



**CUY-90-14.90**

**PID 77332/85531**

---

**APPENDIX EX-68**

---

**CUY-010-1623 PID 1.556**

**(Reference Document)**

State of Ohio  
Department of Transportation  
Jolene M. Molitoris, Director

**Innerbelt Bridge  
Construction Contract Group 1 (CCG1)**

MICROFILMED  
DEC 4 1986

MICROFILMED  
JUL 11 1984

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

IX - 69(22)  
ISSUE NO. 1

FHWA REGION	STATE	PROJECT
5	OHIO	IX-69(22) ISSUE NO. 1

1  
185

CUYAHOGA COUNTY  
CUY-10-16.23

# LORAIN - CARNEGIE BRIDGE

CUY-10-16.23

CUYAHOGA COUNTY

CITY OF CLEVELAND

*Sheets 141, 142, 145 & 146 revised  
12-17-80 EBL.*

*Sheets 78, 109, 112, 115 revised  
3-10-81 EBL*

*Sheet 56 revised 4-6-81 EBL*

*Sheet 122A substituted for  
sheet 122 4-6-81 EBL*

*Sheets 123, 124, 125, 126, 127, 128, 181, 182,  
& 183 superseded by sheets 123A, 124A, 125A, 126A, 127A, 128A,  
181A, 182A, & 183A respectively.*

*7-10-81 EBL*

*Sheets 119 and 121  
Rev. 12-24-81 EBL DATE: 6/25/79*

*Sheet 112 revised 5-4-82 EBL*

*Sheet 121 superseded by  
sheet 121A 8-23-82 EBL*

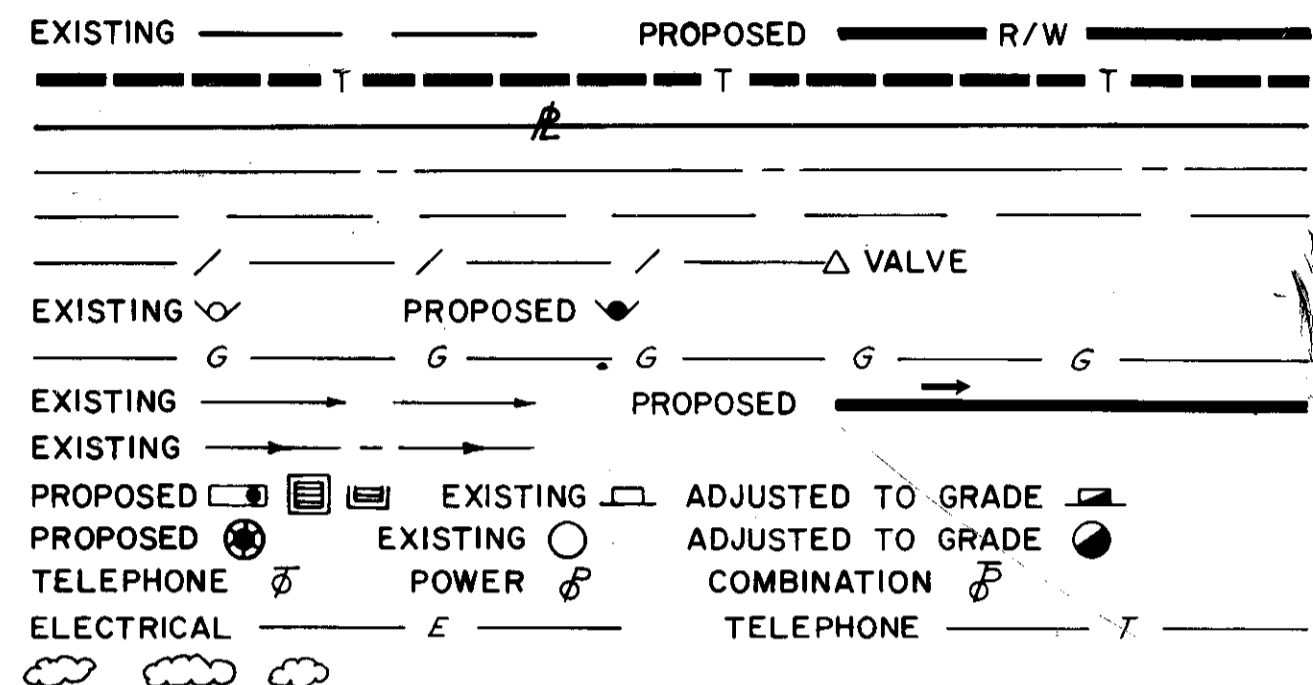
WE, THE COMMISSIONERS OF CUYAHOGA COUNTY, IN FORMAL SESSION HEREBY APPROVE THESE PLANS AND CERTIFY THAT THE NECESSARY RIGHT OF WAY IS AVAILABLE, WE AGREE TO MAINTAIN THE PROJECT IN A MANNER SATISFACTORY TO THE DIRECTOR OF TRANSPORTATION, STATE OF OHIO, OR HIS DULY AUTHORIZED REPRESENTATIVES, AND WILL MAKE AMPLI PROVISION EACH YEAR FOR SUCH MAINTENANCE.  
DONE UNDER AUTHORITY OF SECTIONS 5555.02 ET. SEQ. AND 5535.01 OF THE REVISED CODE OF OHIO

## BOARD OF COMMISSIONERS, CUYAHOGA COUNTY

*Robert E. Lanning*  
*Virgil E. Brown*

## CONVENTIONAL SIGNS

- RIGHT OF WAY LINE
- TEMPORARY RIGHT OF WAY LINE
- PROPERTY LINE
- CENTERLINE
- CONSTRUCTION LINE
- WATER LINE
- WATER HYDRANT
- GAS LINE
- STORM SEWER
- SANITARY SEWER
- CATCH BASIN
- MANHOLE
- UTILITY POLE
- DUCTS
- TREES

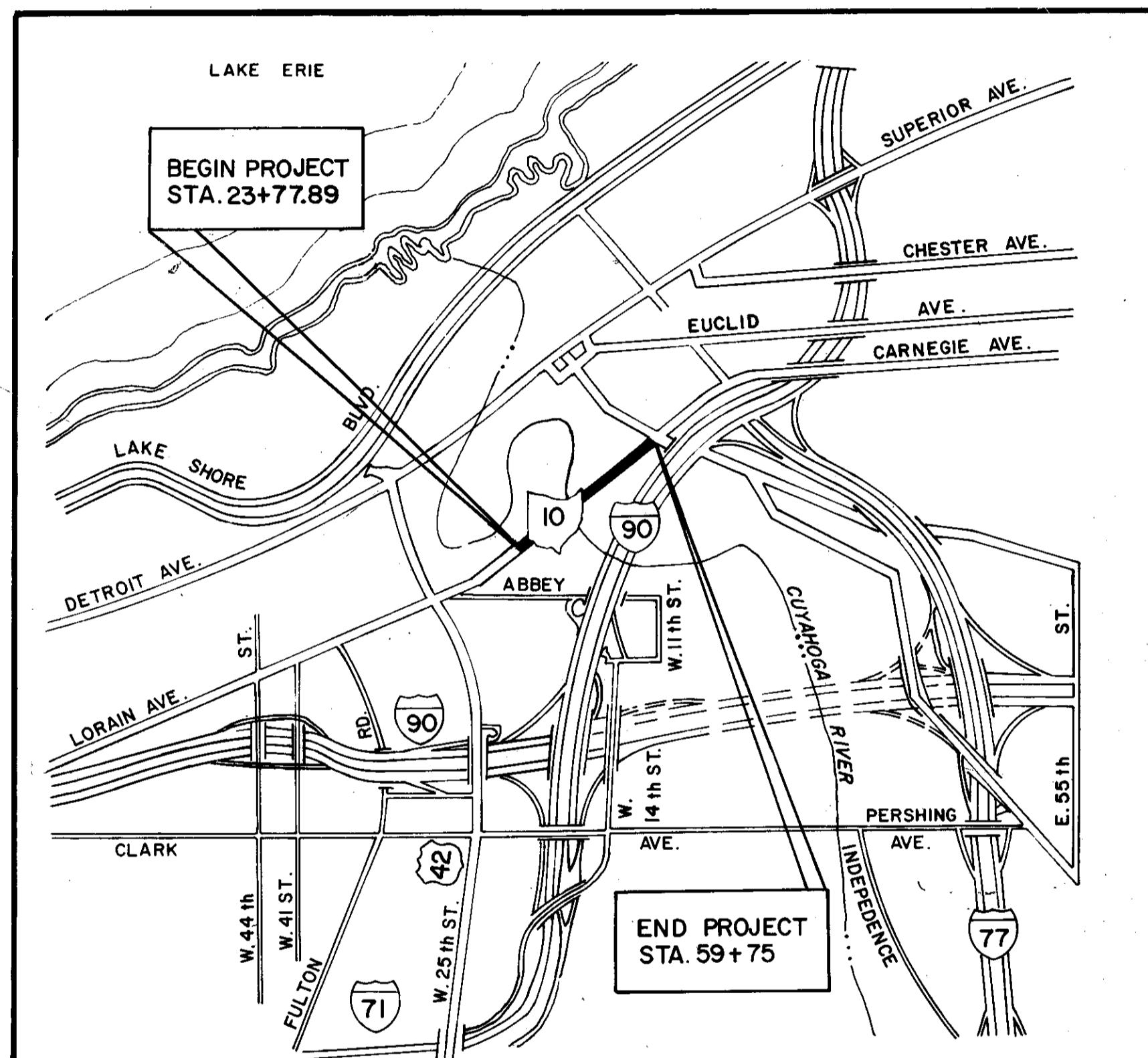


### LINE DATA

BEGIN PROJECT	STA. 23+77.89	
END PROJECT	STA. 59+75.00	
TOTAL PROJECT LENGTH =	3,597.11 Ft.	= 0.681 Mi.
ADD FOR WORK		
STA. 0+00 TO STA. 23+77.89 =	2,377.89 Ft.	
STA. EQUATION 59+75.00 PROJECT "F" = 15+93.53 "F"		
STA. 15+93.53 "F" TO STA. 21+00 "F" =	506.47 Ft.	
TOTAL WORK LENGTH =	6,481.47 Ft.	= 1.228 Mi.

### INDEX OF SHEETS

TITLE SHEET	1	REMOVAL PLAN	15
SCHEMATIC PLAN AND DETOUR PLAN	2	DETAILS	16-21
CENTERLINE SURVEY	3	CLEANING, TELEVISIONING AND REHABILITATION OF SEWERS	22-23
BENCH MARKS AND TRAVERSE POINT REFERENCES	4	PAVEMENT MARKING	24
TYPICAL SECTIONS	5-6	PIER SIX DRAINAGE	25-26
GENERAL NOTES	7-9	APPROACH SLAB DETAILS	27-29
COMPUTATIONS AND SUB SUMMARIES (SEE NOTES)	10-11	LIGHTING PLANS	30-32
GENERAL SUMMARY	12-13	MELP PLANS	33-64
PAVEMENT PLAN	14	STRUCTURE PLANS	65-73A-185



## 1979 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON THE PLANS (SHEET 2).

*Sheets 78, 101, 102, 105, 106, 107, 108, 133, 151, 152, 153, 155, 156, 157, 158, 159, 161, 162, 163, 164, 165, 166, 168, 169, 170, 174, 178, 184, & 185 revised 12-5-83 EBL*  
*Sheets 102A, 102B, 105A, 106A, 106B, 106C, 106D, 106E, 106F, 106G, 106H, 106J, 109A, 118A, 132A, 133A, 167A & 167B added 12-5-83*

APPROVED: *Thomas M. Freese*  
DATE: 7-26-79 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED: *Robert B. Pfeiffer*  
DATE: 11-13-79 ENGINEER, BUREAU OF BRIDGES AND STRUCTURAL DESIGN

APPROVED: *R. E. Galt*  
DATE: 11-13-79 CHIEF ENGINEER, PLANNING AND DESIGN

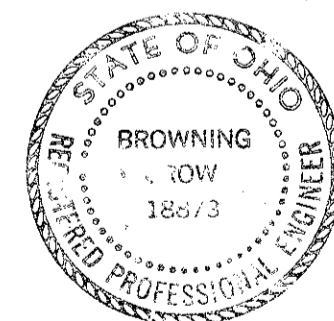
APPROVED: *David A. Weir*  
DATE: 11-13-79 DIRECTOR, DEPARTMENT OF TRANSPORTATION

APPROVED: *Ronald A. Stachura*  
DATE: 6-22-79 COUNTY ENGINEER

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

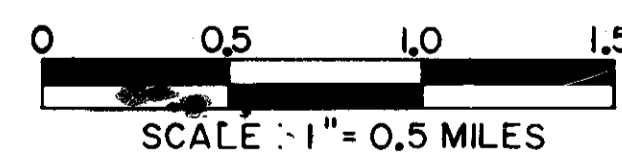
HNTB

*Browning Crow*  
BROWNING CROW



### LOCATION MAP

PORTION TO BE IMPROVED  
CITY STREETS  
COUNTY ROADS



### SCALES

TYPICAL SECTIONS 0" = 4'  
PLAN 0" = 20'  
PROFILE HORIZONTAL 0" = 20'  
PROFILE VERTICAL 0" = 5'  
CROSS SECTIONS - HORIZ. & VERT. 0" = 5'

### DESIGN DESIGNATION

1975 A.D.T.	22,187
2000 A.D.T.	14,400
D.H.V.	1440
D. (DIRECTIONAL DISTRIBUTION)	52 %
T. (PERCENT B & C TRUCKS)	7 %
V. (DESIGN SPEED)	50 M.P.H.

### SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
801	7-15-78		
836	3-12-75	1001	1-3-77
839	11-25-70		
844	11-8-74		
847	4-3-76		
853	6-26-78		
903	1-1-69		
924	9-23-74		
956	6-26-78		

FILE NO.	CUYAHOGA COUNTY NO. _____
	DATE OF LETTING _____ 197 _____
	CONTRACT NO. _____
DATE: 6/25/79	
CHECKED BY: <i>Shirley L. Lister</i>	
DATE: 6/25/79	
APPROVED BY: <i>M.A. RISHER BY D.L. Lister</i>	ENGINEER OF DESIGN
DATE: 6/25/79	
APPROVED BY: <i>John M. Shively</i>	LAND DEPUTY

STANDARD CONSTRUCTION DRAWINGS			
NUMBER	DATE	NUMBER	DATE
AS-1-72	6-30-72	MC-6	6-1-65
BP-5	4-16-79	MH-1	6-12-75
BP-7	12-6-76	SD-1-69	6-12-69
HL-2	7-27-73	TC-41.20	3-26-79
HL-3	7-27-73	TC-71.10	4-9-79
HL-5	9-6-73	TC-35.10	10-5-77
HL-7	1-21-76	MC-9	11-1-77
HL-9	3-22-77	BP-3	12-6-76
HL-15	1-21-76	BP-4	12-6-76
HL-16	4-6-73	MC-1	6-13-69
MC-3	6-1-73	MH-3	6-12-75
MC-4	7-26-76	MH-5	6-12-75

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	
DIVISION ADMINISTRATOR	DATE

Rev. 7-11-80

TITLE SHEET

LORAIN - CARNEGIE BRIDGE

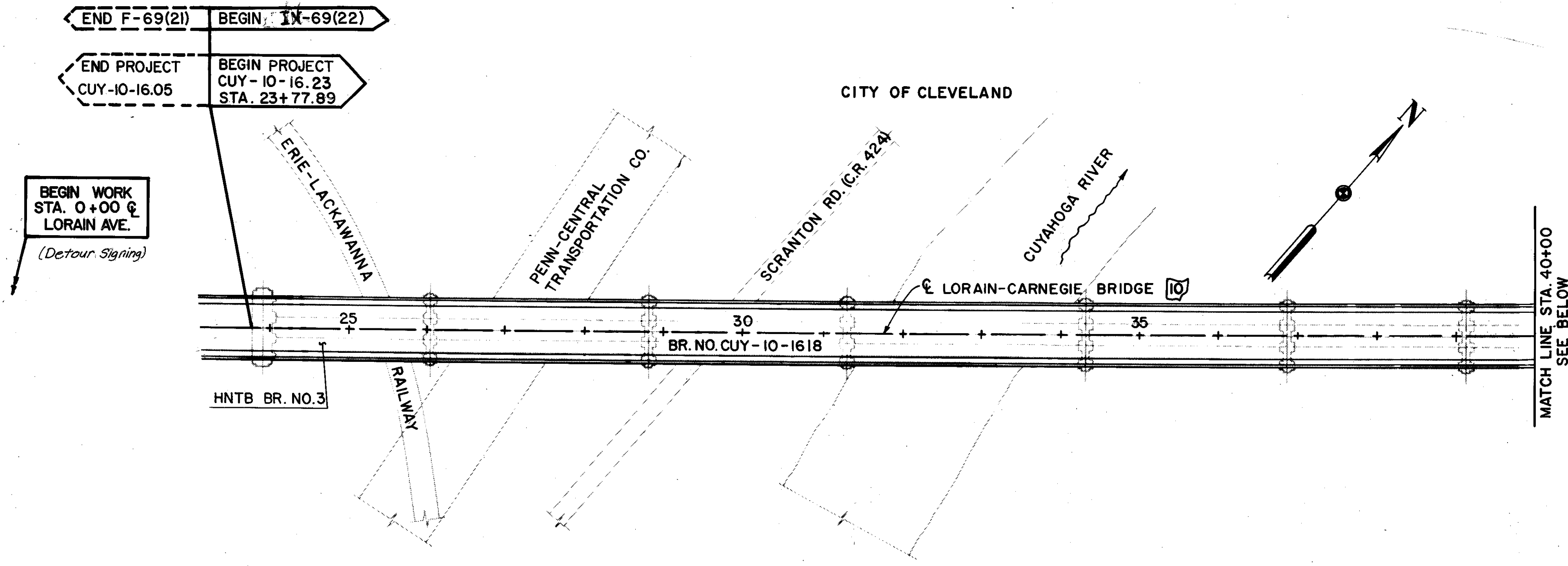
# SCHEMATIC PLAN

FWA REGION	STATE	PROJECT
5	OHIO	

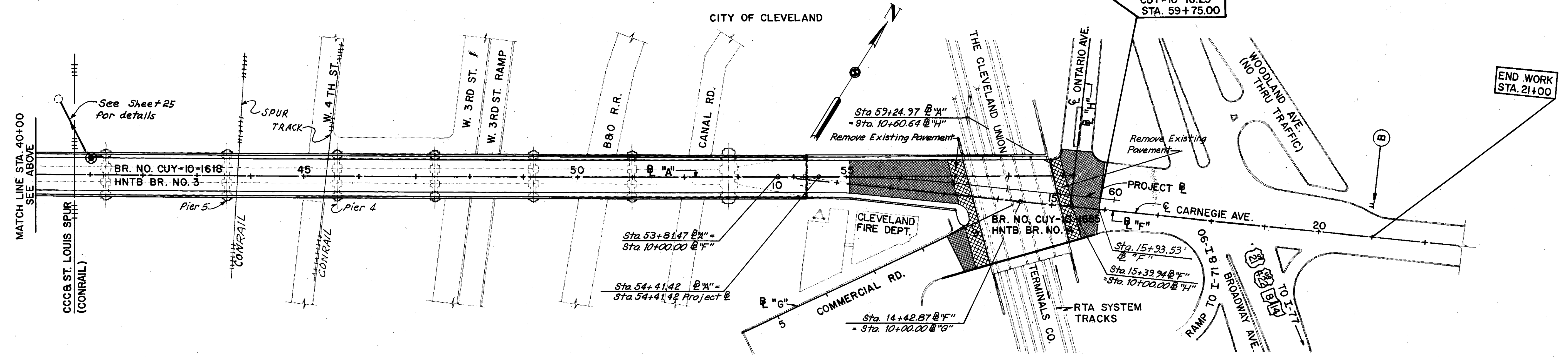
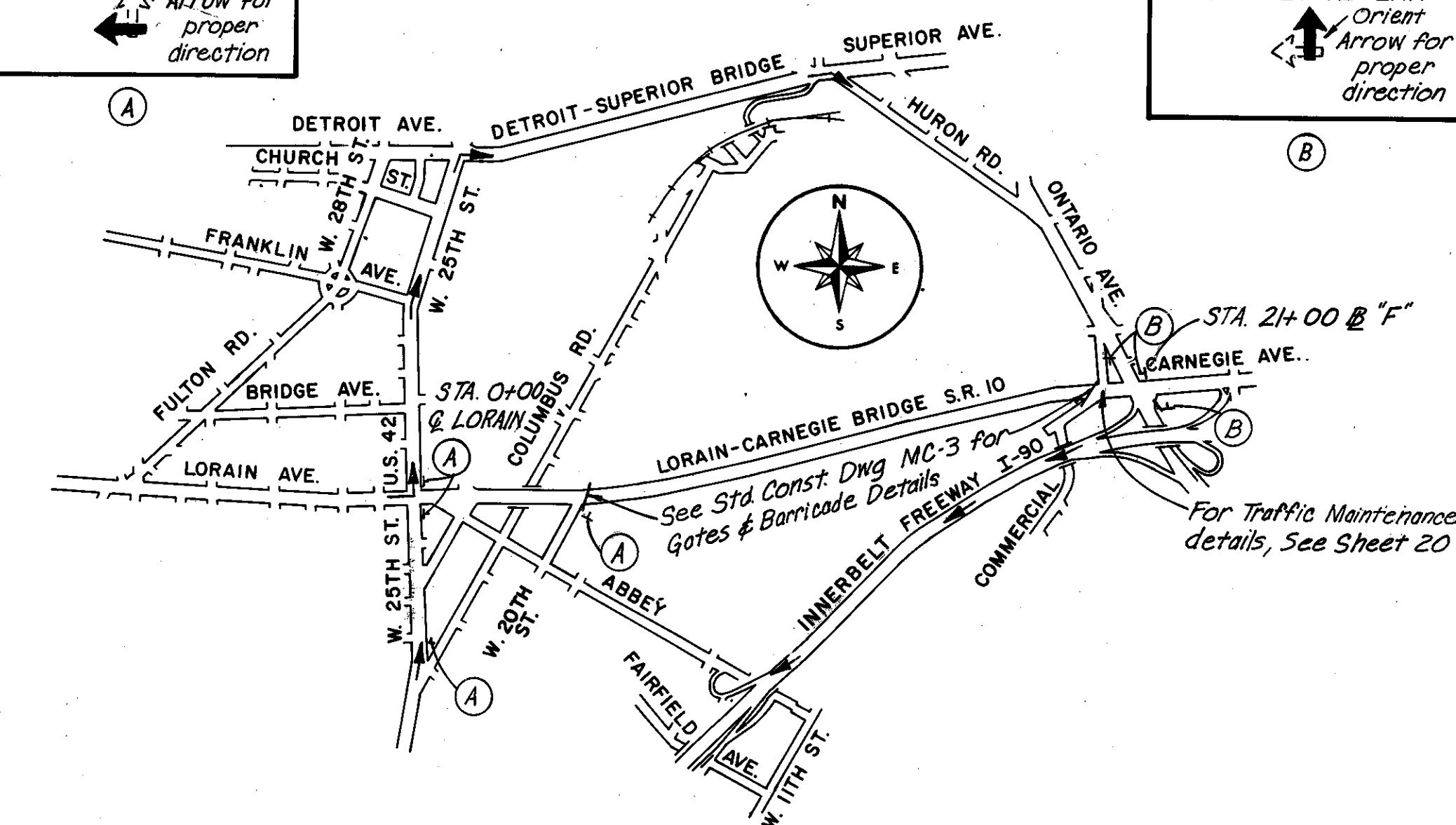
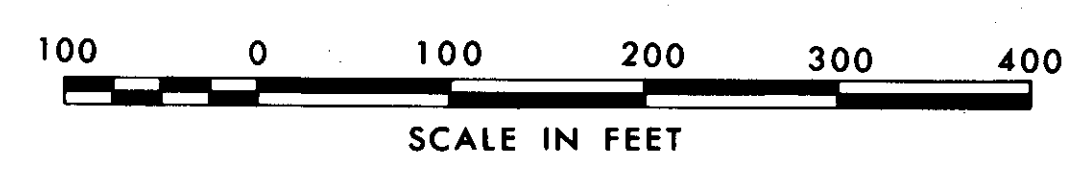
CUYAHOGA COUNTY  
CUY-10-16.23

LORAIN - CARNEGIE  
BRIDGE CLOSED  
USE W 25 TH ST  
TO DETROIT SUPERIOR  
BRIDGE. Orient  
Arrow for  
proper  
direction

LORAIN - CARNEGIE  
BRIDGE CLOSED  
USE I-90 SOUTH  
TO ABBEY RD EXIT  
Orient  
Arrow for  
proper  
direction

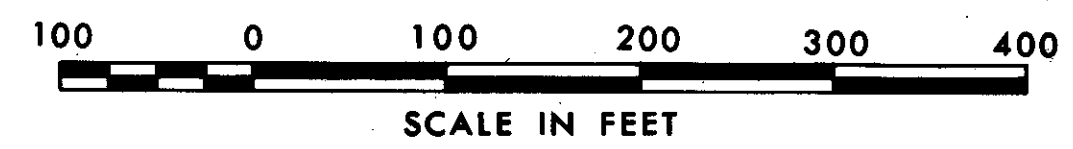


BEGIN WORK  
STA. 0+00 @  
LORAIN AVE.  
(Detour Signing)



END PROJECT  
CUY-10-16.23  
STA. 59+75.00

END WORK  
STA. 21+00



PROJECT CURVE DATA  
P.I. STA. 55+69.68 PROJ. @ 2° "A"

$\Delta = 6^{\circ} 24' 22''$   
 $D = 2^{\circ} 30' 00''$   
 $T = 128.26'$   
 $R = 2291.83'$   
 $L = 256.25'$   
 $E = 3.59'$

LEGEND

	EXISTING CONDITIONS
	OVERLAY EXISTING PAVEMENT
	CONSTRUCT NEW APPROACH SLABS
	PAVEMENT REMOVED
	SIDEWALK, REMOVED & REPLACED

# CENTERLINE SURVEY

FHWA REGION	STATE	PROJECT
5	OHIO	

3  
185

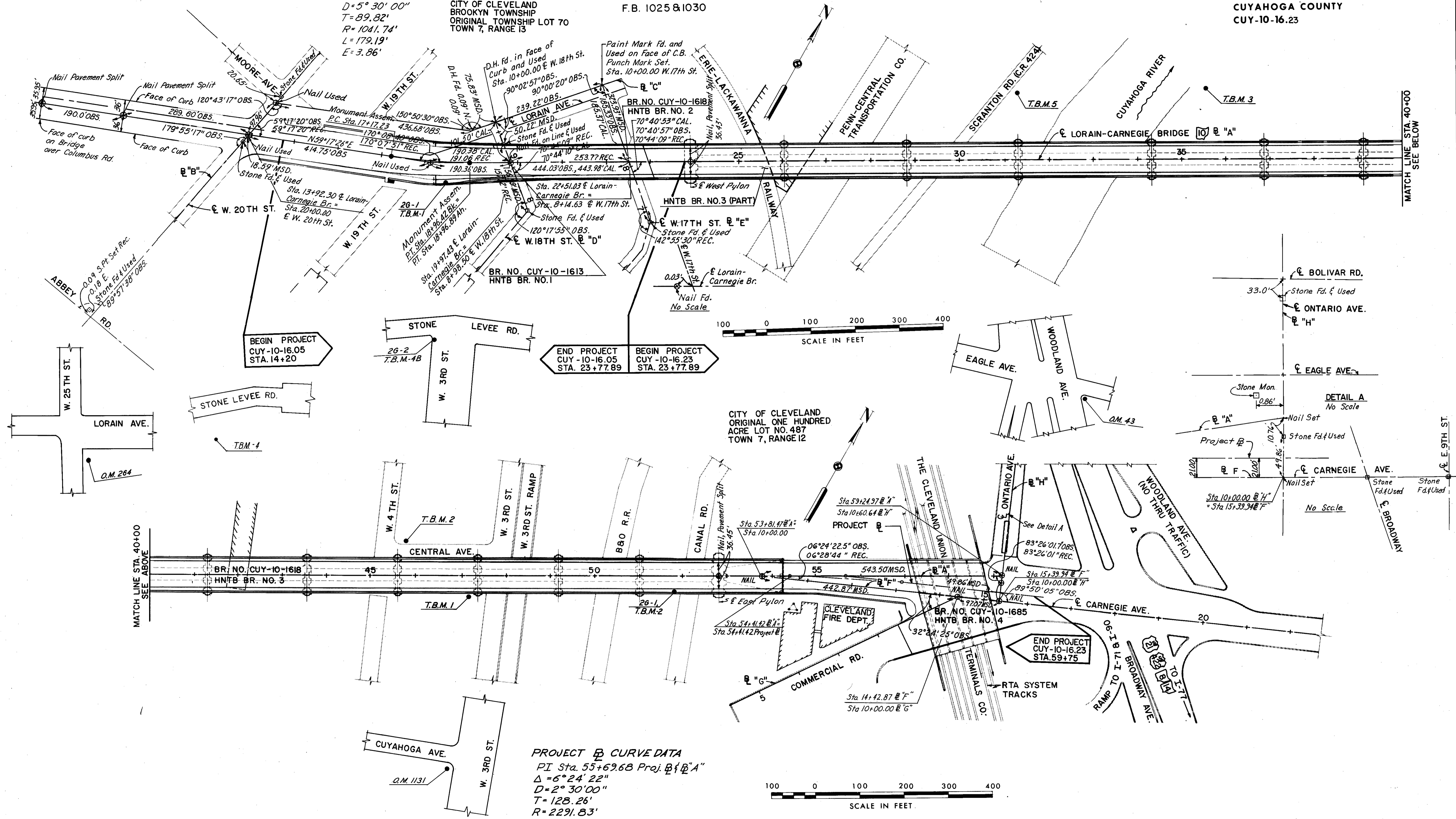
CUYAHOGA COUNTY  
CUY-10-16.23

## ☉ CURVE DATA

P.I. = Sta. 18+07.05  
 $\Delta = 9^\circ 51' 20''$  Lt.  
 $D = 5^\circ 30' 00''$   
 $T = 89.82'$   
 $R = 1041.74'$   
 $L = 179.19'$   
 $E = 3.86'$

CITY OF CLEVELAND  
 BROOKLYN TOWNSHIP  
 ORIGINAL TOWNSHIP LOT 70  
 TOWN 7, RANGE 13

F.B. 1025 & 1030

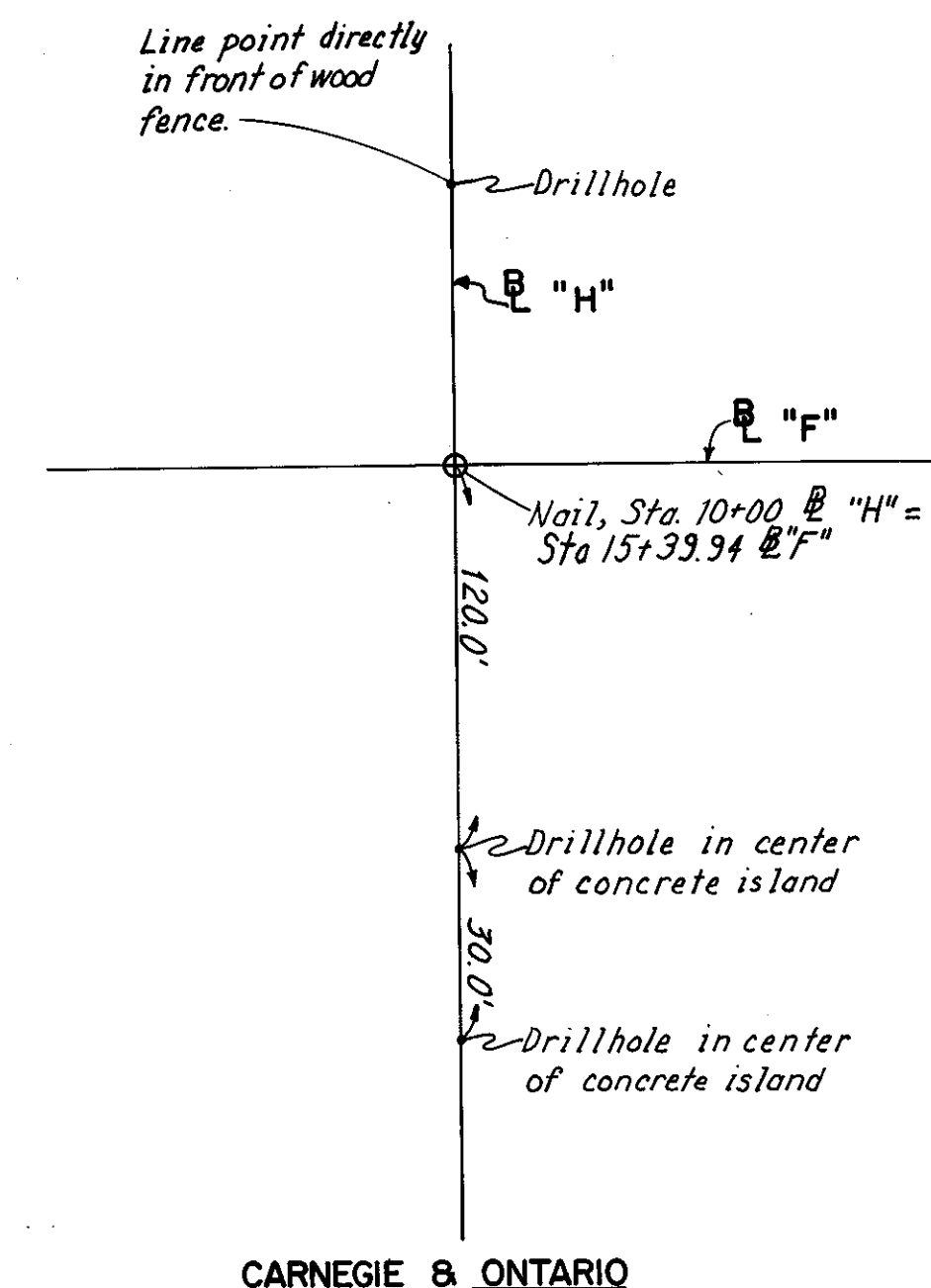


FHWA REGION	STATE	PROJECT	
5	OHIO		

4  
185

CUYAHOGA COUNTY  
CUY-10-16.23

BENCH MARKS		
B.M. NO.	ELEV.	DESCRIPTION
O.M. 1131	581.72	O.M. S.W. corner West Third & Cuyahoga Ave.; by old City of Cleveland garage. Approx. 27' W. of & 3rd St. & 22' S. of E Cuyahoga Ave.
T.B.M. 1	583.10	East bolt on rim of hydrant, W. side of West Third St; 16 ft. west of Bridge pier no. 3.
T.B.M. 2	585.27	"M" in Mathews on hydrant in front of Simmons Co. No. 401 Central Ave.
26-2, T.B.M.-4B	581.71	Cross on S.W. corner of concrete pad over C.B. S.W. corner of West Third & Stone Levee Rd.
T.B.M. 3	579.99	Top of pipe, in steel post approximately 15 ft. East of River; 250 ft. North of Bridge pier no. 9
T.B.M. 4	582.75	"H" in hydrant; hydrant in rear of buildings at No. 701 Stone Levee Rd.
T.B.M. 5	581.62	D.H. & cross in S.E. corner of concrete pad by Railroad Siding on East side of Scranton Rd., approximately 120 ft. North of Bridge pier no. 10.
O.M. 264	683.191	Approximately 38 ft. East of E W. 25th St. and 67 ft. South of E Lorain Ave. 5.88 ft. N.W. of stone foundation of 2 story brick building No. 2011 W. 25th. 19.22 ft. S.W. of cross on East end of C.B. on South curb of Lorain at end of turnout.
26-1, T.B.M.-1	693.028	"X" on N.E. corner of C.B. (upper curb) approximately 100 ft. East of W. 19th St., South side of Bridge.
26-1, T.B.M.-2	686.379	"X" on N.E. corner of C.B. on South side, approximately 250 ft. West of East ornamental stone monument.
O.M. 43	666.235	Approximately 40 ft. N.E. of E of Woodland Ave. and 31 ft. South of E of Eagle Ave. 11.31 ft. S.W. of top and center of hydrant on S.E. corner. 24.48 ft. N.W. of cross in first step to building on S.E. corner.



BENCH MARKS ON LOWER DECK		
B.M. NO.	ELEV.	DESCRIPTION
T.B.M. 1	676.038	Lead hub & nail conc. block, N.E. corner on top of gas line 2' From end of ramp.
T.B.M. 2	678.782	Bolt S.E. corner of plate support for gas line at #16 (from W. end of bridge) vert. floor pier.
T.B.M. 3	684.124	Bolt S.E. corner of plate support for gas line at pier #30
T.B.M. 4	684.834	Bolt S.E. corner of plate support for gas line at pier #45
T.B.M. 5	679.089	Bolt S.E. corner of plate support for gas line at pier #59
T.B.M. 6	674.033	Bolt S.E. corner of plate support for gas line, vert. floor pier #71
T.B.M. 7	669.505	Bolt S.E. corner of plate support for gas line, vert. floor pier #82
T.B.M. 8	664.541	Bolt S.E. corner of plate support for gas line, vert. floor pier #94
T.B.M. 9	659.651	Bolt S.E. corner of plate support for gas line, vert. floor pier #106
T.B.M. 10	654.965	Bolt S.E. corner of plate support for gas line, vert. floor pier #117
T.B.M. 11	655.133	Top of conc. block N.E. corner 10' From chain link fence, block is part. of gas line.

MADE M.T. DATE 6-21-78  
 TRACED DATE  
 CHECKED A.H.S. DATE 1-10-79  
 SCALE NONE

Howard, Needles, Tammen & Bergendoff  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**HNTB**



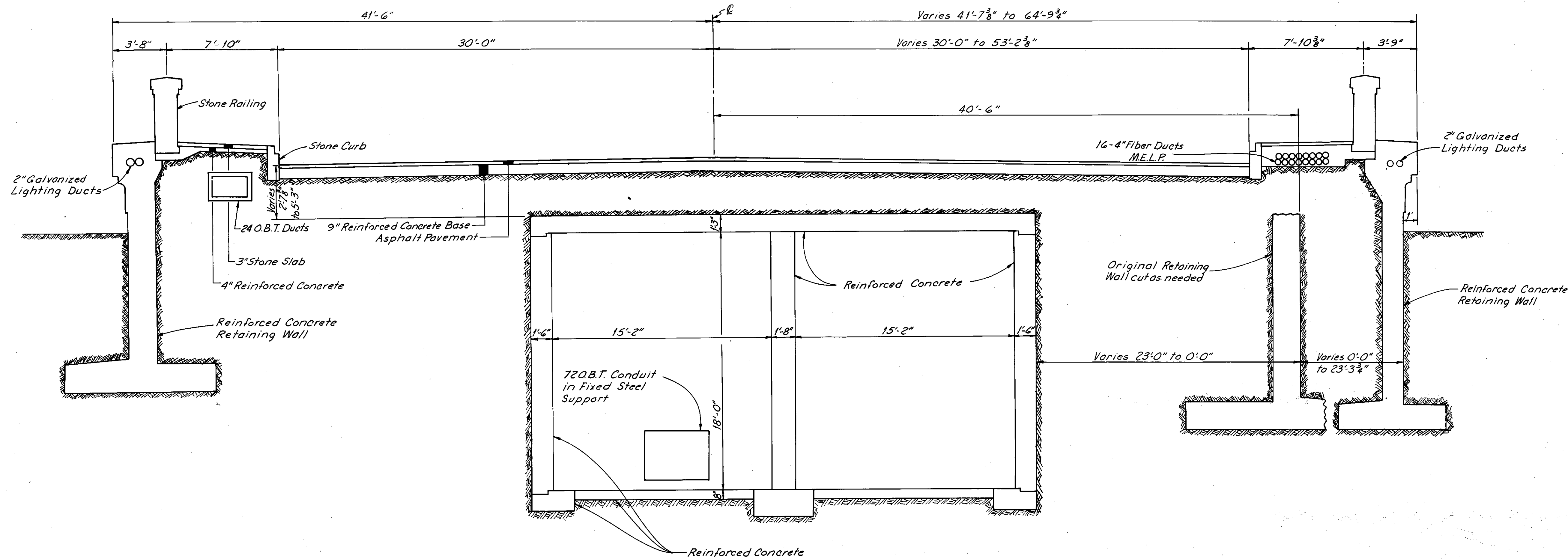
# EXISTING TYPICAL SECTIONS

SCALE 1/4" - 1'-0"

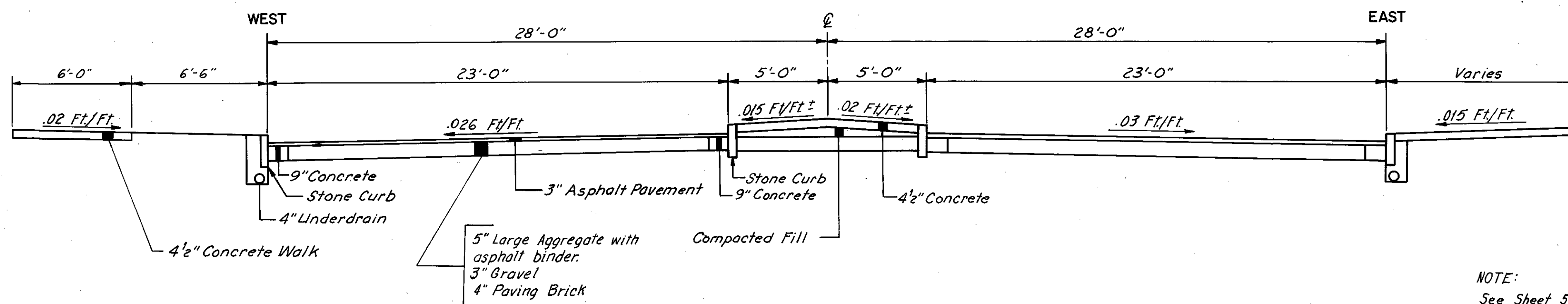
FHWA REGION	STATE	PROJECT
5	OHIO	

6  
185

CUYAHOGA COUNTY  
CUY-10-16.23



EXISTING  
CARNegie AVENUE  
EAST APPROACH  
STA. 55+04.5 to STA. 57+29.1



EXISTING ONTARIO AVENUE

NOTE:  
See Sheet 5 for existing  
Carnegie Ave. at Sta. 59+75

EXISTING COMMERCIAL ROAD  
Pavement Width and Cross-Slope Varies  
Pavement Composition (near Fire Station  
Driveway)  
4" Asphalt  
3" Sand  
4" Paving Brick

# GENERAL NOTES

FHWA REGION	STATE	PROJECT
5	OHIO	

7  
185

QUANTITY CALCULATIONS  
MADE BY F.W.H. DATE 6-1-79  
CHECKED BY C.D. DATE 6-4-79

CUYAHOGA COUNTY  
CUY-10-16.23

## GENERAL

### DESIGN SPEED

THE GEOMETRIC DESIGN FOR THIS PROJECT IS BASED ON THE DESIGN SPEED OF FIFTY (50) MILES PER HOUR AS OUTLINED BY AASHTO IN THE POLICIES OF GEOMETRIC DESIGN.

### ELEVATION DATUM

THE ELEVATIONS SHOWN ON THESE PLANS ARE IN FEET ABOVE THE CLEVELAND REGIONAL GEODETIC SURVEY PLANE (USGS DATUM).

### ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

### UTILITIES

ANY AND ALL WORK REQUIRED FOR REMOVING, RELOCATING, AND CONSTRUCTING NEW FACILITIES FOR PRIVATE OR PUBLIC UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THE RESPECTIVE OWNERS, UNLESS OTHERWISE SHOWN IN THE PLANS.

THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THE WORK OF THE UTILITY OWNERS OR OTHERS WHO MAY BE MAKING THE RELOCATIONS, AND SHALL NOTIFY THE OWNERS OF UTILITIES OF HIS SCHEDULE AT LEAST TWO (2) WORKING DAYS BEFORE BREAKING GROUND.

### UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

### UTILITY OWNERSHIP

CLEVELAND ELECTRIC ILLUMINATING COMPANY  
55 PUBLIC SQUARE (UNDERGROUND AND OVERHEAD)  
CLEVELAND, OHIO 44113

MUNICIPAL ELECTRIC LIGHT & POWER  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

EAST OHIO GAS COMPANY  
1717 EAST NINTH STREET  
CLEVELAND, OHIO 44114

DEPARTMENT OF PUBLIC UTILITIES  
DIVISION OF WATER AND HEAT  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

THE OHIO BELL TELEPHONE COMPANY  
820 SUPERIOR AVENUE, N.W.  
CLEVELAND, OHIO 44113

CLEVELAND REGIONAL TRANSPORTATION AUTHORITY  
1404 EAST NINTH STREET  
CLEVELAND, OHIO 44114

### PRECAUTIONS AGAINST UTILITY DAMAGE

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITY LINES DURING ALL WORK ASSOCIATED WITH THE PROJECT. IT MAY BE NECESSARY TO CHANGE THE FLOW LINE ELEVATIONS OF PROPOSED SEWERS DUE TO THE DEPTHS OF VARIOUS UTILITY LINES. IF ANY CHANGES ARE NECESSARY, COMPENSATIONS OR DEDUCTIONS WILL BE PROVIDED AS SPECIFIED IN ITEM 604. THE CONTRACTOR SHALL MAKE INVESTIGATIONS TO DETERMINE THE DEPTH OF THE UTILITY LINES PRIOR TO THE INSTALLATION OF THE SEWER CONNECTIONS OR APPURTENANCES, TRENCHING, CONDUIT INSTALLATION, AND ALL OTHER UNDERGROUND WORK. THE COST OF SUCH INVESTIGATIONS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT ITEM OF WORK REQUIRING SUCH PRECAUTIONARY INVESTIGATIONS.

### DUST CONTROL

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE APPLICATION FOR THE PREVENTION OR ALLEVIATION OF DUST WHERE DIRECTED AND IN THE AMOUNTS SPECIFIED BY THE ENGINEER.

ITEM 616	WATER	50 M GALLONS
ITEM 616	CALCIUM CHLORIDE	10 TONS

### FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE IN ACCORDANCE WITH ITEM 619, HAVING A MINIMUM OF 800 SQ. FT OF FLOOR SPACE.

### ITEM 623 - CONSTRUCTION LAYOUT STAKES - REFERENCING MONUMENTS

ALL EXISTING MONUMENTS, ROADWAY AS WELL AS PRIVATE PROPERTY LINE MONUMENTS WITHIN THE CONSTRUCTION AREA, ARE TO BE REFERENCED TO POINTS AND OR TO PERMANENT STRUCTURES OUTSIDE OF THE CONSTRUCTION AREA, SO AS TO BE ABLE TO REESTABLISH THEIR POSITION, AND REPLACE THE POINT. NO LESS THAN THREE SUCH REFERENCES PER MONUMENT ARE TO BE FURNISHED. A REASONABLE SEARCH WILL BE MADE FOR THE PRIVATE PROPERTY MONUMENTS, SUCH AS, PROBING OCCUPATION CORNER AND CALLING ON THE RESIDENT TO POINT OUT THE MONUMENTS. THESE MONUMENTS WILL BE REFERENCED BY STATION AND DISTANCE OFFSET FROM CENTERLINE PLUS TWO OF THE AS PREVIOUSLY MENTIONED REFERENCES AND THE ADDRESS OF THE PARTICULAR PROPERTY TO WHICH IT BELONGS. IF NO PRIVATE MONUMENTS CAN BE POINTED OUT, HAVE RESIDENT INITIAL FIELD BOOK AT THAT STATION AND ADDRESS. THE REFERENCES WILL BE DOCUMENTED IN A FIELD BOOK PROVIDED BY THE CUYAHOGA COUNTY ENGINEER'S SURVEY DEPARTMENT. THE DOCUMENTATION WILL BE MADE UNDER THE SUPERVISION OF A LICENSED SURVEYOR. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE ABOVE DOCUMENTATION AND CARE OF THE FIELD BOOK. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES, AS PER PLAN.

### ADJACENT PROJECT

THE CONTRACTOR FOR THIS PROJECT (CUY-10-16.23) IS ADVISED THAT PROJECT CUY-10-16.05 WILL BE LET ADJACENT TO AND WEST OF THIS PROJECT. UNTIL THE CONTRACTOR FOR CUY-10-16.05 HAS BEEN SELECTED, THE CONTRACTOR FOR THE CUY-10-16.23 PROJECT WILL HAVE ACCESS TO HIS WORK FROM BOTH ENDS OF THE LORAIN-CARNEGIE BRIDGE.

## ROADWAY

### REPLACEMENT

THE CONTRACTOR SHALL REPLACE AT HIS OWN EXPENSE ANY ITEM NOT SPECIFICALLY LISTED FOR REMOVAL THAT IS DAMAGED OR DESTROYED BY HIS OPERATIONS.

### ITEM 202 - SIDEWALK REMOVED

THE CONTRACT PRICE BID PER SQUARE FOOT OF ITEM 202 - SIDEWALK REMOVED SHALL ALSO INCLUDE THE REMOVAL OF STONE OR CONCRETE SLABS BENEATH THE SIDEWALK WHERE SUCH STONE OR CONCRETE SLABS ARE ENCOUNTERED ON THIS PROJECT.

### CURB TRANSITIONS

THE COST OF ALL LABOR, MATERIALS AND OTHER COSTS INCURRED IN CONSTRUCTING THE CURB HEIGHT AND FACE TRANSITIONS, EXCEPT THE CURB TRANSITIONS AT THE FACE OF THE DRIVES, SHALL BE INCLUDED IN THE PERTINENT CURB ITEM. FOR DETAILS OF THE TRANSITIONS, SEE SHEET 17.

### REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

### ITEM 660 - SODDING, AS PER PLAN

AN ESTIMATED QUANTITY OF SODDING IS PROVIDED HEREIN FOR THE REPLACEMENT OF GRASS AREAS DAMAGED BY CONSTRUCTION. DAMAGED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL BE REPAIRED BY REMOVING THE DAMAGED SOD TO A DEPTH SUFFICIENT TO PLACE 3 INCHES OF CLEAN, FRIABLE TOPSOIL PRIOR TO LAYING THE NEW SOD. THE PRICE BID FOR ITEM 660 - SODDING, AS PER PLAN SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED AREAS, PLACING THE TOPSOIL AND SOD, AND WATERING THE SOD AS NEEDED UNTIL GROWTH IS ESTABLISHED OR THE PROJECT IS ACCEPTED. AN ESTIMATED QUANTITY OF 100 SQUARE YARDS OF SODDING HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS WORK.

## ROADWAY (CONT.)

### ITEM 844 - NO. 3 POST, AS PER PLAN

THE UNIT PRICE BID PER LINEAR FOOT OF NO. 3 POST, AS PER PLAN SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO INSTALL THE NO. 3 POST AT STA. 57+90 BASELINE "A" PER THE DETAIL ON SHEET 16 INCLUDING THE FABRICATION AND FURNISHING TWO 1/4" x 2" STAINLESS STEEL STRAPS TOGETHER WITH THE NECESSARY ATTACHMENT DEVICES.

### TRAFFIC MAINTENANCE

TWO LANE, TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON COMMERCIAL ROAD. THE CONTRACTOR SHALL PROSECUTE TO THE FULLEST EXTENT THE WORK INVOLVED SO AS TO REDUCE TO A MINIMUM THE LENGTH OF TIME THAT THE ROADWAY IS REDUCED IN WIDTH. REFER TO SHEETS 20 AND 148 FOR THE CONSTRUCTION SEQUENCE.

THE CONTRACTOR SHALL NOTIFY THE CITY OF CLEVELAND POLICE, TRAFFIC, AND FIRE DEPARTMENTS, OHIO DEPARTMENT OF TRANSPORTATION, AND THE CLEVELAND REGIONAL TRANSPORTATION AUTHORITY 14 DAYS PRIOR TO THE CLOSING OF ANY ROADS.

PART WIDTH CONSTRUCTION MAY BE USED TO FACILITATE THE MAINTENANCE OF TRAFFIC IN THIS AREA.

IF THE CONTRACTOR EXERCISES HIS OPTION TO SUBMIT AN ALTERNATE TO THE CONSTRUCTION SEQUENCE, HIS CONSTRUCTION SEQUENCE SHALL ALSO INCLUDE TRAFFIC MAINTENANCE.

ALL REQUIRED SIGNS WITHIN THE WORK LIMITS SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION, LATEST REVISIONS) AND SHALL BE PROVIDED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR.

ALL DETOUR SIGNS OUTSIDE THE WORK LIMITS ARE PROVIDED BY THE STATE AND ERECTED BY COUNTY FORCES.

THE CONTRACTOR SHALL MAINTAIN SAFE AND SATISFACTORY ACCESS TO ABUTTING PROPERTIES AND INTERSECTING STREETS AT ALL TIMES DURING CONSTRUCTION OF THE IMPROVEMENT, INCLUDING THE CONSTRUCTION AND REMOVAL, IF NECESSARY, OF TEMPORARY BY-PASSES, BRIDGING, CROSSOVERS AND DRIVEWAYS.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE ALL NECESSARY SAFEGUARDS SUCH AS BARRICADES SATISFACTORY BARRIERS, LIGHTING, FLAGMEN, TEMPORARY GUARD RAIL, TEMPORARY CONCRETE BARRIERS, AND SUCH OTHER TRAFFIC CONTROL DEVICES AS PROVIDED IN ITEM 614, MAINTAINING TRAFFIC, SO AS TO AVOID DAMAGE AND/OR INJURY TO VEHICLES AND PERSONS USING THE ROADWAY DURING CONSTRUCTION.

PAYMENT FOR LABOR AND EQUIPMENT REQUIRED FOR THE CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL WHEREVER OF APPROACHES, BY-PASSES, CROSSOVERS, DRIVEWAYS, BARRICADES, LIGHTS, SIGNS, AND SIGN SUPPORTS, SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC.

### ESTIMATED QUANTITIES FOR MAINTAINING TRAFFIC

QUANTITIES OF THE FOLLOWING ITEMS ARE ESTIMATED AND ARE INCLUDED FOR USE ONLY WHEN AND IN AMOUNTS AS DIRECTED BY THE ENGINEER. THE PROVISION OF SECTION 104.02 WILL APPLY TO THESE ITEMS:

ITEM 404	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	25 Cu. Yds.
ITEM 410	TRAFFIC COMPACTED SURFACE, TYPES A OR B	50 Cu. Yds.
ITEM 616	CALCIUM CHLORIDE	10 TONS
ITEM 616	WATER	50 M GALLONS

### MONUMENT BOXES

EXISTING MONUMENT BOXES WHICH ARE BROKEN OR OF AN UNAPPROVED TYPE, SHALL, AT THE DIRECTION OF THE ENGINEER, BE REPLACED WITH A NEW STANDARD MONUMENT BOX, NO. 36-B. THE OLD MONUMENT BOX SHALL BE REMOVED IN ACCORDANCE WITH ITEM 202.

IN SUCH CASES AS DETERMINED BY THE ENGINEER, PAYMENT SHALL BE MADE FOR THE ACTUAL NUMBER OF BOXES USED. THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY SHEET TO PERFORM THE WORK NOTED ABOVE:

ITEM 202	MONUMENT BOX REMOVED	2 EACH
ITEM 604	MONUMENT BOX, TYPE 36-B	2 EACH

MADE F.W.H. DATE 6-1-79  
TRACED C.R. DATE 6-4-79  
CHECKED C.D. DATE 6-4-79  
SCALE NONE

Howard, Needles, Tamman & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**



## ROADWAY (CONT.)

## RAILING

ALL APPLICABLE PROVISIONS OF ITEM 517 AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED SUPPLEMENTAL TO THE PROVISIONS SET FORTH THEREIN.

## A. PIGMENTATION OF CONCRETE

THE CONCRETE OF THE RAILING MAY REQUIRE A SYNTHETIC IRON OXIDE PIGMENT ADDITIVE SO THAT THE COLOR OF THE RAILING WILL MATCH THE COLOR OF THE CLEANED PYLONS LOCATED AT BOTH ENDS OF BR. NO. CUY-10-1618. IF COLORING THE RAILING IS DESIRED, THE ENGINEER AFTER COORDINATION WITH THE OHIO HISTORIC PRESERVATION OFFICE WILL FURNISH THE CONTRACTOR A SWATCH OR COLOR CARD OF THE COLOR DESIRED. THE FINISHED RAILING SHALL BE UNIFORM IN COLOR AND MATCH THE COLOR SAMPLE. IF THE COLORING OF THE CONCRETE IS NOT REQUIRED, THE PAY ITEM FOR TINTING OF TYPE C RAILING CONCRETE SHALL BE NON PERFORMED.

## B. PAYMENT

PAYMENT FOR THE RAILING IS COVERED BY TWO PAYMENT ITEMS AS FOLLOWS:

ITEM 517, REINFORCED CONCRETE RAILING TYPE "C", AS PER PLAN  
ITEM SPECIAL, TINTING OF TYPE "C" RAILING CONCRETE

## SAFE PEDESTRIAN TRAFFIC

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NEED FOR PROVIDING ADEQUATE PROTECTION FOR CHILDREN AND OTHER PEDESTRIAN TRAFFIC IN THE VICINITY OF THIS PROJECT. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SUCH TEMPORARY PROTECTION FACILITIES AS THE ENGINEER DEEMS NECESSARY TO ACCOMMODATE IN A REASONABLE AND SAFE MANNER, ALL PEDESTRIAN TRAFFIC.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE TO BE USED AS DIRECTED BY THE ENGINEER TO MAINTAIN SAFE PEDESTRIAN TRAFFIC.

ITEM 607 FENCE, TYPE SNOW, AS PER PLAN 400 Lin. Ft.  
ITEM 608 2" BITUMINOUS WALK, AS PER PLAN 1,000 Sq. Ft.

## ITEM 607 - FENCE, TYPE SNOW, AS PER PLAN

SNOW FENCE, IF REQUIRED FOR THE MAINTENANCE OF SAFE PEDESTRIAN TRAFFIC, SHALL MEET THE FOLLOWING SPECIFICATIONS IN ADDITION TO THE REQUIREMENTS OF ITEM 607:

- WOOD PICKETS SHALL BE OF SPRUCE, POPLAR, OR JACK PINE AND SHALL HAVE ONE COAT OF RED PAINT.
- WOOD PICKETS SHALL HAVE A MINIMUM THICKNESS OF ONE-HALF (1/2") INCH, A MINIMUM WIDTH OF ONE AND ONE-HALF (1-1/2") INCHES, AND MINIMUM LENGTH OF FOUR (4') FEET.
- WOOD PICKETS SHALL BE WOVEN INTO PLACE WITH FIVE (5) DOUBLE STRANDS OF 12-1/2 GAUGE LOW CARBON GALVANIZED WIRE. SPACING BETWEEN PICKETS SHALL BE A MAXIMUM OF TWO (2") INCHES.
- THE FENCE SHALL BE INSTALLED IN ACCORDANCE WITH ITEM 607 USING STEEL LINE POSTS PER SECTION 710.11. PAYMENT FOR FURNISHING, INSTALLATION, MAINTENANCE, AND SUBSEQUENT REMOVAL INCLUDING ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE PAID FOR IN THE UNIT PRICE BID PER LINEAR FOOT OF ITEM 607, FENCE, TYPE SNOW, AS PER PLAN.

## ITEM 608 - 2" BITUMINOUS WALK, AS PER PLAN

IN ADDITION TO PROVIDING AND INSTALLING THIS ITEM OF WORK IF NEEDED, PAYMENT FOR MAINTENANCE AND SUBSEQUENT REMOVAL OF THE WALK SHALL ALSO BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT OF ITEM 608, 2" BITUMINOUS WALK, AS PER PLAN.

## ITEM 608 - 4-1/2" CONCRETE WALK, AS PER PLAN

THE CONCRETE WALK SHALL CONFORM TO THE REQUIREMENTS FOR ITEM 608 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS EXCEPT THAT THE WALK SHALL BE PLACED ON A 2" 703.08 GRANULATED SLAG OR 703.10 SCREENINGS BED AS DETAILED ON SHEET 5.

PAYMENT FOR THE 2" GRANULATED SLAG OR SCREENINGS BED SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 608 - 4-1/2" CONCRETE WALK, AS PER PLAN.

## ITEM 612 - 8 3/4" CONCRETE TRAFFIC ISLAND, AS PER PLAN

THE CONCRETE TRAFFIC ISLAND AT THE INTERSECTION OF CARNEGIE AVE. AND COMMERCIAL RD. SHALL BE BONDED TO CONCRETE DECK WITH POLYSULFIDE-EPOXY RESIN ADHESIVE AS DESCRIBED IN ITEM 13 OF THE STRUCTURE GENERAL NOTES, SHEET 66.

PAYMENT FOR ALL WORK AND MATERIALS SHALL BE INCLUDED WITH THE UNIT PRICE BID FOR ITEM 612- 8 3/4" CONCRETE TRAFFIC ISLAND, AS PER PLAN.

MADE F.W.H. DATE 6-1-79  
TRACED G.B. DATE 6-4-79  
CHECKED C.D. DATE 6-4-79  
SCALE NONE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

## GENERAL NOTES

## PAVEMENT

## ITEM 404, ASPHALT CONCRETE, AS PER PLAN

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS OR IN THE PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 404 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, EXCEPT AS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED AS SUPPLEMENTAL TO THE PROVISIONS SET FORTH HEREIN.

THE GENERAL PLANT MIX PAVEMENT SPECIFICATIONS 401 SHALL APPLY WITH DEVIATIONS AS NOTED HEREIN.

THE MATERIAL COMPOSITIONS SHALL BE IN ACCORDANCE WITH SECTION 404.02 EXCEPT THAT THE COMBINED ASPHALT CEMENT AND RUBBER SOLIDS CONTENT SHALL BE AS DIRECTED BY THE LABORATORY WITHIN THE FOLLOWING LIMITS.

THE ASPHALT CEMENT AND RUBBER SOLID PERCENT OF TOTAL MIX SHALL RANGE BETWEEN 4.5 TO 9.5.

THE QUANTITY OF ASPHALT CEMENT AND RUBBER COMPOUND SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION OF 95 PLUS OR MINUS 0.3 PERCENT ASPHALT CEMENT TO 5 PLUS OR MINUS 0.3 PERCENT RUBBER SOLIDS BY WEIGHT.

THE FINISHED MIX SHALL CONTAIN NO MATERIALS OTHER THAN THE APPROVED AGGREGATE, ASPHALT CEMENT AND RESIDUAL RUBBER SOLIDS.

## MATERIALS: MATERIALS SHALL BE:

COARSE AGGREGATE - CRUSHED AIR-COOLED SLAG MEETING THE QUALITY REQUIREMENTS OF 703.05.

FINE AGGREGATE - NATURAL SAND MEETING THE QUALITY REQUIREMENTS OF 703.05.

ASPHALT CEMENT ... 702.01. AC-20 AS DIRECTED BY THE ENGINEER. WHEN AC-20 IS USED THE PENETRATION AT 25° C (77° F) 100G, 5 SEC. SHALL NOT BE LESS THAN 60.

RUBBER COMPOUND - SUPPLEMENTAL SPECIFICATION 903, 1-1-69, SUPPLEMENTAL SPECIFICATION 924, 9-23-74.

THE RUBBER SOLIDS CONTENT OF THE RUBBER COMPOUND SHALL BE CERTIFIED IN TRIPPLICATE TO THE LABORATORY PRIOR TO START OF PRODUCTION.

## MIXING PLANT

MEANS SHALL BE PROVIDED FOR PROPORTIONING THE RUBBER COMPOUND INTO THE MIXER.

## BITUMINOUS MATERIAL PREPARATION

THE BITUMINOUS MATERIAL SHALL BE HEATED AND DELIVERED TO THE MIXTURE WITHIN A TEMPERATURE REQUIRED TO PRODUCE A MIXTURE THAT WHEN DISCHARGED FROM THE MIXER WILL BE WITHIN 335° F TO 370° F. BITUMINOUS MATERIAL SHALL NOT BE USED WHILE FOAMING.

## MIXING

THE COARSE AND FINE AGGREGATE SHALL BE MIXED DRY FOR NOT LESS THAN 15 SECONDS. ASPHALT CEMENT SHALL THEN BE ADDED IN AN EVENLY SPREAD SHEET OVER THE FULL LENGTH OF THE MIXER BOX AND THE MIXING CONTINUED FOR A PERIOD NOT LESS THAN 10 SECONDS AND AT LEAST UNTIL AGGREGATE IS COMPLETELY COATED WITH BITUMEN. RUBBER COMPOUNDS SHALL THEN BE ADDED TO THE COATED AGGREGATE AND THE MIXING CONTINUED FOR A PERIOD OF NOT LESS THAN 50 SECONDS. THE LENGTH OF DRY MIXING AND WET MIXING PERIODS MAY VARY, BUT UNDER NO CIRCUMSTANCES SHALL THE TOTAL MIXING TIME OR INTERVAL OF TIME BETWEEN THE OPENING OF THE WEIGH BOX GATE AND THE OPENING OF THE MIXER GATE BE LESS THAN 80 SECONDS. THE RUBBER COMPOUND SHALL BE SO DISPERSED IN THE ASPHALT OF THE PAVING MIXTURE THAT THERE WILL BE NO REMAINING BLACK RUBBERY PARTICLES VISIBLE TO THE NAKED EYE WHEN THE MIXTURE IS TESTED IN ACCORDANCE WITH METHOD 1012 ON FILE IN THE OFFICE OF THE DIRECTOR. A TECHNICAL REPRESENTATIVE OF THE RUBBER COMPOUND MANUFACTURER SHALL BE PRESENT SO THAT HE CAN OBSERVE THE MIXING OF THE ASPHALT EMULSION AND RUBBER COMPOUND. THE TEMPERATURE OF THE MIXTURE WHEN DISCHARGED FROM THE MIXER SHALL BE 335° F TO 370° F AS REQUIRED FOR GOOD WORKABILITY.

## SPREADING AND FINISHING

THE MIXTURE SHALL BE SPREAD IN ACCORDANCE WITH THE THICKNESS SPECIFIED IN THE CONTRACT, OR AS SHOWN ON THE PLANS.

TRAFFIC SHALL NOT BE PERMITTED ON THE COMPACTED MIXTURE UNTIL IT HAS COOLED SUFFICIENTLY TO PREVENT GLAZING AS DETERMINED BY THE ENGINEER.

## THE BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT PRICE FOR:

ITEM 404, ASPHALT CONCRETE, AS PER PLAN

## QUANTITY CALCULATIONS

MADE BY F.W.H. DATE 6-1-79  
CHECKED BY C.D. DATE 6-4-79

FHWA REGION	STATE	PROJECT
5	OHIO	

8  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## PAVEMENT (CONT.)

## ITEM 407, TACK COAT, AS PER PLAN

WHEN THE ABOVE ITEM IS CALLED FOR ON THE PLANS UNDER "GENERAL NOTE" WEATHER LIMITATIONS, ALL APPLICABLE PROVISIONS AS SET FORTH IN ITEM 407 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY EXCEPT AS FOLLOWS:

THE TACK COAT SHALL CONSIST OF A BLEND OF BITUMINOUS MATERIAL AND RUBBER COMPOUND. THE BITUMINOUS MATERIAL SHALL BE AN ASPHALT EMULSION MEETING THE REQUIREMENTS OF 702.04, SS-1, SS-1h, MS-2 OR RS-1 OR 702.02; RC-250, AS DIRECTED BY THE ENGINEER.

THE RUBBER COMPOUND SHALL BE A SYNTHETIC LATEX IN THE LIQUID FORM AND SHALL MEET THE REQUIREMENTS OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 903, DATED 1-1-69.

THE RUBBER COMPOUND SHALL BE ADDED TO THE ASPHALT EMULSION IN THE DISTRIBUTOR IN THE RATIO OF 95± 0.3 RESIDUAL ASPHALT TO 5± 0.3 PERCENT RUBBER SOLIDS BY WEIGHT. IT SHALL THEN BE CIRCULATED THROUGH THE DISTRIBUTOR UNTIL A UNIFORM MIXTURE IS OBTAINED. A TECHNICAL REPRESENTATIVE OF THE RUBBER COMPOUND MANUFACTURER, AT NO COST TO THE STATE, SHALL BE PRESENT SO THAT HE CAN OBSERVE THE MIXING OF THE ASPHALT EMULSION AND RUBBER COMPOUND.

TACK COAT SHALL BE APPLIED AT THE RATE OF 0.1 GALLON PER SQUARE YARD AND COVER AGGREGATE SHALL BE APPLIED AT THE RATE OF 5 POUNDS PER SQUARE YARD UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT PRICE FOR:

ITEM 407, TACK COAT, AS PER PLAN  
ITEM 407, COVER AGGREGATE

## WEATHER LIMITATIONS

THE CONTRACTOR SHALL SCHEDULE THE WEARING COURSE REMOVAL OPERATIONS TO START AFTER APRIL 1 OR BE COMPLETED IN A MANNER WHICH WILL PERMIT HIM TO MAKE NECESSARY BASE REPAIRS AND HAVE AT LEAST THE ASPHALT RESURFACING COMPLETED THROUGH THE 402 COURSE PRIOR TO NOVEMBER 1. IN THOSE AREAS WHERE THE 402 COURSE HAS BEEN PLACED AND DUE TO WEATHER LIMITATIONS THE PLACING OF THE SURFACE COURSE HAS TO BE POSTPONED TO THE NEXT CONSTRUCTION SEASON, AN APPLICATION OF RUBBERIZED ASPHALT TACK COAT, NOT TO EXCEED 0.10 GALLONS PER SQUARE YARD, WILL BE APPLIED TO THE BINDER COURSE SURFACE.

THE FOLLOWING ESTIMATED QUANTITY OF TACK COAT AND COVER AGGREGATE IS GIVEN UNDER THE "GENERAL NOTE" ITEM 407 TACK COAT - AS PER PLAN TO PERFORM THIS WORK AND SHALL BE USED ONLY WHEN DIRECTED BY THE ENGINEER.

ITEM 407 - TACK COAT, AS PER PLAN - 369 GALLONS  
ITEM 407 - COVER AGGREGATE 9 TONS

## BITUMINOUS MATERIAL

THE BITUMINOUS MATERIAL SHALL BE AN AC-20, MEETING AASHTO M226 EXCEPT THAT THE PENETRATION AT 25° C. (77° F.), 100 G., 5 SECONDS, SHALL NOT BE LESS THAN 60.

THE COARSE AGGREGATE FOR ASPHALT CONCRETE EXCEPT FOR THE ASPHALT CONCRETE SURFACE COURSE SHALL BE CRUSHED CARBONATE STONE OR CRUSHED AIR-COOLED BLAST-FURNACE SLAG. COARSE AGGREGATE FOR THE ASPHALT CONCRETE SURFACE COURSE SHALL BE CRUSHED AIR-COOLED BLAST-FURNACE SLAG. THE AGGREGATE SHALL MEET THE REQUIREMENTS OF 703.05.

## PLACING AND FINISHING OF 9" PORTLAND CEMENT BASE

APPROVED FLEXIBLE FORMS SHALL BE USED FOR CONSTRUCTION OF ALL CIRCULAR PAVEMENT EDGES HAVING A RADIUS OF 200 FEET OR LESS, CIRCULAR CONCRETE CURB AND CONCRETE CURB TRANSITIONS OF SHORT RADIUS. PARTICULAR CARE SHALL BE EXERCISED BY THE CONTRACTOR IN OBTAINING, IN A UNIFORM MANNER, THE CURB TRANSITION CALLED FOR ON THE PLANS.

HAND FINISHING WILL BE PERMITTED AS PER SECTION 451.09 OF THE GENERAL SPECIFICATIONS FOR THE REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT AT THE FOLLOWING LOCATIONS:

- INTERSECTIONS.
- PAVEMENT WHERE SHARP CURVATURES PREVENT THE USE OF A FINISHING MACHINE.
- VARIABLE WIDTH LANES WHICH IN THE OPINION OF THE ENGINEER REQUIRE HAND FINISHING.

LORAIN-CARNEGIE BRIDGE

# GENERAL NOTES

QUANTITY CALCULATIONS  
 MADE BY F.W.H. DATE 6-1-79  
 CHECKED BY C.D. DATE 6-4-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

9  
185

CUYAHOGA COUNTY  
 CUY-10-16.23

## PAVEMENT (CONT.)

### ITEM 402, ASPHALT CONCRETE - AS PER PLAN

WHEN ITEM 402 IS CALLED FOR ON THE PLANS OR PROPOSAL, ALL APPLICABLE PROVISIONS OF ITEM 402 ASPHALT CONCRETE AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED HEREIN.

### COMPOSITION

COARSE AGGREGATE (No. 57) AND FINE AGGREGATE SHALL BE COMBINED IN SUCH PROPORTIONS THAT THE RESULTING BLEND SHALL BE AS DIRECTED BY THE LABORATORY BUT WITHIN THE FOLLOWING LIMITS:

SIEVE	TOTAL PASSING - % BY WEIGHT
1 1/2 INCH	100
1 INCH	95-100
1/2 INCH	50-80
No. 4	25-60
No. 6	20-52
No. 50	3-20
No. 200	0-5

THE BITUMEN CONTENT SHALL BE AS DIRECTED BY THE LABORATORY WITHIN THE FOLLOWING LIMITS: THE BITUMEN PERCENT OF TOTAL MIX SHALL RANGE BETWEEN 4.0 AND 8.5 WITH A 6.2 PERCENT AVERAGE FOR SLAG AND 5.3 PERCENT AVERAGE FOR STONE. THE BASIS FOR PAYMENT SHALL BE FOR ACCEPTED QUANTITIES COMPLETE IN PLACE, AND PAYMENT SHALL BE MADE UNDER THE CONTRACT UNIT PRICE FOR:

ITEM 402 ASPHALT CONCRETE AS PER PLAN

### SEALING JOINTS IN CONCRETE BASE

CONTRACTION JOINTS SHALL BE SEALED WITH MATERIAL MEETING THE REQUIREMENTS OF SEC. 705.01 OR 705.02 IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF 451.13. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 801, PORTLAND CEMENT CONCRETE BASE

### PAVEMENT DIMENSIONS

ALL PAVEMENT DIMENSIONS SHOWN IN THESE PLANS ARE MEASURED TO THE FRONT FACE OF CURB.

### PAVEMENT REPLACEMENT

ALL SECTIONS OF DRIVES AND SIDEWALKS, WHICH ARE REMOVED FOR THE PURPOSE OF INSTALLING UNDERGROUND FACILITIES, SHALL BE REPLACED WITH SIMILAR TYPE MATERIAL AND RECONSTRUCTED TO ORIGINAL GRADE. GRAVEL DRIVES, HOWEVER, SHALL RECEIVE AN APPLICATION OF ITEM 409, SEAL COAT AND NO. 8 AGGREGATE.

ALL LABOR, MATERIALS AND OTHER COSTS INCURRED IN PERFORMING THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE COST OF THE UNDERGROUND FACILITY.

### APPROACH SLAB CONSTRUCTION

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE DURING THE CONSTRUCTION OF APPROACH SLABS ON THIS PROJECT:

ITEM 301 - BITUMINOUS AGGREGATE BASE, AC-20, RT-II OR RT-12	- 6 Cu. Yds.
ITEM 801 - 9" PORTLAND CEMENT CONCRETE BASE	- 40 Sq. Yds.
ITEM 310 - 6" SUBBASE TYPE II	- 6 Cu. Yds.
ITEM 202 - RIGID PAVEMENT REMOVED	- 40 Sq. Yds.

THE QUANTITIES ARE FOR USE ONLY WHEN DIRECTED BY THE ENGINEER.

PAYMENT FOR CURBS ON APPROACH SLABS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 611 - REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN.

## PAVEMENT (CONT.)

### REMOVAL, STORAGE, AND REUSE OF EXISTING STONE CURB

THE EXISTING STONE CURBS ON THE STRUCTURES AND THE ROADWAY APPROACHES TO THE STRUCTURES SHALL BE REMOVED AND EITHER STORED AT A LOCATION ON THE PROJECT SITE DIRECTED BY THE ENGINEER OR REUSED ON THE PROJECT AS INDICATED IN THE PLANS. THE CONTRACTOR SHALL BE PAID FOR THIS WORK AS FOLLOWS:

ITEM 202 - CURB REMOVED FOR REUSE	- LIN. FT.
ITEM 202 - CURB REMOVED FOR STORAGE	- LIN. FT.
ITEM 609 - RESET GRANITE CURB	- LIN. FT.

THE UNIT PRICE BID FOR ITEM 202 - CURB REMOVED FOR STORAGE SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE, LOAD, DELIVER, UNLOAD, AND NEATLY STORE THE CURB AT A PLACE DESIGNATED BY THE ENGINEER.

THE UNIT PRICE BID FOR ITEM 202 - CURB REMOVED FOR REUSE SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE, STORE, AND PROTECT THE CURB AT OR NEAR ITS POINT OF REUSE. IF THE CONTRACTOR ELECTS TO REMOVE AND STORE THE CURB TO BE REUSED AT A LOCATION REMOTE FROM ITS POINT OF REUSE, HE SHALL DO SO AT NO ADDITIONAL COST TO THE PROJECT.

THE UNIT PRICE BID FOR ITEM 609 - CURB RESET SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO CLEAN AND RESET THE STONE CURB AS SHOWN ON THE PLANS.

### SAW CUTS

THE COST OF SAW CUTTING EXISTING PAVEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM REQUIRING SAW CUTS.

## DRAINAGE

### EXISTING UNDERDRAINS

WHEN EXISTING UNDERDRAINS ARE ENCOUNTERED AND NO PROVISION HAS BEEN MADE TO PROVIDE POSITIVE OUTLET, THE OUTLET SHALL BE MADE IN ACCORDANCE WITH THE DIRECTION OF THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 603	6" CONDUIT, TYPE B	100 LIN. FT.
----------	--------------------	--------------

### REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR ALONG WITH LOCAL REPRESENTATIVES SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT 603 CONDUIT ITEMS OF THE CONTRACT.

### ITEM 605 - PIPE UNDERDRAINS - 706.08 PERFORATED, AS PER PLAN

ALL APPLICABLE PROVISIONS OF ITEM 605 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY UNLESS MODIFIED HEREIN AND THE FOLLOWING SHALL BE CONSIDERED AS SUPPLEMENTAL TO THE PROVISIONS SET FORTH THEREIN.

UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE PROPOSAL, 706.08 PERFORATED BELL AND SPIGOT VITRIFIED CLAY PIPE WITH PERFORATIONS IN ACCORDANCE WITH AASHTO M65 SHALL BE USED FOR PIPE UNDERDRAINS. IN ADDITION, THREE LUGS DESIGNED TO CENTER AND ALIGN THE PIPE AND PROVIDE A 3/8" GAP BETWEEN PIPE LENGTHS SHALL BE PROVIDED IN THE BELL END OF EACH PIPE.

### ITEM 603 - JACKING PIPE

AS PART OF THIS CONTRACT, IT WILL BE NECESSARY TO INSTALL A 15" CONDUIT UNDER THE EXISTING RAILWAY TRACKS BETWEEN STA. 40+00 AND STA. 41+00 CENTERLINE BRIDGE BY THE METHOD OF BORING AND JACKING. NO TRENCH EXCAVATION OR EQUIPMENT SHALL BE CLOSER THAN 10 FEET TO THE EDGE OF THE TRACK.

## DRAINAGE (CONT.)

### STORM AND/OR SANITARY SEWER BUILDING CONNECTIONS

WHEREVER EXISTING STORM AND/OR SANITARY SEWER BUILDING CONNECTIONS ARE ENCOUNTERED AND DAMAGED DUE TO THE CONTRACTOR'S OWN NEGLIGENCE DURING INSTALLATION OF STORM AND/OR SANITARY SEWER OR AS A RESULT OF ANY WORK PERFORMED BY THE CONTRACTOR AS PART OF THIS IMPROVEMENT, THE CONNECTION SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.

### EXISTING SEWERS

THE CONTRACTOR SHALL MAINTAIN SATISFACTORY SEWER SERVICE DURING CONSTRUCTION OR REBUILDING OF ANY SEWER, CONNECTION OR APPURTENANCE. THIS OPERATION, INCLUDING MAINTENANCE OF FLOW BY PUMPING OR OTHER APPROVED METHOD, SHALL BE CONSIDERED AS PART OF THE CONTRACT AND SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

IN THE EVENT THAT ANY OF THE EXISTING SEWER SYSTEM WHICH WILL REMAIN IN SERVICE IS FOUND TO BE DEFECTIVE, THE DEFECTIVE PIPE LENGTHS SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. THE FOLLOWING QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 603	12" TYPE C CONDUIT	540 LIN. FT.
ITEM 603	15" TYPE C CONDUIT	175 LIN. FT.
ITEM 603	24" TYPE C CONDUIT	140 LIN. FT.
ITEM 603	27" TYPE C CONDUIT	18 LIN. FT.
ITEM 603	36" TYPE C CONDUIT	12 LIN. FT.
ITEM 604	MANHOLES RECONSTRUCTED TO GRADE	3 EACH

THE ABOVE ITEMS ARE COST PARTICIPATION II.

### CONNECTIONS TO EXISTING PIPE

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

### MANHOLE COVERS

THE CONTRACTOR SHALL SET THE FRAMES FOR MANHOLE COVERS AT SUCH AN ELEVATION AND INCLINATION AS TO PLACE THE SURFACE OF THE COVER IN THE PLANE OF THE FINISHED SURFACE EXCEPT WHERE PLACED ON SLOPES EXCEEDING 1 ON 4.

### DOWNSPOUT ATTACHMENT ASSEMBLY

THIS WORK SHALL INCLUDE THE FURNISHING AND CONSTRUCTION OF 8" TYPE B 707.13 DRAINAGE CONDUIT, COUPLING BANDS, BENDS, CLEANOUT AND THE CONNECTION TO THE EXISTING MANHOLE IN ACCORDANCE WITH ITEM 603.01

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT OF ITEM 603 - 8" TYPE B 707.13 MEASURED AND ACCEPTED IN PLACE.

### ITEM 604 - FURNISH COMPLETE CASTINGS FOR EXISTING MANHOLES, CATCH BASIN GRATES, AND CATCH BASIN CASTINGS, AS PER PLAN

ALL EXISTING STRUCTURES TO BE ADJUSTED TO GRADE HAVE BEEN FIELD CHECKED TO DETERMINE THAT THE EXISTING CASTINGS ARE SUITABLE FOR SALVAGE AND REUSE AT THE PARTICULAR STRUCTURE TO BE ADJUSTED TO GRADE. HOWEVER, EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE, AS DETERMINED BY THE ENGINEER, DURING CONSTRUCTION OF THE PROJECT. TO PROVIDE FOR THIS CONTINGENCY AN ESTIMATED QUANTITY OF THE FOLLOWING HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTING OF THE REQUIRED TYPE, SIZE, AND STRENGTH FOR THE PARTICULAR STRUCTURE IN QUESTION.

ITEM 604	CUYAHOGA COUNTY MANHOLE FRAME No. 9	5 EACH
ITEM 604	CUYAHOGA COUNTY MANHOLE COVER No. 28	5 EACH
ITEM 604	CATCH BASIN GRATES	4 EACH
ITEM 604	CATCH BASIN CASTINGS	4 EACH

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE, AND PLACEMENT OF ALL EXISTING CASTINGS. ANY CASTINGS DAMAGED BY THE CONTRACTOR'S NEGLIGENT OPERATIONS, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTING BY THE CONTRACTOR, AT NO EXPENSE TO THE STATE. CATCH BASIN GRATES SHALL BE DIAGONAL GRATES OR AN APPROVED BICYCLE SAFE GRATE.

NEW CASTINGS SHALL NOT BE ORDERED UNLESS AUTHORIZED BY THE ENGINEER.

MADE F.W.H. DATE 6-1-79  
 TRACED C.R. DATE 6-4-79  
 CHECKED C.D. DATE 6-4-79  
 SCALE NONE

Howard, Needles, Tammen & Bergendoff  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

HNTB

# COMPUTATIONS AND SUB SUMMARIES

FHWA REGION	STATE	PROJECT
5	OHIO	

10  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## GENERAL NOTE

### QUANTITY CALCULATIONS

MADE BY CD DATE 10-5-78  
CHECKED BY FWH DATE 5-22-79

ITEM 202 SIDEWALK REMOVED					
STATION		SIDE	LENGTH (L.F.)	AREA (S.F.)	REMARKS
FROM	TO				
55+04.56	57+20	Lt.	216	1458	Scaled
55+04.56	57+08.5	Rt.	206	1390	Scaled
57+08.5	8+52	Rt.	49	352	Planimeter
8+52	8+98	Rt.	46	510	" "
58+78	59+01	Lt.		238	" "
15+46	15+91	Rt.	49	340	" "
15+68	15+91	Lt.		228	Planimeter
TOTAL				4,516	

### WATERWORK

ALL ADJUSTMENT TO GRADE OF WATER VALVE BOXES AND WATER MANHOLE CASTINGS SHALL BE PERFORMED IN ACCORDANCE WITH THE STATES SPECIFICATION FOR ITEM 604 AND THE STANDARD SPECIFICATIONS OF THE CITY OF CLEVELAND, DIVISION OF WATER.

THE CONTRACTOR SHALL PERFORM ALL REQUIRED OPERATIONS AND FURNISH ALL LABOR, MATERIALS, TOOLS AND INSPECTIONS NECESSARY TO COMPLETE THE WORK AS SPECIFIED OR AS DIRECTED.

ESTIMATED QUANTITIES OF THE FOLLOWING ITEMS ARE INCLUDED FOR USE AS DIRECTED BY THE ENGINEER.

ITEM 604 - WATER VALVE BOX, ADJUSTED TO GRADE..... 17 EACH  
ITEM 604 - WATER MANHOLE RING, ADJUSTED TO GRADE..... 5 EACH

ITEM 402 - 1 1/2" ASPHALT CONCRETE, AS PER PLAN						
STATION		LENGTH (FT.)	WIDTH (FT.)	AREA (SQ.FT.)	VOLUME (CU.YDS.)	LOCATION
FROM	TO					
55+04.56	57+29.72	Planimeter		16,668	77.2	Lt. & Rt.
58+98	59+75.00	Planimeter		11,732	54.3	Lt. & Rt.
COMMERCIAL ROAD						
8+57	9+17	Planimeter		4824	22.3	Lt. & Rt.
TOTAL					153.8	

ITEM 202 CURB REMOVED FOR REUSE				
STATION		LOCATION & SIDE	LENGTH (L.F.)	REMARKS
FROM	TO			
55+04.56	57+00	@A, Lt.	194	To be reset
55+04.56	57+08.5	@A, Rt.	211	To be reset
TOTAL			405	

ITEM 202 CURB REMOVED FOR STORAGE				
STATION		LOCATION & SIDE	LENGTH (L.F.)	REMARKS
FROM	TO			
23+77.89	55+04.56	@A, Lt. & Rt.	6253	From Structure
57+08.5		@A, Rt.	57	To be stored (S.M. Curblin)
8+52	8+98	@G, Rt.	46	
58+78	59+01	@A, Lt.	30	N.W. Corner Carnegie & Ontario
15+46	15+91	@F, Rt.	48	
15+68	15+91	@F, Lt.	31	N.E. Corner Carnegie & Ontario
57+00	58+78	@A, Lt.	178	From Structure
14+05	15+47	@F, Rt.	155	From Structure
TOTAL			6798	

ITEM 404 - 1 1/4" ASPHALT CONCRETE AS PER PLAN						
STATION		LENGTH (FT.)	WIDTH (FT.)	AREA (SQ.FT.)	VOLUME (CU.YDS.)	LOCATION
FROM	TO					
55+04.56	57+29.72	Planimeter		16,668	64.3	Lt. & Rt.
58+98	59+75.00	Planimeter		11,732	45.3	Lt. & Rt.
COMMERCIAL ROAD						
8+57	9+17	Planimeter		4824	18.6	Lt. & Rt.
TOTAL					128.2	

ITEM 202 RAILING REMOVED					
STATION		SIDE	LENGTH (L.F.)	REMARKS	
FROM	TO				
55+04.56	57+19	Lt.	215	Scaled	
55+04.56	57+11	Rt.	210	Scaled	
TOTAL			425		

ITEM 202 RIGID PAVEMENT REMOVED				
STATION		LOCATION & SIDE	AREA (SQ.YDS)	REMARKS
FROM	TO			
57+04.72	57+29.72	@A, Rt. & Lt.	256	Planimeter
58+85.70	59+12	@A, Rt. & Lt.	439	Planimeter
8+91	9+17	@G, Rt. & Lt.	284	Planimeter
TOTAL			979	

ITEM 202 - WEARING COURSE REMOVED						
STATION		SIDE	LENGTH (L.F.)	WIDTH (L.F.)	AREA (S.F.)	AREA (S.Y.)
FROM	TO					
55+04.56	57+04.72	Lt. & Rt.	Planimeter		14404	1601
8+57	8+91	Rt.	Planimeter		2244	250
58+98 Proj.	59+75 Proj.	Lt. & Rt.	Planimeter		8012	891
Total						2742

ITEM 407 - TACK COAT AS PER PLAN							
STATION		LENGTH (FT.)	WIDTH (FT.)	AREA (SQ.YDS.)	GALLONS	LOCATION	COVER AGGREGATE TONS
FROM	TO						
55+04.56	57+29.72	Planimeter		1852	185.2	Lt. & Rt.	4.63
58+98	59+75.00	Planimeter		1303.6	130.4	Lt. & Rt.	3.26
COMMERCIAL ROAD							
8+57	9+17	Planimeter		536	53.6	Lt. & Rt.	1.34
TOTAL					369.2		9.23

# COMPUTATIONS AND SUB SUMMARIES

FHWA REGION	STATE	PROJECT
5	OHIO	

11  
185

CUYAHOGA COUNTY  
CUY-10-16.23

QUANTITY CALCULATIONS  
MADE BY C.D. DATE 11-20-78  
CHECKED BY F.W.H. DATE 5-31-79

ITEM 403 - ASPHALT CONCRETE						
STATION		SIDE	LENGTH (L.F.)	WIDTH (L.F.)	AREA (S.F.)	VOLUME (C.Y.)
FROM	TO					
55+04.56	57+04.72	Lt. & Rt.	205	10	2050	3.5
Total						3.5

ITEM 608, 4 1/2" CONCRETE WALK, AS PER PLAN						
STATION		SIDE	LENGTH (L.F.)	AREA (S.F.)		REMARKS
FROM	TO					
55+04.56	57+20	Lt.	216	1458		Scaled
55+04.56	57+08.5	Rt.	206	1390		Scaled
57+08.5	8+52 @ "G"	Rt.	49	352		Planimeter
8+52 @ "G"	8+98 @ "G"	Rt.	46	510		Planimeter
58+78	59+01	Lt.		238		" "
15+46 @ "F"	15+91 @ "F"	Rt.	49	340		" "
15+68 @ "F"	15+91 @ "F"	Lt.		228		Planimeter
TOTAL				4,516		

ITEM 612 CONCRETE TRAFFIC ISLAND				
STATION		LOCATION AND SIDE	AREA SQ. YDS.	REMARKS
FROM	TO			
13+83	14+56	@ "F", Rt.	180	Planimetered

REINFORCED CONCRETE RAILING, TYPE C						
STATION		SIDE	5/17 REINFC. CONC. RAILING L.F.	SPECIAL TINTING OF RAILING CONC. L.F.		REMARKS
FROM	TO					
55+04.56	57+11 @ "A"	Rt.	210	210		SEE NOTE
55+04.56	57+19 @ "A"	Lt.	215	215		ON SHEET B
TOTAL			425	425		

ITEM 621 PAVEMENT MARKING		
DESCRIPTION	QUANTITY	UNIT
ISLAND MARKING	1720	Sq. Ft.

ITEM 609 - RESET GRANITE CURB				
STATION		SIDE	LENGTH (L.F.)	REMARKS
FROM	TO			
55+04.56	57+21	Lt.	117	
55+04.56	57+08.5	Rt.	206	
57+08.5		Rt.	50	
TOTAL			373	

ITEM 844 - SIGNS & SIGN SUPPORTS		
DESCRIPTION	QUANTITY	UNIT
W-60c-36, Warning Sign	1	Each
No. 3 Post, As per Plan	11	Lin. Ft.

ITEM 604-MONUMENT ASSEMBLY CUY. CO.-TYPE 36B		
STATION	EACH	REMARKS
54+41.42 @ "A" Proj. @	1	P.C. 2°30' Curve
56+97.67 Proj. @	1	P.T. 2°30' Curve
TOTAL	2	

ITEM 609 - CURB, TYPE 6, AS PER PLAN					
STATION		SIDE	LENGTH (L.F.)		REMARKS
FROM	TO				
8+54 @ "G"	8+74 @ "G"	Rt.	20		
8+86 @ "G"	8+91 @ "G"	Lt.	7		
15+69 @ "F"	15+91 @ "F"	Rt.	22		
15+68 @ "F"	15+91 @ "F"	Lt.	31		N.E. Corner
TOTAL			80		

ITEM 847 PAVEMENT MARKING		
DESCRIPTION	QUANTITY	UNIT
4" Lane Line - White, 847.09	1.51	Miles
4" Edge Line - White, 847.09	1.26	Miles
4" Edge Line - Yellow, 847.09	1.18	Miles
6" Crosswalk Line - White, 847.09	780	Lin. Ft.
8" Channelizing Line - White, 847.09	247	Lin. Ft.
12" Transverse Stripe - Yellow, 847.09	425	Lin. Ft.
24" Stop Line - White, 847.09	244	Lin. Ft.
4-4-4 Double Solid Centerline - Yellow, 847.09	965	Lin. Ft.
Lane Arrow, 847.09	1	Each

ITEM 608 - CURB RAMP			
STATION	SIDE	EACH	REMARKS
15+81 @ "F"	Rt.	1	Type 1
10+88 @ "H"	Rt.	1	Type 1
10+93 @ "H"	Lt.	1	Type 1
9+09 @ "G"	Lt.	1	Type 1
9+37 @ "G"	Lt.	1	Type 1
9+88 @ "G"	Rt.	1	Type 1
Total		6	

ITEM 310 - 3" SUBBASE, 703.08 or 703.10, TYPE II  
TOTAL AREA of APPROACH SLAB = 979 S.Y. x 0.08333 = 81.58 C.Y.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN			
STATION		AREA (S.Y.)	REMARKS
FROM	TO		
57+04.72	57+29.72	540	Planimeter
58+85.70	59+10.70	439	Planimeter
TOTAL		979	

MADE C.D. DATE 11-20-78  
TRACED DATE  
CHECKED F.W.H. DATE 5-31-79  
SCALE None

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**



# GENERAL SUMMARY

QUANTITY CALCULATIONS  
 MADE BY C.D. DATE 11-20-78  
 CHECKED BY F.W.H. DATE 5-21-79

FHWA REGION	STATE	PROJECT
5	OHIO	

13  
185

CUYAHOGA COUNTY  
 CUY-10-16.23

SHEET NUMBER		COST PARTICIPATION		TOTAL QUANT.	UNIT	ITEM	DESCRIPTION
		I	II				ALL TYPE CODE 6706 UNLESS OTHERWISE NOTED
11	23						PAVEMENT MARKING & SIGNING
							No.3 Post, As Per Plan
11		11		11	Lin. Ft.	844	W-60c-36, WARNING SIGN
1		1		1	EACH	844	
1.51		1.51		1.51	MILES	847	4" LANE LINE - WHITE, 847.09
1.26		1.26		1.26	MILES	847	4" EDGE LINE - WHITE, 847.09
1.18		1.18		1.18	MILES	847	4" EDGE LINE - YELLOW, 847.09
780		780		780	LIN. FT.	847	6" CROSSWALK LINE - WHITE, 847.09
247		247		247	LIN. FT.	847	8" CHANNELIZING LINE - WHITE, 847.09
425		425		425	LIN. FT.	847	12" TRANSVERSE STRIPE - YELLOW, 847.09
244		244		244	LIN. FT.	847	24" STOP LINE - WHITE, 847.09
980		980		980	LIN. FT.	847	4-4-4 DOUBLE SOLID CENTERLINE - YELLOW, 847.09
1		1		1	Each	847	Lane Arrow, 847.09
1720		1720		1720	SQ. FT.	621	ISLAND MARKING
							DRAINAGE CONTINUED
	22		22	22	LIN. FT.	SPECIAL	CLEANING 8" SEWER
	196		196	196	LIN. FT.	SPECIAL	CLEANING 10" SEWER
	598		598	598	LIN. FT.	SPECIAL	CLEANING 12" SEWER
	304		304	304	LIN. FT.	SPECIAL	CLEANING 15" SEWER
	335		335	335	LIN. FT.	SPECIAL	CLEANING 18" SEWER
	178		178	178	LIN. FT.	SPECIAL	CLEANING 20" SEWER
	11		11	11	LIN. FT.	SPECIAL	CLEANING 21" SEWER
	372		372	372	LIN. FT.	SPECIAL	CLEANING 24" SEWER
	1250		1250	1250	LIN. FT.	SPECIAL	CLEANING No. 2 SEWER
	574		574	574	LIN. FT.	SPECIAL	CLEANING 36" SEWER
	154		154	154	LIN. FT.	SPECIAL	CLEANING 30" X 17" CORR. M.P. SEWER
	122		122	122	LIN. FT.	SPECIAL	TELEVISIONING 10" SEWER
	598		598	598	LIN. FT.	SPECIAL	TELEVISIONING 12" SEWER
	304		304	304	LIN. FT.	SPECIAL	TELEVISIONING 15" SEWER
	335		335	335	LIN. FT.	SPECIAL	TELEVISIONING 18" SEWER
	178		178	178	LIN. FT.	SPECIAL	TELEVISIONING 20" SEWER
	11		11	11	LIN. FT.	SPECIAL	TELEVISIONING 21" SEWER
	372		372	372	LIN. FT.	SPECIAL	TELEVISIONING 24" SEWER
	1250		1250	1250	LIN. FT.	SPECIAL	TELEVISIONING No. 2 SEWER
	574		574	574	LIN. FT.	SPECIAL	TELEVISIONING 36" SEWER
	154		154	154	LIN. FT.	SPECIAL	TELEVISIONING 30" X 17" CORR. M.P. SEWER
							For Lighting Quantities, See Sheet 32
							For Structure Quantities, See Sheet 74
							For M.E.L.P. Quantities, See Sheet 41
					LUMP	LUMP	614 MAINTAINING TRAFFIC
					LUMP	LUMP	619 FIELD OFFICE
					LUMP	LUMP	623 CONSTRUCTION LAYOUT STAKES, AS PER PLAN
					Lump	Lump	624 Mobilization

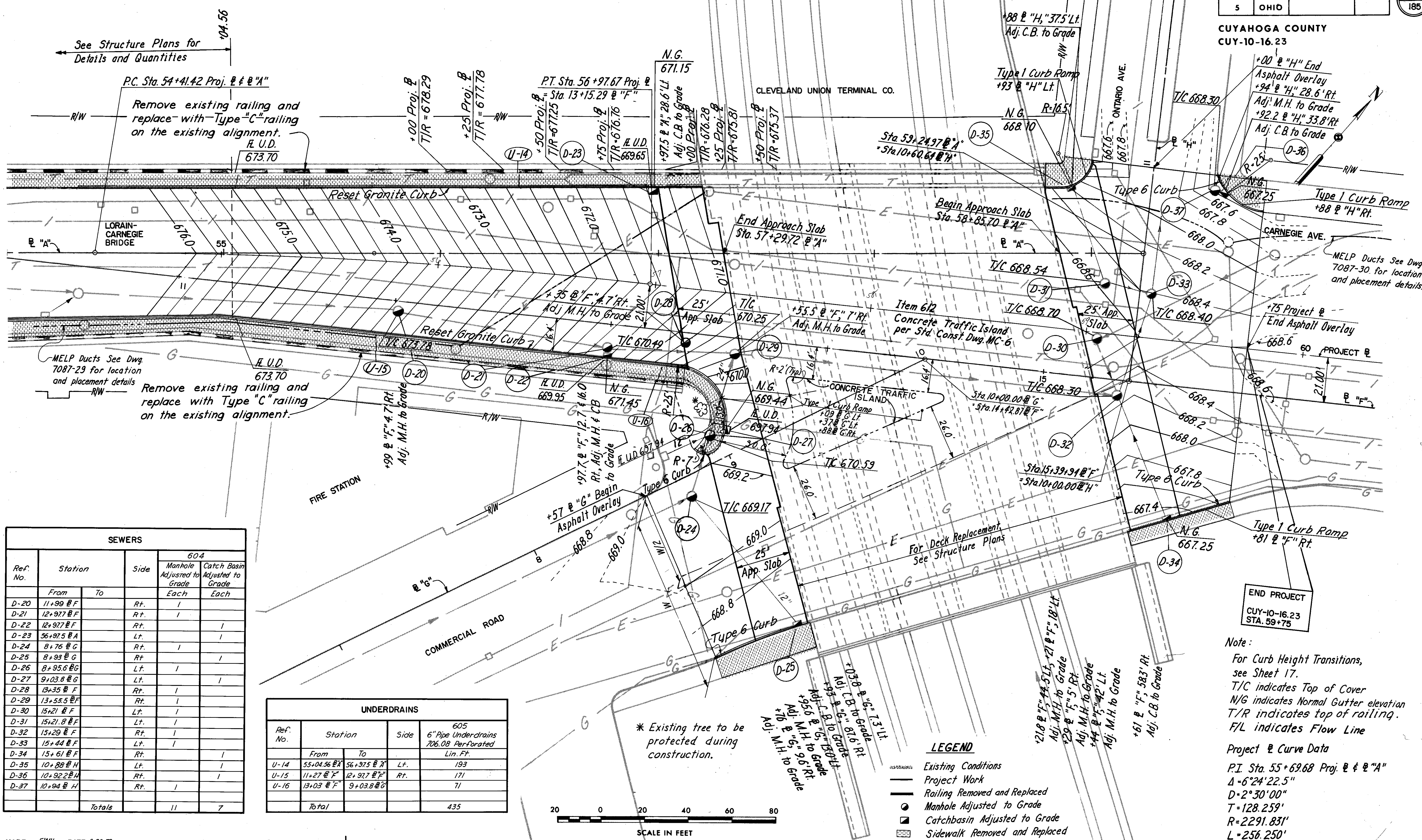
Cost Participation I = Normal Participation  
 Cost Participation II = 100% County Participation

MADE BY C.D. DATE 11-20-78  
 TRACED BY F.W.H. DATE 11-20-78  
 CHECKED BY F.W.H. DATE 5-21-79  
 SCALE \_\_\_\_\_

**Howard, Needles, Tammen & Bergendoff**  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

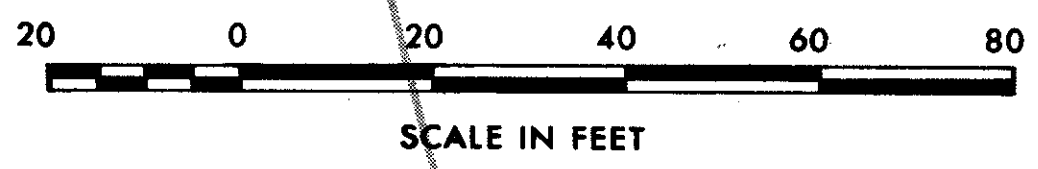
**HNTB**

CUYAHOGA COUNTY  
CUY-10-16.23



SEWERS					
Ref. No.	Station		Side	604	
	From	To		Manhole Adjusted to Grade Each	Catch Basin Adjusted to Grade Each
D-20	11+99 @ F		Rt.	1	
D-21	12+97 @ F		Rt.	1	
D-22	12+97 @ F		Rt.		1
D-23	56+97.5 @ A		Lt.		1
D-24	8+76 @ G		Rt.	1	
D-25	8+93 @ G		Rt.		1
D-26	8+95.6 @ G		Lt.	1	
D-27	9+03.8 @ G		Lt.		1
D-28	13+35 @ F		Rt.	1	
D-29	13+55.5 @ F		Rt.	1	
D-30	15+21 @ F		Lt.	1	
D-31	15+21 @ F		Lt.	1	
D-32	15+29 @ F		Rt.	1	
D-33	15+44 @ F		Lt.	1	
D-34	15+61 @ F		Rt.		1
D-35	10+88 @ H		Lt.		1
D-36	10+92.2 @ H		Rt.		1
D-37	10+94 @ H		Rt.	1	
Totals				11	7

UNDERDRAINS					
Ref. No.	Station		Side	605	
	From	To		6" Pipe Underdrains	706.08 Perforated Lin. Ft.
U-14	55+04.56 @ A	56+97.5 @ A	Lt.	193	
U-15	11+27 @ F	12+97 @ F	Rt.	171	
U-16	13+03 @ F	9+03.8 @ G		71	
Total				435	



- LEGEND**
- Existing Conditions
  - Project Work
  - Railing Removed and Replaced
  - Manhole Adjusted to Grade
  - Catchbasin Adjusted to Grade
  - Sidewalk Removed and Replaced

Note:  
For Curb Height Transitions, see Sheet 17.  
T/C indicates Top of Cover  
N/G indicates Normal Gutter elevation  
T/R indicates top of railing.  
F/L indicates Flow Line

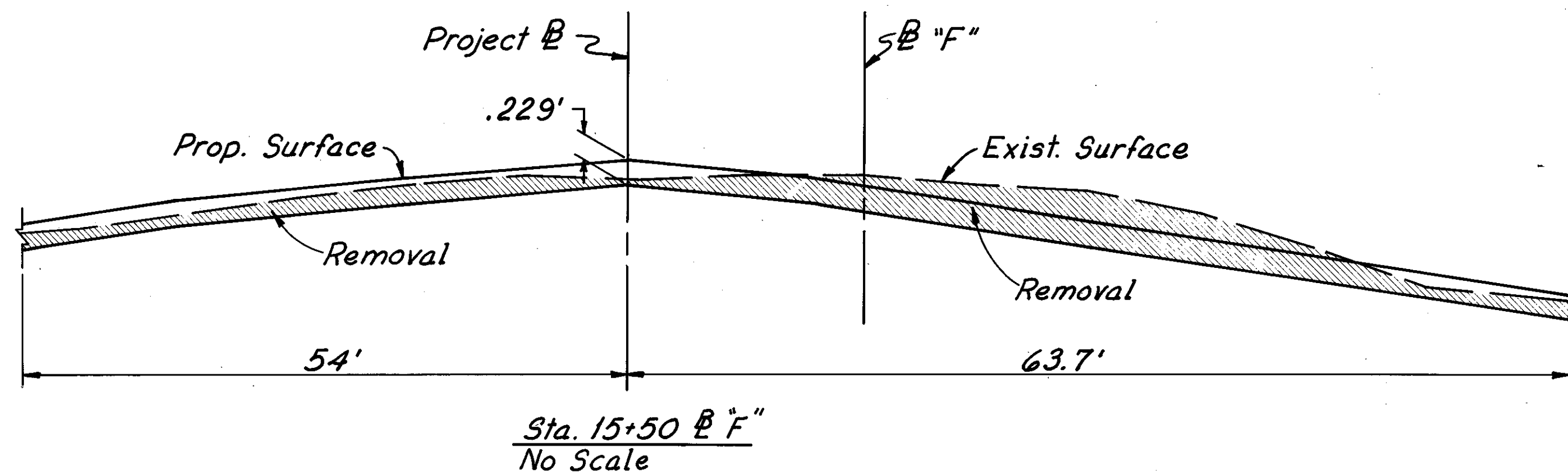
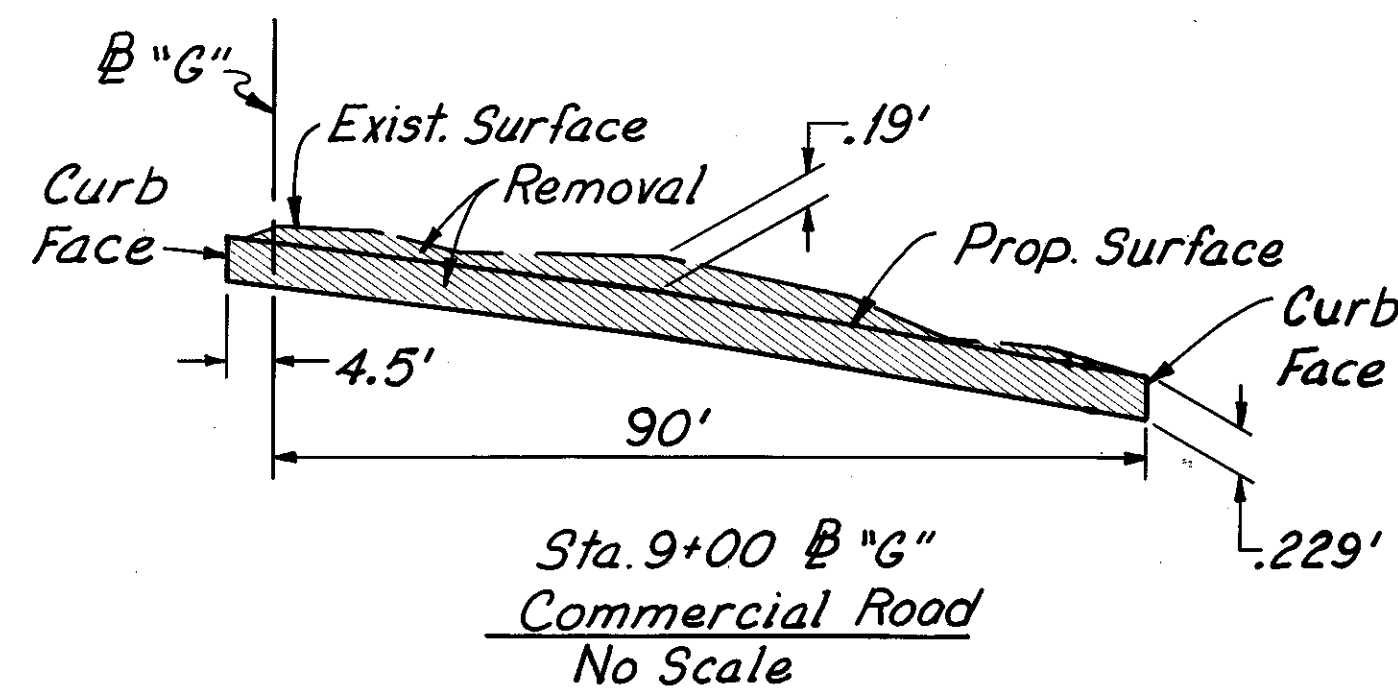
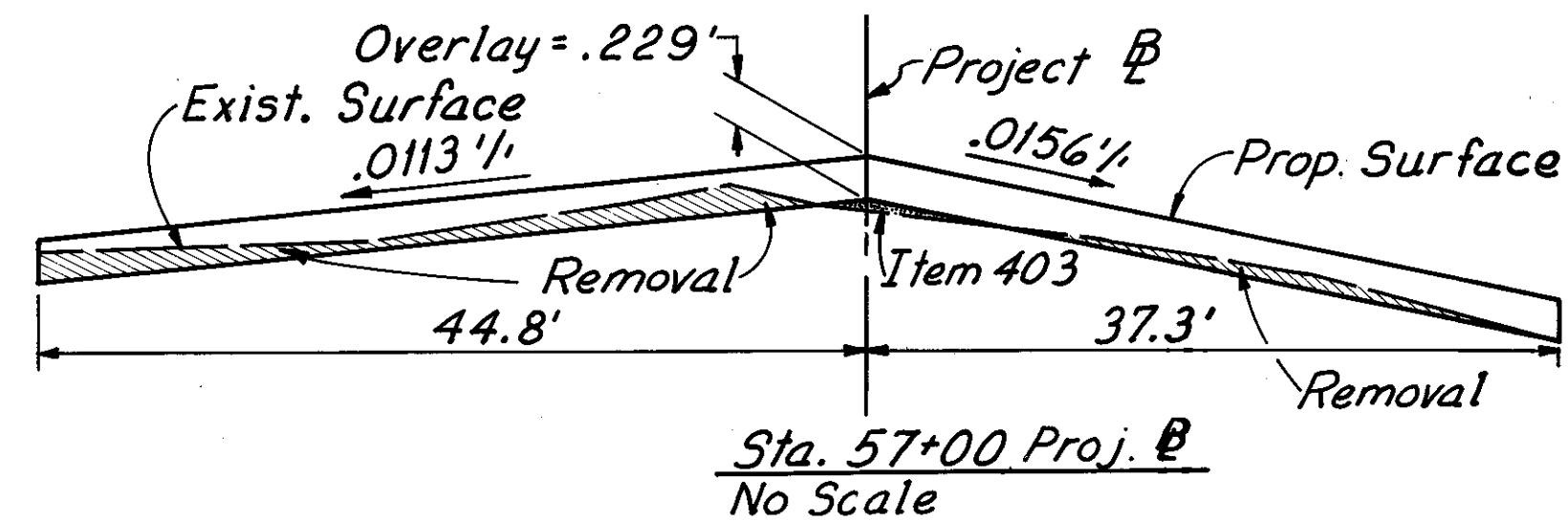
Project @ Curve Data  
P.I. Sta. 55+69.68 Proj. @ @ "A"  
Δ=6°24'22.5"  
D=2°30'00"  
T=128.259'  
R=2291.831'  
L=256.250'  
E=3.586'

# REMOVAL PLAN

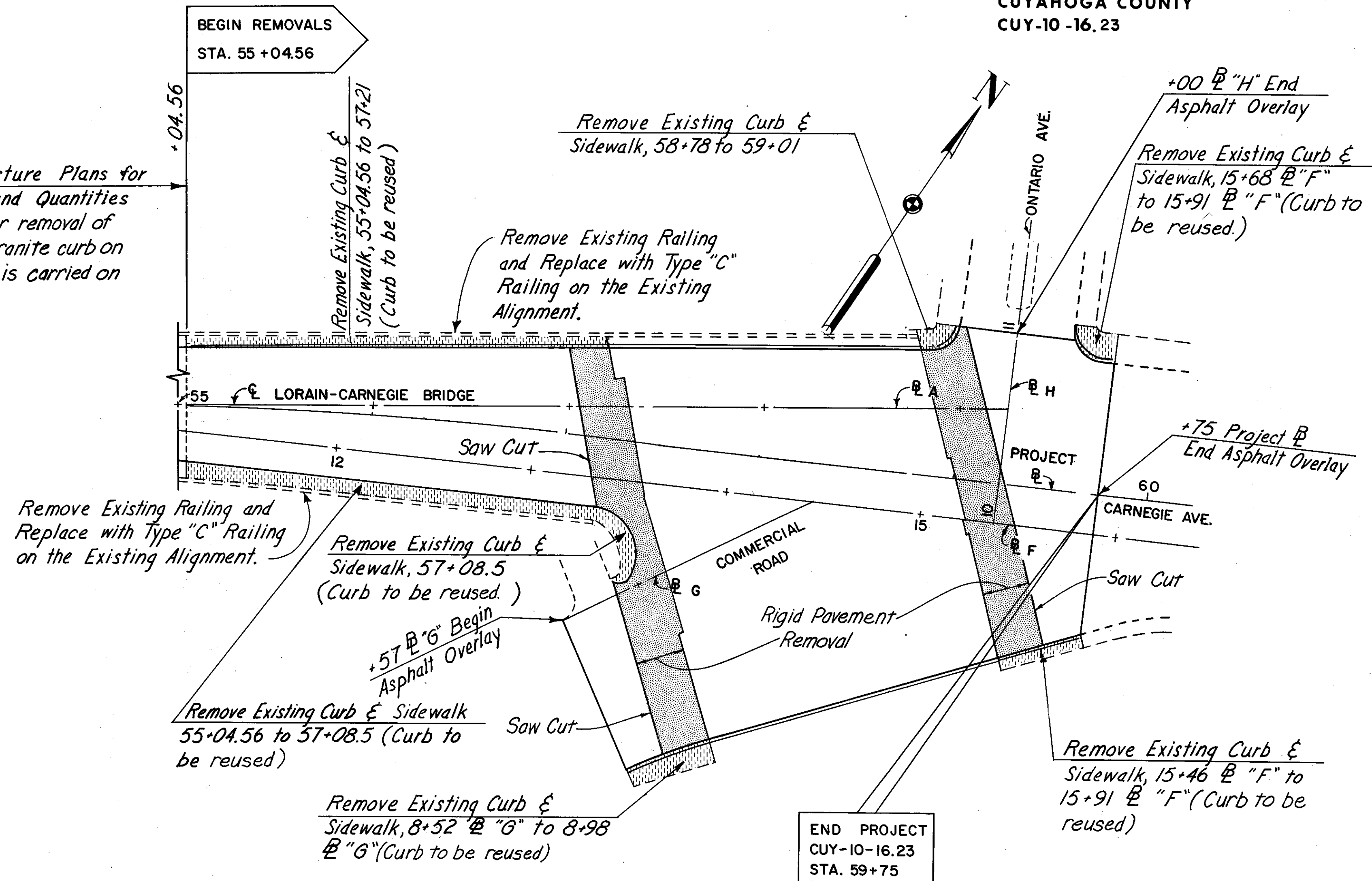
FHWA REGION	STATE	PROJECT
5	OHIO	

15  
185

CUYAHOGA COUNTY  
CUY-10-16.23



See Structure Plans for  
Details and Quantities  
(Quantity for removal of  
existing granite curb on  
structure is carried on  
Sheet 10.)



- LEGEND**
- Wearing Course Removal
  - Curb and Sidewalk Removal
  - Rigid Pavement Removal
  - Railing Removal

MADE C.D. DATE 7-12-78  
TRACED M.A.T. DATE 7-13-78  
CHECKED F.W.H. DATE 5-14-79  
SCALE AS SHOWN

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

LORAIN - CARNEGIE BRIDGE

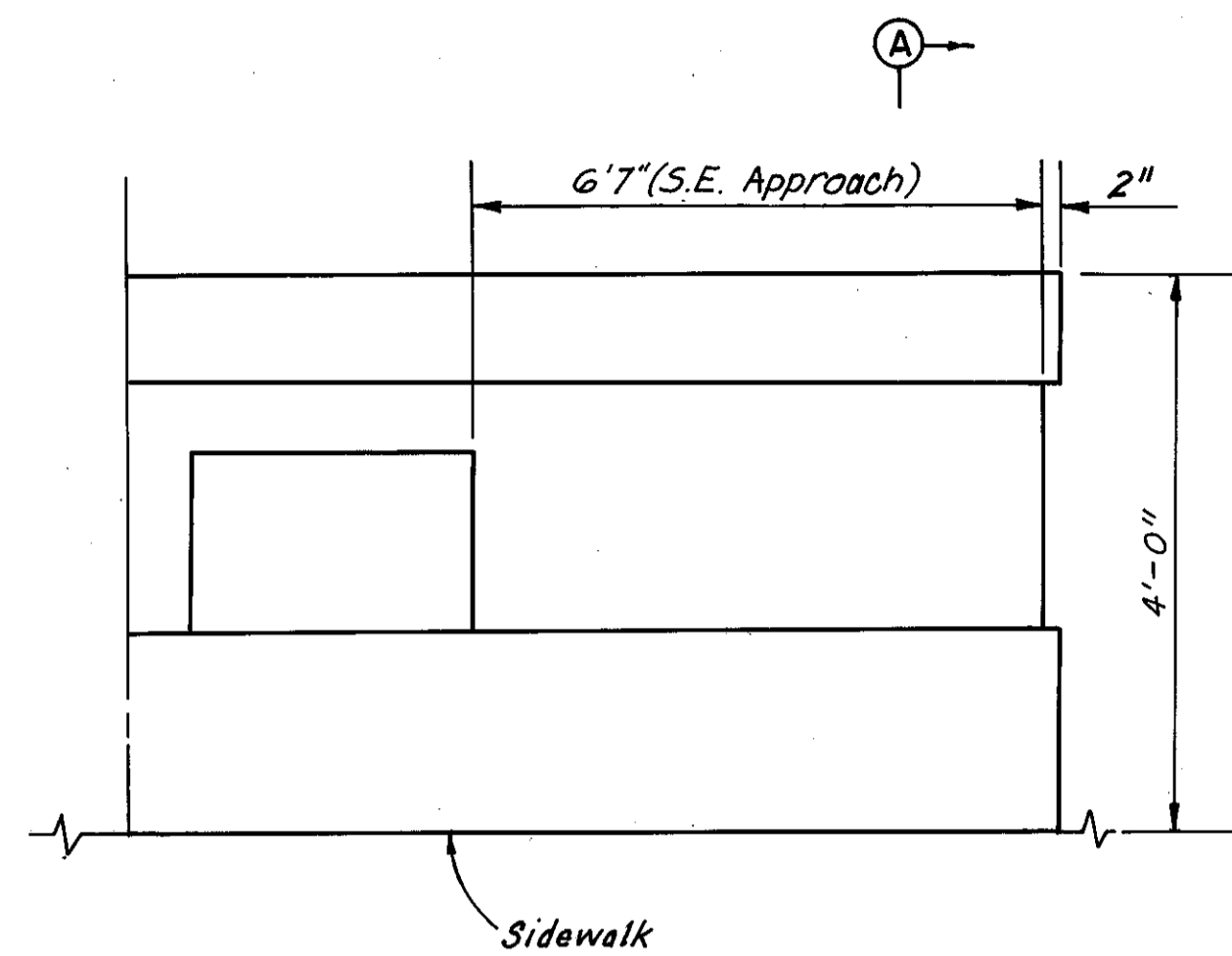


# MISCELLANEOUS DETAILS

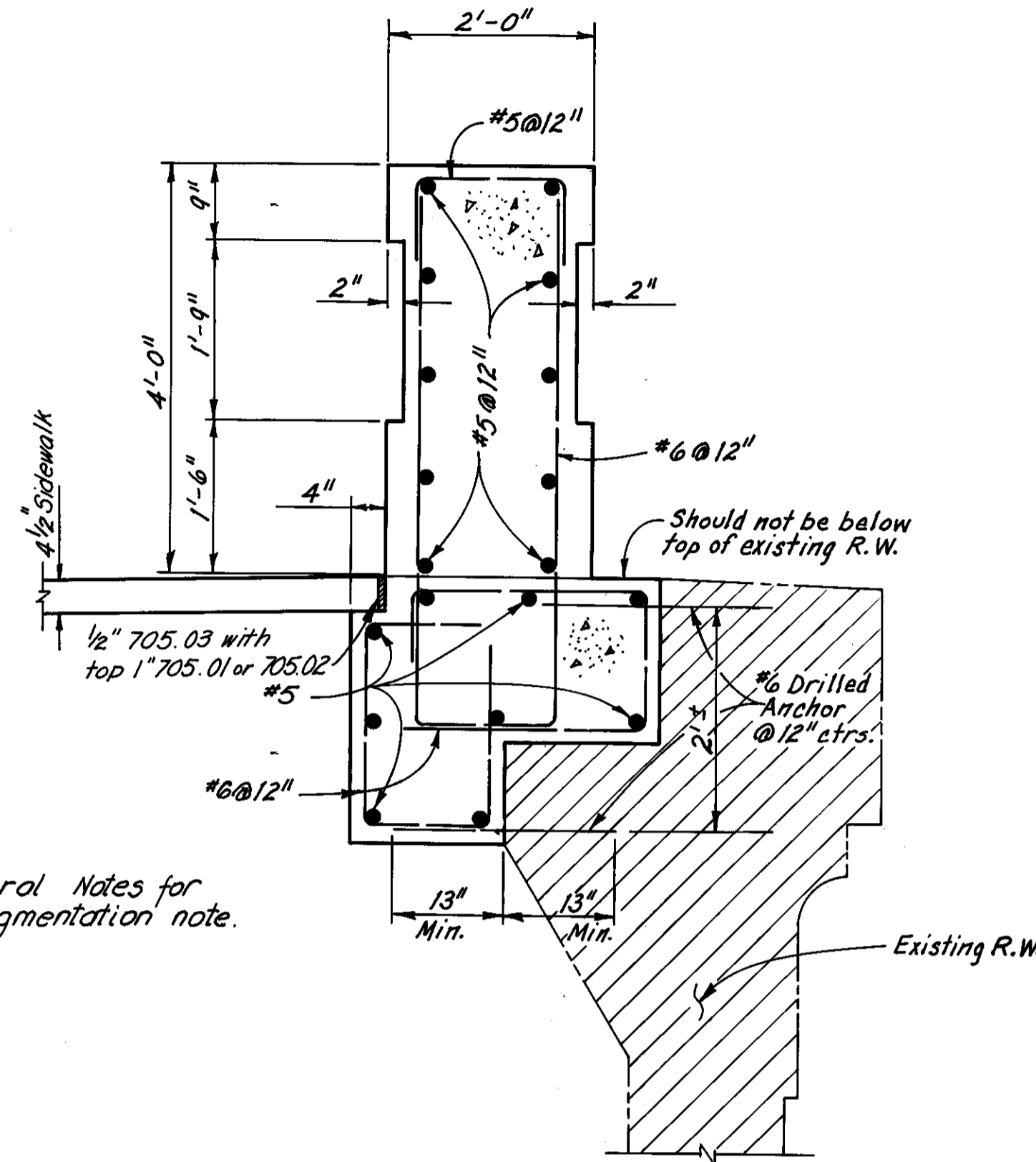
FHWA REGION	STATE	PROJECT
5	OHIO	

16  
185

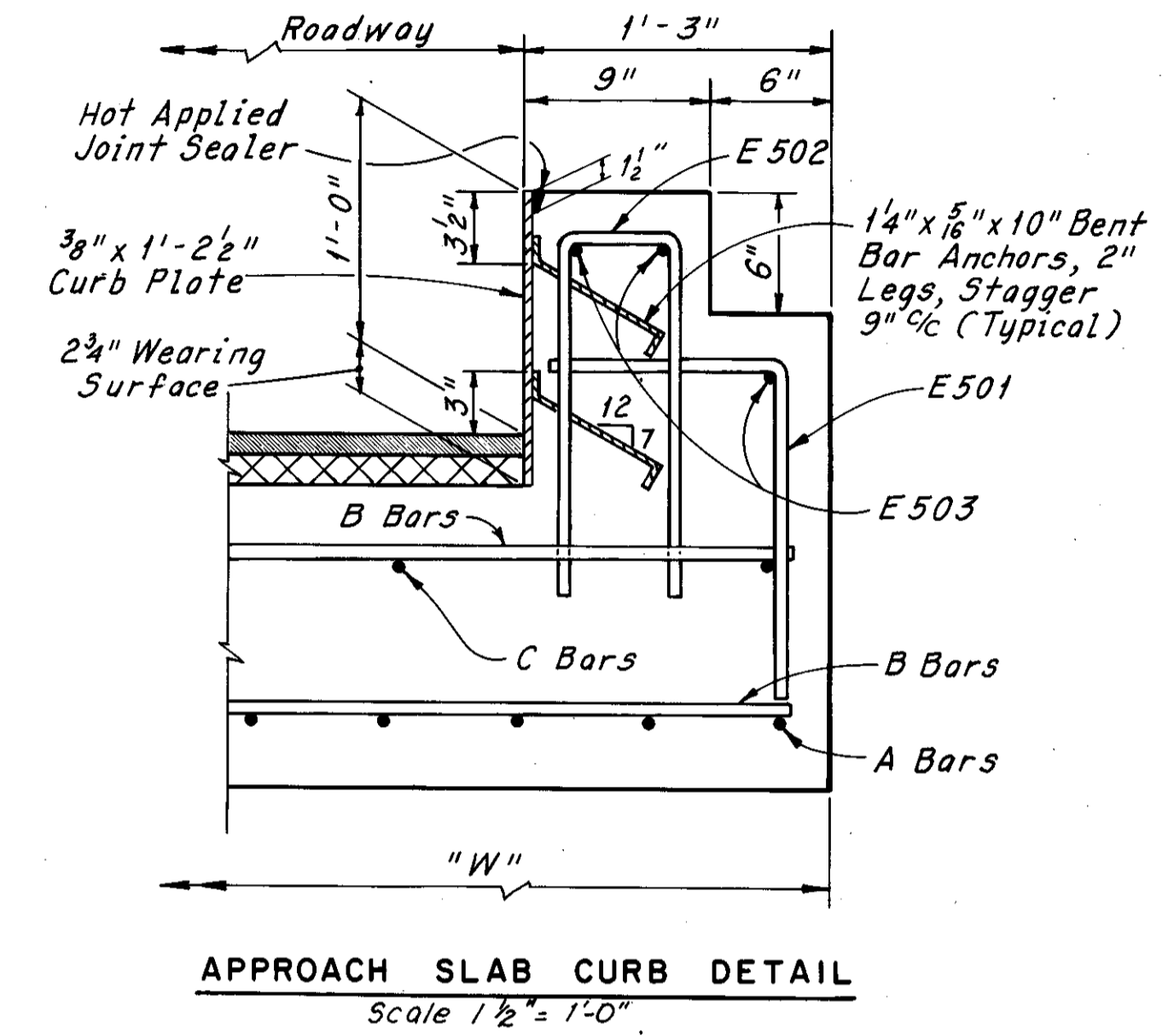
CUYAHOGA COUNTY  
CUY-10-16.23



**END POST ELEVATION VIEW**  
Scale:  $\frac{3}{4}$ " = 1'-0"  
(Looking North)



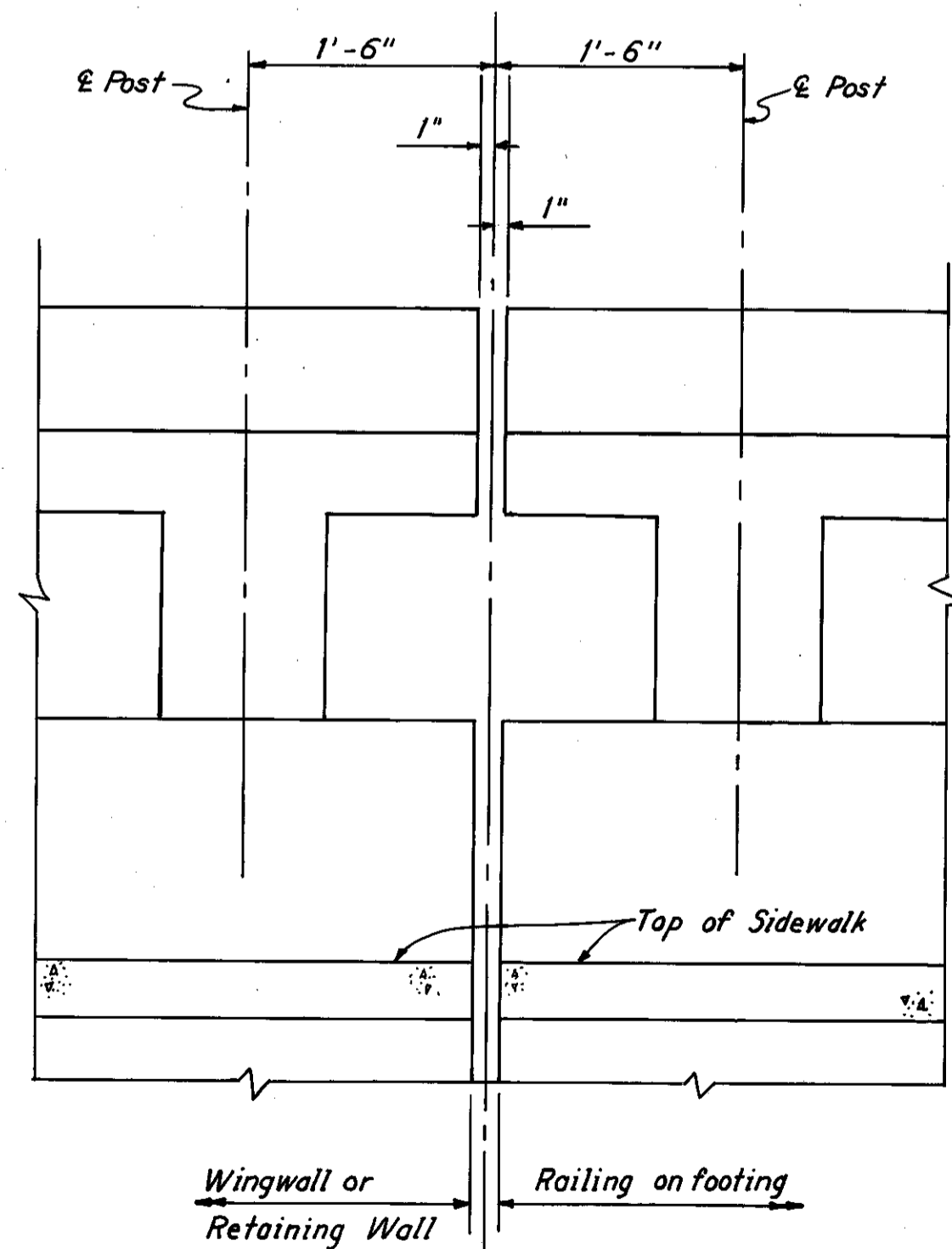
**SECTION A-A**  
(At Southeast Approach)  
Scale:  $\frac{3}{4}$ " = 1'-0"



**APPROACH SLAB CURB DETAIL**  
Scale:  $1 \frac{1}{2}$ " = 1'-0"

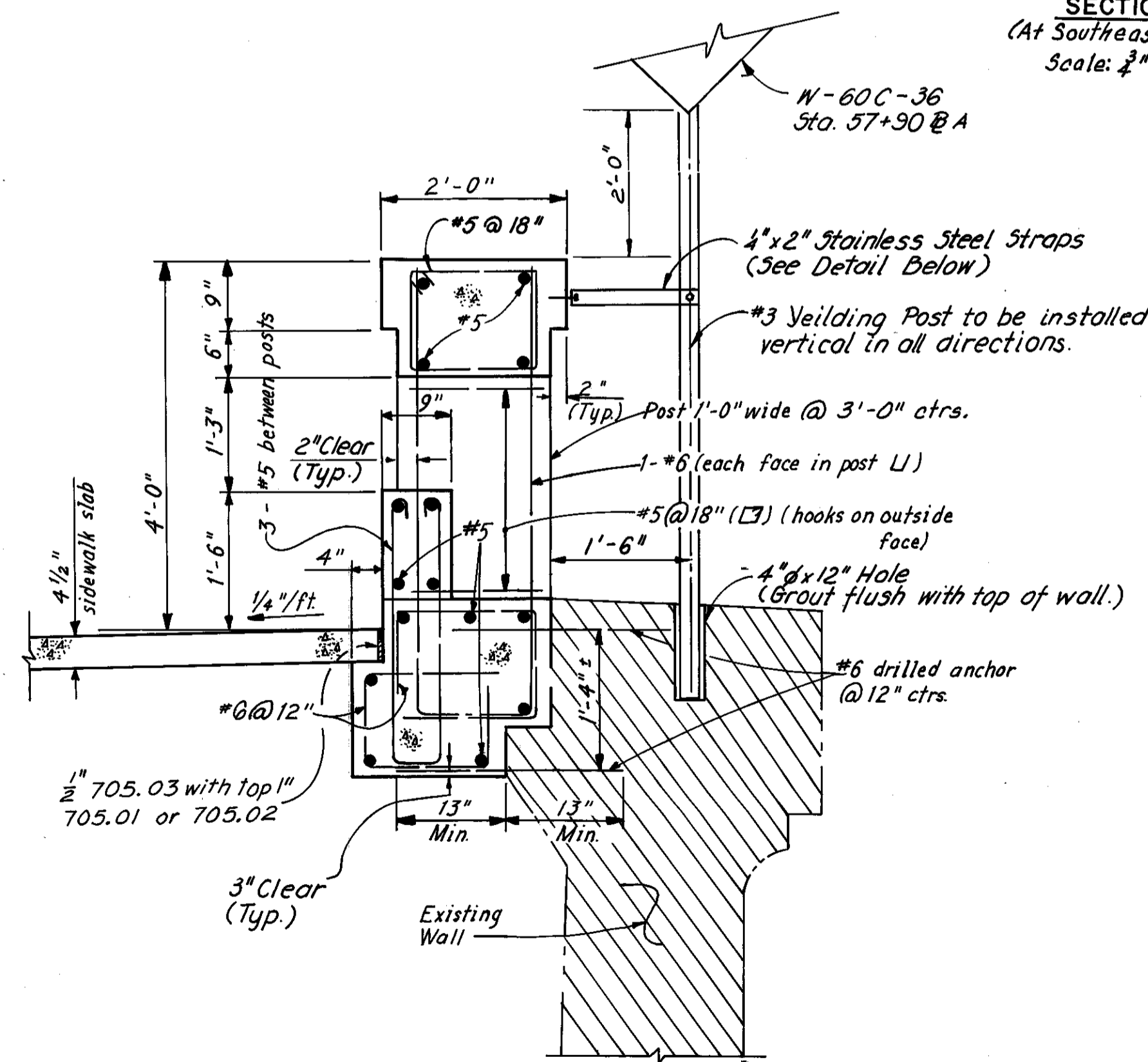
See General Notes for railing pigmentation note.

The cost of the reinforcing steel is included in the unit price bid for item 517.



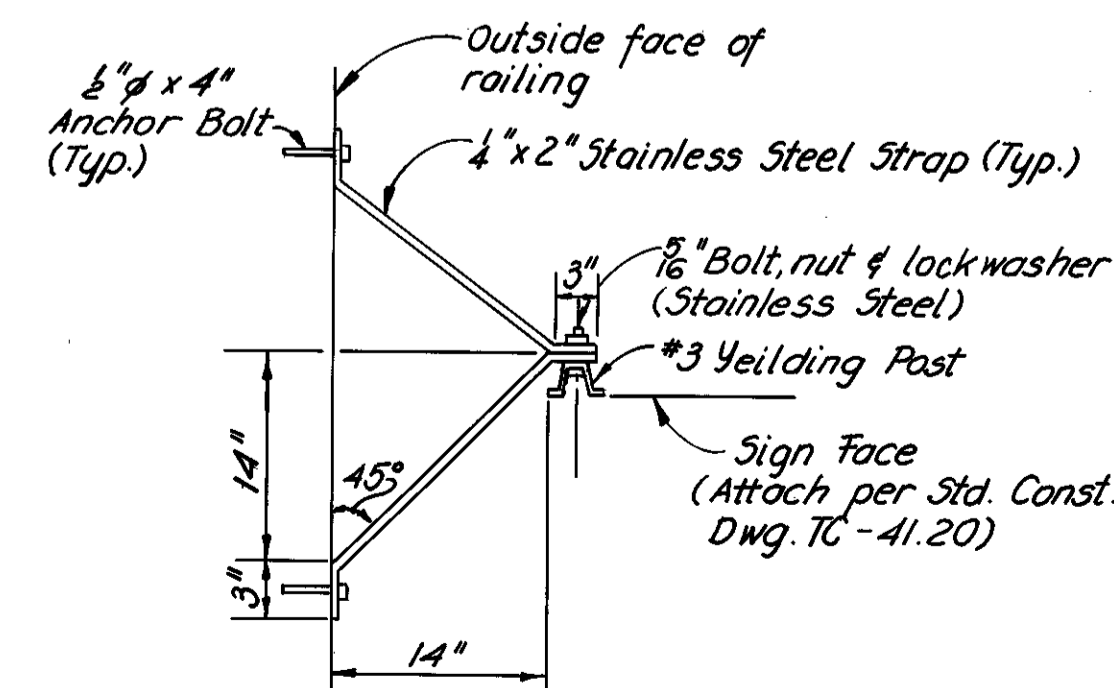
**RAILING TREATMENT AT END OF WINGWALL OR EXISTING RETAINING WALL**

Scale: 1" = 1'-0"



**TYPE "C" RAILING**

Scale:  $\frac{3}{4}$ " = 1'-0"



**POST ATTACHMENT DETAIL**  
(No Scale)

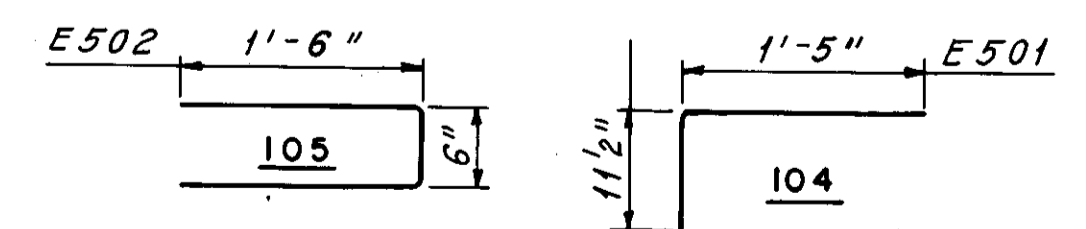
Note:  
For additional details of Approach Slabs, see Ohio Standard Drawing AS-1-72, dated 6-30-72.

For Wearing Surface Detail - See Bridge Plans

REINFORCING STEEL - CURB AREA (FOR ONE APPROACH SLAB)				
MARK	NO. REQ'D.	LENGTH	TYPE	WEIGHT
E 501	26	2'-3"	104	61
E 502	50	3'-3"	105	169
E 503	6	24'-6"	Str.	153
		Total	=	383 lbs.

Note:  
502 bars in approach slab curbs space @ 1'-0" c/c.  
501 bars in approach slab curbs space @ 2'-0" c/c.

## BENDING DIAGRAMS



## APPROACH SLAB DETAILS

Reinforcing steel is included in Item 611 for payment

Note:  
For additional Approach Slab Details, see sheets 27-29.

MADE F.S.V. DATE 5-14-78  
TRACED K.L.R. DATE 6-20-78  
CHECKED F.S.V. DATE 6-6-79  
SCALE AS SHOWN

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

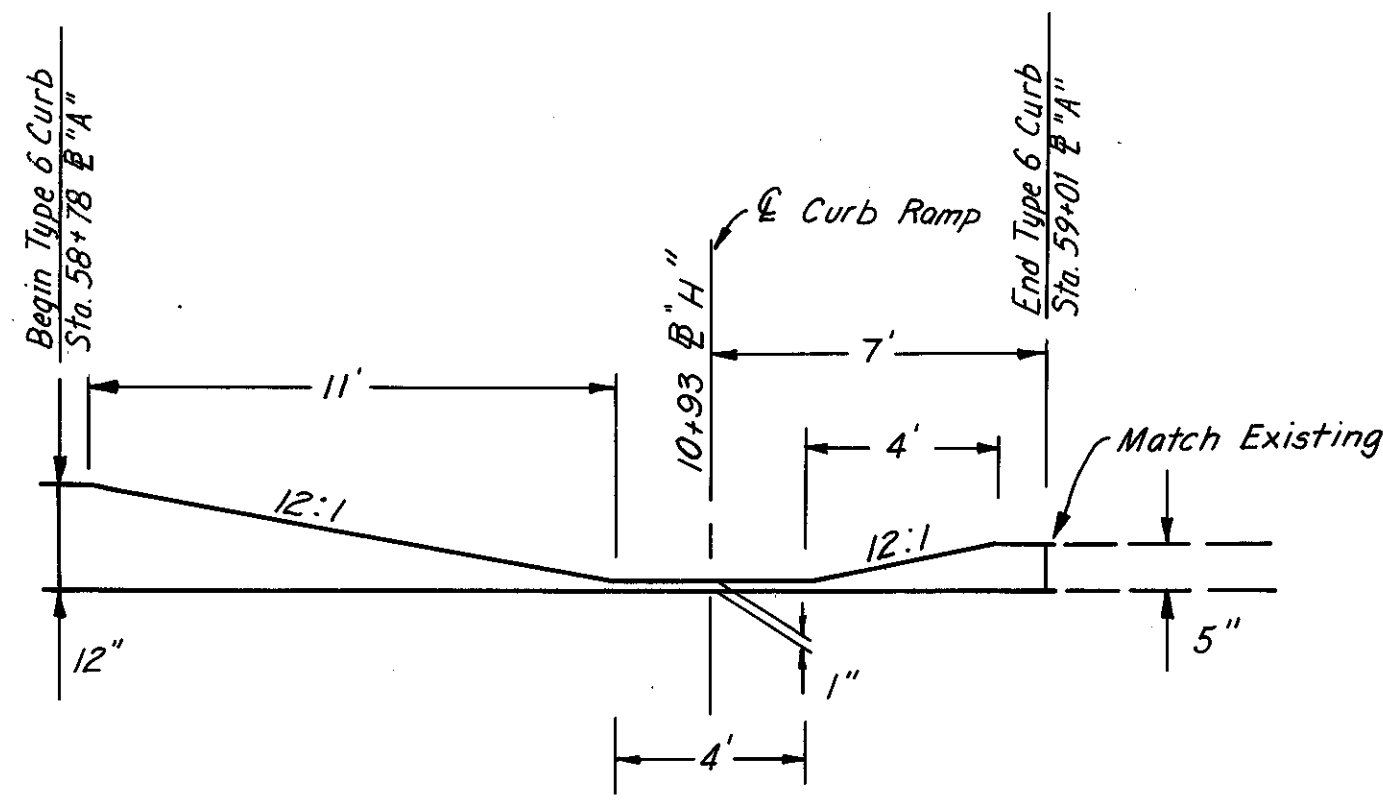
**HNTB**

# CURB HEIGHT TRANSITION DETAILS

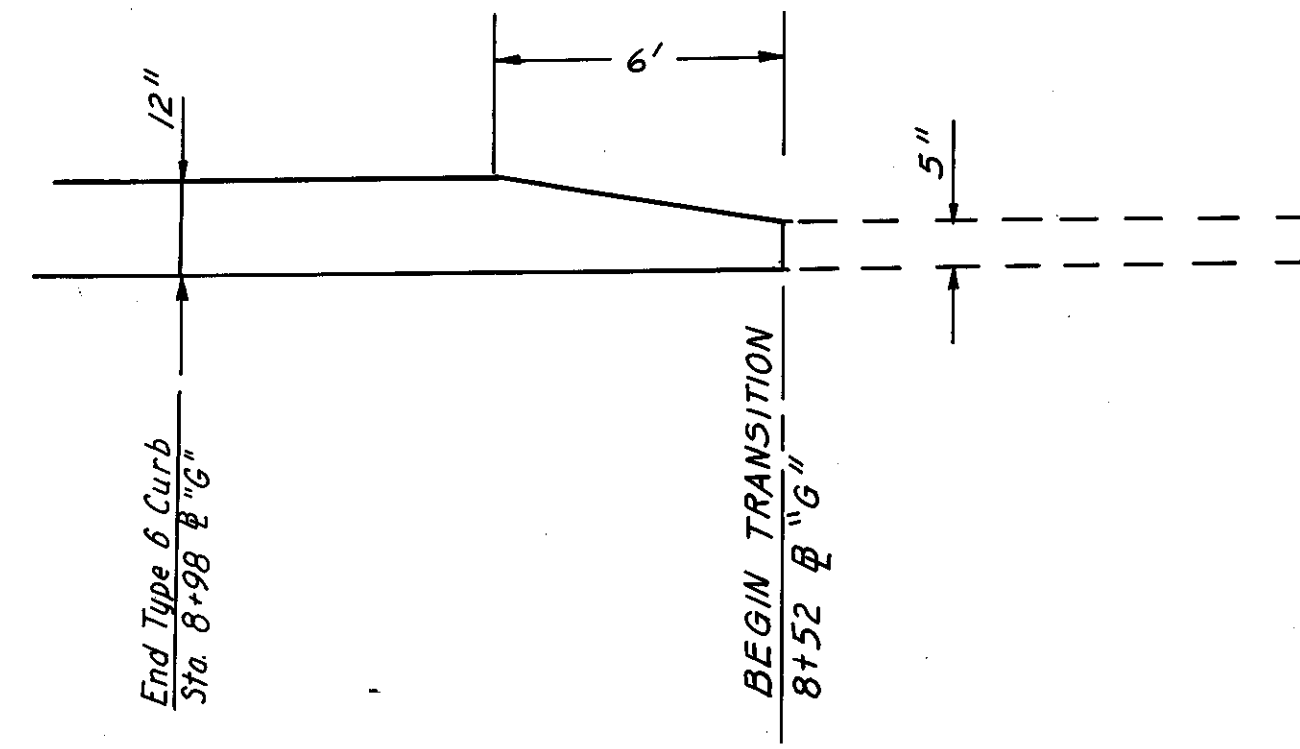
FHWA REGION	STATE	PROJECT	
5	OHIC		

17  
185

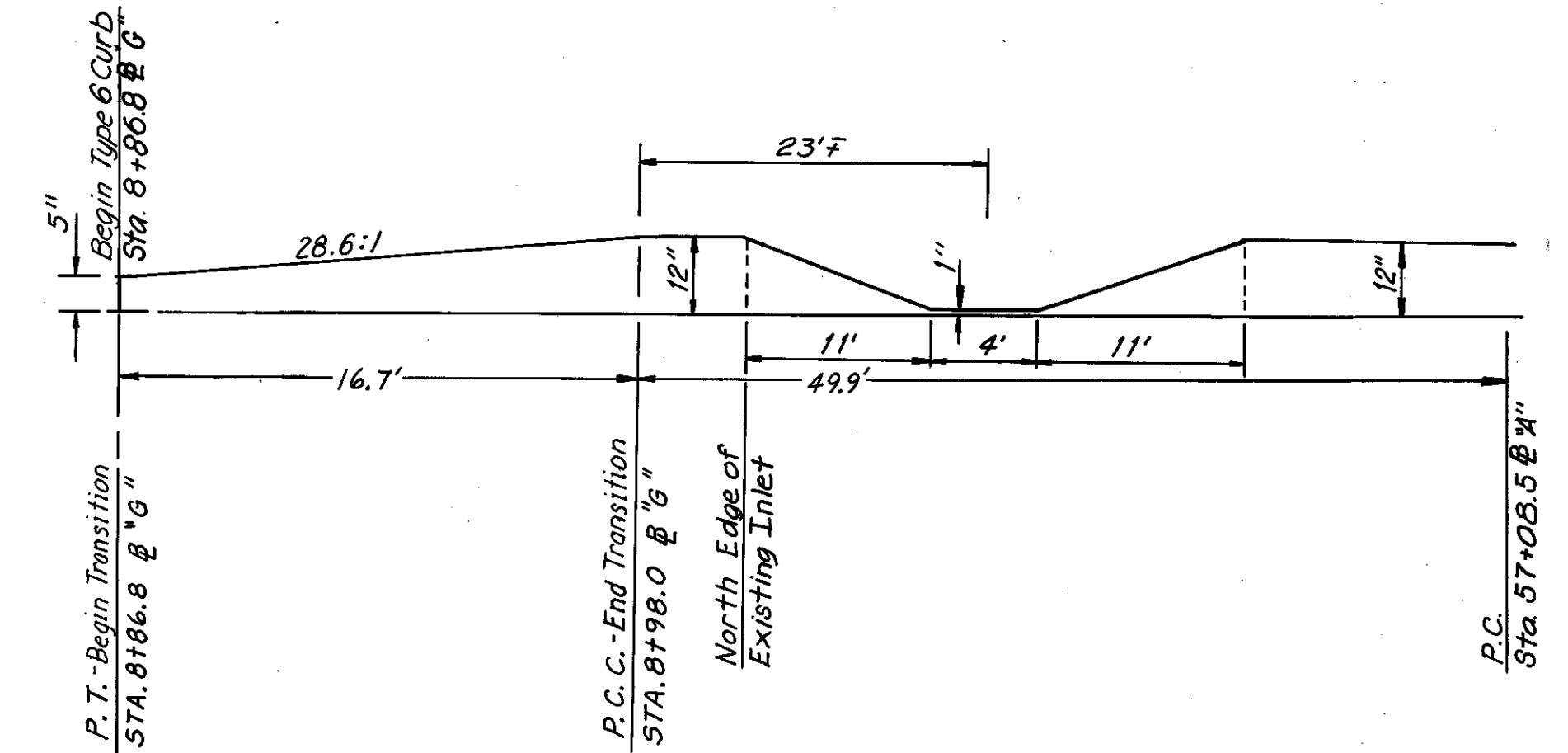
CUYAHOGA COUNTY  
CUY-10-16.23



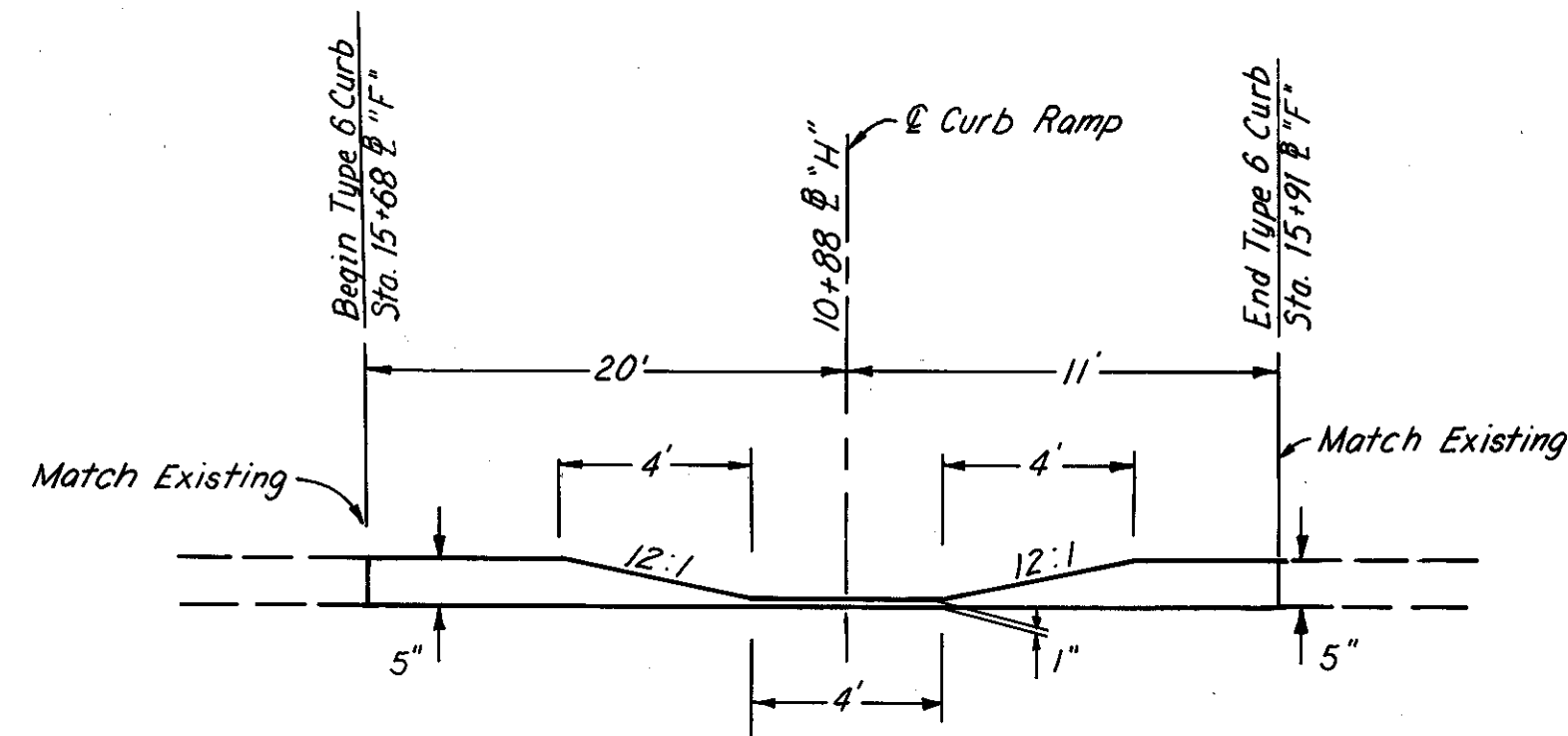
**N-W CORNER (ONTARIO - CARNEGIE)**  
No Scale



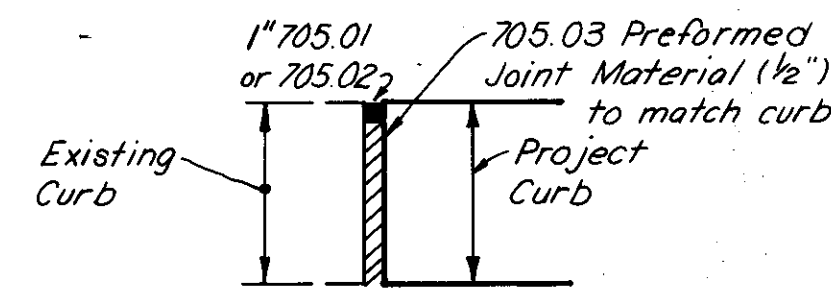
**CURBLINE - SOUTH SIDE OF COMMERCIAL RD.**  
No Scale



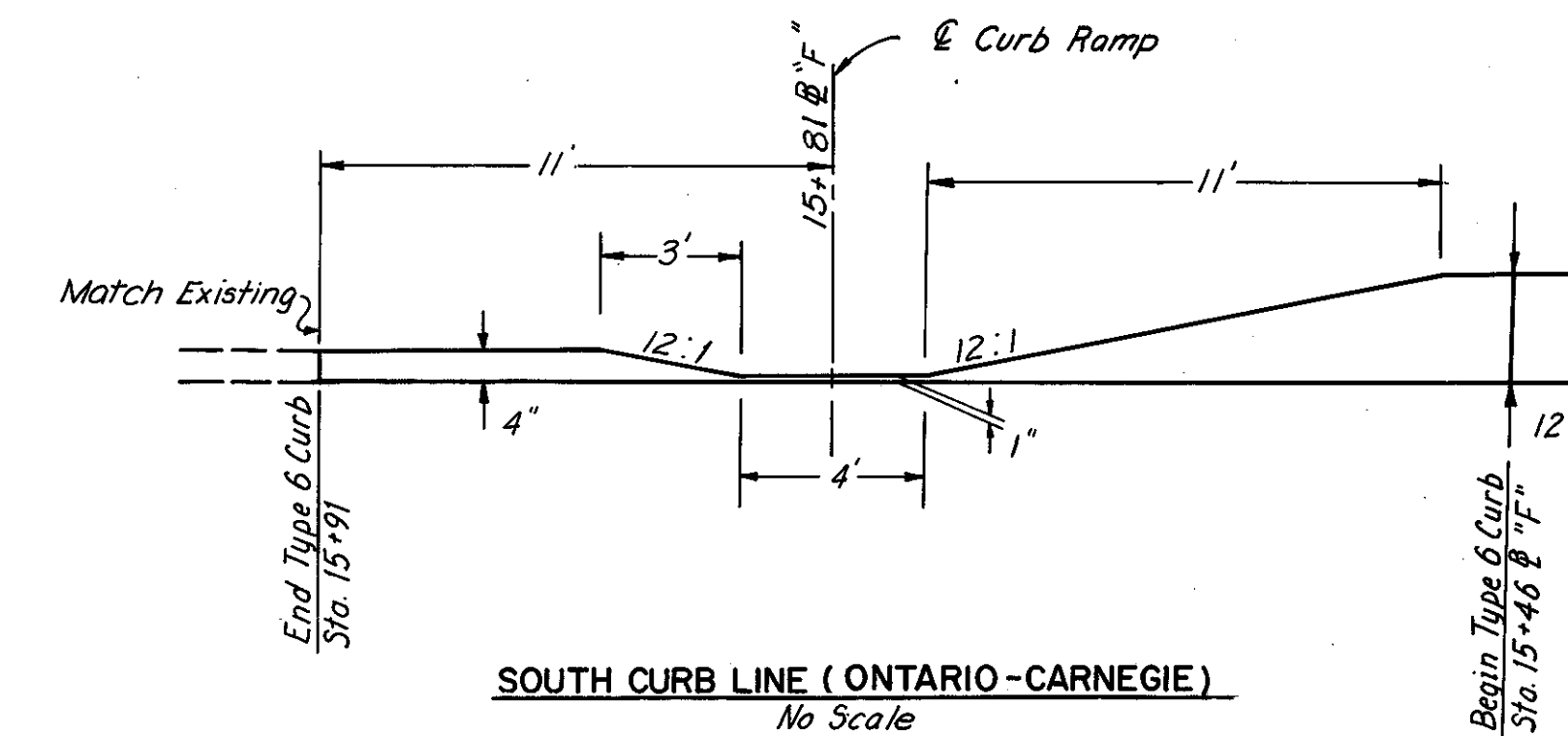
**SOUTH-WEST CURBLINE (END OF BRIDGE)**  
No Scale



**N-E CORNER (ONTARIO - CARNEGIE)**  
No Scale



**JOINT DETAIL**  
No Scale



**SOUTH CURB LINE (ONTARIO - CARNEGIE)**  
No Scale

MADE F.W.H. DATE 2-5-79  
TRACED F.D. DATE 2-8-79  
CHECKED W.H. DATE 4-5-79  
SCALE NONE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

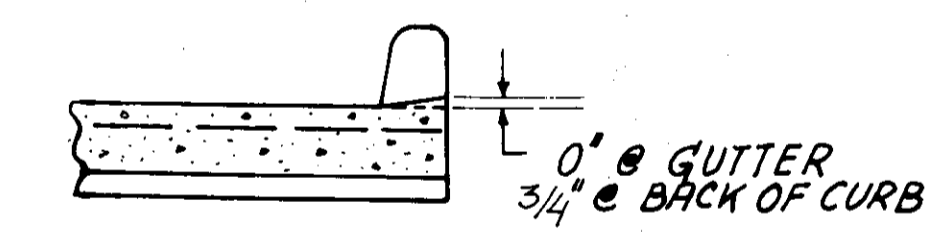
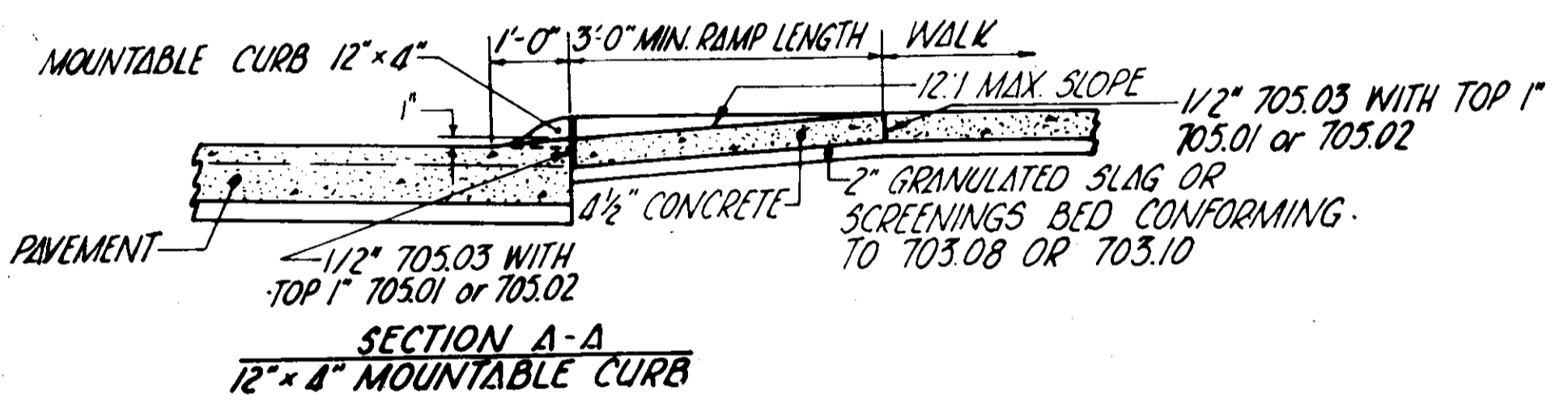
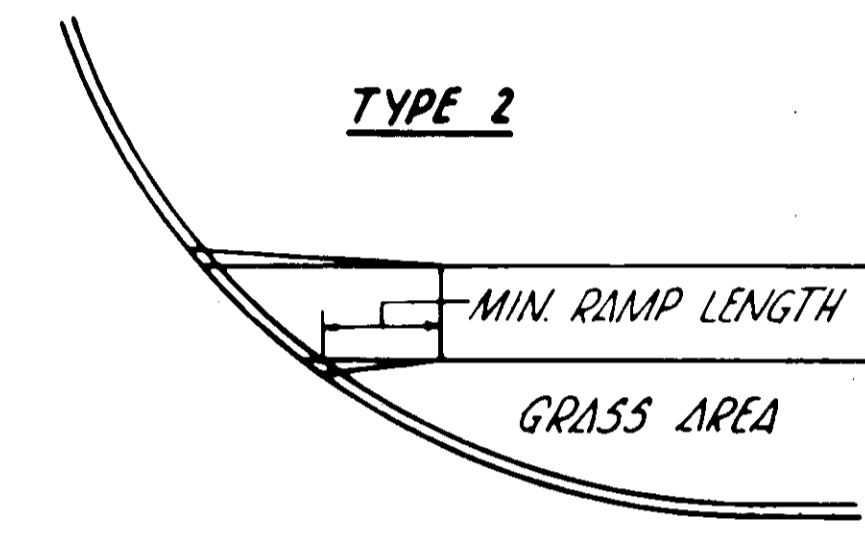
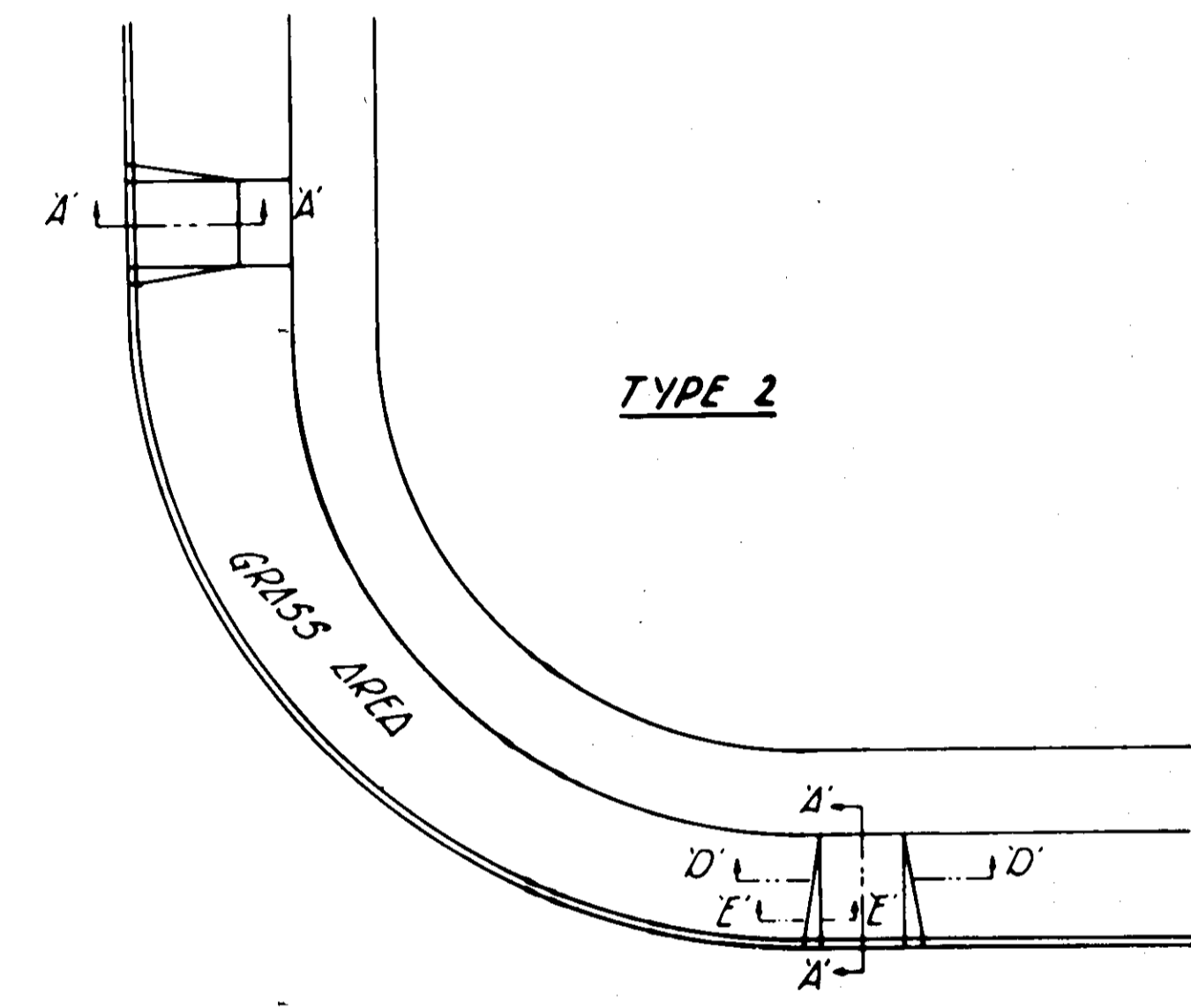
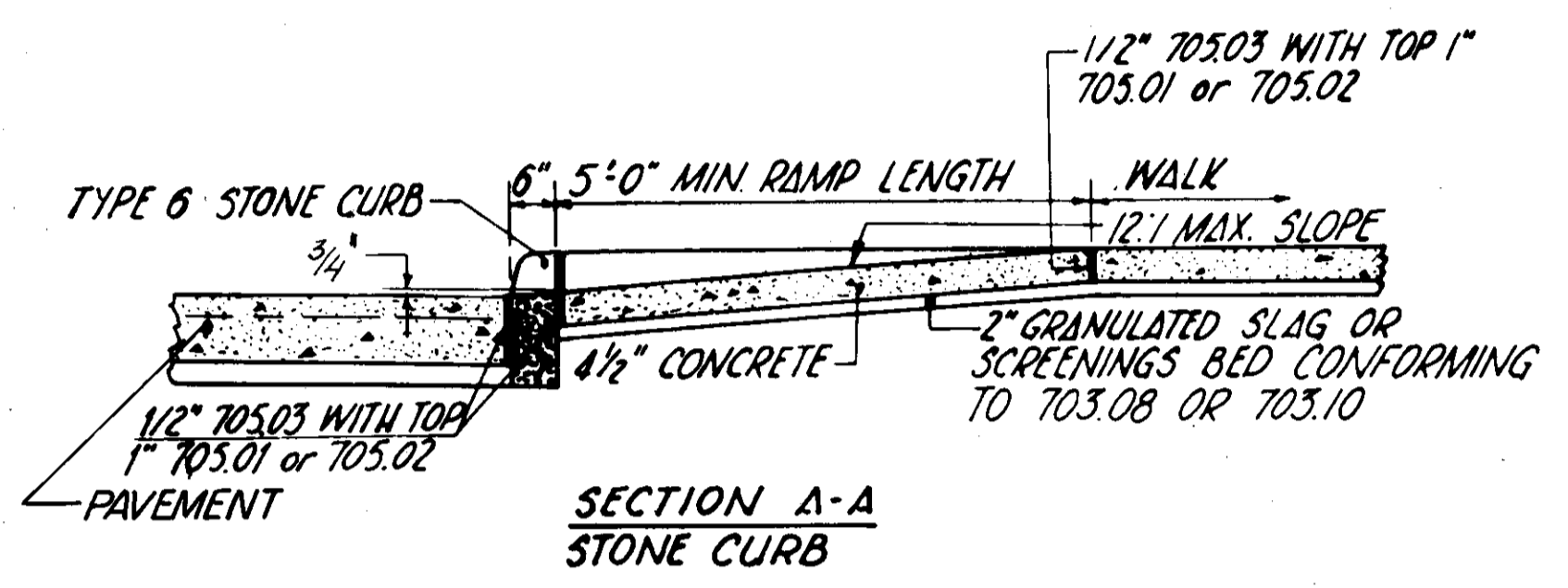
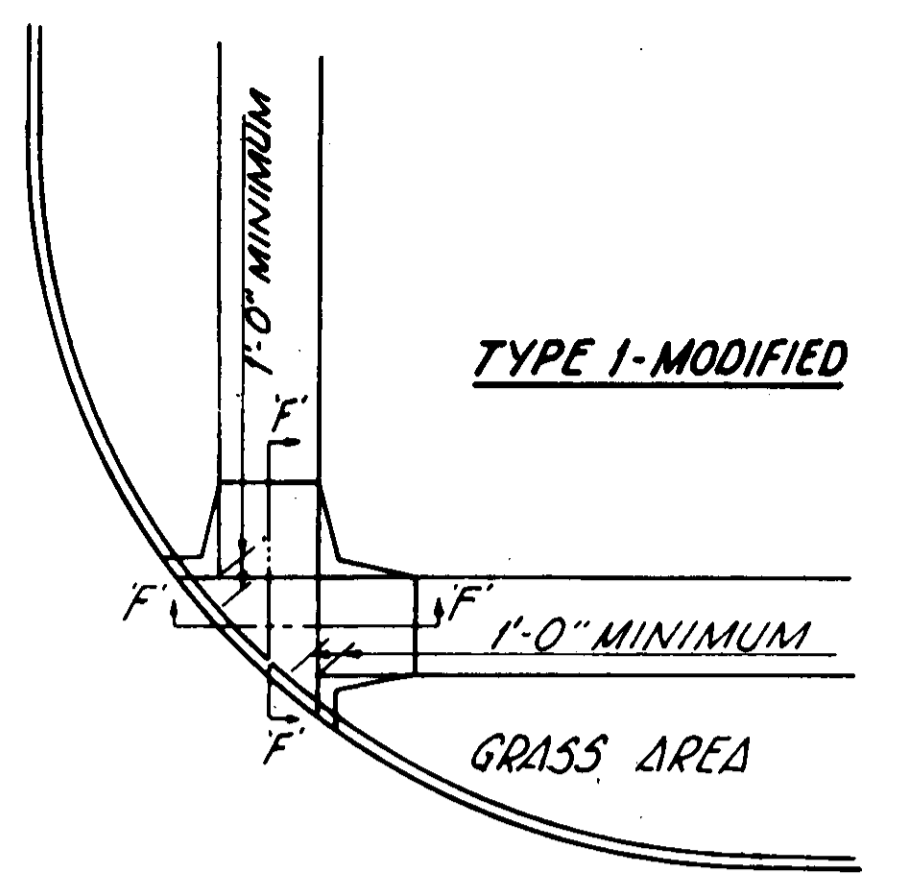
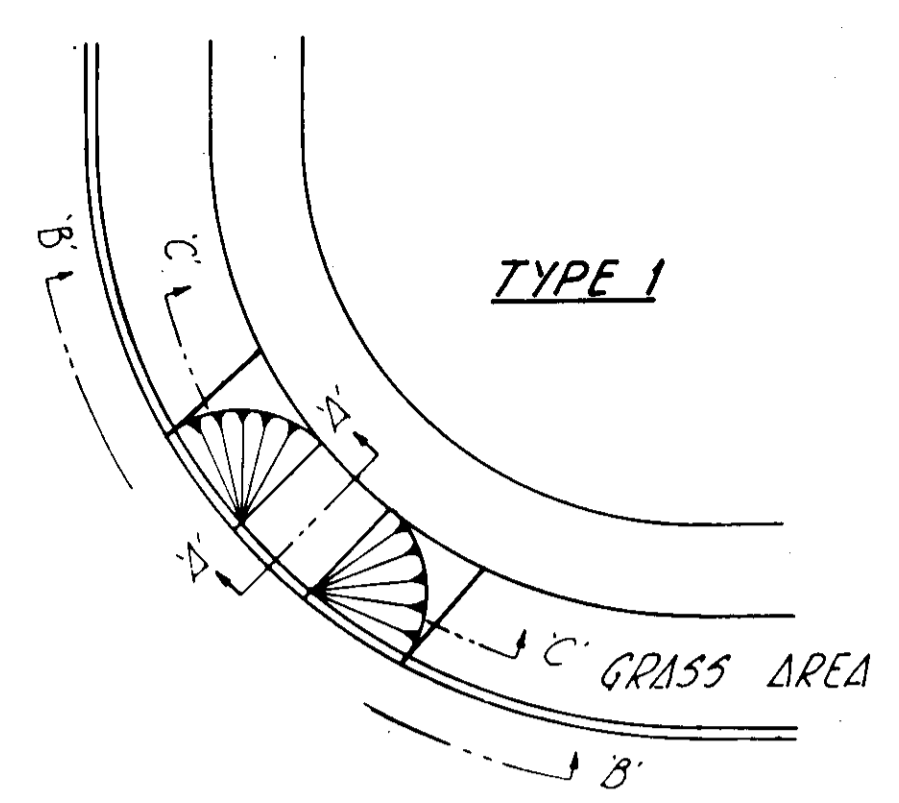
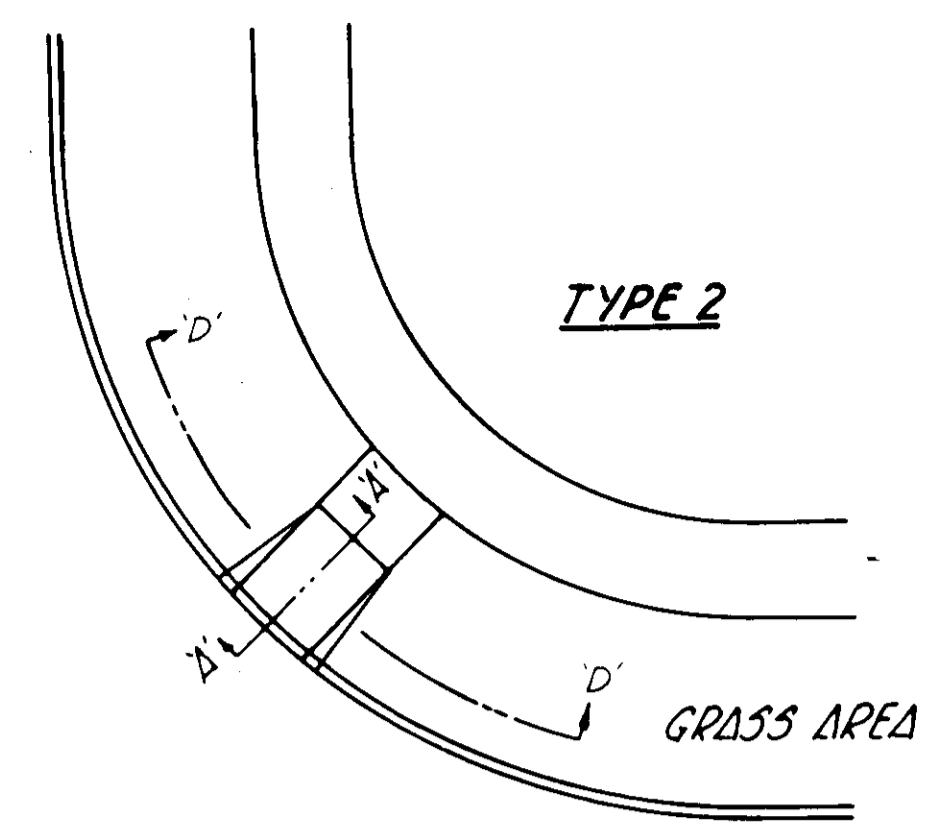
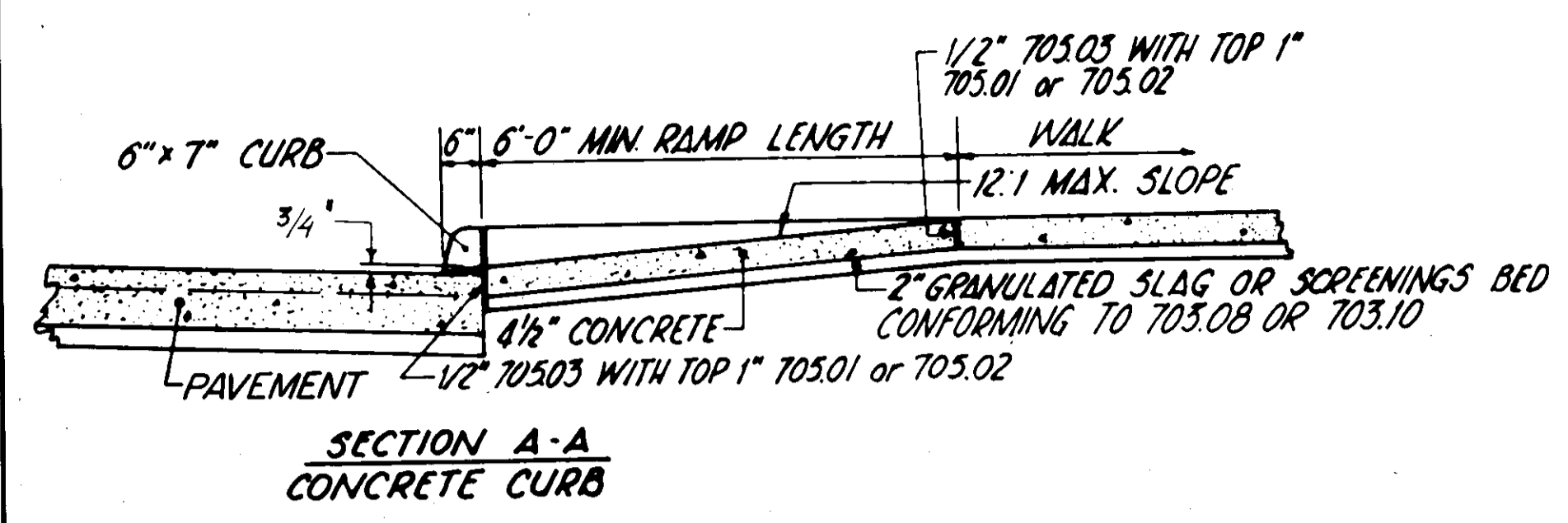
**HNTB**

Note:  
All curb ramps  
are Type 1 unless  
otherwise shown.

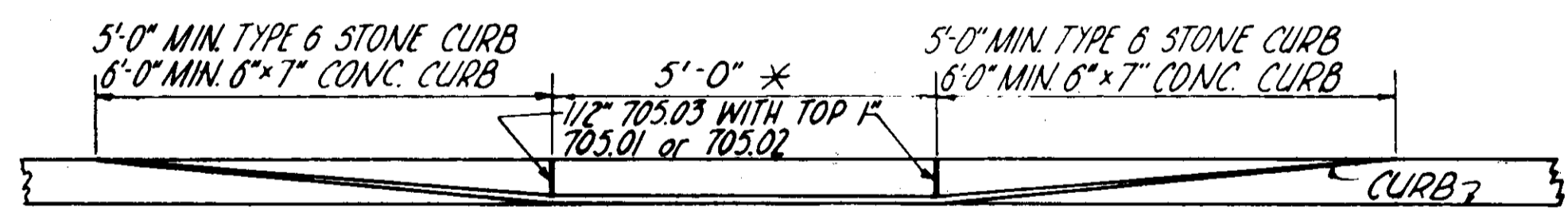
FHWA	STATE	PROJECT
5	OHIO	

18  
185

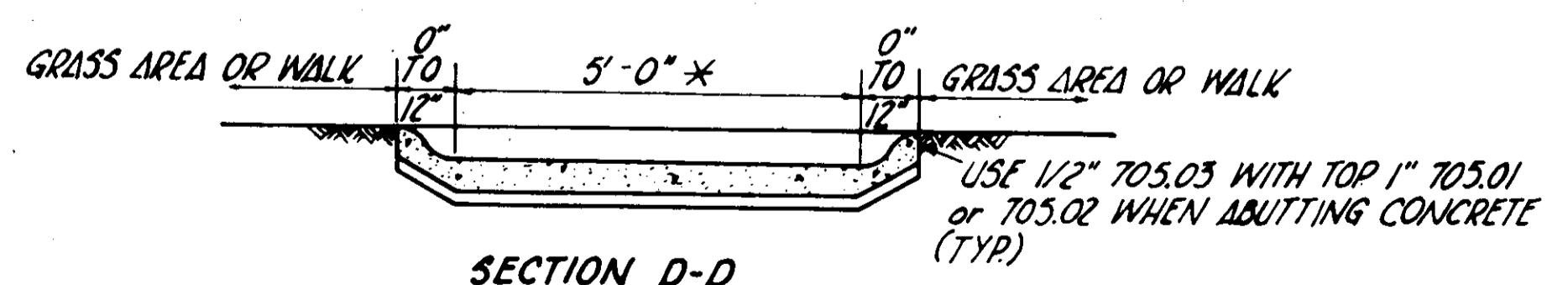
CUYAHOGA COUNTY  
CUY-10-16.23



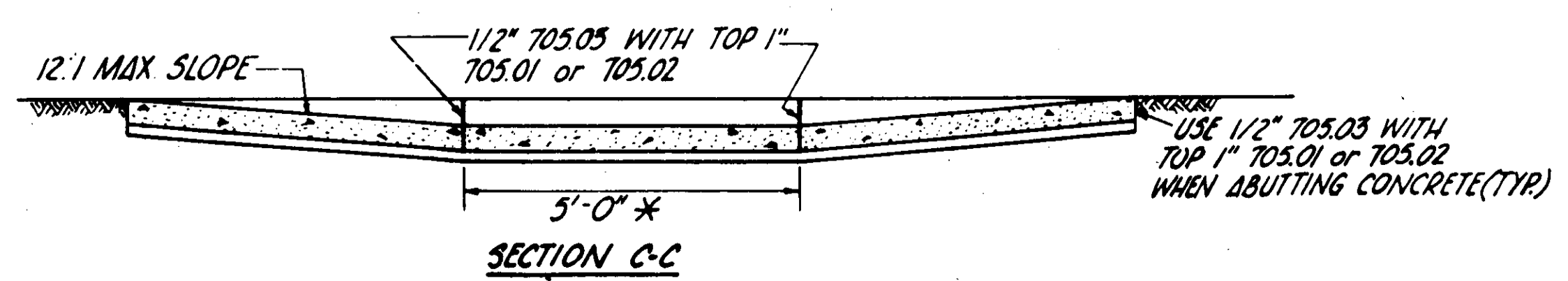
TYP CURB DETAIL AT RAMP



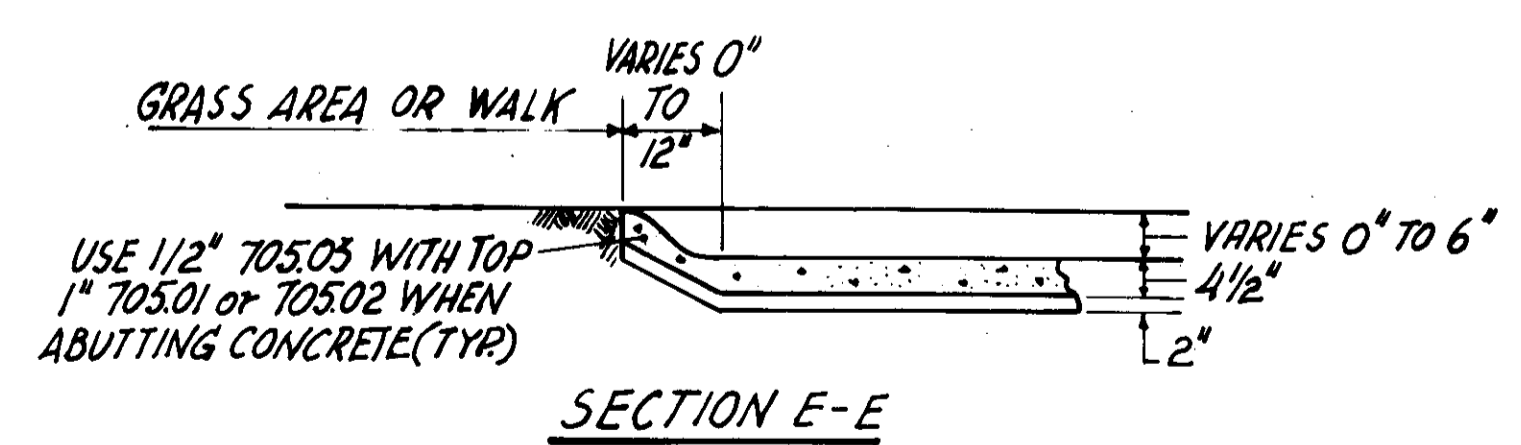
SECTION B-B



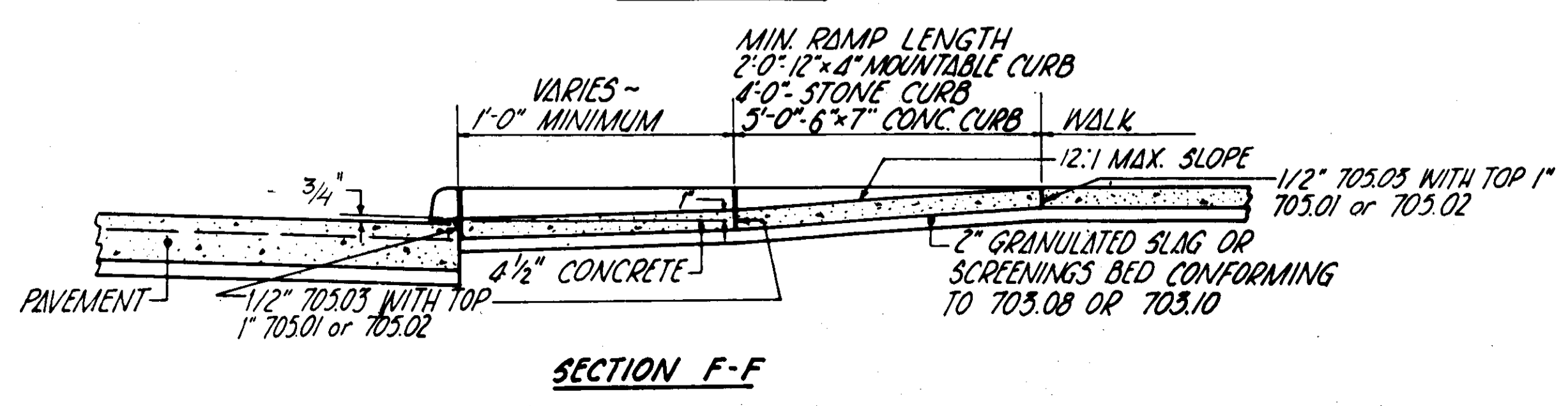
SECTION D-D



SECTION C-C



SECTION E-E



SECTION F-F

PAYMENT: WALK AND CURB, ITEMS 608 & 609, SHALL BE MEASURED THROUGH THE CURB RAMP AREA AND PAID FOR UNDER THEIR RESPECTIVE ITEMS.

ITEM 608, EACH, CURB RAMP TYPE \_\_\_\_\_, CONSTRUCTED IN NEW CURB AND WALK SHALL INCLUDE THE COST OF ANY ADDITIONAL MATERIALS, GRADING, FORMING AND FINISHING.

ITEM 608, SQUARE FOOT, CURB RAMP, TYPE \_\_\_\_\_, CONSTRUCTED IN EXISTING CURB AND WALK SHALL INCLUDE THE TOTAL COST OF FURNISHING ALL MATERIALS AND CONSTRUCTING THE CURB AND WALK OF THE CURB RAMP.

REMOVAL OF EXISTING CURB AND WALK SHALL BE PAID FOR UNDER ITEM 202. REPLACEMENT OF EXISTING CONCRETE WALK BEYOND THE CURB RAMP AREAS NECESSARY TO EFFECT A PROPER GRADE TRANSITION SHALL BE PAID FOR UNDER ITEM 608, SQUARE FOOT, CONCRETE WALK.

SURFACE TEXTURE SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES AND SHALL BE ROUGHER THAN ADJACENT WALK.

JOINTS SHALL BE PROVIDED IN THE CURB RAMP AS EXTENSIONS OF WALK JOINTS AND CONSISTANT WITH 608.03 REQUIREMENTS FOR NEW CONCRETE WALK. A 1/2" 705.03 EXPANSION JOINT FILLER SHALL BE PROVIDED AROUND THE EDGE OF RAMPS BUILT IN EXISTING CONCRETE WALK. LINES SHOWN ON THIS DRAWING TO INDICATE THE RAMP EDGE AND SLOPE CHANGES ARE NOT NECESSARILY JOINT LINES.

DIMENSIONS, LOCATION AND TYPE OF CURB RAMP MAY BE MODIFIED AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THE FOLLOWING:

TYPE OF CURB RAMP BUILT SHALL BE THE TYPE THAT BEST FITS THE LOCATION UNLESS A SPECIFIC TYPE IS SPECIFIED. TYPE 1 IS PREFERRED BECAUSE OF THE FLATTER SIDE SLOPES. ANY COMBINATION OF TYPE 1, TYPE 1 MODIFIED, AND TYPE 2 SIDE SLOPES ON OPPOSITE SIDES OF A RAMP MAY BE USED TO BEST FIT THE SITE CONDITIONS. SLOPE OF THE RAMP TOWARD THE CURB IS PREFERRED TO BE 12:1 OR FLATTER RELATED TO THE HORIZONTAL BUT THE MAXIMUM SLOPE SHALL BE 12:1 RELATED TO THE EXISTING OR PROPOSED WALK SLOPE. THE MINIMUM RAMP LENGTH IS 6' FROM THE BACK OF A 7" CURB, 5' FROM THE BACK OF A 6" CURB AND 3' FROM THE BACK OF A 4" CURB, AND MAY BE INCREASED WHERE FEASIBLE TO OBTAIN A FLATTER RAMP SLOPE OR TO BETTER BLEND WITH THE WALK CONFIGURATION.

WIDTH OF RAMP SHALL NORMALLY BE 5' BUT A MINIMUM WIDTH OF 4' MAY BE USED TO BETTER FIT THE WALK CONFIGURATION OR WHERE SITE CONDITIONS ARE RESTRICTED BY NARROW WALKS, POLE FOUNDATIONS, DRAINAGE INLETS, ETC. MAXIMUM WIDTH OF RAMP SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WIDTH MAY BE TAPERED.

WALK THICKNESS IN THE RAMP SLOPES SHALL BE 4 1/2" MINIMUM OR THICKER AS NECESSARY TO MATCH ADJACENT WALK THICKNESS PLACED ON A 2" GRANULATED SLAG OR SCREENINGS BED.

\* UNLESS OTHERWISE NOTED

CUYAHOGA COUNTY ENGINEER

CURB RAMPS

CONSTRUCTION DRAWING

BP-12

DATE  
11-20-75  
2-2-77  
2-14-78

MISCELLANEOUS DETAILS

LORAIN - CARNEGIE BRIDGE

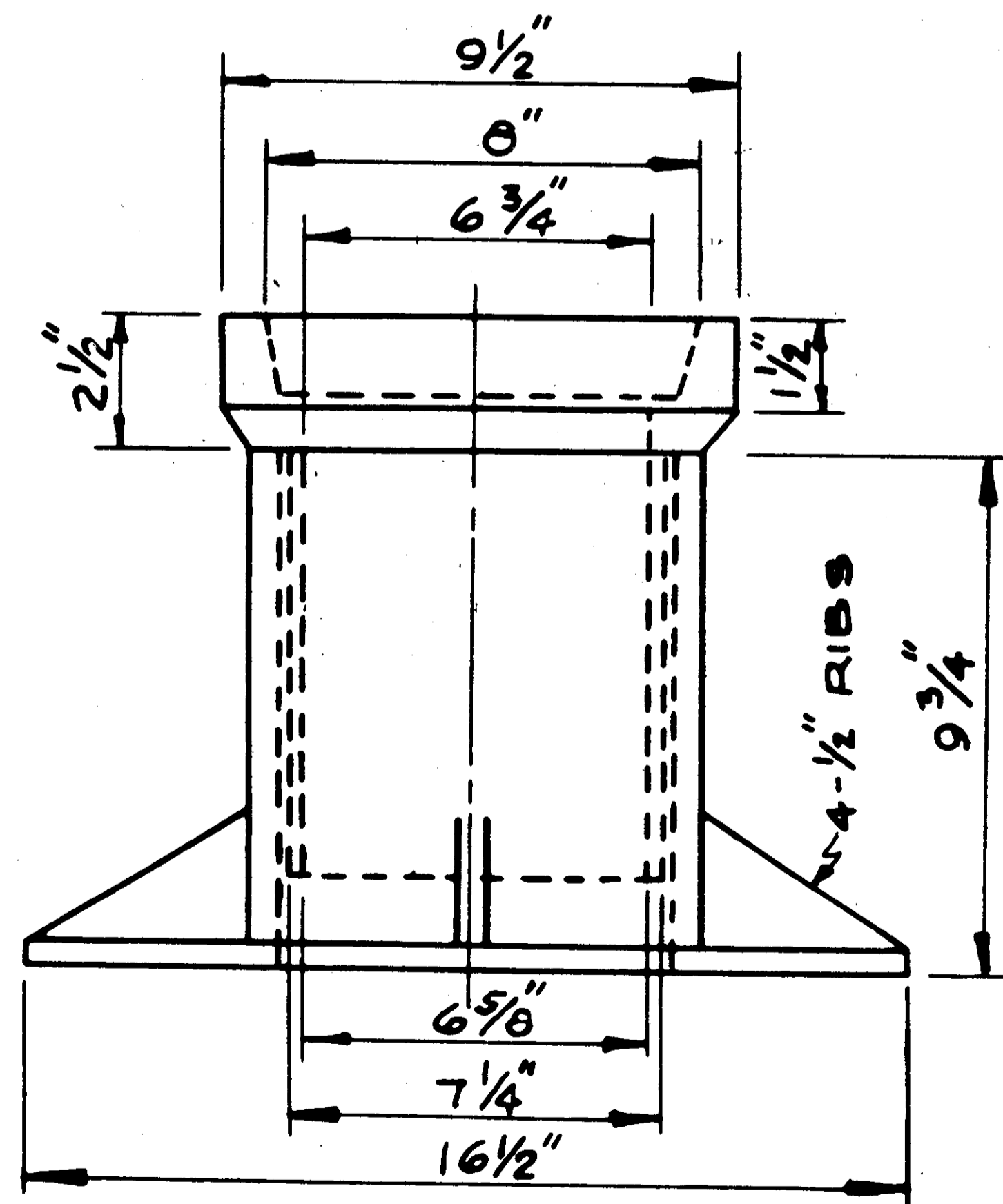
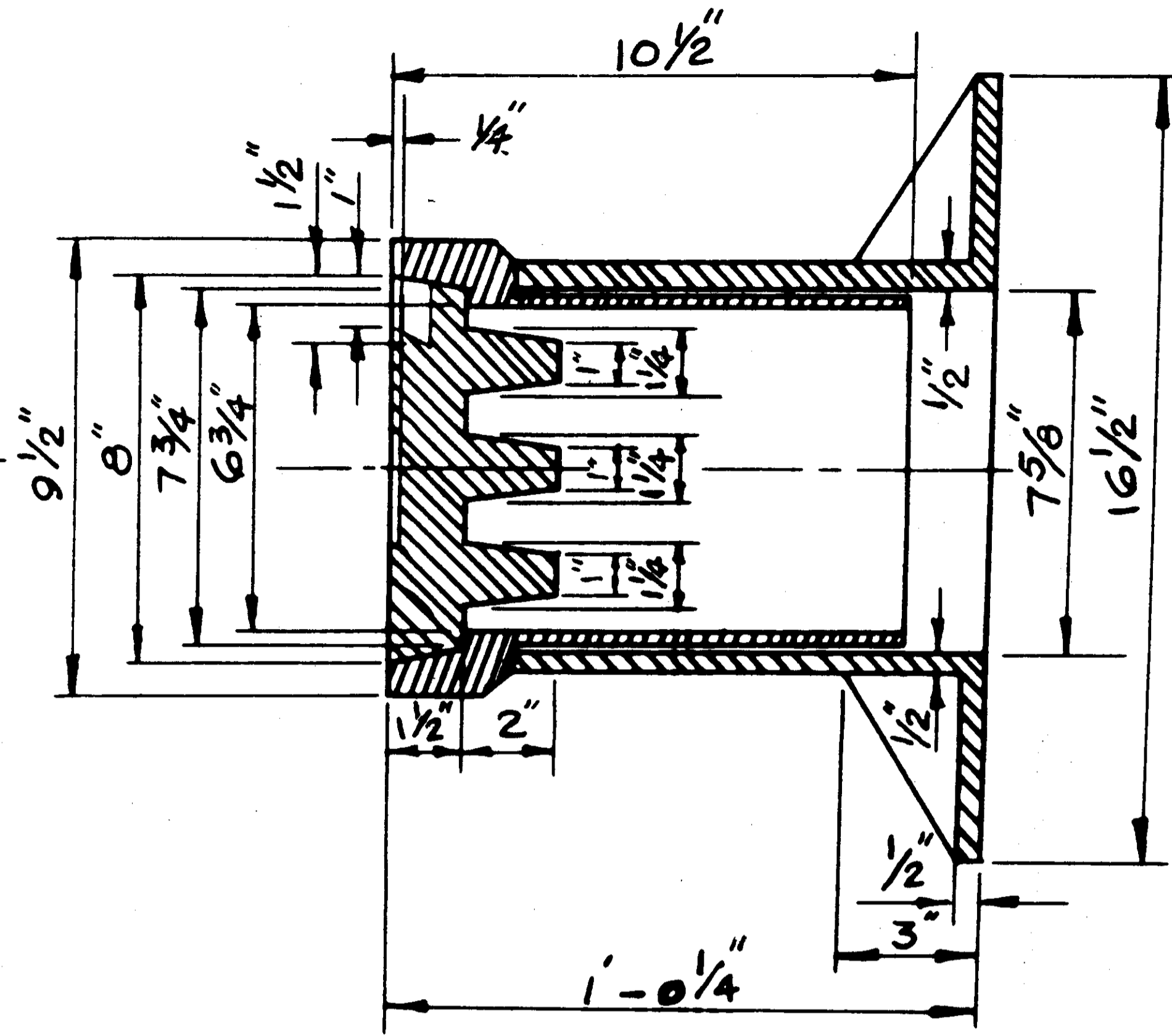
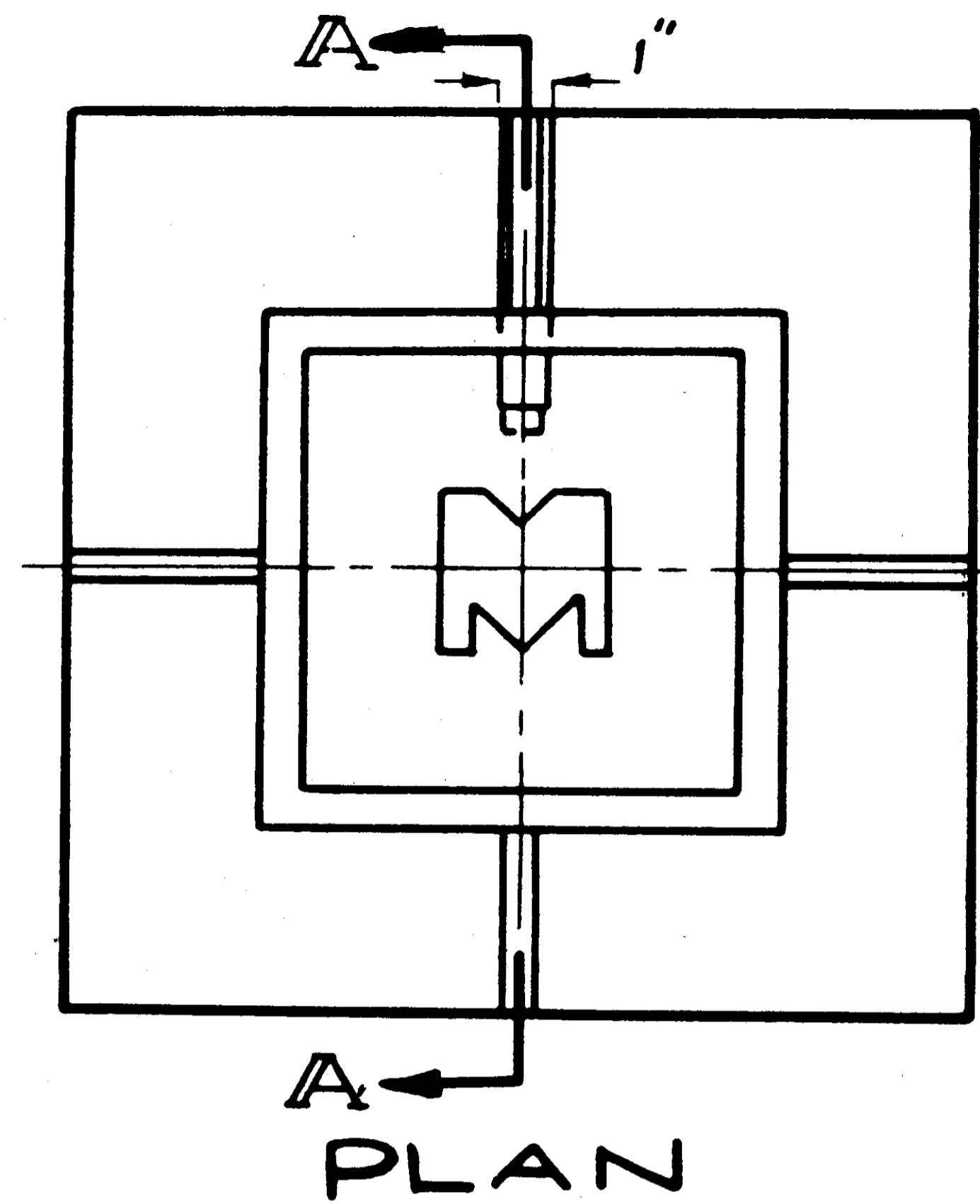
18

# MONUMENT BOX No 36-B

FHWA	STATE	PROJECT	
5	OHIO		

19  
185

CUYAHOGA COUNTY  
CUY-10-16.23



1/2" OR 1" INSERTS FOR  
VARIOUS HEIGHTS

### NOTES

MATERIALS: MATERIALS SHALL BE AS SPECIFIED IN PARAGRAPH 604.02 OF ITEM 604.  
THE MANUFACTURER SHALL SUBMIT A TEST REPORT CERTIFYING THAT THE TEST BARS USED IN SHOP TEST WERE CAST WITH THE LOT OF CASTINGS IN THE SHIPMENT AND THE TEST BARS WERE MADE IN ACCORDANCE WITH ASTM 48.

CUYAHOGA COUNTY ENGINEER	
5-2-69	
MONUMENT BOX	
CONSTRUCTION DRAWING	MB. No 36-B

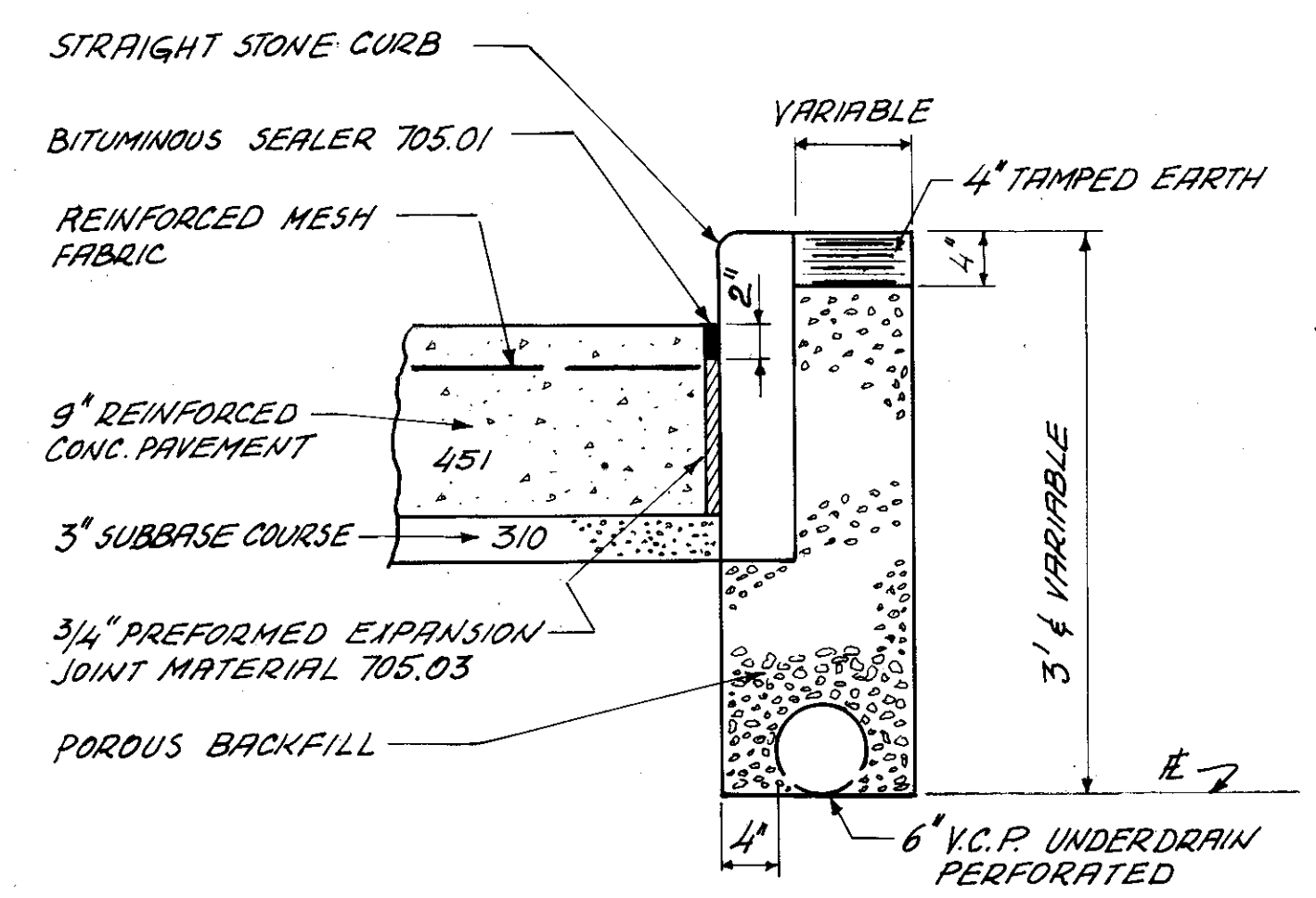
LORAIN-CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

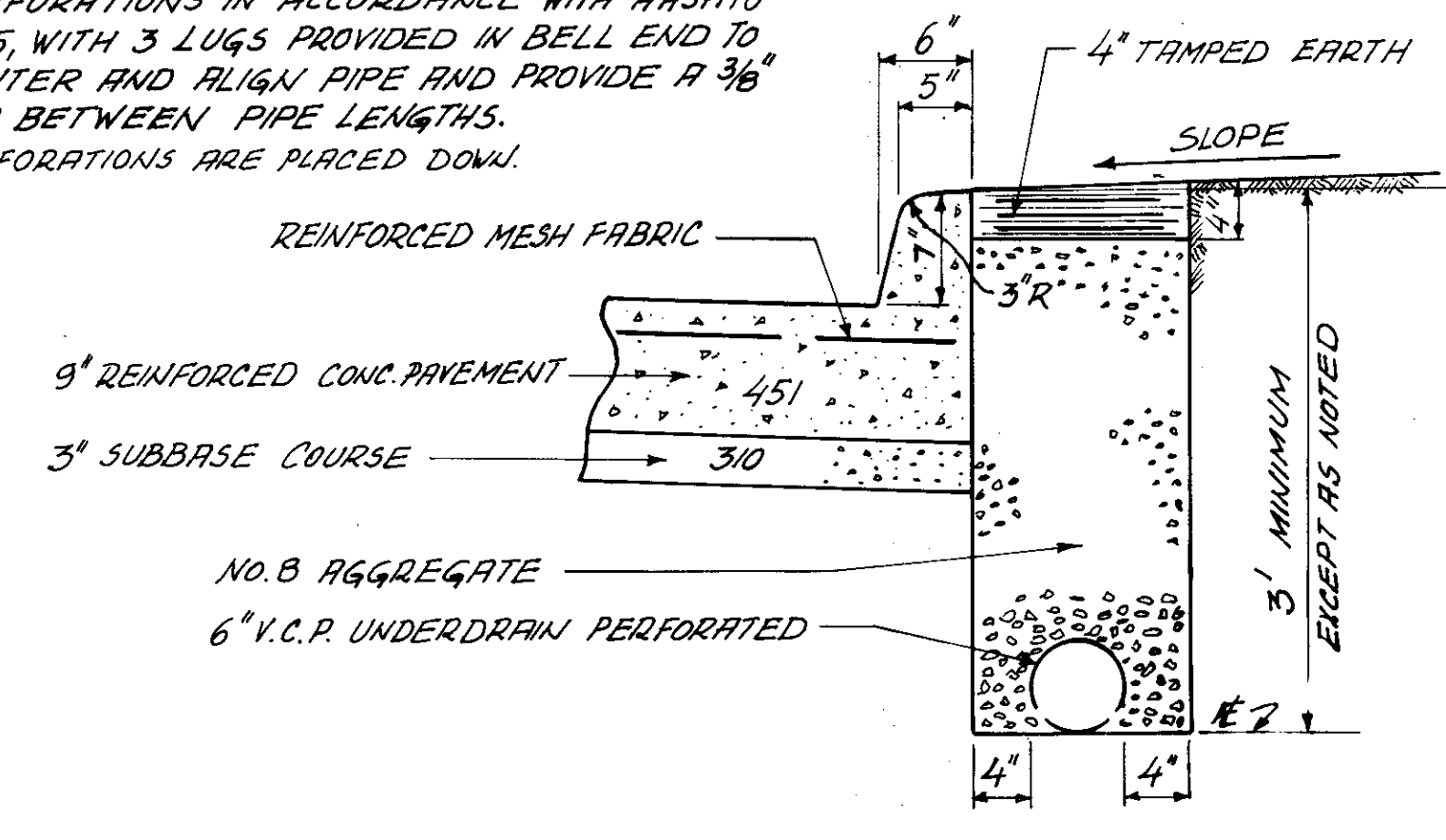
CUYAHOGA COUNTY  
CUY-10-16.23

**NOTE:**

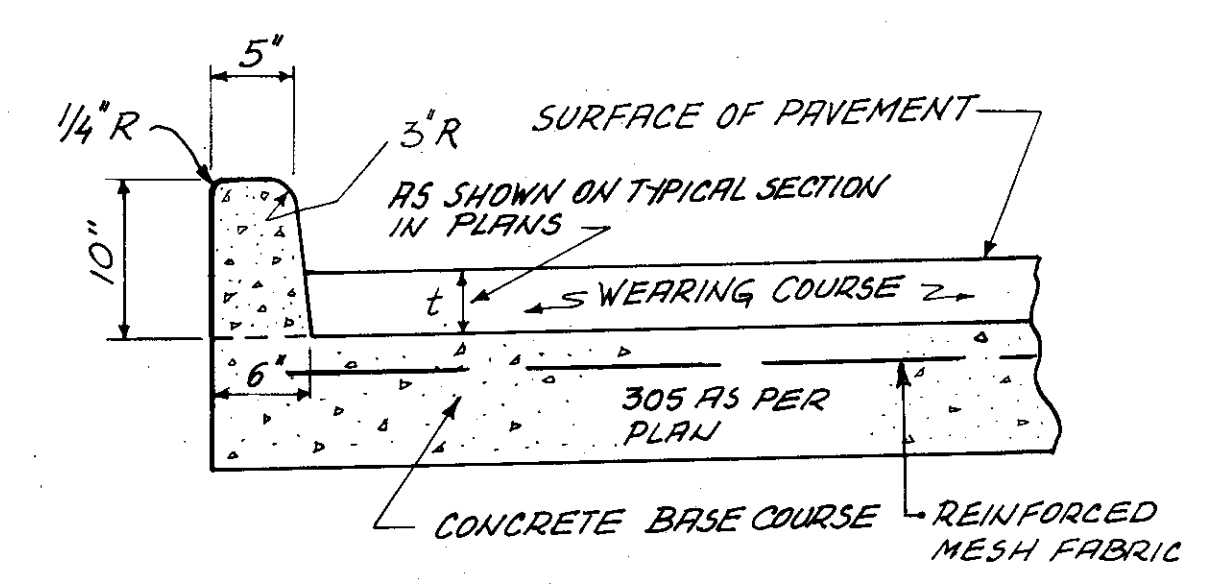
ITEM 605 USING 706.08 PERFORATED BELL & SPIGOT VITRIFIED CLAY PIPE WITH PERFORATIONS IN ACCORDANCE WITH ARSHTO M65, WITH 3 LUGS PROVIDED IN BELL END TO CENTER AND ALIGN PIPE AND PROVIDE A 3/16" GAP BETWEEN PIPE LENGTHS. PERFORATIONS ARE PLACED DOWN.



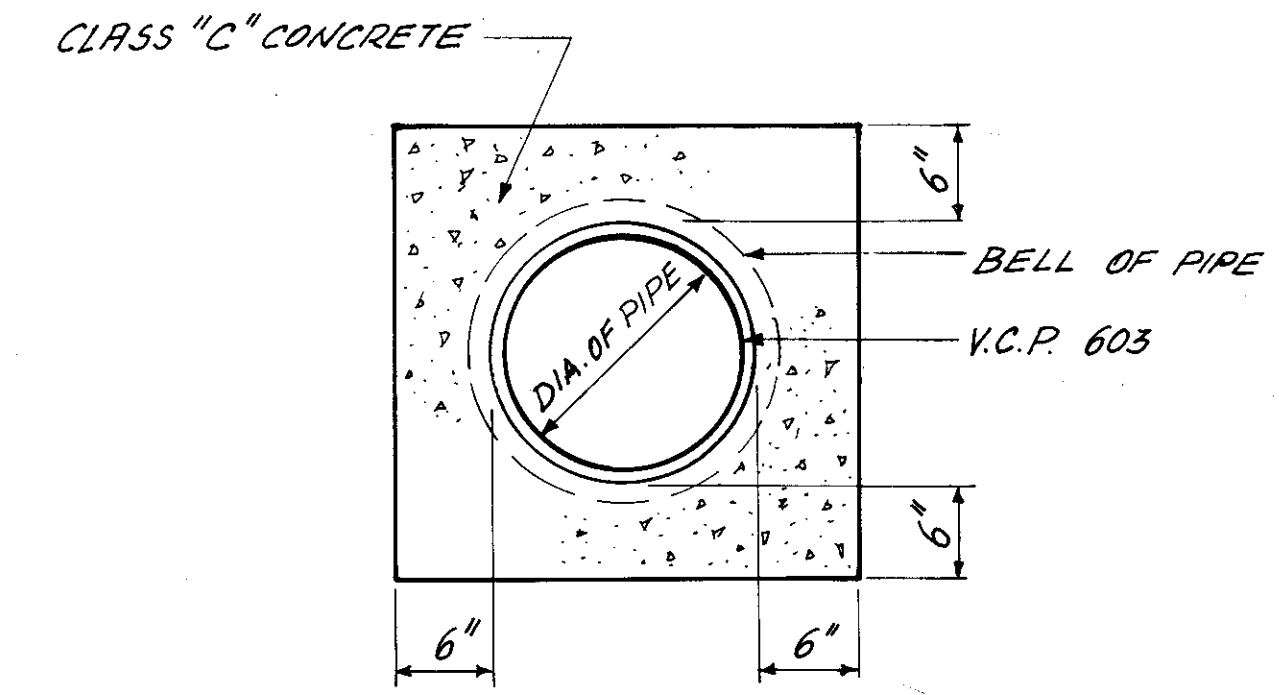
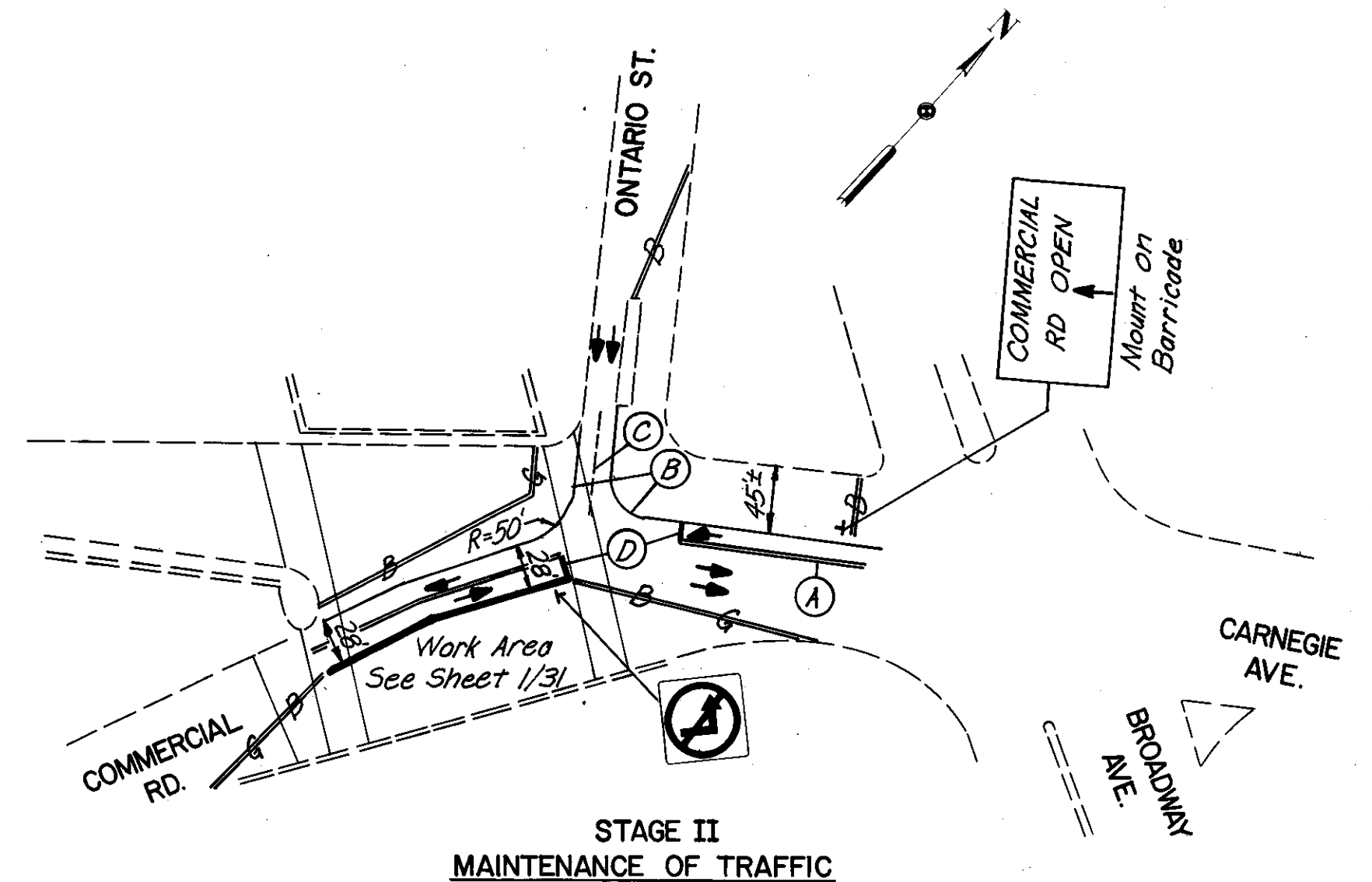
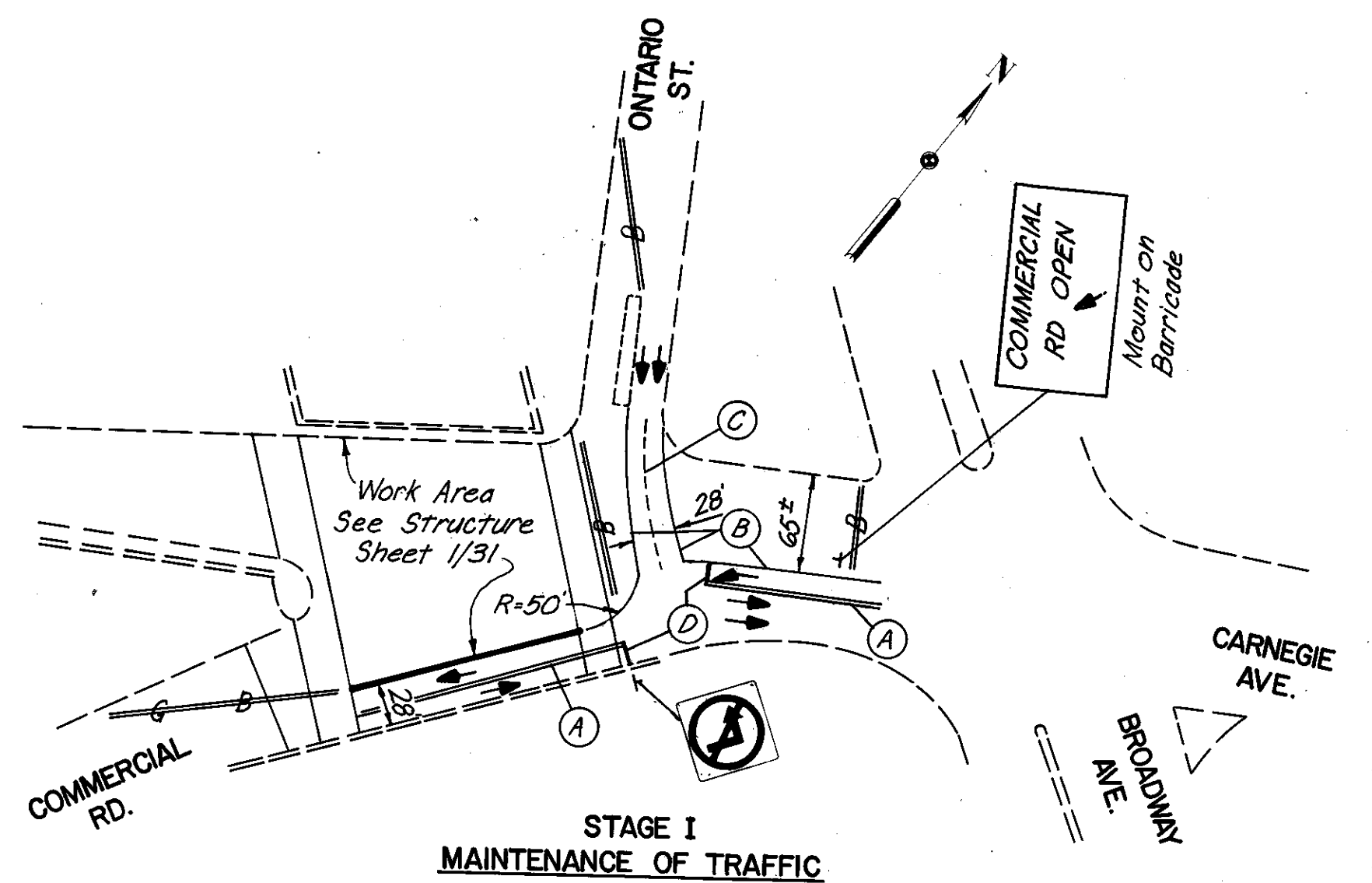
**SETTING OR RESETTING OF STRAIGHT STONE CURB (PRIOR TO PLACING OF PAVEMENT)**



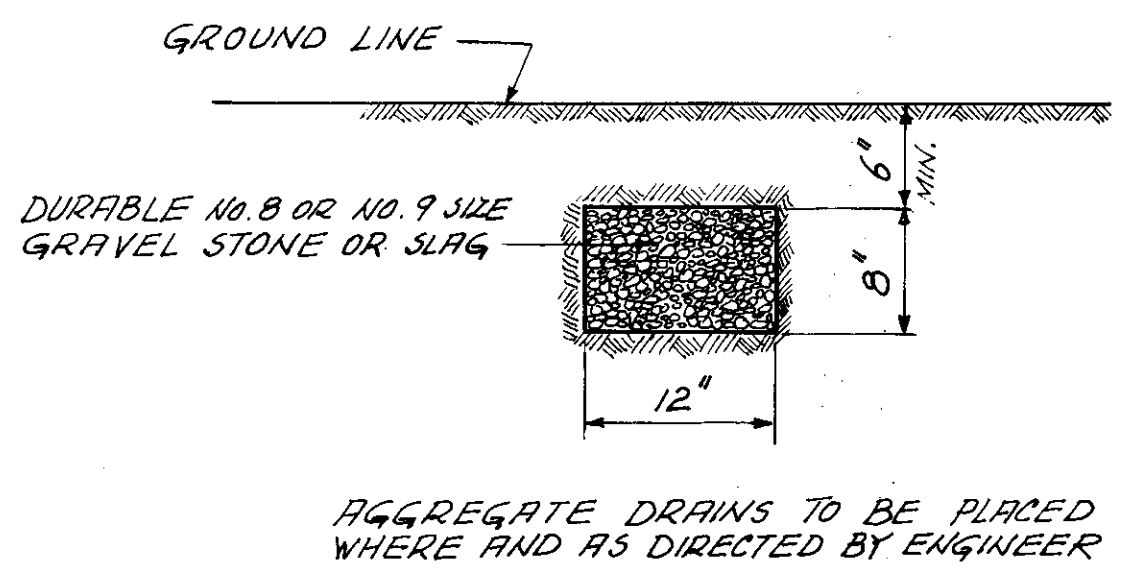
**6'X7" INTEGRAL CONCRETE CURB AND 6" SHALLOW PIPE UNDERDRAIN**



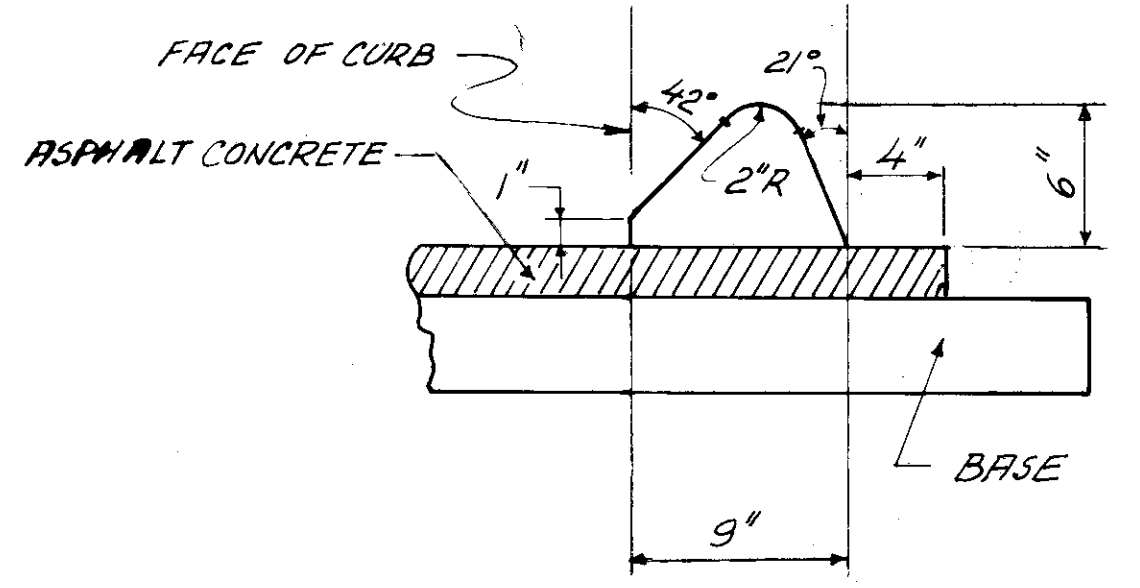
**6'X10" CONCRETE CURB TYPE 2-B**



**DETAIL OF CONCRETE ENCASEMENT FOR V.C.P.**



**AGGREGATE DRAIN**



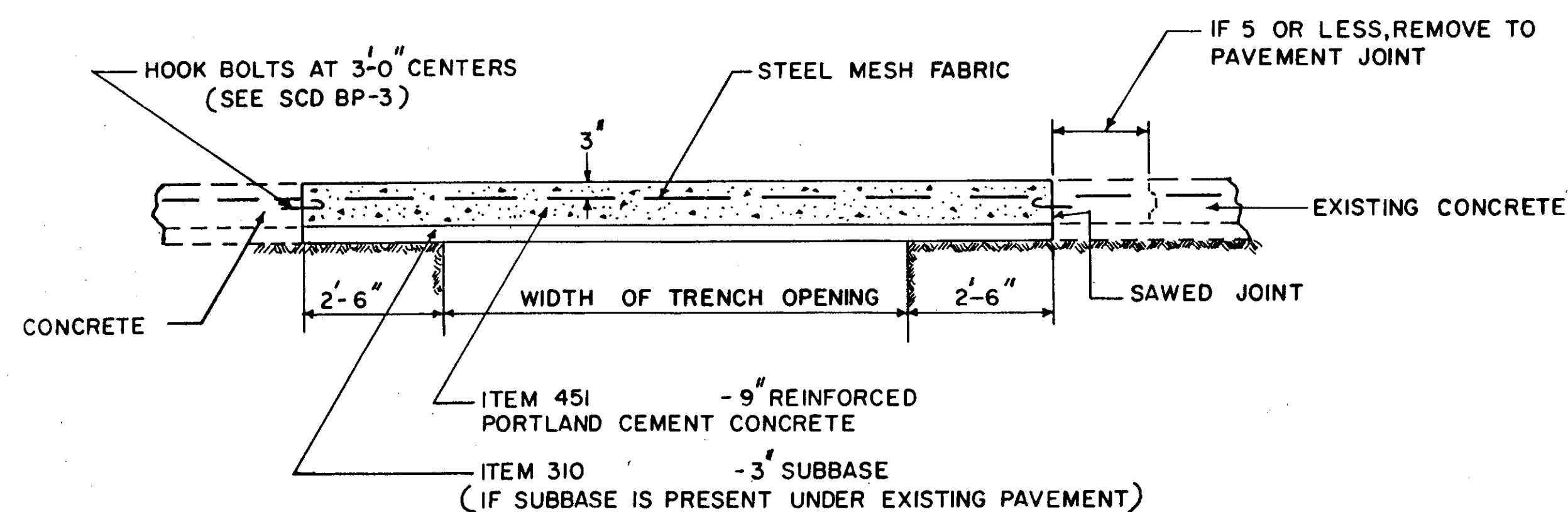
**TYPE I- ASPHALT CONCRETE CURB**

- LEGEND**
- ⊕ Gates and/or Barricades per Std. Const. Dwg. MC-3
  - Temporary Concrete Barrier (New Jersey Style)
  - Temporary Pavement Markings
  - ← Traffic Lanes Maintained
  - (A) Double Yellow Centerline (4-4-4)
  - (B) 4" Edge Line
  - (C) 4" Lane Line
  - (D) 12" Stop Line

CUYAHOGA COUNTY ENGINEER	
MISCELLANEOUS DETAILS	DATE 2-22-78
CONSTRUCTION DRAWING	MD-1

LORAIN - CARNEGIE BRIDGE

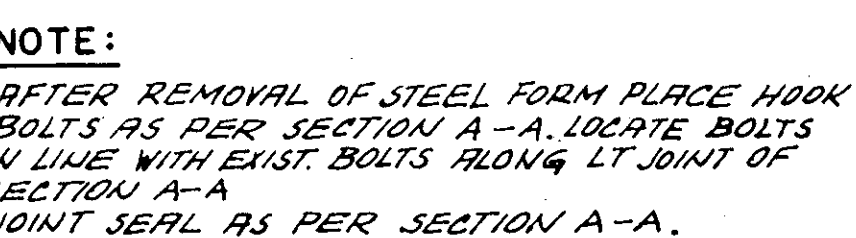
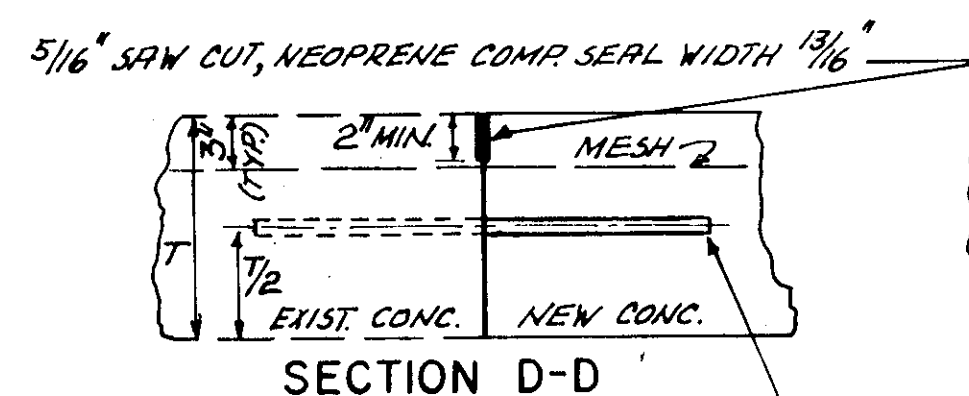
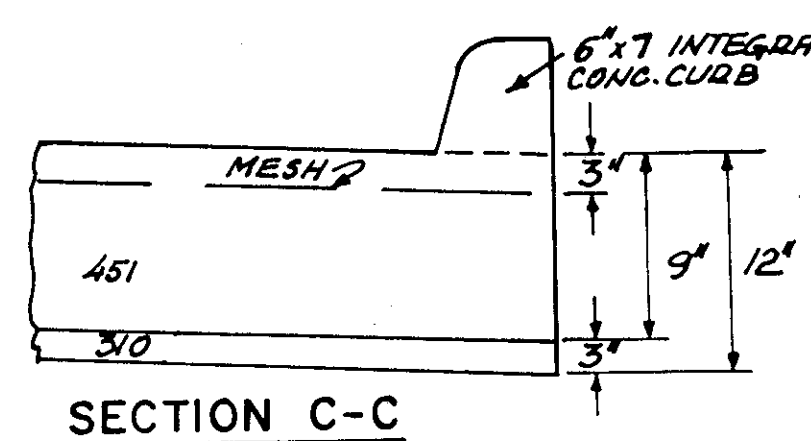
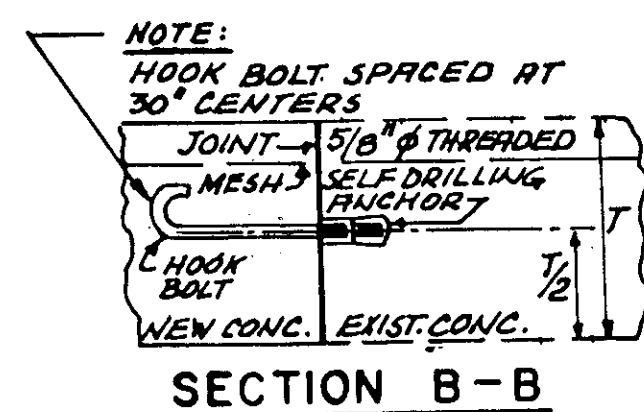
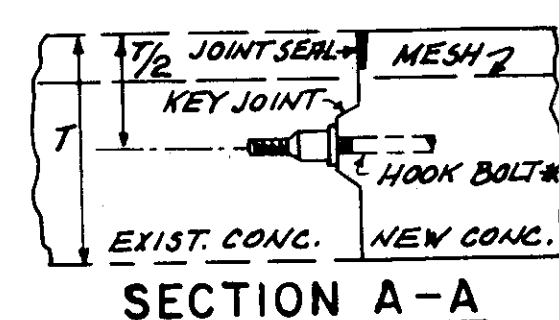
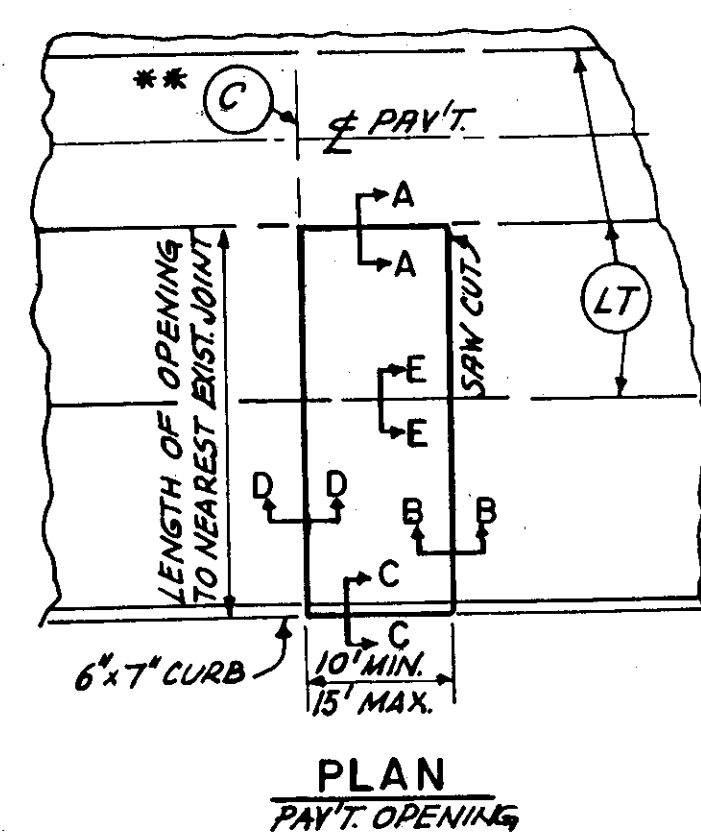
# REPAIR OF RIGID PAVEMENT OPENINGS



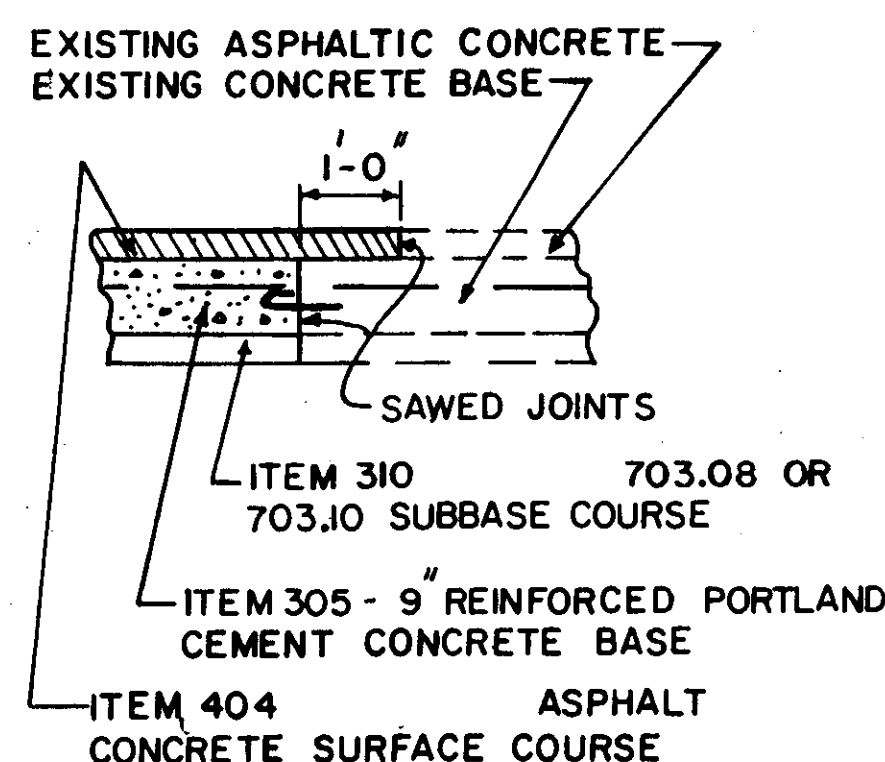
**NOTES:**

1. THIS STANDARD IS APPLICABLE TO EXISTING RIGID PAVEMENT WITH CONCRETE BASE, SURFACED WITH ASPHALT. (SEE DETAIL "A")
2. BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 4 IN THICKNESS (LOOSE DEPTH) BY USE OF MECHANICAL TAMPERS OR OTHER APPROVED MECHANICAL COMPACTORS.
3. EXISTING JOINTS SHALL BE PRESERVED OR RESTORED.
4. WHERE BRICK ON AN EXISTING CONCRETE BASE IS ENCOUNTERED DURING RIGID PAVEMENT REMOVAL, ITEM 451 OR 305 SHALL BE USED TO REPLACE THE BRICK PAVEMENT COMPONENTS. HOOK BOLTS SHALL BE PLACED IN THE EXISTING CONCRETE BASE.

\*\* NOTE: IF THIS JOINT IS AN 1/4" JOINT USE SECTION B-B IN PLACE OF SECTION D-D



**NOTE:** STRAIGHTEN DOWELS AS REQUIRED. APPLY A COATING OF AN OIL SUCH AS S.F.E. 140 OR OTHER "BOND BREAKING" MATERIAL JUST PRIOR TO PLACING CONCRETE.



**DETAIL - "A"**

CONCRETE BASE - ASPHALT SURFACE

**NOTES:**

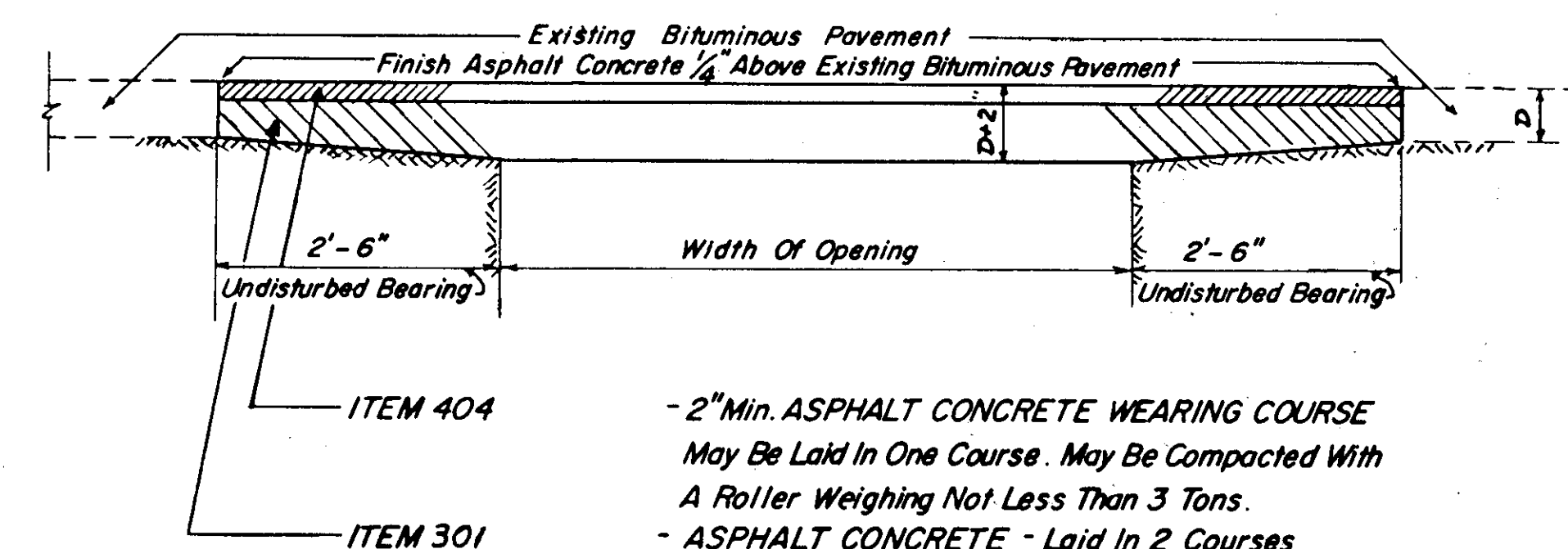
**GENERAL:**

- 1.) PROTECT NEW CONCRETE WITH STEEL PLATES.
- 2.) CONSOLIDATING AND FINISHING - SEE STD. SPEC. 451 PARA. 451.09
- 3.) LT. JOINT SEAL PER STD. CONSTRUCTION DRAWING BP-3.
- 4.) WHEN SECTION D-D IS ALONG HINGE JOINT-REFER TO STD. CONST. DRAWING BP-4.
- 5.) IF EXISTING BOLTS HAVE BEEN DAMAGED DURING REMOVAL OF PAVEMENT, REPLACE WITH NEW BOLTS. SEE SECTION B-B.
- 6.) FOR TRENCH WIDTH DETAIL & BACKFILL REQUIREMENTS-REFER TO ABOVE DRAWINGS.

**MATERIALS:**

- 1.) USE HIGH EARLY STRENGTH CONCRETE
- 2.) STEEL REINFORCED MESH FABRIC 709.10
- 3.) CURING - SEE STD. SPEC. 451 PARAGRAPH 451.10

# REPAIR OF FLEXIBLE PAVEMENT OPENINGS



- 2" Min. ASPHALT CONCRETE WEARING COURSE May Be Laid In One Course. May Be Compacted With A Roller Weighing Not Less Than 3 Tons.

- ASPHALT CONCRETE - Laid In 2 Courses

**NOTES:**

Backfill shall consist of Suitable Soil or as stated in Item 603 Special. The Backfill shall be compacted in layers not to exceed 4" in depth by vibratory or other approved mechanical compactors.

NOTE: THE DRAWINGS SHOWN HEREON HAVE BEEN ADAPTED FROM CUYAHOGA COUNTY STANDARD CONSTRUCTION DRAWINGS FOR USE ON THIS PROJECT.

# NOTES: CLEANING, TELEVISIONING AND REHABILITATION OF SEWERS

FHWA REGION	STATE	PROJECT	
5	OHIO		

22  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## EXAMINE UNDERGROUND SEWER SYSTEMS

THE LOCATIONS OF THE UNDERGROUND SEWER SYSTEMS ARE SHOWN IN THE PLANS.

THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO EXAMINE THE EXISTING UNDERGROUND SEWER SYSTEMS FROM THE MANHOLE OR CATCH BASIN ADJACENT TO THE SUBSTRUCTURE UNIT TO THE OUTFLOW POINT INTO THE CUYAHOGA RIVER. THE PURPOSE OF THIS EXAMINATION IS TO DETERMINE THE NEED TO CLEAN OUT THE SYSTEMS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING THE EXAMINATION. BASED ON THE RESULTS, THE ENGINEER WILL DESIGNATE WHICH PARTS OF THE SYSTEMS REQUIRE CLEANOUT.

EXAMINATION OF THE UNDERGROUND SEWER SYSTEMS WILL BE PAID FOR AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM SPECIAL, TELEVISIONING SEWERS, BY SIZE. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THIS WORK.

## CLEANOUT OF UNDERGROUND SEWER SYSTEMS

CLEANOUT SHALL CONSIST OF REMOVING DIRT AND DEBRIS FROM THE SEWER SYSTEMS WHICH EXTEND FROM THE MANHOLE OR CATCH BASIN ADJACENT TO THE SUBSTRUCTURE UNIT TO THE OUTFLOW POINT INTO THE CUYAHOGA RIVER.

AFTER THE DIRT AND DEBRIS ARE REMOVED, THE SYSTEMS SHALL BE FLUSHED TO THE SATISFACTION OF THE ENGINEER.

THE NUMBER OF LINEAR FEET OF UNDERGROUND SEWER SYSTEMS SHOWN IN THE PLANS (LINEAR FEET FOR EACH PIPE DIAMETER) ARE APPROXIMATELY THE MAXIMUM NUMBER OF LINEAR FEET OF PIPE THAT MIGHT REQUIRE CLEANOUT. ONLY PARTS OF THE SYSTEMS DESIGNATED BY THE ENGINEER AFTER A DETAILED EXAMINATION SHALL BE CLEANED OUT.

CLEANOUT OF THE UNDERGROUND SEWER SYSTEMS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR EACH SIZE PIPE BID FOR ITEM SPECIAL, CLEANOUT OF UNDERGROUND SEWER SYSTEMS. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR TO COVER ANY COST FOR CLEANING DRAINAGE STRUCTURES WITHIN THE UNDERGROUND SEWER SYSTEMS. THE COST OF CLEANING THESE STRUCTURES SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM SPECIAL, CLEANING SEWER, BY SIZE.

## SPECIFICATIONS FOR THE CLEANING OF EXISTING SEWERS

### EQUIPMENT REQUIRED

(A) THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND SUPPLIES NECESSARY TO PROGRESS THE WORK TO COMPLETION IN A WORKMAN-LIKE MANNER IN THE ALLOTTED TIME. THE CLEANING METHODS UTILIZED MAY CONSIST OF RODDING, BUCKETING, BRUSHING, JET FLUSHING, BEE LINING, OR LINING, OR ANY COMBINATION THEREOF.

(B) ALL SEWERS WHICH ARE TO BE TELEVIEWED SHALL BE CLEANED OF DEBRIS, SAND, ROOTS, AND DEPOSITS TO THE EXTENT THAT THE ENTIRE CIRCUMFERENCE IS VISIBLE TO THE TELEVISION CAMERA.

(C) THE CONTRACTOR SHALL PROVIDE ALL PUMPS, DISCHARGE HOSE, AND SEWER PLUGS NECESSARY TO PUMP THE EXISTING WASTEWATER FLOW AROUND THE SEWER SECTION BEING CLEANED IF NECESSARY. THE BYPASSING OF WASTEWATER TO STREAMS, STORM SEWERS, OR OVER GROUND SURFACES WILL NOT BE PERMITTED. THE CONTRACTOR SHALL BE LIABLE FOR BASEMENT FLOODING AND OTHER DAMAGES CAUSED BY HIS OPERATION.

### DISPOSAL OF DEBRIS

(A) ALL DEBRIS, SAND, GRAVEL, AND OTHER MATERIALS WHICH WOULD SETTLE OUT IN THE SEWER SYSTEM AND WHICH WOULD RESTRICT FLOW SHALL BE REMOVED FROM THE SEWER SEGMENT BEING CLEANED AND HAULED AND DISPOSED OF BY THE CONTRACTOR TO A DISPOSAL SITE. FLUSHING OF SAID MATERIALS FROM SEWER SEGMENT TO SEWER SEGMENT SHALL NOT BE PERMITTED. THE CONTRACTOR SHALL BE REQUIRED TO CLEAN AND PROPERLY DISPOSE OF ALL MATERIAL REMOVED FROM THE SEWER SEGMENT WHICH IS SPILLED OR OTHERWISE DEPOSITED UPON THE GROUND. SAID CLEAN-UP SHALL BE DONE WITH DISPATCH AND PROMPTNESS SO AS NOT TO CAUSE UNSIGHTLINESS OR A NUISANCE.

## SPECIFICATIONS FOR INSPECTION BY CLOSED CIRCUIT TELEVISION

### PERSONNEL REQUIRED

(A) THE CONTRACTOR SHALL FURNISH A QUALIFIED TELEVISION TECHNICIAN AND SUFFICIENTLY TRAINED SUPERVISORY PERSONNEL AND LABOR TO PERFORM ALL THE WORK REQUIRED IN THE INSPECTION OPERATION.

### EQUIPMENT REQUIRED

(A) THE CONTRACTOR SHALL FURNISH AN ADEQUATE NUMBER OF TELEVISION CAMERAS, TOOLS, AND REPAIR PARTS SO THAT THERE WILL BE NO DELAY IN CASE OF A CAMERA BREAKDOWN. AT LEAST ONE OF THESE CAMERAS SHALL BE SMALL ENOUGH TO PASS THROUGH A SIX-INCH OPENING.

(B) OPERATION OF THE EQUIPMENT IS TO BE CONTROLLED FROM ABOVE GROUND WITH A SKILLED TECHNICIAN AT THE CONTROL PANEL IN THE TELEVISION STUDIO CONTROLLING THE MOVEMENT OF THE TELEVISION CAMERA. THE TELEVISION EQUIPMENT SHALL HAVE THE CAPACITY TO TELEVIEW A CONTINUOUS 300 FOOT LENGTH OF SEWER.

(C) THE VIEW SEEN BY THE TELEVISION CAMERA SHALL BE TRANSMITTED TO A MONITOR OF NOT LESS THAN 9 INCHES DIAGONAL MEASUREMENT. THE TV CAMERA SHALL HAVE THE CAPACITY OF TRANSMITTING A PICTURE WITH NOT LESS THAN 600 LINES OF RESOLUTION,

AND THE MONITOR SHALL HAVE THE CAPABILITY OF RECEIVING THE SAME. THE VIDEO TAPE EQUIPMENT SHALL HAVE THE CAPABILITY OF PROVIDING AN AUDIO RECORD OF THE TELEVISIONING PROCEDURE.

(D) THE PULLING CABLE OR ROD SHALL HAVE A FOOTAGE METER SO THAT THE LOCATION OF THE TV CAMERA AND POINT OF OBSERVATION WILL BE KNOWN AT ALL TIMES. THE CONTRACTOR SHALL ALSO USE A HAND-HELD COUNTING DEVICE TO COUNT SEWER JOINTS.

(E) THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT REQUIRED FOR TAKING PHOTOGRAPHS OF THE VIEW WHICH APPEARS ON THE MONITOR. DURING THE COURSE OF INSPECTION, THE ENGINEER SHALL INDICATE THE SPECIFIC VIEWS WHICH ARE TO BE PHOTOGRAPHED AND APPROVE OR DISAPPROVE THE QUALITY OF THE VIDEO TAPE. IF THE ENGINEER IS NOT PRESENT, PHOTOGRAPHS SHALL BE TAKEN OF STRUCTURAL FAILURES REQUIRING SEWER REPLACEMENT. PHOTOGRAPHS SHALL BE REFERENCED TO METERED LOCATIONS ON LOG SHEETS.

(F) THE CONTRACTOR SHALL FURNISH SUFFICIENT PUMPS, PLUGS, HOSES, AND ALL EQUIPMENT AND LABOR TO PUMP THE EXISTING SEWAGE FLOW AROUND THE SECTION BEING INSPECTED SO THAT THE ENTIRE CIRCUMFERENCE OF THE PIPE BEING INSPECTED CAN BE OBSERVED. BYPASS PUMPING DURING TELEVISION INSPECTION WILL BE PROVIDED IN ALL LOCATIONS EXCEPT INSTANCES WHERE SUCH ACTION IS IMPOSSIBLE OR IMPRACTICAL AS DETERMINED BY THE ENGINEER. BYPASSING OF SEWAGE FLOWS TO STREAMS, STORM SEWERS, OR OVER THE GROUND SURFACE WILL NOT BE PERMITTED. THE CONTRACTOR SHALL BE LIABLE FOR BASEMENT FLOODING AND OTHER DAMAGES CAUSED BY HIS OPERATION.

## METHODS TO BE USED

### (A) GENERAL

(1) THE TELEVISIONING EQUIPMENT SHALL BE EQUIPPED WITH A METERING DEVICE SO THAT THE EXACT LOCATION OF THE CAMERA WITHIN THE PIPELINE CAN BE DETERMINED AT ALL TIMES AND WILL BE PART OF THE VIDEO TAPE RECORD.

(2) THE CAMERA WILL BE MOVED THROUGH THE LINE AT A UNIFORM, SLOW RATE AND WILL BE STOPPED AT ANY STRUCTURAL DEFICIENCIES TO OBSERVE THE CONDITION, RECORD INFORMATION, AND TAKE PHOTOGRAPHS OF TYPICAL STRUCTURAL DEFICIENCIES. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF STRUCTURAL DEFICIENCIES REQUIRING SEWER REPLACEMENT.

### (B) RECORD OF INSPECTION

(1) THE CONTRACTOR SHALL PREPARE AND FURNISH TO THE ENGINEER SIX COPIES OF A COMPLETE RECORD AND BOUND REPORT ON ALL THE INSPECTION OF WORK DONE UNDER THIS CONTRACT WITHIN THREE WEEKS OF THE COMPLETION OF TELEVISIONING WORK. THIS REPORT SHALL INCLUDE ALL PHOTOGRAPHS TAKEN DURING THE COURSE OF THE INSPECTION AND INFORMATION RELATIVE TO THE FOLLOWING ITEMS.

- (A) IDENTIFICATION OF PIPE SEGMENTS INSPECTED WITH PIPE SIZES, LENGTHS, AND CONSTRUCTION MATERIAL
- (B) METERED LOCATION OF THE FOLLOWING ITEMS ON A SKETCH OF THE SEGMENT TELEVIEWED
  - ALL SERVICE CONNECTIONS TO GO ON AUDIO TAPE
  - OPEN OR MISALIGNED JOINTS

- ROOT PENETRATION INTO THE SEWER
- BROKEN, CRACKED, OR COLLAPSED SECTIONS
- ANY OTHER EVIDENCE OF UNDESIRABLE CONDITIONS
- (C) AN ESTIMATE OF REHABILITATION METHOD
- (D) INFORMATION REQUIRED IN (C) ABOVE SHALL BE INCLUDED IN THE REPORT ON A FORM TO BE SUPPLIED BY THE ENGINEER.

(2) THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE VIDEO TAPE WITH SOUND TRACK OF ALL TELEVISION WORK WITHIN TWO WEEKS OF THE TELEVISIONING TAKING PLACE. THE SPEED AND ELECTRONICS OF THE VIDEO TAPE RECORDER SHALL BE EQUAL TO THAT WHICH WAS STANDARDIZED BY THE ELECTRONICS INDUSTRY. THE LOCATION OF STRUCTURAL OBSERVATIONS, LOCATION OF LATERALS, AND OTHER PERTINENT INFORMATION SHALL BE DESCRIBED VERBALLY ON THE VIDEO TAPE. SEGMENT LOCATION SHALL BE SHOWN ON THE TV MONITOR AND RECORDED ON THE VIDEO TAPE.

(3) THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE SET OF NEGATIVES OF ALL PHOTOGRAPHS TAKEN.

## RESPONSIBILITIES OF THE CONTRACTOR

(A) ELECTRICITY: THE CONTRACTOR SHALL PROVIDE ALL ELECTRICITY.

(B) WATER: THE CONTRACTOR SHALL MAKE PROVISIONS FOR TRANSPORTING FLUSHING WATER REQUIRED AT THE SITE AND SHALL PAY ALL COST FOR SUCH WATER.

(C) PROTECTION OF CONTRACTOR'S EQUIPMENT: THE CONTRACTOR SHALL ASSUME ENTIRE RESPONSIBILITY FOR THE PROTECTION AND SAFEKEEPING OF HIS OWN EQUIPMENT AND MATERIAL UNTIL THE JOB IS COMPLETED. AT THE TERMINATION OF HIS WORK AND FINAL ACCEPTANCE BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE ALL OF HIS MATERIALS FROM THE PREMISES.

(D) CONTRACTOR TO EXAMINE SITE: THE CONTRACTOR SHALL INFORM HIMSELF OF THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, THE SITE OF THE WORK, AND ALL OTHER RELEVANT MATTERS CONCERNING THE WORK TO BE PERFORMED PRIOR TO EXECUTION OF THIS CONTRACT. THE CONTRACTOR WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING CONCERNING WHICH HE MIGHT HAVE FULLY INFORMED HIMSELF BECAUSE OF HIS FAILURE TO HAVE SO INFORMED HIMSELF PRIOR TO ENTERING INTO THIS CONTRACT.

IF MAJOR OBSTRUCTIONS OR BLOCKAGES ARE FOUND WHICH WILL PREVENT PROPER LINE PREPARATION OR TELEVISION INSPECTION, THE CONTRACTOR WILL NOTE THESE TO THE ENGINEER WITH INFORMATION ON THE LOCATION OF THE OBSTRUCTION OR BLOCKAGE, AND THE ENGINEER HEREBY AGREES TO PROMPTLY REQUEST THAT THE CITY REMOVE SUCH OBSTRUCTION OR BLOCKAGE OR TO RELEASE THE CONTRACTOR FROM RESPONSIBILITY FOR PERFORMANCE OF WORK IN THE AFFECTED SECTIONS OF THE SEWER SYSTEM.

(E) PROVISION OF GUARDS AND WARNING SIGNS: THE CONTRACTOR MUST PROVIDE ALL LEGAL AND NECESSARY GUARDS, RAILINGS, LIGHTS, WARNING SIGNS, FLAGMAN, ETC., DURING THE PROGRESS OF THE WORK FOR WHICH HE IS RESPONSIBLE. THE CONTRACTOR SHALL ARRANGE HIS WORK SO THAT HE WILL CAUSE A MINIMUM AMOUNT OF INTERFERENCE WITH MUNICIPAL OPERATION.

MADE T.S. DATE 7-7-78  
TRACED D.E.S. DATE 7-7-78  
CHECKED E.W.H. DATE 6-5-79  
SCALE NONE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

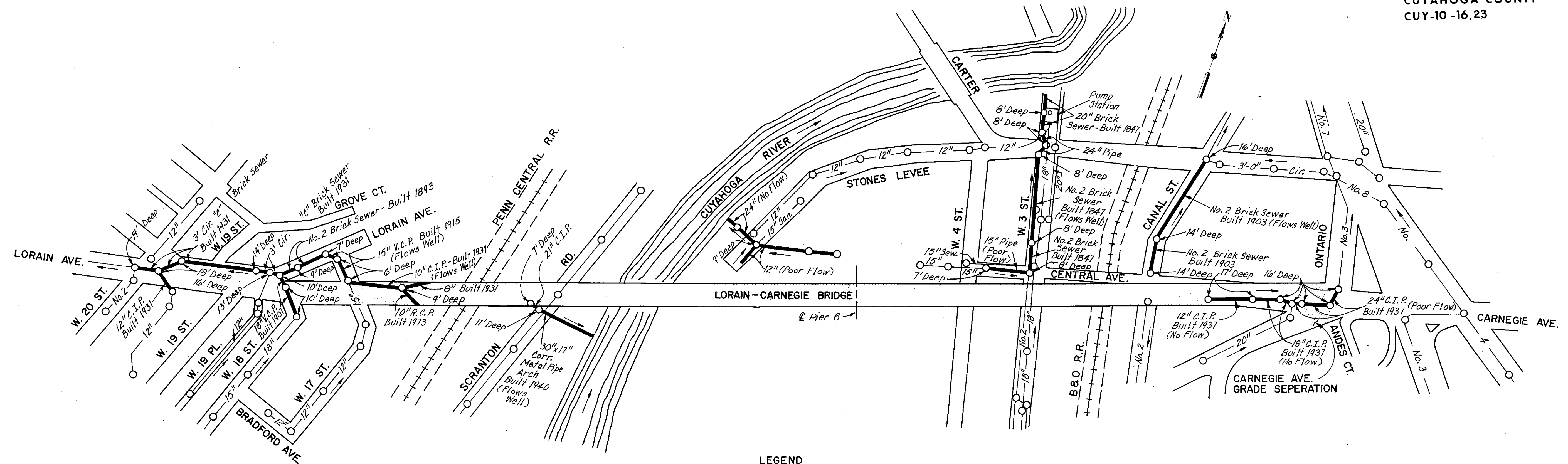
HNTB

# CLEANING, TELEVISIONING AND REHABILITATION OF SEWERS

FHWA REGION	STATE	PROJECT
5	OHIO	

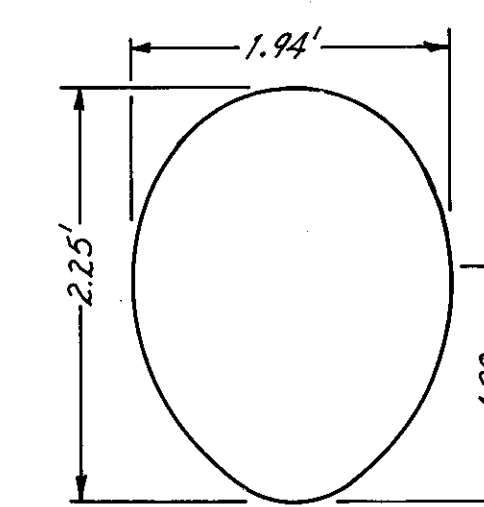
23  
185

CUYAHOGA COUNTY  
CUY-10-16.23



**LEGEND**  
 — Sewer to be Cleaned and/or Televised  
 [Hatched Box] Bridge Limits

LOCATION	CLEANING (COST PARTICIPATION II)									TELEVISIONING (COST PARTICIPATION II)											
	8"	10"	12"	15"	18"	20"	21"	24"	NO.2 36"	30" x 17" CORR. M.P.	8"	10"	12"	15"	18"	20"	21"	24"	NO.2 36"	30" x 17" CORR. M.P.	
Lorain Ave.	22'	196'	71'						261'	574'		122'	71'						261'	574'	
W. 18th St.					177'										177'						
W. 17th St.				130'										130'							
Scranton							11'			154'						11'				154'	
Stones Levee			380'										380'								
Central Ave.				174'									174'								
W. 3rd St.						178'		65'	493'						178'		65'	493'			
Canal St.									496'										496'		
Carnegie			147'		158'			227'					147'		158'			227'			
TOTALS	22'	196'	598'	304'	335'	178'	11'	372'	1250'	574'	154'	122'	598'	304'	335'	178'	11'	372'	1250'	574'	154'



NO. 2 BRICK SEWER

**NOTE:**  
 IF IT IS NECESSARY TO REPLACE A SECTION OF NO. 2 BRICK SEWER, USE 27" TYPE C CONDUIT AND MATCH THE EXISTING FLOWLINES. THE CONDUIT AND THE NO. 2 BRICK SEWER SHALL BE JOINED WITH A MASONRY COLLAR AS PER STANDARD CONSTRUCTION DRAWING MC-4. THE COST OF THE MASONRY COLLARS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 603 - 27" CONDUIT, TYPE C.

MADE TS DATE 7-7-78 **Howard, Needles, Tammen & Bergendoff**  
 TRACED DES DATE 7-7-78 **CONSULTING ENGINEERS**  
 CHECKED FWH DATE 6-5-79 **CLEVELAND, OHIO**  
 SCALE NONE

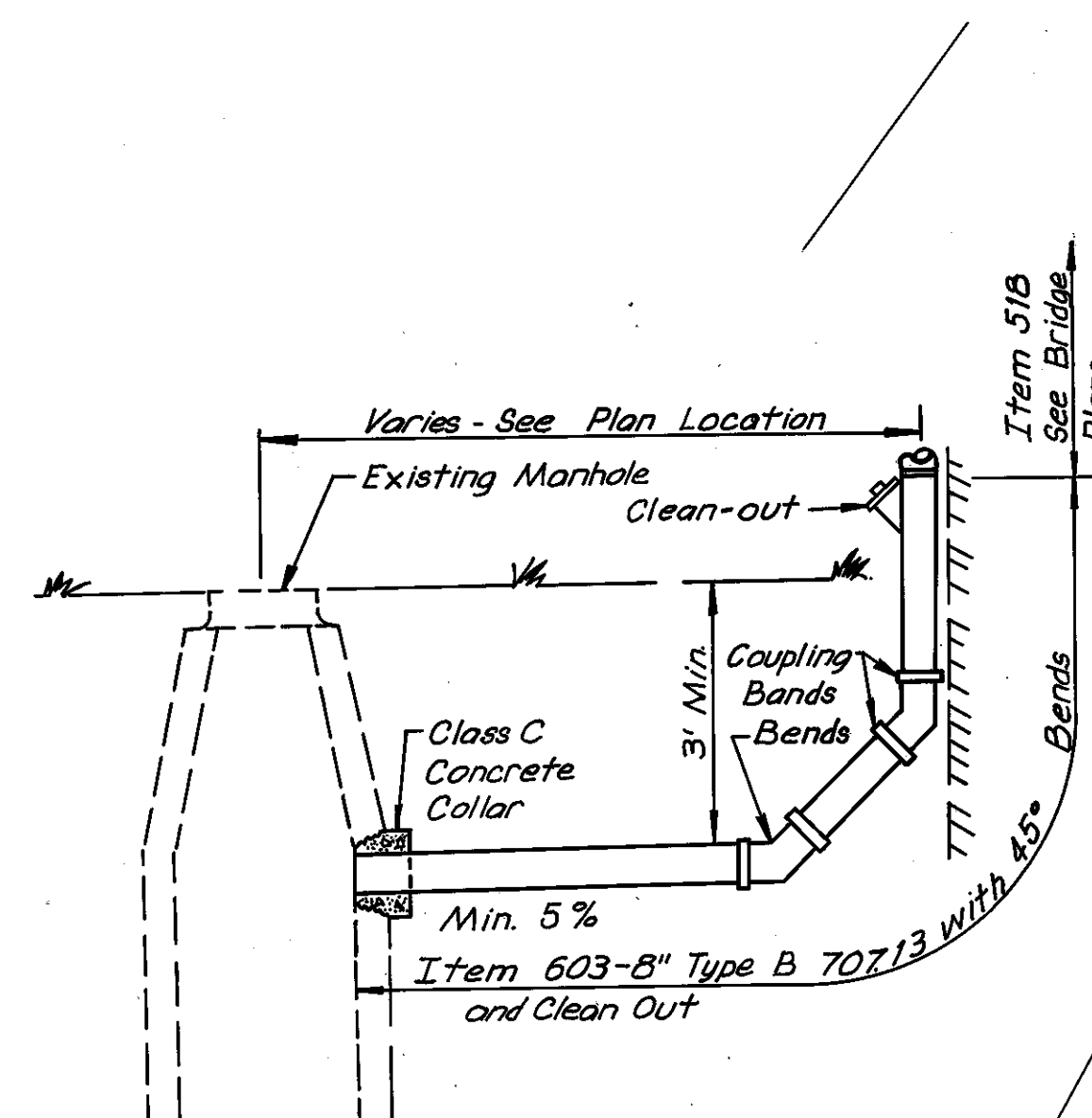
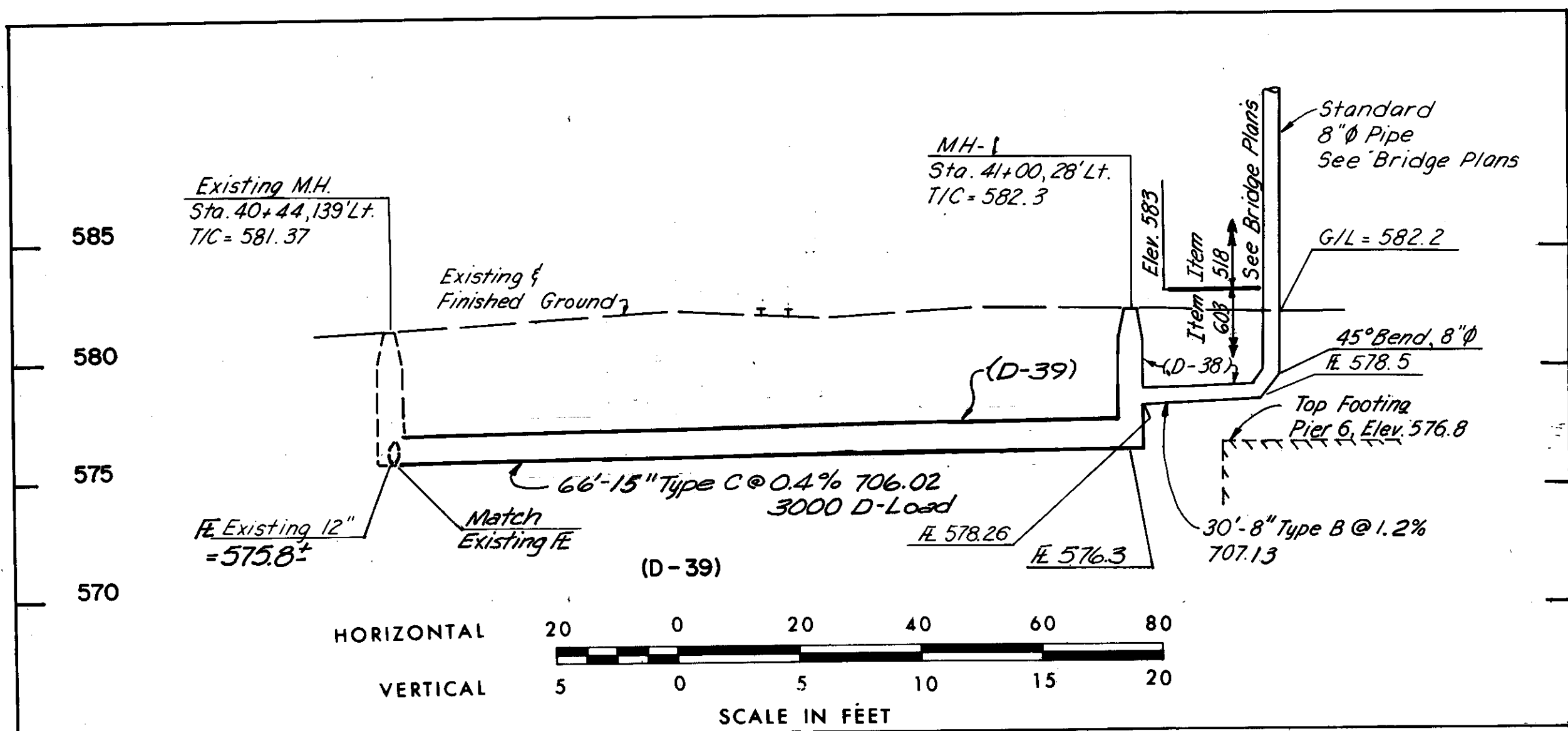
**HNTB**





CUYAHOGA COUNTY  
CUY-10-16.23

QUANTITY CALCULATIONS  
MADE BY C.D. DATE 11-17-78  
CHECKED BY F.W.H. DATE 5-23-79

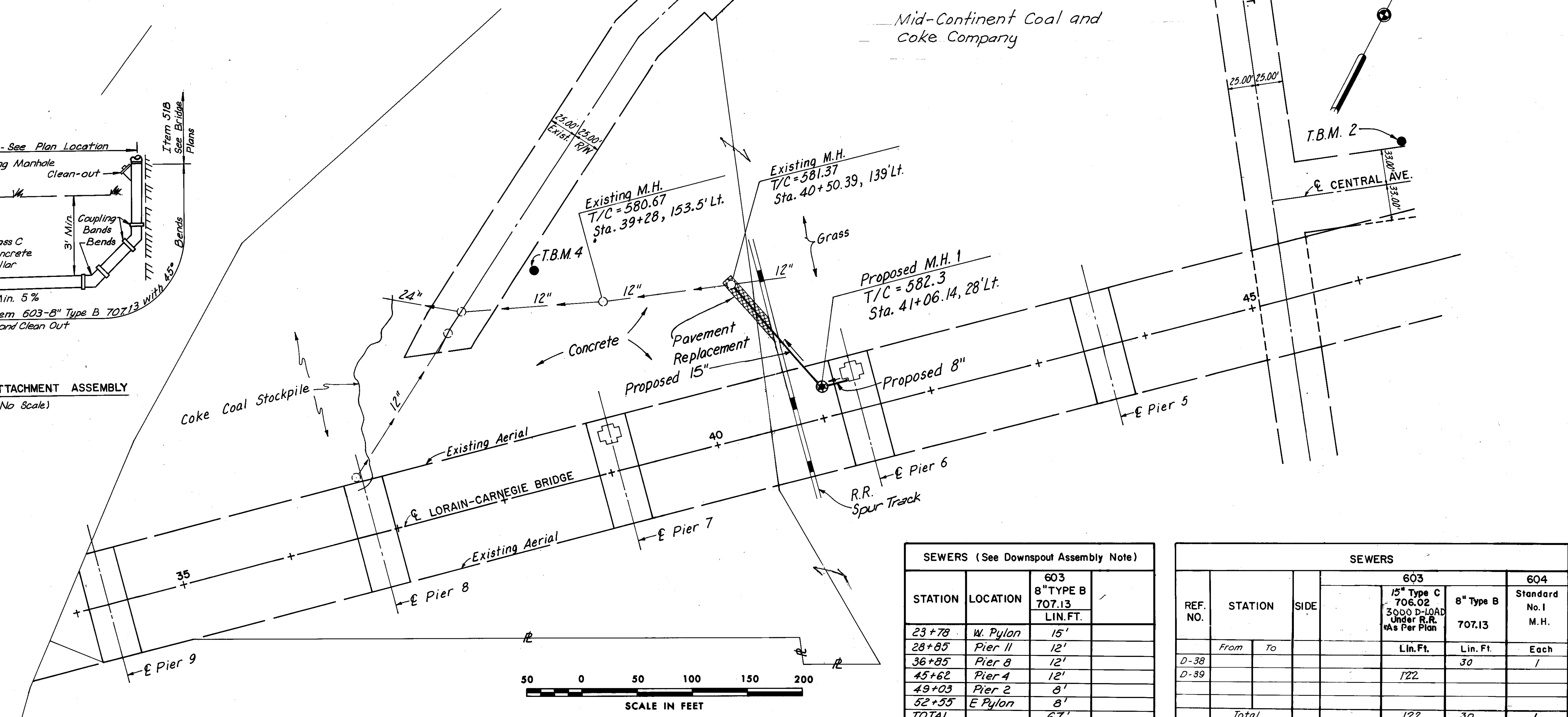


DOWNSPOUT ATTACHMENT ASSEMBLY  
(No Scale)

CUYAHOGA RIVER

Coke Coal Stockpile

Mid-Continent Coal and  
Coke Company



STATION	LOCATION	603 8" TYPE B 707.13 LIN. FT.
23+78	W. Pylon	15'
28+85	Pier II	12'
36+85	Pier 8	12'
45+62	Pier 4	12'
49+03	Pier 2	8'
52+55	E Pylon	8'
TOTAL		67'

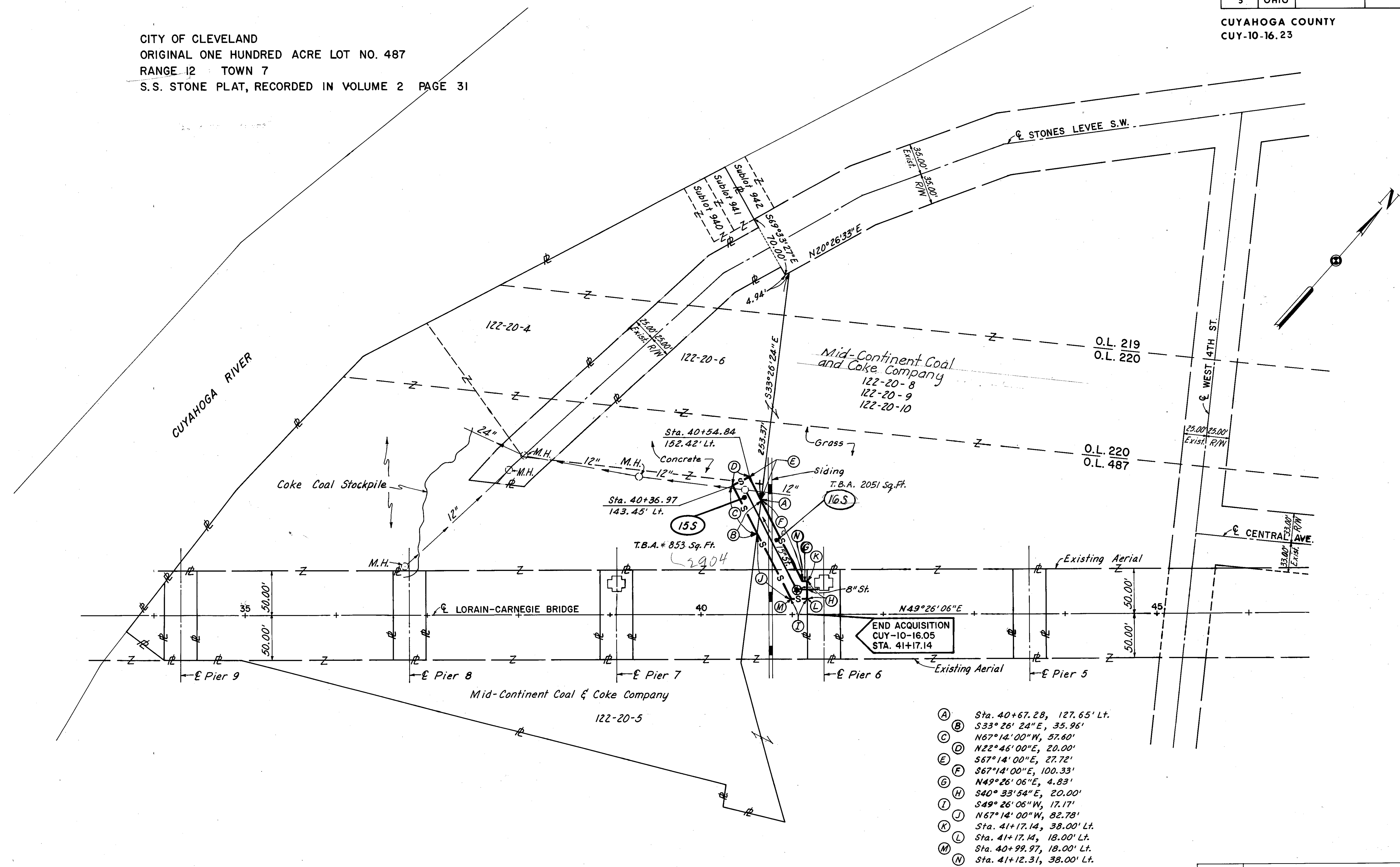
REF. NO.	STATION	SIDE	603		604
			15" Type C 706.02 3000 D-LOAD Under R.R. As Per Plan	8" Type B 707.13	Standard No. 1 M.H.
	From	To	Lin. Ft.	Lin. Ft.	Each
D-38				30	1
D-39			122		
	Total		122	30	1

FHWA REGION	STATE	PROJECT
5	OHIO	

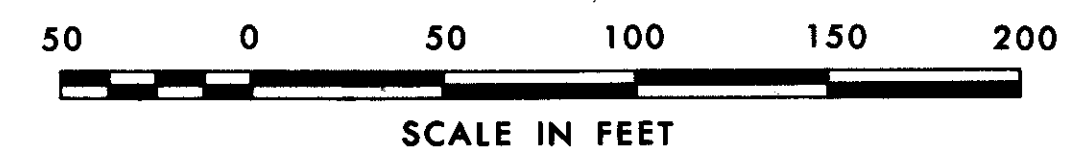
26  
185

CUYAHOGA COUNTY  
CUY-10-16.23

CITY OF CLEVELAND  
ORIGINAL ONE HUNDRED ACRE LOT NO. 487  
RANGE 12 TOWN 7  
S.S. STONE PLAT, RECORDED IN VOLUME 2 PAGE 31



- (A) Sta. 40+67.28, 127.65' Lt.
- (B) S33° 26' 24\"E, 35.96'
- (C) N67° 14' 00\"W, 57.60'
- (D) N22° 46' 00\"E, 20.00'
- (E) S67° 14' 00\"E, 27.72'
- (F) S67° 14' 00\"E, 100.33'
- (G) N49° 26' 06\"E, 4.83'
- (H) S40° 33' 54\"E, 20.00'
- (I) S49° 26' 05\"W, 17.17'
- (J) N67° 14' 00\"W, 82.78'
- (K) Sta. 41+17.14, 38.00' Lt.
- (L) Sta. 41+17.14, 18.00' Lt.
- (M) Sta. 40+99.97, 18.00' Lt.
- (N) Sta. 41+12.31, 38.00' Lt.



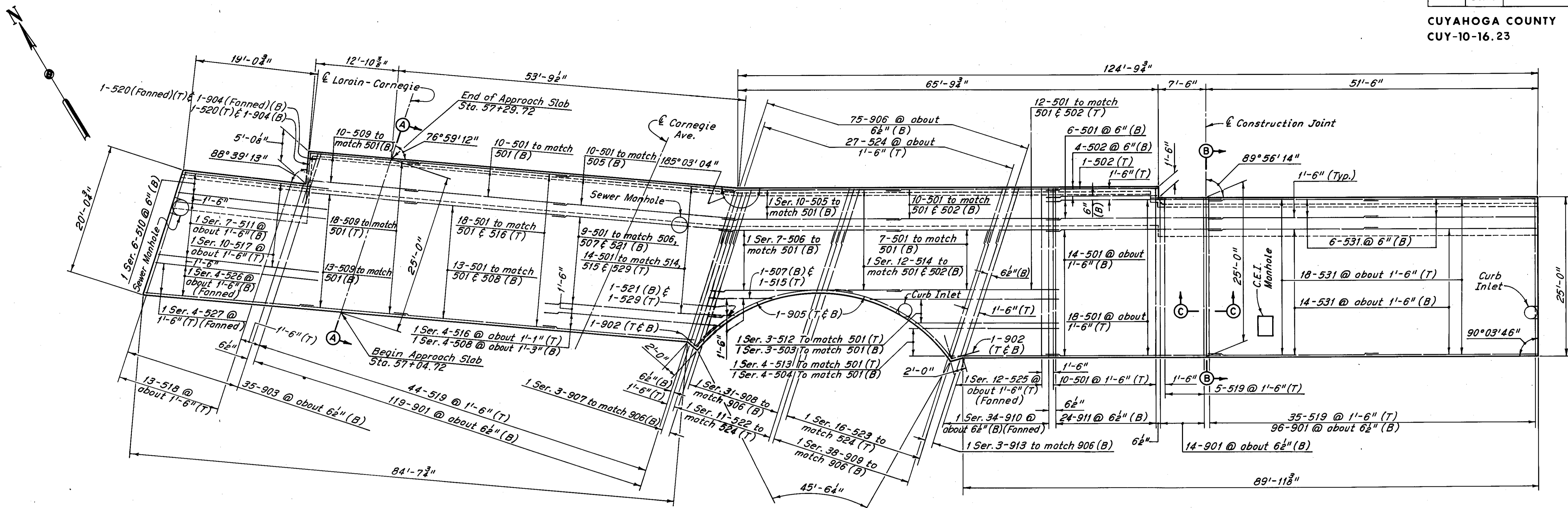
MADE JAG DATE 11-20-78  
 TRACED DATE  
 CHECKED FWH DATE 6-6-79  
 SCALE 1\"/>

Howard, Needles, Tammen & Bergendoff  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**HNTB**

NAME	REVISION	DATE

LORAIN-CARNEGIE BRIDGE



WEST APPROACH SLAB PLAN

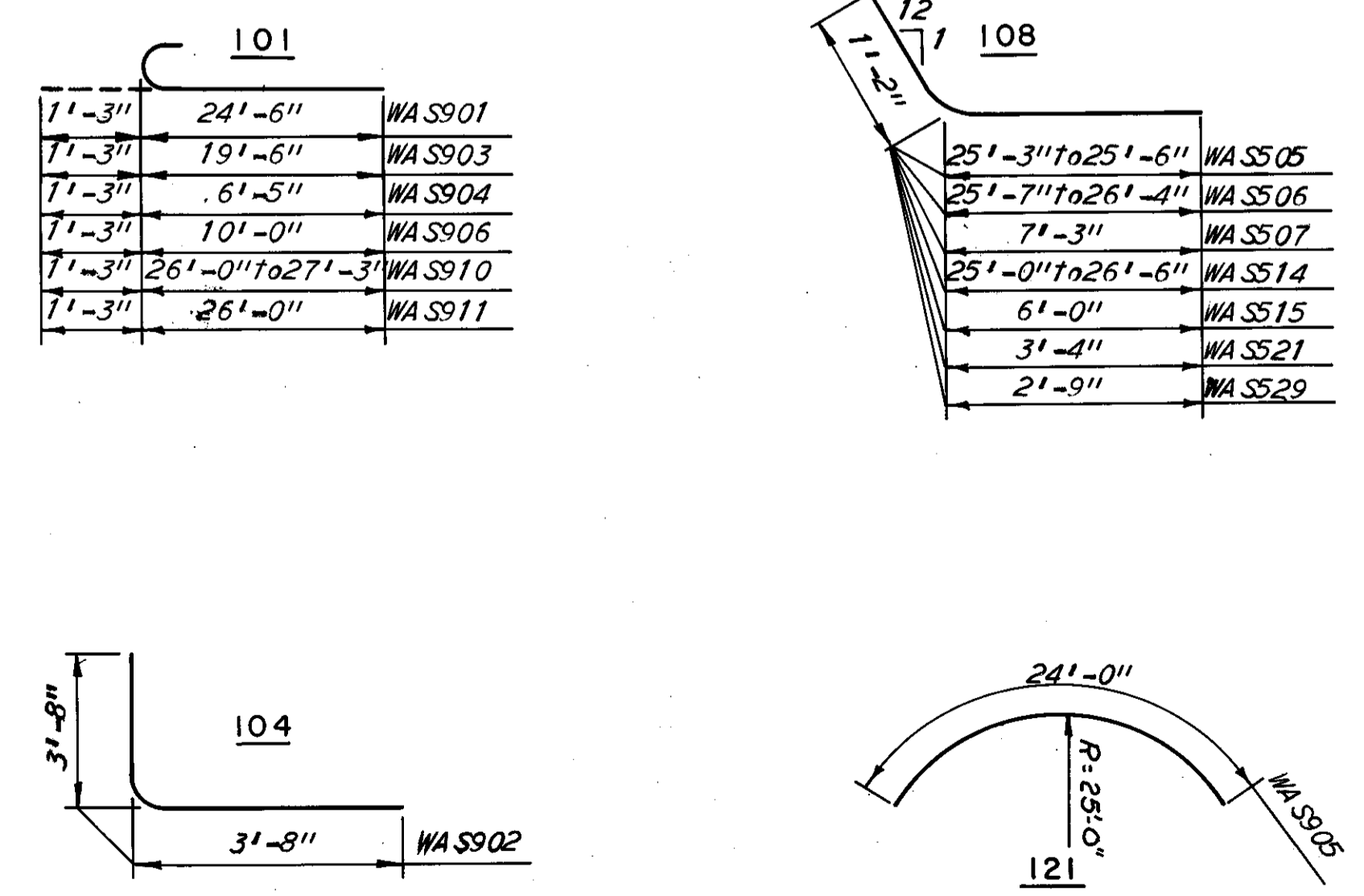
**REQUIRED LAP LENGTHS**  
No. 5 Bars = 1'-2" Minimum  
No. 9 Bars = 2'-10" Minimum

Note: All reinforcing bar marks shall be prefixed WA5.

MARK	NO.	LENGTH	TYPE	SER. INCR.
WA SS01	151	261'-0"	Str.	
WA SS02	5	171'-0"	Str.	
WA SS03	1 Ser. 3	23'-6" to 30'-0"	Str.	3'-3"
WA SS04	1 Ser. 4	18'-3" to 21'-3"	Str.	1'-0"
WA SS05	1 Ser. 10	26'-5" to 26'-9"	108	1/8"
WA SS06	1 Ser. 7	26'-9" to 27'-4"	108	1 1/2"
WA SS07	1	81'-5"	108	
WA SS08	1 Ser. 4	23'-3" to 26'-9"	Str.	1'-2"
WA SS09	41	171'-9"	Str.	
WA SS10	1 Ser. 6	20'-3" to 20'-9"	Str.	1 1/8"
WA SS11	1 Ser. 7	21'-3" to 23'-9"	Str.	5"
WA SS12	1 Ser. 3	23'-3" to 29'-9"	Str.	3'-3"
WA SS13	1 Ser. 4	18'-3" to 21'-3"	Str.	1'-0"
WA SS14	1 Ser. 12	26'-2" to 27'-8"	108	1 1/2"
WA SS15	1	71'-2"	108	
WA SS16	1 Ser. 4	23'-3" to 26'-9"	Str.	1'-0"
WA SS17	1 Ser. 10	20'-3" to 23'-6"	Str.	4 1/2"
WA SS18	13	191'-6"	Str.	
WA SS19	84	241'-6"	Str.	

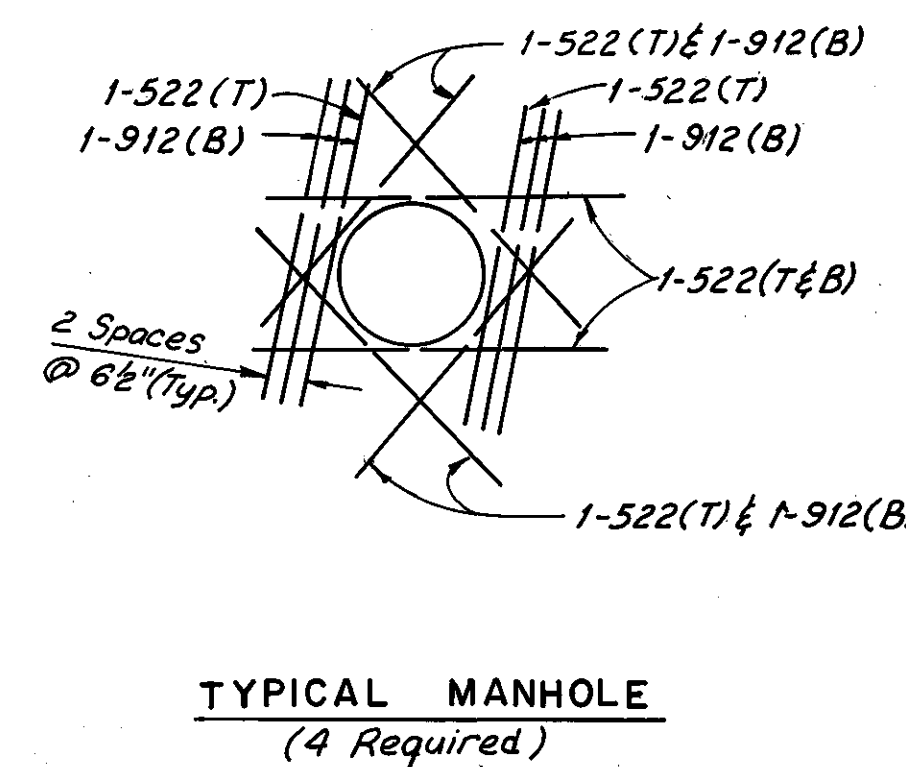
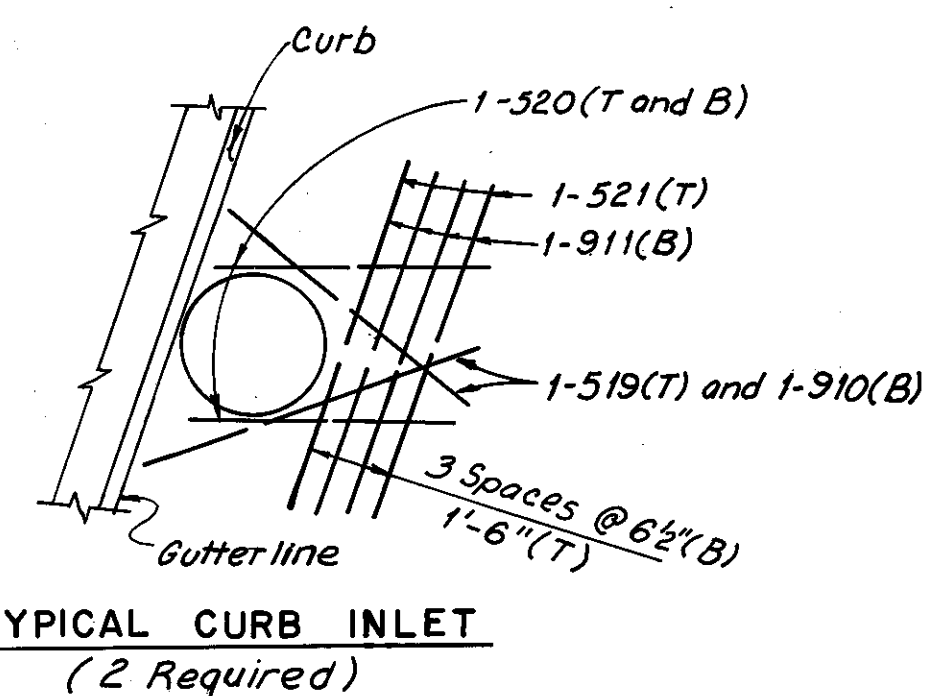
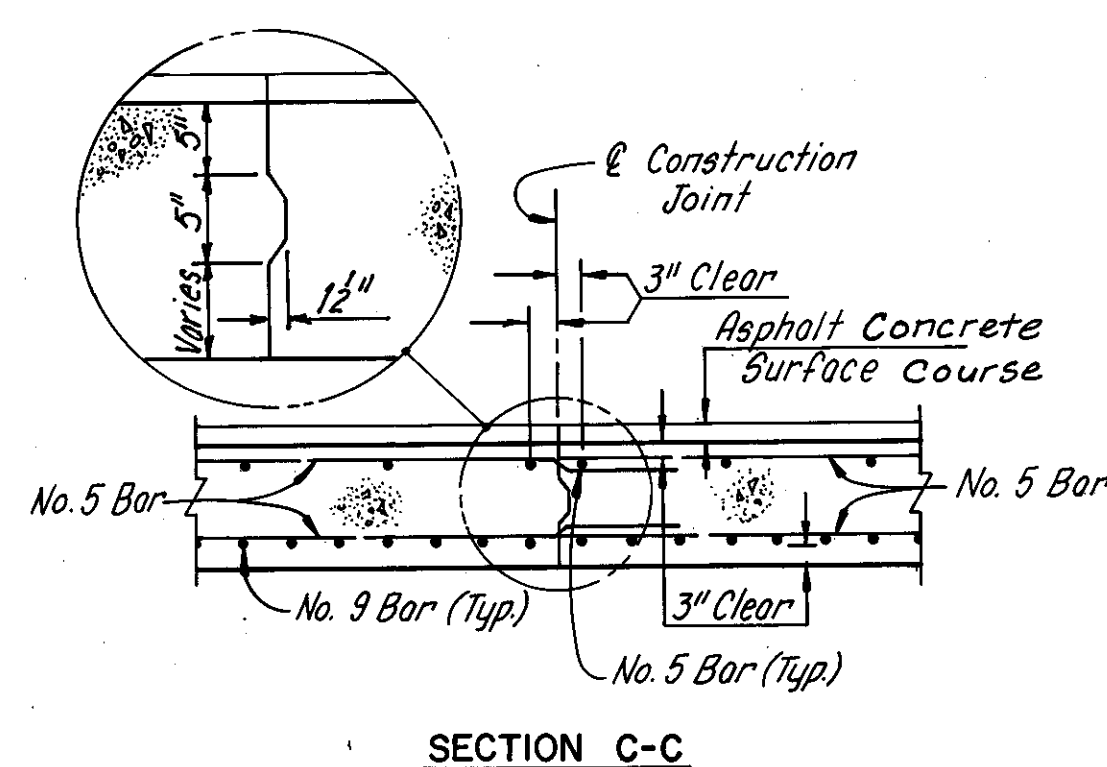
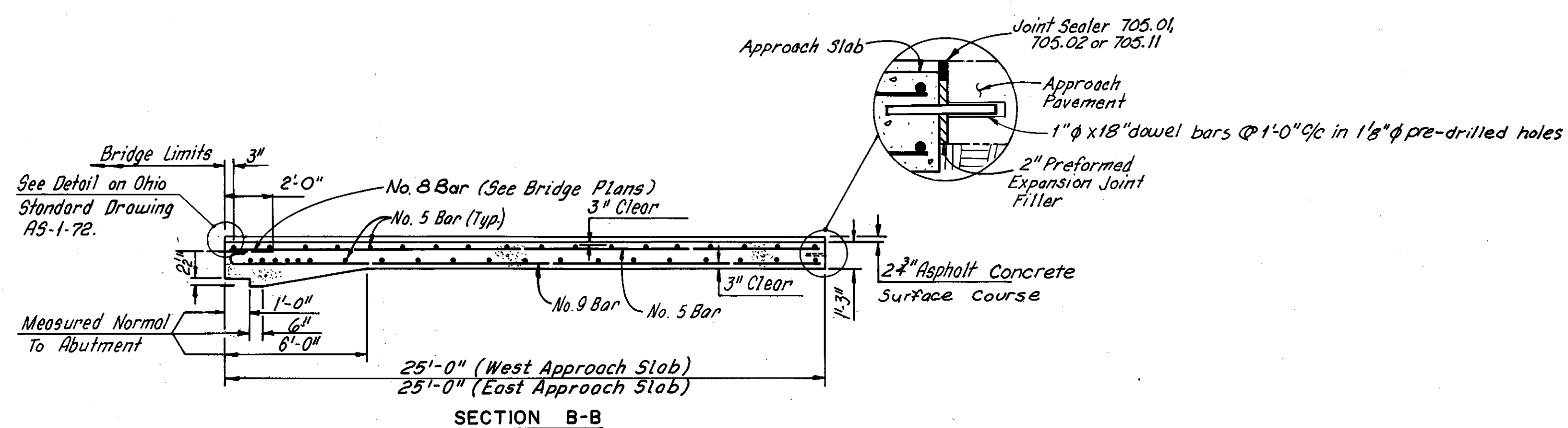
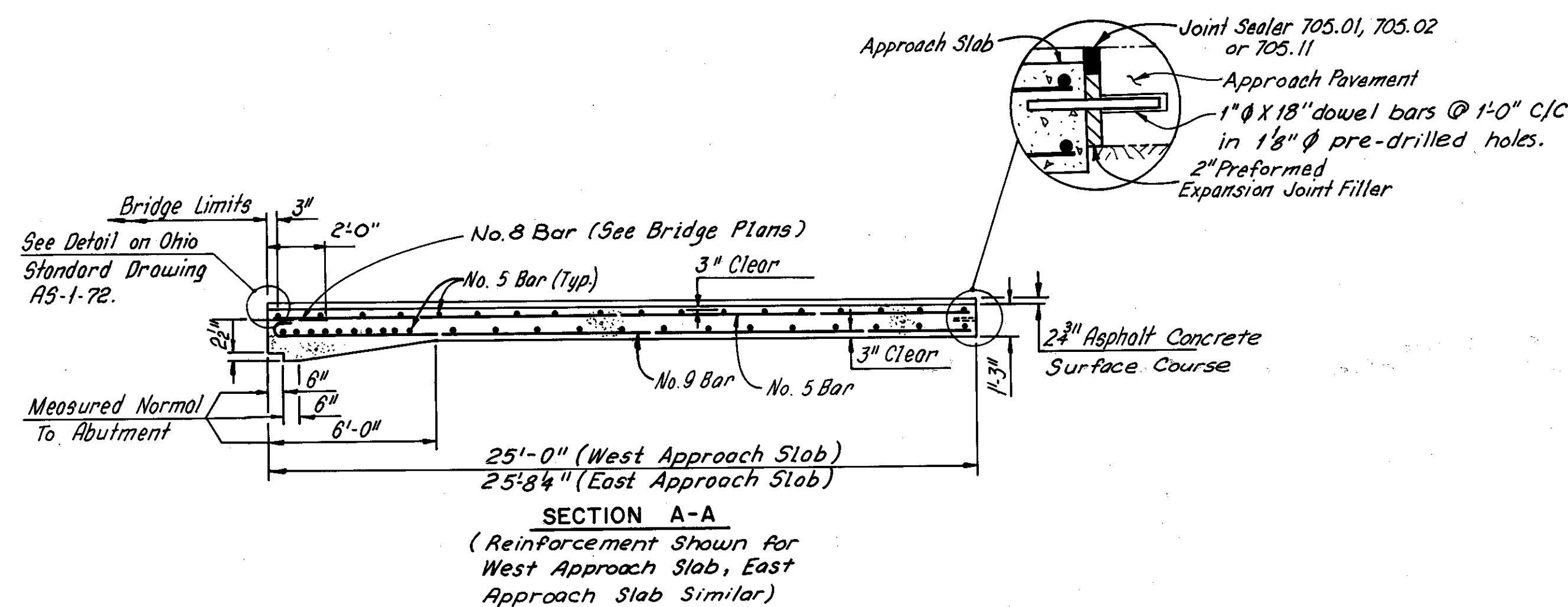
MARK	NO.	LENGTH	TYPE	SER. INCR.
WA SS20	2	51'-9"	Str.	
WA SS21	1	41'-6"	108	
WA SS22	1 Ser. 11	8'-0" to 16'-9"	Str.	10 1/2"
WA SS23	1 Ser. 16	8'-0" to 18'-3"	Str.	9"
WA SS24	27	101'-0"	Str.	
WA SS25	1 Ser. 12	26'-0" to 27'-3"	Str.	1 1/2"
WA SS26	1 Ser. 4	24'-0" to 24'-9"	Str.	3"
WA SS27	1 Ser. 4	23'-3" to 24'-9"	Str.	4"
WA SS28	14	51'-0"	Str.	
WA SS29	1	31'-11"	108	
WA SS30	12	41'-6"	Str.	
WA SS31	38	261'-3"	Str.	
WA SS32	4	31'-6"	Str.	
WA SS33	6	41'-9"	Str.	
WA SS34	10	51'-6"	Str.	

MARK	NO.	LENGTH	TYPE	SER. INCR.
WA SS01	229	251'-9"	101	
WA SS02	4	74'-1"	104	
WA SS03	35	201'-9"	101	
WA SS04	2	71'-8"	101	
WA SS05	4	241'-0"	121	
WA SS06	75	111'-3"	101	
WA SS07	1 Ser. 3	18'-0" to 18'-9"	Str.	4 1/2"
WA SS08	1 Ser. 31	9'-9" to 18'-0"	Str.	3 1/2"
WA SS09	1 Ser. 38	9'-9" to 20'-3"	Str.	3 1/2"
WA SS10	1 Ser. 34	27'-3" to 28'-6"	101	1 1/8"
WA SS11	24	274'-3"	101	
WA SS12	6	41'-3"	Str.	
WA SS13	1 Ser. 3	20'-6" to 21'-0"	Str.	3"
WA SS14	6	41'-9"	Str.	
WA SS15	12	61'-6"	Str.	
WA SS16	4	51'-0"	Str.	
WA SS17	10	71'-0"	Str.	



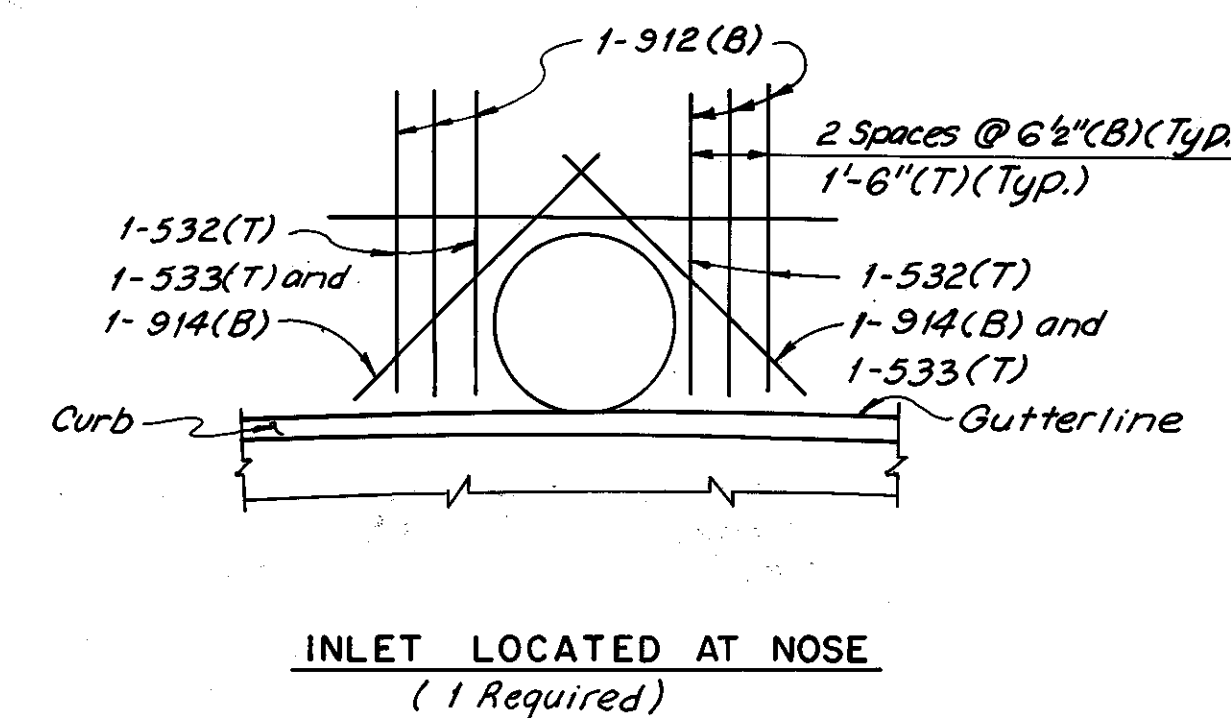
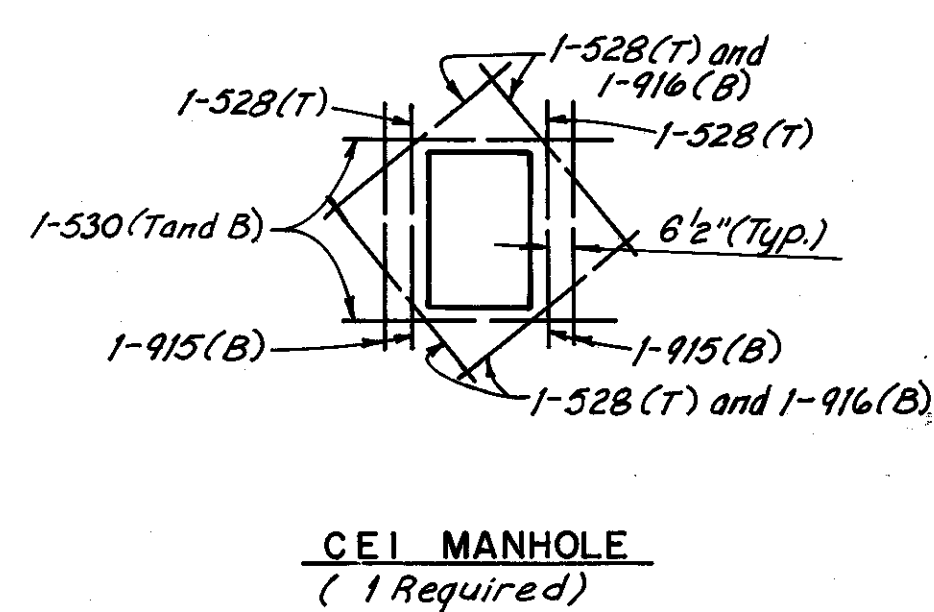
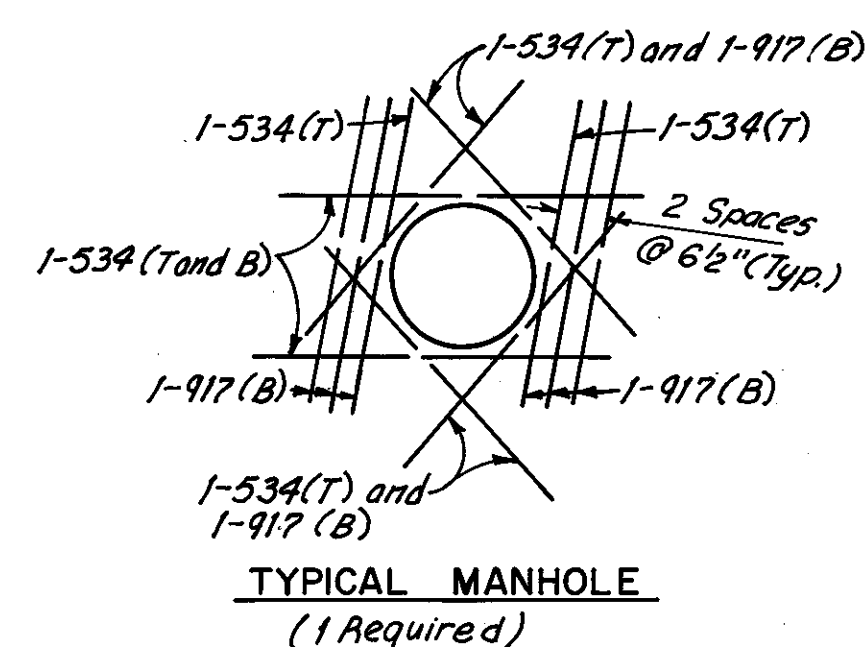
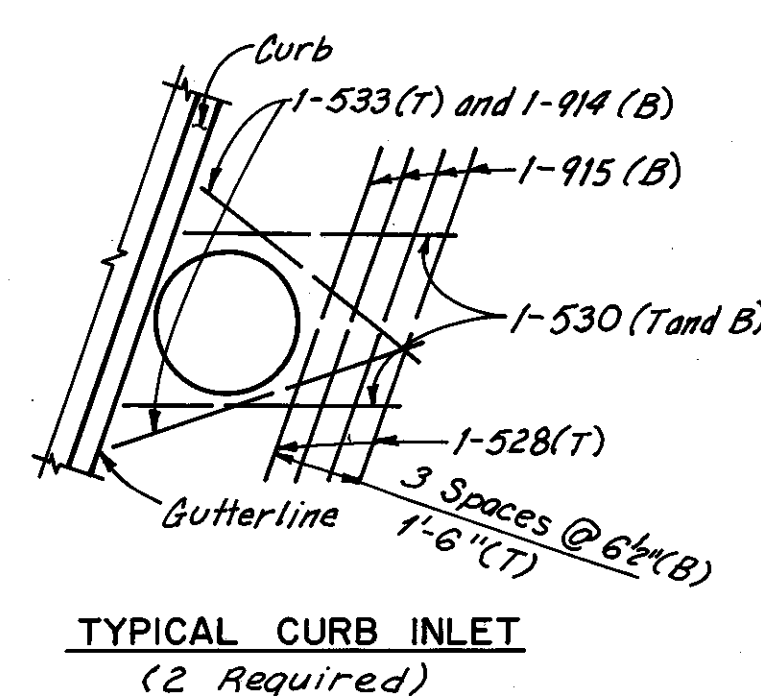
Notes:  
For Sections A-A, B-B and C-C, see Sheet 29.  
All dimensions of curved segments are arc dimensions.  
Front and back sides of approach slab are parallel.  
For reinforcement around inlets and manholes, see "Additional Reinforcement for West Approach Slab", Sheet 29.  
The jacking holes as called for on Ohio Standard Drawing AS-1-72 are not required.  
The following abbreviations are used:  
T = Top  
B = Bottom  
Ser. = Series  
For additional notes and details, see Ohio Standard Drawing AS-1-72, and Sheet 16.





Note:  
All reinforcing bar marks shall be prefixed as follows:  
West Approach Slab = WAS  
East Approach Slab = EAS

ADDITIONAL REINFORCEMENT FOR EAST APPROACH SLAB



Notes:  
For location of Sections A-A, B-B and C-C, see West Approach Slab, Sheet 27 or East Approach Slab, Sheet 28.  
The following abbreviations are used:  
T = Top  
B = Bottom  
Typ. = Typical  
For additional approach slab details, see Sheet 16.

ADDITIONAL REINFORCEMENT FOR WEST APPROACH SLAB

FHWA REGION	STATE	PROJECT	
5	OHIO		

30  
185

CUYAHOGA COUNTY  
CUY-10-16.23

# LIGHTING NOTES

## SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

## PLAN SPECIFICATION REFERENCES

REFERENCES TO ITEM S625 AND S713 IN THESE PLANS SHALL BE CONSIDERED TO READ AS RESPECTIVE REFERENCES TO ITEMS 625 AND 713.

## GENERAL

THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF FULL LIGHTING WITH AN AVERAGE ILLUMINATION OF 3.0 FT.-CD. (INITIAL) AND A MAXIMUM UNIFORMITY RATIO OF 3.0 TO 1.

THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF A 5% MAXIMUM VOLTAGE DROP WITH 480-VOLT, TWO-WIRE, CONTROLLED SECONDARY SERVICE, WITH ONE SIDE GROUNDED, BEING SUPPLIED BY:

CITY OF CLEVELAND  
MUNICIPAL ELECTRICAL LIGHT AND POWER  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

## 625.07 - 713.11 LUMINAIRES

STYLE C LUMINAIRES SHALL HAVE SINGLE RATED 480 VOLT, 400 WATT, INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC M-1000, WESTINGHOUSE OV-50, ITT AMERICAN 1000 OR EQUAL APPROVED BY THE ENGINEER.

## 713.14 LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERAMALUX", SYLVANIA "LUMALUX", OR EQUAL APPROVED BY ENGINEER.

## CONDUIT JACKED UNDER PAVEMENT

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING CONDUIT OF THE SIZE OR SIZES INDICATED UNDER EXISTING PAVEMENT AND CONTIGUOUS SHOULDERS BY AN APPROVED METHOD SUCH AS "DRILLING" OR "JACKING".

THE CONTRACTOR SHALL PLACE THE CONDUIT WITH THE LEAST AMOUNT OF DISTURBANCE TO EXISTING PAVEMENT, SUBBASE, BERM PAVEMENT OR SHOULDERS OF THE ROADWAY, AND TO PREVENT DAMAGE TO THE EXISTING UTILITIES. ALL PUSH PITS OR NECESSARY EXCAVATIONS SHALL BE BACKFILLED AND RESTROED IN ACCORDANCE WITH 625.01. MEASUREMENT OF THE CONDUIT SHALL BE THE ACTUAL AMOUNT OF LINEAL FEET INSTALLED UNDER PAVEMENT AND SHOULDERS, MEASURED IN PLACE, AS ACCEPTED BY THE ENGINEER. THE UNIT PRICE BID FOR ITEM 625 "CONDUIT JACKED UNDER PAVEMENT", SHALL BE FULL COMPENSATION FOR EXCAVATION, DRILLING OR JACKING, BACKFILLING, COMPACTION, RESTORATION OF PAVEMENT AND ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED.

## CONCRETE LIGHTING STANDARDS AND BRACKET SPECIFICATIONS

THESE SPECIFICATIONS APPLY ONLY TO THE MANUFACTURE OF MACHINE-MADE CONCRETE LIGHTING STANDARDS TO BE USED FOR THE SUPPORT OF LIGHTING UNITS. THE STANDARDS TO BE FURNISHED UNDER THESE SPECIFICATIONS SHALL BE OF THE DESIGN AND DIMENSIONS AS SHOWN ON THE DETAILED DRAWING OF LIGHTING STANDARDS AND CONFORMANCE WITH CITY OF CLEVELAND, DIVISION OF LIGHT AND POWER DWG. 4969.

**AGGREGATE** - ALL AGGREGATES SHALL BE GRADED FROM 3/8" TO #100 SIEVE, WITH NOT MORE THAN 5% PASSING THE #100 SIEVE - UNLESS OTHERWISE SPECIFIED. AGGREGATES SHOULD BE SOUND, DURABLE AND FREE FROM CHERT. A MINIMUM OF 20% OF THE TOTAL AGGREGATE SHALL BE CRUSHED BLACK GRANITE. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH SAMPLES OF THE AGGREGATE FOR APPROVAL OF COLOR AND TEXTURE.

**CEMENT** - THE HIGH EARLY STRENGTH CEMENT USED IN THE MANUFACTURE OF THESE STANDARDS SHALL CONFORM TO CURRENT AMERICAN SOCIETY FOR TESTING MATERIALS SPECIFICATION C-150.

**WATER CEMENT RATIO** - THE WATER USED SHALL BE FREE FROM ACIDS, ALKALIES, OIL, OR VEGETABLE MATTER. THE MAXIMUM QUANTITY OF GALLONS OF WATER PER SACK OF CEMENT SHALL BE IN PROPORTION REQUIRED TO PRODUCE A CONCRETE WITH A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,500 PSI, UNDER STEAM CURING AS SPECIFIED, BEFORE PRESTRESSING IS RELEASED.

**REINFORCEMENT** - THE HIGH TENSILE PRESTRESSING STEEL USED SHALL HAVE AN ULTIMATE STRENGTH OF AT LEAST 250,000 PSI, AND SHALL BE PRESTRESSED TO NOT MORE THAN 70% OF THE ULTIMATE STRENGTH. THE PRIMARY REINFORCING SHALL BE IN ACCORDANCE WITH A.S.T.M. DESIGNATION A416-57T OR A421-58T. SPACER RINGS WITH NON-FERROUS STUDS SHALL BE SECURELY ATTACHED TO THE REINFORCEMENT TO INSURE A MINIMUM COVERAGE OF 1/2" OF CONCRETE. WHERE THE MINIMUM COVERAGE CANNOT BE MAINTAINED NEXT TO A CABLE ENTRANCE, HANDHOLE, OR WIRE INLET, THE REINFORCING SHALL BE PROTECTED BY MEANS OF A NON-CORROSIVE SLEEVE. SPIRAL WRAPPING OF A DIAMETER NOT LESS THAN 0.105 INCHES SHALL BE SPACED ON 2-1/2" PITCH FROM THE TOP OF THE POLE FOR A DISTANCE OF NOT LESS THAN 5-FT., AND BE SECURELY TIED TO THE REINFORCEMENT BY AN APPROVED METHOD.

**METHOD OF MANUFACTURE** - POLES SHALL BE PRESTRESSED CONCRETE OF THE DESIGN AND DIMENSIONS SHOWN ON THE PLANS, AND SHALL BE MACHINE MADE IN STEEL MOLDS BY THE CENTRIFUGAL PROCESS TO INSURE MAXIMUM DENSITY, A SMOOTH FINISH PROPER EMBEDMENT OF THE REINFORCING STEEL AND PROVIDE THAT FLEXURAL CRACKING SHALL NOT OCCUR DURING HANDLING OR UNDER DESIGNED LOADS. THE CROSS SECTION OF THE POLE SHALL CONTAIN A RACEWAY FOR THE CABLES, HAVING A MINIMUM OPENING OF 1-1/2", AND NOT MORE THAN 2" AT THE TOP OF THE POLE. THIS RACEWAY SHALL BE PRODUCED BY THE CENTRIFUGAL PROCESS AND SHALL EXTEND THROUGHOUT THE LENGTH OF THE POLE. (IN THE CASE OF THE BOLT-DOWN TYPE OF BASE, THE RACEWAY SHALL BE ENLARGED TO 5-1/2" AT THE BASE FOR EASY ENTRANCE OF THE ELECTRICAL WIRING.) ALL CORED HOLES FOR HANDHOLES OR BRACKET OPENINGS SHALL BE IN ACCORDANCE WITH THE LOCATION AND SIZES SHOWN ON THE PLANS, AND BE FREE FROM SHARP EDGES FOR PASSAGE OF THE ELECTRICAL WIRING.

## CONCRETE LIGHTING STANDARDS AND BRACKET SPECIFICATIONS (CONTINUED)

**CURING** - FOLLOWING THE CASTING OPERATION, THE CONCRETE SHALL BE CURED WITH LOW TEMPERATURE STEAM. FOLLOWING THE STEAM CURING, THE STANDARDS SHALL BE KEPT MOIST DURING THE EARLY DAYS OF CURING AND SHALL NOT BE SUBJECT TO SEVERE TEMPERATURE CHANGES DURING THE CURING PERIOD.

**FINISHING** - THE STANDARDS SHALL HAVE A SMOOTH SURFACE OBTAINED BY MEANS OF A WATER CARBORUNDUM MECHANICAL PROCESS WHICH SHALL REMOVE THE LAITANCE AND SURFACE CEMENT, THEREBY REVEALING THE AGGREGATE USED.

**BOLT-DOWN BASE** - BOLT-DOWN TYPE OF POLES SHALL HAVE A CAST STEEL ANCHOR BASE OF A.S.T.M. DESIGNATION A27 GRADE 70-36 WHICH SHALL BE SECURED TO THE PRIMARY REINFORCEMENT OF THE POLE IN SUCH A MANNER AS TO DEVELOP SUFFICIENT STRENGTH TO TRANSMIT THE REQUIRED LOADS TO THE ANCHOR BOLTS. THE CONNECTION BETWEEN THE BOLT-DOWN BASE AND PRIMARY POLE REINFORCEMENT SHALL BE ENTIRELY EMBEDDED WITHIN THE CONCRETE POLE.

**MAST ARMS** - (ALUMINUM MAST ARMS) THE MAST ARM SHALL BE MANUFACTURED FROM ALUMINUM ALLOY OF THE FOLLOWING SPECIFICATIONS. THE DRAWN SEAMLESS TUBE USED SHALL BE IN ACCORDANCE WITH A.S.T.M. SPECIFICATION B210-58T, GS10A-T6. WHERE PIPE IS USED, IT SHALL BE IN ACCORDANCE WITH A.S.T.M. SPECIFICATION B241-58T, GS10A-T6. THE EXTERIOR SURFACES OF THE MAST ARMS SHALL BE FREE OF ALL PROTUBERANCES, DENTS, CRACKS OR OTHER IMPERFECTIONS. THE MAST ARM POLE FITTINGS SHALL BE HEAT TREATED ALUMINUM CASTINGS AND SHALL BE FREE OF ALL PROTUBERANCES, DENTS, CRACKS OR OTHER IMPERFECTIONS TO INSURE AN EVEN GRIP ON THE POLE AND PROVIDE EASY MOUNTING OF THE MAST ARMS. ALUMINUM FOR THE MAST ARM POLE FITTINGS SHALL BE ALUMINUM ALLOY MADE FROM VIRGIN ALUMINUM METAL AND CONFORM IN ALL RESPECTS TO A.S.T.M. SPECIFICATIONS S5A-F OR SG70A-T6, AND A.S.T.M. SPECIFICATIONS B26-50T.

**POLE FITTINGS** - HAND HOLE-OPENINGS SHALL BE COVERED WITH A HEAT TREATED CAST ALUMINUM DOOR FASTENED TO NON FERROUS INSERTS IN THE POLE WITH STAINLESS STEEL BOLTS. ALUMINUM FOR THE POLE HANDHOLE DOOR SHALL BE ALUMINUM ALLOY MADE FROM VIRGIN ALUMINUM METAL AND SHALL CONFORM IN ALL RESPECTS TO A.S.T.M. SPECIFICATIONS S5A-F, OR SG 70A-T6, AND SHALL CONFORM TO A.S.T.M. SPECIFICATIONS B26-50T.

**TESTING** - RESULTS OF TESTS MADE BY INDEPENDENT AND RECOGNIZED TESTING LABORATORIES OR APPROVED TESTING METHODS OF THE SUPPLIER SHALL BE MADE AVAILABLE TO THE ENGINEER ON HIS REQUEST TO COVER ANY OF THE MATERIALS BEING FURNISHED AS PART OF THE LIGHTING STANDARDS.

**APPROVAL** - CONTRACTOR SHALL SUBMIT THREE (3) COPIES OF DRAWINGS OF LIGHTING EQUIPMENT HE PROPOSES TO PURCHASE TO THE ENGINEER FOR APPROVAL BY THE CITY OF CLEVELAND, DIVISION OF STREET LIGHTING.

## ANCHOR BOLTS FOR LIGHT POLE AND CALL BOX

ANCHOR BOLTS FOR MOUNTING LIGHT POLES AND CALL BOXES ON BRIDGES AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF 713.01 AND DETAILS SHOWN ON THE PLANS AND STANDARD DRAWINGS, OR THE APPROVED SHOP DRAWINGS, FOR THE RESPECTIVE POLES TO BE PLACED THEREON.

ANCHORS SHALL BE CAST-IN-PLACE EXCEPT WHERE EXISTING CONCRETE EXISTS, THEN ANCHORS SHALL BE SET BY DRILLING AND GROUTING. DRILLING OF HOLES INTO CONCRETE AND THE FURNISHING AND EMBLACEMENT OF GROUT INTO THE HOLES SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS 853 AND 956.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID FOR EACH SET OF THE SIZE OF ANCHOR BOLTS REQUIRED TO INSTALL ONE POLE. THIS PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING AND PLACING THE BOLTS, DRILLING ANCHOR HOLES, FURNISHING AND PLACING NONSHRINKING EPOXY MORTAR, AND ALL NUTS, WASHERS, SHIMS, AND INCIDENTALS REQUIRED TO COMPLETE THE WORK.

## EMERGENCY CALLBOX TEMPLATE

THE COST OF PROVIDING CALLBOX TEMPLATE AND MOUNTING HARDWARE AS DETAILED IN THE PLANS IS TO BE INCLUDED IN BID PRICE FOR "ANCHOR BOLTS" AS REQUIRED.

## HIGH VOLTAGE TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 839, SHALL BE PERFORMED ON ALL DISTRIBUTION CABLE AND DUCT CABLE SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION, SUCH AS GUARDRAIL, FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF THE CABLE RUN BEING TESTED, HAS BEEN COMPLETED.

## LIGHT POLE REMOVAL

Contractor shall remove all existing light poles, lamps, wire and appurtenance from retaining wall off structure. Existing anchor bolts shall be cut to grade, wire removed from existing duct and cavities filled with Class C Cement, color matched and finished to match existing wall. All material shall become the property of the Contractor.

Payment shall be made at the unit bid price per each Item 202" Light Pole, To be Removed, As per plan.

MADE E.F.J. DATE 1-22-79  
TRACED COK DATE 3/12/79  
CHECKED E.F.J. DATE 3-24-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

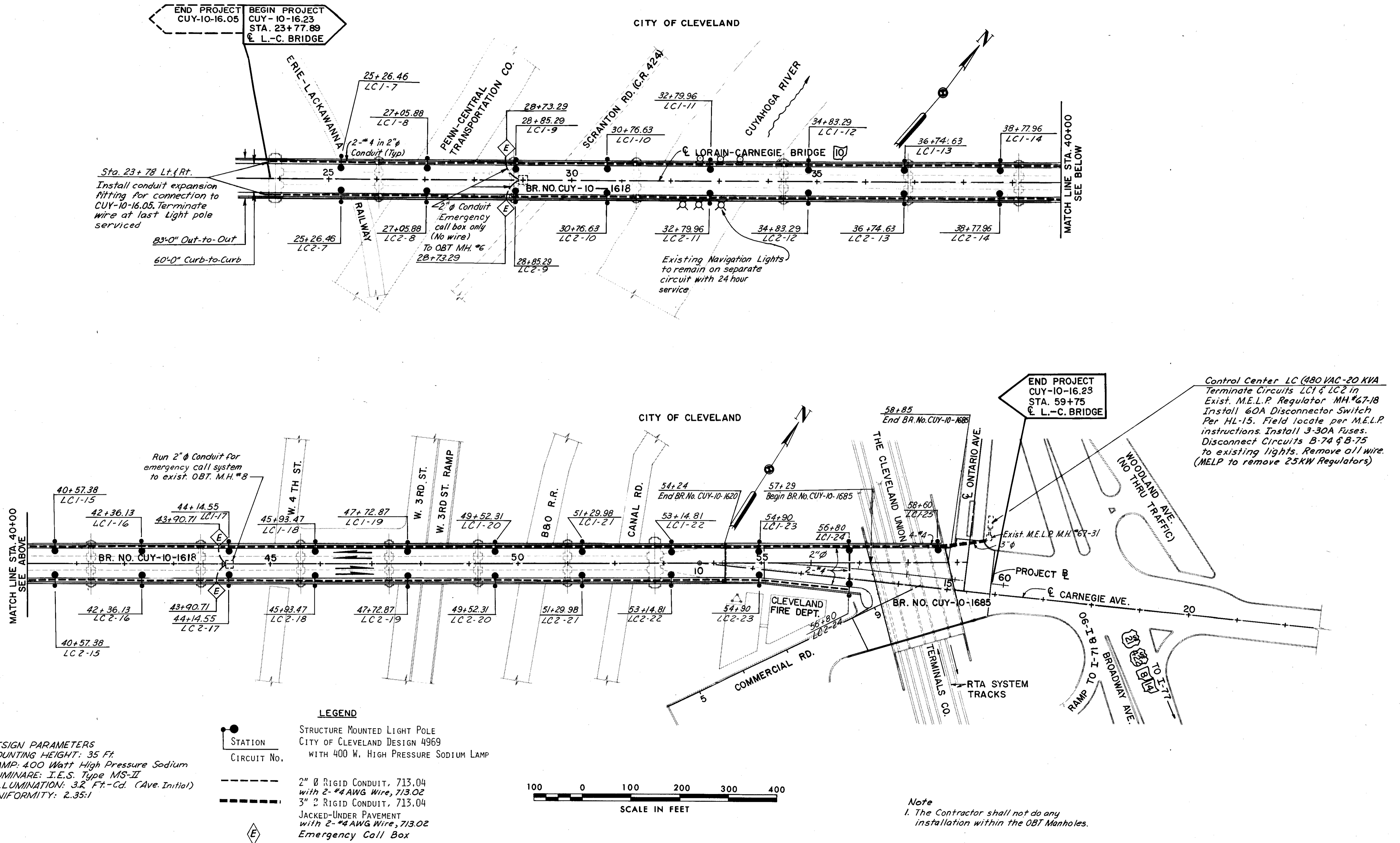
HNTB

# LIGHTING PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

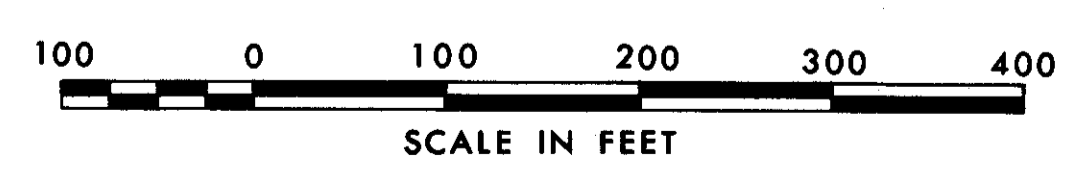
31  
185

CUYAHOGA COUNTY  
CUY-10-16.23



**DESIGN PARAMETERS**  
 MOUNTING HEIGHT: 35 Ft.  
 LAMP: 400 Watt High Pressure Sodium  
 LUMINAIRE: I.E.S. Type MS-II  
 ILLUMINATION: 3.2 Ft.-Cd. (Ave. Initial)  
 UNIFORMITY: 2.35:1

- LEGEND**
- STATION
  - CIRCUIT No.
  - 2" Ø RIGID CONDUIT, 713.04 with 2-#4 AWG Wire, 713.02
  - 3" Ø RIGID CONDUIT, 713.04
  - JACKED-UNDER PAVEMENT with 2-#4 AWG Wire, 713.02
  - ⬢ Emergency Call Box



**Note**  
 1. The Contractor shall not do any installation within the OBT Manholes.

MADE E.F.J. DATE 12-15-78  
 TRACED W.D. DATE 12-21-78  
 CHECKED E.F.J. DATE 3-24-79  
 SCALE 1" = 100'

**Howard, Needles, Tammen & Bergendoff**  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**HNTB**

LORAIN - CARNEGIE BRIDGE

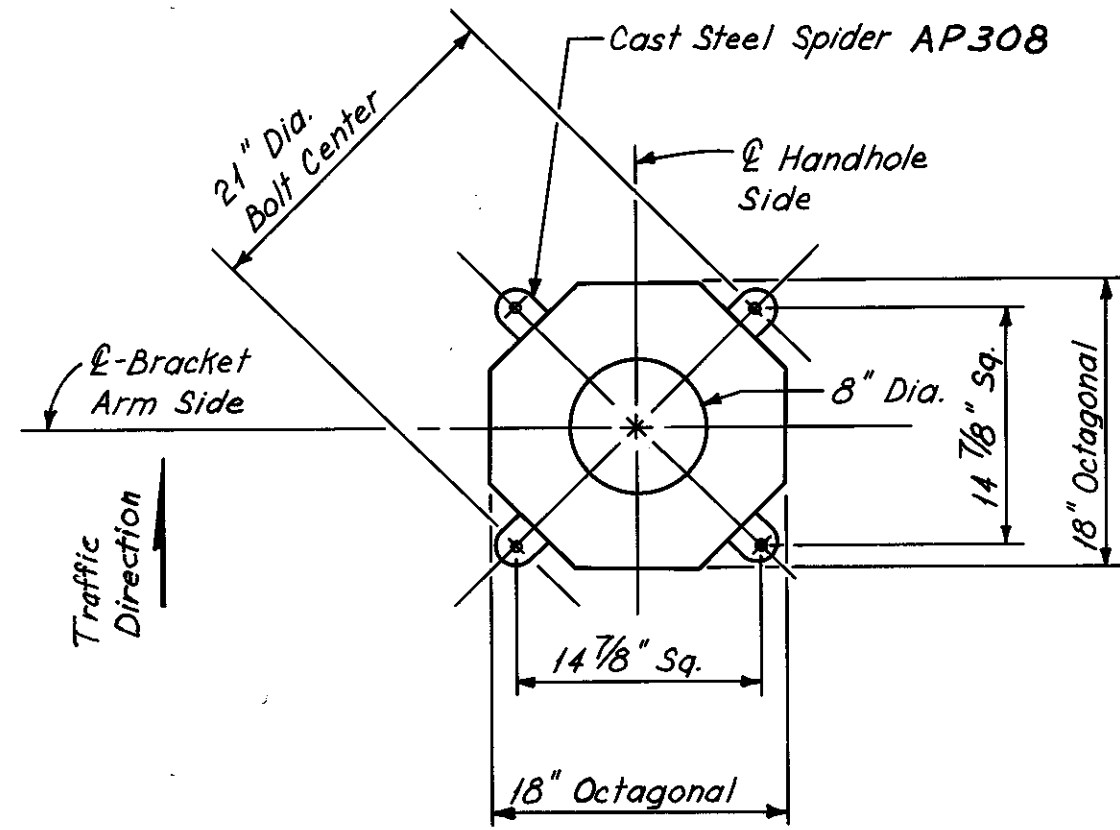
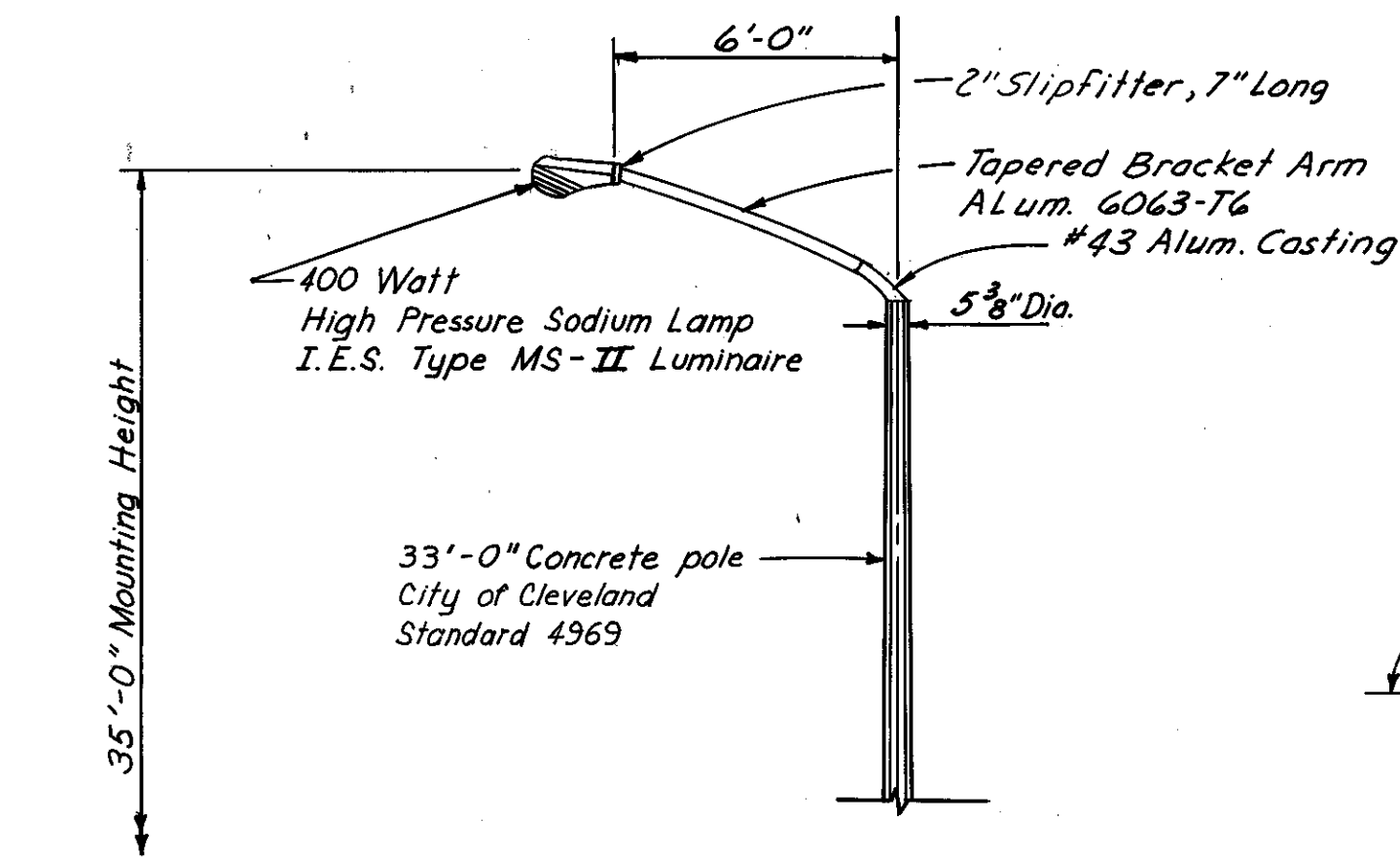


# LIGHTING DETAILS GENERAL SUMMARY

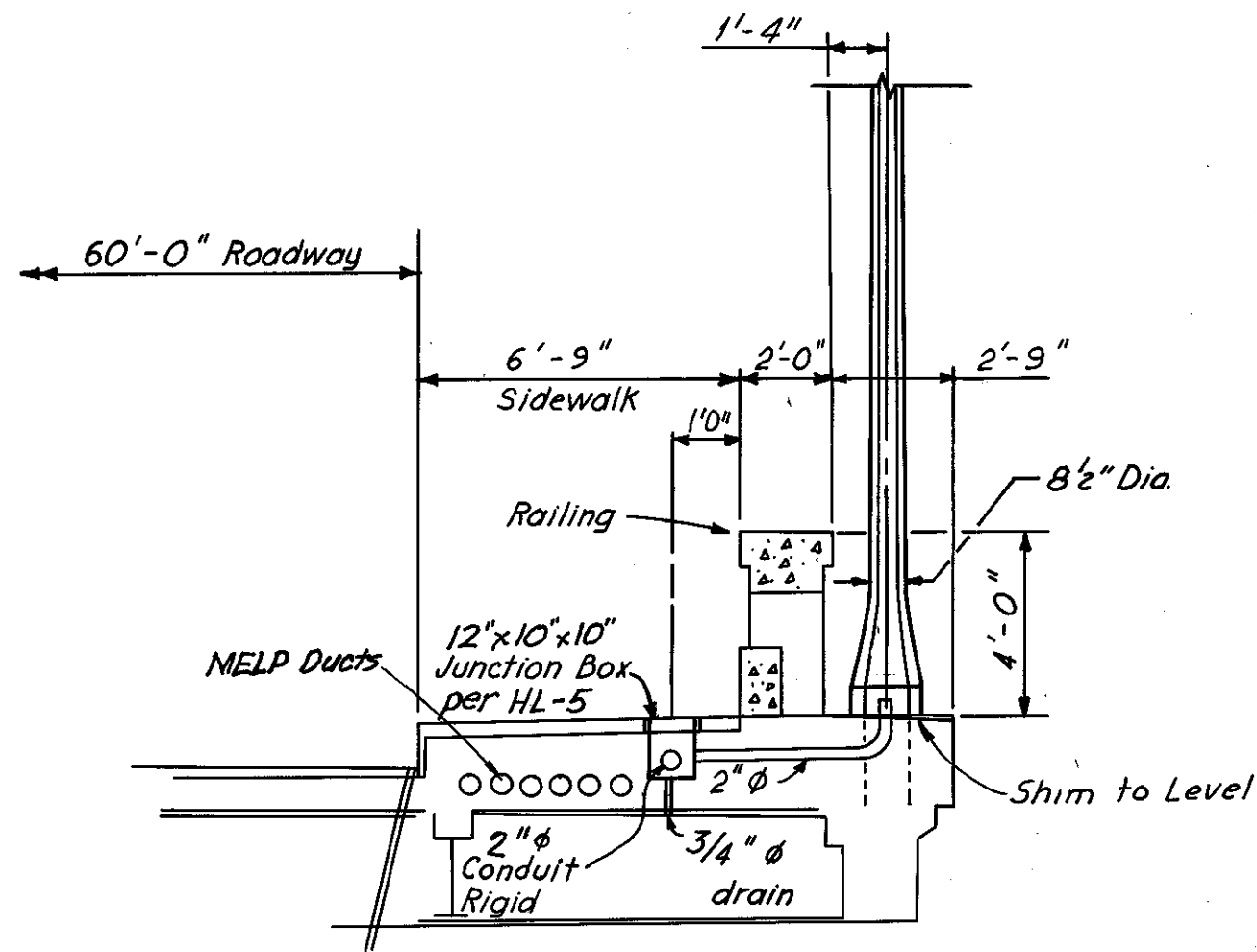
FHWA REGION	STATE	PROJECT
5	OHIO	

32  
185

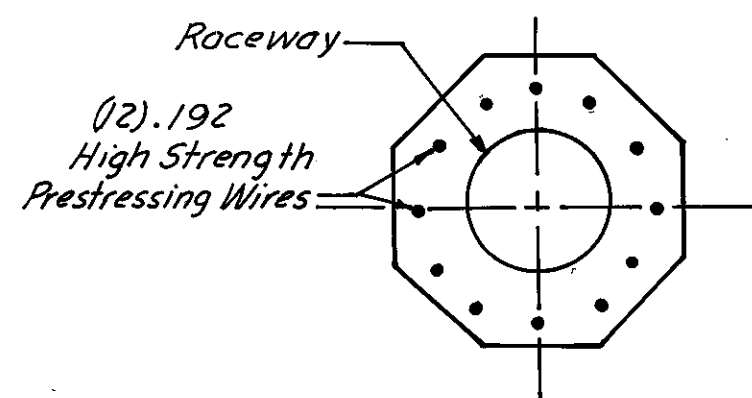
CUYAHOGA COUNTY  
CUY-10 - 16.23



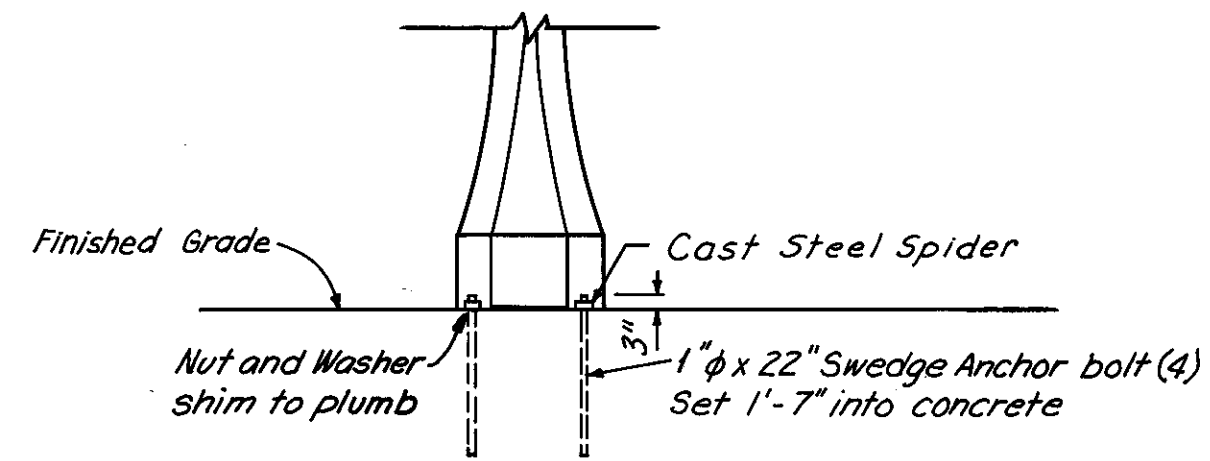
BASE PLAN & BOLTING DATA  
Scale: 1" = 1'-0"



ELEVATION

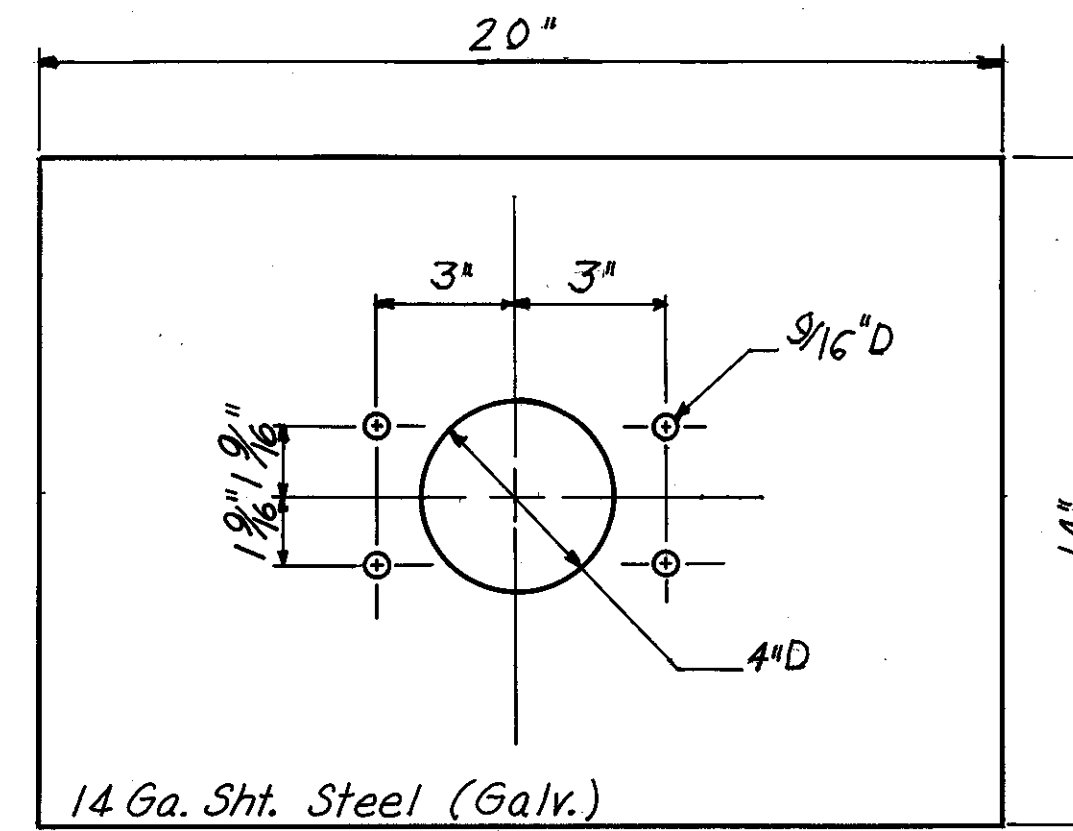


LIGHT POLE CROSS-SECTION

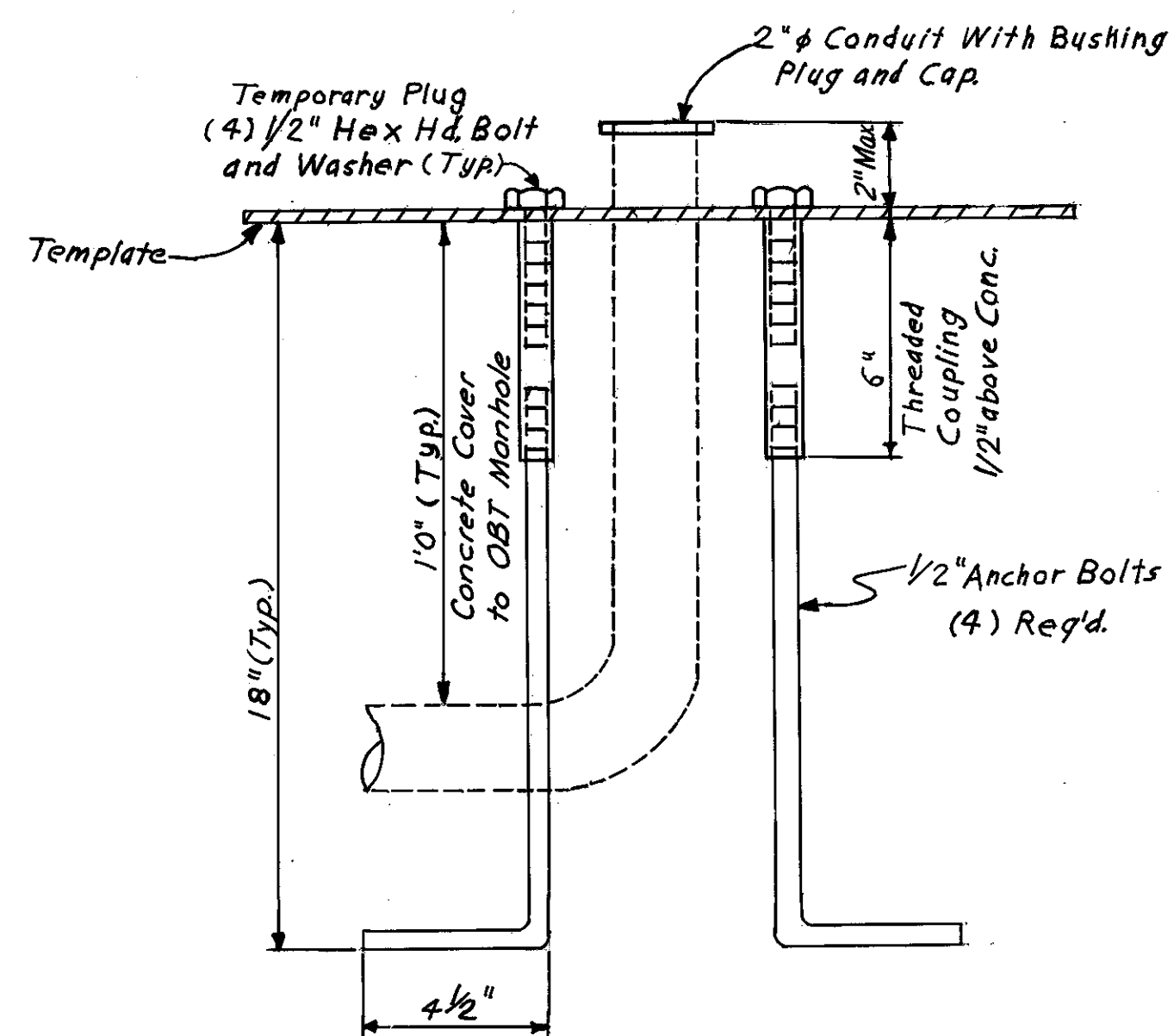


SECTION OF BOLT DOWN BASE  
Scale: 1/2" = 1'-0"

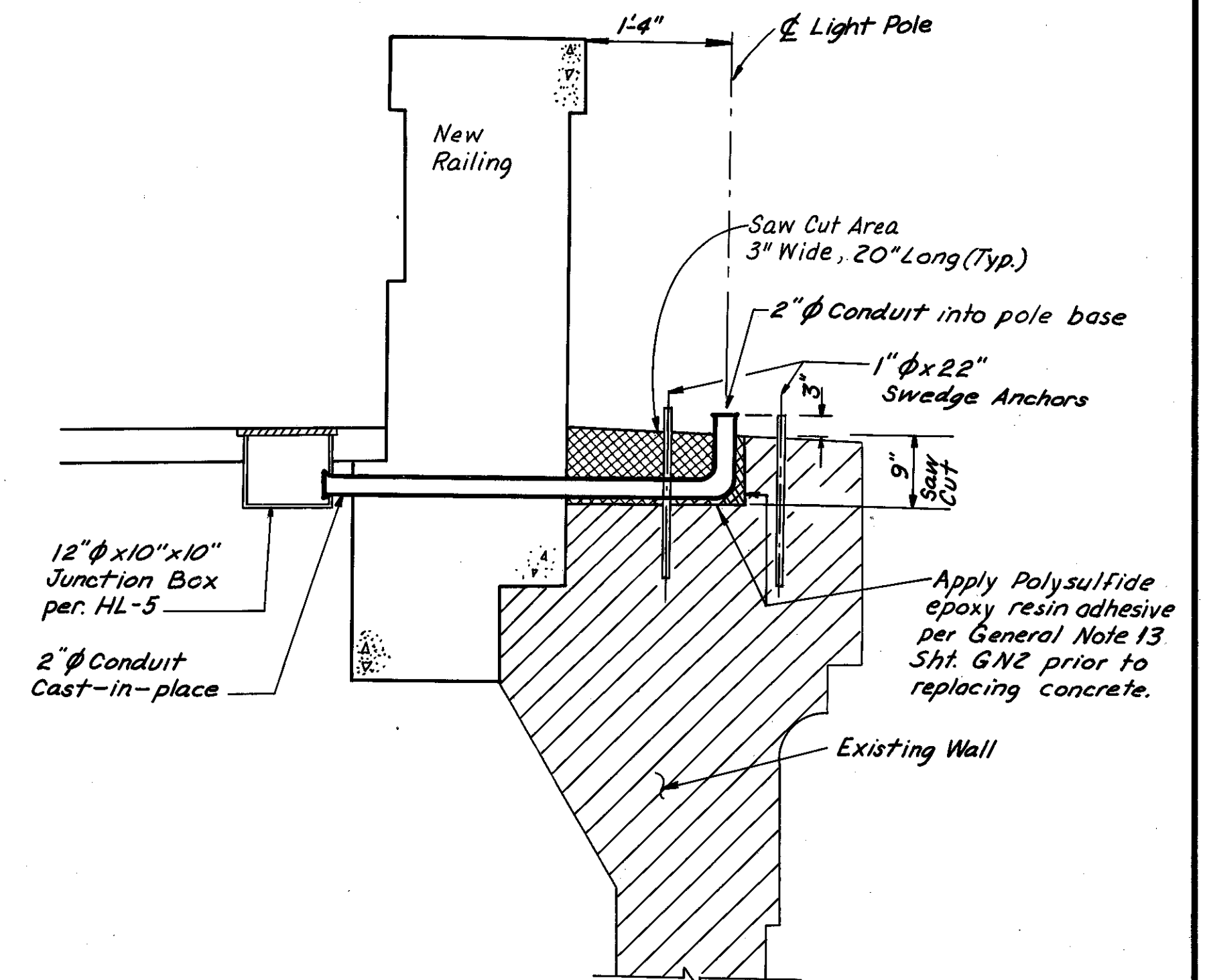
LIGHT POLE DETAILS  
Scale: 1/4" = 1'-0"



EMERGENCY CALLBOX ANCHOR BOLT TEMPLATE  
Scale: 3/4" = 1'-0"



EMERGENCY CALLBOX ANCHOR BOLTS  
Scale: 3/4" = 1'-0"



LIGHT POLE AND CONDUIT INSTALLATION ON EXISTING WALL

(Light Poles LC1-23, LC1-24, LC2-23 & LC2-24)  
Scale: 3/4" = 1'-0"

TOTAL QUANT.	UNIT	ITEM	DESCRIPTION	
			TYPE CODE 6706	
			LIGHTING GENERAL SUMMARY	1
				2
10	Each	202	Light Pole, To be Removed, As per plan.	3
				4
37	EACH	625	LIGHT POLE, CONCRETE, AS PER PLAN	5
				6
37	EACH	625	JUNCTION BOX, 12" x 10" x 10"	7
				8
37	EACH	625	LUMINAIRE, STYLE C, TYPE II, 400 W. HPS	9
				10
74	EACH	625	CONNECTOR KIT, TYPE IX	11
				12
3,900	L.F.	625	No. 10 AWG POLE AND BRACKET CABLE	13
				14
15,000	L.F.	625	No. 4 AWG, 600 V. DISTRIBUTION CABLE	15
				16
6,900	L.F.	625	CONDUIT, 2", 713.04	17
				18
110	L.F.	625	CONDUIT, 3", JACKED-UNDER-PAVEMENT, AS PER PLAN	19
				20
37	SET	Special	Light Pole Anchor Bolts, 1" x 22", For Structure, As per plan	21
				22
4	SET	Special	Callbox Anchor Bolts, 1/2" x 18", For Structure, As per plan	23
				24
				25
Lump	Lump	839	High Voltage Test	26
				27
Lump	Lump	625	Control Center	28
				29
				30
				31
				32
				33
				34

MADE E.R.H. DATE 8-14-78  
TRACED J.W.T. DATE 8-17-78  
CHECKED E.F.J. DATE 9-24-78  
SCALE As Shown

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

# GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

33  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## ITEM GS GENERAL SPECIFICATIONS

### GS.01 SCOPE OF WORK

- THE CONTRACTOR SHALL RELOCATE OR REMOVE ALL M.E.L.P. FACILITIES AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PROPERLY COMPLETED, INCLUDING INCIDENTALS, AS SHOWN ON THE DRAWINGS AND HEREINAFTER SPECIFIED.
- ALL WORK IN THIS CONTRACT SHALL CONFORM TO THE LATEST NATIONAL ELECTRIC SAFETY CODE AND OSHA, EXCEPT WHERE LOCAL REGULATIONS ARE MORE STRINGENT, IN WHICH CASE LOCAL REGULATIONS SHALL GOVERN.
- THE MAJOR ITEMS TO BE FURNISHED AND INSTALLED BY THIS CONTRACTOR SHALL BE AS FOLLOWS:
  - UNDERGROUND DUCT LINE AND MANHOLE CONSTRUCTION INCLUDING CABLES.
  - PLACING OF SPLICING CHAMBERS AND DUCT LINE IN SIDEWALK ON THE STRUCTURE INCLUDING CABLE.
  - PLACING OF AERIAL DUCT LINE ON WEST END OF THE STRUCTURE AND ERECTING MANHOLE AT PIER No. 11 INCLUDING CABLE.
  - PLACING AND SPLICING OF REA DESIGNATION BJC 22 AM6, 25 PAIR TELEPHONE CABLE, FROM EXISTING M.E.L.P. FACILITIES, THROUGH EXISTING OHIO BELL TELEPHONE CO. FACILITIES AND BACK TO M.E.L.P. FACILITIES.

### GS.02 CONSTRUCTION SEQUENCE

THERE ARE 16 M.E.L.P. DUCTS EXISTING IN THE SOUTH SIDEWALK FROM WEST 20TH STREET TO THE EAST END OF THE LORAIN-CARNEGIE BRIDGE. THE DUCTS THEN CROSS TO THE NORTH SIDE AND ARE CARRIED ACROSS THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE JUST BELOW THE DECK IN FRONT OF THE NORTH SIDEWALK. THE DUCTS CONTINUE ON TO A MANHOLE IN CARNEGIE AVENUE.

CARRIED IN THE DUCTS ARE; ONE SIGNAL CABLE, FULL LENGTH; TWO POWER CABLES, FULL LENGTH AND TWO POWER CABLES FROM THE EAST END TO PIER No. 11 AND DOWN PIER No. 11 TO A MANHOLE ON SCRANTON ROAD. THE SIGNAL CABLE AND POWER SUPPLY TO SCRANTON ROAD MUST BE CONTINUOUSLY MAINTAINED IN SERVICE. THE OTHER TWO CABLES WILL BE TAKEN OUT OF SERVICE DURING THE REHABILITATION PROJECT, THE CONSTRUCTION SEQUENCE NECESSARY TO ACCOMPLISH THIS IS AS FOLLOWS:

- CONSTRUCT THE MELP DUCT RUN FROM WEST 20TH STREET TO WEST 17TH STREET. CONSTRUCT THE DUCT RUN BETWEEN THE MELP AND OBT MANHOLES AT THE EAST END OF THE PROJECT AS SHOWN IN THE PLANS. INSTALL NEW MELP SIGNAL CABLES USING OBT DUCTS ON THE BRIDGES, AND MAKE NECESSARY CONNECTIONS SO THAT EXISTING SIGNAL CABLE CAN BE ABANDONED.
- THE POWER SUPPLY TO SCRANTON ROAD MUST BE CHANGED OVER TO BE SUPPLIED FROM THE WEST. MELP PERSONNEL WILL MAKE THE CHANGEOVER USING EXISTING CABLE.
- REMOVAL OPERATIONS ON THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE AND ON THE LORAIN-CARNEGIE BRIDGE BETWEEN THE EAST ABUTMENT AND PIER No. 11, CAN NOW BE UNDERTAKEN.
- COMPLETE THE NEW MELP DUCT RUN FROM WEST 17TH STREET TO PIER No. 11, AND DOWN THE PIER TO THE MANHOLE ON SCRANTON ROAD.

- PULL IN NEW CABLES FROM WEST 20TH STREET TO SCRANTON ROAD IN THE NEW CONDUIT AND CHANGE SCRANTON ROAD SUPPLY TO NEW CABLES. THE CONTRACTOR WILL PERFORM THE WORK IN THIS CHANGEOVER. IT WILL BE NECESSARY FOR THE CONTRACTOR TO CUT A HOLE IN THE EXISTING DECK ABOVE THE NEW METAL MANHOLE ON PIER No. 11 FOR CABLE PULLING ACCESS.
- THE REMAINING PORTIONS OF THE STRUCTURE CAN NOW BE REMOVED.
- AFTER THE STRUCTURES CARRYING THE NEW MELP DUCTS AND SPLICING CHAMBERS HAVE BEEN COMPLETED, TWO NEW CABLES SHALL BE PULLED IN FULL LENGTH OF PROJECT AND TWO CABLES SHALL BE PULLED IN FROM THE EAST END TO THE MANHOLE AT PIER No. 11; ALL AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAKE ALL CONNECTIONS AS SHOWN ON THE PLANS.

### GS.03 UTILITIES

AT LEAST TWO (2) WEEKS BEFORE BREAKING GROUND THE CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITIES HAVING WIRE POLES, PIPES, CONDUITS, MANHOLES OR OTHER STRUCTURES WHICH MAY BE AFFECTED BY HIS OPERATIONS, INCLUDING ANY SERVICES OR STRUCTURES WHICH ARE AFFECTED BUT NOT SHOWN ON THESE PLANS. HE SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO AVOID DAMAGES TO ANY AND ALL UTILITIES.

FOLLOWING IS A LIST OF THE KNOWN UTILITIES WITHIN THE LIMITS OF CONSTRUCTION:

#### CITY OF CLEVELAND

DEPARTMENT OF PUBLIC UTILITIES  
DIVISION OF PUBLIC UTILITIES  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

DEPARTMENT OF PUBLIC SERVICE  
CITY HALL ROOM 227  
601 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

DIVISION OF UTILITIES ENGINEERING  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

EAST OHIO GAS CO.  
1201 EAST 55 STREET  
CLEVELAND, OHIO 44114

DIVISION OF LIGHT & POWER  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

CLEVELAND ELECTRIC ILLUMINATING Co.  
55 PUBLIC SQUARE  
CLEVELAND, OHIO 44113

DEPARTMENT OF PUBLIC SAFETY  
POLICE & FIRE COMMUNICATION SYSTEM  
310 CARNEGIE AVENUE  
CLEVELAND, OHIO 44114

OHIO BELL TELEPHONE Co.  
100 ERIEVIEW PLAZA  
CLEVELAND, OHIO 44114

TRAFFIC ENGINEERING & PARKING  
PAYNE AVENUE  
CLEVELAND, OHIO

UTILITY PROTECTION SERVICE  
1(800) 362-2764

#### UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO OR M.E.L.P. MAKES NO GUARANTEE AS TO THEIR ACCURACY OR COMPLETENESS.

### SYMBOL LEGEND

- MELP MANHOLE - NEW
- MELP MANHOLE - EXISTING
- ⊗ MELP MANHOLE - ABD. OR REM.
- ▣ MELP MANHOLE - EXIST'G - TO BE MODIFIED
- ⊠ MELP SPLICING CHAMBER - NEW
- ⊕ OBT MANHOLE - EXIST'G - TO BE MODIFIED
- OBT MANHOLE - EXISTING
- MELP TELEPHONE CABLE
- - - MELP CONDUIT BANK

### LIST OF DRAWINGS

7087-1	GENERAL NOTES (8 SHEETS)
7087-9	GENERAL SUMMARY
7087-10	PROJECT PLAN
7087-11	SINGLE LINE DIAGRAMS
7087-12	UNDERGROUND PLAN (LORAIN AVE. TO WEST 20 ST. AND OLD LORAIN)
7087-13	UNDERGROUND PLAN (OLD LORAIN AVENUE)
7087-14	UNDERGROUND PLAN (OLD LORAIN AVE. TO WEST 17TH STREET)
7087-15	UNDERGROUND PLAN (WEST 17TH ST. TO WEST PYLON)
7087-16	UNDERGROUND PLAN (WEST PYLON)
7087-17	AERIAL DUCT LINE (WEST PYLON TO PIER #11)
7087-18	TYPICAL CROSS SECTION
7087-19	AERIAL DUCT SUPPORT DETAILS
7087-20	MANHOLE 67-85 DETAILS AT PIER #11
7087-21	MANHOLE 67-85 DETAILS
7087-22	MANHOLE 67-85 ROOF DETAILS
7087-23	CONDUIT DETAILS AT PIER No. 11
7087-24	ACCESS MANHOLE AT PIER No. 11
7087-25	AERIAL DUCT DETAILS AT PIER No. 11
7087-26	SPLICING CHAMBER AND EXPANSION JOINT LOCATION PLAN
7087-27	SPLICING CHAMBER DETAILS
7087-28	SPLICING CHAMBER DETAILS
7087-29	UNDERGROUND PLAN (EAST ABUTMENT TO MELP MH #67-41)
7087-30	CARNEGIE AVE. GRADE SEPARATION MH #67-41 TO MH #67-31
7087-31	UNDERGROUND MANHOLE DETAILS
7087-32	UNDERGROUND MANHOLE DETAILS

APPROVED BY

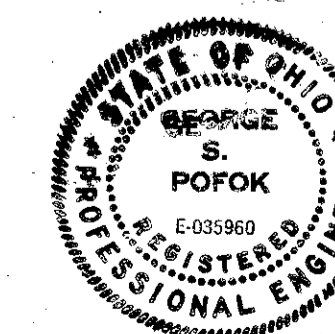
*Larry Bruce* 6/25/79  
DIRECTOR OF PUBLIC UTILITIES

*Richard D. Bart* 6/22/79  
COMMISSIONER OF LIGHT & POWER

*David J. Pfeiffer* 6/22/79  
COMMISSIONER OF UTILITIES ENGINEERING

*George S. Pofok* 6/22/79  
CHIEF ELECTRICAL ENGINEER

*Robert J. Albach* 6/22/79  
ENGINEER OF DESIGN



MADE P.K. DATE 5-2-79  
TRACED DATE  
CHECKED E.E.F. DATE 6-8-79  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

GENERAL NOTES

MELP 7087-1

M.E.L.P. PLANS

LORAIN - CARNEGIE BRIDGE

# GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

34  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## GS.04 FEEDER SHUTDOWN

- A. A FEEDER SHUTDOWN SCHEDULE WITH DATES AND APPROXIMATE SHUTDOWN TIMES IS TO BE SUBMITTED TO THE CITY OF CLEVELAND, DIVISION OF LIGHT & POWER, FOR APPROVAL TWO (2) WEEKS BEFORE A FEEDER SHUTDOWN IS REQUIRED. DUE TO THE NATURE OF THE LOADING OF THE 3/C 15 KV FEEDERS AND THE SEASON OF THE YEAR, IT MAY BE NECESSARY TO HAVE SOME OF THE FEEDER SHUTDOWNS ON OFF-PEAK DAYS, OR OFF-HOURS. THIS DETERMINATION WILL BE MADE BY MR. JEROME SALKO, SYSTEM OPERATING ENGINEER OF THE DIVISION OF LIGHT & POWER.
- B. ALL FEEDER SHUTDOWNS SHALL BE CONFIRMED BY THE CONTRACTOR ONE DAY IN ADVANCE OF ALL SCHEDULED JOBS WITH THE SYSTEMS OPERATING ENGINEER. ALL SWITCHING WILL BE DONE BY THE CITY OF CLEVELAND, DIVISION OF LIGHT & POWER.

## GS.05 CABLE MARKING

FEEDER CABLE LOCATION IN CONDUIT BANK TO BE ASSIGNED BY MELP. EACH CABLE UPON ENTERING AND LEAVING MANHOLES SHALL BE MARKED WITH METAL TAGS, INDICATING THE FEEDER NUMBER AND CABLE SIZE. THE LETTERS SHALL BE 1/4" HIGH. SEE SPECIFICATION.

## GS.06 SUBMITTALS:

IN ADDITION TO THE REQUIREMENTS OF 105 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON THE FOLLOWING ITEMS OF EQUIPMENT:

CABLE  
CABLE SPLICES  
STRUCTURAL STEEL  
MANHOLE No. 67-85

## GS.07 DEFINITIONS:

WHENEVER IN THESE SPECIFICATIONS OR IN ANY DOCUMENTS OR INSTRUCTIONS IN CONSTRUCTION WHERE THESE SPECIFICATIONS GOVERN, THE FOLLOWING TERMS ARE USED, (OR PRONOUNS IN PLACE OF THEM), THE INTENT AND MEANING SHALL BE INTERPRETED AS FOLLOWS:

THE CITY, OR THE CITY OF CLEVELAND - THE CITY, OR THE CITY OF CLEVELAND, IS THE DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES, OF THE CITY OF CLEVELAND.

## GS.08 STATUS OF CITY INSPECTOR:

- A. INSPECTORS AS DESIGNATED BY THE CITY OF CLEVELAND SHALL BE AUTHORIZED TO INSPECT ALL WORK DONE AND MATERIALS FURNISHED. SUCH INSPECTING MAY EXTEND TO ALL OR ANY PART OF THE WORK, AND TO THE PREPARATION OR MANUFACTURE OF THE MATERIALS TO BE USED IN THE WORK. THE CITY INSPECTOR AS DESIGNATED BY THE DIRECTOR OF PUBLIC UTILITIES SHALL MAKE WORK INSTRUCTIONS THROUGH THE PROJECT ENGINEER.

## GS.09 TIE INTO EXISTING MANHOLES

WHEN A NEW DUCTBANK IS CONNECTED INTO AN EXISTING MANHOLE, PART OF THE WALL SHALL BE CAREFULLY BROKEN TO RECEIVE NEW DUCTBANK. AFTER NEW DUCTBANK HAS BEEN INSTALLED, EXISTING MANHOLE SHALL BE REPAIRED, PATCHED AND SEALED. CABLES SHALL BE PROTECTED DURING THIS WORK WITH EXTREME CARE. ANY DAMAGE TO EXISTING CABLES SHALL BE REPAIRED. THIS WORK SHALL BE DONE UNDER DIVISION OF LIGHT AND POWER AND/OR OHIO BELL TELEPHONE SUPERVISION.

## GS.10 ADDITIONAL WORK:

ATTENTION IS CALLED TO THE FACT THAT THE WORK OF THIS CONTRACT INCLUDES CERTAIN PERFORMANCES AS INCIDENTAL TO THE ITEMIZED REQUIREMENTS HEREOF, THOUGH NOT EXCLUSIVE, AS FOLLOWS: TO PERFORM ALL EXCAVATION, BACKFILLING, SHEETING, SHORING, TEMPORARY AND FINAL REPAVING. SAND BACKFILL SHALL CONFORM TO THE STATE OF OHIO DEPARTMENT OF HIGHWAY CONSTRUCTION AND MATERIAL SPECIFICATIONS AND SHALL BE PLACED UNDER EXISTING AND PROPOSED PAVEMENT AND SIDEWALK. FOR THE PERFORMANCES HEREIN DESCRIBED AND FOR OTHER INCIDENTAL PERFORMANCES OF LIKE NATURE, THE STATE WILL MAKE NO SPECIFIC OR SEPARATE PAYMENT OR ALLOWANCE, BUT THE COST THEREOF SHALL BE INCLUDED IN THE PRICES STIPULATED TO BE PAID FOR THE VARIOUS ITEMS OF THE WORK TO BE DONE UNDER THIS CONTRACT.

## GS.11 STRUCTURES ENCOUNTERED

- A. IN ADDITION TO THE CONDITIONS OF 105 THE CONTRACTOR SHALL NOTIFY IN WRITING, COMPANIES, OWNERS, OR OTHERS IN RESPONSIBLE CHARGE OF ANY STRUCTURES THAT MAY BE AFFECTED BY HIS OPERATIONS, AND SUCH NOTICE SHALL BE GIVEN IN AMPLE TIME TO PERMIT SUCH COMPANIES, OWNERS OR OTHERS TO TAKE PROPER PROTECTION MEASURES BEFORE SUCH STRUCTURES ARE IN ANY WAY ENDANGERED BY THE WORK UNDER THIS CONTRACT. THE CONTRACTOR SHALL NOT HINDER OR INTERFERE WITH ANY SUCH COMPANIES, OWNERS OR OTHERS IN MOVING, SUPPORTING, OR OTHERWISE PROTECTING THEIR PROPERTY AND STRUCTURES, BUT SHALL AFFORD THEM EVERY REASONABLE FACILITY IN TAKING SUCH PROTECTIVE MEASURES AS MAY BE NECESSARY.

## GS.12 TESTS, INSPECTION AND REPORTS:

IN ADDITION TO THE REQUIREMENTS OF 106.04 FOR TESTS AND INSPECTION TO BE MADE AT THE PLACE OF MANUFACTURE OR FABRICATION, AND REPORTS REQUIRED ON TESTS AND INSPECTION OF FABRICATION AND WORKMANSHIP, SEE ITEMS UC, CA, IS & BR.

## GS.13 MAINTAINING VEHICULAR TRAFFIC

TRAFFIC WILL NOT BE MAINTAINED ON THE LORAIN-CARNEGIE BRIDGE DURING THE REHABILITATION. HOWEVER, TRAFFIC WILL BE MAINTAINED ON OLD LORAIN AVENUE, WEST 17TH AND 18TH STREETS AND CARNEGIE AVENUE DURING THE PROJECT.

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO, AND THE MAXIMUM SAFETY OF THE TRAVELING PUBLIC AND THE CONTRACTOR. EXCEPT AS MODIFIED BELOW OR AS SHOWN IN THE MAINTENANCE OF TRAFFIC PLANS, THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND PERTINENT ITEMS OF SPECIFICATION AND PROPOSAL SHALL APPLY.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF AT LEAST TWO PERSONS WHO CAN BE CONTACTED 24 HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THESE PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES TO MAINTAIN THE TRAVELED PAVEMENT SAFELY.

TRAFFIC SHALL BE MAINTAINED WITHOUT INTERRUPTION DURING CONSTRUCTION OF THE WORK EXCEPT AS OTHERWISE APPROVED BY THE ENGINEER OR SPECIFIED IN THESE NOTES OR PLANS.

DURING NON-WORKING PERIODS, OPEN EXCAVATIONS SHALL BE COVERED WITH STEEL PLATES AND DELINEATED WITH WARNING FLASHERS AND/OR OTHER APPROVED DEVICES AS DEEMED APPROPRIATE BY THE ENGINEER.

NO STOPPAGE OF TRAFFIC OR LANE RESTRICTIONS SHALL OCCUR DURING WORK HOURS WITHOUT LAW ENFORCEMENT PERSONNEL AT EACH LOCATION TO DIRECT TRAFFIC.

DURING OVERHEAD CONSTRUCTION THE CONTRACTOR SHALL PROVIDE, IF DEEMED NECESSARY BY THE ENGINEER, SAFETY NETS AND/OR OTHER SAFETY DEVICES UNDER THE STRUCTURES TO PROTECT TRAFFIC OR PROPERTY IN THE AREA OF CONSTRUCTION

## GS.14 REMOVAL

PAYMENT FOR REMOVAL OF EXISTING M.E.L.P. MANHOLES Nos. 56-41 AND 56-42 SHALL BE THE CONTRACT LUMP SUM BID FOR ITEM UC.14. PAYMENT FOR REMOVAL OF EXISTING 16-4" DUCT BANK BETWEEN M.E.L.P. MANHOLES No. 67-31 AND THE EAST ABUTMENT OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE SHALL BE INCLUDED IN THE PRICE BID FOR THAT SECTION OF NEW 6-5" DUCT BANK. ALL OTHER M.E.L.P. OWNED MATERIALS WHICH ARE TO BE REMOVED AS PART OF THIS PROJECT SHALL BE INCLUDED WITH STRUCTURE REMOVAL FOR PAYMENT.

MADE P.K. DATE 5-2-77 Howard, Needles, Tammen & Bergendoff  
TRACED DATE 5-2-77 CONSULTING ENGINEERS  
CHECKED E.E.F. DATE 7-8-77 CLEVELAND, OHIO  
SCALE

**HNTB**

GENERAL NOTES  
MELP 7087-2

FHWA REGION	STATE	PROJECT	
5	OHIO		

35  
185

# GENERAL NOTES

CUYAHOGA COUNTY  
CUY-10-16.23

## ITEM UC

### UNDERGROUND CONSTRUCTION SPECIFICATION

#### UC.01 SCOPE OF WORK:

A. THE WORK TO BE DONE UNDER THIS PART OF THE CONTRACT COMPRISES THE FURNISHING AND INSTALLING OF THE FOLLOWING ELECTRICAL CONDUIT BANKS, MANHOLES AND CABLES.

1. NON-REINFORCED, CONCRETE ENCASED, PVC CONDUIT BANKS (COMPLETE).
2. REINFORCED, CONCRETE ENCASED PVC CONDUIT BANKS (COMPLETE)
3. REINFORCED CONCRETE MANHOLES.
4. CABLE RUNS.

#### UC.02 EXCAVATION:

A. THE CONTRACTOR SHALL REMOVE ALL EXISTING ROADWAYS, DRIVEWAYS AND OTHER SIMILAR MATERIALS AND MAKE TO THE LINES AND GRADES GIVEN, ALL EXCAVATION NECESSARY FOR THE PROPER CONSTRUCTION OF THE CONTRACT WORK. THE EXCAVATION SHALL INCLUDE THE REMOVAL, HANDLING, REHANDLING AND DISPOSAL OF MATERIALS ENCOUNTERED IN THE WORK AND SHALL INCLUDE ALL PUMPING, BAILING, DRAINING, SHEETING AND BRACING. MOREOVER, THE CONTRACTOR MUST ASSUME ALL RESPONSIBILITY FOR ANY ADDED EXPENSE OF OTHER LIABILITIES WHICH MAY ARISE BY MEANS OF QUICKSAND, OBSTACLES OR CONDITIONS, FORESEEN OR UNFORESEEN AND ENCOUNTERED IN THE WORK OF THIS CONTRACT. PAVEMENT REMOVAL SHALL BE IN ACCORDANCE WITH THE DETAILS FOR REPAVING OVER SEWER AND UTILITY TRENCHES SHOWN IN THE CONSTRUCTION ROADWAY PLANS.

B. TRENCHES SHALL BE OF SUFFICIENT WIDTH TO PERMIT A SOLID PACKING OF REFILL UNDER AND AROUND THE CONDUIT, AND SATISFACTORY CONSTRUCTION OF ALL APPURTENANCES AND FOR SUCH SHEETING AND SHORING, PUMPING AND DRAINING AS MAY BE NECESSARY.

C. ANY DAMAGE IN WORKING AREA CAUSED BY THIS CONTRACTOR AS PART OF THE WORK OR AS AN ACCIDENT SHALL BE REPAIRED AND AREA SHALL BE RESTORED FOR NEAT APPEARANCE AS REQUIRED.

D. THE TRENCH SHALL BE DUG TO THE ALIGNMENT AND DEPTH REQUIRED AND ONLY SO FAR IN ADVANCE OF LAYING OF THE CONDUIT LINE AS THE PROJECT ENGINEER SHALL PERMIT. THE TRENCH SHALL BE SO BRACED AND DRAINED THAT WORKMEN MAY WORK THEREIN SAFELY AND EFFICIENTLY. IT IS ESSENTIAL THAT THE DISCHARGE FROM PUMPS BE LED TO NATURAL DRAINAGE CHANNELS, TO DRAINS, OR TO SEWERS.

E. THE TRENCH WIDTH MAY VARY WITH AND DEPEND UPON THE DEPTH OF TRENCH AND THE NATURE OF THE EXCAVATED MATERIAL ENCOUNTERED; BUT IN ANY CASE SHALL BE OF AMPLE WIDTH TO PERMIT THE CONDUIT LINE TO BE LAID AND JOINTED PROPERLY AND THE BACKFILL TO BE PLACED AND COMPACTED PROPERLY. THE MINIMUM WIDTH OF TRENCH SHALL BE THREE FEET (3'-0"). WHEN SHEETING AND BRACING IS USED, THE TRENCH WIDTH SHALL BE INCREASED ACCORDINGLY.

F. THE TRENCH, UNLESS OTHERWISE SPECIFIED, SHALL HAVE A FLAT BOTTOM CONFORMING TO THE REQUIRED GRADE.

G. ANY PART OF THE TRENCH EXCAVATED BELOW GRADE SHALL BE CORRECTED WITH APPROVED MATERIAL, THOROUGHLY COMPACTED.

H. WHEN THE SUBGRADE IS SOFT AND IN THE OPINION OF THE PROJECT ENGINEER CANNOT SUPPORT THE INSTALLATION, A FURTHER DEPTH AND/OR WIDTH SHALL BE EXCAVATED AND REFILLED TO GRADE AS REQUIRED AT CONTRACTOR'S EXPENSE.

I. LEDGE ROCK, BOULDERS, LARGE STONES, DEBRIS AND SHALE SHALL BE REMOVED TO PROVIDE A CLEARANCE OF AT LEAST SIX INCHES BELOW CONDUIT LINES OR OTHER PARTS OF THE WORK AND TO CLEAR WIDTH OF SIX INCHES AT CONTRACTOR'S EXPENSE.

J. EXCAVATIONS BELOW SUBGRADE IN ROCK, SHALE OR IN BOULDERS SHALL BE REFILLED TO SUBGRADE WITH APPROVED MATERIAL, THOROUGHLY COMPACTED.

K. THE USE OF EXCAVATING MACHINERY WILL BE PERMITTED EXCEPT IN PLACES WHERE OPERATION OF SAME WILL CAUSE DAMAGE TO TREES, BUILDING, OR EXISTING STRUCTURES ABOVE OR BELOW GROUND, IN WHICH CASE HAND METHODS SHALL BE EMPLOYED.

L. HYDRANTS UNDER PRESSURE, VALVE PIT COVERS, VALVE BOXES, CURB STOP BOXES, FIRE OR POLICE CALL BOXES, OR OTHER UTILITY CONTROL SHALL BE LEFT UNOBSTRUCTED AND ACCESSIBLE DURING THE CONSTRUCTION PERIOD.

M. TREES, FENCES, POLES AND ALL OTHER PROPERTY SHALL BE PROTECTED UNLESS THEIR REMOVAL IS AUTHORIZED; AND ANY PROPERTY DAMAGED SHALL BE SATISFACTORILY RESTORED BY THE CONTRACTOR.

N. THE CONTRACTOR SHALL MAINTAIN ALL EXCAVATIONS IN GOOD ORDER DURING THE CONSTRUCTION, SO AS NOT TO HINDER OR INJURE THE CONDUIT LAYING, MASONRY OR OTHER WORK; HE SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT MOVEMENT OF THE SIDES OF SUCH EXCAVATION, AND SHALL REMOVE AT HIS OWN EXPENSE ANY MATERIAL SLIDING INTO THE EXCAVATION.

O. BEFORE LAYING THE CONDUIT LINE, THE BOTTOM OF THE TRENCH SHALL BE BROUGHT TO THE REQUIRED GRADE. WHEREVER THE BOTTOM OF THE TRENCH HAS BEEN EXCAVATED BELOW THE GRADE, THE CONTRACTOR SHALL PLACE THE SAND OR GRIT BACKFILL TO BRING THE BOTTOM OF THE TRENCH TO THE GRADE OF THE BOTTOM OF THE CONDUITS. THIS BED SHALL BE THOROUGHLY TAMPED BEFORE THE CONDUIT IS LAID, THE BALANCE OF THE SELECTED BACKFILL AS DETAILED ON DRAWINGS SHALL BE THOROUGHLY COMPACTED BY TAMPING AND WETTING AS REQUIRED FOR THE MATERIAL USED.

IF TRENCH BOTTOM IS UNACCEPTABLE AS DETERMINED BY THE ENGINEER, ADDITIONAL MATERIAL SHALL BE ADDED AT THE CONTRACTOR'S EXPENSE.

#### UC.03 SHEETING AND BRACING:

A. THE CONTRACTOR SHALL FURNISH AND PUT IN PLACE SUCH SHEETING AND BRACING AS MAY BE REQUIRED TO SUPPORT THE SIDES OF TRENCHES OR OTHER EXCAVATION AND SHALL REMOVE SUCH SHEETING AND BRACINGS, AS THE TRENCH OR EXCAVATIONS IS FILLED UP, UNLESS THE PROJECT ENGINEER SHALL ORDER IT LEFT IN PLACE, IN WHICH CASE, THE CONTRACTOR SHALL CUT THE PLANK OFF AT A HEIGHT AS ORDERED BY THE PROJECT ENGINEER, OR AS CALLED FOR ON THE CONTRACT DRAWINGS.

B. WHENEVER THE EXCAVATIONS FOR THE WORK HEREIN TO BE DONE ARE IMMEDIATELY ADJACENT TO OTHER SUBSURFACE STRUCTURES, THE CONTRACTOR SHALL FURNISH AND PLACE SHEETING AND BRACING WHERE NOTED ON CONTRACT DRAWINGS AND AS MAY BE NECESSARY, SO AS TO REDUCE TO A MINIMUM THE POSSIBILITY OF INJURING OR DAMAGING THE SAME.

C. IF THE PROJECT ENGINEER IS OF THE OPINION THAT AT ANY POINT SUFFICIENT OR PROPER SUPPORTS, SHEETINGS, OR BRACINGS HAVE NOT BEEN PROVIDED, HE MAY ORDER SUPPORTS, SHEETING OR BRACING AT THE EXPENSE OF THE CONTRACTOR, AND THE COMPLIANCE WITH SUCH ORDERS BY THE CONTRACTOR SHALL NOT RELIEVE OR RELEASE HIM FROM HIS RESPONSIBILITY FOR SUFFICIENCY OF SUCH SUPPORTS.

#### UC.04 REMOVAL OF EXCAVATED MATERIAL:

A. ALL SURPLUS MATERIAL AND SUCH OTHER MATERIAL AS THE PROJECT ENGINEER MAY DEEM UNFIT FOR USE AS BACKFILL, SHALL BE DISPOSED OF BY THE CONTRACTOR SO AS TO GIVE A MINIMUM OF INCONVENIENCE TO THE PUBLIC. IN CASE OF SETTLEMENT AFTER BACKFILL, THE CONTRACTOR SHALL SUPPLY SUFFICIENT MATERIAL SATISFACTORY TO THE PROJECT ENGINEER TO MAKE UP FOR THE DEFICIENCY.

B. IN THE STORING OF EXCAVATED MATERIAL, WHICH IS TO BE USED AS A BACKFILL, THE CONTRACTOR SHALL EXERCISE CARE SO AS TO AVOID INCONVENIENCING THE PUBLIC. IF, IN THE OPINION OF THE PROJECT ENGINEER, IT IS NECESSARY TO REMOVE THIS EXCAVATED MATERIAL FROM THE STREETS OR LOTS, THE CONTRACTOR SHALL BE REQUIRED TO DO SO.

C. ANY MATERIAL WHICH MAY SPILL OR DRIP FROM VEHICLES BY HAULING IN THE STREETS, SHALL BE REMOVED AND THE STREETS CLEANED BY THE CONTRACTOR, TO THE SATISFACTION OF THE MUNICIPALITY OR TOWNSHIP IN WHICH THE WORK IS BEING DONE.

D. WHEN SO DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL EXCAVATED MATERIALS FROM THE SITE AND DISPOSE OF THE SAME.

#### UC.05 BACKFILLING:

BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 625.12 AND PAYMENT SHALL BE INCLUDED IN THE COST OF THE RESPECTIVE ITEM.

#### UC.06 SEEDING:

A. IN PREPARATION FOR SEEDING OR SODDING, THE SURFACES SHALL BE HARROWED TO A DEPTH OF THREE (3) INCHES. ALL GRASS, WEEDS, ROOTS, STICKS, STONES, ETC., ARE TO BE REMOVED AND THE SOIL CAREFULLY BROUGHT TO THE EXACT FINISHED GRADE OR SUBBASE BY RAKING. AN APPLICATION OF NOT LESS THAN TWO POUNDS PER ONE HUNDRED (100) SQUARE FOOT OF HIGH NITROGEN CONTENT COMMERCIAL FERTILIZER HAVING AN ANALYSIS OF 10:6:4 SHALL THEN BE UNIFORMLY DISTRIBUTED AND CAREFULLY RAKED IN.

B. IMMEDIATELY AFTER THE PREPARATION AND FERTILIZING OF THE SEED BED, THE PREPARED SURFACE SHALL BE SEEDED WITH NOT LESS THAN THREE (3) POUNDS OF GRASS SEED PER 1,000 SQ. FT. THE SEED SHALL BE CAREFULLY AND UNIFORMLY SOWN BY EXPERIENCED AND SKILLED WORKMEN. FOLLOWING THE SEEDING, THE SURFACE SHALL BE LIGHTLY RAKED AND ROLLED WITH A LIGHT ROLLER. THE GRASS SEED TO BE USED SHALL BE AS SPECIFIED IN THE CONSTRUCTION ROADWAY PLANS.

C. ALL SEEDED SURFACES SHALL BE CAREFULLY LOOKED AFTER AND TENDED BY THE CONTRACTOR; SHALL BE WATERED AND THE GRASS CUT WHEN NECESSARY. SETTLED AREAS SHALL BE REFILLED, LEVELED AND TAMPED TO THE PROPER GRADE. ALL SEEDED SURFACES SHALL BE LEFT IN GOOD CONDITION ON THE COMPLETION OF THE WORK.

D. AS SEEDING CAN ONLY BE SUCCESSFULLY DONE AT CERTAIN SEASONS OF THE YEAR, THE PREPARATION OF THE SEED BED, AND THE WORK OF SEEDING SHALL ONLY BE DONE AT SUCH TIMES AS MAY BE APPROVED BY THE PROJECT ENGINEER.

#### UC.07 ROAD SURFACES, SIDEWALKS, DRIVEWAYS AND CURBING:

A. THE CONTRACTOR SHALL REMOVE ALL PAVEMENT AND ROAD SURFACES WITHIN THE LINES OF EXCAVATION. AFTER THE CONDUIT LINE HAS BEEN LAID, ALL APPURTENANT WORK CONSTRUCTED AND BACKFILL COMPLETED, HE SHALL FURNISH, PLACE AND MAINTAIN, WHEREVER THE PAVEMENT OR ROAD SURFACE HAS BEEN REMOVED OR DAMAGED BY HIM, A TEMPORARY PAVEMENT IN THE PAVED PORTION OF STREETS, OR A TEMPORARY ROAD SURFACE IN THE UNPAVED PORTION OF STREETS, SO AS TO PROVIDE A SAFE AND PASSABLE ROADWAY UNTIL SUCH TIME AS THE FINAL PAVEMENT OR ROAD SURFACE IS COMPLETED.

B. WHEN ONLY A PORTION OF THE STREET IS PAVED AND THE LINES OF EXCAVATION ARE IN THE UNPAVED PORTION OF SAME, THE CONTRACTOR SHALL USE THE UTMOST CARE IN PREVENTING INJURY TO THE PAVEMENT. IF IN MAKING THE EXCAVATION, OR FOR ANY OTHER CAUSE, THE PAVEMENT IS REMOVED OR INJURED BY THE CONTRACTOR, HE SHALL FURNISH, PLACE AND MAINTAIN A TEMPORARY PAVEMENT WHEREVER THE PAVEMENT HAS BEEN REMOVED OR DAMAGED, SO AS TO PROVIDE A SAFE AND PASSABLE ROADWAY UNTIL SUCH TIME AS THE FINAL PAVEMENT IS COMPLETED.

C. ALL FINAL PAVING OF ROAD SURFACES, SHALL BE DONE BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY AND THE ENGINEER AND SHALL CONFORM TO THE DETAILS FOR REPAVING OVER SEWER OR UTILITY TRENCHES SHOWN IN THE CONSTRUCTION ROADWAY PLANS. THE CONTRACTOR SHALL BEAR THE ENTIRE COST OF THIS WORK. WHERE PAVEMENT OR BASE OF PAVEMENTS HAS BEEN DAMAGED BY CAVE-IN OR BY TRENCH CUT LEAVING A PORTION OR PORTIONS OF PAVEMENT 18 INCHES OR LESS IN WIDTH (BETWEEN SUCH CUT OR DAMAGE) TO CURB OR OTHER SUBSTRUCTURE, THAT REMAINING PORTION OF PAVEMENT SHALL BE REMOVED AND RESTORED MONOLITHIC WITH THE TYPE AND KIND OF PAVEMENT SPECIFIED FOR THE ADJACENT TRENCH AREA. THE SURFACE COURSE OVER TRENCH OR OTHER DISTURBED AREAS SHALL BE RESTORED TO MATCH EXISTING PAVEMENT UNLESS OTHERWISE SPECIFIED. ASPHALTIC CONCRETE SURFACE COURSE OVER SUCH AREAS SHALL BE NEATLY AND SQUARELY CUT, NOT LESS THAN 3 FEET WIDE, BEFORE THE INSTALLATION OF A CAREFULLY TOOTHED-IN-TO ADJACENT PAVEMENT, UNLESS OTHERWISE SPECIFIED.

D. ALL DAMAGED OR DISPLACED CURB SHALL BE RENEWED OR RESET TO THE SATISFACTION OF THE ENGINEER AND/OR CITY. NO FAULTY CURB OR CURB LESS THAN 30" LONG WILL BE PERMITTED FOR REUSE.

E. LOCATION OF WORK: EXISTING PAVEMENT AS SHOWN ON CITY RECORDS, AND RESTORATION ACCEPTABLE, ARE GIVEN ON THE ROADWAY CONSTRUCTION PLANS.

F. AT LOCATIONS NOT SPECIFICALLY MENTIONED THE CONTRACTOR SHALL RESTORE THE SAME TYPE OF PAVEMENT ENCOUNTERED. IF THE THICKNESS OF THE CONCRETE BASE IS GREATER THAN THE RECORD CALLS FOR THE CONTRACTOR SHALL RESTORE THE THICKNESS GIVEN IN RECORD.

MADE P.K. DATE 5-2-79  
TRACED DATE 4-27-79  
CHECKED E.E.T. DATE 4-27-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

GENERAL NOTES  
MELP

7087-3

M.E.L.P. PLANS

LORAIN - CARNEGIE BRIDGE

3

# GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

36  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## UC.07 ROAD SURFACES, SIDEWALKS, DRIVEWAYS AND CURBING (CONTINUED)

- G. IF PRIOR TO THE EXPIRATION OF THE PERIOD OF MAINTENANCE, ANY OF THE PAVEMENTS OR ROAD SURFACES WITHIN THE LINES OF EXCAVATION OR ADJACENT THERETO SHALL HAVE BEEN DAMAGED OR INJURED, DUE TO UNDERMINING, OR FOR ANY OTHER CAUSE WHICH MAY BE ATTRIBUTED TO THE WORK WHICH IS BEING DONE BY THE CONTRACTOR, THEN THE CONTRACTOR SHALL REMOVE SUCH DAMAGED OR INJURED PAVEMENTS OR ROAD SURFACES, FOUNDATIONS OF SAME AND ALL LOOSE EARTH. HE SHALL THEN BACKFILL WITH SAND PROPERLY RAMMED AND REPLACE THE FINAL PAVEMENT OR ROAD SURFACE.
- H. IF ANY SIDEWALKS, DRIVEWAYS OR CURBS, ARE REMOVED OR INJURED BY THE CONTRACTOR IN THE COURSE OF MAKING EXCAVATION OR HANDLING MATERIALS, OR FOR ANY OTHER REASON WHICH MAY BE ATTRIBUTED TO WORK WHICH HAS BEEN DONE BY THE CONTRACTOR, THEN HE SHALL RELAY SAME AFTER ALL WORK, INCLUDING BACKFILLING, HAS BEEN COMPLETED. IF ANY STONE SIDEWALKS, DRIVEWAYS OR CURBS WHICH HAVE BEEN REMOVED OR INJURED, ARE UNFIT TO BE RELAID, THEN THE CONTRACTOR SHALL FURNISH NEW MATERIAL AND RELAY SAME. ALL CONCRETE OR CEMENT SIDEWALKS, DRIVEWAYS OR CURBS, WHICH ARE REMOVED OR INJURED BY THE CONTRACTOR SHALL BE BROKEN UP BY HIM AND HE SHALL FURNISH ALL LABOR AND MATERIALS AND CONSTRUCT NEW SIDEWALKS, DRIVEWAYS OR CURBS, TO REPLACE THOSE REMOVED OR INJURED. AT INTERSECTING WALKS, DRIVES, ETC., ADDITIONAL CONCRETE SLABS BEYOND THE EXCAVATION LIMITS SHALL BE REMOVED AND REPLACED WITH NEW MATERIAL, IN ORDER TO AVOID HAVING MORE JOINTS THAN IN THE ORIGINAL WORK. ALL SLABS REPLACED SHALL BE OF FULL WIDTH. THE CONTRACTOR SHALL FURNISH, PLACE AND MAINTAIN, WHEREVER THE SIDEWALK HAS BEEN REMOVED OR DAMAGED BY HIM, A TEMPORARY SIDEWALK SO AS TO PROVIDE A SAFE AND PASSABLE SIDEWALK UNTIL SUCH TIME AS THE FINAL SIDEWALK IS COMPLETED.
- I. ALL PAVEMENTS, ROAD SURFACES, SIDEWALKS, DRIVEWAYS, OR CURBS, WHICH THE CONTRACTOR IS REQUIRED TO REPLACE OR TO HAVE REPLACED, SHALL AT THE EXPIRATION OF THE PERIOD OF MAINTENANCE, BE IN AT LEAST AS GOOD CONDITION AS AT THE TIME OF AWARDING THE CONTRACT.
- J. ALL WORK WHICH THE CONTRACTOR MAY DO IN CONNECTION WITH THE OPENING UP OR REPLACING OF PAVEMENT, ROAD SURFACES, SIDEWALKS, DRIVEWAYS, OR CURBS, AS WELL AS THE FINAL REPAVING, SHALL BE DONE AT HIS EXPENSE, IN ACCORDANCE WITH THE ROADWAY CONSTRUCTION PLANS AND WITH THE ADDITIONAL EVIDENCE TO THE PROJECT ENGINEER THAT THE WORK HAS BEEN COMPLETED TO THEIR SATISFACTION.
- K. TUNNELING WILL NOT BE PERMITTED.
- L. THE CONTRACTOR SHALL MAKE ALL PAVEMENT CUTS BY CHANNELING MACHINE, HAND-OPERATED PNEUMATIC TOOLS OR BY SUCH OTHER METHODS AS WILL FURNISH A CLEAN CUT IN THE PAVEMENT AND PAVEMENT BASE WITHOUT UNDUE SHATTERING. THE USE OF BALL OR WEIGHT TO BREAK THE PAVEMENT WILL NOT BE PERMITTED.
- M. NO SPECIFIC OR SEPARATE PAYMENT WILL BE MADE FOR ALL OF THIS WORK, BUT THE COST THEREOF SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE WORK TO BE DONE UNDER THIS CONTRACT.
- N. TEMPORARY REPAVING SHALL CONSIST OF 3 INCHES OF EITHER COLD MIXED, COLD LAID ASPHALTIC CONCRETE MEETING THE STATE OF OHIO SPECIFICATION 405 OR HOT MIXED ASPHALTIC CONCRETE MEETING THE STATE OF OHIO SPECIFICATION 404.

## UC.08 LAYING CONDUIT:

- A. PROPER IMPLEMENTS, TOOLS, AND FACILITIES, SATISFACTORY TO THE PROJECT ENGINEER SHALL BE PROVIDED AND USED BY THE CONTRACTOR FOR THE SAFE AND CONVENIENT PROSECUTION OF THE WORK. ALL CONDUITS AND FITTINGS SHALL BE CAREFULLY LOWERED INTO THE TRENCH PIECE BY PIECE, IN SUCH MANNER AS TO PREVENT DAMAGE TO CONDUIT, AND UNDER NO CIRCUMSTANCES SHALL CONDUIT OR ACCESSORIES BE DROPPED OR DUMPED INTO THE TRENCH. IF ANY DEFECTIVE CONDUIT OR MATERIAL BE DISCOVERED WHILE CONDUIT IS BEING LAID, A NEW PIECE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AT THE SITE OF THE WORK.
- B. ALL FOREIGN MATTER OR DIRT SHALL BE REMOVED FROM THE INSIDE OF THE CONDUIT BEFORE IT IS LOWERED INTO ITS POSITION IN THE TRENCH, AND IT SHALL BE KEPT CLEAN BY APPROVED MEANS DURING AND AFTER LAYING.
- C. WHEREVER NECESSARY TO DEFLECT CONDUIT FROM A STRAIGHT LINE, EITHER IN THE VERTICAL OR HORIZONTAL PLANE TO AVOID OBSTRUCTIONS, OR FOR OTHER REASONS, THE DEGREE OF DEFLECTION SHALL BE APPROVED BY THE PROJECT ENGINEER.
- D. NO CONDUIT SHALL BE LAID IN WATER, OR WHEN THE TRENCH CONDITIONS OR THE WEATHER IS UNSUITABLE FOR SUCH WORK, EXCEPT BY PERMISSION OF THE PROJECT ENGINEER.

## UC.09 FLOATING:

THE CONTRACTOR SHALL TAKE EVERY PRECAUTION AGAINST THE FLOATING OF THE CONCRETE, ENCASED CONDUIT LINE DUE TO WATER COMING INTO THE TRENCH, OR THROUGH CAVING IN, FLUSHING OR PUDDLING. IN CASE OF SUCH FLOATING THE CONTRACTOR SHALL REPLACE THE CONCRETE ENCASED CONDUIT LINE AT HIS OWN EXPENSE, AND MAKE WHOLLY GOOD ANY INJURY OR DAMAGE WHICH MAY HAVE RESULTED.

## UC.10 INSPECTION:

INSPECTIONS CONDUCTED UNDER 105 AND 106 SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM SAID WORK STRICTLY IN ACCORDANCE WITH THE SPECIFICATIONS, OR ANY MODIFICATIONS THEREOF AS HEREIN PROVIDED, AND WORK NOT SO CONSTRUCTED SHALL BE REMOVED AND MADE GOOD BY THE CONTRACTOR AT HIS OWN EXPENSE. ALL MATERIAL MUST BE SOUND AND SHALL CONFORM TO THESE SPECIFICATIONS, AND ANY DEFECTIVE MATERIAL WHICH MAY HAVE PASSED THE INSPECTOR AT THE WORKS, OR ELSEWHERE, SHALL BE AT ALL TIMES LIABLE TO REJECTION WHEN DISCOVERED, UNTIL THE DATE OF FINAL PAYMENT UNDER THIS CONTRACT.

## UC.11 PLAIN AND REINFORCED CONCRETE MASONRY:

THE MATERIAL FURNISHED BY THE CONTRACTOR FOR THE VARIOUS KINDS OF PLAIN AND REINFORCED MASONRY CONSTRUCTION TO BE PERFORMED, SHALL CONFORM TO 602.

## UC.12 REINFORCED CONCRETE MANHOLES:

### A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AT THE LOCATIONS, TO THE LINE AND GRADE, AND TO THE DIMENSIONS AND DETAILS AS SHOWN ON THE PLANS AND ACCORDANCE TO THESE SPECIFICATIONS ALL MANHOLES COMPLETE WITH BRICK NECKS, FRAMES, COVERS, CABLE PULLING IRONS, GROUNDING RODS, RACKS AND SUMPS AS SHOWN ON PLANS. TERMS OF SECTIONS UC.01 THROUGH AND INCLUSIVE UC.11 SHALL GOVERN THIS SECTION. TERMS AND STIPULATIONS THEREIN SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

### B. CONCRETE

CONCRETE SHALL CONFORM TO 511.

### C. REINFORCING STEEL

REINFORCING STEEL SHALL CONFORM TO 509 MODIFIED TO 709.01.

## D. MANHOLE FRAMES AND COVERS

- ALL CAST IRON MANHOLE FRAMES AND COVERS AS SHOWN ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED AS DIRECTED. FRAMES SHALL BE SET IN PLACE IN A FULL BED OF MORTAR, AT SUCH ELEVATIONS AS TO MAKE THE TOP OF THE FRAME CONFORM TO THE FINISHED SURFACES OR FINAL ESTABLISHED GRADE. BRICK MASONRY MAY BE USED ABOVE THE TOP OF THE MANHOLE FOR SETTING THE FRAME TO GRADE. MANHOLE FRAMES AND COVER SHALL BE MACHINED SO THAT IT WILL BE IMPOSSIBLE TO ROCK THE COVER AFTER IT HAS BEEN SEATED IN THE PROPER POSITION IN THE FRAME.
- ALL CASTINGS SHALL CONFORM TO 711.12 CLASS 30B.
- ALL CASTING SHALL BE THOROUGHLY CLEANED AND SUBJECTED TO A CAREFUL HAMMER TEST. NO CASTINGS SHALL BE COATED UNLESS CLEAN AND FREE FROM RUST AND APPROVED IN THESE RESPECTS BY THE DIRECTOR OR HIS AUTHORIZED INSPECTOR IMMEDIATELY BEFORE BEING DIPPED.
- EACH CASTING SHALL BE SPRAYED OR BRUSHED INSIDE AND OUT WITH ONE (1) COAT OF ASPHALTIC COMPOUND VARNISH. THE VARNISH SHALL BE MADE OF HIGH GRADE ASPHALT FLUXED AND BLENDED WITH PROPERLY TREATED DRYING OILS AND THINNED TO A PROPER CONSISTENCY WITH A VOLATILE SOLVENT. THE VARNISH SHALL BE APPROVED AND SIMILAR TO BLACK ASPHALT VARNISH. OTHER METHODS OF COATING AND TYPES OF COATING MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. IN ADDITION TO THE SHOP COAT THE COATINGS SHALL RECEIVE TWO (2) COATS OF APPROVED PAINT.
- FOR MANHOLES WITH TRANSFORMERS, VENTILATED GRATING SHALL BE USED.

## E. CABLE PULLING IRONS

CABLE PULLING IRONS SHALL BE MADE FROM 7/8 INCH ROUND STEEL ROD SHAPED AS SHOWN ON THE DRAWING AND TIED INTO THE REINFORCING STEEL BEFORE CONCRETE IS POURED. PULLING IRONS SHALL BE HOT-DIP GALVANIZED AFTER FORMING.

## F. GROUND ROD

THE GROUND ROD SHALL BE 1/2" X 8'-0" COPPERWELD GROUND ROD AND GROUND WIRE SHALL BE #2 BARE STRANDED.

## G. CABLE RACKS

CABLE RACKS SHALL CONSIST OF:

RACK	McGraw-Edison #DU1B7 HUBBARD #2290 OR APPROVED EQUAL,
HOOK	McGraw-Edison #DU1S3 HUBBARD #2262 OR APPROVED EQUAL,
INSULATOR	McGraw-Edison DE3U1 HUBBARD #2123 OR APPROVED EQUAL.

RACKS AND SUPPORTS SHALL BE HOT-DIP GALVANIZED.

## H. CLEANING MANHOLES

UPON COMPLETION OF THE MANHOLES AND BEFORE ACCEPTANCE AND FINAL PAYMENT SHALL BE MADE, THE CONTRACTOR SHALL REMOVE ALL DIRT, SAND, MUD, RUBBISH, DEBRIS, EXCESS MATERIALS, FALSE WORK, TEMPORARY STRUCTURES AND EQUIPMENT OUT OF THE MANHOLES AND ALL PARTS OF THE WORK SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE PROJECT ENGINEER.

## I. MEASUREMENT

THE MANHOLES TO BE PAID FOR WILL BE THE ACTUAL NUMBER COMPLETED AND ACCEPTED, INCLUDING GROUND RODS, CLAMP, GROUND WIRE, CABLE SUPPORTS, AND COVER.

FHWA REGION	STATE	PROJECT	
5	OHIO		

37  
185

CUYAHOGA COUNTY  
CUY-10-16.23

# GENERAL NOTES

## UC.12 REINFORCED CONCRETE MANHOLES: (CONTINUED)

### J. PAYMENT

THE WORK INCLUDED IN THIS ITEM AND THE CONTRACT UNIT PRICE FOR EACH MANHOLE BID UNDER "ITEM UC.12 - CONCRETE MANHOLES" IN PLACE, COMPLETED AND ACCEPTED, SHALL FORM THE BASIS OF PAYMENT AND SHALL CONSTITUTE FULL COMPENSATION FOR ALL EXCAVATION AND BACKFILL, FOR FURNISHING, HAULING AND PLACING ALL CASTINGS, AND TIEING EXISTING OR NEW DUCTS INTO MANHOLES INCLUDING RAISING OR LOWERING DUCTS. REINFORCING STEEL, CONCRETE BRICK AND CONCRETE MASONRY, PULLING IRONS, GROUND RODS AND OTHER MATERIAL, ETC., AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THESE ITEMS AS PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
UC.12	EACH	REINFORCED CONCRETE MANHOLES (FOR NEW DUCT)
UC.12	EACH	MANHOLE (MODIFIED)

## UC.13 NON-REINFORCED & REINFORCED CONCRETE ENCASED CONDUIT BANKS AND DUCT CLEANING

### A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AND CONNECT TO MANHOLES AND TO PULL BOXES AS SHOWN ON DRAWINGS OR AS DIRECTED, ALL NON-REINFORCED AND REINFORCED CONCRETE ENCASED PVC CONDUIT BANKS AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. TERMS OF SECTIONS UC.01 THROUGH AND INCLUSIVE UC.11 SHALL GOVERN THIS SECTION. TERMS AND STIPULATIONS THEREIN SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

### B. CONDUITS AND FITTINGS

SHALL BE PLASTIC PVC, POLYVINYL CHLORIDE POWER AND COMMUNICATIONS DUCT. CONCRETE BLOCK SPACERS WILL NOT BE ACCEPTED.

### C. PLASTIC PVC CONDUIT SHALL BE UL LABELED AND LISTED AND CONFORM TO LATEST REVISION OF UNDERWRITERS LABORATORIES 651 STANDARD AND SHALL BE TYPE EB, ENCASED BURIAL WITH CONCRETE ENCASEMENT, NECESSARY COUPLINGS, ADAPTERS, EXPANSIONS, END BELLS, AND SWEEPS SOLVENT WELDED TOGETHER TO FORM A WATERTIGHT CONDUIT RUN. END BELLS, COUPLINGS, AND EXPANSION FITTINGS TO BE OF THE SAME MATERIAL AS THE CONDUIT. THE CONDUIT, FITTINGS AND THE SOLVENT WELD CEMENT SHALL BE PRODUCED BY THE SAME MANUFACTURER.

### D. POLYVINYL CHLORIDE, PVC, CONDUIT FOR ELECTRICAL PURPOSES SHALL CONFORM TO UL 651 STANDARDS AND SHALL BE FIVE (5) INCHES INSIDE DIAMETER TYPE EB WITH CONCRETE ENCASEMENT AS DETAILED ON CONTRACT DRAWINGS. COUPLINGS SHALL BE SOCKET TYPE. END BELLS AT MANHOLE ENTRANCE, 5° ANGLE COUPLINGS, STANDARD COUPLINGS, VARIOUS DEGREE SWEEPS, 11¼° TO 90°, INCLUDING FIELD BENDS, AND PLUGS OR CAPS TO CLOSE UNUSED CONDUITS SHALL BE MADE OF THE SAME MATERIAL AS THE CONDUIT. CONDUIT SPACERS MAY BE MADE OF PLASTIC, STYRENE, OR POLYVINYL CHLORIDE OR POLYETHYLENE.

### E. CONCRETE

CONCRETE USED FOR ENCASEMENT OF CONDUITS SHALL CONFORM TO STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 499 CLASS C, USING NO. 8 SIZE AGGREGATE.

### F. INSTALLATION

CONDUIT SHALL BE INSTALLED BY THE BUILT UP METHOD WITH JOINTS IN ADJACENT DUCTS STAGGERED. NECESSARY SPACERS SHALL BE PLACED AT NOT GREATER THAN (5) FOOT INTERVALS TO HOLD DUCTS IN THE CONFIGURATION DESIRED, WITH THE DUCT BANK BRACED SECURELY TO KEEP FROM SHIFTING AND FLOATING WHILE CONCRETE IS POURED. EACH SECTION OF CONDUIT SHALL HAVE AN APPLICATION OF A JOINT SEALER COMPOUND FURNISHED BY THE CONDUIT MANUFACTURER AND BE TAPPED SECURELY INTO PLACE IN THE PREVIOUS COUPLING TO SET UP THE JOINTS TIGHT AND LEAKPROOF.

2. CONCRETE SHALL BE WORKED INTO THE SPACES BETWEEN DUCTS SO THAT THE CONDUIT BANK IS EFFECTIVELY ENCASED IN CONCRETE WITHOUT VOIDS OR EMPTY SPACES. REINFORCING RODS SHALL BE INSTALLED AS SHOWN ON DRAWINGS.

3. CONDUIT WHICH IS CUT TO FIT SHORT SECTIONS SHALL BE DEBURRED ON THE DUCT END AND THE END OF THE BELL REAMED IN THE INSIDE DIAMETER FOR EASY ENTRY OF THE DUCT INTO THE COUPLING TO PRODUCE THE SAME JOINTING CONDITIONS AS PROVIDED BY FACTORY MADE CONDUIT SECTIONS.

4. THE END BELLS SHALL BE INSTALLED WITH THE EDGE OF THE FLARED ENDS FLUSH WITH THE INSIDE WALL OF THE MANHOLES.

5. ALL END BELLS SHALL BE GROUDED IN PLACE.

### G. DUCT CLEANING

AFTER CONDUITS HAVE BEEN INSTALLED THE CONTRACTOR SHALL CLEAN ALL THE DUCTS BY PULLING THROUGH A MANDREL TO REMOVE SOLID OBSTRUCTIONS, FOLLOWED BY A CIRCULAR WIRE BRUSH TO REMOVE ANY DIRT, SAND OR CONCRETE WHICH MAY HAVE BEEN INTRODUCED DURING CONSTRUCTION, LEAVING A CLEAN CONDUIT FREE FROM OBSTRUCTIONS OR FOREIGN MATTER.

### H. MEASUREMENT

THE NUMBER OF LINEAR FEET OF CONDUIT BANK TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAR FEET FURNISHED AND PLACED AND CLEANED IN ACCORDANCE WITH THESE SPECIFICATIONS AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE INCLUDING FITTINGS.

### I. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT PRICE BID PER LINEAL FOOT UNDER "ITEM UC.13 NON-REINFORCED CONCRETE ENCASED CONDUIT BANKS AND DUCT CLEANING" CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR EXCAVATING AND FOR FURNISHING, HAULING, PLACING, THE CONDUIT, FITTINGS, CAPPING SPACERS, CONCRETE, REINFORCING STEEL, SHEETING AND BRACING, BACKFILL, WATER USED FOR COMPACTION, INCIDENTAL CONCRETE AND DUCT CLEANING. THE REMOVAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL, REPAVING, SEEDING AND FOR ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

THESE ITEMS AS MEASURED AND PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
UC.13	LIN. FT.	NON-REINFORCED CONCRETE ENCASED 6-5" PVC CONDUIT BANK
UC.13	LIN. FT.	NON-REINFORCED CONCRETE ENCASED 7-5" PVC CONDUIT BANK
UC.13	LIN. FT.	NON-REINFORCED CONCRETE ENCASED 1-5" PVC CONDUIT BANK
UC.13	LIN. FT.	REINFORCED CONCRETE ENCASED 6-5" PVC CONDUIT BANK
UC.13	LIN. FT.	DUCT CLEANING

## UC.14 MANHOLES (ABANDONED): MELP M.H. Nos. 56-41 & 56-42

### A. WORK INCLUDED

1. THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY ABANDON AS DIRECTED, ALL MANHOLES AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. TERMS OF SECTIONS UC.01 THROUGH AND INCLUSIVE UC.11 SHALL GOVERN THIS SECTION. TERMS AND STIPULATIONS THEREIN SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

### B. CONSTRUCTION METHODS

1. CASTINGS ON MANHOLES TO BE ABANDONED SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THE SALVAGE MATERIAL SHALL BECOME THE PROPERTY OF THIS CONTRACTOR.

2. MANHOLE ROOFS SHALL BE BROKEN OUT AND MANHOLE WALLS SHALL BE TORN DOWN AS PER 202.

3. THE MANHOLES SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL.

### C. MEASUREMENT

THE MANHOLES TO BE PAID FOR WILL BE THE ACTUAL NUMBER ESTIMATED, DEMOLISHED, AND ACCEPTED.

### D. PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH, "ITEM UC.14 - MANHOLES (ABANDONED OR REMOVED)" WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR REMOVING CASTINGS, EXCAVATIONS, REMOVAL OF ROOF AND PORTION OF WALLS, BACK-FILLING, DISPOSAL OF REMOVED MASONRY, RESTORATION OF PAVEMENT AND FOR FURNISHING AND PLACING ALL THE NECESSARY MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND OTHER INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. REMOVAL OF MANHOLES IN THE SIDEWALK OF THE BRIDGE SHALL BE INCLUDED WITH STRUCTURE REMOVAL FOR PAYMENT.

# GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

38  
185

CUYAHOGA COUNTY  
CUY-10-16.23

ITEM CA  
CABLE

CA.01 15 KV CABLE RUNS

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, TOOLS AND EQUIPMENT FOR INSTALLING AND SPLICING ALL 15 KV CABLES, COMPLETE, INCLUDING RACKING, BONDING, FIREPROOFING AND OTHER APPURTENANT WORK, ALL AS SPECIFIED, REQUIRED OR SHOWN ON THE CONTRACT DRAWINGS.

B. CABLE

- PAPER INSULATED CABLE SHALL CONFORM TO A.E.I.C. SPECIFICATIONS FOR "SOLID-TYPE, IMPREGNATED-PAPER INSULATED, LEAD COVERED CABLE," LATEST EDITION, AND ALL APPLICABLE IPCEA SPECIFICATIONS EXCEPT AS OTHERWISE SPECIFICALLY NOTED.

CONDUCTOR SIZE & TYPE	VOLTAGE CLASS	RESISTANCE PER 1000 FT @ 25° C.	STRANDING AND CROSS SECTION
#4/0, 3/C, PIL	15 KV UNGRD.	0.051	BELTED 37 STRANDS COMPACT

- PAPER INSULATED CABLE SHALL BE BELTED TYPE FOR 15 KV.

- THICKNESS OF INSULATION ON CONDUCTORS SHALL BE 155 MILLS FOR 15 KV.
- THICKNESS OF BELT SHALL BE 155 MILS FOR 15 KV CABLE.

- LEAD SHEATH SHALL BE AN ARSENICAL LEAD ALLOY DESIGNED FOR MAXIMUM RESISTANCE FROM BEND CREEP, ABRASION AND CORROSION; COPPER, IF PRESENT, SHALL BE IN MINIMUM TRACES.

- THE LEAD SHEATH ON 15 KV CABLE SHALL BE COVERED WITH A REINFORCED POLYMERIZED CHLOROBUTADIENE JACKET 110 MILS THICK WITH THE POLYMERIZED CHLOROBUTADIENE BONDED TO THE SHEATH. THICKNESS OF LEAD SHALL BE REDUCED AS PER A.E.I.C. SPECIFICATIONS, 10TH EDITION TABLE IX.

- LEAD SHEATH SHALL HAVE THE FOLLOWING PHYSICAL REQUIREMENTS:

- TENSILE STRENGTH MINIMUM PSI 2400
- ELONGATION IN 2" GAUGE MINIMUM % 25
- IPCEA BENDS MINIMUM 30
- ARSENIC CONTENT OF 0.15% NOMINAL

- CABLE SHALL CONTAIN IMMEDIATELY UNDER THE SHEATH AND ALONG THE CORE A MARKER OR IDENTIFYING TAPE SHOWING THE MANUFACTURER'S NAME, THE YEAR OF MANUFACTURE, AND A CONSECUTIVE SERIAL NUMBER FOR IDENTIFICATION PURPOSES, ALL TO APPEAR AT INTERVALS OF APPROXIMATELY ONE FOOT. THE PRINTED MATTER ON THE MARKER OR IDENTIFYING TAPE SHALL BE LEGIBLE WHEN THE TAPE IS REMOVED FROM THE COMPLETED CABLE.

- THE CONTRACTOR SHALL FURNISH CERTIFIED COPIES OF THE RESULTS OF ALL TESTS ON SAMPLES OF THE CABLE WHICH HE PROPOSED TO FURNISH MADE IN ACCORDANCE WITH THE PROVISIONS OF A.E.I.C. SPECIFICATIONS FOR "SOLID-TYPE IMPREGNATED-PAPER-INSULATED LEAD COVERED CABLE," 10TH EDITION, FOR PAPER INSULATED CABLE.

- THE CONTRACTOR SHALL FURNISH AS PART OF HIS PROPOSAL THE PERCENTAGE OF EACH ELEMENT CONTAINED IN THE LEAD SHEATH ALLOY HE PROPOSES TO SUPPLY. THIS DATA SHALL BE ON THE CABLE MANUFACTURER'S FORMS.

C. 3C-4/0 15 KV SPLICES

- SPLICES SHALL BE MADE UP FROM UNIT PACKAGE SPLICING KITS FOR 3C-4/0, 15 KV PAPER-INSULATED CABLES. SPLICING KITS SHALL BE AS MANUFACTURED BY PLM Co., G.E., OR APPROVED EQUAL.
- THE CONTRACTOR SHALL FURNISH AS PART OF HIS PROPOSAL THE SPLICE KIT MANUFACTURER'S DRAWINGS SHOWING THE SPLICE INCLUDING ALL DETAILS WHICH HE PLANS TO USE.

D. CABLE LUBRICANT

THE LUBRICANT SHALL BE GREASE OR SOAPSTONE OR A COMBINATION OF THESE TWO (2) INGREDIENTS.

E. BONDING WIRE

BONDING WIRE SHALL BE NO. 2 AWG COPPER BARE WIRE.

F. FIREPROOFING

PLYMOUTH RUBBER CO. PLY ARC TAPE NO. 3313, IRVINGTON ELECTRIC ARC AND FIREPROOFING TAPE 7700 OR EQUAL AND CEMENT SHALL BE USED AS REQUIRED IN MANHOLES. FIREPROOFING SHALL BE MADE AS SHOWN ON PLAN OR DIRECTED BY ENGINEER. PAYMENT SHALL BE THE LINEAR FEET OF CABLE FIREPROOFED.

G. CABLE PULLING

- BEFORE STARTING CABLE INSTALLATION, THE DUCTS TO BE OCCUPIED SHOULD BE SELECTED THROUGHOUT THE ENTIRE LENGTH OF THE RUN AND THE DUCTS SELECTED MUST BE CHECKED TO SEE THAT THEY ARE CLEAN AND FREE FROM ALL OBSTRUCTIONS.
- IF REELS ARE LEFT IN THE STREET, WARNING LIGHTS SHALL BE PLACED AROUND THEM.
- LUBRICANT SHALL BE APPLIED TO THE CABLE JUST BEFORE IT ENTERS THE FEEDING TUBE. A COATING ABOUT 1/16 INCHES THICK IS AMPLE.  
NO LUBRICANT SHALL BE APPLIED TO THE FIRST AND LAST FIVE FEET OF CABLE FOR CONVENIENCE AND CLEANLINESS IN SPLICING.
- THE REEL OF CABLE MUST BE PROPERLY PLACED AT THE FEEDING END TO CAUSE MINIMUM FLEXING OF THE CABLE. IT SHOULD ALWAYS BE LOCATED ON THE SIDE OF THE MANHOLE TOWARD WHICH THE CABLE IS PULLED.
- WHERE THERE IS A BEND IN THE DUCT LINE THE PULLING SET UP WHEREVER POSSIBLE SHOULD BE PLANNED FOR FEEDING-IN AT THE MANHOLE NEAREST THE BEND.
- THE AMOUNT OF SLACK IN THE CABLE AT THE FEEDING END SHALL BE REGULATED BY MEN STATIONED AT THE CABLE REEL SO THAT THE CABLE PASSES FREELY INTO THE FEEDING TUBE WITHOUT BEING LOOSE ON THE REEL AND WITHOUT SCRAPING THE MANHOLE FRAME.
- THE CABLE SHALL BE DRAWN INTO THE DUCT JUST FAST ENOUGH TO KEEP THE CABLE AND REEL MOVING SMOOTHLY AND SO IT CAN BE PROPERLY INSPECTED AND LUBRICATED.
- EYES OR SEALS DAMAGED DURING PULLING SHALL BE REPAIRED UNLESS SPLICING FOLLOWS IMMEDIATELY.
- WHEN A CABLE IS CUT, UNLESS SPLICING IS TO BE DONE IMMEDIATELY, THE ENDS SHALL BE PROPERLY SEALED BY AN APPROVED METHOD FOR PREVENTING OIL FROM SEEPING OUT AND MOISTURE ENTERING CABLE. ALL SEALED ENDS SHOULD BE RACKED HIGH.
- THE MEN IN THE PULLING GANG SHOULD PLACE THE CABLE IN THE MANHOLES ON THE CABLE RACKS WITHOUT TRYING TO TRAIN IT INTO ITS FINAL POSITION AND SHALL TIE THE CABLE TO THE SUPPORTS TO PREVENT IT FROM FALLING. THE ENDS SHALL BE TRAINED AS HIGH AS POSSIBLE TO KEEP THEM OUT OF ANY WATER. DYNAMOMETER READING SHALL BE AVAILABLE THROUGHOUT CABLE PULLING PROCESS. PULLING TENSION SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATIONS.

H. SPLICING

SPLICING OF CABLES SHALL BE DONE IN AN APPROVED MANNER, USING PLM, G.E. OR OTHER APPROVED SPLICING KITS AND ACCORDING TO THE SPLICING KIT MANUFACTURER'S INSTRUCTIONS.

I. CABLE RACKING AND TRAINING

- PAPER INSULATED CABLE SHALL NOT BE BENT WHEN TEMPERATURE IS BELOW 14° F. UNLESS CABLE IS HEATED SO THAT IT IS WARM ALL THE WAY THROUGH.
- AT LEAST SIX (6) INCHES OF STRAIGHT CABLE OUT OF THE DUCT SHALL BE ALLOWED BEFORE STARTING THE OFFSET BEND IN MANHOLES.
- BENDING RADIUS OF CABLE SHALL BE MINIMUM OF EIGHT (8) TIMES OVERALL CABLE DIAMETER.

- CABLES SHALL BE SUPPORTED IN SUCH A WAY AS TO LEAVE A SPLICING AREA FOR ANY FUTURE CABLE FROM OTHER DUCTS.
- AT LEAST SIX (6) INCHES OF STRAIGHT CABLE SHOULD EXTEND BEYOND EACH END OF THE SPLICE TO PROVIDE SPACE FOR RESTING ON THE SADDLES OF THE SUPPORTING RACKS.
- ALL CABLES AND JOINTS SHALL BE SO RACKED IN THE MANHOLE THAT THEY ARE NOT DIRECTLY UNDER THE MANHOLE COVER.

J. BONDING

- ALL SOLDERING CONNECTIONS MUST BE WELL MADE, ON CLEAN SURFACES TO ACHIEVE MINIMUM RESISTANCE POSSIBLE BUT CARE MUST BE TAKEN NOT TO INJURE THE LEAD SHEATH WITH HOT SOLDER.
- BOND WIRES ATTACHED DIRECTLY TO THE CABLE SHEATH SHOULD FORM A 60 DEGREE ANGLE WITH THE SHEATH AT THE POINT OF SOLDERING.
- BOND WIRES SHALL BE CLAMPED AND CONNECTED FIRMLY TO GROUND ROD IN MANHOLE.

K. TESTING

THE PROJECT ENGINEER OR HIS AUTHORIZED INSPECTOR SHALL HAVE THE RIGHT TO ORDER CONTRACTOR TO PERFORM DURING AND AFTER CABLE RUN INSTALLATION HIGH VOLTAGE TESTS IN ACCORDANCE WITH A.E.I.C. SPECIFICATIONS FOR "SOLID TYPE IMPREGNATED-PAPER INSULATED LEAD COVERED CABLE," FOR PAPER INSULATED CABLE AT THE FOLLOWING TEST VOLTAGES AND TIME LIMITATIONS, ACCORDING TO A.E.I.C. 10TH EDITION.

15 KV PAPER INSULATED CABLE:

NEW CABLE 50 KV	5 MINUTES
EXISTING CABLE 30 KV	5 MINUTES

NEW CABLE SHALL BE DEFINED AS ALL CABLE INSTALLED BY CONTRACTOR EITHER TEMPORARY OR PERMANENT.

EXISTING CABLE SHALL BE DEFINED AS MELP CABLE TO WHICH CONTRACTOR HAS MADE SPLICES TO EXISTING FEEDER CABLES. COPIES OF ALL TEST DATA RESULTS SHOULD BE SENT TO:

MR. JEROME SALKO  
SYSTEM OPERATING ENGINEER  
DIVISION OF LIGHT AND POWER  
1201 LAKESIDE AVENUE  
CLEVELAND, OHIO 44114

L. MEASUREMENT

THE NUMBER OF LINEAR FEET OF CABLE TO BE PAID FOR SHALL BE THE DISTANCE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE PLUS 10'-0" AT ENDS IN MANHOLES.

M. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT BID PRICE PER LINEAR FOOT FOR "ITEM UC.15, 15 KV CABLE RUNS" CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING CABLE, SPLICING KITS, FIREPROOFING MATERIALS, CABLE GUARDS, CABLE LUBRICANT AND FOR PULLING, TRAINING, SPLICING, RACKING, BONDING, FIREPROOFING AND INSTALLING ON POLE OF CABLES AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ITEM	UNIT	DESCRIPTION
CA.01	LIN. FT.	3/C 15 KV #4/0 PIL CABLE
CA.01	LUMP	TESTING OF CABLE
CA.01	LIN. FT.	FIREPROOFING OF CABLE

MADE P.K. DATE 5-2-79  
TRACED DATE  
CHECKED EEF DATE 6-2-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

GENERAL NOTES  
MELP 7087-6

Rev. 12-27-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

39  
185

CUYAHOGA COUNTY  
CUY-10-16.23

CA.02 WIRE

A. GROUND WIRE

1. WIRE SHALL BE BARE COPPER.
2. #8 WIRE SHALL BE SINGLE CONDUCTOR, SOLID HARD-DRAWN COPPER IN ACCORDANCE WITH ASTM DESIGNATION B1-56 OR LATEST REVISION.
3. #4/0 WIRE SHALL BE 19 STRAND, SOFT-ANNEALED COPPER WITH ASTM B3-63 OR LATEST REVISION, UNCOATED.

B. WIRE INSTALLATION

1. #8 COPPER GROUND WIRE TO BE PULLED IN WITH THE CONTROL CABLE.
2. #4/0 COPPER GROUND WIRE TO BE PULLED IN WITH THE FIRST FEEDER CABLE.

C. MEASUREMENT

THE NUMBER OF LINEAR FEET OF WIRE FORMING THE BASIS FOR PAYMENT SHALL BE THE ACTUAL NUMBER OF LINEAR FEET FURNISHED AND INSTALLED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, AS MEASURED FROM EQUI-CENTER TO-CENTER OF MANHOLES AND SHALL INCLUDE MISCELLANEOUS FITTINGS.

D. PAYMENT

THE FOOTAGE MEASURED AS DESCRIBED ABOVE AND THE CONTRACT UNIT PRICE PER FOOT FOR ITEM CA.02 CLASSIFIED AS TO SIZE AND TYPE SHALL FORM THE BASIS OF PAYMENT AND SHALL INCLUDE HAULING, PULLING, INSTALLING, SPLICING, AND ALL LABOR EQUIPMENT, TOOLS AND INCIDENTALS TO COMPLETE THIS ITEM.

ITEM	UNIT	DESCRIPTION
CA.92	FT.	# 4/0 BARE COPPER GROUND WIRE
CA.02	FT.	# 8 BARE COPPER GROUND WIRE

I.S.01 REA DESIGNATION BJC IC22 AWG, 25 PAIR TELEPHONE CABLE

CONTROL CABLE (PILOT WIRE CONTROL)

CABLE TO CONSIST OF TWENTY-FIVE (25) GUARANTEED PAIRS OF REA DESIGNATION - BJC TELEPHONE CABLE IN A COMPACT INSULATED AND SHIELDED ASSEMBLY.

A. CONDUCTIVITY

THE D.C. RESISTANCE OF ANY CONDUCTOR AS MEASURED ON THE COMPLETED CABLE SHALL NOT EXCEED 17.4 OHMS PER 1000 FT. CORRECTED TO 68 DEGREE F.

B. CAPACITANCE

THE AVERAGE MUTUAL CAPACITANCE OF ALL PAIRS IN ANY REEL SHALL NOT EXCEED 0.087 MFD. PER MILE. THE CONDUCTORS SHALL BE TWISTED IN PAIRS OF VARYING LAYS SO AS TO KEEP "CROSS TALK" TO A MINIMUM.

C. INSULATION

THE CONDUCTORS SHALL BE INSULATED WITH COLOR CODED POLYETHYLENE AND SHALL HAVE A TESTED DIELECTRIC STRENGTH TO WITHSTAND FOR 3 SECONDS 3600 VOLTS D.C. BETWEEN CONDUCTORS. EACH LENGTH OF CABLE SHALL BE FREE FROM GROUNDS, CROSSES, SHORT CIRCUITS AND OPEN CIRCUITS.

D. CONSTRUCTION

AN INNER JACKET OF 0.050" OF POLYETHYLENE SHALL BE PROVIDED OVER THE BINDER TAPE SURROUNDING THE CONDUCTORS. A CORRUGATED COPPER SHIELD 0.005" IN THICKNESS SHALL BE PROVIDED OVER THE INNER JACKET AND A 0.040" POLYETHYLENE OUTER JACKET SHALL BE PROVIDED.

THE ENTIRE ASSEMBLY SHALL BE ROUND AND NOT EXCEED 0.90" IN DIAMETER. THE DIELECTRIC STRENGTH BETWEEN CONDUCTORS AND SHIELD SHALL BE TESTED TO WITHSTAND 20,000 VOLTS D.C. FOR 3 SECONDS.

E. SUMMARY OF ELECTRICAL TEST

THE MANUFACTURER OF THIS CABLE SHALL FURNISH A COPY OF ALL ELECTRICAL AND PHYSICAL TEST DATA REQUIRED ON COMPLETED CABLE AS OUTLINED BY THE REA SPECIFICATIONS INDICATED IN SECTION #20, EXTENT OF TESTING BEFORE SHIPPING CABLE TO USER.

CABLE SHALL BE MANUFACTURED BY:

- THE OKONITE COMPANY
- ANACONDA WIRE & CABLE COMPANY
- PHELPS DODGE TELEPHONE COMPANY  
OR APPROVED EQUAL

F. FIREPROOFING

PLYMOUTH RUBBER CO. PLY ARC TAPE NO. 3313, IRVINGTON ELECTRIC ARC AND FIREPROOFING TAPE 7700 AND CEMENT OR APPROVED EQUAL SHALL BE USED AS REQUIRED IN MANHOLES. FIREPROOFING SHALL BE MADE AS SHOWN ON PLAN OR DIRECTED BY ENGINEER. PAYMENT SHALL BE THE LINEAR FEET OF CABLE FIREPROOFED.

G. SCOPE OF WORK

THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS, TOOLS AND EQUIPMENT FOR INSTALLING AND SPLICING THE "PILOT CABLE," COMPLETE INCLUDING RACKING, BONDING, FIREPROOFING AND OTHER APPURTENANT WORK IN THE EXISTING OHIO BELL TELEPHONE AND NEW AND EXISTING M.E.L.P. MANHOLES, ALL AS SPECIFIED, REQUIRED OR SHOWN ON THE CONTRACT DRAWINGS.

H. CABLE INSTALLATION

THIS WORK SHALL BE DONE UNDER THE SUPERVISION OF THE DIVISION OF LIGHT AND POWER AND OHIO BELL TELEPHONE COMPANY AND SHALL BE NOTIFIED IN ADVANCE OF THIS INSTALLATION.

1. BEFORE STARTING CABLE INSTALLATION THE CONTRACTOR SHALL CHECK THE SELECTED DUCT THROUGHOUT THE ENTIRE LENGTH TO ASSURE IT IS CLEAN AND FREE FROM ALL OBSTRUCTION.
2. LUBRICANT SHALL BE APPLIED TO THE CABLE JUST BEFORE IT ENTERS THE FEEDING TUBE. NO LUBRICANT SHALL BE APPLIED TO THE FIRST AND LAST FIVE FEET OF CABLE FOR CONVENIENCE AND CLEANLINESS IN SPLICING.
3. WHERE THE "PILOT CABLE" IS PULLED THROUGH A MANHOLE WITHOUT A SPLICE, THE DUCT SELECTION SHOULD BE THE SAME AT BOTH ENDS OF THE MANHOLE AND AMPLE CABLE LENGTH BE PROVIDED FOR NECESSARY RACKING IN EACH MANHOLE.
4. AFTER THE "PILOT CABLE" HAS BEEN PLACED, SUFFICIENT CABLE LENGTH SHOULD BE LEFT IN EACH MANHOLE TO PROPERLY RACK AND SPLICE CABLES AS SHOWN ON THE CONTRACT DRAWINGS. CABLE SPLICES WILL BE MADE AT THE DESIGNATED MANHOLES AND IN ALL THE OBT MANHOLES THE "PILOT CABLE" SHALL BE IDENTIFIED WITH IDENTIFICATION TAGS INDICATING AS SUCH "M.E.L.P. REA DESIGNATION BJC, 22 AWG, 25 PAIR PHONE CABLE."
5. MELP SHALL FURNISH AND PLACE ONE TERMINAL BOARD IN M.E.L.P. MANHOLE, AS SHOWN ON THE CONSTRUCTION DRAWINGS.

I. MEASUREMENT

THE NUMBER OF LINEAR FEET OF CABLE TO BE PAID FOR SHALL BE THE DISTANCE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE PLUS 10'-0" AT EACH MANHOLE FOR RACKING OR SPLICING.

J. PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR "ITEM SPECIAL CONTROL CABLE" IN PLACE COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL SPLICES, MATERIAL TESTING, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ITEM	UNIT	DESCRIPTION
I.S.01	LIN. FT.	REA DESIGNATION BJC IC22 AWG, 25 PAIR TELEPHONE CABLE
I.S.01	LIN. FT.	FIREPROOFING OF CABLE



# GENERAL NOTES

ITEM BR  
BRIDGE CONSTRUCTION SPECIFICATIONS

BR.01. EXPOSED PVC CONDUIT BANK SUPPORTED ON STRUCTURAL STEEL

NON-ENCASED, BRIDGE-SUPPORTED 6-5" PVC CONDUIT BANK

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY INSTALL AND CONNECT TO EXPANSION COUPLINGS AS SHOWN ON THE DRAWINGS OR AS DIRECTED, ALL NON-ENCASED, BRIDGE-SUPPORTED PVC CONDUIT BANKS AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. ALL APPLICABLE SECTIONS OF ITEM UC SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

B. PVC CONDUIT AND FITTINGS

POLYVINYL CHLORIDE COMPONENTS SHALL MEET THE CELL CLASSIFICATION 12454-B AS DEFINED IN ASTM D-1784. IN ADDITION THE COMPOUND SHALL CONTAIN A MINIMUM OF 6% TITANIUM DIOXIDE FOR ULTRA-VIOLET RESISTANCE.

C. STRUCTURAL STEEL FOR DUCT BANK SUPPORT

ALL STEEL COMPONENTS SHALL BE EITHER HOT DIP GALVANIZED OR ASTM A588 AS CALLED FOR IN THE PLANS.

D. MEASUREMENT

THE NUMBER OF LINEAL FEET OF CONDUIT BANK TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET FURNISHED AND PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE INCLUDING FITTINGS.

E. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT PRICE BID PER LINEAL FOOT FOR "ITEM BR.01 - NON-ENCASED, BRIDGE-SUPPORTED CONDUIT BANK" CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING AND PLACING THE CONDUIT, FITTINGS, SPACERS, SUPPORT BRACKETS, PROTECTIVE HOOD, STRUCTURAL STEEL, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THESE ITEMS AS MEASURED AND PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
BR.01	LIN. FT.	NON-ENCASED, BRIDGE-SUPPORTED 6-5" PVC CONDUIT BANK
UC.13	LIN. FT.	DUCT CLEANING

BR.02 BRIDGE SUPPORTED PVC CONDUIT BANKS ENCASED IN CONCRETE SIDEWALK OR DECK

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY INSTALL AND CONNECT TO EXPANSION COUPLINGS AS SHOWN ON THE DRAWINGS OR AS DIRECTED, ALL ENCASED BRIDGE SUPPORTED PVC CONDUIT BANKS AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. ALL APPLICABLE SECTIONS OF ITEM UC SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

B. PVC CONDUIT AND FITTINGS

POLYVINYL CHLORIDE TYPE EB SHALL BE USED FOR ALL COMPONENTS EXCEPT EXPANSION JOINTS. SLEEVES AND NIPPLES USED IN THE EXPANSION JOINTS SHALL MEET THE MATERIAL REQUIREMENTS OF THE NOW ENCASED PVC DUCT BANK.

C. MEASUREMENT

THE NUMBER OF LINEAL FEET OF CONDUIT BANK TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET FURNISHED AND PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE INCLUDING FITTINGS.

D. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT PRICE BID PER LINEAL FOOT FOR "ITEM BR.02 - PVC CONDUIT BANK" ENCASED IN CONCRETE SIDEWALK OR DECK, CLASSIFIED AS TO SIZE AND TYPE, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING, AND PLACING CONDUIT, FITTINGS, SPACERS, SUPPORT BRACKETS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THESE ITEMS AS MEASURED AND PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
BR.02	LIN. FT.	ENCASED IN CONCRETE SIDEWALK, 6-5" PVC CONDUIT BANK
BR.02	LIN. FT.	ENCASED IN CONCRETE DECK, 6-5" PVC CONDUIT BANK
UC.13	LIN. FT.	DUCT CLEANING

BR.03 METAL MANHOLE ON PIER NO. 11

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AT THE LOCATION AND TO THE DIMENSIONS AND DETAILS AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THESE SPECIFICATIONS THE MANHOLE ON PIER NO. 11.

B. PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM BR.03," WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE MANHOLE. THE MANHOLE FRAME AND COVER AND THE STEEL SUPPORT MEMBERS IN THE SIDEWALK ABOVE THE MANHOLE SHALL BE INCLUDED WITH THE MANHOLE FOR PAYMENT.

BR.04 SPLICING CHAMBERS IN BRIDGE SIDEWALK

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY CONSTRUCT AT THE LOCATIONS AND TO THE DIMENSIONS AND DETAILS AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THESE SPECIFICATIONS; ALL SPLICING CHAMBERS IN BRIDGE SIDEWALK.

B. PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM BR.04", WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE SPLICING CHAMBERS.

BR.05 RIGID ALUMINUM CONDUIT - EXPOSED ON PIER 11

A. WORK INCLUDED

1. THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY INSTALL AND CONNECT TO PIER 11 AS SHOWN ON THE DRAWINGS OR AS DIRECTED, THE TWO RIGID ALUMINUM CONDUITS AS REQUIRED FOR THE PROPER COMPLETION OF THE WORK INCLUDED UNDER THIS CONTRACT. TERMS OF SECTIONS BR.01 THROUGH AND INCLUSIVE BR.04 SHALL GOVERN THIS SECTION. TERMS AND STIPULATIONS THEREIN SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

B. CONDUIT AND FITTINGS

1. CONDUIT FOR ELECTRICAL PURPOSES SHALL CONFORM TO FEDERAL SPECIFICATION WW-C-00540C (GSA-FSS).

C. MEASUREMENT

THE NUMBER OF LINEAL FEET OF CONDUIT BANK TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET FURNISHED AND PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE INCLUDING FITTINGS AND SUPPORTS.

D. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT PRICE BID PER LINEAL FOOT FOR "ITEM BR.05 - EXPOSED 2-5" RIGID ALUMINUM DUCT BANK, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING, AND PLACING THE CONDUIT, FITTINGS, SUPPORT BRACKETS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THESE ITEMS AS MEASURED AND PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
BR.05	LIN. FT.	2-5" RIGID ALUMINUM CONDUIT BANK
UC.13	LIN. FT.	DUCT CLEANING

BR.06 EXPOSED AND ENCASED PVC CONDUIT BANK

A. WORK INCLUDED

THE CONTRACTOR SHALL FURNISH ALL MATERIALS FOR AND SHALL PROPERLY INSTALL AND CONNECT AS SHOWN ON THE DRAWINGS OR AS DIRECTED, THE 6-5" PVC CONDUIT BANK FROM MH #67-85 TO S.C. #67-86. ALL APPLICABLE SECTIONS OF ITEM UC SHALL BE UNDERSTOOD AS PART OF THIS SECTION.

B. PVC CONDUIT AND FITTINGS

POLYVINYL CHLORIDE COMPONENTS SHALL MEET THE CELL CLASSIFICATION 12454-B AS DEFINED IN ASTM D-1784. IN ADDITION THE COMPOUND SHALL CONTAIN A MINIMUM OF 6% TITANIUM DIOXIDE FOR ULTRA-VIOLET RESISTANCE.

C. MEASUREMENT

THE NUMBER OF LINEAL FEET OF CONDUIT BANK TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET FURNISHED AND PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AS MEASURED ALONG THE AXIS OF THE CONDUIT LINE INCLUDING FITTINGS.

D. PAYMENT

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT PRICE BID PER LINEAL FOOT FOR "ITEM BR. 06 - EXPOSED AND ENCASED PVC CONDUIT BANK," WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING AND PLACING THE CONDUIT, FITTINGS, SPACERS, SUPPORT BRACKETS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THESE ITEMS AS MEASURED AND PROVIDED ABOVE WILL BE PAID FOR UNDER:

ITEM	UNIT	DESCRIPTION
BR.06	LIN. FT.	EXPOSED AND ENCASED 6-5" PVC CONDUIT BANK
UC.13	LIN. FT.	DUCT CLEANING

# GENERAL SUMMARY M. E. L. P.

FHWA REGION	STATE	PROJECT
5	OHIO	

41  
185

CUYAHOGA COUNTY  
CUY-10-16.23

QUANTITIES CALCULATED BY WF DATE 4-27-79

QUANTITIES CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

M.E.L.P. SPEC. No.	SHEET NO.													ITEM	QUANTITY TOTAL	UNIT	TYPE CODE	YOGO	DESCRIPTION
	10	12	13	14	15	16	17	23	25	26	29	30							
UC. 13				225										SPEC.	225	FT.	NON-REINFORCED CONCRETE ENCASED 7-5" PVC CONDUIT BANK (COMPLETE)		
UC. 13		219	478	145	70							202	83	SPEC.	1197	FT.	NON-REINFORCED CONCRETE ENCASED 6-5" PVC CONDUIT BANK (COMPLETE)		
UC. 13				22									77	SPEC.	99	FT.	NON-REINFORCED CONCRETE ENCASED 1-5" PVC CONDUIT BANK (COMPLETE)		
UC. 13					70									SPEC.	70	FT.	REINFORCED CONCRETE ENCASED 6-5" PVC CONDUIT BANK (COMPLETE)		
BR. 01								468						SPEC.	468	FT.	EXPOSED 6-5" PVC CONDUIT BANK SUPPORTED ON STRUCTURAL STEEL (COMPLETE)		
BR. 05									108					SPEC.	108	FT.	EXPOSED 2-5" ALUMINUM RIGID CONDUIT BANK		
BR. 06										24				SPEC.	24	FT.	EXPOSED & ENCASED 6-5" PVC CONDUIT BANK		
BR. 02											2473	93		SPEC.	2566	FT.	ENCASED IN CONCRETE SIDEWALK 6-5" PVC CONDUIT BANK		
BR. 02													164	SPEC.	164	FT.	ENCASED IN CONCRETE DECK 6-5" PVC CONDUIT BANK		
UC. 13			1314	2868	2450	840		2808	216	144	14,838	1770	1559	SPEC.	28,807	FT.	DUCT CLEANING		
CA. 01			996	2032	1592	620		1928	260	200	10,468	1,380	1,108	SPEC.	20,584	FT.	3C-15KV #4 P.I.L. CABLE		
CA. 02											115			SPEC.	3495	FT.	#4 BARE COPPER GROUND WIRE		
CA. 02														SPEC.	5080	FT.	#8 BARE COPPER GROUND WIRE		
IS. 01			4785	249	508	267							120	SPEC.	5929	FT.	REA DESIGNATION BJC1C22 AWG, 25 PAIR TELEPHONE CABLE		
CA. 01			Lump	Lump	Lump	Lump		Lump	Lump	Lump	Lump	Lump	Lump	SPEC.	LUMP	LUMP	TESTING OF CABLES		
CA. 01			64	64	68	24		40	20	48	300	48	110	SPEC.	786	FT.	FIREPROOFING OF CABLES (15 KV)		
IS. 02			120	16	16	17							30	SPEC.	199	FT.	FIREPROOFING OF CABLES (25 PAIR TELEPHONE)		
UC. 12				1	1	1								SPEC.	3	EA.	REINFORCED CONCRETE MANHOLES (FOR NEW DUCT)		
UC. 12					1	1				1			2	SPEC.	7	EA.	MANHOLE (MODIFIED)		
GS. 12			2											SPEC.	2	EA.	MANHOLE ABANDONED OR REMOVED		
BR. 03								1						SPEC.	1	EA.	METAL MANHOLE (ON PIER No 11)		
BR. 04											5			SPEC.	5	EA.	SPlicing CHAMBER IN BRIDGE SIDEWALK (COMPLETE)		

\* Carried in O.B.T. Conduit from O.B.T. Manhole No. 3 to O.B.T. Manhole No. 10.  
 \* Ground Wire between M.E.L.P. Manhole No. 56-101 and M.E.L.P. Manhole No. 67-42.  
 @ Ground Wire between M.E.L.P. Manhole No. 56-100 and OBT Manhole No. 3 - OBT Manhole No. 3 and OBT Manhole No. 10 - OBT Manhole No. 10 and M.E.L.P. Manhole No. 67-31

MADE BY BP DATE 5-1-79 **Howard, Needles, Tammen & Bergendoff**  
 TRACED BY \_\_\_\_\_ DATE \_\_\_\_\_ CONSULTING ENGINEERS  
 CHECKED BY \_\_\_\_\_ DATE 4-27-79 CLEVELAND, OHIO

**HNTB**

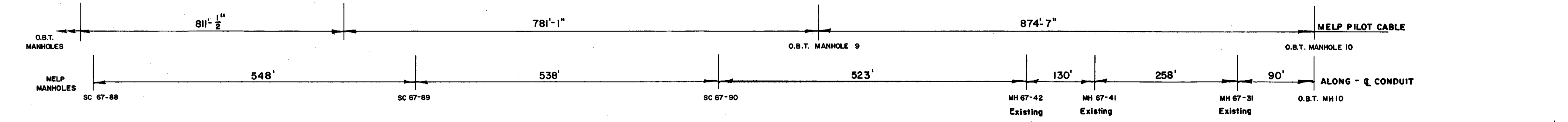
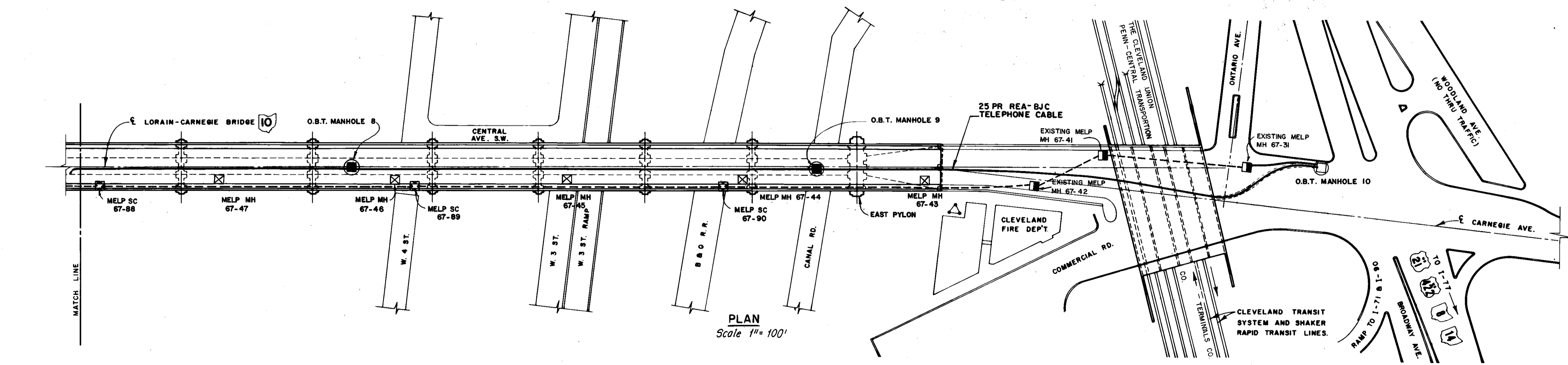
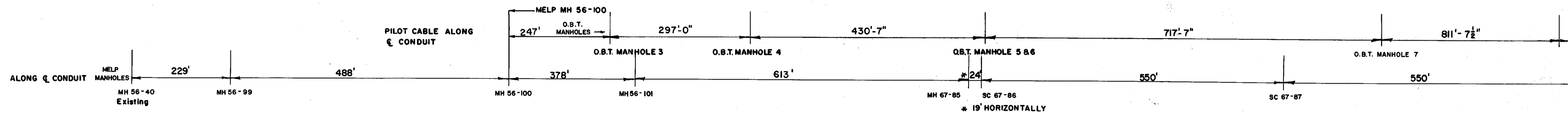
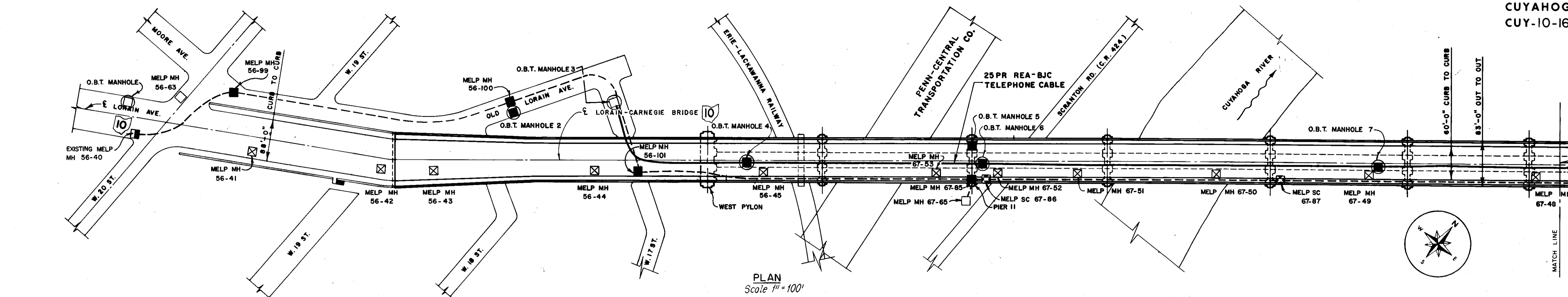
REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
GENERAL SUMMARY				
DRAWN BY <u>BP</u>	SCALE <u>N.A.</u>	DRAWING NUMBER		
CHK'D BY _____	DATE <u>5-1-79</u>	7087-9		

LORAIN-CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT
5	OHIO	

42  
185

CUYAHOGA COUNTY  
CUY-10-16.23



- SYMBOL LEGEND**
- MELP MANHOLE - NEW
  - MELP MANHOLE - EXISTING
  - ⊗ MELP MANHOLE - ABD. OR REM.
  - ⊠ MELP MANHOLE - EXIST'G - TO BE MODIFIED
  - ⊞ MELP SPLICING CHAMBER - NEW
  - ⊕ OBT MANHOLE - EXIST'G - TO BE MODIFIED
  - OBT MANHOLE - EXISTING
  - MELP TELEPHONE CABLE
  - - - MELP CONDUIT BANK

REVISION	DATE	DESCRIPTION	BY	APP'D
<b>DIVISION OF LIGHT &amp; POWER</b> <b>CITY OF CLEVELAND</b>				
<b>PROJECT PLAN</b>				
DRAWN BY	SCALE	DRAWING NUMBER		
CHECKED BY	DATE	7087-10		

MADE K.B.V. DATE 5-1-79  
 TRACED \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED F.E.B. DATE 2-8-79  
 SCALE \_\_\_\_\_

**Howard, Needles, Tammen & Bergendoff**  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

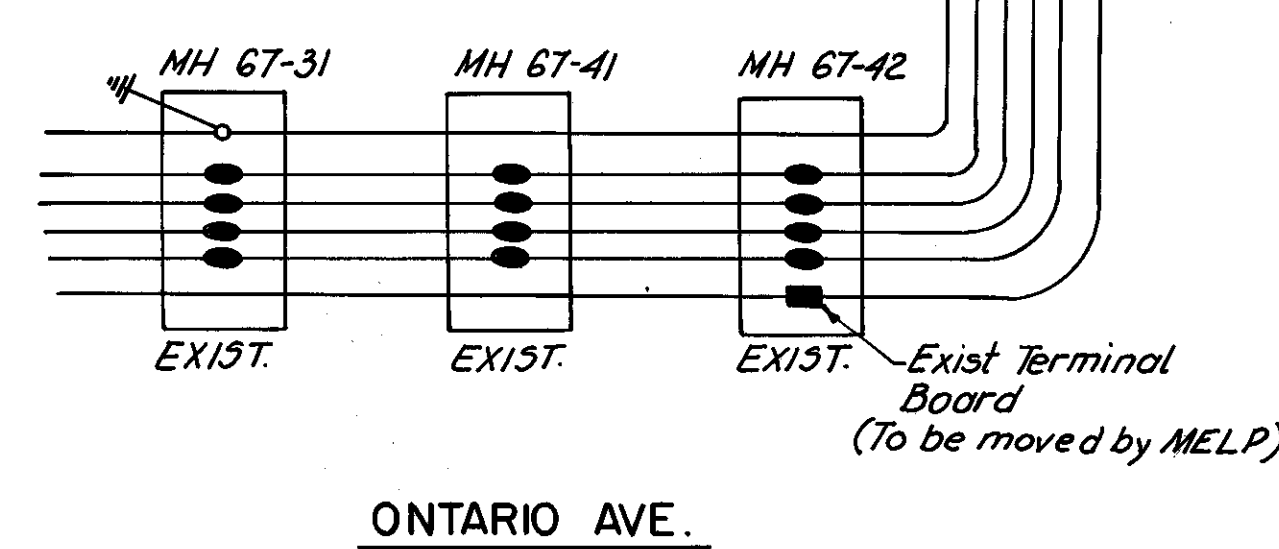
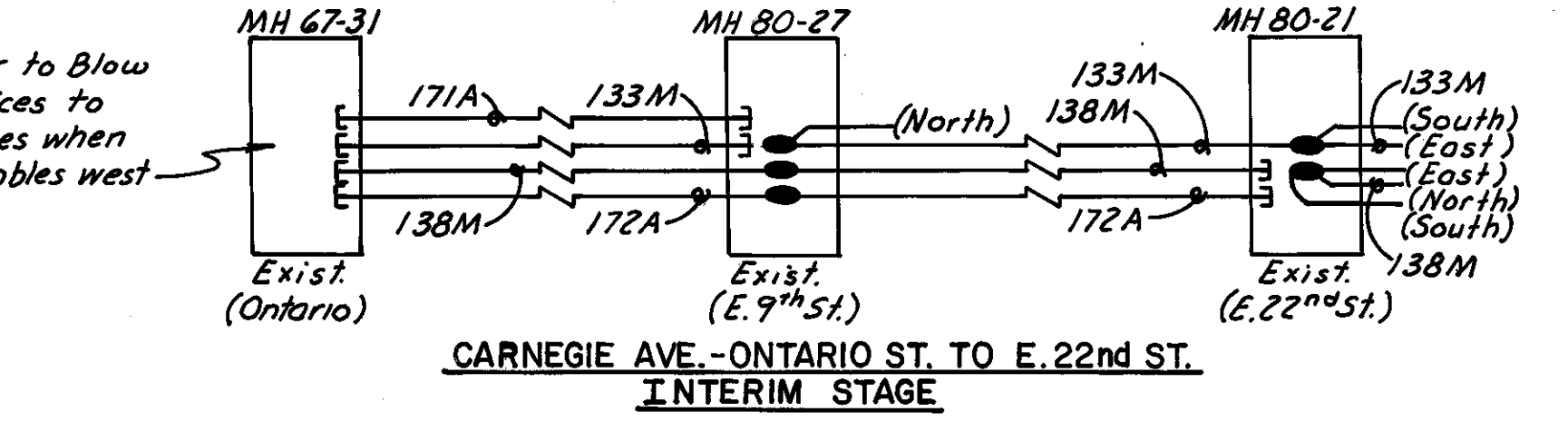
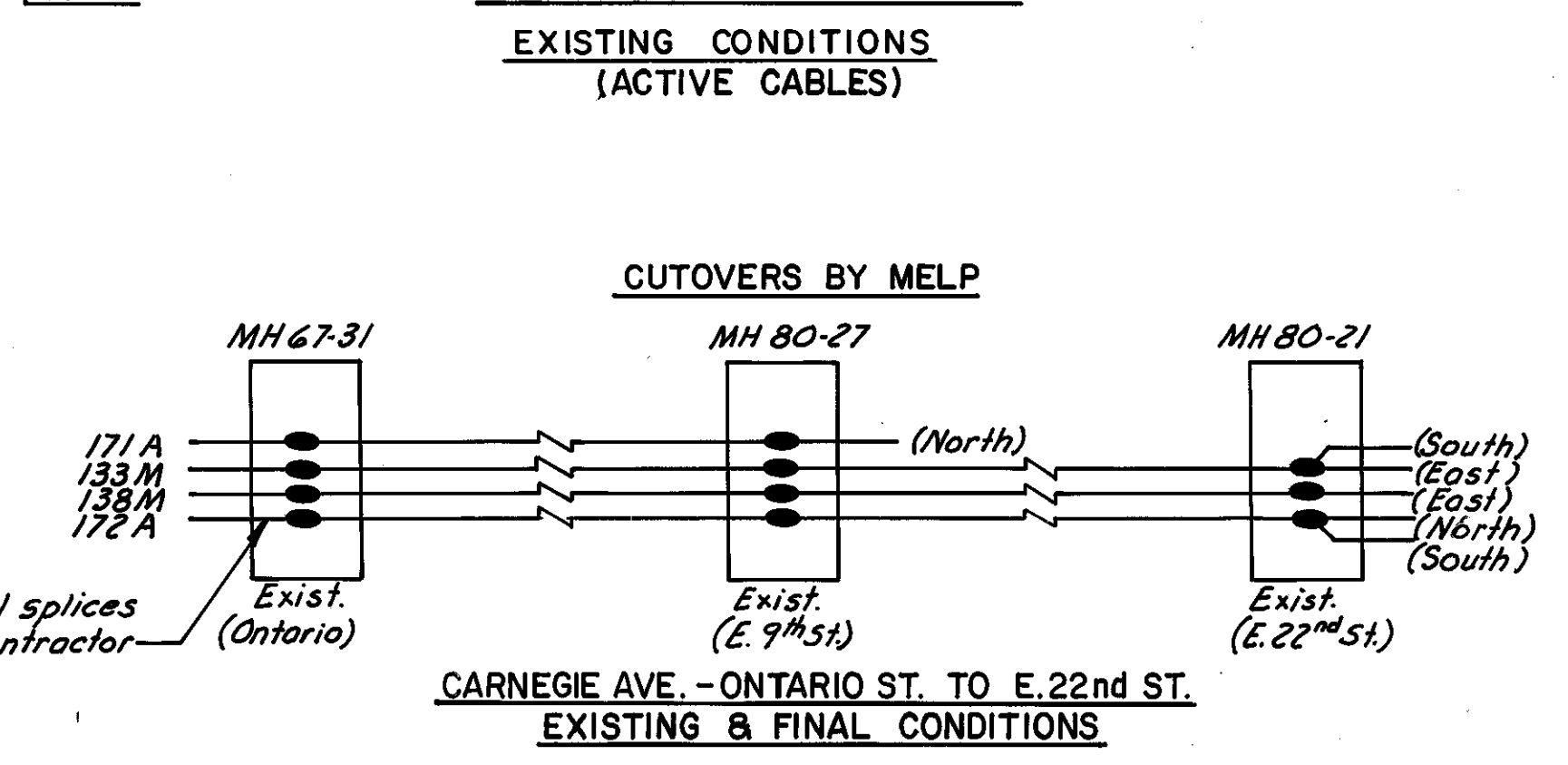
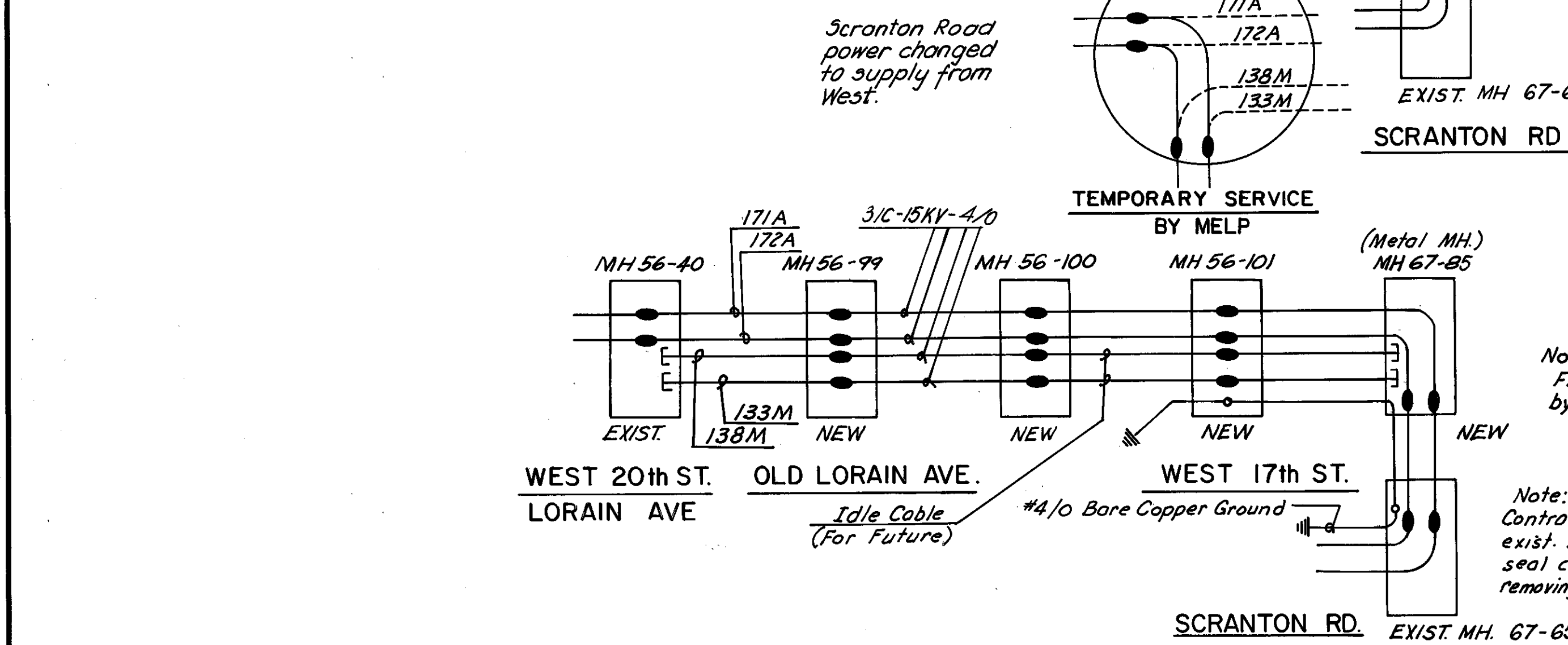
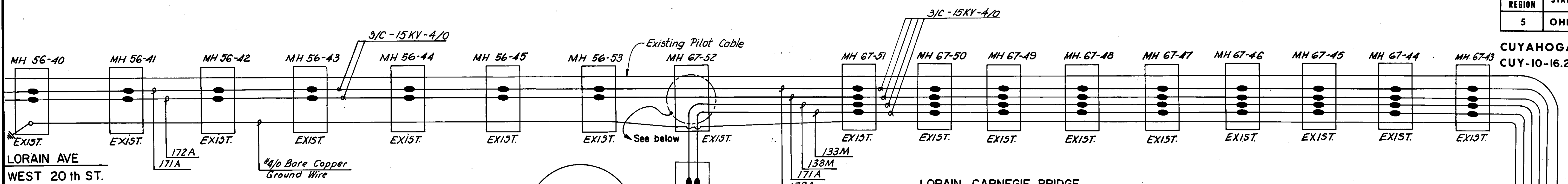
**HNTB**

LORAIN - CARNEGIE BRIDGE

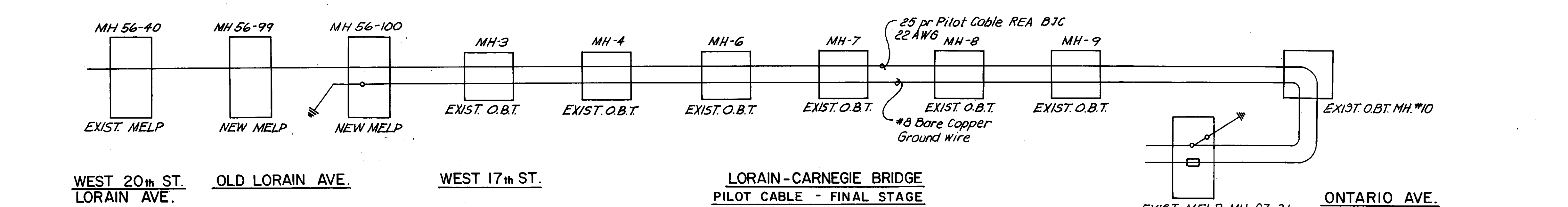
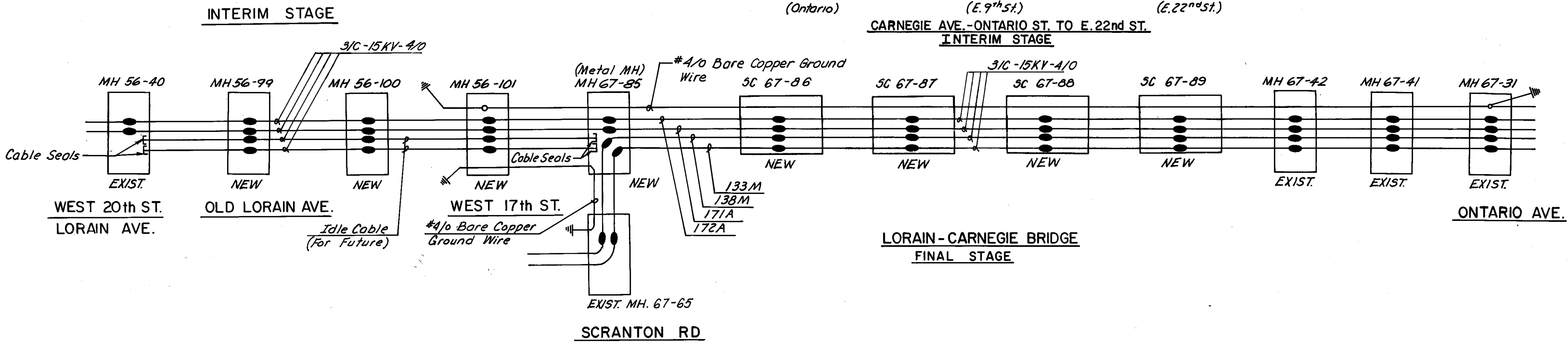
FHWA REGION	STATE	PROJECT
5	OHIO	

43  
185

CUYAHOGA COUNTY  
CUI-10-16.23



Note: Contractor shall remove existing 4-3/c-15KV-4/0 cables (Idle) (tagged 117M, 120M, 126M and 132M). From MH#56-40 to MH#67-31, Contractor shall seal cables going west in MH#56-40, cables are now cut and sealed in MH#67-31. Payment for removal is included with Item 202, Portions of Structure Removed. The cable shall become the property of the contractor.



- LEGEND**
- GROUND WIRE
  - CABLE SPLICE
  - EXISTING TERMINAL BOARD
  - PROPOSED TERMINAL BOARD
  - CABLE SEALS

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND  
WEST 20th STREET TO ONTARIO AVE.  
SINGLE LINE DIAGRAMS  
DRAWN BY \_\_\_\_\_ SCALE \_\_\_\_\_ DRAWING NUMBER  
CHKD BY \_\_\_\_\_ DATE \_\_\_\_\_ 7087-11

MADE R.D.J. DATE 5-2-79  
TRACED DATE 6-8-79  
CHECKED P.E.F. DATE 6-8-79  
SCALE \_\_\_\_\_  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

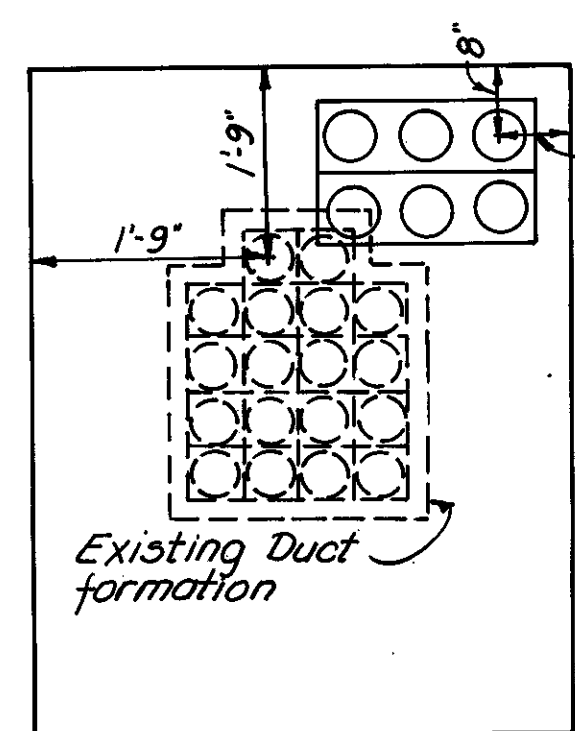
**HNTB**

LORAIN - CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT
5	OHIO	

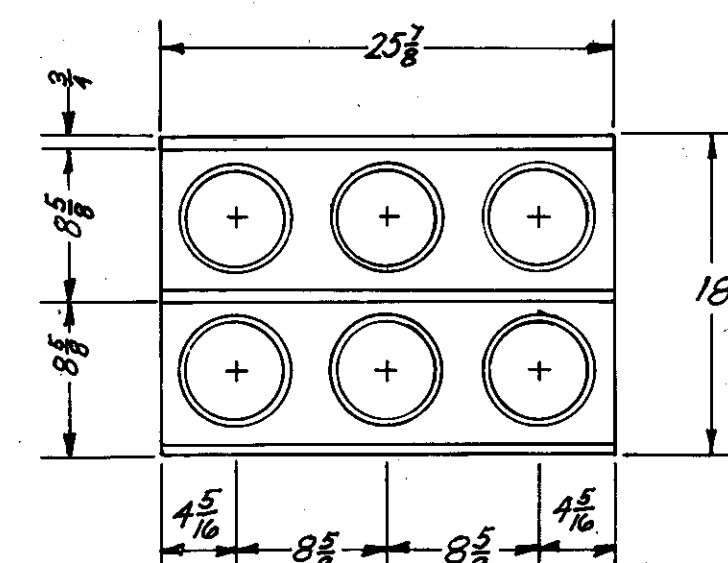
44  
185

CUYAHOGA COUNTY  
CUY-10-16.23



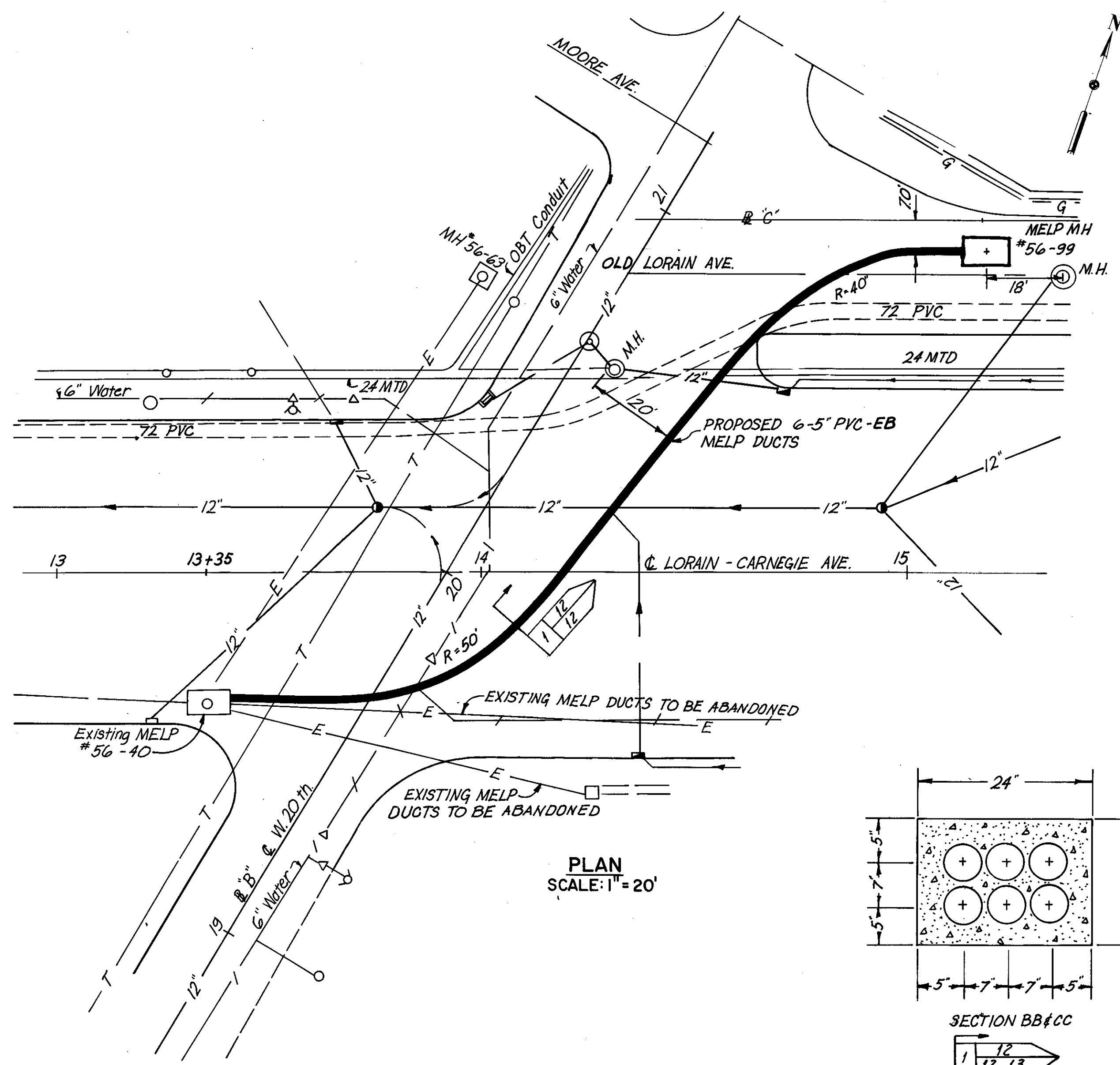
SECTION "A-A"  
LOOKING WEST  
EXISTING MH#56-40

Contractor shall break out wall and install two formex interlocking duct terminators T-5A-3030-6\* and grout. See below.

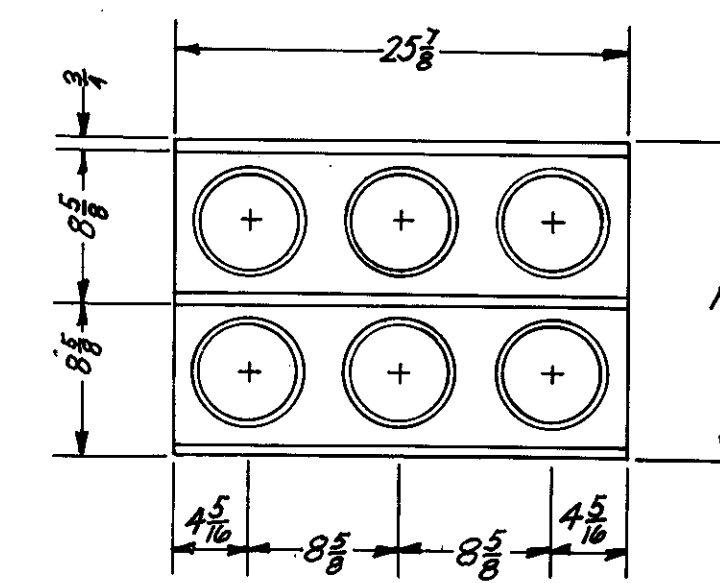


Formex Interlocking Duct Terminators T-5A-3030-6\* or approved equal.

SECTION "A-A"



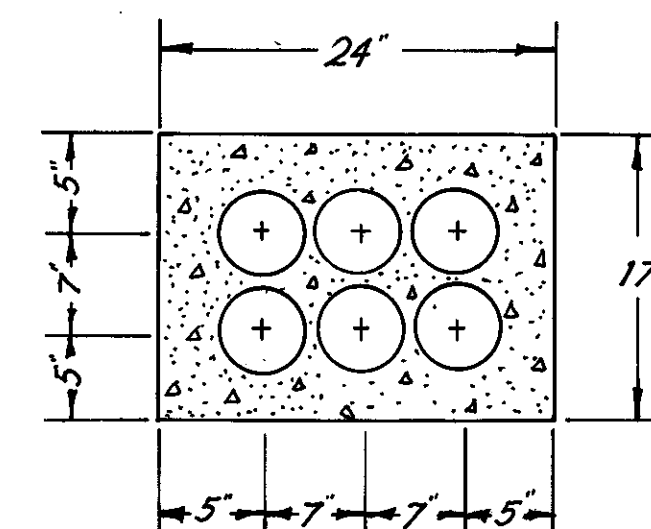
PLAN  
SCALE: 1" = 20'



SECTION "E-E"

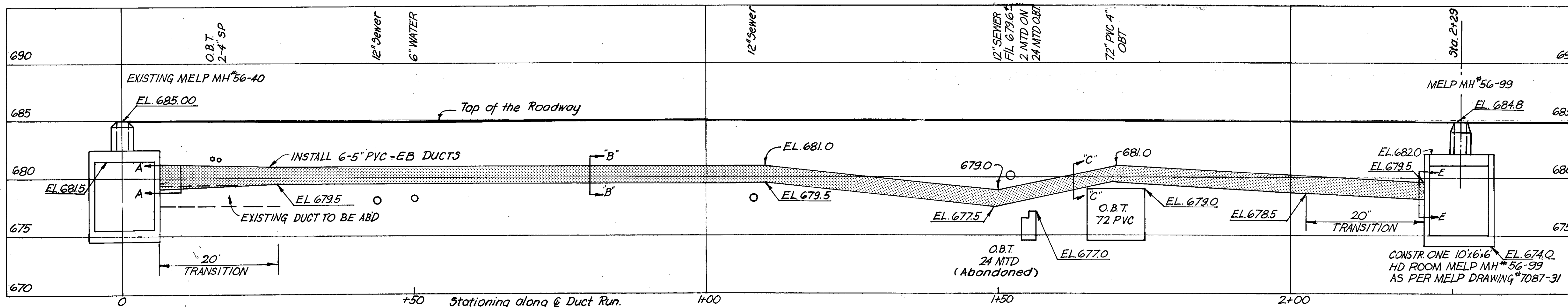
Formex Interlocking Duct Terminators T-5A-3030-6\* or approved equal.

\* DR KYOVA CORP. END BELL TC-6



SECTION BB#CC

1 12  
12, 13



PROFILE  
MELP UNDERGROUND EQUIPMENT  
HORIZONTAL SCALE: 1" = 10'-0"  
VERTICAL SCALE: 1" = 5'-0"

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

UNDERGROUND PLAN  
LORAIN AVE. TO WEST 20 St. & OLD LORAIN

DRAWN BY	SCALE	DRAWING NUMBER
		7087-12
CHECKED BY	DATE	

MADE P.K. DATE 5-2-79  
TRACED DATE 5-2-79  
CHECKED E.E. DATE 7-6-79  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

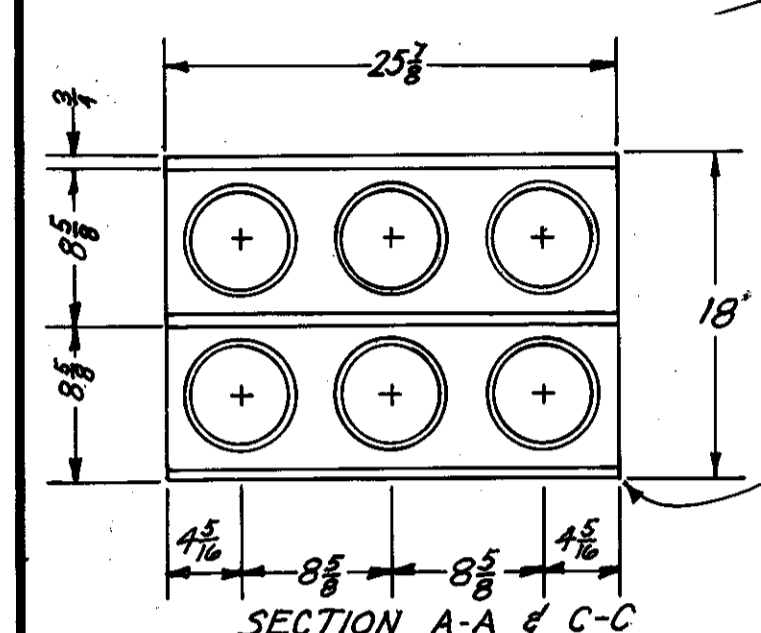
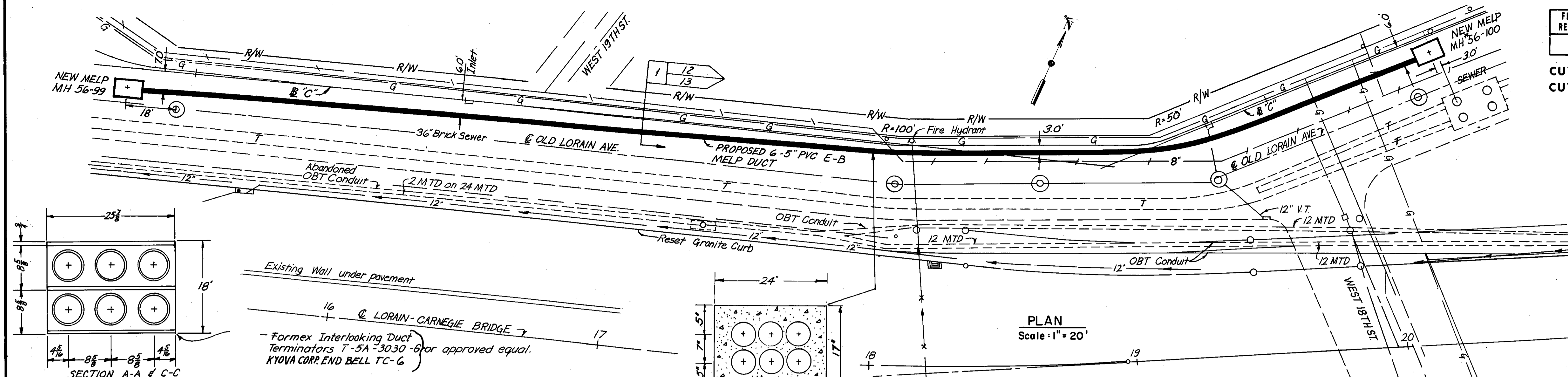
**HNTB**

Rev. 12-27-79

FHWA REGION	STATE	PROJECT
5	OHIO	

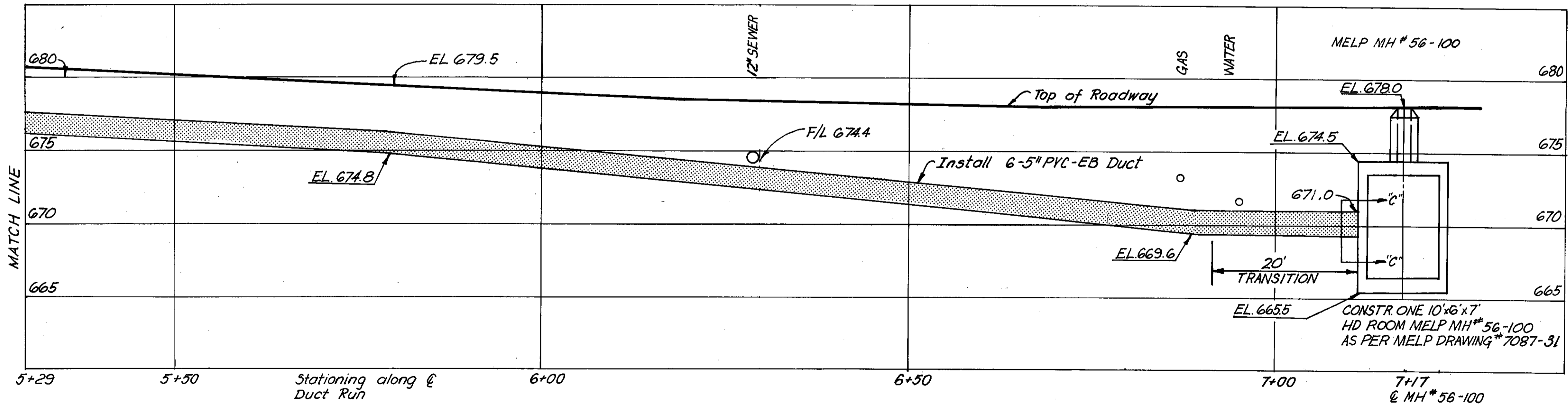
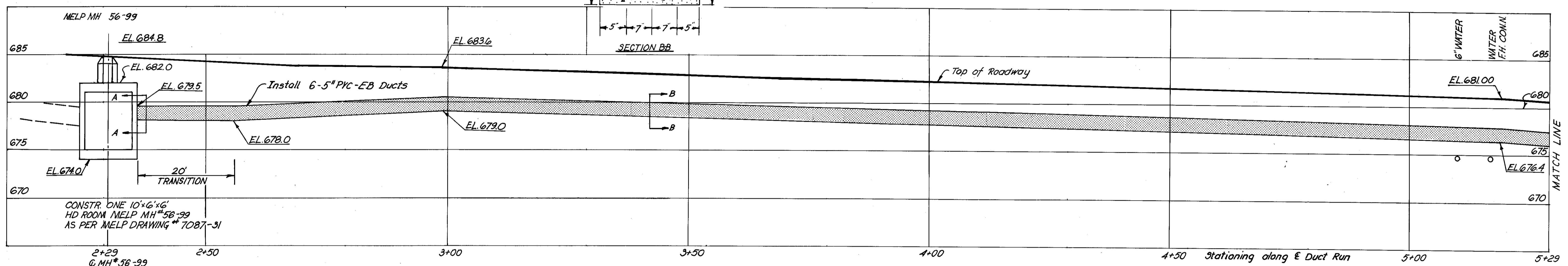
45  
185

CUYAHOGA COUNTY  
CUY-10-16.23



Existing Wall under pavement  
16' @ LORAIN-CARNEGIE BRIDGE  
Formex Interlocking Duct Terminators T-5A-3030-6 or approved equal.  
KYOVA CORR. END BELL TC-6

PLAN  
Scale: 1" = 20'



PROFILE  
MELP UNDERGROUND EQUIPMENT  
HORIZONTAL SCALE: 1" = 10'-0"  
VERTICAL SCALE: 1" = 5'-0"

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
UNDERGROUND PLAN OLD LORAIN AVENUE				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-13		
CHK'D BY	DATE			

MADE KV DATE 5-2-79  
TRACED DATE 5-2-79  
CHECKED EEE DATE 6-8-79  
SCALE

**HNTB**  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

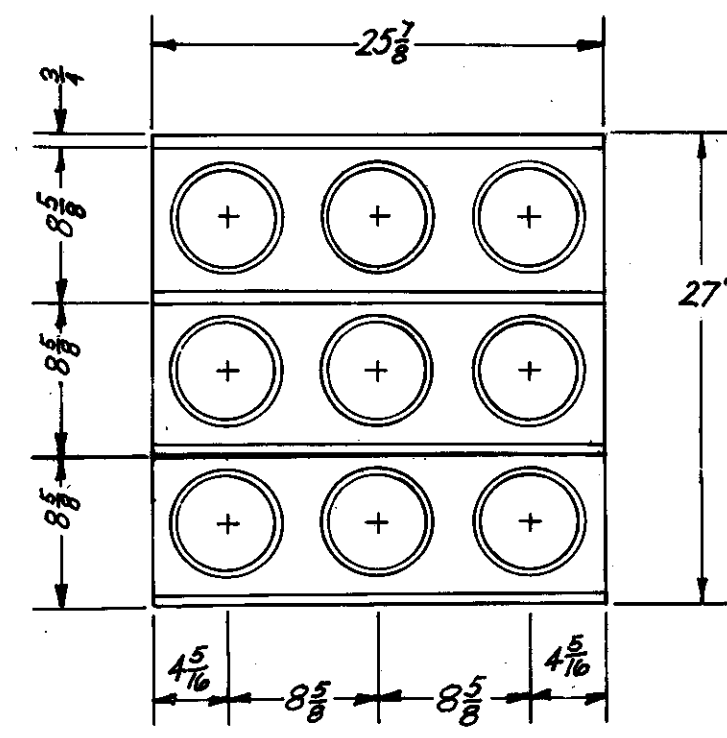
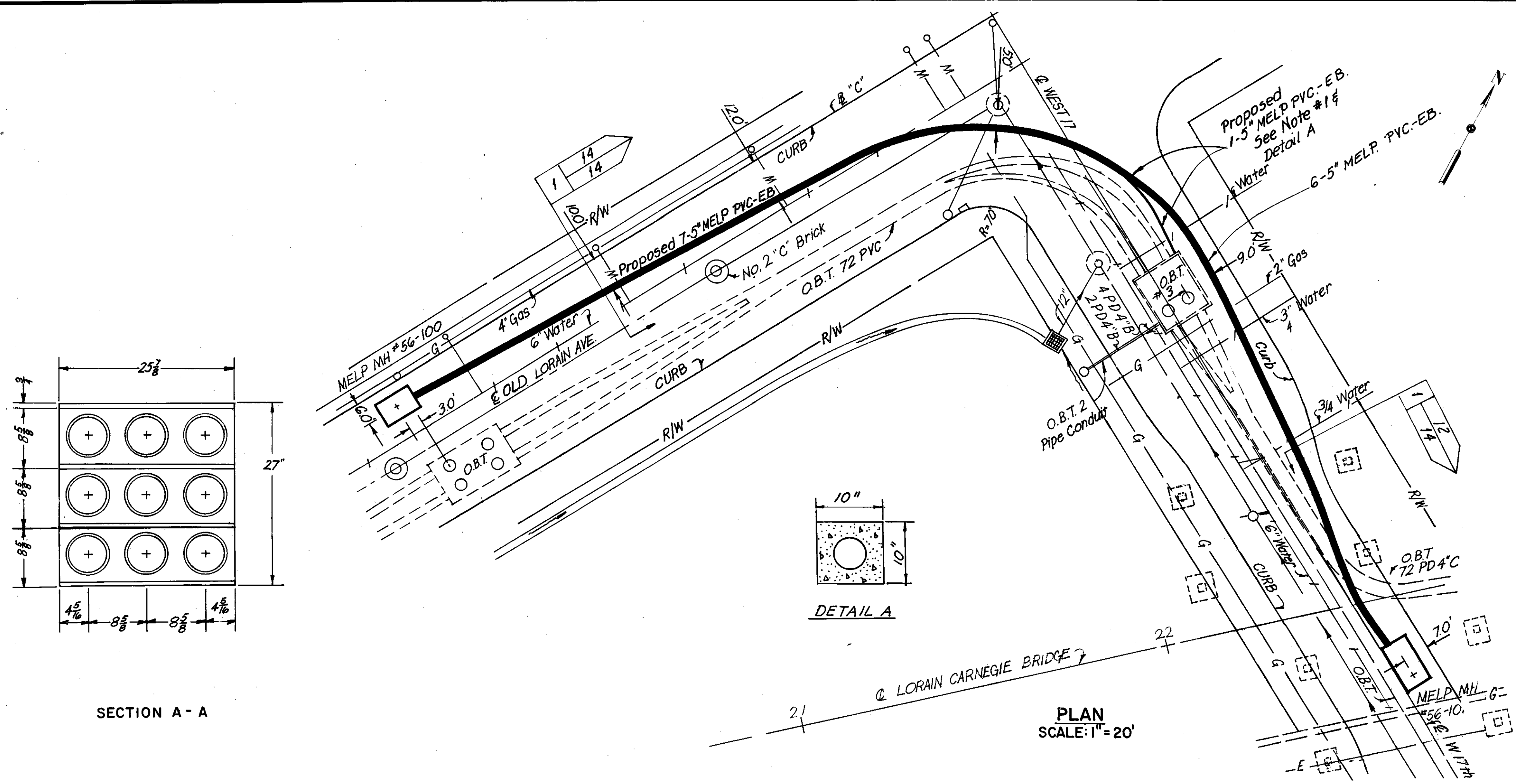
Rev. 12-27-79

LORAIN-CARNEGIE BRIDGE

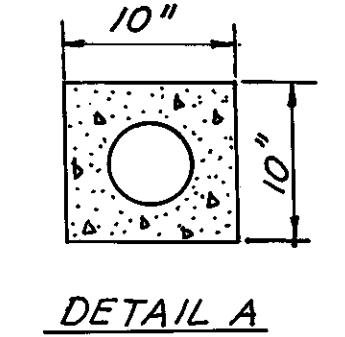
FHWA REGION	STATE	PROJECT
5	OHIO	

46  
185

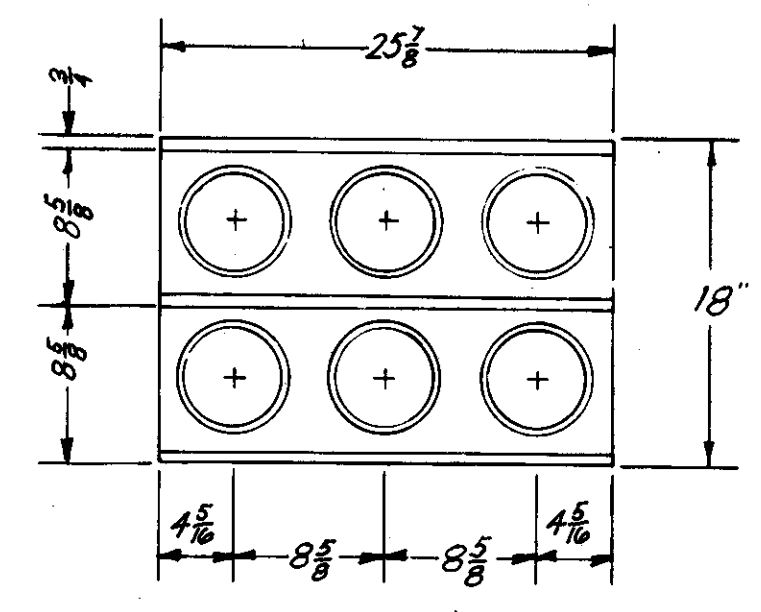
CUYAHOGA COUNTY  
CUY-10-16.23



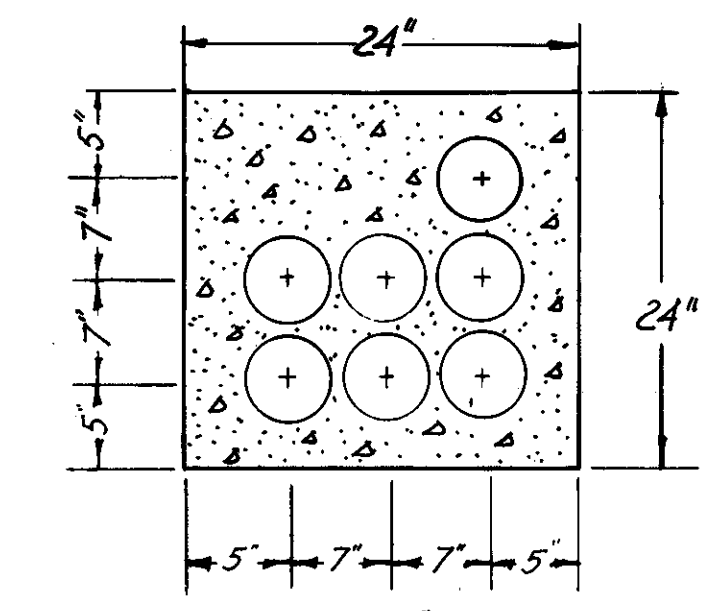
SECTION A-A



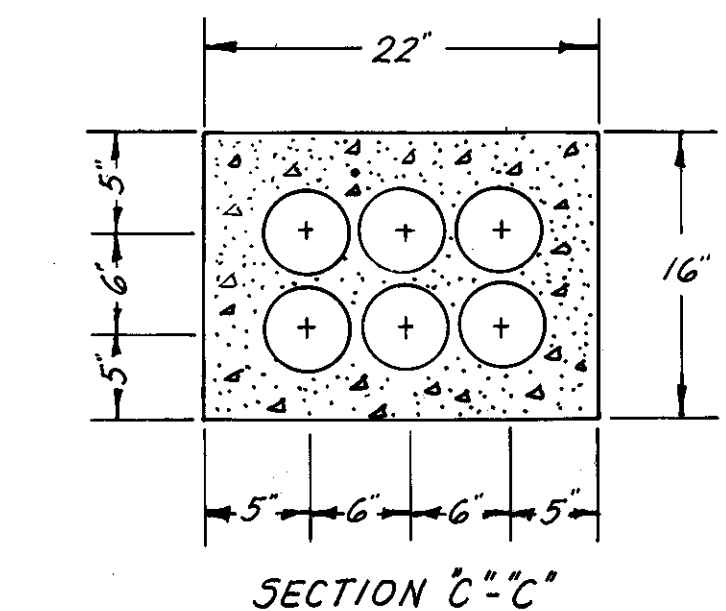
DETAIL A



SECTION D-D

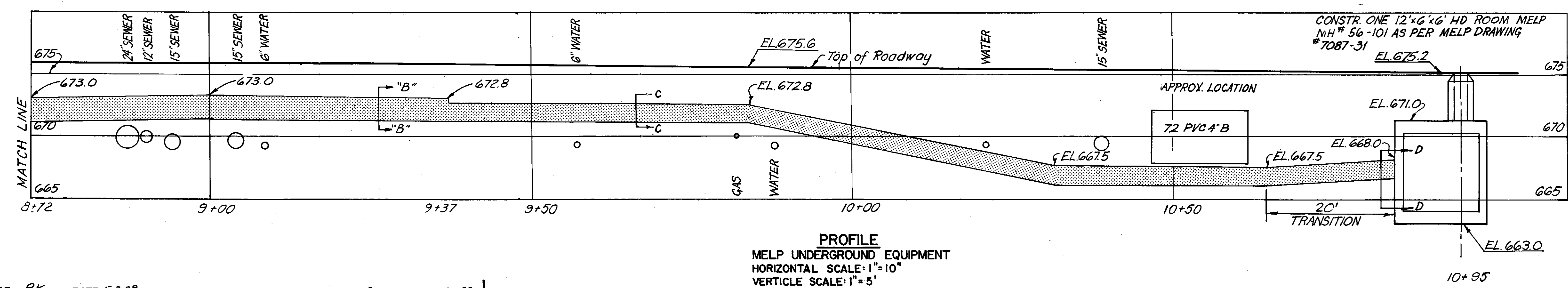
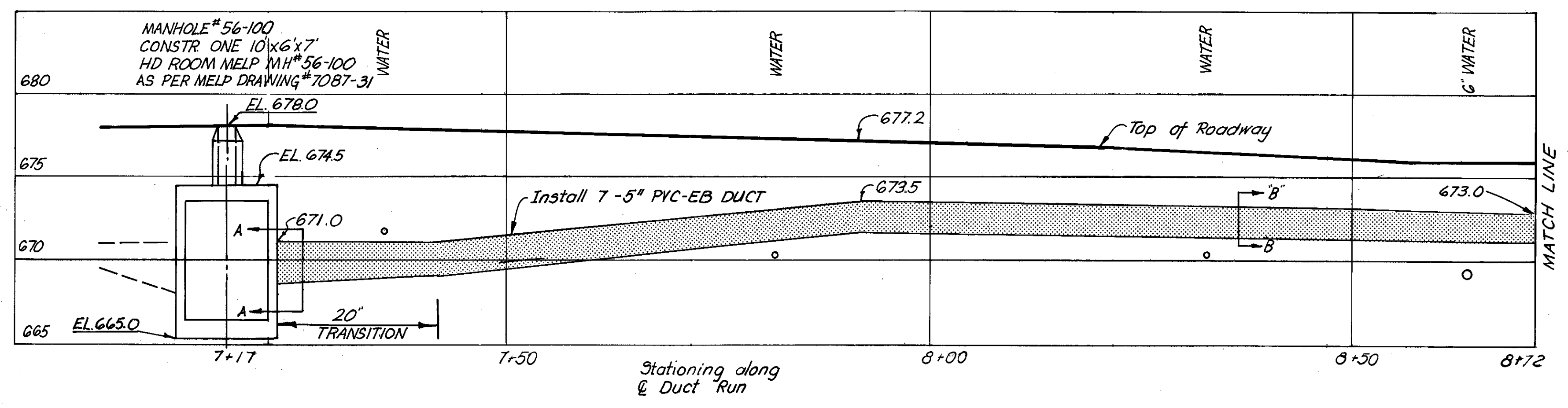


SECTION B-B



SECTION C-C

NOTE:  
1) The O.B.T. field inspector shall determine the location & elevation of the 1.5\"/>



PROFILE  
MHP UNDERGROUND EQUIPMENT  
HORIZONTAL SCALE: 1" = 10'  
VERTICLE SCALE: 1" = 5'

MADE PK DATE 5-2-29  
TRACED DATE  
CHECKED FEE DATE 2-8-29  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

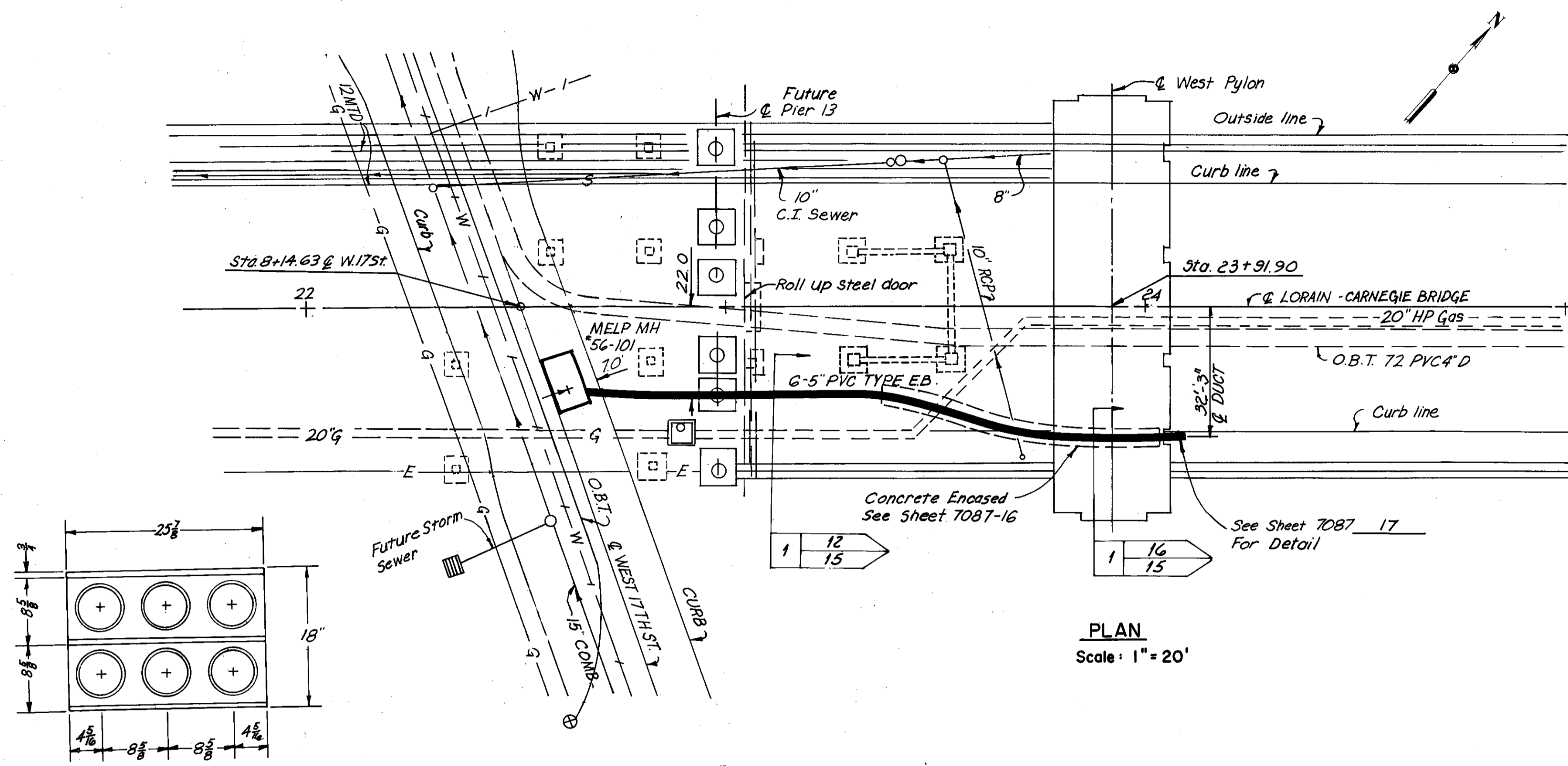
UNDERGROUND PLAN  
OLD LORAIN AVE. TO WEST 17ST.

DRAWN BY	SCALE	DRAWING NUMBER
		7087-14
CHECKED BY	DATE	

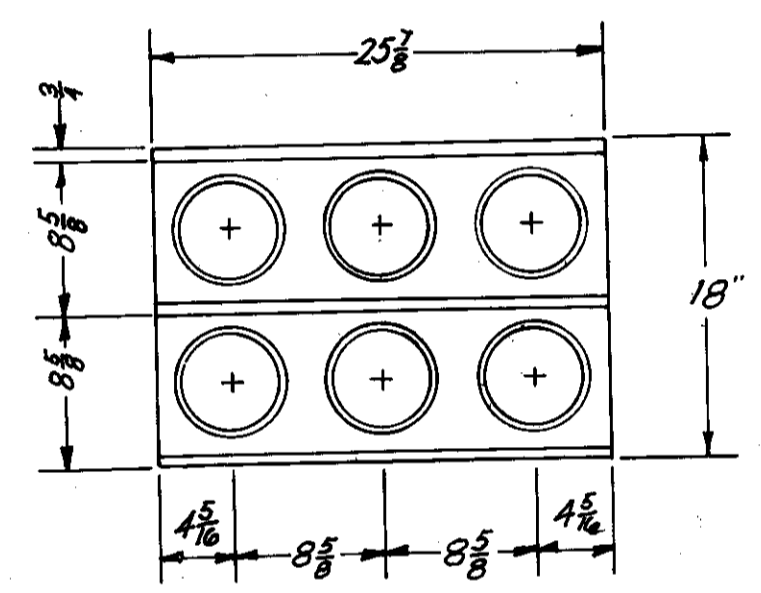
LORAIN - CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT
5	OHIO	

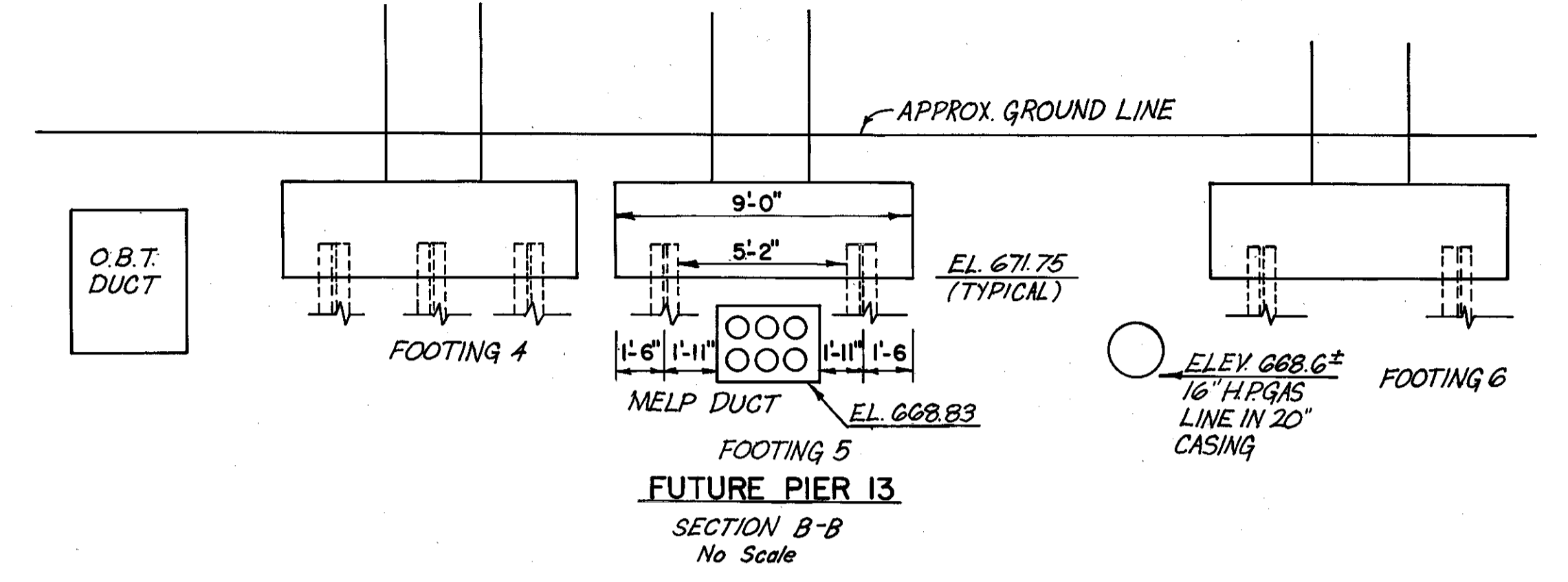
CUYAHOGA COUNTY  
CUY-10-16.23



**PLAN**  
Scale: 1" = 20'

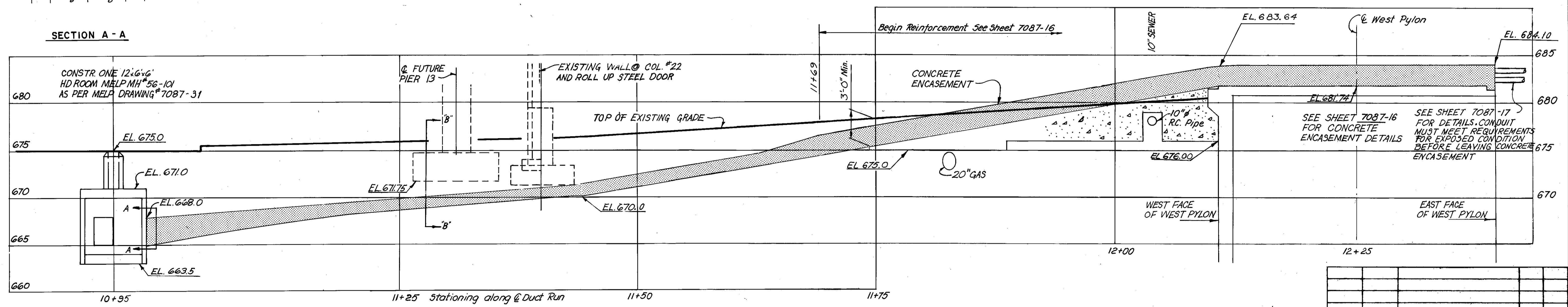


**SECTION A - A**



**FUTURE PIER 13**  
SECTION B-B  
No Scale

Note:  
For concrete encasement details see Sheet 7087-16



**PROFILE**  
MELP UNDERGROUND EQUIPMENT  
HORIZONTAL SCALE: 1" = 5'  
VERTICAL SCALE: 1" = 5'

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

UNDERGROUND PLAN  
WEST 17th ST TO WEST PYLON

DRAWN BY	SCALE	DRAWING NUMBER
		7087-15
CHECKED BY	DATE	

MADE BY KBY DATE 4-27-79  
TRACED DATE    
CHECKED FEF DATE 2-8-77  
SCALE    
**Howard, Needles, Tammen & Bergendoff**  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

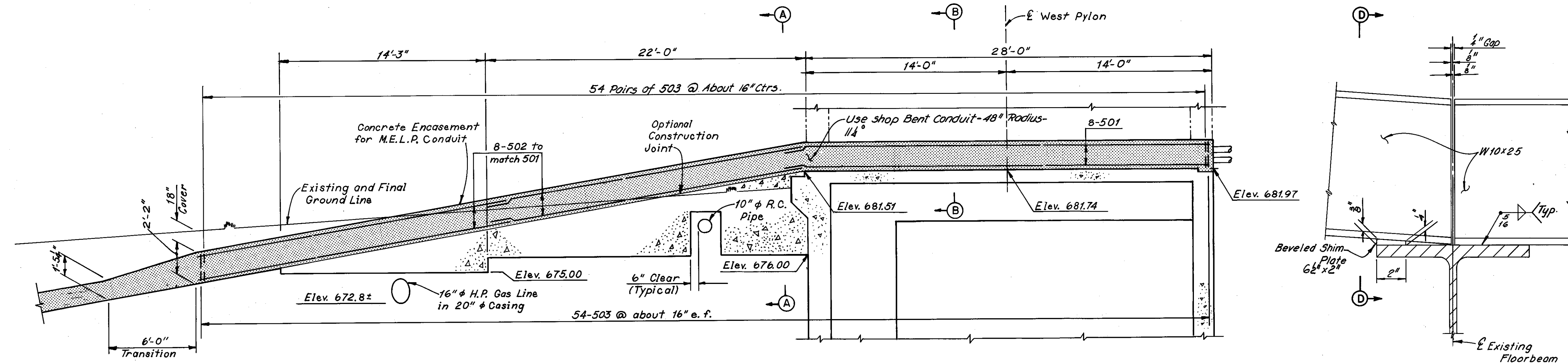
LORAIN - CARNEGIE BRIDGE



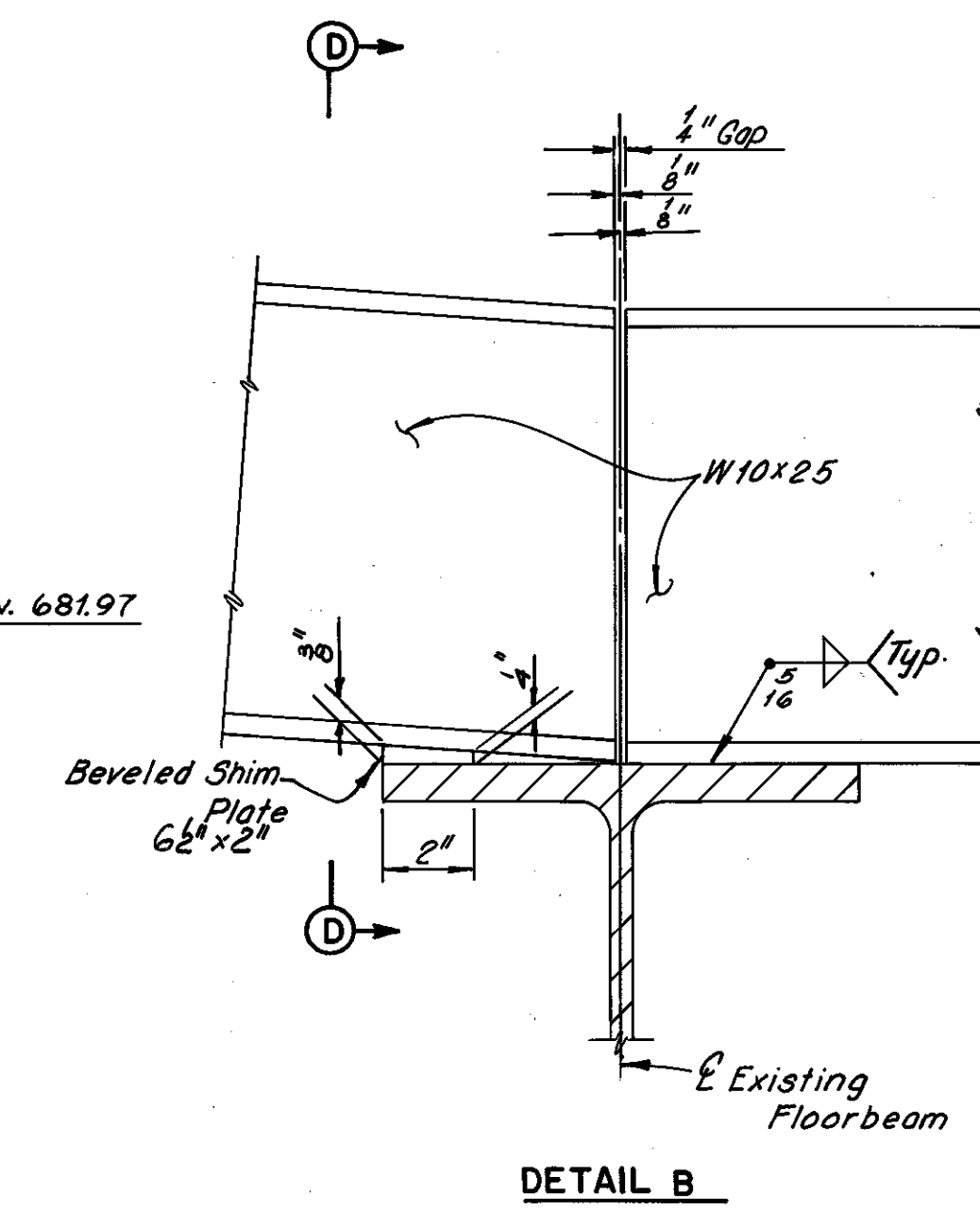
FHWA REGION	STATE	PROJECT
5	OHIO	

48  
185

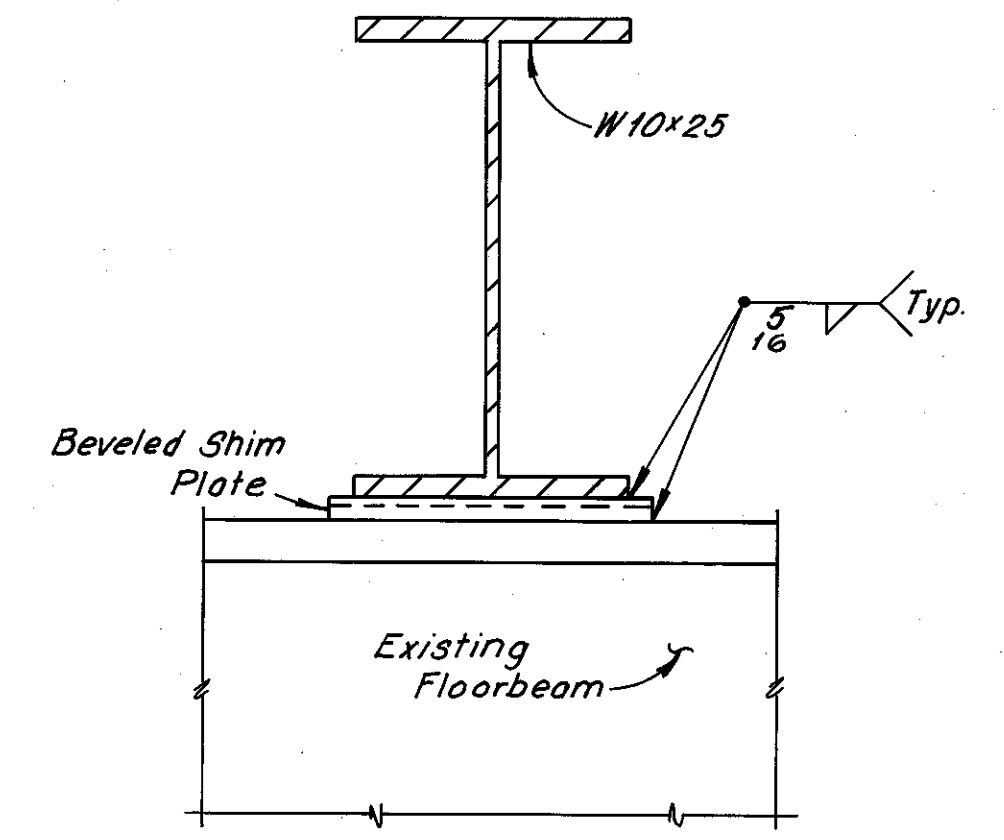
CUYAHOGA COUNTY  
CUY- 10-16.23



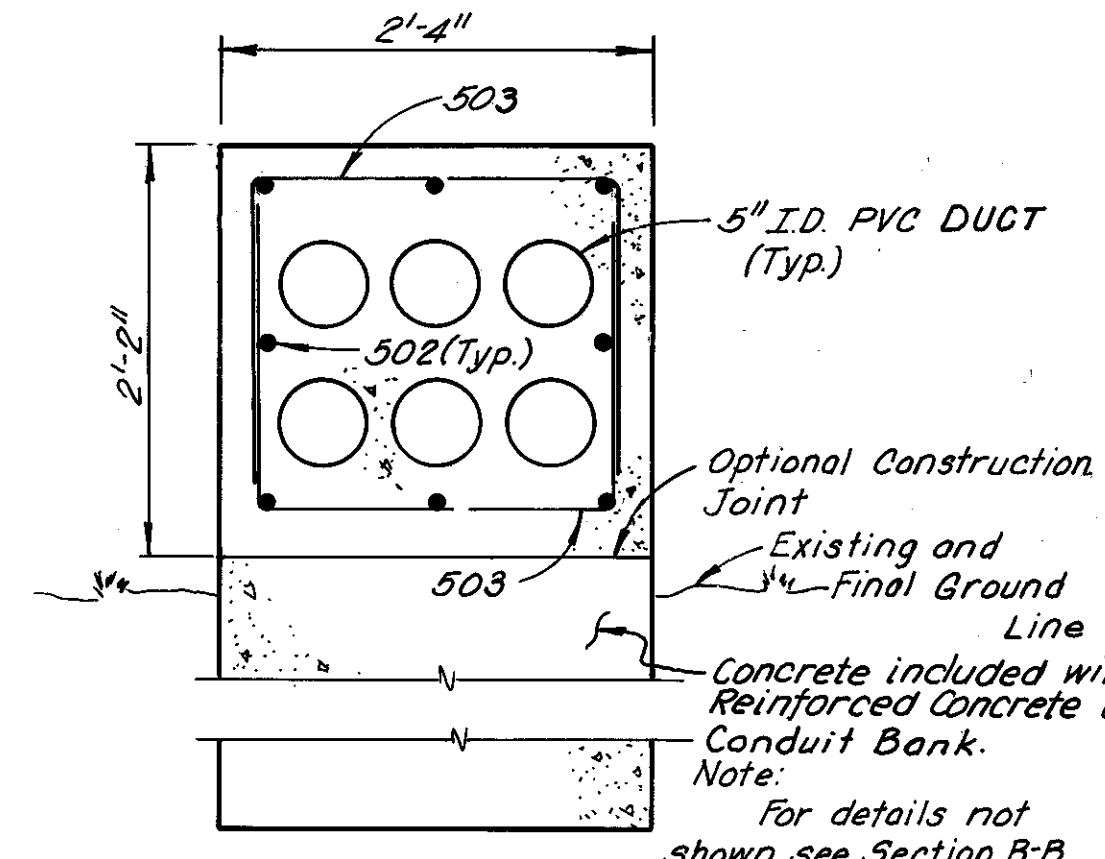
REINFORCED CONCRETE ENCASEMENT ELEVATION



DETAIL B

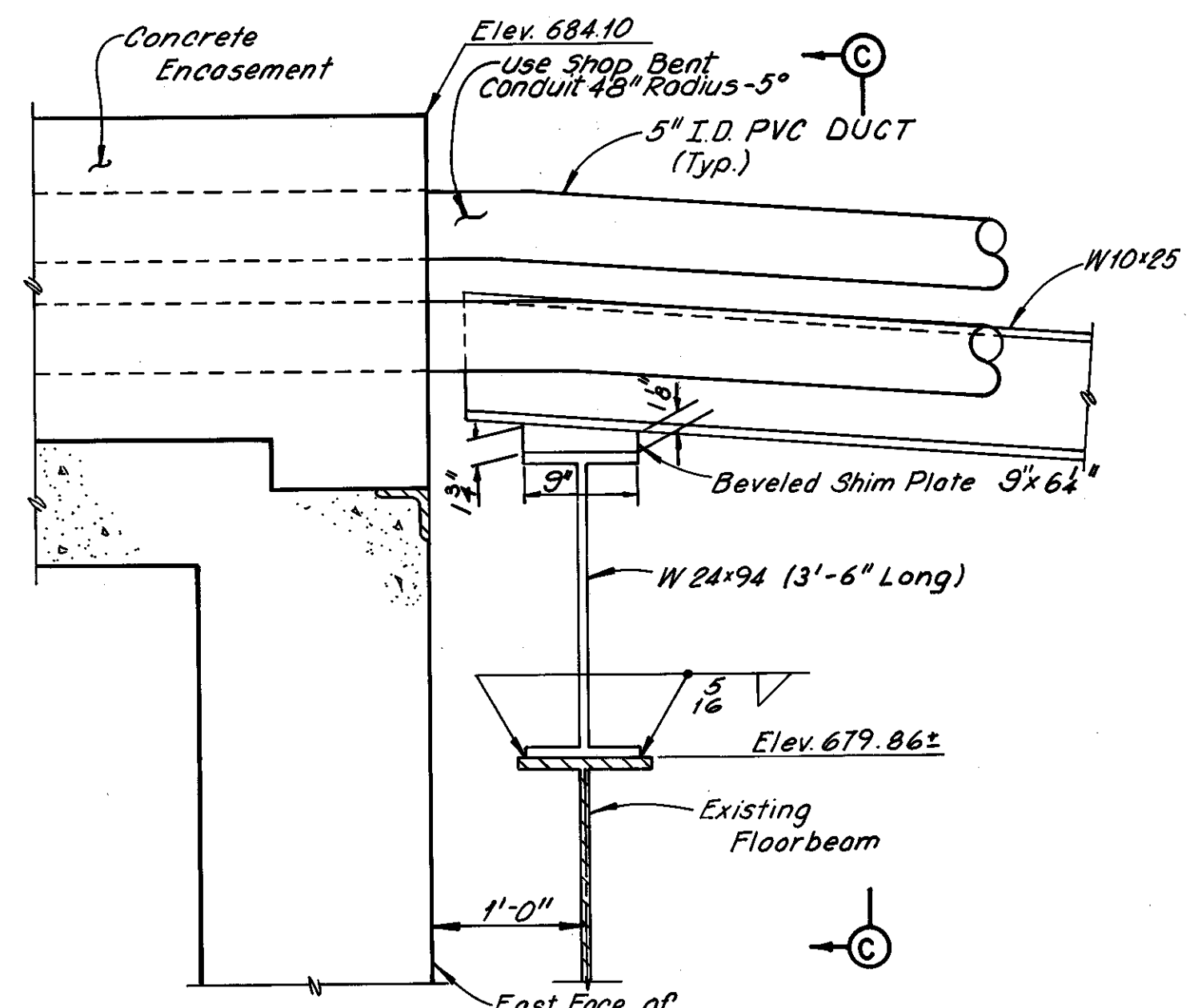


SECTION D-D



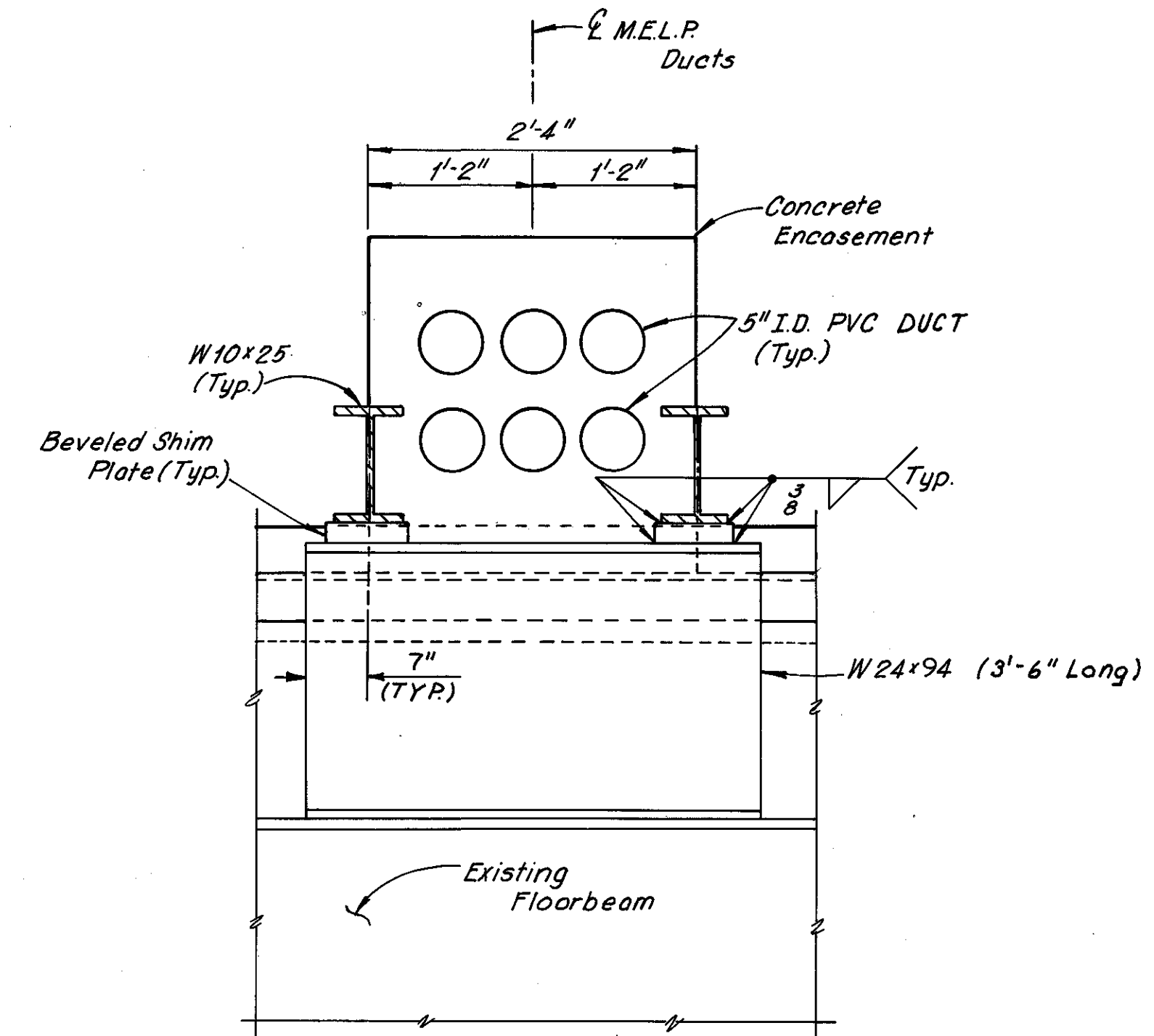
SECTION A-A

Note:  
New concrete shall be bonded to existing concrete with polysulfide-epoxy adhesive.



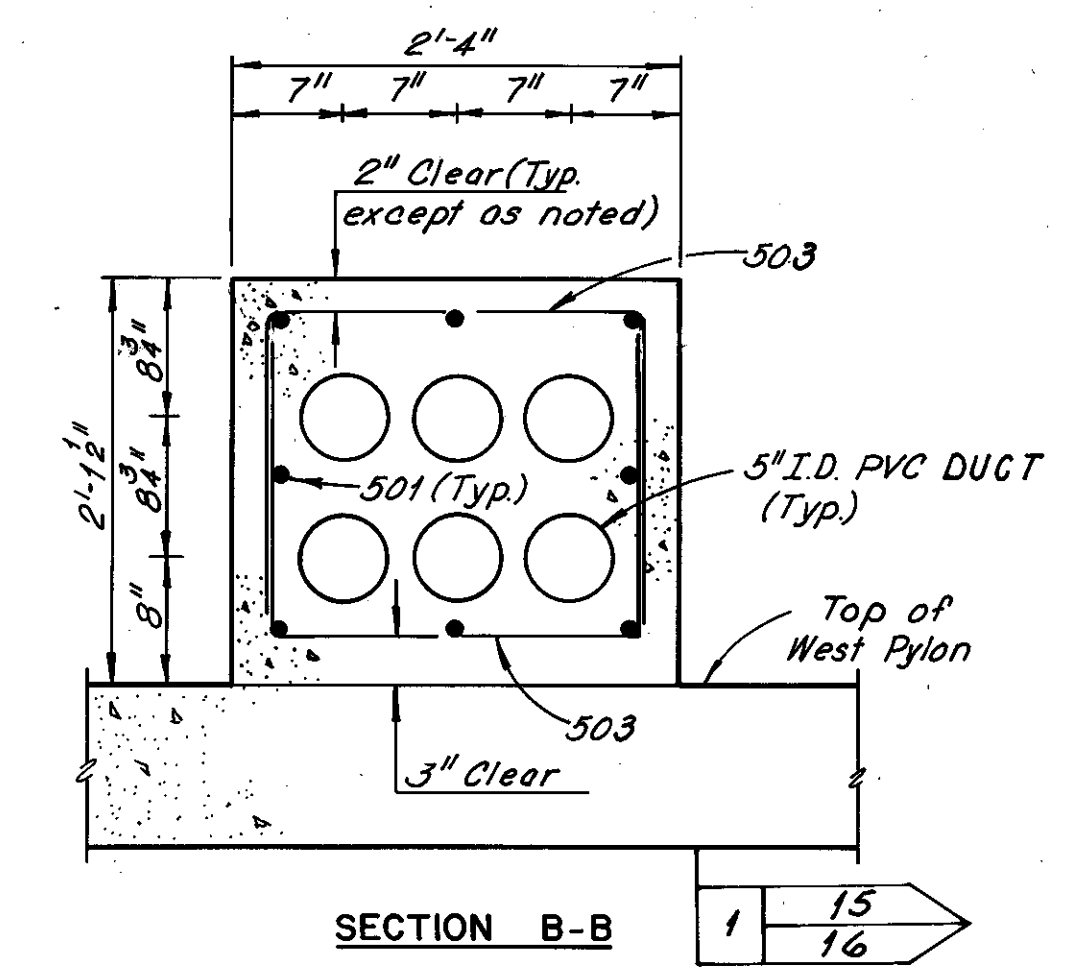
DETAIL A

Corrugated Steel Cover Not Shown



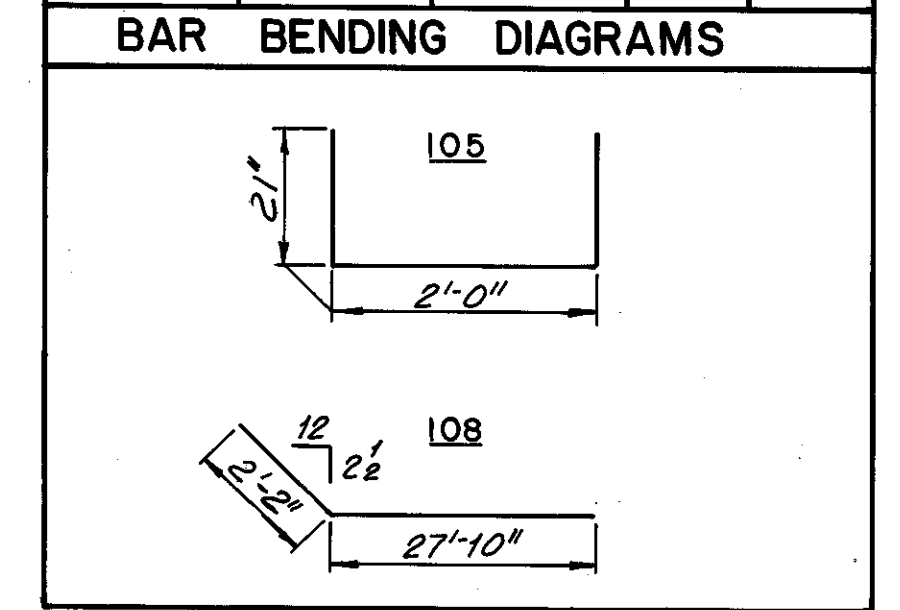
SECTION C-C

Corrugated Steel Cover Not Shown



SECTION B-B

REINFORCEMENT SCHEDULE				
MARK	NO.	LENGTH	TYPE	SER. INCR.
501	8	30'-0"	10B	
502	16	22'-0"	3Tr.	
503	108	5'-4"	105	



Note: For location of Detail A and Detail B See Sheet 7087-17.  
Reinforcement included with Item UC.13 Reinforced Concrete Encased 6-5" Conduit Bank

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

UNDERGROUND PLAN  
WEST PYLON

DRAWN BY	SCALE	DRAWING NUMBER
		7087-16
CHECKED BY	DATE	

MADE KV DATE 5-2-22  
TRACED DATE  
CHECKED EEE DATE 2-8-77  
SCALE

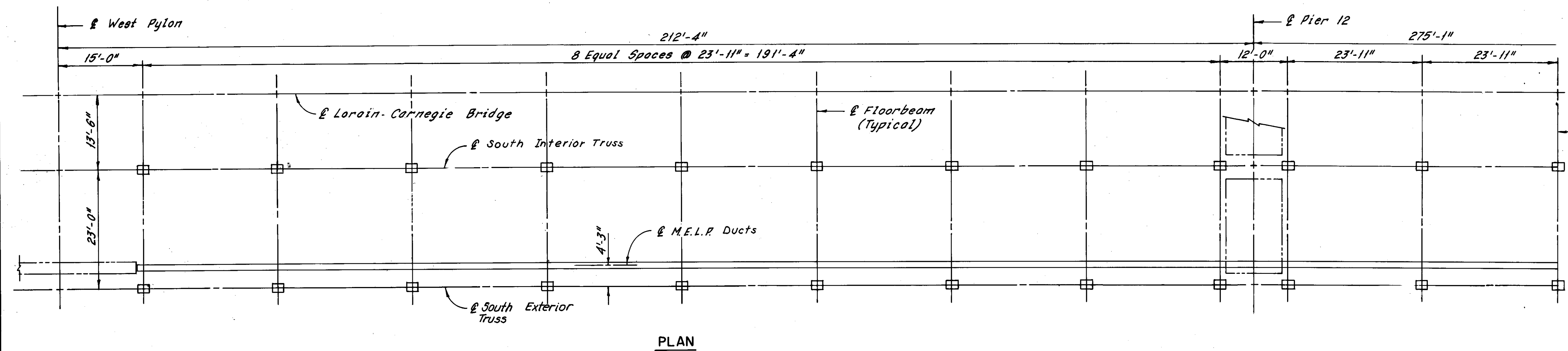
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

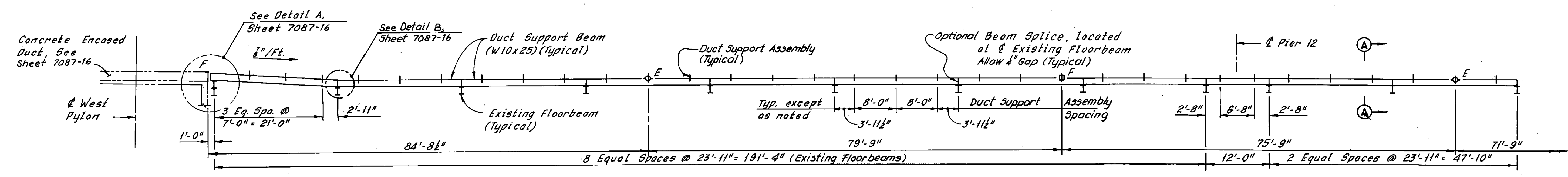
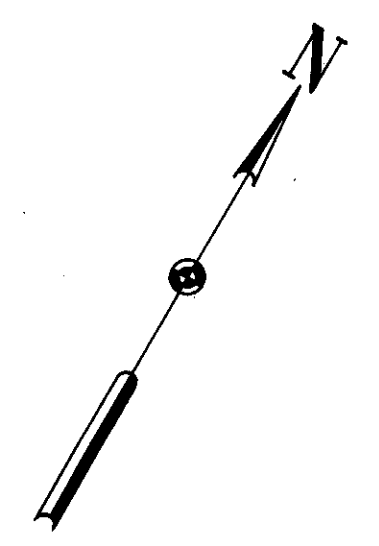
FHWA REGION	STATE	PROJECT	
5	OHIO		

49  
185

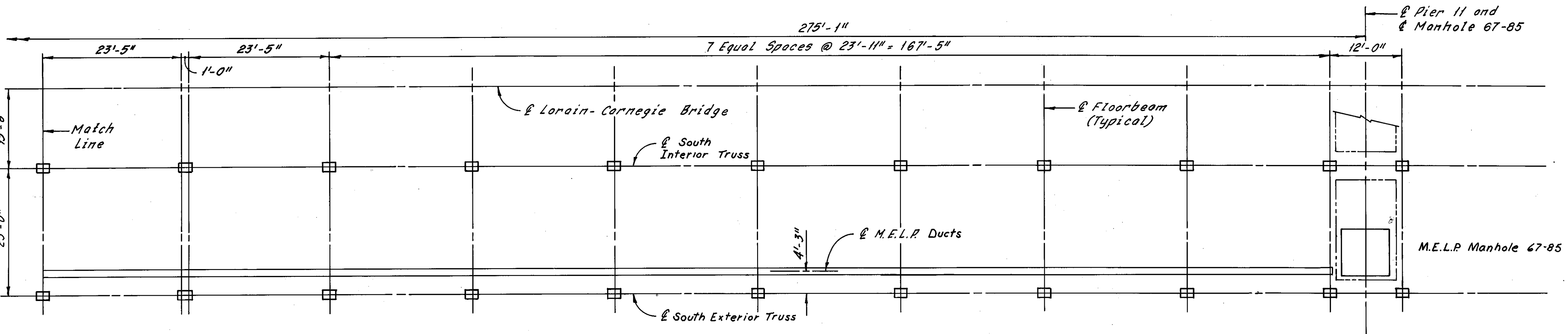
CUYAHOGA COUNTY  
CUY-10-16.23



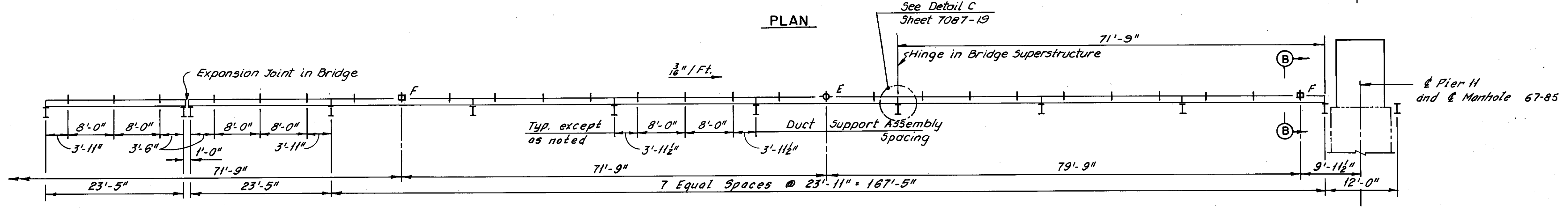
PLAN



ELEVATION



PLAN



ELEVATION

- LEGEND:**
- Typical Duct Support Assembly, for Details, see Sheet 7087-19
  - Two-Way Expansion Joint Duct Support Assembly, for Details, see Sheet 7087-19
  - Fixed Point Duct Support Assembly, for Details, see Sheet 7087-19

Note:  
For Sections A-A and B-B,  
See Sheet 7087-18.

REVISION	DATE	DESCRIPTION	BY	APP'D

**DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND**

**AERIAL DUCT LINE  
WEST PYLON TO PIER #11**

DRAWN BY	SCALE	DRAWING NUMBER
		7087-17
CHECKED BY	DATE	

MADE BY PK DATE 5-2-22  
TRACED DATE  
CHECKED FEE DATE 2-8-22  
SCALE

**Howard, Needles, Tammen & Bergendoff**  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

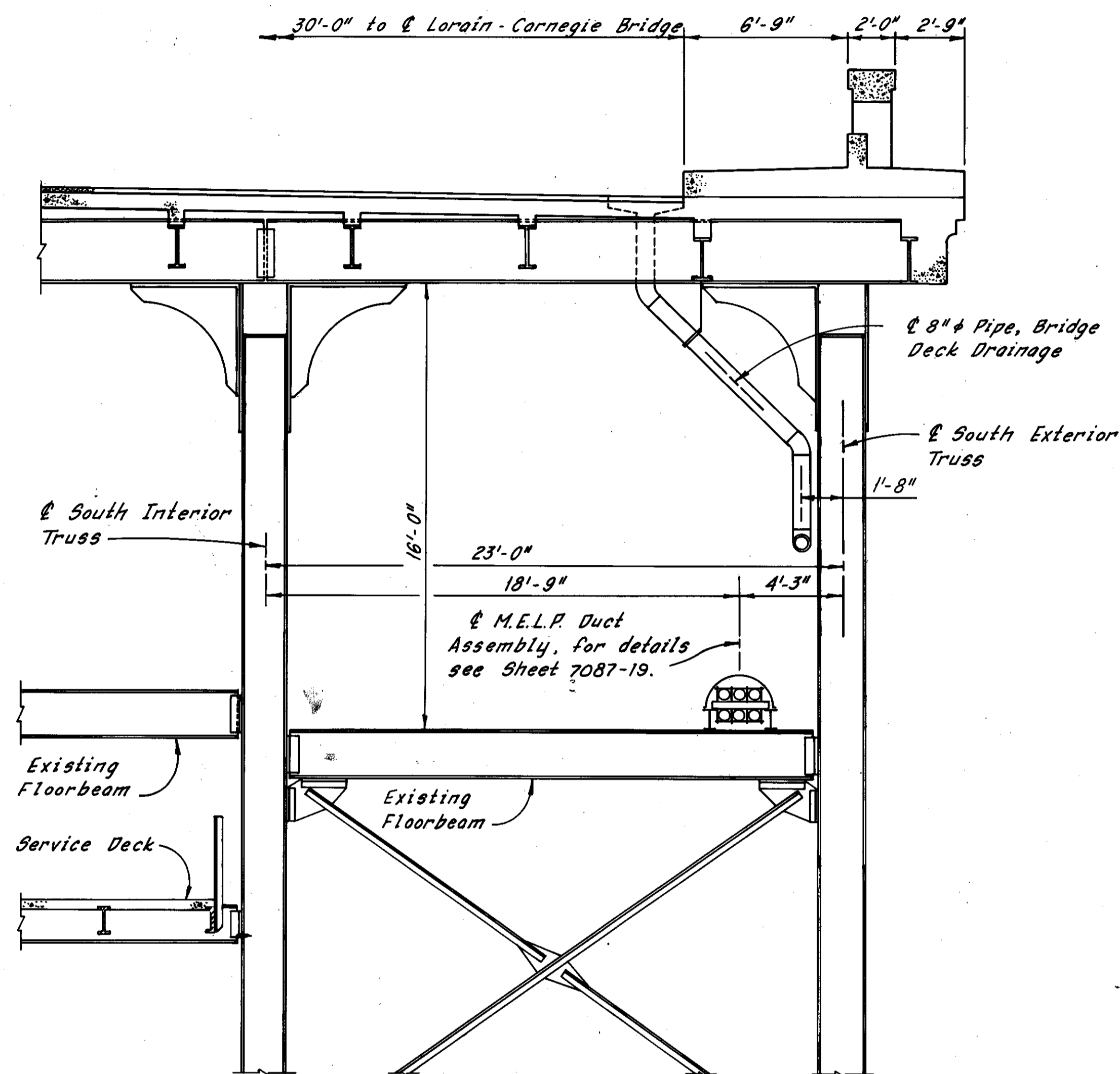
**HNTB**

LORAIN-CARNEGIE BRIDGE

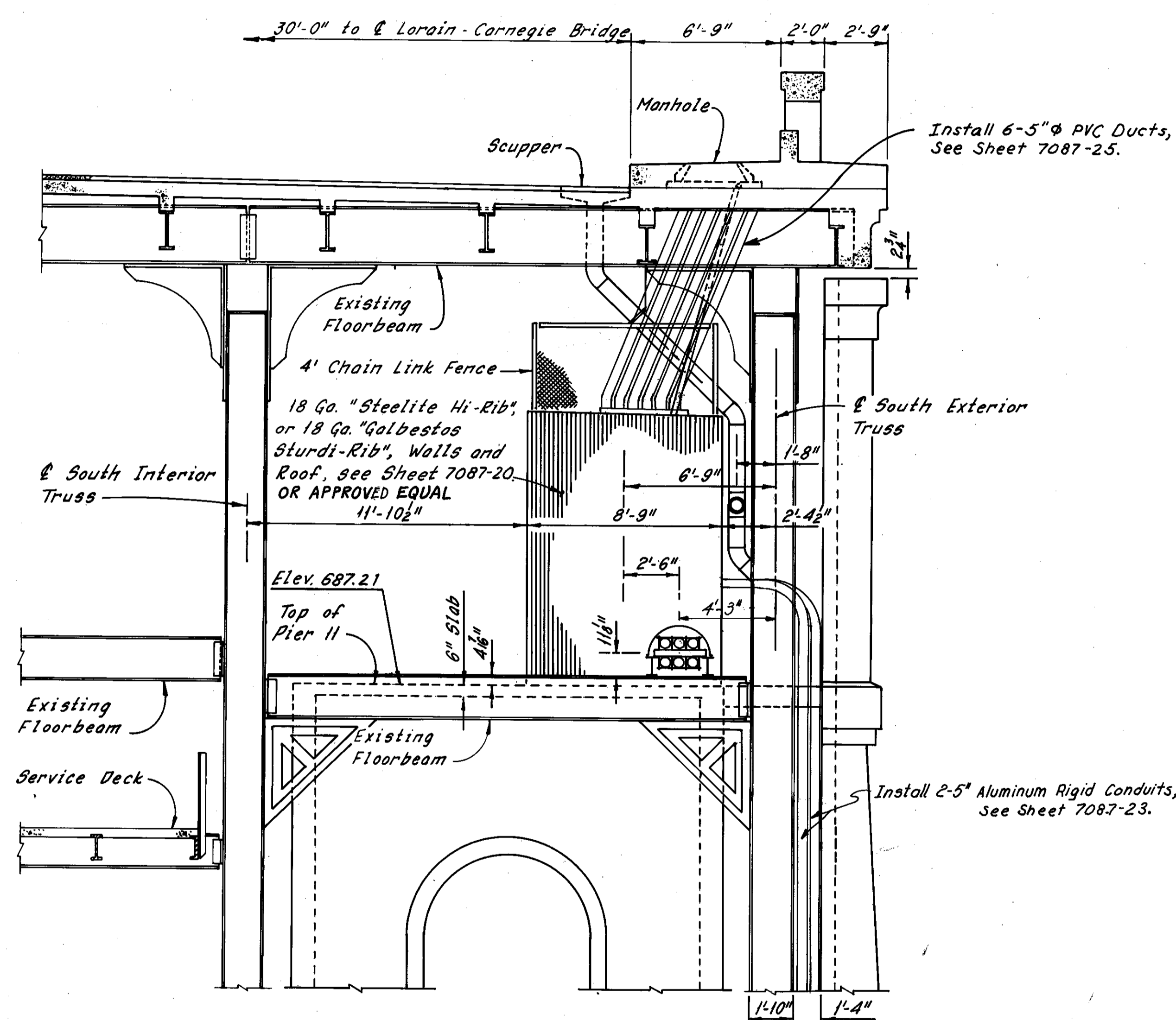
FHWA REGION	STATE	PROJECT	
5	OHIO		

50  
185

CUYAHOGA COUNTY  
CUY-10-16.23



SECTION A-A  
(Looking East)



SECTION B-B  
(Looking East)

Install 6-5" PVC Ducts,  
See Sheet 7087-25.

Install 2-5" Aluminum Rigid Conduits,  
See Sheet 7087-23.

Note:  
For location of Sections A-A and B-B,  
See Sheet 7087-17.

MADE PK DATE 5-2-77  
TRACED DATE  
CHECKED EEE DATE 2-8-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

HNTB

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
TYPICAL CROSS SECTIONS				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-18		
CHK'D BY	DATE			

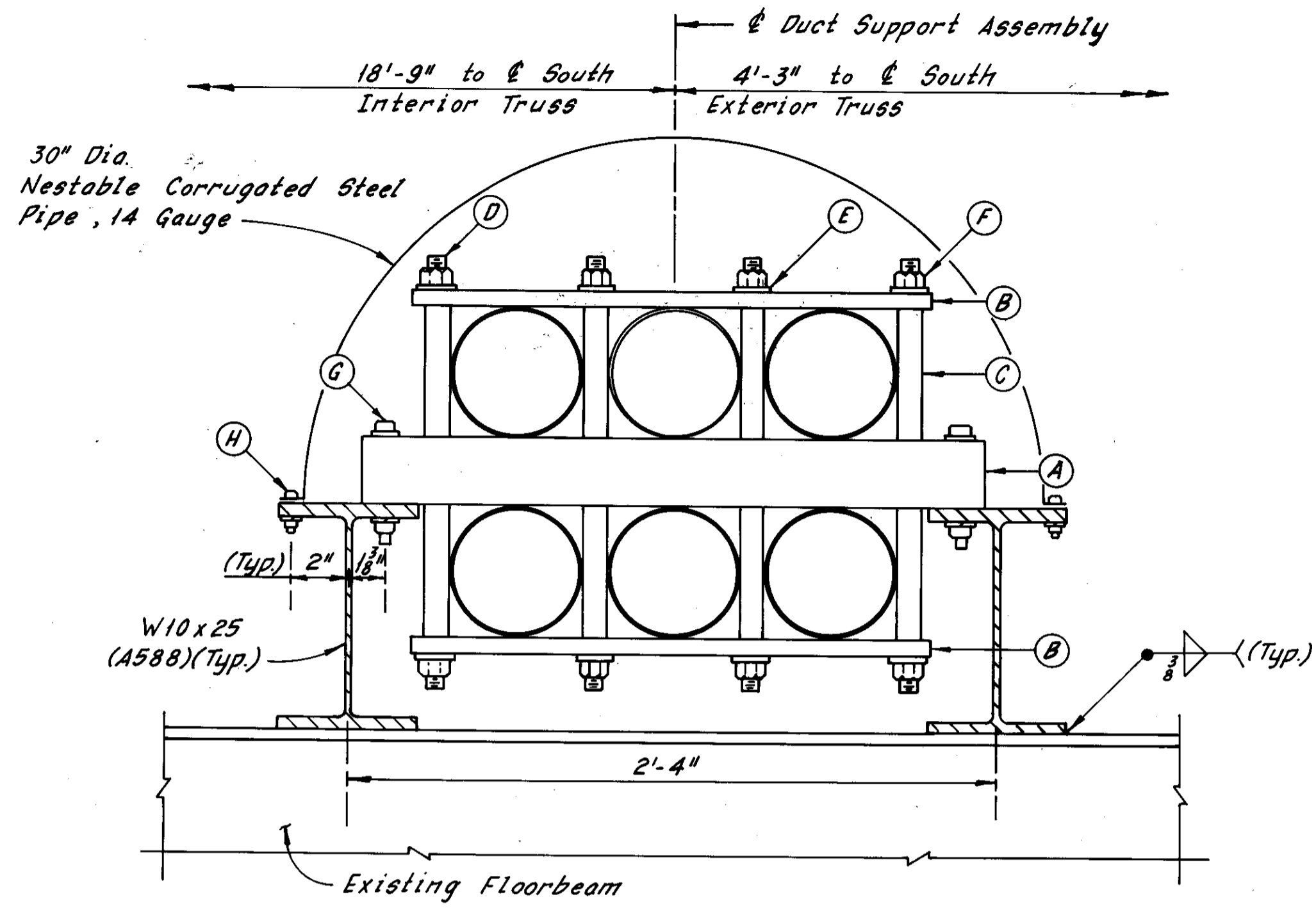
Rev. 12-27-79

H14

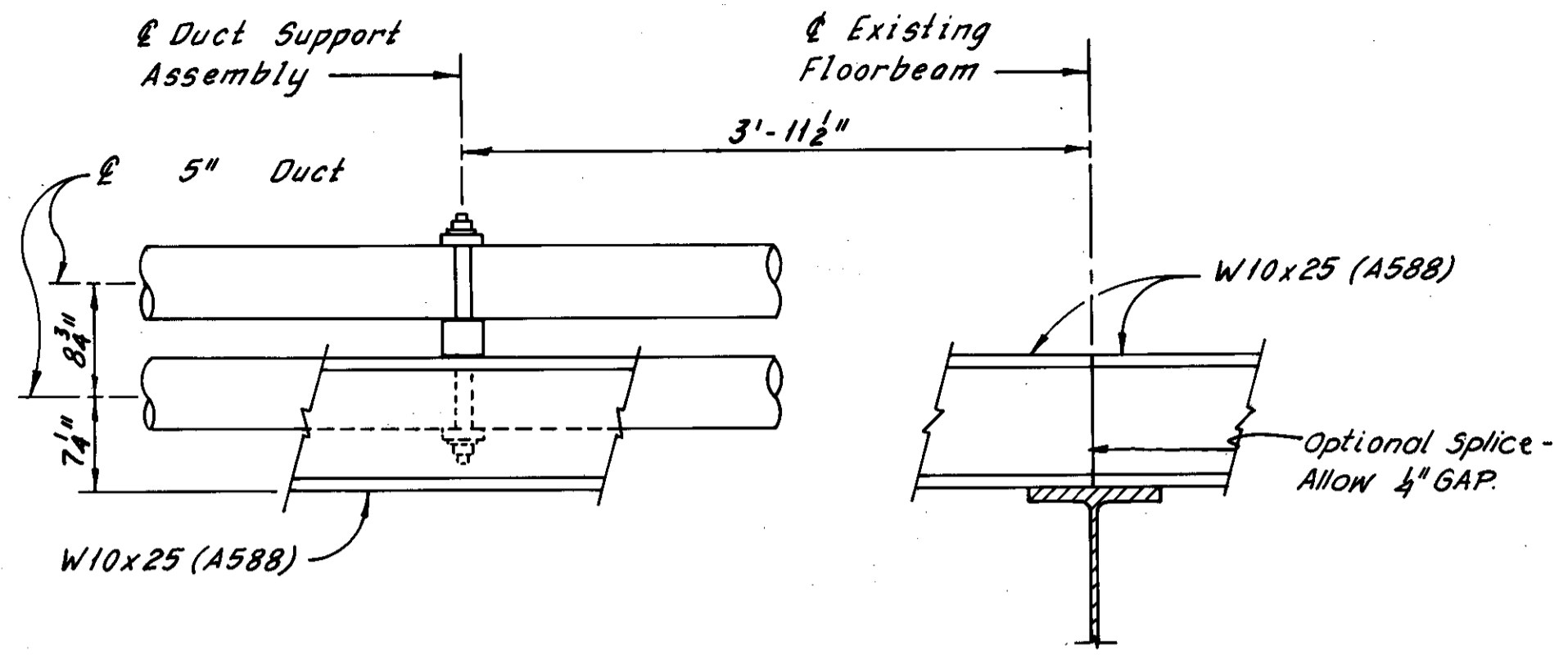
FHWA REGION	STATE	PROJECT
5	OHIO	

51  
185

CUYAHOGA COUNTY  
CUY-10-16.23



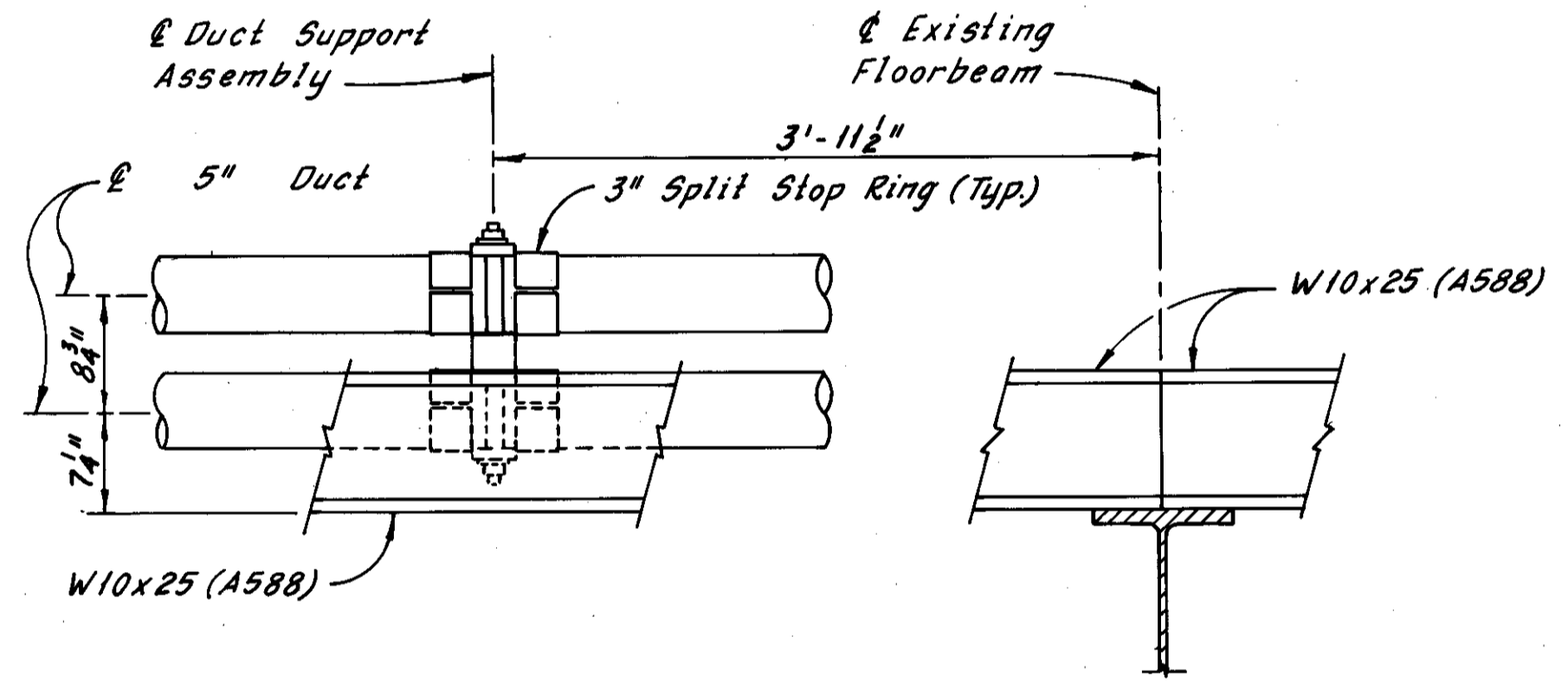
**DUCT SUPPORT ASSEMBLY**  
(Looking East)



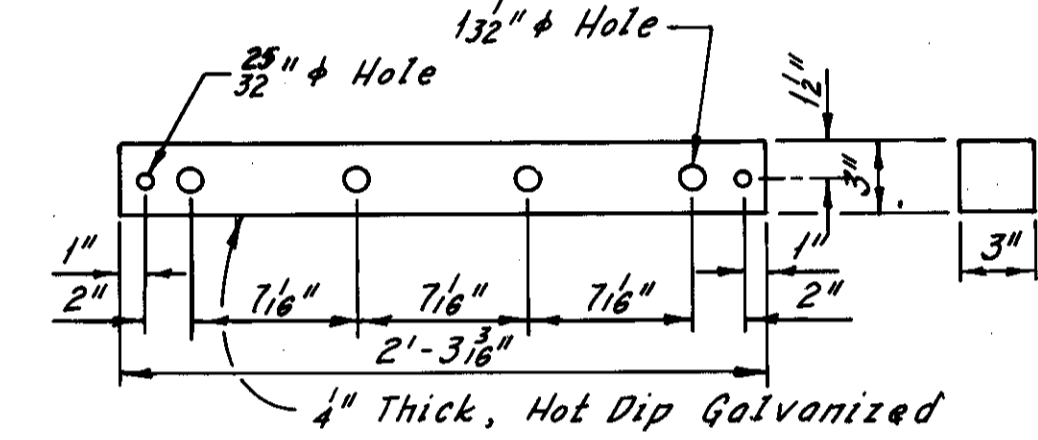
**TYPICAL DUCT SUPPORT ASSEMBLY**  
(Nestable Pipe Protection not shown)

LIST OF MATERIALS		
PART	QUANTITY	DESCRIPTION
A	59	* 3" x 3" x 1/4" Square Steel Tubing
B	118	3/4" x 3" PVC Plate
C	472	1" Spacer Tube (1.315" O.D., 1.049" I.D.)
D	236	* 1" x Threaded Rod (1'-7" Long)
E	472	* 1" Plain Washer
F	472	* 1" Self-Locking Hex Nut
G	118	* 3/8" x 4 1/2" Hex Head Bolt (Includes 1 Plane Washer, 1 Lock Washer and 1 Hex Nut per Bolt)
H	118	* 3/8" x 1" Hex Head Bolt (Includes 1 Lock Washer and 1 Hex Nut per Bolt)

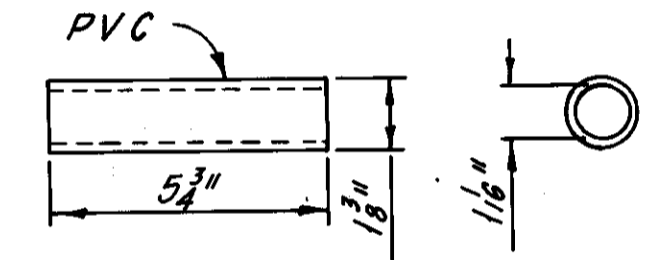
\* Hot Dip Galvanized in accordance with ASTM A-123.



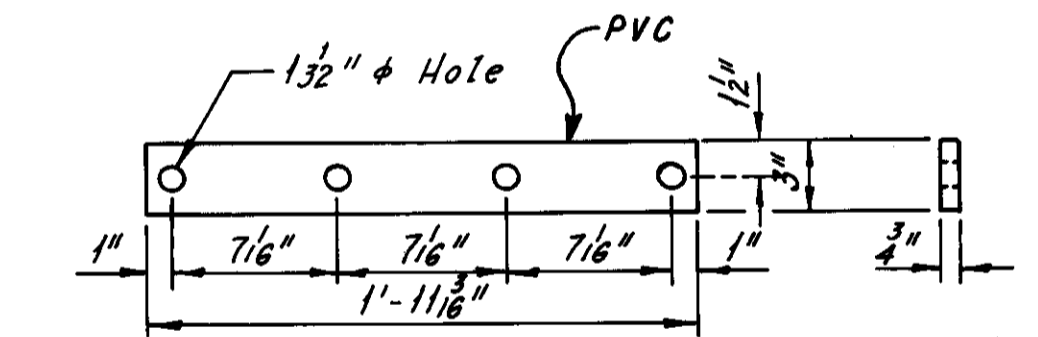
**FIXED POINT DUCT SUPPORT ASSEMBLY**  
(Nestable Pipe Protection not shown)



**PART A**



**PART C**



**PART B**

Notes:  
All plastic components shall be made of polyvinyl chloride compounds meeting the cell classification 1245A-B as defined in ASTM D-1784. In addition, the compound shall contain a minimum of 6% titanium dioxide for ultraviolet resistance.  
All steel components shall be either hot dip galvanized as defined in ASTM A-123 or A588 structural steel.  
Most components are made available by the "Kyova Pipe Co., Ironton, Ohio".  
For locations of Duct Support Assemblies, Fixed Point Duct Support Assemblies and Expansion Joint Assemblies, see Sheet 7087-17.

Notes:  
For locations of "Typical Duct Support Assembly," See Sheet 7087-17.  
For locations of "Fixed Point Duct Support Assembly," See Sheet 7087-17.  
For locations of "Expansion Joint Duct Support Assembly," See Sheet 7087-17.

REVISION	DATE	DESCRIPTION	BY	APP'D

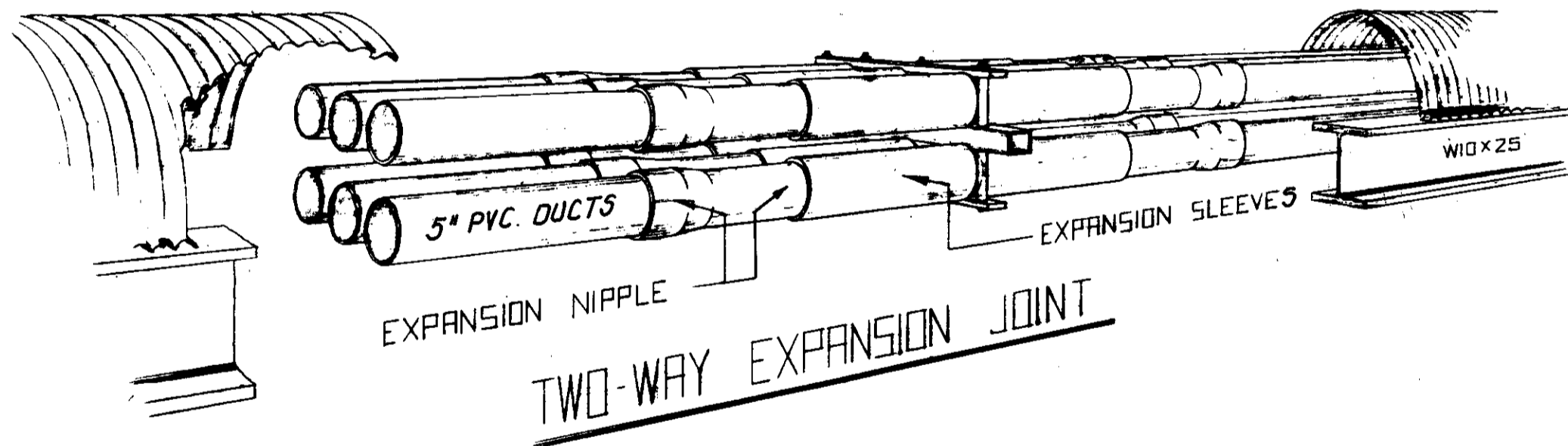
DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

AERIAL DUCT SUPPORT DETAILS

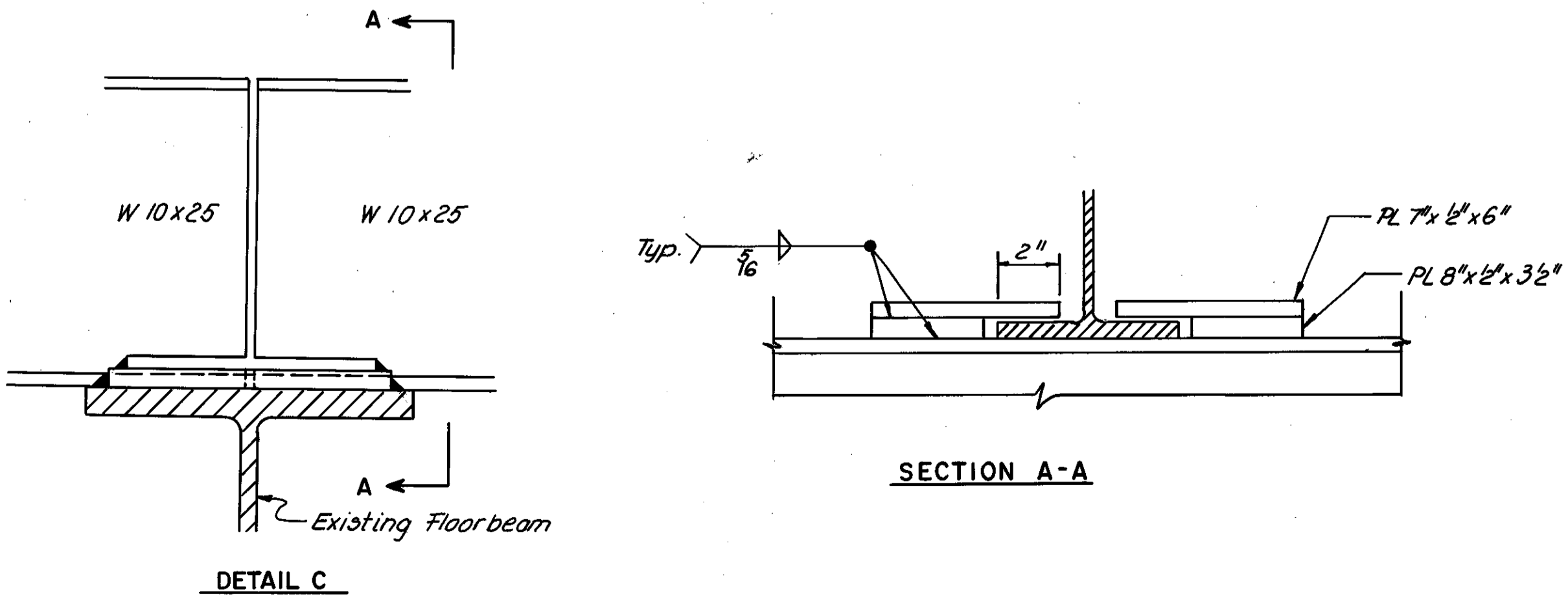
DRAWN BY	SCALE	DRAWING NUMBER
		7087-19
CHKD BY	DATE	

Rev. 12-27-79

LORAIN - CARNEGIE BRIDGE

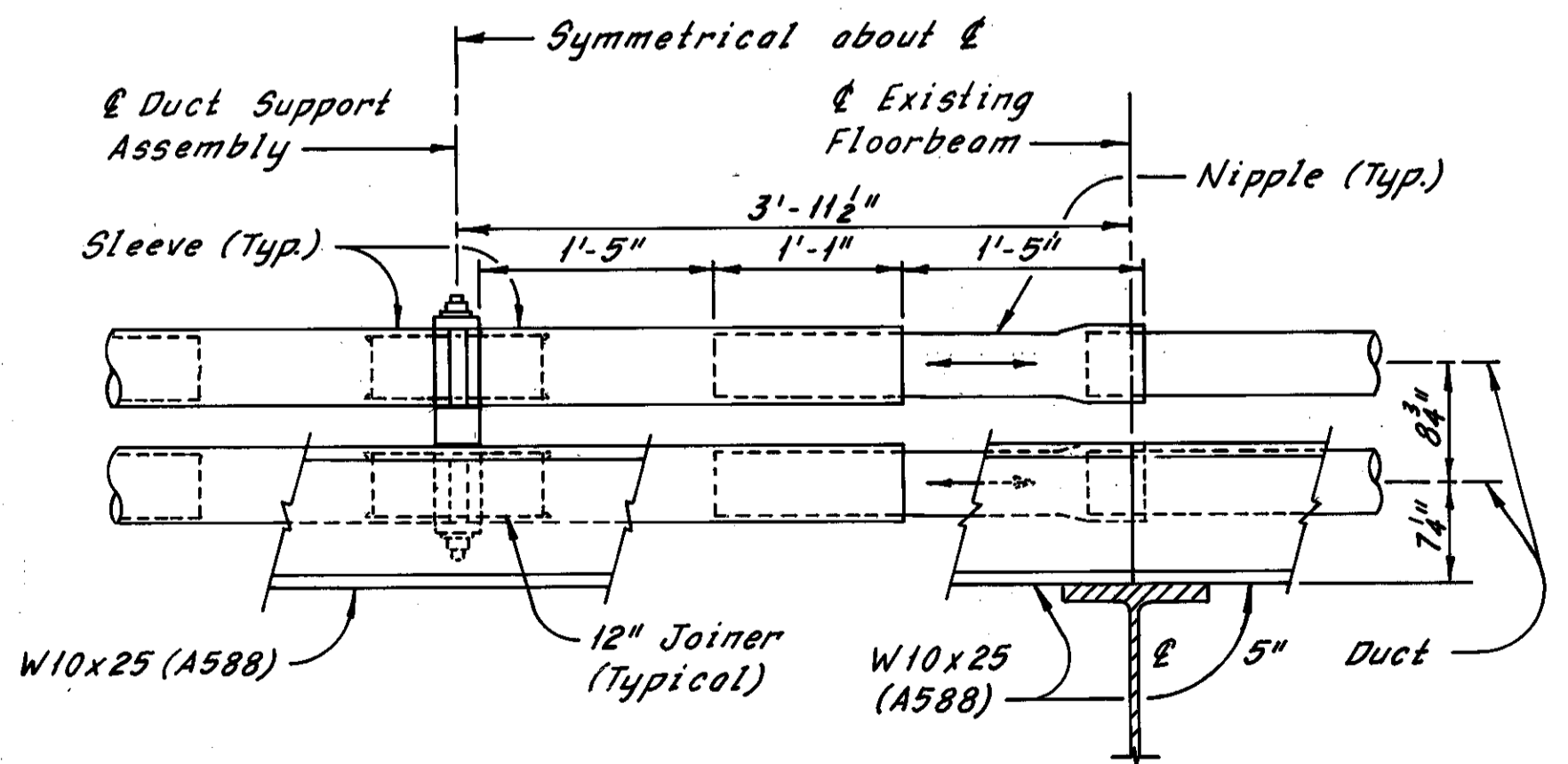


**TWO-WAY EXPANSION JOINT**



**SECTION A-A**

**DETAIL C**

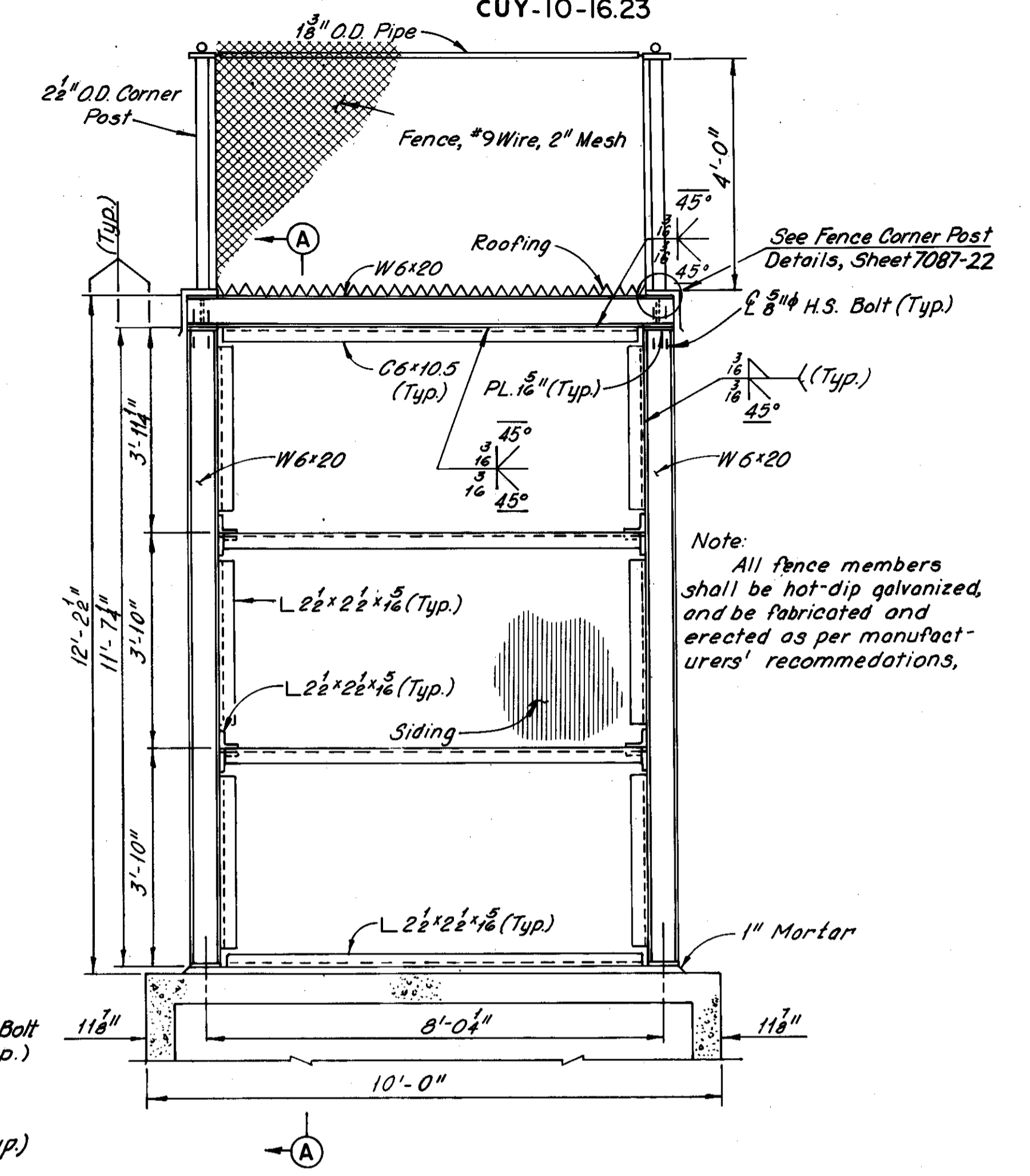
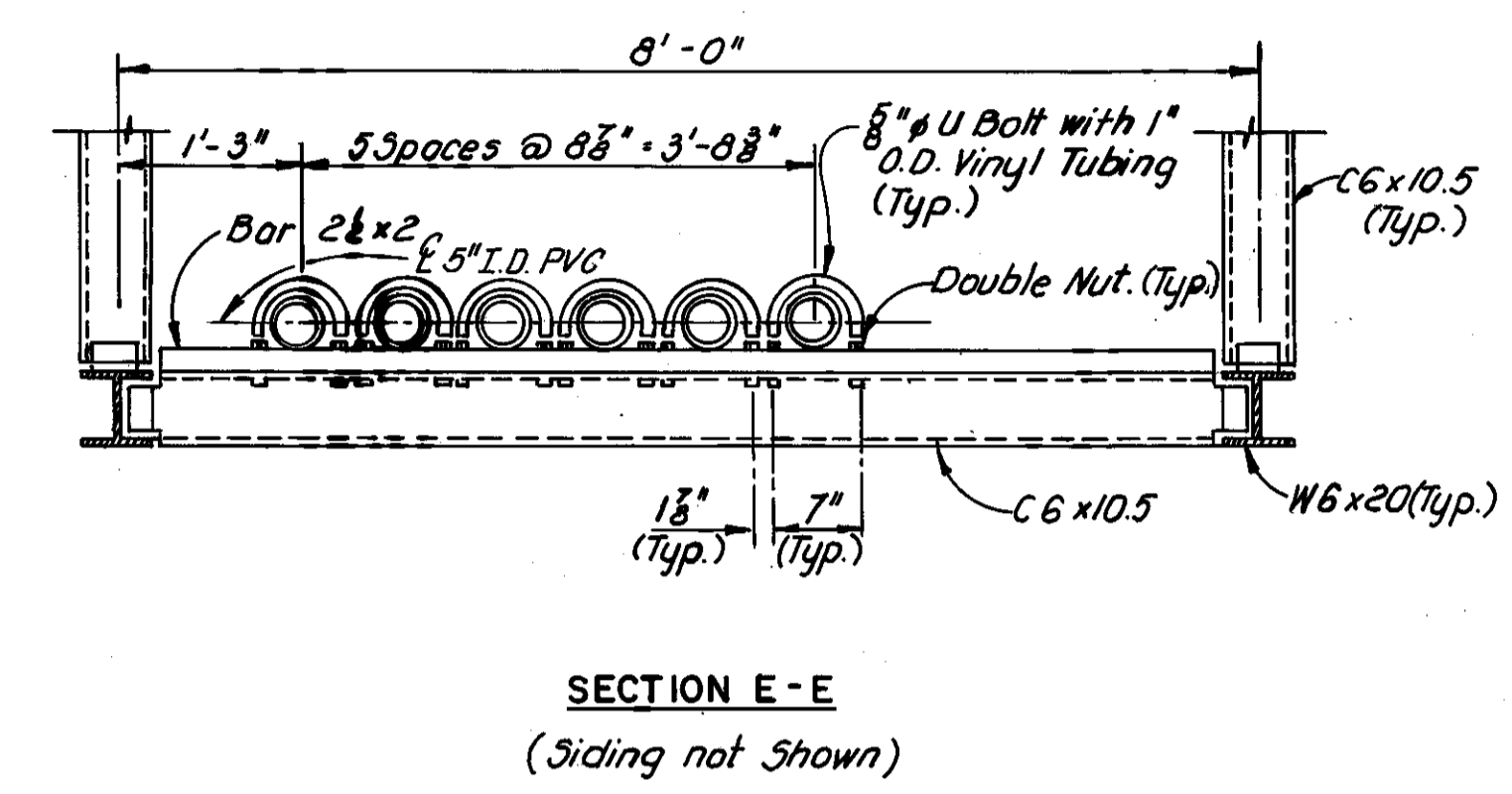
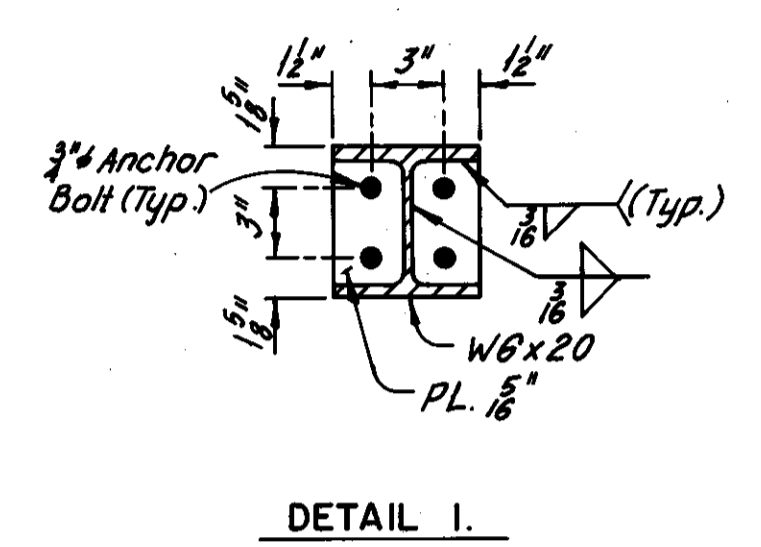
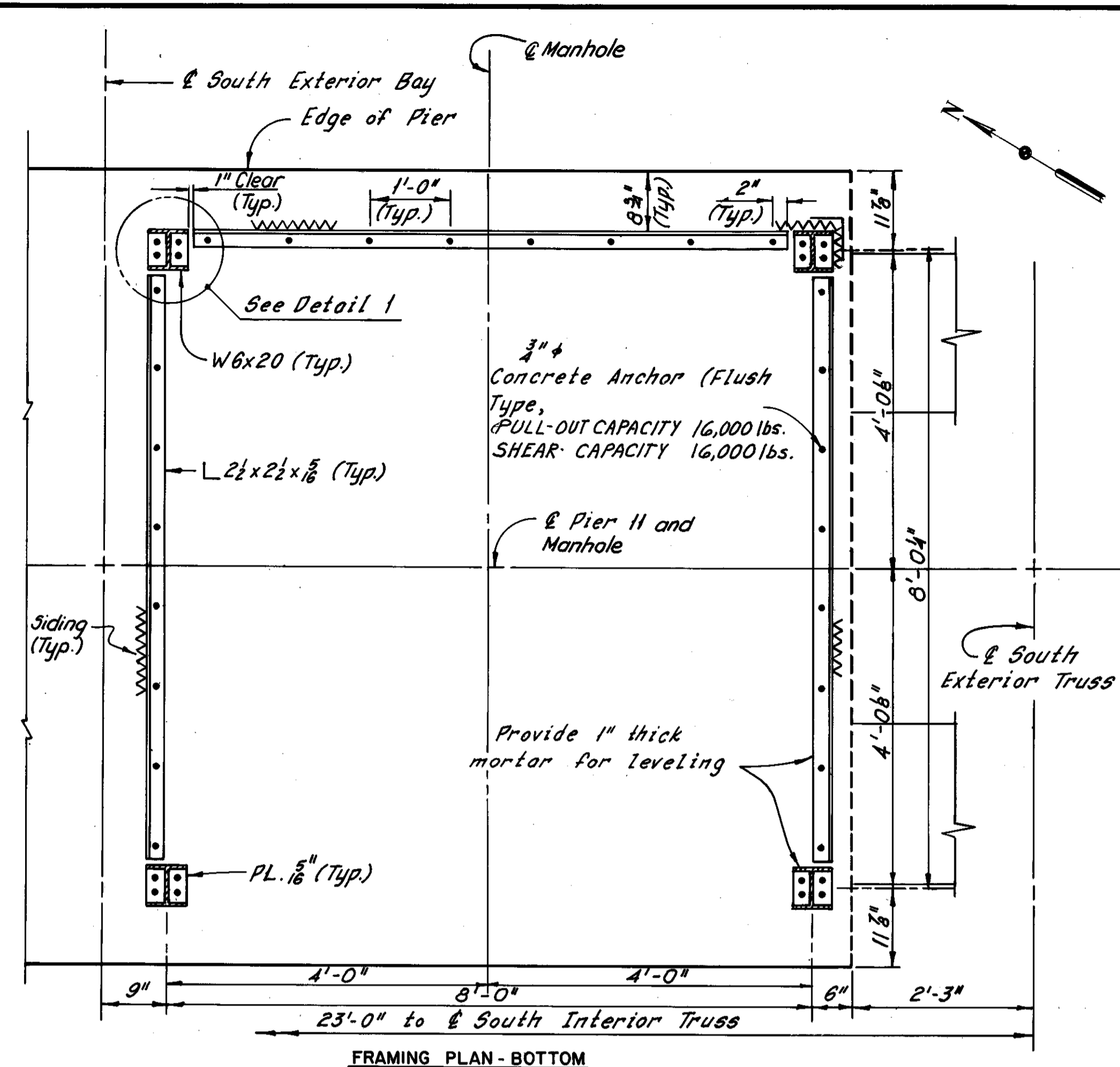


**EXPANSION JOINT DUCT SUPPORT ASSEMBLY**  
(Nestable Pipe Protection not shown)

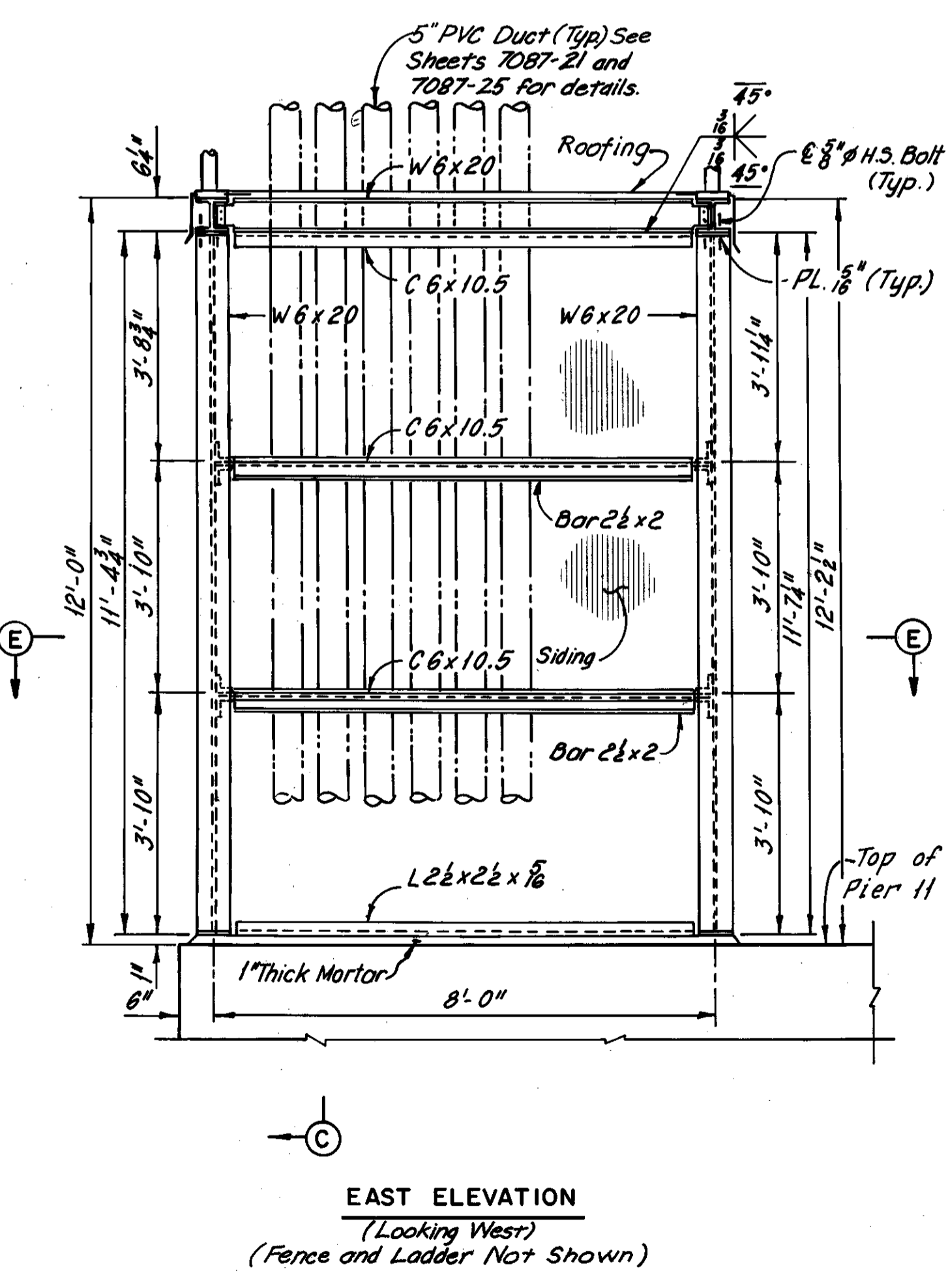
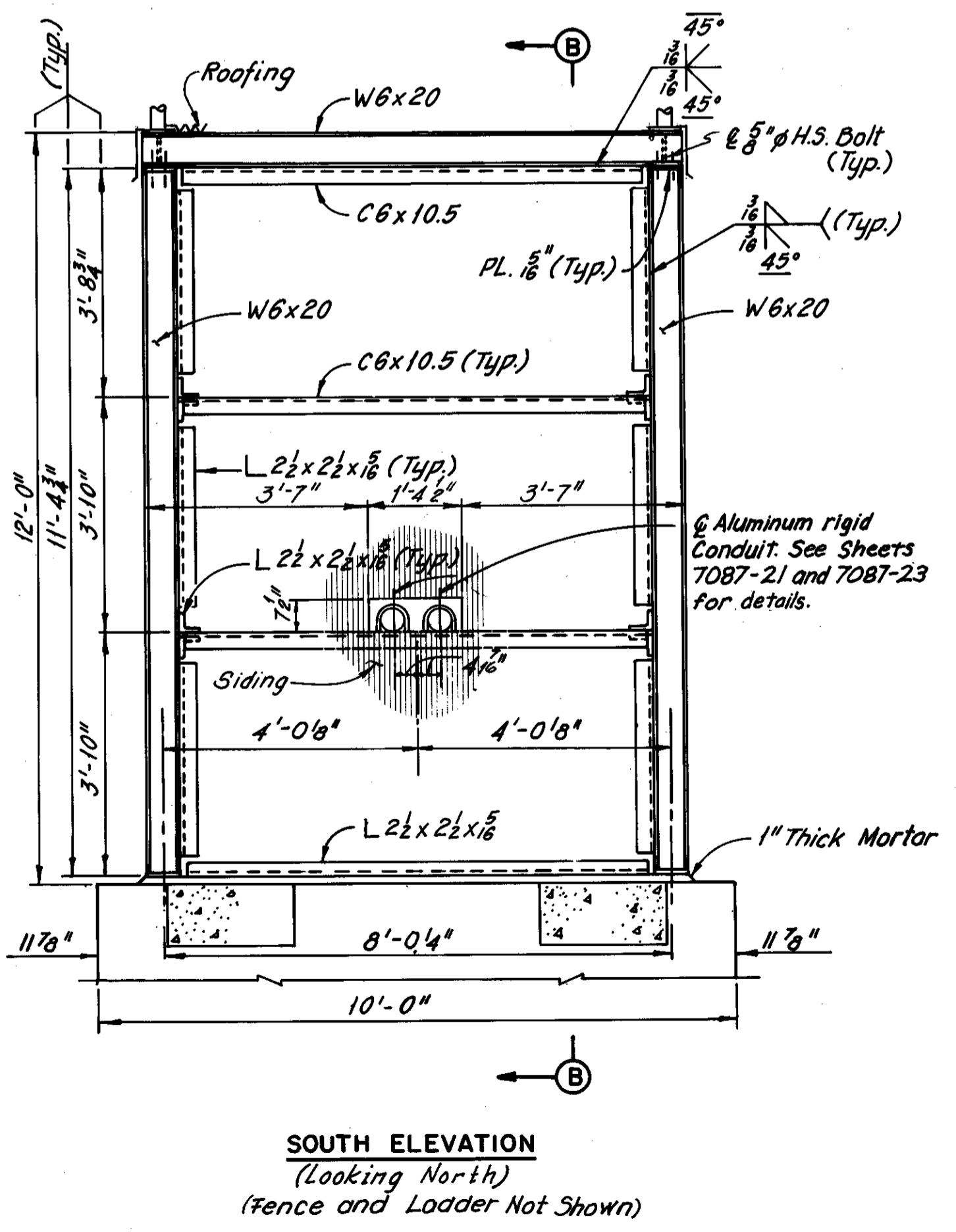
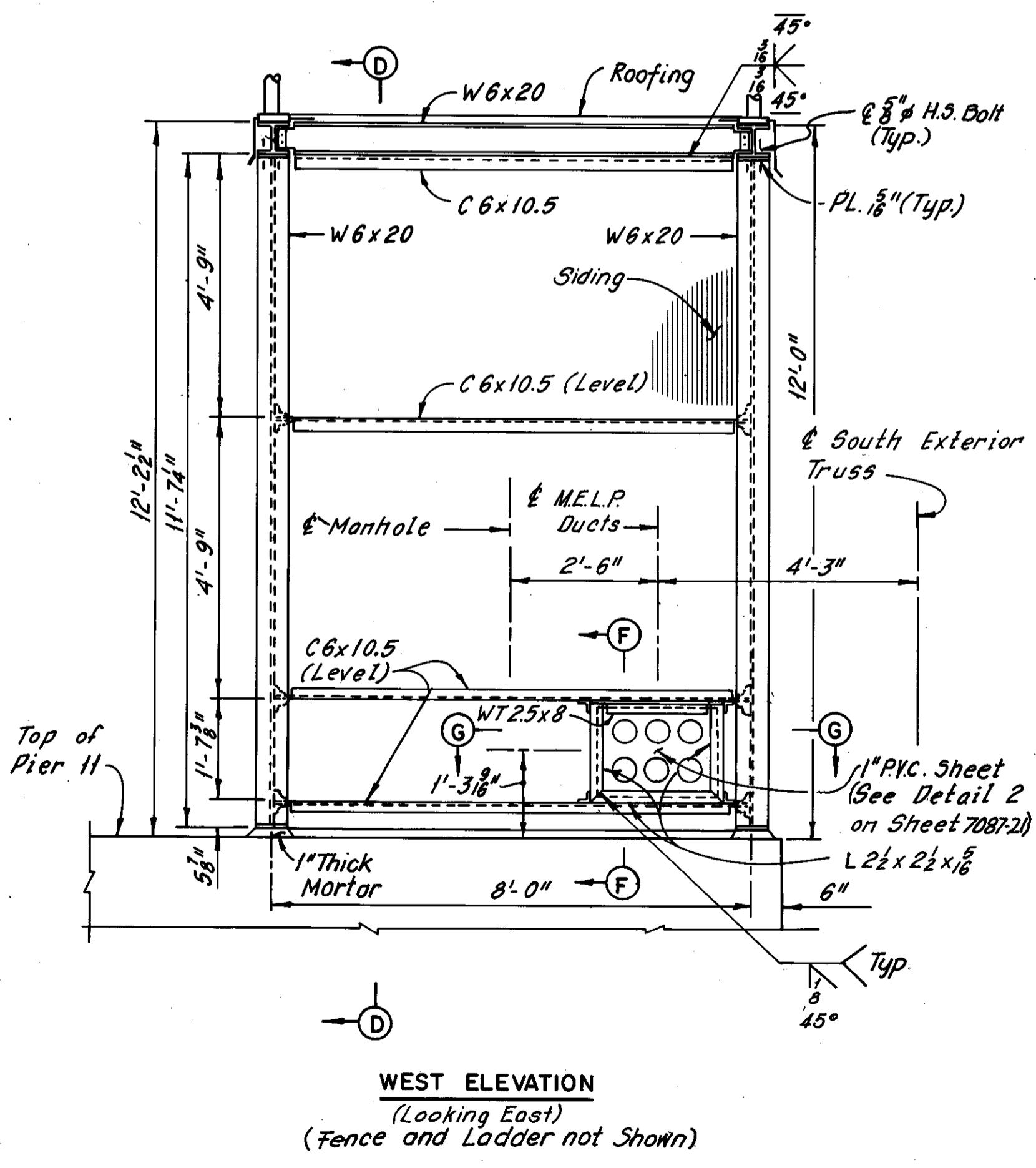
MADE PK DATE 5-2-72  
TRACED DATE  
CHECKED EEF DATE 2-8-79  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

CUYAHOGA COUNTY  
CUY-10-16.23



Notes:  
For Sections A-A thru D-D, and Sections F-F and G-G, See Sheet 7087-21.  
For Roof Framing Details, See Sheet 7087-22.  
Roofing and siding shall be light gray #18 gauge Galbestos Box-Rib or gray #18 gauge, Steelite Corrtan Hi-Rib, or equivalent.

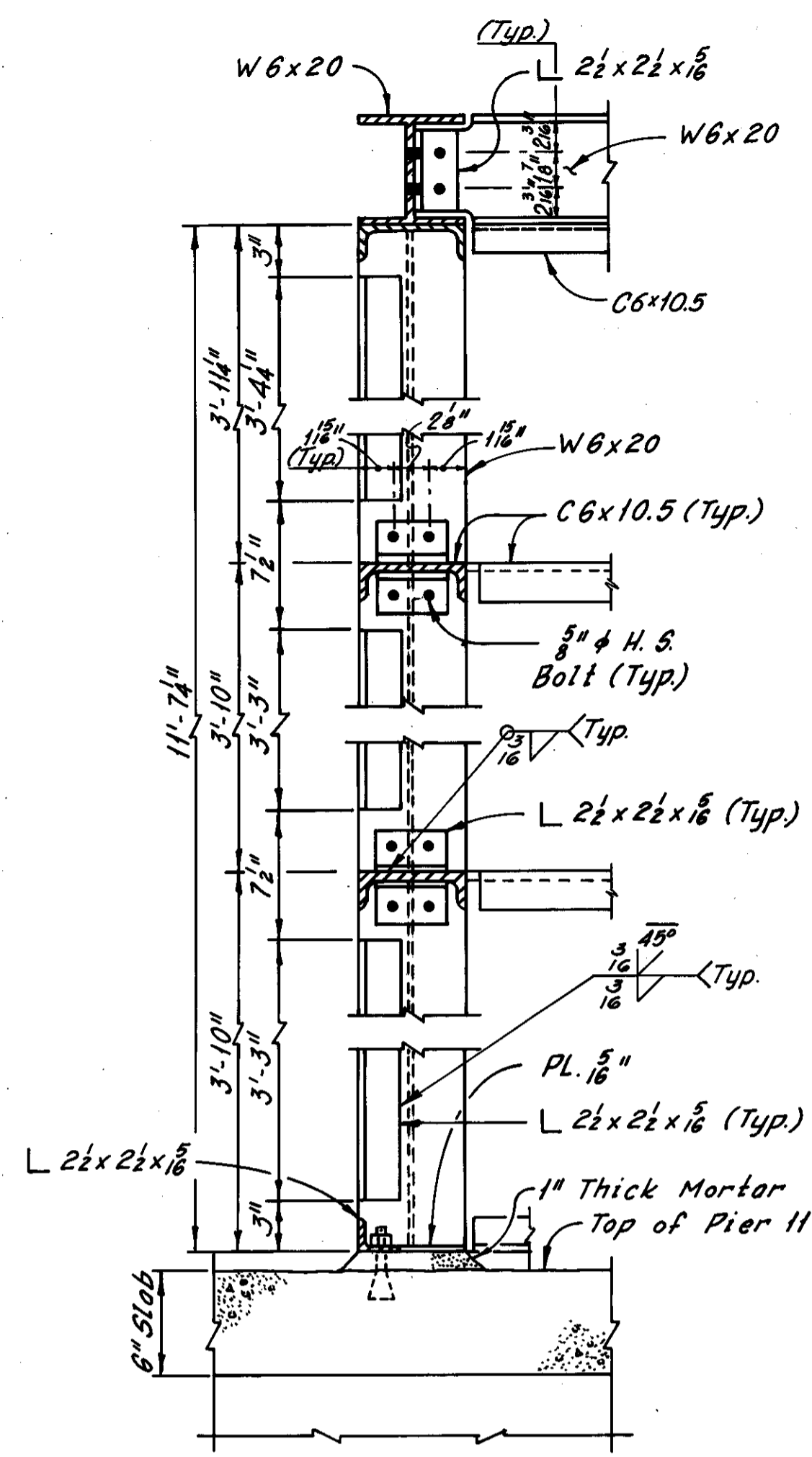


REVISION	DATE	DESCRIPTION	BY	APP'D

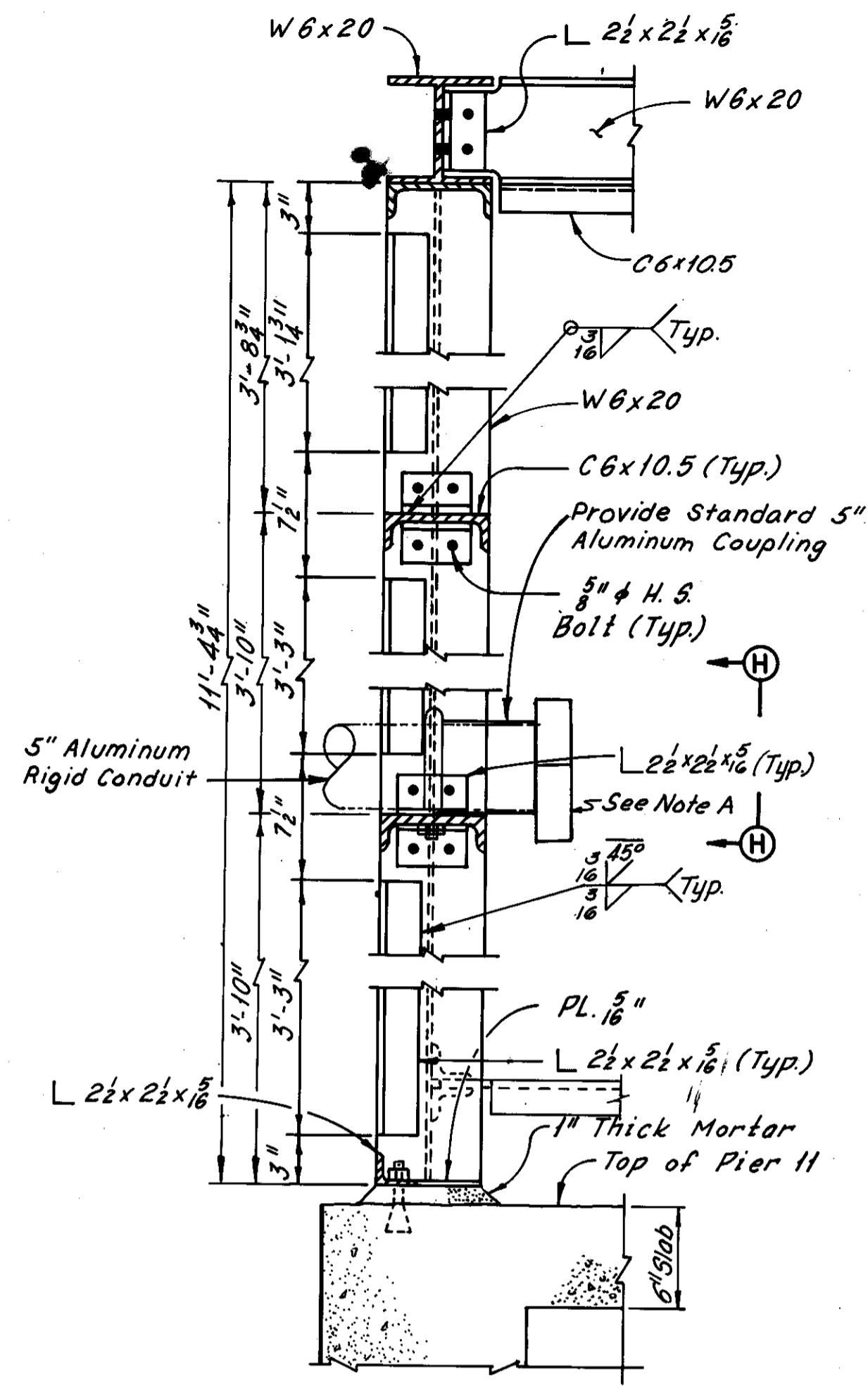
DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

MANHOLE 67-85 DETAILS AT PIER #11

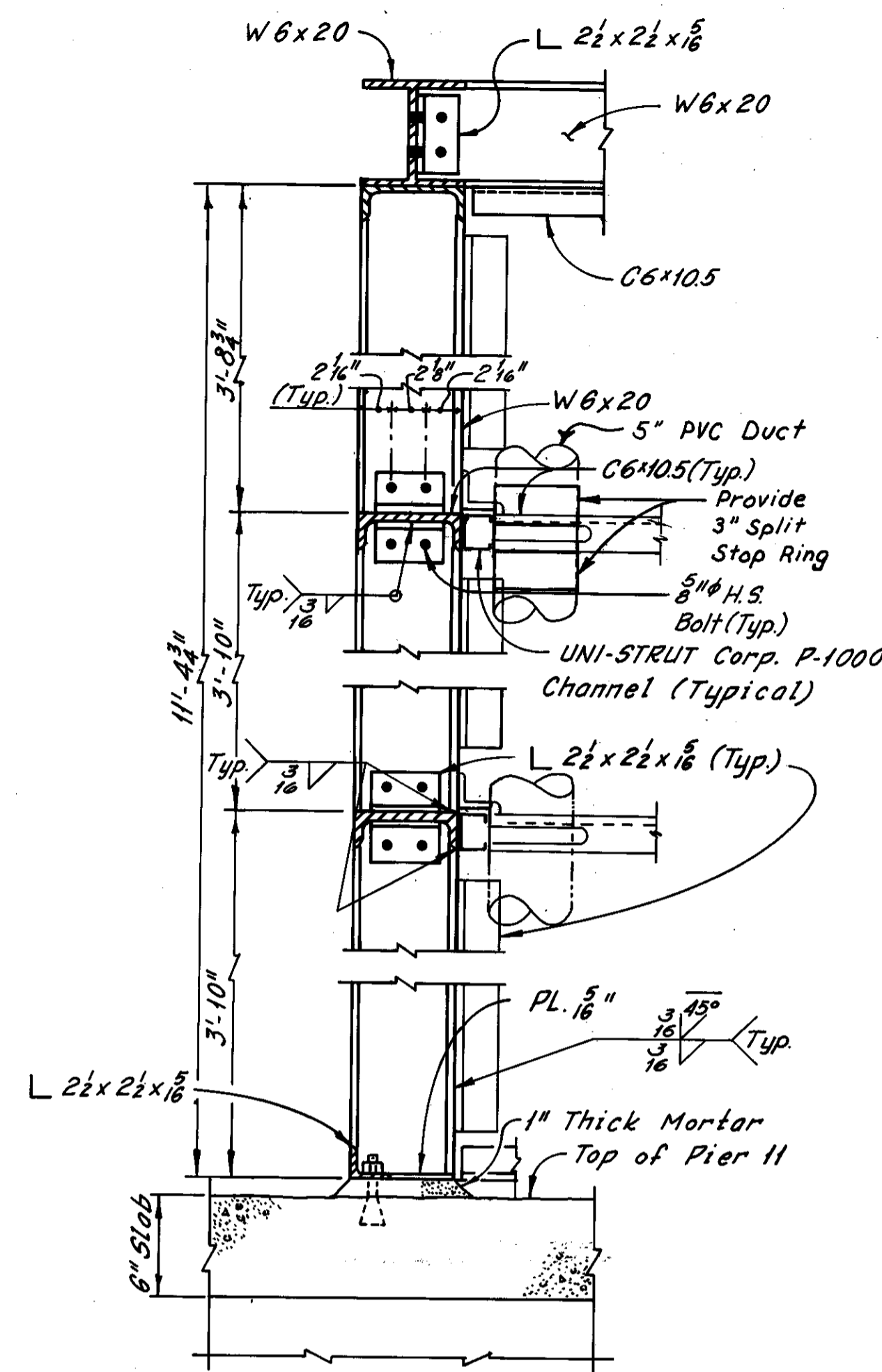
DRAWN BY	SCALE	DRAWING NUMBER
		7087-20
CHECKED BY	DATE	



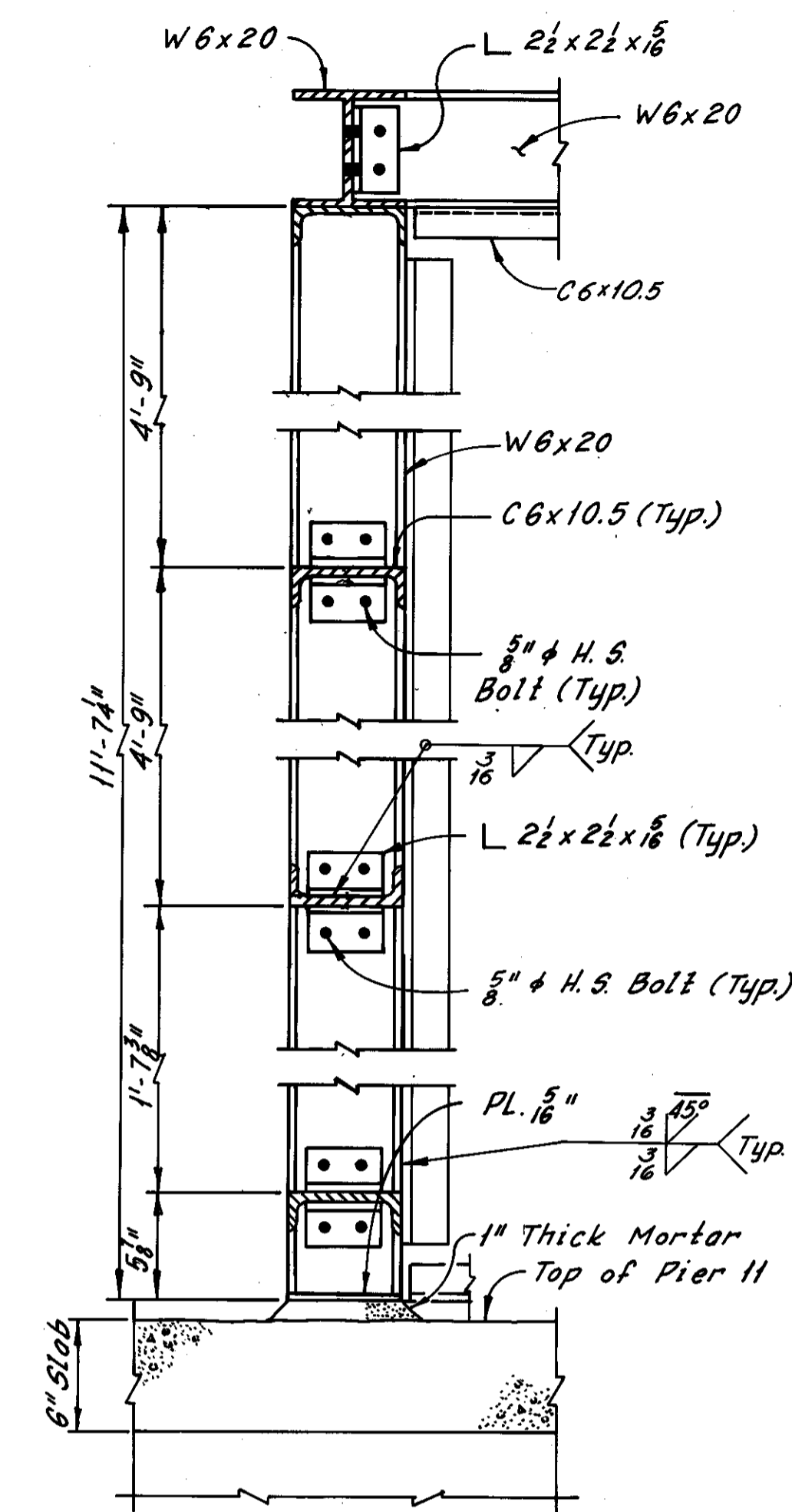
SECTION A-A  
(Roofing and Siding not shown)



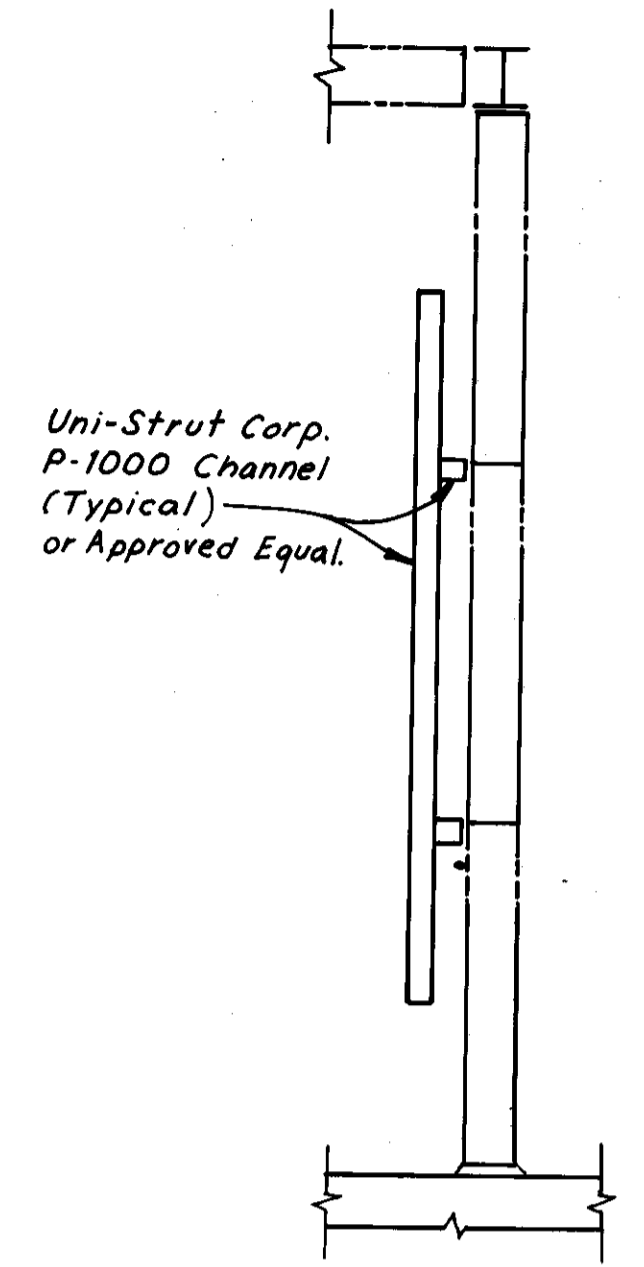
SECTION B-B  
(Roofing and Siding not shown)



SECTION C-C  
(Roofing and Siding not shown)



SECTION D-D  
(Roofing and Siding not shown)



SECTION E-E

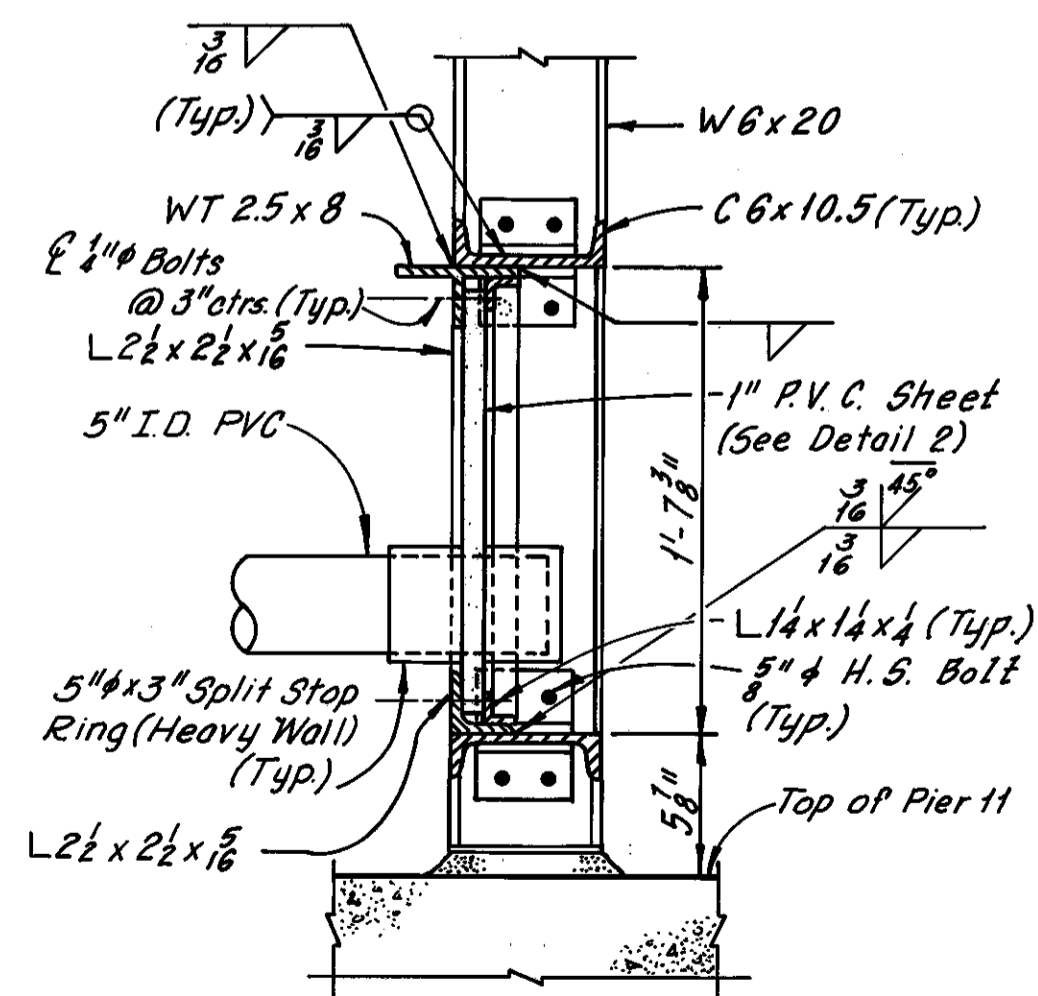
NOTE:  
CONTRACTOR SHALL BOLT ONE (1) 6'-0" LONG, "12 GAUGE ALUMINUM P-1000 CHANNEL," CENTERED ON EACH HORIZONTAL C6 X 10.5 MANHOLE WALL FRAMING MEMBER.

CONTRACTOR SHALL BOLT TWO (2) 8'-0" LONG, "12 GAUGE ALUMINUM P-1000 CHANNELS, VERTICALLY TO THE HORIZONTAL P-1000 CHANNELS.

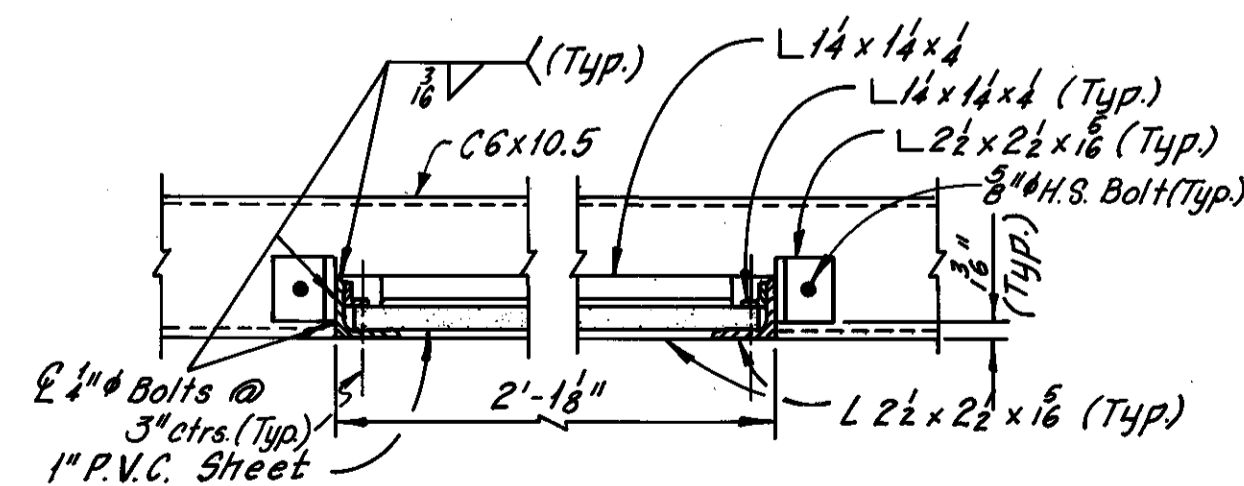
CONTRACTOR SHALL INSTALL THE SAME NUMBER OF RACKS, HOOKS AND INSULATORS AS CALLED FOR IN NEW CONCRETE MANHOLES. RACKS SHALL BE MOUNTED ON VERTICAL 12 GAUGE ALUMINUM P-1000 CHANNELS, ALLOWING FOR BOTH HORIZONTAL AND VERTICAL ADJUSTMENT.

FOR LOCATION OF SECTIONS A-A THRU D-D, F-F AND G-G, SEE SHEET 7087-20.  
FOR CABLE SUPPORT DETAILS, SEE SHEET 7087-31.

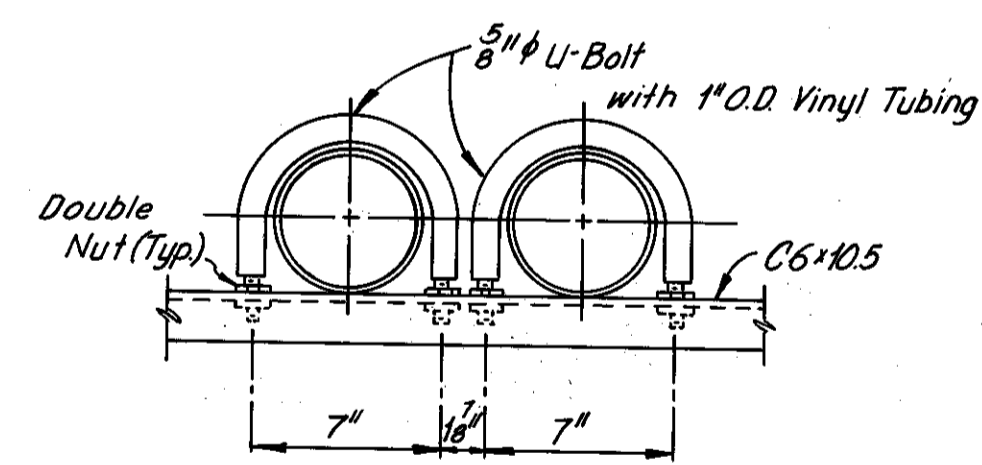
MULTAFRAME CO. SHALL BE CONSIDERED AS AN ACCEPTABLE ALTERATE WHEREVER REFERENCE IS MADE TO UNI-STRUT CORP. P-1000 CHANNEL OR P-2645 (FOR 15 KV CABLE).



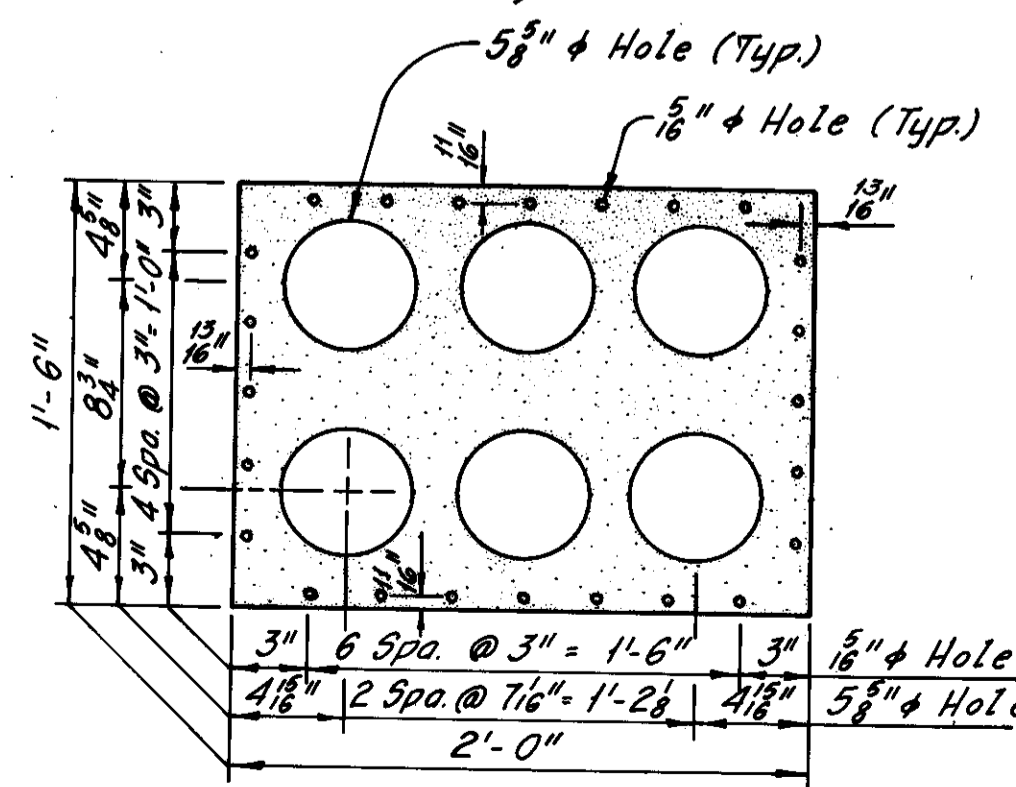
SECTION F-F



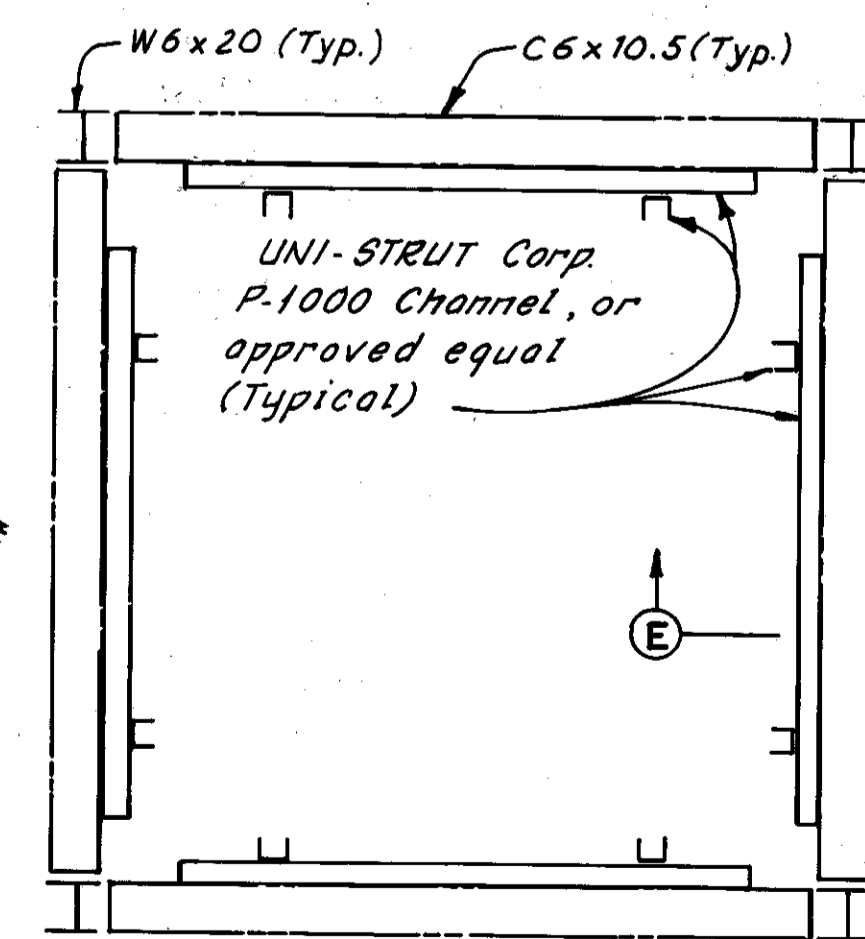
SECTION G-G



VIEW H-H  
(Cable Clamp not shown)



DETAIL 2



PLAN  
MANHOLE 67-85 CABLE

SUPPORT DETAILS

REVISION	DATE	DESCRIPTION	BY	APP'D

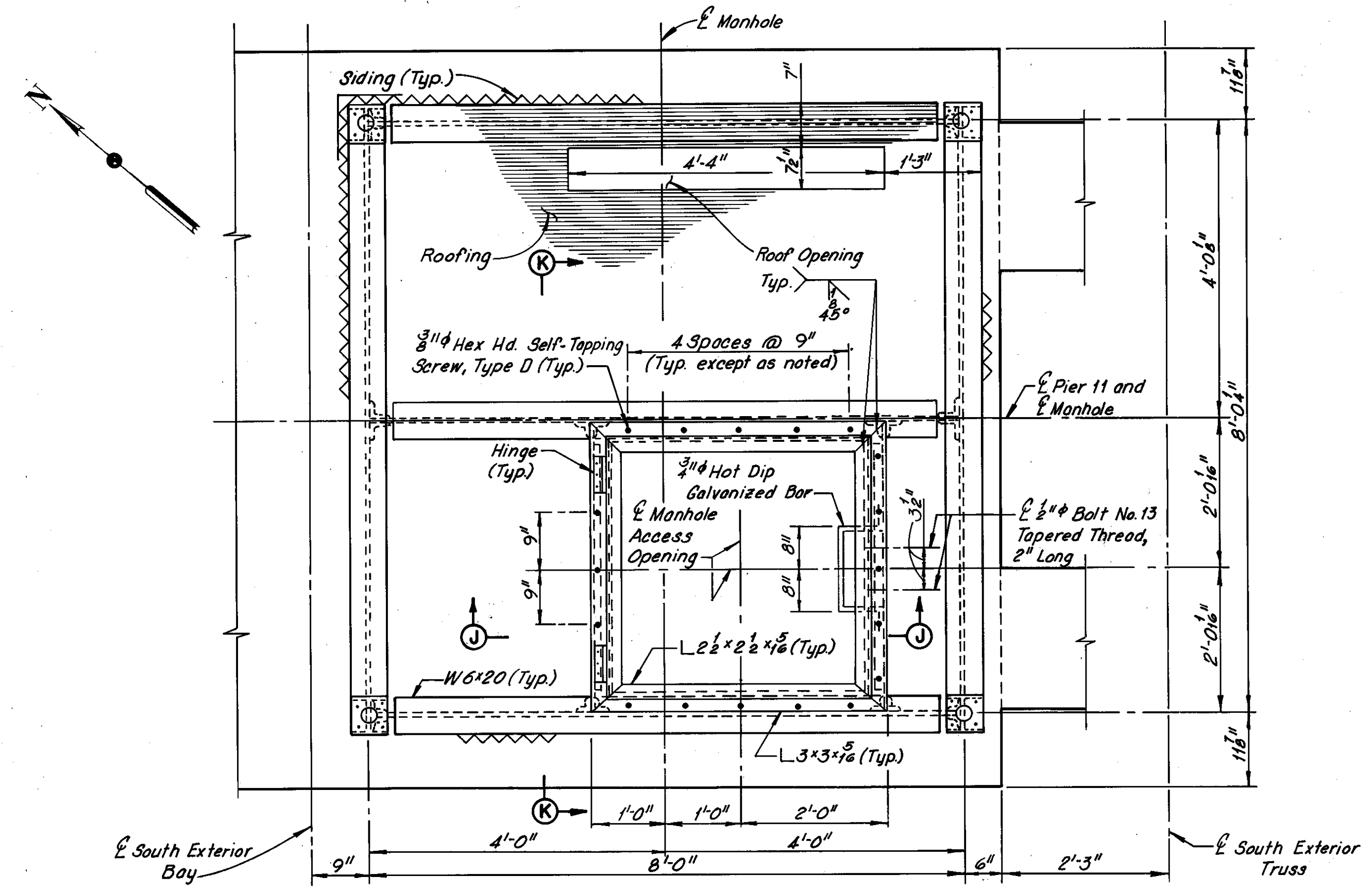
DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND  
MANHOLE 67-85 DETAILS

DRAWN BY [Signature]	SCALE	DRAWING NUMBER
7087-21		
CH'KD BY [Signature]	DATE	

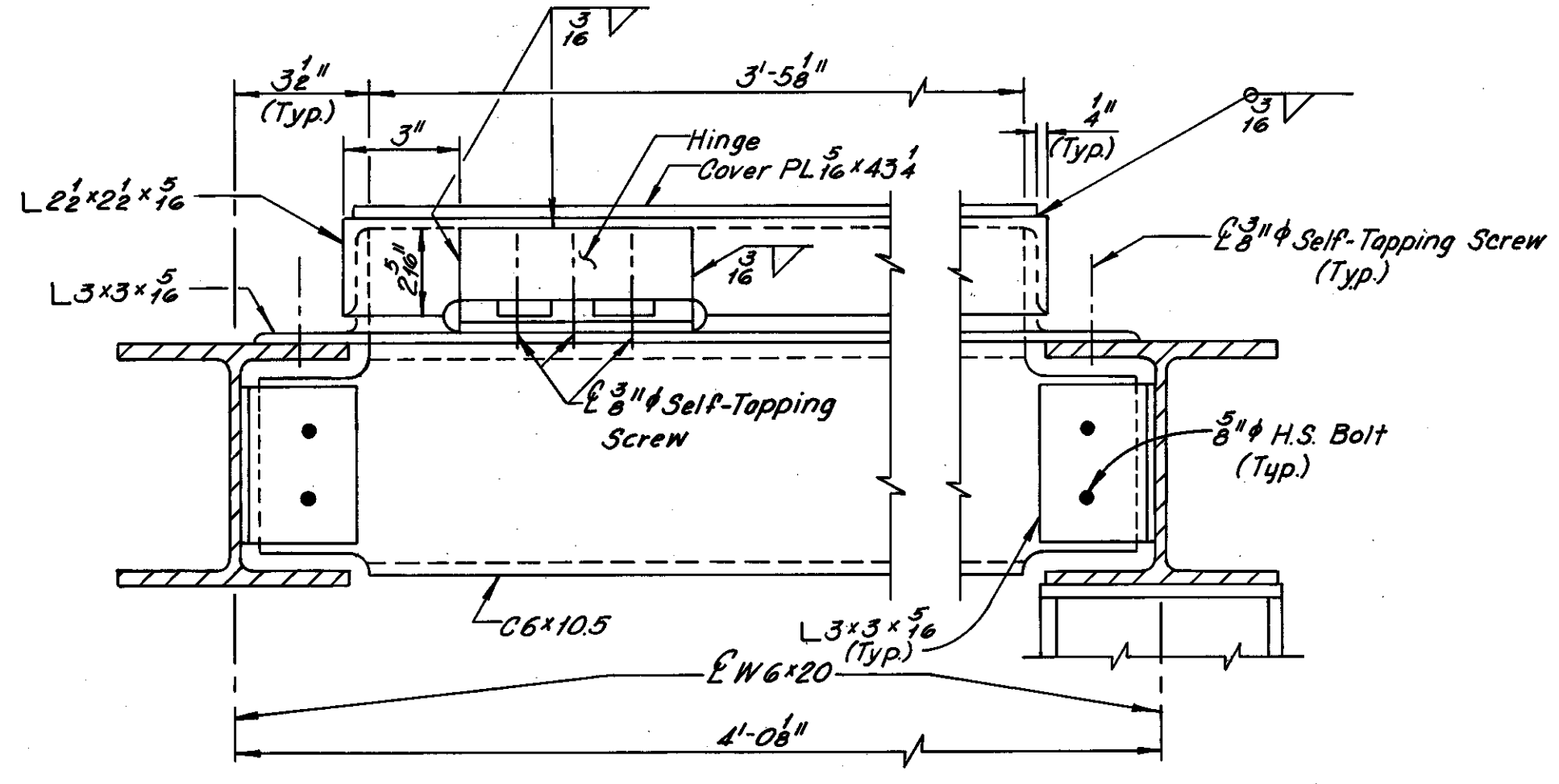
FHWA REGION	STATE	PROJECT
5	OHIO	

54  
185

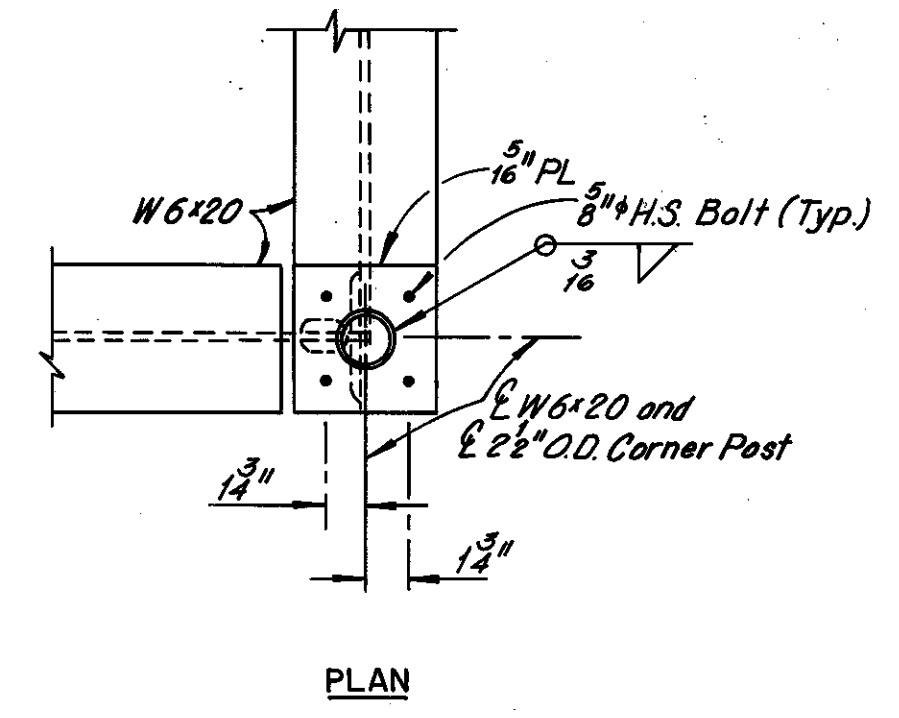
CUYAHOGA COUNTY  
CUY-10-16.23



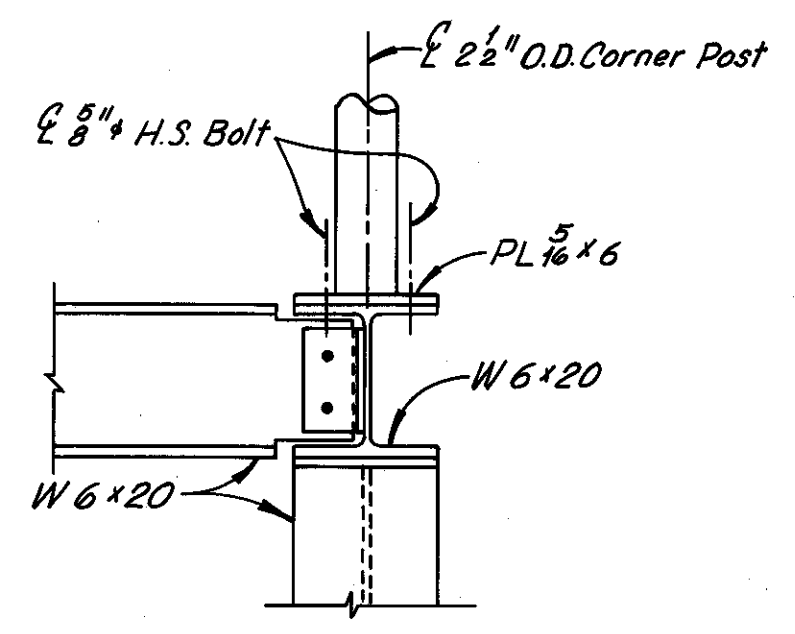
FRAMING PLAN - ROOF  
(Cover Plate, Ladder and Fence not shown)



SECTION K - K

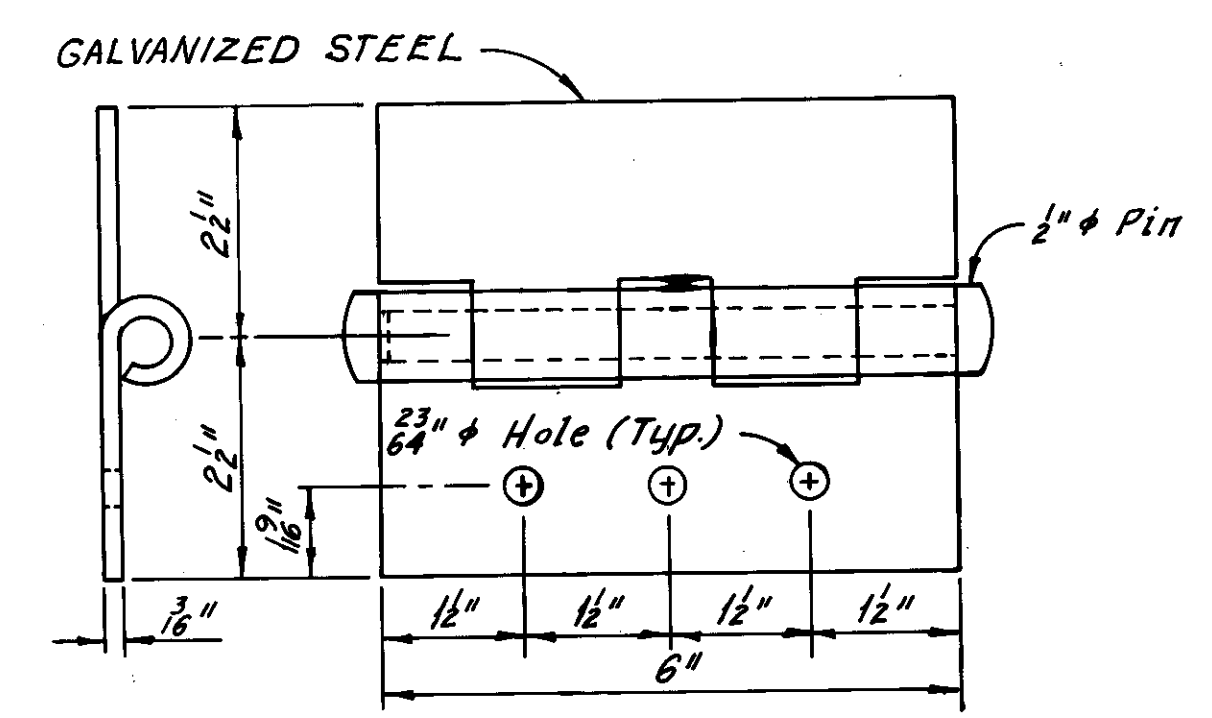


PLAN

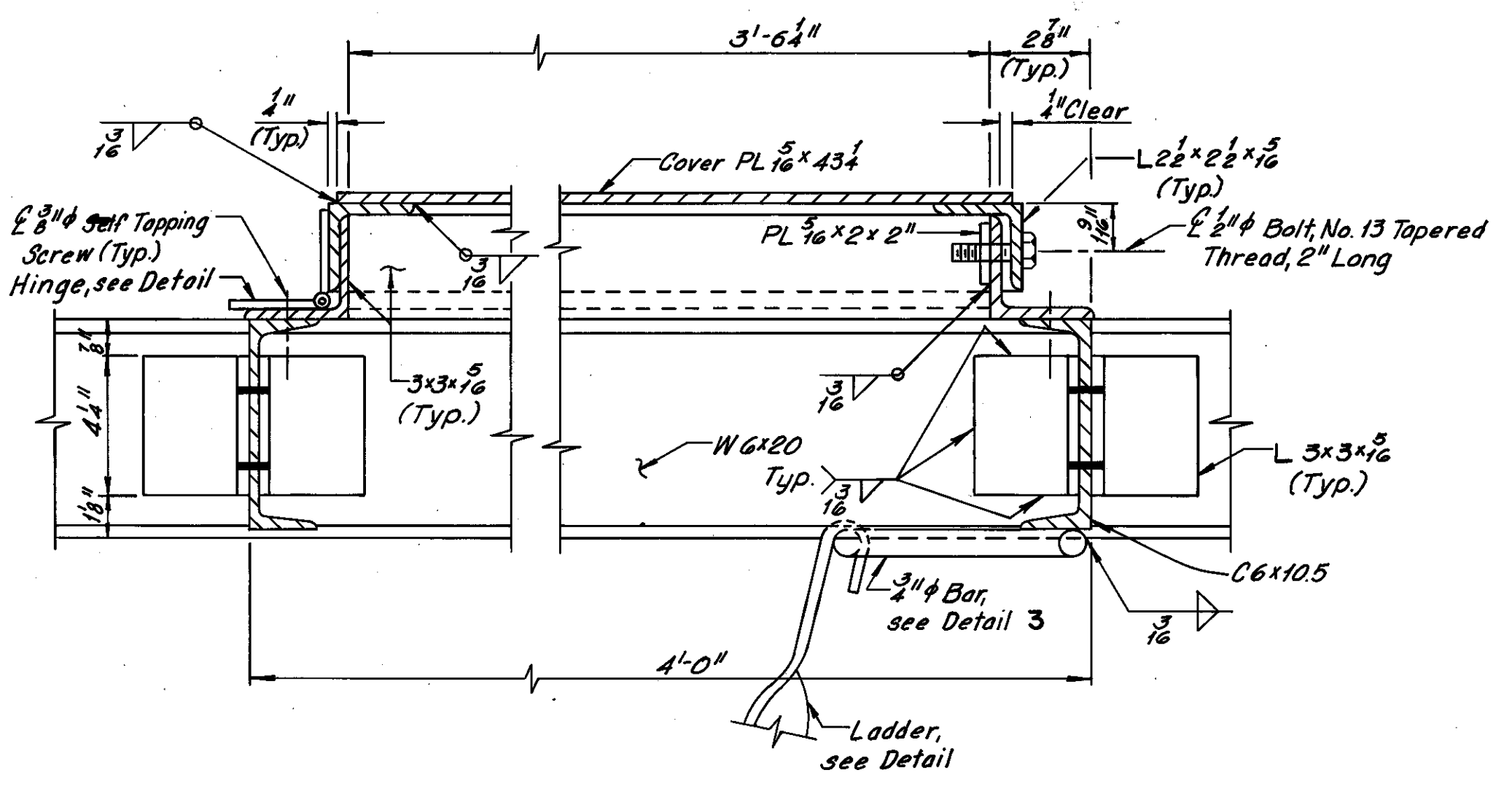


ELEVATION

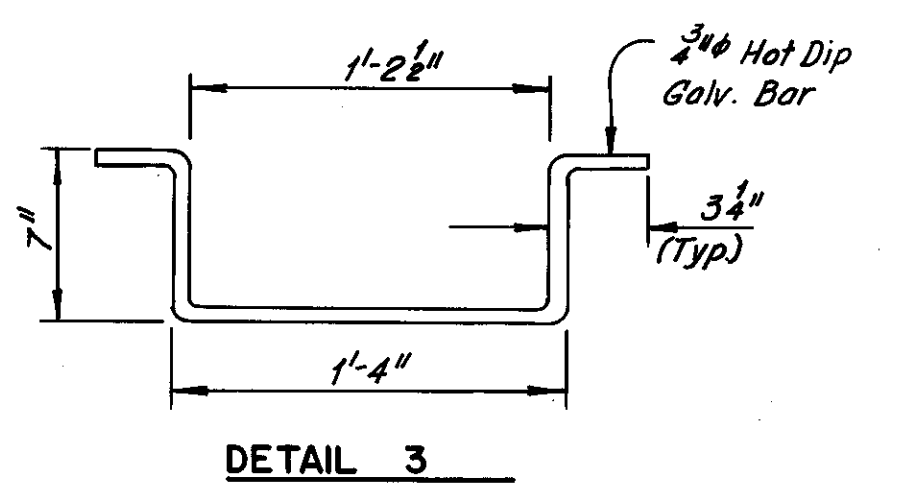
FENCE CORNER POST DETAILS  
(Roofing and Siding not shown)



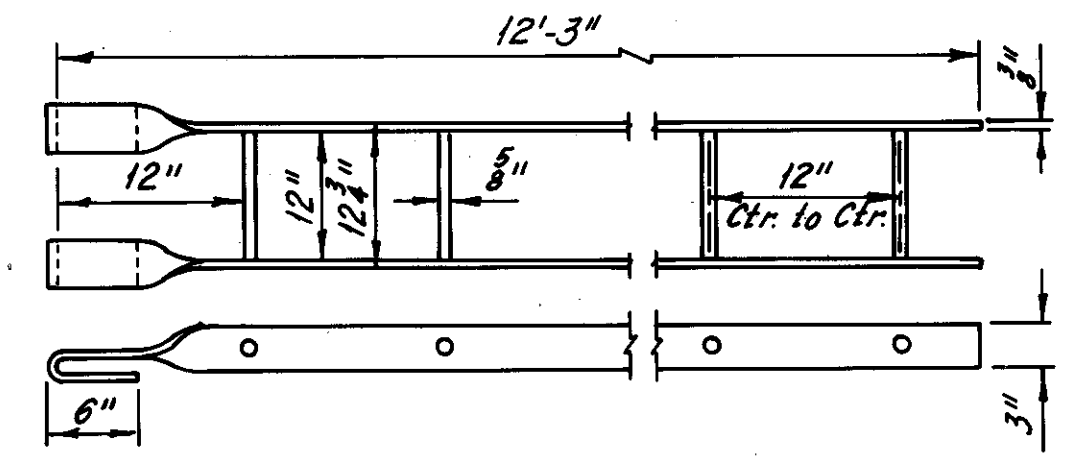
HINGE DETAIL



SECTION J - J



DETAIL 3



LADDER DETAIL

(Ladder shall be Hot-dip Galvanized)

MADE BY KV DATE 5-2-79 **Howard, Needles, Tammen & Bergendoff**  
 TRACED DATE 5-2-79 CONSULTING ENGINEERS  
 CHECKED BY EEF DATE 6-8-79 CLEVELAND, OHIO

**HNTB**

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
MANHOLE 67-85 ROOF DETAILS				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-22		
CHK'D BY	DATE			

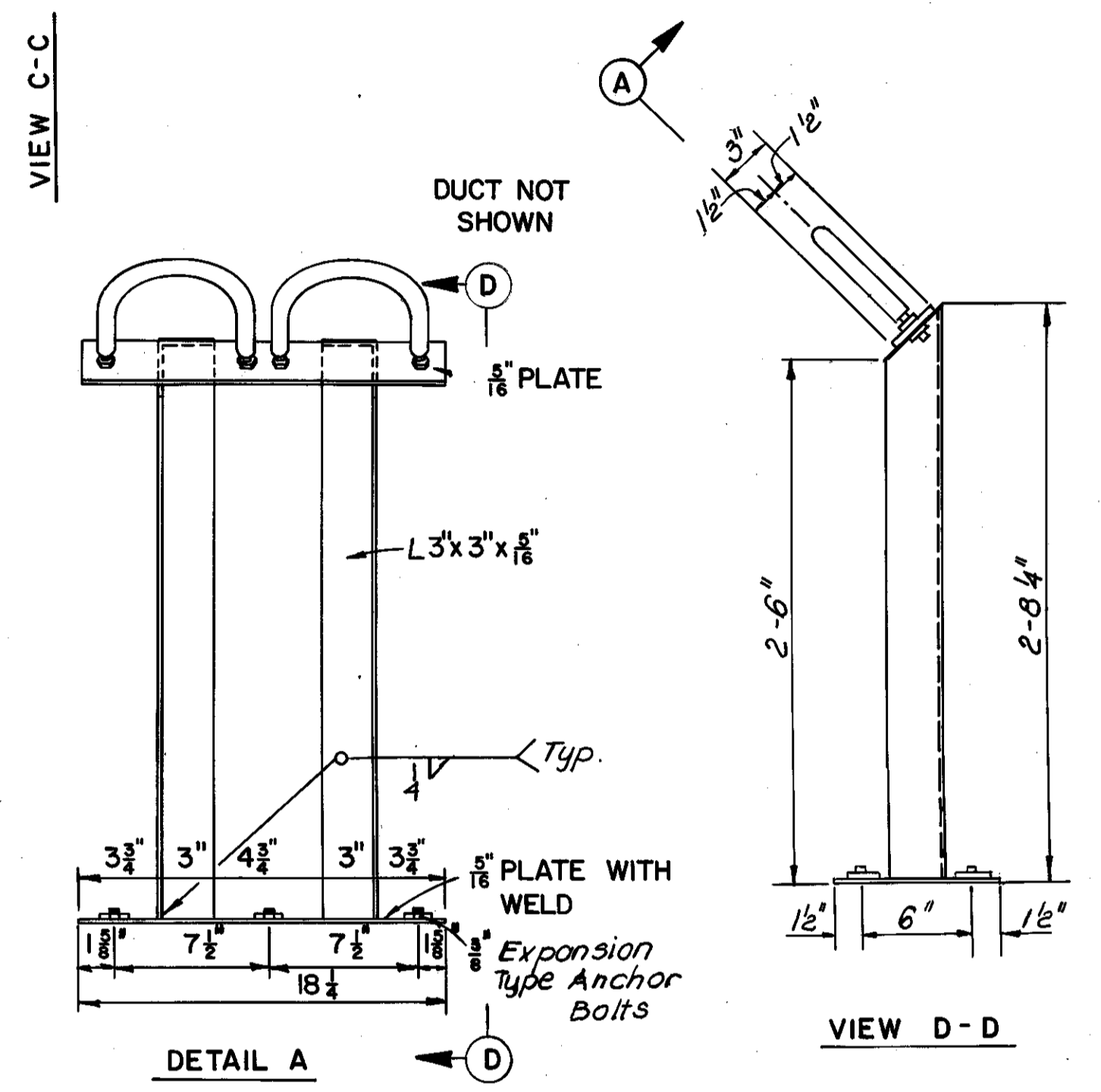
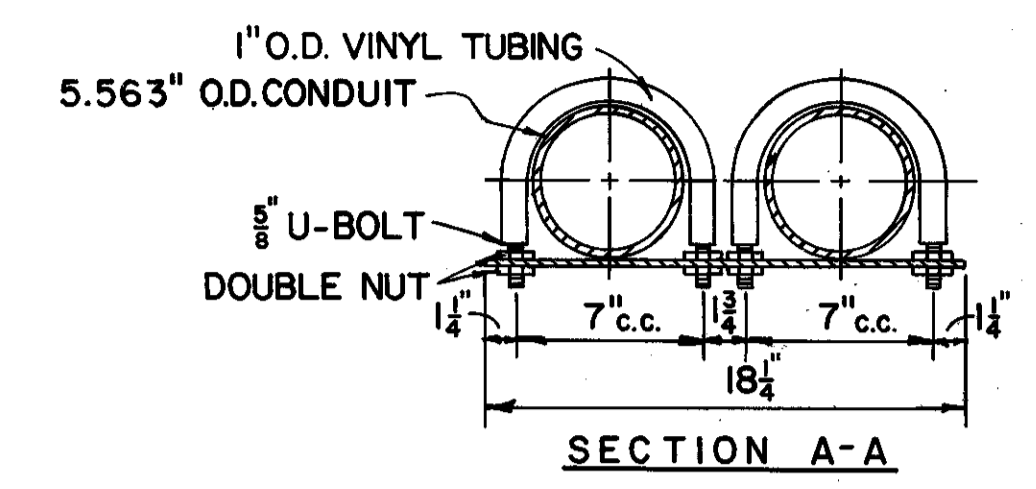
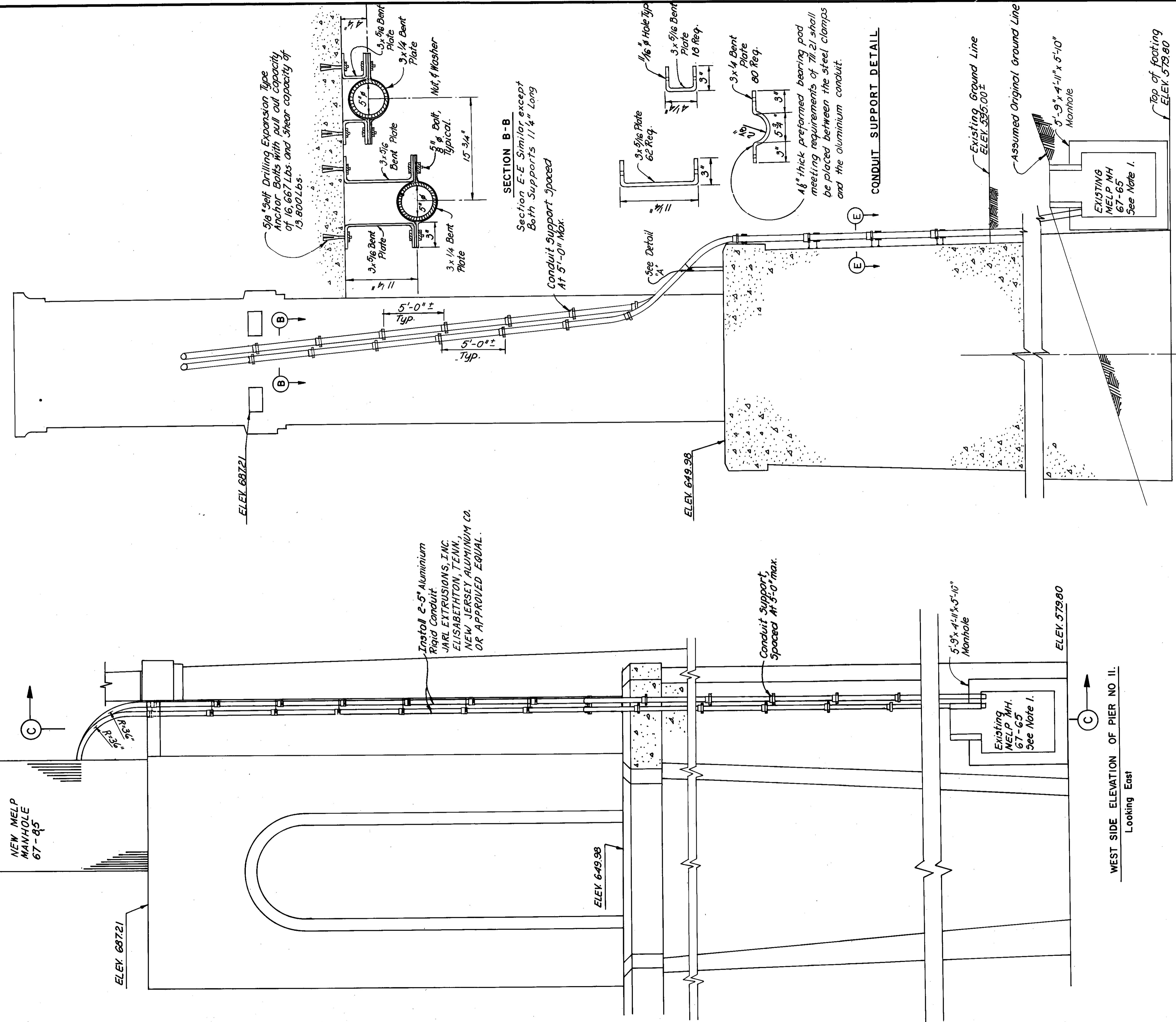
Rev. 12-27-79

LORAIN - CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT
5	OHIO	

55  
185

CUYAHOGA COUNTY  
CUY-10-16.23



- Notes:
- 1) The location shown for existing MELP Manhole 67-65 is only approximate. The manhole has had an estimated 5ft to 6ft of earth placed over the cover to create a parking area. MELP will assume responsibility for removing earth necessary to gain access to the inside of the manhole.
  - 2) All Aluminium Rigid Conduit shall meet Federal Specification number WW-C-0054C (56A-F55) All conduit shall be joined using couplings having American Standard threads (8 threads per inch).
  - 3) All steel components shall be either hot dip galvanized as defined in ASTM A-123 or A-588 Structural Steel.
  - 4) For Conduit details at MELP Manhole 67-85, See sheets 7087-20 and 7087-21.
  - 5) All bends in conduit shall have 36° Radius.

REVISION	DATE	DESCRIPTION	BY	APP'D

**DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND**

**CONDUIT DETAILS AT PIER #11**

DRAWN BY	SCALE	DRAWING NUMBER
CHKO BY	DATE	7087-23

MADE PK DATE 5-2-79 **Howard, Needles, Tammen & Bergendoff**  
 TRACED DATE 2-8-79 CONSULTING ENGINEERS  
 CHECKED DATE 2-8-79 CLEVELAND, OHIO

**HNTB**

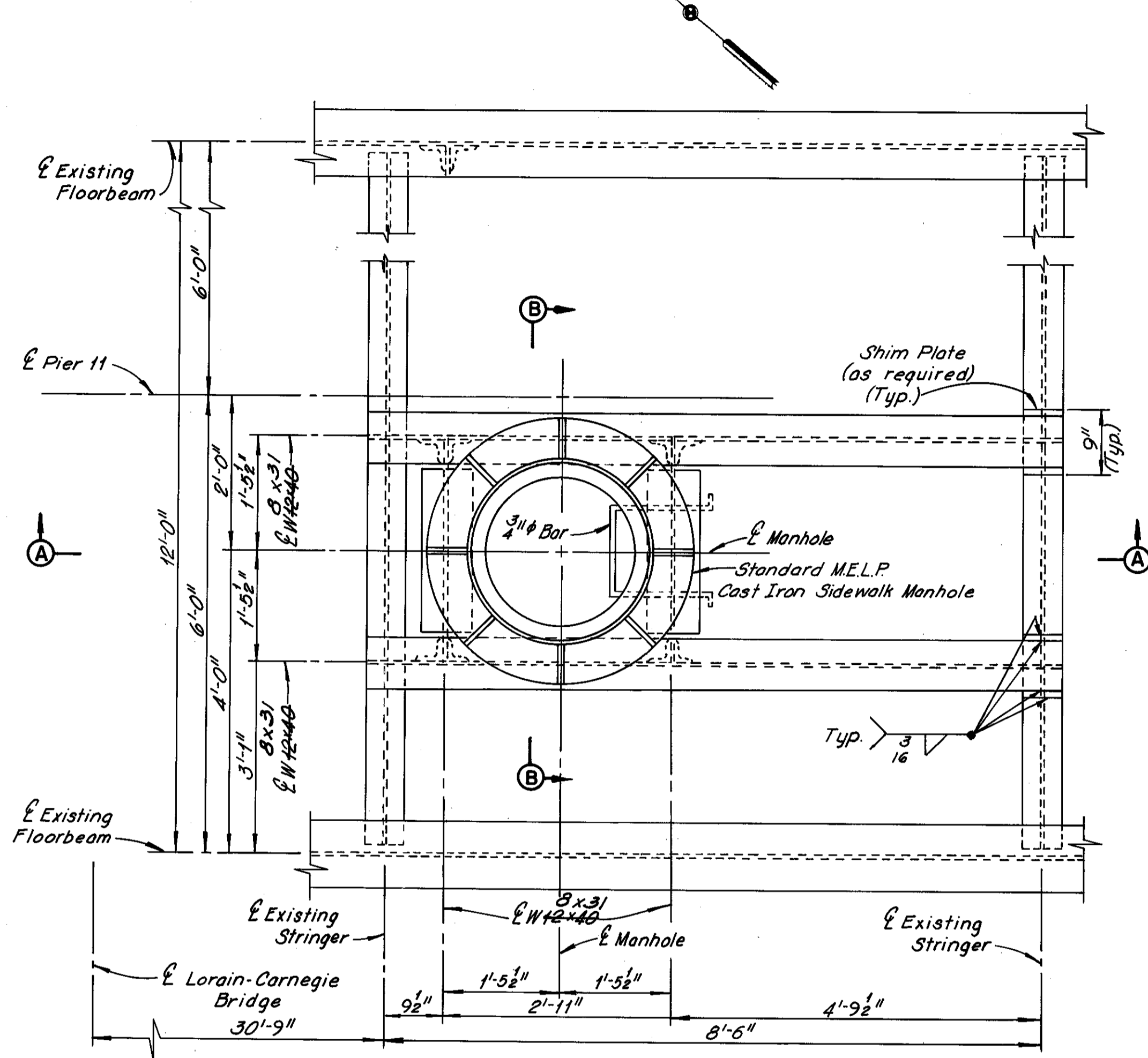
Rev. 12-31-79



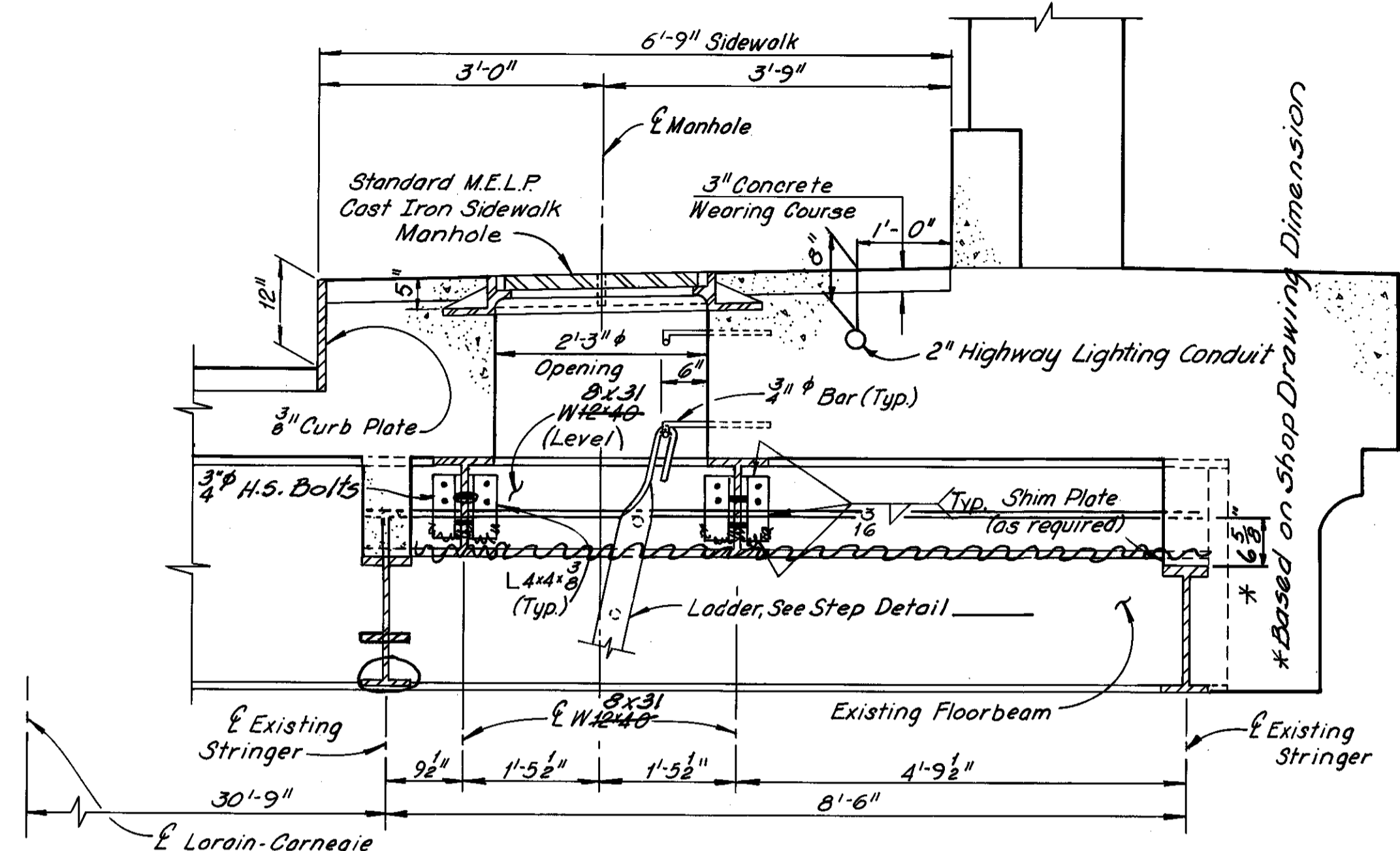
FHWA REGION	STATE	PROJECT
5	OHIO	

56  
185

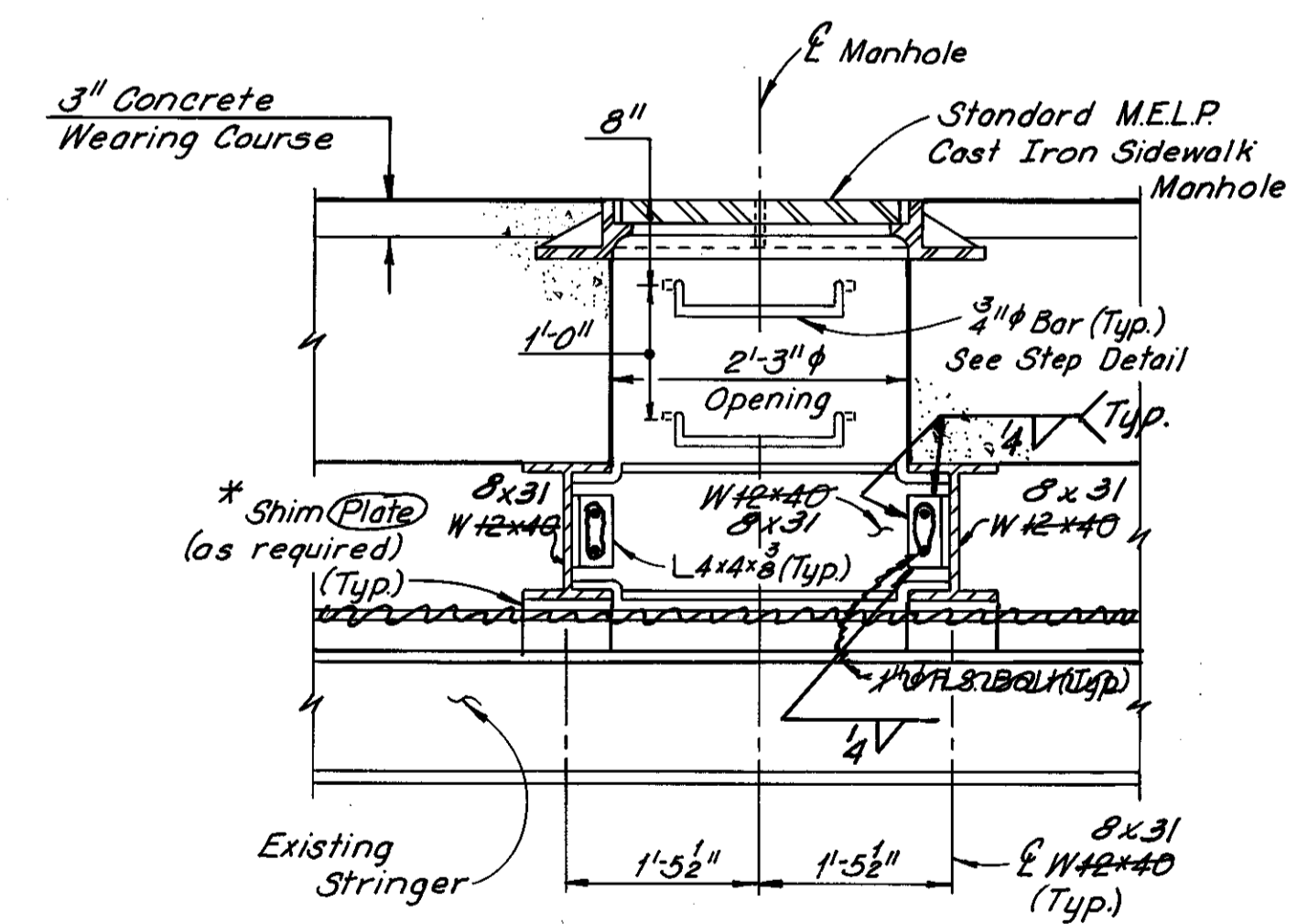
CUYAHOGA COUNTY  
CUY-10-16.23



PLAN OF M.E.L.P. MANHOLE THRU SIDEWALK  
(Sidewalk and Manhole Cover not shown for clarity)

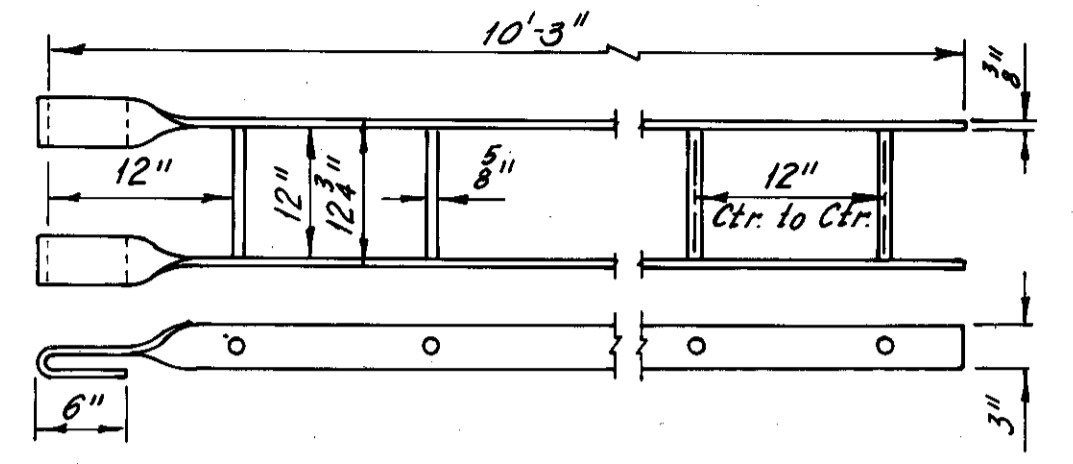


SECTION A - A

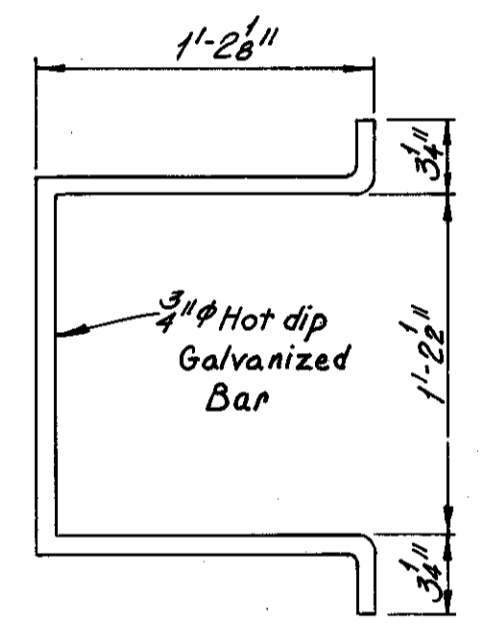


SECTION B - B

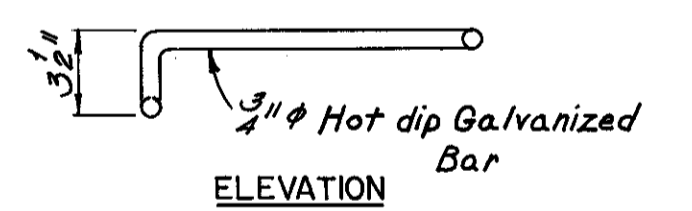
\* shim height is  $6\frac{5}{8}$ "  
Small section of beam is suggested  
Min. web thickness  $\frac{5}{16}$ "



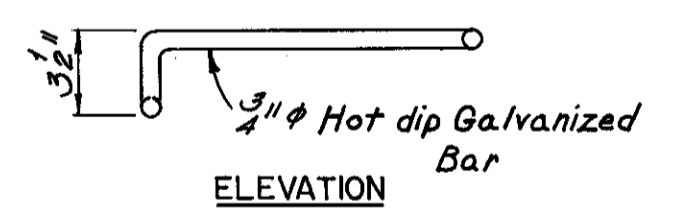
LADDER DETAIL  
(Ladder shall be Hot-dip Galvanized)



PLAN



ELEVATION



STEP DETAIL

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

ACCESS MANHOLE AT PIER #11

DRAWN BY	SCALE	DRAWING NUMBER
		7087 - 24
CHECKED BY	DATE	

MADE PK DATE 5-2-79  
TRACED DATE  
CHECKED EEE DATE 4-2-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

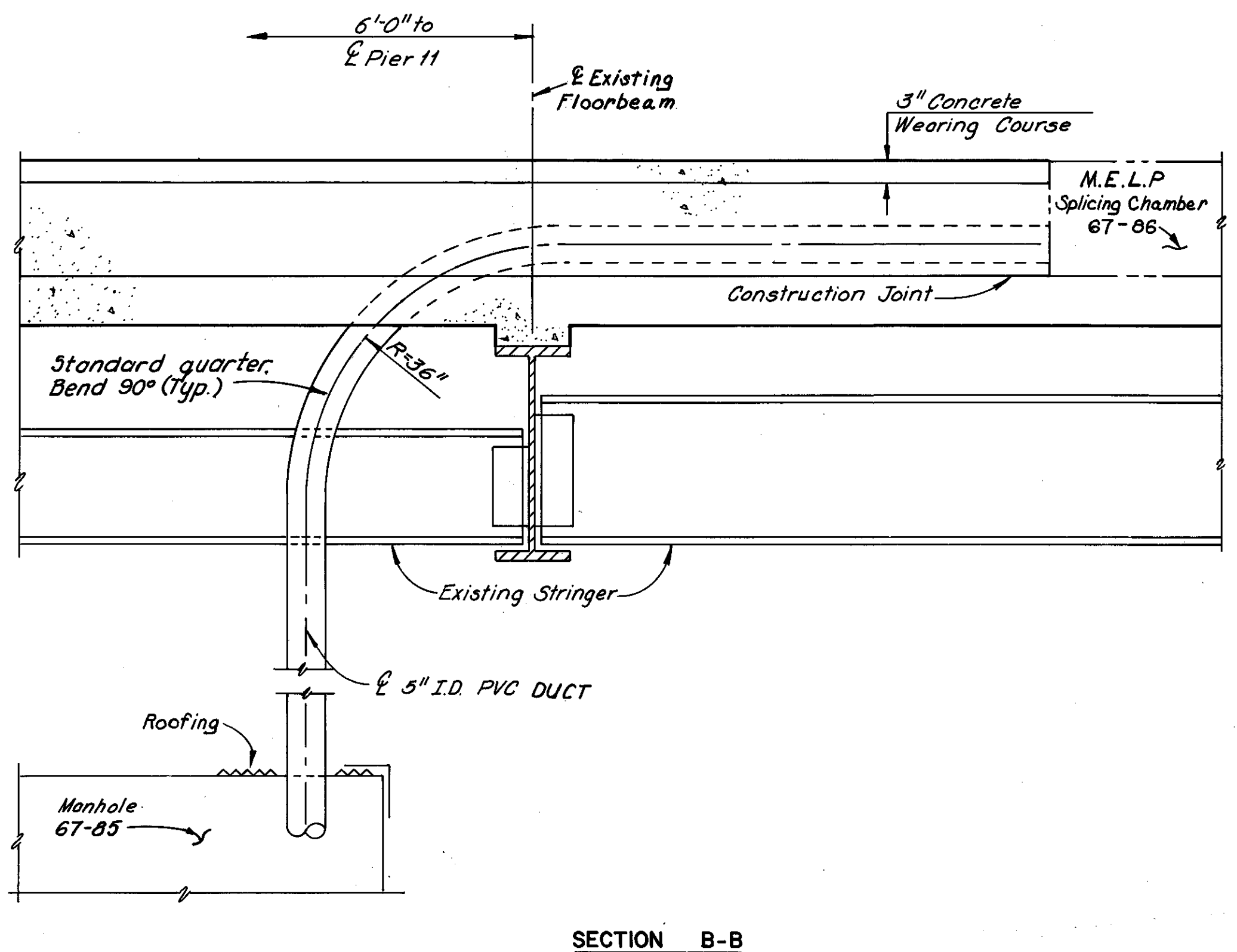
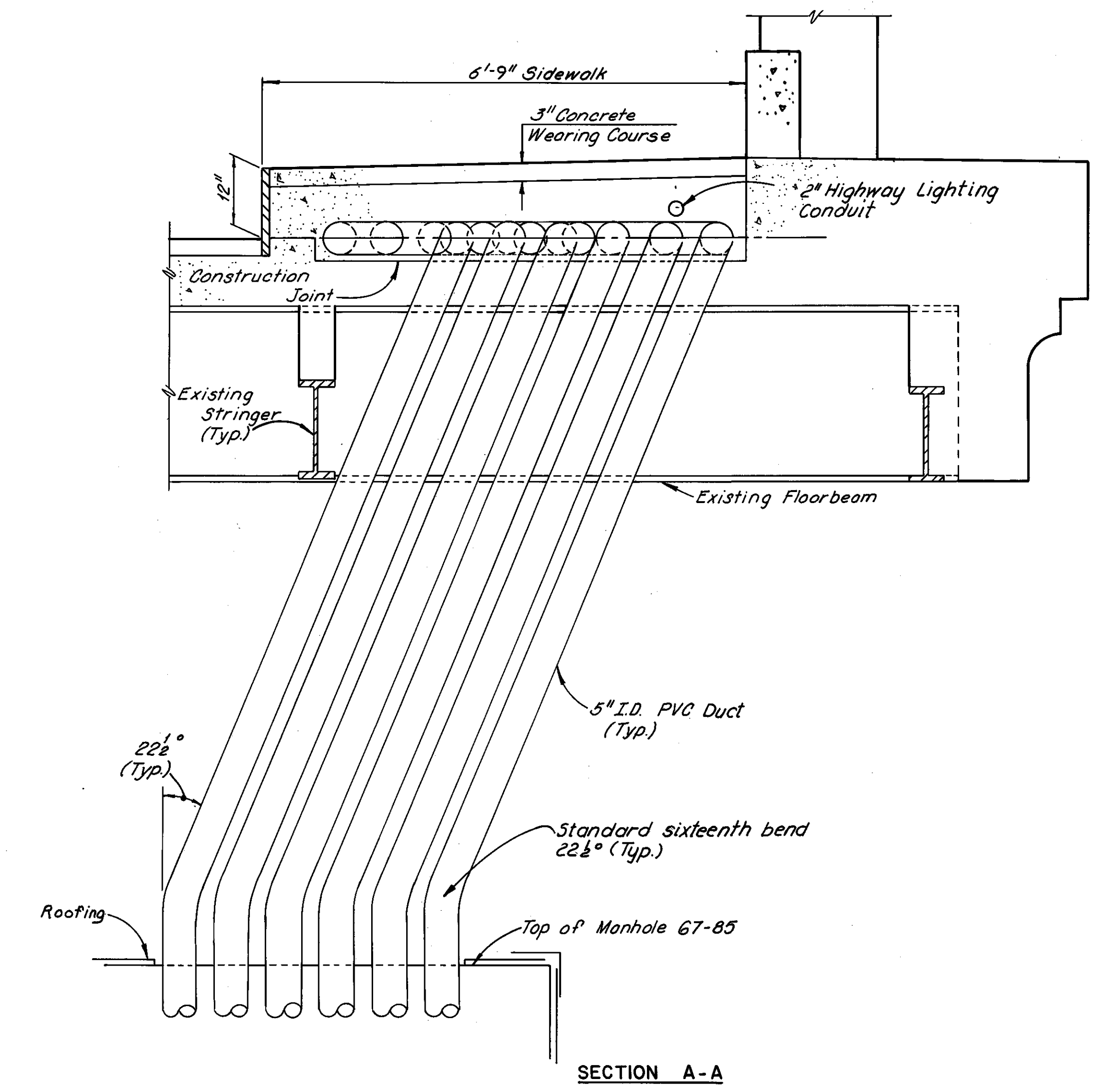
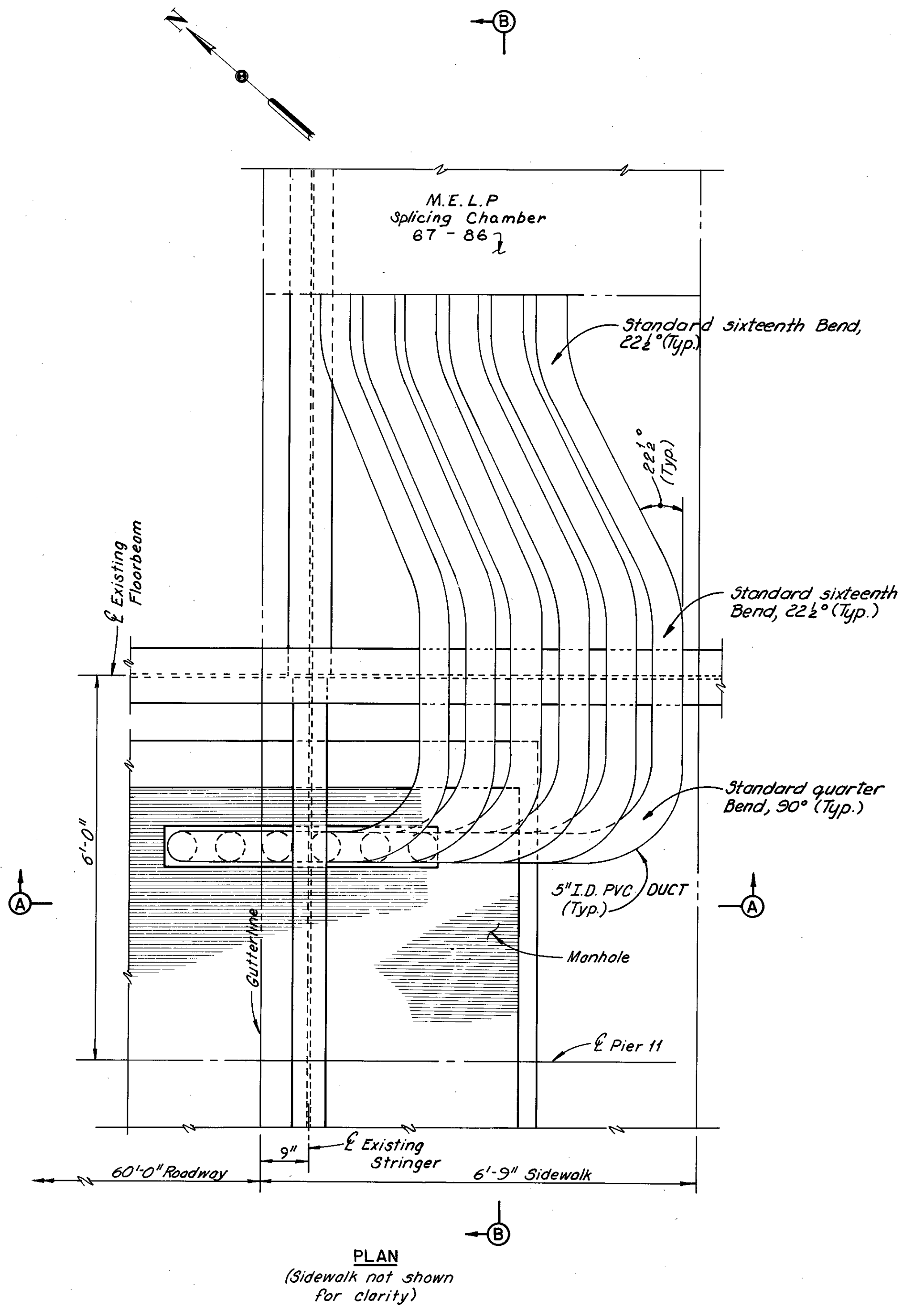
HNTB

Revised 4-6-81

FNWA REGION	STATE	PROJECT
5	OHIO	

57  
185

CUYAHOGA COUNTY  
CUY-10-16.23



NOTE:  
For location of ducts of manhole 67-85, see Sheet 7087-22

MADE K.B.V. DATE 1-27-79  
 TRACED EEF DATE 2-8-79  
 CHECKED EEF DATE 2-8-79  
 SCALE \_\_\_\_\_

Howard, Needles, Tammen & Bergendoff  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**HNTB**

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

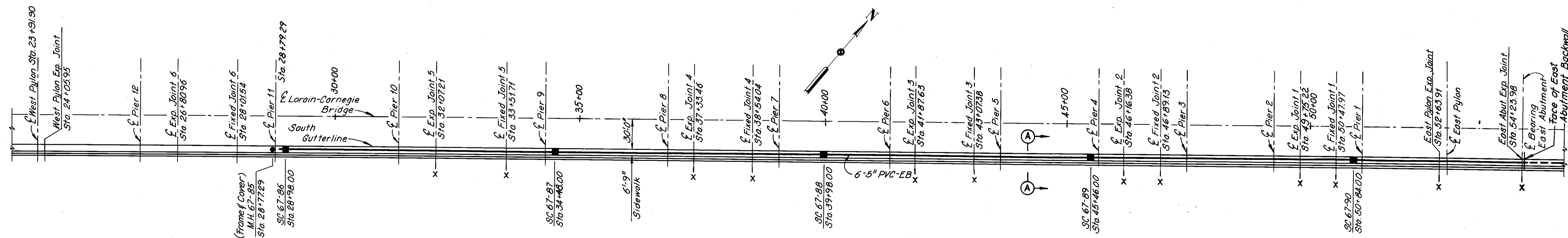
AERIAL DUCT DETAILS AT PIER #11

DRAWN BY _____	SCALE _____	DRAWING NUMBER
CHKD BY _____	DATE _____	7087-25

FHWA REGION	STATE	PROJECT
5	OHIO	

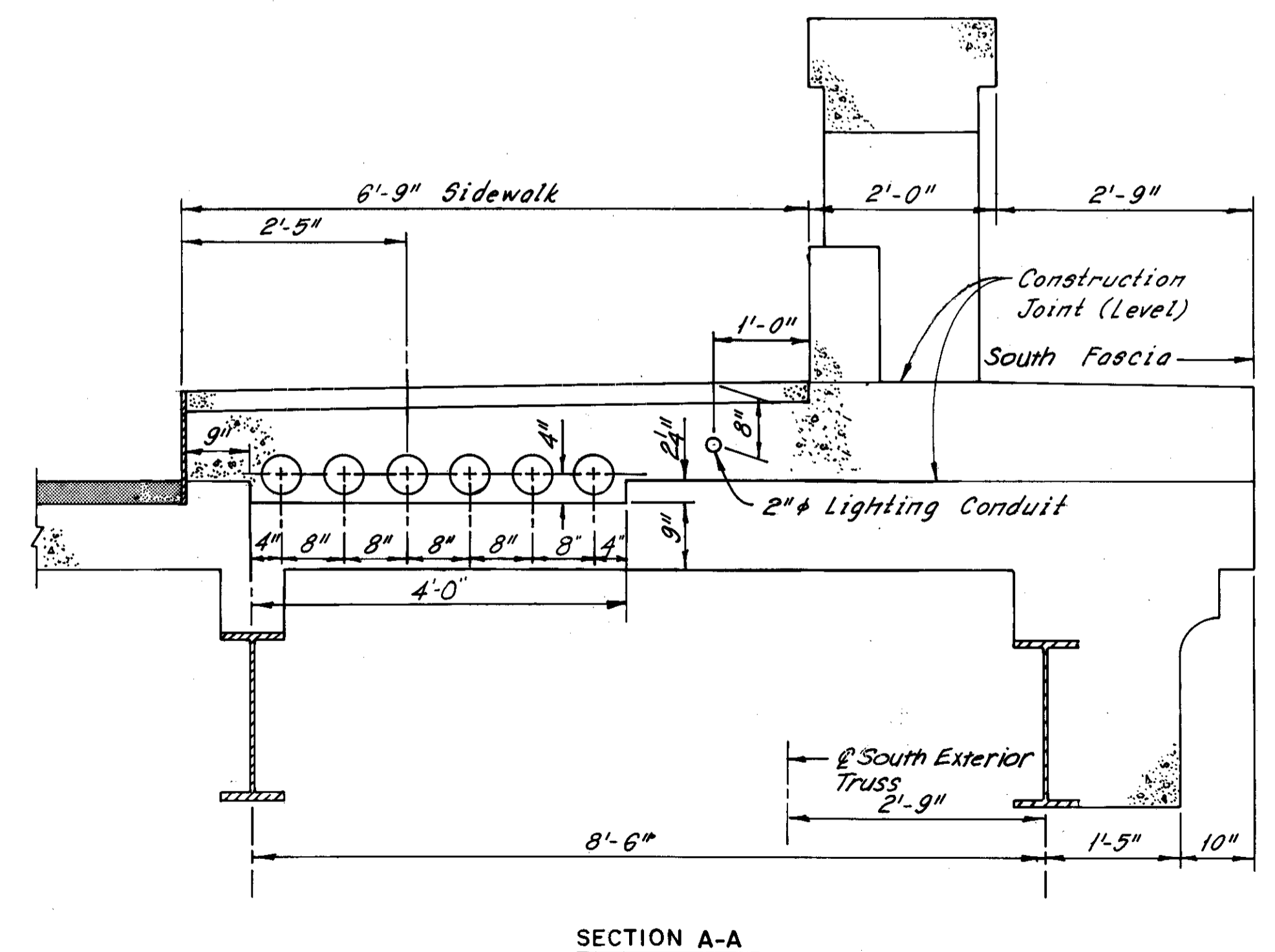
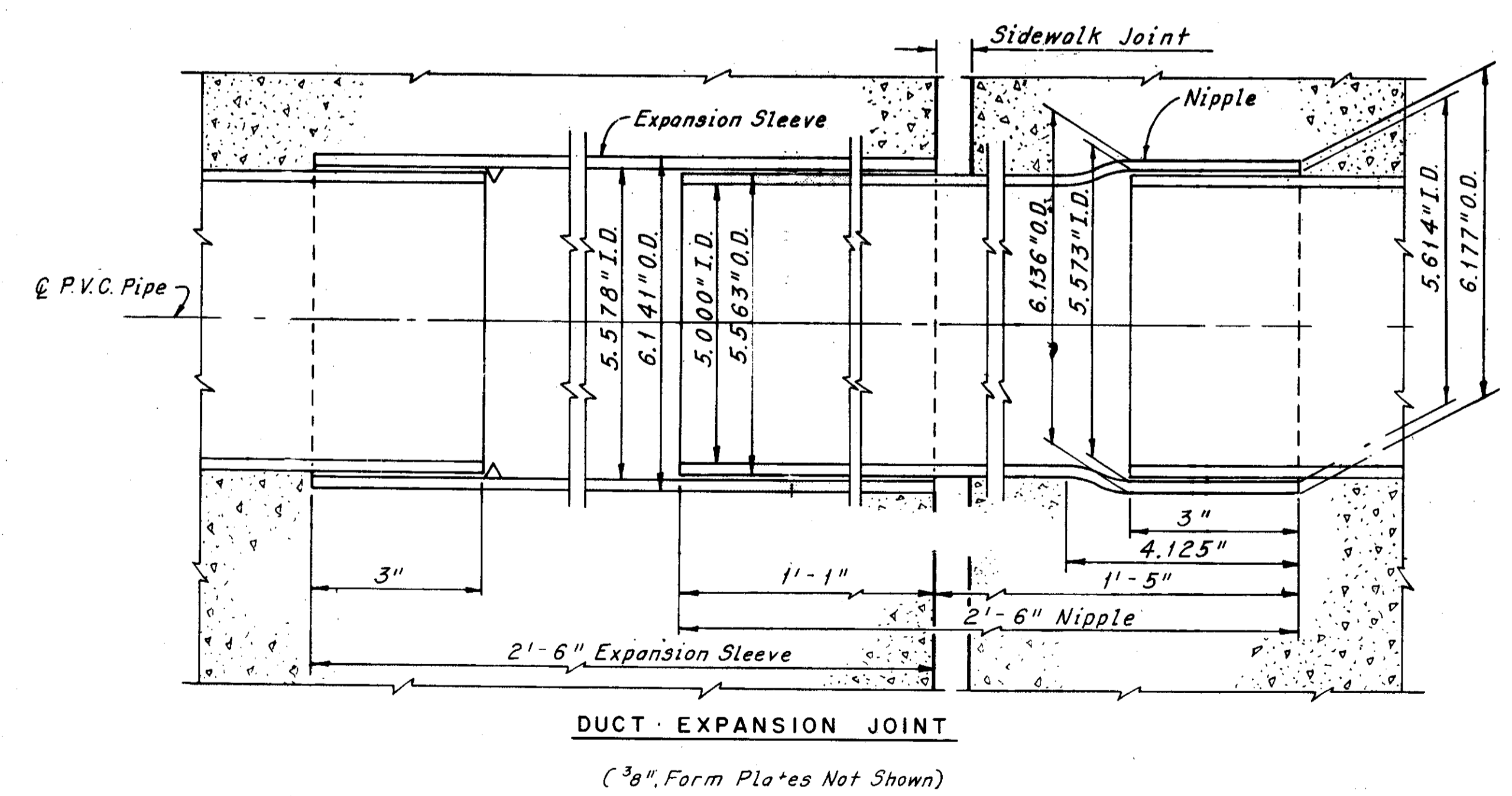
58  
185

CUYAHOGA COUNTY  
CUY-10-16.23



**PLAN**  
Scale: Longitudinal 1" = 100'  
Scale: Transverse 1" = 50'

x Designates open joints in the sidewalk. Six Duct Expansion Joints are required at each location.



**NOTE:**  
THE EXPANSION SLEEVE AND NIPPLE SHALL MEET THE REQUIREMENTS FOR EXPOSED APPLICATION AS DEFINED IN ASTM D-1784 AND SHALL CONTAIN A MINIMUM OF 6% TITANIUM DIOXIDE. EDGES SHALL BE BEVELED AT THE COUPLING BETWEEN THE ENCASED BURIAL DUCTS AND THE EXPANSION JOINTS.

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
SPlicing Chamber & Expansion Joint Location Plan				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-26		
CHECKED BY	DATE			

MADE *KBY* DATE *1-30-79* **Howard, Needles, Tammen & Bergendoff**  
TRACED DATE *2-2-79* CONSULTING ENGINEERS  
CHECKED *EEF* DATE *2-2-79* CLEVELAND, OHIO  
SCALE

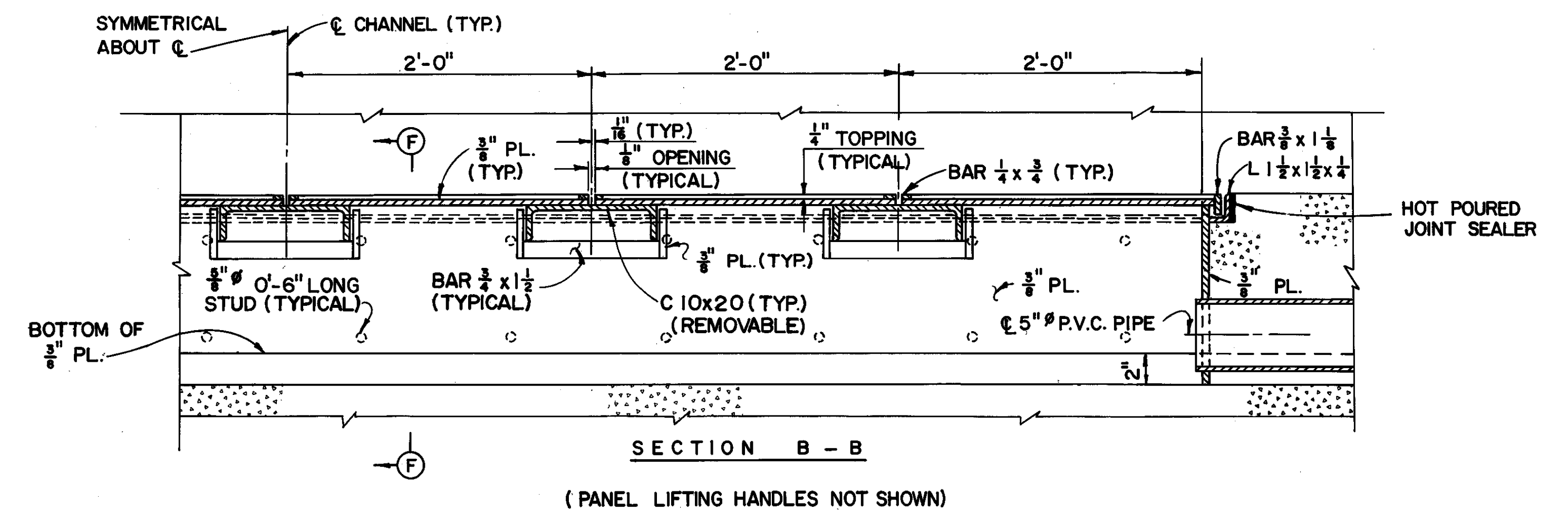
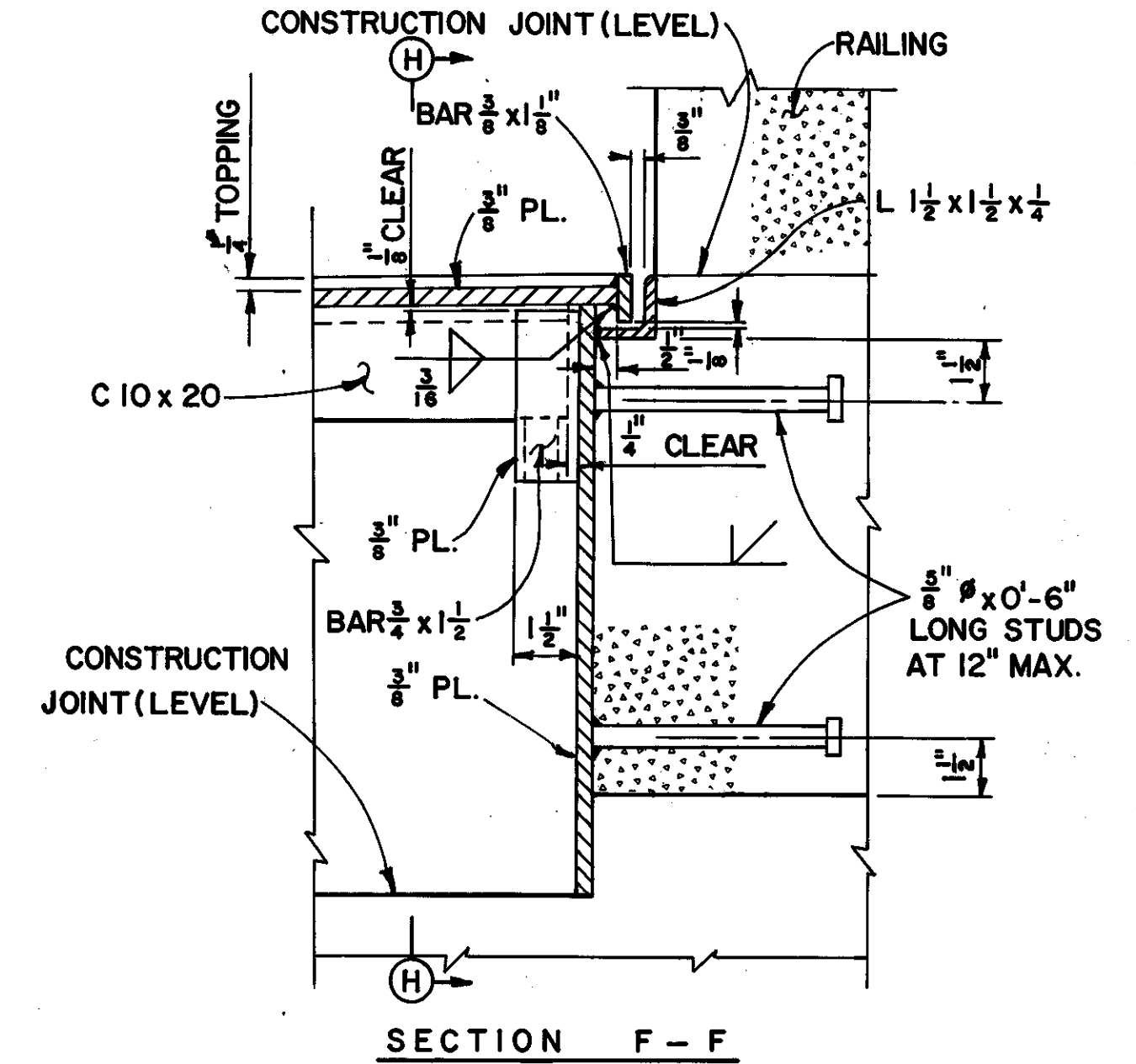
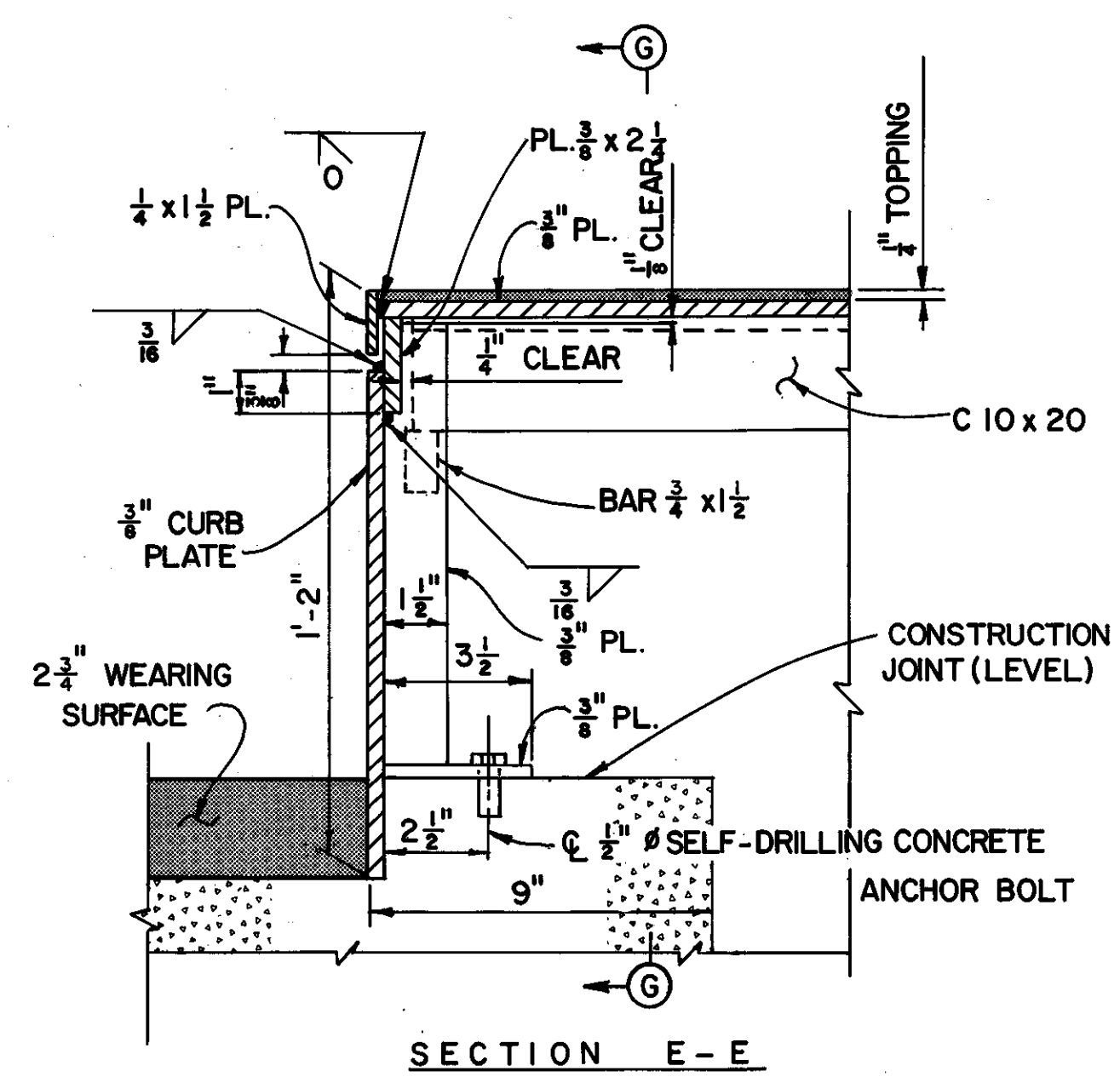
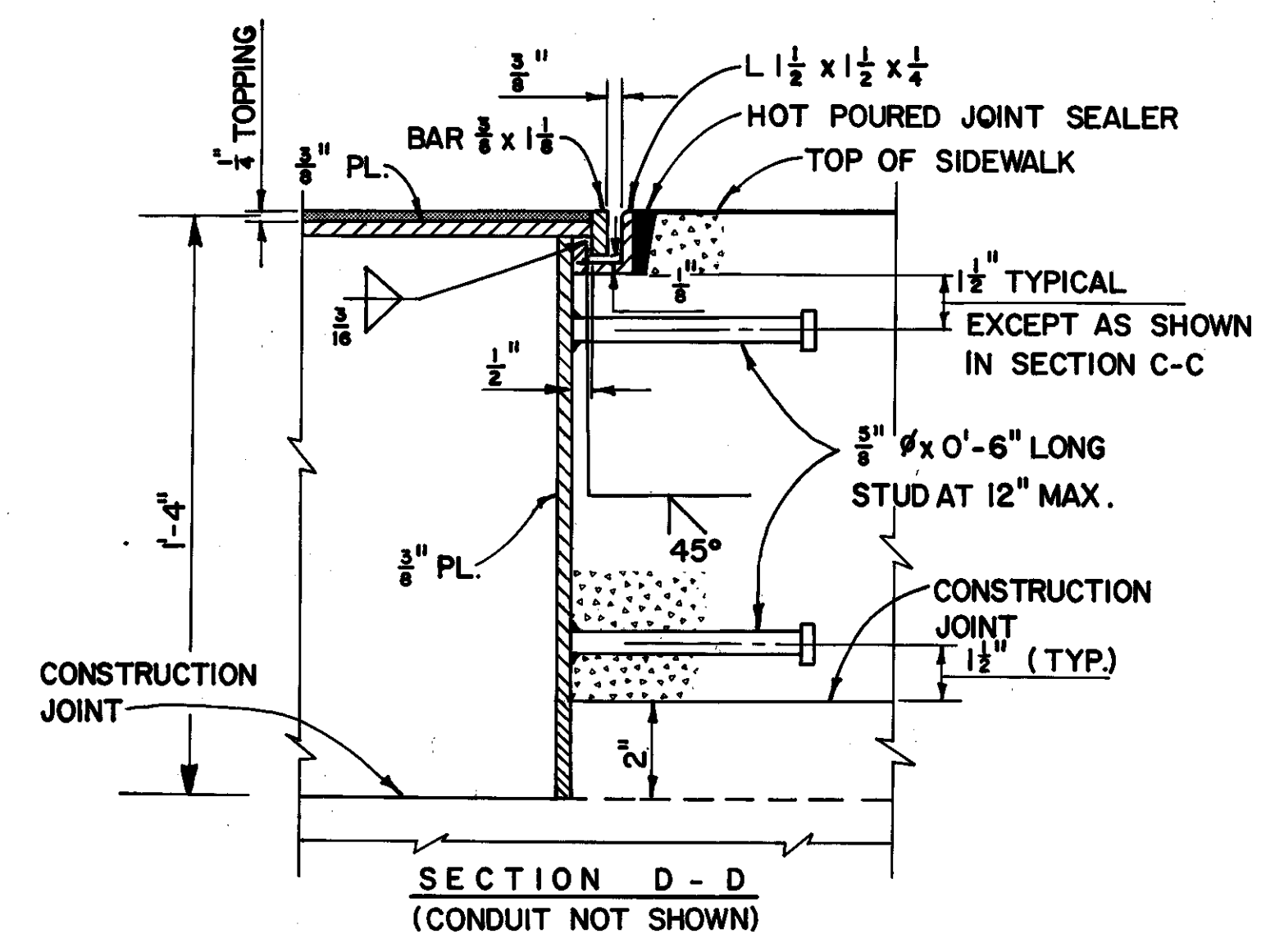
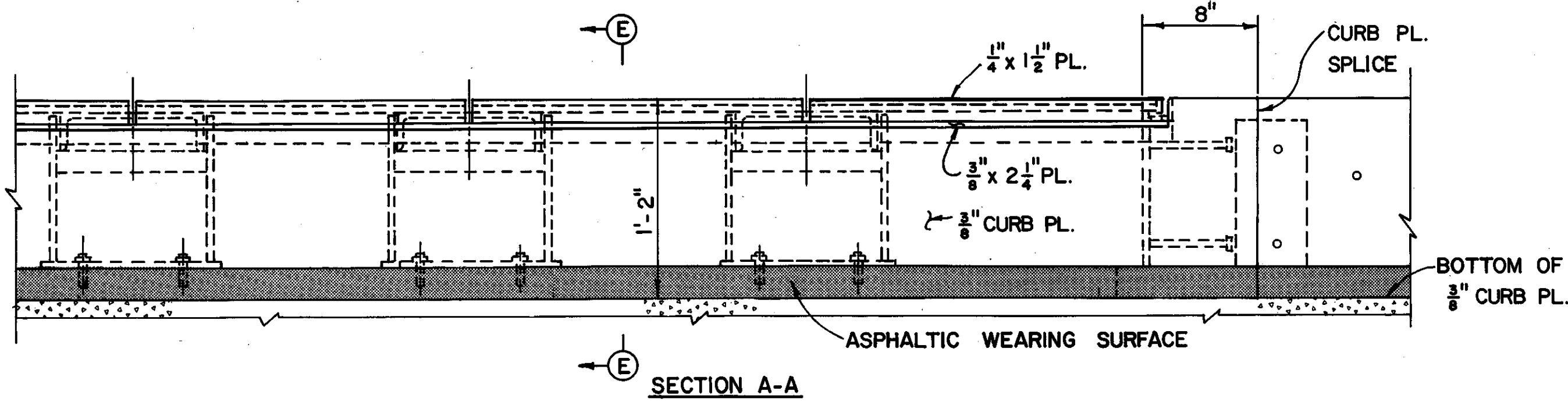
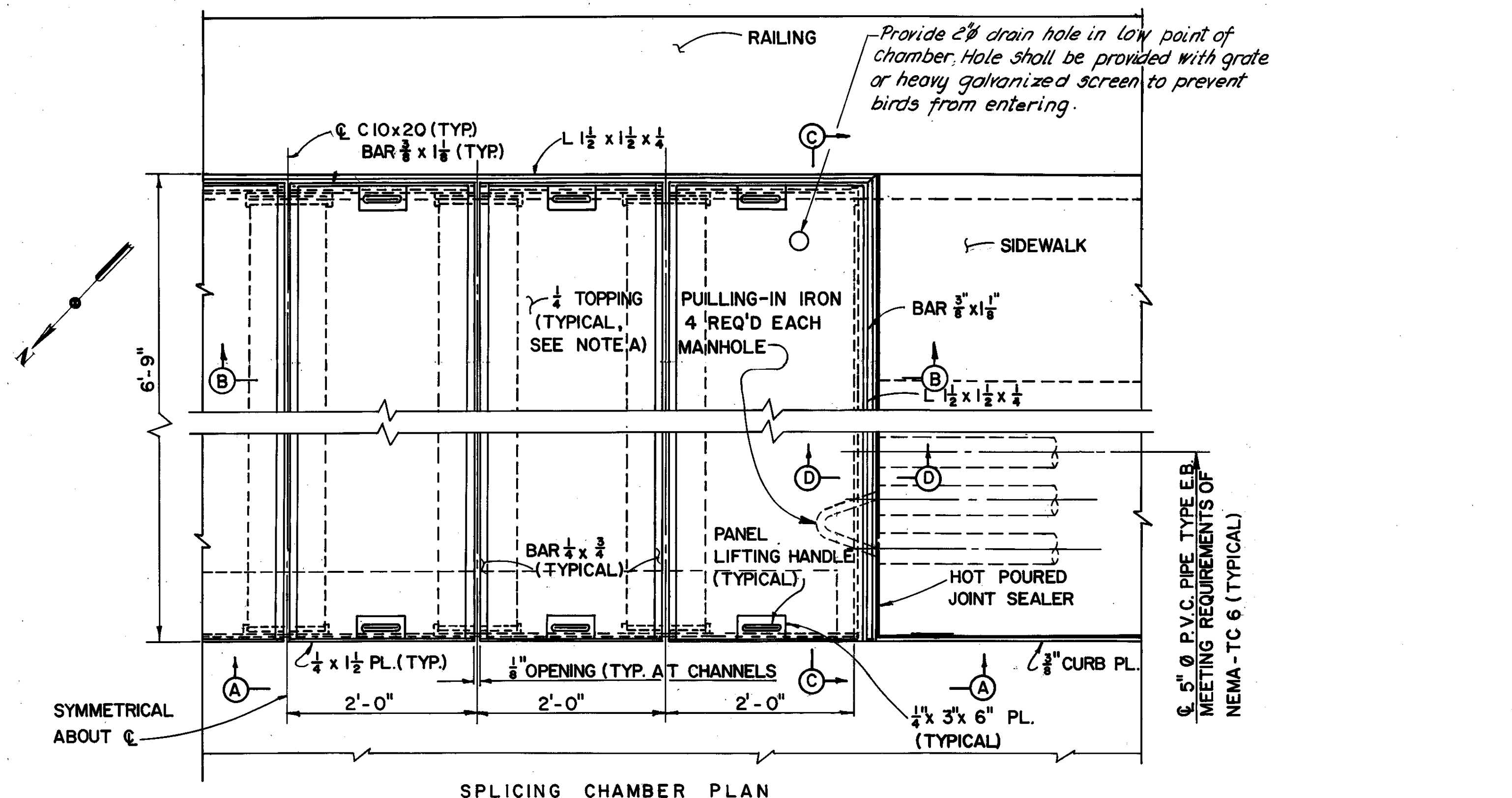
**HNTB**

LORAIN - CARNEGIE BRIDGE

FHWA REGION	STATE	PROJECT
5	OHIO	

59  
185

CUYAHOGA COUNTY  
CUY-10-16.23



NOTE A:  
The 1/4" TOPPING shall be a modified epoxy resembling concrete in appearance as manufactured by the CEILCOTE COMPANY, BEREA, OHIO 44017, under the trade name "COPOCRETE A-1" or approved equal. THE TOPPING SHALL BE APPLIED IN THE SHOP AND THE SURFACE TEXTURED TO RESEMBLE A TYPICAL CONCRETE SIDEWALK. PREPARATION OF THE STEEL SURFACE SHALL BE THE SAME AS FOR PAINTING DESCRIBED IN SECTION 514.04.  
  
A MANUFACTURER'S REPRESENTATIVE EXPERIENCED IN THE APPLICATION OF THE TOPPING WILL INSTRUCT THE CONTRACTOR IN THE PROPER PROCEDURES FOR APPLYING THE TOPPING.  
  
THE 1/4" TOPPING SHALL BE INCLUDED WITH ITEM 513, STRUCTURAL STEEL, FOR PAYMENT.

NOTE:  
FOR SECTIONS C-C, G-G, AND H-H  
SEE SHEET 7087-28.

\* OR PENN-TROWEL AS MANUF.  
BY PENN WALT CORP. PHILA. PA.

MADE BY PK DATE 5-2-79  
TRACED DATE 6-2-79  
CHECKED DATE 6-2-79  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

DIVISION OF LIGHT & POWER			
CITY OF CLEVELAND			
SPlicing Chamber DETAILS			
DRAWN BY	SCALE	DRAWING NUMBER	
CHKD BY	DATE	7087-27	

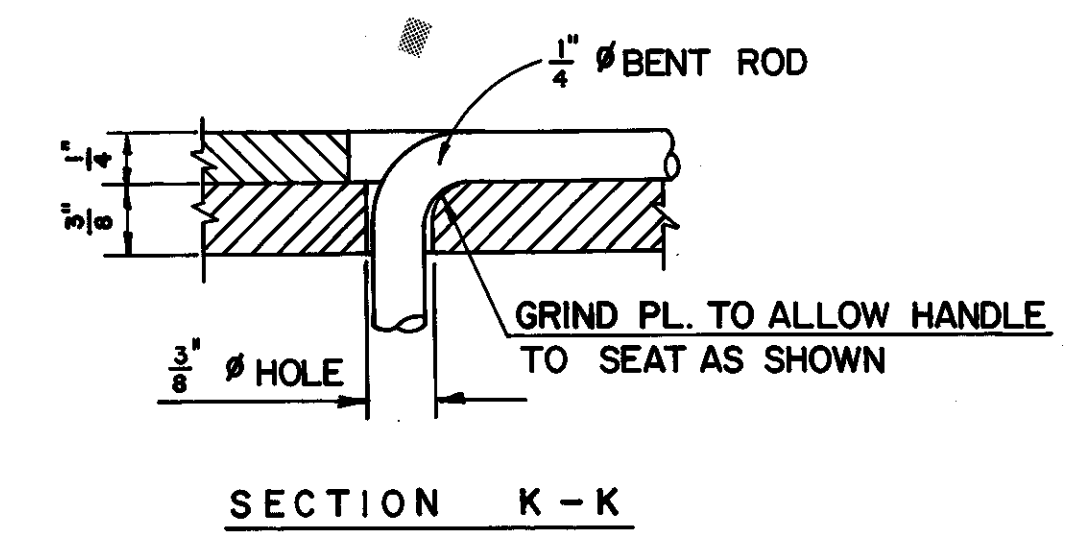
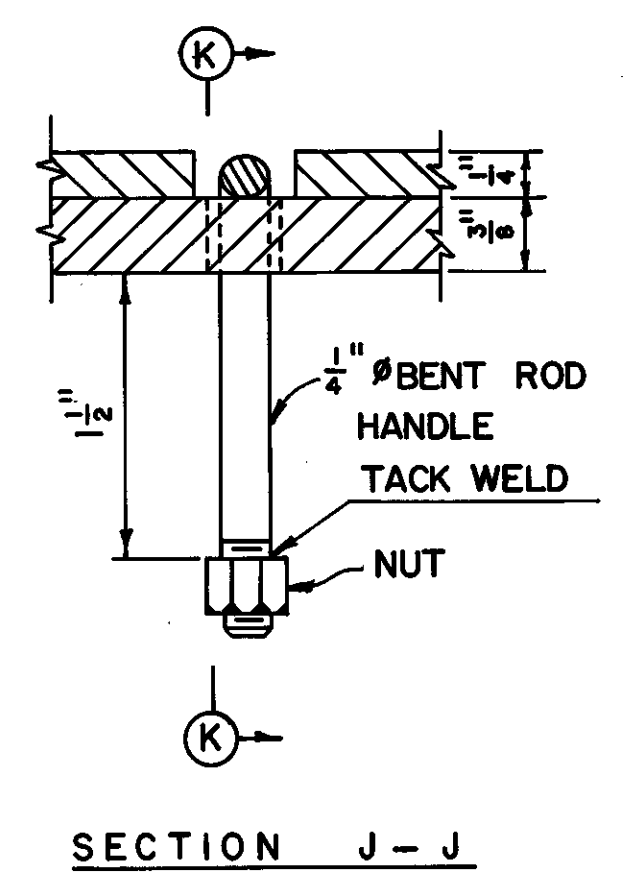
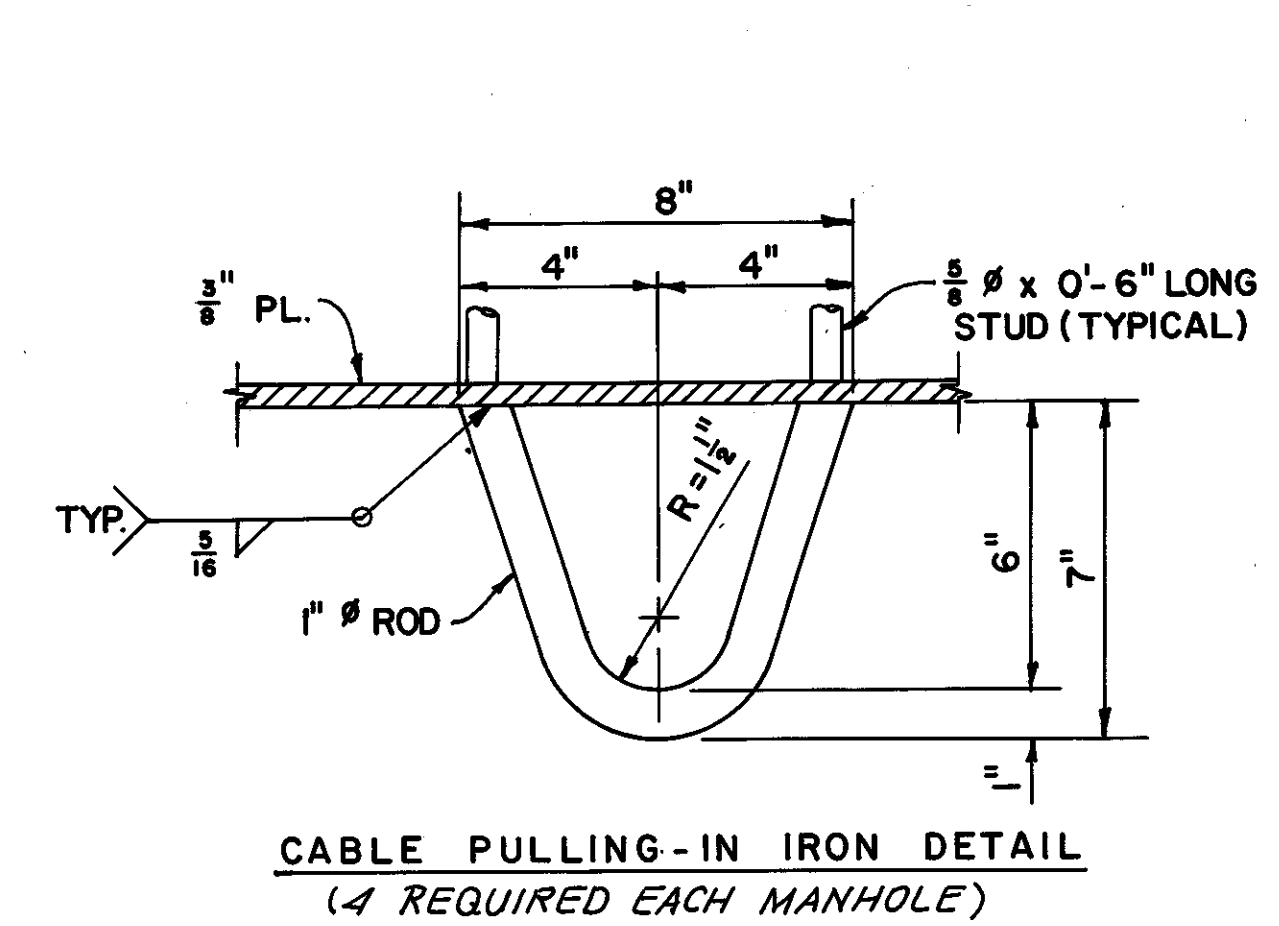
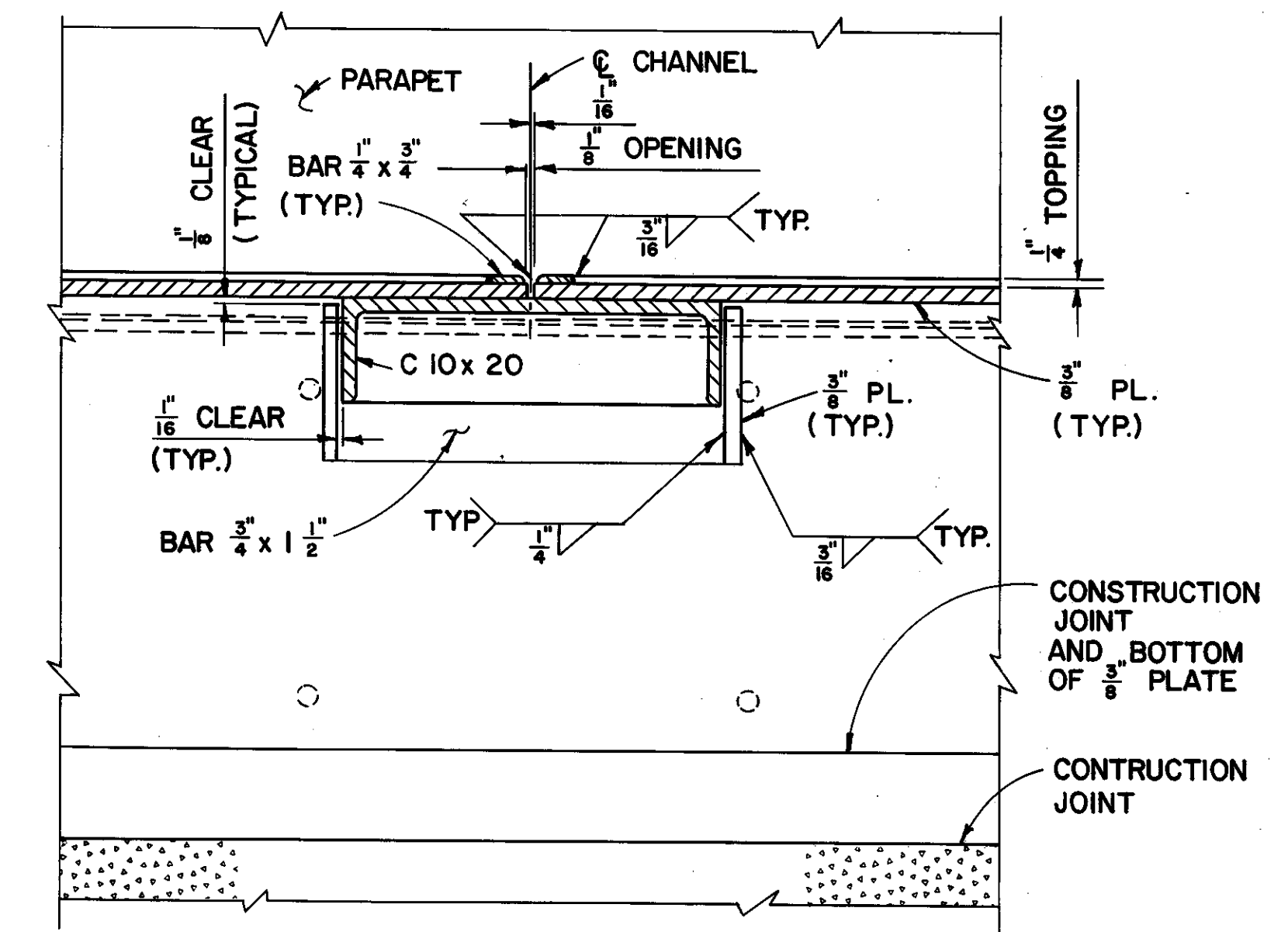
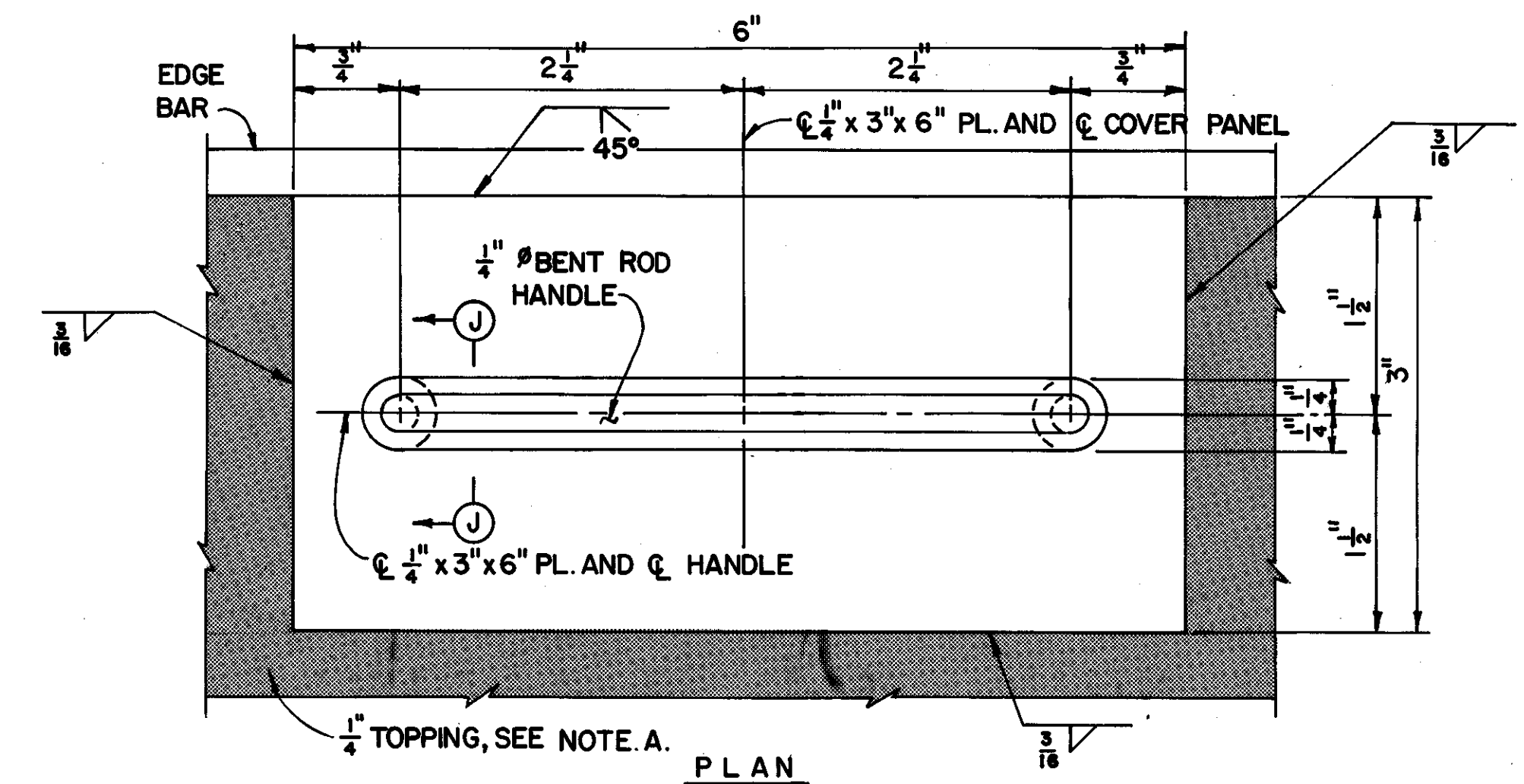
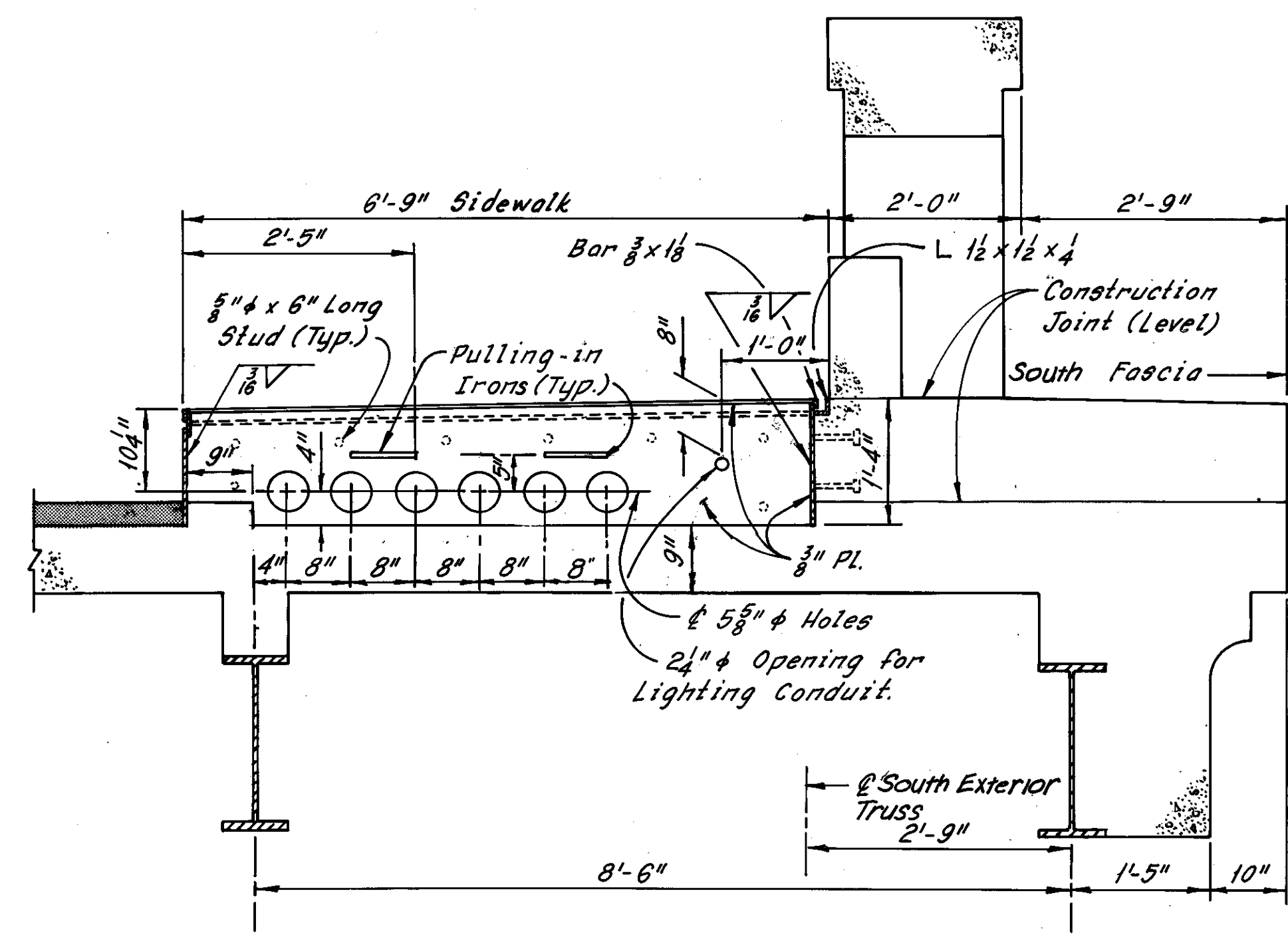
Rev. 12-27-79

LORAIN - CARNEGIE BRIDGE

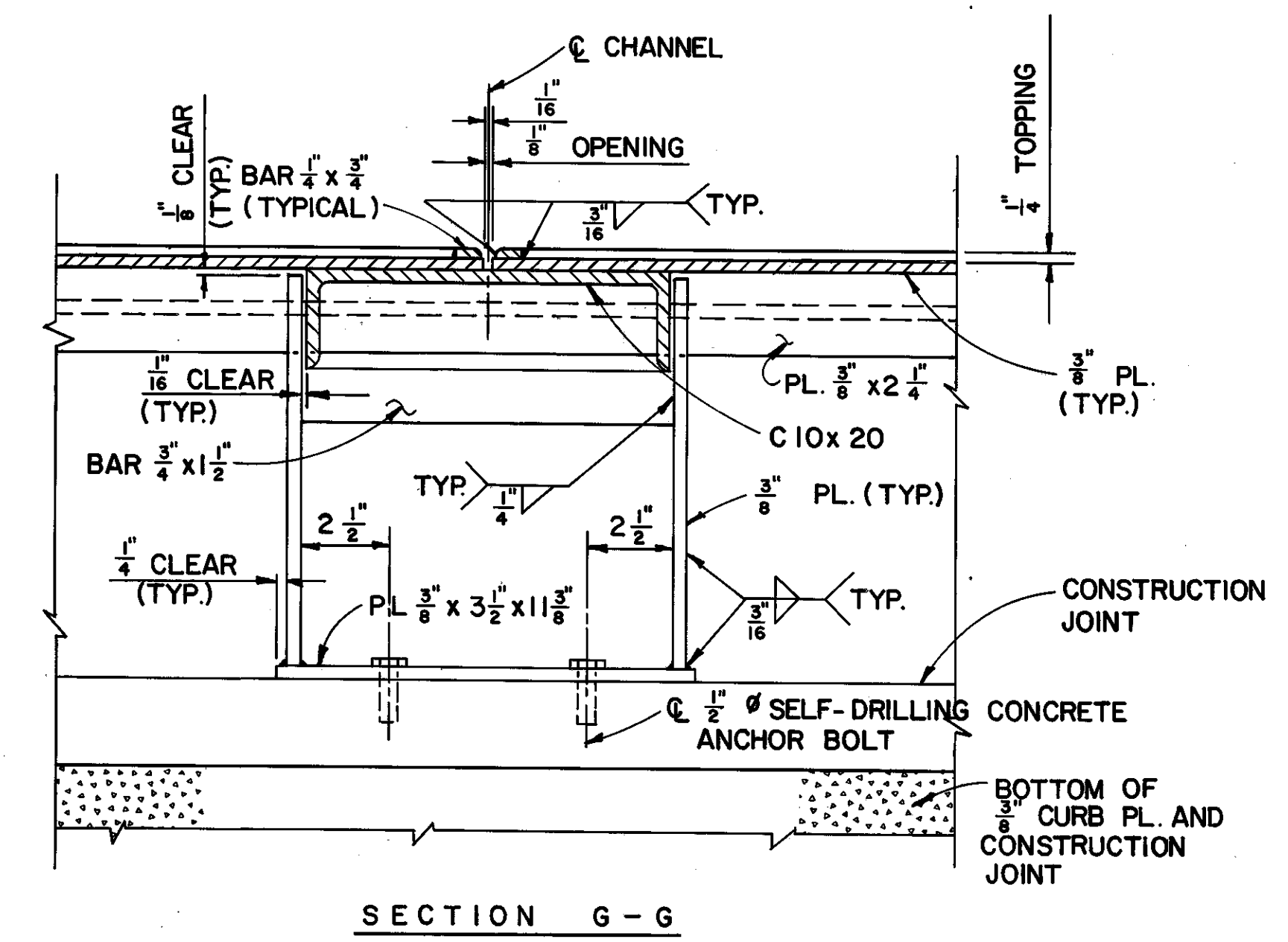
FHWA REGION	STATE	PROJECT
5	OHIO	

60  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PANEL LIFTING HANDLE DETAILS



NOTE:  
FOR LOCATION OF SECTION C-C  
SEE SHEET 7087-27

Note:  
The Contractor shall provide 4 Cable Clamps, Unistrut P2645\* or approved equal to fit 15KV Cable. Clamps shall be fitted against west end of chamber to prevent weight of vertical cable to put strain on cable splices.

\* OR MULTAFRAME CO.

MADE K.B.V. DATE 4-27-79  
TRACED DATE  
CHECKED E.E. DATE 6-3-79  
SCALE

**HNTB**

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
SPlicing Chamber Details				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-28		
CHECKED BY	DATE			

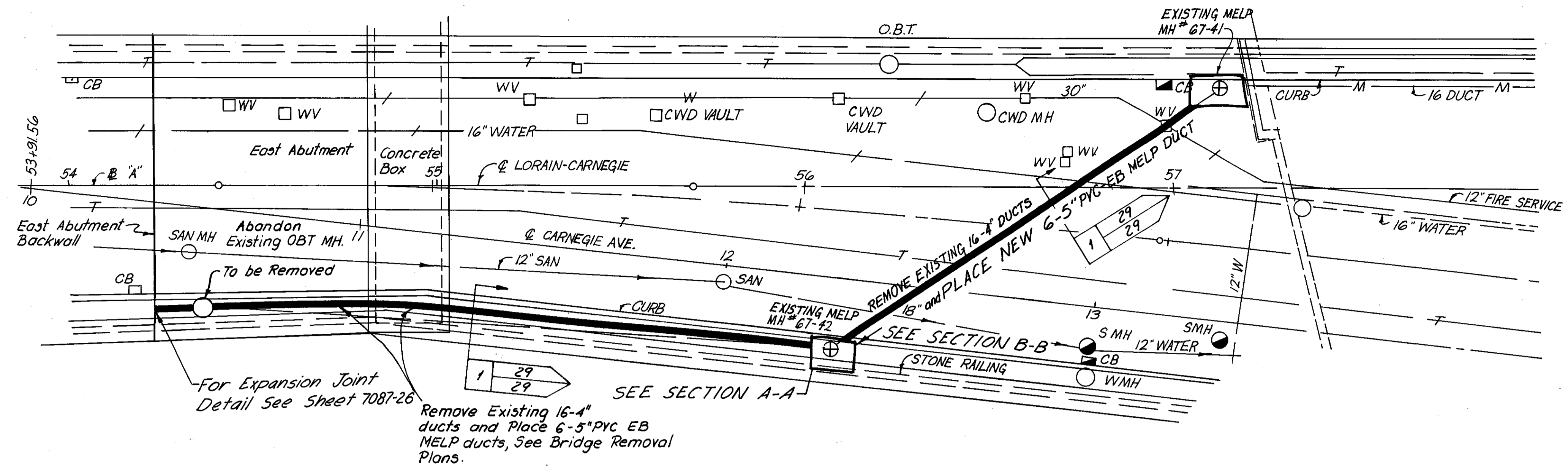
Rev. 12-27-79

LORAIN-CARNEGIE BRIDGE

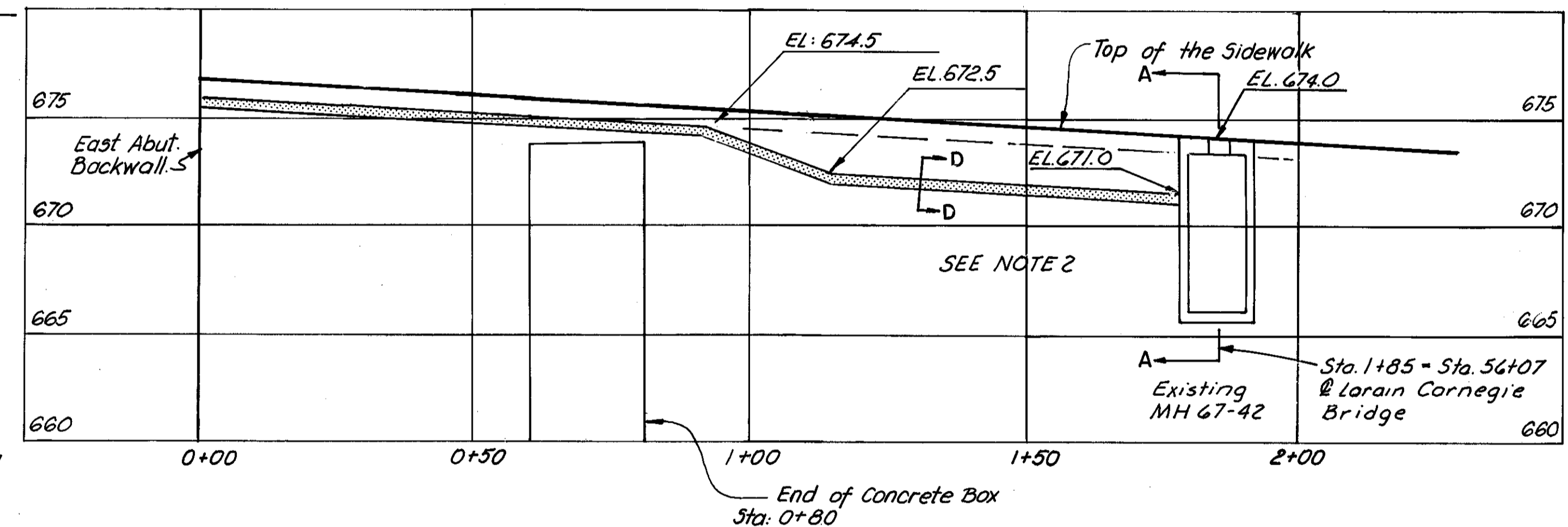
FHWA REGION	STATE	PROJECT
5	OHIO	

61  
185

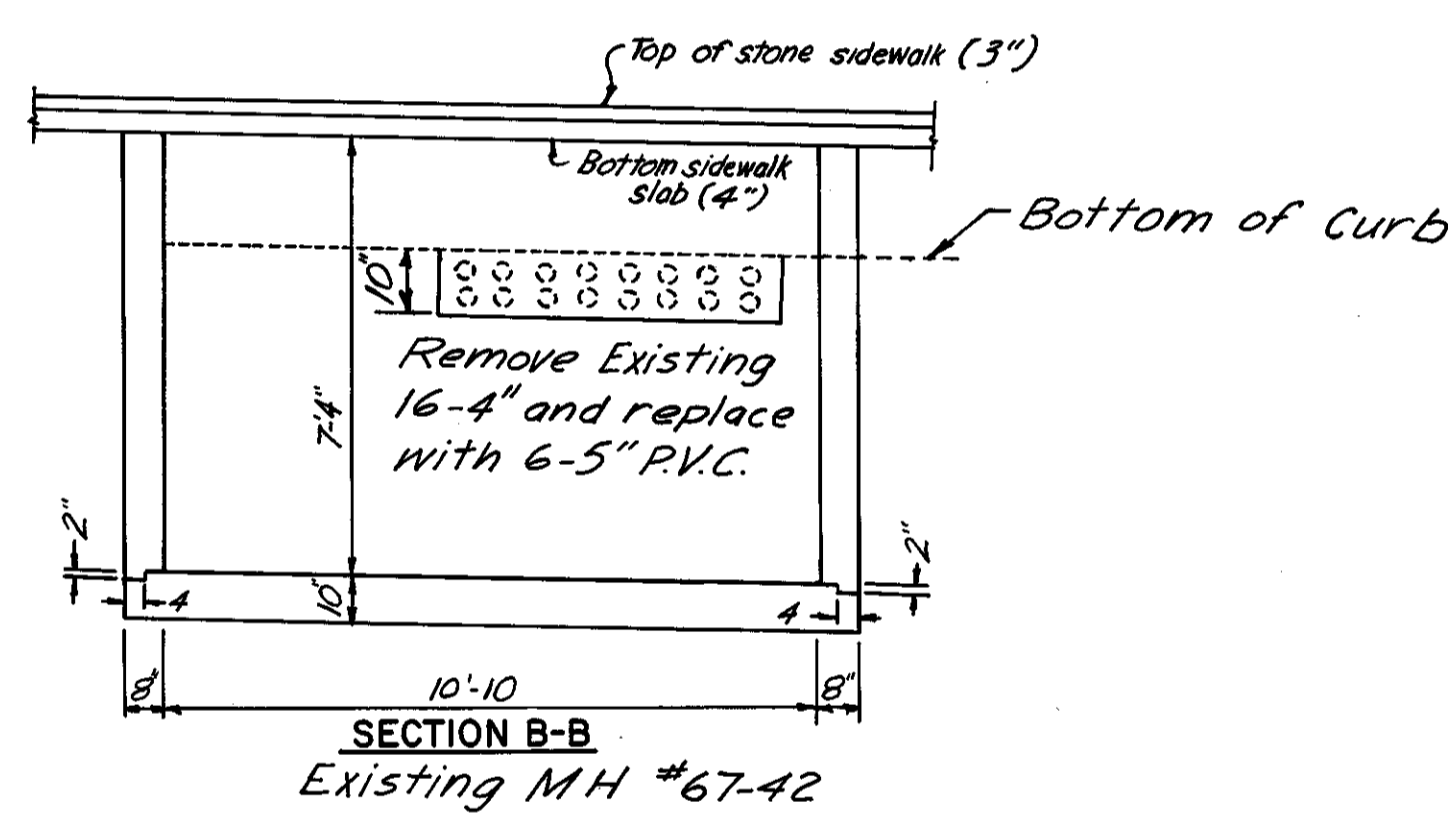
CUYAHOGA COUNTY  
CUI-10-16.23



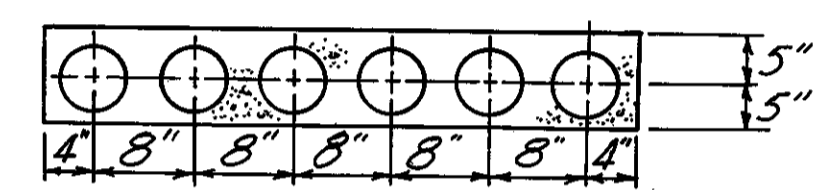
PLAN  
Scale: 1"=20'



PROFILE  
MELP UNDERGROUND EQUIPMENT  
Hor. Scale: 1"=20'  
Ver. Scale: 1"=5'

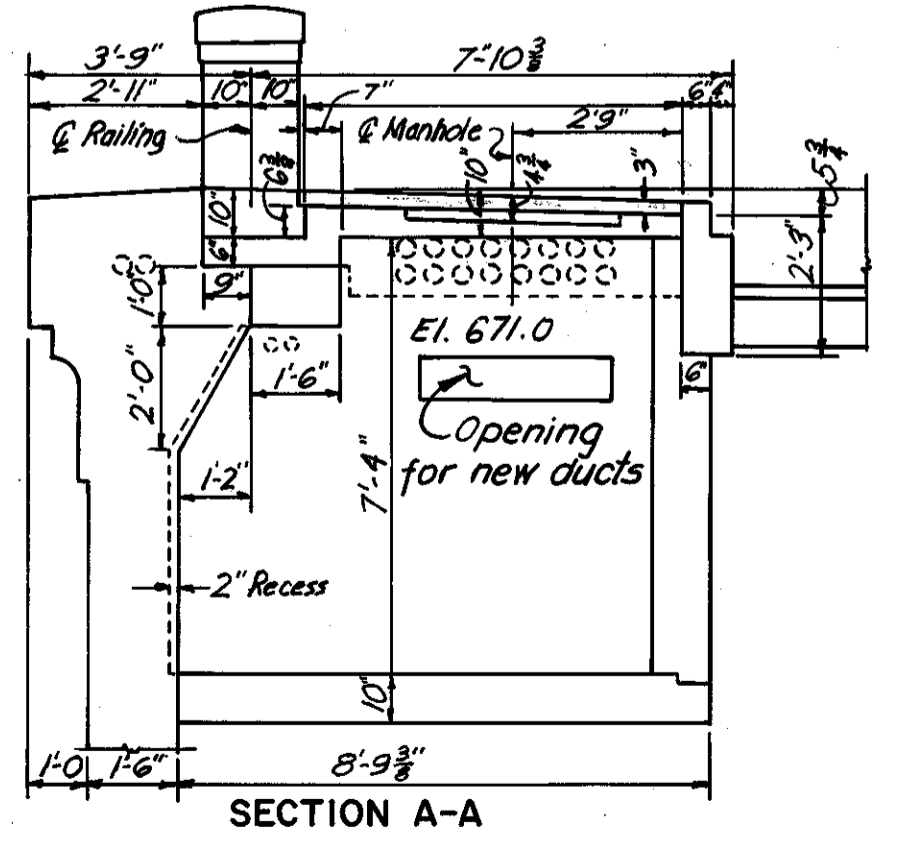


SECTION B-B  
Existing MH #67-42

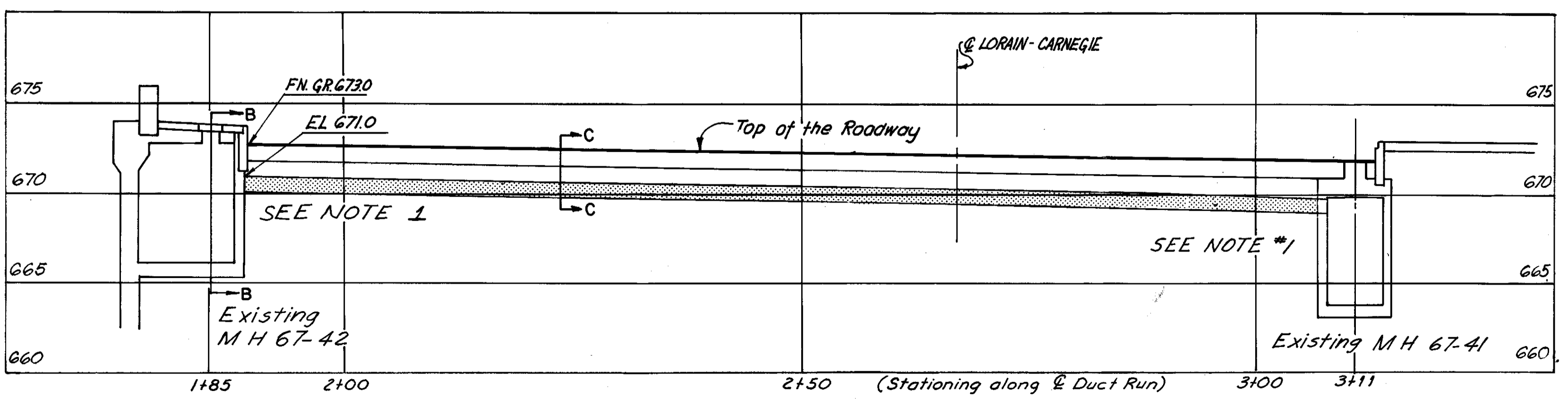


SECTION C-C & D-D

- NOTE:
- 1) CONTRACTOR SHALL REMOVE THE EXISTING 16 - 4" DUCT BETWEEN MANHOLE #67-41 AND MANHOLE #67-42 TAKING CARE NOT TO DISTURB THE EXISTING ROOF OR WALLS AND PLACE 6 - 5" PVC, DUCT BELL END FLUSH WITH INSIDE WALLS AND GROUT. POLYSULFIDE EPOXY RESIN ADHESIVE SHALL BE USED FOR BONDING GROUT TO EXISTING CONCRETE.
  - 2) CONTRACTOR TO PLUG THE EXISTING DUCT ON THE WEST WALL MANHOLE #67-42.



Contractor to remove only the 3" Stone Sidewalk and adjust frame of manhole as needed.



PROFILE  
MELP UNDERGROUND EQUIPMENT  
Hor. Scale: 1"=10'  
Ver. Scale: 1"=5'

MADE PK DATE 5-2-79  
TRACED DATE  
CHECKED FEE DATE 6-2-79  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO



REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

UNDERGROUND PLAN  
EAST ABUTMENT TO MELP MH 67-41

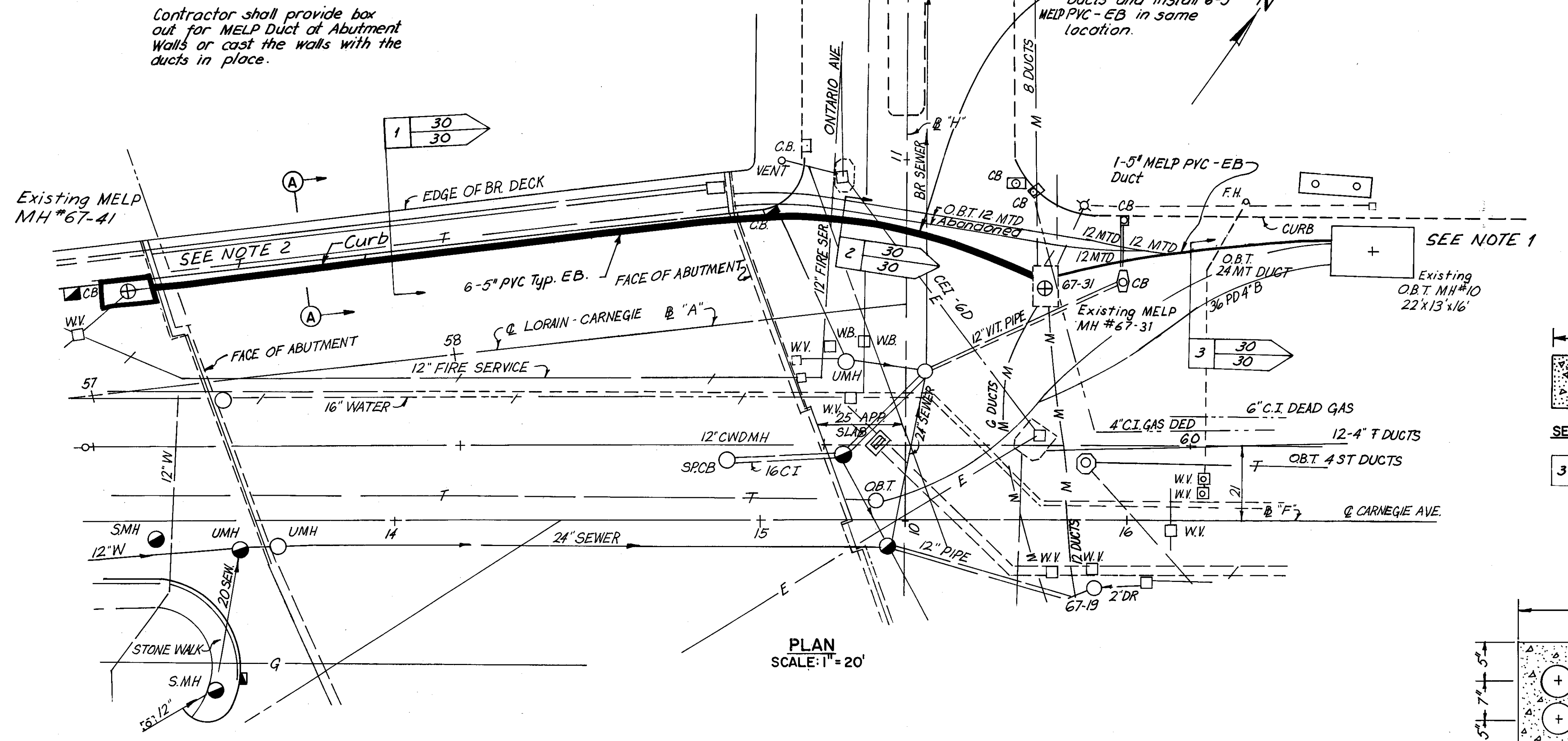
DRAWN BY	SCALE	DRAWING NUMBER
		7087-29
CHKD BY	DATE	

LORAIN - CARNEGIE BRIDGE

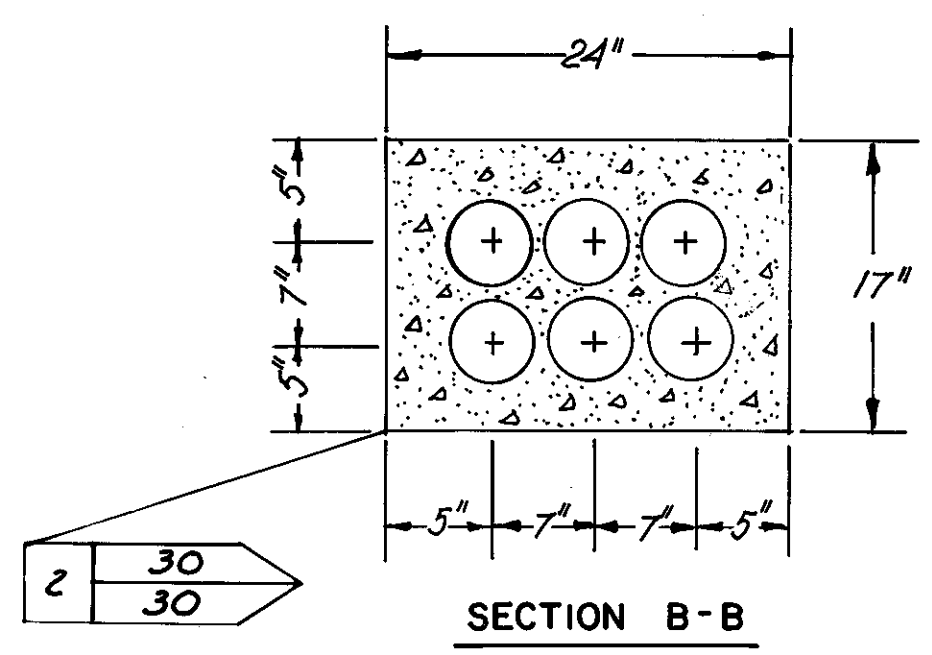
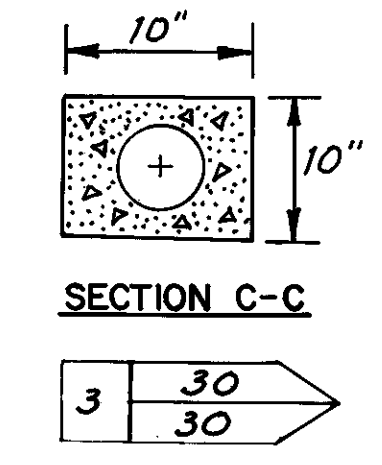
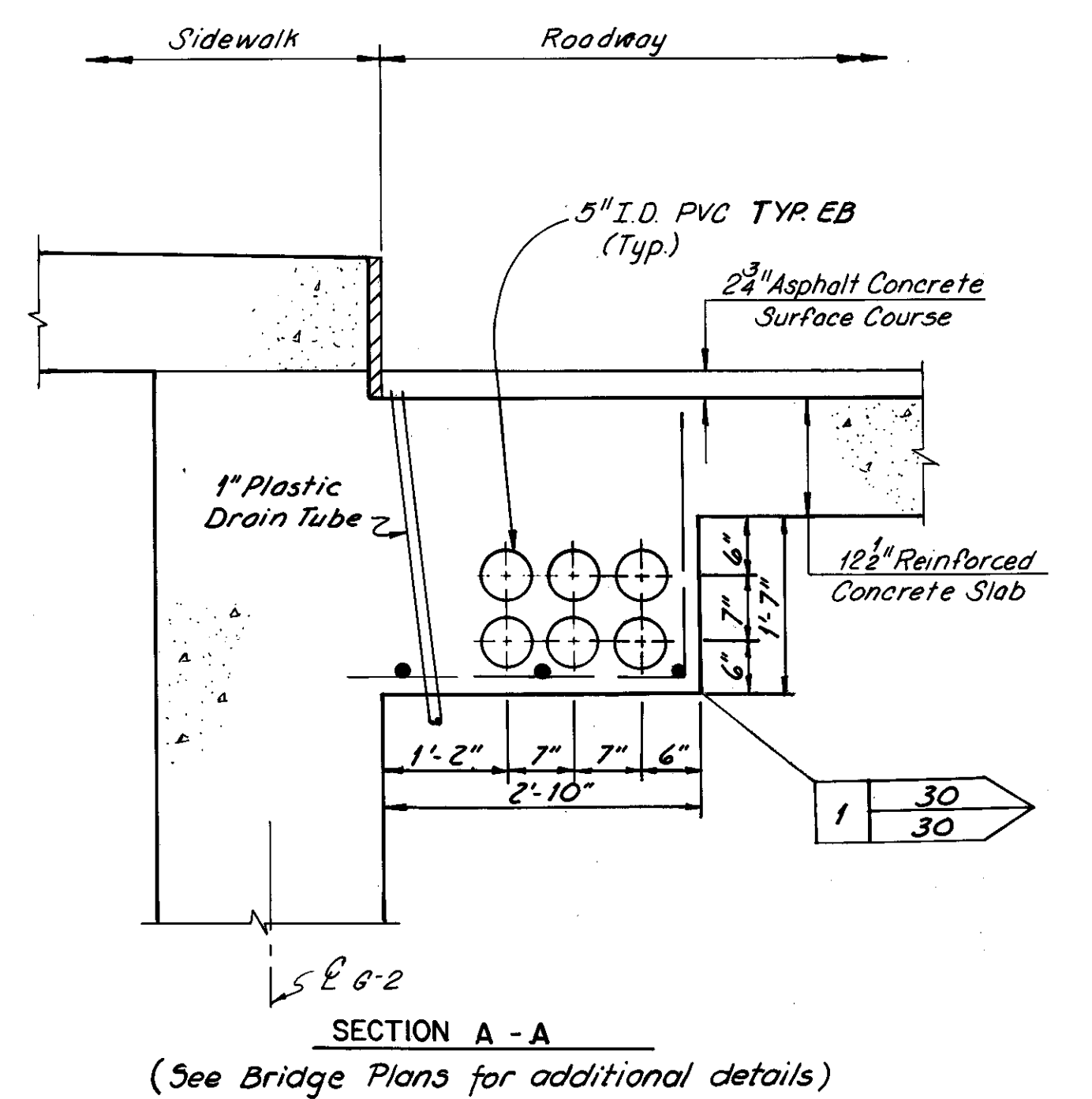
FHWA REGION	STATE	PROJECT
5	OHIO	

62  
185

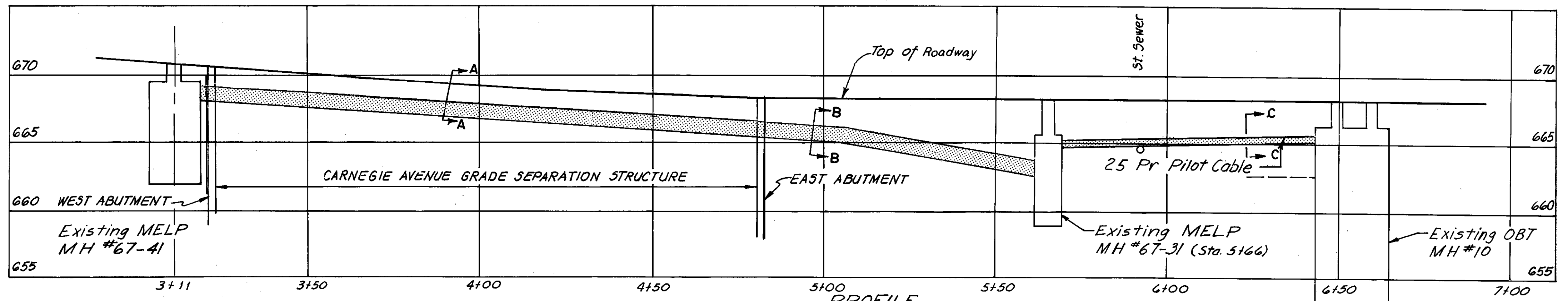
CUYAHOGA COUNTY  
CUY-10-16.23



Contractor shall provide box out for MELP Duct at Abutment Walls or cast the walls with the ducts in place.



NOTE:  
The OBT Field Inspector shall determine the location and elevation of the 1-5\"/>



PROFILE  
MELP UNDERGROUND EQUIPMENT  
Horizontal Scale 1"=20'  
Vertical Scale 1"=5'

REVISION	DATE	DESCRIPTION	BY	APP'D

DIVISION OF LIGHT & POWER  
CITY OF CLEVELAND

CARNEGIE AVE. GRADE SEPARATION  
MH 67-41 TO MH 67-31

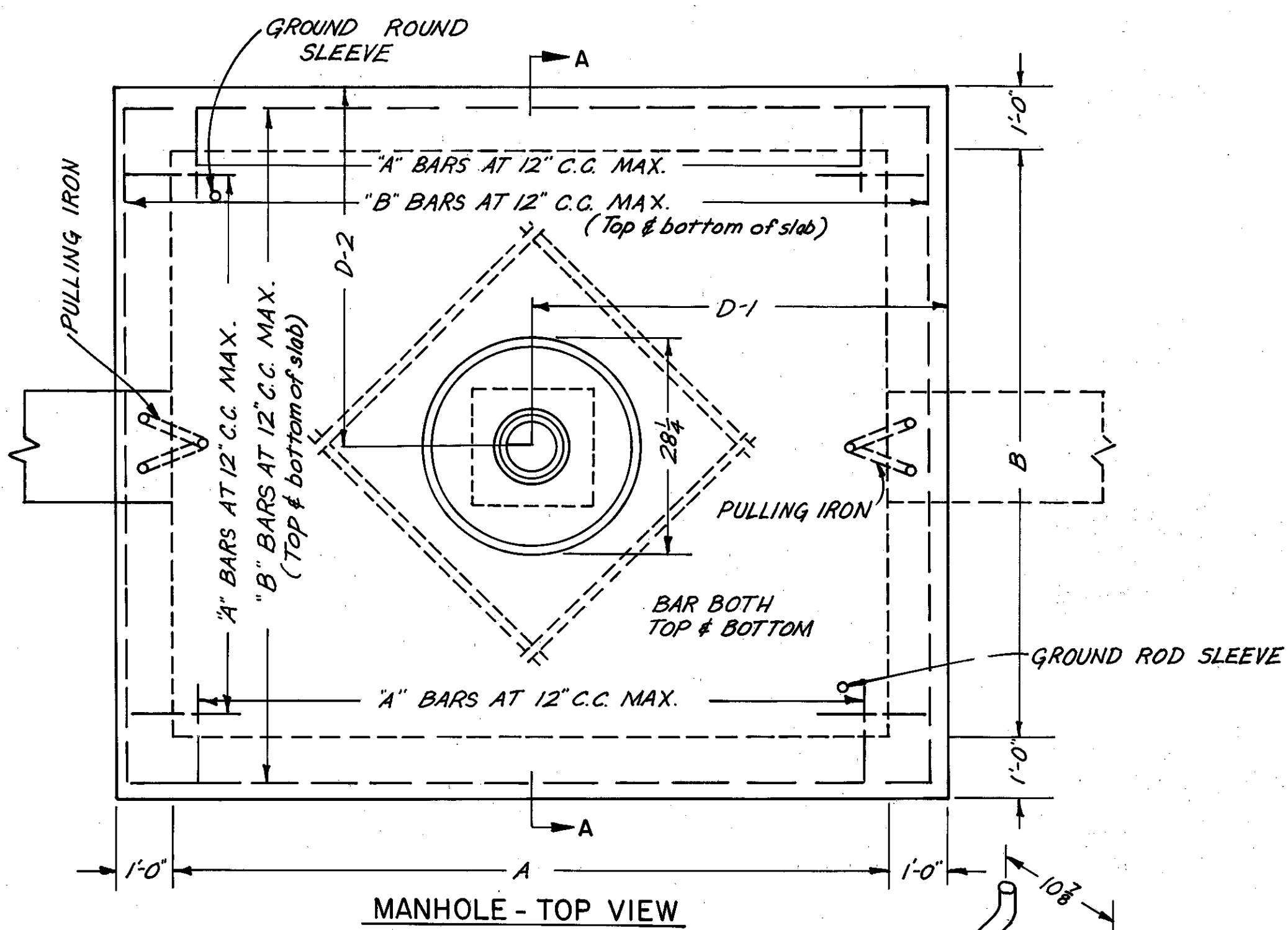
DRAWN BY	SCALE	DRAWING NUMBER
		7087-30
CHK'D BY	DATE	

MADE BY KV DATE 5-2-79  
TRACED DATE 6-8-79  
CHECKED EEF DATE 6-8-79  
SCALE

Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

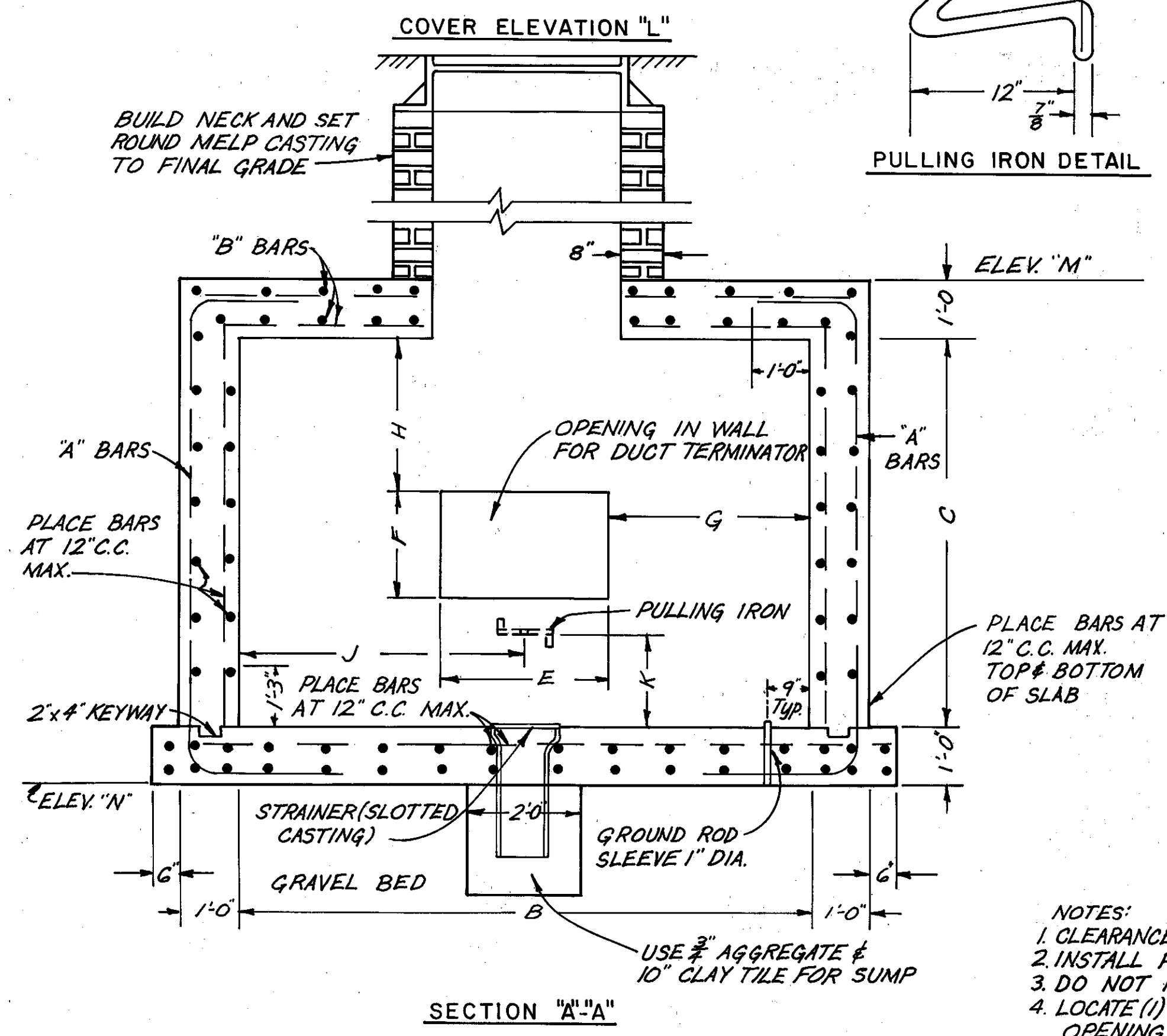
LORAIN - CARNEGIE BRIDGE



MANHOLE DETAILS															
MANHOLE NO. & LOCATION	STRUCTURE DIMENSIONS								DUCT OPENING DIMENSION					PULLING IRON	
	A	B	C	D1	D2	L	M	N	Wall	E	F	G	H	J	K
OLD LORAIN AVE. MH# 56-99 STA. 2+29 *	10'-0"	6'-0"	6'-0"	6'-0"	4'-0"	684.8	682.0	674.0	EAST	26"	18"	23"	1'-6"	36"	18"
									WEST	26"	18"	23"	1'-6"	36"	18"
OLD LORAIN AVE. MH# 56-100 STA. 7+17 *	10'-0"	6'-0"	7'-0"	6'-0"	4'-0"	678.0	674.5	665.5	EAST	26"	18"	23"	2'-6"	36"	18"
									WEST	26"	27"	23"	2'-6"	36"	18"
WEST 17TH STREET MH# 56-101 STA. 10+95 *	12'-0"	6'-0"	6'-0"	10'-0"	4'-0"	675.2	671.0	663.0	EAST	26"	18"	23"	2'-0"	36"	18"
									WEST	26"	18"	23"	2'-0"	36"	18"

\* Stationing along & Duct line

MODIFIED MANHOLES		
LOCATION & MANHOLE NO.	WALLS	REMARKS
LORAIN AVE. STA. 13+35, 30' RT MELP # 56-40	EAST	SEE SHEET 7087-12 FOR DETAILS
WEST 17 TH STREET STA. 9+10 C OBT MH# 3	NORTH	SEE SHEET 7087-14 FOR DETAILS
LORAIN - CARNEGIE AVE. STA. 56+07, 45' RT, MELP MH# 67-42	WEST & NORTH	SEE SHEET 7087-29 FOR DETAILS
LORAIN CARNEGIE AVE. STA. 57+13, 28' LT. MELP MH# 67-41	SOUTH & EAST	SEE SHEET 7087-29 FOR DETAILS
CARNEGIE AVE. STA. 15+78, 65' LT. MELP MH# 67-31	EAST & WEST	SEE SHEET 7087-30 FOR DETAILS
CARNEGIE AVE. STA. 16+67 75' LT. OBT MH# 10	WEST	SEE SHEET 7087-30 FOR DETAILS
SCRANTON ROAD BASE PIER II MELP MH# 67-65	ROOF	CONTRACTOR TO LOCATE EXISTING MANHOLE AND SECURE TWO DUCT IN ROOF OF MANHOLE AND GROUT AND WATER SEAL ROOF AT OPENING



MELP ELECTRICAL MANHOLE

NOTE:  
OTHER WALLS SIMILAR AS VIEWED FROM CENTER OF MANHOLE.  
FOR DETAILS OF DUCT OPENING AND LOCATIONS AND LOCATION OF PULLING IRONS, SEE TABLE ON THIS SHEET.

- NOTES:
- CLEARANCE OF 2" FROM REBAR TO FACE OF WALL INSIDE AND OUTSIDE
  - INSTALL PULLING IRONS OPPOSITE DUCTS ENTERING MANHOLE.
  - DO NOT PLACE RODS BETWEEN DUCTS.
  - LOCATE (1) 2'x2'x2' SLAG SUMP (10" SEWER TILE) UNDER MANHOLE ROOF OPENING. SLOPE FLOOR TOWARDS SUMP.
  - ALL STEEL SHALL BE #6 REINFORCING BARS
  - ALL STEEL SHALL CONFORM TO A.S.T.M. SPECS. AND SHALL BE FABRICATED AS SHOWN: F<sub>s</sub> = 20,000 P.S.I.
  - CONCRETE SHALL BE CLASS "C" (4,000 P.S.I.)
  - FOR MANHOLE FRAME & COVER, SEE SHEET 7087-32.
  - FOR SQUARE COVER, ROOF OPENING TO BE 3'-0" x 3'-0" SQUARE.
  - FOR MANHOLE CABLE SUPPORT DETAILS, SEE SHEET 7087-32.

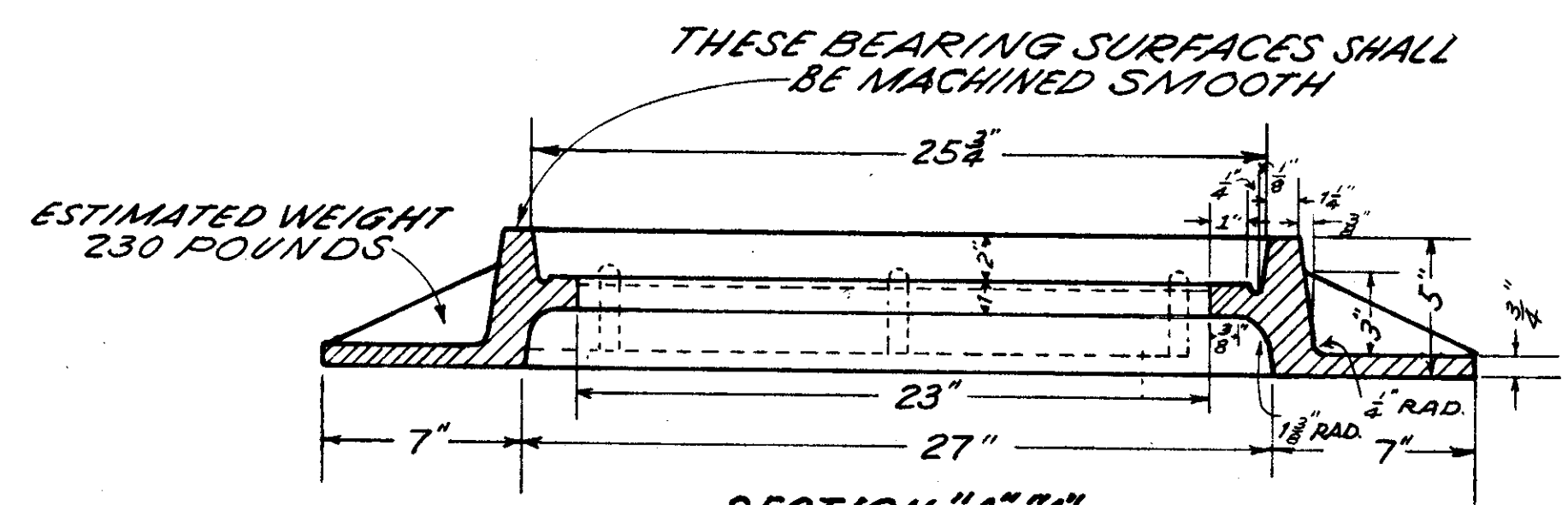
DIVISION OF LIGHT & POWER			
CITY OF CLEVELAND			
UNDERGROUND MANHOLE			
DETAILS			
DRAWN BY	SCALE	DRAWING NUMBER	
CH'KD BY	DATE	7087-31	



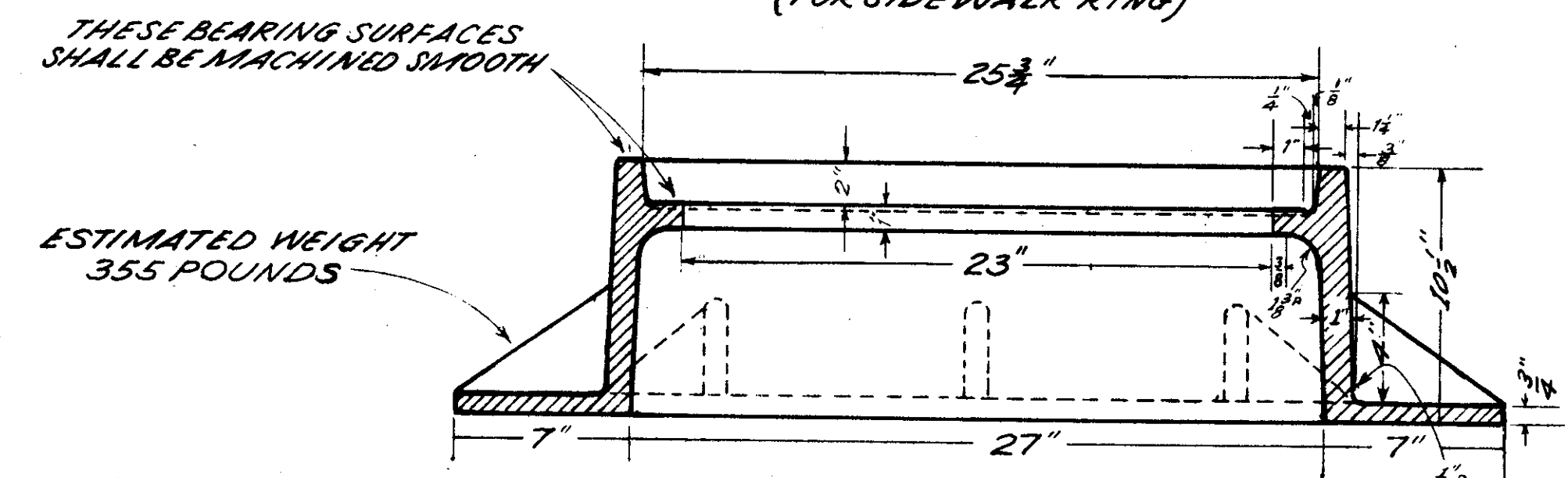
FHWA REGION	STATE	PROJECT
5	OHIO	

64  
LBS

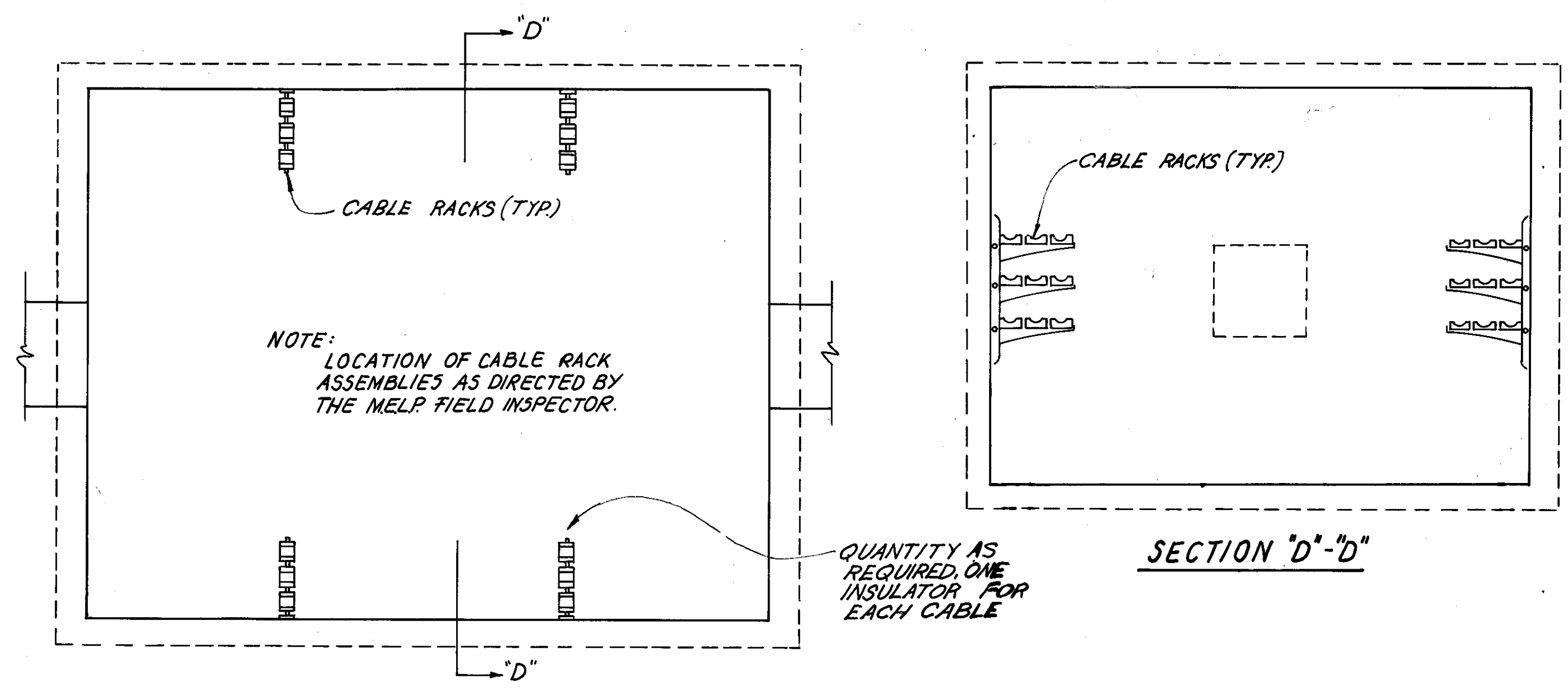
CUYAHOGA COUNTY  
CUY-10-16.23



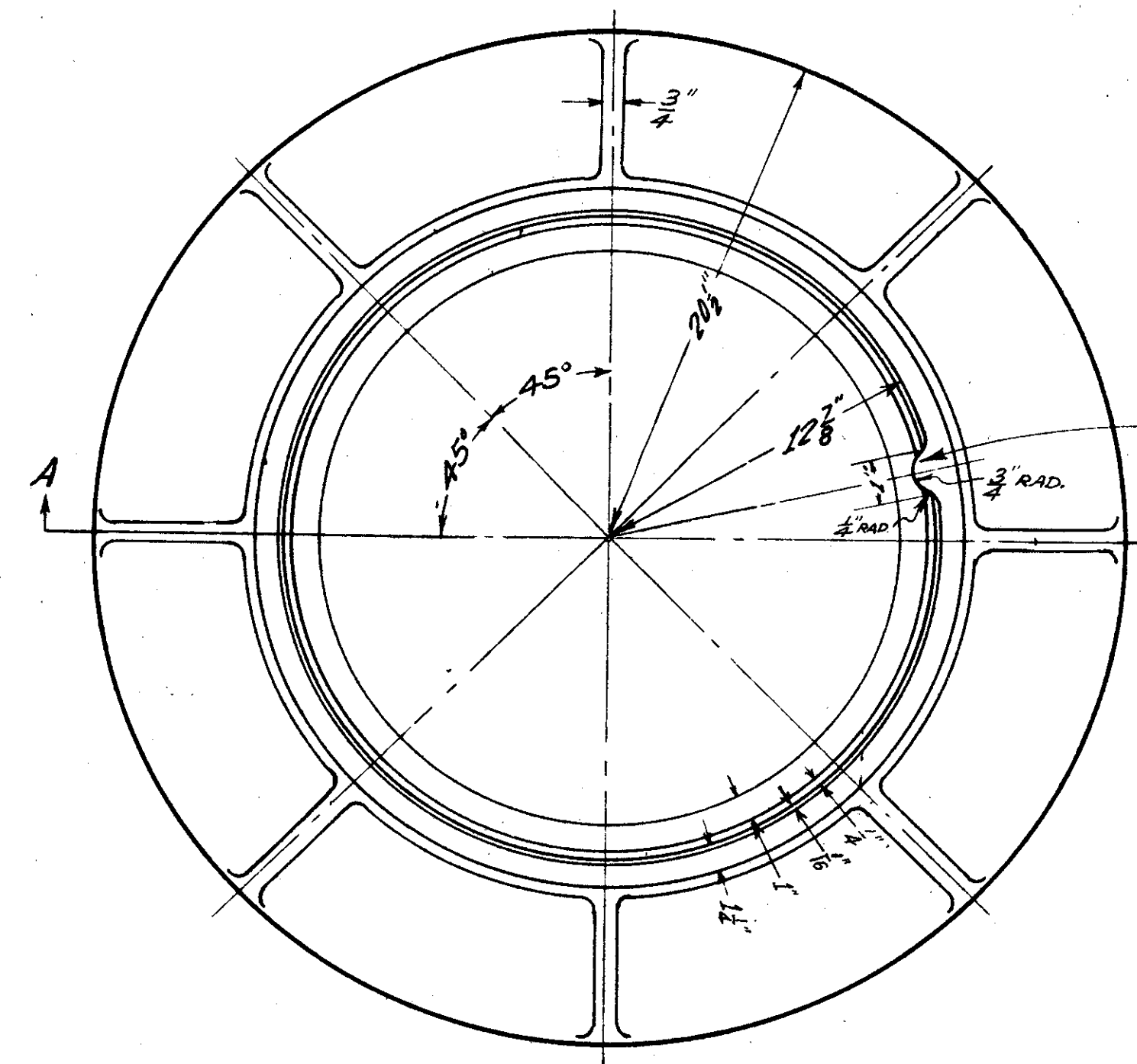
SECTION "A-A"  
(FOR SIDEWALK RING)



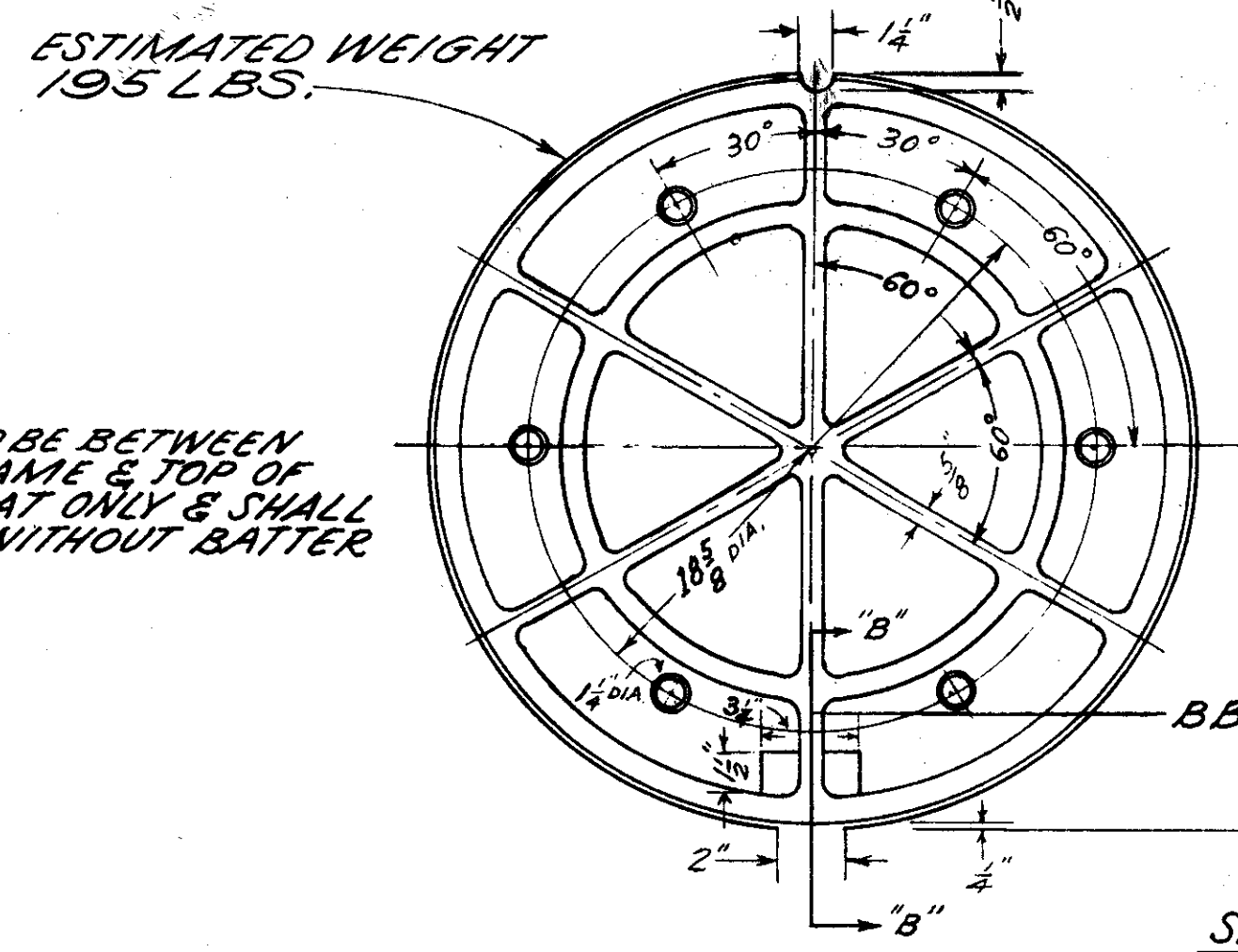
SECTION "A-A"  
FOR STREET RING



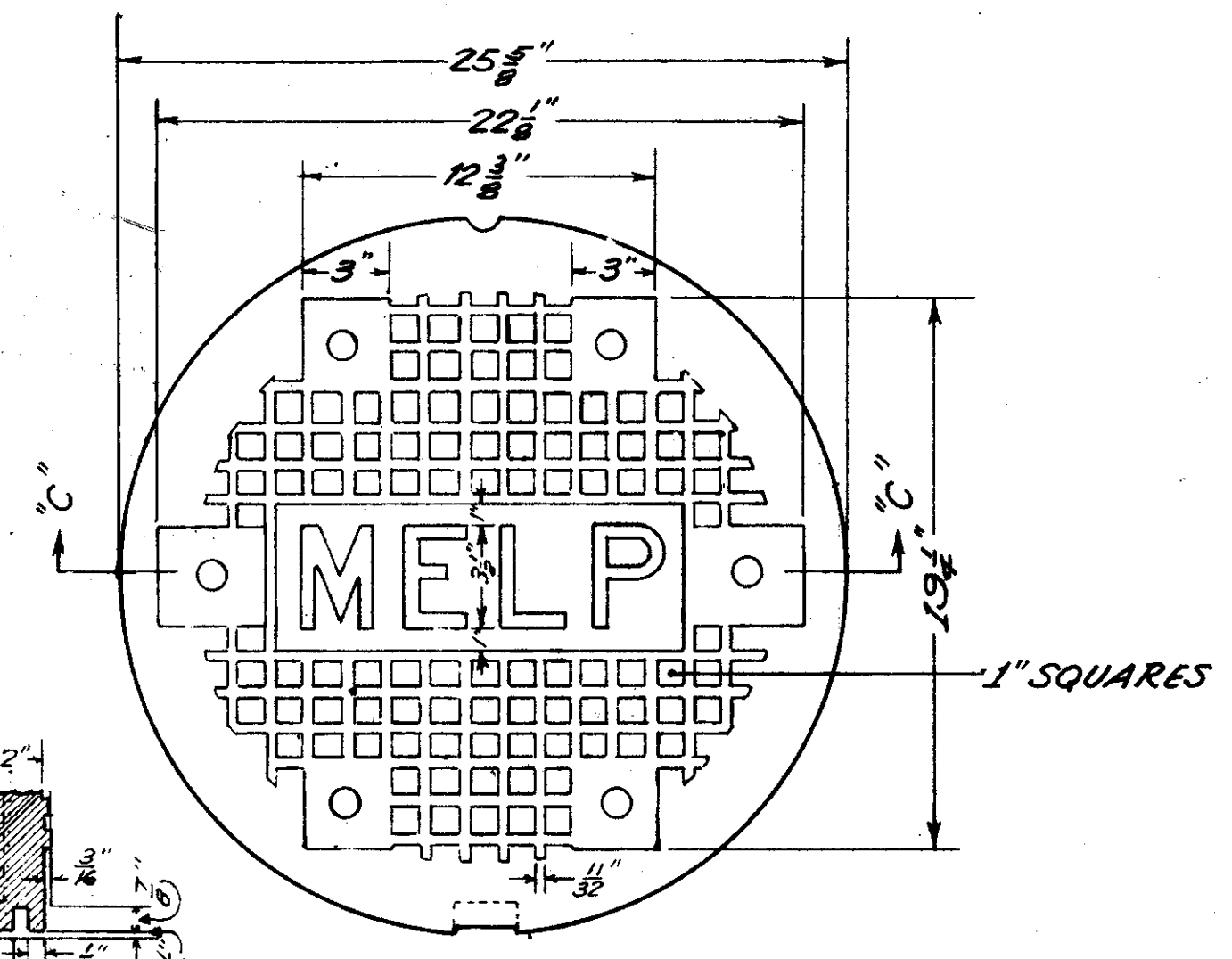
MANHOLE CABLE SUPPORT DETAILS



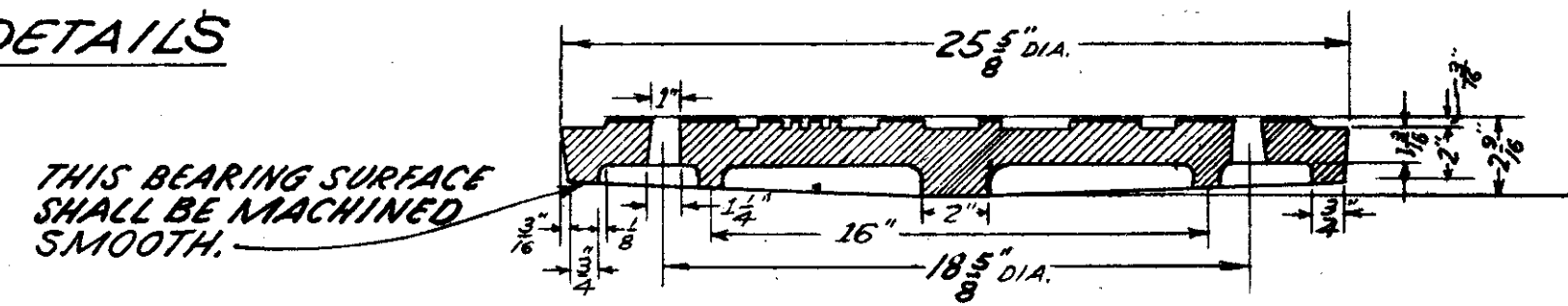
STANDARD C.I. MANHOLE RING DETAILS



BOTTOM PLAN DETAILS



SECTION "B-B" TOP PLAN DETAILS



SECTION "CC"  
STANDARD C.I. MANHOLE COVER DETAILS

NOTE:  
ALL COVERS AND FRAMES MUST BE INTERCHANGEABLE.  
COVERS FOR STREET AND SIDEWALK FRAMES ARE IDENTICAL.

MADE KBV DATE 1-27-79  
TRACED DATE  
CHECKED EEF DATE 6-8-77  
SCALE  
Howard, Needles, Tammen & Bergendoff  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

REVISION	DATE	DESCRIPTION	BY	APP'D
DIVISION OF LIGHT & POWER CITY OF CLEVELAND				
UNDERGROUND MANHOLE DETAILS				
DRAWN BY	SCALE	DRAWING NUMBER		
		7087-32		
CHK'D BY	DATE			

LORAIN - CARNEGIE BRIDGE

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT
5	OHIO	



CUYAHOGA COUNTY  
CUY-10-16.23

1. PROPOSED WORK

ACCESS TO PROJECT NO. CUY-10-16.23 WILL BE AVAILABLE FROM BOTH ENDS UNTIL PROJECT NO. CUY-10-16.05 IS STARTED. THEREAFTER ACCESS FROM THE EASTERLY END IS ALL THAT CAN BE ASSURED.

THE LORAIN-CARNEGIE BRIDGE (EAST OF STATION 23+77.89) AND THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE SHALL BE REHABILITATED UNDER THIS CONTRACT. MAJOR ITEMS OF WORK CONTAINED IN THE BRIDGE PLANS ARE SUMMARIZED BELOW FOR EACH STRUCTURE. DETAILS OF THIS WORK ARE SHOWN IN THE PLANS.

A. LORAIN-CARNEGIE BRIDGE (EAST OF STATION 23+77.89)

- (1) REPLACE THE ENTIRE ROADWAY DECK INCLUDING DECK JOINTS, SIDEWALKS AND RAILINGS.
- (2) REPLACE UPPER DECK FLOOR BEAMS AND LOWER STRINGERS IN THE AREA OF THE LENGTHENED VERTICAL CURVE (SPAN 10 AND PART OF SPANS 9 AND 11).
- (3) REPLACE ALL UPPER DECK FLOOR BEAMS ADJACENT TO EACH ROADWAY EXPANSION JOINT EXCEPT AT THE EAST PYLON REPLACE THE INTERIOR BAY FLOOR BEAM ONLY.
- (4) STRENGTHEN ALL UPPER DECK FLOOR BEAMS, EXCEPT AT ROADWAY EXPANSION JOINTS, BY FIELD WELDING STUD SHEAR CONNECTORS TO THE TOP FLANGE.
- (5) STRENGTHEN OR REPLACE SELECTED UPPER DECK STRINGERS.
- (6) REPLACE THE "MAINTENANCE AND INSPECTION" DECK SLAB.
- (7) REPLACE THE TRUSS WIND SHEAR KEY ASSEMBLIES AT ALL EXPANSION JOINTS.
- (8) REPLACE THE ENTIRE BRIDGE DRAINAGE SYSTEM.
- (9) REMOVE AND REPLACE THE DETERIORATED CONCRETE OF ALL SUBSTRUCTURE ELEMENTS INCLUDING STRUCTURALLY REPAIRING CRACKS IN THE CONCRETE.
- (10) PROVIDE A CONCRETE COATING TO THE EXPOSED SURFACES OF ALL EXISTING PIERS AND ABUTMENTS.
- (11) REMOVE THE EXISTING STEPS AND CROSSWALK BENEATH THE UPPER DECK IN THE WEST END SPAN.
- (12) CLEAN AND POINT THE EAST AND WEST PYLON.
- (13) PAINT ALL EXISTING AND NEW STRUCTURAL STEEL MEMBERS.

B. CARNEGIE AVENUE GRADE SEPARATION STRUCTURE

- (1) REPLACE THE ENTIRE ROADWAY DECK INCLUDING SIDEWALKS, RAILING AND FENCING.
- (2) REPLACE ONE CONCRETE GIRDER, TWO CONCRETE PIER COLUMNS AND PART OF ONE CONCRETE STRUT.
- (3) REPLACE AND/OR MODIFY THE TOP OF THE ABUTMENT BACKWALLS.
- (4) REMOVE AND REPLACE THE DETERIORATED CONCRETE OF ALL STRUCTURAL ELEMENTS INCLUDING STRUCTURALLY REPAIRING CRACKS IN THE CONCRETE.
- (5) PROVIDE A CONCRETE COATING TO THE EXPOSED SURFACES OF ALL EXISTING CONCRETE ELEMENTS.

2. DESIGN SPECIFICATIONS

STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 1977, INCLUDING THE 1978 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS. THE DESIGN LOADING IS HS-20-44 CASE 11 AND THE ALTERNATE MILITARY LOADING.

THE CLASSES OF CONCRETE AND THE GRADES OF STRUCTURAL STEEL AND REINFORCING STEEL, TOGETHER WITH THE WORKING STRESS FOR EACH ARE AS FOLLOWS:

- CONCRETE CLASS S - UNIT STRESS 1,200 PSI FOR SUPERSTRUCTURE
- CONCRETE CLASS C - UNIT STRESS 1,333 PSI FOR SUBSTRUCTURE
- STRUCTURAL STEEL - ASTM A36 - UNIT STRESS, 20,000 PSI
- ASTM A538 - UNIT STRESS, 27,000 PSI
- REINFORCING STEEL - ASTM A615, A616, A617 - UNIT STRESS 20,000 PSI

3. SUPPLEMENTAL SPECIFICATIONS

REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS 836 DATED 3-12-75, 853 DATED 6-26-78, 903 DATED 1-1-69 AND 956 DATED 6-26-78.

4. REFERENCE DRAWINGS

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS AS-1-72, DATED 6-30-72 (SHEETS 1 AND 2) AND TO SD-1-69, DATED 6-12-69 (SHEET 3 OF 4).

5. PLANS OF EXISTING BRIDGES

CONSTRUCTION PLANS FOR THE EXISTING BRIDGES ARE ON FILE AT THE CUYAHOGA COUNTY ENGINEER'S OFFICE, 1370 ONTARIO STREET, CLEVELAND, OHIO AND ARE AVAILABLE FOR REFERENCE.

6. DIMENSIONS

DIMENSIONS GIVEN ARE MEASURED HORIZONTALLY AND AT 60°F. DIMENSIONS GIVEN FOR EXISTING STRUCTURES ARE FROM THE ORIGINAL CONSTRUCTION PLANS. SOME VARIATIONS FROM PLAN DIMENSIONS IS EXPECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER FIT-UP BETWEEN THE PROPOSED AND EXISTING CONSTRUCTION. ADEQUATE MEASUREMENTS SHALL BE MADE IN THE FIELD PRIOR TO THE FABRICATION OR INSTALLATION OF ANY PART TO INSURE THAT ALL PARTS CAN BE PROPERLY ASSEMBLED AS SPECIFIED IN THE PLANS. ANY ADDITIONAL COST RESULTING FROM VARIATIONS FROM PLAN DIMENSIONS IS THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL PAYMENT WILL BE AWARDED BY THE STATE.

7. UTILITIES

UTILITIES NOT INDICATED IN THE PLANS AS BEING ABANDONED SHALL REMAIN. WORK ADJACENT TO OR OVER THE RETAINED UTILITIES SHALL NOT BE COMMENCED UNTIL ALL ARRANGEMENTS NECESSARY FOR THEIR PROTECTION HAVE BEEN MADE. THE CONTRACTOR'S PROVISIONS FOR PROTECTION MUST BE ACCEPTABLE TO THE UTILITY OWNERS AND APPROVED BY THE DIRECTOR. EXCEPT AS OTHERWISE NOTED NO SEPARATE PAYMENT WILL BE MADE FOR PROTECTION OF UTILITIES.

SPECIAL PROTECTION SHALL BE PROVIDED FOR THE TWO CLEVELAND ELECTRIC ILLUMINATING COMPANY'S 8" Ø - 132 K.V. POWER LINES CARRIED ON THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE. DETAILS OF THIS PROTECTION AND ADDITIONAL PRECAUTIONARY NOTES ARE SHOWN ON SHEET 31A/31. THIS PROTECTION IS COVERED IN THE ESTIMATED QUANTITIES AS A LUMP SUM ITEM AND WILL BE PAID FOR BY THE C.E.I. COMPANY.

A 20" Ø H.P. GAS LINE IS CARRIED ON THE MAINTENANCE AND INSPECTION DECK AS SHOWN ON SHEET 3/72. THIS GAS LINE WILL BE ABANDONED AND SHALL BE REMOVED BY THE CONTRACTOR. PAYMENT FOR THE REMOVAL OF THIS GAS MAIN SHALL BE INCLUDED FOR PAYMENT IN THE ITEM 202, PORTIONS OF STRUCTURES REMOVED. THE PIPE AND ALL APPURTENANCES SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

AIR VENTS SHALL BE PROVIDED FOR THE EAST OHIO GAS COMPANY'S 20" Ø AND 3" Ø H.P. PIPES CARRIED ON THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE. DETAILS OF THESE VENTS ARE SHOWN ON SHEET 31/31. THESE VENTS ARE COVERED IN THE ESTIMATED QUANTITIES AS A LUMP SUM ITEM AND WILL BE PAID FOR BY THE EAST OHIO GAS COMPANY.

ANY OTHER SPECIAL PROTECTIVE DEVICES DESIRED BY THE UTILITY OWNERS SHALL BE PROVIDED BY THE CONTRACTOR AND SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY WORK CONSIDERED BY THE ENGINEER TO BE ADDITIONAL TO NORMAL PROTECTIVE MEASURES WILL BE AT THE EXPENSE OF THE UTILITY OWNER.

THE MANHOLES IN THE DECK OR SIDEWALK OF THE LORAIN-CARNEGIE BRIDGE, CELLULAR CONSTRUCTION AT THE EAST ABUTMENT AND CARNEGIE AVENUE GRADE SEPARATION STRUCTURE MUST BE MODIFIED FOR THE PROPOSED CONSTRUCTION. PAYMENT FOR ADJUSTING PUBLICLY OWNED MANHOLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS ON THE PROJECT. THE CONTRACTOR SHALL ADJUST PRIVATELY OWNED MANHOLES BY AGREEMENT WITH THE OWNER.

MUNICIPAL ELECTRIC LIGHT AND POWER HAS A 16 DUCT RUN IN THE SOUTH SIDEWALK FROM WEST 20TH STREET TO THE EAST END OF THE LORAIN-CARNEGIE BRIDGE. THE DUCTS THEN CROSS TO THE NORTH SIDE AND ARE CARRIED ACROSS THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE JUST BELOW THE DECK IN FRONT OF THE NORTH SIDEWALK. PLANS FOR THE RELOCATION OF THIS DUCT RUN ARE INCLUDED AS PART OF THIS PROJECT.

THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO ALLOW UTILITY OWNERS ACCESS TO THEIR FACILITIES AT ALL TIMES IN CASE AN EMERGENCY SHOULD ARISE.

8. MAINTENANCE OF TRAFFIC

TWO LANES OF TRAFFIC AS SHOWN AT THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE WILL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD TO SERVICE COMMERCIAL ROAD. EXCEPT FOR THIS TRAFFIC REQUIREMENT, THE PROJECT WILL BE CLOSED TO VEHICULAR TRAFFIC. FOR TRAFFIC CONTROL DETAILS AT THE GRADE SEPARATION STRUCTURE, SEE ROADWAY PLANS.

9. REMOVAL

A. GENERAL

REMOVAL OF THE SOUTH SIDEWALK ON THE LORAIN-CARNEGIE BRIDGE AND THE NORTHERN PART OF THE DECK ON THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE MUST NOT BE STARTED UNTIL CERTAIN PARTS AT THE MUNICIPAL ELECTRIC LIGHT AND POWER RELOCATION HAVE BEEN ACCOMPLISHED. SEE THE CONSTRUCTION SEQUENCE NOTE IN THE MUNICIPAL ELECTRIC LIGHT AND POWER RELOCATION PLANS.

THE CONTRACTOR SHALL REMOVE THE DESIGNATED PORTIONS OF THE EXISTING BRIDGES TO THE LIMITS SHOWN ON THE PLANS OR TO THE LIMITS DIRECTED BY THE ENGINEER. PORTIONS OF THE LORAIN-CARNEGIE BRIDGE (EAST OF STA. 23+77.89) TO BE REMOVED INCLUDE THE FOLLOWING:

- (1) THE ENTIRE ROADWAY DECK SLAB, INCLUDING SIDEWALKS, RAILINGS, UTILITY DUCTS, MANHOLES IN SIDEWALKS, ASPHALT SURFACING, CONCRETE SLAB AND ANY OTHER MISCELLANEOUS ITEMS CONNECTED WITH THE DECK. MANHOLE COVERS AND FRAMES IN ROADWAY SHALL REMAIN BUT MUST BE ADJUSTED TO NEW GRADE.
- (2) THE ENTIRE BRIDGE LIGHTING SYSTEM EXCLUDING NAVIGATION LIGHTS.
- (3) ALL UPPER DECK EXPANSION AND DEFLECTION JOINTS.
- (4) ALL UPPER DECK FLOOR BEAMS ADJACENT TO ROADWAY EXPANSION JOINTS, EXCEPT THE EXTERIOR BAY AT THE EAST PYLON.
- (5) UPPER DECK FLOOR BEAMS AND STRINGERS AS REQUIRED WITHIN THE LENGTHENED VERTICAL CURVE (SPAN 10 AND PART OF SPANS 9 AND 11).
- (6) OTHER SELECTED STRINGERS AND FLOOR BEAMS AS SHOWN IN THE PLANS.
- (7) THE TRUSS WIND SHEAR KEY ASSEMBLIES AT ALL EXPANSION JOINTS.
- (8) THE ENTIRE CONCRETE SLAB OF THE "MAINTENANCE AND INSPECTION" DECK INCLUDING MISCELLANEOUS DECK EXPANSION JOINT METAL WORK.
- (9) THE ENTIRE DRAINAGE SYSTEM ABOVE GROUND.
- (10) THE ACCESS STEPS AND CROSSWALK BENEATH THE UPPER DECK IN SPAN 13.
- (11) PORTIONS OF THE WEST PYLON, EAST ABUTMENT AND ADJACENT CELLULAR CONSTRUCTION AS REQUIRED FOR NEW CONSTRUCTION.
- (12) PORTIONS OF THE WALLS ATOP PIERS 6, 7, 10, AND 12.

PORTIONS OF THE CARNEGIE AVENUE GRADE SEPARATION TO BE REMOVED INCLUDE THE FOLLOWING:

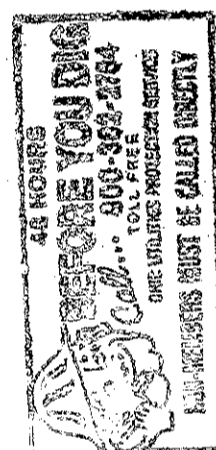
- (1) THE ENTIRE ROADWAY DECK SLAB, INCLUDING SIDEWALKS, RAILING, FENCING, ASPHALT SURFACING, CONCRETE SLAB AND ALL OTHER MISCELLANEOUS ITEMS CONNECTED WITH THE DECK.
- (2) THE ENTIRE BRIDGE LIGHTING SYSTEM.
- (3) ONE GIRDER, TWO PIER COLUMNS AND PART OF ONE STRUT.
- (4) PORTIONS OF THE ABUTMENTS AND REMAINING GIRDERS AS REQUIRED FOR NEW CONSTRUCTION.

\* THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SUPPORTS UNDER PORTIONS OF THE STRUCTURE, DURING REMOVAL AND RECONSTRUCTION OPERATIONS, AS REQUIRED TO MAINTAIN A COMPLETELY STABLE STRUCTURE AT ALL TIMES. IF, IN THE OPINION OF THE ENGINEER, ADDITIONAL SUPPORTS ARE REQUIRED, THEY SHALL BE PROVIDED BY THE CONTRACTOR ENTIRELY AT HIS EXPENSE. THE CONTRACTOR SHALL SUBMIT PLANS OF TEMPORARY SUPPORTS TOGETHER WITH HIS PROPOSED METHOD AND SEQUENCE OF REMOVAL TO THE DIRECTOR FOR APPROVAL.

STRUCTURAL STEEL MEMBERS DESIGNATED IN THE PLANS FOR REMOVAL MAY BE REMOVED BY METHODS OF THE CONTRACTOR'S SELECTION AND AS APPROVED BY THE ENGINEER. CARE SHALL BE EXERCISED TO PREVENT DAMAGE TO MEMBERS WHICH ARE TO BE RE-USED.

WHEN SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL WET DOWN CONCRETE THOROUGHLY DURING REMOVAL OPERATIONS TO PREVENT SPREAD OF DUST. ALL NECESSARY LABOR EQUIPMENT AND MATERIAL SHALL BE PROVIDED BY THE CONTRACTOR, AND INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURES REMOVED, FOR PAYMENT.

\* THE CONTRACTOR SHALL SUBMIT PLANS TO THE RAILROADS FOR APPROVAL OF THE PROTECTIVE SHIELD HE PROPOSES TO ERECT OVER THE RAILROAD TRACKS DURING DEMOLITION IN THE VICINITY OF THE TRACKS.



HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

GENERAL NOTES

BR. NO. CUY.-10-1618  
BR. NO. CUY.-10-1685

DRAWN CAB DATE 11-27-78		TRACED DATE	CHECKED CAB DATE 11-29-78	REVIEWED DATE	REVISED 12-3-79 SHEET GN 1
-------------------------------	--	----------------	---------------------------------	------------------	----------------------------------

CUYAHOGA COUNTY OHIO

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		



CUYAHOGA COUNTY  
CUY-10-16.23

## 9. REMOVAL (CONTINUED)

### B. CONCRETE REMOVAL

CONCRETE SHALL BE REMOVED BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS EXCEPT THE CONCRETE DECKS MAY BE SAW CUT AND REMOVED IN SECTIONS. THE MAXIMUM WEIGHT OF HAMMER, IF USED, SHALL NOT EXCEED 35 POUNDS. EXISTING REINFORCING STEEL SHALL BE CUT AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER TO SERVE AS DOWELS OR PRINCIPAL REINFORCEMENT IN THE REBUILT STRUCTURE. CARE SHALL BE TAKEN TO PRESERVE THE BOND OF SUCH DOWELS OR PRINCIPAL REINFORCEMENT IN THE EXISTING CONCRETE. THESE BARS SHALL BE CLEANED OF ALL CONCRETE FRAGMENTS AND FOREIGN MATTER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE BARS; HAND TOOLS SHALL BE EMPLOYED FOR FINAL CLEANING. DAMAGED AREAS OF REINFORCEMENT THAT ARE TO REMAIN SHALL BE CUT AND STRESS TRANSFER ACCOMPLISHED BY EITHER A LAPPED OR MECHANICAL SPLICE APPROVED BY THE ENGINEER. OTHER EXISTING REINFORCEMENT WITHIN THE REMOVAL LIMITS SHALL BE REMOVED AND DISPOSED OF. ALL NECESSARY LABOR, EQUIPMENT AND MATERIAL REQUIRED TO CUT AND CLEAN EXISTING REINFORCING STEEL SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, FOR PAYMENT. LAPPED OR MECHANICAL SPLICES ARE PAID FOR UNDER ITEM SPECIAL, REPLACEMENT REINFORCEMENT.

THE LATERAL LIMITS OF EACH CONCRETE DECK SLAB PANEL TO BE REMOVED FROM THE CARNEGIE-AVENUE GRADE SEPARATION STRUCTURE WILL BE DELINEATED BY THE CONTRACTOR AND SUITABLY MARKED FOR APPROVAL BY THE ENGINEER PRIOR TO START OF REMOVAL. THE OUTLINE OF EACH SUCH AREA SHALL BE SAW CUT TO A DEPTH OF THREE-QUARTERS (3/4) OF AN INCH.

THE CONTRACTOR SHALL NOT PERMIT REMOVED CONCRETE TO DROP. MEANS SHALL BE PROVIDED FOR CATCHING BROKEN CONCRETE. THE CONTRACTOR SHALL SUBMIT DETAILS OF THE METHOD HE PROPOSES TO USE TO COLLECT THE CONCRETE, TO THE ENGINEER FOR APPROVAL.

### C. DISPOSAL OF REMOVED MATERIAL

ALL CONCRETE, STEEL, REINFORCING STEEL, ASPHALT, ETC., REMOVED FROM THE STRUCTURE AND NOT REUSED SHALL, UNLESS OTHERWISE SPECIFIED, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE SITE.

UNDER NO CIRCUMSTANCES SHALL THE MATERIAL BE PERMITTED TO REMAIN ON THE PREMISES, RIGHT OF WAY OR STREETS PENDING DISPOSAL OF SAME OR FOR ANY OTHER PURPOSES, UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

### D. UTILITIES

UTILITIES NOT INDICATED IN THE PLANS AS BEING ABANDONED SHALL REMAIN. WORK ADJACENT TO OR OVER THE RETAINED UTILITIES SHALL NOT BE COMMENCED UNTIL ALL ARRANGEMENTS NECESSARY FOR THEIR PROTECTION HAVE BEEN MADE. THE CONTRACTOR'S PROVISIONS FOR PROTECTION MUST BE ACCEPTABLE TO THE UTILITY OWNERS AND APPROVED BY THE DIRECTOR.

### E. EXISTING LIGHTING

THE EXISTING LIGHT POLES, BRACKETS, LUMINAIRES AND TRANSFORMERS, POLE AND BRACKET CABLE AND CABLE BETWEEN LIGHT POLES SHALL BE REMOVED AND DISPOSED OF. THE EXISTING NAVIGATION LIGHTING WILL REMAIN IN SERVICE DURING THE CONSTRUCTION PERIOD AND BE RETAINED IN THE FINAL CONSTRUCTION.

### F. DECK REPAIR PLATES

STEEL PLATES (APPROXIMATELY 98,000 POUNDS) HAVE BEEN PLACED ON THE BRIDGE DECK AS A TEMPORARY MEANS OF MAINTAINING VEHICULAR TRAFFIC ON THE EXISTING STRUCTURE.

THESE PLATES SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BECOME THE PROPERTY OF THE COUNTY OF CUYAHOGA. THE CONTRACTOR SHALL STORE THESE PLATES AT THE SITE IN AN AREA AS APPROVED BY THE CUYAHOGA COUNTY ENGINEER WHO SHALL BE RESPONSIBLE FOR REMOVING THEM FROM THE SITE.

ALL NECESSARY LABOR AND EQUIPMENT FOR THE WORK IN CONNECTION WITH THE DECK PLATES SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURES REMOVED, FOR PAYMENT.

## G. RAILING

NINE CONTINUOUS FEET OF UNDAMAGED SECTIONS OF SANDSTONE RAILING AND SIX ADDITIONAL ORNAMENTAL ALUMINUM RAILING INSERTS SHALL BE REMOVED FROM A STRAIGHT SECTION OF THE STRUCTURE NEAR THE WESTERN TERMINUS OF THE BRIDGE CONVENIENT FOR SHORT TERM STORAGE OUTSIDE OF THE ACTIVE WORKING AREA. REMOVAL OF THESE ITEMS FROM THE SITE SHALL BE THE RESPONSIBILITY OF THE CUYAHOGA COUNTY ARCHIVIST. THE SECTIONS TO BE REMOVED AND THE AREA DESIGNATED FOR STORAGE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

ALL NECESSARY LABOR AND EQUIPMENT FOR THE WORK IN CONNECTION WITH THE REMOVAL AND STORAGE OF THE ABOVE NOTED RAILING SECTIONS SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED WITH ITEM 202, PORTION OF STRUCTURES REMOVED, FOR PAYMENT.

## 10. REPLACEMENT REINFORCEMENT

REPLACEMENT REINFORCEMENT REQUIRED DUE TO CORROSION OF THE EXISTING REINFORCEMENT OR NON-CONTRACTOR RELATED DAMAGE OF EXISTING REINFORCEMENT SHALL BE THE SAME SIZE AS THE ORIGINAL BARS AND SHALL BE PLACED AS NEAR AS POSSIBLE TO THEIR ORIGINAL PLAN LOCATION. BARS SHALL BE SPLICED BY LAPPING OR APPROVED MECHANICAL SPLICE IN ACCORDANCE WITH 509.08.

THESE BARS SHALL BE USED AS DIRECTED BY THE ENGINEER AT AREAS WHERE THE EXISTING STRUCTURE IS PATCHED IN ACCORDANCE WITH ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR EQUAL TO OR LESS THAN 6" AVERAGE DEPTH) OR ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR GREATER THAN 6" AVERAGE DEPTH), WHERE THE "MAINTENANCE AND INSPECTION DECK" IS ANCHORED TO THE SIDE CHANNEL AS SHOWN ON SHEET 3/72, AND AT ALL OTHER LOCATIONS WHERE THE EXISTING REINFORCEMENT IS CALLED FOR TO BE RETAINED AND IS UNSATISFACTORY DUE TO NON-CONTRACTOR RELATED CAUSES.

REPLACEMENT REINFORCEMENT WILL BE MEASURED BY WEIGHT IN POUNDS BASED ON THE TOTAL COMPUTED WEIGHT FOR THE SIZES OF BARS USED INCLUDING NUTS AS REQUIRED AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL, "REPLACEMENT REINFORCEMENT." THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING AND STORING ALL MATERIALS, AND FOR ALL LABOR, TOOLS AND INCIDENTALS NECESSARY TO THE PLACING OF THE MATERIALS IN THE FINISHED WORK. THIS PRICE SHALL ALSO INCLUDE REMOVAL OF EXISTING REINFORCING. THE WORK SHALL BE IN ACCORDANCE WITH SECTION 509.

## 11. INSPECTION OF EXISTING CONCRETE UNITS

THE LOCATION OF THE EXISTING CONCRETE UNITS THAT ARE TO BE REPAIRED ARE SHOWN IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIAL, EQUIPMENT AND LABOR PRIOR TO BEGINNING OF WORK, TO PERMIT INSPECTION OF THESE UNITS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER AT THIS TIME IN MAKING A DETAILED EXAMINATION OF THE REPAIRS TO BE MADE. THE MATERIAL, EQUIPMENT AND LABOR SHALL BE FURNISHED FOR WHATEVER LENGTH OF TIME IT MAY BE NECESSARY TO CONDUCT THIS EXAMINATION.

INSPECTION OF THE EXISTING SUBSTRUCTURE UNITS WILL BE PAID FOR AT THE CONTRACT LUMP SUM BID FOR ITEM SPECIAL, INSPECTION OF EXISTING SUBSTRUCTURE UNITS. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK.

## 12. PATCHING CONCRETE STRUCTURES

CONCRETE IN SOME AREAS OF THE STRUCTURE HAS DETERIORATED BY SPALLING, CRACKING AND GENERAL BREAKDOWN INCLUDING HONEYCOMBED AND POROUS AREAS. A CAREFUL DETAILED VISUAL INSPECTION HAS BEEN MADE OF ALL EXPOSED CONCRETE SURFACES IN THE STRUCTURE. BASED ON THIS INSPECTION, QUANTITY ESTIMATES HAVE BEEN MADE FOR THE AREAS OF THE STRUCTURE REQUIRING PATCHING. THE PATCHING SHALL BE IN ACCORDANCE WITH ITEM 519 EXCEPT THE BONDING AGENT WILL BE AS DESCRIBED IN ITEM 13 OF THE GENERAL NOTES. AS AN ALTERNATIVE, THE CONTRACTOR MAY PATCH THE AREAS WITH A PNEUMATICALLY PLACED MORTAR IN ACCORDANCE WITH ITEM 520 USING THE ABOVE MENTIONED BONDING AGENT.

THE EXTENT OF THE WORK WHICH WILL BE NECESSARY TO REMOVE AND RESTORE ALL DETERIORATED CONCRETE PARTS CANNOT BE DETERMINED BY A VISUAL INSPECTION. THE ESTIMATED QUANTITIES OF PATCH ARE BASED ON INSPECTIONS WHICH HAVE BEEN MADE. PAYMENT WILL BE BASED ON THE UNIT PRICE BID FOR ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR EQUAL TO OR LESS THAN 6" AVERAGE DEPTH) OR ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR GREATER THAN 6" AVERAGE DEPTH) AND SHALL BE MADE ON THE BASIS OF ACTUAL WORK PERFORMED AS MEASURED IN PLACE.

## 13. BONDING NEW CONCRETE TO EXISTING CONCRETE

REPLACEMENT REINFORCEMENT, NOT INCLUDING ANCHOR BOLTS OR WIRE FABRIC, IS NOT INCLUDED IN ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR EQUAL TO OR LESS THAN 6" AVERAGE DEPTH) OR ITEM SPECIAL, PATCHING CONCRETE STRUCTURES (REPAIR GREATER THAN 6" AVERAGE DEPTH) BUT IS INCLUDED IN ITEM SPECIAL, REPLACEMENT REINFORCEMENT.

POLYSULFIDE-EPOXY RESIN ADHESIVE SHALL BE USED FOR BONDING NEW CONCRETE TO EXISTING CONCRETE AT ALL LOCATIONS WHERE NEW CONCRETE IS PLACED IN CONTACT WITH EXISTING CONCRETE. THE ADHESIVE SHALL BE THIOBOND No. 100 AS MANUFACTURED BY STEEL-COAT MANUFACTURING COMPANY, ST. LOUIS, MO., CEILCOAT 348 ADHESIVE, AS MANUFACTURED BY THE CEILCOAT COMPANY, BEREA, OHIO, RESIWELD R-7689-G AS MANUFACTURED BY THE H.B. FULLER COMPANY OR ADHESIVE MEETING THE REQUIREMENTS OF AASHTO M-235-731. IN THE EVENT OF APPLICATION AT LESS THAN 60°F OR MORE THAN 104°F, IT MAY BE NECESSARY TO OBTAIN A SLIGHTLY MODIFIED MATERIAL DEPENDING ON THE RECOMMENDATIONS OF THE MANUFACTURER.

PREPARATION OF THE SURFACE OF THE EXISTING CONCRETE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. JUST PRIOR TO APPLICATION, THE PREPARED SURFACE SHALL BE WASHED WITH WATER TO REMOVE ALL DUST. WHEN THE SURFACE IS DAMP OR DRY, THE ADHESIVE SHALL BE APPLIED BY THOROUGH BRUSHING ONTO THE SURFACE TO A THICKNESS OF NOT LESS THAN 15 MILS WITH THE COVERAGE AVERAGING AT LEAST ONE GALLON PER 100 SQ.FT. IF THE ADHESIVE SETS AND IS NO LONGER TACKY, A SECOND COAT SHALL BE APPLIED. THE ADHESIVE SHALL BE THOROUGHLY MIXED AND HEALTH PRECAUTIONS OBSERVED, ALL IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

NO SEPARATE PAYMENT WILL BE MADE FOR BONDING NEW CONCRETE TO OLD USING POLYSULFIDE-EPOXY RESIN ADHESIVE, BUT THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT CONCRETE ITEM. THIS PRICE SHALL INCLUDE ALL LABOR, MATERIAL INCLUDING CLEANING AND PREPARING OF THE EXISTING SURFACE IF NOT COVERED ELSEWHERE.

## 14. REPAIR OF CRACKS

CRACKS IN EXISTING CONCRETE WHERE THE ADJACENT CONCRETE IS SOUND AND NOT DISLOCATED, SHALL BE STRUCTURALLY REPAIRED BY THE PRESSURE INJECTION OF EPOXY RESIN BONDING COMPOUND. THE METHOD OF REPAIR SHALL CONSIST OF TEMPORARILY SEALING THE SURFACE OF THE CRACK EXCEPT FOR OCCASIONAL OPENINGS, INJECTING THE EPOXY THROUGH THE OPENING SO AS TO COMPLETELY FILL THE CRACK, AND THEN REMOVING THE TEMPORARY SEAL. THE METHOD SHALL NOT DEFACE THE SURFACE OF THE CONCRETE.

THE EPOXY SHALL BE 100% SOLID MATERIAL AND SHALL DEVELOP THE STRENGTH OF THE CONCRETE. IN GENERAL, THE REPAIR PROCEDURE SHALL BE SIMILAR TO THE METHOD USED BY THE STRUCTURAL CONCRETE BONDING DIVISION OF THE ADHESIVE ENGINEERING COMPANY, 1411 INDUSTRIAL ROAD, SAN CARLOS, CALIFORNIA.

REPAIR OF CRACKS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL, REPAIR OF CRACKS. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR TO COMPLETE THE WORK AS SPECIFIED.

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

## GENERAL NOTES

BR. NO. CUY.-10-1618  
BR. NO. CUY.-10-1685

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
CAB		CAB		
DATE 11-27-78	DATE	DATE 11-29-78	DATE	

SHEET GN 2

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		



CUYAHOGA COUNTY  
CUY-10-16.23

15. REINFORCING STEEL

ALL BARS ARE DESIGNATED ON THE PLANS BY BAR NUMBERS. THE BAR SIZE IS DESIGNATED BY THE FIRST DIGIT OF THREE-DIGIT NUMBERS AND BY THE FIRST TWO DIGITS OF FOUR-DIGIT NUMBERS.

THE CLEAR DISTANCE BETWEEN REINFORCING STEEL AND FACE OF CONCRETE SHALL BE 3" FOR ALL BARS IN FOOTINGS, 2-1/2" AT BAR MATS UNDER SHOES AND 2" ELSEWHERE UNLESS OTHERWISE SHOWN ON THE PLANS.

ALL BAR DIMENSIONS ARE GIVEN OUT TO OUT.

ALL BARS OF SERIES SHALL VARY BY A CONSTANT INCREMENT.

EXISTING REINFORCING STEEL THAT SERVES AS DOWELS OR PRINCIPAL REINFORCEMENT IN THE REBUILT STRUCTURE ARE SHOWN IN THE PLANS AS EXTENDING BEYOND THE CONCRETE REMOVAL LINE. THIS STEEL SHALL BE COMPLETELY RETAINED EXCEPT AS NOTED IN THE PLANS.

16. DECK FLOOR SYSTEM SURVEY - BRIDGE NO. CUY-10-1618 (TRUSS SPANS)

PRIOR TO THE REMOVAL OF THE UPPER DECK AND WITH NO LIVE LOAD ON THE STRUCTURE, THE CONTRACTOR SHALL MAKE A DETAILED SURVEY OF THE UPPER DECK FLOOR SYSTEM TO DETERMINE THE EXISTING ELEVATIONS AND DIMENSIONS OF THE FLOOR BEAMS AND STRINGERS. BASED ON THIS SURVEY, THE CONTRACTOR SHALL DETERMINE THE DEPTH OF CONCRETE REQUIRED OVER EACH FLOOR BEAM AND STRINGER TO PROVIDE THE DECK ELEVATIONS AS SHOWN IN THE PLANS ON SHEET 54/72. THE DEFLECTIONS OF THE TRUSSES, FLOOR BEAMS AND STRINGERS UNDER THE PROPOSED DEAD LOAD ARE ESSENTIALLY THE SAME AS UNDER THE EXISTING DEAD LOAD. THE CALCULATED DEPTHS OF CONCRETE SHALL BE SUBMITTED IN TRIPPLICATE TO THE DIRECTOR FOR APPROVAL.

THE COST OF THE ABOVE WORK SHALL BE INCLUDED WITH ITEM 623, CONSTRUCTION LAYOUT STAKES, FOR PAYMENT (SEE ROADWAY PLANS FOR QUANTITY).

17. CONCRETE DECK

THE FINAL SURFACE OF THE ROADWAY SHALL CONFORM AS NEARLY AS PRACTICABLE TO THE ELEVATIONS SHOWN ON THE PLANS.

THE CONCRETE OF THE ROADWAY SLABS ON THE STEEL SPANS OF THE LORAIN-CARNEGIE BRIDGE SHALL BE POURED IN SPECIAL SEQUENCE. THE SEQUENCE SHALL ADHERE TO THE FOLLOWING GENERAL RULES:

- a) FOR UNITS WITH ONE CANTILEVER ARM, THE ADJACENT SUSPENDED SPAN SHALL BE POURED BEFORE THE CANTILEVER UNIT.
- b) FOR UNITS WITH DOUBLE CANTILEVER ARMS, BOTH ADJACENT SUSPENDED SPANS SHALL BE POURED BEFORE THE DOUBLE CANTILEVER UNIT.
- c) FIVE-FOOT CONCRETE SLAB BLOCKOUTS SHALL BE PROVIDED ON EACH SIDE OF EACH TOOTH PLATE EXPANSION JOINT. AFTER THE SLAB IS PLACED ON EACH SIDE OF THE JOINT, THE EXPANSION JOINT METAL WORK SHALL BE INSTALLED AND THE BLOCKOUT FILLED.

THE CONTRACTOR SHALL SUBMIT HIS PROPOSED POURING SEQUENCE TO THE DIRECTOR FOR APPROVAL PRIOR TO THE START OF WORK.

18. ITEM 401 - PLANT MIX PAVEMENTS - GENERAL AS PER PLAN

ALL APPLICABLE PROVISIONS OF "ITEM 401 PLANT MIX PAVEMENTS - GENERAL" AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS NOTED HEREIN.

19. ITEM 402 - ASPHALT CONCRETE, AC-20, AS PER PLAN

ALL APPLICABLE PROVISIONS OF "ITEM 402 ASPHALT CONCRETE" AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT THE ELAPSED TIME BETWEEN APPLICATION OF THE TACK COAT, ITEM 407, AND THE ASPHALT CONCRETE SHALL BE ESTABLISHED BY THE ENGINEER AND 402.02 SHALL BE MODIFIED AS FOLLOWS:

COARSE AGGREGATE (No. 57) AND FINE AGGREGATE SHALL BE COMBINED IN SUCH PROPORTIONS THAT THE RESULTING BLEND SHALL BE AS DIRECTED BY THE LABORATORY BUT WITHIN THE FOLLOWING LIMITS.

SIEVE	TOTAL PASSING - % BY WT.
1 1/2 INCH	100
1 INCH	95-100
3/4 INCH	50-80
No. 4	25-60
No. 6	20-52
No. 50	3-20
No. 200	0-5

BITUMEN CONTENT SHALL BE AS DIRECTED BY THE LABORATORY WITHIN THE FOLLOWING LIMITS:

BITUMEN (PERCENT OF TOTAL MIX) 4.0 TO 8.5  
 ASPHALT CEMENT ..... AC 20 AS DIRECTED BY THE ENGINEER.  
 WHEN AC 20 IS USED, THE PENETRATION AT 25°C (77°F) 100g., 5 Sec. SHALL NOT BE LESS THAN 60.

20. ITEM 404 - ASPHALT CONCRETE, AC-20, AS PER PLAN (See Note On Sheet 8).

ALL APPLICABLE PROVISIONS OF "ITEM 404 ASPHALT CONCRETE" AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED SUPPLEMENTAL TO THE PROVISIONS SET FORTH THEREIN.

A. DESCRIPTION

THIS WORK SHALL CONSIST OF CONSTRUCTING A SURFACE COURSE OF AGGREGATE AND RUBBERIZED ASPHALT CEMENT MIXED IN A CENTRAL PLANT AND SPREAD AND COMPACTED ON A PREPARED SURFACE, IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN A REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES AND TYPICAL SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

THE GENERAL PLANT MIX PAVEMENT SPECIFICATIONS 401, AS PER PLAN, SHALL APPLY WITH THE DEVIATIONS AS NOTED HEREIN.

B. COMPOSITION

COARSE AGGREGATE (No. 8) AND FINE AGGREGATE SHALL BE COMBINED IN SUCH PROPORTIONS THAT THE RESULTING BLEND SHALL BE AS DIRECTED BY THE LABORATORY, BUT WITHIN THE FOLLOWING LIMITS:

SIEVE No.	TOTAL PASSING - % BY WT.
1/2 INCH	100
3/8 INCH	90-100
No. 4	45-75
No. 6	36-65
No. 50	3-22
No. 200	0-8

THE COMBINED ASPHALT CEMENT AND RUBBER SOLIDS CONTENT SHALL BE AS DIRECTED BY THE LABORATORY WITHIN THE FOLLOWING LIMITS.

ASPHALT CEMENT AND RUBBER SOLIDS (PERCENT OF TOTAL MIX), 4.5 TO 9.5.  
 THE QUANTITY OF ASPHALT CEMENT AND RUBBER COMPOUND SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION OF 95 PLUS OR MINUS 0.3 PERCENT ASPHALT CEMENT TO 5 PLUS OR MINUS 0.3 PERCENT RUBBER SOLIDS BY WEIGHT.

THE FINISHED MIX SHALL CONTAIN NO MATERIALS OTHER THAN THE APPROVED AGGREGATE, ASPHALT CEMENT AND RESIDUAL RUBBER SOLIDS.

C. MATERIALS

COARSE AGGREGATE CRUSHED CARBONATE STONE OR CRUSHED AIR-COOLED SLAG MEETING THE QUALITY REQUIREMENTS OF 703.05.

FINE AGGREGATE NATURAL SAND MEETING THE QUALITY REQUIREMENTS OF 703.05.

ASPHALT CEMENT ..... 702.01 AC 10 OR AC 20 AS DIRECTED BY THE ENGINEER.  
 WHEN AC 20 IS USED, THE PENETRATION AT 25°C (77°F) 200g., 5 Sec. SHALL NOT BE LESS THAN 60.

RUBBER COMPOUND..... 903

THE RUBBER SOLIDS CONTENT OF THE RUBBER COMPOUND SHALL BE CERTIFIED TO THE LABORATORY PRIOR TO START OF PRODUCTION.

D. MIXING PLANTS

MEANS SHALL BE PROVIDED FOR PROPORTIONING THE RUBBER COMPOUND INTO THE MIXER.

E. WEATHER LIMITATIONS

RUBBERIZED ASPHALT CONCRETE SHALL NOT BE PLACED BETWEEN OCTOBER 1ST AND JUNE 15TH EXCEPT BY SPECIAL PERMISSION OF THE ENGINEER.

F. BITUMINOUS MATERIAL PREPARATION

THE BITUMINOUS MATERIAL SHALL BE HEATED AND DELIVERED TO THE MIXTURE WITHIN A TEMPERATURE RANGE REQUIRED TO PRODUCE A MIXTURE THAT WHEN DISCHARGED FROM THE MIXER WILL BE WITHIN 335°F TO 370°F. BITUMINOUS MATERIAL SHALL NOT BE USED WHILE FOAMING.

MIXING

THE COARSE AND FINE AGGREGATE SHALL BE MIXED DRY FOR NOT LESS THAN 15 SECONDS. ASPHALT CEMENT SHALL THEN BE ADDED IN AN EVENLY SPREAD SHEET OVER THE FULL LENGTH OF THE MIXER BOX AND THE MIXING CONTINUED FOR A PERIOD OF NOT LESS THAN 10 SECONDS AND AT LEAST UNTIL AGGREGATE IS COMPLETELY COATED WITH BITUMEN. RUBBER COMPOUND SHALL THEN BE ADDED TO THE COATED AGGREGATE AND THE MIXING CONTINUED FOR A PERIOD OF NOT LESS THAN 50 SECONDS. THE LENGTH OF DRY MIXING AND WET MIXING PERIODS MAY VARY, BUT UNDER NO CIRCUMSTANCES SHALL THE TOTAL MIXING TIME OR INTERVAL OF TIME BETWEEN THE OPENING OF THE WEIGH BOX GATE AND THE OPENING OF THE MIXER GATE BE LESS THAN 80 SECONDS. THE RUBBER COMPOUND SHALL BE SO DISPERSED IN THE ASPHALT OF THE PAVING MIXTURE THAT THERE WILL BE NO REMAINING BLACK RUBBERY PARTICLES VISIBLE TO THE NAKED EYE WHEN THE MIXTURE IS TESTED IN ACCORDANCE WITH METHOD 1012 ON FILE IN THE LABORATORY. THE RUBBER COMPOUND MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL BE PRESENT IN ORDER THAT HE CAN OBSERVE THE MIXING OF THE ASPHALT CEMENT AND RUBBER COMPOUND. THE TEMPERATURE OF THE MIXTURE WHEN DISCHARGED FROM THE MIXER SHALL BE 335°F TO 370°F AS REQUIRED FOR GOOD WORKABILITY.

G. SPREADING AND FINISHING

THE MIXTURE SHALL BE SPREAD IN ACCORDANCE WITH THE THICKNESS SHOWN ON THE PLANS.

TRAFFIC SHALL NOT BE PERMITTED ON THE COMPACTED MIXTURE UNTIL IT HAS COOLED SUFFICIENTLY TO PREVENT GLAZING AS DETERMINED BY THE ENGINEER.

H. METHOD OF MEASUREMENT

CONVERSION WEIGHT TO CUBIC YARDS SHALL BE 3,650 POUNDS.

I. BASIS OF PAYMENT

THE ACCEPTED QUANTITIES OF RUBBERIZED ASPHALT CONCRETE, COMPLETE AND IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR "ITEM 404 RUBBERIZED ASPHALT CONCRETE, AS PER PLAN".

21. ITEM 407 - TACK COAT, AS PER PLAN

ALL APPLICABLE PROVISIONS OF "ITEM 407 TACK COAT" AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED HEREIN.

THE TACK COAT SHALL CONSIST OF A BLEND OF BITUMINOUS MATERIAL AND RUBBER COMPOUND. THE BITUMINOUS MATERIAL SHALL BE AN ASPHALT EMULSION MEETING THE REQUIREMENTS OF TYPE SS-1, MS-2, RS-1 OR RS-2, AS DIRECTED BY THE ENGINEER. THE RUBBER COMPOUND SHALL BE A SYNTHETIC LATEX IN THE LIQUID FORM AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION NO. 903.

THE RUBBER COMPOUND SHALL BE ADDED TO THE ASPHALT EMULSION IN THE DISTRIBUTOR IN THE RATIO OF 95± 0.3 RESIDUAL ASPHALT TO 5± 0.3 PERCENT RUBBER SOLIDS BY WEIGHT. IT SHALL THEN BE CIRCULATED THROUGH THE DISTRIBUTOR UNTIL A UNIFORM MIXTURE IS OBTAINED. A TECHNICAL REPRESENTATIVE OF THE RUBBER COMPOUND MANUFACTURER SHALL BE PRESENT IN ORDER THAT HE CAN OBSERVE THE MIXING OF THE ASPHALT EMULSION AND RUBBER COMPOUND. THE RUBBERIZED ASPHALT EMULSION SHALL BE APPLIED AT THE RATE OF 0.10 GALLON PER SQUARE YARD AND IN ACCORDANCE WITH 407.05.

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 CLEVELAND **HNTB**

GENERAL NOTES

BR. NO. CUY.-10-1618  
 BR. NO. CUY.-10-1685

CUYAHOGA COUNTY OHIO

DRAWN CKB	TRACED DATE 11-27-78	CHECKED CAB DATE 11-29-78	REVIEWED DATE	REVISED DATE
--------------	-------------------------	---------------------------------	------------------	-----------------

VOID

VOID

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		



CUYAHOGA COUNTY  
CUY-10-16.23

22. ITEM 511 - CONCRETE SIDEWALK WEARING COURSE, AS PER PLAN

ALL APPLICABLE PROVISIONS OF ITEM 511 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, UNLESS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED AS SUPPLEMENTAL TO THE PROVISIONS SET FORTH HEREIN.

A. DESCRIPTION

THIS WORK SHALL CONSIST OF CONSTRUCTING A PORTLAND CEMENT CONCRETE SIDEWALK WEARING COURSE IN REASONABLY CLOSE CONFORMITY WITH LINES, GRADES AND DIMENSIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

B. MATERIALS

THE MATERIALS SHALL CONFORM TO THE FOLLOWING:

CONCRETE (CLASS C)	499
REINFORCING STEEL	709.10
JOINT SEALER	705.01 or 705.02
CURING COMPOUND MATERIALS	705.08 (CLEAR)

C. PLACING AND FINISHING

THE CONCRETE SHALL BE DEPOSITED IN A SINGLE LAYER. IT SHALL BE STRUCK OFF WITH A TEMPLATE AND SMOOTHED WITH A FLOAT TO PRODUCE A SANDY TEXTURE. NO PLASTERING WILL BE PERMITTED. THE SURFACE SHALL BE DIVIDED ONTO EQUALLY SPACED BLOCKS WITH TRANSVERSE JOINTS APPROXIMATELY 5'-0" ON CENTER. ALL TRANSVERSE JOINTS SHALL BE FILLED WITH JOINT SEALER IN ACCORDANCE WITH 516.04. THE SURFACE SHALL HAVE A TRANSVERSE SLOPE OF 1/4 INCH PER FOOT, UNLESS OTHERWISE SPECIFIED, WITH THE LOW SIDE ADJACENT TO THE ROADWAY. THE REINFORCING SHALL BE 6 X 6 - 6/6 WELDED WIRE FABRIC PLACED IN ACCORDANCE WITH 509.

D. CURING

EXPOSED SURFACES OF THE CONCRETE SIDEWALK WEARING COURSE SHALL BE CURED AS REQUIRED IN 451.10, USING THE CURING COMPOUND SPECIFIED IN MATERIALS ABOVE. WHEN THE WEATHER CONDITIONS ARE SUCH THAT IT IS IMPRACTICAL TO USE THE CURING COMPOUND, OTHER MEANS FOR CURING CONCRETE MAY BE USED, HOWEVER AFTER CONDITIONS BECOME FAVORABLE, THE CURING COMPOUND SHALL THEN BE APPLIED. RESIN BASE CURING COMPOUNDS WILL NOT BE PERMITTED.

E. WATERPROOFING

THE BASE SLAB FOR THE CONCRETE SIDEWALK WEARING COURSE SHALL BE WATERPROOFED IN ACCORDANCE WITH "ITEM 512 CONCRETE DECK WATERPROOFING, AS PER PLAN".

F. METHOD OF MEASUREMENT

THE SIDEWALK WEARING COURSE WILL BE MEASURED BY THE SQUARE FEET OF FINISHED SURFACE, COMPLETE AND ACCEPTED IN PLACE.

G. BASIS OF PAYMENT

THE ACCEPTED QUANTITIES OF CONCRETE SIDEWALK WEARING COURSE, COMPLETE AND IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR ITEM 511 "CLASS C CONCRETE WEARING COURSE, AS PER PLAN". REINFORCING STEEL, JOINTS AND JOINT MATERIALS, CURING COMPOUND, WATERPROOFING, AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE INCLUDED IN THE COST OF THE CONCRETE SIDEWALK WEARING COURSE OF WHICH THEY ARE A PART.

23. ITEM 512 - CONCRETE DECK WATERPROOFING, AS PER PLAN

ALL APPLICABLE PROVISIONS OF ITEM 512 AS SET FORTH IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL APPLY, UNLESS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED AS SUPPLEMENTAL TO THE PROVISIONS SET FORTH HEREIN.

A. DESCRIPTION

THIS ITEM CONSISTS OF FURNISHING THE NECESSARY LABOR, MATERIAL AND EQUIPMENT REQUIRED TO APPLY TWO COATS OF AN APPROVED RUBBER SEALING COMPOUND WATERPROOFING IN ACCORDANCE WITH THESE SPECIFICATIONS. THE MATERIAL SHALL BE APPLIED WITH SUITABLE BRUSHES. CARE SHALL BE TAKEN TO PREVENT DRIPPING OR RUNNING OF THE MATERIAL BEYOND THE AREAS TO BE WATERPROOFED. CONCRETE SURFACES NOT COVERED WITH THE WATERPROOFING SHALL BE PROTECTED FROM THE SPILLING OR OTHERWISE MARRING THE SURFACE WITH THE MATERIAL.

B. MATERIALS

THE MATERIALS USED SHALL BE A NON-AQUEOUS ONE-PART NON-BITUMINOUS SOLUTION OF UNCURED PIGMENTED VIRGIN NITRILE RUBBER AND RESINS SEALING COMPOUND AND A SUITABLE THINNER WHICH WILL FORM AN ELASTIC AND ADHESIVE COATING RESISTANT TO SALT, WATER, GASOLINE AND PETROLEUM OILS AS MANUFACTURED BY THE FOLLOWING COMPANIES AND MEETING ALL ASPECTS OF THESE SPECIFICATIONS.

MANUFACTURER	PRODUCT
FIRESTONE TIRE AND RUBBER CO.	RUBBER SEALING COMPOUND - R-526 THINNER R-607
GOODYEAR TIRE AND RUBBER CO.	RUBBER SEALING COMPOUND - PLIOPAVE L-30 THINNER - METHYL ETHYL KETONE

ADDITIONAL REQUIREMENTS:

SPECIFIC GRAVITY	0.89 TO 0.93 INC.
*COLOR	LIGHT GREY OR TAN
VISCOSITY (BROOKFIELD 770F., CPS)	750 TO 2000 INC.
FLASH POINT	250F PLUS
SOLIDS CONTENT (% BY WEIGHT)	24 TO 27 INC.

\*THE MATERIAL SHALL BE SHADED IN SUCH A MANNER THAT WILL GIVE ADEQUATE CONTRAST BETWEEN THE FIRST COAT AND SECOND COAT TO ASSURE THAT ALL AREAS OF THE DECK HAVE BEEN PROPERLY COATED WITH THE SECOND COAT.

C. TEST CERTIFICATION

THE CONTRACTOR SHALL PROVIDE A CERTIFIED LABORATORY TEST REPORT FROM A RELIABLE TESTING LABORATORY INDICATING THAT THE MATERIAL HE PROPOSES TO FURNISH WILL MEET THE REQUIREMENTS OF THESE SPECIFICATIONS. IN ADDITION, HE SHALL SUBMIT IN WRITING EVIDENCE THAT THIS MATERIAL HAS BEEN USED FOR SEALING AND WATERPROOFING CONCRETE SURFACES ON STRUCTURES AND HAS PERFORMED SATISFACTORILY FOR AT LEAST 5 YEARS.

THE MANUFACTURER SHALL ALSO SUBMIT A QUART SAMPLE OF THE RUBBER SEALING COMPOUND AND A QUART SAMPLE OF THE THINNER TO THE TESTING LABORATORY OF THE OHIO DEPARTMENT OF TRANSPORTATION AT LEAST ONE MONTH PRIOR TO THE TIME IT IS EXPECTED TO BE USED.

THE DIRECTOR RESERVES THE RIGHT TO USE ANY ADDITIONAL INFORMATION OR PERFORM ANY TESTS DEEMED NECESSARY TO DETERMINE WHETHER OR NOT THE RUBBER SEALING COMPOUND CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION AND IS SUITABLE FOR THE PURPOSE INTENDED.

D. PREPARATION OF SURFACE

SURFACES TO BE WATERPROOFED SHALL HAVE ALL PROJECTIONS DRESSED OFF, AND THE OUTSIDE FILM OF CEMENT, TOGETHER WITH ALL DIRT REMOVED WITH WIRE BRUSHES AND THEN WASHED OFF WITH CLEAR WATER. IF ANY GREASE OR OIL IS PRESENT ON THE CONCRETE SURFACE, IT SHALL BE REMOVED BY SCRAPING AND WASHING WITH A SUITABLE SOLVENT AND/OR MURIATIC ACID AND THEN THOROUGHLY FLUSHED WITH CLEAR WATER. NO PRIMER COAT IS REQUIRED. THE PREPARED SURFACE SHALL BE KEPT CLEAN OF ALL FOREIGN MATERIAL UNTIL THE WATERPROOFING IS APPLIED.

E. APPLICATION OF WATERPROOFING

THE CONCRETE SHALL BE THOROUGHLY DRY BEFORE THE RUBBER SEALING COMPOUND IS APPLIED. THE MINIMUM AIR TEMPERATURE SHALL BE NOT LESS THAN 50°F. THE TEMPERATURE OF THE SURFACE TO BE WATERPROOFED SHALL ALSO BE OBSERVED AND REPORTED TO THE ENGINEER. THE ENGINEER SHALL DETERMINE IF THE SURFACE TEMPERATURE IS APPROPRIATE TO RECEIVE THE WATERPROOFING MATERIAL. THE WATERPROOFING MATERIAL SHALL NOT BE HEATED AND PRECAUTIONS SHALL BE TAKEN TO AVOID FIRE HAZARD WHEN USING THE MATERIALS.

(A) FIRST COAT - THE MATERIAL USED SHALL BE A 50/50 MIXTURE OF THE RUBBER SEALING COMPOUND AND THINNER. IT SHALL BE APPLIED UNIFORMLY AT THE MINIMUM RATE OF 0.10 GAL. PER SQUARE YARD USING SUITABLE BRUSHES AND PERMITTED TO CURE FOR AT LEAST TWO HOURS AND UNTIL FREE FROM TACKINESS OR ANY TENDENCY TO STICK TO SHOES BEFORE APPLYING THE SECOND COAT.

(B) SECOND COAT - THE MATERIAL USED SHALL BE THE RUBBER SEALING COMPOUND UNDILUTED. IT SHALL BE APPLIED UNIFORMLY AT THE MINIMUM RATE OF 0.15 GAL. PER SQUARE YARD USING SUITABLE BRUSHES. THE WATERPROOFING SHALL BE PERMITTED TO CURE OVERNIGHT. NO TRAFFIC OR FURTHER WORK SHALL BE PERMITTED ON THE WATERPROOFED DECK UNTIL THE END OF THE REQUIRED CURING PERIOD AND UNTIL, IN THE OPINION OF THE ENGINEER, THE CURED MEMBRANE HAS ACQUIRED SUFFICIENT STRENGTH TO SUPPORT NECESSARY EQUIPMENT WITHOUT RUPTURING.

(C) PATCH COAT - IF THE SURFACE IS NOT SATISFACTORY AFTER APPLICATION OF THE SECOND COAT, DUE TO BUBBLES, HOLES, OR INSUFFICIENT THICKNESS, OR THE CURED MEMBRANE IS DAMAGED FOR ANY REASON, ADDITIONAL SEALING COMPOUND SHALL BE APPLIED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL AVOID PLACING ANY UNNECESSARY EQUIPMENT OR STORE ANY MATERIALS ON THE CURED MEMBRANE. HE SHALL PROCEED WITH THE APPLICATION OF THE TACK COAT AND ASPHALTIC WEARING COARSE ON THE ROADWAY PORTION OF THE DECK AS SOON AS PRACTICABLE WITHOUT ANY UNNECESSARY DELAYS.

F. MANUFACTURER'S REPRESENTATIVE

THE RUBBER SEALING COMPOUND MANUFACTURER'S TECHNICAL REPRESENTATIVE SHALL BE NOTIFIED IN ORDER THAT HE CAN PROVIDE THE ENGINEER WITH RECOMMENDED PROCEDURES AND HE SHALL ALSO BE PRESENT DURING THE INITIAL INSTALLATION OF THE WATERPROOFING AND SUBSEQUENT APPLICATION OF THE TACK COAT AND WEARING SURFACE.

G. METHOD OF MEASUREMENT

THE QUANTITY OF RUBBER SEALING COMPOUND WATERPROOFING TO BE PAID FOR SHALL BE THE NUMBER OF SQUARE YARDS COMPLETE AND ACCEPTED IN PLACE.

H. BASIS OF PAYMENT

THE WATERPROOFING MEASURED AS ABOVE PROVIDED SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, LABOR AND EQUIPMENT FOR PREPARING THE CONCRETE SURFACE AND APPLYING THE COATINGS AT THE REQUIRED RATE.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR ITEM 512, "CONCRETE DECK WATERPROOFING, AS PER PLAN".

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

GENERAL NOTES

BR. NO. CUY-10-1618  
BR. NO. CUY-10-1685

CUYAHOGA COUNTY OHIO

DRAWN C.K.B. DATE 11-27-78	TRACED DATE	CHECKED C.A.B. DATE 11-29-78	REVIEWED DATE	REVISED
----------------------------------	----------------	------------------------------------	------------------	---------

SHEET GN 4

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT
5	OHIO	



CUYAHOGA COUNTY  
CUY-10-16.23

## 24. ITEM 518 - SUBDRAINAGE FOR SURFACE COURSE, AS PER PLAN

THE SUBDRAINAGE SYSTEM SHALL CONSIST OF 1-1/2"Ø PLASTIC TUBES. TUBES SHALL BE PLACED VERTICALLY IN THE SLAB, DEPRESSED 1/4-INCH BELOW THE TOP OF THE SLAB AND PROJECTING AT LEAST 6-INCHES BELOW THE BOTTOM OF THE SLAB AND DIRECTED AWAY FROM THE NEAREST STRUCTURAL ELEMENT. THEY SHALL BE PLACED WITH CENTER OF TUBES 1-INCH FROM FACE OF CURBS AND SPACED AT APPROXIMATELY 6-FOOT INTERVALS EXCEPT NO TUBES SHALL BE PLACED OVER OR WITHIN 4 FEET OF A PAVEMENT OR SIDEWALK. A TUBE SHALL BE PLACED WITHIN 1 FOOT OF EACH EXPANSION JOINT. THE TUBES AT THE ABUTMENTS SHALL EXTEND IN SUCH A MANNER AS TO DRAIN INTO THE BRIDGE SEAT DRAIN TROUGH. AFTER THE DECK HAS BEEN WATERPROOFED, A GALVANIZED STEEL ANGLE, 1-1/2 x 1-1/2 x 1/4 INCHES, SHALL BE PLACED OVER THE TUBES, WITH BOTH LEGS DOWN, FORMING A WATER COURSE FOR THE FULL LENGTH OF THE BRIDGE. THIS ELEMENT MAY BE PLACED IN CONVENIENT LENGTHS WITH BUTT JOINTS; CARE SHALL BE TAKEN TO AVOID DISPLACING IT AS THE SURFACE COURSE IS PLACED. THE PRICE PER LINEAR FOOT OF SUCH DRAINAGE SYSTEM SHALL INCLUDE ALL TUBES INCLUDING SUPPORTS AS REQUIRED, STEEL ANGLES, AND LABOR, NECESSARY TO COMPLETE THE ITEM.

## 25. TOOTH PLATE EXPANSION JOINT WITH NEOPRENE TROUGH INCLUDING SIDEWALK PLATES AND TROUGH

### A. DESCRIPTION

THIS WORK SHALL INCLUDE THE FURNISHING AND INSTALLING OF ALL TOOTH PLATE EXPANSION JOINTS WITH (INCLUDING SIDEWALK PLATES) WITH NEOPRENE TROUGHS AND HOSES IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE FINISHED JOINTS SHALL BE IN CONFORMITY WITH LINES AND GRADES SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER.

### B. MATERIALS

A) STRUCTURAL STEEL - ASTM A588 - UNIT STRESS 27,000 PSI.

B) NYLON REINFORCED NEOPRENE SHEET (TROUGH AND HOSE) - DUPONT'S FAIRPRENE NN-0003, 3/32" THICK OR AN APPROVED EQUAL.

THE ONE-PLY MATERIAL SHALL CONFORM TO ASTM D751 AND THE FOLLOWING:

TENSILE STRENGTH	700 x 700
GRAB METHOD POUNDS	
WARP x FILL, MINIMUM	
MULLINS BURST, PSI, MINIMUM	1,400
HEAT AGING 70 HOURS @ 212°F	NO CRACKING
180° BEND, 8" Ø ROD	

C) ADHESIVES AND PRIMERS (NEOPRENE SHEET TO STEEL)

THE ADHESIVES AND PRIMERS SHALL CONFORM WITH THE PERTINENT PROVISIONS OF GENERAL NOTE NO. 26.

### C. STRUCTURAL STEEL

DETAILS OF THE STRUCTURAL STEEL PARTS OF THE JOINT ARE SHOWN IN THE PLANS. PORTIONS OF THE STEEL JOINT NOT ENCASED IN CONCRETE SHALL BE CLEANED AND PAINTED IN CONFORMANCE WITH 514, FIELD PAINTING OF NEW STRUCTURAL STEEL, AS PER PLAN.

### D. NEOPRENE TROUGH

DETAILS OF THE TROUGH ARE SHOWN IN THE PLANS. ADDITIONAL REQUIREMENTS GOVERNING FABRICATION AND INSTALLATION ARE STIPULATED HEREIN.

#### (1) FABRICATION

TROUGH SHOP DRAWINGS SHALL BE PREPARED TO CONTROL THE WORK. THEY SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL PRIOR TO THE BEGINNING OF TROUGH FABRICATION.

TROUGHS SHALL BE PREFORMED IN THE SHOP TO CONFORM WITH THE TROUGH SHAPES AS SHOWN IN THE PLANS.

ALL JOINTS OR SEAMS IN THE TROUGH SHALL BE LAP SPLICED NYLON REINFORCED NEOPRENE SHEETS WHICH SHALL EXTEND AT LEAST 1-1/2 INCHES ON BOTH SIDES OF EACH JOINT. SPLICES SHALL BE VULCANIZED BONDED UNDER HEAT AND PRESSURE IN THE SHOP.

ENDS OF TROUGHS SHALL BE CLOSED WITH THE END REINFORCED AS DESCRIBED ABOVE FOR JOINTS OR SEAMS.

HOLES IN THE TROUGHS SHALL BE LOCATED WITH THE AID OF A TEMPLATE FURNISHED BY THE STRUCTURAL STEEL FABRICATOR.

#### (2) INSTALLATION

PRIOR TO FINAL ASSEMBLY IN THE FIELD THE SURFACE OF THE NEOPRENE AND STEEL WHICH ARE TO BE COMPRESSED TOGETHER SHALL BE PREPARED TO CONFORM WITH THE APPROXIMATE PROVISIONS OF GENERAL NOTE NO. 26. THE INSTALLATION SHALL CONFORM IN ESSENTIAL RESPECTS TO THESE PROVISIONS.

### E. MEASUREMENT AND PAYMENT

TOOTH PLATE EXPANSION JOINT WITH NEOPRENE TROUGH INCLUDING SIDEWALK PLATES AND TROUGH WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM SPECIAL, TOOTH PLATE EXPANSION JOINT WITH NEOPRENE TROUGH INCLUDING SIDEWALK PLATES AND TROUGH. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR TO COMPLETE THE WORK AND INCLUDES ALL STRUCTURAL STEEL PARTS, FLASHING PLATES, TROUGH, FILL PLATES, BOLTS AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THIS WORK ACCORDING TO THE PLANS AND SPECIFICATIONS.

## 26. ADDITIONAL STRINGER AND/OR FLOORBEAM REPLACEMENT

A CAREFUL VISUAL INSPECTION HAS BEEN MADE OF ALL EXPOSED STEEL SURFACES. BASED ON THIS INSPECTION CERTAIN STEEL MEMBERS HAVE BEEN SCHEDULED FOR REPLACEMENT. THE REPLACEMENT OF THESE MEMBERS ARE INCLUDED IN THE PLANS.

THE TOP OF THE FLANGES OF THE STRINGERS AND FLOORBEAMS ARE COVERED BY THE DECK CONCRETE AND THEREFORE VISUAL INSPECTION OF THIS SURFACE WILL NOT BE POSSIBLE UNTIL THE DECK IS REMOVED. AFTER REMOVAL OF THE DECK ADDITIONAL STRINGERS AND/OR FLOORBEAMS MIGHT NEED TO BE REPLACED. REMOVAL, DISPOSAL AND IN-KIND REPLACEMENT OF THESE ADDITIONAL STRINGERS AND/OR FLOORBEAMS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER POUND OF REPLACED STEEL BID FOR ITEM SPECIAL, ADDITIONAL STRINGER AND/OR FLOORBEAM REPLACEMENT. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL TEMPORARY BRACING AS REQUIRED, REMOVAL, DISPOSAL, ALL MATERIAL, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE IN-KIND REPLACEMENT.

## 27. ELASTOMERIC COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS

### A. DESCRIPTION

THESE PROVISIONS ARE FOR THE PRODUCTION, FABRICATION AND INSTALLATION CONTROL OF ELASTOMERIC COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS. ALL STEEL SHALL BE ASTM-A36.

### B. QUALIFICATION

EACH LOT OF COMPRESSION SEALS, ADHESIVES AND METAL SURFACE PRIMERS FURNISHED UNDER THESE PROVISIONS SHALL BE IDENTIFIED AS SPECIFIED, SHALL BE PRODUCTS WHICH HAVE BEEN TESTED BY THE MANUFACTURER OR A COMMERCIAL LABORATORY, AND SHALL COMPLY WITH THESE PROVISIONS.

### C. CERTIFICATION

CERTIFIED COPIES OF THE QUALIFICATION TEST RESULTS FOR THE ADHESIVE AND COMPRESSION SEALS, INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS, SHALL BE SUBMITTED TO THE TESTING LABORATORY FOR APPROVAL. SAMPLING, IF REQUESTED, WILL BE IN ACCORDANCE WITH 106.03, EXCEPT THAT WHERE COMPRESSION SEALS ARE PREFABRICATED ACCORDING TO PLAN REQUIREMENTS, SEAL SAMPLES SHALL BE MADE AVAILABLE PRIOR TO FABRICATION. FROM EACH LOT SEAL SAMPLES SHALL BE ONE PIECE TWO FEET LONG. ADHESIVE SAMPLES SHALL BE ONE PINT.

### D. ACCEPTANCE

MATERIAL ACCEPTANCE WILL BE BASED UPON LABORATORY EVALUATION OF CERTIFIED TEST RESULTS SUBMITTED, UPON LABORATORY TEST OF SAMPLED MATERIAL, OR UPON THE EVALUATION OF BOTH CERTIFICATES AND TESTED SAMPLES.

### E. COMPOSITION

COMPRESSION SEALS OF THE SIZE, SHAPE AND TOLERANCES SHOWN ON THE PLANS SHALL BE COMPOSED OF AN EXTRUDED VULCANIZED ELASTOMERIC VIRGIN POLYCHLOROPRENE MATERIAL. THE ADHESIVE SHALL BE A ONE-PART MOISTURE CURING POLYURETHANE AND HYDROCARBON MIXTURE. THE METAL SURFACE PRIMER SHALL BE INDUSTRIAL WASH PRIMER P6062 AS MANUFACTURED BY THE SHERWIN WILLIAMS COMPANY OF CLEVELAND, OHIO; CHEMGLAZE WASH PRIMER 9924 AS MANUFACTURED BY THE HUGHSON CHEMICAL COMPANY OF ERIE, PENNSYLVANIA; OR AN APPROVED EQUIVALENT.

### F. REQUIREMENTS

EXCEPT AS PROVIDED HEREIN, COMPRESSION SEALS, ADHESIVES AND PRIMERS SHALL CONFORM TO THE PERTINENT PROVISIONS OF AASHTO M220.

(1) COMPRESSION SEALS SHALL BE RESILIENT AND SHALL NOT SOFTEN EXCESSIVELY OR BECOME BRITTLE BETWEEN THE TEMPERATURES OF -30°F AND 160°F. THEY SHALL BE FURNISHED IN ONE CONTINUOUS PIECE OR BE PREFABRICATED IN THE SHOP TO FIT THE STRUCTURAL JOINT DESCRIBED IN THE PLANS. CUTTING OR STRETCHING OF THE COMPRESSION SEALS IN THE FIELD TO CORRECT A MISFIT WITH THE STRUCTURAL STEEL WILL NOT BE PERMITTED. THEREFORE, WHERE PREFABRICATION IS NECESSARY, THE SEAL DIMENSIONS SHALL BE QUALIFIED BY TEMPLATES WHICH MATCH THE JOINT, OR BY PRELIMINARY SHOP ASSEMBLY OF THE SEAL WITH THE ACTUAL STRUCTURAL JOINT.

THE SEAL FABRICATOR SHALL ALSO FURNISH SEAL END CLOSURES PERMANENTLY FASTENED OR VULCANIZED TO THE ENDS OF ALL DECK JOINT SEALS. THESE CLOSURES SHALL BE DESIGNED TO PREVENT THE ENTRANCE INTO THE SEALS OF PRECIPITATION, SURFACE DRAINAGE OR ROADWAY DEBRIS. SUCH CLOSURES SHALL NOT DETRIMENTALLY AFFECT THE COMPRESSIVE BEHAVIOR OF THE SEALS OR THE INTEGRITY OF THE JOINT. PROVISIONS SHALL ALSO BE MADE IN THE CLOSURE DESIGN TO VENTILATE ALL SEAL COMPARTMENTS TO INSURE THAT AIR PRESSURE EQUILIBRIUM IS MAINTAINED THROUGHOUT ALL COMPRESSION-EXPANSION CYCLES.

THE ADEQUACY OF THE CLOSURE DEVICES SHALL BE ESTABLISHED BY TEST. THIS TEST SHALL BE PERFORMED BY AN ACCREDITED LABORATORY AT ROOM TEMPERATURE. IT SHALL CONSIST OF 2000 CYCLES OF SEAL MOVEMENT (FROM CLOSED TO FULLY OPEN TO CLOSED) AT ABOUT 1 CPM. TEST FIXTURE SHALL SIMULATE THE MOST ADVERSE JOINT SEAL AND BUTT SPLICE CONFIGURATION (E.G., JOINT SKEW AND ANY CHANGE IN VERTICAL AND/OR HORIZONTAL ALIGNMENT) USED FOR A STRUCTURE'S ROADWAY OR ROADWAY-CURB SURFACE.

AFTER CYCLING, THE SEAL SAMPLE SHALL BE WATERTIGHT AND EXHIBIT NO VISUAL SIGNS OF GROSS DISTRESS SUCH AS CRACKS, HOLES, TEARS, SIGNIFICANT ABRASION OR BOND FAILURE. TO CONFIRM WATERTIGHTNESS, THE FULLY OPEN SEAL SHALL BE SUBJECTED TO PONDED WATER AT LEAST ONE INCH DEEP FOR NOT LESS THAN 7 HOURS. DURING AND AFTER THIS PERIOD, THE BOTTOM SURFACE SHALL EXHIBIT NO EVIDENCE OF MOISTURE PENETRATION THROUGH THE SEAL OR BUTT SPLICE.

TEMPERATURE (70° ± 10°F) WITHIN A 24-HOUR PERIOD WITHOUT VISIBLE DISTRESS TO THE SEAL OR THE CLOSURE DEVICES.

SHARP CHANGES IN THE ALIGNMENT OF DECK JOINTS OR OF THE COMPRESSION SEALS WITHIN SUCH JOINTS SHALL BE MADE BY MITER CUTTING AND ADHESIVE BONDING. GENERALLY, SUCH SPLICES SHALL BE MADE IN THE SHOP. HOWEVER, FIELD SPLICES SHALL BE MADE WHERE SPECIFIED ON THE PLANS OR WHERE DIRECTED BY THE ENGINEER.

AT EACH ROADWAY SEAL MITER SPLICE, SEVERAL INCHES OF INTERNAL WEBBING ON EACH SIDE OF THE SPLICE SHALL BE REMOVED AND REPLACED WITH A SINGLE SNUG FITTING PIECE OF CLOSED CELL FOAM REINFORCEMENT. FOAM INSERTS AND THE ADHESIVE USED FOR BONDING THE INSERTS AND THE SEAL ELEMENTS TOGETHER SHALL BE AS RECOMMENDED BY THE SEAL MANUFACTURER FOR THIS PURPOSE.

PROVISIONS SHALL BE MADE TO VENTILATE SEAL SECTIONS WHICH ARE LOCATED BETWEEN FOAM REINFORCED SPLICES. ALL CHAMBERS OF THE SEAL SHALL BE VENTILATED THROUGH A BOTTOM OPENING LOCATED AT THE LOWERMOST POINT OF THE JOINT SEAL.

THE SPLICING ADHESIVE AND THE CLOSED CELL FOAM SHALL BE COMPATIBLE WITH THE OTHER MATERIALS SPECIFIED HEREIN, AND THEY SHALL BE COMPOUNDED TO FURNISH SIMILAR RESISTANCE AND DURABILITY CHARACTERISTICS.

AFTER COMPLETION, SPLICES SHALL HAVE NO VISIBLE OFFSET ON EXTERIOR SURFACES, AND AFTER INSTALLATION, THERE SHALL BE NO EVIDENCE OF BOND FAILURE AT THE SPLICES.

(2) ADHESIVES SHALL BE STORED AT TEMPERATURES BETWEEN 50° TO 80°F, AND SHALL BE USED WITHIN 270 DAYS AFTER THE DATE OF ITS MANUFACTURE. THE ADHESIVE SHALL BE HOMOGENEOUS AND CONFORM TO THE FOLLOWING PHYSICAL PROPERTIES:

AVERAGE WEIGHT PER GALLON	8.00 LBS ± 10%
SOLIDS CONTENT	72-74% BY WT.
THE ADHESIVE SHALL REMAIN FLUID FROM	50 TO 120°F.
FILM STRENGTH (ASTM D-412)	1,200 PSI
ELONGATION, MIN. AT BREAK	350%
STROMER-VISCOSITY (77°F, 500 GRM WT. AT 200 RPM)	300 TO 4,200 CPS

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

## GENERAL NOTES

BR. NO. CUY-10-1618  
BR. NO. CUY-10-1685

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
C.K.B.		C.A.B.		
DATE: 11-27-78	DATE:	DATE: 11-27-78	DATE:	DATE:

SHEET GN5

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

70  
185

CUYAHOGA COUNTY  
CUY-10-16.23

## 27. ELASTOMERIC COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS (CONTINUED)

- (3) PRIMERS SHALL NOT BE APPLIED TO STEEL SURFACES WHICH WILL BE HEATED TO A TEMPERATURE IN EXCESS OF 300°F. CONSEQUENTLY, WHERE HEAT GENERATING OPERATIONS ARE REQUIRED ADJACENT TO BONDED AREAS, THE PRIMER APPLICATION SHALL BE DELAYED UNTIL SUCH WORK IS COMPLETED UNLESS THE PRIMED AREA CAN BE MAINTAINED AT LESSER TEMPERATURES BY THE USE OF APPROVED COOLING PROCEDURES.
- (4) THE PRIMER SOLVENTS AND THE SOLVENTS SPECIFIED AS CLEANING AGENTS IN THESE PROVISIONS ARE VOLATILE, COMBUSTIBLE AND, IN SOME INSTANCES, IRRITATING TO THE SKIN. CONTAINERS SHALL BE KEPT TIGHTLY CLOSED AND AWAY FROM HEAT AND OPEN FLAMES. DURING APPLICATION, ALL FLAMES, WELDING AND SMOKING SHALL BE PROHIBITED. PROLONGED BREATHING OF VAPORS AND CONTACT WITH THE SKIN SHALL BE AVOIDED. IN CONFINED AREAS, VENTILATION SHALL BE PROVIDED DURING APPLICATION AND DRYING.

### G. PREPARATION

PRIOR TO INSTALLING COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS, STEEL AND SEAL SURFACES WHICH ARE TO BE BONDED TOGETHER SHALL BE CAREFULLY AND THOROUGHLY CLEANED TO REMOVE ALL RUST, MILL SCALE, DIRT, AND OTHER CONTAMINANTS WHICH WOULD BE DETRIMENTAL TO BONDING.

THE BARE STEEL SURFACES SHALL BE PREPARED TO GRADE SA 3, ASTM D-2200. IMMEDIATELY AFTER MECHANICAL PREPARATION, THE FRESH SURFACES SHALL BE WIPED WITH METHYL ETHYL KETONE, TOLUENE, OR OTHER SUITABLE SOLVENT TO REMOVE ALL CONTAMINANT TRACES. THEY THEN SHOULD BE COATED WITH PRIMER. CLEANED AND UNCOATED STEEL SURFACES SHOULD NOT BE ALLOWED TO BECOME WET. THEY ARE HIGHLY SENSITIVE TO MOISTURE AND ANY CORROSION MAY MAKE THEM UNSUITABLE FOR COATING. IT IS ESSENTIAL, THEREFORE, THAT THE PRIMER BE APPLIED BEFORE THE CLEANED SURFACES CAN BE DULLED BY OXIDATION, A PROCESS WHICH CAN OCCUR VERY QUICKLY IN HUMID WEATHER.

THE PRIMER SHALL BE APPLIED ONLY TO CLEAN DRY SURFACES. THICKNESS OF PRIMER SHALL BE APPROXIMATELY 1.0 MIL WET FILM, 0.40 MIL DRY FILM. CARE SHALL BE TAKEN TO INSURE THAT THE COMPLETE BONDING AREA PLUS AT LEAST 1/4 INCH WIDTH OF ADJACENT METAL SURFACE AREA SHALL BE PRIMED FOR FIELD ADHESION. STEEL SHALL BE MAINTAINED DRY AND AT A TEMPERATURE OF 50°F. OR ABOVE DURING SEAL INSTALLATION.

TO IMPROVE ADHESION, THE GLOSSY SEAL SURFACES WHICH ARE TO BE BONDED SHALL FIRST BE CLEANED WITH SOLVENT USING CLEAN, DISPOSABLE CLOTHS AND THEN BUFFED WITH BELT SANDERS, WIRE BRUSHES OR GRINDERS. CLEANING AND BUFFING MAY BE DONE IN THE SHOP PROVIDED THAT THE CLEANED SEALS ARE CAREFULLY WRAPPED TO PROTECT THEM FROM CONTAMINATION PRIOR TO INSTALLATION.

### H. INSTALLATION

SEAL INSTALLATION PREFERABLY SHALL FOLLOW THE PRIMING OPERATING AS SOON AS PRACTICABLE, BUT NOT SOONER THAN TWO HOURS AFTER PRIMER APPLICATION NOR LATER THAN ONE WEEK. JUST PRIOR TO SEAL INSTALLATION, THE BONDING SURFACES OF THE SEAL AND THE PRIMED STEEL SHALL BE WIPED WITH METHYL ETHYL KETONE, TOLUENE OR OTHER SUITABLE SOLVENT. IF THE PRIMED STEEL SURFACE HAS BECOME CONTAMINATED WITH CONSTRUCTION MATERIALS OR OTHER DIRT AND DEBRIS WHICH CANNOT BE REMOVED WITHOUT DAMAGE TO THE PRIMER, THE CONTAMINATED PRIMER SHALL BE REMOVED AND THE STEEL SURFACE CLEANED AND REPRIMED AS ORIGINALLY SPECIFIED.

TO CLEAN AND DRY PRIMED STEEL SURFACES, ADHESIVE SHALL BE APPLIED TO A THICKNESS OF 1/32 (-0, + 1/32) INCH. THEN THE CLEAN AND DRY ELASTOMERIC SEAL SHALL BE COMPRESSED SUFFICIENTLY SO THAT IT CAN BE INSERTED AND ALLOWED TO EXPAND WITHIN THE JOINT AND AGAINST THE ADHESIVE COATED SIDES. CARE SHALL BE TAKEN TO SEE THAT THE CLEAN AND DRY SIDES OF THE COMPRESSION SEAL ARE NOT CONTAMINATED DURING INSTALLATION. AFTER INSTALLATION, A SMALL BEAD OF ADHESIVE, APPROXIMATELY 1/4 INCH IN DIAMETER, SHALL BE APPLIED ALONG THE TOP EDGE WHERE THE SEAL TOUCHES THE SIDES OF THE JOINT.

ADHESIVES SHALL BE APPLIED ONLY TO DRY SURFACES AND ONLY DURING PERIODS WHEN THE TEMPERATURE IS 50°F. OR HIGHER. SINCE THE ADHESIVE IS MOISTURE CURING, THE COMPLETED INSTALLATION NEED NOT BE PROTECTED FROM PRECIPITATION.

THE JOINT SEAL SHALL BE INSTALLED WITH EQUIPMENT DESIGNED SPECIFICALLY FOR THE INSTALLATION OF ELASTOMERIC JOINT SEALS. THIS EQUIPMENT SHALL NOT ELONGATE THE SEAL LONGITUDINALLY, CAUSE STRUCTURAL DAMAGE TO THE SEAL, NOR TWIST, DISTORT, OR CAUSE OTHER MALFORMATIONS IN THE COMPLETED SEAL. EQUIPMENT THAT DOES NOT PROVIDE A PROPERLY INSTALLED SEAL SHALL NOT BE USED.

PORTIONS OF THE STEEL JOINT NOT ENCASED IN CONCRETE, NOT IN CONTACT WITH A COMPRESSION SEAL, AND NOT COVERED BY ADHESIVES SHALL BE CLEANED AND PAINTED IN CONFORMANCE WITH 514, FIELD PAINTING OF NEW STRUCTURAL STEEL, AS PER PLAN.

### I. SHOP DRAWINGS

SHOP DRAWINGS COVERING ALL DETAILS FOR "ELASTOMERIC COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS" ARE REQUIRED.

### J. MEASUREMENT AND PAYMENT

ELASTOMERIC COMPRESSION SEALS IN STRUCTURAL STEEL JOINTS WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM SPECIAL, ELASTOMERIC COMPRESSION SEAL IN STRUCTURAL STEEL JOINT. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR TO COMPLETE THE WORK AND INCLUDES ALL STRUCTURAL STEEL PARTS AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THIS WORK ACCORDING TO THE PLANS AND SPECIFICATIONS.

## 28. CONTINUOUS SEALS IN STRUCTURAL STEEL JOINTS

### A. DESCRIPTION

THIS WORK SHALL INCLUDE FURNISHING AND INSTALLING CONTINUOUS SEAL EXPANSION JOINTS FOR THE BRIDGE DECK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE FINISHED JOINTS SHALL BE IN CONFORMITY WITH LINES AND GRADES SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER. ALL STEEL SHALL BE ASTM-A36.

### B. QUALIFICATION

EACH LOT OF SEALS AND ADHESIVES FURNISHED UNDER THESE PROVISIONS SHALL BE IDENTIFIED, SHALL BE PRODUCTS WHICH HAVE BEEN TESTED BY THE MANUFACTURER OR A COMMERCIAL LABORATORY AND SHALL COMPLY WITH THESE PROVISIONS. ADHESIVES ARE REQUIRED WITH THE WABO-MAURER, OR AN APPROVED EQUAL, SYSTEM ONLY.

### C. CERTIFICATION

CERTIFIED COPIES OF THE QUALIFICATION TEST RESULTS FOR THE CONTINUOUS SEALS, INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS, SHALL BE SUBMITTED TO THE TESTING LABORATORY FOR APPROVAL. SAMPLING, IF REQUESTED, WILL BE SUBMITTED TO THE TESTING LABORATORY. FROM EACH LOT, SEAL SAMPLES SHALL BE ONE PIECE TWO FEET LONG.

### D. ACCEPTANCE

MATERIAL ACCEPTANCE WILL BE BASED UPON EVALUATION OR CERTIFIED TEST RESULTS SUBMITTED, UPON LABORATORY TEST OF SAMPLED MATERIAL, OR UPON EVALUATION OF BOTH CERTIFICATES AND TESTED SAMPLES.

### E. COMPOSITION

CONTINUOUS SEALS OF THE SIZE, SHAPE AND TOLERANCES SHOWN ON THE PLANS SHALL BE COMPOSED OF AN EXTRUDED OR MOLDED VULCANIZED ELASTOMERIC VIRGIN POLYCHLOROPRENE MATERIAL. THE ADHESIVE SHALL BE A ONE-PART MOISTURE CURING POLYURETHANE AND HYDROCARBON MIXTURE.

### F. REQUIREMENTS

EXCEPT AS PROVIDED HEREIN, WABO-MAURER, OR AN APPROVED EQUAL, CONTINUOUS SEALS AND ADHESIVES SHALL CONFORM TO THE PERTINENT PROVISIONS OF ASTM D-2628, AND PRO-SPAN, OR AN APPROVED EQUAL, CONTINUOUS SEALS SHALL CONFORM TO THE PROVISIONS OF ASTM D-2000.

SEALS SHALL BE RESILIENT AND SHALL NOT SOFTEN EXCESSIVELY OR BECOME BRITTLE BETWEEN THE TEMPERATURE OF -30°F AND 160°F. THEY SHALL BE FURNISHED IN ONE CONTINUOUS PIECE.

ADHESIVES SHALL BE STORED AT TEMPERATURES BETWEEN 50°F AND 80°F AND SHALL BE USED WITHIN 270 DAYS AFTER THE DATE OF MANUFACTURE. THE ADHESIVE SHALL BE BON-LASTIC AS MANUFACTURED BY WATSON-BOWMAN ASSOCIATES, INC., BUFFALO, NEW YORK, PRIMA-LUBE AS MANUFACTURED BY ACME HIGHWAY PRODUCTS, CORP., BUFFALO, NEW YORK, OR AN APPROVED EQUAL.

### G. PREPARATION

#### 1. WABO STRIP SEAL, OR AN APPROVED EQUAL, SYSTEM

PRIOR TO INSTALLING SEALS IN STRUCTURAL STEEL JOINTS, STEEL AND SEAL SURFACES WHICH ARE TO BE BONDED TOGETHER SHALL BE CAREFULLY AND THOROUGHLY CLEANED TO REMOVE ALL DIRT AND OTHER CONTAMINANTS WHICH WOULD BE DETRIMENTAL TO BONDING. THE SURFACES SHALL BE WIPED WITH METHYL ETHYL KETONE, TOLUENE, OR OTHER SUITABLE SOLVENT TO REMOVE ALL CONTAMINANT TRACES.

TO IMPROVE ADHESION, THE GLOSSY SEAL SURFACES WHICH ARE TO BE BONDED SHALL FIRST BE CLEANED WITH SOLVENT USING CLEAN, DISPOSABLE CLOTHS AND THEN BUFFED WITH BELT SANDERS, WIRE BRUSHES OR GRINDERS. CLEANING AND BUFFING MAY BE DONE IN THE SHOP PROVIDED THAT THE CLEANED SEALS ARE CAREFULLY WRAPPED TO PROTECT THEM FROM CONTAMINATION PRIOR TO INSTALLATION.

## 2. PRO-SPAN, OR AN APPROVED EQUAL, SYSTEM

PRIOR TO INSTALLING THE CONTINUOUS SEAL, ALL STEEL AND SEAL SURFACES SHALL BE CAREFULLY AND THOROUGHLY CLEANED TO REMOVE ALL DIRT AND OTHER CONTAMINANTS WHICH WOULD BE DETRIMENTAL TO CLAMPING THE SEAL IN THE RETAINERS.

### H. INSTALLATION

SEAL INSTALLATIONS PREFERABLY SHALL FOLLOW THE CLEANING OPERATION AS SOON AS PRACTICABLE.

ADHESIVES, WHEN REQUIRED, SHALL BE APPLIED ONLY TO DRY SURFACES AND ONLY DURING PERIODS WHEN THE TEMPERATURE IS 50°F OR HIGHER. SINCE THE ADHESIVE IS MOISTURE CURING, THE COMPLETED INSTALLATION NEED NOT BE PROTECTED FROM PRECIPITATION.

THE WABO-MAURER, OR AN APPROVED EQUAL JOINT SEAL SHALL BE INSTALLED WITH EQUIPMENT DESIGNED SPECIFICALLY FOR THE INSTALLATION OF ELASTOMERIC STRIP SEALS. THIS EQUIPMENT SHALL NOT ELONGATE THE SEAL LONGITUDINALLY, CAUSE STRUCTURAL DAMAGE TO THE SEAL, NOR TWIST, DISTORT, OR CAUSE OTHER MALFORMATIONS IN THE COMPLETED SEAL. EQUIPMENT THAT DOES NOT PROVIDE A PROPERLY INSTALLED SEAL SHALL NOT BE USED.

THE PRO-SPAN, OR AN APPROVED EQUAL, SEAL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION PROCEDURES.

PORTIONS OF THE STEEL JOINT NOT ENCASED IN CONCRETE, NOT IN CONTACT WITH A CONTINUOUS SEAL AND NOT COVERED BY ADHESIVES SHALL BE CLEANED AND PAINTED IN CONFORMANCE WITH 514, FIELD PAINTING OF NEW STRUCTURAL STEEL, AS PER PLAN.

### I. SHOP DRAWINGS

SHOP DRAWINGS COVERING ALL DETAILS FOR "CONTINUOUS SEALS IN STRUCTURAL STEEL JOINTS" ARE REQUIRED.

### J. MEASUREMENT AND PAYMENT

CONTINUOUS SEALS IN STRUCTURAL STEEL JOINTS WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM SPECIAL, CONTINUOUS SEAL IN STRUCTURAL STEEL JOINTS. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT AND LABOR TO COMPLETE THE WORK AND INCLUDES ALL STRUCTURAL STEEL PARTS, FILL PLATES, SUPPORT PLATES, ANGLES, BOLTS AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THIS WORK ACCORDING TO THE PLANS AND SPECIFICATIONS.

## 29. RAILING

ALL APPLICABLE PROVISIONS OF ITEM 517 AS SET FORTH IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED HEREIN, AND THE FOLLOWING SHALL BE CONSIDERED SUPPLEMENTAL TO THE PROVISIONS SET FORTH THEREIN.

### A. PIGMENTATION OF CONCRETE

THE CONCRETE OF THE RAILING MAY REQUIRE A SYNTHETIC IRON OXIDE PIGMENT ADDITIVE SO THAT THE COLOR OF THE RAILING WILL MATCH THE COLOR OF THE CLEANED PYLONS LOCATED AT BOTH ENDS OF BR. NO. CUY-10-1618. IF COLORING THE RAILING IS DESIRED, THE ENGINEER AFTER COORDINATION WITH THE OHIO HISTORIC PRESERVATION OFFICE WILL FURNISH THE CONTRACTOR A SWATCH OR COLOR CARD OF THE COLOR DESIRED. THE FINISHED RAILING SHALL BE UNIFORM IN COLOR AND MATCH THE COLOR SAMPLE. ~~IF THE COLORING OF THE CONCRETE IS NOT REQUIRED, THE PAY ITEM FOR TINTING OF BRIDGE RAILING CONCRETE SHALL BE NON-PERFORMED.~~

### B. PAYMENT

PAYMENT FOR THE RAILING IS COVERED BY TWO PAYMENT ITEMS AS FOLLOWS:

ITEM 517, REINFORCED CONCRETE BRIDGE RAILING, AS PER PLAN  
ITEM SPECIAL, TINTING OF BRIDGE RAILING CONCRETE

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND HNTB

## GENERAL NOTES

BR. NO. CUY.-10-1618  
BR. NO. CUY.-10-1685

DRAWN C.K.B. DATE: 27-78		TRACED DATE	CHECKED C.A.B. DATE: 29-78	REVIEWED DATE	REVISED 7-17-80	OHIO SHEET GNS
--------------------------------	--	----------------	----------------------------------	------------------	-----------------	-------------------

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT
5	OHIO	



CUYAHOGA COUNTY  
CUY-10-16.23

## 30. CONCRETE COATING

MICROFILMED  
DEC 4 1986

THE EXPOSED CONCRETE SURFACES OF THE FOLLOWING EXISTING ELEMENTS SHALL BE COATED WITH A CEMENT-EPOXY COATING.

- A. ALL PIERS OF BR. NO. CUY-10-1618 INCLUDING ALL PIER ELEMENTS BELOW THE TRUSS BEARING AREAS, THE OUTSIDE FACES OF EXTERIOR PILASTERS AND ALL OUTSIDE FACES OF WALLS ABOVE THE TRUSS BEARING AREAS.
- B. THE EAST ABUTMENT OF BR. NO. CUY-10-1618.
- C. THE RETAINING WALLS BETWEEN BR. NO. CUY-10-1618 AND BR. NO. CUY-10-1685.
- D. ALL PIERS, COLUMNS, STRUTS (EXCLUDING THE TOP OF STRUTS) AND ABUTMENTS OF BR. NO. CUY-10-1685.
- E. ALL RETAINING WALLS ADJACENT TO THE ABUTMENTS OF BR. NO. CUY-10-1685, (ALL EXISTING VEGETATION SHALL BE REMOVED FROM THE WALLS PRIOR TO APPLYING THE CEMENT-EPOXY COATING).

THE COATING SHALL BE A TWO COMPONENT EPOXY BLENDED WITH PORTLAND CEMENT AND A COLORING AGENT SIMILAR TO CP102-1C, AS MANUFACTURED BY THE CHESTER CHEMICAL COMPANY, 3214 HELMS AVENUE, LOS ANGELES, CALIFORNIA. THE COATING SHALL BE A NON-FUNGUS NUTRIENT, SHALL WITHSTAND FREEZE-THAW CYCLES AND SHALL NOT RETAIN MOISTURE OR ACT AS A MOISTURE BARRIER. THE MANUFACTURER OF THE COATING MUST BE ABLE TO CITE STRUCTURES WHICH HAVE BEEN SUCCESSFULLY COATED WITH THE MATERIAL FOR A PERIOD OF AT LEAST TWO YEARS. THE COATING SHALL, AFTER 380 HOURS OF EXPOSURE TO CONCENTRATED ULTRA-VIOLET AND INFRA-RED LIGHT IN ACCORDANCE WITH ASTM DESIGNATION E-42, SHOW NO EVIDENCE OF BLISTERING, CHALKING, CHECKING, CRACKING OR FLAKING WHEN EVALUATED IN ACCORDANCE WITH ASTM PUBLICATION D322. A CONCRETE SUBSTRATE SHALL BE A LIGHT-GRAY AS APPROVED BY THE DIRECTOR.

THE SURFACE TO BE COATED SHALL BE CLEANED OF EFFLORESCENCE, DIRT, OIL, SOOT, VEGETATION, LOOSE MATERIAL AND ANY OTHER MATERIAL WHICH WOULD PREVENT A SOUND BOND TO THE CONCRETE. CLEANING SHALL BE DONE BY SANDBLASTING. ANY ADDITIONAL SURFACE PREPARATION REQUIREMENTS OF THE MANUFACTURER OF THE COATING MUST ALSO BE PERFORMED.

PRIOR TO APPLYING THE COATING, THE SUBSTRATE SHALL BE EXAMINED BY A QUALIFIED REPRESENTATIVE OF THE MANUFACTURER OF THE COATING. BEFORE COATING MAY BEGIN, THE REPRESENTATIVE SHALL CERTIFY TO THE ENGINEER IN WRITING THAT THE SURFACE IS PROPERLY PREPARED TO RECEIVE THE COATING. IN THE EVENT A PRIMER IS REQUIRED, IT SHALL BE APPLIED BY THE CONTRACTOR AT NO EXTRA COST.

MIXING, APPLICATION AND CURING SHALL BE PERFORMED STRICTLY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. ONE COAT WILL BE REQUIRED, COVERAGE SHALL BE IN THE RANGE OF 150-200 SQ. FT. PER GALLON OF UNTHINNED MATERIAL. APPLICATION SHALL BE BY SPRAY OR ROLLER. PRIOR TO FINAL ACCEPTANCE, ALL DAMAGED AREAS OF THE COATING SHALL BE REPAIRED.

PRECAUTIONS MUST BE TAKEN TO PREVENT THE COATING FROM CONTACTING PARTS OF THE STRUCTURE NOT TO BE COATED, PERSONS AND PROPERTY USING THE BRIDGE, AND PERSONS AND PROPERTY ADJACENT TO THE BRIDGE. IF DAMAGE OCCURS FROM DRIFTING SPRAY, APPLICATION SHALL BE DISCONTINUED UNTIL ORDERED TO RESUME BY THE ENGINEER.

THE WORK OF COATING THE DESIGNATED STRUCTURAL MEMBERS WITH CEMENT-EPOXY FILM WILL BE MEASURED BY THE AREA OF SURFACE COATED USING PLAN QUANTITIES AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL, CONCRETE COATING. THE COST OF FURNISHING ALL LABOR, MATERIALS AND EQUIPMENT, SANDBLASTING AND ANY OTHER CLEANING AND PREPARING REQUIRED, PRIMER IF REQUIRED, AND OF PROTECTING PERSONS AND PROPERTY FROM SPRAY AND DRIPPINGS, SHALL BE INCLUDED IN THIS PRICE.

## 31. SPECIAL REQUIREMENTS INVOLVING WORK IN THE VICINITY OF REGIONAL TRANSIT AUTHORITY TRACKS (BR. NO. CUY-10-1685)

### A. DETAILS OF REMOVAL AND REPAIR

THE CONTRACTOR SHALL PREPARE DETAILED PROCEDURES AND PLANS FOR THE REMOVAL AND REPLACEMENT OF THE EXISTING DECK AND THE REMOVAL AND/OR REPAIR OR REPLACEMENT AT ANY STRUCTURAL MEMBERS THAT ARE NEAR OR ADJACENT TO THE REGIONAL TRANSIT AUTHORITY (RTA) TRACKS AND LINES. THESE PLANS SHALL INCLUDE INFORMATION AS TO EQUIPMENT, MATERIALS, PERSONNEL AND SUPERVISION TO BE USED, THE HOURS OF OPERATION AND THE DURATION OF THE JOB AND SHALL BE APPROVED BY RTA BEFORE BEING SUBMITTED TO THE DIRECTOR FOR APPROVAL.

### B. TEMPORARY GRADE CROSSINGS

THE RTA WILL NOT PERMIT THE CONSTRUCTION OF TEMPORARY CROSSINGS ACROSS THEIR TRACKS.

## C. PROTECTION OF TROLLEY LINES

THE OVERHEAD TROLLEY LINES ARE SUSPENDED UNDER THE BRIDGE PARTLY BY BRACKETS AND PARTLY BY STEEL COLUMNS. THESE LINES ARE ENERGIZED AT ALL TIMES WITH 600 VOLTS D.C. AND A MAXIMUM CURRENT OF 5,000 AMPS. IF PROTECTION OF THESE LINES AGAINST FALLING DEBRIS IS REQUIRED IT WILL BE PROVIDED BY RTA, AT PROJECT EXPENSE, BY FORCE ACCOUNT.

## D. SCHEDULING OF WORK

THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT CONSTRUCTION ABOVE OR ADJACENT TO THE TRACKS SHALL BE ACCOMPLISHED BETWEEN THE HOURS OF 7:30 PM AND 4:00 AM. ALL SCHEDULING SHALL BE COORDINATED WITH SUPERINTENDENT OF RTA.

## E. PROTECTION OF PERSONS AND PROPERTY

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO ANY PERSONS OR RTA PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NON-EXECUTION THEREOF BY THE CONTRACTOR, RTA SHALL NOT BE HELD RESPONSIBLE. THE CONTRACTOR SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR HE SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.

## 32. WORK IN THE VICINITY OF THE CLEVELAND UNION TERMINAL CO. TRACKS (BR. NO. CUY-10-1685)

THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE LOCAL OFFICIALS OF THE CLEVELAND UNION TERMINAL COMPANY. HE SHALL USE ALL REASONABLE CARE AND DILIGENCE IN THE WORK IN ORDER TO AVOID ACCIDENTS, DAMAGE OR INTERFERENCE WITH THE TRAINS OR THE PROPERTY OF THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE LOCAL OFFICIALS OF THE RAILROAD PRIOR TO STARTING WORK THAT MAY AFFECT RAILROAD PROPERTY AND FACILITIES AND SHALL PAY THE RAILROAD COMPANY THE COST OF FLAGMEN FURNISHED BY THE RAILROAD COMPANY AND MADE NECESSARY BECAUSE OF ANY OF THE CONTRACTORS' OPERATIONS OVER OR ADJACENT TO THE TRACKS.

NO SCAFFOLD, PLANKS OR OTHER EQUIPMENT SHALL BE SUSPENDED OR ERECTED ABOVE OR WITHIN 10 FEET OF A RAIL OVER WHICH TRAINS ARE OPERATING WITHOUT PRIOR WRITTEN APPROVAL OF THE CHIEF ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE, OF THE RAILROAD COMPANY. FAILURE TO NOTIFY THE RAILROAD COMPANY AS NOTED ABOVE SHALL BE CAUSE FOR STOPPING WORK UNTIL ALL PROVISIONS FOR PROTECTING RAILROAD PROPERTY HAVE BEEN PROVIDED.

## 33. PAINTING STRUCTURAL STEEL

### A. GENERAL REQUIREMENTS

- (1) ALL EXISTING STRUCTURAL STEEL AND ALL NEW STRUCTURAL STEEL OF BR. NO. CUY-10-1618 SHALL BE PAINTED IN ACCORDANCE WITH THESE GENERAL NOTES. THE PROSPECTIVE BIDDERS SHALL MAKE AN INSPECTION OF THE BRIDGE IN THE FIELD TO INFORM THEMSELVES OF ALL SURFACES REQUIRING PAINT AND TO SATISFY THEMSELVES AS TO THE CONDITIONS TO BE ENCOUNTERED IN PERFORMING THE WORK. THE UPPER CASTINGS AT ALL BEARINGS HAVE DRAIN HOLES. THESE HOLES SHALL BE CLEANED ALLOWING ANY WATER TO DRAIN BEFORE CLEANING AND PAINTING CASTINGS.
- (2) SHOP PAINTING SHALL BE IN ACCORDANCE WITH 514.04 - SYSTEM B EXCEPT THAT TWO COATS OF THE METAL PRIMER SPECIFIED HEREIN SHALL BE APPLIED TO A TOTAL DRY FILM THICKNESS OF 3 MILS AS MEASURED WITH A CALIBRATED MAGNETIC FILM GAGE. THE FIRST COAT SHALL BE TINTED FOR CONTRAST AND BE PERMITTED TO DRY FOR NOT LESS THAN 24 HOURS BEFORE APPLYING THE SECOND COAT.
- (3) FIELD PAINTING SHALL BE IN ACCORDANCE WITH 514.05 - SYSTEM B EXCEPT THAT 2 FIELD COATS OF THE METAL PRIMER SPECIFIED HEREIN SHALL BE APPLIED TO FIELD BOLTS, FIELD WELDS AND ADJACENT SURFACES, THE EDGES OF CONTACT SURFACES AND ALL SURFACES FROM WHICH THE SHOP COAT WAS OMITTED OR HAS BEEN REMOVED OR BECAME DEFECTIVE, AND THAT THE FIELD PAINT SHALL CONSIST OF ONE INTERMEDIATE AND ONE FINISH COAT OF THE PAINT SPECIFIED HEREIN. IF FOR ANY REASON THE STEEL IS RECEIVED IN THE FIELD WITH ONLY ONE COAT OF METAL PRIMER APPLIED IN THE SHOP, THE SECOND COAT OF METAL PRIMER SHALL BE APPLIED IN THE FIELD PRIOR TO APPLICATION OF THE INTERMEDIATE COAT. THE INTERMEDIATE COAT SHALL BE APPLIED AS SOON AS POSSIBLE AFTER ERECTION OF STEEL. THE FINISH COAT SHALL BE APPLIED AFTER THE COMPLETION OF ALL CONSTRUCTION OPERATIONS WHICH MIGHT MAR THE FINISH COAT AND AFTER THE INTERMEDIATE COAT HAS BEEN THOROUGHLY CLEANED.

- (4) THE TOTAL DRY FILM THICKNESS OF SHOP AND FIELD COATS SHALL BE NOT LESS THAN 6 MILS MEASURED WITH A CALIBRATED MAGNETIC FILM THICKNESS GAGE.
- (5) THE PAINT SHALL BE WELL GROUND, SHALL NOT SETTLE BADLY IN THE CONTAINER AND SHALL BE READILY BROKEN UP WITH A PADDLE TO A SMOOTH, UNIFORM PAINT OF GOOD BRUSHING CONSISTENCY.
- (6) WORKING PROPERTIES - THE PAINT SHALL BRUSH EASILY, POSSESS GOOD LEVELING, AND SHALL SHOW OR EXHIBIT NO STREAKING, SAGGING OR OTHER OBJECTIONABLE FEATURES.
- (7) CERTIFIED ANALYSIS AND SAMPLES - THE MANUFACTURER SHALL SUBMIT WITH HIS BID A SAMPLE ACCOMPANIED BY A CERTIFIED ANALYSIS SETTING FORTH THE COMPOSITION OF THE PAINT, BRAND AND KIND OF PIGMENTS, TINTING COLORS, RESINS, OILS, DRIERS, THINNERS, ETC. USED IN MAKING THE PAINT. IN ADDITION, THE MANUFACTURER SHALL FURTHER CERTIFY THAT IF AWARDED THE CONTRACT, THE MATERIAL FURNISHED WILL BE IDENTICAL WITH THAT OF THE SAMPLE SUBMITTED. SAMPLES WILL BE REQUIRED OF ALL BATCHES, AND NO SHIPMENT OF THE PAINT SHALL BE MADE UNTIL APPROVED BY THE DIRECTOR.
- (8) TEST METHODS - THE LABORATORY EXAMINATION OF THE PAINT SHALL BE CONDUCTED ACCORDING TO THE APPLICABLE METHODS OF FEDERAL SPECIFICATIONS TT-P-141 B.

### B. FIRST SHOP COAT ON NEW STEEL - THIS SPECIFICATION COVERS A GRADE OF LONG OIL ALKYD PAINT SUITABLE FOR USE AS A PRIME COAT ON STRUCTURAL STEEL.

- (1) PIGMENT - THE PIGMENT SHALL MEET THE FOLLOWING COMPOSITION REQUIREMENTS:

	MINIMUM PERCENT	MAXIMUM PERCENT
BASIC LEAD SILICO CHROMATE	94.0	-
PURE RED IRON OXIDE	3.0	5.3
PIGMENT SUSPENSION AGENT	0.5	0.7

- A. FIRST SHOP PRIMER TINTED OFF FOR CONTRAST WITH LAMPBLACK IN OIL OR ALKYD.
- (2) LIQUID - THE LIQUID SHALL CONSIST OF NOT LESS THAN 49 PERCENT NON-VOLATILE VEHICLE, THE BALANCE TO BE COMBINED DRIER AND THINNER. THE NON-VOLATILE VEHICLE SHALL BE A LONG OIL ALKYD RESIN CONTAINING A MINIMUM OF 23.0 PERCENT OF PHTHALIC ANHYDRIDE. SMALL QUANTITIES OF GRINDING AND WETTING AIDS MAY BE USED IF DESIRED.
- (3) FINISHED PAINT - THE COMPOSITION AND PROPERTIES OF THE FINISHED PAINT SHALL BE AS INDICATED BELOW:

	MINIMUM	MAXIMUM
PIGMENT	53.0%	
VEHICLE		47.0%
WATER		0.5%
COARSE PARTICLES AND SKINS (TOTAL RESIDUE RETAINED ON A 325 SIEVE-BASED ON PAINT)		1.0%
WEIGHT PER GALLON	12.7 LBS.	
FINESS OF GRIND (NORTH STANDARD)	4	
VISCOSITY (STORMER-KREBS UNITS)	75	85
DRYING TIME		8 HRS.
SET-TO-TOUCH		4 HRS.
- (4) MARKING OF CONTAINERS - EACH CONTAINER SHALL BE SUITABLY LABELED OR MARKED WITH THE FOLLOWING INFORMATION:

BASIC LEAD SILICO CHROMATE METAL PRIMING ALKYD PAINT  
MANUFACTURER'S NAME AND ADDRESS  
INFORMATION AS MAY BE REQUIRED BY STATE LAWS.
- (5) SPECIFICATION FOR INGREDIENTS - THE ALKYD RESIN SOLUTION SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-R-266, TYPE 1, CLASS A. THE BASIC LEAD SILICO CHROMATE SHALL MEET THE REQUIREMENTS OF THE AMERICAN SOCIETY FOR TESTING MATERIALS SPECIFICATION D 1648-68.

HNTB BRIDGE NOS. 3 and 4

HOWARD NEEDLES TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

## GENERAL NOTES

BR. NO. CUY-10-1618  
BR. NO. CUY-10-1685

CUYAHOGA COUNTY OHIO

DRAWN C.A.B. DATE: 11-27-78	TRACED DATE	CHECKED C.A.B. DATE: 11-29-78	REVIEWED DATE	REVISED 12-3-79 SHEET GN7
-----------------------------------	----------------	-------------------------------------	------------------	---------------------------------



# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

72  
185

CUYAHOGA COUNTY  
CUY-10-16.23

MICROFILMED  
DEC 4 1986

## 33. PAINTING STRUCTURAL STEEL (CONTINUED)

- C. SECOND SHOP COAT ON NEW STEEL - THE SECOND SHOP COAT SHALL BE OF THE SAME TYPE OF PAINT AS USED FOR THE FIRST SHOP COAT BUT TINTED FOR CONTRAST.
- D. FIRST FIELD COAT ON NEW STEEL (INTERMEDIATE COAT) - THIS SPECIFICATION COVERS A GRADE OF LONG OIL ALKYD PAINT SUITABLE FOR USE AS A FIELD COAT ON STRUCTURAL STEEL.

(1) PIGMENT - THE COMPOSITION OF THE PIGMENT SHALL BE AS INDICATED BELOW:

	MINIMUM	MAXIMUM
BASIC LEAD SILICO CHROMATE	26.0%	
TITANIUM DIOXIDE, RUTILE NON-CHALKING	35.0%	
ZINC OXIDE, ACICULAR	8.0%	9.0%
MAGNESIUM SILICATE AND LIGHT-FAST TINTING COLORS		31.0%

(2) LIQUID - THE LIQUID SHALL CONSIST OF NOT LESS THAN 47.0 PERCENT NON-VOLATILE VEHICLE, BALANCE TO BE COMBINED DRIER AND THINNER. THE NON-VOLATILE VEHICLE SHALL BE A LONG OIL ALKYD RESIN CONTAINING A MINIMUM OF 23.0 PERCENT OF PHTHALIC ANHYDRIDE. SMALL QUANTITIES OF GRINDING AND WETTING AIDS MAY BE USED IF DESIRED.

(3) FINISHED PAINT - THE COMPOSITION AND PROPERTIES OF THE FINISHED PAINT SHALL BE AS INDICATED BELOW:

	MINIMUM	MAXIMUM
PIGMENT	44.0%	
VEHICLE		56.0%
WATER		0.5%
COARSE PARTICLES AND SKINS (TOTAL RESIDUE RETAINED ON 325 SIEVE BASED ON PAINT)		1.0%
WEIGHT PER GALLON	11.0 LBS.	
FINENESS OF GRIND (NORTH STANDARD)	4	
VISCOSITY (STORMER-KREBS UNITS)	65	75
DRYING TIME		8 HRS.

(4) COLOR - THE COLOR SHALL CLOSELY MATCH FEDERAL STD. NO. 595-26280.

(5) MARKING OF CONTAINERS - EACH CONTAINER SHALL BE SUITABLY LABELED OR MARKED WITH THE FOLLOWING INFORMATION:

GRAY ALKYD-BASIC LEAD SILICO CHROMATE PAINT - 1ST FIELD COAT  
MANUFACTURER'S NAME AND ADDRESS  
INFORMATION AS MAY BE REQUIRED BY STATE LAWS.

(6) SPECIFICATION FOR INGREDIENTS - THE CHALK-RESISTANT TITANIUM DIOXIDE SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-P-425A, TYPE 111.

THE ALKYD RESIN SOLUTION SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-R-266, TYPE 2, CLASS A OR B.

E. SECOND FIELD COAT ON NEW STEEL (FINISH COAT) - THIS SPECIFICATION COVERS A GRADE OF LONG OIL ALKYD PAINT SUITABLE FOR USE AS A FINISH COAT ON STRUCTURAL STEEL.

(1) PIGMENT - THE COMPOSITION OF THE PIGMENT SHALL BE AS INDICATED BELOW:

	MINIMUM	MAXIMUM
BASIC LEAD SILICO CHROMATE	38.0%	
TITANIUM DIOXIDE, RUTILE NON-CHALKING	25.0%	
ZINC OXIDE, ACICULAR	12.0%	13.0%
BARYTES AND LIGHT-FAST TINTING COLORS		25.0%

(2) LIQUID - THE LIQUID SHALL CONSIST OF NOT LESS THAN 51.0 PERCENT NON-VOLATILE VEHICLE, BALANCE TO BE COMBINED DRIER AND THINNER. THE NON-VOLATILE VEHICLE SHALL BE A LONG OIL ALKYD RESIN CONTAINING A MINIMUM OF 23.0 PERCENT OF PHTHALIC ANHYDRIDE. SMALL QUANTITIES OF GRINDING AND WETTING AIDS MAY BE USED IF DESIRED.

(3) FINISHED PAINT - THE COMPOSITION OF THE FINISHED PAINT SHALL BE AS INDICATED BELOW:

	MINIMUM	MAXIMUM
PIGMENT	36.5%	
VEHICLE		63.5%
WATER		0.5%
COARSE PARTICLES AND SKINS (TOTAL RESIDUE RETAINED ON 325 SIEVE BASED ON PAINT)		1.0%
WEIGHT PER GALLON	10.5 LBS.	
FINENESS OF GRIND (NORTH STANDARD)	4	
VISCOSITY (STORMER-KREBS UNITS)	65	75
DRYING TIME		8 HRS.

(4) COLOR - THE COLOR SHALL CLOSELY MATCH FEDERAL STD. NO. 595-26280.

(5) MARKING OF CONTAINERS - EACH CONTAINER SHALL BE SUITABLY LABELED OR MARKED WITH THE FOLLOWING INFORMATION:

GRAY ALKYD-BASIC LEAD SILICO CHROMATE PAINT - 2ND FIELD COAT  
MANUFACTURER'S NAME AND ADDRESS  
INFORMATION AS MAY BE REQUIRED BY STATE LAWS.

(6) SPECIFICATIONS FOR INGREDIENTS - THE CHALK-RESISTANT TITANIUM DIOXIDE SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATIONS TT-P-425A, TYPE 111.

THE ALKYD RESIN SOLUTION SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-R-266, TYPE 1, CLASS A OR B.

F. PAINTING EXISTING STRUCTURAL STEEL - THE EXISTING STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH 514.06 - SYSTEM B EXCEPT FOR THE TYPE OF PAINT AND NUMBER OF COATS. AFTER CLEANING, BARE OR THIN AREAS OF THE EXISTING PAINTED SURFACES SHALL BE PAINTED WITH THE SAME FOUR (4) COATS AS THE NEW STRUCTURAL STEEL. PAINTING OF OTHER AREAS OF EXISTING STRUCTURAL STEEL SHALL BE LIMITED TO THE FIRST AND SECOND FIELD COATS AS APPLIED TO THE NEW STRUCTURAL STEEL.

G. MAINTAINING TRAFFIC

TO PREVENT DAMAGE TO VEHICLES TRAVELING UNDER STRUCTURES WHICH ARE BEING PAINTED, THE CONTRACTOR SHALL INSTALL AND MAINTAIN SUITABLE SHIELDS BETWEEN HIS OPERATIONS AND VEHICLES USING OPEN TRAFFIC LANES. THE SHIELDS SHALL BE OF A TYPE AND CONSTRUCTION, APPROVED BY THE ENGINEERS, TO PREVENT PAINT FROM DROPPING ONTO OR BEING BLOWN INTO PAVEMENT LANES OPEN TO TRAFFIC. THEY SHALL BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC (SEE ROADWAY PLAN).

H. PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR SHALL COLLECT, REMOVE AND DISPOSE OF ALL BUCKETS, RAGS OR OTHER DISCARDED MATERIALS AND HE SHALL LEAVE THE JOB SITE IN A CLEAN CONDITION.

ALL PORTIONS OF THE STRUCTURE WHICH ARE NOT TO BE PAINTED SHALL BE PROTECTED BY THE CONTRACTOR AGAINST DAMAGE OR DISFIGUREMENT BY SPLASHES, SPATTERS AND SMIRCHES OF PAINT.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE, OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NON-EXECUTION THEREOF BY THE CONTRACTOR, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR HE SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.

I. STATE SAFETY REQUIREMENTS

STATE SAFETY REQUIREMENTS AS OUTLINED IN THE CONSTRUCTION SAFETY CODE FOR THIS TYPE OF WORK, WILL BE ENFORCED AND THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF BULLETIN I.C.-3 ISSUED AS A GENERAL ORDER BY THE INDUSTRIAL COMMISSION OF OHIO.

J. WORK IN THE VICINITY OF RAILROADS

THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE LOCAL OFFICIALS OF THE RAILROAD COMPANY. HE SHALL USE ALL REASONABLE CARE AND DILIGENCE IN THE WORK IN ORDER TO AVOID ACCIDENTS, DAMAGE OR INTERFERENCE WITH THE TRAINS OR THE PROPERTY OF THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE LOCAL OFFICIALS OF THE RAILROAD PRIOR TO STARTING WORK THAT MAY AFFECT RAILROAD PROPERTY AND FACILITIES AND SHALL PAY THE RAILROAD COMPANY THE COST OF FLAGMEN FURNISHED BY THE RAILROAD COMPANY AND MADE NECESSARY BECAUSE OF ANY OF THE CONTRACTORS' OPERATIONS OVER OR ADJACENT TO THE TRACKS.

NO SCAFFOLD, PLANKS OR OTHER EQUIPMENT SHALL BE ERECTED WITHIN 10 FEET OF A RAIL OVER WHICH TRAINS ARE OPERATING WITHOUT PRIOR WRITTEN APPROVAL OF THE CHIEF ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE, OF THE RAILROAD COMPANY. 21' VERTICAL CLEARANCE BENEATH SCAFFOLDING OR OTHER EQUIPMENT SHALL BE PROVIDED. FAILURE TO NOTIFY THE RAILROAD COMPANY AS NOTED ABOVE SHALL BE CAUSE FOR STOPPING WORK UNTIL ALL PROVISIONS FOR PROTECTING RAILROAD PROPERTY HAVE BEEN PROVIDED.

K. COOPERATION OF CONTRACTOR

THE CONTRACTOR SHALL LEAVE HIS LADDERS, PLATFORMS OR SCAFFOLD IN PLACE FOR A SUFFICIENT LENGTH OF TIME AND IN SUCH A MANNER TO PERMIT THE ENGINEER OR INSPECTOR TO SAFELY EXAMINE THE WORK PERFORMED.

L. POLLUTION CONTROL

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.

## 34. DOWEL HOLES

DRILLING OF HOLES INTO CONCRETE AND THE FURNISHING AND PLACING GROUT INTO THE HOLES SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 853 AND SUPPLEMENTAL SPECIFICATION 956 EXCEPT FOR THE BASIS OF PAYMENT, DRILLING DOWEL HOLES, FURNISHING AND PLACING NONSHRINKING EPOXY MORTAR AND SETTING STRUCTURAL ELEMENT WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM 510, DOWEL HOLES, AS PER PLAN. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

HNTB BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>GENERAL NOTES</b>			
BR. NO. CUY.-10-1618 BR. NO. CUY.-10-1685			
CUYAHOGA COUNTY		OHIO	
DRAWN C. A. B. DATE: 11-23-78	TRACED DATE	CHECKED C. A. B. DATE: 11-23-78	REVIEWED DATE REVISED 12-3-79 SHEET GN 8

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT
5	OHIO	

73  
185

CUYAHOGA COUNTY  
CUY-10-16.23

MICROFILMED  
DEC 4 1986

35. CLEANING THE PYLONS

THE STONE PYLONS SHALL BE CLEANED IN THEIR ENTIRETY WITH A HYDROFLUORIC ACID SOLUTION CONTAINING A SMALL AMOUNT OF PHOSPHORIC ACID TO PREVENT STAINING. THE PERCENTAGE OF HYDROFLUORIC ACID SHOULD BE USED IN THE WEAKEST PERCENTAGE SATISFACTORY TO CLEAN THE PYLONS BUT UNDER NO CIRCUMSTANCES SHOULD THE ACID BE USED IN CONCENTRATIONS OF MORE THAN 5% (WEIGHT/VOLUME). UNDER NO CIRCUMSTANCES SHOULD HYDROCHLORIC (MURI-ATIC) ACID OR SULFURIC ACID BE USED.

CARE SHOULD BE TAKEN TO AVOID ATTEMPTING TO MAKE THE PYLONS LOOK "BRAND NEW" FOR VARIATIONS IN COLOR ARE NATURAL TO THE SANDSTONE ITSELF. FOLLOWING THE CLEANING PROCESS A WASH OF NEUTRALIZING ELEMENTS SHALL BE APPLIED.

A "TENT" OR OTHERWISE PROTECTIVE SCREENING SHALL BE USED TO PREVENT ACID DAMAGE TO OTHER OBJECTS IN THE AREA FROM DRIPPINGS OR SPRAY DURING THE CLEANING OPERATIONS. THE CLEANING METHOD USED SHALL BE IN GENERAL ACCORDANCE WITH THE GENERAL INSTRUCTIONS CONTAINED IN THE PUBLICATION "EXTERIOR CLEANING OF HISTORIC MASONRY BUILDINGS" BY NORMAN R. WEISS AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER WHO WILL COORDINATE ALL CLEANING OPERATIONS WITH THE CUYAHOGA COUNTY ARCHIVIST.

CLEANING THE PYLONS WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM SPECIAL, CLEANING PYLONS. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR TO COMPLETE THE WORK.

36. POINTING THE PYLONS

EACH ENTIRE PYLON SHALL BE POINTED AS REQUIRED WITH MORTAR THAT MATCHES THE COMPOSITION, TEXTURE AND COLOR OF THE MORTAR THAT WAS USED DURING THE ORIGINAL CONSTRUCTION OF THE PYLONS.

THIS MORTAR SHALL BE BASED ON AT LEAST FOUR (4) MORTAR SAMPLES TAKEN FROM THE PYLONS (ABOVE ELEVATIONS THAT MIGHT BE AFFECTED BY ROADWAY SPRAY) AND TESTED IN ACCORDANCE WITH THE METHOD OUTLINED IN THE MONOGRAPH "TESTS FOR THE ANALYSIS OF MORTAR SAMPLES" PREPARED BY E. BLAINE CLIVER, HISTORIC ARCHITECT AND PUBLISHED IN THE BULLETIN OF THE ASSOCIATION FOR PRESERVATION TECHNOLOGY. THE CONTRACTOR'S PROPOSED MORTAR AND LIMITS OF POINTING SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER WHO WILL COORDINATE ALL POINTING OPERATIONS WITH THE CUYAHOGA COUNTY ARCHIVIST

POINTING THE PYLONS WILL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT LUMP SUM PRICE BID FOR ITEM SPECIAL, POINTING PYLONS. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIAL, EQUIPMENT, AND LABOR TO COMPLETE THE WORK.

37. GREASE BOX REBUILDING AND REPACKING

GREASE BOXES PROTECTING THE BEARINGS AT THE WEST PYLON AND AT THE EAST ABUTMENT ARE SEVERELY DETERIORATED AND SHALL BE REPLACED. THE NESTS OF BEARINGS SHALL BE CLEANED, USING STEAM OR OTHER APPROVED METHOD, ALLOWED TO DRY AND THE NEW BOX FILLED WITH NO OX-ID A SPECIAL, A BEARING GREASE AVAILABLE FROM SAN CHEM INC., 1600 SOUTH CANAL STREET, CHICAGO, ILLINOIS 60616, OR APPROVED EQUAL. GREASE MAY BE HEATED TO 125° F. AND POURED IN BOXES. FOR GREASE BOX REBUILDING DETAILS, SEE SHEET CD 1

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM SPECIAL, GREASE BOX REBUILDING AND REPACKING, WHICH PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK.

38. FILLING UNDER WEST PYLON

THE CONTRACTOR SHALL REMOVE ALL LOOSE DIRT FROM THE AREAS UNDER THE TOE OF THE PYLON FOOTING WHERE THE PILING IS EXPOSED AND FILL THE CAVITY WITH MASS CONCRETE.

ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM SPECIAL, FILLING UNDER WEST PYLON.

39. ITEMS NOT INCLUDED IN BRIDGE PLANS

THE FOLLOWING ITEMS ARE NOT INCLUDED IN THE BRIDGE PLANS, SEE ROADWAY PLANS FOR DETAILS.

- (1) PAVEMENT, SIDEWALKS AND RAILING BETWEEN BRIDGES.
- (2) APPROACH SLABS.
- (3) LIGHTING AND POLICE AND FIRE CALL BOXES
- (4) UNDERGROUND DRAINAGE AND SEWERS.
- (5) MAINTENANCE OF TRAFFIC.

H.N.T.B. BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

GENERAL NOTES

BR. NO. CUY.-10-1618  
BR. NO. CUY.-10-1685

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
C.A.B.		C.A.B.		
DATE 11-27-78	DATE	DATE 11-29-78	DATE	

SHEET GN9

# GENERAL NOTES - STRUCTURES OVER 20 - FT SPAN

FHWA REGION	STATE	PROJECT	
5	OHIO		



CUYAHOGA COUNTY  
CUY-10-16.23

MICROFILMED  
DEC 5 1986

## 40. ITEM 601 SLOPE PROTECTION (GABIONS) AS PER PLAN

### 1. SCOPE OF WORK

THE CONTRACTOR SHALL FURNISH, ASSEMBLE, TIE AND FILL WITH STONE OF APPROVED SIZE AND MATERIAL, OPEN MESH WIRE BASKETS CONSTRUCTED AS SPECIFIED HEREIN AND PLACED CONFORMING TO LINES, GRADES AND DIMENSIONS SHOWN ON THE PLANS OR AS REQUIRED BY THE ENGINEER.

### 2. MATERIALS

#### A. BASKETS

- (1) DIMENSIONS - GABIONS SHALL BE SUPPLIED IN LENGTHS AND HEIGHTS AS SHOWN OR CALLED FOR ON THE PLANS. THE LENGTHS SHALL BE MULTIPLES OF THE HORIZONTAL WIDTH, I.E. (2,3 OR 4 x W). THE HEIGHTS OF THE BASKETS SHALL BE EQUAL TO, OR FRACTIONS OF THE HORIZONTAL WIDTH, I.E. (1, 1/2, OR 1/3 x W). THE HORIZONTAL WIDTH SHALL BE 3'-3", NOT, IN ANY CASE, LESS THAN 36". ALL GABIONS USED IN ANY ONE INSTALLATION SHALL BE OF UNIFORM WIDTH. TOLERANCE LIMIT FOR HEIGHT, LENGTH AND WIDTH DIMENSIONS SHALL BE ±3% OF THE MANUFACTURER'S STATED SIZES.
- (2) FABRICATION - GABIONS SHALL BE FABRICATED IN SUCH A MANNER THAT THE SIDES, ENDS, DIAPHRAGMS AND LIDS CAN BE ASSEMBLED AT THE CONSTRUCTION SITE INTO RECTANGULAR BASKETS OF THE SPECIFIED SIZES. GABIONS SHALL BE OF SINGLE UNIT CONSTRUCTION - THE BASE LID, ENDS AND SIDES SHALL BE EITHER WOVEN INTO A SINGLE UNIT OR ONE EDGE OF THE RESPECTIVE MEMBERS CONNECTED TO THE BASE SECTION OF THE GABION IN SUCH A MANNER THAT THE STRENGTH AND FLEXIBILITY AT THE POINT OF CONNECTION IS EQUAL TO OR GREATER THAN THAT OF THE MESH.

WHERE THE LENGTH OF THE GABION EXCEEDS ITS HORIZONTAL WIDTH THE GABION SHALL BE EQUALLY DIVIDED BY DIAPHRAGMS, OF THE SAME MESH AND GAUGE AS THE BODY OF THE GABIONS, INTO CELLS WHOSE LENGTH DOES NOT EXCEED THE HORIZONTAL WIDTH. THE GABION SHALL BE FURNISHED WITH THE NECESSARY DIAPHRAGMS SECURED IN PROPER POSITION ON THE BASE IN SUCH A MANNER THAT NO ADDITIONAL TYING OF THE DIAPHRAGM TO THE BASE WILL BE NECESSARY.

ALL PERIMETER EDGES OF THE MESH FORMING THE GABION SHALL BE SECURELY SELVEDGE AND BOUND SO THAT THE JOINTS FORMED BY TYING THE SELVEDGED EDGES HAVE AT LEAST EQUAL STRENGTH WITH THE BODY OF THE MESH.

TIE WIRE OR CONNECTING WIRE SHALL BE SUPPLIED IN SUFFICIENT QUANTITY FOR SECURELY FASTENING ALL EDGES OF THE GABION AND DIAPHRAGMS AND TO PROVIDE FOR FOUR INTERVAL CONNECTING WIRES IN EACH CELL ONE-HALF UNIT HIGH AND EIGHT INTERNAL WIRES IN EACH CELL ONE UNIT HIGH. THE TIE WIRE SHALL BE NOT MORE THAN TWO GAUGES SMALLER THAN THE MESH WIRE; OTHERWISE IT SHALL MEET THE SAME SPECIFICATIONS AS THE MESH WIRE.

THE WIRE MESH SHALL BE MADE OF GALVANIZED STEEL WIRE HAVING A MINIMUM SIZE OF U.S. STEEL WIRE GAGE NO. 11. THE TENSILE STRENGTH OF THE WIRE SHALL BE IN THE RANGE OF 60,000 TO 85,000 PSI. THE MINIMUM ZINC-COATING OF THE WIRE SHALL BE 0.80 OZ./SQ.FT. OF UNCOATED WIRE SURFACE AS DETERMINED BY TESTS CONDUCTED IN ACCORDANCE WITH ASTM DESIGNATION A-90. THE MAXIMUM LINEAR DIMENSION OF THE MESH OPENING SHALL NOT EXCEED 4 1/2 INCHES AND THE AREA OF THE MESH OPENING SHALL NOT EXCEED 8 SQUARE INCHES.

#### (3) TESTS

##### (A) ELONGATION

THE WIRE MESH SHALL HAVE SUFFICIENT ELASTICITY TO PERMIT ELONGATION OF THE MESH EQUIVALENT TO A MINIMUM OF 10% OF THE LENGTH OF THE SECTION OF THE MESH UNDER TEST WITHOUT REDUCING THE GAUGE OR TENSILE STRENGTH OF INDIVIDUAL WIRES TO VALUES LESS THAN THOSE FOR SIMILAR WIRE ONE GAUGE SMALLER IN DIAMETER.

##### (B) ELASTICITY

A SECTION OF THE MESH 6 FEET LONG AND NOT LESS THAN 3 FEET WIDE, AFTER FIRST BEING SUBJECTED TO THE ELONGATION TEST DESCRIBED ABOVE, SHALL WITHSTAND A LOAD TEST OF 6,000 POUNDS APPLIED TO AN AREA OF

ONE SQUARE FOOT APPROXIMATELY IN THE CENTER OF THE SECTION UNDER TEST. THE DETAILS OF THIS TEST ARE AS FOLLOWS:

AN UN CUT SECTION OF MESH 6 FEET LONG, NOT LESS THAN 3 FEET WIDE AND INCLUDING ALL SELVEDGE BINDINGS SHALL HAVE THE ENDS SECURELY CLAMPED FOR 3 FEET ALONG THE WIDTH OF THE SAMPLE. WHEN THE WIDTH OF THE SAMPLE UNDER TEST EXCEEDS 3 FEET, THE CLAMPS WILL BE PLACED IN THE MIDDLE PORTION OF THE WIDTH AND THE EXCESS WIDTH WILL BE ALLOWED TO FALL FREE ON EACH SIDE OF THE CLAMPED SECTION. THE SAMPLE SHALL THEN BE SUBJECTED TO SUFFICIENT TENSION TO CAUSE 10% ELONGATION OF THE SAMPLE SECTION BETWEEN THE CLAMPS. AFTER ELONGATION AND WHILE CLAMPED AS DESCRIBED ABOVE (AND OTHERWISE UNSUPPORTED), THE SECTION SHALL BE SUBJECTED TO A LOAD APPLIED TO AN AREA OF ONE SQUARE FOOT LOCATED APPROXIMATELY IN THE CENTER OF THE SAMPLE SECTION BETWEEN THE CLAMPS, AND IN A DIRECTION PERPENDICULAR TO THE DIRECTION OF THE TENSION FORCE. THE SAMPLE SHALL WITHSTAND, WITHOUT RUPTURE OF ANY WIRE, OR OPENING OF ANY MESH FASTENING, AN ACTUAL LOAD, SO APPLIED, EQUALING OR EXCEEDING 6,000 POUNDS. THE RAM HEAD USED IN THE TEST SHALL BE CIRCULAR WITH ITS EDGES BEVELED OR ROUNDED TO PREVENT CUTTING OF THE WIRES.

##### (C) SINGLE STRAND CUT

THE WIRE MESH SHALL BE FABRICATED IN SUCH A MANNER AS TO BE NON-RAVELING. THIS IS DEFINED AS THE ABILITY TO RESIST PULLING APART AT ANY OF THE TWISTS OR CONNECTIONS FORMING THE MESH WHEN A SINGLE WIRE IN A SECTION OF MESH IS CUT AND THE SECTION OF MESH THEN SUBJECTED TO THE LOAD TEST DESCRIBED IN THE ELASTICITY TEST ABOVE.

##### (D) ZINC COATING

THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH DETAILS DESCRIBED IN ASTM DESIGNATION A-90.

##### (E) TENSILE STRENGTH

THE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH DETAILS DESCRIBED IN ASTM A-392, EXCEPT THAT STRENGTH SHALL BE AS LISTED UNDER "2. FABRICATION."

#### (4) CERTIFICATION

EACH SHIPMENT OF GABIONS TO A JOB SITE SHALL BE ACCOMPANIED BY A CERTIFICATION WHICH STATES THAT THE MATERIAL CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION. A SHIPMENT SHALL CONSIST OF ALL MATERIAL ARRIVING AT THE JOB SITE AT SUBSTANTIALLY THE SAME TIME. THE CERTIFICATION SHALL BE ON COMPANY LETTERHEAD AND SHALL BE SIGNED BY AN OFFICER OF THE COMPANY HAVING LEGAL AUTHORITY TO BIND THE COMPANY.

IN ADDITION TO THE ABOVE LETTER OF CERTIFICATION, THE STATE MAY REQUEST A CERTIFIED COPY OF TEST RESULTS AS PERFORMED BY A REPUTABLE TESTING LABORATORY AS VERIFICATION OF CONFORMANCE WITH THE SPECIFICATIONS CONTAINED HEREIN. THE COST OF TESTING SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 601, SLOPE PROTECTION (GABIONS), AS PER PLAN.

#### B. FILL

THE BASKETS SHALL BE FILLED WITH APPROVED STONE RANGING IN SIZE FROM A MINIMUM OF 4 INCHES TO A MAXIMUM OF 13 INCHES, BOTH MEASURED IN THE GREATEST DIMENSION.

THE STONE SHALL BE AS APPROVED BY THE ENGINEER.

THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SOURCE FAILING EITHER OF THE FOLLOWING TESTS:

- (1) FREEZE-THAW TEST - A MAXIMUM 10 PERCENT LOSS, BY WEIGHT, AFTER 25 CYCLES OF FREEZING AND THAWING.
- (2) MAGNESIUM SULFATE SOUNDNESS TEST - A MAXIMUM 10 PERCENT LOSS, BY WEIGHT, AFTER 10 CYCLES OF THE MAGNESIUM SULFATE SOUNDNESS TEST.

## 3. CONSTRUCTION DETAILS

EACH GABION UNIT SHALL BE ASSEMBLED BY BINDING TOGETHER ALL VERTICAL EDGES WITH WIRE TIES ON APPROXIMATELY SIX INCH SPACING OR BY A CONTINUOUS PIECE OF CONNECTING WIRE STITCHED AROUND THE VERTICAL EDGES WITH A COIL ABOUT EVERY FOUR INCHES. EMPTY GABION UNITS SHALL BE SET TO LINE AND GRADE AS SHOWN OR DESCRIBED ON THE PLANS. WIRE TIES OR CONNECTING WIRE SHALL BE USED TO JOIN THE UNITS TOGETHER IN THE SAME MANNER AS DESCRIBED ABOVE FOR ASSEMBLING. INTERNAL TIE WIRES SHALL BE UNIFORMLY SPACED AND SECURELY FASTENED IN EACH OUTSIDE CELL OF THE STRUCTURE OR WHERE ORDERED BY THE ENGINEER. WHEN GABIONS ARE BEING PLACED AS SLOPE PROTECTION THE CROSS-CONNECTING WIRES MAY BE DELETED IF ORDERED BY THE ENGINEER.

A STANDARD FENCE STRETCHER, CHAIN FALL, OR IRON ROD MAY BE USED TO STRETCH THE WIRE BASKETS AND HOLD ALIGNMENT. WHERE CALLED FOR ON THE PLANS, RODS USED TO ASSEMBLE, STRETCH AND/OR ALIGN THE WIRE BASKET SHALL BE DRIVEN INTO THE ADJACENT MATERIAL AND LEFT IN PLACE AS ANCHORS.

THE GABIONS SHALL BE FILLED WITH STONE CAREFULLY PLACED BY MACHINE AND/OR BY HAND AS REQUIRED TO ASSURE ALIGNMENT AND AVOID BULGES, AS WELL AS WITH A MINIMUM OF VOIDS. AFTER A GABION HAS BEEN FILLED, THE LID SHALL BE BENT OVER UNTIL IT MEETS THE SIDES AND EDGES. THE LID SHALL THEN BE SECURED TO THE SIDES, ENDS AND DIAPHRAGMS WITH THE WIRE TIES OR CONNECTING WIRE IN THE MANNER DESCRIBED ABOVE FOR ASSEMBLING.

## 4. METHOD OF MEASUREMENT

SLOPE PROTECTION - GABIONS WILL BE MEASURED BY THE CUBIC YARD COMPLETED IN PLACE, IN LOCATIONS AND IN ACCORDANCE WITH DIMENSIONS AND LIMITS SHOWN ON THE PLANS.

## 5. METHOD OF PAYMENT

THE UNIT PRICE BID, PER CUBIC YARD, SHALL INCLUDE THE COST OF FURNISHING ALL LABOR, MATERIALS, INCLUDING STONE, MESH AND RODS AS REQUIRED, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK. PAYMENT WILL BE MADE FOR ACCEPTED QUANTITIES OF GABIONS COMPLETE IN PLACE, UNDER ITEM 601, SLOPE PROTECTION (GABIONS), AS PER PLAN.

H.N.T.B. BRIDGE NOS. 3 and 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

## GENERAL NOTES

BR. NO. CUY.-10-1618  
BR. NO. CUY.-10-1685

DRAWN		CHECKED		REVIEWED		REVISED	
C.K.B.		C.A.B.					
DATE 6-13-79		DATE 6-14-79					
DATE		DATE				SHEET GN 10	

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	PART BR. NO. CUY-10-1618 (HNTB BR. NO. 3)	BR. NO. CUY-10-1685	GENERAL	PARTICIPATION					
							FEDERAL & ISSUE NO. 1			100% ISSUE NO. 1	100% EAST OHIO GAS	100% C.E.I.
							BRIDGE NO. CUY-10-1618	BRIDGE NO. CUY-10-1685	TOTAL			
202	Lump Sum	Lump Sum	Portions of Structures Removed	Lump Sum	Lump Sum	-	Lump	Lump	Lump			
202	Lump Sum	Lump Sum	Removal of Access Steps and Underdeck Crosswalk in Span 13	Lump Sum	-	-	Lump		Lump			
402	1,152	Cu. Yd.	Asphalt Concrete, AC-20, As Per Plan	1009	143	-			1152			
403	14	Cu. Yd.	Asphalt Concrete, AC-20	14	-	-			14			
404	658	Cu. Yd.	Asphalt Concrete, AC-20, As Per Plan	578	82	-			658			
407	2,370	Gallons	Tack Coat, As Per Plan	2076	294	-			2370			
509	1,903,995	Lbs.	Reinforcing Steel	1,552,638	351,357	-	1,374,938	351,357	1,726,295	177,700		
510	56	Each	Dowel Holes, As Per Plan	-	56	-		56	56			
511	13,735	Cu. Yd.	Class S Concrete, Superstructure	12,165	1,570	-	11,158	1,570	12,728	1,007		
511	45,315	Sq. Ft.	Class C Concrete, Sidewalk Wearing Course, As Per Plan	41,951	3,364	-	41,951	3,364	45,315			
511	56	Cu. Yd.	Class C Concrete, Piers Above Footings	56	-	-	56		56			
511	92	Cu. Yd.	Class C Concrete, Abutments Above Footings	92	-	-	92		92			
512	28,435	Sq. Yd.	Concrete Deck Waterproofing, As Per Plan	24,905	3,530	-			28,435			
513	130,160	Lbs.	New Structural Steel (ASTM A36) (Curb plates, including anchors)	123,960	6,200	-	123,960	6,200				
513	327,000	Lbs.	New Structural Steel (ASTM A588)	327,000	-	-	317,550		317,550	9,450		
513	Lump Sum	Lump Sum	Dismantle, Move, Alter, and/or Recondition and Erect Reused Structural Steel	Lump Sum	-	-	Lump		Lump			
#514	Lump Sum	Lump Sum	Painting of Existing Structural Steel, As Per Plan	Lump Sum	-	-	Lump		Lump			
514	356,300	Lbs.	Field Painting of New Structural Steel, As Per Plan	350,100	6,200	-	350,100	6,200	356,300			
516	166	Sq. Ft.	1/4" Preformed Expansion Joint Filler	166	-	-	166		166			
517	6,295	Lin. Ft.	Reinforced Concrete Bridge Railing, As Per Plan	6,135	160	-	6,135	160	6,295			
*Special	6,295	Lin. Ft.	Tinting of Bridge Railing Concrete	6,135	160	-	6,135	160	6,295			
517	143	Lin. Ft.	Railing (Concrete Parapet with Chain Link Fence-AASHTO Designation M-181-Type III Aluminum-alloy Fabric, Posts, Hardware and Fittings)	-	143	-		143	143			
518	1,982	Lin. Ft.	8" Pipe, Horizontal Conductors, Including Supports	1,982	-	-	1,982		1,982			
518	1,111	Lin. Ft.	8" Pipe, Downspouts, Including Supports	1,111	-	-	1,111		1,111			
518	40	Each	Scuppers, Including Supports	40	-	-	40		40			
518	6,375	Lin. Ft.	Subdrainage For Surface Course, As Per Plan	6,070	305	-			6,375			
601	66	Cu. Yd.	Slope Protection (Gabion), As Per Plan	66	-	-	66		66			
513	62,573	Each	Welded Stud Shear Connectors	62,573	-	-	62,573		62,573			
Special	10	Each	Repair of Floorbeam Cracks	10	-	-				10		
Special	386,910	Sq. Ft.	Concrete Coating	263,000	121,400	2,510	263,000	121,400	386,910			
Special	11,615	Sq. Ft.	Patching Concrete Structures (Repair equal to or less than 6" average depth)	4,947	6,668	-	4,947	6,668	11,615			
Special	5,807	Sq. Ft.	Patching Concrete Structures (Repair greater than 6" average depth)	2,473	3,334	-	2,473	3,334	5,807			
Special	Lump Sum	Lump Sum	Falswork and Temporary Bracing	Lump Sum	Lump Sum	-	Lump	Lump	Lump			
Special	2,782	Lin. Ft.	Repair of Cracks	1,545	1,237	-	1,545	1,237	2,782			
Special	6	Each	Tooth Plate Expansion Joint with Neoprene Trough including Sidewalk Plates and Troughs	6	-	-	6		6			
Special	6	Each	Elastomeric Compression Seals in Structural Steel Joints	6	-	-	6		6			
Special	3	Each	Continuous Seals in Structural Steel Joints	3	-	-	3		3			
Special	Lump Sum	Lump Sum	Cleaning Pylons	Lump Sum	-	-	Lump		Lump			
Special	Lump Sum	Lump Sum	Painting Pylons	Lump Sum	-	-	Lump		Lump			
Special	Lump Sum	Lump Sum	Inspection of Existing Substructure Units	Lump Sum	Lump Sum	-	Lump	Lump	Lump			
Special	Lump Sum	Lump Sum	East Ohio Gas Company H.P. Pipe Air Vents, Complete	-	Lump Sum	-				Lump		
Special	Lump Sum	Lump Sum	Cleveland Electric Illuminating Company Power Lines Protection, Complete, As Per Plan	-	Lump Sum	-					Lump	
Special	1,529,850	Lbs.	Epoxy Coated Reinforcing Steel (See Proposal Note)	1,212,620	317,230	-	1,212,620	317,230	1,529,850			
Special	9,000	Lbs.	Additional Stringer and/or Floorbeam Replacement	9,000	-	-	9,000		9,000			
Special	6,850	Lbs.	Replacement Reinforcement	4,850	2,000	-	4,850	2,000	6,850			
Special	7	Each	Grease Box Rebuilding and Repacking	7	-	-	7		7			
Special	Lump Sum	Lump Sum	Filling Under West Pylon	Lump Sum	-	-	Lump		Lump			
604	15	Each	Manhole Adjusted to Grade	9	6	-	9	6	15			

\* This quantity is subject to non-performance, if found not to be required. See Note on Sheet 70.  
 \* Ohio Bell Telephone Company facilities shall not be painted.

Note: Removal of Portions of Structures shall include the elements as indicated in the Plans or General Notes, and includes the approximate quantity of reinforced concrete, asphalt concrete structural steel and stone curb as shown in Table I.

Note: The replacement of the maintenance and inspection deck includes 1,007 Cu. Yd. of Class S Concrete, Superstructure, 177,700 Lbs. of Reinforcing Steel, 9,450 Lbs. of New Structural Steel (ASTM A588) and the entire Item Special, Repair of Floorbeam Cracks. All of these quantities are included in the total quantities shown above as 100% Issue No. 1 participation.

BR. NO.	SUPERSTRUCTURE CONCRETE	SUBSTRUCTURE CONCRETE	ASPHALT CONCRETE	STRUCTURAL STEEL	STONE CURB
CUY-10-1618	11,570 Cu. Yds.	152 Cu. Yds.	20,220 Sq. Yds.	323,500 Lbs.	See Roadway Plans
CUY-10-1685	1,463 Cu. Yds.	-	3130 Sq. Yds.	-	-

ESTIMATED REPAIR QUANTITIES		
LOCATION	PCS (Sq. Ft.)	REPAIR OF CRACKS (Lin. Ft.)
BRIDGE NO. CUY-10-1618		
W. PYLON	670	15
PIER 12	170	20
PIER 11	650	90
PIER 10	400	120
PIER 9	480	55
PIER 8	120	65
PIER 7	370	45
PIER 6	440	110
PIER 5	470	140
PIER 4	250	140
PIER 3	440	95
PIER 2	150	30
PIER 1	150	30
E. PYLON	680	60
E. ABUT	1650	95
General	330	435
Total	7,420	1,545

Note: The Location designated General, represents the existing structure between the Box at East Abutment and the Grade Separation. For PCS and Repair of Cracks in the Grade Separation, see Sheet 31/31. PCS Indicates Patching Concrete Structure.

Notes: Payment for Item 202, Portions of Structure Removed, shall be based on the limits of removals as indicated in the plans and shall include, as necessary to accomplish the work, any cleaning and repairing of parts not intended for removal but damaged during removal of other parts. Additional removals and related items over and above that shown on the plans shall be included in the lump sum bid for Item 202, Portions of Structure Removed. However, additional materials and work required to make the additional repairs and as approved by the Engineer will be paid for at the unit bid prices for the appropriate item. Removals necessary for Item Special, Patching Concrete Structures, are not included with Item 202, Portions of Structure Removed, for payment, but are included with Item Special, Patching Concrete Structures. Item 509, Reinforcing Steel, does not include replacement reinforcing which may be required for Item Special, Patching Concrete Structures. The replacement is included in the Item Special, Replacement Reinforcement, for payment. The payment quantity for Item 513, New Structural Steel (ASTM A36) and Item 513, New Structural Steel (ASTM A588) shall be the quantity of new structural steel incorporated into the completed construction. The payment quantity shall not include existing structural steel which is to be removed and reused in the completed structure. Payment for this work and any other work on the existing structural steel not covered elsewhere shall be considered as included in the lump sum bid for Item 513, Dismantle, move, alter, and/or recondition and erect reused structural steel. Approximately 132,200 lbs. of existing structural steel will be removed and reused, exclusive of steel removed for erection purposes. Item Special, Falswork and Temporary Bracing, shall cover payment for all labor, materials and equipment required for constructing and removing all temporary constructions required to complete the permanent structure exclusive of formwork and items which are specifically included elsewhere for payment. The item shall include payment for equipment, platforms or staging as needed to permit access for inspection, for temporary platforms or other means provided for catching broken concrete and other removed materials, and for all temporary support and braces required to maintain a completely stable structure at all times. (For further reference to temporary bracing, see General Note 9, sheet 6N1).

Note: All structural steel included in the quantity table under Item 513 shall be ASTM-A588 except curb plates (including their anchors) which shall be ASTM A36. Other new structural steel incorporated into the structure but not included in the quantity table under Item 513 shall be ASTM-A588 except as tabulated below:

Location	Type Steel
All steel at "Elastomeric Compression Seals in Structural Steel Joints"	ASTM-A36
All steel at "Continuous Seals in Structural Steel Joints"	ASTM-A36
All flashing plates, and Neoprene trough support bars and angles	ASTM-A36
All drainage elements	As noted on Sheet 6S/72

CUYAHOGA COUNTY  
CUY-10-16.23

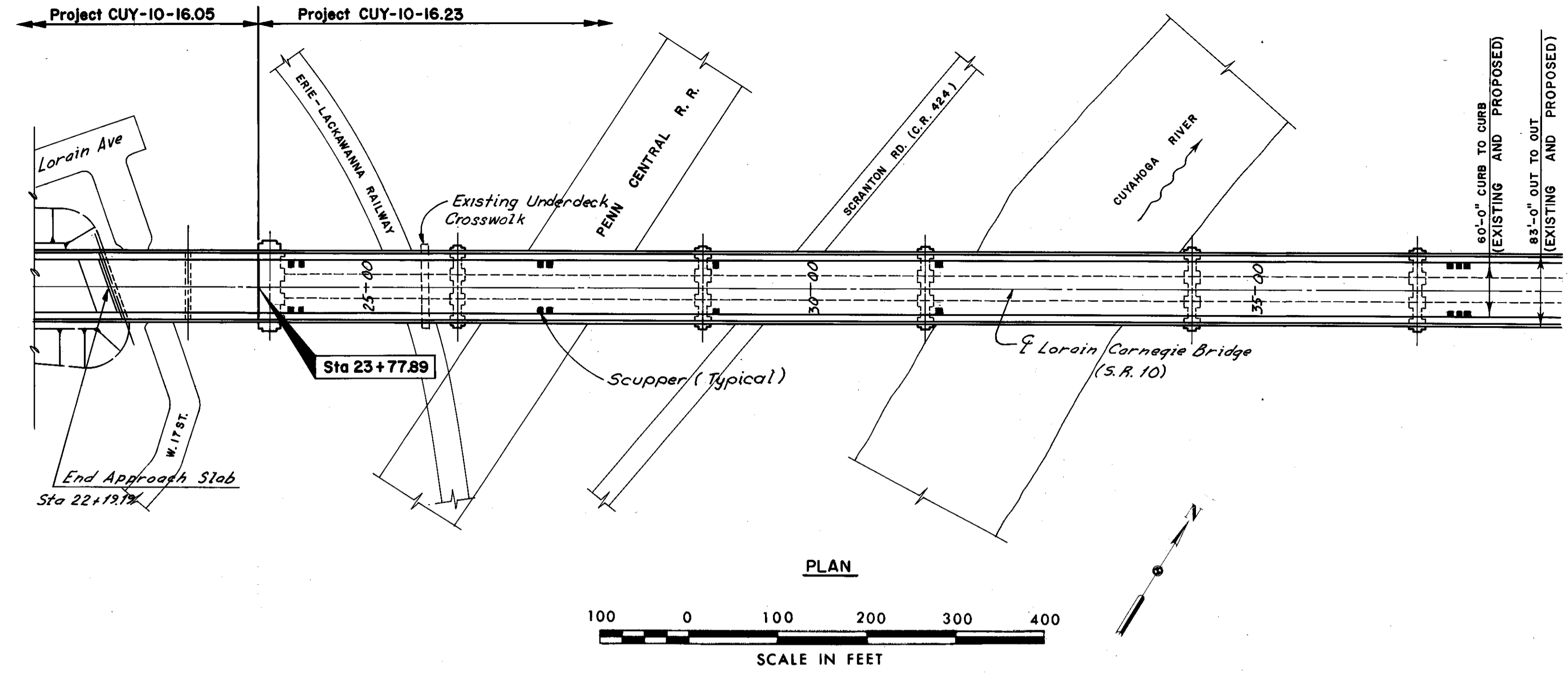
H.N.T.B. BRIDGE NOS. 3 and 4		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB	
ESTIMATED QUANTITIES					
BR. NO. CUY-10-1618 BR. NO. CUY-10-1685					
CUYAHOGA COUNTY OHIO					
DRAWN AAS DATE 11-2-78	TRACED AJP DATE 11-8-78	CHECKED RHW DATE 6-15-78	REVIEWED DATE	REVISED	SHEET E1

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT	
5	OHIO		

75  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PROPOSED STRUCTURE DATA ON TRUSSES  
BRIDGE NO. CUY-10-1618

TYPE: Steel Deck Trusses with Reinforced Concrete Deck and Substructure.

SPANS: Varies - See Plan and Elevation Sheets 75 & 76

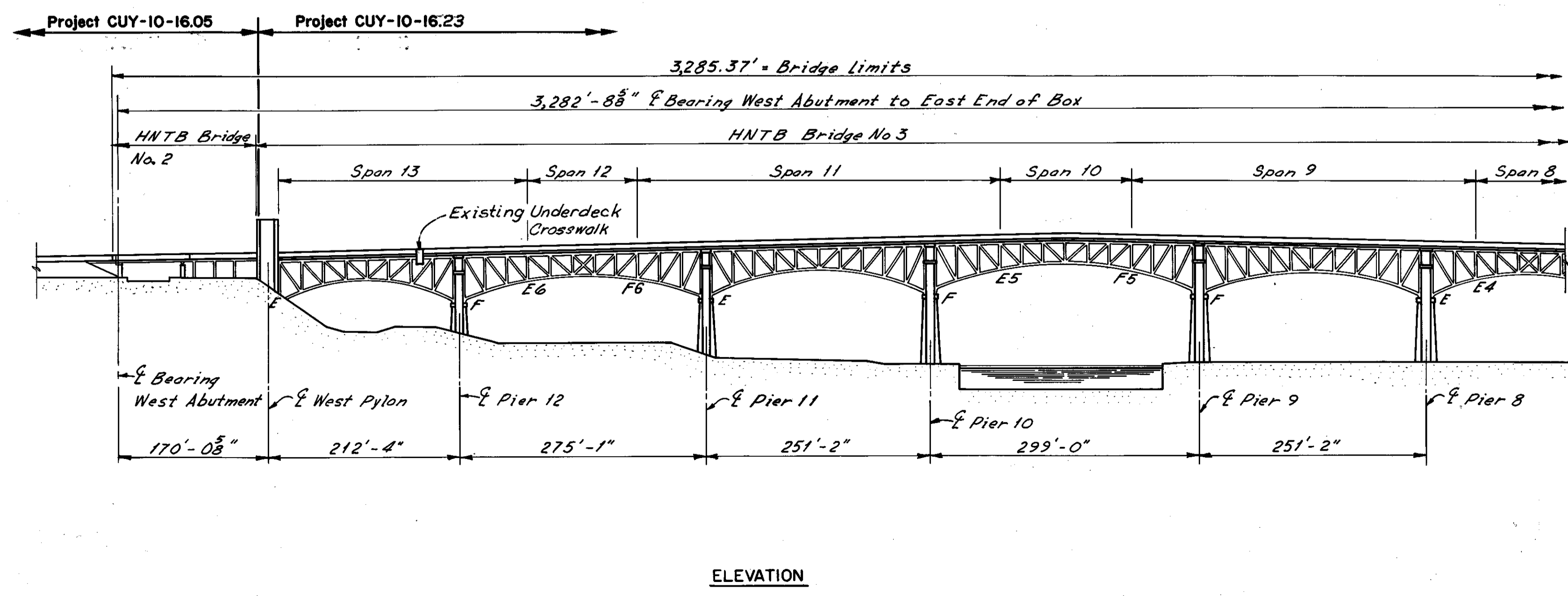
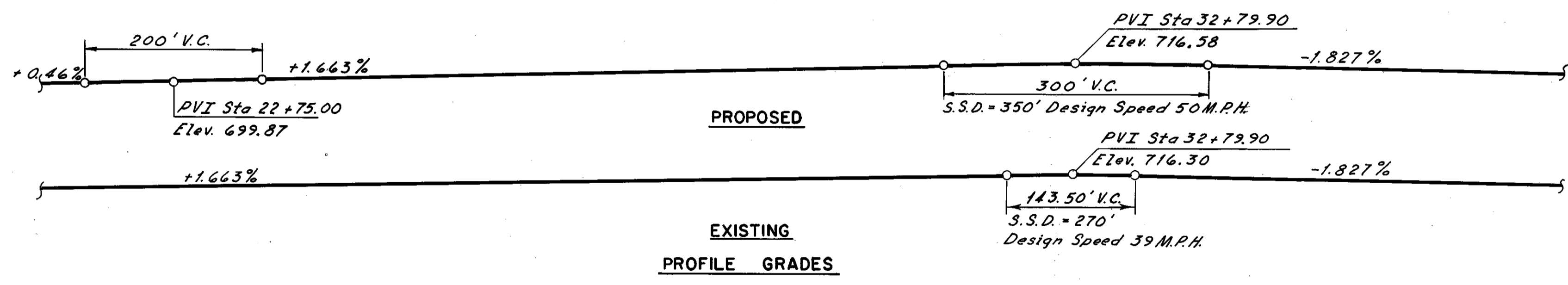
ROADWAY: 60'-0" Curb/Curb with Two 6'-9" Sidewalks.

LOADING: HS 20-44 Case II and The Alternate Military Loading

SKIEW: None

WEARING SURF: 2 3/4" Asphalt Concrete (Rubberized)

ALIGN. Tangent



Note:  
The existing horizontal and vertical clearances are not permanently affected by this project.  
Spans and piers are numbered east to west to be consistent with the original bridge plans.

HNTB BRIDGE NO. 3

HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

GENERAL PLAN AND ELEVATION

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

BR. NO. CUY-10-1618 STA. 22+19.19  
STA. 56+04.56

CUYAHOGA COUNTY OHIO

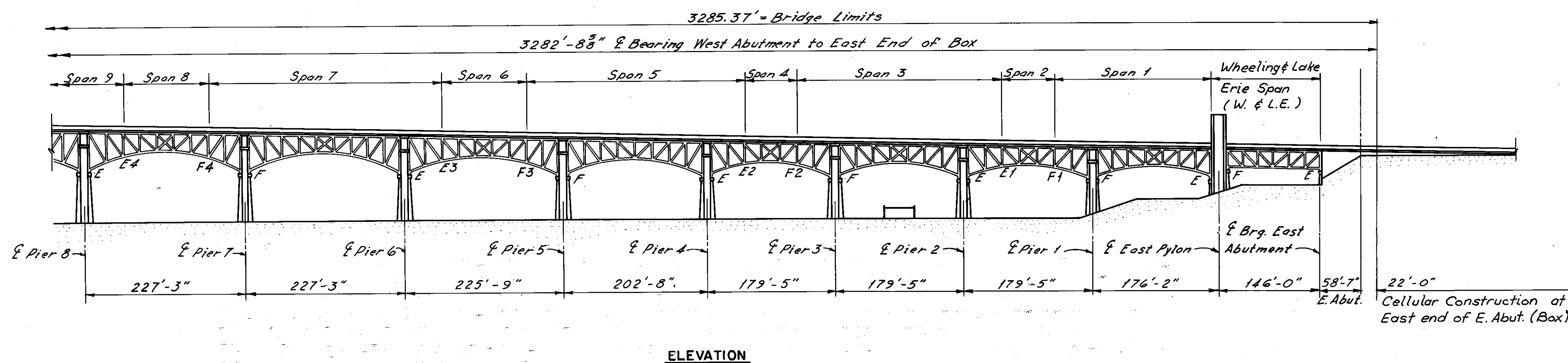
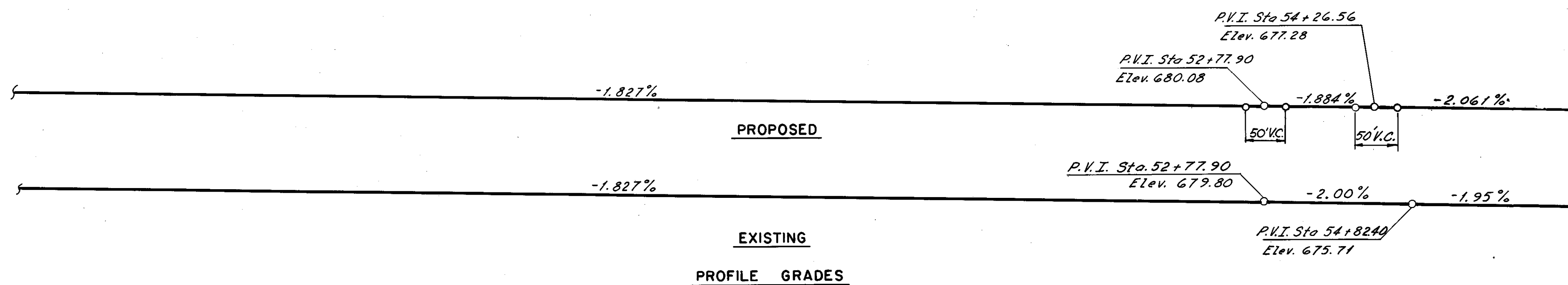
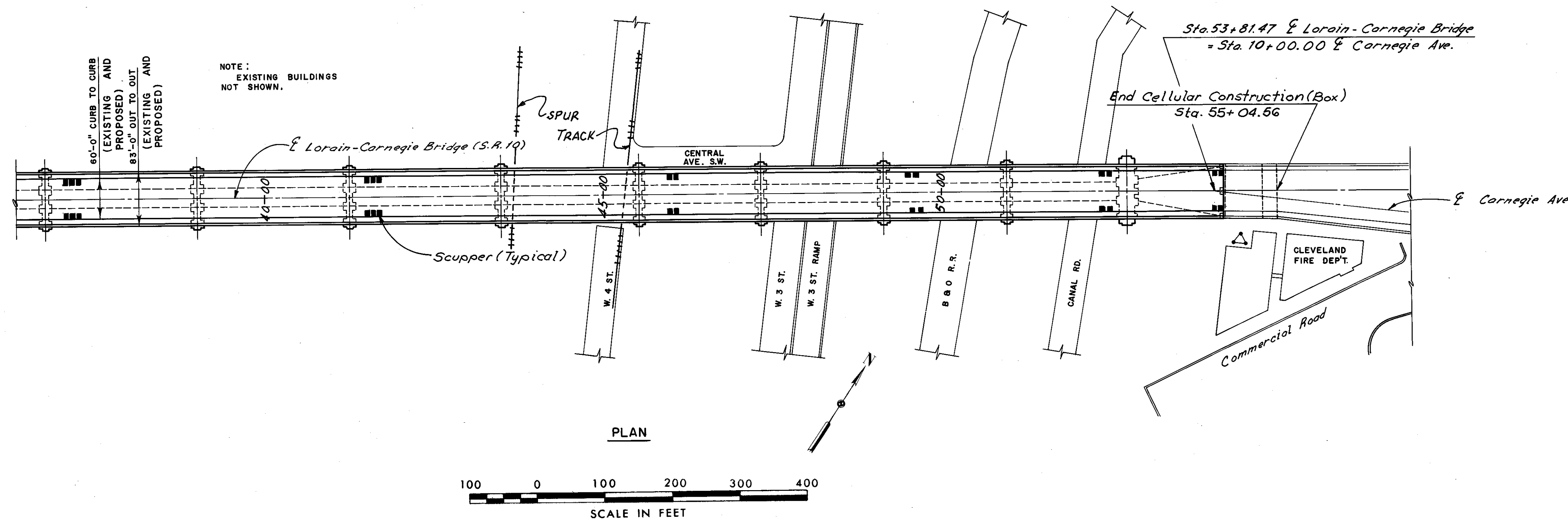
DRAWN CRB DATE 7-1-78	TRACED LBX DATE 8-6-78	CHECKED R.A.S. DATE 9-20-78	REVIEWED	REVISED
				SHEET 1   72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

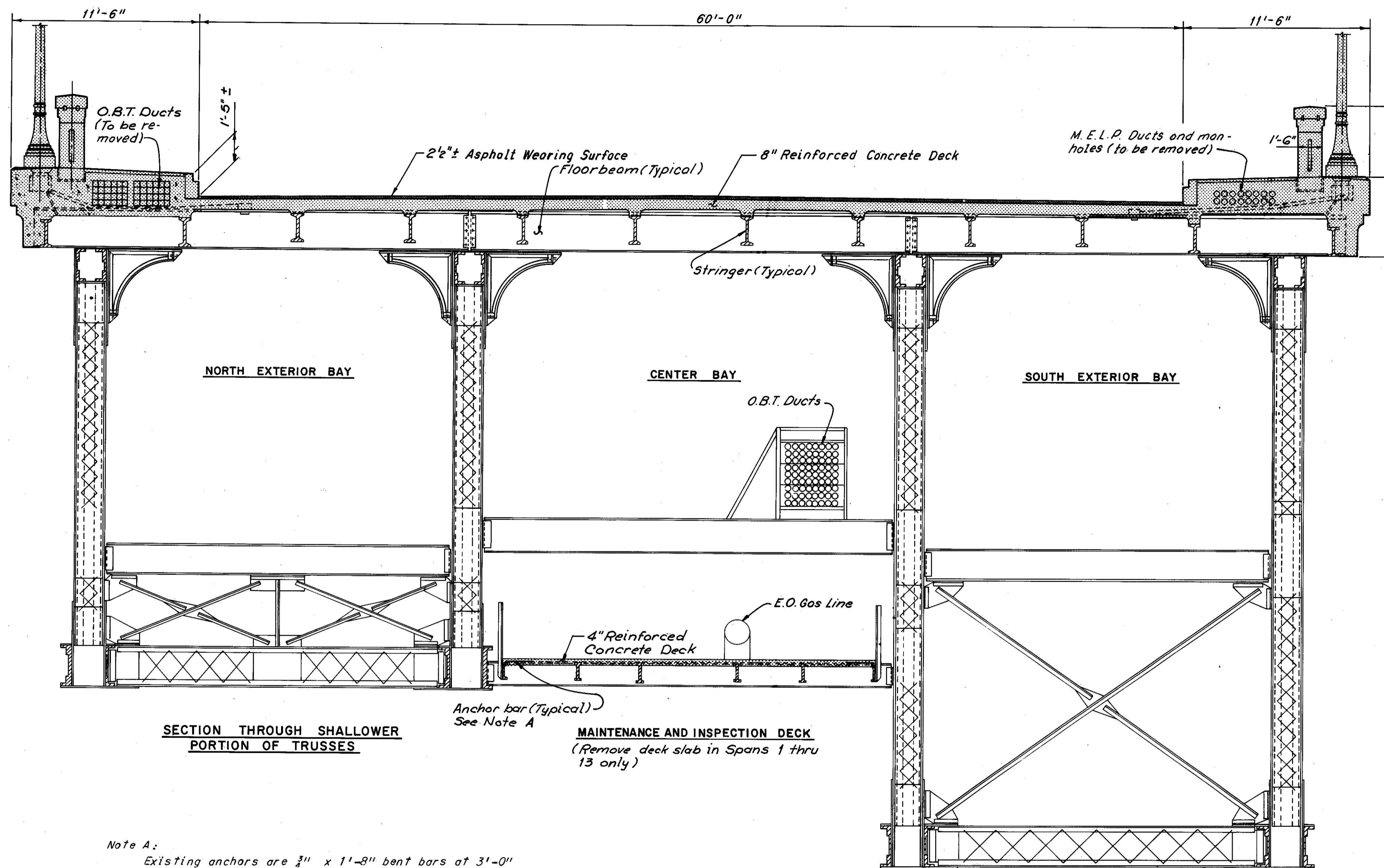
76  
185

CUYAHOGA COUNTY  
CUY-10-16.23



Note:  
The existing horizontal and vertical clearances are not permanently affected by this project.  
Spans and piers are numbered east to west to be consistent with the original bridge plans.

HNTB BRIDGE NO. 3			
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			HNTB
GENERAL PLAN AND ELEVATION			
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY.-10-1618		STA. 22+19.19	
		STA. 55+04.56	
CUYAHOGA COUNTY OHIO			
DRAWN CAB	TRACED LBK	CHECKED RAS	REVIEWED RAS
DATE 7-1-78	DATE 7-6-78	DATE 9-20-78	DATE
			SHEET 2 / 22



Removal Notes:  
Included in Item 202 the portions of structure to be removed as indicated in the General Notes Item 9, the following floorbeams and stringers tabulated below shall be removed and not reused. Payment for this work shall be included in Item 202, Portions of Structures Removed.

SPAN	FLOORBEAM	BAY
1	10	Center
10	1	North, Center and South
10	2	North, Center and South
10	3	North, Center and South
10	4	North, Center and South
10	5	North, Center and South
11	17	North and South

SPAN	STRINGER	FLOORBEAM To FLOORBEAM
1	L	7-8
2	L	14-1
3	B	8-9 and 12-13
3	L	9-10
4	L	2-0
5	L	8-9 and 11 thru 14
6	L	16-1
7	L	0-1, 5-6, 9-10 and 14-15
8	B	4-0
9	L	5 thru 10 and 13-14
9	B	5-6
10	L	19-1 and 2-3
11	L	1-2 and 4 thru 7
12	L	13 thru 3
13	L	0-1 and 11-12

For the location of floorbeams and stringers that are to be temporarily removed and re-used, see Sheet 25/72.

Note A:  
Existing anchors are 3/4" x 1'-3" bent bars at 3'-0" centers, secured in position by two nuts, one on each side of the channel flange. The existing anchor bars are to be retained. Any anchor bars or bolts that are unsatisfactory shall be replaced as directed by the Engineer. Payment for the new anchor is covered by Item Special, Replacement Reinforcement, which price shall also cover removal and disposal of the existing anchors.

NOTE B:  
ANY STRINGERS AND FLOORBEAMS DAMAGED DURING REMOVAL SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. OTHER FLOORBEAMS AND STRINGERS FOUND TO BE UNSATISFACTORY SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. STRINGER AND FLOORBEAM REMOVAL AND REPLACEMENT SHALL BE ACCOMPLISHED IN A MANNER SIMILAR TO THE METHOD SHOWN IN THESE PLANS. ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED IN CONNECTION WITH STRINGER AND FLOORBEAM REPLACEMENT OTHER THAN THOSE CALLED FOR ON THE PLANS WILL BE MEASURED BY WEIGHT IN POUNDS BASED ON THE TOTAL COMPUTED WEIGHT OF NEW MATERIAL USED AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL ADDITIONAL STRINGER AND/OR FLOORBEAM REPLACEMENT THIS PRICE SHALL INCLUDE ALL COSTS INCLUDING THE REMOVAL OF THE EXISTING STRINGERS AND/OR FLOORBEAMS. THE WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 513 FOR NEW STEEL AND SECTION 202 FOR REMOVAL.

TYPICAL CROSS SECTION  
(Spans 1 thru 13 shown, W&LE span similar)

SECTION THROUGH DEEPER PORTION OF TRUSSES

Notes:  
For Member Identification, see Sheets 5/72 thru 9/72  
[Hatched Box] designates removal.

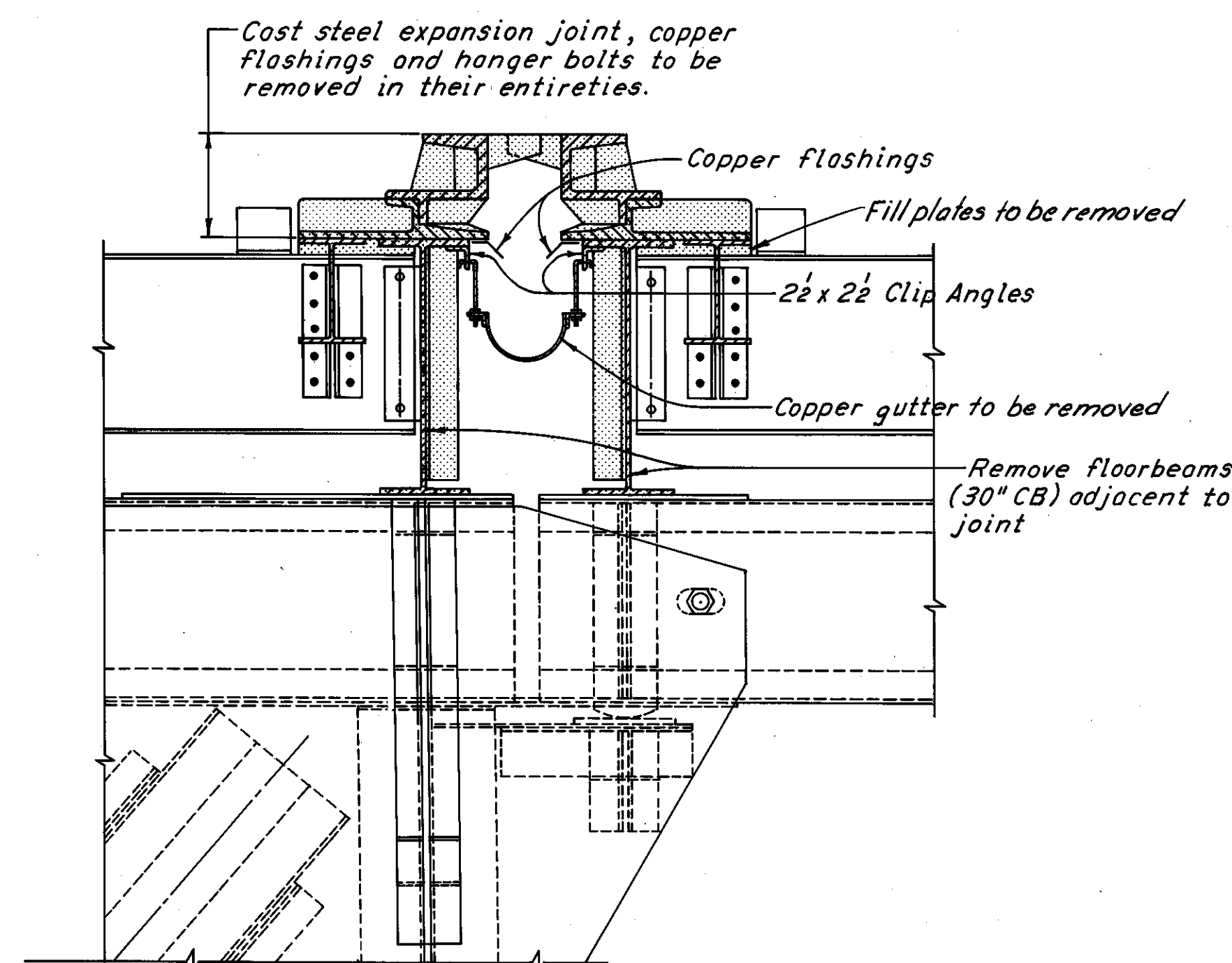
The following abbreviations are used:  
O.B.T. = Ohio Bell Telephone Company  
M.E.L.P. = Municipal Electric Light and Power  
E.O. = East Ohio Gas Company

MICROFILMED  
DEC 5 1966

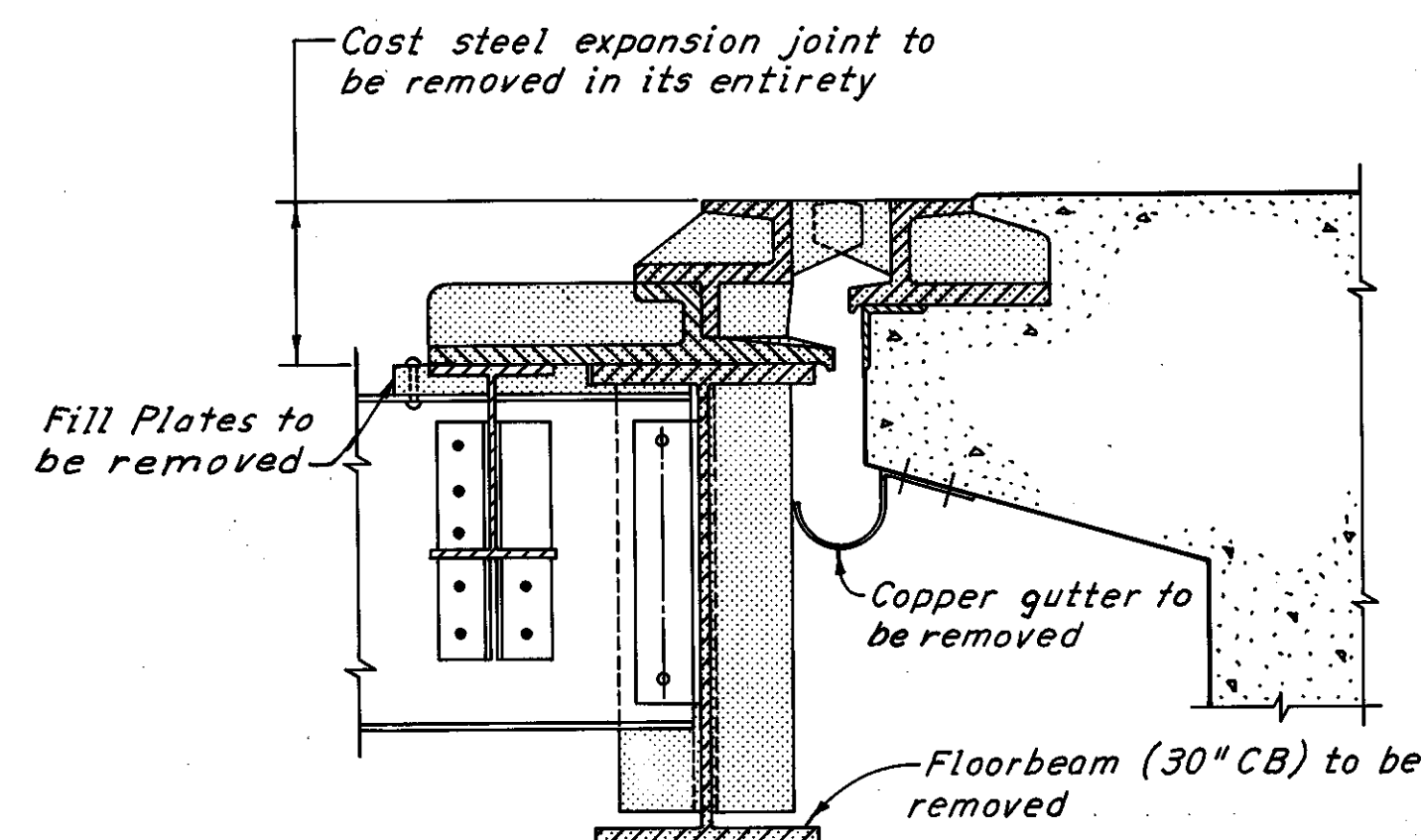
FHWA REGION	STATE	PROJECT
5	OHIO	

78  
185

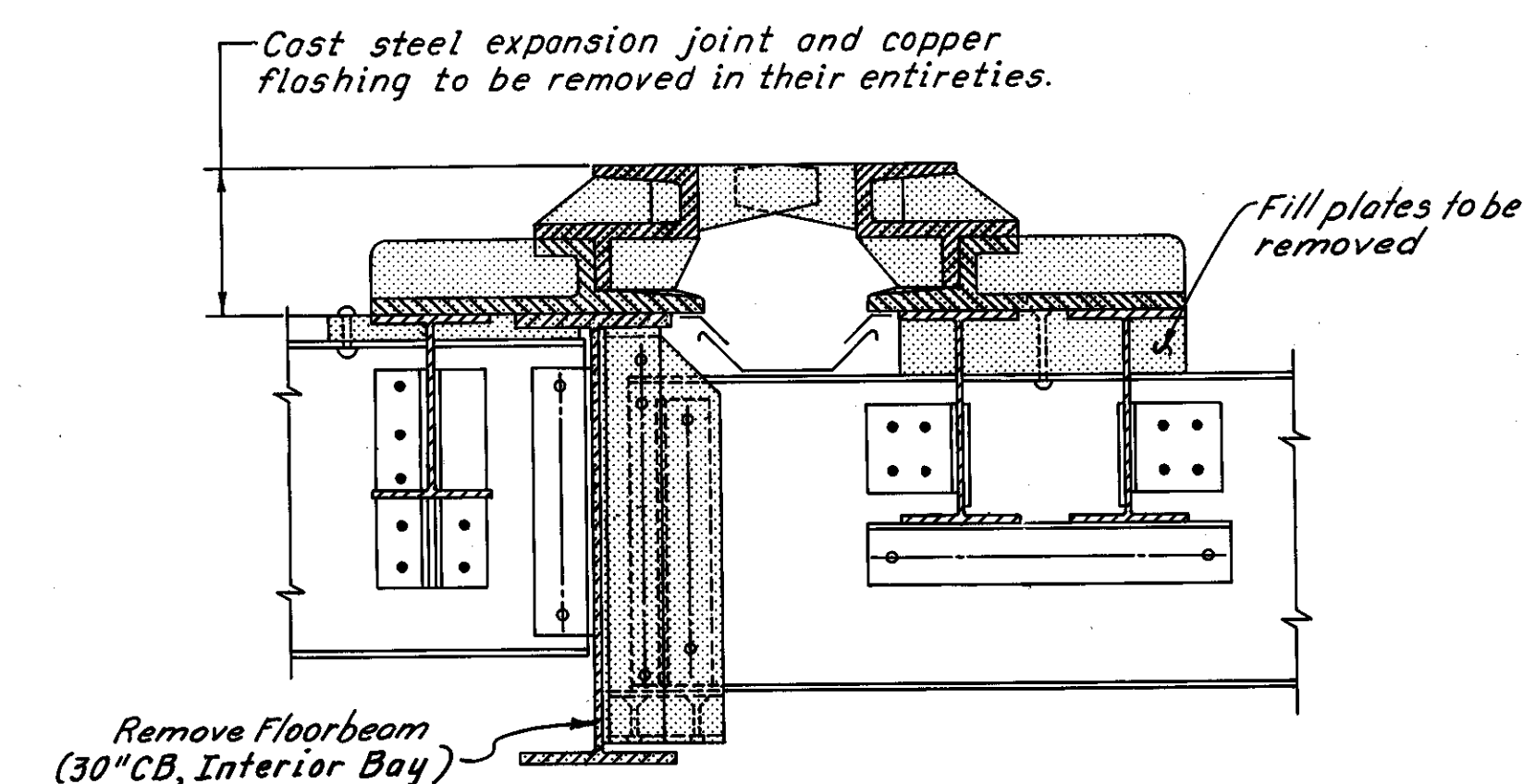
CUYAHOGA COUNTY  
CUY-10-16.23



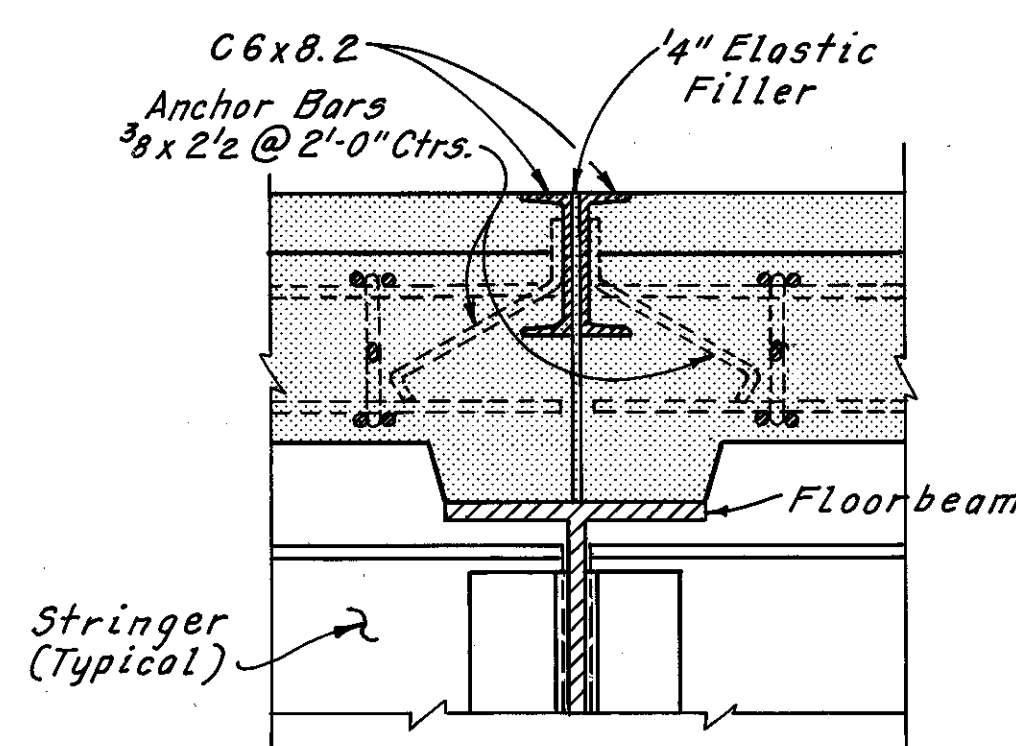
TYPICAL EXPANSION JOINT  
(Concrete Deck not shown)



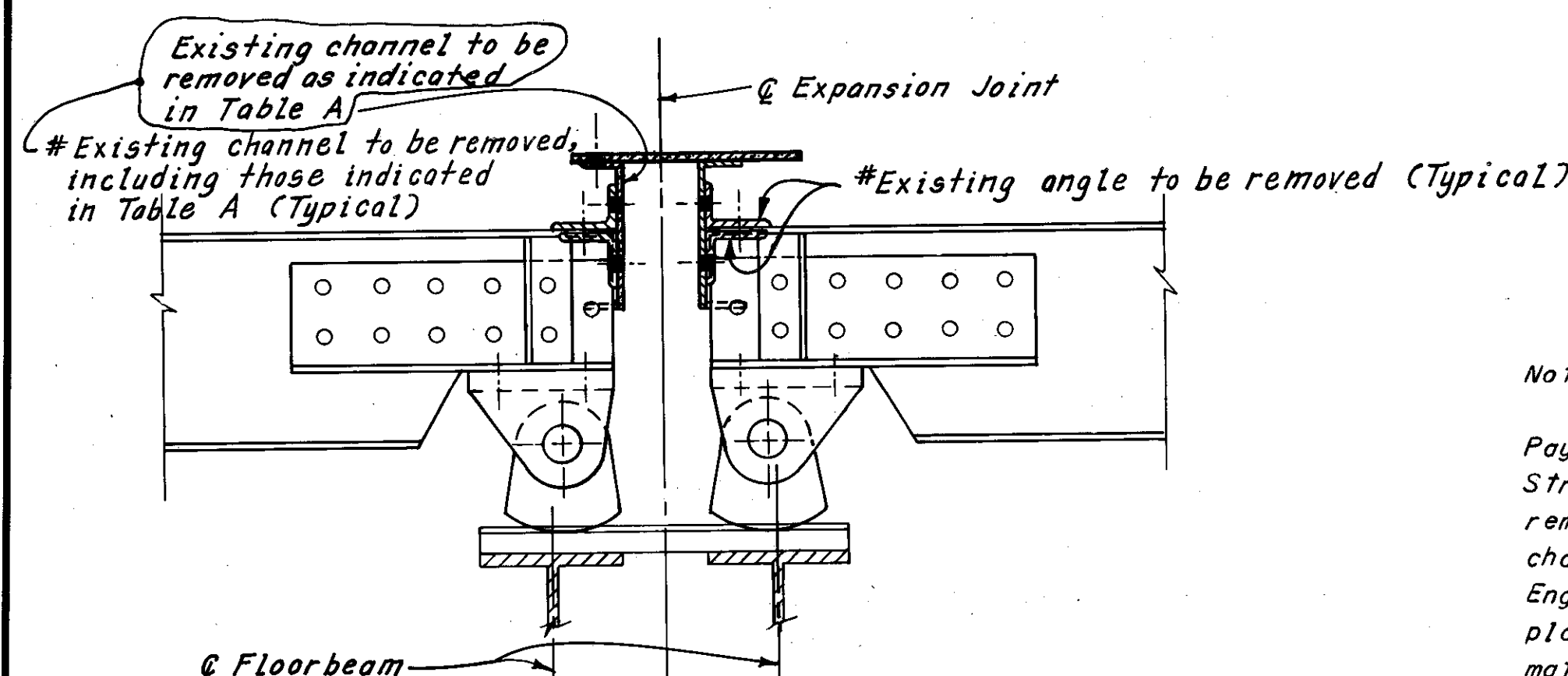
EXPANSION JOINT AT EAST ABUTMENT  
(Expansion joint at West Pylon similar. Concrete Deck not shown)



EXPANSION JOINT AT EAST PYLON  
(Concrete Deck not shown)



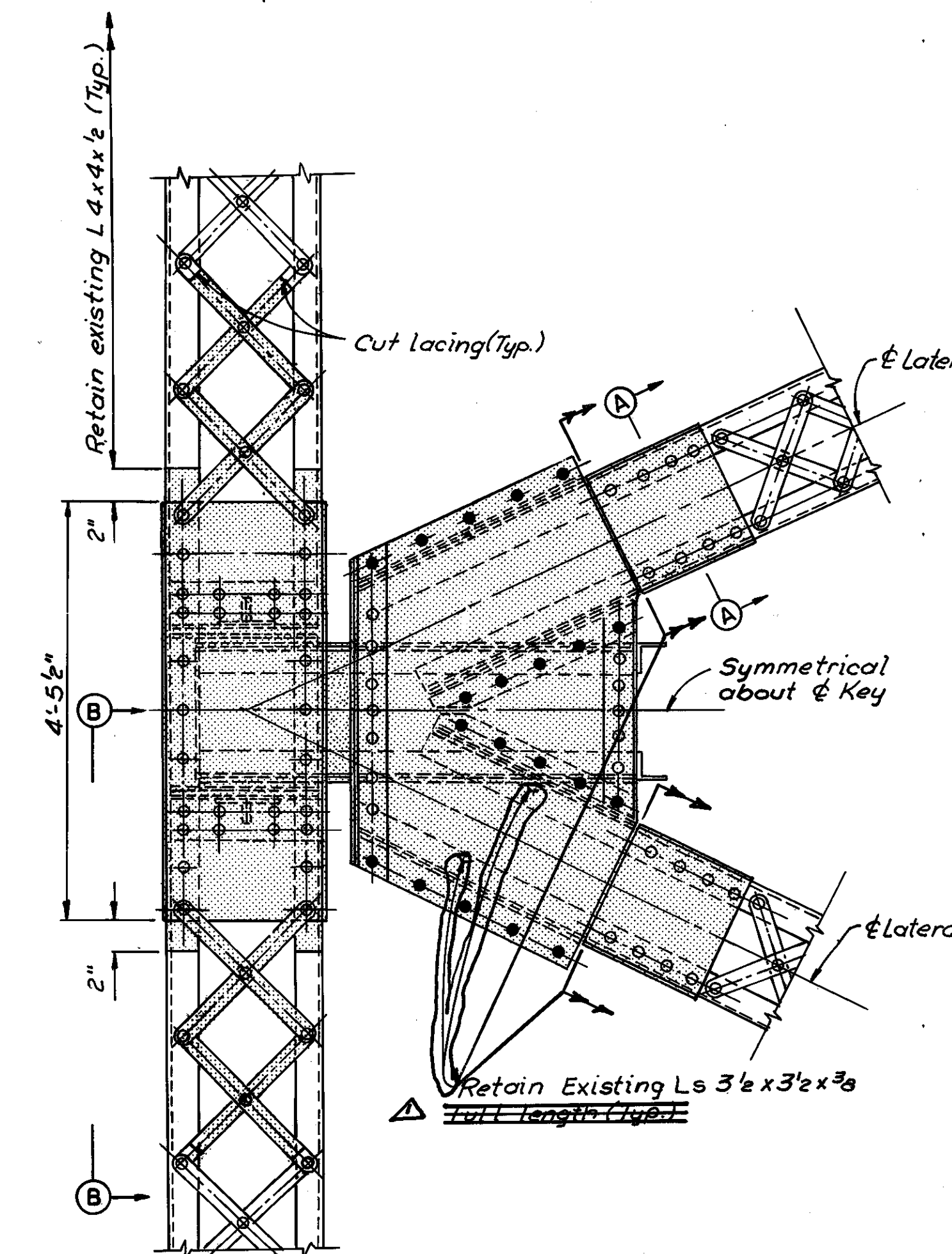
TYPICAL FIXED JOINT



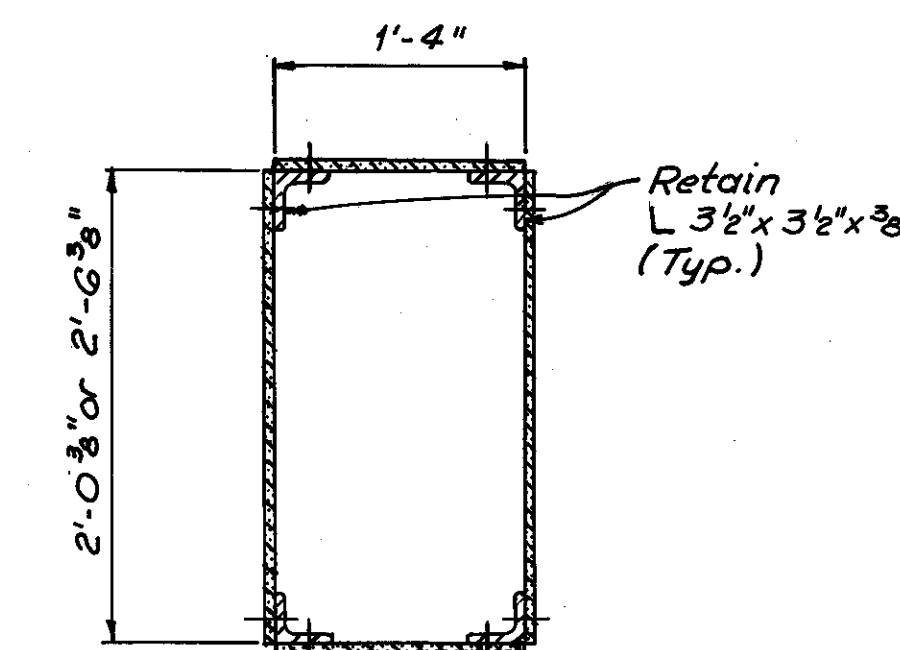
TYPICAL EXPANSION JOINT FOR MAINTENANCE AND INSPECTION DECK  
(Concrete Deck Not Shown)

Span	Floorbeam Location
13	12
8	18
7	15
4	15
2	14

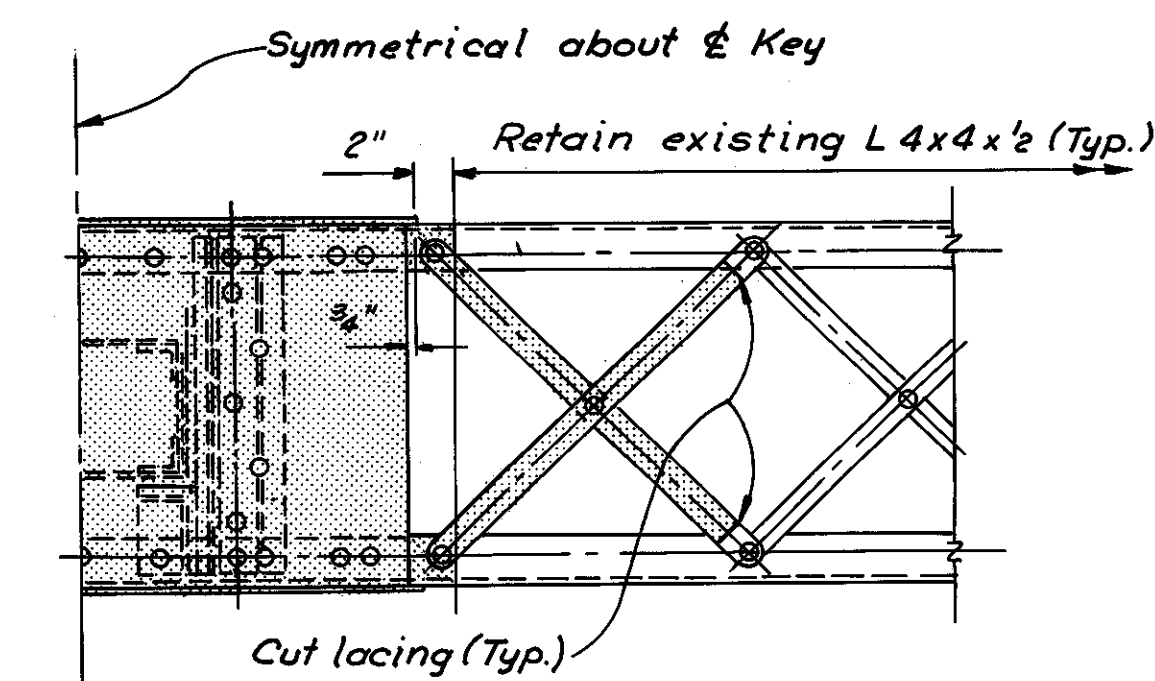
Note:  
The channel over the indicated floorbeam in Table A shall be removed. Payment for channel removal shall be included with Item 202, Portions of Structures Removed, for payment. Any additional channels damaged during removal shall be removed and replaced at the Contractor's expense. Other channels found to be unsatisfactory shall be replaced as directed by the Engineer. Any additional channel removal and replacement shall be accomplished in a manner similar to the method shown in these plans. All labor, materials and equipment required in connection with channel replacement other than those noted in Table A will be measured by weight in pounds based on the total computed weight of new material used and shall be paid for at the contract unit price bid for Item Special, Additional Stringer and or Floorbeam Replacement. THIS PRICE SHALL INCLUDE ALL COSTS INCLUDING THE REMOVAL OF EXISTING CHANNEL. THE WORK SHALL BE DONE IN ACCORDANCE WITH SECTION 513 FOR NEW STEEL AND SECTION 202 FOR REMOVAL.



PLAN VIEW - TRUSS  
WIND SHEAR KEY



SECTION A-A



VIEW B-B

Notes:  
Truss-wind shear keys shall be removed, as shown, in both the north and south bays at Expansion joint locations E1 thru E6. For expansion joint locations, see Sheets 1/72 and 2/72. For member identification plans, see Sheets 5/72 thru 9/72. [Hatched area] indicates removal.

#Additional expansion joint removal as determined during bridge reconstruction W.E.B. 7-1-81  
REVISION

Revised 3-10-81

HNTB BRIDGE NO. 3  
HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

TRUSS SPANS  
REMOVAL DETAILS  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN CHB	TRACED DLR	CHECKED R.A.S.	REVIEWED	REVISED 2-5-83
DATE 5-12-78	DATE 5-23-78	DATE 12-8-78	DATE	SHEET 4/72

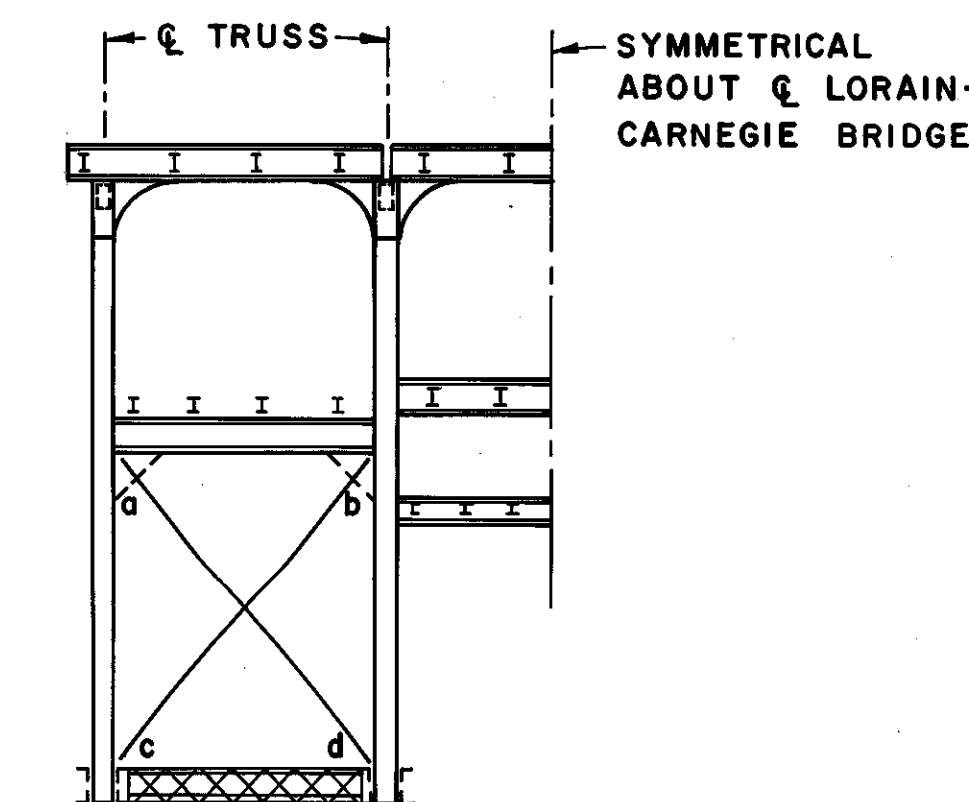


DEC 5 1986

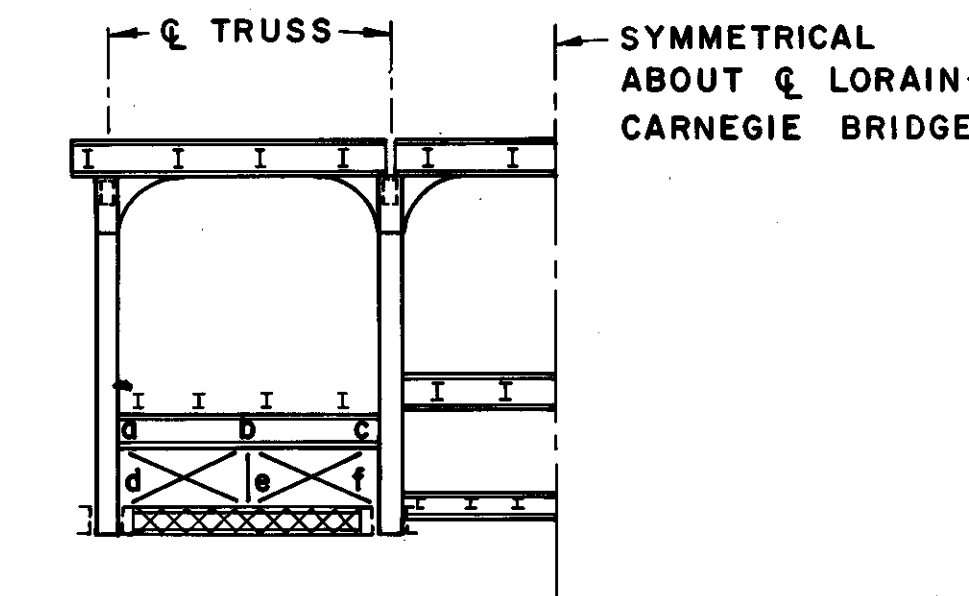
FHWA REGION	STATE	PROJECT
5	OHIO	

79  
185

CUYAHOGA COUNTY  
CUY-10-16.23



HALF CROSS SECTION THROUGH DEEPER PORTION OF TRUSSES



HALF CROSS SECTION THROUGH SHALLOWER PORTION OF TRUSSES

PORTAL AND SWAY BRACING SPANS 1 THRU 13

LEGEND

- DENOTES FLOORBEAMS
- DENOTES STRINGERS
- E DENOTES EXPANSION JOINT
- F DENOTES FIXED JOINT

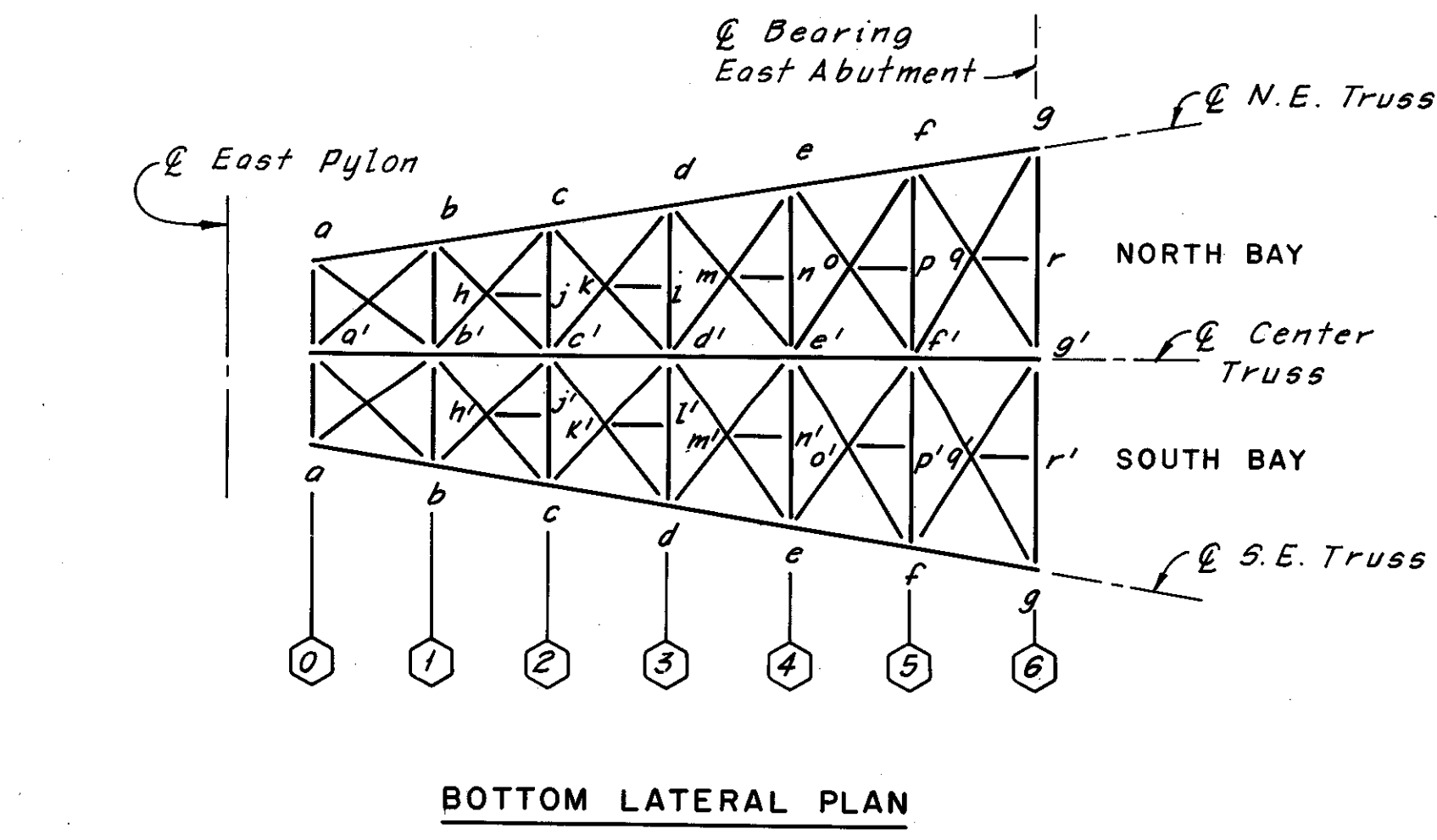
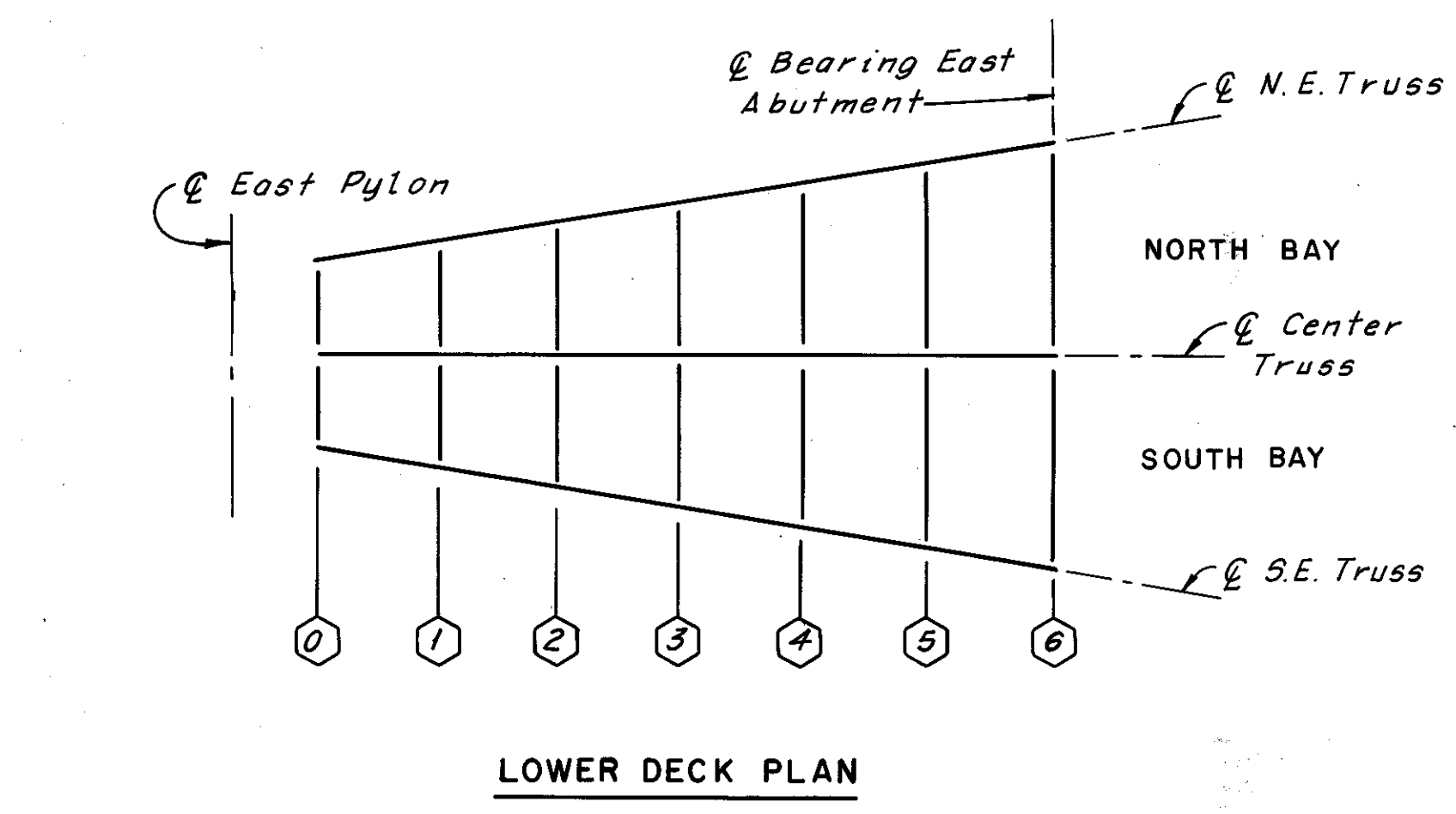
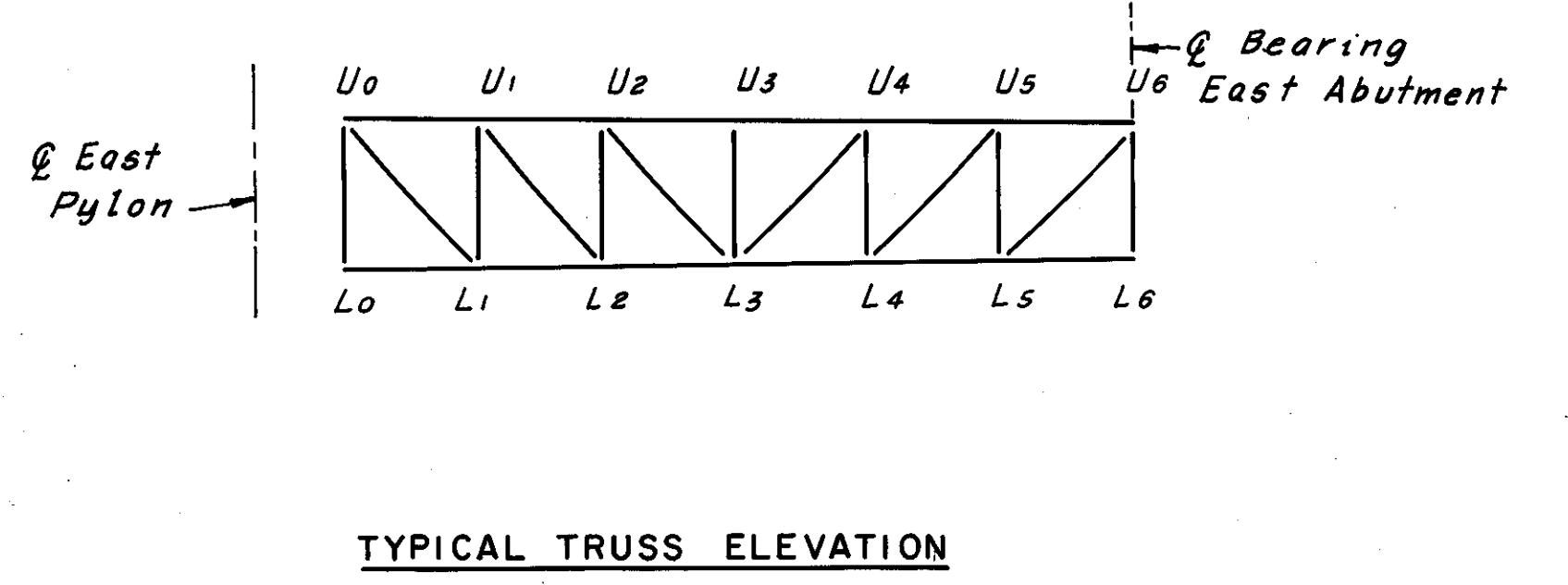
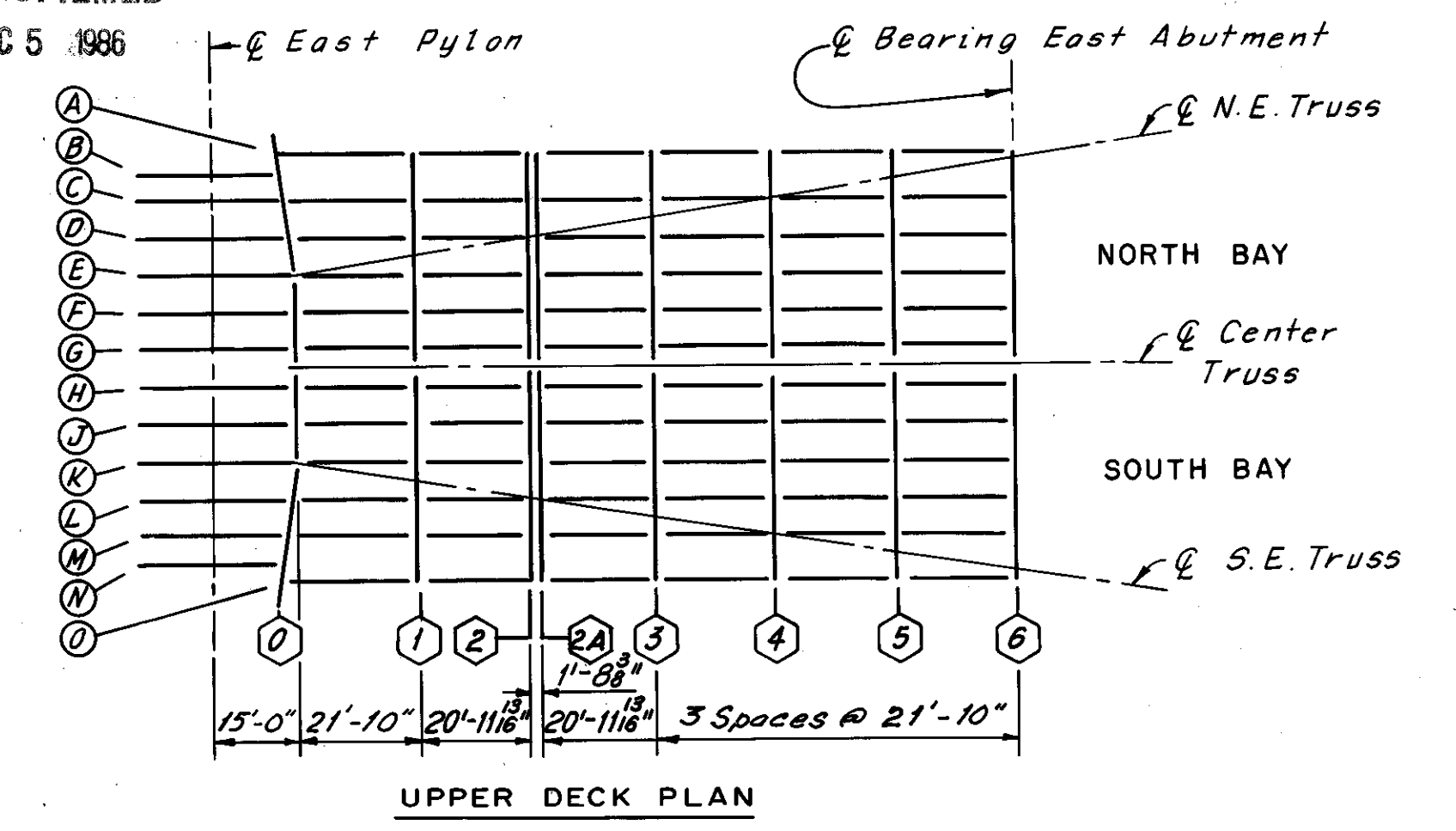
Note:

The following abbreviations are used:  
 N.E. = North Exterior  
 N.I. = North Interior  
 S.I. = South Interior  
 S.E. = South Exterior  
 For location of spans, see Sheet 2/72

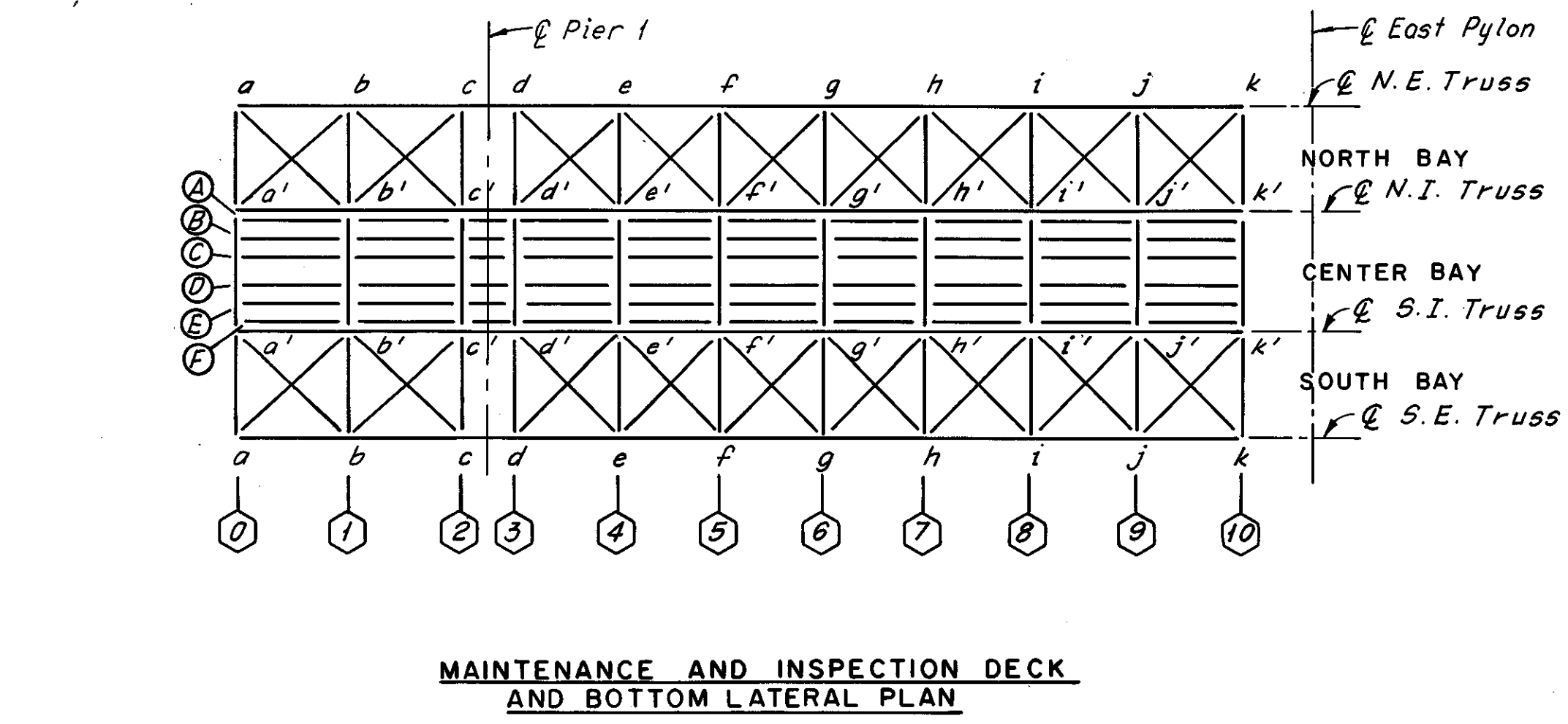
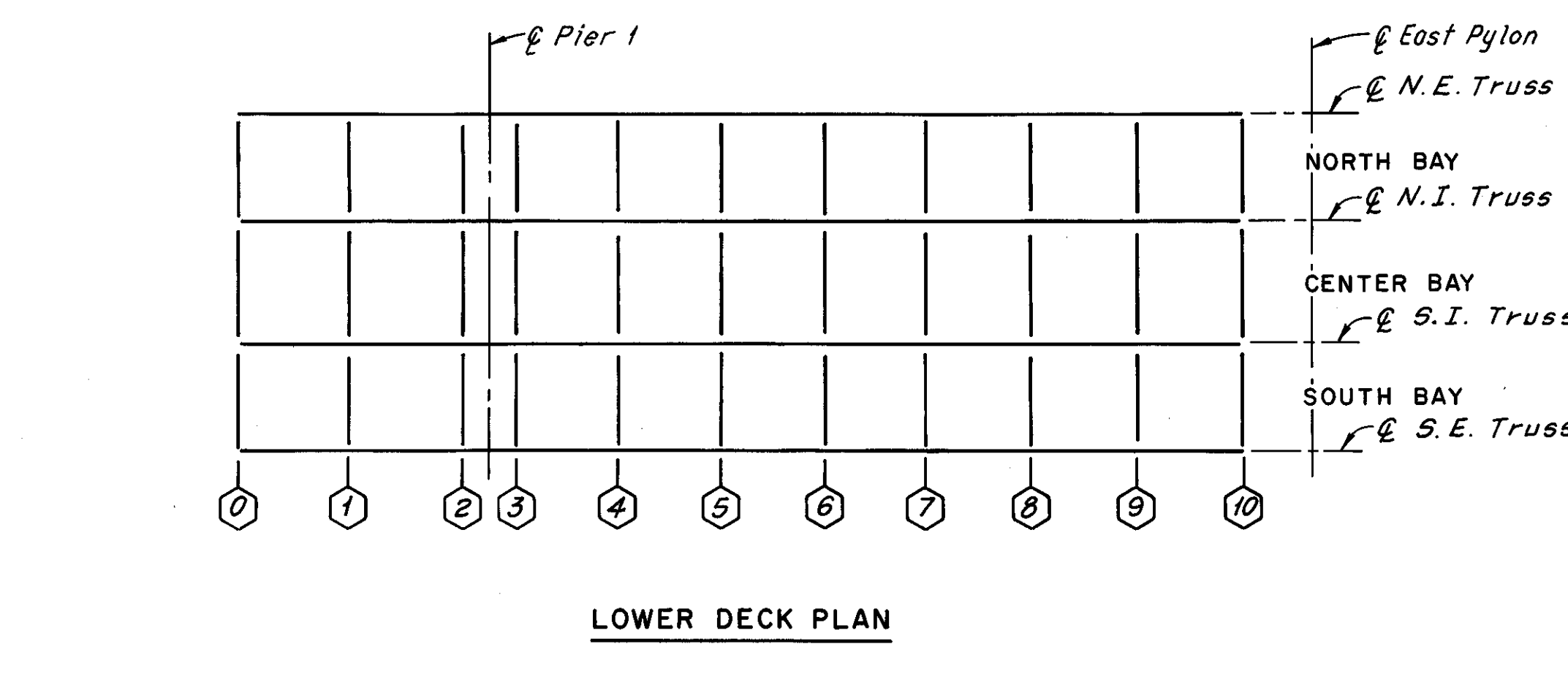
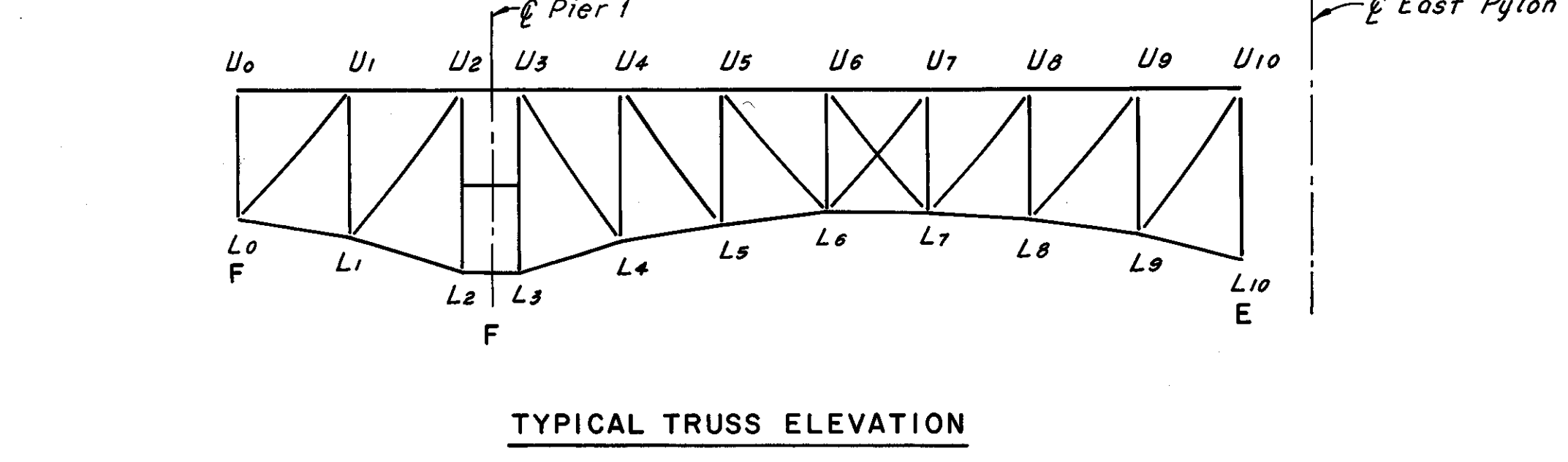
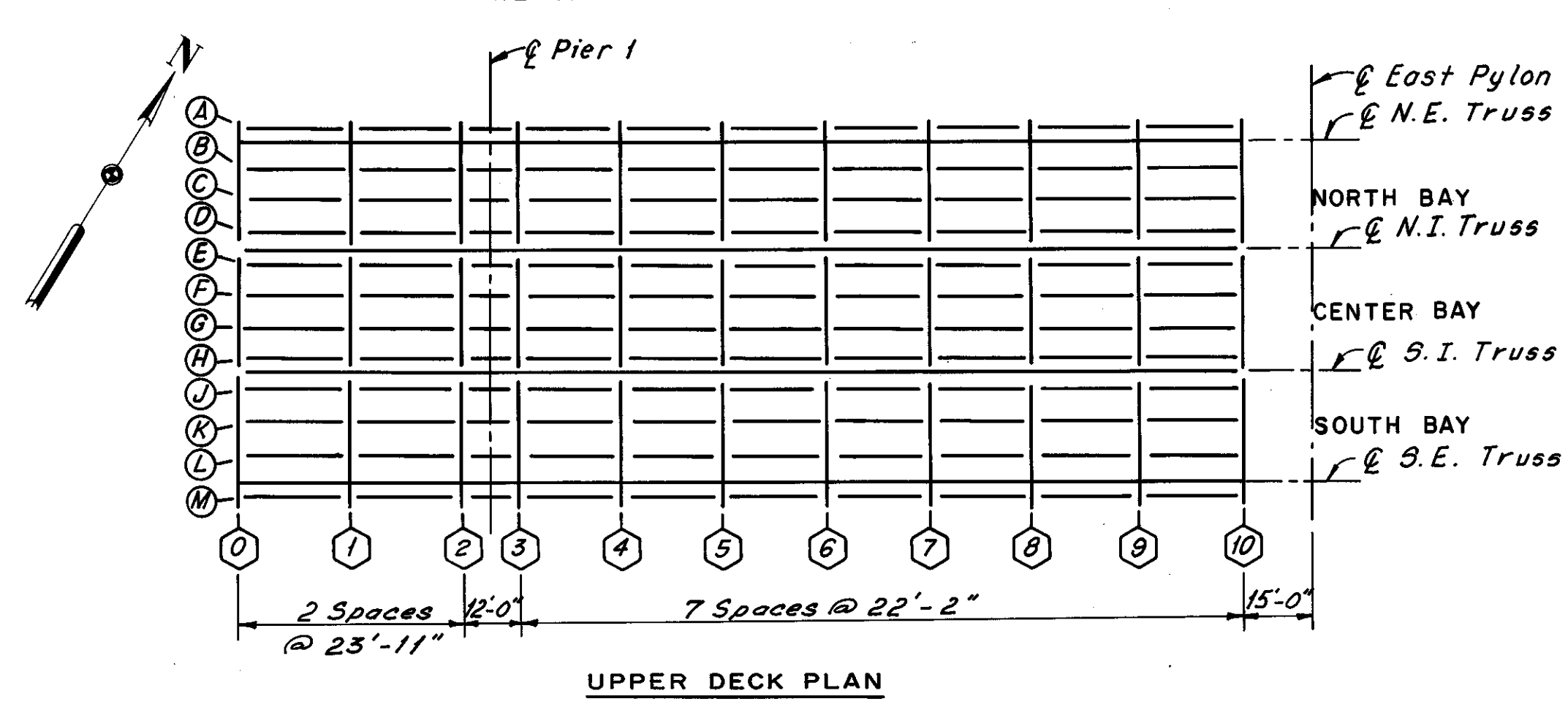
HNTB BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 CLEVELAND, OHIO

**MEMBER IDENTIFICATION PLANS**  
**W. & L.E. RAILROAD SPAN,**  
**SPANS 1, 2 AND 4**  
 REHABILITATION OF THE  
 LORAIN-CARNEGIE BRIDGE  
 (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY-10-1618 STA. 22 + 19.19  
 CUYAHOGA COUNTY STA. 55 + 04.56 OHIO

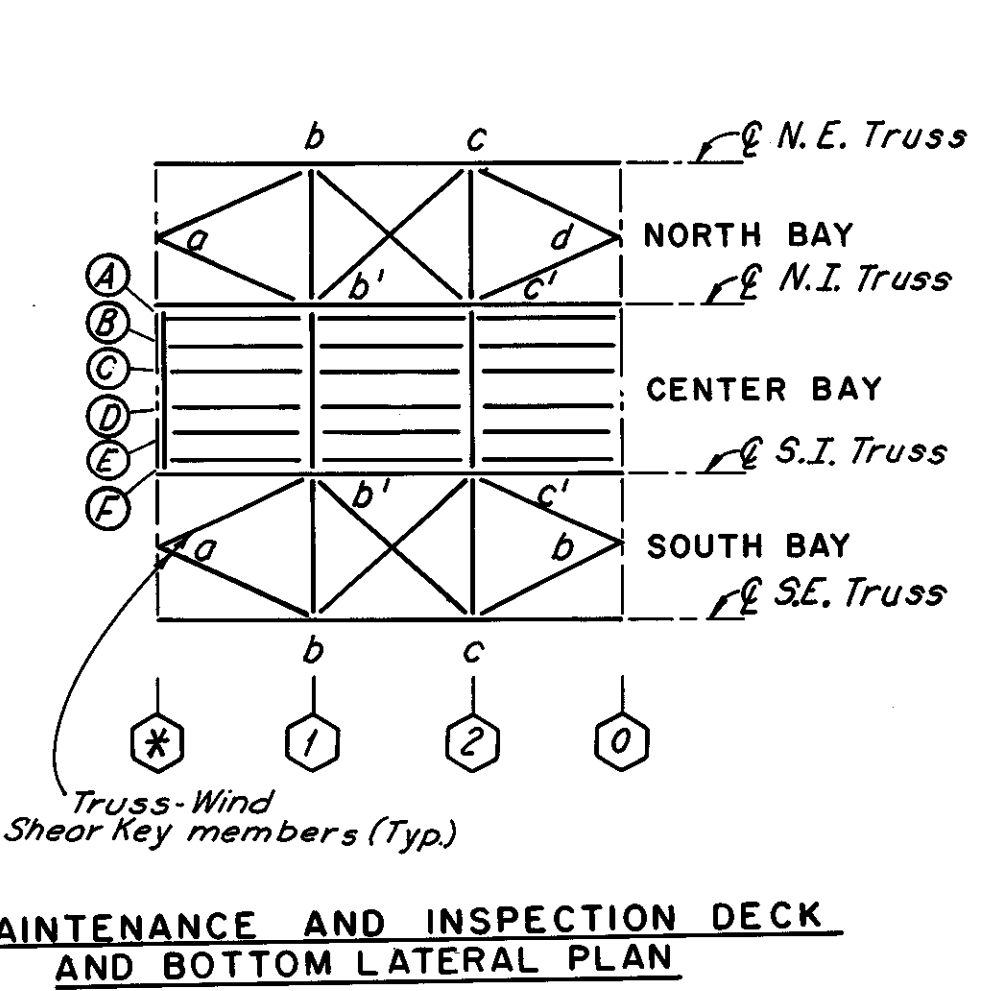
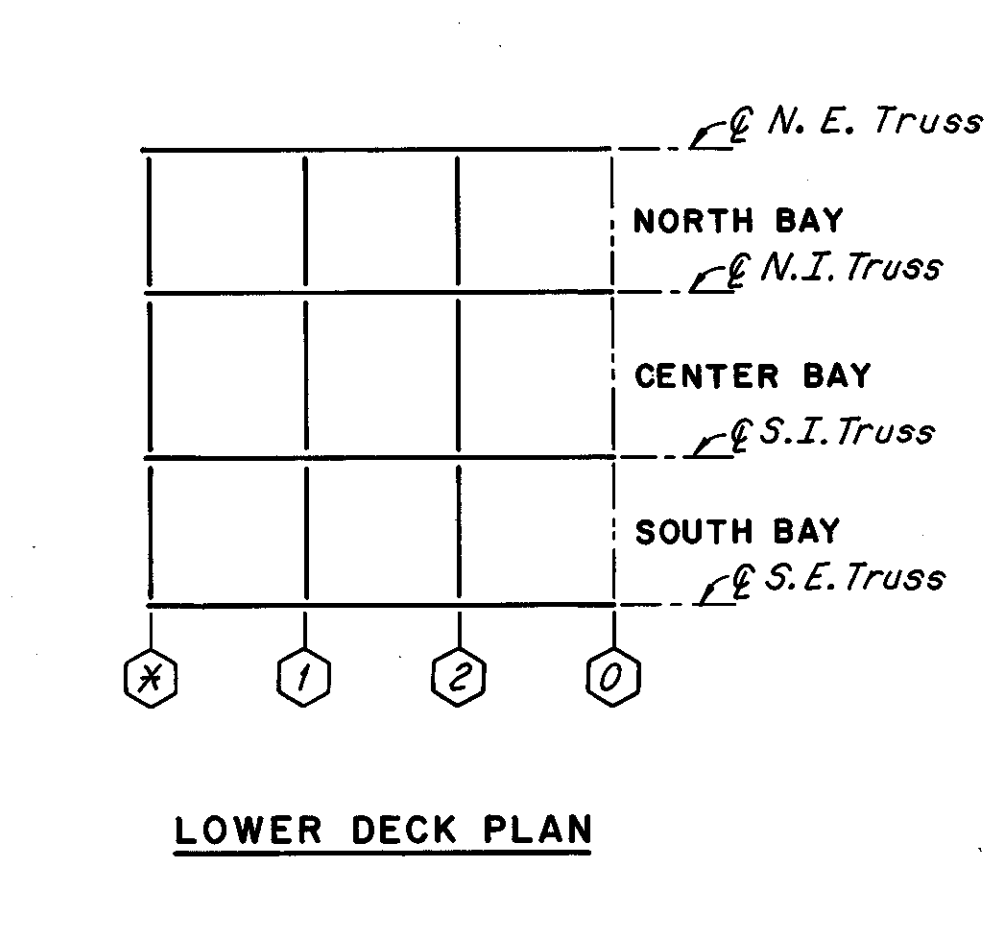
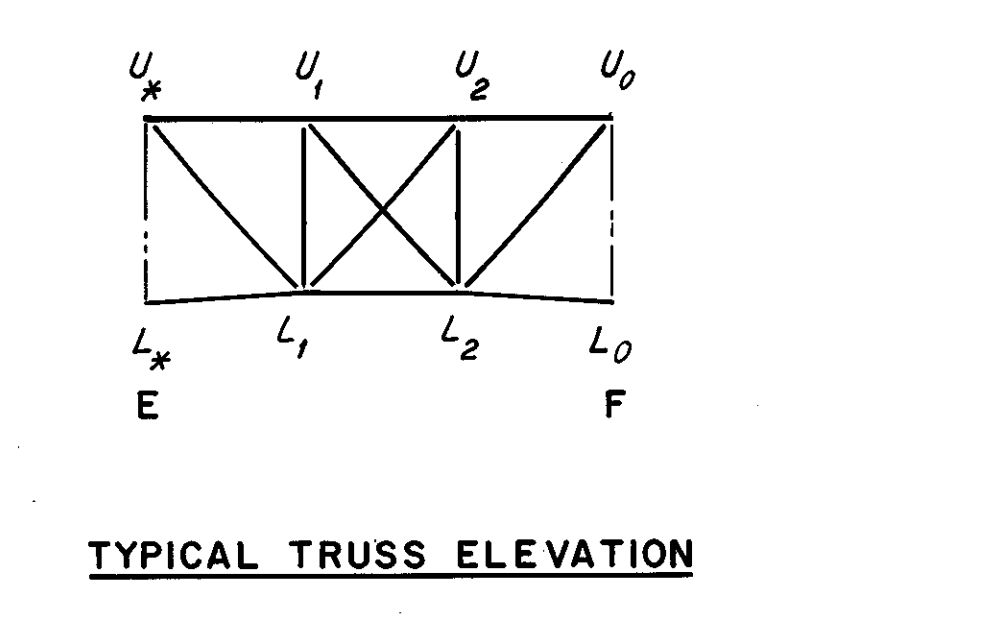
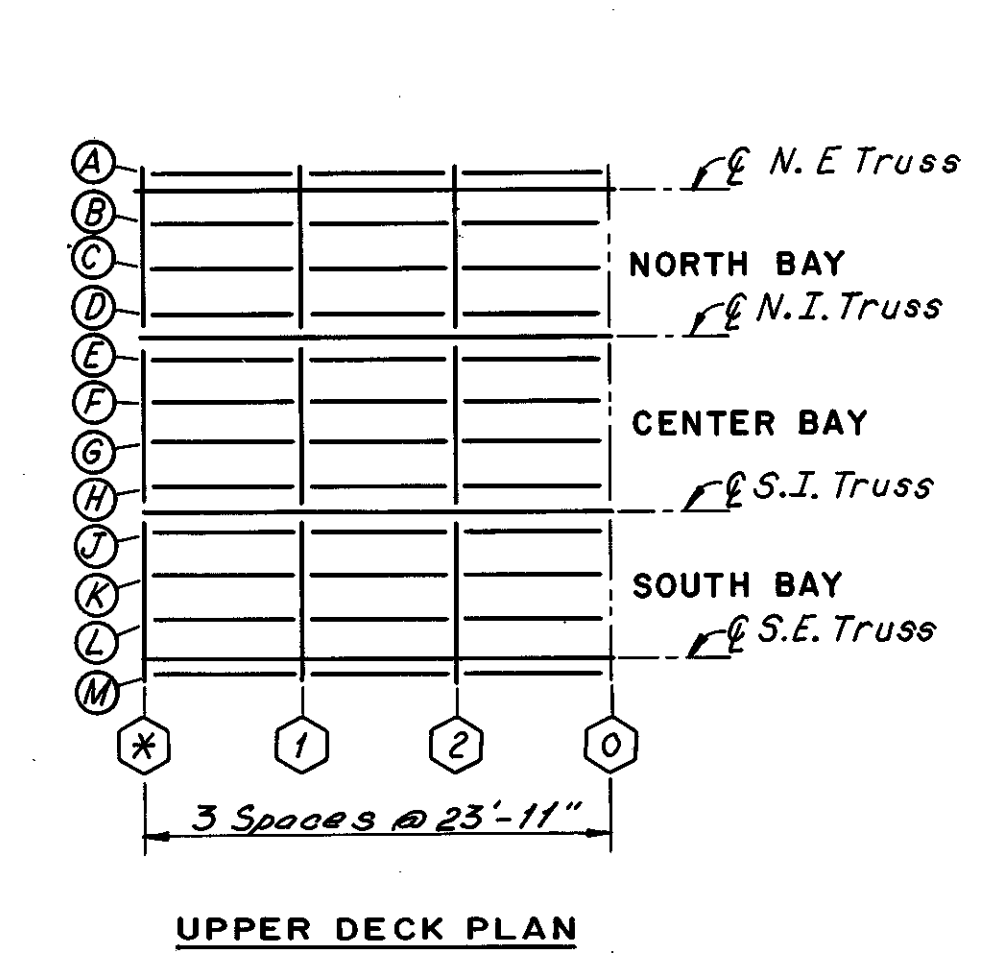
DRAWN AJT DATE 2/13/75	TRACED AJT DATE 2/14/75	CHECKED D.L.P. DATE 3-20-75	REVIEWED DATE	REVISED DATE
------------------------------	-------------------------------	-----------------------------------	------------------	-----------------



SPAN OVER WHEELING AND LAKE ERIE RAILROAD



SPAN 1



SPANS 2 AND 4

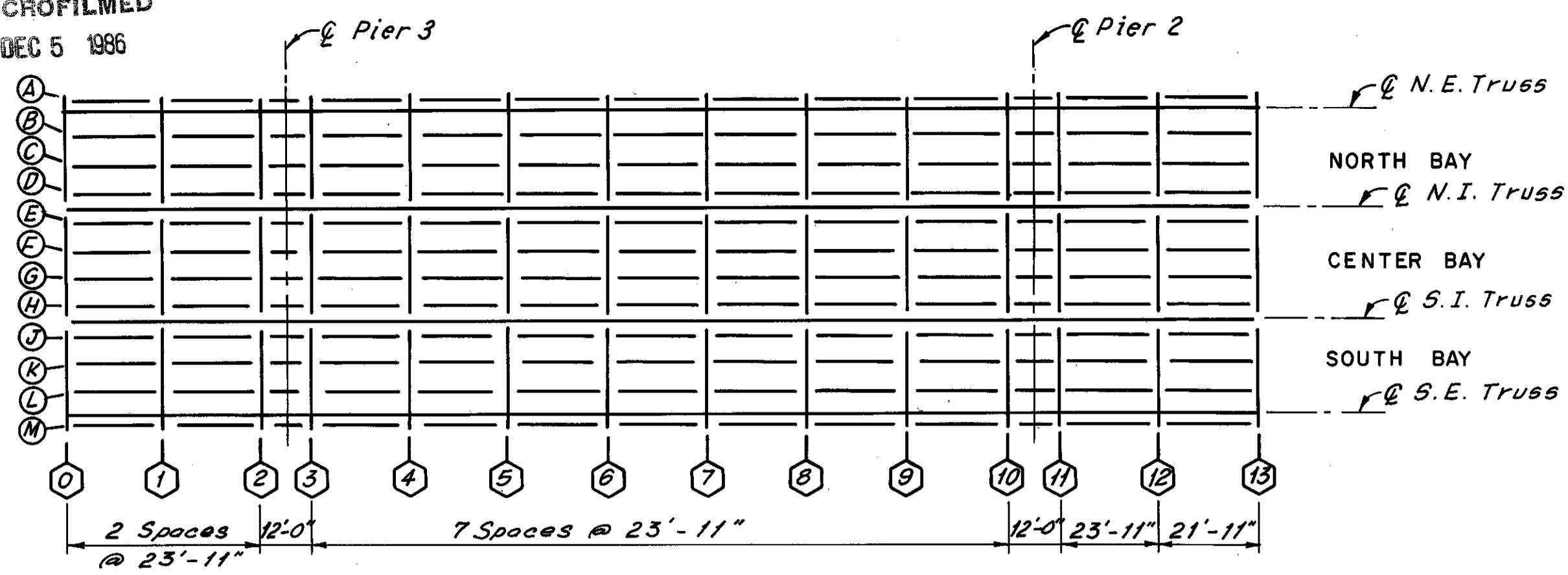
\* 14 for Span 2, 15 for Span 4

MICROFILMED  
DEC 5 1986

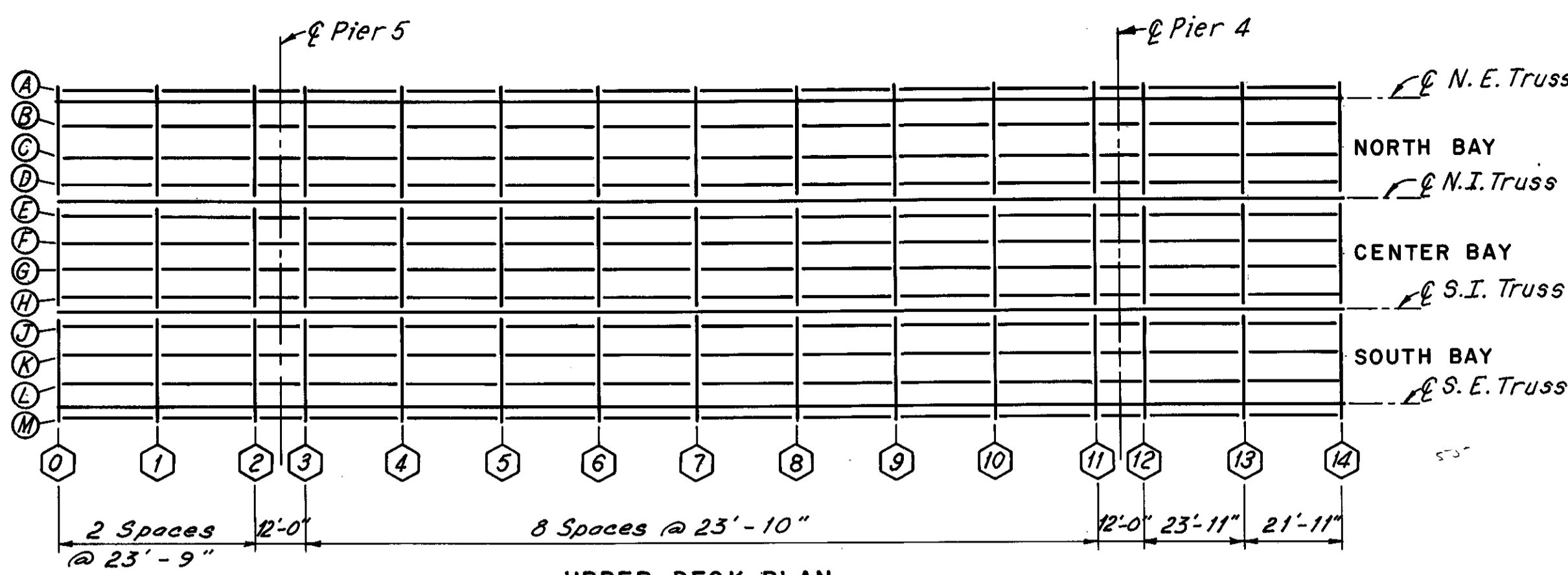
FHWA REGION	STATE	PROJECT	
5	OHIO		

80  
185

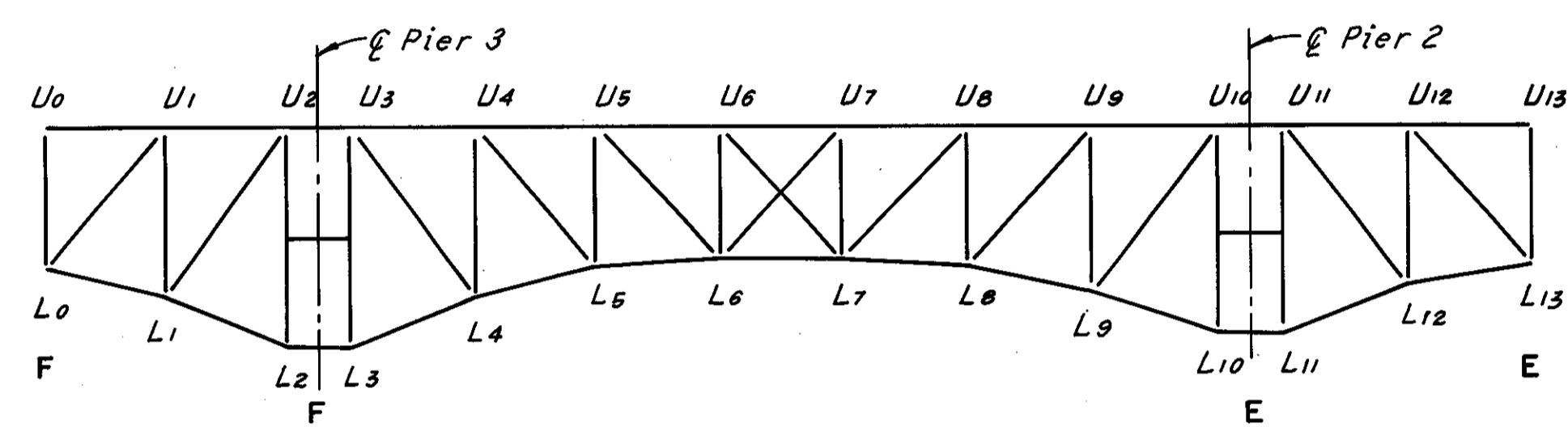
CUYAHOGA COUNTY  
CUY-10-16.23



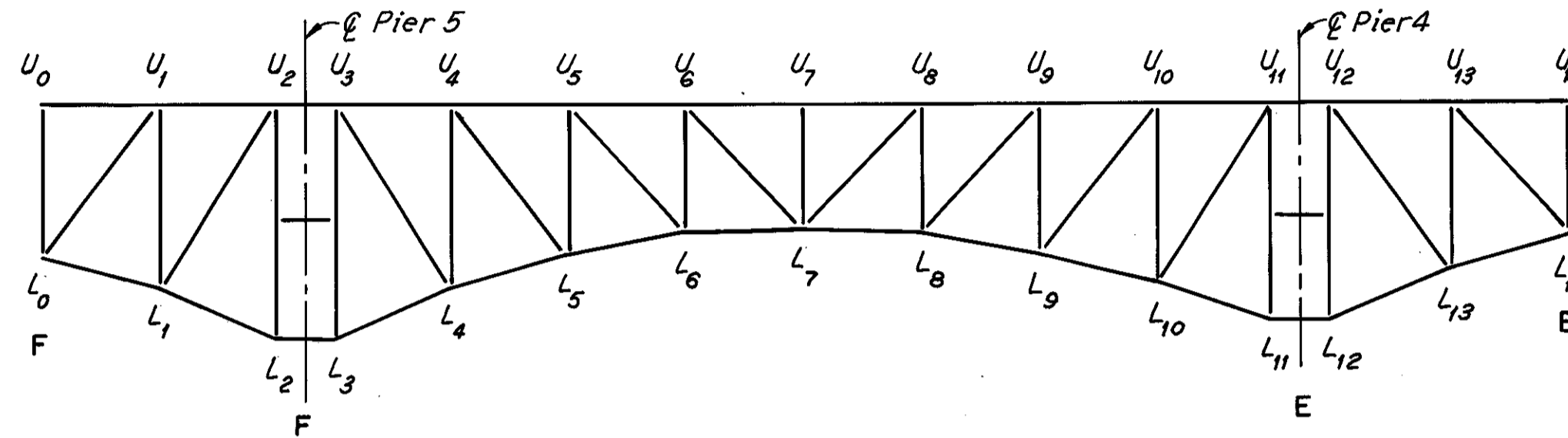
UPPER DECK PLAN



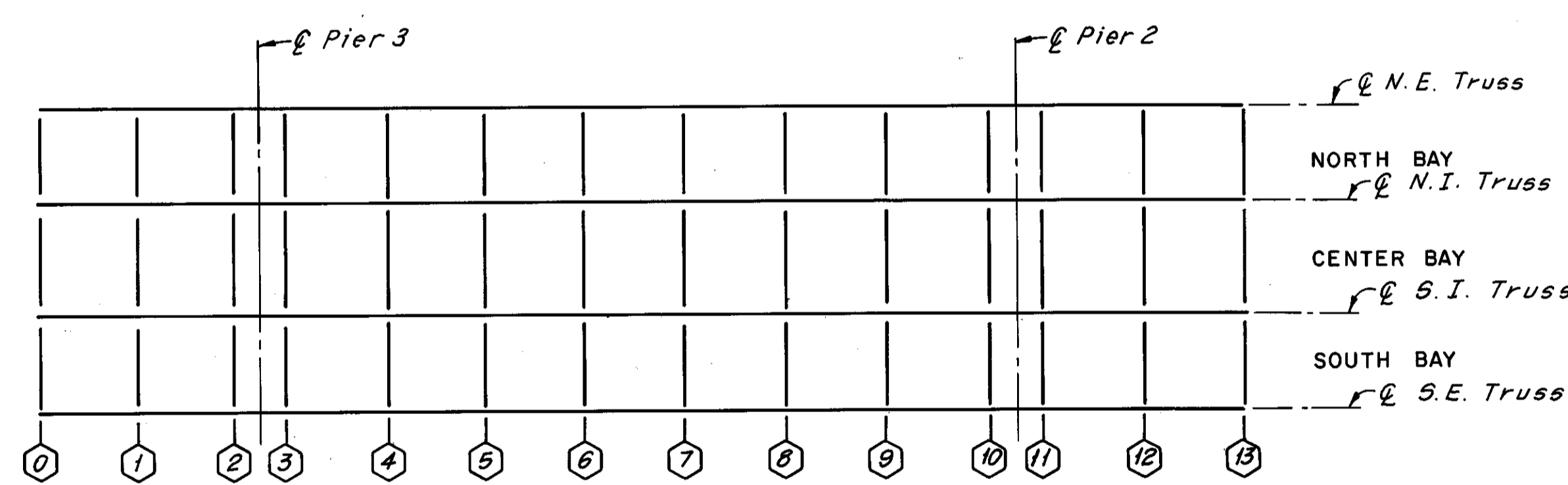
UPPER DECK PLAN



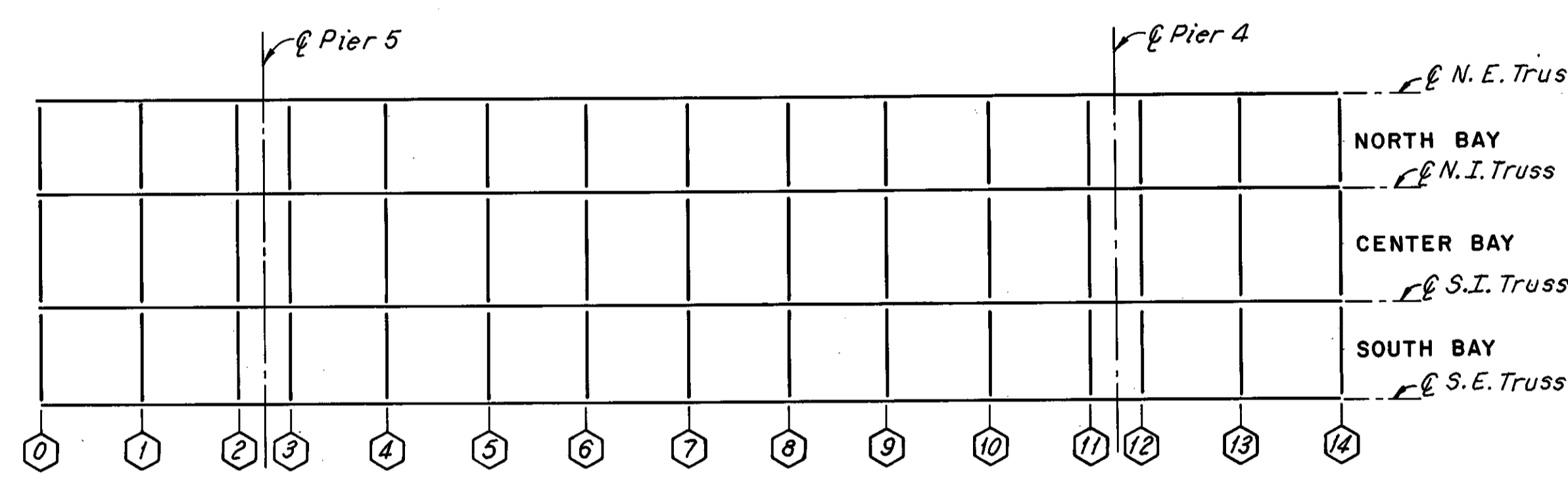
TYPICAL TRUSS ELEVATION



TYPICAL TRUSS ELEVATION

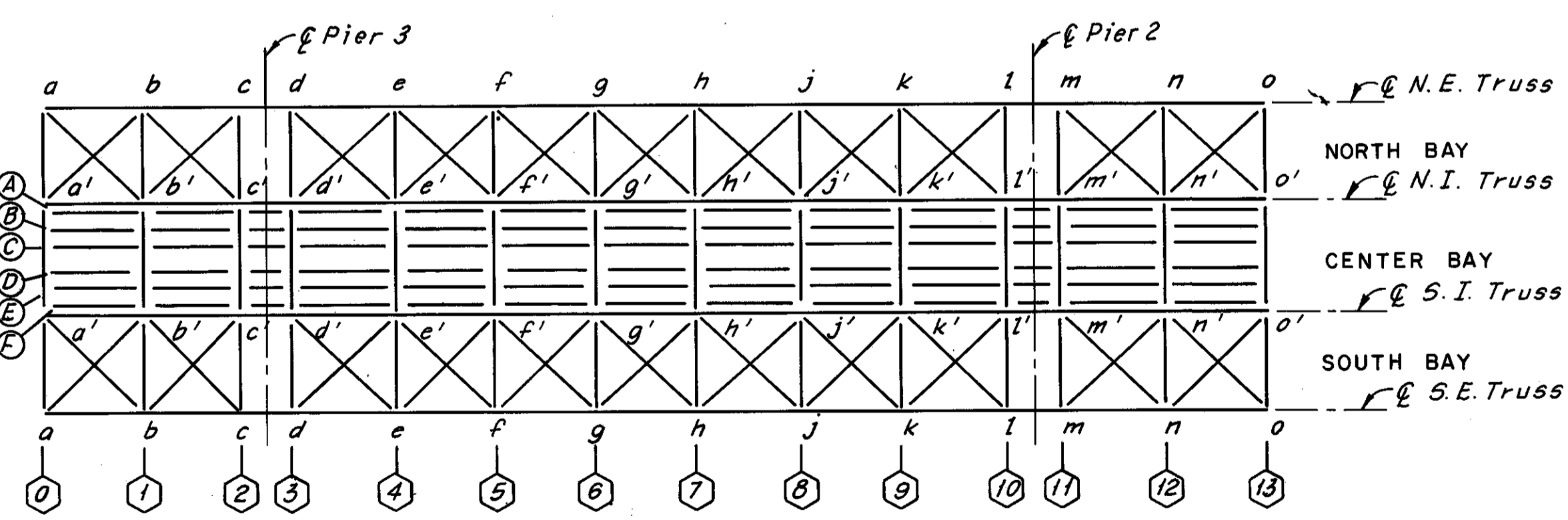


LOWER DECK PLAN



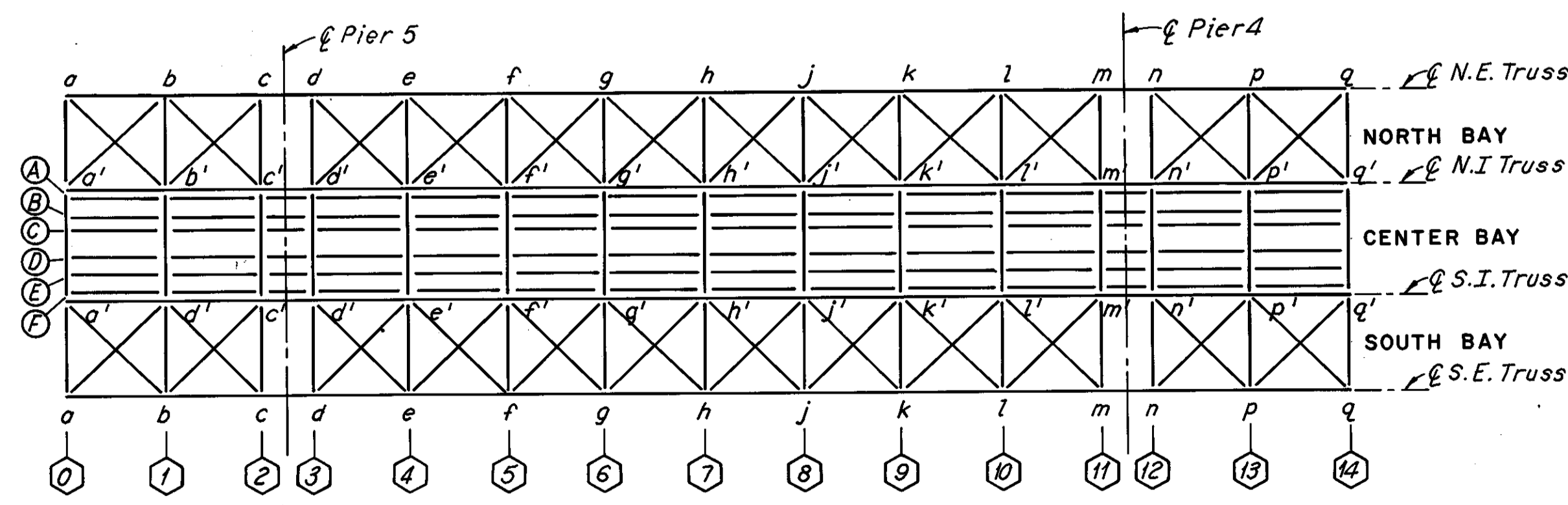
LOWER DECK PLAN

- LEGEND**
- DENOTES FLOORBEAMS
  - DENOTES STRINGERS
  - E DENOTES EXPANSION JOINT
  - F DENOTES FIXED JOINT



MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPAN 3



MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPAN 5

Notes:  
For Portal and Sway Bracing Identification, see Sheet 5/72.  
The following abbreviations are used:  
N.E. = North Exterior  
N.I. = North Interior  
S.I. = South Interior  
S.E. = South Exterior  
For location of Spans, see Sheet 2/72.

HNTB BRIDGE NO.3

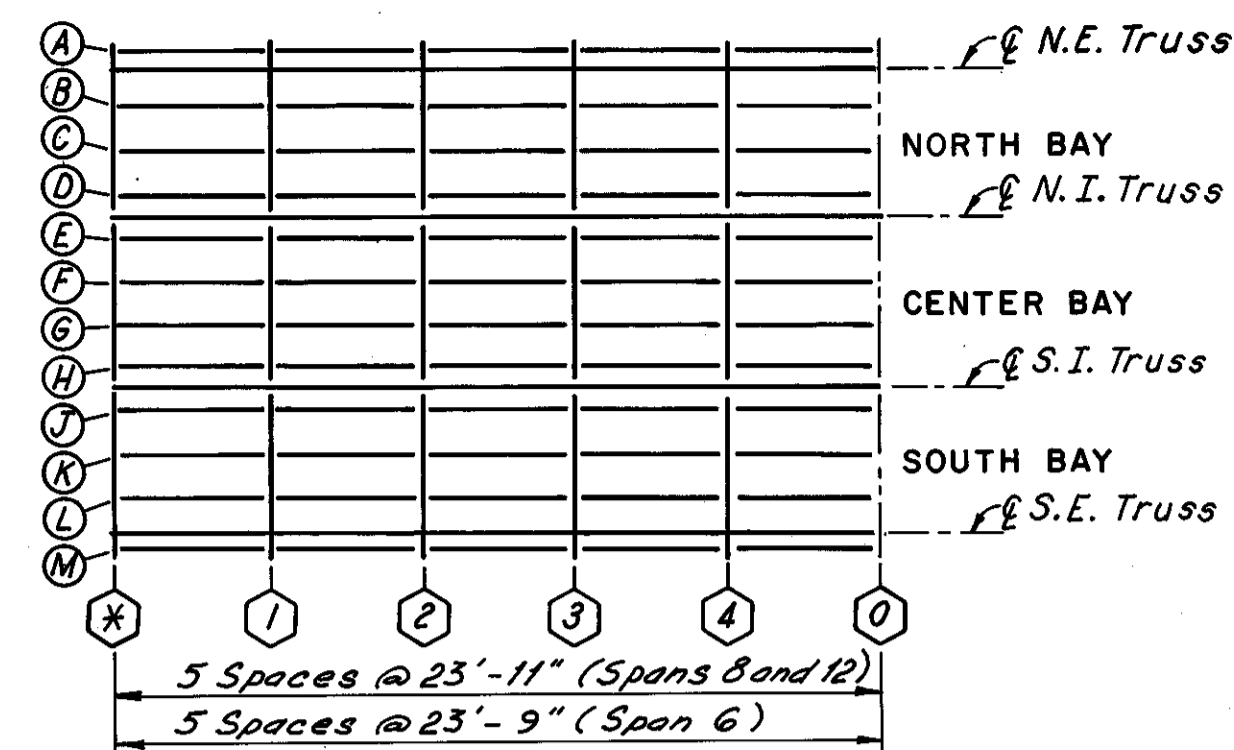
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

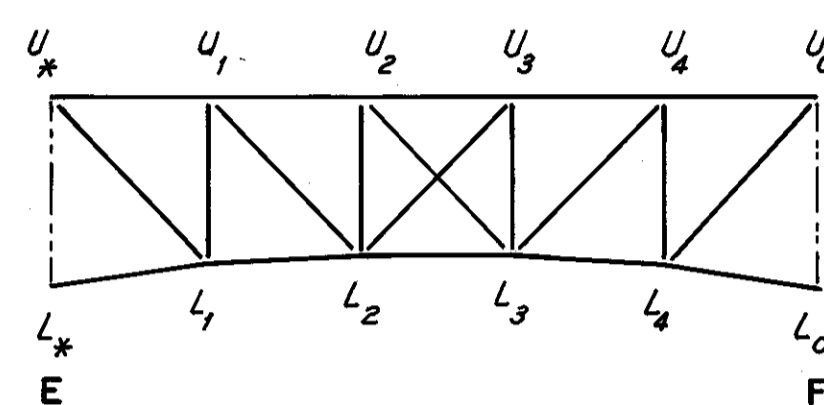
MEMBER IDENTIFICATION PLANS  
SPANS 3 AND 5  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN BY JAT	TRACED BY JAT	CHECKED D.L.R.	REVIEWED	REVISED
DATE 2-13-75	DATE 2-14-75	DATE 3-20-75	DATE	DATE

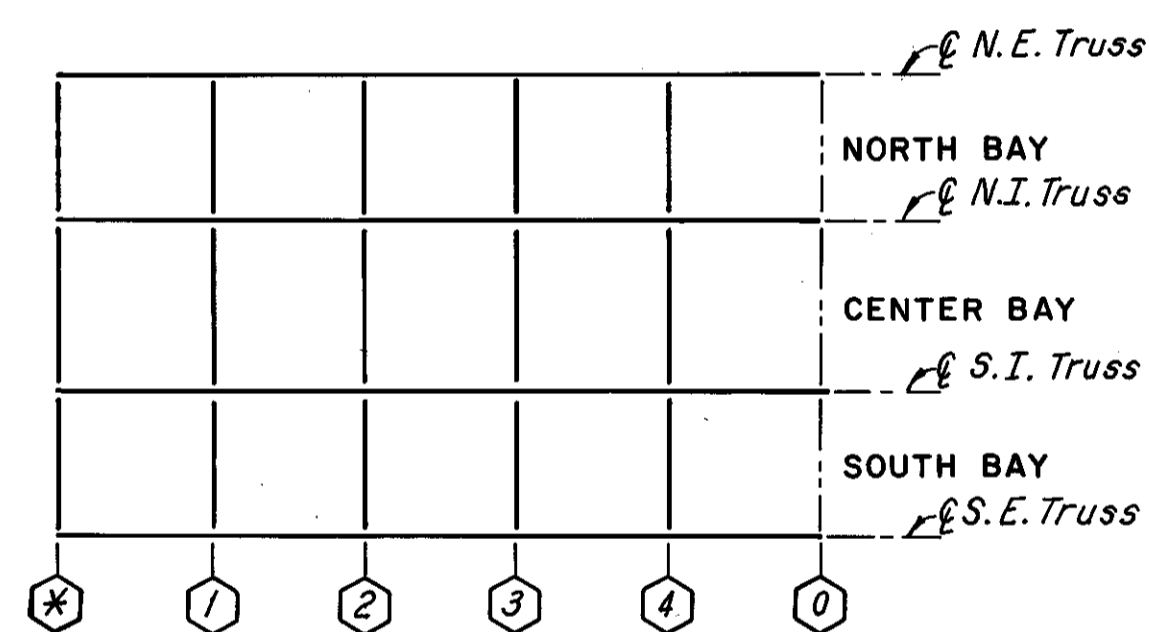
SHEET 6/72



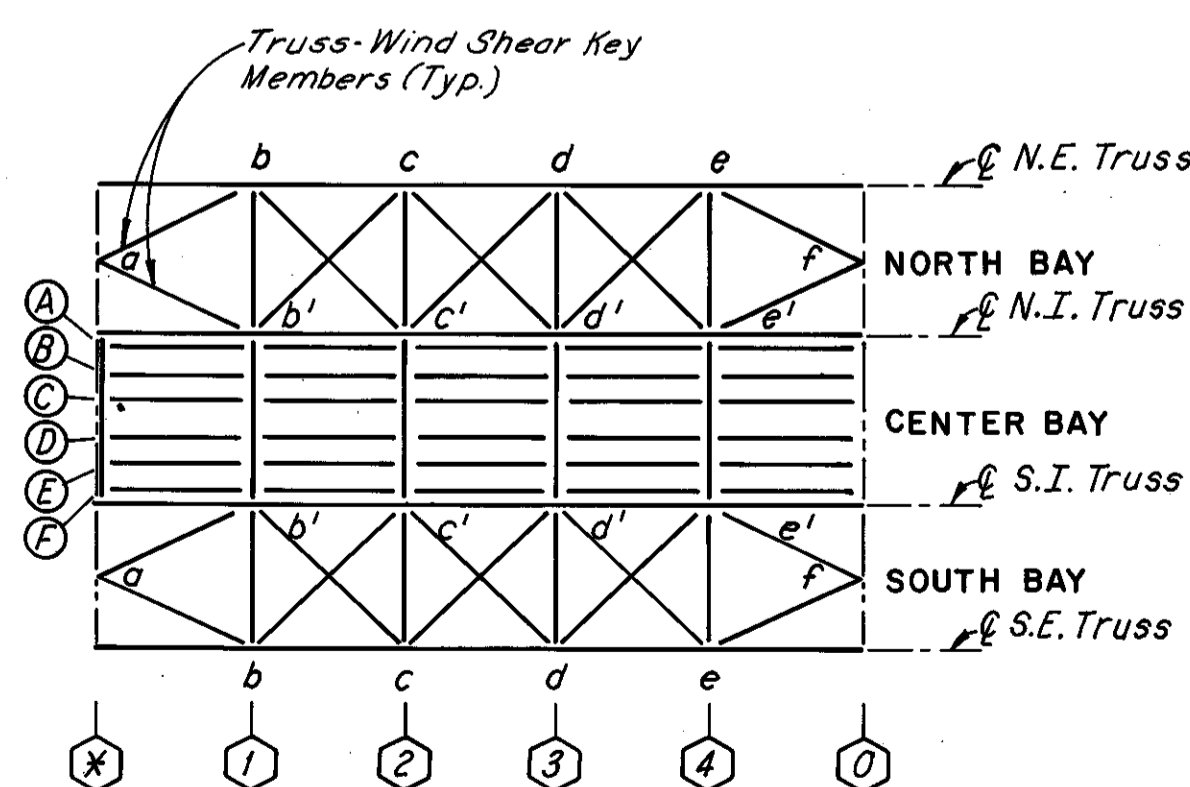
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION



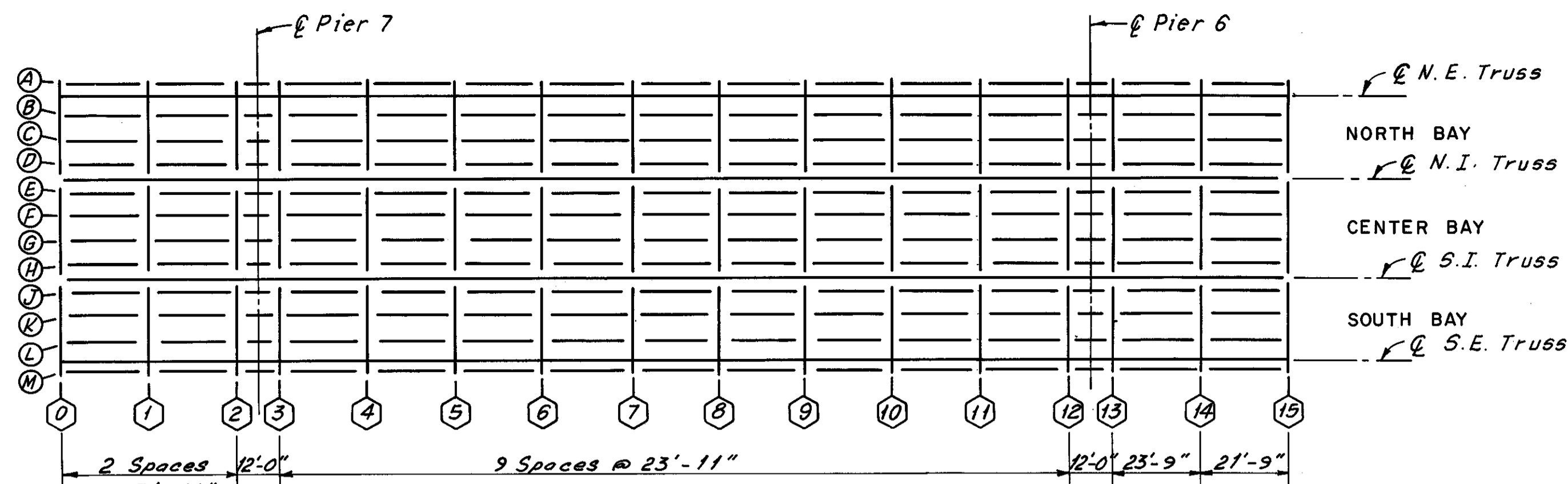
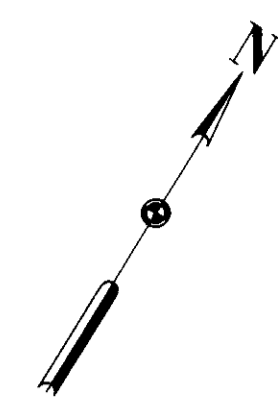
LOWER DECK PLAN



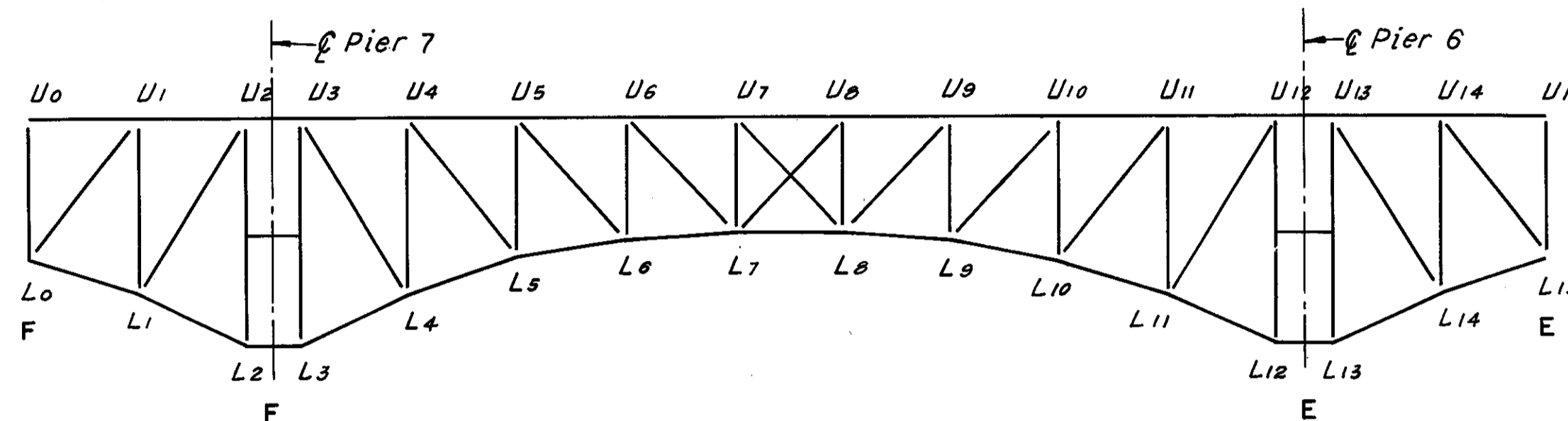
MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPANS 6, 8 AND 12

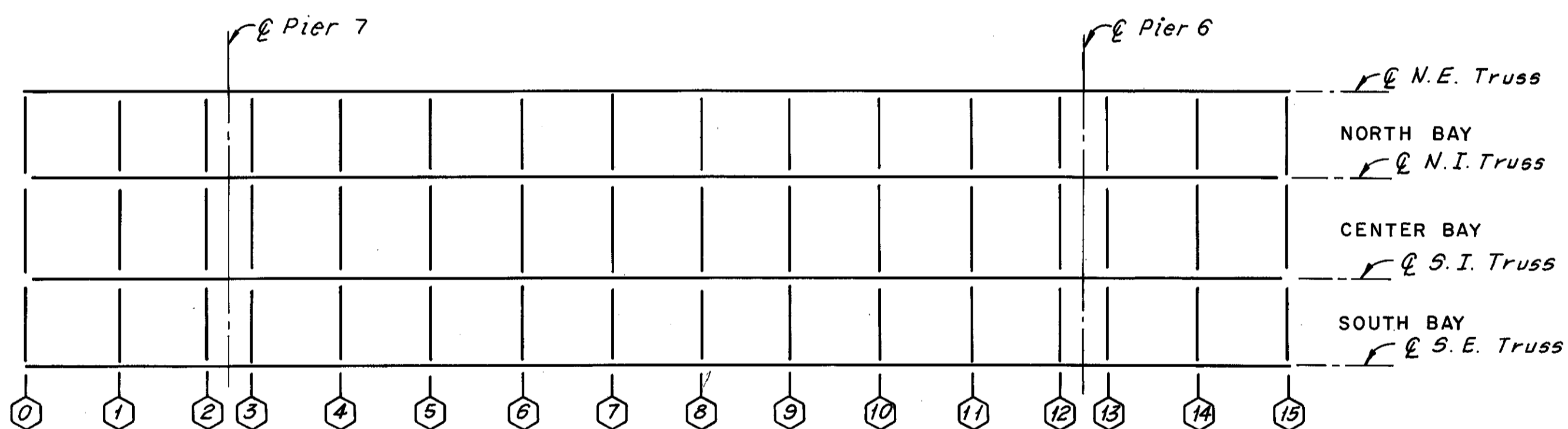
\* 16 For Span 6, 18 For span 8  
and 13 For Span 12



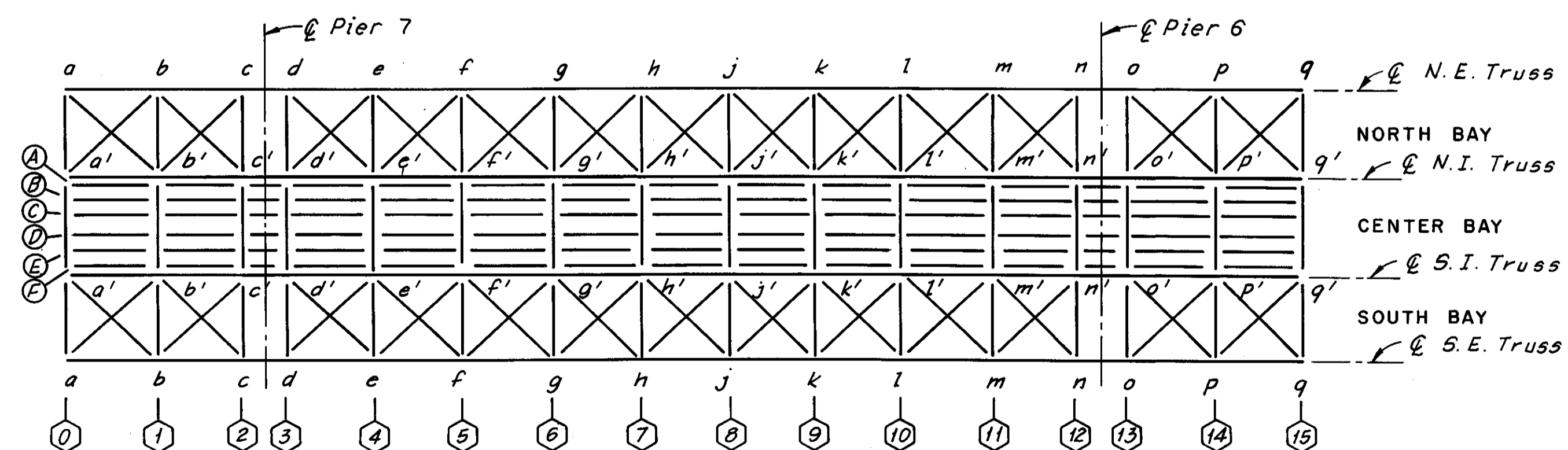
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION



LOWER DECK PLAN



MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPAN 7

FHWA REGION	STATE	PROJECT
5	OHIO	

81  
185

CUYAHOGA COUNTY  
CUY-10-16.23

LEGEND

- DENOTES FLOORBEAMS
- DENOTES STRINGERS
- E DENOTES EXPANSION JOINT
- F DENOTES FIXED JOINT

Notes:  
For Portal and Sway Bracing Identification,  
see Sheet 5/72.  
The following abbreviations are used:  
N.E. = North Exterior  
N.I. = North Interior  
S.I. = South Interior  
S.E. = South Exterior  
For location of spans, see Sheets 1/72  
and 2/72.

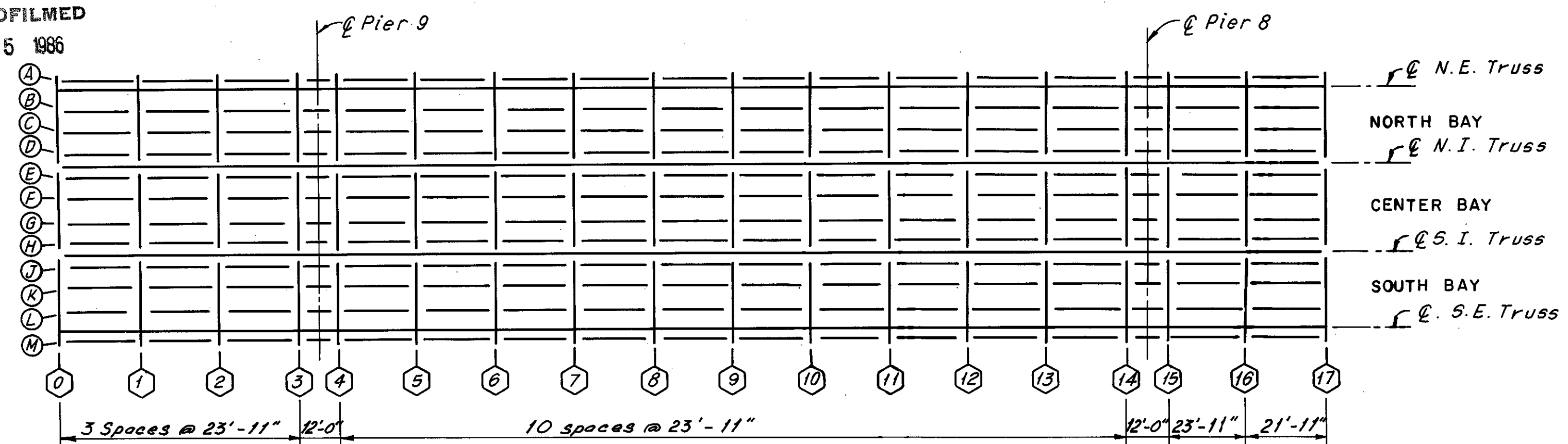
HNTB BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

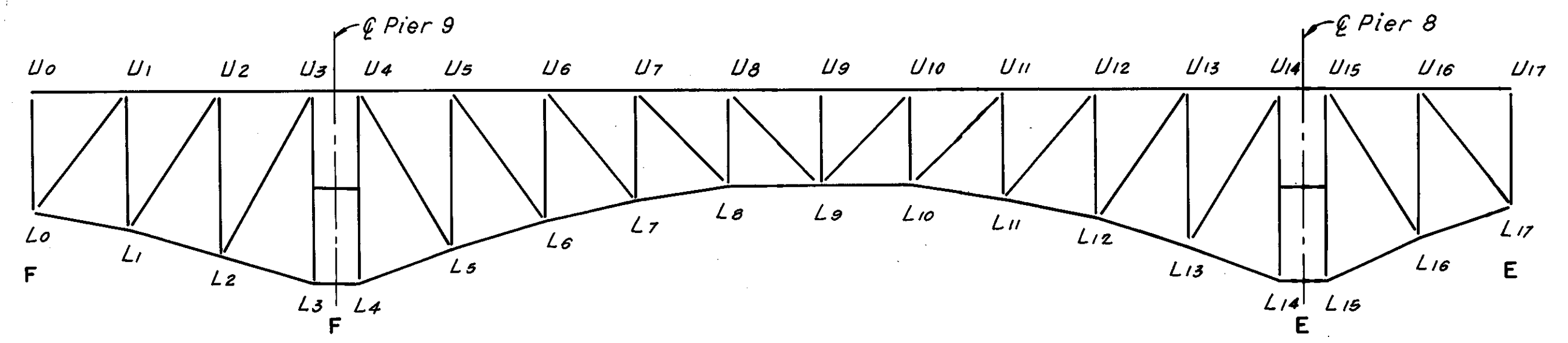
MEMBER IDENTIFICATION PLANS  
SPANS 6, 7, 8 AND 12  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN AJT	TRACED AJT	CHECKED D.L.R.	REVIEWED	REVISION
DATE 2-17-75	DATE 2-17-75	DATE 3-20-75	DATE	SHEET 7/72

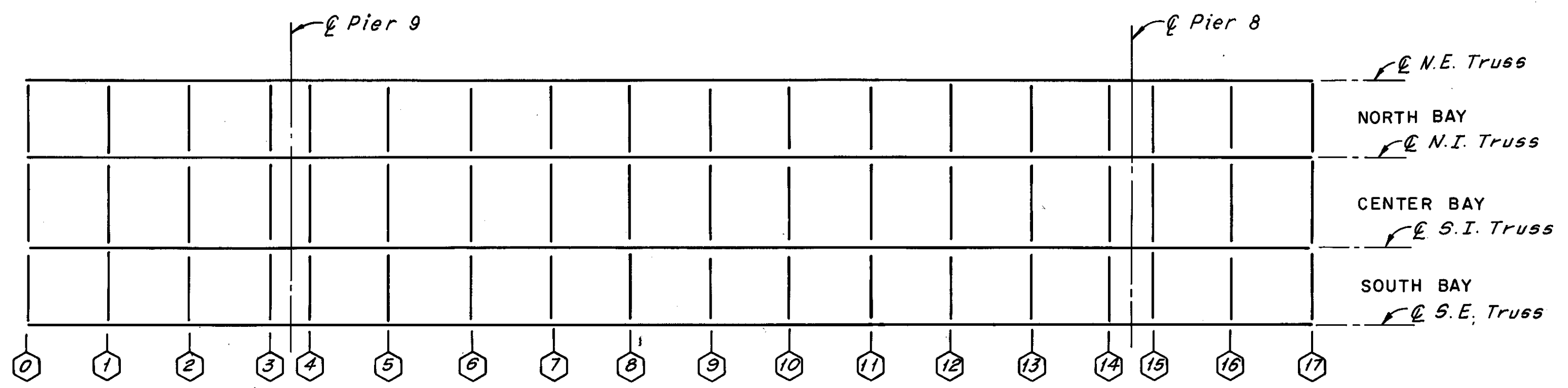
MICROFILMED  
DEC 5 1986



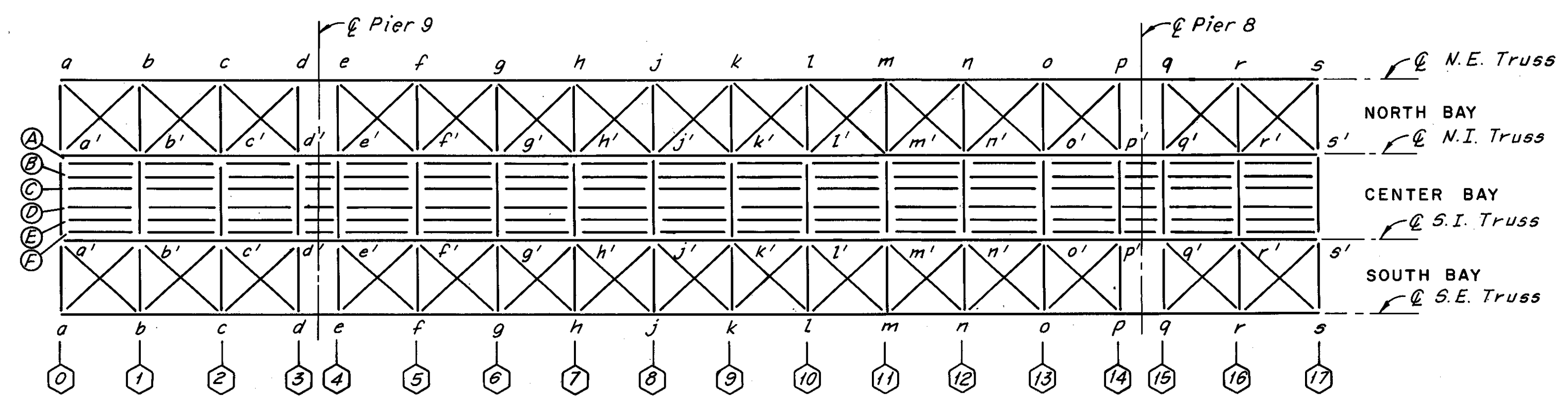
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION

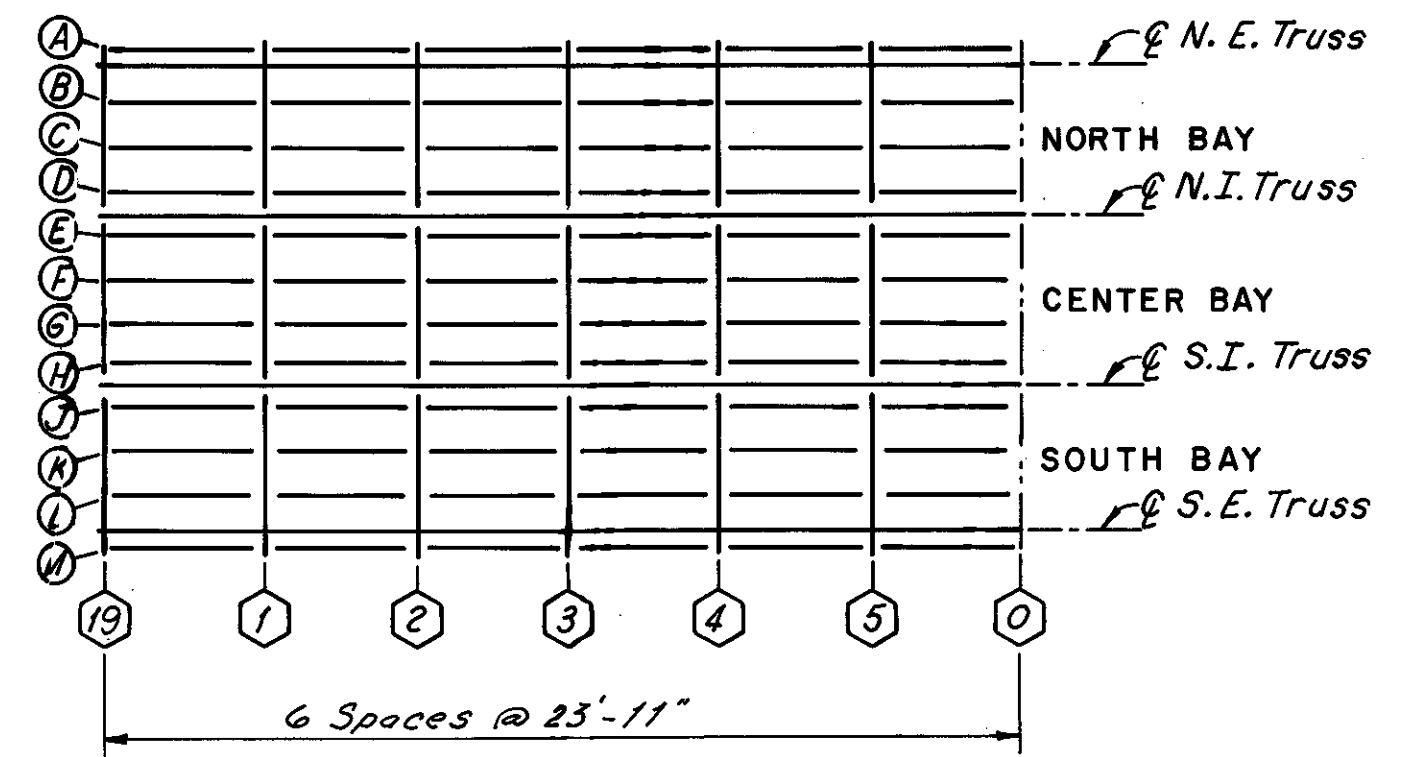


LOWER DECK PLAN

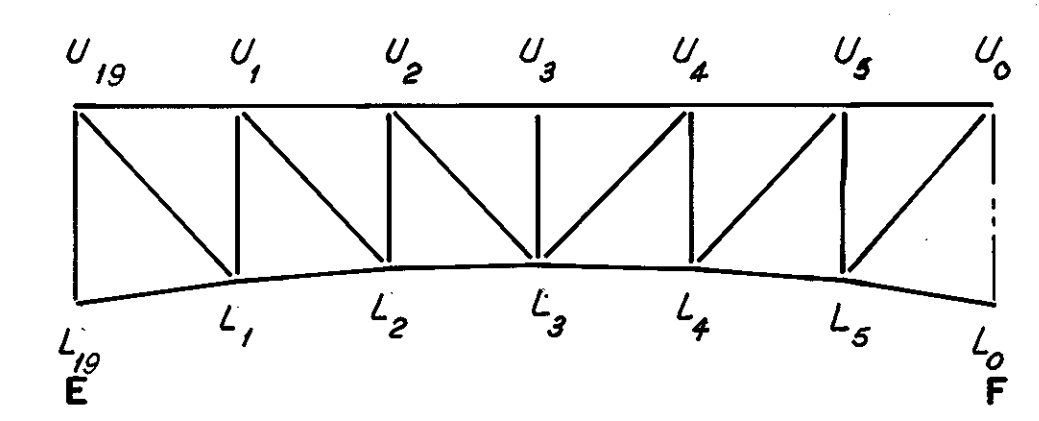


MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

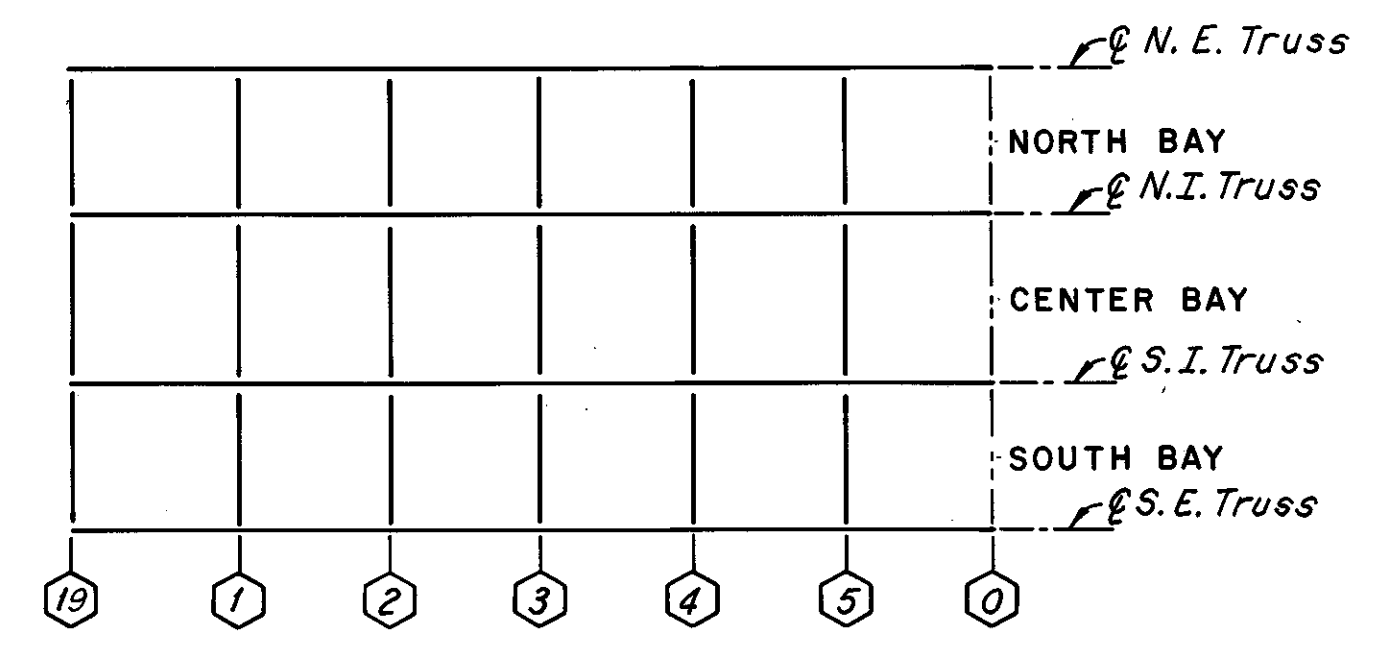
SPAN 9



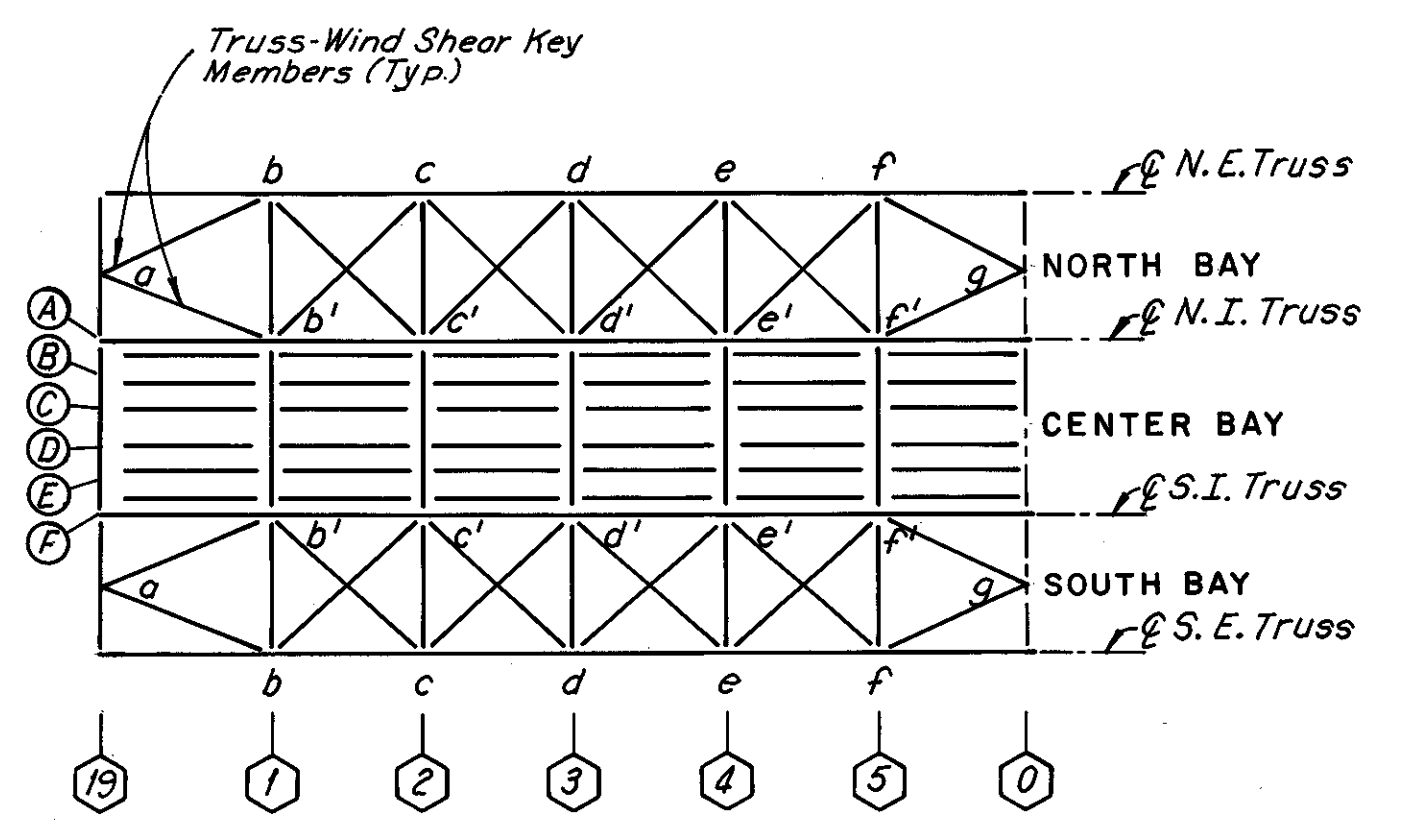
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION



LOWER DECK PLAN



MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPAN 10

FHWA REGION	STATE	PROJECT
5	OHIO	

82  
185

CUYAHOGA COUNTY  
CUY-10-16.23

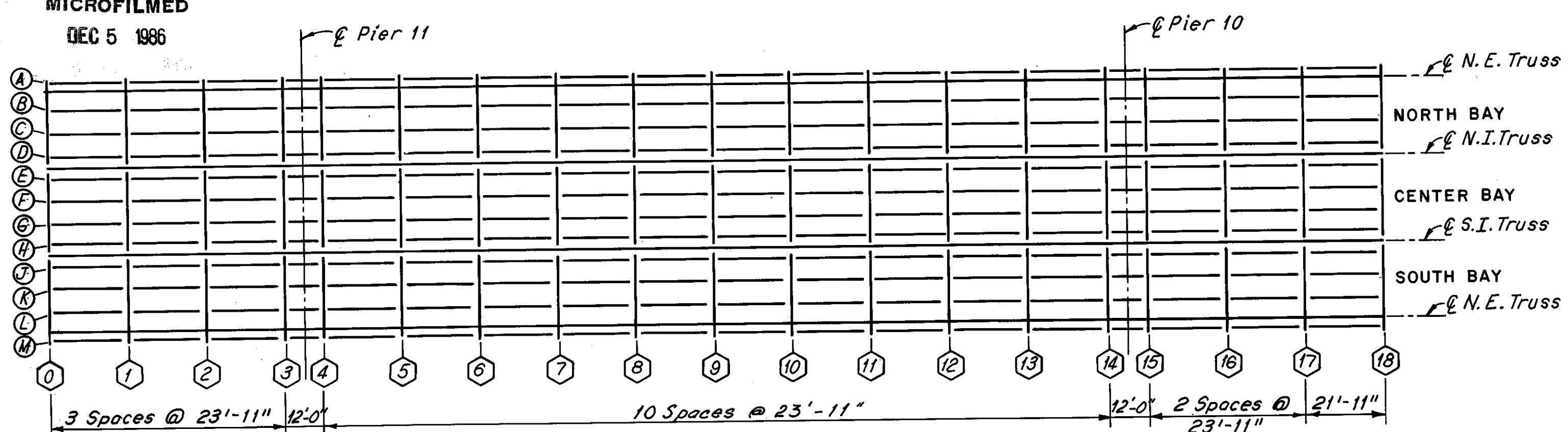
LEGEND

- DENOTES FLOORBEAMS
- DENOTES STRINGERS
- E DENOTES EXPANSION JOINT
- F DENOTES FIXED JOINT

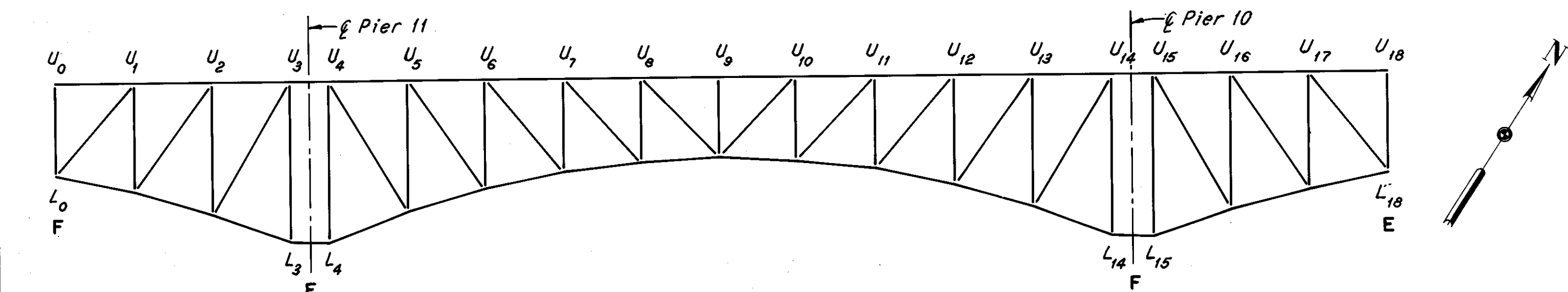
Notes:  
For Portal and Sway Bracing Identification, see Sheet 5/72.  
The following abbreviations are used:  
N.E. = North Exterior  
N.I. = North Interior  
S.I. = South Interior  
S.E. = South Exterior  
For location of spans, see Sheet 1/72.

HNTB BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>MEMBER IDENTIFICATION PLANS</b>					
<b>SPANS 9 AND 10</b>					
REHABILITATION OF THE					
LORAIN-CARNEGIE BRIDGE					
(S.R. 10 OVER THE CUYAHOGA RIVER)					
BR. NO. CUY.-10-1618			STA. 22+19.19		
CUYAHOGA COUNTY			OHIO		
DRAWN BY	TRACED BY	CHECKED	REVIEWED	REVISED	
DATE 2/17/75	DATE 2/18/75	DATE 2/17/75	DATE	SHEET 3 / 72	

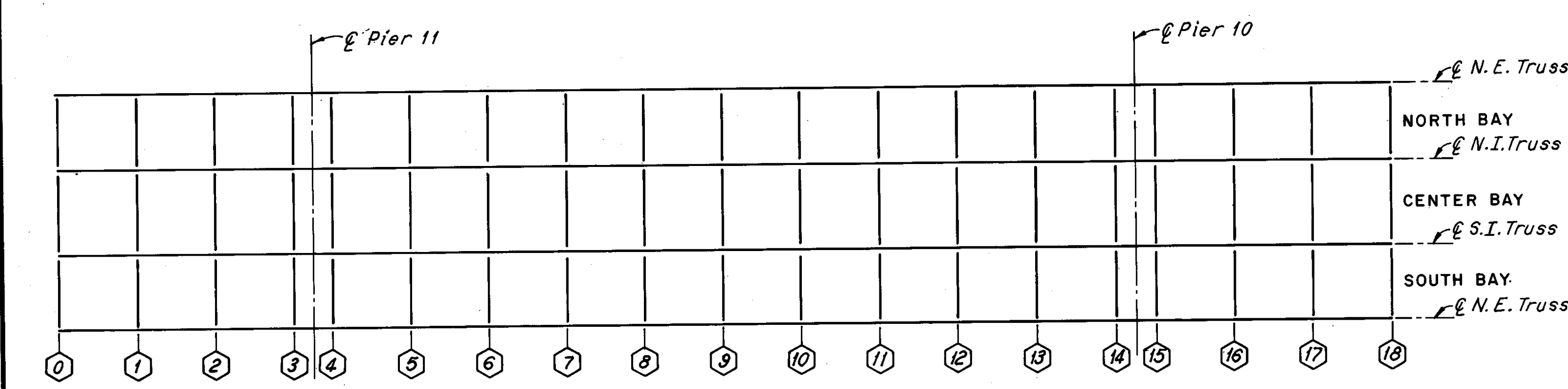
MICROFILMED  
DEC 5 1986



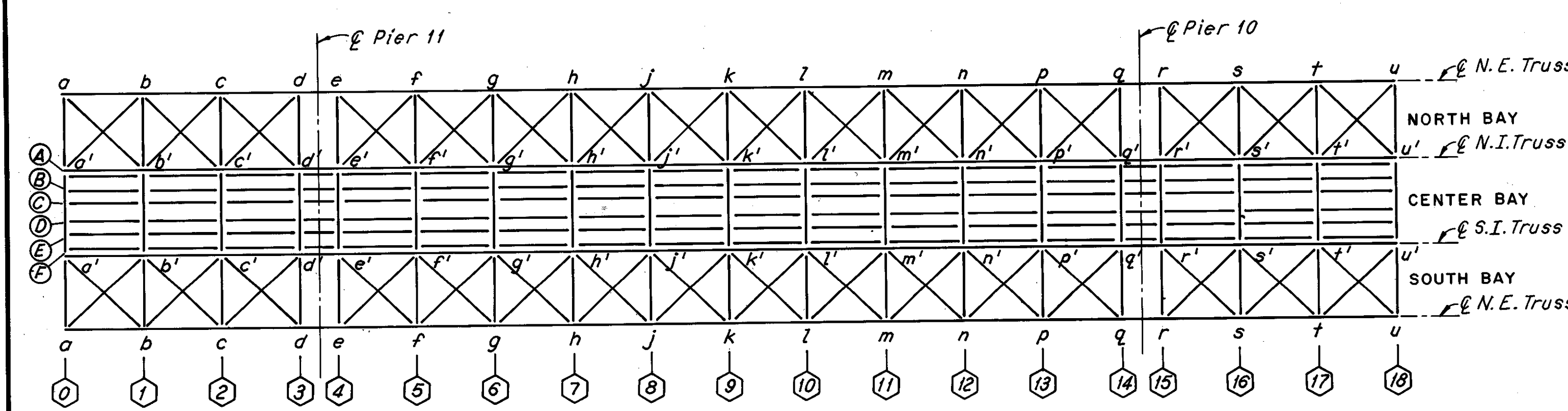
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION

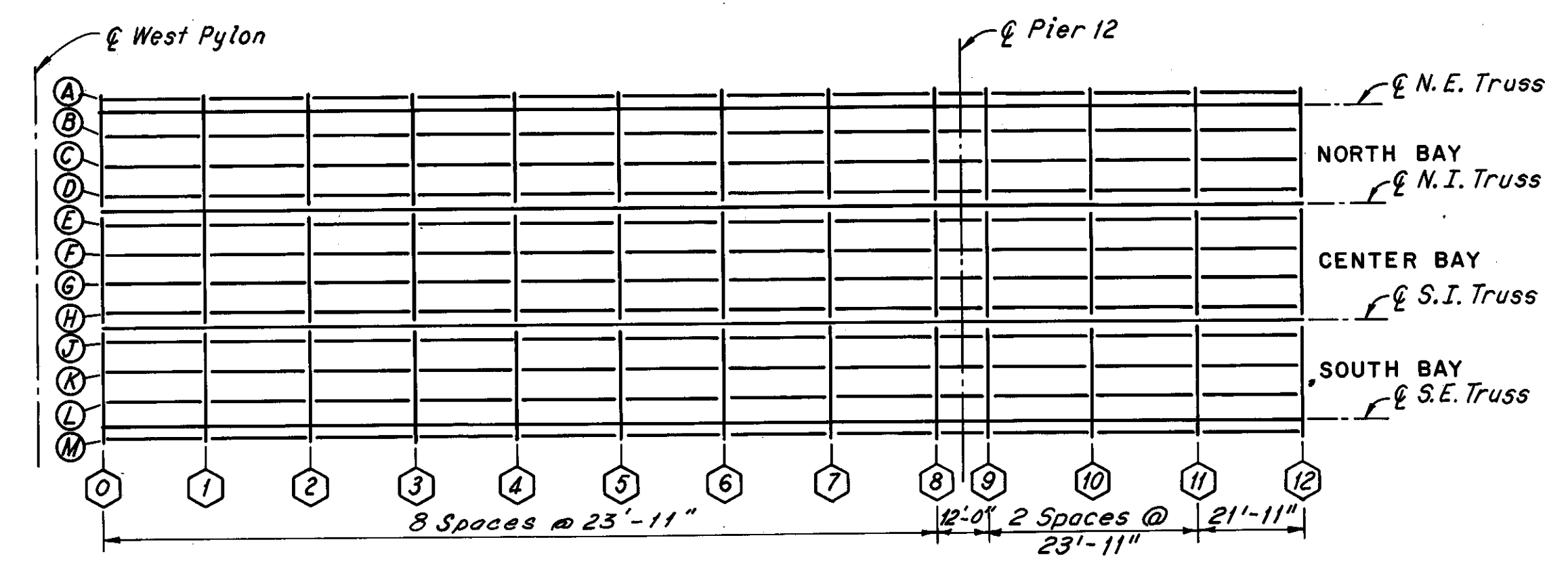


LOWER DECK PLAN

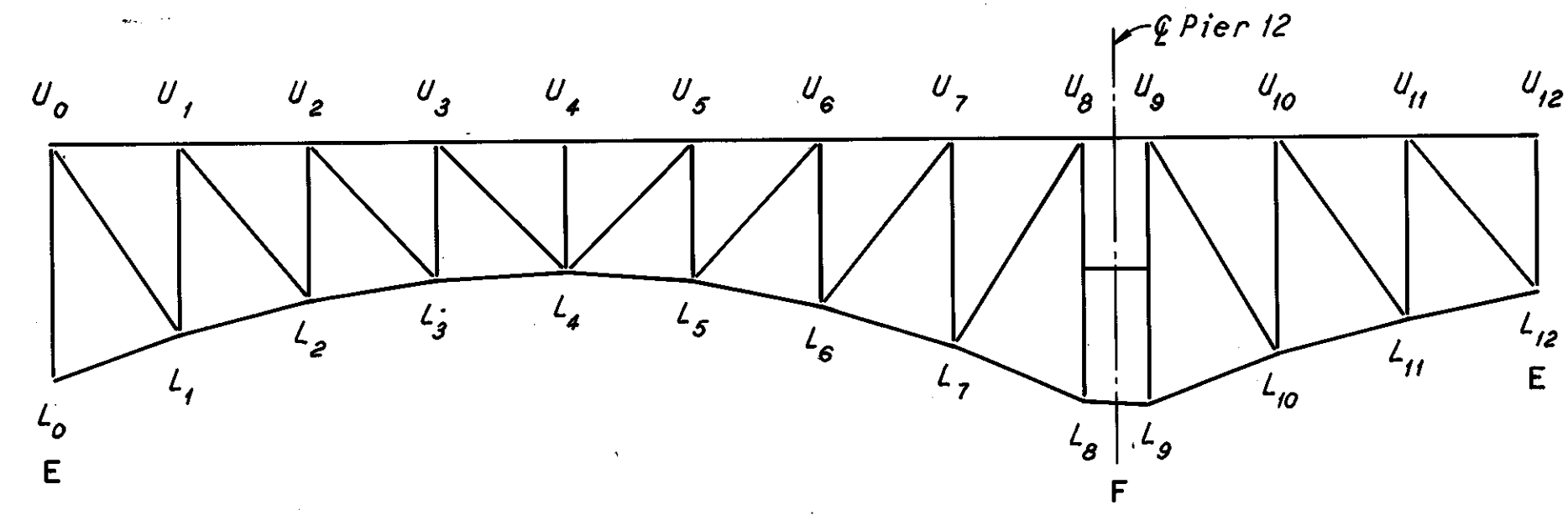


MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

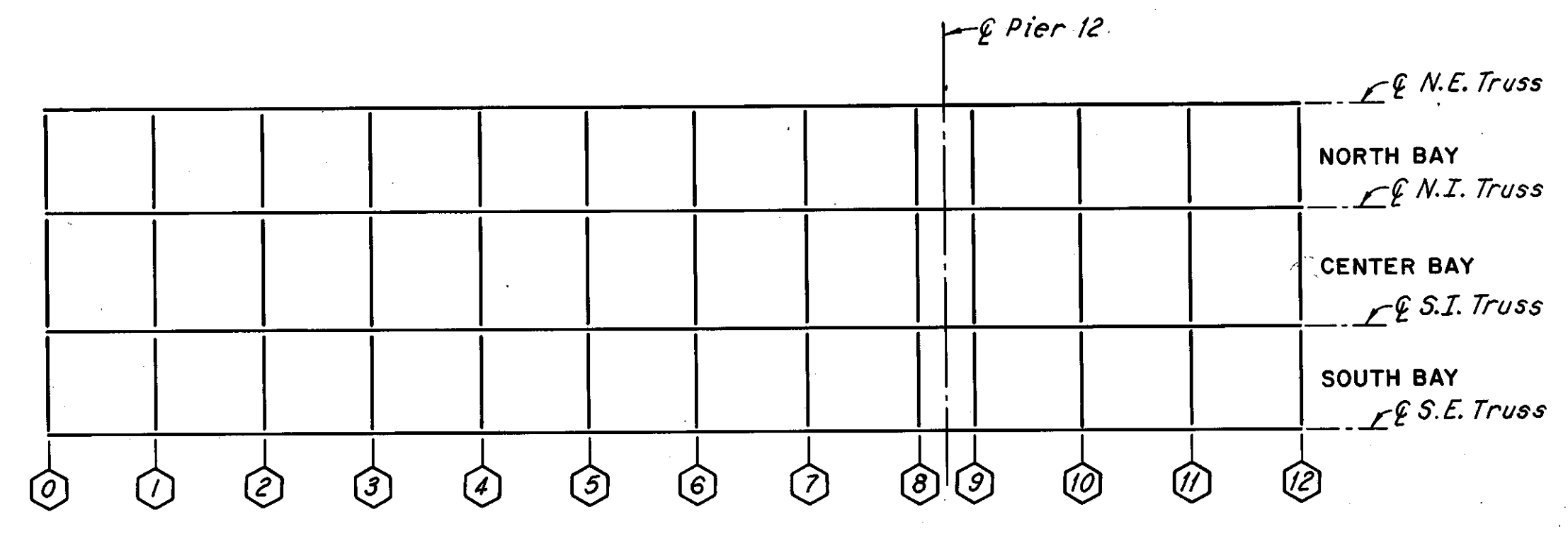
SPAN II



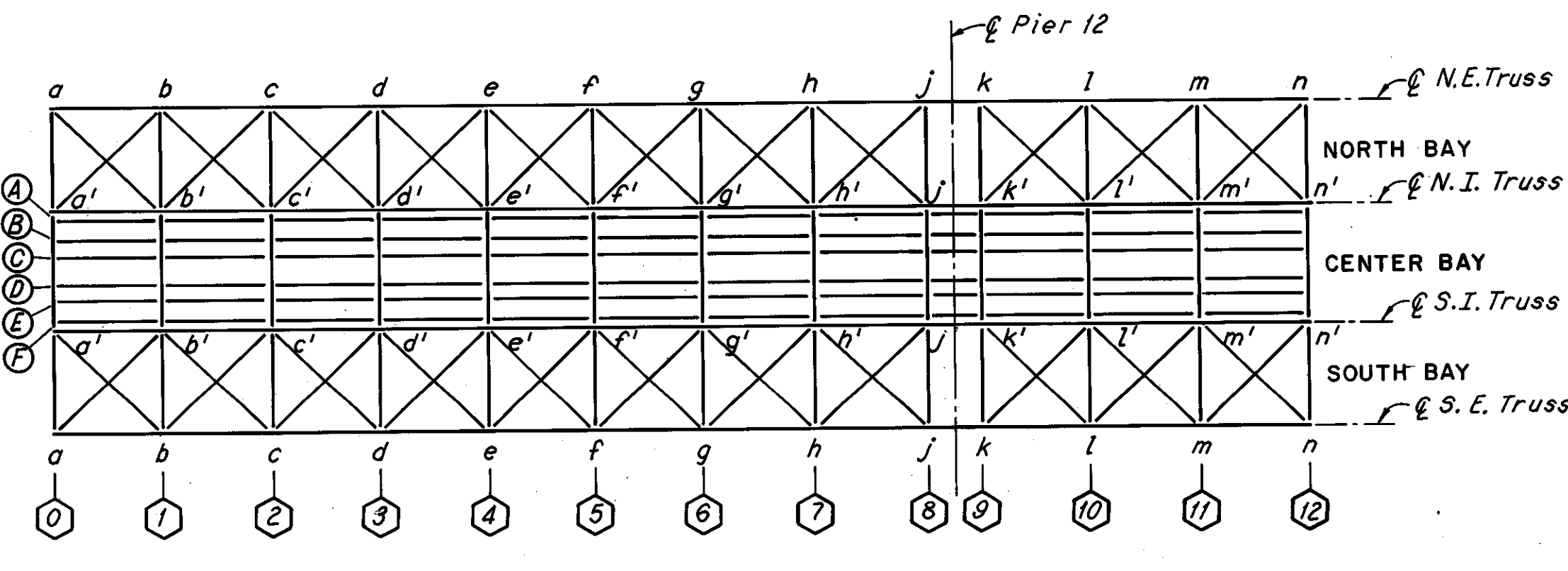
UPPER DECK PLAN



TYPICAL TRUSS ELEVATION



LOWER DECK PLAN



MAINTENANCE AND INSPECTION DECK  
AND BOTTOM LATERAL PLAN

SPAN 13

FHWA REGION	STATE	PROJECT
5	OHIO	

83  
185

CUYAHOGA COUNTY  
CUY-10-16.23

LEGEND

- ⬡ DENOTES FLOORBEAMS
- DENOTES STRINGERS
- E DENOTES EXPANSION JOINT
- F DENOTES FIXED JOINT

Notes:  
For Portal and Sway Bracing Identification, see Sheet 5/72.  
The following abbreviations are used:  
N. E. = North Exterior  
N. I. = North Interior  
S. I. = South Interior  
S. E. = South Exterior  
For location of spans, see Sheet 1/72.

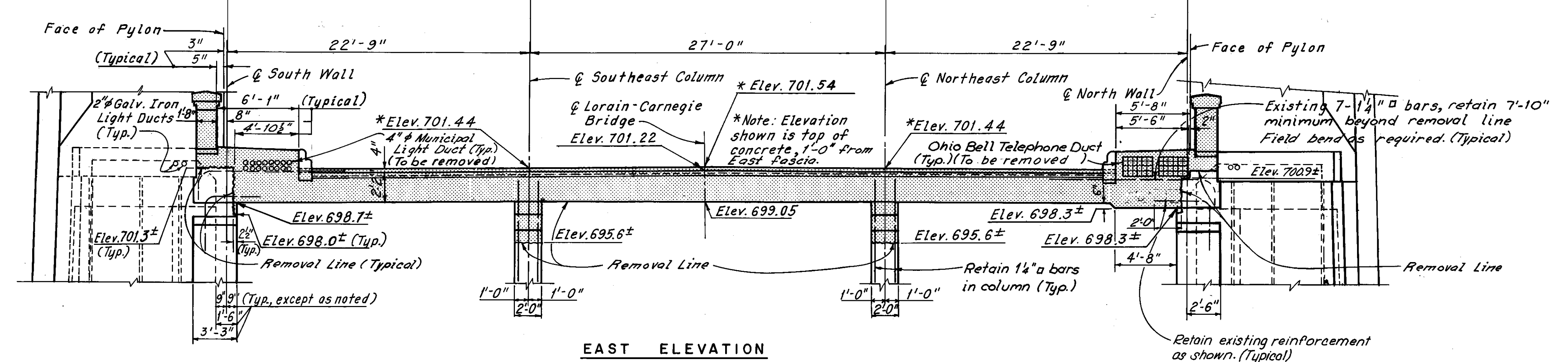
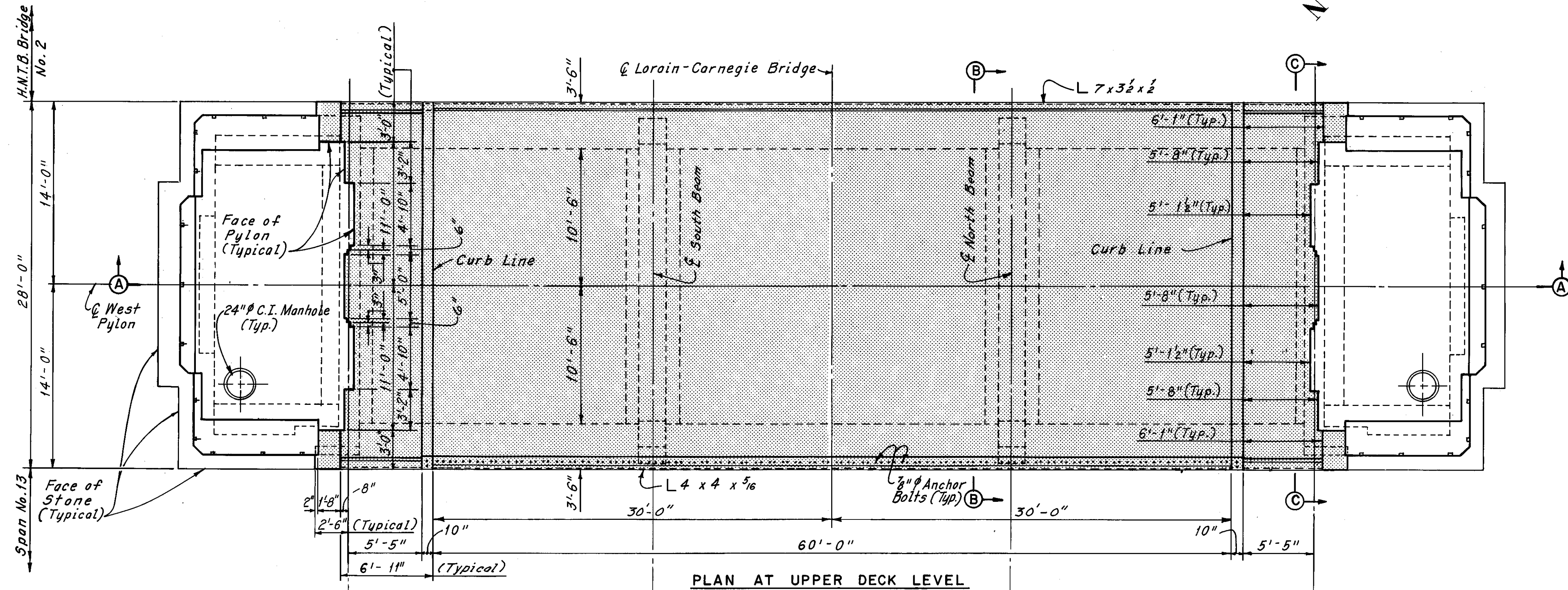
HNTB BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

MEMBER IDENTIFICATION PLANS  
SPANS 11 AND 13  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN/RCK	TRACED/RCK	CHECKED/D.L.R.	REVIEWED	REVISED
DATE 2/14/75	DATE 2/18/75	DATE 3/20/75	DATE	SHEET 9/72



Notes:  
 For Section A-A, Section B-B and Section C-C, see Sheet 11/72.  
 [Hatched Area] Indicates portions of structure removed.  
 Existing vertical exposed steel in columns and walls shall be retained, field bend or cut as required to clear new steel reinforcement.  
 The following abbreviations are used:  
 Elev. = Elevation  
 Typ. = Typical  
 Galv. = Galvanized

HNTB BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

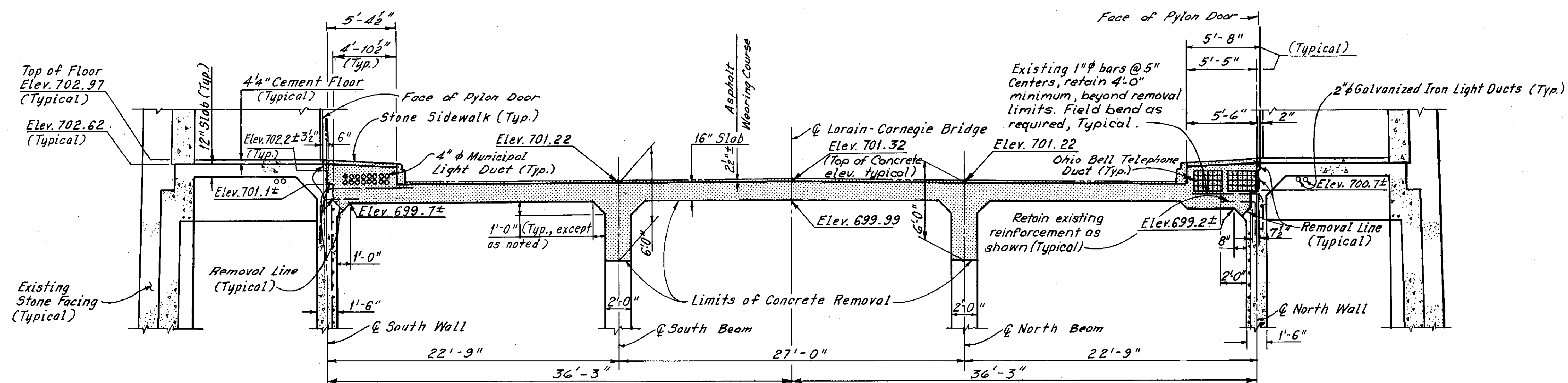
**HNTB**

**WEST PYLON - REMOVAL DETAILS**

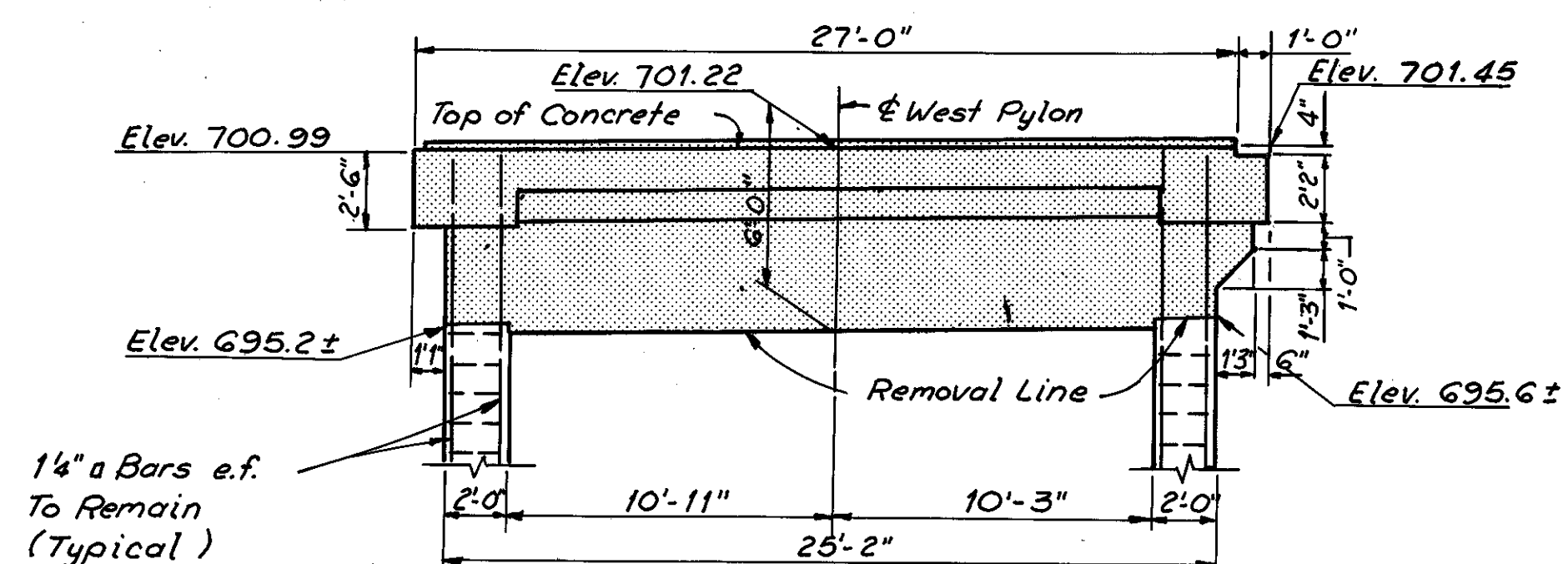
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN C.P.	TRACED C.P.	CHECKED W.E.B.	REVIEWED	REVISED
DATE 6-11-78	DATE 6-13-78	DATE 7-14-78	DATE	DATE

SHEET 10/72

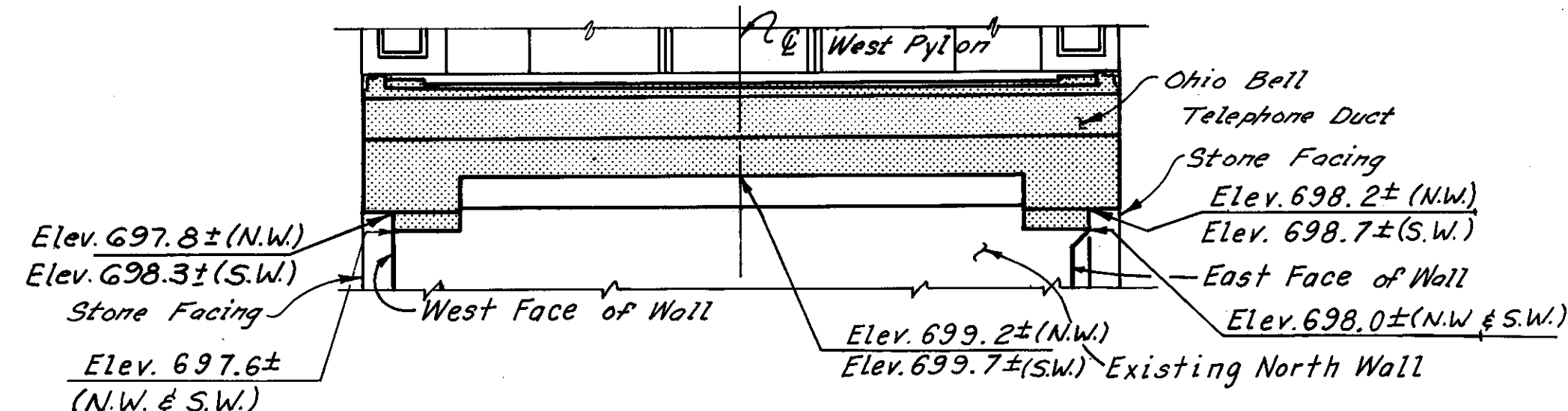


SECTION A - A



SECTION B - B

Note: Elevations shown are at  $\epsilon$  of Beam.



SECTION C - C

(North Wall Shown, South Wall Similar, except Opposite Hand)

Note: Elevations are shown at either South Face of North wall or North Face of South Wall.

Notes:  
For location of Section A-A, Section B-B and Section C-C, see Sheet 10/72.  
For additional notes, see Sheet 10/72.

Ohio Bell Telephone ducts and Municipal Electric Light ducts shown are to be abandoned.

The following abbreviations are used:  
N.W. = North Wall  
S.W. = South Wall

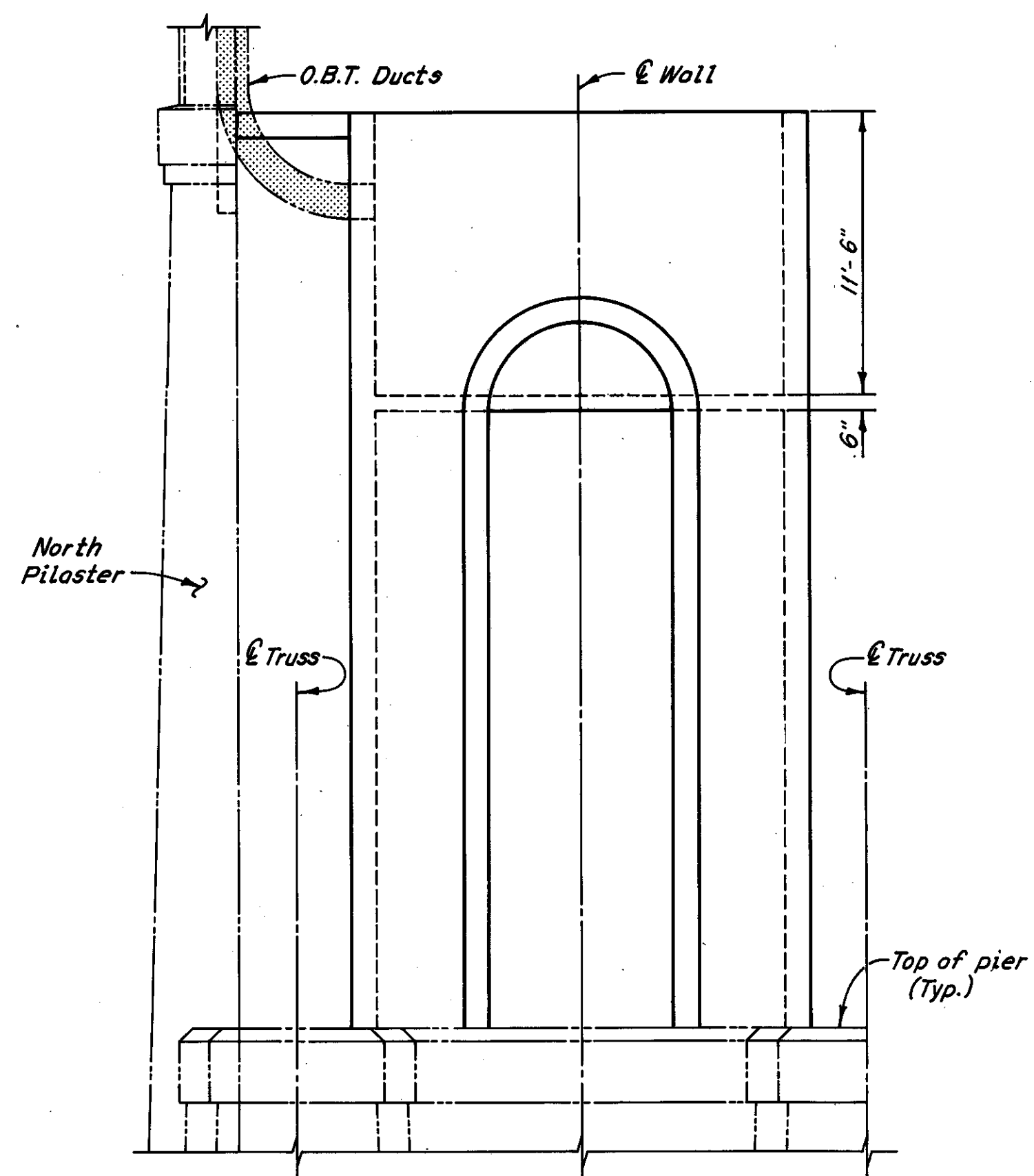
HNTB BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>WEST PYLON - REMOVAL DETAILS</b>					
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)					
BR. NO. CUY. - 10-1618		STA. 22+19.19		STA. 55+04.56	
CUYAHOGA COUNTY OHIO					
DRAWN C.P.	TRACED C.P.	CHECKED W.E.B.	REVIEWED	REVISED	
DATE 6-12-78	DATE 6-14-78	DATE 7-14-78	DATE		SHEET 11 / 72

MICROFILMED  
DEC 5 1986

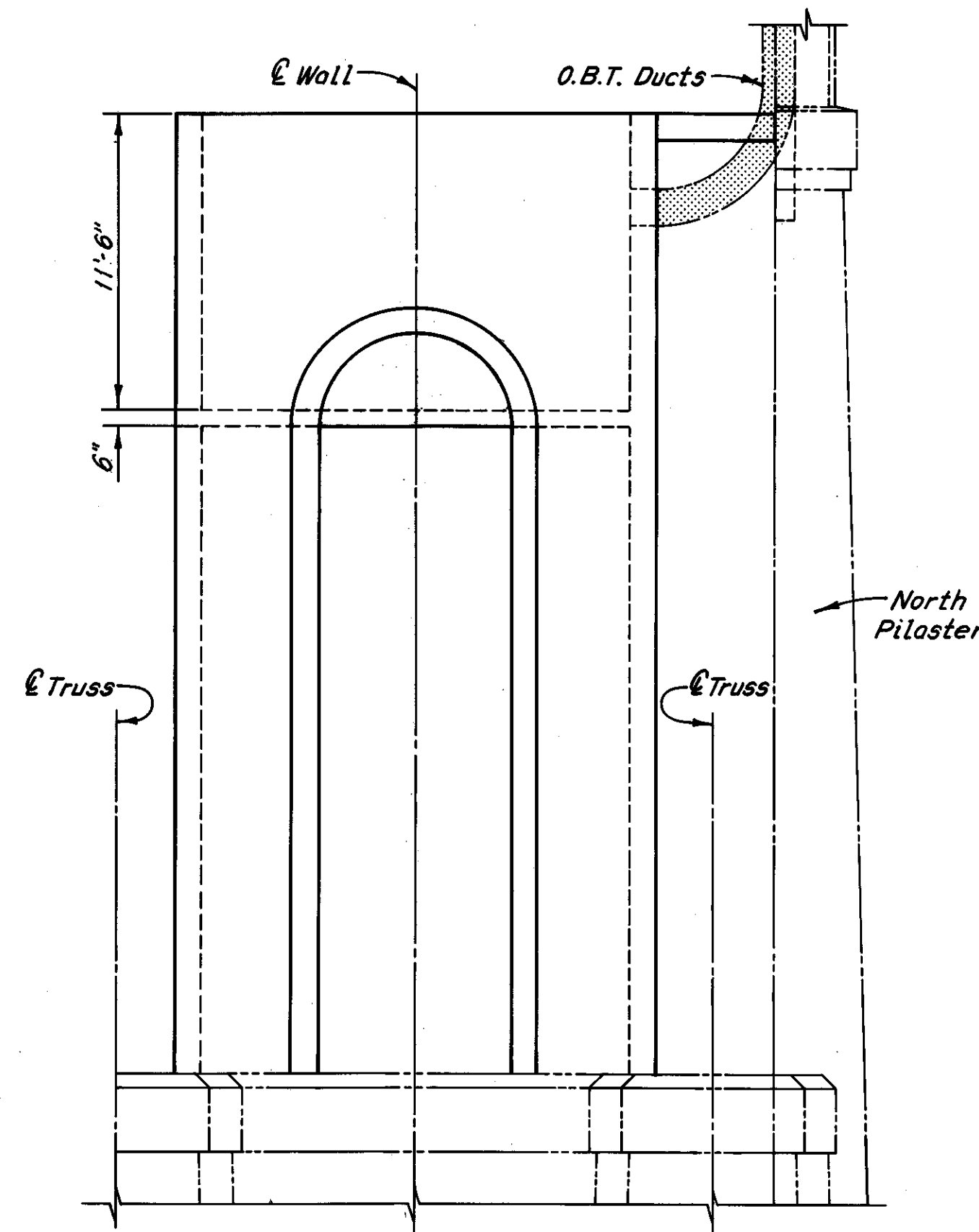
FHWA REGION	STATE	PROJECT
5	OHIO	

86  
185

CUYAHOGA COUNTY  
CUY-10-16.23

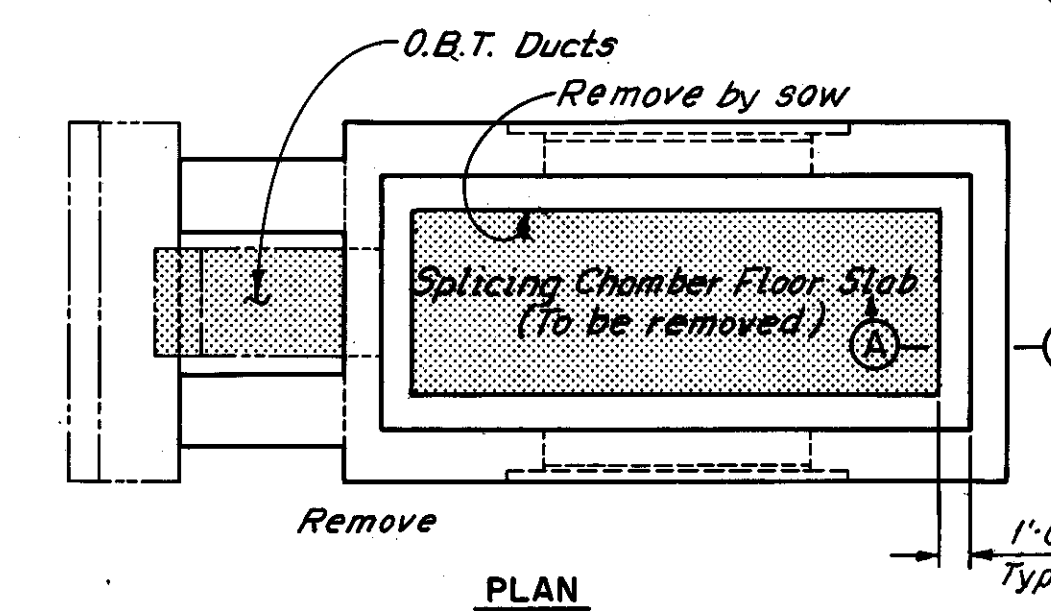


WEST ELEVATION

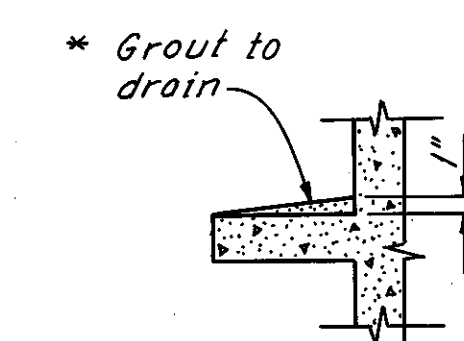


EAST ELEVATION

PIER 6

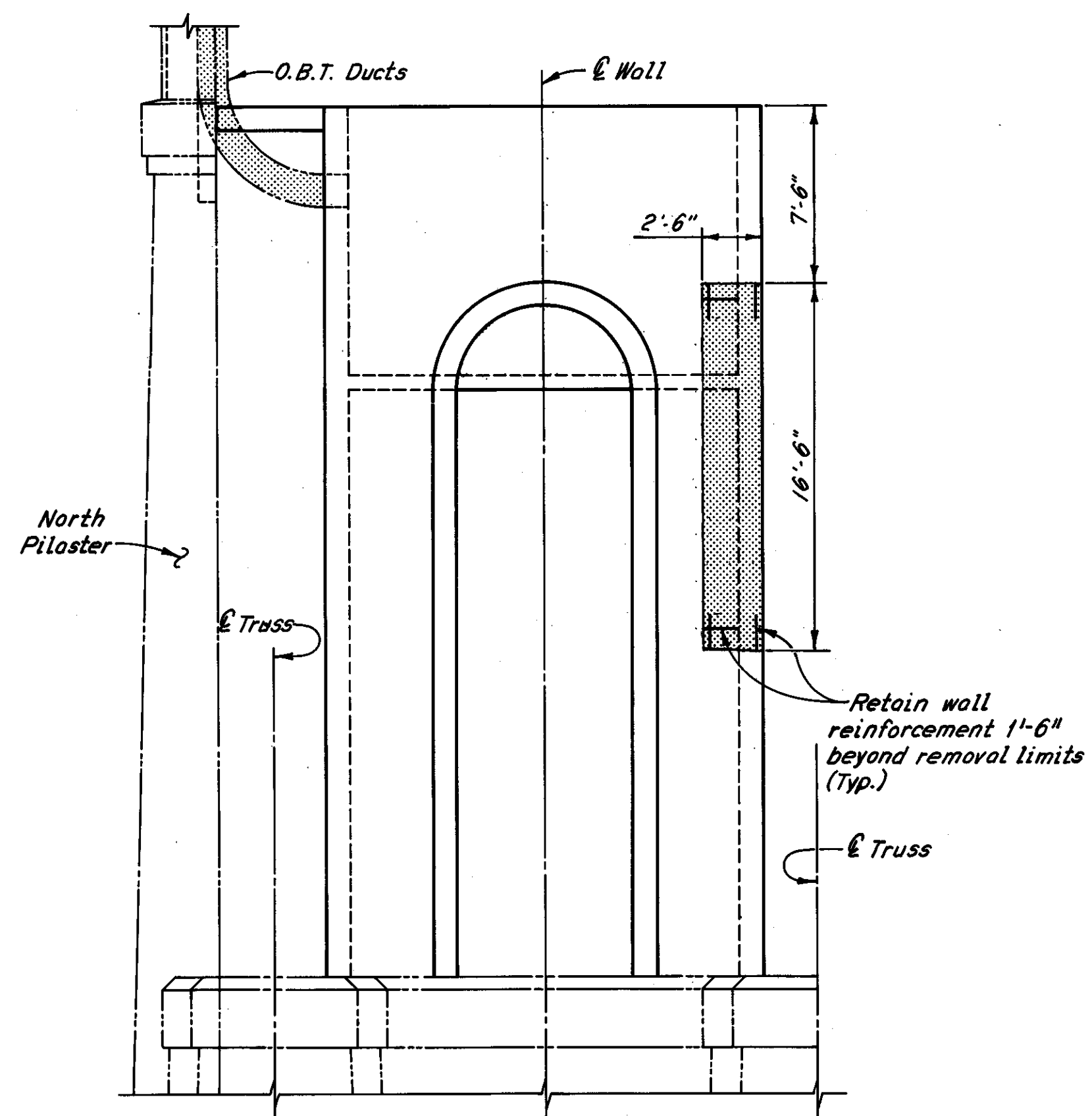


PLAN

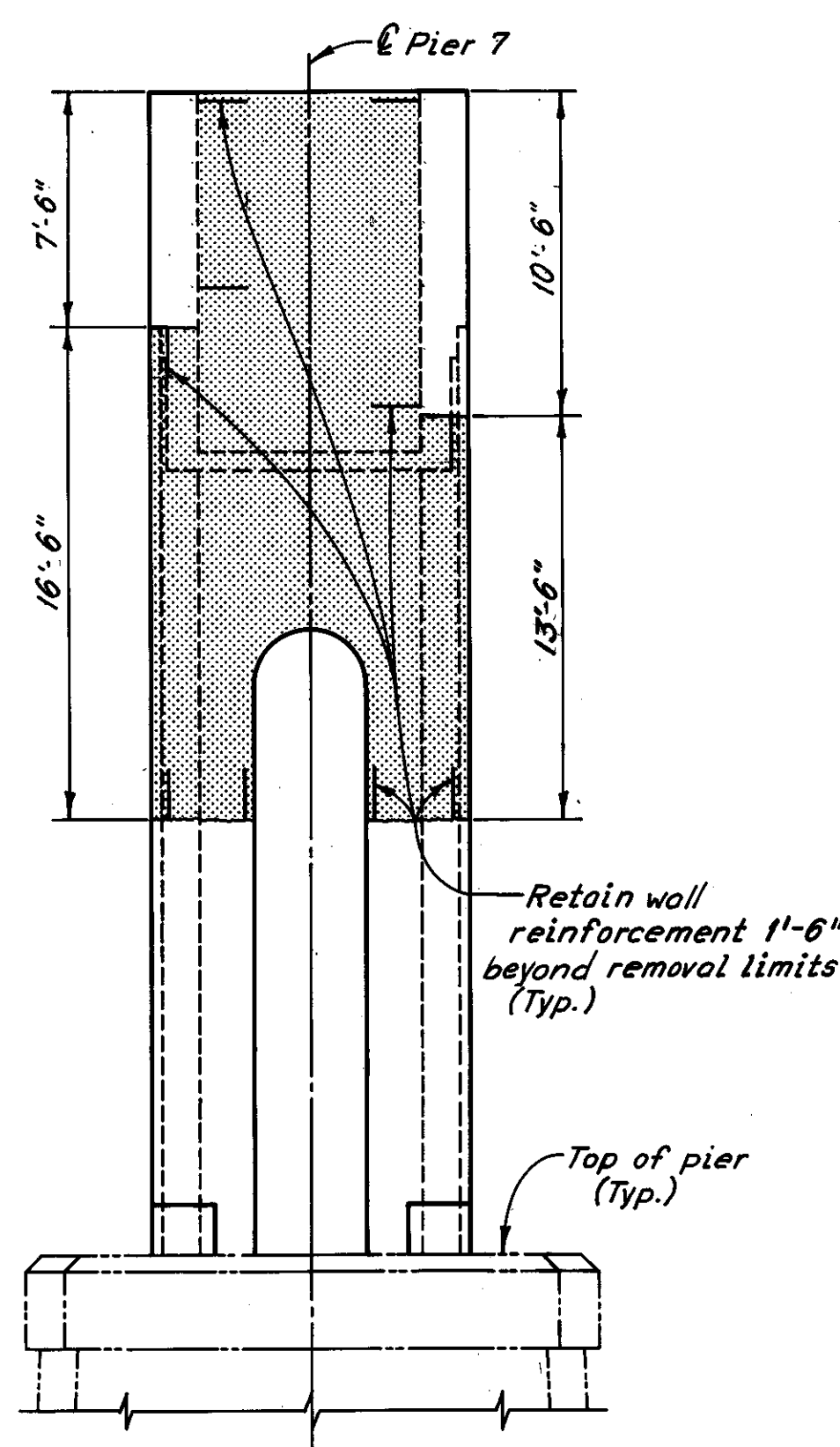


SECTION A-A

\* The Contractor may use any commercially available grout. Include with Item 202, Portions of structures Removed, for payment.

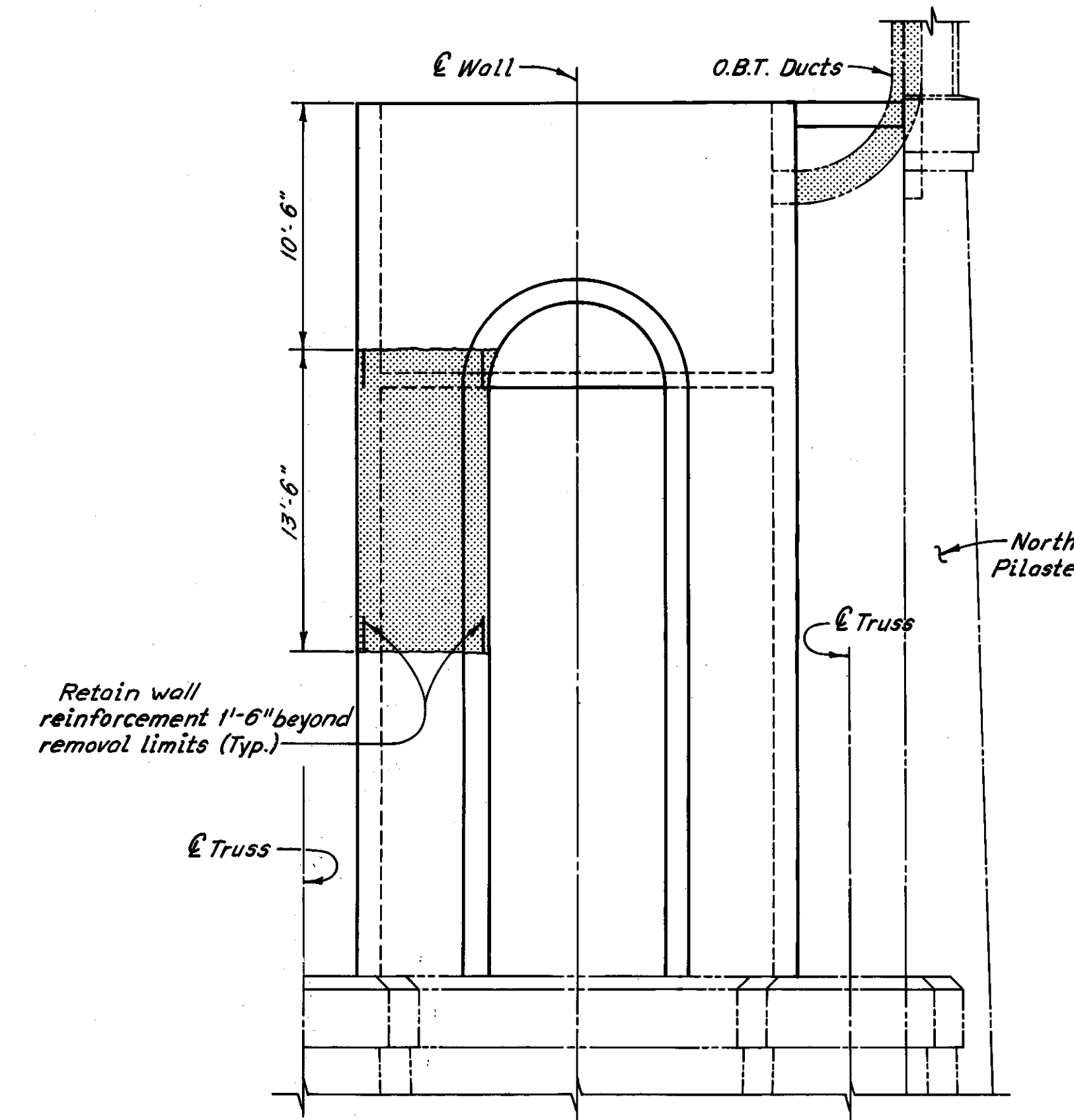


WEST ELEVATION



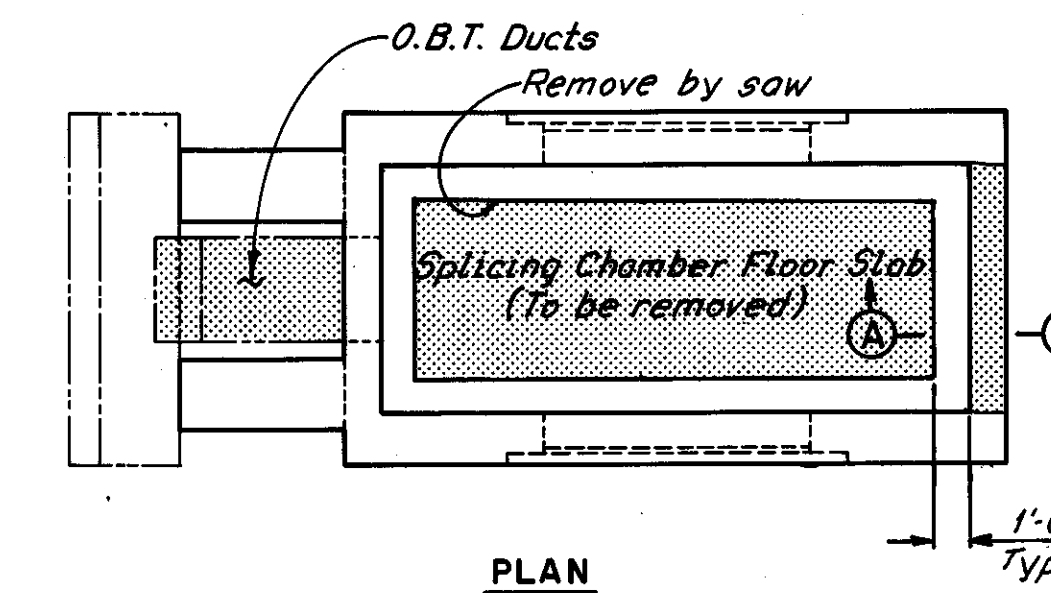
SOUTH ELEVATION

PIER 7



EAST ELEVATION

Notes:  
Zip-a-tone indicates portions of structure to be removed.  
Removals required for Item Special, Patching Concrete Structures, are not shown.  
For repair details and extent of removal, see Sheet 20/72.  
Some concrete removal will require installation of temporary supports in order to maintain stability. See General Note 9 on Sheet G.N.1.



PLAN

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

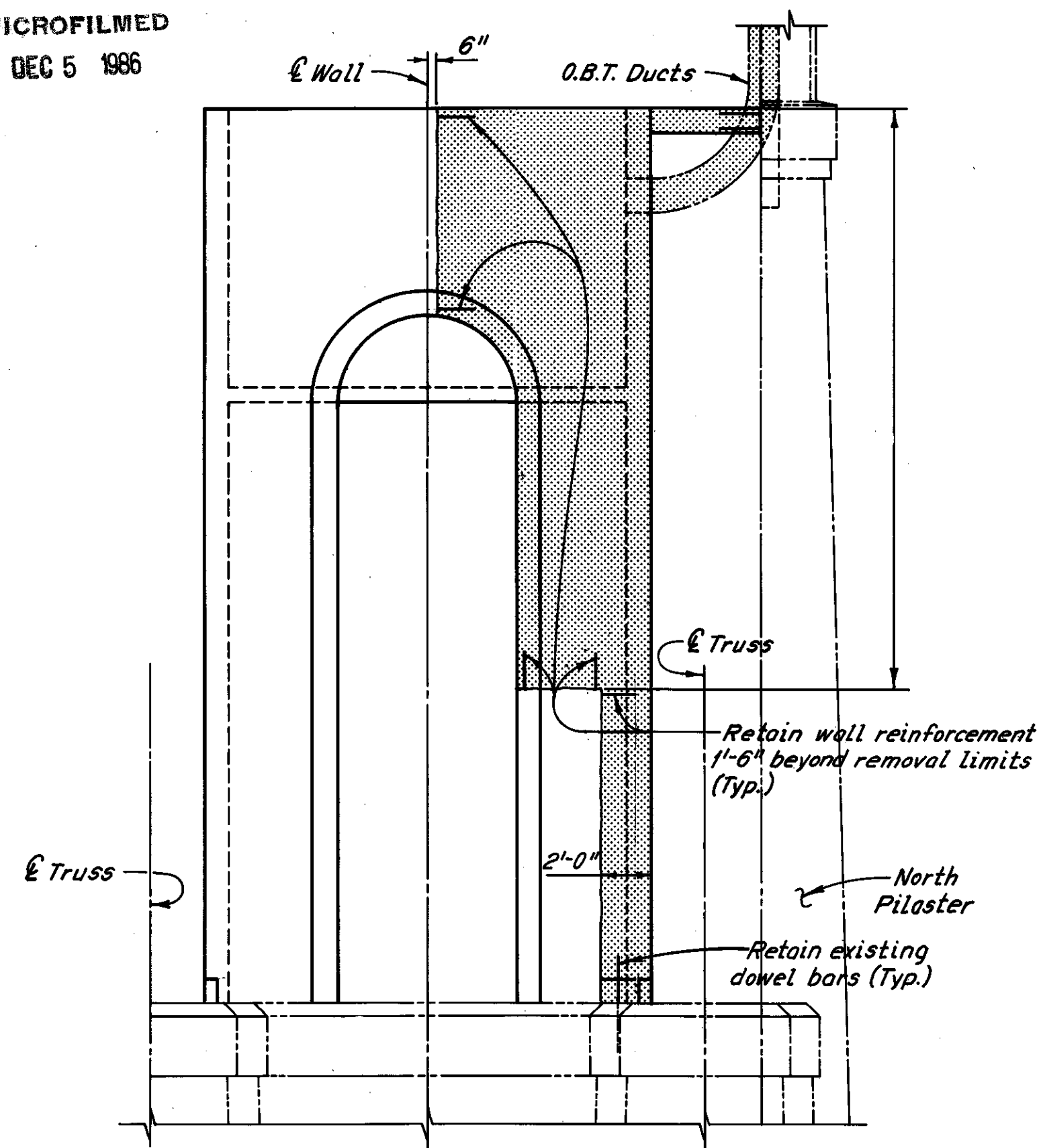
**HNTB**

**REMOVAL PLANS  
PIERS 6 AND 7**  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

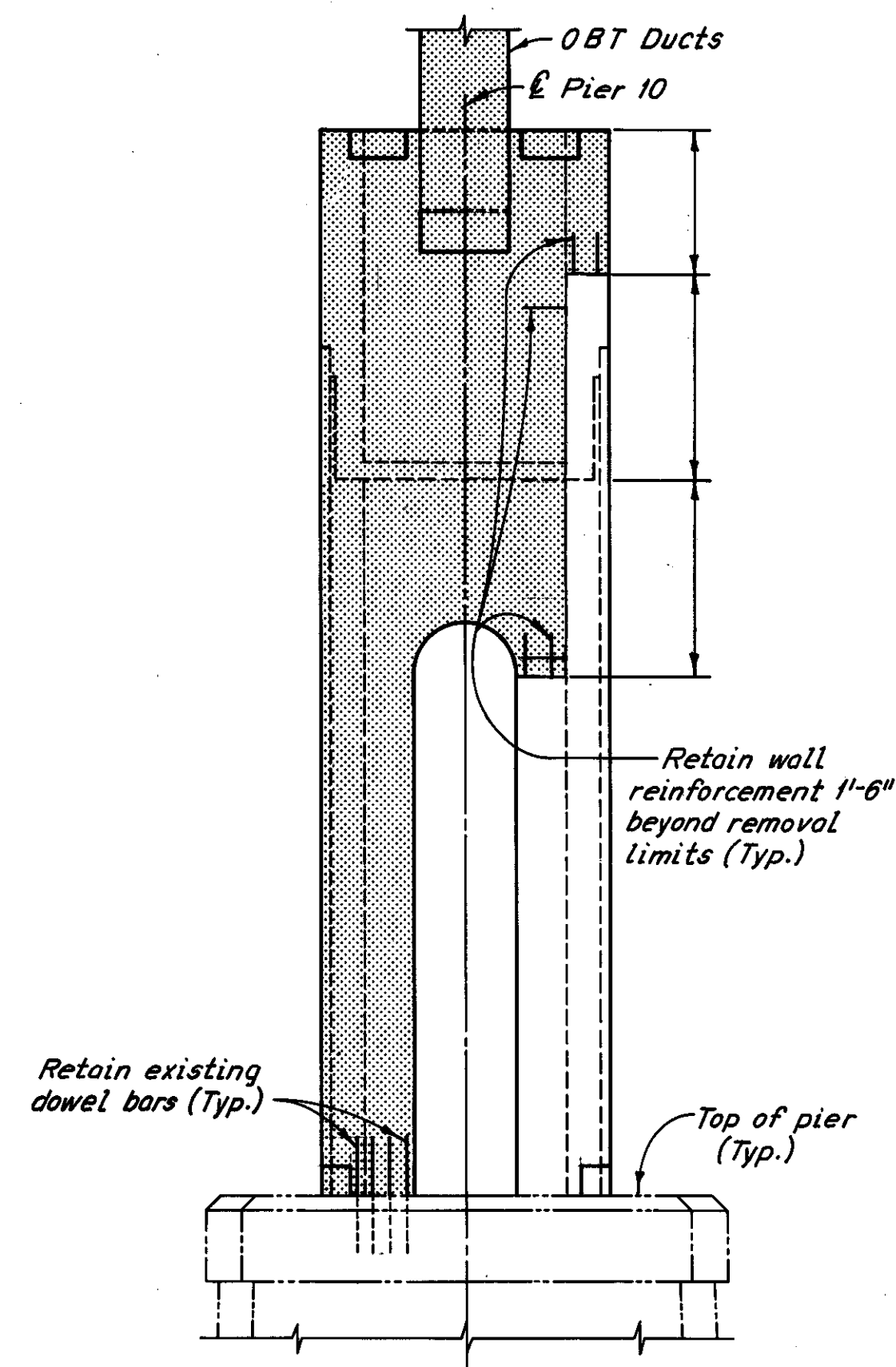
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 3-14-75	DATE 3-18-75	DATE 5-31-75	DATE	DATE

SHEET 12/72

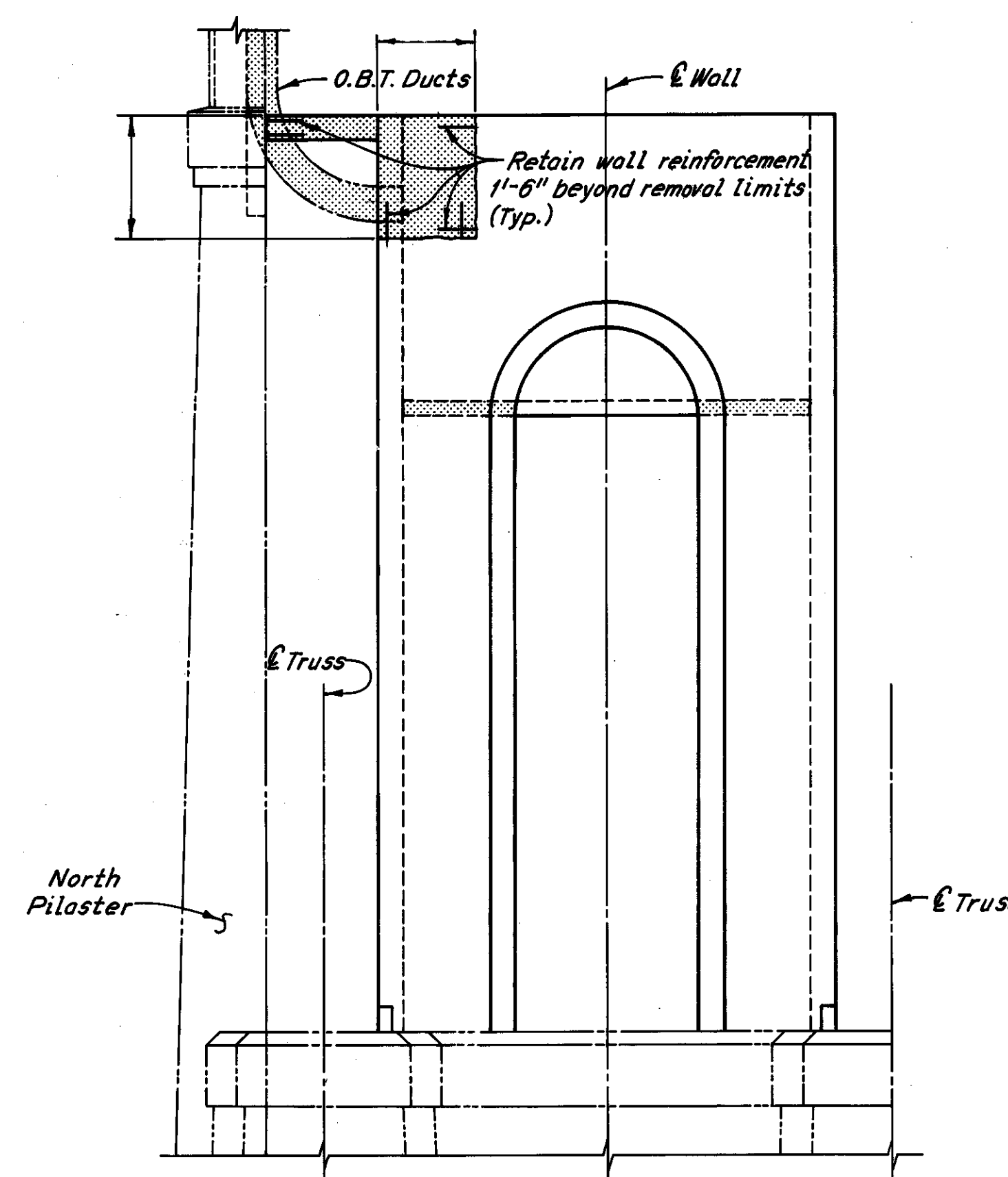




EAST ELEVATION

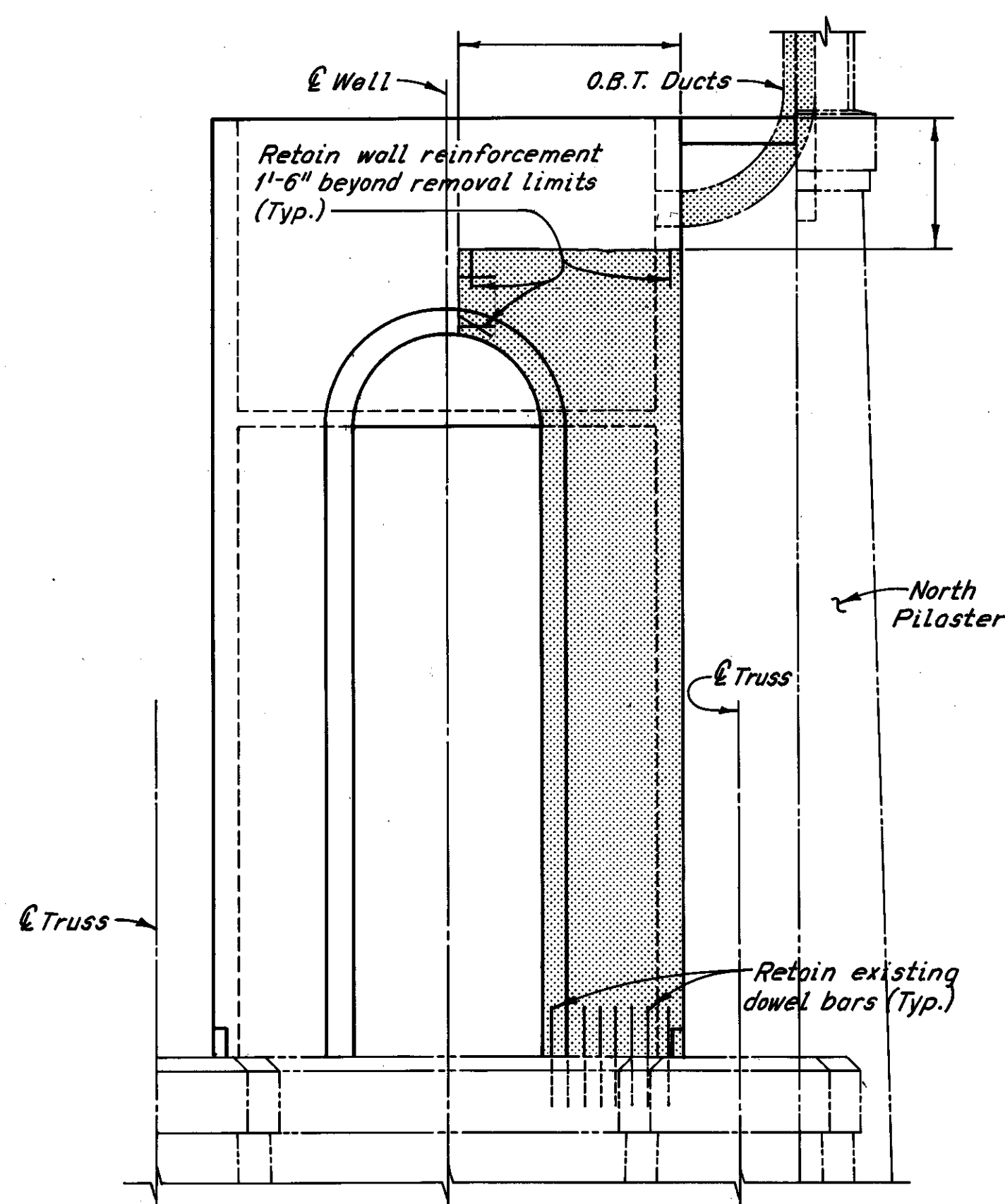


NORTH ELEVATION

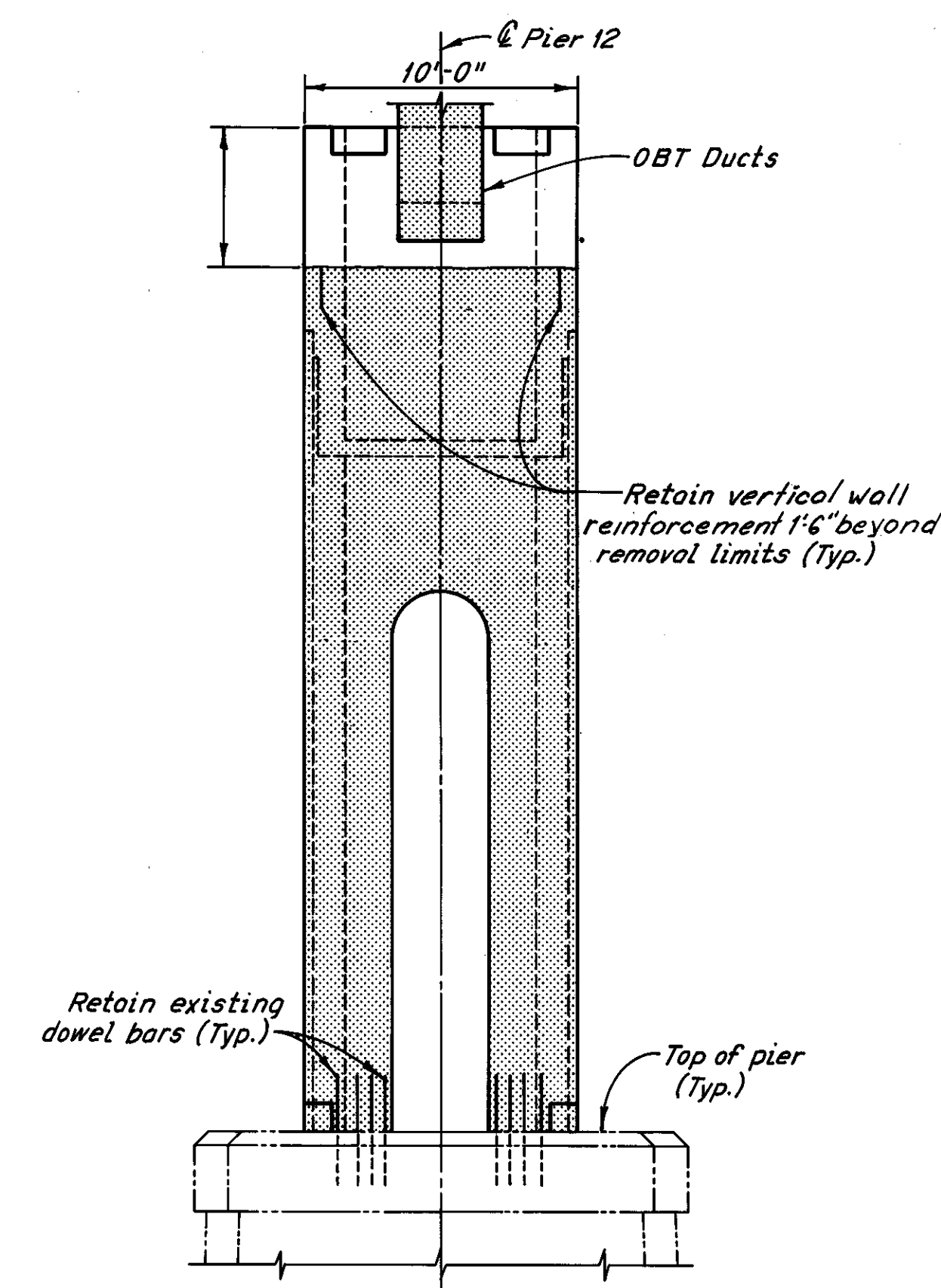


WEST ELEVATION

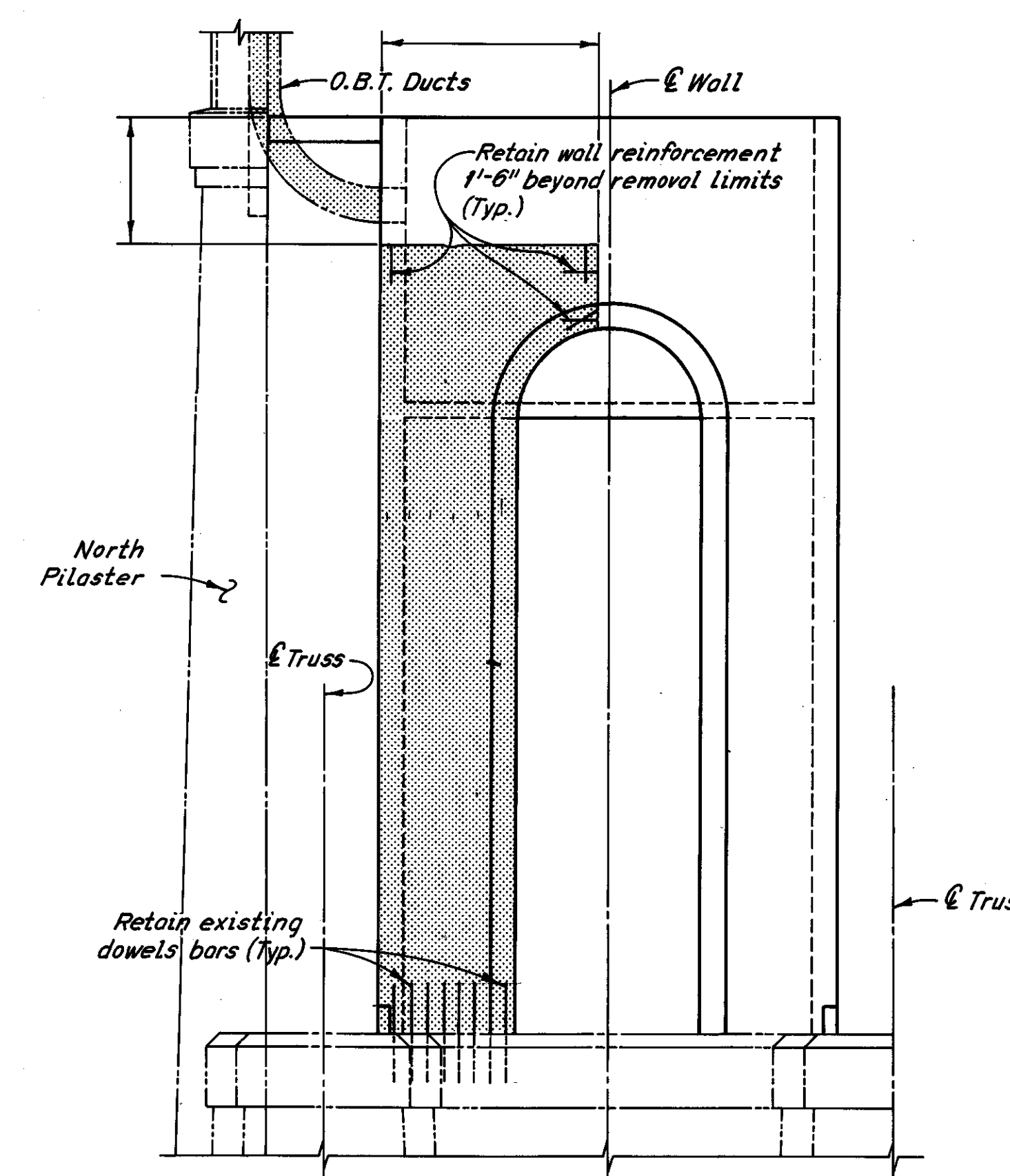
PIER 10



EAST ELEVATION

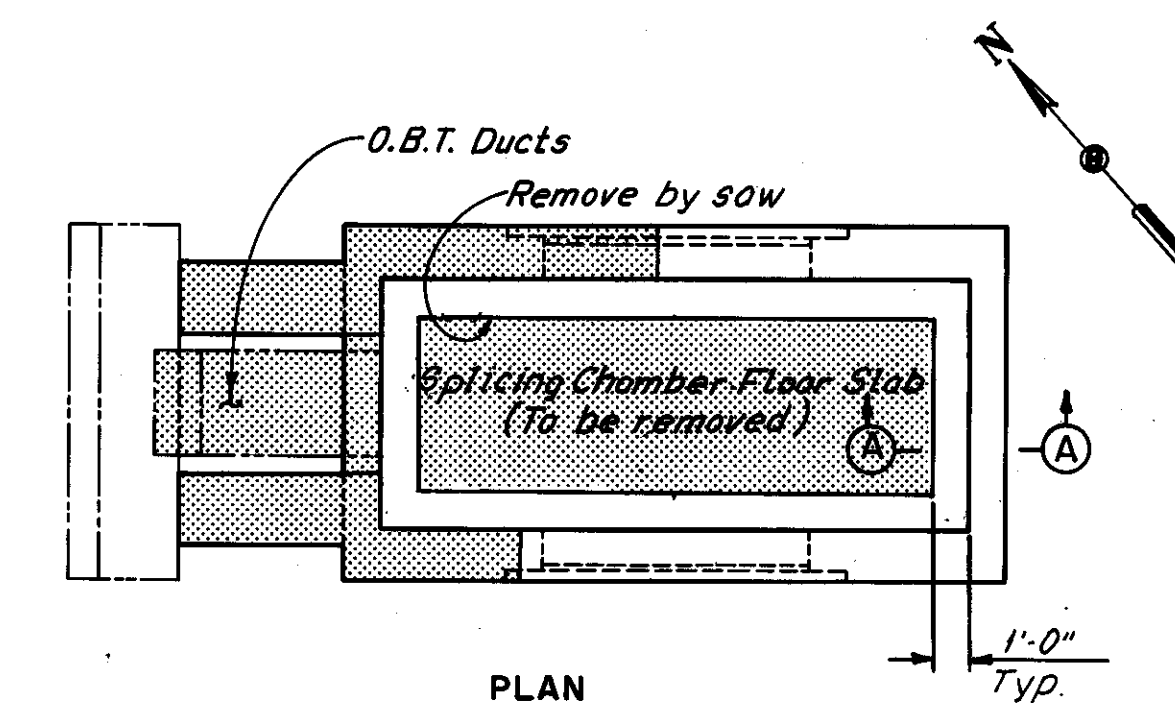


NORTH ELEVATION

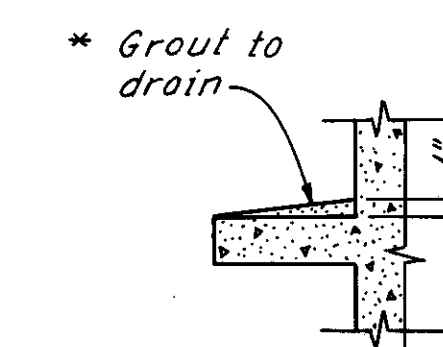


WEST ELEVATION

PIER 12

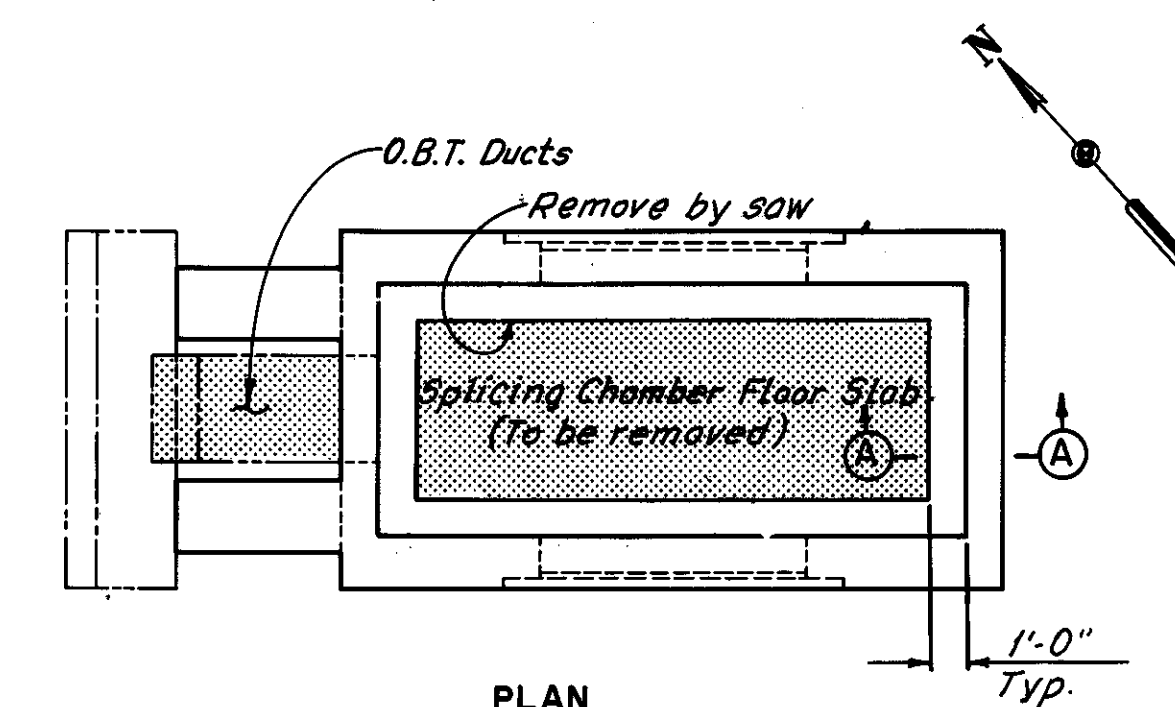


PLAN



SECTION A-A

\* The Contractor may use any commercially available grout. Include with Item 202, Portions of structures Removed, for payment.



PLAN

Notes:  
Zip-a-tone indicates portions of structure to be removed.  
Removals required for Item Special, Patching Concrete Structures, are not shown.  
For repair details and extent of removal, see Sheet 20/72.  
Some concrete removal will require installation of temporary supports in order to maintain stability. See General Note 9 on Sheet G.N.I.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

REMOVAL PLANS  
PIERS 10 AND 12  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY. - 10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

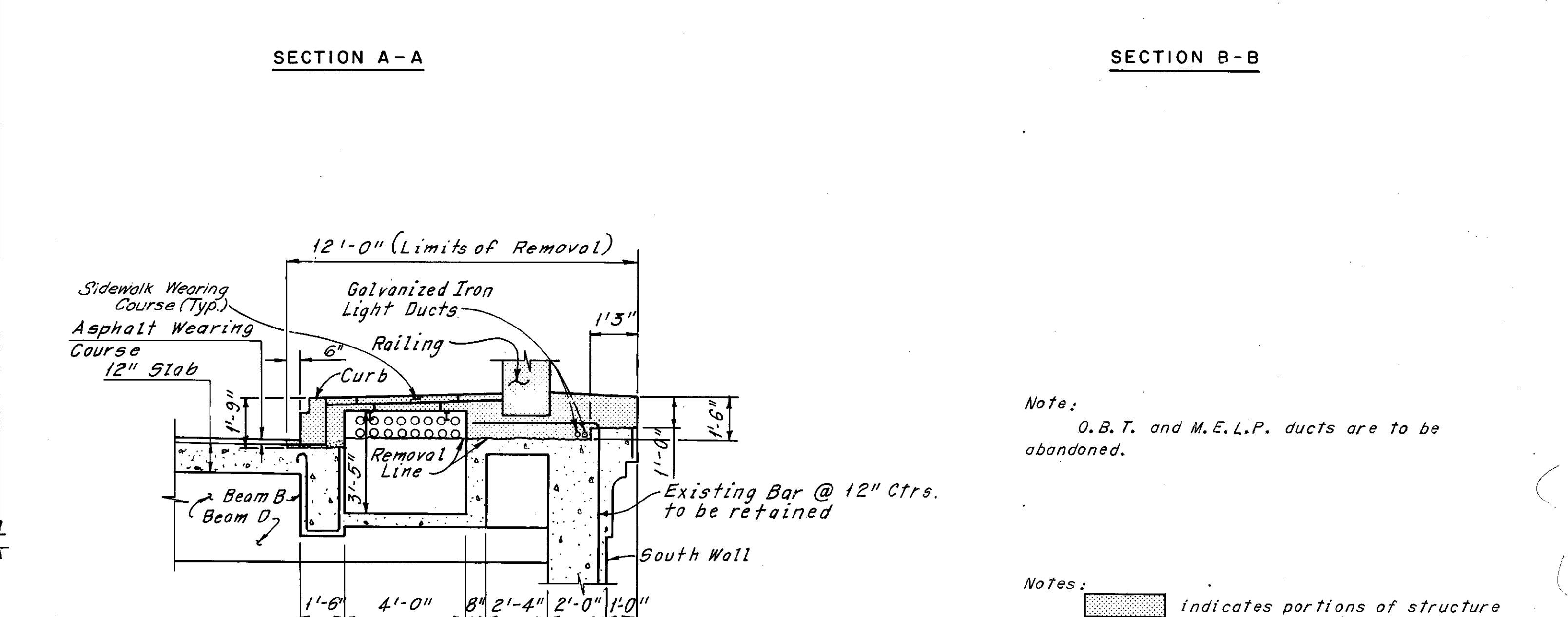
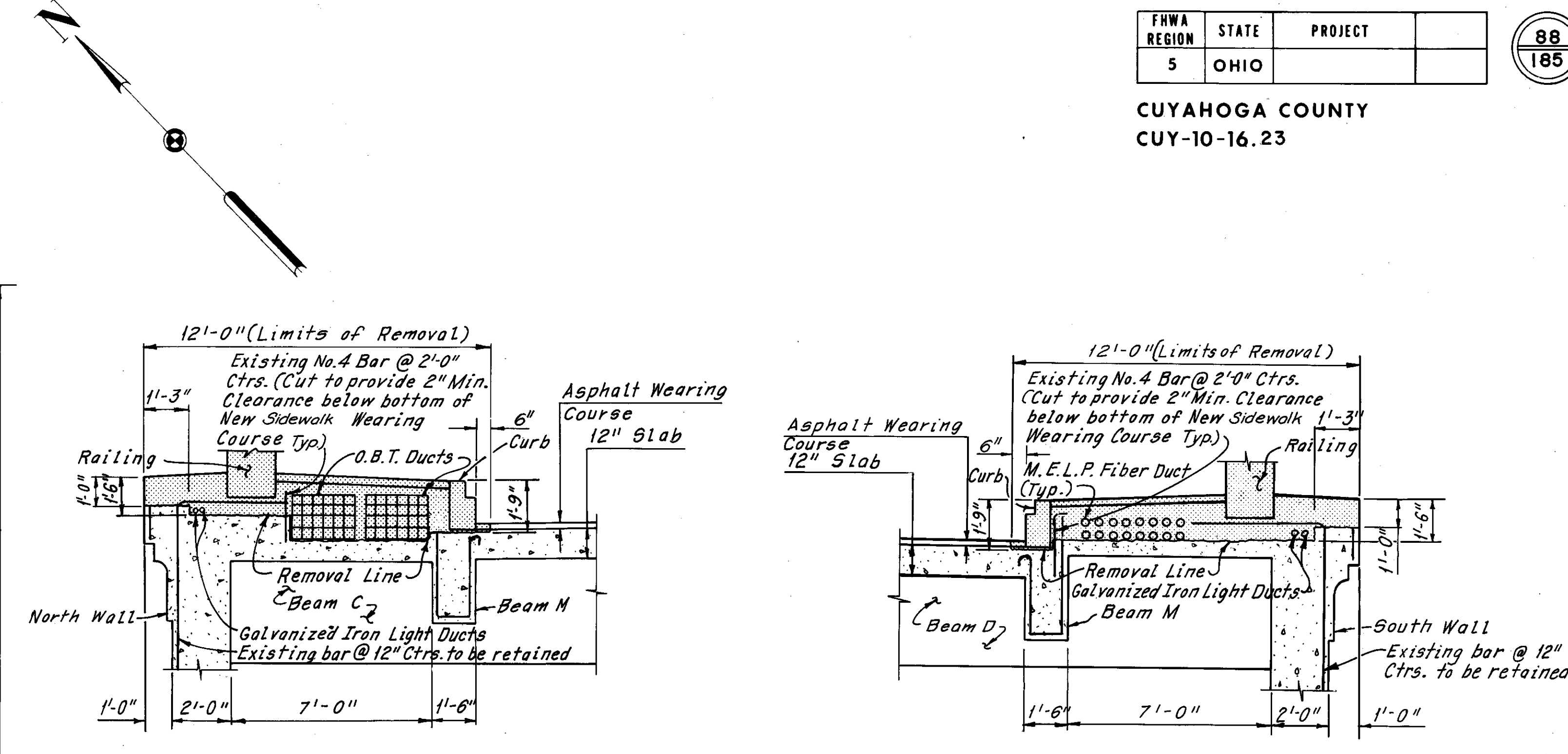
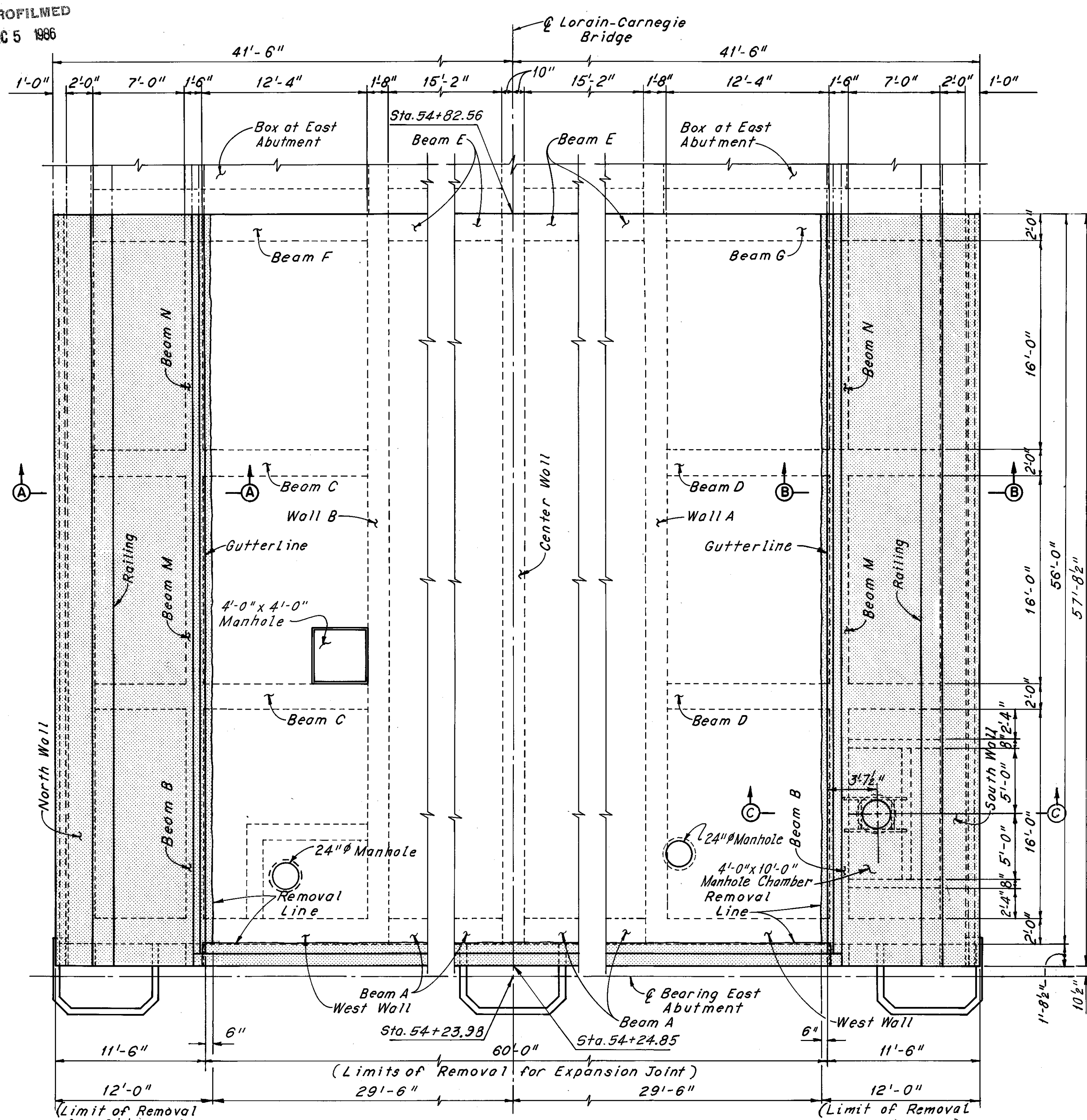
DRAWN: R.A.	TRACED: D.L.R.	CHECKED: C.H.B.	REVIEWED:	REVISED:
DATE: 3-10-75	DATE: 3-18-75	DATE: 3-31-75	DATE:	SHEET 13/72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

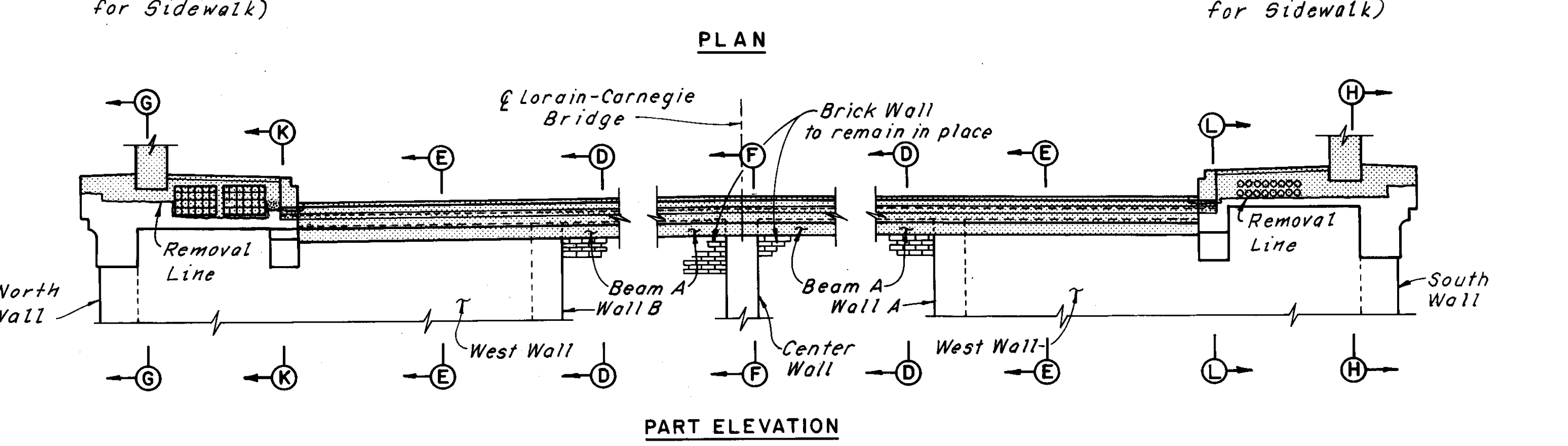
88  
185

CUYAHOGA COUNTY  
CUY-10-16.23



Note:  
O.B.T. and M.E.L.P. ducts are to be abandoned.

Notes:  
[Hatched Area] indicates portions of structure to be removed.  
For Sections D-D, E-E, F-F, G-G, H-H, J-J, and K-K, see Sheet 15/72.  
The following abbreviations are used:  
Ctrs. = Centers  
Min. = Minimum  
Sta. = Station



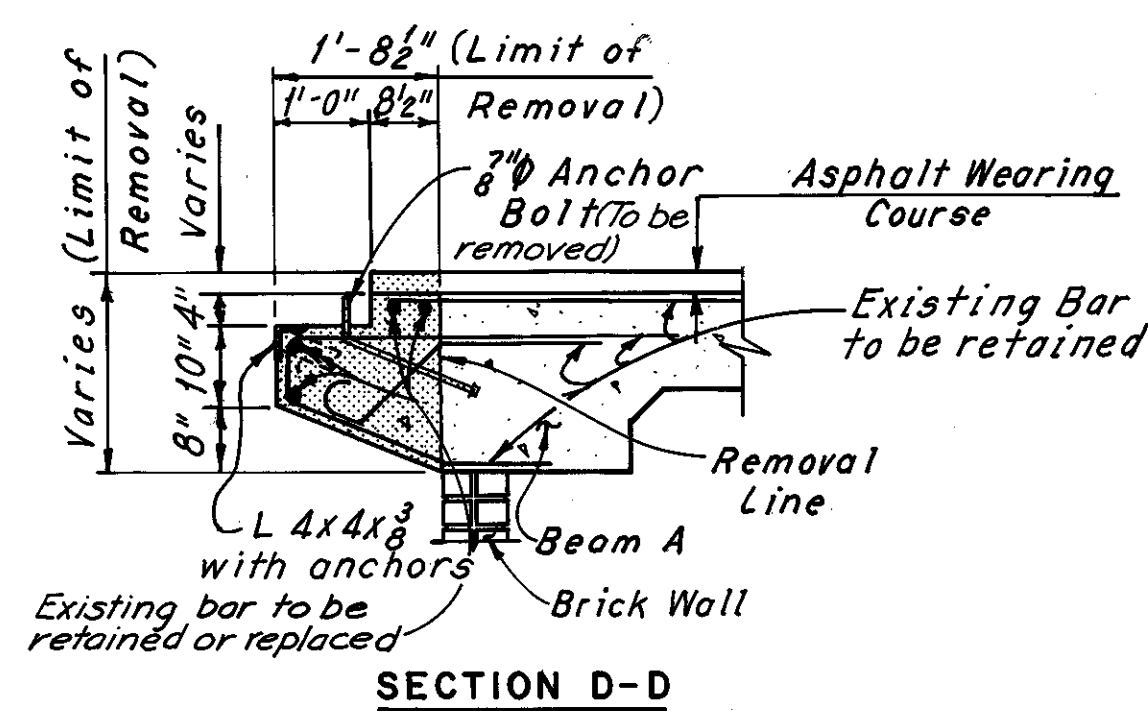
HNTB BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

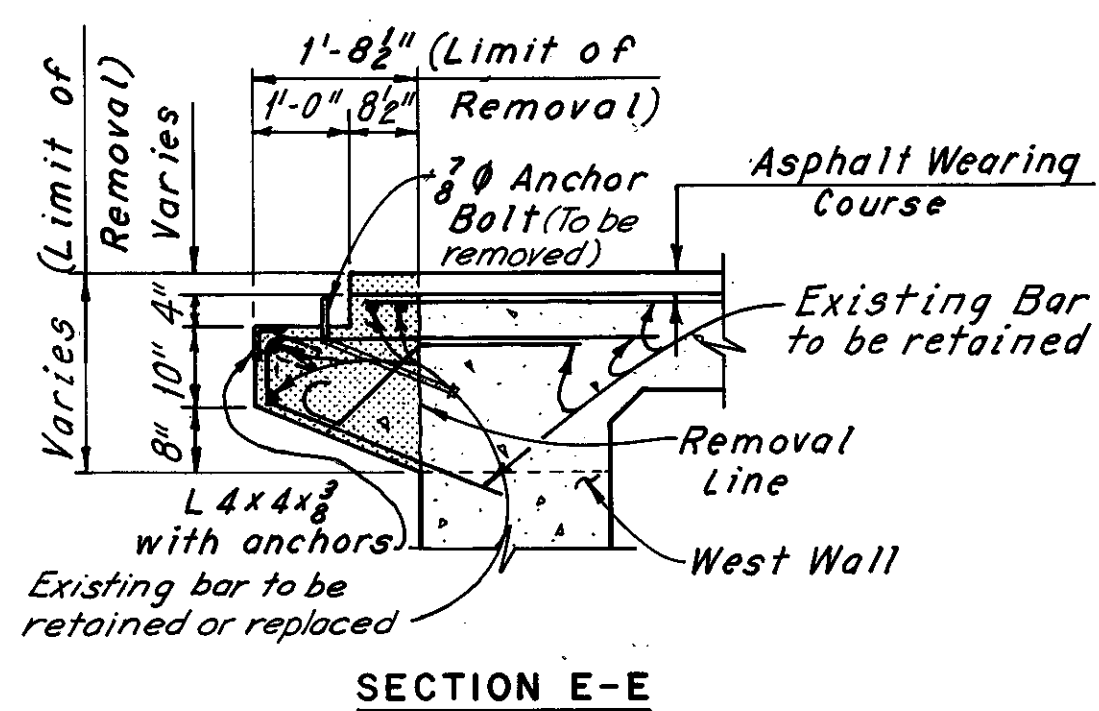
**EAST ABUTMENT  
REMOVAL DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN BY DATE 5-19-78	TRACED BY DATE 5-19-78	CHECKED W.E.B. DATE 6-22-78	REVIEWED DATE	REVISED
--------------------------	---------------------------	-----------------------------------	------------------	---------

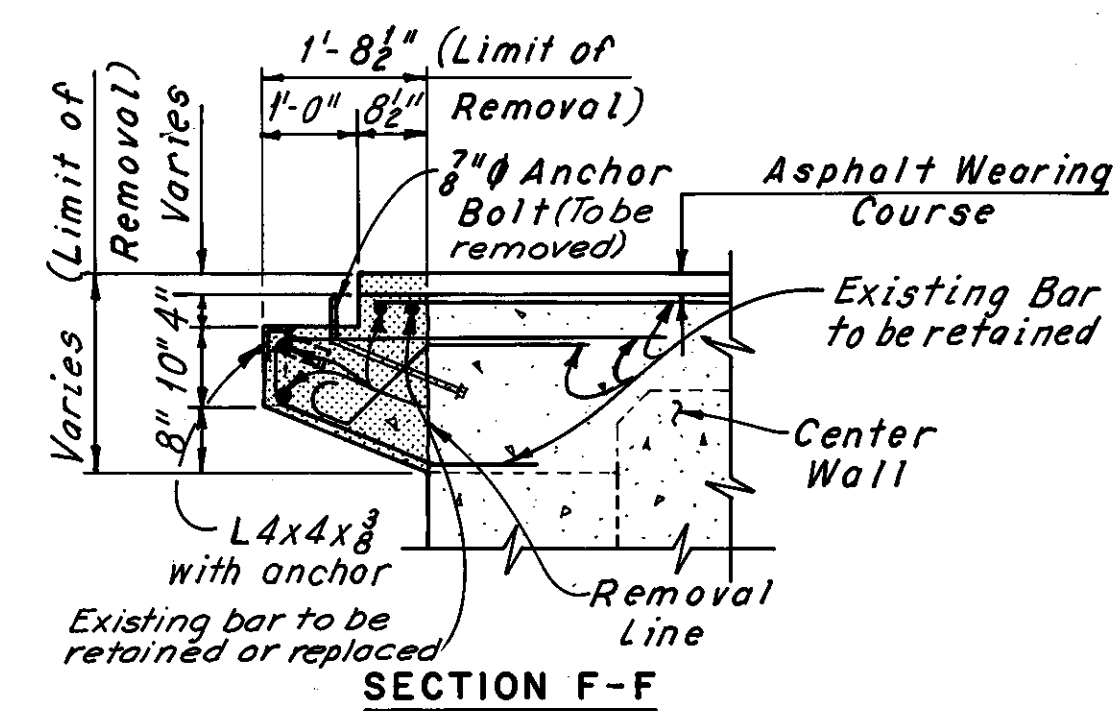
SHEET 74/72



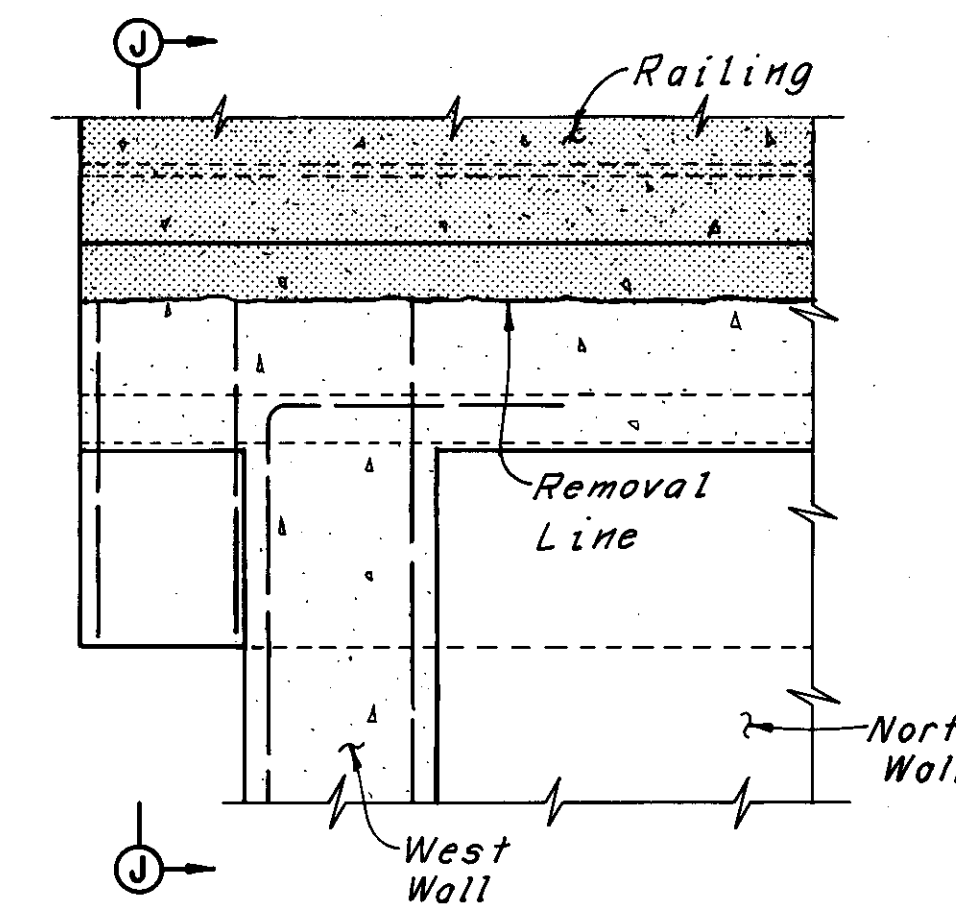
SECTION D-D



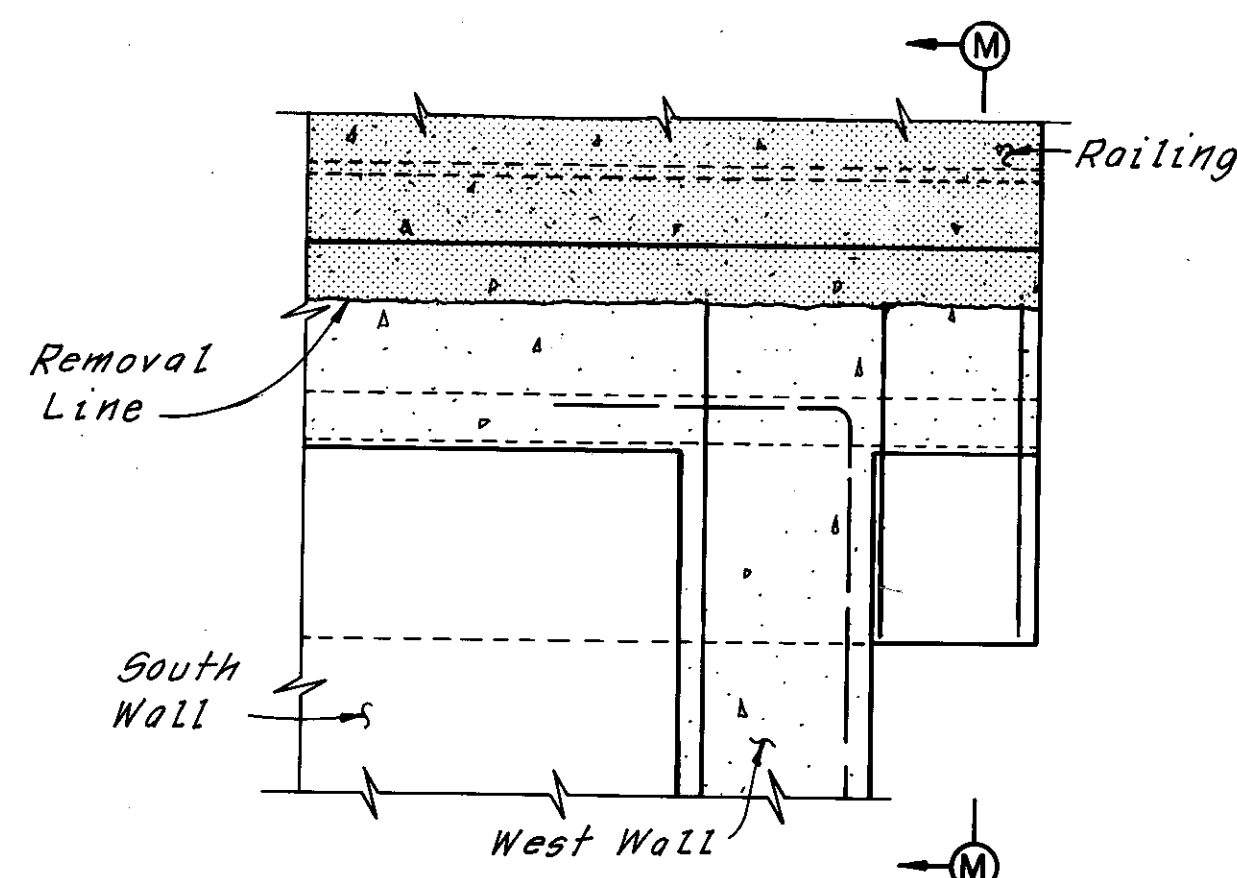
SECTION E-E



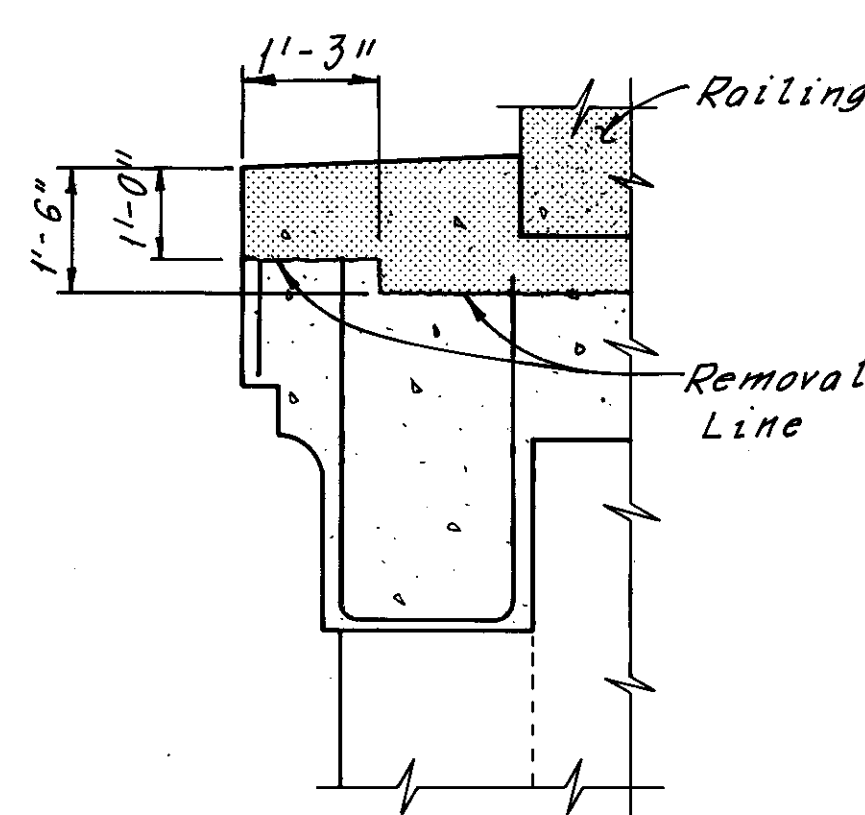
SECTION F-F



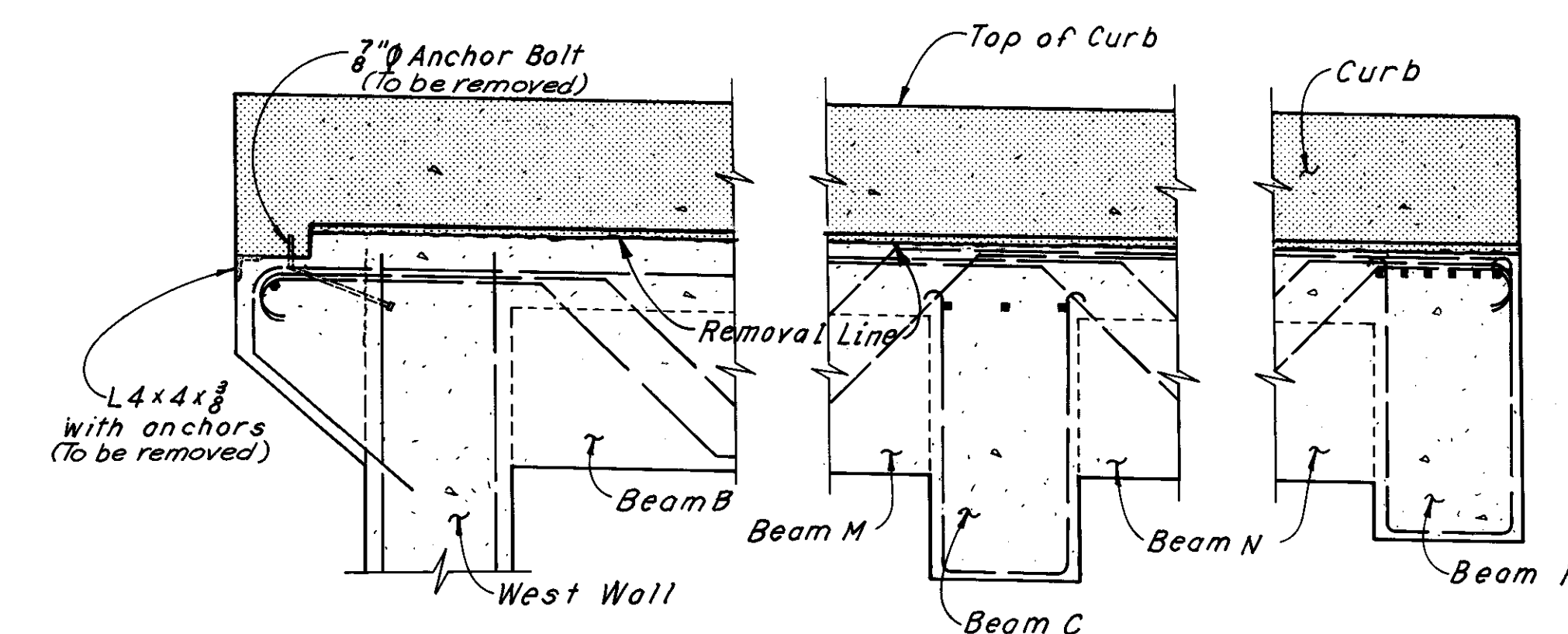
SECTION G-G



SECTION H-H



SECTION J-J  
(Section M-M similar  
except opposite hand)



PART SECTION K-K  
(Part Section L-L similar  
except opposite hand, Railing  
not shown)

Notes:  
For locations of Sections D-D, E-E, F-F,  
G-G, H-H, J-J, and K-K, see Sheet 12/72.  
For additional notes, see Sheet 14/72.

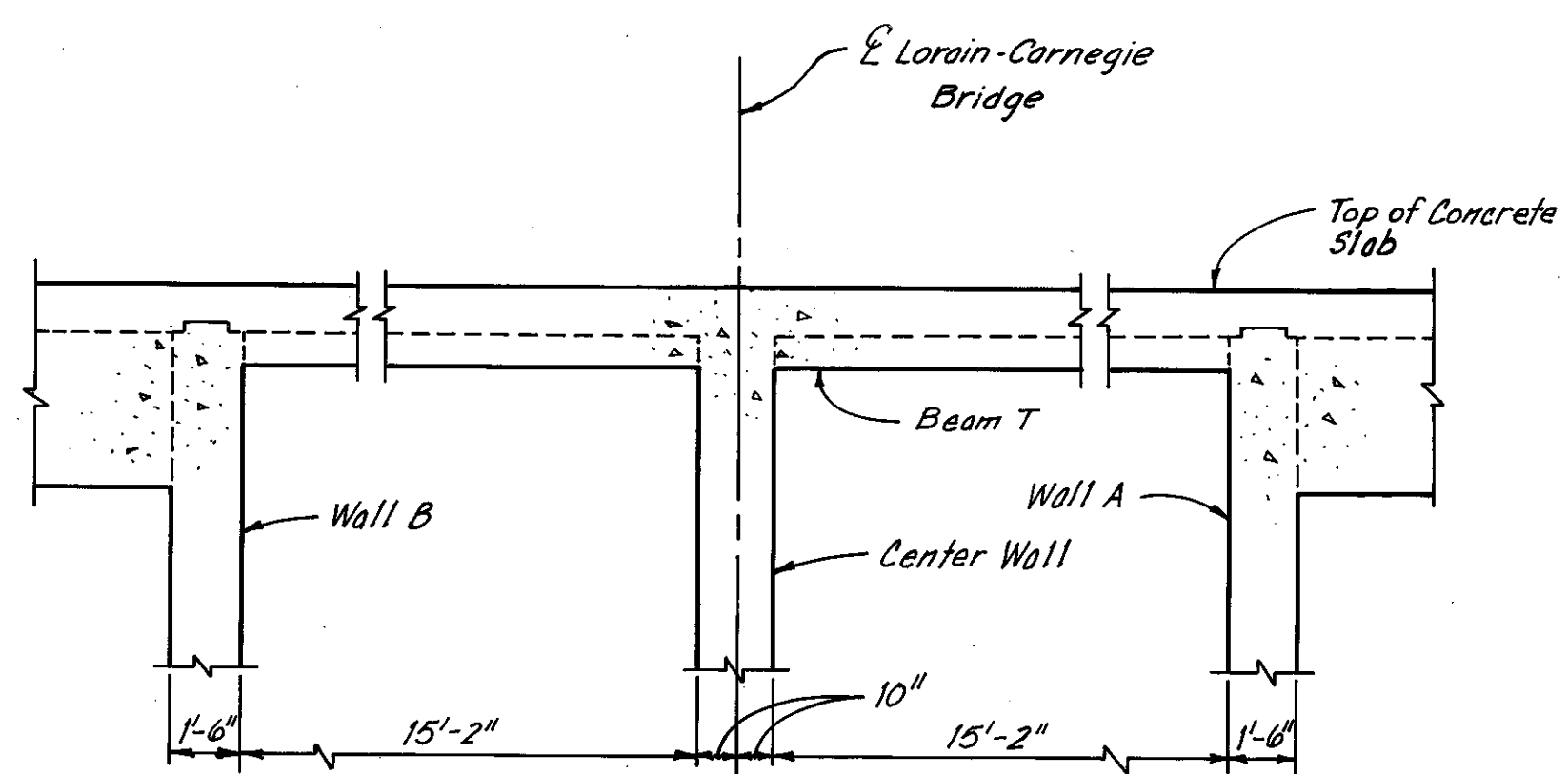
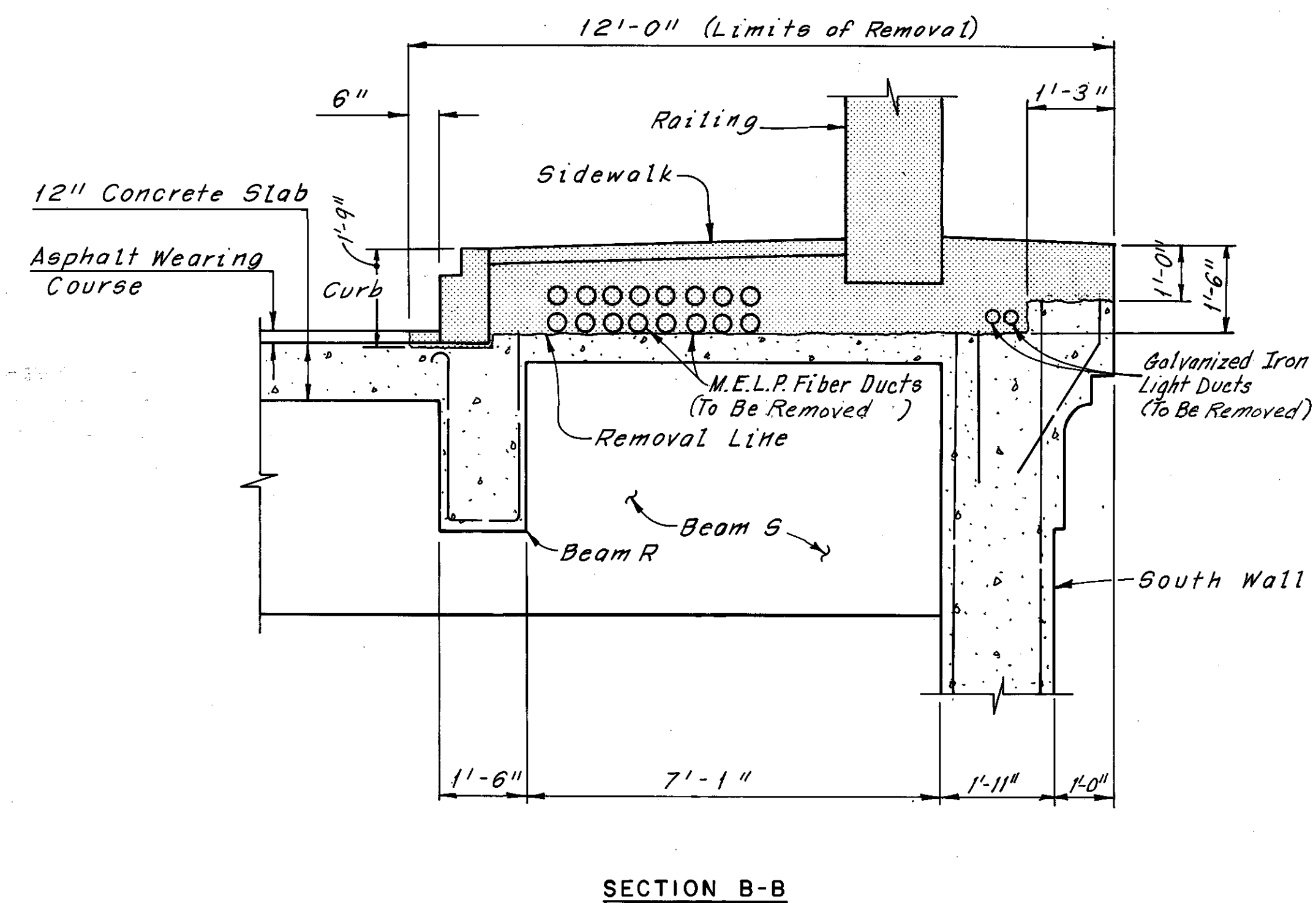
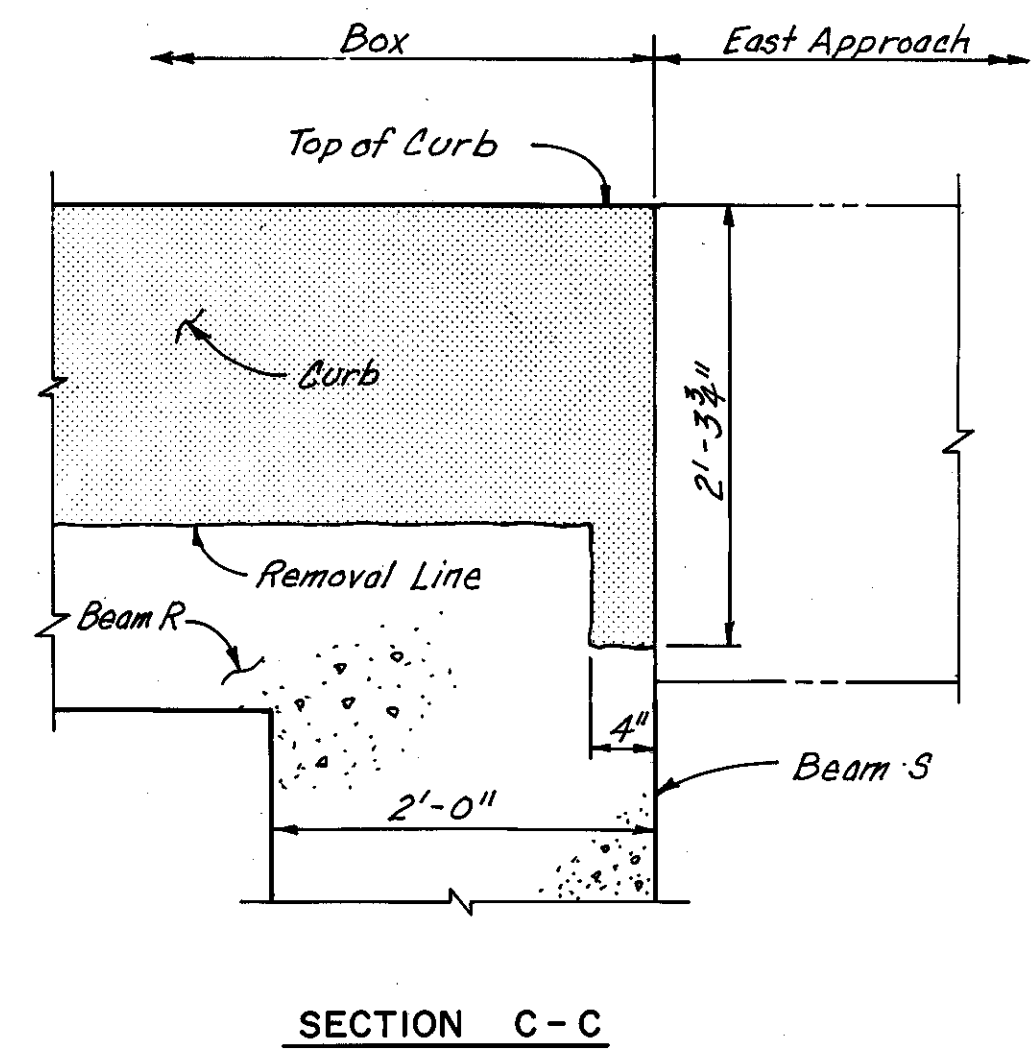
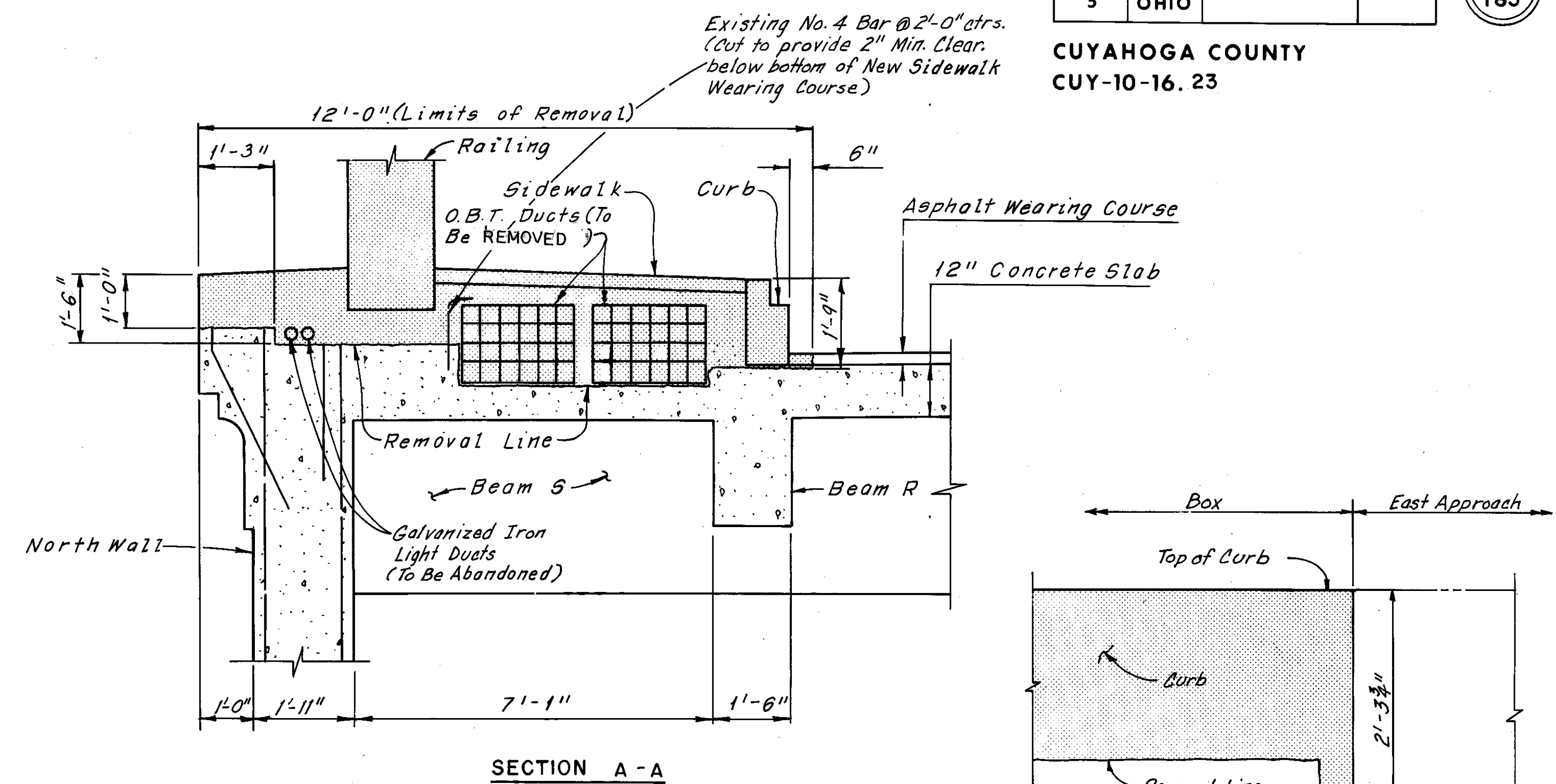
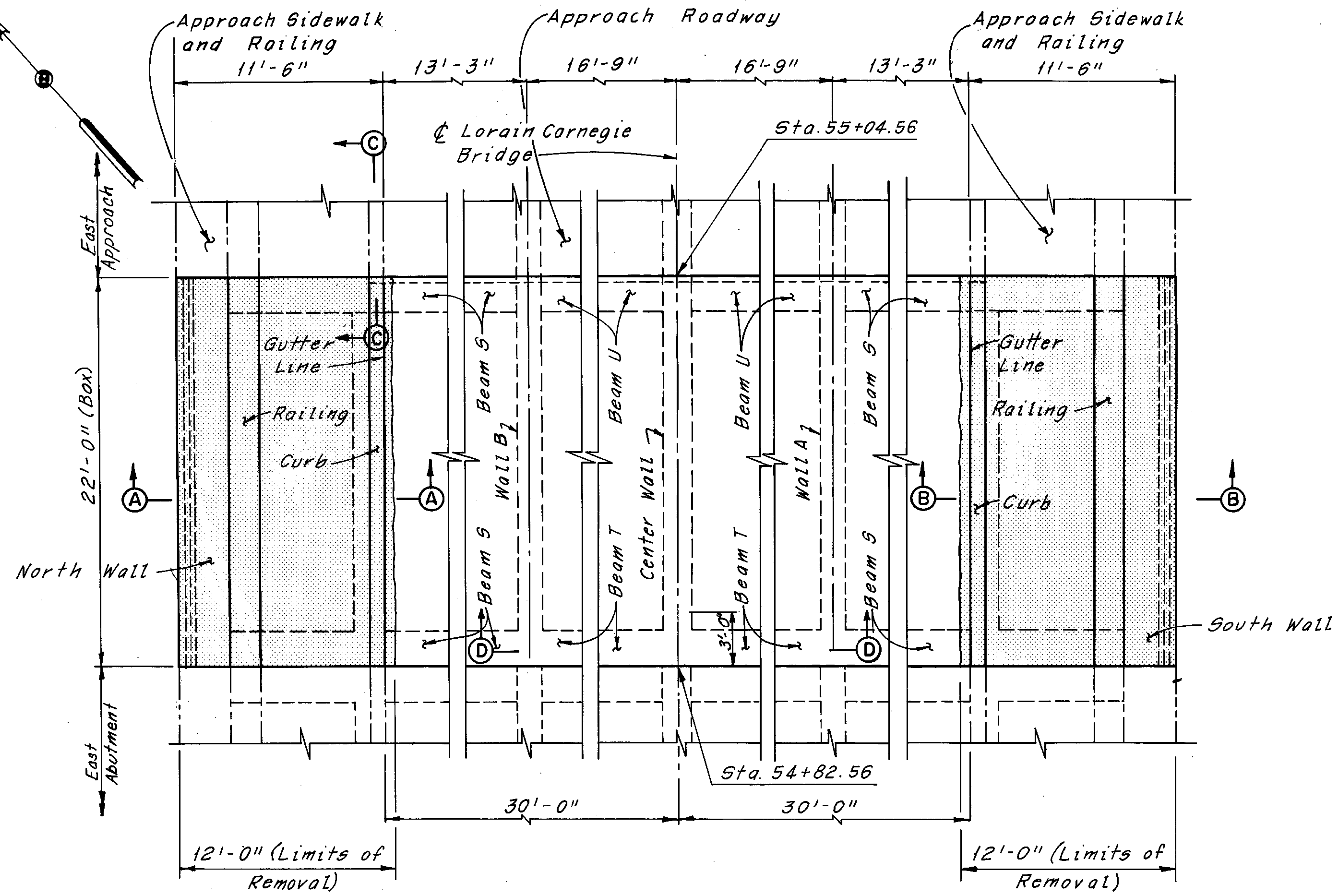
HNTB BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB	
<b>EAST ABUTMENT REMOVAL DETAILS</b>					
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)					
BR. NO. CUY.-10-1618			STA. 22+19.19		
			STA. 55+04.56		
CUYAHOGA COUNTY OHIO					
DRAWN BY	TRACED BY	CHECKED	REVIEWED	REVISED	
DATE 5-16-78	DATE 5-16-78	DATE 6-22-78	DATE	SHEET 15/72	

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

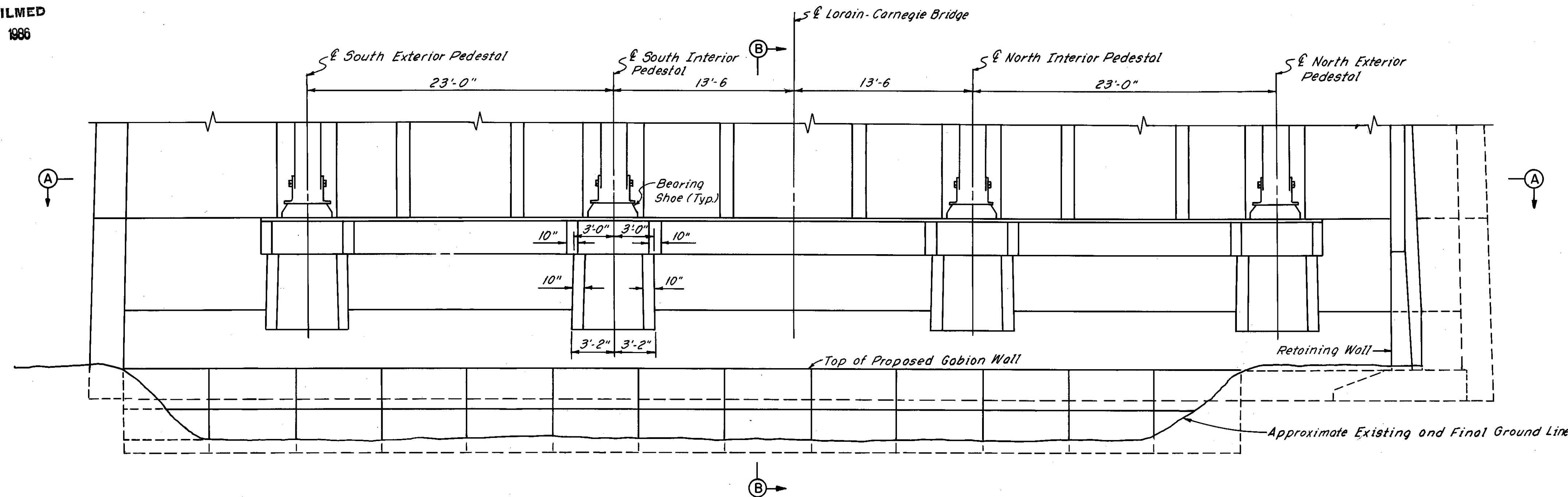
90  
185

CUYAHOGA COUNTY  
CUY-10-16.23

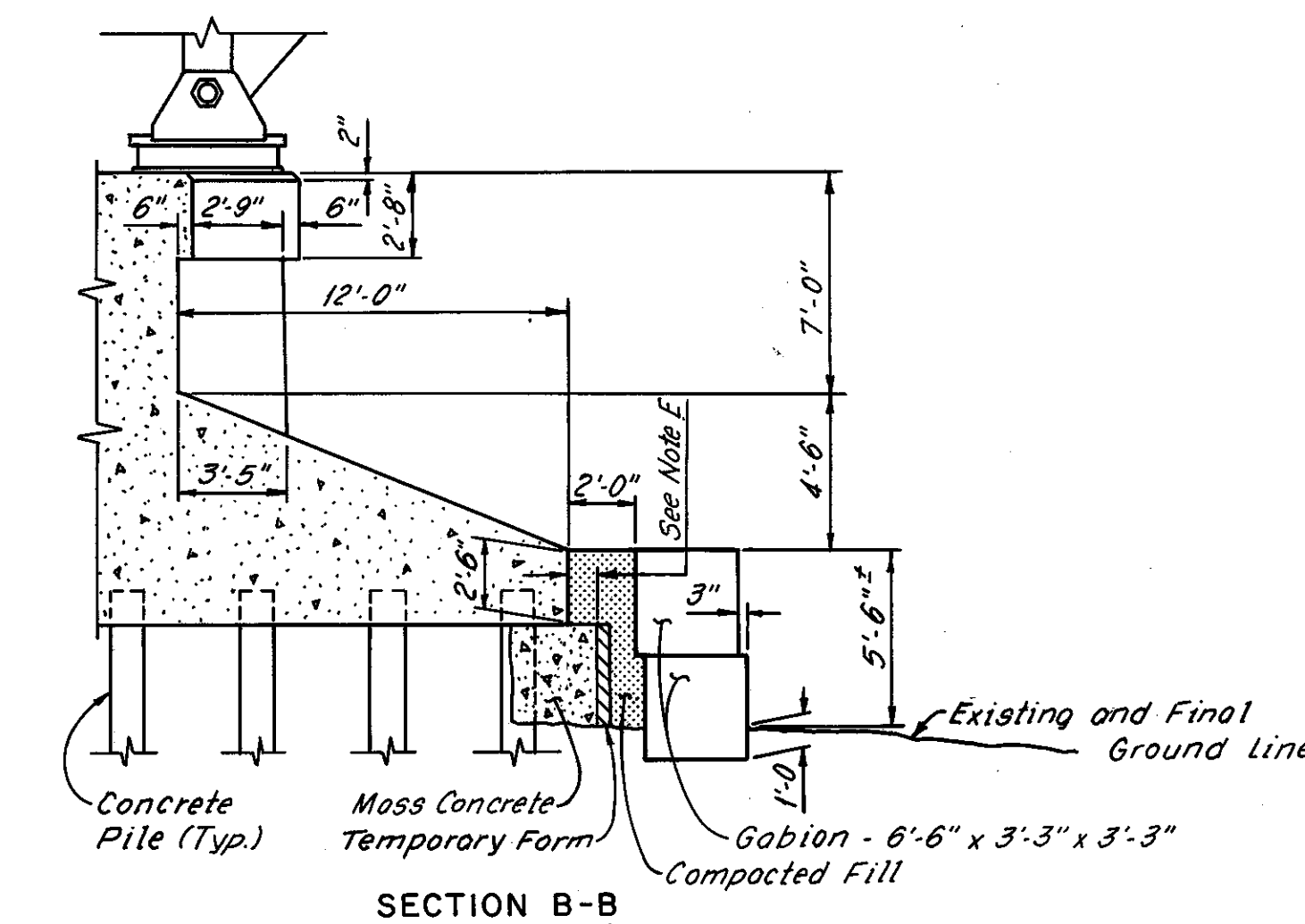


Notes: indicates portions of structure to be removed.  
The following abbreviations are used:  
ctrs. = centers  
Min. = Minimum  
Sta. = Station  
O.B.T. = Ohio Bell Telephone  
M.E.L.P. = Municipal Electric Light & Power

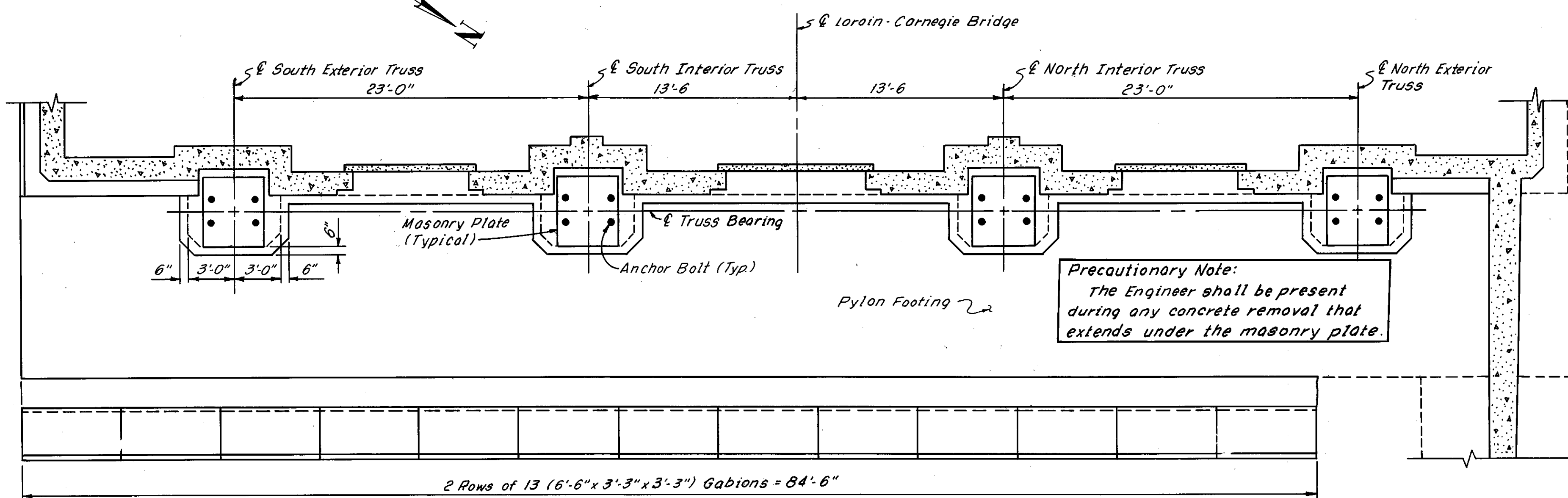
HNTB BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>BOX REMOVAL DETAILS</b>					
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)					
BR. NO. CUY-10-1618			STA. 22+19.19		
CUYAHOGA COUNTY			OHIO		
DRAWN BY AJT	TRACED BY AJT	CHECKED BY W.E.B.	REVIEWED	REVISION	
DATE 5-2-78	DATE 5-8-78	DATE 6-28-78	DATE		SHEET 16 / 72



ELEVATION  
(Looking West, Piles not shown)



NOTE E:  
The Contractor shall leave an opening large enough to allow insertion of a vibrator. Vibration of the mass concrete shall be of sufficient duration and intensity to thoroughly compact the concrete and fill all voids, but shall not be continued long enough to cause segregation.



SECTION A-A

Note:  
Dimensions shown are typical of all pedestals.

NOTE A:  
The Contractor shall place mass concrete under the toe of the pylon as shown in Section B-B and in conformance with General Note 38 on Sheet GN 9.

NOTE B:  
Grading and shaping of the existing ground to provide a firm base for the gabions shall be kept to an absolute minimum. Protruding rock or concrete and sharp breaks in the ground may be removed with the Engineer's approval.

Payment for the gabion wall will be made at the unit price bid per cu. yd. for Item 601, Slope Protection (Gabion), As Per Plan, which price shall be full compensation for labor, materials and site preparation, including compacted fill.

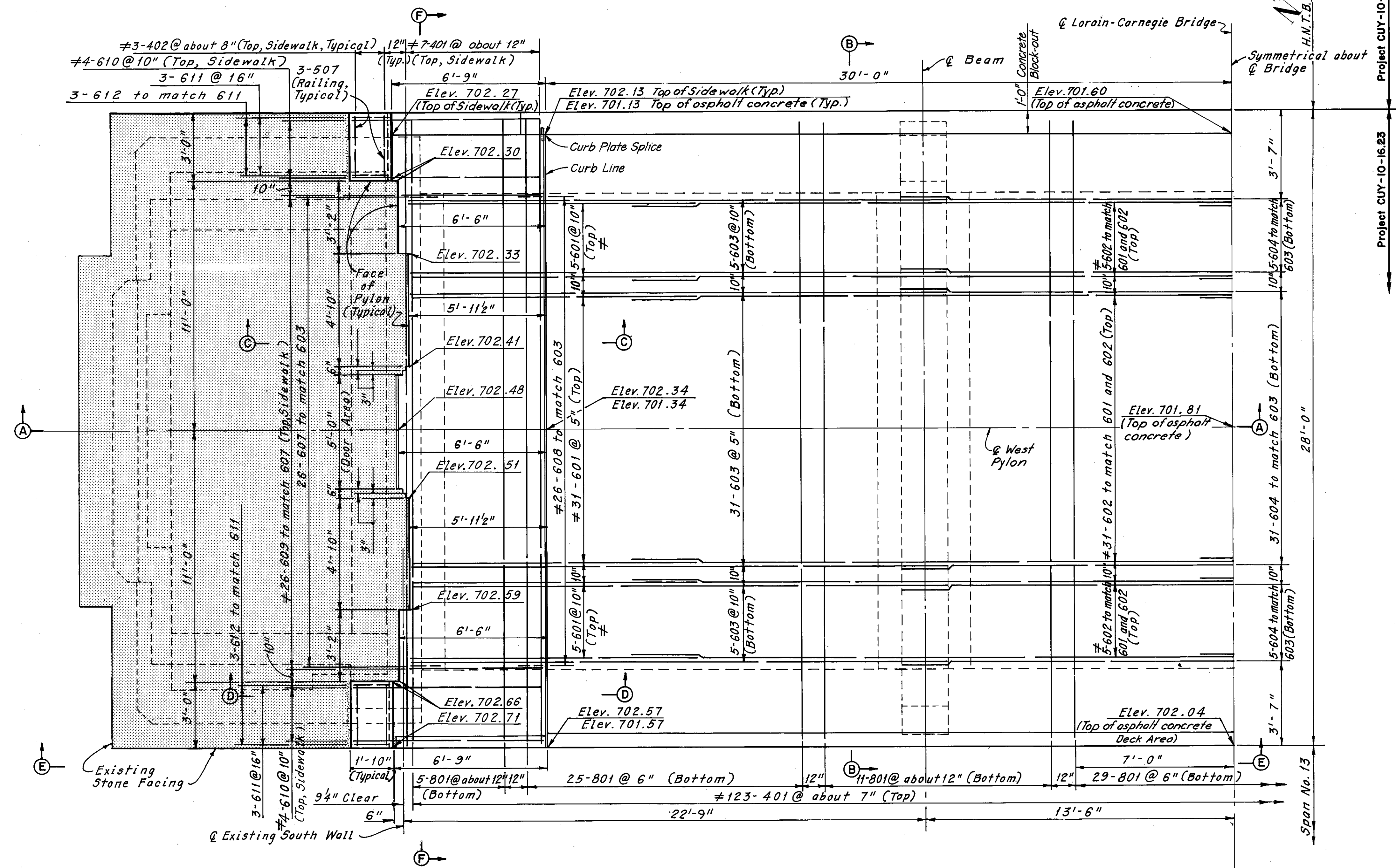
NOTE C:  
The concrete pedestal located under the north interior truss shall be repaired and restored to the plan dimensions as shown. Any part of the repair that extends under the masonry plate shall initially be constructed to a level one inch below the plate. After the bridge deck has been removed and the initially constructed part of the pedestal has cured, the cavity below the masonry plate shall be filled with damp-pack Embeco 636 Grout as manufactured by Master Builders or approved equal.

This concrete repair is part of the repairs listed in Table of Estimated Repair Quantities on Sheet E-1. Any additional labor, material and equipment required to complete this repair shall be included with the unit price bid for Item Special, Patching Concrete Structures (Repair greater than 6" average depth).

PROPOSED WORK

1. Place mass concrete as required under toe of pylon footing (See Note A).
2. Construct gabion wall in front of pylon footing (See Note B).
3. Repair truss pedestal under north interior truss (See Note C).

HNTB BRIDGE NO. 3			
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			HNTB
MISCELLANEOUS REPAIRS AT WEST PYLON REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY.-10-1618		STA. 22+19.19	
		STA. 55+04.56	
CUYAHOGA COUNTY OHIO			
DRAWN C.K.B.	TRACED D.M.O.	CHECKED R.H.W.	REVIEWED DATE
DATE 5-31-79	DATE 5-31-79	DATE 6-9-79	DATE
			SHEET 16A 72



# Denotes epoxy coated reinforcing steel.

Note:  
All reinforcing bar marks shall be prefixed WP.

REQUIRED LAP LENGTHS	
No. 6 Bar (Top)	2'-9" Min.
No. 6 Bar (Bottom)	1'-11" Min.
No. 6 Bar (Railing)	2'-0" Min.

Notes:  
For Sections A-A, B-B and C-C, see Sheet 18/72.  
For Sections D-D, F-F and View E-E, see Sheet 19/72.  
For additional notes see Sheet 18/72.

**SIDEWALK AND DECK SLAB PLAN**  
(Beam Reinforcement Not Shown)

HNTB BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**WEST PYLON - MODIFICATION PLAN**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

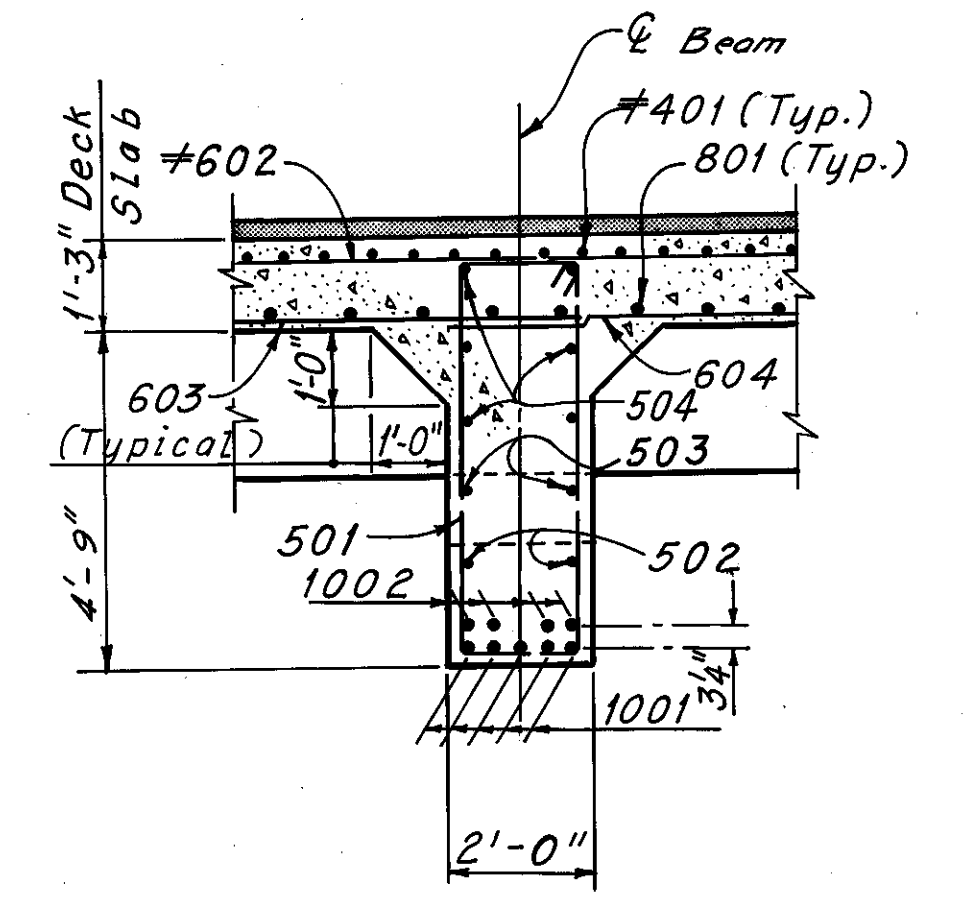
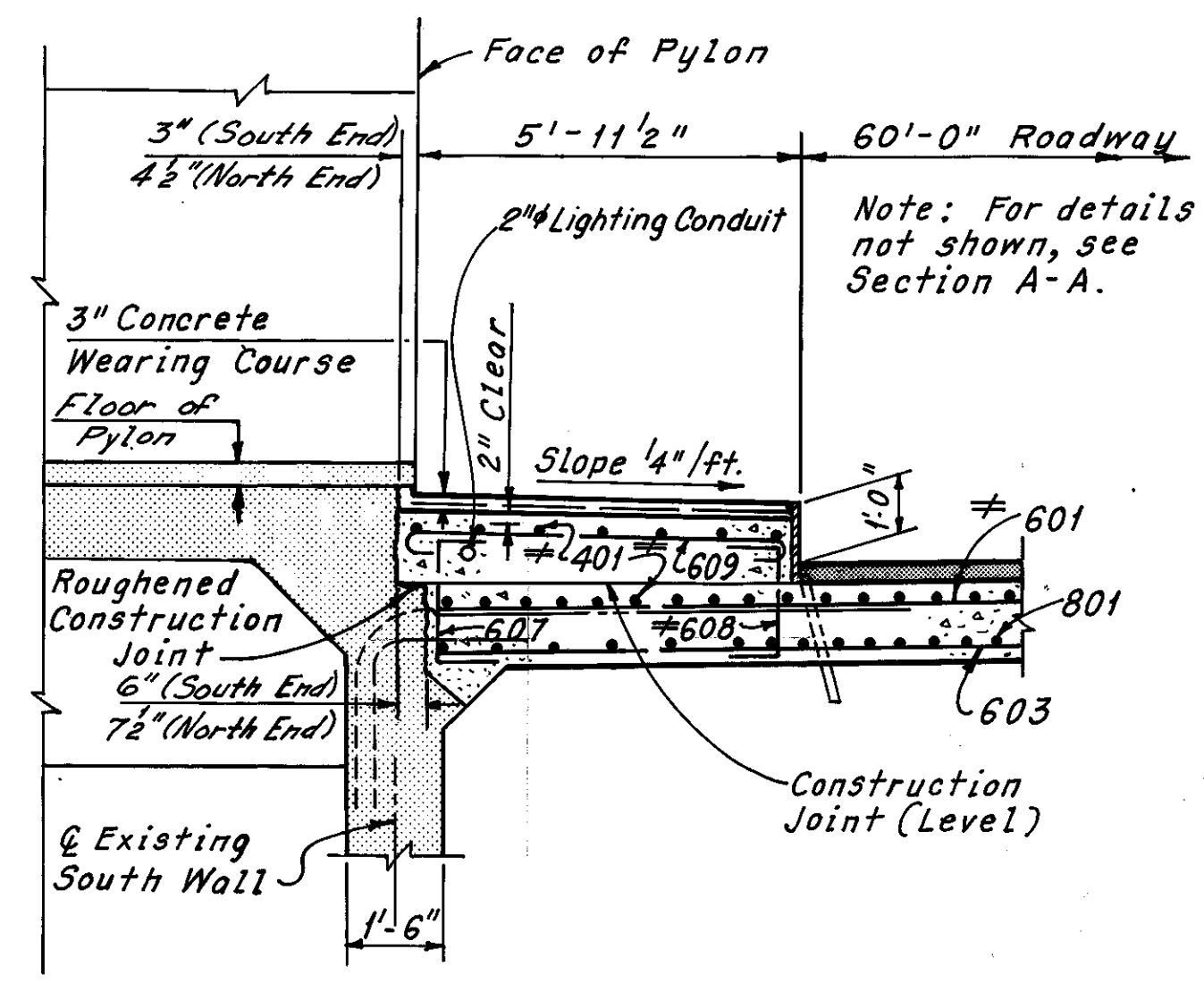
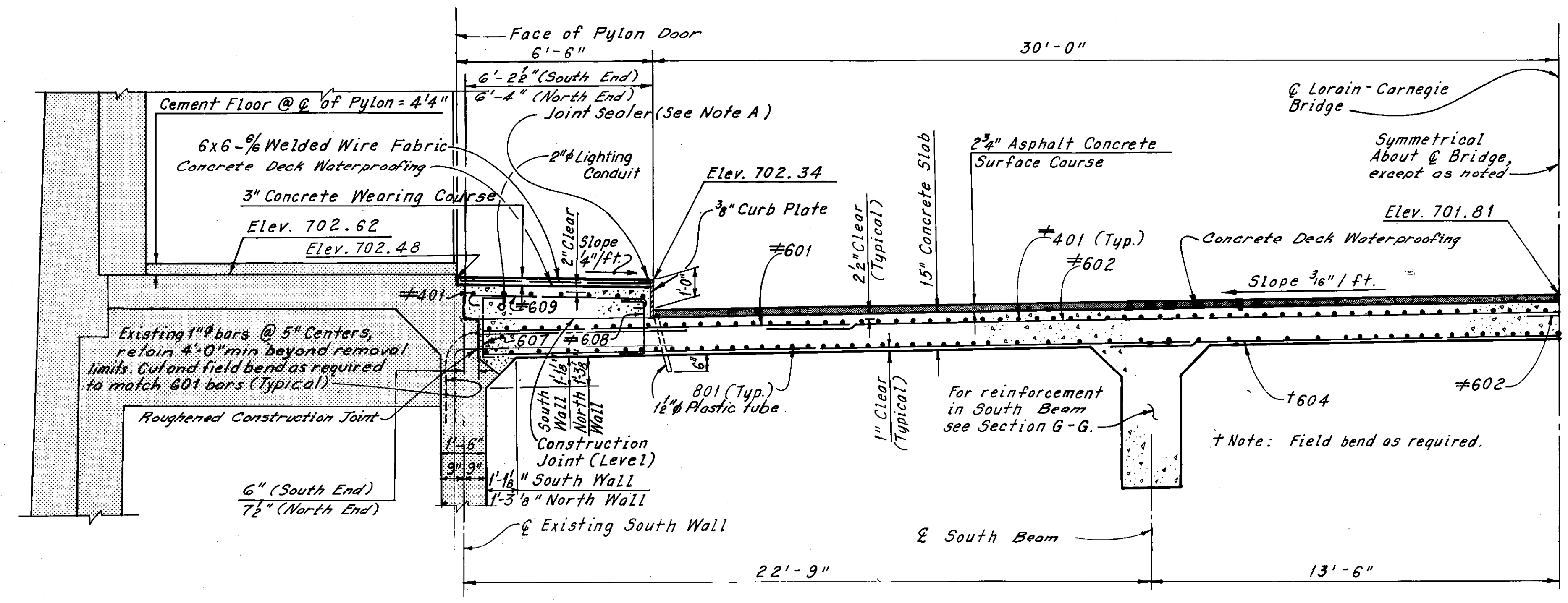
CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED W.E.B.	REVIEWED	REVISED
DATE 5-31-78	DATE 6-5-78	DATE 7-20-78	DATE	DATE

SHEET 17/72

# Denotes epoxy coated reinforcing steel.

Note:  
All reinforcing bar marks shall be prefixed WP.

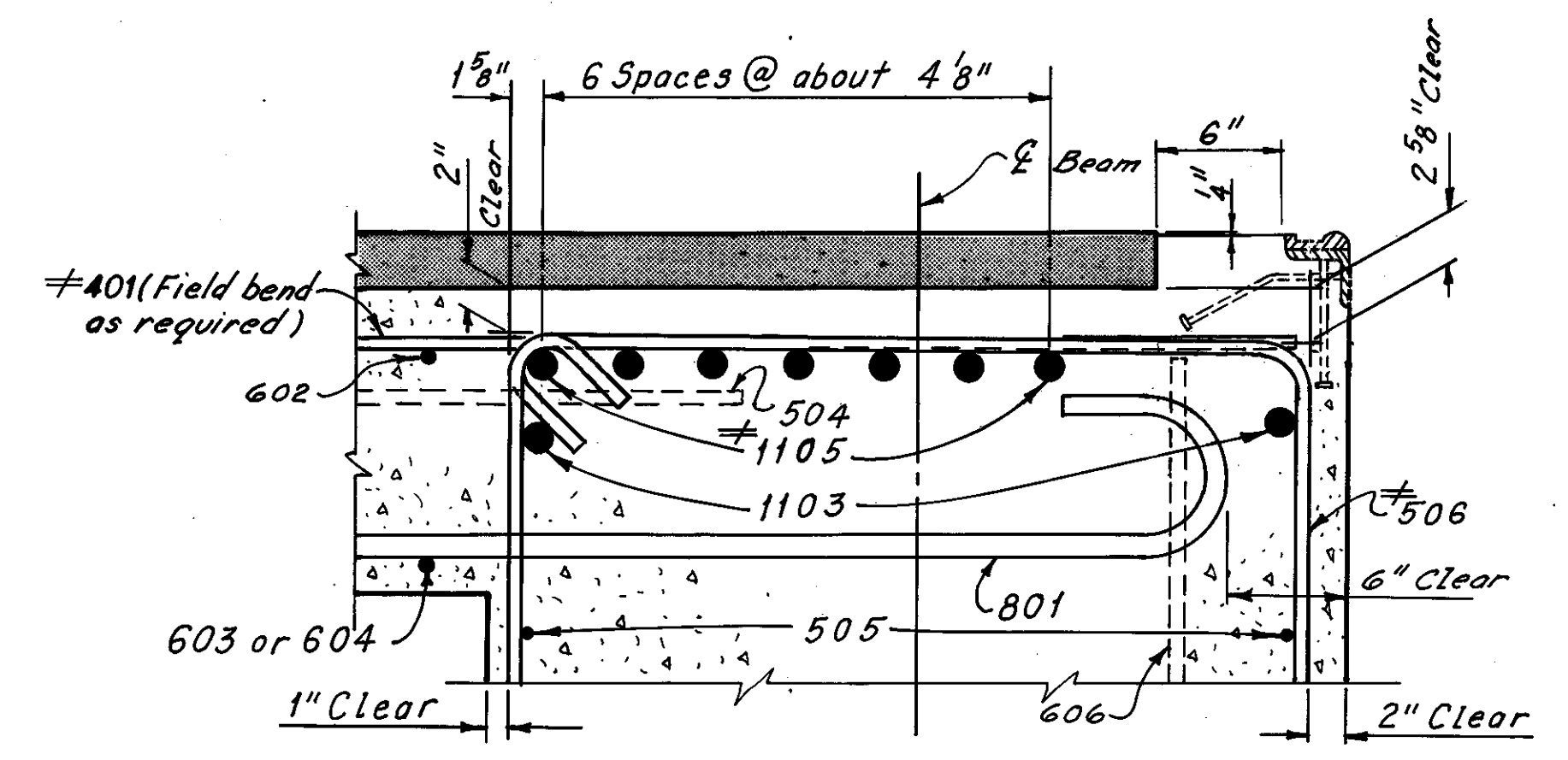


SECTION A-A  
(South End Shown, North End Similar, except as noted)

PART SECTION C-C  
(South End Shown, North End Similar, except as noted)

SECTION G-G

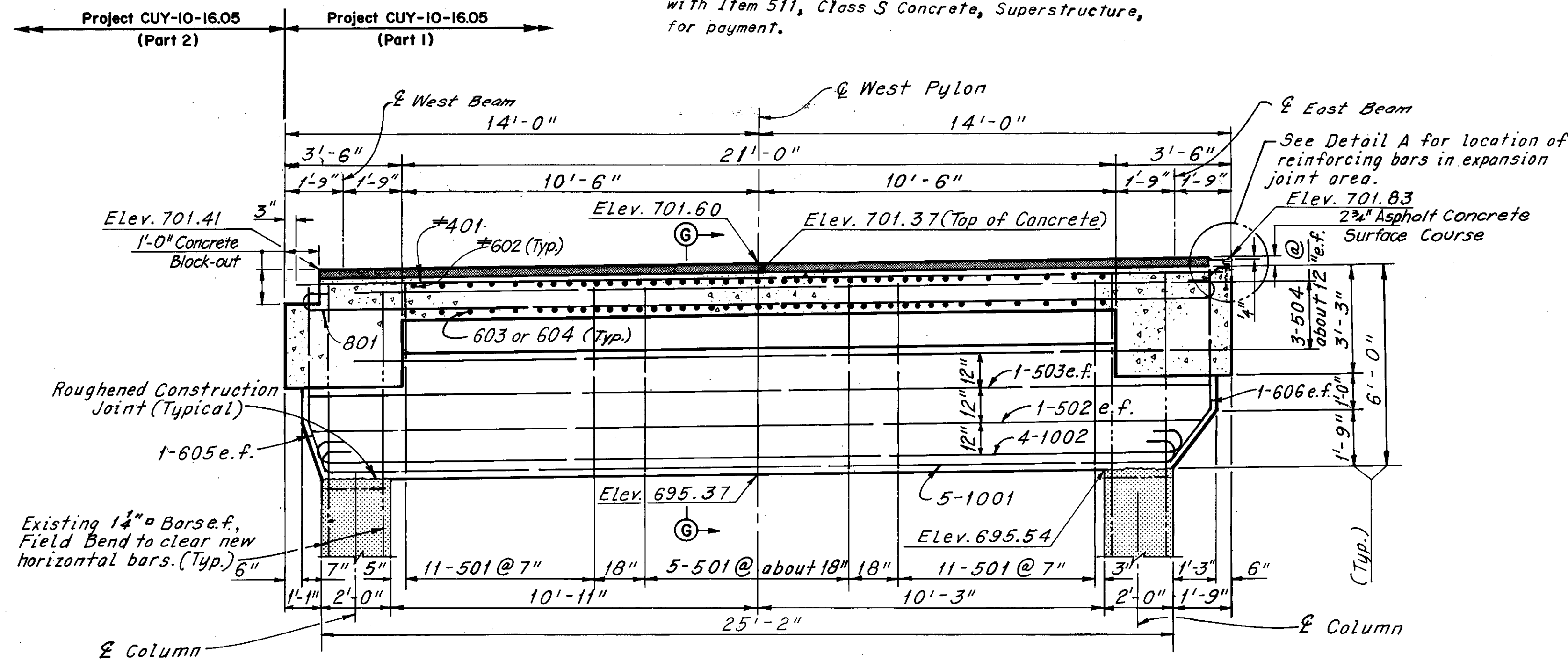
Note A:  
Joint Sealer Material shall be hot applied bridge deck waterproofing material, which also meets the requirement of 705.01. To be included with Item 511, Class S Concrete, Superstructure, for payment.



DETAIL A  
(East Beam Shown, West Beam Similar)

Notes:  
For location of Section A-A, B-B and C-C, see Sheet 17/72.  
Existing vertical exposed steel reinforcing bars in columns and wall shall be retained; field bend and cut as required to clear new steel reinforcing bars.  
Indicates existing structure to remain.  
For Expansion Joint Details at East Side of West Pylon, see Sheets 40/72 and 43/72.  
For Expansion Joint Details at West Side of West Pylon, see Sheets 41/72 and 43/72.  
For Reinforcement Schedule, see Sheet R/1.  
The following abbreviations are used:  
Elev. = Elevation  
Typ. = Typical  
e.f. = each face  
For Asphalt Concrete Surface Course Detail, see Sheet CD1.  
For Curb Plate Detail, see Sheet CD1.  
For Subdrainage for Wearing Course Detail, see Sheet CD1.

REQUIRED LAP LENGTHS	
No. 6 Bar (Top)	2'-9" Min.
No. 6 Bar (Bottom)	1'-11" Min.



SECTION B-B  
(South Beam Shown, North, Same)

Notes:  
Elevations shown are at  $\bar{c}$  of Beam.  
Transverse End Beam Reinforcement not shown, see Section H-H, Sheet 19/72.

HNTB BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**WEST PYLON - MODIFICATION DETAILS**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

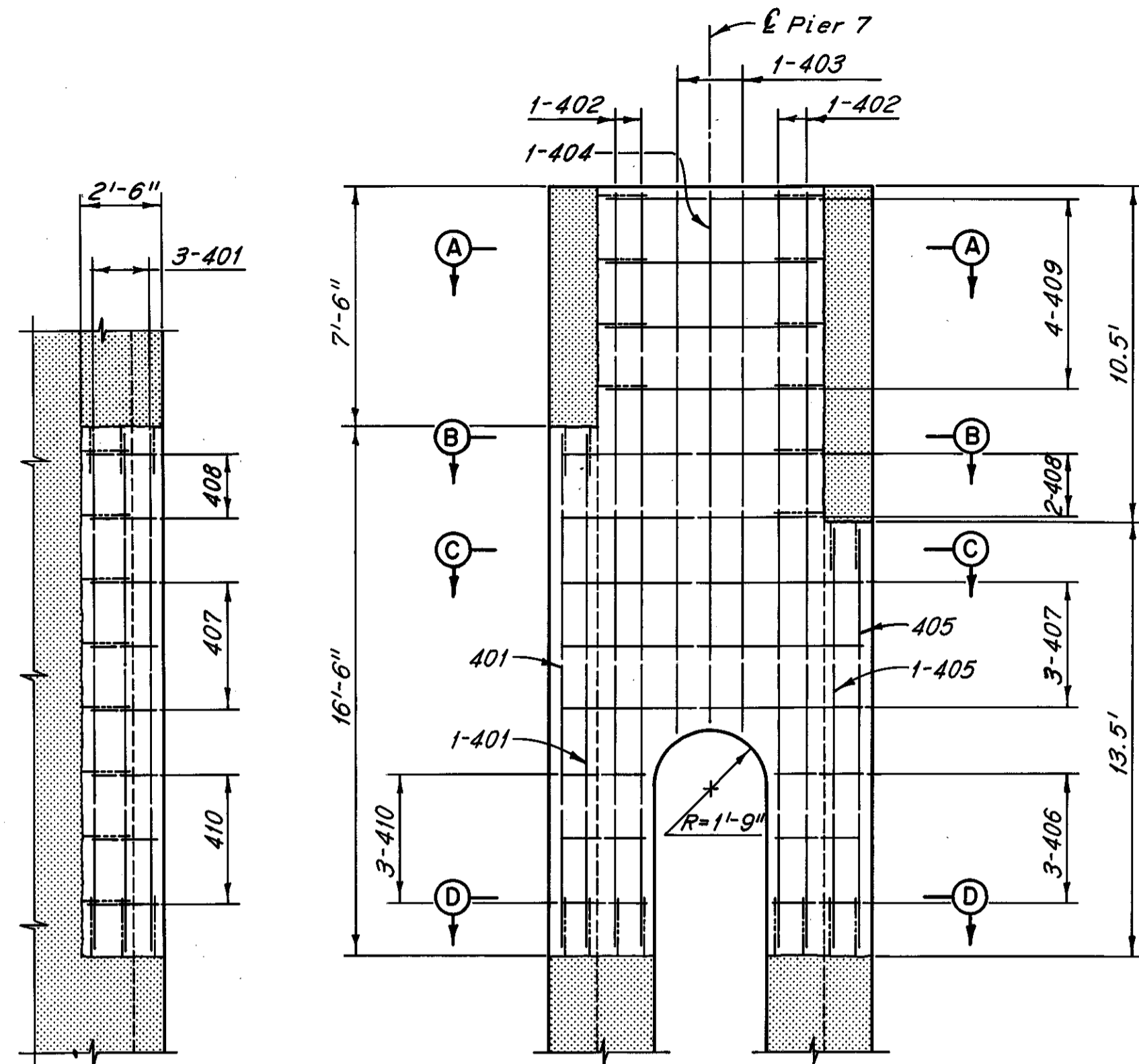
DRAWN/C.P.	TRACED/C.P.	CHECKED/W.F.B.	REVIEWED	REVISED
DATE 6-6-78	DATE 6-9-78	DATE 7-20-78	DATE	DATE

SHEET 18/72



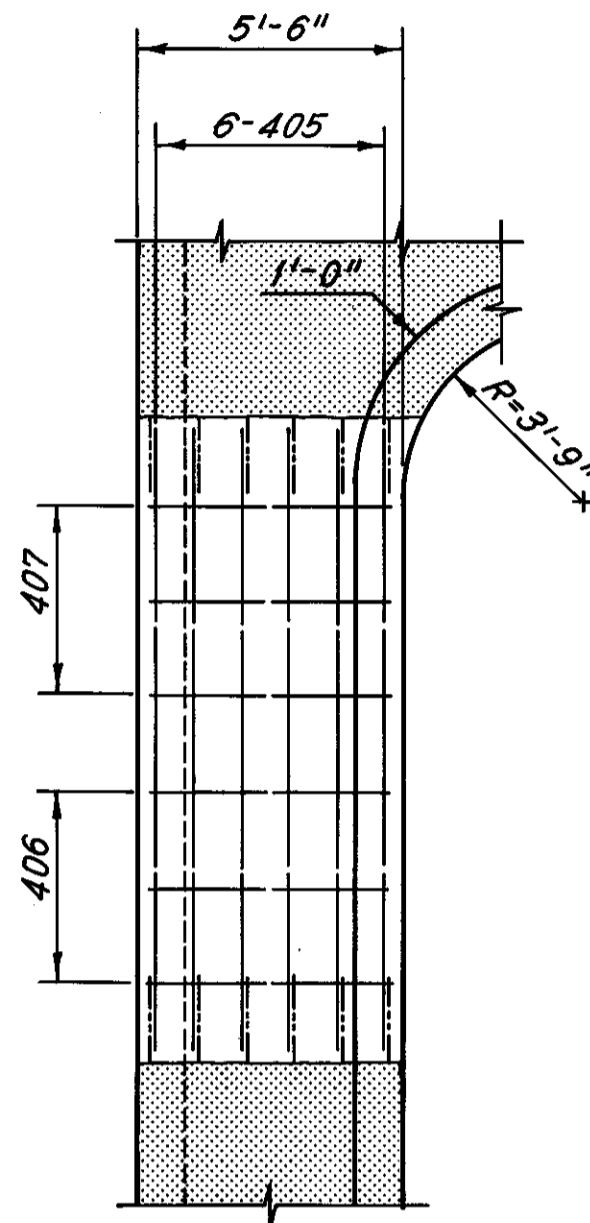


CUYAHOGA COUNTY  
CUY-10-16.23

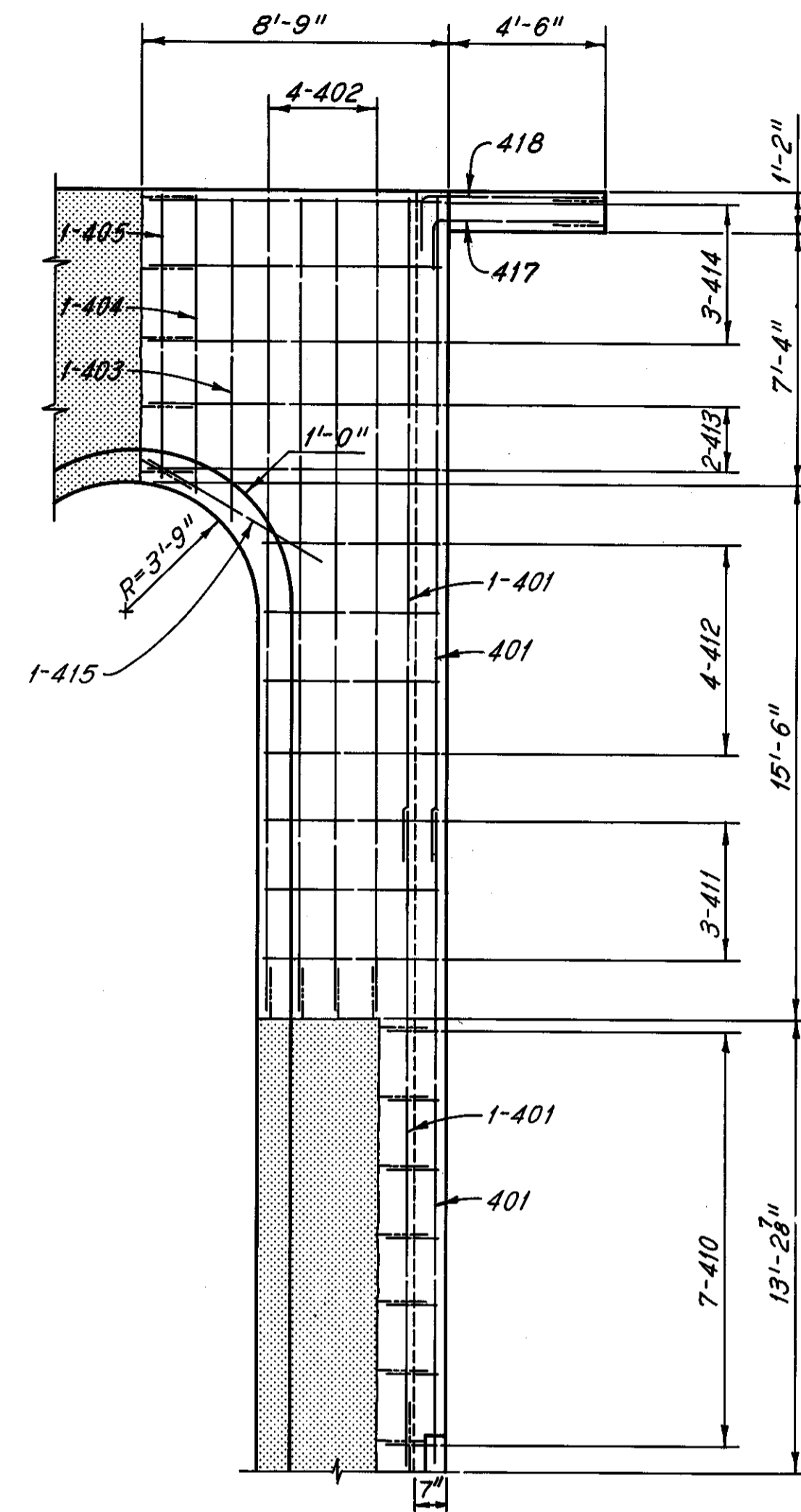


PART WEST ELEVATION

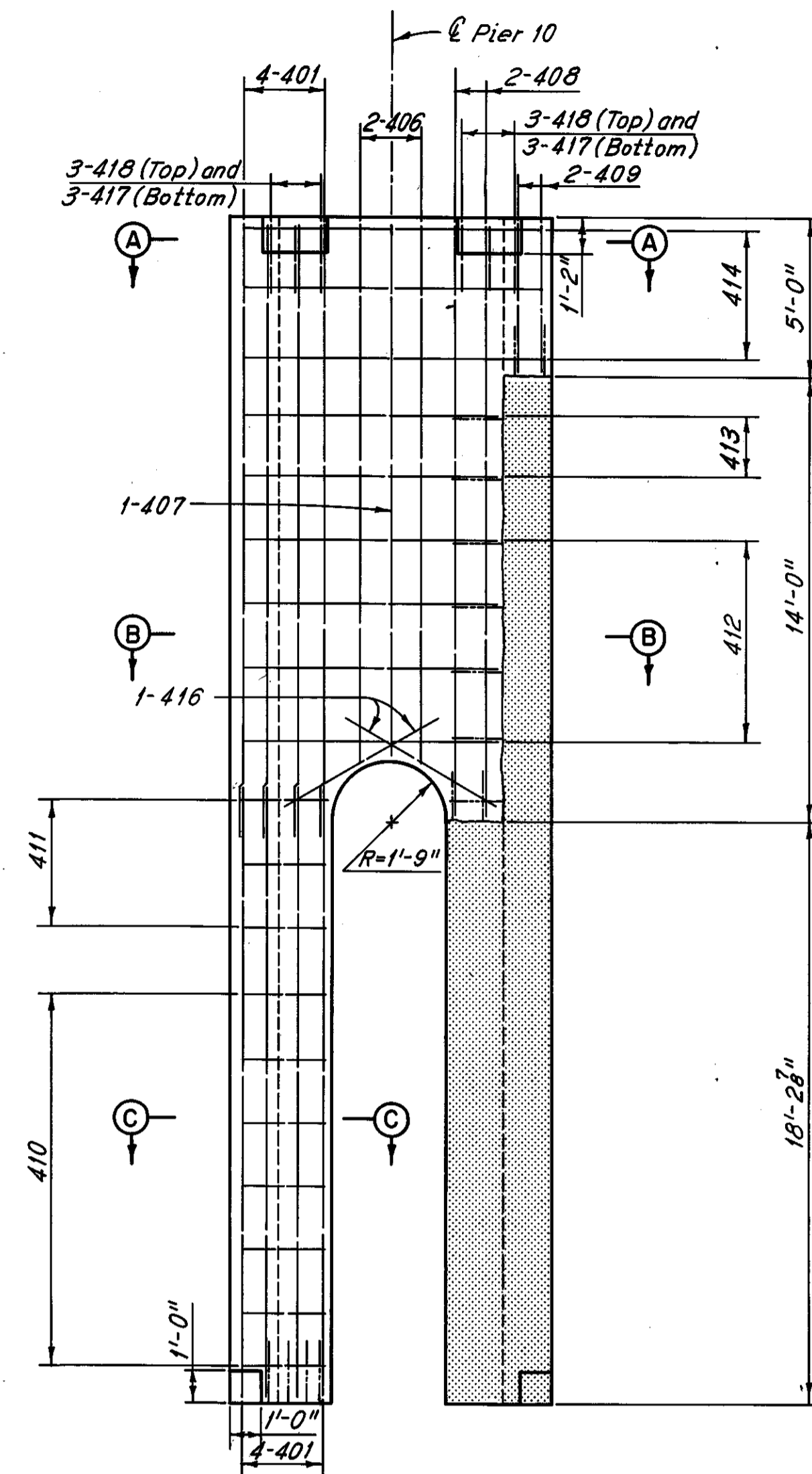
PART SOUTH ELEVATION



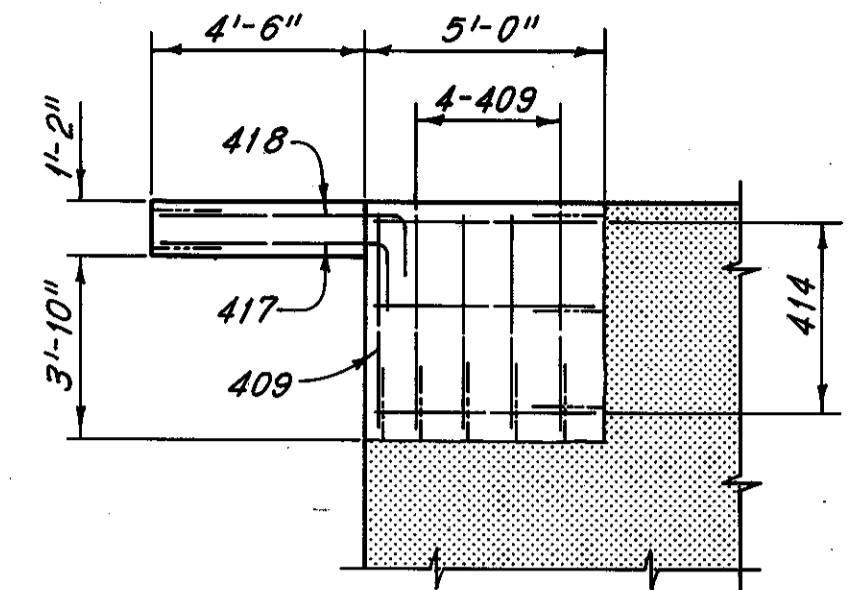
PART EAST ELEVATION



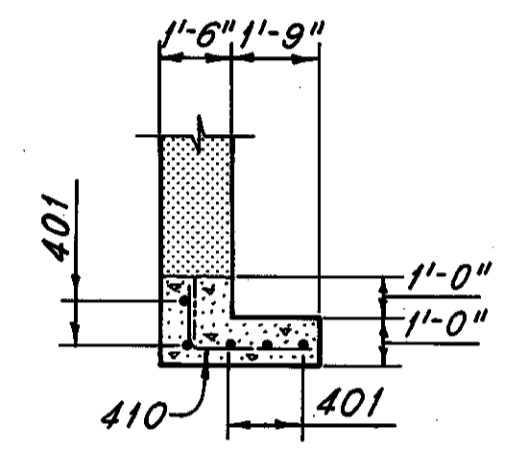
PART EAST ELEVATION



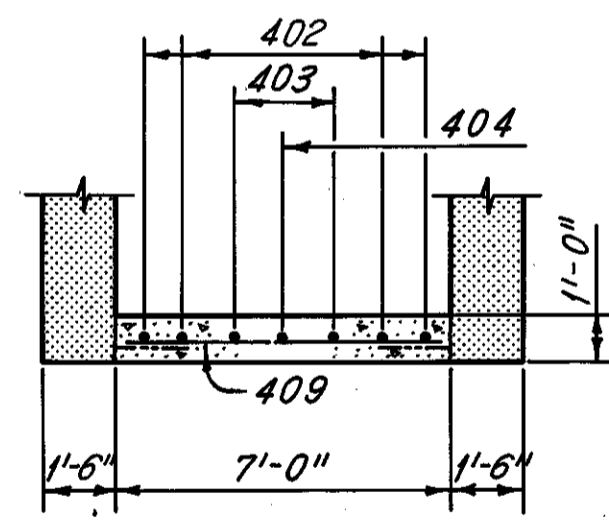
NORTH ELEVATION



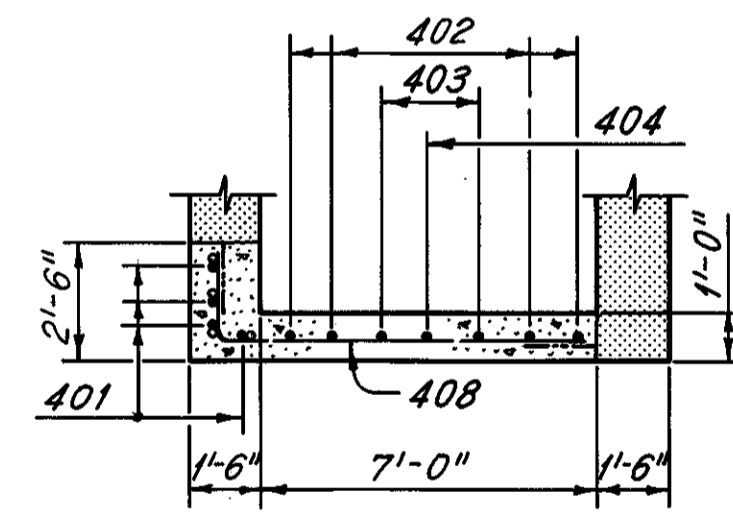
PART WEST ELEVATION



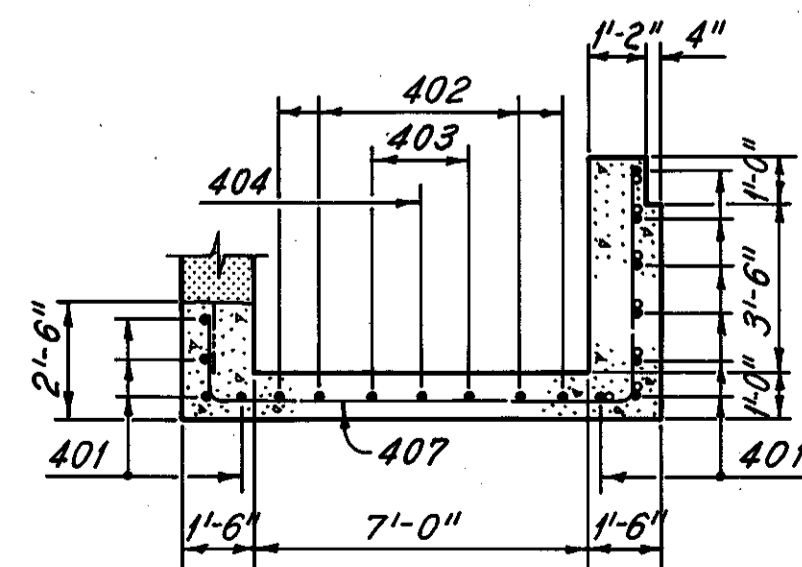
SECTION C-C



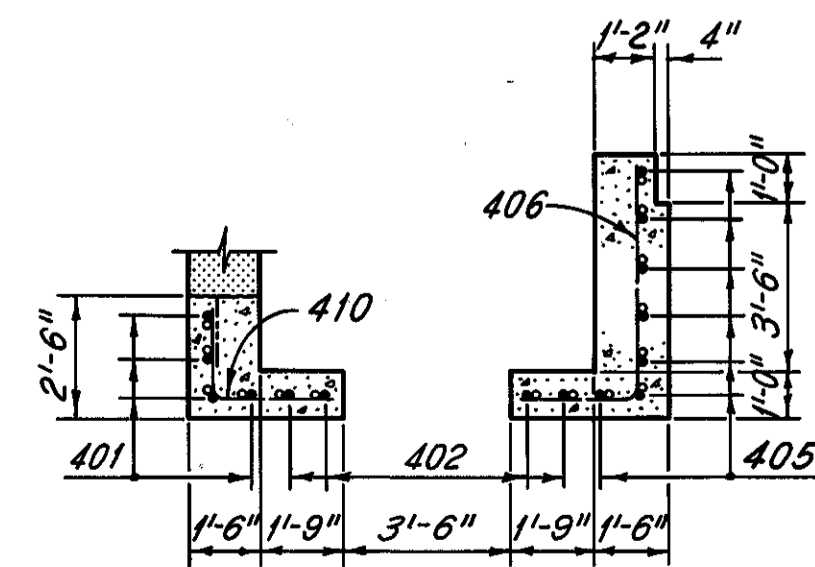
SECTION A-A



SECTION B-B



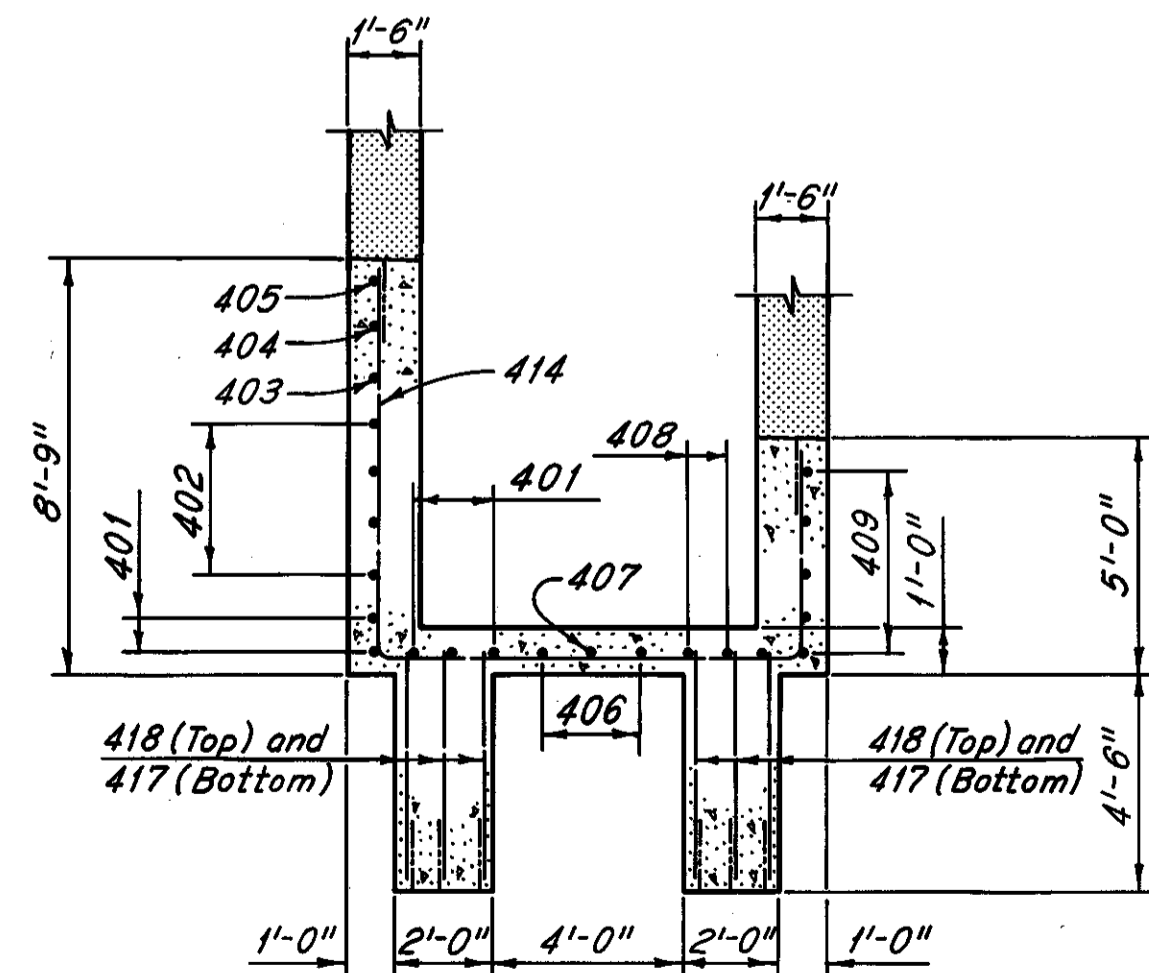
SECTION C-C



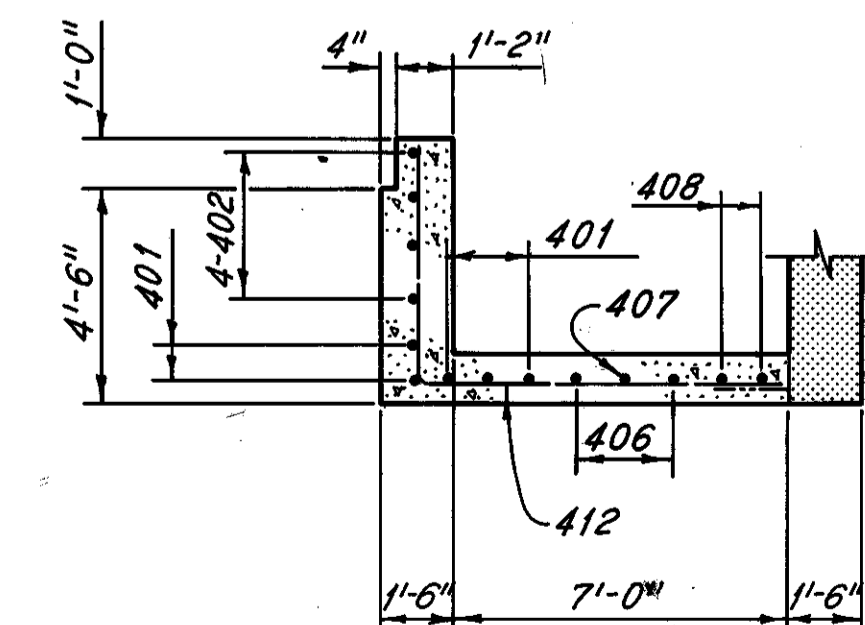
SECTION D-D

PIER 7

All reinforcing bar marks for Pier 7 shall be prefixed PA.



SECTION A-A



SECTION B-B

PIER 10

All reinforcing bar marks for Pier 10 shall be prefixed PB.

Notes:  
Reinforcement shall be placed to match existing wall reinforcement.  
Zip-a-tone indicates existing structure.  
For reinforcement schedule, see Sheet R-11.  
For removal details, see Sheet 12/72 and 13/72.

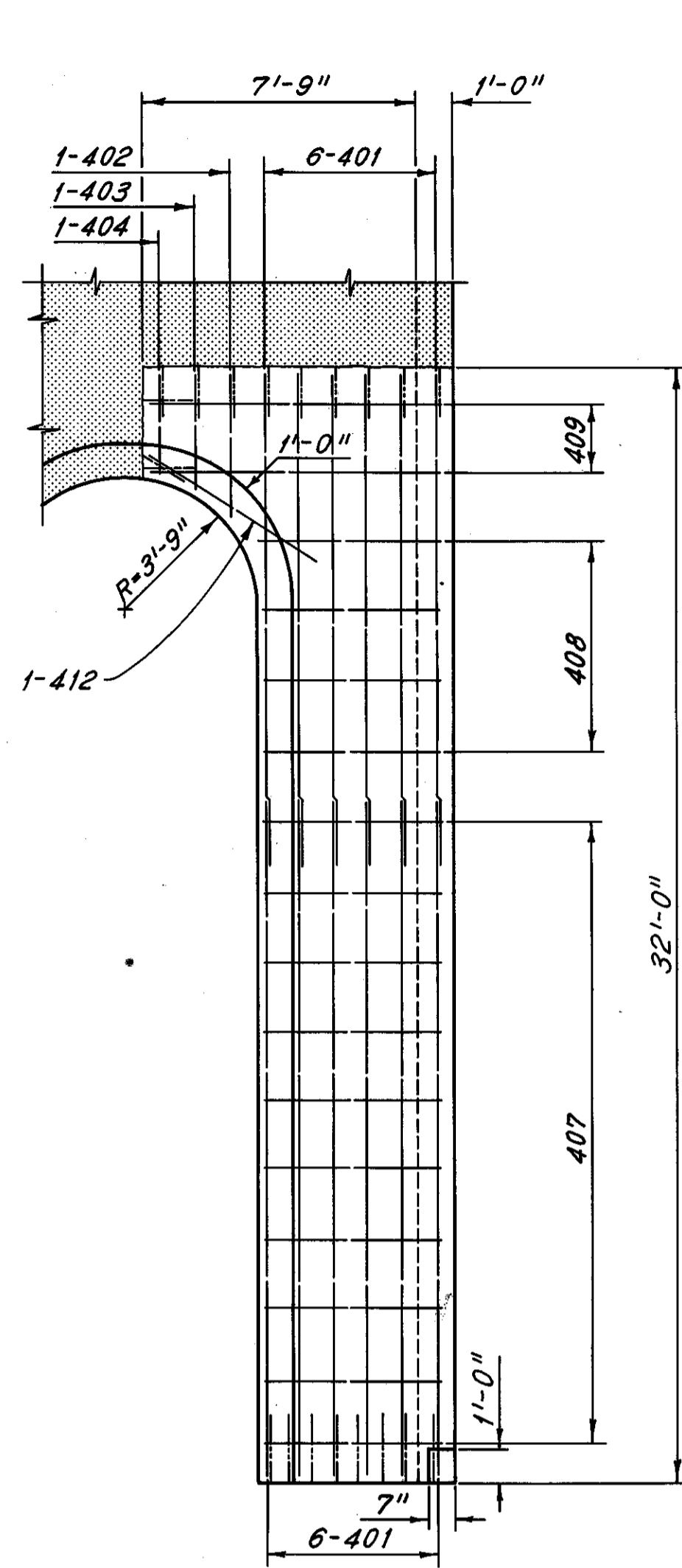
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

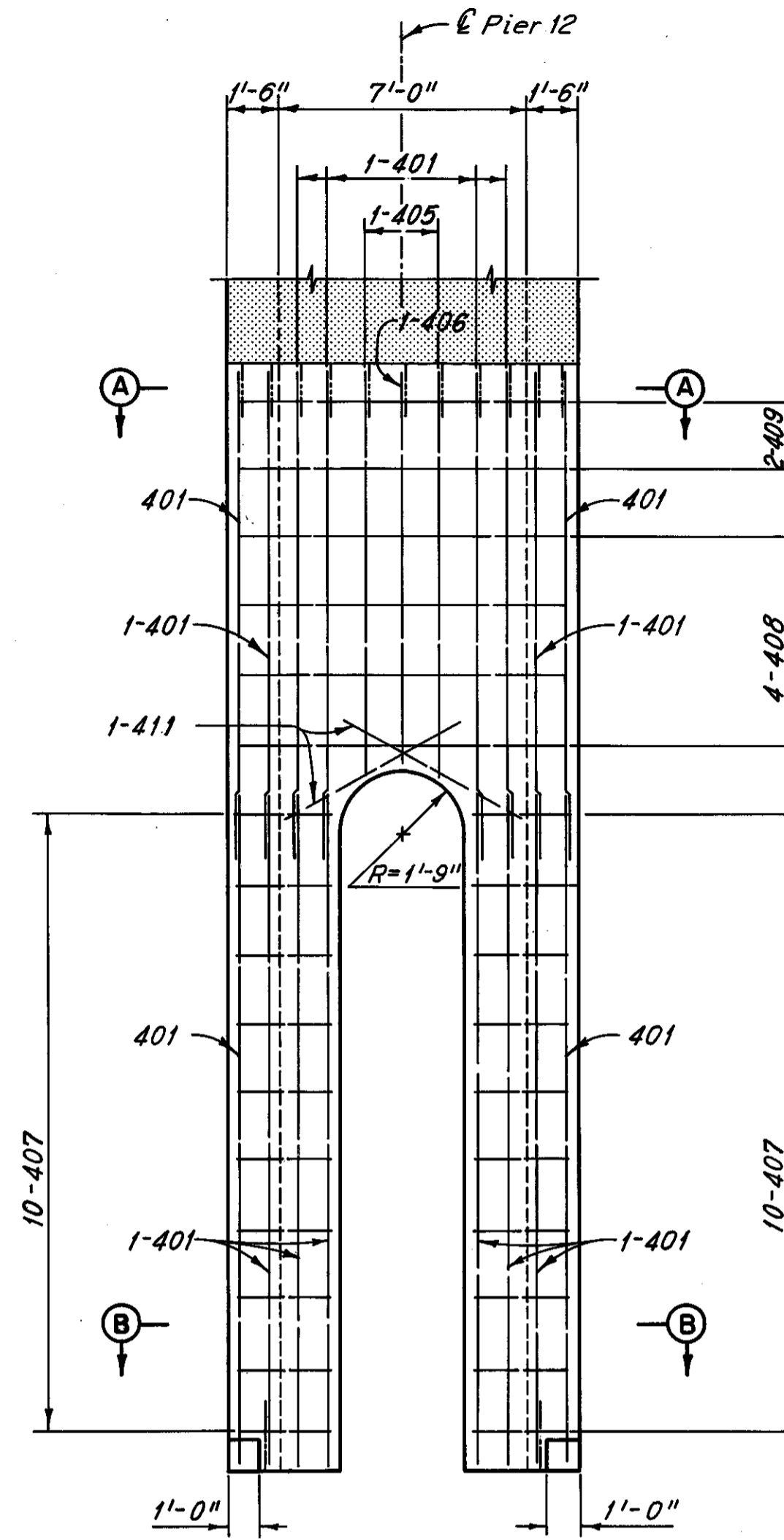
HNTB

REPAIR PLANS  
PIERS 7 AND 10  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO  
STA. 55+04.56

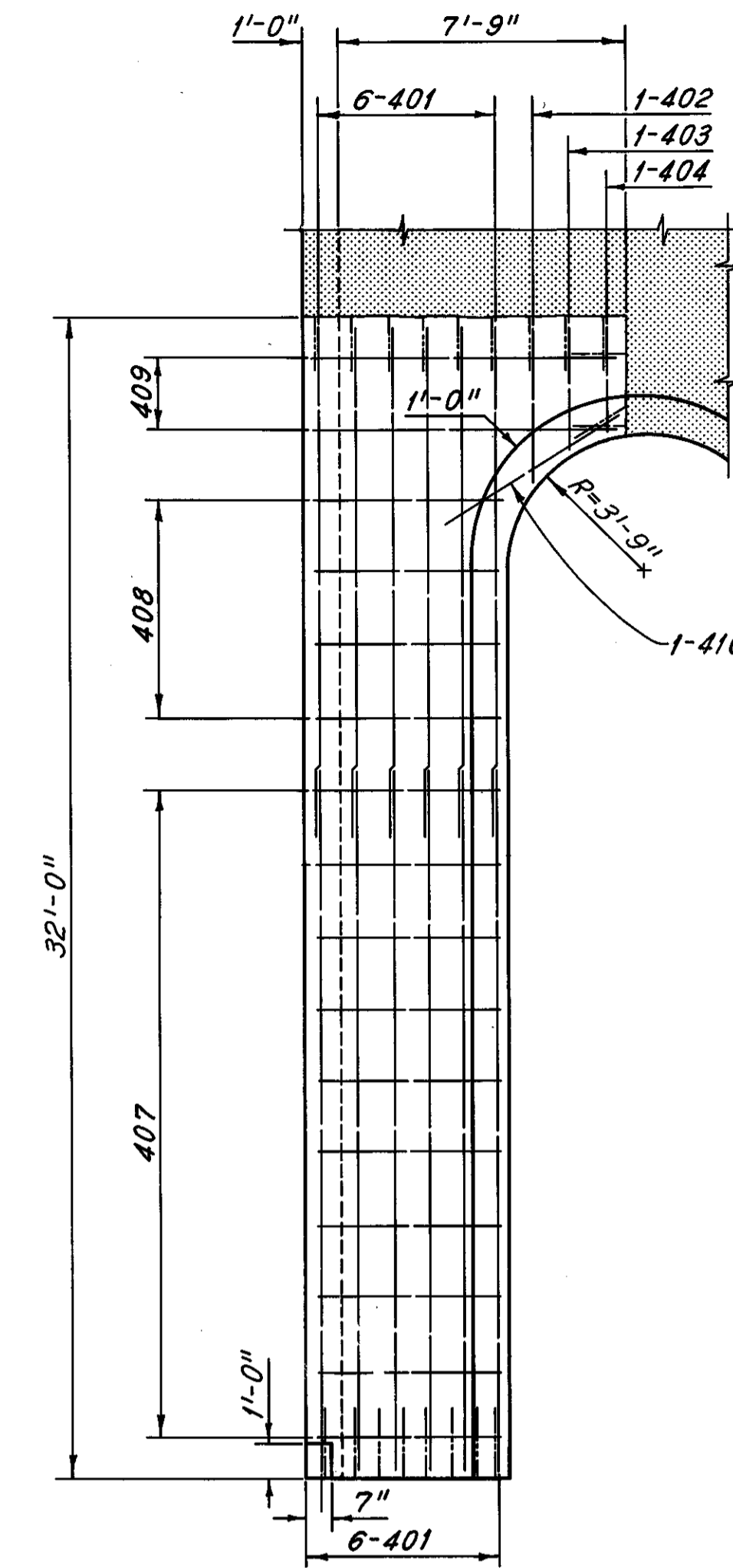
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE: 3-10-75	DATE: 3-18-75	DATE: 5-31-75	DATE:	SHEET 20/72



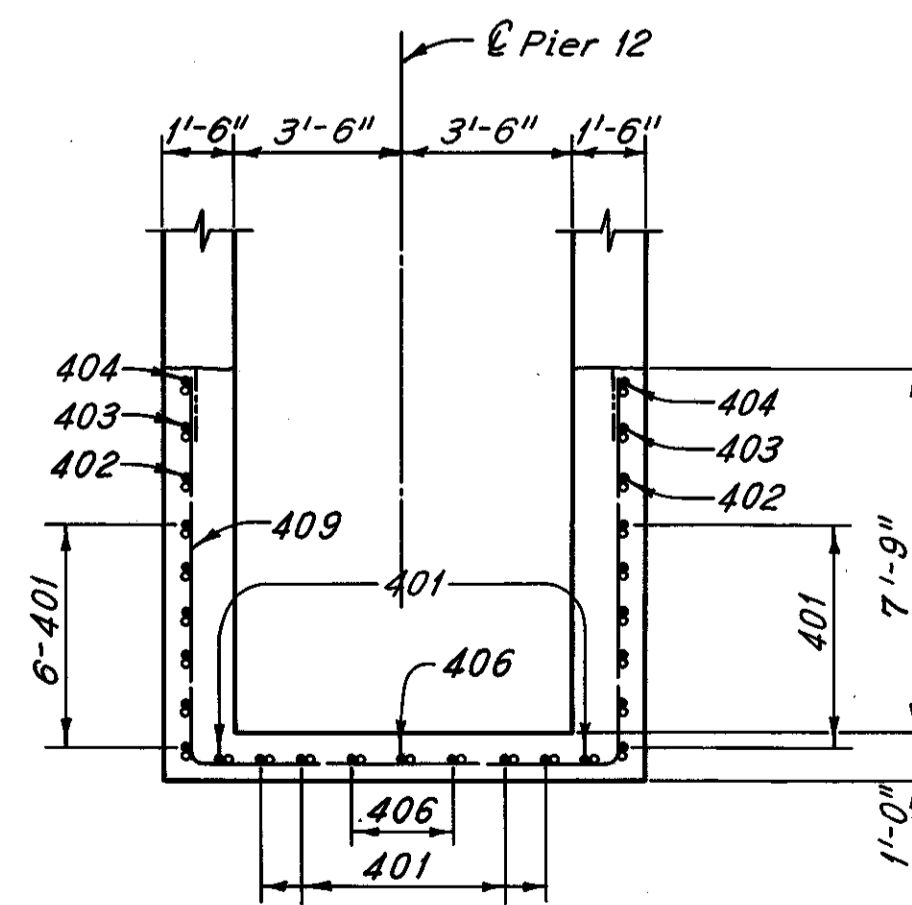
PART EAST ELEVATION



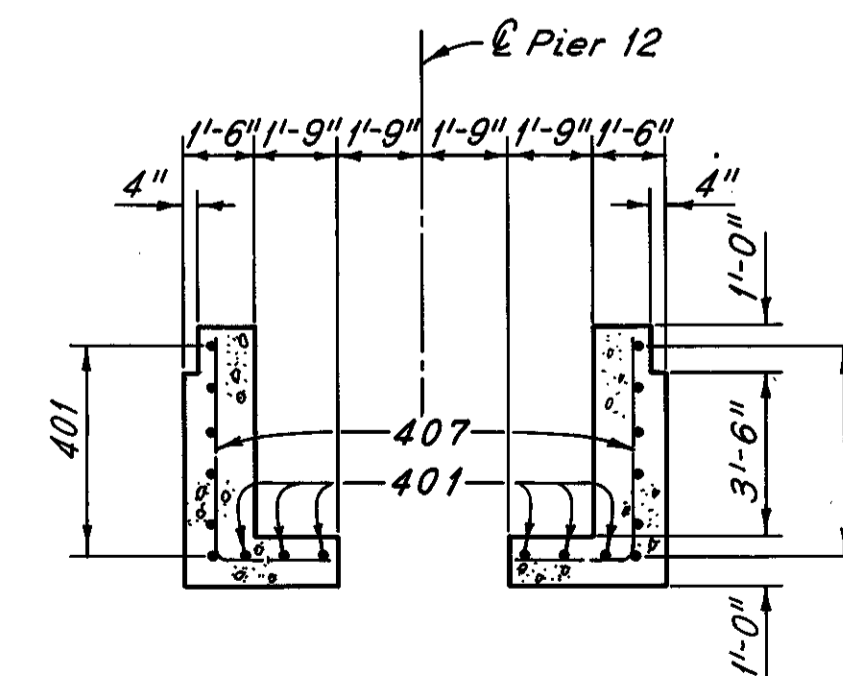
PART NORTH ELEVATION



PART WEST ELEVATION



SECTION A-A



SECTION B-B

All reinforcing bar marks for Pier 12 shall be prefixed PC.

Notes:  
Reinforcement shall be placed to match existing wall reinforcement.  
Zip-a-tone indicates existing structure.  
For reinforcement schedule, see Sheet R 11.  
For removal details, see Sheet 13 72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

REPAIR PLANS  
PIER 12  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO  
STA. 55+04.56

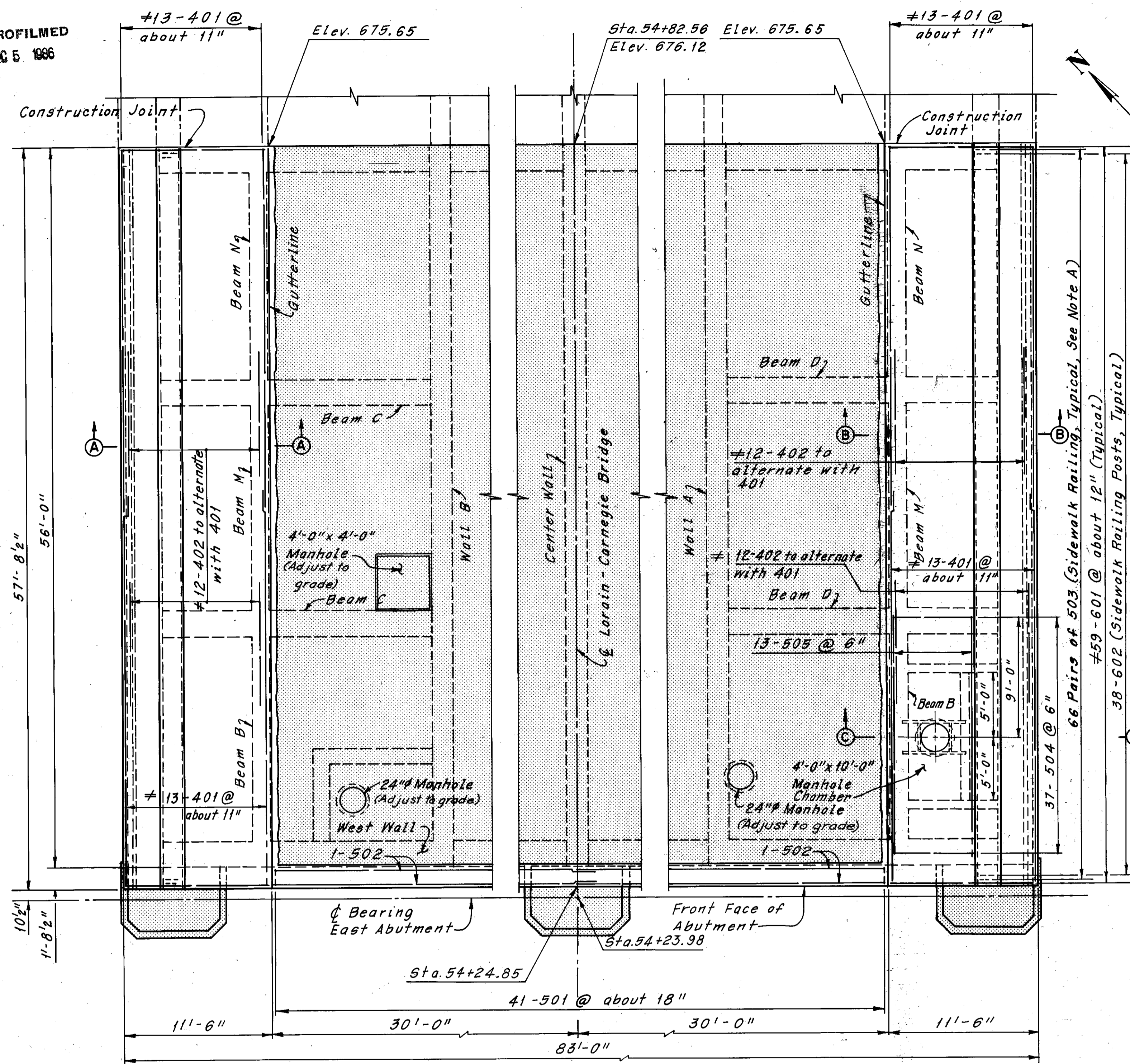
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DLR	DLR	DLR	DLR	
DATE 3-9-75	DATE 3-18-75	DATE 5-31-75	DATE	SHEET 21 72

MICROFILMED  
DEC 5 1986

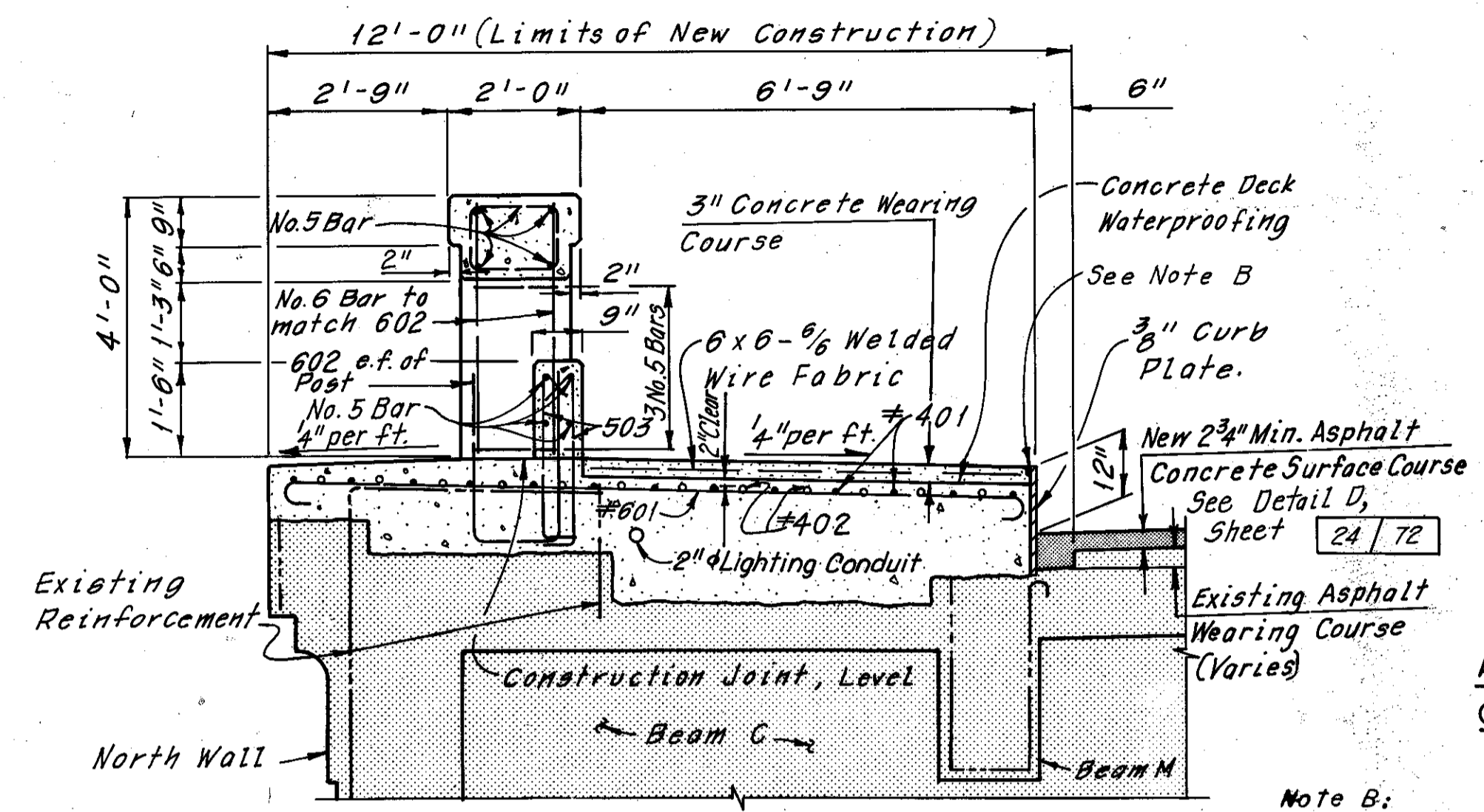
FHWA REGION	STATE	PROJECT
5	OHIO	

97  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PLAN

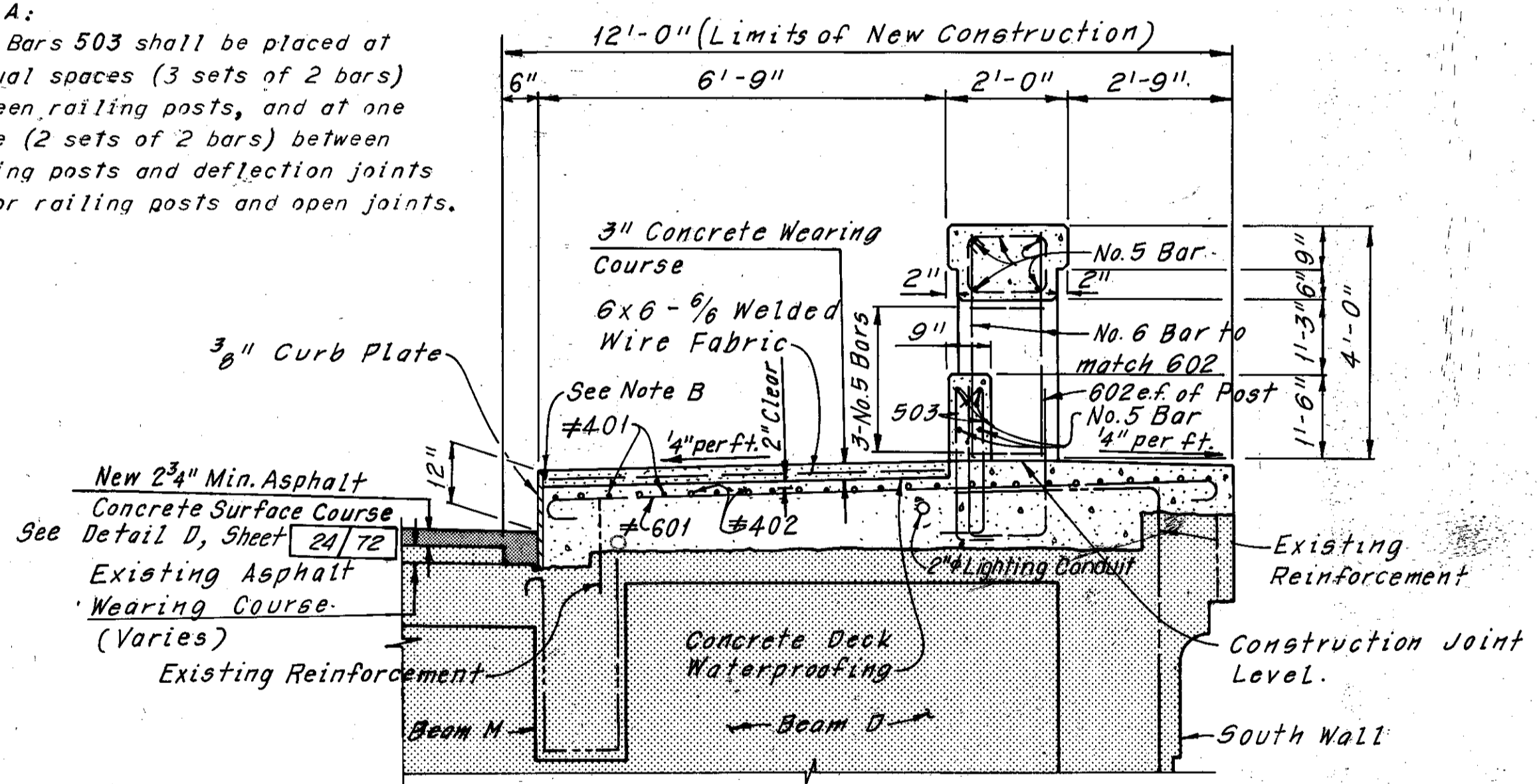


SECTION A-A

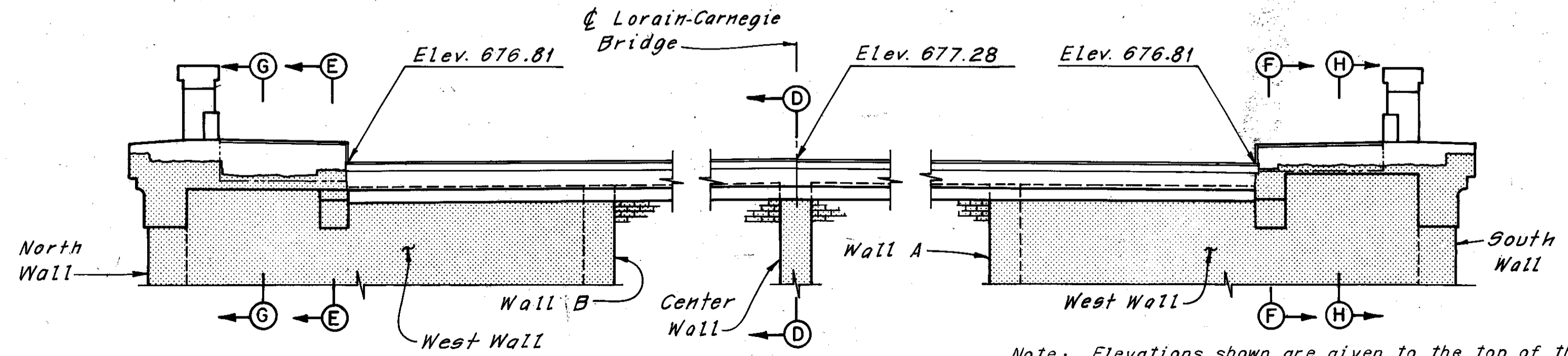
ADDITIONAL REINFORCEMENT  
OVER BEAMS C AND BEAMS D

Note B:  
Joint Sealer. Material shall be hot applied bridge deck waterproofing material, which also meets the requirements of 705.01. To be included with Item 511, Class S Concrete, Superstructure, for payment.

Note A:  
Bars 503 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.



SECTION B-B



ELEVATION

Note: Elevations shown are given to the top of the 3/8" Expansion Joint Plate at the front face of abutment, 1/4" below top of asphalt concrete surface course.

\* Denotes epoxy coated reinforcing steel.

Note: All reinforcing bar marks shall be prefixed EA.

REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-10" Minimum
No. 5 Bar	= 2'-5" Minimum

Notes:  
 [Symbol] Indicates existing structure.  
 For Sections C-C, D-D, E-E, F-F, G-G and H-H, see Sheet 23/72.  
 For Railing Details, see Sheet 59/72.  
 For Expansion Joint Details at the East Abutment, see Sheets 42/72 and 43/72.  
 The following abbreviations are used:  
 Sta. = Station ft. = foot  
 Elev. = Elevation  
 e.f. = each face  
 Min. = Minimum  
 For Reinforcement Schedule, see Sheet R/1.

HNTB BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND  
**HNTB**  
**EAST ABUTMENT MODIFICATION DETAILS**  
 REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE  
 (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY.-10-1618 STA. 22+19.19  
 STA. 55+04.56  
 CUYAHOGA COUNTY OHIO  
 DRAWN A/J7 TRACED A/J7 CHECKED W.E.B. REVIEWED REVISOR  
 DATE 6-8-78 DATE 6-8-78 DATE 6-22-78 DATE  
 SHEET 22/72

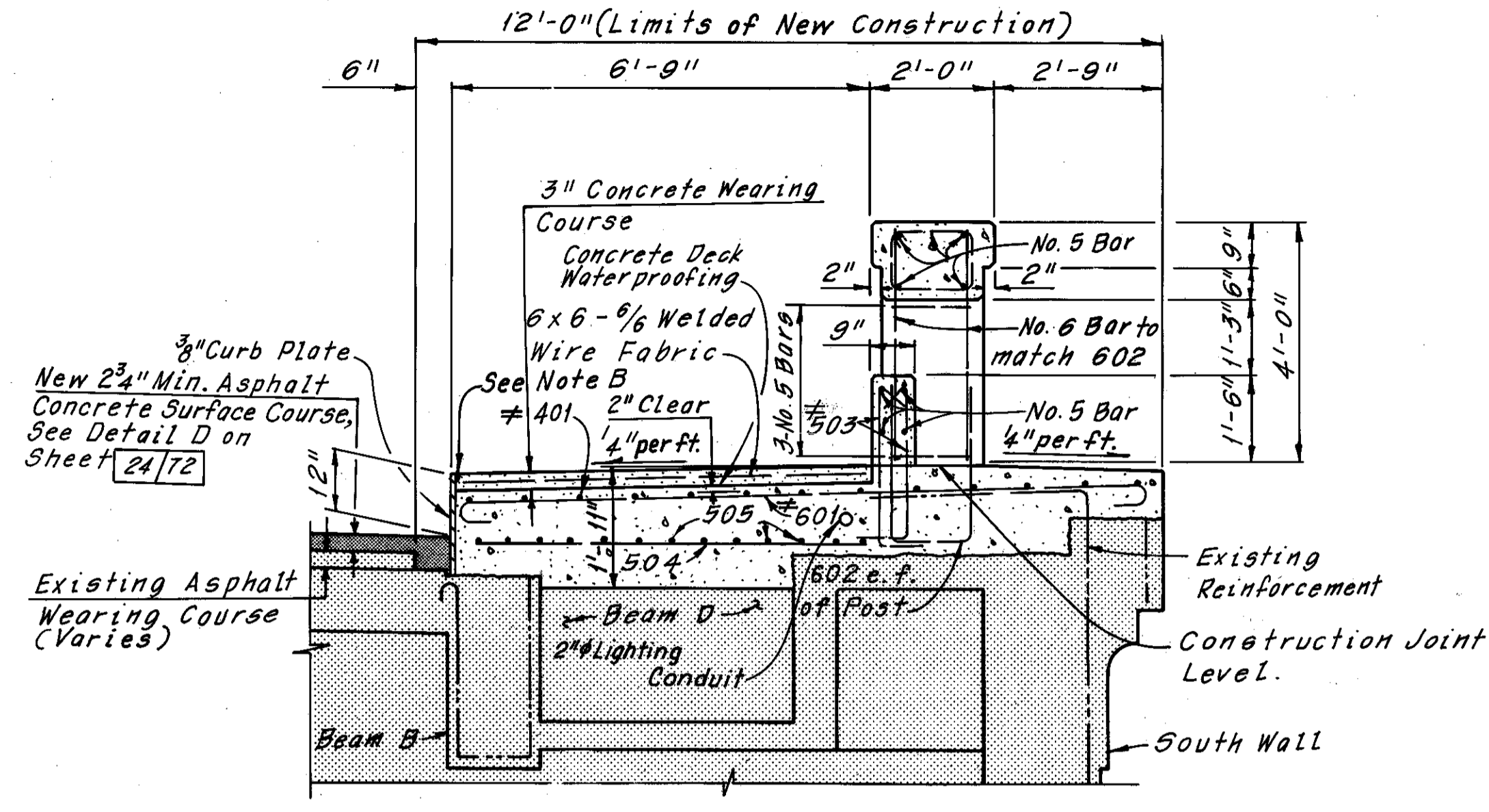
711-V

DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

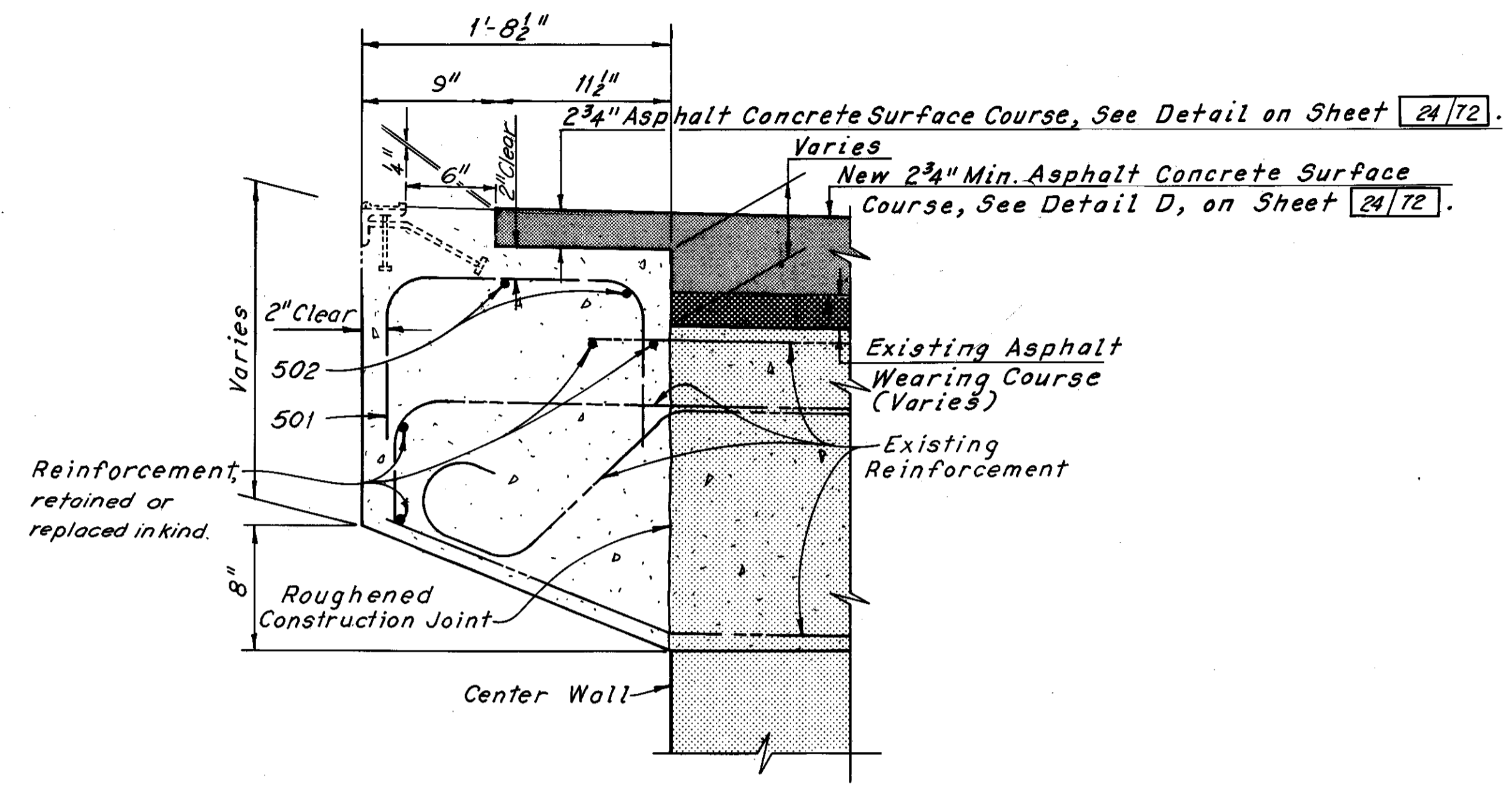
98  
185

CUYAHOGA COUNTY  
CUY-10-16.23

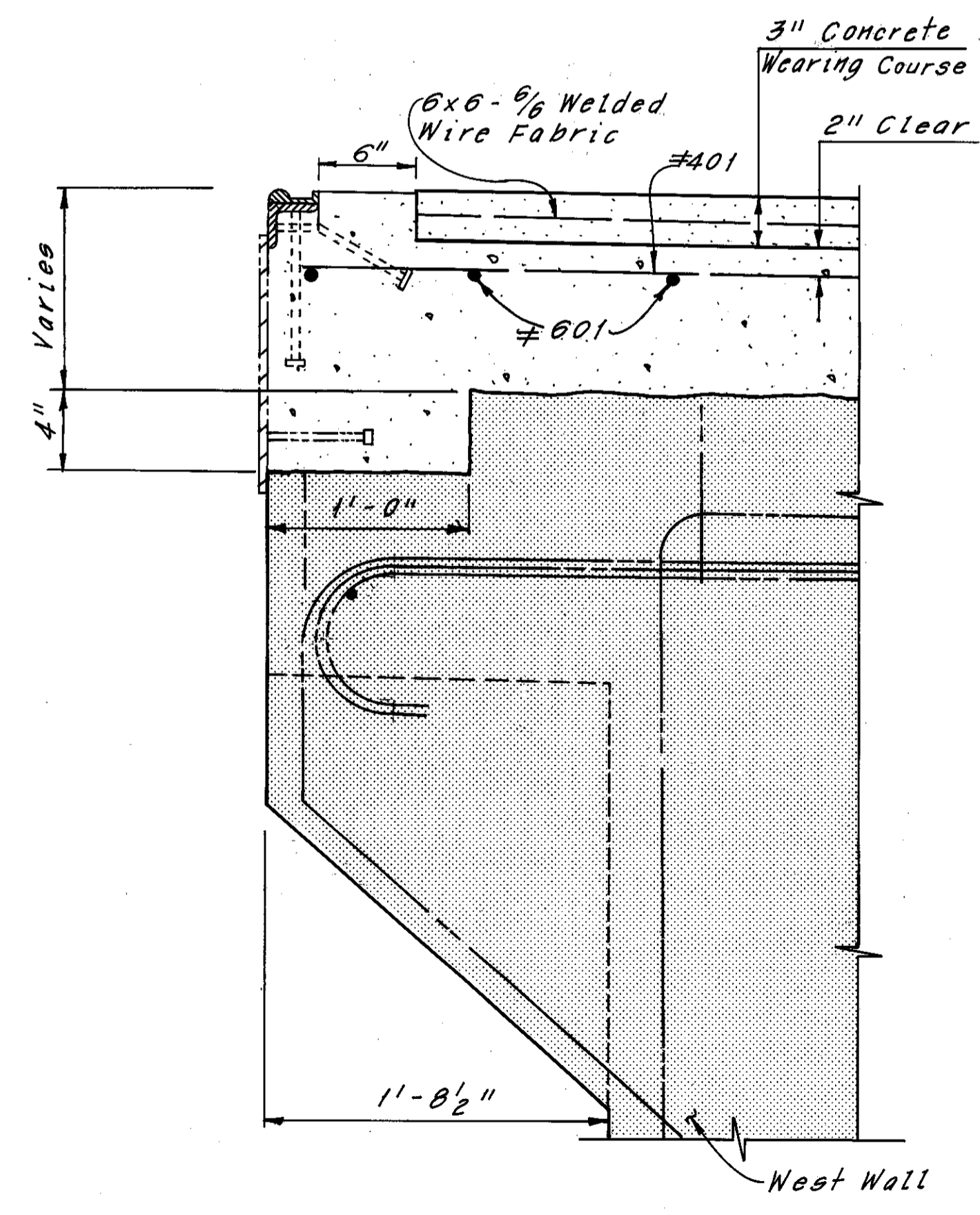


SECTION C-C

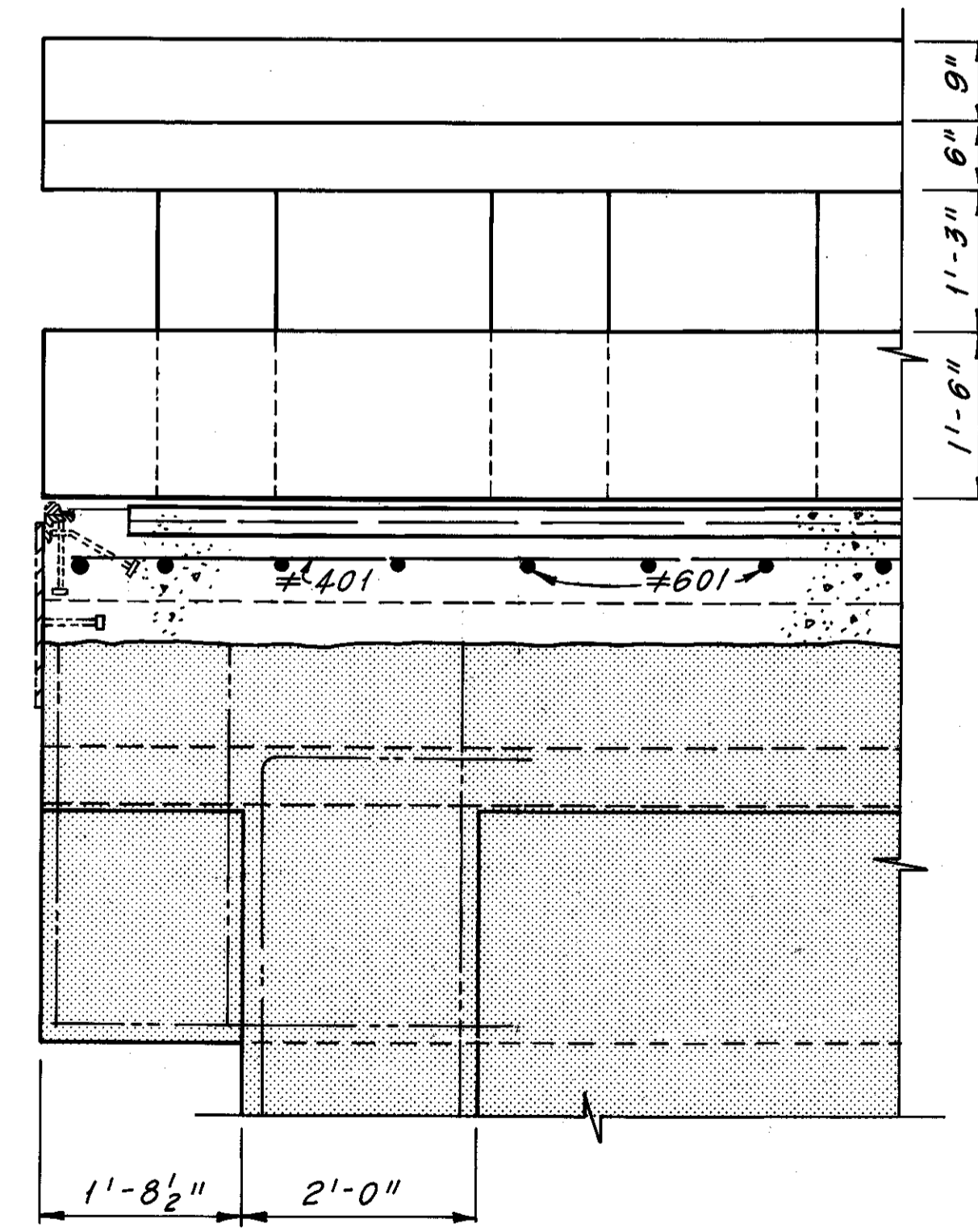
Note B:  
Joint Sealer. Material shall be hot applied bridge deck waterproofing material, which also meets the requirements of 705.01. To be included with Item 511, Class S Concrete, Substructure, for payment.



SECTION D-D



SECTION E-E  
(Section F-F similar except opposite hand)



SECTION G-G  
(Section H-H similar except opposite hand)

# Denotes epoxy coated reinforcing steel.

Note: All reinforcing bar marks shall be prefixed EA.

Notes:  
For the location of Sections C-C, D-D, E-E, F-F, G-G and H-H, see Sheet 22/72.  
For additional notes, see Sheet 22/72.

HNTB BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**EAST ABUTMENT MODIFICATION DETAILS**  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN AJT	TRACED AJT	CHECKED W.E.B.	REVIEWED	REVISED
DATE 6-7-78	DATE 6-9-78	DATE 6-22-78	DATE	DATE

SHEET 23/72

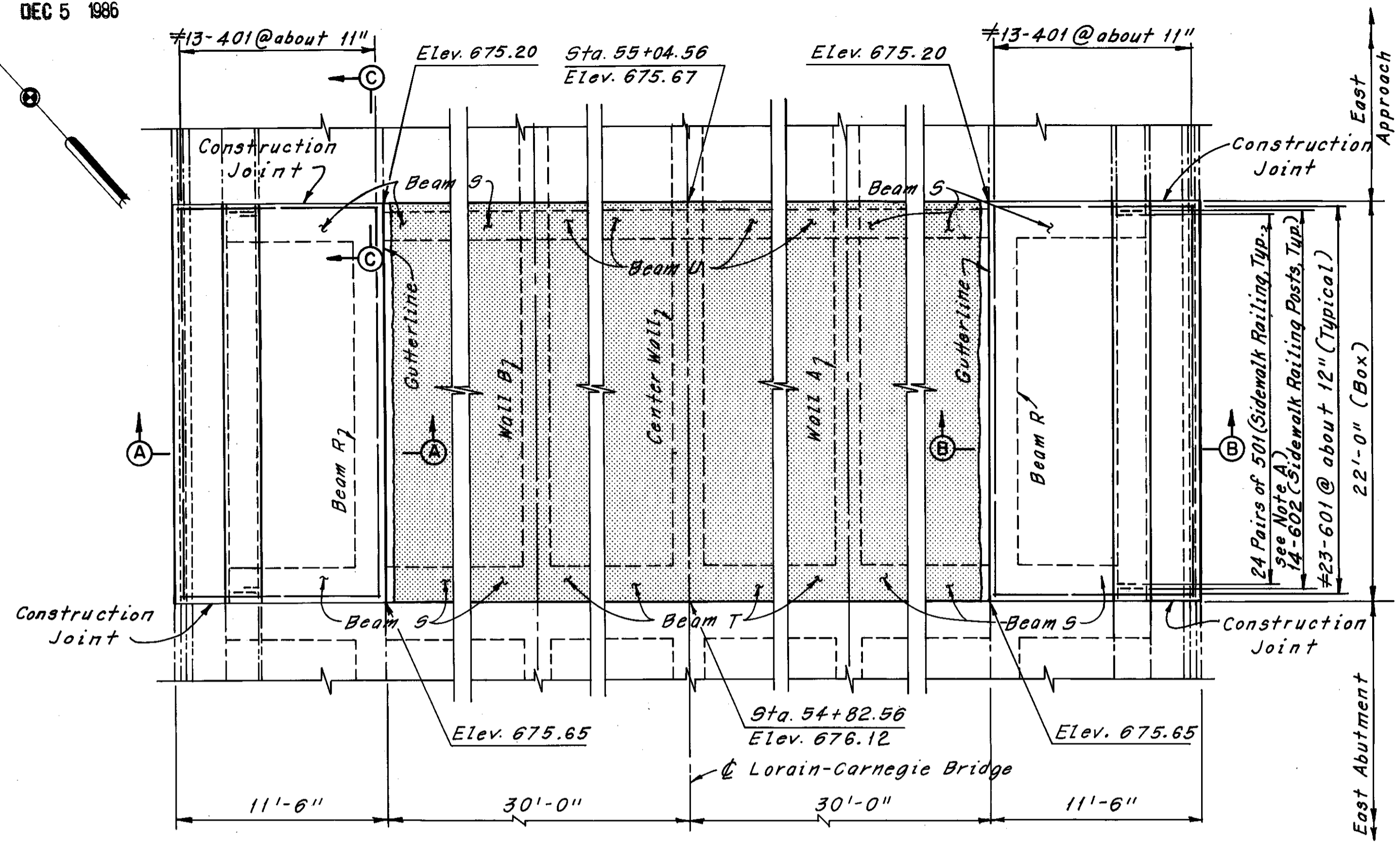
MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

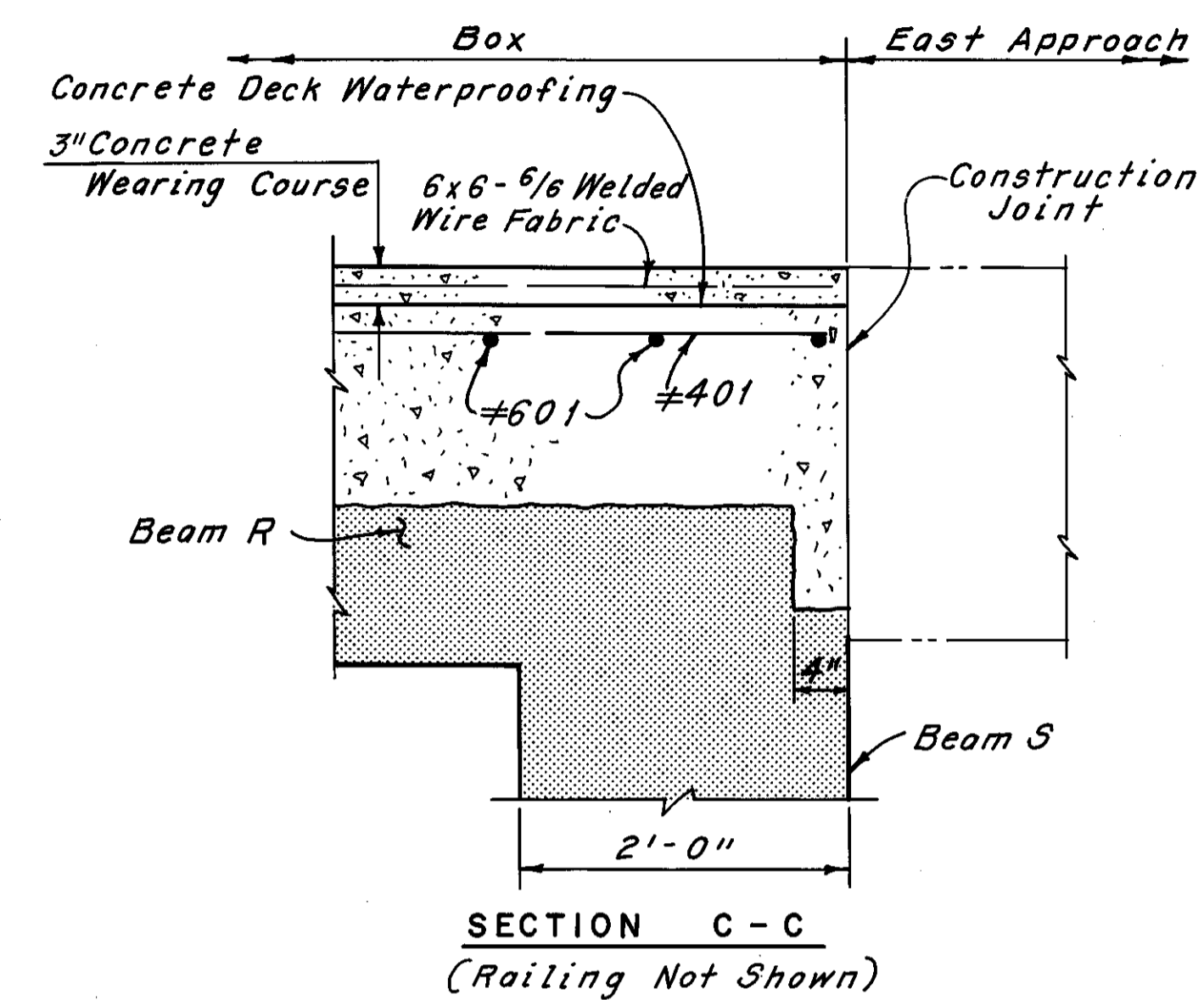
99  
185

CUYAHOGA COUNTY  
CUY-10-16.23

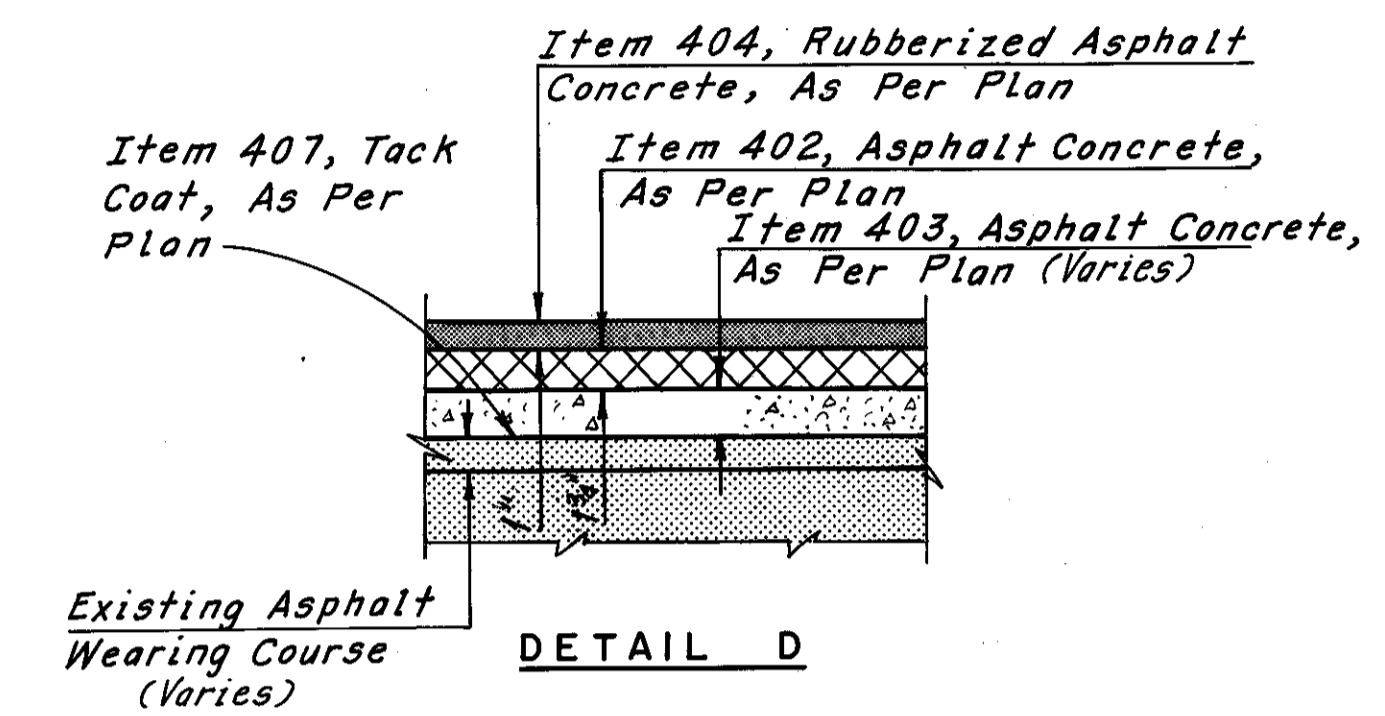
Note A:  
501 Bars shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.



PLAN

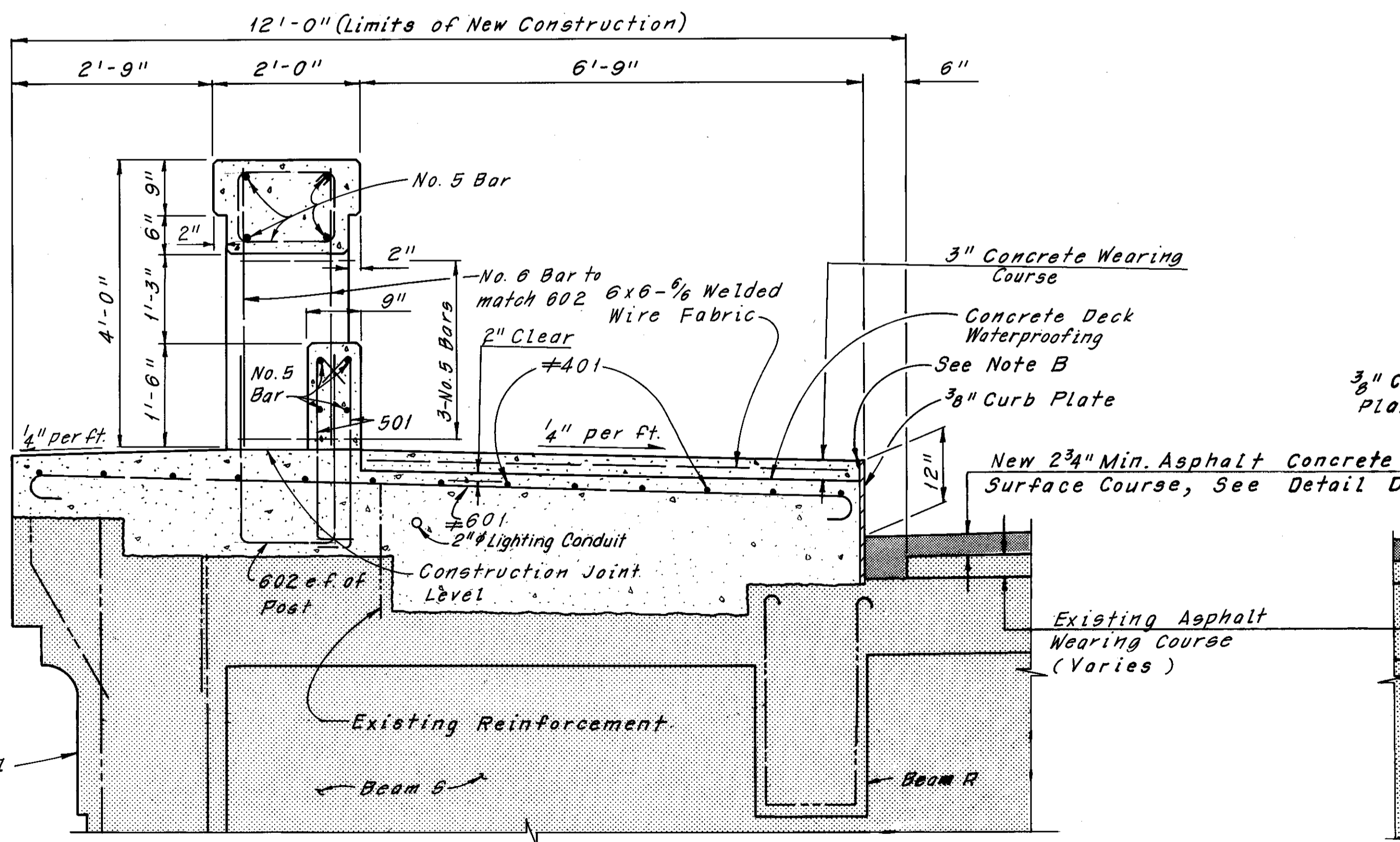


SECTION C-C  
(Railing Not Shown)

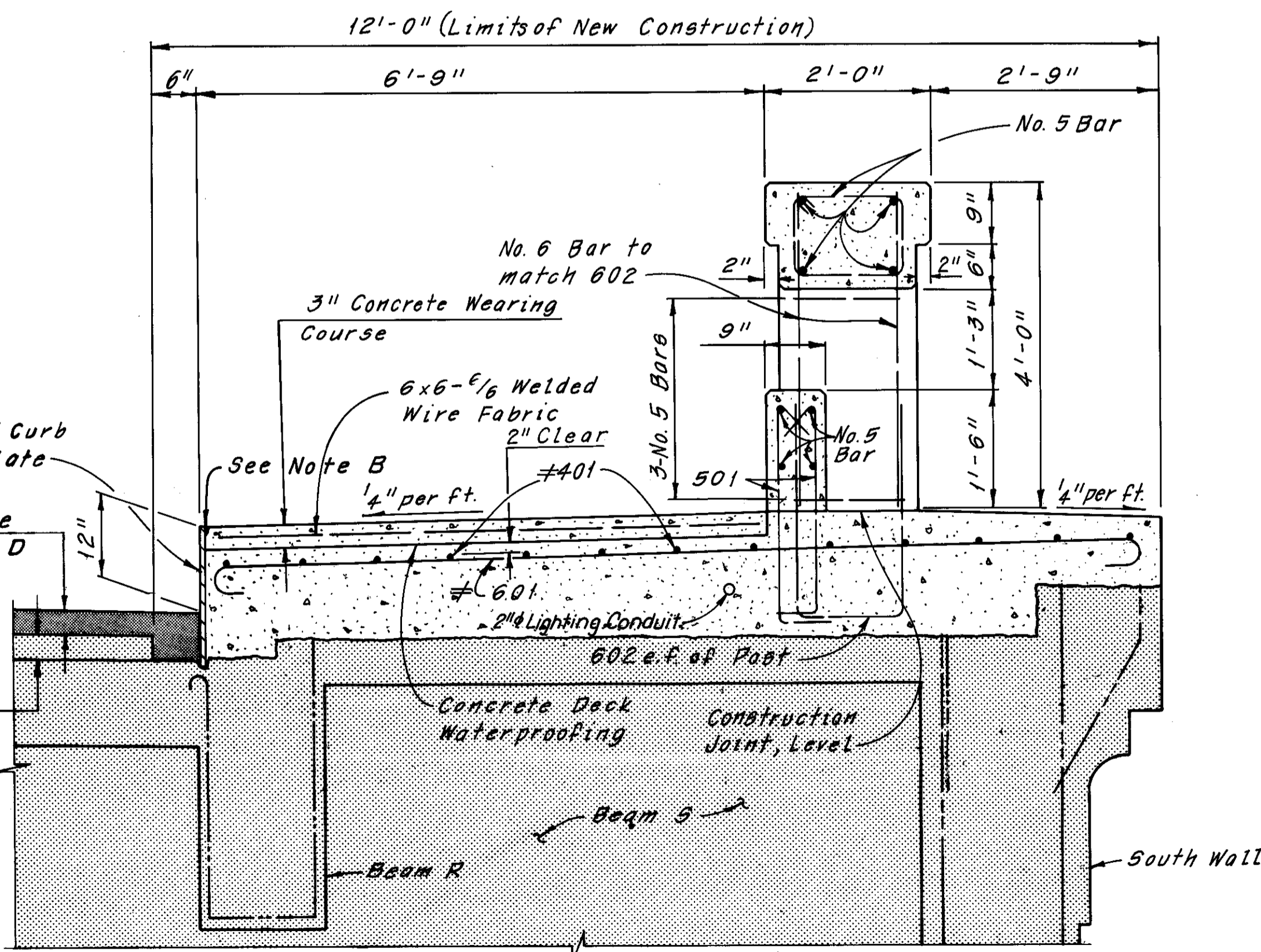


DETAIL D

Note: All reinforcing bar marks shall be prefixed B. # Denotes epoxy coated reinforcing steel.



SECTION A-A



SECTION B-B

Notes:  
 Indicates existing structure.  
 For Railing Details, see Sheet 59/72.  
 The following abbreviations are used:  
 e.f. = each face  
 ft. = foot  
 Min. = Minimum  
 Typ. = Typical  
 For Reinforcement Schedule, see Sheet R/1.

Note B:  
 Joint Sealer Material shall be hot applied bridge deck material, which also meets the requirements of 705.01. It is to be included with Item 511, Class S Concrete, Superstructure, for payment.

HNTB BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND  
**HNTB**

**BOX MODIFICATION DETAILS**  
 REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY-10-1618 STA. 22+19.19  
 STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 6/12/78	DATE 6/13/78	DATE 6/28/78	DATE	DATE

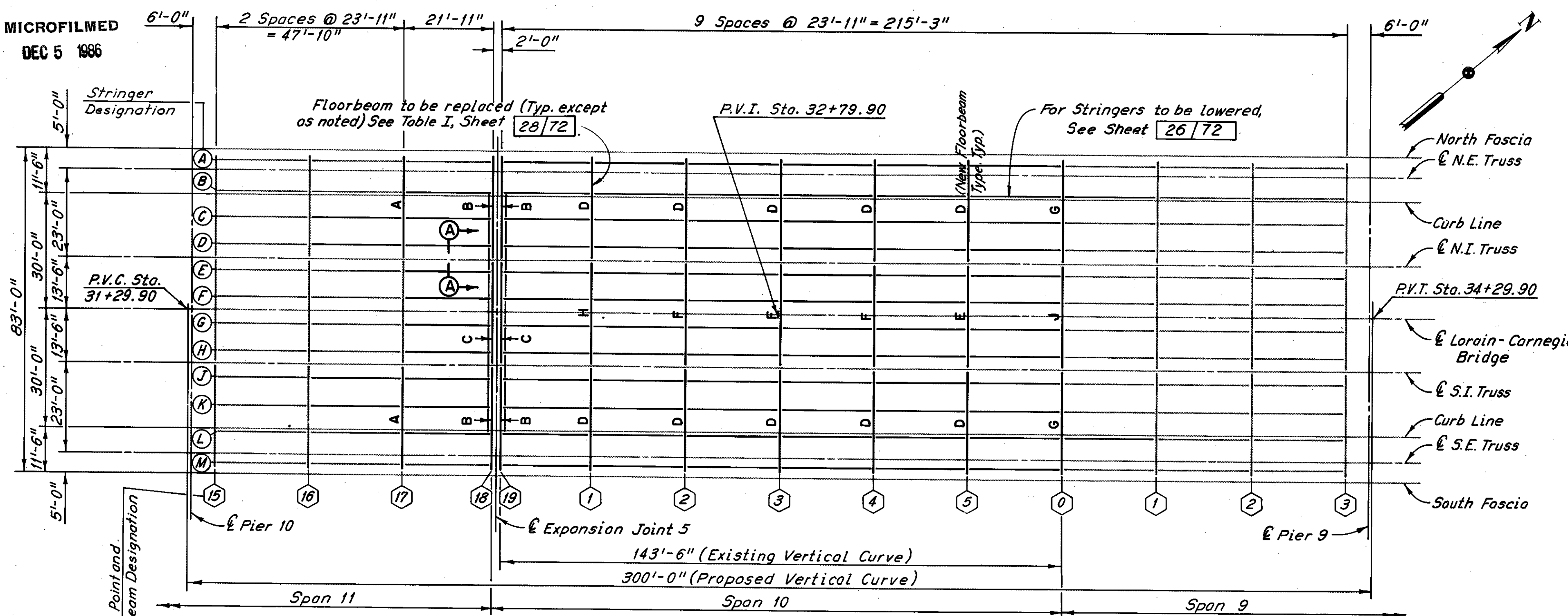
SHEET 24/72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

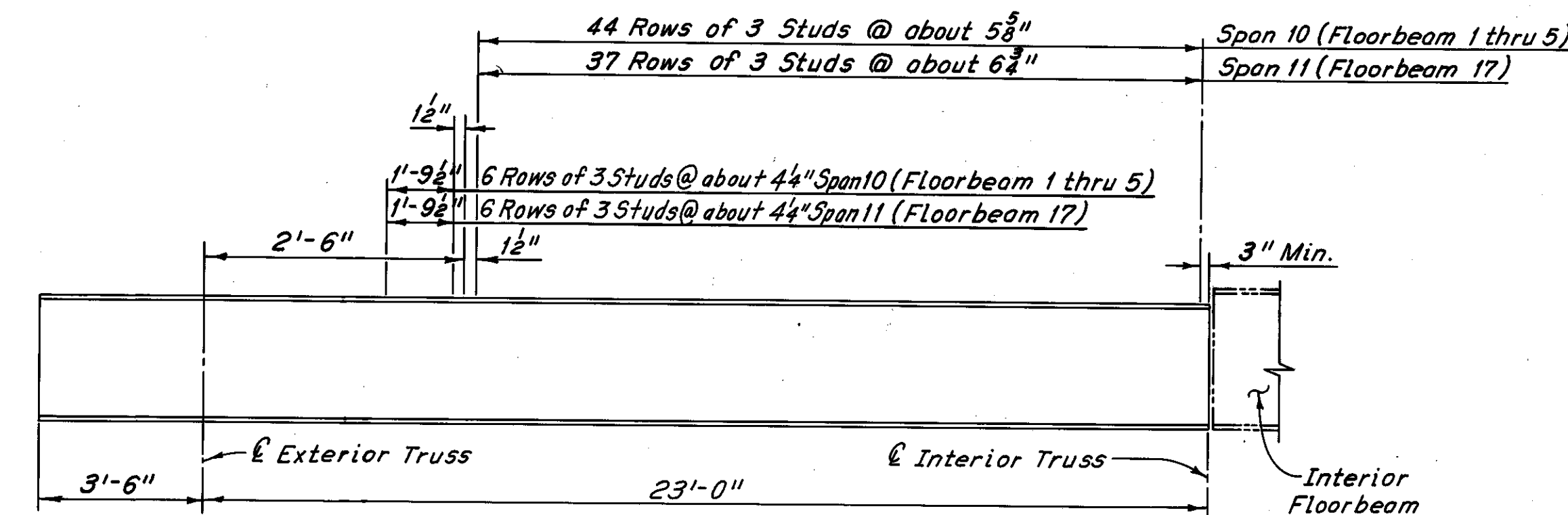
100  
185

CUYAHOGA COUNTY  
CUY-10-16.23

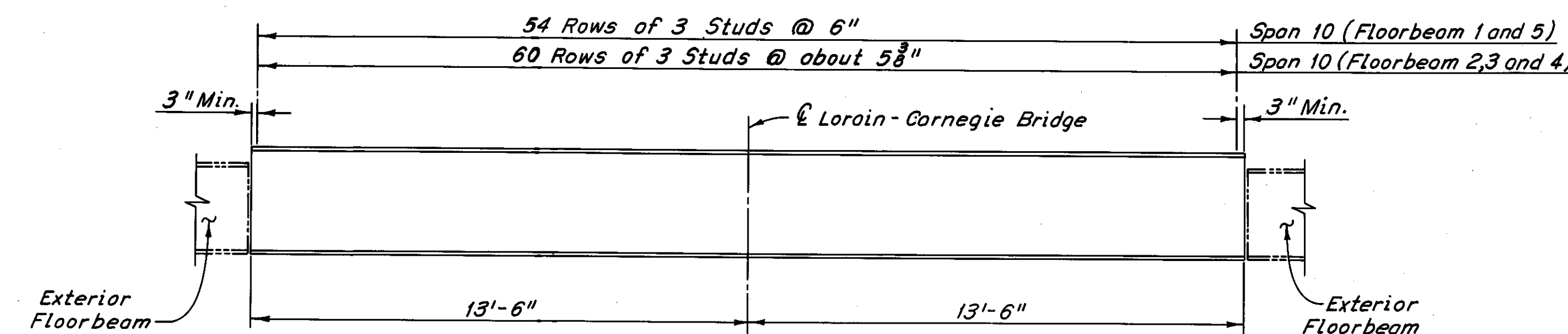


**PART FRAMING PLAN**  
(Upper Deck)

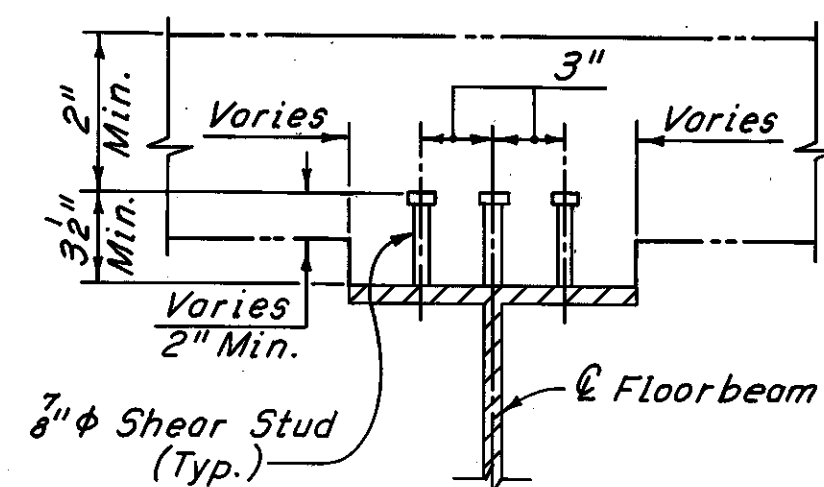
Note:  
In order to fit the lower profile of the lengthened vertical curve all floorbeams shown with bold lines are being replaced with shallower beams. Unless otherwise noted all stringers shown in bold lines shall be reused after modification to fit new floorbeams.



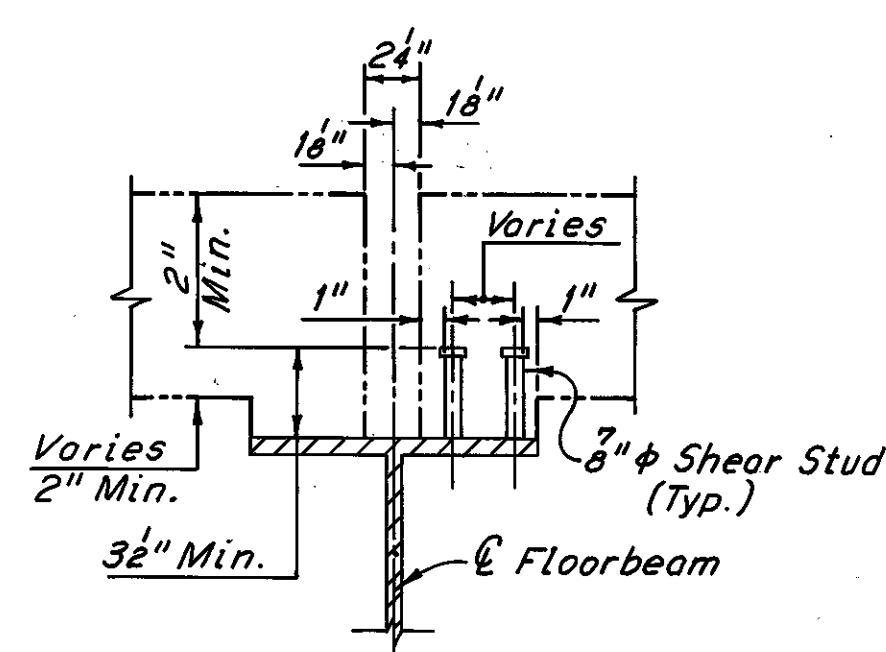
**EXTERIOR FLOORBEAM STUD SPACING**



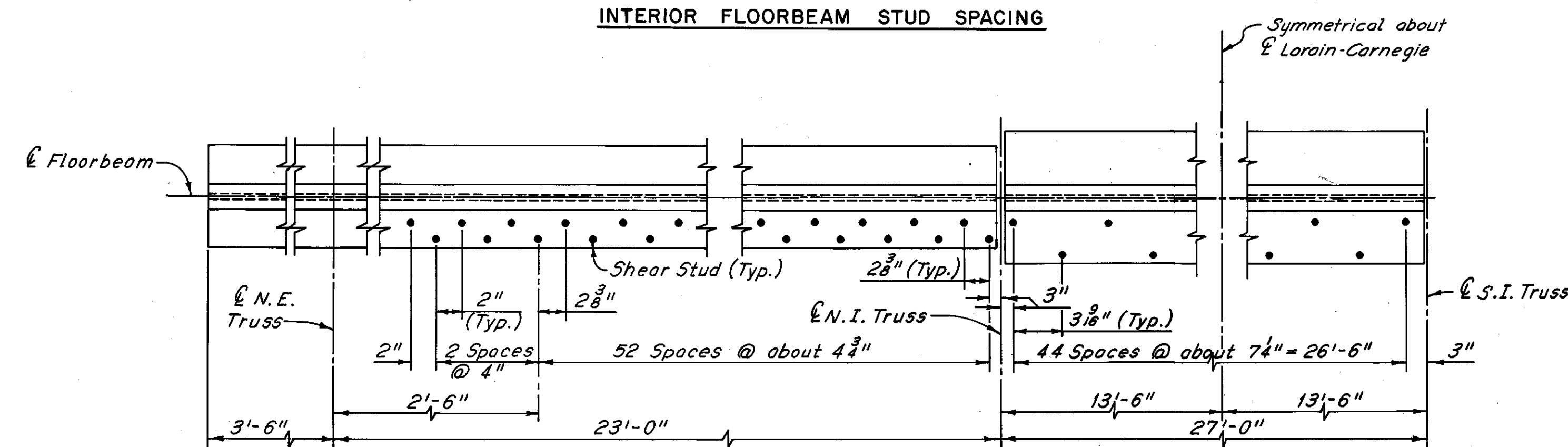
**INTERIOR FLOORBEAM STUD SPACING**



**TYPICAL STUD PLACEMENT**



**FIXED JOINT STUD PLACEMENT**  
(Span 9 Floorbeam 0)  
(For details of joint in deck see Sheet 44/72.)



**FLOORBEAM STUD SPACING**  
(Span 9 Floorbeam 0 only)

Notes:  
For Floorbeam Replacement Details, see Sheets 28/72 and 29/72.  
For Stringer Modification Details, see Sheets 26/72 and 27/72.  
For details of Floorbeam Strengthening at Floorbeams not replaced or temporarily removed, see Sheet 32/72.  
For Expansion Joint 5 details, see Sheet 39/72.

For Section A-A, see Sheet 39/72.  
The following abbreviations are used:  
S.E. = South Exterior N.I. = North Interior  
S.I. = South Interior N.E. = North Exterior  
Typ. = Typical Min. = Minimum

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENOFF  
ENGINEERS  
CONSULTING ENGINEERS  
CLEVELAND

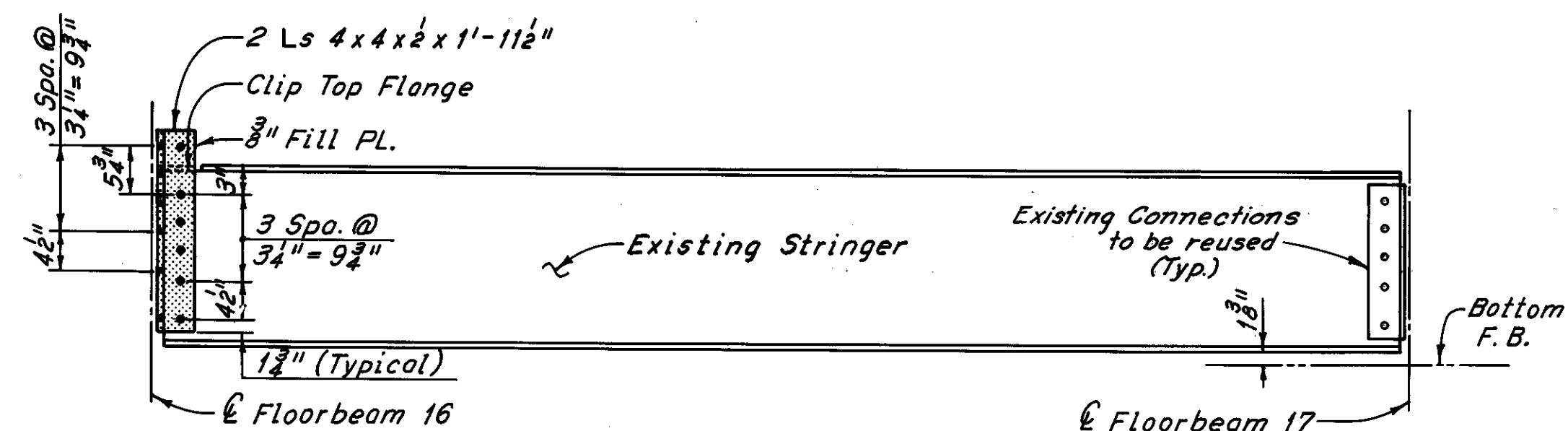
**HNTB**

**FRAMING PLAN AND FLOORBEAM STRENGTHENING-SPAN 10 AND PART SPANS 9 AND 11**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

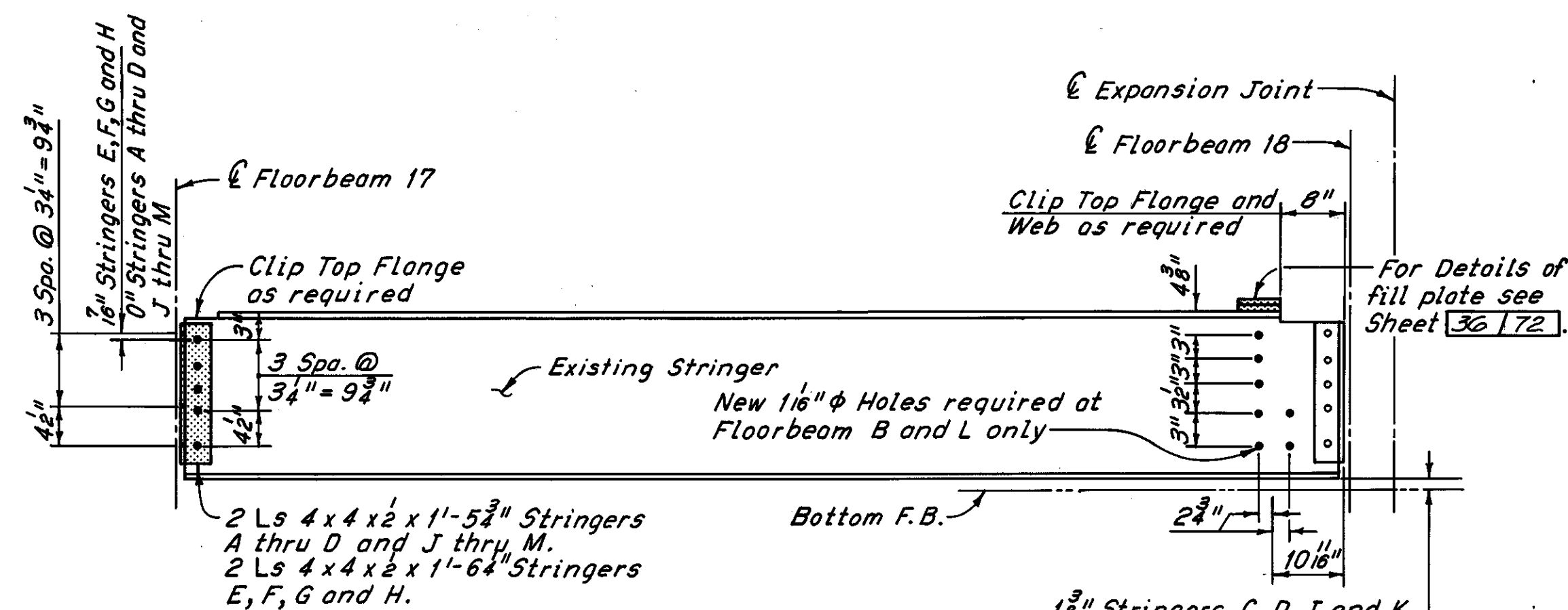
CUYAHOGA COUNTY OHIO

DRAWN/RAS	TRACED/DLR	CHECKED/AN	REVIEWED	REVISED
DATE 6-1-78	DATE 6-8-78	DATE 7-12-78	DATE	DATE

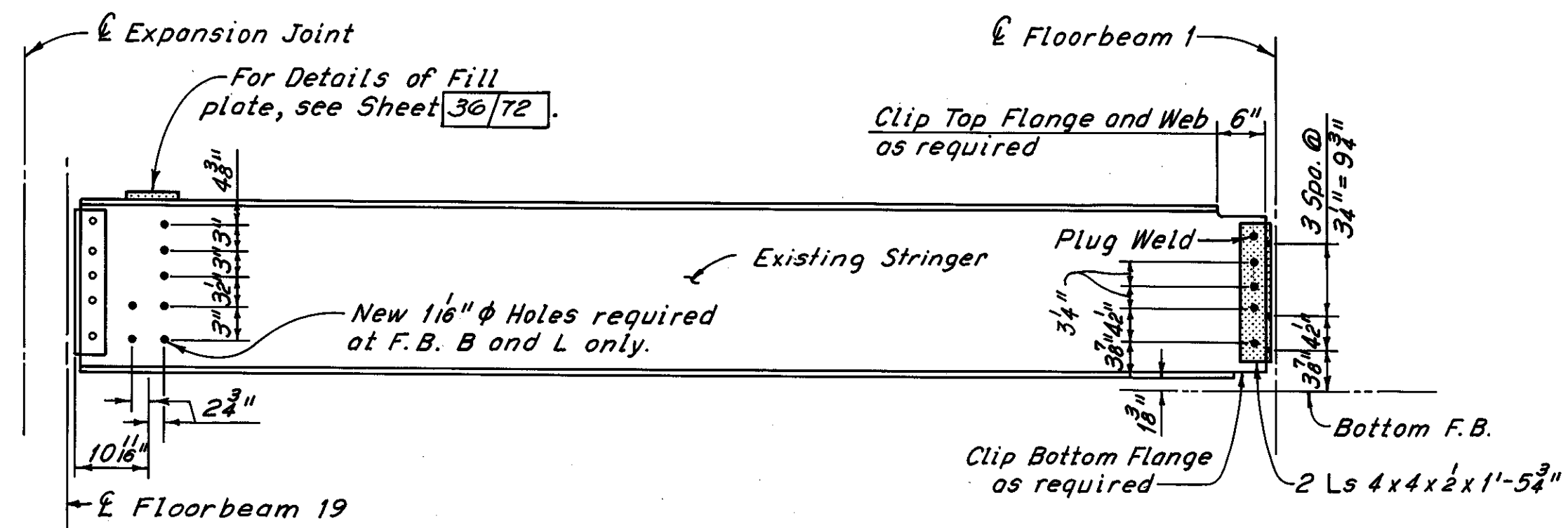
SHEET 25/72



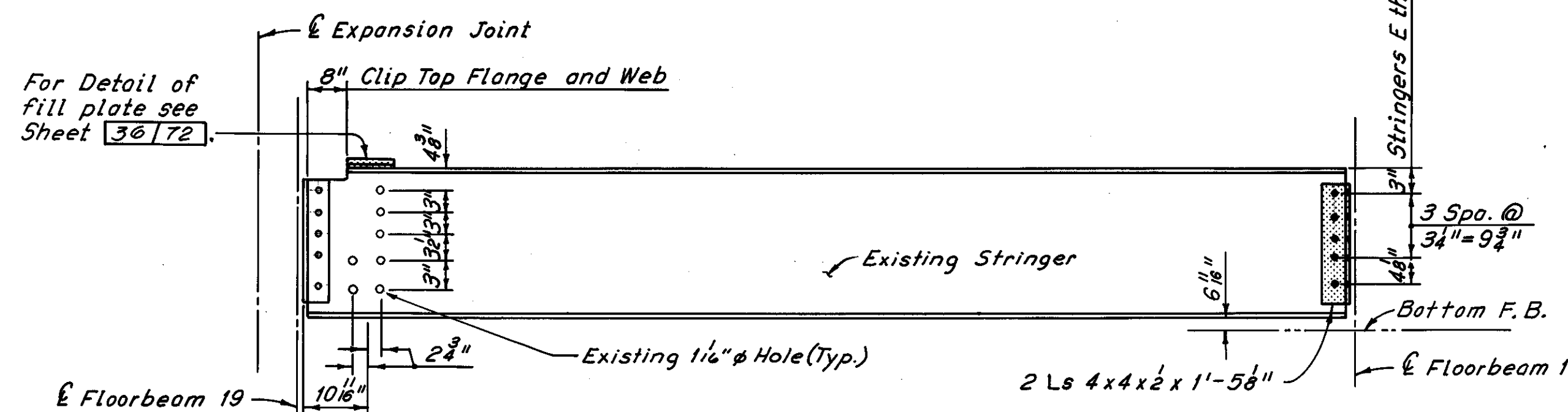
SPAN II - PANEL POINTS 16 TO 17  
(Stringers C, D, J and K)



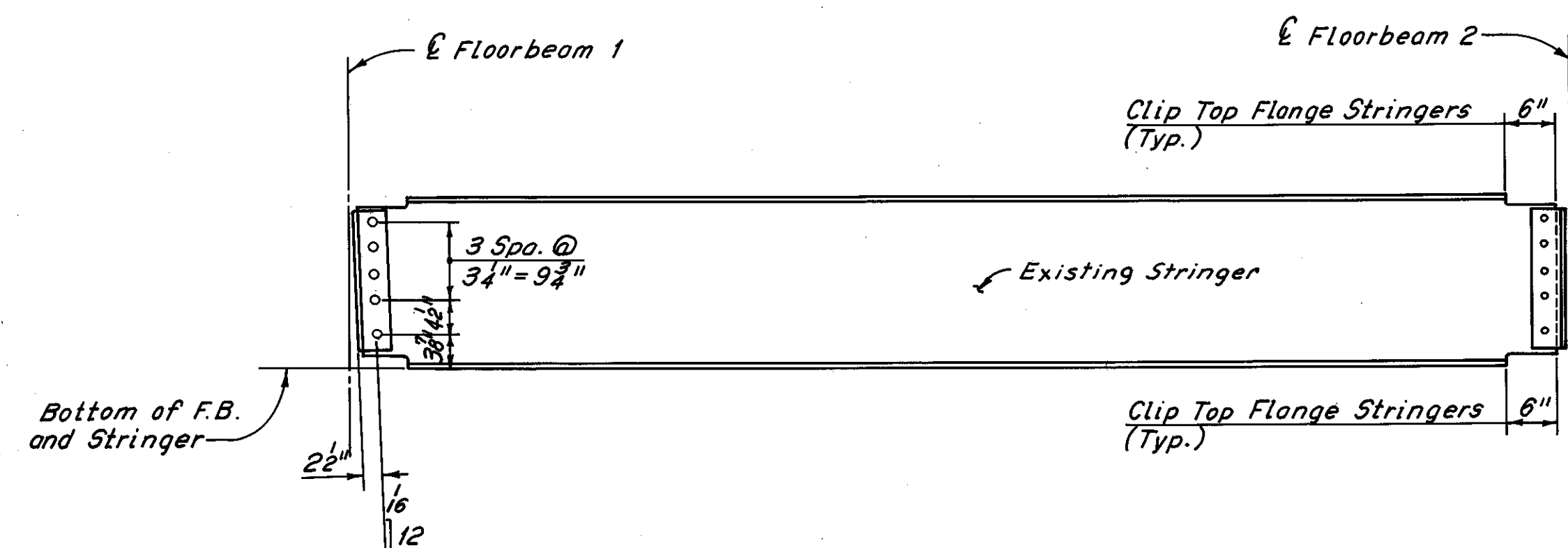
SPAN II - PANEL POINTS 17 TO 18  
(Stringers A thru M)



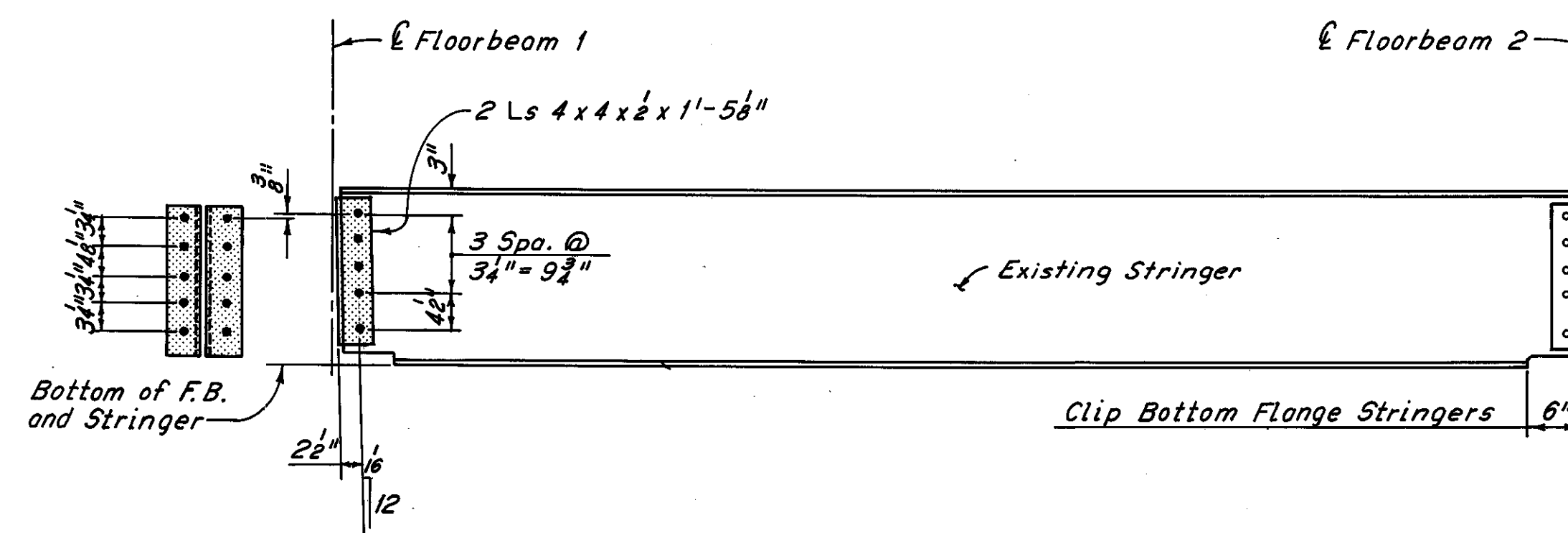
SPAN IO - PANEL POINTS 19 TO 1  
(Stringers B thru D, J and K) For Stringer L detail see Case R6, Sheet 31/72.



SPAN IO - PANEL POINTS 19 TO 1  
(Stringers E thru H)



SPAN IO - PANEL POINTS 1 TO 2  
(Stringers B thru D and J thru L)  
≠ C,



SPAN IO - PANEL POINTS 1 TO 2  
(Stringers E thru H)

SPAN	PANEL POINTS	STRINGERS LOWERED
11	16 to 17	C, D, J and K
11	17 to 18	C thru K
10	19 to 1	B thru L
10	1 to 2	B thru L
10	2 to 3	B thru L
10	3 to 4	B thru L
10	4 to 5	B thru L
10	5 to 0	B thru L
9	0 to 1	B and L

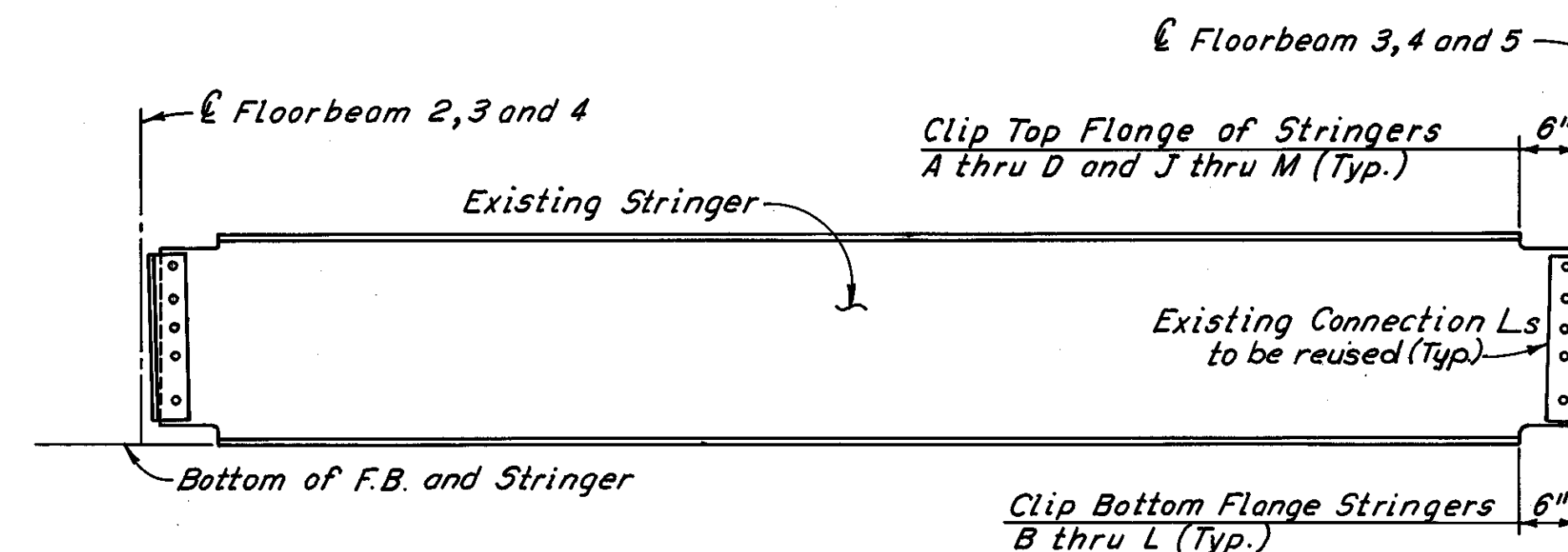
Notes:  
The stringer modifications as shown on these Sheets, including removal, specified modifications to existing stringers and reinstalling of those stringers shall be included with the lump sum bid for Item 513, Dismantle, Move, Alter and/or Recondition and Erect Reused Steel, for payment. This payment shall include all labor, equipment and material needed to perform the required work.  
Holes in the stringer web or the connection angles may be reamed to a maximum 1/4 inch diameter holes as required for fit.  
All new bolts shall be 1 inch High Strength Bolts. For Part Framing Plan, see Sheet 25/72.  
The following abbreviations are used:  
Typ. = Typical  
F.B. = Floorbeam  
Indicates new members

HNTB BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

STRINGER MODIFICATION DETAILS  
SPAN IO AND PART SPANS 9 AND II  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY. - 10-1618 STA. 22+19.19  
STA. 55+04.56

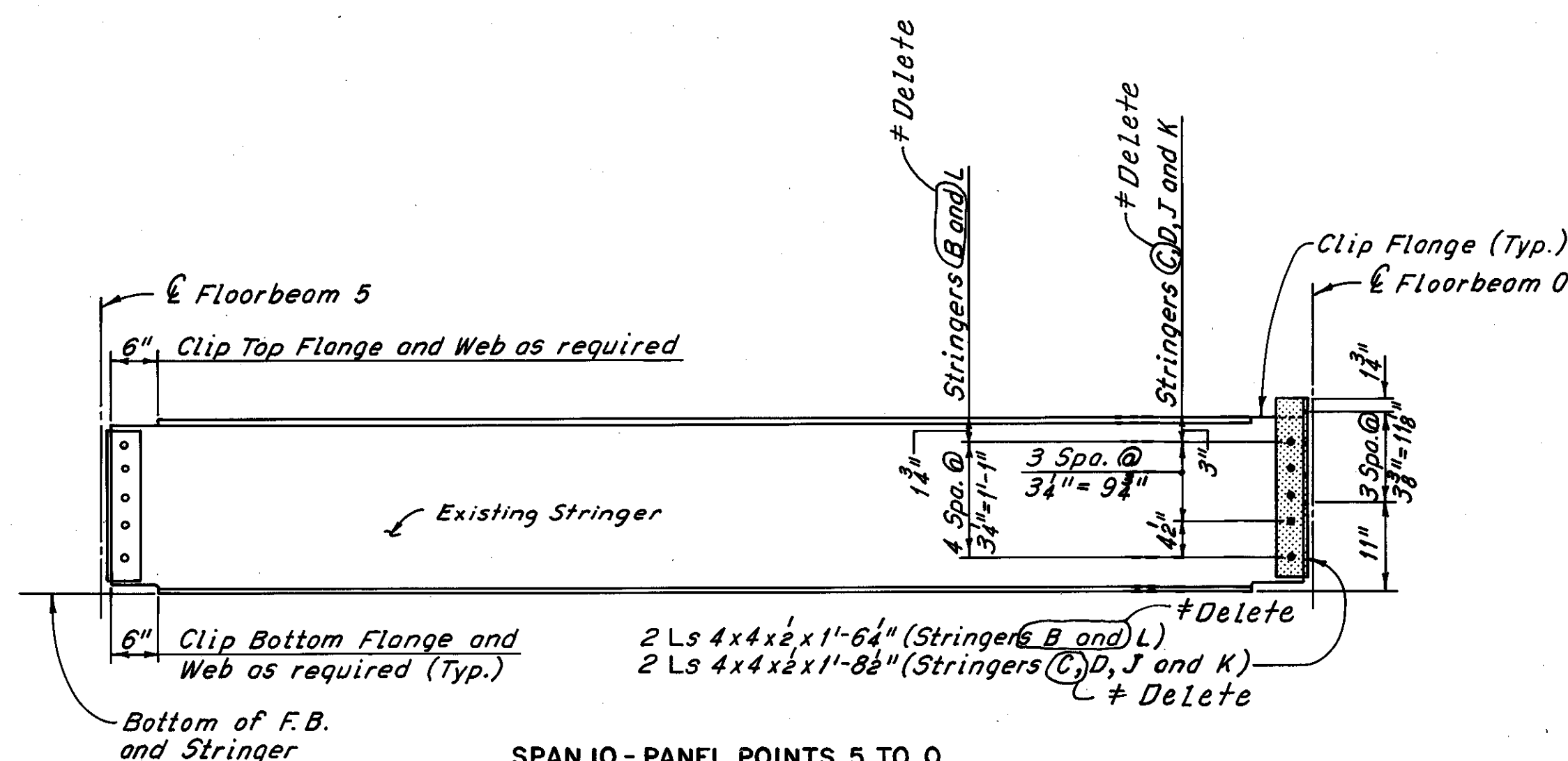
Additional stringer replacement as determined during bridge reconstruction 4-29-81  
REVISION

CUYAHOGA COUNTY	OHIO
DRAWN BY RAS	TRACED BY LR
DATE 5-30-78	DATE 8-10-78
CHECKED BY A.N.	REVIEWED
DATE 5-29-79	DATE
REVISED 12-5-83	SHEET 26/72

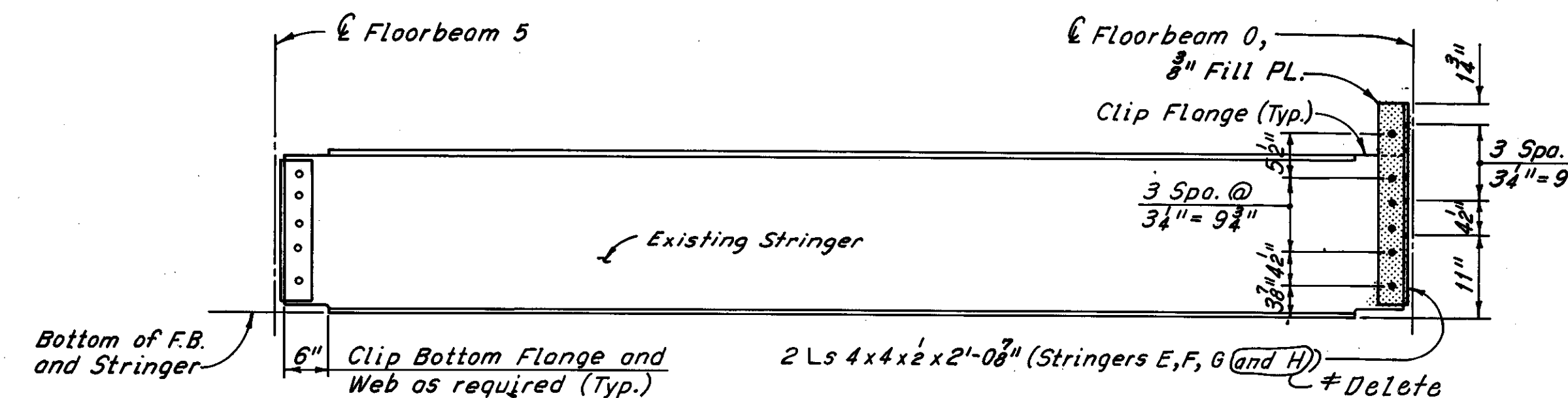


**SPAN 10 - PANEL POINTS 2 Thru 5**  
(Stringer A thru M)

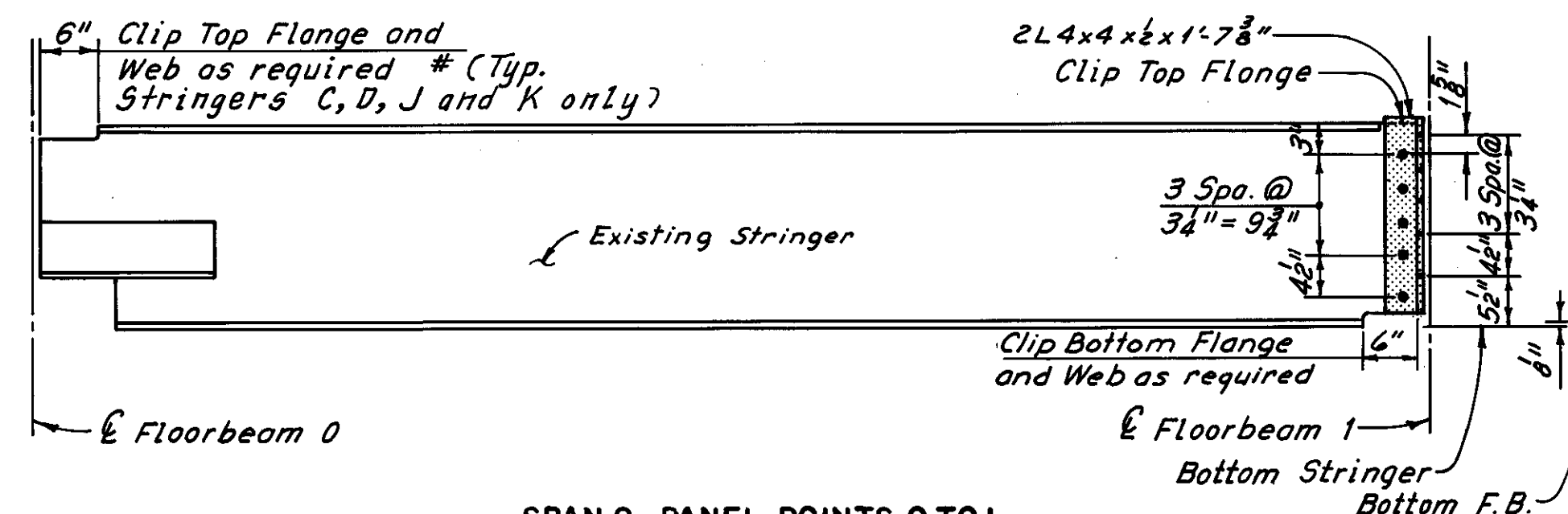
For Stringer L panel points 2 to 3 see Case R-5, sheet 31/72



**SPAN 10 - PANEL POINTS 5 TO 0**  
(Stringers B, C, D, J, K and L) # Delete



**SPAN 10 - PANEL POINTS 5 TO 0**  
(Stringers E, F, G and H) # Delete



**SPAN 9 - PANEL POINTS 0 TO 1**  
(Stringers B and L) # as shown  
# (Stringers C, D, J and K as noted) # Delete

For notes, see Sheet 26/72

# Additional stringer replacement as determined during bridge reconstruction	W.E.B. 8-20-81
# Plan omissions	W.E.B. 4-28-81
# Additional stringer replacement as determined during bridge reconstruction	C.F. 4-28-81
REVISION	

HNTB BRIDGE NO. 3

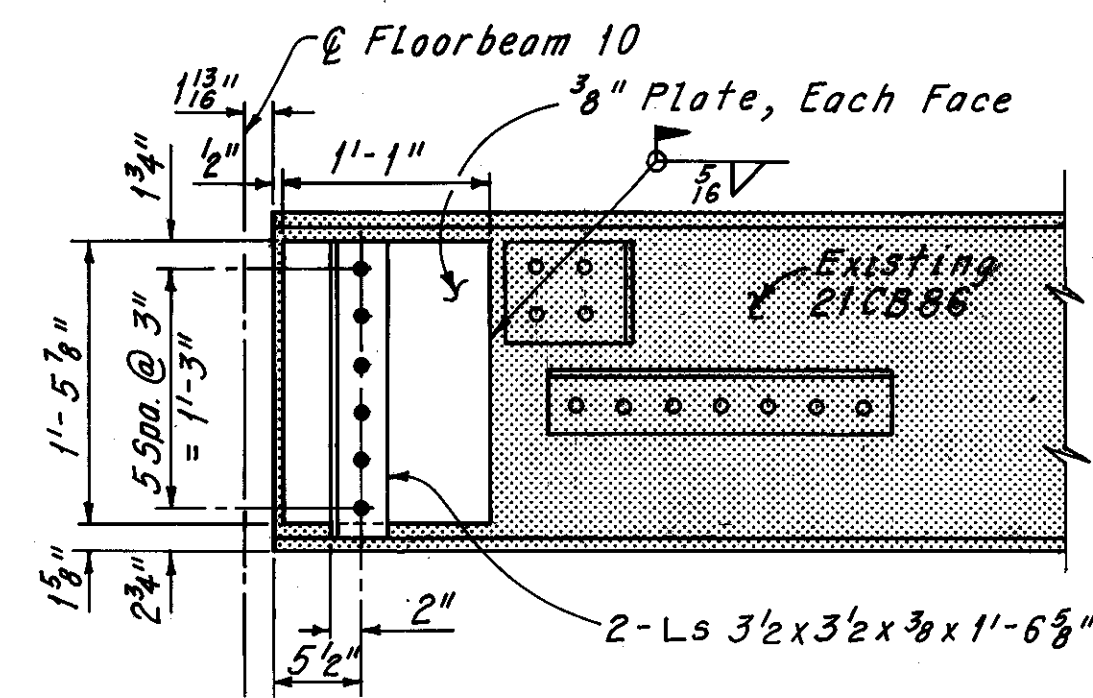
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**STRINGER MODIFICATION DETAILS**  
SPAN 10 AND PART SPANS 9 AND 11  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
\* (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY. - 10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

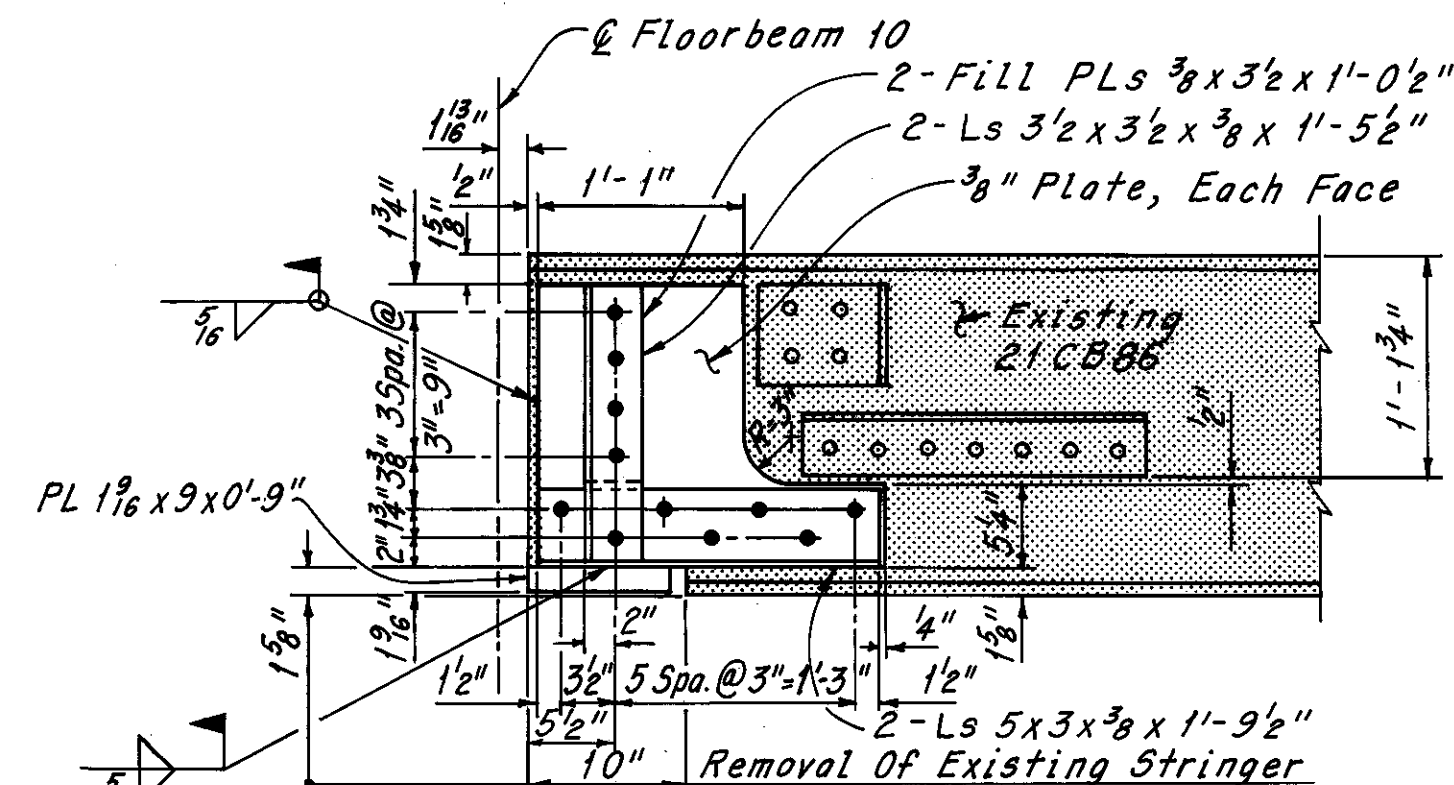
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
W.A.S.	W.L.A.	A.N.		12-5-83
DATE 5-30-78	DATE 9-10-78	DATE 5-23-79	DATE	SHEET 27/72



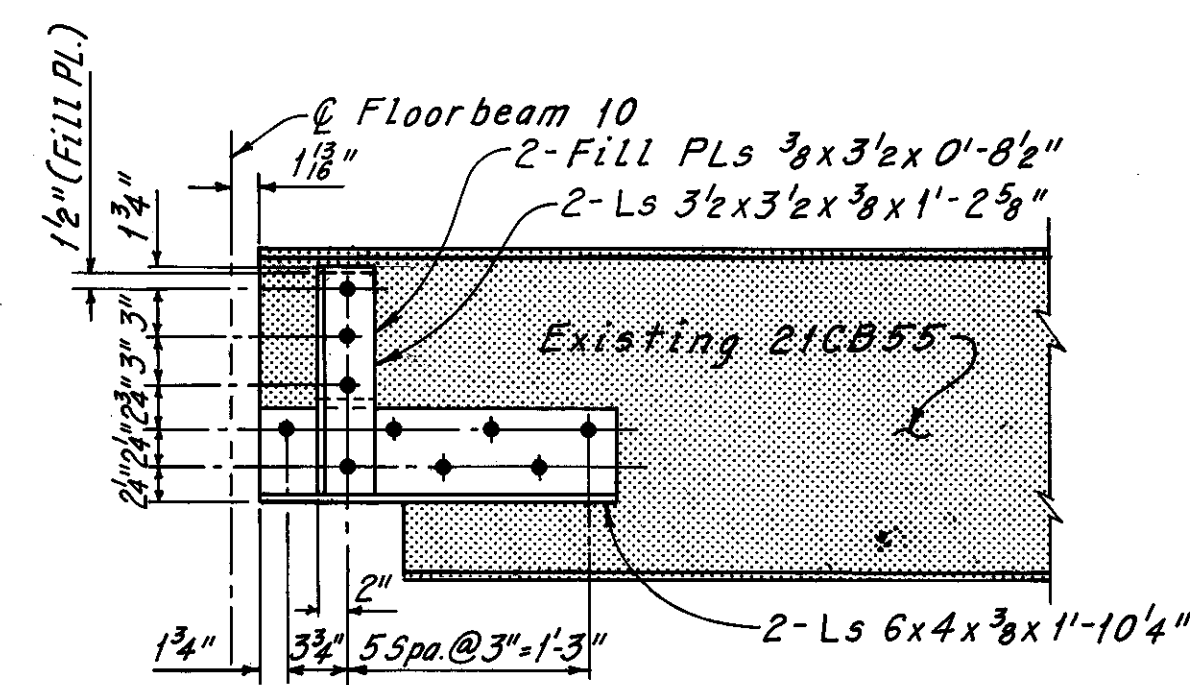


**ALTERNATE A**  
WHEELING & LAKE ERIE SPAN - PANEL POINTS 10 TO 0  
Stringers D thru L

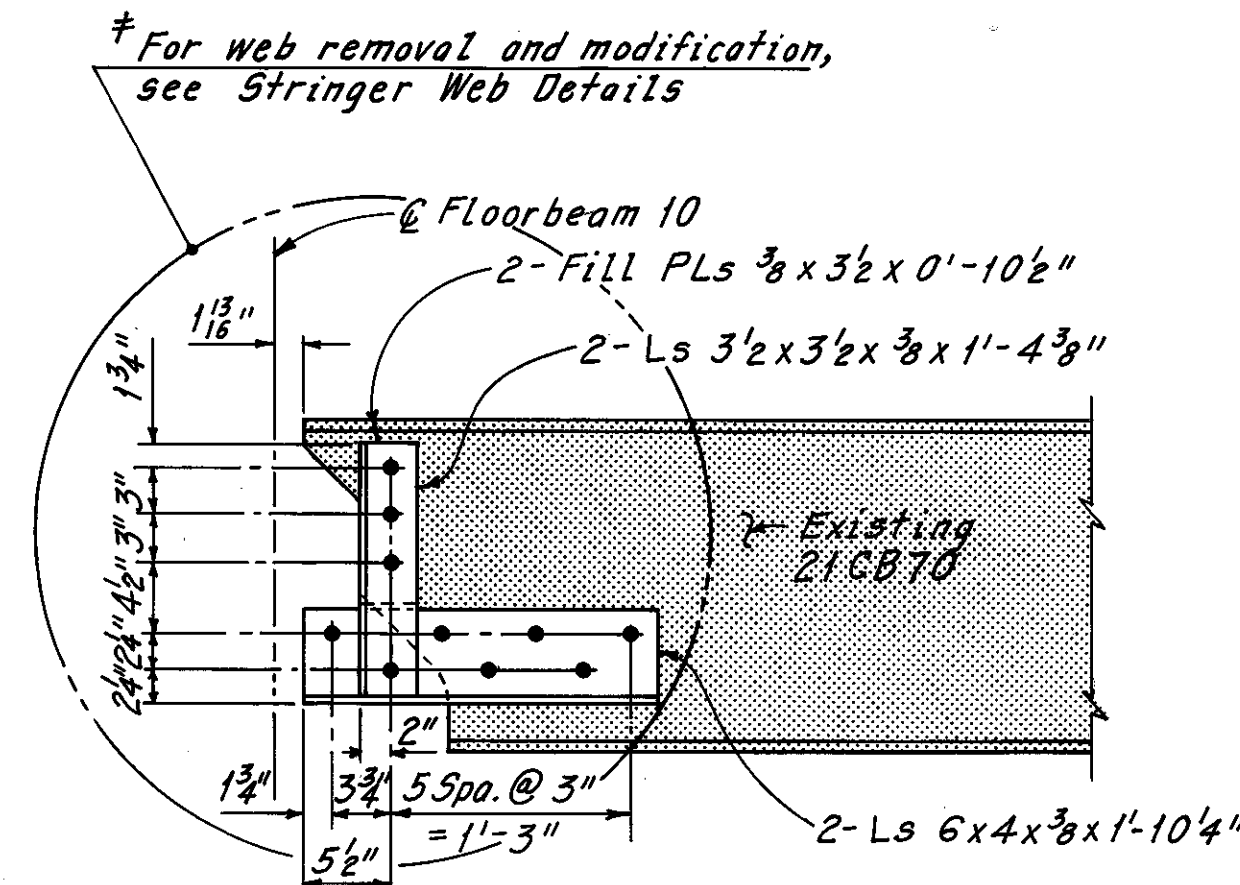
Note:  
Alternate A shall be used when end of web is in unsatisfactory condition and bottom flange is in satisfactory condition.  
Alternate B shall be used when the end of web is in unsatisfactory condition and the bottom flange is in unsatisfactory condition in the bearing area. Field drill holes in web to fit Ls 5x3x3/8".



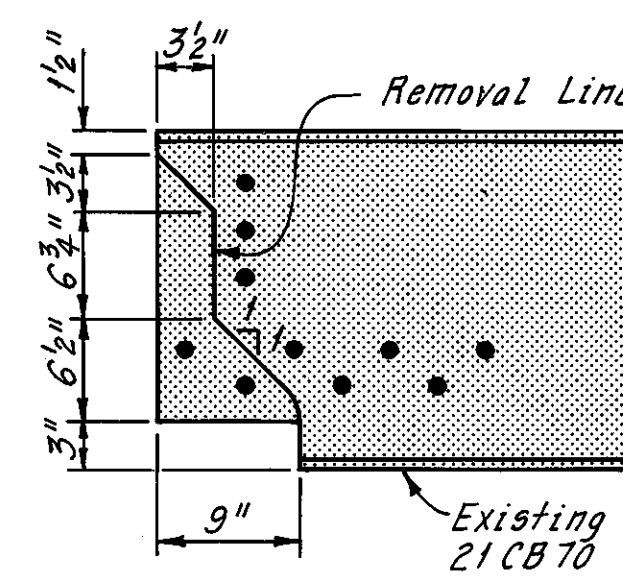
**ALTERNATE B**  
WHEELING & LAKE ERIE SPAN - PANEL POINTS 10 TO 0  
Stringers D thru L



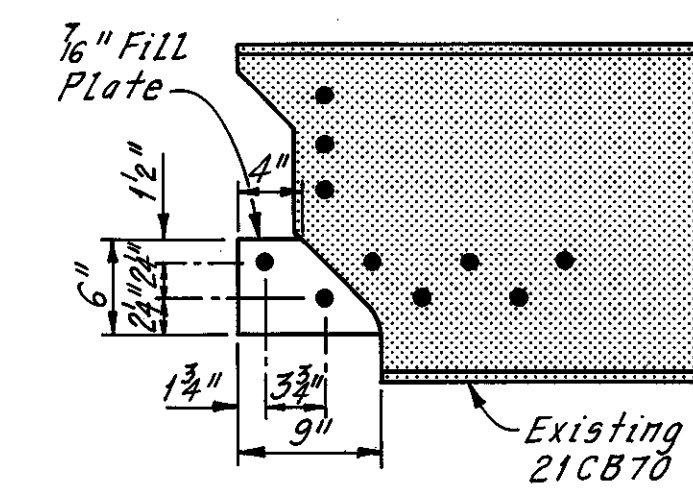
WHEELING & LAKE ERIE SPAN - PANEL POINTS 10 TO 0  
Stringers B and N



WHEELING & LAKE ERIE SPAN - PANEL POINTS 10 TO 0  
Stringer M



REMOVAL



MODIFICATION

† STRINGER WEB DETAILS  
(Stiffener angles not shown)

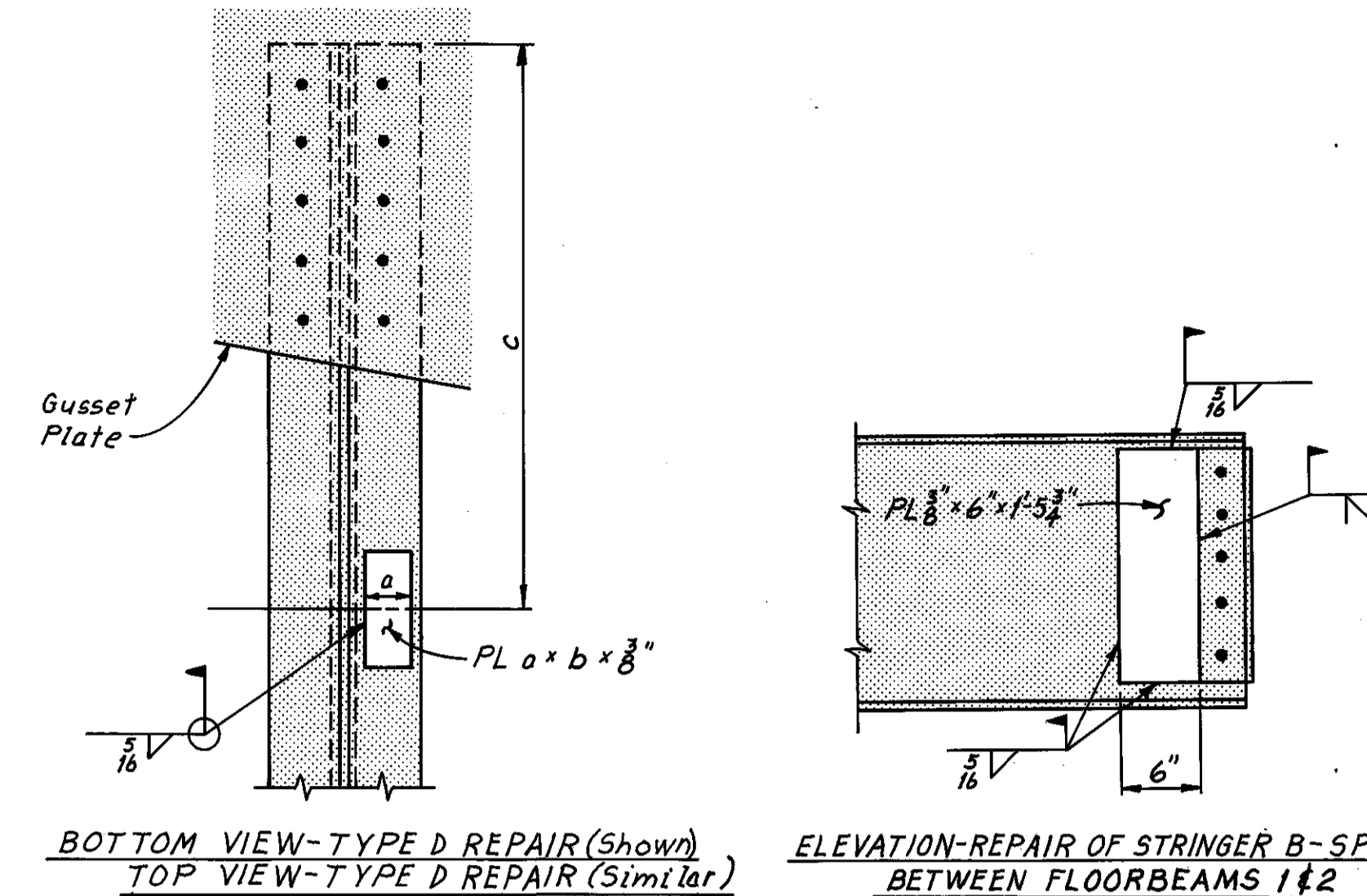
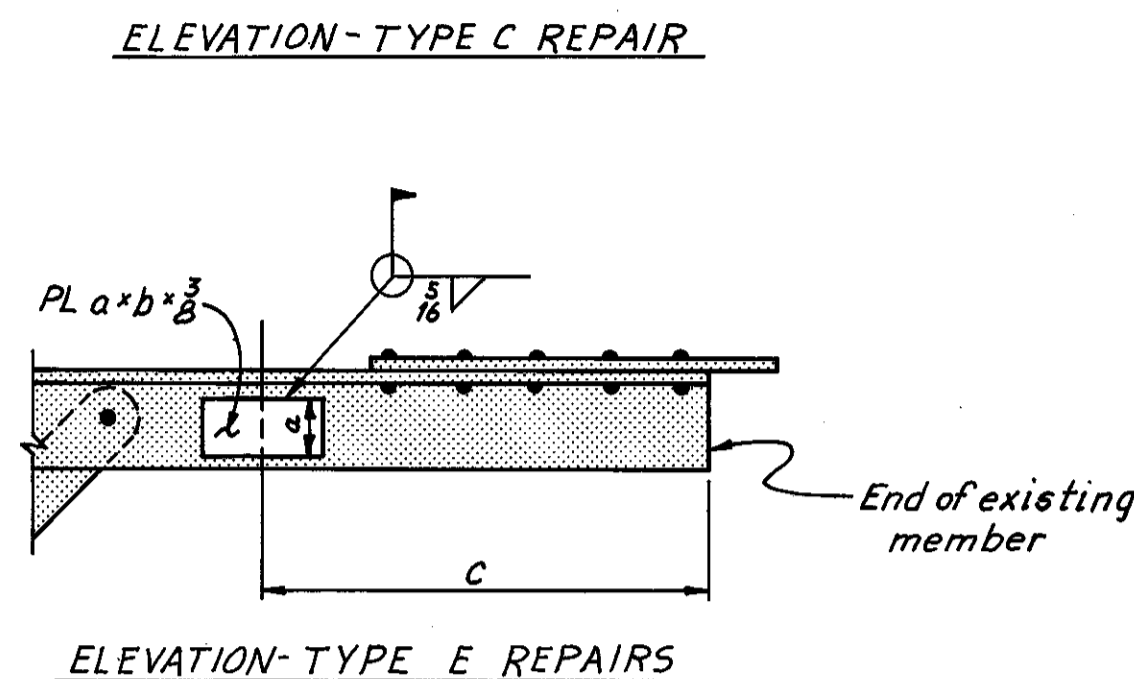
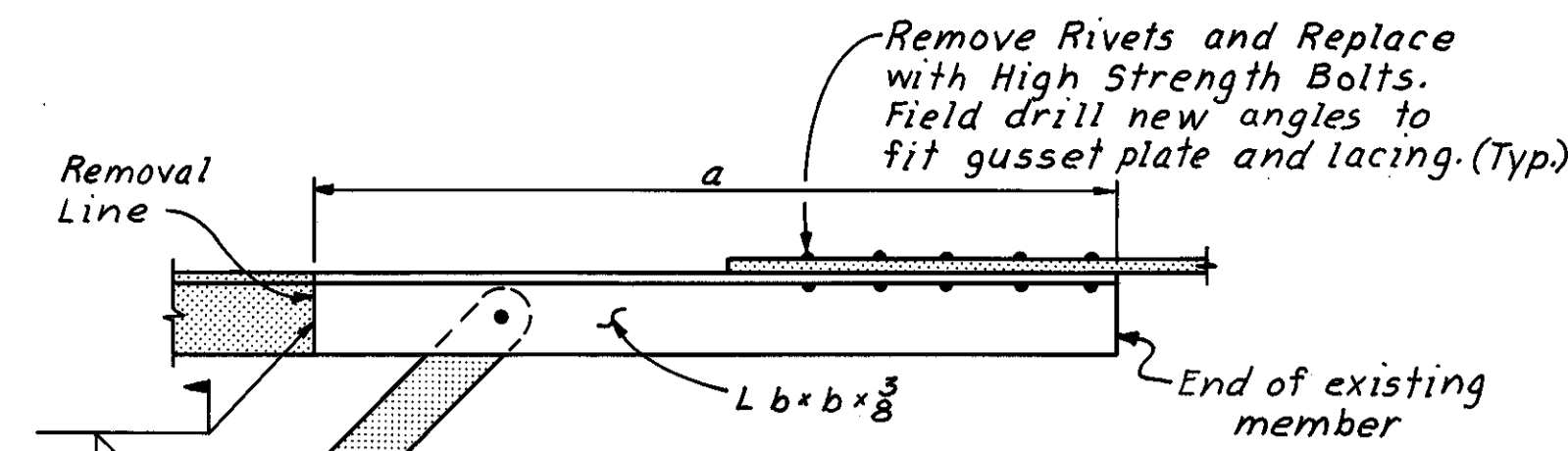
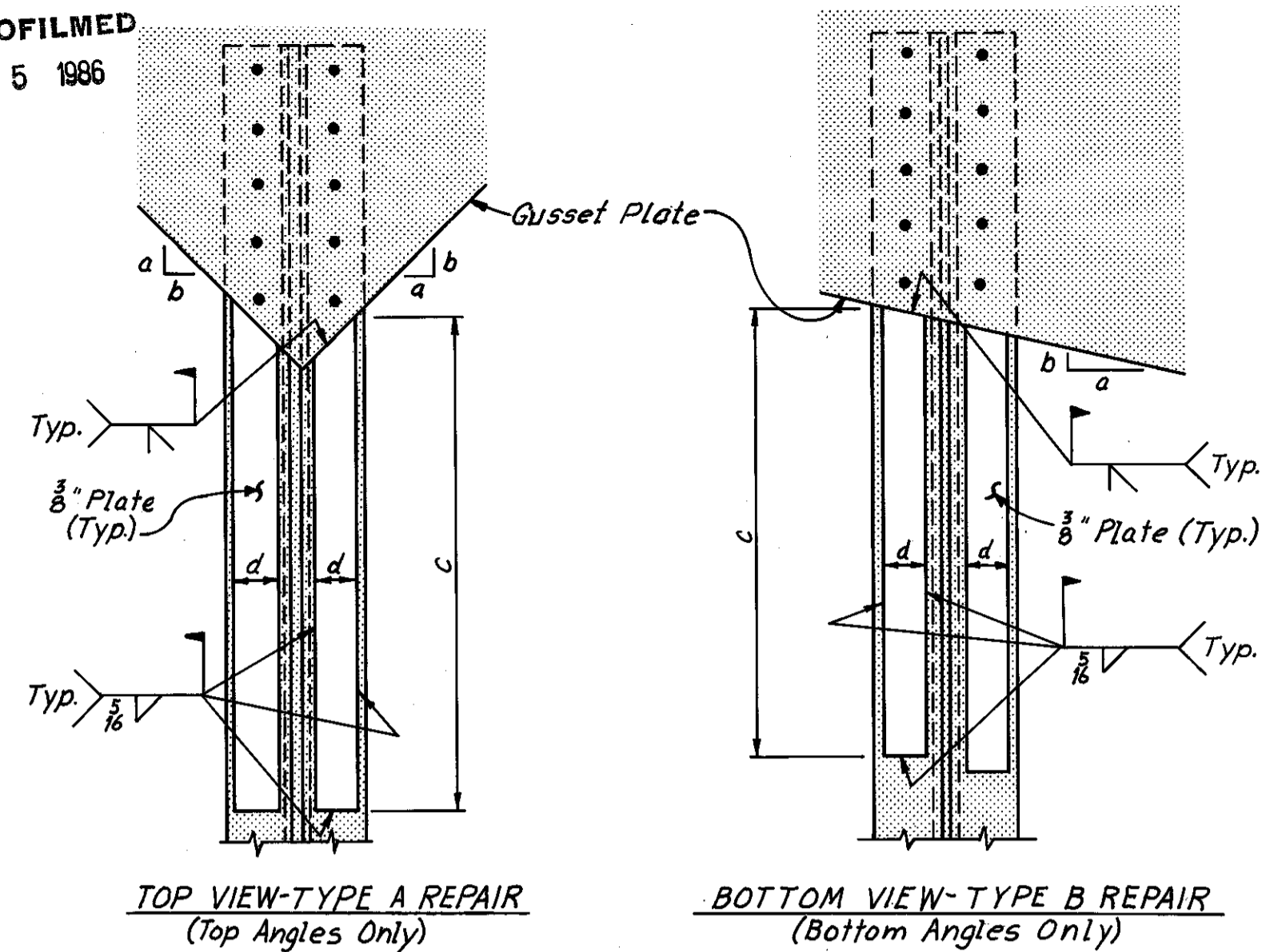
Notes:  
For Member Identification Plan, see Sheet 5/72.  
Zip-a-tone indicates existing structure and existing connections to be retained.  
All bolts are 1" High Strength with 1/8" holes.  
The following abbreviation is used:  
Spa. = Spaces

Sheet added 12-5-83

† Additional Stringer Modification As Determined During Bridge Reconstruction  
W.E.B. 4-19-82  
REVISION

H.N.T.B. BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
STRINGER MODIFICATION DETAILS WHEELING & LAKE ERIE SPAN (AS DETERMINED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56					
CUYAHOGA COUNTY OHIO					
DRAWN C.P.	TRACED C.P.	CHECKED W.E.B.	REVIEWED	REVISED	
DATE 7-1-81	DATE 7-2-81	DATE 7-2-81	DATE	DATE	SHEET 27A/72

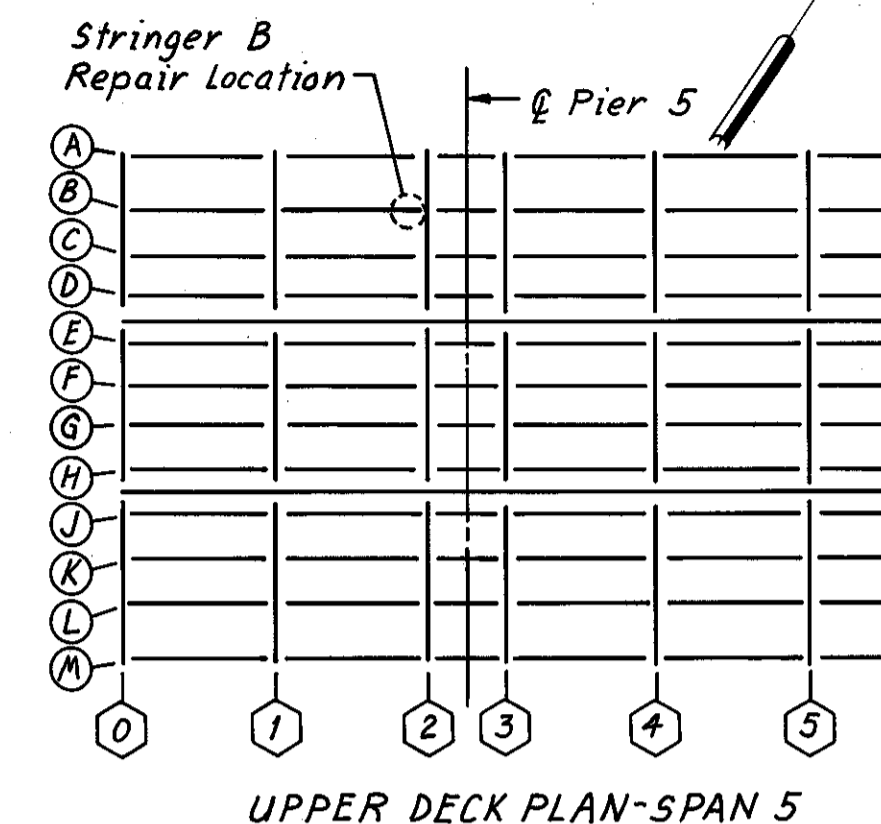
MICROFILMED  
DEC 5 1986



FHWA REGION	STATE	PROJECT
5	OHIO	

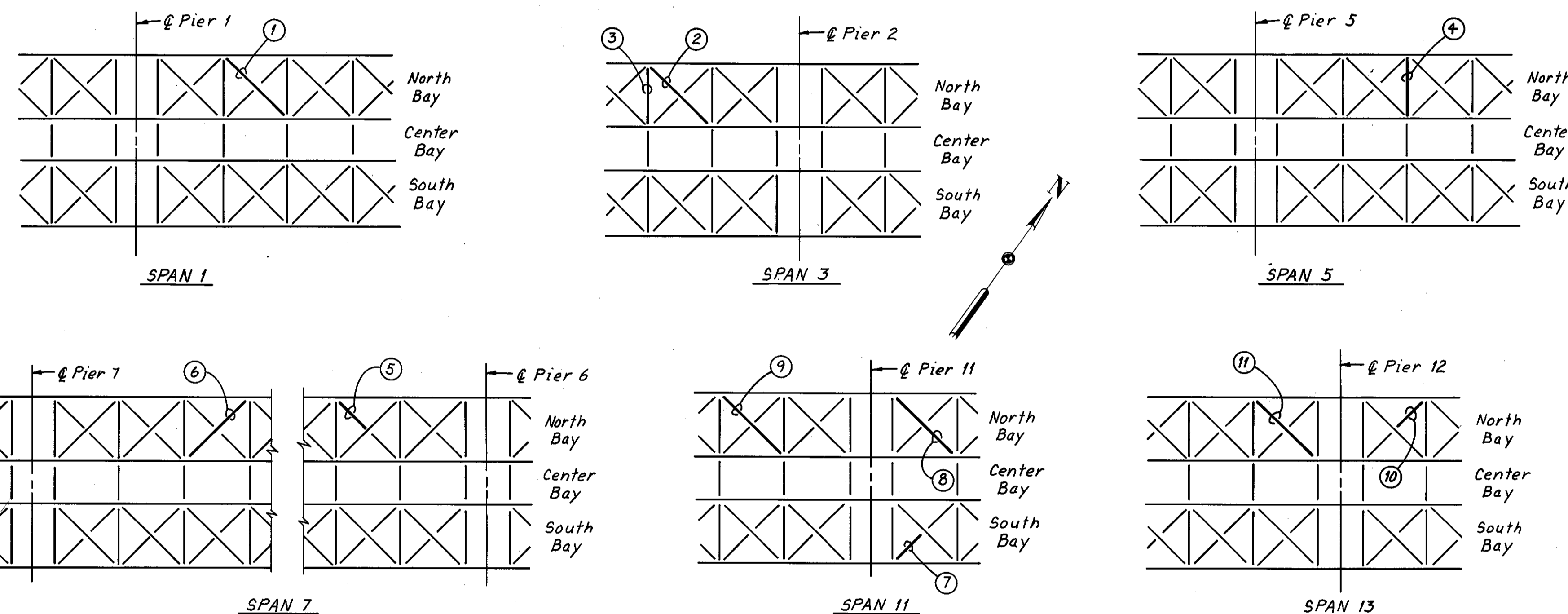
102B  
185

CUYAHOGA COUNTY  
CUY-10-16.23



LATERAL REPAIRS

STRINGER REPAIRS

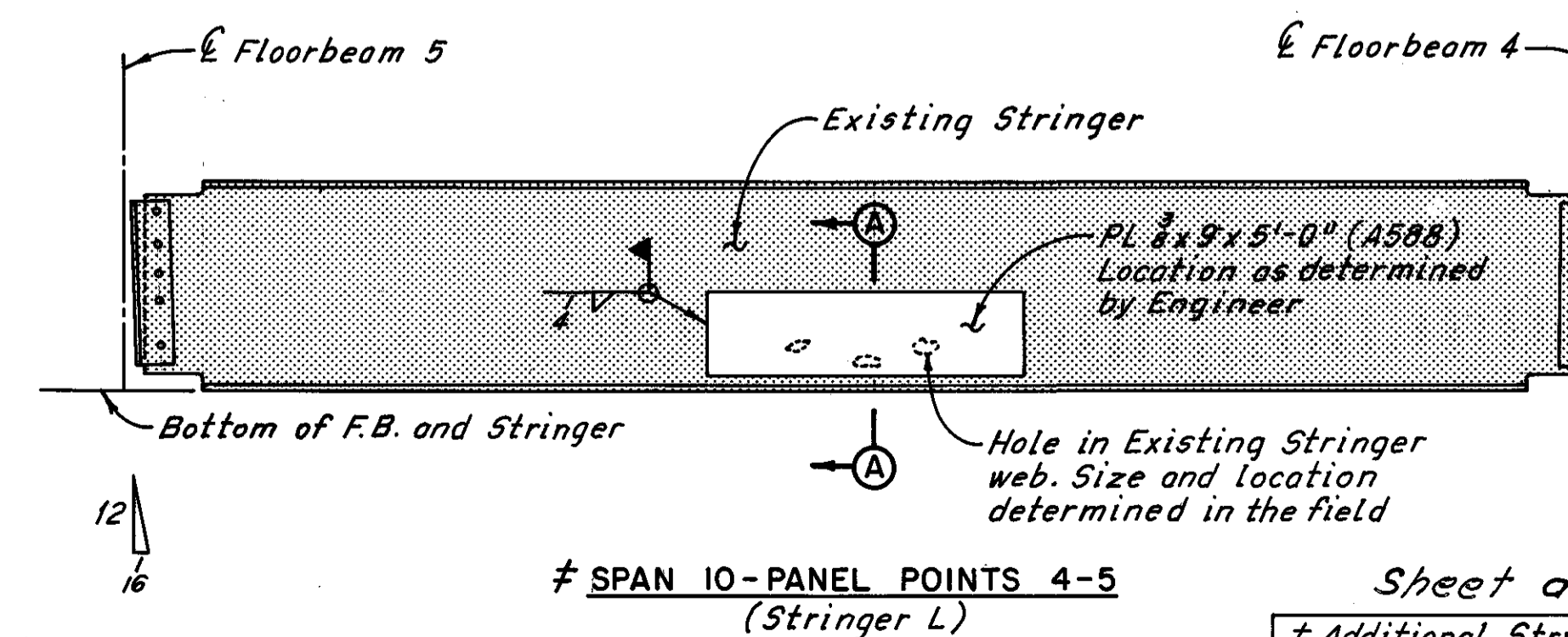
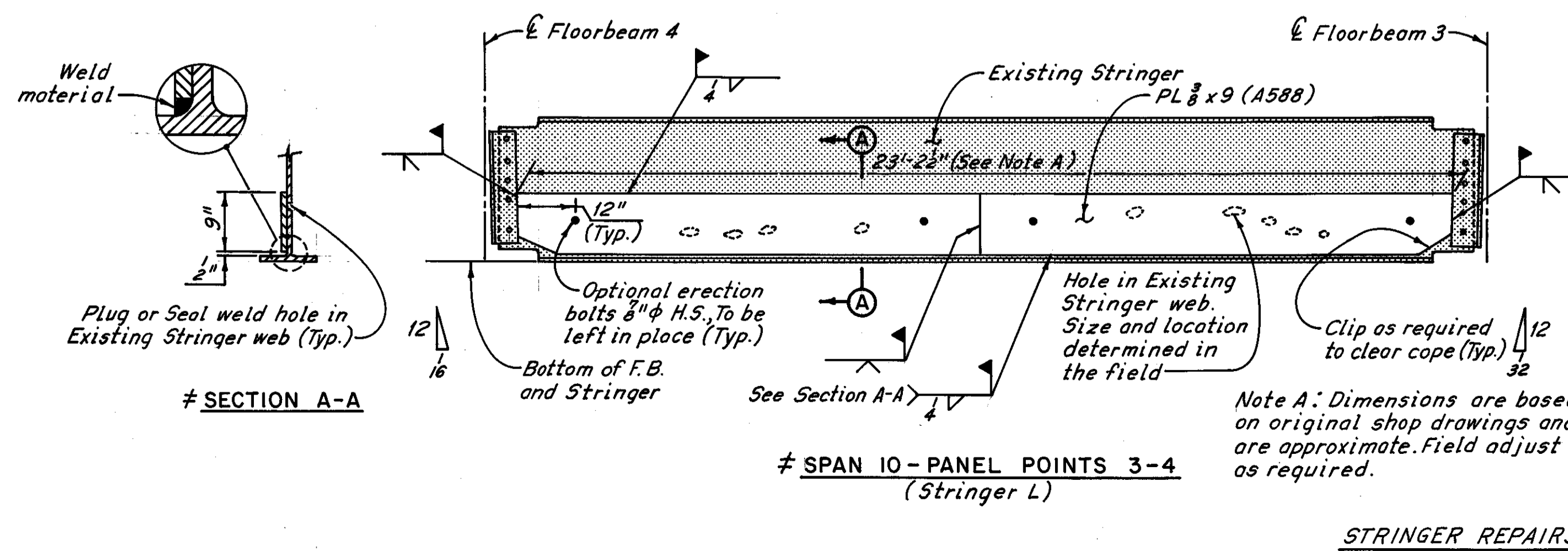


Member Ident. Number	Span	Member Type	Member Location	Angle	Type of Repair	a	b	c	d
1	1	X-Brace	Top	Both	A	12	11 1/4	2'-6"	3"
2	3	X-Brace	Top	Both	A	12	0	5'-0"	3"
2	3	X-Brace	Bottom	West	B	12	0	6'-6"	3"
3	3	X-Brace	Top	Both	A	12	0	8'-6"	3"
3	3	Strut	Bottom	West	B	12	0	8'-6"	3"
4	5	Strut	Top	Both	A	12	0	8'-0"	3"
4	5	Strut	Top	West	E	2 1/4"	6"	3'-0"	—
4	5	Strut	Bottom	East	E	2 1/4"	2'-0"	3'-3"	—
4	5	Strut	Bottom	West	D	3"	9"	2'-0"	—
4	5	Strut	Bottom	East	B	12	0	13'-0"	3"
5	7	X-Brace	Bottom	Both	B	12	4 1/2	8'-0"	3"
6	7	X-Brace	Top	Both	C	6'-0"	3 1/2"	—	—
6	7	X-Brace	Bottom	East	C	7'-0"	3 1/2"	—	—
7	11	X-Brace	Top	East	D	3"	6"	4'-9"	—
8	11	X-Brace	Top	Both	A	12	9 3/4	6'-0"	3"
9	11	X-Brace	Top	Both	A	12	10 1/4	9'-0"	3"
9	11	X-Brace	Bottom	West	D	3"	2'-0"	3'-0"	—
10	13	X-Brace	Top	Both	A	9 3/4	12	5'-0"	3"
11	13	X-Brace	Top	Both	A	12	9 3/4	5'-0"	3"

Notes:  
All new structural steel shall be ASTM A588.  
All bolts are 7/8" High Strength Bolts with 5/8" holes. Holes are to be field drilled to fit existing steel.  
Angles given on gusset plates are taken from original shop drawings and are approximate. The Patch Plates may need to be field corrected to fit existing steel.

- Indicates Member Identification Number.
- ▨ Indicates existing steel.
- Indicates Floorbeam.

Note: Surfaces of old material, which are to be covered by repair or by reinforcing material, shall be cleaned of dirt, rust, and other foreign matter except adherent paint film. The portions of such surfaces that are to receive welds shall be cleaned thoroughly of all foreign matter including paint film for a distance of 2 in. from each side of the outside lines of welds. Such surfaces, inside the areas cleaned for receiving welds, shall be painted.



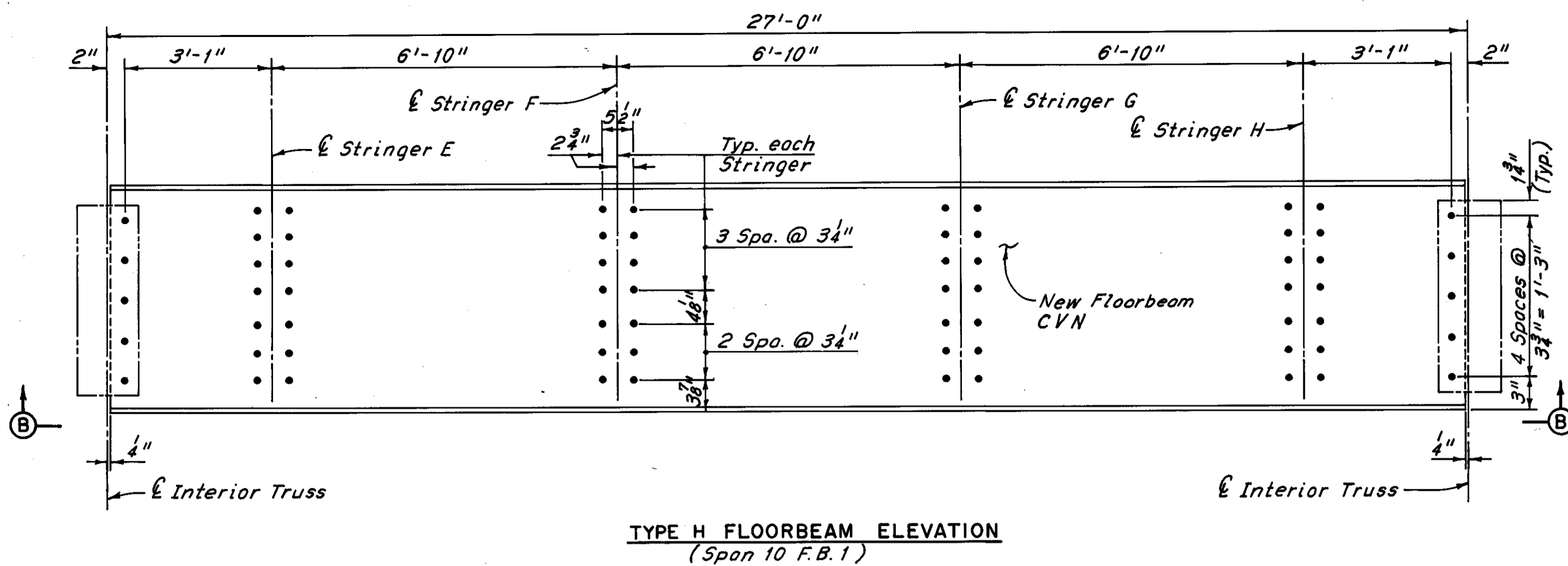
Note: For Member Identification Plan, see Sheet B/72.

Sheet added 12-5-83  
# Additional Stringer Modification As Determined During Bridge Reconstruction 6-30-83  
R.H.W.

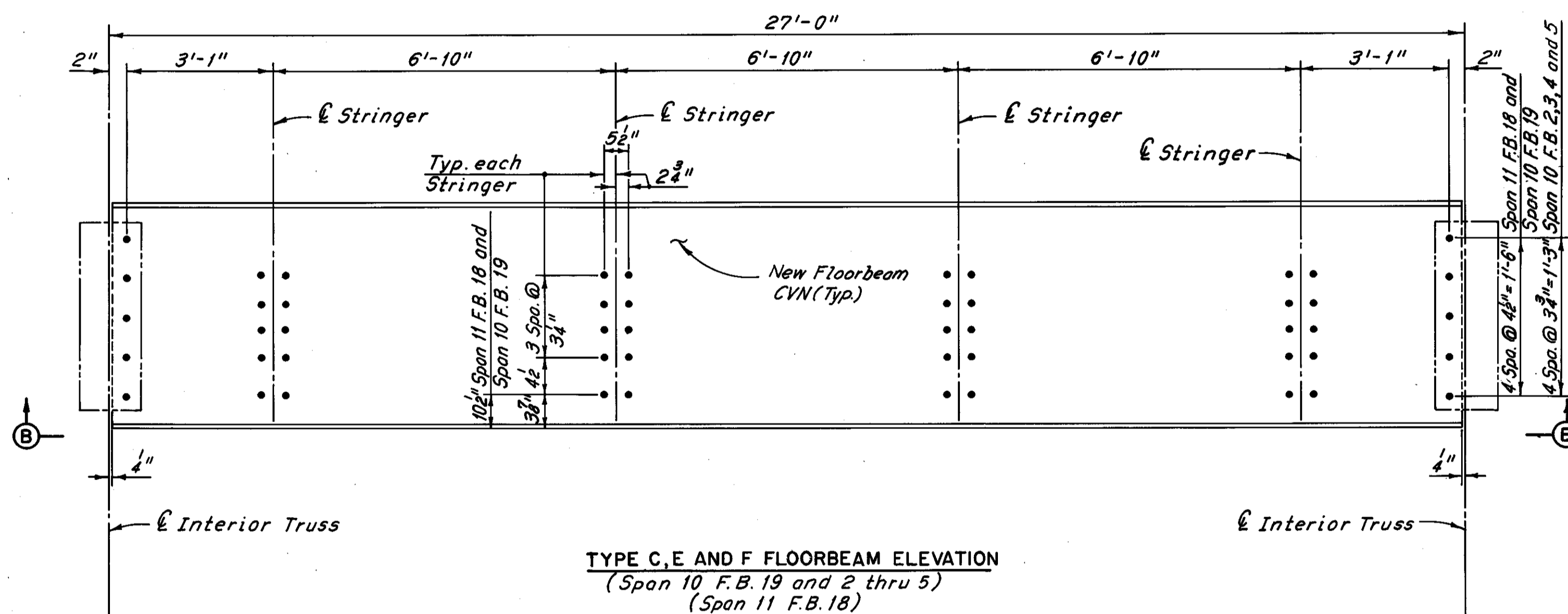
H.N.T.B. BRIDGE NO. 3  
HOWARD NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**MISCELLANEOUS REPAIRS**  
(AS DETERMINED DURING RECONSTRUCTION)  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22 + 19.19  
CUYAHOGA COUNTY STA. 55 + 04.56 OHIO

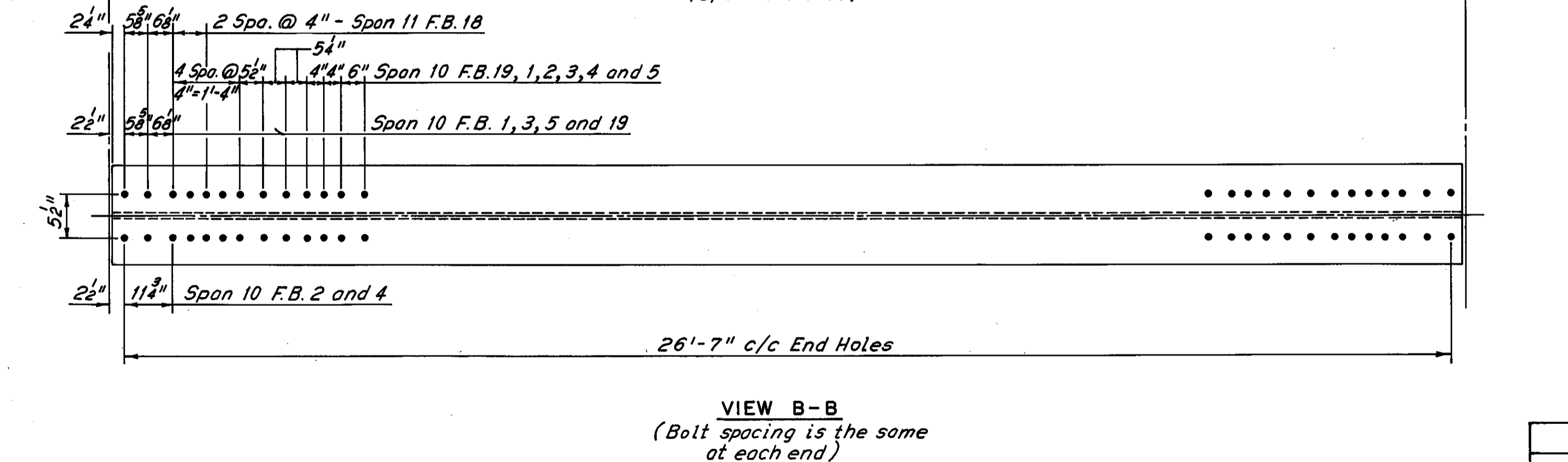
DATE 3-21-83 TRACED RPT DATE 3-24-83 CHECKED W.E.B. DATE 3-29-83 REVIEWED DATE SHEET 27B/72



TYPE H FLOORBEAM ELEVATION  
(Span 10 F.B. 1)



TYPE C, E AND F FLOORBEAM ELEVATION  
(Span 10 F.B. 19 and 2 thru 5)  
(Span 11 F.B. 18)



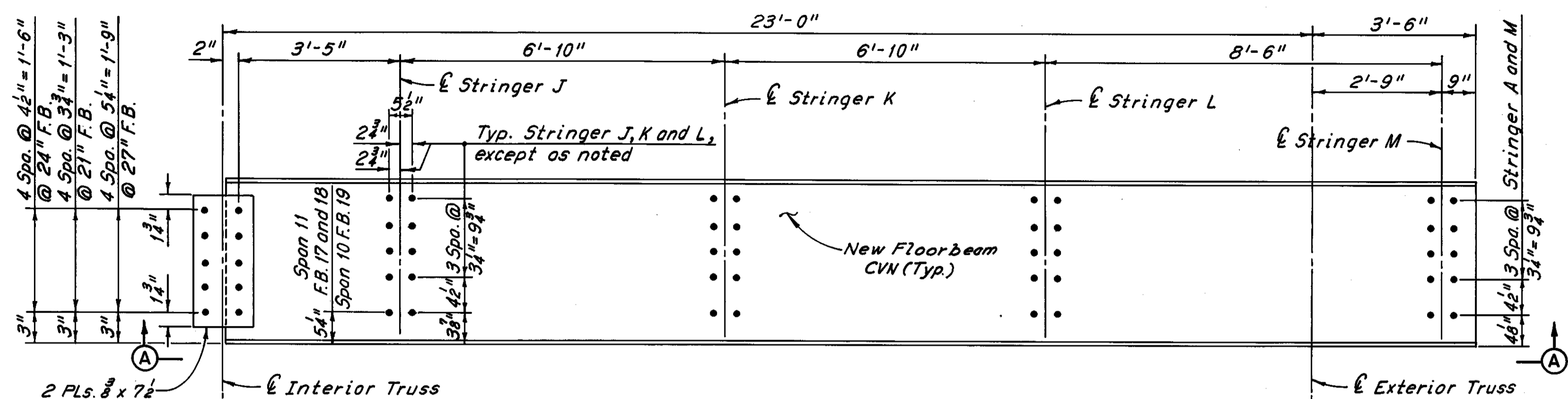
VIEW B-B  
(Bolt spacing is the same at each end)

Note:  
Web stiffeners required on one side of F.B. at expansion joints. Stiffener sizes shall be as shown in Expansion Joint 5 Details, Sheet 39/72, and shall be placed along floorbeams as shown on Floorbeam Replacement At Expansion Joints, West Pylon to East Abutment, Sheet 34/72.

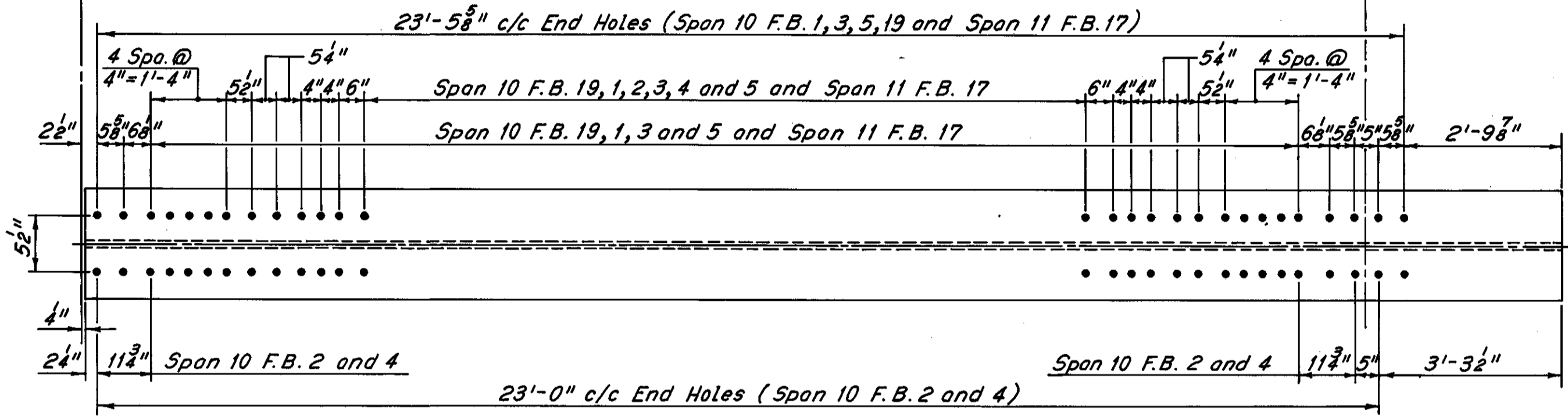
SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS (CVN)  
Where a shape or plate is labeled "CVN", the material shall meet minimum notch toughness requirements in accordance with 711.01. The Fabricator shall submit to the Director a procedure designed for positive identification of material through all phases of fabrication. No material shall be fabricated until the Director has approved the procedure.

FLOORBEAM TYPE	NEW FLOORBEAM SIZE
A	W27 x 84
B	W24 x 117 (or W24 x 120)
C	W27 x 178 (or W27 x 177)
D	W21 x 101 (or W21 x 96)
E & H	W27 x 114
F	W24 x 131 (or W24 x 130)
G	W24 x 84
J	W30 x 124

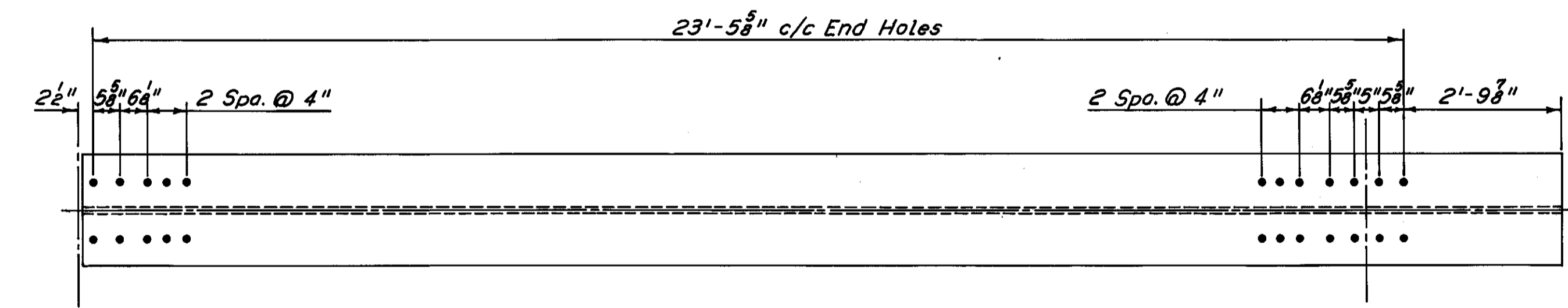
Notes:  
For Part Framing Plan, see Sheet 25/72.  
For Floorbeam Stud Placement, see Sheet 25/72.  
All bolts are 1" High Strength Bolts, with 1/8" holes.  
The following abbreviations are used:  
F.B. = Floorbeam Spa. = Spaces  
Typ. = Typical



TYPE A, B AND D FLOORBEAM ELEVATION  
(Span 11 F.B. 17 and 18 and Span 10 F.B. 19 thru 5)  
(South Exterior F.B. Shawn, North Exterior F.B. Similar)



VIEW A-A  
(Typical except as noted)



VIEW A-A  
(Span 11 F.B. 18)

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

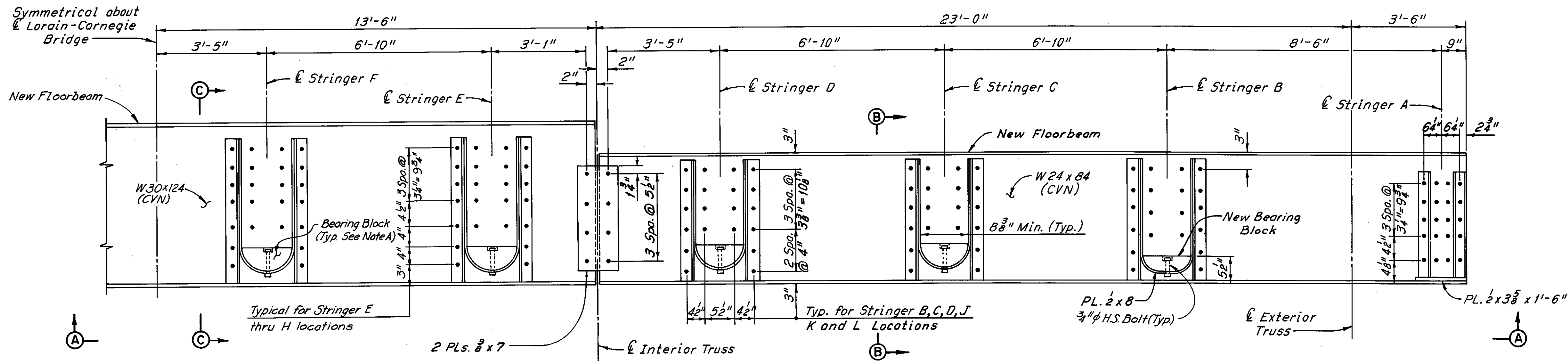
**HNTB**

**FLOORBEAM REPLACEMENT DETAILS**  
SPAN 10 AND PART SPANS 9 AND 11  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

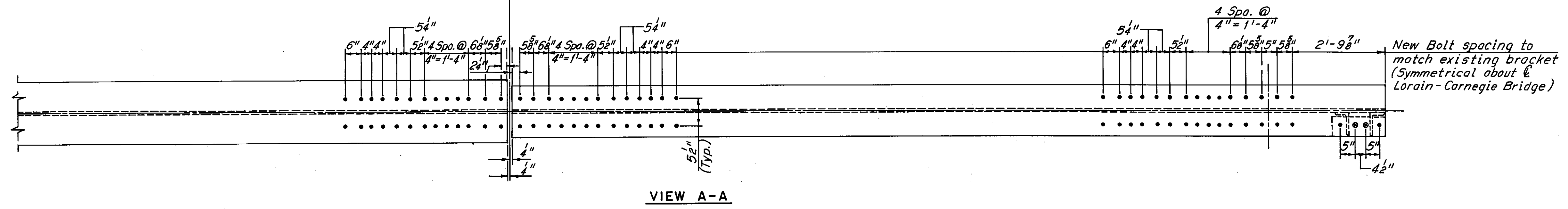
CUYAHOGA COUNTY OHIO

DRAWN: R.S.	TRACED: L.A.	CHECKED: A.V.	REVIEWED:	REVISED:
DATE: 6-1-78	DATE: 8-1-78	DATE: 7-19-78	DATE:	DATE:

SHEET 28/72



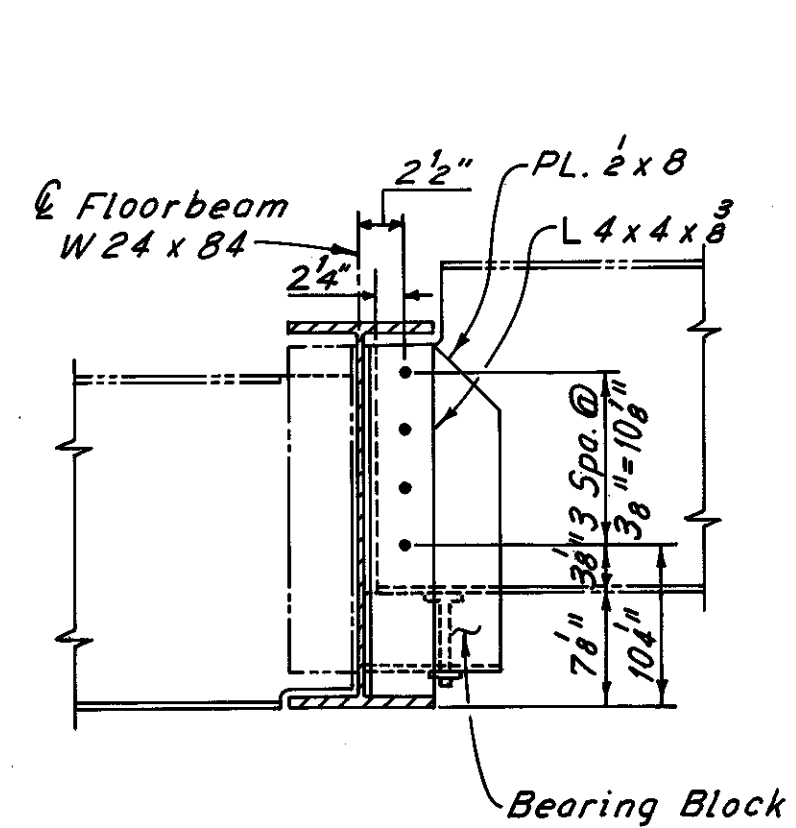
**TYPES G AND J FLOORBEAM ELEVATION**  
(Span 9, F.B. 0)  
(Welded Studs not shown)



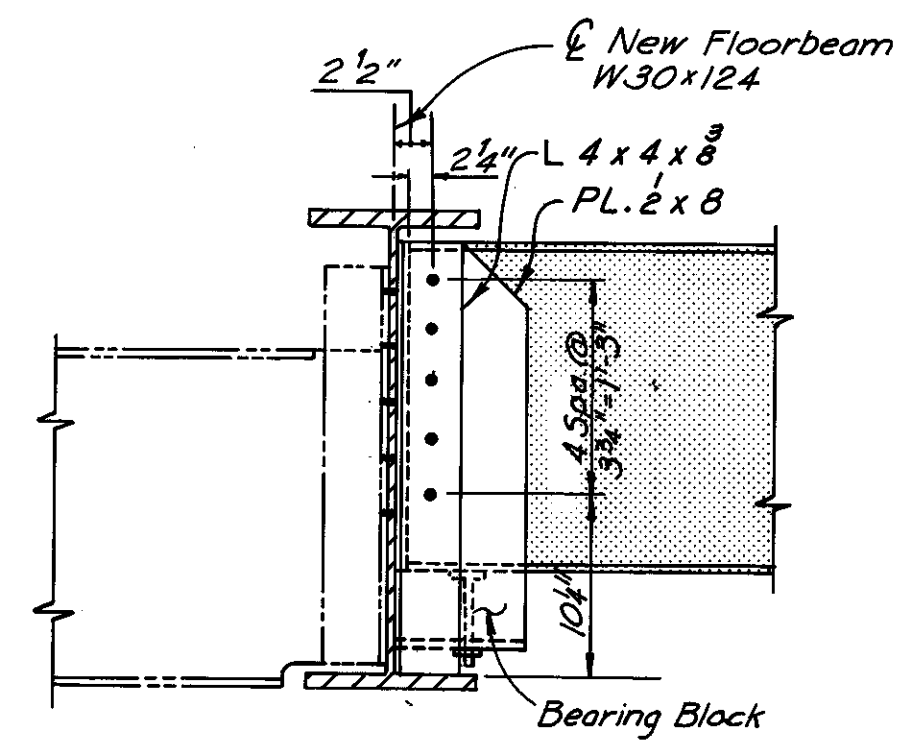
VIEW A-A

Note A:  
Existing bearing blocks at stringers C through K shall be removed, cleaned and inspected. If blocks are found to be in satisfactory condition and with approval of the Engineer they shall be reinstalled. If blocks are found to be unsatisfactory they shall be replaced in kind. All labor, materials and equipment required for the removal, inspection, and replacement or reinstallation of bearing blocks shall be included with the lump sum price bid for Item 513, Dismantle, Move, Alter and/or Recondition and Erect Reused Structural Steel, for payment.

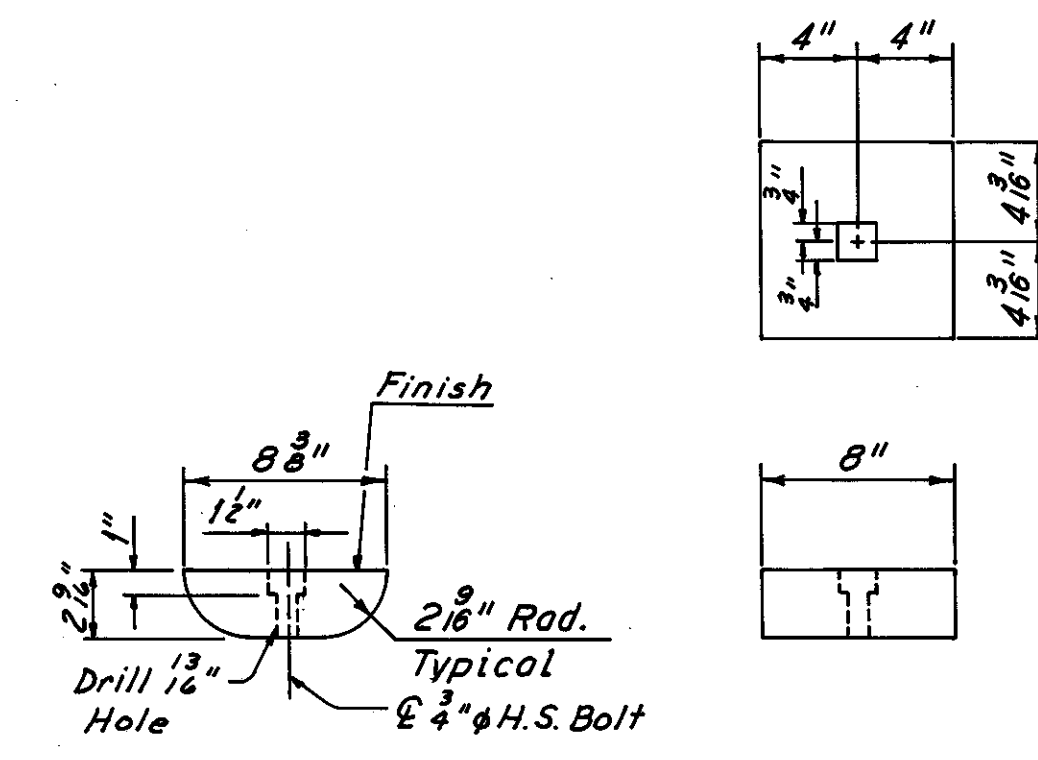
Notes:  
For Part Framing Plan, see Sheet 25/72.  
For Floorbeam Stud Placement, see Sheet 25/72.  
Zip-a-tone indicates portions of existing structure not modified.  
Phantom lines indicate modification, details of which are shown elsewhere in these plans.  
All bolt holes are 1/16"φ, except as noted.  
The following abbreviations are used:  
F.B. = Floorbeam      Spa. = Spaces  
Typ. = Typical      Rad. = Radius  
Min. = Minimum      H.S. = High Strength



SECTION B-B  
(Welded Studs not shown)



SECTION C-C  
(Welded Studs not shown)



CAST OR MACHINED STEEL BEARING BLOCK  
2 Required, each at Stringers B and L  
Bearing blocks shall be cast steel ASTM A296 or Structural steel ASTM A588.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

**FLOORBEAM REPLACEMENT DETAILS**  
**SPAN 10 AND PART SPANS 9 AND 11**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618      STA. 22+19.19  
   STA. 55+04.56

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
R.A.S.	L.R.	A.N.		
DATE 6-1-70	DATE 6-7-70	DATE 7-12-70	DATE	DATE

OHIO      SHEET 29/72

FHWA REGION	STATE	PROJECT
5	OHIO	



CUYAHOGA COUNTY  
CUY- 10-16.23

STRINGER	F.B. SPAN	CASE
B	0-1	10
L	0-1	R-12
B	1-2 thru 7-8	7
L	1-2 and 3-4 thru 7-8	7
L	2-3	6
B	8-9	R-11
L	8-9	R-11
B and L	9-10 and 10-11	7
B	11-12	R-7
L	11-12	R-7
B	6-7 and 10-11	R-2
A	8-9	R-14

STRINGER	F.B. SPAN	CASE
B	13-1	10
L	13-1	R-12
B	1-2	7
L	1-2	R-2
B	2-3	7
L	2-3	R-2
B	3-4	7
L	3-4	6
B and L	4-0	7
E, C & D	4-0	R-20

STRINGER	F.B. SPAN	CASE
B and L	0-1	7
B	1-2	7
L	1-2	R-2
B and L	2-3	7
B and L	3-4	2
B #7-8, (4-5) thru 13-14		7
L	4-5 thru 6-7	R-2
L	7-8 thru 10-11	7
L	11-12	6
L	(12-13 and) 13-14	7
B and L	14-15	2
B and L	15-16 and 16-17	7
B and L	17-18	9
B	8-9	R-2

STRINGER	F.B. SPAN	CASE
B	19-1	10
L	19-1	R-6
B and L	1-2	7
B	2-3	7
L	2-3	R-5
B and L	3-4, 4-5 and 5-0	7
B	5-0	R-15
C	5-0	R-16

STRINGER	F.B. SPAN	CASE
B and L	0-1	7
B and L	1-2 and 2-3	7
B and L	3-4	2
B and L	4-5	7
B and L	5-6	R-2
B	6-7 and 7-8	7
L	6-7 and 7-8	R-2
B	8-9	6
L	8-9	R-2
B	9-10	7
L	9-10	R-2
B and L	10-11 and 11-12	7
B	12-13	7
L	12-13	6
B	13-14	7
L	13-14	R-2
B and L	14-15	7
F	14-15	2
B and L	15-16	7
B and L	16-17	7
A	14-15	R-14
B	14-15	R-11

STRINGER	F.B. SPAN	CASE
B and L	18-1	10
B and L	1-2	7
B	2-3	6
L	2-3	7
B and L	3-4	7
B	4-0	R-3
L	4-0	7

STRINGER	F.B. SPAN	CASE
B	0-1	7
L	0-1	R-8
K	0-1	8
B and L	1-2	7
B and L	2-3	2
B and L	3-4	7
B	4-5	7
L	4-5	6
L	5-6	7
L	5-6	R-2
B and L	6-7, (7-8) and 8-9	7
B	9-10	7
L	9-10	R-2
B and L	10-11 and 11-12	7
B and L	12-13	2
B and L	13-14	7
B	14-15	7
L	14-15	R-10
B	1-2, 7-8 and 11-12	R-2
B	6-7, 8-9 and 10-11	7

STRINGER	F.B. SPAN	CASE
B	16-1	10
L	16-1	R-9
B and L	1-2	7
B	2-3	7
L	2-3	6
B and L	3-4	7
B and L	4-0	7
B	3-4	R-28
L	4-0	R-31

STRINGER	F.B. SPAN	CASE
B and L	0-1	7
B and L	1-2	7
B and L	2-3	2
B and L	3-4 thru 7-8	7
B	8-9	7
L	8-9	R-4
B	9-10	6
L	9-10	7
B	10-11	7
L	10-11	6
B	11-12	7
L	11-12	R-11
B	12-13	7
L	12-13	R-2
B	13-14	7
L	13-14	R-7
B	7-8	R-4
B	2-3	R-11
B	6-7	R-4

STRINGER	F.B. SPAN	CASE
B	15-1	10
L	15-1	10
B and L	1-2	7
B	2-0	7
L	2-0	R-3

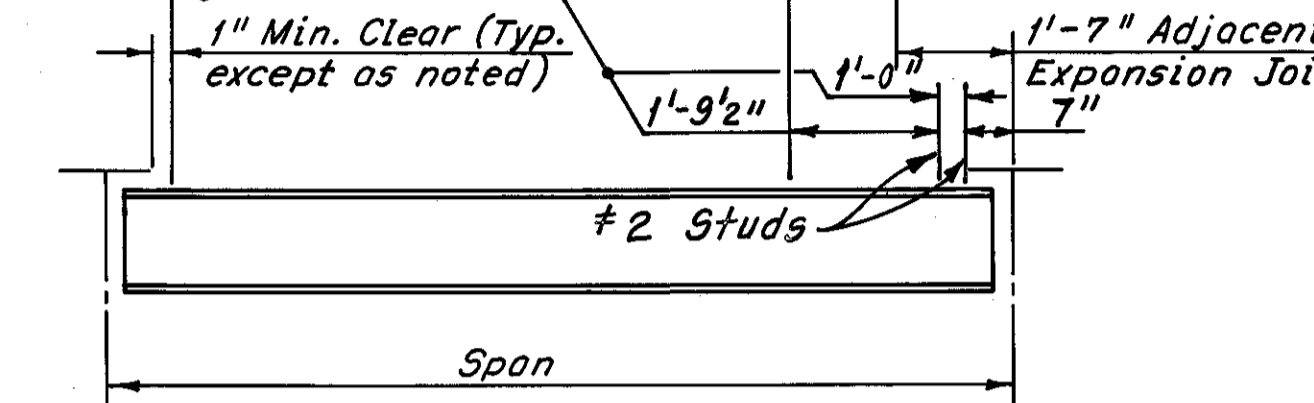
STRINGER	F.B. SPAN	CASE
B	0-1	6
L	0-1	7
B and L	1-2	7
F	1-2	8
B and L	2-3	2
B	3-4	5
L	3-4	4
B and L	4-5	3
B and L	5-6 and 6-7	5
B	7-8	5
L	7-8	R-1
B and L	8-9	5
B and L	9-10	11
L	2-3	R-11

STRINGER	F.B. SPAN	CASE
B	14-1	10
L	14-1	R-12
B and L	1-2	7
B and L	2-0	7
K	2-0	8

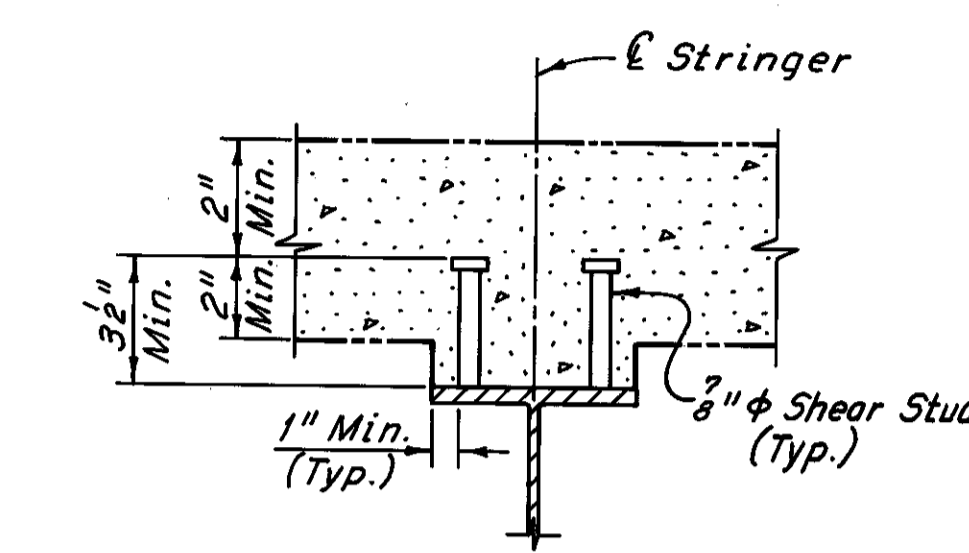
STRINGER	F.B. SPAN	CASE
B	0-1	6
L	0-1	7
B and L	1-2	7
F	1-2	8
B and L	2-3	2
B	3-4	5
L	3-4	4
B and L	4-5	3
B and L	5-6 and 6-7	5
B	7-8	5
L	7-8	R-1
B and L	8-9	5
B and L	9-10	11
L	2-3	R-11

STRINGER	F.B. SPAN	CASE
B and N	10-0	12
C and M	0-1	13
C and M	1-2 and 2A-3	12
C and M	3-4, 4-5 and 5-6	15
C	10-0	R-13
C	1-2	R-22
M	5-6	R-26

CASE	SPAN	MEMBER
R-1	22'-2"	W21x44
R-2, 3, 4	23'-9" thru	W21x44
5 and 8	23'-11"	
R-11	12'-0"	W16x26
R-6, R-9	23'-9" and	W21x44
and R-12	23'-11"	
R-7	21'-11"	W21x44
R-10	21'-9"	W21x44
R-13	27'-10 1/2"	W21x44

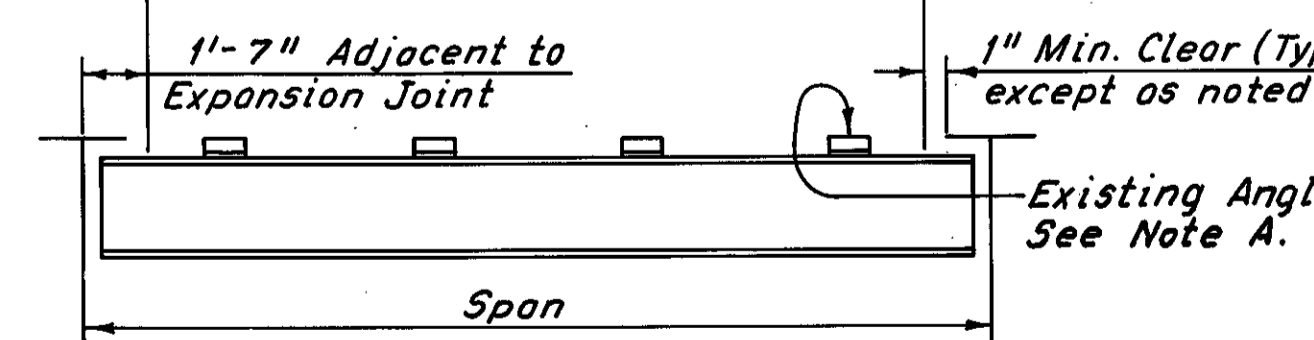


STUD SPACING  
(New Stringers)



TYPICAL STUD PLACEMENT

CASE	SPAN	MEMBER
1	12'-0"	16CB 70
2	12'-0"	16CB 38
3	22'-2"	21CB 64
4	22'-2"	21CB 70
5	22'-2"	21CB 55
6	23'-9" thru	21CB 70
	23'-11"	
7	23'-9" thru	21CB 64
	23'-11"	
8	23'-11"	21CB 64
*9	21'-9" thru	21CB 64
	21'-11"	
*10	23'-9" thru	21CB 64
	23'-11"	
*11	22'-2"	21CB 55
12	27'-10 1/2"	21CB 70
13	23'-11"	21CB 64
14	20'-11 1/2"	21CB 58
15	21'-10 1/2"	21CB 58



STRINGER STRENGTHENING  
(Retained Stringers)

\*Adjacent to Expansion Joint

Note A:  
Shear studs may be welded to existing angle, or to an existing rivet head, to maintain the stud spacing shown. Welding to existing angles or rivet heads shall be to the satisfaction of the Engineer.

\*except as noted on Sheet 31A/72.

Notes:  
Stringer strengthening details with a case prefix R-, denote cases in which the welded studs are placed on new stringers. For stringer replacement details, see Sheet 31/72 thru 31C/72.  
The following abbreviations are used:  
Typ. = Typical  
F.B. = Floorbeam  
Min. = Minimum  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
\*See Sheet 30A/72 for additional Stringer Replacement Locations.

Additional Stringer Replacement As Determined During Bridge Reconstruction	W.E.B. 12-15-82	W.E.B. 7-30-81	C.P. 7-22-81	C.P. 4-28-81	C.K.B. 4-14-81	D.L.R. 3-27-81
--	-----------------	----------------	--------------	--------------	----------------	----------------

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**STRINGER STRENGTHENING**  
WEST PYLON TO EAST ABUTMENT  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY	OHIO
DRAWN BY	TRACED BY
DATE 6-28-78	DATE 7-6-78
CHECKED	REVIEWED
DATE 7-14-78	DATE
REVISION	REVISED 12-5-83
	SHEET 30/72

SPAN 13		
STRINGER	F. B. SPAN	CASE
B	1-2, 2-3, 3-4, 5-6 & 7-8	R-2
L	1-2, 3-4 thru 6-7 & 10-11	R-2

SPAN 9		
STRINGER	F. B. SPAN	CASE
B	0-1	R-8
B	15-16	R-2
B	16-17	R-7
K	0-1	R-17
L	1-2, 2-3 and 4-5	R-2

#R-70

SPAN 11		
STRINGER	F. B. SPAN	CASE
B	0-1	R-8
C and D	0-1	R-17
B	4-5 thru 6-7	R-2
B	9-10 and 10-11	R-2
B	11-12 and 15-16	R-2
L	12-13	R-2
L	14-15	R-11

SPAN 7		
STRINGER	F. B. SPAN	CASE
L	2-3 and 12-13	R-11
L	7-8	R-2

SPAN 10		
STRINGER	F. B. SPAN	CASE
B	1-2	R-18
H	5-0	R-19
L	5-0	R-34

Note:  
For Notes, see Sheet 30/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

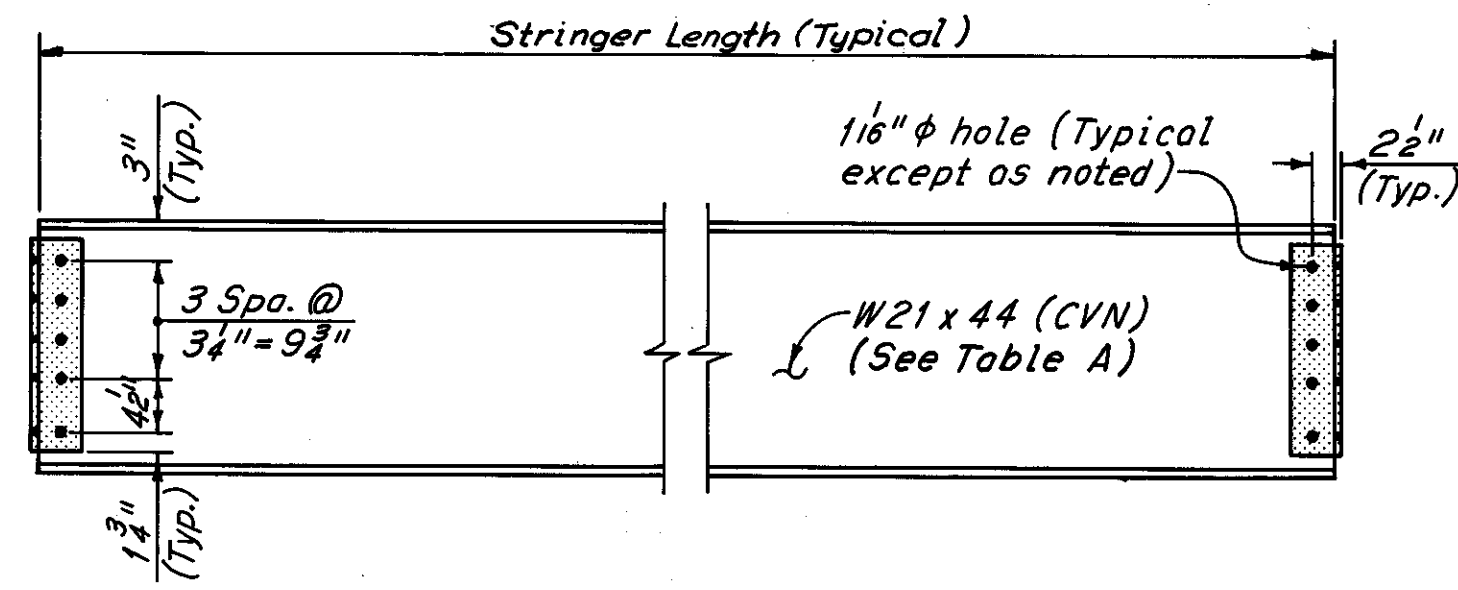
HNTB

Sheet added 12-5-83

Δ Additional Stringer Replacement As Determined During Bridge Reconstruction	W.E.B. 12-15-82
# Case Number	W.E.B. 8-25-81
● Additional Stringer Replacement As Determined During Bridge Reconstruction.	C.P. 8-18-81
# Additional Stringer Replacement As Determined During Bridge Reconstruction	C.P. 7-22-81
REVISION	

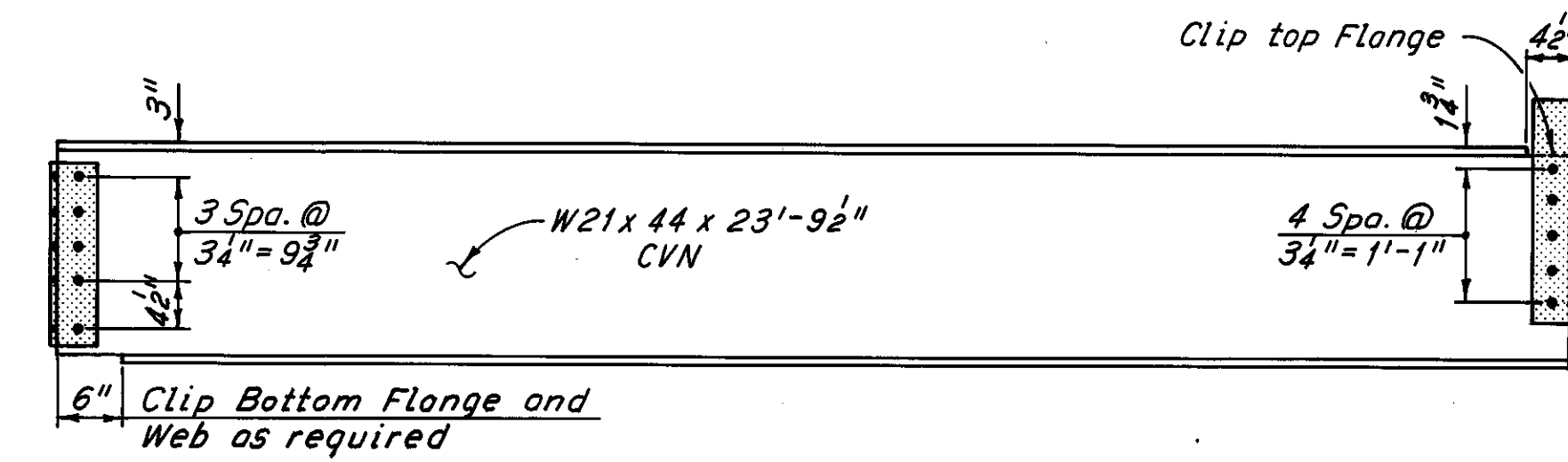
STRINGER REPLACEMENT LOCATIONS WEST PYLON TO EAST ABUTMENT (AS DETERMINED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56  
CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED W.E.B.	REVIEWED	REVISED
DATE 5-1-81	DATE 5-1-81	DATE 5-5-81	DATE	SHEET 30A/72

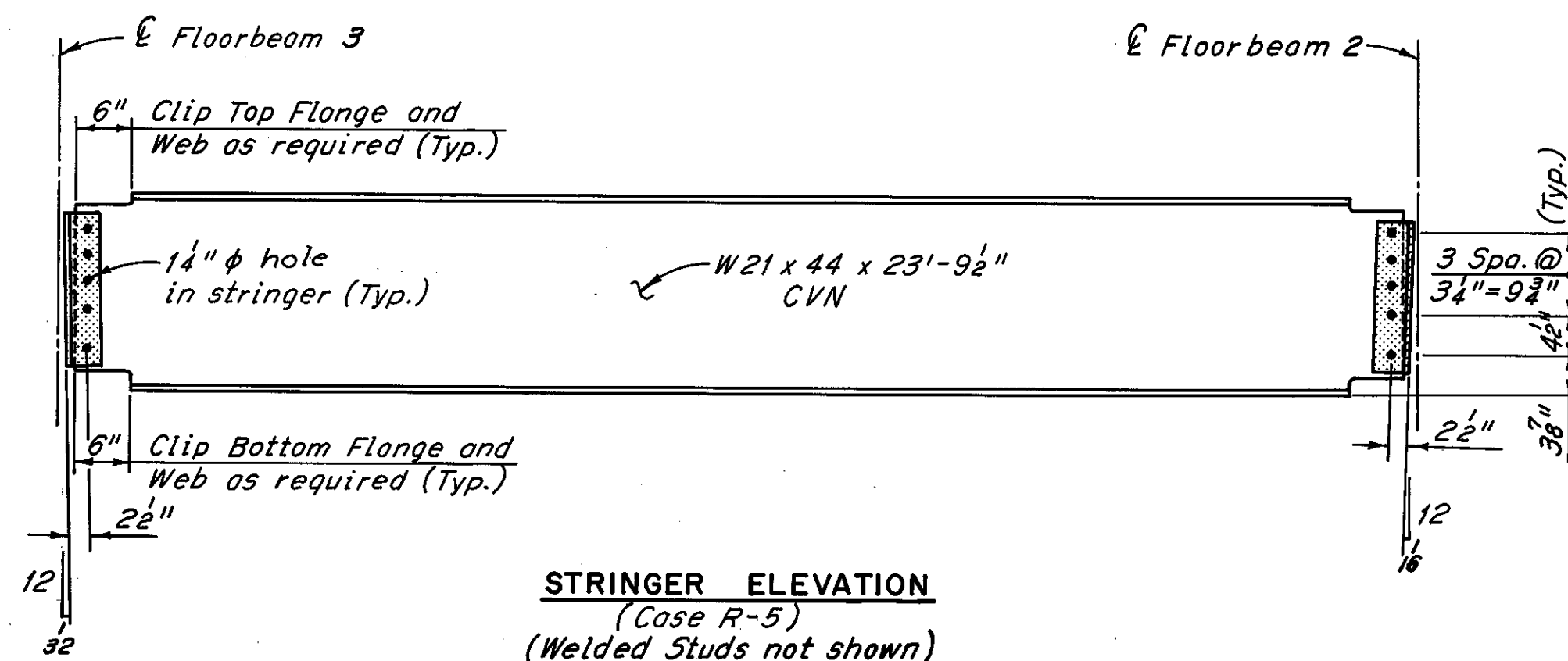


**STRINGER ELEVATION**  
(Cases R1, R2, R4, R7, R9, R10, and R12)  
(Welded Studs not shown)

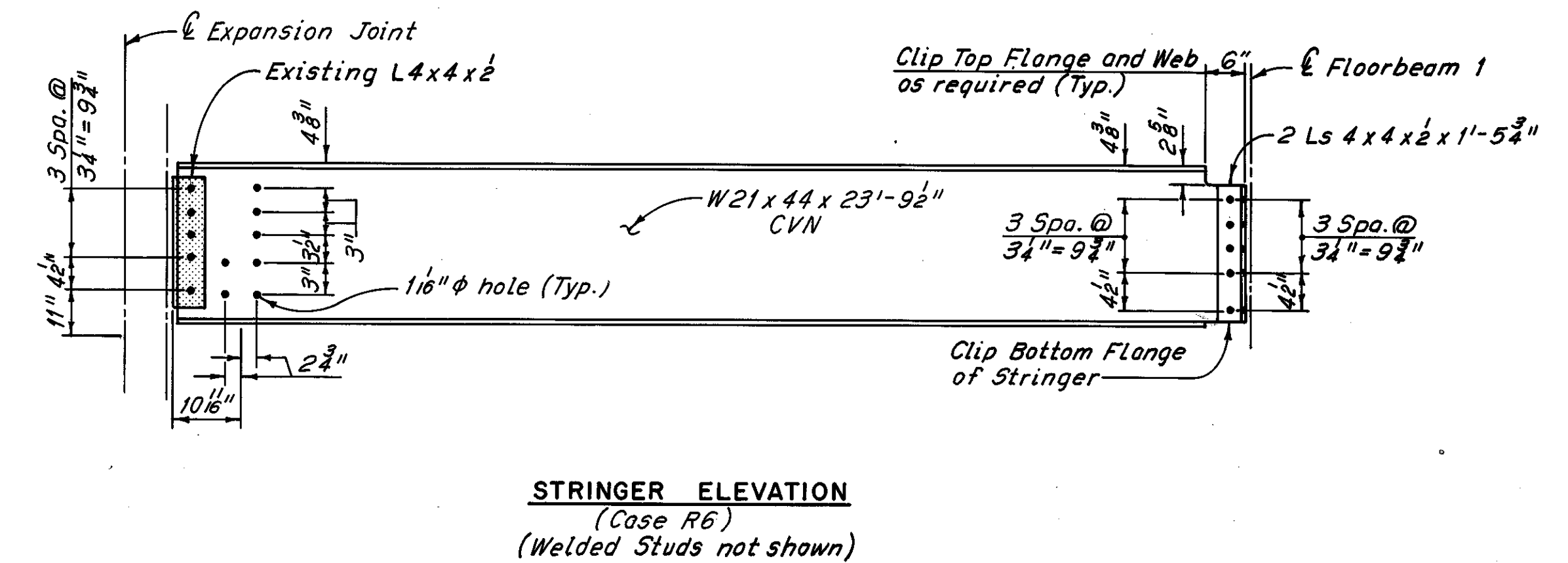
CASE	STRINGER LENGTH
R1	22'-0 1/2"
R2 and R12	23'-9 1/2"
R4	23'-8 1/2"
R7	21'-9 1/2"
R9	23'-7 1/2"
R10	21'-7 1/2"



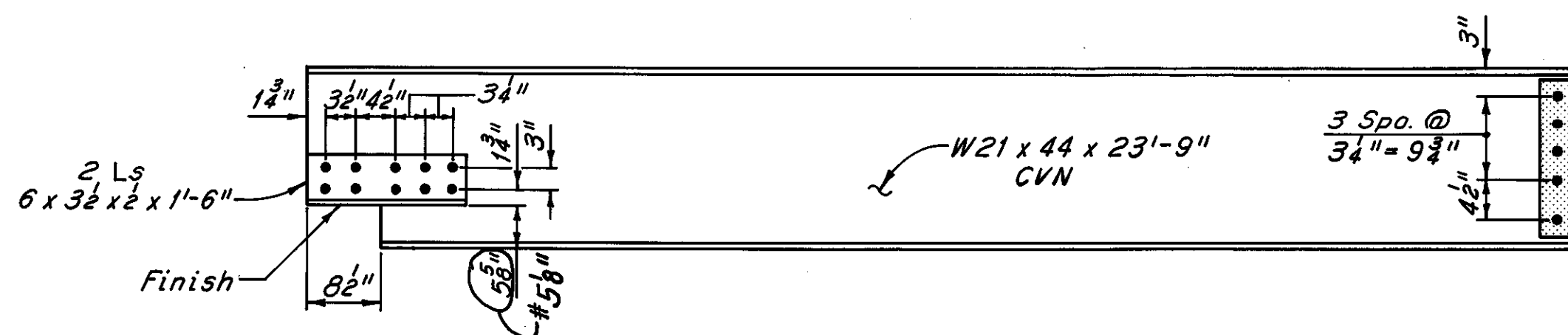
**STRINGER ELEVATION**  
(Case R3)  
(Welded Studs not shown)



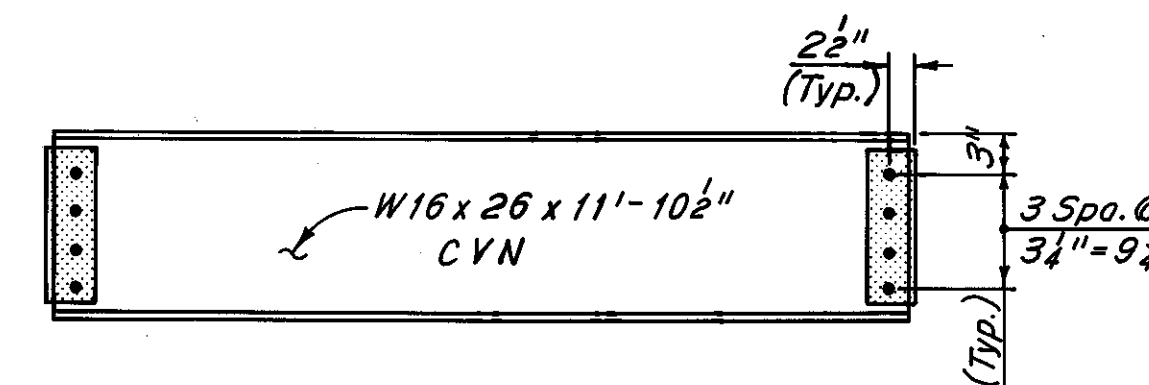
**STRINGER ELEVATION**  
(Case R-5)  
(Welded Studs not shown)



**STRINGER ELEVATION**  
(Case R6)  
(Welded Studs not shown)



**STRINGER ELEVATION**  
(Case R-8)  
(Welded Studs not shown)



**STRINGER ELEVATION**  
(Case R11)  
(Welded Studs not shown)

Notes:  
For Stringer Replacement Locations, see Sheet 30/72, # and Sheet 30A/72.  
For Stringer Stud placement, see Sheet 30/72.  
All bolts are 1" H.S. Bolts, with 1 1/4" holes, typical except as noted.  
Zip-a-tone indicates existing connection angle to be retained.  
For CVN, see Sheet 28/72.  
The following abbreviations are used:  
Typ. = Typical Spc. = Spaces

# Plan dimension	W.E.B. 5-5-81
# Additional stringer replacement as determined during bridge reconstruction	C.P. 4-29-81
REVISION	

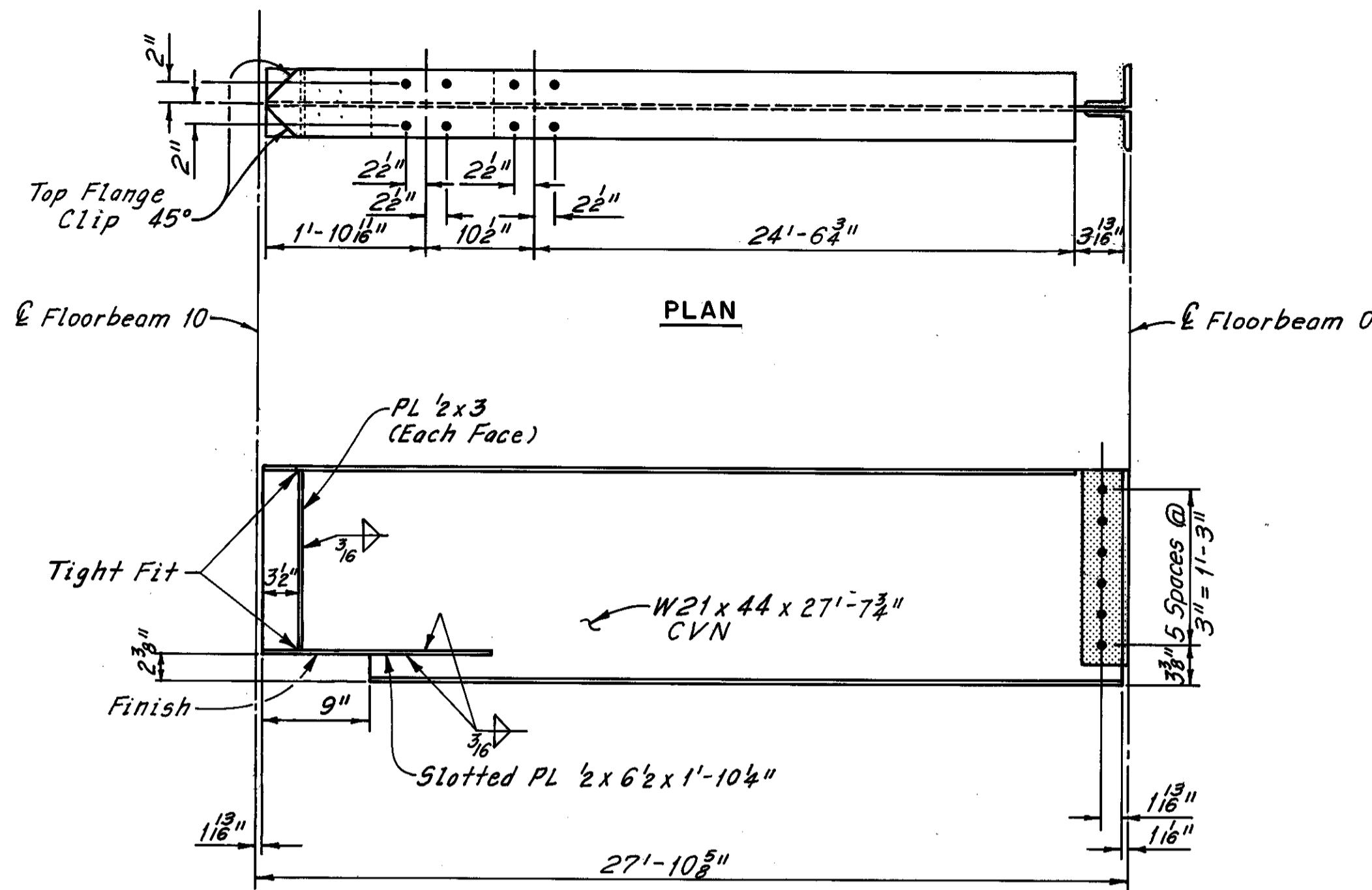
H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**STRINGER REPLACEMENT DETAILS**  
WEST PYLON TO EAST PYLON

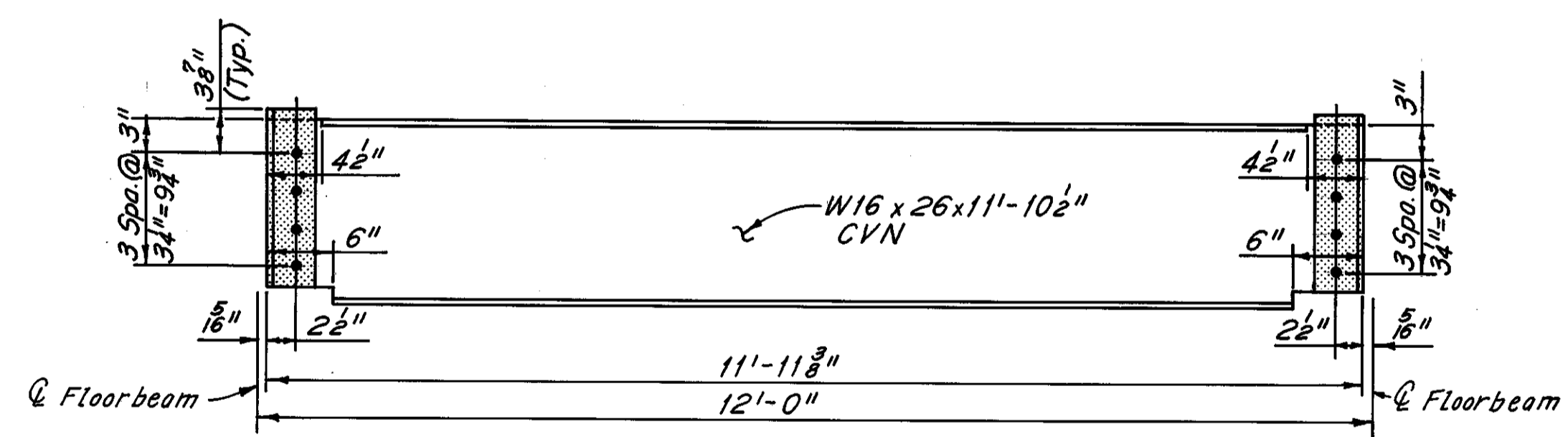
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

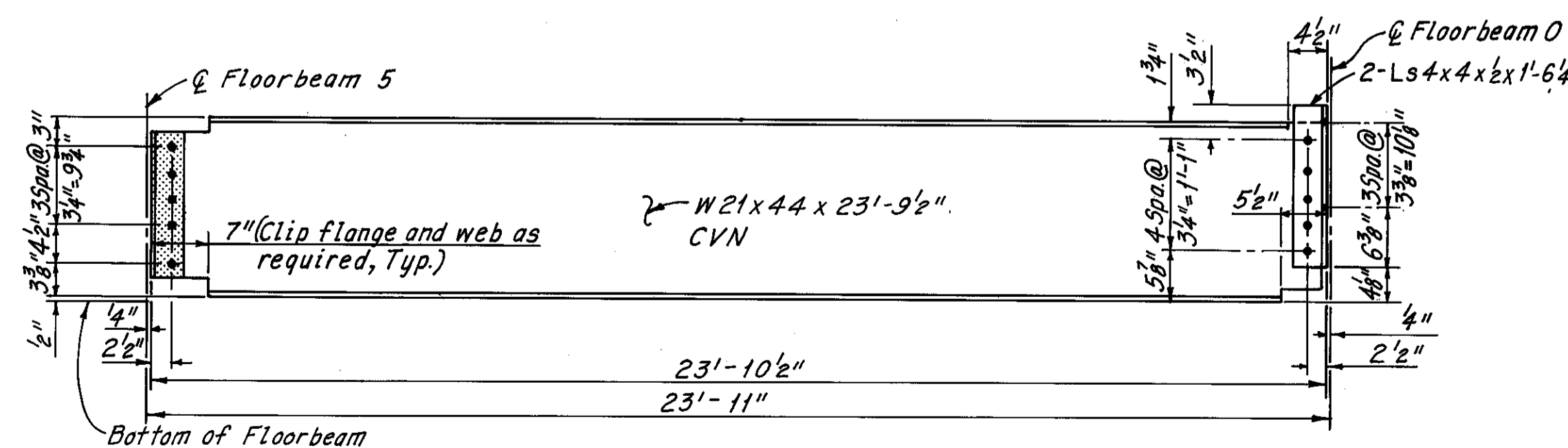
DRAWN RAS	TRACED DLA	CHECKED AN	REVIEWED	REVISED 12-5-83
DATE 6-28-78	DATE 7-31-78	DATE 7-25-78	DATE	SHEET 31/72



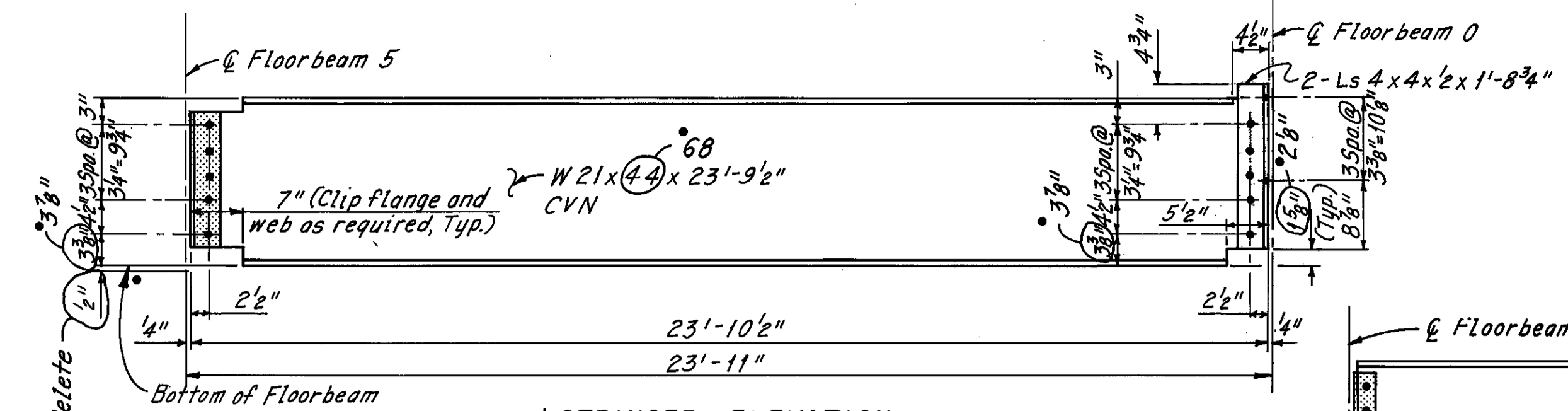
**STRINGER ELEVATION**  
(Case R-13)  
(Welded studs not shown)



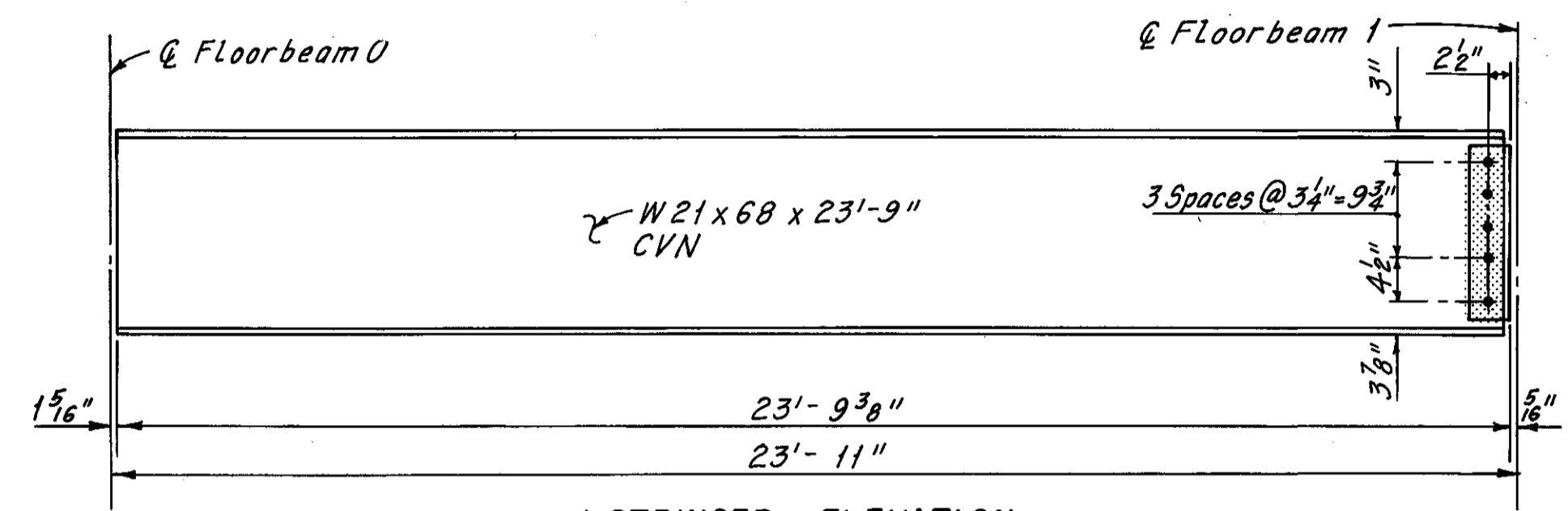
**STRINGER ELEVATION**  
(Case R-14)  
(Welded studs not required)



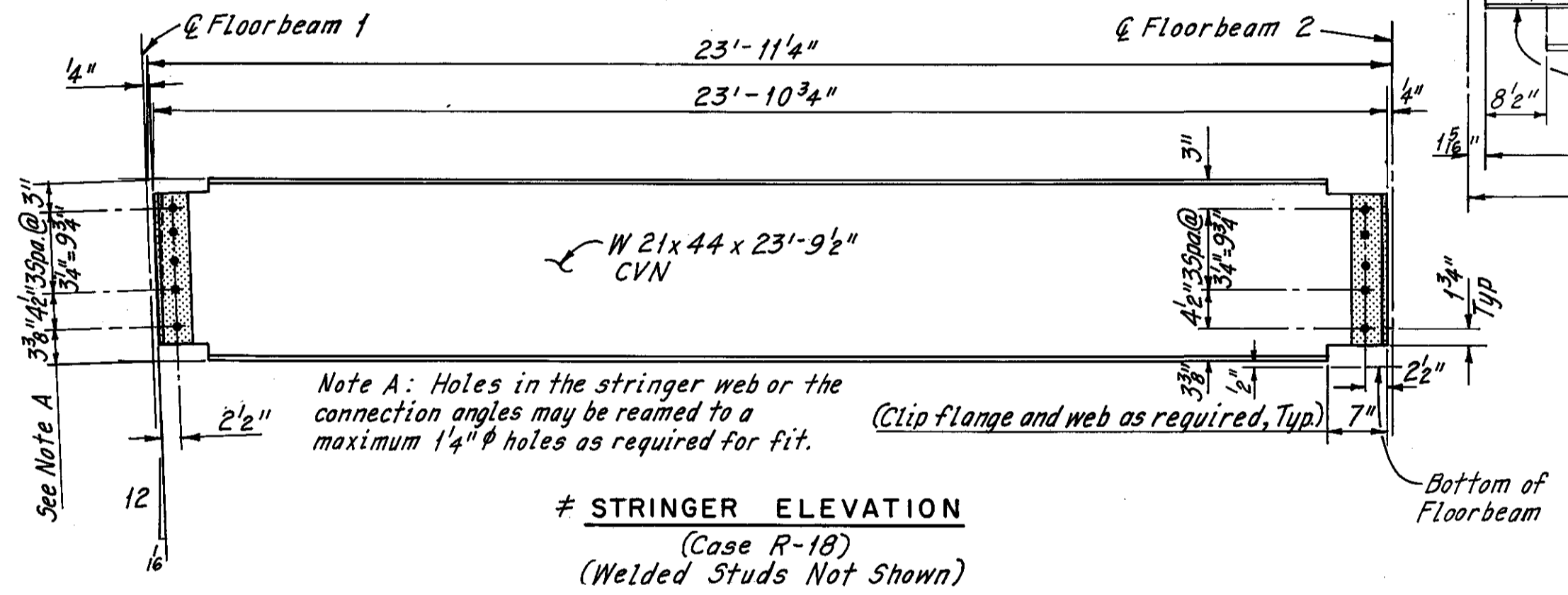
**STRINGER ELEVATION**  
(Case R-15)  
(Welded studs Not Shown)



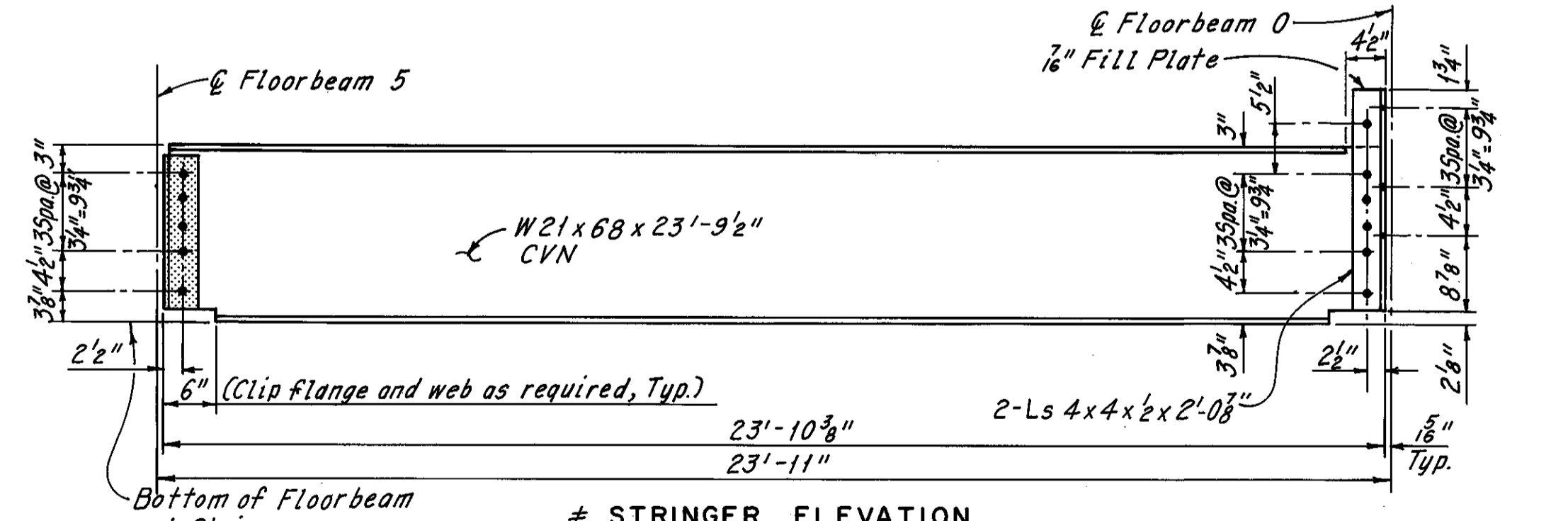
**STRINGER ELEVATION**  
(Case R-16)  
(Welded Studs Not Shown) Required



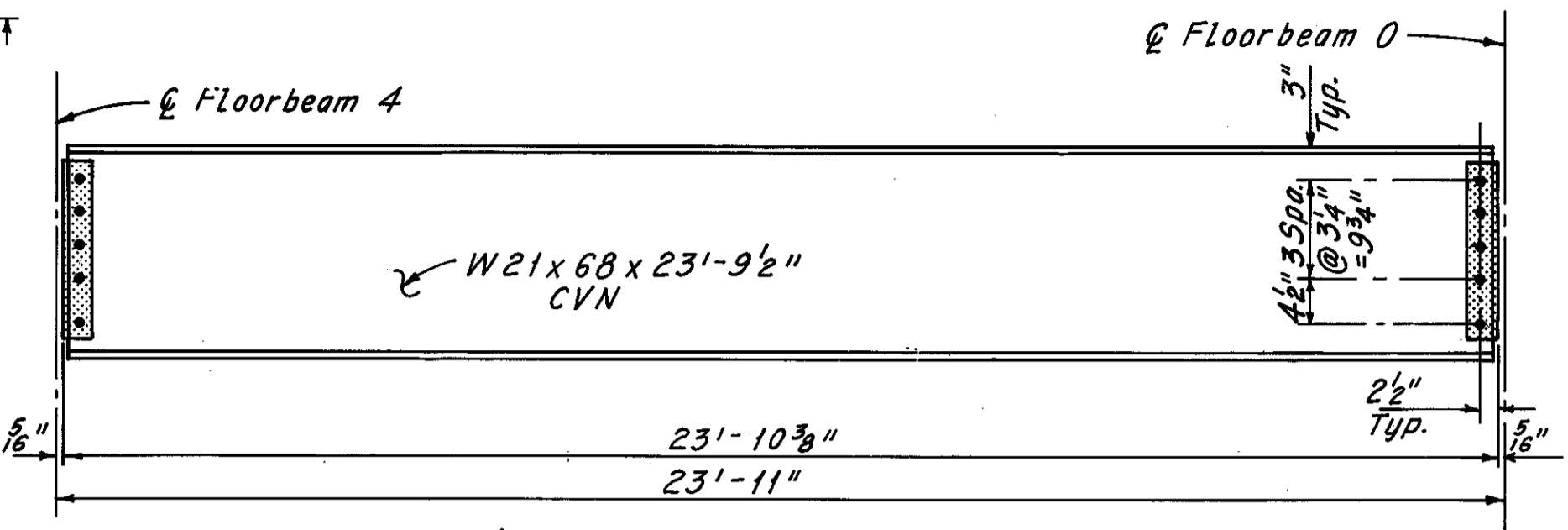
**STRINGER ELEVATION**  
(Case R-17)  
(Welded Studs Not Required)



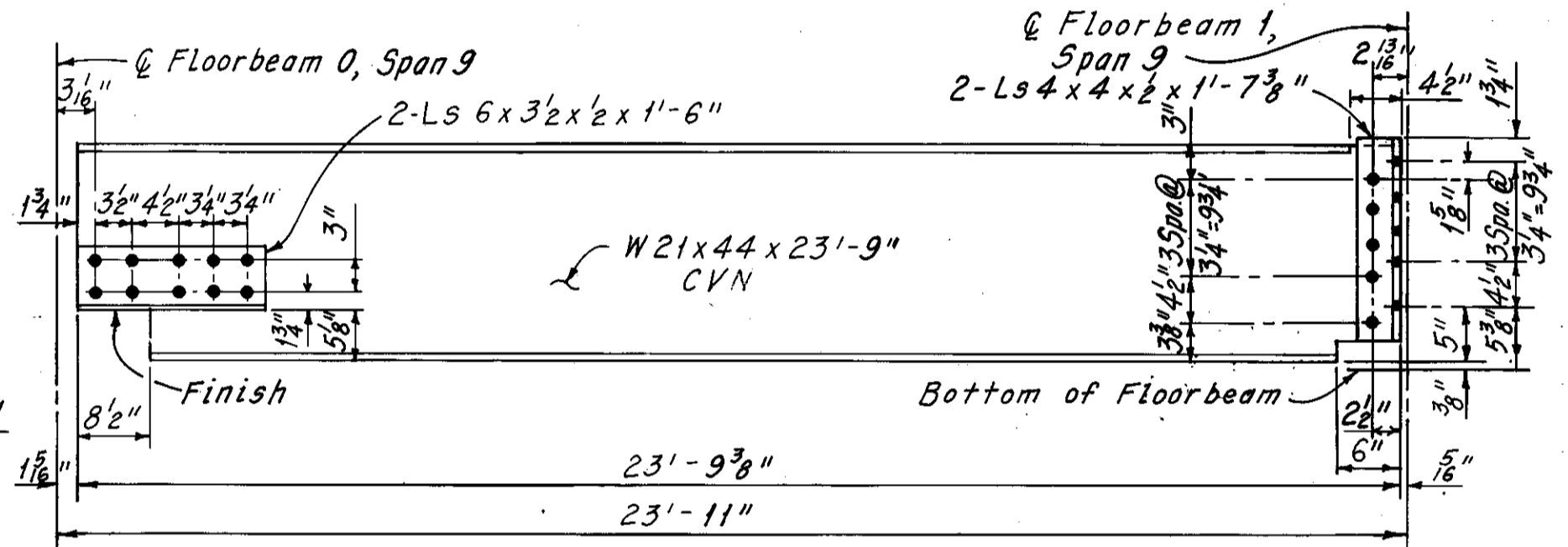
**STRINGER ELEVATION**  
(Case R-18)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-19)  
(Welded Studs Not Required)



**STRINGER ELEVATION**  
(Case R-20)  
(Welded Studs Not Required)



**STRINGER ELEVATION**  
(Case R-70)  
(Welded Studs Not Shown)

Note A: Holes in the stringer web or the connection angles may be reamed to a maximum 1/4" diameter as required for fit.

Notes:  
For Stringer Replacement locations, see Sheet 30/72, # and Sheet 30A/72.  
For Stringer Stud placement, see Sheet 30/72.  
All bolts are 1" H.S. Bolts with 1/8" holes.  
Zip-a-tone indicates existing connection angle to be retained.  
For CW, see Sheet 28/72

Sheet added 12-5-83

* Member Size	W.E.B. 8-25-81
* Additional Stringer Replacement As Determined During Bridge Reconstruction	C.P. 8-25-81
* Additional Stringer Replacement As Determined During Bridge Reconstruction.	C.P. 7-22-81
* Additional Stringer Replacement As Determined During Bridge Reconstruction.	C.P. 4-28-81

REVISIONS

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

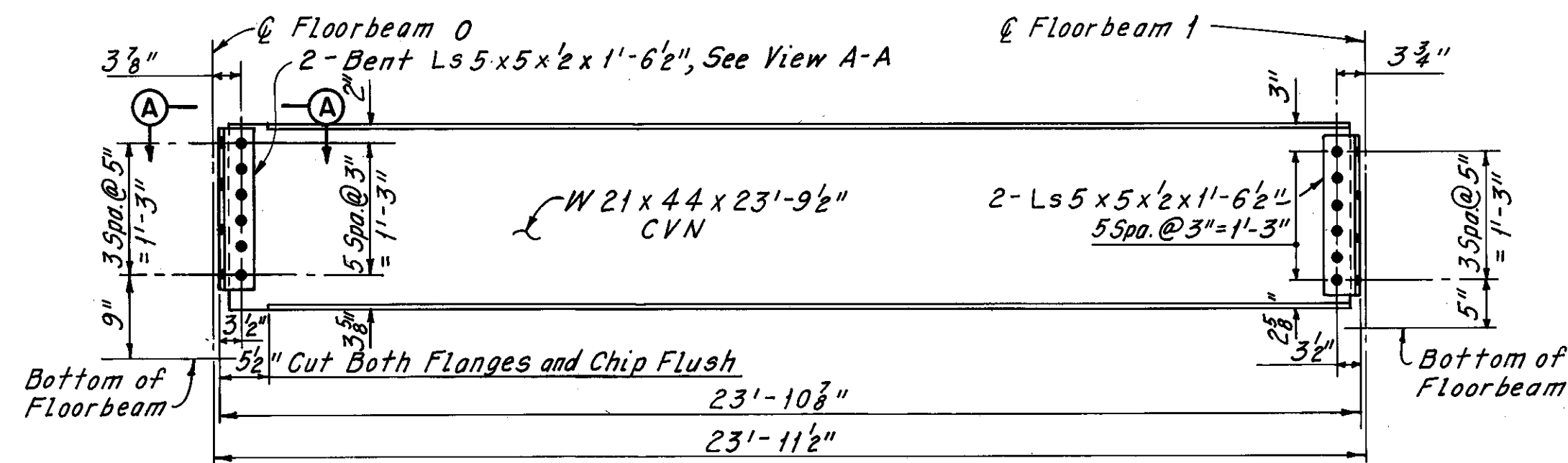
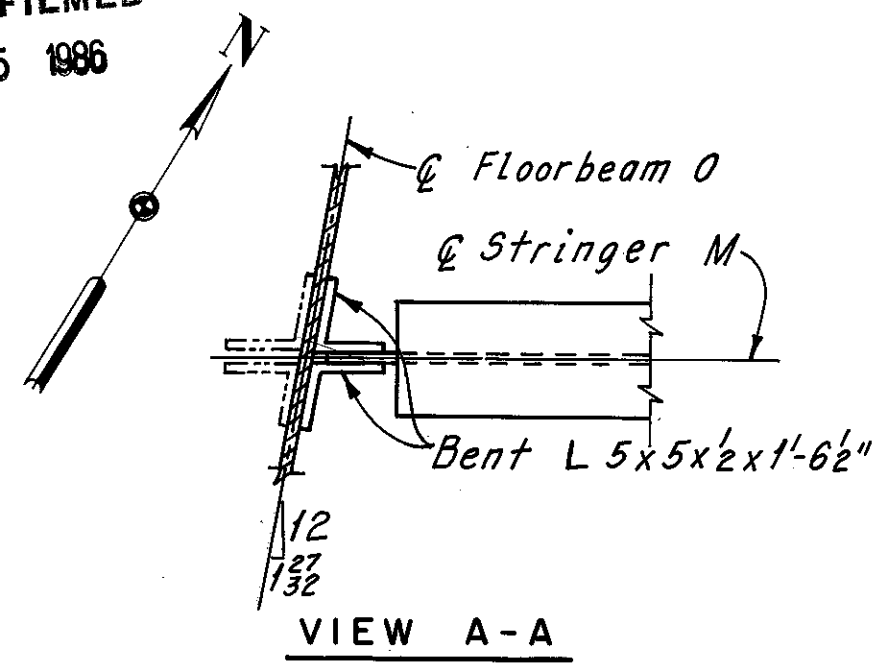
**HNTB**

**ADDITIONAL STRINGER REPLACEMENT DETAILS - WEST PYLON TO EAST PYLON (AS DETERMINED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)**  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO

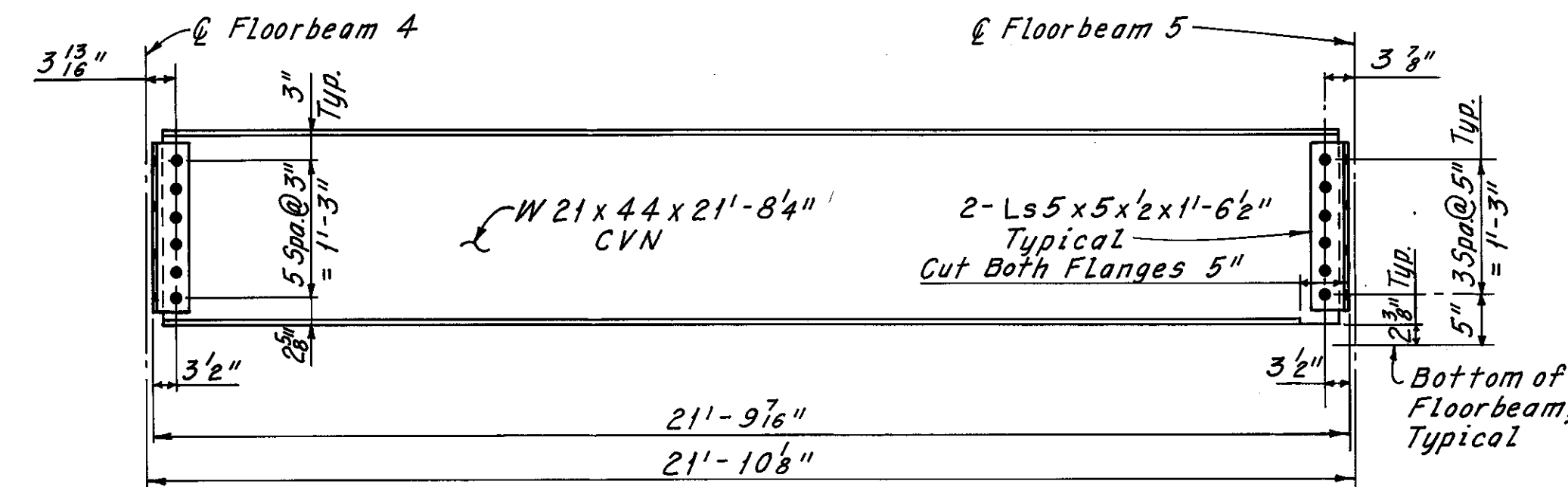
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
D.L.R.	D.L.R.	W.E.B.		
DATE 2/20/81	DATE 2/20/81	DATE 2/20/81	DATE	

SHEET 31A/72

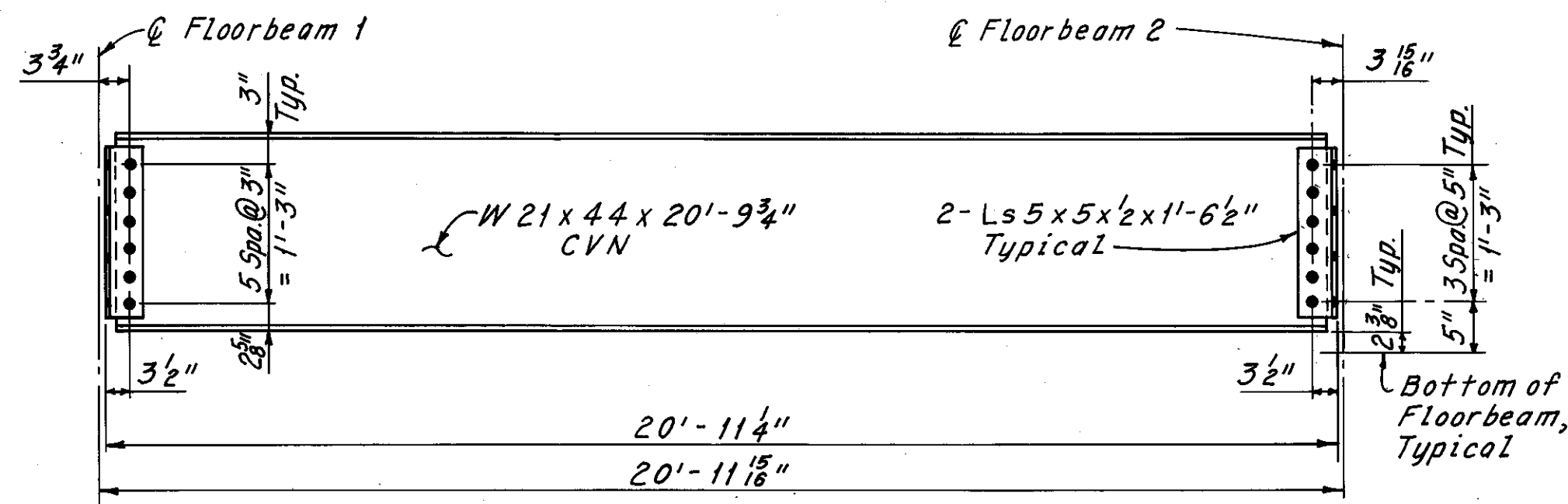




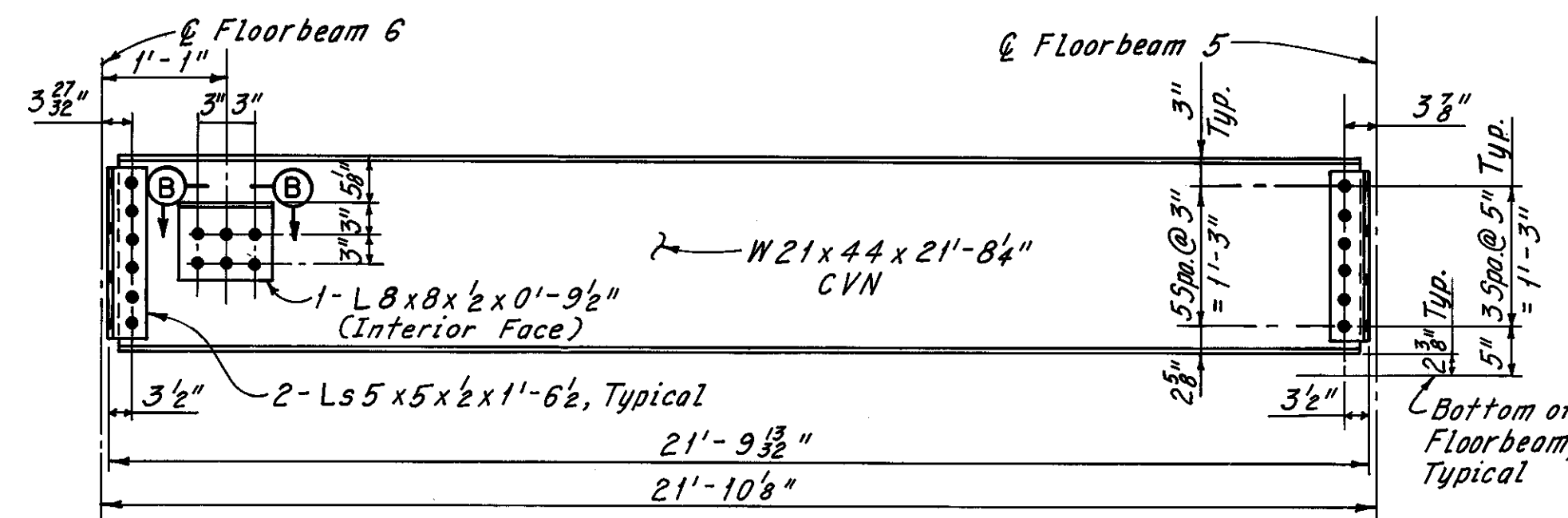
**STRINGER ELEVATION**  
(Case R-21)  
(Welded Studs Not Shown)



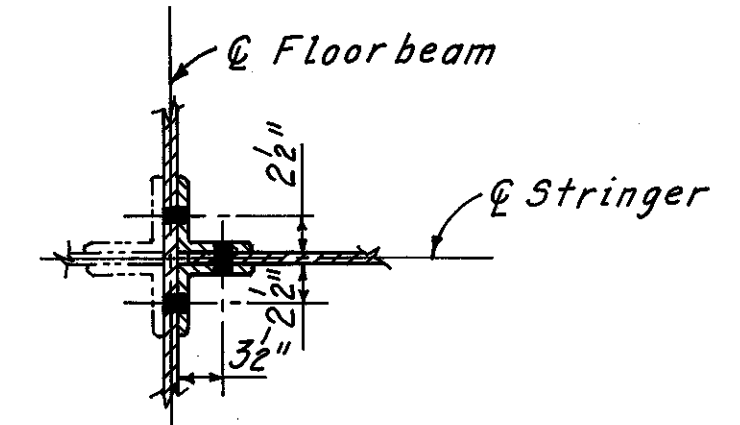
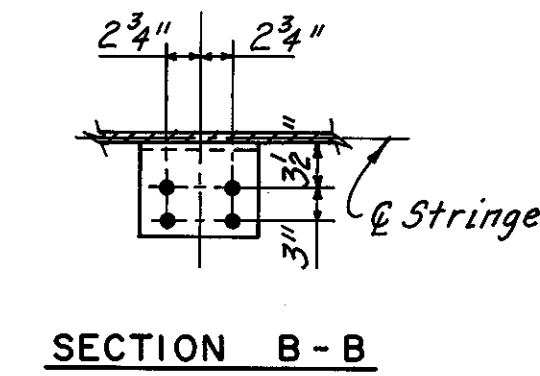
**STRINGER ELEVATION**  
(Case R-25)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-22)  
(Welded Studs Not Shown)

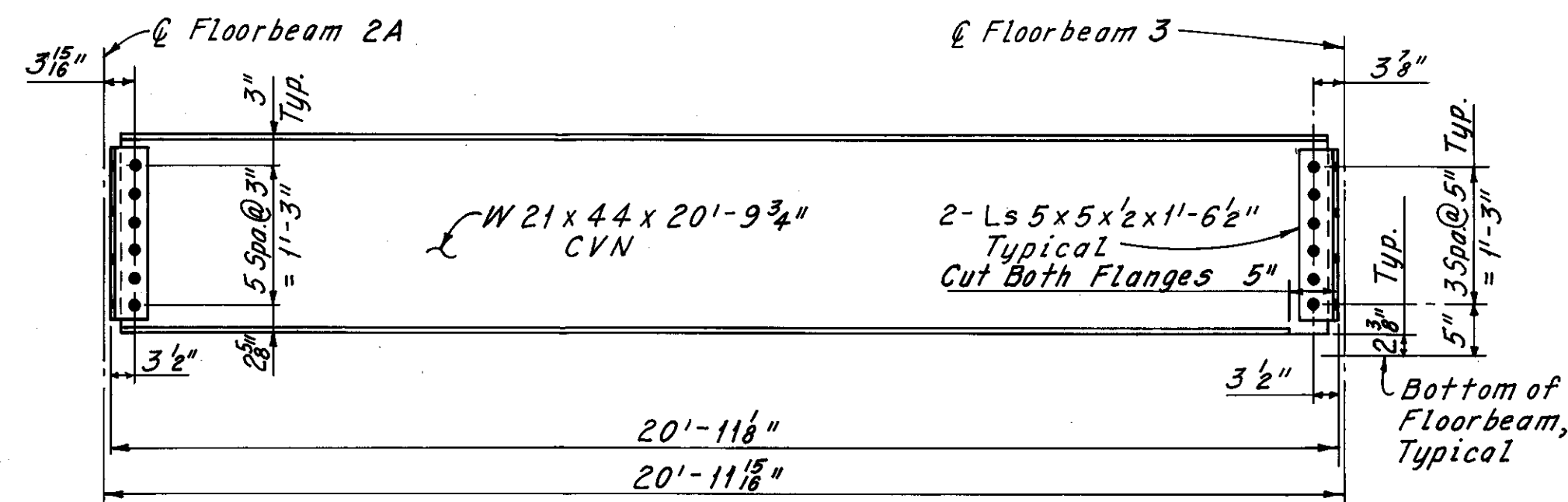


**STRINGER ELEVATION**  
(Case R-26)  
(Welded Studs Not Shown)

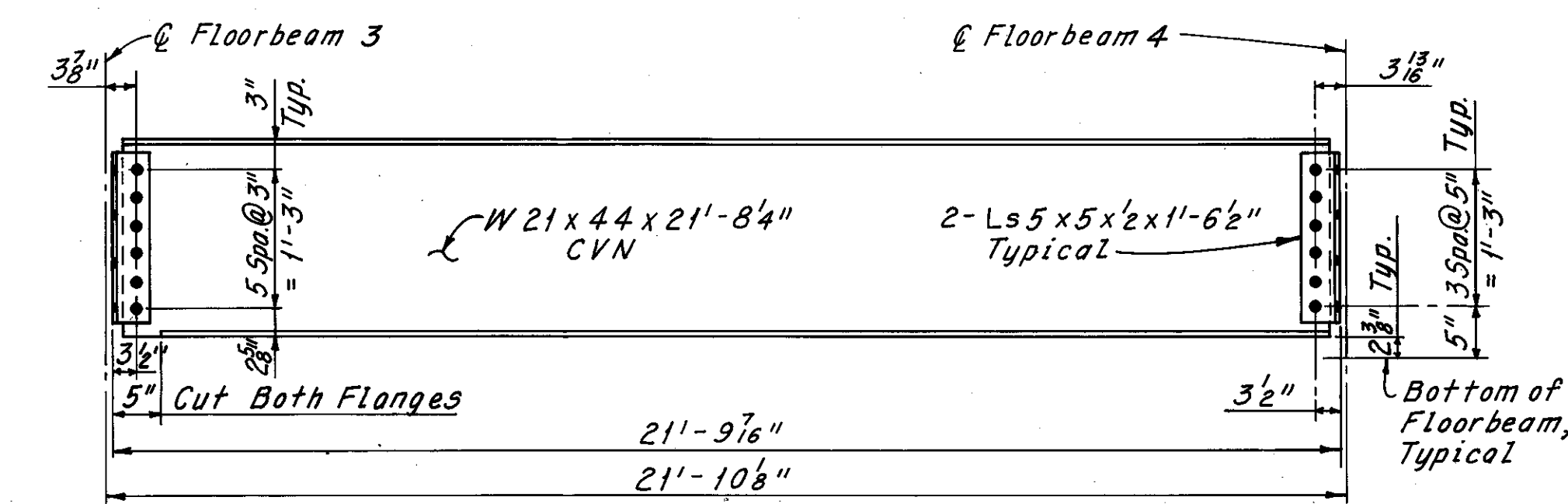


**TYPICAL SECTION FOR END CONNECTIONS AT STRINGERS**

Note: Angle gages shown are for stringers perpendicular to floorbeams. Appropriate adjustments should be made at skewed locations.

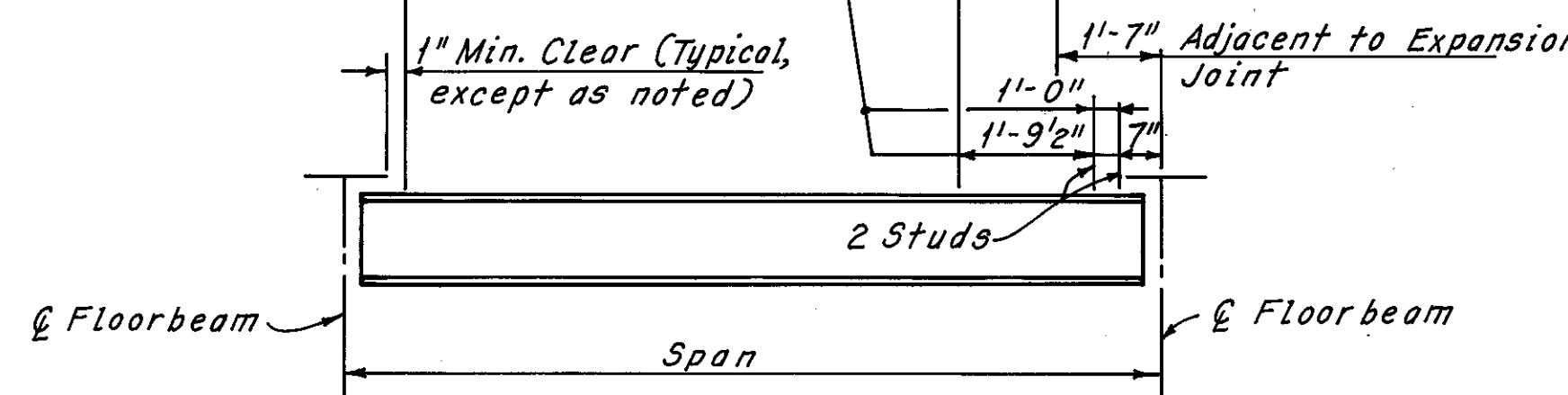


**STRINGER ELEVATION**  
(Case R-23)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-24)  
(Welded Studs Not Shown)

CASE	SPAN	MEMBER
R-1	24 Rows of 2 Studs @ about 11"	22'-2" W21 x 44
R-2, R-3, R-4, R-5, R-8, R-21, R-28, R-29, R-30, R-31, R-33, R-34, R-35 & R-70	24 Rows of 2 Studs @ about 11 3/4"	23'-9" thru 23'-11 1/2" W21 x 44
R-11	14 Rows of 2 Studs @ about 9 3/8"	12'-0" W16 x 26
R-22 & R-23	24 Rows of 2 Studs @ about 10 1/4"	20'-11 1/8" W21 x 44
R-24 & R-25	24 Rows of 2 Studs @ about 10 3/8"	21'-10 1/8" W21 x 44
R-9, R-12 & R-32	24 Rows of 2 Studs @ about 11 1/4"	23'-9" and 23'-11" W21 x 44
R-7, R-10, R-26 & R-36	24 Rows of 2 Studs @ about 10 1/4"	21'-9" thru 21'-11" W21 x 44
R-27	24 Rows of 2 Studs @ about 10 1/2"	22'-2" W21 x 44
R-13	24 Rows of 2 Studs @ about 12 1/2"	27'-10 1/8" W21 x 44



**STUD SPACING**  
(New Stringers)  
(Spans 1-13 and W & L.E. Span)

Notes:  
All bolts are 1" High Strength Bolts with 1/8" holes.  
For CVN, see Sheet 28/72.  
The Replacement Details shown on this sheet are for replacement of members only, if replacement is necessitated due to field inspection.  
For Stringer Replacement Locations, see Sheets 310/72 and 31E/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

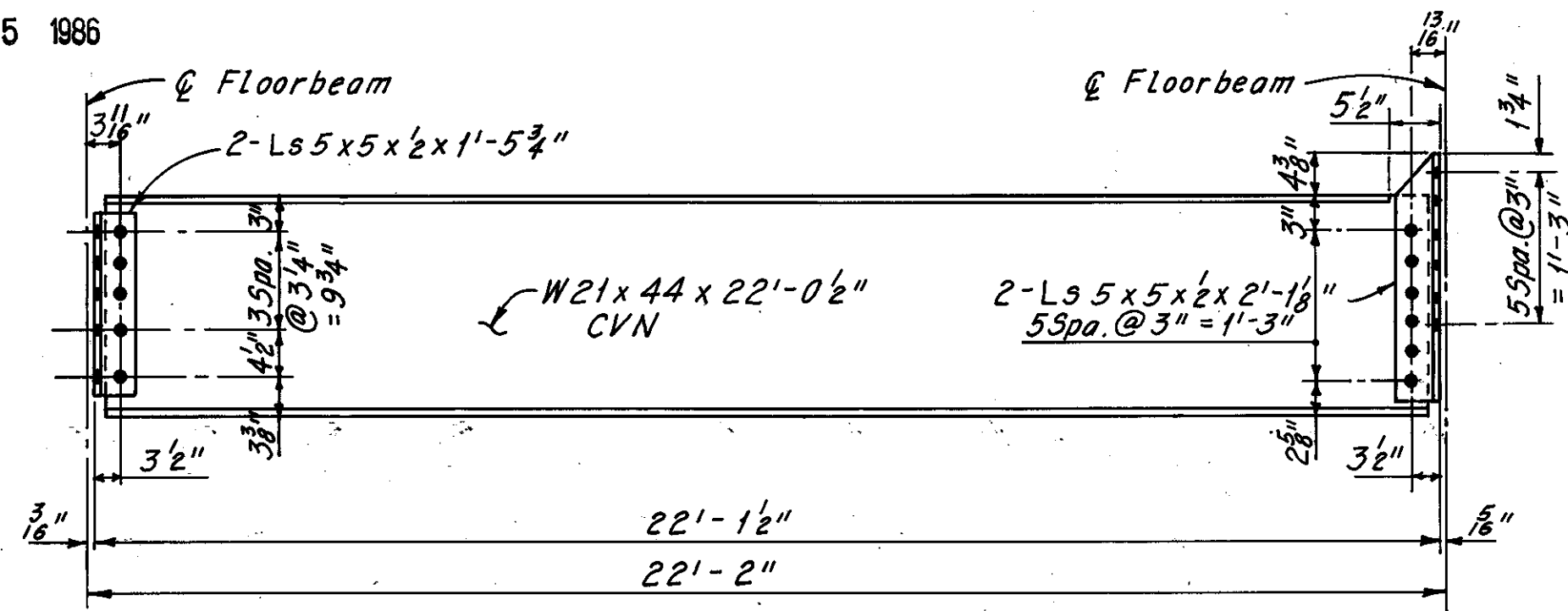
**HNTB**

**ADDITIONAL STRINGER REPLACEMENT DETAILS - WHEELING & LAKE ERIE RR SPAN (IF REQUIRED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY. - 10 - 1618 STA. 22+19.19 STA. 55+04.56**

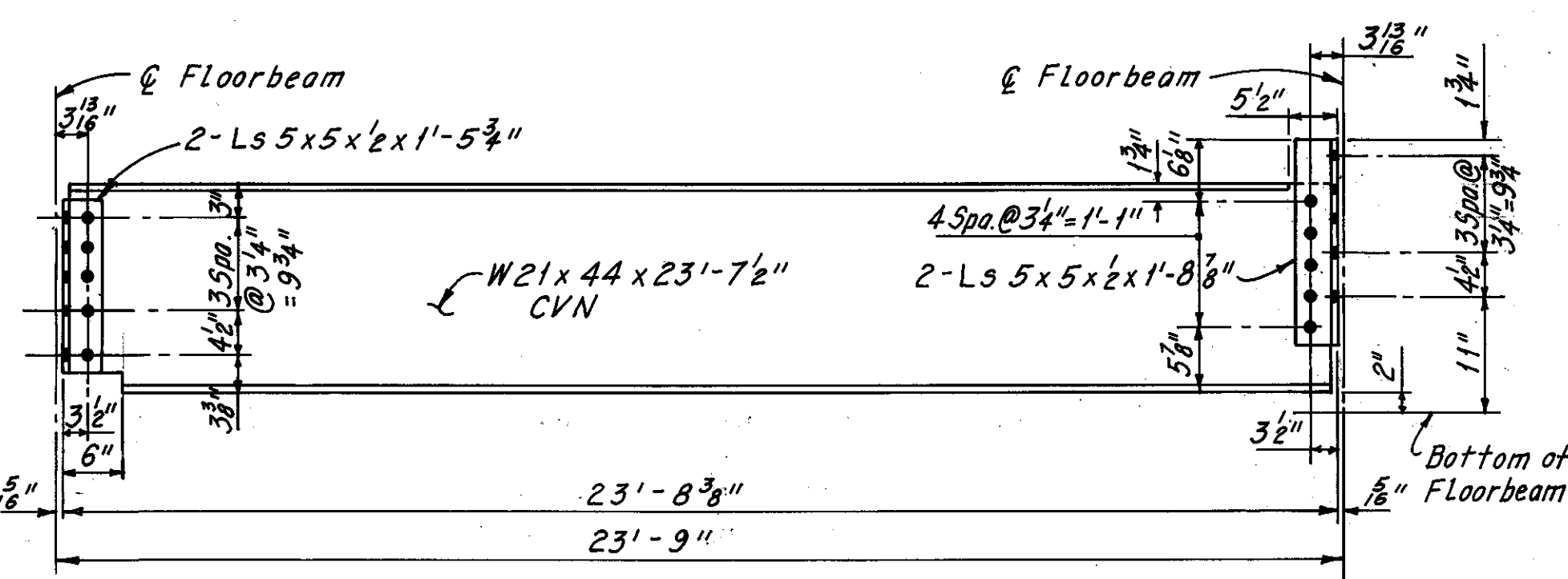
CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED R.R.W.	REVIEWED	REVISED
DATE 8-7-81	DATE 8-10-81	DATE 8-13-81	DATE	DATE

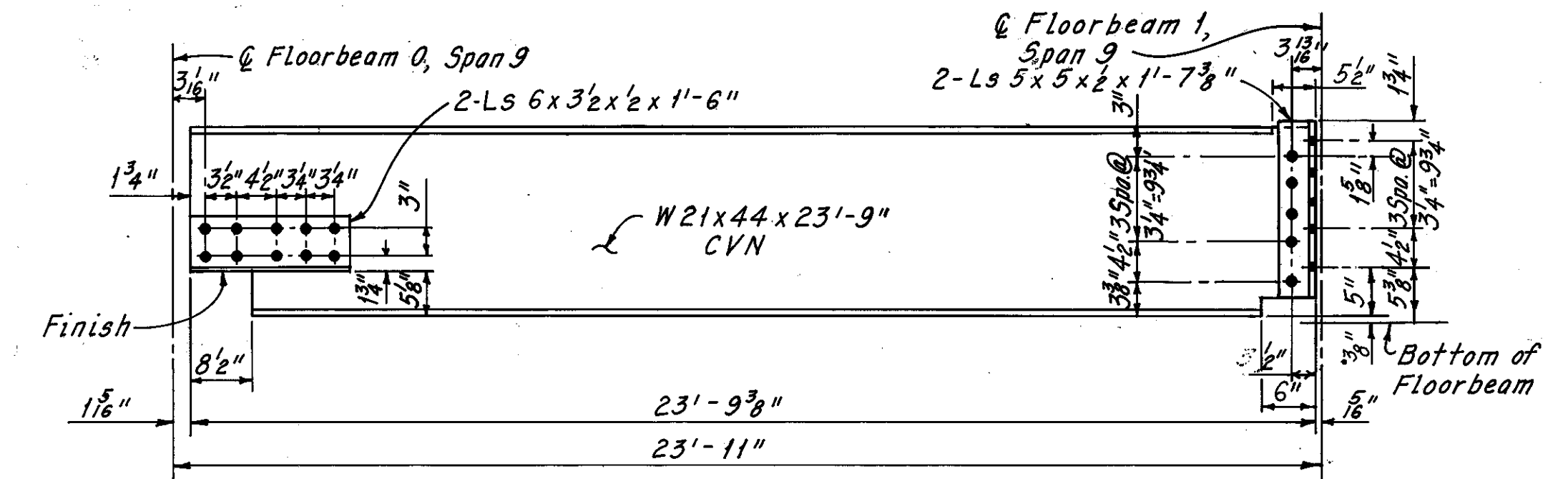
SHEET 31B/72



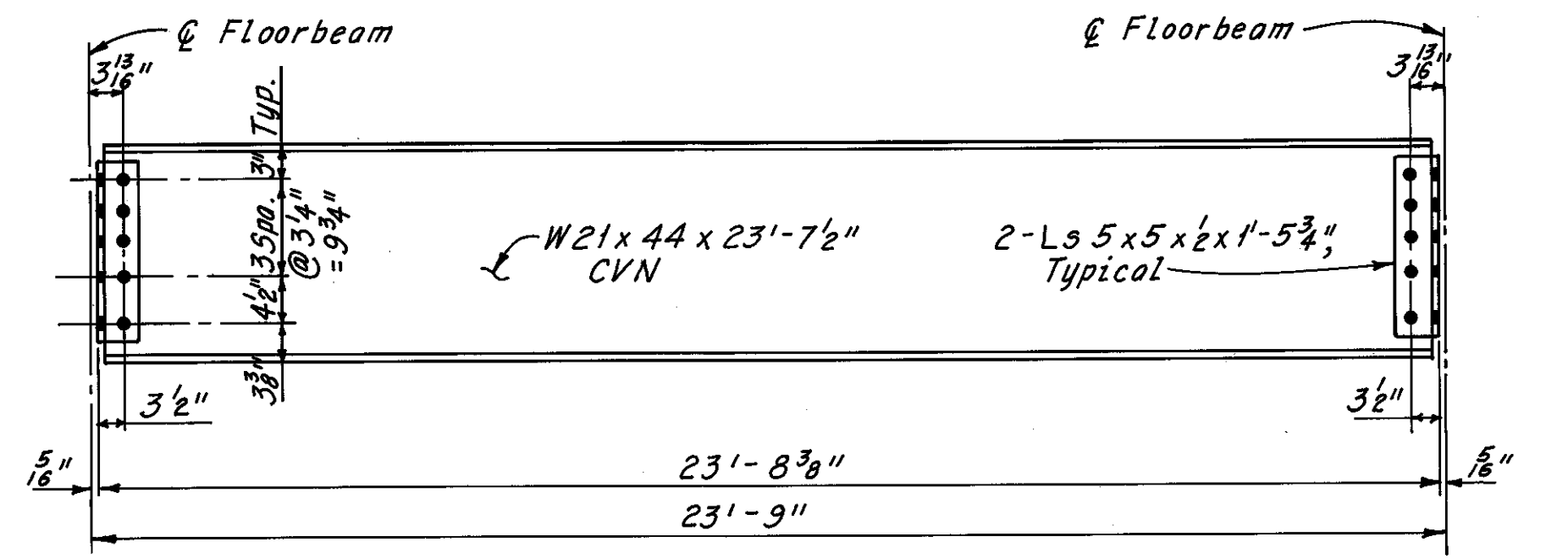
**STRINGER ELEVATION**  
(Case R-27)  
(Welded Studs Not Shown)



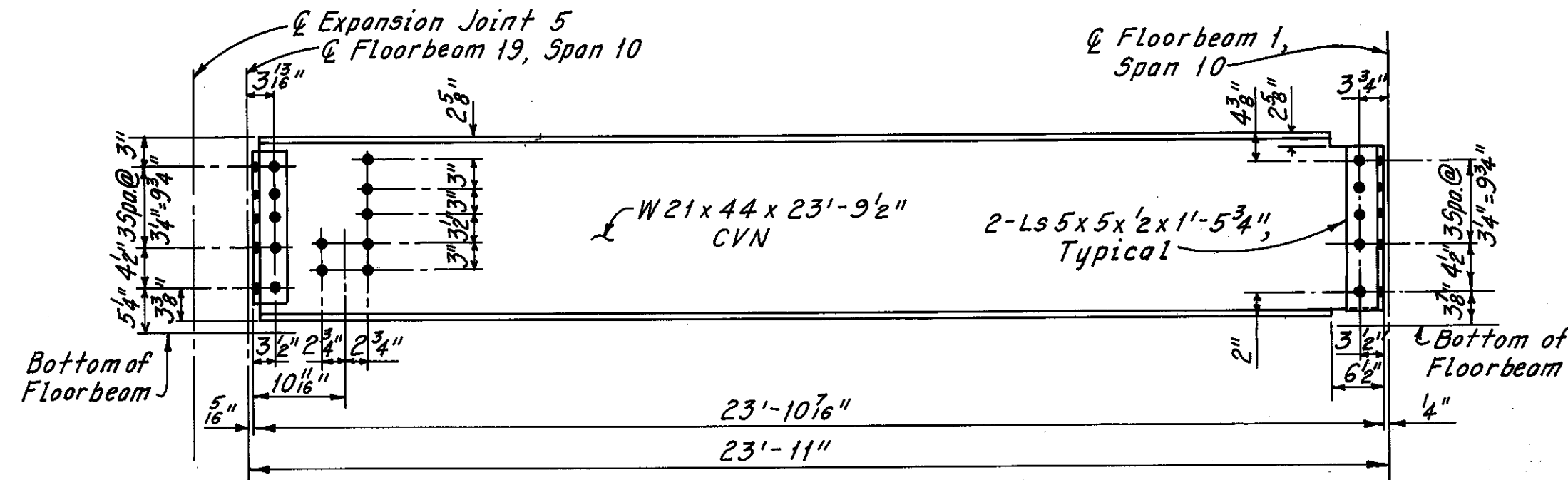
**STRINGER ELEVATION**  
(Case R-31)  
(Welded Studs Not Shown)



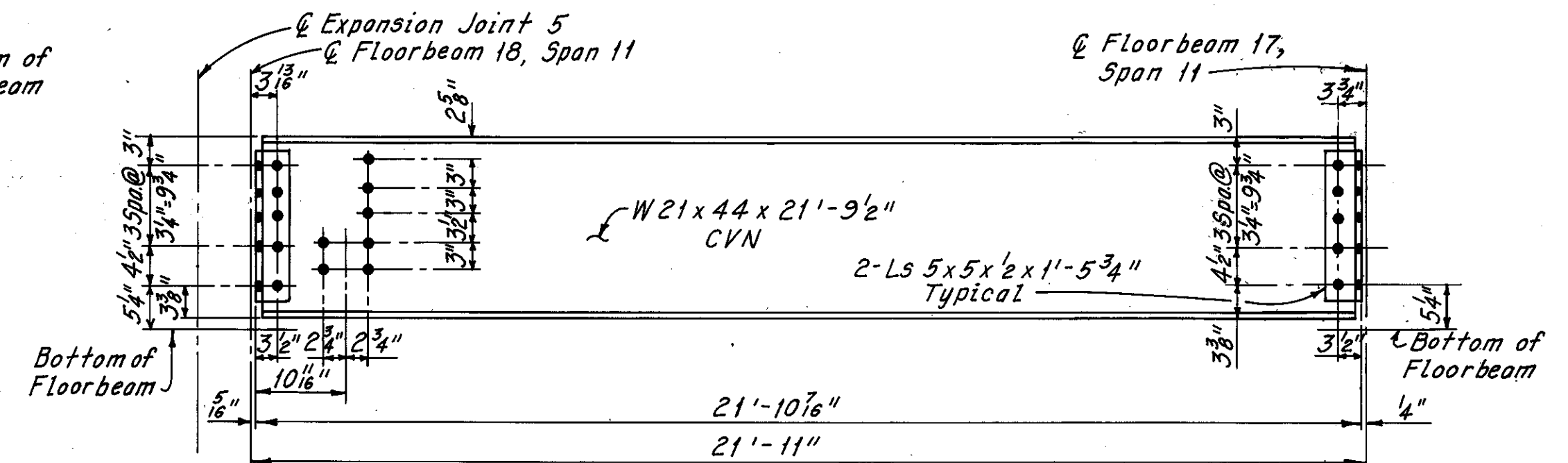
**STRINGER ELEVATION**  
(Case R-35)  
(Welded Studs Not Shown)



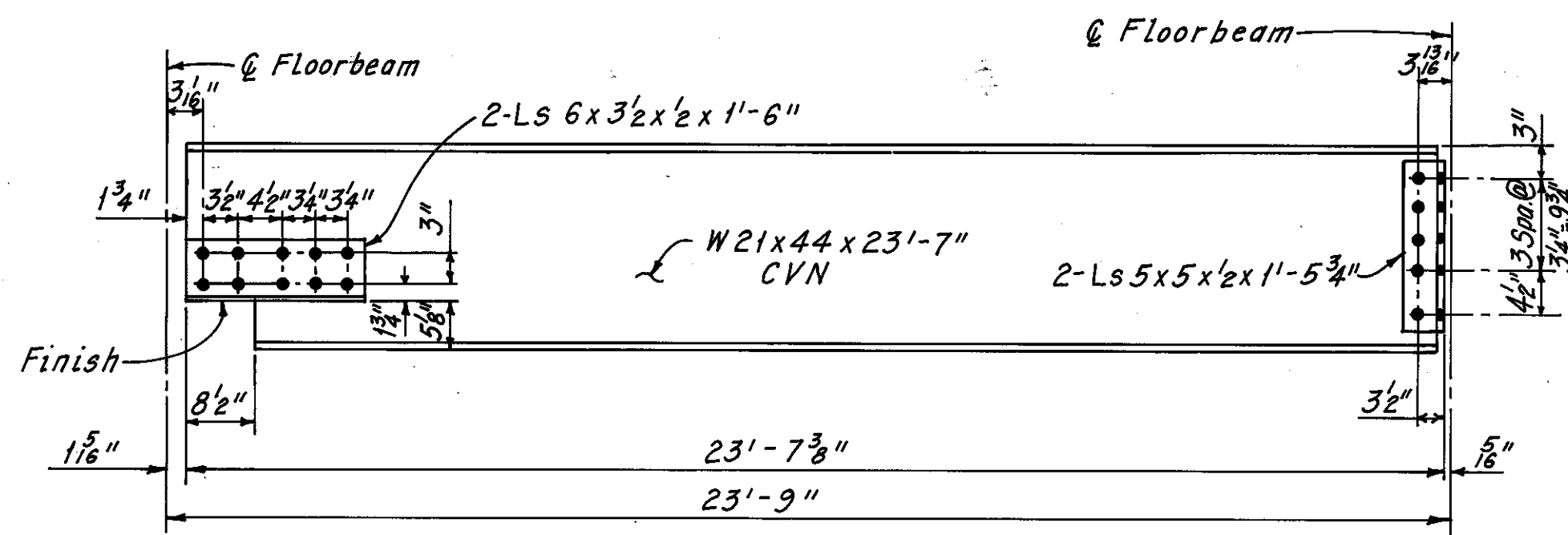
**STRINGER ELEVATION**  
(Case R-28)  
(Welded Studs Not Shown)



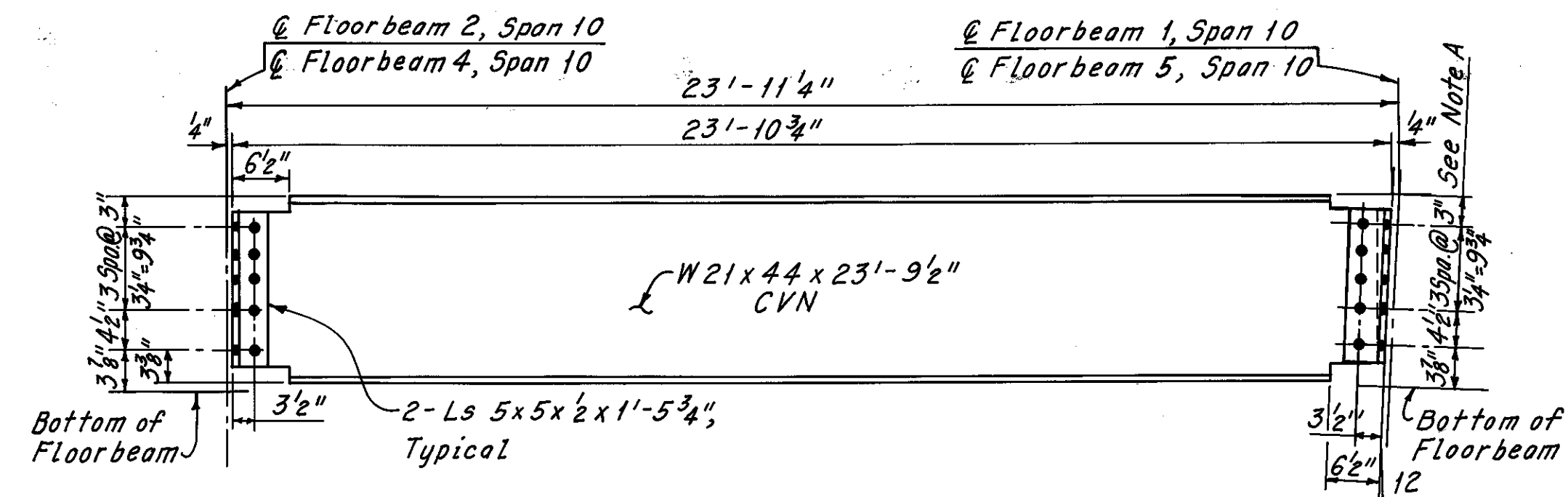
**STRINGER ELEVATION**  
(Case R-32)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-36)  
(Welded Studs Not Shown)

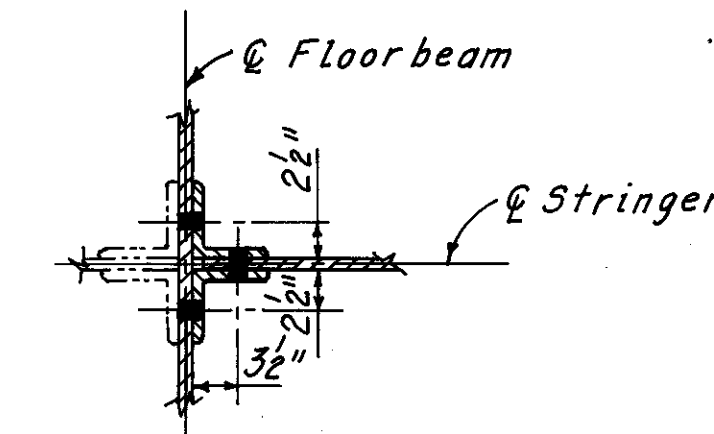


**STRINGER ELEVATION**  
(Case R-29)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-33)  
(Welded Studs Not Shown)

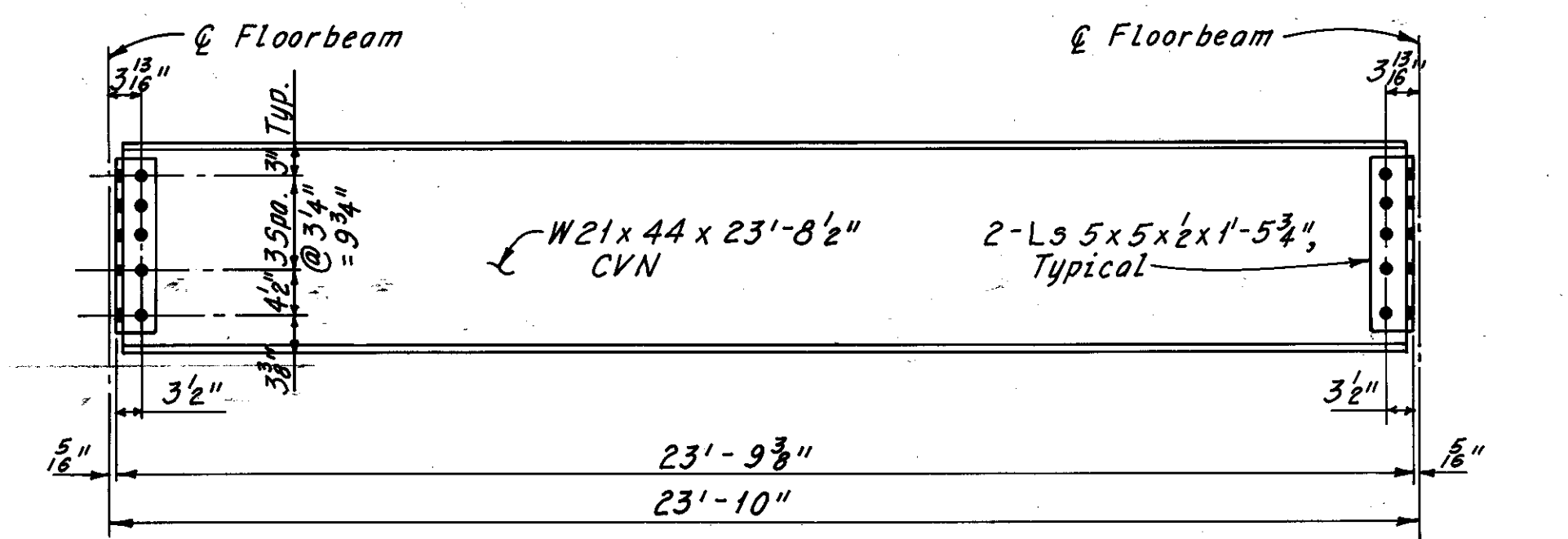
Note A: Holes in the stringer web or the connection angles may be reamed to a maximum 1 1/4" diameter holes as required to fit.



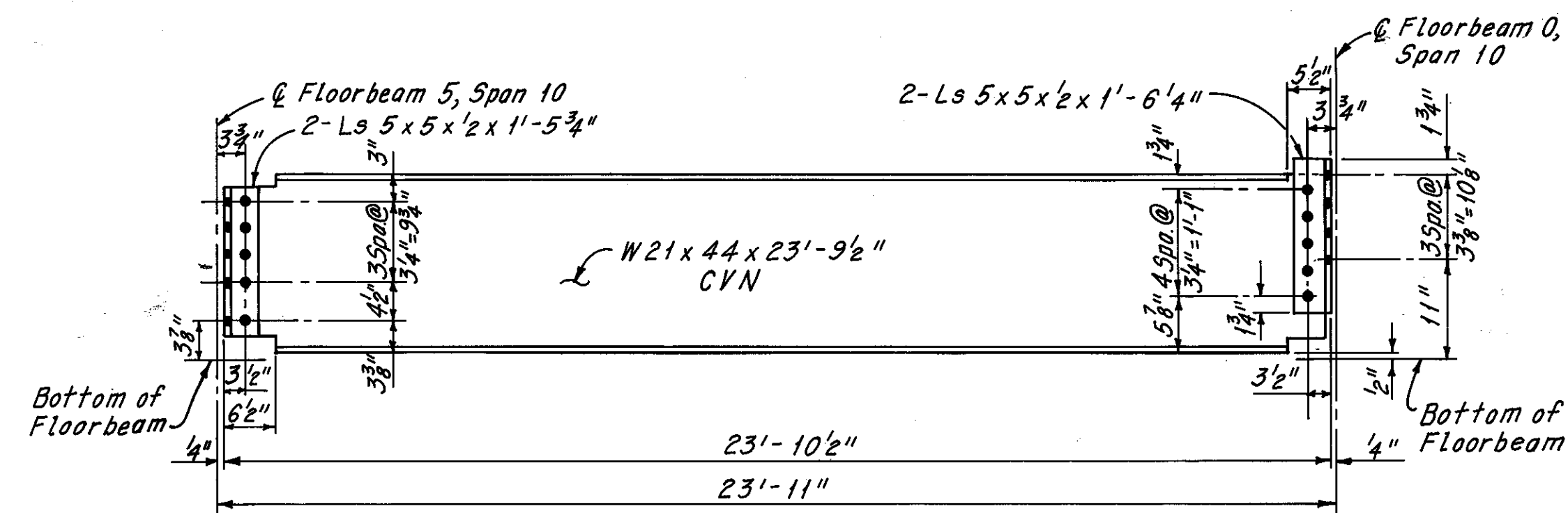
**TYPICAL SECTION FOR END CONNECTIONS AT STRINGERS**

Note: Angle gages shown are for stringers perpendicular to floorbeams. Appropriate adjustments should be made at skewed locations.

Note: For Notes and Stud Spacing on stringers, see Sheet 31B/72.



**STRINGER ELEVATION**  
(Case R-30)  
(Welded Studs Not Shown)



**STRINGER ELEVATION**  
(Case R-34)  
(Welded Studs Not Shown)

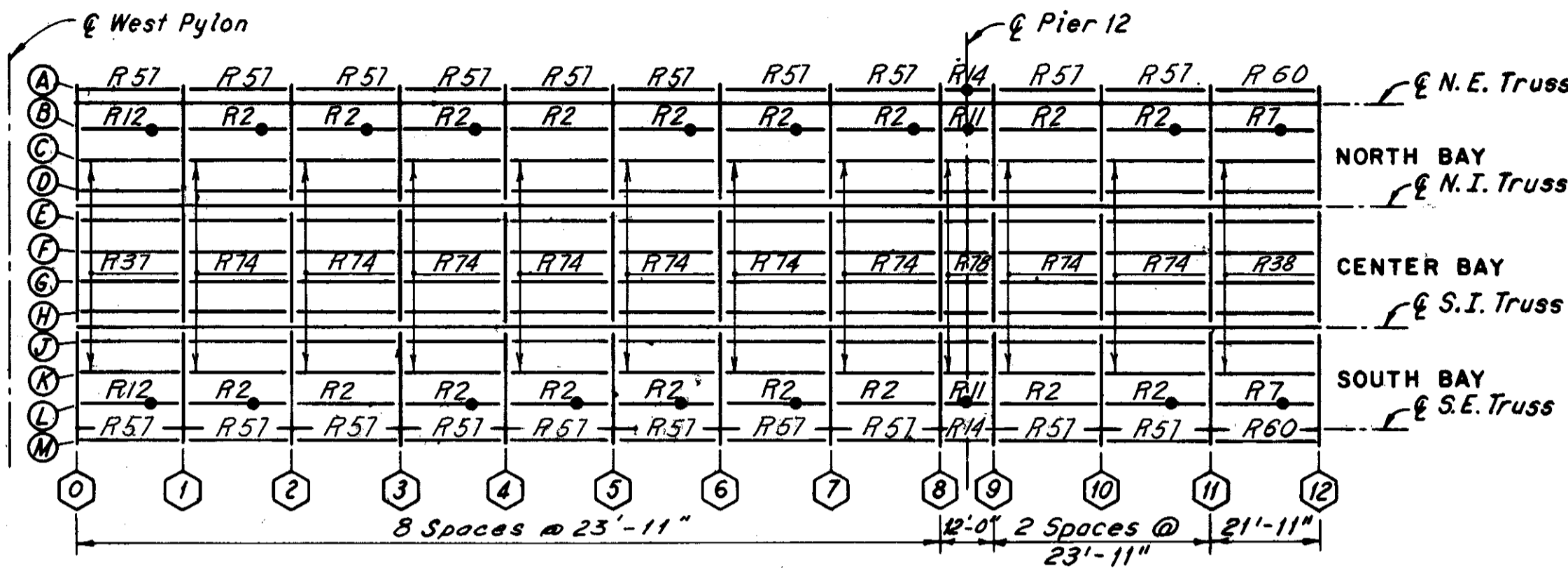
H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

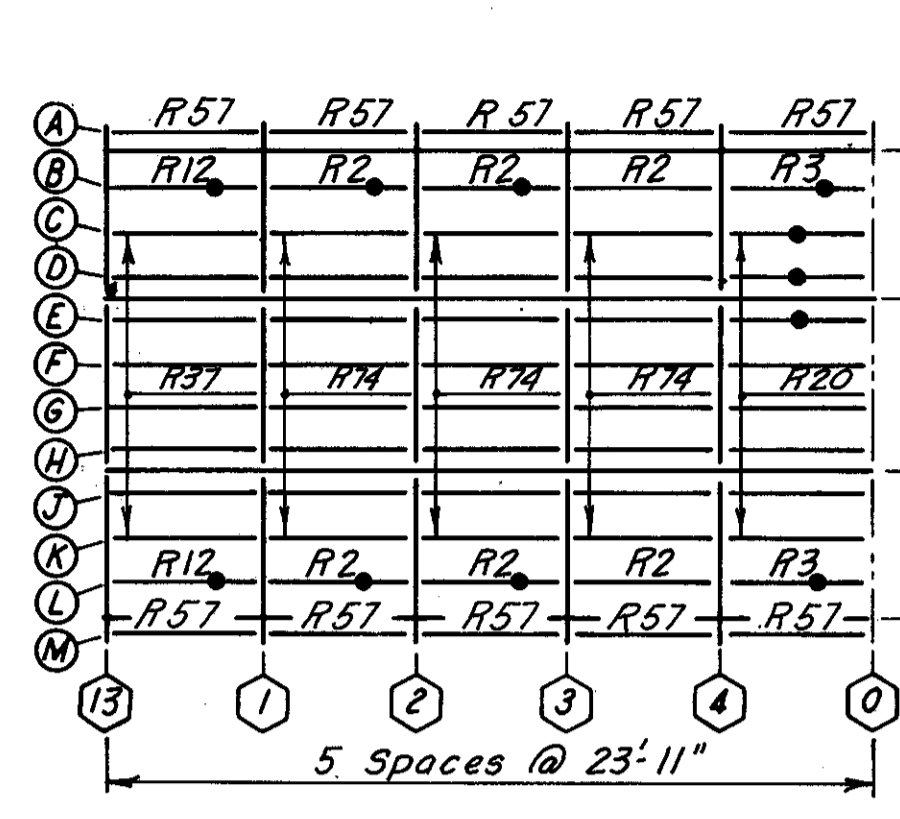
**ADDITIONAL STRINGER REPLACEMENT DETAILS**  
(IF REQUIRED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN C.P.	TRACED C.P.	CHECKED R.H.W.	REVIEWED	REVISED
DATE 8-11-81	DATE 8-13-81	DATE 8-13-81	DATE	SHEET 31C/72

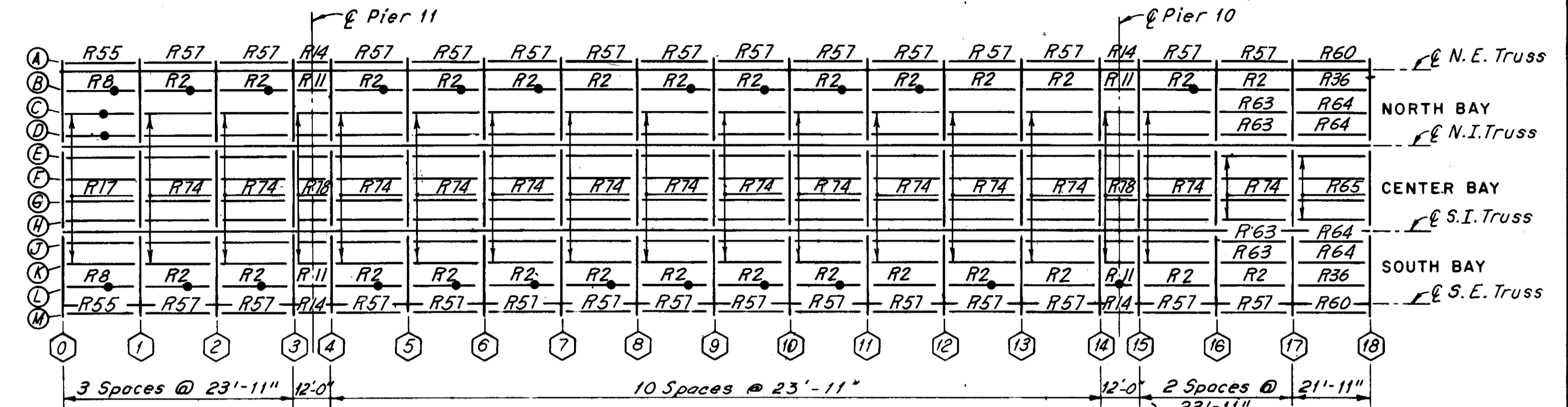
Sheet added 12-5-83



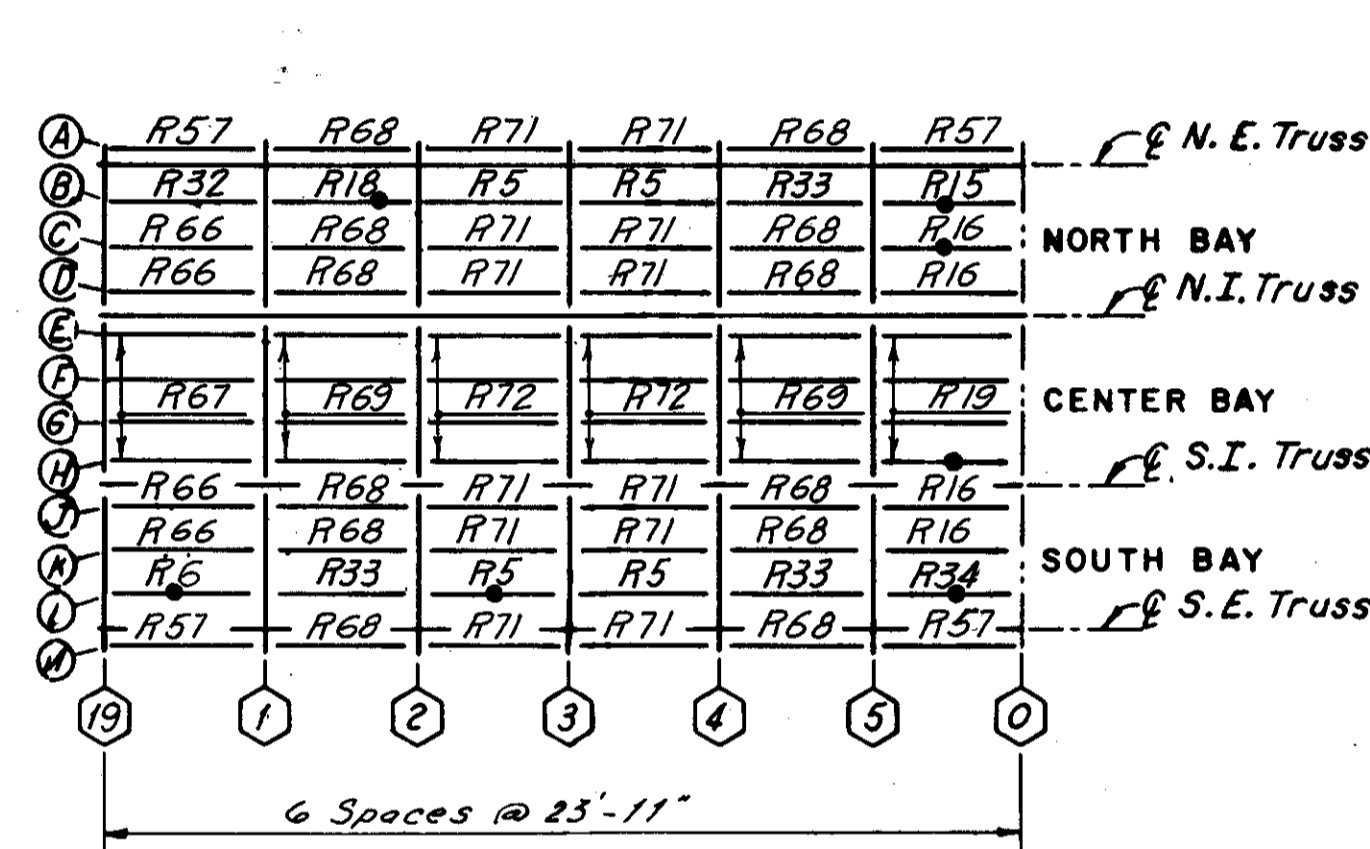
SPAN 13



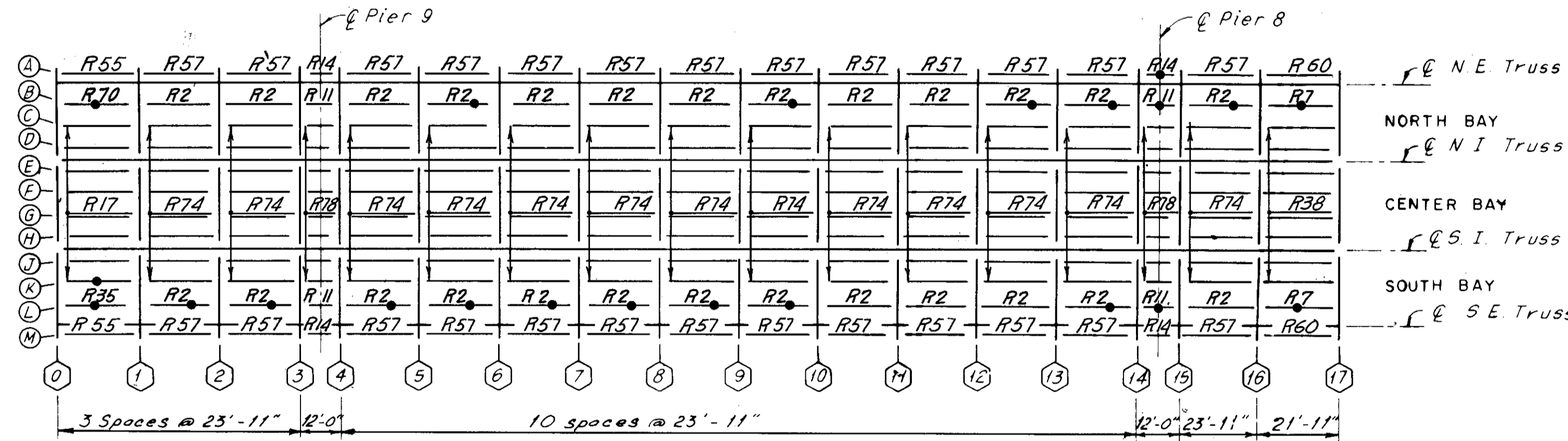
SPAN 12



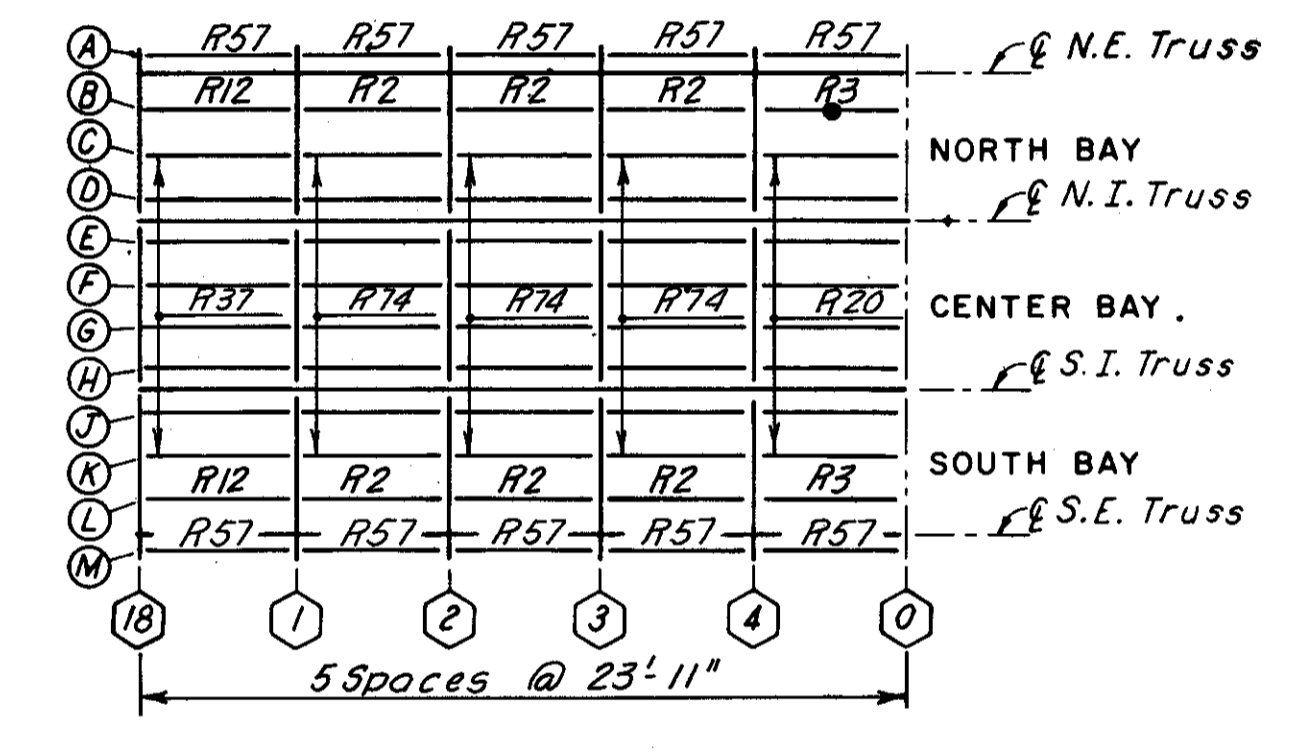
SPAN 11



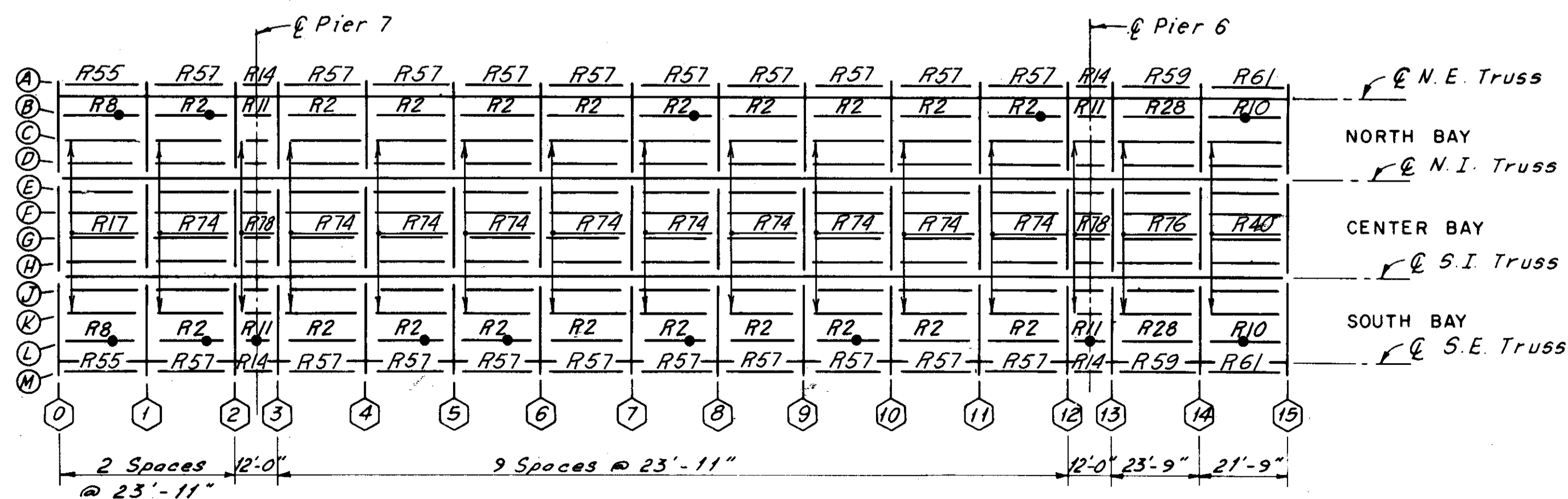
SPAN 10



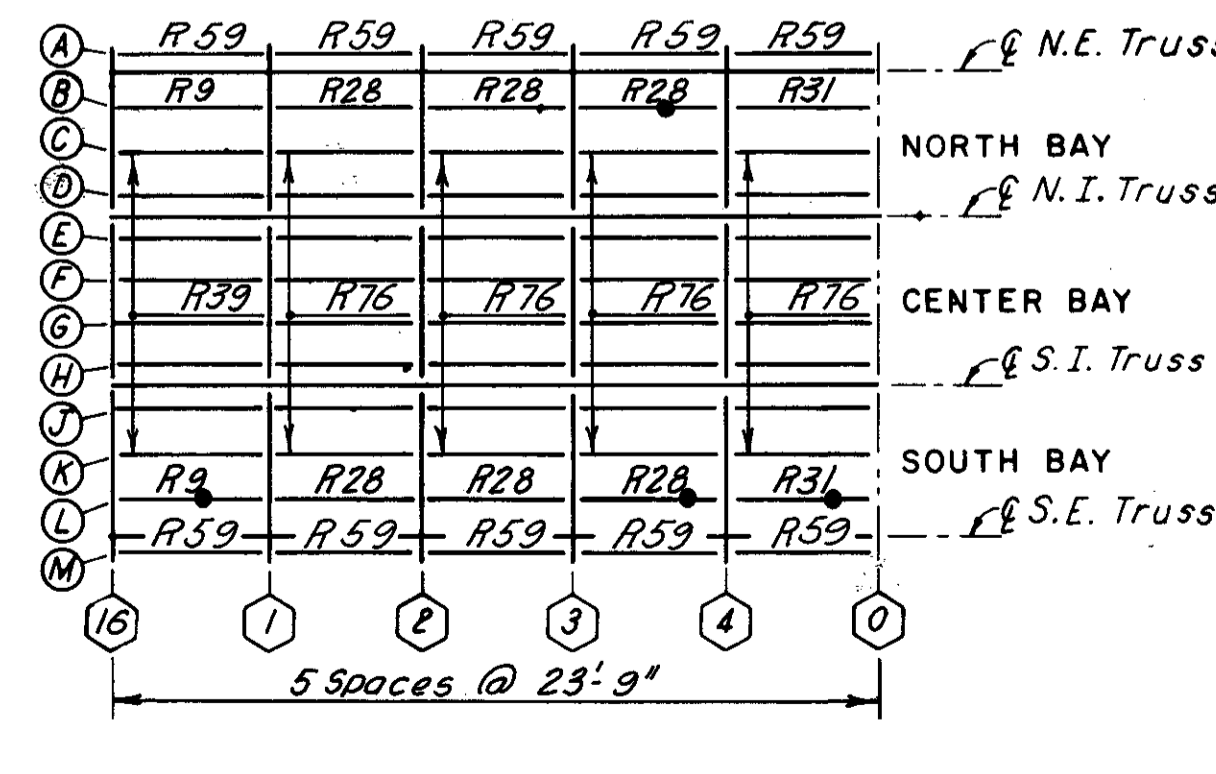
SPAN 9



SPAN 8



SPAN 7



SPAN 6

Indicates stringers which have been replaced as part of this project. This information was added after the project was completed (11-16-83) as requested by the Cuyahoga County Engineer.

**H.N.T.B. BRIDGE NO. 3**  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

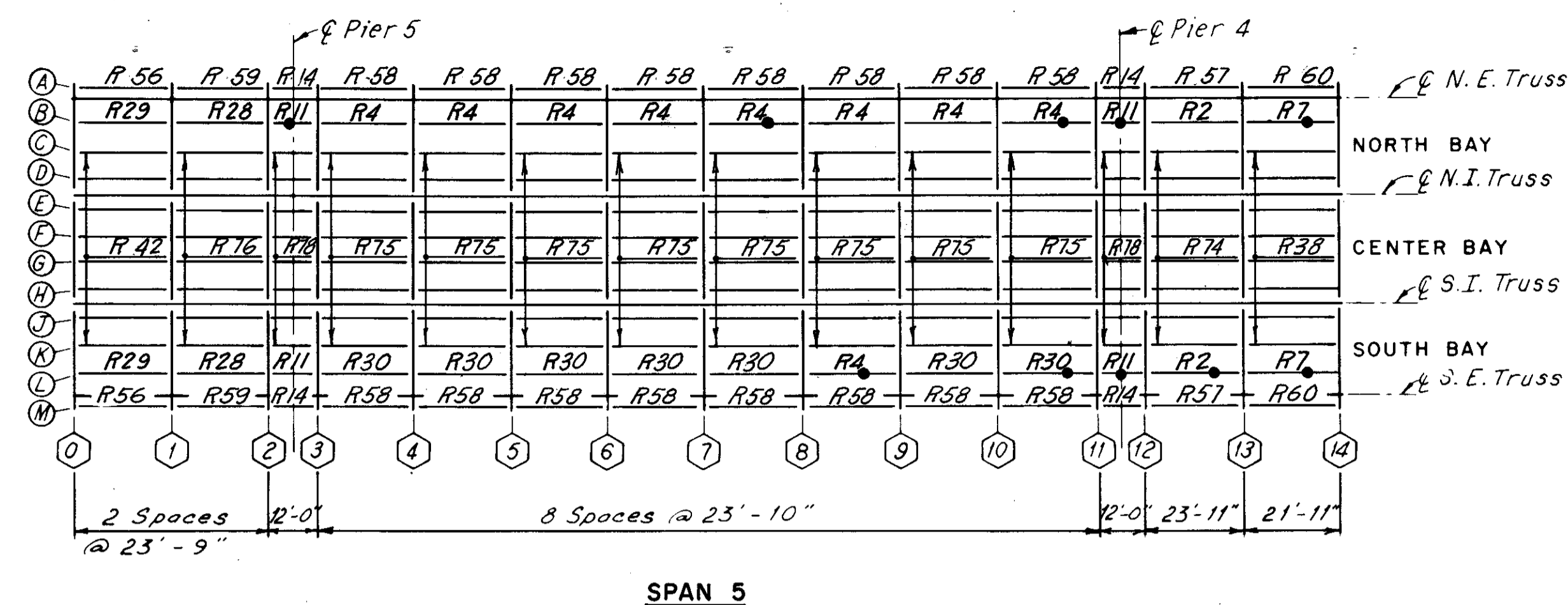
**HNTB**

**STRINGER REPLACEMENT LOCATIONS- SPANS 13 THRU 6 (IF REQUIRED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)**  
BR. NO. CUY-10-1618 STA. 22 + 19.19  
CUYAHOGA COUNTY OHIO STA. 55 + 04.56

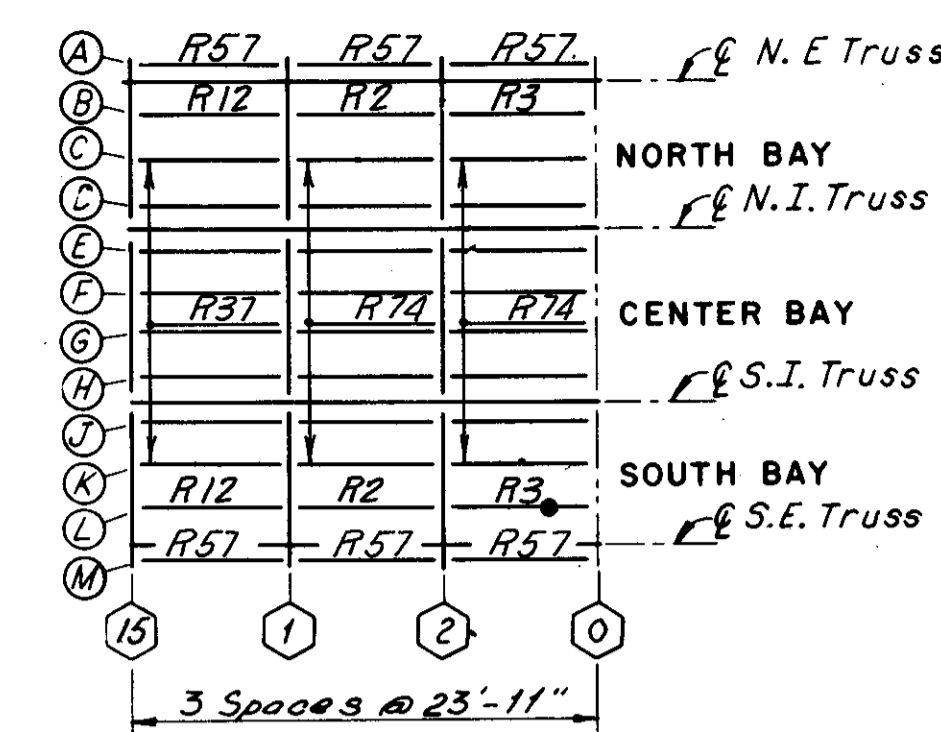
DRAWN: P.A.S. DATE: 8-13-82  
TRACED: D.P.J. DATE: 8-14-82  
CHECKED: P.H.W. DATE: 8-17-82  
REVIEWED: [ ]  
REVISED: [ ]

SHEET 310/72

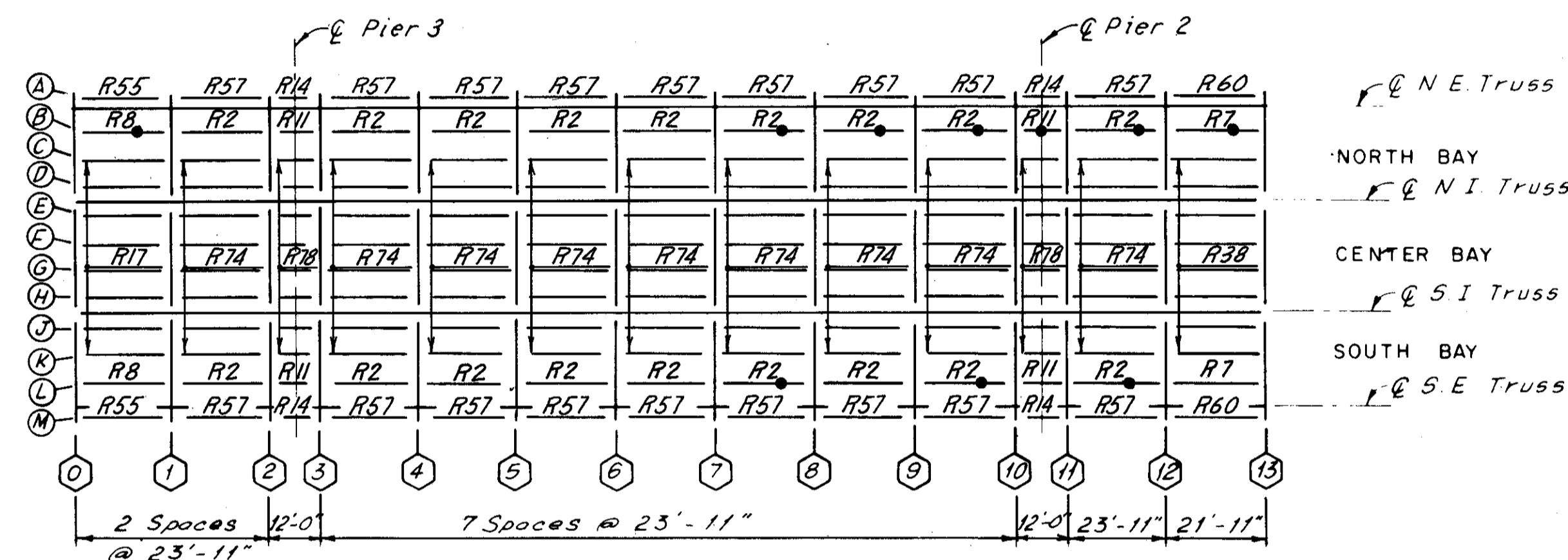
Sheet added 12-5-83



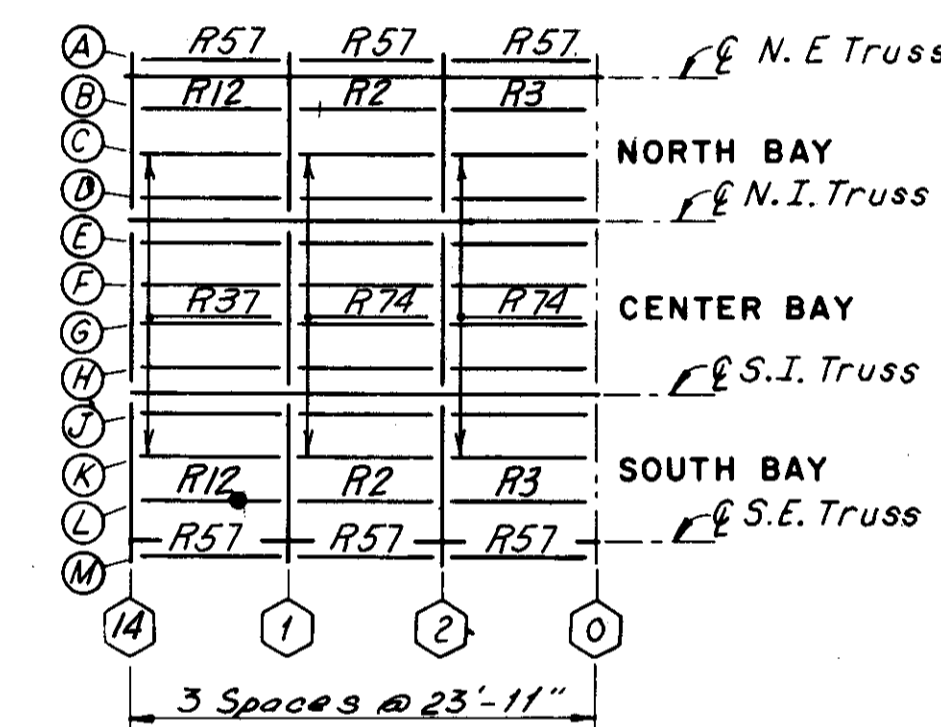
SPAN 5



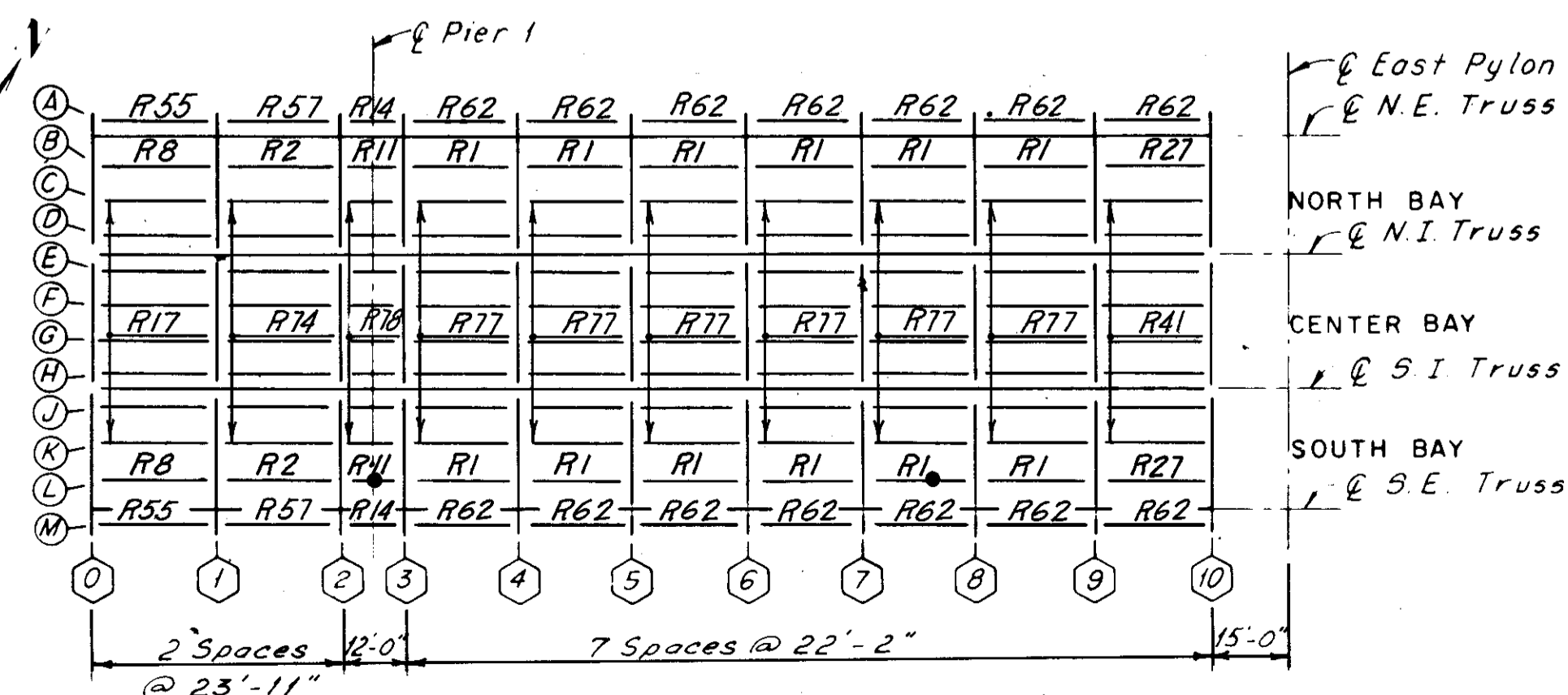
SPAN 4



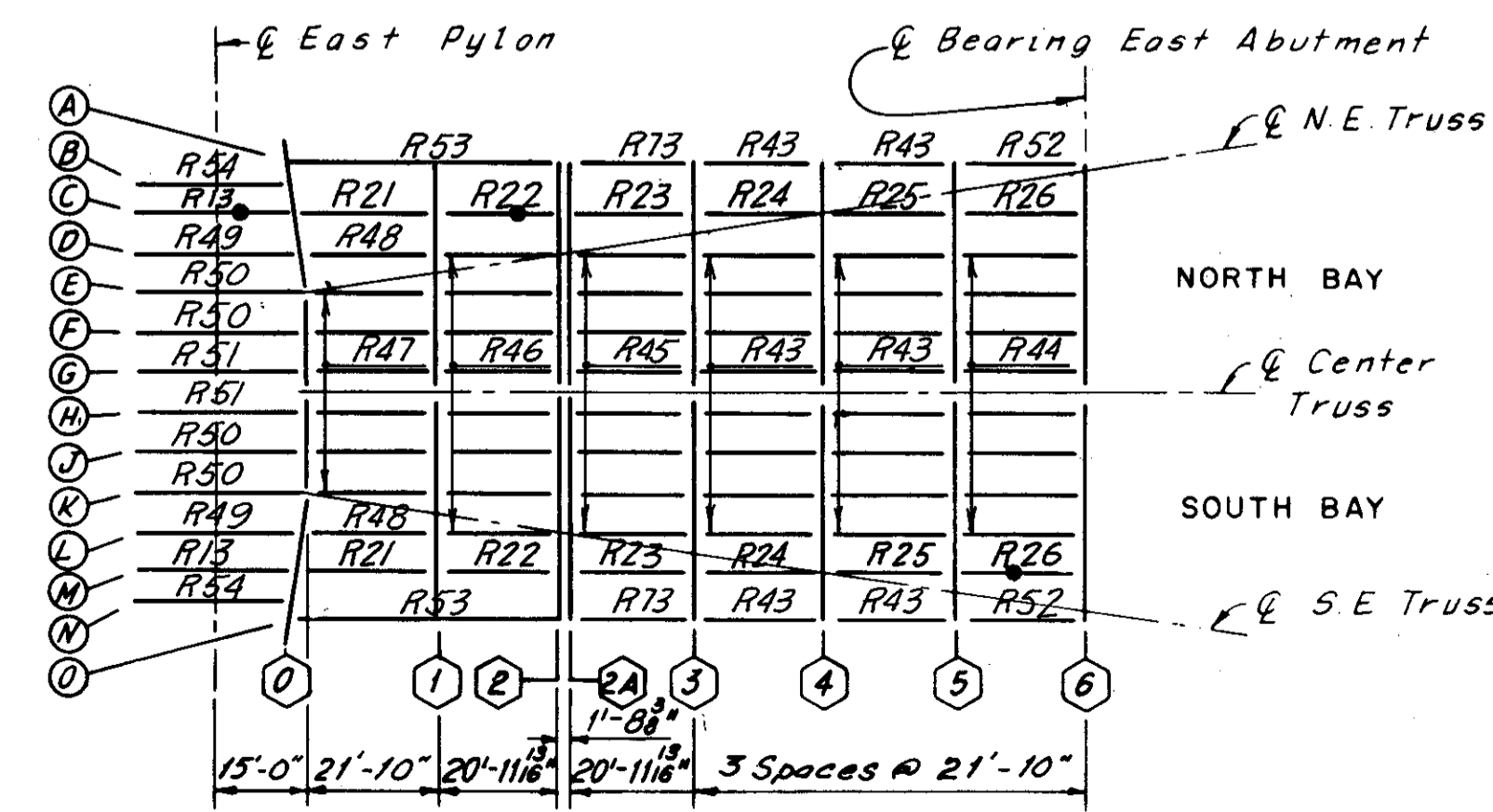
SPAN 3



SPAN 2



SPAN 1



W.&L.E. SPAN

Indicates stringers which have been replaced as part of this project. This information was added after the project was completed (11-16-83) as requested by the Cuyahoga County Engineer.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**STRINGER REPLACEMENT LOCATIONS SPANS 5 THRU 1 AND W.&L.E. (IF REQUIRED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY-10-1618 STA. 22 + 19.19 STA. 55 + 04.56**

CUYAHOGA COUNTY OHIO

DRAWN P.A.S. DATE: 8-13-81	TRACED D.P.J. DATE: 8-14-81	CHECKED R.H.W. DATE: 8-17-81	REVIEWED	REVISED
----------------------------------	-----------------------------------	------------------------------------	----------	---------

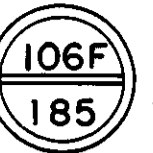
SHEET 31E/72

Sheet added 12-5-83

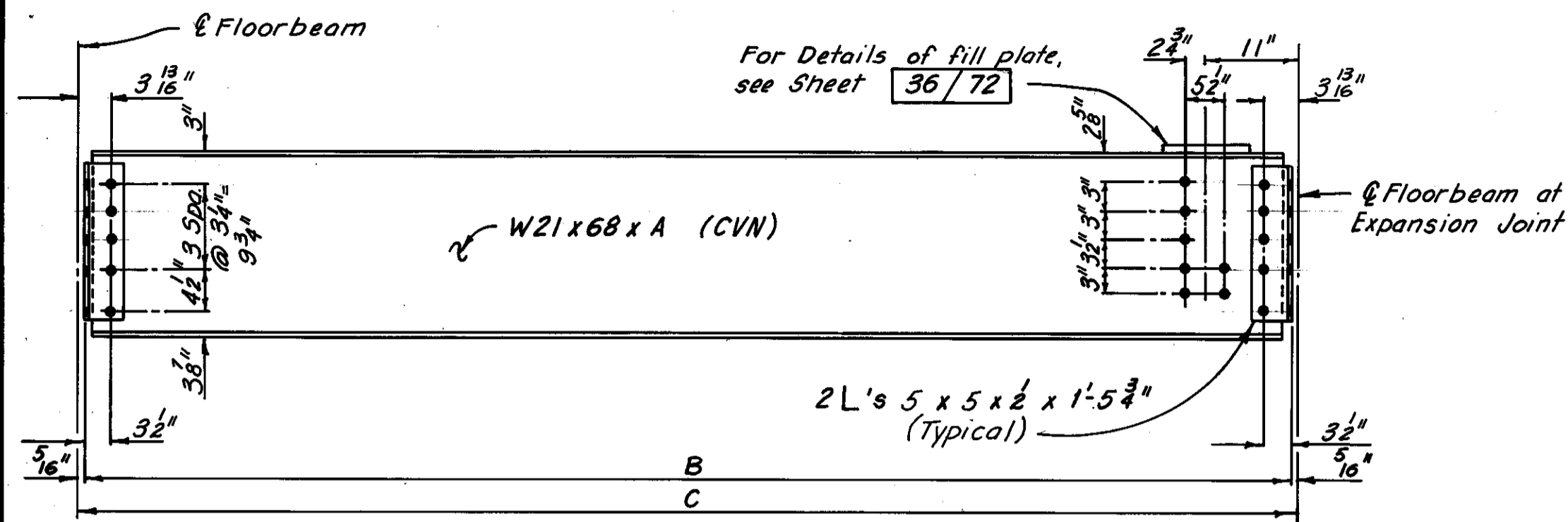
TABLE OF DIMENSIONS			
TYPE	A	B	C
R-37	23'-9 1/2"	23'-10 3/8"	23'-11"
R-38	21'-9 1/2"	21'-10 3/8"	21'-11"
R-39	23'-7 1/2"	23'-8 3/8"	23'-9"
R-40	21'-7 1/2"	21'-8 3/8"	21'-9"

TABLE OF DIMENSIONS					
TYPE	A	B	C	D	E
R43	21'-8 1/4"	21'-2 3/8"	21'-10 1/8"	3 1/2"	3 1/2"
R45	20'-9 3/4"	20'-4 1/8"	20'-11 1/8"	3 1/2"	3 1/2"
R52	21'-8 1/4"	21'-2 3/8"	21'-10 1/8"	3 1/2"	3 1/2"

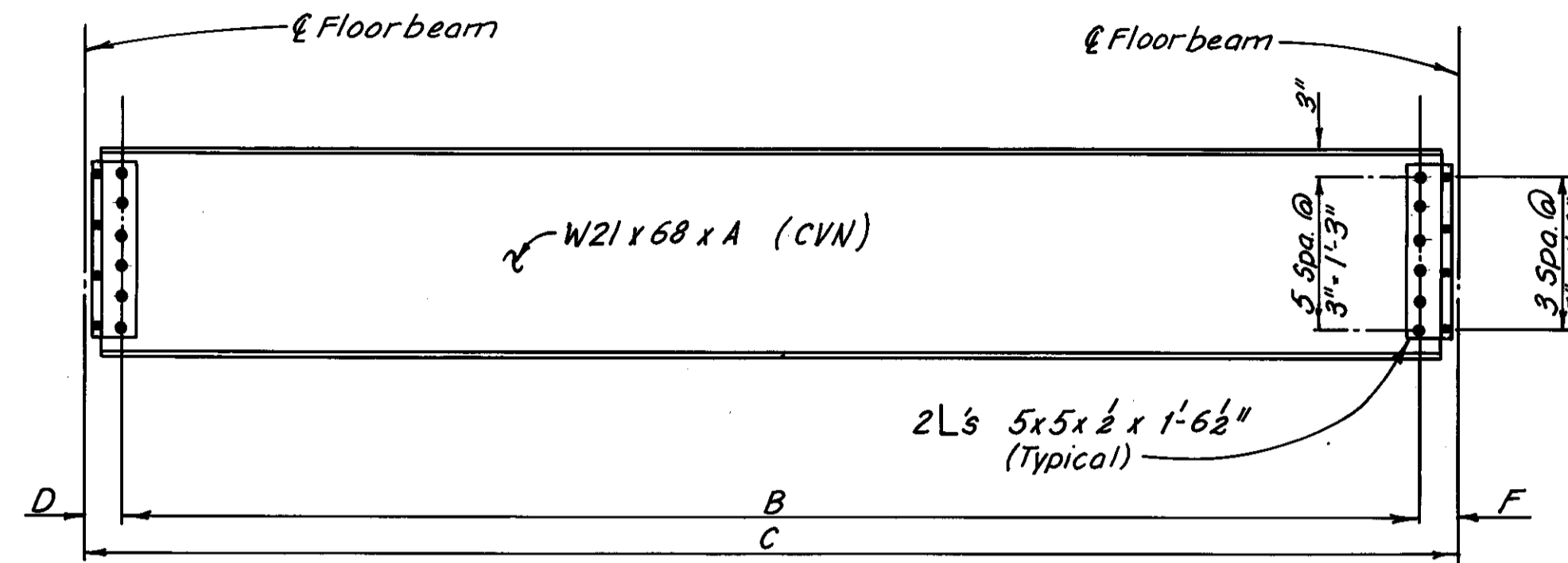
FHWA REGION	STATE	PROJECT
5	OHIO	



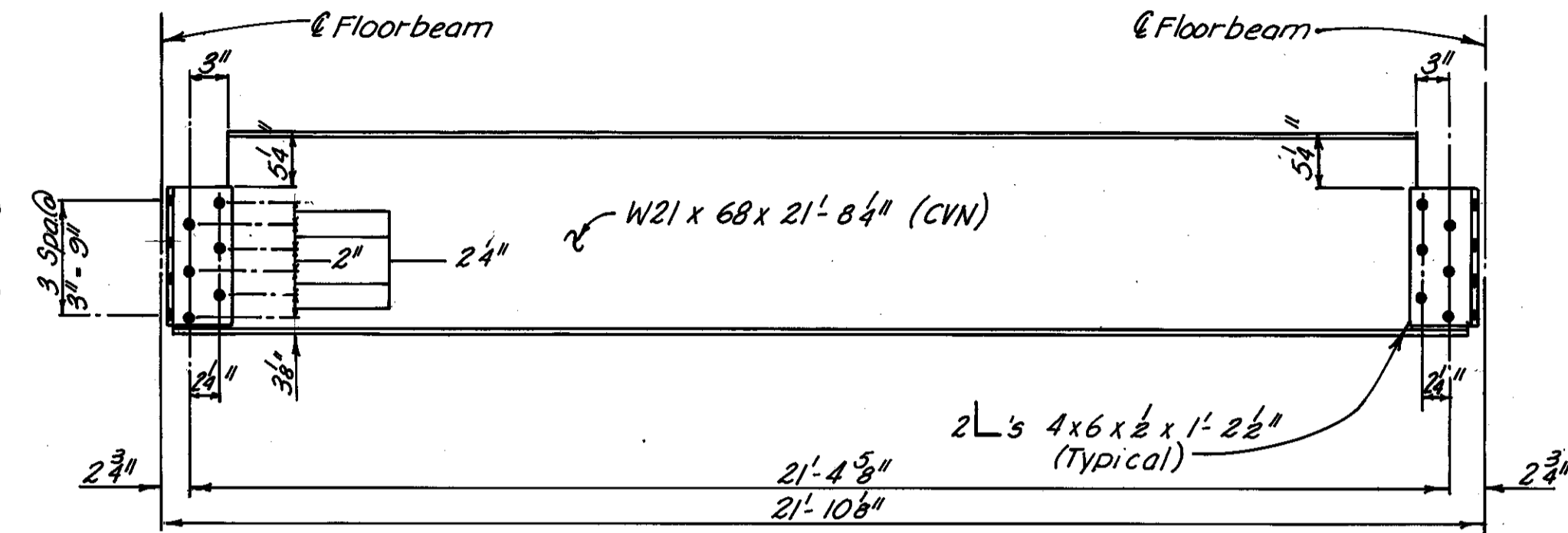
CUYAHOGA COUNTY  
CUY-10-16.23



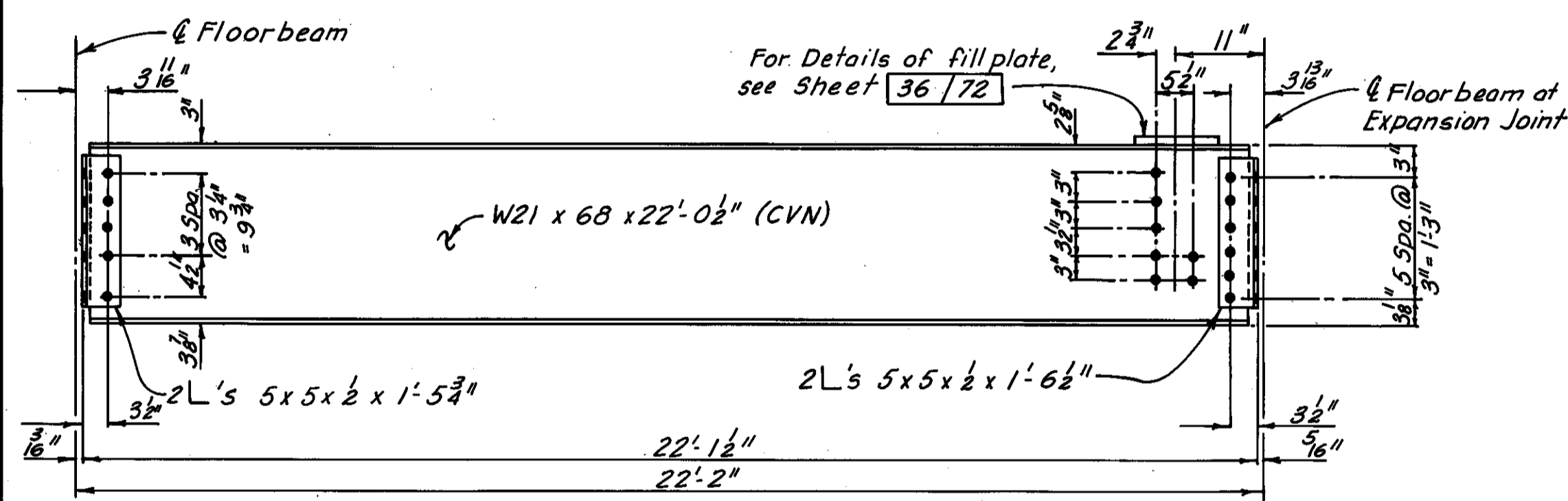
**STRINGER ELEVATION**  
(Cases R-37, R-38, R-39 and R-40)  
(Welded Studs not required)



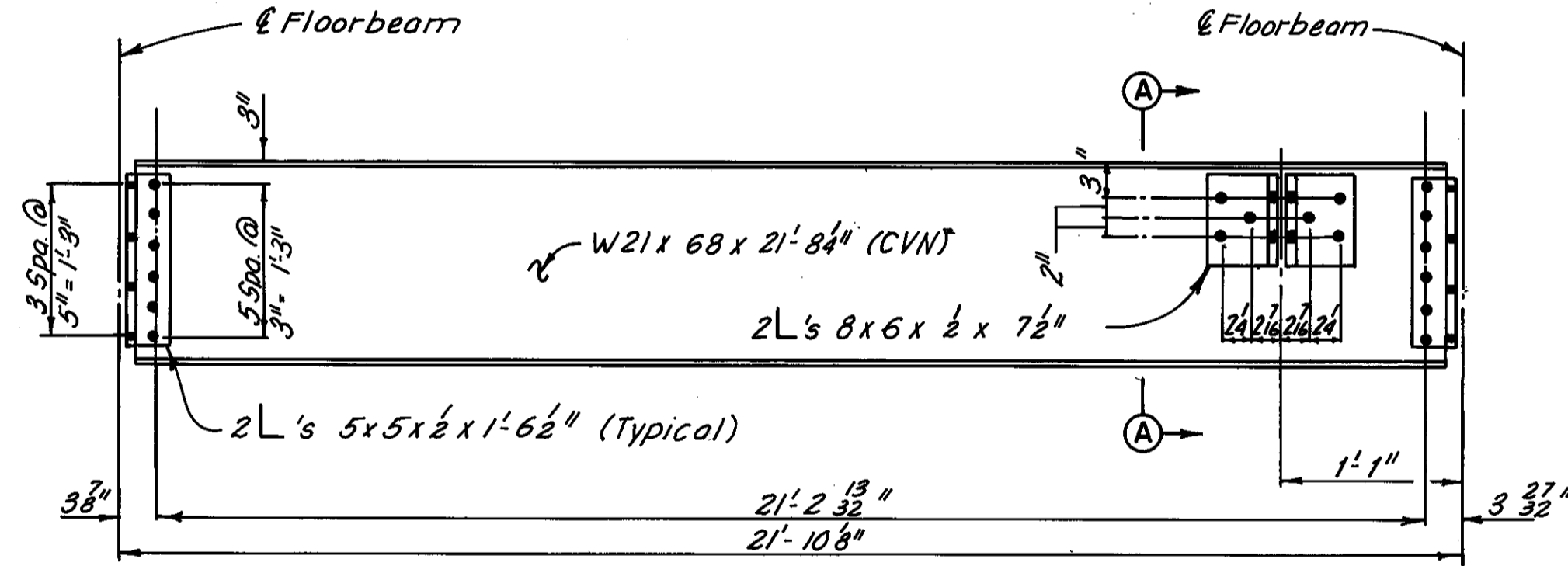
**STRINGER ELEVATION**  
(Cases R-43, R-45 and R-52)  
(Welded Studs not required)



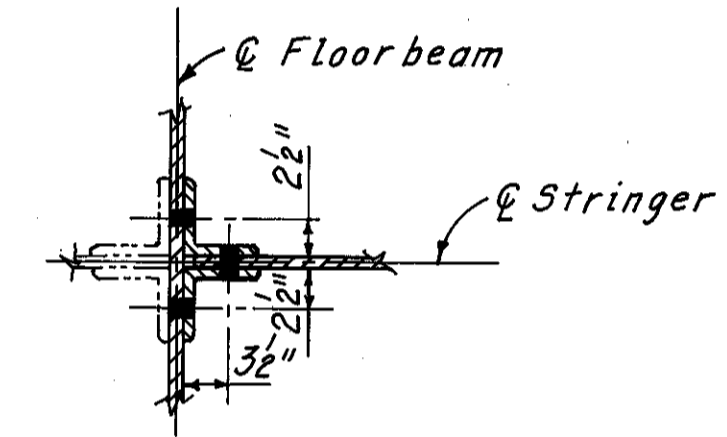
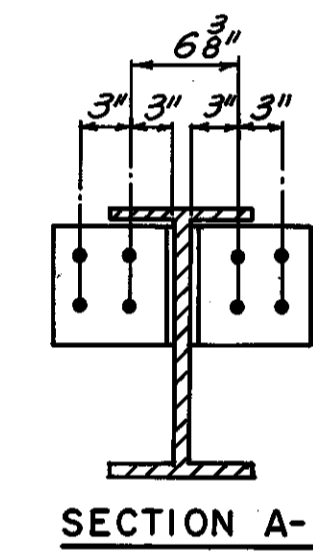
**STRINGER ELEVATION**  
(Case R-47)  
(Welded Studs not required)



**STRINGER ELEVATION**  
(Case R-41)  
(Welded Studs not required)

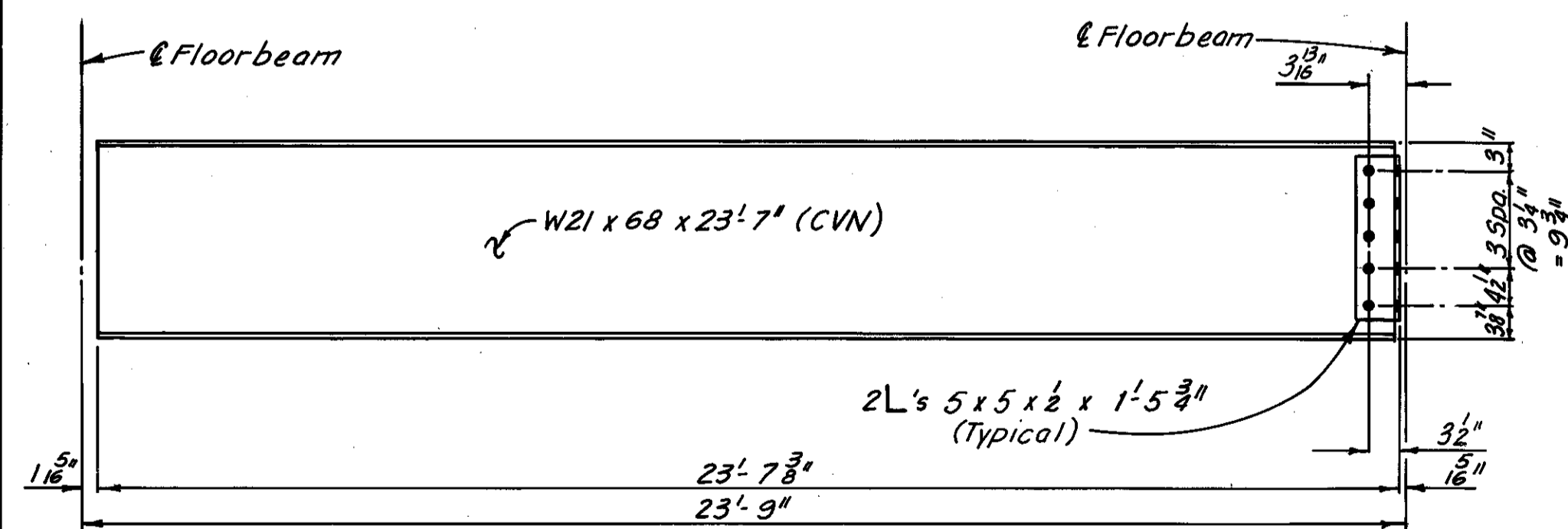


**STRINGER ELEVATION**  
(Case R-44)  
(Welded Studs not required)

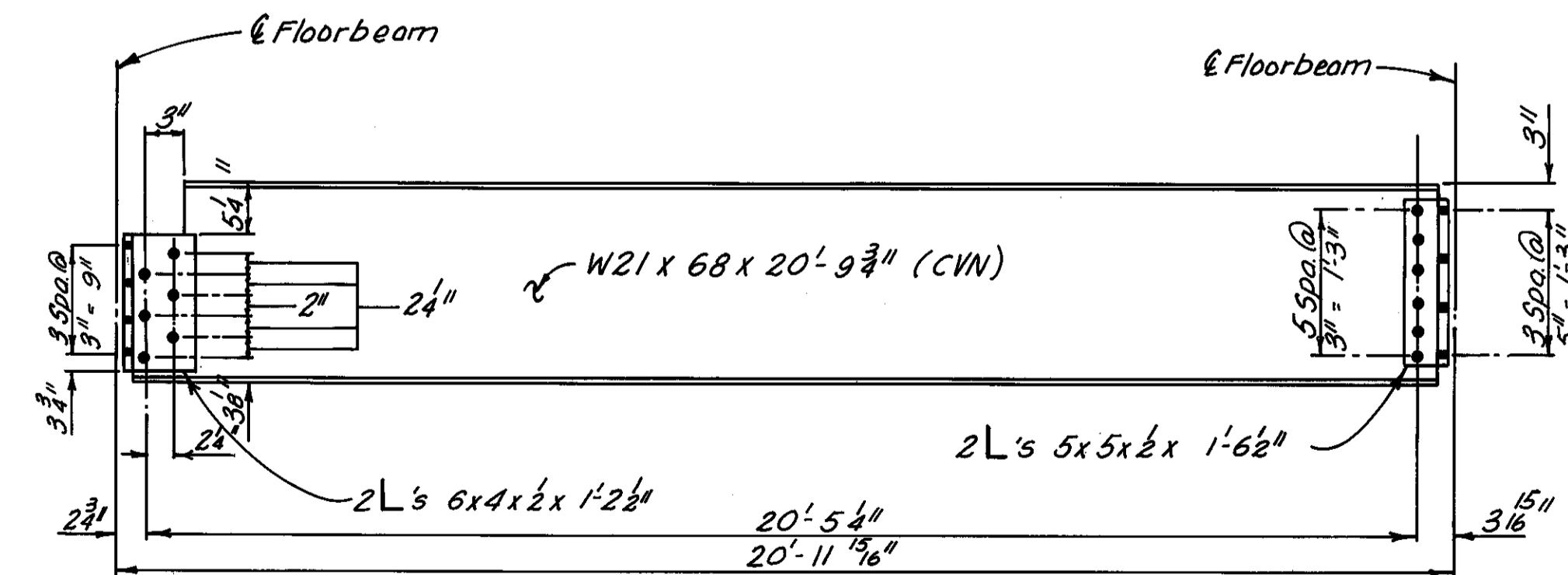


**TYPICAL SECTION FOR END CONNECTIONS  
AT STRINGERS**

Note: Angle gages shown are for stringers perpendicular to floorbeams. Appropriate adjustments should be made at skewed locations.



**STRINGER ELEVATION**  
(Case R-42)  
(Welded Studs not required)



**STRINGER ELEVATION**  
(Case R-46)  
(Welded Studs not required)

Notes:  
All bolts are 1"  $\phi$  High Strength Bolts with 1/8"  $\phi$  holes.  
For CVN, see Sheet 28/72.  
The Replacement Details shown on this sheet are for replacement of members only, if replacement is necessitated due to field inspection.  
For Stringer Replacement Locations, see Sheets 31D/72 and 31E/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**ADDITIONAL STRINGER REPLACEMENT  
DETAILS**

(IF REQUIRED DURING RECONSTRUCTION)

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

BR. NO. CUY-10-1618

STA. 22 + 19.19

CUYAHOGA COUNTY

OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DRJ	DRJ	R.H.W.		
DATE 3-24-80	DATE 3-25-80	DATE 9-8-81	DATE	

Sheet added 12-5-83

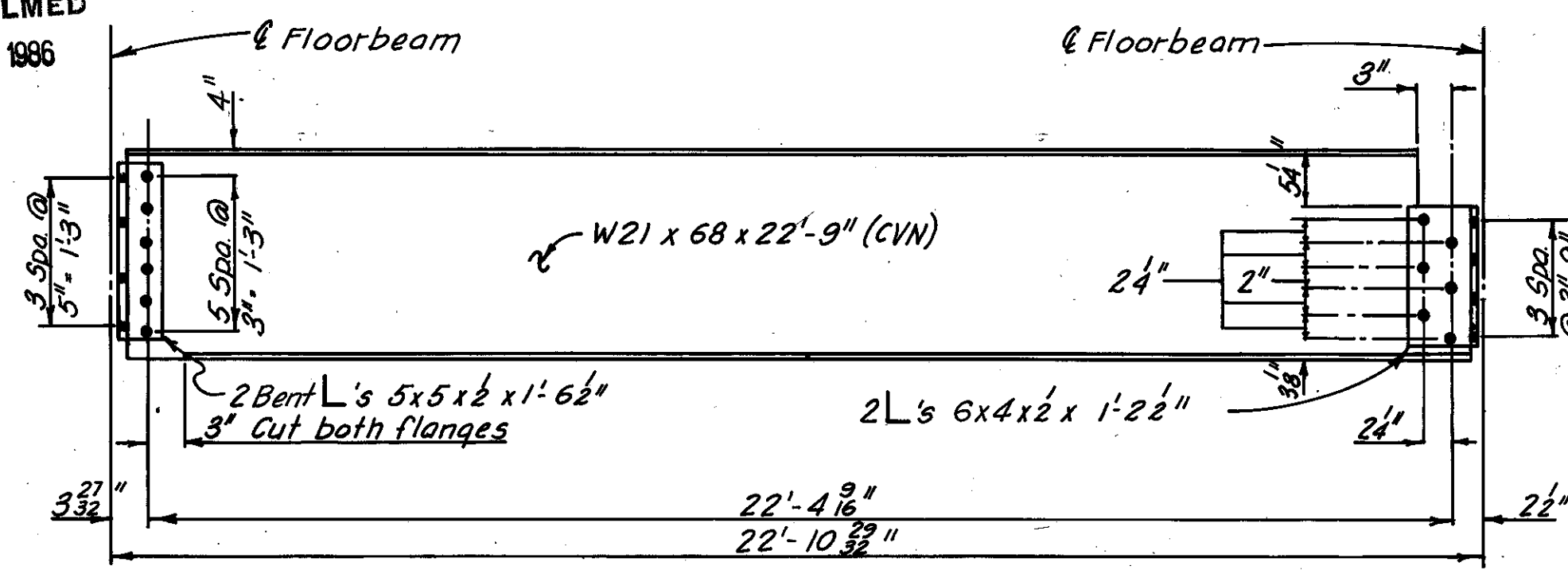
SHEET 31F/72

MICROFILMED  
DEC 5 1986

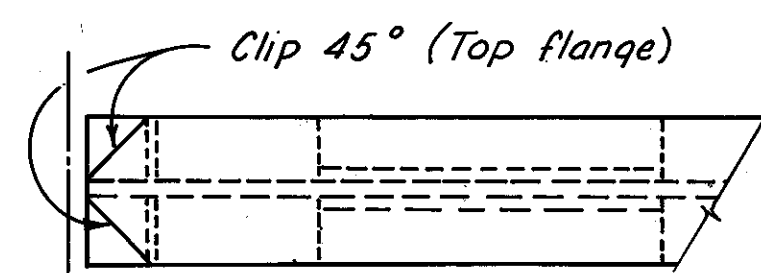
FHWA REGION	STATE	PROJECT
5	OHIO	

106G  
185

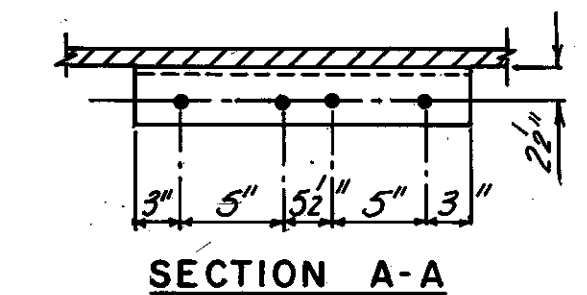
CUYAHOGA COUNTY  
CUY-10-16.23



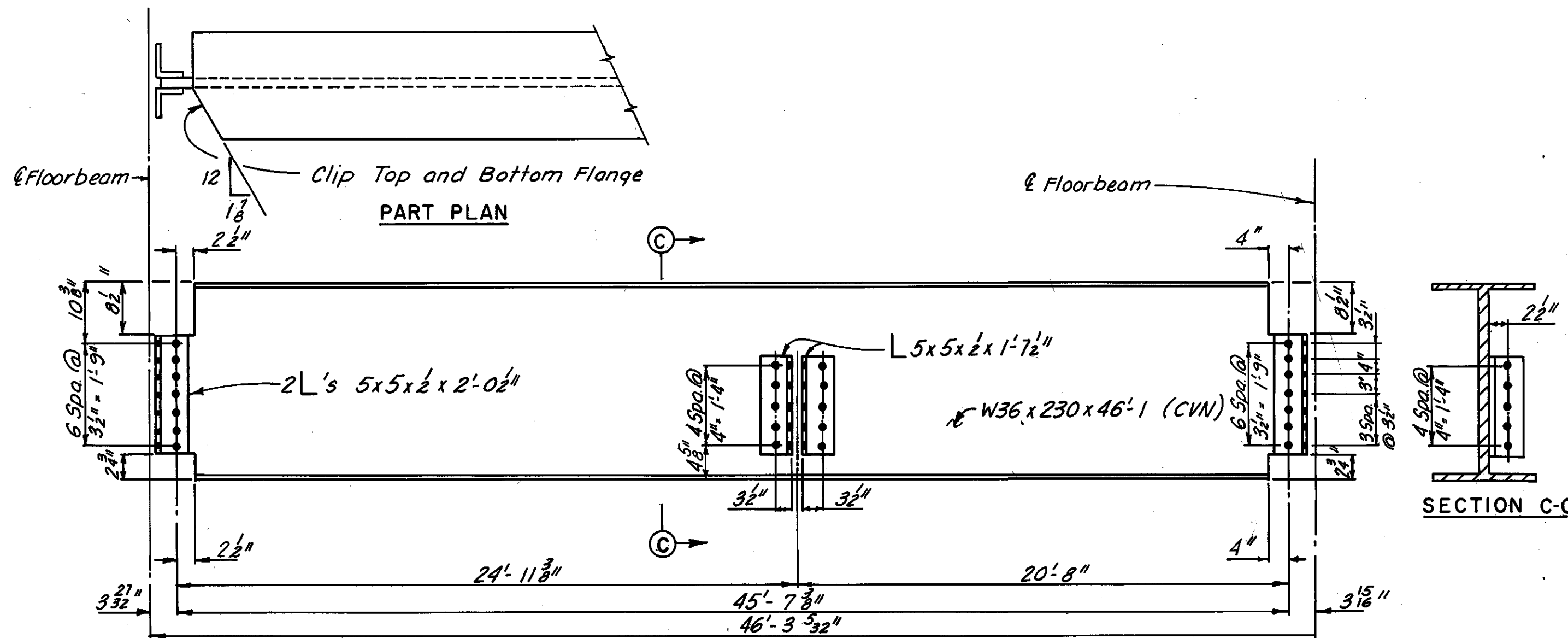
STRINGER ELEVATION  
(Case R-48)  
(Welded Studs not required)



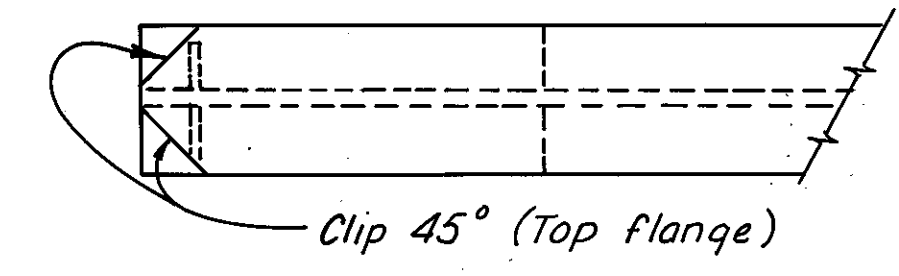
PART PLAN



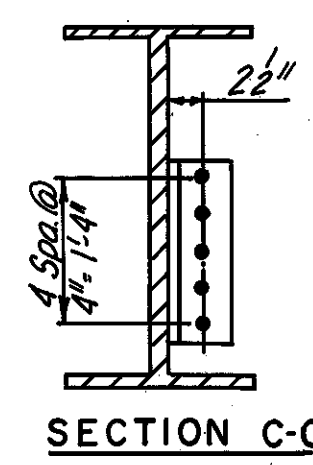
SECTION A-A



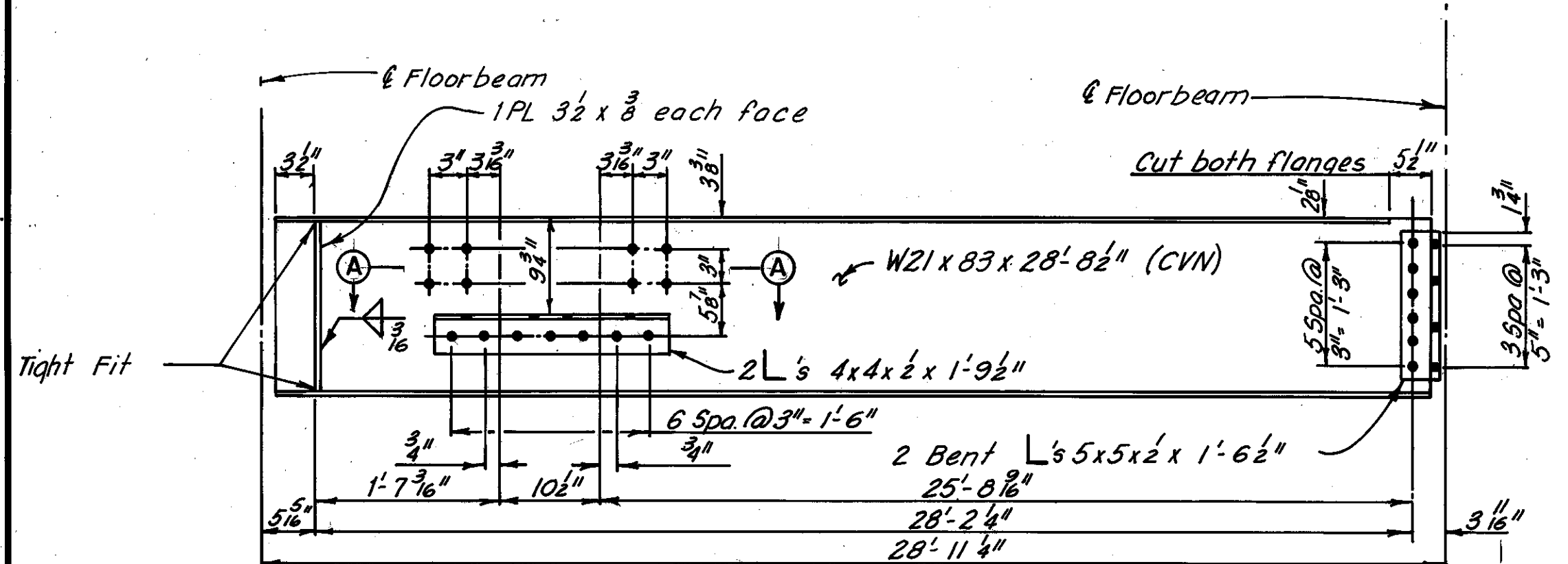
STRINGER ELEVATION  
(Case R-53)  
(Welded Studs not required)



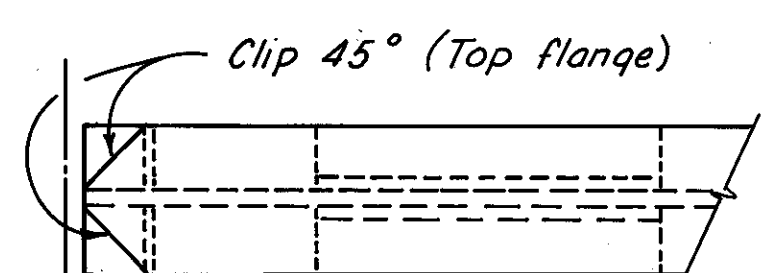
PART PLAN



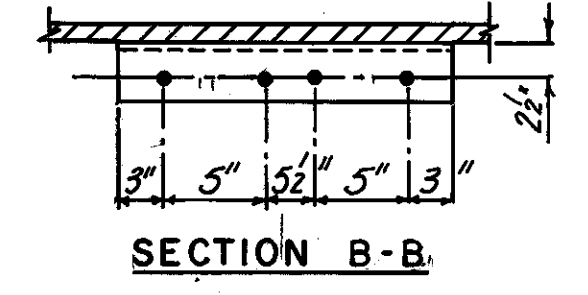
SECTION C-C



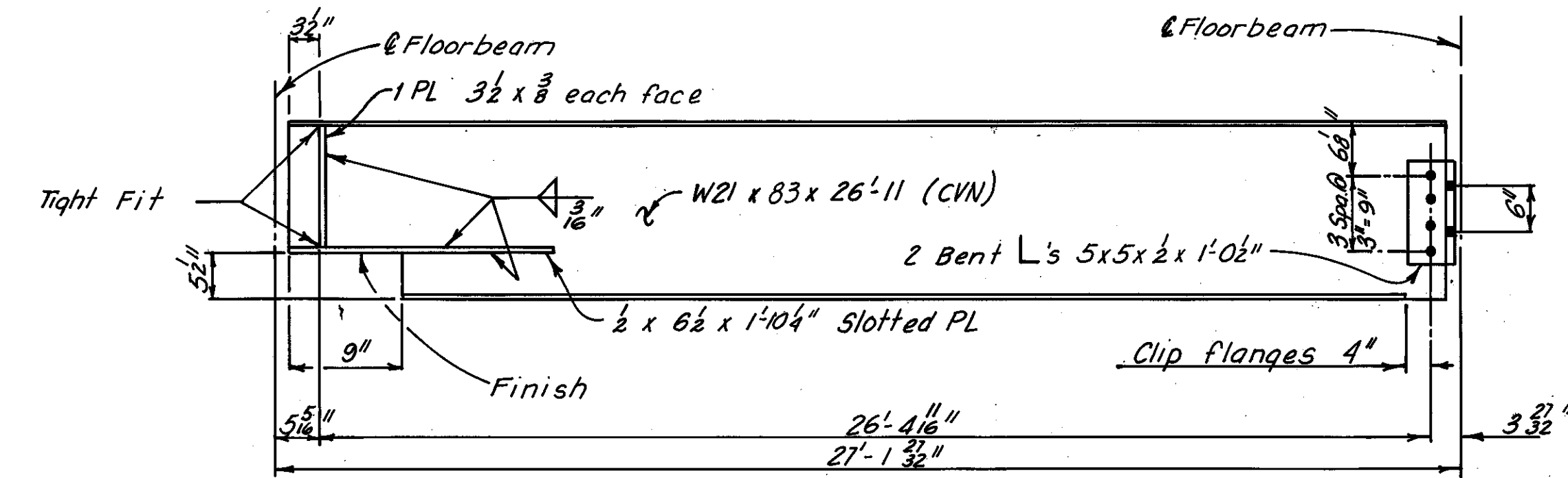
STRINGER ELEVATION  
(Case R-49)  
(Welded Studs not required)



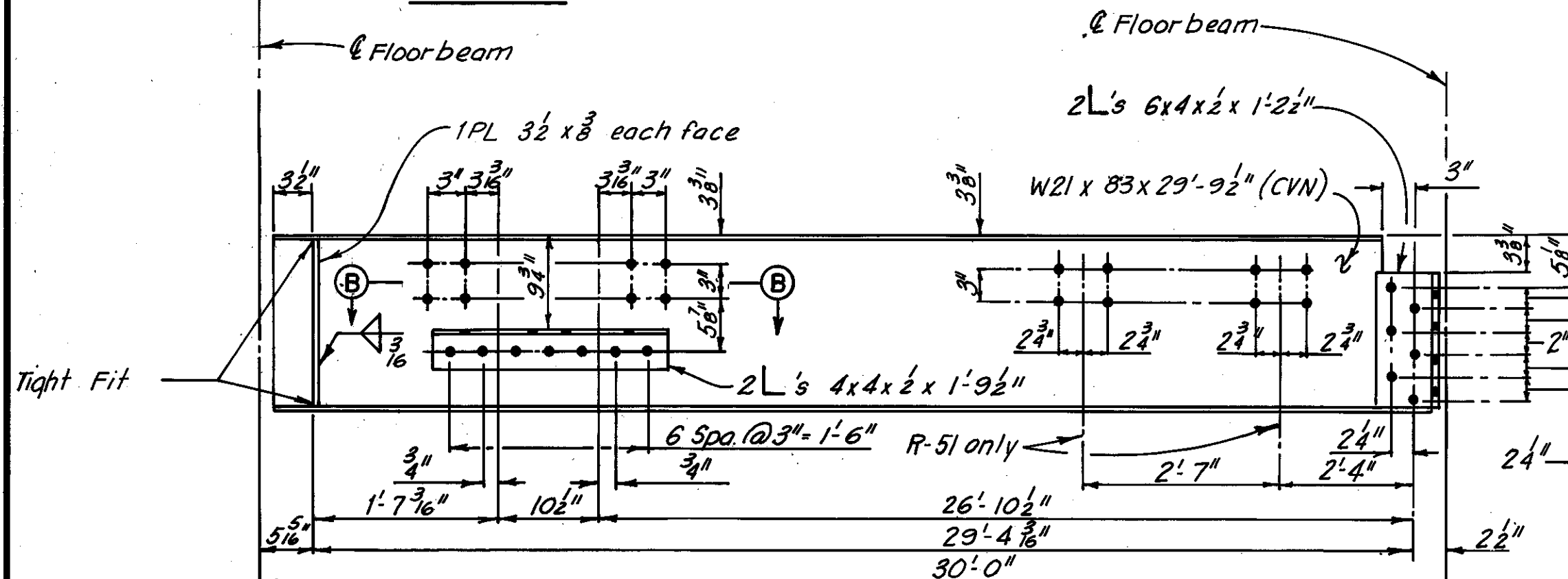
PART PLAN



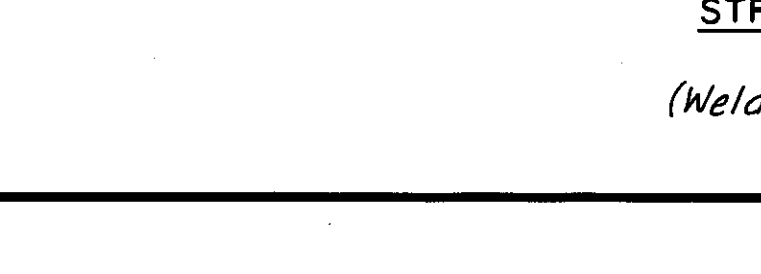
SECTION B-B



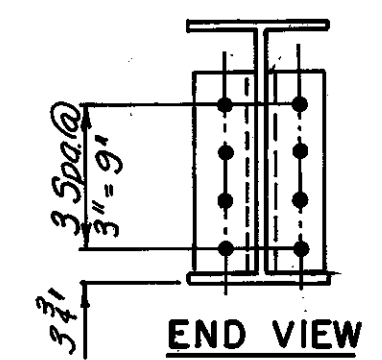
STRINGER ELEVATION  
(Case R-54)  
(Welded Studs not required)



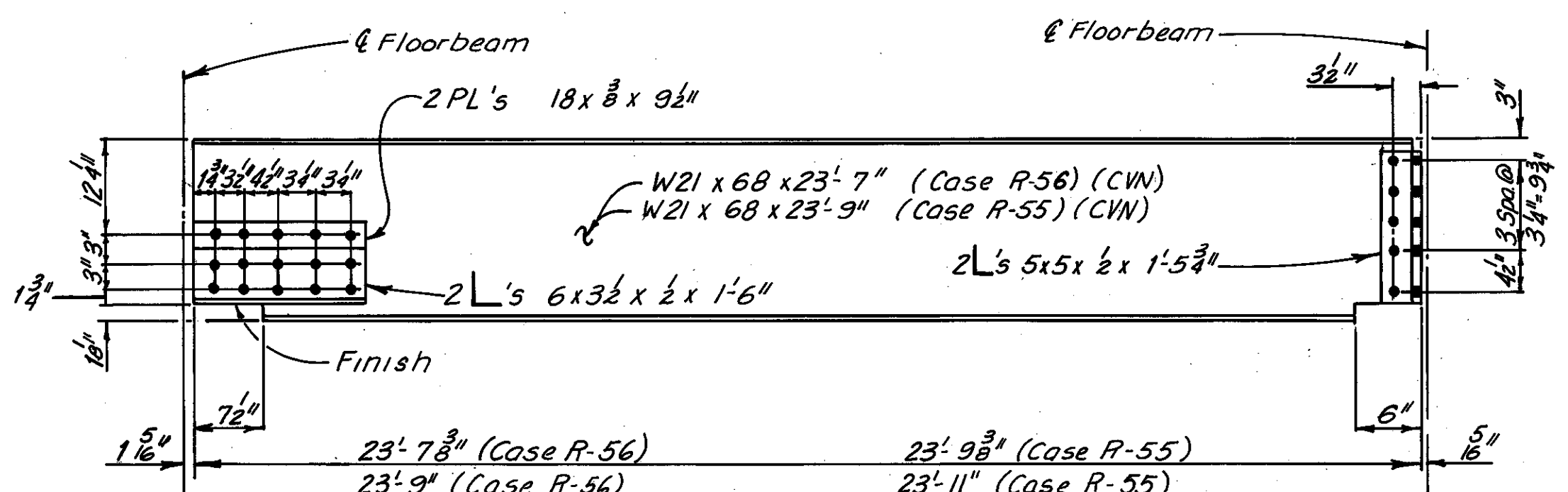
STRINGER ELEVATION  
(Cases R-50 and R-51)  
(Welded Studs not required)



PART PLAN



END VIEW



STRINGER ELEVATION  
(Cases R-55 and R-56)  
(Welded Studs not required)

Note:  
For Notes on stringers, see Sheet 31F/72

HNT.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

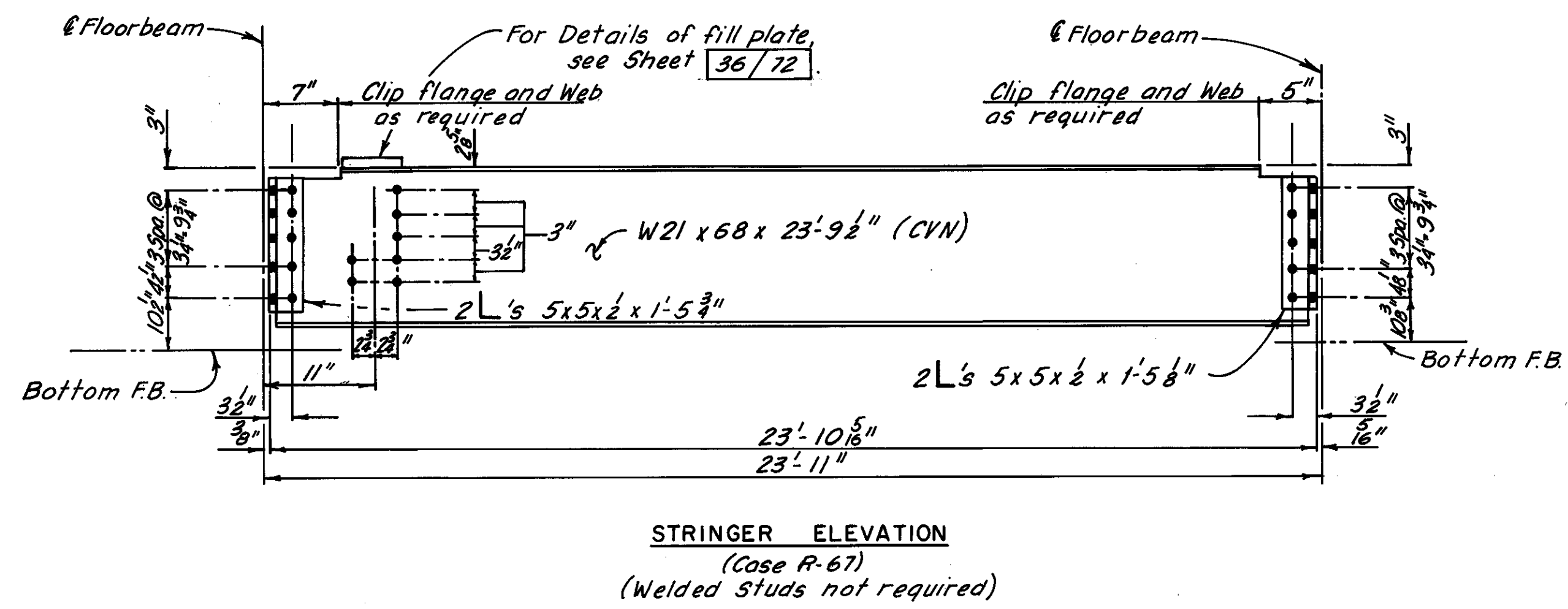
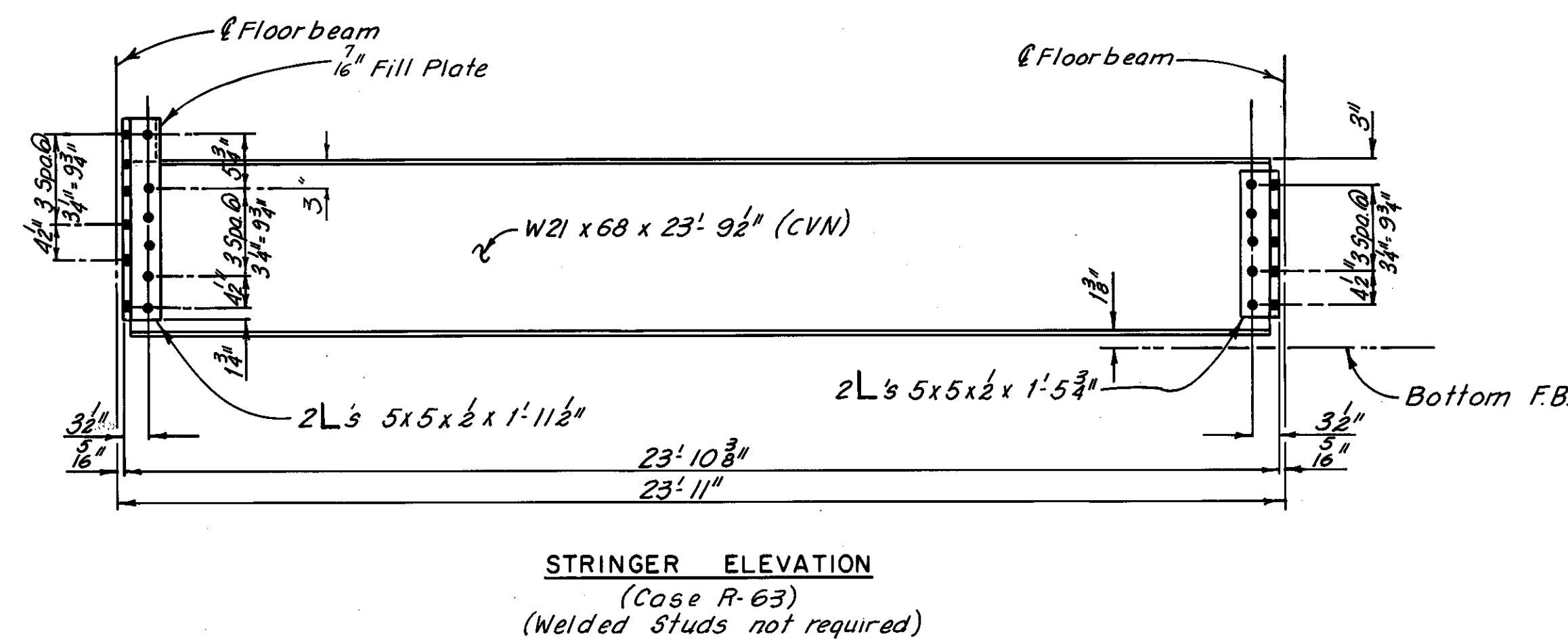
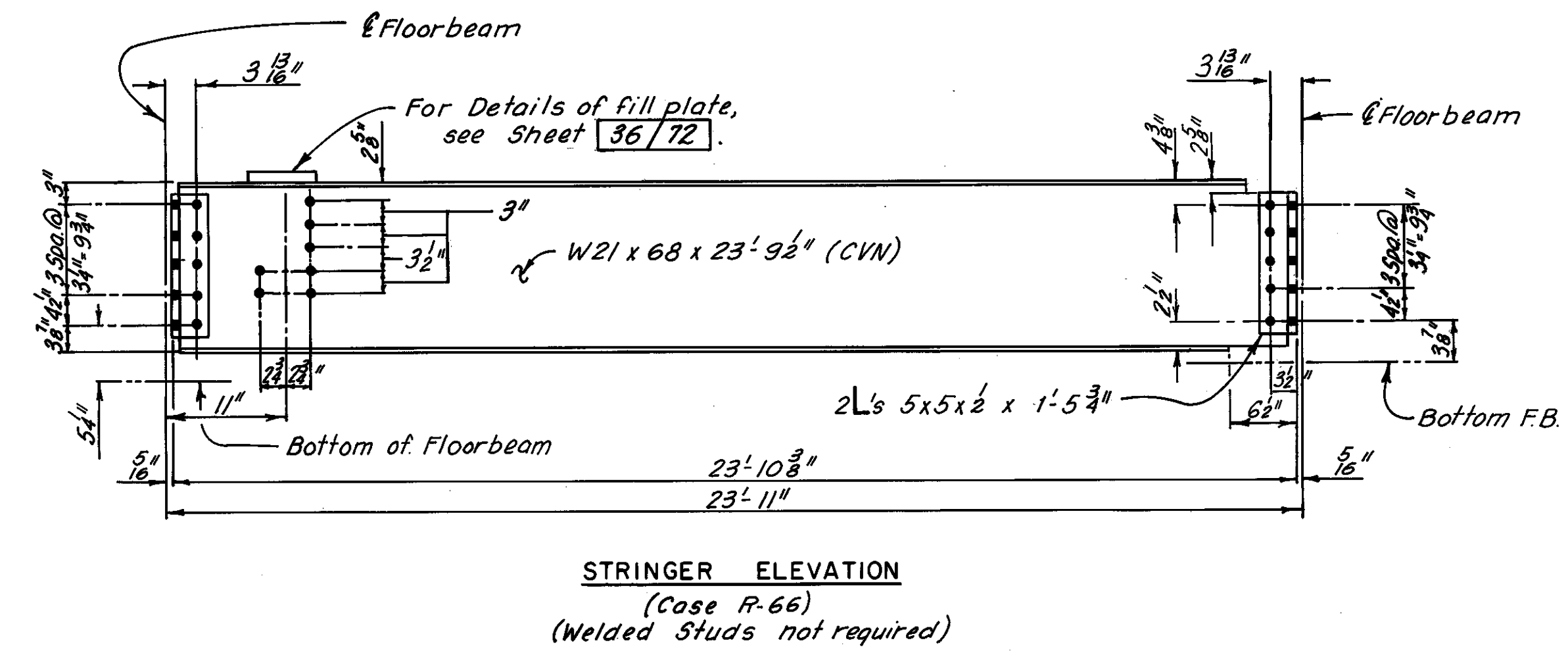
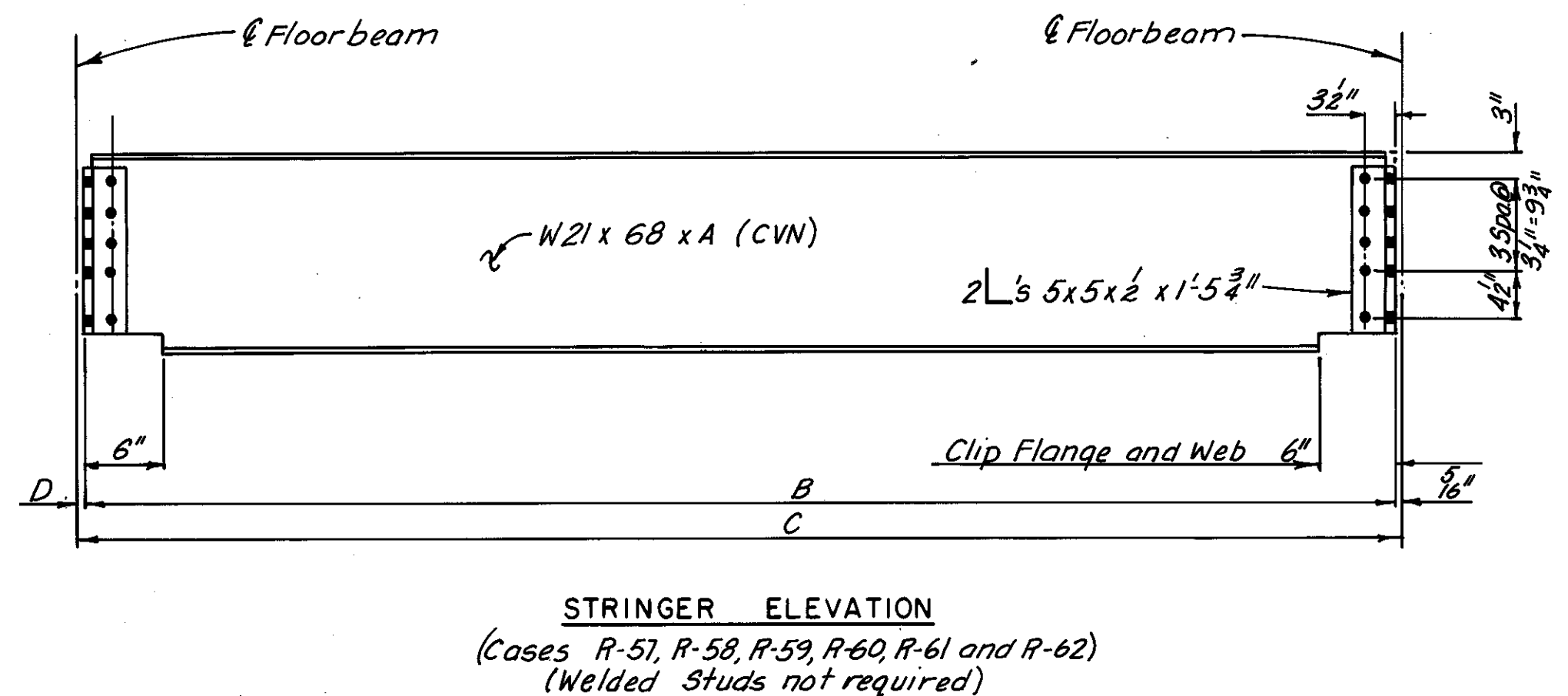
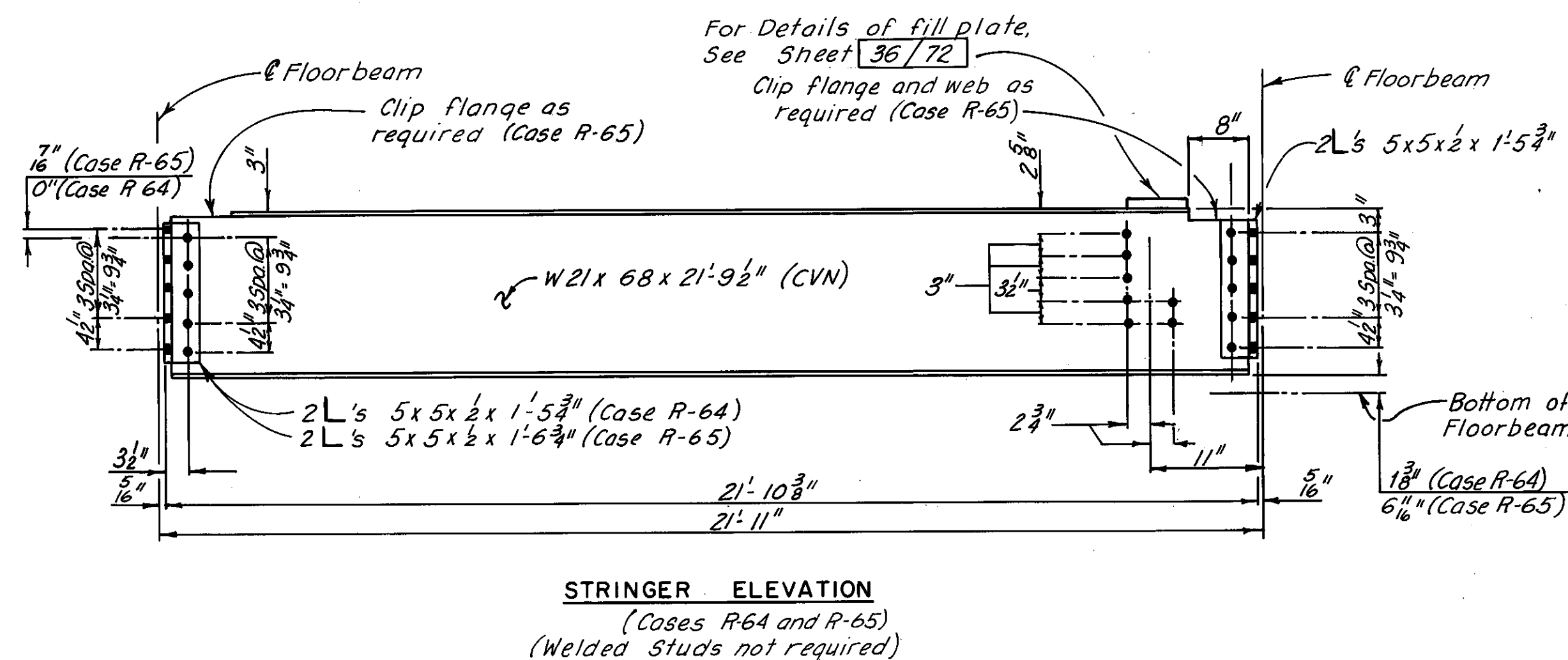
ADDITIONAL STRINGER REPLACEMENT  
DETAILS  
(IF REQUIRED DURING RECONSTRUCTION)  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22 + 19.19  
CUYAHOGA COUNTY STA. 55 + 04.56 OHIO

DRAWN D.P.J. DATE 8-25-81	TRACED D.P.J. DATE 8-26-81	CHECKED R.H.W. DATE 9-29-81	REVIEWED DATE	REVISED
---------------------------------	----------------------------------	-----------------------------------	------------------	---------

Sheet added 12-5-83

SHEET 31G/72

TABLE OF DIMENSIONS				
TYPE	A	B	C	D
R-57	23'-9 1/2"	23'-10 3/8"	23'-11"	5/16"
R-58	23'-8 1/2"	23'-9 3/8"	23'-10"	5/16"
R-59	23'-7 1/2"	23'-8 3/8"	23'-9"	5/16"
R-60	21'-9 1/2"	21'-10 3/8"	21'-11"	5/16"
R-61	21'-7 1/2"	21'-8 3/8"	21'-9"	5/16"
R-62	22'-0 1/2"	22'-1 1/2"	22'-2"	3/16"



Note:  
For Notes on stringers, see Sheet 31F/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

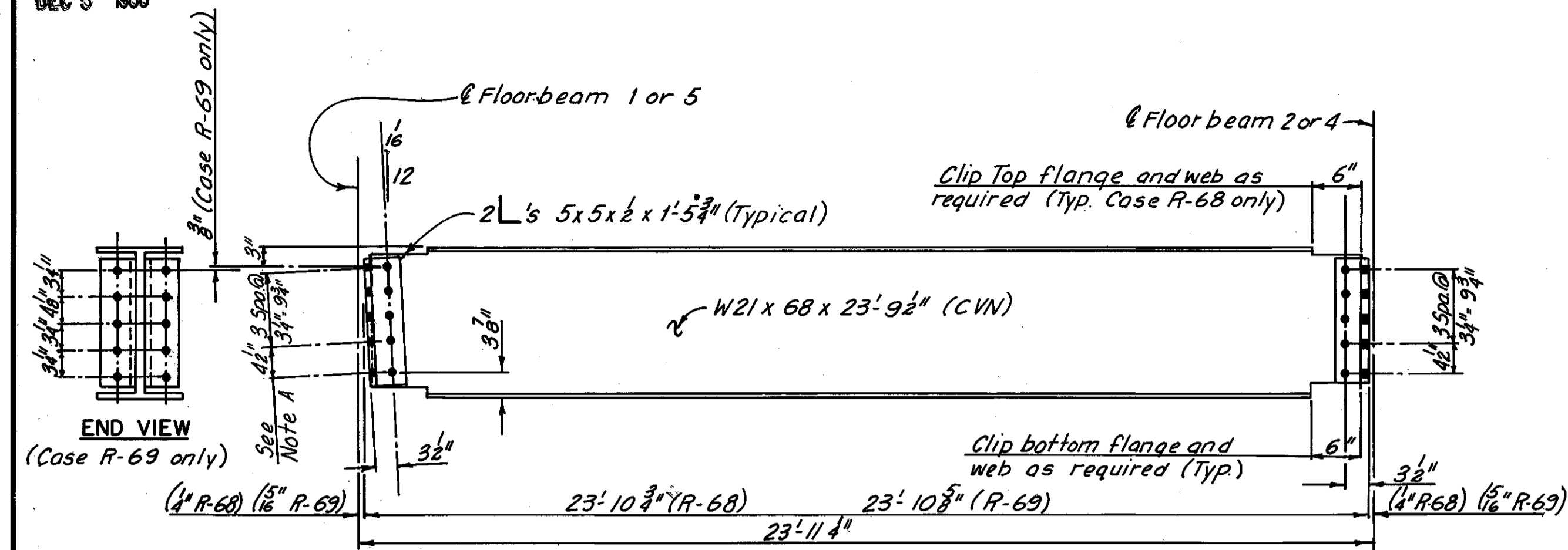
ADDITIONAL STRINGER REPLACEMENT  
DETAILS  
(IF REQUIRED DURING RECONSTRUCTION)

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S. R. 10 OVER THE CUYAHOGA RIVER)

BR. NO. CUY-10-1618 STA. 22 + 19.19  
CUYAHOGA COUNTY STA. 55 + 04.56 OHIO

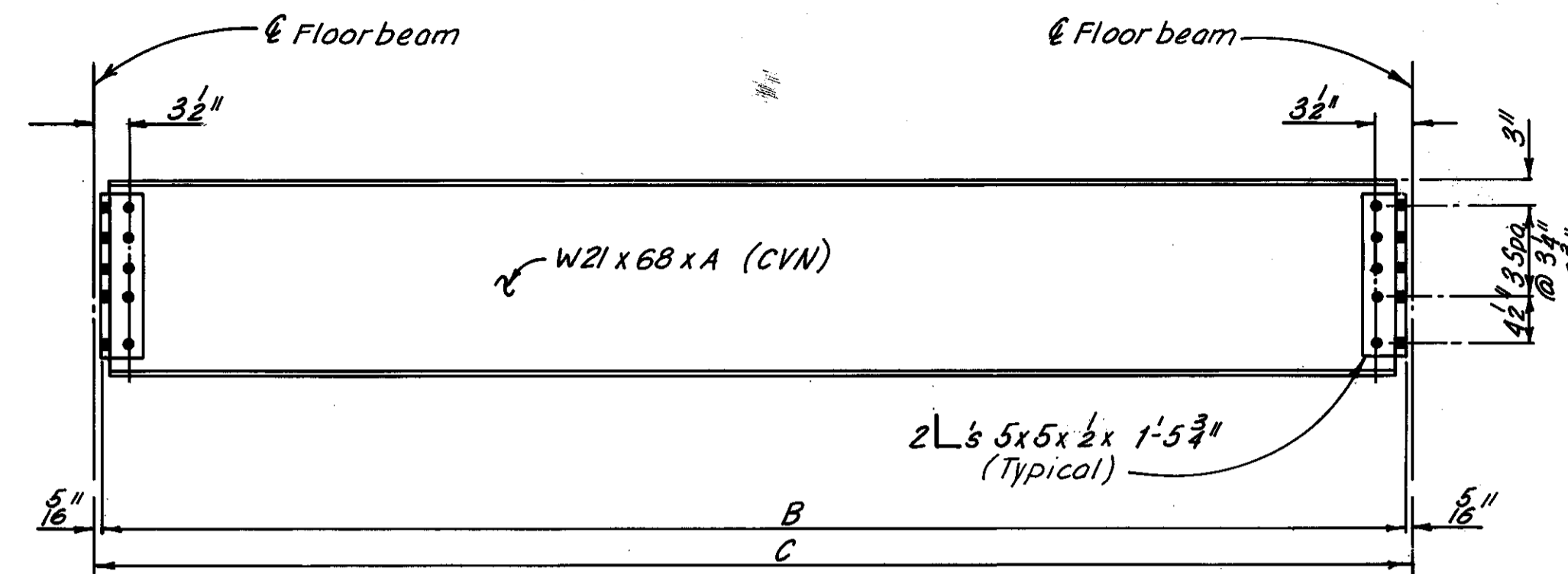
DRAWN D.R.J. DATE 8-26-81	TRACED D.R.J. DATE 8-27-81	CHECKED R.H.W. DATE 9-10-81	REVIEWED DATE	REVISED
---------------------------------	----------------------------------	-----------------------------------	------------------	---------

Sheet added 12-5-83



STRINGER ELEVATION  
(Cases R-68 and R-69)  
(Welded studs not required)

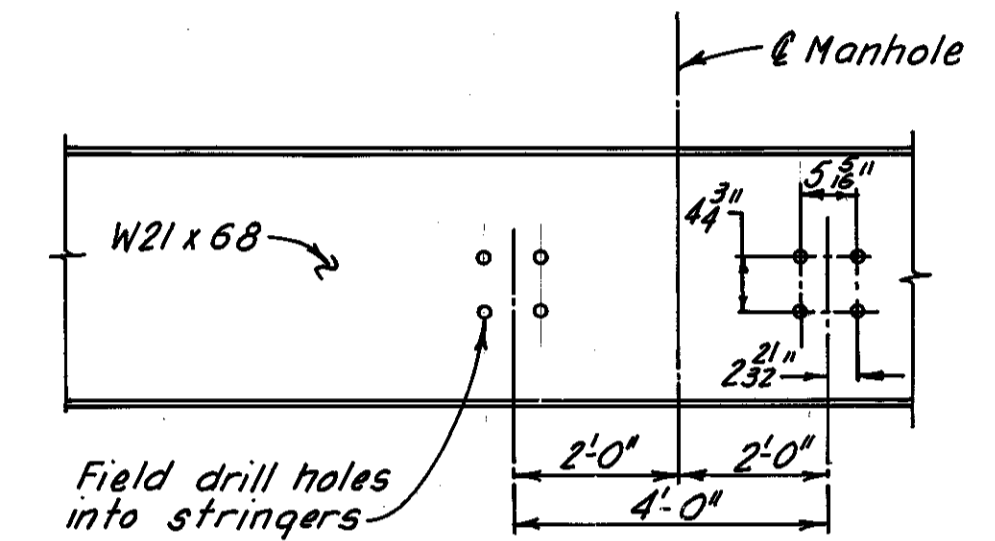
Note A:  
Holes in the stringer web or the connection angles may be reamed to a maximum 1/4" diameter holes as required to fit.



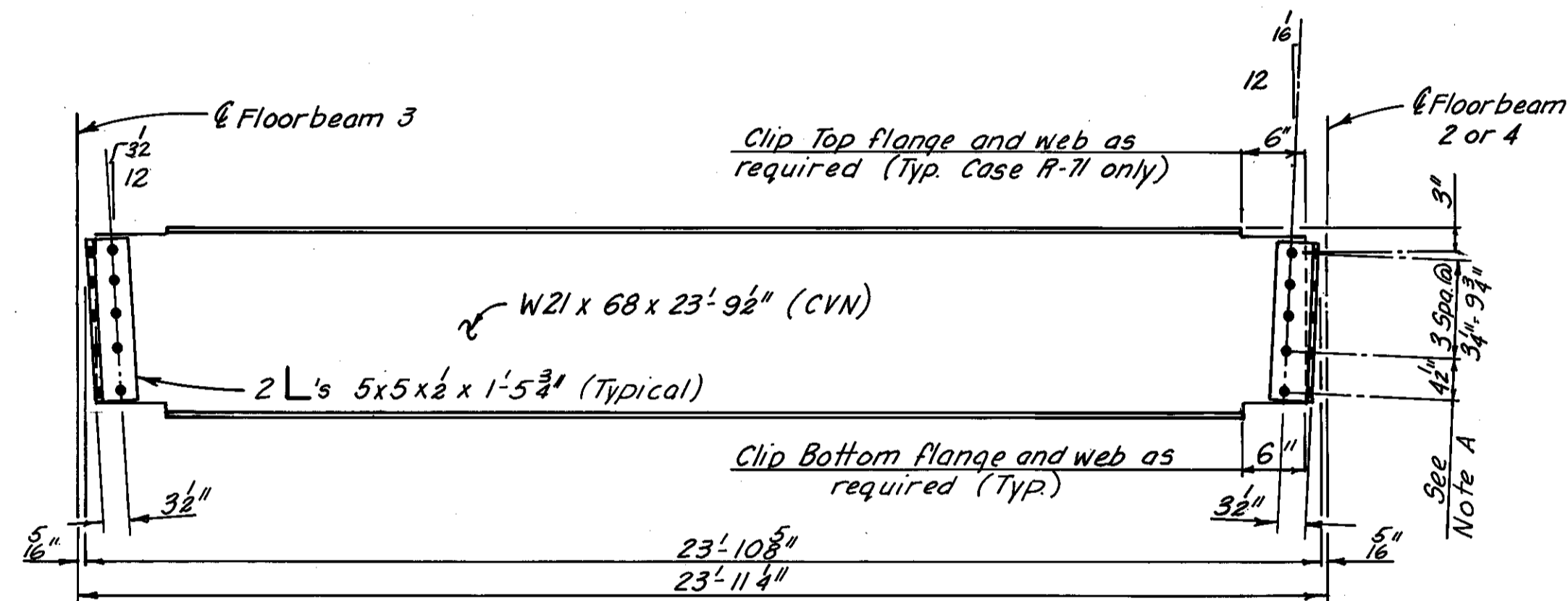
STRINGER ELEVATION  
(Cases R-74, R-75, and R-76)  
(Welded studs not required)

TABLE OF DIMENSIONS

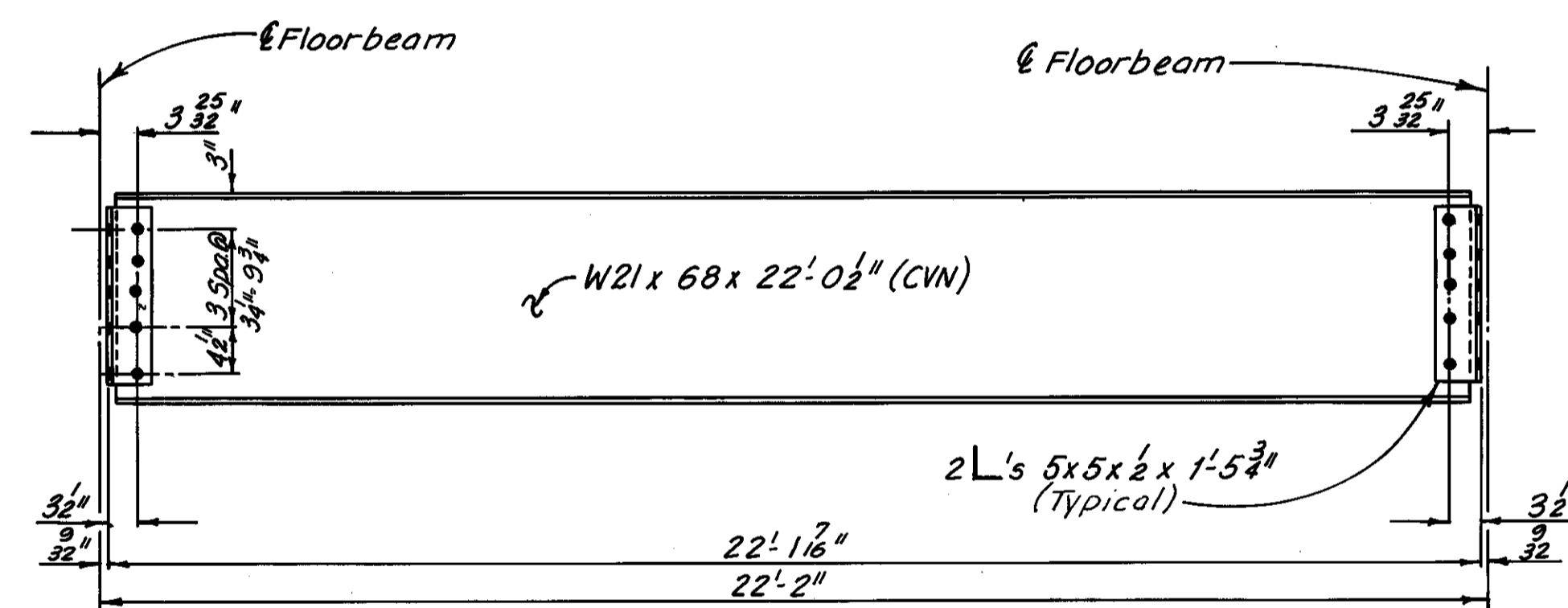
TYPE	A	B	C
R-74	23'-9 1/2"	23'-10 3/8"	23'-11"
R-75	23'-8 1/2"	23'-9 3/8"	23'-10"
R-76	23'-7 1/2"	23'-8 3/8"	23'-9"



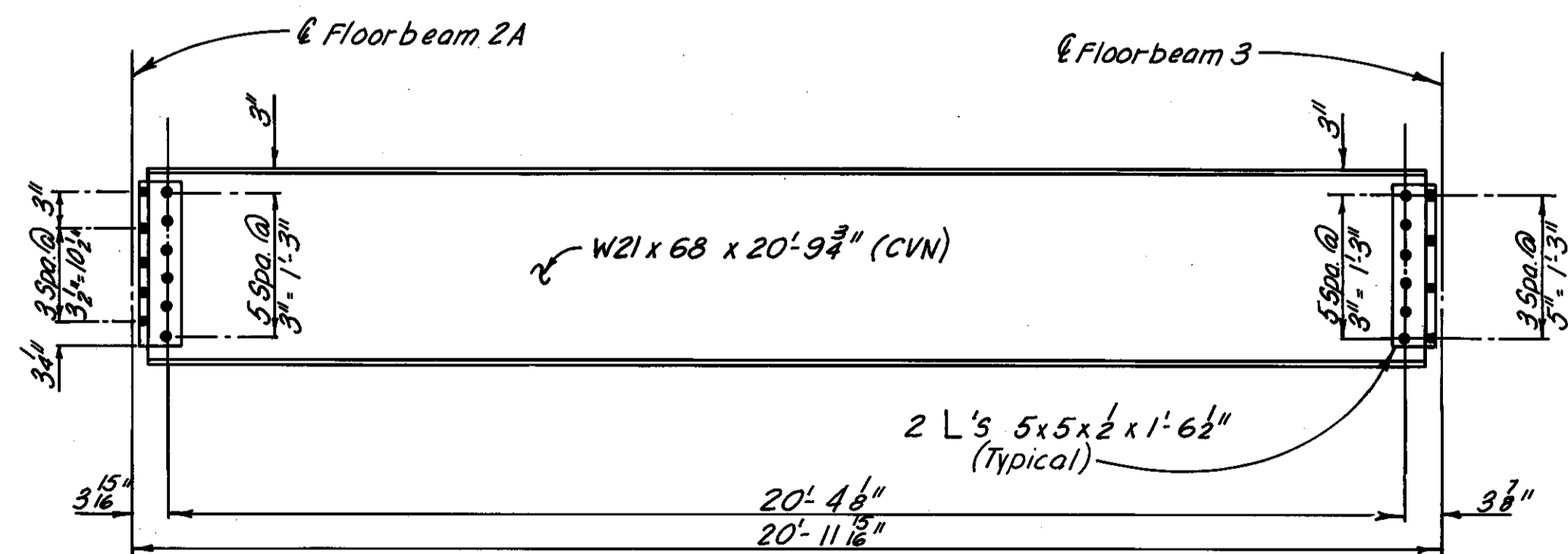
STRINGERS AT O.B.T. MANHOLES  
(For additional Details, see Sheet 51A/72)



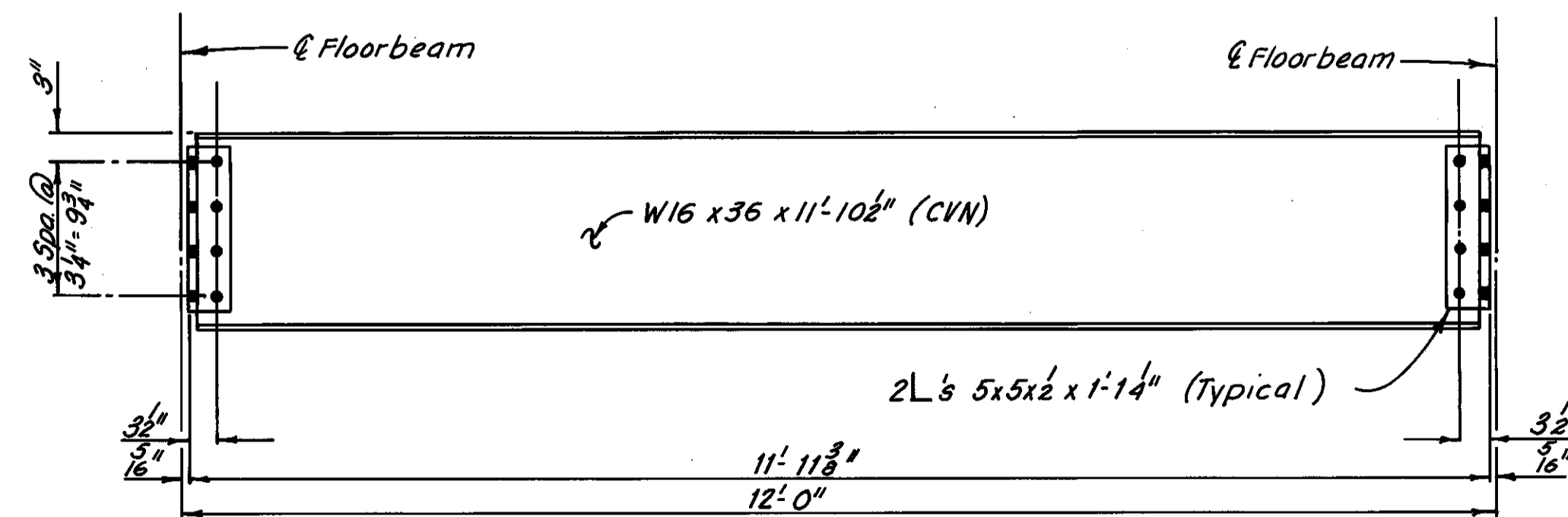
STRINGER ELEVATION  
(Cases R-71 and R-72)  
(Welded studs not required)



STRINGER ELEVATION  
(Case R-77)  
(Welded studs not required)



STRINGER ELEVATION  
(Case R-73)  
(Welded studs not required)



STRINGER ELEVATION  
(Case R-78)  
(Welded studs not required)

Note:  
For Notes on stringers, see Sheet 31F/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

ADDITIONAL STRINGER REPLACEMENT  
DETAILS  
(IF REQUIRED DURING RECONSTRUCTION)  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN D.R.J. DATE 3-27-81	TRACED D.R.J. DATE 8-28-81	CHECKED R.H.W. DATE 9-10-81	REVIEWED DATE	REVISED DATE
---------------------------------	----------------------------------	-----------------------------------	------------------	-----------------

Sheet added 12-5-83



SPAN NO. 13		
FLOORBEAM NO.	TYPE	
1 thru 11 (E)	1	
1 thru 7, 10 and 11 (I)	2	
8 and 9 (I)	3	

SPAN NO. 12		
FLOORBEAM NO.	TYPE	
1 thru 4 (E)	1	
1 thru 4 (I)	2	

SPAN NO. 11		
FLOORBEAM NO.	TYPE	
0 (E)	4	
0 (I)	5	
1 thru 16 (E)	1	
1, 2, 5 thru 13, 16, and 17 (I)	2	
3, 4, 14 and 15 (I)	3	

SPAN NO. 10*		
FLOORBEAM NO.	TYPE	

SPAN NO. 9		
FLOORBEAM NO.	TYPE	
1 thru 16 (E)	1	
1, 2, 5 thru 13 and 16 (I)	2	
3, 4, 14 and 15 (I)	3	

SPAN NO. 8		
FLOORBEAM NO.	TYPE	
1 thru 4 (E)	1	
1 thru 4 (I)	2	

SPAN NO. 7		
FLOORBEAM NO.	TYPE	
0 (E)	4	
0 (I)	5	
1 thru 14 (E)	1	
1, 4 thru 11 and 14 (I)	2	
2, 3, 12 and 13 (I)	3	

SPAN NO. 6		
FLOORBEAM NO.	TYPE	
1 thru 4 (E)	1	
1, 2 and 4 (I)	2	
3 (I)	2	

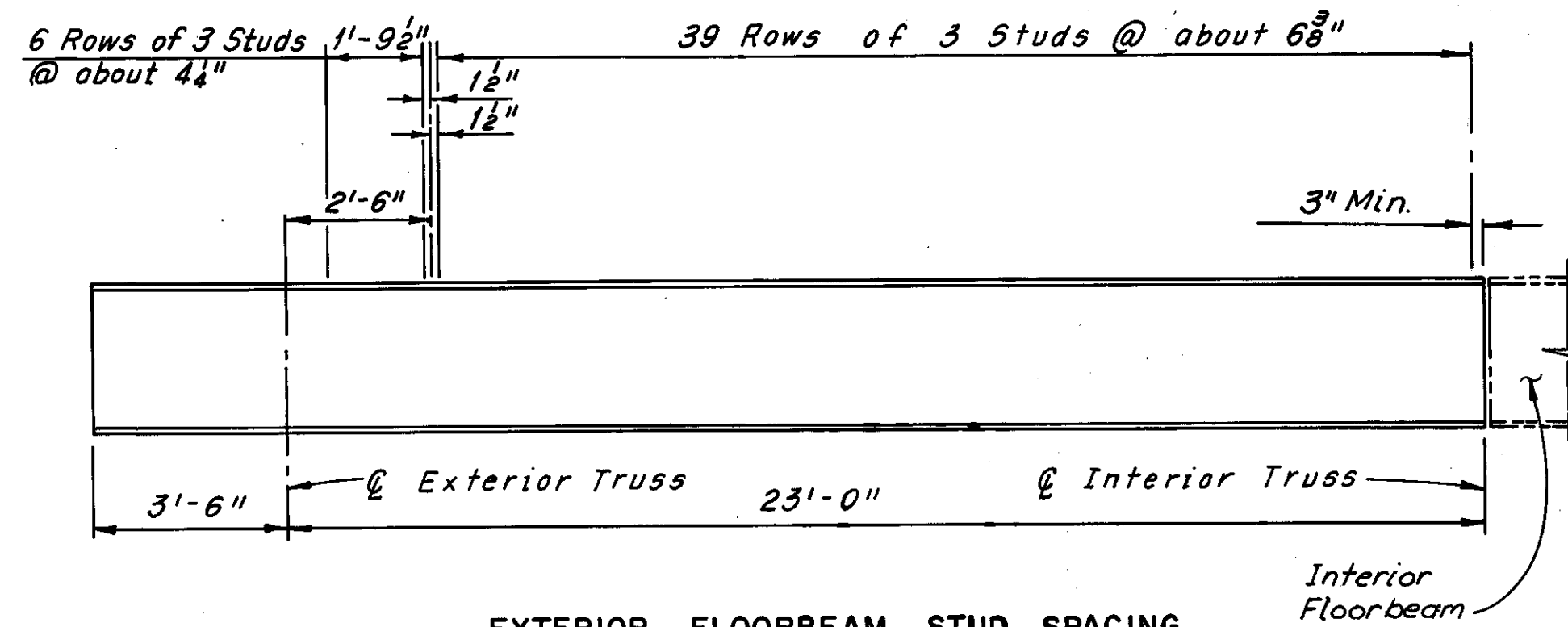
SPAN NO. 5		
FLOORBEAM NO.	TYPE	
0 (E)	4	
0 (I)	5	
1 thru 13 (E)	1	
1, 4 thru 10 and 13 (I)	2	
2, 3, 11 and 12 (I)	3	

SPAN NO. 4		
FLOORBEAM NO.	TYPE	
1 thru 2 (E)	1	
1 thru 2 (I)	2	

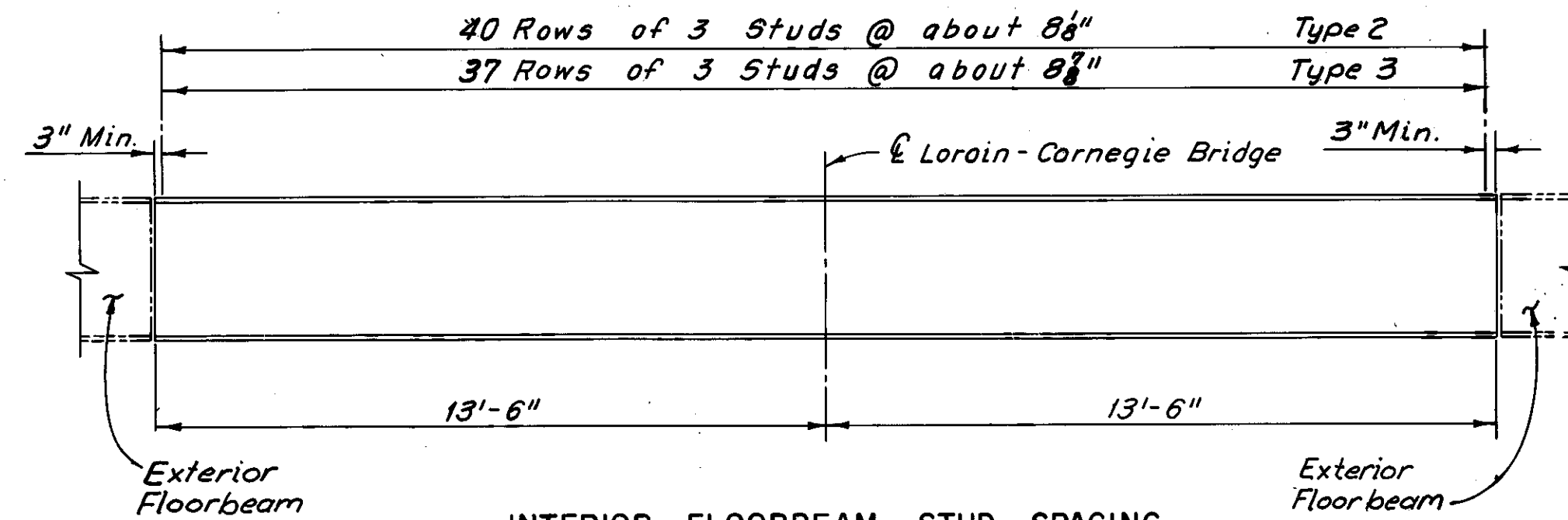
SPAN NO. 3		
FLOORBEAM NO.	TYPE	
0 (E)	4	
0 (I)	5	
1 thru 12 (E)	1	
1, 4 thru 9 and 12 (I)	2	
2, 3, 10 and 11 (I)	3	

SPAN NO. 2		
FLOORBEAM NO.	TYPE	
1 thru 2 (E)	1	
1 thru 2 (I)	2	

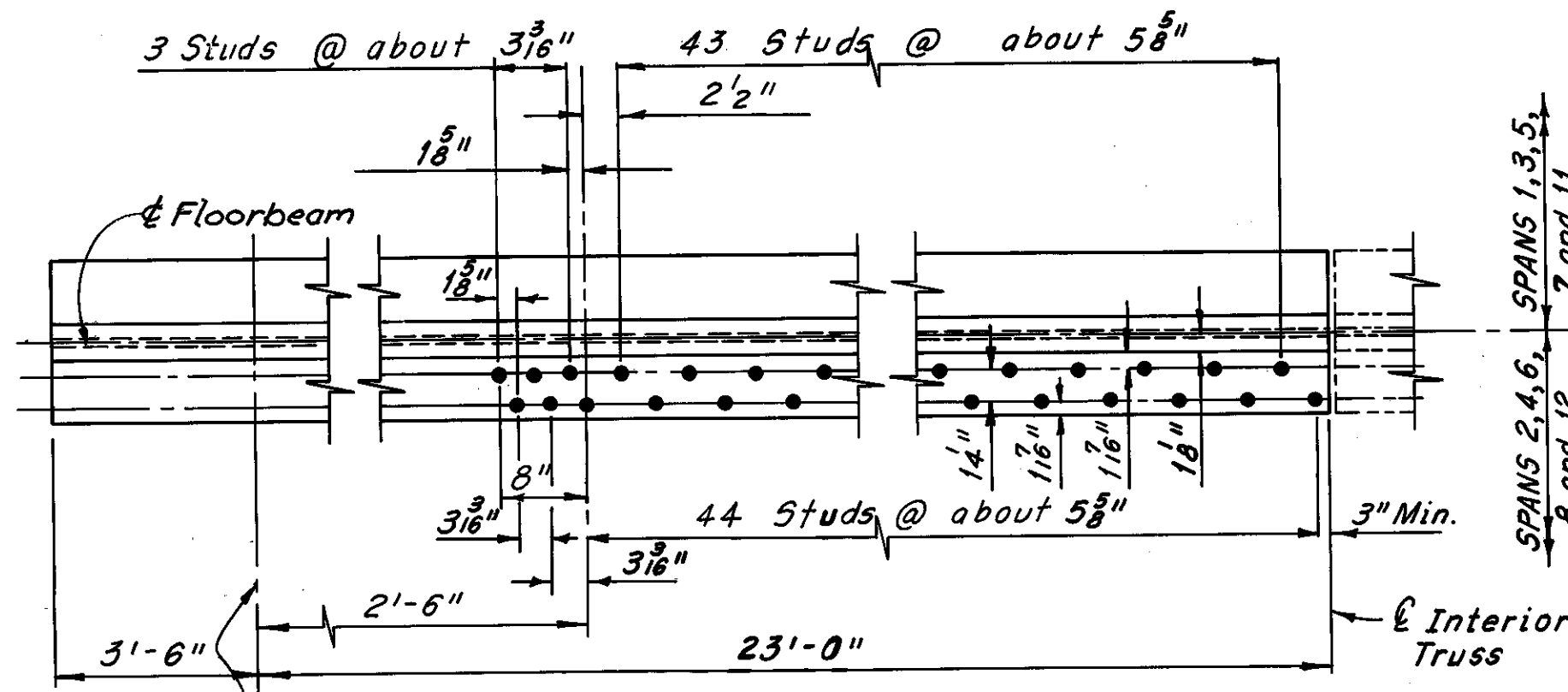
SPAN NO. 1		
FLOORBEAM NO.	TYPE	
0 (E)	4	
0 (I)	5	
1 thru 9 (E)	1	
1, 4 thru 9 (I)	2	
2 and 3 (I)	3	



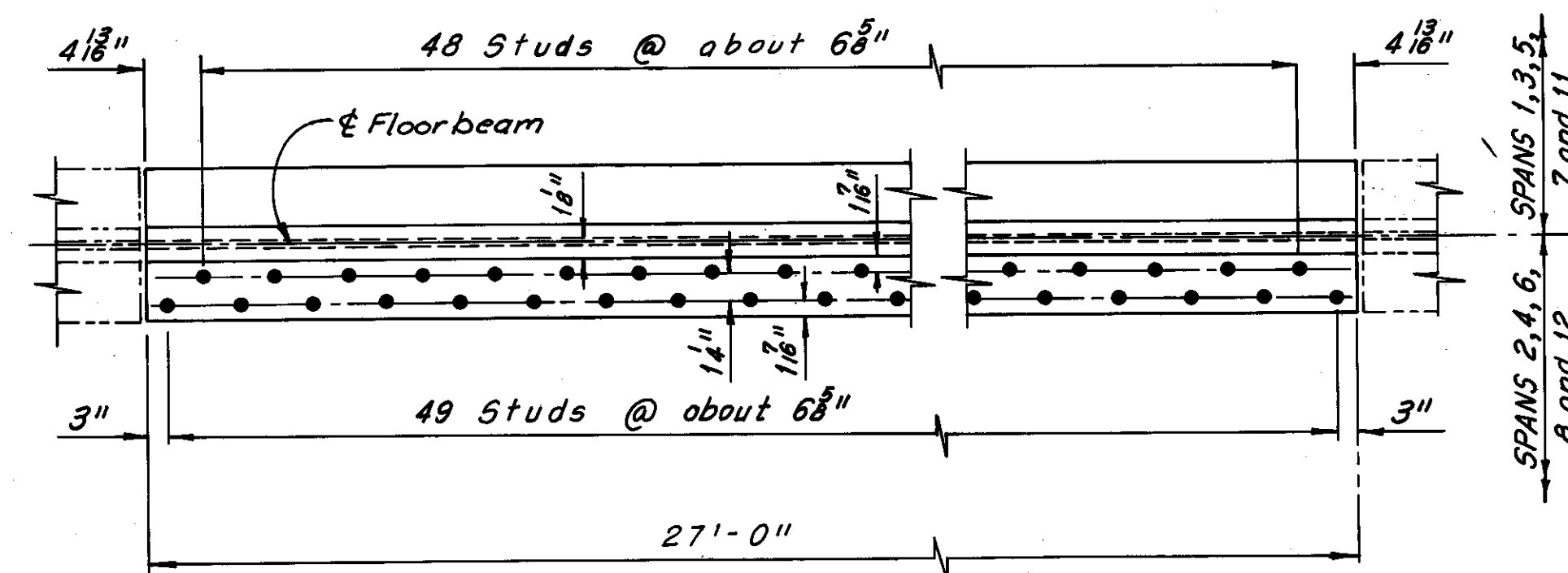
EXTERIOR FLOORBEAM STUD SPACING  
(Type 1)



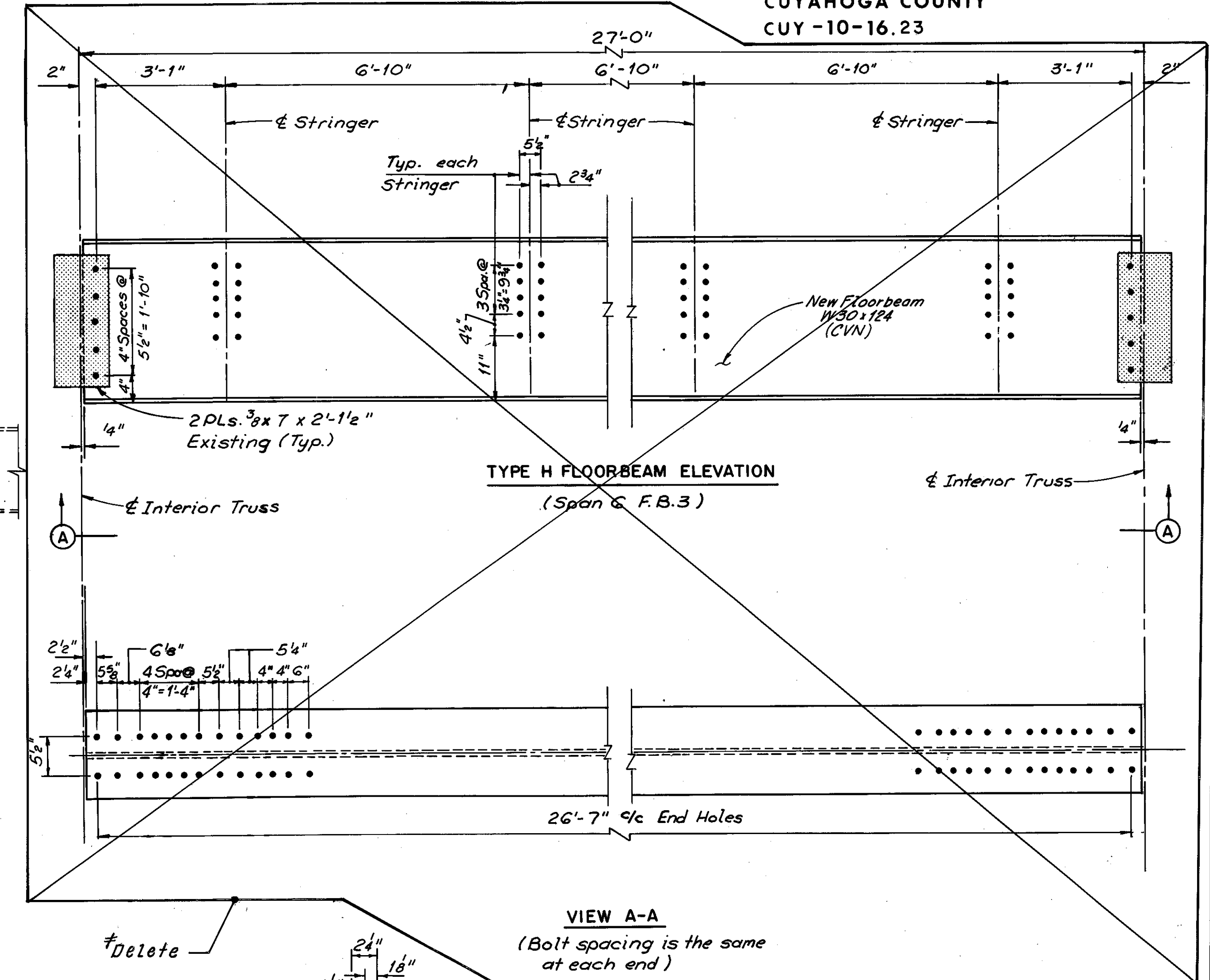
INTERIOR FLOORBEAM STUD SPACING  
(Type 2 and 3)



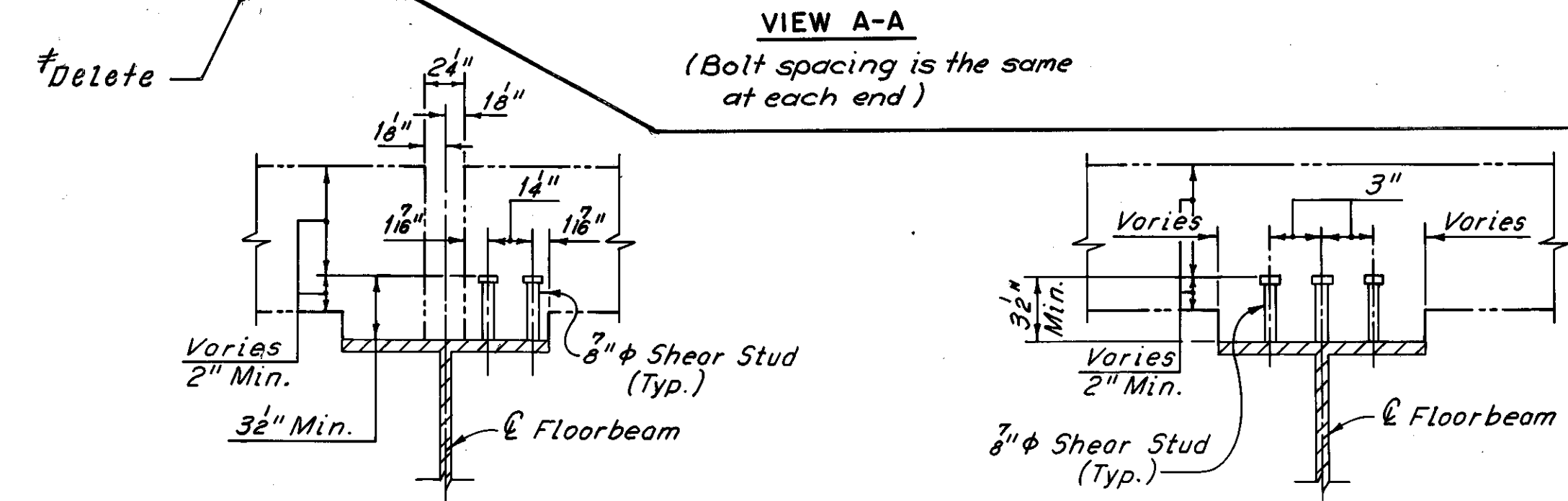
EXTERIOR FLOORBEAM STUD SPACING  
(Type 4)



INTERIOR FLOORBEAM STUD SPACING  
(Type 5)



TYPE H FLOORBEAM ELEVATION  
(Span 6, F.B. 3)



FIXED JOINT STUD PLACEMENT  
(Types 4 and 5)

TYPICAL STUD PLACEMENT  
(Types 1 thru 3 and Types 7 thru 11)

Notes:  
The following abbreviations are used:  
Typ. = Typical Min. = Minimum  
(E) = Exterior (I) = Interior  
For Member Identification Plans,  
see Sheets 5/72 thru 9/72

\*Floorbeam replacement deletion as determined during bridge reconstruction 4-20-81  
C.K.B.  
REVISION

Type H Floorbeam Replacement is covered on this sheet.

\* For Floorbeam Strengthening Details, Span 10 and Part Span 9 and 11, see Sheet 25/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

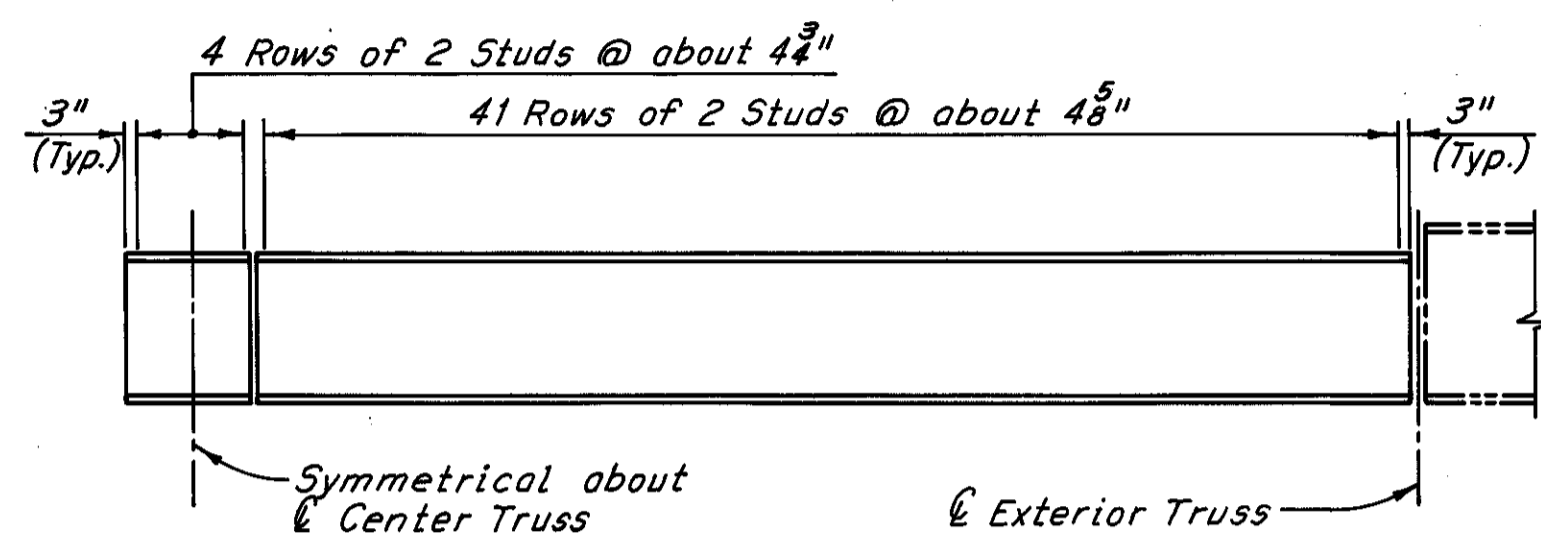
**HNTB**

FLOORBEAM STRENGTHENING DETAILS  
WEST PYLON TO EAST PYLON  
EXCEPT AS NOTED  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

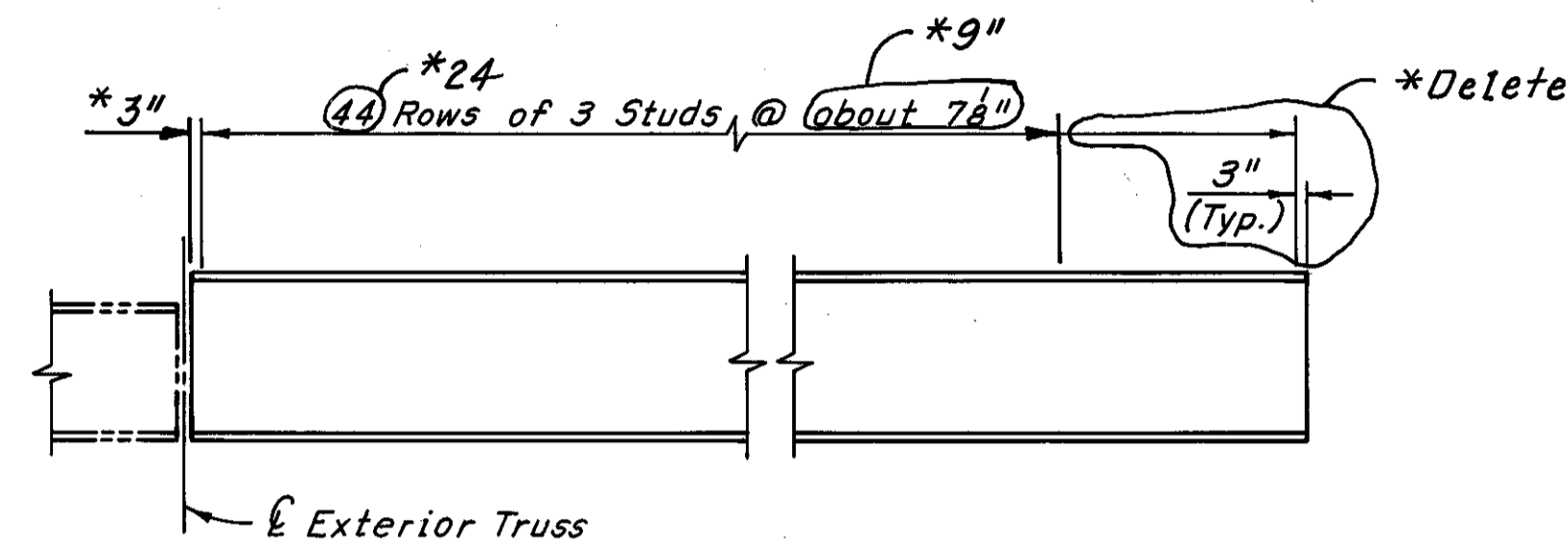
CUYAHOGA COUNTY OHIO

DRAWN/RAS	TRACED	CHECKED	REVIEWED	REVISED
DATE 6-28-78	D.L.R.	A.N.	DATE 5-29-79	DATE

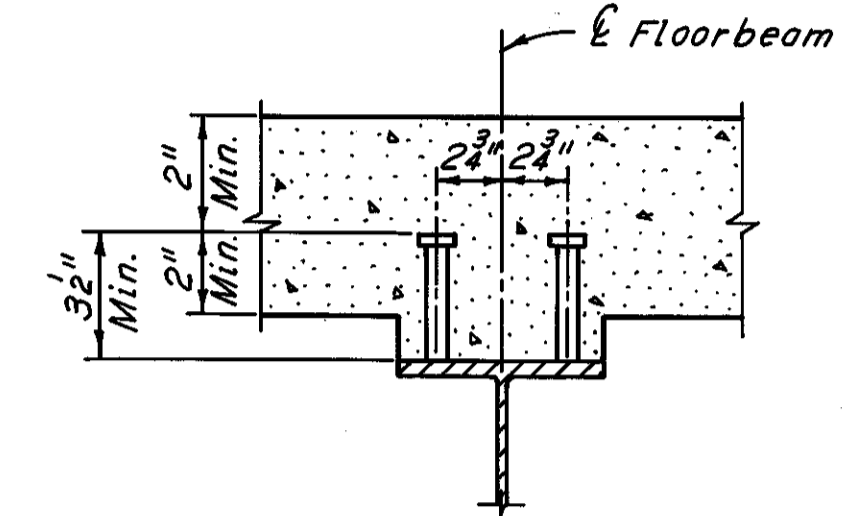
SHEET 32/72



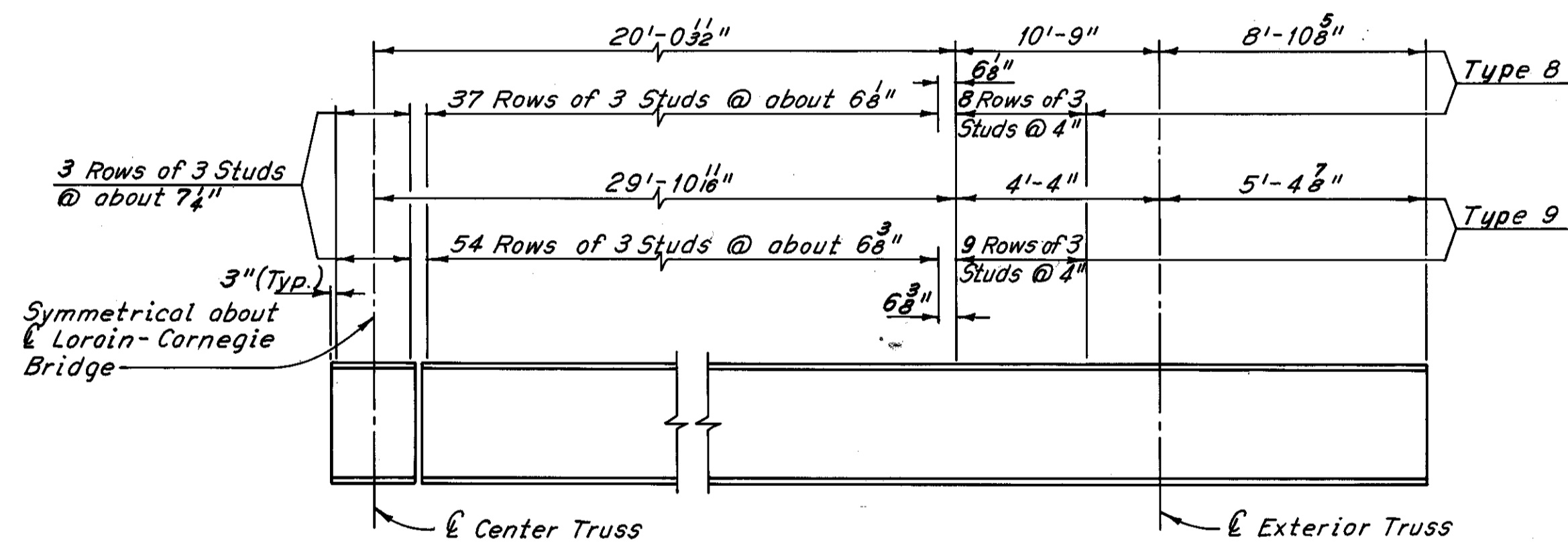
FLOORBEAM STUD SPACING  
(Type 6)



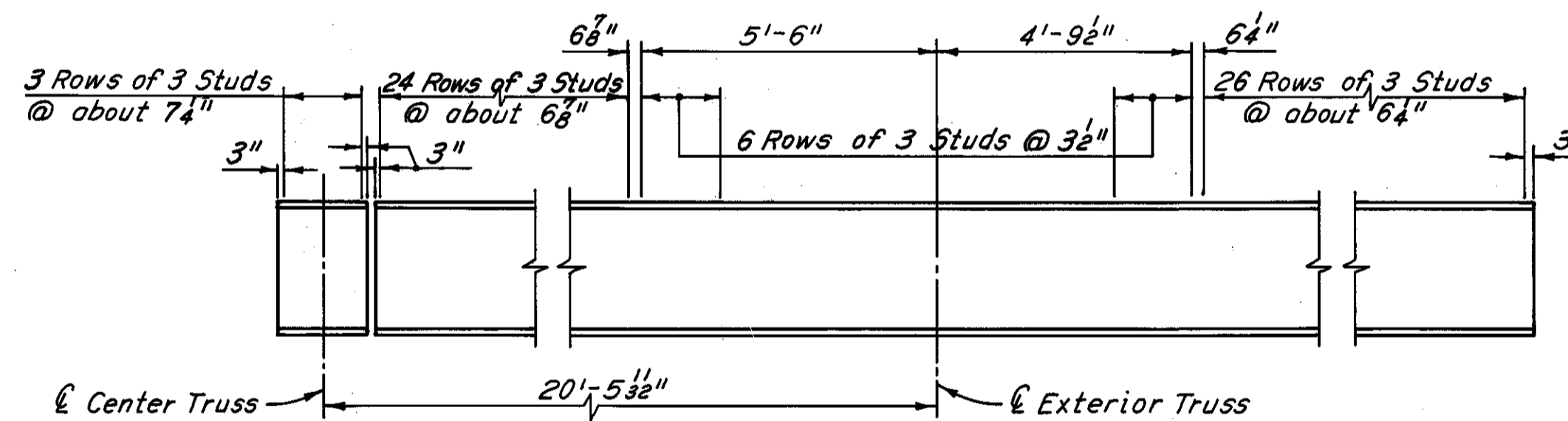
FLOORBEAM STUD SPACING  
(Type 7)



TYPICAL STUD PLACEMENT  
(Type 6)



FLOORBEAM STUD SPACING  
(Types 8 and 9)



FLOORBEAM STUD SPACING  
(Type 10)

W. & L. E. SPAN	
FLOORBEAM NO.	TYPE
0 (I)	6
0 (E)	7
1	10
4	8
5	9

Notes:  
All new bolts are 1"  $\phi$  High Strength bolts.  
The following abbreviations are used:  
I = Interior  
E = Exterior  
Typ. = Typical  
Min. = Minimum  
For Member Identification Plan, see Sheet 5/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

FLOORBEAM STRENGTHENING DETAILS  
W. & L. E. SPAN

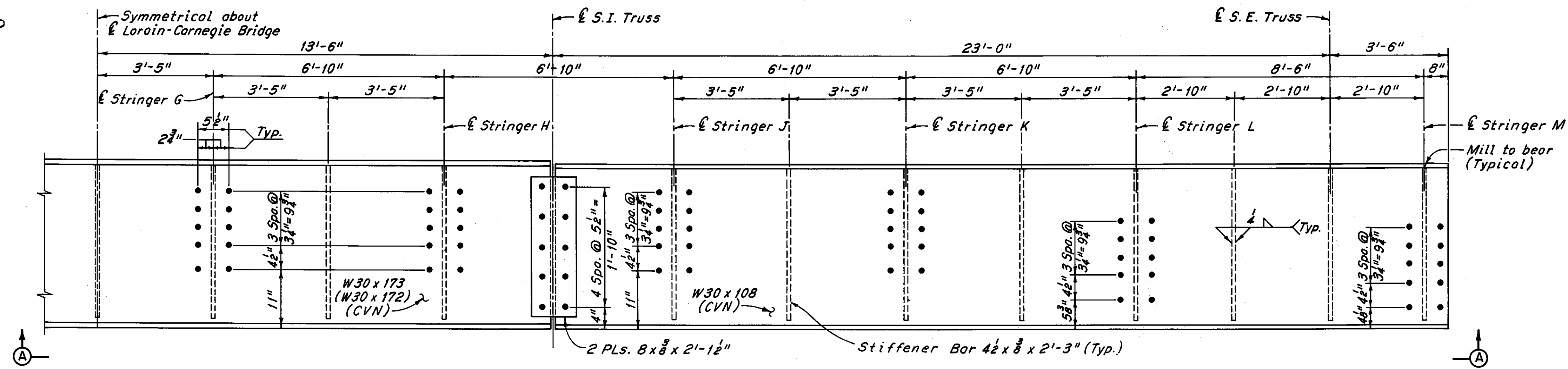
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S. R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22 + 19.19  
STA. 55 + 04.56

CUYAHOGA COUNTY OHIO

\* Stud spacing  
REVISION

R.A.S.  
10-30-81

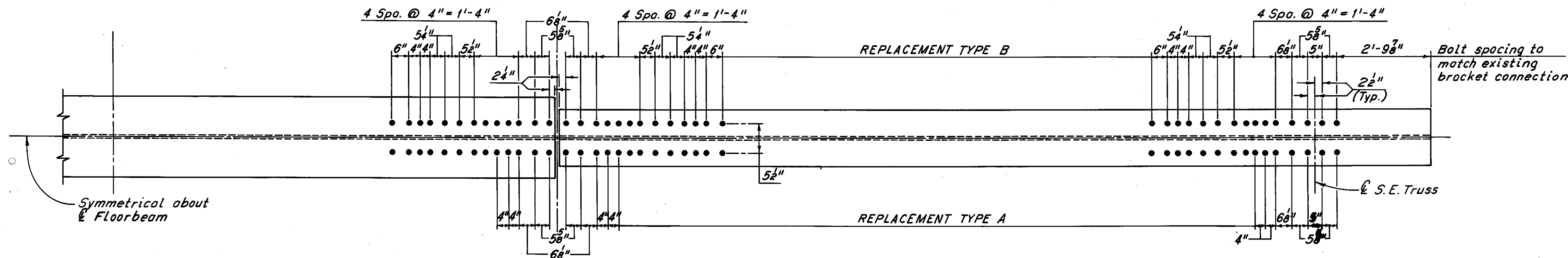
DATE 7-27-78	DATE 7-31-78	DATE 5-29-79	DATE
DRAWN RAS	TRACED DLA	CHECKED A.M.	REVIEWED
REVISED 12-5-83			SHEET 33/72



FLOORBEAM ELEVATION  
(Types A and B)

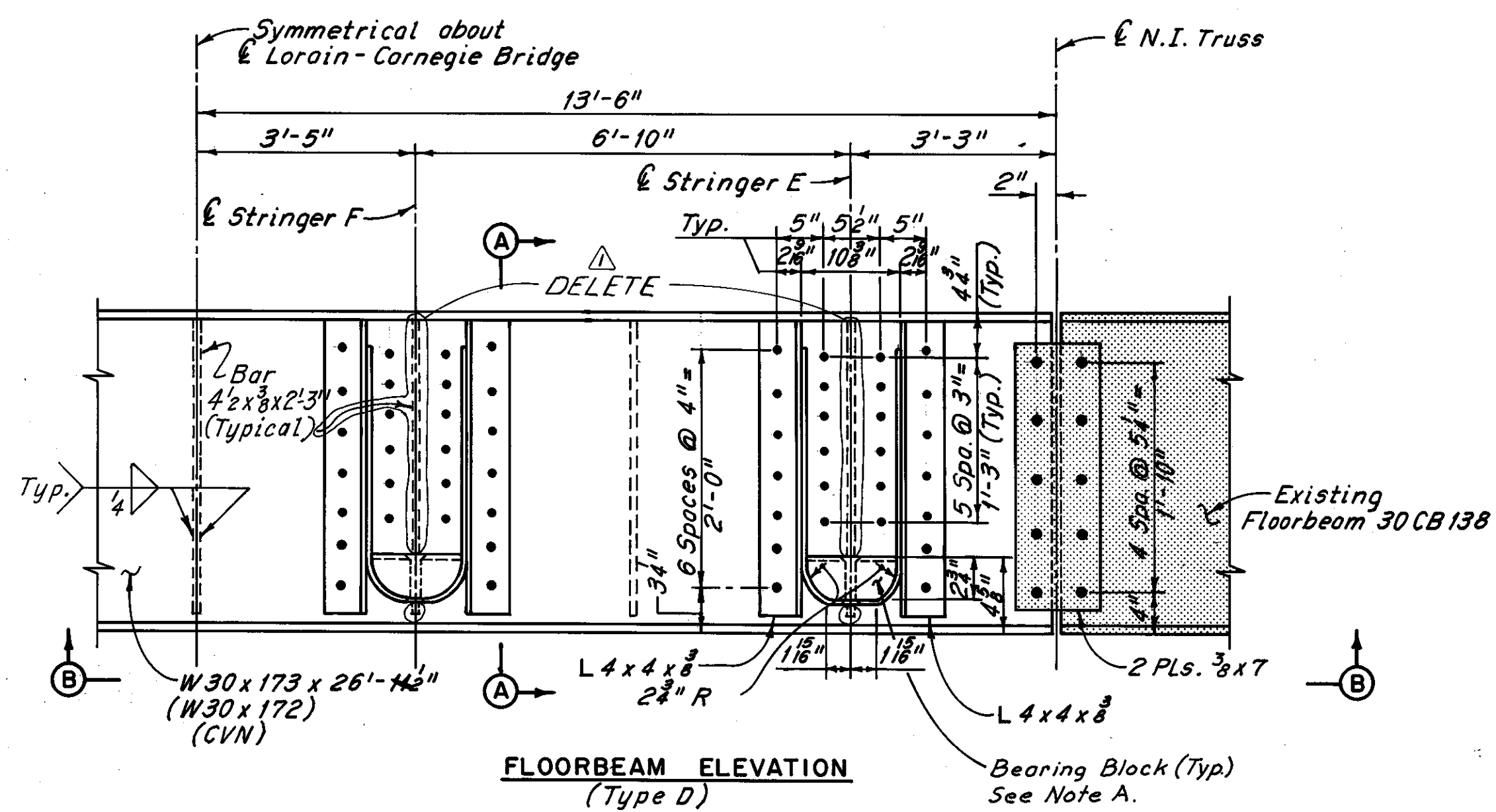
EXPANSION JOINT FLOORBEAM REPLACEMENT		
SPAN	PANEL POINT LOCATION	TYPE REPLACEMENT
13	0	B
13	12	A
12	13	B
11	18	See Note B
10	19	See Note B
9	17	A
8	18	B
7	15	A
6	16	B
5	14	A
4	15	B
3	13	A
2	14	B
1	10	D

Note B.  
For Floorbeam replacement details at Span 11 F.B. 18, and Span 10 F.B. 19, see Sheet 28/72.

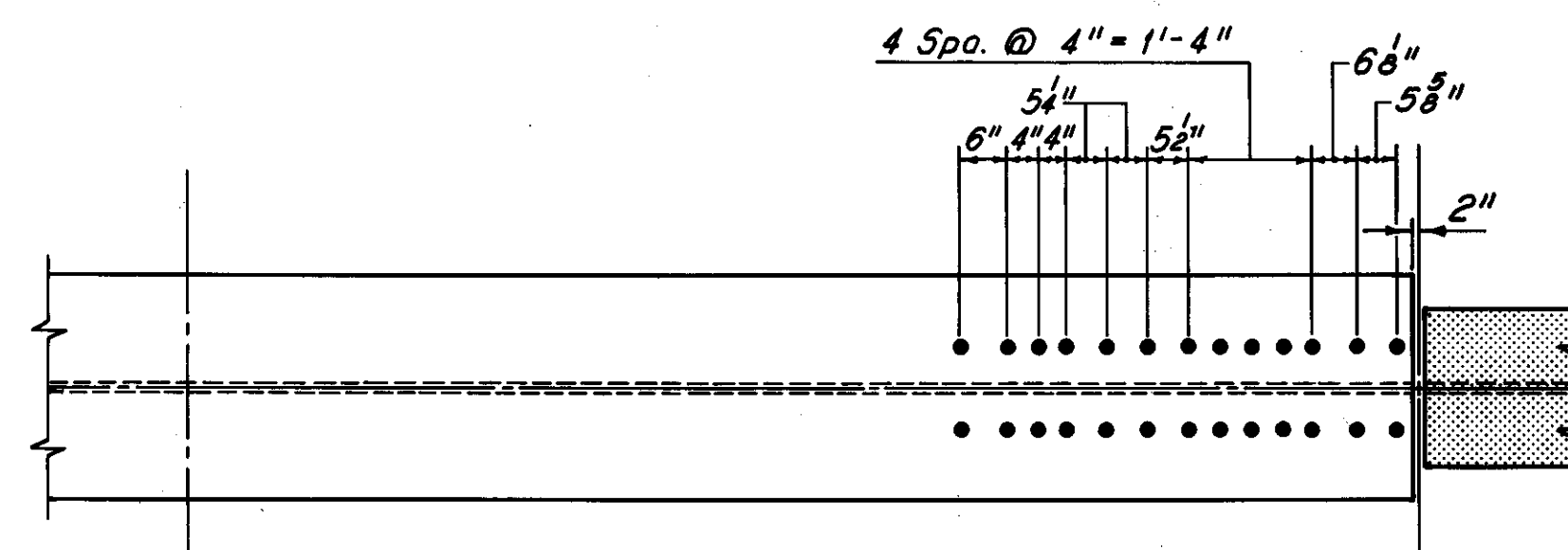


VIEW A-A

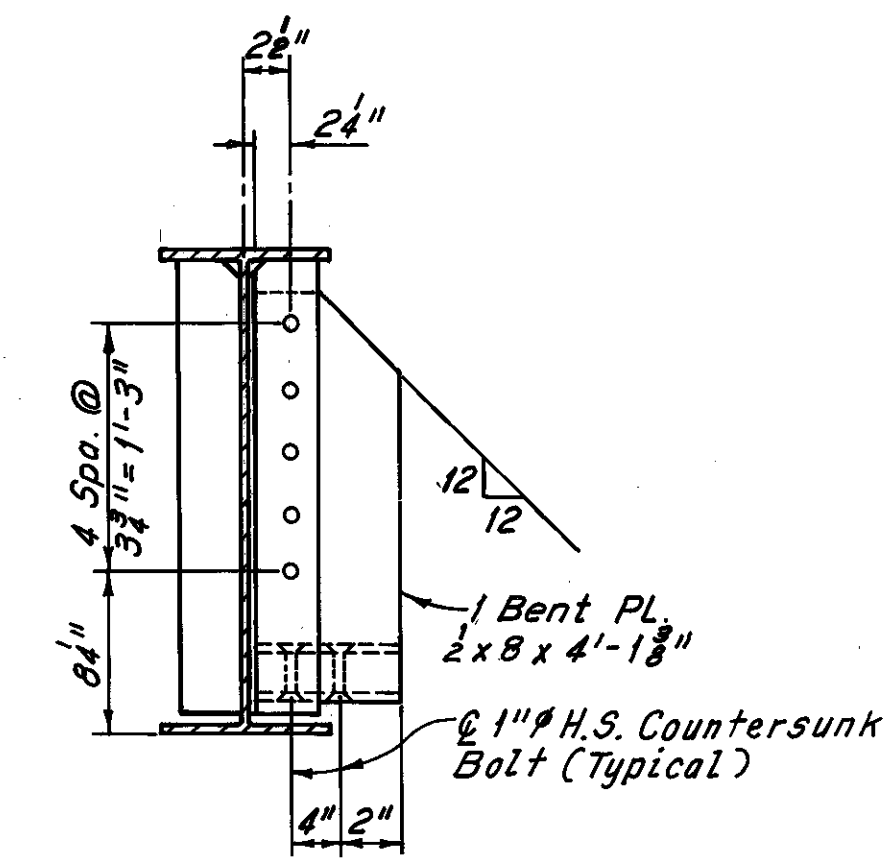
Note A.  
Existing bearing blocks at stringers E through H shall be removed, cleaned and inspected. If blocks are found to be in satisfactory condition and with approval of the Engineer they shall be reinstalled. If blocks are found to be unsatisfactory they shall be replaced in kind. All labor, materials and equipment required for the removal, inspection, and replacement or reinstallation of bearing blocks shall be included with the unit price bid for Item 513, Structural Steel (ASTM A588) for payment.



FLOORBEAM ELEVATION  
(Type D)



VIEW B-B



SECTION A-A

Notes:  
For Details of Expansion Joint at East Abutment, see Sheets 42/72 and 43/72.  
For CVN, see Sheet 28/72.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

FLOORBEAM REPLACEMENT DETAILS AT EXPANSION JOINTS WEST PYLON TO EAST PYLON REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN BY: A.M.	TRACED BY: A.M.	CHECKED BY: A.M.	REVIEWED BY: A.M.	REVISED BY: A.M.
DATE: 6-12-78	DATE: 8-7-78	DATE: 5-23-79	DATE:	DATE:

REVISIONS: 3-10-81

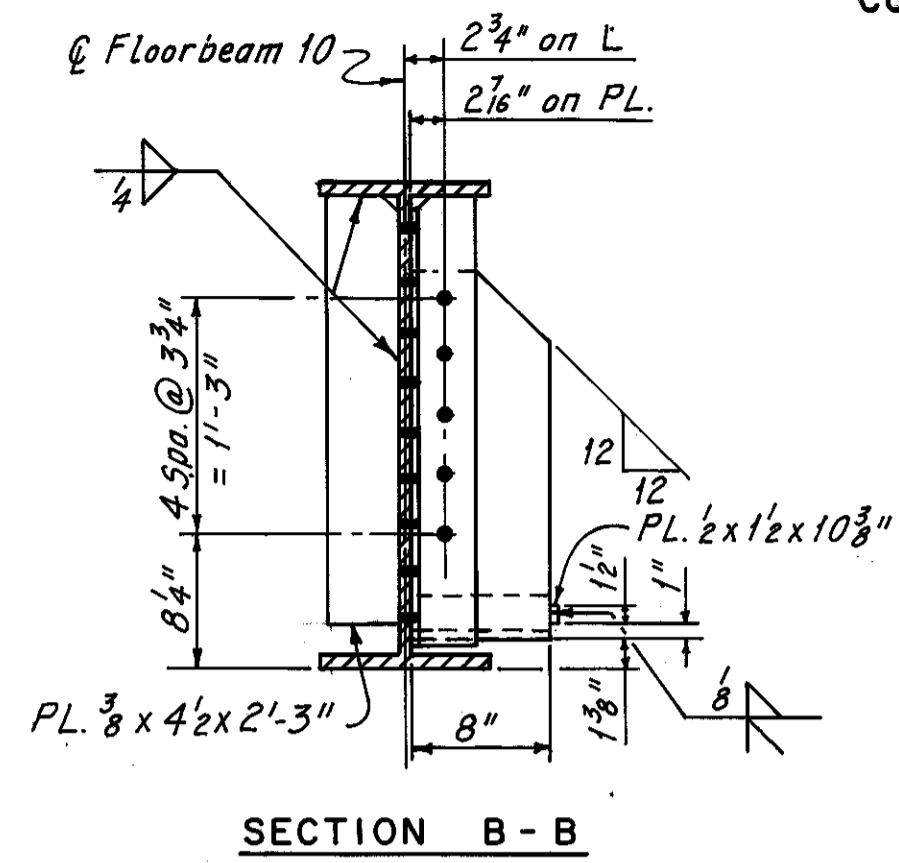
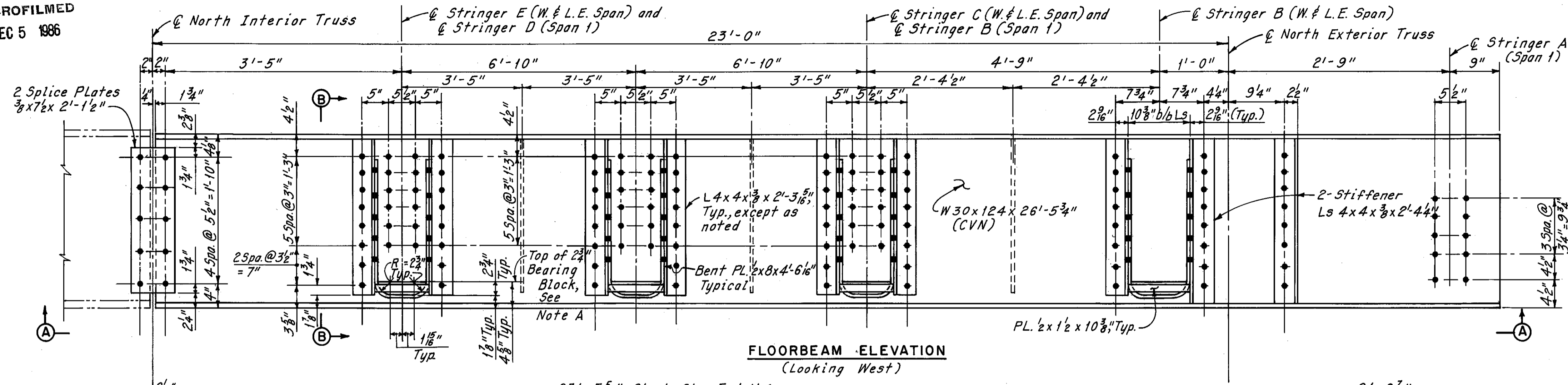
SHEET 34/72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

109A  
185

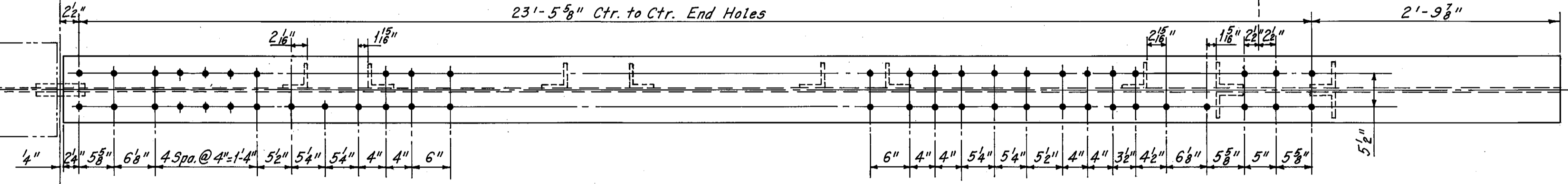
CUYAHOGA COUNTY  
CUY-10-16.23



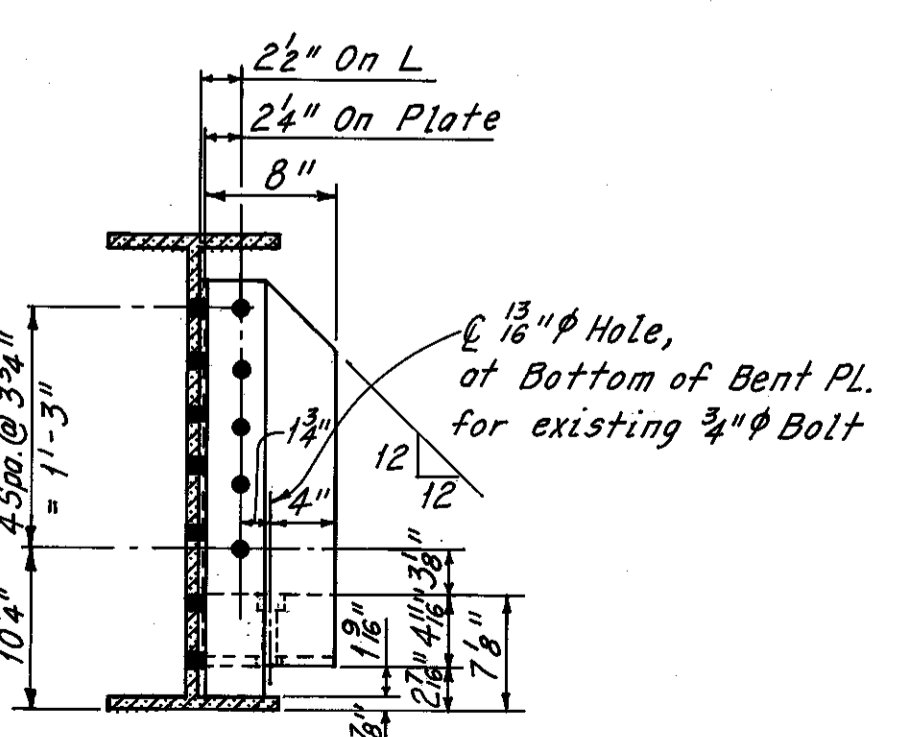
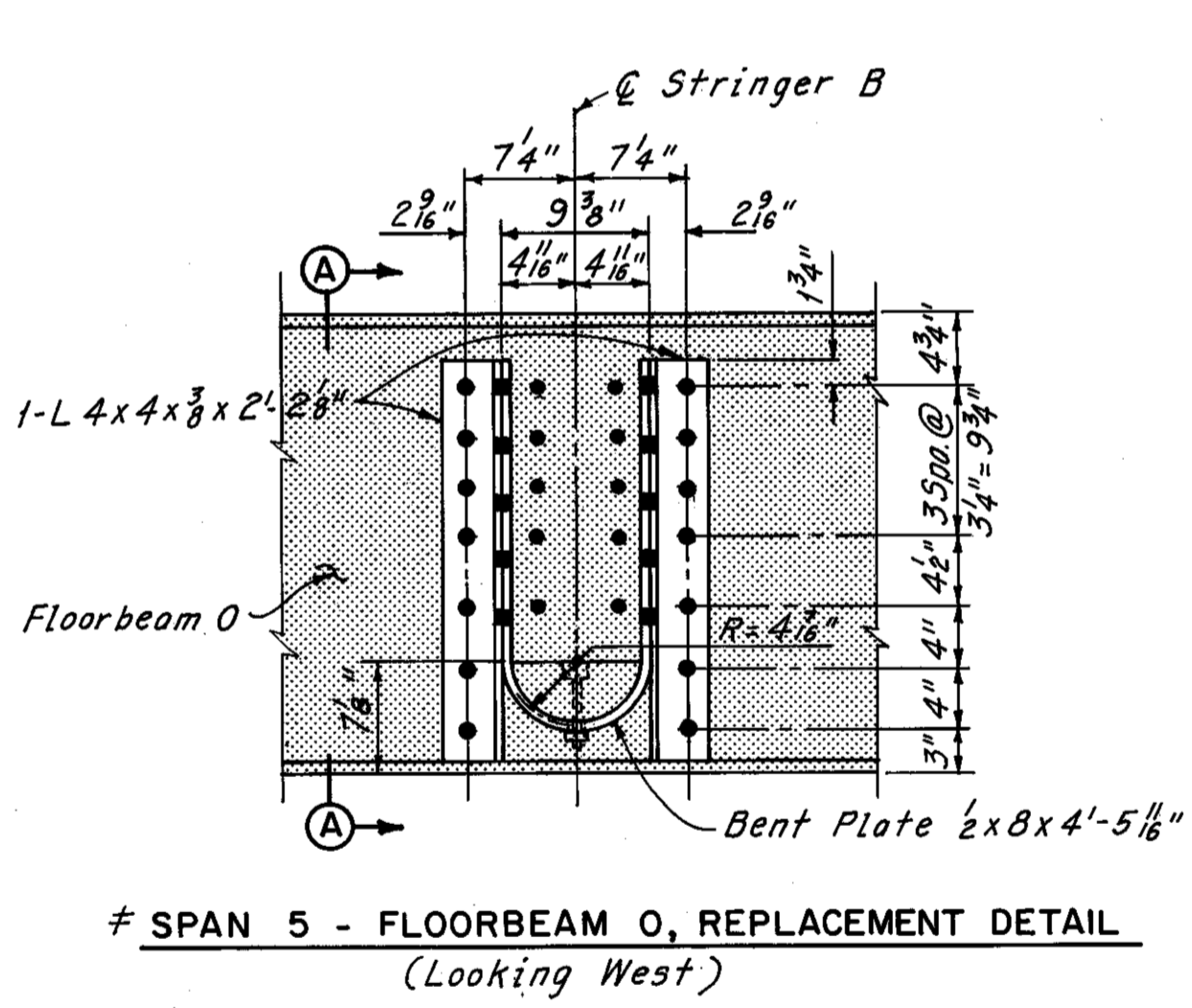
FLOORBEAM ELEVATION  
(Looking West)

SECTION B-B

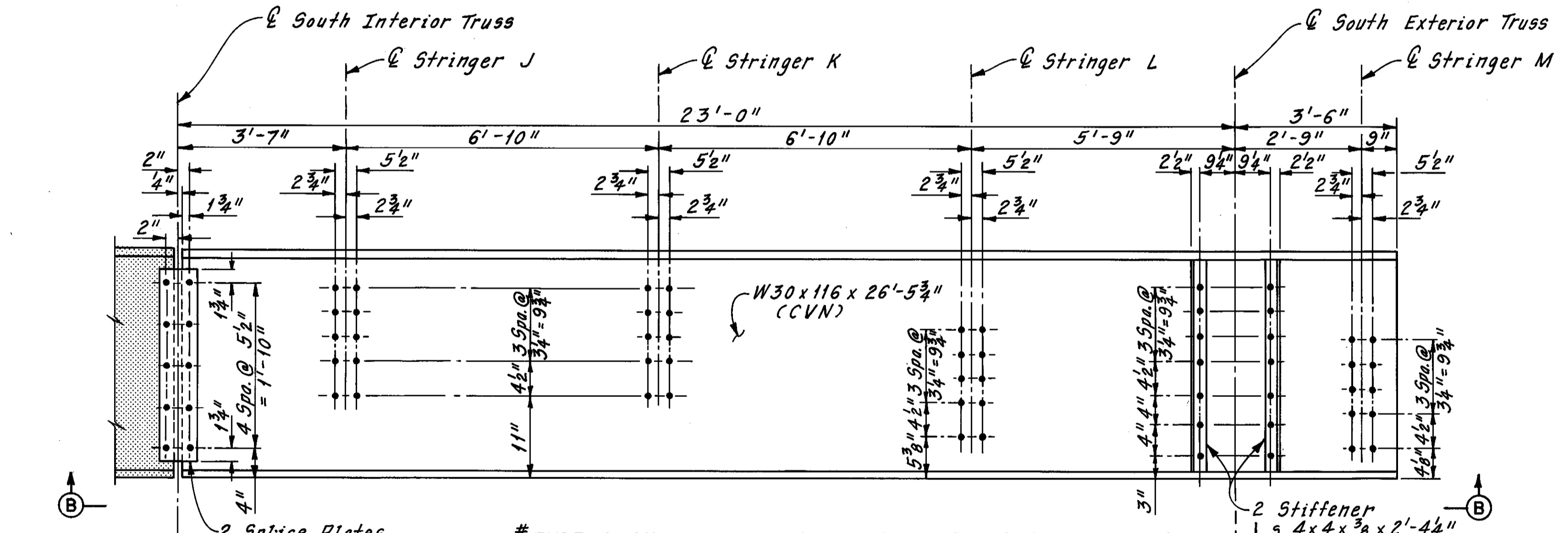
**Note A:**  
Existing bearing blocks at Stringers B through E (Wheeling and Lake Erie Railroad Span) shall be removed, cleaned and inspected. If blocks are found to be in satisfactory condition and with approval of the Engineer, they shall be reinstalled. If blocks are found to be unsatisfactory, they shall be replaced in kind. All labor, materials and equipment required for the removal, inspection, and replacement or reinstallation of bearing blocks shall be included with the unit price bid for Item 513, Structural Steel (ASTM A588) for payment.



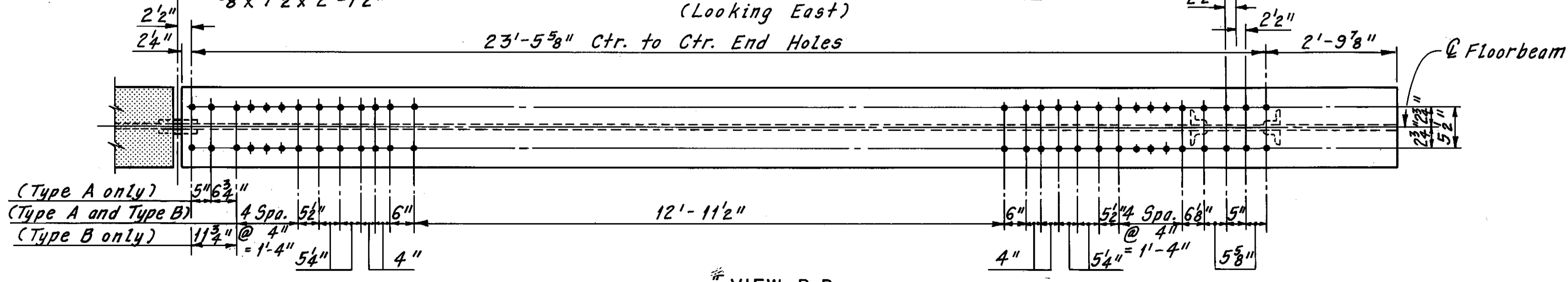
VIEW A-A  
SPAN 1 - FLOORBEAM 10  
(At Expansion Joint At West Side of East Pylon)



# SECTION A-A



# TYPE A AND TYPE B FLOORBEAM ELEVATION  
(Looking East)



# VIEW B-B

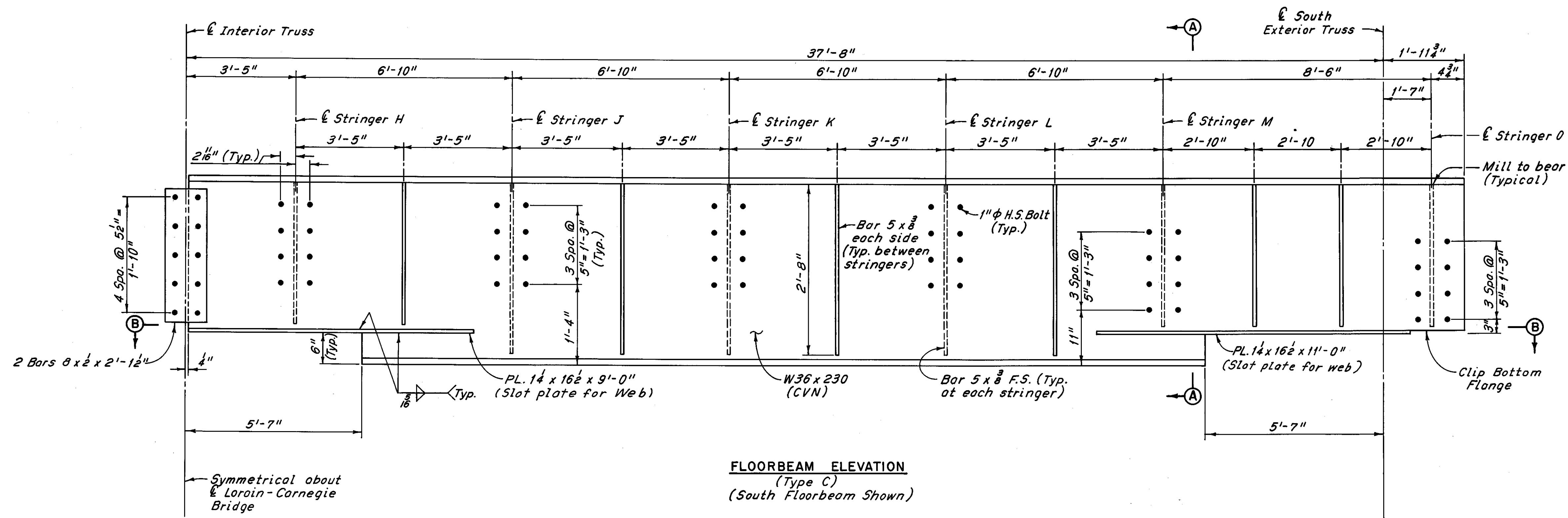
# FLOORBEAM REPLACEMENT TABLE

SPAN	FLOORBEAM	TYPE
9	B	A
11	B	B

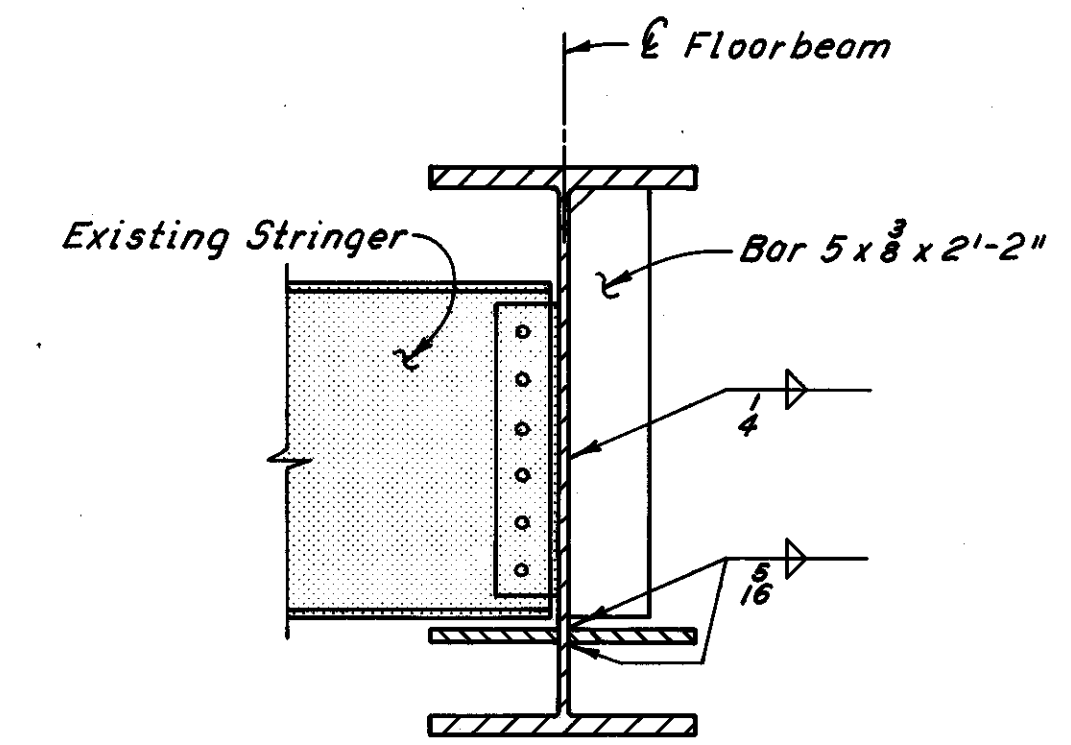
Sheet added 12-5-83  
 #Additional Floorbeam Replacement Details W.E.B.  
 As Determined During Bridge Reconstruction. 11-5-82  
 #Additional Floorbeam Replacement Details C.P.  
 As Determined During Bridge Reconstruction. 8-20-81  
 REVISION

**Notes:**  
 Phantom lines indicate new construction, details of which are shown elsewhere in the Plans.  
 All bolts are 1" High Strength Bolts with 1 1/8" holes.  
 For Member Identification Plan, see Sheets 5/72 thru 9/72.  
 For CW, see Sheet 28/72.  
 The following abbreviations are used:  
 Typ. = Typical  
 Ctr. = Center  
 Spa. = Spaces  
 W. & L.E. = Wheeling and Lake Erie  
 # Zip-a-tone indicates existing member and connections to be retained.

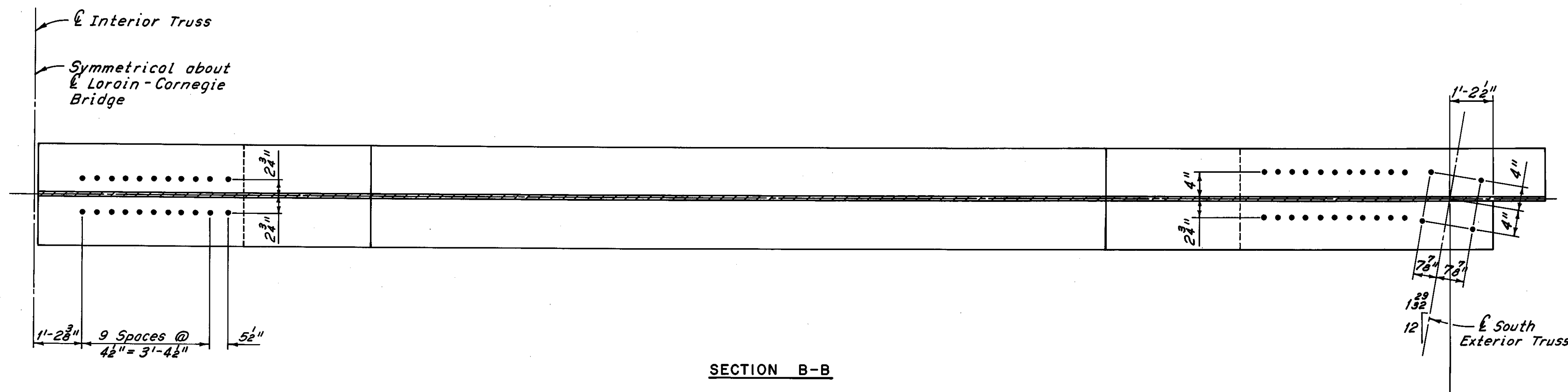
H.N.T.B. BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB  
**FLOORBEAM REPLACEMENT DETAILS**  
 (AS DETERMINED DURING RECONSTRUCTION)  
 REHABILITATION OF THE  
 LORAIN - CARNEGIE BRIDGE  
 (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY. - 10-1618 STA. 22+19.19  
 CUYAHOGA COUNTY OHIO STA. 55+04.56  
 DRAWN C.P. TRACED C.P. CHECKED W.E.B. REVIEWED REVISION  
 DATE 5-26-81 DATE 5-27-81 DATE 6/81 DATE SHEET 34A 72



FLOORBEAM ELEVATION  
(Type C)  
(South Floorbeam Shown)



SECTION A-A



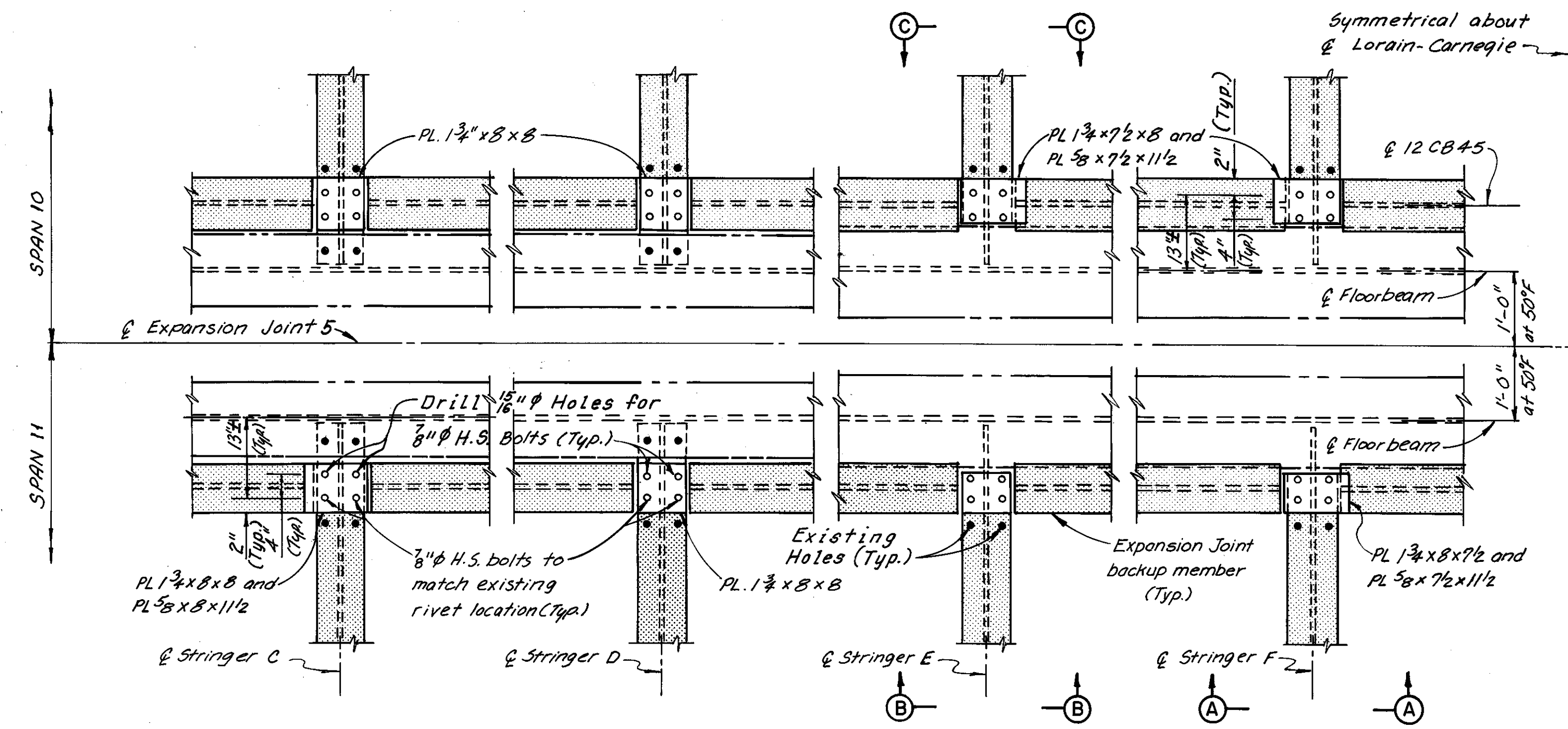
SECTION B-B

Notes:  
All new bolts are 1" High Strength bolts, with 1/16" holes.  
Zip-a-tone indicates existing structure.  
For CVN, see Sheet 28/72  
The following abbreviations are used:  
F.S. = Far Side Typ. = Typical  
Spa. = Spaces  
For Member Identification Plans, see Sheet 5/72

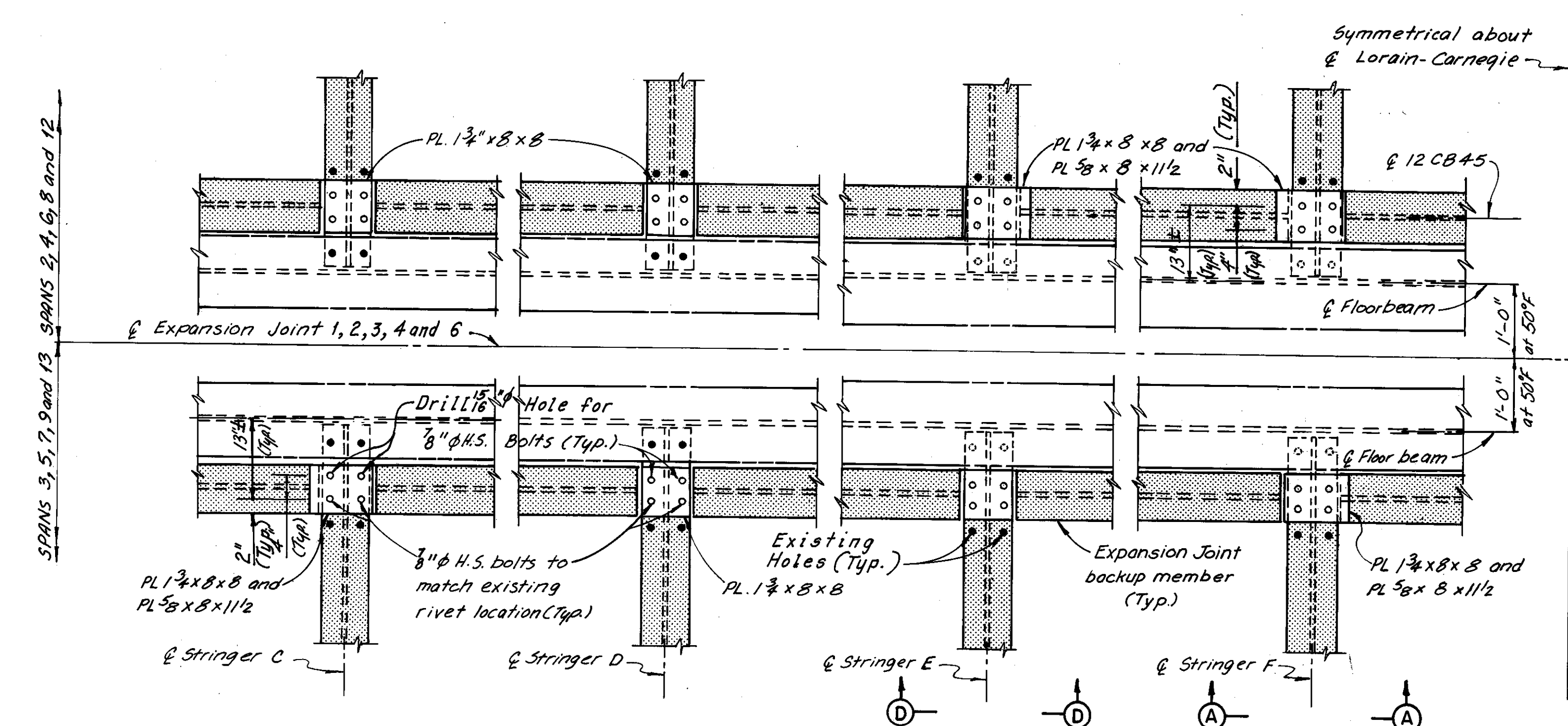
H.N.T.B. BRIDGE NO. 3			
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			<b>HNTB</b>
<b>FLOORBEAM REPLACEMENT DETAILS AT EXPANSION JOINT EAST ABUTMENT REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)</b>			
BR. NO. CUY.-10-1618		STA. 22+19.19	
		STA. 55+04.56	
CUYAHOGA COUNTY OHIO			
DRAWN BY: RAS	TRACED BY: AN	CHECKED BY: AN	REVIEWED BY: AN
DATE: 12-78	DATE: 8-2-78	DATE: 7-25-78	DATE:
			SHEET 35/72

FHWA REGION	STATE	PROJECT
5	OHIO	

CUYAHOGA COUNTY  
CUY-10-16.23

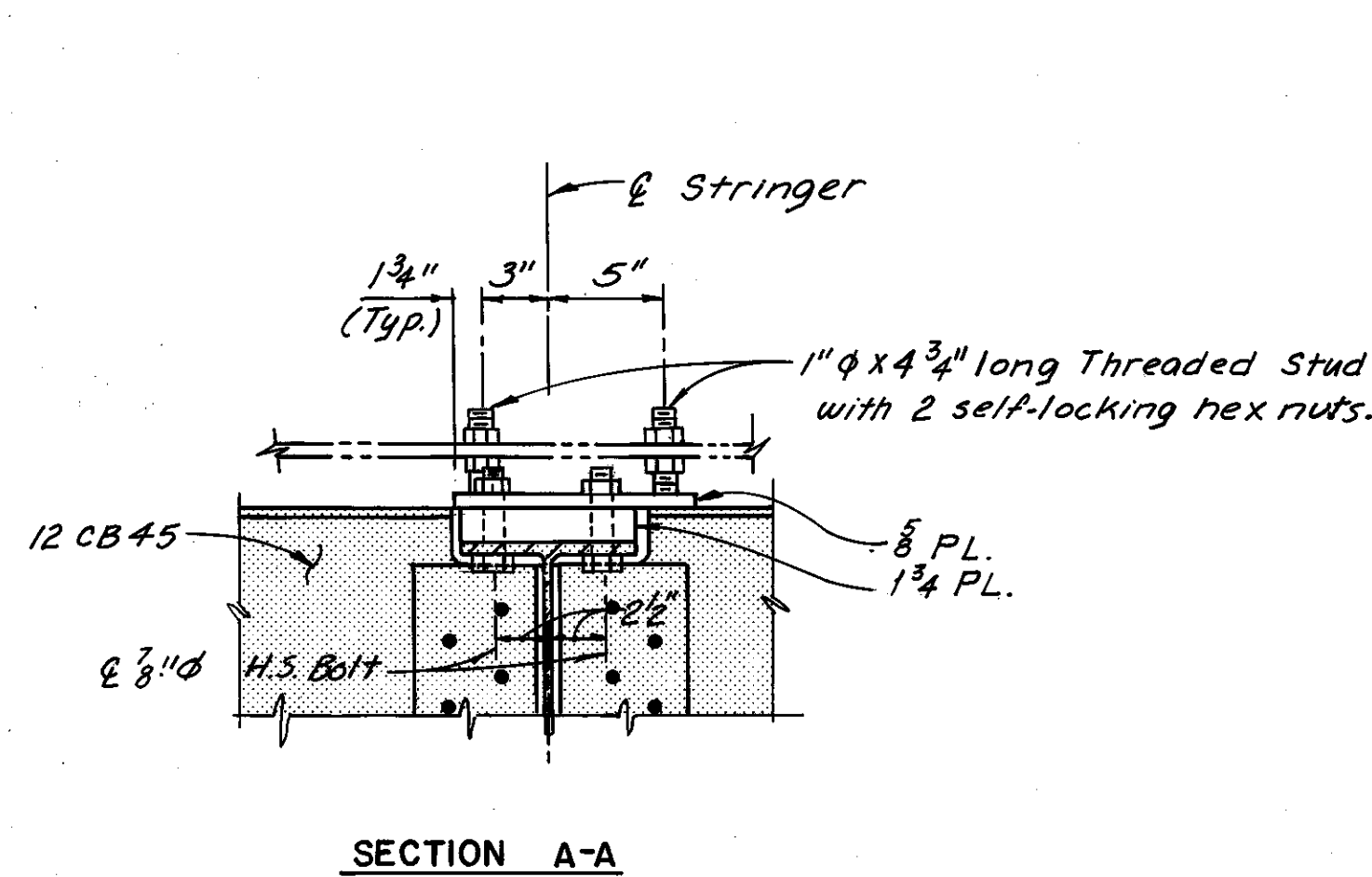


**PART PLAN - EXPANSION JOINT 5**  
(Expansion Plates, Deck, welded Studs and connections for girder, stringer, and expansion joint backup members, not shown)

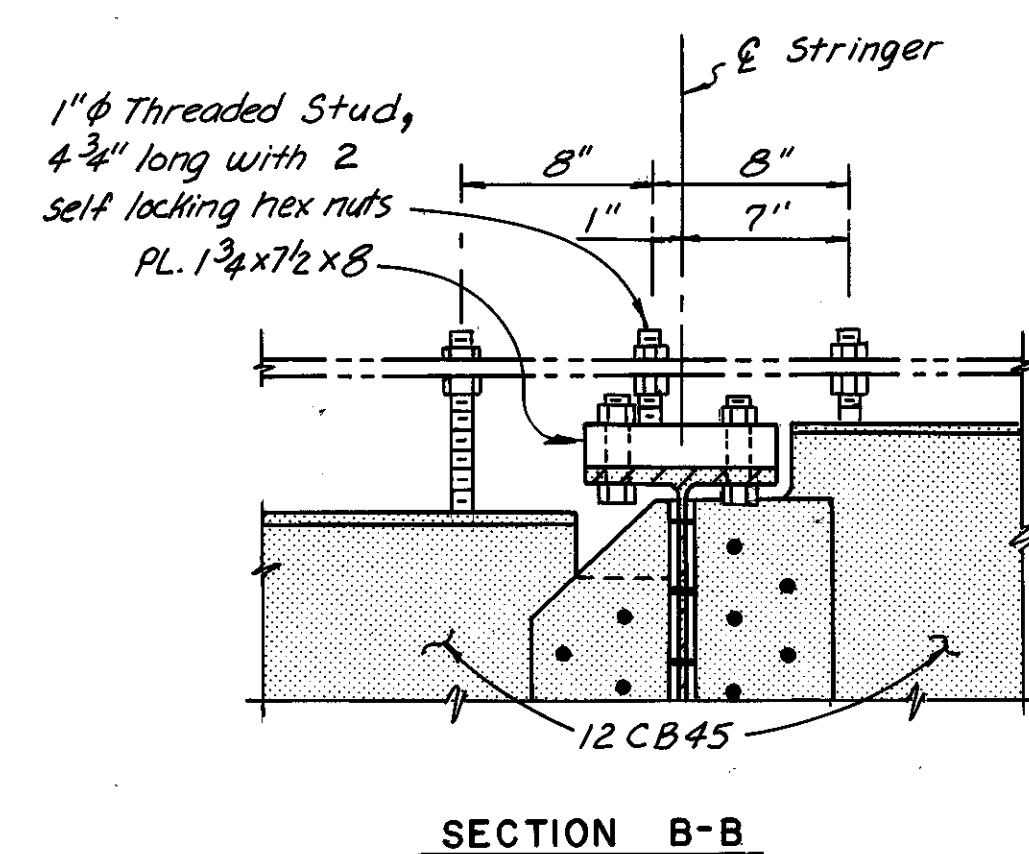


**PART PLAN - EXPANSION JOINTS 1, 2, 3, 4 AND 6**  
(Expansion Plates, Deck, welded Studs and connections for girder, stringer, and expansion joint backup members, not shown)

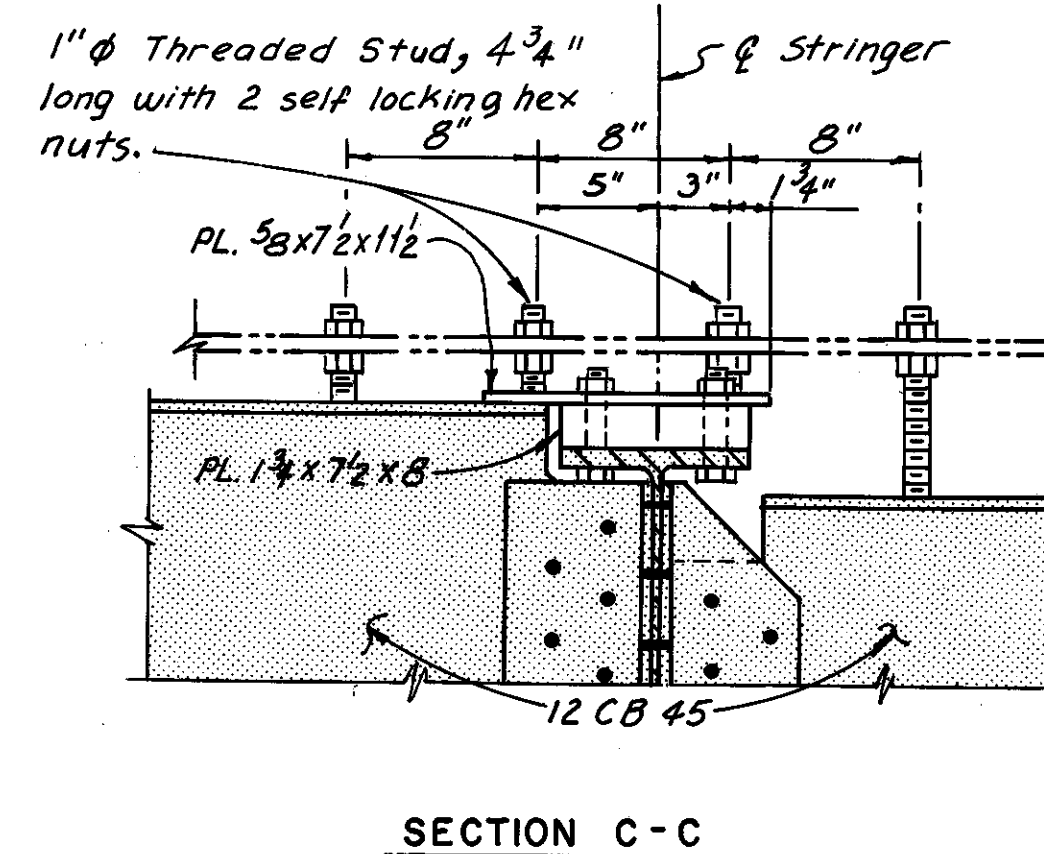
Note:  
New plates 1 3/4" and 5/8" shall be included with the unit price bid for Item Special, Tooth Plate Expansion Joint with Neoprene Trough, for payment.



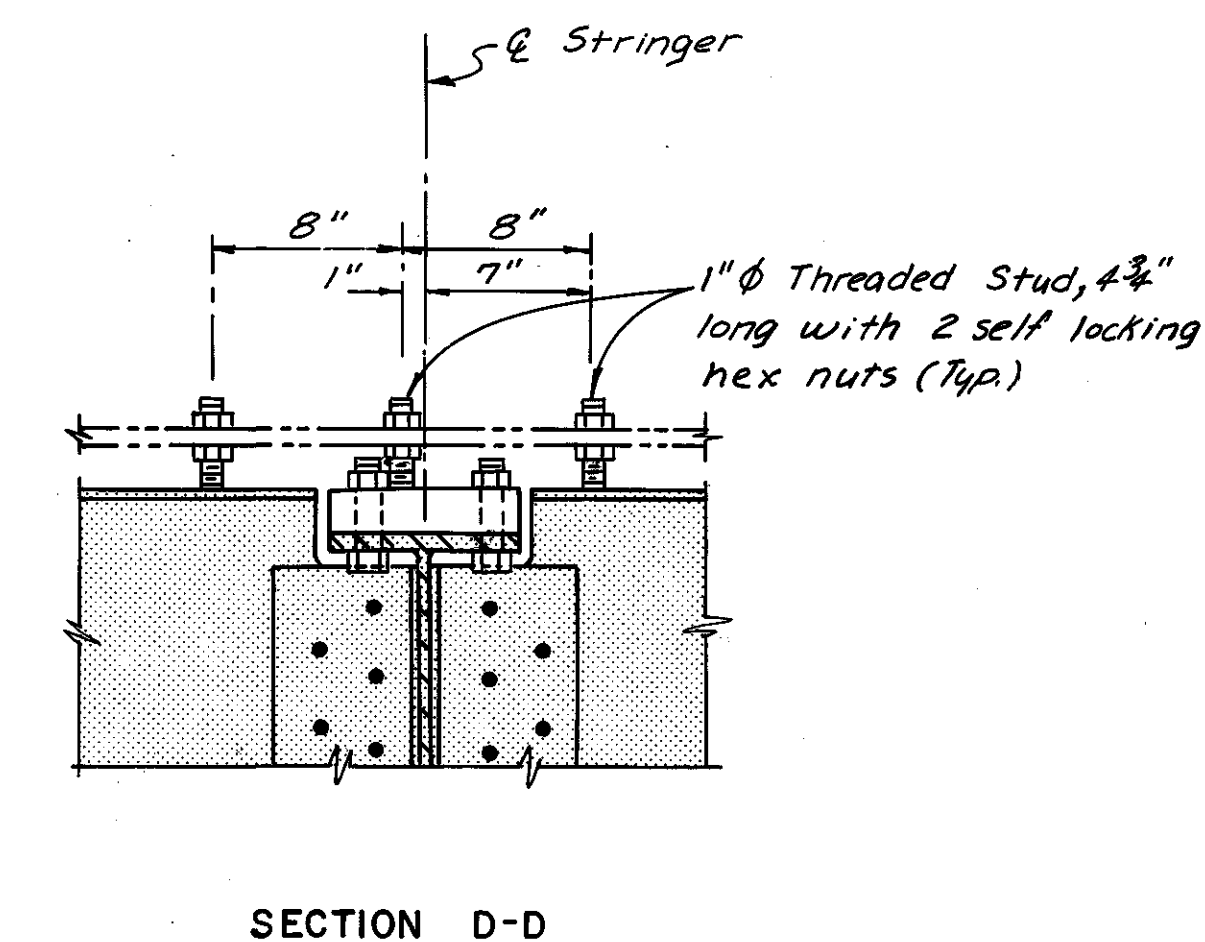
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

Notes:  
For Intermediate Expansion Joint Details, see Sheet 37/72.  
For Expansion Joint 5 Details, see Sheet 39/72.  
For Expansion Joint locations, see Sheets 5/72 thru 9/72.

Zip-a-tone indicates existing structure. Phantom lines indicate new construction, details of which are shown elsewhere in these plans.

H.N.T.B. BRIDGE NO. 3

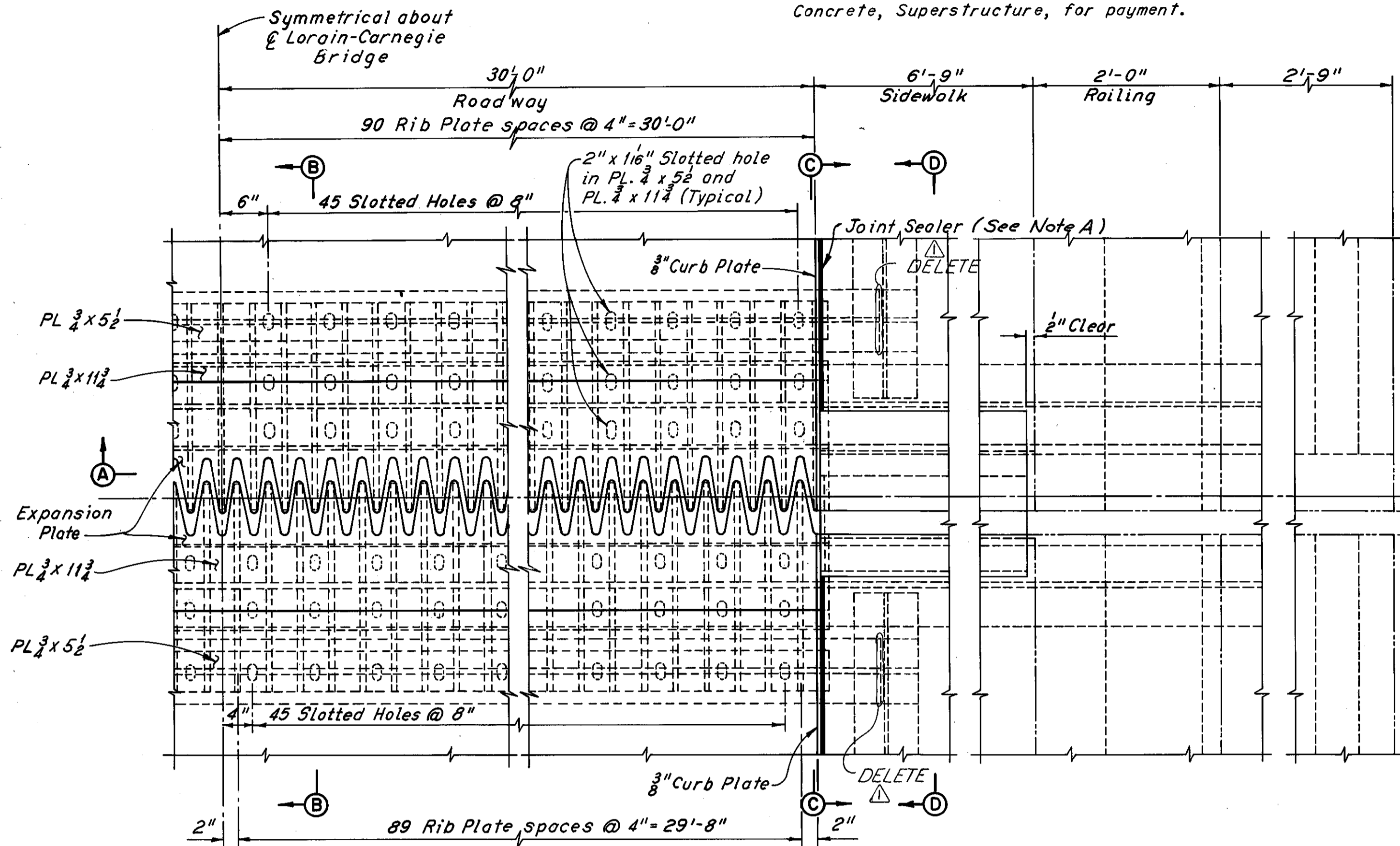
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

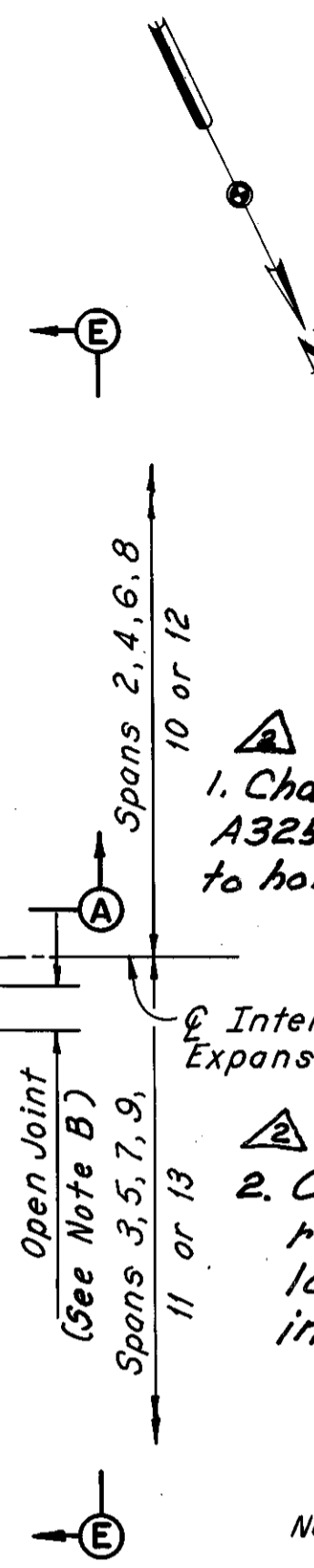
**INTERMEDIATE EXPANSION JOINT SUPPORT DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

DRAWN RAS	TRACED ONB	CHECKED AN	REVIEWED	REVISED
DATE 7-25-78	DATE 7-28-78	DATE 7-28-78	DATE	DATE

Note A:  
Joint Sealer. Material shall be hot applied bridge deck waterproofing material, which also meets the requirement of 705.01. To be included with Item 511, Class 3 Concrete, Superstructure, for payment.

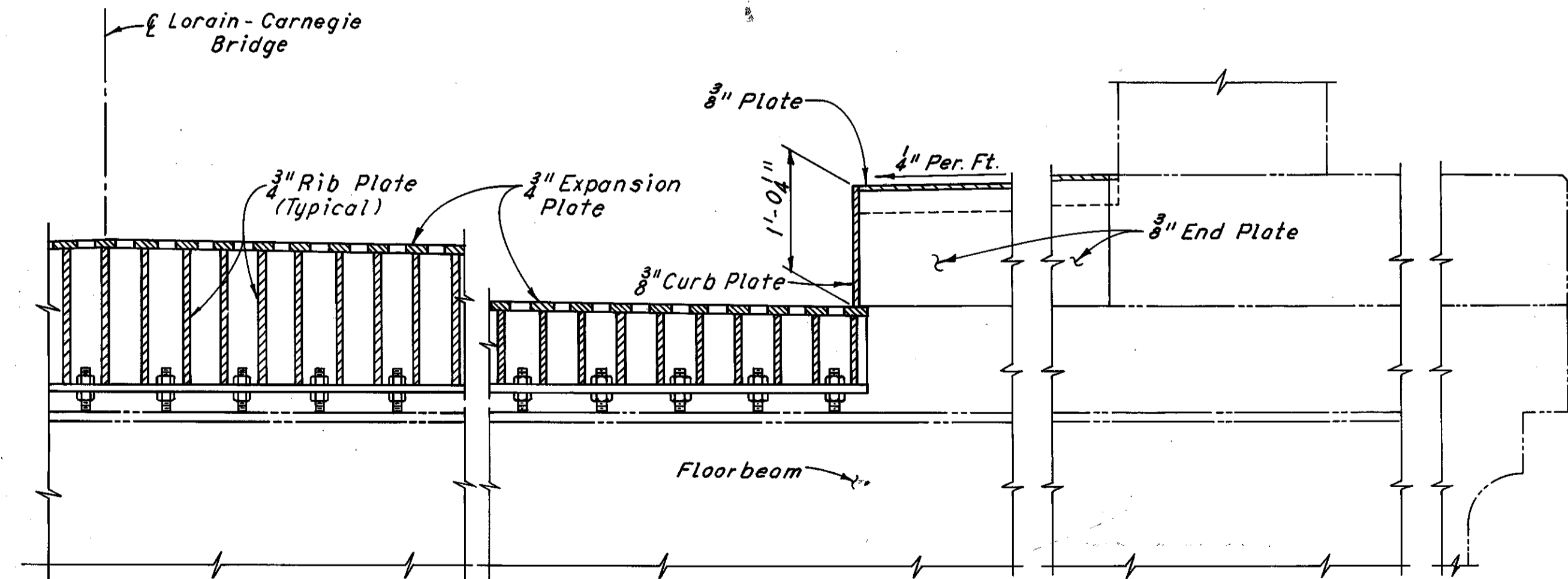
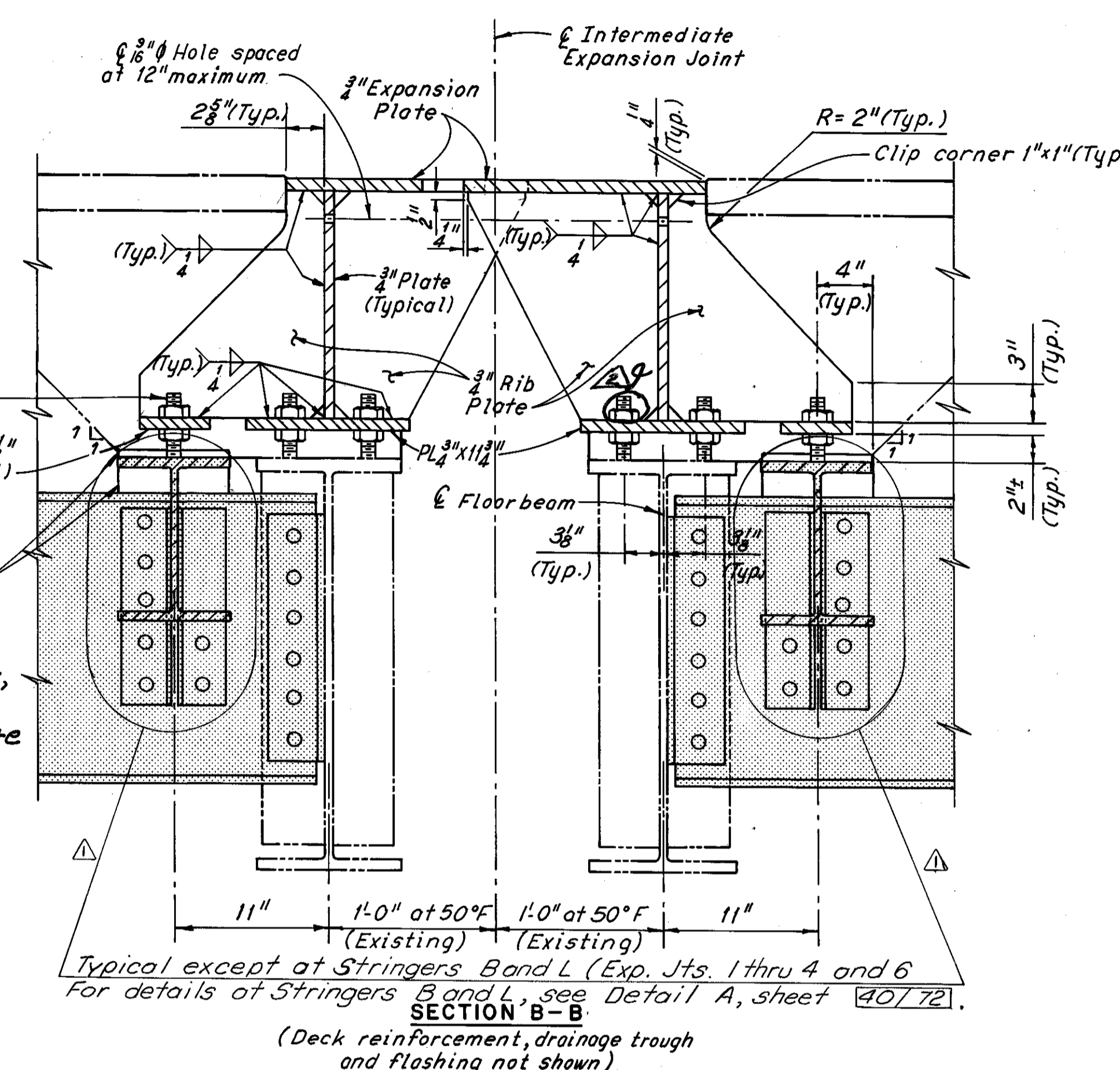


**PART PLAN**  
(Anchor Bars and Studs not shown)

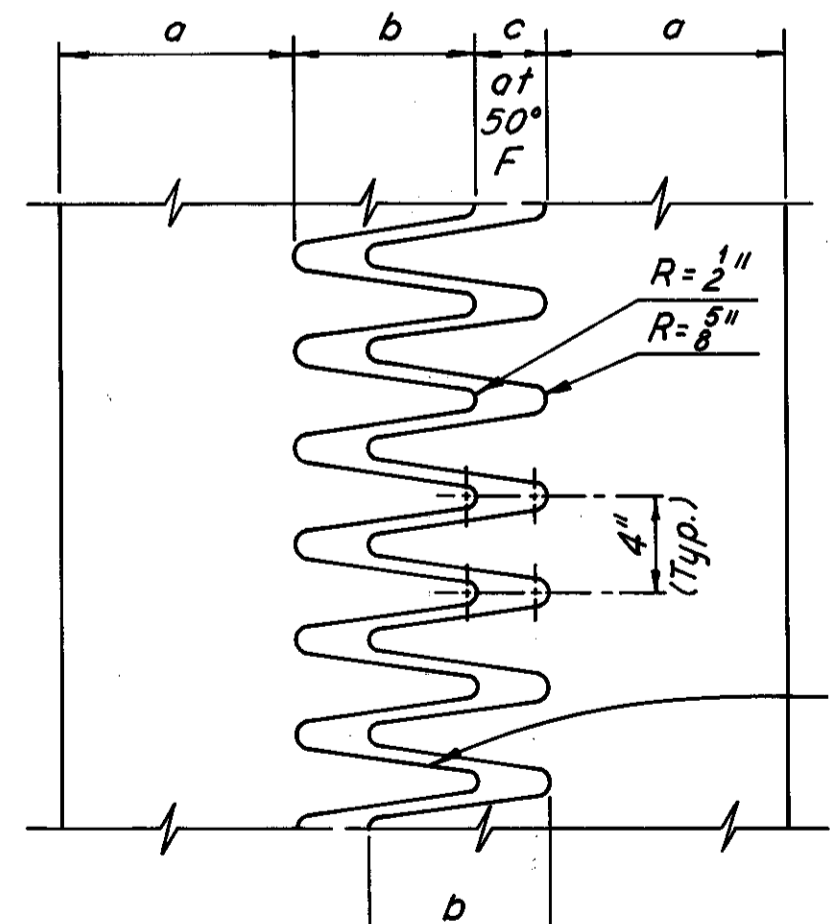


- Change bottom nuts to 1"  $\phi$  Threaded Stud, 4 3/4" long with 3/8" hex. self-locking nuts, (Typical) PL 3/4 x 5 1/2" (Typical) to hold them in place.
- Omit top nut, interior row, right side. Accurately locate bottom nut before installing unit.

Note B:  
For open joint dimensions at 50°F., see dimension c in Table of Dimensions.



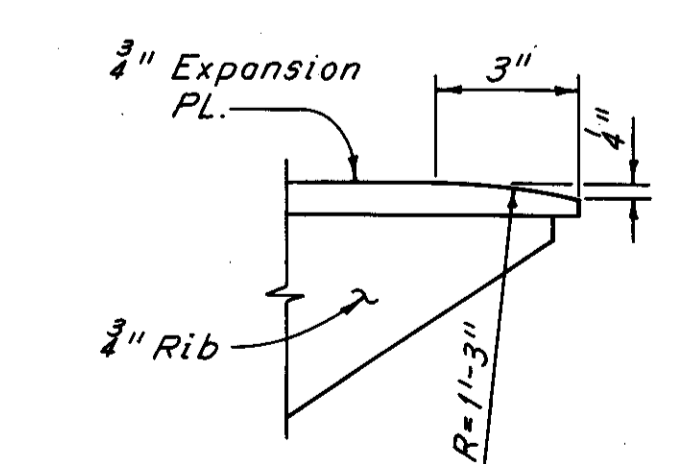
**SECTION A-A**



**EXPANSION PLATE DETAIL**  
Note: Expansion Plate cut from PL 3/4 x d.

TABLE OF DIMENSIONS				
JOINT	a	b	c	d
1	9 3/8"	7 1/4"	3"	27 5/8"
2	9 1/8"	7 1/2"	3 1/2"	27"
3	9 1/8"	8 3/8"	3 1/2"	26 5/8"
4	8 3/8"	8 3/8"	3 3/8"	26 1/2"
5	10 1/8"	6 1/2"	2 3/8"	27 1/2"
6	8 1/8"	9 1/4"	3 3/8"	26 1/4"

Notes:  
Zip-a-tone indicates existing structure. Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
For Sections C-C, and D-D and View E-E, see Sheet 38772.  
For locations of intermediate expansion joints, see Sheet 1772 and 2772.



**EXPANSION PLATE TIP DETAIL**

Revised 5-4-82  
REVISED 3-10-81

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

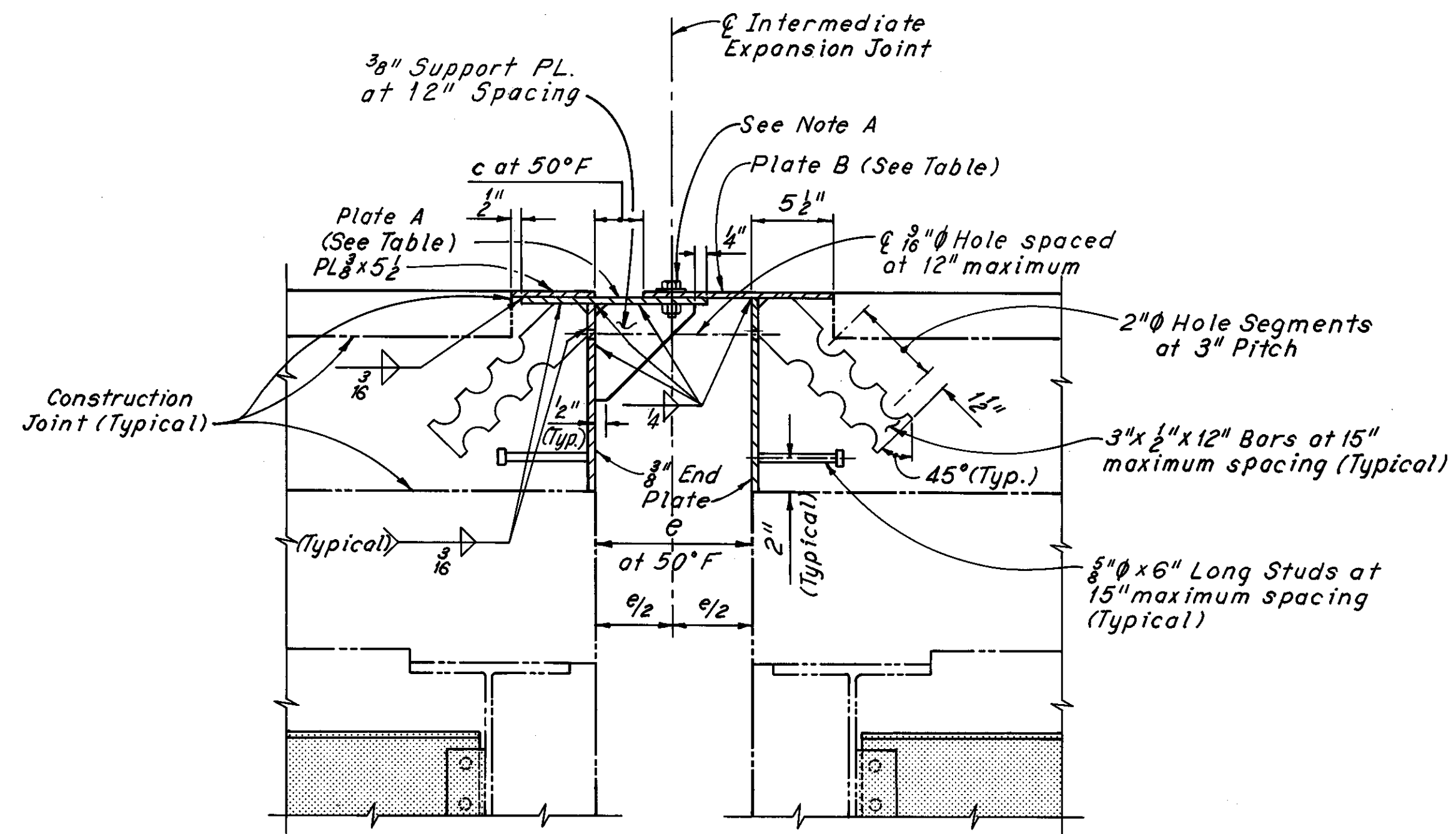
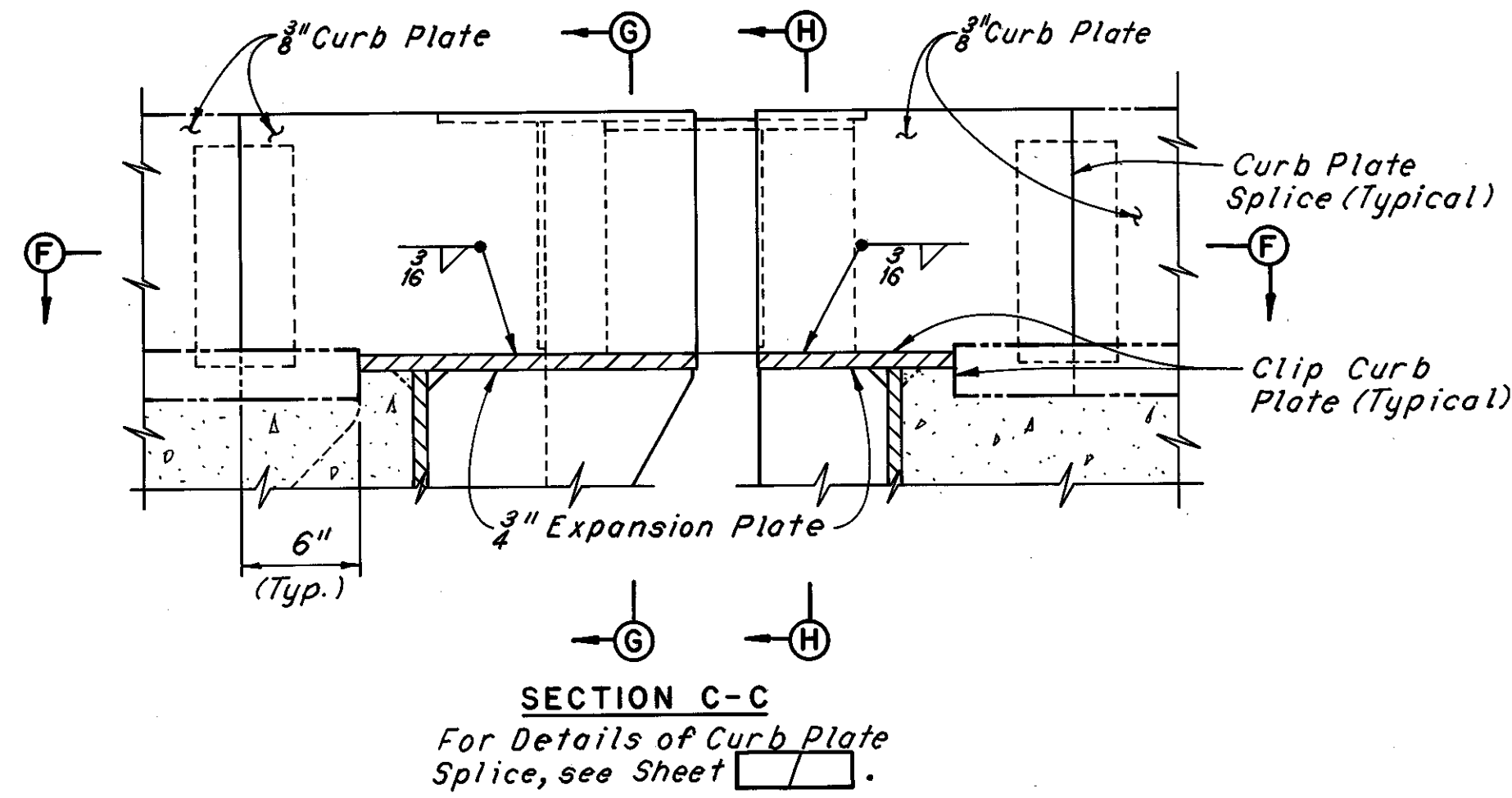
**HNTB**

**INTERMEDIATE EXPANSION JOINT DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

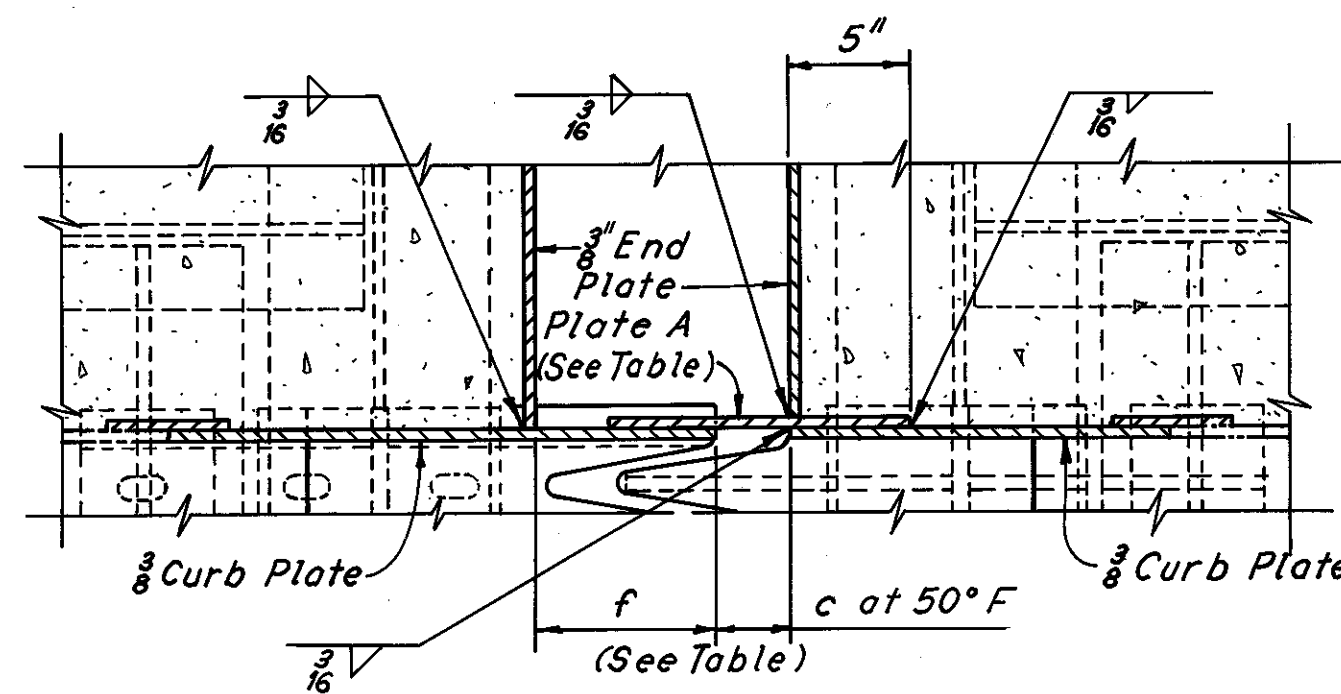
CUYAHOGA COUNTY OHIO

DRAWN C.K.B. DATE 4-3-78	TRACED D.L.R. DATE 4-5-78	CHECKED R.A.S. DATE 5-9-78	REVIEWED	REVISED
--------------------------------	---------------------------------	----------------------------------	----------	---------

SHEET 37/72

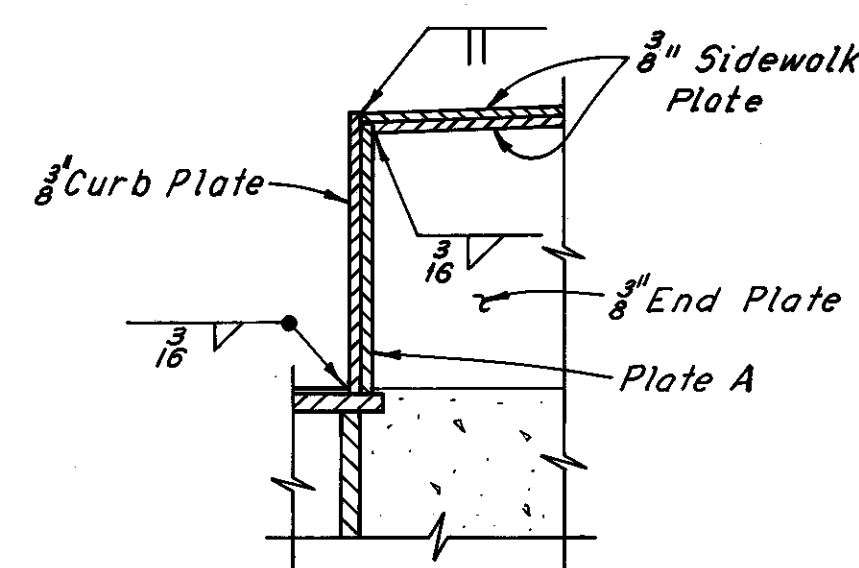


SECTION D-D

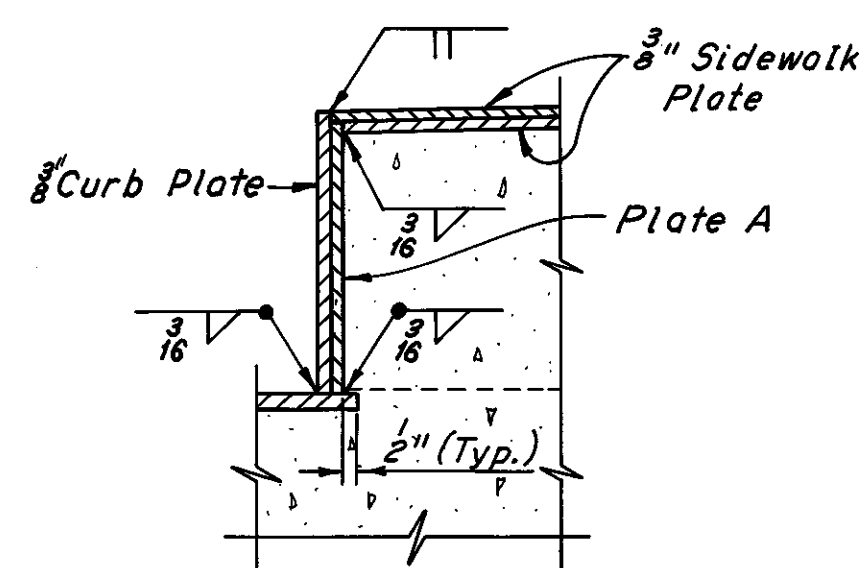


SECTION F-F

(Floorbeam and stringer connections not shown)



SECTION G-G



SECTION H-H

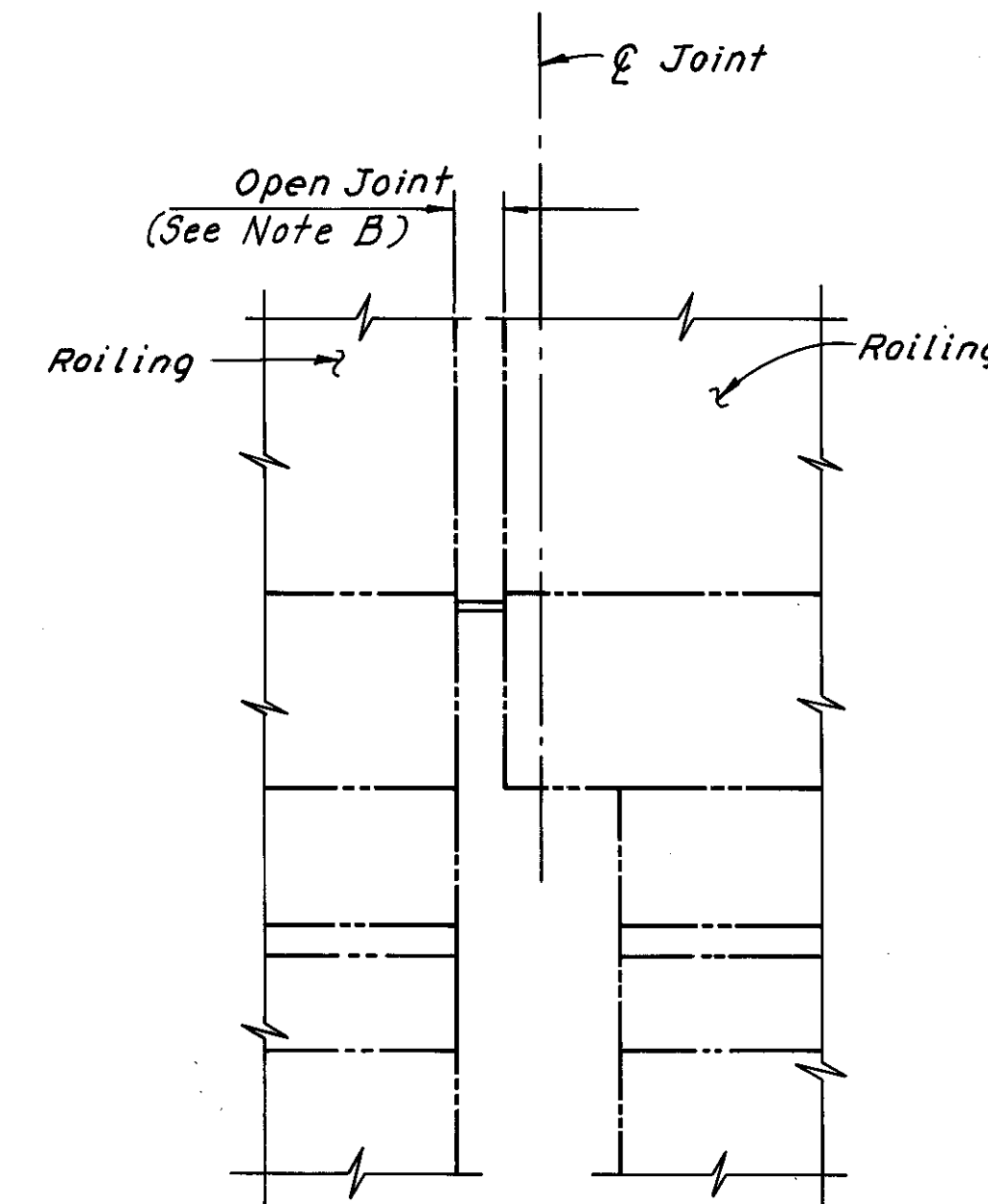
Note A:

5/8"  $\phi$  x 2" bolts with nuts and washers spaced at 2'-0" maximum spacing, with nuts tack-welded to underside of Plate A. Holes in Plate B shall be 1 1/8". Center 3/8" bolts in 1 1/8" holes. Apply flake graphite between washers and Plate B. Turn bolts tight and release one-half turn. Remove bolts as soon as concrete has set, preferably within two hours after placing, to avoid damage due to temperature expansion or contraction of superstructure. Fill holes with bituminous material.

JOINT	PLATE A	PLATE B	c	e	f
1	3/8" x 12 1/2"	3/8" x 12 1/2"	3"	10 1/4"	7 1/4"
2	3/8" x 12 1/2"	3/8" x 13"	3 1/2"	10 3/8"	7 1/2"
3	3/8" x 13 1/2"	3/8" x 13 1/2"	3 1/2"	11 1/8"	8 3/8"
4	3/8" x 13 1/2"	3/8" x 14 1/2"	3 1/2"	12 1/4"	8 3/8"
5	3/8" x 11 1/2"	3/8" x 12"	2 3/8"	9 1/8"	6 1/2"
6	3/8" x 14 1/2"	3/8" x 14 1/2"	3 3/8"	13 1/8"	9 1/4"

Note B:

For open joint dimensions at 50°F., see dimension c in Table of Dimensions.



VIEW E-E

Notes:  
For locations of Sections C-C and D-D and View E-E, see Sheet [redacted].  
For additional notes, see Sheet [redacted].

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

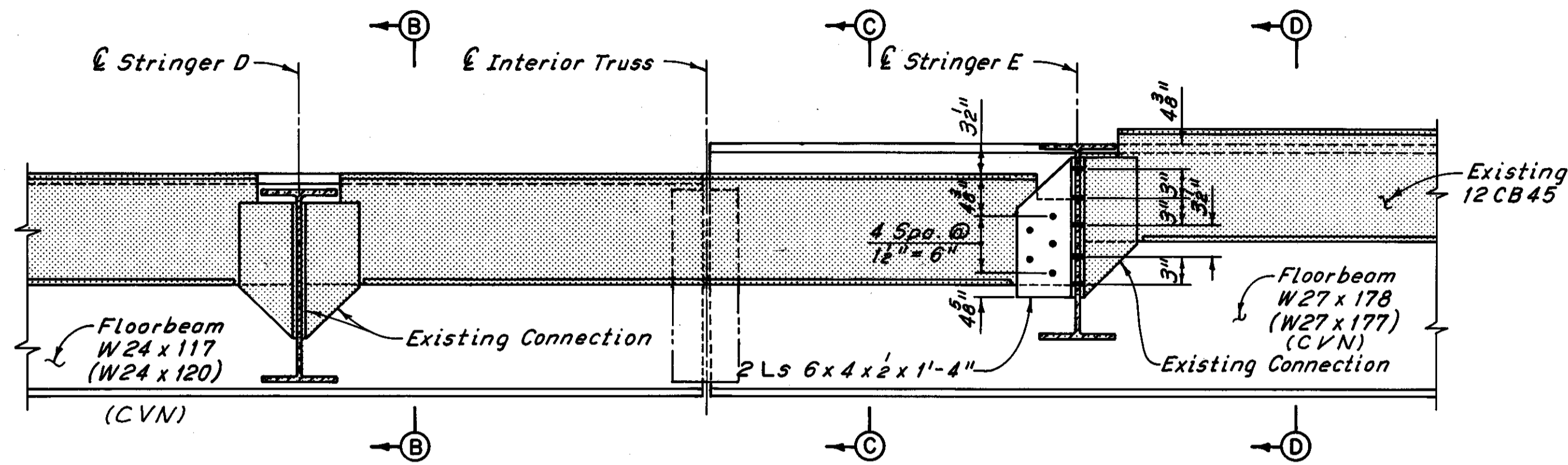
HNTB

INTERMEDIATE EXPANSION  
JOINT DETAILS  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

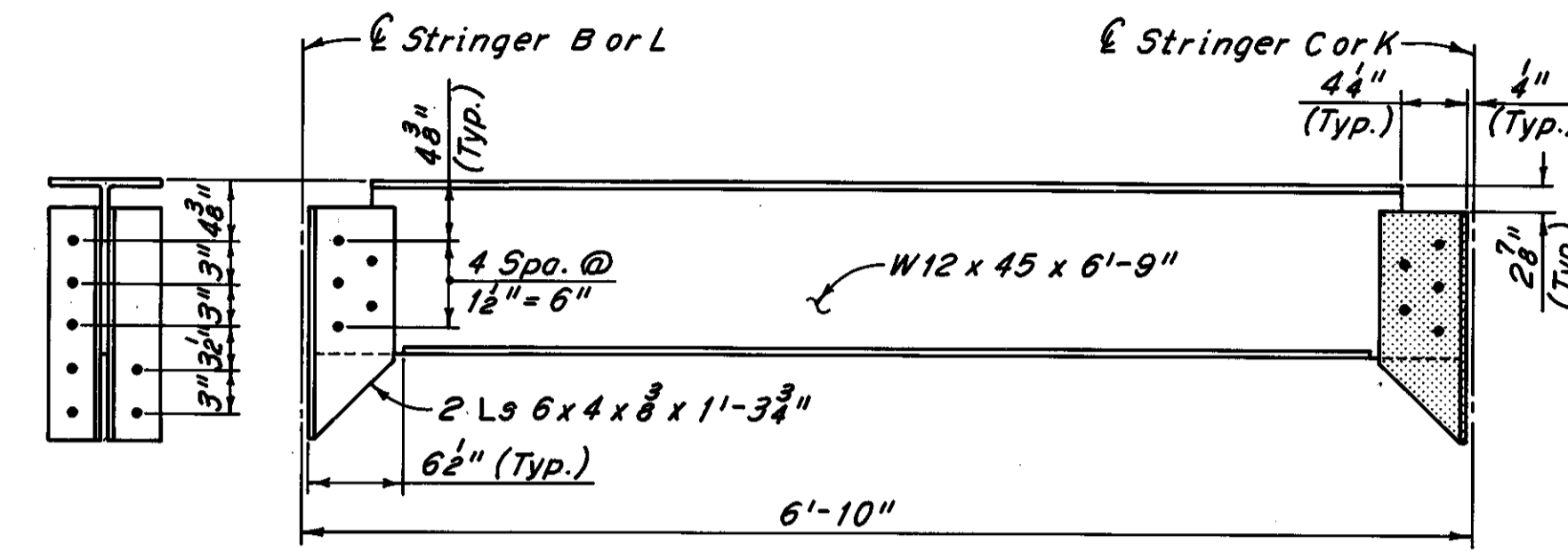
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56

DRAWN C.K.B.	TRACED D.L.R.	CHECKED R.A.S.	REVIEWED	REVISED
DATE 4-3-78	DATE 4-8-78	DATE 5-9-78	DATE	DATE

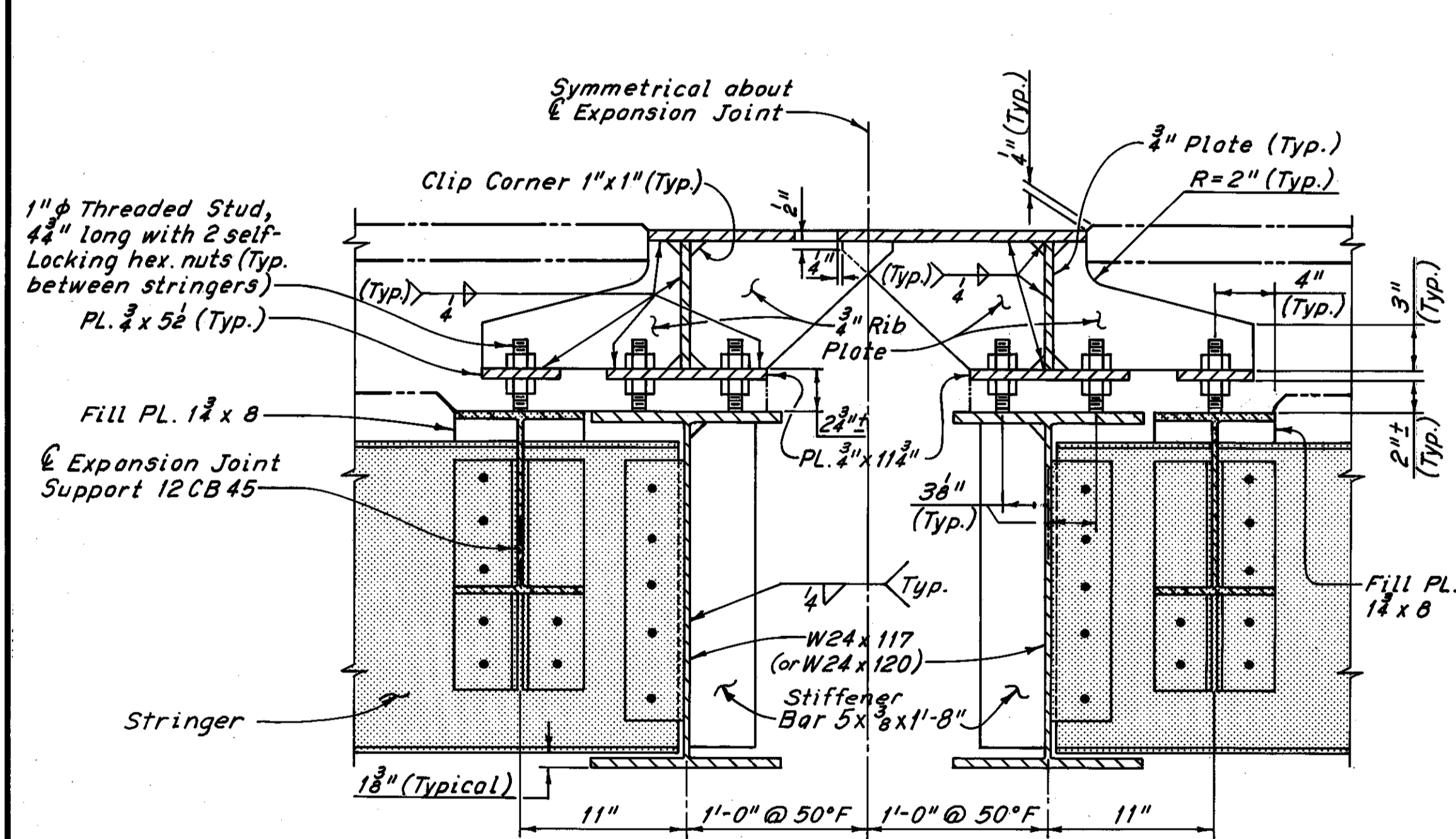




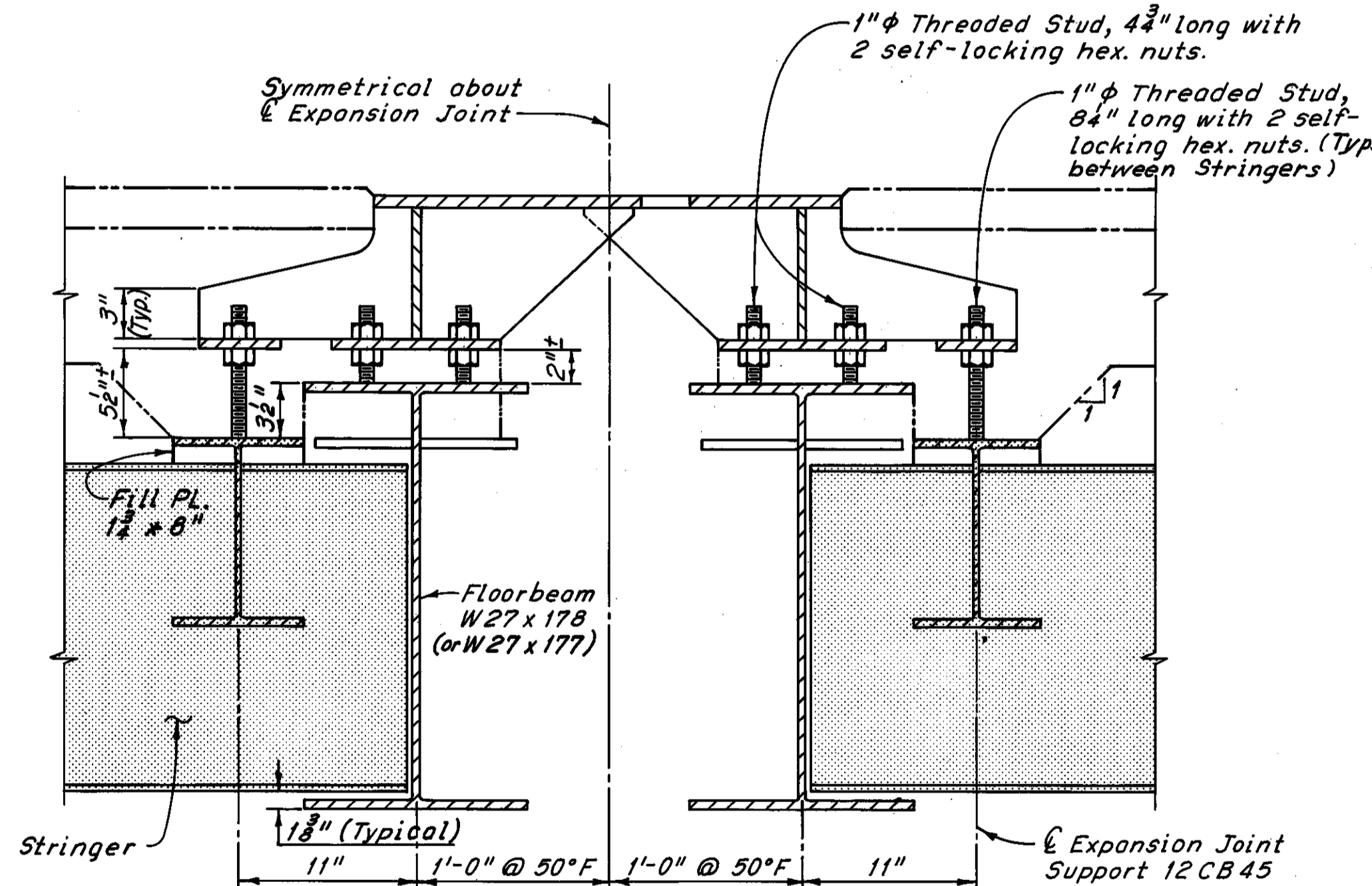
**PART SECTION A-A**  
(Deck welded studs, stiffeners and castings not shown)



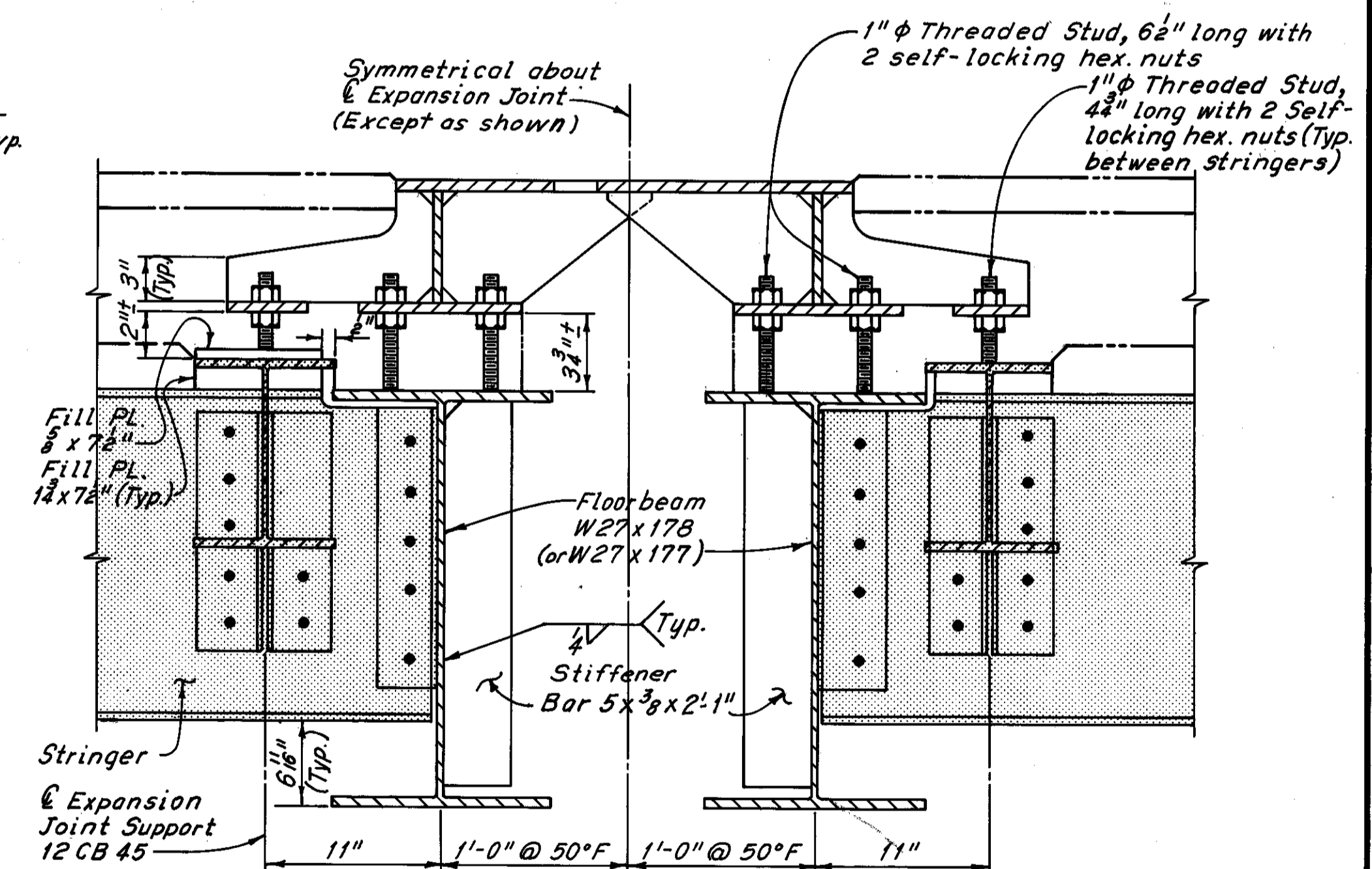
**EXPANSION JOINT SUPPORT**  
(Threaded Studs not shown)



**SECTION B-B**  
(Typical along Exterior Floorbeam from Curb Line to Interior Truss)  
(Trough and drainage details not shown)



**SECTION C-C**  
(Stringer Connection not shown)  
(For details not shown, See Section B-B)  
(Trough and drainage details not shown)



**SECTION D-D**  
(For details not shown see Section B-B)  
(Typical from Stringer E thru H)  
(Trough and drainage details not shown)

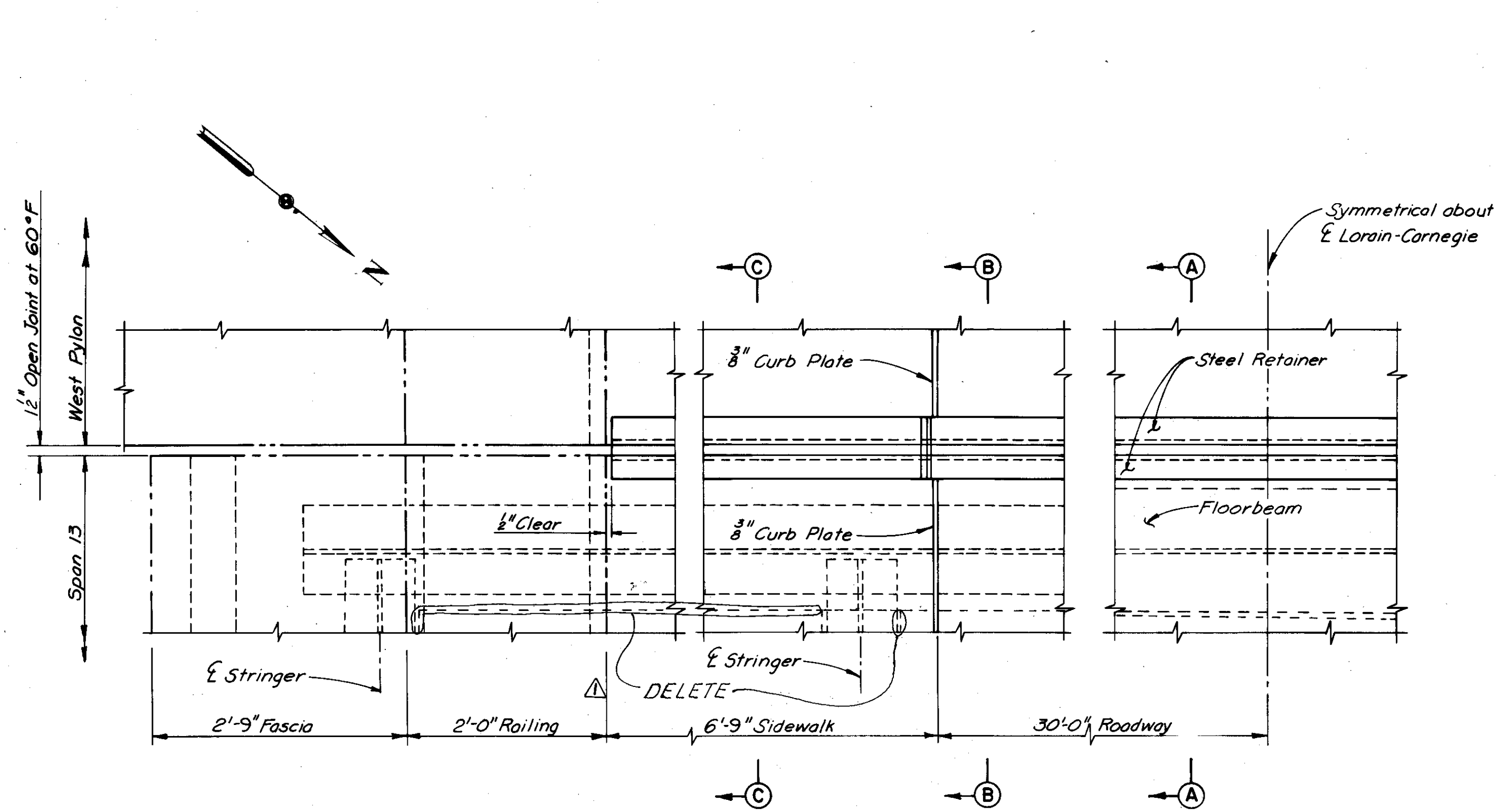
Notes:  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
Zip-a-tone indicates existing members, which are modified elsewhere in these plans.  
For stringer modification details, see Sheet 26/72.  
For location of Section A-A, see Sheet 25/72.  
For additional details of Expansion Joint 5, see Sheet 37/72.  
For trough details, see Sheet 46/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND  
**HNTB**

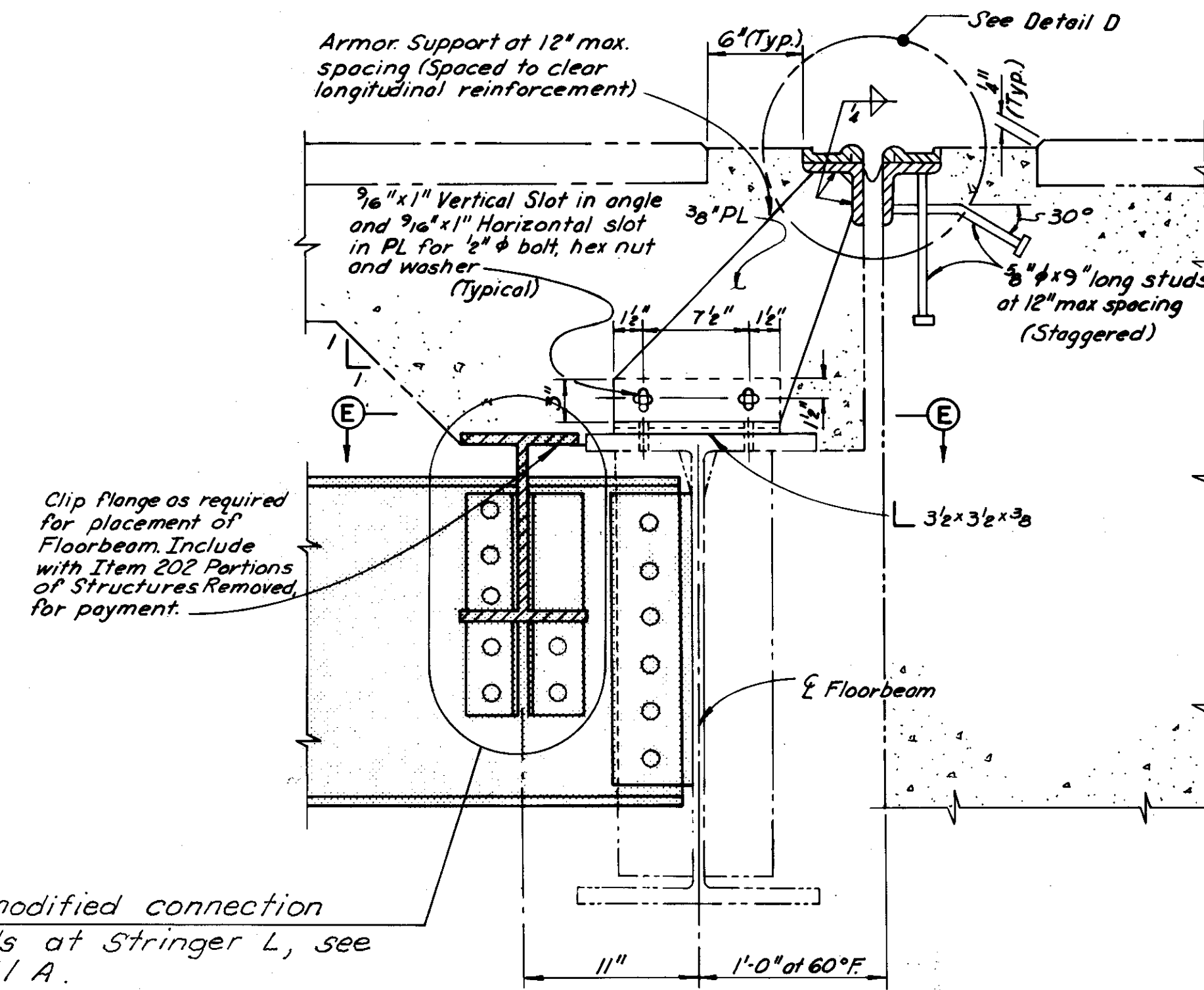
**EXPANSION JOINT 5 DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO  
STA. 55+04.56

DRAWN R.A.S.	TRACED D.L.R.	CHECKED A.N.	REVIEWED	REVISED
DATE 7-25/72	DATE 7-28/72	DATE 7-28/72	DATE	DATE

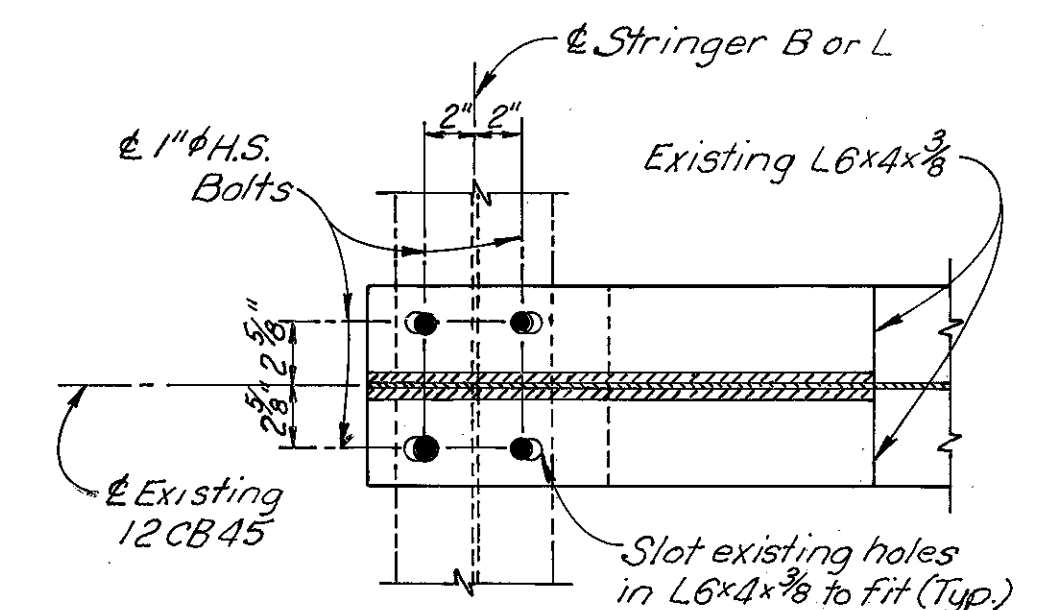
SHEET 39/72



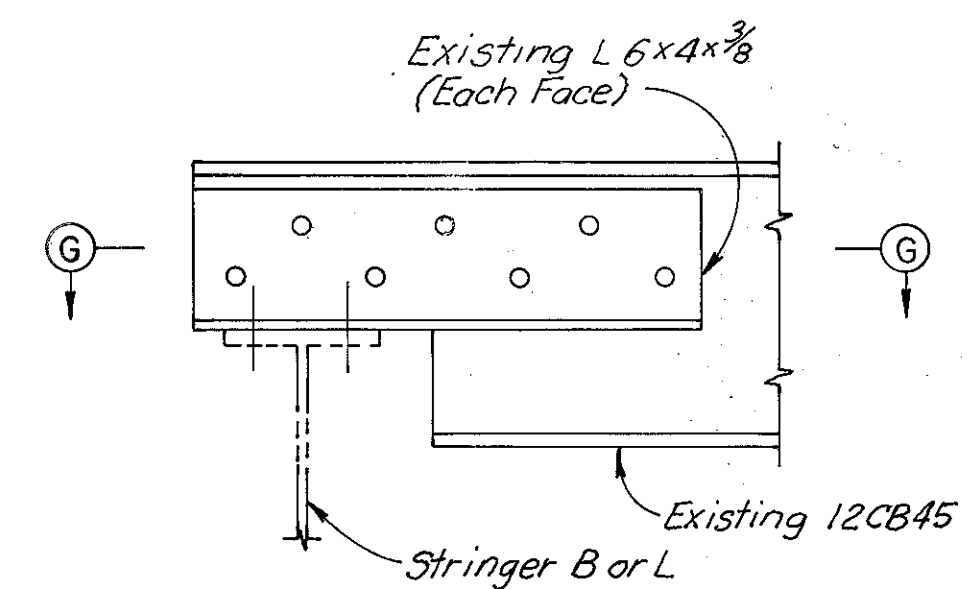
**PART PLAN AT EAST SIDE OF WEST PYLON**  
(Neoprene seal support details not shown)  
(Floorbeam and stringer connections not shown)



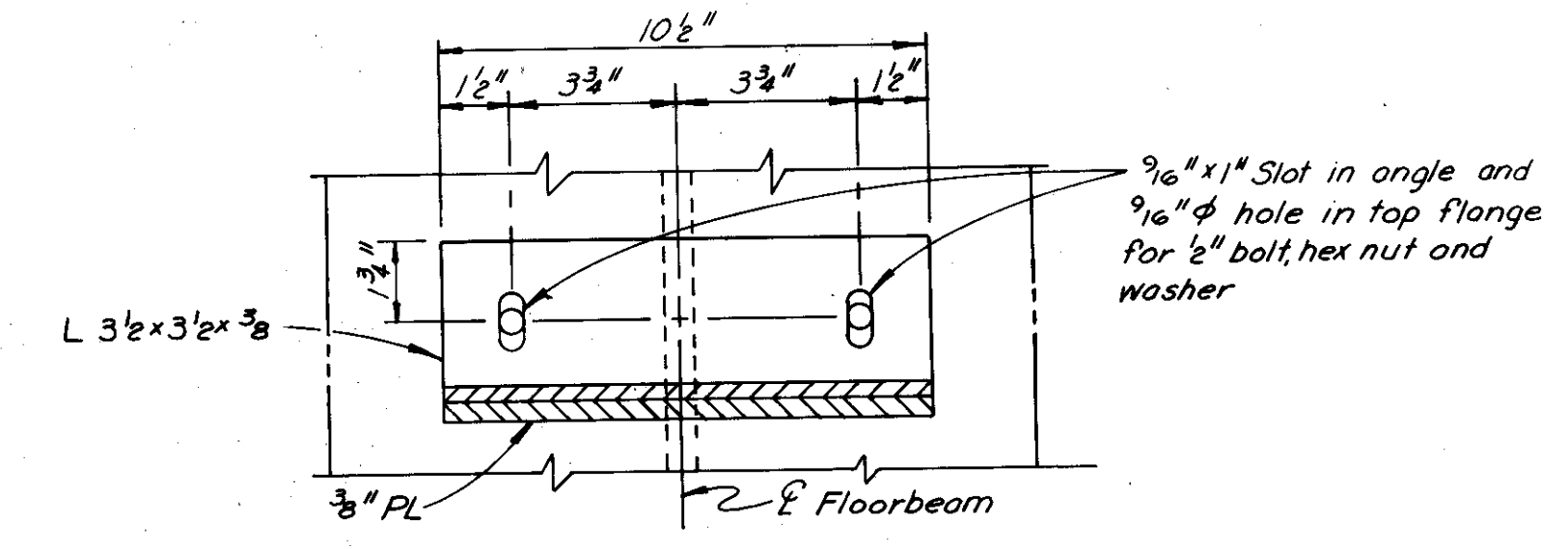
**SECTION A-A**  
(Pro-Span System Shown,  
Wabo Strip Seal System Similar)



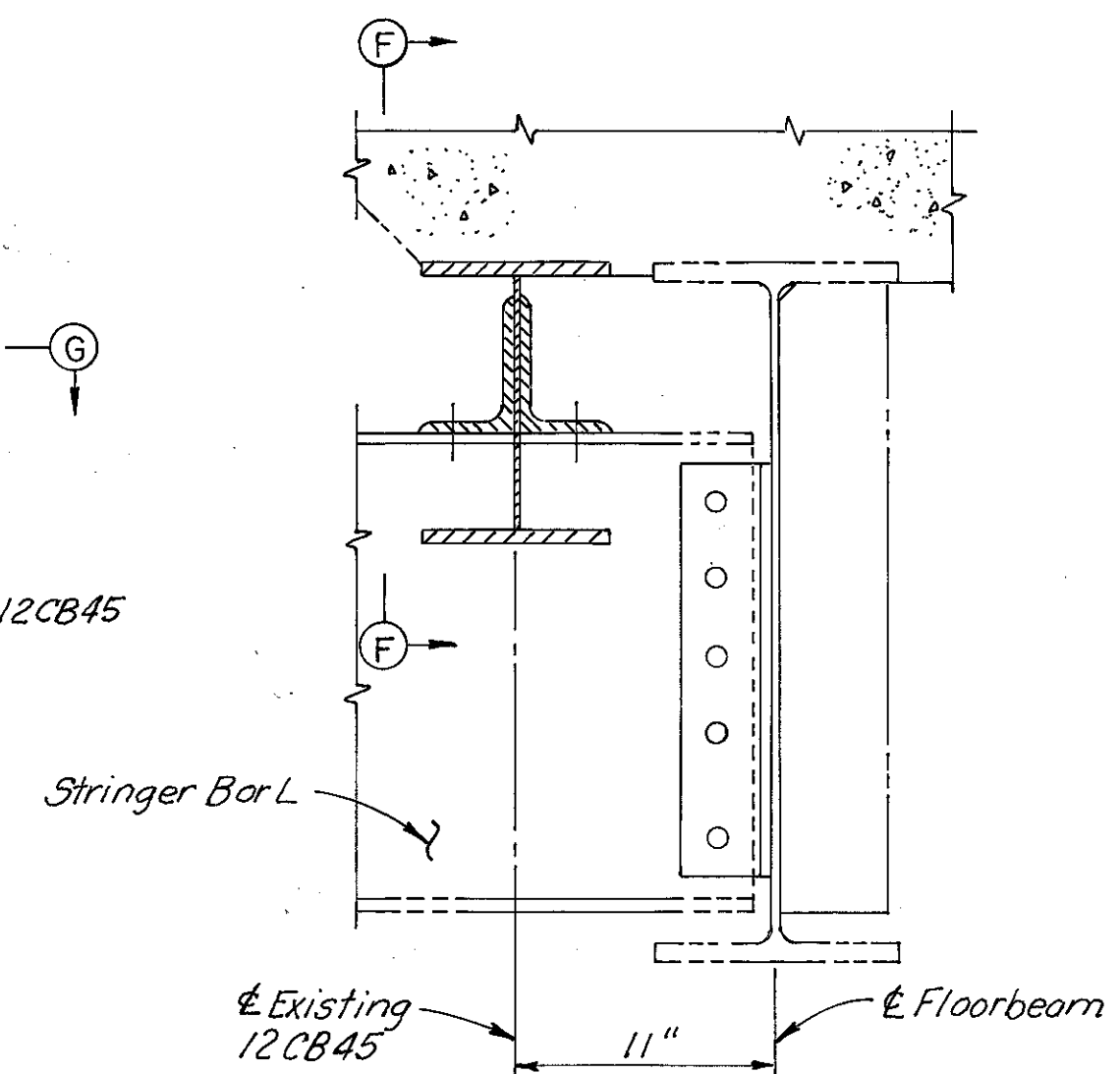
**SECTION G-G**



**SECTION F-F**



**SECTION E-E**

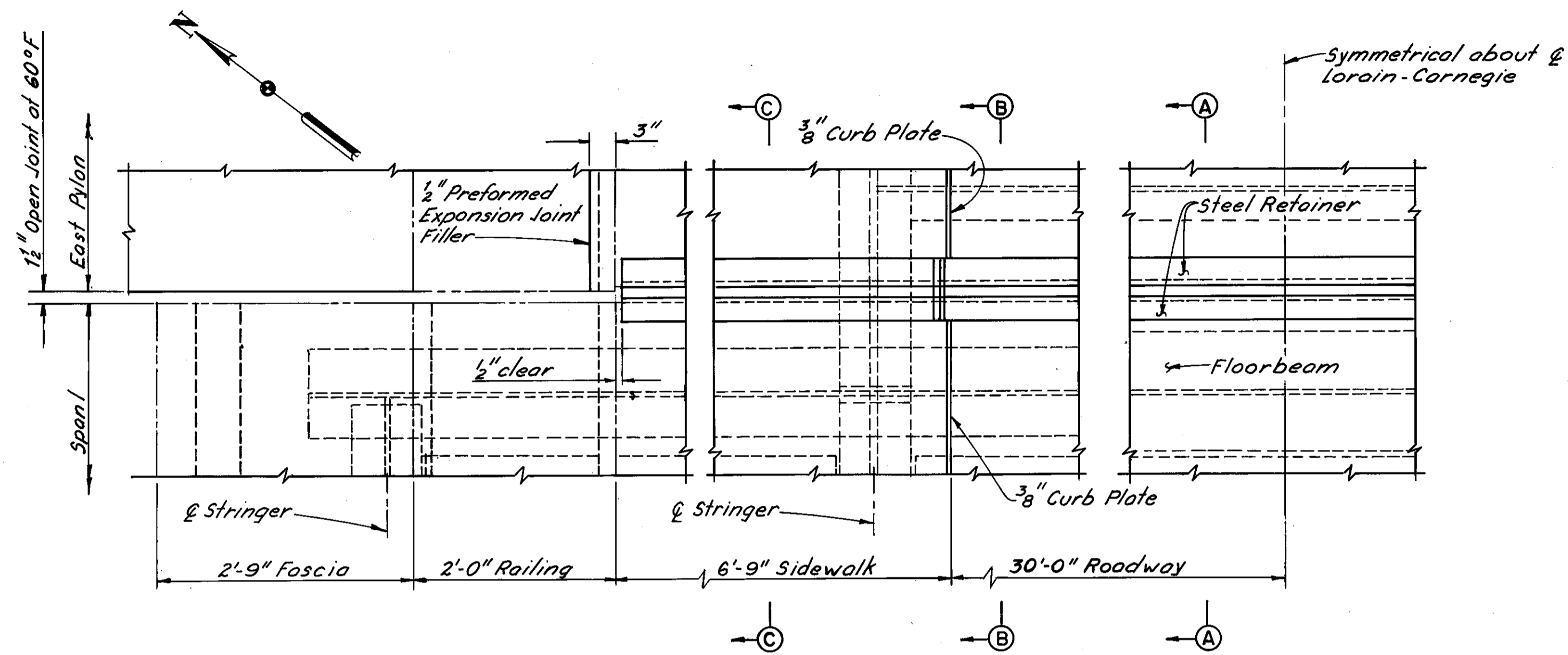


**DETAIL A**

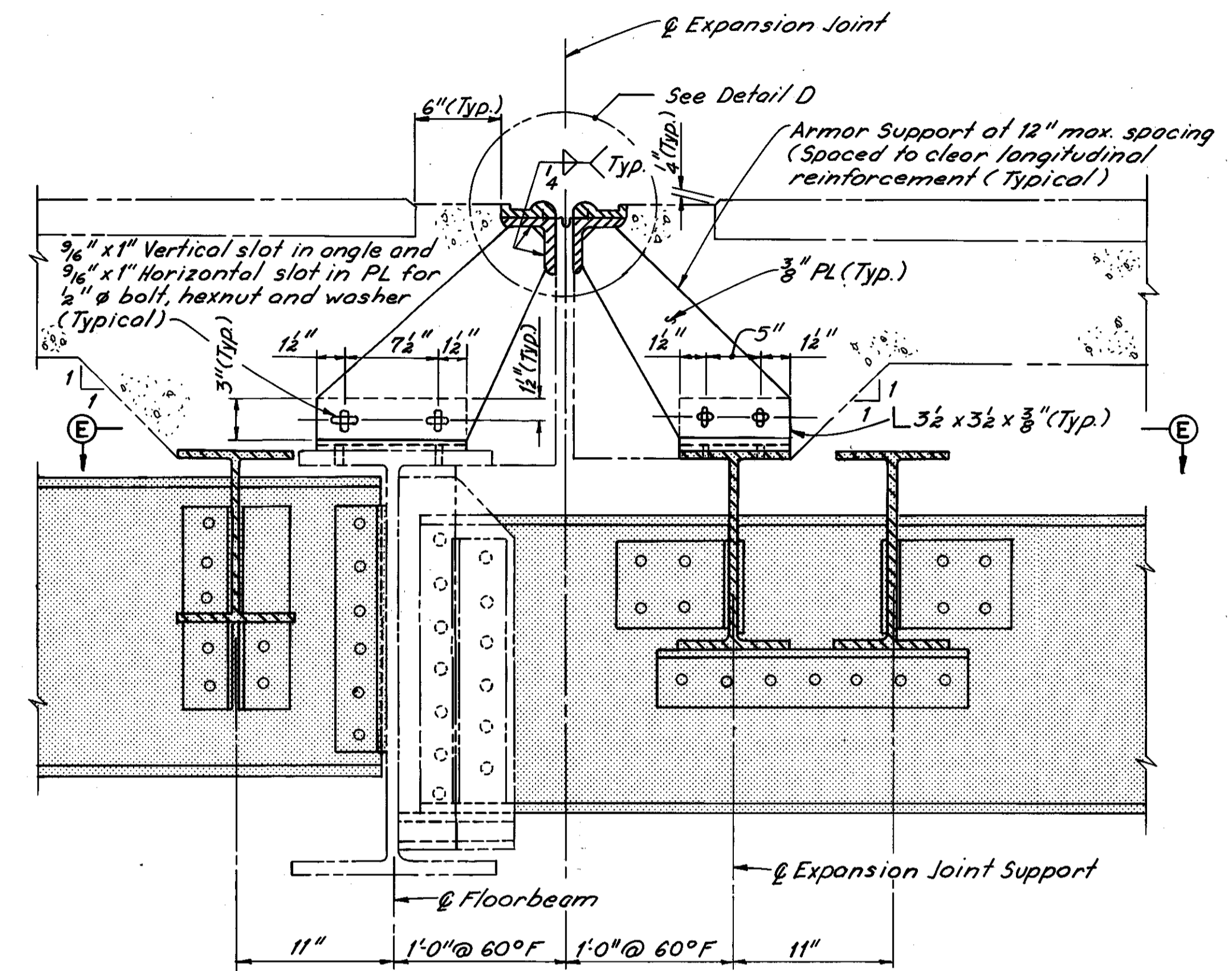
Notes:  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
Zip-a-tone indicates existing structure. For Sections B-B and C-C, see Sheet 43 | 72. For Detail D, see Sheet 43 | 72.

Revised 3-10-81

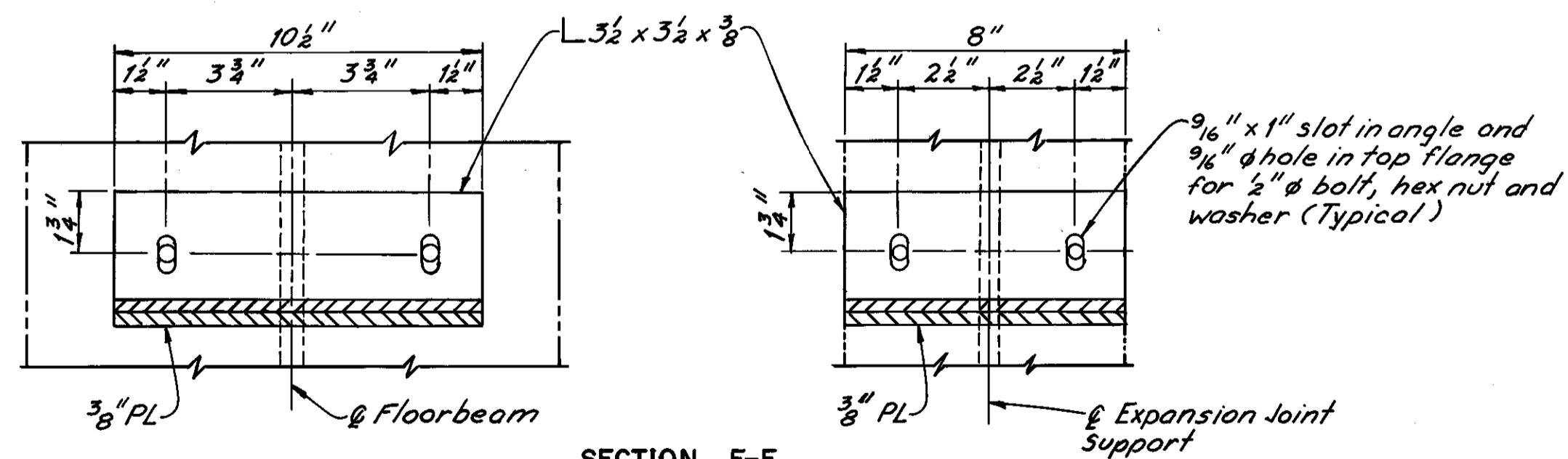
H.N.T.B. BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>EXPANSION JOINT DETAILS AT EAST SIDE OF WEST PYLON. REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)</b>					
BR. NO. CUY.-10-1618			STA. 22+19.19		
			STA. 55+04.56		
CUYAHOGA COUNTY OHIO					
DRAWN C.K.B.	TRACED T.D.W.	CHECKED R.A.S.	REVIEWED	REVISED	
DATE 11-18-78	DATE 1-27-78	DATE 4-1-78	DATE	DATE	SHEET 40   72



**PART PLAN AT WEST SIDE OF EAST PYLON**  
(Neoprene seal support details not shown)  
(Floorbeam and stringer connections not shown)



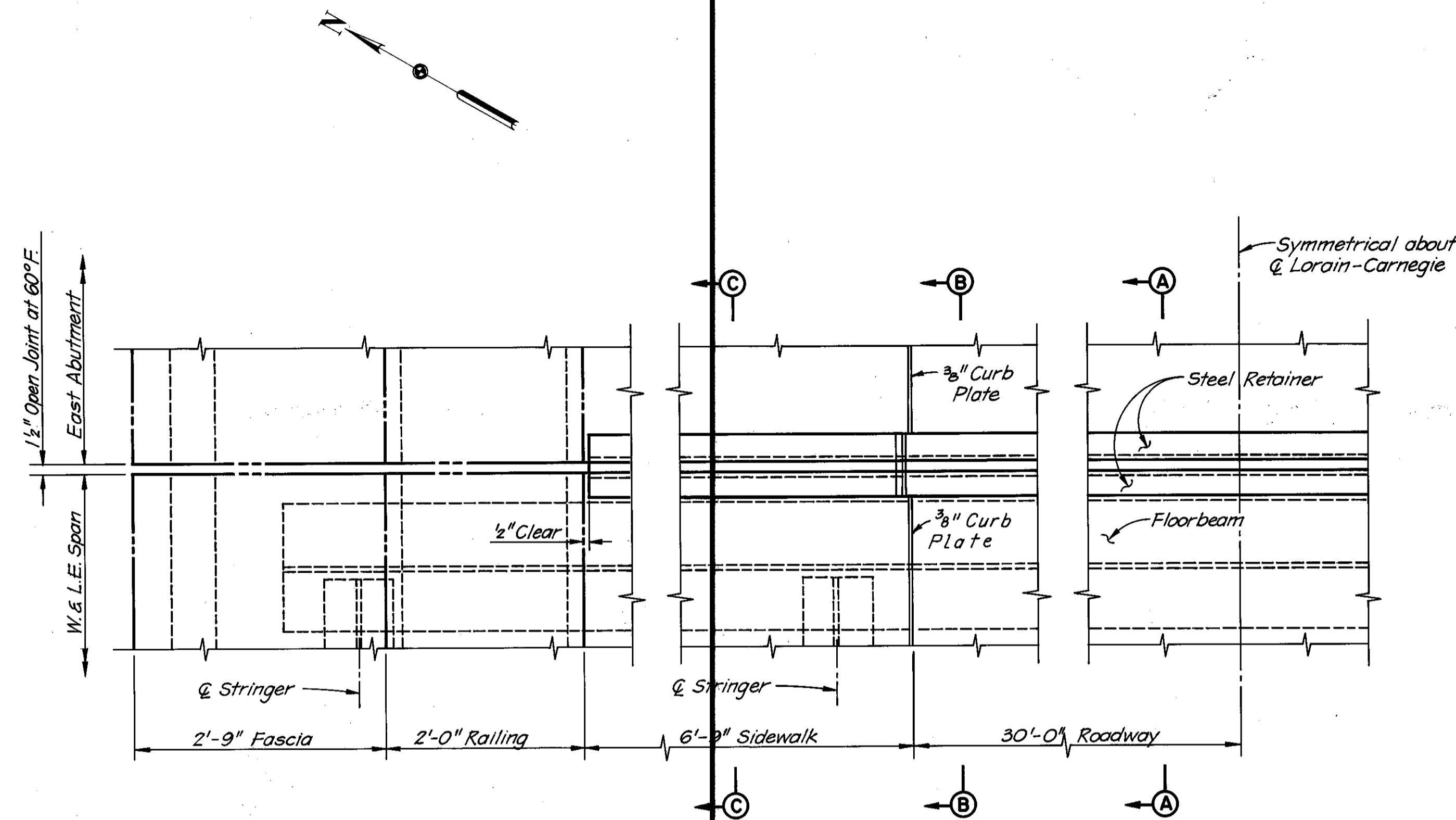
**SECTION A-A**  
(Pro-span System shown, Wabo Strip Seal System Similar)



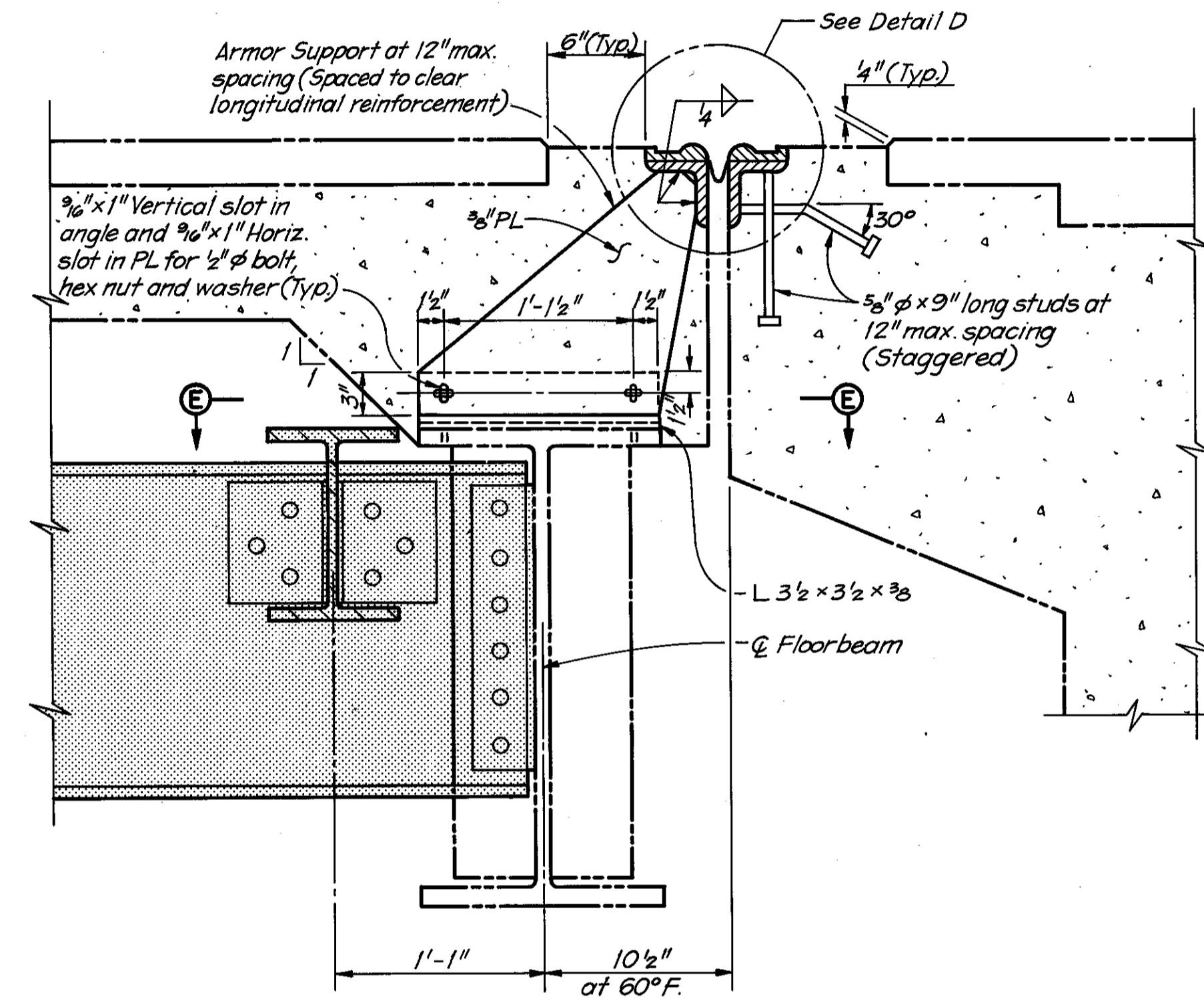
**SECTION E-E**

Notes:  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
Zip-a-tone indicates existing structure.  
For Sections B-B and C-C, see Sheet 43/72.  
For Detail D, see Sheet 43/72.

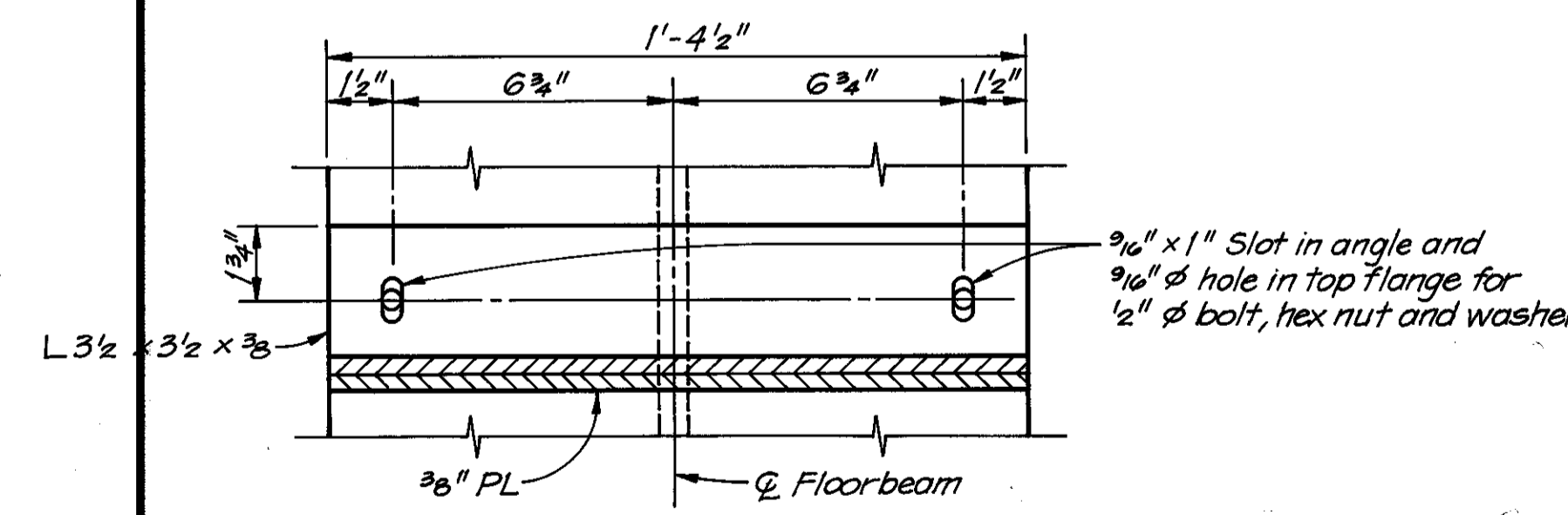
H.N.T.B. BRIDGE NO. 3		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>
<b>EXPANSION JOINT DETAILS AT WEST SIDE OF EAST PYLON</b>				
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)				
BR. NO. CUY.-10-1618		STA. 22+19.19 STA. 55+04.56		
CUYAHOGA COUNTY		OHIO		
DRAWN C.K.B.	TRACED JLV	CHECKED R.A.S.	REVIEWED	REVISED 7-17-80
DATE 11-21-78	DATE 12-7-78	DATE 2-6-79	DATE	SHEET 41/72



**PART PLAN AT EAST ABUTMENT**  
(Neoprene seal support details not shown)  
(Floorbeam and stringer connections not shown)



**SECTION A-A**  
(Pro-Span System shown, Wabo Strip Seal System similar)



**SECTION E-E**

Notes:  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
Zip-a-tone indicates existing structure.  
For Sections B-B and C-C, see Sheet 43/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**EXPANSION JOINT DETAILS AT EAST ABUTMENT**  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

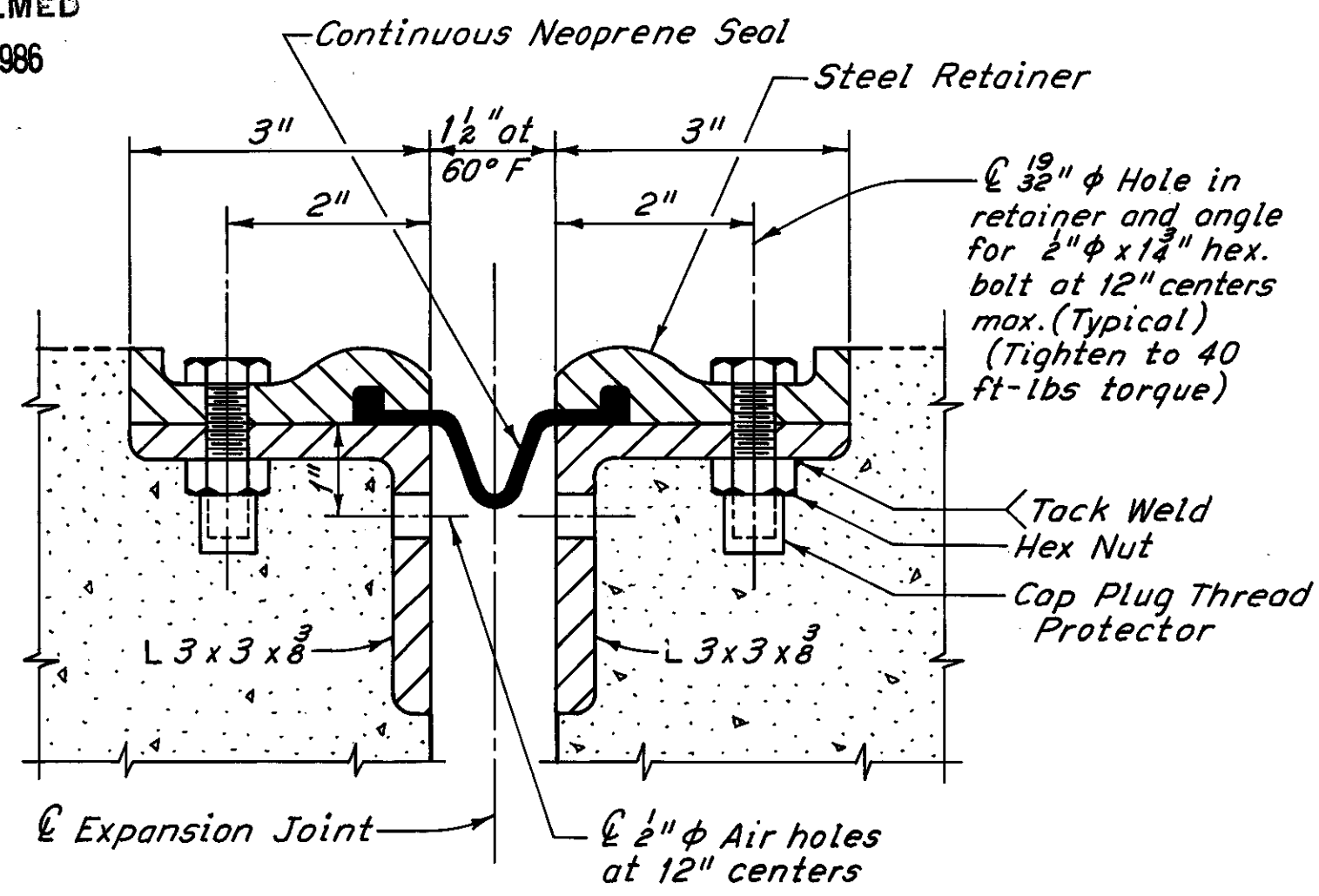
DRAWN C.K.B.	CHECKED J.L.S.	REVIEWED R.A.S.	DATE 11/20/76	DATE 11/27/76	DATE	DATE	OHIO REVISED 7-17-80 SHEET 42/72
-----------------	-------------------	--------------------	------------------	------------------	------	------	--

MICROFILMED  
DEC 5 1986

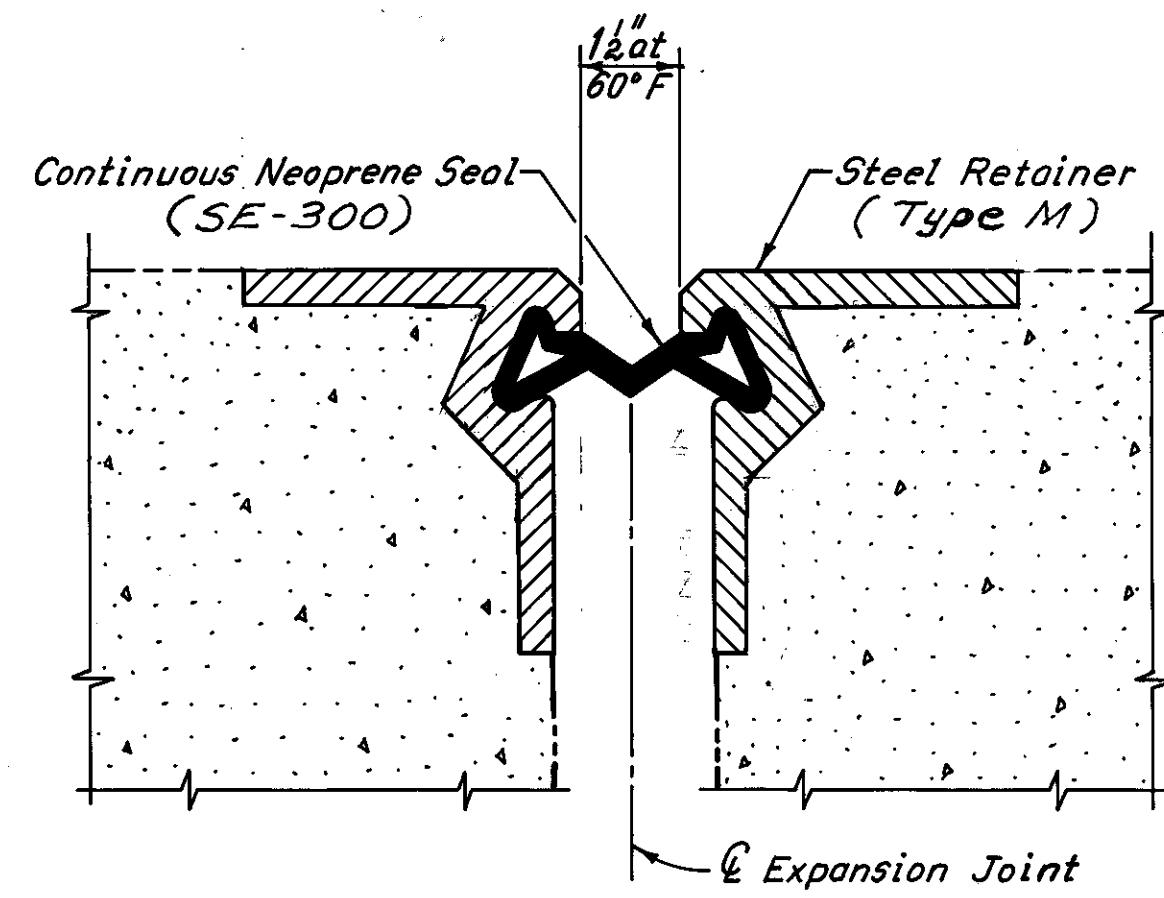
FHWA REGION	STATE	PROJECT
5	OHIO	

118  
185

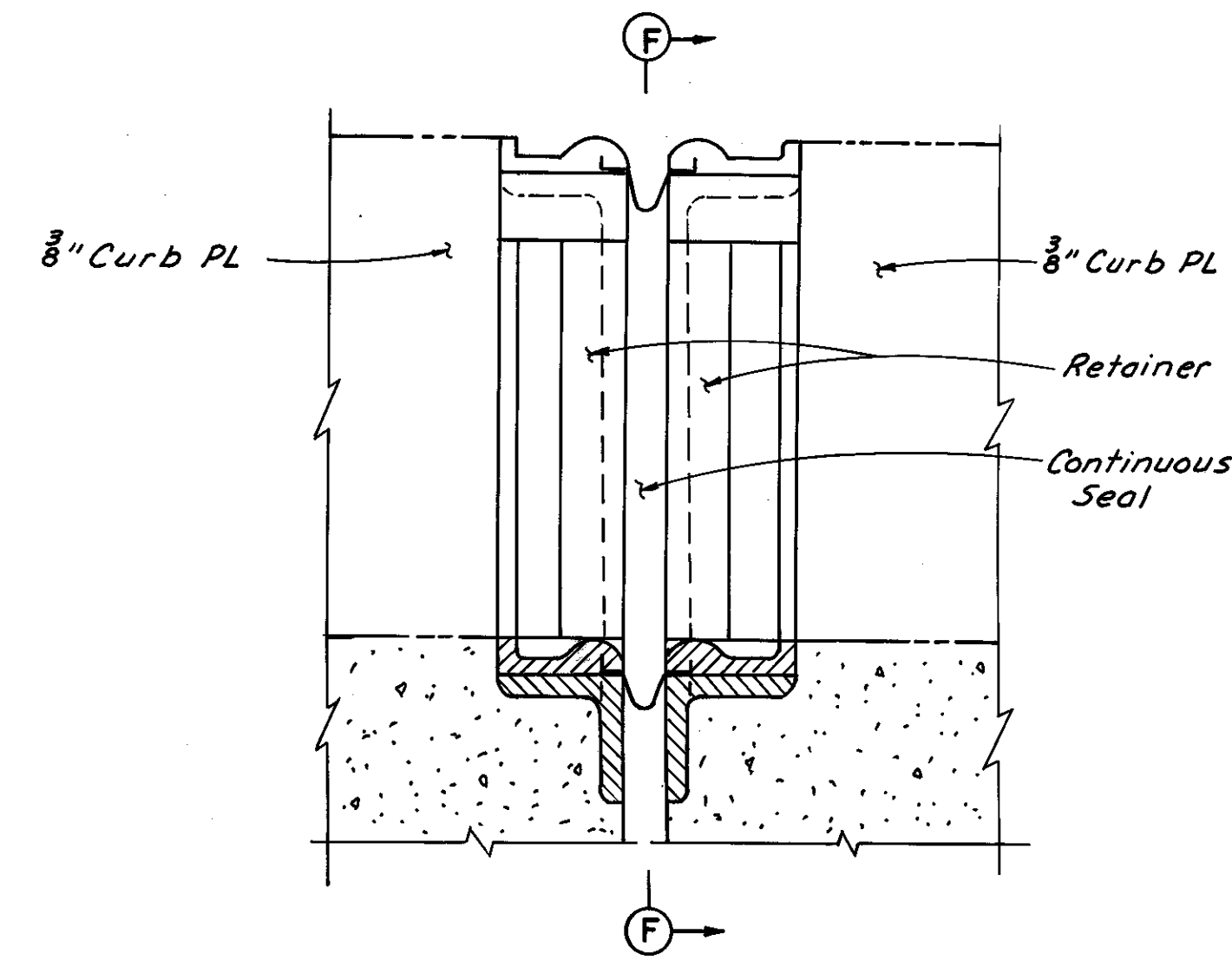
CUYAHOGA COUNTY  
CUY-10-16.23



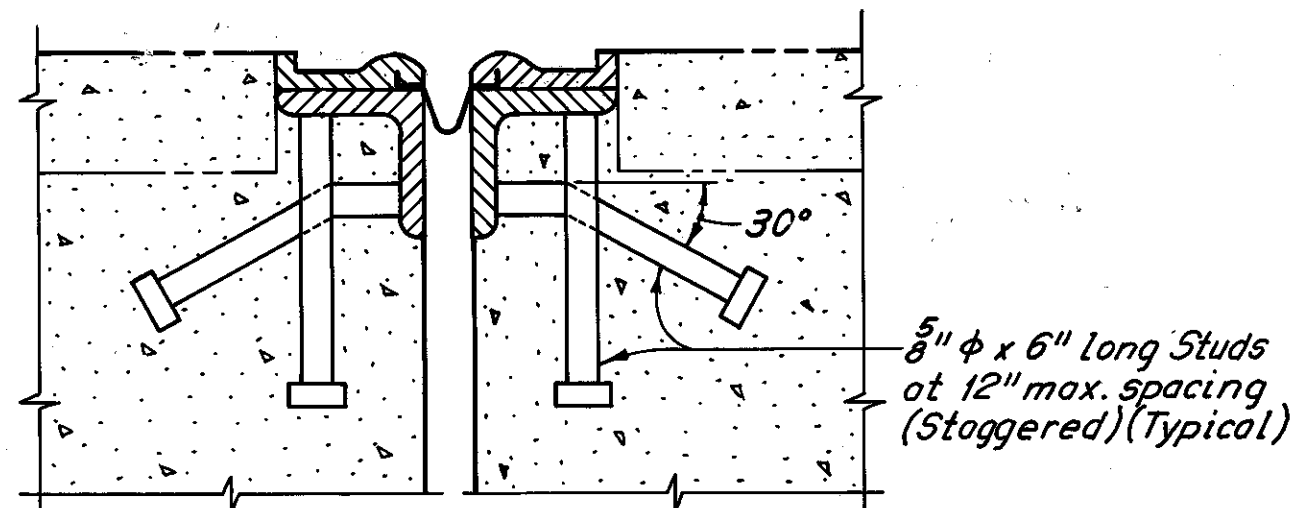
**DETAIL D**  
(Support details not shown) (Pro-Span Strip Sealing System or approved alternate)



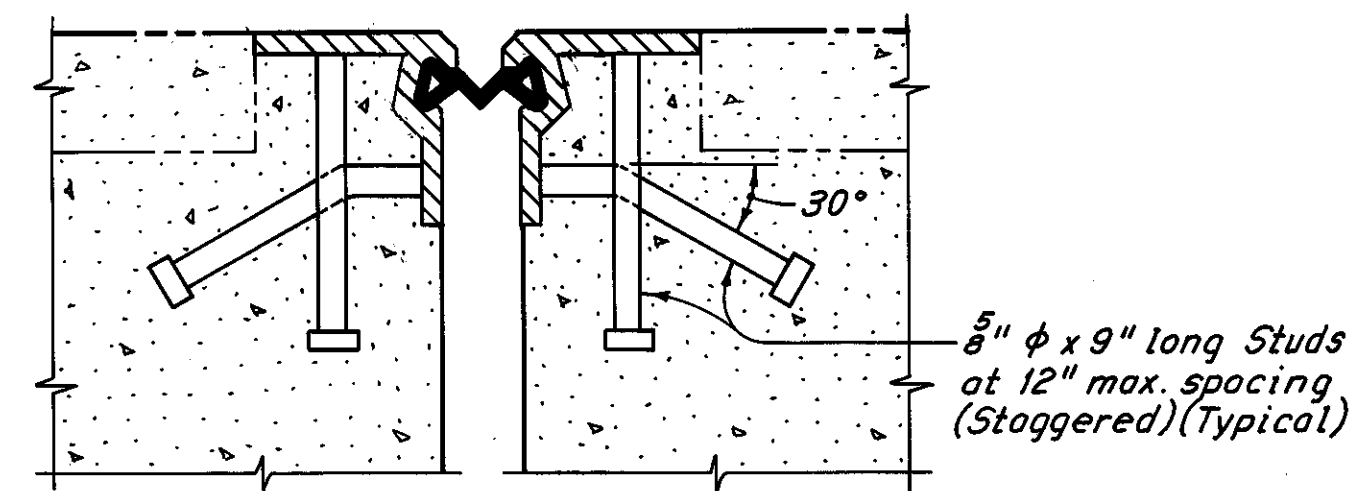
**DETAIL D**  
(Support details not shown) (Wabo Strip Seal System or approved alternate)



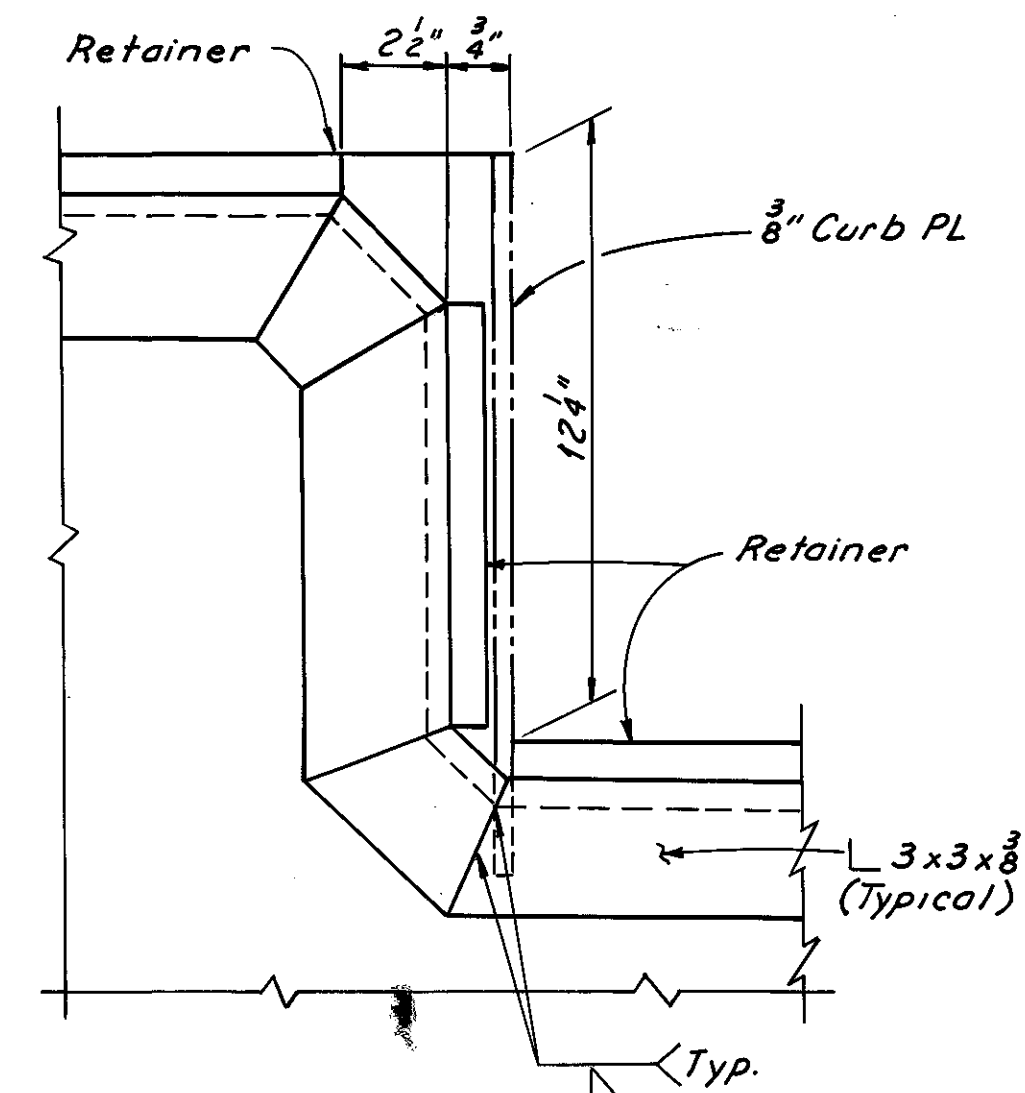
**SECTION B-B**  
(Pro-Span System shown, Wabo Strip Seal System similar)



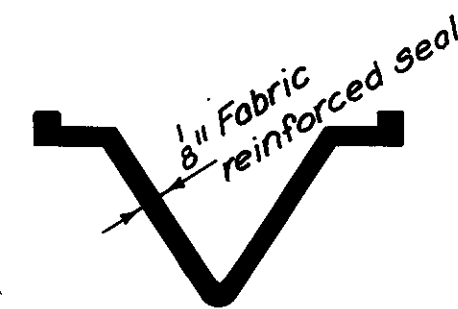
**SECTION C-C**  
(For additional details, see Detail D, Pro-Span Sealing System)



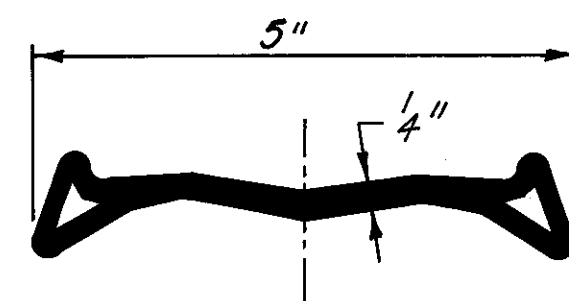
**SECTION C-C**  
(For additional details, see Detail D, Wabo Strip Seal System)



**SECTION F-F**  
(Neoprene Seal not shown) (Pro-Span System shown, Wabo Strip Seal System similar)



**CONTINUOUS SEAL DETAIL**  
(Pro-Span System or approved alternate)



**SEAL STRIP DETAIL**  
(Wabo Strip Seal System or approved alternate)

Notes:  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
For locations of Section B-B and C-C, and Detail D, see Sheets 40/72, 41/72 or 42/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

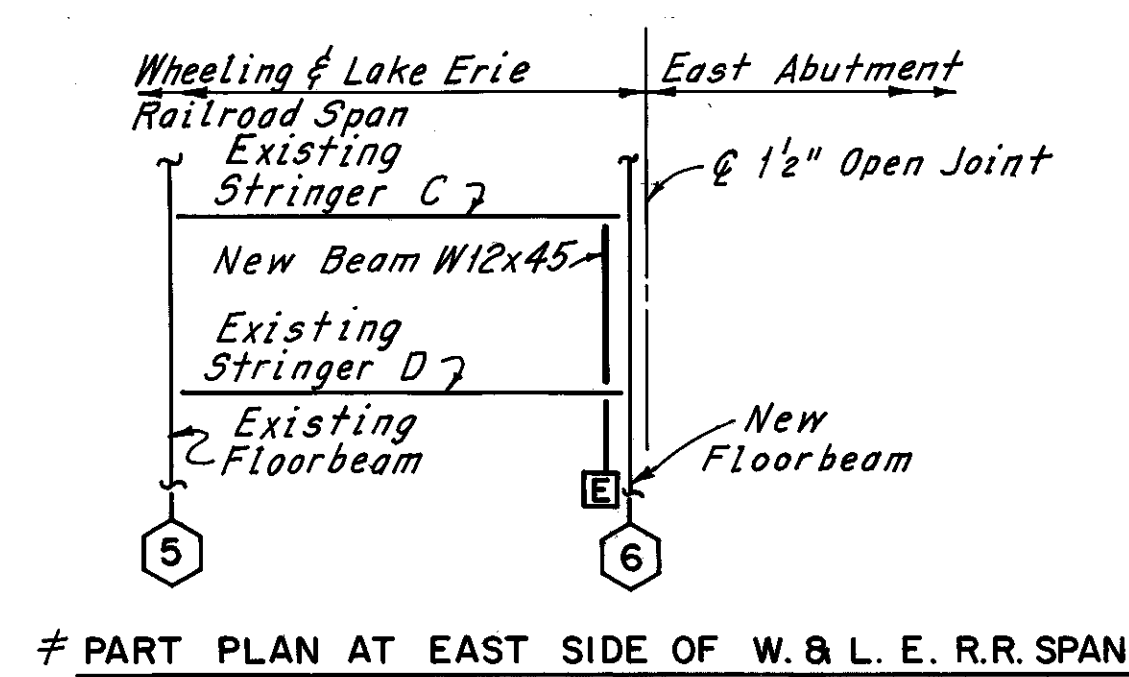
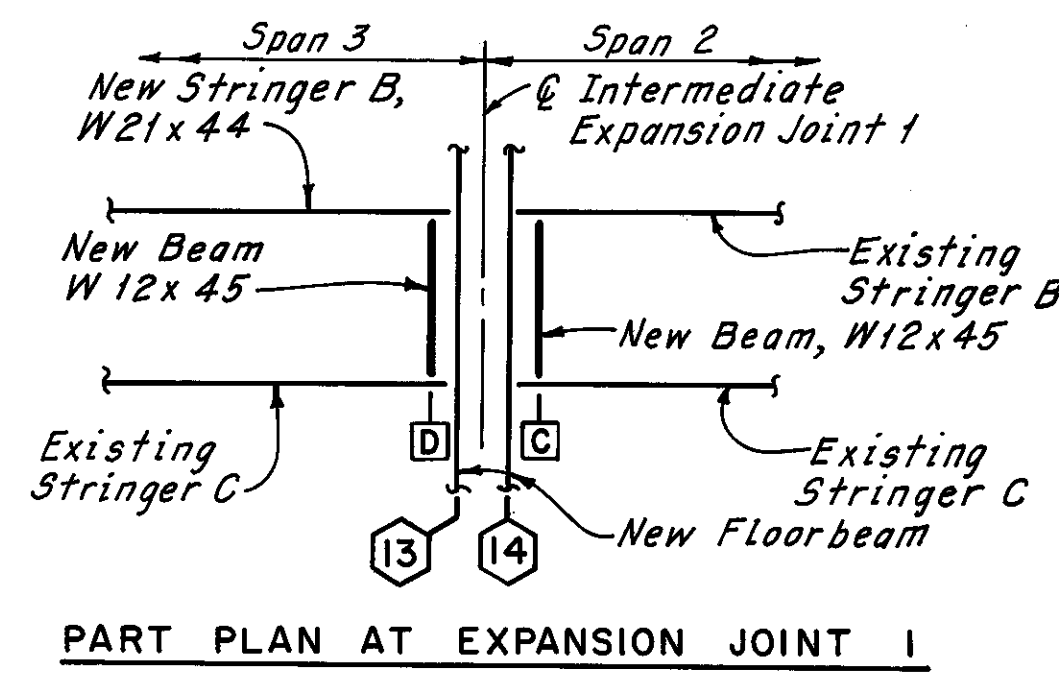
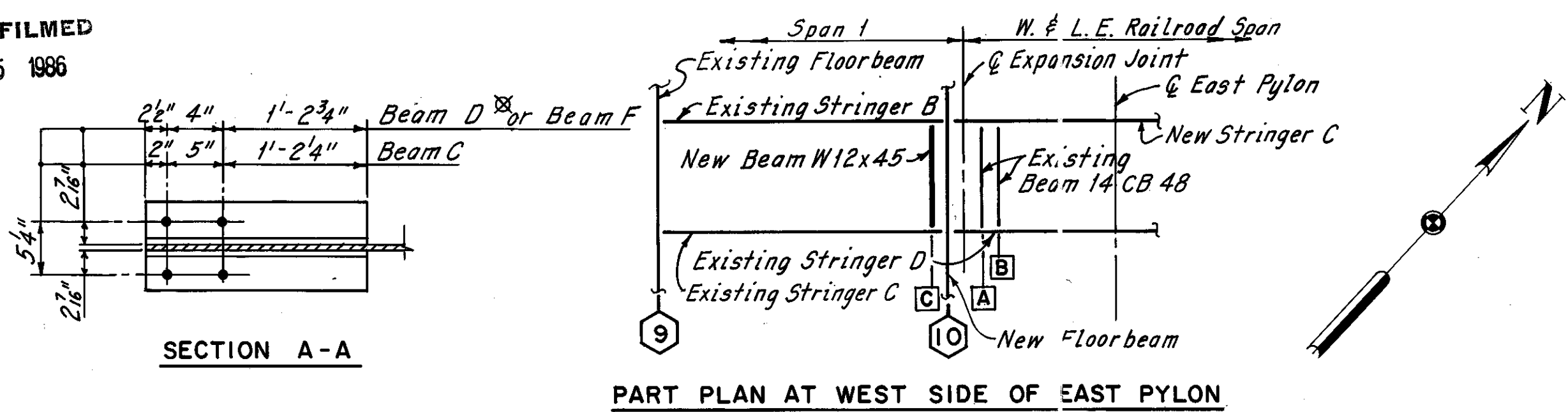
**HNTB**

**EXPANSION JOINT DETAILS AT PYLONS AND EAST ABUTMENT**  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

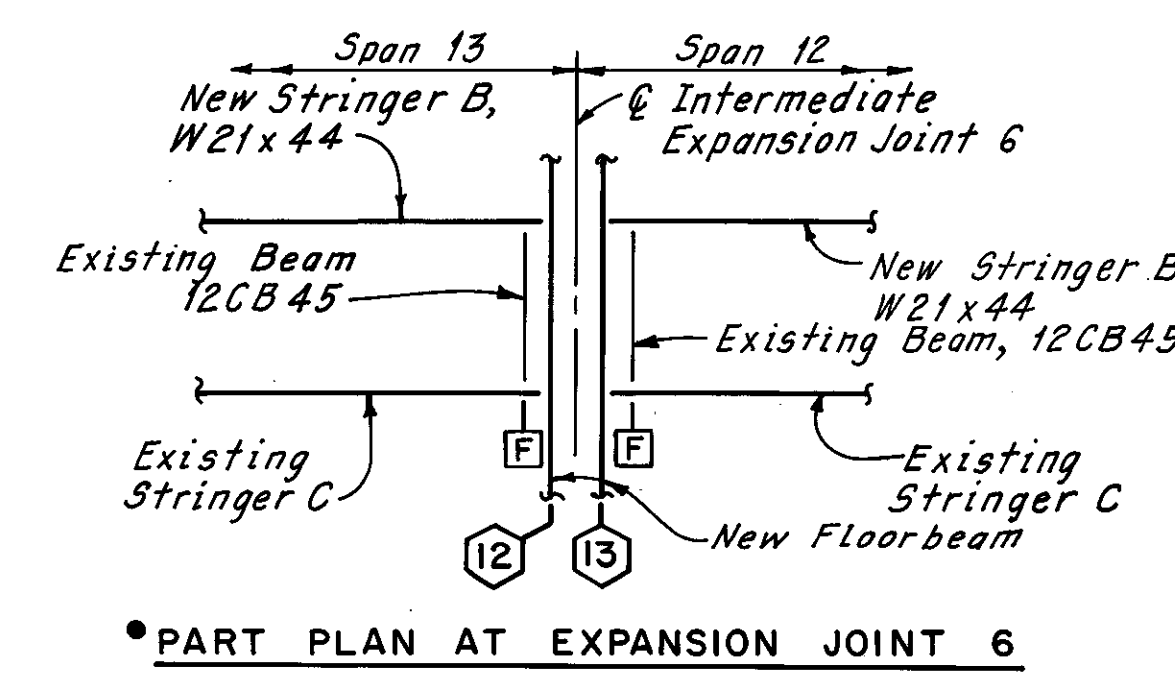
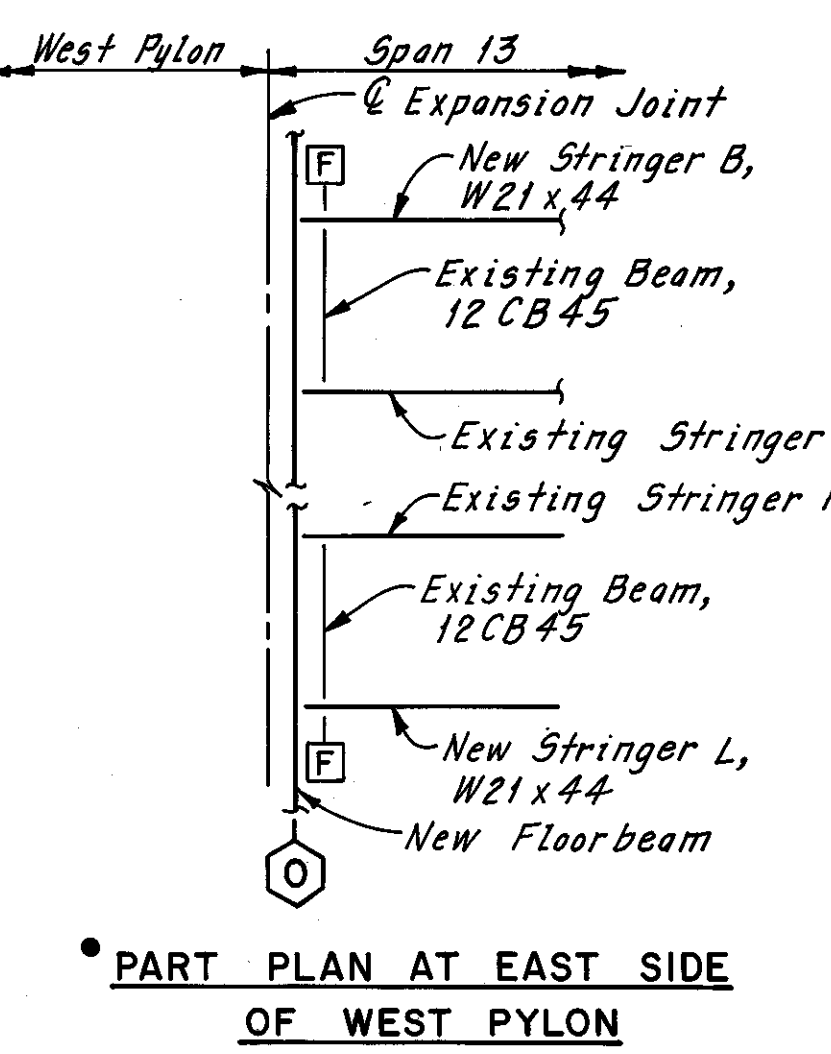
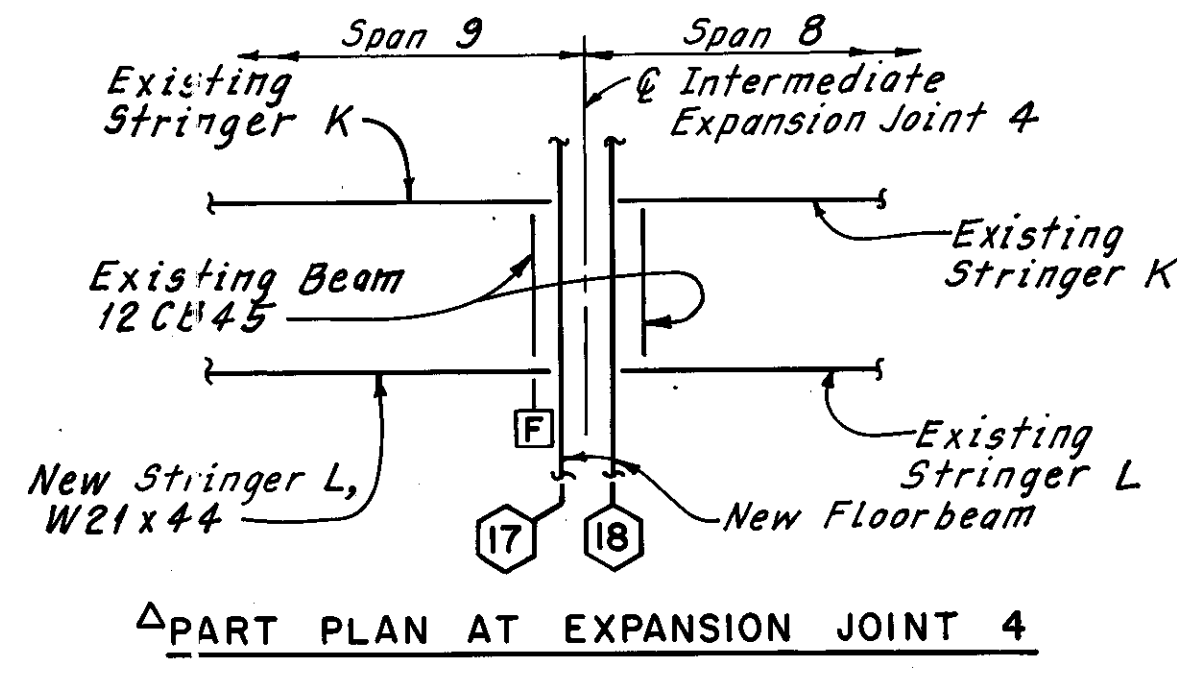
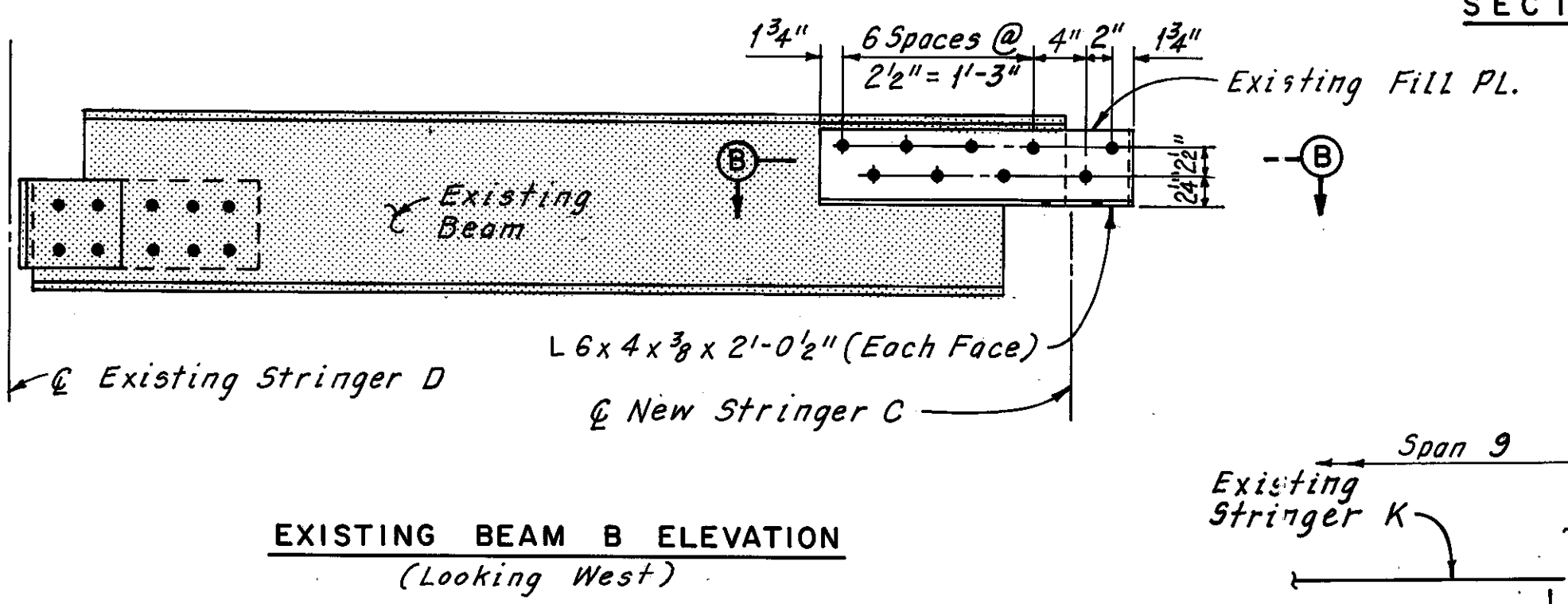
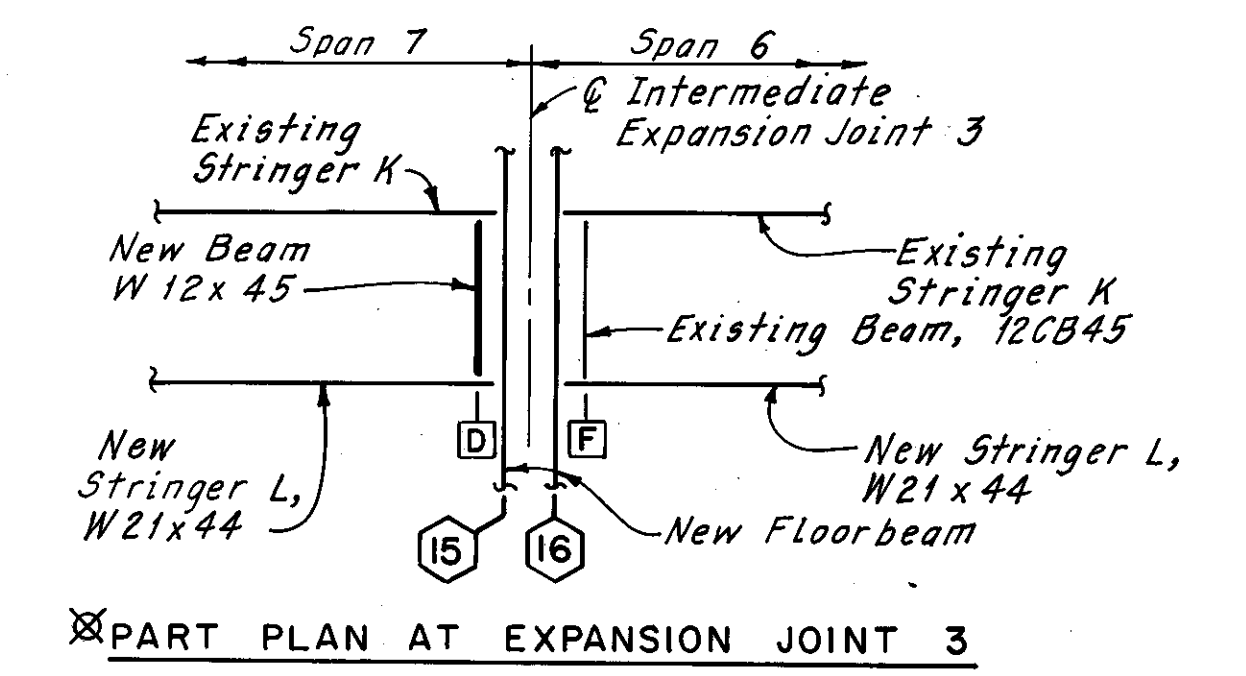
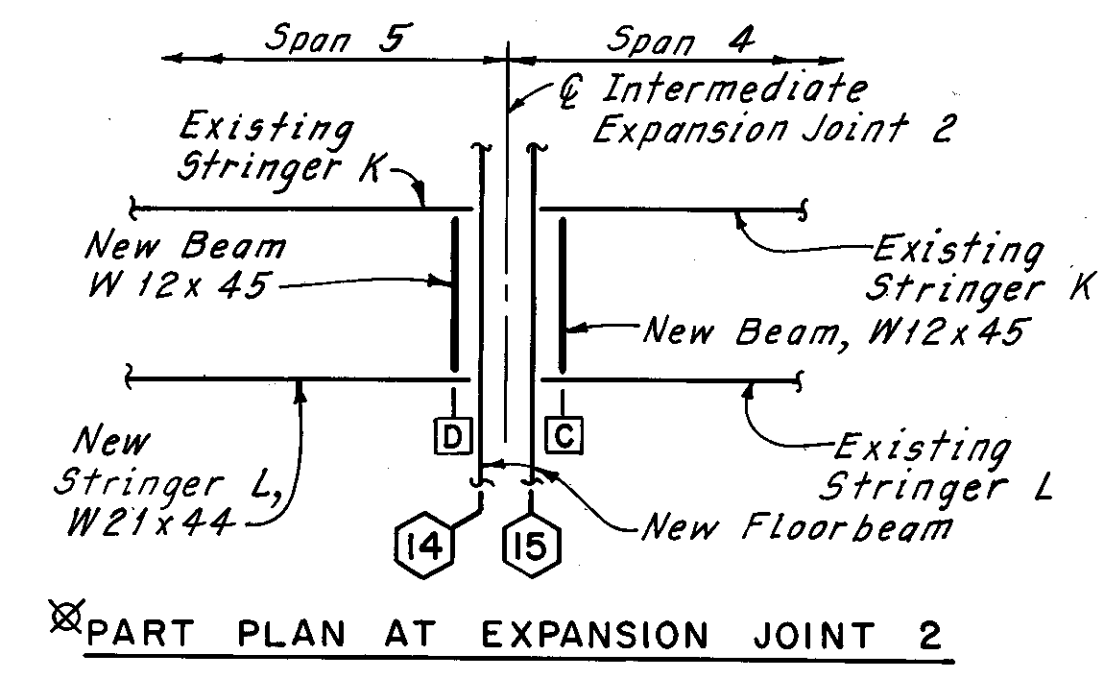
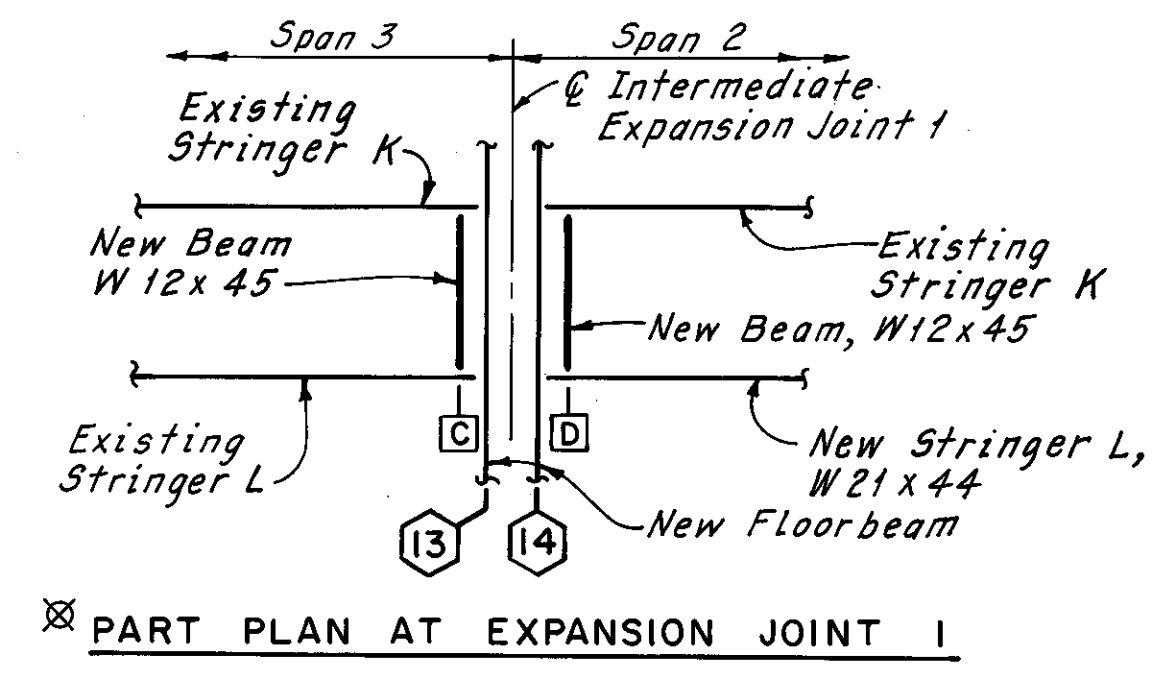
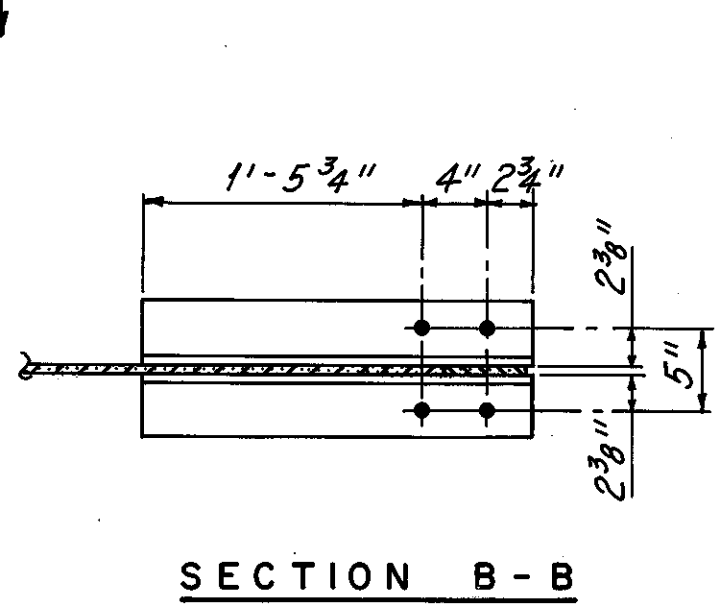
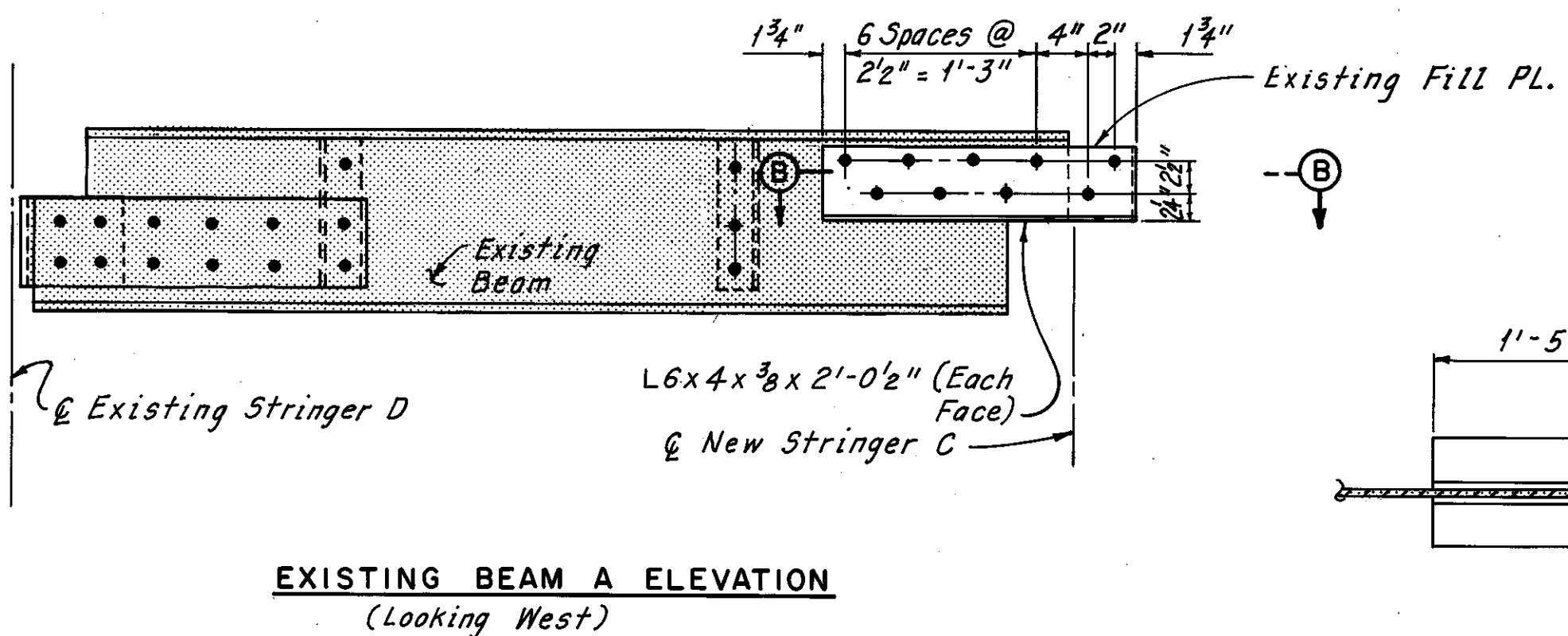
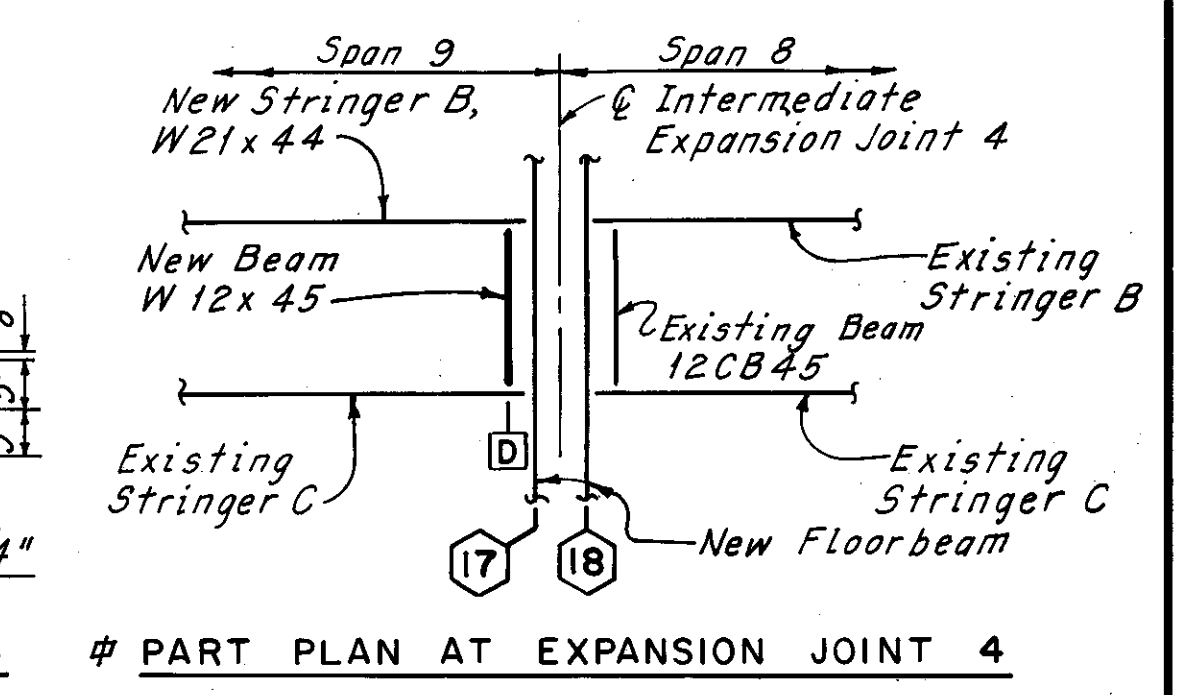
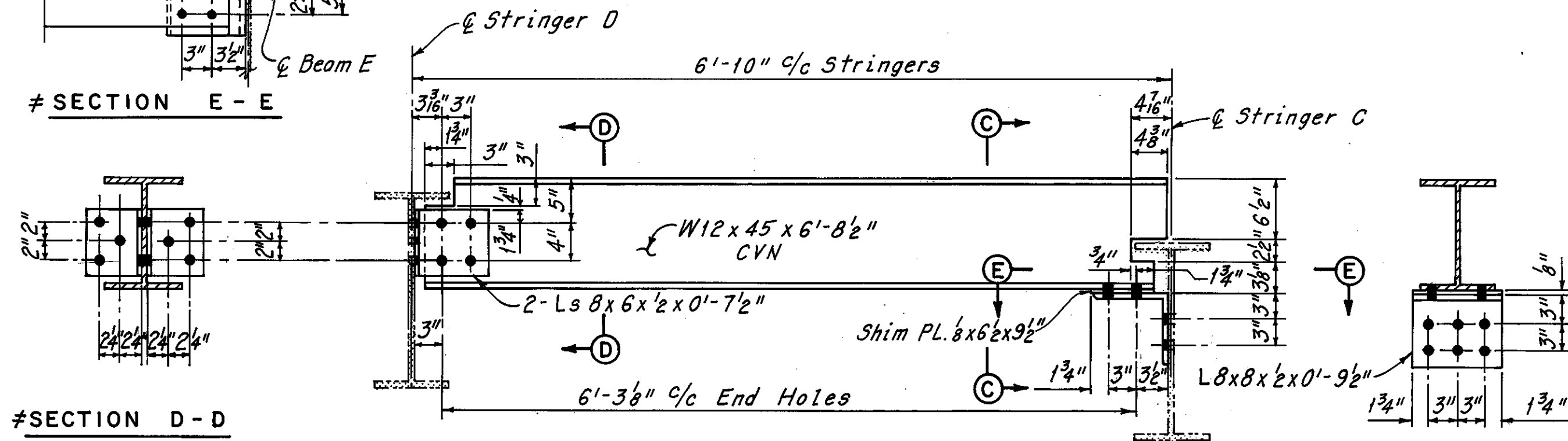
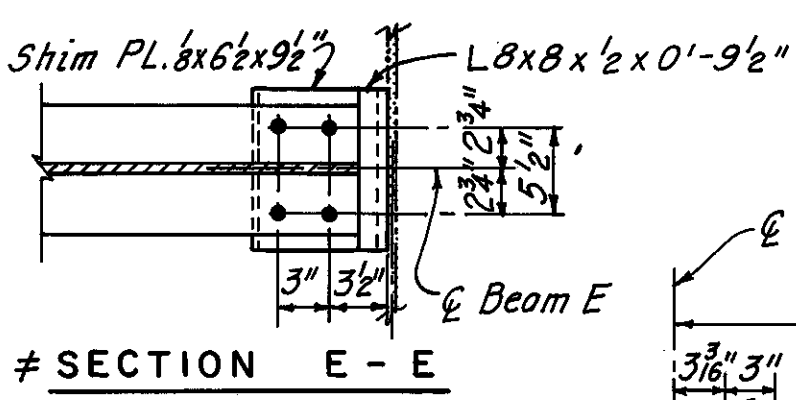
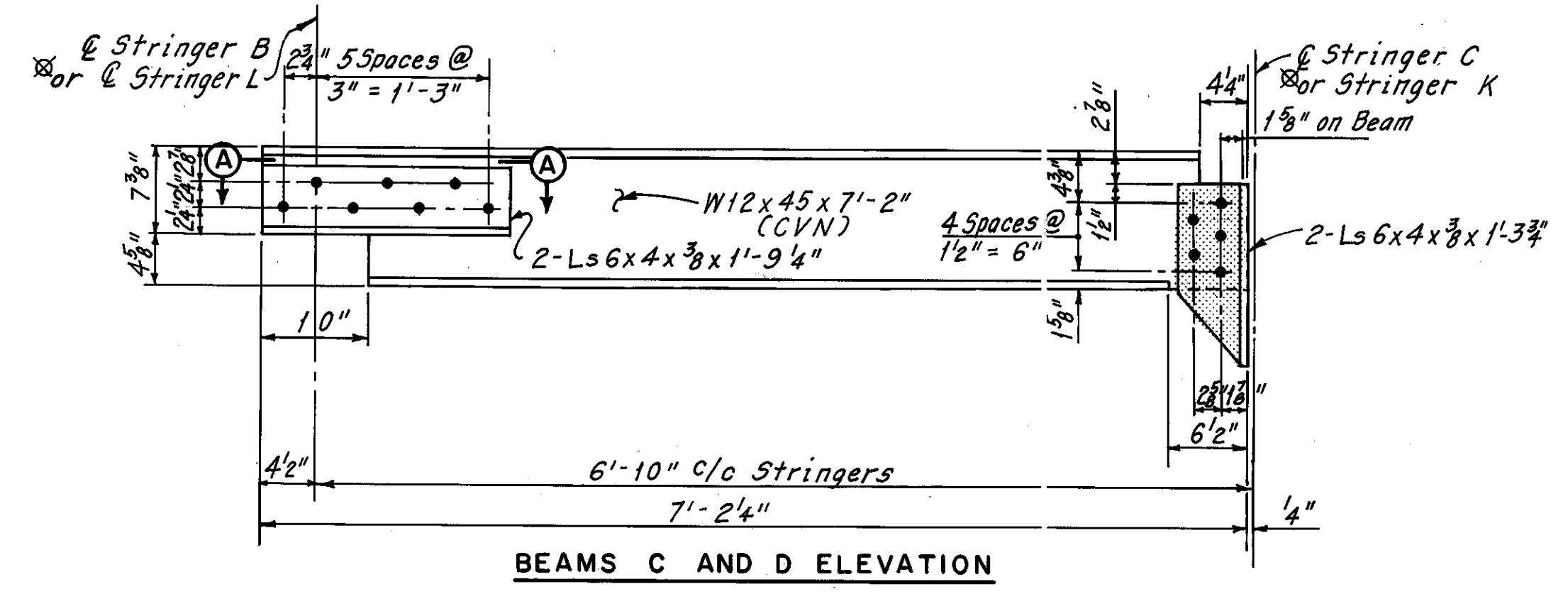
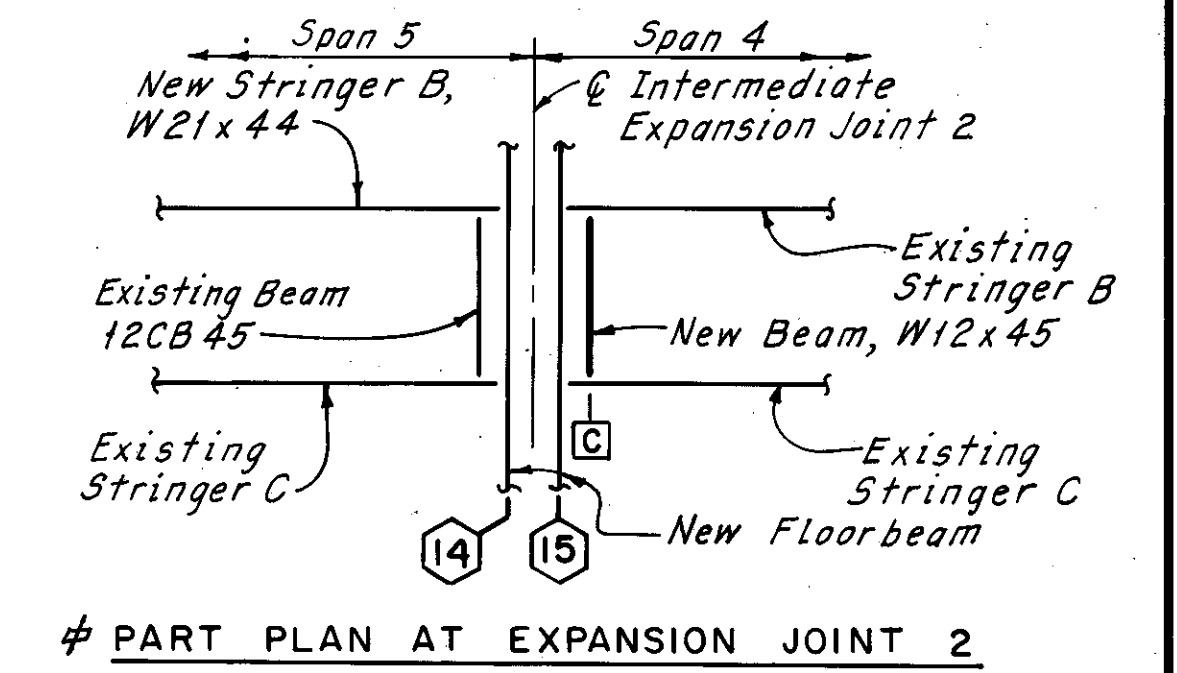
DRAWN C.K.B.	TRACED J.L.V.	CHECKED R.A.S.	REVIEWED	REVISED 7-17-80
DATE 11/18/78	DATE 11/27/78	DATE 1/29/79	DATE	SHEET 43/72

MICROFILMED  
DEC 5 1986

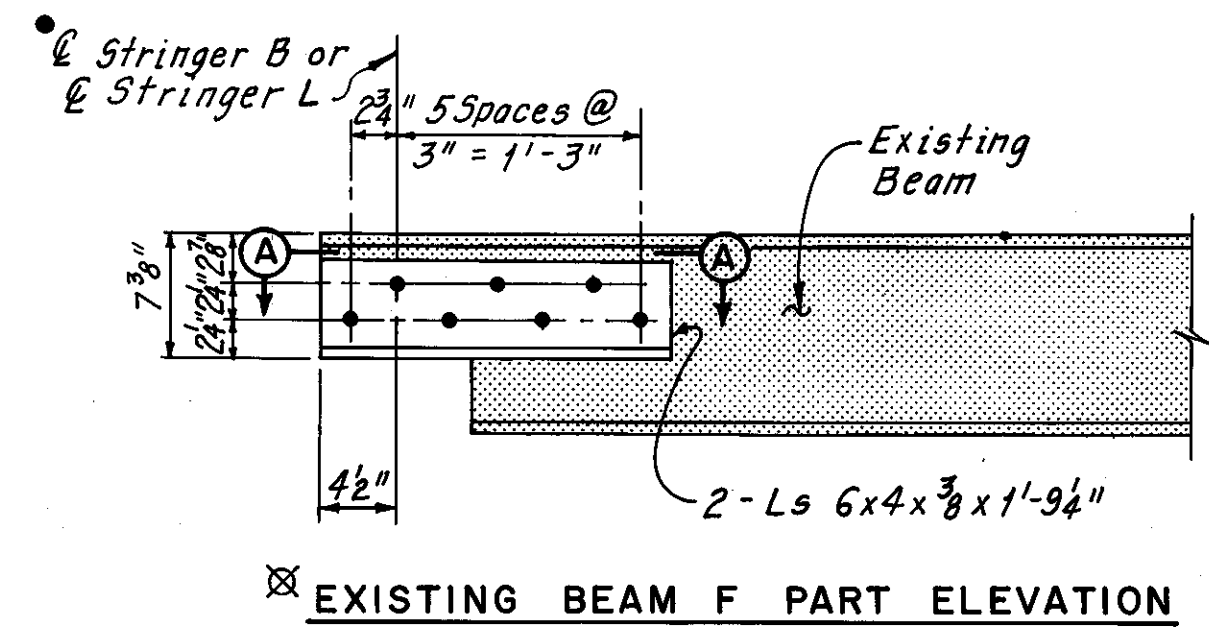


FHWA REGION	STATE	PROJECT
5	OHIO	

CUYAHOGA COUNTY  
CUY-10-16.23



Notes:  
 ○ Denotes floorbeam identification number.  
 □ Denotes beam identification.  
 Zip-a-tone indicates existing structure and existing connection angle to be retained.  
 All bolts are 1 1/4" High Strength Bolts, with 1/8" holes.  
 For C.V.N., see Sheet 28/72.  
 For Member Identification Plans, see Sheets 5/72 thru 9/72.



H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
ENGINEERS  
CLEVELAND

**HNTB**

EXPANSION JOINT BEAM REPLACEMENT AND MODIFICATION DETAILS (AS DETERMINED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN/C.P.	TRACED/C.P.	CHECKED/W.E.B.	REVIEWED	REVISED
DATE 5-19-81	DATE 5-20-81	DATE 6-2-81	DATE	DATE

SHEET 43A/72

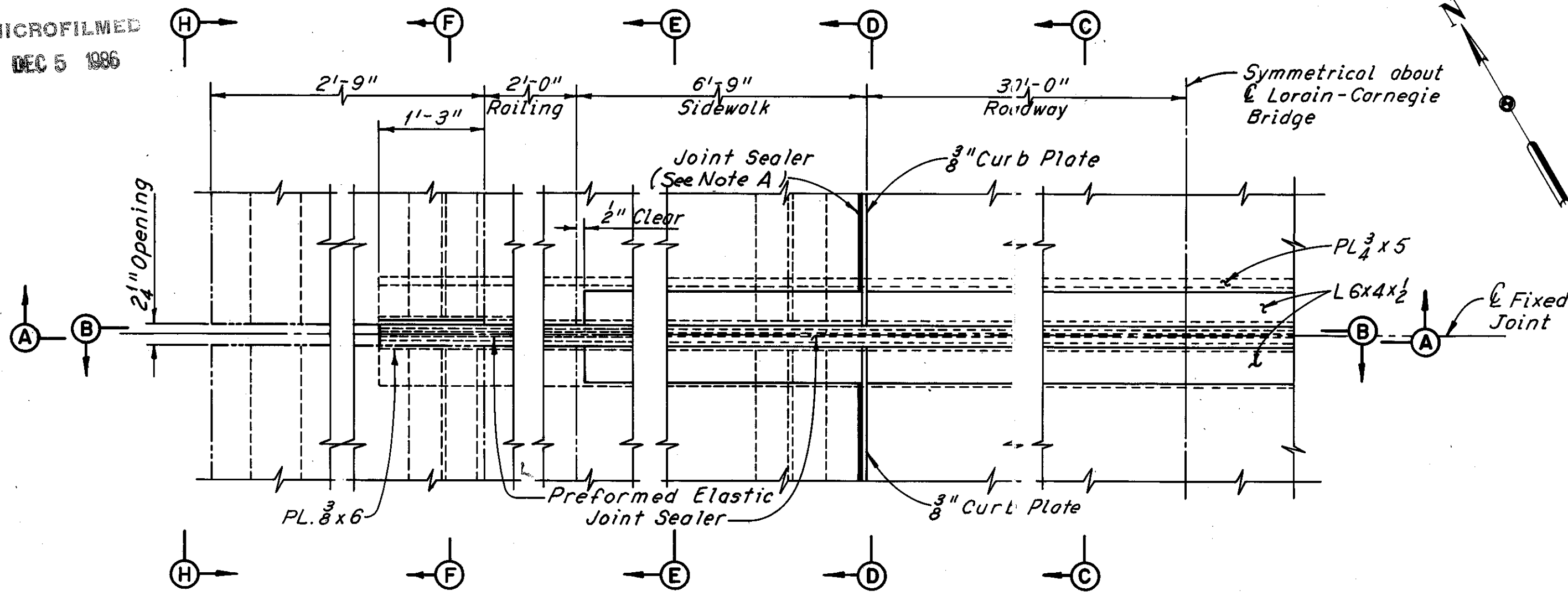
Sheet added 12-5-83

Δ Additional Angle Replacement As Determined During Bridge Reconstruction	W.E.B.	10-22-82
• Additional Angle Replacement As Determined During Bridge Reconstruction	R.H.W.	4-5-82
⊗ Additional Beam Replacement As Determined During Bridge Reconstruction	R.H.W.	3-29-82
# Additional Beam Replacement As Determined During Bridge Reconstruction	C.P.	8-18-81
# Additional Beam Replacement As Determined During Bridge Reconstruction	C.P.	7-30-81

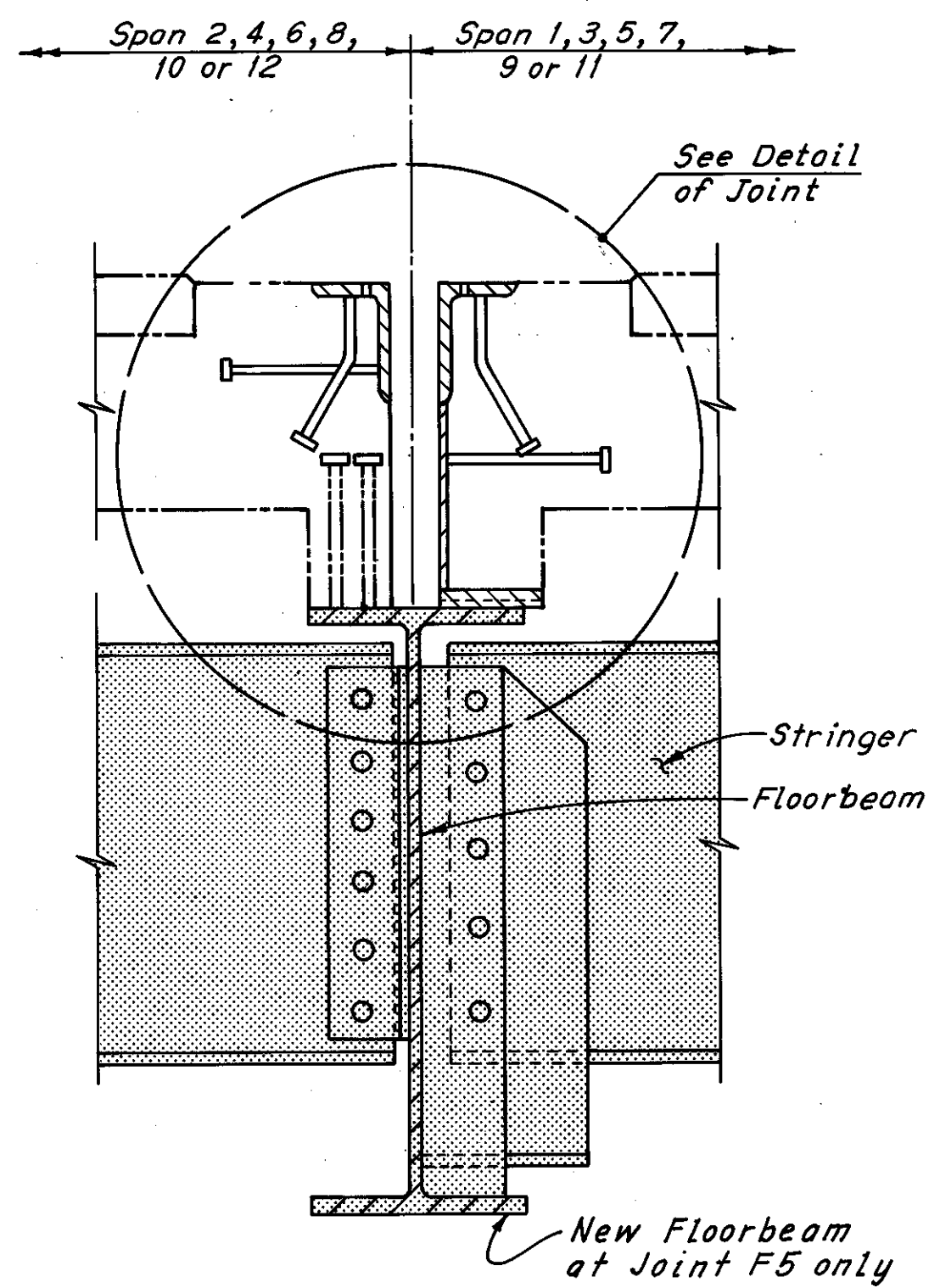
REVISION

FHWA REGION	STATE	PROJECT
5	OHIO	

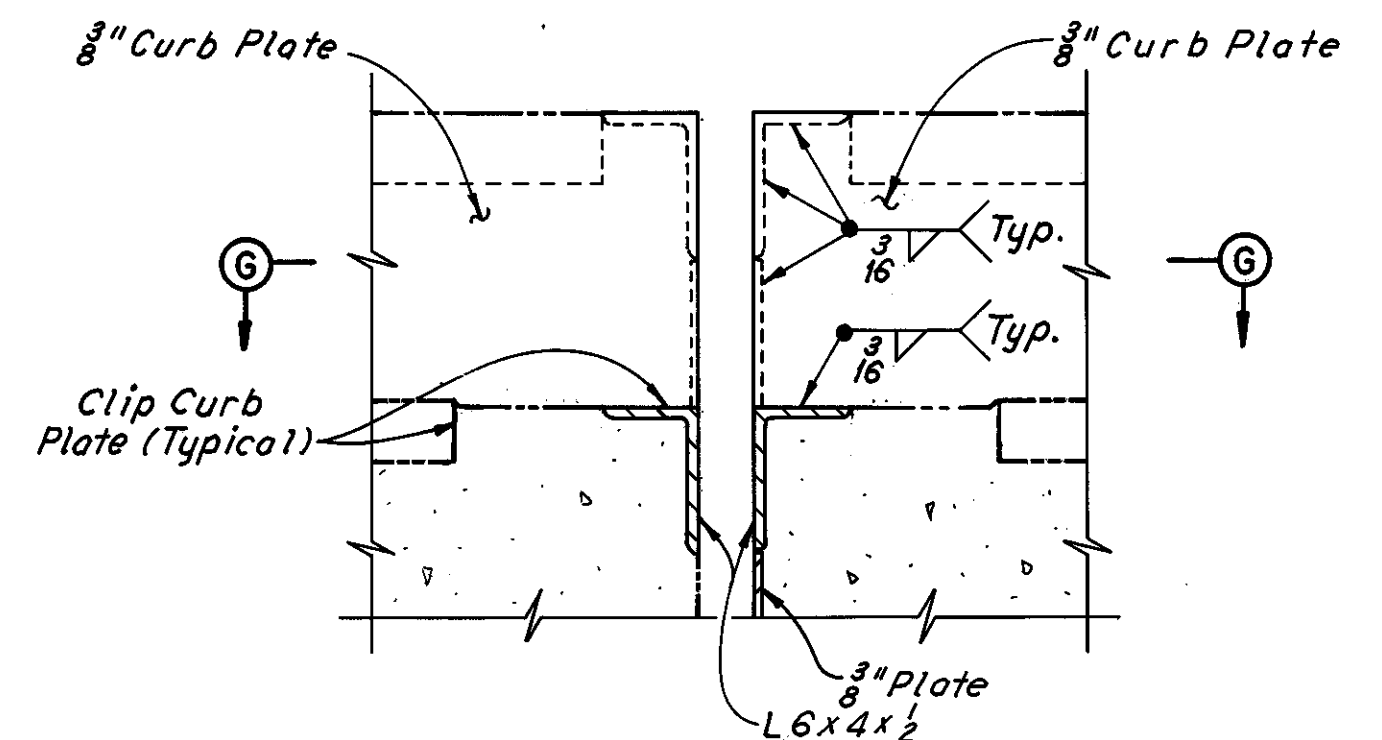
CUYAHOGA COUNTY  
CUY-10-16.23



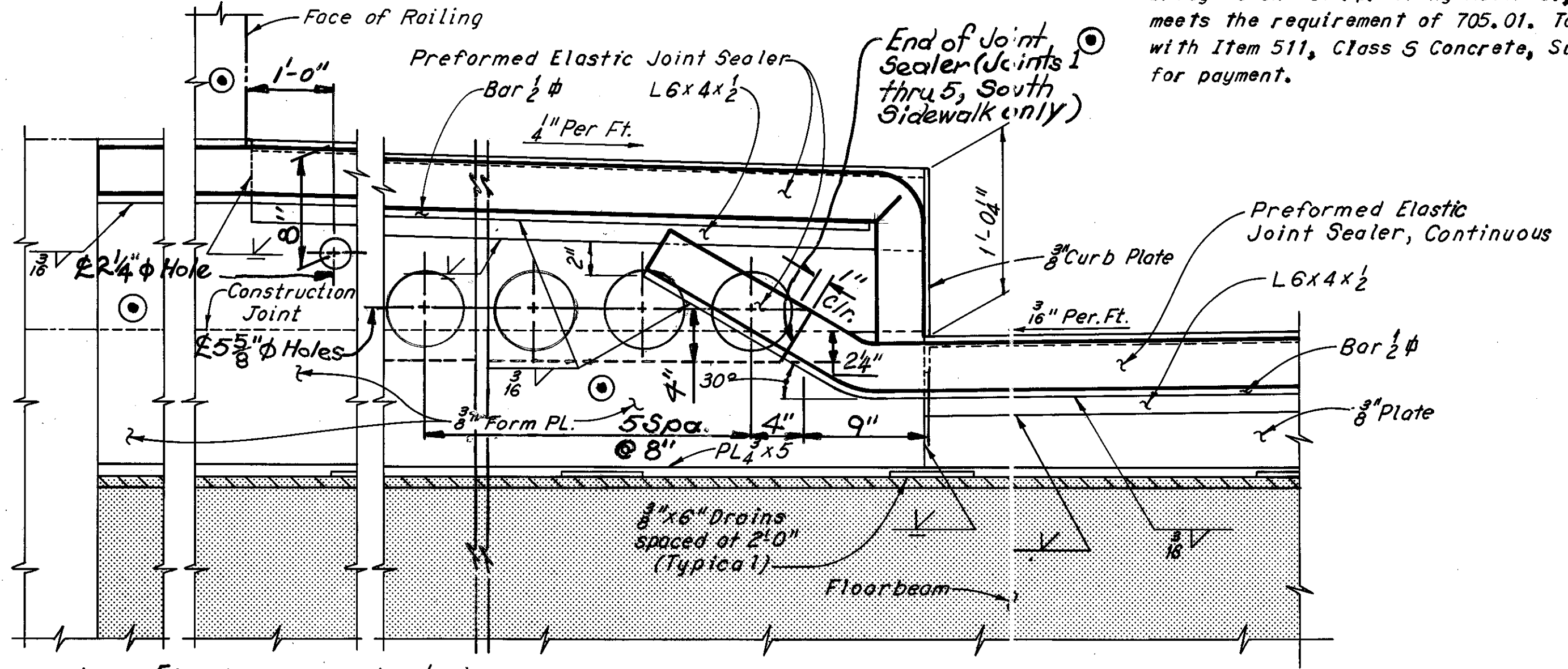
**PART PLAN**  
(Anchor Studs not shown)



**SECTION C-C**

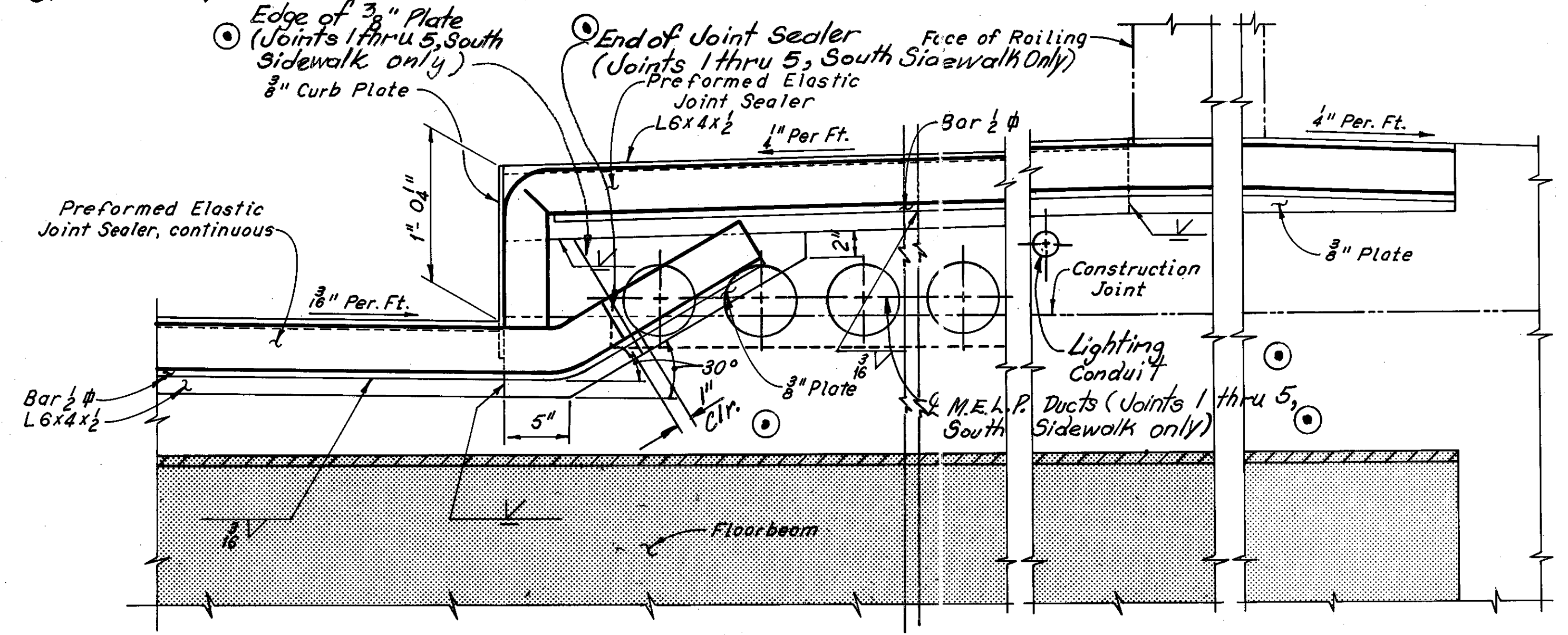


**SECTION D-D**  
(Joint Sealer not shown)  
For details not shown, see section C-C.

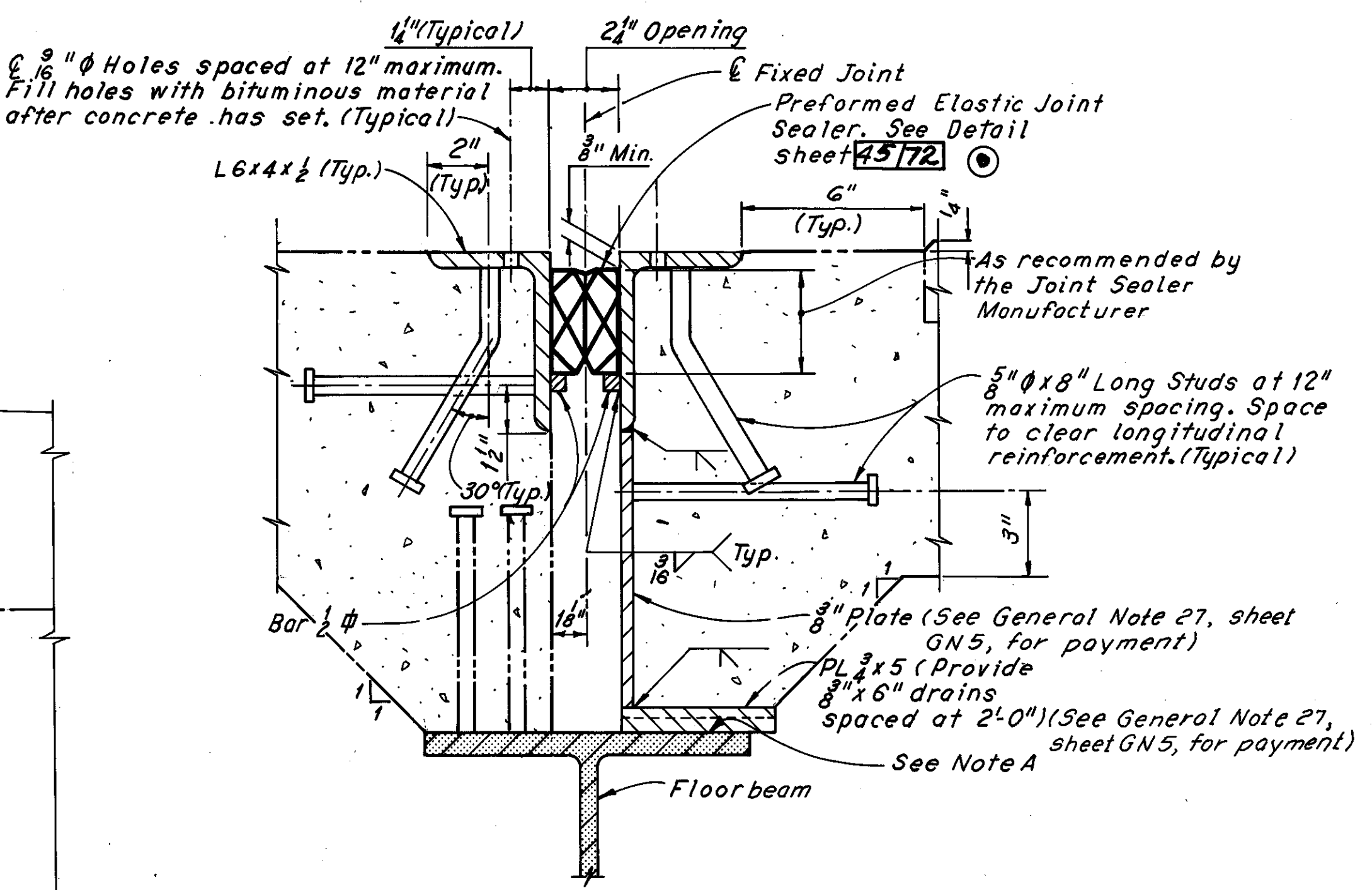


**PART SECTION A-A**

Note: 5 5/8" phi Holes are located at Joints 1 thru 5, South Sidewalk only.



**PART SECTION B-B**



**DETAIL OF JOINT**  
(Deck reinforcement not shown)

Note A:  
This contact surface shall not be painted but shall be cleaned and lubricated with flake graphite in the field immediately prior to placing of PL 3/4 x 5.

Notes:  
Zip-a-tone indicates existing structure, except as noted.  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
For Sections E-E, F-F, and H-H and View G-G, see Sheet 45/72.  
For location of fixed joints, see Sheets 1/72 and 2/72.

Rev. 12-24-81

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

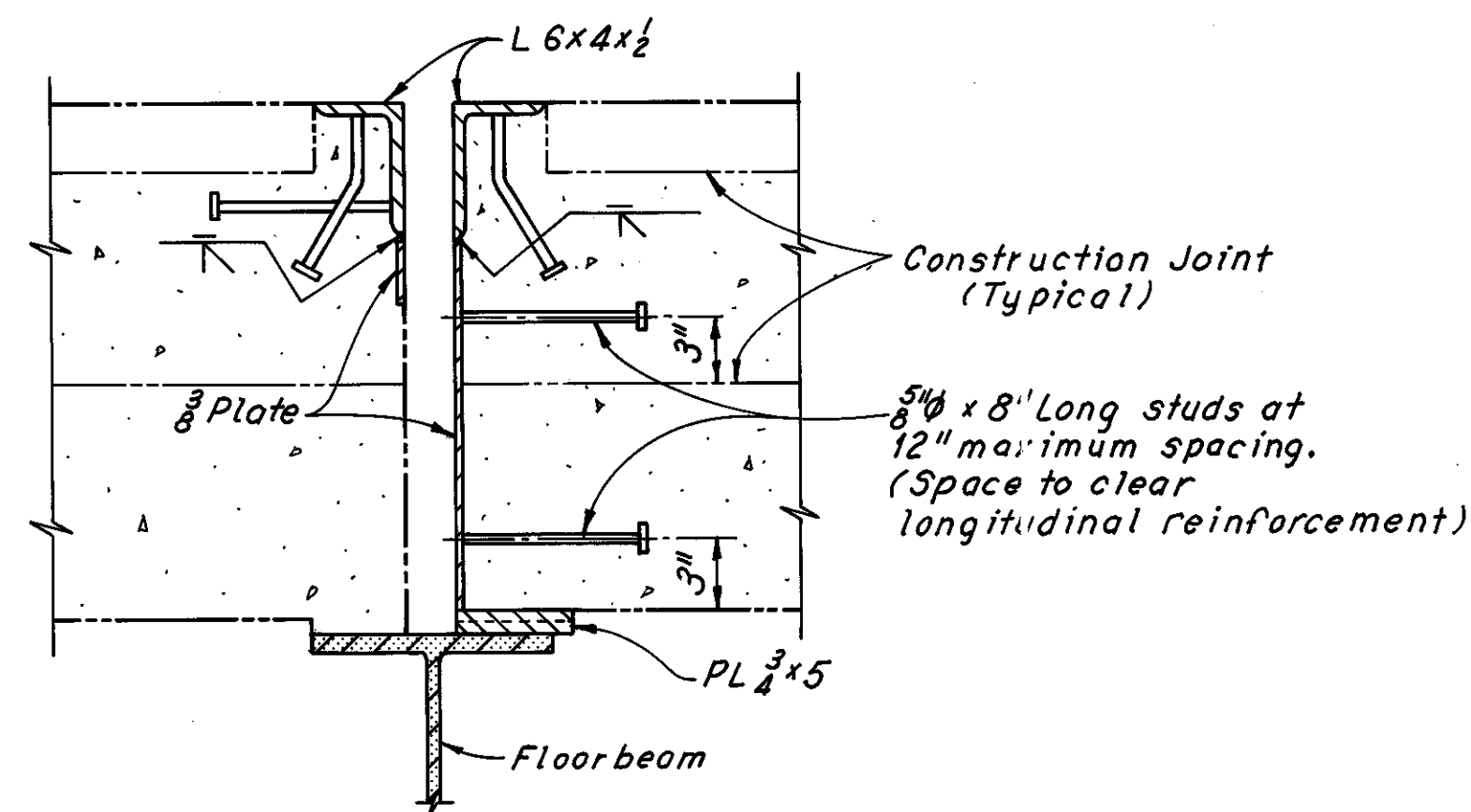
**FIXED JOINT DETAILS**  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO

DRAWN C.K.B. DATE 4-5-78	TRACED D.L.R. DATE 4-7-78	CHECKED R.A.S. DATE 5-11-78	REVIEWED DATE	REVISED DATE
--------------------------------	---------------------------------	-----------------------------------	------------------	-----------------

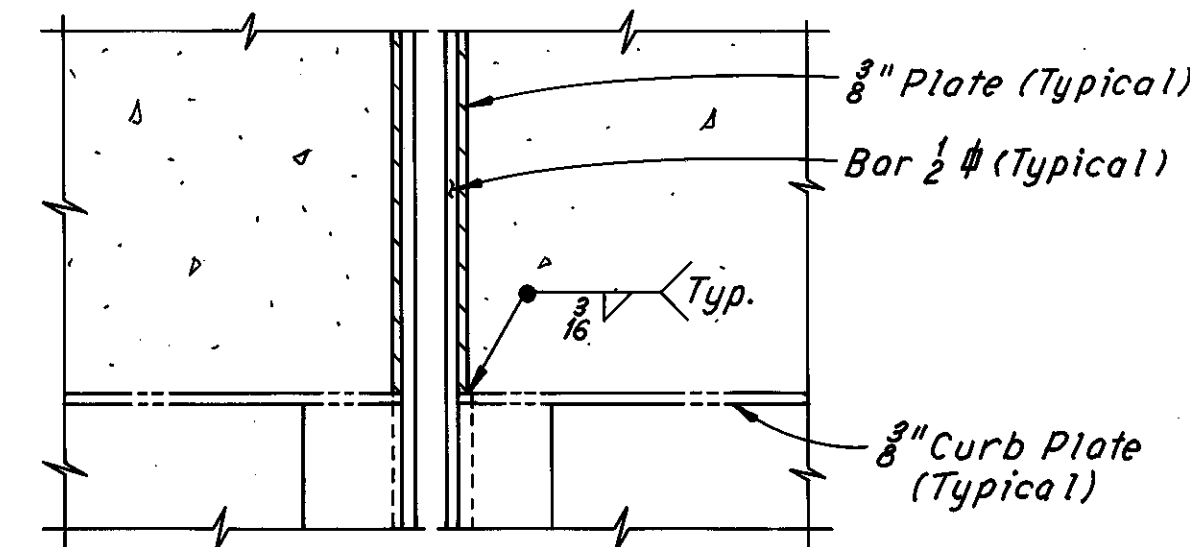
SHEET 44/72

FHWA REGION	STATE	PROJECT	
5	OHIO		

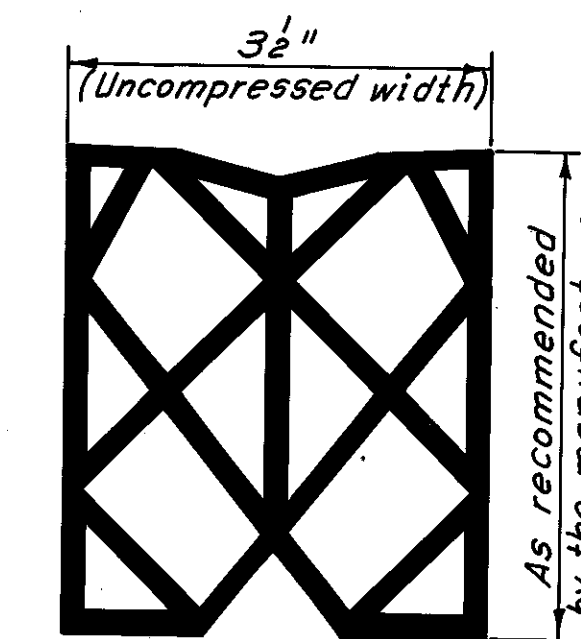
CUYAHOGA COUNTY  
CUY-10-16.23



**SECTION E-E**  
(Joint sealer and floorbeam studs not shown)  
(For details not shown see Section C-C Sheet 44/72.)

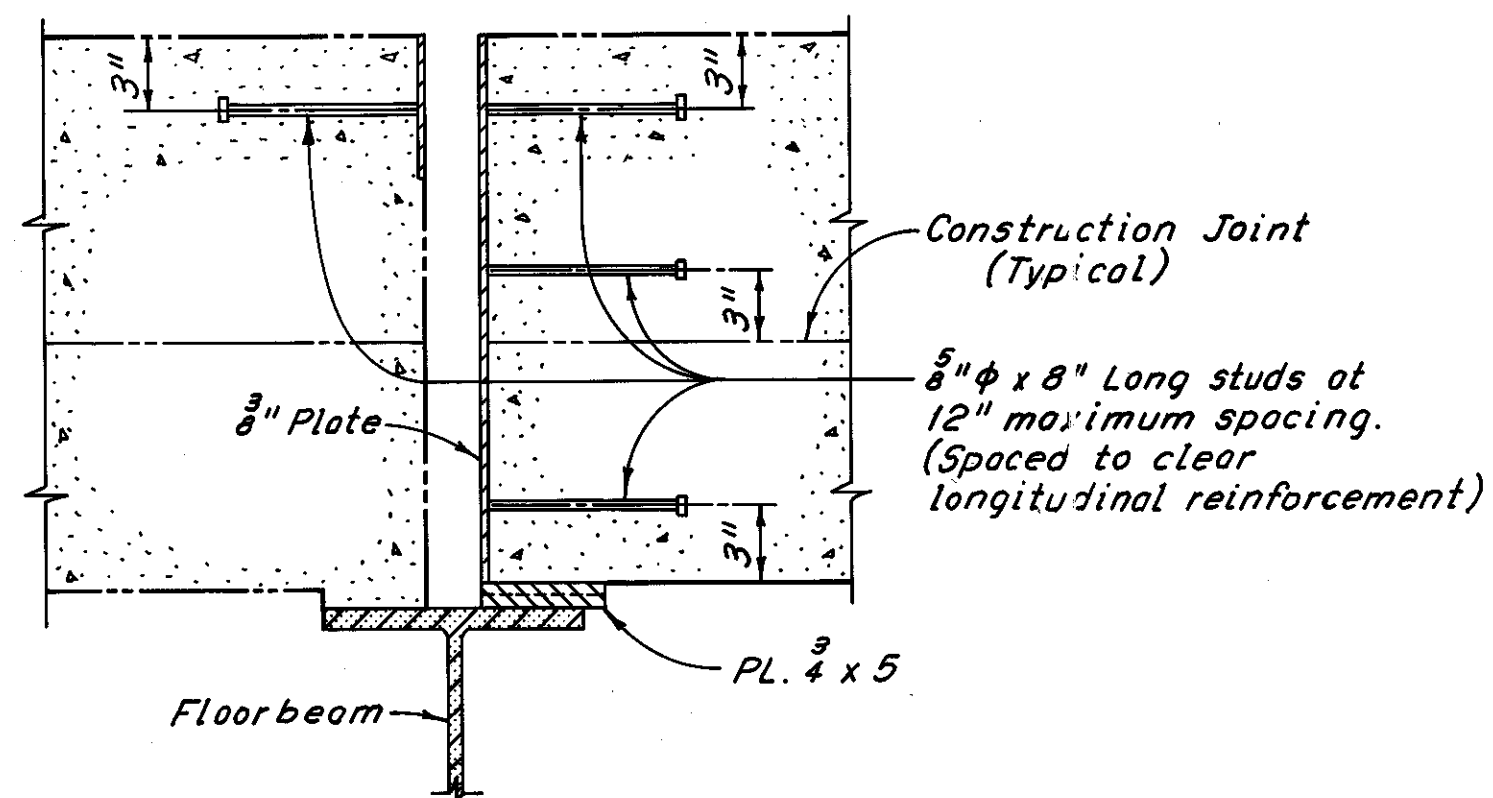


**SECTION G-G**  
(Joint sealer and reinforcement not shown)

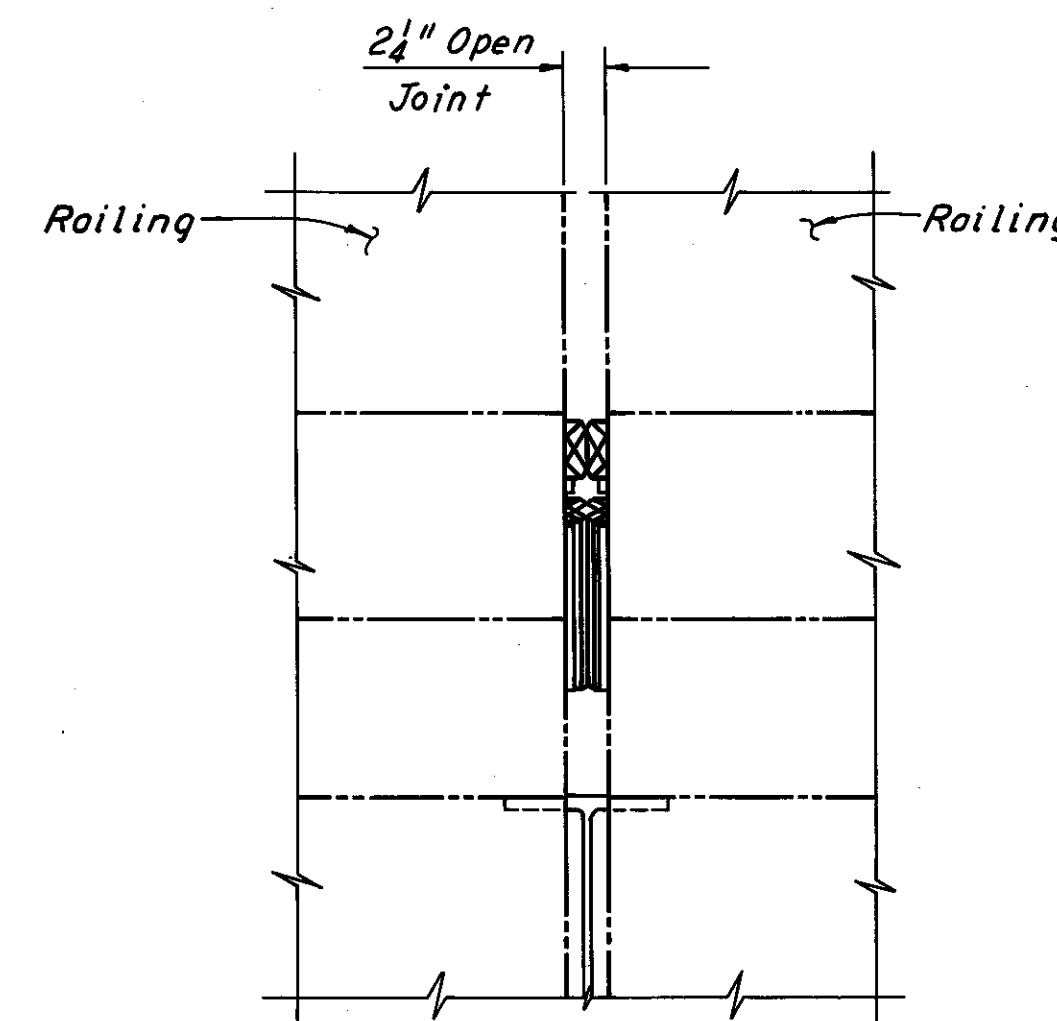


**PREFORMED ELASTIC JOINT SEALER**

Note:  
The preformed elastic joint sealer shall meet the requirements of Item 705.11 of "Construction and Material Specifications".



**SECTION F-F**  
(Floorbeam studs and reinforcement not shown)



**VIEW H-H**

Notes:  
For location of Sections E-E, F-F, and H-H and View G-G, see Sheet 44/72.  
For additional notes, see Sheet 44/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**FIXED JOINT DETAILS**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
C.K.B.	D.L.R.	R.A.S.		
DATE 4-5-78	DATE 4-7-78	DATE 5-11-78	DATE	SHEET 45/72

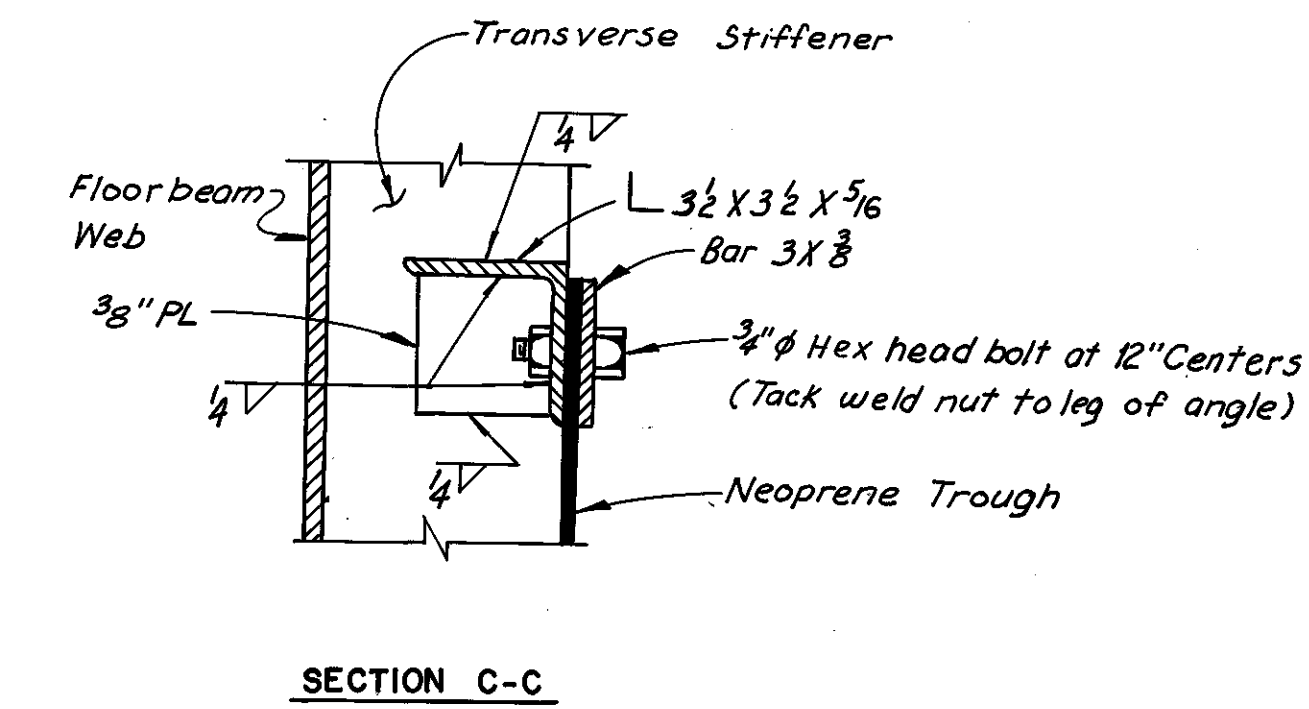
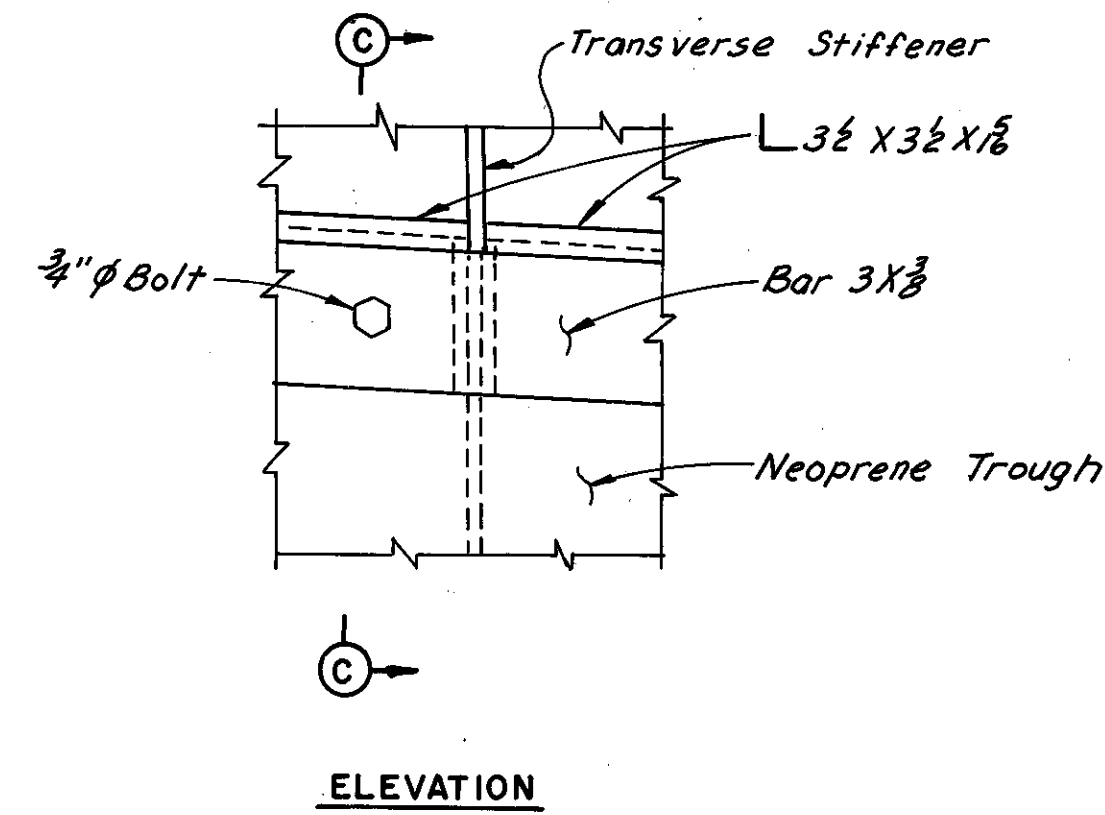
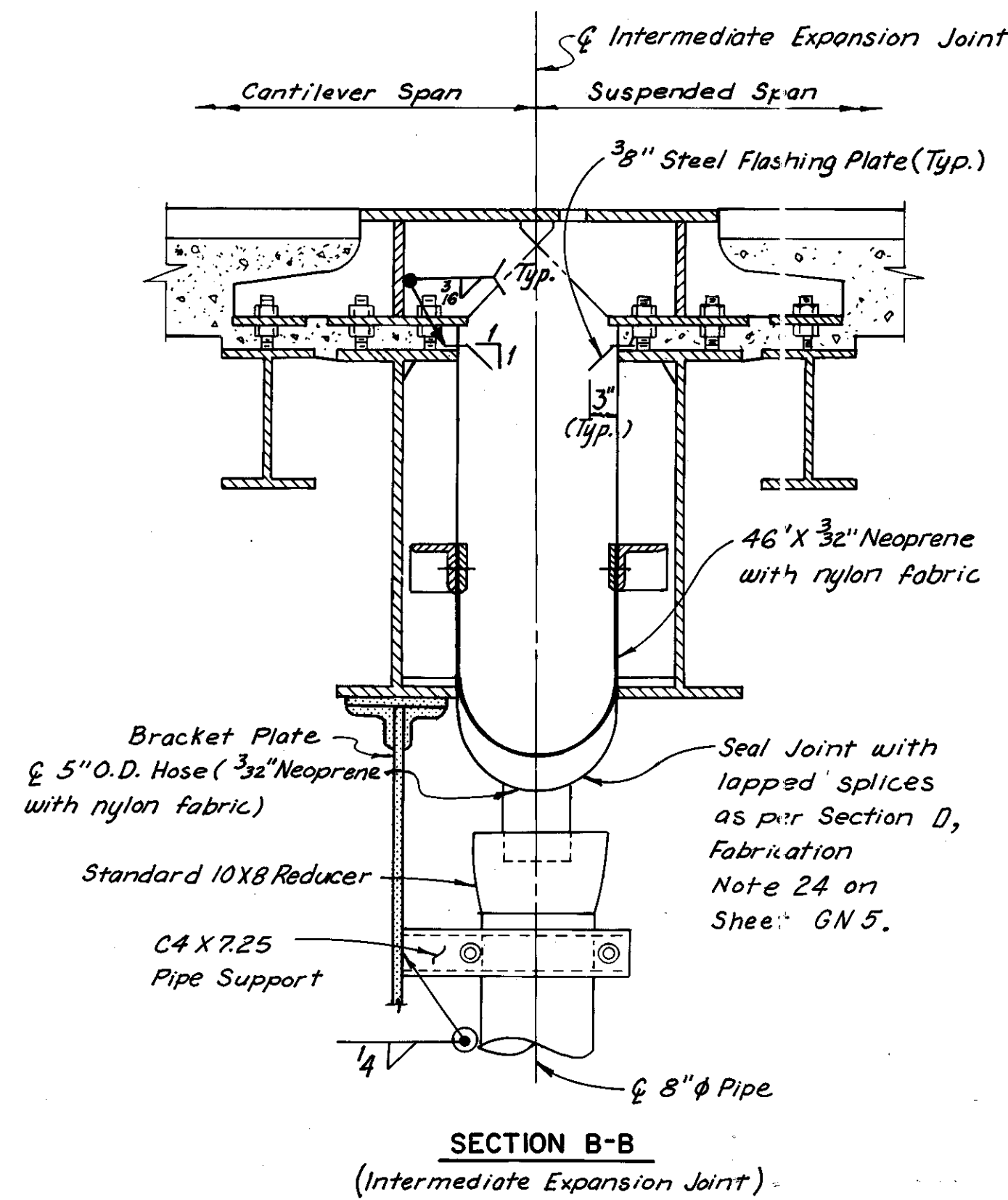
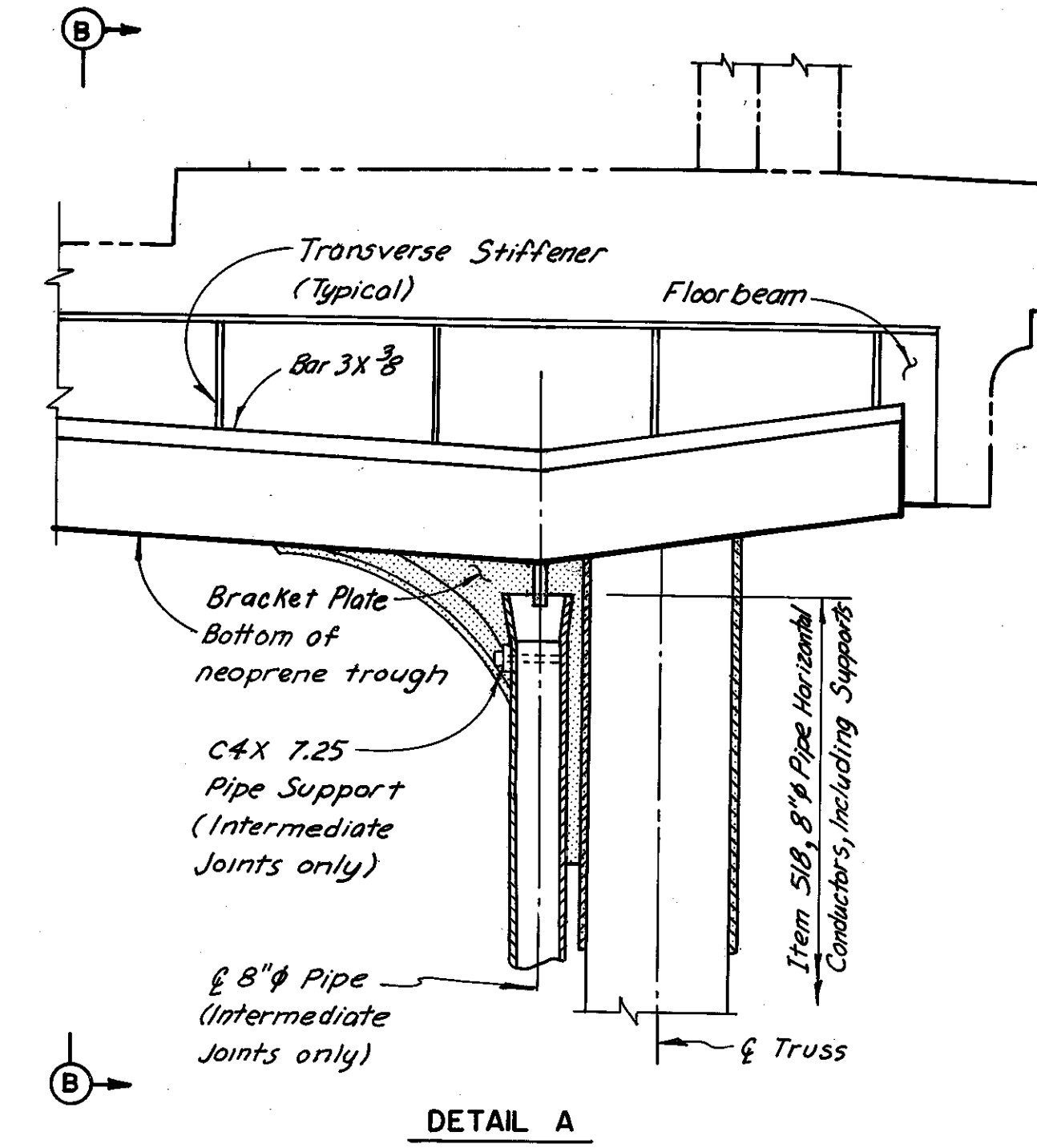
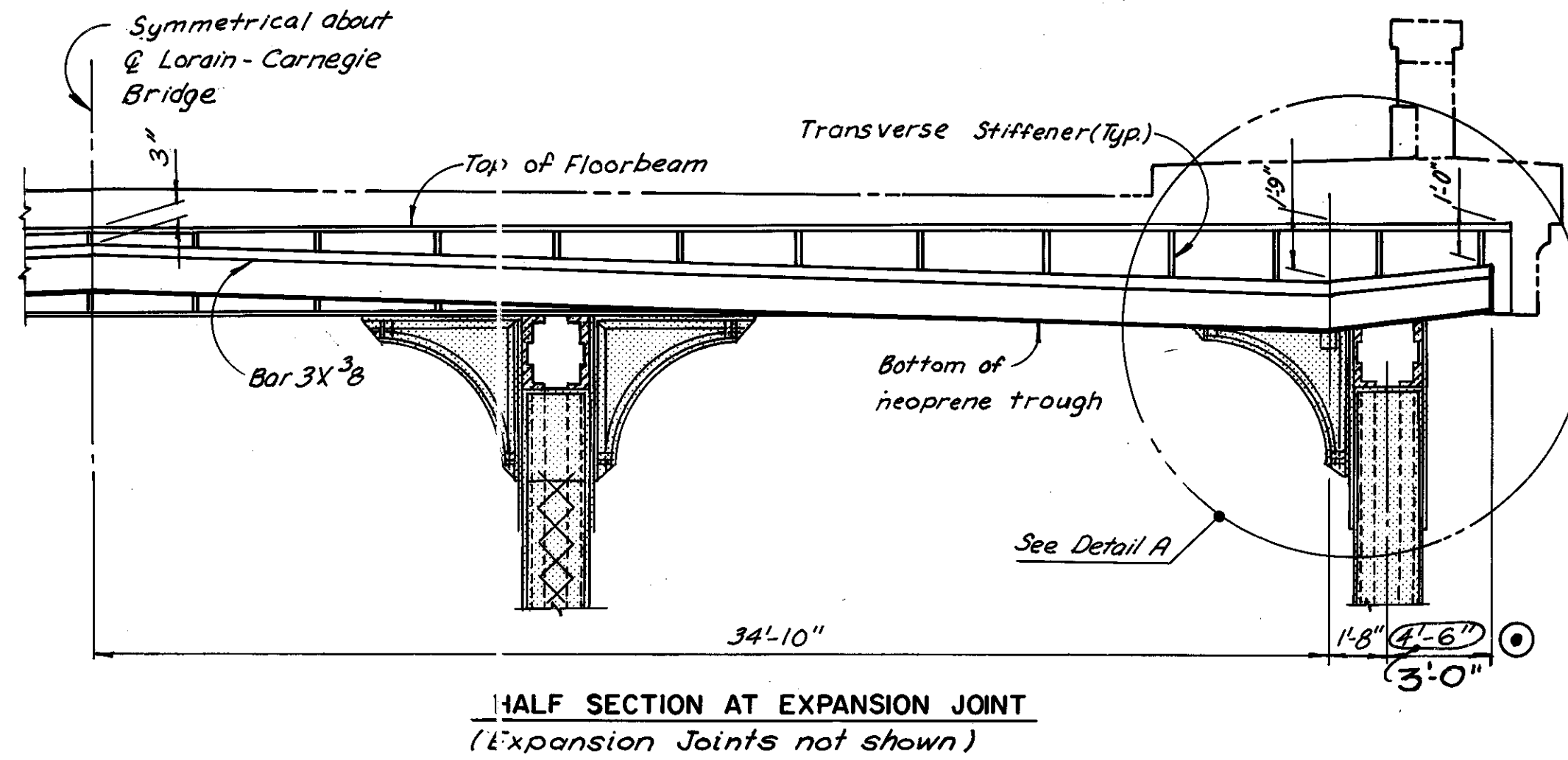


MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

121  
185

CUYAHOGA COUNTY  
CUY-10-16.23



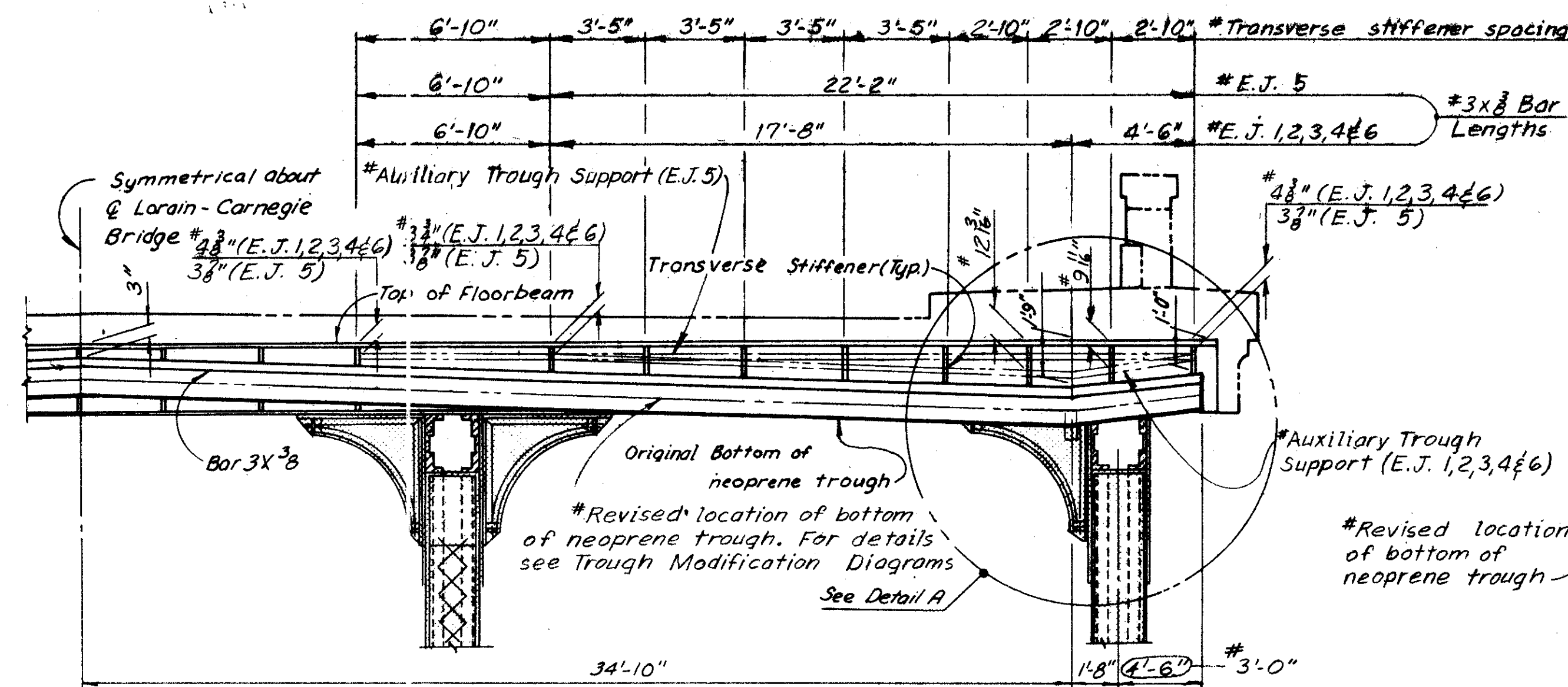
TROUGH SUPPORT DETAIL

Notes:  
All bolts and nuts used to attach the neoprene trough to support members shall be stainless steel (ASTM A240).  
The flashing plates, and trough support bars and angles shall be hot-dip galvanized ASTM A36 steel.  
For details of intermediate expansion joints, see Sheets 37/72 and 38/72.  
Zip-a-tone indicates existing structure.  
The following abbreviation is used:  
Typ. = Typical

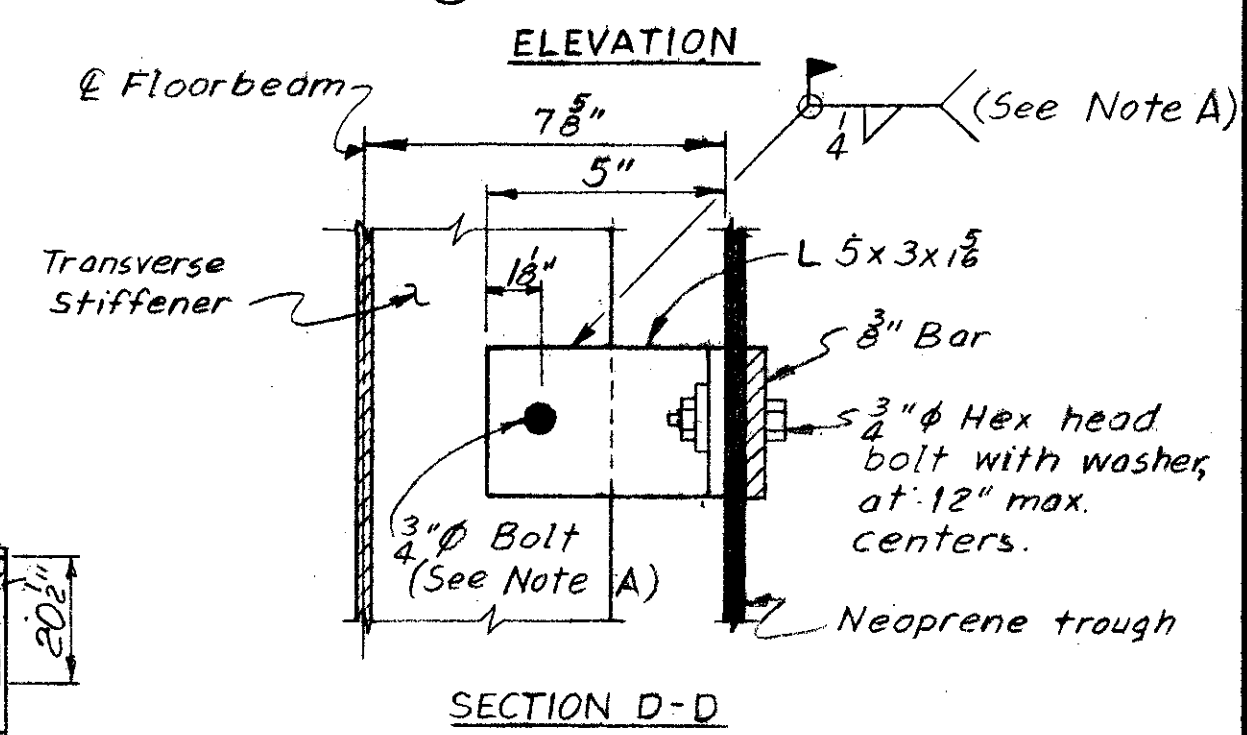
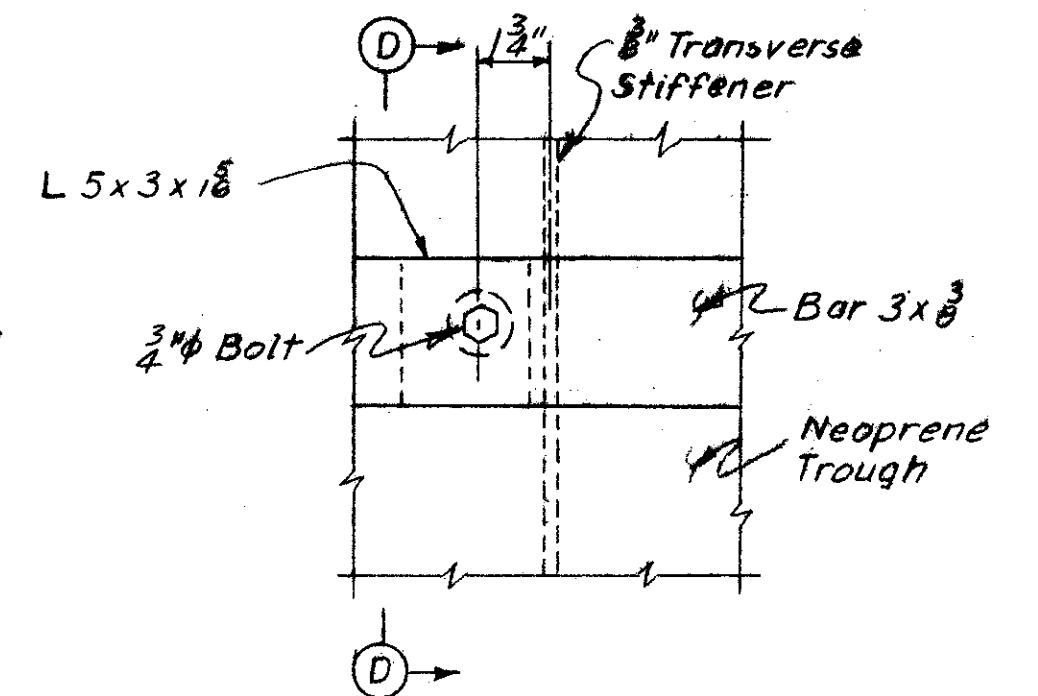
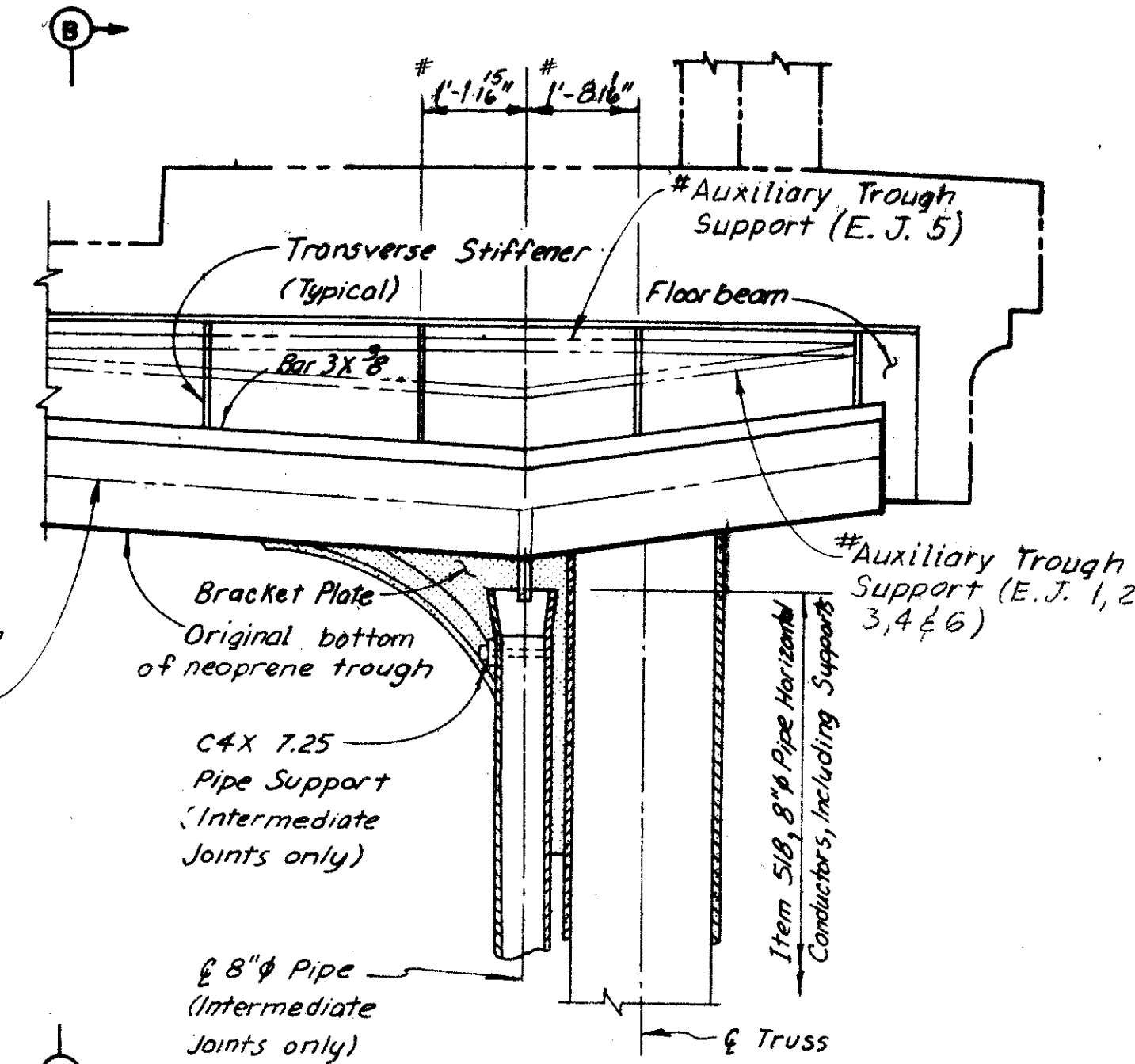
Rev. 12-24-84  
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>
<b>TROUGH DETAILS</b>		
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)		
BR. NO. CUY.-10-1618	STA. 22+19.19	STA. 55+04.56
CUYAHOGA COUNTY		OHIO
DRAWN C.K.B. DATE 8-10-78	TRACED O.W.B. DATE 8-17-78	CHECKED M.E.B. DATE 9-19-78
REVIEWED	REVISED	SHEET 46/72

Superseded by sheet 121A, 8-23-82

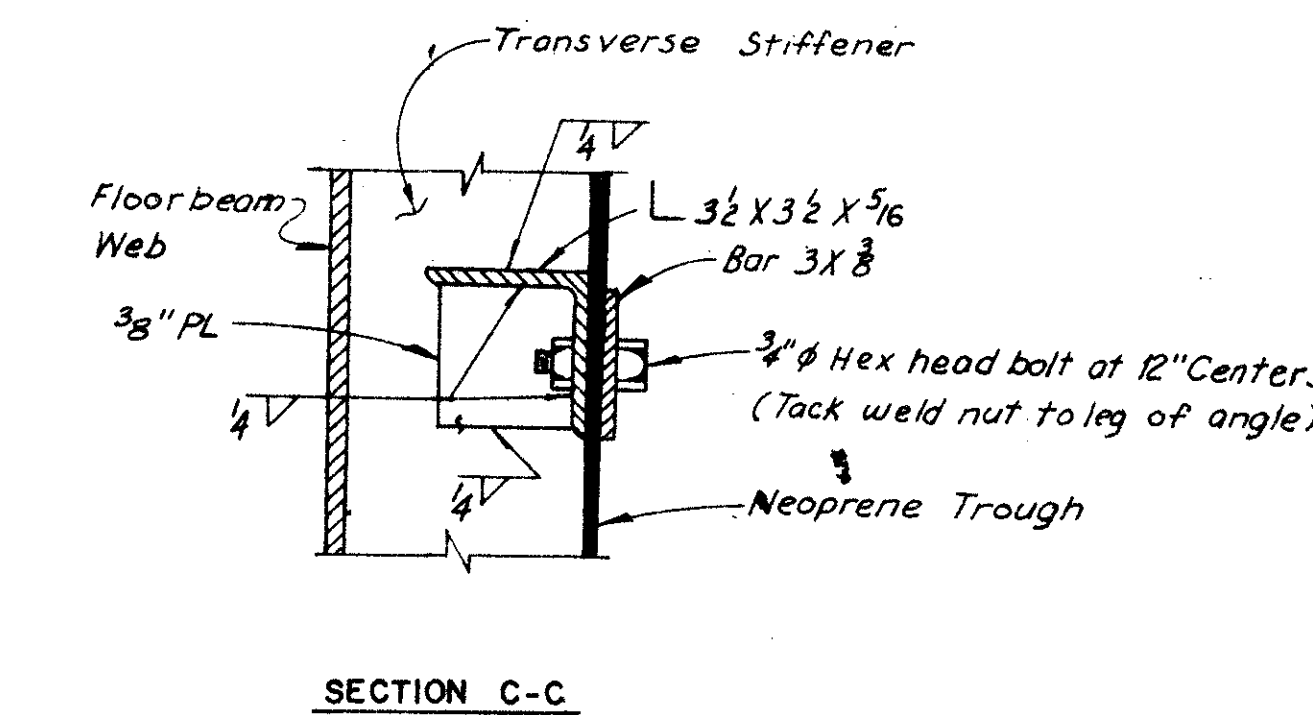
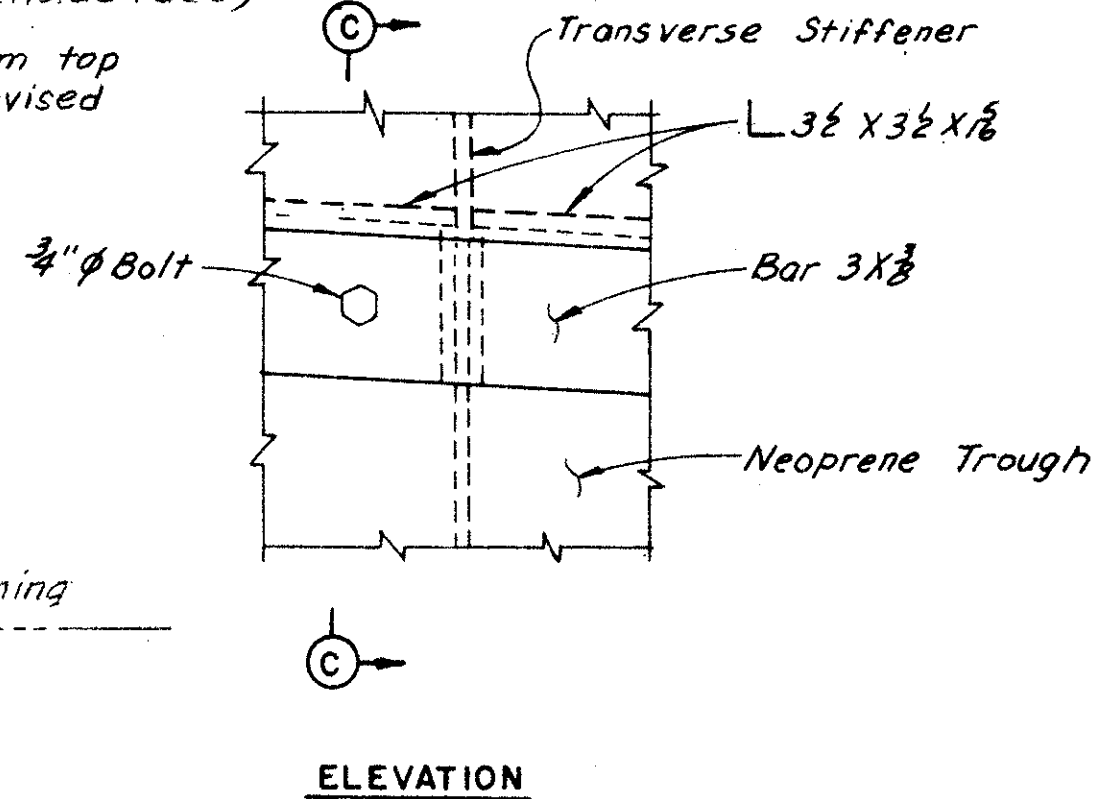
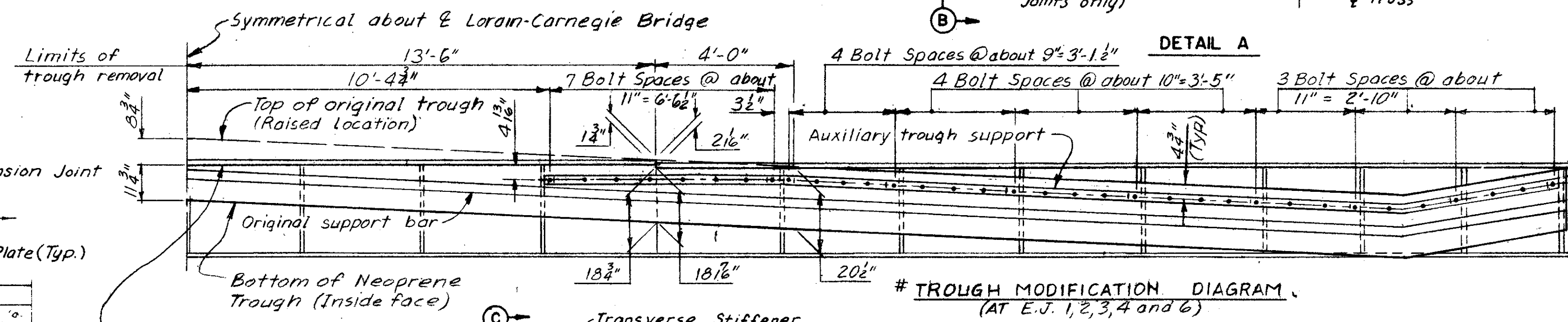


HALF SECTION AT EXPANSION JOINT  
(Expansion Joints not shown)



AUXILIARY TROUGH SUPPORT DETAIL

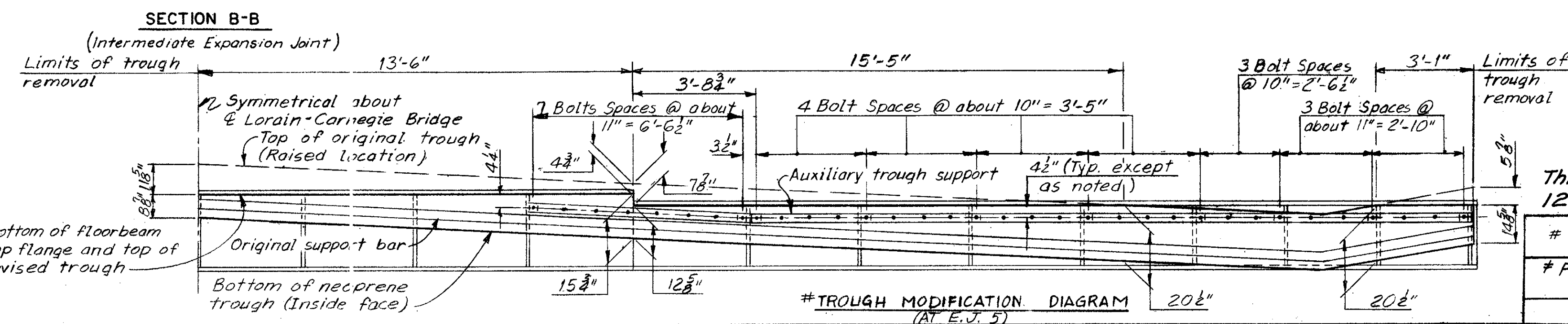
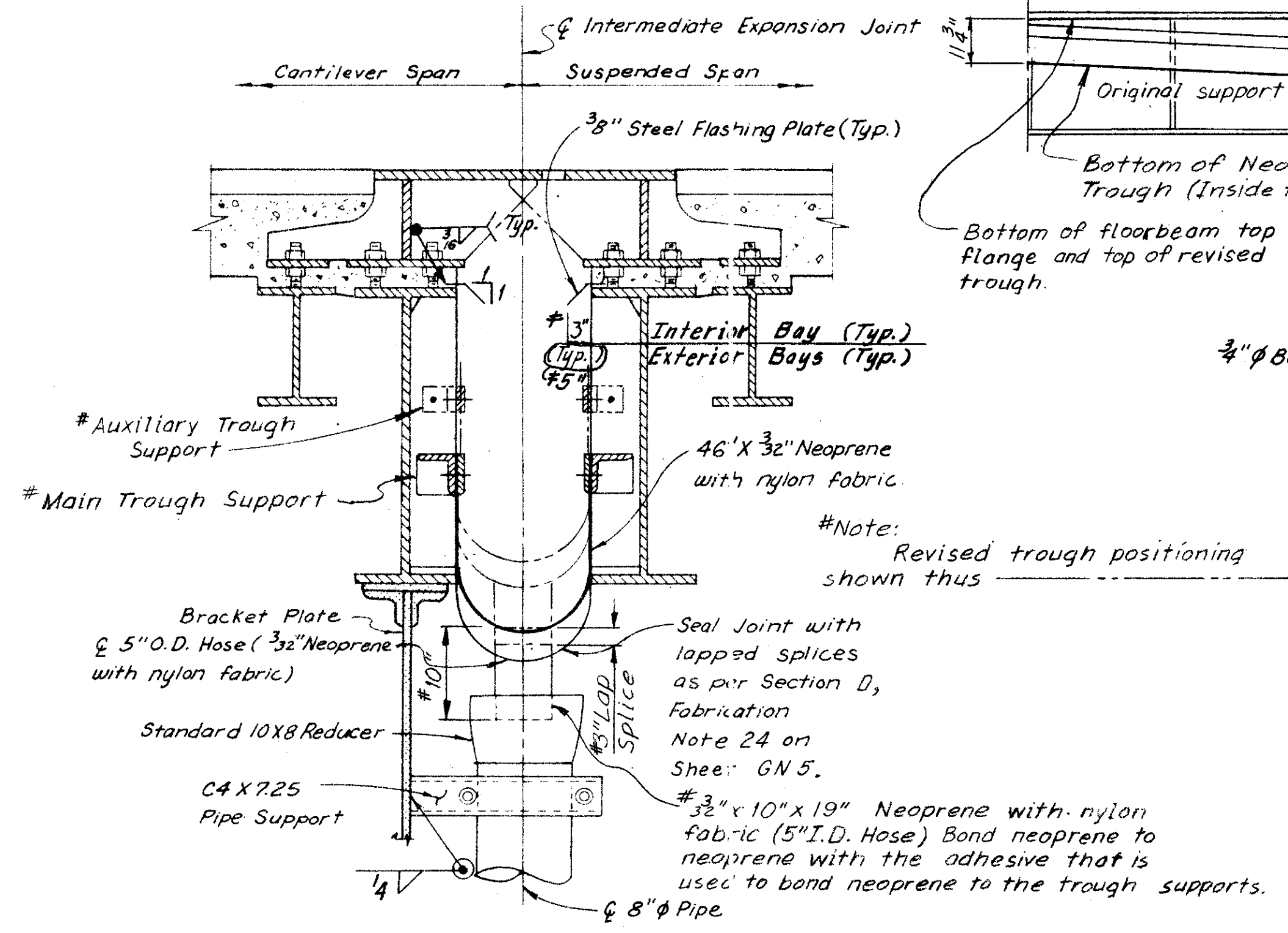
Note A: Connection may be field bolted or welded at the Contractor's option.



MAIN TROUGH SUPPORT DETAIL

Notes:  
The neoprene trough shall be raised to the position shown in the "Trough Modification Diagram" and the portion above the bottom of the floorbeam top flange shall be removed as indicated. New holes shall be punched in the neoprene to align with the holes in the original support bar and as indicated for auxiliary support bar. The neoprene trough shall be securely fastened to the original support bars at all support points prior to being fastened to the auxiliary supports.

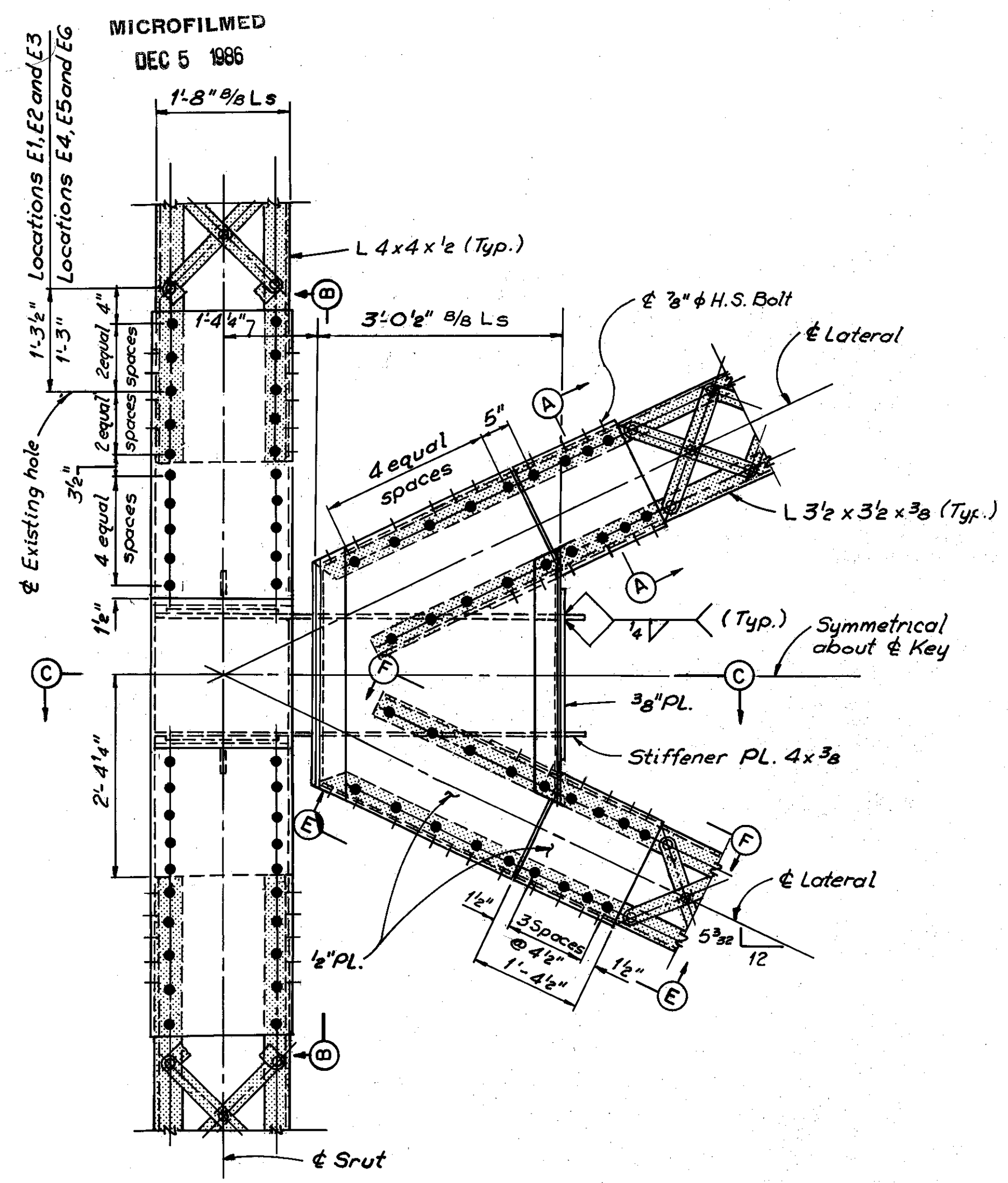
Notes:  
All bolts and nuts used to attach the neoprene trough to support members shall be stainless steel (ASTM A240). The flashing plates, and trough support bars and angles shall be hot-dip galvanized ASTM A36 steel. For details of intermediate expansion joints, see Sheets 37/72 and 38/72.  
Zip-a-tone indicates existing structure. The following abbreviation is used:  
Typ. = Typical



This sheet supersedes sheet 121, 8-23-82

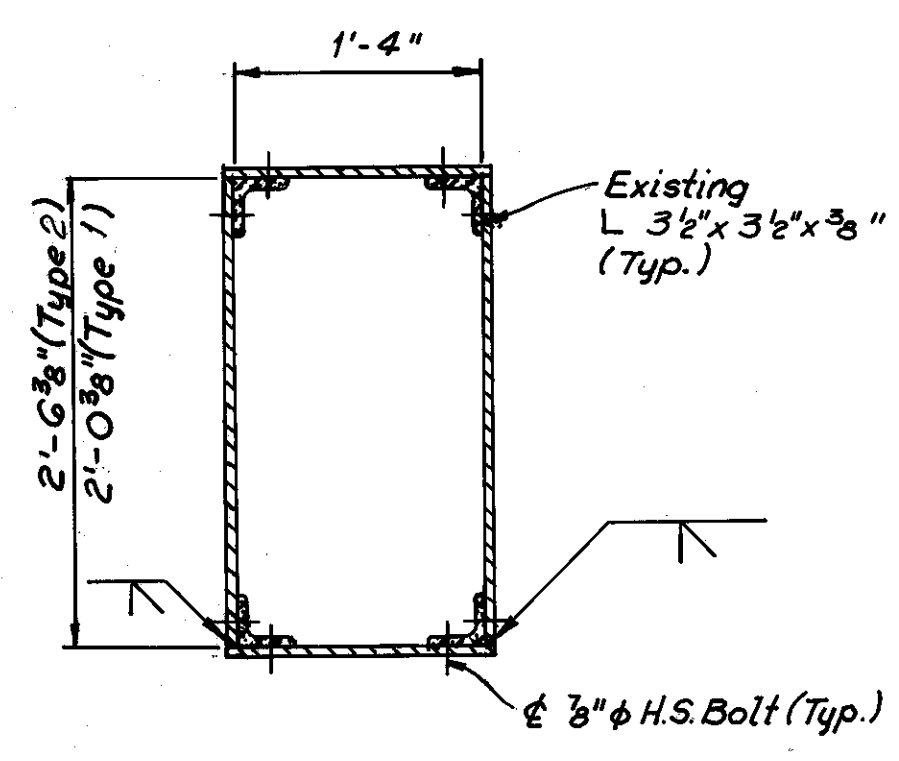
# Trough Modifications	C.K.B. 8-9-82
# Flashing Plate Dimensions	C.K.B. 11-18-81
REVISIONS	

H.N.T.B. BRIDGE NO. 3	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND	
HNTB	
TROUGH DETAILS	
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)	
BR. NO. CUY.-10-1618	STA. 22+19.19
	STA. 55+04.56
CUYAHOGA COUNTY	OHIO
DRAWN C.K.B. DATE 8-10-82	TRACED O.W.B. DATE 8-17-82
CHECKED W.E.A. DATE 8-19-82	REVIEWED DATE
REVISED	SHEET 46/72

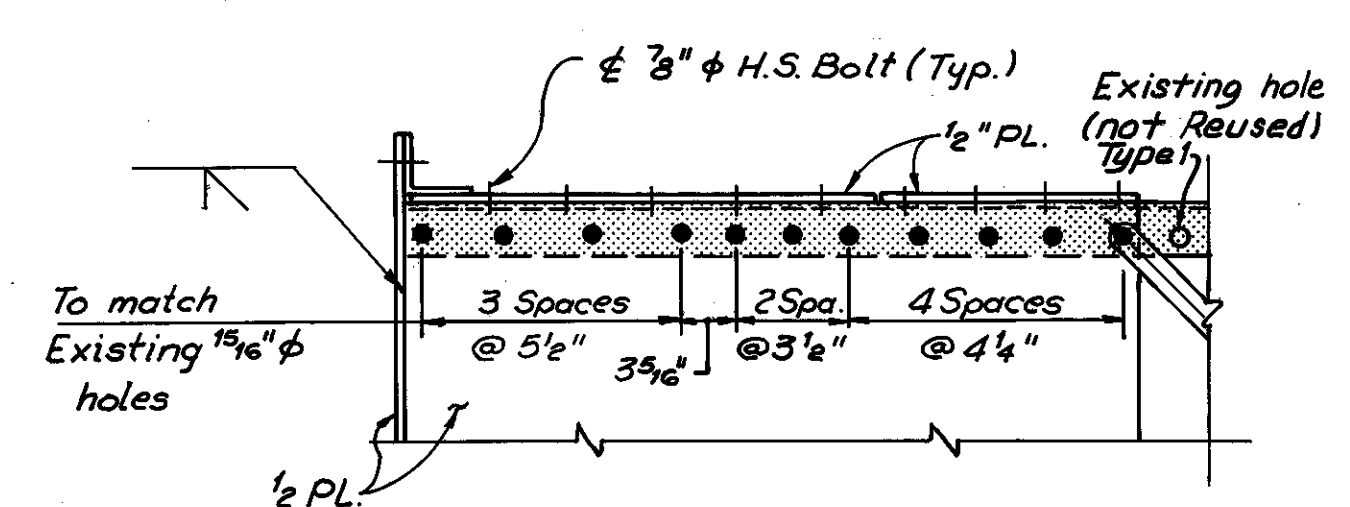


PLAN VIEW - TRUSS  
WIND SHEAR KEY  
(Type 1 and Type 2)

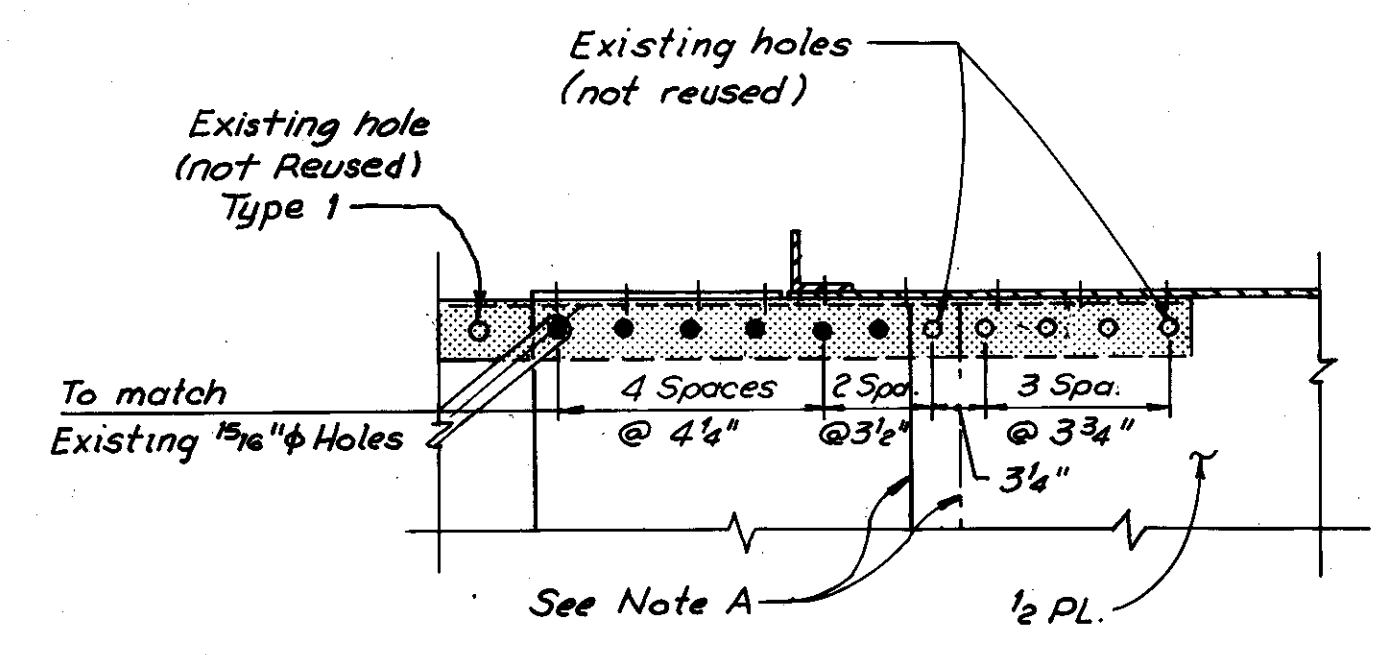
TYPE	Dimensions		
	A	B	C
2	8 7/8"	6 7/8"	7 1/8"
1	5 7/8"	3 7/8"	4 1/8"



SECTION A-A

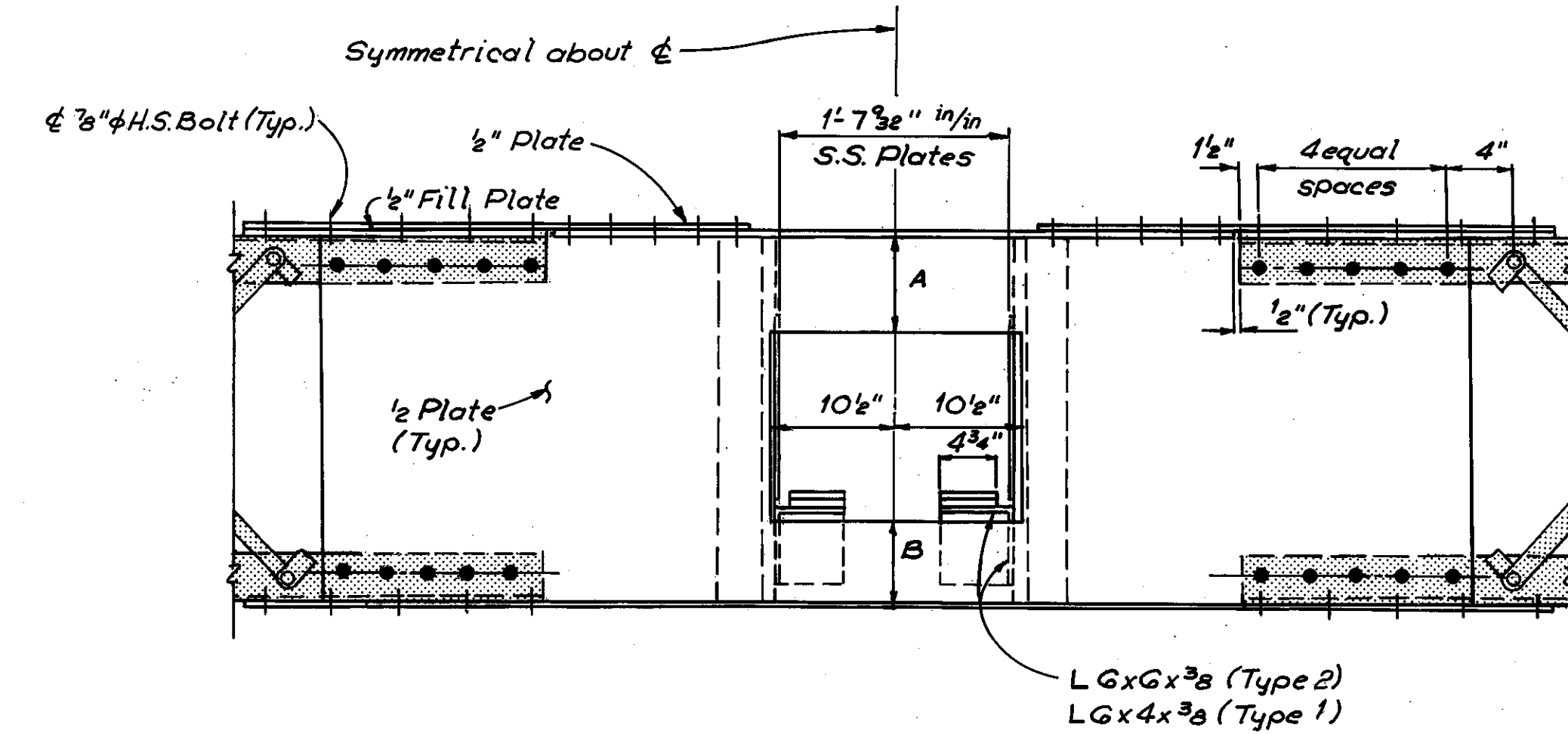


PART VIEW E-E  
(Types 1 and 2)



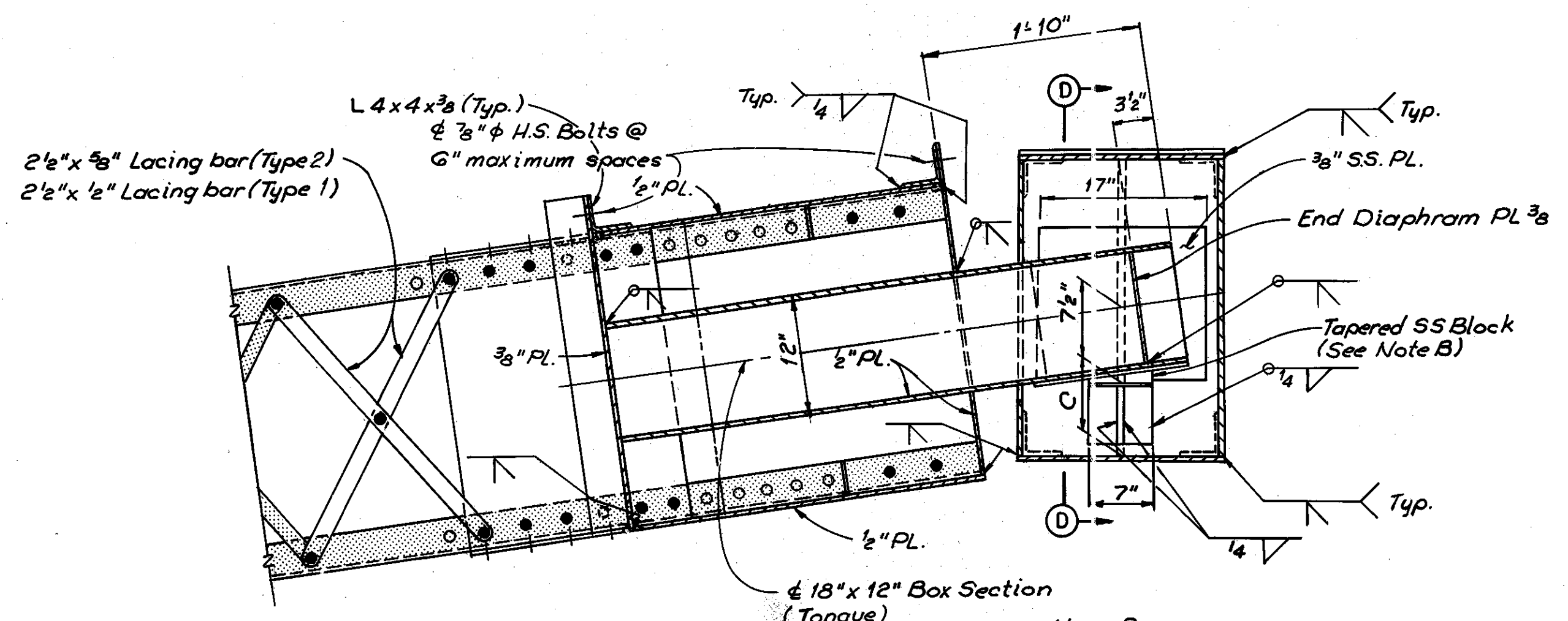
PART SECTION F-F  
(Types 1 and 2)

Note A:  
Interior side plates extend out an additional 3" for Type 1 Shear Key. An additional bolt is required.



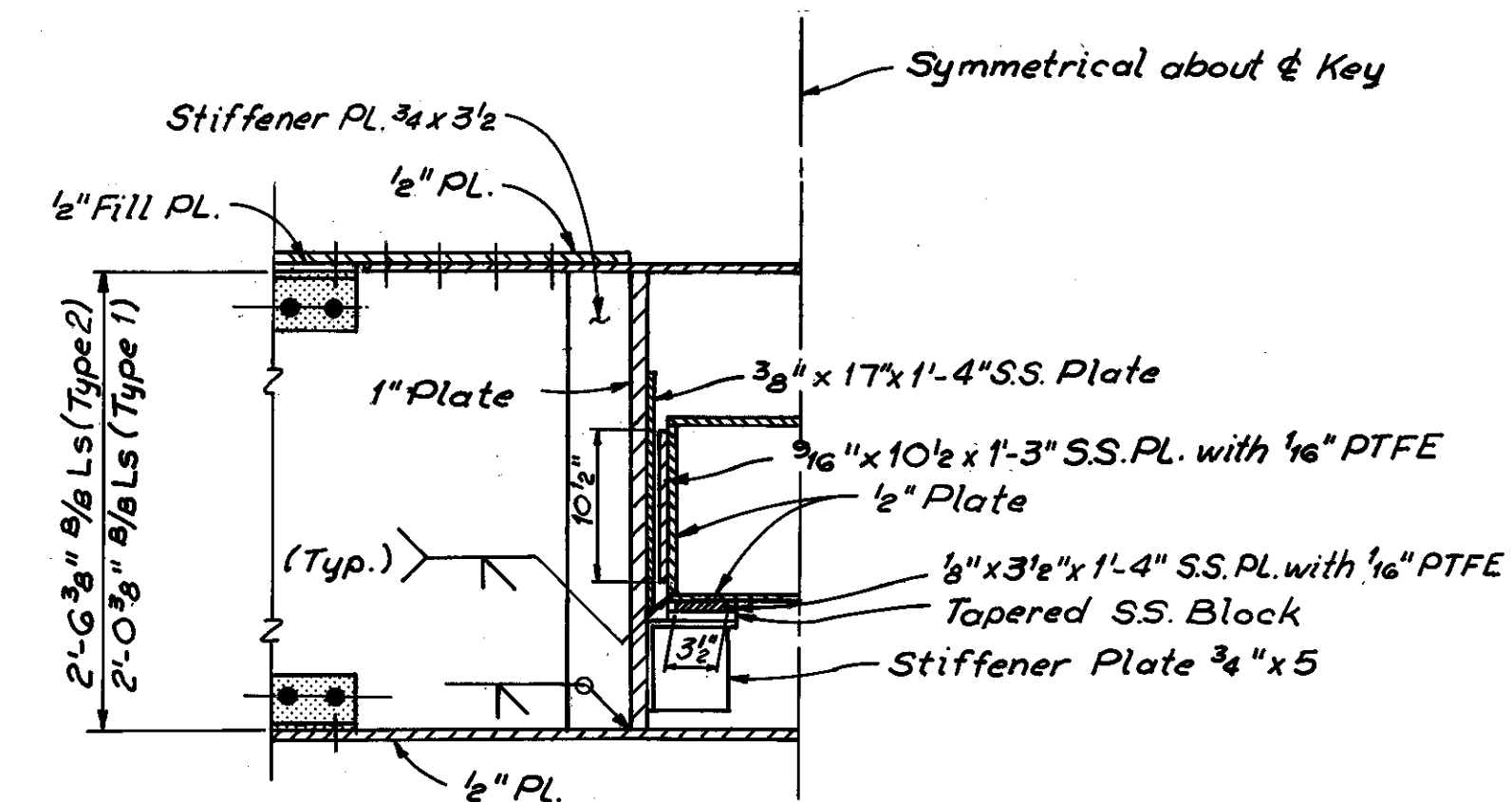
SECTION B-B  
(18" x 12" Box section not shown)

Notes:  
Truss wind shear keys shall be replaced at expansion joints E1 thru E6 in both north and south bays as follows:  
Location Replacement type  
E1 & E2 1  
E3 thru E6 2  
The contractor shall provide necessary drain holes to prevent the accumulation of water in the wind shear key mechanism.  
The PTFE (Poly Tetra Fluoro Ethylene) shall be bonded to the stainless steel plates as shown, with an approved epoxy adhesive. All stainless steel plates and blocks shown shall be bonded to new structural members with an approved high temperature-resistant epoxy. All bonding shall be subject to the approval of the Engineer.  
The truss wind shear key shall be installed in such a manner that the tongue bears against the 3/8" S.S. plate nearest to the interior of the bridge.  
All Poly Tetra Fluoro Ethylene, stainless steel, and epoxy bonding material shall be included with the unit price bid for Item 513, Structural Steel (ASTM A588), for payment.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
For Truss Wind Shear Key removal, see Sheet 4/72.  
Zip-a-tone indicates existing structure.  
All new bolts are 3/8" high strength bolts.  
The following abbreviations are used:  
Typ. = Typical S.S. = Stainless Steel (ASTM A240)  
Spa. = Spaces H.S. = High Strength



SECTION C-C

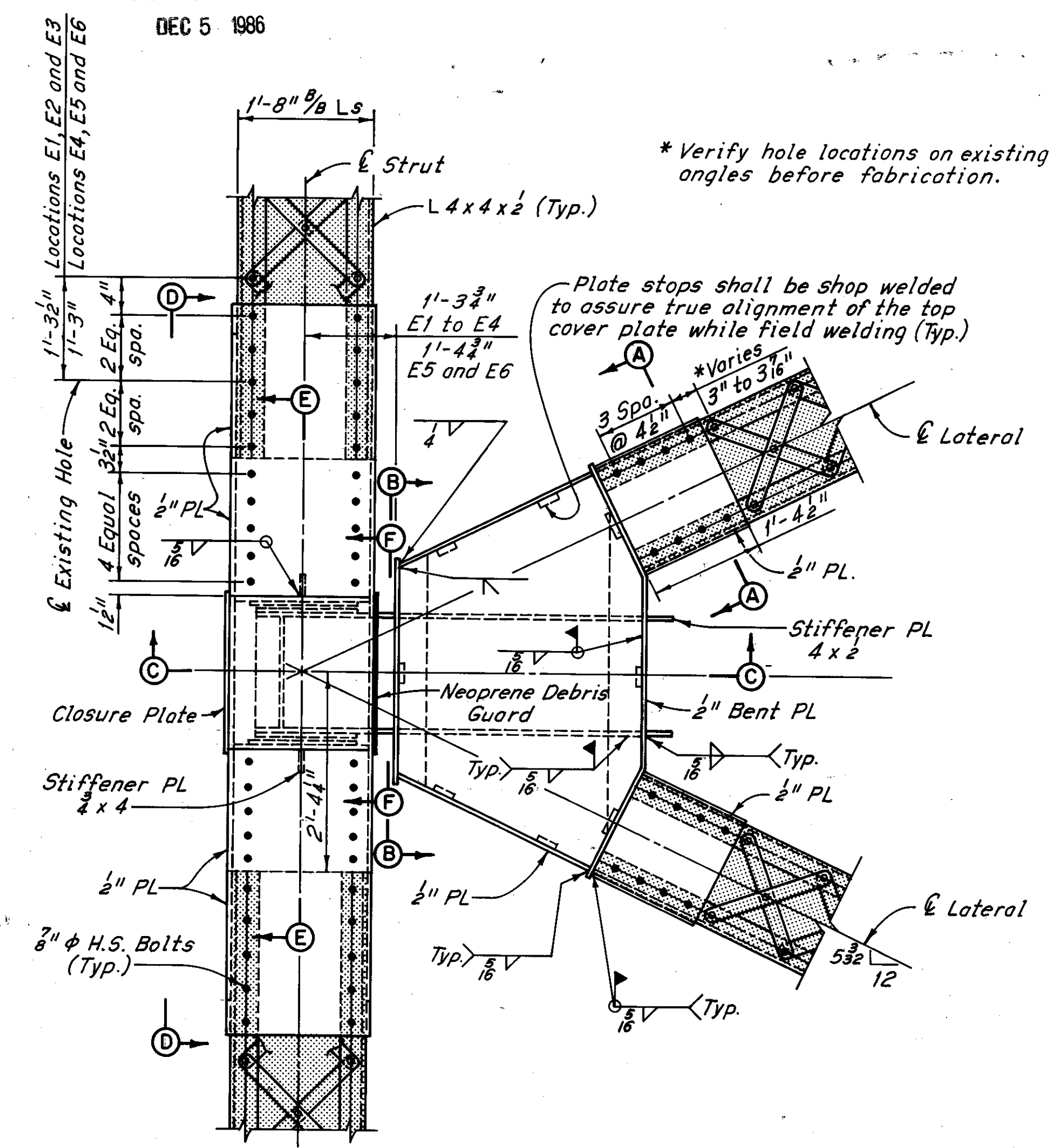
Note B:  
The taper on the 7" x 4 3/4" S.S. Blocks vary. The taper shall be determined by field measurements.



SECTION D-D

Superseded by sheet No. 122A 4-6-81  
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>TRUSS-WIND SHEAR KEY REPLACEMENT</b>			
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY.-10-1618		STA. 22+19.19	
CUYAHOGA COUNTY		OHIO	
DRAWN RHW DATE 12-6-78	TRACED ATP DATE 12-6-78	CHECKED RAS DATE 6-12-79	REVIEWED DATE
			SHEET 47/72

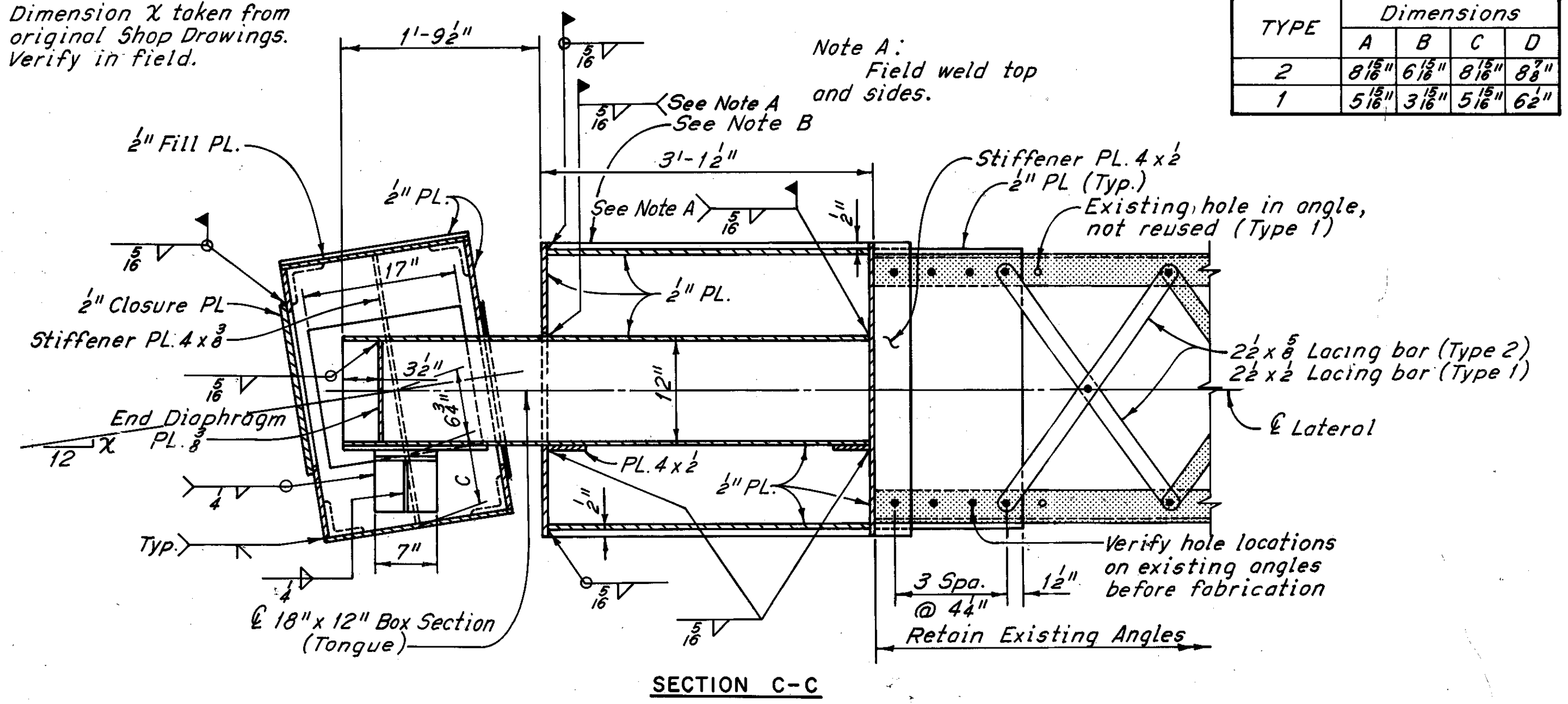


EXP. JT.	X
E1	13 3/8"
E2	16"
E3	12"
E4	12"
E5	12"
E6	1"

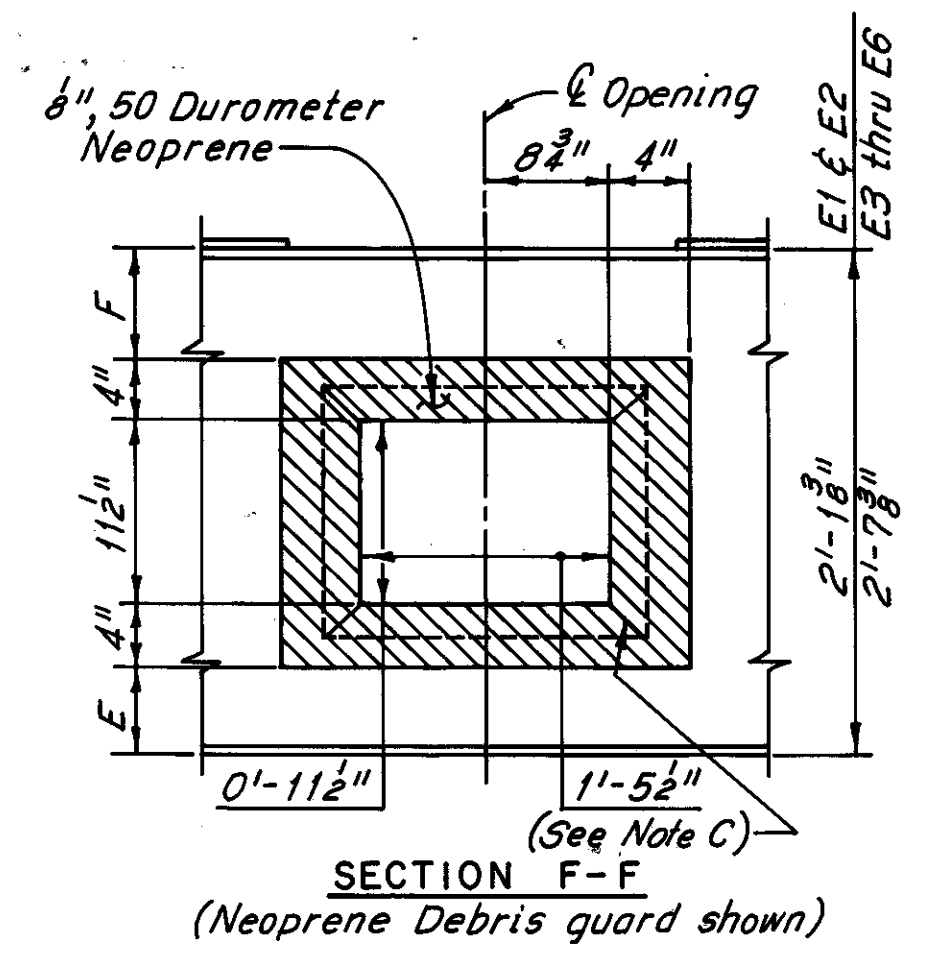
DEVELOPED  
PLAN VIEW - TRUSS  
WIND SHEAR KEY

Note B:  
Fill low end with "Ferrogrout" as manufactured by L & M Construction Chemicals, Omaha, Nebraska 68134, or "Masterflow 713 Grout" as manufactured by Master Builders, Cleveland, Ohio 44118, or approved equal. Slope surface to drain.

Dimension X taken from original Shop Drawings. Verify in field.

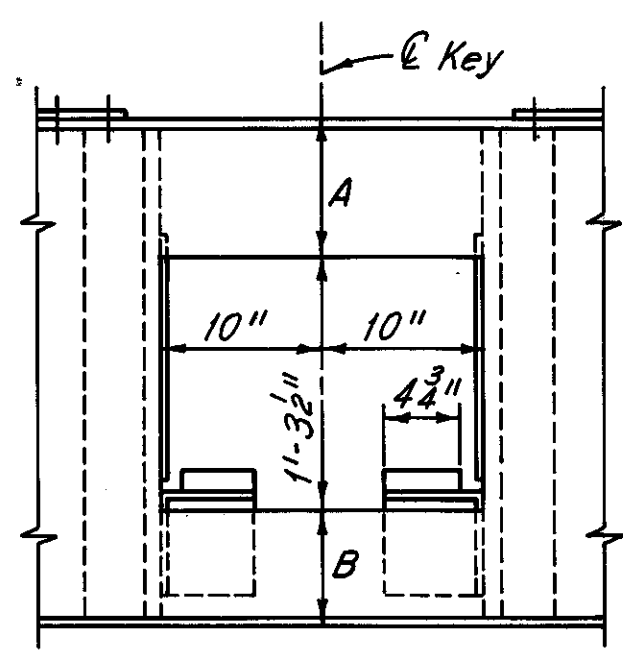


SECTION C-C



SECTION F-F  
(Neoprene Debris guard shown)

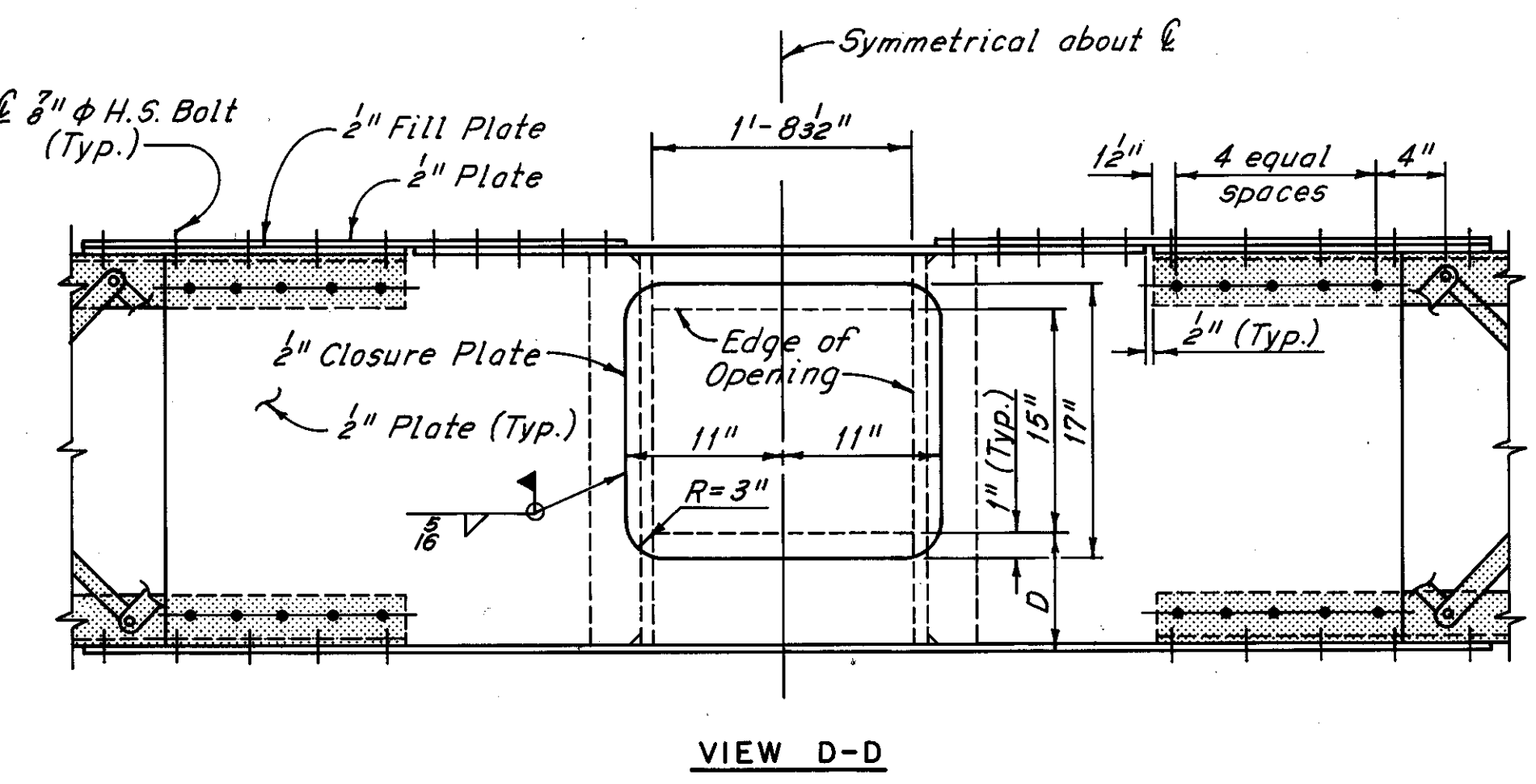
LOCATION	Dimensions
E1	1 1/8" x 4 1/8"
E2	1" x 4 3/8"
E3	4 1/8" x 7 1/8"
E4	4 1/8" x 7 1/8"
E5	5 1/8" x 6 1/8"
E6	5 1/8" x 6 1/8"



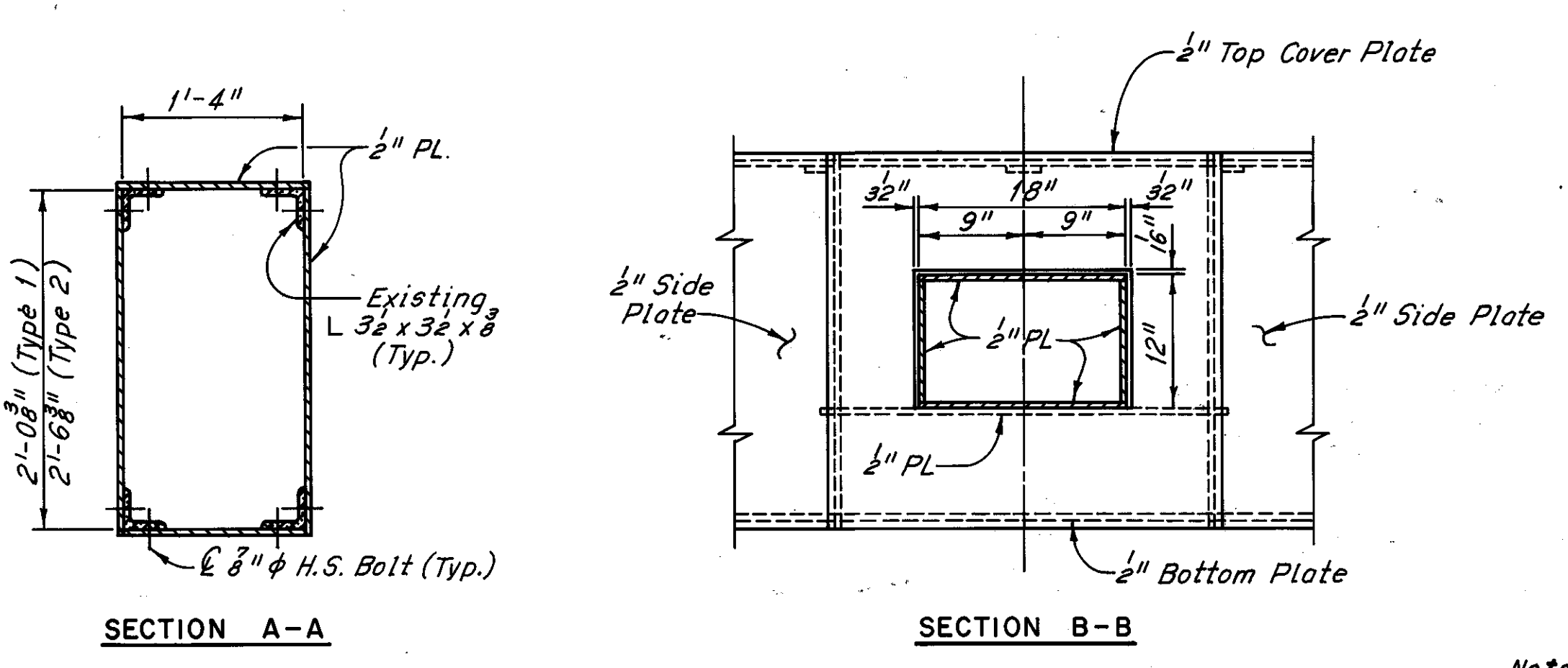
SECTION F-F  
(18" x 12" Box section and Neoprene debris guard not shown)

TYPE	Dimensions
2	8 1/8" x 6 1/8" x 8 1/8" x 8 1/8"
1	5 1/8" x 3 1/8" x 5 1/8" x 6 1/8"

Note C:  
Neoprene shall be attached in the shop with an adhesive equal to Scotch Grip Rubber Adhesive 1711 as manufactured by 3M Co., applied in accordance with manufacturer's instructions. Inside corners of neoprene shall be cut back to corner of opening in steel plate or, at the Contractor's option, back to other corner of neoprene.



VIEW D-D



SECTION A-A

SECTION B-B

Notes:  
Truss wind shear keys shall be replaced at expansion joints E1 thru E6 in both north and south bays as follows:  
Location Replacement Type  
E1 E2 1  
E3 thru E6 2  
The contractor shall provide 2-1/2" phi drain holes to prevent the accumulation of water in the wind shear key mechanism.  
The PTFE (PolyTetraFluoroEthylene) shall be bonded to the stainless steel plates as shown, with an approved epoxy adhesive. All stainless steel plates shown shall be bonded to new structural members with an approved epoxy. All stainless steel plates without PTFE shall have a Type 2B finish on the sliding face. All bonding shall be subject to the approval of the Engineer.  
The truss wind shear key shall be installed in such a manner that the tongue bears against the 3/8" S.S. plate nearest to the interior of the bridge.  
All PolyTetraFluoroEthylene, stainless steel, and epoxy bonding material shall be included with the unit price bid for Item 513, Structural Steel (ASTM A588), for payment.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
For Truss-Wind Shear Key removal, see Sheet 4/72.  
Hatched areas indicate existing structure.  
All new bolts are 7/16" high strength bolts.  
The following abbreviations are used:  
Typ. = Typical S.S. = Stainless Steel (ASTM A240, Type 304)  
Spa. = Spaces H.S. = High Strength  
The wind shear key has been detailed so that the tongue can be placed as a unit in the field.

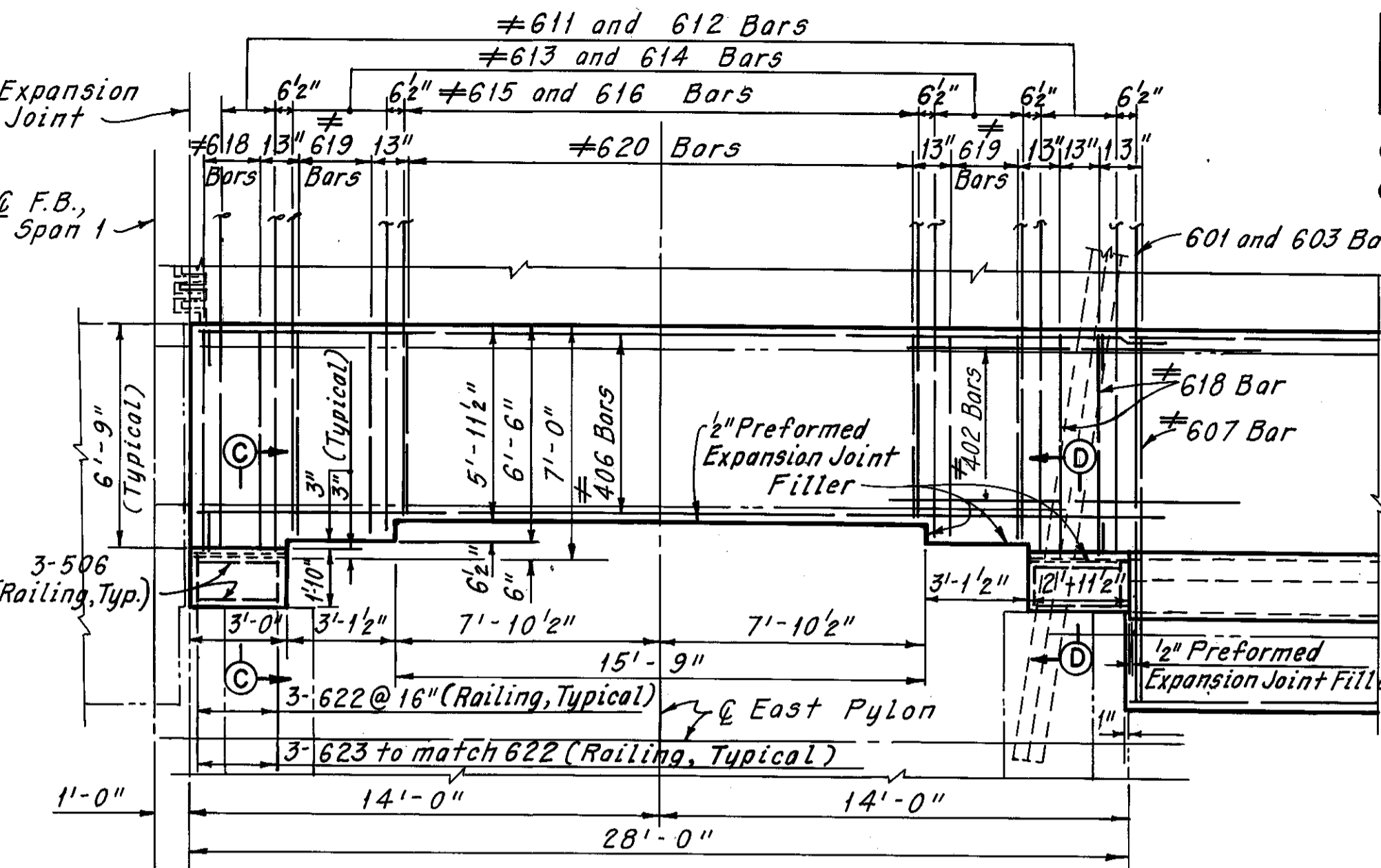
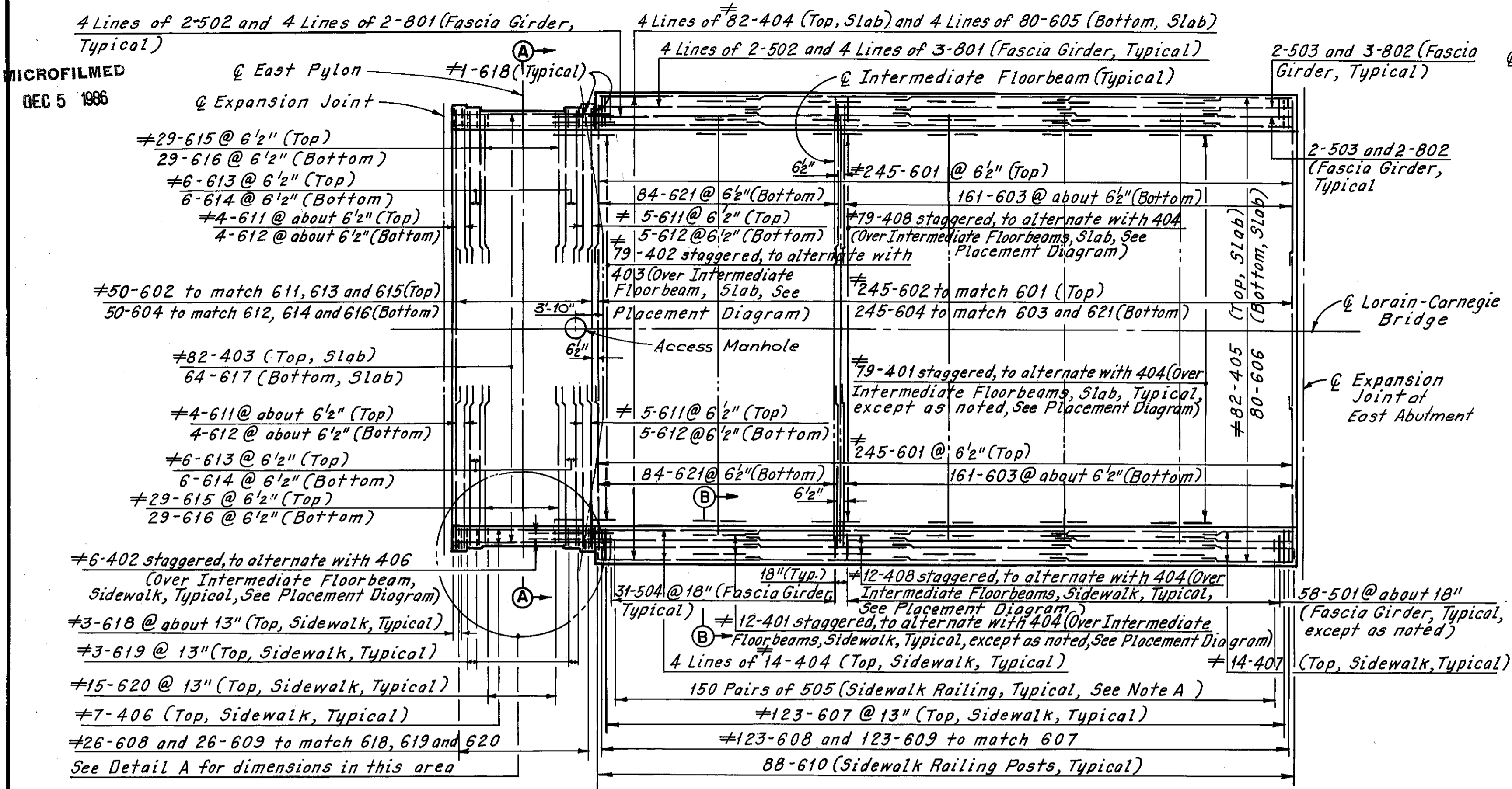
Supersedes sheet No. 122 4-6-81  
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>TRUSS - WIND SHEAR KEY REPLACEMENT</b>			
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY. - 10-1618		STA. 22+19.19	
		STA. 55+04.56	
CUYAHOGA COUNTY OHIO			
DRAWN D.L.R.	TRACED D.L.R.	CHECKED R.H.W.	REVIEWED DATE
DATE 1/27/81	DATE 1/27/81	DATE 2/28/81	DATE
			REVISED 1-26-81 SHEET 47/72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT	123 185
5	OHIO		

CUYAHOGA COUNTY  
CUY-10-16.23



# Denotes epoxy coated reinforcing steel.

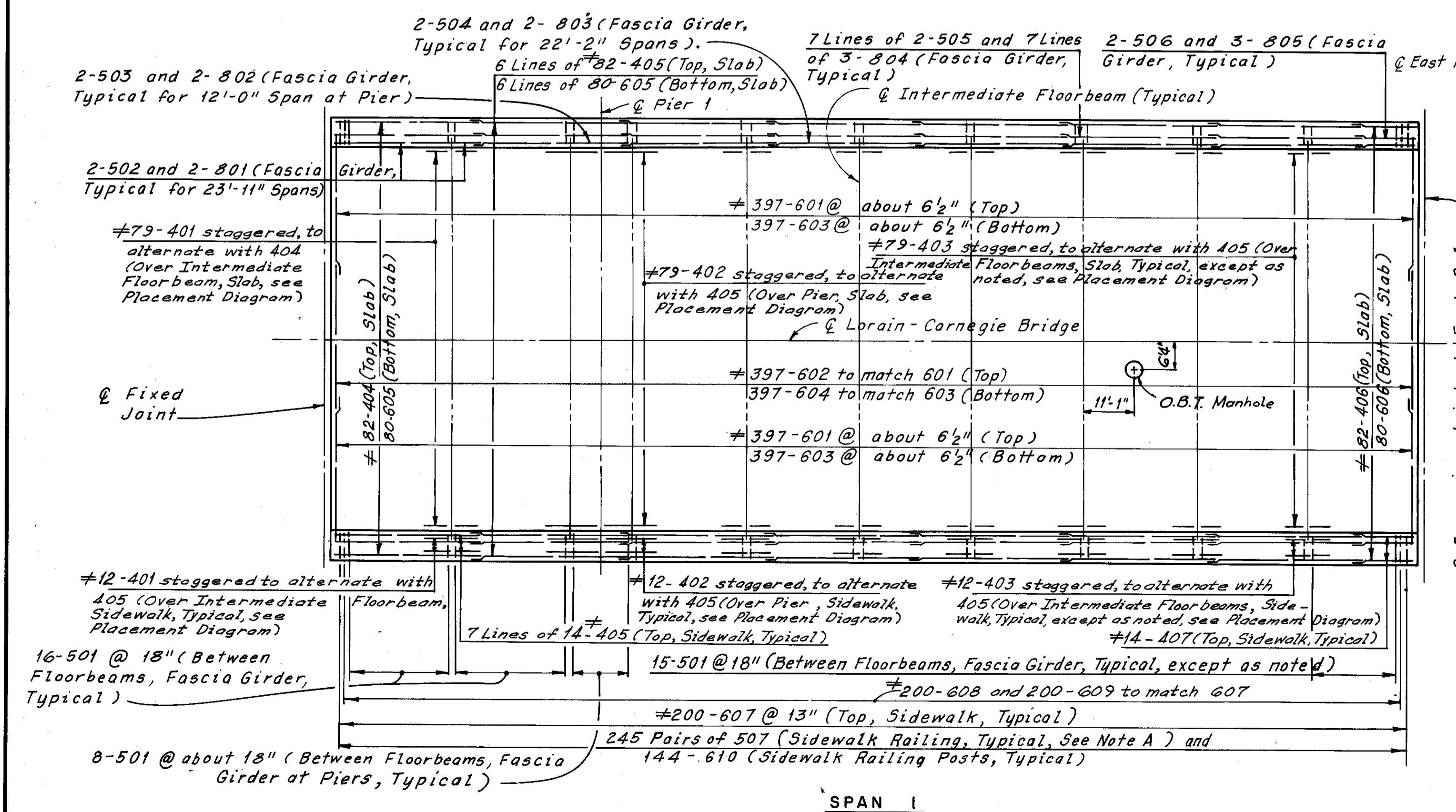
REQUIRED LAP LENGTHS

No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

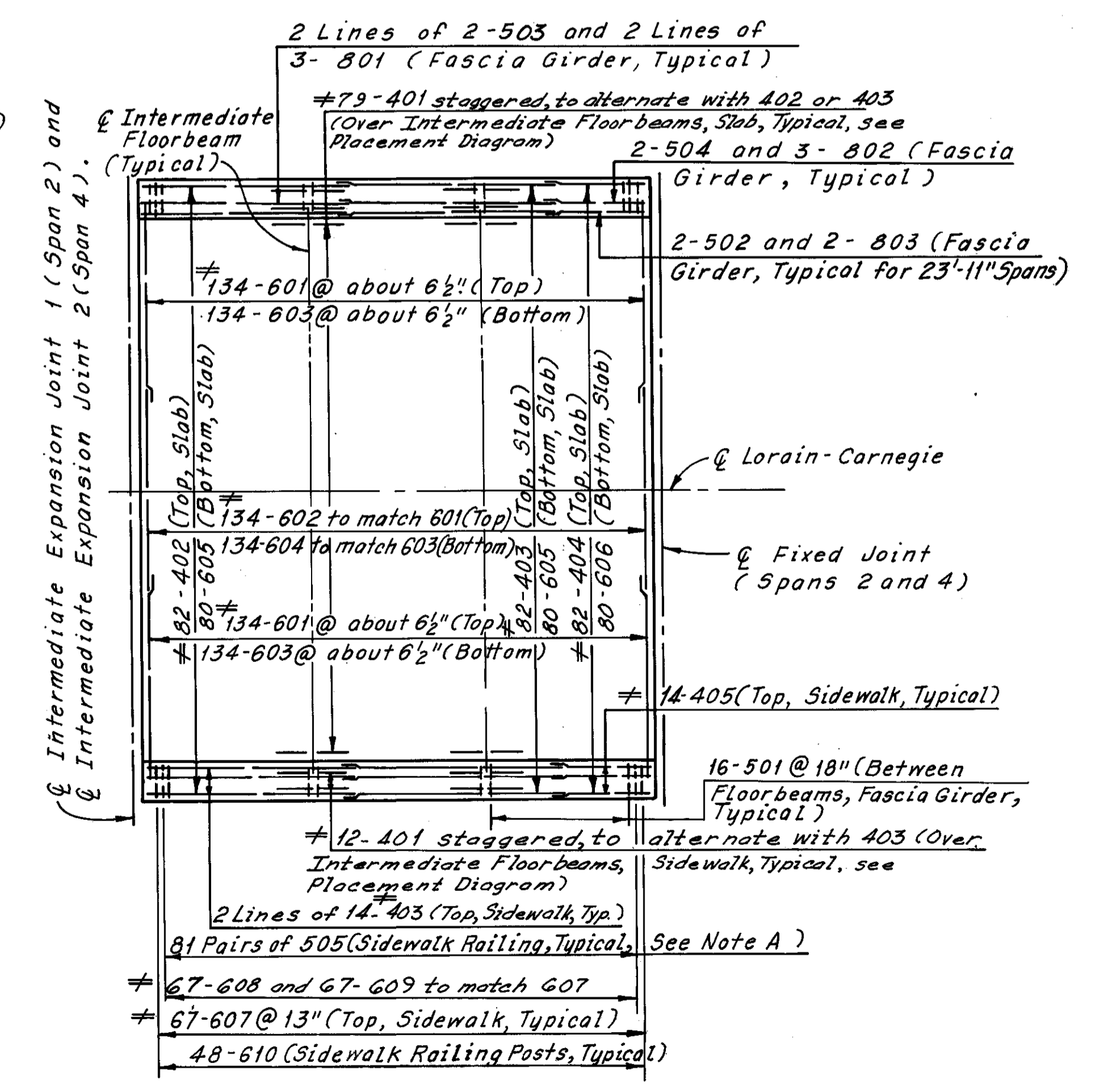
Note:  
All reinforcing bar marks shall be prefixed as follows:  
Wheeling and Lake Erie Railroad = SA  
Span 1 = SB  
Span 2 = SC  
Span 4 = SE

Note A:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints, and/or railing posts and open joints.

SPAN OVER WHEELING AND LAKE ERIE RAILROAD



SPAN 1



SPAN 2 AND SPAN 4

Notes:  
For Sections A-A, B-B, C-C and D-D, see Sheet 53/72.  
For Railing Details, see Sheets 59/72 thru 64/72.  
For Placement Diagram of No. 4 bars over Piers and Intermediate Floorbeams, see Sheet 53/72.  
For placement of longitudinal reinforcement and additional reinforcement over Piers in the slab and the sidewalk, see Sheet 53/72.  
For Typical Section for Span 1 thru Span 13, see Sheet 53/72.  
For Details of Expansion Joint at East Abutment, see Sheets 42/72 and 43/72.  
For Details of Expansion Joint at East Pylon, see Sheets 41/72 and 43/72.  
For Details of Fixed Joints, see Sheets 44/72 and 45/72.  
For Details of Intermediate Expansion Joints, see Sheets 37/72 and 38/72.  
For Reinforcement Schedule, see Sheet R/1 thru Sheet R/3.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
For manhole details, see Sheet 51/72.  
Concrete deck slab reinforcement shall be field cut to clear the manholes.

H.B.T.B. BRIDGE NO. 3

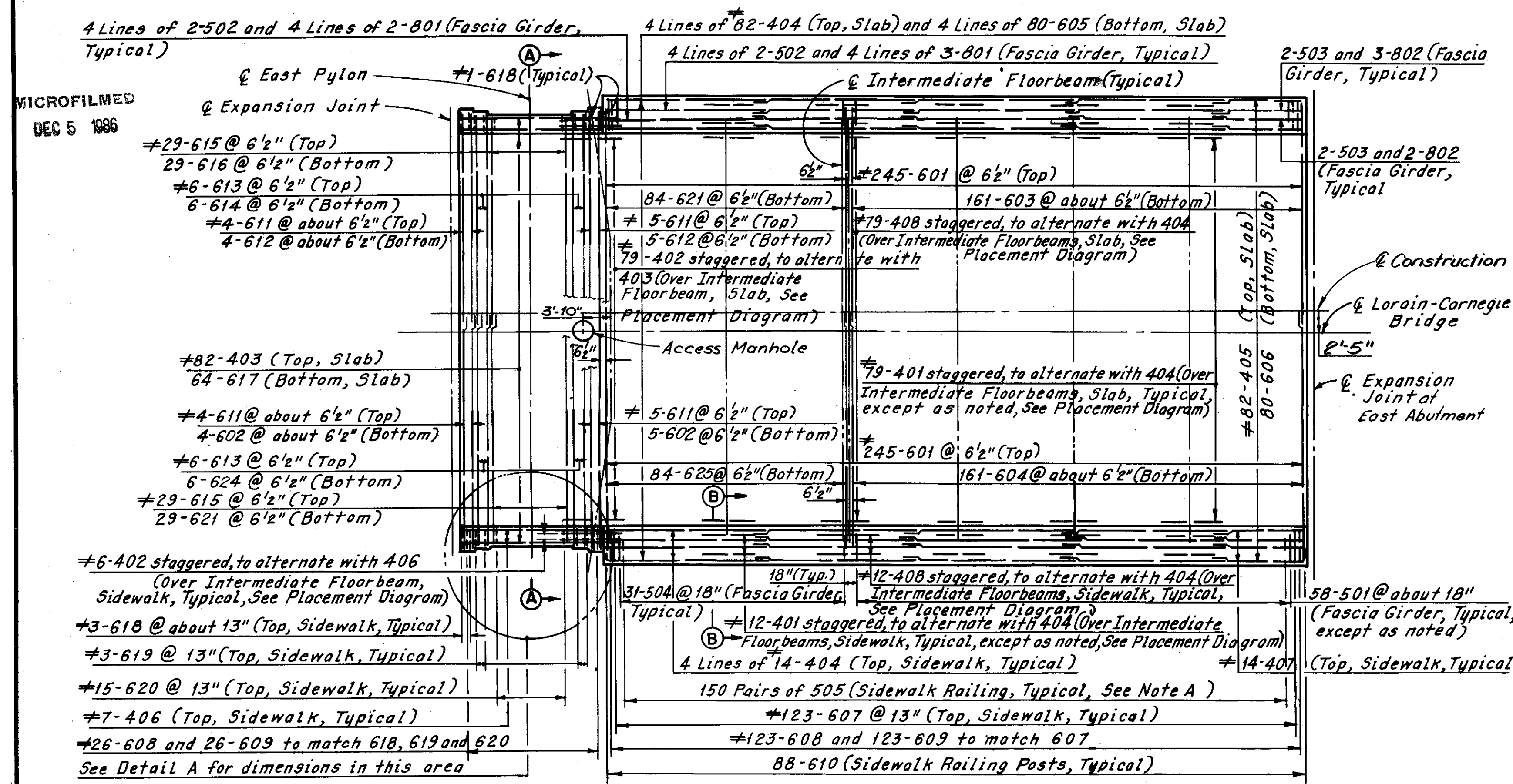
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

HNTB

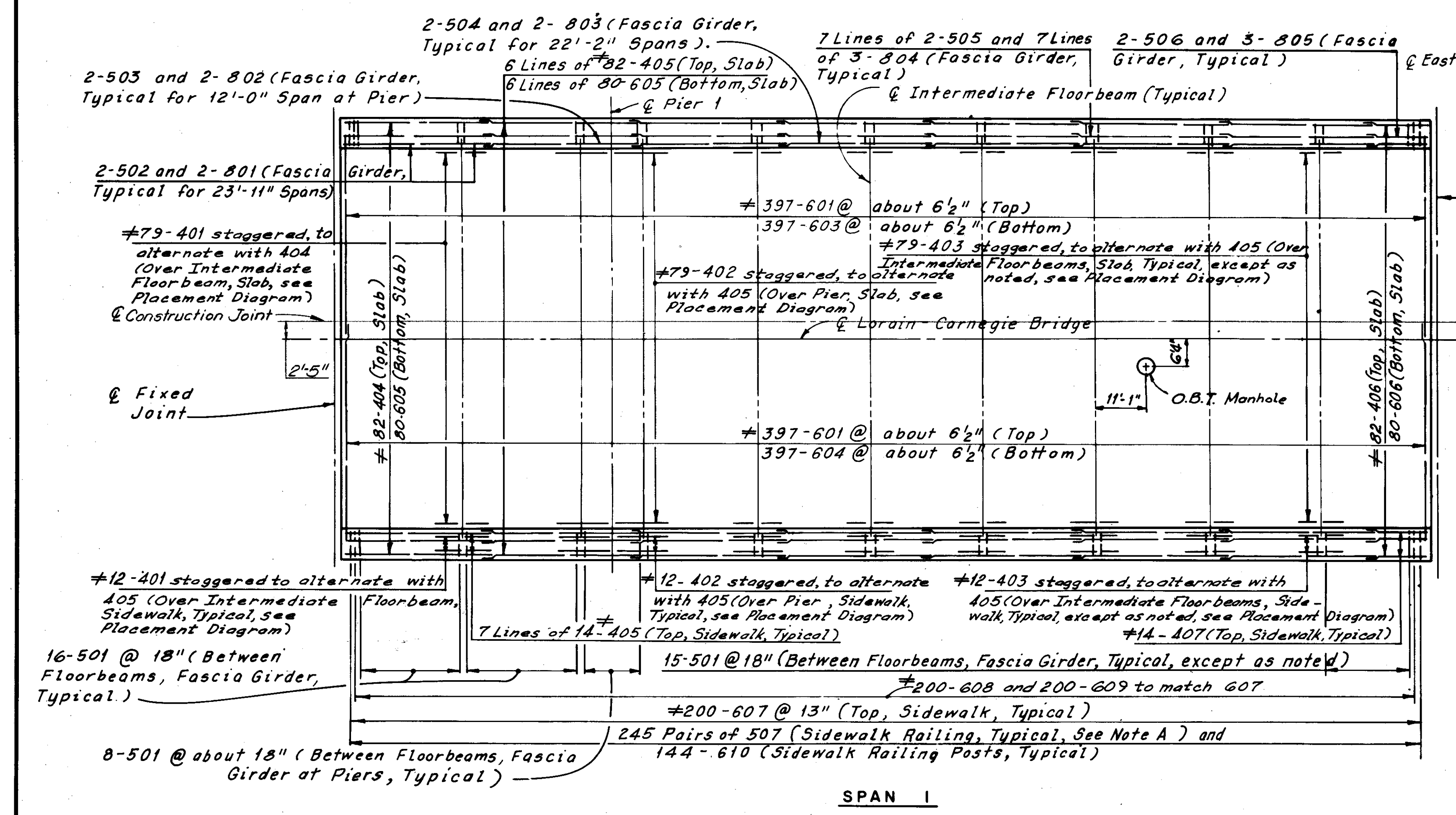
UPPER DECK PLAN  
SPAN OVER WHEELING & LAKE ERIE R.R.,  
SPANS 1, 2 AND 4  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S. R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22 + 19.19  
STA. 55 + 04.56

DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISED
DATE: 1-18-78	DATE: 1-23-78	DATE: 4-6-78	DATE	SHEET 48/72

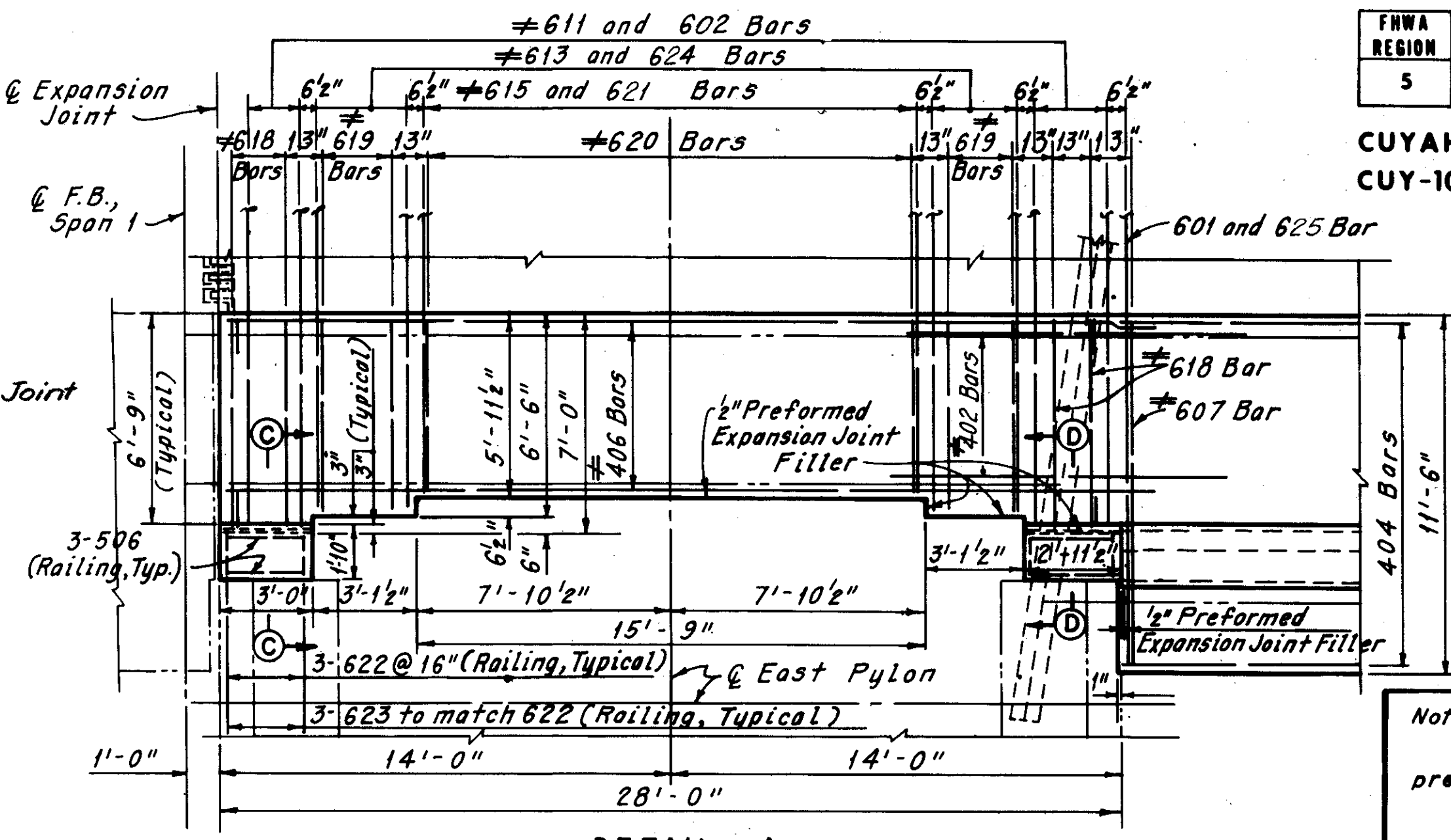
Superseded by sheet 123A, 7-10-81



SPAN OVER WHEELING AND LAKE ERIE RAILROAD



SPAN 1



DETAIL A

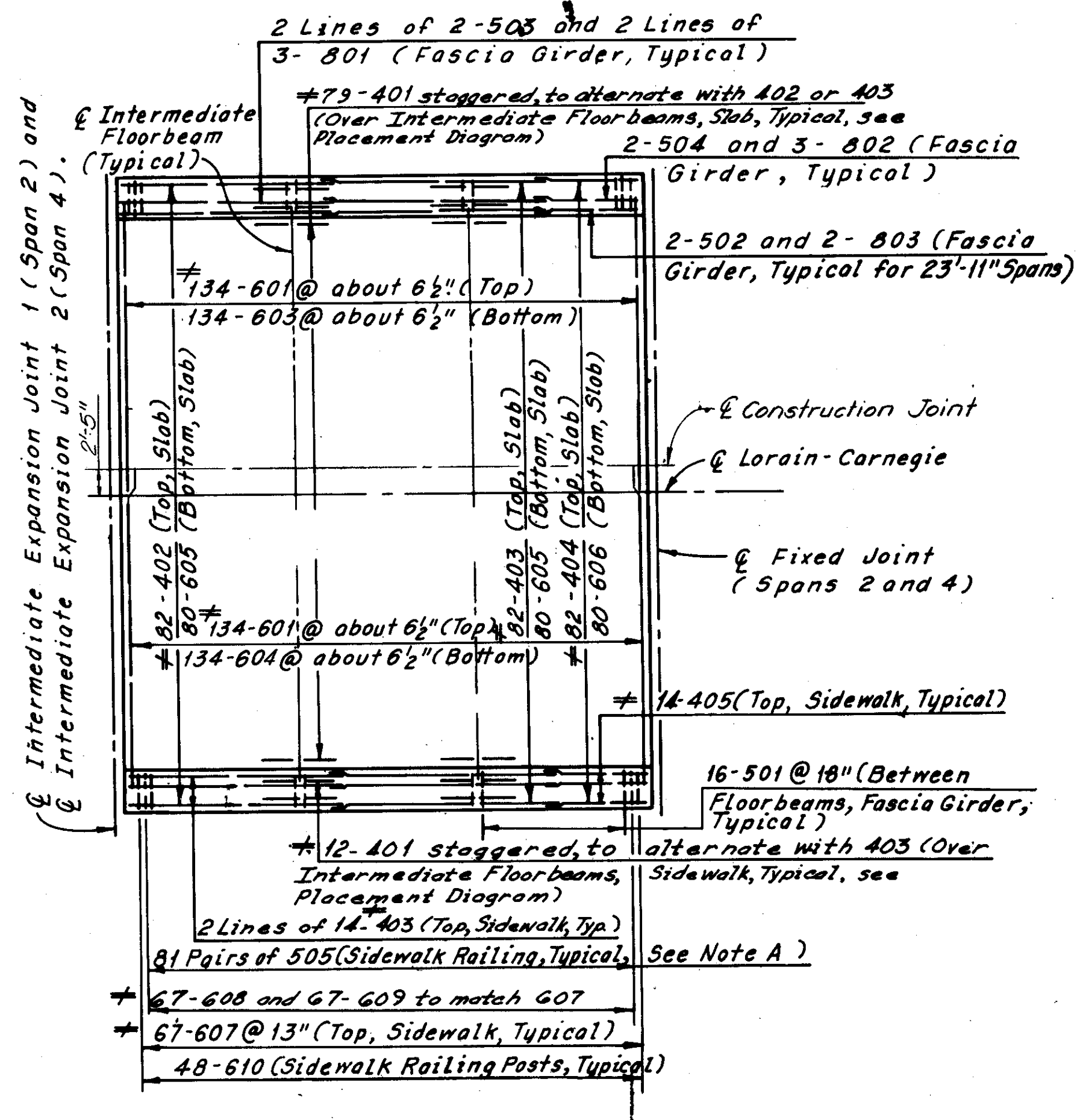
Note A:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints, and/or railing posts and open joints.

\* Denotes epoxy coated reinforcing steel.

REQUIRED LAP LENGTHS	
No. 4 Bar	= 11'-0" Min.
No. 5 Bar	= 11'-4" Min.
No. 6 Bar	= 11'-5" Min.
No. 8 Bar	= 21'-7" Min.

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Wheeling and Lake Erie Railroad = SA  
Span 1 = SB  
Span 2 = SC  
Span 4 = SE

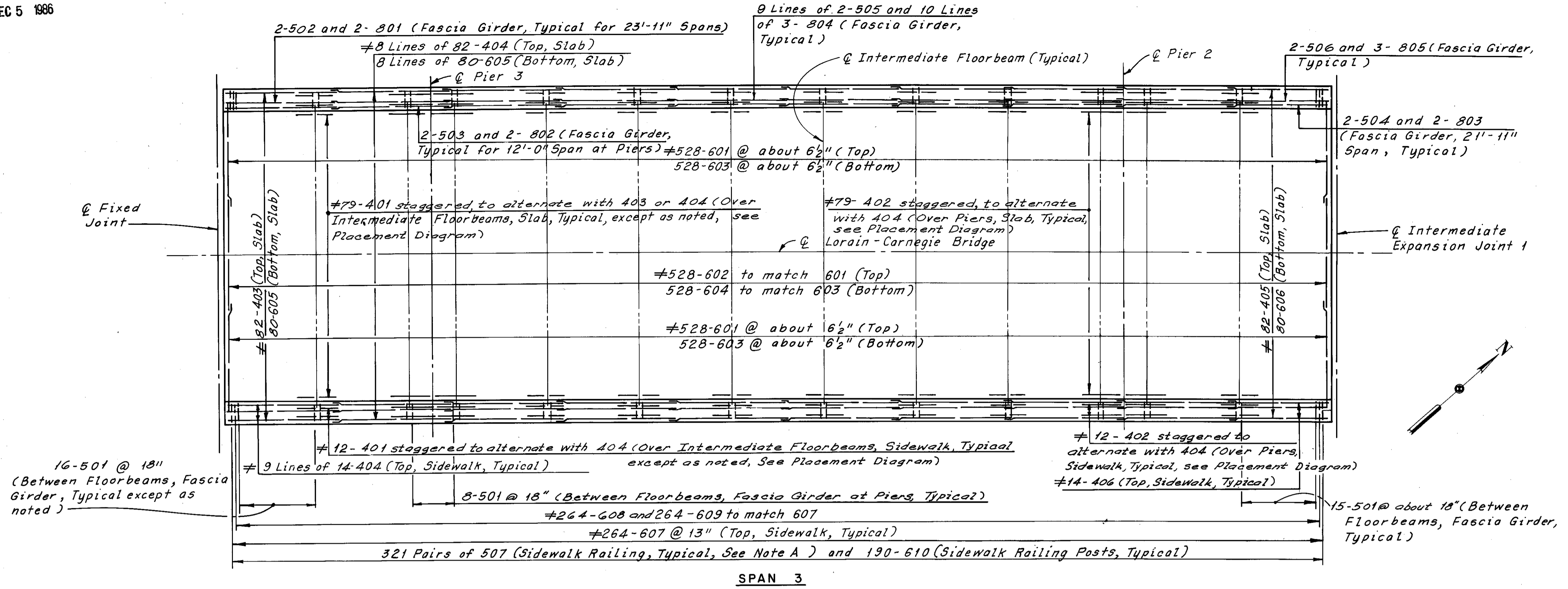
Notes:  
For Sections A-A, B-B, C-C and D-D, see Sheet 53/72.  
For Railing Details, see Sheets 59/72 thru 64/72.  
For Placement Diagram of No. 4 bars over Piers and Intermediate Floorbeams, see Sheet 53/72.  
For placement of longitudinal reinforcement and additional reinforcement over Piers in the slab and the sidewalk, see Sheet 53/72.  
For Typical Section for Span 1 thru Span 13, see Sheet 53/72.  
For Details of Expansion Joint at East Abutment, see Sheets 42/72 and 43/72.  
For Details of Expansion Joint at East Pylon, see Sheets 41/72 and 43/72.  
For Details of Fixed Joints, see Sheets 44/72 and 45/72.  
For Details of Intermediate Expansion Joints, see Sheets 37/72 and 38/72.  
For Reinforcement Schedule, see Sheet R/1A thru R/3.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
For manhole details, see Sheet 54/72.  
Concrete deck slab reinforcement shall be field cut to clear the manholes.  
This sheet added 5-1-81 and supersedes Sheet 48/72.



SPAN 2 AND SPAN 4

Supersedes sheet 123, 7-10-81

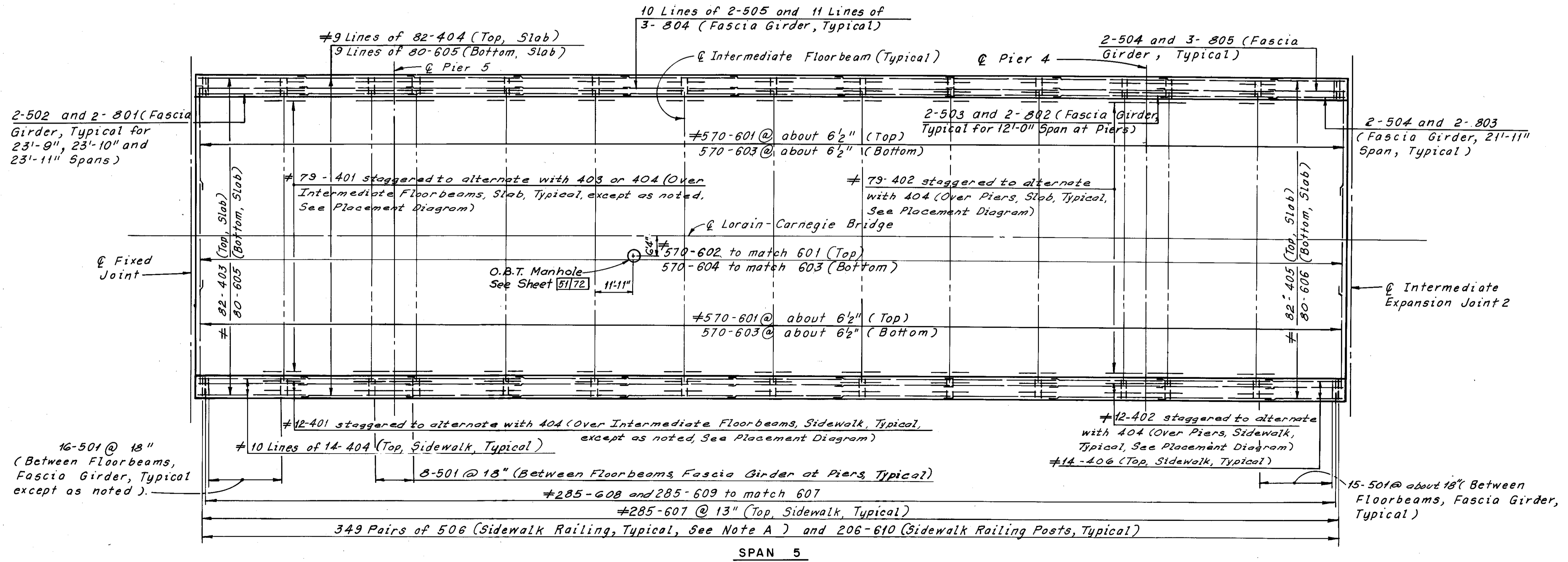
H.B.T.B. BRIDGE NO. 3		<b>HNTB</b>	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			
<b>UPPER DECK PLAN</b>			
<b>SPAN OVER WHEELING &amp; LAKE ERIE R.R.,</b>			
<b>SPANS 1, 2 AND 4</b>			
<b>REHABILITATION OF THE</b>			
<b>LORAIN-CARNEGIE BRIDGE</b>			
(S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY-10-1618	STA. 22 + 19.19		
CUYAHOGA COUNTY	STA. 55 + 04.56	OHIO	
DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED
DATE: 1-18-78	DATE: 1-25-78	DATE: 4-6-78	DATE:



REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 3 = SD  
Span 5 = SF

≠ Denotes epoxy coated reinforcing steel.



Note:  
For Notes, see Sheet 48/72.

Note A:  
Bars 506 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

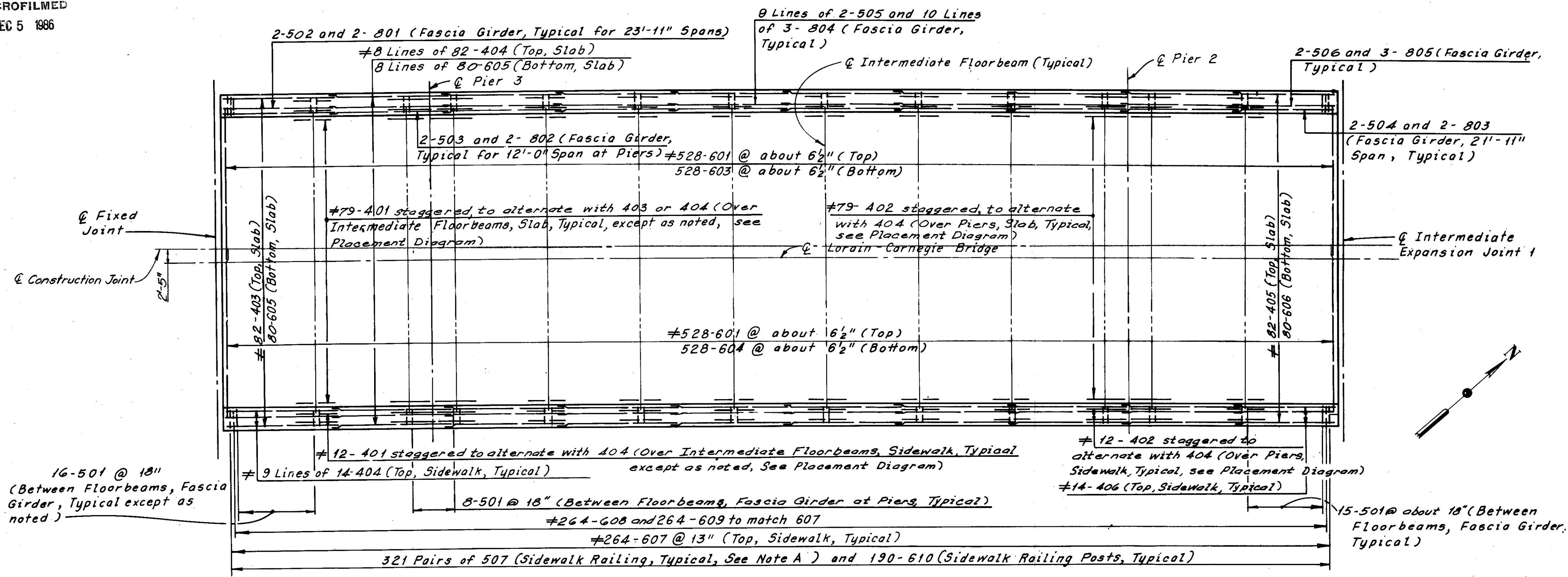
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>
UPPER DECK PLANS SPANS 3 AND 5 REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56		
CUYAHOGA COUNTY OHIO		
DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.
DATE: 2-78	DATE: 2-78	DATE: 4-78
REVIEWED	REVISED	
DATE	DATE	

FHWA REGION	STATE	PROJECT
5	OHIO	

124A  
185

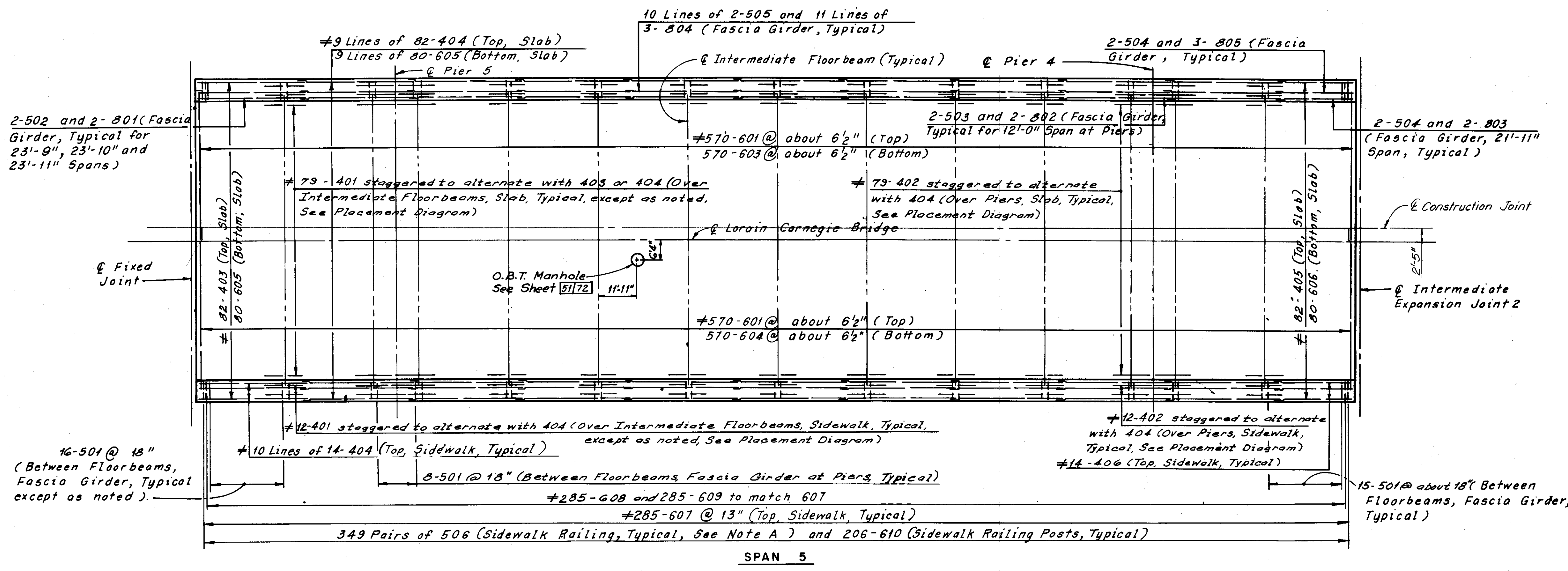
CUYAHOGA COUNTY  
CUY-10-16.05



REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 3 = SD  
Span 5 = SF

# Denotes epoxy coated reinforcing steel.



Note:  
For Notes, see Sheet 48/72

Note A:  
Bars 506 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.  
This sheet added 5-1-81 and supersedes Sheet 49/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**UPPER DECK PLANS SPANS 3 AND 5**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISION
DATE: 2-78	DATE: 2-78	DATE: 4-78	DATE	

SHEETS 24/72

Supersedes sheet 124, 7-10-81

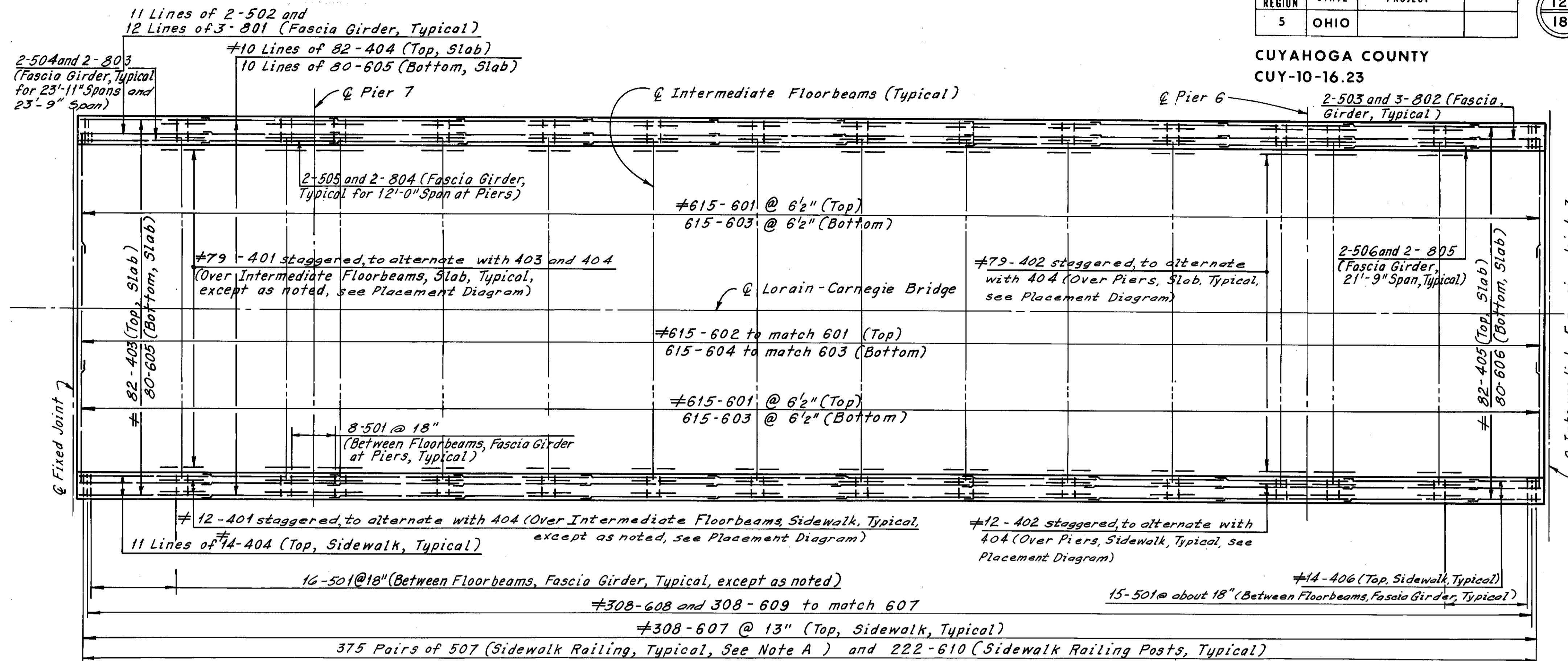
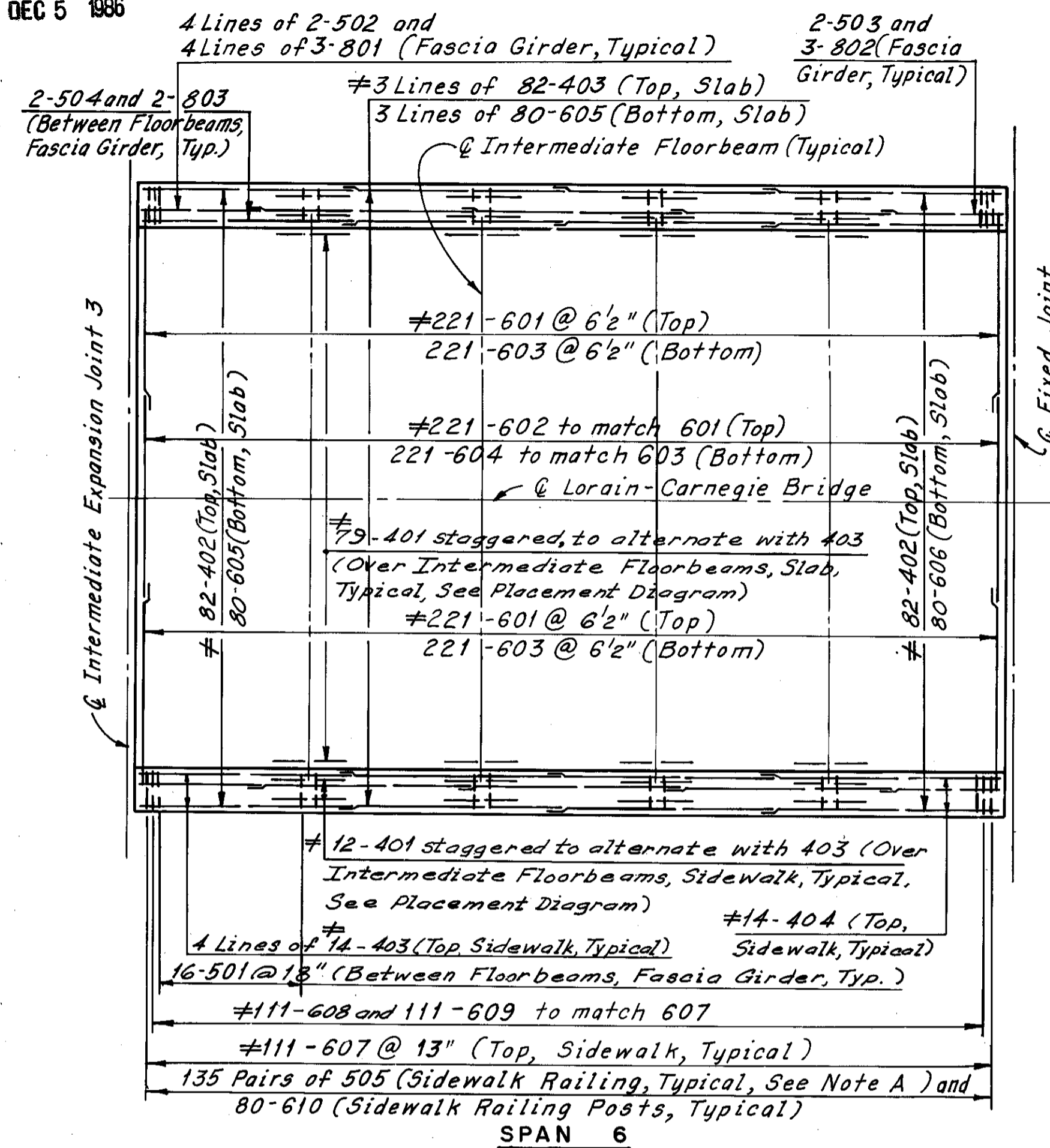


MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

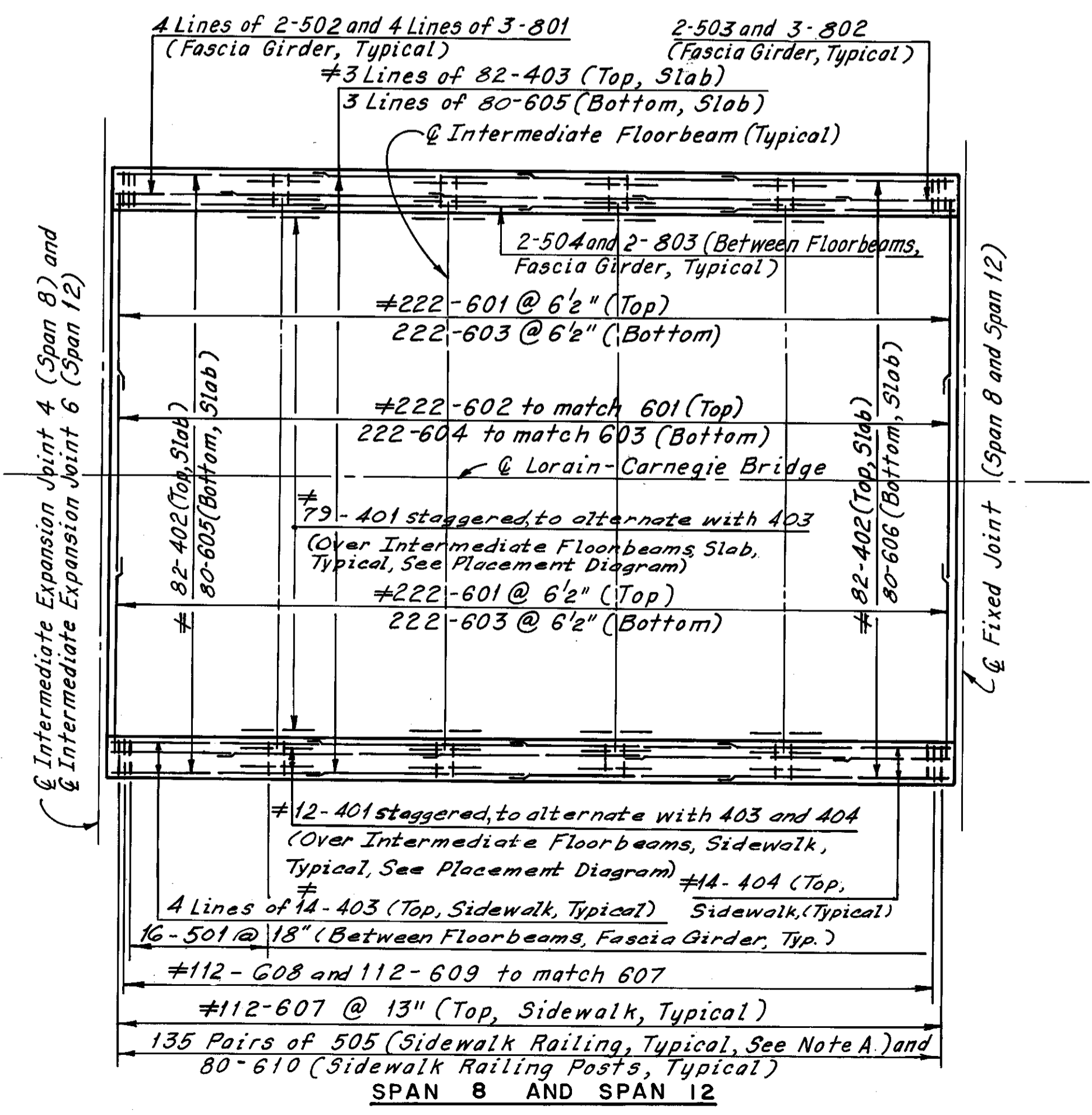
125  
185

CUYAHOGA COUNTY  
CUY-10-16.23

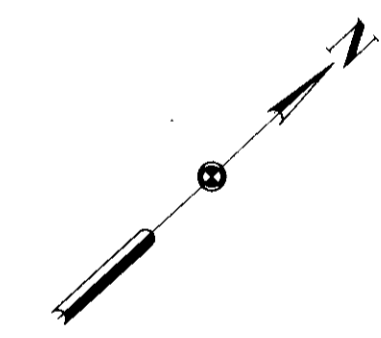


SPAN 7

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 6 = SG  
Span 7 = SH  
Span 8 = SJ  
Span 12 = SN



SPAN 8 AND SPAN 12



Note:  
For Notes, see Sheet 48/72

REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

# Denotes epoxy coated reinforcing steel.

Note A:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

H.N.T.B. BRIDGE NO.3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

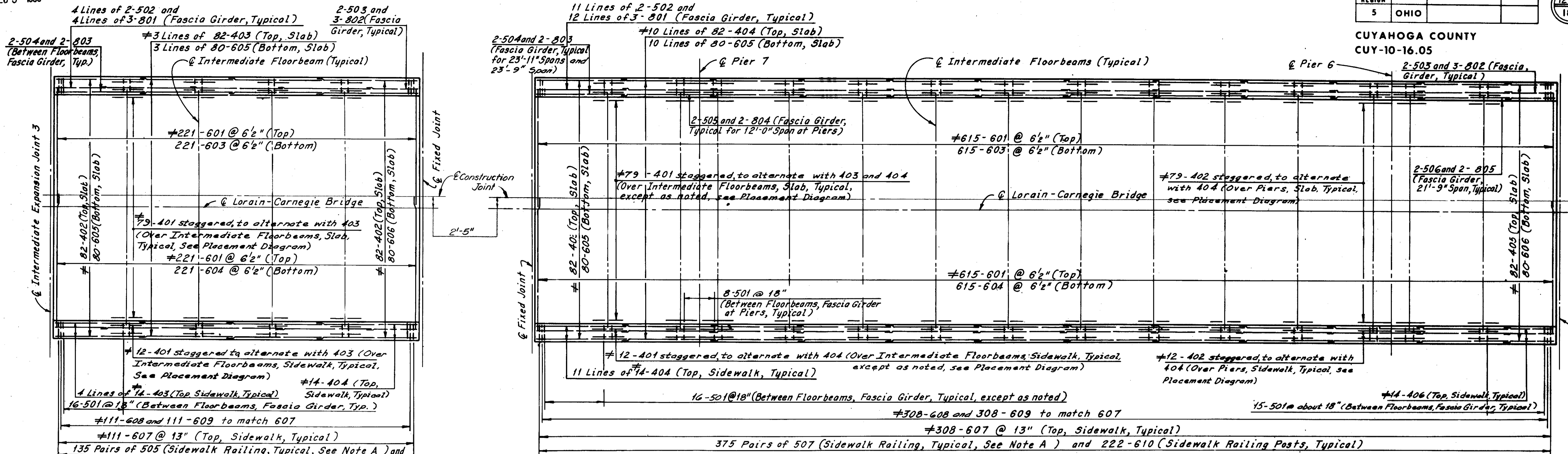
**UPPER DECK PLANS  
SPANS 6, 7, 8 AND 12  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)**

BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

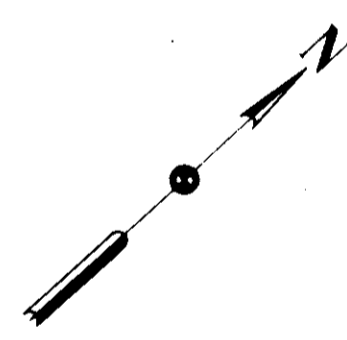
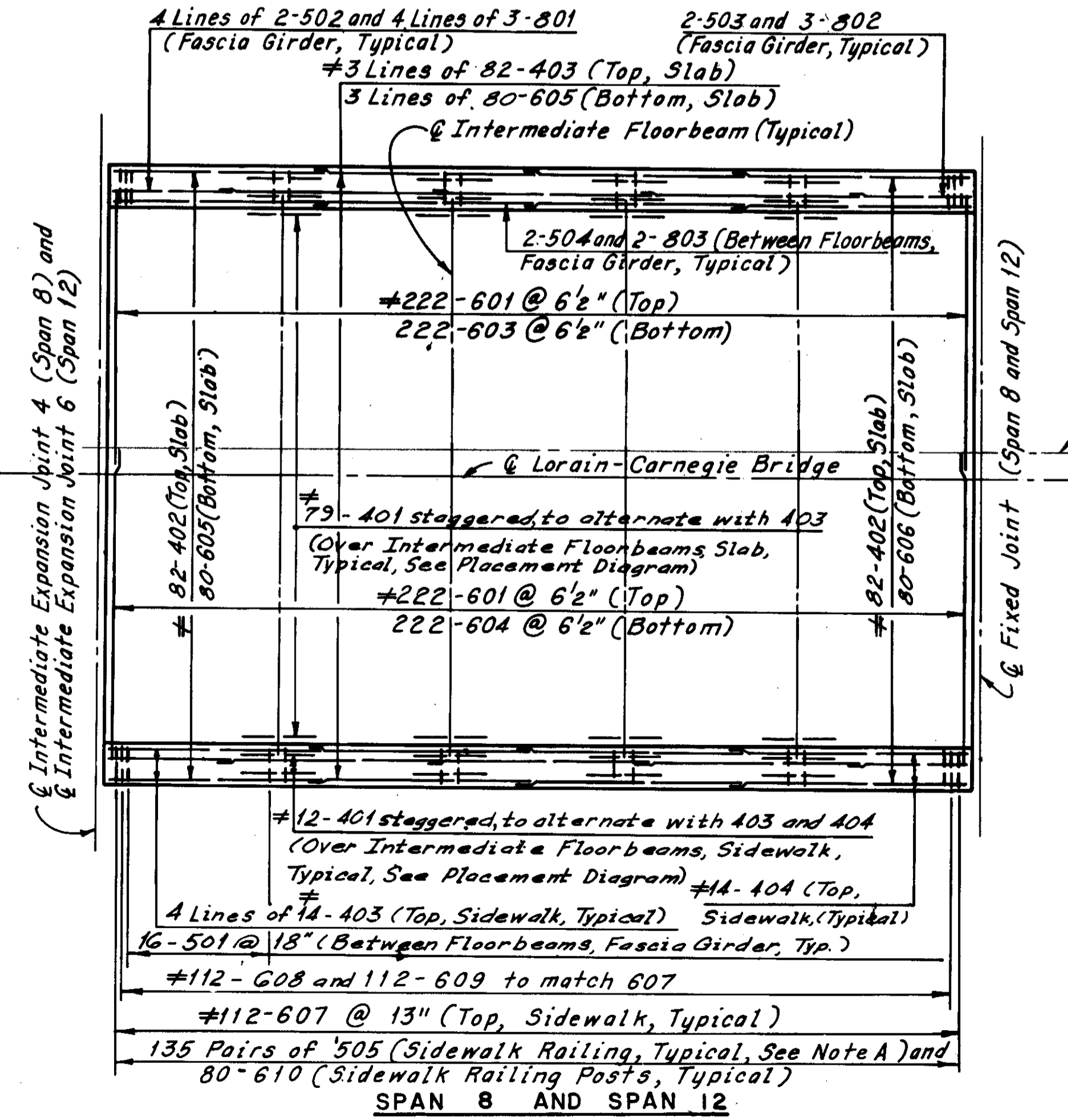
CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISION
DATE 2/27/78	DATE 2/27/78	DATE 4/6/78	DATE	SHEET 50/72

Superseded by sheet 125A, 7-10-81



Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 6 = SG  
Span 7 = SH  
Span 8 = SJ  
Span 12 = SN



Note:  
For Notes, see Sheet 48/72

REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

\* Denotes epoxy coated reinforcing steel.

This sheet added 5-1-81 and supersedes Sheet 50/72

Note 2:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

H.N.T.B. BRIDGE NO.3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**UPPER DECK PLANS  
SPANS 6, 7, 8 AND 12**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

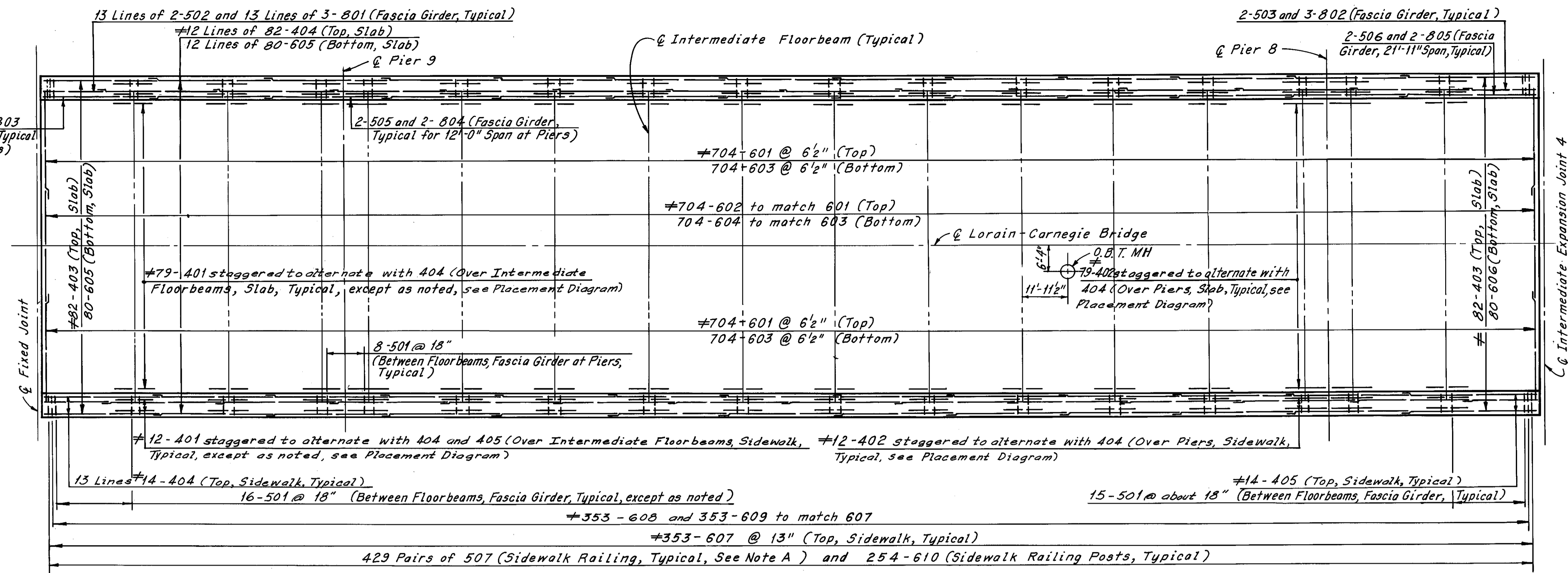
DRAWN	TRACED	CHECKED	REVIEWED	REVISOR
DATE 2-27-78	DATE 2-27-78	DATE 4-6-78	DATE	

Supersedes sheet 125, 7-10-81

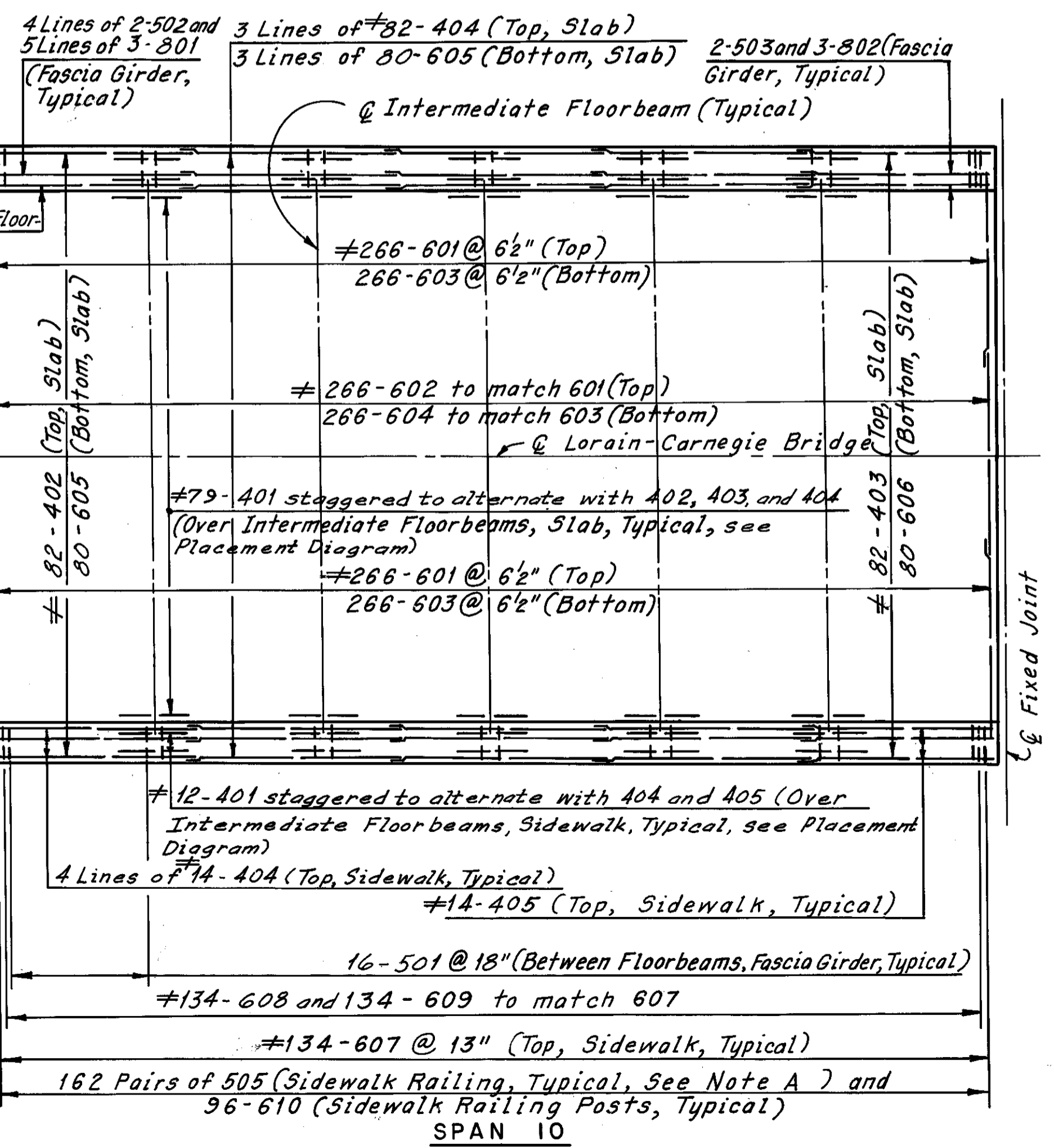
Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 9 = SK  
Span 10 = SL  
O.B.T. Manholes (All Spans) = MH

REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

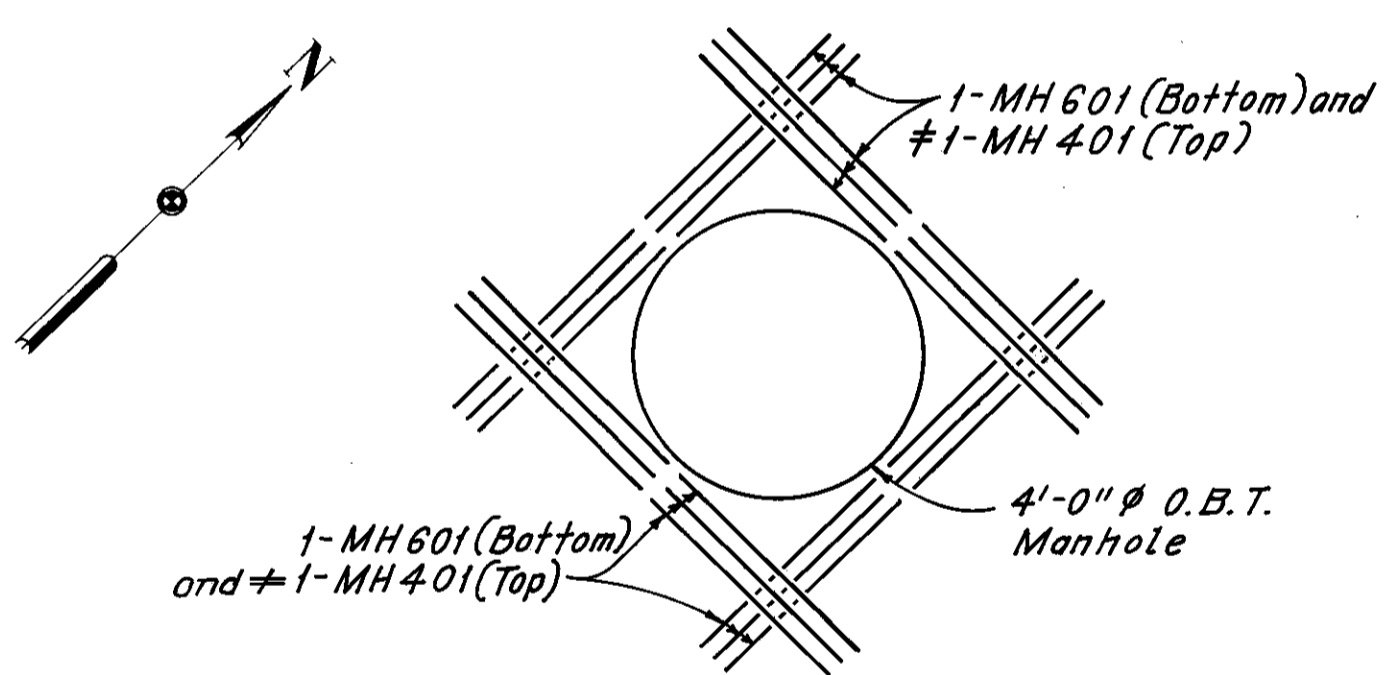
Note A:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.



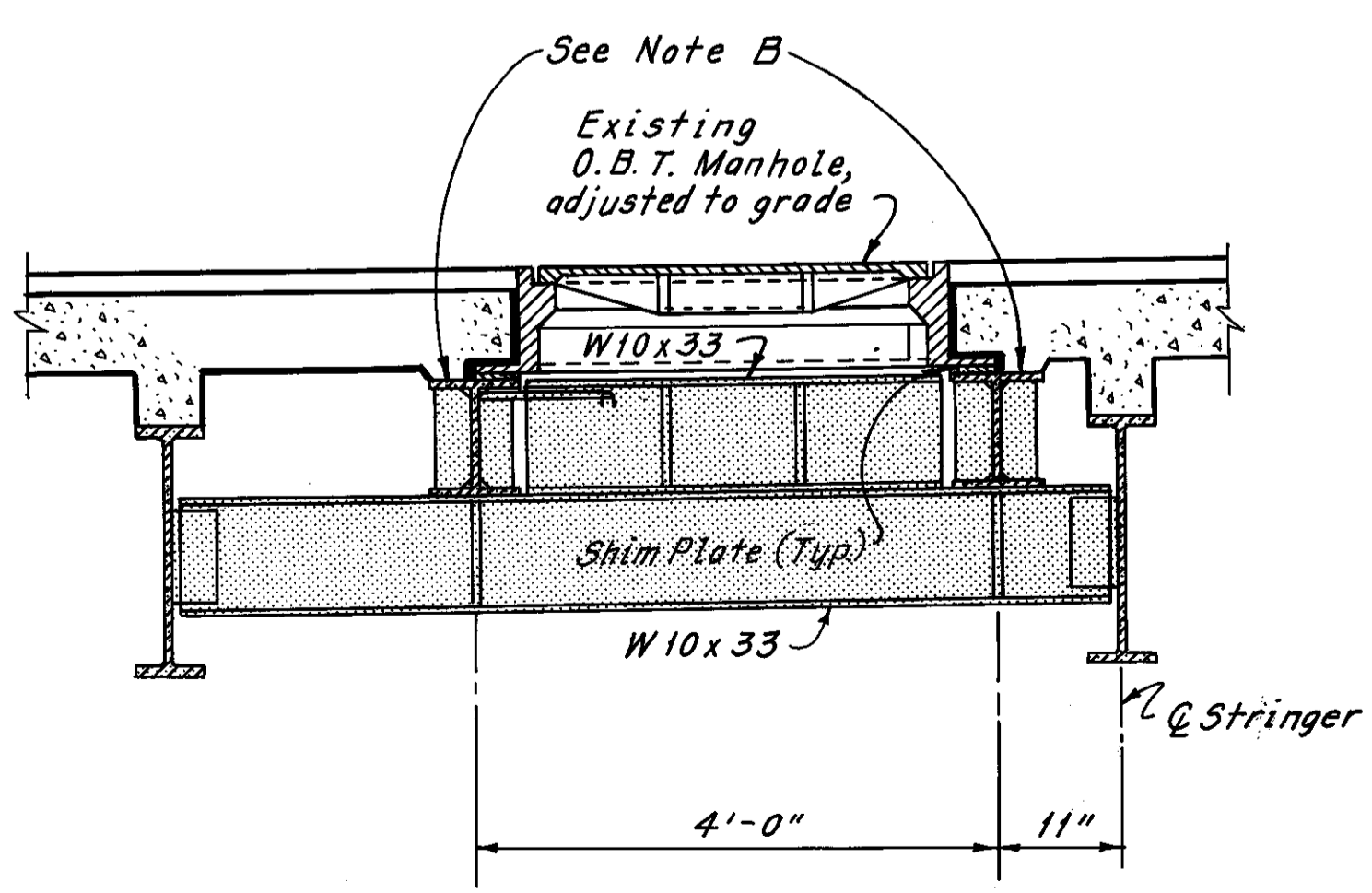
SPAN 9



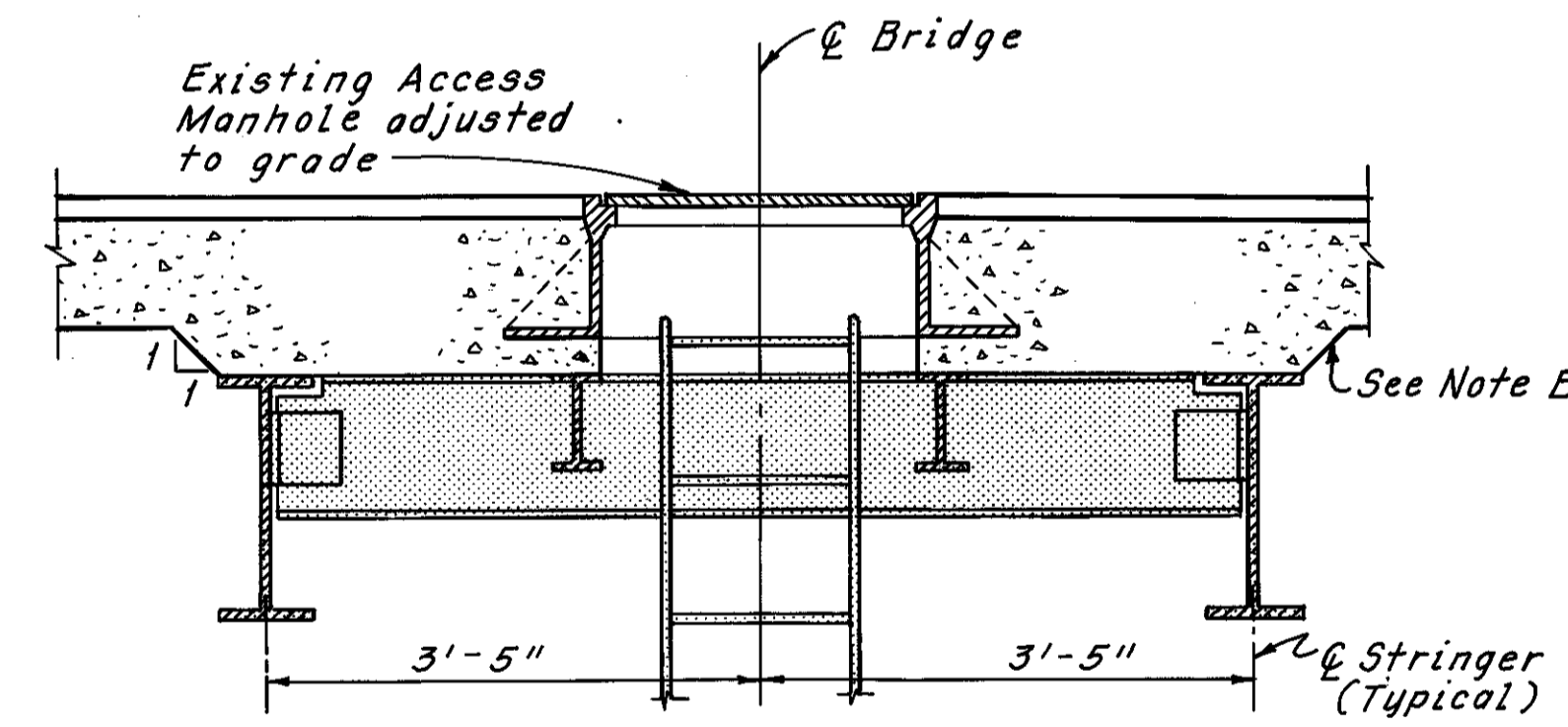
SPAN 10



ADDITIONAL REINFORCEMENT AT O.B.T. MANHOLE



O.B.T. MANHOLE DETAIL (Deck Reinforcement not shown)



ACCESS MANHOLE DETAIL (Deck Reinforcement not shown)

REINFORCEMENT SCHEDULE				
Mark	No.	Length	Type	Ser. Incr.
#MH401	60	7'-3"	Str.	—
MH601	60	8'-3"	Str.	—

Manhole Notes:  
Additional reinforcement at manhole locations shall be included with the unit price bid for Item 604, Manholes Adjusted to Grade, for payment.  
Deck slab reinforcement shall be field cut to clear manholes.

# Denotes epoxy coated reinforcing steel.

Note B:  
The concrete deck shall be haunched to the manhole support members.

Notes:  
The following abbreviations are used:  
O.B.T. = Ohio Bell Telephone Company  
MH = Manhole  
Zip-a-tone indicates existing structure.  
For location of Access Manhole, see Sheet 48/72.  
For additional Notes, see Sheet 48/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

UPPER DECK PLANS  
SPANS 9 AND 10  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISED
DATE 2-6-78	DATE 2-8-78	DATE 4-6-78	DATE	DATE

Superseded by sheet 126A, 7-10-81

SHEET 51/72

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 9 = SK  
Span 10 = SL  
O. B. T. Manholes (All Spans) = MH

REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

Note A:  
Bars 505 and 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

Note B:  
The concrete deck shall be haunched to the manhole support members.

Notes:  
The following abbreviations are used:  
O. B. T. = Ohio Bell Telephone Company  
MH = Manhole  
Zip-a-tone indicates existing structure.  
For location of Access Manhole, see Sheet 48/72.  
For additional Notes, see Sheet 48/72.

This sheet added 5-1-81 and supersedes Sheet 51/72.

H. N. T. B. BRIDGE NO. 3

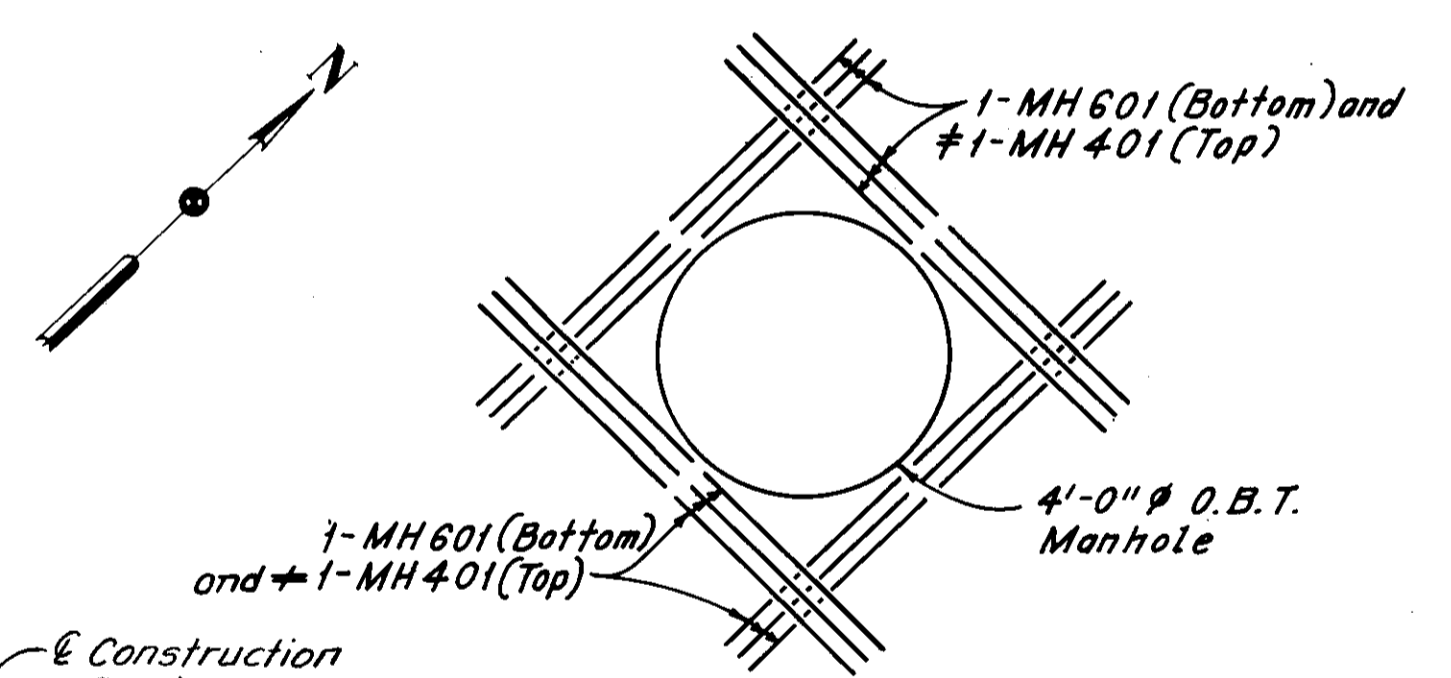
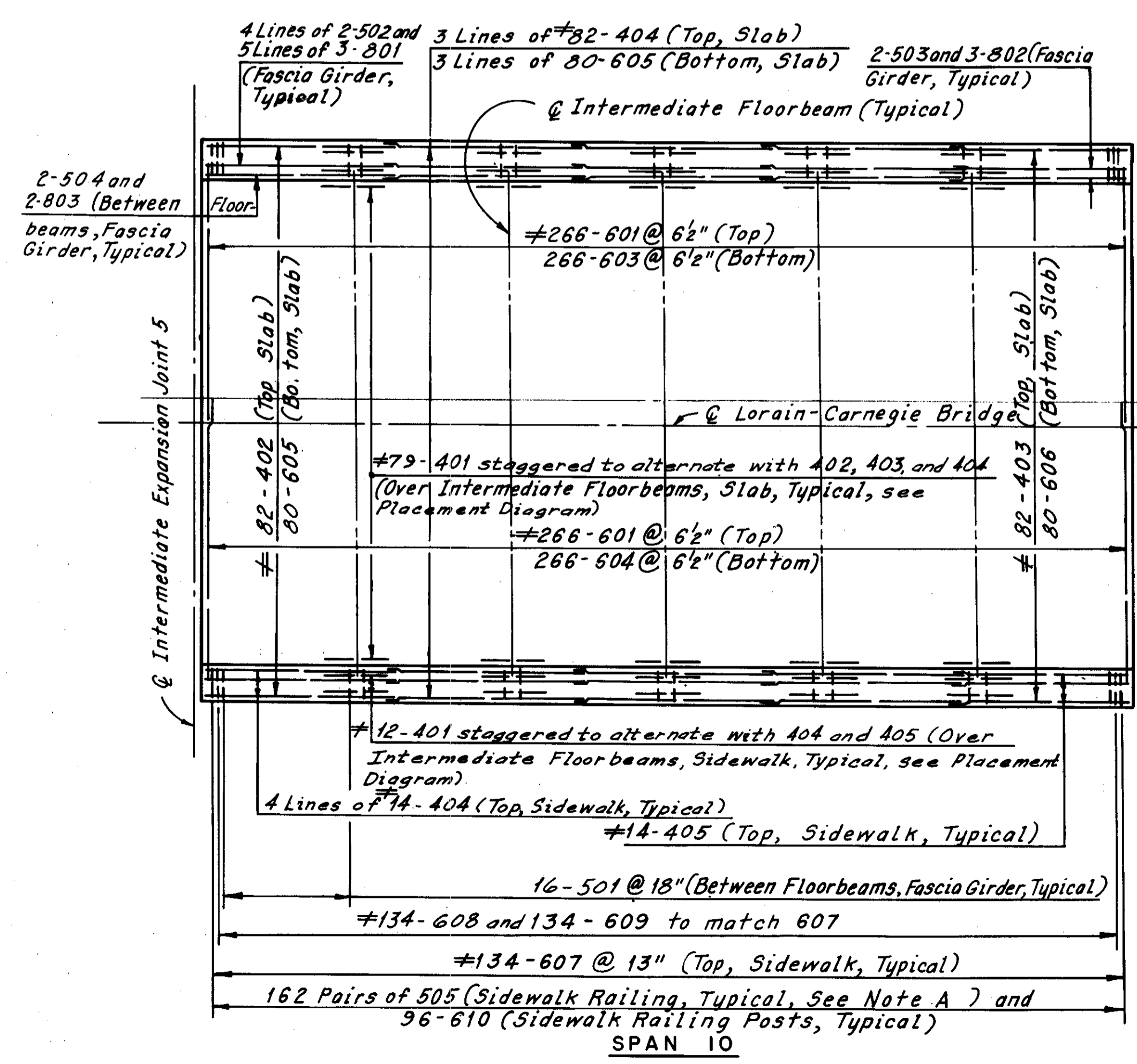
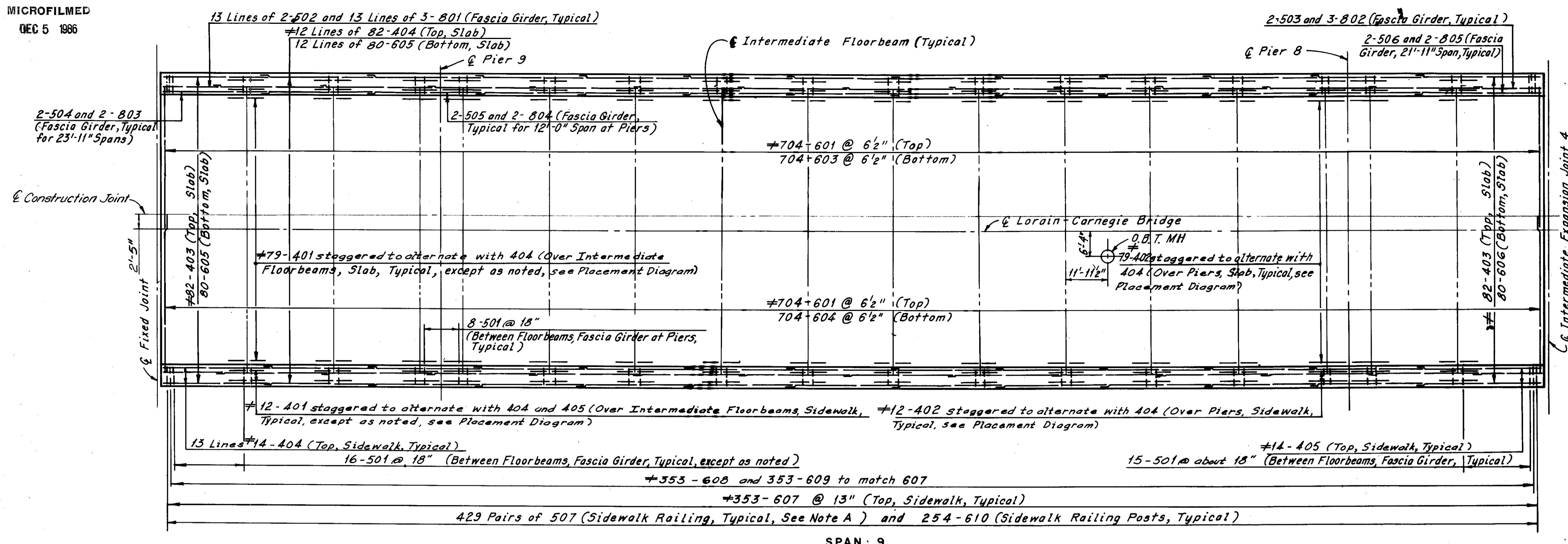
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

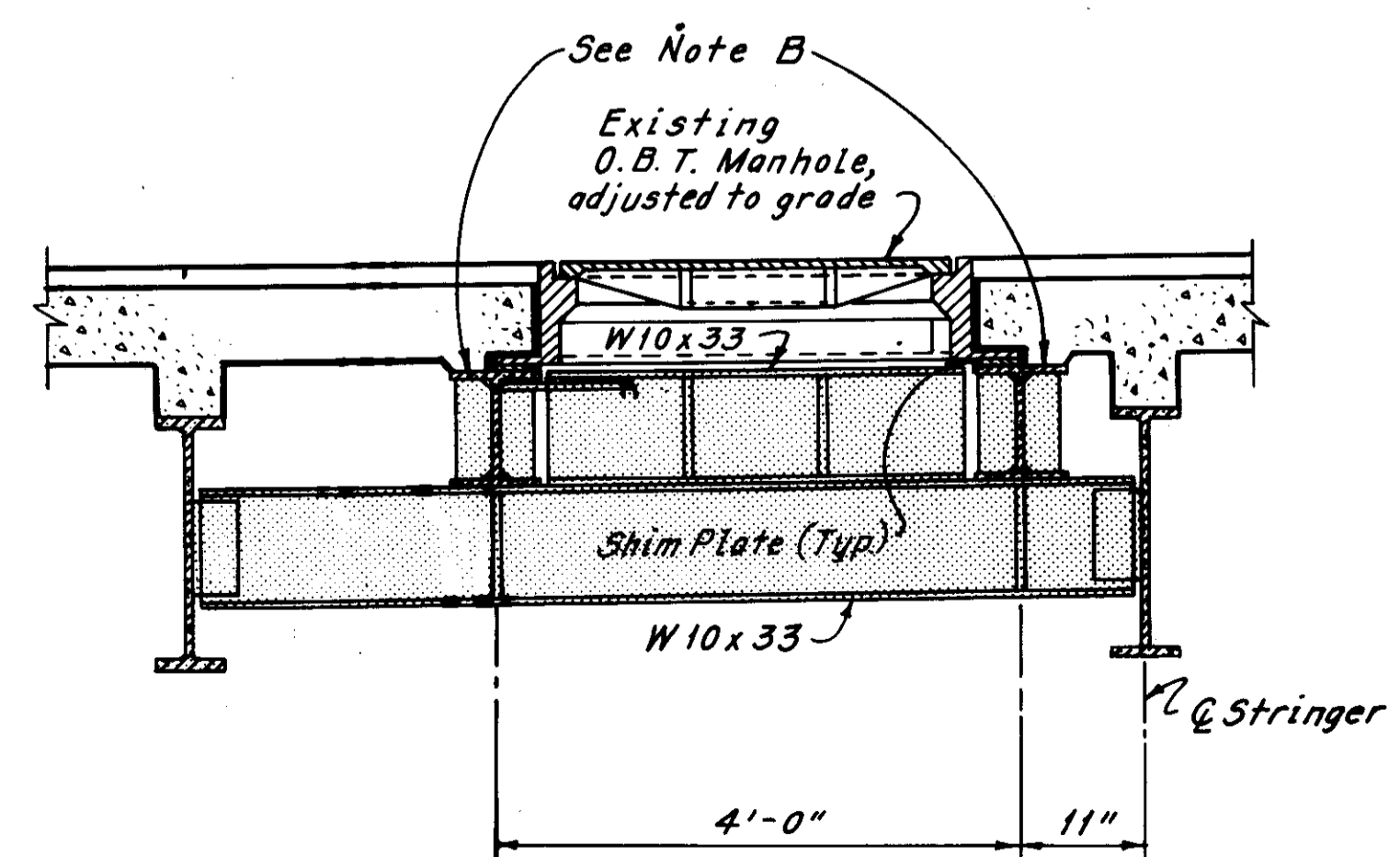
**UPPER DECK PLANS**  
**SPANS 9 AND 10**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56  
OHIO

DRAWN/C.P.	TRACED/C.P.	CHECKED	REVIEWED	REVISED
DATE 2-6-78	DATE 2-8-78	C.H.B. DATE 4-6-78	DATE	DATE

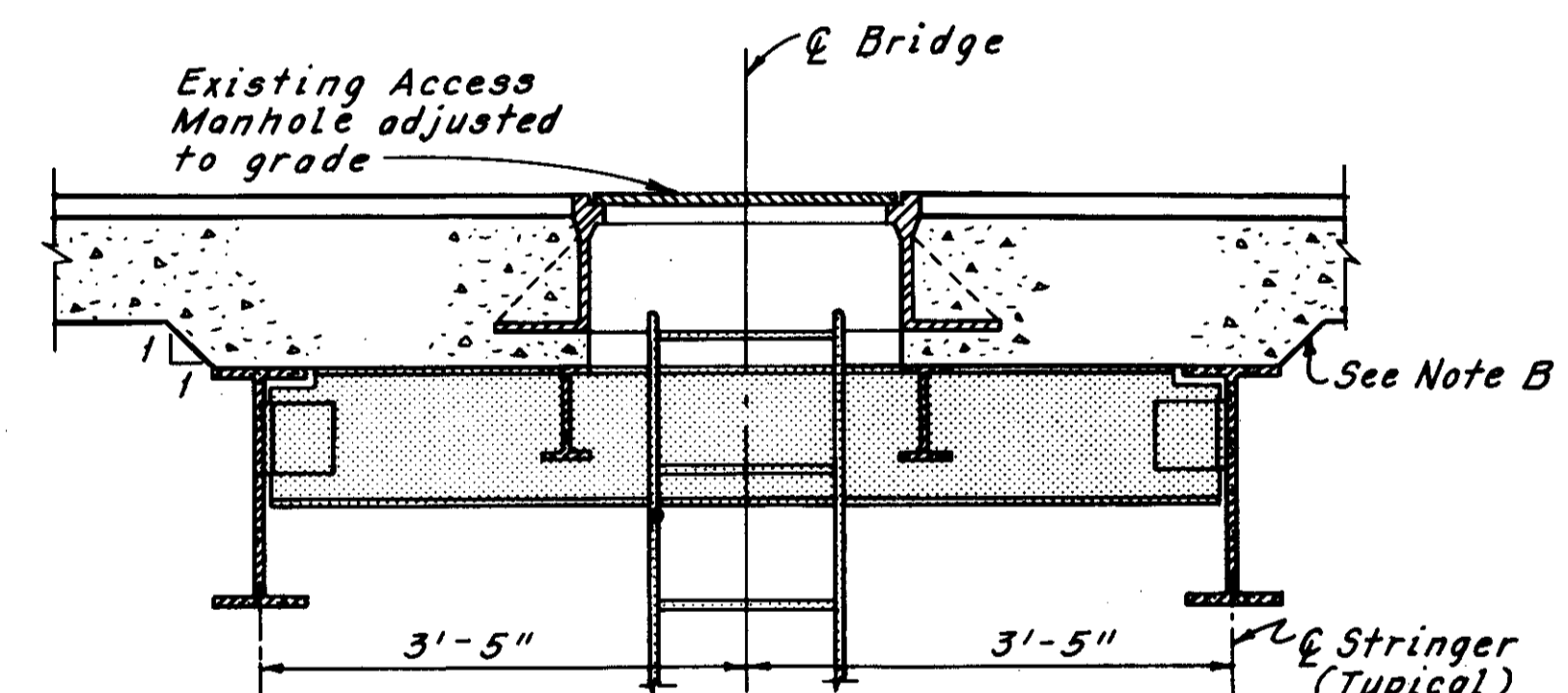
Supersedes sheet 126, 7-10-81



ADDITIONAL REINFORCEMENT AT  
O. B. T. MANHOLE



O. B. T. MANHOLE DETAIL  
(Deck Reinforcement not shown)

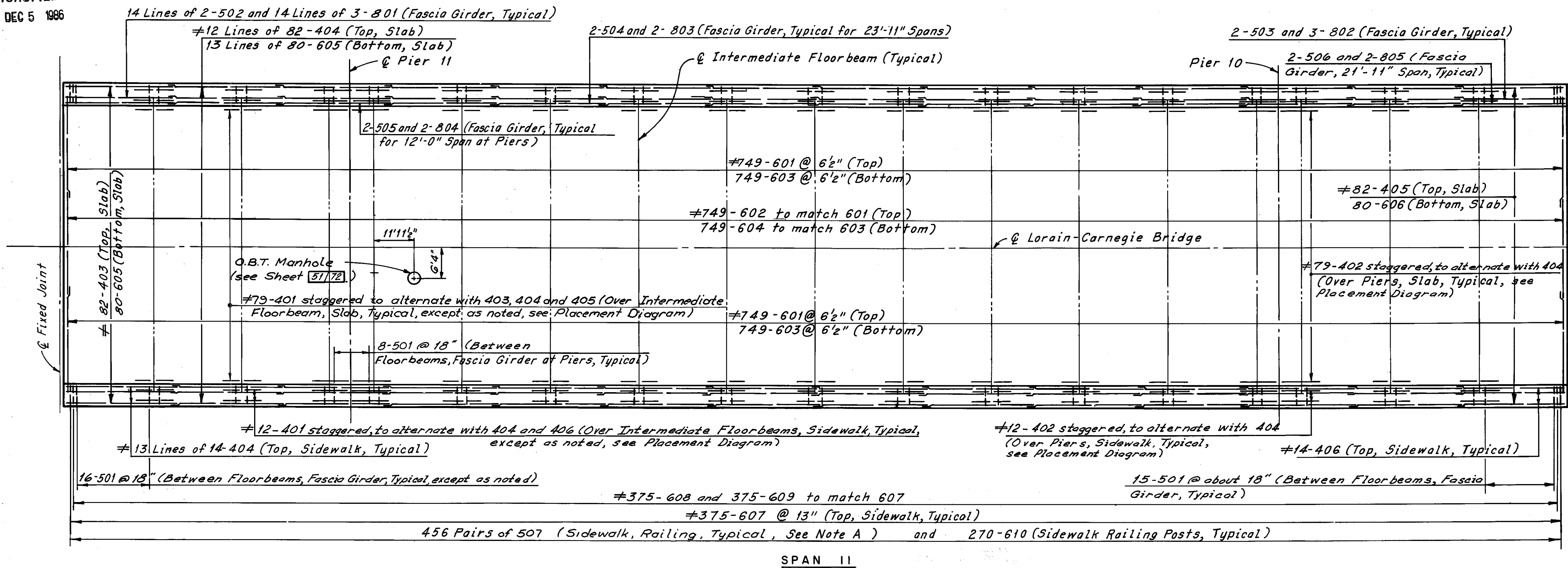


ACCESS MANHOLE DETAIL  
(Deck Reinforcement not shown)

REINFORCEMENT SCHEDULE				
Mark	No.	Length	Type	Ser. Incr.
#MH401	60	7'-3"	Str.	—
MH601	60	8'-3"	Str.	—

Manhole Notes:  
Additional reinforcement at manhole locations shall be included with the unit price bid for Item 604, Manholes Adjusted to Grade, for payment.  
Deck slab reinforcement shall be field cut to clear manholes.

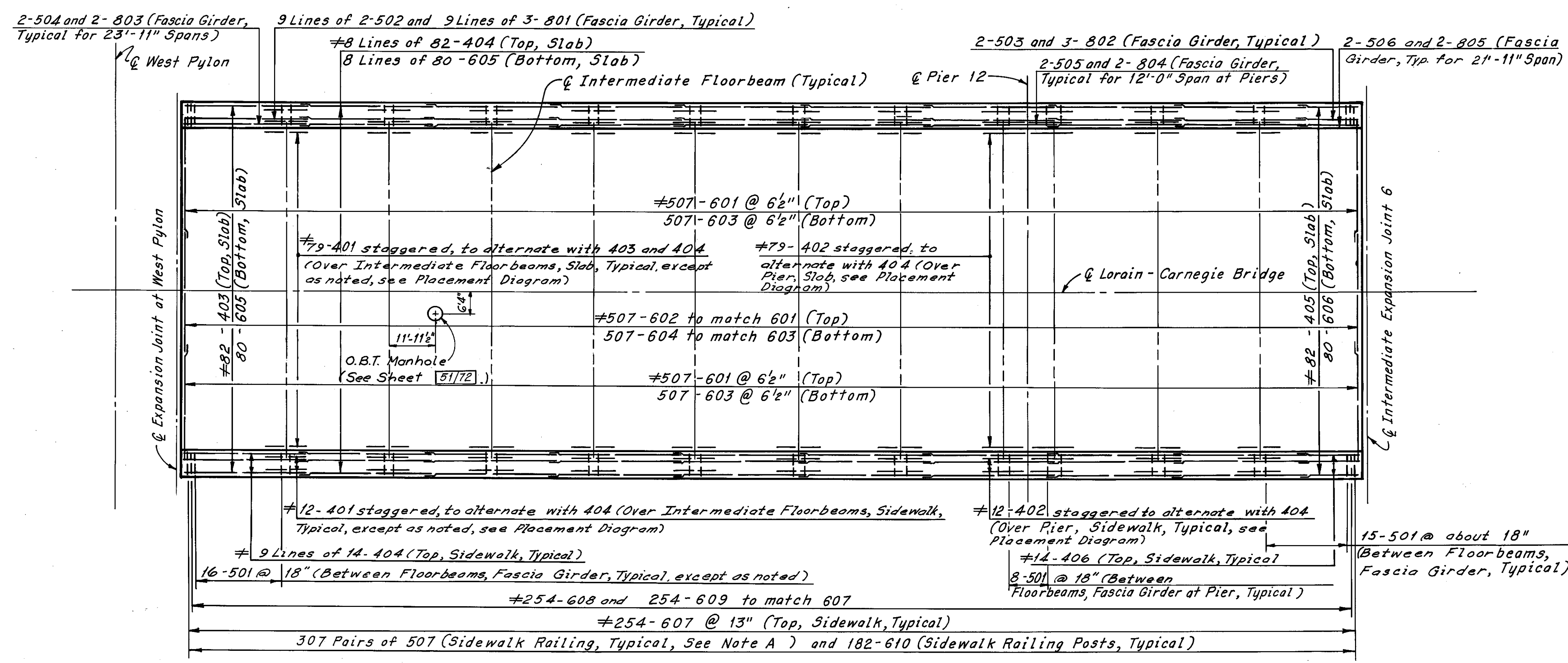
\* Denotes epoxy coated reinforcing steel.



Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 11 = SM  
Span 13 = SP

Note A:  
Bars 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

SPAN II



REQUIRED LAP LENGTHS	
No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

# Denotes epoxy coated reinforcing steel.

Note:  
For Notes, see Sheet 48/72.

SPAN 13

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

UPPER DECK PLANS  
SPANS II AND 13  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

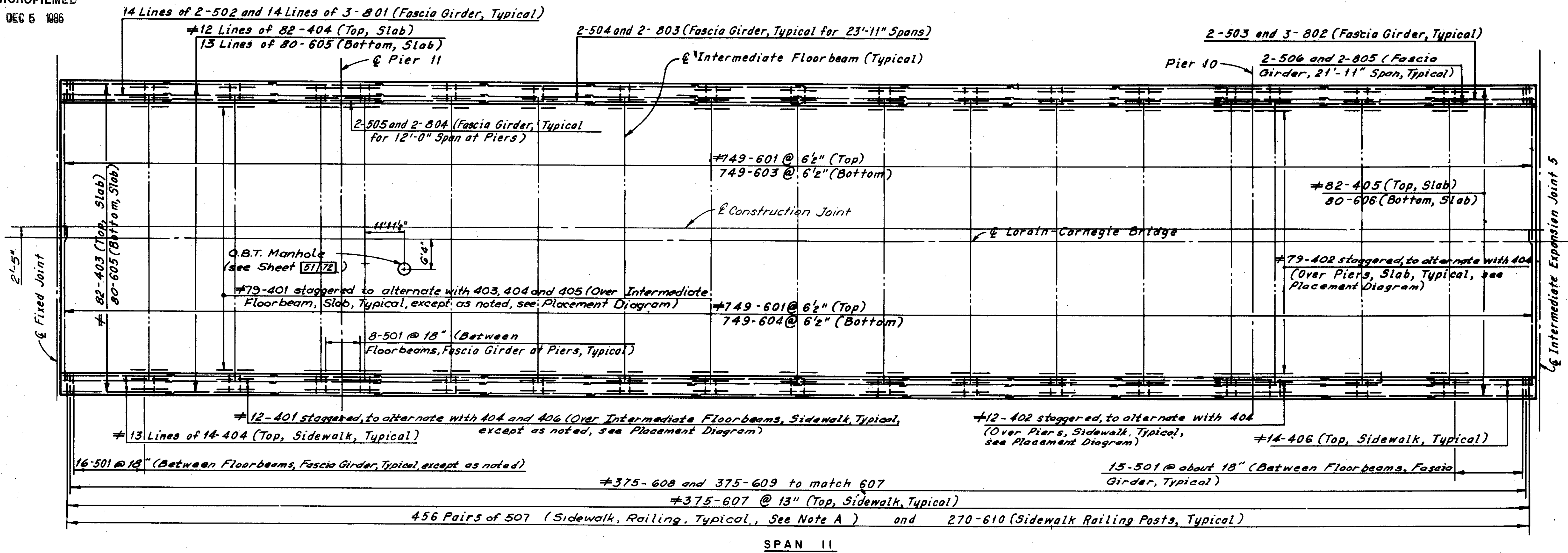
DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISED
DATE 2-10-78	DATE 2-14-78	DATE 4-6-78	DATE	SHEET 52/72

Superseded by sheet 127A, 7-10-81

FHWA REGION	STATE	PROJECT
5	OHIO	



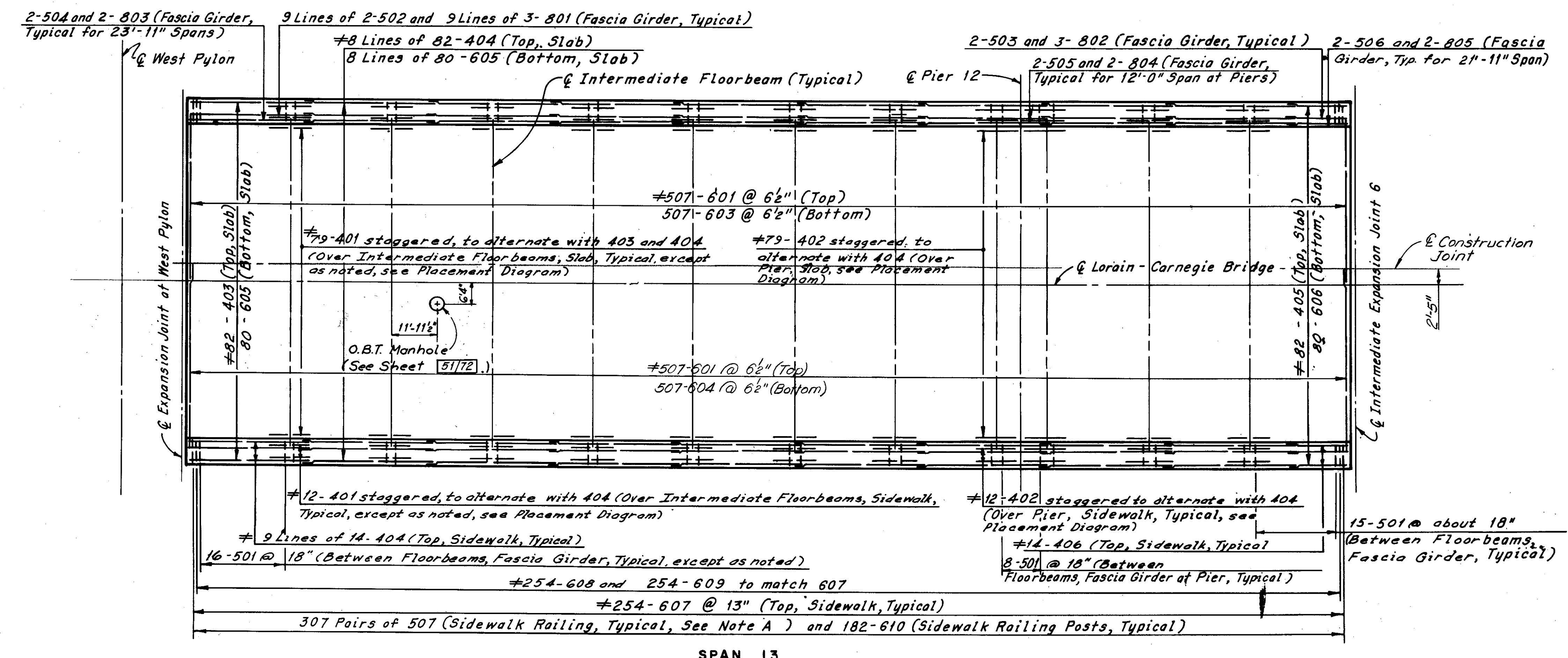
CUYAHOGA COUNTY  
CUY-10-16.05



**Notes:**  
 All reinforcing bar marks shall be prefixed as follows:  
 Span 11 = SM  
 Span 13 = SP

**Note A:**  
 Bars 507 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts, and at one space (2 sets of 2 bars) between railing posts and deflection joints and/or railing posts and open joints.

SPAN II



**REQUIRED LAP LENGTHS**

No. 4 Bar	= 1'-0" Min.
No. 5 Bar	= 1'-4" Min.
No. 6 Bar	= 1'-5" Min.
No. 8 Bar	= 2'-7" Min.

# Denotes epoxy coated reinforcing steel.

**Note:**  
 For Notes, see Sheet 48/72

This sheet added 5-1-81 and supersedes Sheet 52/72

SPAN 13

H.N.T.B. BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

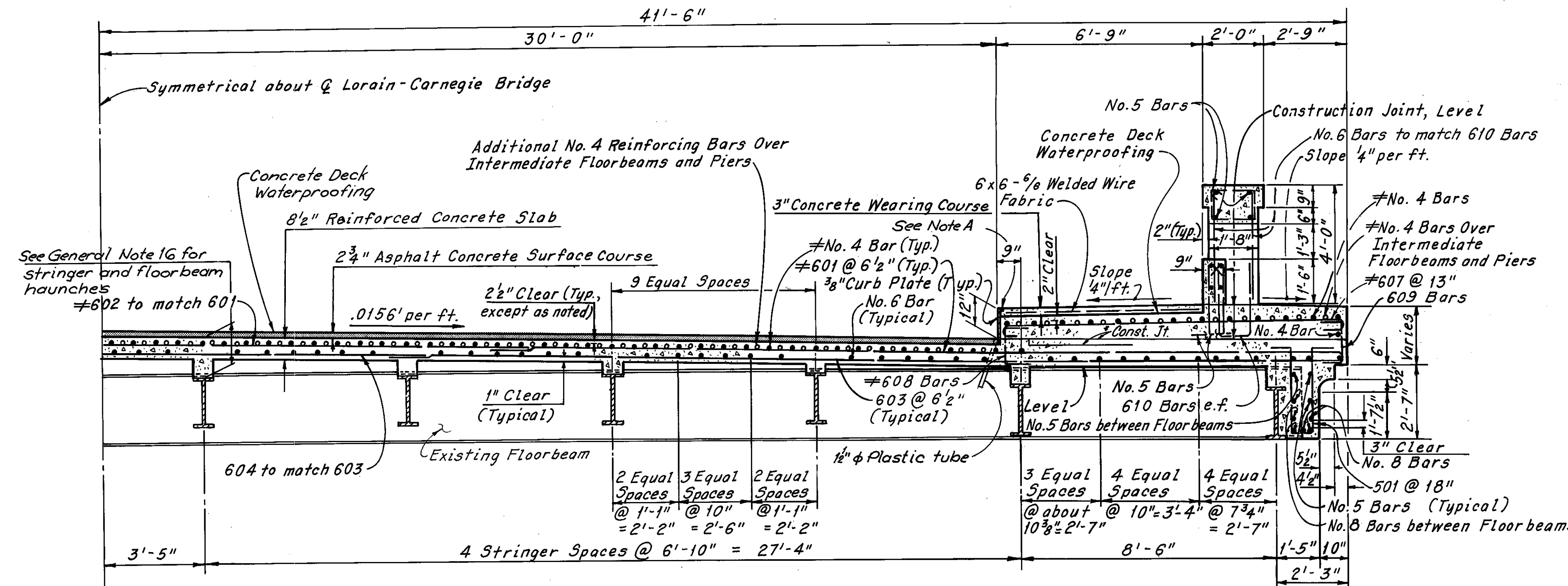
**UPPER DECK PLANS SPANS II AND 13**  
 REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY.-10-1618 STA. 22+19.19  
 STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISION
DATE 2-10-78	DATE 2-14-78	DATE 4-6-78	DATE	

Supersedes sheet 127, 7-10-81

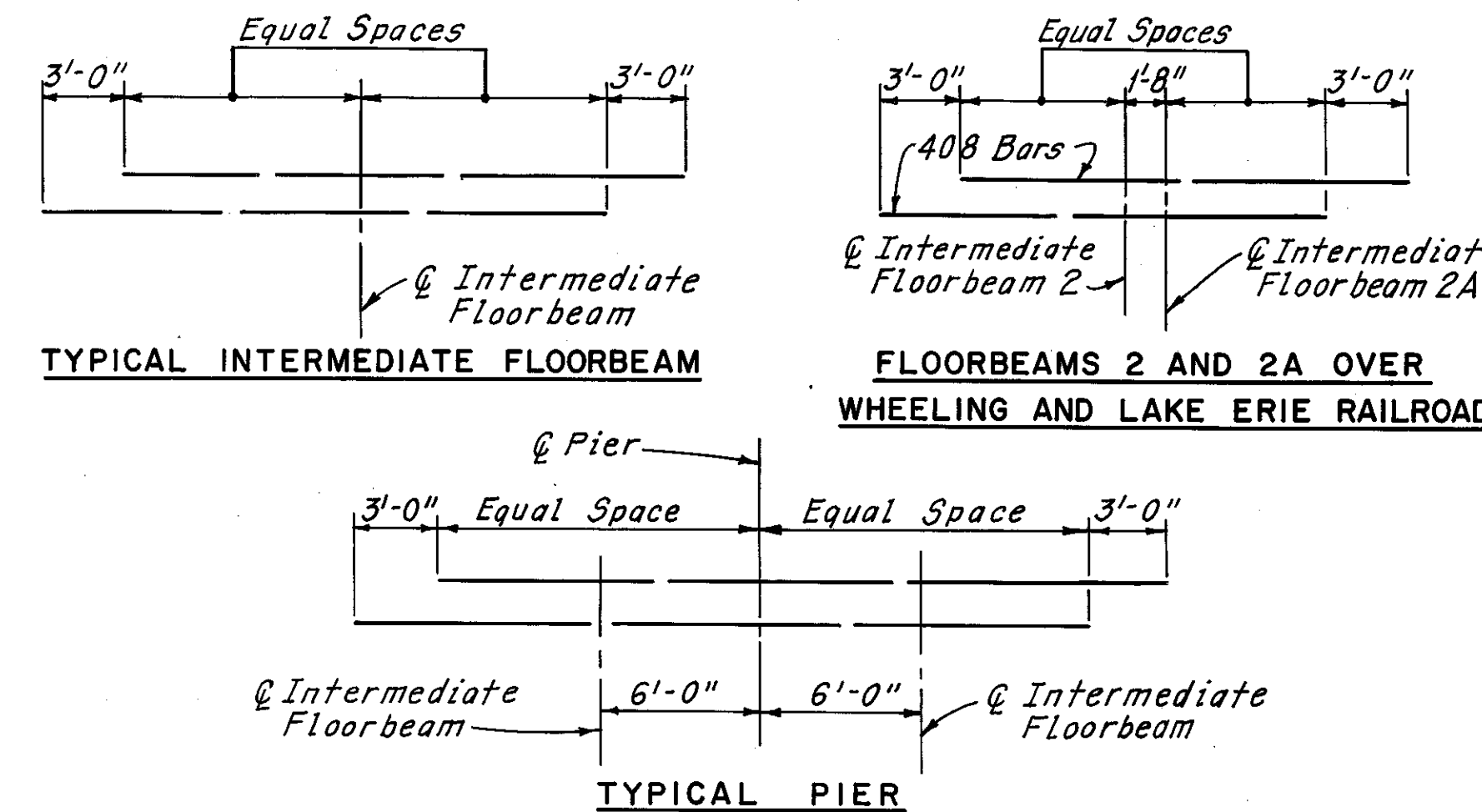
\* The horizontal construction joint in the south sidewalk between Pier 11 and the East Abutment must be lowered as shown to accommodate M.E.L.P. ducts. See M.E.L.P. Relocation Plans for details.  
Reinforcement above the construction shall be field cut to allow installation of 5 M.E.L.P. Splicing Chambers. See M.E.L.P. Relocation Plans, for locations of splicing chambers.



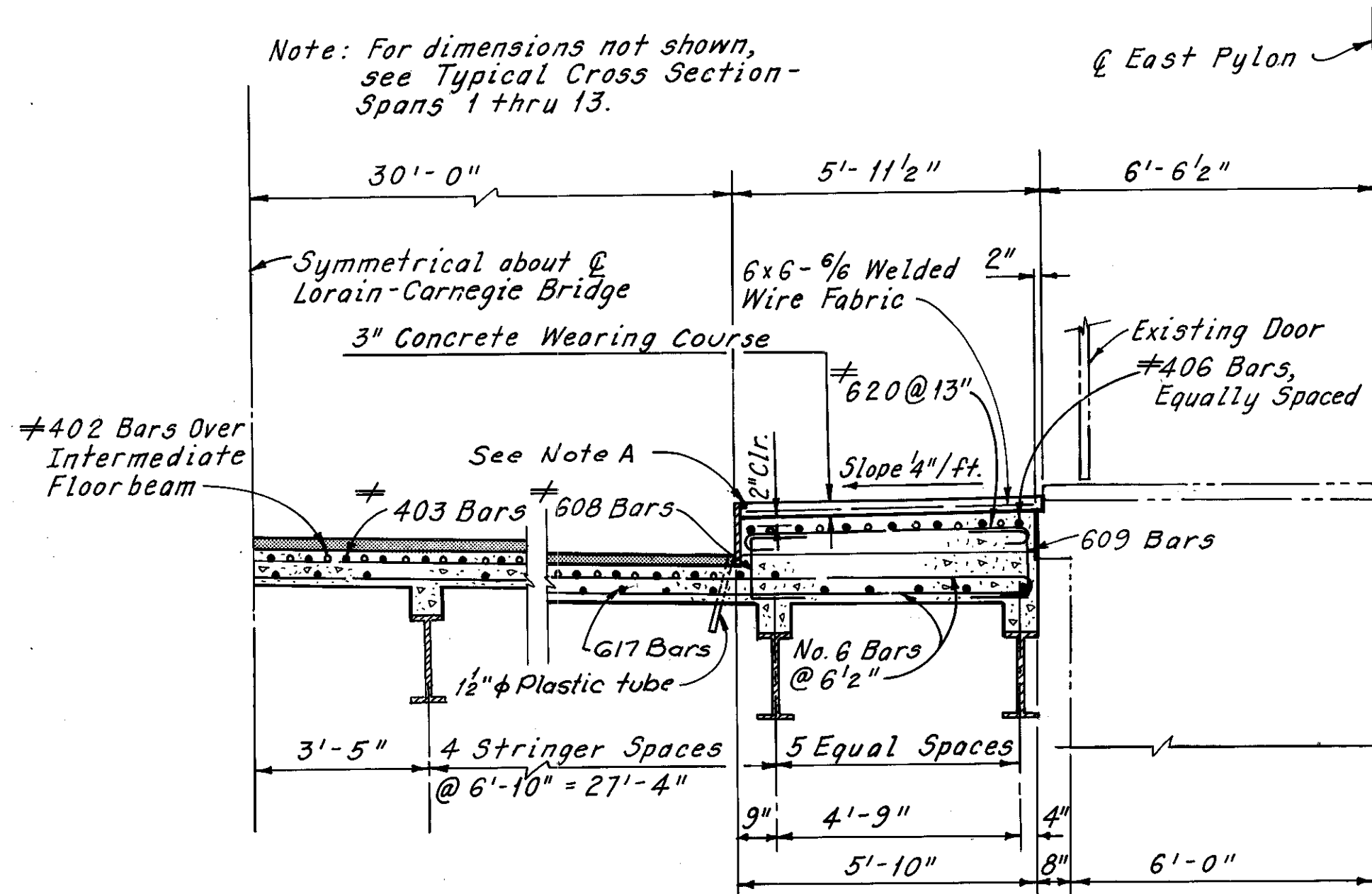
TYPICAL CROSS SECTION - SPANS 1 THRU 13  
(Wheeling and Lake Erie R.R. Span Same, except as shown in Part Section B-B)

Note A:  
Joint Sealer. Material shall be hot applied bridge deck waterproofing material, which also meets the requirement of 705.01. To be included with Item 511, Class S Concrete, Superstructure, for payment.

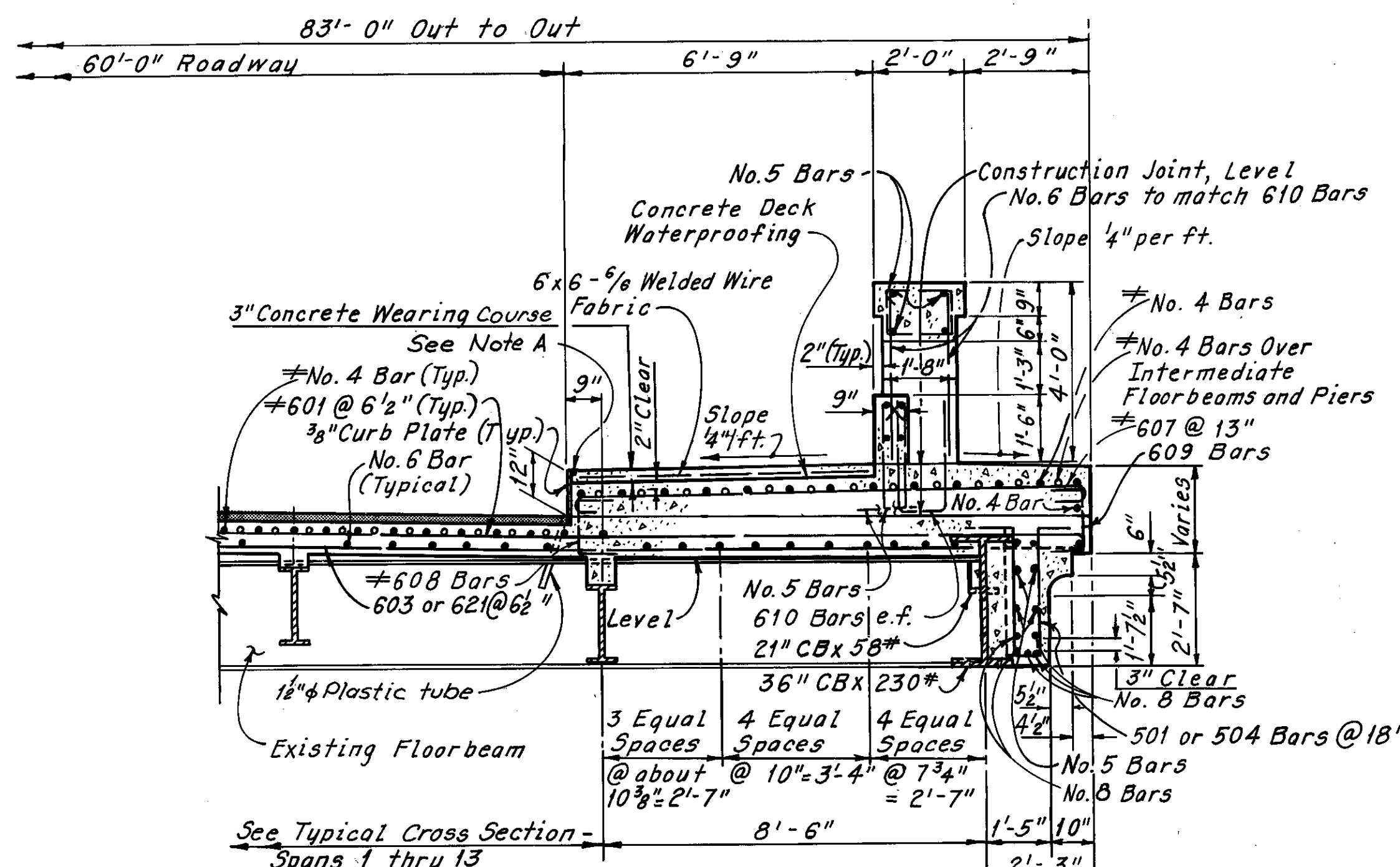
Note:  
2"  $\phi$  Lighting Conduit not shown in sections.



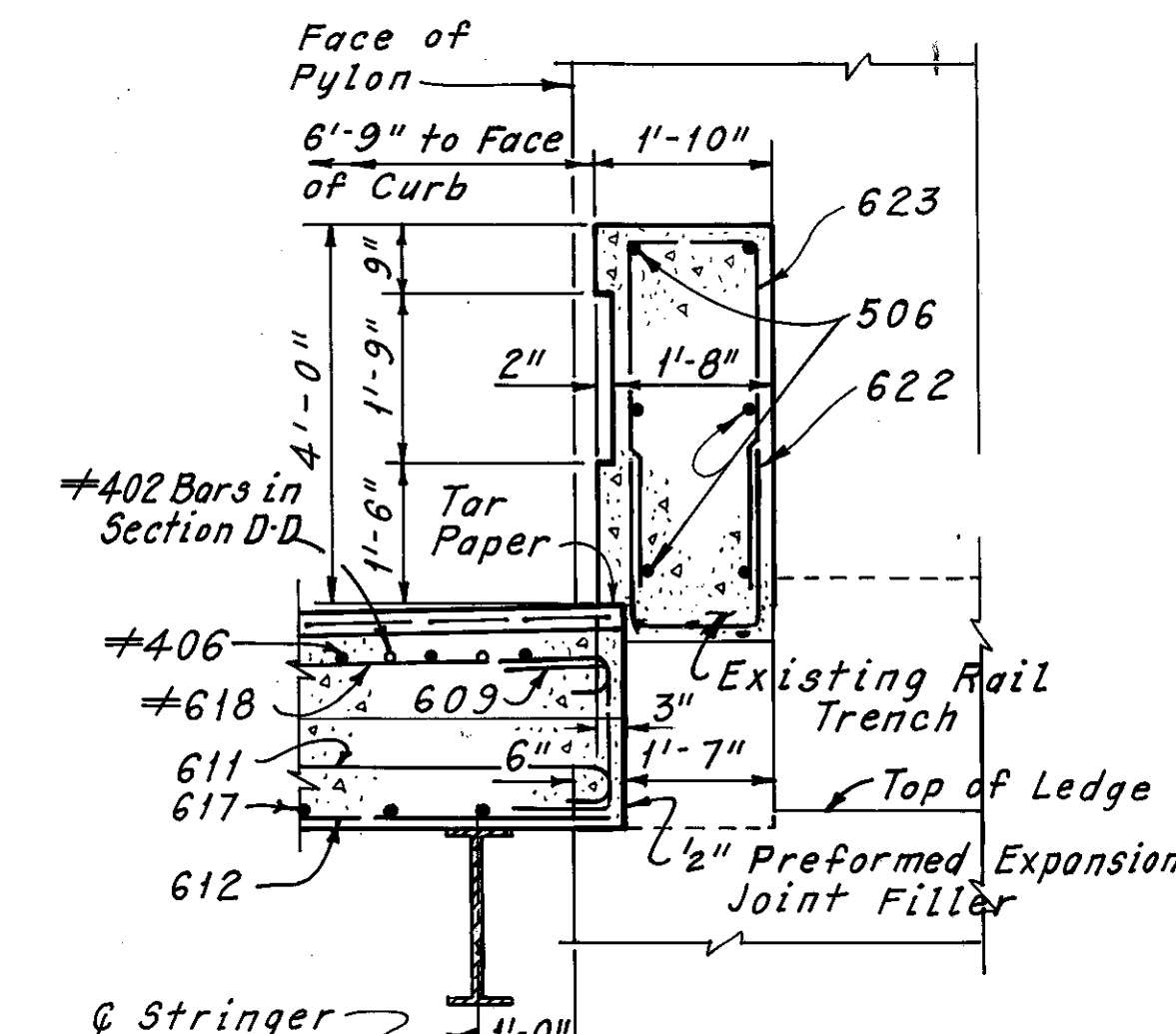
PLACEMENT DIAGRAM OF No. 4 BARS  
OVER INTERMEDIATE FLOORBEAMS AND AT PIERS



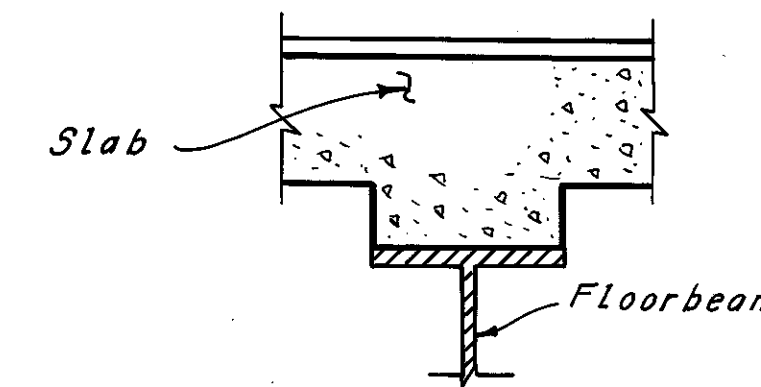
PART SECTION A-A



PART SECTION B-B



SECTION C-C  
(Section D-D Similar, Except Opposite Hand and as noted)



TYPICAL FLOORBEAM HAUNCH DETAIL  
(Shear Studs not shown)

Notes:  
For location of Sections A-A, B-B and C-C, see Sheet 48/72.  
For location of No. 4 bars over Piers and Intermediate Floorbeams, see Sheets 48/72 thru 52/72.  
For additional Notes, see Sheet 48/72.  
Tar paper shall be included in the unit price bid for Item 511, Class S Concrete, Superstructure, for payment.  
For curb plate details, see Sheet CD 1.  
For subdrainage for surface course detail, see Sheet CD 1.  
For asphalt concrete surface course detail, see Sheet CD 1.

$\#$  Denotes epoxy coated reinforcing steel.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

DECK SECTIONS AND REINFORCEMENT  
PLACEMENT DIAGRAMS

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19 TO  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

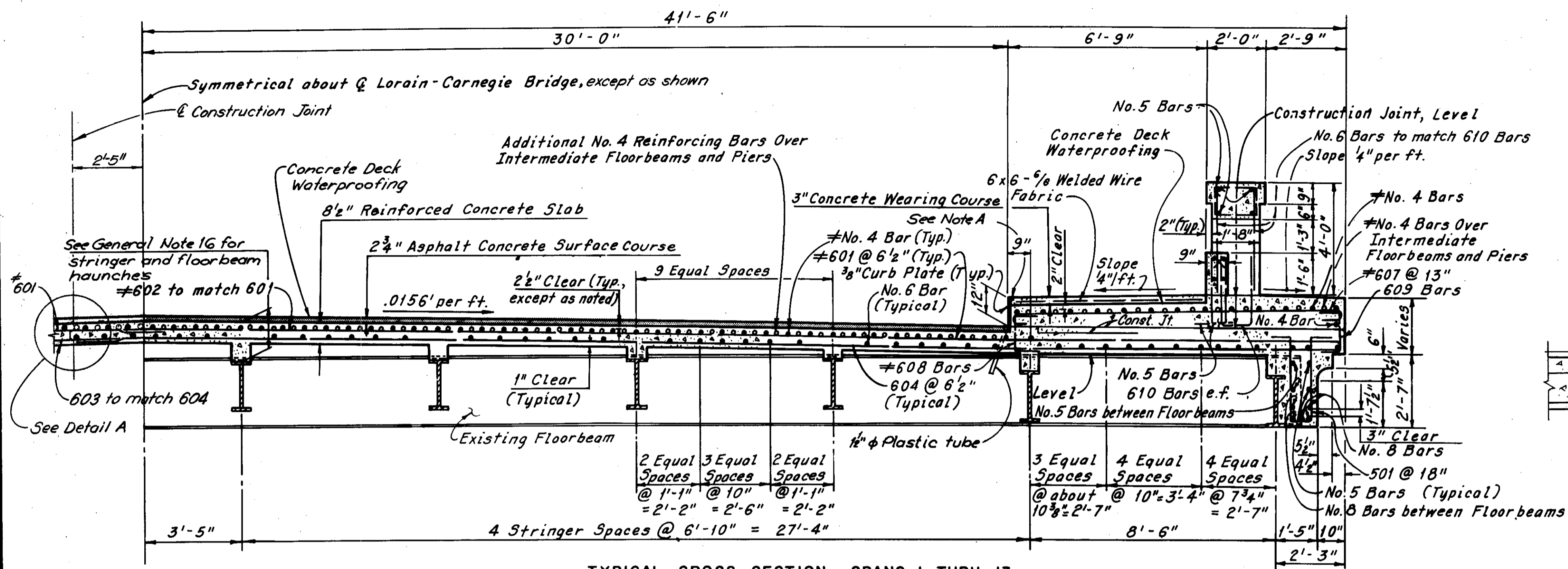
DRAWN/C.P.	TRACED/C.P.	CHECKED/C.H.B.	REVIEWED	REVISED
DATE 2/10/78	DATE 2/19/78	DATE 4/6/78	DATE	DATE

Superseded by sheet 128A, 7-10-81

FHWA REGION	STATE	PROJECT
5	OHIO	

CUYAHOGA COUNTY  
CUY-10-16.05

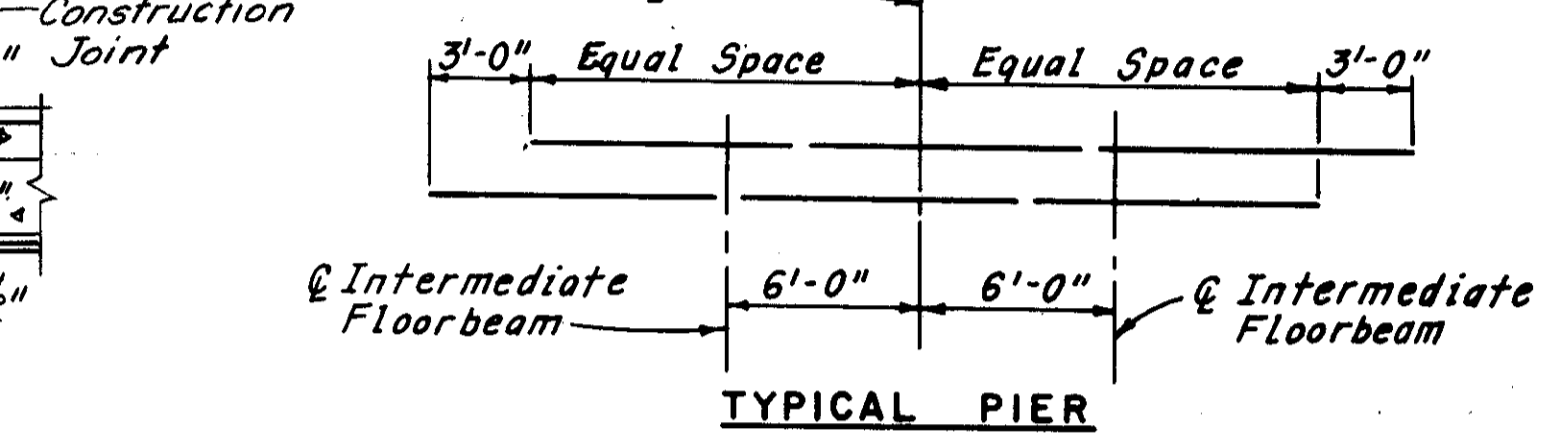
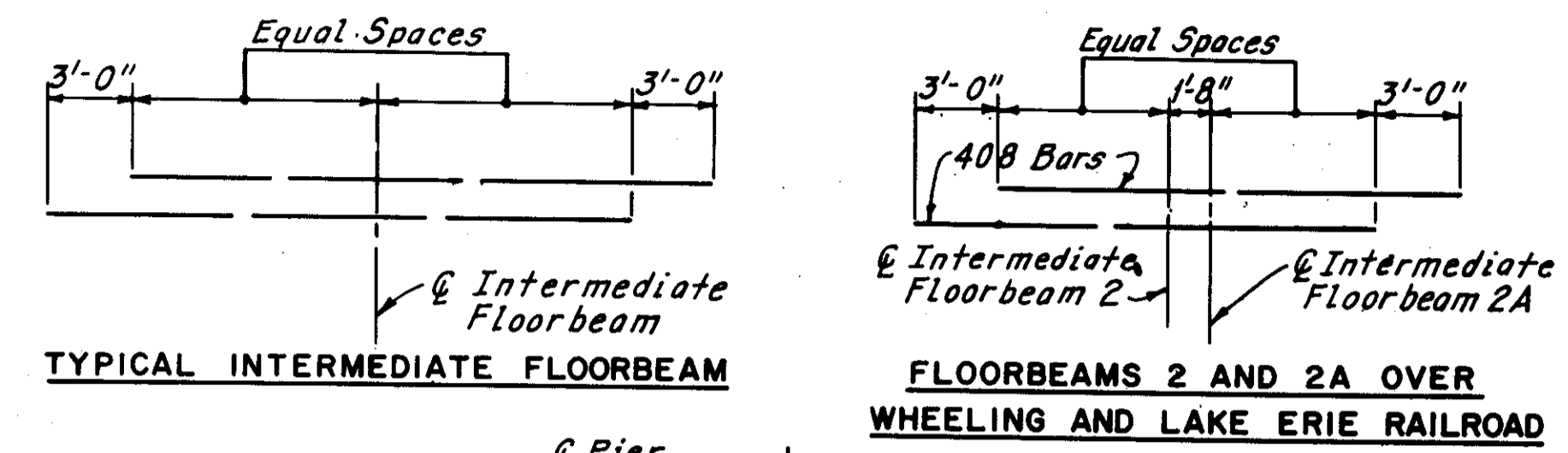
\* The horizontal construction joint in the south sidewalk between Pier 11 and the East Abutment must be lowered as shown to accommodate M.E.L.P. ducts. See M.E.L.P. Relocation Plans for details.  
Reinforcement above the construction shall be field cut to allow installation of 5 M.E.L.P. Splicing Chambers. See M.E.L.P. Relocation Plans, for locations of splicing chambers.



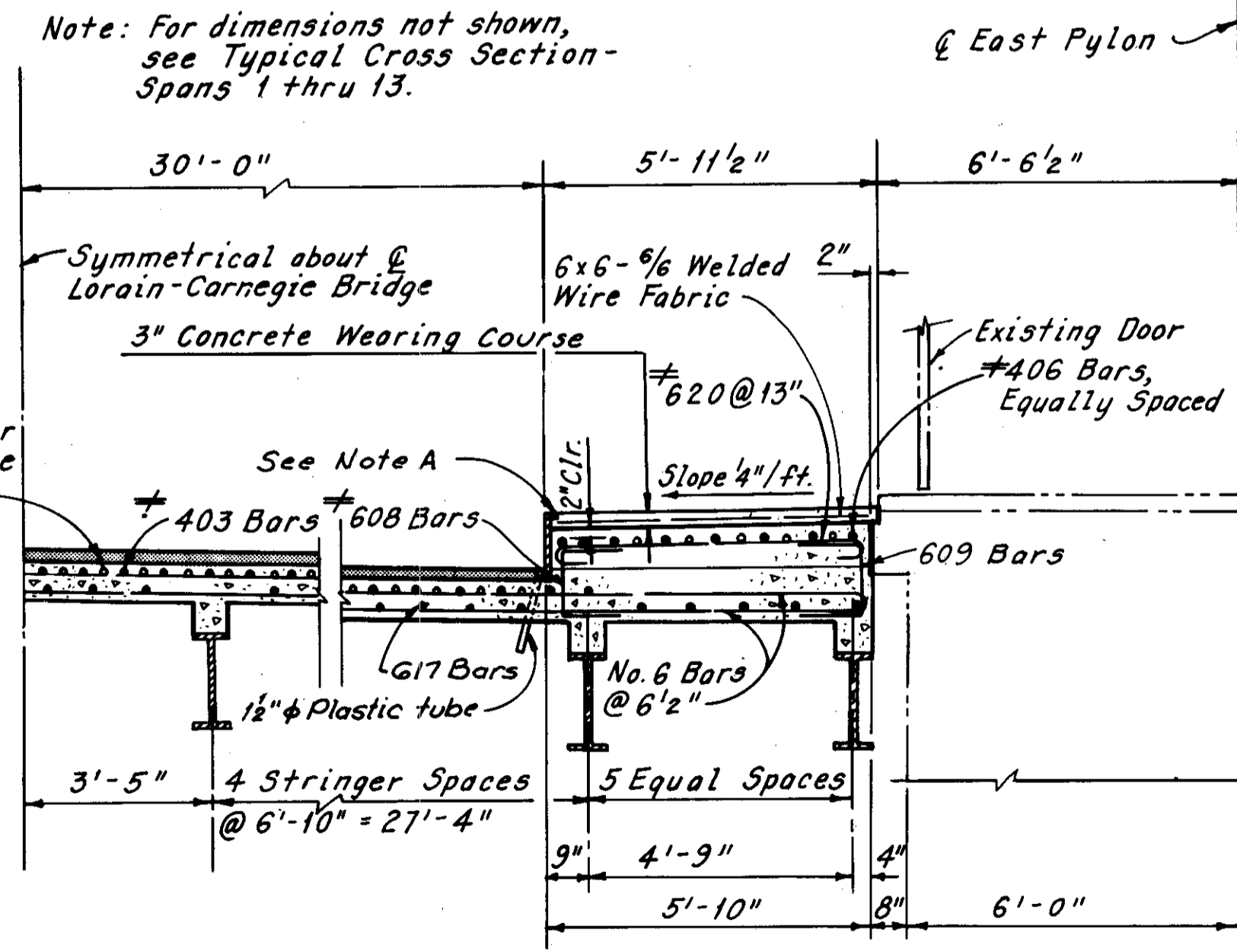
TYPICAL CROSS SECTION - SPANS 1 THRU 13  
(Wheeling and Lake Erie R.R. Span Same, except as shown in Part Section B-B)

Note A:  
Joint Sealer. Material shall be hot applied bridge deck waterproofing material, which also meets the requirement of 705.01. To be included with Item 511, Class C Concrete, Superstructure, for payment.

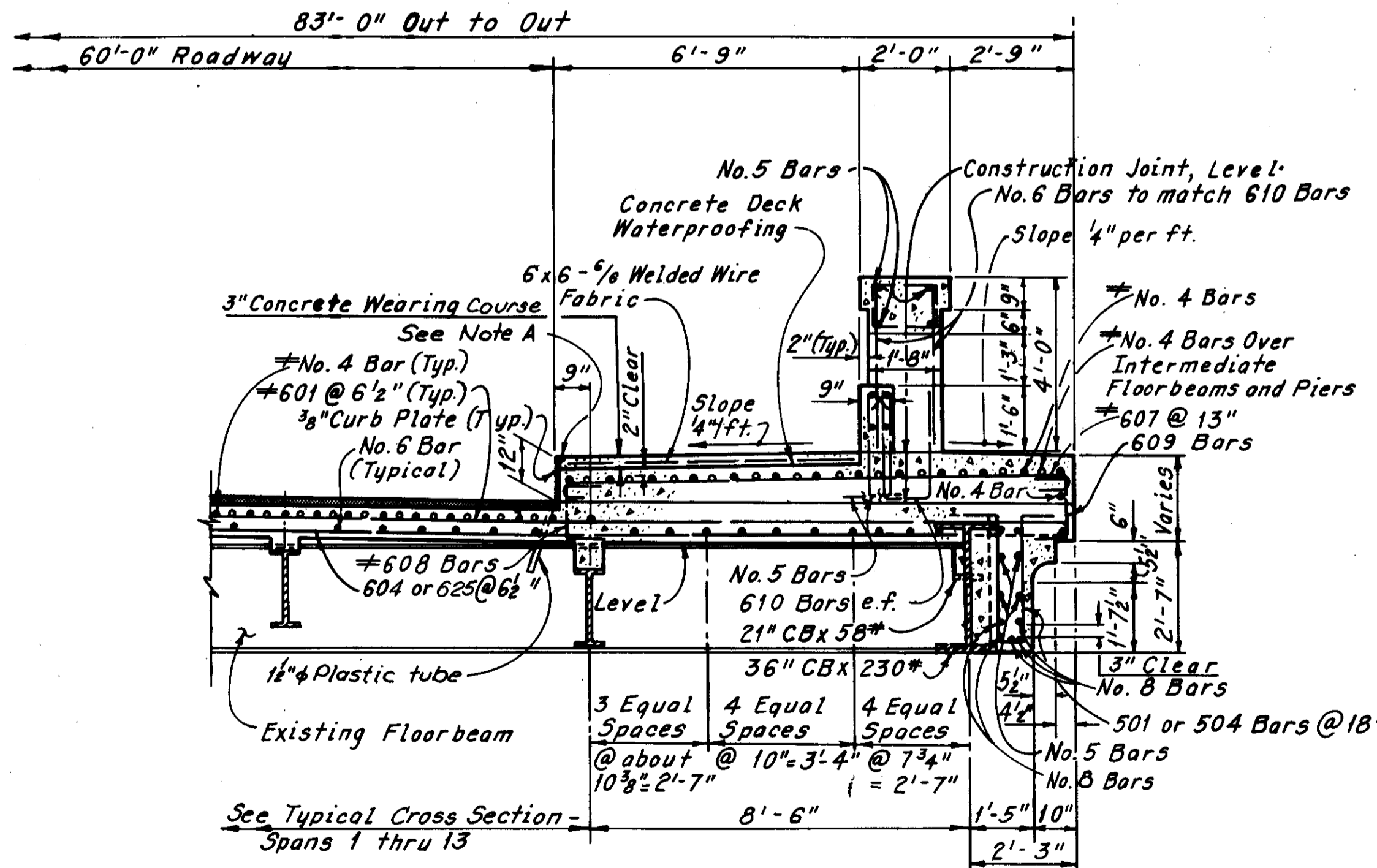
Note:  
2" diameter Lighting Conduit not shown in sections.



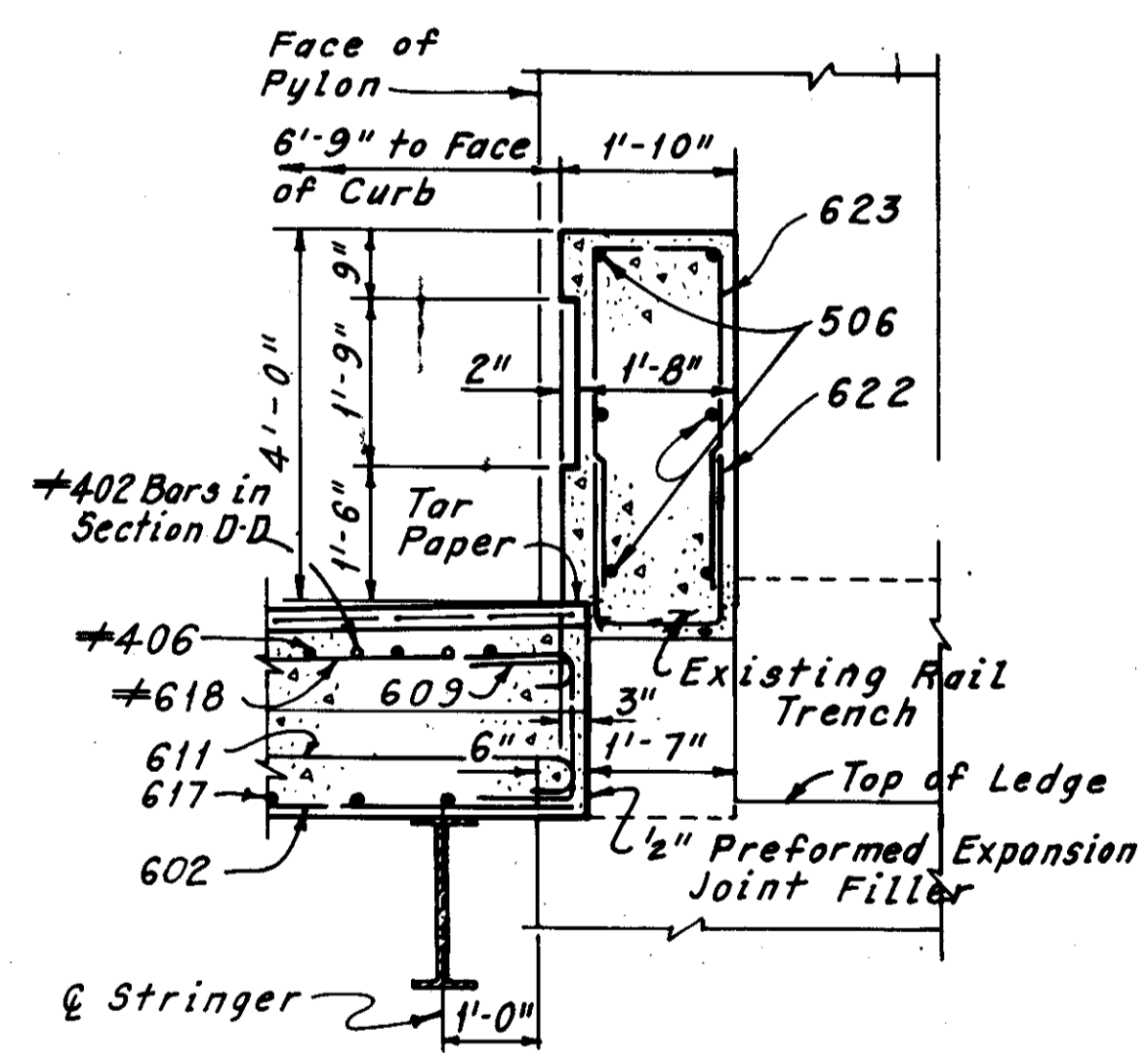
PLACEMENT DIAGRAM OF No. 4 BARS OVER INTERMEDIATE FLOORBEAMS AND AT PIERS



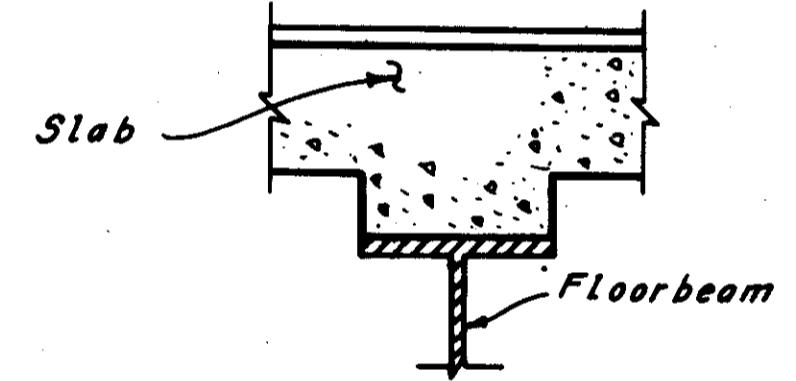
PART SECTION A-A



PART SECTION B-B



SECTION C-C  
(Section D-D Similar, Except Opposite Hand and as noted)



TYPICAL FLOORBEAM HAUNCH DETAIL  
(Shear Studs not shown)

Notes:  
For location of Sections A-A, B-B and C-C, see Sheet 48A/72.  
For location of No. 4 bars over Piers and Intermediate Floorbeams, see Sheets 48A/72 thru 52A/72.  
For additional Notes, see Sheet 48A/72.  
Tar paper shall be included in the unit price bid for Item 511, Class C Concrete, Superstructure, for payment.  
For curb plate details, see Sheet CD 1.  
For subdrainage for surface course detail, see Sheet CD 1.  
For asphalt concrete surface course detail, see Sheet CD 1.

⊕ Denotes epoxy coated reinforcing steel.

This sheet added 5-15-81 and supersedes 53/72.

Supersedes sheet 128, 7-10-81

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

DECK SECTIONS AND REINFORCEMENT PLACEMENT DIAGRAMS  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19 TO STA. 55+04.56 OHIO

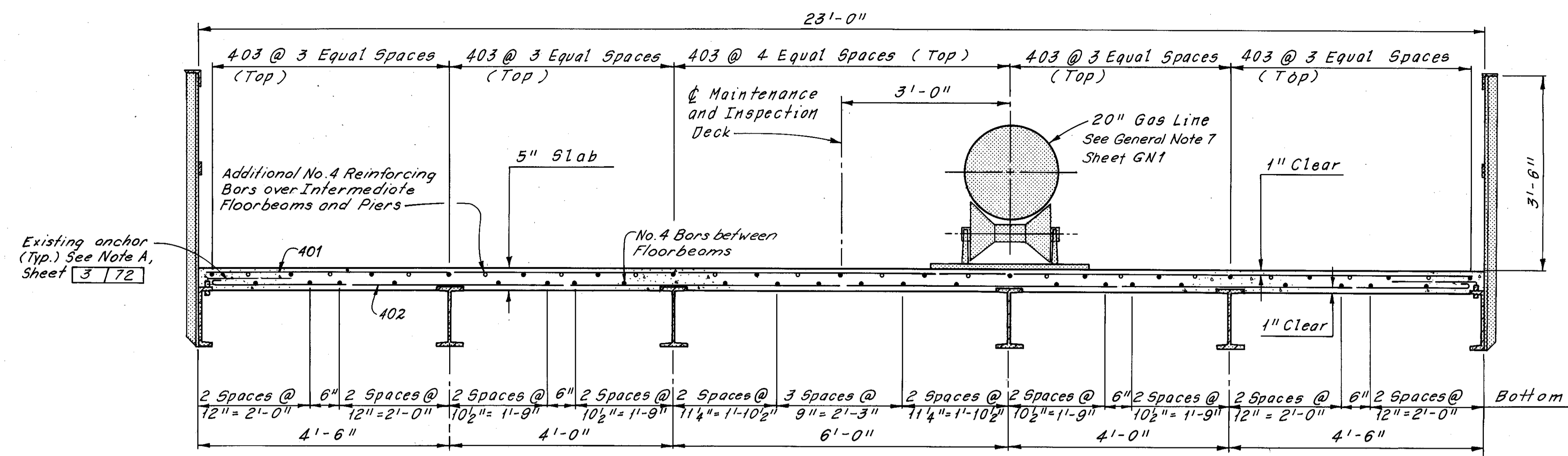
DRAWN C.P.	TRACED C.P.	CHECKED C.H.B.	REVIEWED	REVISED
DATE 2/10/78	DATE 2/13/78	DATE 4/5/78	DATE	DATE

SHEET 53A/72



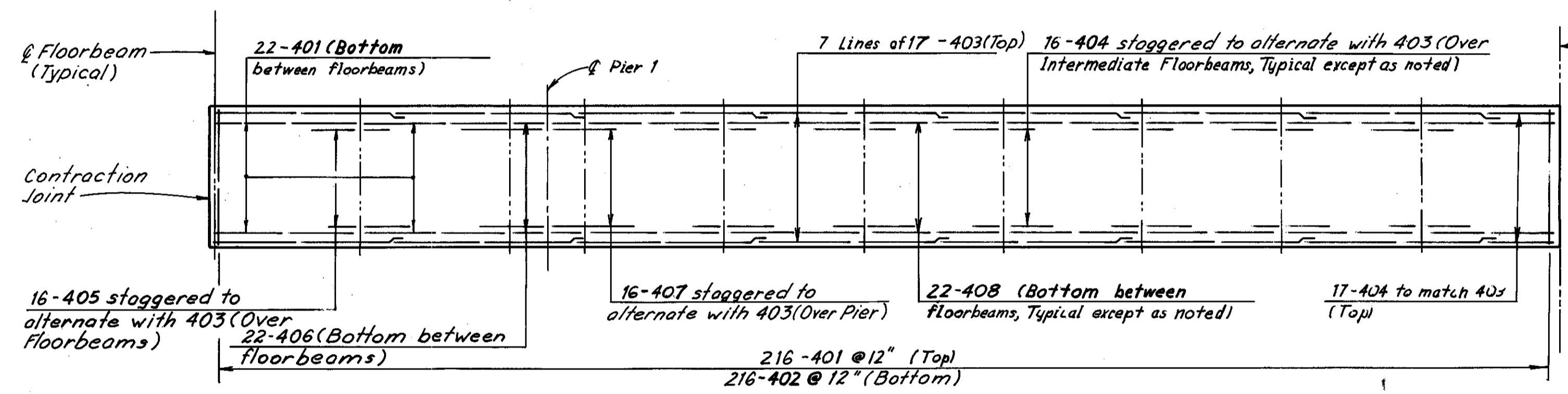


CUYAHOGA COUNTY  
CUY-10-16.23

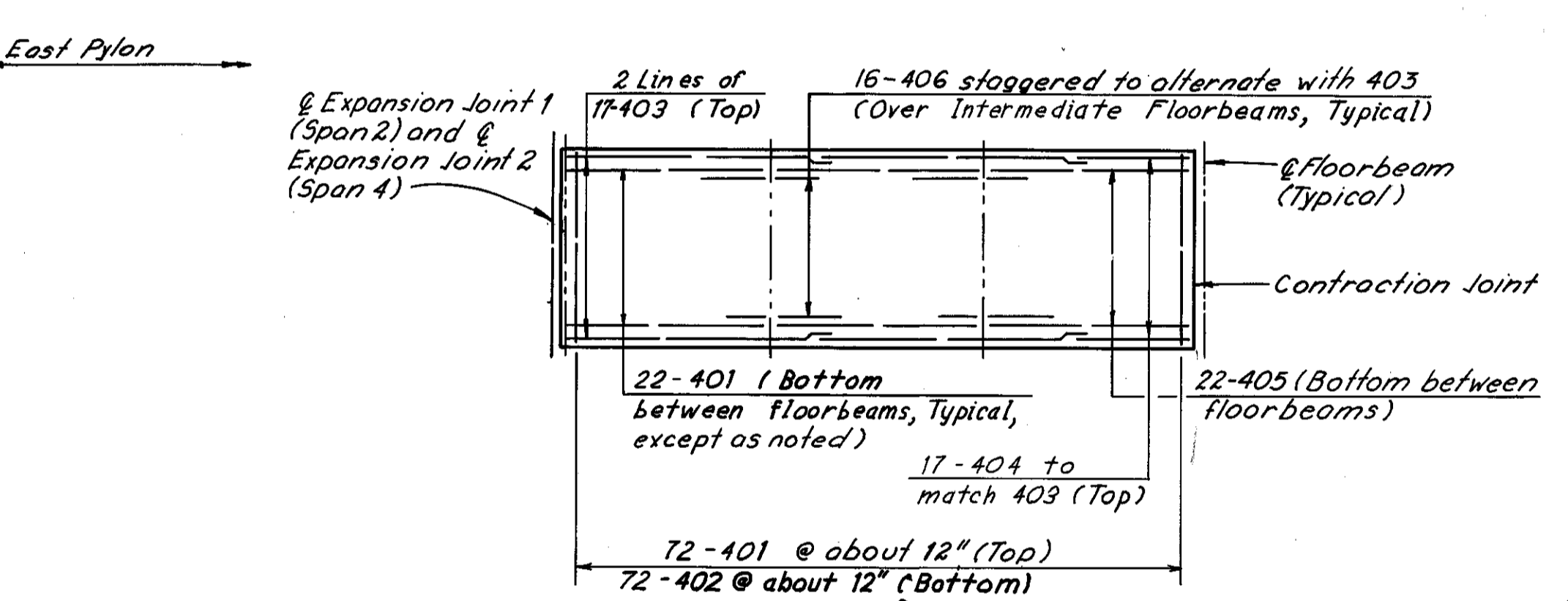


TYPICAL CROSS SECTION

Notes:  
All reinforcing bar marks shall be prefixed as follows:  
Span 1 = MA  
Span 2 = MB  
Span 3 = MC  
Span 4 = MD

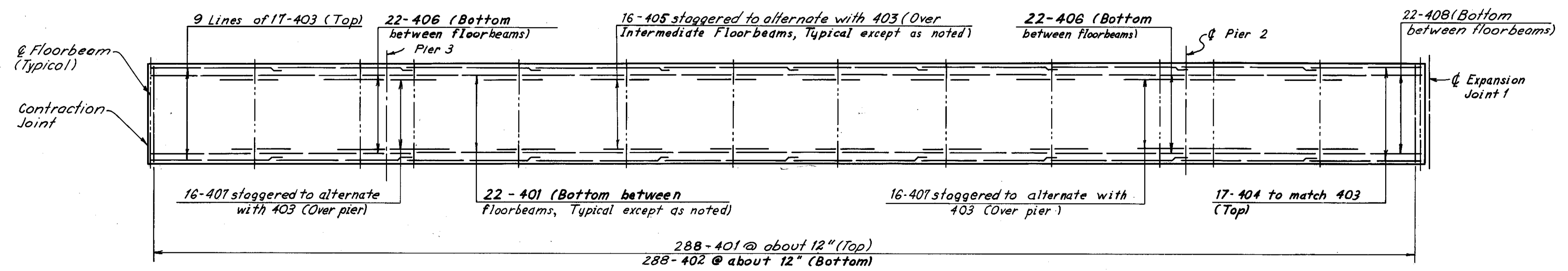


SPAN 1

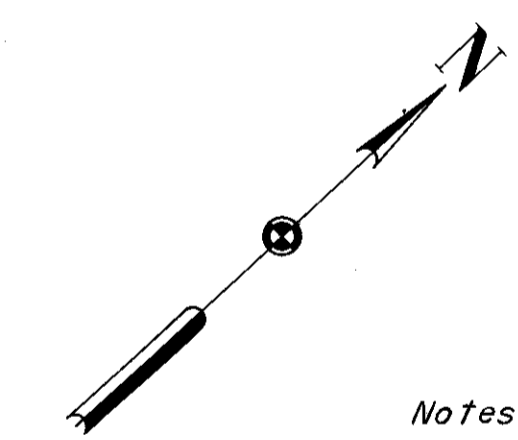


SPAN 2 AND SPAN 4

REQUIRED LAP LENGTH  
No. 4 Bar = 1'-0" Min.



SPAN 3



Notes:  
For Expansion Joint Details, Contraction Joint Detail and Joint at Pylons, see Sheet 58/72.  
For Reinforcement Schedule, see Sheet R/3.  
Zip-a-tone indicates existing structure.  
For location of Maintenance and Inspection Deck, see Sheet 3/72.  
For diagram for placement of additional reinforcement and piers, see Sheet 53/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**MAINTENANCE & INSPECTION DECK PLANS SPANS 1, 2, 3 & 4 - TYPICAL CROSS SECTION**

REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 11/15/80	DATE 11/15/80	DATE 11/20/80	DATE	SHEET 55/72

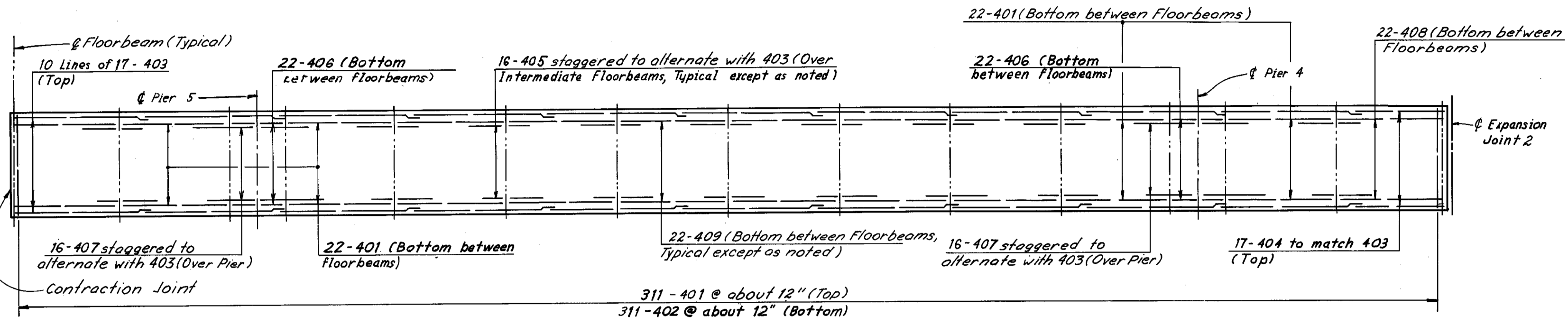
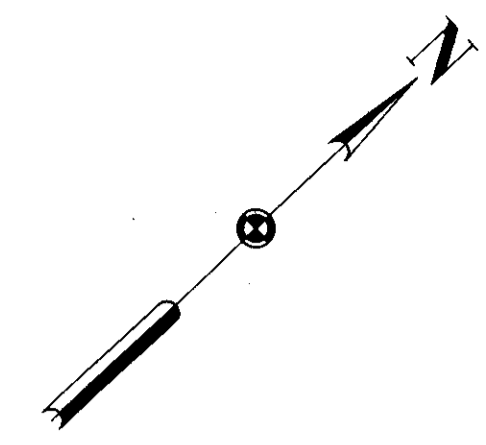
MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

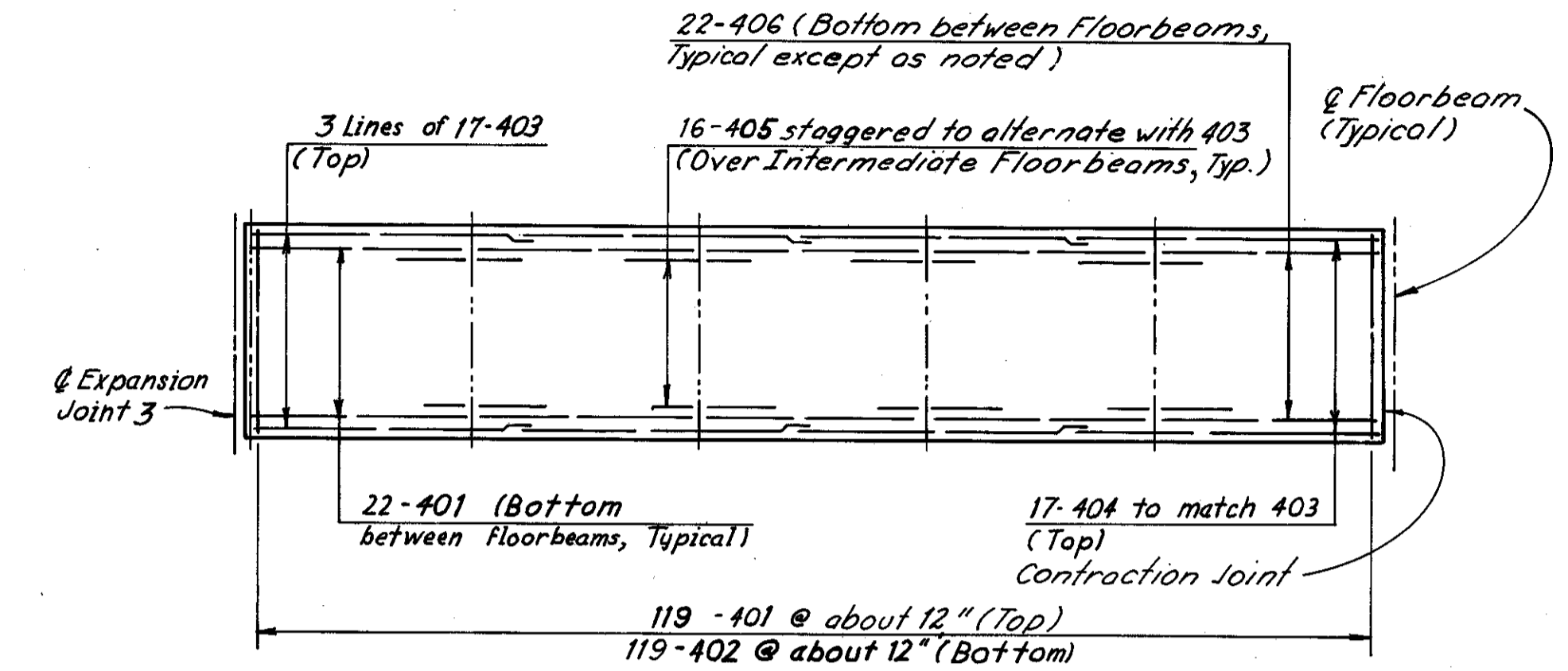
131  
185

CUYAHOGA COUNTY  
CUI-10-16.23

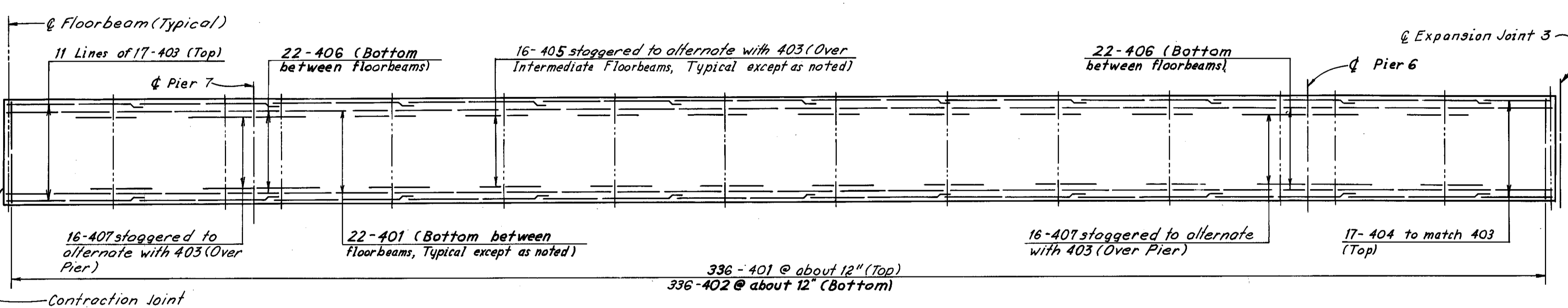
REQUIRED LAP LENGTH  
No. 4 Bar = 1'-0" Min.



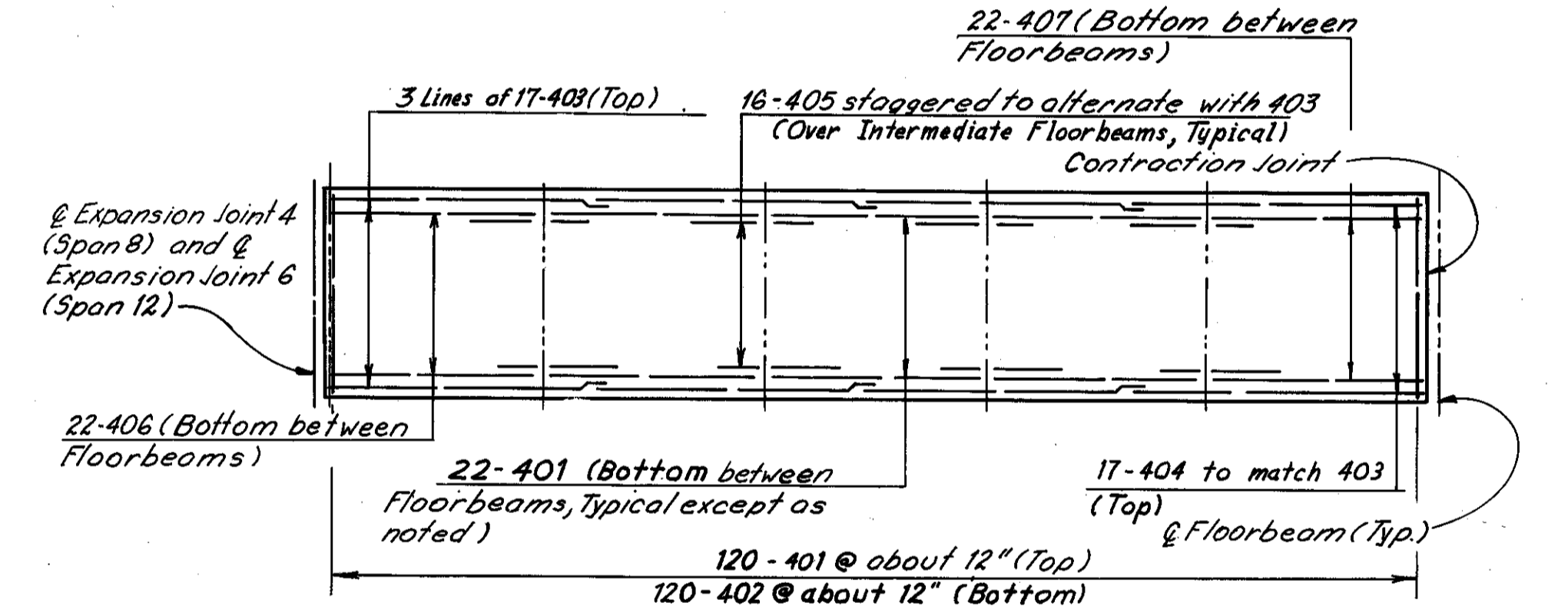
SPAN 5



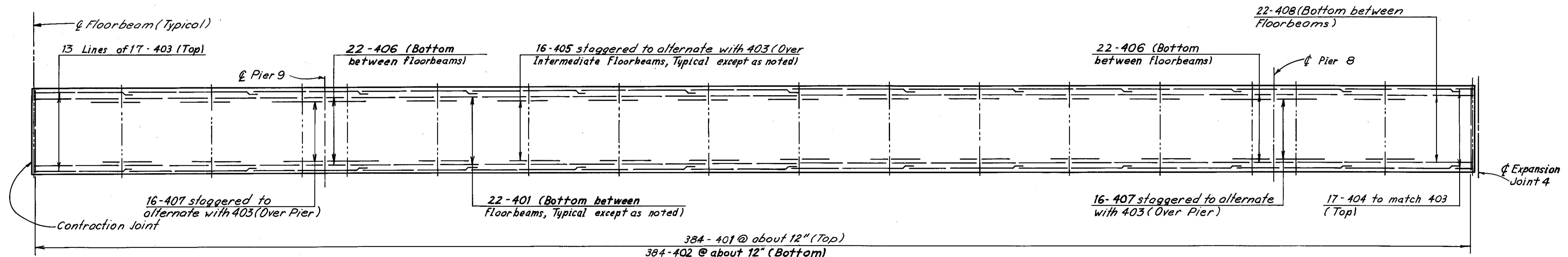
SPAN 6



SPAN 7



SPAN 8 AND SPAN 12



SPAN 9

Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 5 = ME  
Span 6 = MF  
Span 7 = MG  
Span 8 = MH  
Span 9 = MI  
Span 12 = ML

Notes:  
For Typical Cross Section, see Sheet 55/72.  
For additional notes, see Sheet 55/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**MAINTENANCE & INSPECTION DECK PLANS,  
SPANS 5, 6, 7, 8, 9 AND 12  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO**

DRAWN JIV	TRACED JIV	CHECKED JIV	REVIEWED	REVISED
DATE 11-15-78	DATE 11-15-78	DATE 11-20-78	DATE	DATE

SHEET 56/72

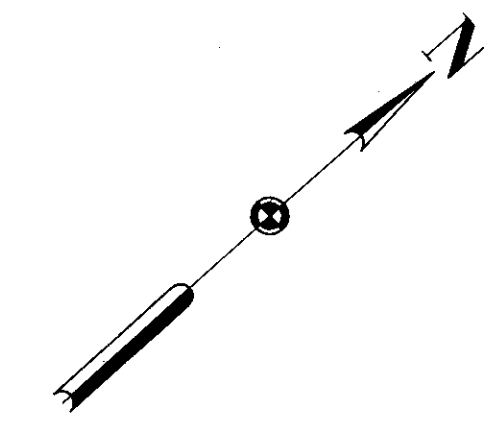
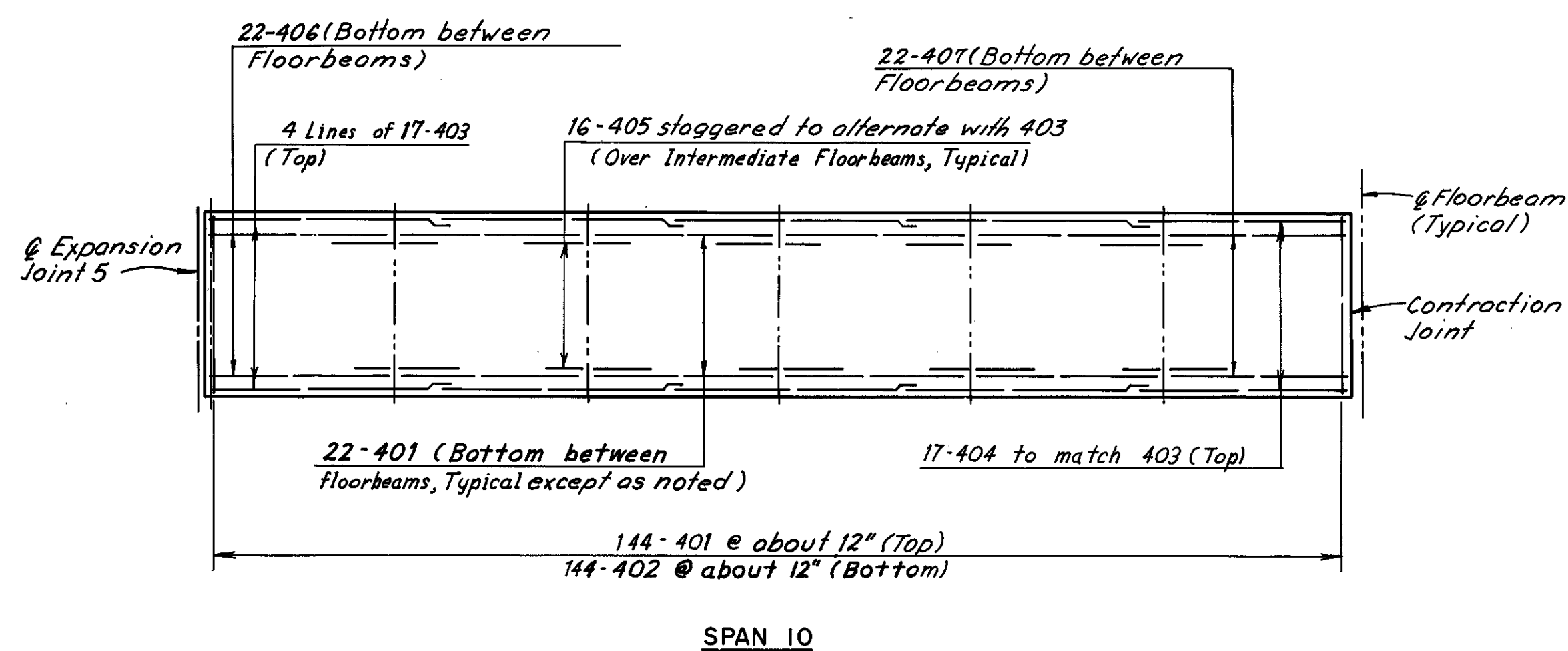
MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT	
5	OHIO		

132  
185

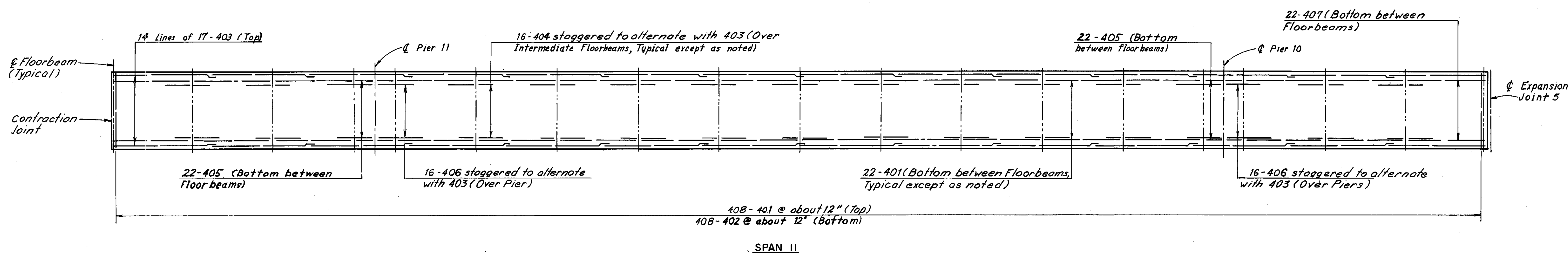
CUYAHOGA COUNTY  
CUY- 10-16.23

REQUIRED LAP LENGTH
No. 4 Bar = 1'-0" Min.

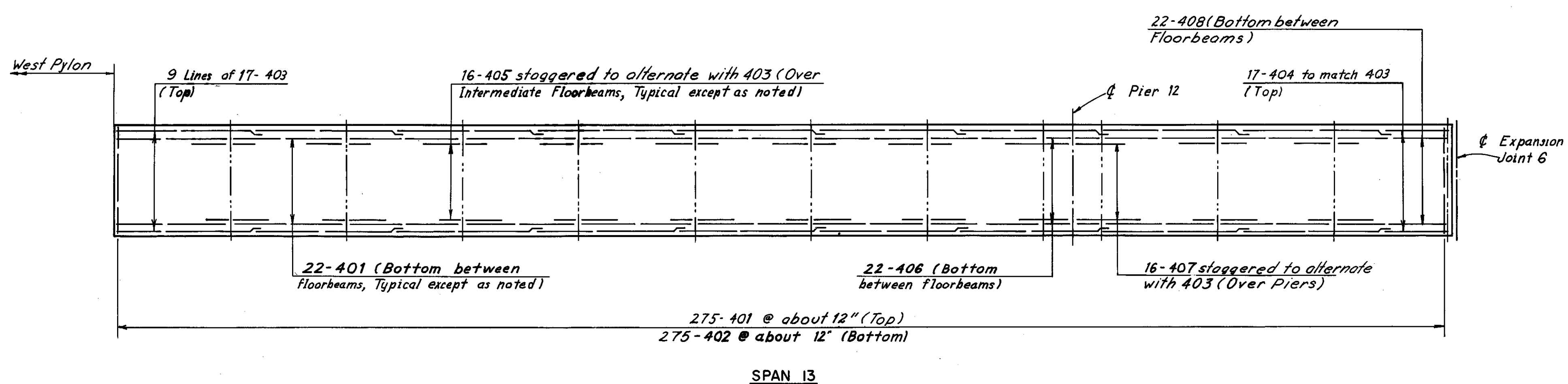


Note:  
All reinforcing bar marks shall be prefixed as follows:  
Span 10 = MJ  
Span 11 = MK  
Span 13 = MM

SPAN 10



SPAN 11



SPAN 13

Notes:  
For Typical Cross Section, see Sheet 5572  
For additional notes, see Sheet 5572.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND, OHIO

**HNTB**

**MAINTENANCE & INSPECTION DECK PLANS,  
SPANS 10, 11 AND 13**

REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO

DRAWN/V	TRACED/V	CHECKED/PA	REVIEWED	REVISED
DATE 11-15-78	DATE 11-15-78	DATE 11-20-78	DATE	DATE

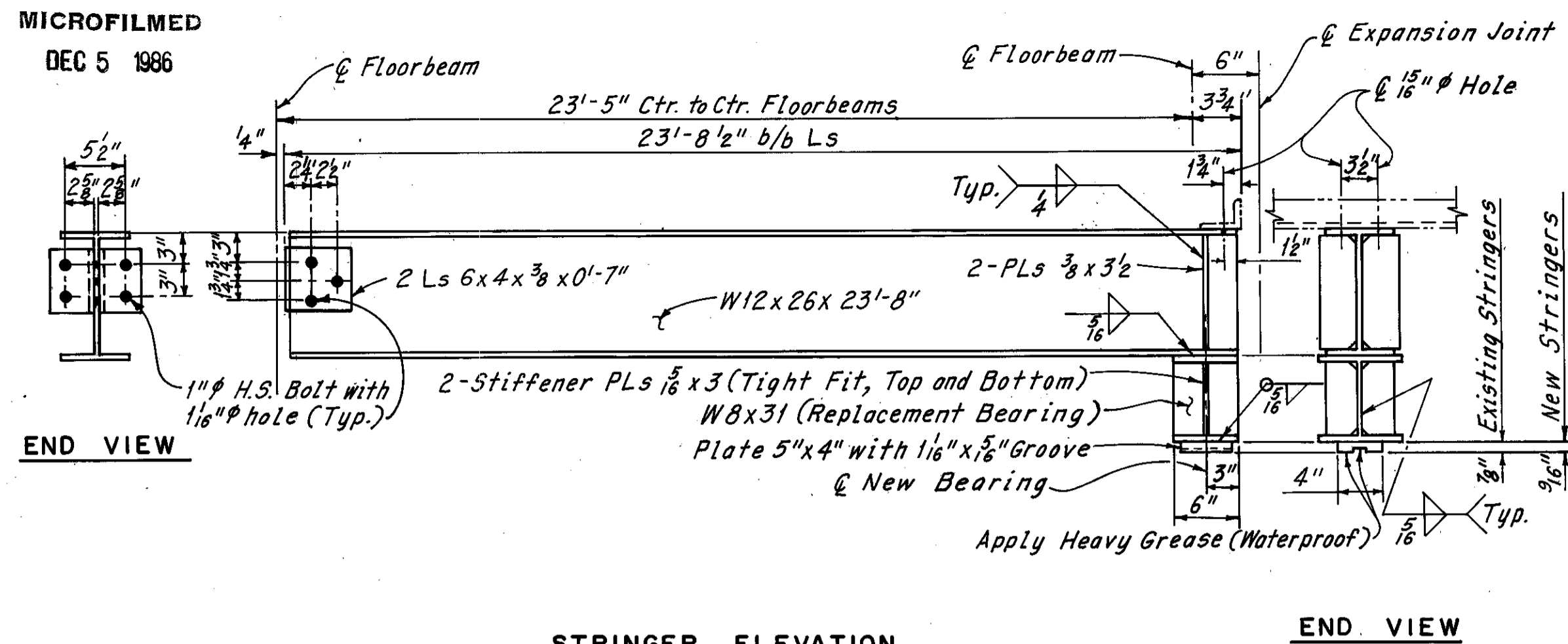
SHEET 57/72

MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

132A  
185

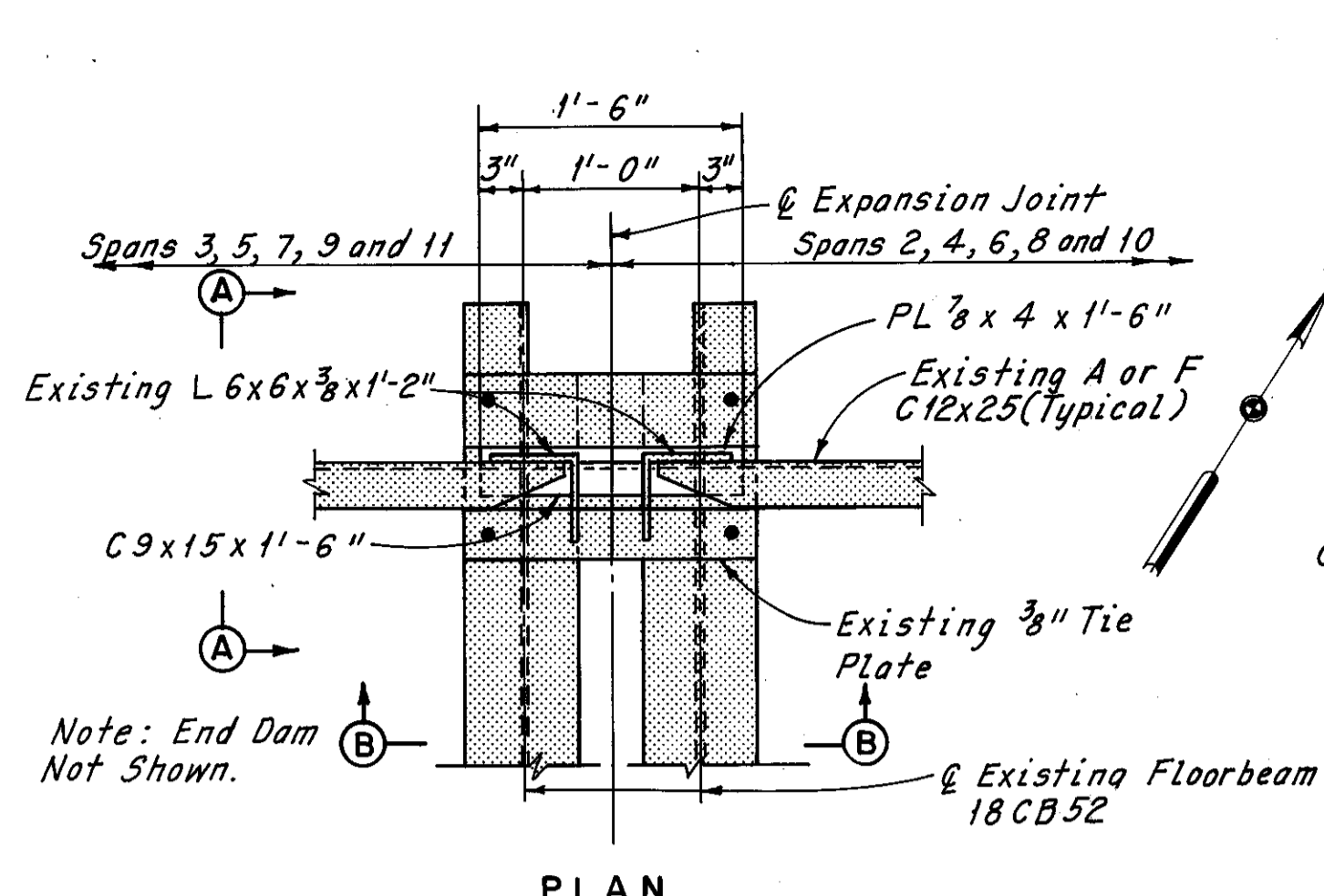
CUYAHOGA COUNTY  
CUY-10-16.23



STRINGER ELEVATION

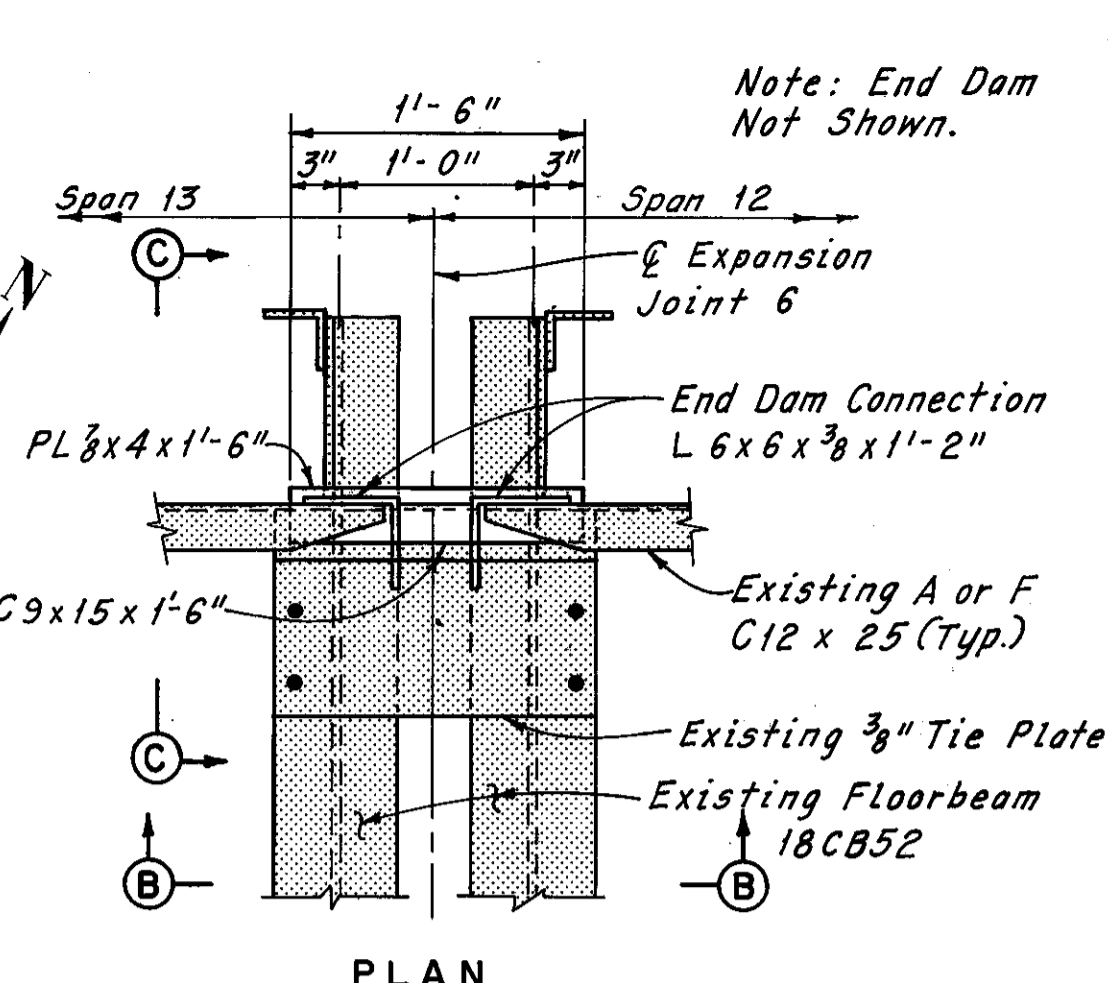
SPAN	F.B. SPAN	STRINGER
4	15-1	D
8	18-1	D and E
9	16-17	E
12	13-1	E
13	11-12	D

Note:  
Existing stringers at expansion joints, which are re-used but have defective bearings shall have the same Replacement Bearing as detailed above, field welded with a 3/8" fillet.



PLAN

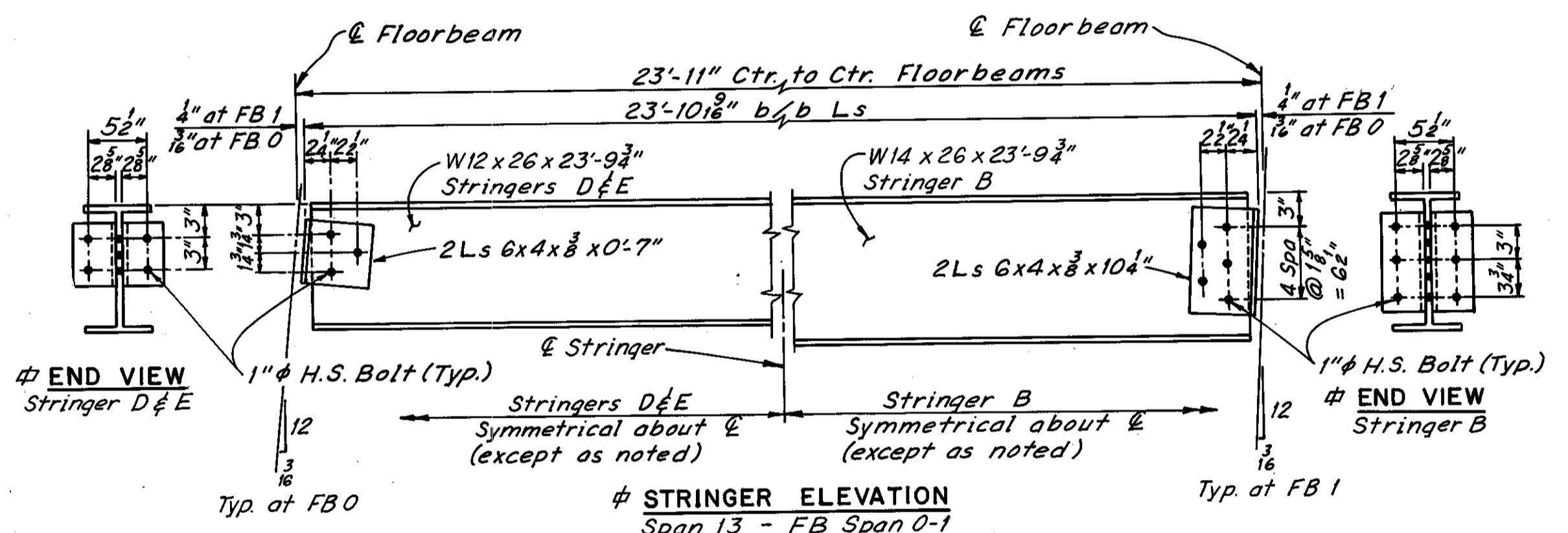
Note: End Dam Not Shown.  
(Expansion Joints 3, 4 and 5 Shown, South side similar, except opposite hand. Expansion Joints 1 and 2, Similar)



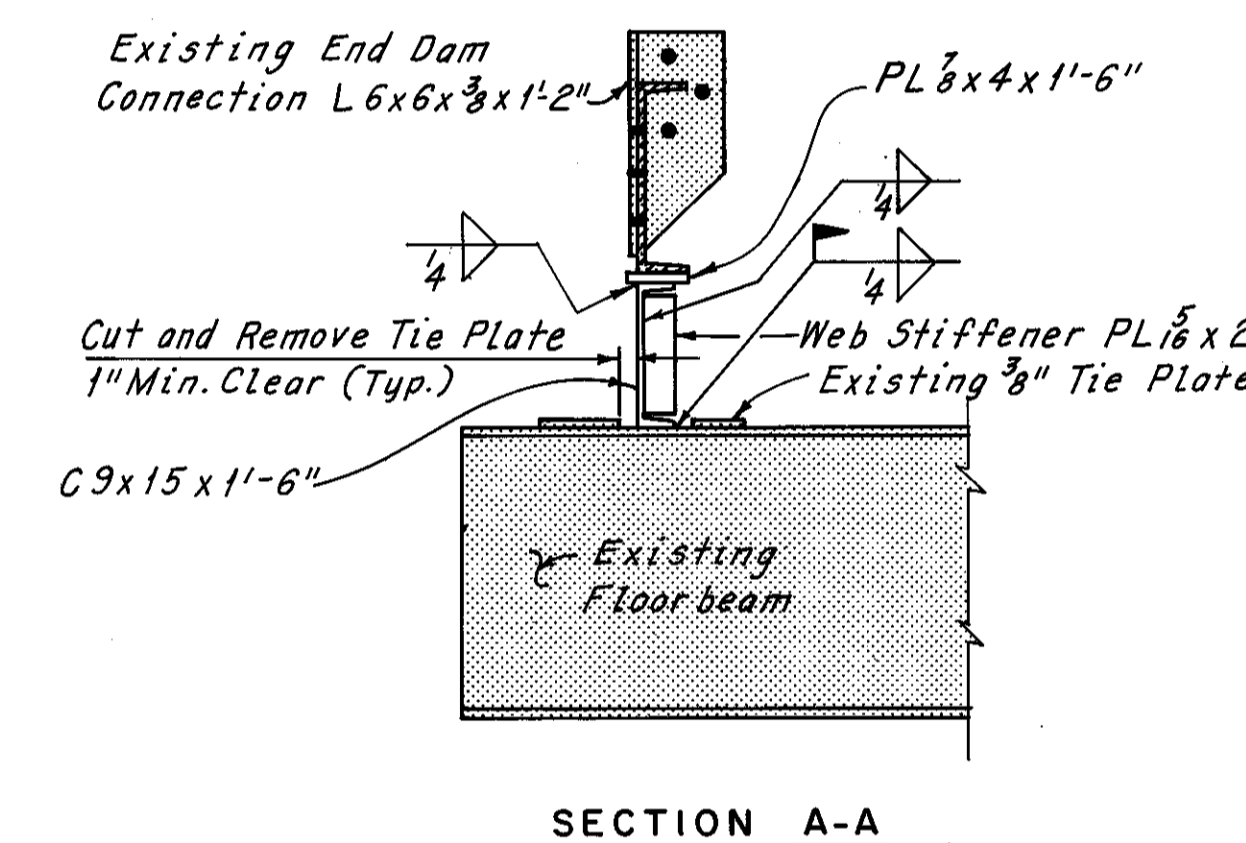
PLAN

Note: End Dam Not Shown.  
(South Side Similar, except opposite hand)

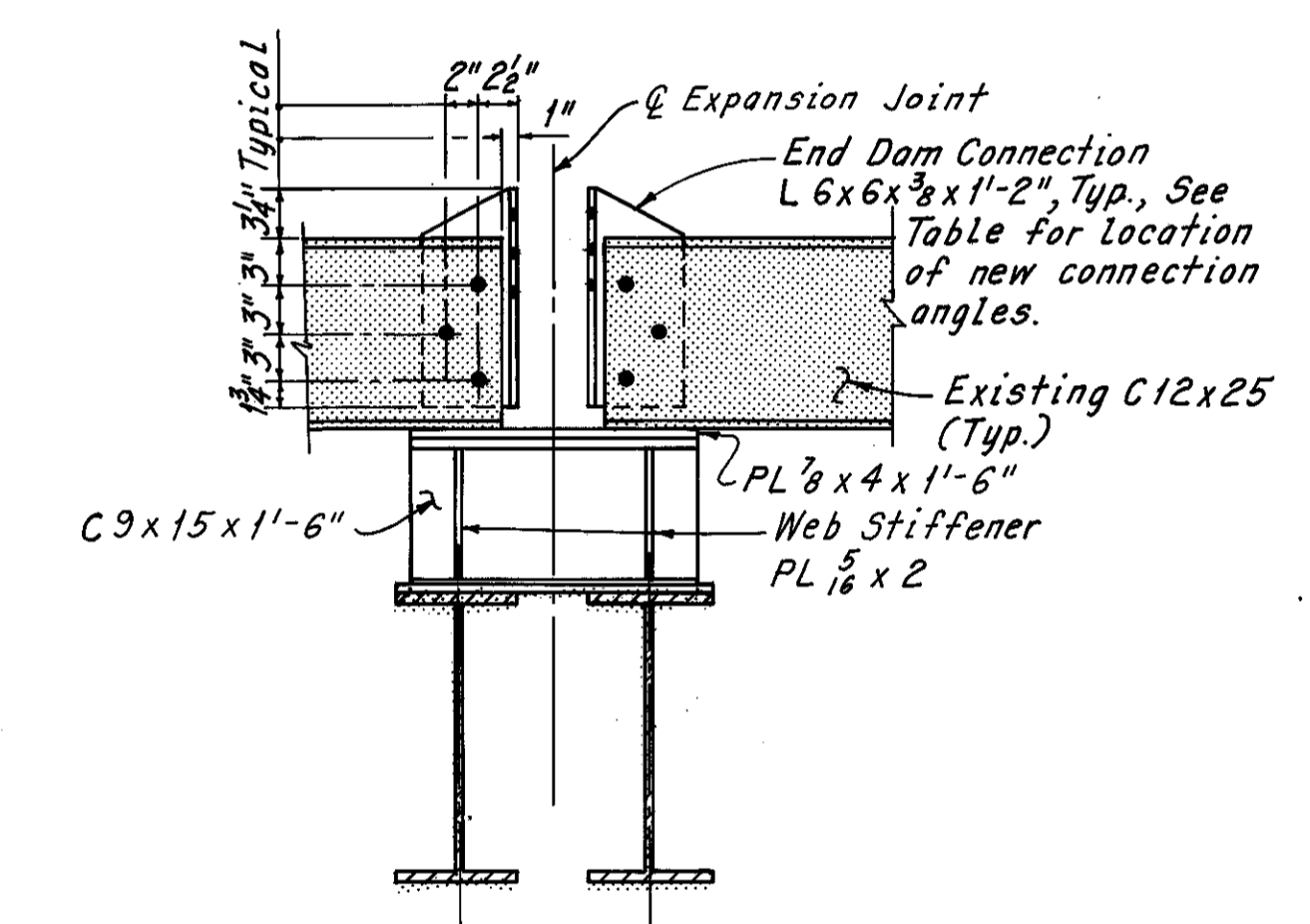
LOCATION	SIDE	SPAN	NUMBER
Expansion Joint No. 2	Northeast	4	1
Expansion Joint No. 2	South	4 - 5	2
Expansion Joint No. 5	South	10 - 11	2
Expansion Joint No. 6	North	12 - 13	2
Expansion Joint No. 6	South	12 - 13	2



STRINGER ELEVATION  
Span 13 - FB Span 0-1

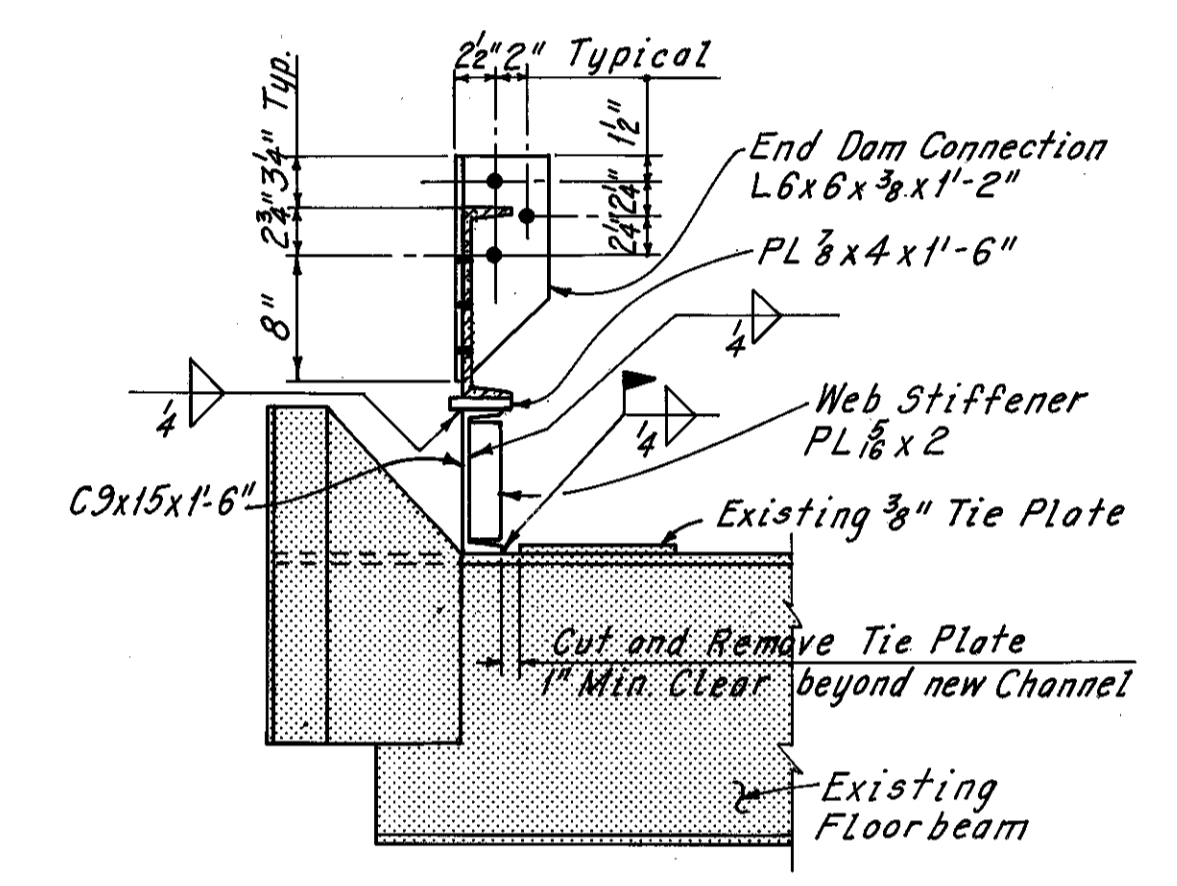


SECTION A-A



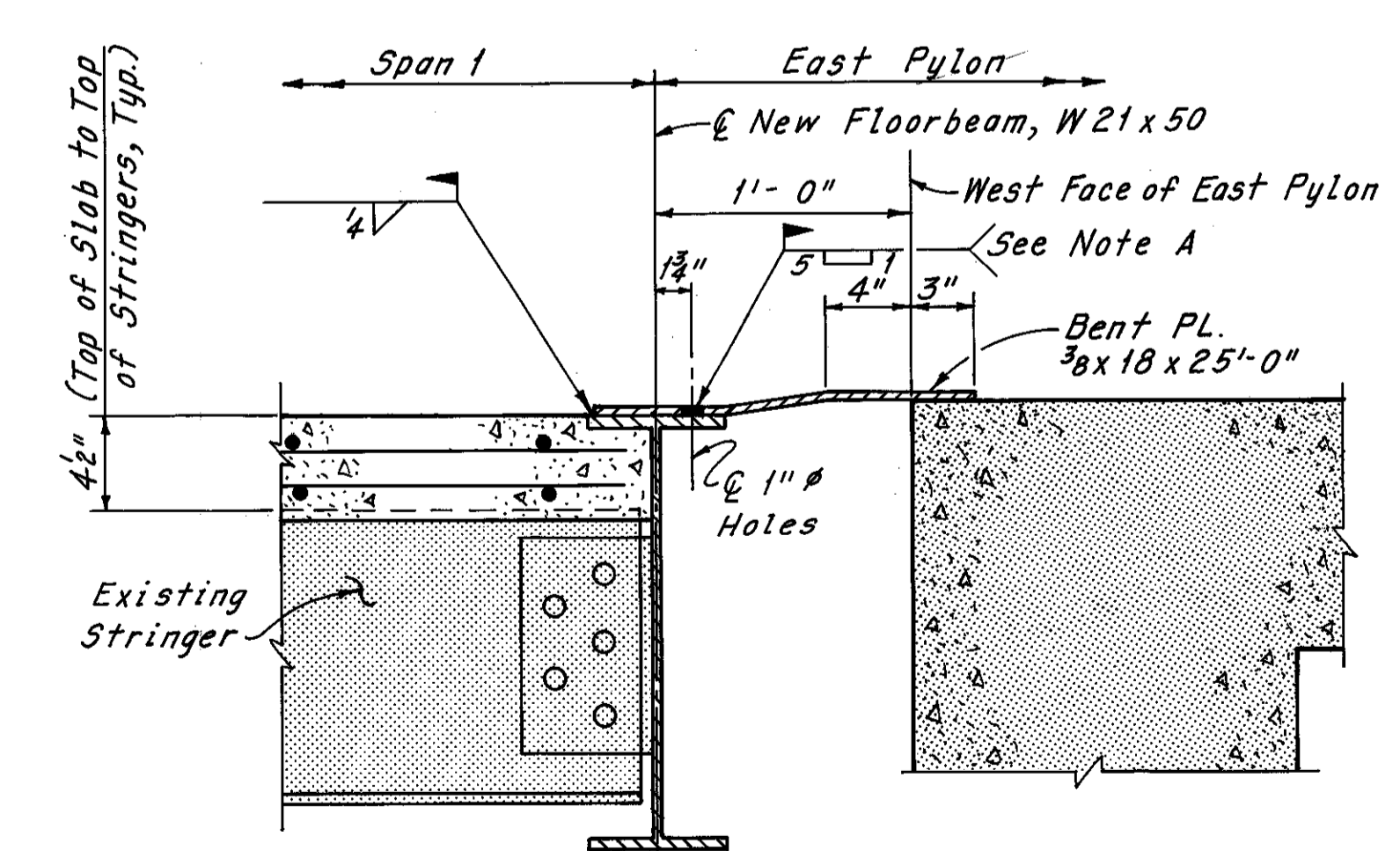
SECTION B - B

(Expansion Joint 6 Shown, Expansion Joints 1 thru 5 Similar)



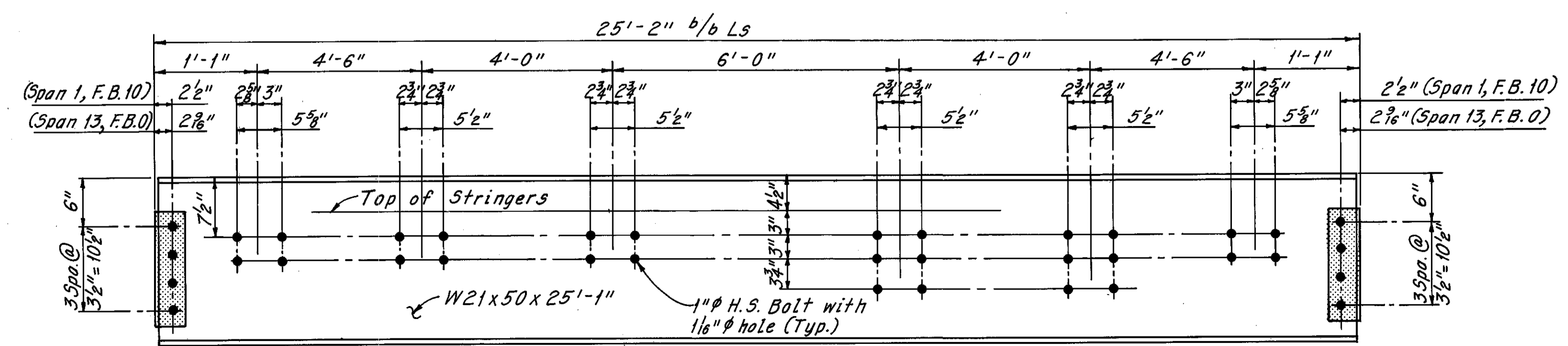
SECTION C - C

CHANNEL SUPPORT AT EXPANSION JOINTS AND  
END DAM CONNECTION ANGLES



JOINT AT EAST PYLON

(Span 13 to West Pylon Similar, Except Opposite Hand)



FLOORBEAM ELEVATION - SPAN 1, F.B. 10 AT EAST PYLON & SPAN 13, F.B. 0 AT WEST PYLON  
(Looking West)

Note A:  
If welds can be accomplished before erection, fillet weld may be used on edge of beam flange in lieu of plug welds.

Notes:  
Zip-a-tone indicates existing structure and existing connections to be retained.  
For Member Identification Plans, see Sheets 5/72 thru 9/72.  
For location of expansion joints, see Sheets 55/72 thru 57/72.  
All bolts are 3/4" ASTM A307 with 1/2" holes, except as noted.  
The following abbreviations are used:  
Typ. = Typical  
b/b = back to back  
F.B. = Floorbeam  
Min. = Minimum  
H.S. = High Strength

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

MAINTENANCE AND INSPECTION DECK REPLACEMENT DETAILS (AS DETERMINED DURING RECONSTRUCTION) REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56

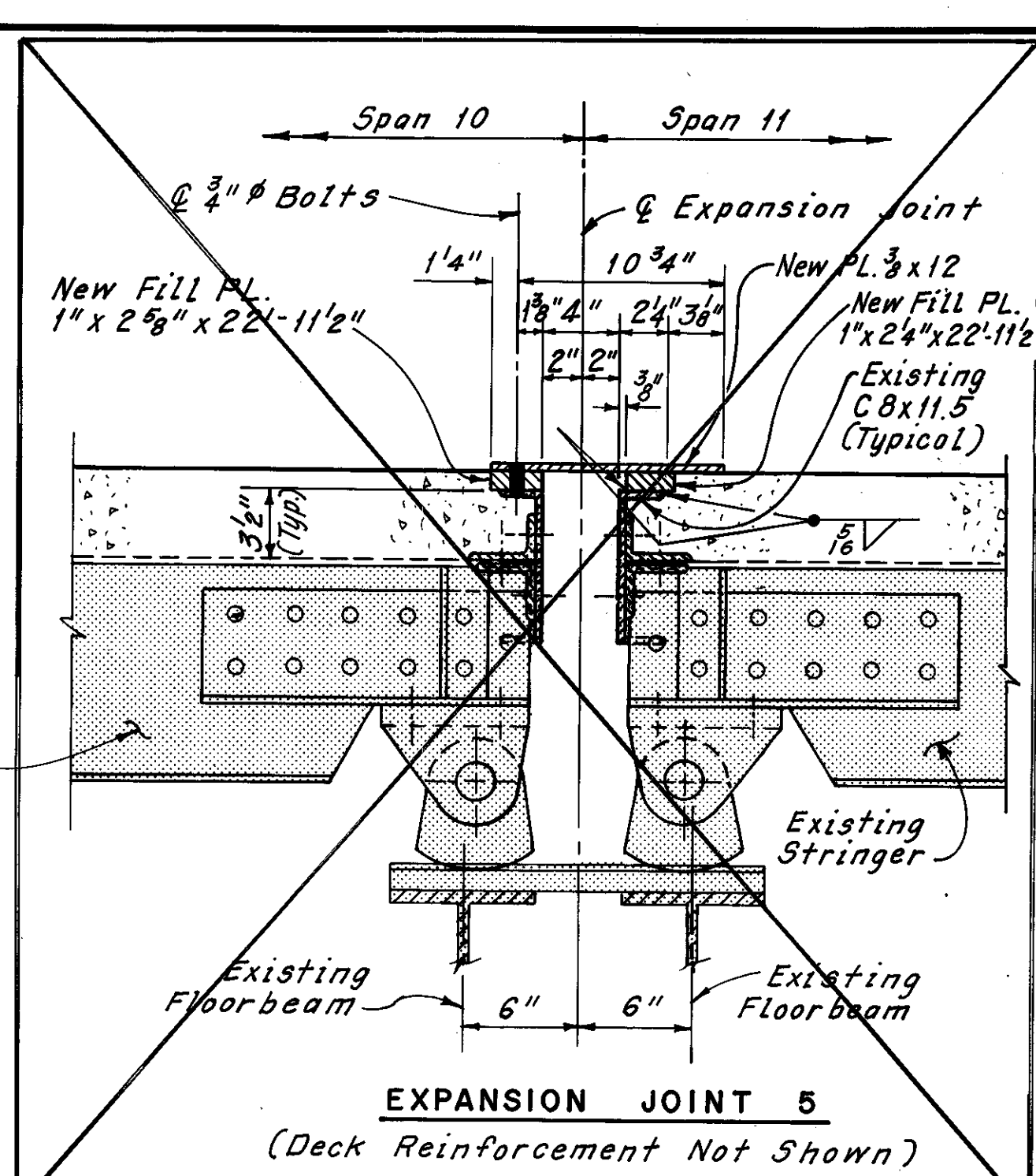
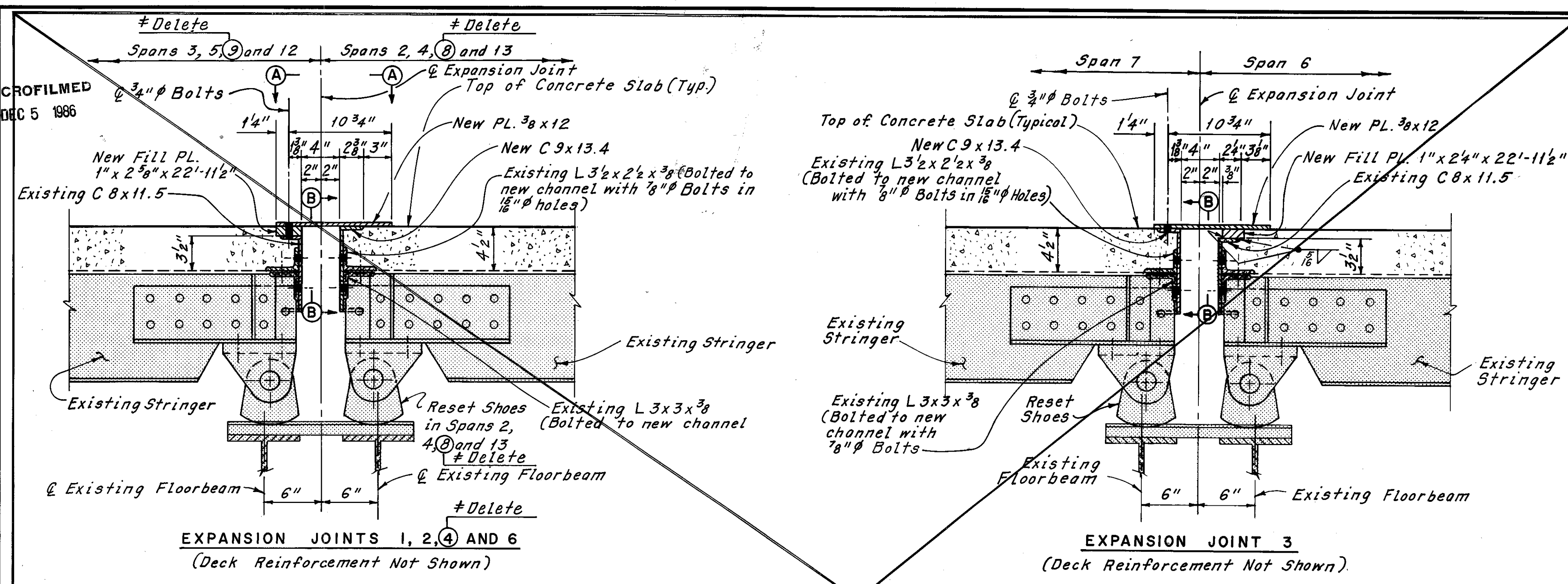
Sheet added 12-5-83  
# Additional Stringer Replacement As Determined During Bridge Reconstruction RAS 12-3-81  
REVISION

CUYAHOGA COUNTY	OHIO
DRAWN C.P. TRACED C.P. CHECKED W.E.B. DATE 5-22-81	REVIEWED DATE 7-17-81
DATE 5-22-81	DATE 7-17-81

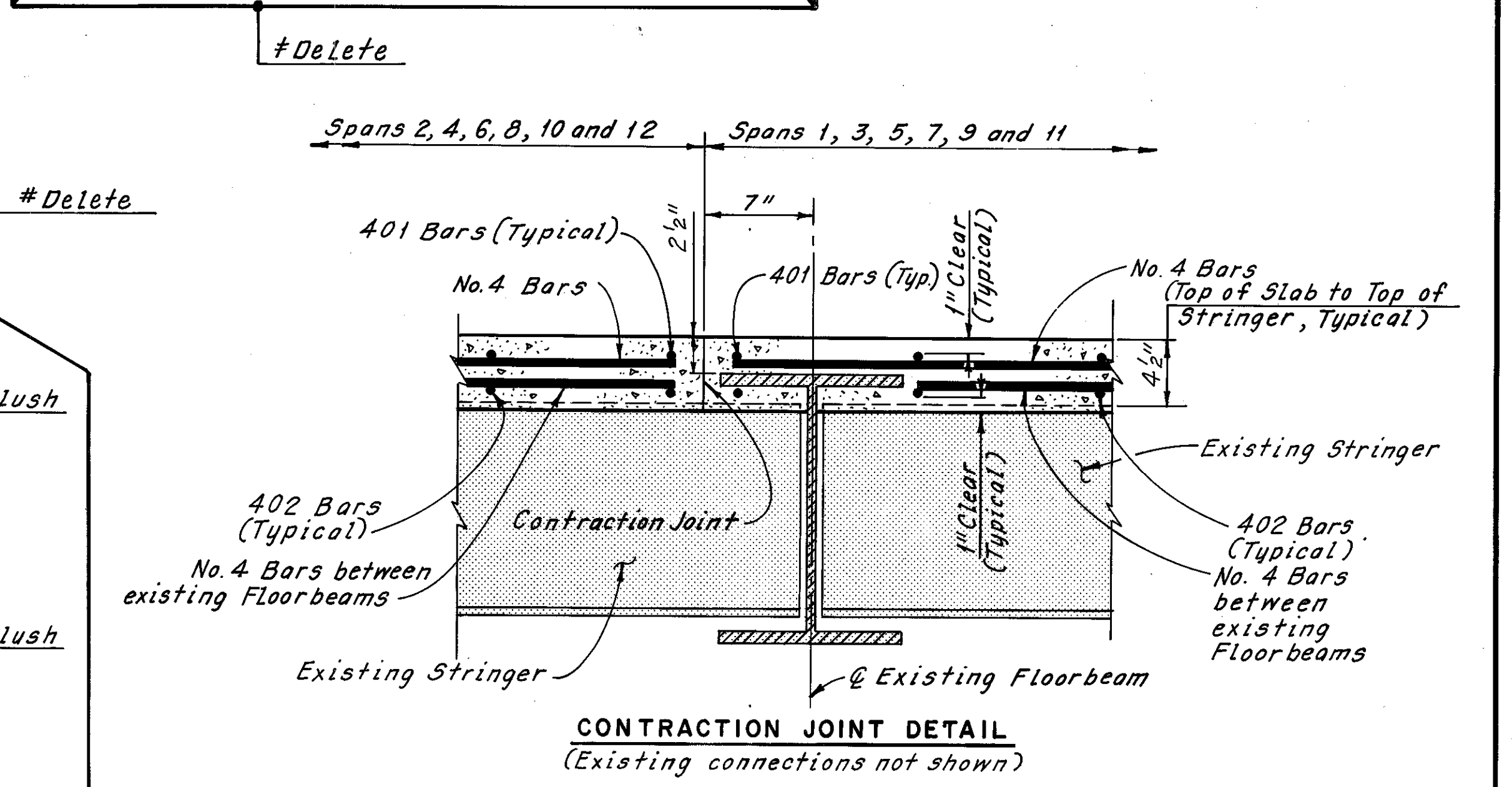
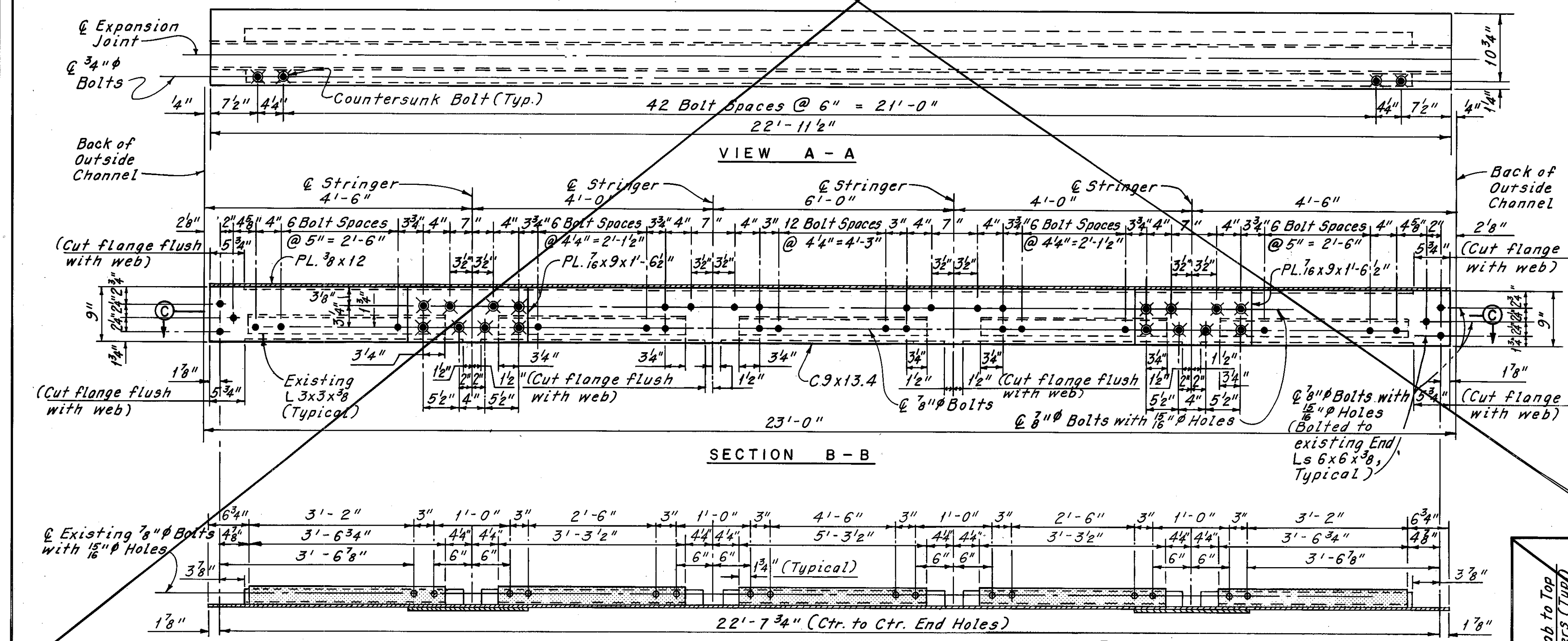
MICROFILMED  
DEC 5 1986

FHWA REGION	STATE	PROJECT	133 185
5	OHIO		

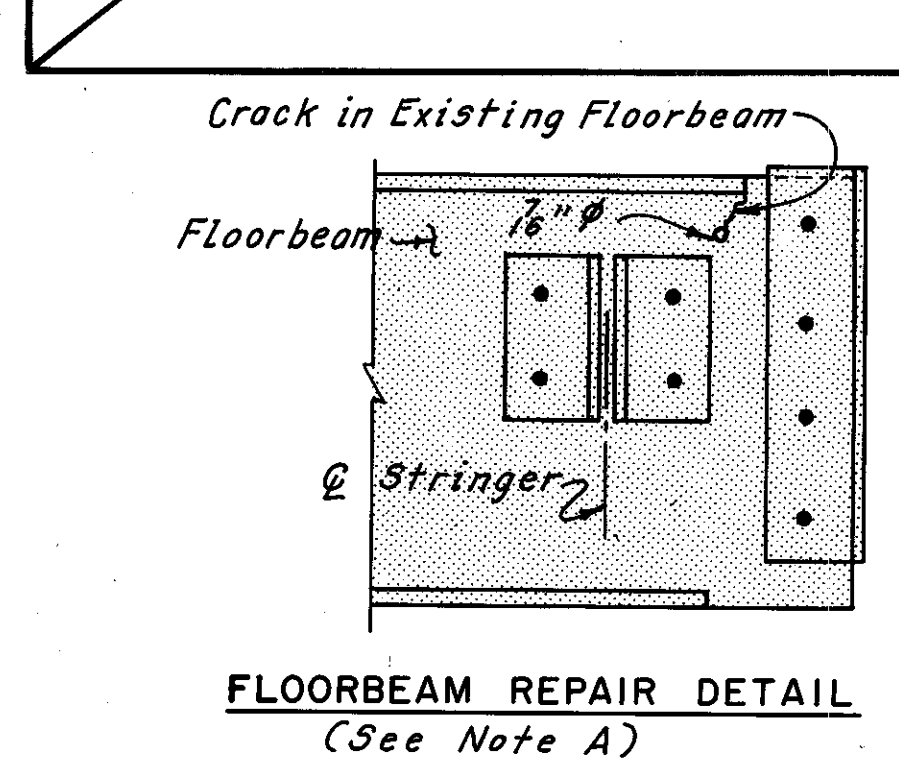
CUYAHOGA COUNTY  
CUI-10-16.23



Note:  
All member dimensions shown are based on existing plans, and some variations may be encountered. The Contractor shall make adequate field measurements prior to structural steel fabrication to insure a proper fit-up between structural members. All material, labor and equipment used shall be included in the lump sum price bid for Item 513, Dismantle, Move, Alter and/or Recondition and Erect Structural Steel.  
The Contractor shall be responsible for the proper setting of all shoes. Any shoe, including any shoes not indicated on these plans, that requires resetting shall be set in its vertical position at 60 F. prior to placement of new structural steel. All material, labor and equipment required to perform this work shall be included in the lump sum price bid for Item 513, Dismantle, Move, Alter and/or Recondition and Erect Structural Steel. No additional compensation will be provided for any additional shoes to be reset.



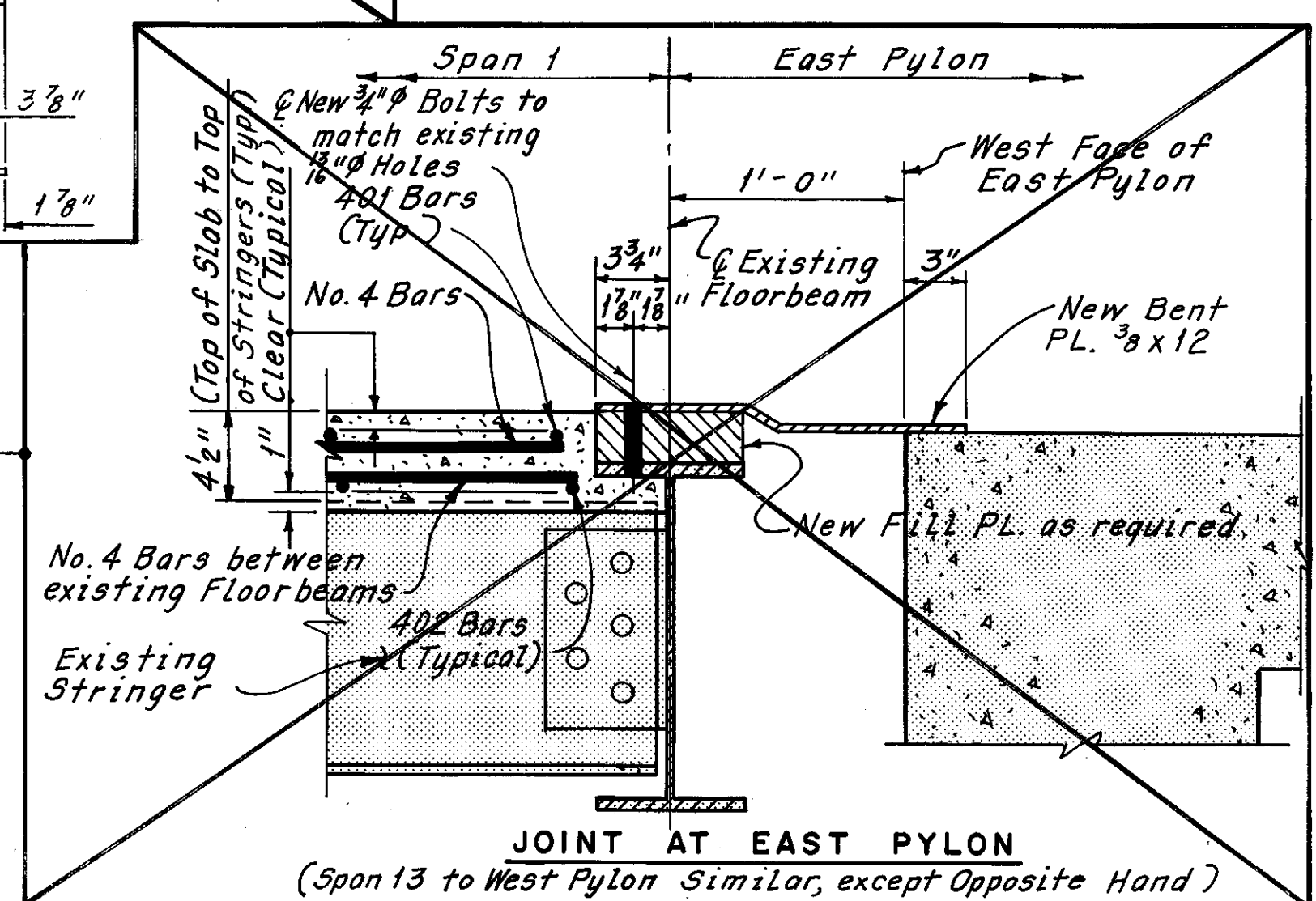
Notes:  
For location of Joints see Sheets 55/72 thru 57/72.  
Zip-tone indicates existing structure and members.  
All bolts shown on this sheet shall be A.S.T.M. - A307 bolts.  
The following abbreviations are used:  
Typ. = Typical  
Ctr. = Center



Note A:  
Maintenance and inspection deck floorbeam cracks, as shown in the floorbeam repair detail, were determined to be at the locations shown in Table A by field inspection. The Contractor shall inspect all maintenance and inspection deck floorbeams to determine the locations of all floorbeam cracks. The Contractor shall repair all cracks at the direction of the Engineer. Cracks shall be repaired by drilling a 1/8" hole at the end of the crack, cleaning the edges of the crack, providing a suitable backup plate and filling the crack with weld. All labor, equipment and materials required to perform the inspection and repair of the existing maintenance and inspection deck floorbeams shall be included with the unit price bid for Item Special, Repair of Floorbeam Cracks, for payment.

Span	F.B. No. @ Stringer	Location
2	1	A
2	2	A
2	2	F
3	7	F
3	8	F
4	1	A
4	1	F
4	2	A
4	2	F
5	7	F

Note:  
For location of floorbeam number at stringer locations given in Table A, see Member Identification Plans, Sheet 5/72 and 9/72.



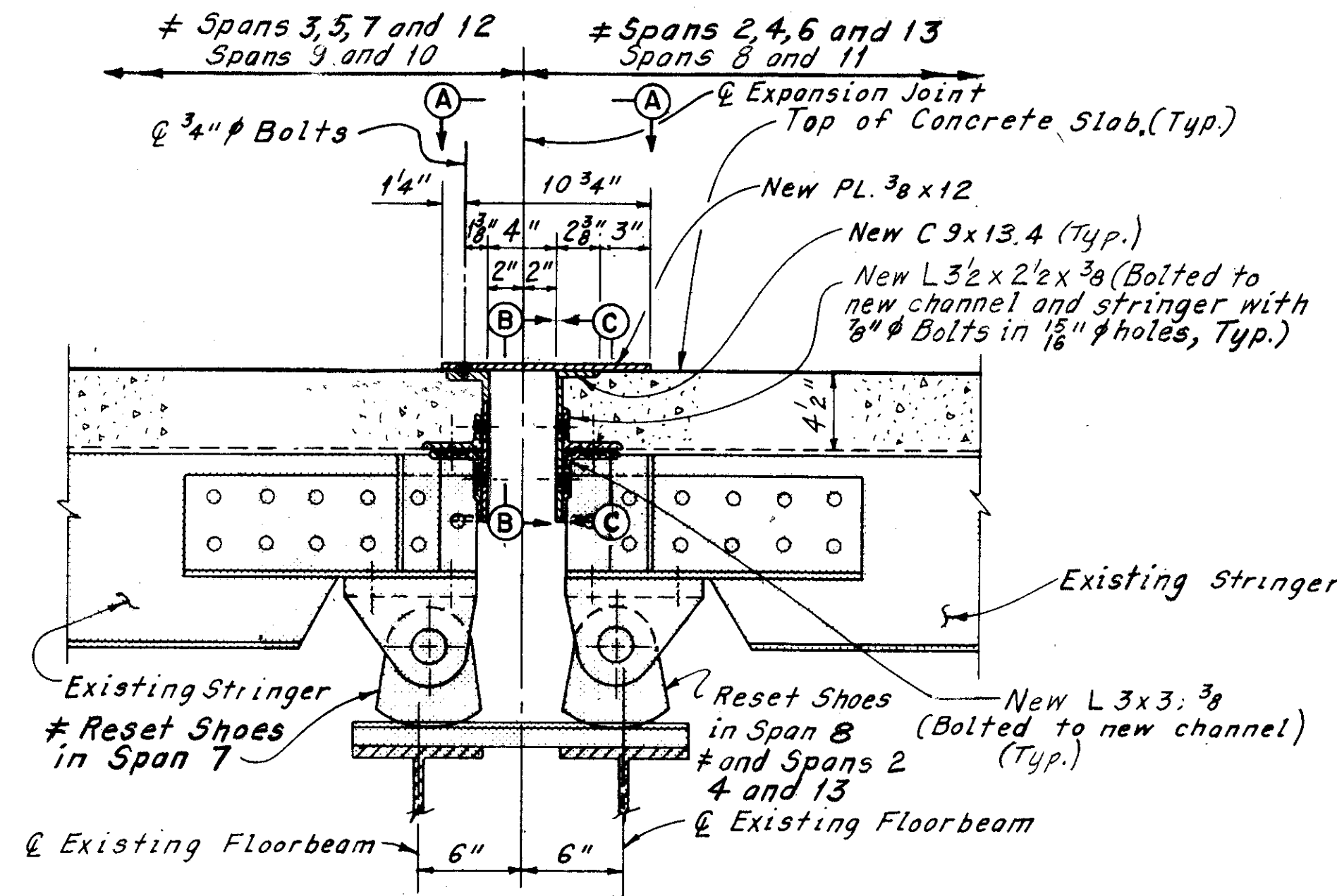
#W.B. 7-81 #C.K.B. 4-15-81 Additional expansion joint replacement as determined during bridge reconstruction REVISION

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENOFF  
CONSULTING ENGINEERS  
CLEVELAND

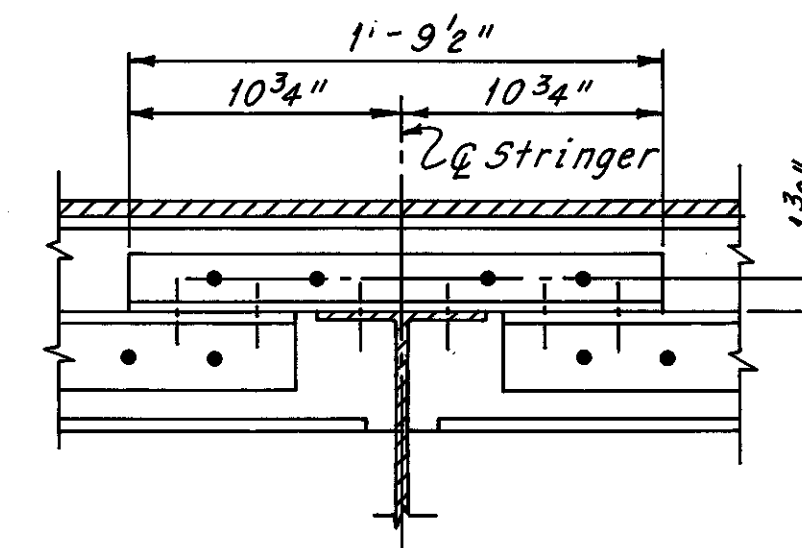
**HNTB**

**MAINTENANCE AND INSPECTION DECK  
JOINT DETAILS**  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO

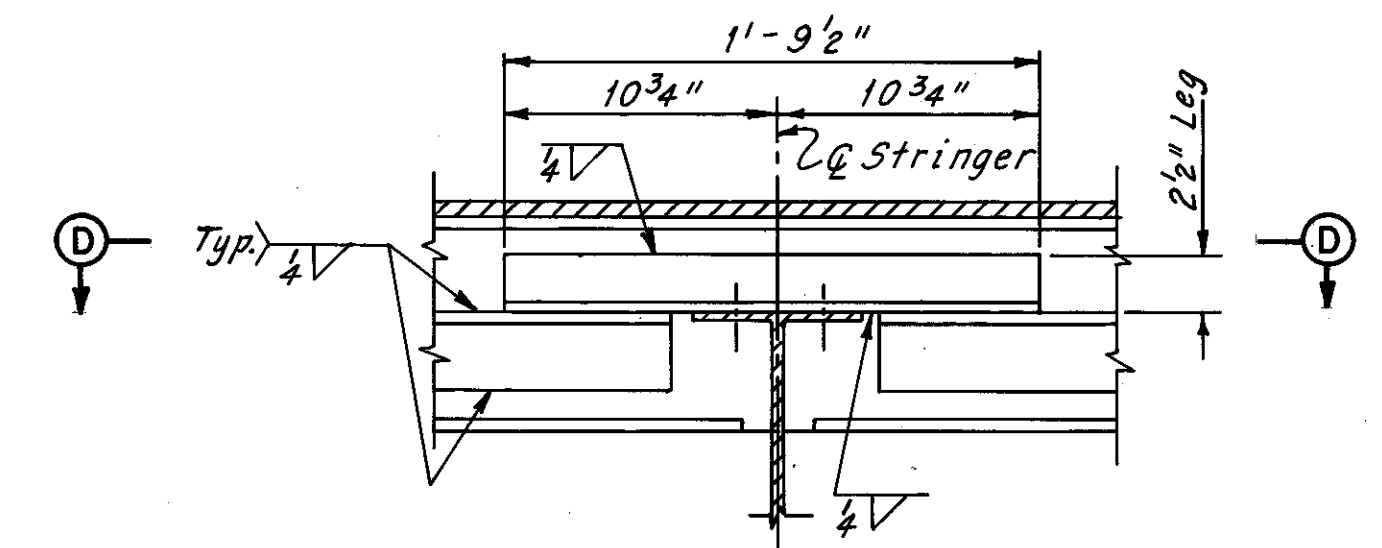
DRAWN C.P. TRACED C.P. CHECKED R.H.M. REVIEWED DATE 10-31-80 DATE 11-5-80 DATE 12-6-80 REVISION 72-5-83 SHEET 58/72



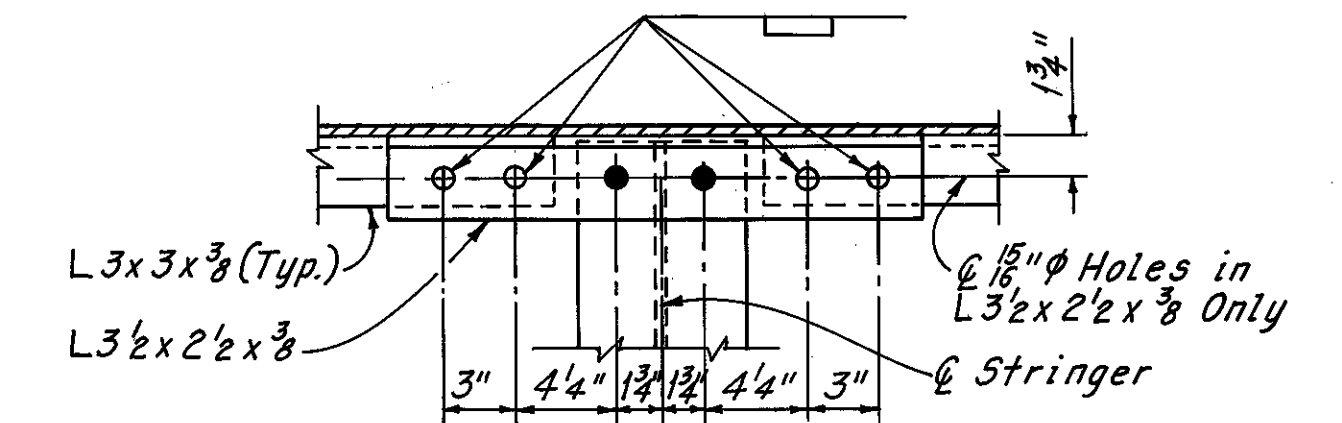
TYPICAL SECTION AT INTERIOR STRINGERS  
(Deck Reinforcement Not Shown)



SECTION C - C  
(Deck Not Shown)



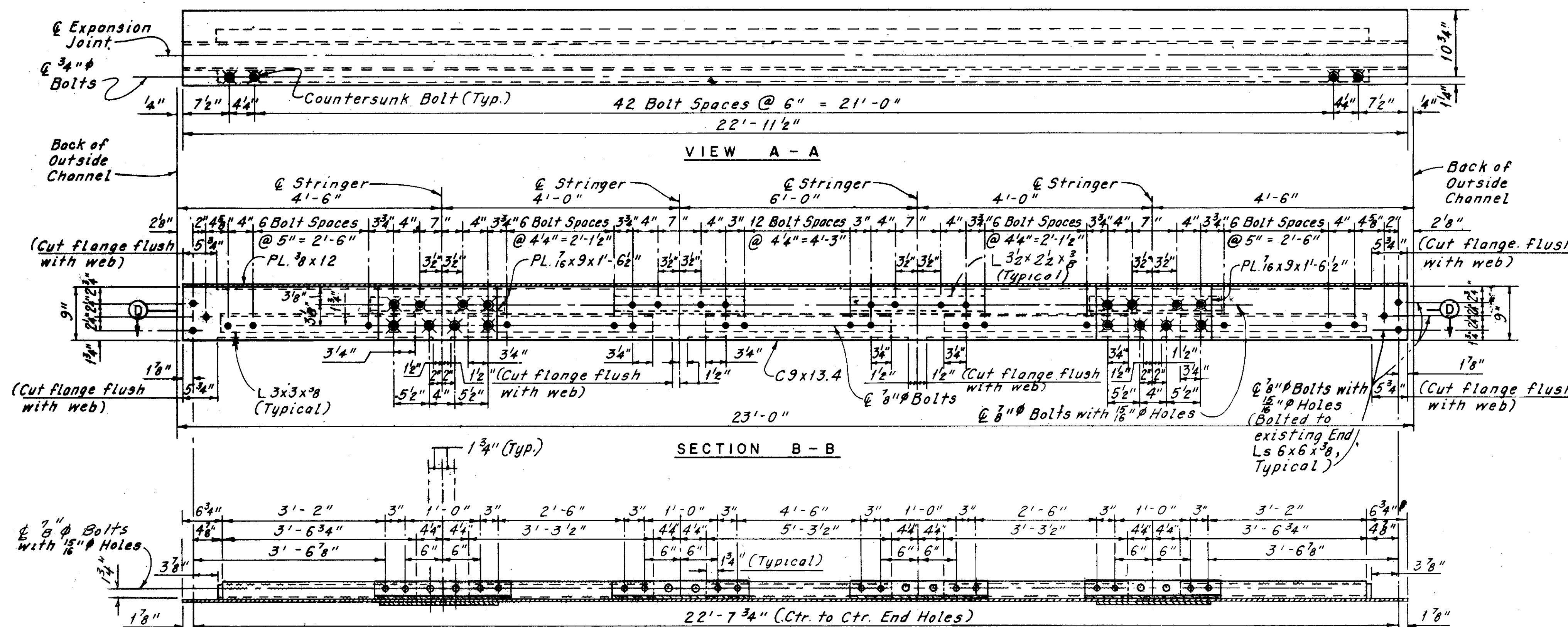
SECTION C - C  
(Deck Not Shown)



SECTION D - D

ALTERNATE DETAILS FOR  
WELDED END DAM

Note:  
When existing stringer ends are too close to permit a bolted end dam, the alternate welded detail shall be used. Omit PL 3/8 x 9 x 1'-6 1/2" when welded end dam is used.



Notes:  
For location of joints see Sheets 55/72 thru 57/72.  
Zip-tone indicates existing structure and members.  
All bolts shown on this sheet shall be A.S.T.M. - A307 bolts.  
The following abbreviations are used:  
Typ. = Typical  
Ctr. = Center

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

MAINTENANCE AND INSPECTION DECK  
JOINTS 4 AND 5 REPLACEMENT  
(AS DETERMINED DURING RECONSTRUCTION)  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

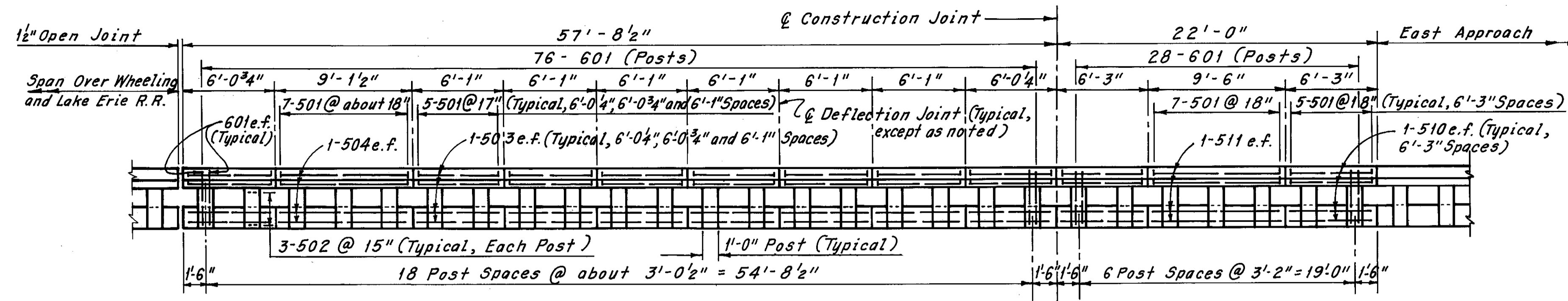
\* EXPANSION JOINT

Sheet added 12-5-83

\* Additional Expansion Joint Replacement As  
Determined During Bridge Reconstruction

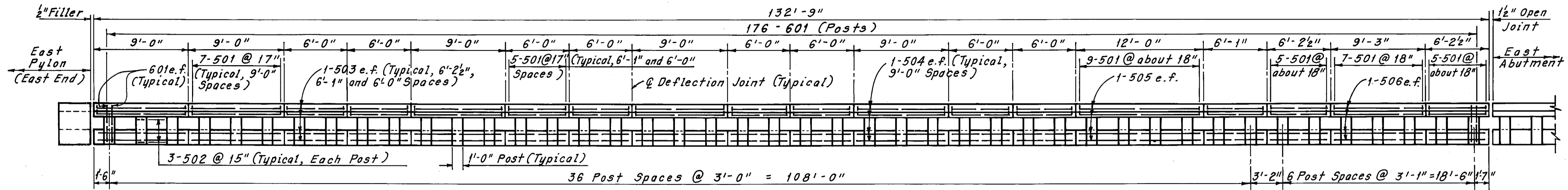
W.E.B. 7-1-81	CUYAHOGA COUNTY OHIO
DATE 4-15-81	REVISION
DATE 4-21-81	REVIEWED
DATE 4-22-81	REVISOR
DATE	SHEET 58A/72

CUYAHOGA COUNTY  
CUY-10-16.23

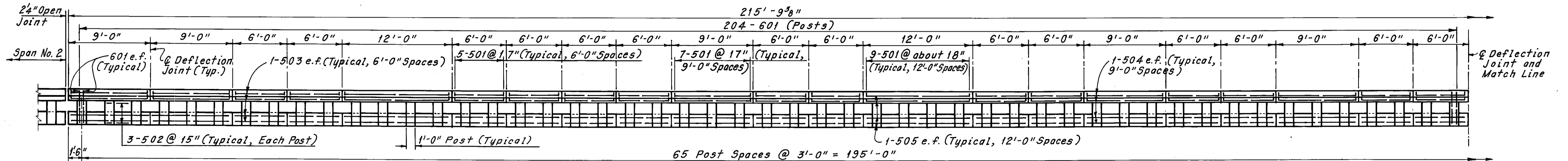


**EAST ABUTMENT** **BOX**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

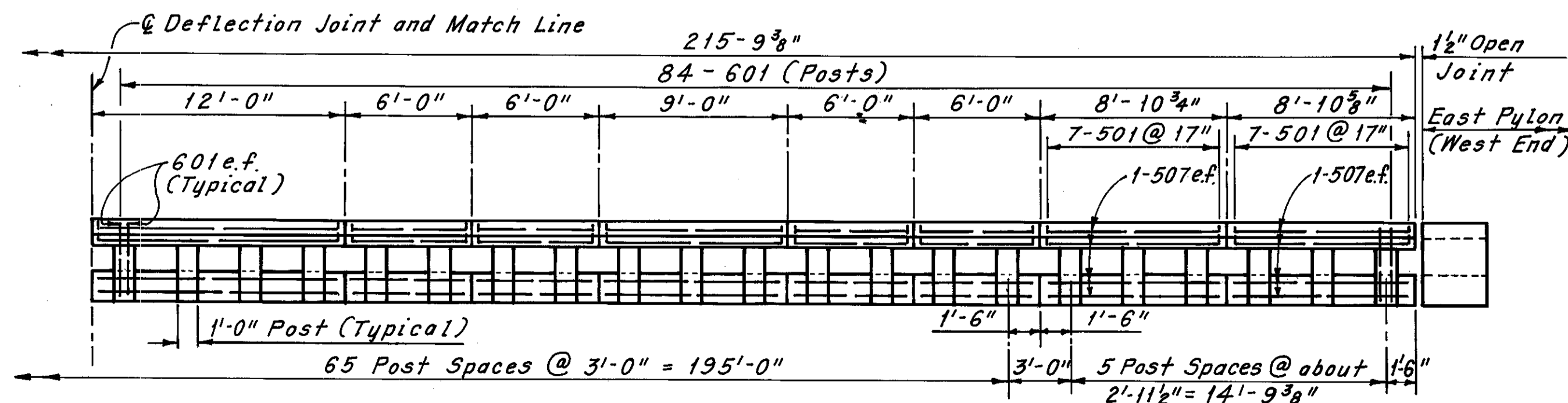
Note:  
All reinforcing bar marks shall be prefixed RC.



**SPAN OVER WHEELING AND LAKE ERIE RAILROAD**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 1**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 1**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

Notes:  
Payment for the railing shall be made at the contract unit price bid for Item 517, Railing. Payment length shall be the overall length of the railings. Railing expansion joint and deflection joint material and all reinforcing steel that does not extend into the sidewalk shall be included with Item 517 for payment. Reinforcing steel extending from the sidewalk is included with Item 509, Reinforcing Steel, for payment. Railings shall be placed in alternate sections by the use of bulkheads. Closing sections shall be placed after removal of bulkheads and after placement of sponge filler. The filler shall be attached to the face of the concrete on one side, flush with the surface of concrete and exposed edges shall be free of mortar.

The following abbreviation is used:  
e.f. = each face

Note:  
For Typical Railing Section, Deflection Joint Detail and Reinforcement Schedule, see Sheet 64/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**RAILING DETAILS**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)

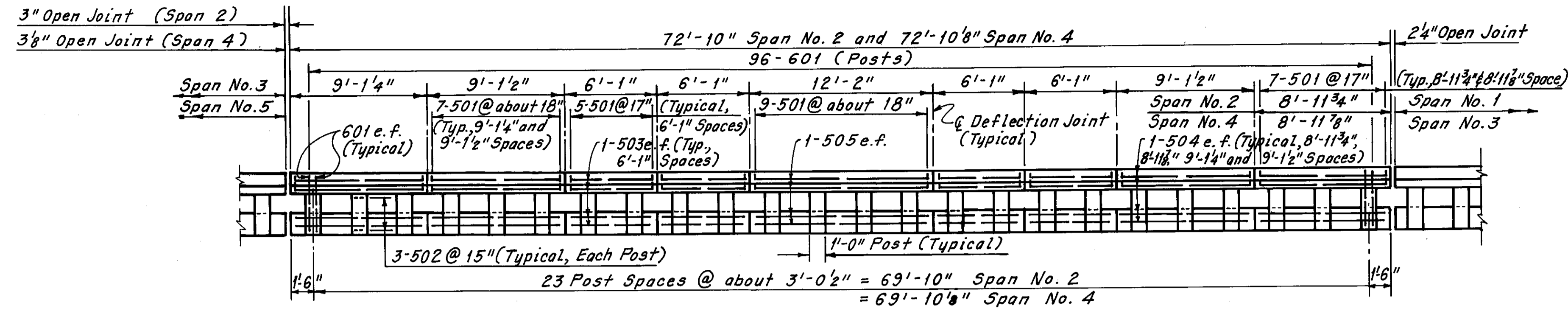
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

CUYAHOGA COUNTY OHIO

DRAWN C.P.	TRACED C.P.	CHECKED I.B.K.	REVIEWED DATE	REVISED
DATE 6-29-78	DATE 7-5-78	DATE 8-14-78	DATE	

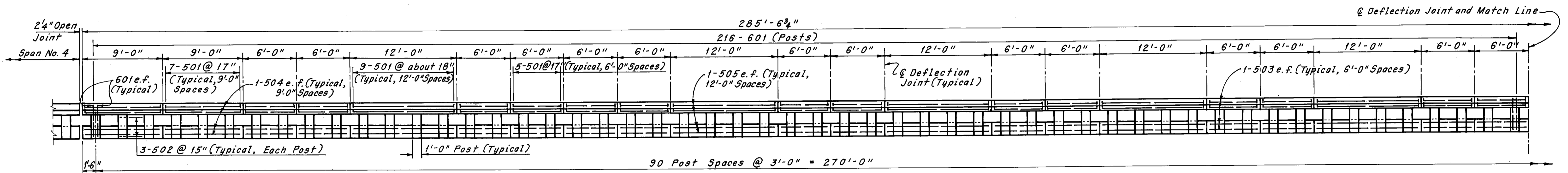
SHEET 59/72



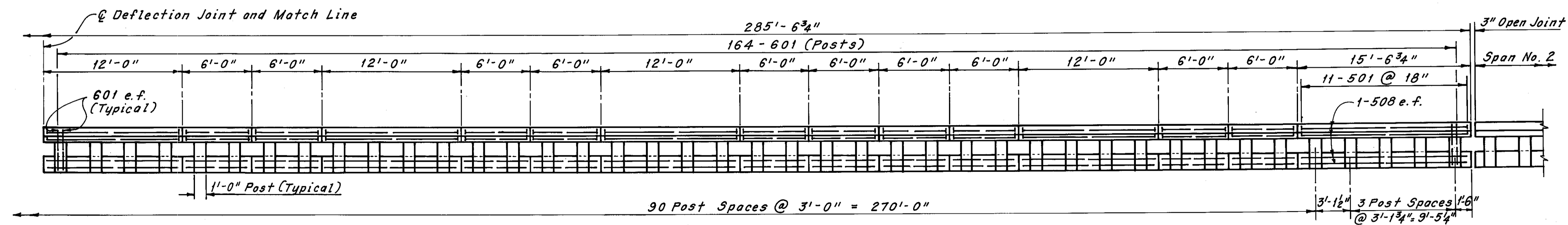


Note:  
All reinforcing bar marks shall be prefixed RC.

**SPAN NO. 2 AND SPAN NO. 4**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



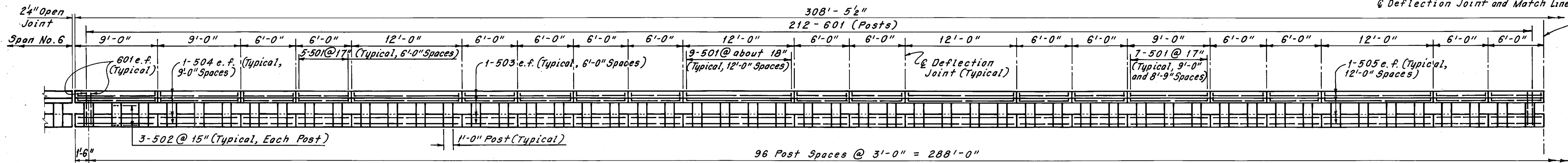
**SPAN NO. 3**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



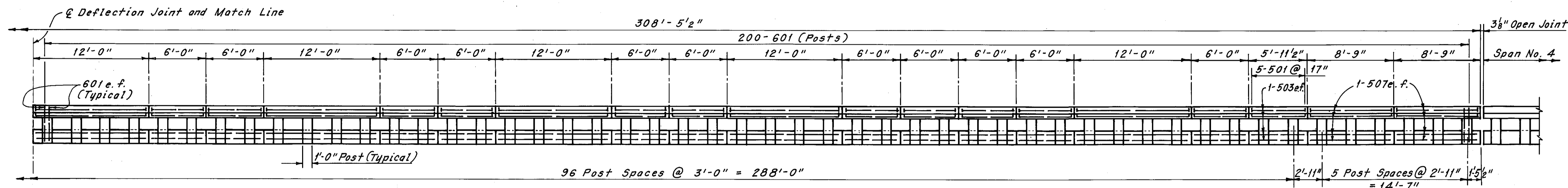
**SPAN NO. 3**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

Note:  
For Notes, see Sheet 59/72.

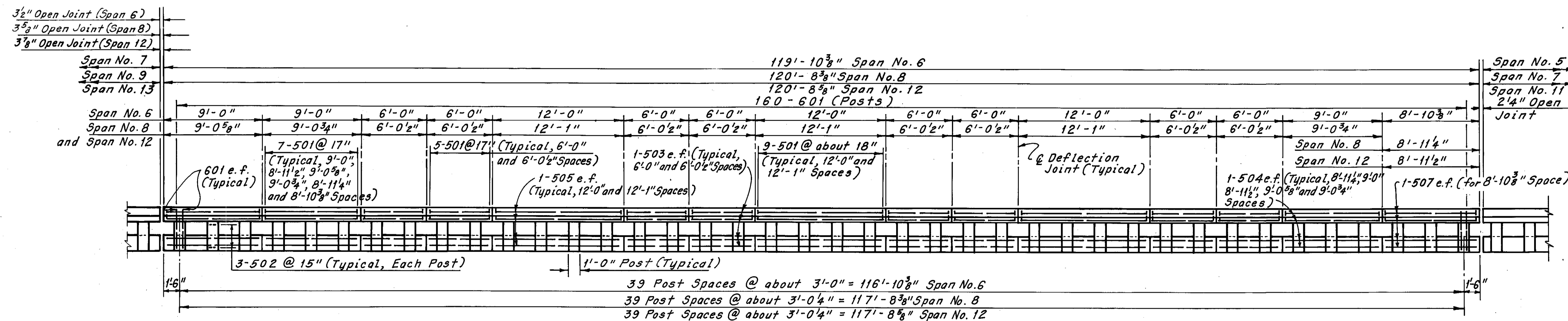
H.N.T.B. BRIDGE NO. 3				
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND				<b>HNTB</b>
<b>RAILING DETAILS</b>				
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56				
CUYAHOGA COUNTY OHIO				
DRAWN C.P. DATE 7-7-78	TRACED C.P. DATE 7-11-78	CHECKED I.B.K. DATE 8-14-78	REVIEWED DATE	REVISED DATE
				SHEET 60/72



SPAN NO. 5  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



SPAN NO. 5  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



SPAN NO. 6, SPAN NO. 8 AND SPAN NO. 12  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

Note:  
All reinforcing bar marks shall be prefixed RC.

Note:  
For Notes, see Sheet 59/72.

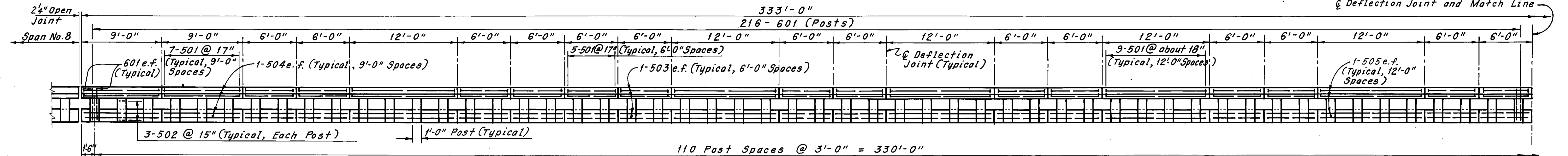
H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

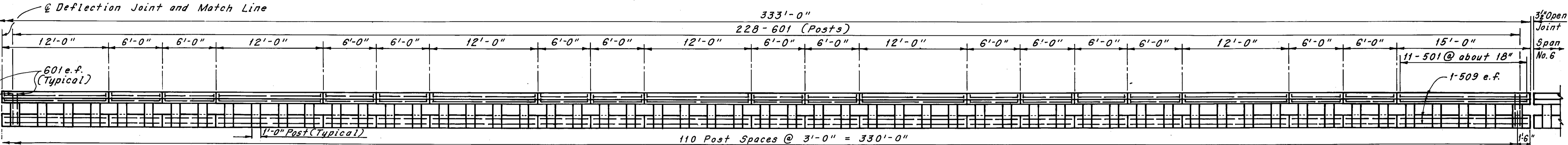
**RAILING DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 . STA. 22+19.19  
CUYAHOGA COUNTY OHIO  
STA. 55+04.56

DRAWN C.P.	TRACED C.P.	CHECKED L.B.K.	REVIEWED DATE	REVISED
DATE 7-12-78	DATE 7-17-78	DATE 8-14-78		

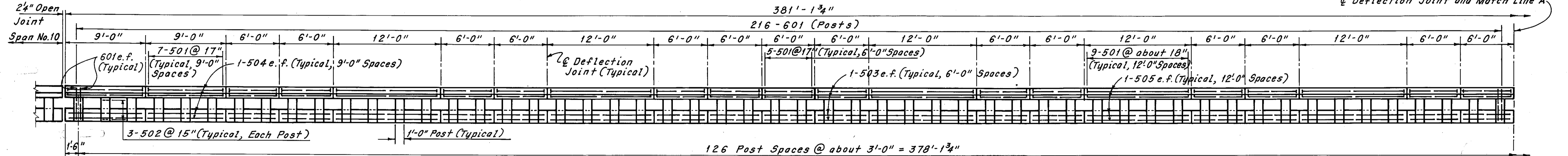
SHEET 61/72



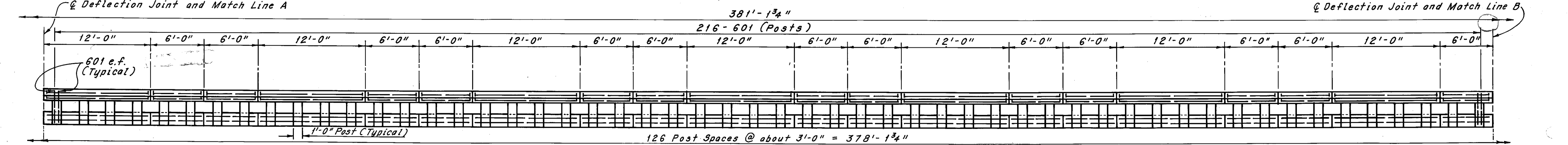
**SPAN NO. 7**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



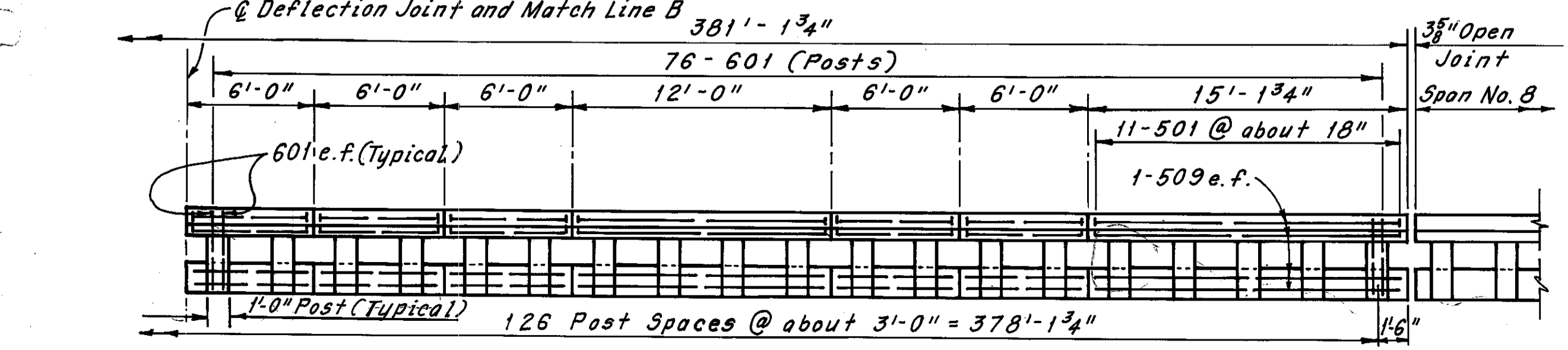
**SPAN NO. 7**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 9**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 9**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



Note:  
All reinforcing bar marks shall be prefixed RC.

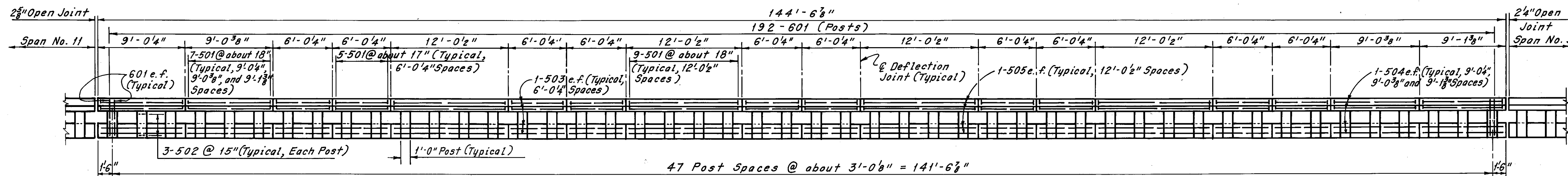
Note:  
For Notes, see Sheet 59/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

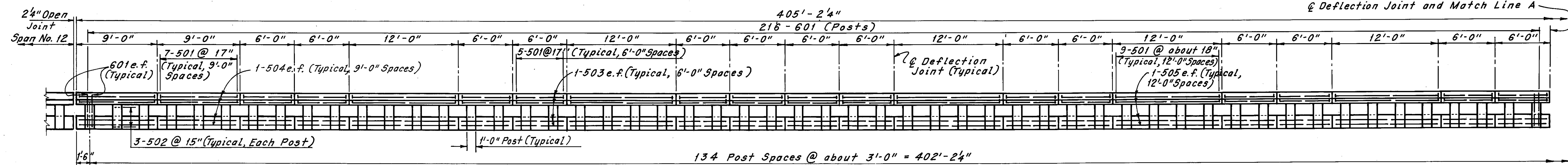
**HNTB**

**RAILING DETAILS**  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY STA. 55+04.56 OHIO

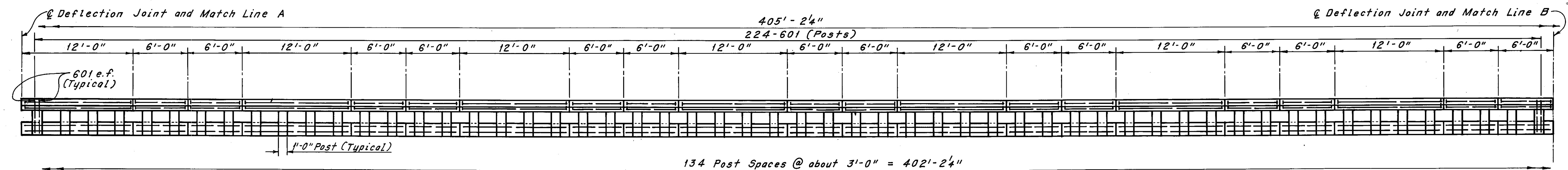
DRAWN C.P.	TRACED C.P.	CHECKED I.B.A.	REVIEWED DATE	REVISED
DATE 7-18-78	DATE 7-21-78	DATE 8-14-78	DATE	SHEET 62/72



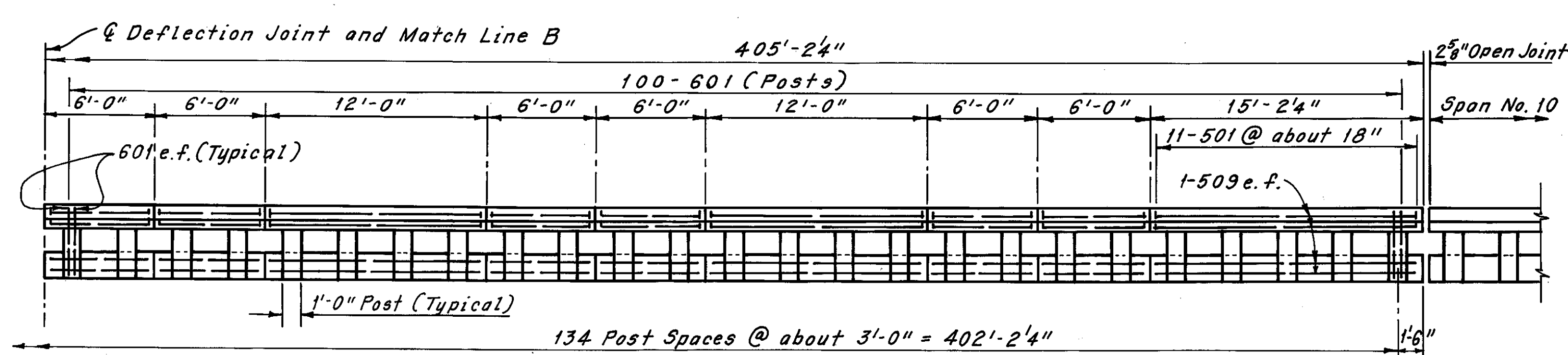
**SPAN NO. 10**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 12**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 11**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

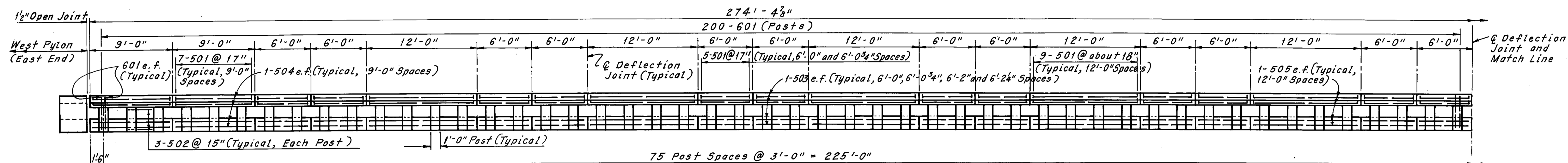


**SPAN NO. 11**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)

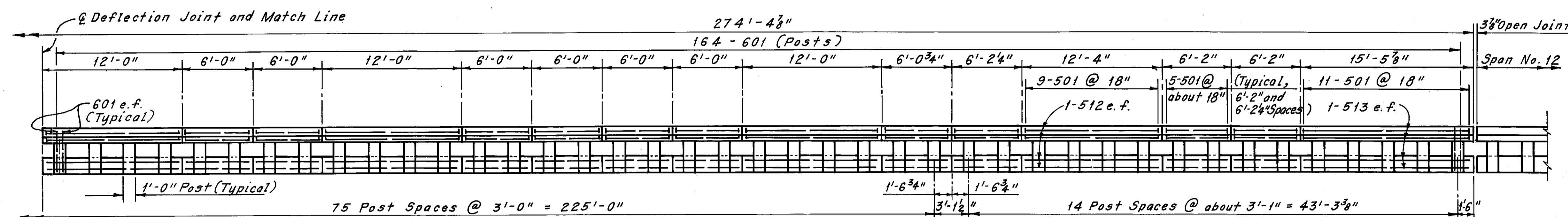
Note:  
For Notes, see Sheet 59/72.

Note:  
All reinforcing bar marks shall be prefixed RC.

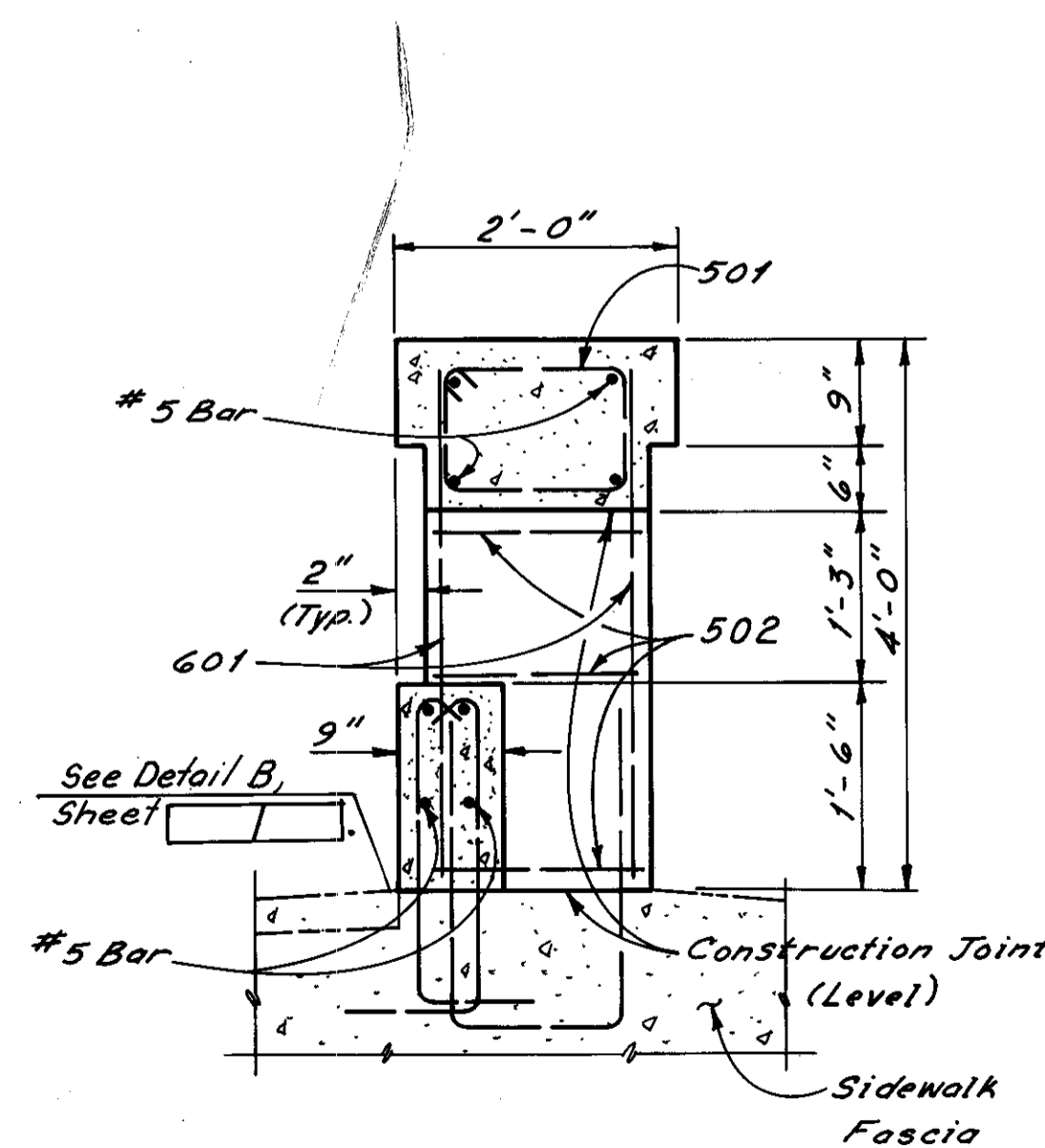
H.N.T.B. BRIDGE NO. 3			
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			
<b>HNTB</b>			
<b>RAILING DETAILS</b>			
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)			
BR. NO. CUY.-10-1618		STA. 22+19.19	
CUYAHOGA COUNTY		OHIO	
DRAWN C.P.	TRACED C.P.	CHECKED L.B.K.	REVIEWED DATE
DATE 7-24-78	DATE 7-27-78	DATE 8-15-78	DATE
			SHEET 63/72



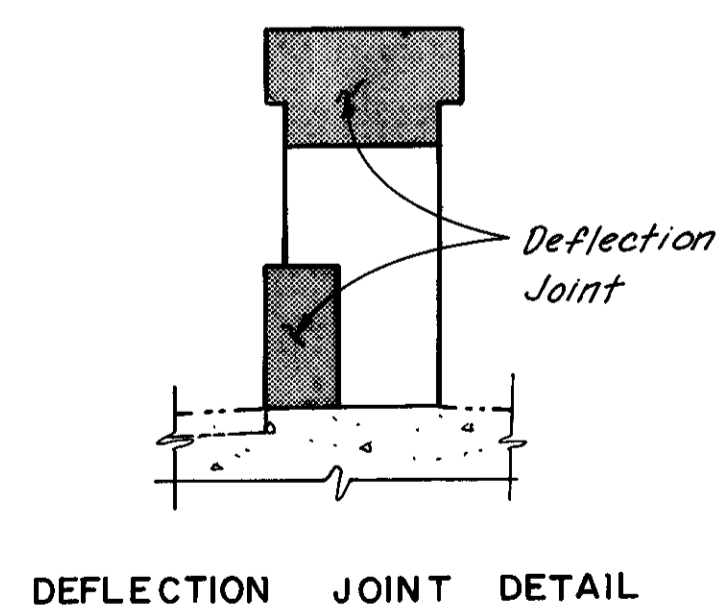
**SPAN NO. 13**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



**SPAN NO. 13**  
(South Railing Looking North Shown, North Railing Looking South Same, Except Opposite Hand)



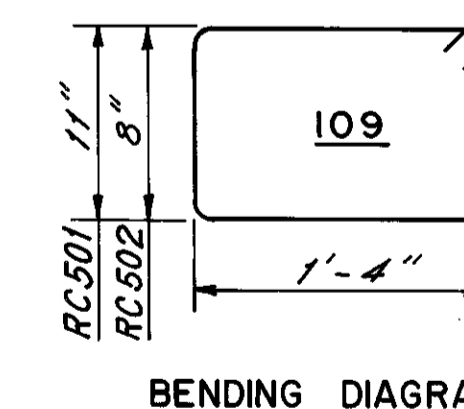
TYPICAL RAILING SECTION



DEFLECTION JOINT DETAIL

Note:  
The deflection joints in the railing may be either 1/4" gray sponge rubber or 1/4" gray cellular polyvinyl chloride (PVC) sponge. Either material shall meet the requirements of AASHTO M-153, Type 1, except the density of the PVC sponge shall be not less than 20 lb. per cu. ft.

MARK	NO.	LENGTH	TYPE	WEIGHT (LBS.)
RC501	4,862	5'-2"	109	26,201
RC502	6,120	4'-8"	109	29,788
RC503	3,920	5'-9"	Str.	23,509
RC504	768	8'-9"	Str.	7,009
RC505	1,328	11'-9"	Str.	16,275
RC506	16	9'-0"	Str.	150
RC507	80	8'-6"	Str.	709
RC508	16	15'-3"	Str.	254
RC509	48	14'-9"	Str.	738
RC510	32	6'-0"	Str.	200
RC511	16	9'-3"	Str.	154
RC512	16	12'-0"	Str.	200
RC513	16	15'-0"	Str.	250
RC601	8,160	3'-9"	Str.	45,961
TOTAL WEIGHT =				151,398



BENDING DIAGRAM

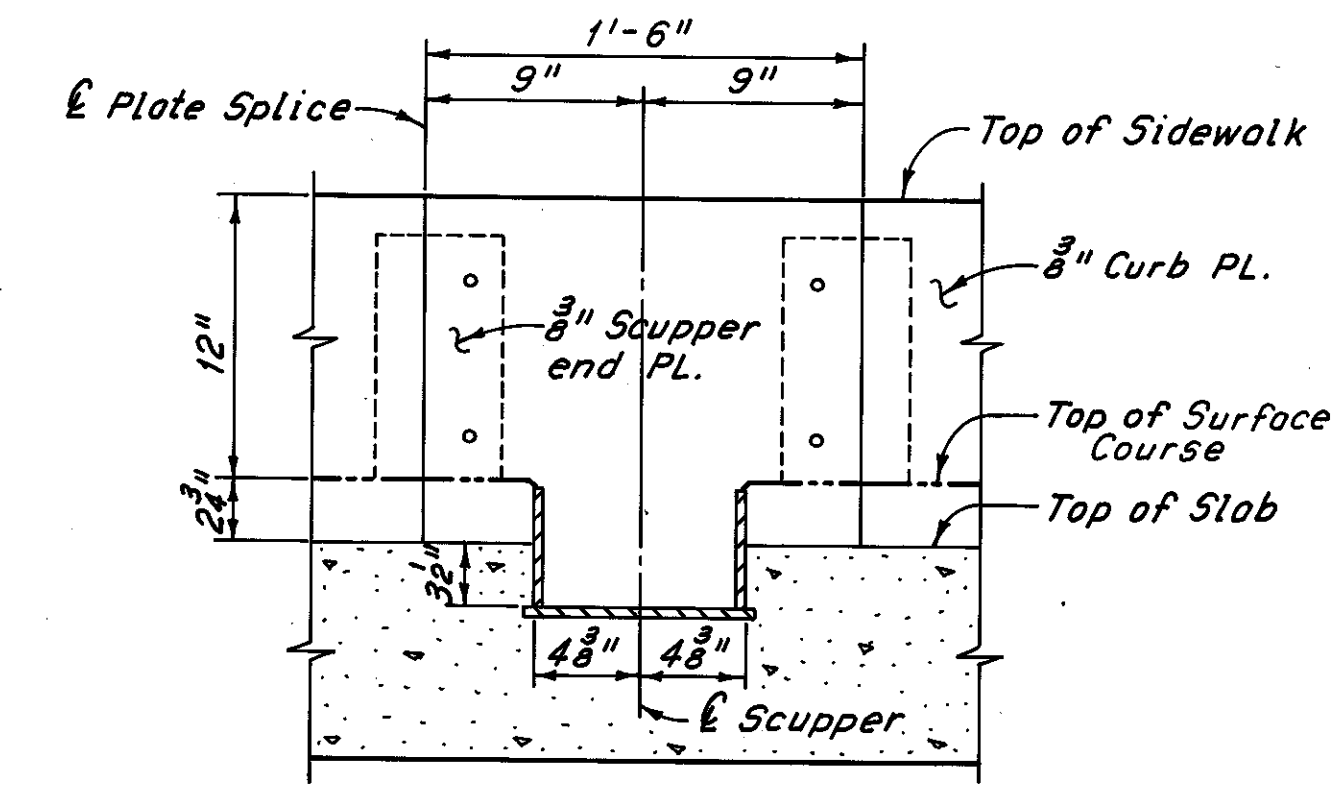
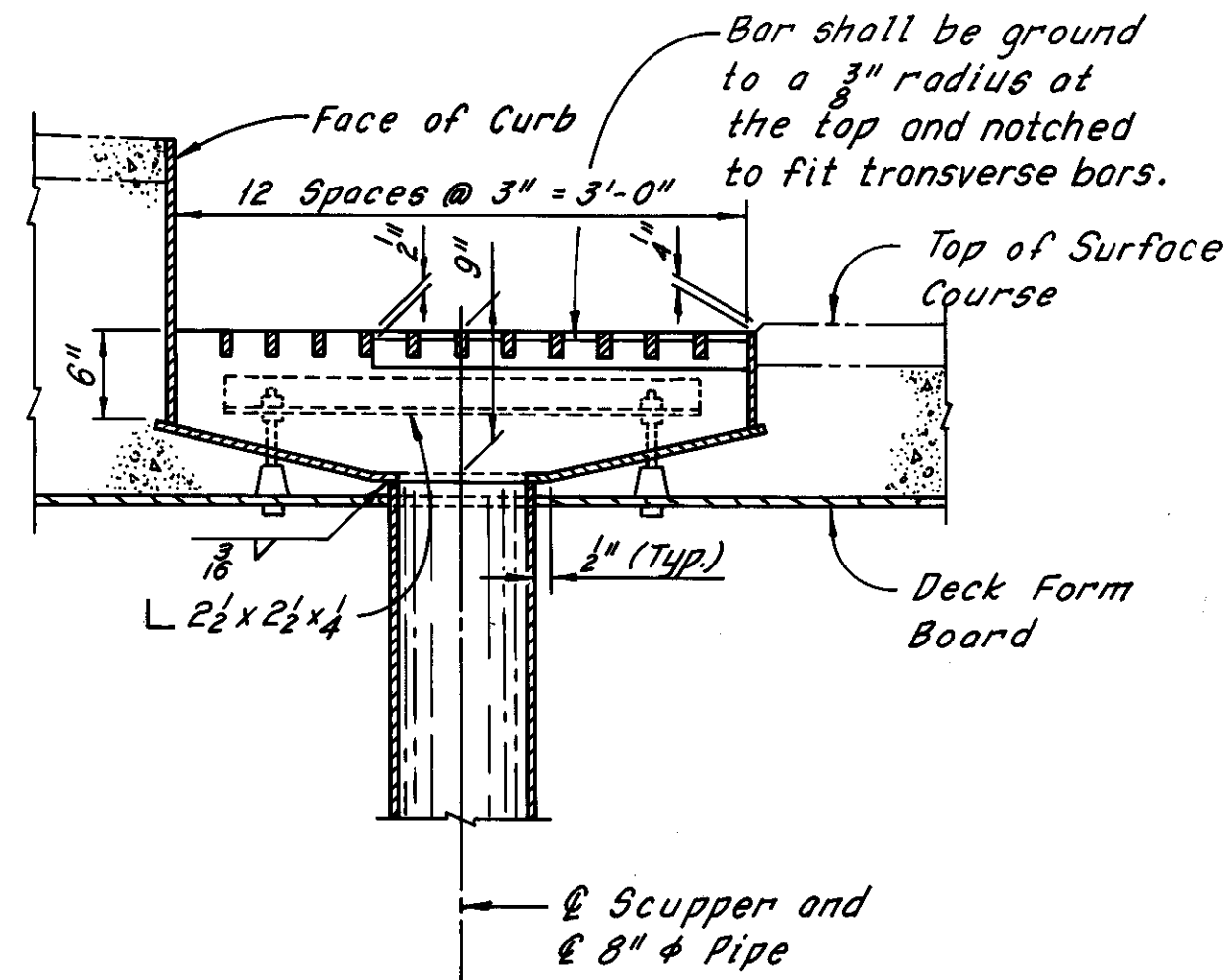
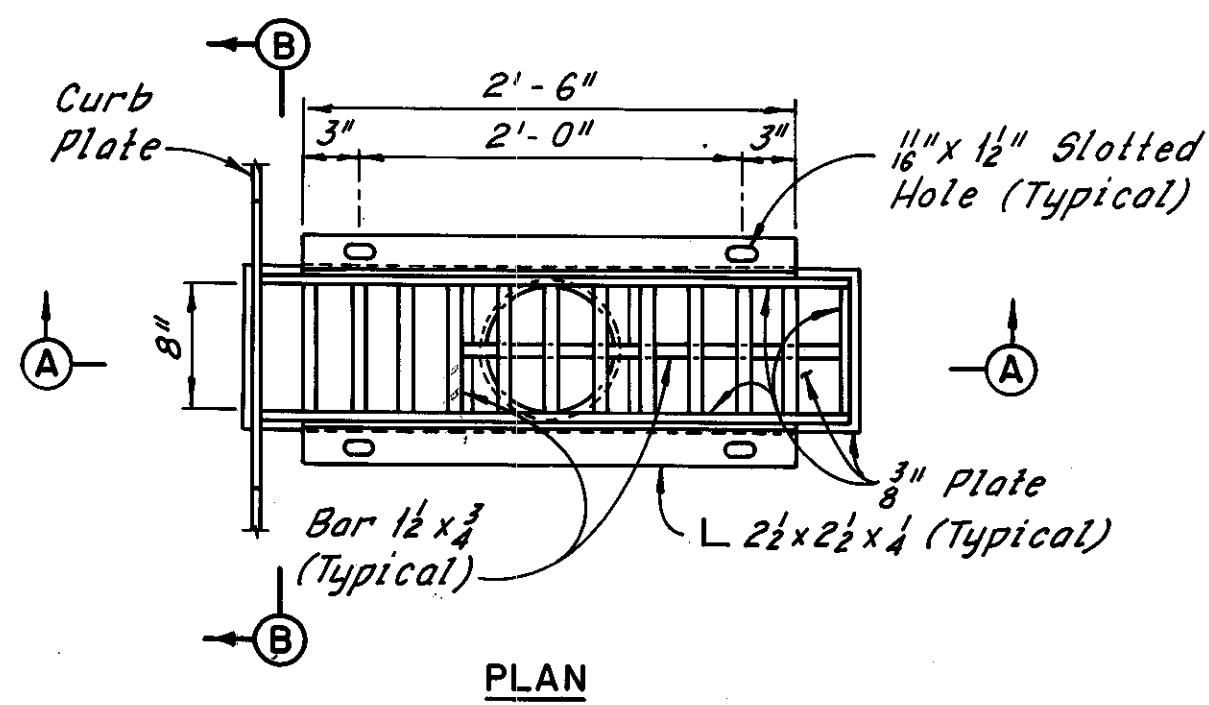
Note:  
For Notes, see Sheet 59/72.

Note:  
All reinforcing bar marks shall be prefixed RC.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**RAILING DETAILS**  
REHABILITATION OF THE  
LORAIN - CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN C.P.	TRACED C.P.	CHECKED L.B.K.	REVIEWED	REVISED
DATE 7-28-78	DATE 8-1-78	DATE 8-15-78	DATE	SHEET 64/72



**SCUPPER DETAILS**

(For additional scupper details, see Ohio Standard Drawing SD-1-69, sheet 3 of 4.)

**Notes:**

The scuppers and scupper supports shall be hot-dipped galvanized low or mild carbon steel available commercially. This material will be excluded from the requirements of 501.07 for test reports. The 8"  $\phi$  pipes shall be alloy steel pipe, 707.11, or hot-dipped galvanized steel pipe. Joints shall be made by welding or by use of a clamp-type coupling with a ring gasket. All welding shall be done before galvanizing. Support material for attaching pipes shall be ASTM A36. The bolts shall be galvanized as specified in ASTM A153.

Standard 8"  $\phi$  elbows, tees, crosses and laterals shall be used in all cases.

The support angles are included with Item 518, Scuppers Including Supports, for payment.

The 8"  $\phi$  pipe attached to the superstructure including fittings, supports and accessories shall be paid for at the unit price bid for Item 518, 8"  $\phi$  Pipe, Horizontal Conductors Including Supports.

The 8"  $\phi$  pipe attached to the substructure (piers, pylons and abutments) including fittings, supports and accessories shall be paid for at the unit price bid for Item 518, 8"  $\phi$  Pipe, Downspouts, Including Supports.

For Item 603 Quantities, see Roadway Plans.

For details of curb plate splice, see Sheet CD 1.

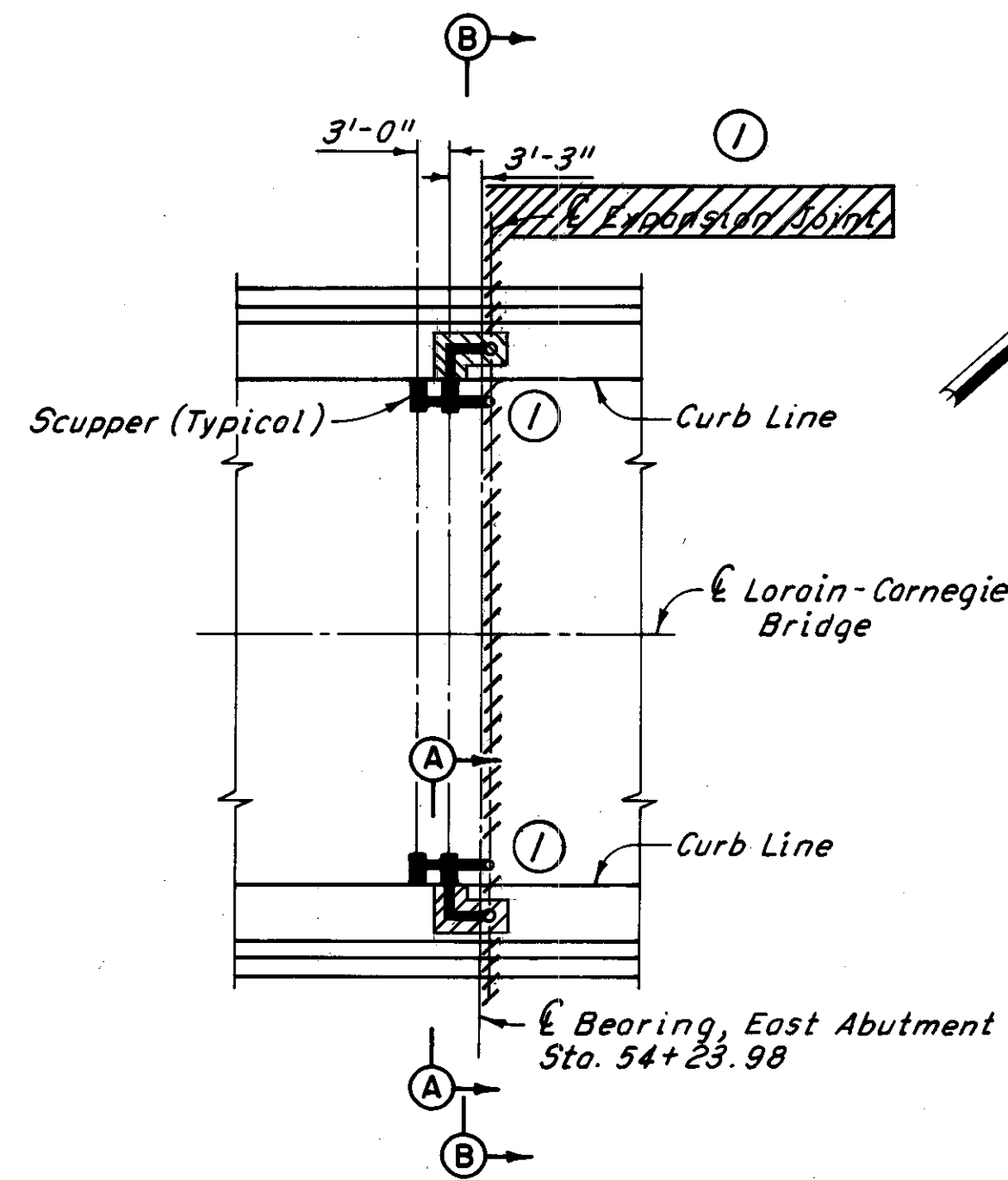
Before the proposed bridge drainage is connected to the existing sewer system, the existing system shall be inspected and cleaned as shown in the plans. For details see Roadway Plans.

All drain pipes shall be sloped a minimum of 1/4" per foot.

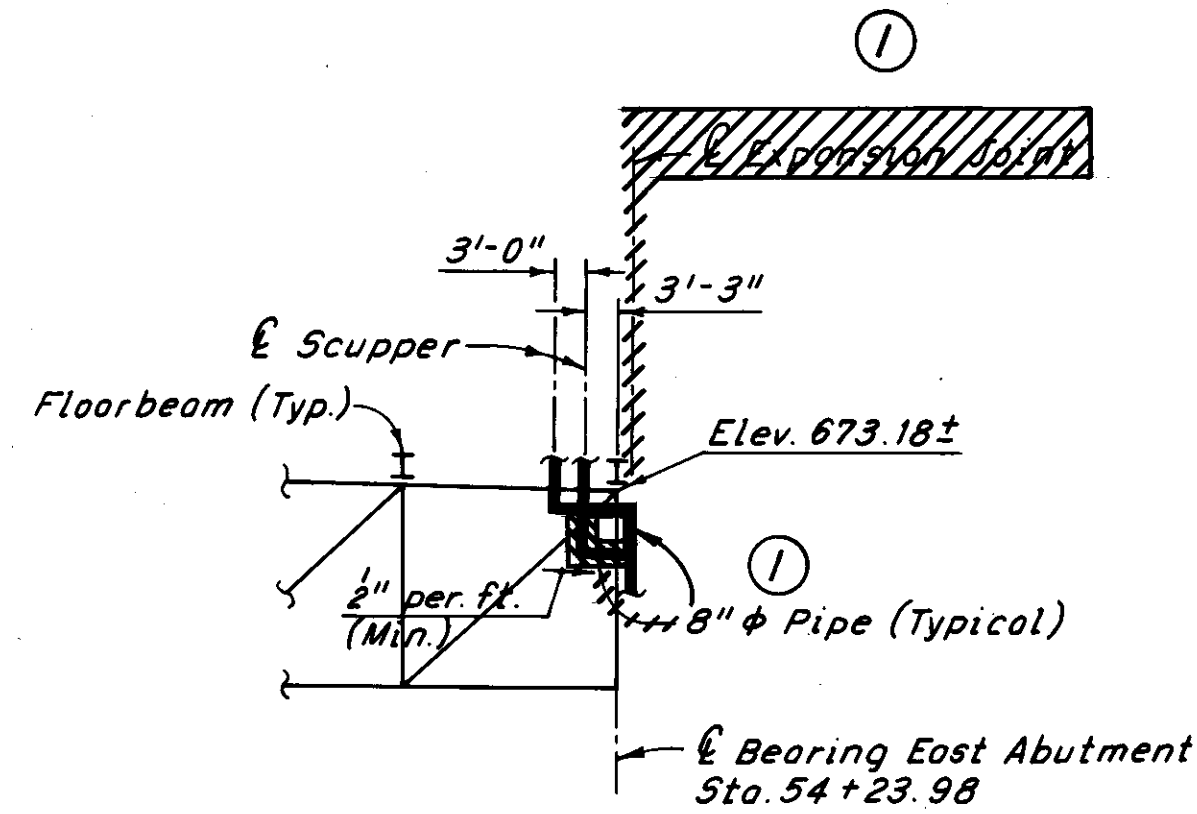
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.

H.N.T.B. BRIDGE NO. 3

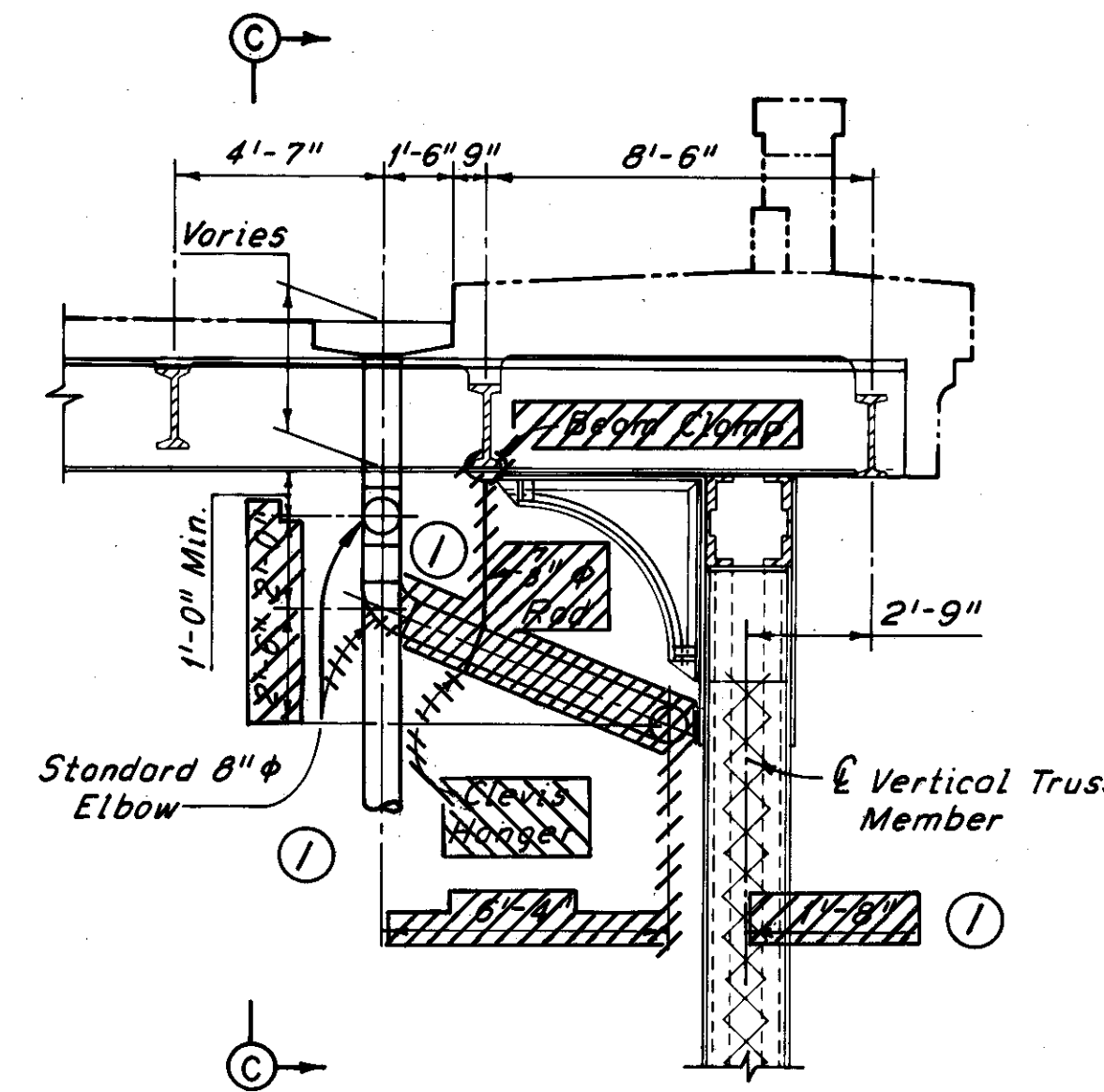
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>DRAINAGE DETAILS AND NOTES</b>			
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56			
CUYAHOGA COUNTY		OHIO	
DRAWN: K.B.	TRACED: D.L.	CHECKED: W.E.B.	REVIEWED: [ ]
DATE: 6-24-78	DATE: 7-11-78	DATE: 8-14-78	DATE: [ ]
			SHEET 65/72



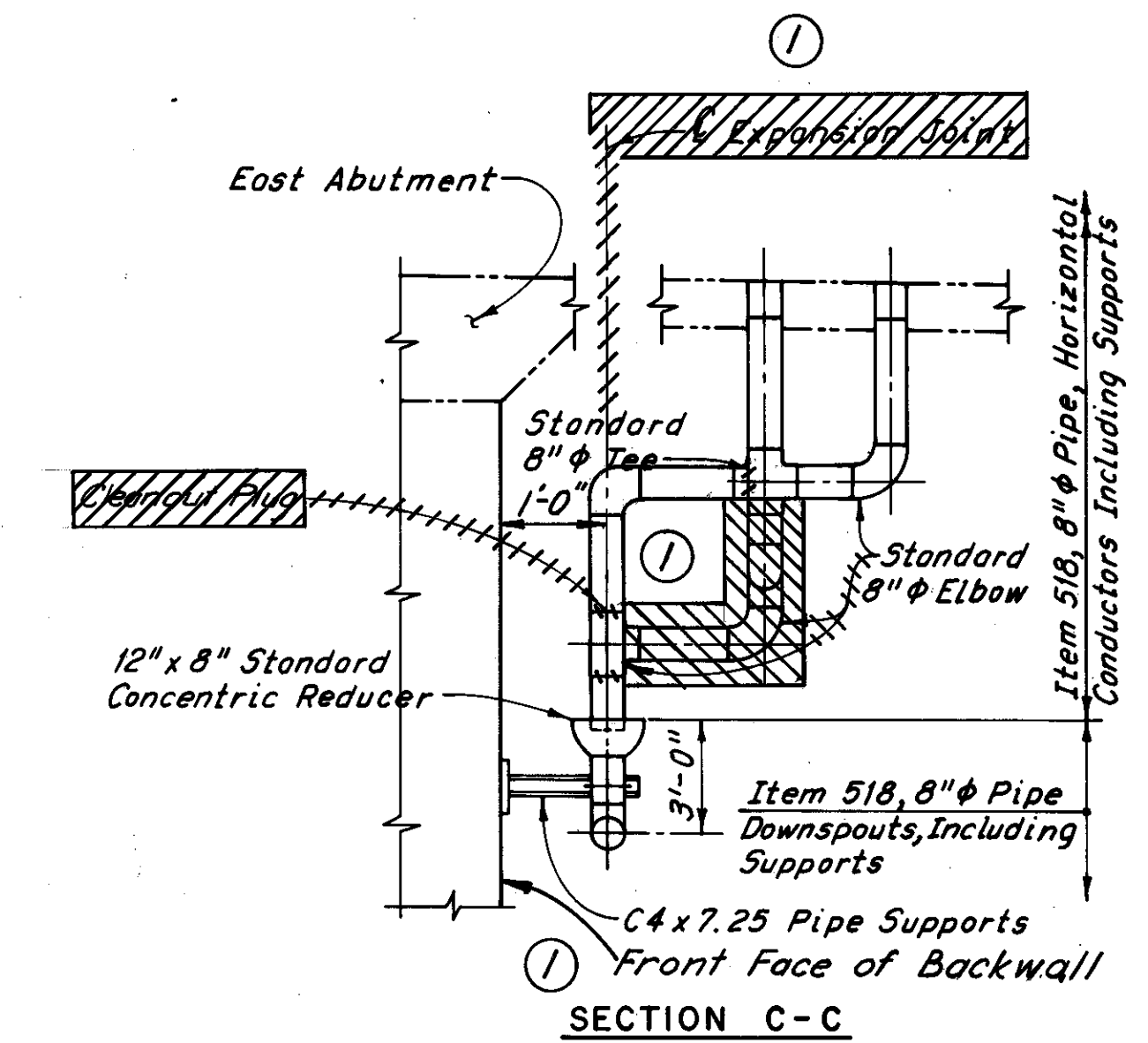
PART PLAN AT EAST ABUTMENT



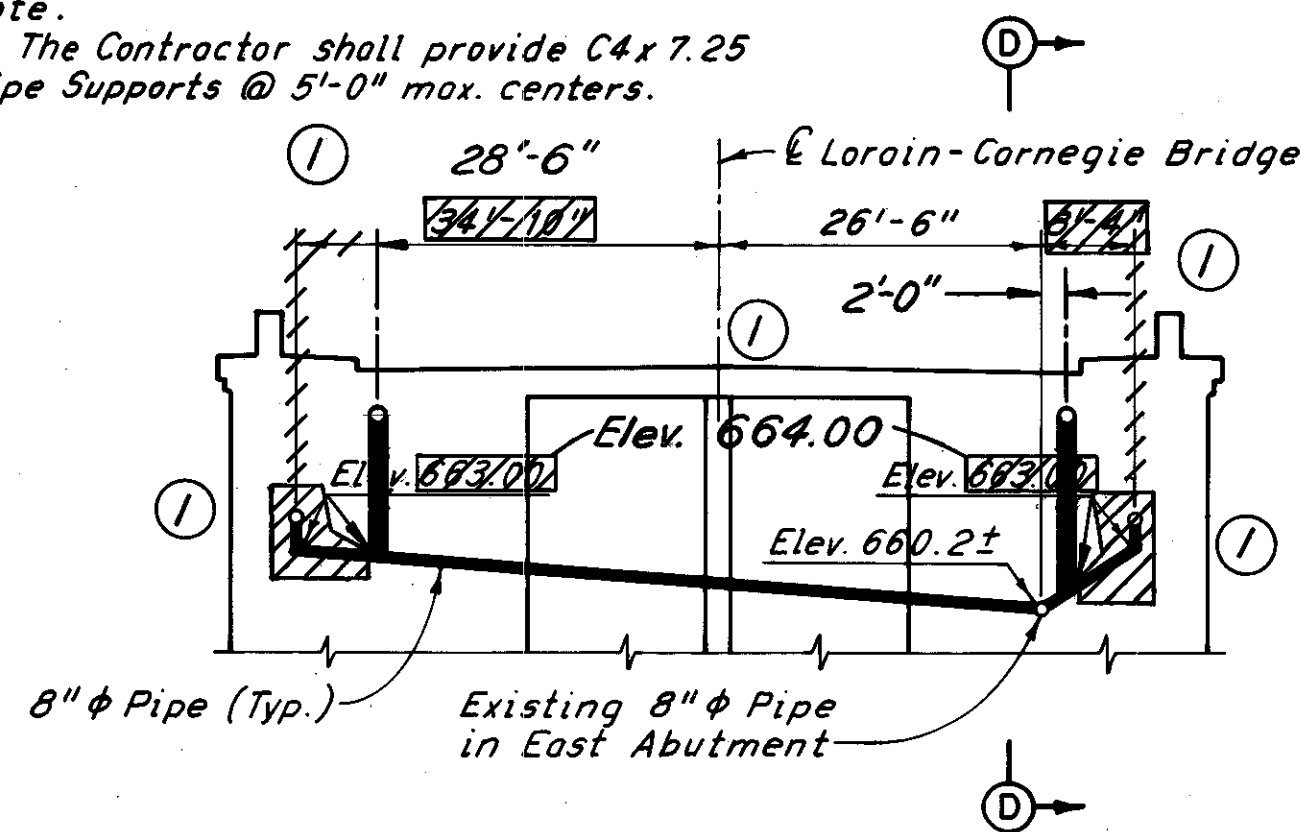
PART EXTERIOR TRUSS ELEVATION  
AT EAST ABUTMENT  
(North Exterior Truss, looking North shown, South Exterior Truss similar)



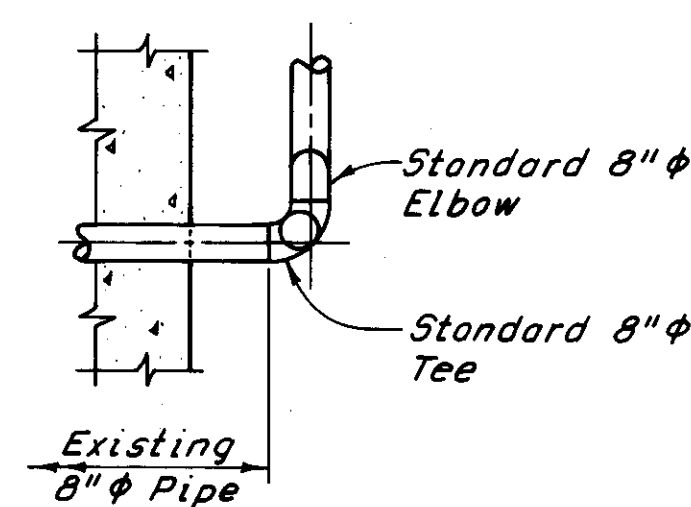
SECTION A-A



Note:  
The Contractor shall provide C4x7.25  
Pipe Supports @ 5'-0" max. centers.



PART SECTION B-B



PART SECTION D-D

Notes:  
Pipe elevations are given at the centerline of pipes.  
Truss elevations are given at the bottom of floorbeams.  
For details of pipe support and attachment to the East Abutment, see "Pipe Support Detail on Piers", Sheet 71/72.  
For details of curb plate splice, see Sheet CD1.  
Before the proposed bridge drainage is connected to the existing sewer system, the existing system shall be inspected and cleaned as shown in the plans. For details see Roadway Plans.  
All drain pipes shall be sloped a minimum of 1/8" per foot.  
For additional notes, see Sheet 65/72.

① Revised 12-17-80

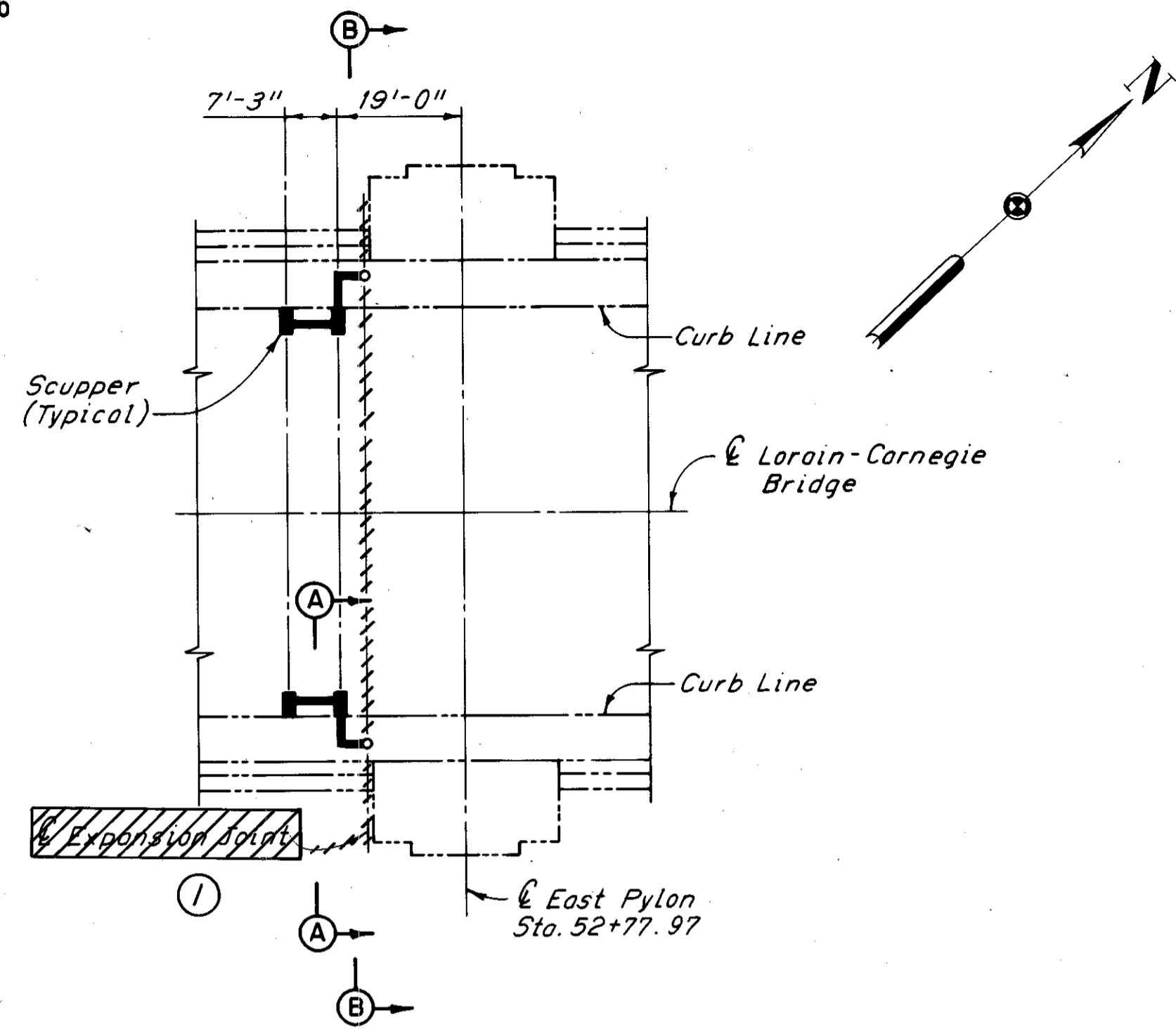
H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

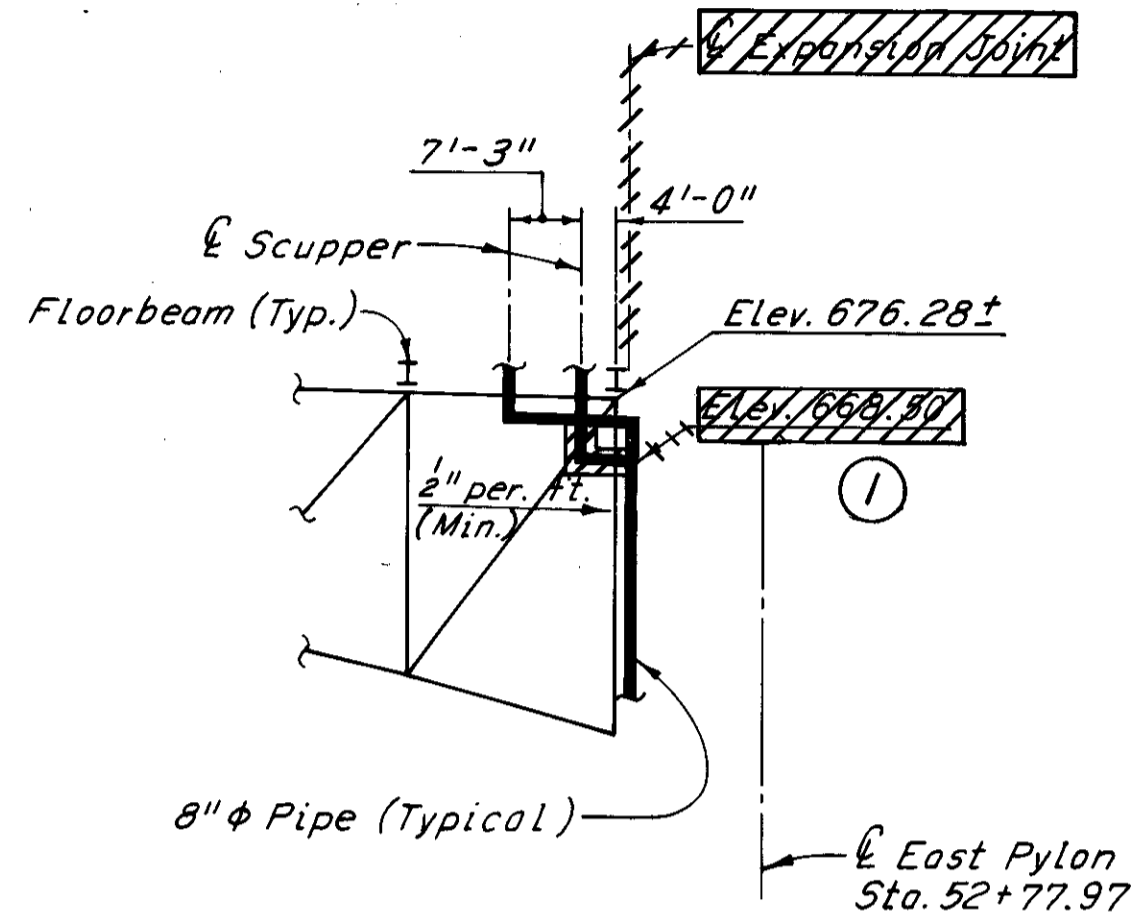
HNTB

DRAINAGE DETAILS AT  
EAST ABUTMENT  
REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO  
STA. 55+04.56

DRAWN: CAB	TRACED: L.R.	CHECKED: W.E.B.	REVIEWED:	REVISED:
DATE: 2-23-78	DATE: 7-12-78	DATE: 8-14-78	DATE:	SHEET 66/72

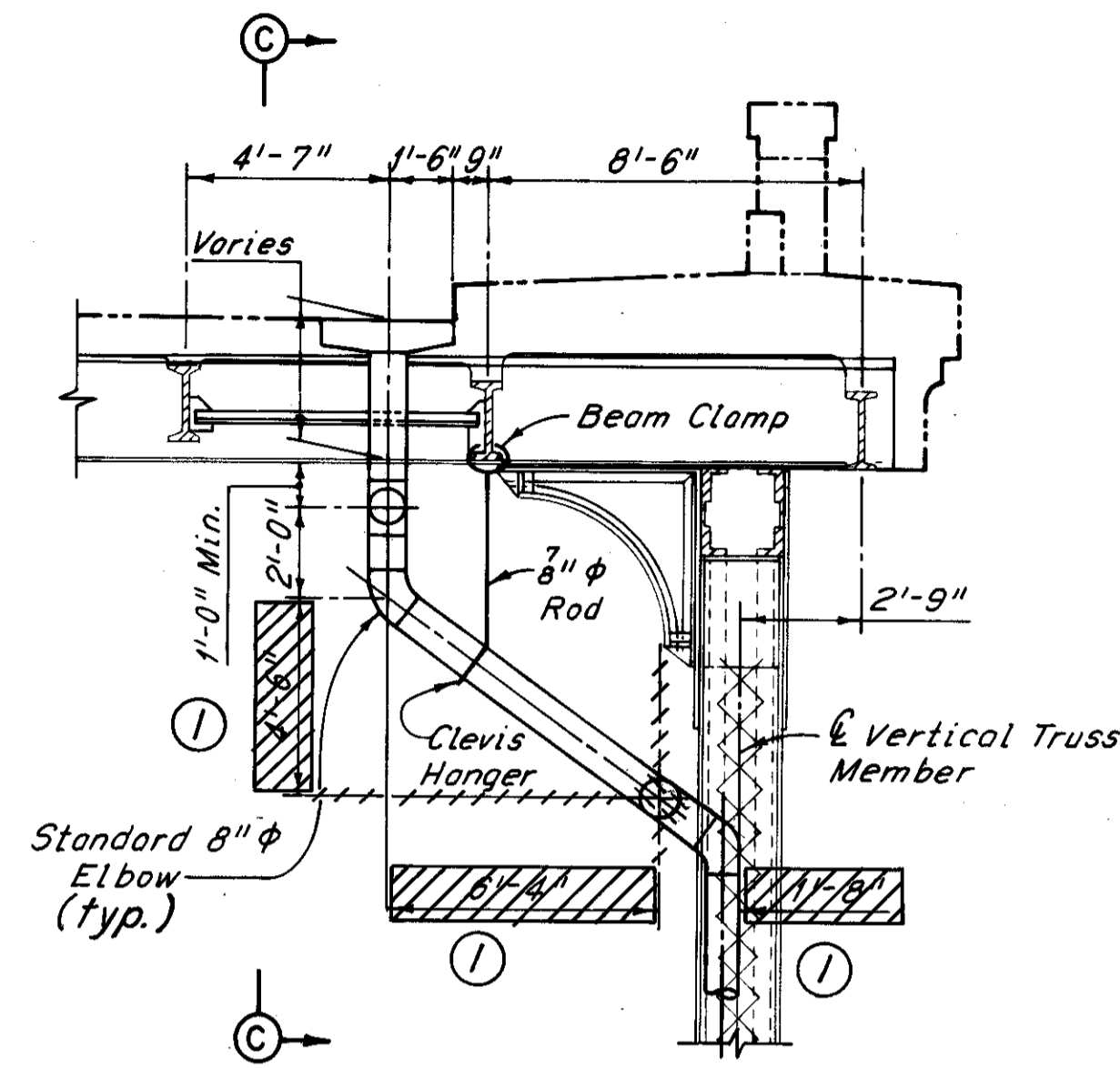


PART PLAN AT EAST PYLON

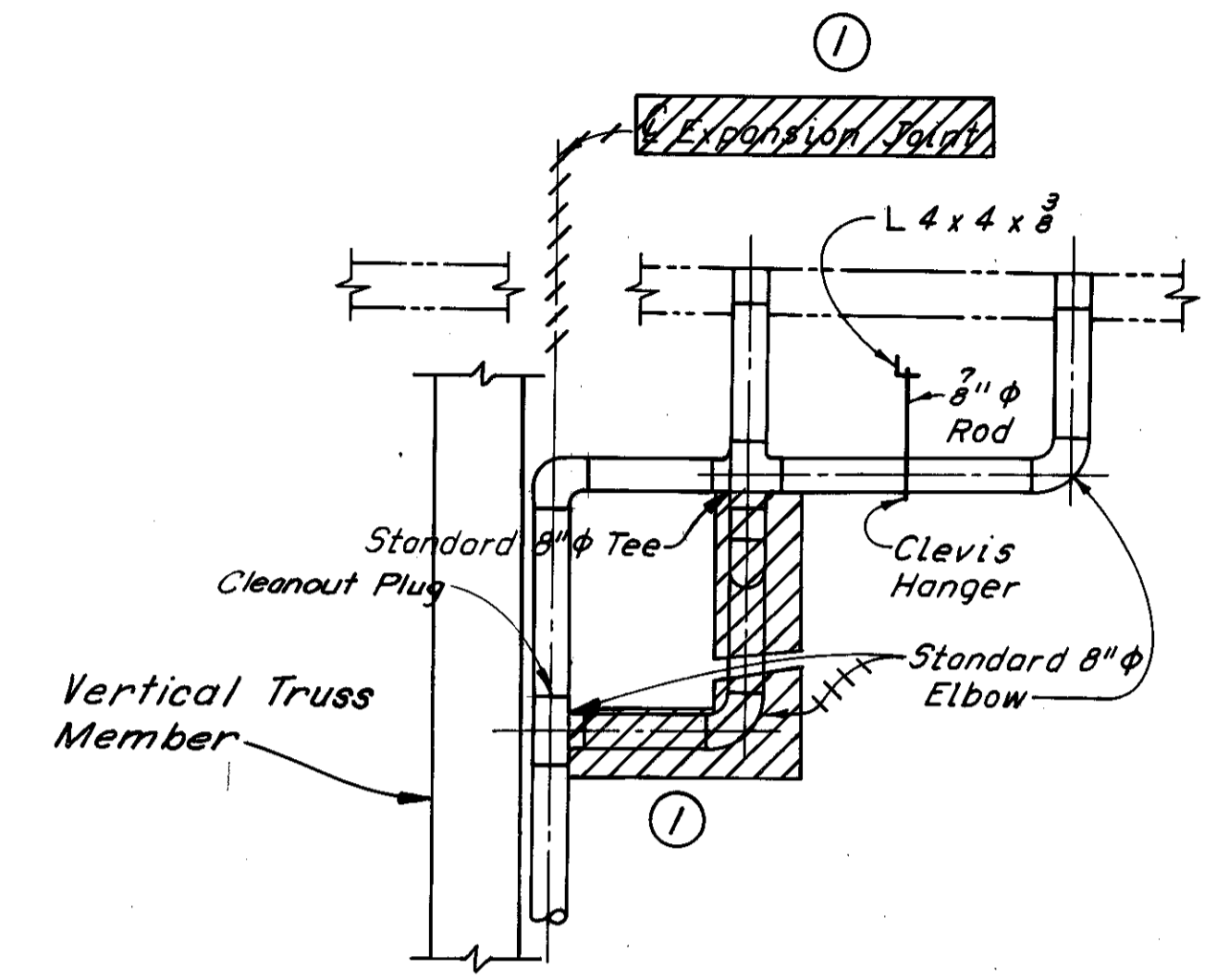


PART EXTERIOR TRUSS ELEVATION  
AT EAST PYLON

(North Exterior Truss, looking North shown, South Exterior Truss similar)

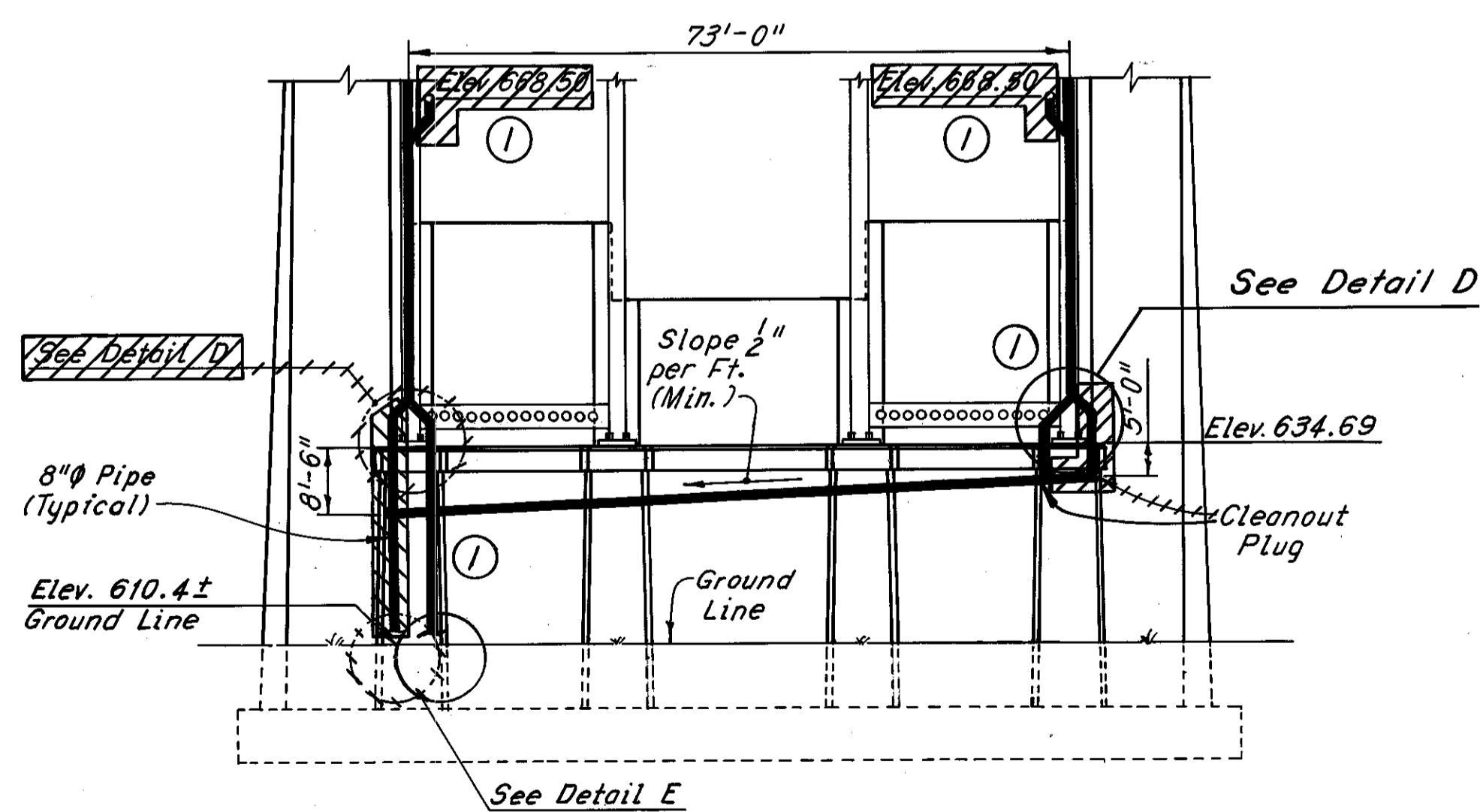


SECTION A-A

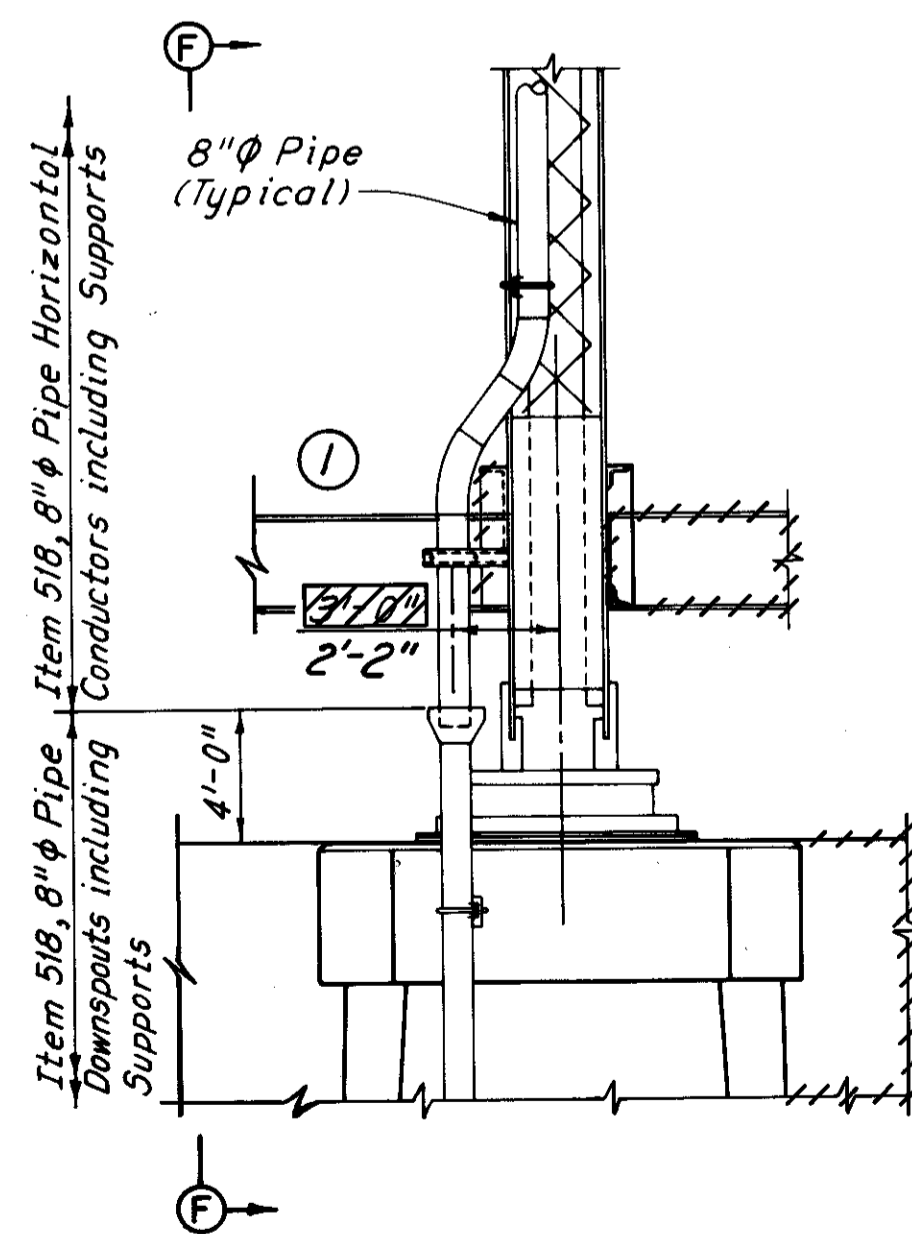


SECTION C-C

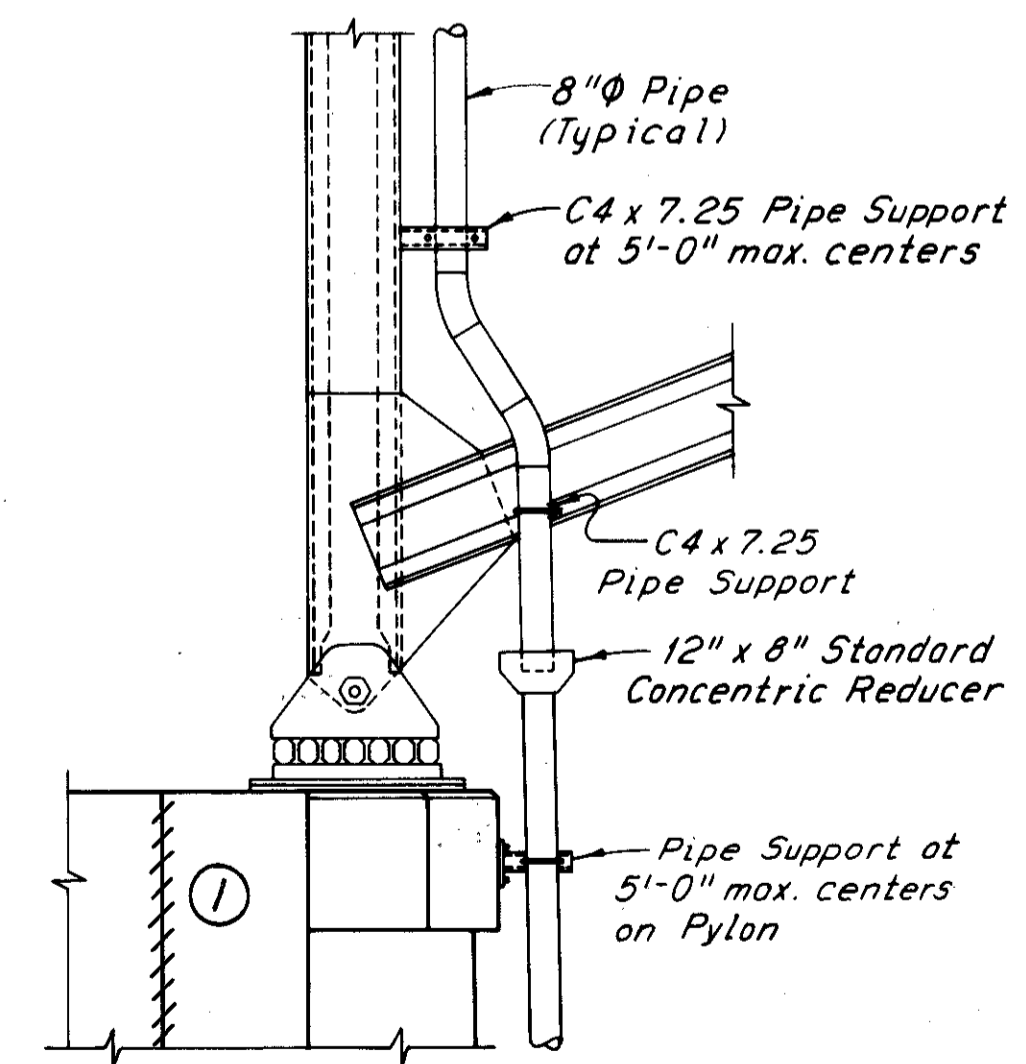
Note:  
The Contractor shall provide C4 x 7.25 Pipe Supports @ 5'-0" max. centers.



PART SECTION B-B



DETAIL D



VIEW F-F

Notes:  
Pipe elevations are given at the centerline of pipes.  
Truss elevations are given at the bottom of floorbeams.  
For details of pipe support and attachment to the East Pylon, see "Pipe Support Detail on Piers", Sheet 71/72.  
For details of curb plate splice, see Sheet C07.  
Before the proposed bridge drainage is connected to the existing sewer system, the existing system shall be inspected and cleaned as shown in the plans. For details see Roadway Plans.  
All drain pipes shall be sloped a minimum of 2" per foot.  
For Detail E, see Sheet 71/72.  
For additional notes, see Sheet 65/72.

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

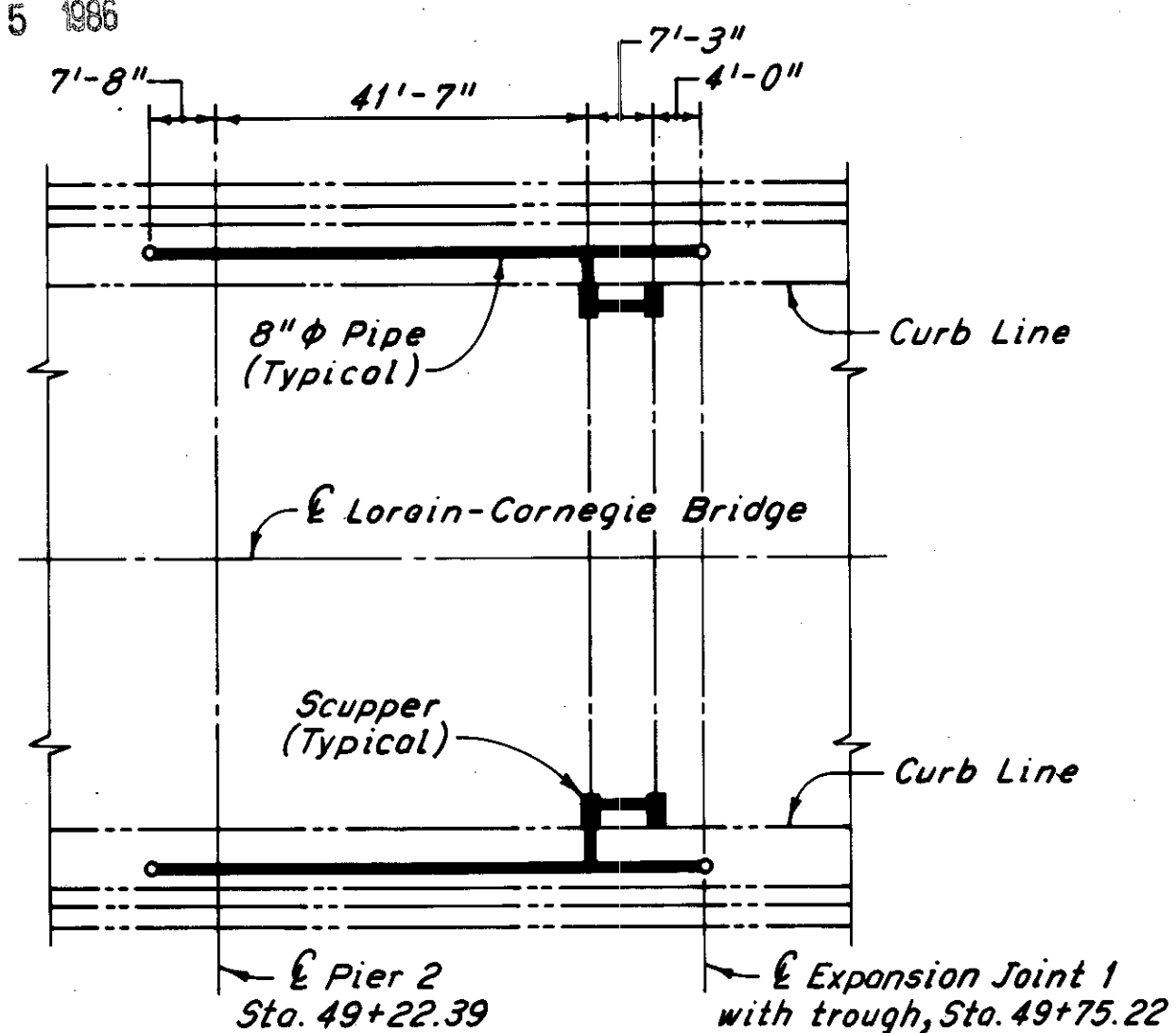
DRAINAGE DETAILS AT EAST PYLON  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
CKB	DLR	W.E.A.		
DATE 6-23-78	DATE 7-12-78	DATE 8-14-78	DATE	DATE

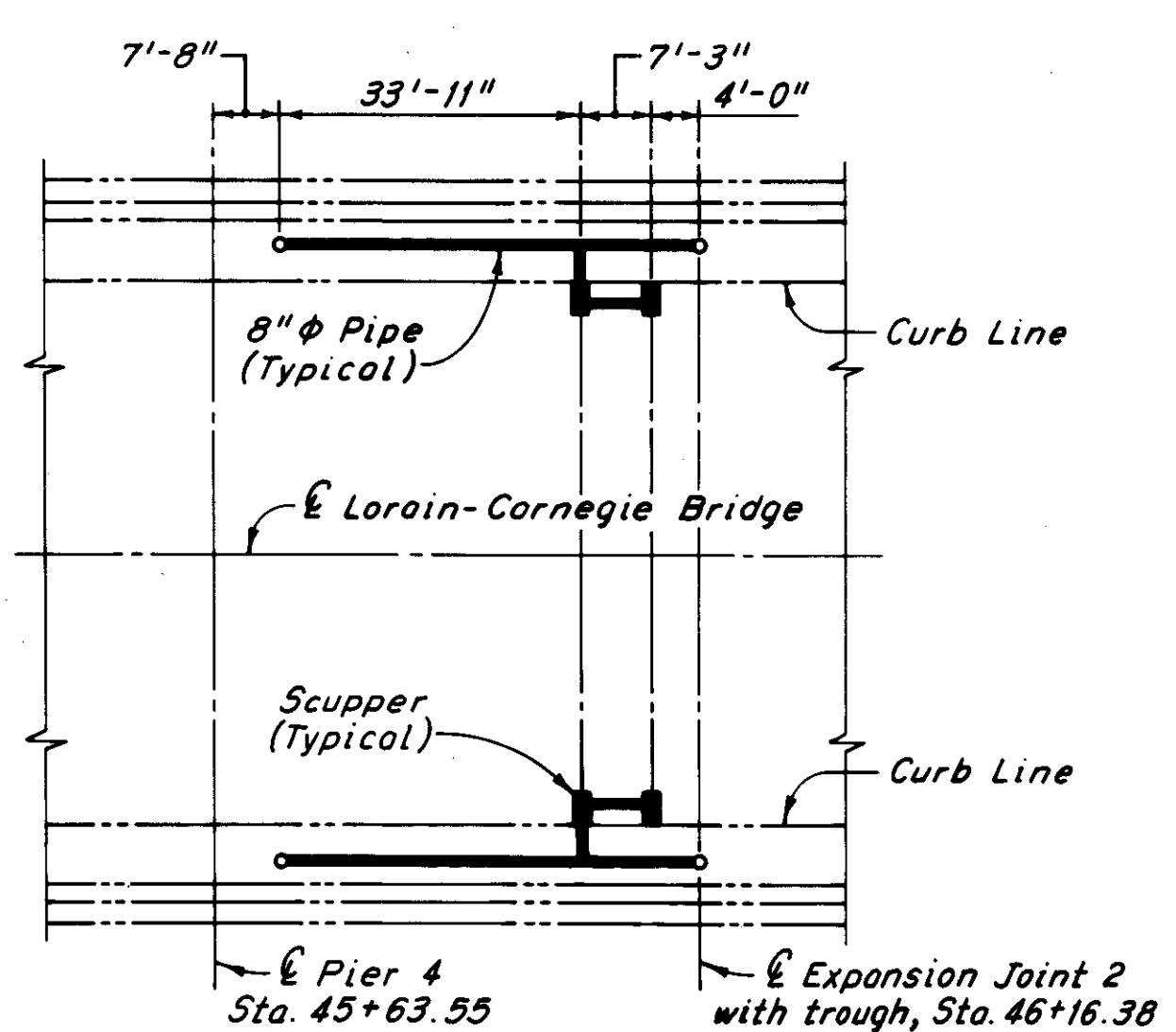
SHEET 67/72

① Revised 12-17-80

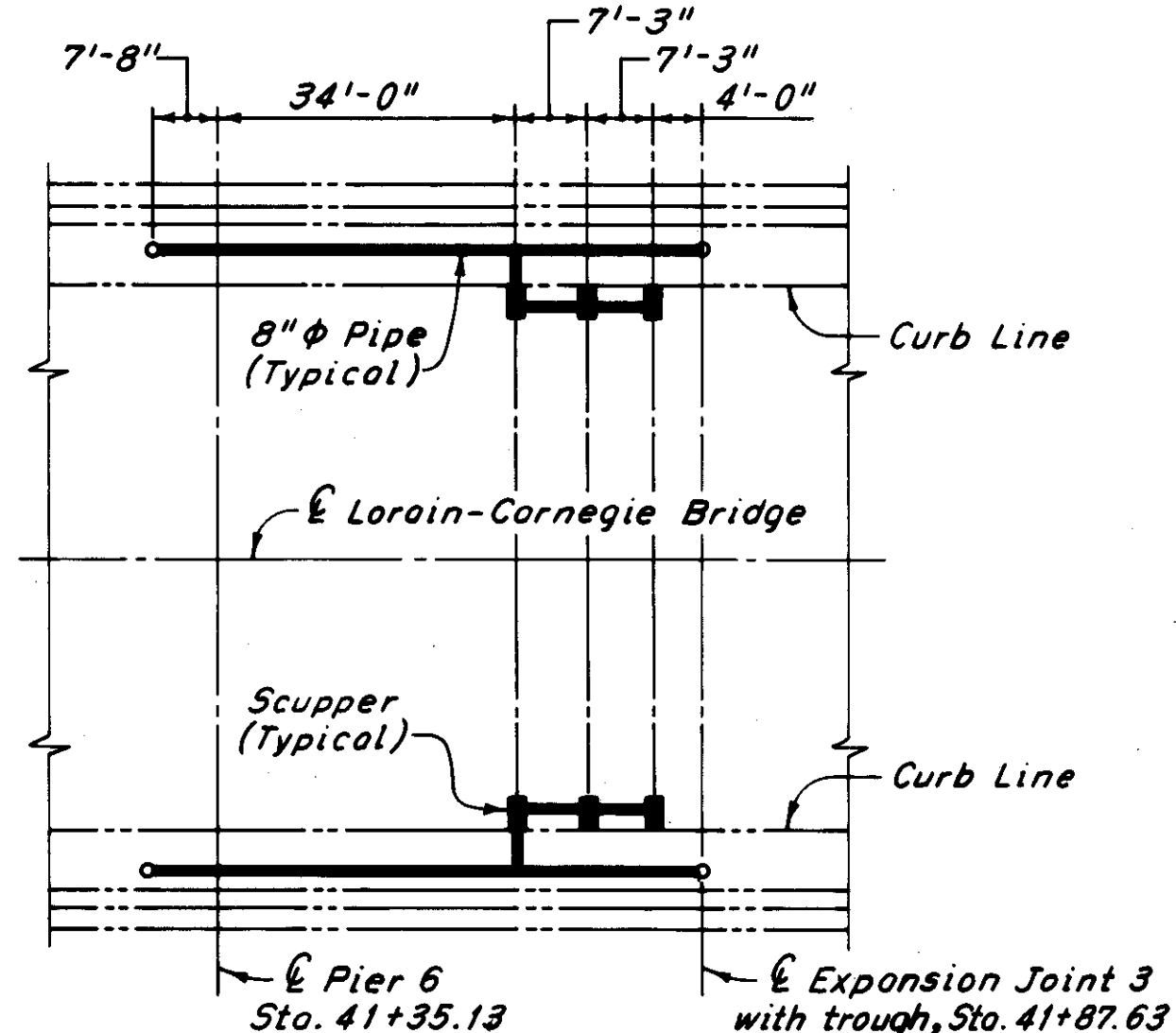




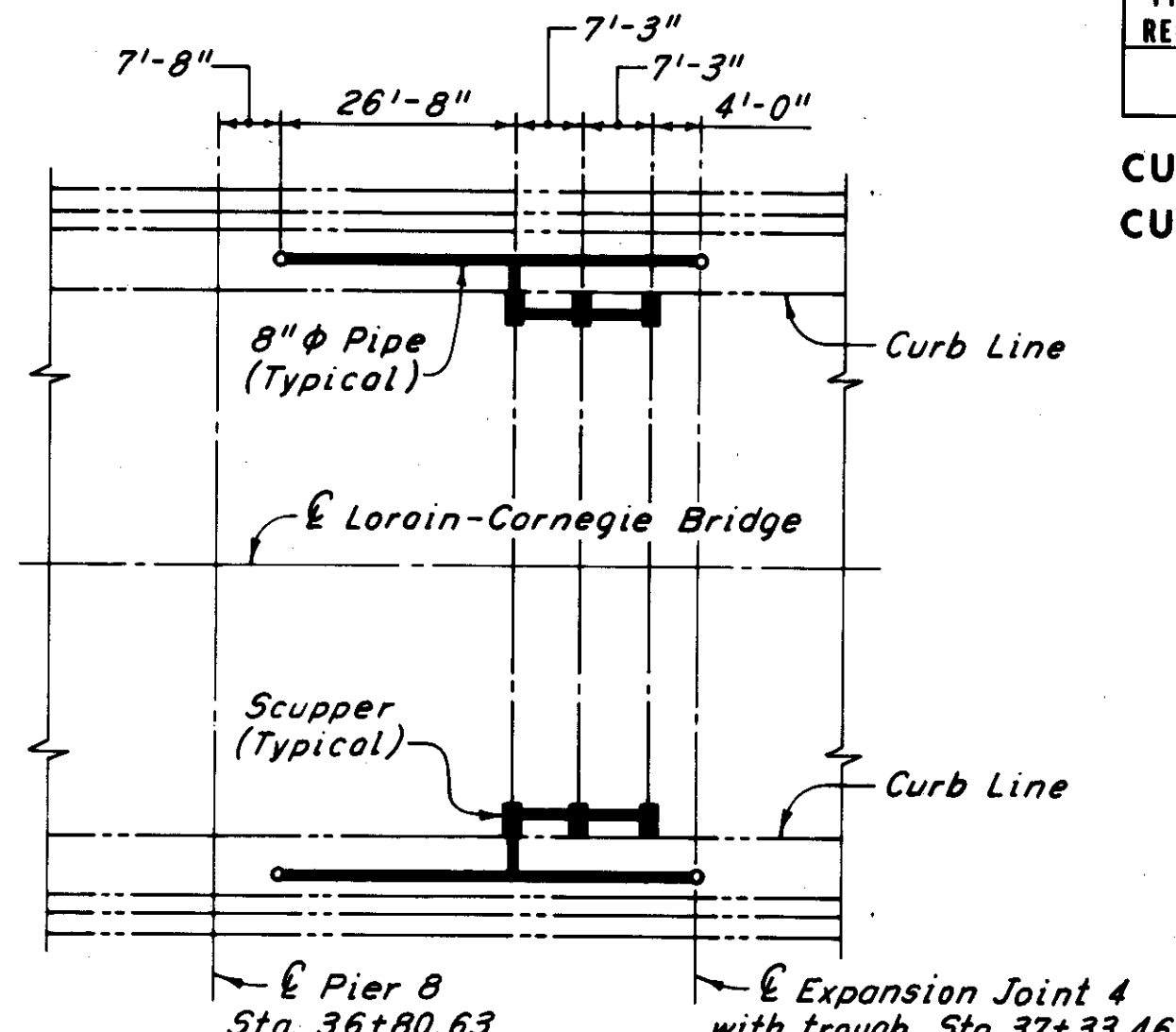
PART PLAN AT PIER 2



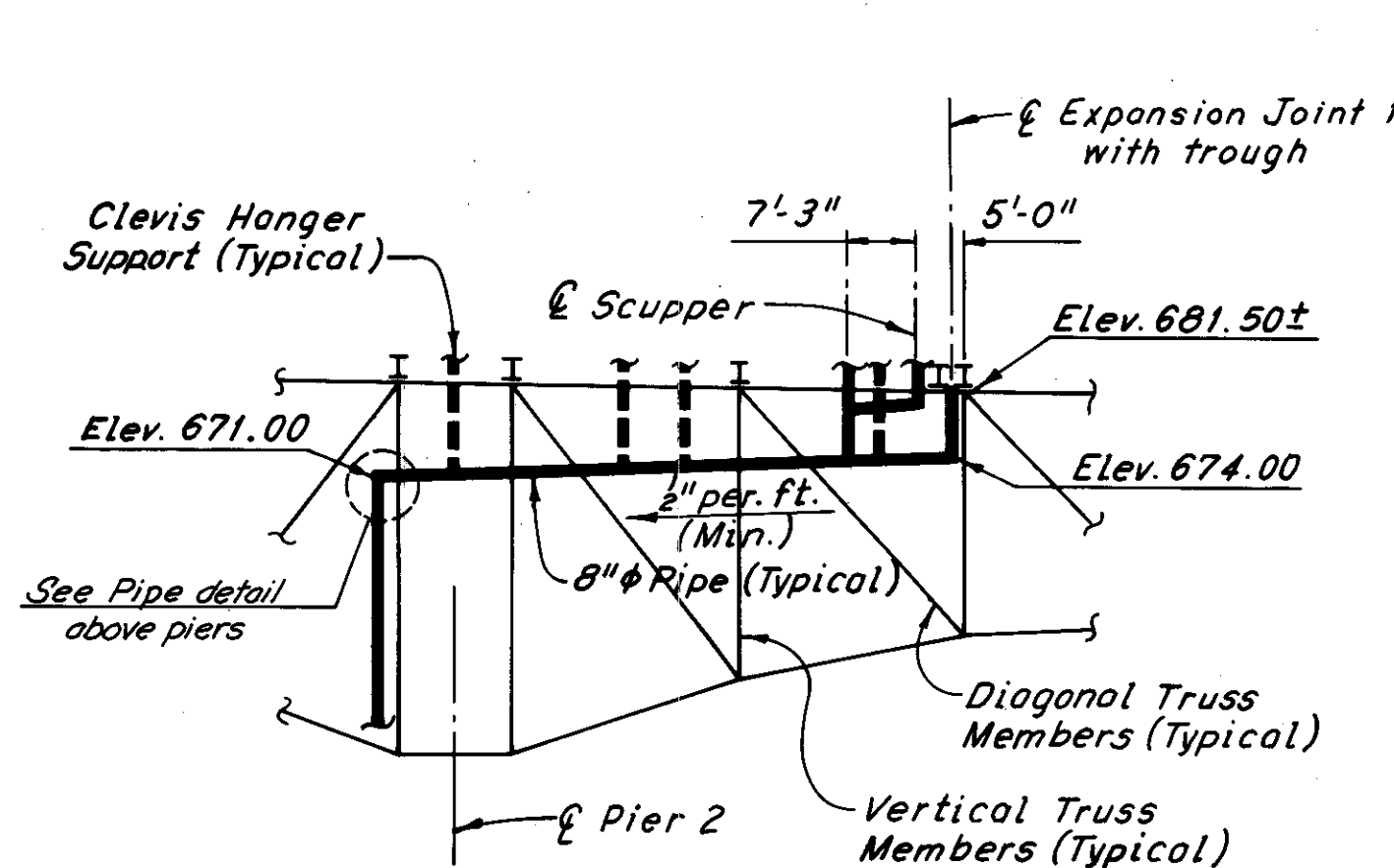
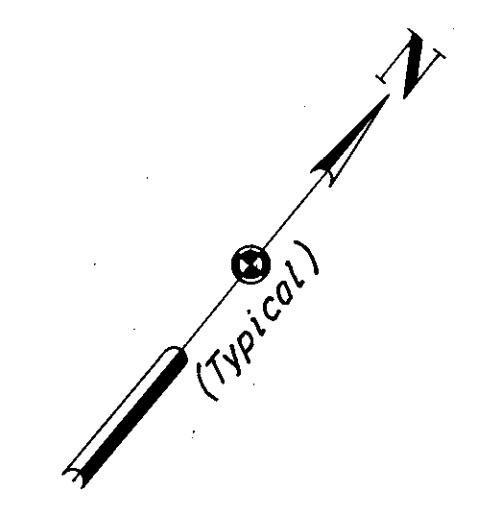
PART PLAN AT PIER 4



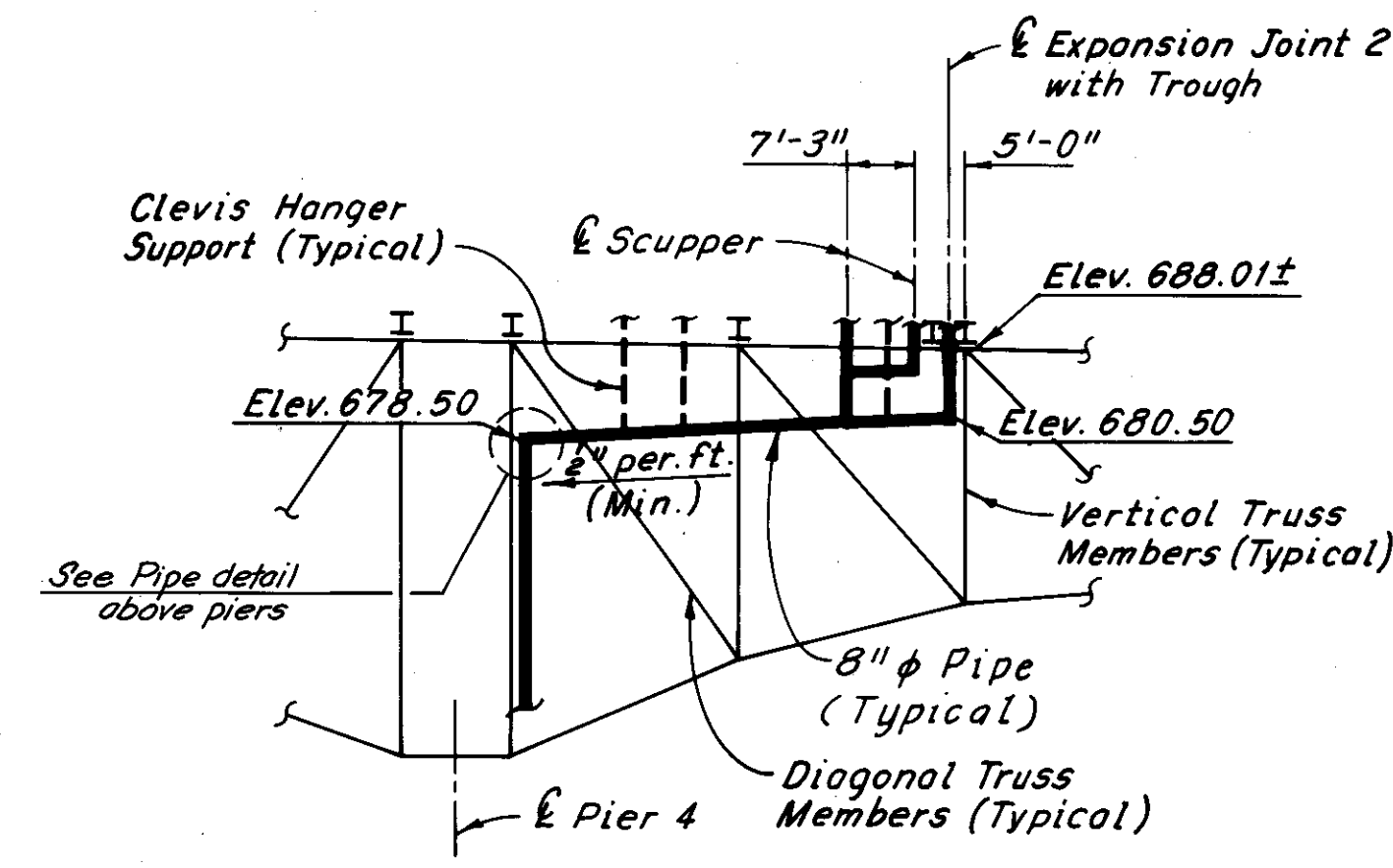
PART PLAN AT PIER 6



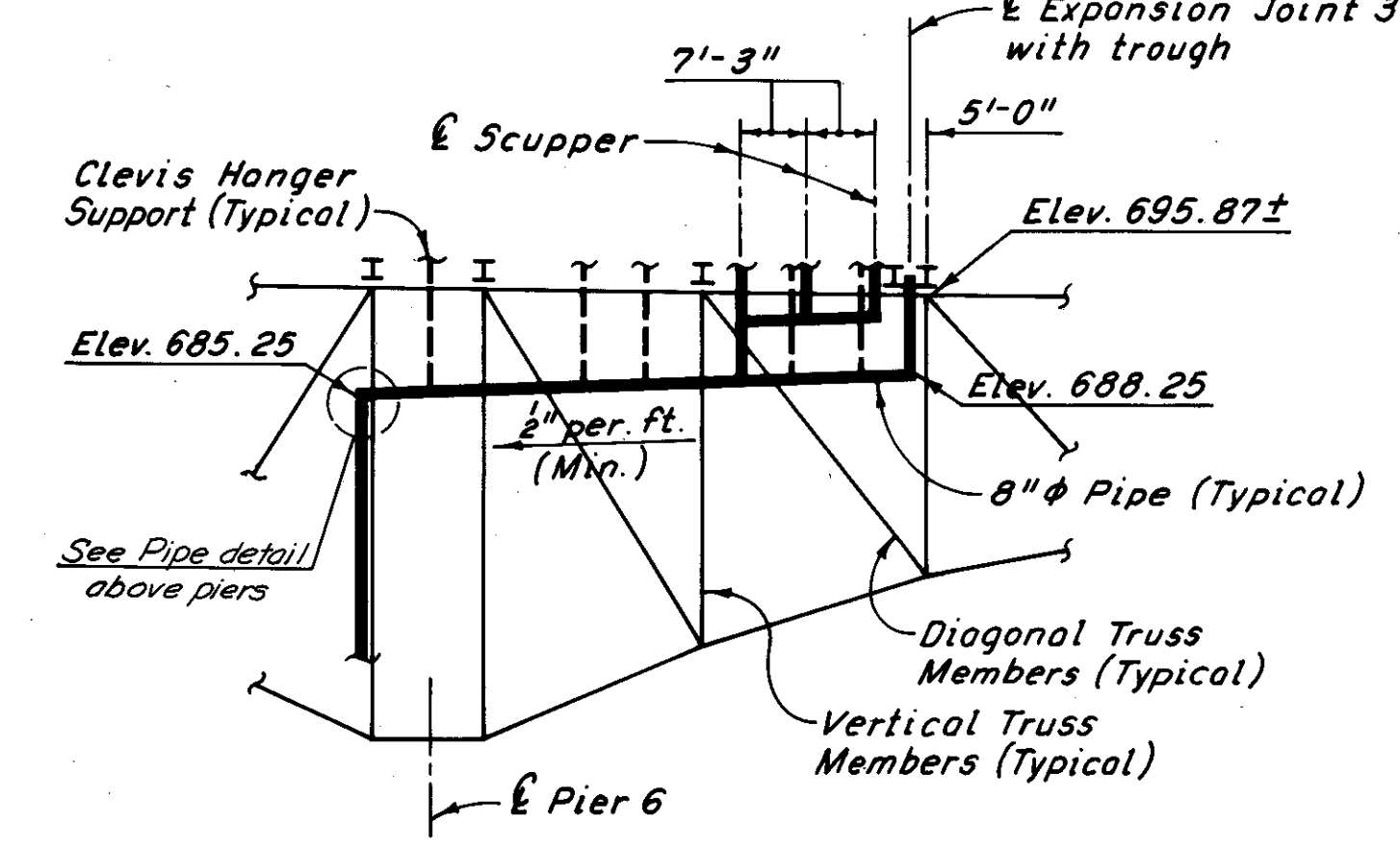
PART PLAN AT PIER 8



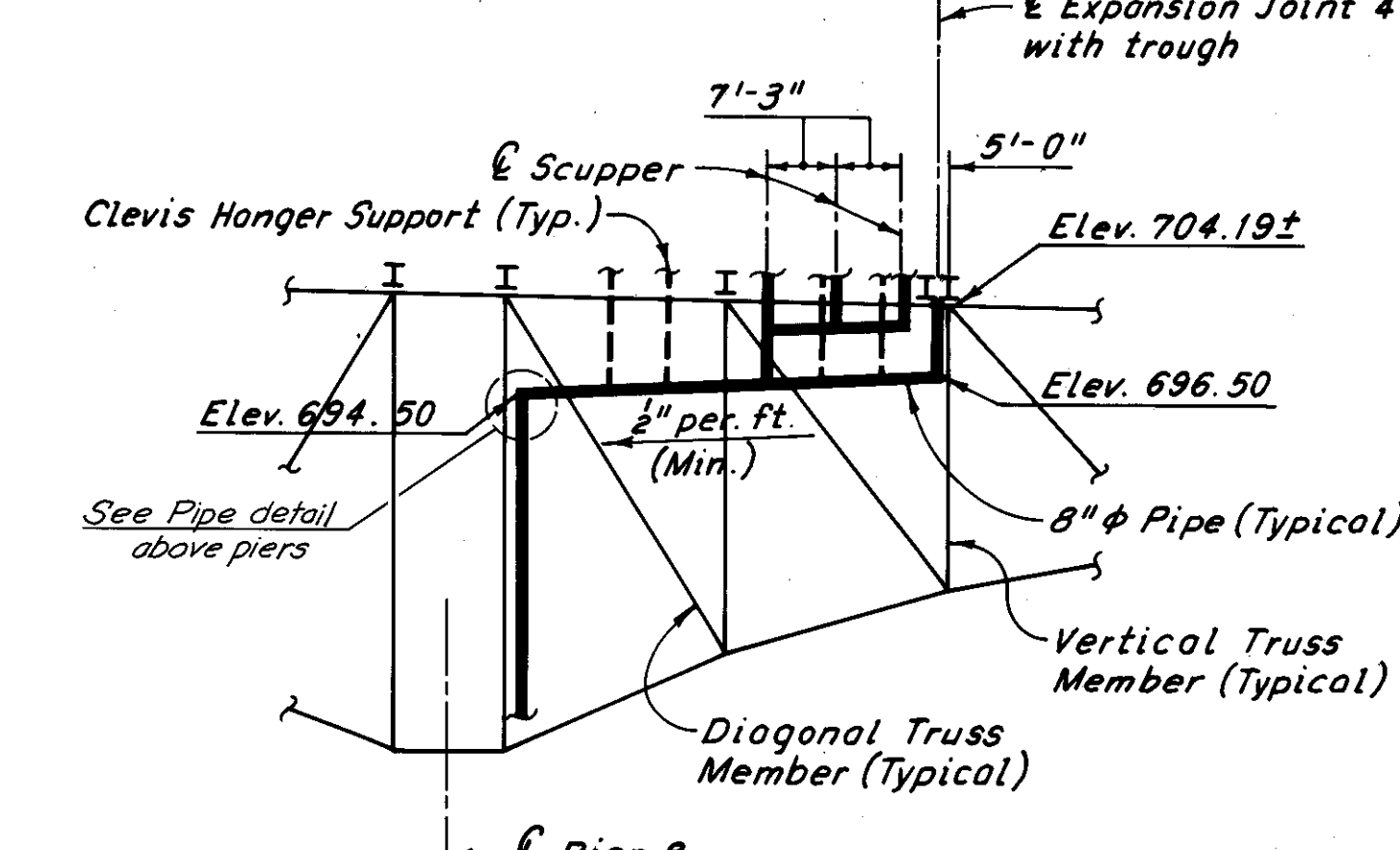
PART EXTERIOR TRUSS ELEVATION AT PIER 2  
(North Exterior Truss, looking North shown, South Exterior Truss similar)



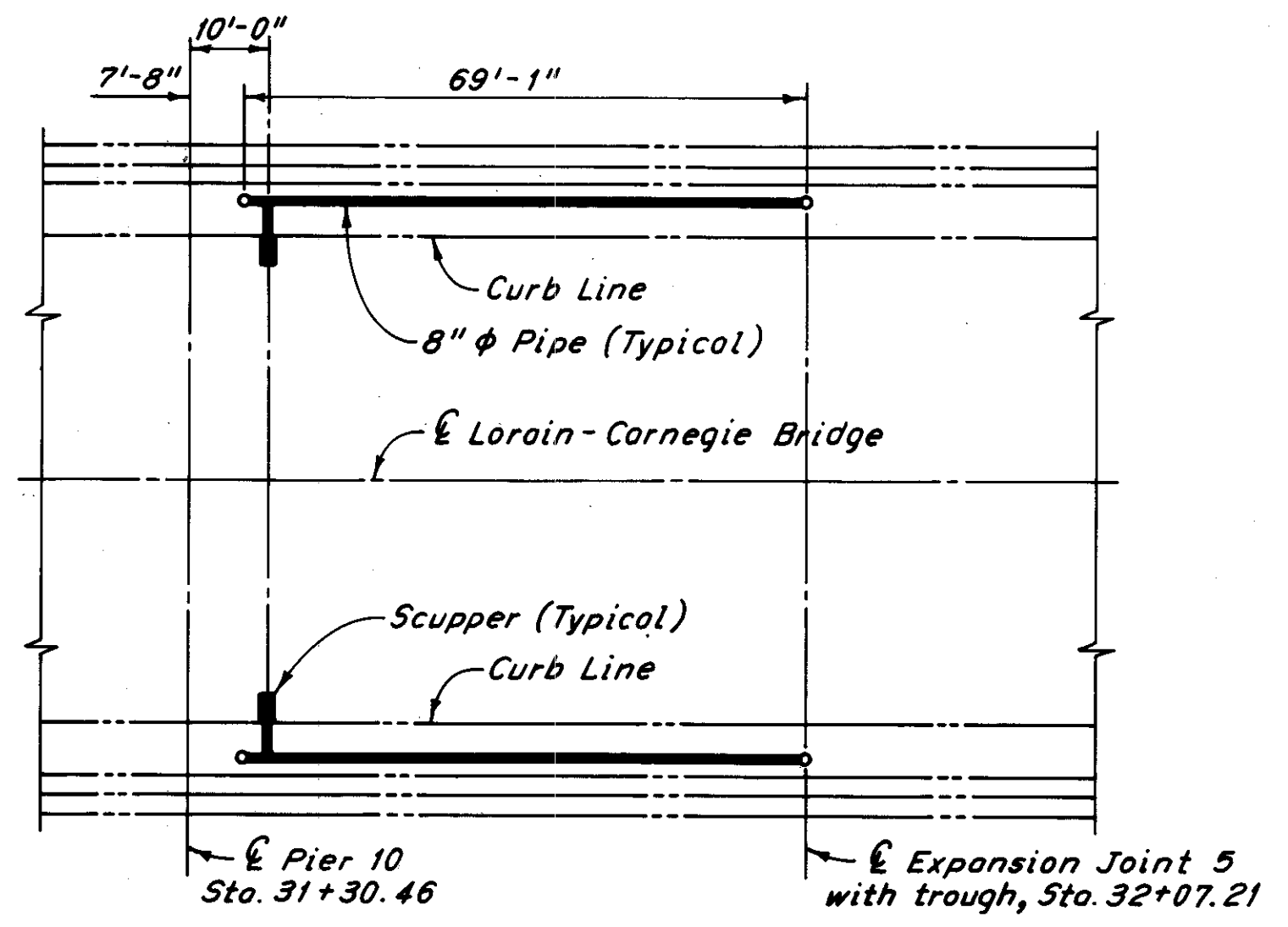
PART EXTERIOR TRUSS ELEVATION AT PIER 4  
(North Exterior Truss, looking North shown, South Exterior Truss similar)



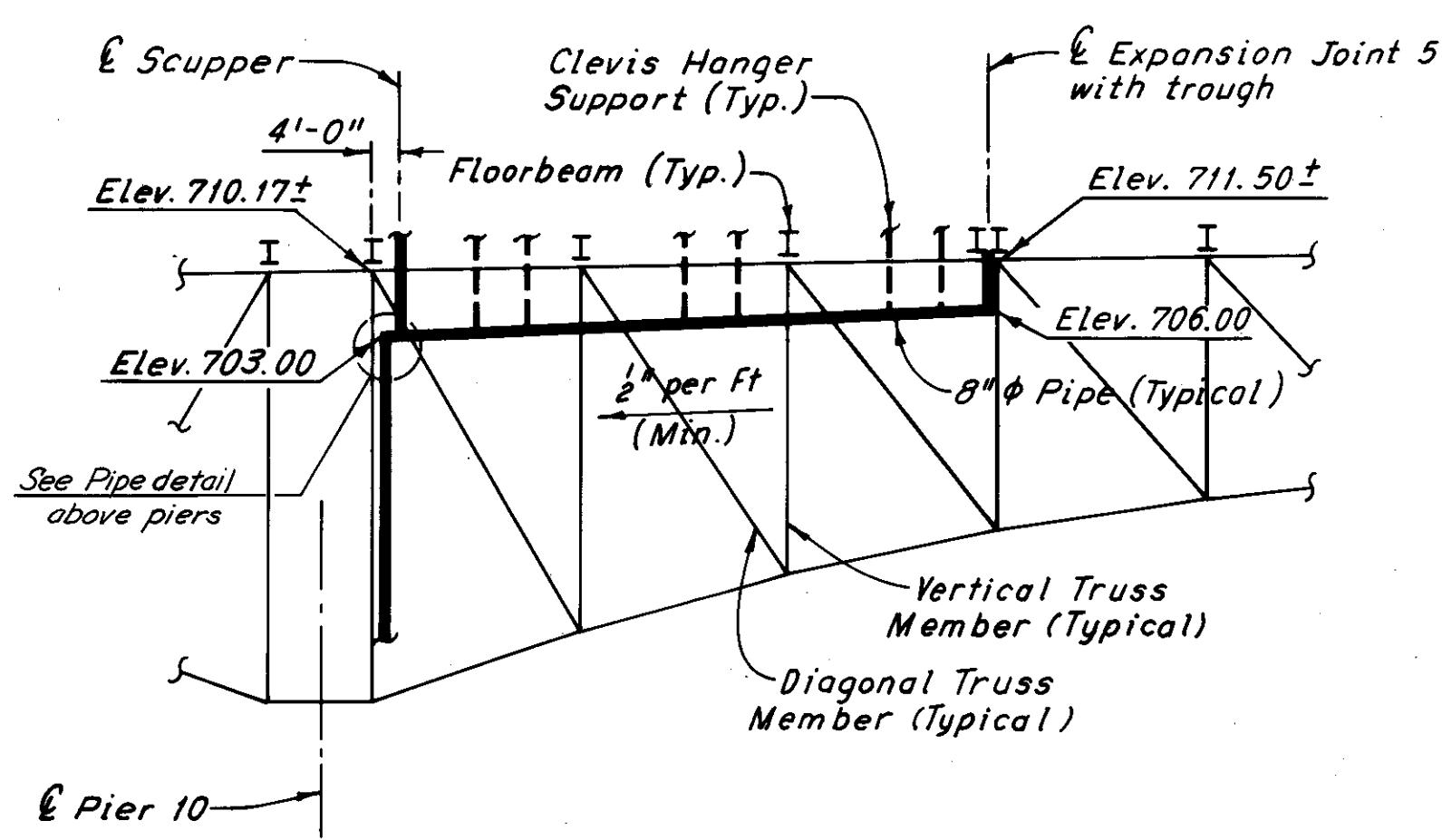
PART EXTERIOR TRUSS ELEVATION AT PIER 6  
(North Exterior Truss, looking North shown, South Exterior Truss similar)



PART EXTERIOR TRUSS ELEVATION AT PIER 8  
(North Exterior Truss, looking North shown, South Exterior Truss similar)



PART PLAN AT PIER 10



PART EXTERIOR TRUSS ELEVATION AT PIER 10  
(North Exterior Truss, looking North shown, South Exterior Truss similar)

Notes:

- Pipe elevations are given at the centerline of pipes.
- Truss elevations are given at the bottom of floorbeams.
- For details of scuppers, see Sheet 65/72.
- For details of pipes at scuppers, see Sheet 65/72.
- For details of pipe supports at truss members, and between truss members, see Sheet 70/72.
- For details of trough at expansion joints, see Sheet 46/72.
- For details of pipe above piers, see Sheet 70/72.
- For details of drainage attached to the piers, see Sheet 71/72.
- For additional notes, see Sheet 65/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

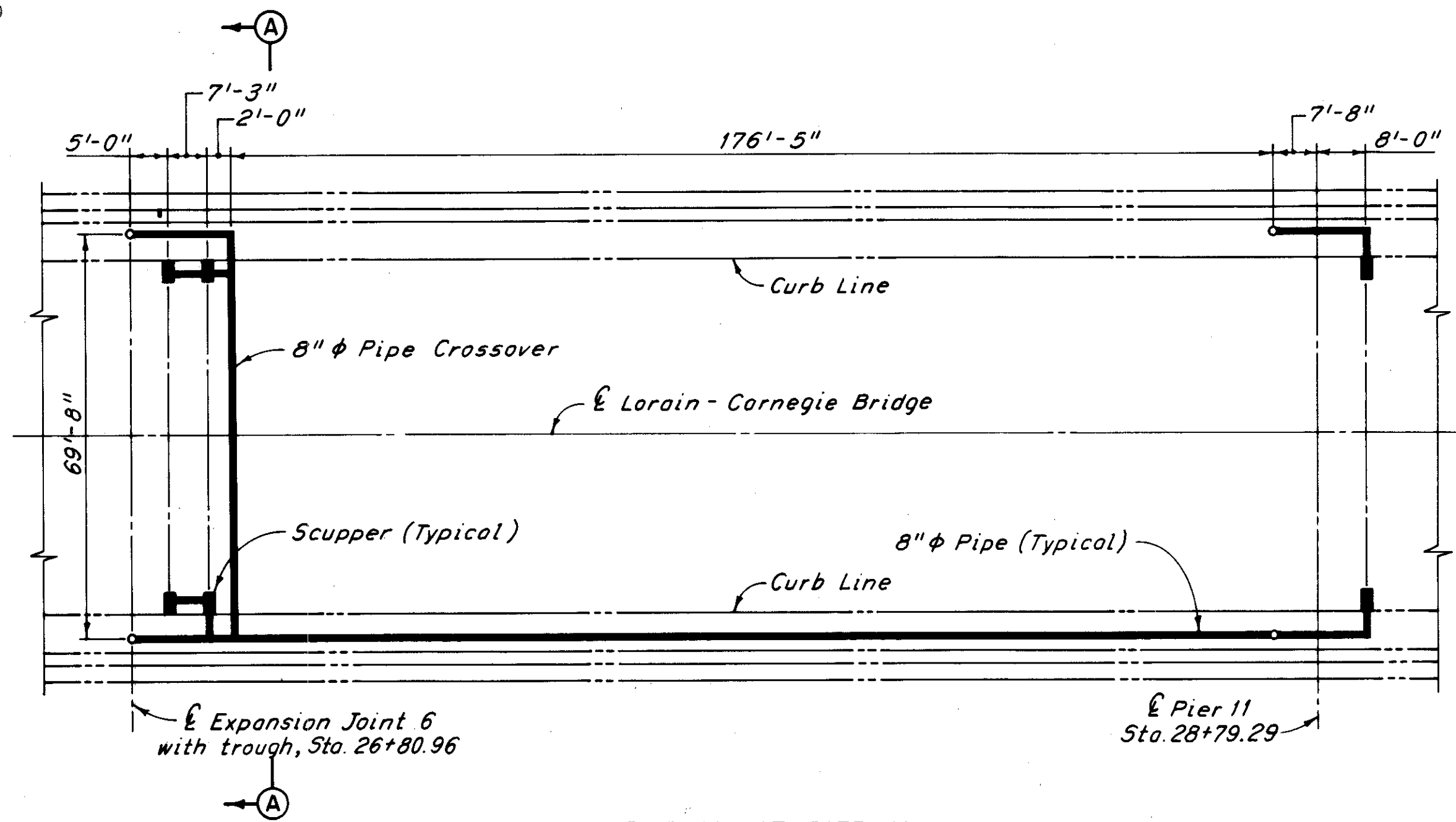
**DRAINAGE DETAILS AT PIERS**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
STA. 55+04.56

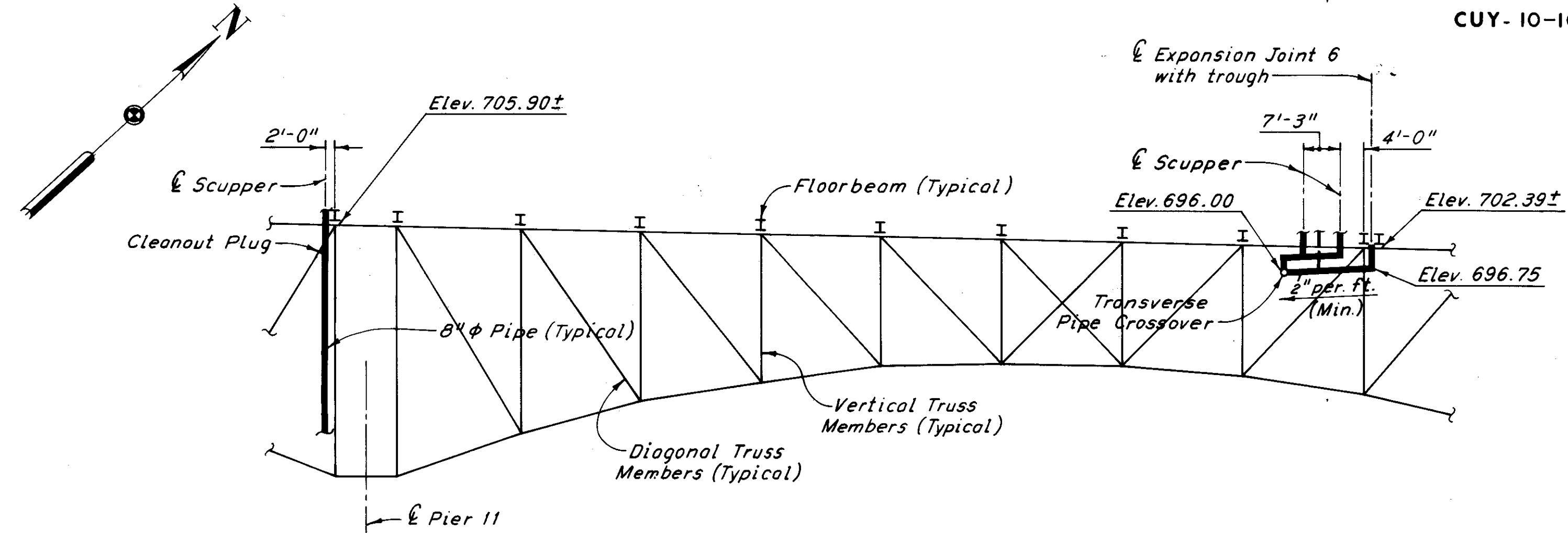
CUYAHOGA COUNTY OHIO

DRAWN: KCB	TRACED: JLR	CHECKED: W.E.B.	REVIEWED:	REVISED:
DATE: 6-21-78	DATE: 7-11-78	DATE: 8-14-78	DATE:	DATE:

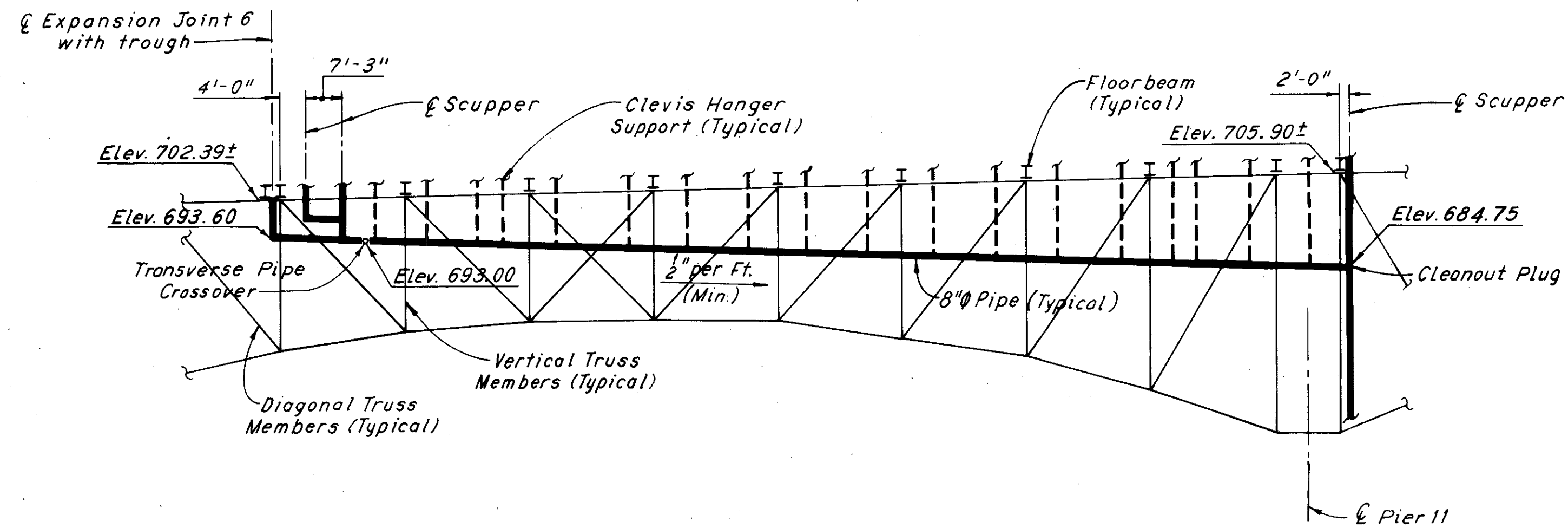
SHEET 68/72



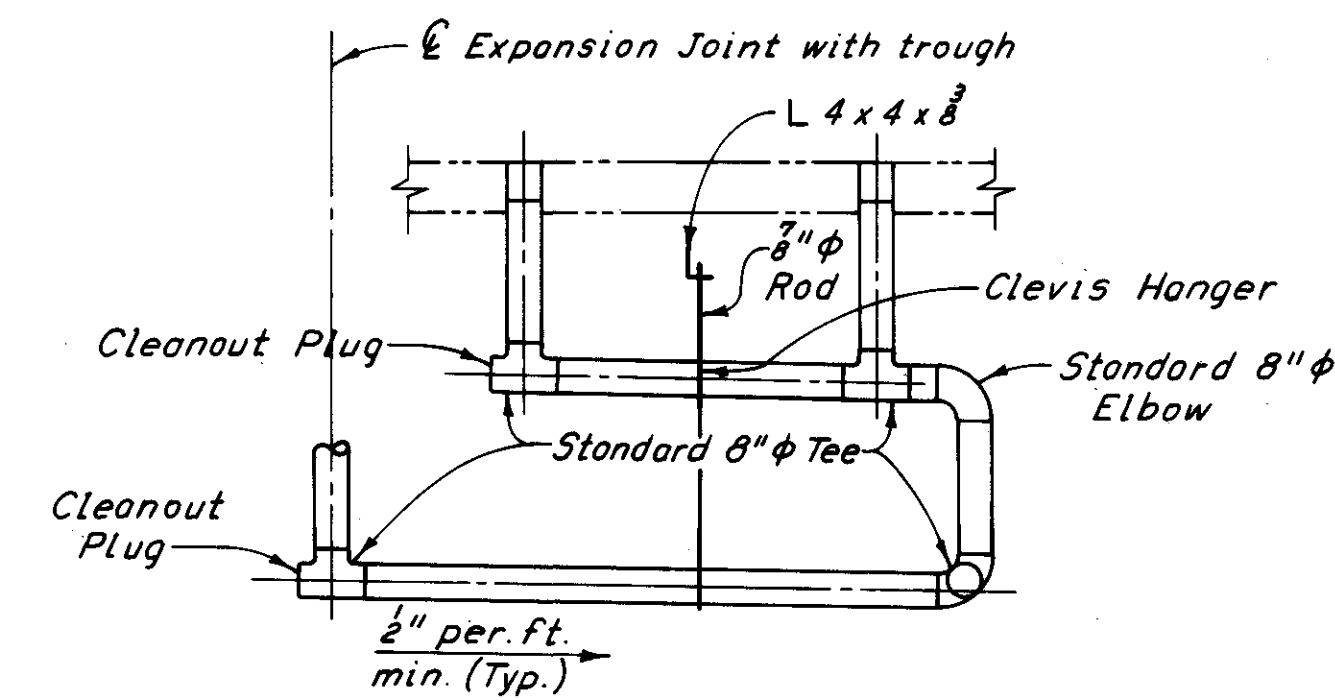
PART PLAN AT PIER II



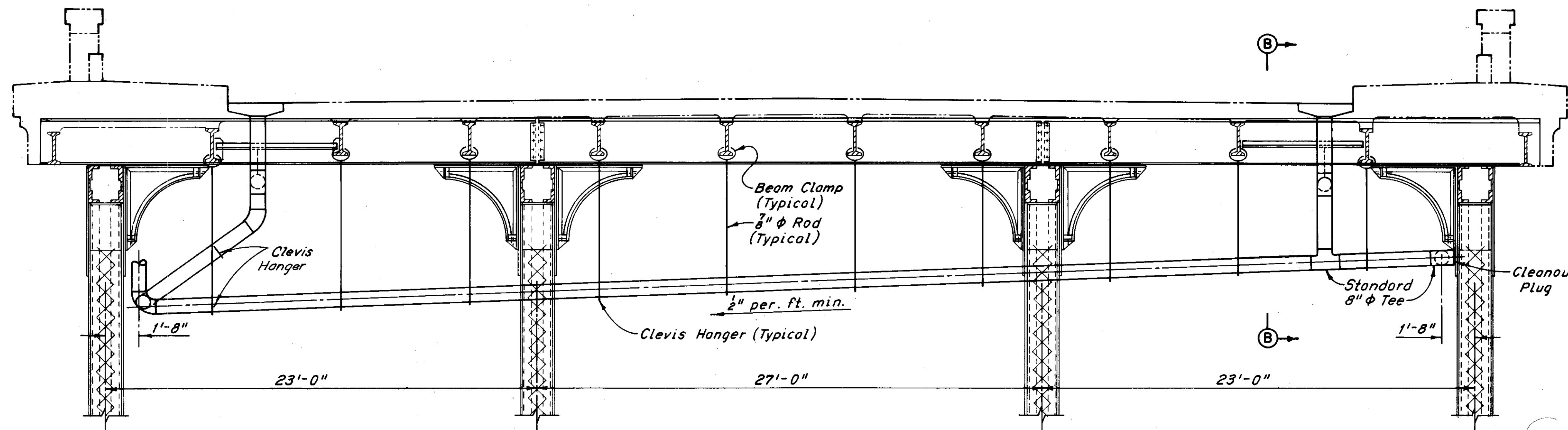
PART NORTH EXTERIOR TRUSS ELEVATION AT PIER II  
(Looking South)



PART SOUTH EXTERIOR TRUSS ELEVATION AT PIER II  
(Looking North)



SECTION B-B



SECTION A-A

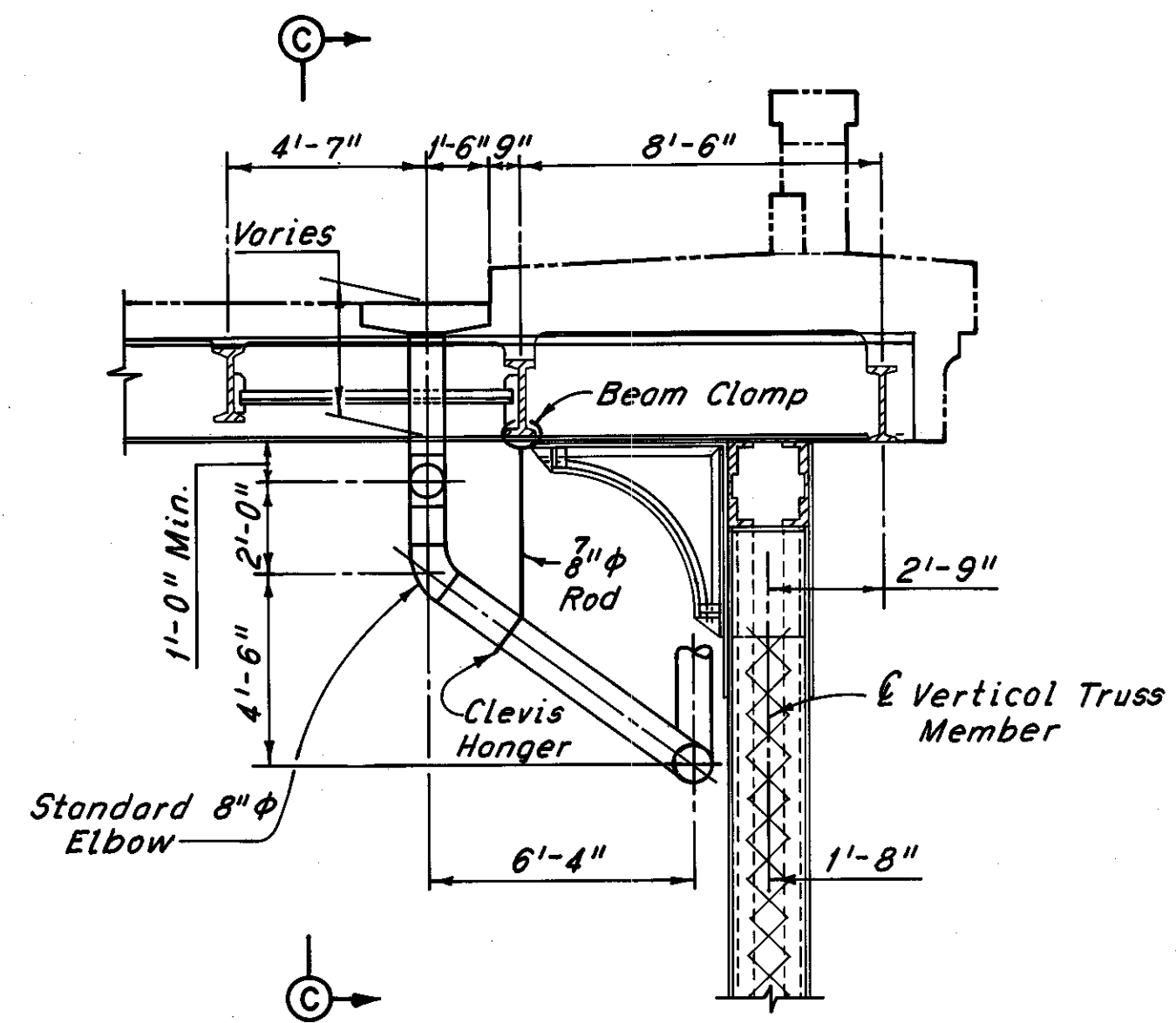
Notes:  
 Pipe elevations are given at the centerline of pipes.  
 Truss elevations are given at the bottom of floorbeams.  
 For details of scuppers, see Sheet 65/72.  
 For details of pipes at scuppers, see Sheet 65/72.  
 For details of pipe supports at truss members, and between truss members, see Sheet 70/72.  
 For details of trough at expansion joints, see Sheet 46/72.  
 For additional details of pipe above piers, see Sheet 70/72.  
 For details of drainage attached to the piers, see Sheet 71/72.  
 For additional notes, see Sheet 65/72.

H.N.T.B. BRIDGE NO. 3  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS CLEVELAND  
**HNTB**

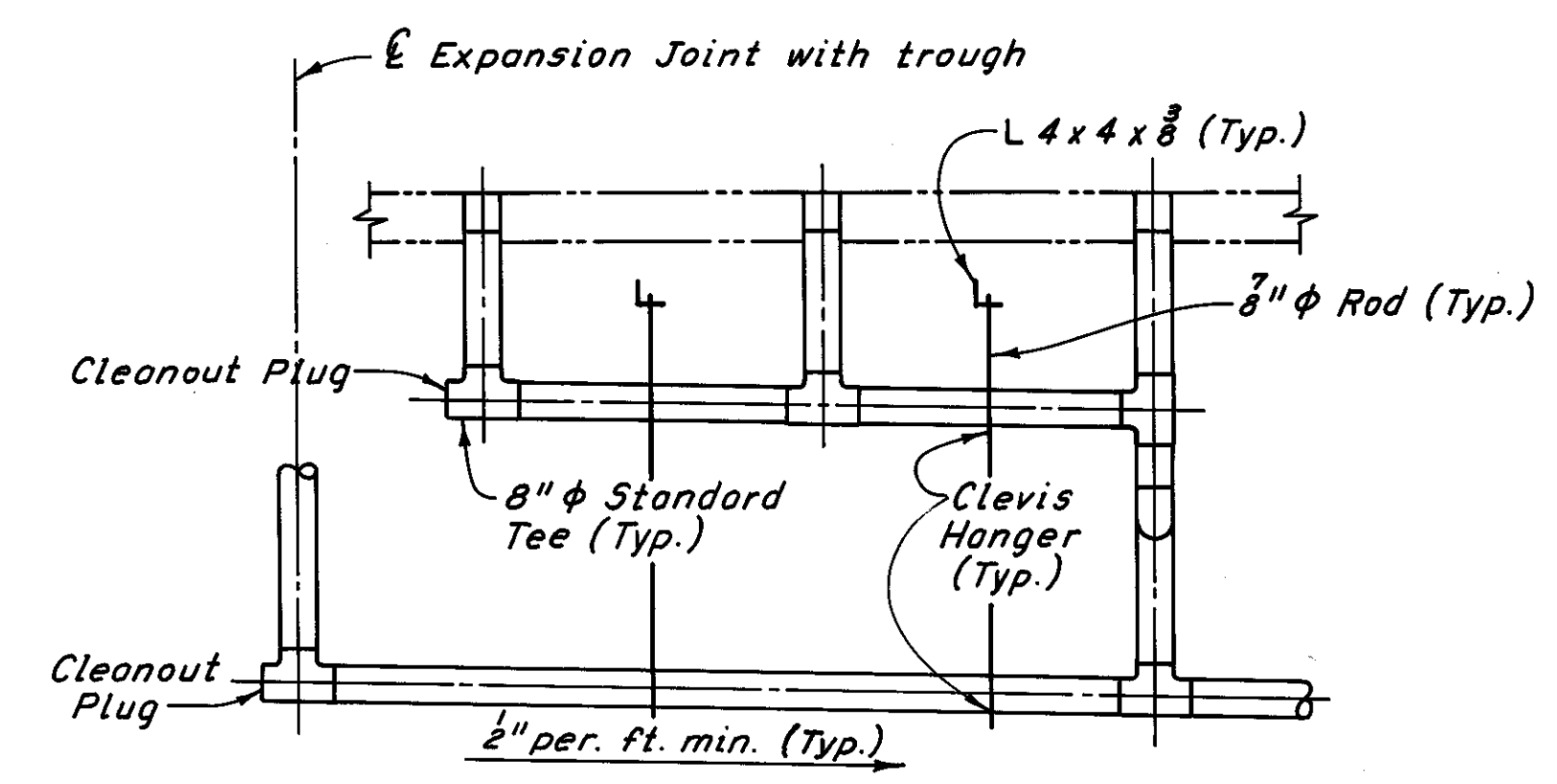
**DRAINAGE DETAILS AT PIERS**  
 REHABILITATION OF THE  
 LORAIN-CARNEGIE BRIDGE  
 (S.R. 10 OVER THE CUYAHOGA RIVER)  
 BR. NO. CUY.-10-1618 STA. 22+19.19  
 CUYAHOGA COUNTY OHIO  
 STA. 55+04.56

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE 6-22-78	DATE 7-12-78	DATE 8-14-78	DATE	DATE

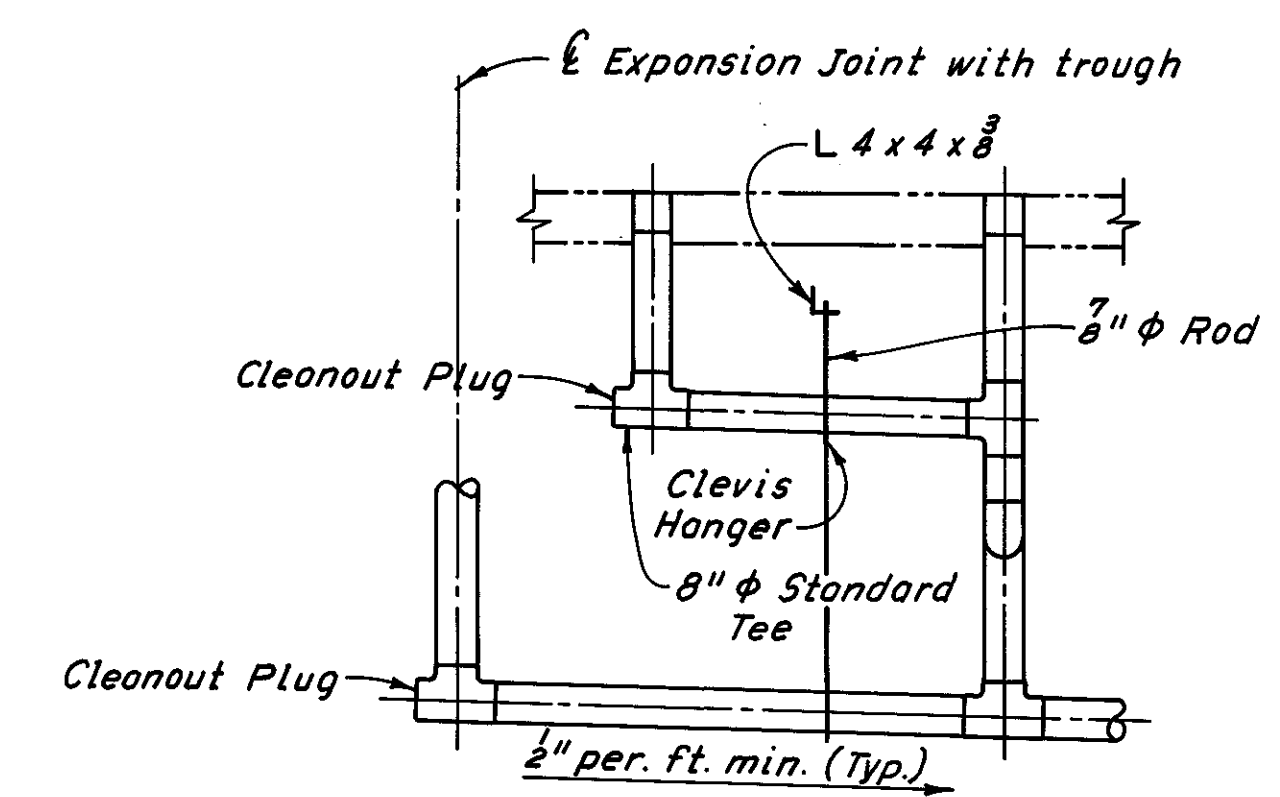
SHEET 69/72



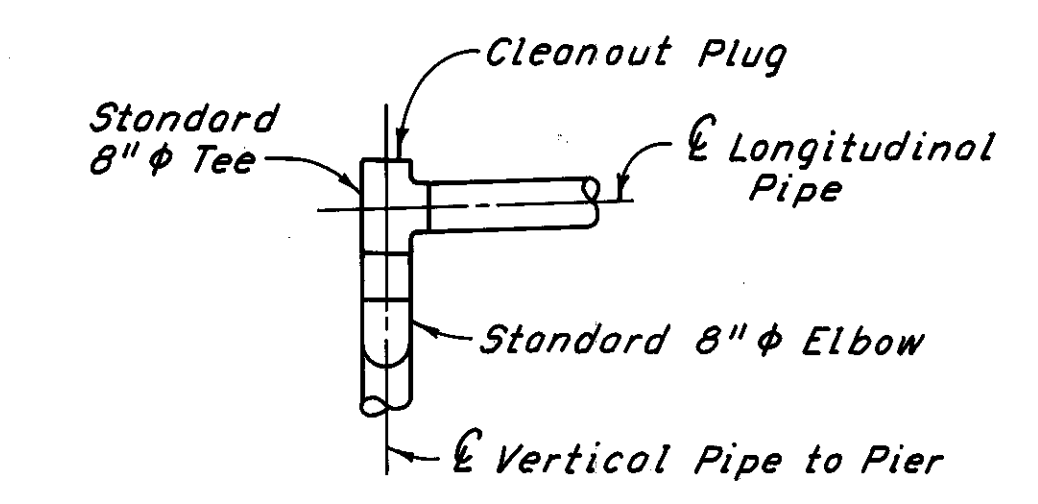
PIPE DETAIL AT MULTIPLE SCUPPERS



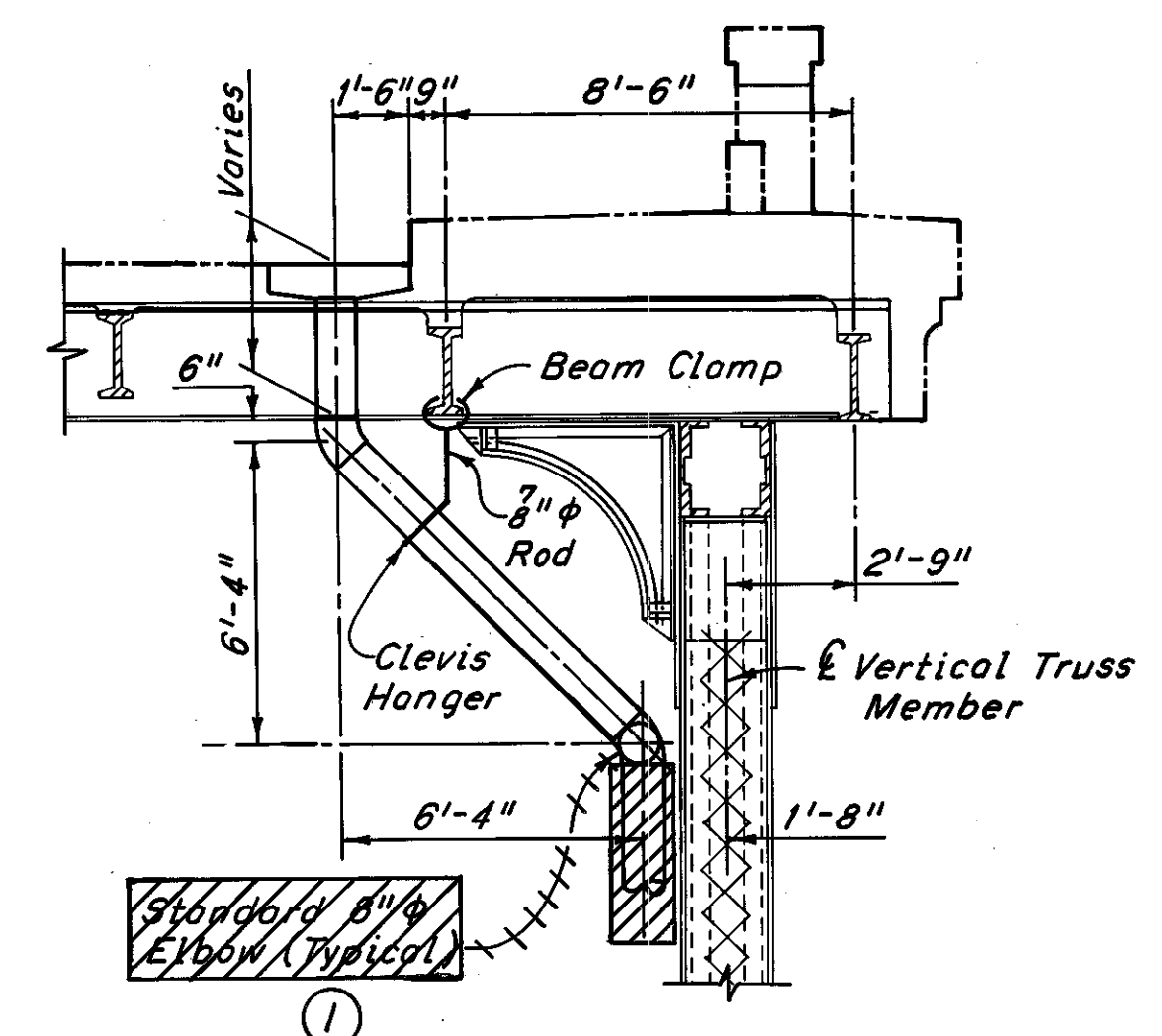
SECTION C-C (3 SCUPPERS)



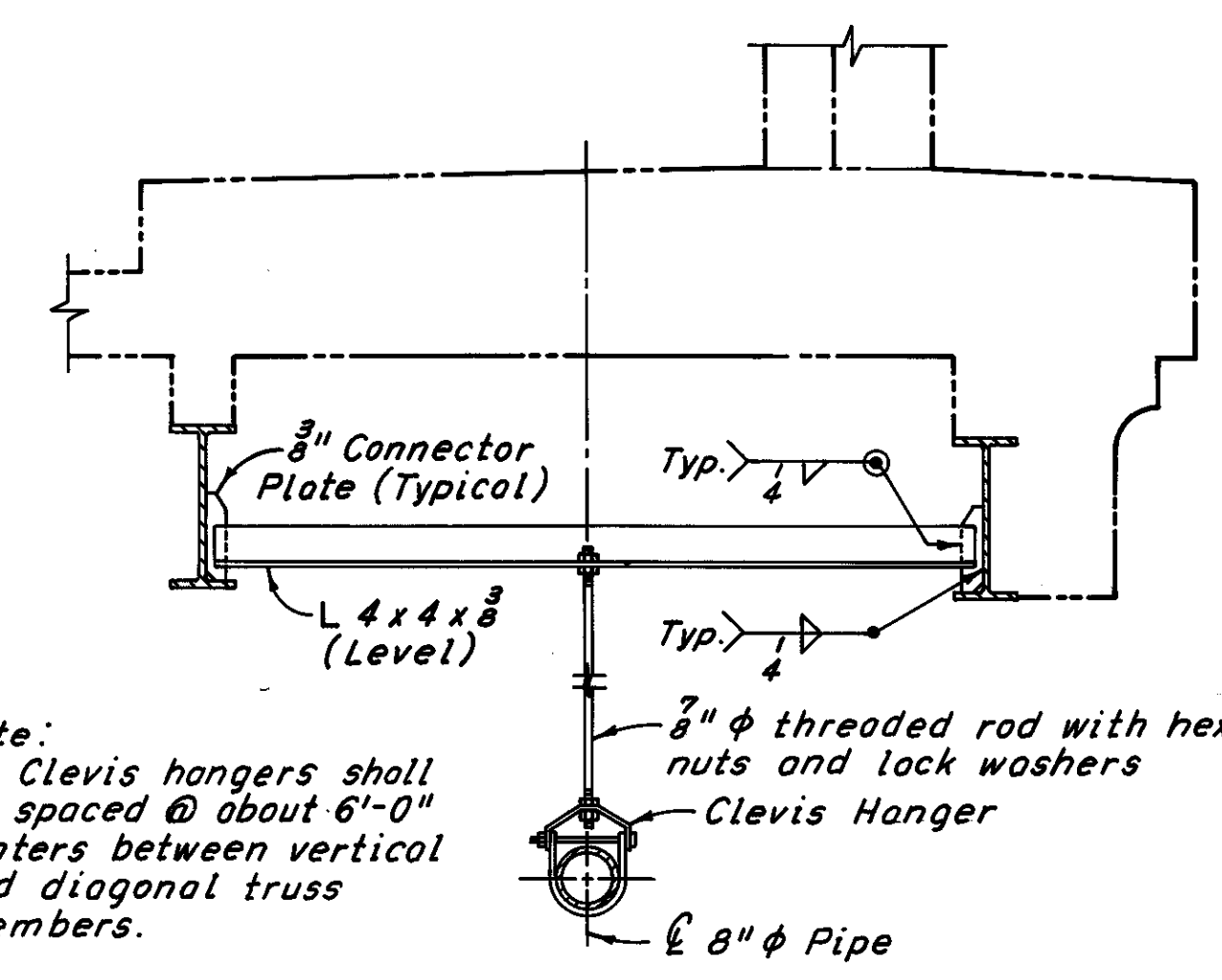
SECTION C-C (2 SCUPPERS)



PIPE DETAIL ABOVE PIERS

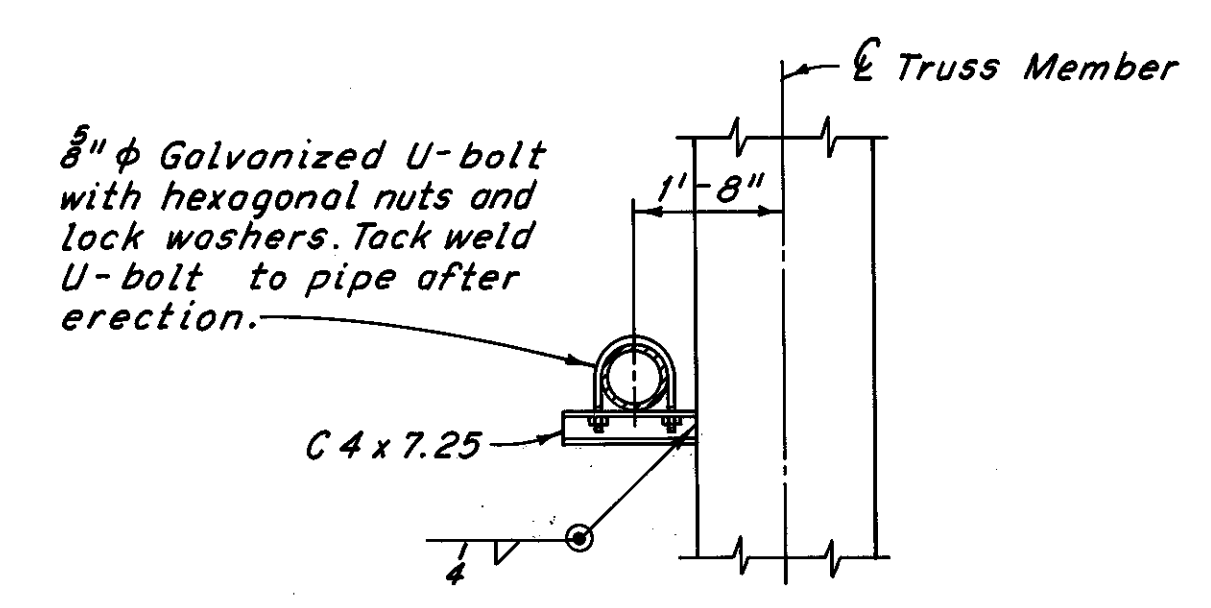


PIPE DETAIL AT SINGLE SCUPPERS



Note: Clevis hangers shall be spaced @ about 6'-0" centers between vertical and diagonal truss members.

PIPE SUPPORT DETAIL BETWEEN TRUSS MEMBERS  
(Pipe support between scuppers similar)



PIPE SUPPORT DETAIL AT VERTICAL AND DIAGONAL TRUSS MEMBERS

Notes:  
For location of drainage attached to the superstructure, see Sheets 66/72 thru 69/72.  
For additional notes, see Sheet 65/72.

① Revised 12-17-80

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

**DRAINAGE DETAILS AT PIERS**  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO STA. 55+04.56

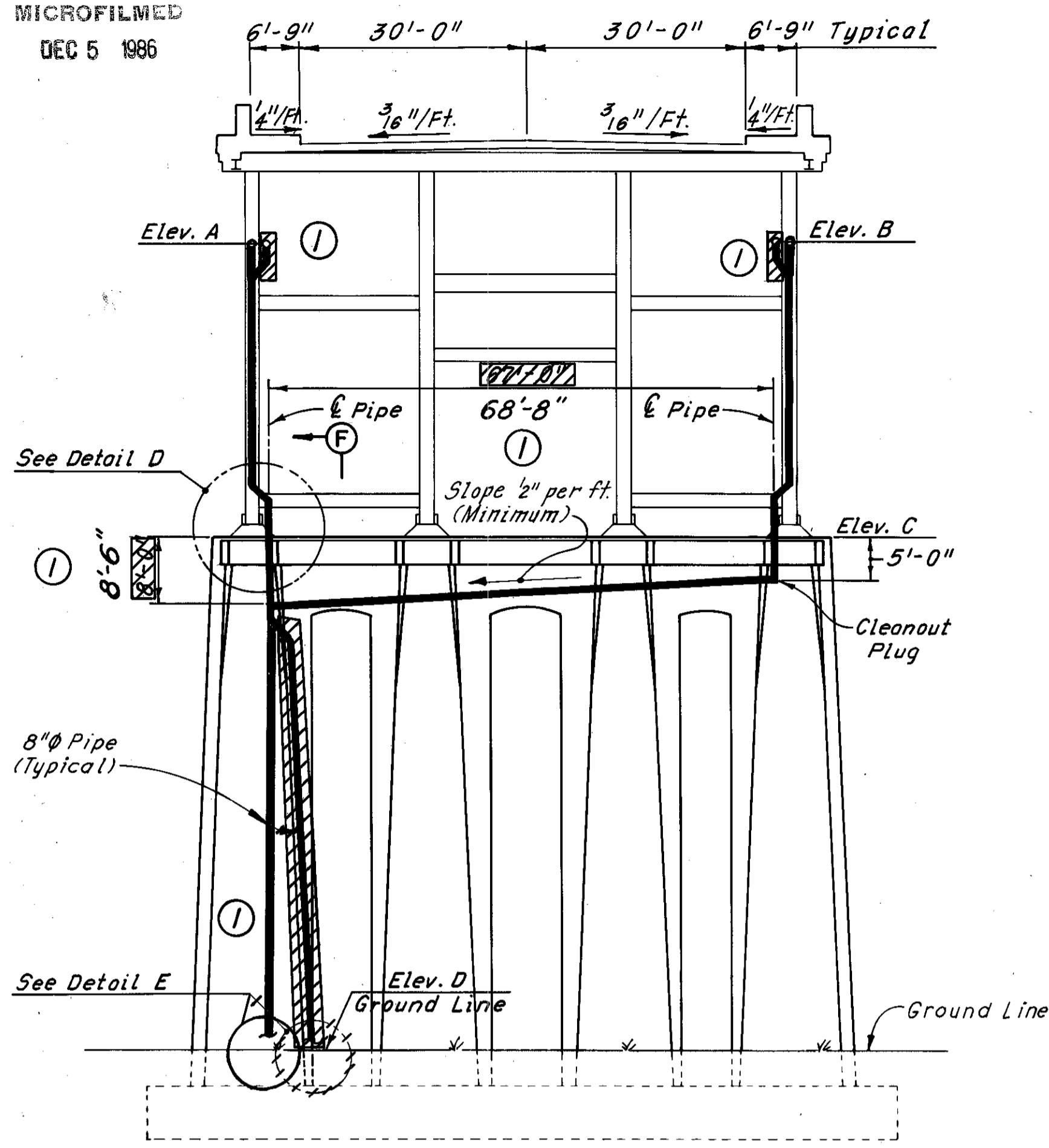
DRAWN: CKB	TRACED: DLR	CHECKED: W.E.B.	REVIEWED:	REVISED:
DATE: 6-22-78	DATE: 7-12-78	DATE: 8-14-78	DATE:	SHEET 70/72

MICROFILMED  
DEC 5 1986

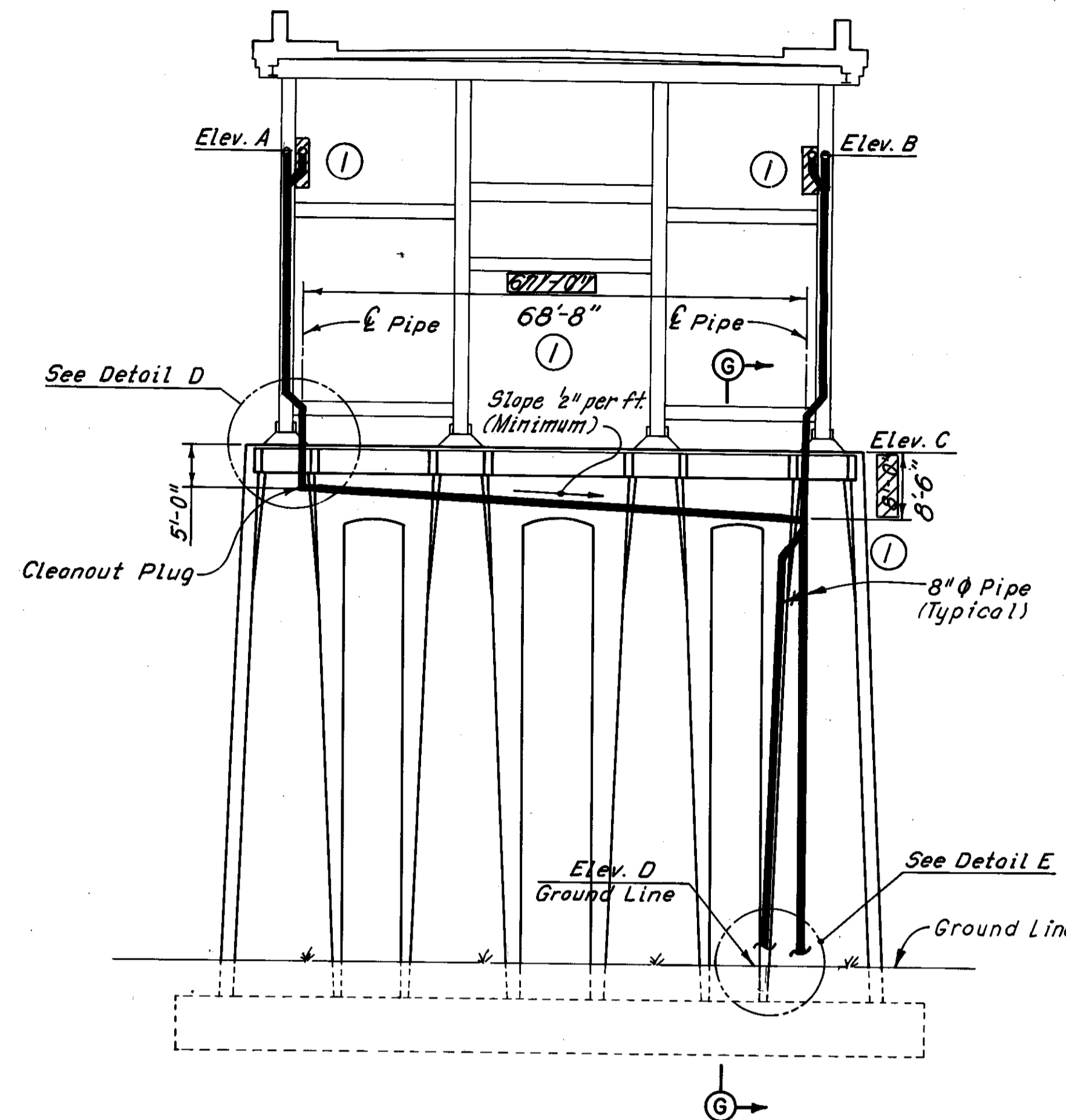
FHWA REGION	STATE	PROJECT
5	OHIO	

146  
185

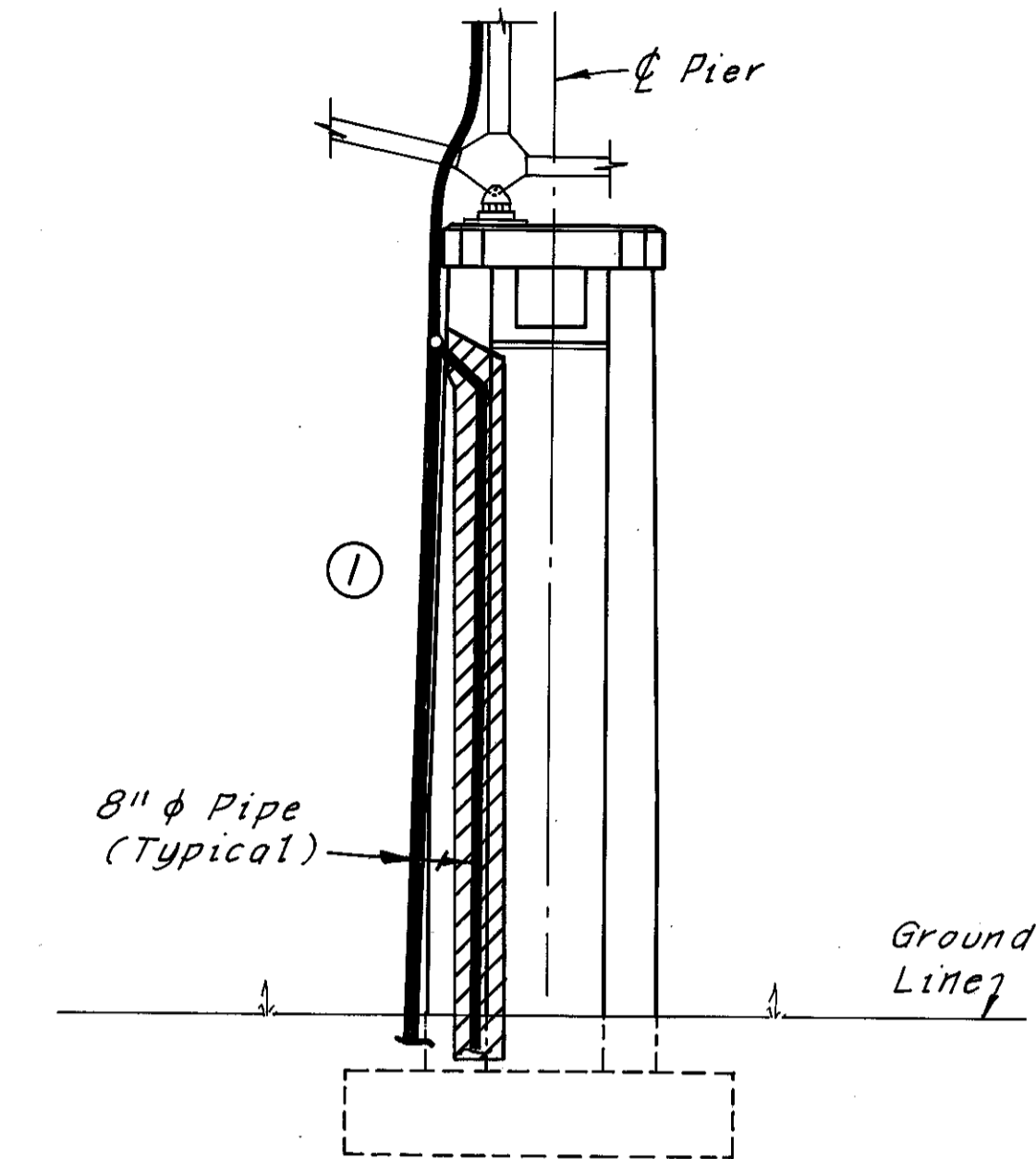
CUYAHOGA COUNTY  
CUY-10-16.23



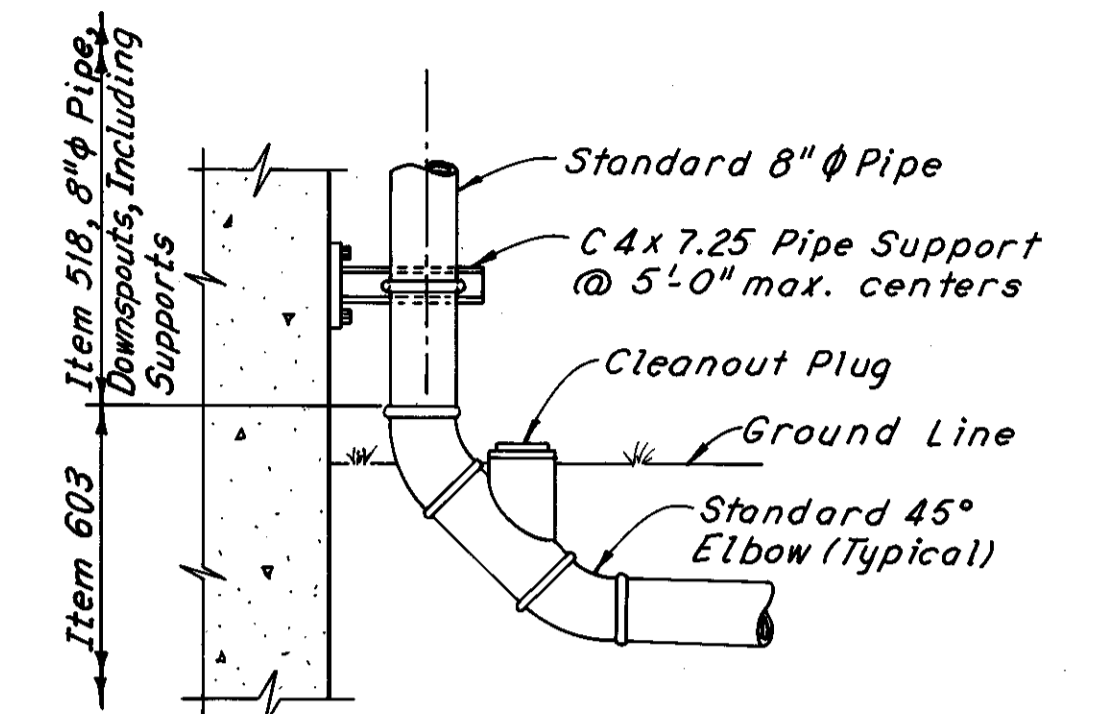
**ELEVATION-PIERS 2, 6, 10 AND 11**  
(Looking East, except as noted; looking West, Pier 10 and 11)



**ELEVATION-PIERS 4 AND 8**  
(Looking West)

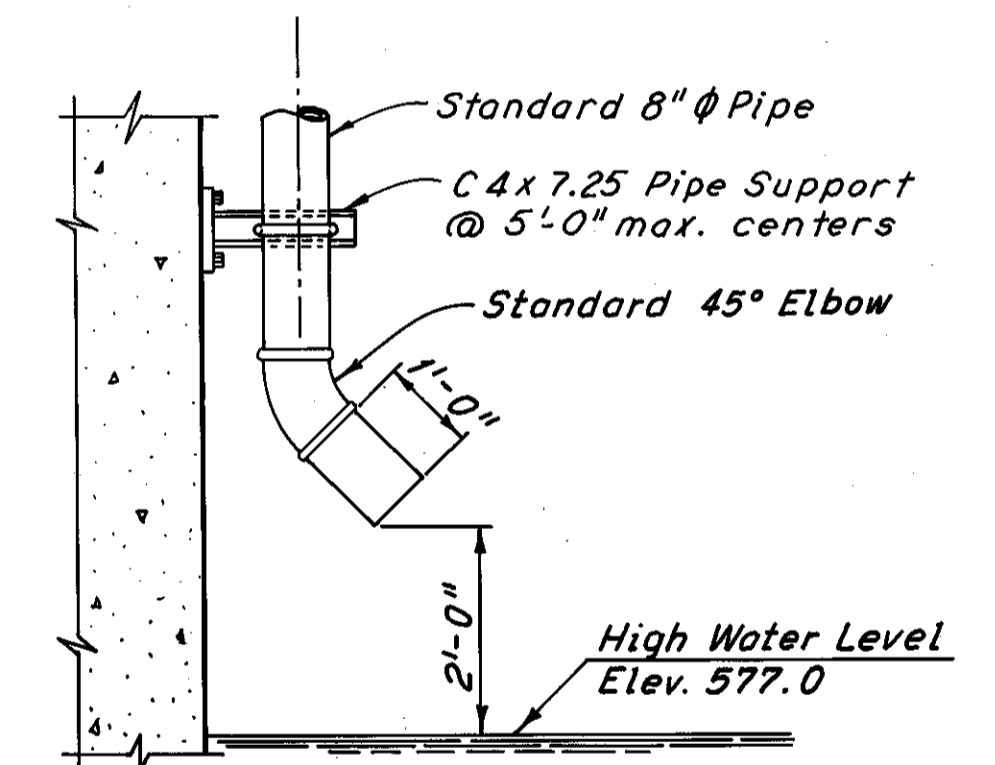


**SECTION F-F**  
(Section G-G opposite hand)



**DETAIL E**  
Turn pipe, lateral and 45° elbow as required for connection to underground system.  
(Typical except Pier 10)

Pier	Elev. A	Elev. B	Elev. C	Elev. D
2	671.00	671.00	636.62	585.1±
4	678.50	678.50	638.64	583.3±
6	685.25	685.25	641.03	582.2±
8	694.50	694.50	649.33	581.8±
10	703.00	703.00	654.16	
11	698.25	685.50	649.98	584.8±



**DETAIL E**  
(Pier 10)

Notes:  
For additional details of drainage attached to the superstructure, see Sheets 69/72 and 70/72.  
For details of pipe support and attachment to the superstructure, see Sheet 70/72.  
For additional notes, see Sheet 65/72.

H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

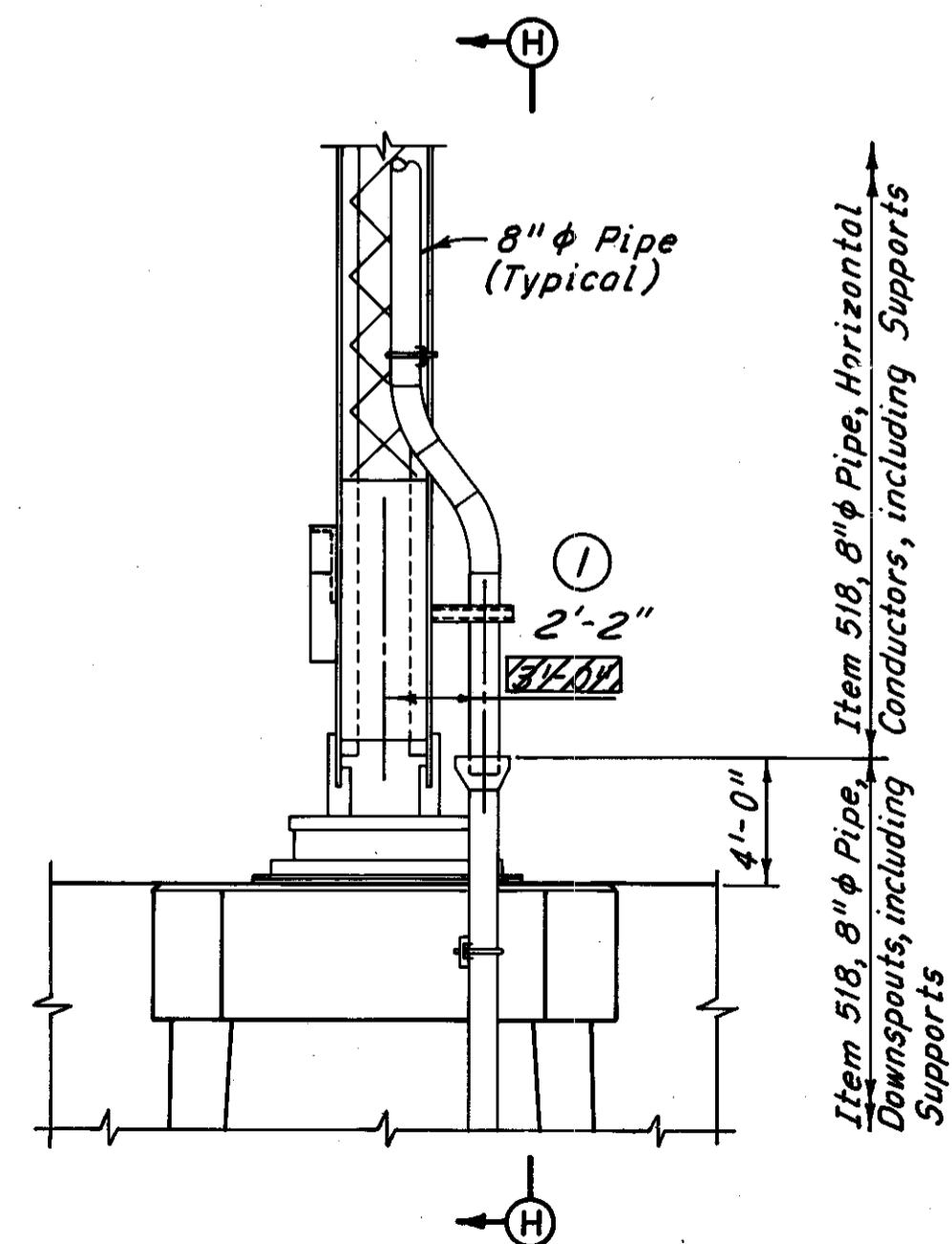
**DRAINAGE DETAILS AT PIERS**

REHABILITATION OF THE  
LORAIN-CARNEGIE BRIDGE  
(S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY-10-1618 STA. 22+19.19  
STA. 55+04.56

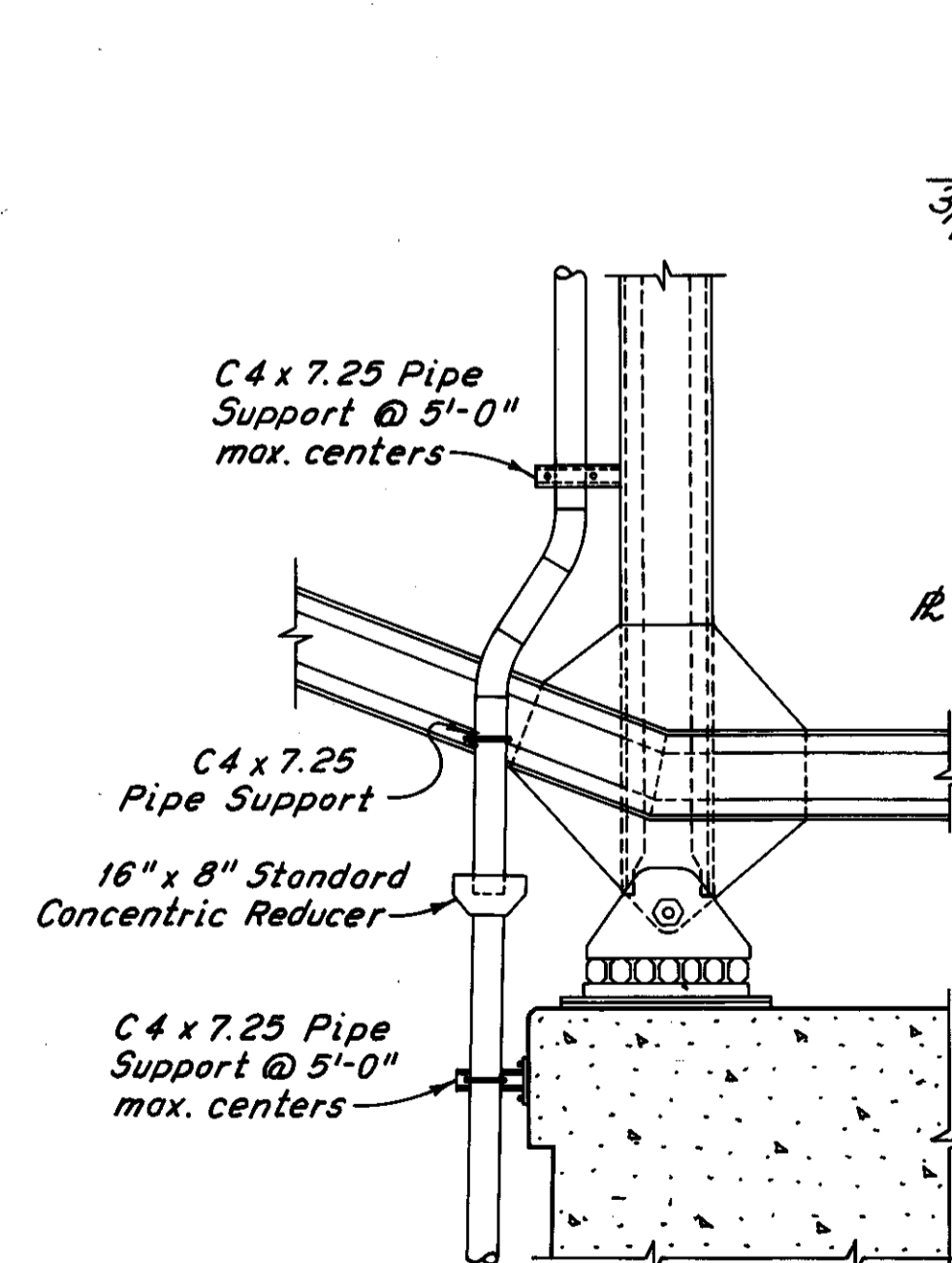
CUYAHOGA COUNTY OHIO

DRAWN C.K.B.	TRACED D.L.R.	CHECKED W.E.B.	REVIEWED	REVISED
DATE 6-21-78	DATE 7-13-78	DATE 8-14-78	DATE	DATE

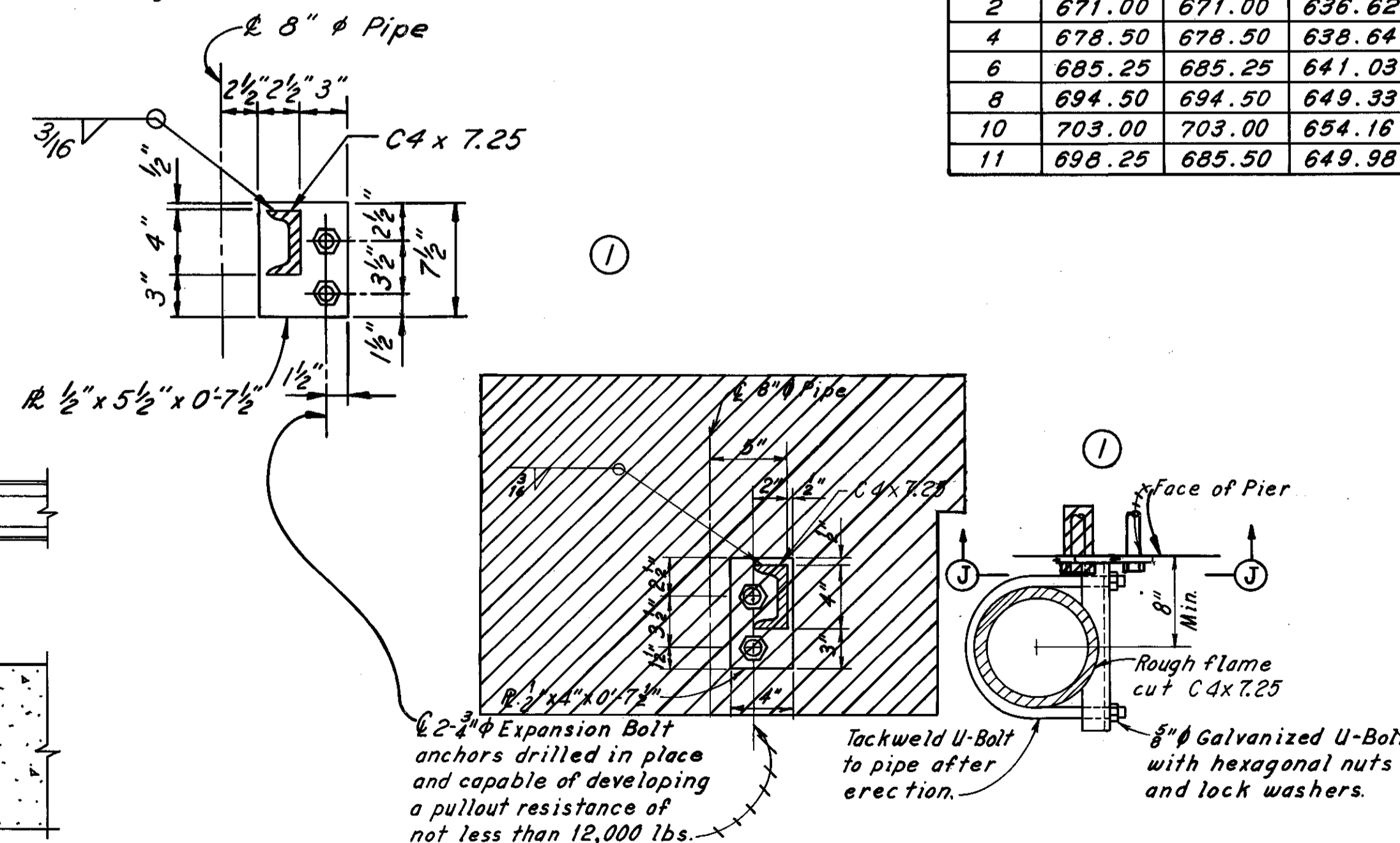
SHEET 71/72



**DETAIL D**



**SECTION H-H**

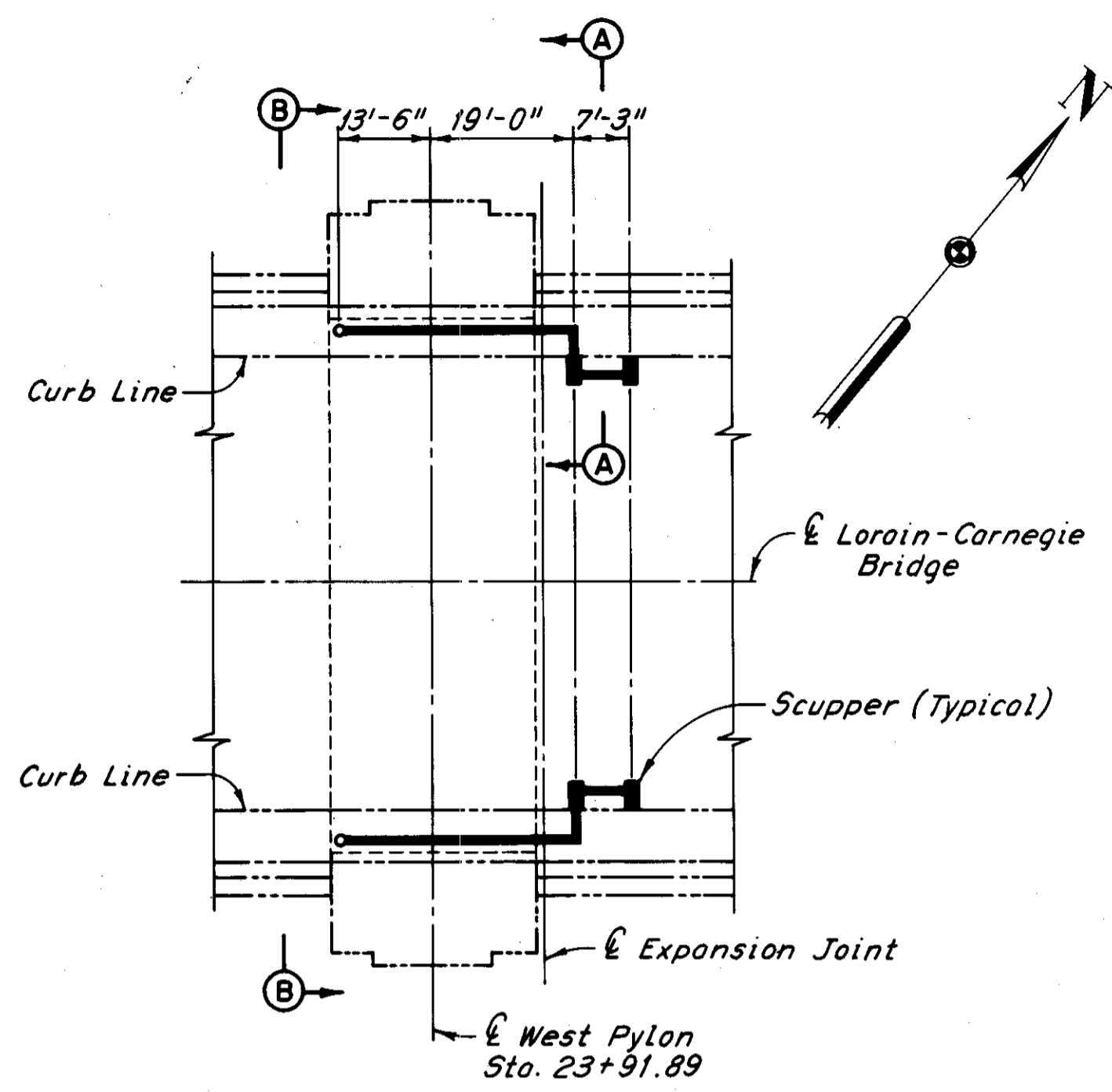


**SECTION J-J**

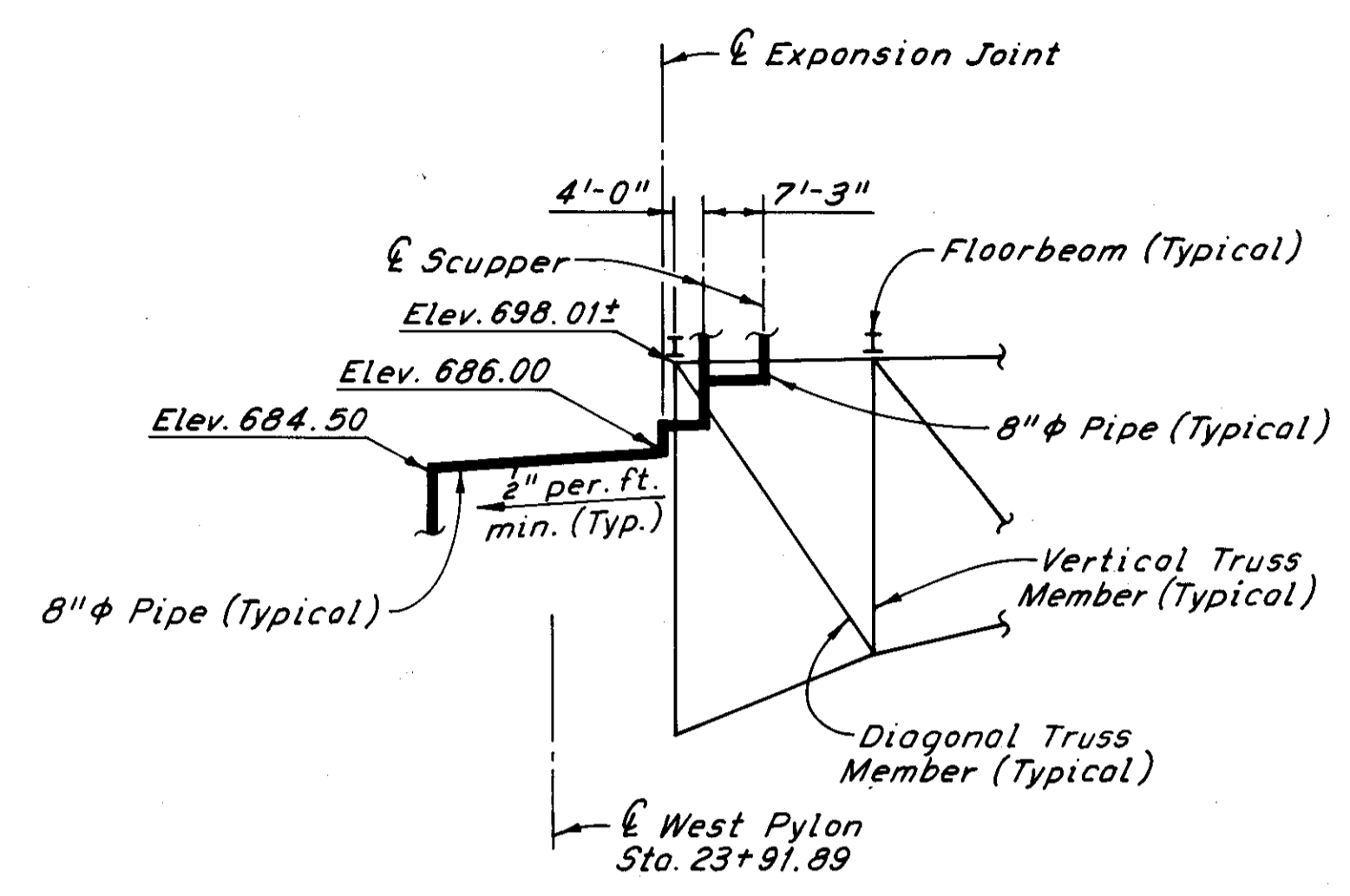
**PLAN**

**PIPE SUPPORT DETAIL ON PIERS**

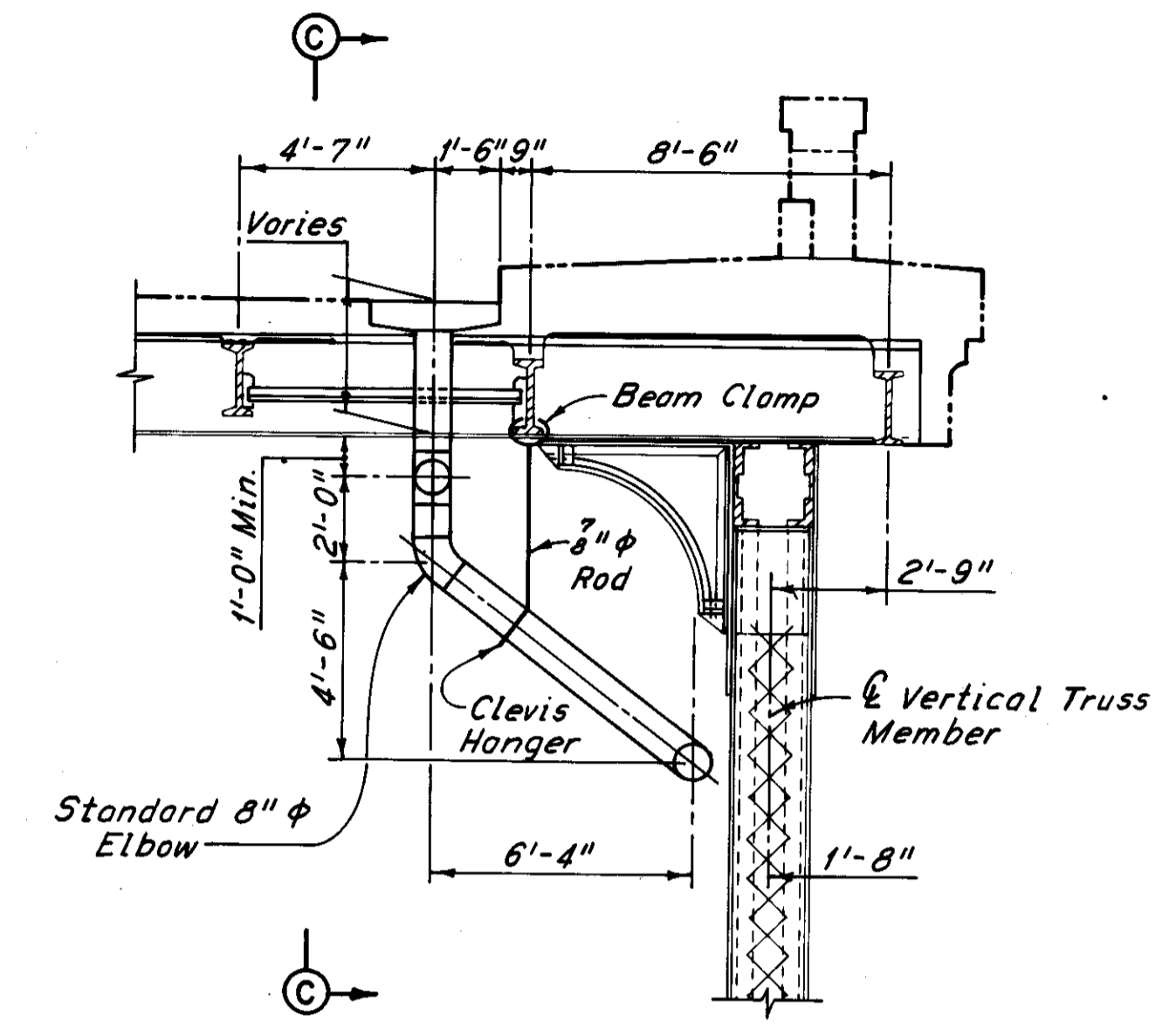
① Revised 12-17-80



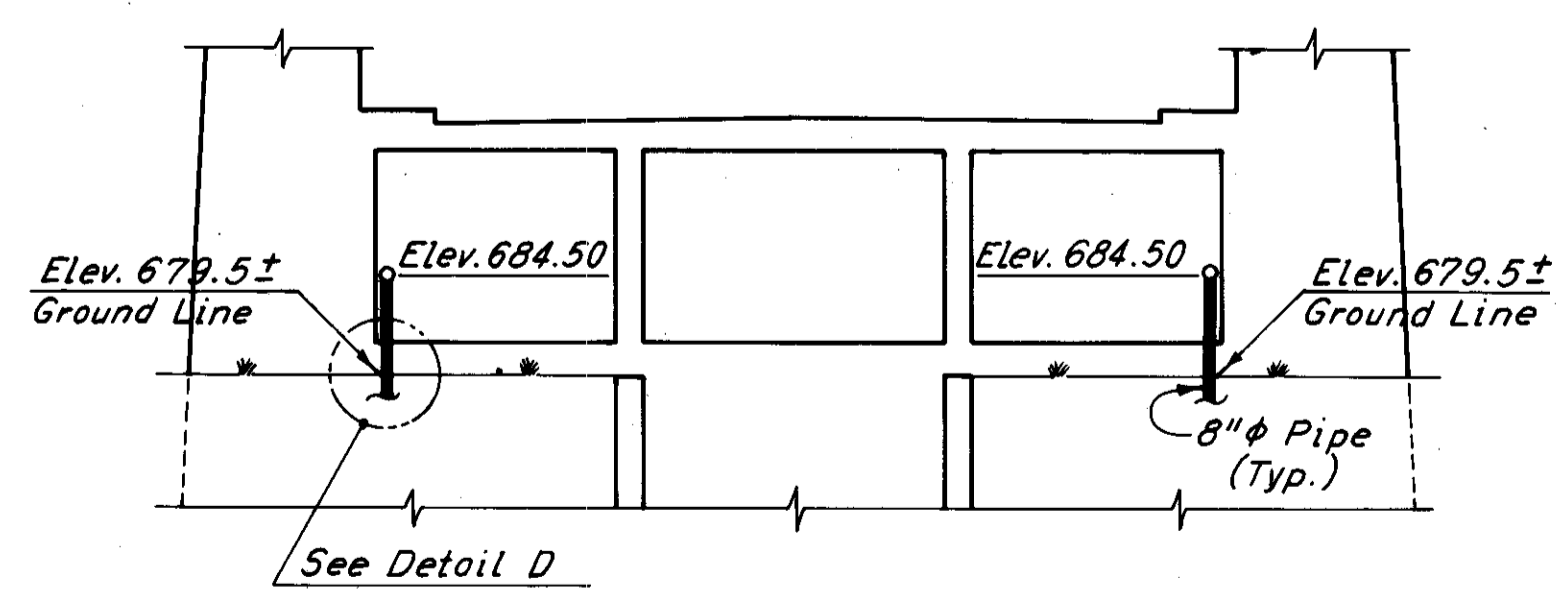
PART PLAN AT WEST PYLON



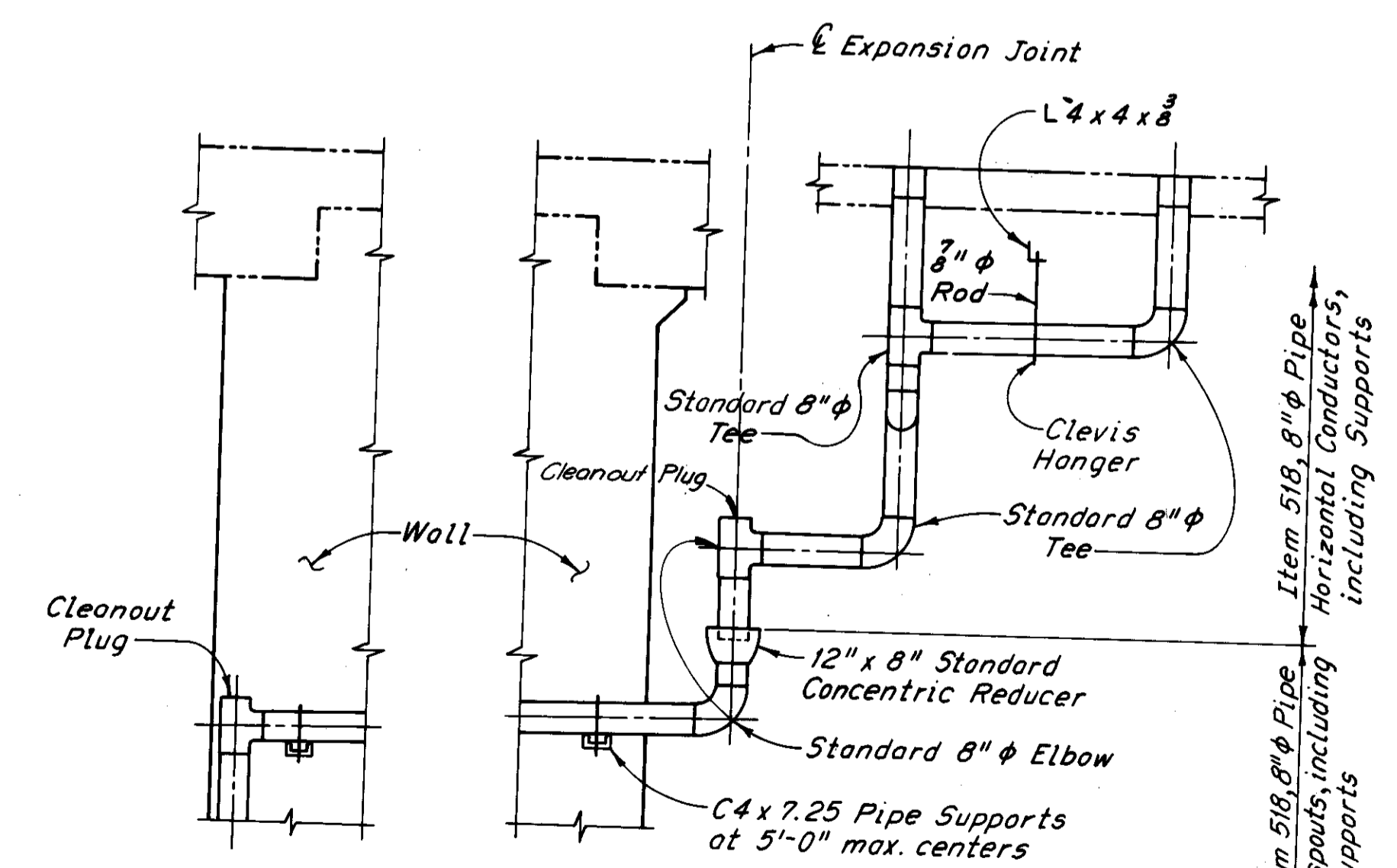
PART EXTERIOR TRUSS ELEVATION  
AT WEST PYLON  
(North Exterior Truss, looking North similar,  
South Exterior Truss similar)



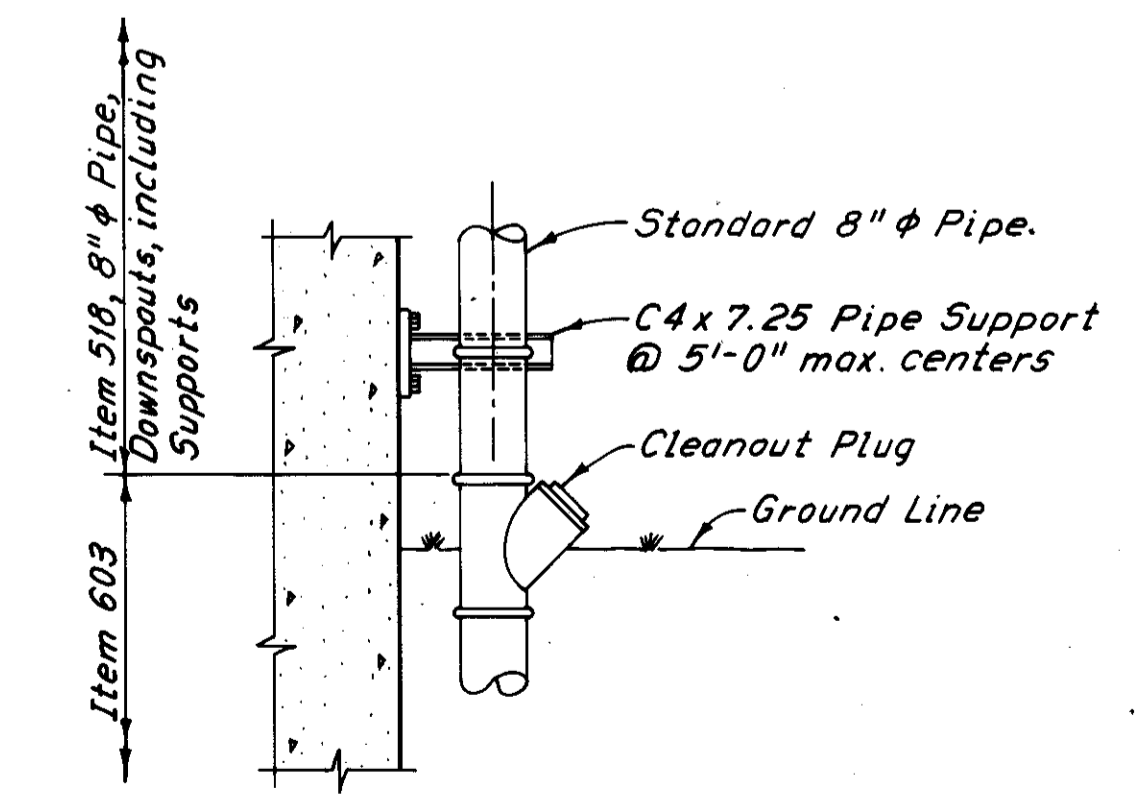
SECTION A-A



PART SECTION B-B



PART SECTION C-C



DETAIL D

Notes:  
Pipe elevations are given at the centerline of pipes.  
Truss elevations are given at the bottom of floorbeams.  
For details of pipe support and attachment to the West Pylon, see "Pipe Support Detail on Piers", Sheet 71/72.  
For additional notes, see Sheet 65/72.

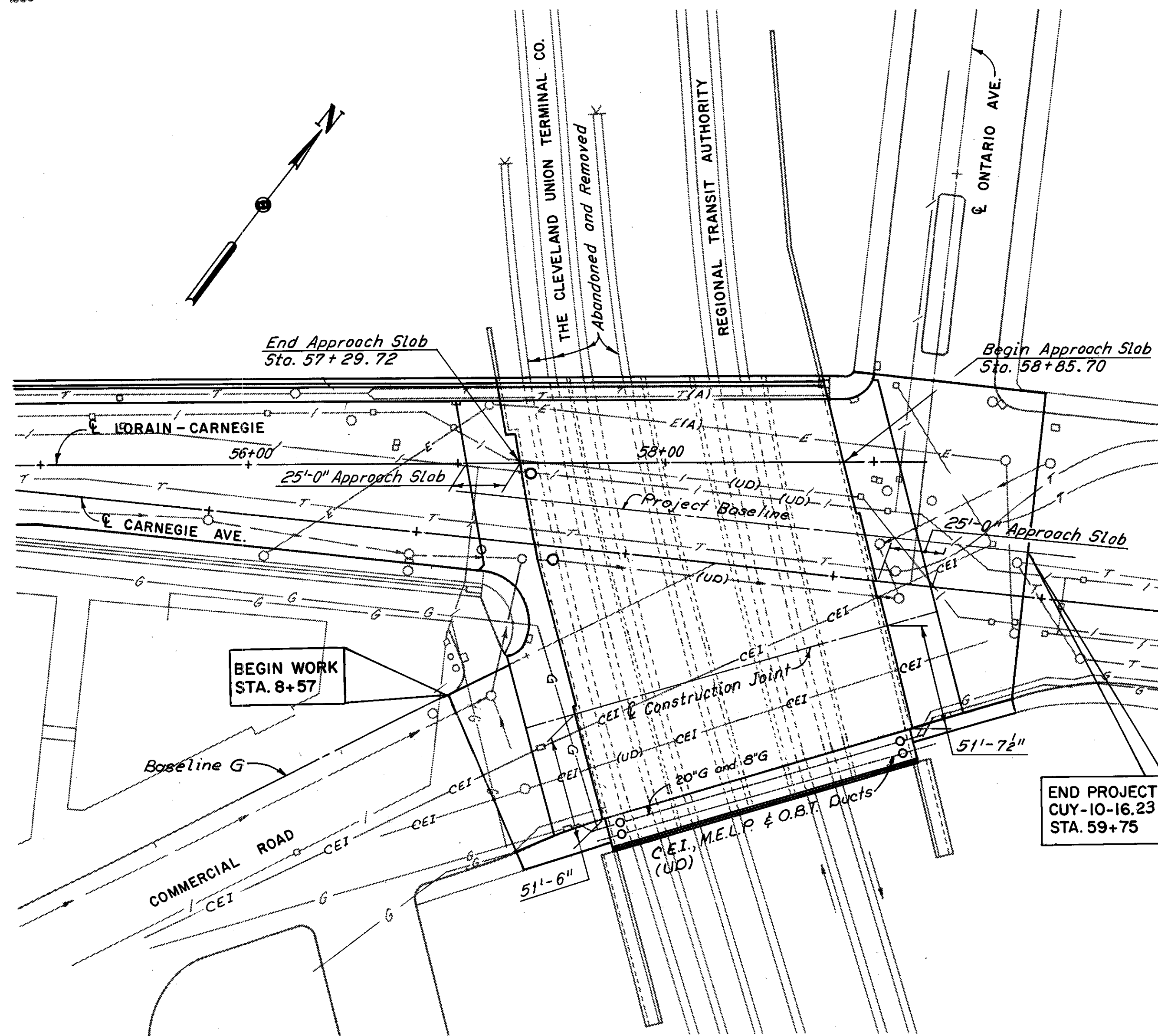
H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

**HNTB**

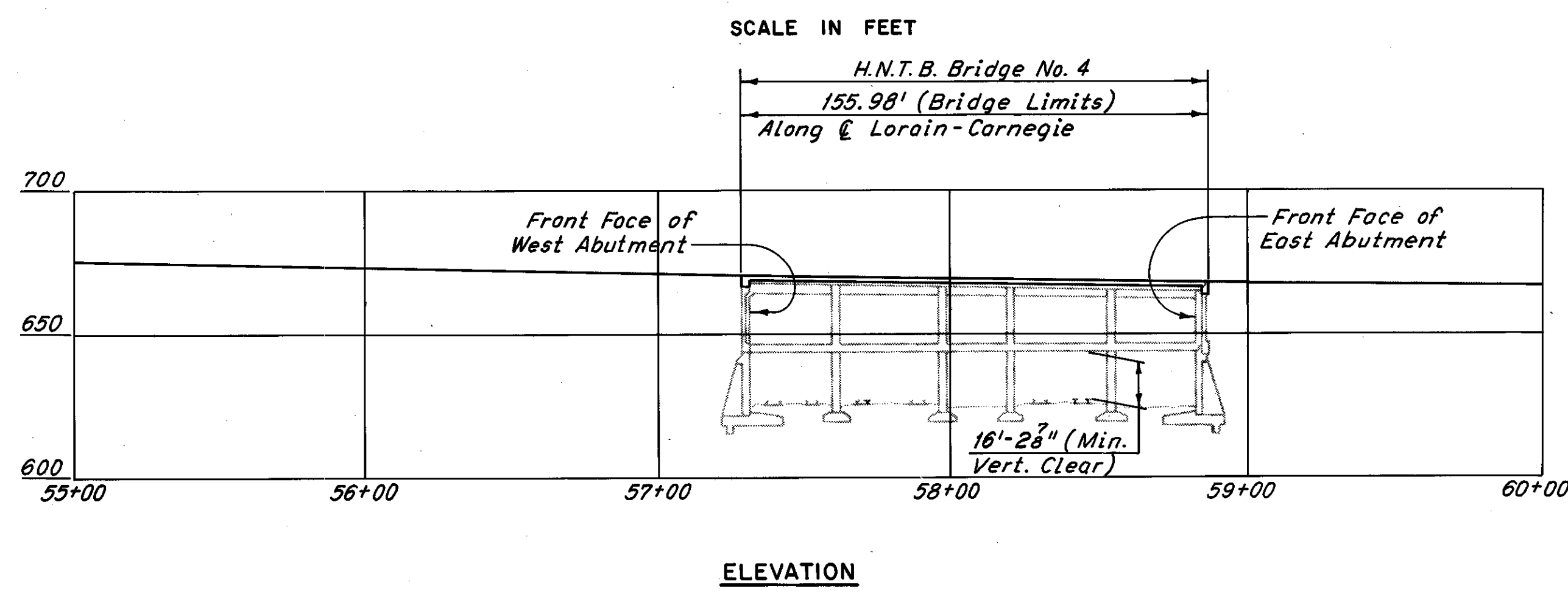
**DRAINAGE DETAILS AT WEST PYLON**  
REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO

DRAWN: CKB	TRACED: DLR	CHECKED: W.E.B.	REVIEWED:	REVISED:
DATE: 6-24-78	DATE: 7-11-78	DATE: 8-14-78	DATE:	DATE:

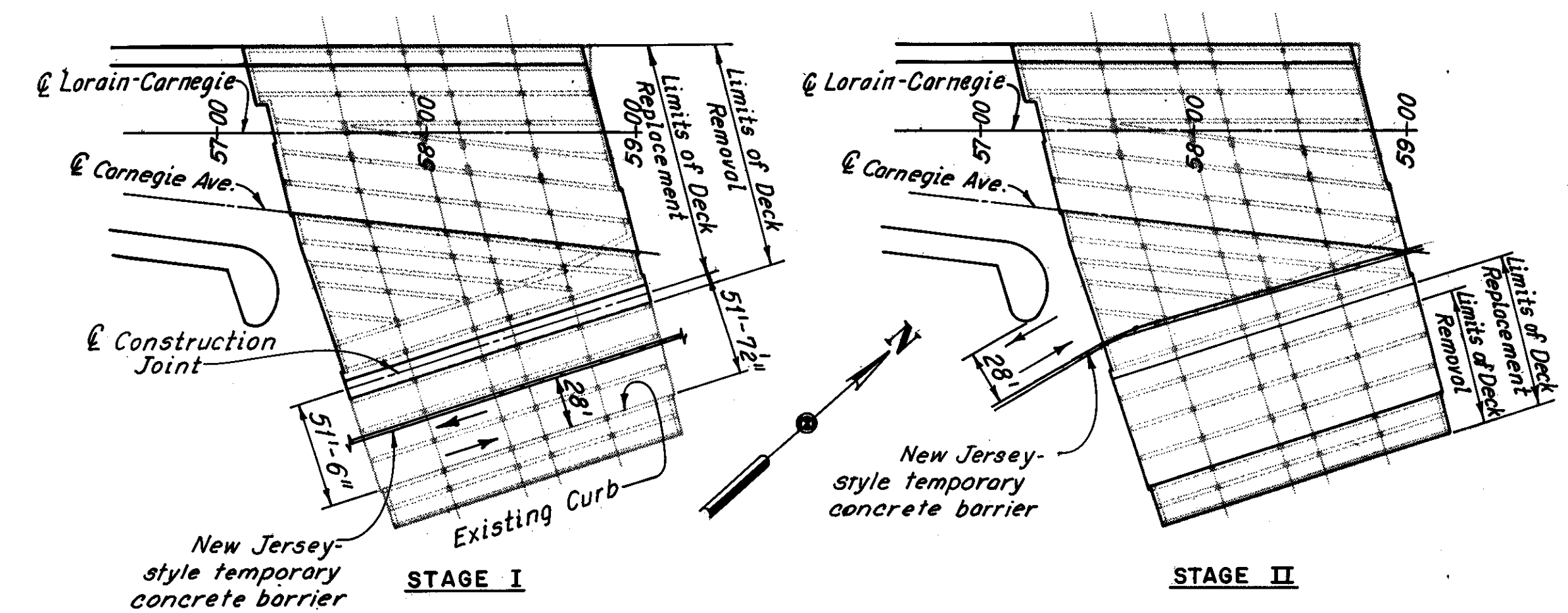
SHEET 72/72



**PLAN**  
(Utilities not shown otherwise are underground utilities)  
Scale: 1"=60'



**ELEVATION**



**STAGE I**  
**STAGE II**  
**TRAFFIC MAINTENANCE - CARNEGIE AVENUE GRADE SEPARATION STRUCTURE**  
Scale: 1"=60'

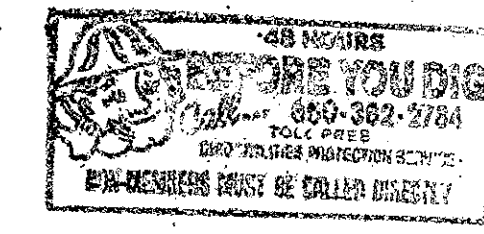
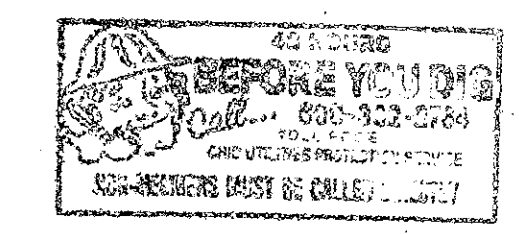
The stage construction applies within the bridge and approach slab limits. All repair work shall be coordinated with the stage construction as shown.

Notes:  
Subdued linework indicates existing conditions.  
For Project Baseline Data, and Baseline G Data,  
See Roadway Plans.

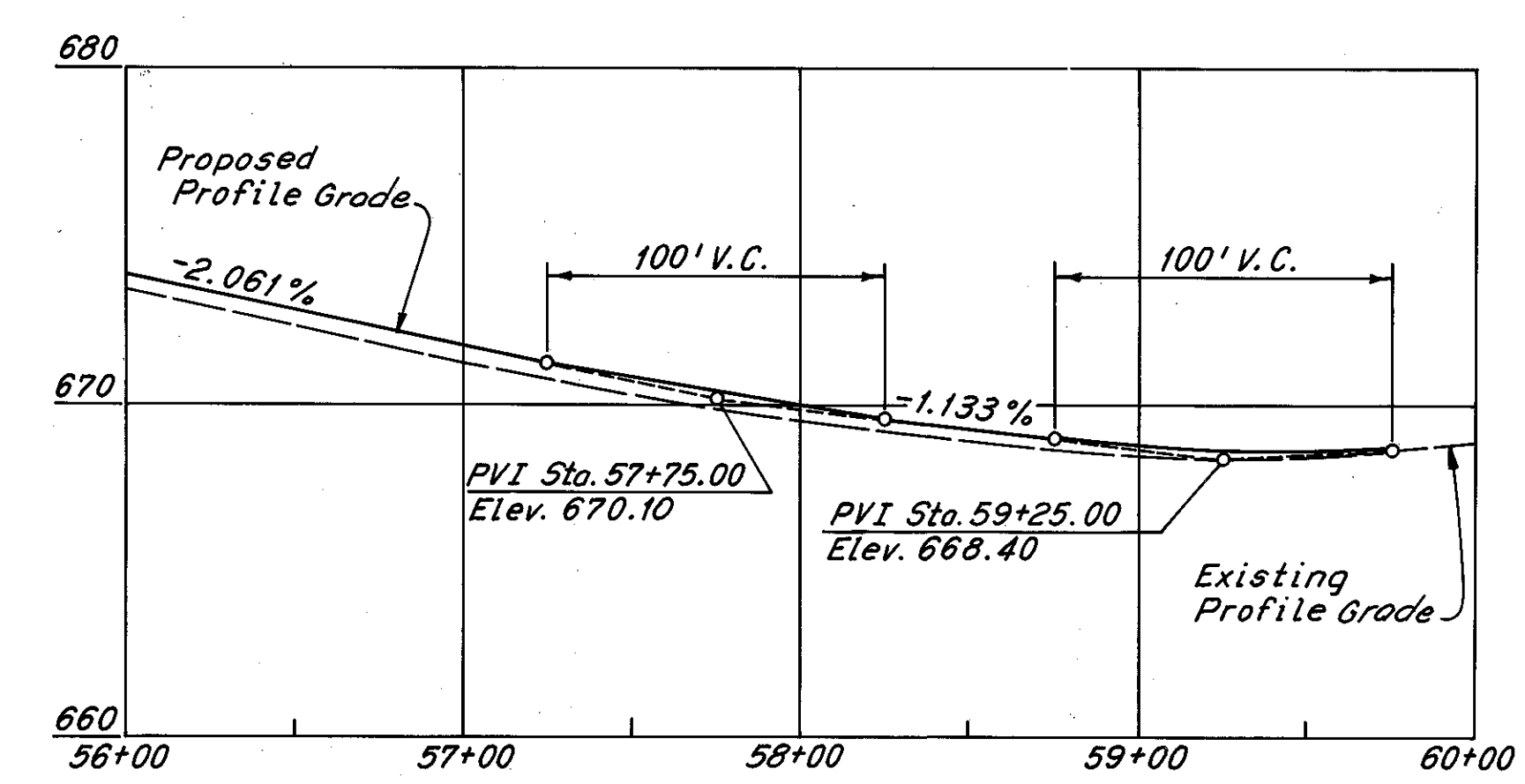
Note:  
Underground and underdeck utilities not indicated as being abandoned shall remain. The information shown on this drawing concerning type and location of underground and underdeck utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making his own determination as to the type and location of underground and underdeck utilities as may be necessary to avoid damage thereto. Full expense involved in relocating the affected utility, except where the relocation is covered in these plans, shall be borne by the Owner of the utility. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

**UTILITY LEGEND**

- (A) - Indicates a utility to be abandoned
- (UD) - Indicates an underdeck utility
- E — Indicates Municipal Electric Light and Power line (M.E.L.P.)
- T — Indicates Ohio Bell Telephone Line (O.B.T.)
- I — Indicates water line
- G — Indicates gas line
- S — Indicates sewer line
- CEI — Indicates Cleveland Electric Illuminating Company line (C.E.I.)



**PROPOSED STRUCTURE DATA ON CONCRETE GIRDERS**  
**BRIDGE NO. CUY-10-1685**  
TYPE: Reinforced Concrete Girder, Deck and Substructure  
SPAN: See Framing Plan, Sheet No. 150.  
ROADWAY: Varies  
LOADING: HS20-44 Case II and The Alternate Military Loading  
SKEW: Varies  
WEARING SURF: 2 3/4" Asphalt Concrete (Rubberized)  
ALIGN: Tangent



**PROFILE GRADE: GRADE SEPARATION**  
**ALONG PROJECT BASELINE**

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**SITE PLAN**

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. IO OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY-10-1685 STA. 57+29.72  
STA. 58+85.70

CUYAHOGA COUNTY OHIO

DRAWN BY	TRACED	CHECKED	REVIEWED	REVISED
DATE 9-29-78	D.L.R.	RAS	DATE 9-25-78	

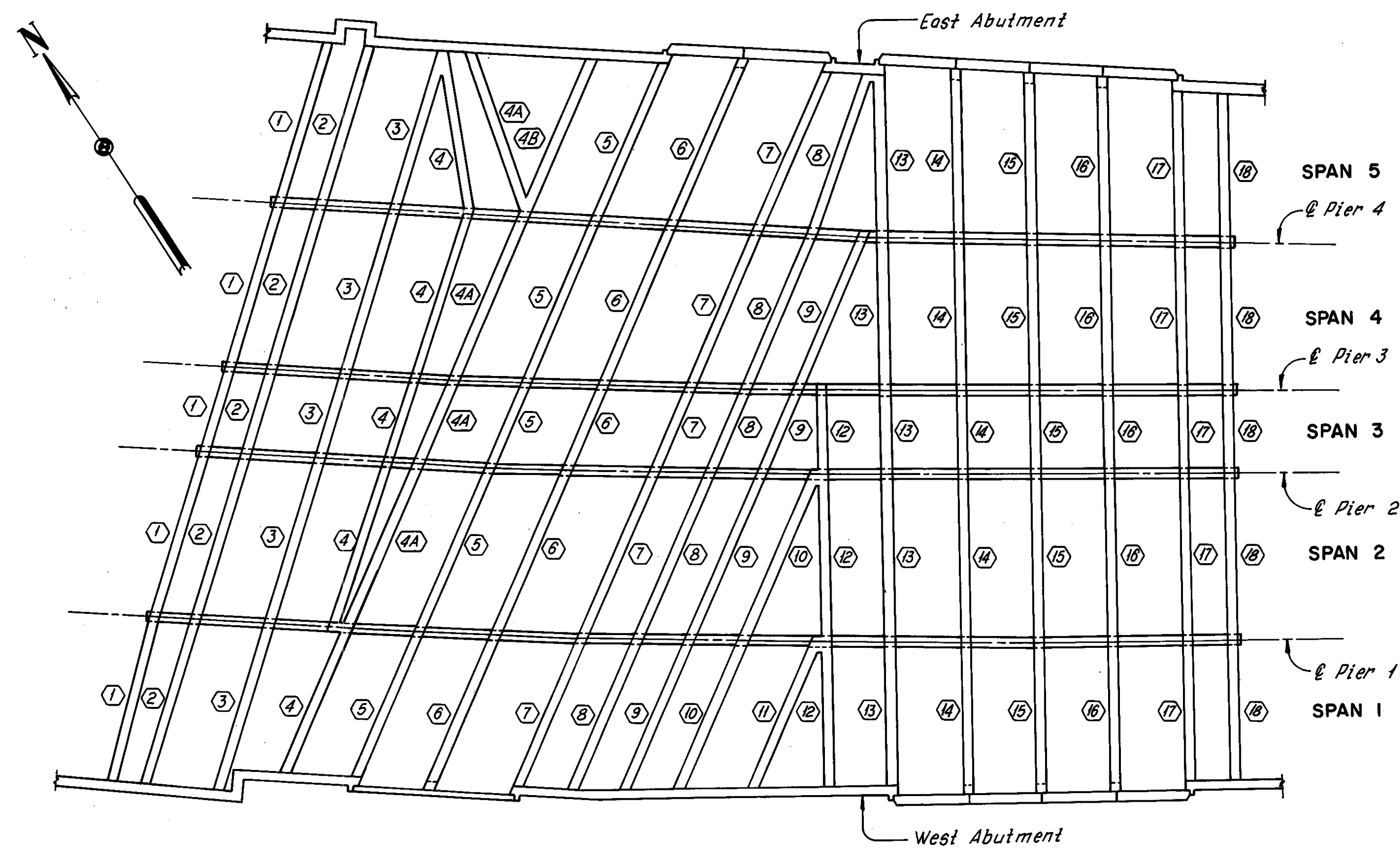
SHEET 1/31

MICROFILMED  
DEC 5 1986

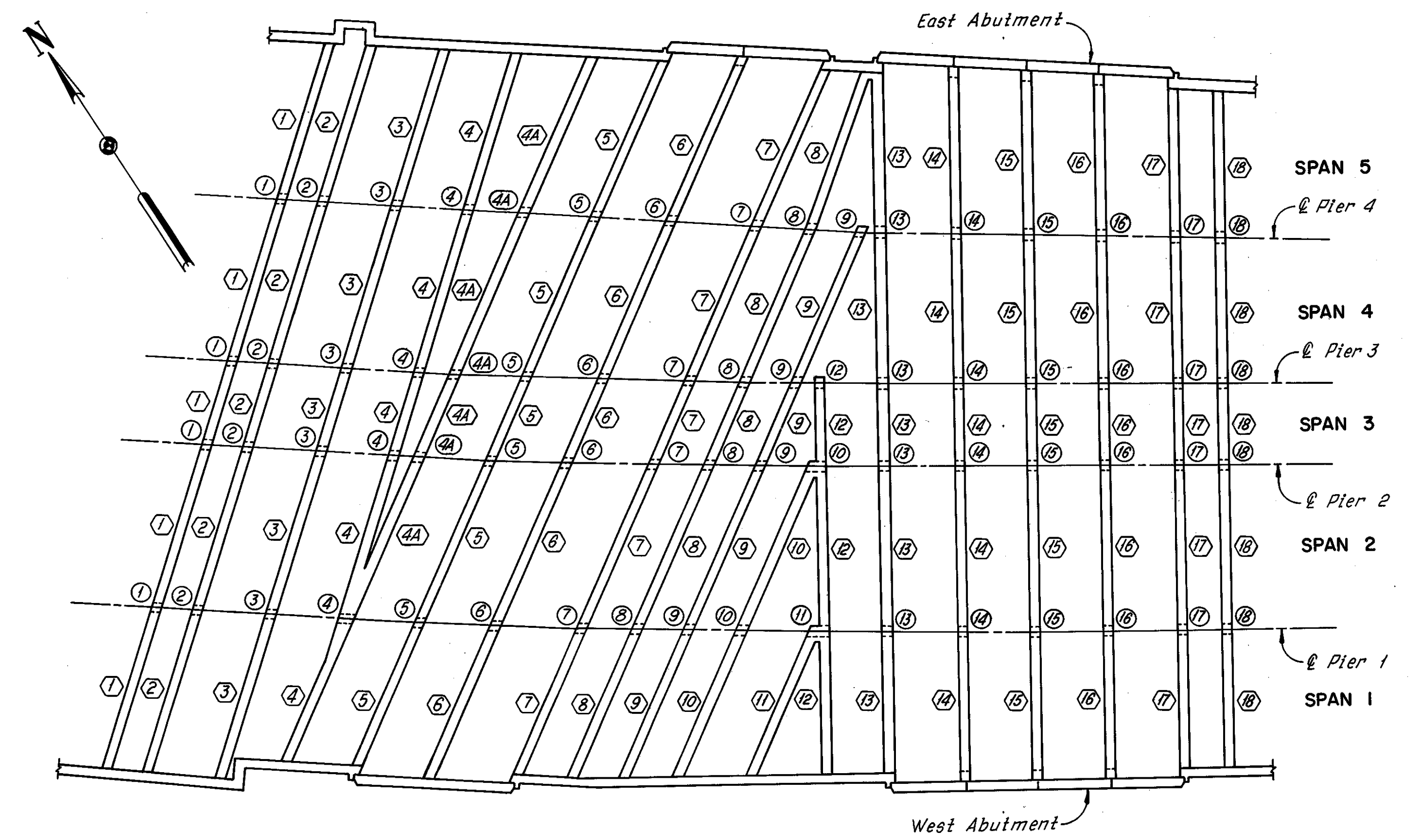
FHWA REGION	STATE	PROJECT	
5	OHIO		

149  
185

CUYAHOGA COUNTY  
CUY-10-16.23



**STRUT AND PIER IDENTIFICATION PLAN**  
(Lower Level Framing)



**GIRDER AND COLUMN IDENTIFICATION PLAN**  
(Upper Level Framing)

**LEGEND:**

- Strut or Girder
- Column

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

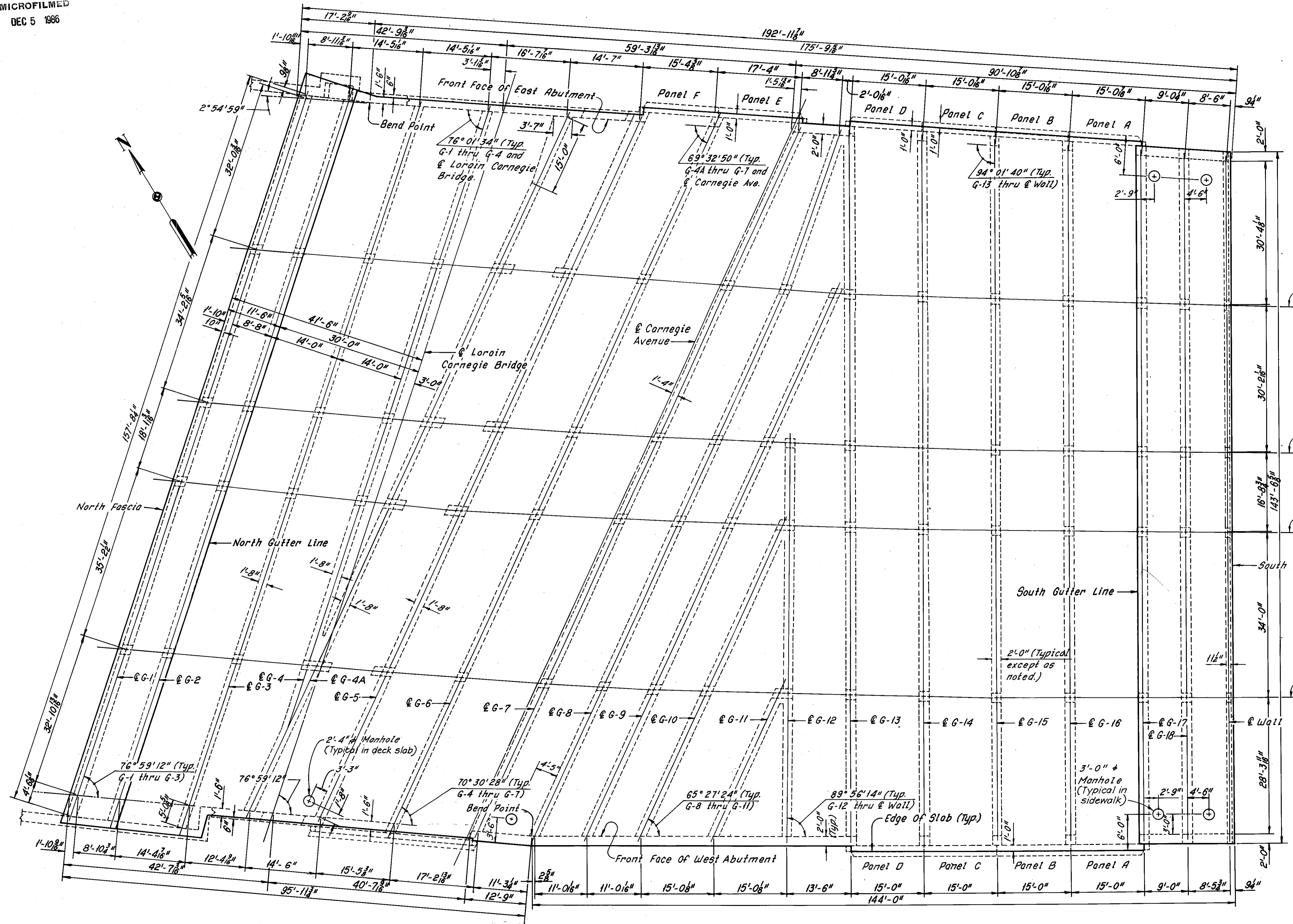
**HNTB**

**MEMBER IDENTIFICATION PLANS**

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

DRAWN BY	TRACED BY	CHECKED BY	REVIEWED	REVISED
DATE 2-13-75	DATE 2-14-75	DATE 3-19-75	DATE	

Note:  
Prior to deck removal over the girders, Girders 2 thru 18 shall be shored. For Girders 2 thru 18 removal, see removal plans, typical section along Pier 3, Sheet 4/31.



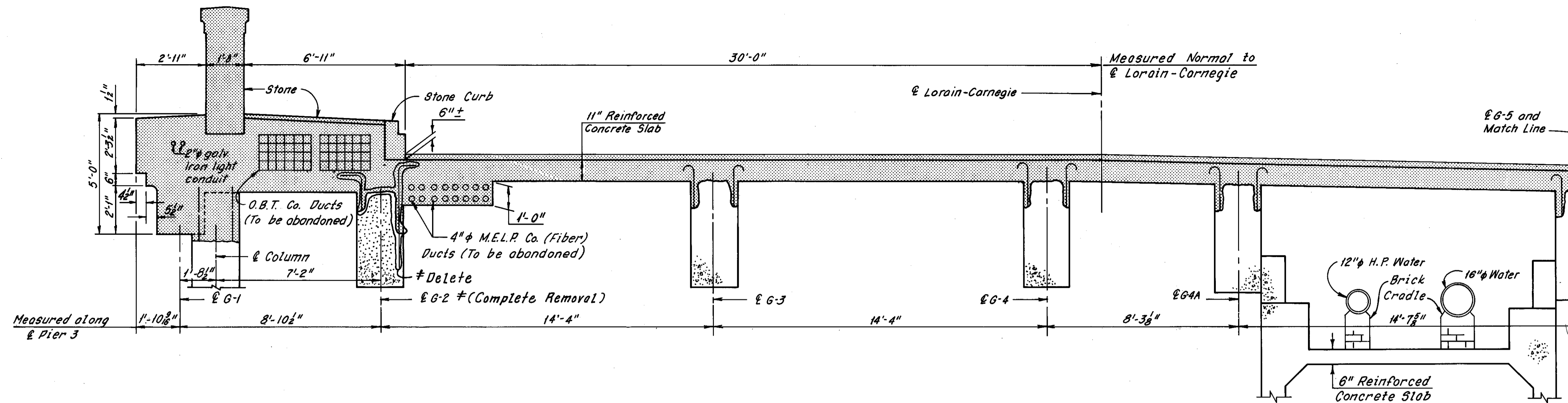
Notes:  
For typical deck and girder removal details, see Sheet 4/31.  
The existing manholes shall be reconstructed to grade. For details, see Sheets 26/31 and 27/31.  
For strut and column removal details, see Sheet 6/31.  
For removal plans at the West Abutment, see Sheets 7/31 thru 9/31.  
For removal plans at the East Abutment, see Sheets 10/31 thru 12/31.  
For removal plans along Pier 3, see Sheets 4/31 and 5/31.  
For stage construction, see Sheet 1/31.

DECK PLAN

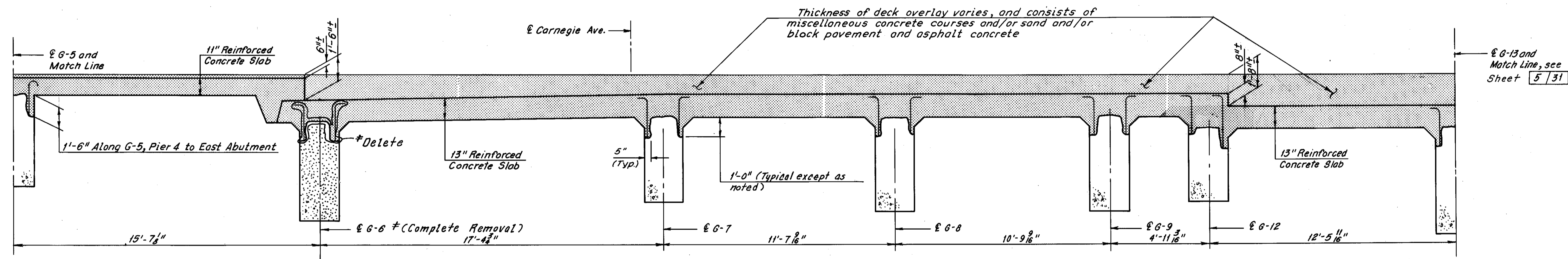
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB
<b>DECK REMOVAL AND FRAMING PLAN</b>		
REHABILITATION OF THE CARNegie AVENUE GRADE SEPARATION STRUCTURE (S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)		
BR. NO. CUY. -10-1685	STA. 57+29.72	STA. 58+85.70
CUYAHOGA COUNTY		OHIO
DRAWN BP DATE 3-20-78	TRACED BP DATE 3-20-78	CHECKED PB DATE 6-7-78
REVIEWED	REVISOR	SHEET 3/31





PART TYPICAL SECTION  
(Columns not shown)



PART TYPICAL SECTION  
(Columns not shown)

**SPECIAL REQUIREMENTS FOR GIRDER 1 AND DECK REMOVAL**

- The girders are under a compressive load from the abutments. Before Girder 1 replacement work begins the Contractor shall temporarily support the abutments at the girder. The supports shall be preloaded to resist a total compressive force of 35 kips at each abutment and shall be retained until the replacement Girder 1 attains its design strength. (For requirements and payment for temporary supports see General Note 9 on Sheet GN-1 and notes on Sheet E-1)
- Suggested deck removal sequence:
  - Laterally support Girders 2 thru 18 at each pier before deck removal operations begin.
  - Remove the deck between girders.
  - Shore girders 2 thru 18 continually throughout their length. Preload the supports with an upward force equal to the weight of the girder and remaining deck (Shoring shall remain in place until the replacement deck attains its design strength).
  - Remove the remaining portion of the deck.
  - An alternate sequence may be submitted to the Director for consideration and approval.

# 3 thru 5 and 7

Notes:  
Zip-a-tone indicates portions of the structure to be removed.  
For Removal Details at Girders 2 thru 13, see Detail A, Sheet 5/31.  
For Framing Plan, see Sheet 3/31.  
For Modified Typical Section at Pier 3, see Sheets 22/31 and 23/31.  
The following abbreviations are used:  
Typ. = Typical  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company  
M.E.L.P. = Municipality Electric Light and Power  
P.E.H.P. = Plain end, high pressure  
H.P. = High Pressure  
All existing reinforcing shown shall be retained. Other existing reinforcing shall be removed, except as noted in Detail A, Sheet 5/31.  
For Stage Construction, see Sheet 1/31.

# All existing reinforcing in backwalls and columns at Girders 2 and 6 shall be cleaned and retained.

# Additional girder removal as determined during bridge reconstruction 4-15-81  
C.K.B.  
REVISION

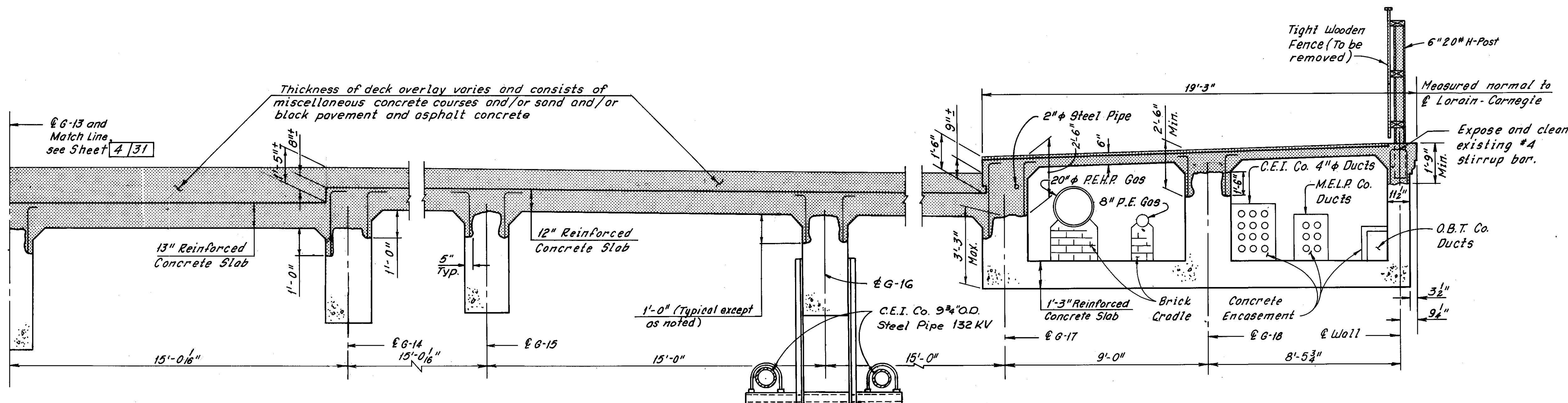
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

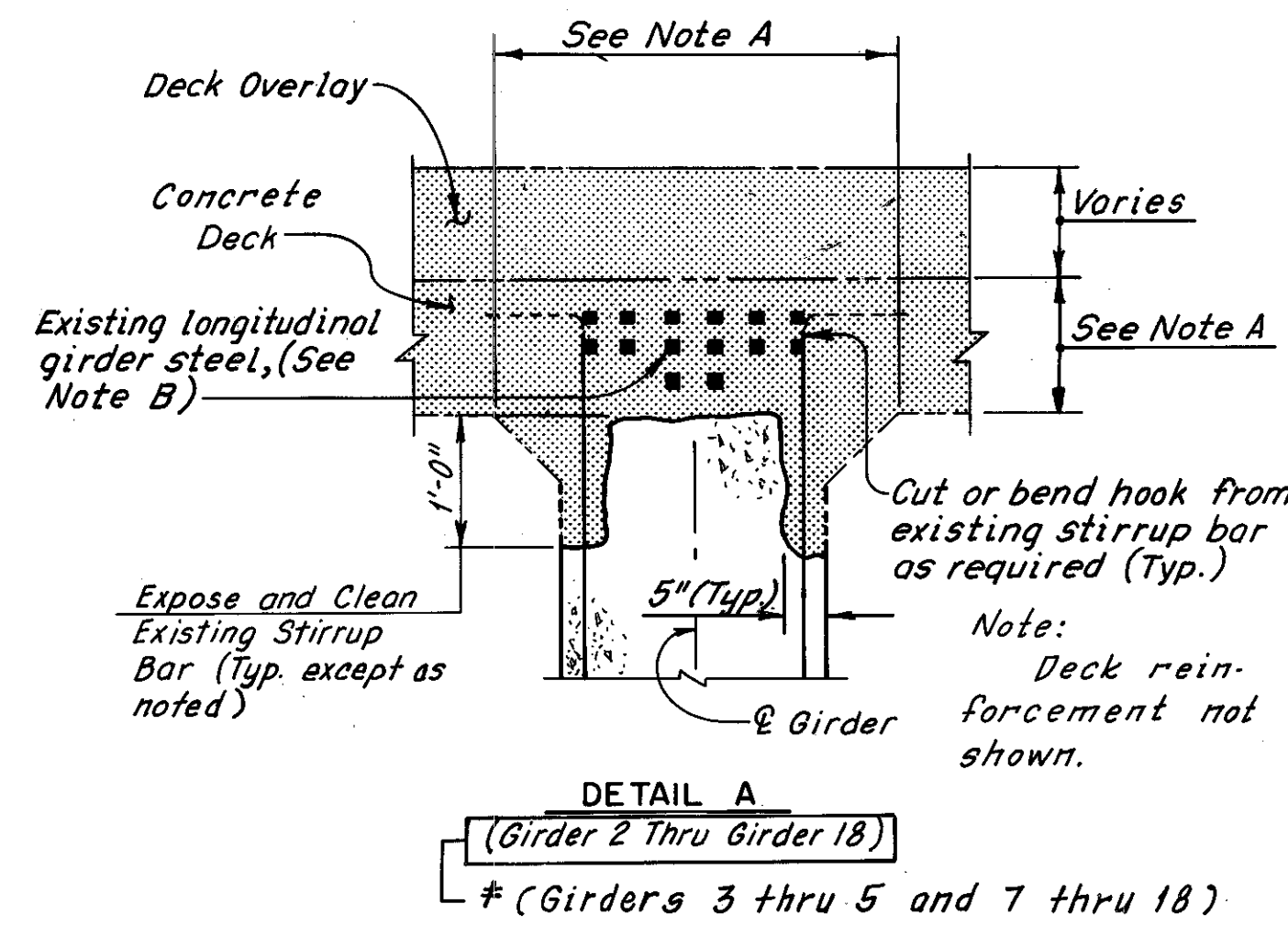
HNTB

REMOVAL PLANS  
TYPICAL SECTION ALONG PIER 3  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
STA. 58+85.70  
OHIO

DRAWN BP	TRACED BP	CHECKED PB	REVIEWED	REVISED 12-5-83
DATE: 5-17-78	DATE: 5-30-78	DATE: 7-7-78	DATE	SHEET 4/31



**PART TYPICAL SECTION**  
(Columns and C.E.I. Protection not shown)



**DETAIL A**  
(Girders 2 Thru Girder 18)  
# (Girders 3 thru 5 and 7 thru 18)

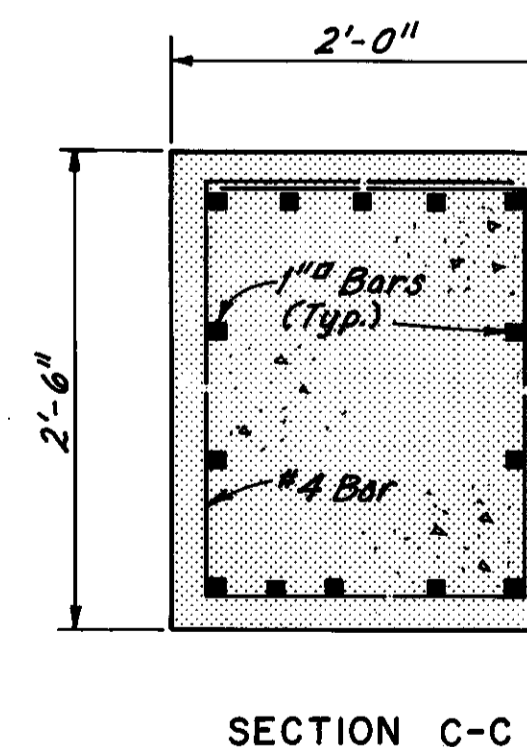
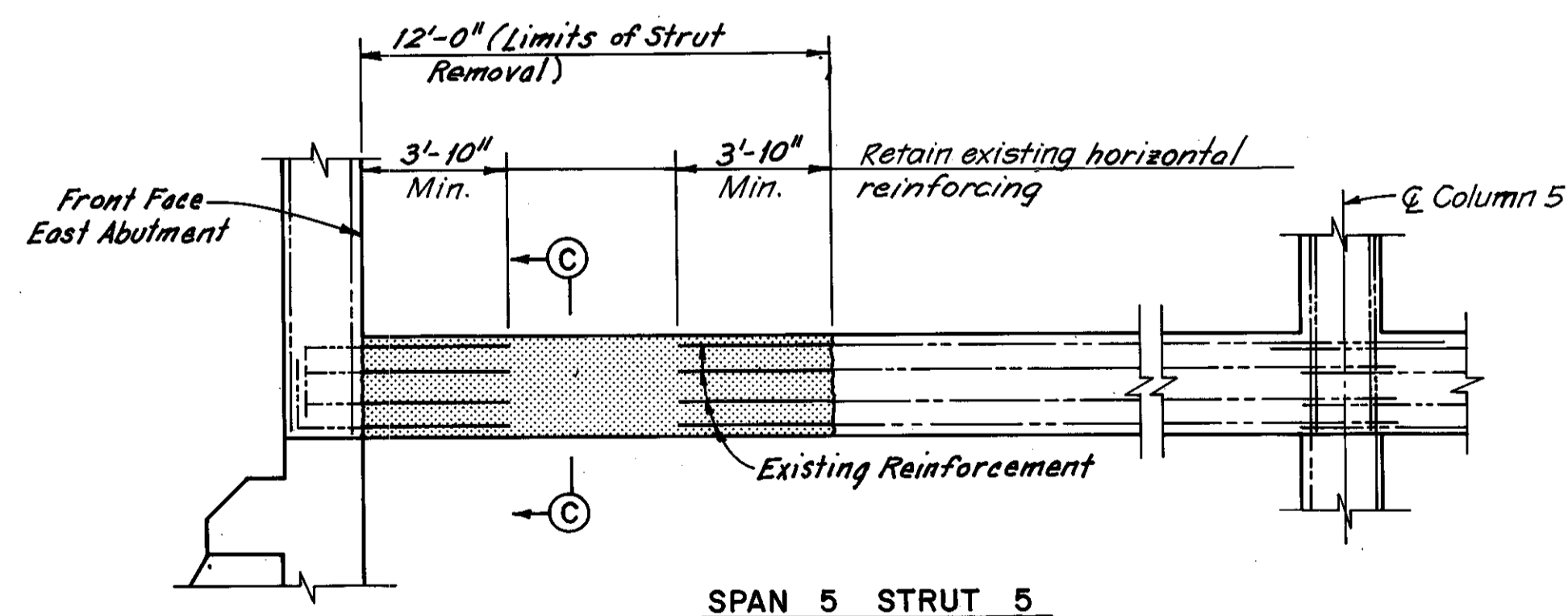
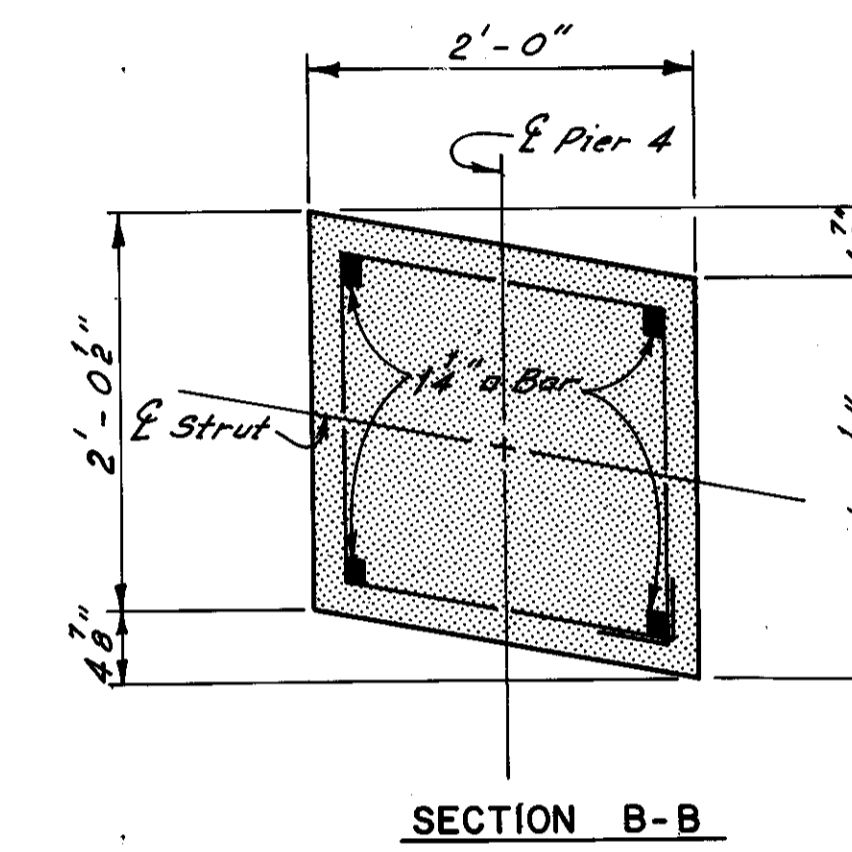
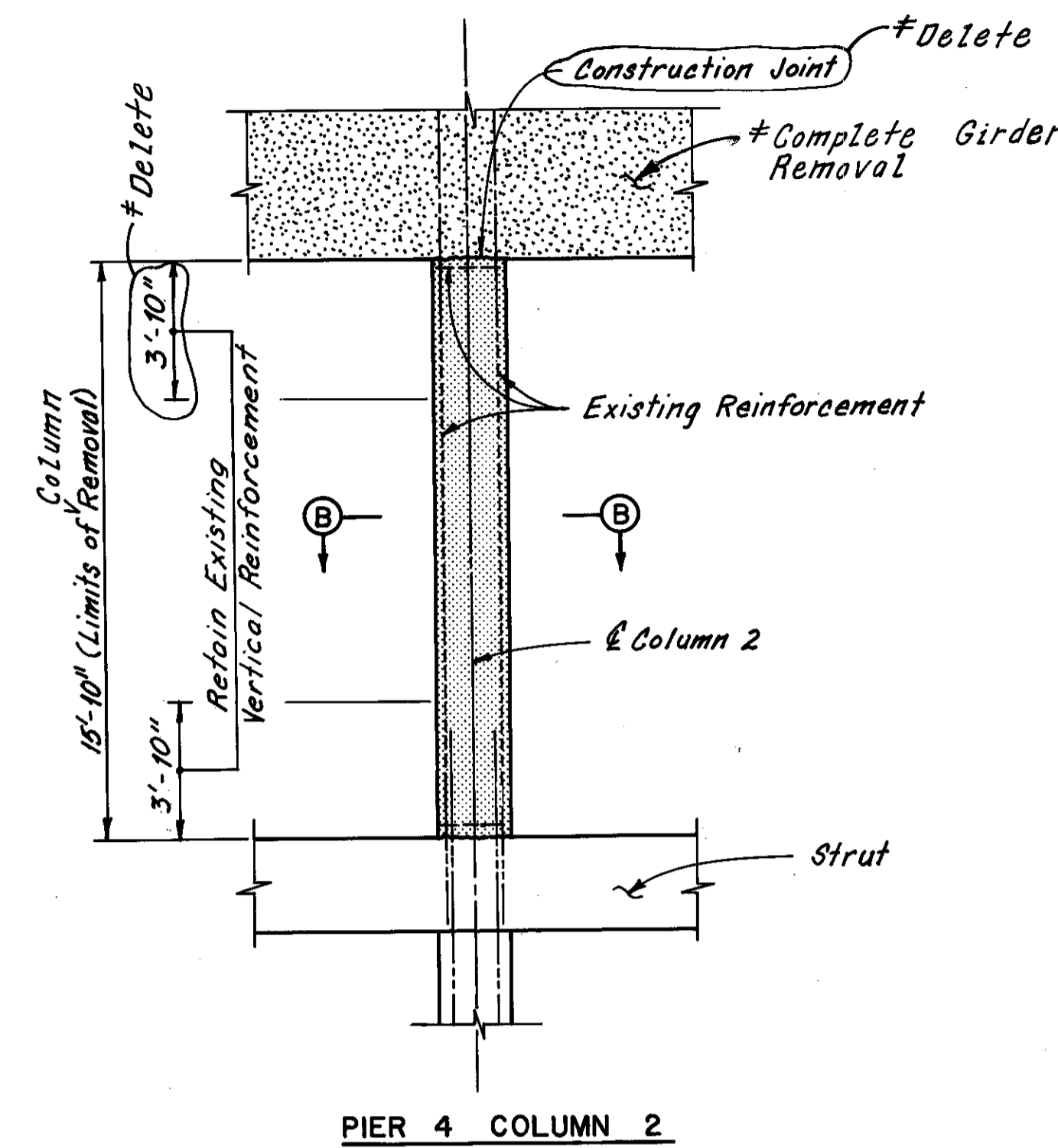
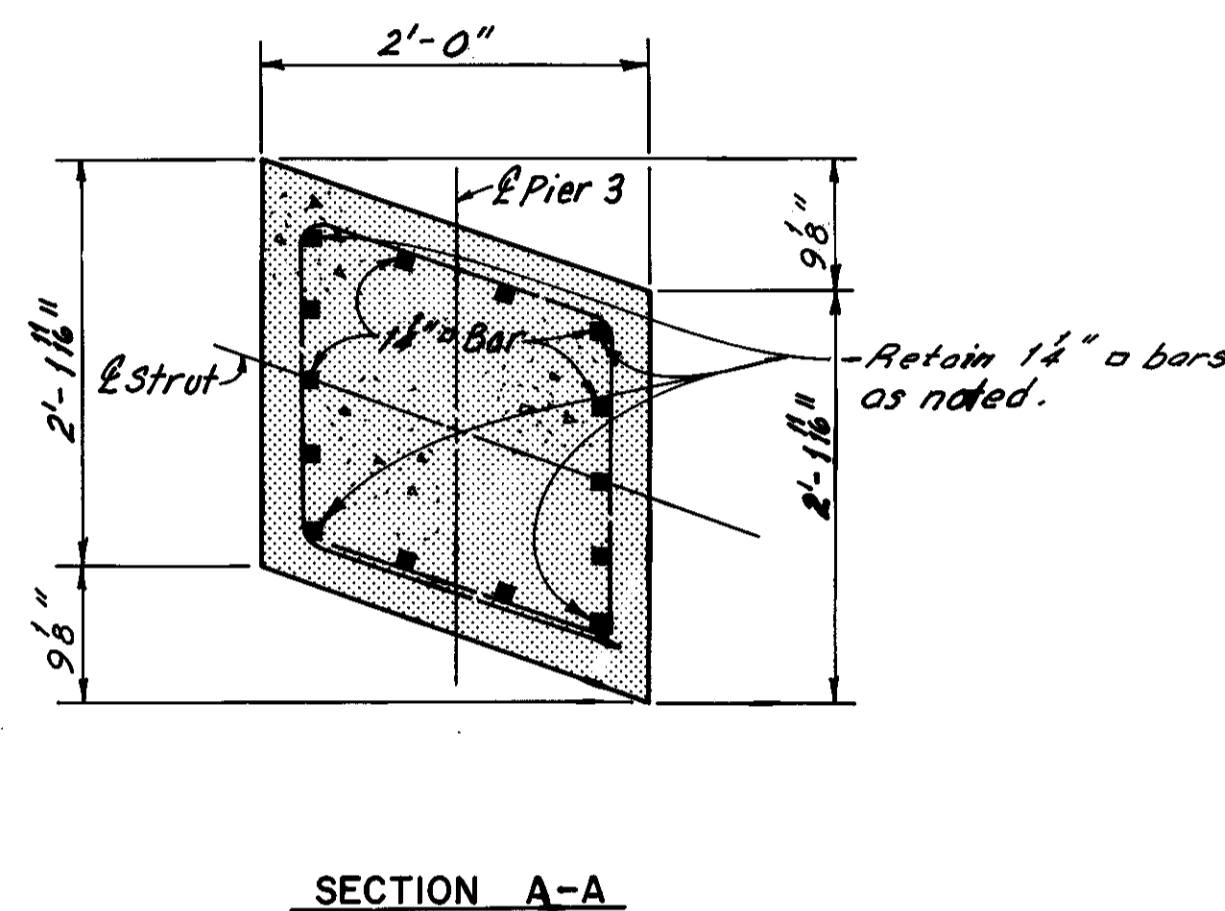
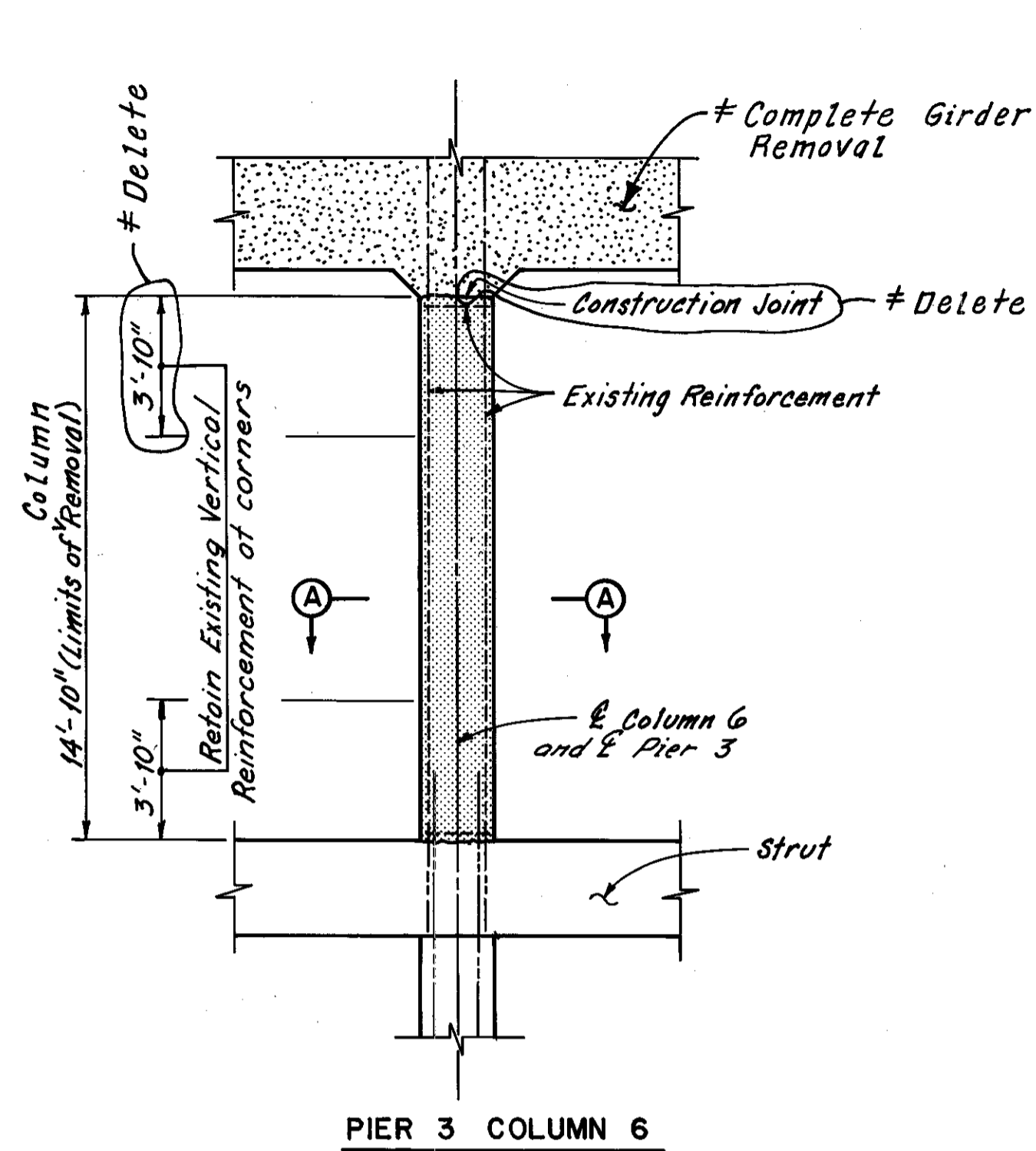
**Note A:**  
Concrete above the girders shall remain in place until the girders have been properly shored. Special requirements for Girder 1 and Deck Removal, see Sheet 4/31.

**Note B:**  
All existing longitudinal girder reinforcement shall be retained except at the option of the Contractor and with the approval of the Engineer new bars may be substituted for the original bars. The new bars may be round or square with a cross-sectional area equal or greater than the original bars. No additional payment will be made for substituting new bars for the original bars.

**Notes:**  
Zip-a-tone indicates portions of the structure to be removed.  
For Framing Plan, see Sheet 3/31.  
For Modified Typical Section at Pier 3, see Sheets 22/31 and 23/31.  
The following abbreviations are used:  
Typ. = Typical  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company  
M.E.L.P. = Municipality Electric Light and Power  
P.E.H.P. = Plain end, high pressure  
H.P. = High Pressure  
All existing reinforcing shown shall be retained. Other existing reinforcing shall be removed, except as noted in Detail A.  
For Stage Construction, see Sheet 1/31.

HNTB BRIDGE NO. 4		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		<b>HNTB</b>	
<b>REMOVAL PLANS</b>					
<b>TYPICAL SECTION ALONG PIER 3</b>					
REHABILITATION OF THE					
CARNegie AVENUE GRADE SEPARATION STRUCTURE					
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.					
AND THE REGIONAL TRANSIT AUTHORITY)					
BR. NO. CUY-10-1685			STA. 57+29.72		
			STA. 58+85.70		
CUYAHOGA COUNTY OHIO					
# Additional girder removal as determined during bridge reconstruction		C.K.B. 4-15-83		REVISION	
DRAWN BP	TRACED BP	CHECKED PB	REVIEWED	REVISED 12-5-83	SHEET 5/31
DATE: 5-17-77	DATE: 3-1-77	DATE: 7-7-78	DATE:		

# Additional girder removal as determined during bridge reconstruction  
C.K.B. 4-15-83  
REVISION



**Special Requirements for Strut Removal**

1. The strut removal and repair shall be accomplished prior to shoring the girders.
2. The strut is under a compressive load from the abutments. Before strut removal work begins, the Contractor shall install temporary supports between Column 5 and the East Abutment as close as possible to the strut top. The supports shall be preloaded with a total load 153.5 kips and this load shall be retained until the replacement strut attains design strength.

Note:  
Zig-zag indicates portions of structure to be removed.  
For strut and column repair details, see Sheet 19/31.  
For member identification plans, see Sheet 2/31.

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

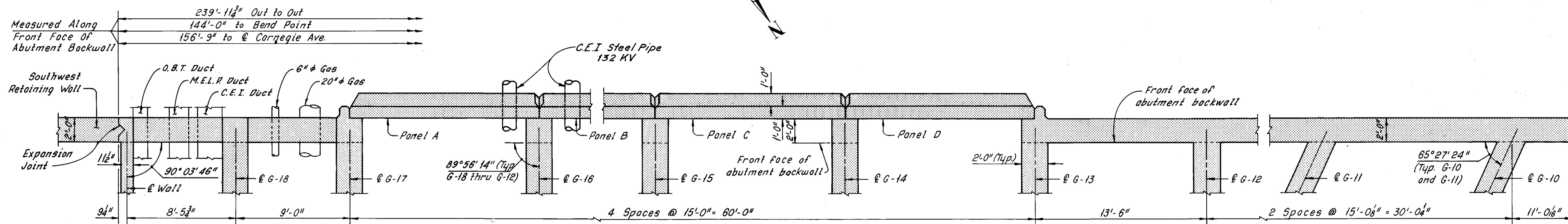
**HNTB**

STRUT AND COLUMN  
REMOVAL DETAILS  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
STA. 58+85.70

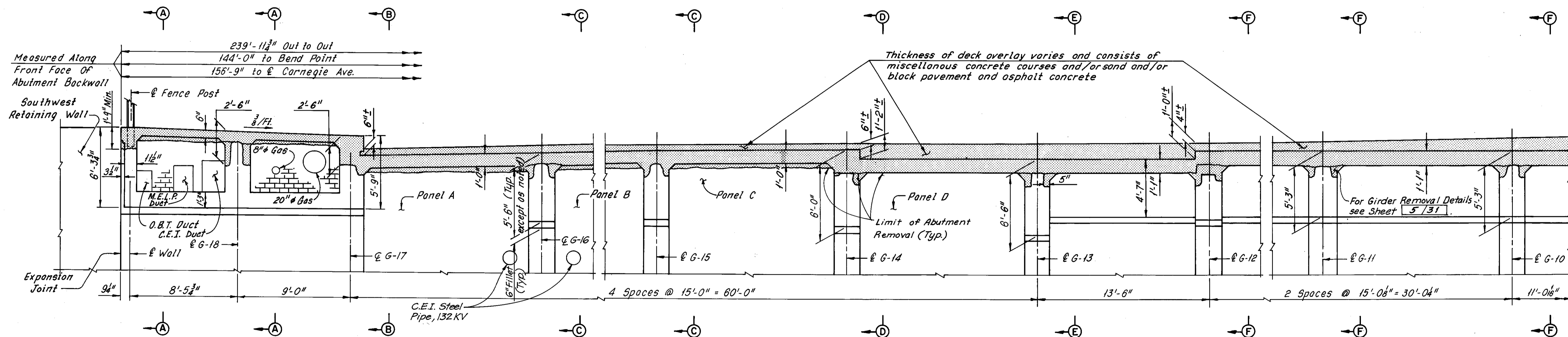
CUYAHOGA COUNTY OHIO

Additional girder removal as determined during bridge reconstruction  
REVISION  
C.K.B. 4-15-81

DRAWN AUT	TRACED DES	CHECKED RAS	REVIEWED	REVISED 12-5-83
DATE 8-1-78	DATE 8-3-78	DATE 9-6-78	DATE	SHEET 6/31



PART PLAN - WEST ABUTMENT  
(Slab not shown)



PART ELEVATION - WEST ABUTMENT

Note:  
All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 14/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

Notes:  
Zip-a-tone indicates portions of the structure to be removed.  
For Sections A-A thru F-F, see Sheet 9/31.  
For Modified West Abutment Details, see Sheets 13/31 thru 15/31.  
The following abbreviations are used:  
Typ. = Typical  
M.E.L.P. = Municipal Electric Light and Power  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company  
For Stage Construction, see Sheet 1/31.

HNTB BRIDGE NO. 4

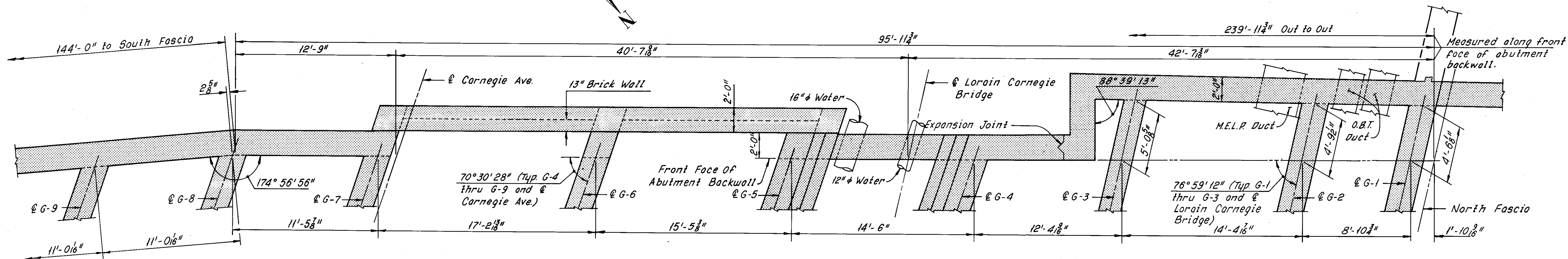
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

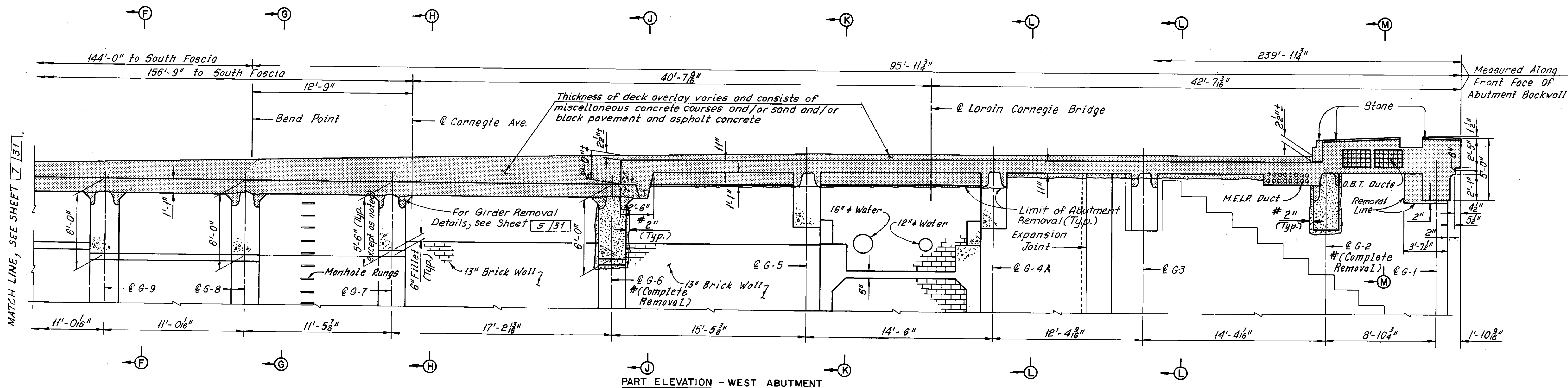
REMOVAL PLANS  
WEST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
BP	BP	PB		
DATE: 3-17-75	DATE: 10-13-76	DATE: 7-7-78	DATE:	

SHEET 7 / 31



PART PLAN - WEST ABUTMENT  
(Slab not shown)



PART ELEVATION - WEST ABUTMENT

Note:  
All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 14/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

#Additional girder removal as determined during bridge reconstruction C.K.B. 4-16-81  
REVISION

Notes:  
Zip-a-tone indicates portions of the structure to be removed.  
For Sections F-F thru M-M, see Sheet 9/31.  
For modified West Abutment details, see Sheets 13/31 thru 15/31.  
The following abbreviations are used:  
Typ. = Typical  
M.E.L.P. = Municipal Electric Light and Power  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company

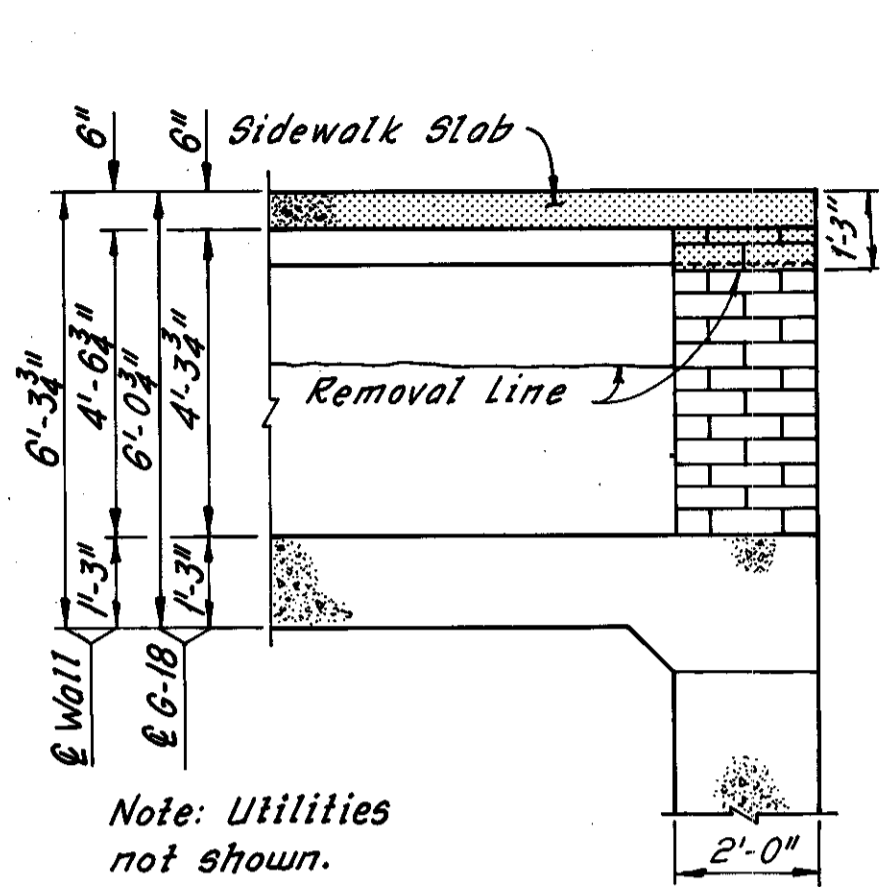
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

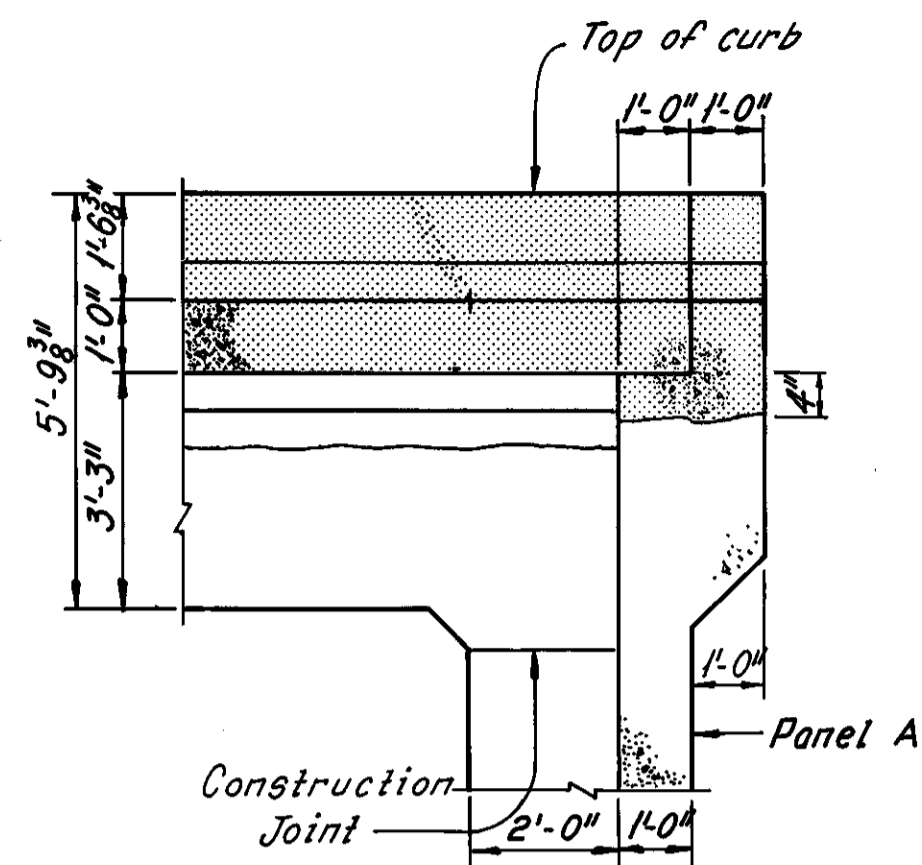
**HNTB**

**REMOVAL PLANS  
WEST ABUTMENT**  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70 OHIO

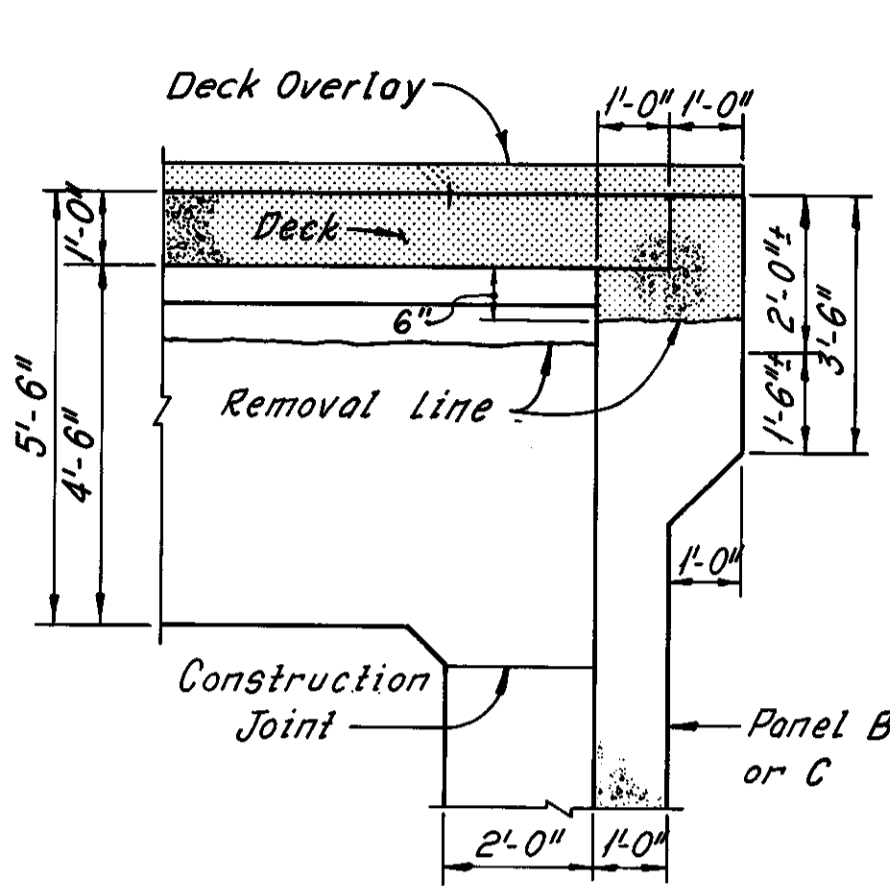
DRAWN B.P.	TRACED P.B.	CHECKED P.B.	REVIEWED DATE	REVISED 12-5-83
DATE 3-18-78	DATE 10-13-78	DATE 7-7-78	DATE	SHEET 8/31



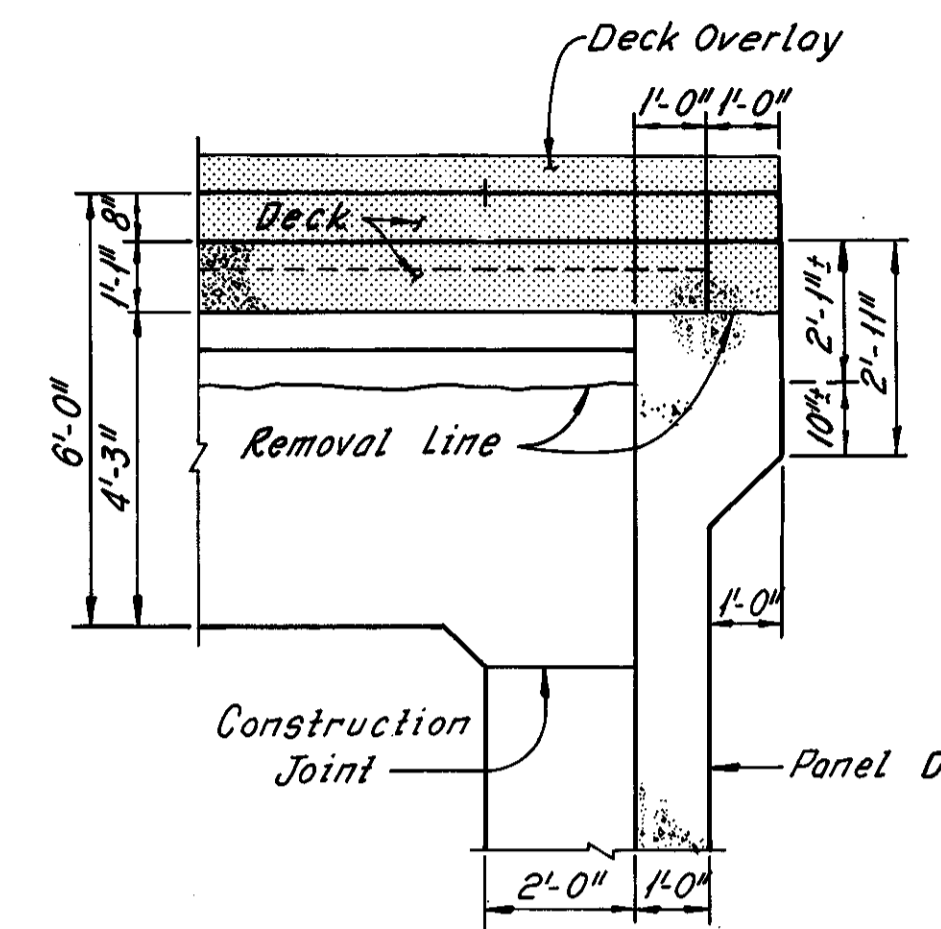
SECTION A-A



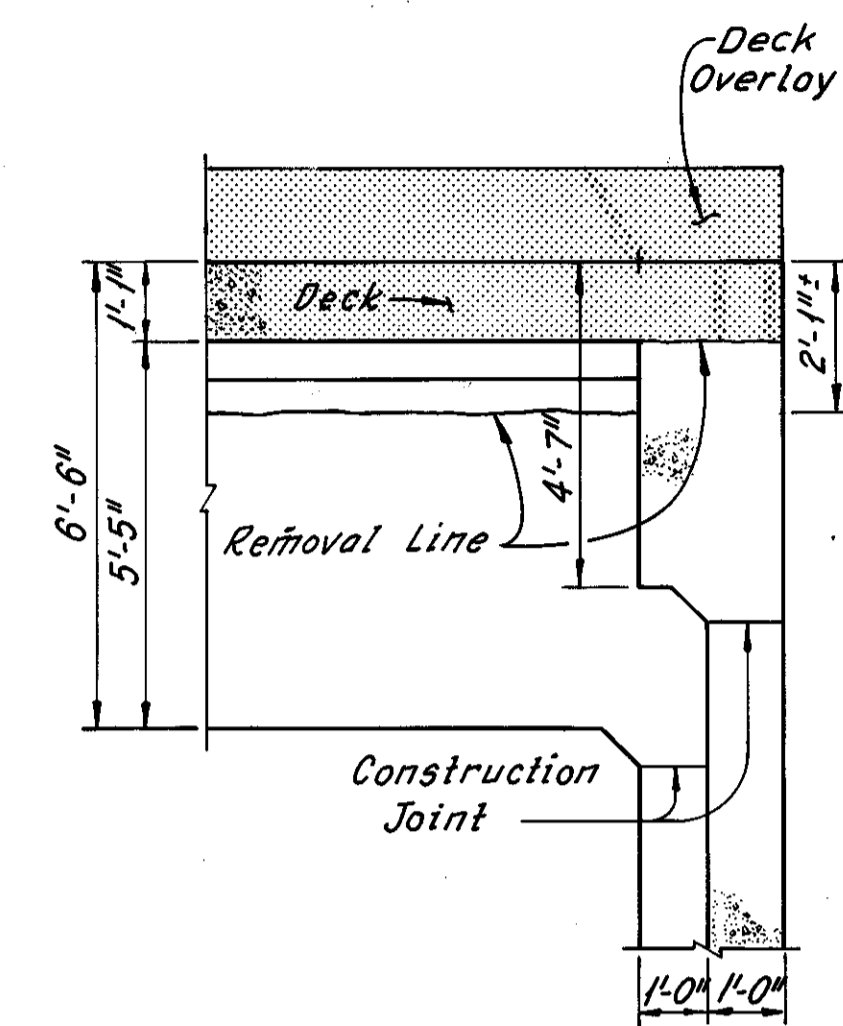
SECTION B-B



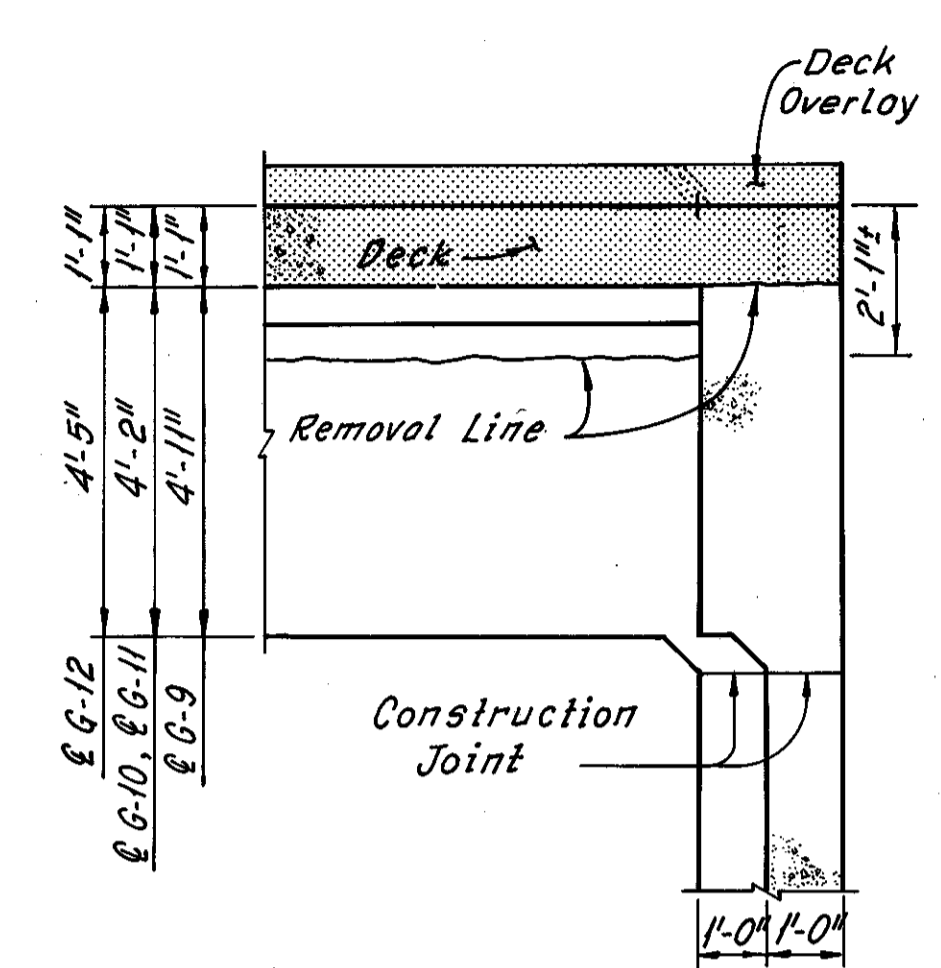
SECTION C-C



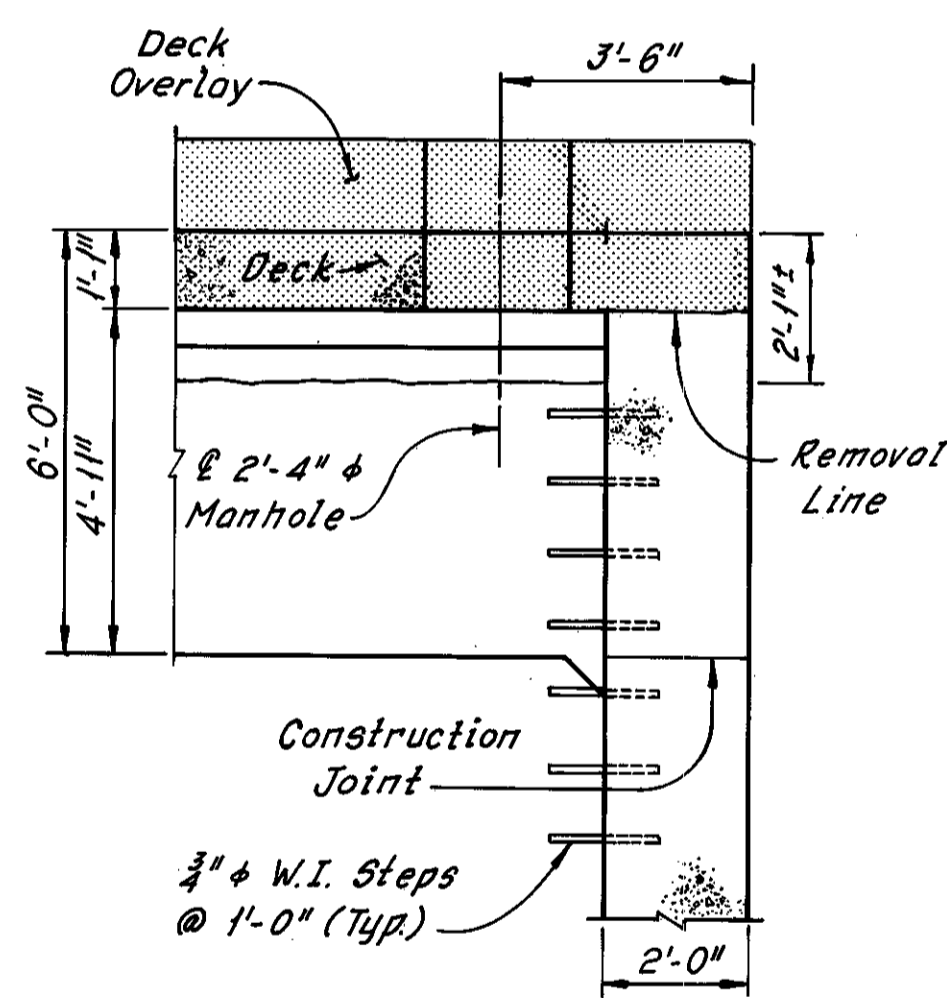
SECTION D-D



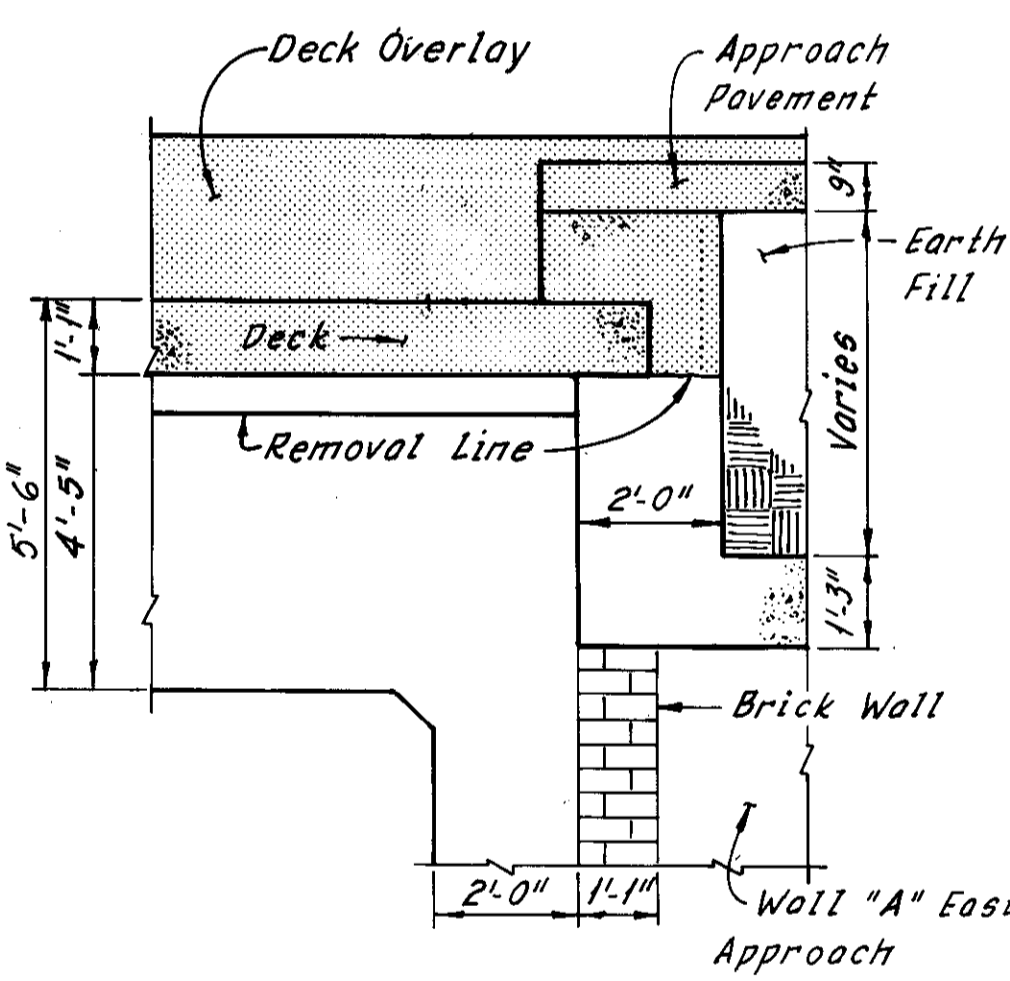
SECTION E-E



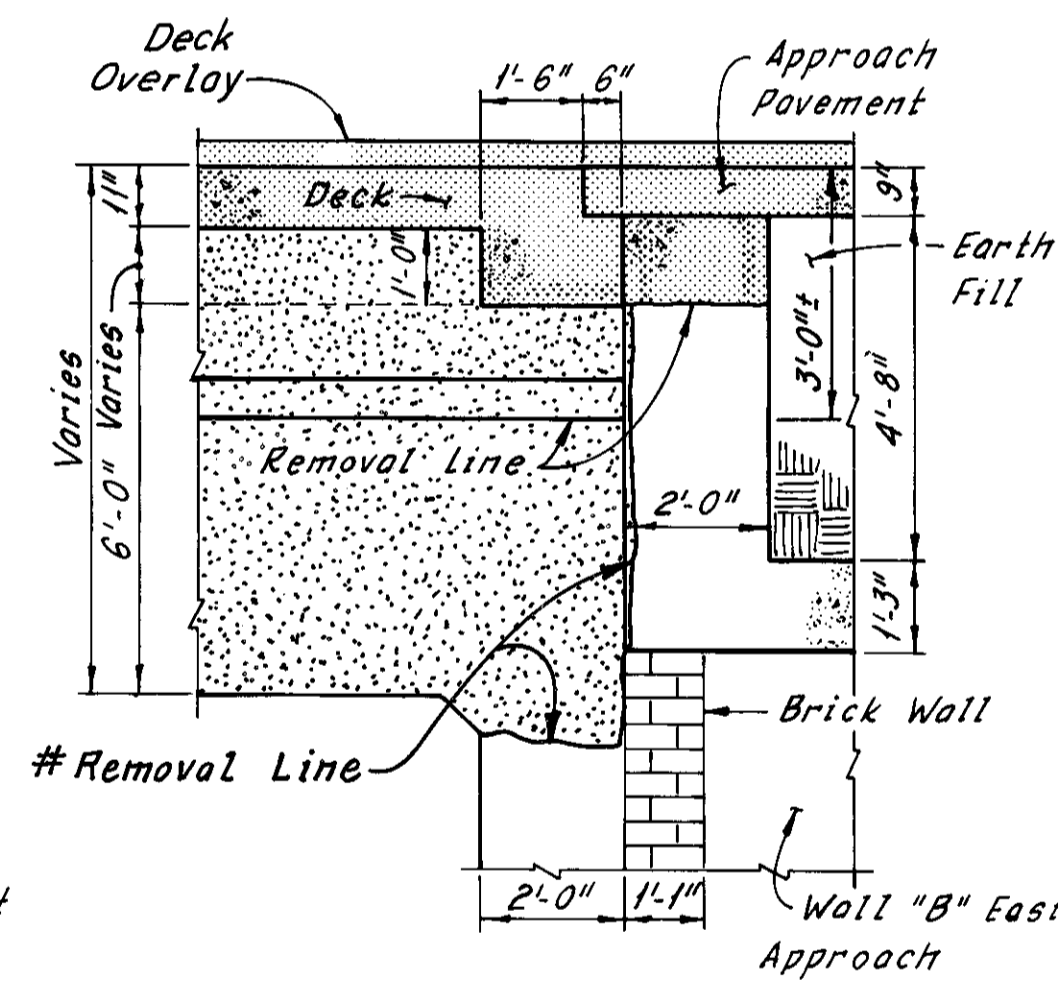
SECTION F-F



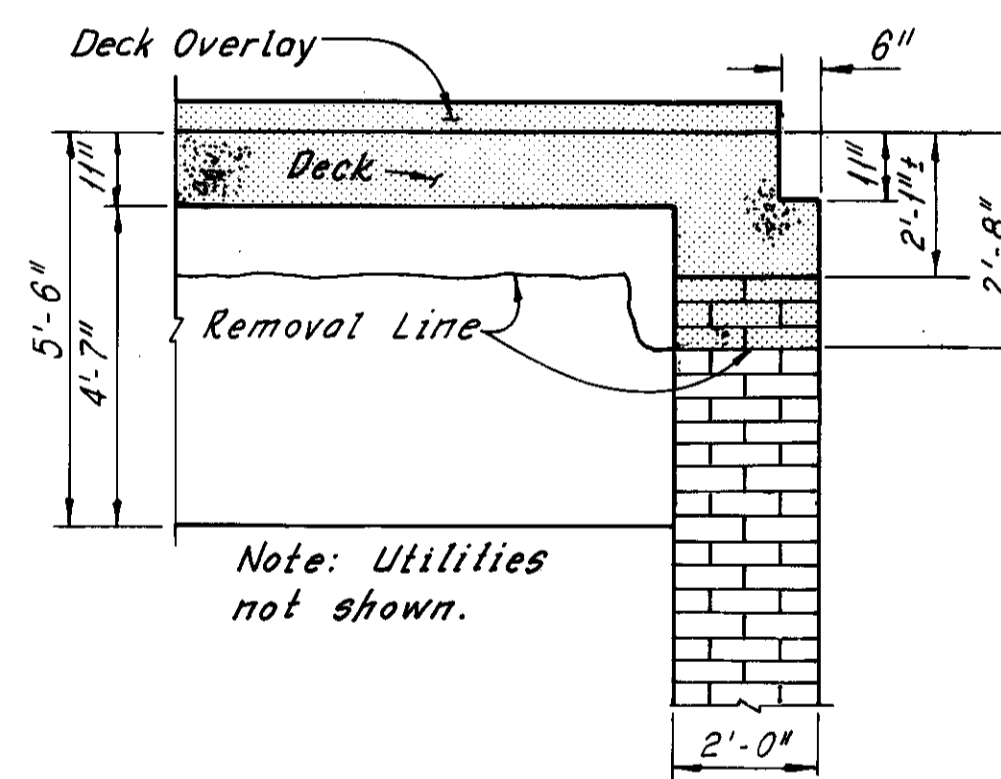
SECTION G-G



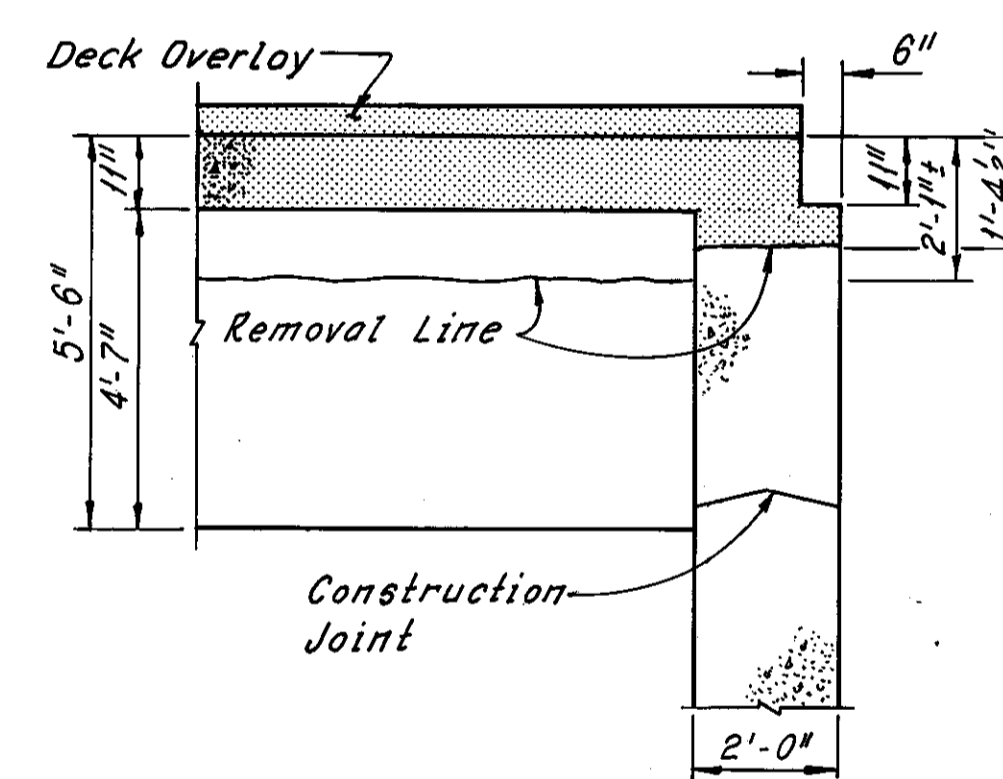
SECTION H-H



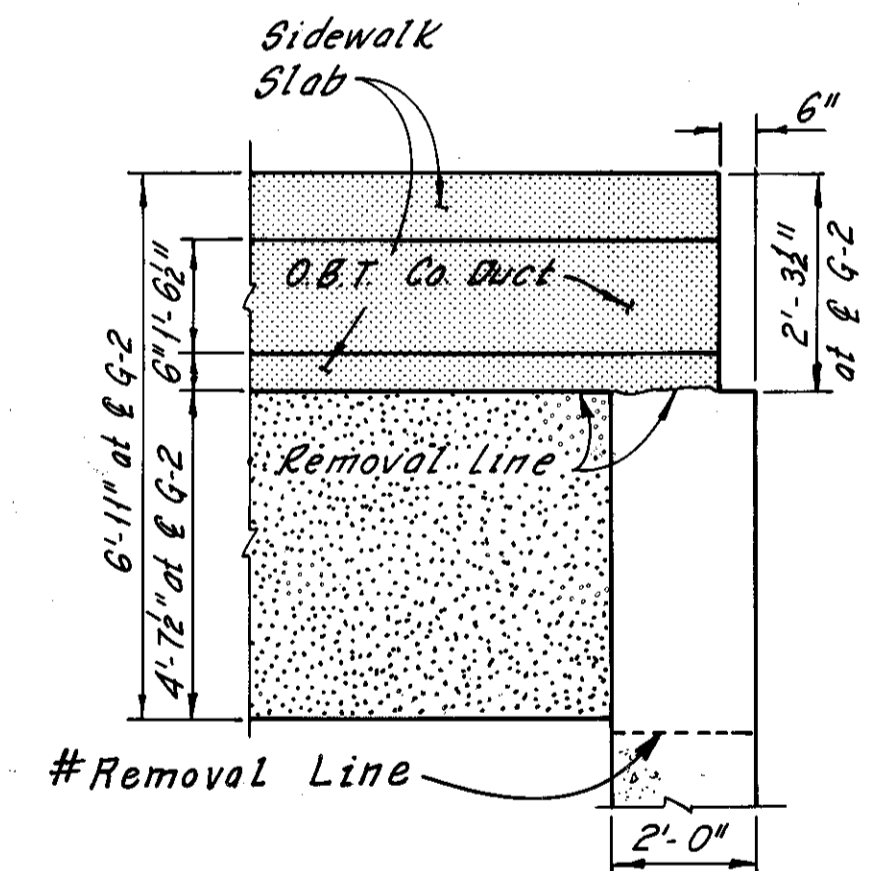
SECTION J-J



SECTION K-K



SECTION L-L



SECTION M-M

Note:  
Existing reinforcement not shown. All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck slab shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 14/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

Notes:  
Zip-a-tone indicates portions of structure to be removed.  
For limits of existing girder removal, see Detail A, Sheet 5/31.  
For location of Sections A-A thru F-F, see Sheet 7/31.  
For location of Sections F-F thru M-M, see Sheet 8/31.

HNTB BRIDGE NO. 4

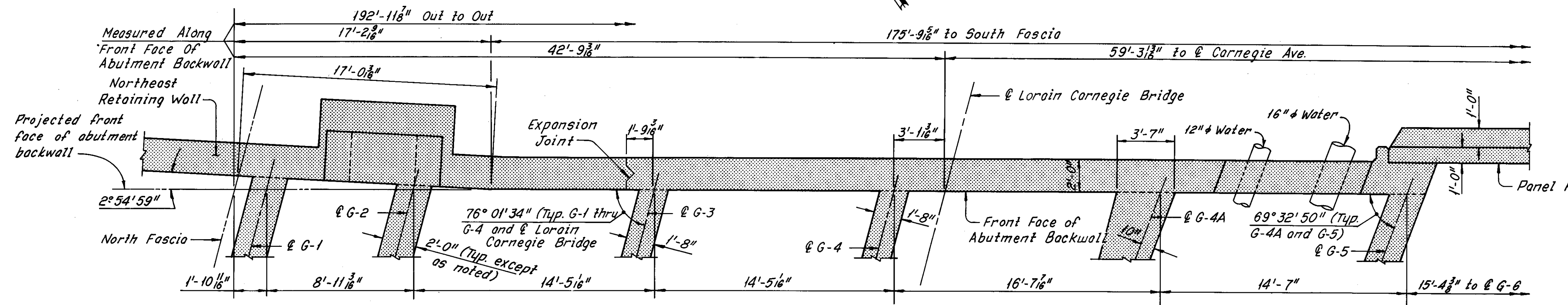
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

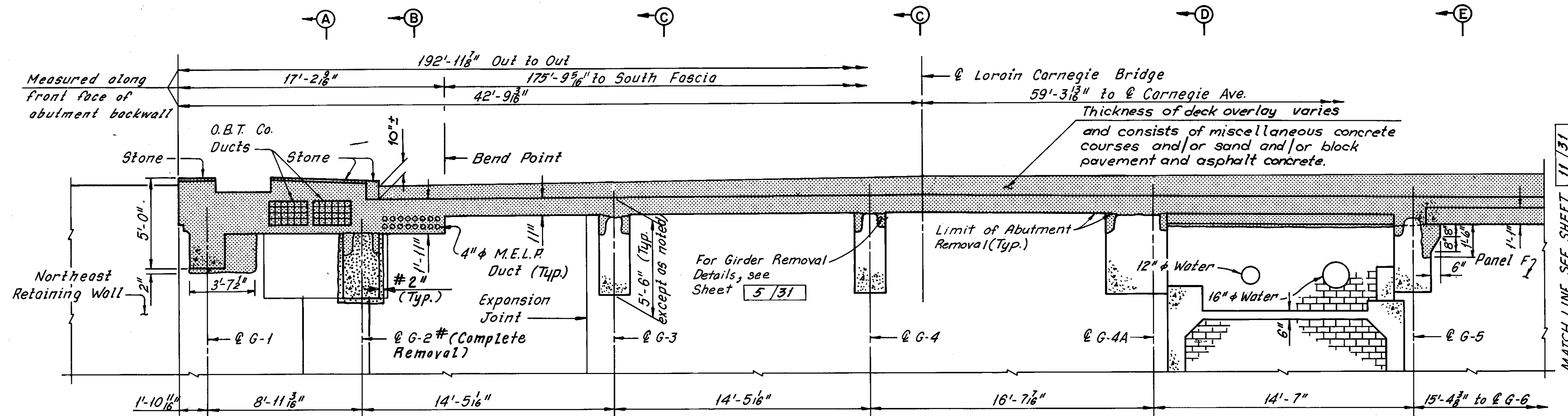
REMOVAL PLANS  
WEST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY-10-1685 STA. 57+29.72  
STA. 58+85.70  
CUYAHOGA COUNTY OHIO

#Additional girder removal as determined during bridge reconstruction 4-16-81 C.K.B.  
REVISION

DRAWN BP DATE 3-17-75	TRACED BP DATE 10-13-75	CHECKED FB DATE 7-7-78	REVIEWED DATE	REVISED 12-5-83 SHEET 9/31
-----------------------------	-------------------------------	------------------------------	------------------	----------------------------------



PART PLAN - EAST ABUTMENT  
(Slab not shown)



PART ELEVATION - EAST ABUTMENT

Note:  
All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck slab shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 16/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

Notes:  
Zip-a-tone indicates portions of the structure to be removed.  
For Sections A-A thru E-E, see Sheet 12/31.  
For modified East Abutment details, see Sheets 16/31 thru 18/31.  
The following abbreviations are used:  
Typ. = Typical  
M.E.L.P. = Municipal Electric Light and Power  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company

#Additional girder removal as determined during bridge reconstruction  
C.K.B.  
4-16-81  
REVISION

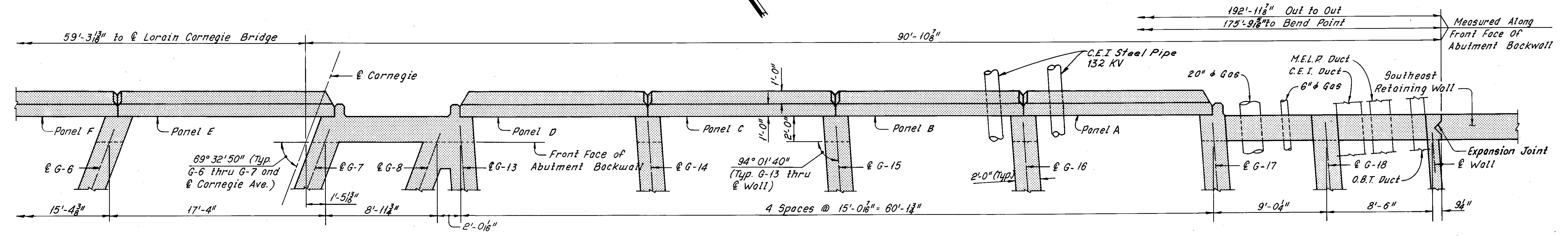
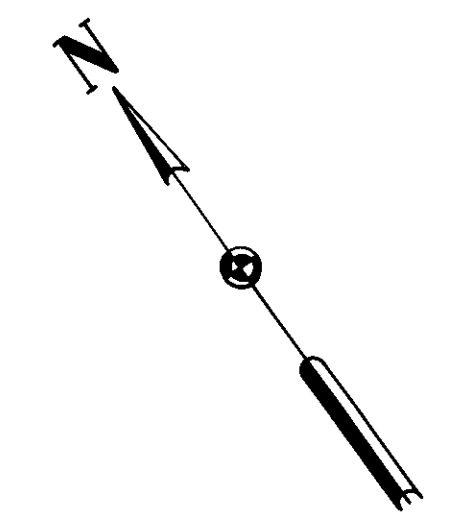
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

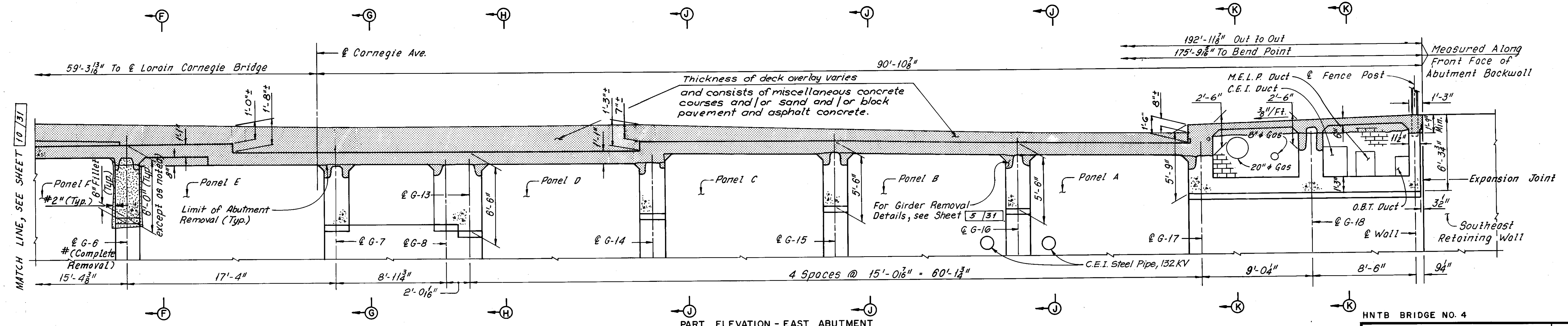
HNTB

REMOVAL PLANS  
EAST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

DRAWN B.P.	TRACED B.P.	CHECKED P.B.	REVIEWED	REVISED 12-5-83
DATE 3-17-75	DATE 10-10-75	DATE 7-7-78	DATE	SHEET 10/31



PART PLAN - EAST ABUTMENT  
(Slab not shown)



PART ELEVATION - EAST ABUTMENT

MATCH LINE, SEE SHEET 10/31

Note:  
All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck slab shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 16/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

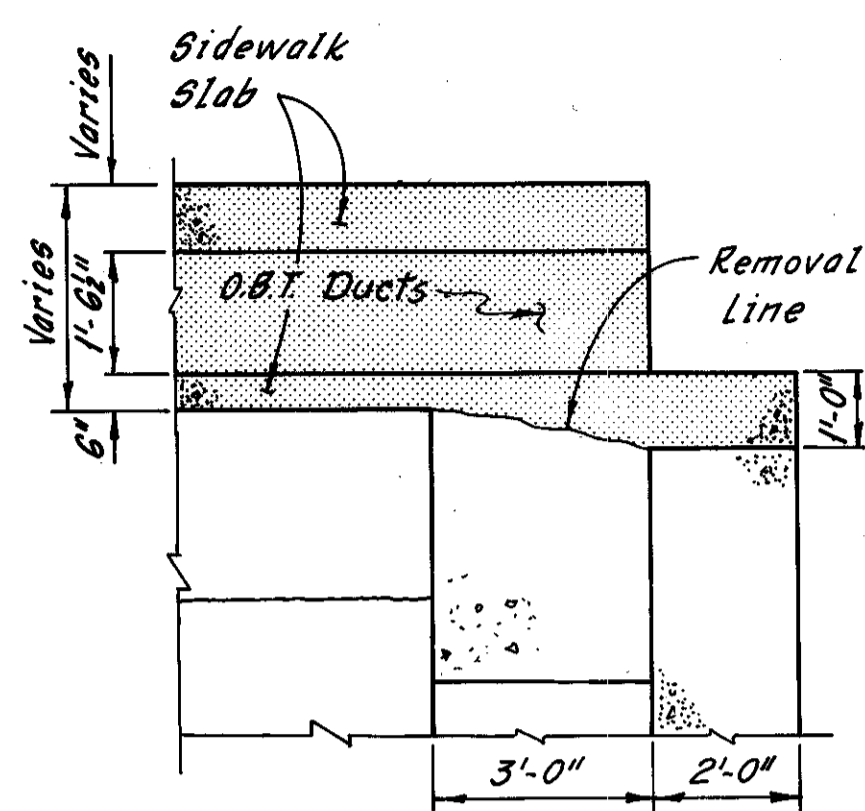
\*Additional girder removal as determined during bridge reconstruction  
REVISION  
C.K.B. 4-16-81

Notes:  
Zip-a-tone indicates portions of the structure to be removed.  
For Sections F-F thru K-K, see Sheet 12/31.  
For modified East Abutment details, see Sheets 16/31 thru 18/31.  
The following abbreviations are used:  
Typ. = Typical  
M.E.L.P. = Municipal Electric Light and Power  
O.B.T. = Ohio Bell Telephone Company  
C.E.I. = Cleveland Electric Illuminating Company  
For stage construction, see Sheet 1/31.

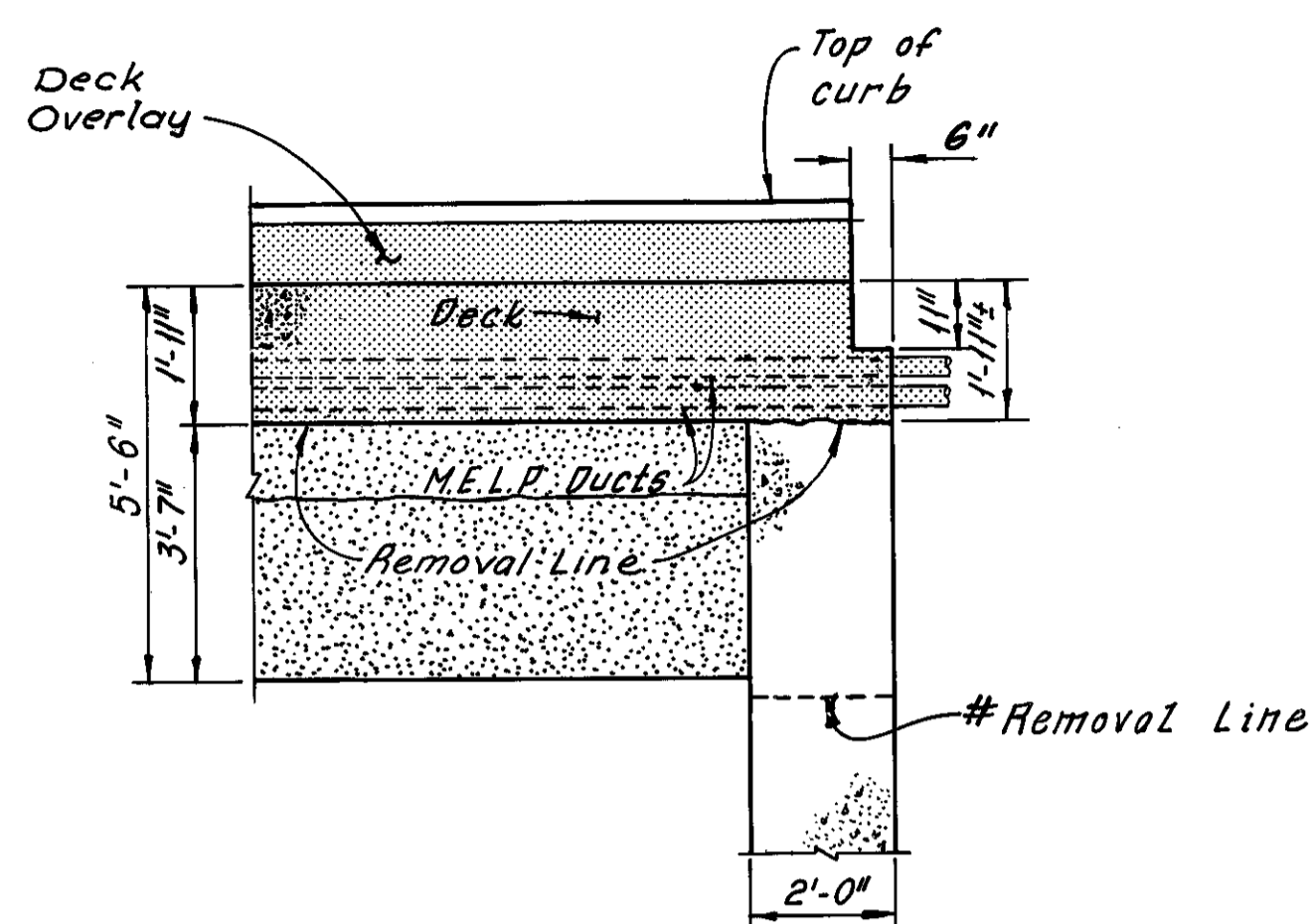
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB
<b>REMOVAL PLANS EAST ABUTMENT</b>		
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY) BR. NO. CUY. 10-1685 STA. 57+29.72 CUYAHOGA COUNTY OHIO STA. 58+85.70		
DRAWN BP DATE 3-17-75	TRACED BP DATE 10-10-75	CHECKED PB DATE 7-7-75
REVIEWED DATE		REVISED 12-5-83 SHEET 11/31

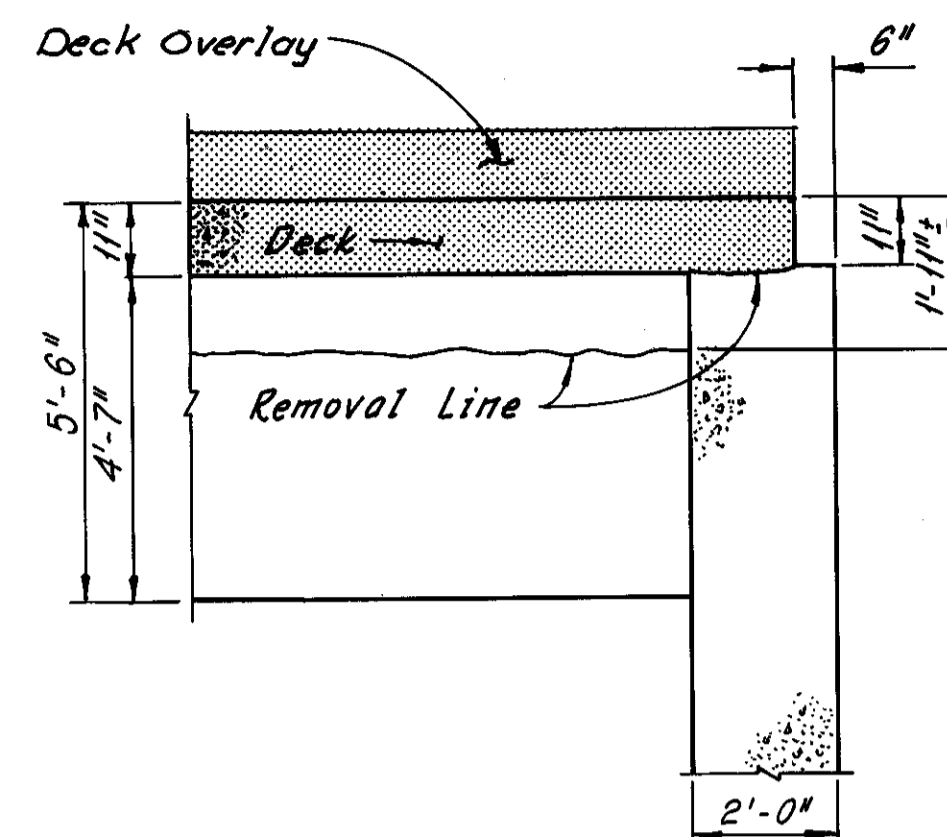




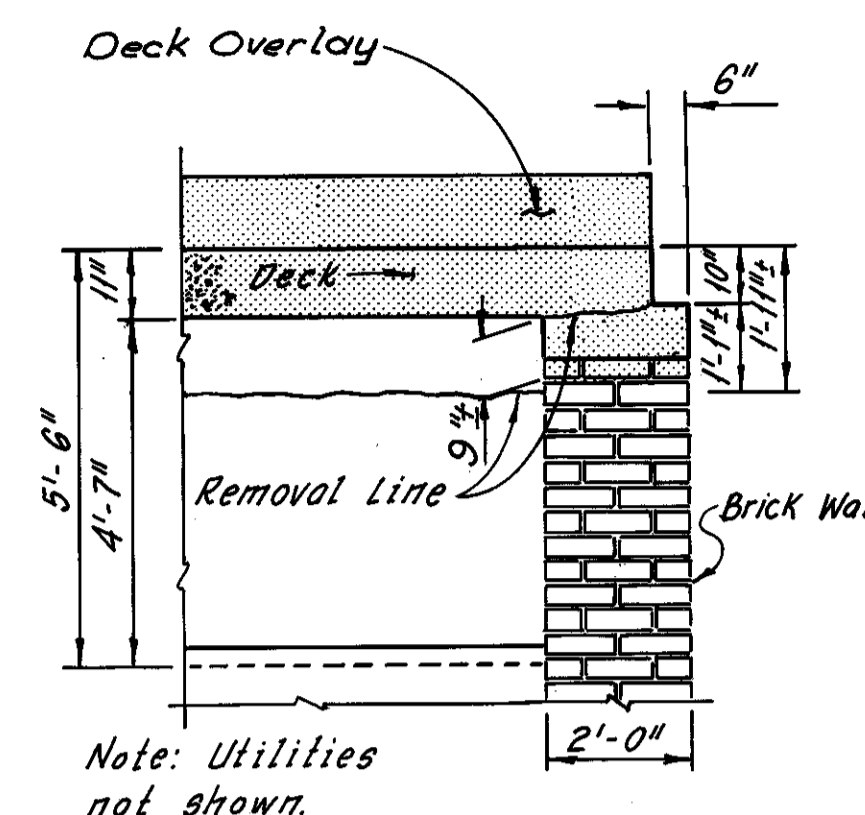
SECTION A-A



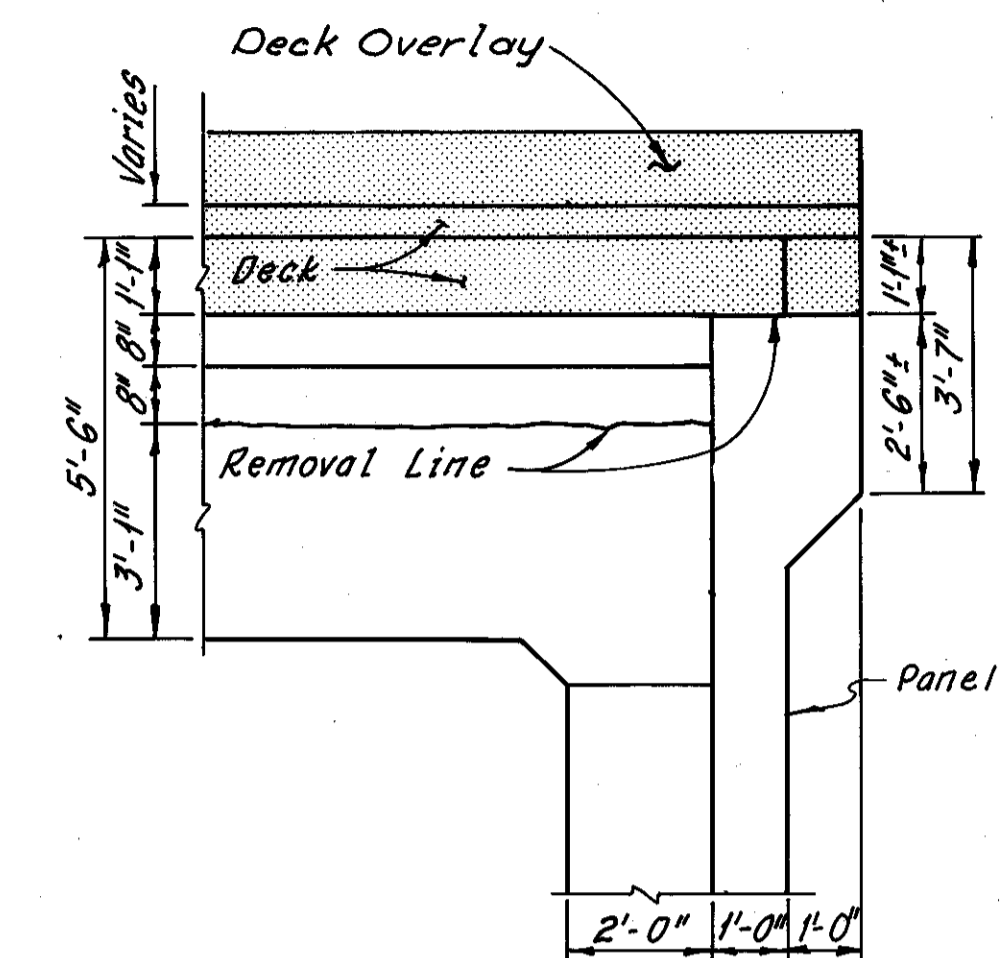
SECTION B-B



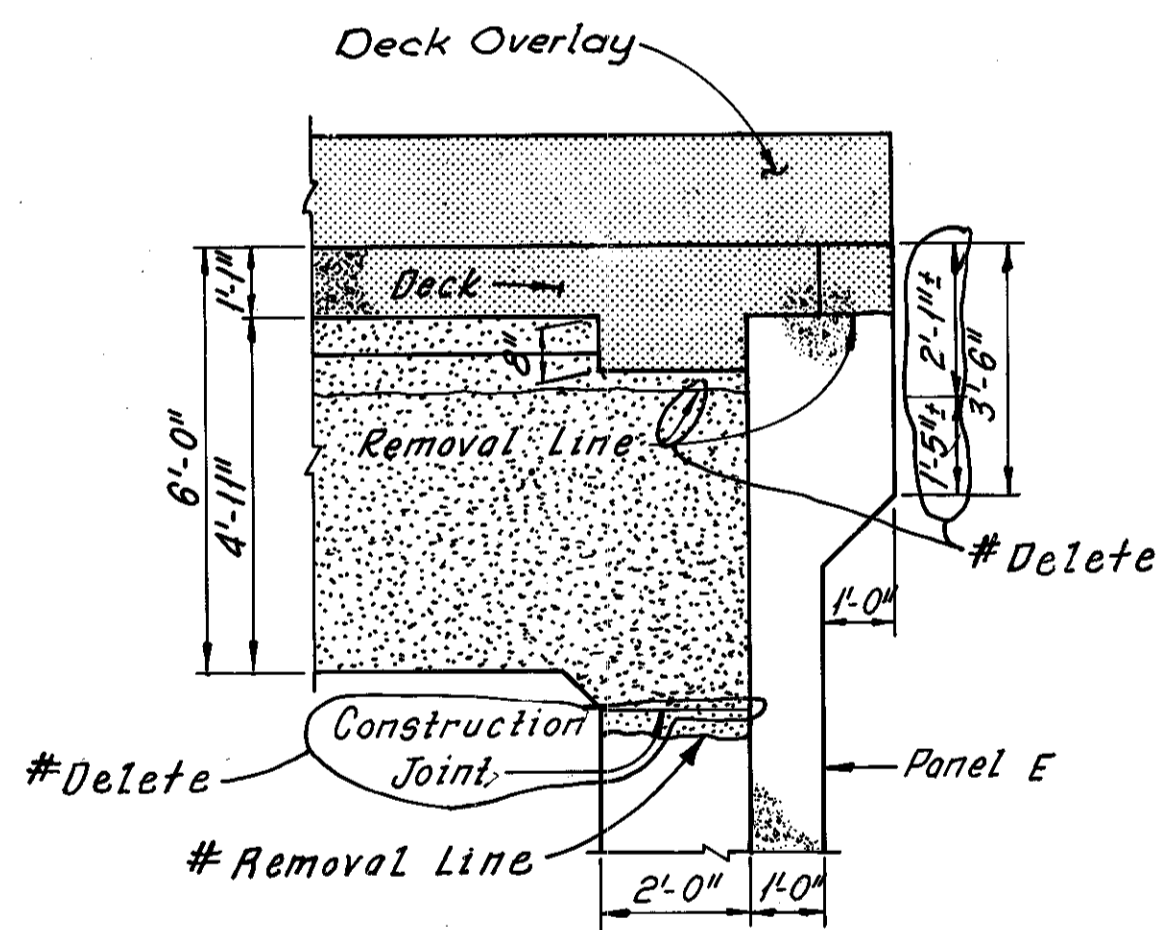
SECTION C-C



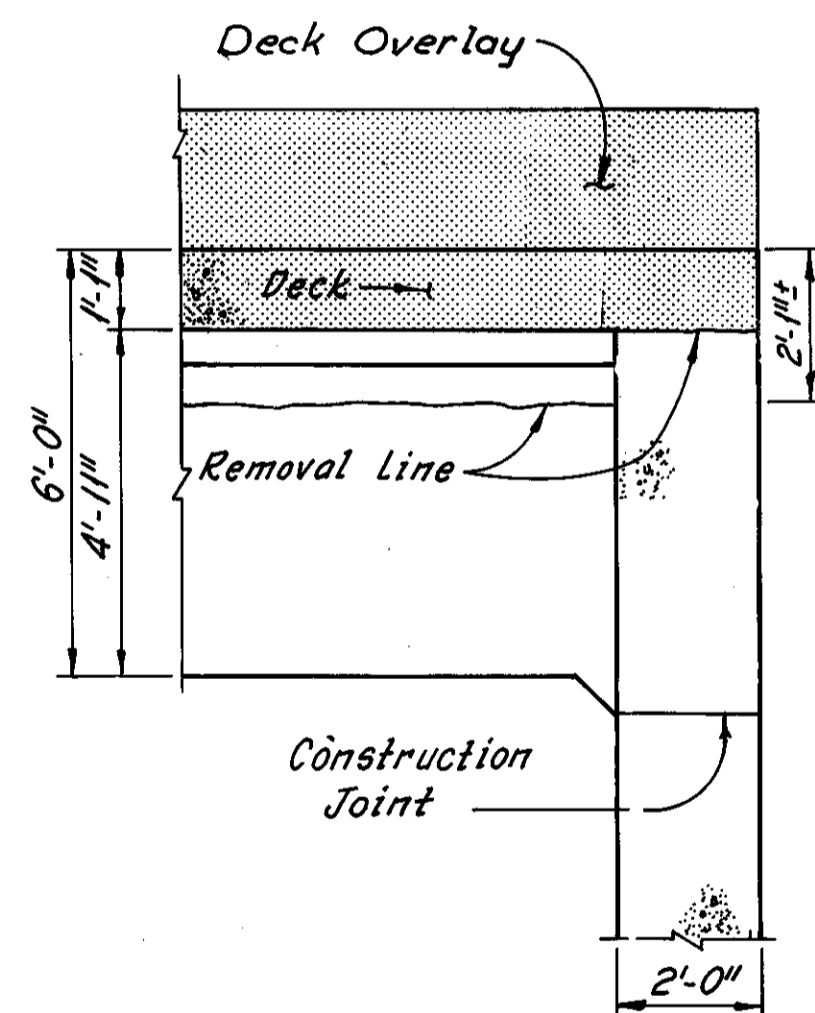
SECTION D-D



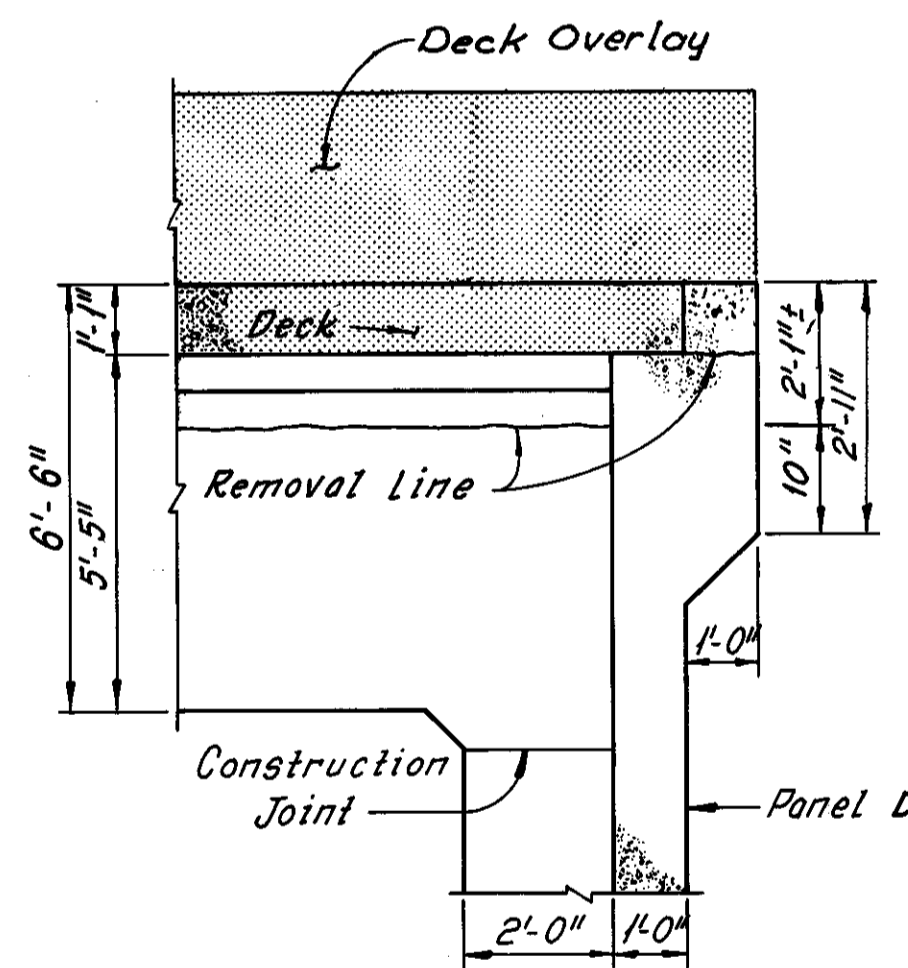
SECTION E-E



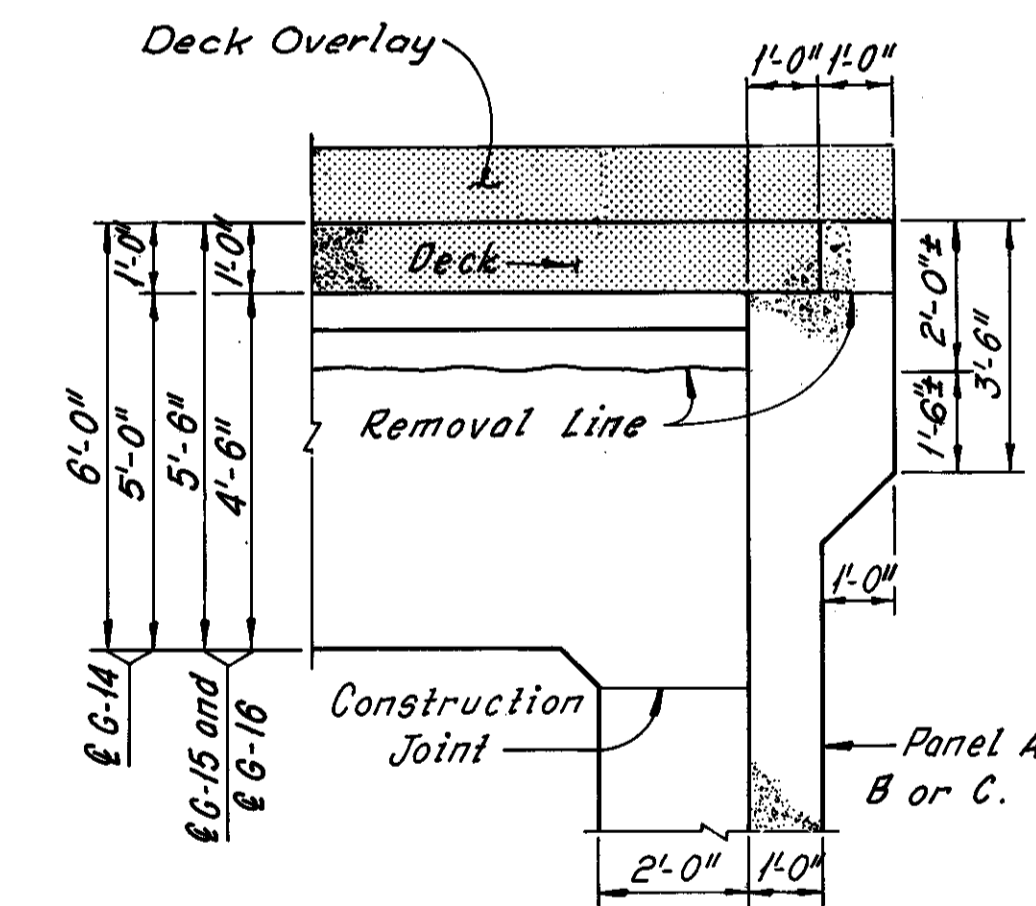
SECTION F-F



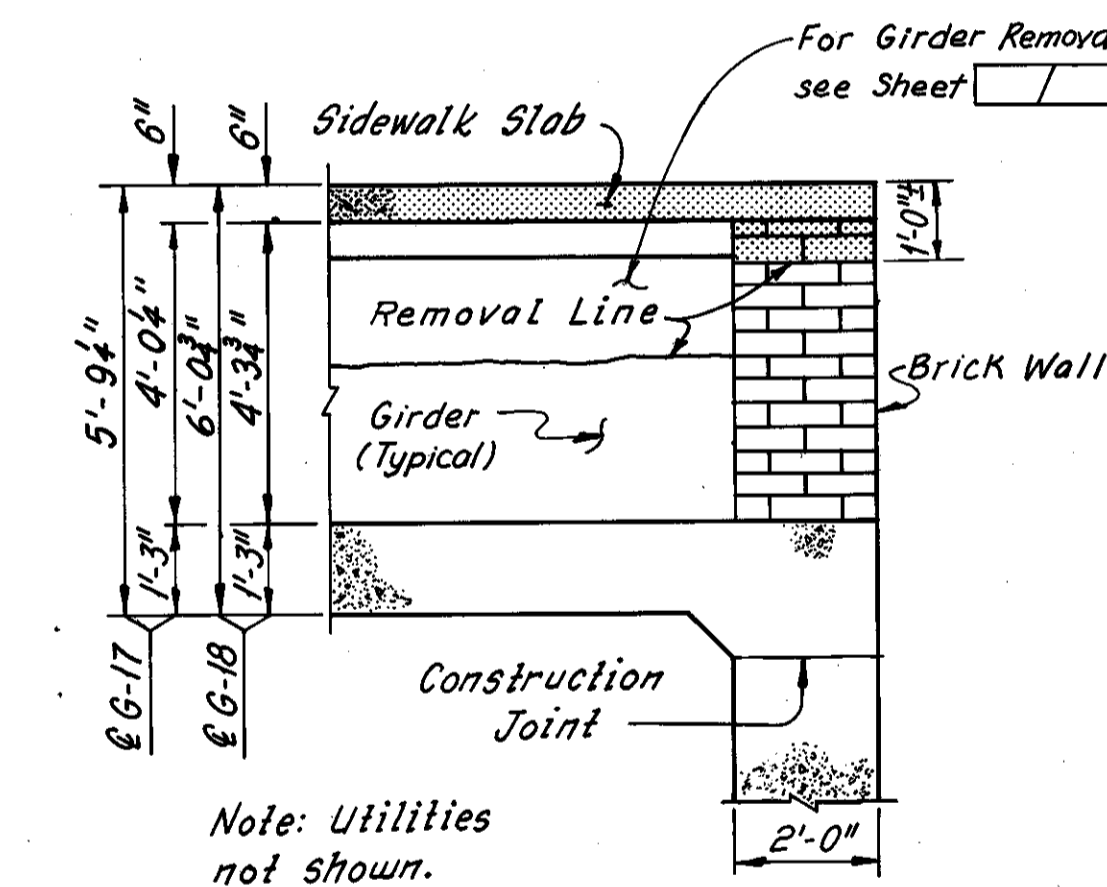
SECTION G-G



SECTION H-H



SECTION J-J



SECTION K-K

Note:  
Existing reinforcement not shown. All existing vertical abutment reinforcement and all existing horizontal abutment reinforcement below the bottom of the new deck slab shall be retained as part of the new construction, except at new slab edge beams shown on Sheet 16/31. Horizontal reinforcement may be replaced in kind at no additional cost to the State.

Notes:  
Zip-a-tone indicates portions of structure to be removed.  
For limits of existing girder removal, see Detail A, Sheet 5/31.  
For location of Sections A-A thru E-E, see Sheet 10/31.  
For location of Sections F-F thru K-K, see Sheet 11/31.

#Additional girder removal as determined during bridge reconstruction REVISION  
C.K.B. 4-16-81

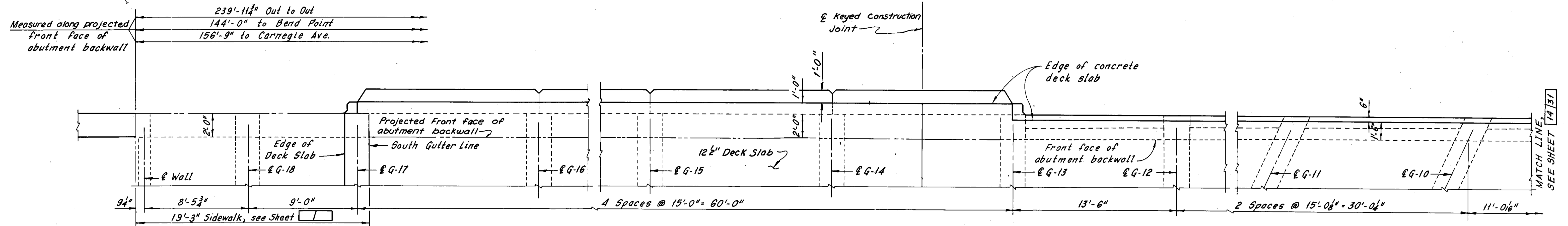
HNTB BRIDGE NO. 4			
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND			
<b>HNTB</b>			
<b>REMOVAL PLANS EAST ABUTMENT</b>			
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY) BR. NO. CUY. -10-1685 STA. 57+29.72 STA. 58+85.70			
CUYAHOGA COUNTY OHIO			
DRAWN BP	TRACED BP	CHECKED PB	REVIEWED DATE
DATE 3-17-75	DATE 4-13-75	DATE 6-21-78	DATE
REVISED 12-5-83			SHEET 12/31

MICROFILMED  
DEC 8 1986

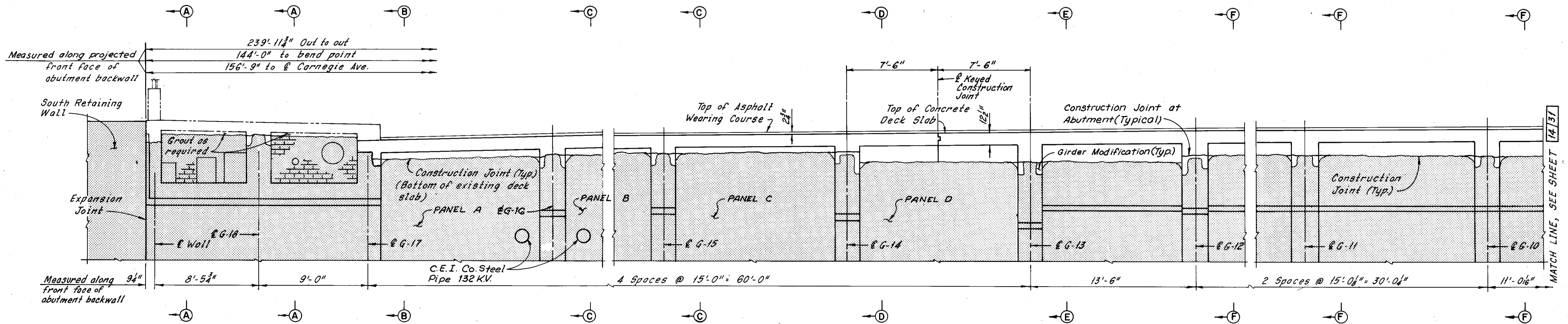
FHWA REGION	STATE	PROJECT
5	OHIO	

160  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PART PLAN - WEST ABUTMENT



PART ELEVATION - WEST ABUTMENT  
(Deck slab, girder and retained abutment reinforcement not shown)

Notes:  
 Zip-a-tone indicates existing structure.  
 For removal at West Abutment, see  
 Sheets 7/31 thru 9/31.  
 For Typical Girder Modification Repair,  
 see Sheet 23/31.  
 For Sections A-A thru F-F, see  
 Sheet 15/31.  
 For Sidewalk Details, see Sheet 27/31.  
 For Stage Construction, see Sheet 1/31.  
 For Contour Plan, see Sheet 30/31.

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

PART MODIFIED PLAN AND ELEVATION  
WEST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
STA. 58+85.70  
CUYAHOGA COUNTY OHIO

DRAWN AJT	TRACED DWB	CHECKED RAS	REVIEWED	REVISED
DATE 8-21-82	DATE 8-22-82	DATE 9-22-82	DATE	DATE

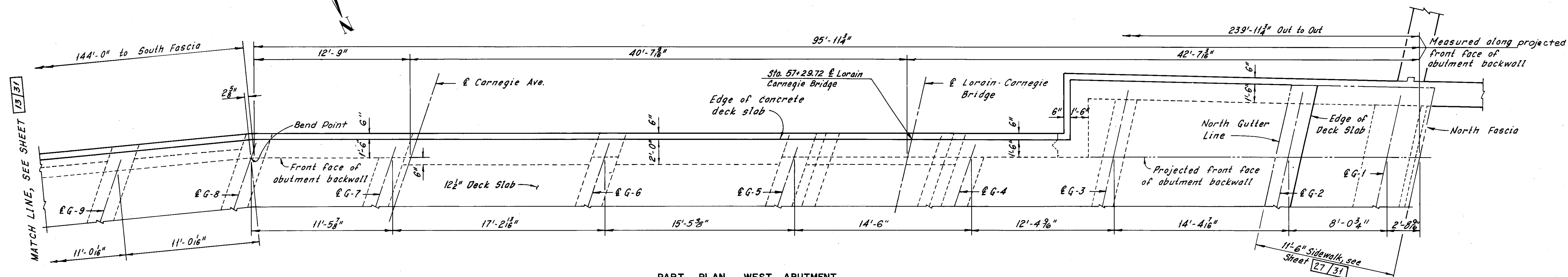
SHEET 13/31

MICROFILMED  
DEC 8 1986

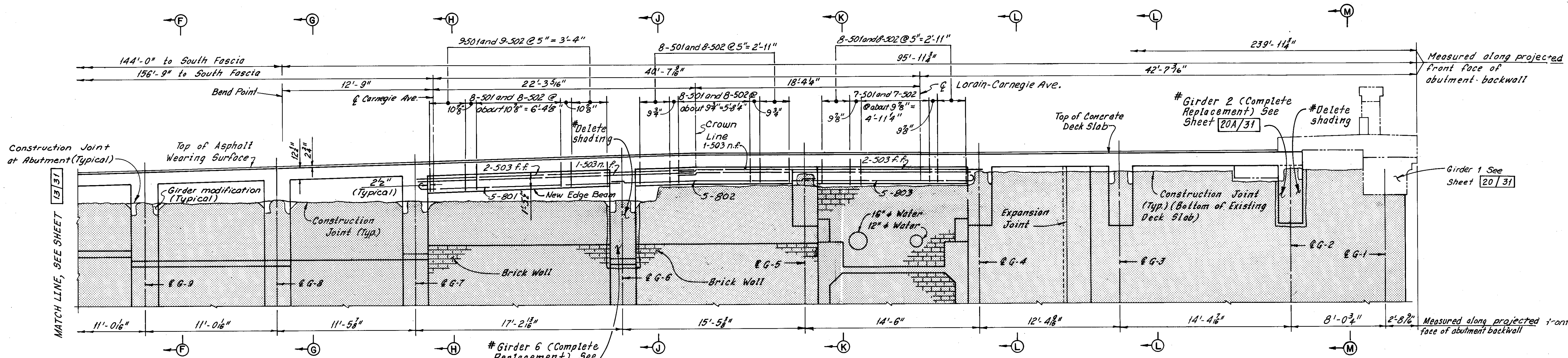
FHWA REGION	STATE	PROJECT
5	OHIO	

161  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PART PLAN - WEST ABUTMENT



PART ELEVATION - WEST ABUTMENT  
(Deck slab, girder and retained abutment reinforcement not shown)

Note:  
All reinforcing bar marks shall be prefixed WA.

Notes:  
Zip-a-tone indicates existing structure.  
Phantom lines indicate new construction details of which are shown elsewhere in these plans.  
For Sections F-F thru M-M, see Sheet 15/31.  
For Reinforcement Schedule, see Sheet R/4.  
For Stage Construction, see Sheet 1/31.  
For Contour Plan, see Sheet 30/31.  
For additional notes, see Sheet 13/31.

#Additional girder replacement as determined during bridge reconstruction  
C.K.B. 4-16-81  
REVISION

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

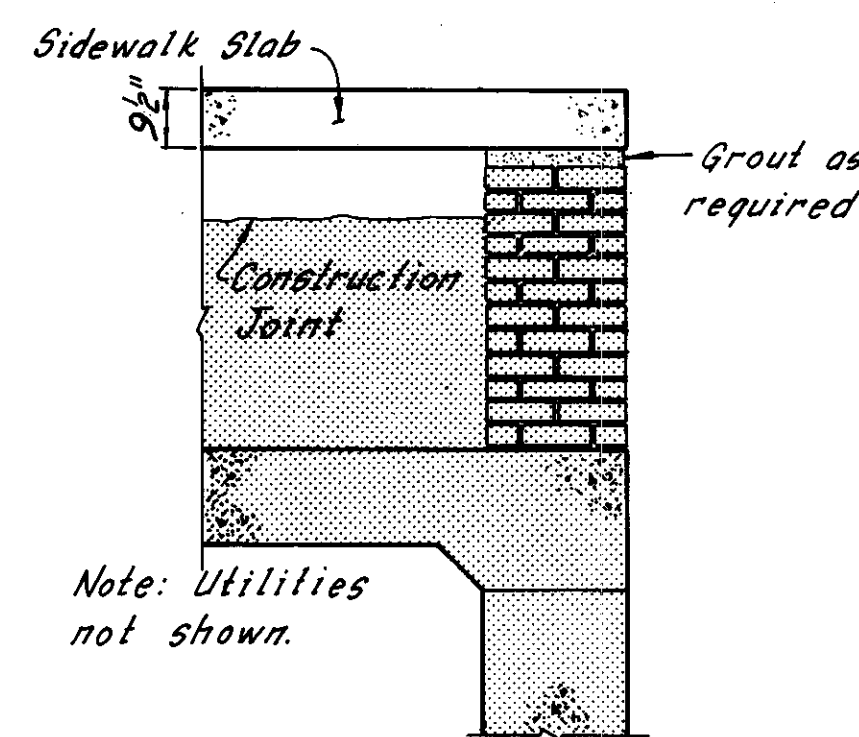
**HNTB**

PART MODIFIED PLAN AND ELEVATION  
WEST ABUTMENT

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
STA. 58+85.70  
OHIO

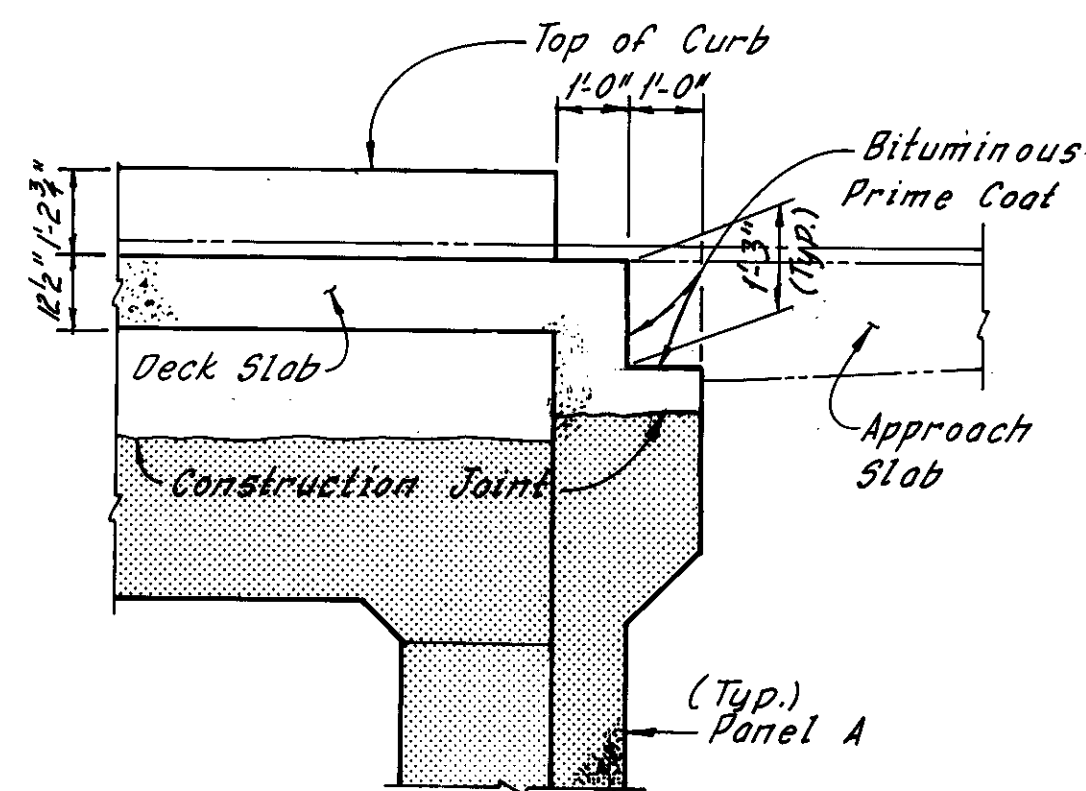
DRAWN/JT	CHECKED/AJT	REVIEWED/P.A.S.	REVISION
DATE 8-24-78	DATE 8-27-78	DATE 9-22-78	12-5-83

SHEET 14/31

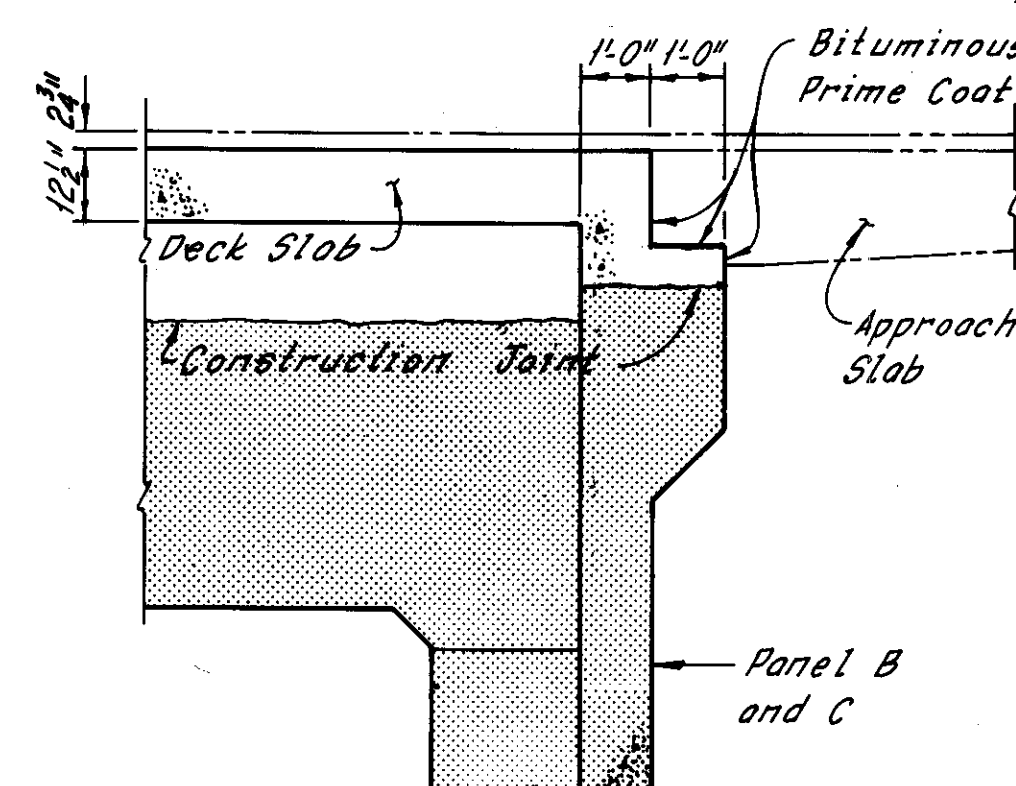


SECTION A-A

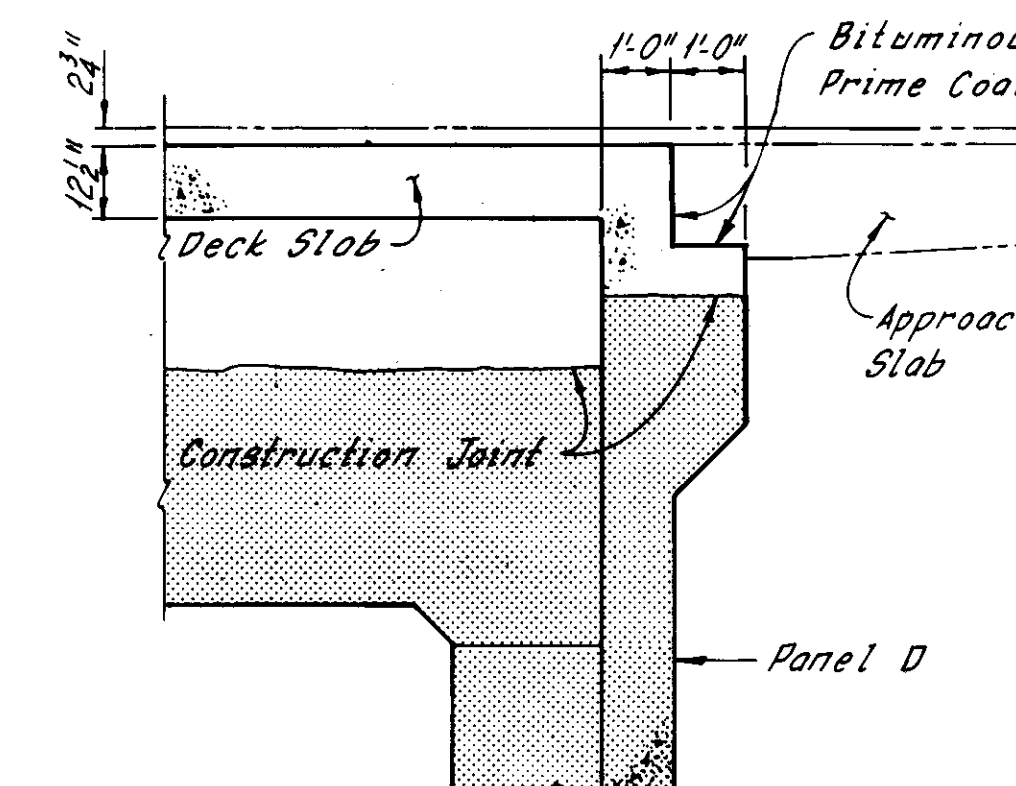
Note: Utilities not shown.



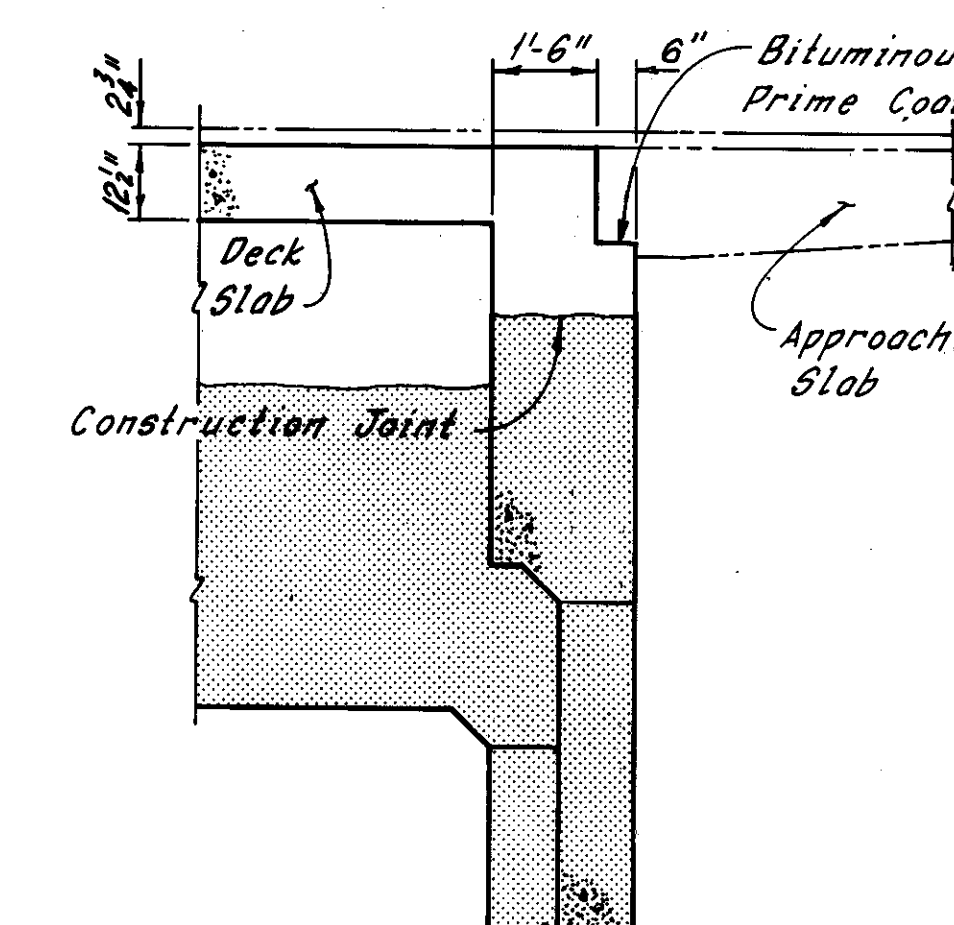
SECTION B-B



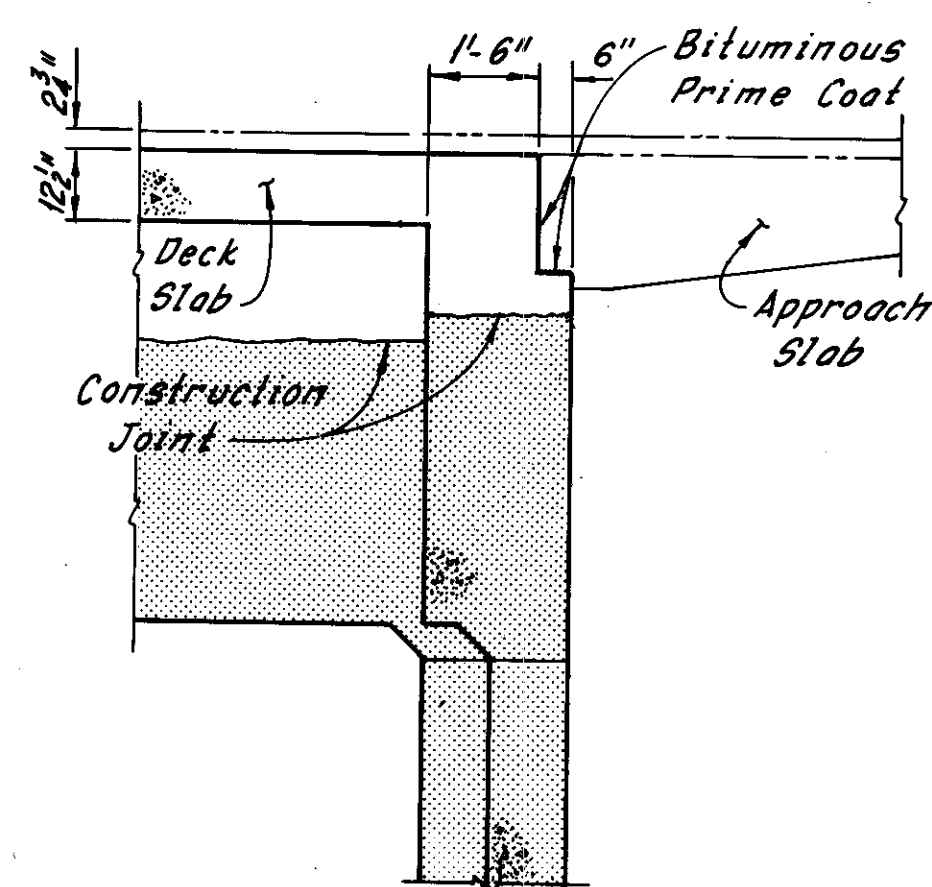
SECTION C-C



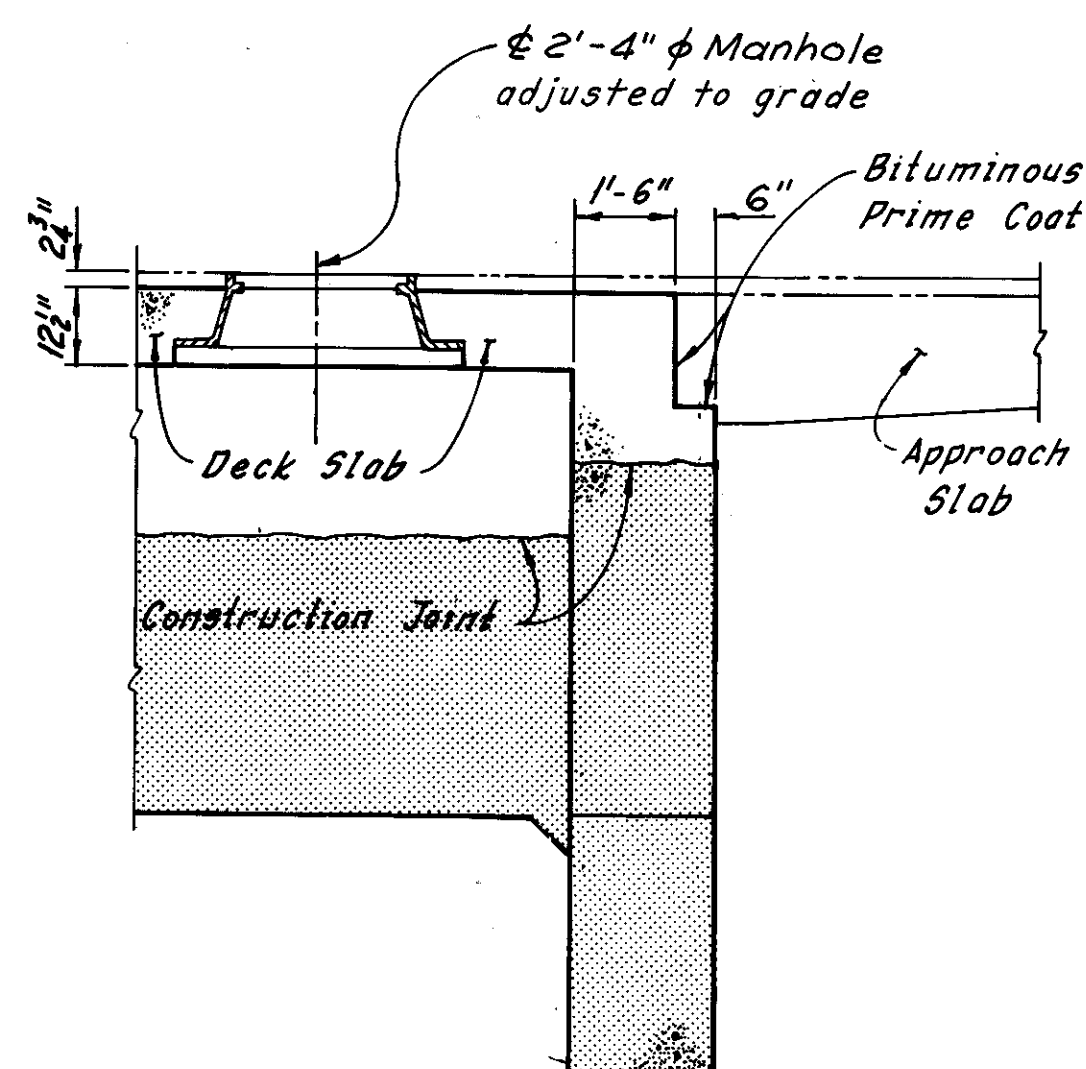
SECTION D-D



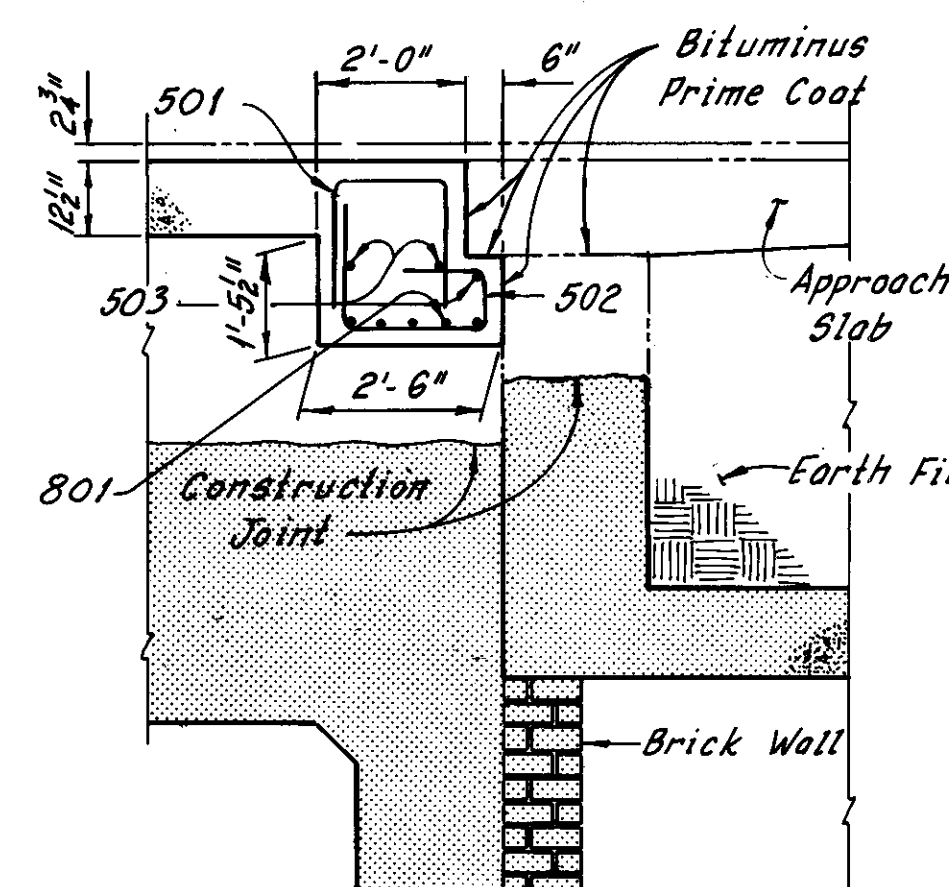
SECTION E-E



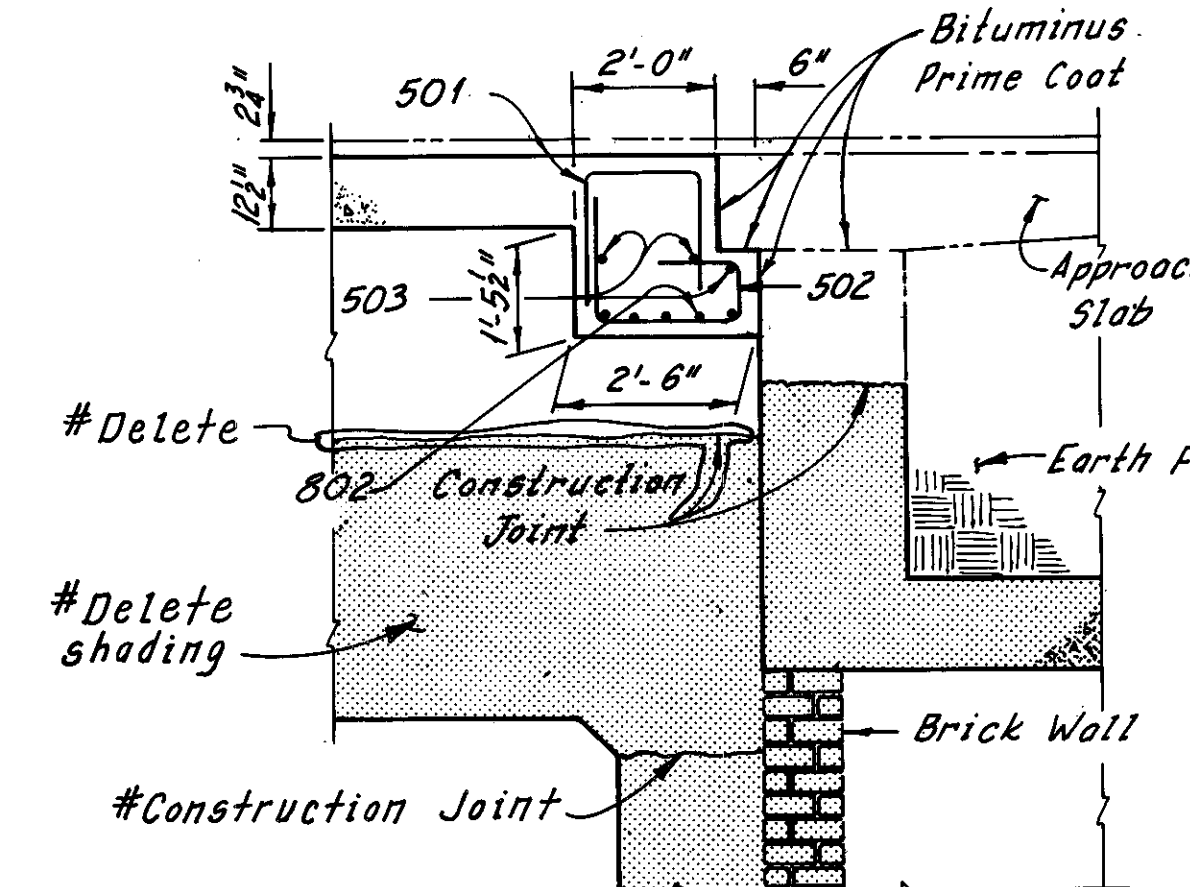
SECTION F-F



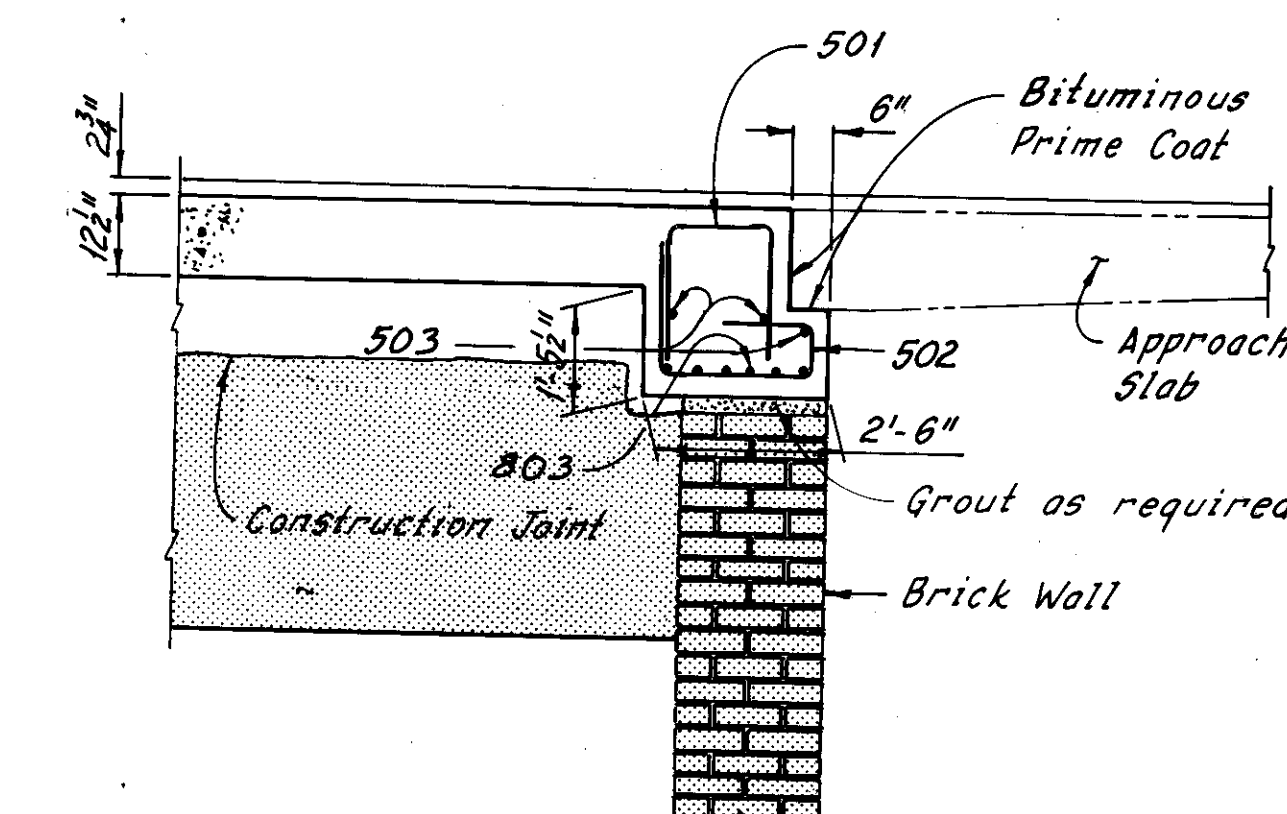
SECTION G-G



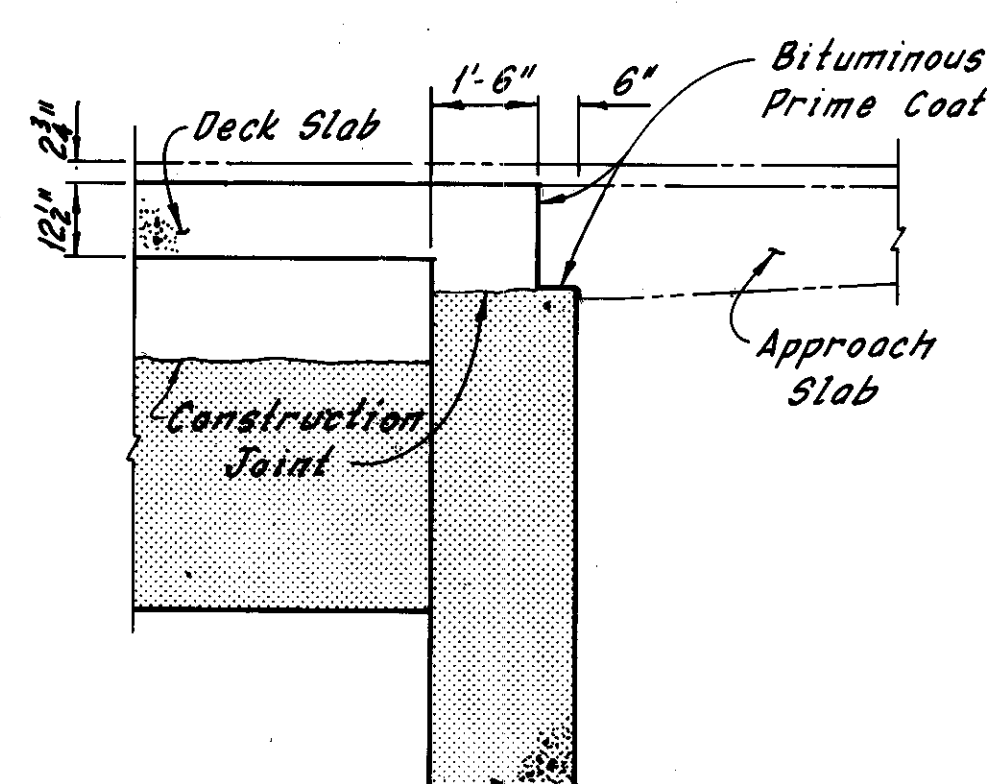
SECTION H-H



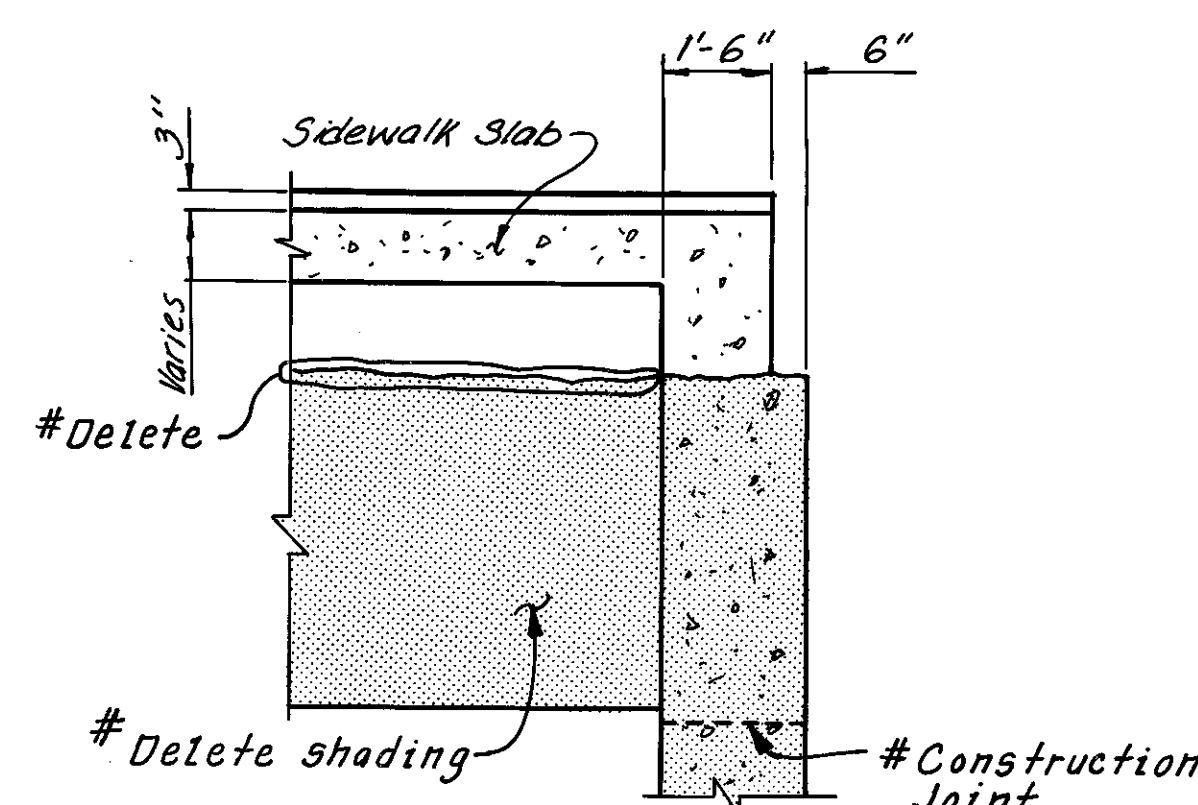
SECTION J-J



SECTION K-K



SECTION L-L



SECTION M-M

Note: All reinforcing bar marks shall be prefixed WA.

Notes:  
Zip-a-tone indicates existing structure.  
Sidewalk, deck, girder and retained existing abutment reinforcement is not shown.  
For location of Sections A-A thru F-F, see Sheet 13/31.  
For location of Sections G-G thru M-M, see Sheet 14/31.  
For manhole locations, see Sheet 26/31.  
The cost of grouting shall be included with the unit price bid for Item 511, Class C Concrete, Abutments Above Footings, for payment.  
For Reinforcement Schedule, see Sheet 8/4.

#Additional girder replacement as determined during bridge reconstruction 4-16-81  
C.K.B.  
REVISION

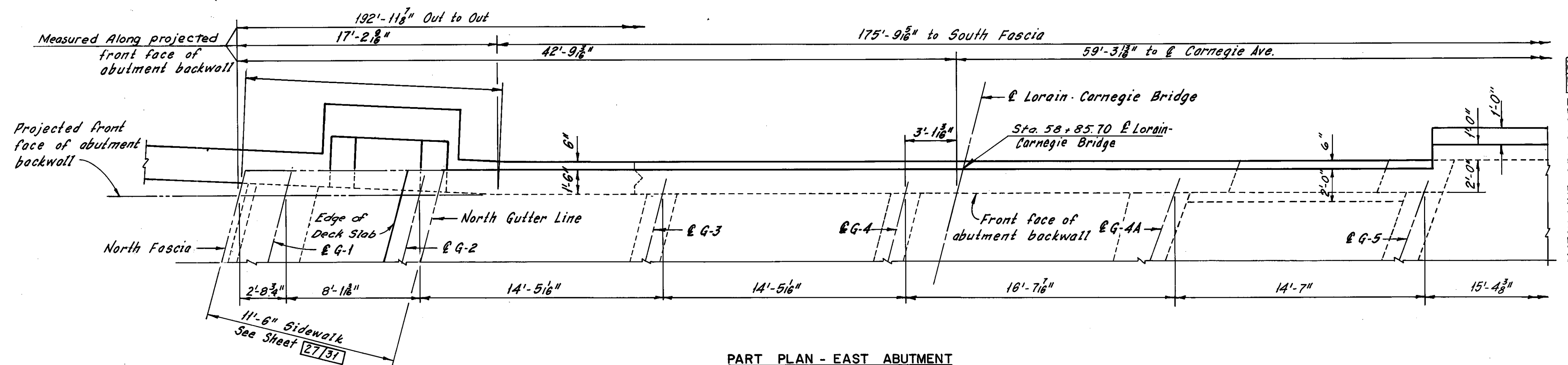
HNTB BRIDGE NO. 4		HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB	
MODIFIED TYPICAL CROSS SECTIONS WEST ABUTMENT REHABILITATION OF THE CARNegie AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY) BR. NO. CUY.-10-1685 STA. 57+29.72 STA. 58+85.70					
CUYAHOGA COUNTY		OHIO		REVISED 12-5-83	
DRAWN AJT	TRACED OWB	CHECKED RAS	REVIEWED	DATE 8-24-82	DATE 9-22-82
				SHEET 15/31	

MICROFILMED  
DEC 8 1986

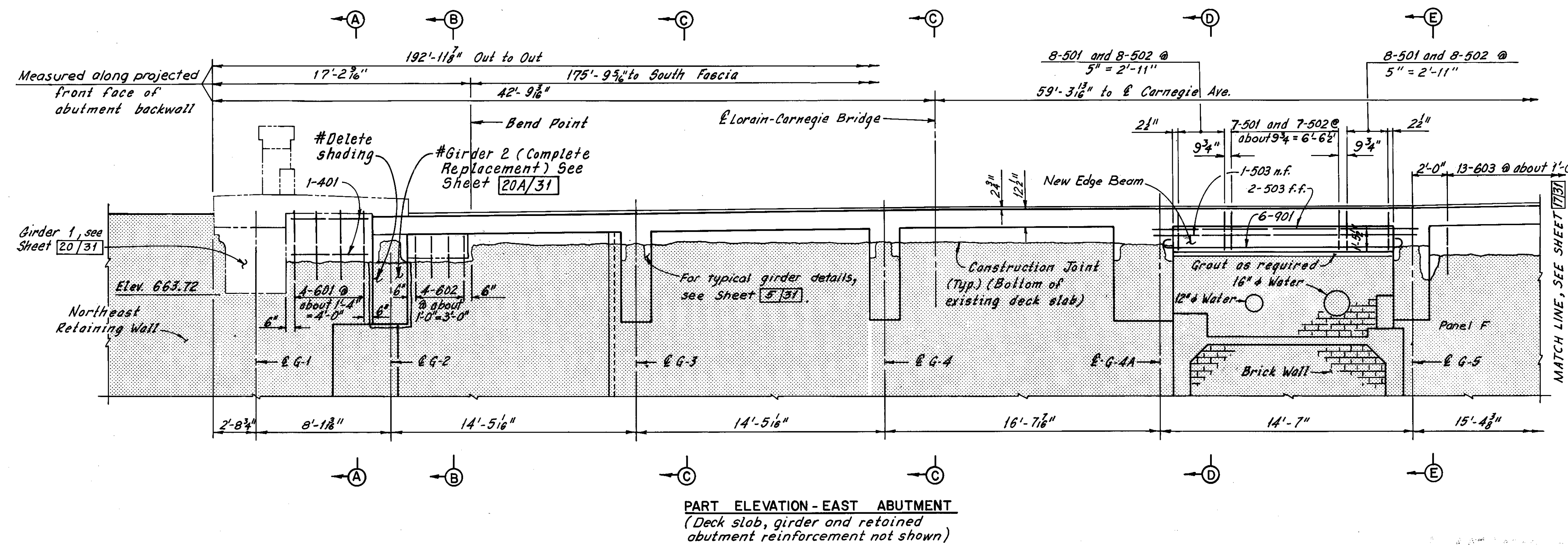
FHWA REGION	STATE	PROJECT
5	OHIO	

163  
185

CUYAHOGA COUNTY  
CUY-10-16.23



Note:  
All reinforcing bar marks shall be prefixed EA.



Notes:  
Zip-a-tone indicates existing structure.  
Phantom lines indicate new construction details of which are shown elsewhere on these plans.  
For Removal at East Abutment, see Sheets 10/31 thru 12/31.  
For Typical Girder Repair, see Sheet 23/31.  
For Approach Slab Details, see roadway plans.  
For Sections A-A thru E-E, see Sheet 18/31.  
For Contour Plan, see Sheet 30/31.  
For reinforcement schedule see Sheet R/4.

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

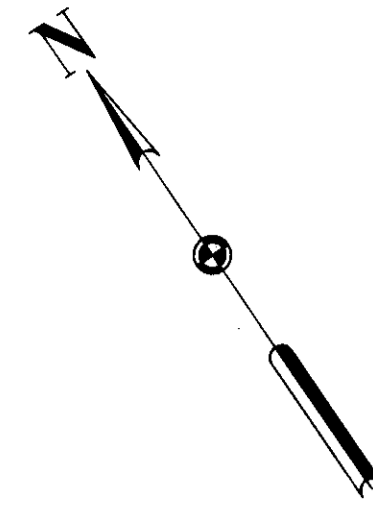
**HNTB**

**PART MODIFIED PLAN AND ELEVATION  
EAST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70**

DRAWN AUT DATE: 8-14-78	TRACED RPS DATE: 9-15-78	CHECKED RPS DATE: 9-22-78	REVIEWED DATE	REVISED 12-5-83 SHEET 16/31
-------------------------------	--------------------------------	---------------------------------	------------------	-----------------------------------

#Additional girder replacement as determined during bridge reconstruction REVISION  
C.K.B. 4-16-81

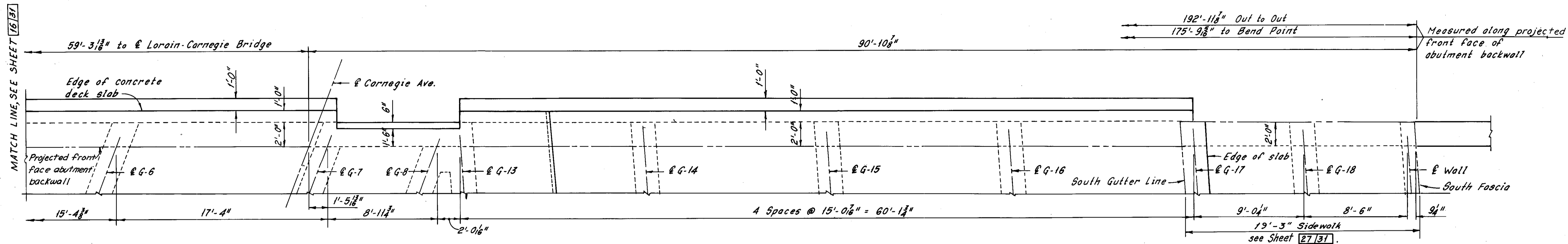
MICROFILMED  
DEC 8 1986



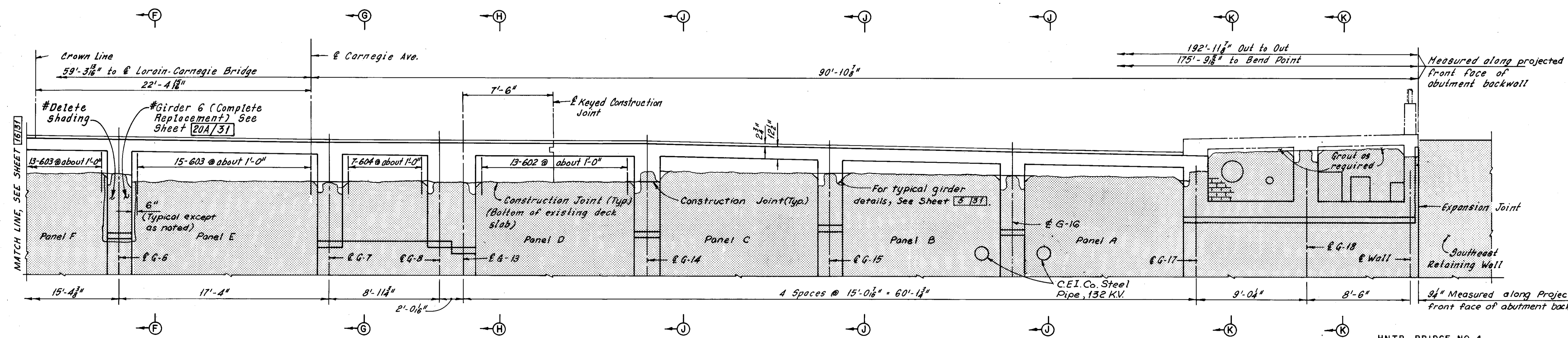
FHWA REGION	STATE	PROJECT
5	OHIO	

164  
185

CUYAHOGA COUNTY  
CUY-10-16.23



PART PLAN - EAST ABUTMENT



PART ELEVATION - EAST ABUTMENT  
(Deck slab, girder, and retained abutment reinforcement not shown)

Note:  
All reinforcing bar marks shall be prefixed EA.

- Notes:
- Zip-a-tone indicates existing structures.
  - For Removal at East Abutment, see Sheets 10/31 thru 12/31.
  - For Typical Girder Repair, see Sheet 23/31.
  - For Approach Slab Details, see roadway plans.
  - For Sections F-F thru K-K, see Sheet 18/31.
  - For Contour Plan, see Sheet 30/31.
  - For reinforcement schedule, see Sheet R/4.

#Additional girder replacement as determined during bridge reconstruction  
REVISION  
C.K.B.  
4-16-81

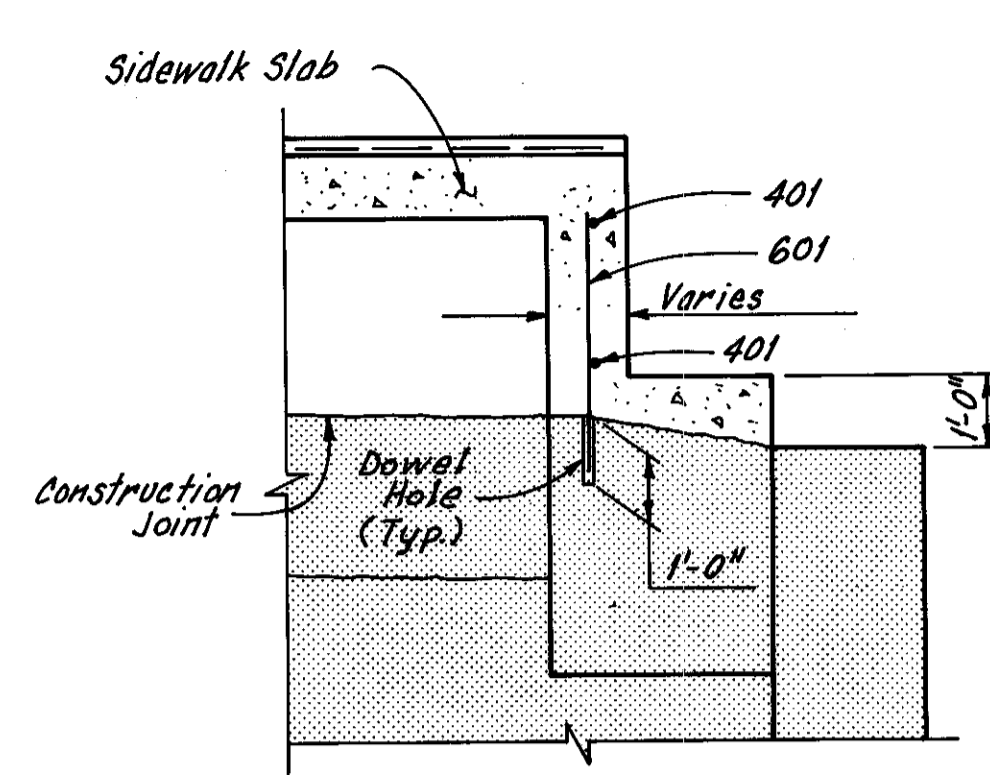
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

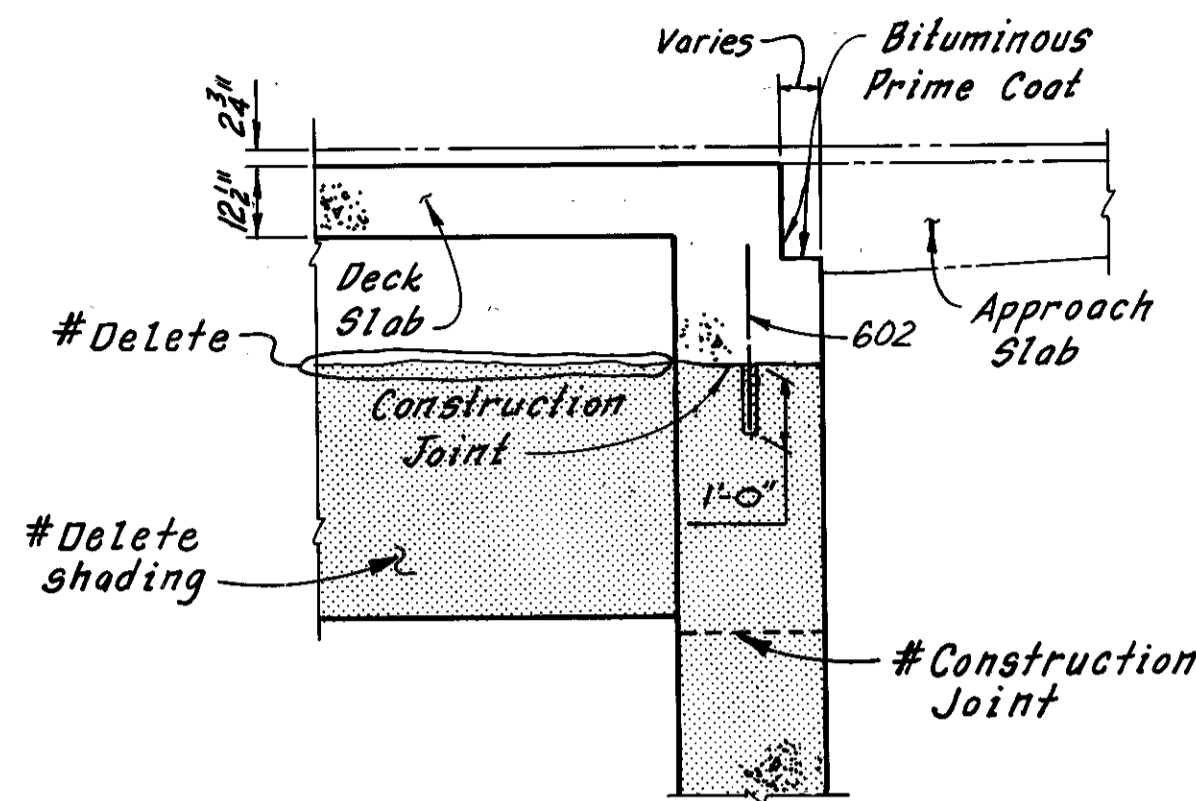
**HNTB**

**PART MODIFIED PLAN AND ELEVATION  
EAST ABUTMENT**  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

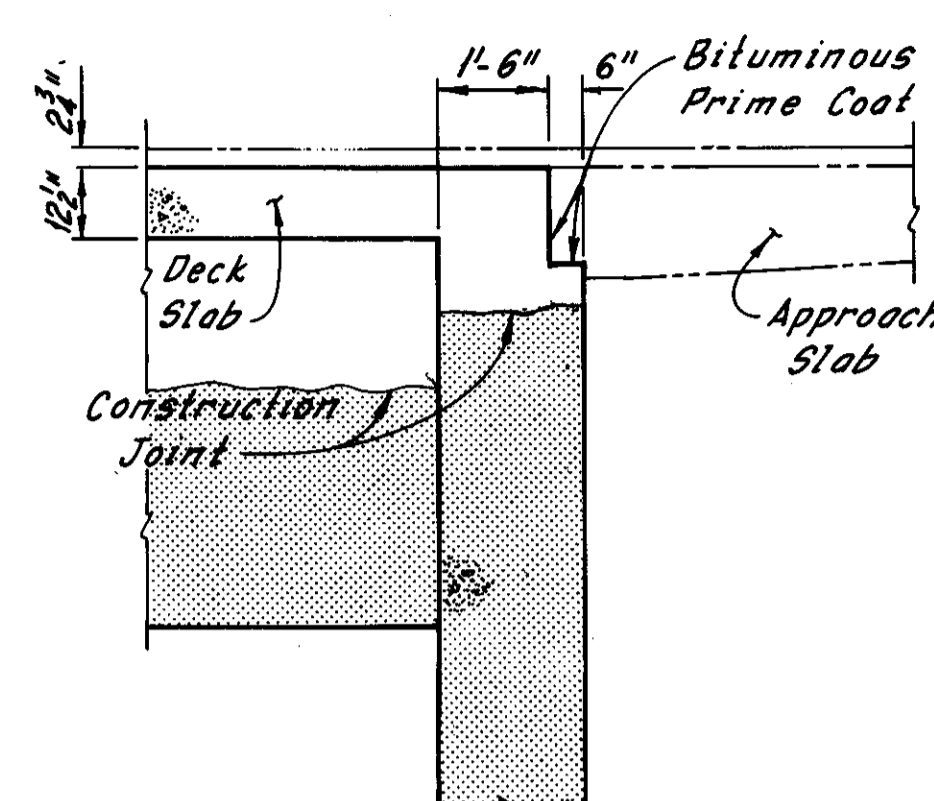
DRAWN RUT	TRACED DES	CHECKED RAS	REVIEWED	REVISED 12-5-83
DATE: 8-14-78	DATE: 8-15-78	DATE: 8-22-78	DATE	SHEET 17/31



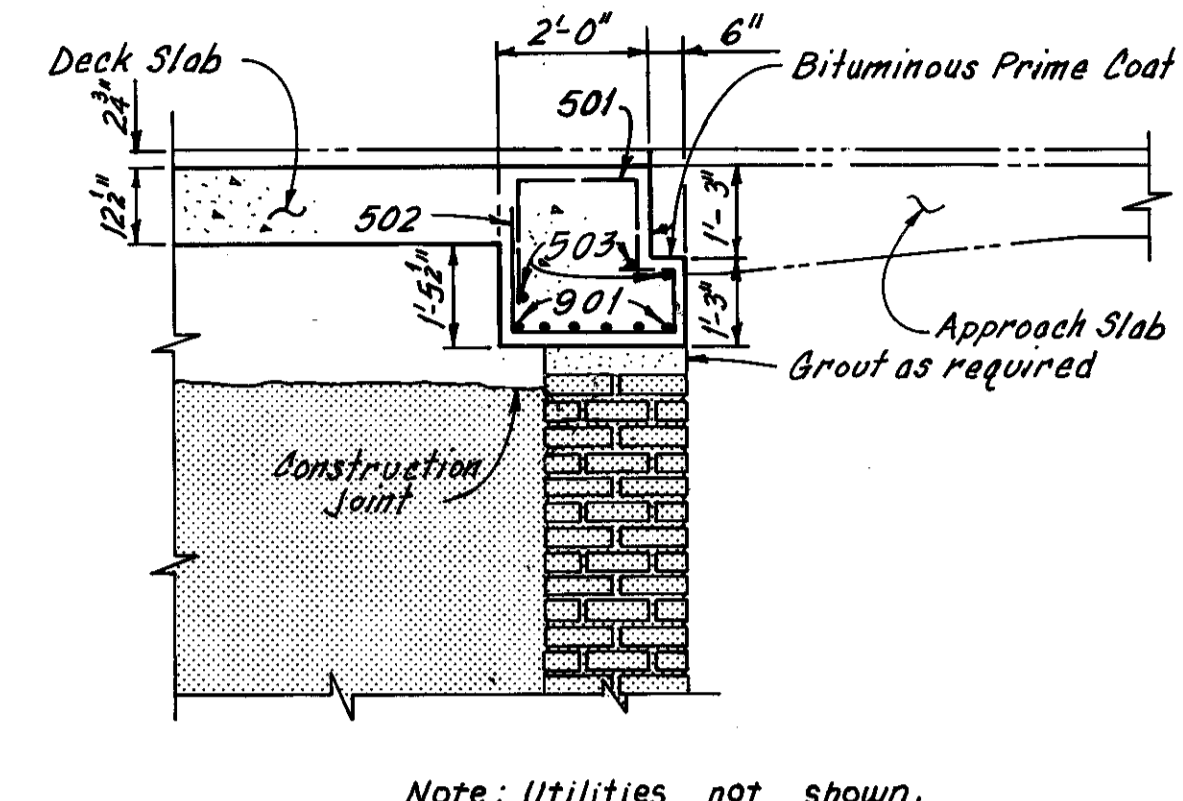
SECTION A-A



SECTION B-B

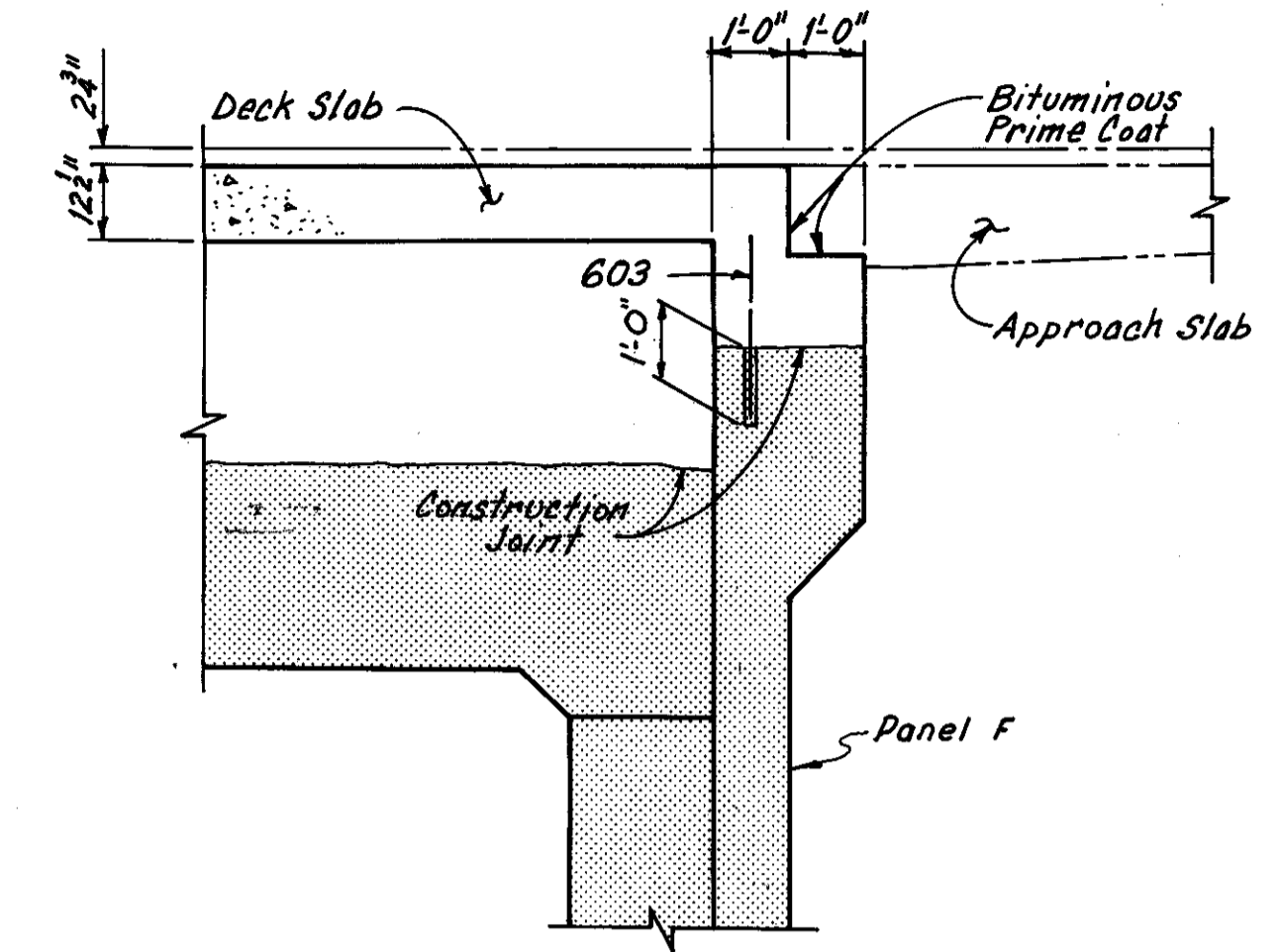


SECTION C-C

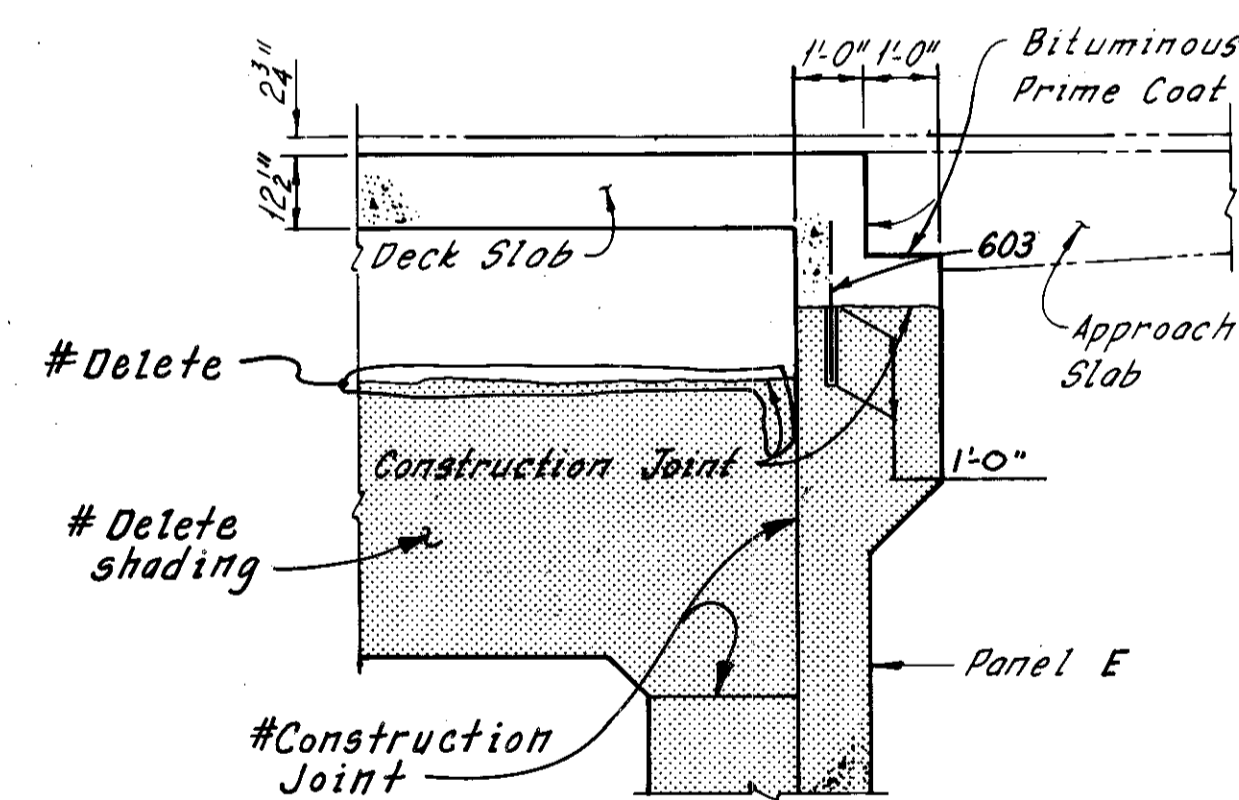


Note: Utilities not shown.

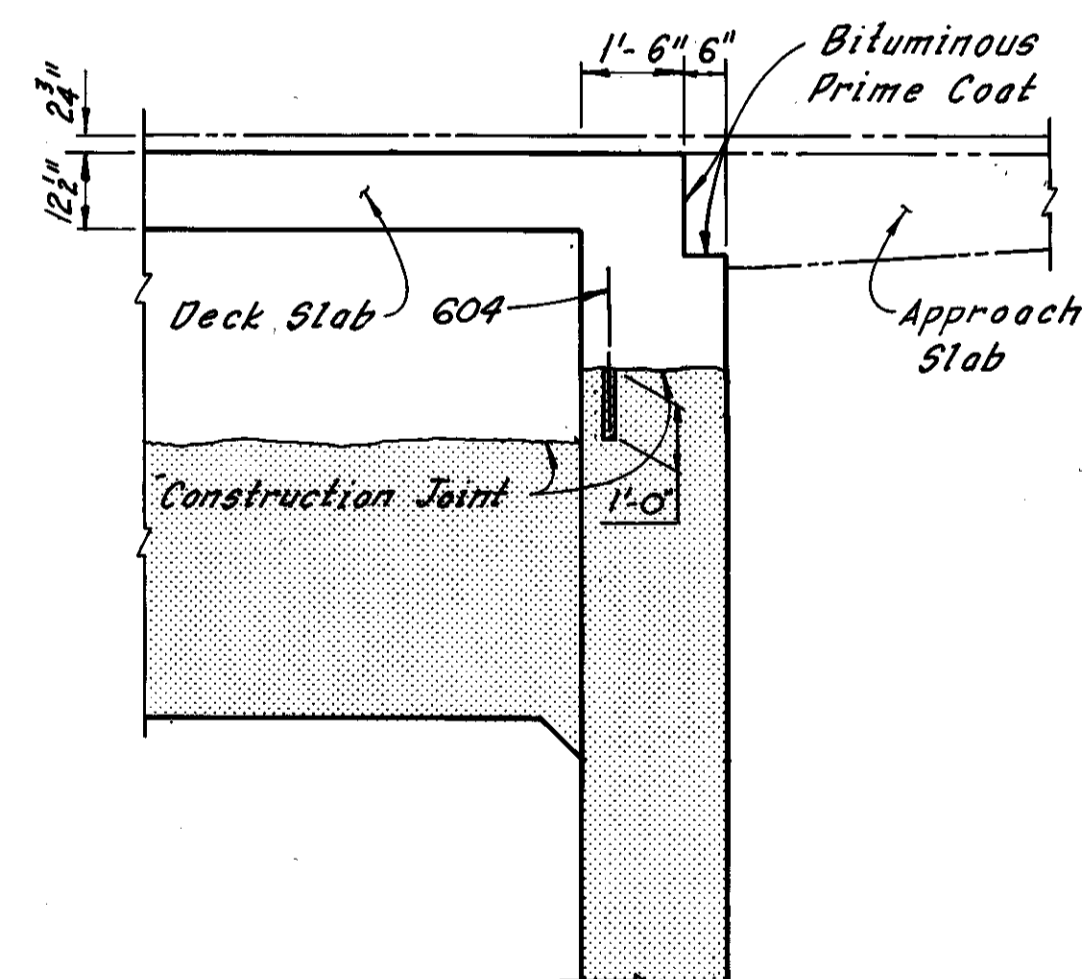
SECTION D-D



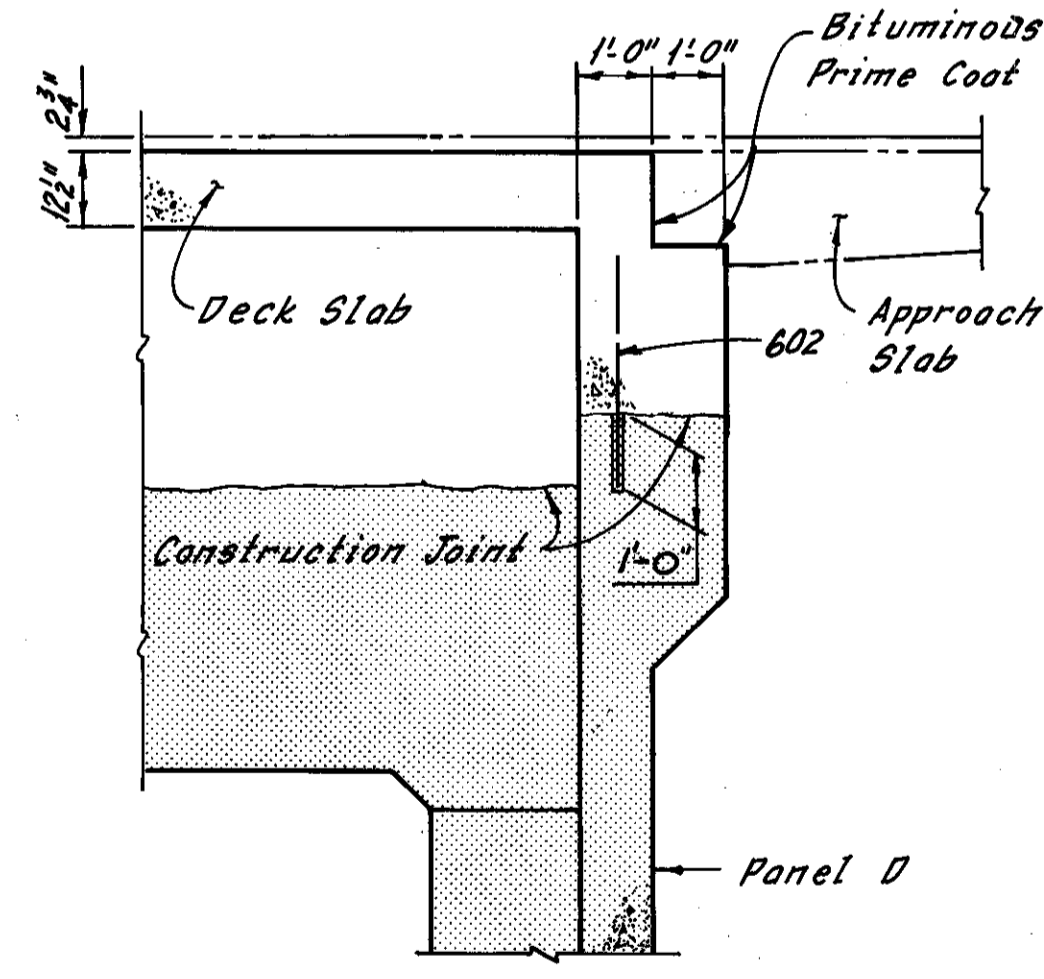
SECTION E-E



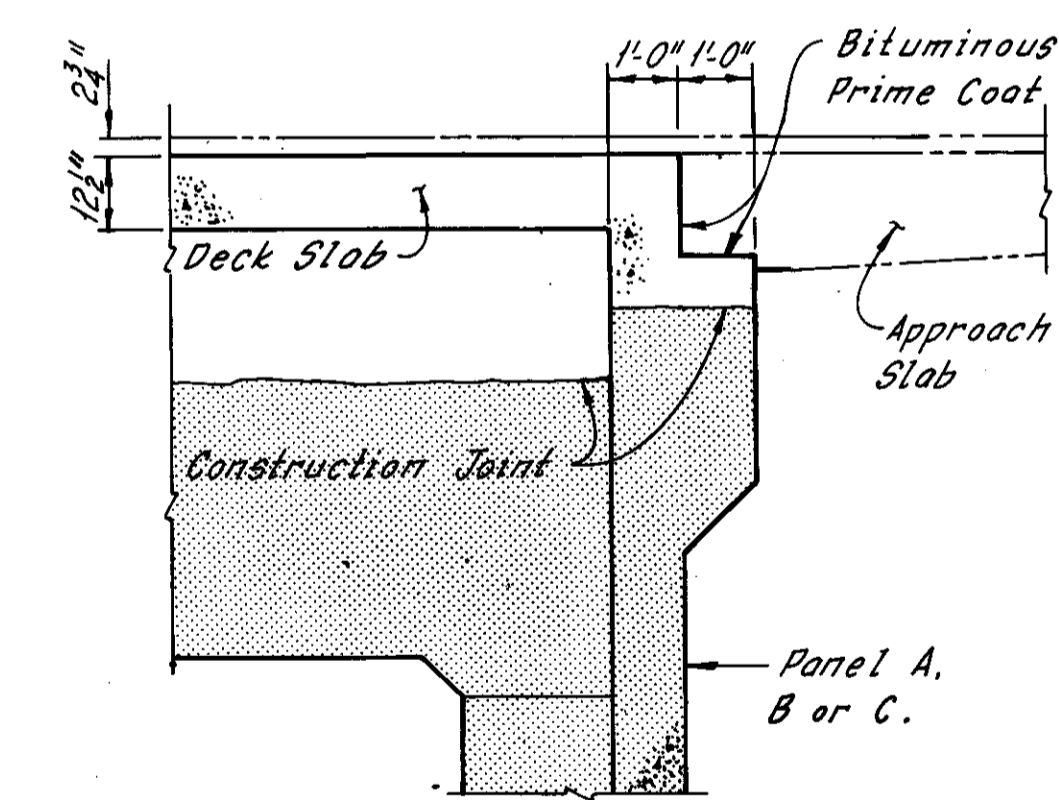
SECTION F-F



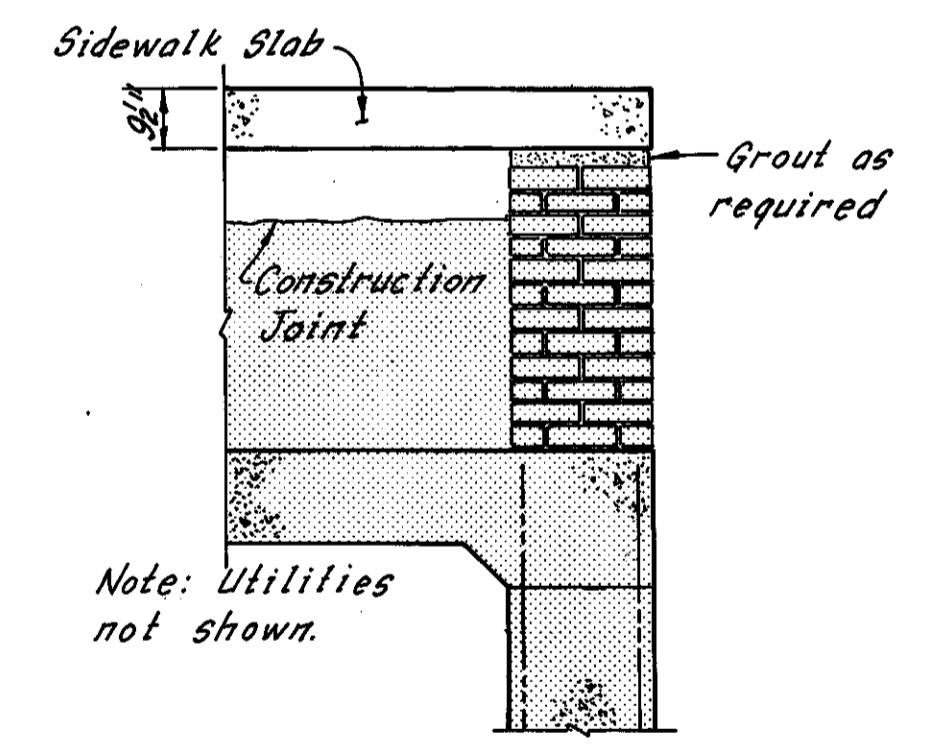
SECTION G-G



SECTION H-H



SECTION J-J



SECTION K-K

Note: All reinforcing bar marks shall be prefixed EA.

Notes:  
Zip-a-tone indicates existing structures.  
Sidewalk, deck, existing girder and retained abutment reinforcement is not shown.  
The cost of grouting shall be included with the unit price bid for Item 511, Class C Concrete, Abutments Above Footings, for payment.  
For reinforcement schedule see Sheet R/4.

#Additional girder replacement as determined during bridge reconstruction  
REVISION

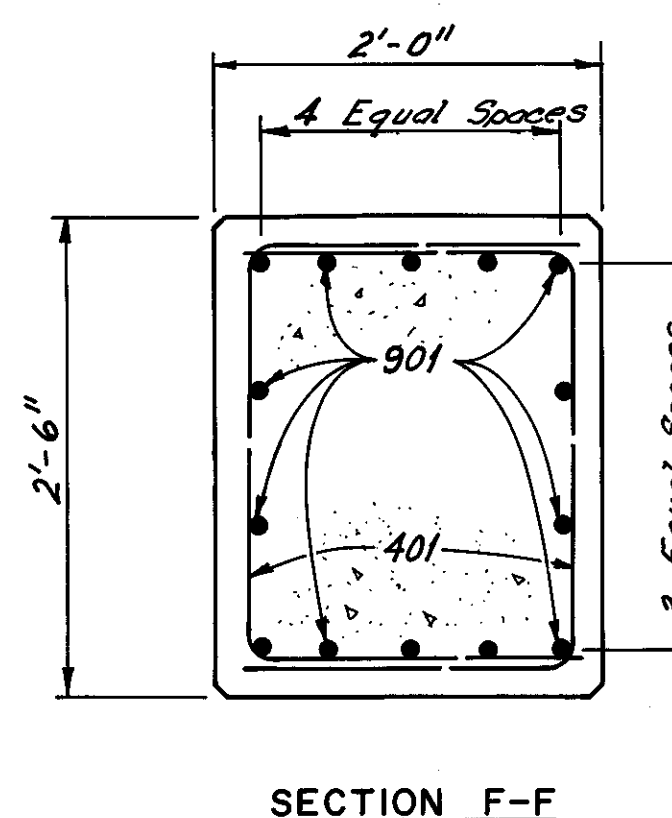
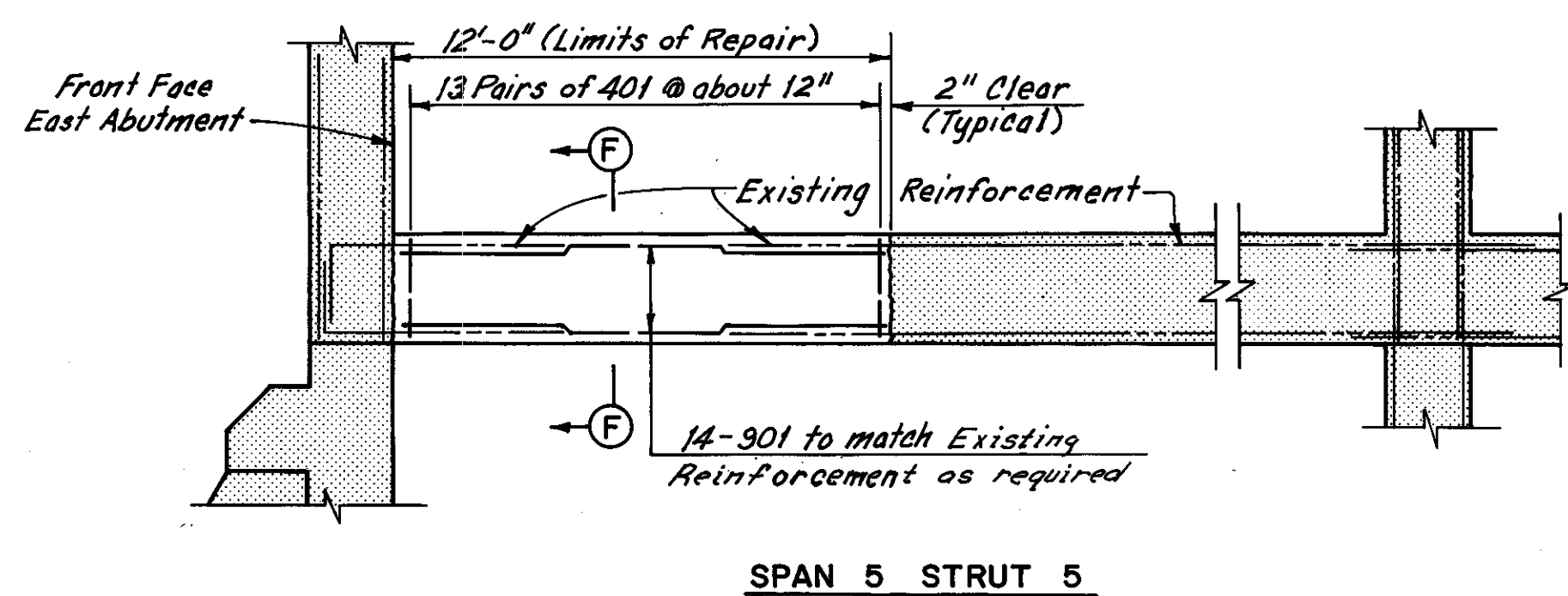
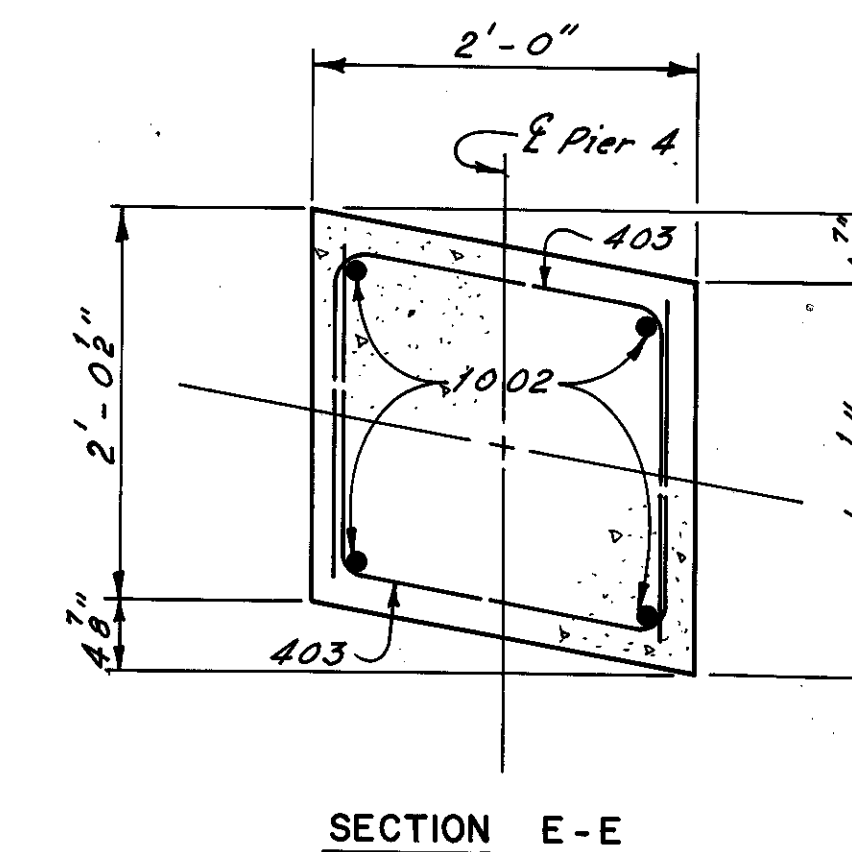
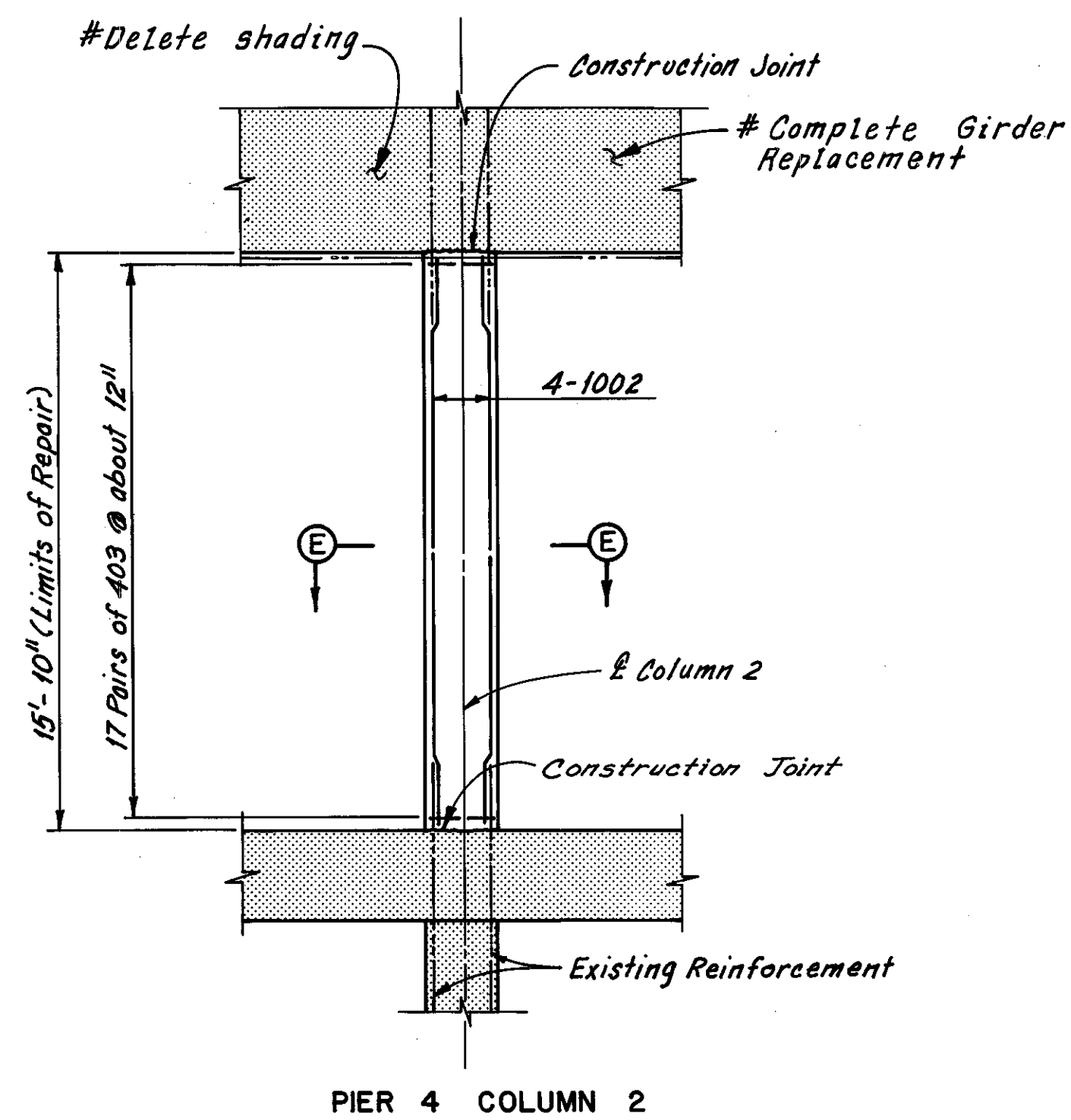
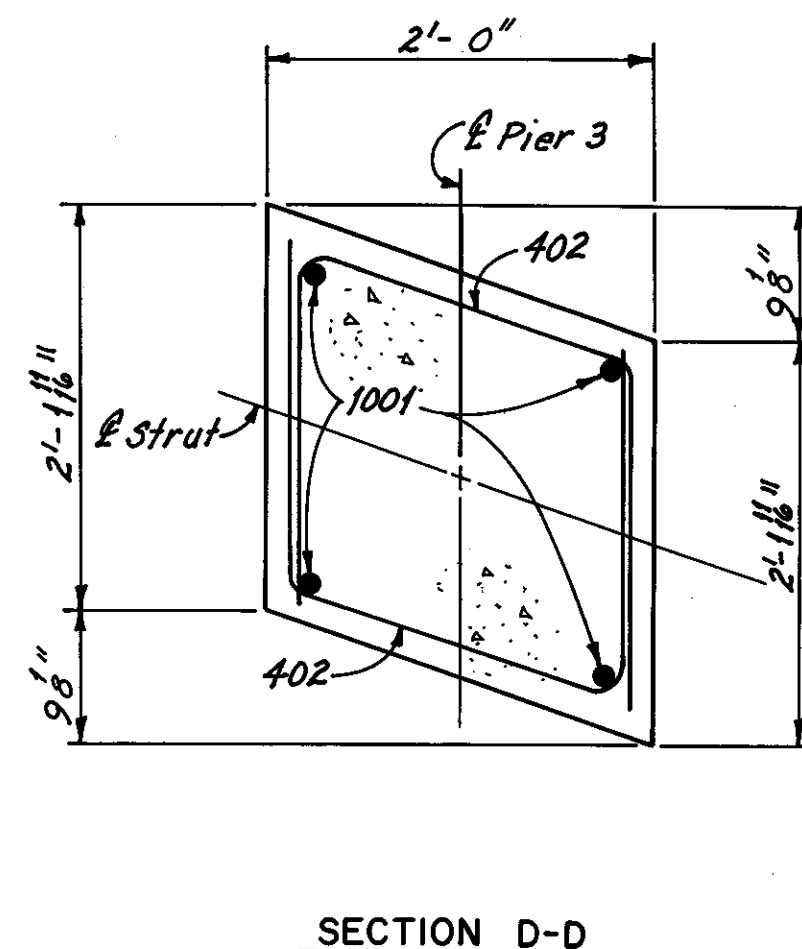
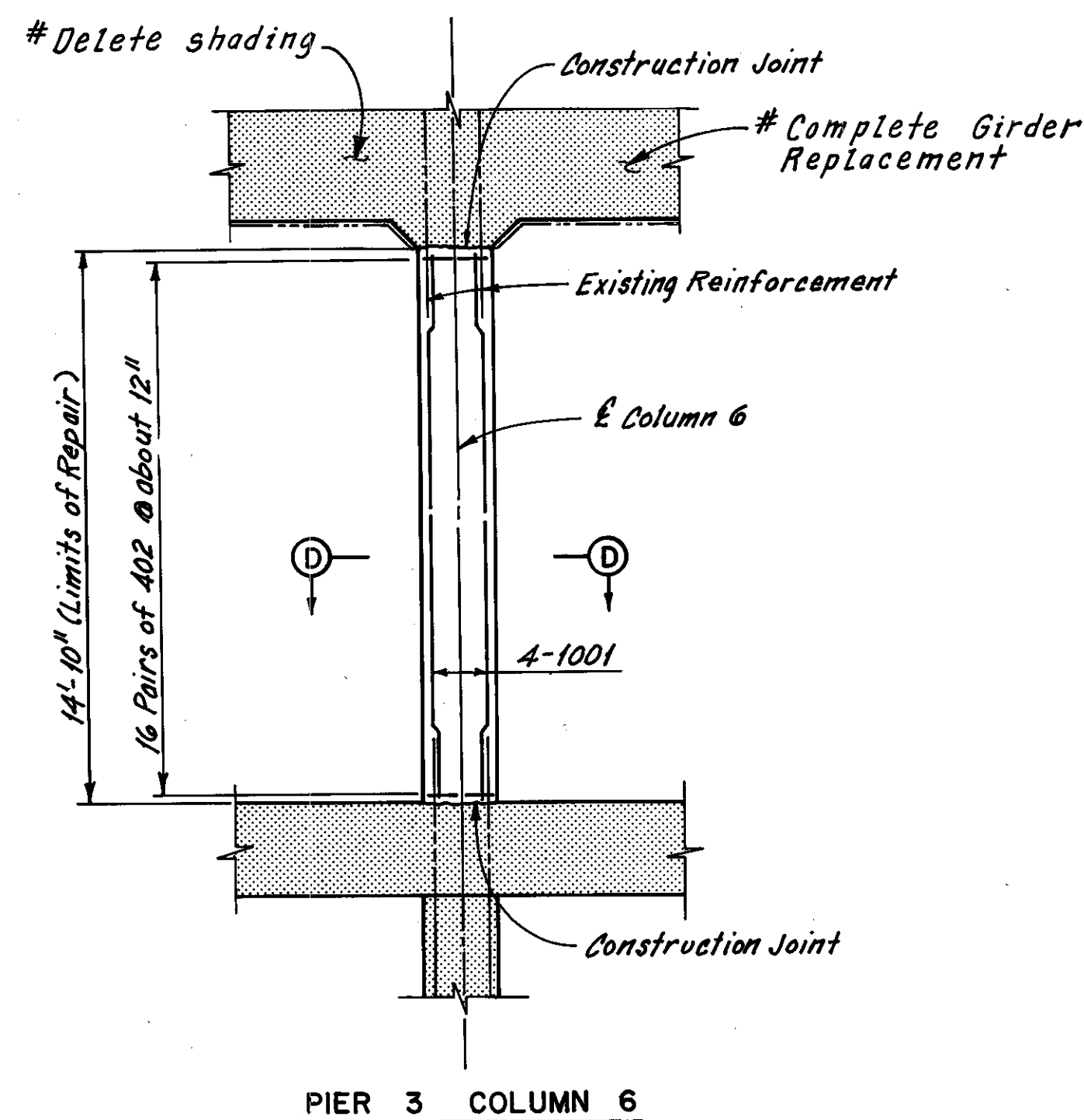
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

MODIFIED TYPICAL CROSS SECTIONS  
EAST ABUTMENT  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY-10-1685 STA. 57+29.72  
STA. 58+85.70  
OHIO

DRWN AJT	TRACED DES	CHECKED RAS	REVIEWED	REVISED
DATE: 4-78	DATE: 5-78	DATE: 2-78	DATE	12-5-83
CUYAHOGA COUNTY				SHEET 18/31



Note: All reinforcing bar marks shall be prefixed SC.

Notes:  
Zip-a-tone indicates existing structure.  
For strut and column removal details, see Sheet 6/31.  
For reinforcement schedule, see Sheet R15.  
# Phantom lines indicate new construction, details of which are shown elsewhere in these plans.

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND		HNTB
STRUT AND COLUMN REPAIR DETAILS		
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY) BR. NO. CUY.-10-1685 STA. 57+29.72 STA. 58+85.70		
CUYAHOGA COUNTY		OHIO
DRAWN AJT	TRACED DES	CHECKED RAS
DATE 8-1-78	DATE 8-3-78	DATE 9-6-78
REVISION		REVIEWED DATE
#Additional girder replacement as determined during bridge reconstruction 5-13-81		REVISOR 12-5-83
		SHEET 19/31

#Additional girder replacement as determined during bridge reconstruction 5-13-81  
C.K.B.  
REVISION

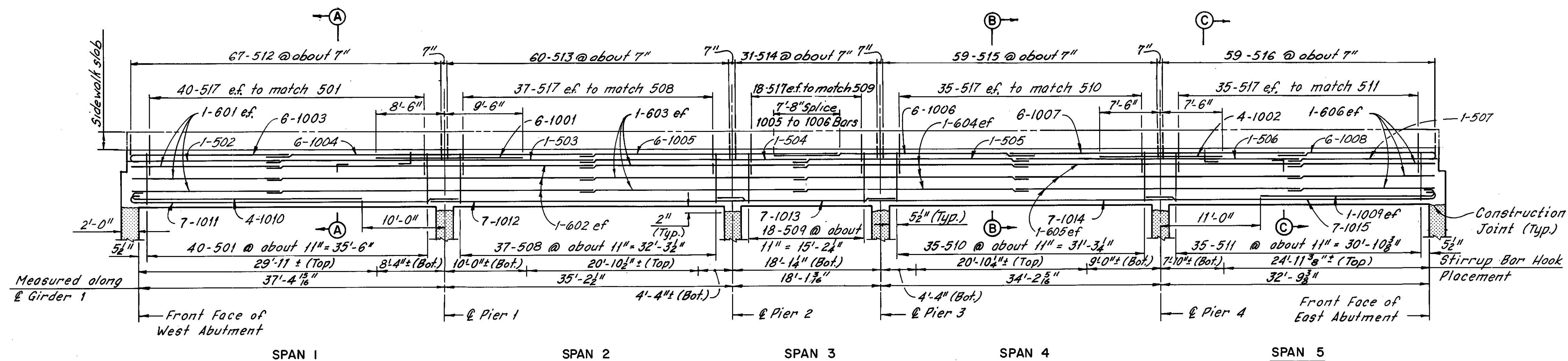


MICROFILMED  
DEC 8 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

167  
185

CUYAHOGA COUNTY  
CUY-10-16.23



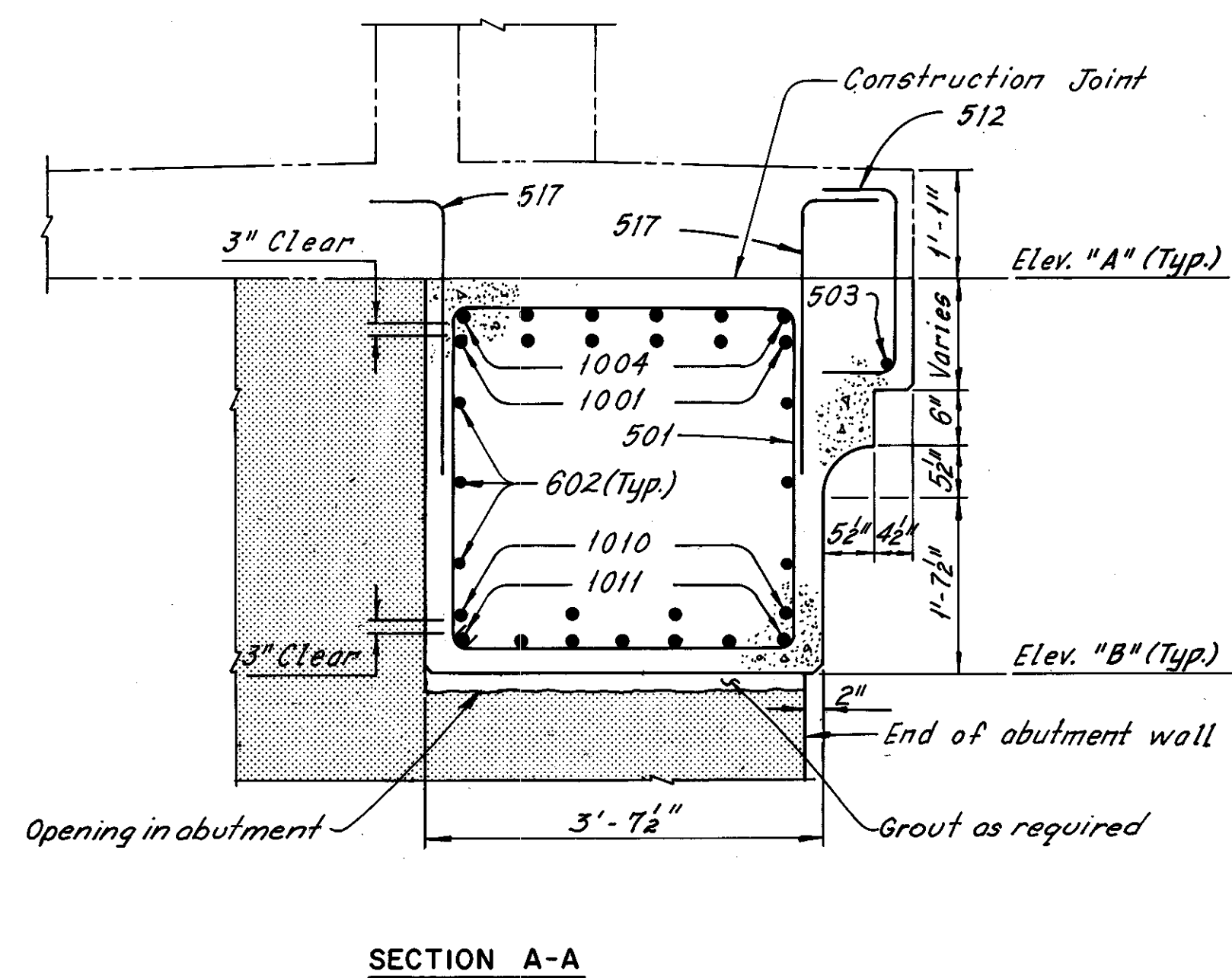
GIRDER ELEVATION  
(Looking North)

Note: All reinforcing bar marks shall be prefixed GM.

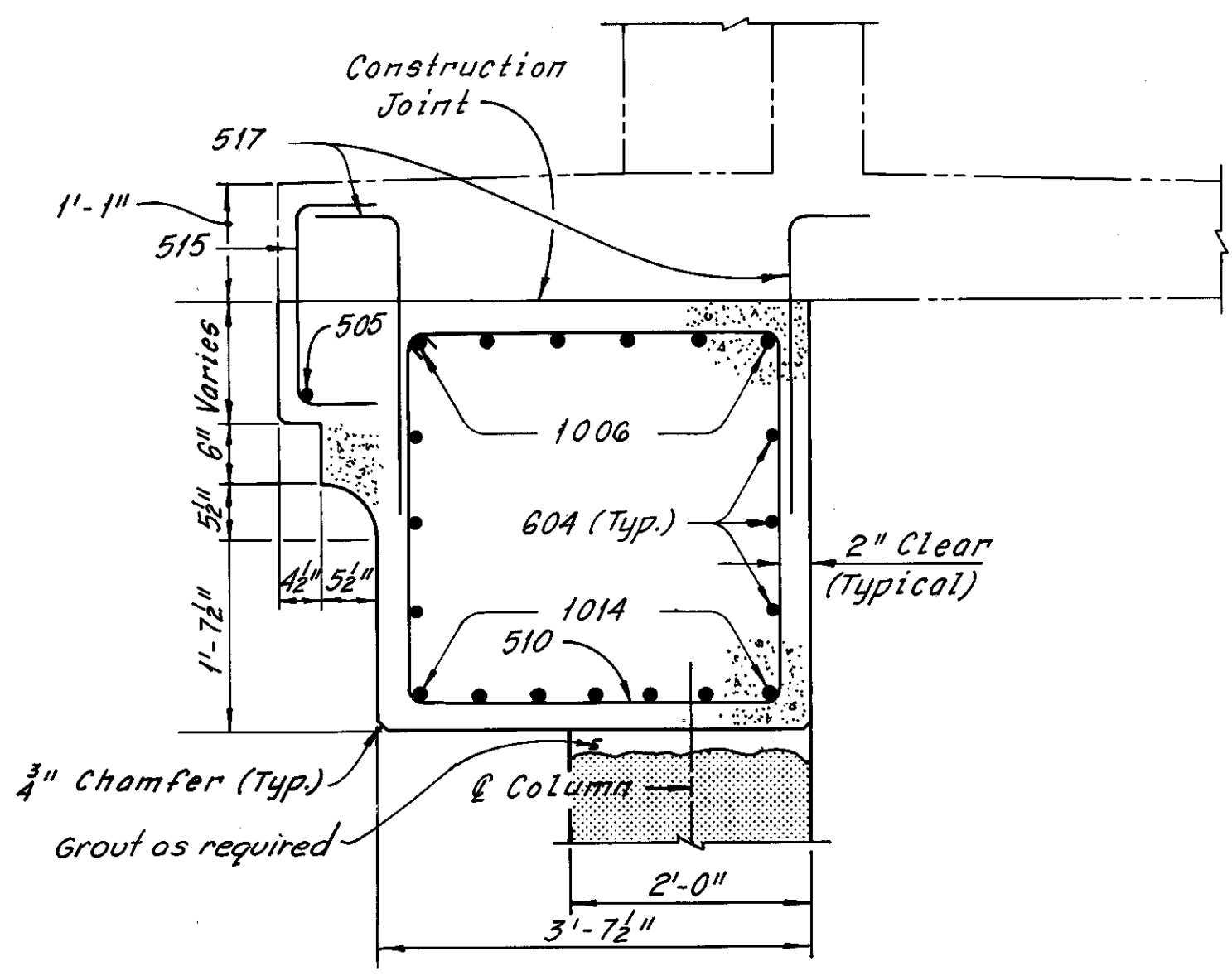
Bar No.	Lengths
5	1' - 7"
6	1' - 11"
10	3' - 2"

Location	Elev. A	Elev. B
*Front face of west abutment	670.95	667.60
@ Pier 1	670.27	666.83
@ Pier 2	669.62	666.13
@ Pier 3	669.36	665.77
@ Pier 4	668.91	665.07
*Front face of east abutment	668.48	663.72

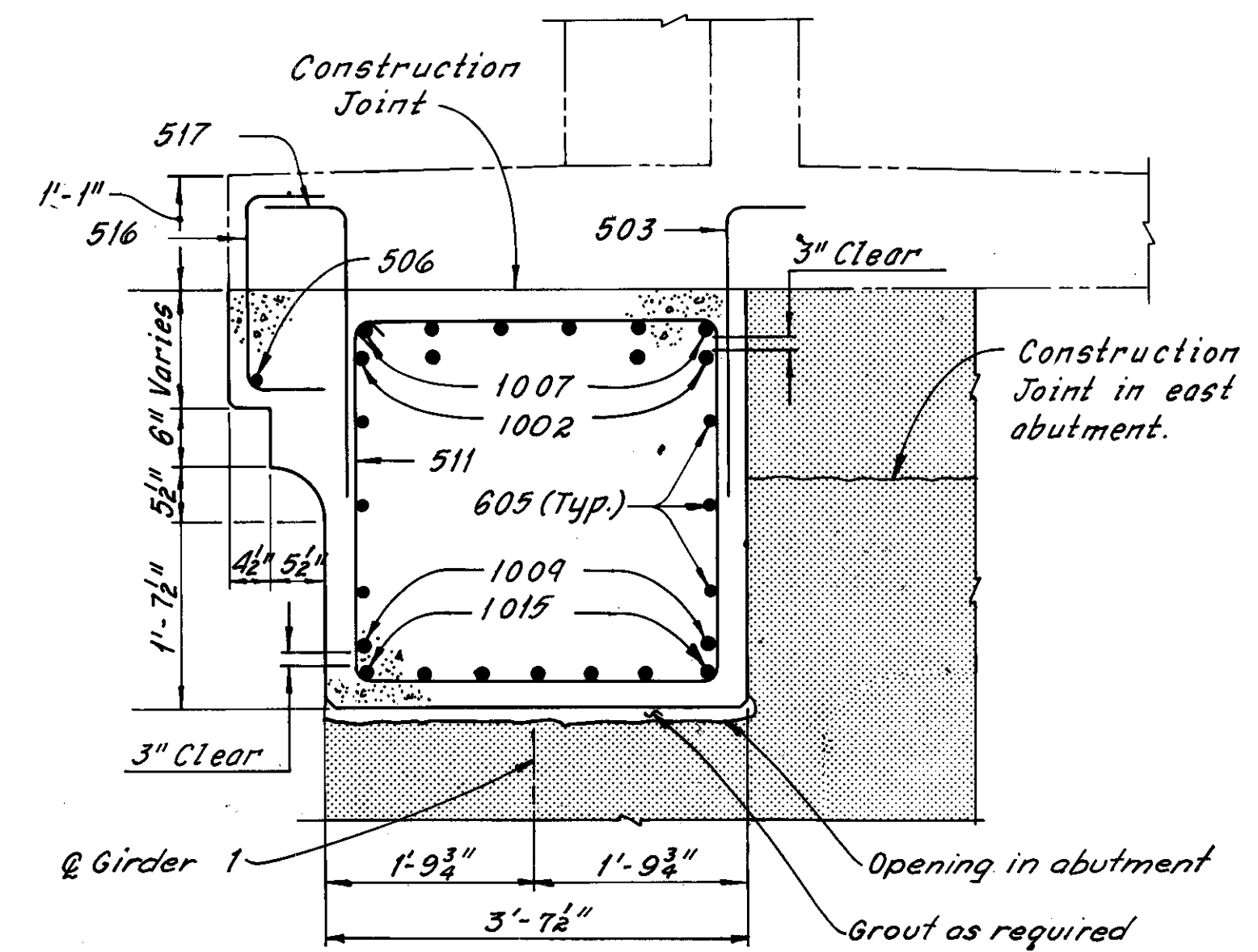
\* Given to the actual front face of Abutment backwall



SECTION A-A



SECTION B-B  
(Sidewalk reinforcement not shown)



SECTION C-C

Notes:  
 Zip-a-Tone indicates existing structure.  
 Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
 For Removal Plans, see Sheets 4/31  
 For Sidewalk Plans, see Sheets 27/31  
 For Reinforcement Schedule, see Sheet R/5  
 The following abbreviations are used:  
 Typ. = Typical Bot. = Bottom  
 e.f. = each face f.f. = far face  
 The cost of grouting shall be included with the unit price bid for Item 511, Class C Concrete, Abutments Above Footings, for payment.

HNTB BRIDGE NO. 4

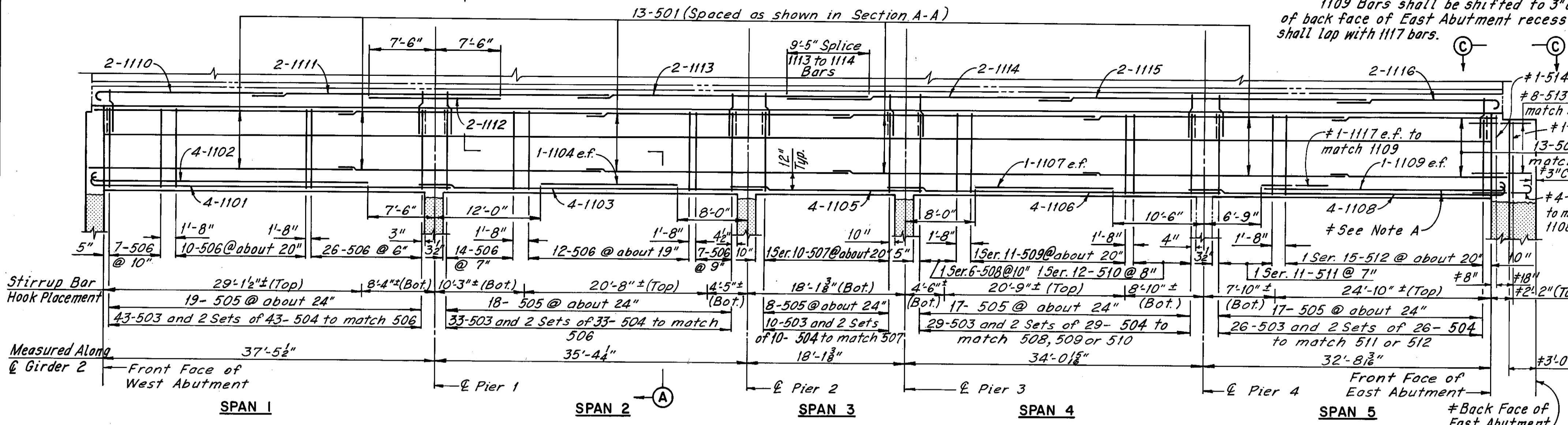
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**GIRDER-I REPLACEMENT**

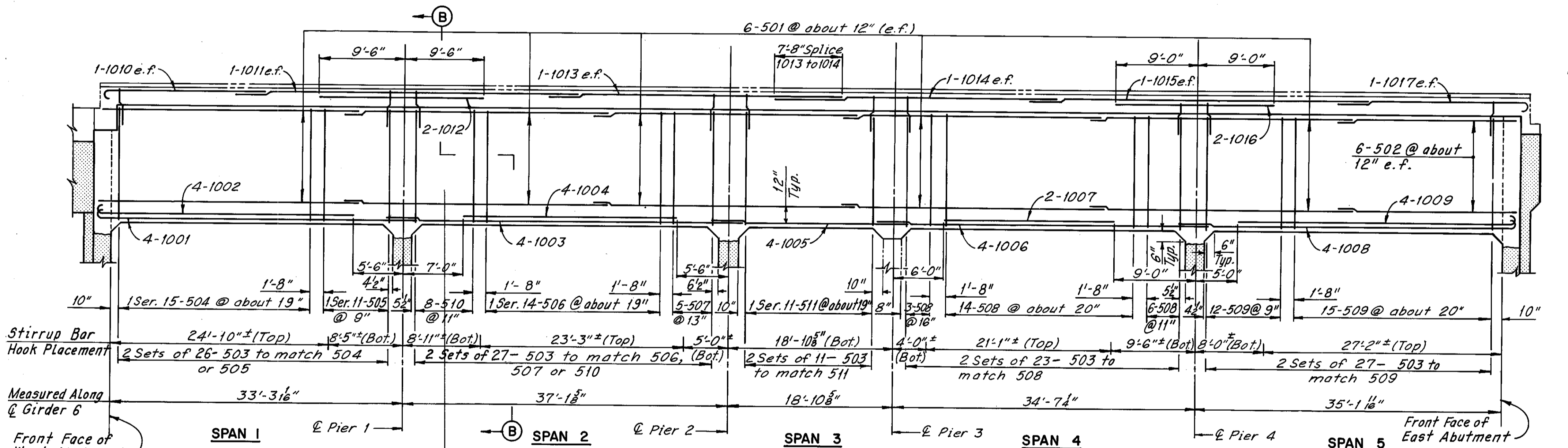
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)  
 BR. NO. CUY.-10-1685 STA. 57+29.72 STA. 58+85.70  
 CUYAHOGA COUNTY OHIO

DRAWN AJT	TRACED DES	CHECKED RAS	REVIEWED	REVISED
DATE 7-28-78	DATE 8-1-78	DATE 9-27-78	DATE	SHEET 20/31

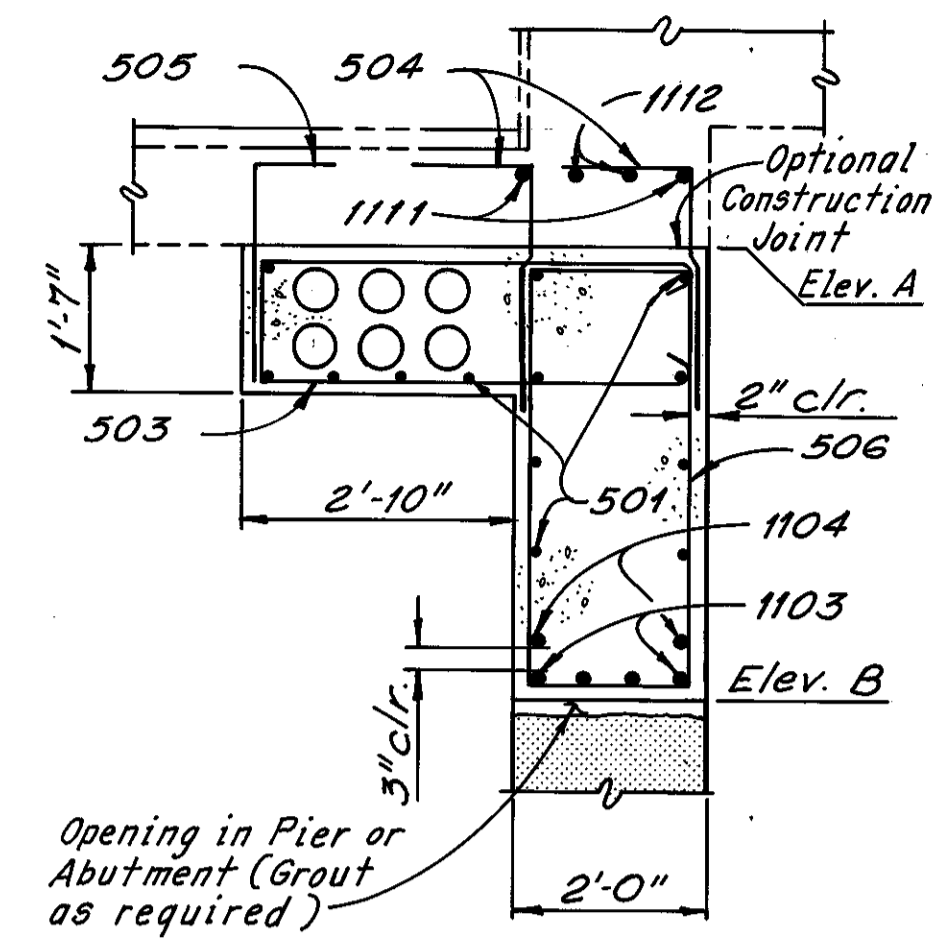
# Note A:  
1109 Bars shall be shifted to 3" clear of back face of East Abutment recess and shall lap with 1117 bars.



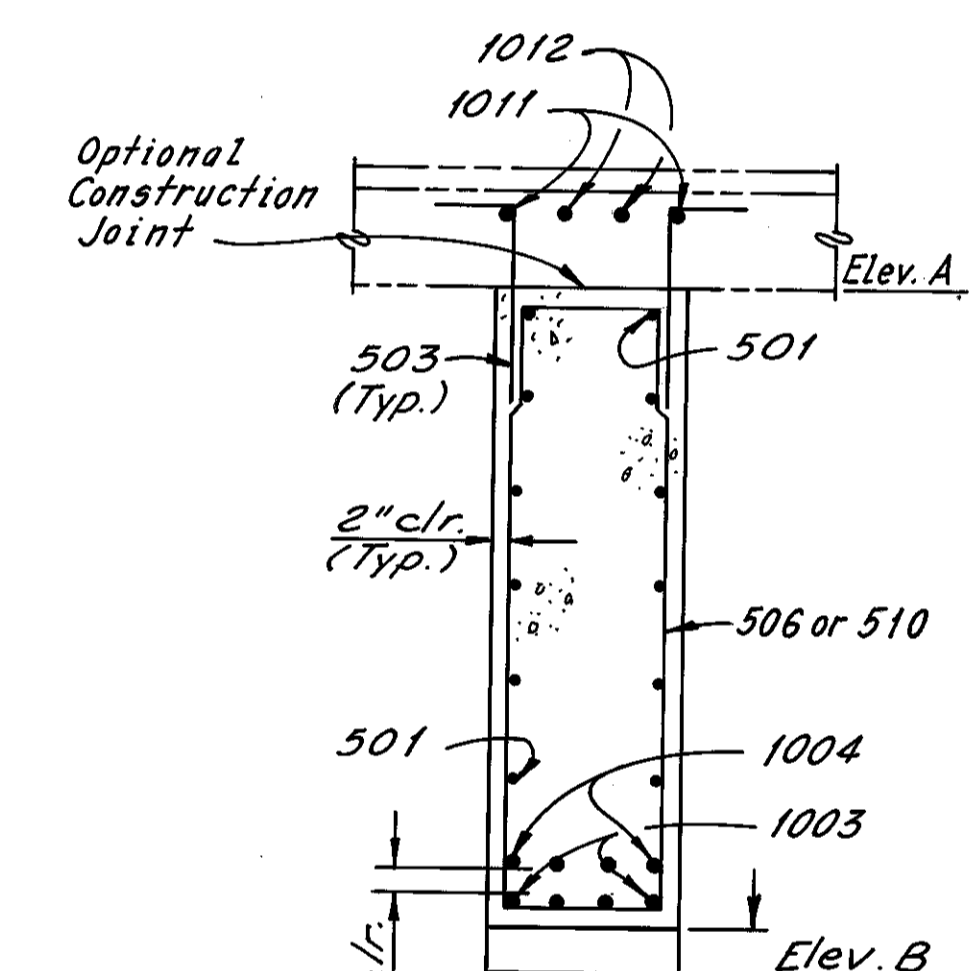
GIRDER 2 ELEVATION  
(Looking North)



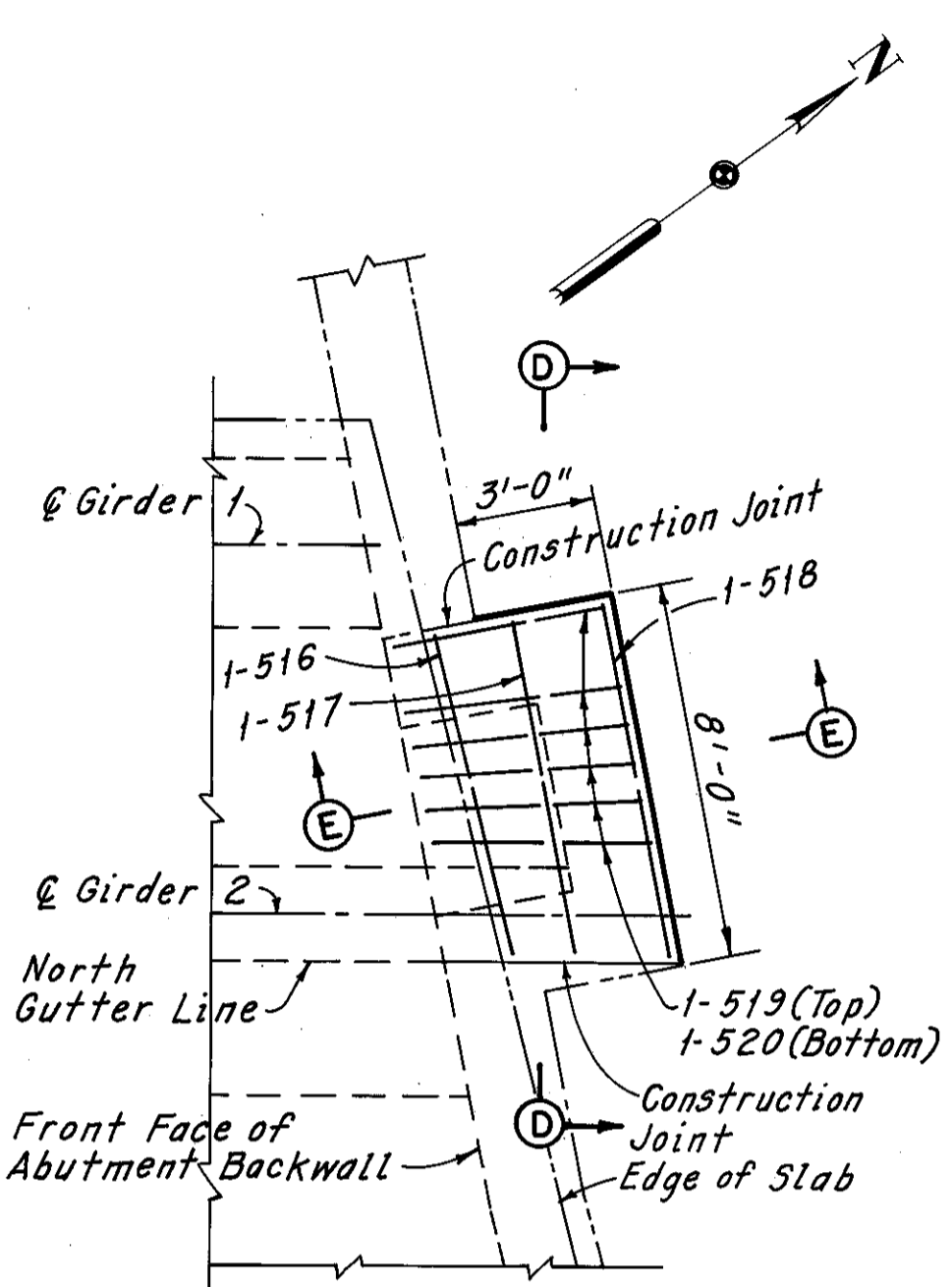
GIRDER 6 ELEVATION  
(Looking North)



SECTION A-A  
(Stirrup Bar Hooks Not Shown)



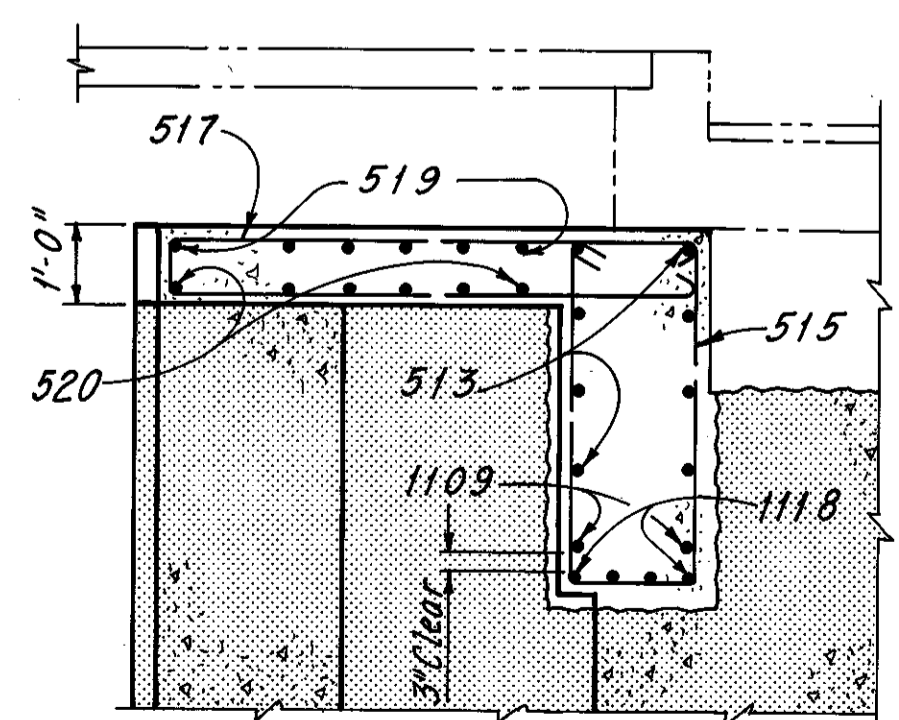
SECTION B-B  
(Stirrup Bar Hooks Not Shown)



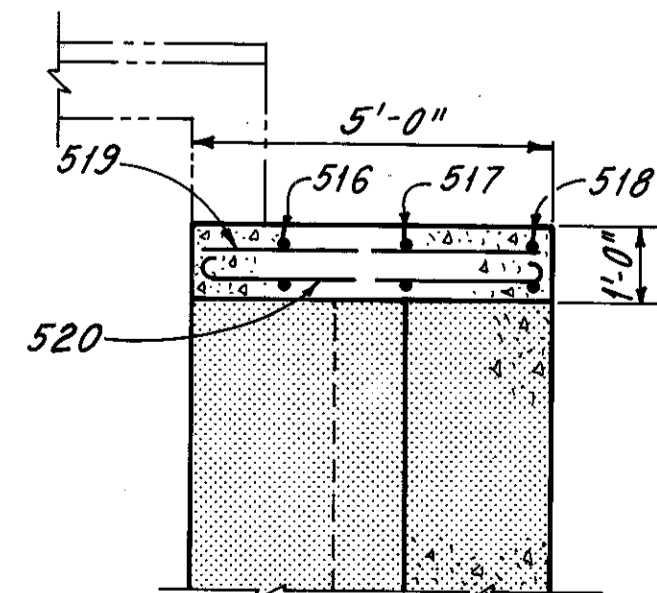
# VIEW C-C

LOCATION	GIRDER 2		GIRDER 6	
	ELEV. A	ELEV. B	ELEV. A	ELEV. B
*Front face of West Abutment	669.69	665.18	669.50	661.95
℄ Pier 1	668.93	664.43	668.89	661.65
℄ Pier 2	668.29	663.72	668.40	661.31
℄ Pier 3	668.05	663.36	668.17	661.14
℄ Pier 4	667.60	662.67	667.77	660.82
*Front face of East Abutment	667.19	662.02	667.45	660.50

\*Given to the actual front face of Abutment backwall.



# SECTION D-D



# SECTION E-E

Note: Reinforcing bar marks shall be prefixed GA for Girder 2 and GB for Girder 6.

MINIMUM LAP LENGTHS (Except as noted)	
Bar No.	Lengths
5	1'-7"
6	1'-11"
10	3'-2"
11	3'-6"

Notes:  
Zip-a-tone indicates existing structure.  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
Bottom girder reinforcing shall be placed in between existing vertical column reinforcing.  
The abutment brace at Girder 6 shall not be removed until the girder attains its design strength.  
For Removal Plans, see Sheet 4/31.  
For Reinforcement Schedule, see Sheet R/5.  
The following abbreviations are used:  
Typ. = Typical Bot. = Bottom e.f. = each face f.f. = far face Elev. = Elevation Ser. = Series  
The cost of grouting shall be included with the unit price bid for Item 511, Class C Concrete, Abutments Above Footings, for nument.

Sheet added 12-5-83  
# Extension of Girder 2 As Determined During Bridge Reconstruction  
REVISION

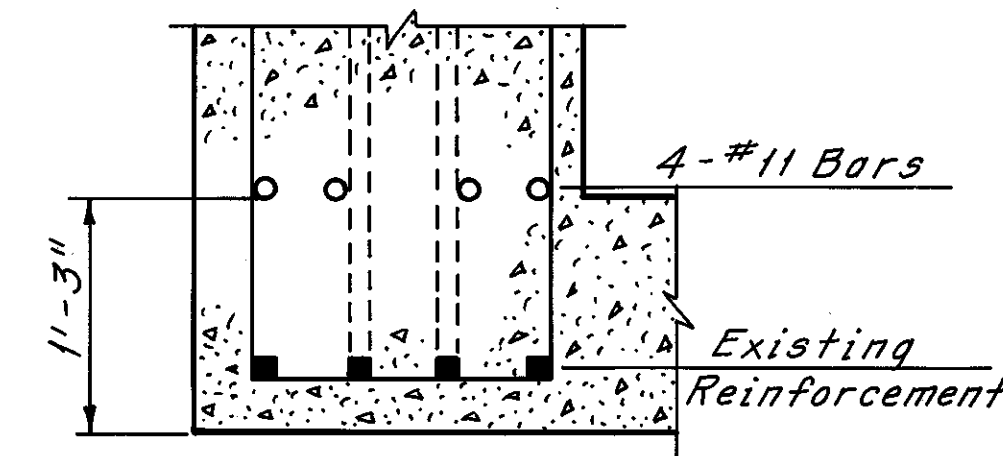
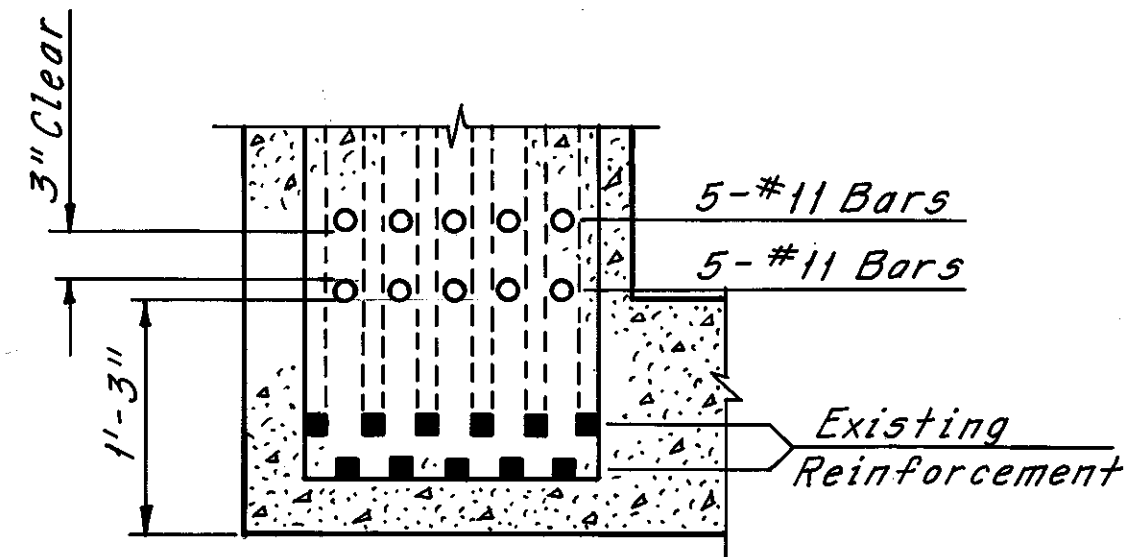
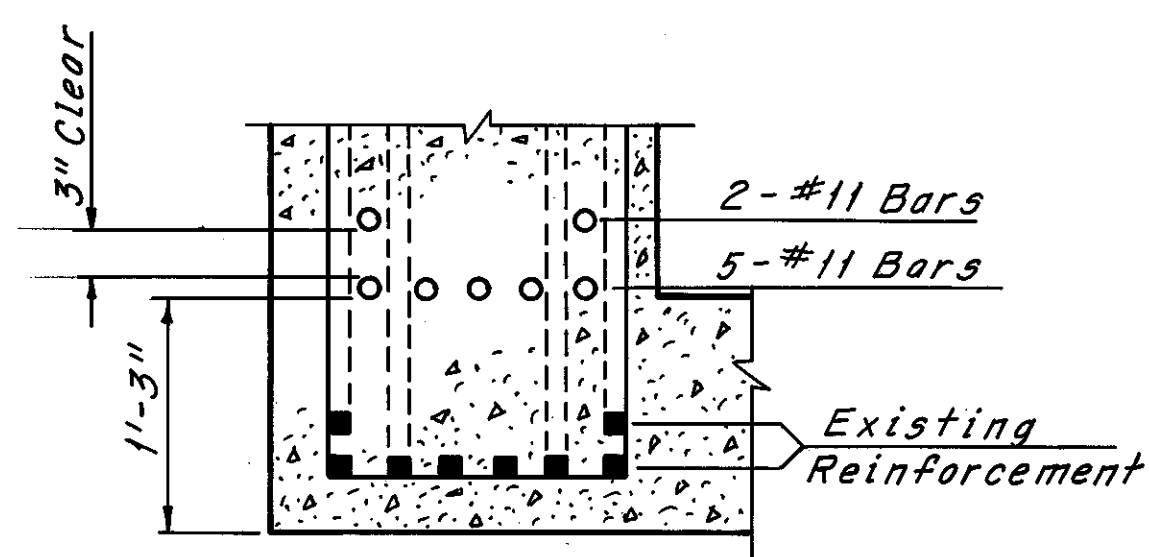
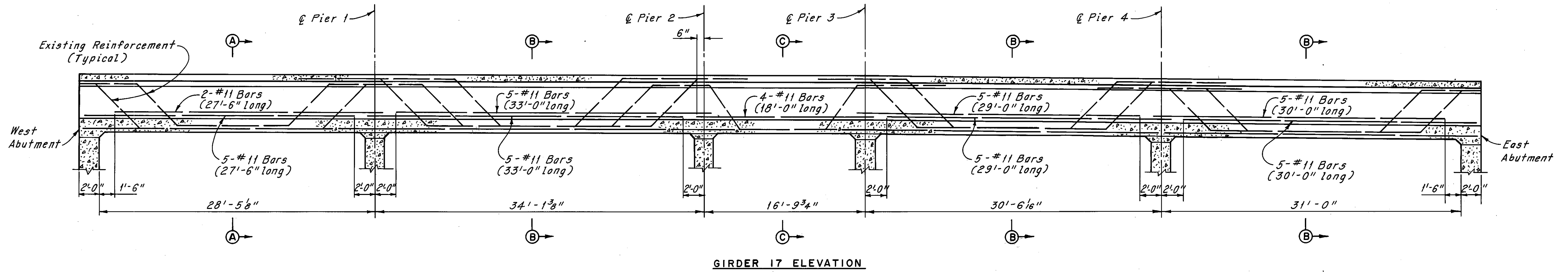
H.N.T.B. BRIDGE NO. 4  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND  
**HNTB**  
GIRDERS 2 AND 6 REPLACEMENT (AS DETERMINED DURING RECONSTRUCTION)  
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY. -10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70 OHIO  
DRAWN BY: JLV TRACED BY: WEA CHECKED BY: WEA REVIEWED BY: WEA REVISION DATE: 5-1-81 DATE: 5-5-81 DATE: 5-7-81 DATE: DATE: SHEET 20A/31

MICROFILMED  
DEC 8 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

167B  
185

CUYAHOGA COUNTY  
CUY-10-16.23



H.N.T.B. BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

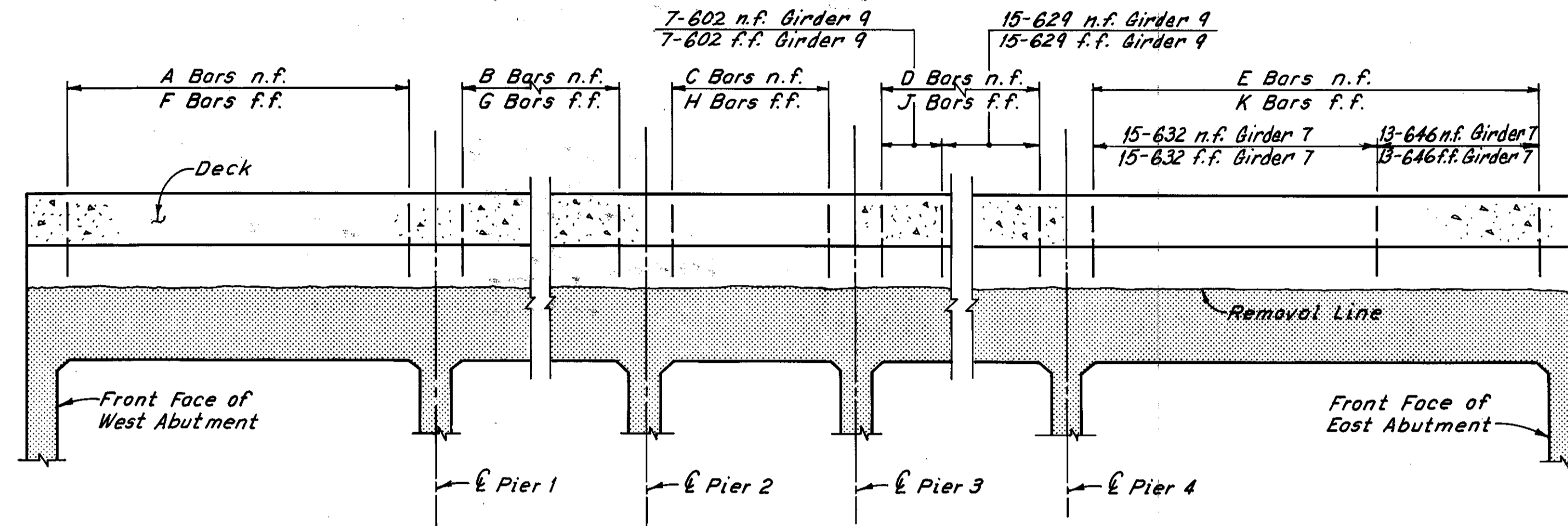
**GIRDER 17 MODIFICATION**  
(AS DETERMINED DURING RECONSTRUCTION)

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)

BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

DRAWN C.K.B.	TRACED C.P.	CHECKED D.H.S.	REVIEWED	REVISED
DATE: 4-22-82	DATE: 6-11-82	DATE: 4-23-82	DATE:	SHEET: 20B/31

Sheet added 12-5-83



Note:  
Reinforcing bars shall be spaced to match existing girder reinforcement.

TYPICAL GIRDER ELEVATION  
(Existing Girder reinforcement and new slab reinforcement not shown)

GIRDER	BAR A		BAR B		BAR C		BAR D		BAR E		BAR F		BAR G		BAR H		BAR J		BAR K	
	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK	NO.	MARK
	2	24	602	22	602	4	605	1 Ser. 16	607	1 Ser. 16	609	24	601	22	601	4	603	1 Ser. 16	606	1 Ser. 16
3	26	610	24	610	4	611	1 Ser. 20	612	1 Ser. 18	613	26	610	24	610	4	611	1 Ser. 20	612	1 Ser. 18	613
4	16	614	18	615	4	611	1 Ser. 16	616	1 Ser. 20	617	16	614	18	615	4	611	1 Ser. 16	616	1 Ser. 20	617
4A	-	-	18	615	4	611	1 Ser. 16	618	1 Ser. 20	619	-	-	18	615	4	611	1 Ser. 16	618	1 Ser. 20	619
5	18	611	22	620	1 Ser. 4	621	1 Ser. 20	622	1 Ser. 22	625	18	611	22	620	1 Ser. 4	621	1 Ser. 20	622	1 Ser. 22	624
6	1 Ser. 23	626	1 Ser. 32	627	8	628	28	628	26	629	1 Ser. 23	626	1 Ser. 32	627	8	628	28	628	26	629
7	22	629	28	630	8	630	1 Ser. 23	631	15 13	632 646	22	629	28	630	8	630	1 Ser. 23	631	15 13	632 646
8	17	603	19	633	8	601	1 Ser. 17	634	26	635	17	603	19	633	8	601	1 Ser. 17	634	26	635
9	17	601	19	605	8	602	7 15	602 629	-	-	17	601	19	605	8	602	7 15	602 629	-	-
10	19	636	21	605	-	-	-	-	-	-	19	636	21	605	-	-	-	-	-	-
11	1 Ser. 16	637	-	-	-	-	-	-	-	1 Ser. 16	637	-	-	-	-	-	-	-	-	-
12	1 Ser. 21	638	29	640	8	629	-	-	-	1 Ser. 21	639	29	636	8	636	-	-	-	-	-
13	23	601	24	633	8	630	20	629	32	635	23	601	24	633	8	630	20	629	32	635
14	19	620	32	641	8	641	19	642	21	643	19	601	32	601	8	601	19	633	21	645
15	1 Ser. 17	644	20	620	7	620	14	641	16	641	1 Ser. 17	644	20	620	7	620	14	641	16	641
16	17	611	20	611	7	620	14	620	16	604	17	611	20	611	7	620	14	620	16	604
17	16	≠641	20	≠620	8	≠620	16	≠620	18	≠604	16	≠611	20	≠641	8	≠642	16	≠642	18	≠623
18	18	604	28	604	7	641	20	641	17	642	18	604	28	604	7	641	20	641	17	642

#Delete

Notes:  
Zip-a-tone indicates existing structure.  
For Girder 1 replacement details, see Sheet 20/31.  
For Reinforcement Schedule, see Sheet R/5.  
For Member Identification Plans, see Sheet 2/31.  
For Typical Section thru girders, see Modified Typical Section Along Pier 3, see Sheet 22/31.  
#For Girder 2 and Girder 6 replacement details, see Sheet 20A/31.

Note: All reinforcing bar marks shall be prefixed GR.

≠ denotes epoxy coated reinforcing steel

#3 THRU 5 AND 7

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

GIRDER REINFORCEMENT GIRDERS ② THRU 18

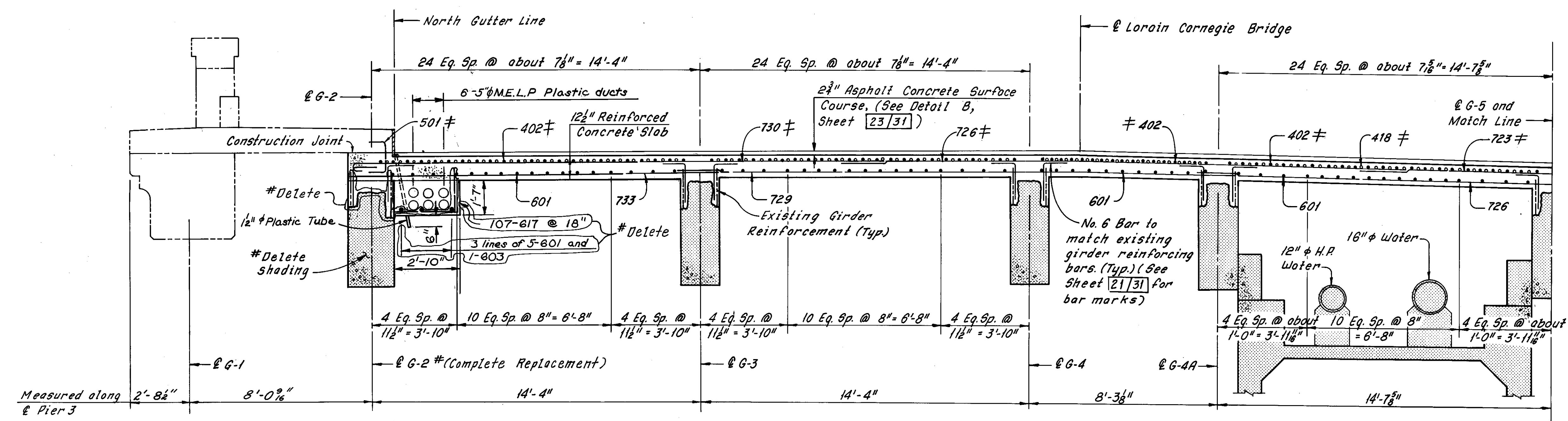
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)

BR. NO. CUY. -10-1685 STA. 57+29.72  
OHIO STA. 58+85.70

CUYAHOGA COUNTY

#Additional girder replacement as determined during bridge reconstruction 4-16-81 C.K.B. REVISION

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
AJT	DES	AN		12-5-83
DATE: 8-2-78	DATE: 8-4-78	DATE: 8-7-78	DATE:	SHEET 21/31

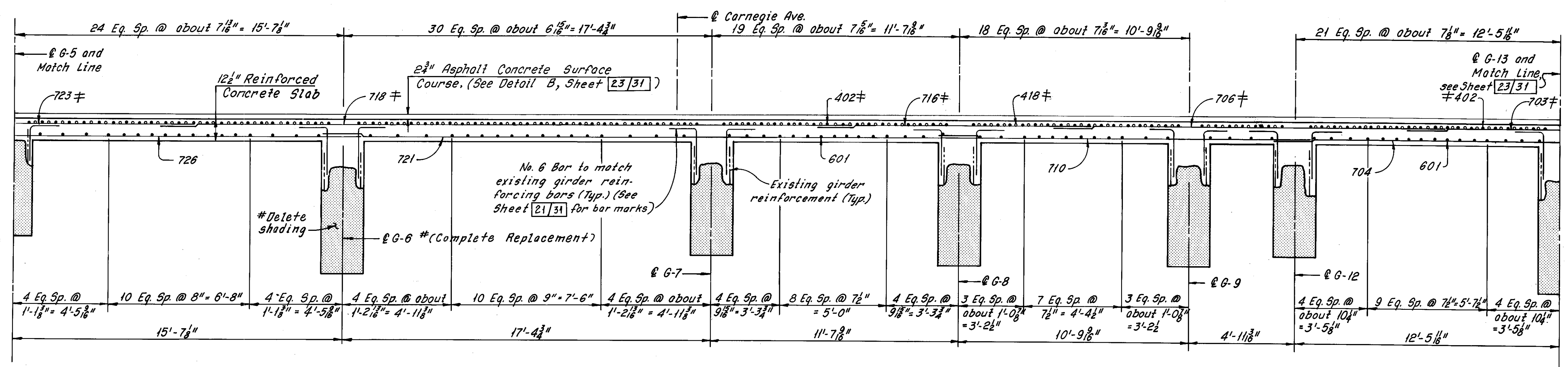


PART TYPICAL SECTION  
(Columns Not Shown)

# denotes epoxy coated reinforcing steel

Note:  
Existing Longitudinal Girder Reinforcement not shown.

Note:  
Reinforcing bars shown shall be prefixed as follows:  
BR = Bottom Transverse Reinforcing  
TR = Top Transverse Reinforcing  
LR = Longitudinal Reinforcing



PART TYPICAL SECTION  
(Columns Not Shown)

Notes:  
Zip-a-tone indicates existing structures.  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.

For Removal Plans, see Sheet 4/31.  
For Sidewalk Details, see Sheet 27/31.  
For Girder 1 Details, see Sheet 30/31.  
For Reinforcement Schedule, see Sheet R/4.

The following abbreviations are used:  
Typ. = Typical  
H.P. = High Pressure  
Eq. Sp. = Equal Spaces  
For Slab Plans, see Sheets 24/31, 25/31 and 26/31.

For stage construction see Sheet 1/31.  
# For Girders 2 and 6 details, see Sheet 20A/31.

HNTB BRIDGE NO. 4  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

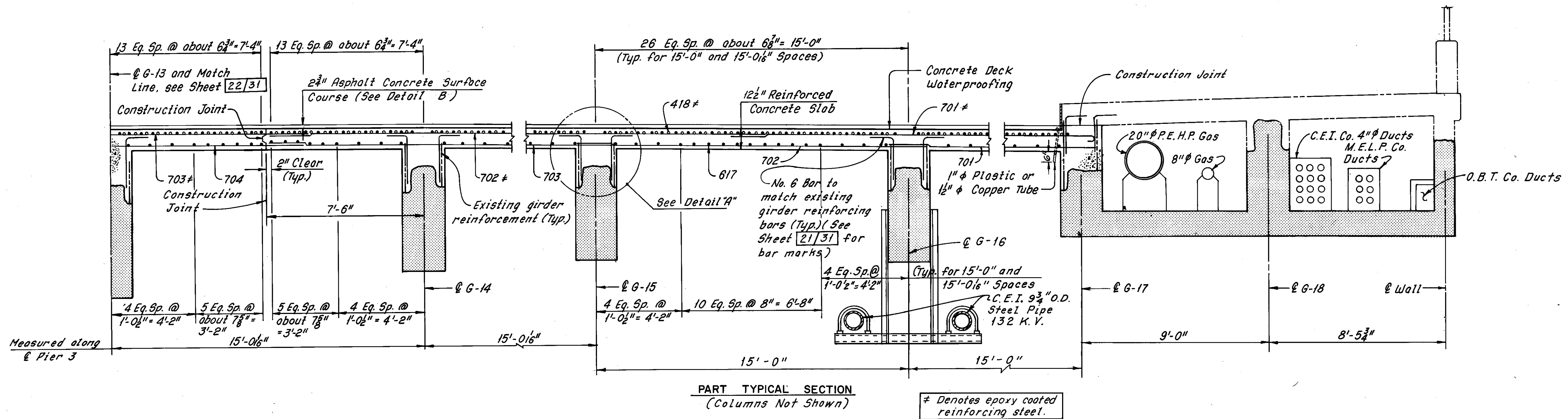
**HNTB**

MODIFIED TYPICAL SECTION  
ALONG PIER 3  
REHABILITATION OF THE  
CARNegie AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

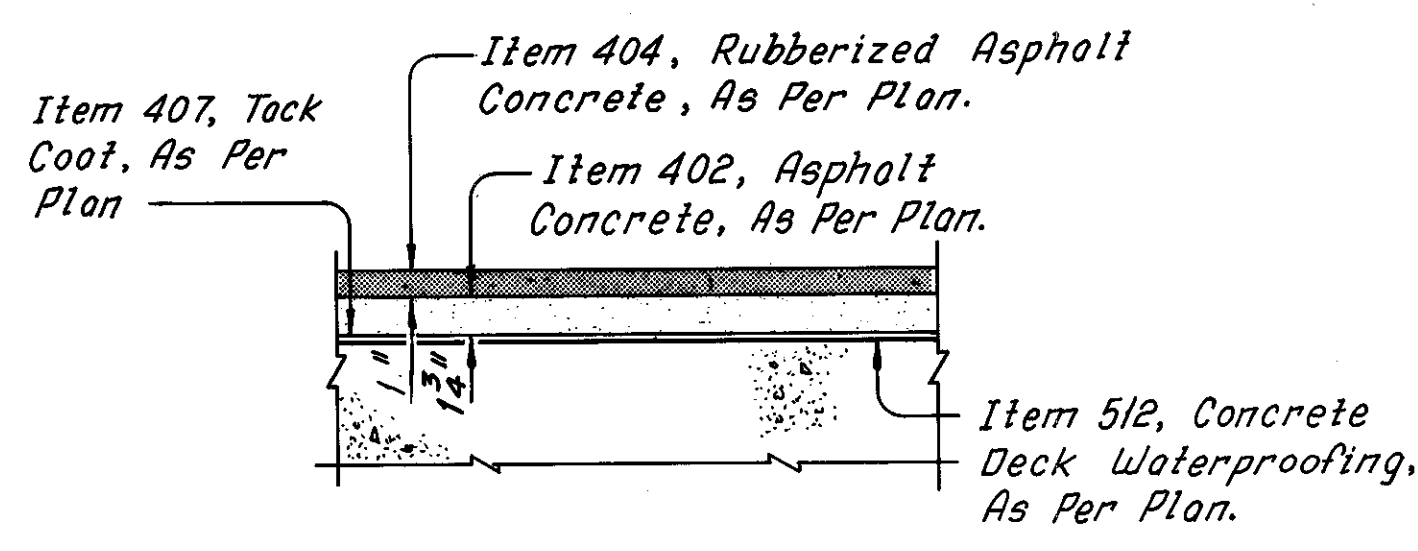
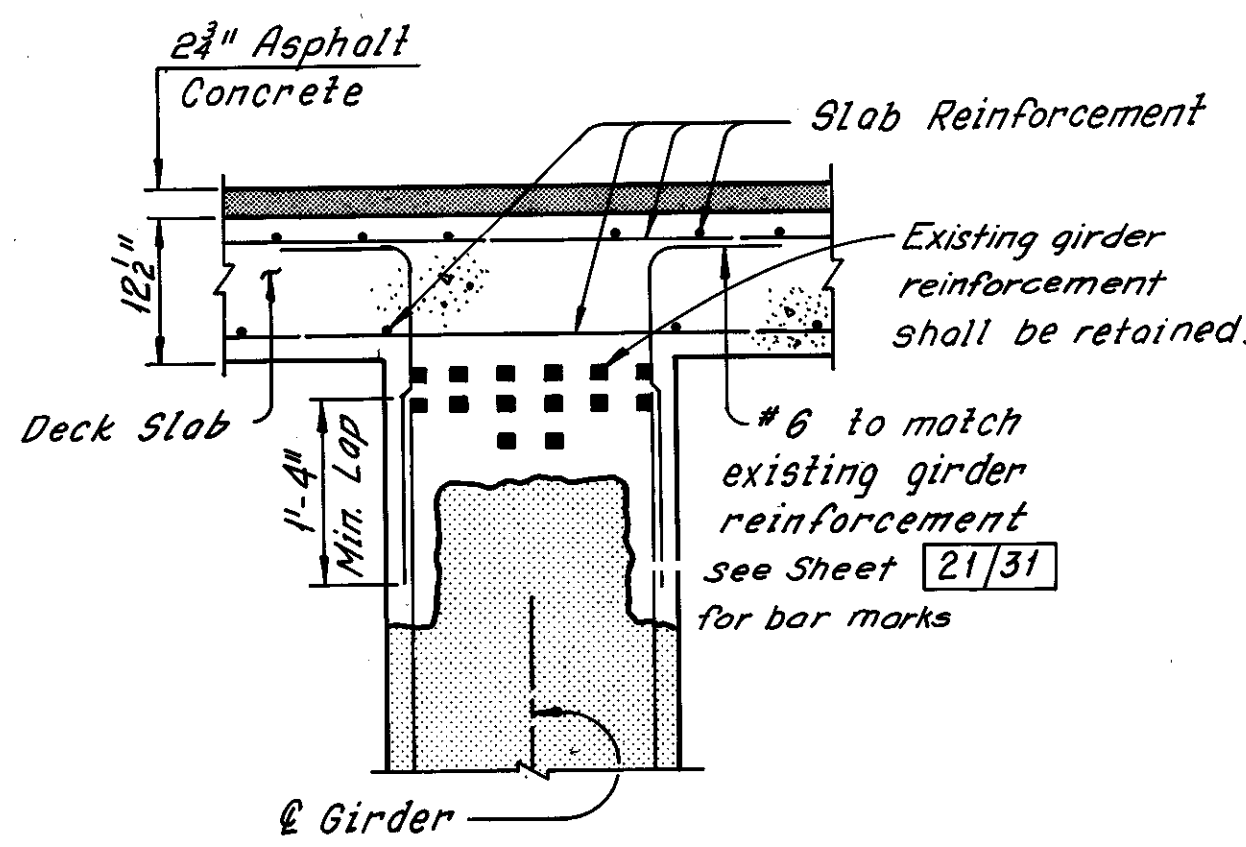
DRAWN BY	TRACED BY	CHECKED BY	REVIEWED	REVISED
DATE 9-25-78	DATE 10-3-78	DATE 7-7-78	DATE	12-5-83

SHEET 22/31

#Additional girder replacement as determined during bridge reconstruction 4-16-81  
REVISION  
C.K.B.



Note:  
Reinforcing bars shown shall be prefixed as follows:  
BR = Bottom Transverse Reinforcing  
TR = Top Transverse Reinforcing  
LR = Longitudinal Reinforcing



Note:  
For Notes, see Sheet 22/31

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

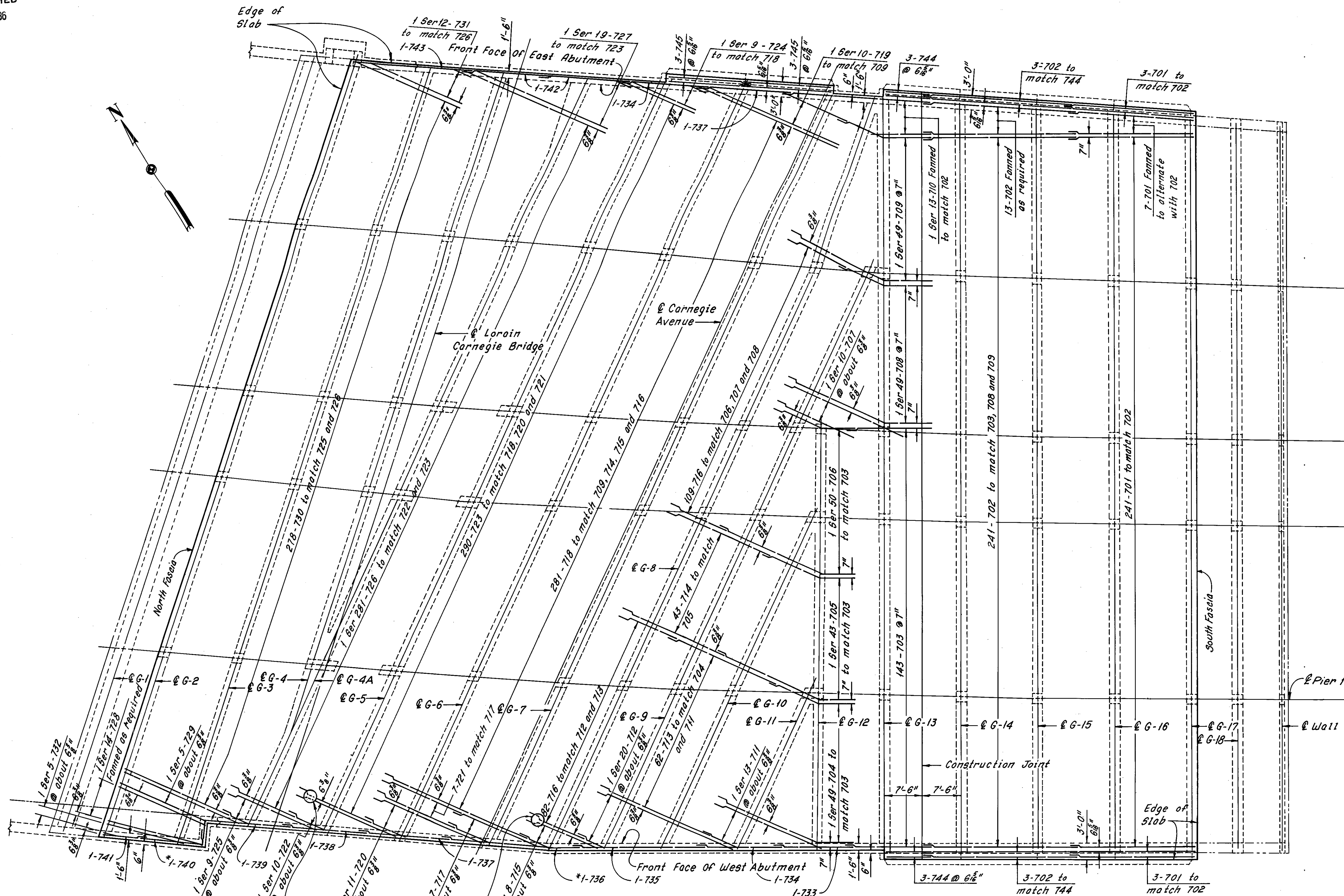
**HNTB**

MODIFIED TYPICAL SECTION  
ALONG PIER 3  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY. -10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70 OHIO

#Additional girder replacement as determined during bridge reconstruction 4-16-81 C.K.B.

DRAWN Bp	TRACED Bp	CHECKED PB	REVIEWED	REVISED 12-5-83
DATE 9-25-78	DATE 10-3-78	DATE 7-7-78	DATE	SHEET 23/31

REVISION



REQUIRED LAP LENGTHS	
No. 7 Bar	2'-0" Min.

Notes:  
 For longitudinal deck slab reinforcement, see Sheet 26/31.  
 For bottom transverse deck slab reinforcement, see Sheet 25/31.  
 For Modified Typical Section of Pier 3, see Sheet 22/31.  
 For Sidewalk Plans and Details, see Sheet 27/31.  
 For Railing Plans and Details, see Sheet 29/31.  
 For Approach Slab Details, see roadway plans.  
 For Reinforcement Schedule and Bending Diagrams, see Sheet R/4.  
 For additional reinforcement at 30" Manholes, see Detail A, Sheet 26/31.  
 For stage construction, see Sheet 1/31.

\*Note: Field Bend as required.

Note: All reinforcing steel shown on this sheet shall be epoxy coated.

Note: All reinforcing bar marks shall be prefixed TR.

30" Manhole, for details see Sheet 26/31

HNTB BRIDGE NO. 4

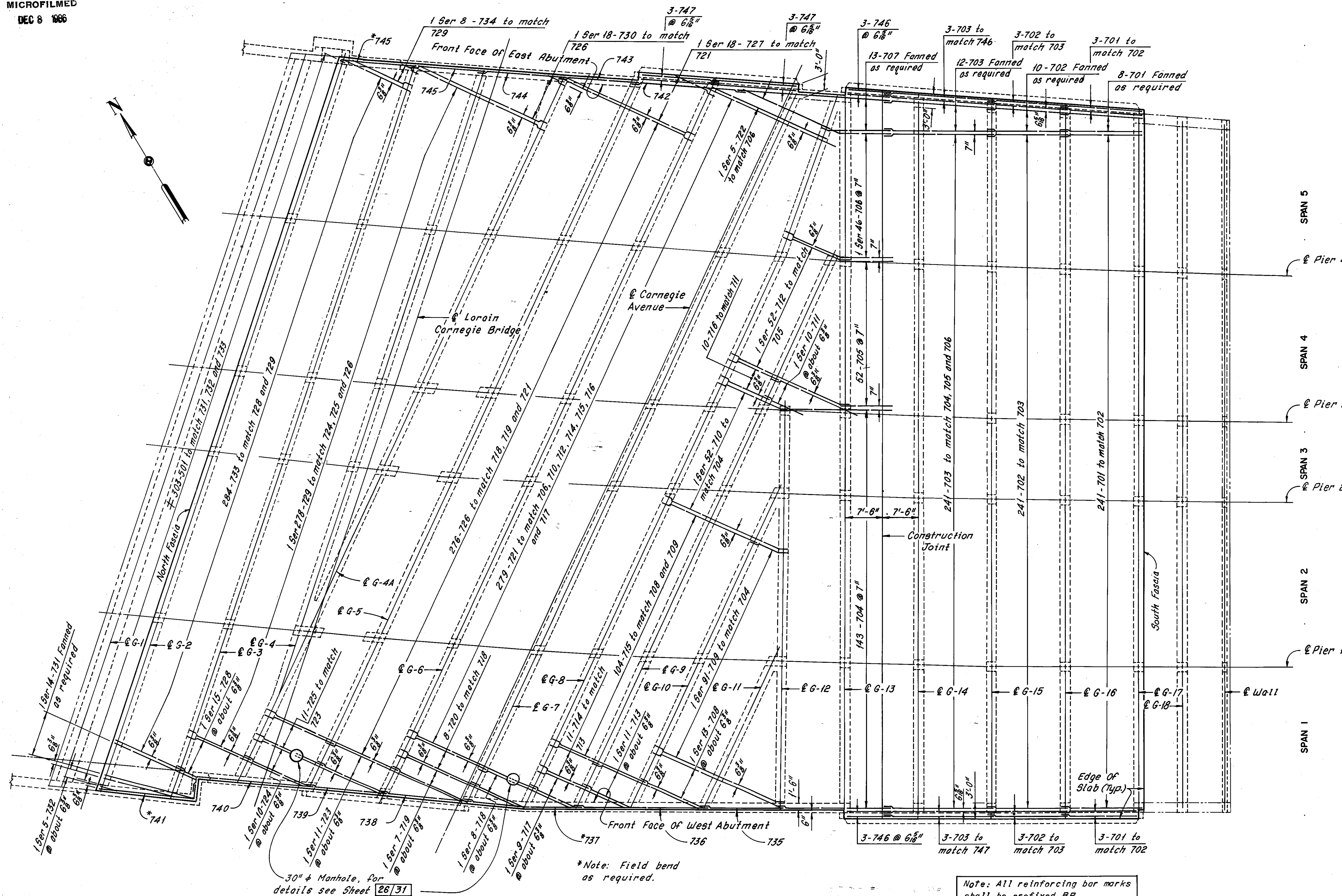
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**SLAB PLAN**  
**TOP TRANSVERSE REINFORCEMENT**  
 REHABILITATION OF THE  
 CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
 (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
 AND THE REGIONAL TRANSIT AUTHORITY)  
 BR. NO. CUY-10-1685 STA. 57+29.72  
 CUYAHOGA COUNTY STA. 58+85.70 OHIO

DRAWN BY B/P	TRACED BY B/P	CHECKED BY T/B	REVIEWED BY DATE	REVISED BY DATE
DATE: 3-7-78	DATE: 3-11-78	DATE: 7-7-78	DATE	DATE

SHEET 24/31



**REQUIRED LAP LENGTHS**  
No. 7 Bar 21'-0" Min.

Notes:  
For longitudinal deck slab reinforcement, see Sheet 26/31.  
For top transverse deck slab reinforcement, see Sheet 24/31.  
For Modified Typical Section at Pier 3, see Sheet 22/31.  
For Sidewalk Plans and Details, see Sheet 27/31.  
For Railing Plans and Details, see Sheet 29/31.  
For Approach Slab Details, see roadway plans.  
For Reinforcement Schedule and Bending Diagrams, see Sheet R/4.  
For additional reinforcement at 30" Manhole, see Detail A, Sheet 26/31.  
For stage construction, see Sheet 1/31.

\*Note: Field bend as required.

Note: All reinforcing bar marks shall be prefixed BR.

≠ denotes epoxy coated reinforcing steel

HNTB BRIDGE NO. 4

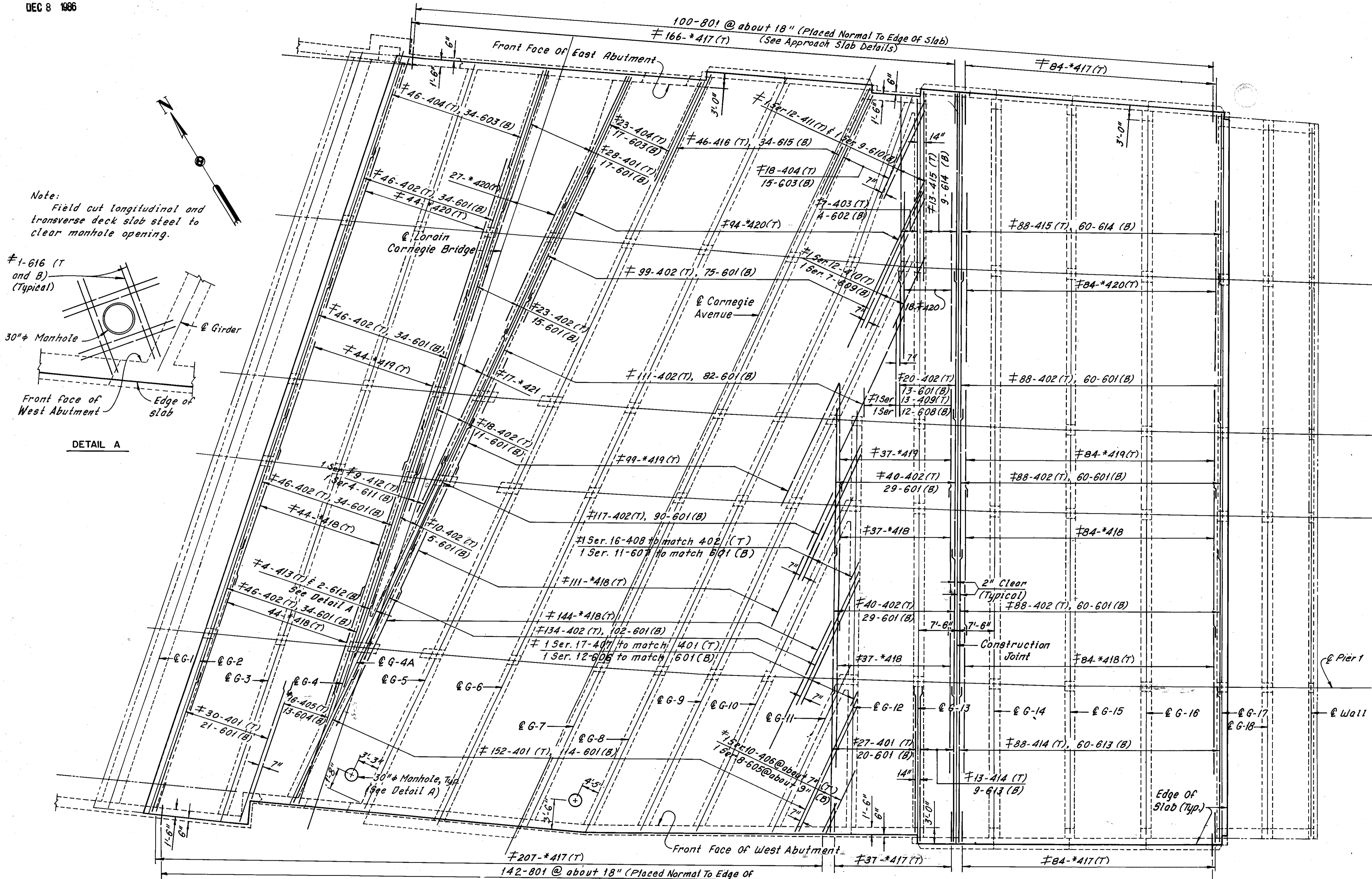
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

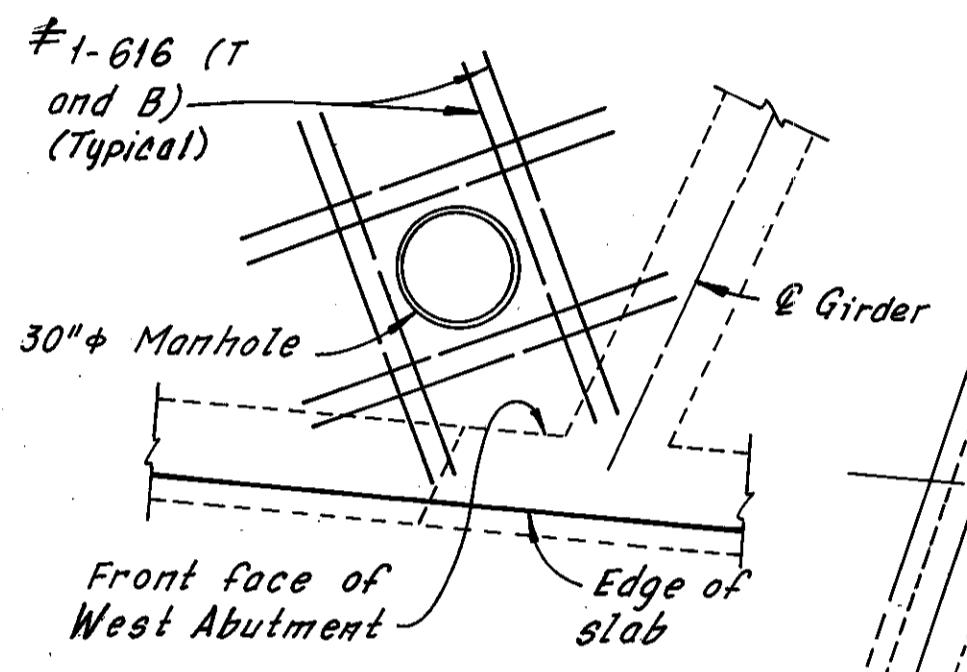
**SLAB PLAN**  
**BOTTOM TRANSVERSE REINFORCEMENT**  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70 OHIO

DRAWN BP	TRACED BP	CHECKED PB	REVIEWED DATE	REVISED
DATE 3-20-78	DATE 3-21-78	DATE 7-7-78	DATE	SHEET 25/31

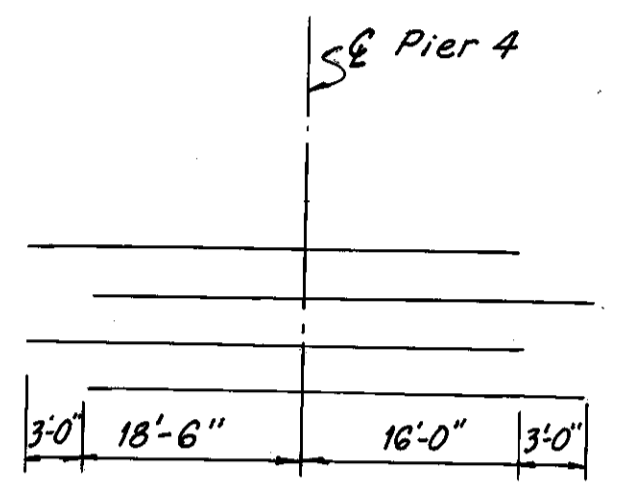
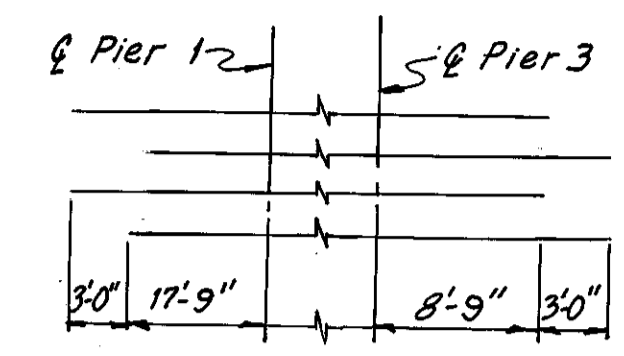




Note:  
Field cut longitudinal and transverse deck slab steel to clear manhole opening.



DETAIL A



PLACEMENT OF ADDITIONAL REINFORCEMENT OVER PIERS

MINIMUM REQUIRED BAR SPLICE LENGTH	
Bar No.	Splice length
4	1'-0"
6	1'-5"

Notes:  
\* Indicates additional reinforcement over piers or at abutments.  
For placement of longitudinal slab reinforcement, see Sheets 22/31 and 23/31.  
For additional notes, see Sheet 24/31.  
For Approach Slab Details, see roadway plans.  
For stage construction, see Sheet 1/31.

# denotes epoxy coated reinforcing steel

Note: All reinforcing bar marks shall be prefixed LR.

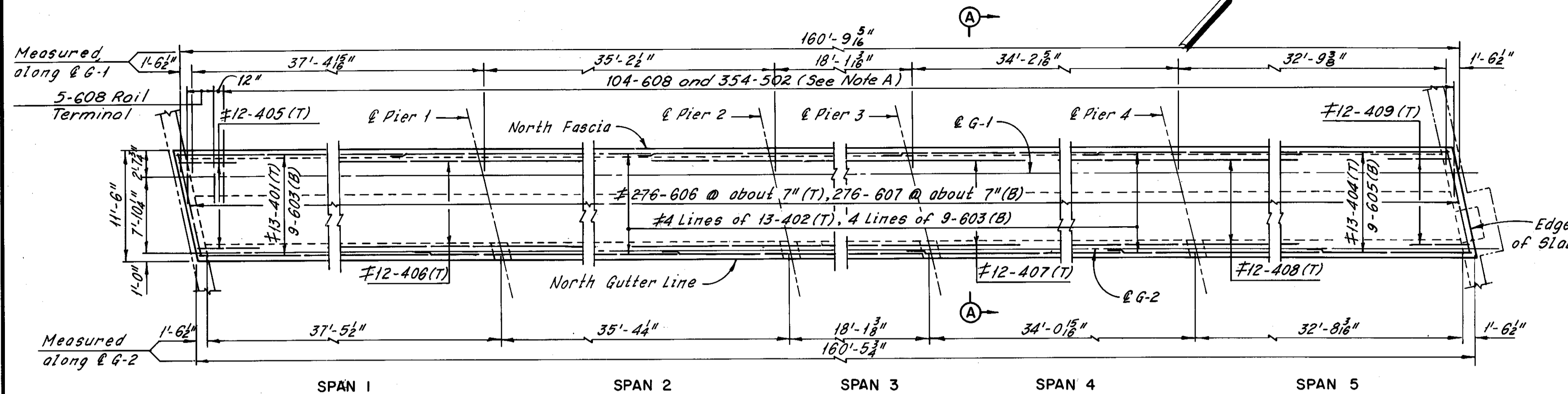
HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND



**SLAB PLAN**  
**LONGITUDINAL REINFORCEMENT**  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

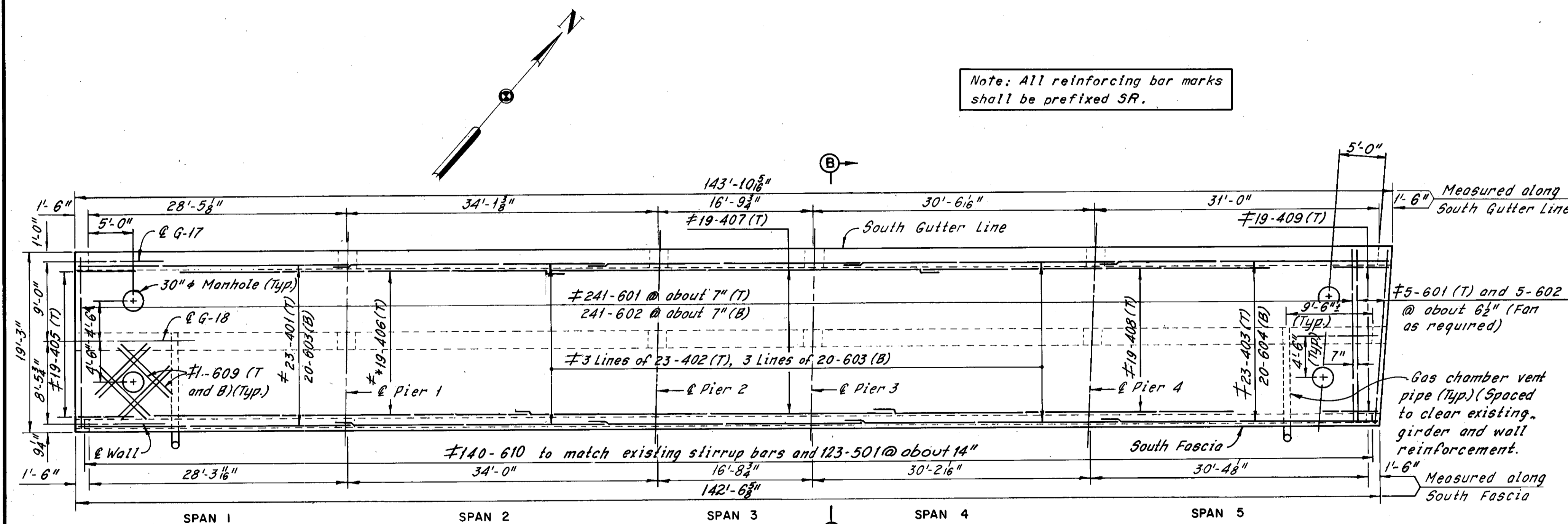
DRAWN BP	TRACED BP	CHECKED PB	REVIEWED PB	REVISION
DATE 5-22-78	DATE 5-23-78	DATE 7-24-78	DATE	



NORTH SIDEWALK PLAN  
(Concrete railing not shown)

\* Indicates additional reinforcement over piers, see Placement Diagram.

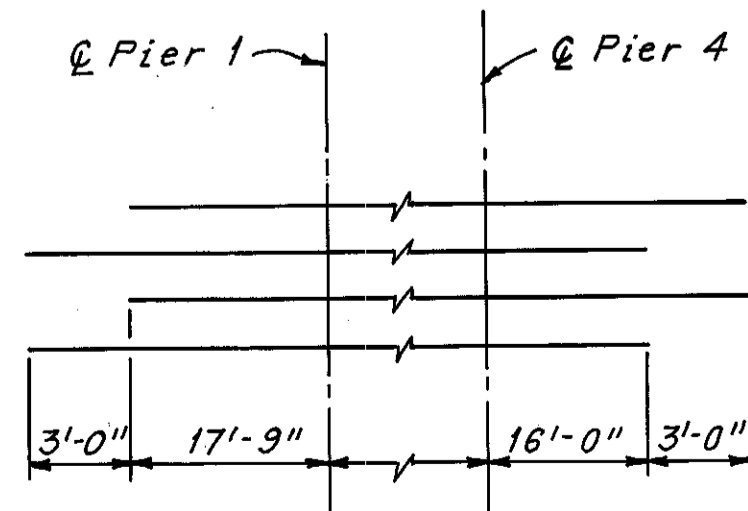
Note: All reinforcing bar marks shall be prefixed SR.



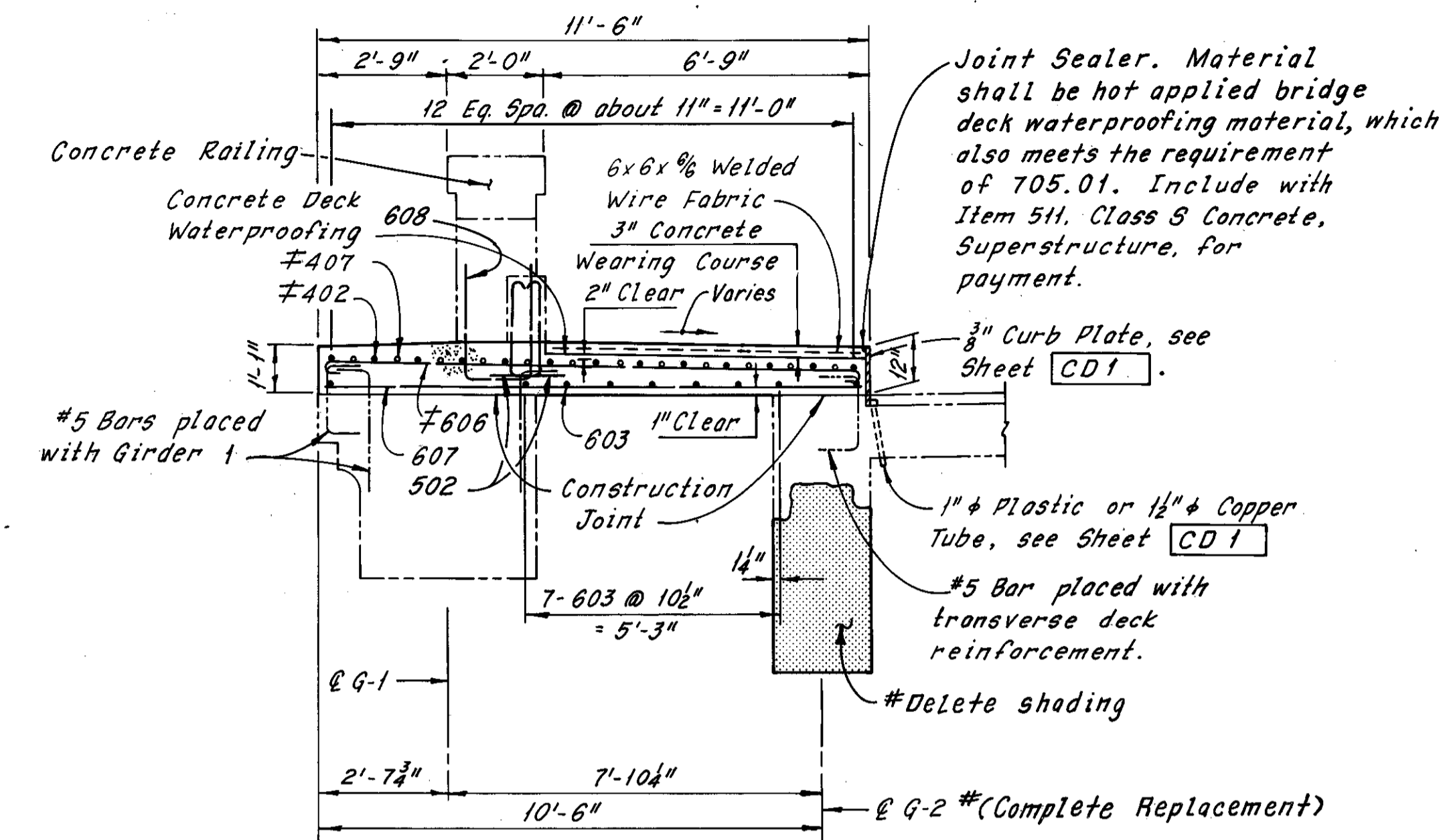
SOUTH SIDEWALK PLAN  
(Parapet and fence not shown)

\* Indicates additional reinforcement over piers, see Placement Diagram.

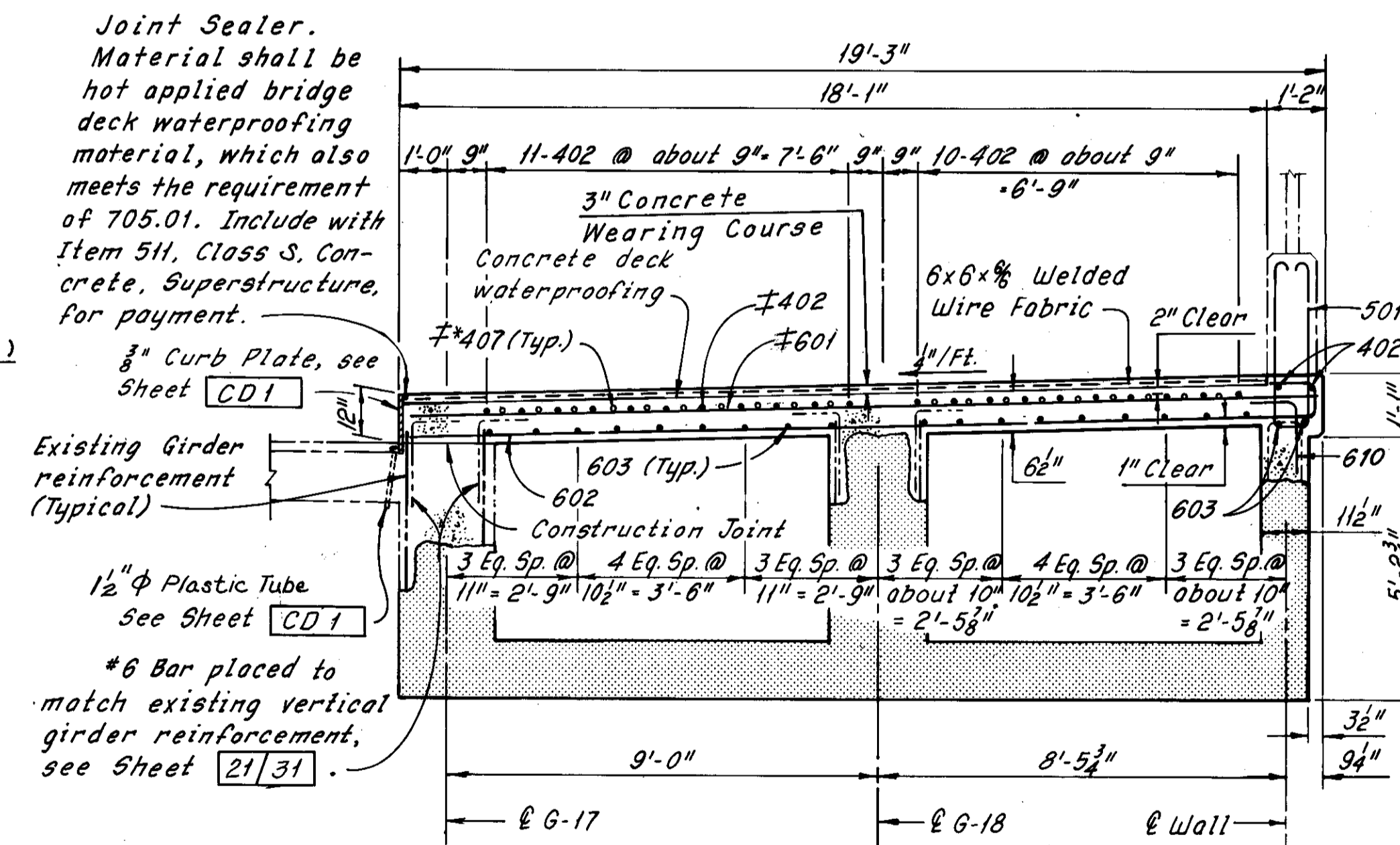
PLACEMENT OF ADDITIONAL REINFORCEMENT OVER PIERS



Note A:  
Bars SR502 shall be placed at 2 equal spaces (3 sets of 2 bars) between railing posts and at 1 space (2 sets of 2 bars) between railing posts and deflection joints and or railing posts and open joints. Bars SR 608 shall be placed at each face of railing posts.



SECTION A-A



SECTION B-B  
(Utilities Not Shown)

Notes:  
Zip-a-tone indicates existing structure.  
Phantom lines indicate new construction, details of which are shown elsewhere in these plans.  
For Removal Plans, see Sheets 4/31 and 5/31.  
For details of concrete railing on north sidewalk, see Sheet 29/31.  
For details of fence and parapet on south sidewalk, see Sheet 28/31.  
For Girder 1 Replacement Details, see Sheet 20/31.  
For Reinforcement Schedule, see Sheet R/4.  
For Gas Vent Detail, see Sheet 31/31.

#Additional girder replacement as determined during bridge reconstruction 4-16-81  
C.K.B.  
REVISION

HNTB BRIDGE NO. 4

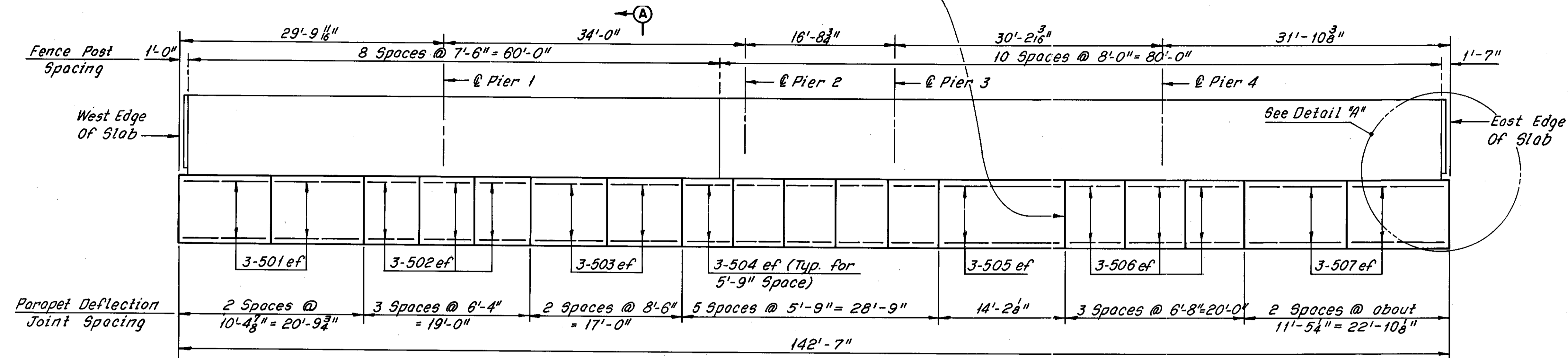
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

HNTB

SIDEWALK PLANS  
REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R. 10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

DRAWN B.P.	TRACED B.P.	CHECKED P.B.	REVIEWED DATE	REVISED 12-5-83
DATE 5-21-78	DATE 5-22-78	DATE 7-7-78	DATE	SHEET 27/31

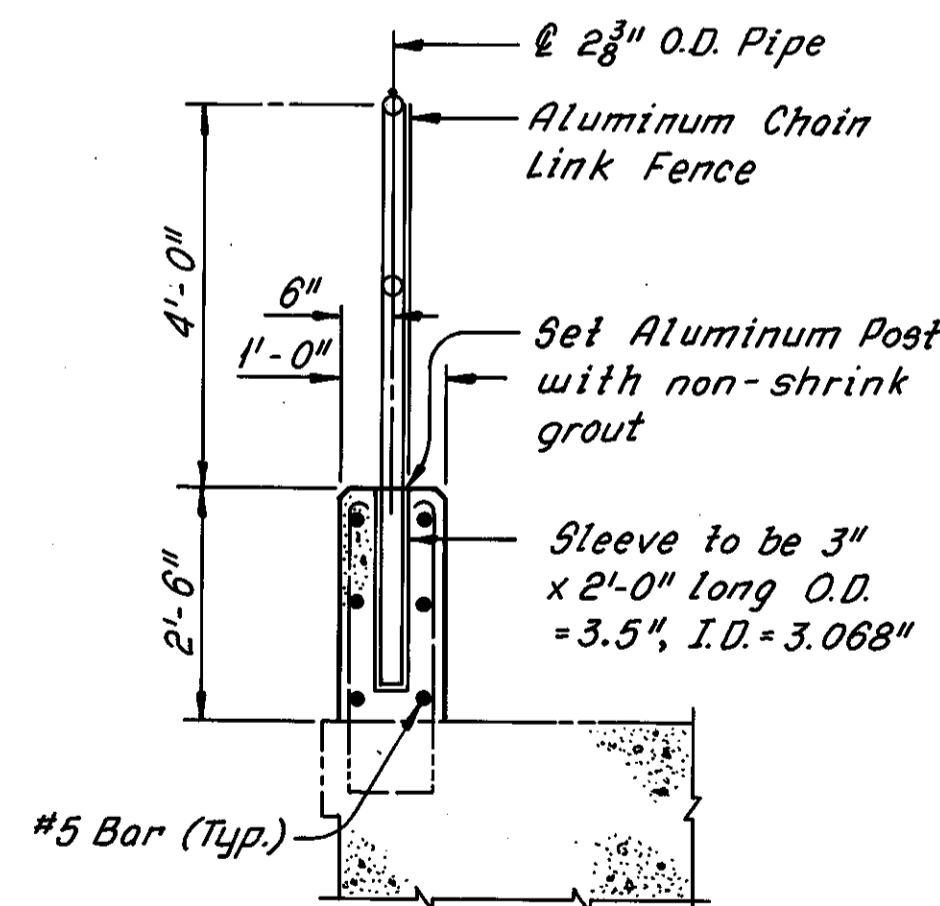
Preformed Expansion Joint Filler in the fencing parapet deflection joints may be either 1/4" gray sponge rubber or 1/4" gray cellular polyvinyl chloride (PVC) sponge. Either material shall meet the requirements of AASHTO M-153, Type 1 except the density of PVC sponge shall be not less than 20 lb. per cu. ft.



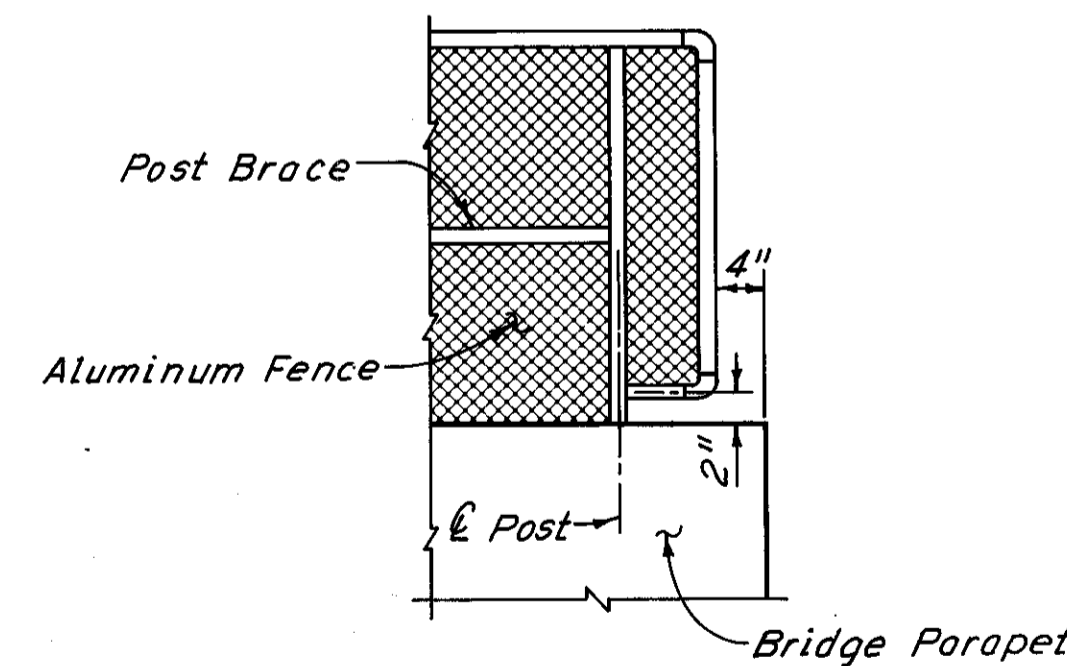
**SOUTH PARAPET AND FENCE DETAILS**  
(Looking North)

Note:  
All reinforcing bar marks shall be prefixed RB.

MARK	NO.	LENGTH	TYPE	WEIGHT (LBS)
RB501	12	10'-0"	Str.	125
RB502	18	6'-0"	Str.	113
RB503	12	8'-3"	Str.	103
RB504	30	5'-6"	Str.	172
RB505	6	13'-9"	Str.	86
RB506	18	6'-3"	Str.	117
RB507	12	11'-0"	Str.	138
TOTAL WEIGHT =				854



SECTION A-A



DETAIL A

Notes:  
Payment for parapet and fence shall be made at the contract unit price for Item 517, Railing (Concrete Parapet with Chain-Link Fence-AASHTO Designation M-181-Type III Aluminum alloy fabric, posts, hardware and fittings.) Payment length shall be the overall length of the parapets. Sleeves, parapet expansion joint material, grout and longitudinal reinforcing steel in the parapets shall be included with the unit price bid for Item 517, Railing (Concrete Parapet with Chain-Link Fence-AASHTO Designation M-181-Type III Aluminum alloy fabric, posts, hardware and fittings.), for payment. All other reinforcing steel in the parapets is included with Item 509, Reinforcing Steel, for payment.  
Concrete parapets shall be placed in alternate sections by the use of bulkheads. Closing sections shall be placed after removal of bulkheads and after placement of sponge filler. Filler shall be flush with surface of mortar. The anchor posts shall be set in non-shrink grout.  
The following abbreviation is used:  
ef = each face

HNTB BRIDGE NO. 4

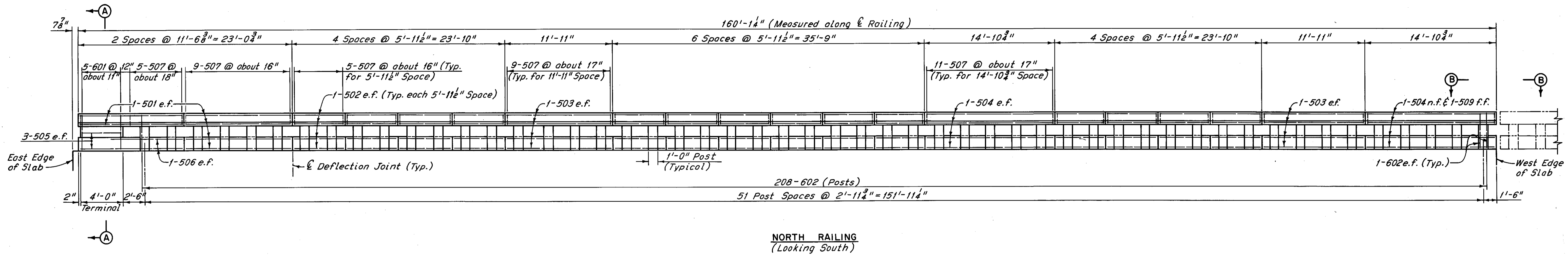
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND OHIO

HNTB

**SOUTH PARAPET AND FENCE DETAILS**

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

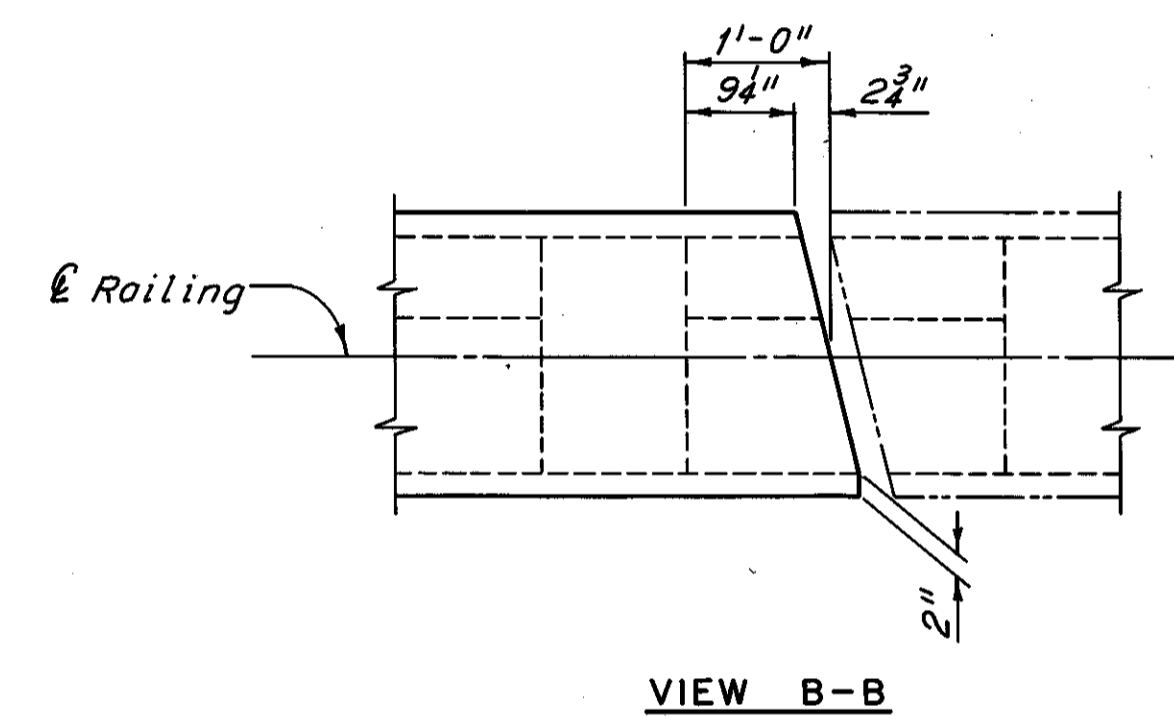
DRAWN R.A.S. DATE 2-11-78	TRACED D.L.R. DATE 9-14-78	CHECKED C.K.B. DATE 9-18-78	REVIEWED DATE	REVISED DATE
---------------------------------	----------------------------------	-----------------------------------	------------------	-----------------



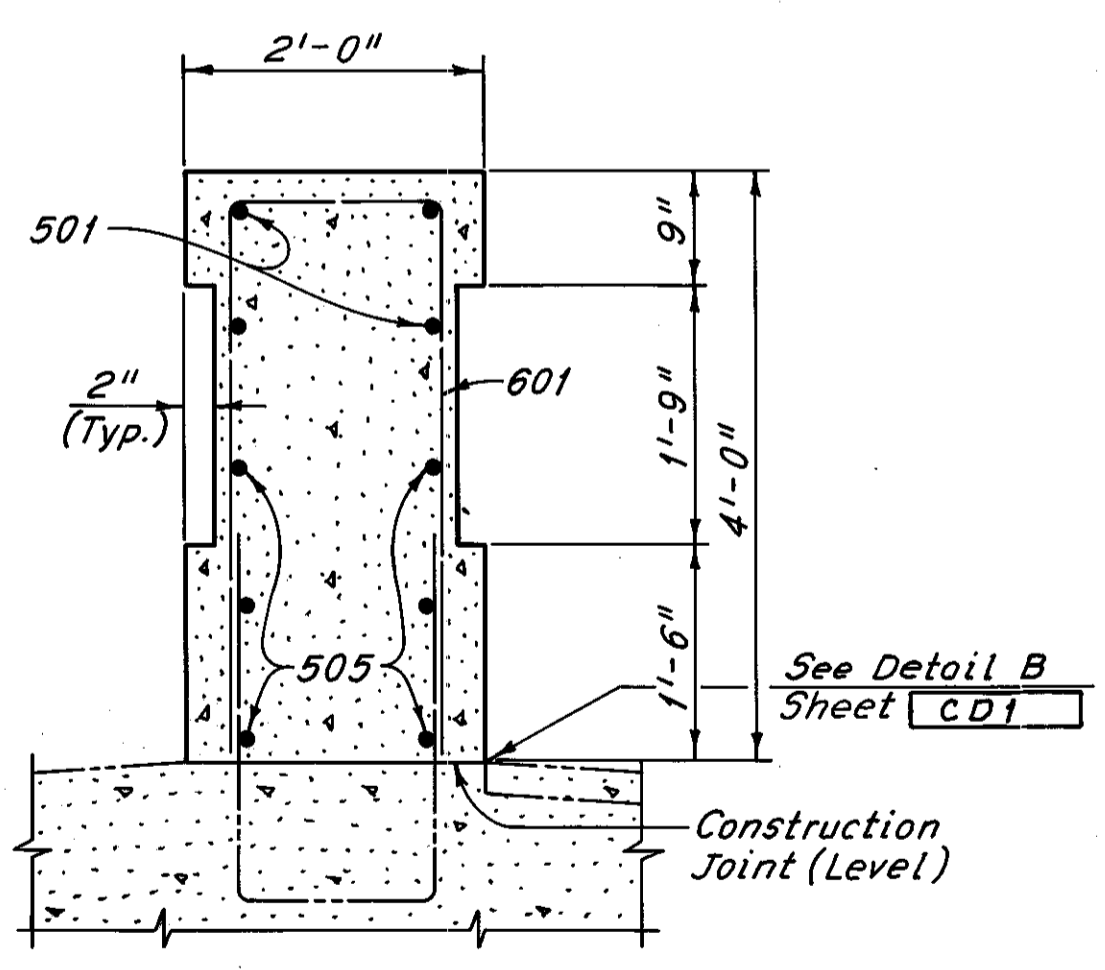
**NORTH RAILING**  
(Looking South)

Note: All reinforcing bar marks shall be prefixed RA.

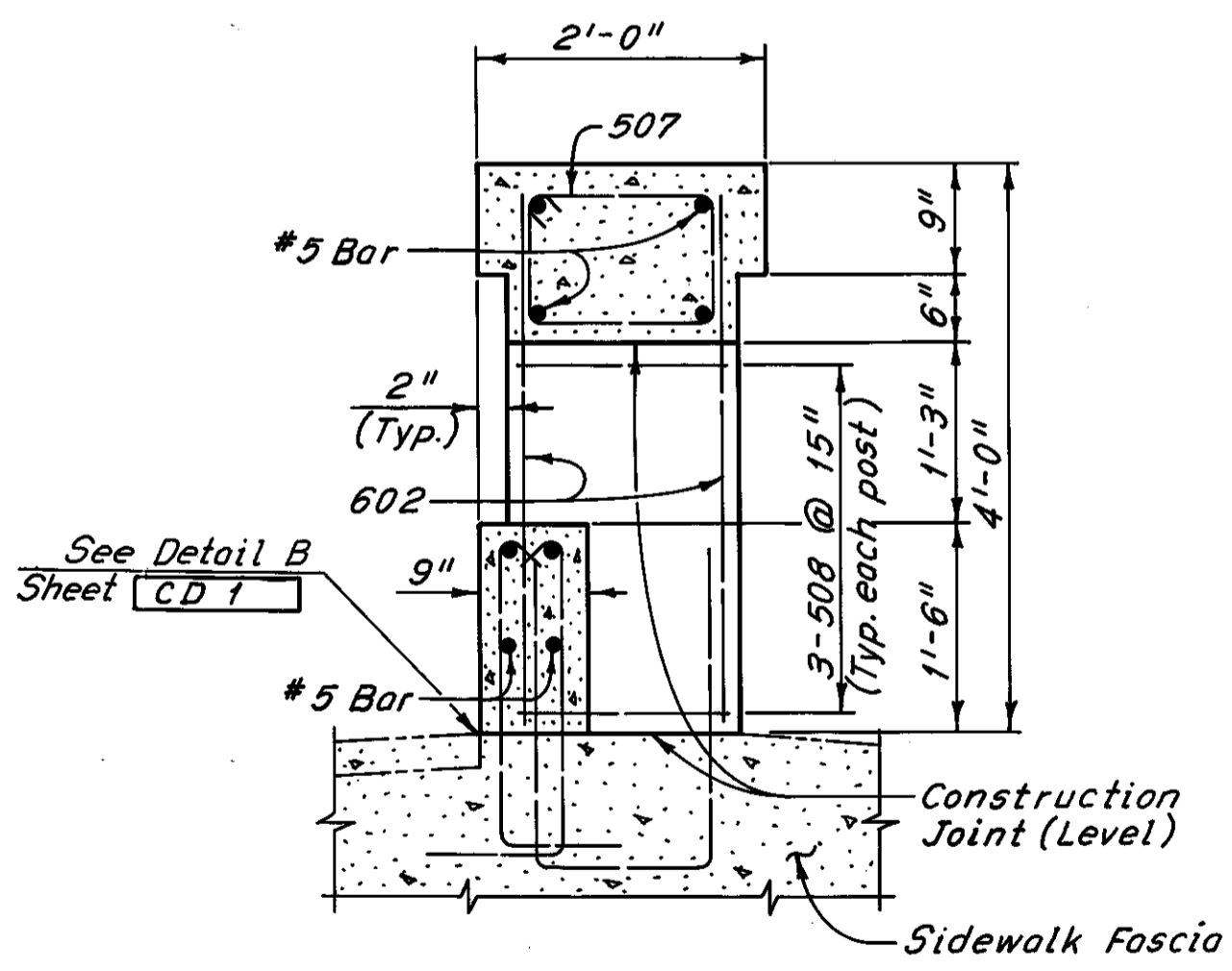
Note: The deflection joints in the railing may be either 1/4" gray sponge rubber or 1/4" gray cellular polyvinyl chloride (PVC) sponge. Either material shall meet the requirements of AASHTO M-153, Type 1, except the density of the (PVC) sponge shall be not less than 20 lb. per cu. ft.



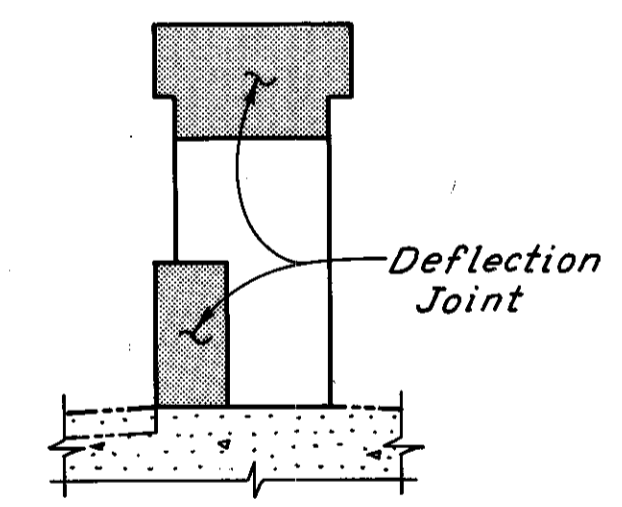
**VIEW B-B**



**SECTION A-A**



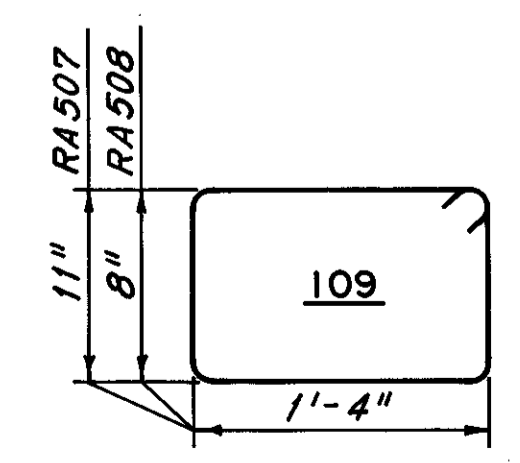
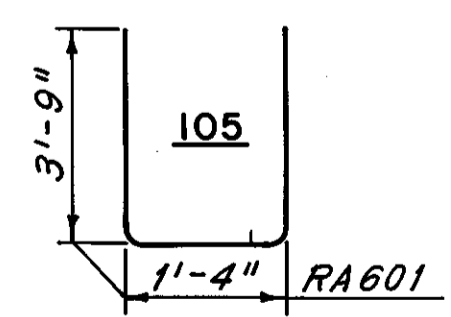
**TYPICAL RAILING SECTION**



**DEFLECTION JOINT DETAIL**

MARK	NO.	LENGTH	TYPE	WEIGHT (LBS)
RA 501	12	11'-3"	Str.	141
RA 502	112	5'-6"	Str.	643
RA 503	16	11'-6"	Str.	192
RA 504	12	14'-6"	Str.	181
RA 505	6	3'-9"	Str.	24
RA 506	4	8'-9"	Str.	37
RA 507	124	5'-2"	109	668
RA 508	156	4'-8"	109	759
RA 509	4	14'-3"	Str.	59
RA 601	5	8'-6"	105	64
RA 602	208	3'-9"	Str.	1172
<b>TOTAL WEIGHT =</b>				<b>3940</b>

**BENDING DIAGRAMS**



Notes:  
Payment for the railing shall be made at the contract unit price bid for Items 517, Railing, As Per Plan. Payment length shall be the overall length of the railings. Railing expansion joint and deflection joint material and all reinforcing steel that does not extend into the sidewalk shall be included with Item 517 for payment. Reinforcing steel extending from the sidewalk is included with Item 509, Reinforcing Steel, for payment. Railings shall be placed in alternate sections by the use of bulkheads. Closing sections shall be placed after removal of bulkheads and after placement of sponge filler. The filler shall be attached to the face of the concrete on one side, flush with the surface of concrete and exposed edges shall be free of mortar.

The following abbreviations are used:  
e.f. = each face n.f. = near face  
Typ. = typical f.f. = for face

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

**NORTH RAILING DETAILS**

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

DRAWN P.A.S.	TRACED D.L.R.	CHECKED C.R.S.	REVIEWED	REVISED
DATE 9-11-78	DATE 9-14-78	DATE 9-18-78	DATE	DATE

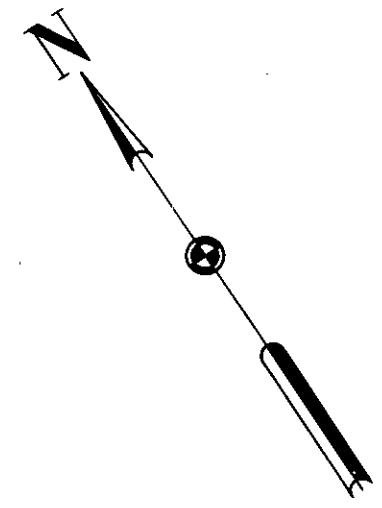
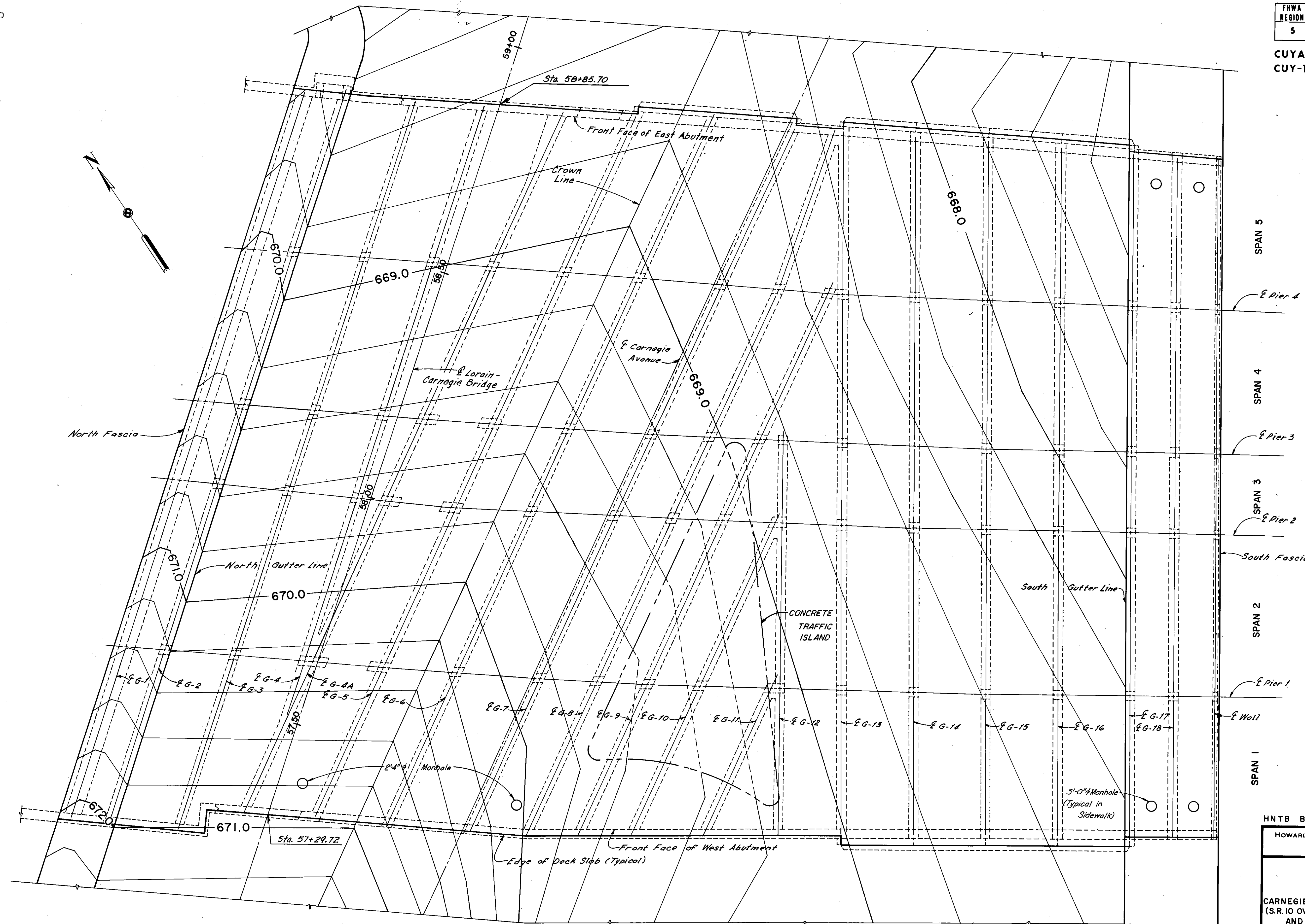
SHEET 29/31

MICROFILMED  
DEC 8 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

177  
185

CUYAHOGA COUNTY  
CUY-10-16.23



Note:  
Contours are shown at top of the asphalt concrete surface course.  
For details of Concrete Traffic Island see Roadway Plans



CONTOUR PLAN

HNTB BRIDGE NO. 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND **HNTB**

**CONTOUR PLAN**

REHABILITATION OF THE CARNegie AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)

BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

DRAWN BP	TRACED 10A	CHECKED RAS	REVIEWED	REVISED
DATE 9-25-82	DATE 6-29-82	DATE 9-18-82	DATE	DATE

SHEET 30/31

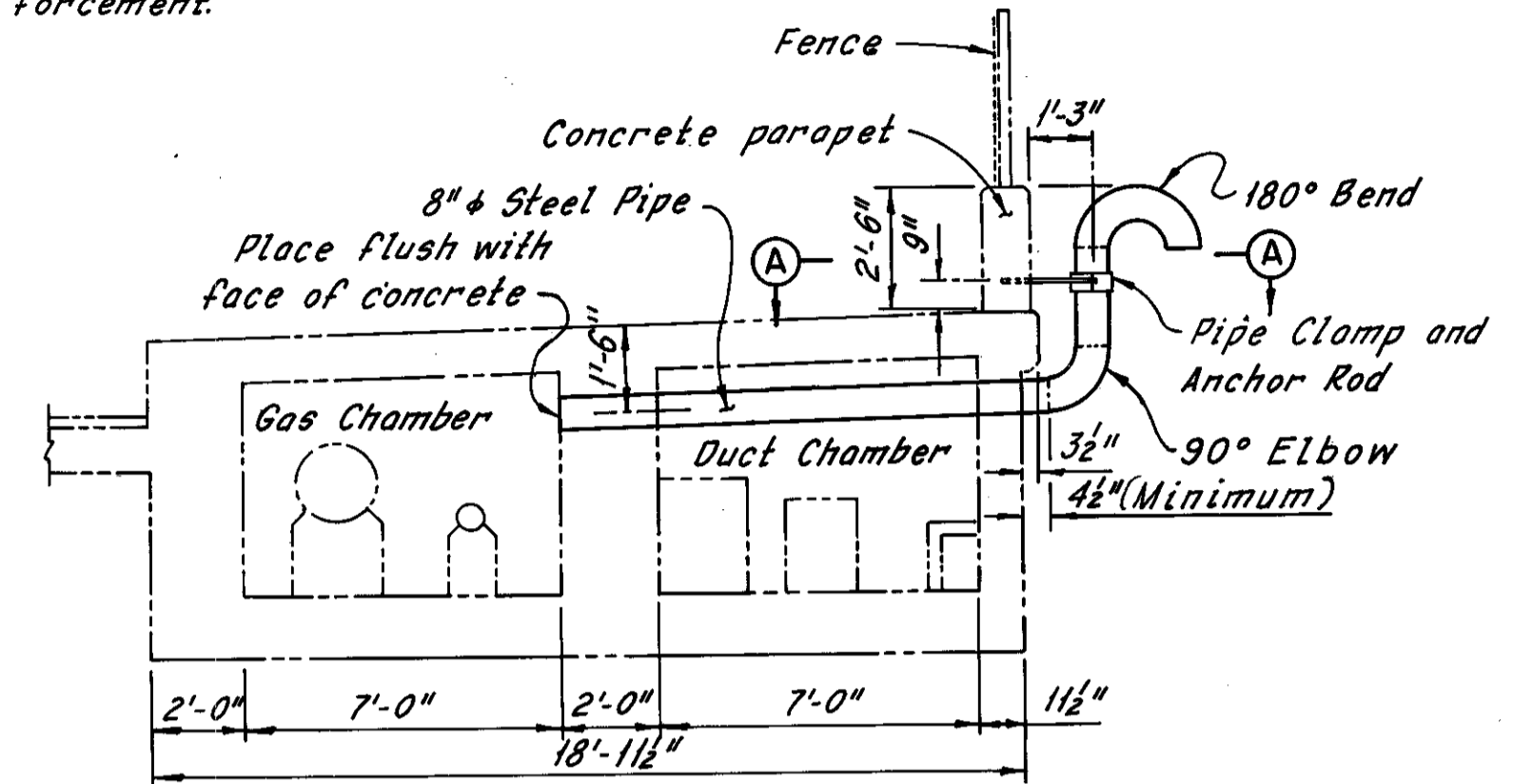
MICROFILMED  
DEC 8 1986

ESTIMATED REPAIR QUANTITIES

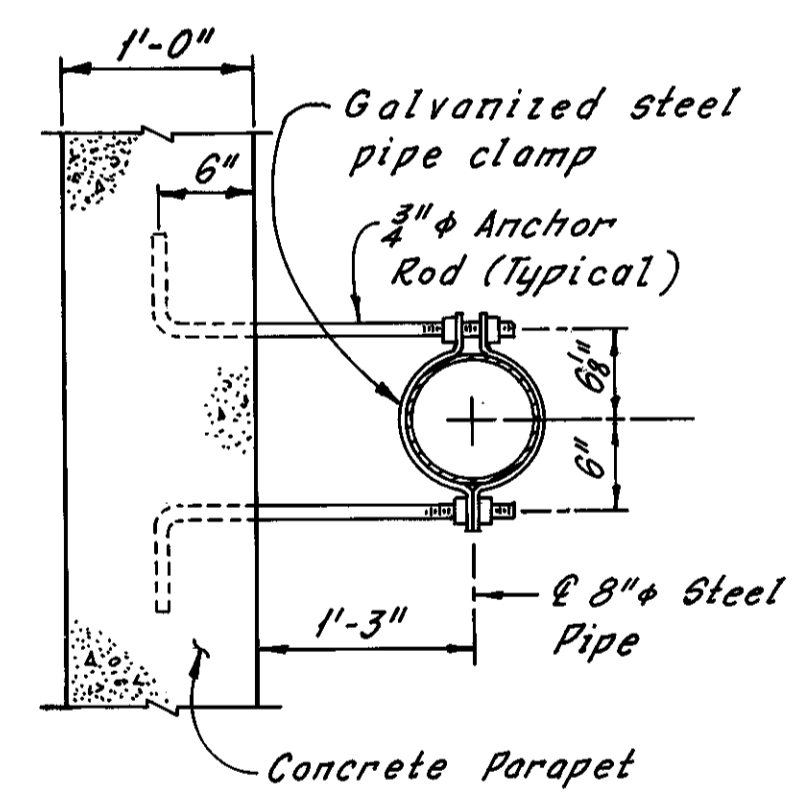
LOCATION	REPAIR OF CRACKS		LOCATION	REPAIR OF CRACKS		LOCATION	REPAIR OF CRACKS		LOCATION	REPAIR OF CRACKS	
	PCS	SQ. FT.		PCS	SQ. FT.		PCS	SQ. FT.		PCS	SQ. FT.
PIERS			4-15	1	-	4-1	-	-	4-3	-	4
1	34	188	4-16	-	-	4-2	-	-	4-4	-	-
2	99	114	4-17	-	-	4-3	1	-	4-4A	-	-
3	75	114	4-18	68	-	4-4	-	-	4-5	-	-
4	311	62				4-4A	-	-	4-6	279	-
			5-1	20	-	4-5	-	-	4-7	-	-
			5-2	74	-	4-6	7	-	4-8	40	-
STRUTS			5-3	-	2	4-7	-	-	4-9	-	-
1-1	-	-	5-4	4	-	4-8	-	-	4-13	-	-
1-2	2	-	5-	65	-	4-9	-	-	4-14	-	-
1-3	11	-	5-4B	86	-	4-13	-	-	4-15	-	-
1-4	2	-	5-5	-	-	4-14	-	-	4-16	4	-
1-5	-	-	5-6	97	9	4-15	-	-	4-17	18	-
1-6	20	-	5-7	12	-	4-16	-	-	4-18	11	-
1-7	-	-	5-8	8	-	4-17	-	-			
1-8	-	-	5-13	11	-	4-18	-	-	5-1	206	-
1-9	39	-	5-14	-	-				5-2	396	-
1-10	-	-	5-15	-	-				5-3	-	-
1-11	-	-	5-16	-	-	GIRDERS			5-4	6	-
1-12	-	-	5-17	65	-	1-1	48	24	5-4A	-	-
1-13	-	-	5-18	25	-	1-2	75	-	5-5	33	-
1-14	-	-				1-3	19	6	5-6	74	-
1-15	1	-				1-4	1	-	5-7	7	-
1-16	1	-	COLUMNS			1-5	2	6	5-8	-	-
1-17	-	-	1-1	1	-	1-6	132	8	5-13	2	-
1-18	13	-	1-2	18	13	1-7	-	-	5-14	-	-
			1-3	2	-	1-8	72	7	5-15	-	-
2-1	4	-	1-4	-	-	1-9	40	6	5-16	1	-
2-2	44	-	1-5	-	-	1-10	1	-	5-17	132	-
2-3	1	-	1-6	-	-	1-11	-	-	5-18	18	-
2-4	-	-	1-7	-	-	1-12	-	-			
2-4A	1	-	1-8	-	-	1-13	6	-			
2-5	1	-	1-9	1	-	1-14	-	-	ABUTMENTS AND WINGWALLS		
2-6	14	-	1-10	1	-	1-15	-	-	EAST	2297	253
2-7	-	-	1-11	1	-	1-16	-	-			
2-8	-	-	1-13	1	-	1-17	79	-	WEST	543	196
2-9	1	-	1-14	-	-	1-18	77	51			
2-10	-	-	1-15	-	-				UTILITY CHAMBERS		
			1-16	-	-	2-1	18	2	17-18	1,265	-
2-12	-	-	1-17	26	-	2-2	54	-	7-8	7	-
2-13	-	-	1-18	6	13	2-3	-	13	4-5	567	-
2-14	-	-				2-4	1	-	At 2	539	24
2-15	-	-	2-1	-	-	2-4A	2	-			
2-16	1	-	2-2	-	-	2-5	1	-			
2-17	20	1	2-3	-	-	2-6	190	-	GRAND TOTAL	(10,002)	(1,237)
2-18	70	6	2-4	1	-	2-7	6	-		(#8,404)	(#1,229)
			2-4A	2	-	2-8	11	-			
3-1	-	-	2-5	-	-	2-9	13	-			
3-2	-	6	2-6	6	-	2-10	7	-			
3-3	1	2	2-7	1	-	2-12	-	-			
3-4	2	2	2-8	-	-	2-13	1	-			
3-4A	2	-	2-9	-	-	2-14	3	-			
3-5	1	-	2-10	-	-	2-15	-	-			
3-6	65	-	2-13	-	-	2-16	8	-			
3-7	1	-	2-14	-	-	2-17	80	22			
3-8	-	-	2-15	1	-	2-18	86	55			
3-9	1	-	2-16	-	-				# Delete		
3-12	-	-	2-17	45	-	3-1	54	-			
3-13	-	-	2-18	1	-	3-2	158	-			
3-14	-	1				3-3	-	-			
3-15	-	-	3-1	4	-	3-4	-	-			
3-16	-	-	3-2	2	-	3-4A	-	-			
3-17	19	-	3-3	-	2	3-5	8	-			
3-18	-	-	3-4	-	-	3-6	95	-			
			3-4A	1	-	3-7	-	-			
4-1	-	-	3-5	-	-	3-8	20	-			
4-2	-	-	3-6	-	-	3-9	-	-			
4-3	-	1	3-7	-	-	3-12	1	-			
4-4	6	17	3-8	-	-	3-13	1	-			
4-4A	6	-	3-9	-	-	3-14	-	-			
4-5	1	-	3-12	-	-	3-15	-	-			
4-6	58	-	3-13	-	-	3-16	7	-			
4-7	1	-	3-14	-	-	3-17	92	-			
4-8	-	-	3-15	-	-	3-18	40	-			
4-9	6	-	3-16	-	-						
4-13	2	-	3-17	-	-	4-1	304	-			
4-14	-	-	3-18	-	-	4-2	145	-			

# Delete

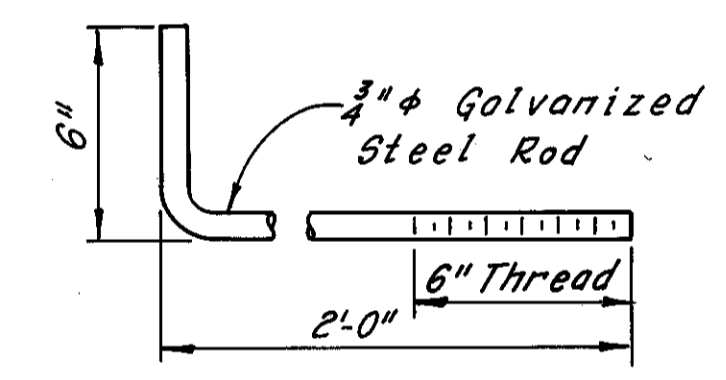
Note:  
The 8" steel pipe shall be placed to clear vertical reinforcement.



TYPICAL GAS CHAMBER VENT DETAIL



SECTION A-A  
(Parapet Reinforcement not shown)



ANCHOR BOLT DETAIL  
4 Required

(Threads are to be Unified Standard Series for Basic Major Diameter of 3/4".)

Notes:  
PCS indicates Patching Concrete Structures.  
For Member Identification Plans, see Sheet 2/31.  
For location of Gas Chamber Vents, see Sheet 27/31.  
Utility Chambers are identified as at or between the girders called out, for the entire length of the Grade Separation.  
All costs for venting the gas chamber shall be borne by the gas company, and shall be paid for at the Lump Sum price bid for Item Special, East Ohio Gas Company H. P. Pipe Air Vents, Complete As Per Plan.

FHWA REGION	STATE	PROJECT
5	OHIO	

178  
185

CUYAHOGA COUNTY  
CUY-10-16.23

#Additional girder replacement as determined during bridge reconstruction 4-16-81  
REVISION

HNTB BRIDGE NO. 4

HOWARD, NEEDLES TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND

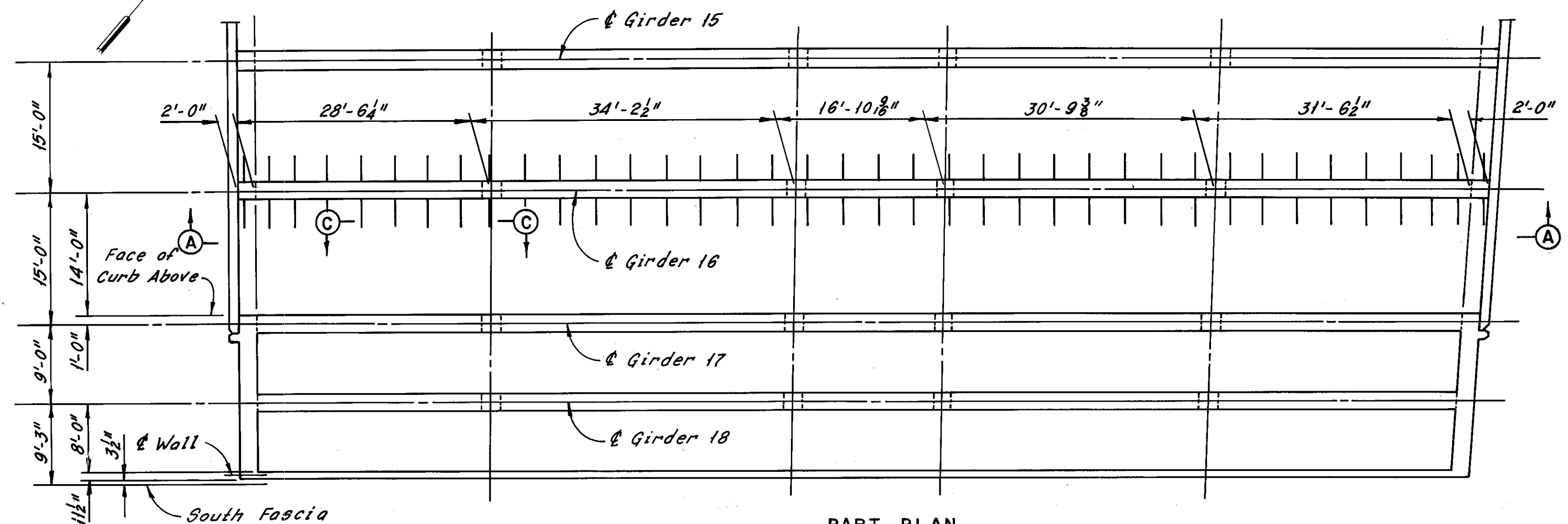
**HNTB**

ESTIMATED REPAIR QUANTITIES AND GAS CHAMBER VENT DETAILS

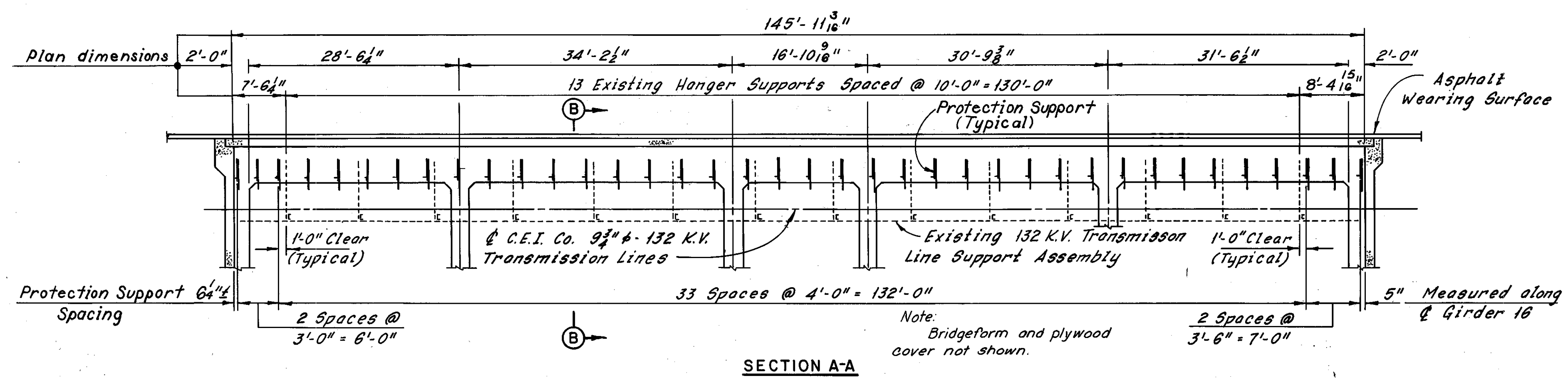
REHABILITATION OF THE CARNEGIE AVENUE GRADE SEPARATION STRUCTURE (S.R.10 OVER THE CLEVELAND UNION TERMINALS CO. AND THE REGIONAL TRANSIT AUTHORITY)

BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY OHIO STA. 58+85.70

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
BP	BP	RAS		12-5-83
DATE 2-13-78	DATE 2-14-78	DATE 10-4-78	DATE	SHEET 31/31

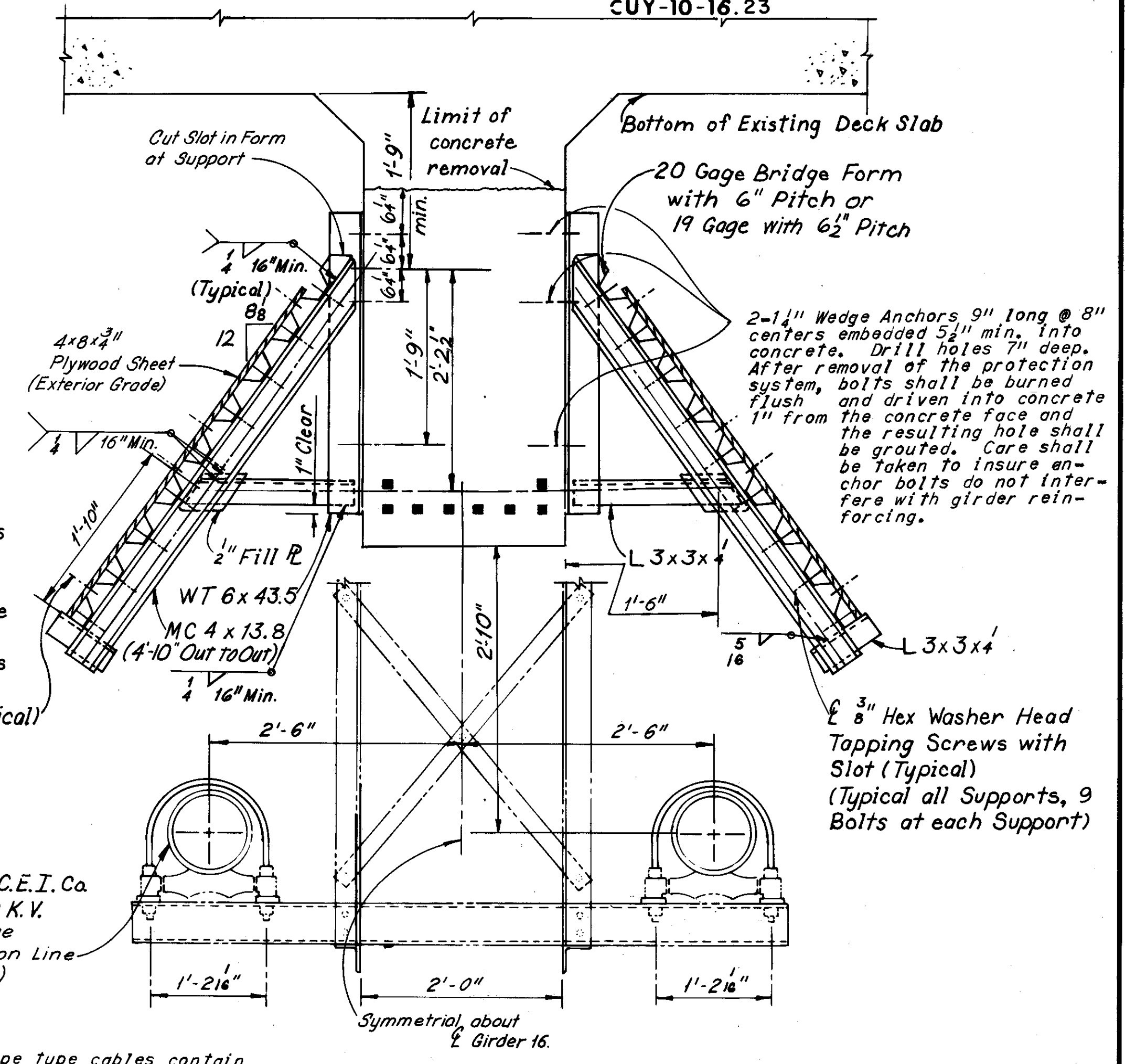


**PART PLAN**  
**CARNEGIE AVENUE GRADE**  
**SEPARATION STRUCTURE**  
(Dimension shown are from original plans)



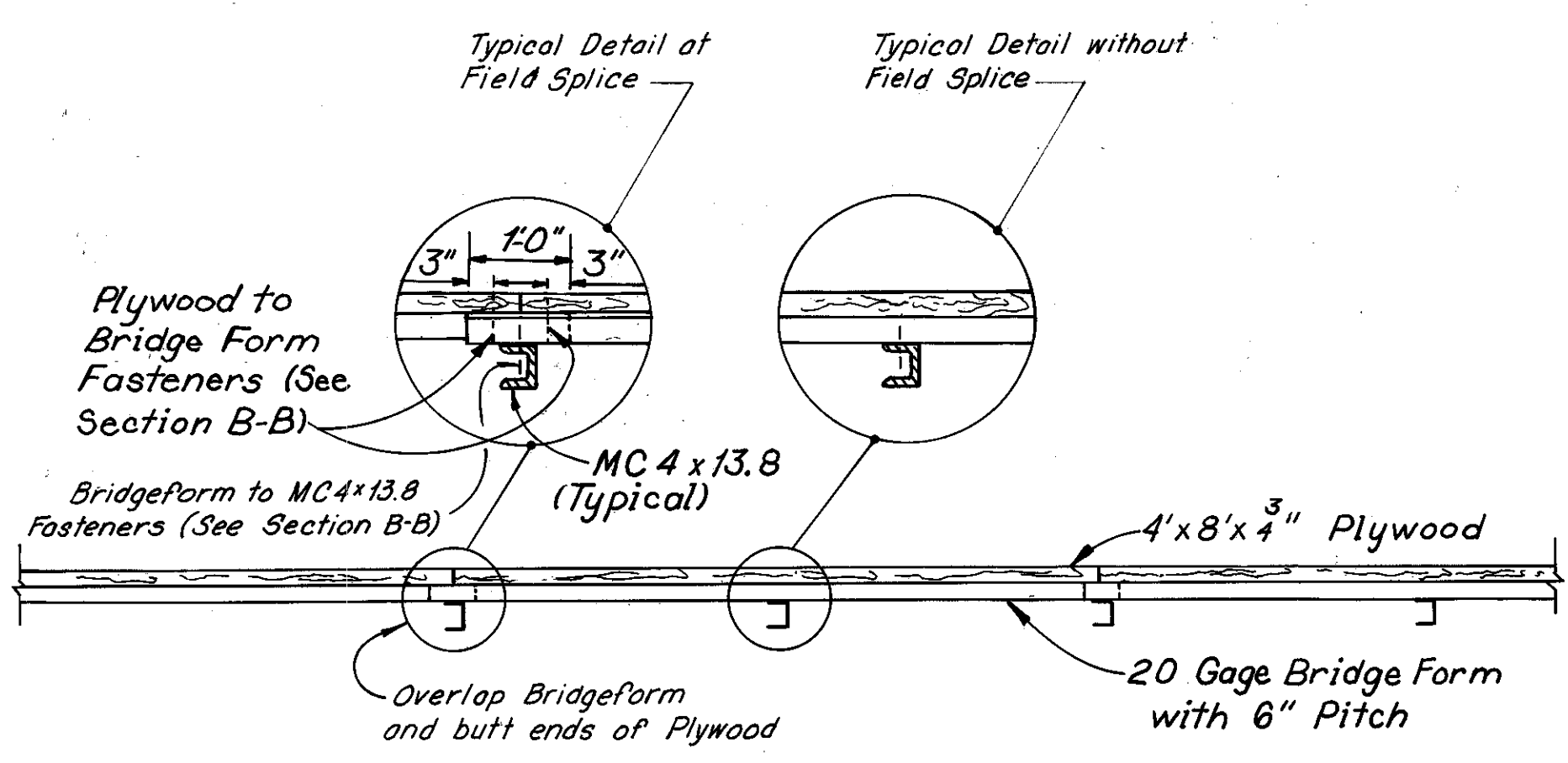
**SECTION A-A**

1/4" Turned Bolt with two Washers or 1/4" Wood Screws placed from the underside with one washer, 4 per line on 4" max. centers and as shown in Section C-C (Typical)



**SECTION B-B**

Note: The 132 K.V. pipe type cables contain three copper insulated cables and insulating fluid at a nominal 200 psi. The steel pipes and corrosion control covering on the pipes must be protected from any and all damage.



**SECTION C-C**

**Notes:**  
All structural steel shall be ASTM A572 except as noted. (Approx. 16,000 lbs.)  
ASTM A572 shall be given one shop coat of primer as per Article 514, System B.  
Bridge form, similar to Bethlehem Bridgeform, shall be ASTM A446, Grade E with the following properties:  
Thickness = 20 gage  
Pitch = 6 in. Depth = 2 in.  
I = .400 in.<sup>4</sup>/ft.  
S.M. = 0.372 in.<sup>3</sup>/ft.  
F<sub>y</sub> = 80,000 psi  
Allowable design stress = 30,000 psi  
Wedge anchors shall be equivalent to Phillips Wedge Anchors with a minimum pullout load of 40,600 lbs. and a minimum shear load of 48,660 lbs.  
1/4" turned bolts shall be ASTM A307.  
All temporary protection at the 132 K.V. Transmission Lines, as per plan, shall be in place prior to concrete deck and girder removal between Girder 15 and Girder 17, and shall remain in place until all required work is complete on the permanent structure between Girder 15 and Girder 17.

All labor, material and equipment required for the placement and removal of all temporary transmission line protection devices, as per plan, shall be included in the unit price bid for Item Special, Temporary Protection At 132 K.V. Transmission Lines.  
Materials used in the protection system shall become the property of the Contractor upon completion of the work, and shall be removed by him from the site.  
The Contractor shall assume full responsibility for any damage to the 132 K.V. lines and its supports, and for damages resulting from damage to these lines. The Contractor shall take extraordinary precautions to insure against any damage to the 132 K.V. lines during erection and removal of the temporary protection system and against concrete dropping between Girders 15 and 17. The protection system is designed only for an accidental occurrence of a 50 lb. block of concrete dropping from the level of the deck. If any concrete pieces drop on the protection system, the Contractor shall cease operations, inspect the protection system and make necessary repairs to the system subject to the approval, prior to resuming operations, by the State of Ohio Project Engineer assigned to implement the contract.

Supporting members have been designed for basic allowable stresses increased 50%. Anchors have been designed for a 1.6 Factor of Safety.  
The Contractor or his agents must notify the Cleveland Electric Illuminating Company (623-1350, Extension 2445) at least 24 hours in advance if any work is to be performed in the vicinity of the two C.E.I. 132 K.V. pipe type cables. The Illuminating Company will provide a field representative during the time any work is performed near the 132 K.V. cables.

HNTB BRIDGE NO. 4

HOWARD, NEEDLES TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

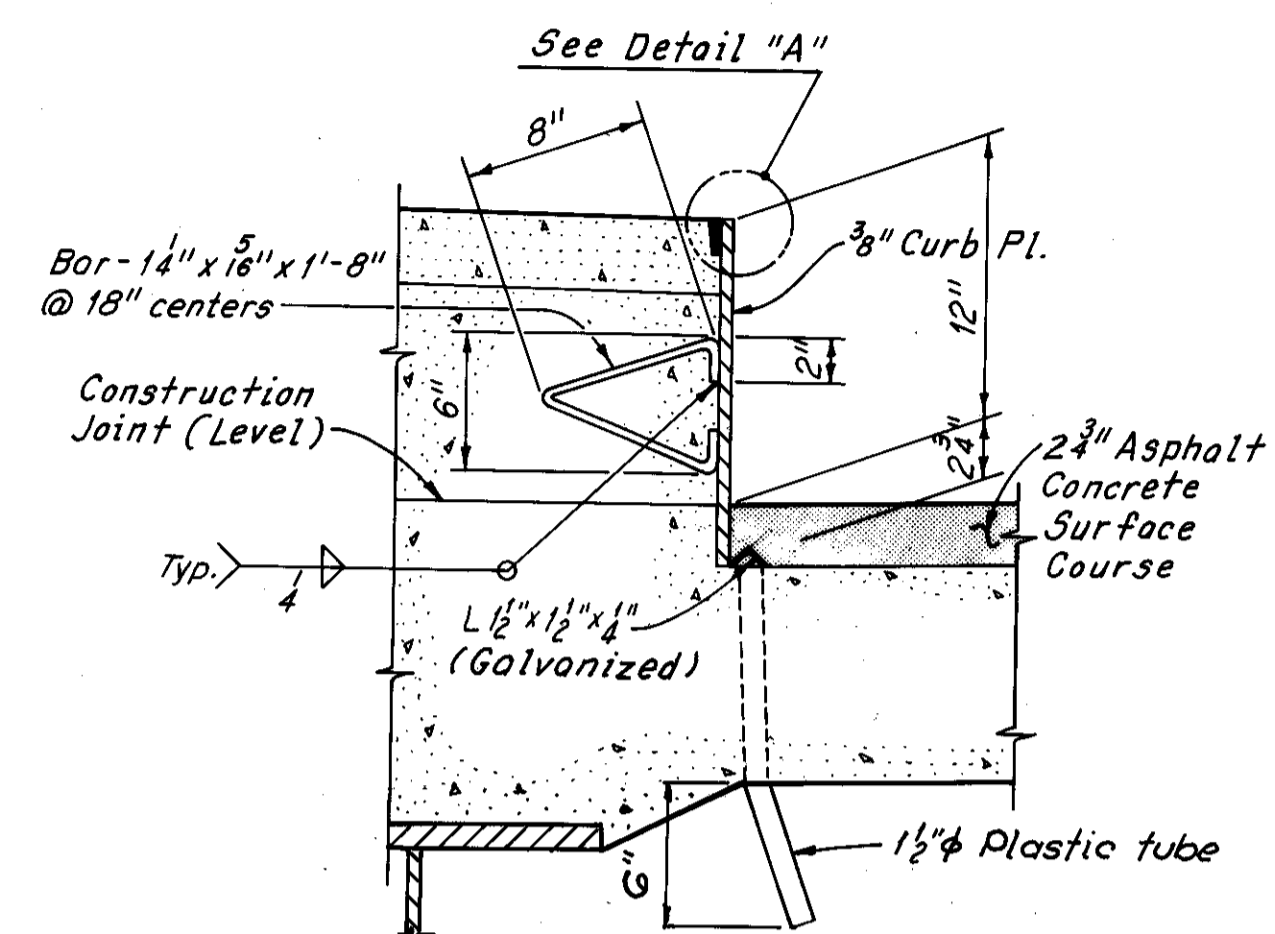
**HNTB**

**TEMPORARY PROTECTION FOR THE  
132 K.V. TRANSMISSION LINES**

REHABILITATION OF THE  
CARNEGIE AVENUE GRADE SEPARATION STRUCTURE  
(S.R.10 OVER THE CLEVELAND UNION TERMINALS CO.  
AND THE REGIONAL TRANSIT AUTHORITY)  
BR. NO. CUY.-10-1685 STA. 57+29.72  
CUYAHOGA COUNTY STA. 58+85.70  
OHIO

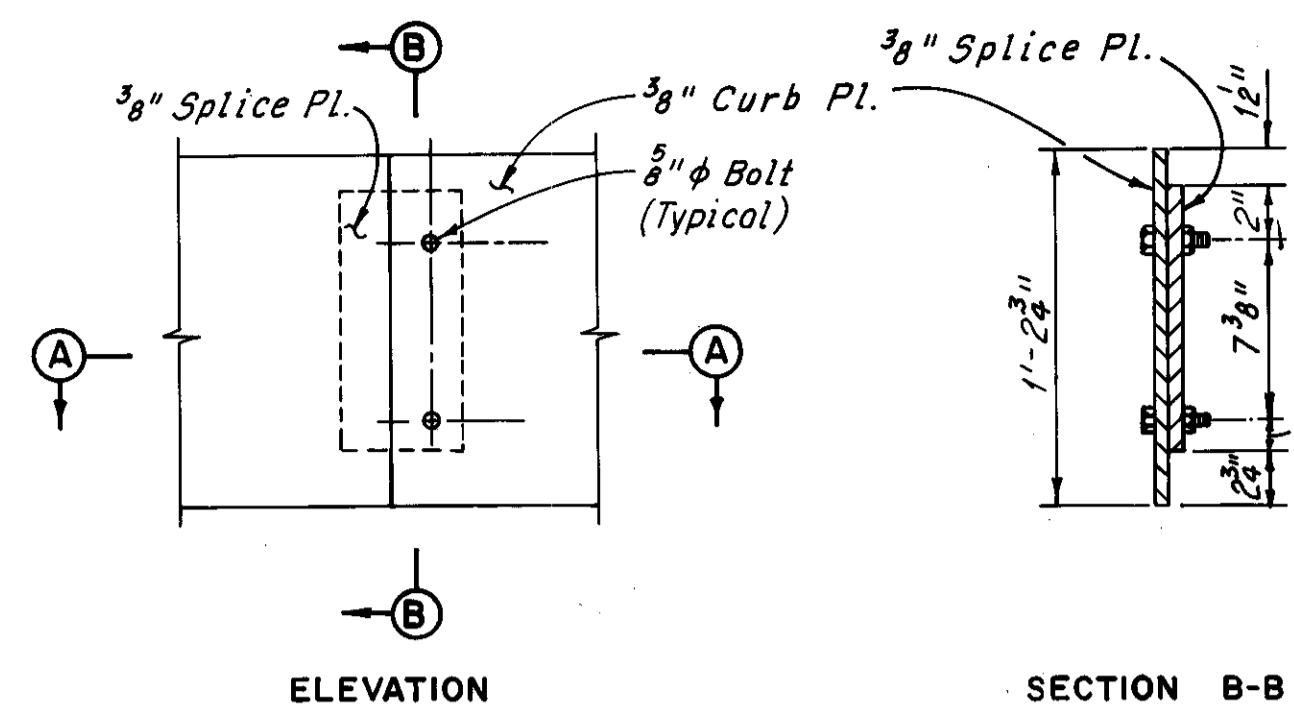
DRAWN B.M.P.	TRACED M.M.P.	CHECKED D.H.S./F.S.T.	REVIEWED	REVISED
DATE 3-16-79	DATE 3-30-79	DATE 4-12-79	DATE	DATE

SHEET 31/37



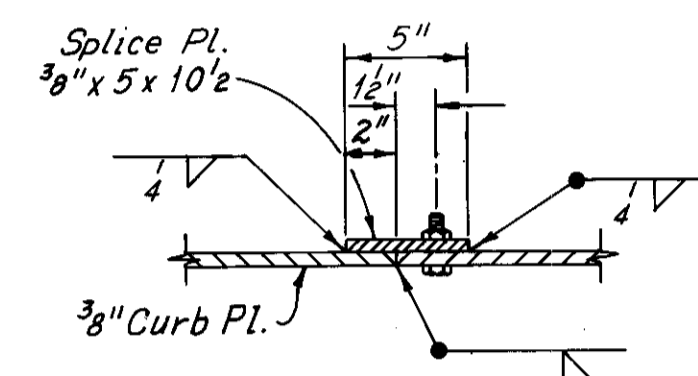
**SIDWALK CURB PLATE AND  
SUBDRAINAGE FOR SURFACE COURSE DETAIL**

For location of drain tubes,  
see General Note 24, Sheet GN5.



**ELEVATION**

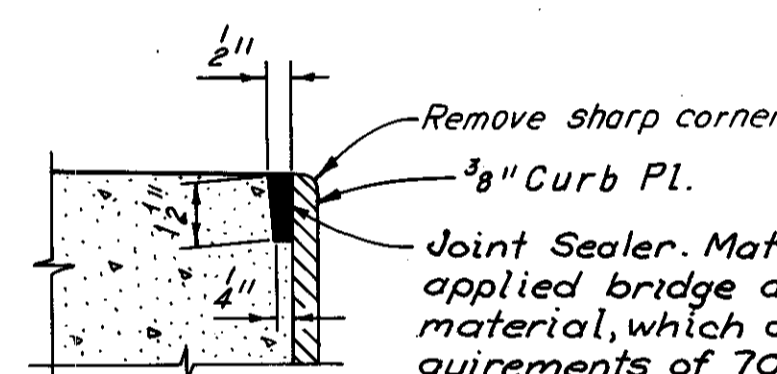
**SECTION B-B**



**SECTION A-A**

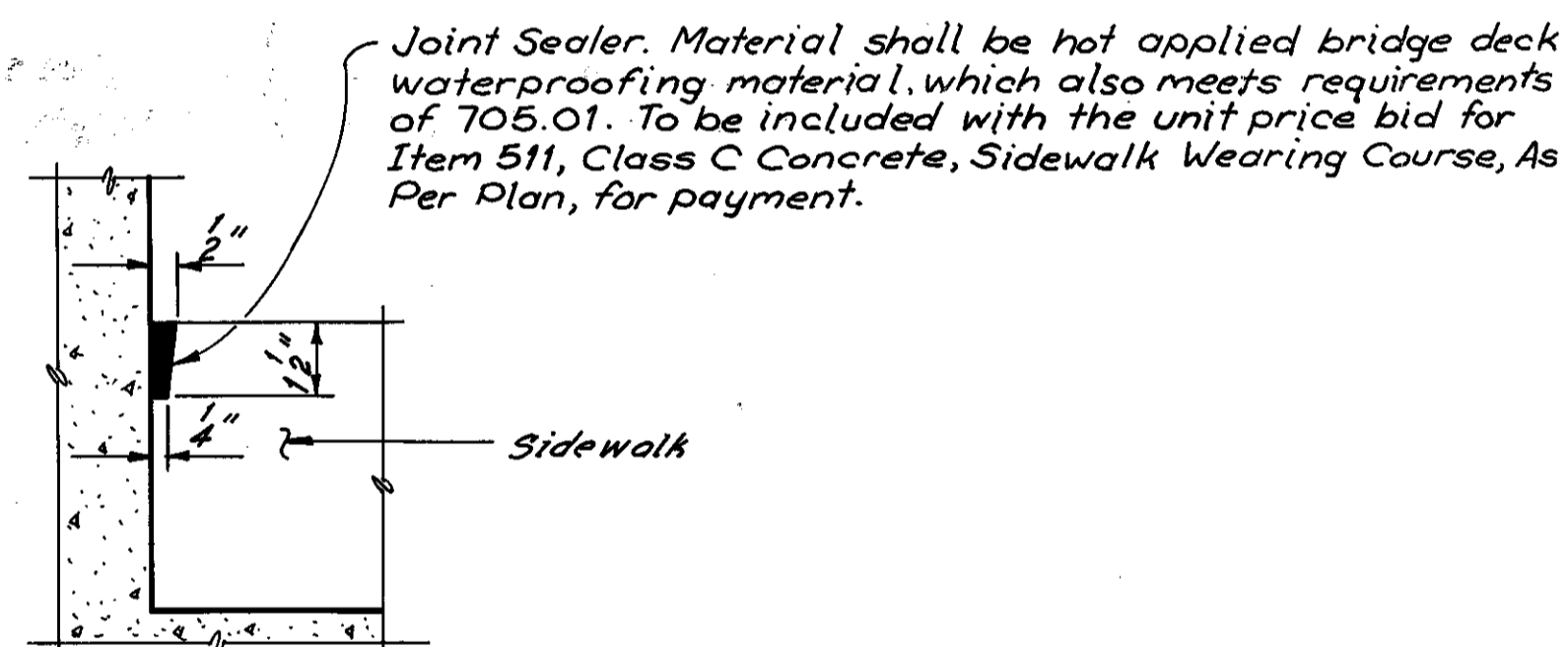
**CURB PLATE SPLICE DETAIL**

Note:-  
Remove bolts after field  
welds have been completed  
Plug weld holes flush with  
curb plate.

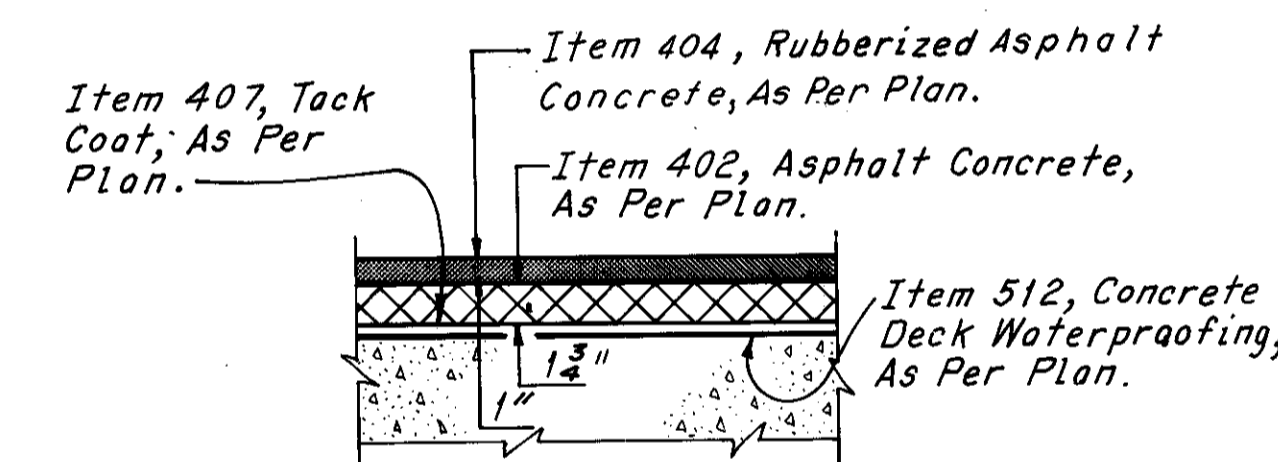


**DETAIL A**

Joint Sealer. Material shall be hot  
applied bridge deck waterproofing  
material, which also meets the re-  
quirements of 705.01. To be included  
with the unit price bid for Item 511,  
Class S Concrete, Superstructure, for  
payment.

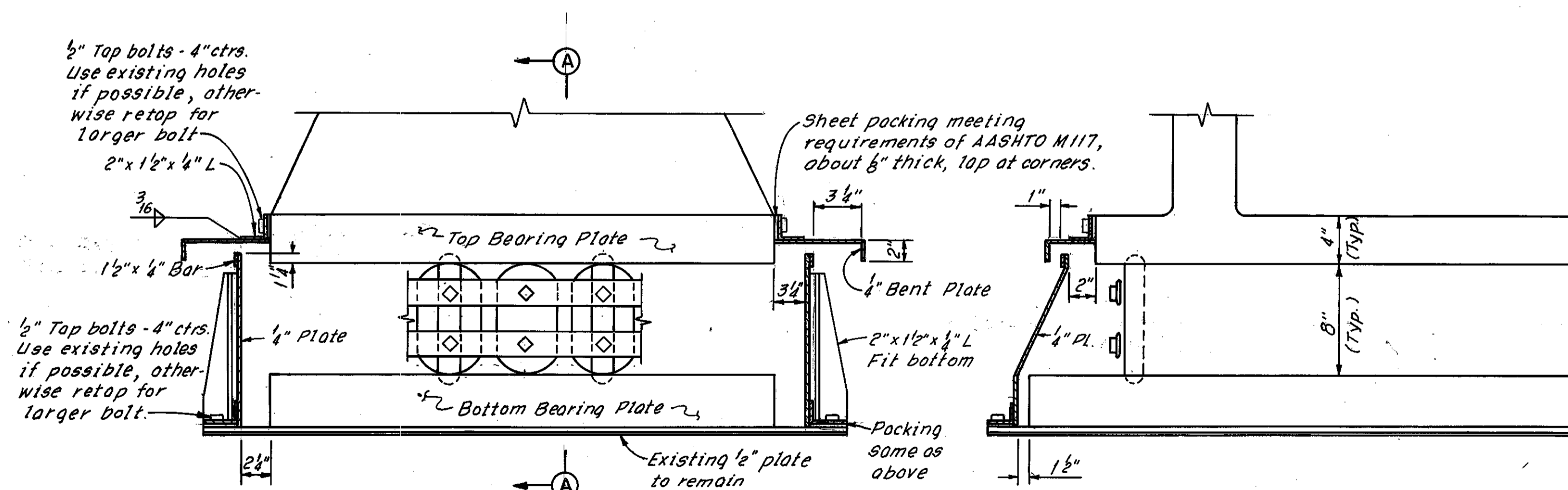


**DETAIL B**



**ASPHALT CONCRETE SURFACE COURSE DETAIL**

Note:  
Curb plate, curb plate anchors and splice plates  
shall be ASTM A36 Steel.



**SECTION THROUGH GREASE BOX**

**SECTION A-A**

**EXPANSION BEARING GREASE BOX REPLACEMENT DETAILS**  
All new metal parts shall be ASTM A588

LOCATION	TOP PLATE		BOTTOM PLATE		NUMBER OF GREASE BOXES REQUIRED	BASE PLATE THICKNESS
	LONG.	TRANS.	LONG.	TRANS.		
West Pylon - Exterior	3'-4"	2'-8"	3'-6"	3'-5"	2	3 1/2"
West Pylon - Interior	3'-4"	3'-1"	3'-6"	3'-11"	2	4"
East Abutment - Exterior	3'-4"	3'-3"	3'-6"	3'-11 1/2"	2	4"
East Abutment - Center	2'-7"	2'-8"	2'-7"	3'-5"	1	3 1/2"

HNTB BRIDGE NO. 3 AND 4

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
CLEVELAND

**HNTB**

COMMON DETAILS

CUYAHOGA COUNTY OHIO

DRAWN CKB	TRACED DES	CHECKED RAS	REVIEWED	REVISED
DATE: 3-4-78	DATE: 1-16-78	DATE: 9-20-78	DATE	DATE

SHEET CD 1



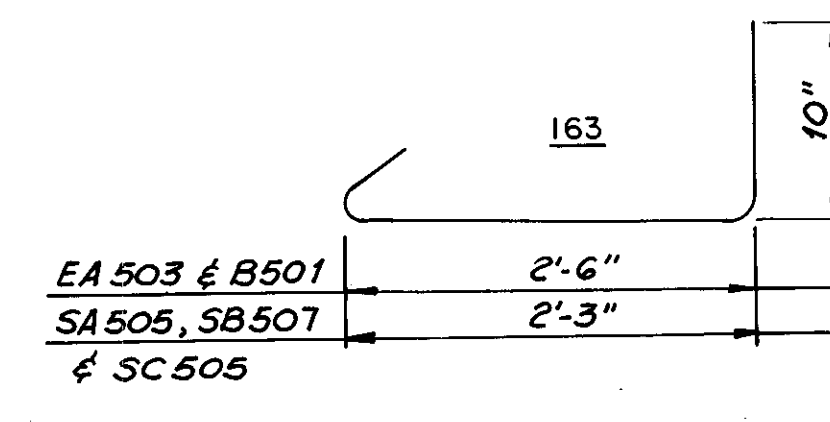
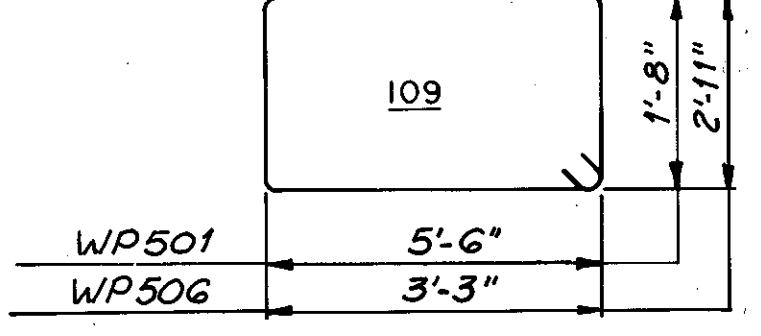
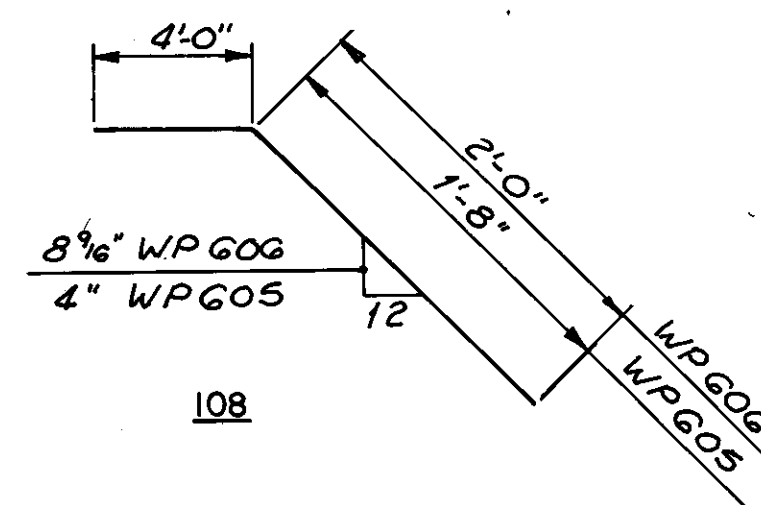
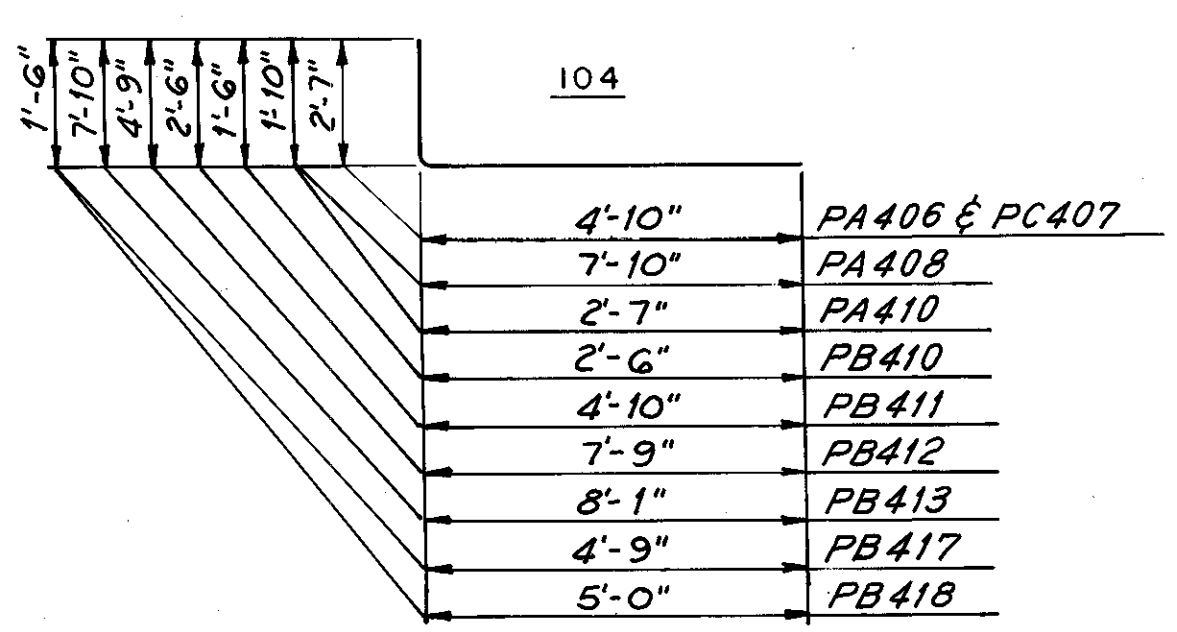
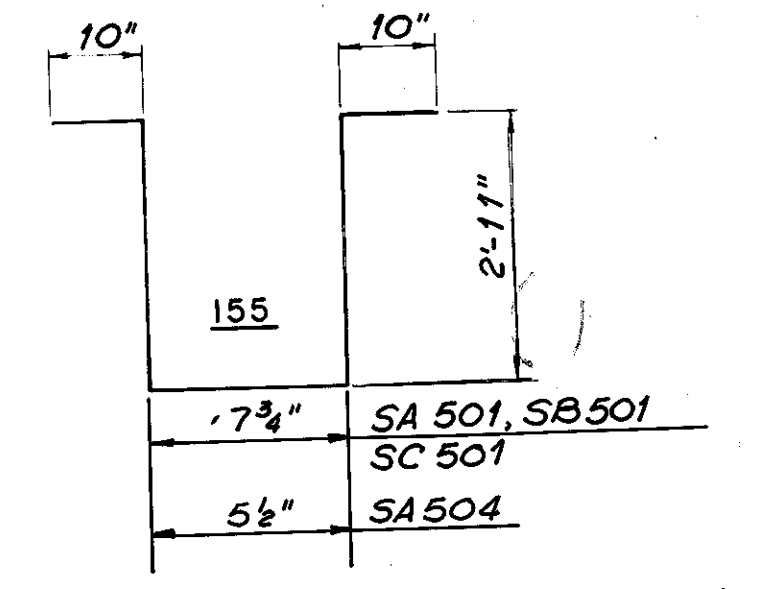
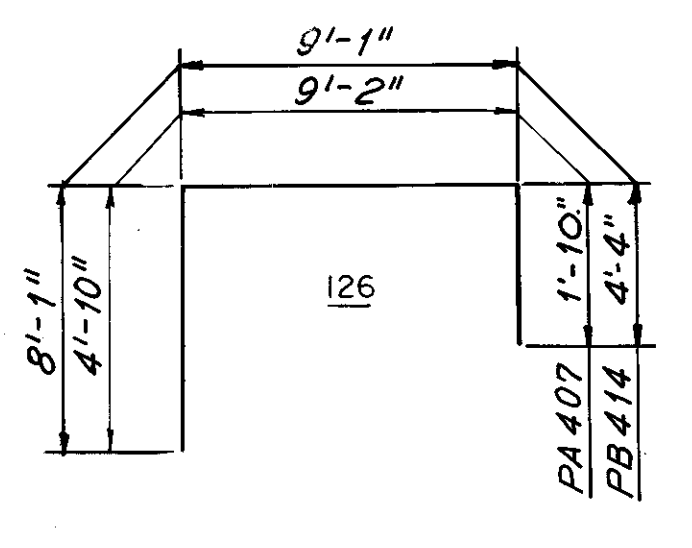
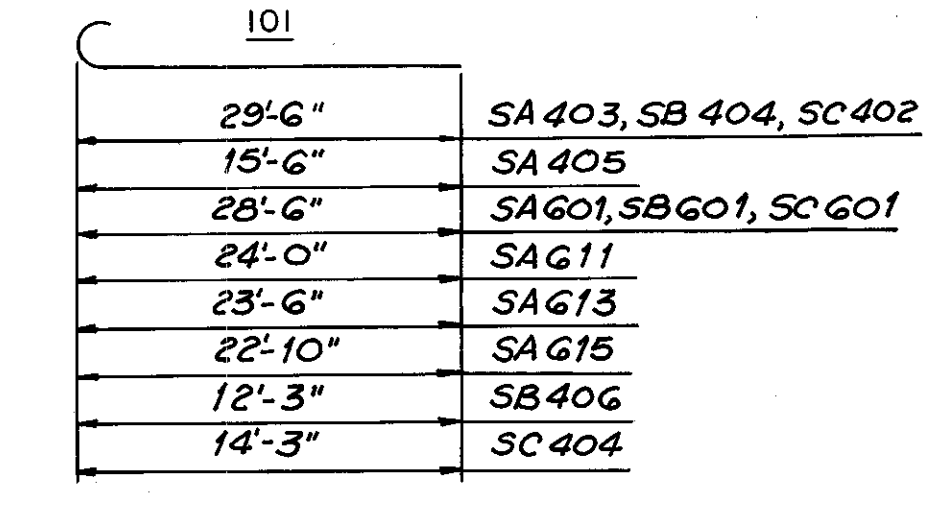
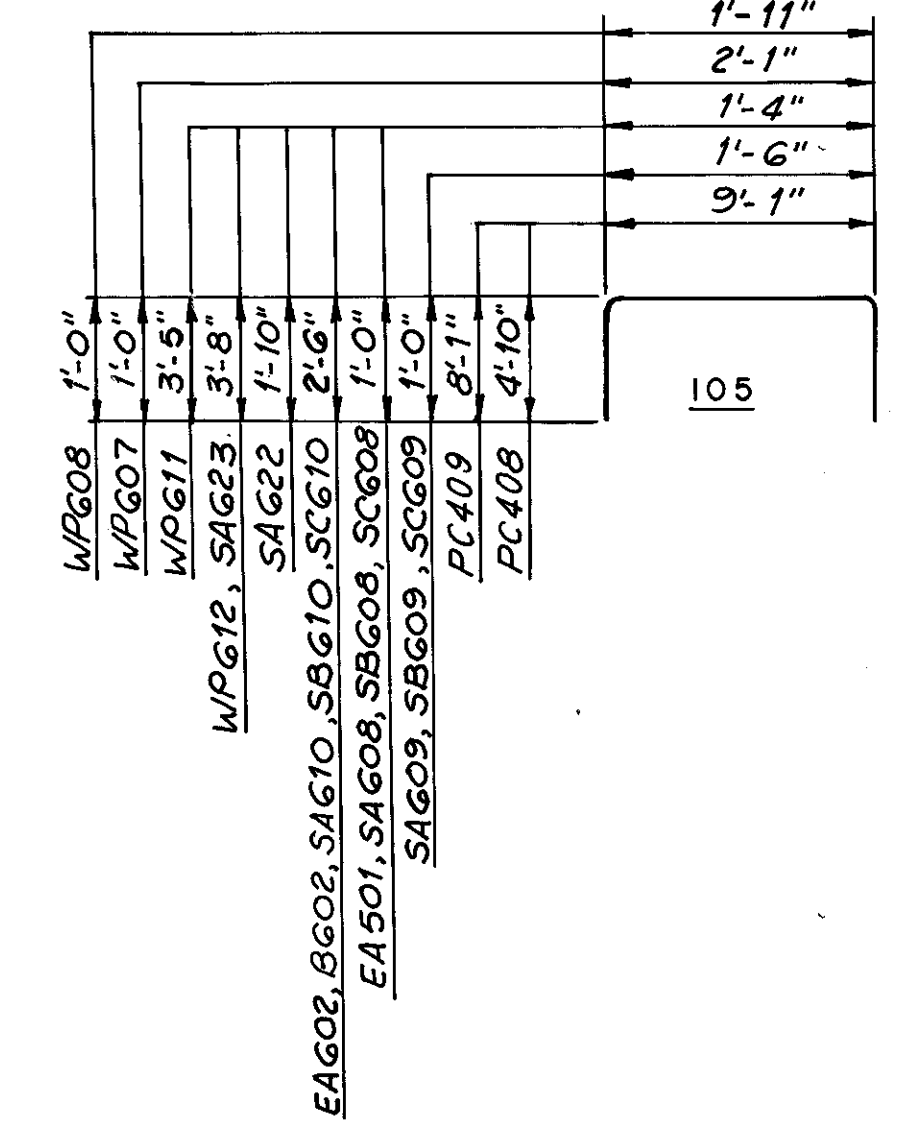
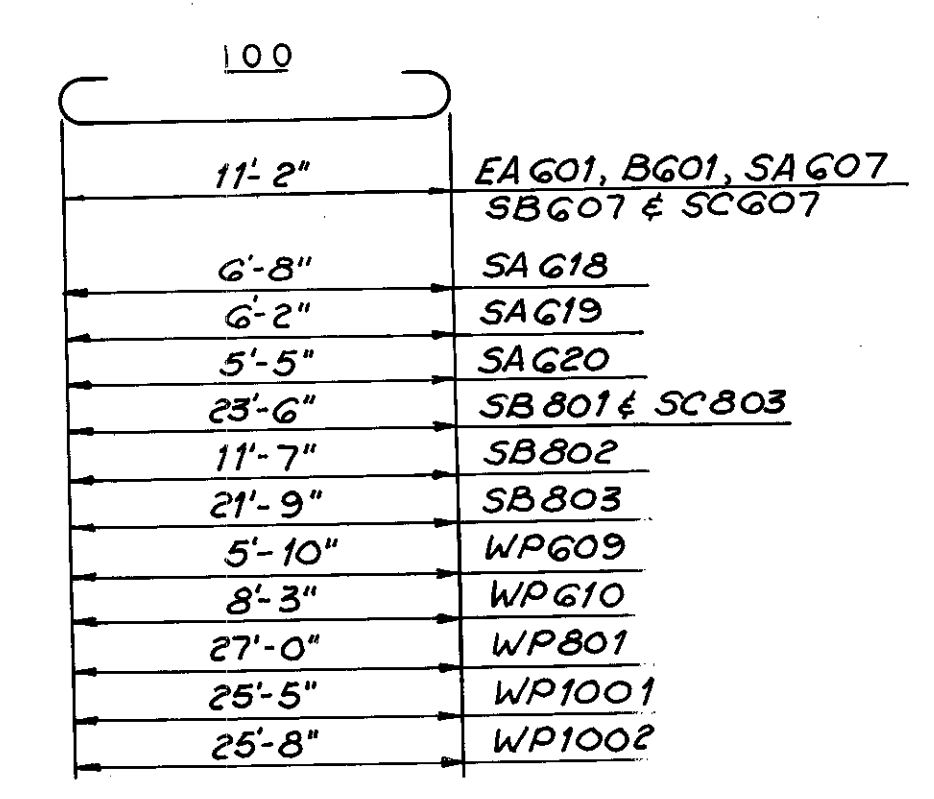
CUYAHOGA COUNTY CUY-10-16.23

Table with 6 columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for EAST ABUTMENT, WEST Pylon, and PIER 7.

Table with 6 columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for PIER 10, PIER 12, and SLAB-M. L.E. SPAN.

Table with 6 columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for SLAB - SPAN 1 and SLAB - SPAN 2.

#Denotes Epoxy Coated Reinforcing Steel.



H.N.T.B. BRIDGE NO. 3

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND HNTB

REINFORCEMENT SCHEDULE

REHABILITATION OF THE LORAIN-CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER) BR. NO. CUY.-10-1618 STA. 22+19.19 STA. 55+04.56

Table with columns: DRAWN, CHECKED, REVISIONS, DATE, SHEET R/1

Superseded by sheet 181A, 7-10-81







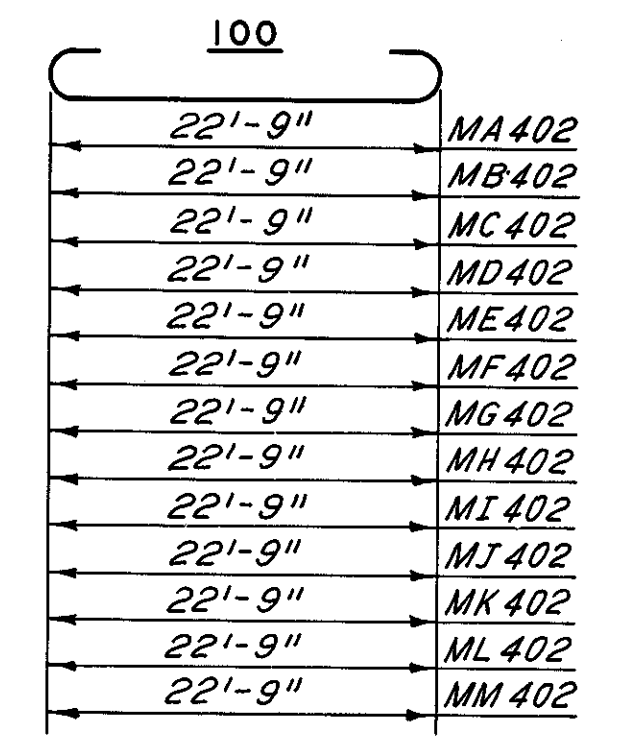
MICROFILMED  
DEC 8 1986

Table with columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for SLAB - SPAN 10, SLAB - SPAN 11, and SLAB - SPAN 12. Total weight for uncoated is 181,825 lbs and for epoxy coated is 161,257 lbs.

Table with columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for SAAB - SPAN 13, SPAN 1, SPAN 2, and SPAN 3. Total weight for uncoated is 122,869 lbs and for epoxy coated is 108,747 lbs.

Table with columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for SPAN 3, SPAN 4, SPAN 5, SPAN 6, SPAN 7, SPAN 8, and SPAN 9. Total weight for uncoated is 17,960 lbs and for epoxy coated is 2,3967 lbs.

Table with columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for SPAN 10, SPAN 11, SPAN 12, and SPAN 13. Total weight for uncoated is 88,39 lbs and for epoxy coated is 17,122 lbs.



# Denotes Epoxy Coated Reinforcing Steel.

FHWA REGION 5, STATE OHIO, PROJECT CUYAHOGA COUNTY CUY-10-16.23. Includes a circular seal with 183 and 185.

CUYAHOGA COUNTY  
CUY-10-16.23

H.N.T.B. BRIDGE NO. 3  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS CLEVELAND  
REINFORCEMENT SCHEDULE  
REHABILITATION OF THE LORAIN - CARNEGIE BRIDGE (S.R. 10 OVER THE CUYAHOGA RIVER)  
BR. NO. CUY.-10-1618 STA. 22+19.19  
CUYAHOGA COUNTY OHIO

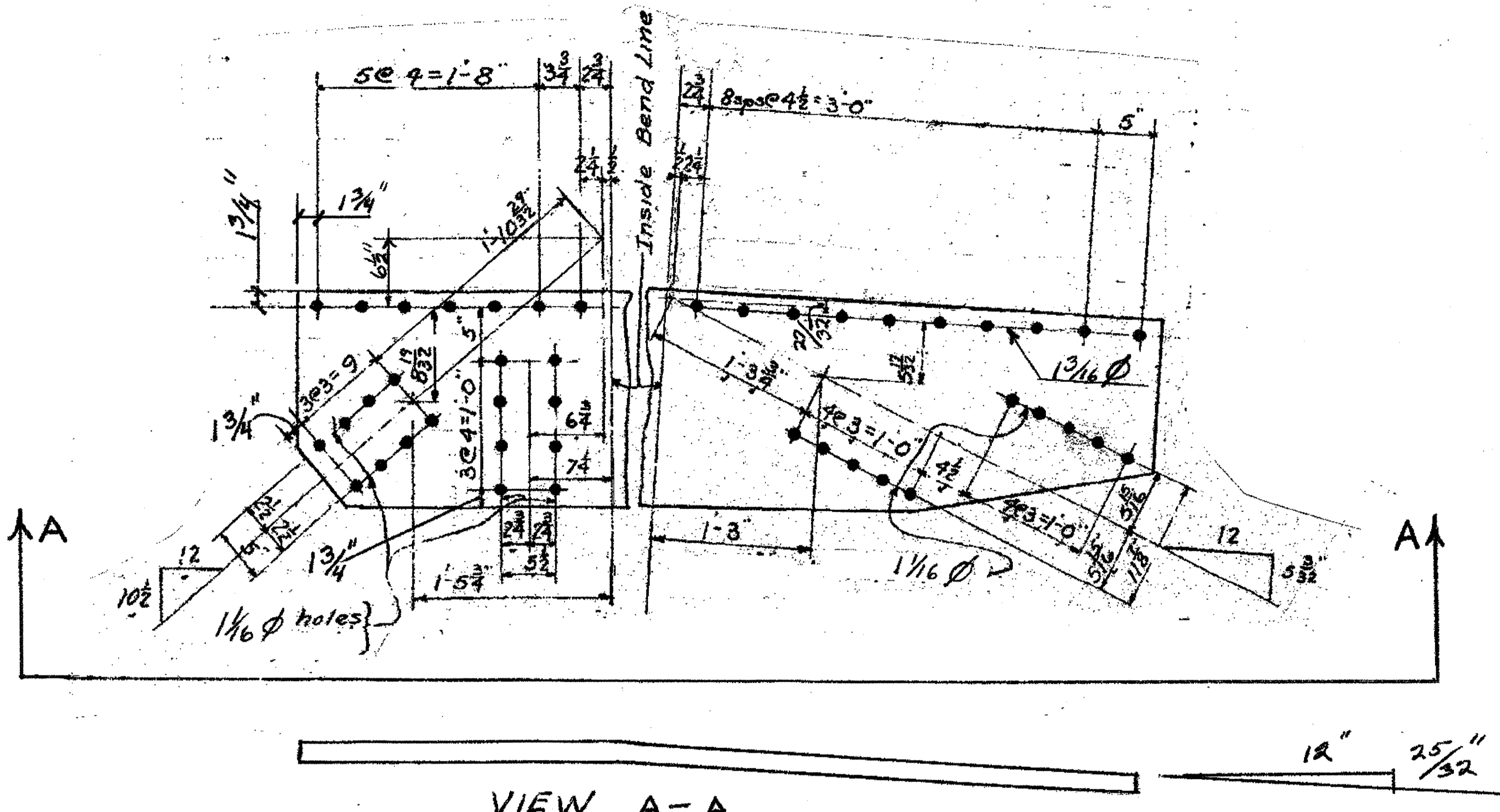
Superseded by sheet 183A, 7-10-81  
DRAWN R.A.S. TRACED D.L.R. CHECKED DATE 5-29-77 REVIEWED DATE SHEET R/3











VIEW A-A

ONE-TYPE 3 GUSSET PLATE 11A  
ORIGINAL SHOP MARK P368ac<sup>L</sup>  
DRAWING 376

SPAN 10  
L5-NORTH EXTERIOR TOP 11A

BILL OF MATERIALS

Piece No.	Qty.	Description
11A	1	PL 20 1/2" x 1/2" x 6'-2 1/4"
		PLATE A.36

O.D.O.T. DIST. 12

ACCEPTED	2/3/94	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

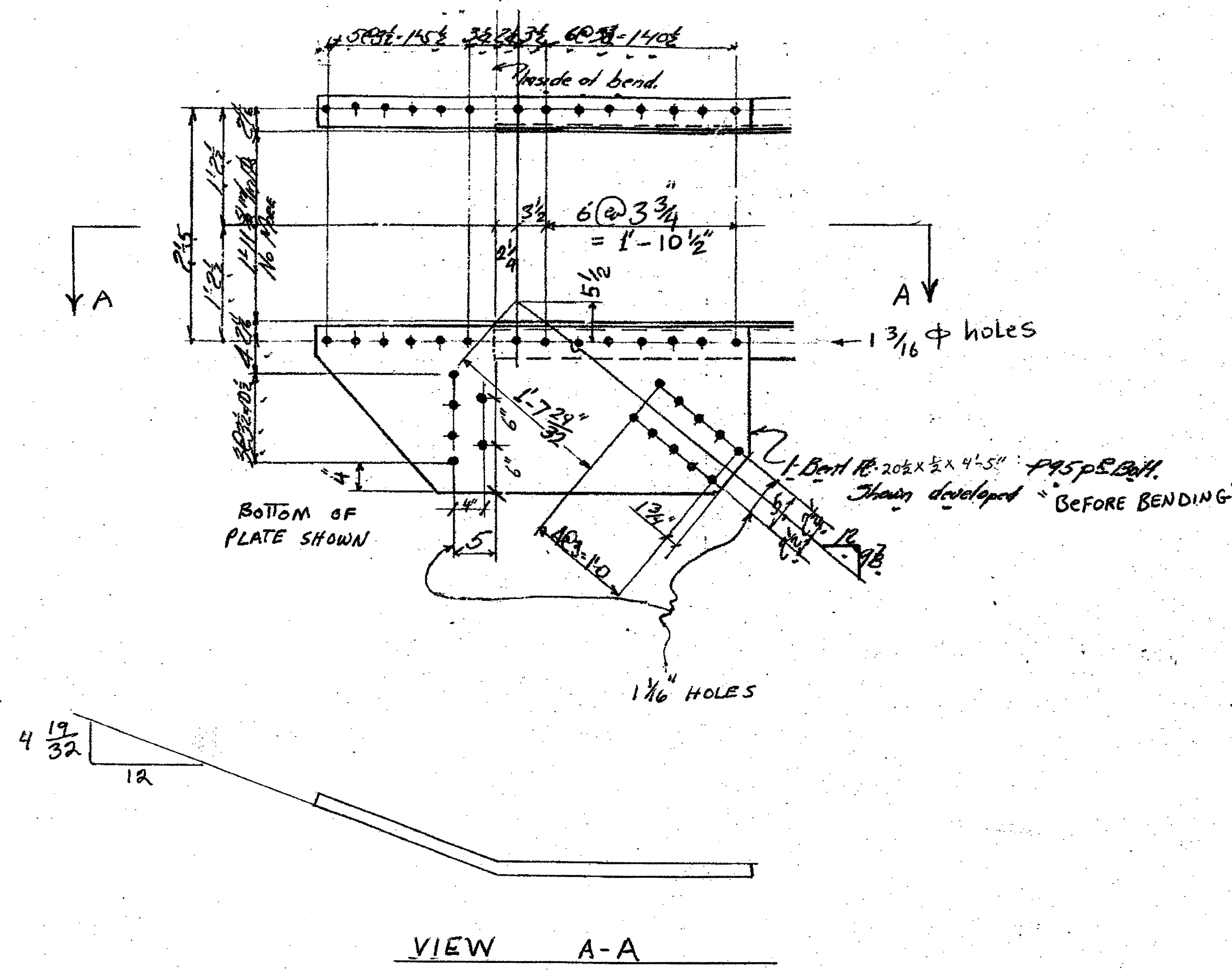


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No CUY-10-16-13**

DRAWN BY	CHECKED BY	JOB NO.
SCALE NA	DATE	
		DRAWING NO. <b>11</b>



VIEW A-A

1-TYPE 2 GUSSET PLATE 13A  
ORIGINAL SHOP MARK P95P R

SPAN 5  
L3 SOUTH EXTERIOR BOTTOM 13A

**BILL OF MATERIALS**

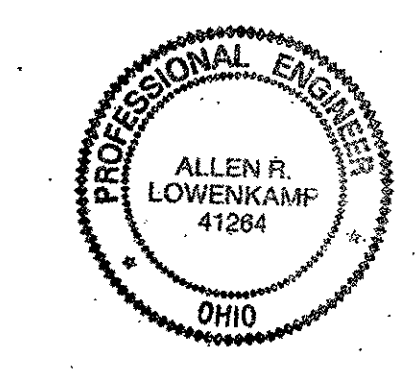
Piece No.	Qty.	Description
13A	1	R 20 1/2 x 1/2 x 4'-5"
PLATE A36		

- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/2/04	13M
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

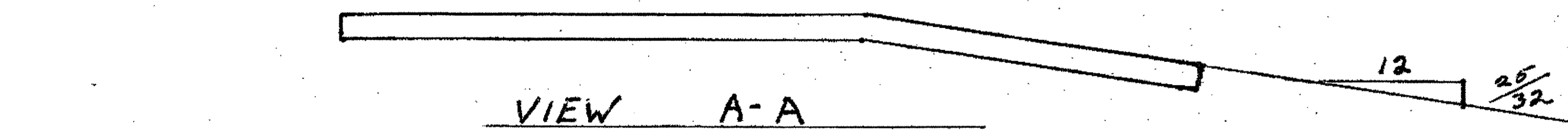
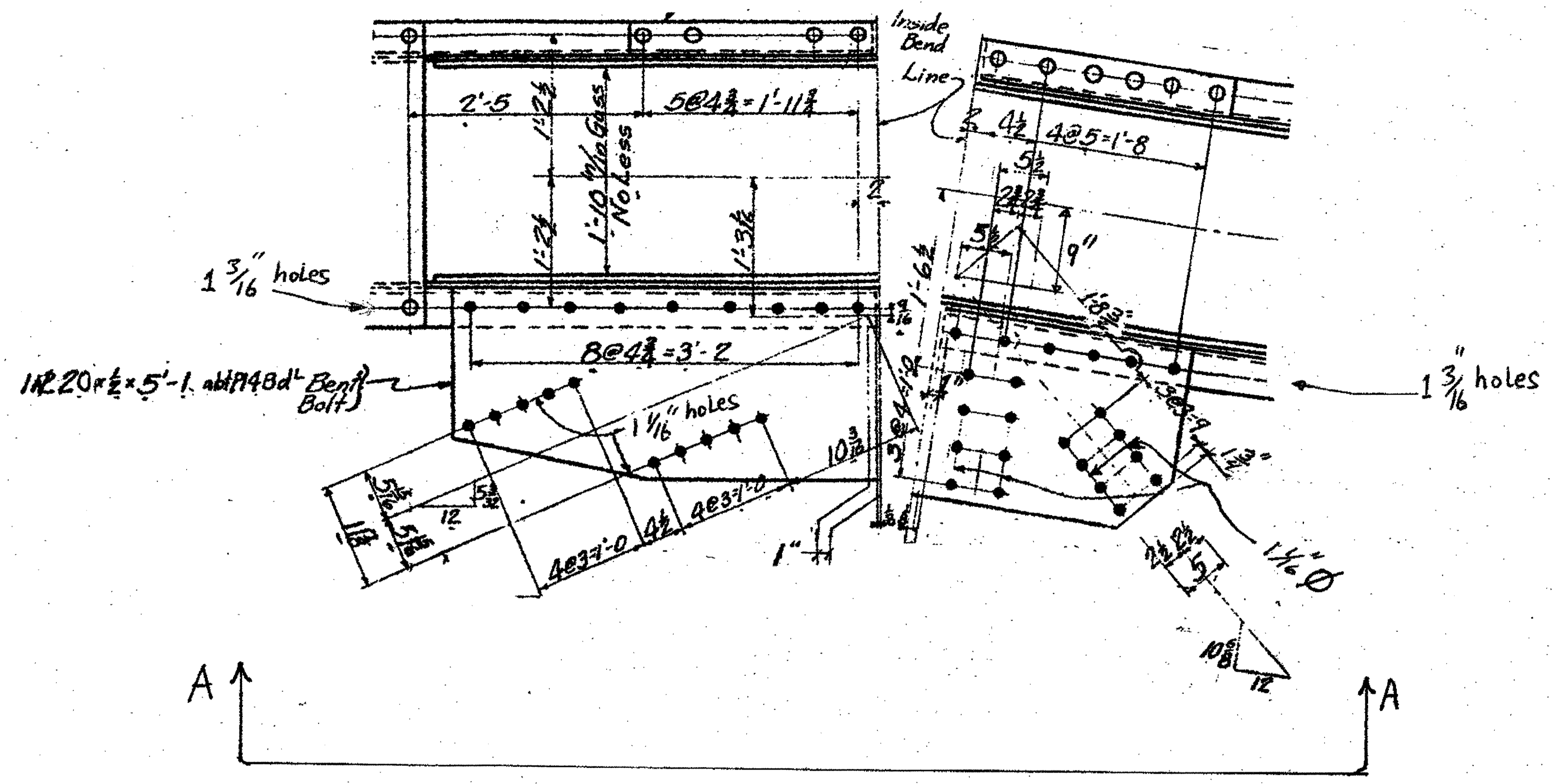


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. 13  
 SCALE: NA DATE: \_\_\_\_\_



2 - TYPE 3 GUSSET PLATES 14A/R+L (L SHOWN)  
 ORIGINAL SHOP MARK P148 d<sup>4</sup> SHEET 157

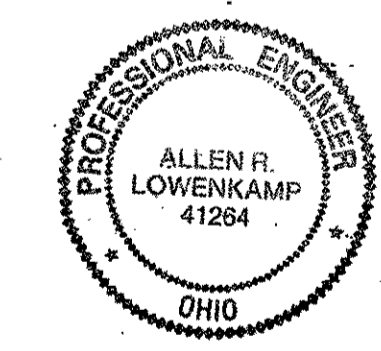
SPAN 6  
 L1 - SOUTH EXTERIOR 14A/R  
 L1 - NORTH EXTERIOR 14A/L

### BILL OF MATERIALS

Piece No.	Qty.	Description
14A/R+L	2	
16 IIR		PL 20 x 1/2 x 5 L10
PLATE A36 SHAPES A36		

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/3/91 JSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



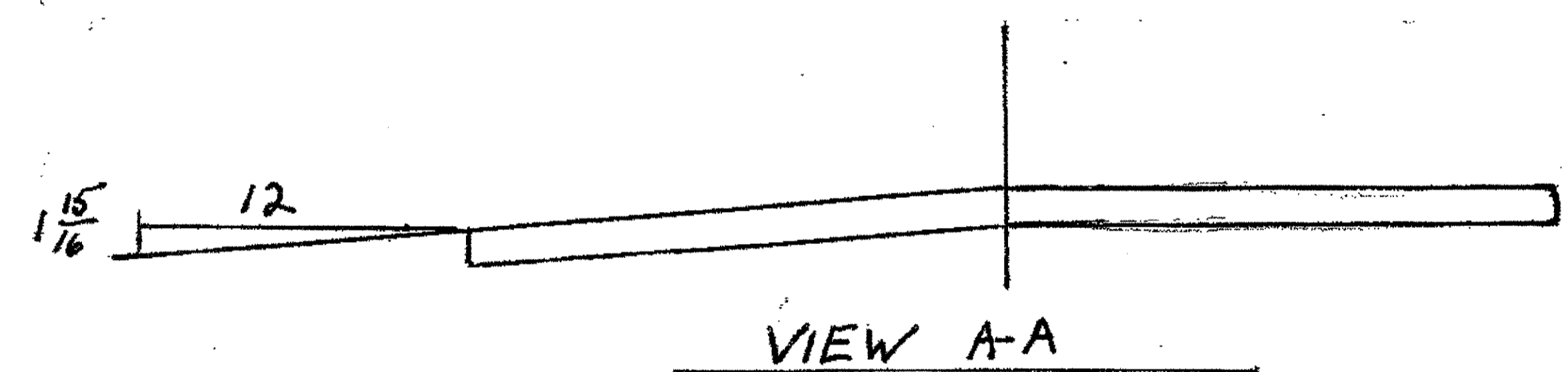
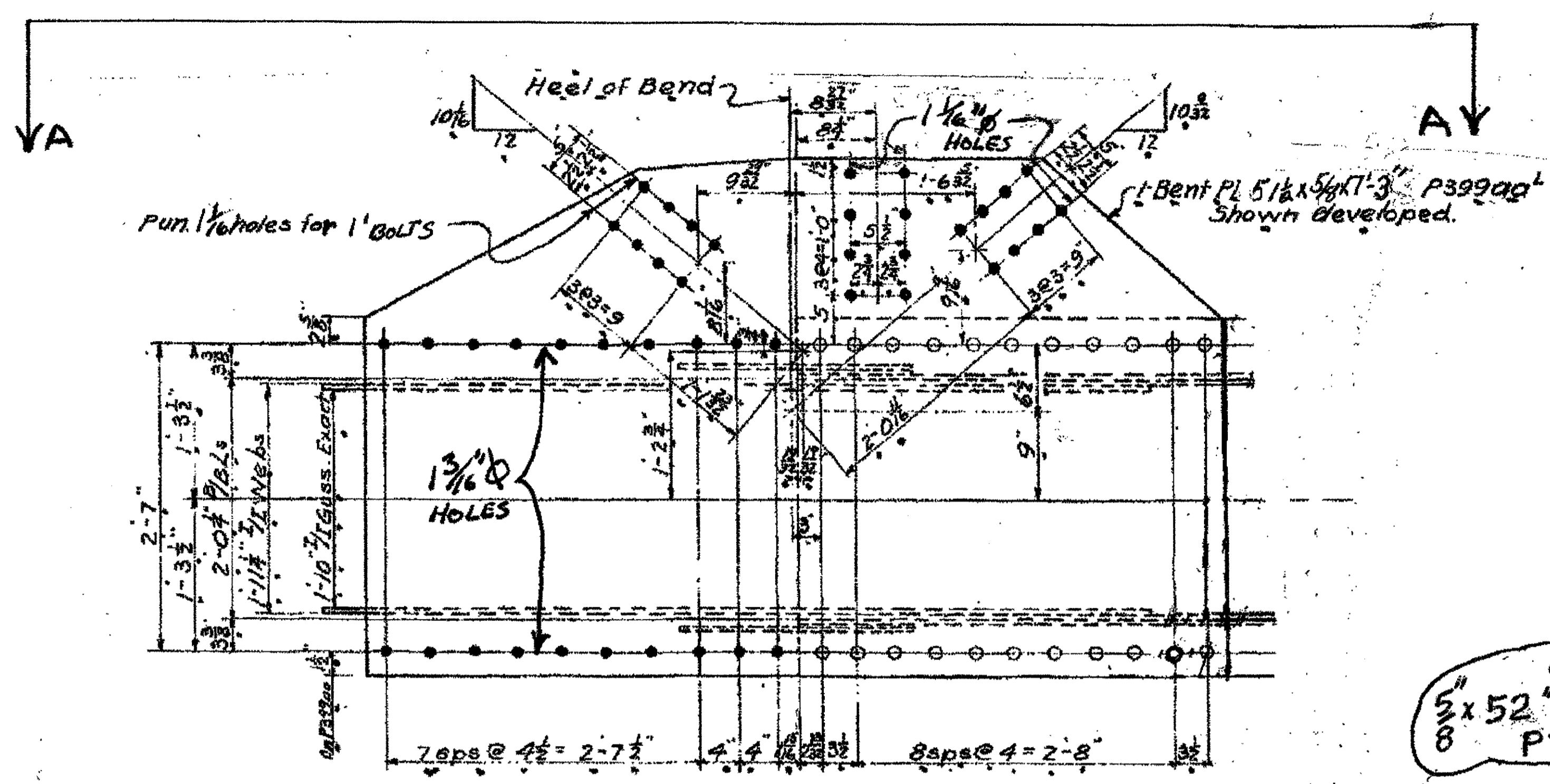
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

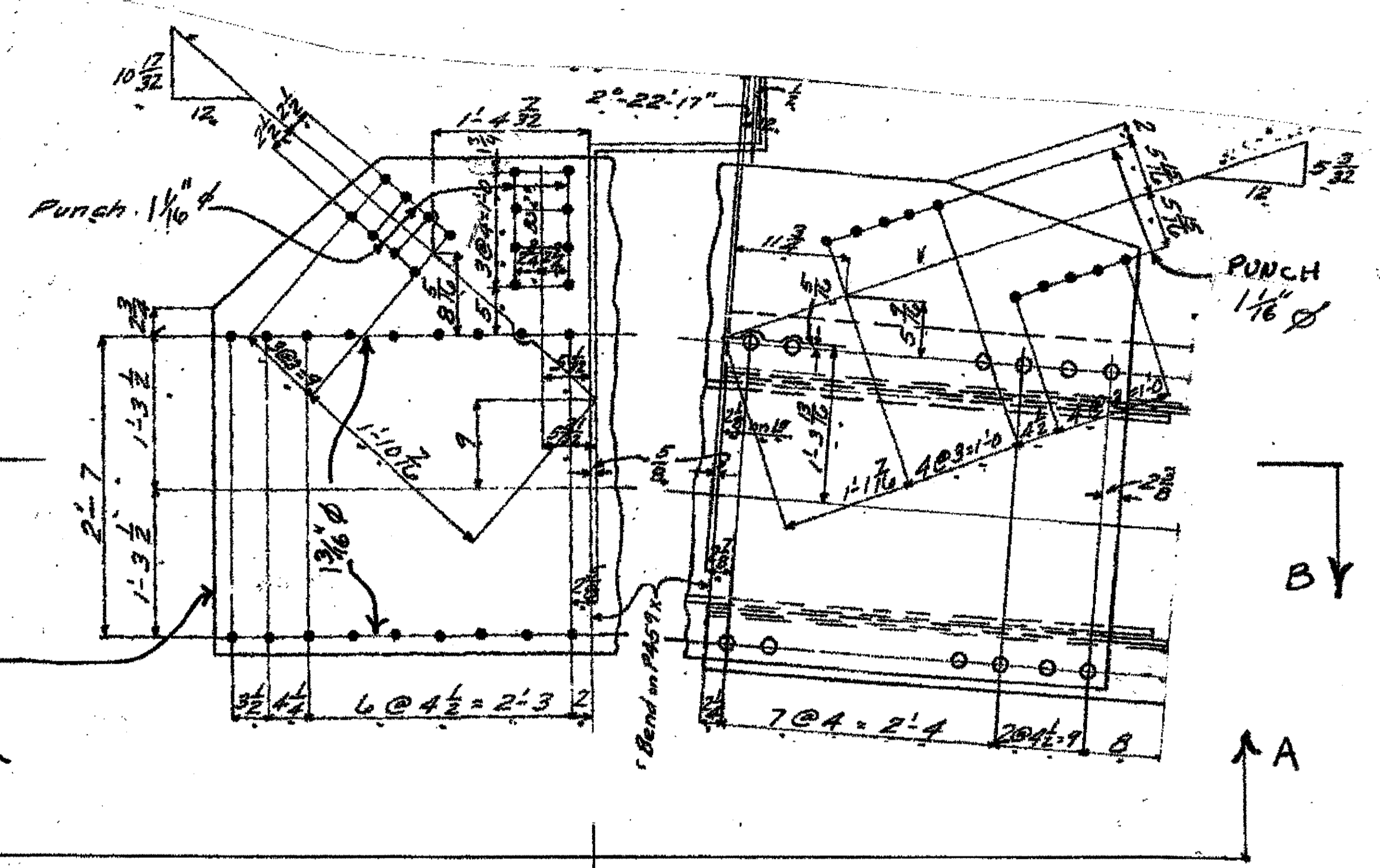
DRAWN BY	CHECKED BY	DRAWING NO.
SCALE NA	DATE	14



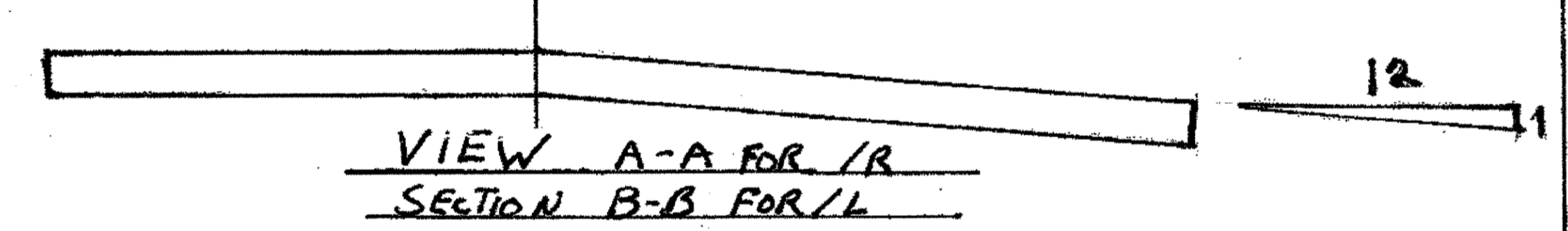


1-TYPE 4 GUSSET PLATE 29A  
 ORIGINAL SHOP MARK P399aa<sup>t</sup>

SPAN 11 L6-NORTH EXTERIOR BOTTOM 29A



BENT PL  
 5" x 52" x 6-9"  
 P459x<sup>L</sup>



3-TYPE 4 GUSSET PLATES 29B/R+L  
 ORIGINAL SHOP MARK P459x<sup>L</sup> SHEET 459

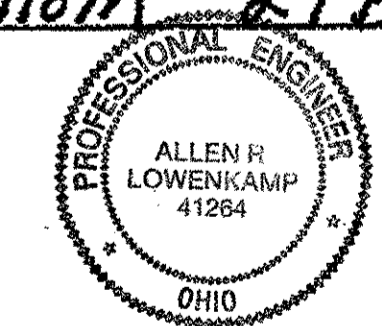
SPAN 12

L4-NORTH EXTERIOR BOTTOM 29B/L  
 L4-NORTH INTERIOR BOTTOM 29B/R  
 L4-SOUTH EXTERIOR BOTTOM 29B/R

O.D.O.T. DIST. 12

ACCEPTED	2/1/01	PRM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NO.	REVISION	DATE	BY

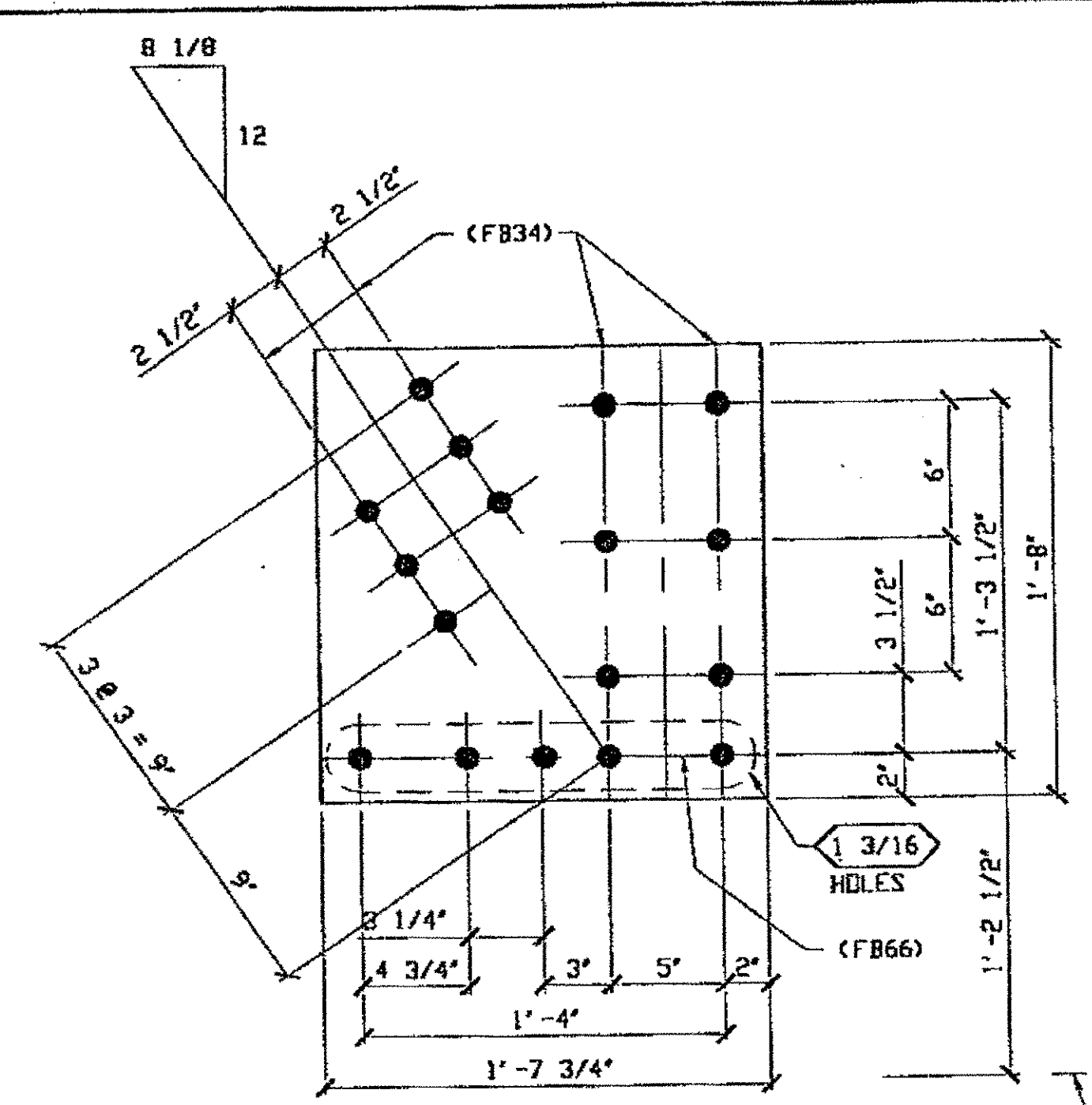
**Tri Plate Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

JOB NO. 2000212  
 DRAWING NO. 29  
 DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_

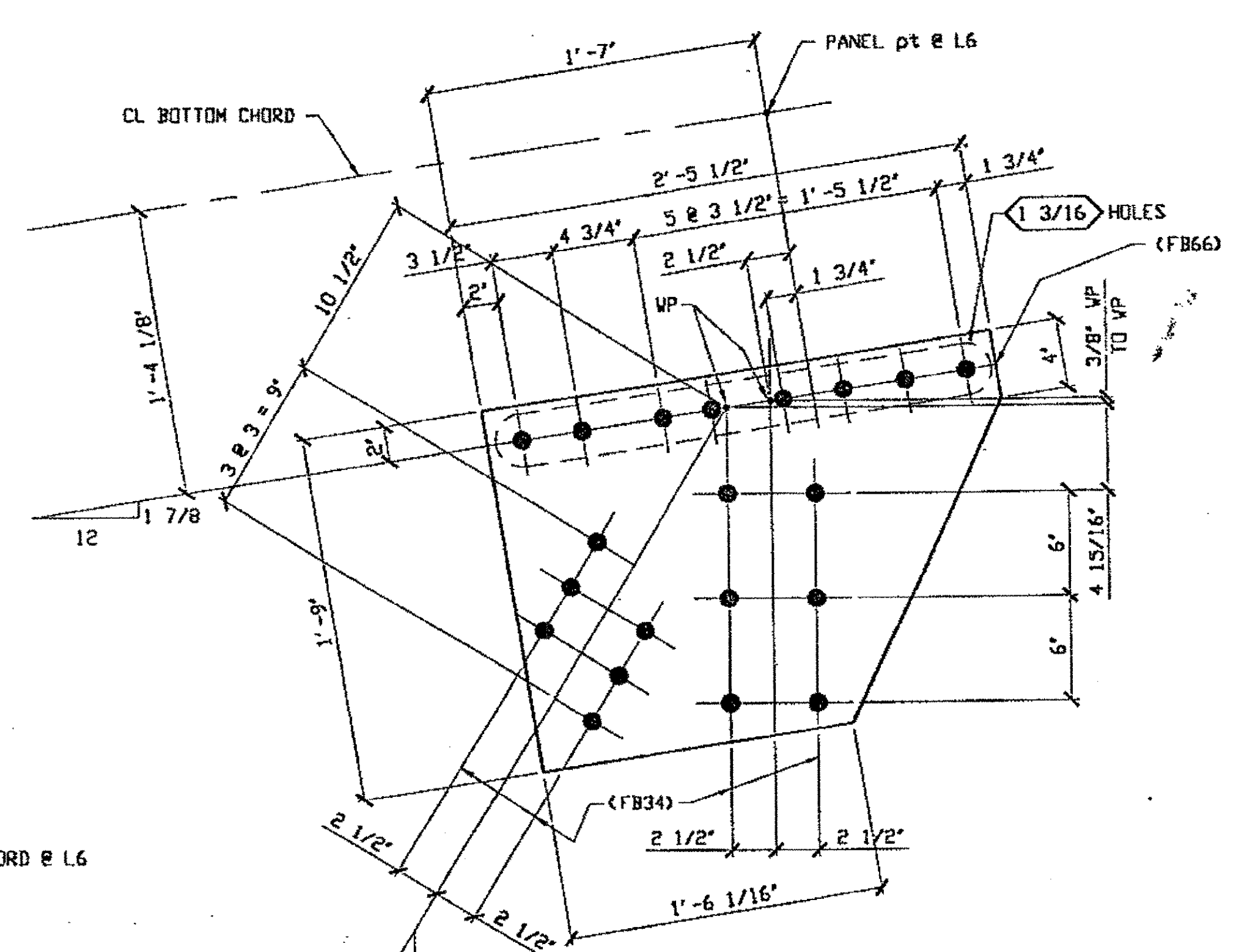
PLATE A36 SHAPES A36

Last modified at 10:59am on Wed Oct 04, 2000 - 1 - Last plotted by Gfoster a 57am on Thu Oct 05, 2000



**3 - TYPE 1 & 2 GUSSET PLATE - 108A**  
 ORIG SHOP DWG 16  
 ORIG SHOP MARK LP4

**SPAN W+LE**  
 L6-CENTER TRUSS, POINT 9, TOP NORTH 108A  
 L6-CENTER TRUSS, POINT 9, BOTTOM NORTH 108A  
 L6-CENTER TRUSS, POINT 9, BOTTOM SOUTH 108A



**4 - TYPE 1 & 2 GUSSET PLATE - 108B**  
 ORIG SHOP DWG 16  
 ORIG SHOP MARK LP2

**SPAN W+LE**  
 L6-NORTH TRUSS POINT 9 TOP 108B  
 L6-SOUTH TRUSS POINT 9 TOP 108B  
 L6-SOUTH TRUSS POINT 9 BOTTOM 108B  
 L6-NORTH TRUSS POINT 9 BOTTOM 108B

**BILL OF MATERIAL**

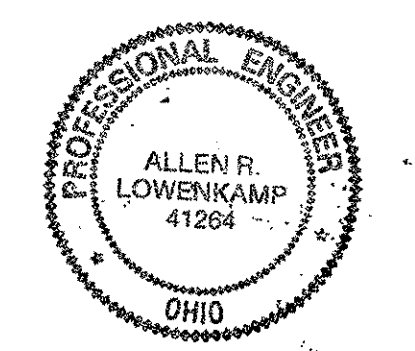
LINE NO.	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1	108A	3	TYPE 1 GUSSET PLATE				126
2		1	PL 3/8 X 19 3/4	1	8		
3							
4	108B	4	TYPE 1 GUSSET PLATE				222
5		2	PL 3/8 X 21	2	5 1/2		
6							
7							
8							
9							
10							
11							
12							
13							
14			FIELD BOLTS				
15	FB34	84	1" DIA	0	2 1/4	NOTE 2	
16	FB66	47	1 1/8" DIA	0	2 1/2	NOTE 2	
17							
18							
19							
20							
PLATE A36				PIPE		FITTINGS	
SHAPES				FLGS.		BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE  $\langle 1/16 \rangle$  UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**

ACCEPTED	2/3/01 PSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general information only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0117 & 0118  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

**RELEASED FOR CONSTRUCTION**  
 DATE 10/9/00 BY *cm*

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

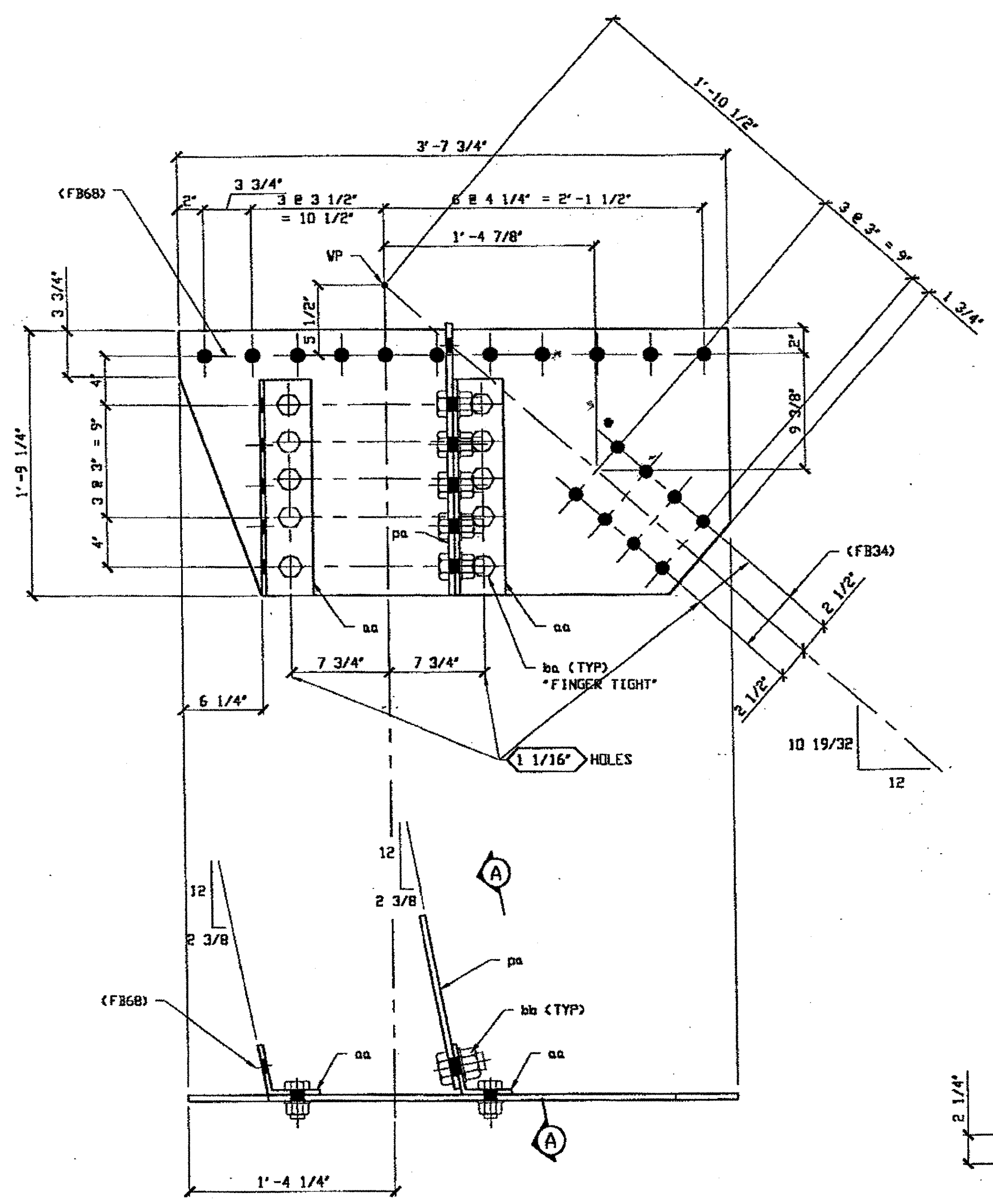
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**W & LE SPAN REPAIR**

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 GVG 09/01/00  
 CHECKED BY: DATE  
 GAF 09/14/00

SHEET NUMBER: 108  
 A36 JOB NUMBER: 800010

Last modified by Gfoster at 09:15am on Wed Oct 18, 2000 - Last plotted by Gfoster 1:33am on Wed Oct 18, 2000

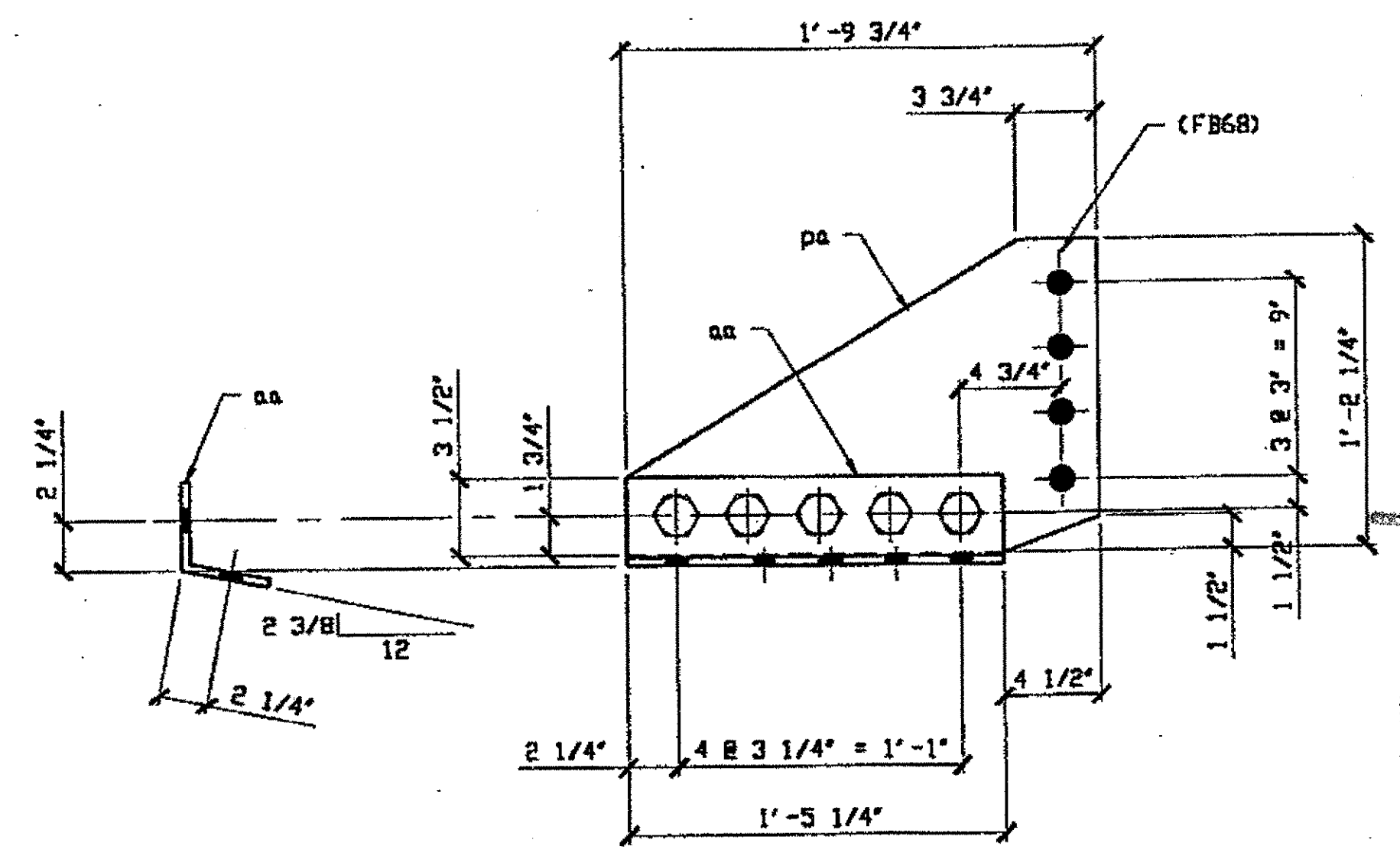


**(2) TYPE 5 GUSSET PLATE 118A**  
 ORIG SHOP MARK P249b ITEM LINE NO. 0121  
 ORIG SHOP MARK (2) 249u ITEM LINE NO. 0153  
 ORIG SHOP MARK P249ak ITEM LINE NO. 0142  
 ORIG SHOP DWG 249

SPAN 1  
 LO-A SOUTH EXTERIOR TOP 118A  
 LO-A NORTH EXTERIOR TOP 118A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		118A	2	TYPE 5 GUSSET PLATE				
3				PL 1/2 X 21 1/4	3	7 3/4		
4		aa	4	L 4 X 4 X 3/8	1	5 1/4	BEND	
5		pa	2	PL 1/2 X 14 1/4	1	9 3/4		
6		ba		1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	
7				W/ HVY HEX NUT & WASHER				
8		bb		1 1/8" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	
9				W/ HVY HEX NUT & WASHER				
10								
11				FIELD BOLTS				
12		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
13		FB34		1" DIA	0	2 1/4	NOTE 2	
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $1 \frac{3}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.



SECTION A-A

SHOWN IN REF# 142

RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY cm

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



**O.D.O.T. DIST. 12**

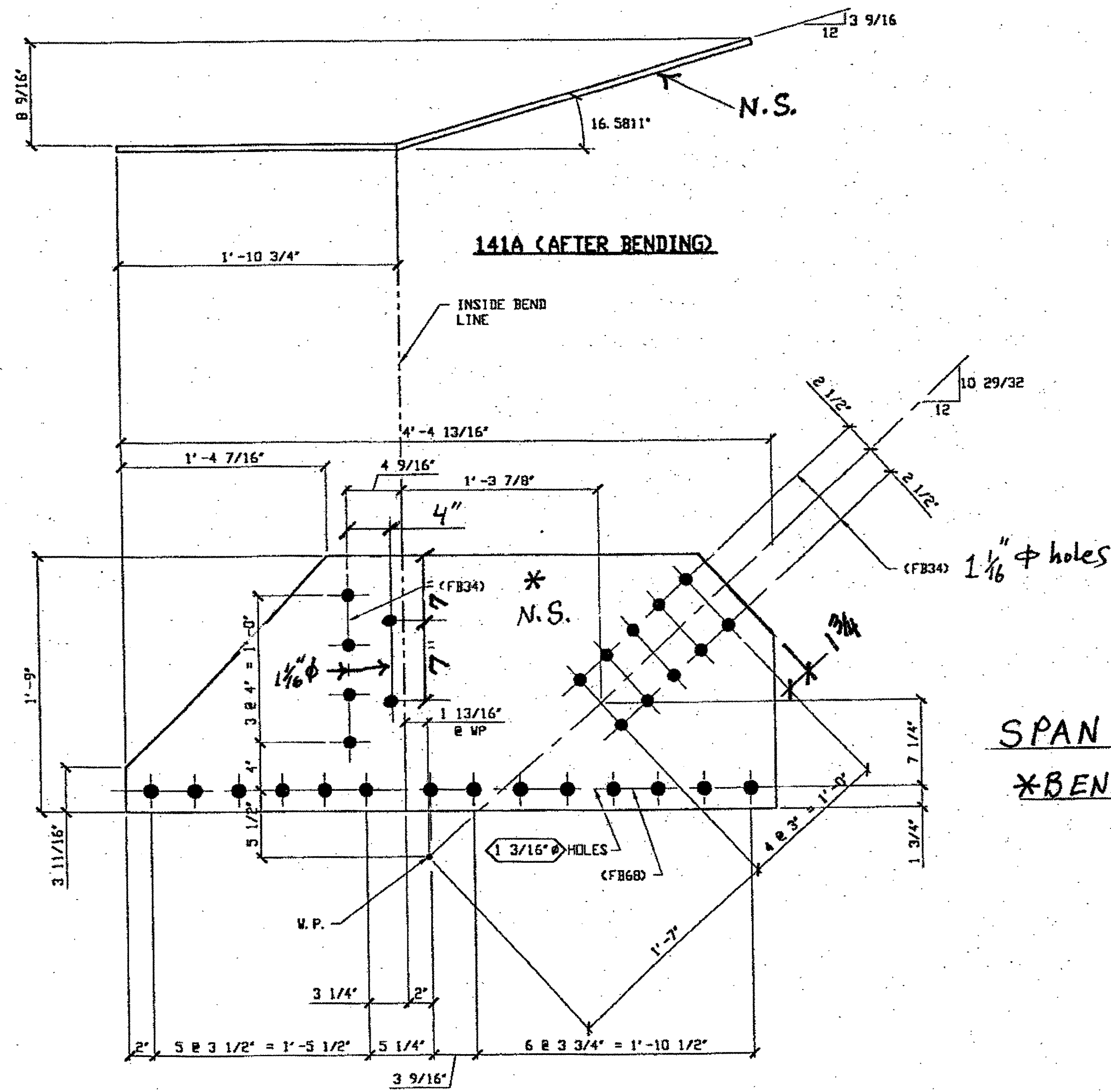
ACCEPTED	2/2/01	DJA
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO. 0121, 0153, 0142  
 DOT BID ITEM NO. 86350000 UND

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN 1 REPAIR			
SHEET NUMBER			118
ASB JOB NUMBER			800010

Last modified: 09:59am on Wed Oct 18, 2000 - last plotted by Gfoster  
 u:00am on Wed Oct 18, 2000



(1) TYPE 2 GUSSET PLATE 141A  
 (SHOWN DEVELOPED) (BEFORE BENDING)  
 ORIG SHOP MARK P251g/R  
 ORIG SHOP DWG 251

SPAN 1 L3 NORTH EXTERIOR BOTTOM 141A  
 \*BEND DOWN N.S.

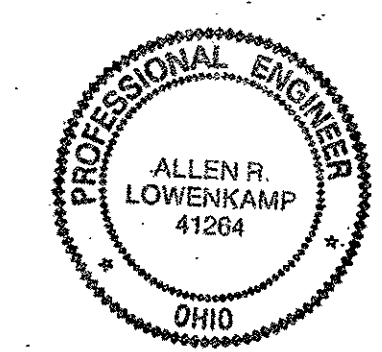
BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1									
2		141A	1	TYPE 2 GUSSET PLATE					
3			1	PL 1/2 X 21	4	4 19/16	BEND	135	
4									
5									
6									
7									
8									
9				FIELD BOLTS					
10		FB68	14	1 1/8" DIA	0	2 9/4	NOTE 2	27	
11		FB34	14	1" DIA	0	2 1/4	NOTE 2	19	
12									
13									
14									
15									
16									
17									
18									
19									
20									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

O.D.O.T. DIST. 12

ACCEPTED	
ACCEPTED AS NOTED	2/3/07 [Signature]
NOT ACCEPTED	

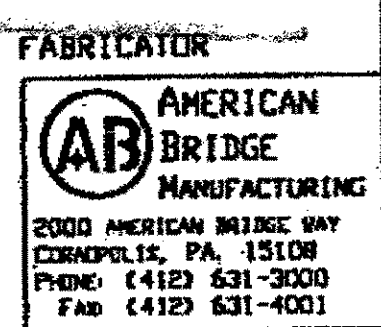
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY cu

DOT ITEM LINE NO. 0118  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 1 REPAIR

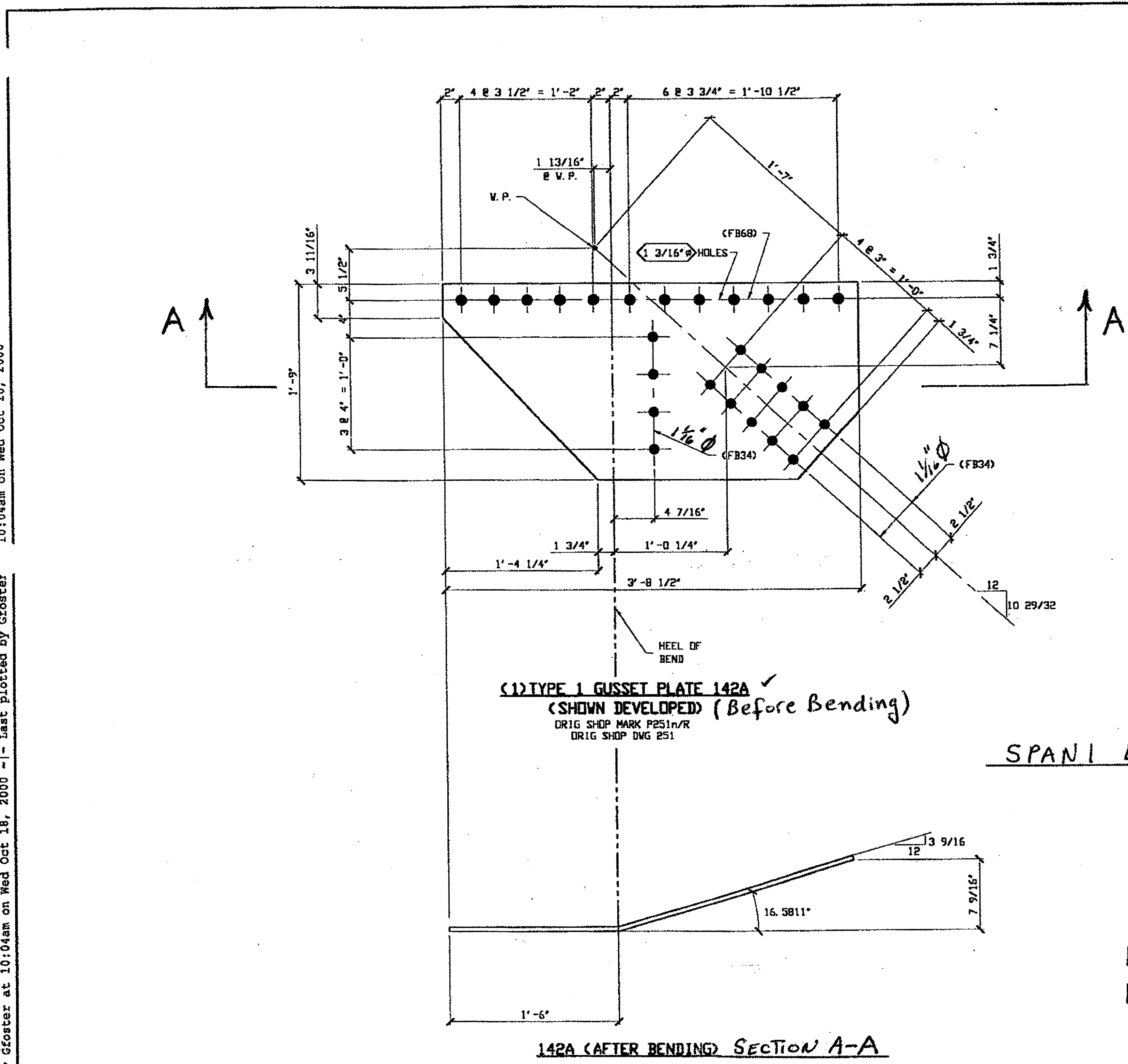
STEEL ERECTOR	IN CHARGE OF: L. SMITH	SHEET NUMBER
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	DRAWN BY: DATE: GAF 09/28/00 CHECKED BY: DATE: GWG 10/16/00	141 JOB NUMBER: 800010



10:04am on Wed Oct 18, 2000

10:04am on Wed Oct 18, 2000 - Last plotted by sfoster

Last modified by sfoster



(1) TYPE 1 GUSSET PLATE 142A  
 (SHOWN DEVELOPED) (Before Bending)  
 ORIG SHOP MARK P251n/R  
 ORIG SHOP DNG 251

142A (AFTER BENDING) SECTION A-A

SPAN 1 L3 NORTH EXTERIOR TOP 142A

RELEASED FOR CONSTRUCTION  
 DATE 10/29/00 BY em

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		142A	1	TYPE 1 GUSSET PLATE				
3			1	PL 1/2 X 21	3	8 1/2	BEND	108
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB68	12	1 1/8" DIA	0	2 3/4	NOTE 2	23
11		FB34	14	1" DIA	0	2 1/4	NOTE 2	19
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE JE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILLS: 3.0 - 5.0.

O.D.O.T. DIST. 12

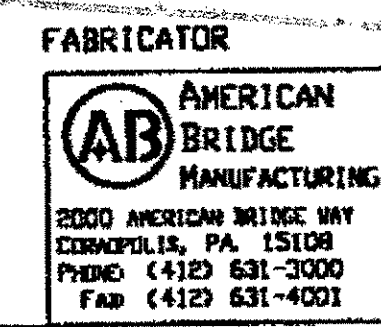
ACCEPTED	2/3/01	J.M.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 117  
 DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 GAF 09/29/00  
 DWG BY: DATE:  
 GVG 10/16/00

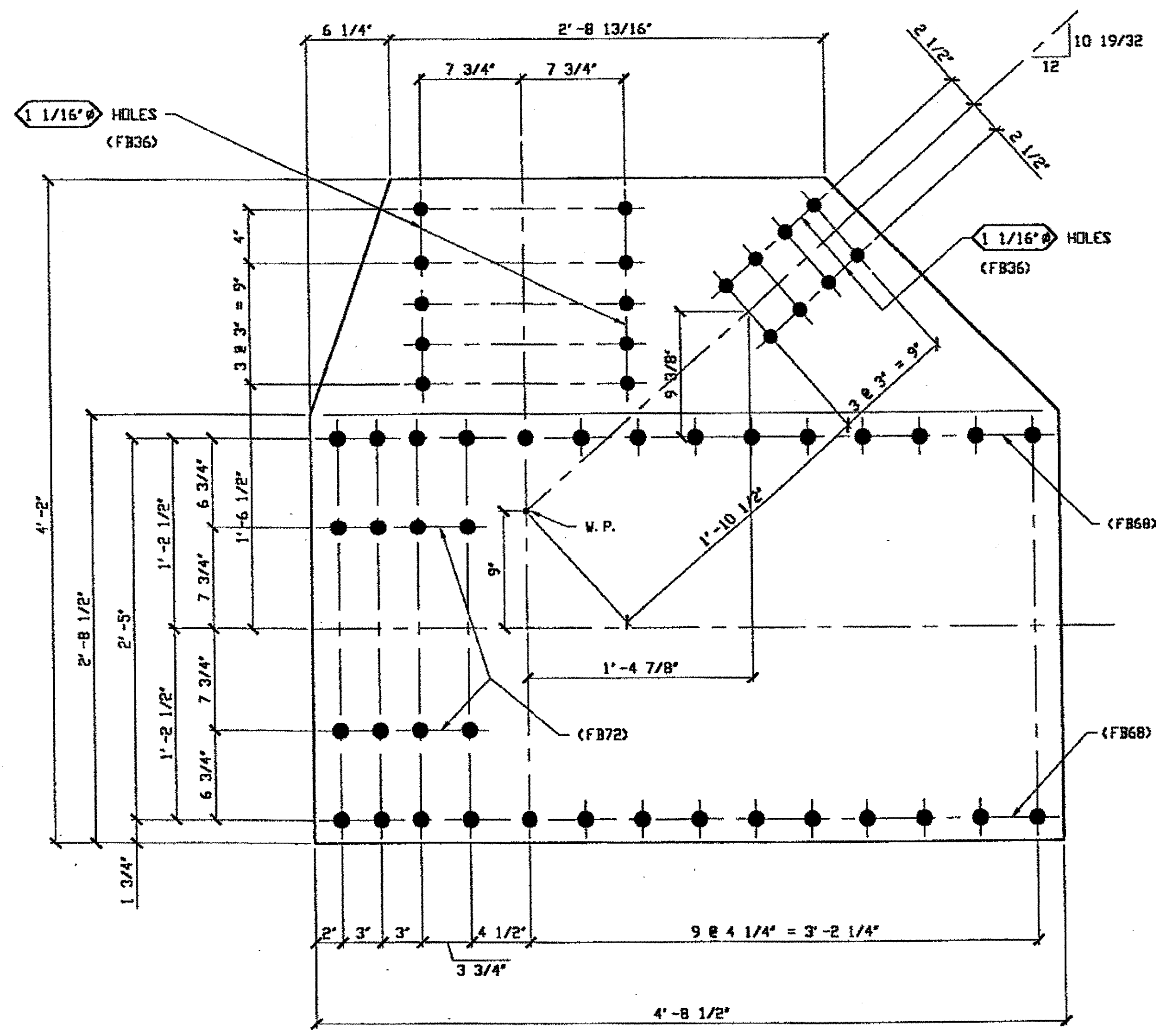
SHEET NUMBER  
 142  
 ABN JOB NUMBER  
 800010

10:07am on Wed Oct 18, 2000

y Gfooster at 10:06am on Wed Oct 18, 2000 -|- Last plotted by Gfooster

Last modified

H:\800010\0143.dwg



(1) TYPE 6 GUSSET PLATE 143A ✓

ORIG SHOP MARK P249p  
ORIG SHOP DWG 249

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		143A	1	TYPE 6 GUSSET PLATE				
3			1	PL 9/16 X 50	4	8 1/2		414
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB72	8	1 1/8" DIA	0	3 1/4	NOTE 2	17
11		FB68	28	1 1/8" DIA	0	2 3/4	NOTE 2	54
12		FB36	18	1" DIA	0	2 1/2	NOTE 2	25
13								
14								
15								
16								
17								
18								
19								
20								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES N/A		FLGS. N/A		BOLTS NOTE 2				

**NOTES:**

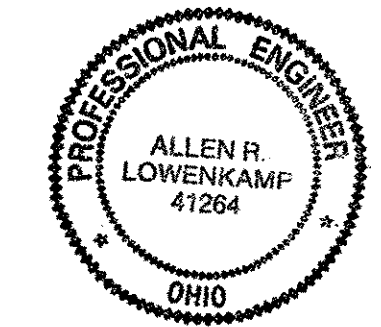
1. OPEN HOLES ARE 1 3/16" UNLESS NOTED OTHERWISE.
2. ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRC-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

SPAN 1  
LO-A NORTH EXTERIOR BOTTOM 143A

**O.D.O.T. DIST. 12**

ACCEPTED	2/3/04	psw
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0122  
DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

SHEET NUMBER	143
ADM JOB NUMBER	800010

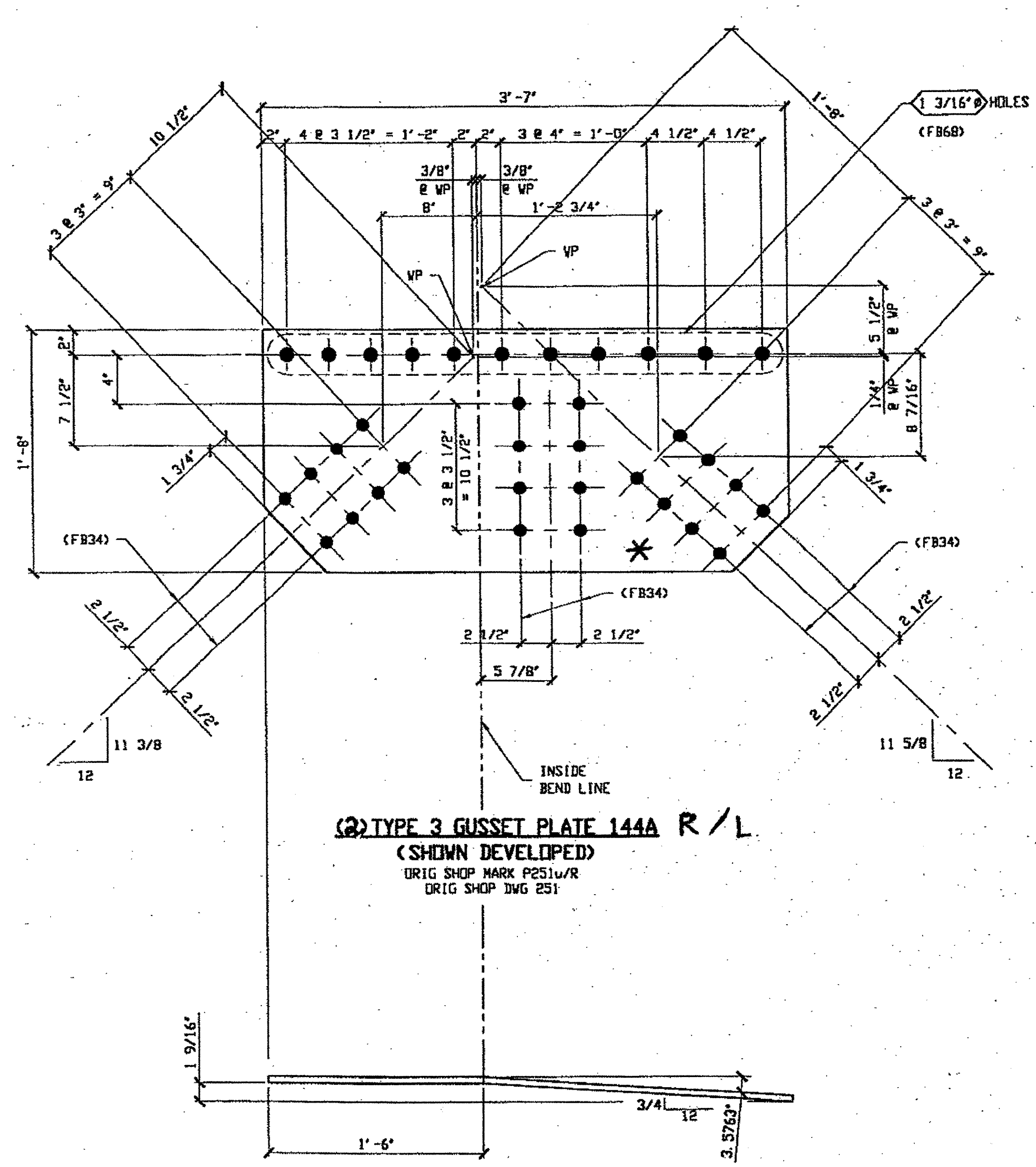
RELEASED FOR CONSTRUCTION  
DATE 10/25/00 BY ew

**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
GAF 10/02/00  
CHECKED BY: DATE:  
GNG 10/17/00

Last modified: 10:19am on Wed Oct 18, 2000 - last plotted by gfooster  
 H:\800010\144.dwg



**(2) TYPE 3 GUSSET PLATE 144A R/L**  
 (SHOWN DEVELOPED)  
 ORIG SHOP MARK P251w/R  
 ORIG SHOP DWG 251

**144A (AFTER BENDING)**  
 \* Bend Down for 144A R  
 \* Bend up for 144A L

**SPAN 1**  
 L6-G NORTH EXTERIOR TOP 144A/R  
 L6-G SOUTH EXTERIOR TOP 144A/L

**BILL OF MATERIAL**

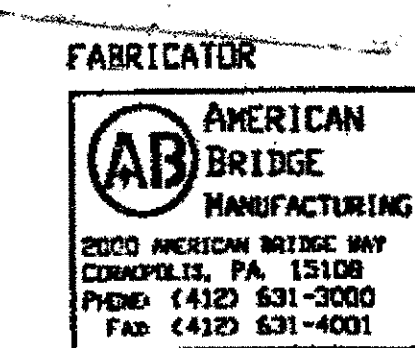
LINE	ADVANCE BILL % LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		B/L 144A	2	TYPE 3 GUSSET PLATE			1R, 1L	
3			2	PL 1/2 X 20	3	7	BEND	
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
11		FB34		1" DIA	0	2 1/4	NOTE 2	
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILLS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**  
 ACCEPTED 2/5/01  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY ew



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 10/03/00  
 CHECKED BY: DATE: GWG 10/17/00

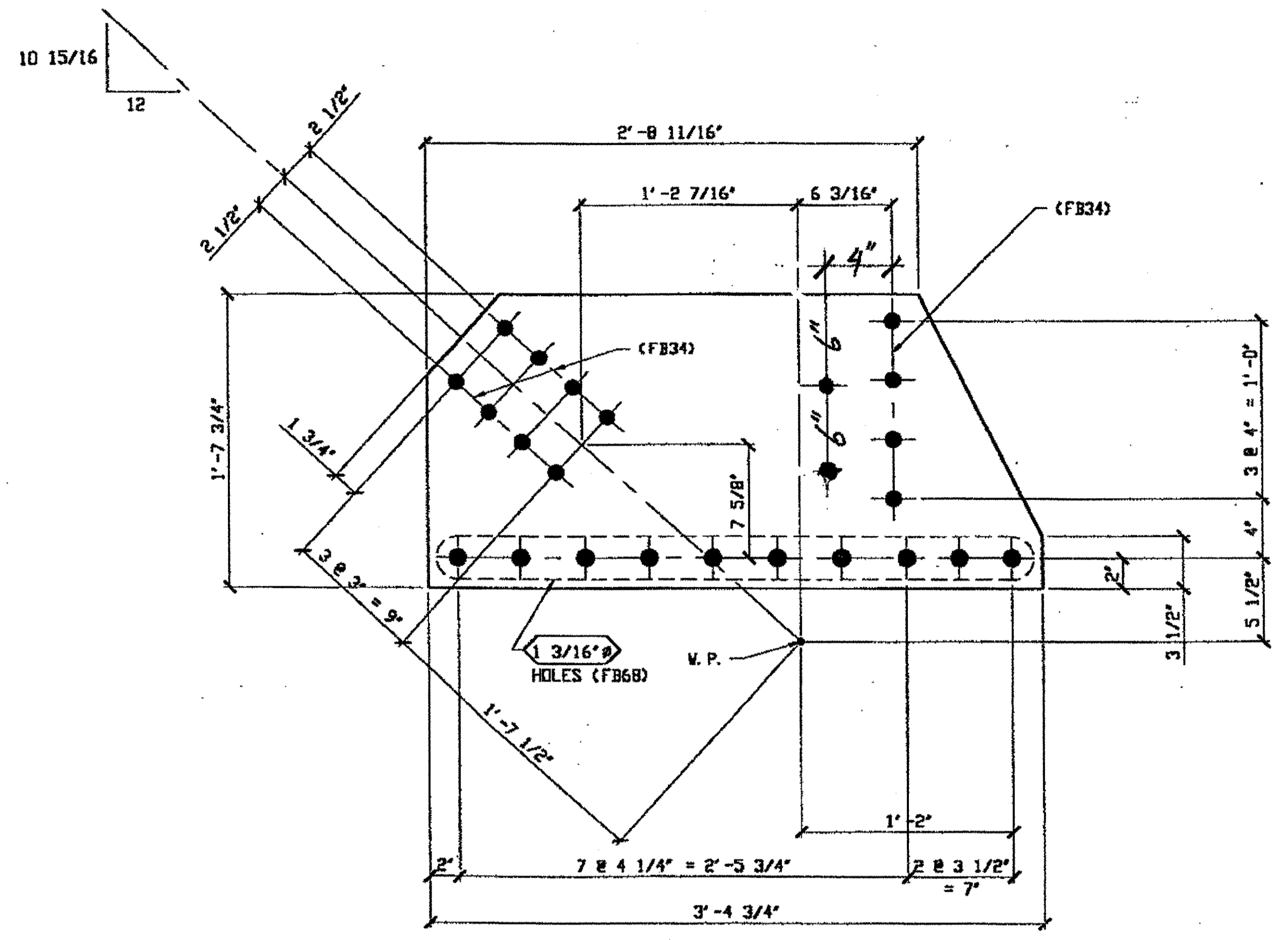
DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

SHEET NUMBER: 144  
 AM JOB NUMBER: 800010

Last modified by coster at 10:21am on Wed Oct 18, 2000 -1- Last plotted by Gfoote: 10/18/2000 10:21am on Wed Oct 18, 2000



(1) TYPE 2 GUSSET PLATE 145A ✓  
 ORIG SHOP MARK P253g  
 ORIG SHOP DWG 253

SPAN 1 L10-K NORTH EXTERIOR BOTTOM 145A

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		145A	1	TYPE 2 GUSSET PLATE				
3			1	PL 1/2 X 19 3/4	3	4 3/4		103
4								
5								
6								
7								
8								
9				FIELD BOLTS				
11		FB68	10	1 1/8" DIA	0	2 3/4	NOTE 2	19
11		FB34	12	1" DIA	0	2 1/4	NOTE 2	16
12								
13								
14								
15								
16								
17								
18								
19								
20								

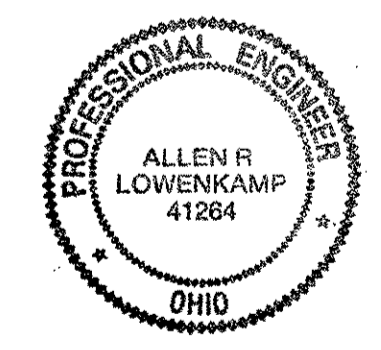
PLATE	A36	PIPE	N/A	FITTINGS	N/A
SHAPES	N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**

ACCEPTED	2/3/04	AJA
ACCEPTED AS NOTED		
NOT ACCEPTED		

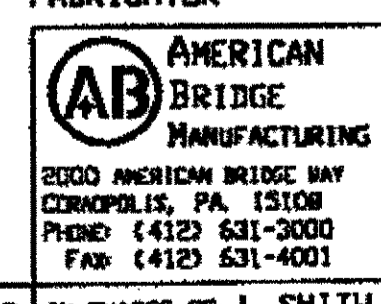
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY ew

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 10/05/00  
 CHECKED BY: DATE: GVG 10/17/00

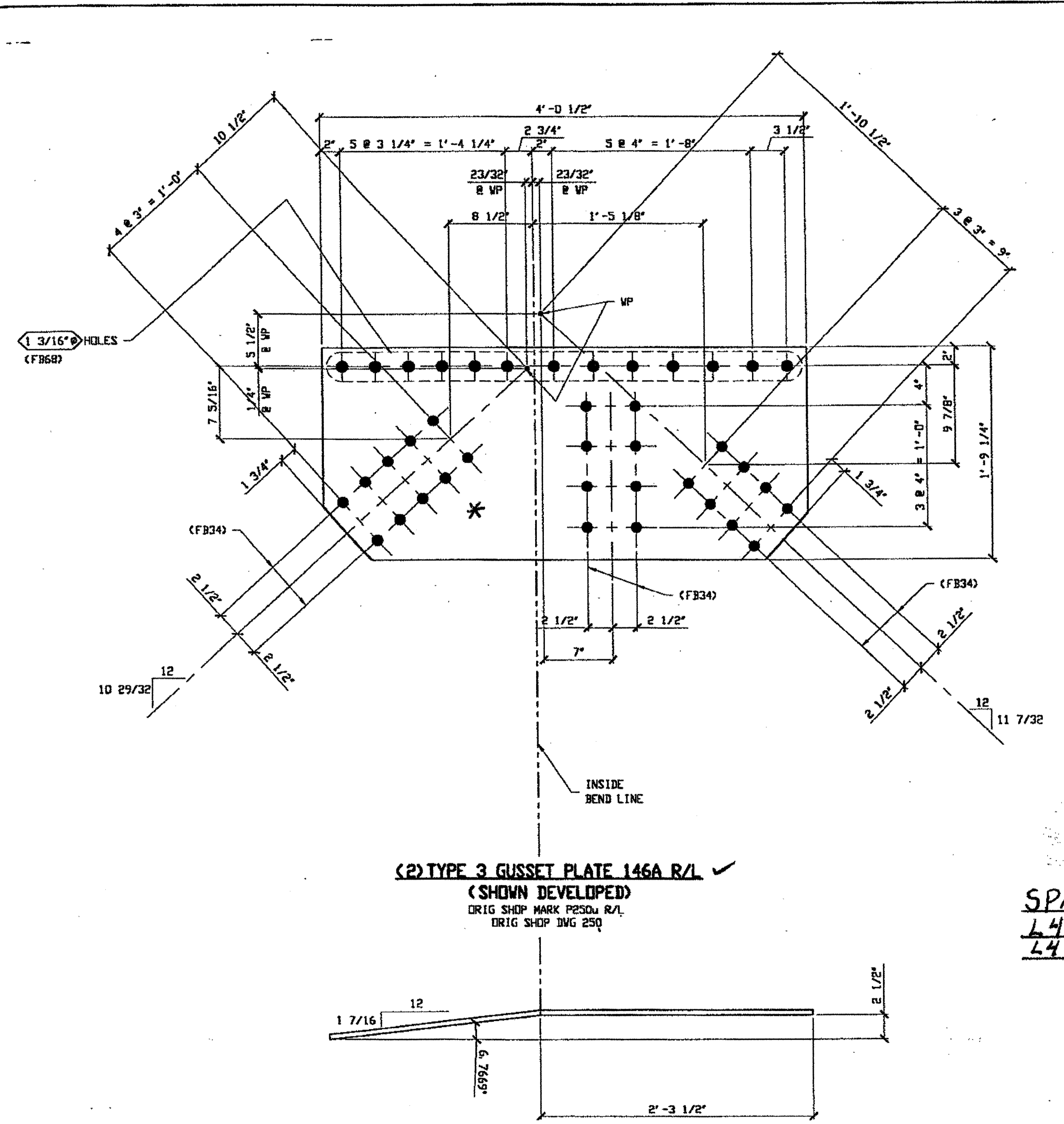
DOT ITEM LINE NO. 0118  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

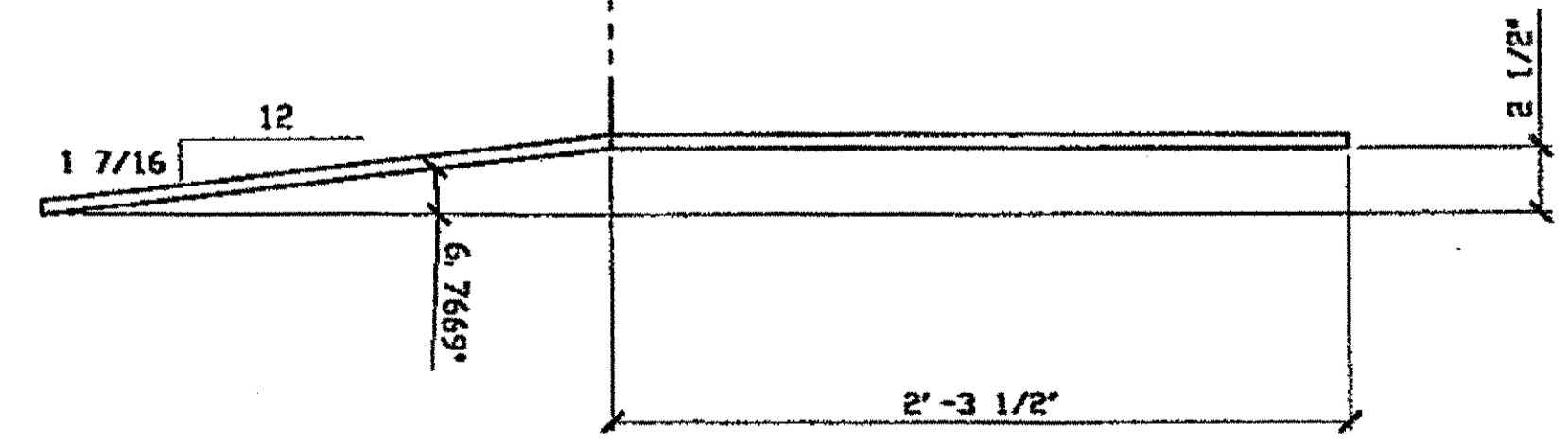
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

SHEET NUMBER: 145  
 ABN JOB NUMBER: 800010

10:41am on Wed Oct 18, 2000  
y Gfooster at 10:40am on Wed Oct 18, 2000 - Last plotted by Gfooster:  
Last modified: H:\800010\0146.dwg



(2) TYPE 3 GUSSET PLATE 146A R/L ✓  
 (SHOWN DEVELOPED)  
 ORIG SHIP MARK P230u R/L  
 ORIG SHIP DWG 250



146A/R (AFTER BENDING)  
 \* Bend up for L

**BILL OF MATERIAL**

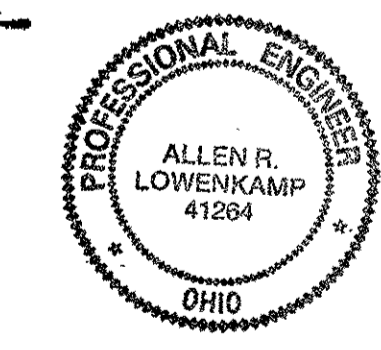
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		146A R/L	2	TYPE 3 GUSSET PLATE			1 R, 1 L	
3			2	PL 1/2 X 21 1/4	4	0 1/2	BEND	288
4								
5								
6								
7								
8								
9				FIELD BOLTS				
11		FB68	26	1 1/8\" DIA	0	2 3/4	NOTE 2	50
11		FB34	52	1\" DIA	0	2 1/4	NOTE 2	69
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16\" UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

SPAN 1  
L4-E NORTH EXTERIOR TOP 146A/R  
L4-E SOUTH EXTERIOR TOP 146A/L

RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY cm



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE HWY  
 COMPELL, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

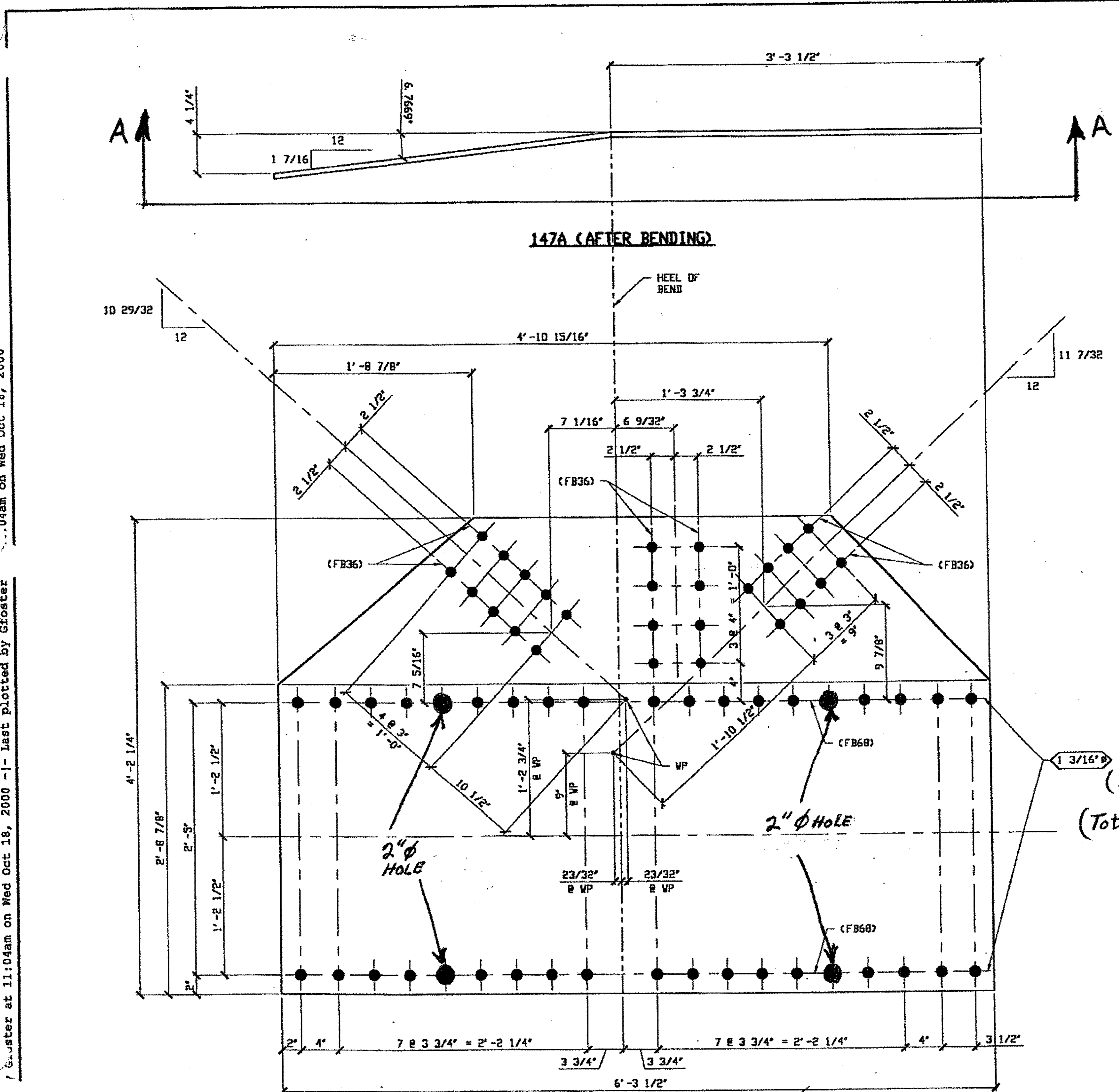
IN CHARGE OF L SMITH  
 DRAWN BY: DATE  
 GAF 10/05/00  
 CHECKED BY: DATE  
 GVG 10/17/00

SHEET NUMBER: 146  
 ASH JOB NUMBER: 800010

...04am on Wed Oct 18, 2000

...04am on Wed Oct 18, 2000 - Last plotted by Cfoster

Last modified



**VIEW A-A**  
 (1) TYPE 4 GUSSET PLATE 147A  
 (SHOWN DEVELOPED)  
 ORIG SHOP MARK P2504/R  
 ORIG SHOP DWG 250

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		147A	1	TYPE 4 GUSSET PLATE				
3			1	PL 9/16 X 50 1/4	6	3 1/2	BEND	556
4								
5								
6								
7								
8								
9				FIELD BOLTS				
11		FB68	38	1 1/8" DIA	0	2 3/4	NOTE 2	73
11		FB36	26	1" DIA	0	2 1/2	NOTE 2	36
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		N/A	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

SPAN 1  
 L4-E NORTH EXTERIOR BOTTOM 147A

$\frac{1}{32}$ " HOLES  
 (17 Total Each Row)  
 (Total 4 HOLES, 2" DIAMETER IN PLATE)

**O.D.O.T. DIST. 12**

ACCEPTED	DATE	BY
ACCEPTED AS NOTED	10/25/00	CSM
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY CSM



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 GAF 10/09/00  
 CHECKED BY: DATE:  
 GVG 10/17/00

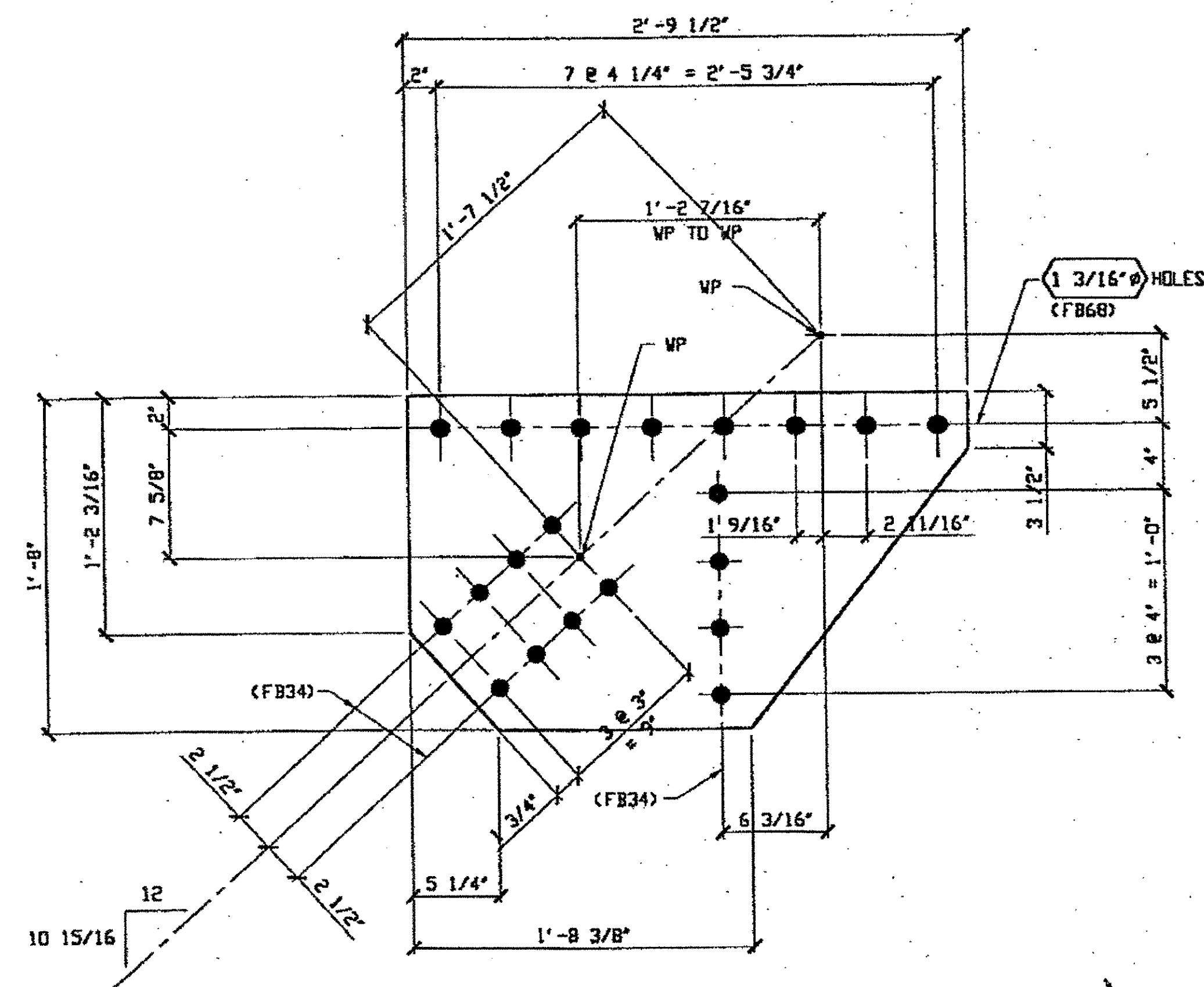
DOT ITEM LINE NO. 0120  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 1 REPAIR

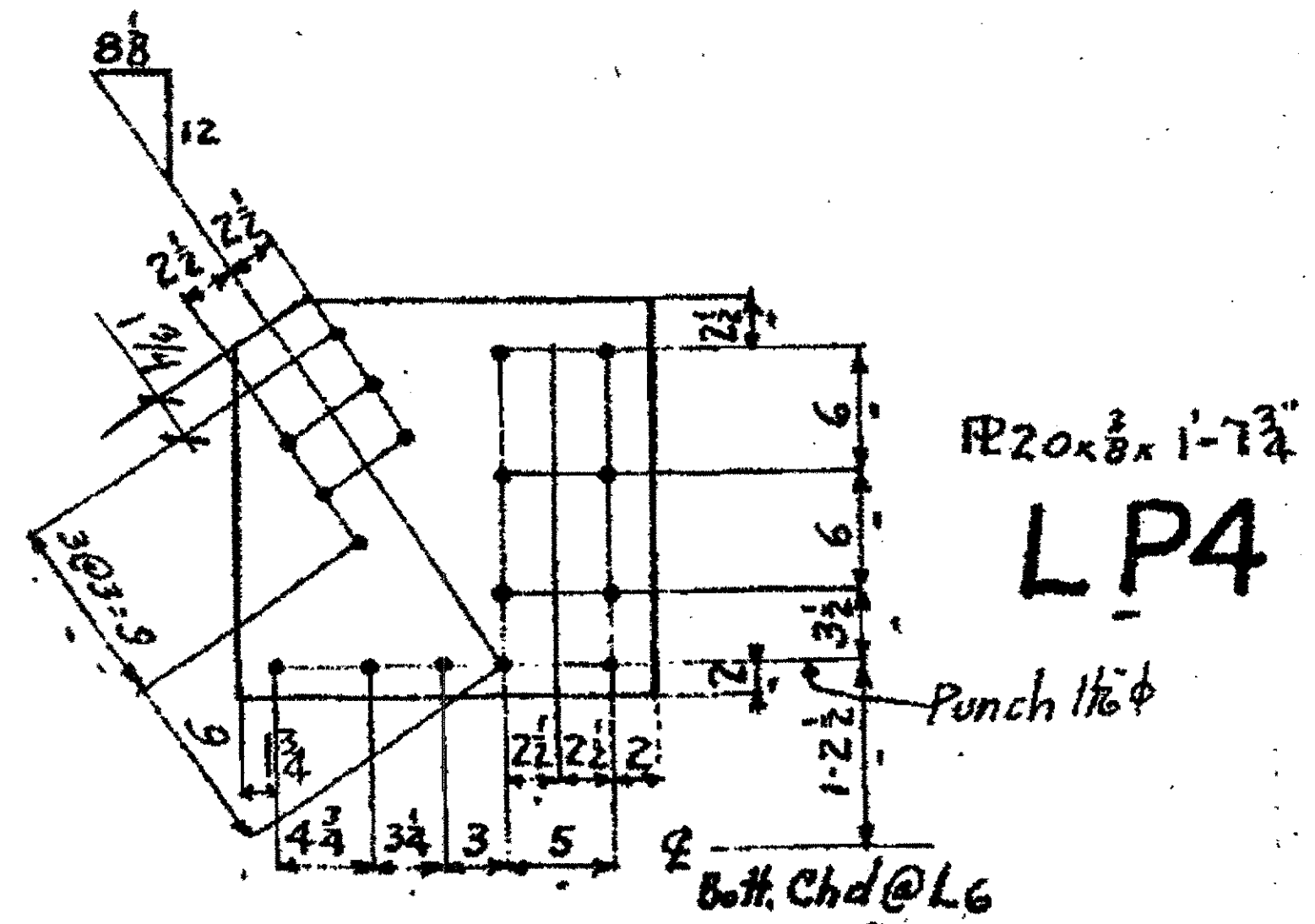
SHEET NUMBER 147  
 ASN JOB NUMBER 800010

Last modified / G.uster at 03:01pm on Thu Oct 19, 2000 - Last plotted by Gfoster / G.uster on Thu Oct 19, 2000

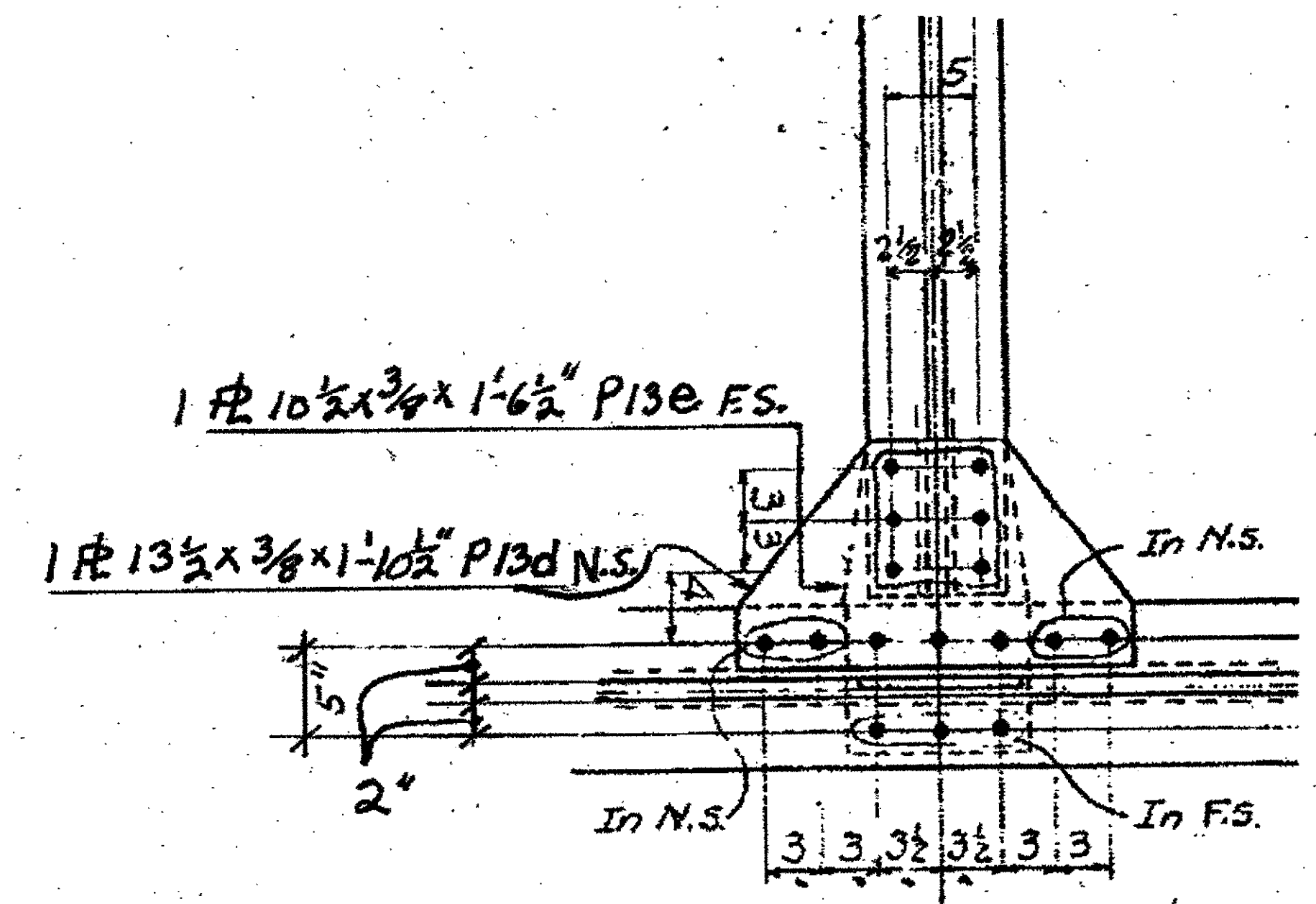


(1) TOP GUSSET PLATE 148A (TYPE 1)  
 ORIG. SHOP DRAWING 253 LB-L10-0-1  
 ORIG. SHOP MARK P253K

SPAN 1 L10, K SOUTH EXTERIOR TOP 148A



1-TYPE 3 GUSSET PLATE 148D  
ORIGINAL SHOP MARK LP4

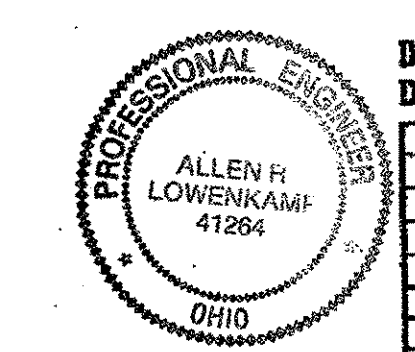


(1 EACH) - GUSSET PLATES 148B & 148C  
ORIGINAL SHOP MARKS P13D & P13E  
SPAN W+LE  
L6- POINT R NORTH, TOP 148B (P13D)  
L6- POINT R NORTH, BOTTOM 148C (P13E)

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		148A	1	PL 1/2 X 20	2	9 1/2		77
3								
4								
5								
6								
7		148B	1	PL 13 1/2 X 3/8	1	10 1/2		
8								
9								
10		148C	1	PL 10 1/2 X 3/8	1	6 1/2		
11								
12		148D	1	PL 20 X 3/8	1	7 3/4		
13								
14								
15				FIELD BOLTS				
16		FB34		1" DIA	0	2 1/4	NOTE 2	
17		FB68		1 1/8" DIA	0	2 1/4	NOTE 2	
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	<input checked="" type="checkbox"/>
ACCEPTED AS NOTED	<input checked="" type="checkbox"/>
NOT ACCEPTED	<input type="checkbox"/>
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



DOT ITEM LINE NO. 0117  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

FABRICATOR: AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 17108  
 PHONE (412) 531-3000  
 FAX (412) 531-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 1 REPAIR

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 9/27/00  
 CHECKED BY: DATE: GAF 10/16/00

SHEET NUMBER: 148  
 AM JOB NUMBER: 800010

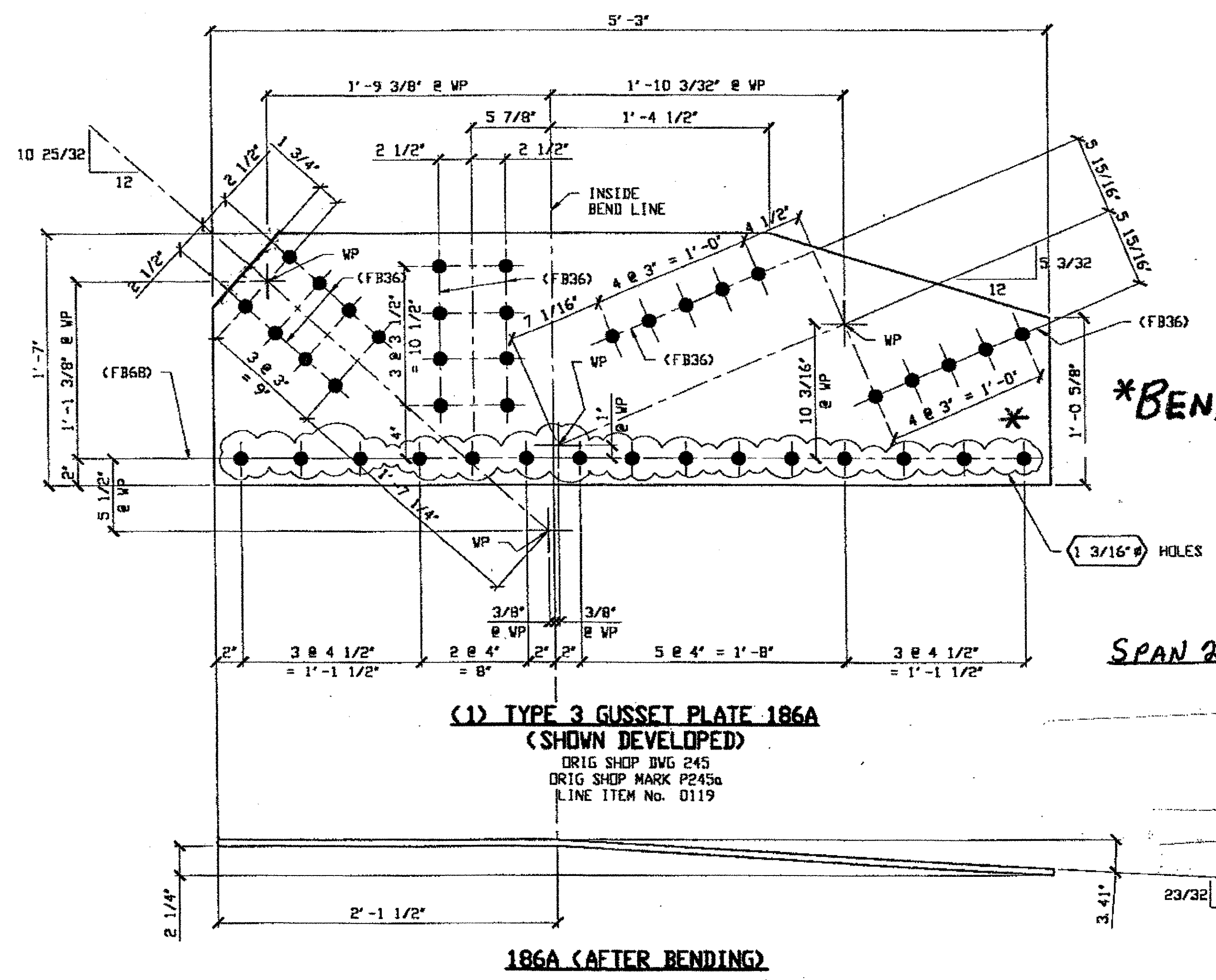
EdP 1/30/01 16

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		186A	1	PL 1/2 X 19	5	3	BEND	158
3								
4								
5								
6								
7								
8								
9								
10								
11								
12				FIELD BOLTS				
13		FB34		1" DIA	0	2 1/4	NOTE 2	
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

**NOTES:**

- OPEN HOLES ARE  $(1 \frac{1}{16} \text{ DIA})$  UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



SPAN 2 L2-C SOUTH EXTERIOR TOP 186A

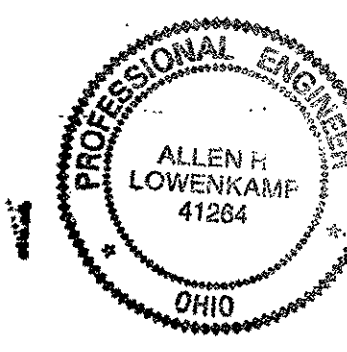
(1) TYPE 3 GUSSET PLATE 186A  
(SHOWN DEVELOPED)  
ORIG SHOP DWG 245  
ORIG SHOP MARK P245a  
LINE ITEM No. 0119

186A (AFTER BENDING)

O.D.O.T. DIST. 12

ACCEPTED	12/14/01	BJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
DATE 1/30/01 BY EdP  
AS NOTED

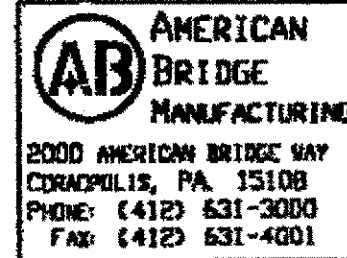
DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E0000 U. N. D.

NO.	DATE	DESCRIPTION REVISIONS	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 2 REPAIRS

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

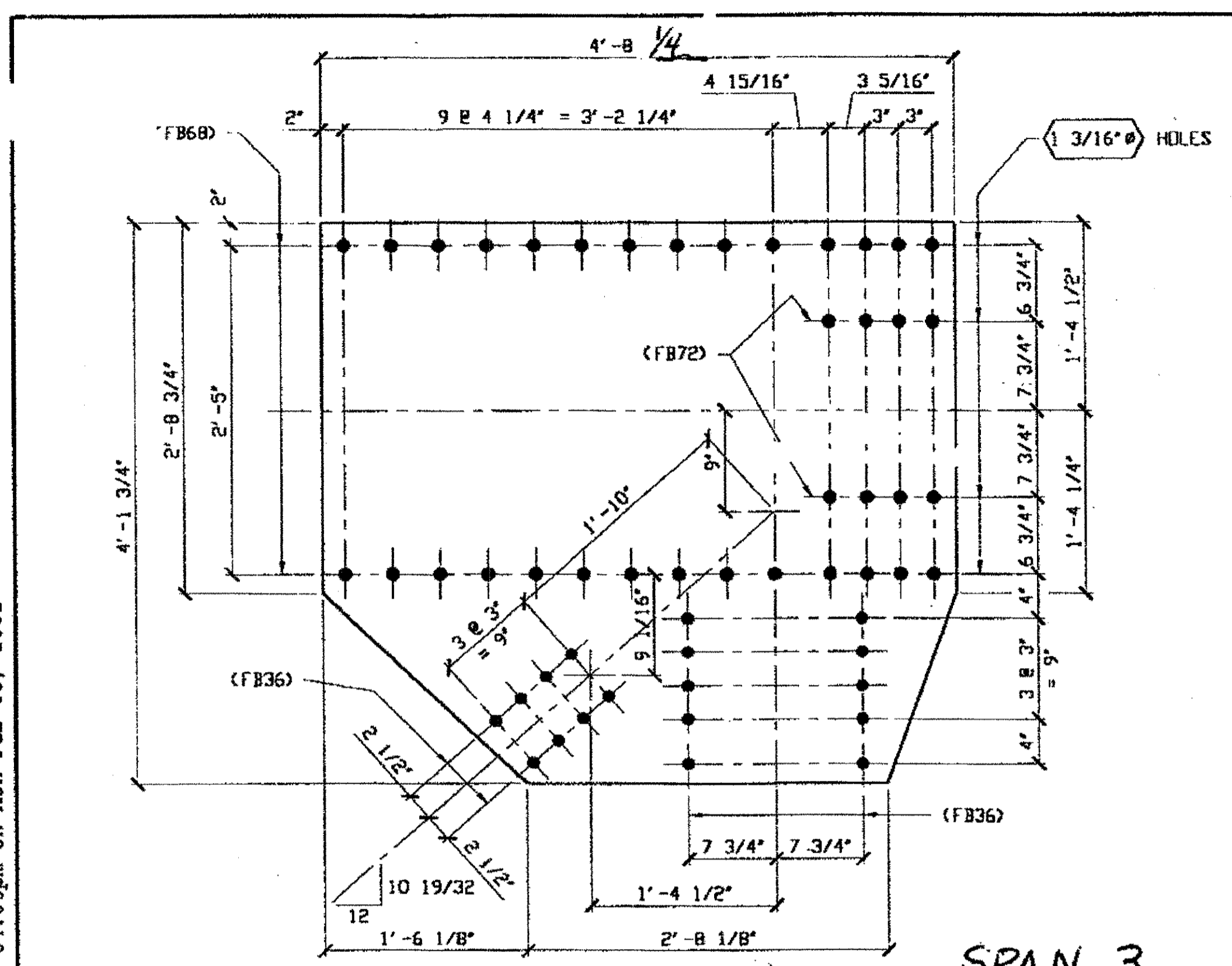
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 12/04/00  
CHECKED BY: DATE: GAF 12/06/00

SHEET NUMBER: 186  
ADM JOB NUMBER: 800010

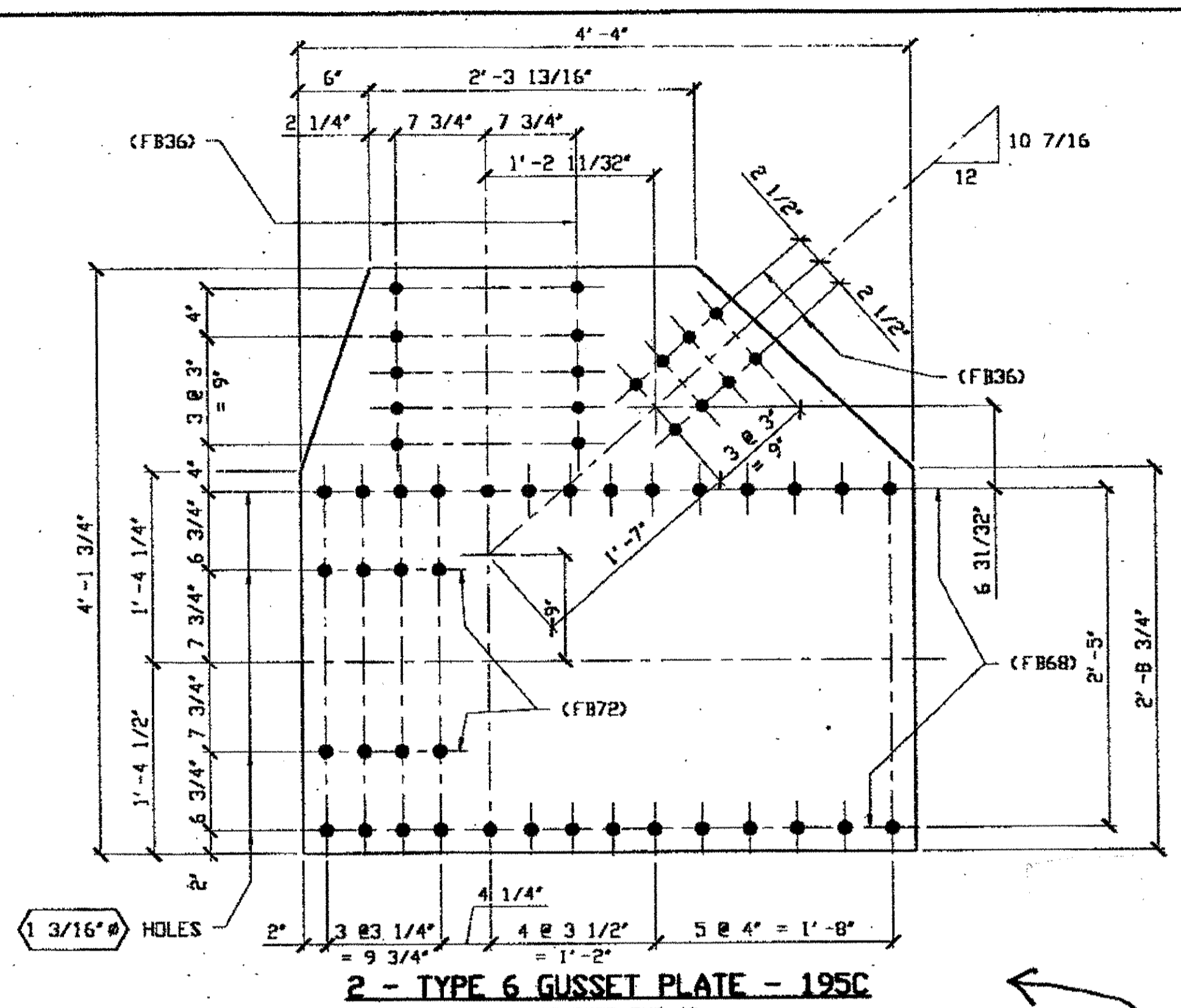
Last modified by Repringer at 09:51am on Thu Dec 07, 2000 - Last plotted by Cfooster at 10:33am on Tue Dec 19, 2000



at 04:06pm on Mon Feb 05, 2001  
Reprinter at 09:09am on Thu Dec 29, 2000 - Last plotted by Gfo  
Last modify

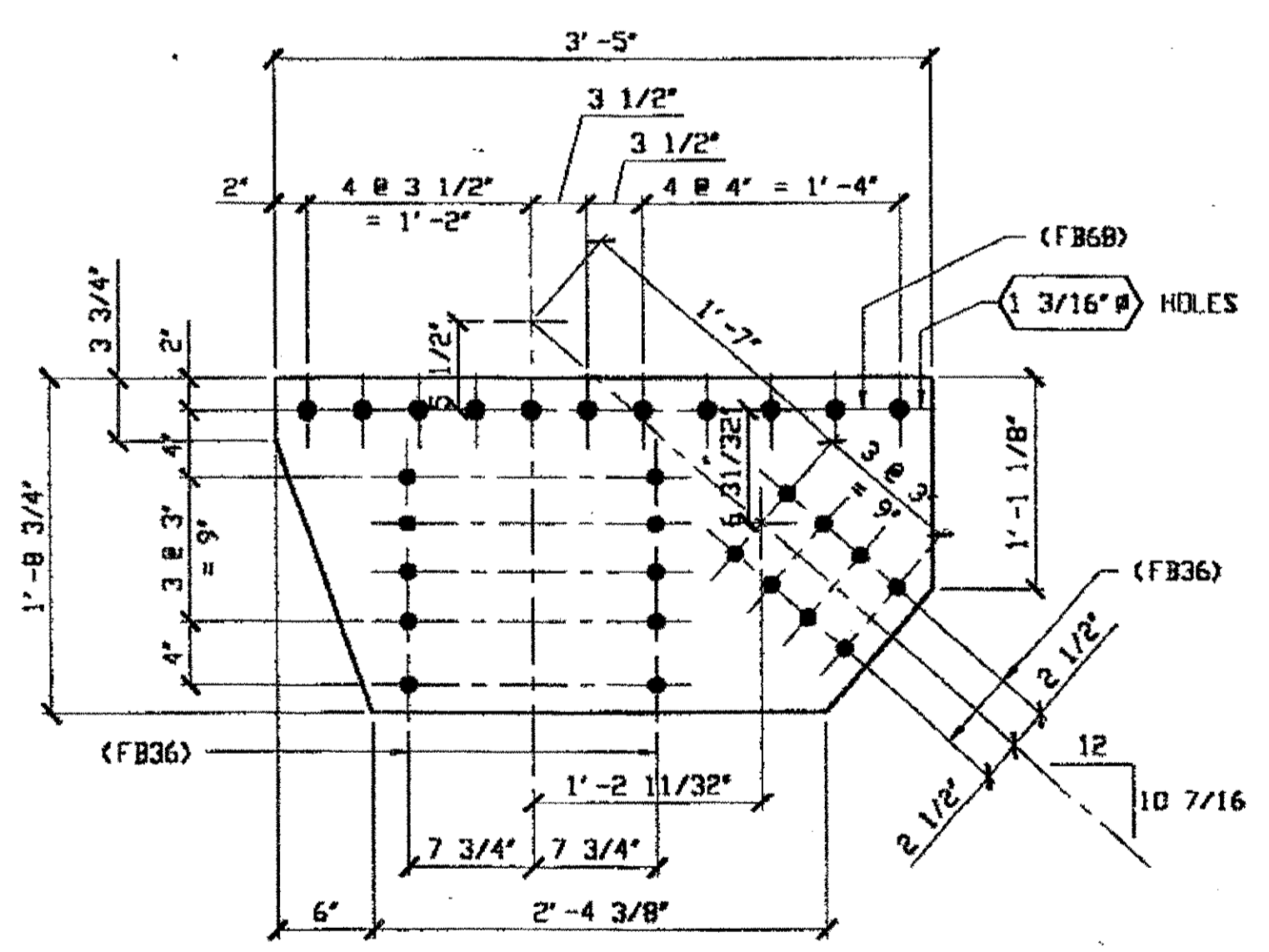


**3 - TYPE 6 GUSSET PLATE - 195A**  
ORIG SHOP DWG 34  
ORIG SHOP MARK P34ad  
ITEM LINE No. 0122



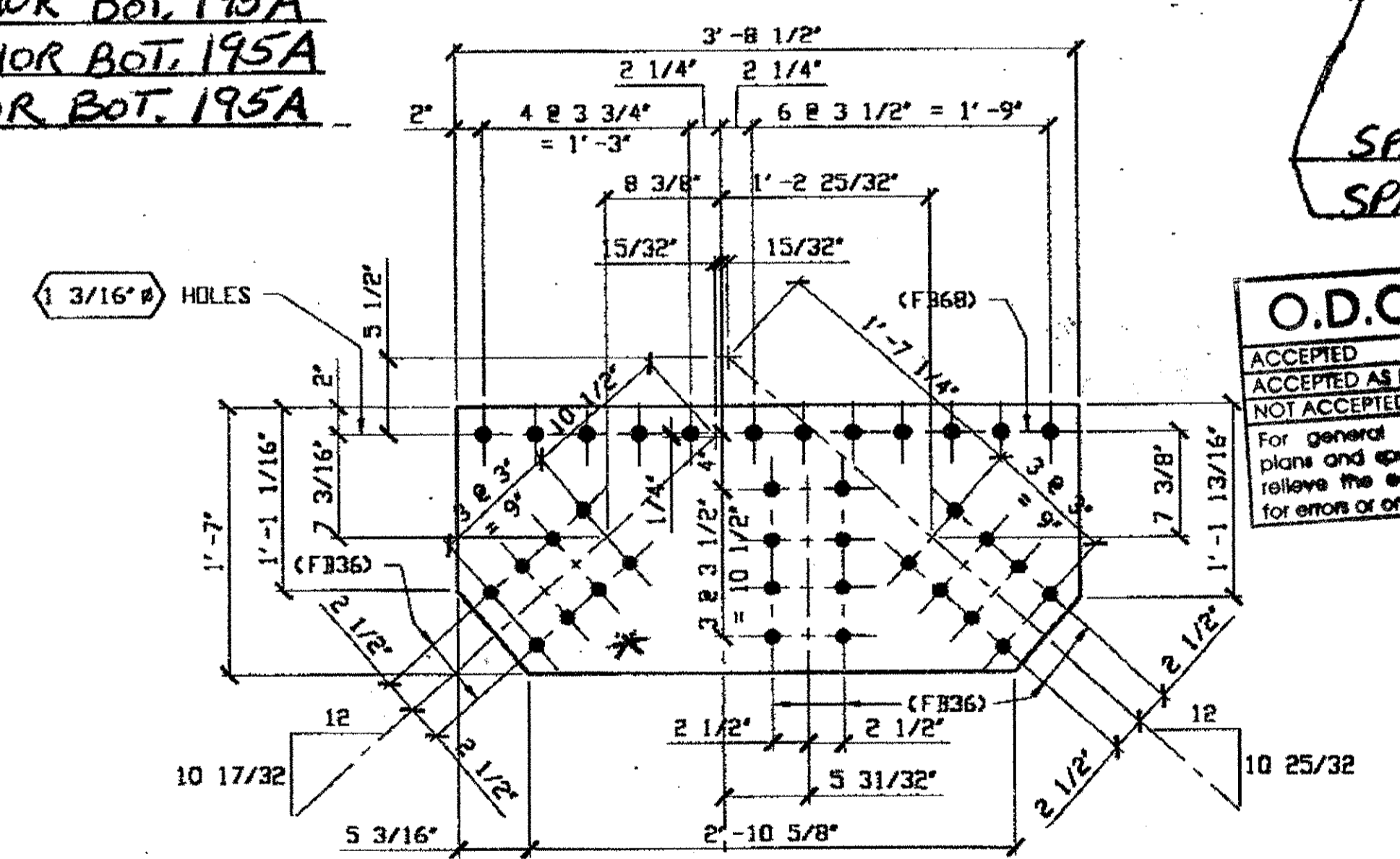
**2 - TYPE 6 GUSSET PLATE - 195C**  
ORIG SHOP DWG 4B  
ORIG SHOP MARK P27aa  
ITEM LINE No. 0122

SPAN 3  
L13 NORTH EXTERIOR BOT. 195A  
L13 SOUTH INTERIOR BOT. 195A  
L13 NORTH INTERIOR BOT. 195A

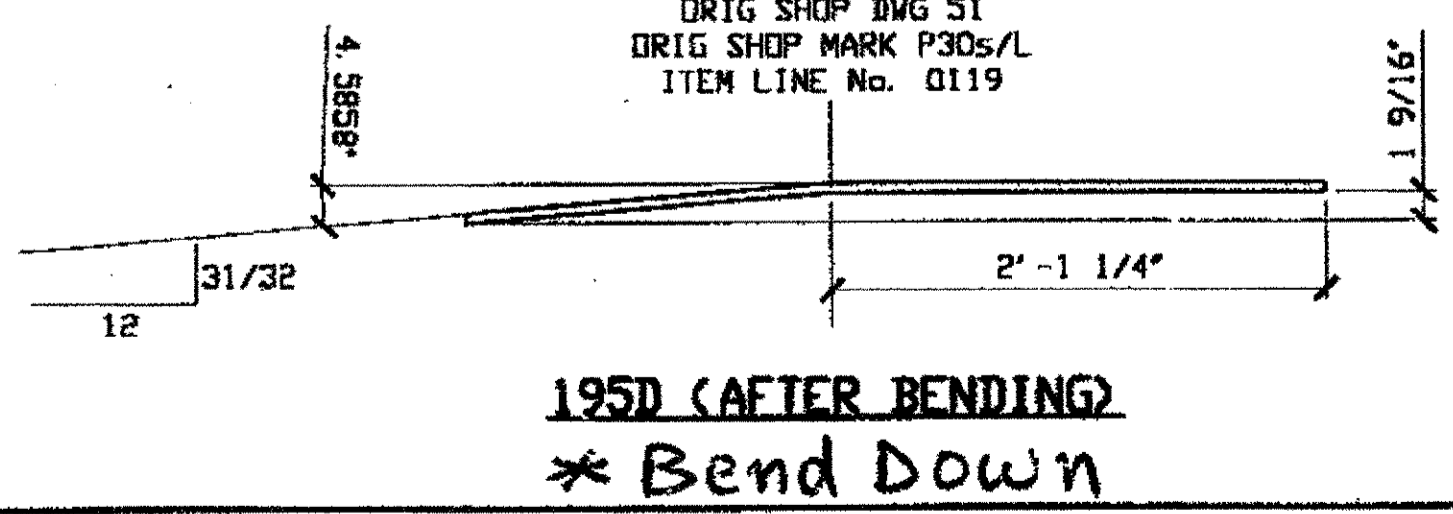


**2 - TYPE 5 GUSSET PLATE - 195B**  
ORIG SHOP DWG 4B  
ORIG SHOP MARK P27a  
ITEM LINE No. 0121

SPAN 3 LO-A SOUTH EXTERIOR TOP 195B  
SPAN 3 LO-A NORTH EXTERIOR TOP 195B



**1 - TYPE 3 GUSSET PLATE - 195D**  
(SHOWN DEVELOPED)  
ORIG SHOP DWG 51  
ORIG SHOP MARK P30s/L  
ITEM LINE No. 0119



**195D (AFTER BENDING)**  
**\* Bend Down**

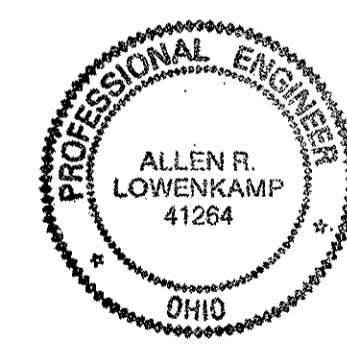
BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				GUSSET PLATE		
2		195A	3	PL 9/16 X 49 3/4	4 8 1/2	
3		195B	2	PL 1/2 X 20 3/4	3 5	220
4		195C	2	PL 9/16 X 49 3/4	4 4	760
5		195D	1	PL 1/2 X 19	3 8 1/2	BEND 116
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16				FIELD BOLTS		
17		FB36		1" DIA	0 2 1/2	NOTE 2
18		FB68		1 1/8" DIA	0 2 3/4	NOTE 2
19		FB72		1 1/8" DIA	0 3 1/4	NOTE 2
20						
PLATE A36				PIPE N/A	FITTINGS N/A	
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/WHY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHIP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 3 LO-A NORTH EXTERIOR BOTTOM 195C  
SPAN 3 LO-A SOUTH EXTERIOR BOTTOM 195C

**O.D.O.T. DIST. 12**  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY tdr



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

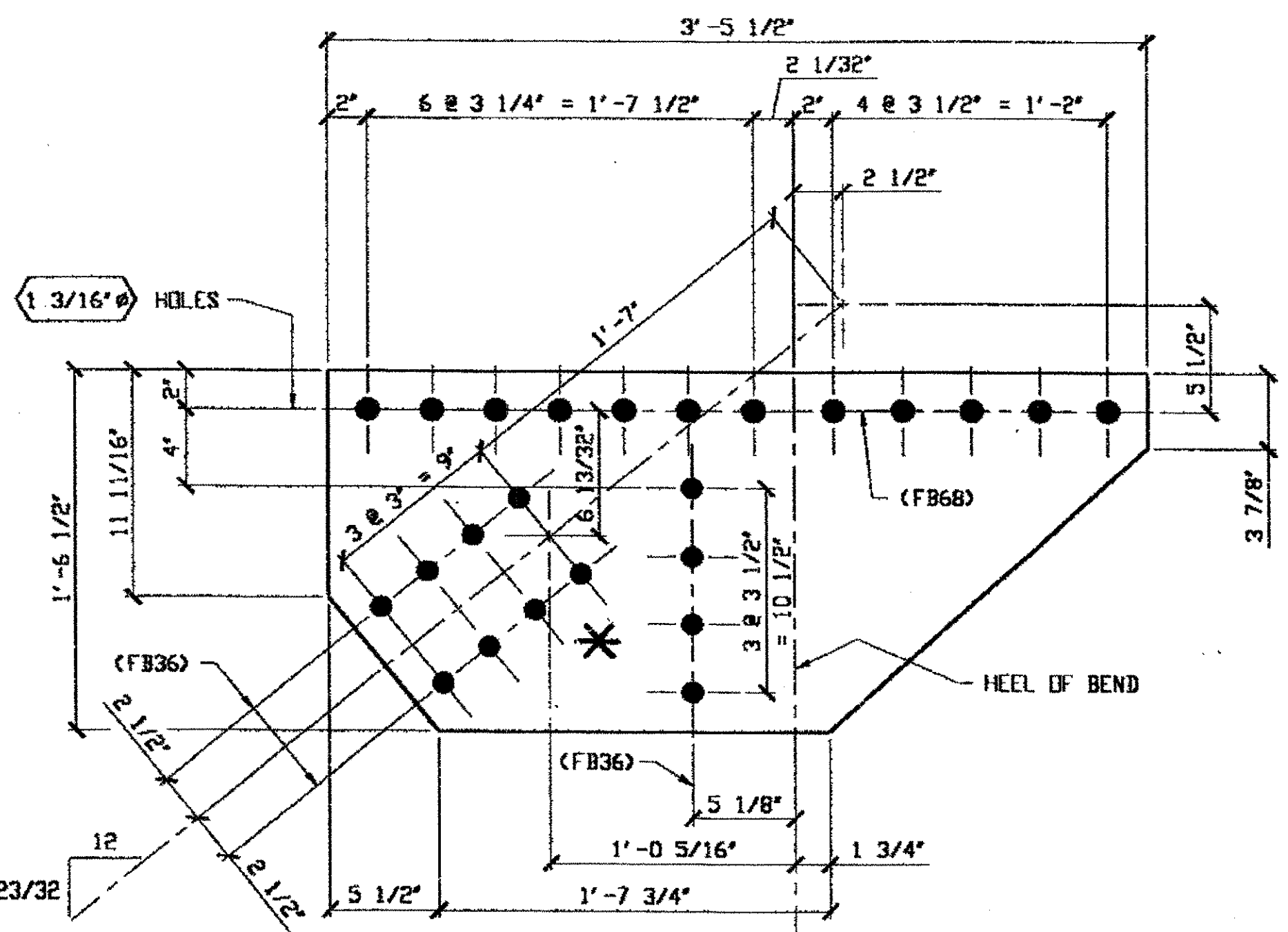
SPAN 3 LG-G NORTH EXTERIOR TOP 195D

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

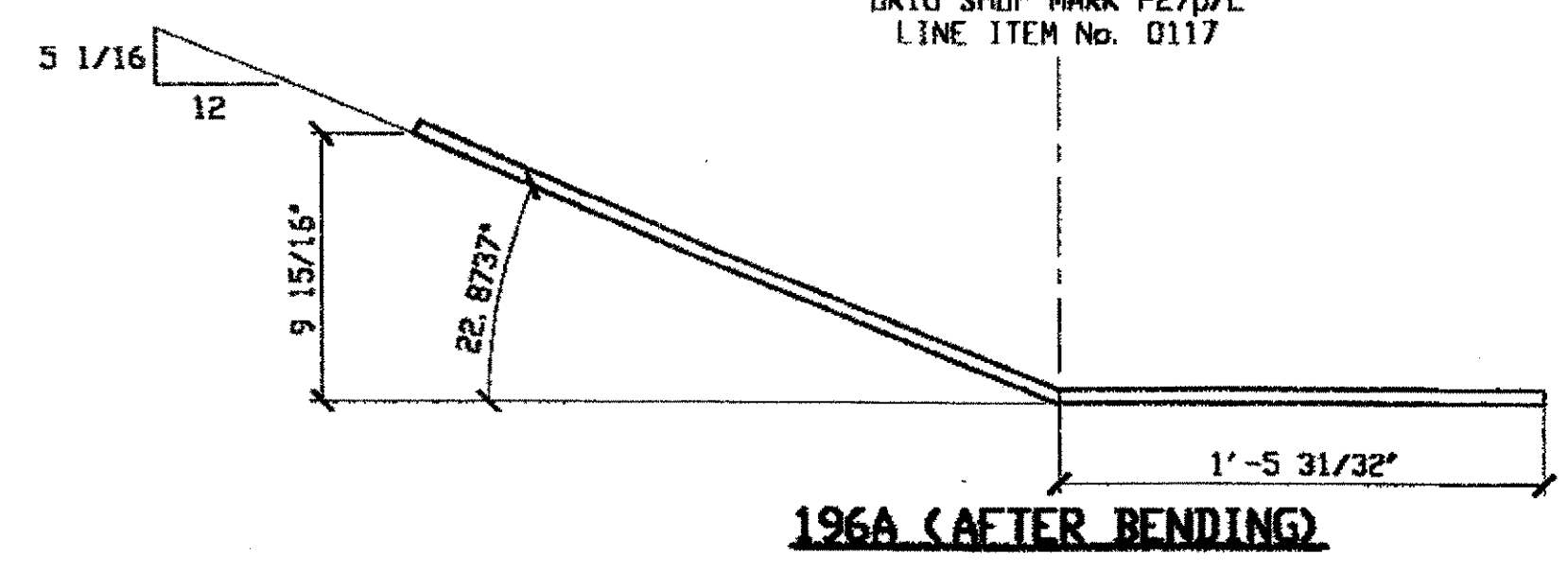
**FABRICATOR**  
AMERICAN BRIDGE MANUFACTURING  
2800 AMERICAN BRIDGE WAY  
CORONADO, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
			SHEET NUMBER 195
			ARM. JOB NUMBER 800010

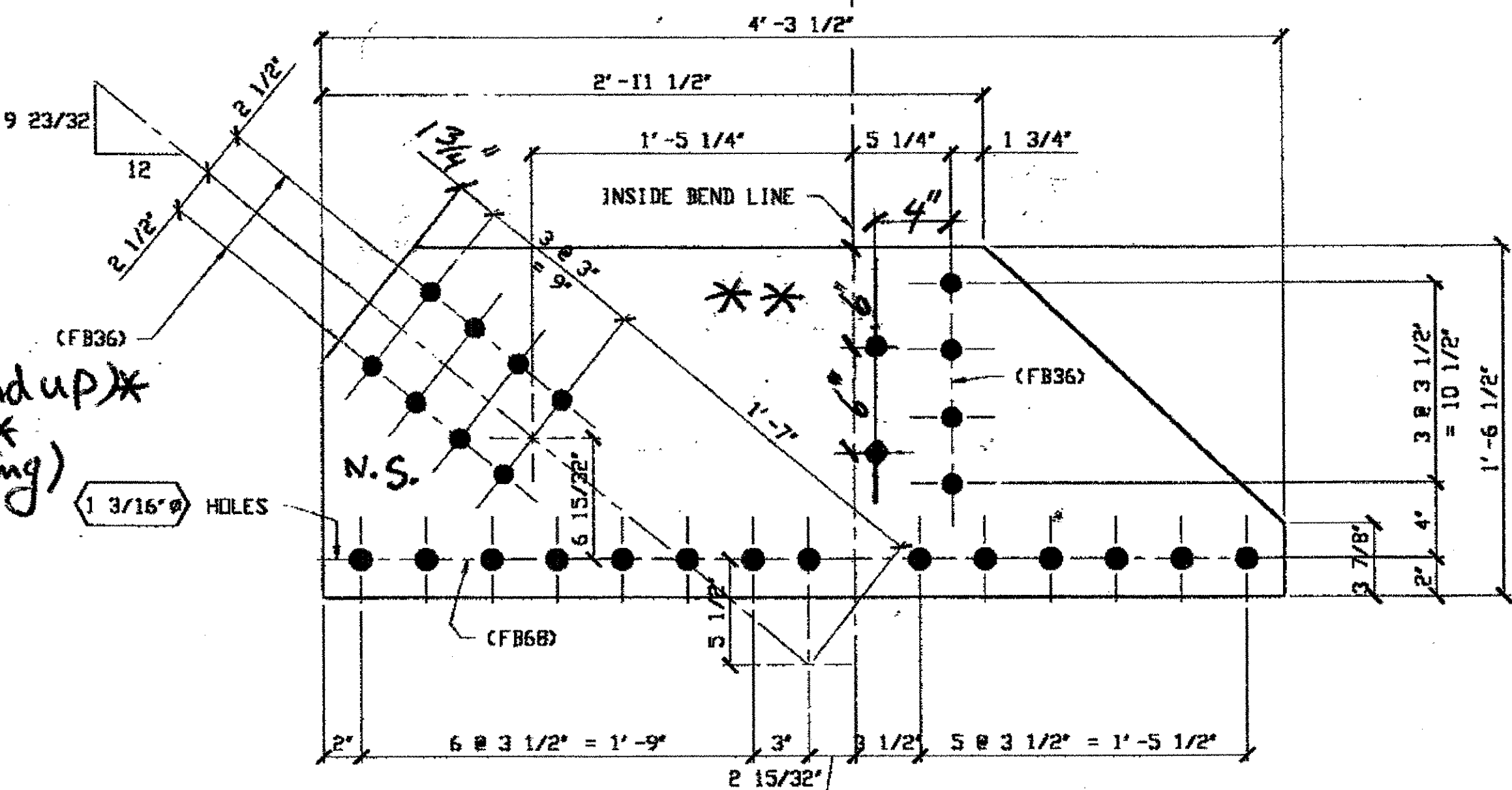
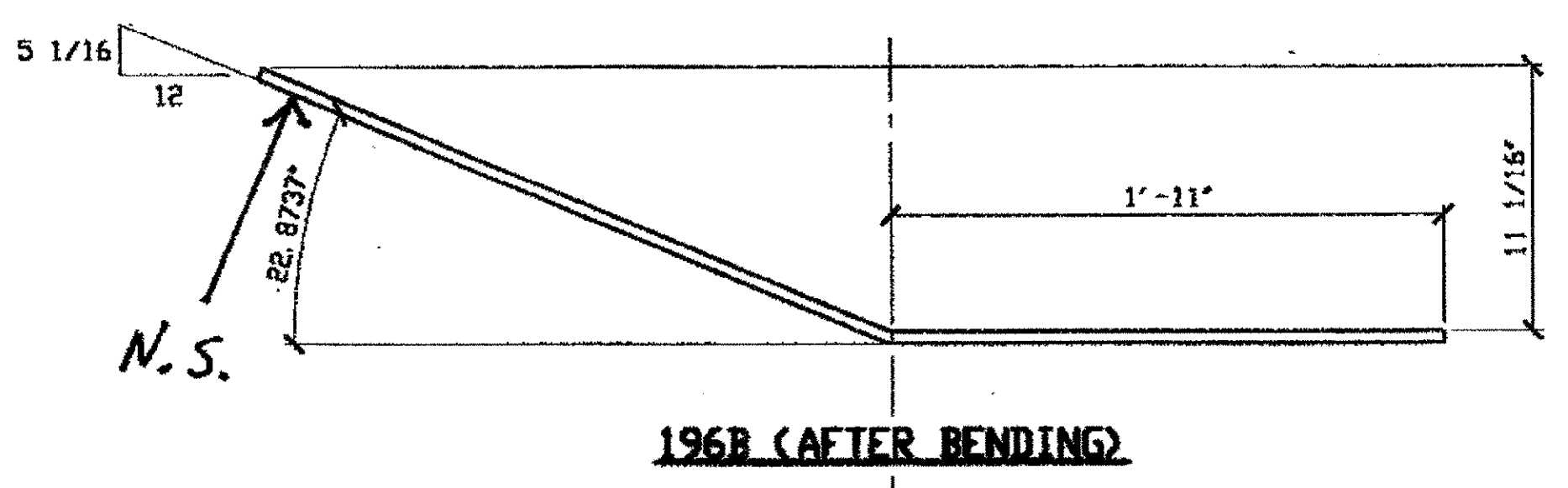
at 04:06pm on Mon Feb 05, 2001  
 Reprinted at 09:28am on Thu Dec 28, 2000 - 1 - Last plotted by Gfo  
 Last modified



**1 - TYPE 1 GUSSET PLATE - 196A/R (AS SHOWN) (Bend up) \***  
**1 - TYPE 1 GUSSET PLATE - 196A/L (OPPOSITE HAND) \***  
 (SHOWN DEVELOPED) (Before Bending)  
 ORIG SHOP DWG 49  
 ORIG SHOP MARK P27p/L  
 LINE ITEM No. 0117



SPAN 3 L2-C, NORTH EXTERIOR 196A/R TOP  
 SPAN 3 L2-C SOUTH EXTERIOR 196A/L TOP  
 \* opposite hand = Bend down (for L)  
 \* AS shown = Bend up (for R)



**1 - TYPE 2 GUSSET PLATE - 196B/R (AS SHOWN) \*\* BEND DOWN**  
**2 - TYPE 2 GUSSET PLATE - 196B/L (OPPOSITE HAND) \*\* BEND UP**  
 (SHOWN DEVELOPED)  
 ORIG SHOP DWG 49  
 ORIG SHOP MARK P27ab/L  
 LINE ITEM No. 0118

BOTTOM PLATES  
 SPAN 3 L2-C' NORTH INTERIOR 196B/L  
 SPAN 3 L2-C NORTH EXTERIOR 196B/R  
 SPAN 3 L2-C SOUTH EXTERIOR 196B/L

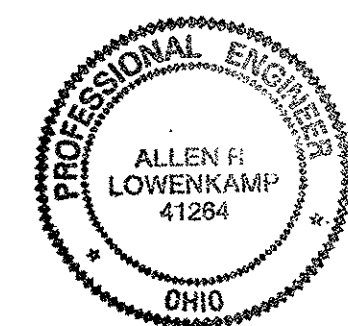
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		196A R/L	2	PL 1/2 X 18 1/2	3	5 1/2	BEND	178
3		196B R/L	3	PL 1/2 X 18 1/2	4	3 1/2	BEND	
4							24 1R	
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36		1" DIA	0	2 1/2	NOTE 2	
18		FB6B		1 1/8" DIA	0	2 3/4	NOTE 2	
19								
20								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES N/A		FLGS. N/A		BOLTS NOTE 2				

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE T-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/01 PJA  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY EDP



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

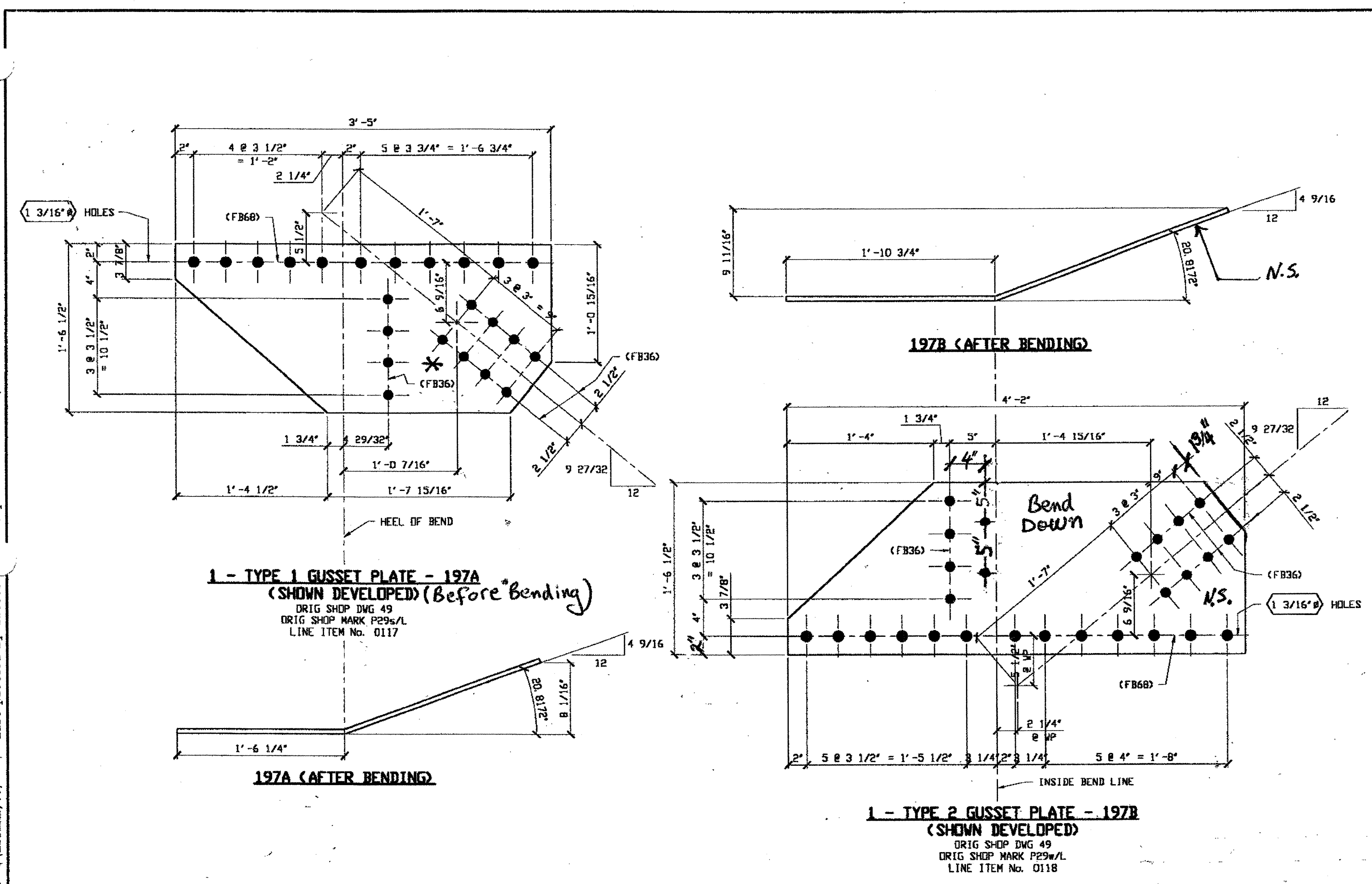
NO.	DATE	DESCRIPTION REVISIONS	BY

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 86350000

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

SHEET NUMBER 196  
 AM JOB NUMBER 800010

Last modified at \$ (EDTIME,??) on \$ (EDTIME,??) -1- Last plotted by Gfoster 14:07pm on Mon Feb 05, 2001



SPAN 3 L3-D NORTH EXTERIOR TOP 197A  
\* BEND UP

SPAN 3  
L3-D NORTH EXTERIOR BOTTOM 197B

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		197A	1	PL 1/2 X 18 1/2	3	5	BEND	89
3		197B	1	PL 1/2 X 18 1/2	4	2	BEND	114
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36	24	1" DIA	D	2 1/2	NOTE 2	33
18		FB68	24	1 1/8" DIA	D	2 3/4	NOTE 2	46
19								
20								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

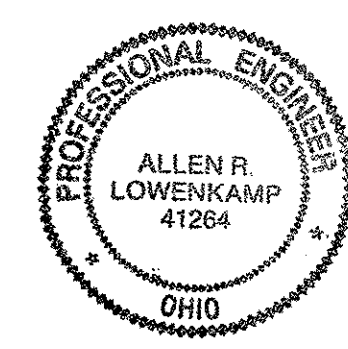
- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
ACCEPTED *2/13/01 JSP*  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

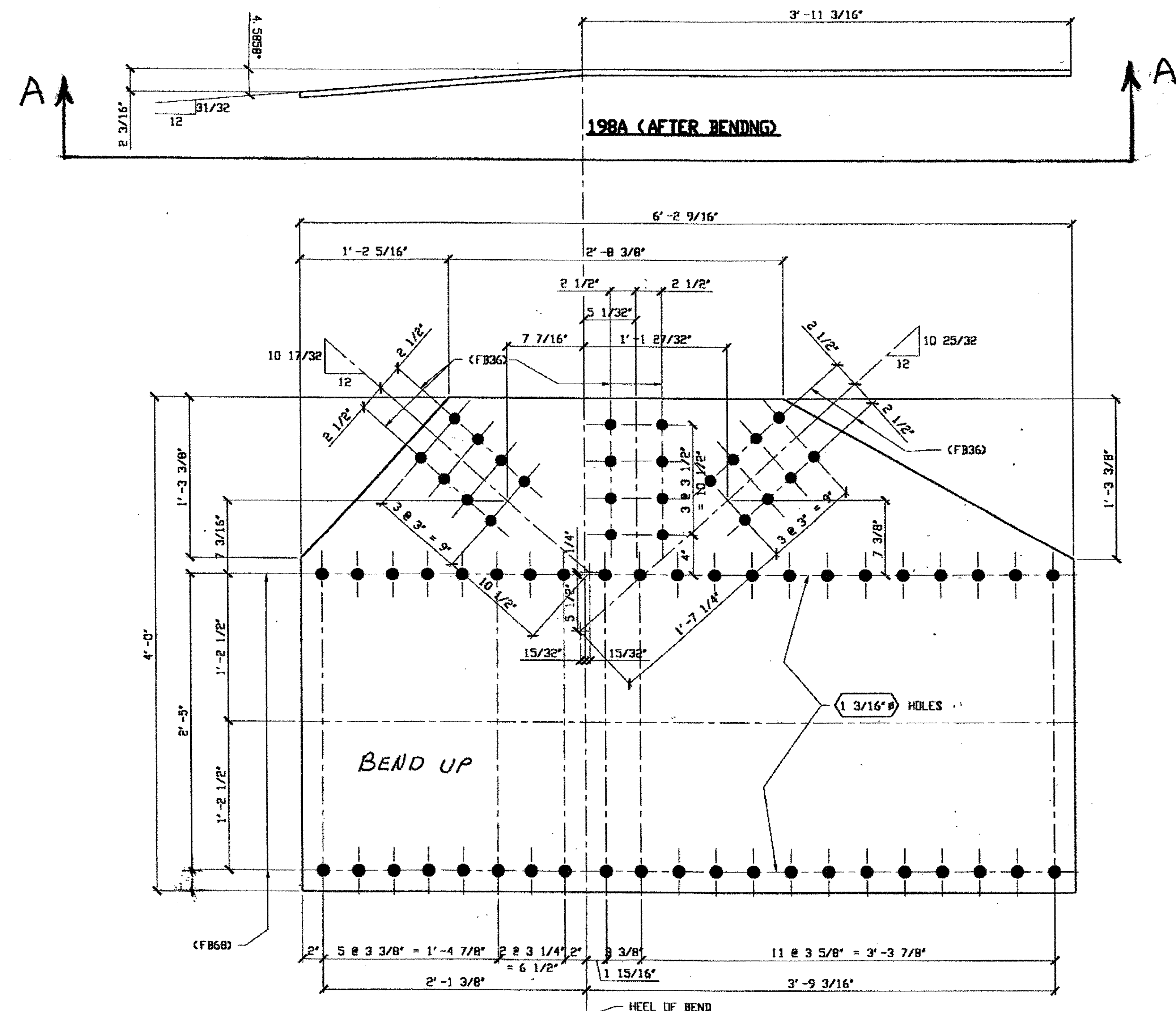
RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY JSP

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY COLUMBUS, PA 15108 PHONE: (610) 631-3000 FAX: (610) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH		SHEET NUMBER: 197	
DRAWN BY: DATE: RAS 12/14/00		JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 12/27/00			



Reprinter at 09:59am on Thu Dec 28, 2000 - Last plotted by Gfo at 04:07pm on Mon Feb 05, 2001  
 Last modified H:\800010\198A.dwg



**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		198A	1	PL 9/16 X 48	6	2 9/16	BEND	519
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
18		FB68	42	1 1/8" DIA	0	2 3/4	NOTE 2	81
19								
20								
PLATE A36				PIPE N/A	FETTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:**
- OPEN HOLES ARE  $1 \frac{1}{16} \phi$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILLS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/5/01 dm
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY *edp*

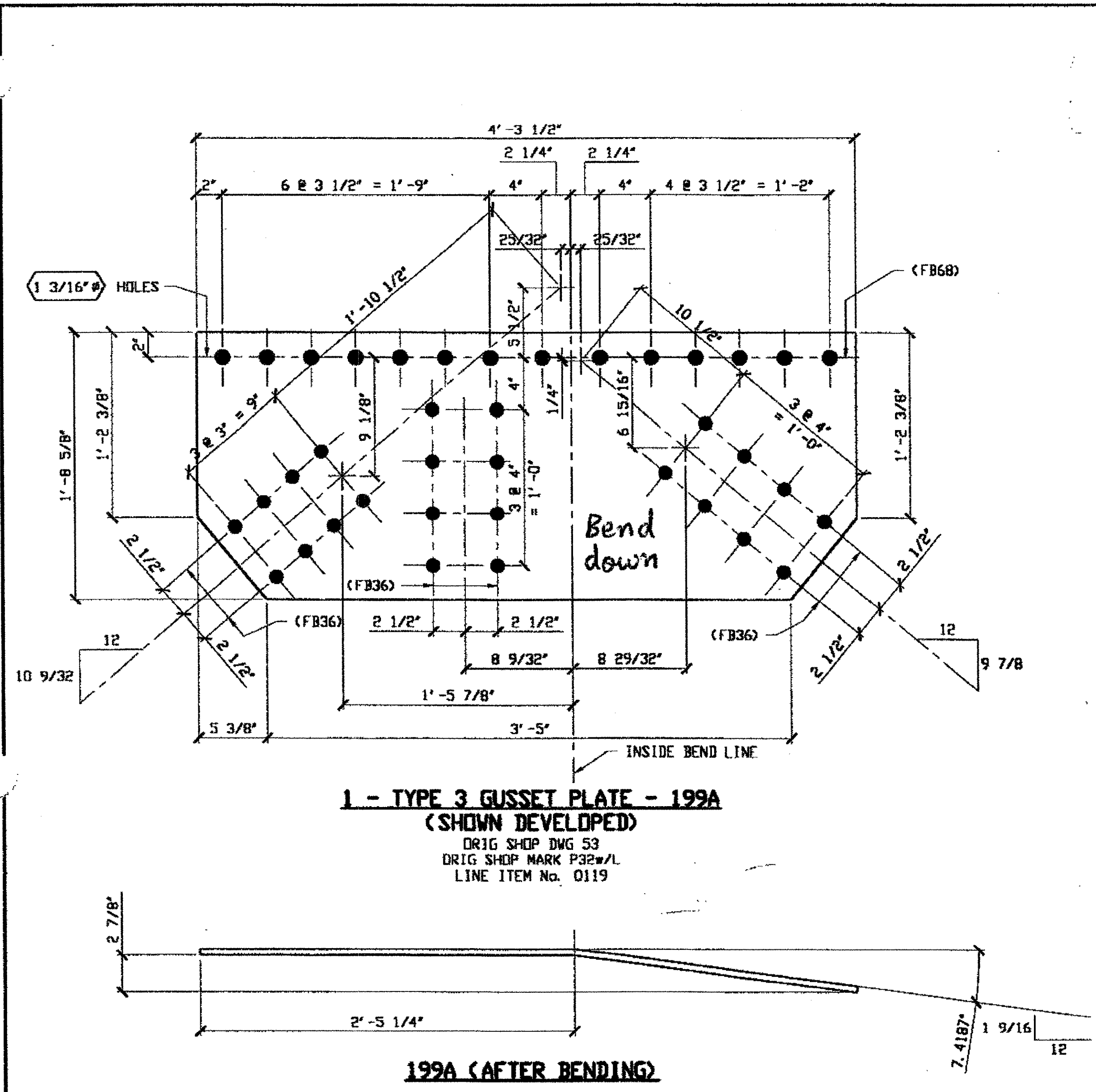


**1 - TYPE 4 GUSSET PLATE - 198A**  
 (SHOWN DEVELOPED)  
 ORIG SHOP DWG 51  
 ORIG SHOP MARK P30w/L

**SPAN 3 L6 NORTH EXTERIOR BOTTOM**

STEEL ERECTOR		FABRICATOR	
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE HWY CORNHORNS, PA 15108 PHONE: (412) 631-3000 FAX: (412) 631-4000	
IN CHARGE OF: L. SMITH		STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
DRAWN BY: DATE: RAS 12/14/00		HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS	
CHECKED BY: DATE: GAF 12/27/00		SHEET NUMBER: 198 JOB NUMBER: 800010	

at 04:08pm on Mon Feb 05, 2001  
reprinter at 10:08am on Fri Feb 02, 2001 - 1 - Last plotted by Gfo  
Last modified



**1 - TYPE 3 GUSSET PLATE - 199A**  
(SHOWN DEVELOPED)  
DRIG SHOP DWG 53  
DRIG SHOP MARK P32w/L  
LINE ITEM No. 0119

SPAN 3 L9-K NORTH EXTERIOR TOP 199A,

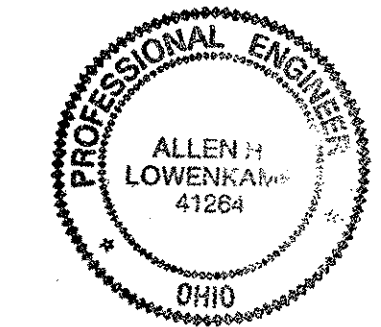
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. PER D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		199A	1	PL 1/2 X 20 5/8	4	3 1/2	BEND	145
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB34		1" DIA	0	2 1/4	NOTE 2	
17		FB36		1" DIA	0	2 1/2	NOTE 2	
18		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\phi 1 3/16$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

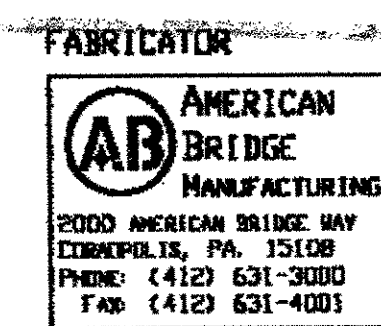
**O.D.O.T. DIST. 12**  
ACCEPTED  
ACCEPTED AS NOTED 2/3/01 P37M  
NOT ACCEPTED  
For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY *[Signature]*



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 86390000 U.N.O.

NO.	DATE	DESCRIPTION	BY



**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

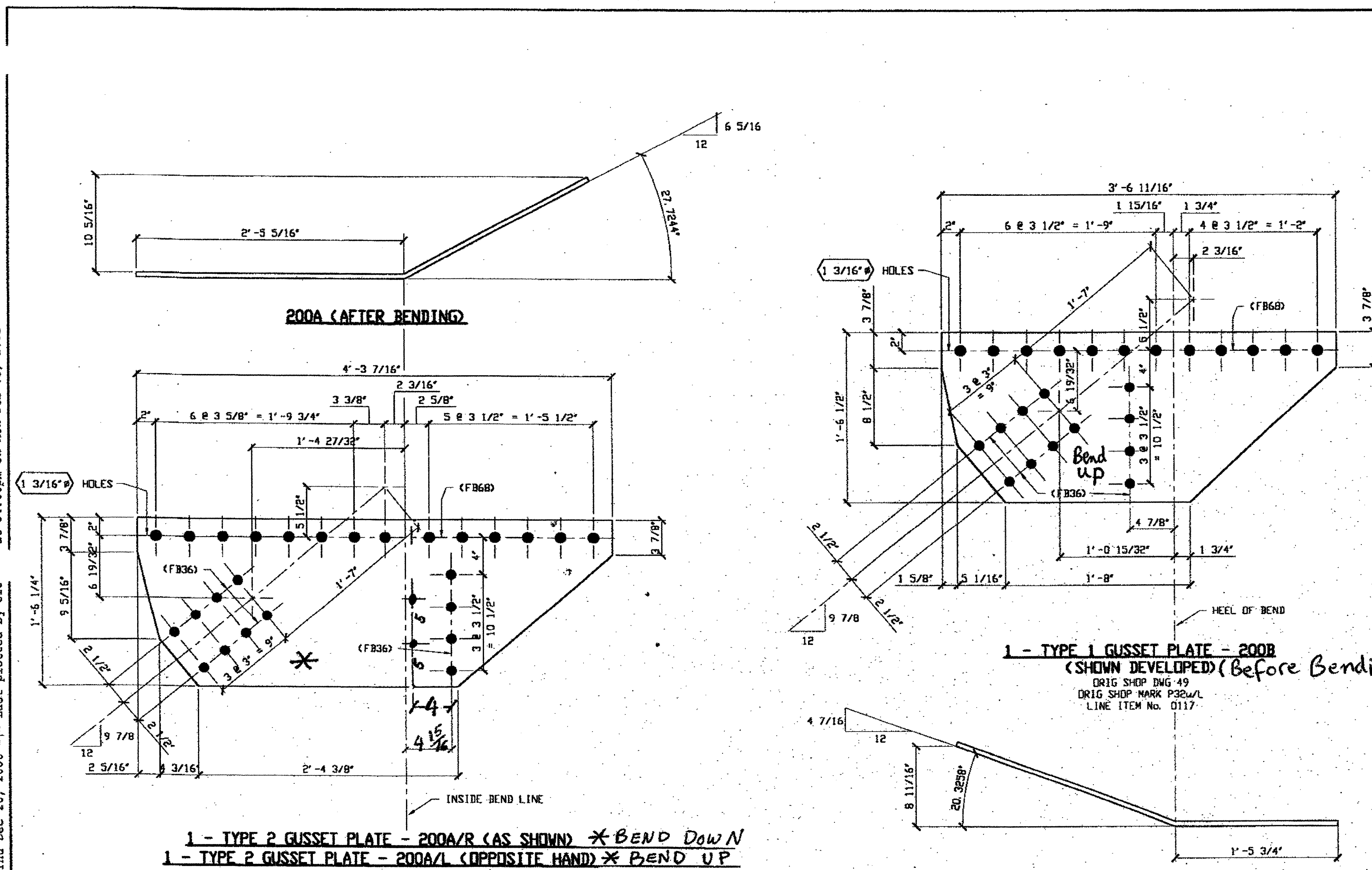
IN CHARGE OF: L. SMITH  
DRAWN BY: RAS  
DATE: 12/15/00  
CHECKED BY: GAF  
DATE: 12/21/00

SHEET NUMBER: 199  
JOB NUMBER: 800010

at 04:08pm on Mon Feb 05, 2001

Reprinter at 11:05am on Thu Dec 28, 2000 - I - Last plotted by Gfc

Last modified



**1 - TYPE 2 GUSSET PLATE - 200A/R (AS SHOWN) \* BEND DOWN**  
**1 - TYPE 2 GUSSET PLATE - 200A/L (OPPOSITE HAND) \* BEND UP**  
 (SHOWN DEVELOPED)  
 ORIG SHOP DVG 32  
 ORIG SHOP MARK P32ac/R  
 LINE ITEM No. 0118  
**SPAN 3**  
**L10 NORTH EXTERIOR BOTTOM 200A/L**  
**L10 NORTH INTERIOR BOTTOM 200A/R**

**1 - TYPE 1 GUSSET PLATE - 200B**  
 (SHOWN DEVELOPED) (Before Bending)  
 ORIG SHOP DVG 49  
 ORIG SHOP MARK P32w/L  
 LINE ITEM No. 0117  
**200B (AFTER BENDING)**  
**SPAN 3**  
**L10 NORTH EXTERIOR TOP 200B**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		200A R/L	2	PL 1/2 X 18 1/4	4	3 7/16	BEND	222
3		200B	1	PL 1/2 X 18 1/2	3	6 11/16	BEND	92
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36	36	1" DIA	0	2 1/2	NOTE 2	50
18		FB68	40	1 1/8" DIA	0	2 3/4	NOTE 2	77
19								
20								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

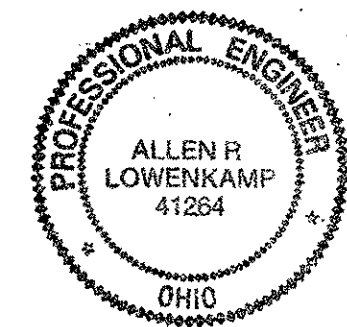
- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD (V. ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

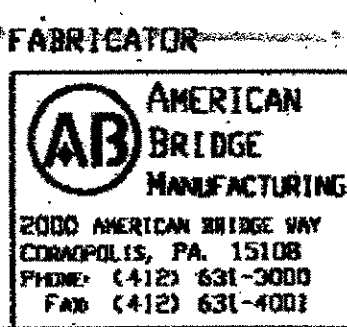
ACCEPTED	2/5/01	ASW
ACCEPTED AS NOTED		
NOT ACCEPTED		

For structural conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY *tdp*



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000



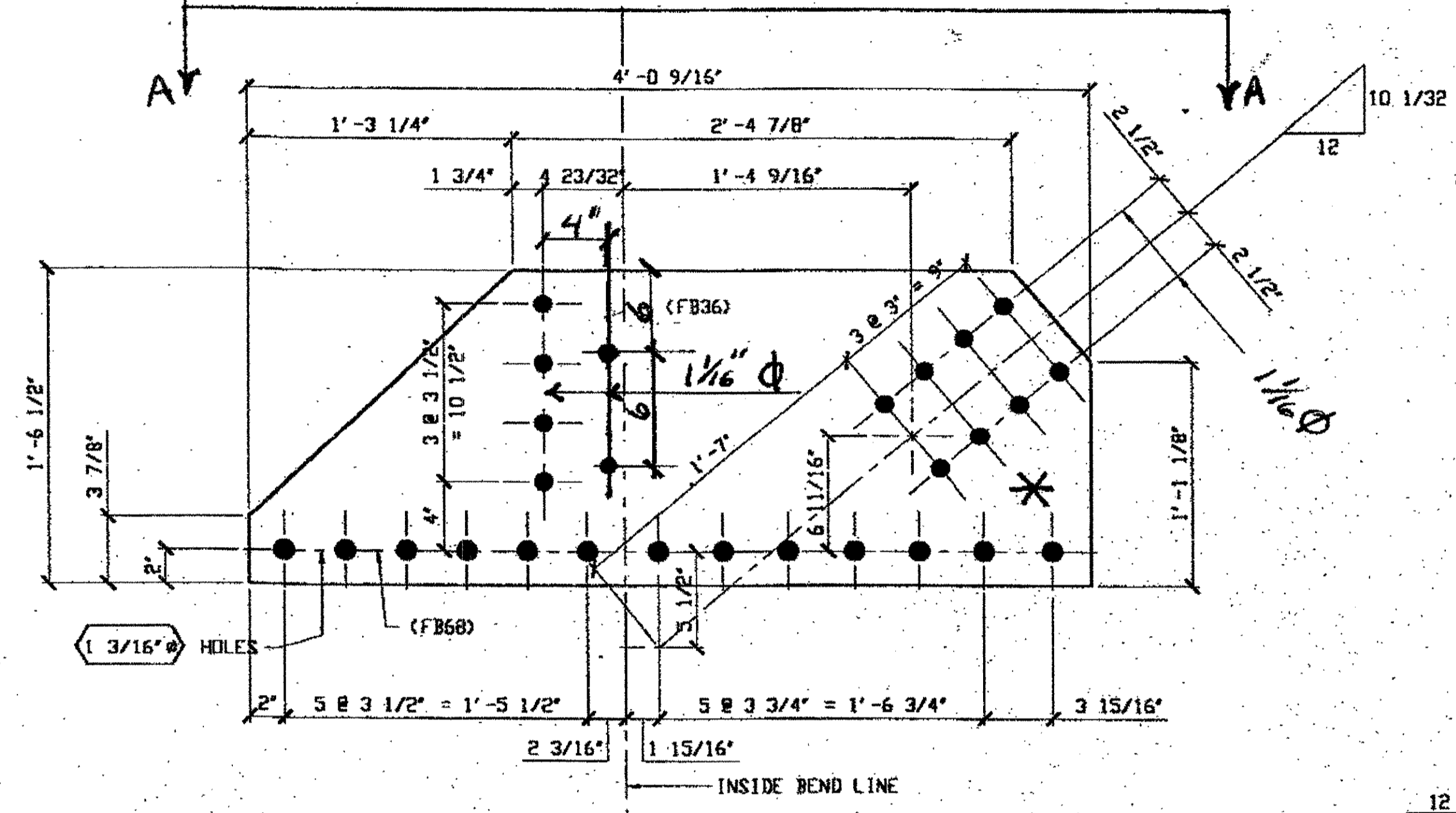
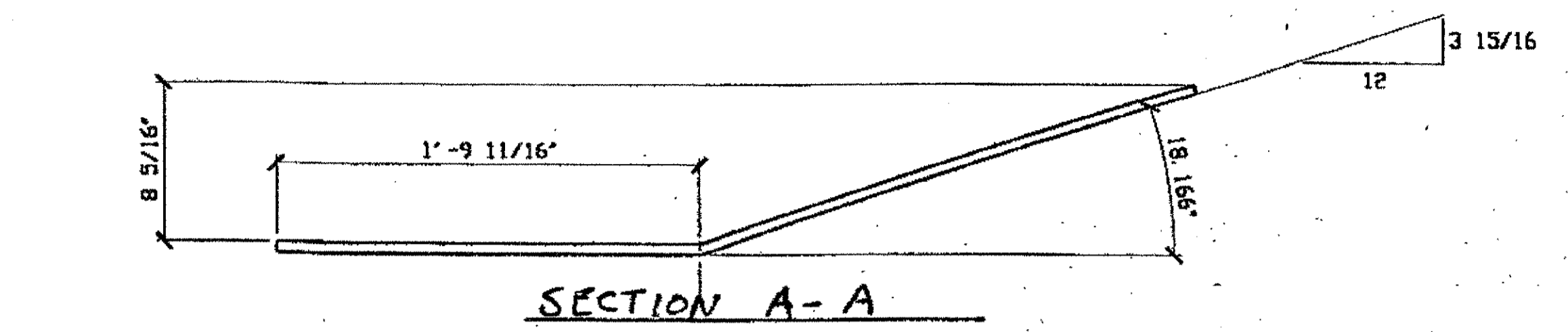
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

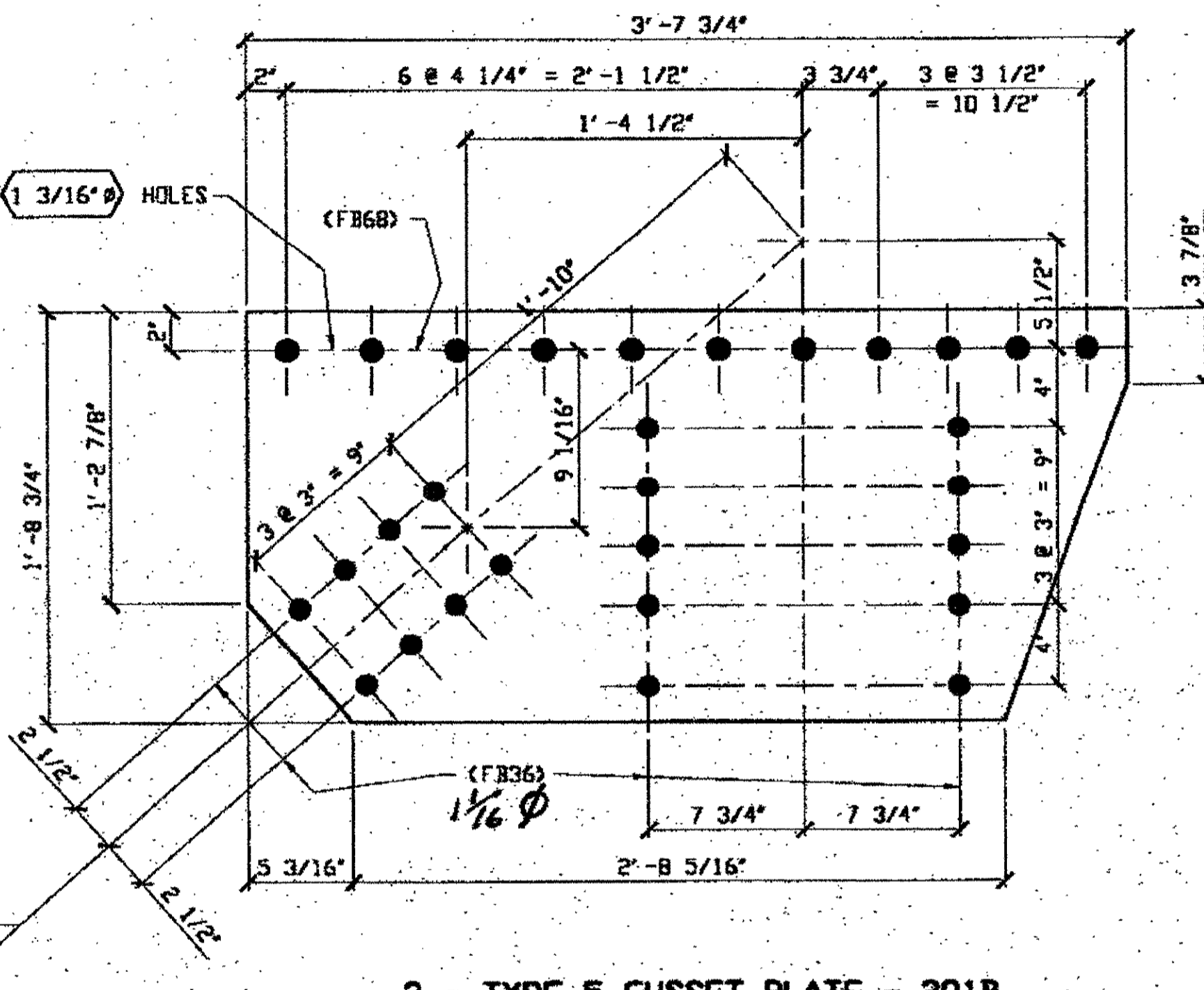
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 12/15/00  
CHECKED BY: DATE:  
GAF 12/27/00

SHEET NUMBER:  
200  
JOB NUMBER:  
800010

at 04:09pm on Mon Feb 05, 2001  
Respringer at 11:38am on Thu Dec 28, 2000 - Last plotted by Gfo.  
Last modified H:\800010\0201A.dwg



**2 - TYPE 2 GUSSET PLATE - 201A R/L**  
(SHOWN DEVELOPED) (BEFORE BENDING)  
ORIG SHOP DWG 49  
ORIG SHOP MARK P34ap/L  
LINE ITEM No. 011B



**2 - TYPE 5 GUSSET PLATE - 201B**  
ORIG SHOP DWG 54  
ORIG SHOP MARK P34\*  
LINE ITEM No. 0121

SPAN 3 L11-M NORTH EXTERIOR BOTTOM 201A/R \* BEND DOWN  
SPAN 3 L11-M SOUTH EXTERIOR BOTTOM 201A/L \* BEND UP

SPAN 3 L13-0 NORTH EXTERIOR TOP 201B  
SPAN 3 L13-0 NORTH INTERIOR TOP 201B

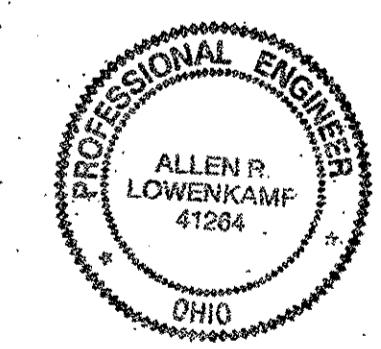
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		201A	2	PL 1/2 X 18 1/2	4	0 9/16	BEND	
3		201B	2	PL 1/2 X 20 3/4	3	7 3/4		236
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB36		1" DIA	0	2 1/2	NOTE 2	
17		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
18								
19								
20								
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
ACCEPTED [Signature]  
ACCEPTED AS NOTED [Signature]  
NOT ACCEPTED [Signature]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY t.d.p.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
COLUMBUS, OH 43260  
PHONE: (614) 631-3000  
FAX: (614) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 12/15/00  
CHECKED BY: DATE: GAF 12/27/00

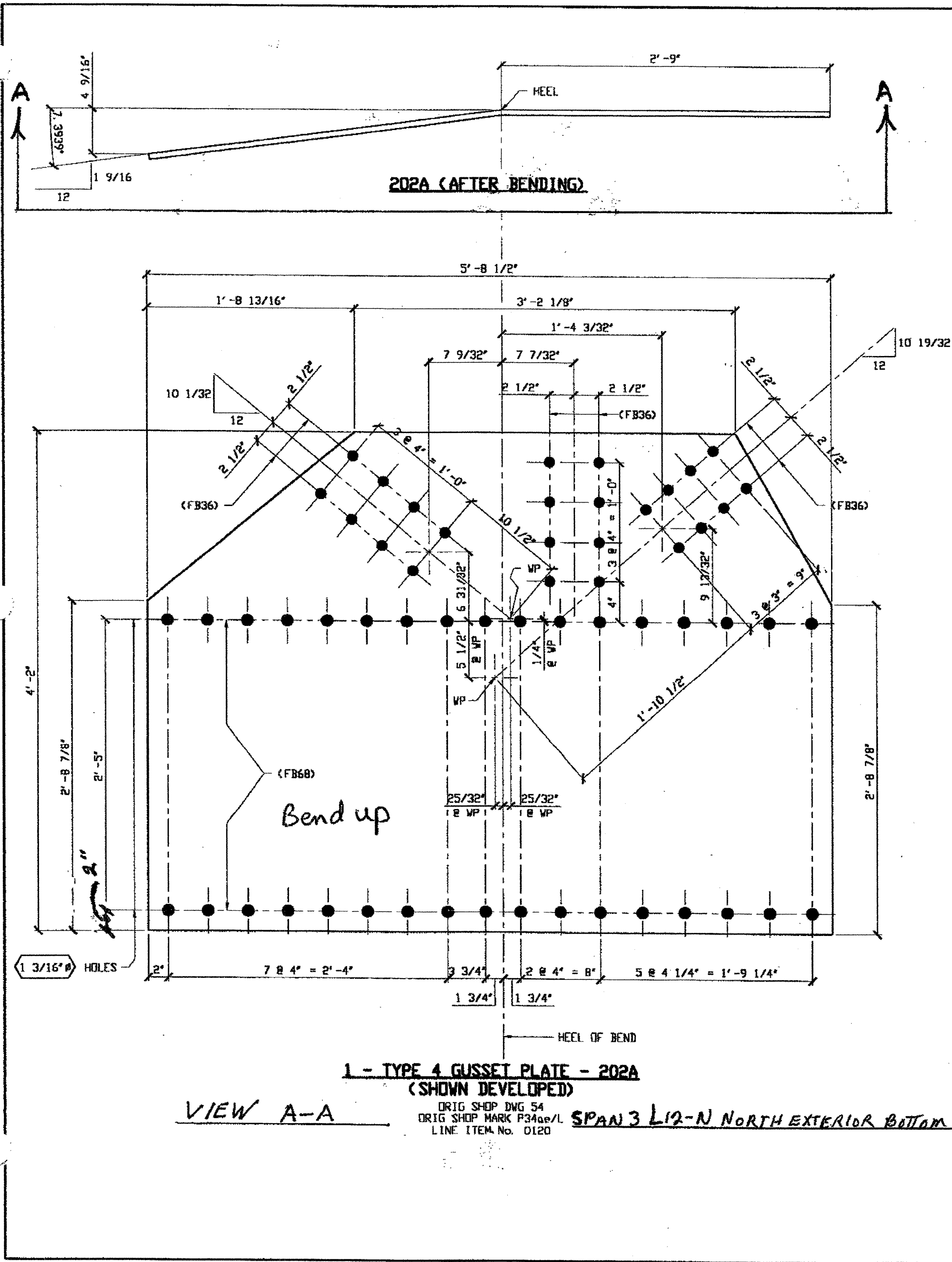
DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

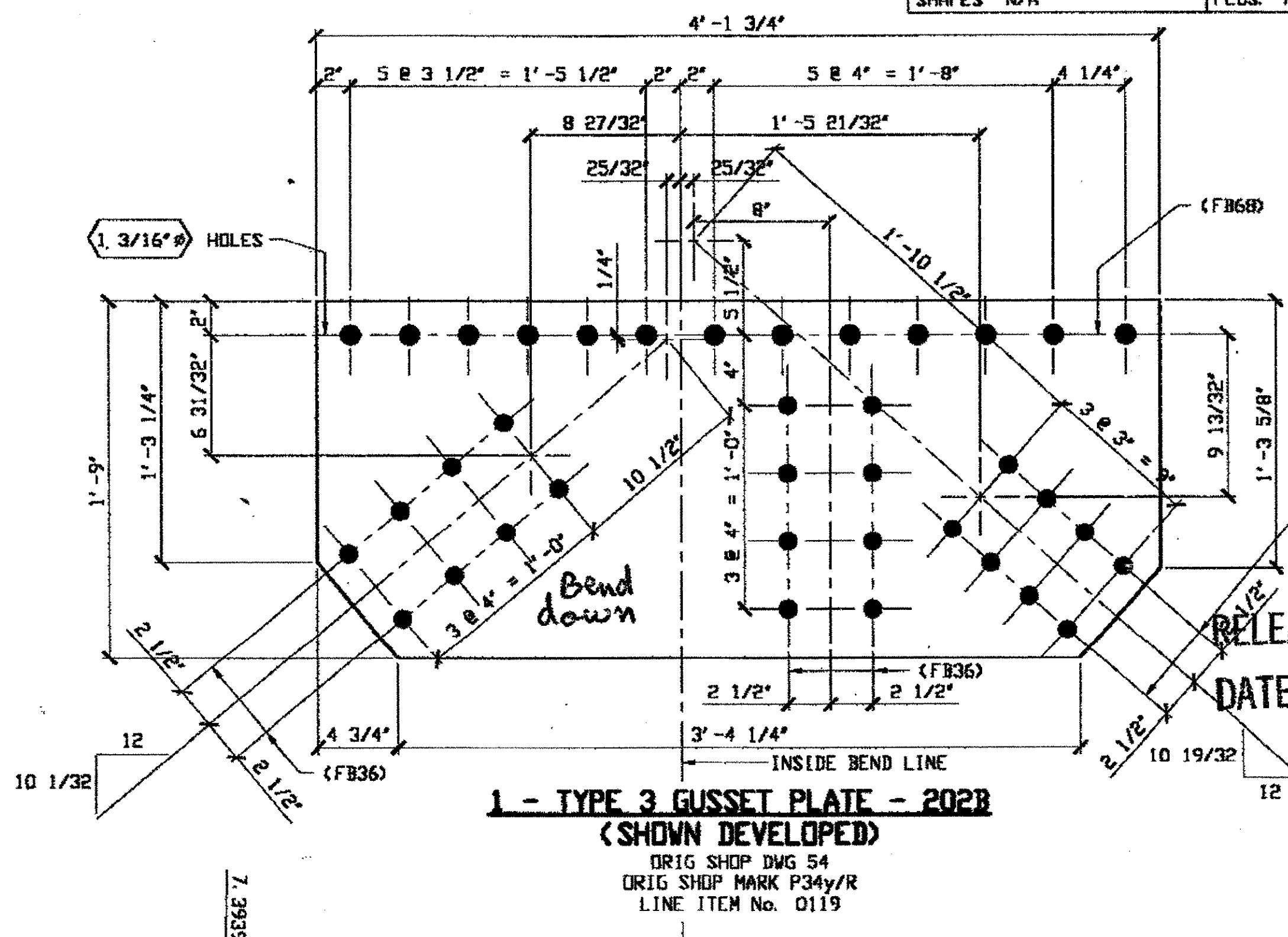
SHEET NUMBER: 201  
JOB NUMBER: 800010

Repringer at 02:05pm on Thu Dec 28, 2000 -1- Last plotted by Gfc at 04:09pm on Mon Feb 05, 2001  
 Last modify



- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		202A	1	PL 9/16 X 50	5	8 1/2	BEND	503
3		202B	1	PL 1/2 X 21	4	1 3/4	BEND	148
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36	48	1" DIA	0	2 1/2	NOTE 2	67
18		FB68	47	1 1/8" DIA	0	2 3/4	NOTE 2	90
19								
20								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES N/A		FLGS. N/A		BOLTS NOTE 2				



**O.D.O.T. DIST. 12**

ACCEPTED AS NOTED 2/3/01 P.J.M.

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION

DATE 2/13/01 BY tdp



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
SHEET NUMBER: 202			SHEET NUMBER: 800010

**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORNWALLIS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

**STEEL ERECTOR**

**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

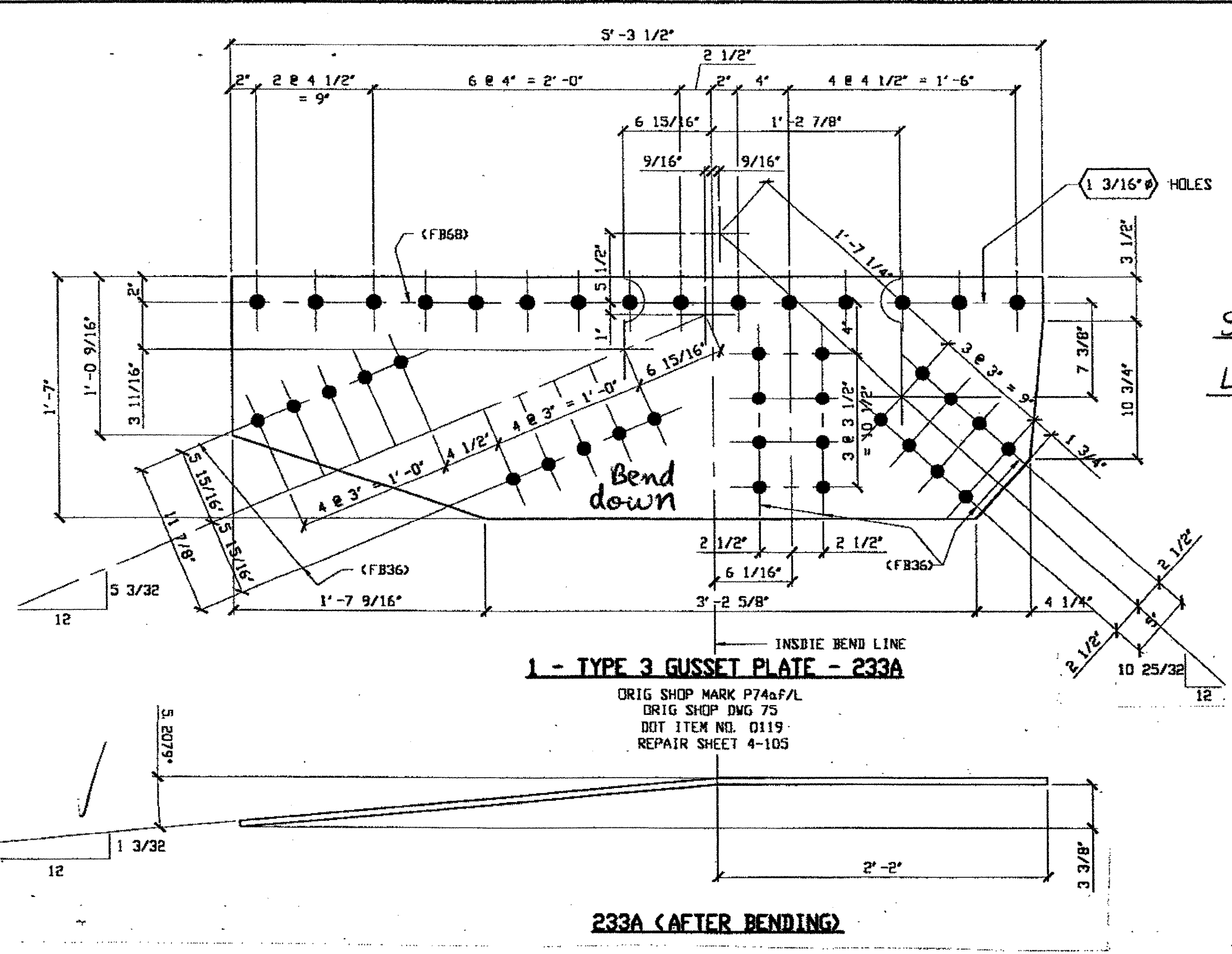
IN CHARGE OF: L. SMITH

**DRAWN BY: DATE:**  
RAS 12/19/00

**CHECK BY: DATE:**  
GAF 12/27/00



Last modified by repringer at 08:54am on Mon Feb 12, 2001 -1- Last plotted by Gfooster at 09:18am on Mon Feb 12, 2001



SPAN 4  
L1-B NORTH EXTERIOR TOP 233A

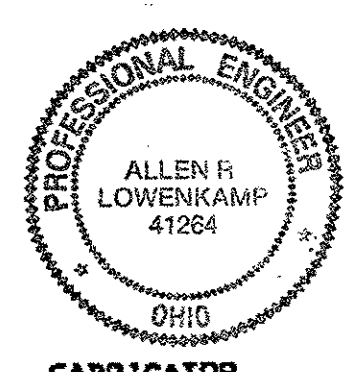
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		233A	1	PL 1/2 X 19	5	3 1/2	BEND	159
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB36		1" DIA	0	2 1/2	NOTE 2	
17		FB6B		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A		BOLTS NOTE 2	
SHAPES N/A				FLGS. N/A				

- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC INC-RTCH-PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED AS SHOWN 2/13/01  
NOT ACCEPTED  
For general acceptance, design plans and specifications shall not relieve the contractor from responsibility for errors or omissions.

*Edp/ESS*  
FEB 13 2001

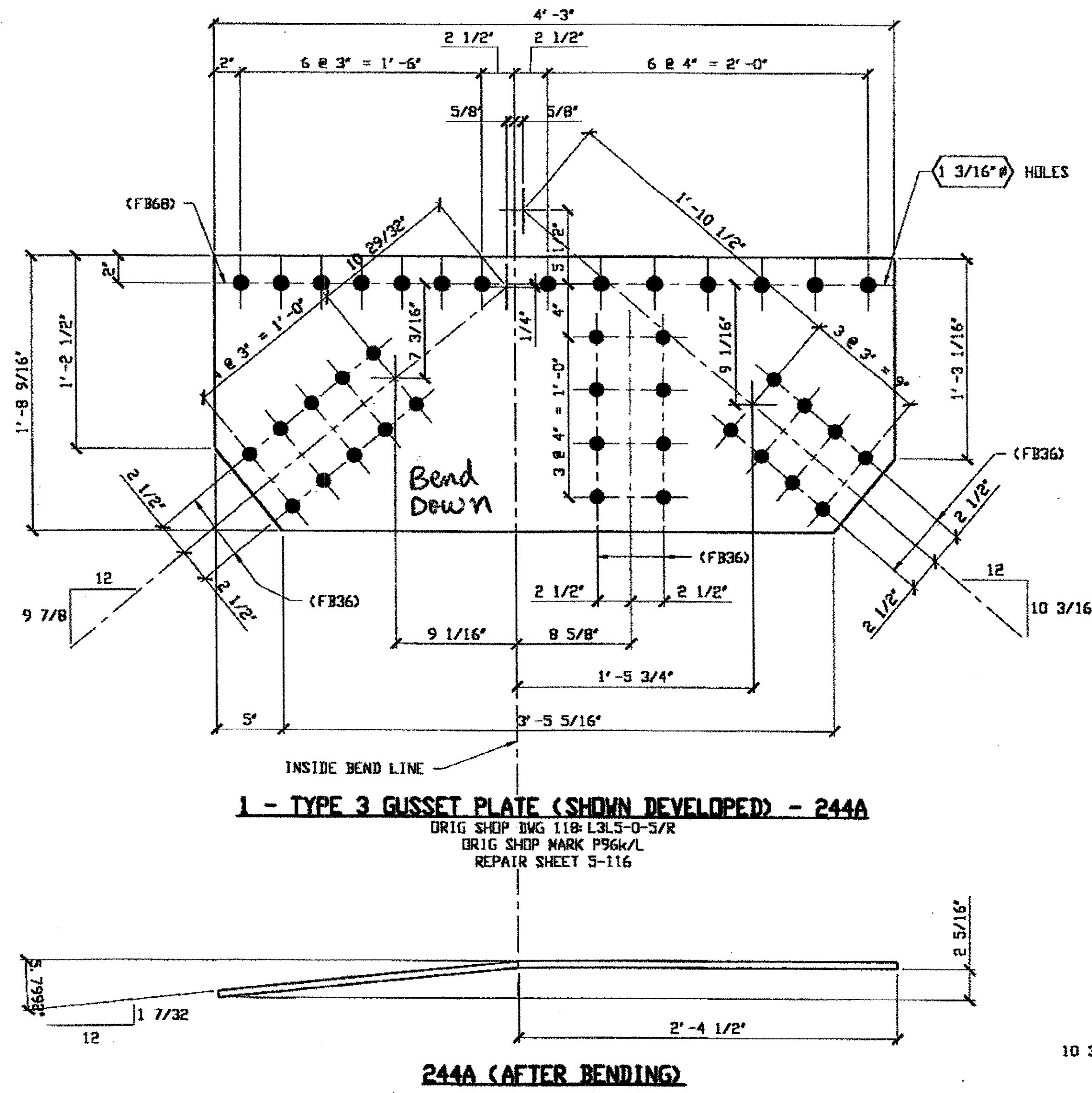
RELEASED FOR CONSTRUCTION  
DATE 2/2/01 BY Edp



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORNELIUS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. AS NOTED		
DOT BID ITEM NO. 863E50000		
NO.	DATE	DESCRIPTION REVISIONS BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 4 REPAIRS		
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		IN CHARGE OF: L. SMITH DRAWN BY: DATE: RAS 01/31/01 CHECKED BY: DATE: GAF 02/09/01
		SHEET NUMBER: 233 JOB NUMBER: 800010

Last modified by repringer at 09:32am on Wed Mar 21, 2001 - Last plotted by Gfooster at 08:59am on Fri Mar 23, 2001



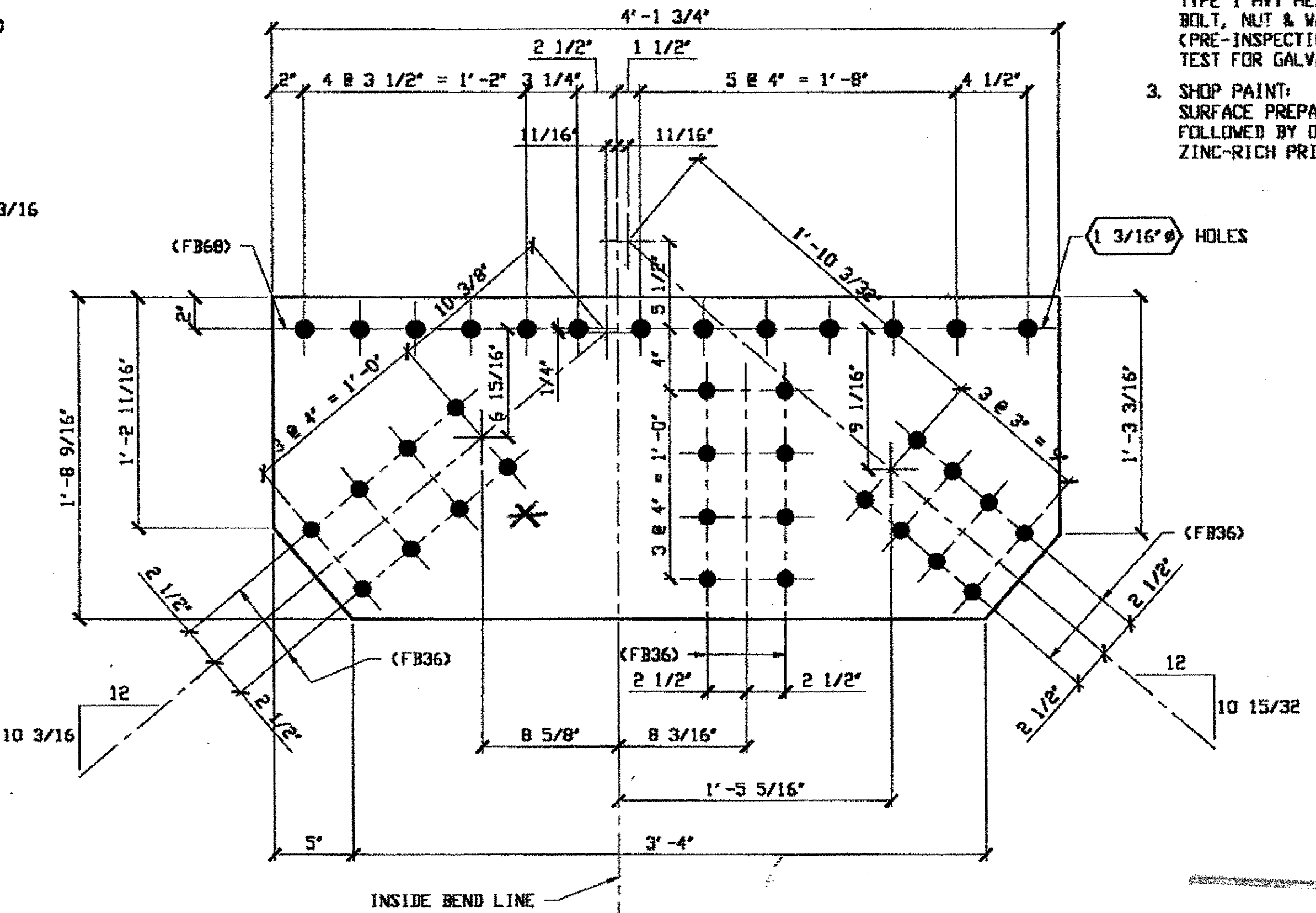
**1 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 244A**  
 ORIG SHOP DWG 118-L3L5-D-5/R  
 ORIG SHOP MARK P96K/L  
 REPAIR SHEET 5-116

**244A (AFTER BENDING)**

**SPAN 5 L4-E NORTH EXTERIOR TOP 244A**

**SPAN 5 L5-F NORTH EXTERIOR TOP 244 B/L (AS SHOWN)**

**SPAN 5 L5-F SOUTH EXTERIOR TOP 244 B/R**



**2 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 244B L/R**  
 ORIG SHOP DWG 119-L5L7-D-5/R  
 ORIG SHOP MARK P97K/L  
 REPAIR SHEET 5-122

**244B (AFTER BENDING)**

\* Bend up for R  
 \* Bend down for L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2		244A	1	PL 1/2 X 20 9/16	4	3	BEND	144
3		244B	2	PL 1/2 X 20 9/16	4	1 3/4	BEND	
4							R, L	
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB6B		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

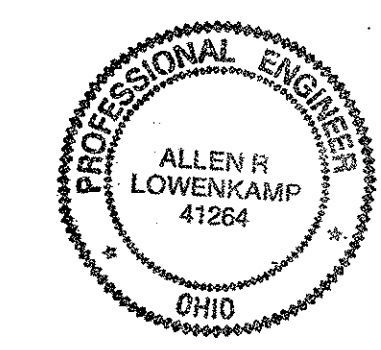
ACCEPTED	2/3/01	DM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY *tdp*

NAT'L ENGR' & CONTR. CO.  
 By *tdp/tss*

MAR 26 2001



DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY

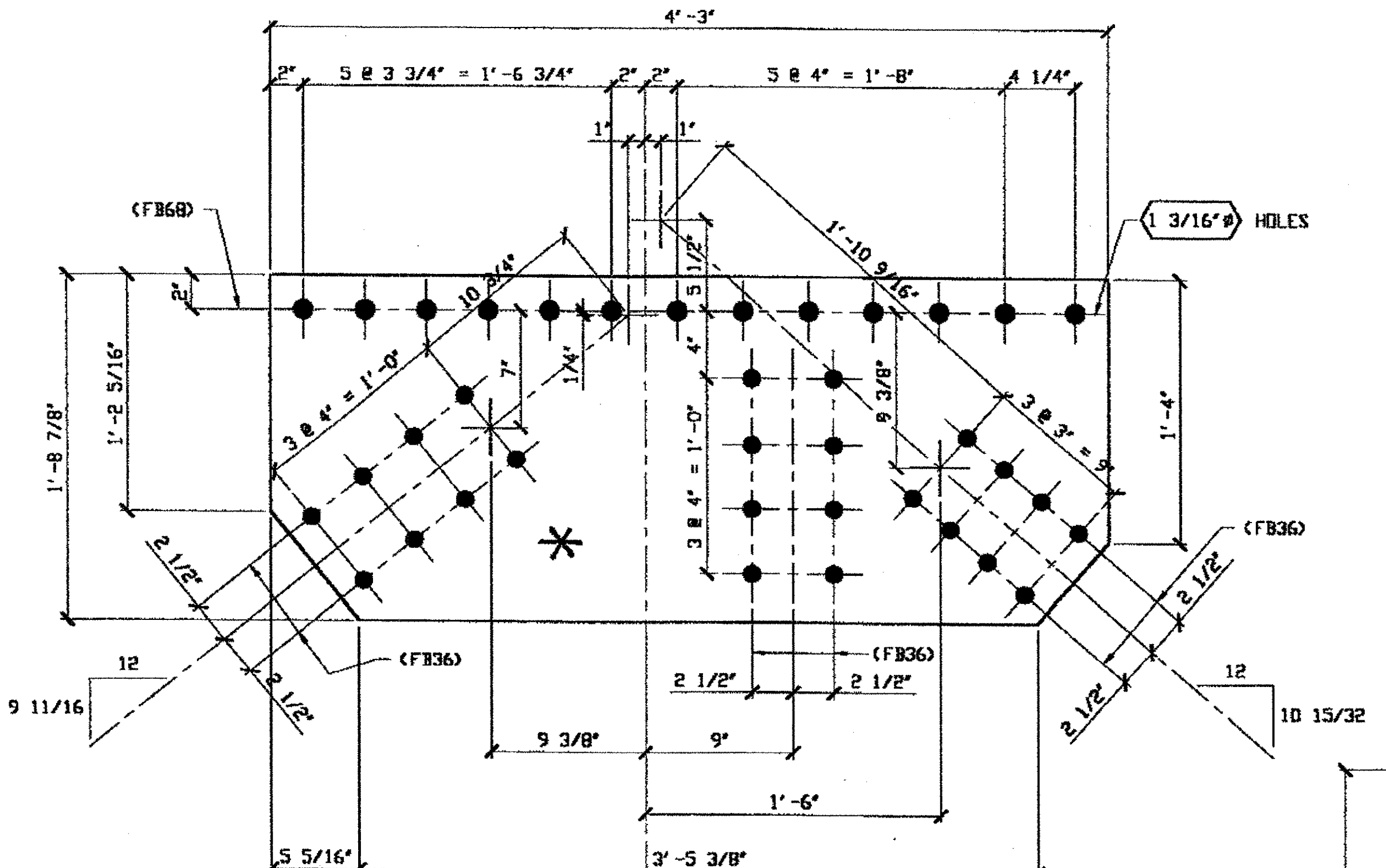
FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CHANDLER, PA 15008  
 PHONE: (412) 631-2000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

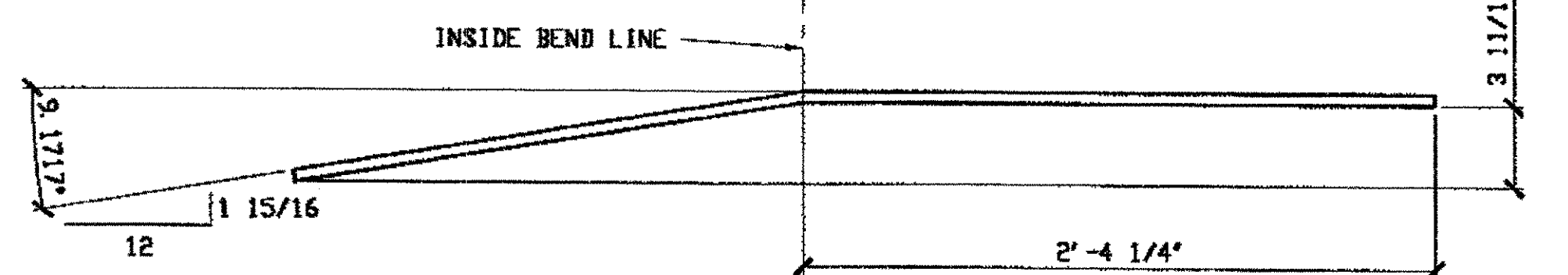
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH	SHEET NUMBER: 244
DRAWN BY: DATE: RAS 02/21/01	ASB JOB NUMBER: 800010
CHECKED BY: DATE: GAF 03/16/01	

Last modified by rspringer at 09:03am on Wed Mar 21, 2001 - 1 - Last plotted by Groster at 09:00am on Fri Mar 23, 2001

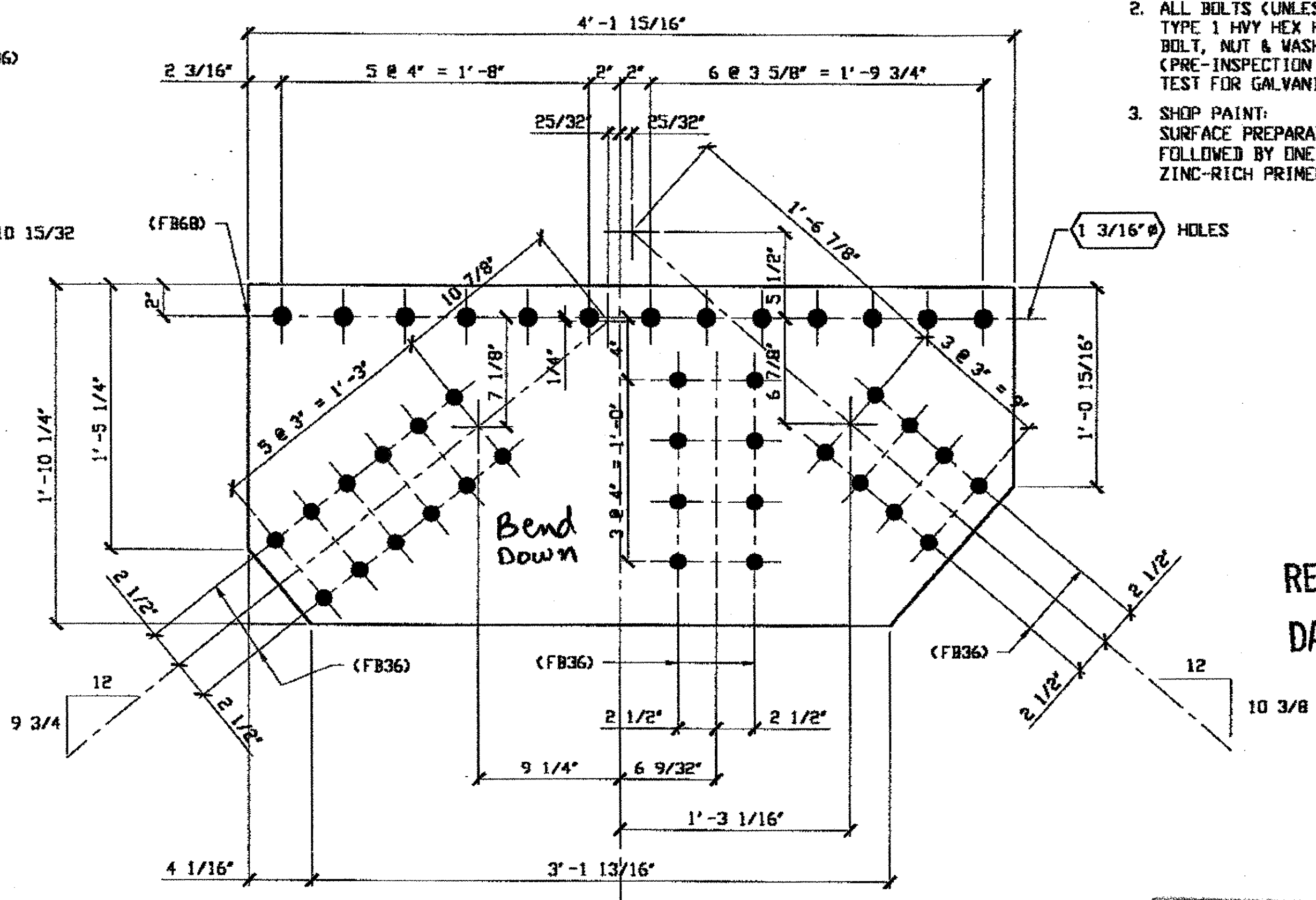


**2 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 245A R/L**  
 ORIG SHOP DWG 122-112L14-D-5/R  
 ORIG SHOP MARK P100W/L  
 REPAIR SHEET 5-149

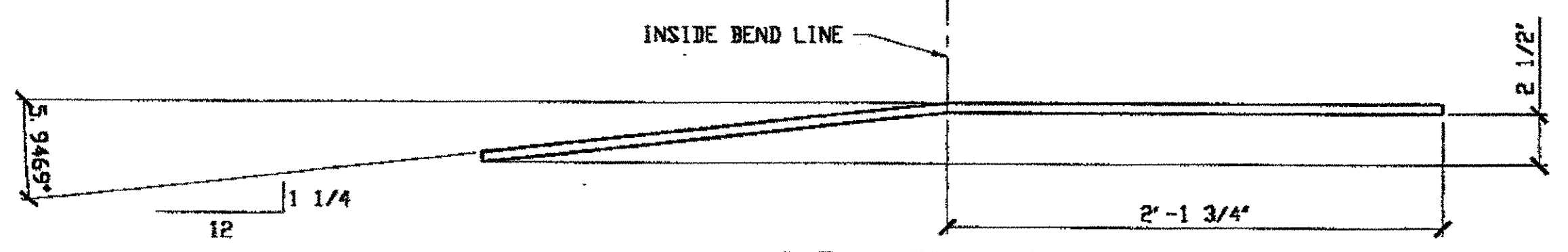


**245A (AFTER BENDING)** \* BEND DOWN FOR L  
 \* BEND UP FOR R

**SPAN 5**  
**L13-P SOUTH EXTERIOR TOP 245A/R**  
**L13-P NORTH EXTERIOR TOP 245A/L**



**1 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 245B**  
 ORIG SHOP DWG 116-LDL2-D-5/L  
 ORIG SHOP MARK P94W/R  
 REPAIR SHEET 5-172



**245B (AFTER BENDING)**

**SPAN 5**  
**L1-B SOUTH EXTERIOR TOP 245B**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2	R/L	245A	2	PL 1/2 X 20 7/8	4	3	BEND, R, L	147
3		245B	1	PL 1/2 X 22 1/4	4	15/16	BEND	150
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	52	1" DIA	0	2 1/2	NOTE 2	72
10		FB68	26	1 1/8" DIA	0	2 3/4	NOTE 2	50
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

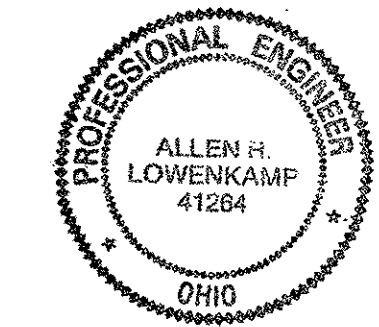
ACCEPTED	2/3/01	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY EDP

NAT'L ENGR. & CONTR. CO.  
 By EDP/ESS

MAR 26 2001



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNERSVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 02/22/01  
 CHECKED BY: DATE  
 GAF 03/16/01

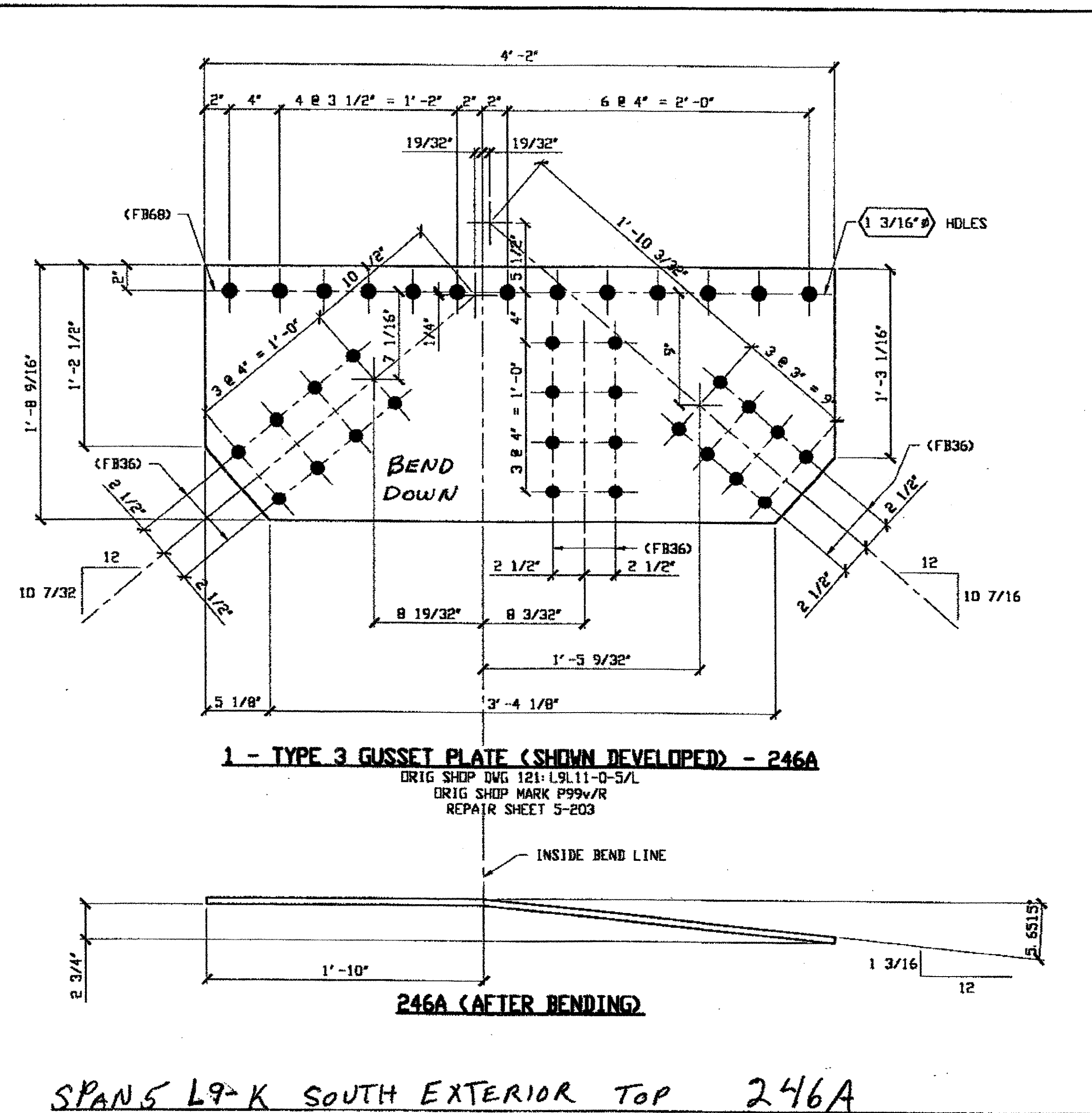
DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

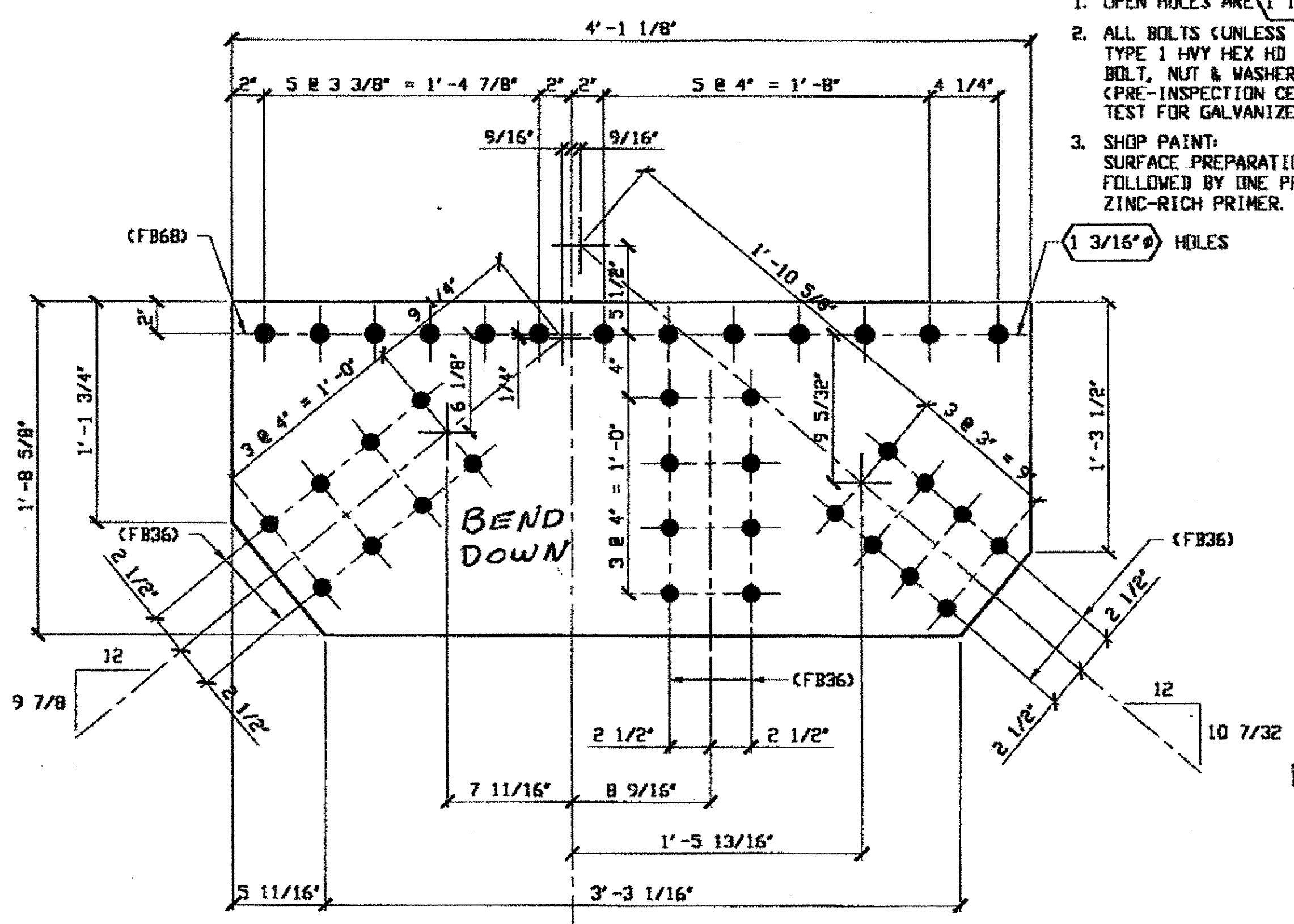
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

SHEET NUMBER: 245  
 ADM JOB NUMBER: 800010

Last modified by respringer at 09:04am on Wed Mar 21, 2001 - Last plotted by efooster at 09:00am on Fri Mar 23, 2001



SPAN 5 L9-K SOUTH EXTERIOR TOP 246A



SPAN 5 L10-L SOUTH EXTERIOR TOP 246B

BILL OF MATERIAL								
LINE	ADVANCE BILL # LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2		246A	1	PL 1/2 X 20 9/16	4	2	BEND	141
3		246B	1	PL 1/2 X 20 5/8	4	1 1/8	BEND	139
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	48	1" DIA	0	2 1/2	NOTE 2	67
10		FB68	26	1 1/8" DIA	0	2 3/4	NOTE 2	50
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

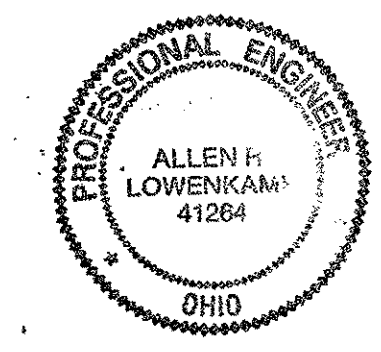
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED 2/26/01 DSYM  
 NOT ACCEPTED

RELEASED FOR CONSTRUCTION  
 DATE 2/26/01 BY EDP

NAT'L ENGR. & CONTR. CO.  
 BY EDP/TSS

MAR 26 2001



DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863ES0000

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2020 AMERICAN BRIDGE WAY  
 CORPUSCOPUS, PA. 15106  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

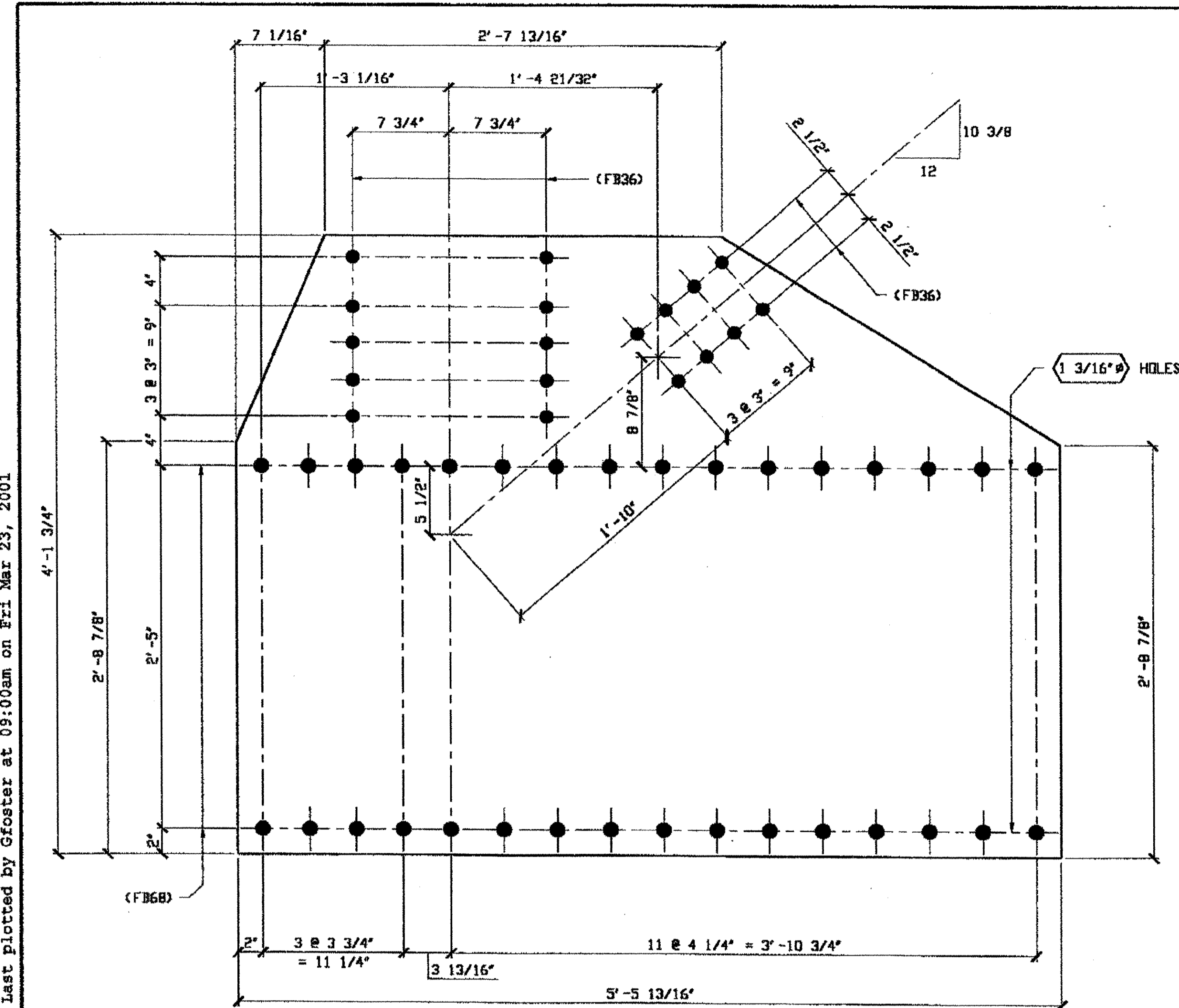
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 02/22/01  
 CHECKED BY: DATE: GAF 03/16/01

SHEET NUMBER: 246  
 JOB NUMBER: 800010

Last modified by at \$(EDTIME,??) on \$(EDTIME,??) - 1 - last plotted by Groster at 09:00am on Fri Mar 23, 2001



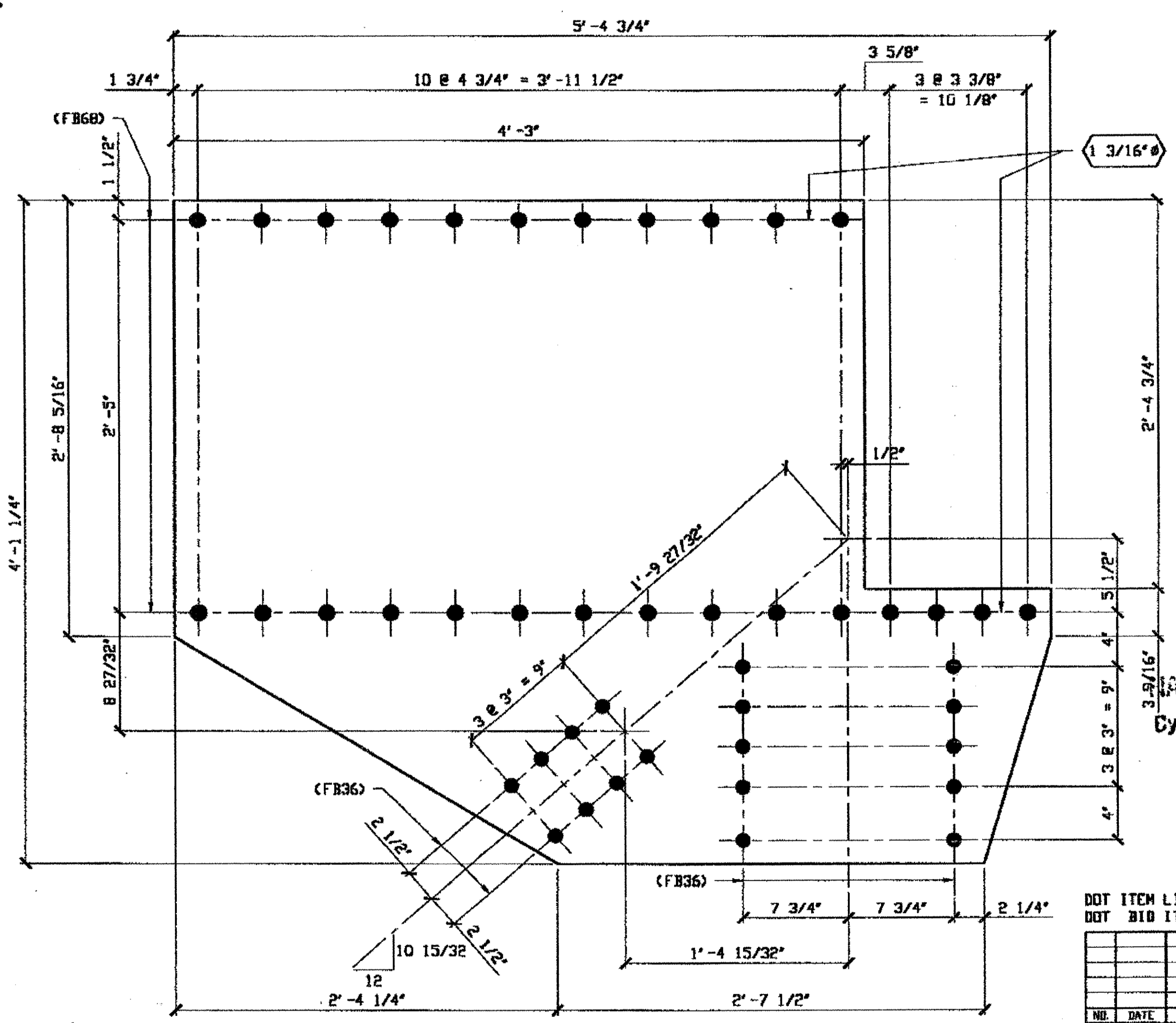
**2 - TYPE 6 GUSSET PLATE - 247A**  
 ORIG SHOP DWG 116-L0L2-0-5/R  
 ORIG SHOP MARK P94ah  
 REPAIR SHEET 5-118

SPAN 5  
LO-A SOUTH EXTERIOR, BOTTOM 247A  
LO-A NORTH EXTERIOR, BOTTOM 247A

**NOTES:**

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 6 GUSSET PLATES				
2		247A	2	PL 9/16 X 49 3/4	5	5 13/16		
3		247B	1	PL 9/16 X 49 1/4	5	4 3/4		401
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE A36		PIPE N/A		FITTERINGS N/A				
SHAPES N/A		FLGS. N/A		BOLTS NOTE 2				



**1 - TYPE 6 GUSSET PLATE - 247B**  
 ORIG SHOP DWG 100-L12L14-1-5/L  
 ORIG SHOP MARK P100ab  
 REPAIR SHEET 5-236

SPAN 5  
L14-Q SOUTH INTERIOR BOTTOM 247B

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY t.d.p.

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED 2/2/03 P. 077  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**CIVIL ENGR. & CONTR. CO.**  
 by t.d.p./t.s.s.

**MAR 26 2001**  
 PROFESSIONAL ENGINEER  
 ALLEN R. LOVENKAMP  
 41264  
 OHIO

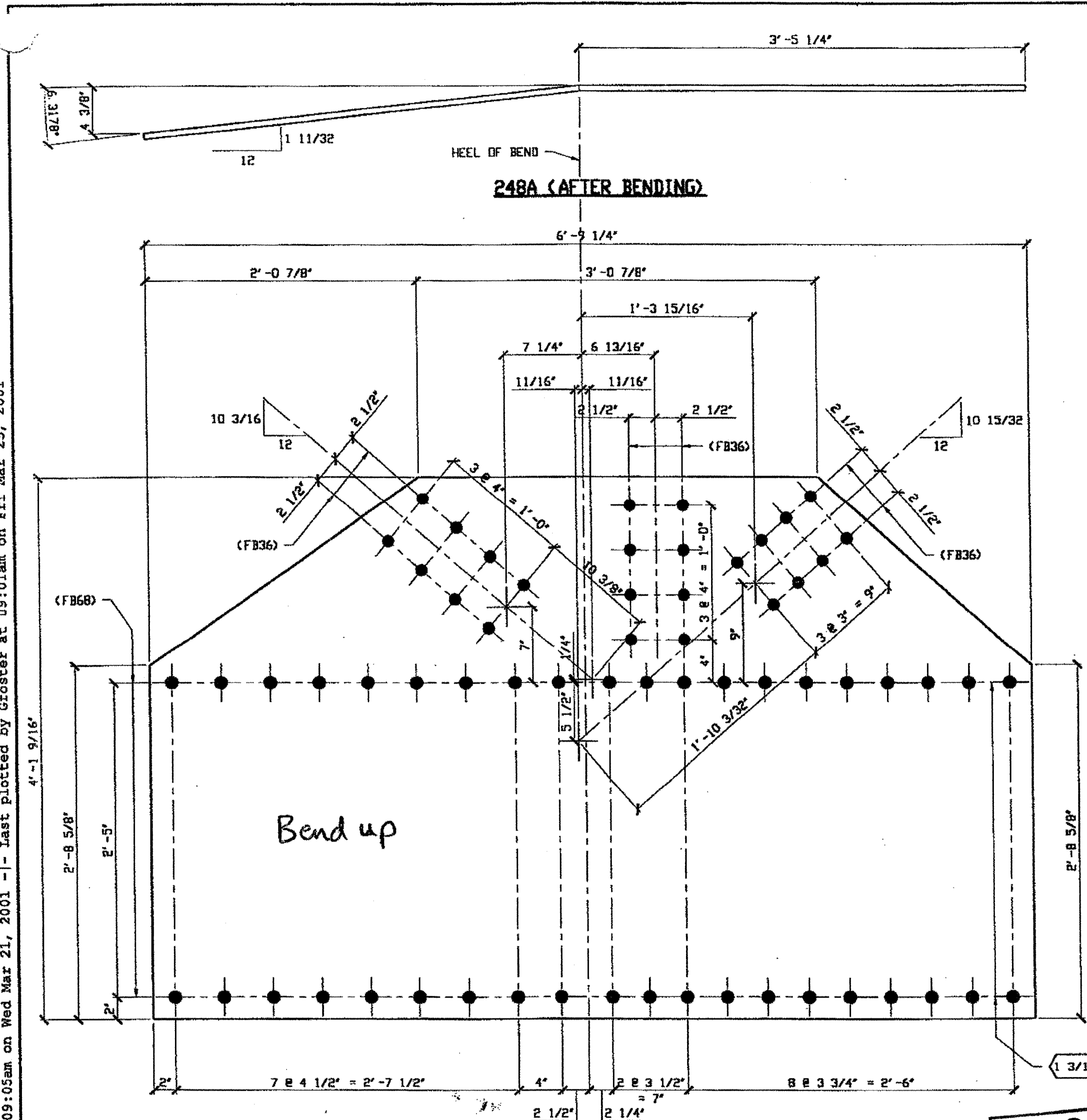
DOT ITEM LINE NO. 0122  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

FABRICATOR	AMERICAN BRIDGE MANUFACTURING	2000 AMERICAN BRIDGE WAY DUNSPOLIS, PA 15106 PHONE: (412) 631-3000 FAX: (412) 631-4001
STEEL ERECTOR	TRI-STATE STEEL CONSTRUCTION INC.	12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335
IN CHARGE OF	L. SMITH	
DRAWN BY	RAS	DATE: 02/23/01
CHECKED BY	GAF	DATE: 03/16/01
SHEET NUMBER	247	
AWM JOB NUMBER	800010	

inged at 09:05am on Wed Mar 21, 2001 - last plotted by Gfroster at 09:01am on Fri Mar 23, 2001  
 Last modified by

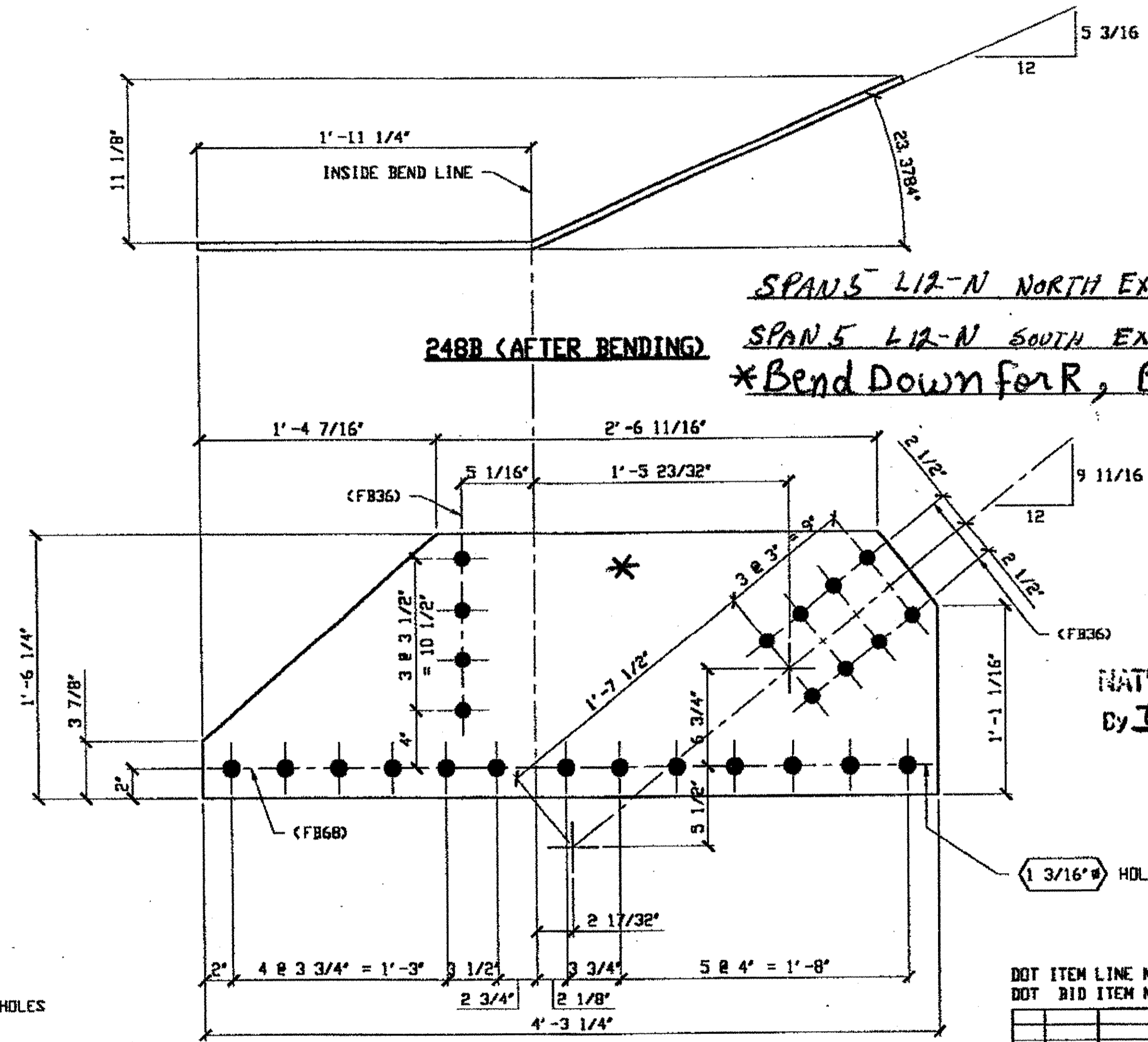


**1 - TYPE 4 GUSSET PLATE (SHOWN DEVELOPED) - 248A**  
 ORIG SHOP DWG 119 LSL7-0-5/R  
 ORIG SHOP MARK P97a/L  
 REPAIR SHEET 5-125  
 ITEM LINE No. 0120

SPAN 5  
 L5-F NORTH EXTERIOR BOTTOM 248A

- NOTES:**
- OPEN HOLES ARE  $1 \frac{1}{16} \phi$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

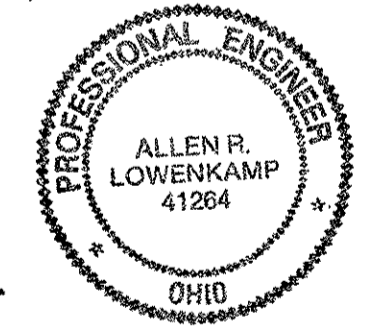
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		248A	1	PL 9/16 X 49 9/16	6	9 1/4	BEND	583
3		248B R/L	2	PL 1/2 X 18 1/4	4	3 1/4	BEND	228
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	36	1" DIA	0	2 1/2	NOTE 2	50
10		FB68	53	1 1/8" DIA	0	2 3/4	NOTE 2	102
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			



**2 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 248B R/L**  
 ORIG SHOP DWG 117 L11L12-0-5 R/L  
 ORIG SHOP MARK P100as R/L  
 REPAIR SHEET 5-145 & 216

SPAN 5 L12-N NORTH EXTERIOR BOTTOM (R)  
 SPAN 5 L12-N SOUTH EXTERIOR BOTTOM (L)  
 \*Bend Down for R, Bend up for L

NAT'L ENGR. & CONTR. CO.  
 By *Ed/ass*  
 MAR 26 2001



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 4/1/01 BY *tdp*

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

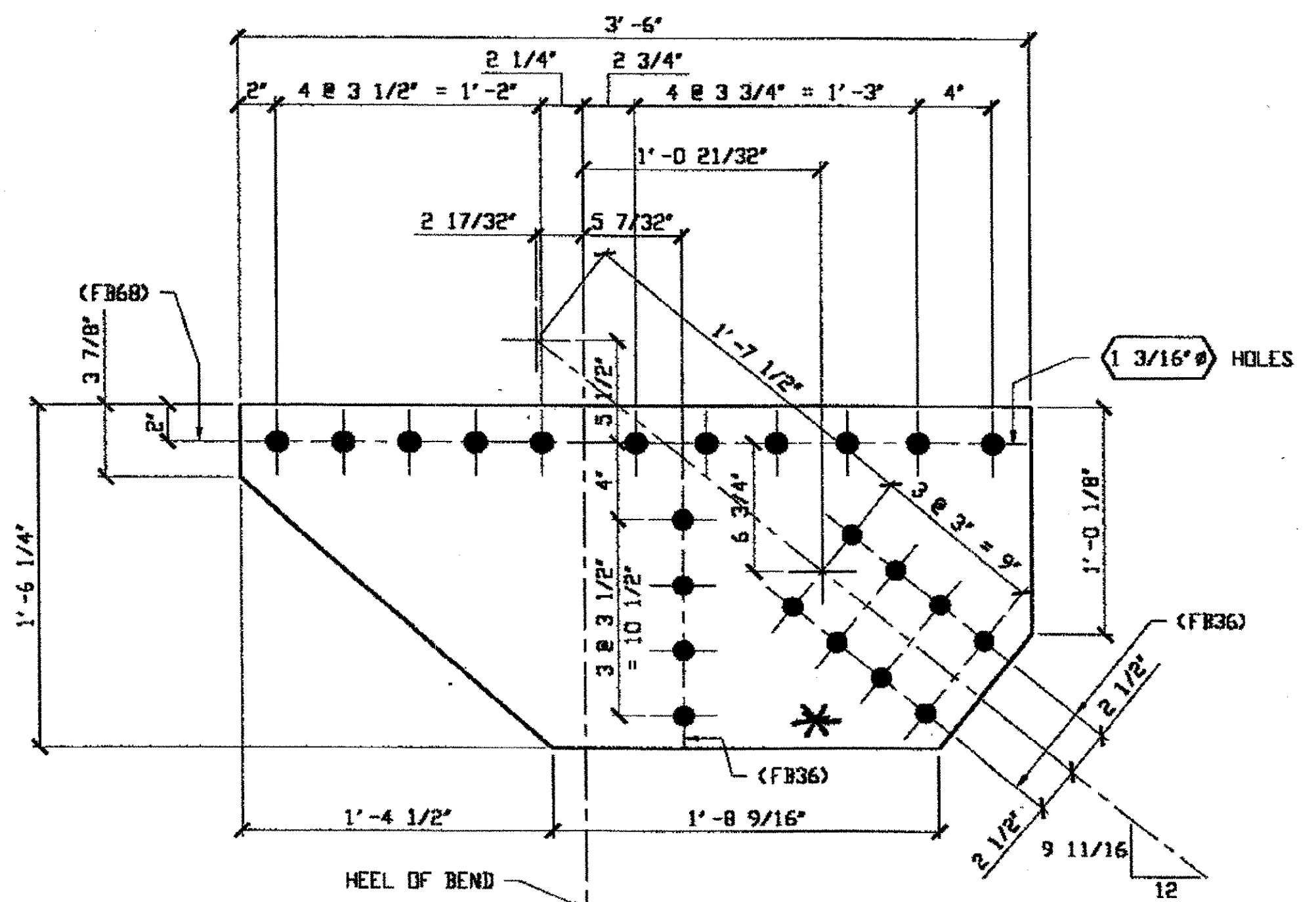
FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**  
 SHEET NUMBER: 248  
 AM JOB NUMBER: 800010

Last modified by reprinter at 09:05am on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:01am on Fri Mar 23, 2001

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				GUSSET PLATES				
2		249A	2	PL 1/2 X 18 1/4	3	6	BEND	180
3		249B R/L	2	PL 1/2 X 18 1/2	3	5 3/4	BEND	182
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

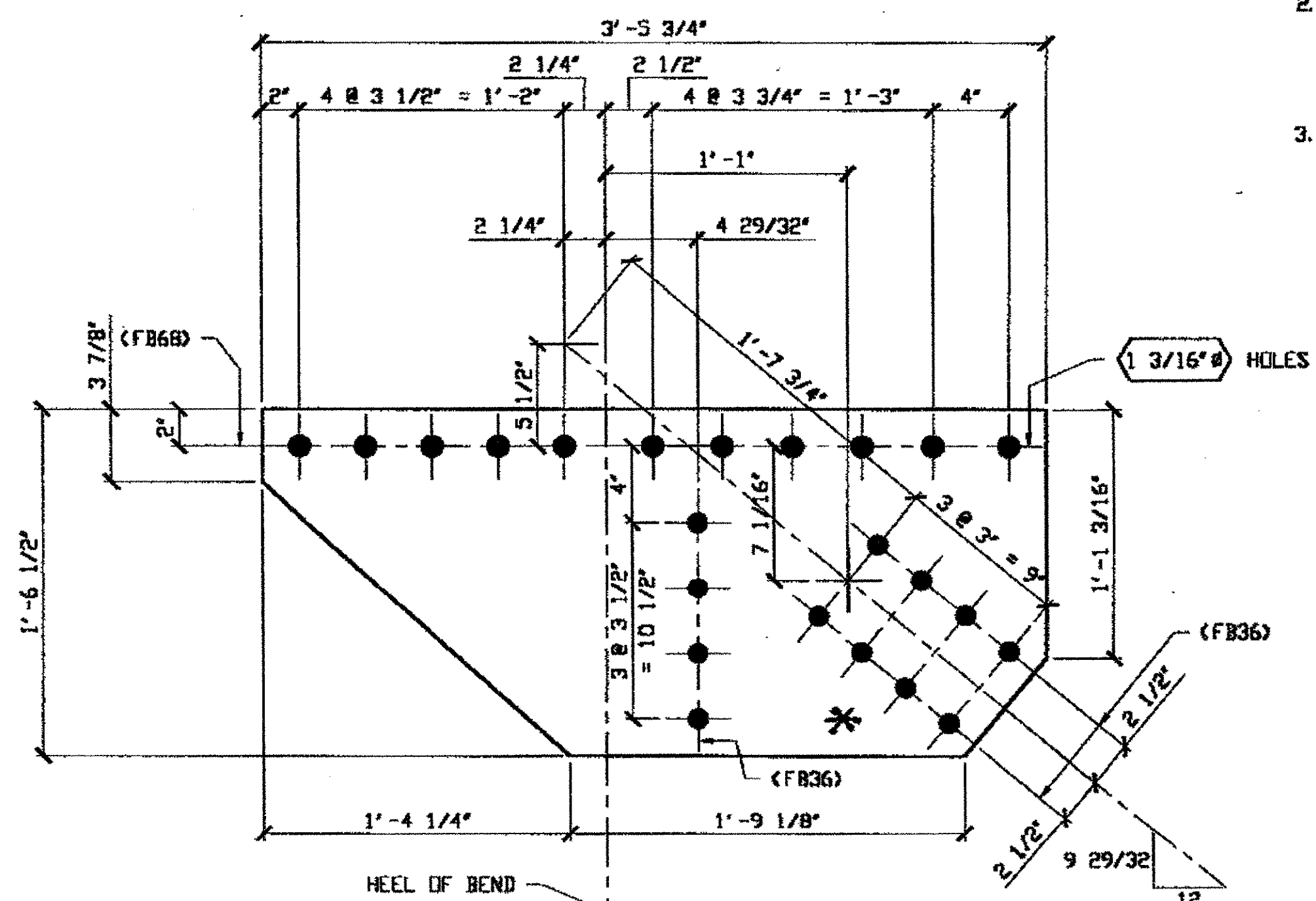
- NOTES:
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{ } \phi)$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**2 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 249A**  
 ORIG SHIP DWG 117-L11L12-0-5/R  
 ORIG SHIP MARK P100av/L  
 REPAIR SHEET 5-145

SPAN 5  
L12 NORTH EXTERIOR TOP 249A/R  
L12 SOUTH EXTERIOR TOP 249A/L

\* BEND UP FOR R  
 \* BEND DOWN FOR L



**2 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 249B R/L**  
 ORIG SHIP DWG 117-L11L12-0-5 R/L  
 ORIG SHIP MARK P99ae R/L  
 REPAIR SHEET 5-144 & 214

SPAN 5  
L11 NORTH EXTERIOR TOP 249B/R  
L11 SOUTH EXTERIOR TOP 249B/L

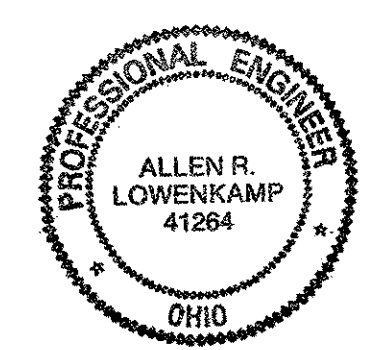
**O.D.O.T. DIST. 12**

ACCEPTED	2/16/01	ADJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

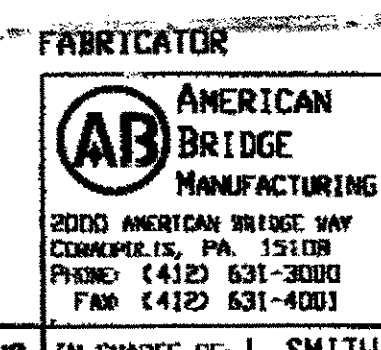
RELEASED FOR CONSTRUCTION  
 DATE 2/16/01 BY EDP

NAT'L ENGR' & CONTR. CO.  
 By EDP/ESS  
 MAR 26 2001



DOT ITEM LINE NO. 0117  
 DOT BID ITEM NO. 863ES0000

NO.	DATE	DESCRIPTION	BY



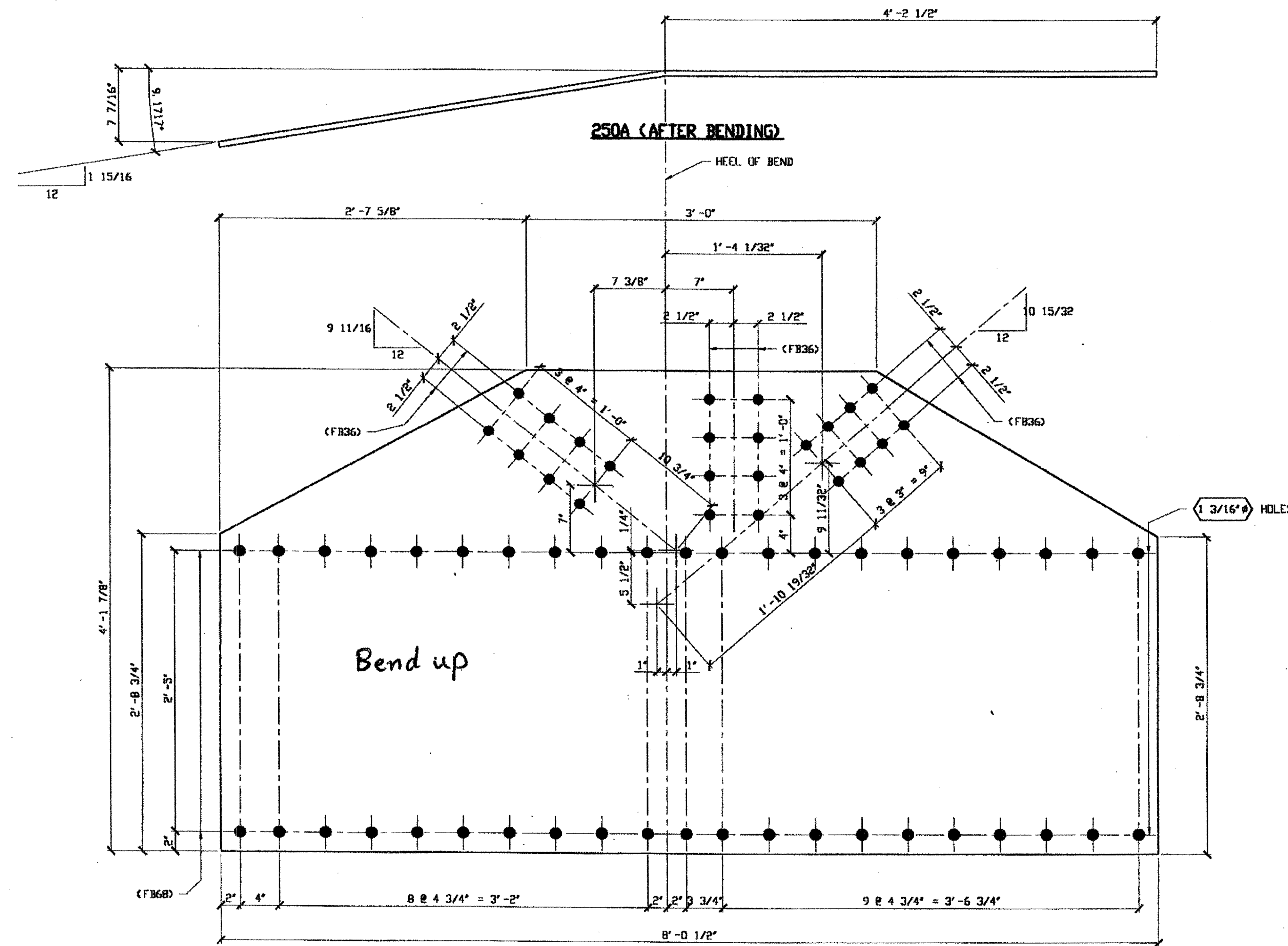
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: 02/26/01  
 CHECKED BY: DATE: 03/16/01

SHEET NUMBER: 249  
 AM JOB NUMBER: 800010

Last modified by reppinger at Wed Mar 21, 2001 11:02am on Fri Mar 23, 2001  
Last plotted by Gfoster at 09:02am on Fri Mar 23, 2001



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 4 GUSSET PLATE					
2		250A	1	PL 9/16 X 49 7/8	8	0 1/2	BEND	.686	
3									
4									
5									
6									
7									
8				FIELD BOLTS					
9		FB36	24	1" DIA	0	2 1/2	NOTE 2	33	
10		FB68	42	1 1/8" DIA	0	2 3/4	NOTE 2	81	
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II (ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/9/03	D.J.V.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 4/6/01 BY EDP

1 - TYPE 4 GUSSET PLATE (SHOWN DEVELOPED) - 250A  
ORIG SHOP DWG 122 L12L14-D-5/R  
ORIG SHOP MARK P100ac/L  
REPAIR SHEET 5-149

SPAN 5 L13-P NORTH EXTERIOR BOTTOM 250 A

NAT'L ENGR. & CONTR. CO.  
By EDP/ESS

MAR 26 2001



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORNELIUS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF L. SMITH  
DRAWN BY DATE:  
RAS 02/26/01  
CHECKED BY DATE:  
GAF 03/16/01

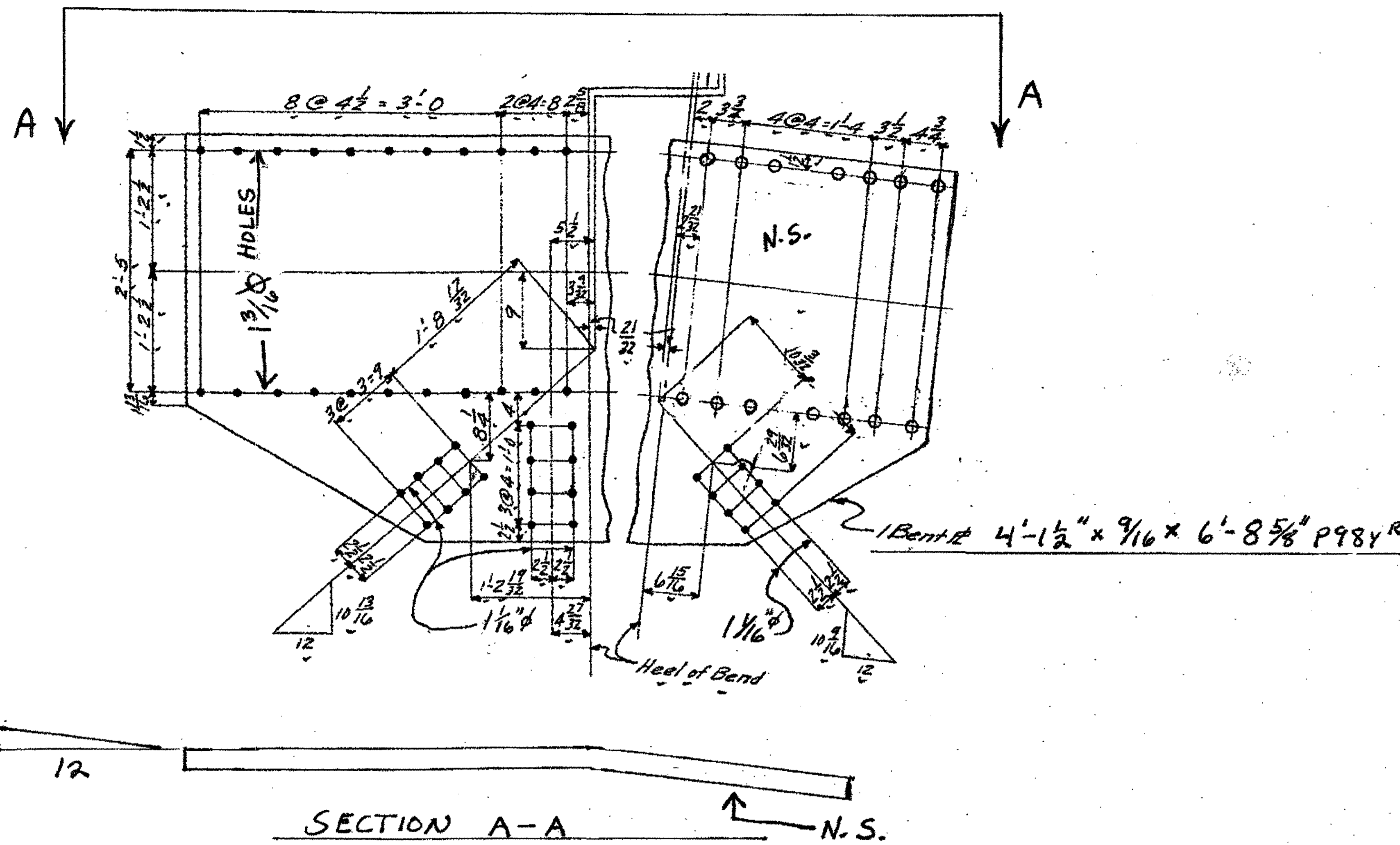
DOT ITEM LINE NO. 0120  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16, 13 SPAN 5 REPAIRS			
			SHEET NUMBER
			250
			ASH JOB NUMBER
			800010



BILL OF MATERIALS

Piece No.	Qty.	Description
251 A	1	$\# 4-1\frac{1}{2} \times 9/16 \times 6'-8\frac{5}{8}"$
		$\# A36 \text{ SHAPES A36}$



1-TYPE 4 GUSSET PLATE 251 A (SHOWN DEVELOPED)  
ORIGINAL SHOP MARK P98YR

SPAN 5  
L7 SOUTH EXTERIOR BOTTOM 251A

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



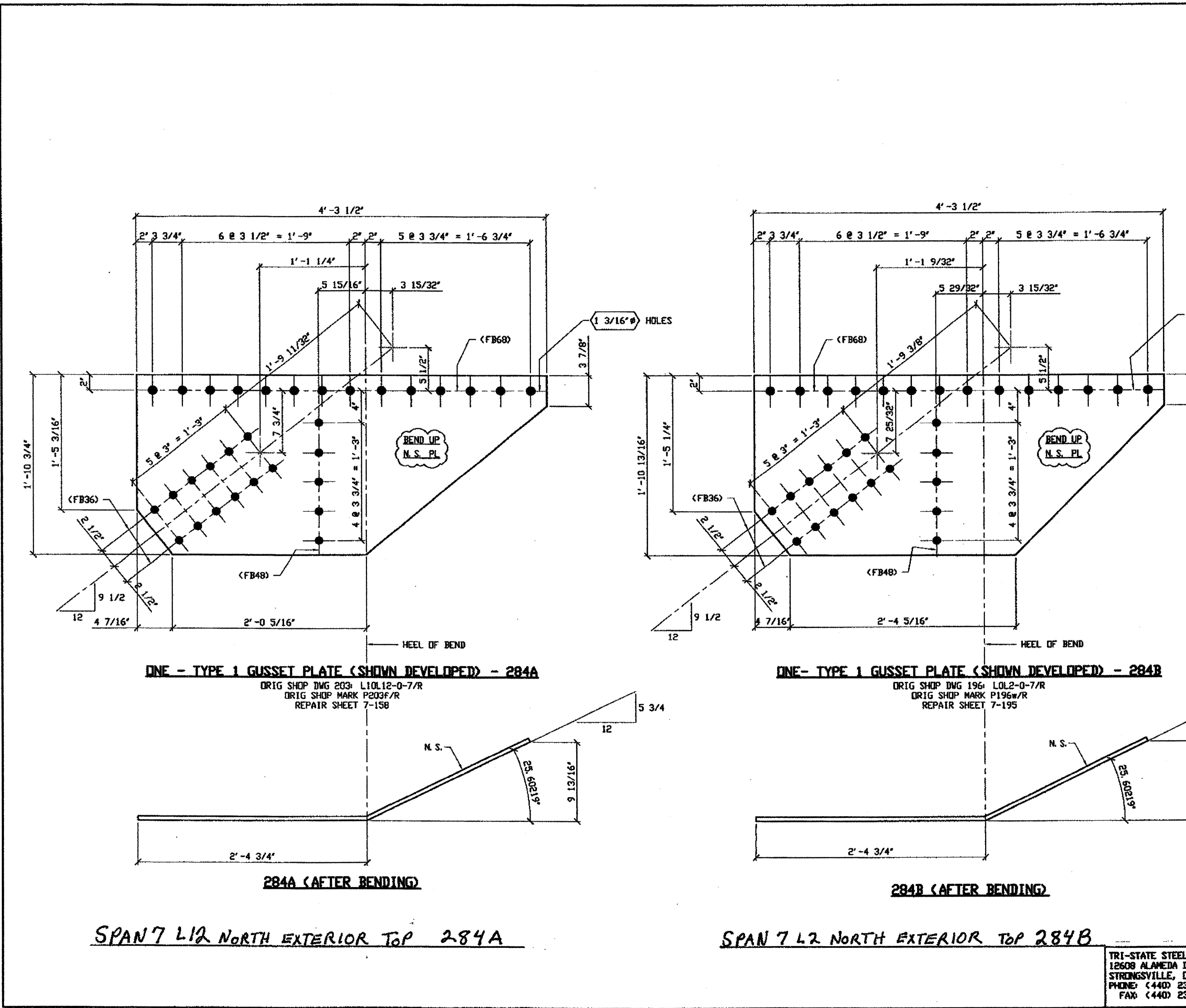
NO.	REVISION	DATE	BY

**Tri-State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_  
 Scale: NA Date: \_\_\_\_\_ Job No. 251

Last modified by rspringer at \$(EDTIME,??) -1- Last plotted by Repringer at 02:38pm on Tue May 15, 2001



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
1				TYPE 1 GUSSET PLATES				
2		284A	1	PL 1/2 X 22 3/4	4	3 1/2	BEND	134
3		284B	1	PL 1/2 X 22 13/16	4	3 1/2	BEND	140
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
13		FB48	10	1" DIA	0	4	NOTE 2	17
14		FB68	28	1 1/8" DIA	0	2 3/4	NOTE 2	54
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 2/2/01 BY [signature]



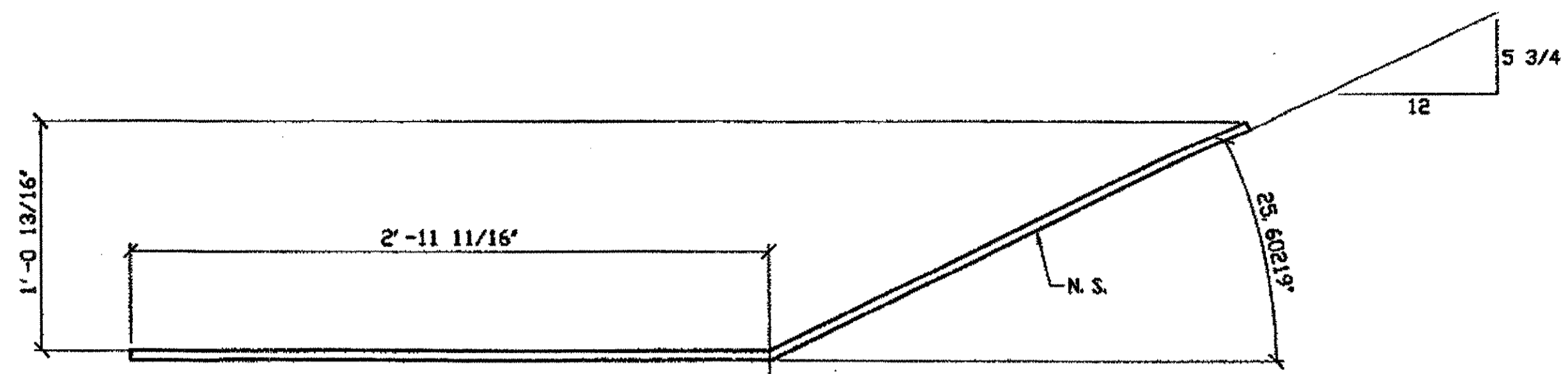
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIA, PA. 17108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

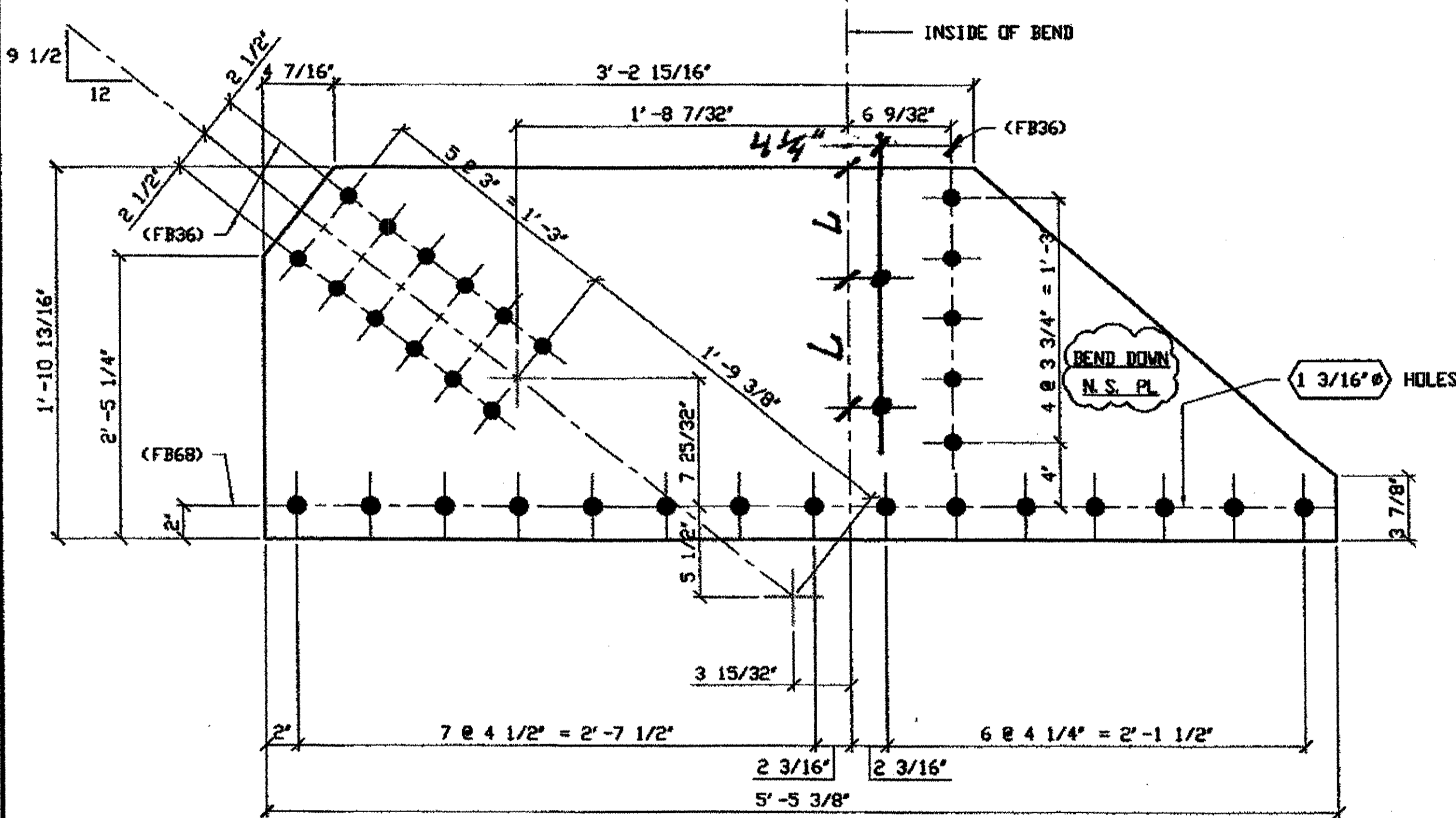
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/23/01  
 CHECKED BY: DATE: GAF 04/30/01

DOT ITEM LINE NO. 0117		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
SHEET NUMBER		284	
JOB NUMBER		800010	

Last modified by rspringer at 8:40:15pm on Tue May 22, 2001



**285A (AFTER BENDING)**



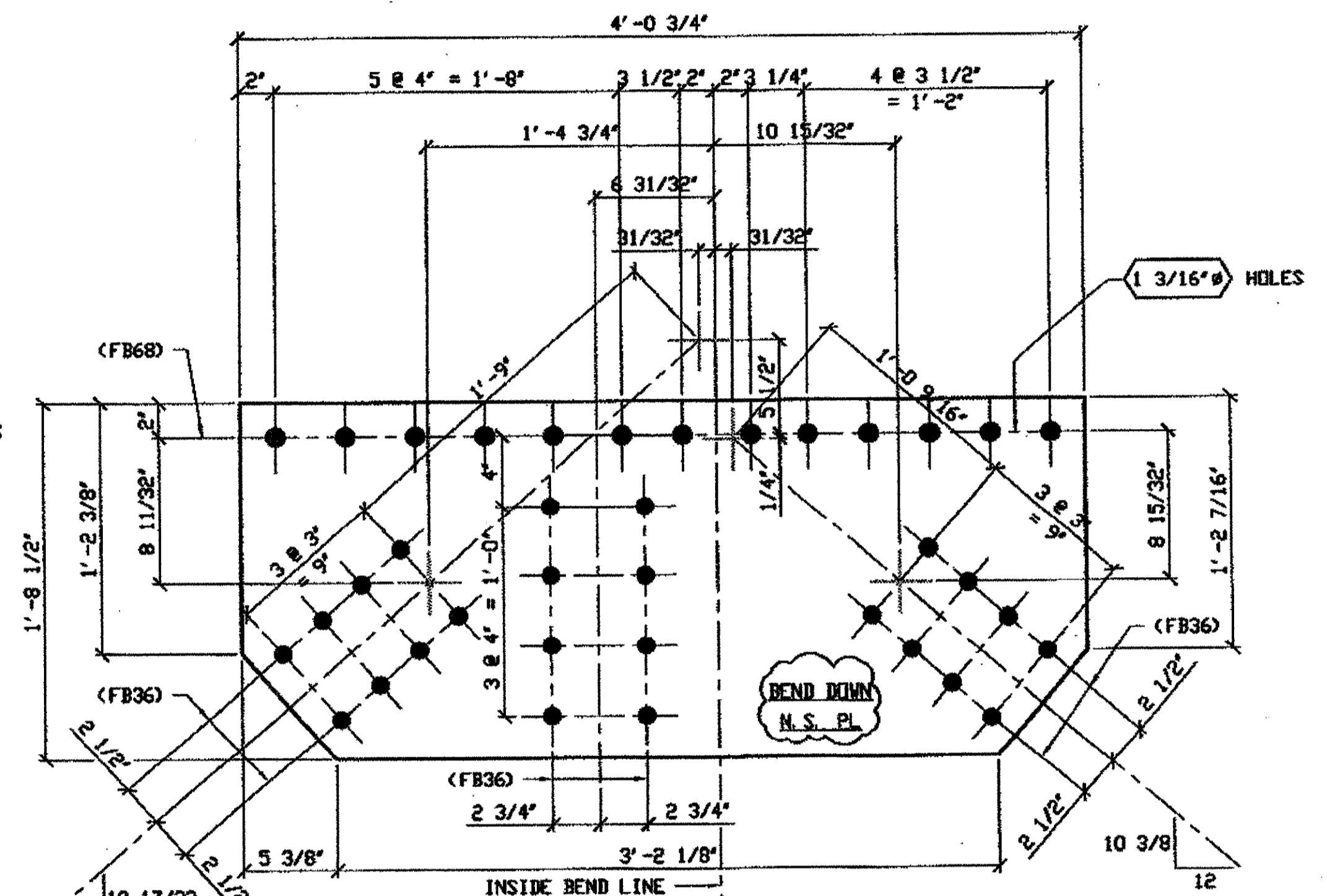
**ONE - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 285A**

ORIG SHOP DWG 196 L0L2-0-7/R  
ORIG SHOP MARK P196y/R  
ITEM No. 0118  
REPAIR SHEET 7-195

**SPAN 7**  
**L2 NORTH EXTERIOR BOTTOM 285A**

- NOTES:**
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

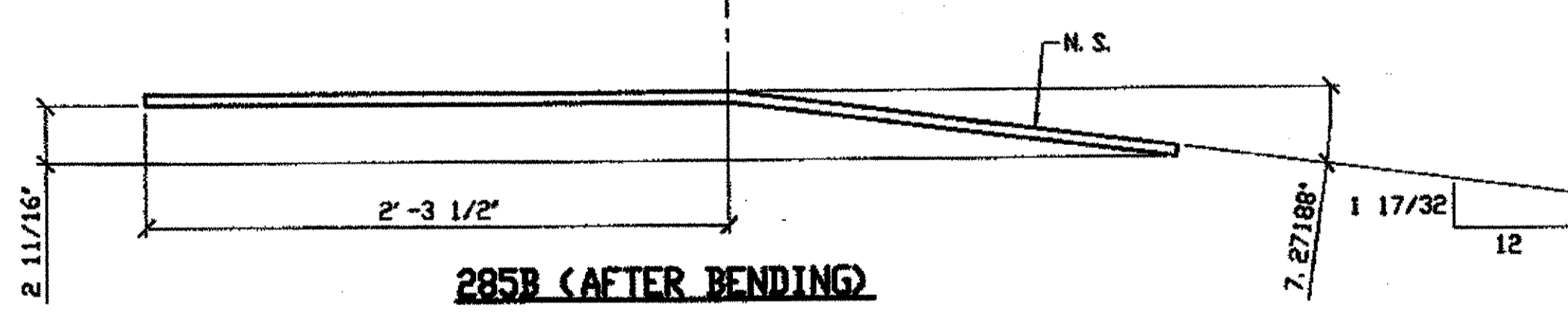
BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 GUSSET PLATE					
2		285A	1	PL 1/2 X 22 13/16	5	5 9/8	BEND	180	
3									
4				TYPE 3 GUSSET PLATE					
5		285B	1	PL 1/2 X 20 1/2	4	0 3/4	BEND	137	
6									
7									
8				FIELD BOLTS					
9		FB36	41	1" DIA	0	2 1/2	NOTE 2	57	
10		FB68	28	1 1/8" DIA	0	2 3/4	NOTE 2	54	
PLATE A36				PIPE N/A	FITTINGS N/A				
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2				



**ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 285B**

ORIG SHOP DWG 200 L5L7-0-7/L  
ORIG SHOP MARK P200s/L  
ITEM No. 0119  
REPAIR SHEET 7-111

**SPAN 7**  
**L6-G SOUTH EXTERIOR TOP 285B**



**285B (AFTER BENDING)**

<b>O.D.O.T. DIST. 12</b>	
ACCEPTED	2/3/01 RSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**RELEASED FOR CONSTRUCTION**  
DATE 2/2/01 BY tdp



DOT ITEM LINE NO. AS NOTED	
DOT BID ITEM NO. 86350000	
NO.	DATE

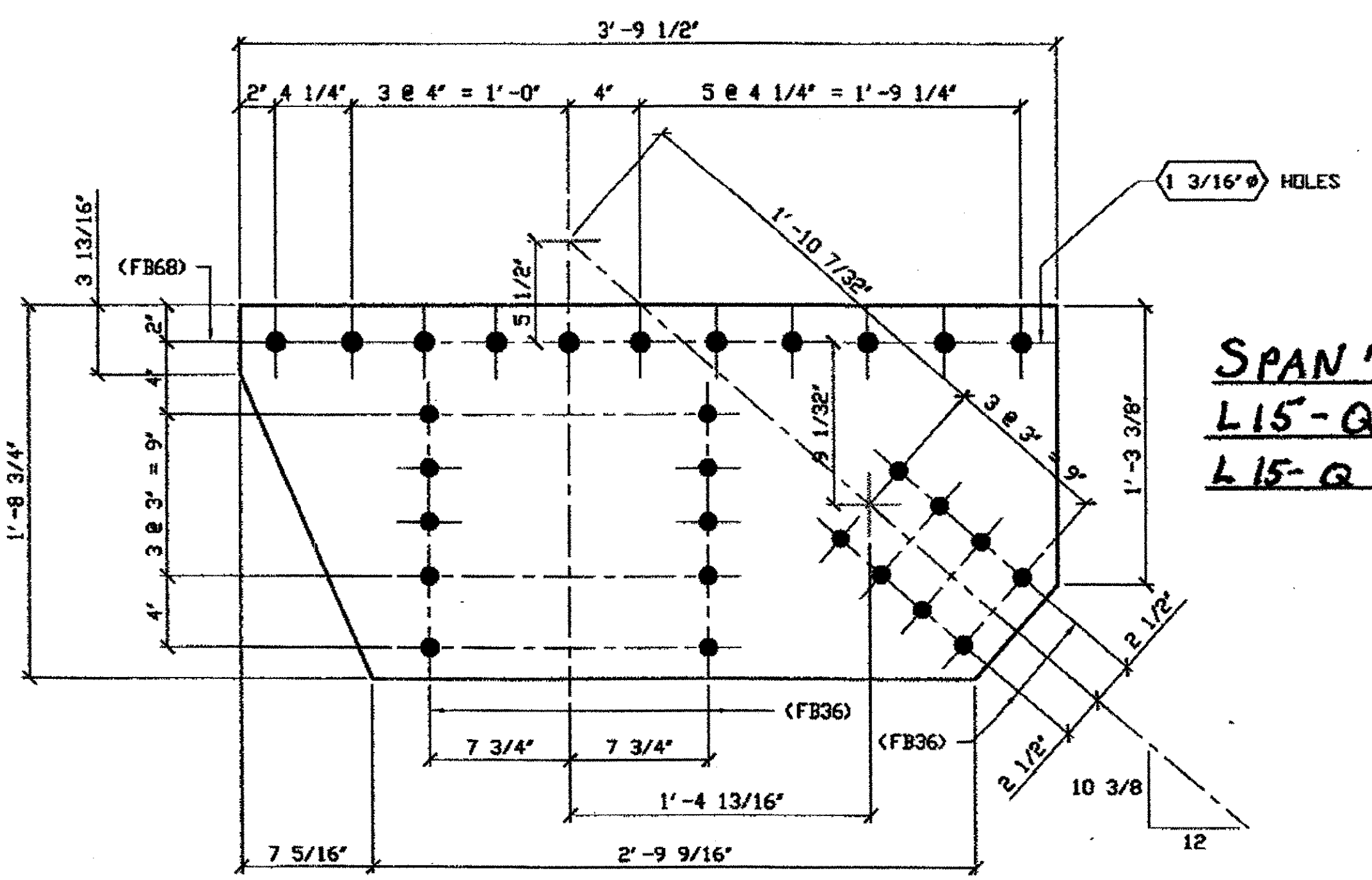
**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
COLUMBUS, OH 43109  
PHONE (614) 631-3000  
FAX (614) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 04/23/01  
CHECKED BY: DATE  
GAF 04/30/01

<b>STATE OF OHIO</b>	
DEPARTMENT OF TRANSPORTATION	
<b>HOPE MEMORIAL BRIDGE REHAB</b>	
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)	
CITY OF CLEVELAND	
CUYAHOGA COUNTY OHIO	
<b>BRIDGE No. CUY-10-16.13</b>	
<b>SPAN 7 REPAIRS</b>	
SHEET NUMBER	285
AWN JOB NUMBER	800010

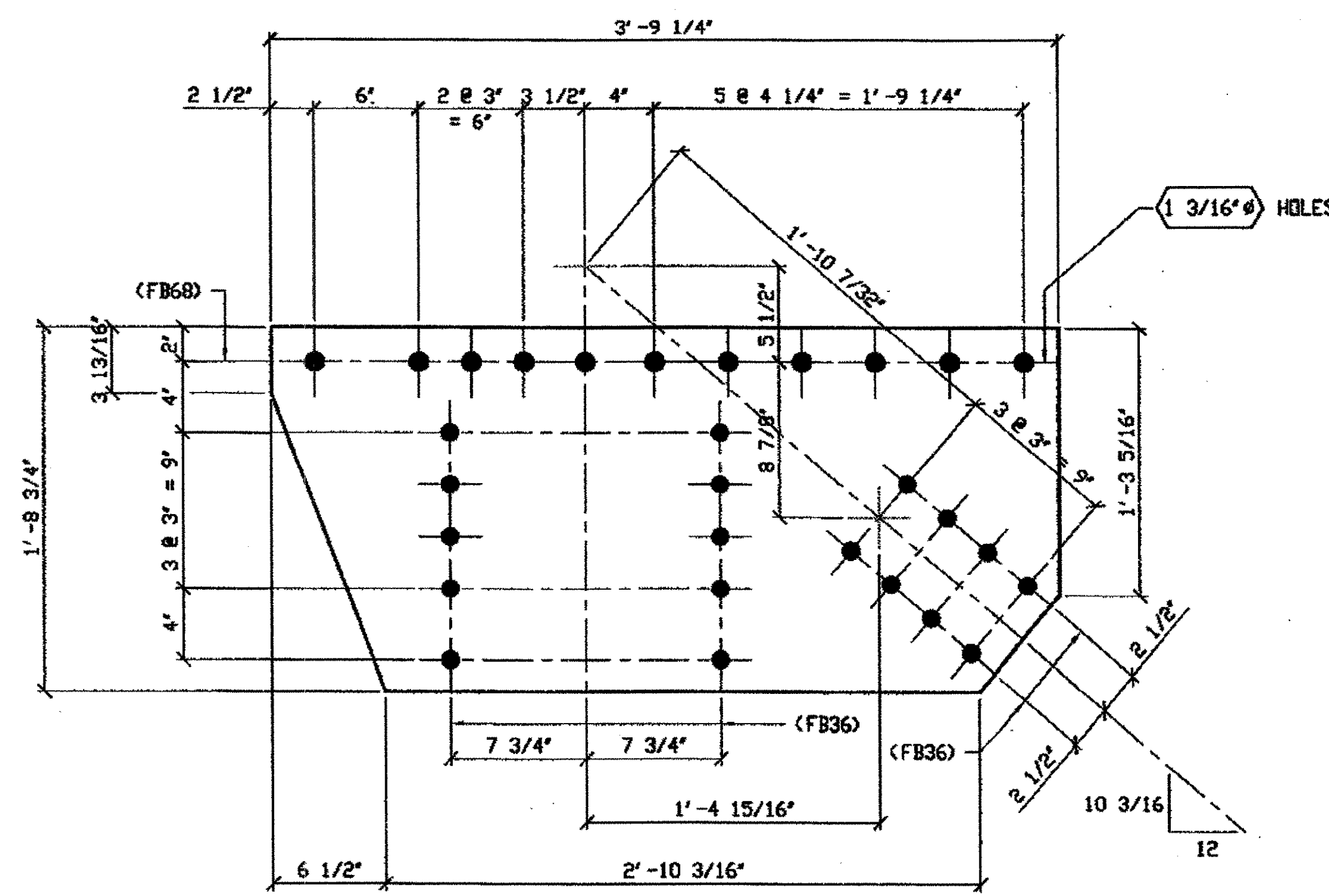
Last modified by rspringer at 9 (EDRIME,??) - 1 - Last plotted by rspringer at 02:57pm on Tue May 15, 2001



**SPAN 7**  
**L15-G NORTH EXTERIOR TOP 286A**  
**L15-G SOUTH EXTERIOR TOP 286A**

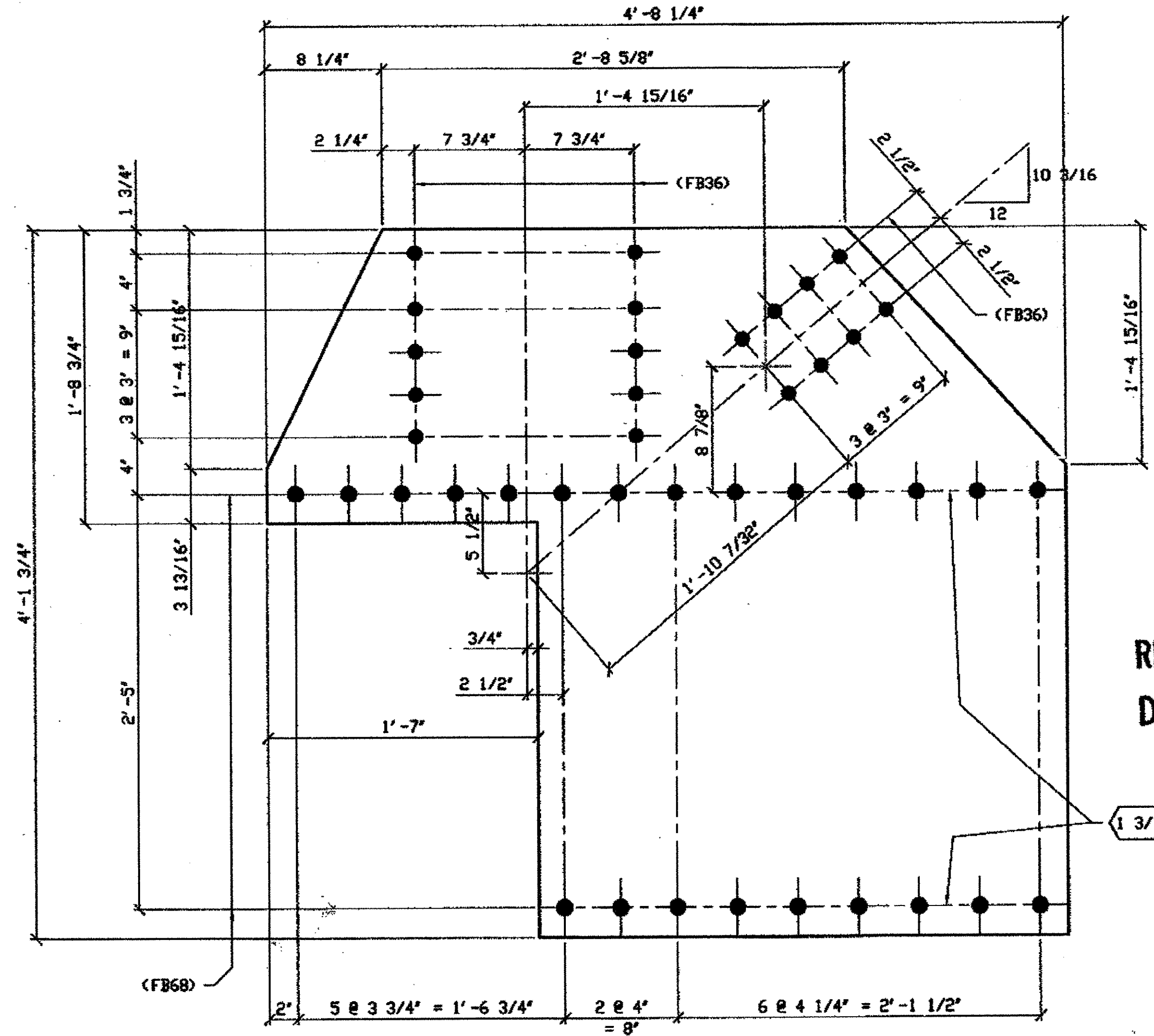
- NOTES:**
1. OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HEAVY HEX HD W/HEAVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**2 - TYPE 5 GUSSET PLATES - 286A**  
 ORIG SHIP DWG 204: L13L15-0-7 R/L  
 ORIG SHIP MARK P204c  
 ITEM No. 0121  
 REPAIR SHEETS 7-140 & 170



**SPAN 7**  
**LO-A NORTH EXTERIOR TOP 286B**

**ONE - TYPE 5 GUSSET PLATE - 286B**  
 ORIG SHIP DWG 196: L0L2-0-7/R  
 ORIG SHIP MARK P196s  
 ITEM No. 0121  
 REPAIR SHEETS 7-182



**SPAN 7**  
**LO-A NORTH EXTERIOR BOTTOM 286C**

**ONE - TYPE 6 GUSSET PLATE - 286C**  
 ORIG SHIP DWG 196: L0L2-0-7/R  
 ORIG SHIP MARK P196c  
 ITEM No. 0122  
 REPAIR SHEETS 7-182

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 5 GUSSET PLATE				
2		286A	2	PL 1/2 X 20 3/4	3	9 1/2		246
3		286B	1	PL 1/2 X 20 3/4	3	9 1/4		124
4								
5				TYPE 6 GUSSET PLATE				
6		286C	1	PL 9/16 X 49 3/4	4	8 1/4		326
7								
8				FIELD BOLTS				
9		FB36	72	1" DIA	0	2 1/2	NOTE 2	100
10		FB68	56	1 1/8" DIA	0	2 3/4	NOTE 2	108
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

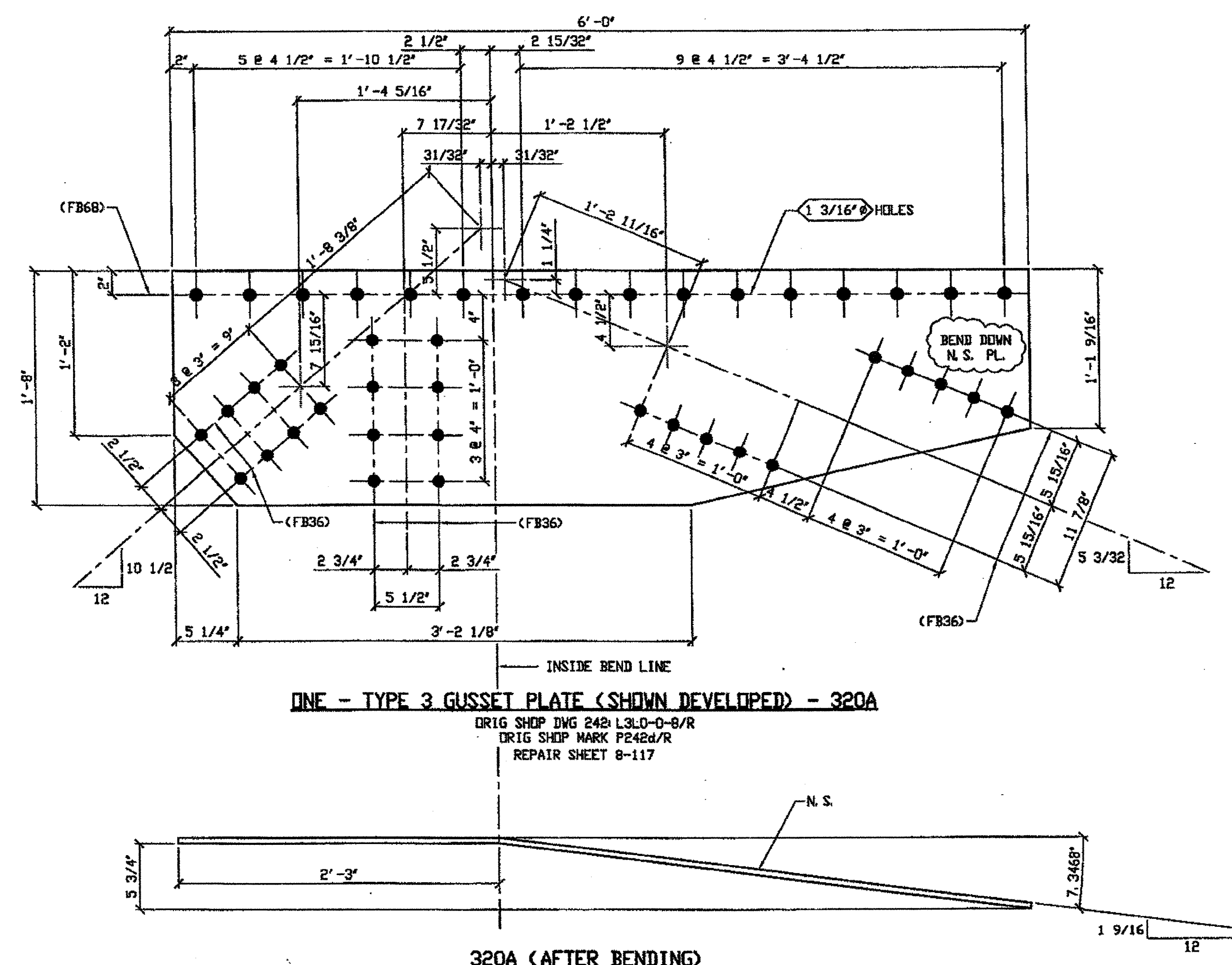
**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**RELEASED FOR CONSTRUCTION**  
 DATE 4/1/01 BY EDP



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E5000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
FABRICATOR <b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY CAMPBELL, PA 15106 PHONE (412) 631-3000 FAX (412) 631-4001			SHEET NUMBER 286
STEEL ERECTOR <b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335			AM. JOB NUMBER 800010
CH. IN CHARGE: L. SMITH			
DRAWN BY: DATE: RAS 04/23/01			
CHECKED BY: DATE: GAF 05/01/01			



ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 320A  
 ORIG SHOP DWG 242 L3LD-0-8/R  
 ORIG SHOP MARK P242d/R  
 REPAIR SHEET 8-117

SPAN 8  
 L4-E NORTH EXTERIOR TOP 320A

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 3 GUSSET PLATE					
2		320A	1	PL 1/2 X 20	6	0	BEND	189	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15				FIELD BOLTS					
16		FB96	26	1" DIA.	0	2 1/8	NOTE 2	36	
17		FB69	16	1 1/8" DIA.	0	2 9/8	NOTE 2	31	
18									
19									
20									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE  $1 \frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED 2/4/01  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/2/01 BY tdp/ess

DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E5000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 8 REPAIRS

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 691-3000  
 FAX (412) 691-8001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

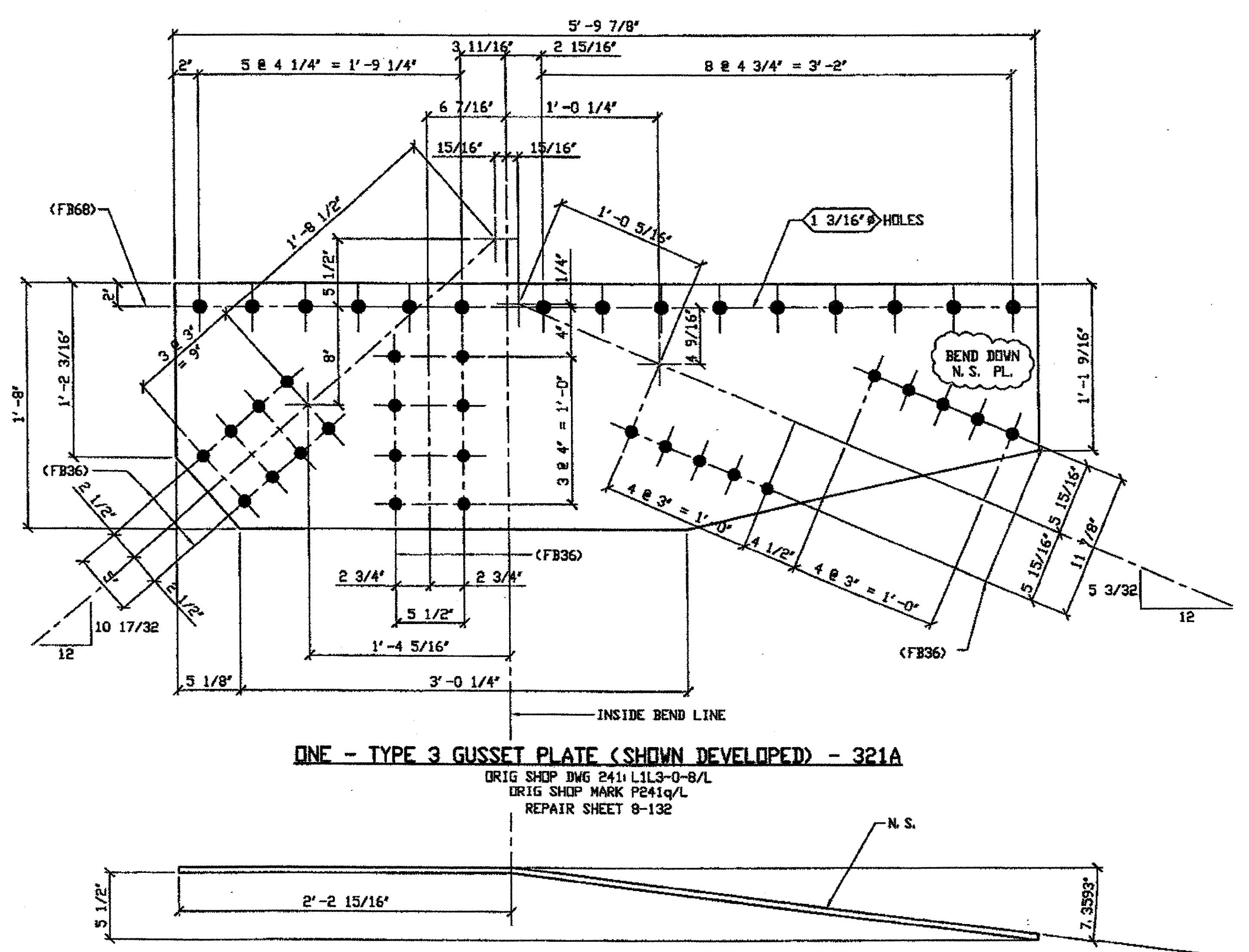
IN CHARGE OF L. SMITH  
 DRAWN BY DATE  
 JRC 05/11/01  
 CHECKED BY DATE  
 GAF 08/07/01

SHEET NUMBER: 320  
 AMN JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\1320A.dwg  
 Save by ofas at 11:54am Oct 05, 2001  
 Plot by ofas at 11:54am Oct 05, 2001  
 Model space plot + Scale = 1/6

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 3 GUSSET PLATE					
2		321A	1	PL 1/2 X 20	5	9 7/8		183	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16				FIELD BOLTS					
17		FB36	26	1" DIA.	0	2 3/4	NOTE 2	36	
18		FB68	15	1 1/8" DIA.	0	2 3/4	NOTE 2	29	
19									
20									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2	

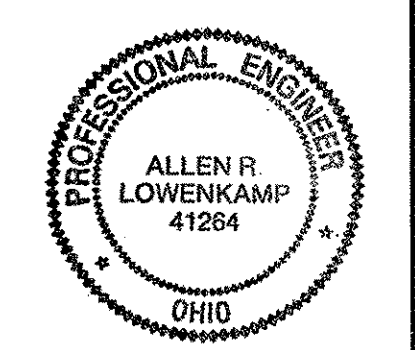
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND RETENTIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 321A  
 ORIG SHOP DWG 2411L1L3-0-8/L  
 ORIG SHOP MARK P241q/L  
 REPAIR SHEET 8-132

SPAN 8  
 LI-B SOUTH EXTERIOR TOP 321A

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 4/23/01 BY [signature]

DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 8 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

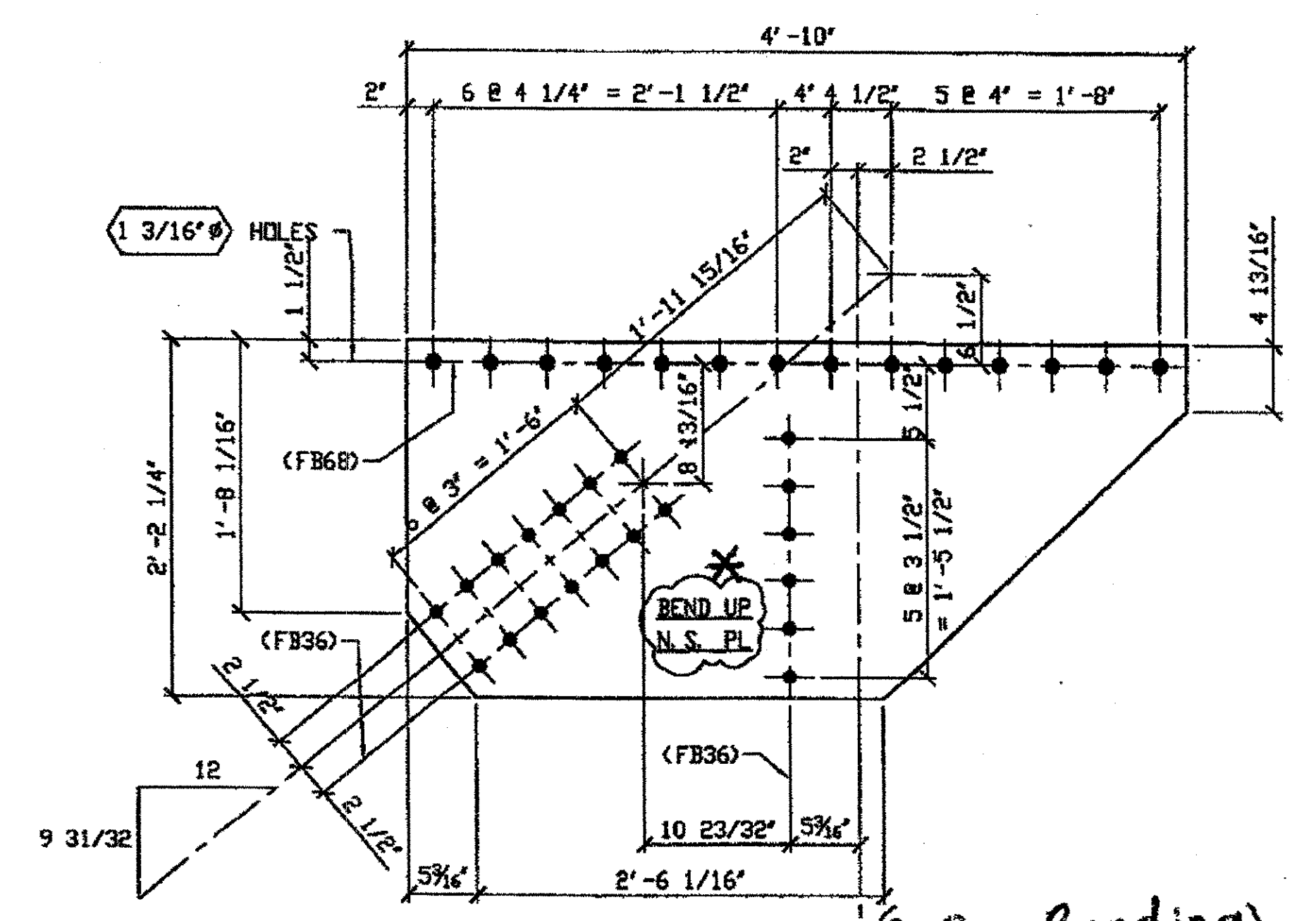
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 JRC 05/11/01  
 CHECKED BY: DATE  
 GAF 08/07/01

SHEET NUMBER: 321  
 A321 JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\321a.dwg  
 Save by gFos at 11:55am Oct 05, 2001  
 Plot by gFos at 11:55am Oct 05, 2001  
 Model space plot + Scale = 1/6

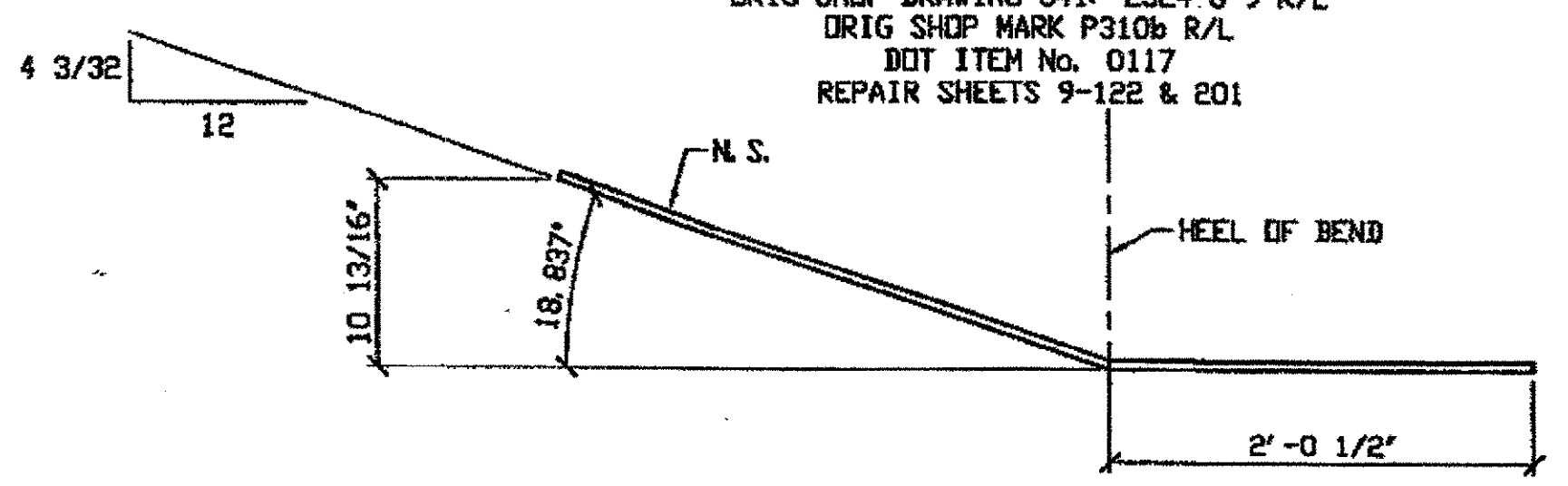
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE			BEND	
2		331A R/L	2	PL 1/2 X 26 1/4	4	10	1/R 1/L	366
3								
4				TYPE 2 GUSSET PLATE			BEND	
5		331B R/L	2	PL 1/2 X 26 1/4	5	8	1/R 1/L	441
6								
7								
8				FIELD BOLTS				
9		FB36	86	1" DIA	0	2 1/2	NOTE 2	120
10		FB68	54	1 1/8" DIA	0	2 3/4	NOTE 2	104
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



2 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 331A R/L

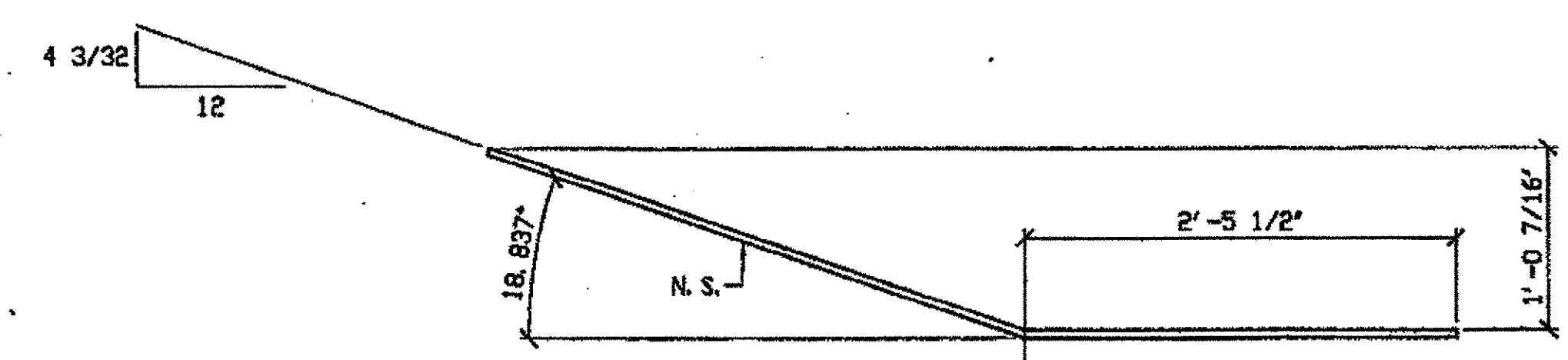
ORIG SHOP DRAWING 341: L3L4-0-9 R/L  
ORIG SHOP MARK P310b R/L  
DOT ITEM No. 0117  
REPAIR SHEETS 9-122 & 201



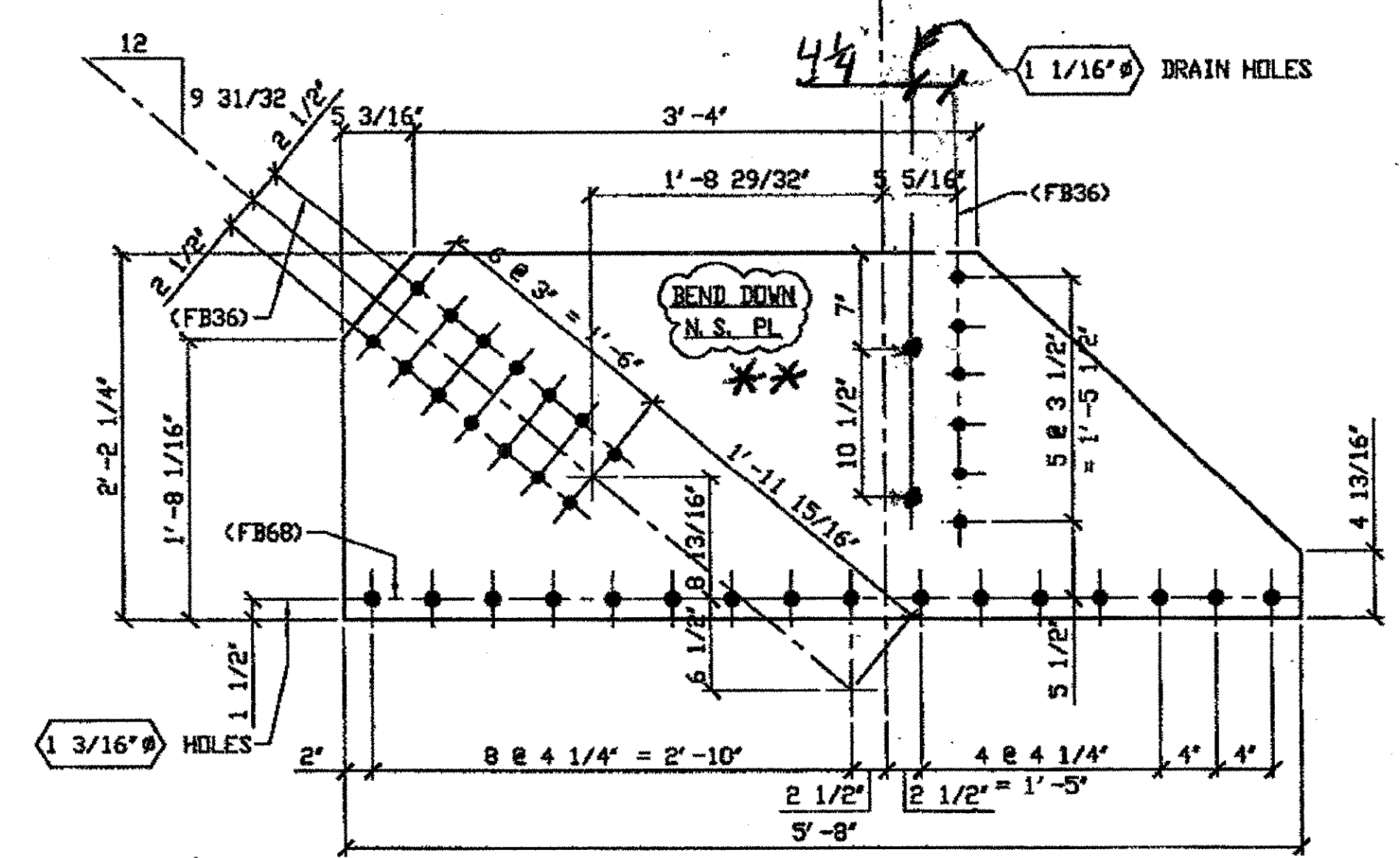
331A/R (AFTER BENDING)

SPAN 9 L3 NORTH EXTERIOR TOP 331A/R  
SPAN 9 L3 SOUTH EXTERIOR TOP 331A/L

\* Bend down for L



331B/R (AFTER BENDING)



2 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 331B R/L

ORIG SHOP DRAWING 341: L3L4-0-9 R/L  
ORIG SHOP MARK P310h R/L  
DOT ITEM No. 0118  
REPAIR SHEETS 9-122 & 201

SPAN 9 L3-D NORTH EXTERIOR BOTTOM 331B/R  
SPAN 9 L3-D SOUTH EXTERIOR BOTTOM 331B/L

\*\* Bend up for L

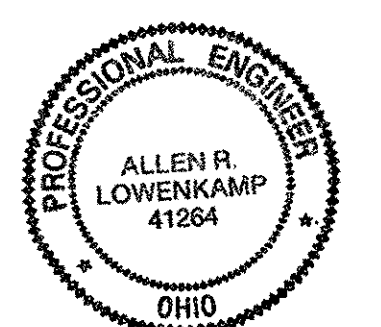
O.D.O.T. DIST. 12

ACCEPTED \_\_\_\_\_

ACCEPTED AS NOTED \_\_\_\_\_

NOT ACCEPTED \_\_\_\_\_

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E5000

NO.	DATE	REVISIONS	BY
A	11/29/01	REVISE PER APPROVAL COMMENTS	RAS

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
FORSYTH, PA 15106  
PHONE (412) 631-3000  
FAX (412) 631-4001

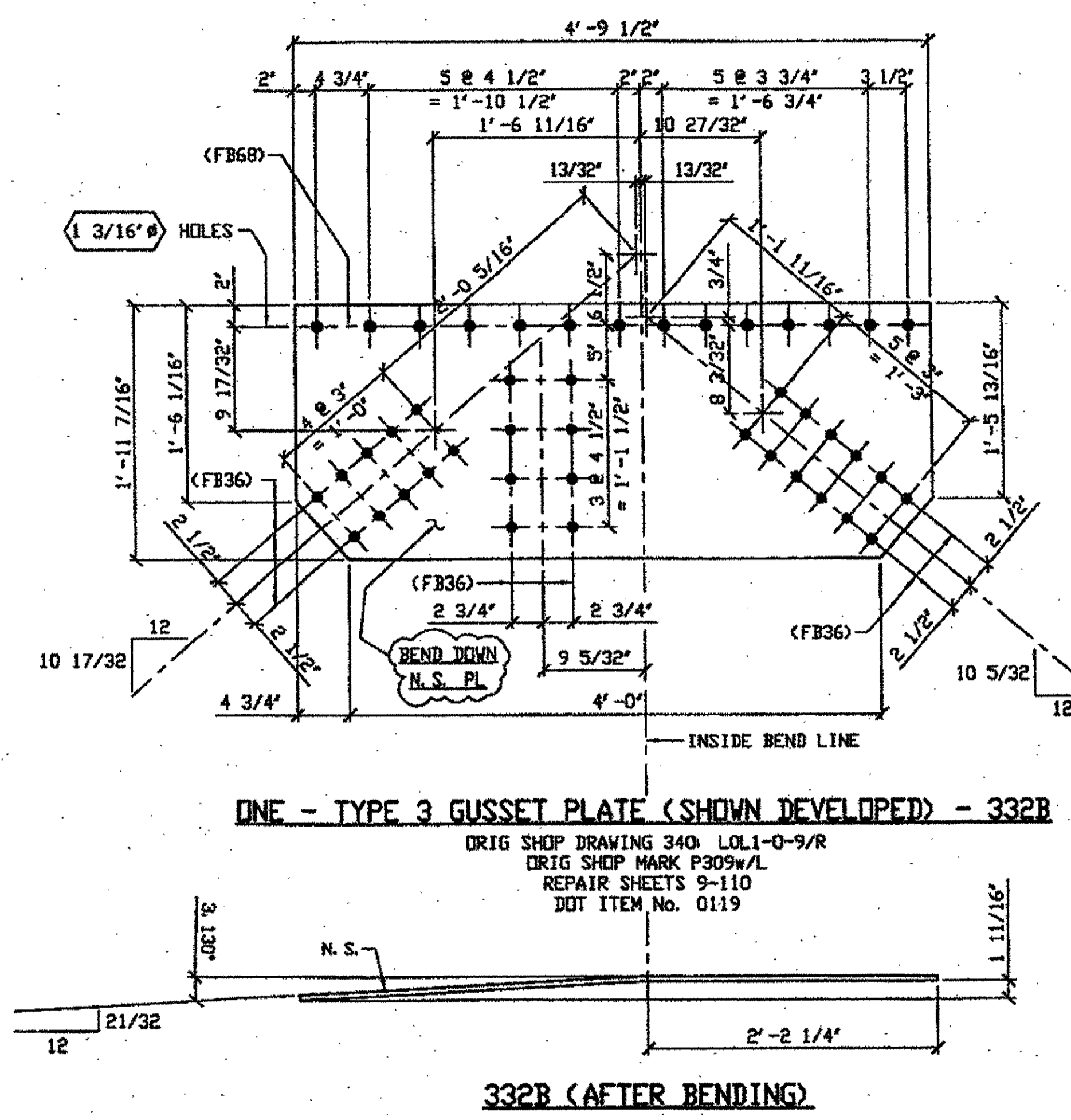
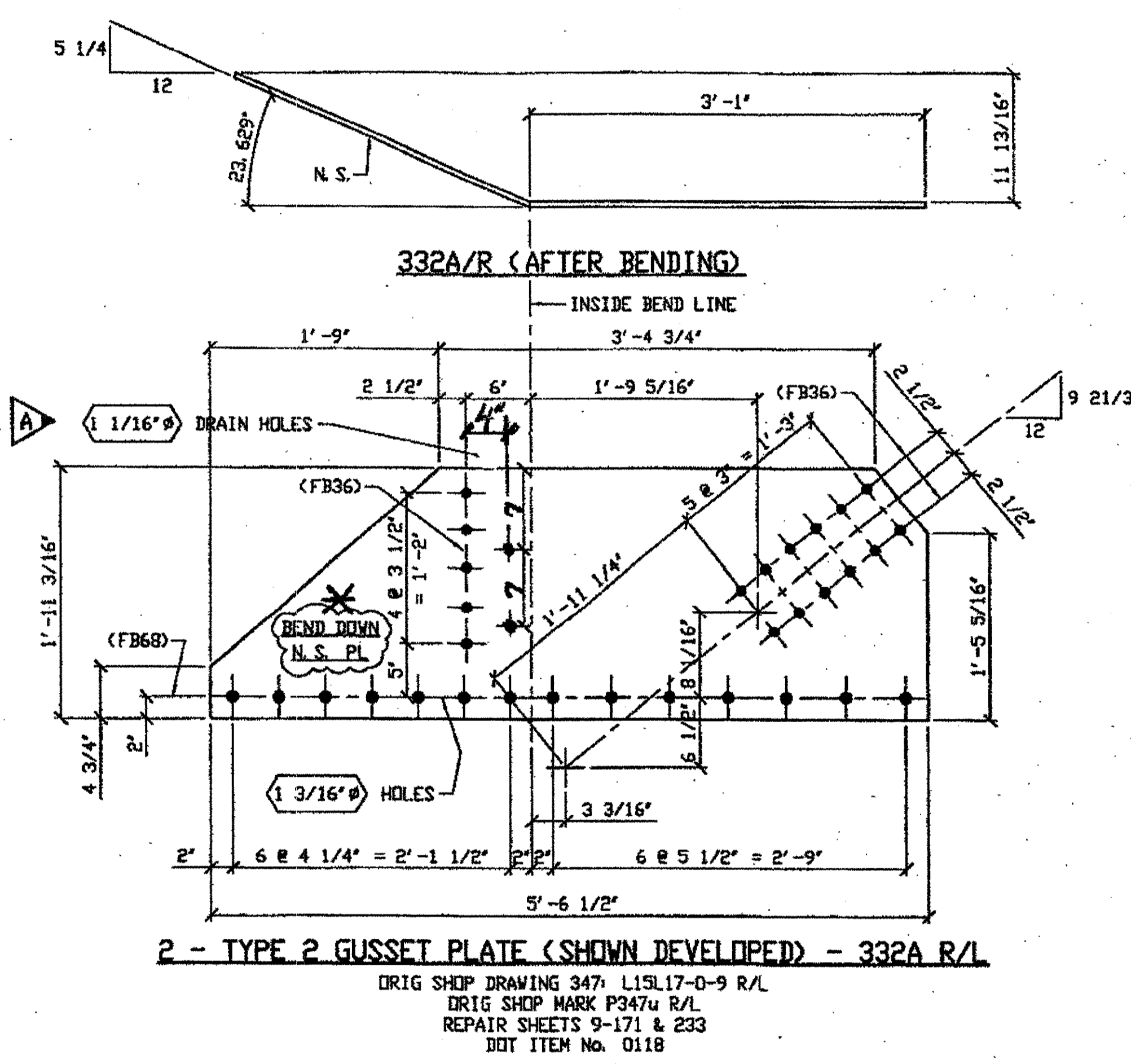
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF L SMITH  
DRAWN BY: DATE  
RAS 07/10/01  
CHECKED BY: DATE  
GAF 10/15/01

SHEET NUMBER  
331  
JOB NUMBER  
800010

G:\Contracts\2000\800010\Drawings\331A.dwg  
Save by rasm at 02:56pm Dec 13, 2001  
Plot by gbas at 09:38am Dec 17, 2001  
Model Space Plot - Scale = 1/9



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 GUSSET PLATE				
2		332A R/L	2	PL 1/2 X 23 3/16	5	6 1/2	BEND	377
3								
4				TYPE 3 GUSSET PLATE				
5		332B	1	PL 1/2 X 23 7/16	4	9 1/2	BEND	187
6								
7								
8				FIELD BOLTS				
9		FB36	64	1" DIA	0	2 1/2	NOTE 2	89
10		FB68	42	1 1/8" DIA	0	2 3/4	NOTE 2	81
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TT-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 9**  
**L1-B NORTH EXTERIOR TOP 332B**

**SPAN 9**  
**L15-Q NORTH EXTERIOR BOTTOM 332A/R**  
**L15-Q SOUTH EXTERIOR BOTTOM 332A/L**

**\* BEND UP FOR L**

G:\Contracts\2000\800010\Drawings\332A.dwg  
 Save by rjpr at 03:56pm Dec 13, 2001  
 Plot by gfos at 09:38am Dec 17, 2001  
 Model space plot + Scale = 1/9

**O.D.O.T. DIST. 12**

ACCEPTED	2/1/04 Dm
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISED PER APPROVAL COMMENTS	BY
A	12/10/01	REVISED PER APPROVAL COMMENTS	GAF

**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**

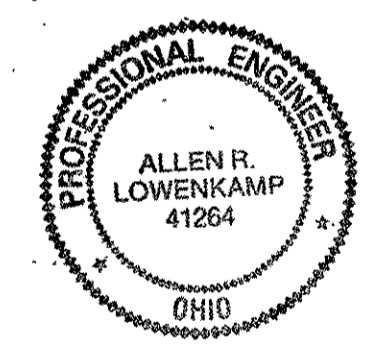
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 07/10/01  
 CHECKED BY: DATE: GAF 08/20/01

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

SHEET NUMBER: 332  
 AIRC JOB NUMBER: 800010

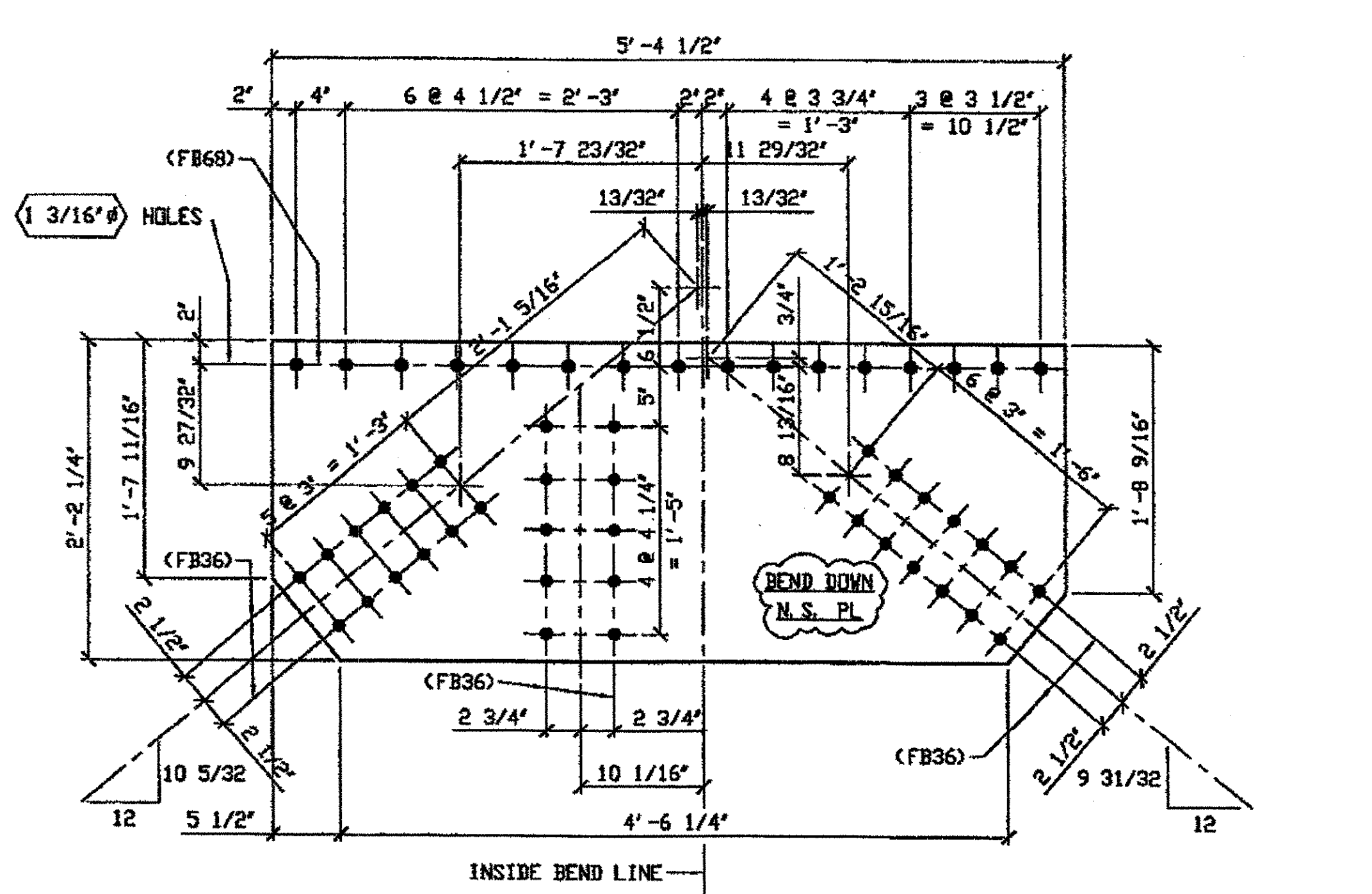




**BILL OF MATERIAL**

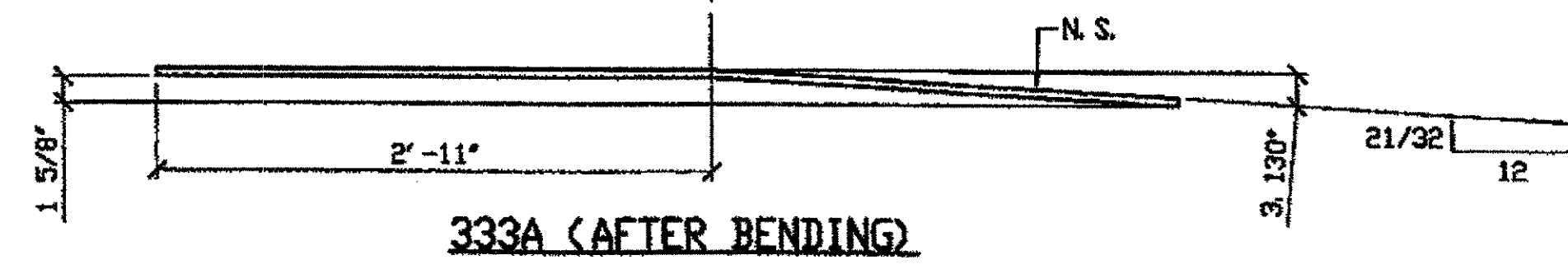
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		333A	1	PL 1/2 X 26 1/4	5	4 1/2	BEND	235
3		333B	1	PL 1/2 X 23 5/8	4	11 1/2	BEND	185
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	64	1" DIA	0	2 1/2	NOTE 2	89
10		FB68	30	1 1/8" DIA	0	2 3/4	NOTE 2	58
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES N/A				FLGS. N/A			BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE  $(1\ 3/16\ \phi)$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLTS, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



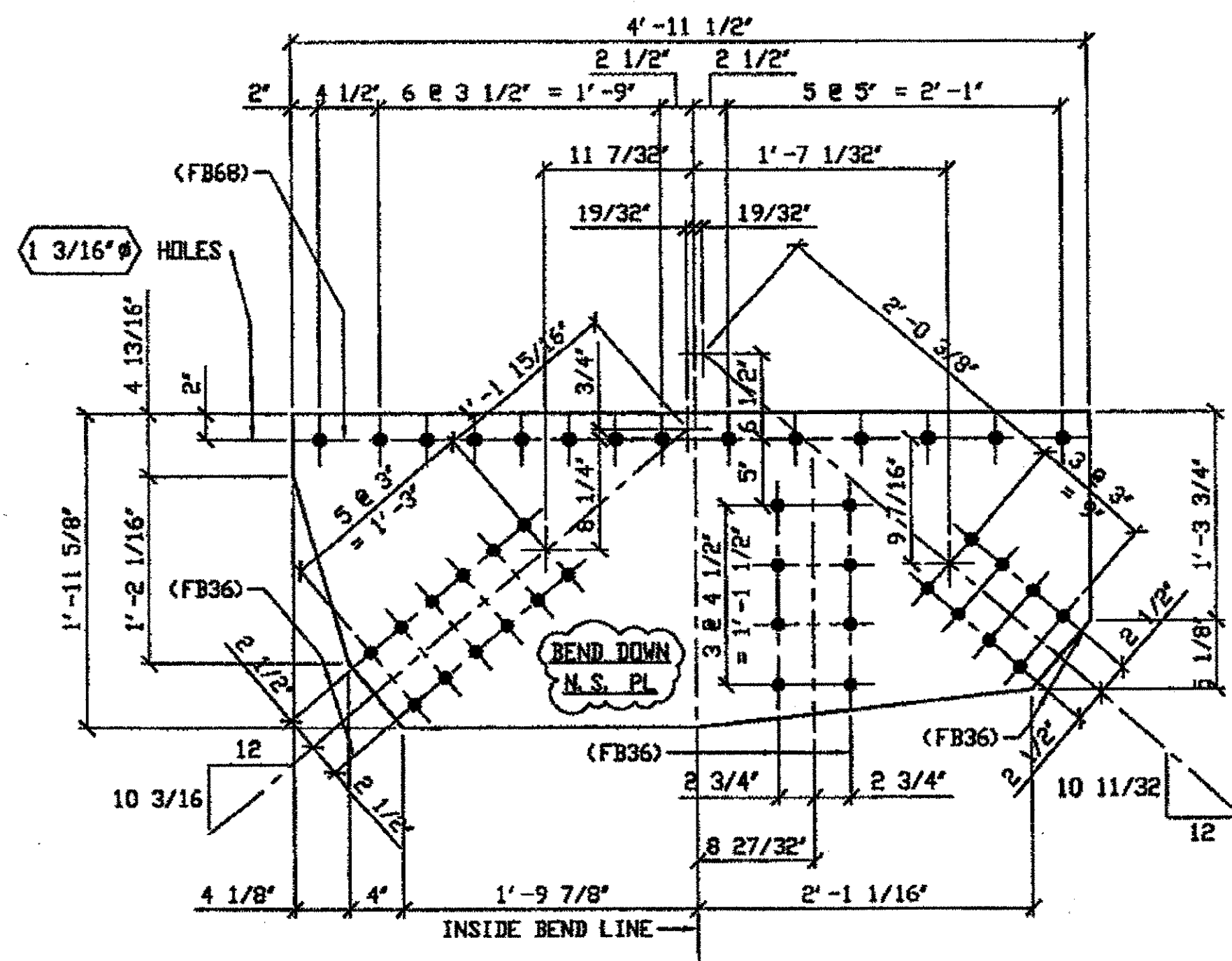
**ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 333A**

DRIG SHOP DRAWING 340 L1L3-0-9/R  
DRIG SHOP MARK P309y/L  
REPAIR SHEETS 9-115



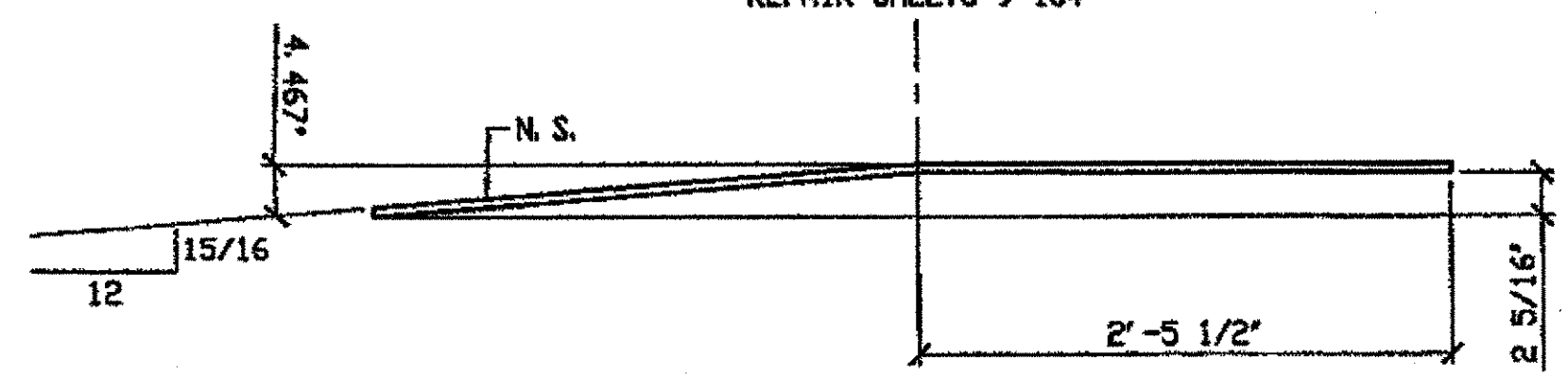
**333A (AFTER BENDING)**

**SPAN 9**  
**L2-C NORTH EXTERIOR TOP 333A**



**ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 333B**

DRIG SHOP DRAWING 343 L6L8-0-9/R  
DRIG SHOP MARK P312s/L  
REPAIR SHEETS 9-134



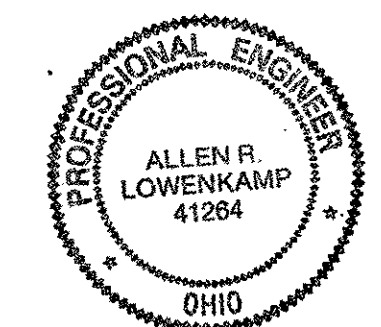
**333B (AFTER BENDING)**

**SPAN 9**  
**L6-G NORTH EXTERIOR TOP 333B**

**O.D.O.T. DIST. 12**

ACCEPTED	2/19/01	DJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0119  
DOT BID ITEM NO. 863E5000Q

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
SHEET NUMBER: 333			AM JOB NUMBER: 80010

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
COMBLETZ, PA 15109  
PHONE (412) 631-3000  
FAX (412) 631-4001

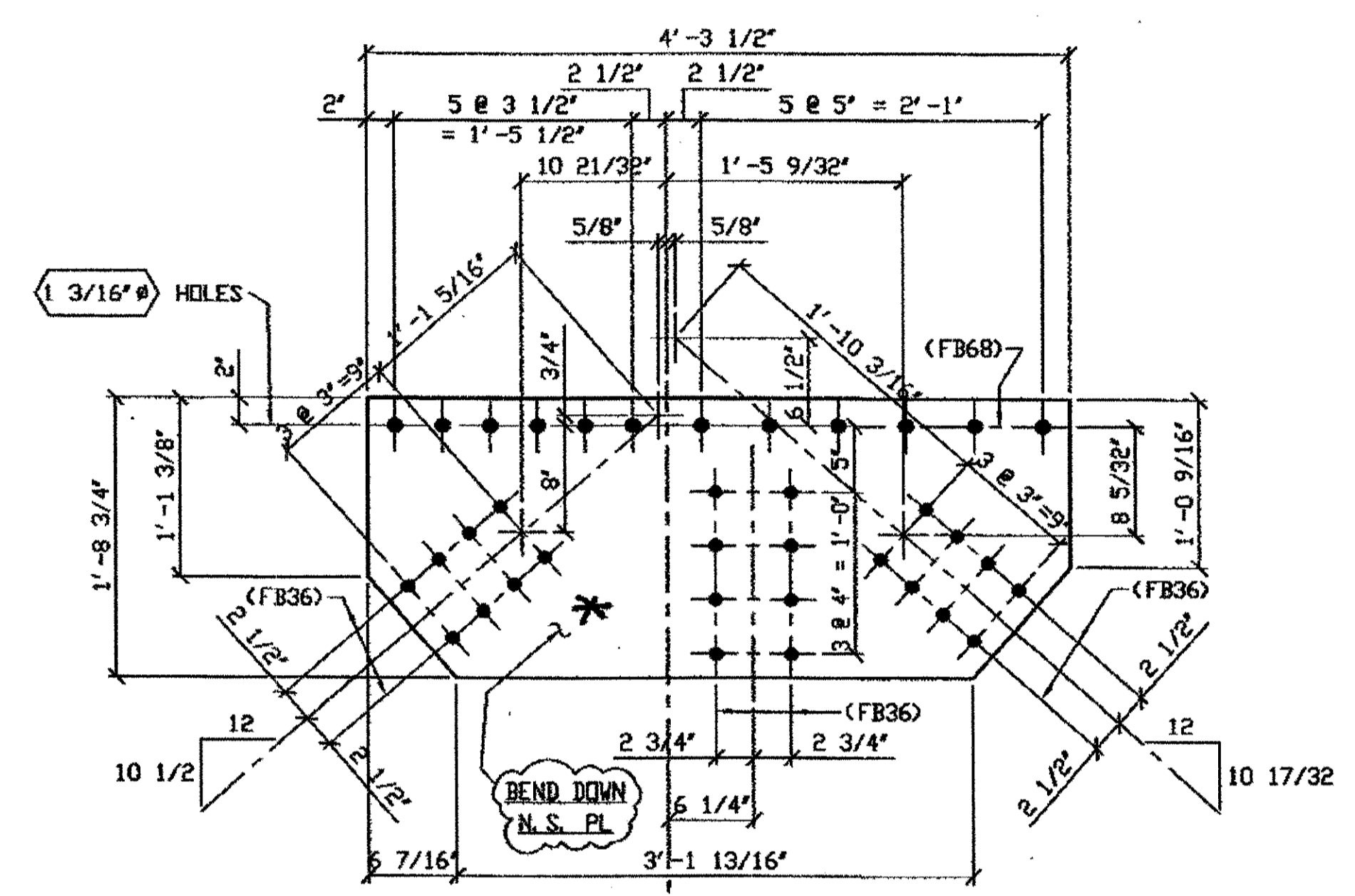
**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 07/10/01  
CHECKED BY: DATE: GAF 08/21/01

G:\Contracts\2000\0001\Drawings\333A.dwg  
Save by RSP on 01/03/01  
Plot by GRS on 01/10/01  
Model Space plot - Scale = 1/3

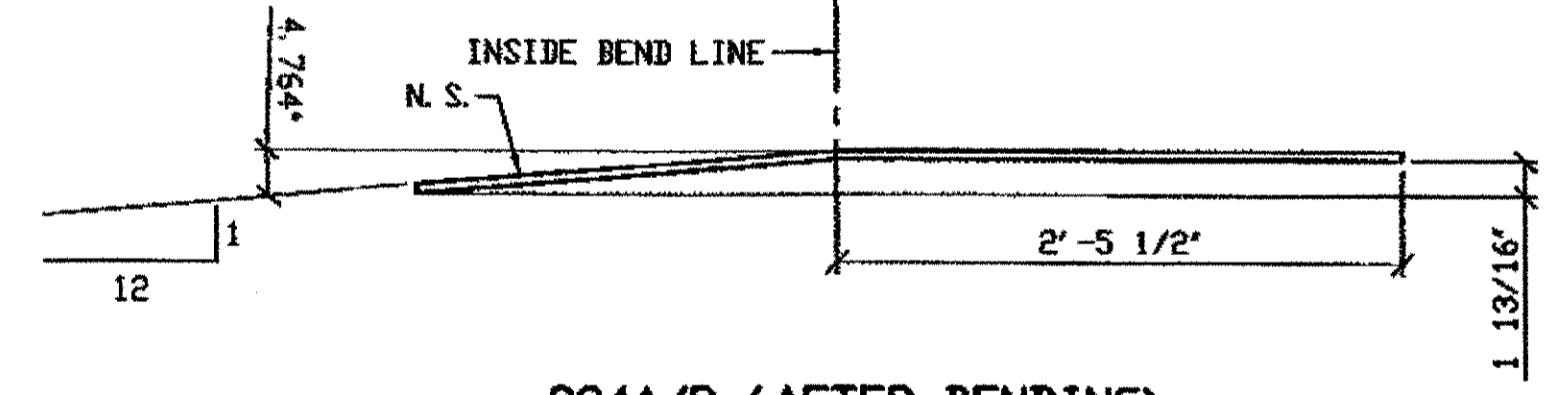
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		334A R/L	2	PL 1/2 X 20 3/4	4	3 1/2	BEND	288
3		334B	1	PL 1/2 X 20 3/4	4	2 1/2	BEND	143
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	72	1" DIA	0	2 1/2	NOTE 2	100
10		FB69	37	1 1/8" DIA	0	2 3/4	NOTE 2	71
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



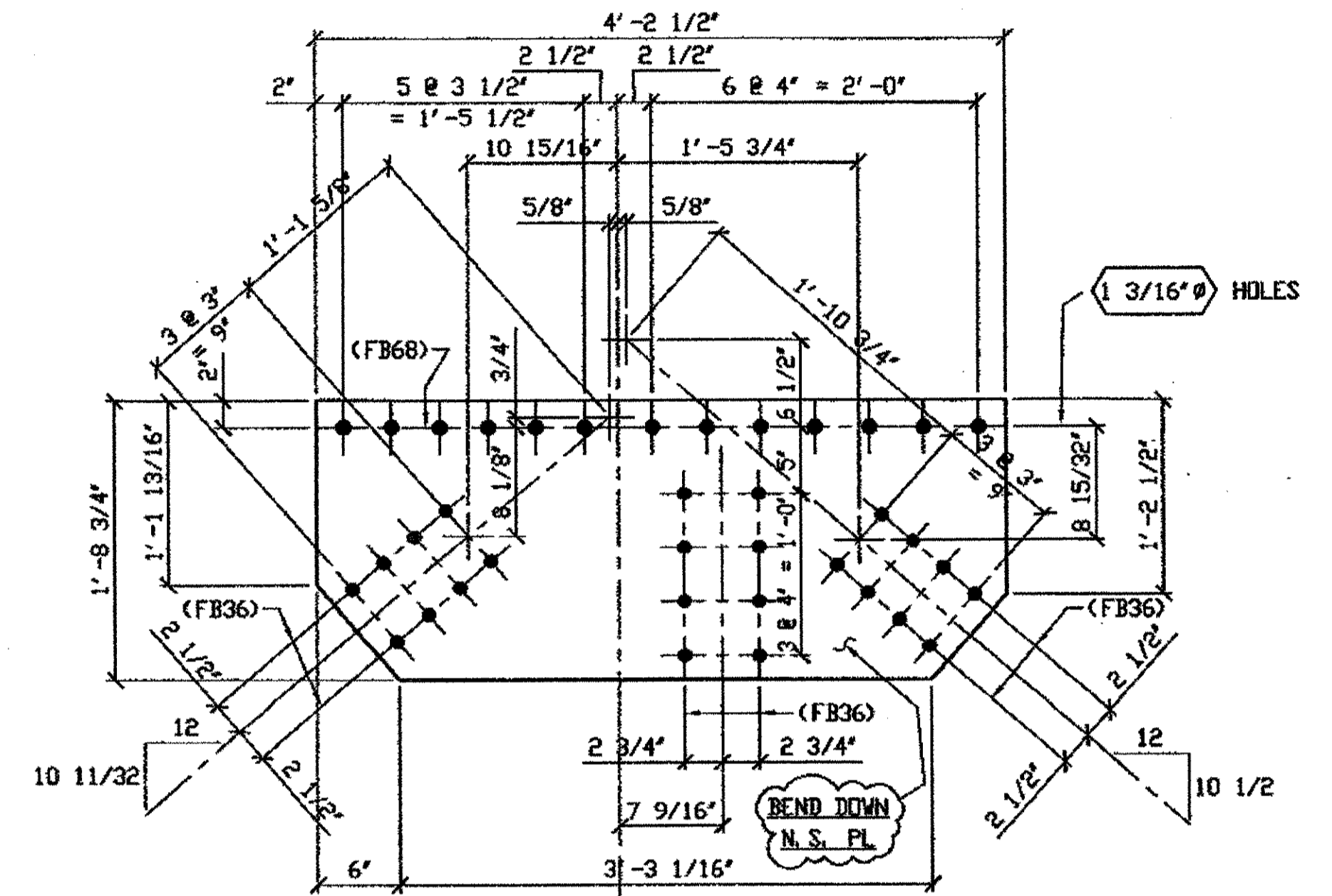
2 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 334A R/L

ORIG SHOP DRAWING 344: LBL10-0-9 R/L  
ORIG SHOP MARK P313p R/L  
REPAIR SHEETS 9-144 & 215



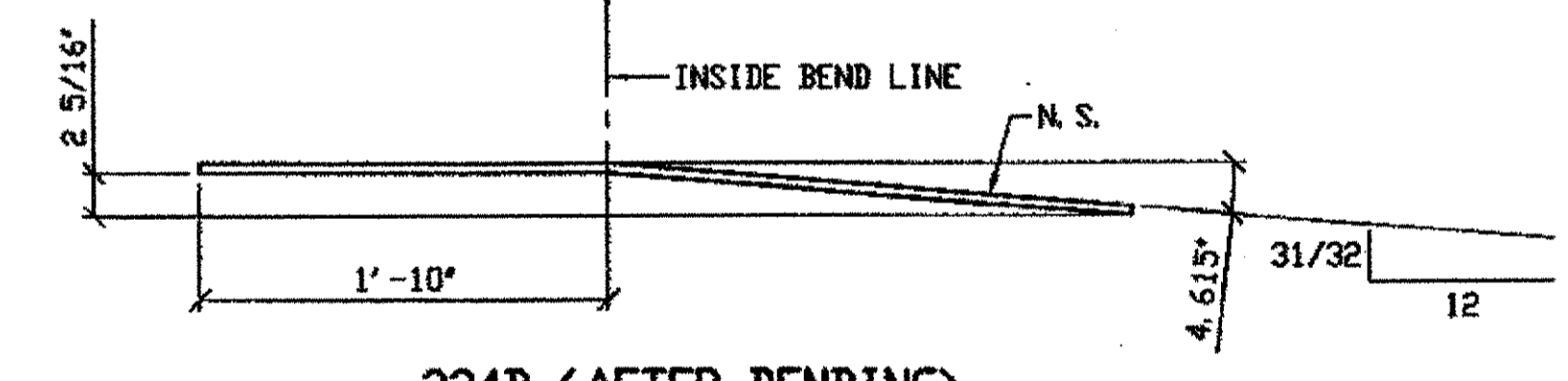
334A/R (AFTER BENDING)  
\* BEND UP FOR L

SPAN 9  
L8-J SOUTH EXTERIOR TOP 334A/L  
L8-J NORTH EXTERIOR TOP 334A/R



1 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 334B

ORIG SHOP DRAWING 343: L6L8-0-9/R  
ORIG SHOP MARK P312w/L  
REPAIR SHEETS 9-150

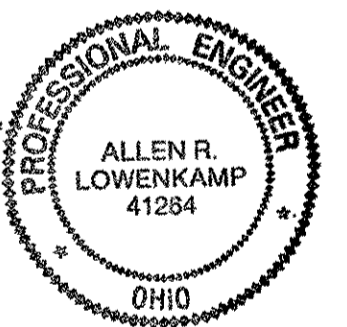


334B (AFTER BENDING)

SPAN 9  
L7-H NORTH EXTERIOR TOP 334B

O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 P.33M
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	

RELEASED FOR CONSTRUCTION  
DATE 11/29/01 BY LDP/ESS



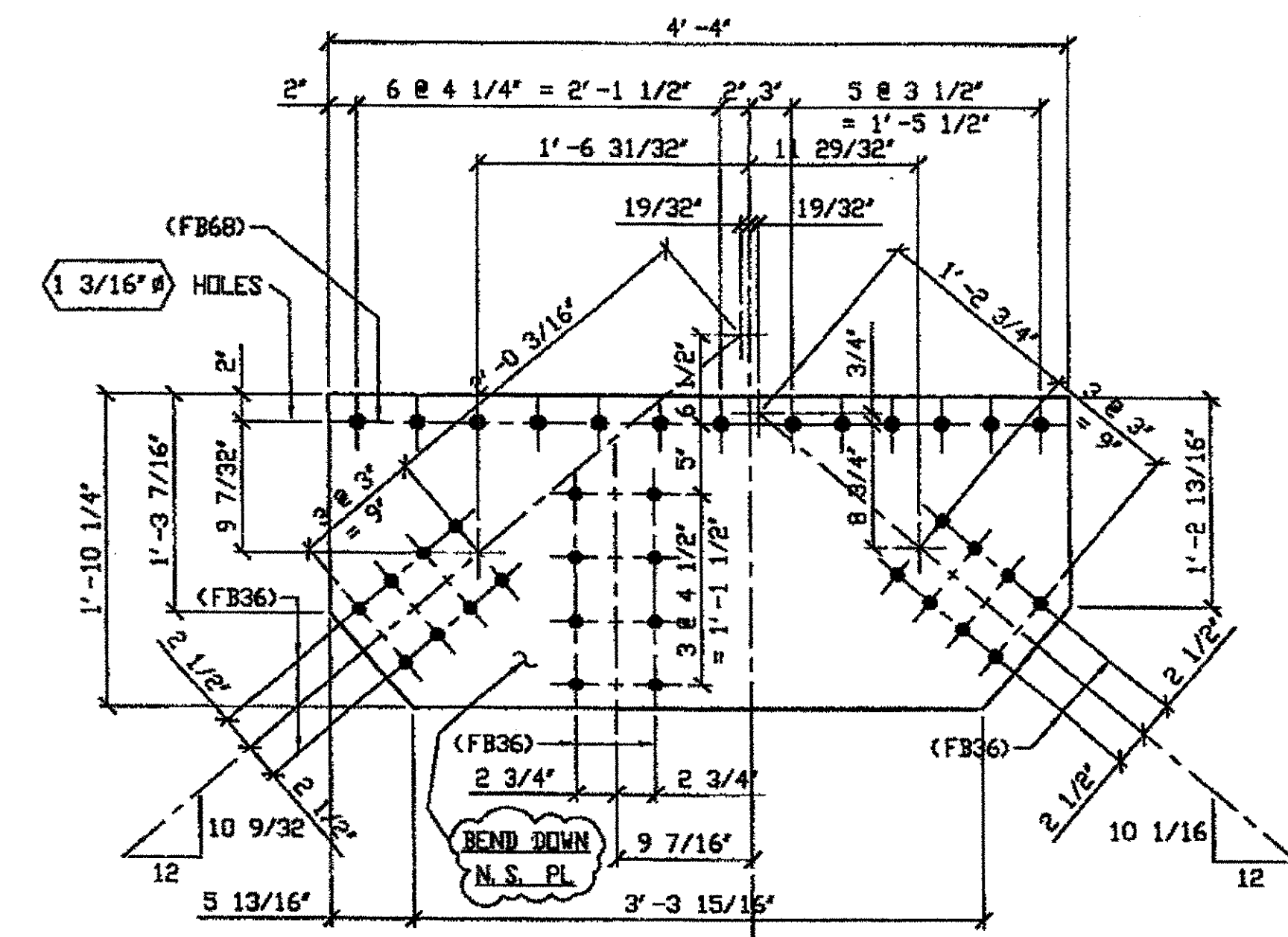
DOT ITEM LINE NO. 0119  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR		SHEET NUMBER	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORADELLO, PA. 15108 PHONE (412) 631-3000 FAX (412) 631-4001		334	
STEEL ERECTOR		JOB NUMBER	
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335		80010	
IN CHARGE OF: I. SMITH		DRAWN BY: DATE	
		RAS 07/11/01	
CHECKED BY: DATE		GAF 08/21/01	

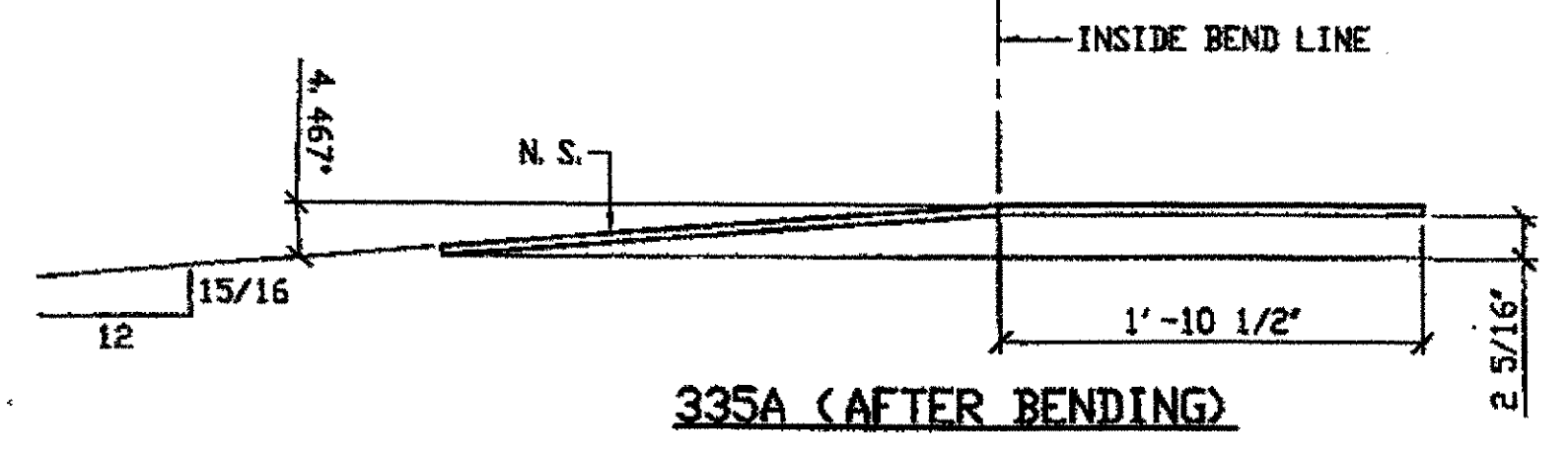
H:\contracts\80001002\1034A.dwg  
Save by RSP at 08:56pm Oct 17, 2001  
Plot by RSP at 08:57pm Oct 17, 2001  
Model Space plot + Scale = 1/9

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		335A	1	PL 1/2 X 22 1/4	4	4	BEND	158
3								
4				TYPE 4 GUSSET PLATE				
5		335B	1	PL 5/8 X 54 1/8	6	11 7/8	BEND	727
6								
7								
8				FIELD BOLTS				
9		FB36	52	1" DIA	0	2 1/2	NOTE 2	72
10		FB68	53	1 1/8" DIA	0	2 3/4	NOTE 2	102
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

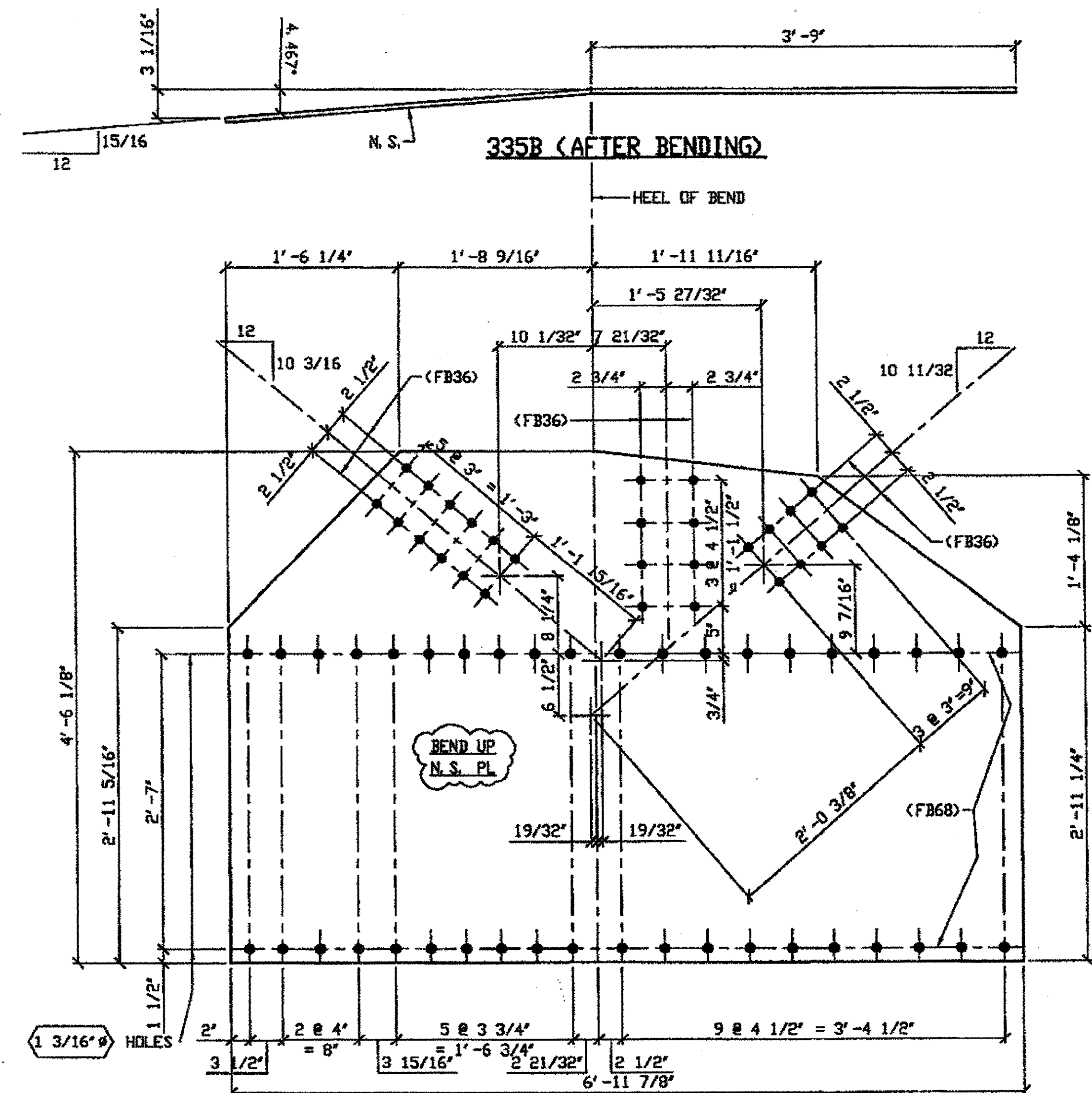


ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 335A  
 ORIG SHOP DRAWING 346 L12L14-0-9/R  
 ORIG SHOP MARK P315e/L  
 DOT ITEM No. 0119  
 REPAIR SHEETS 9-159



335A (AFTER BENDING)

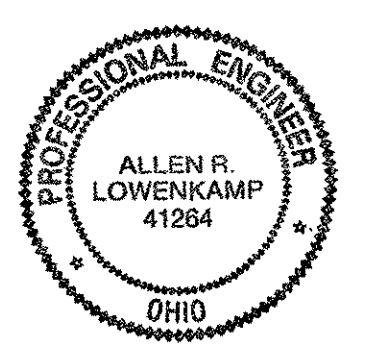
SPAN 9  
 L-12-N NORTH EXTERIOR TOP 335A



ONE - TYPE 4 GUSSET PLATE (SHOWN DEVELOPED) - 335B  
 ORIG SHOP DRAWING 343 L6L8-0-9/R  
 ORIG SHOP MARK P312ae/L  
 DOT ITEM No. 0120  
 REPAIR SHEETS 9-134

SPAN 9  
 L6-G NORTH EXTERIOR BOTTOM 335B

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E5000Q

NO.	DATE	DESCRIPTION	BY

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNWALL, PA 15008  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

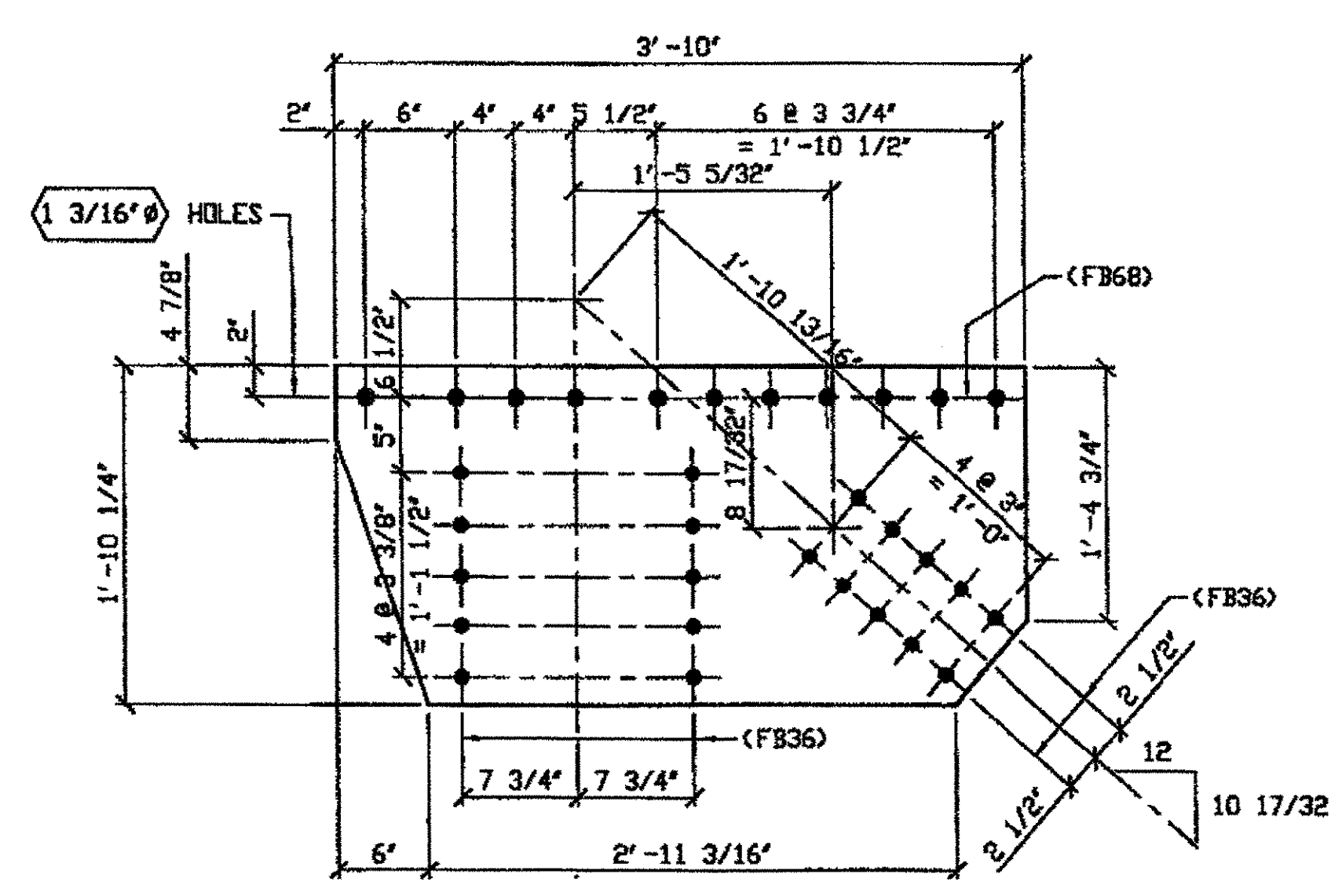
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: 07/11/01  
 CHECKED BY: DATE: 08/21/01  
 GAF

SHEET NUMBER: 335  
 AM JOB NUMBER: 80010

G:\Contracts\2000\800010\Drawings\J335A.dwg  
 Save by rppr at 09:56pm Dec 13, 2001  
 Plot by gfos at 09:41am Dec 17, 2001  
 Model Space plot + Scale = 1/9

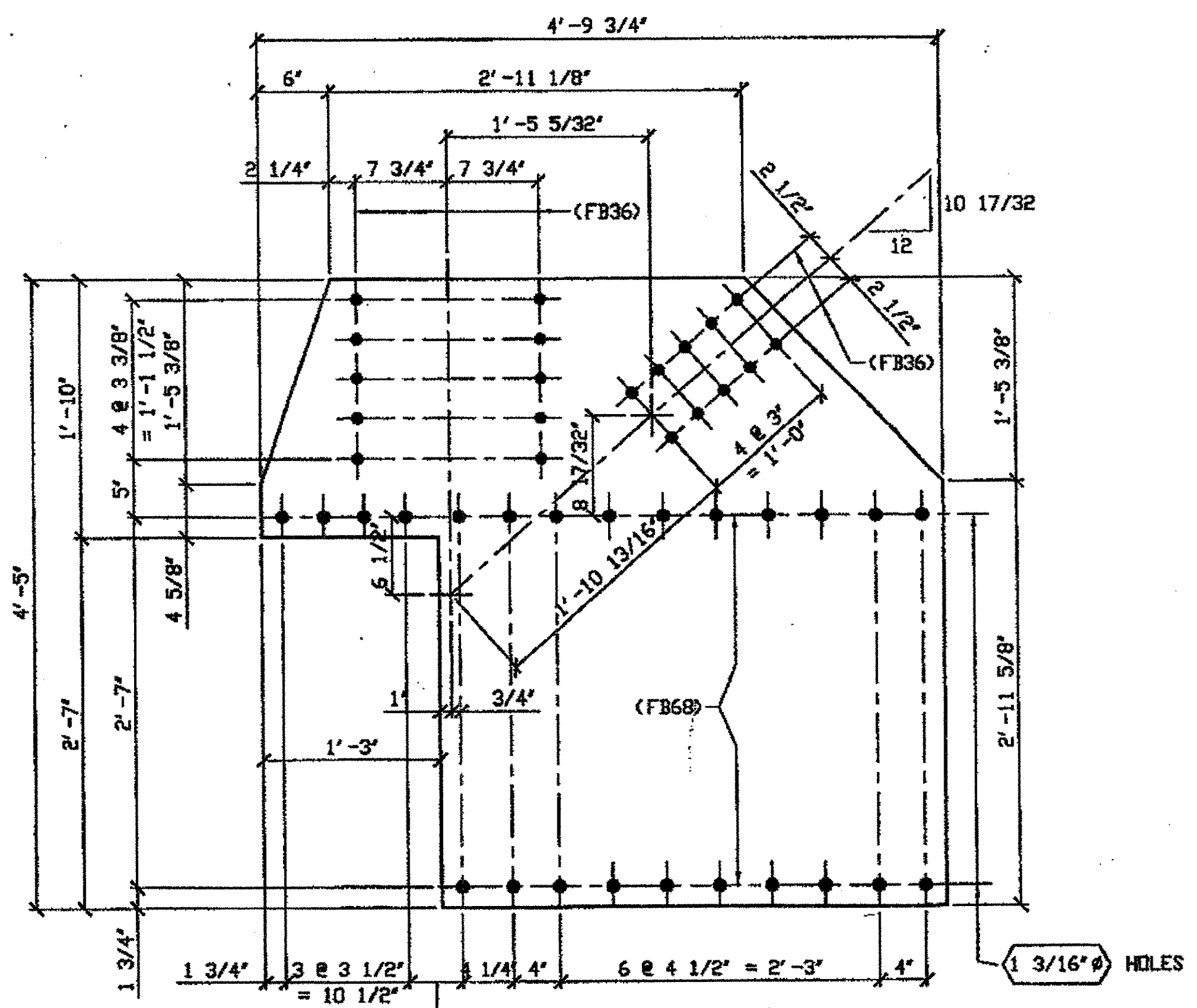
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 5 GUSSET PLATE				
2		336A	3	PL 1/2 X 22 1/4	3	10		
3								
4				TYPE 6 GUSSET PLATE				
5		336B	2	PL 5/8 X 53	4	9 3/4		
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**3 - TYPE 5 GUSSET PLATE - 336A**  
 ORIG SHOP DRAWING 339 L01-0-9 R/L  
 ORIG SHOP MARK P308F  
 DDT ITEM No. 0121  
 REPAIR SHEETS 9-105 & 204

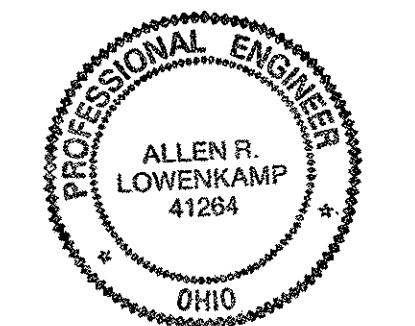
SPAN 9  
 L0-A NORTH INTERIOR TOP 336A  
 L0-A NORTH EXTERIOR TOP 336A  
 L0-A SOUTH EXTERIOR TOP 336A



**2 - TYPE 6 GUSSET PLATE - 336B**  
 ORIG SHOP DRAWING 339 L01-0-9/R  
 ORIG SHOP MARK P339F  
 DDT ITEM No. 0122  
 REPAIR SHEETS 9-105

SPAN 9  
 L0-A NORTH EXTERIOR BOTTOM 336B  
 L0-A SOUTH EXTERIOR BOTTOM 336B

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



G:\Contracts\2000\8000\10\Drawings\336A.dwg  
 Save by rskr at 08:04am Dec 17, 2001  
 Plot by gfsa at 09:42am Dec 17, 2001  
 Model Space plot + Scale = 1/9

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

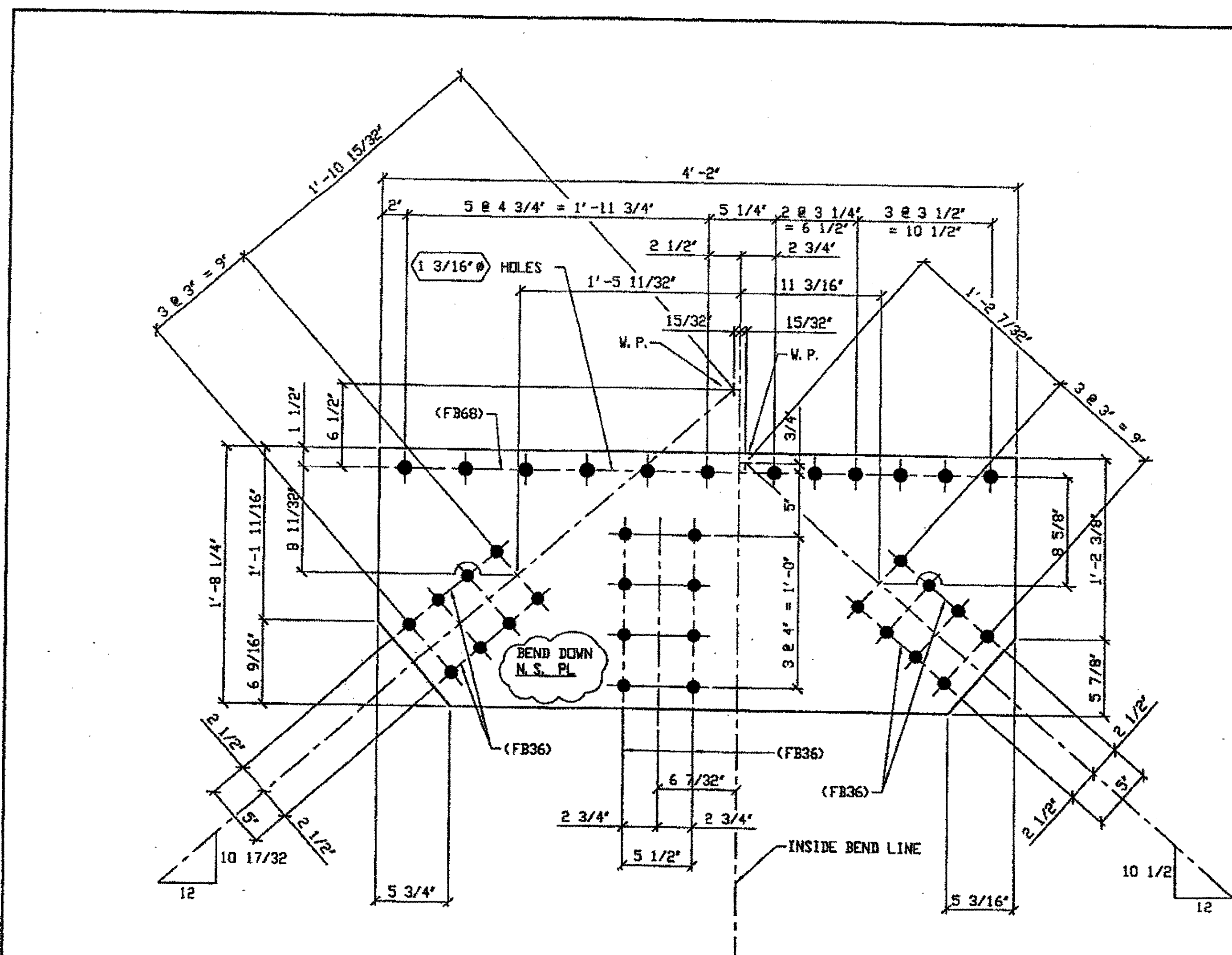
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONAVOLLS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

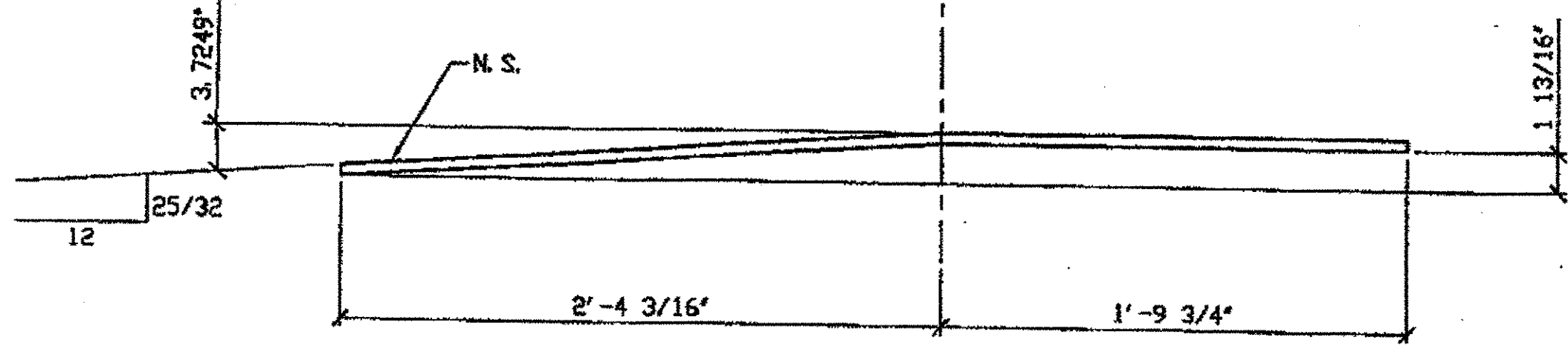
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 07/11/01  
 CHECKED BY: DATE: GAF 08/22/01

SHEET NUMBER: 336  
 AWM JOB NUMBER: 800010



ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 357A  
 ORIG SHOP DWG 376-L4-L0-0-10R  
 ORIG SHOP MARK P368xL  
 ITEM NO. 0119  
 REPAIR SHEET 10-118



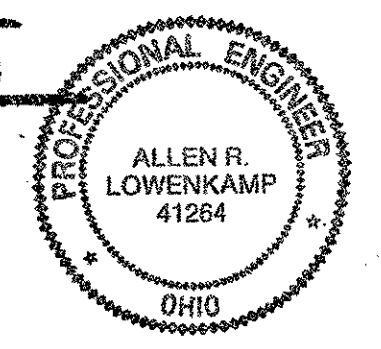
357A - (AFTER BENDING)

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		357A	1	PL 1/2 x 20 1/4	4	2	BENT	139
3								
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
13		FB68	12	1 1/8" DIA	0	2 3/4	NOTE 2	23
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES N/A					FLGS. N/A		BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 10, L4-E NORTH EXTERIOR, TOP 357A

RELEASED FOR CONSTRUCTION  
 DATE 1/4/02 BY tde/tss



O.D.O.T. DIST. 12

ACCEPTED AS NOTED 2/4/01 PSM

ACCEPTED AS NOTED

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO. 0119  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 10 REPAIRS

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORADELIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: DATE  
 AMN 07/17/01

CHECKED BY: DATE  
 GNG 12/05/01

SHEET NUMBER: 357  
 AM JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\357A.dwg  
 Save by rsm at 09:59pm Dec 05, 2001  
 Plot by cjt at 12:48pm Dec 12, 2001  
 Model spc of + Scale = 1/6

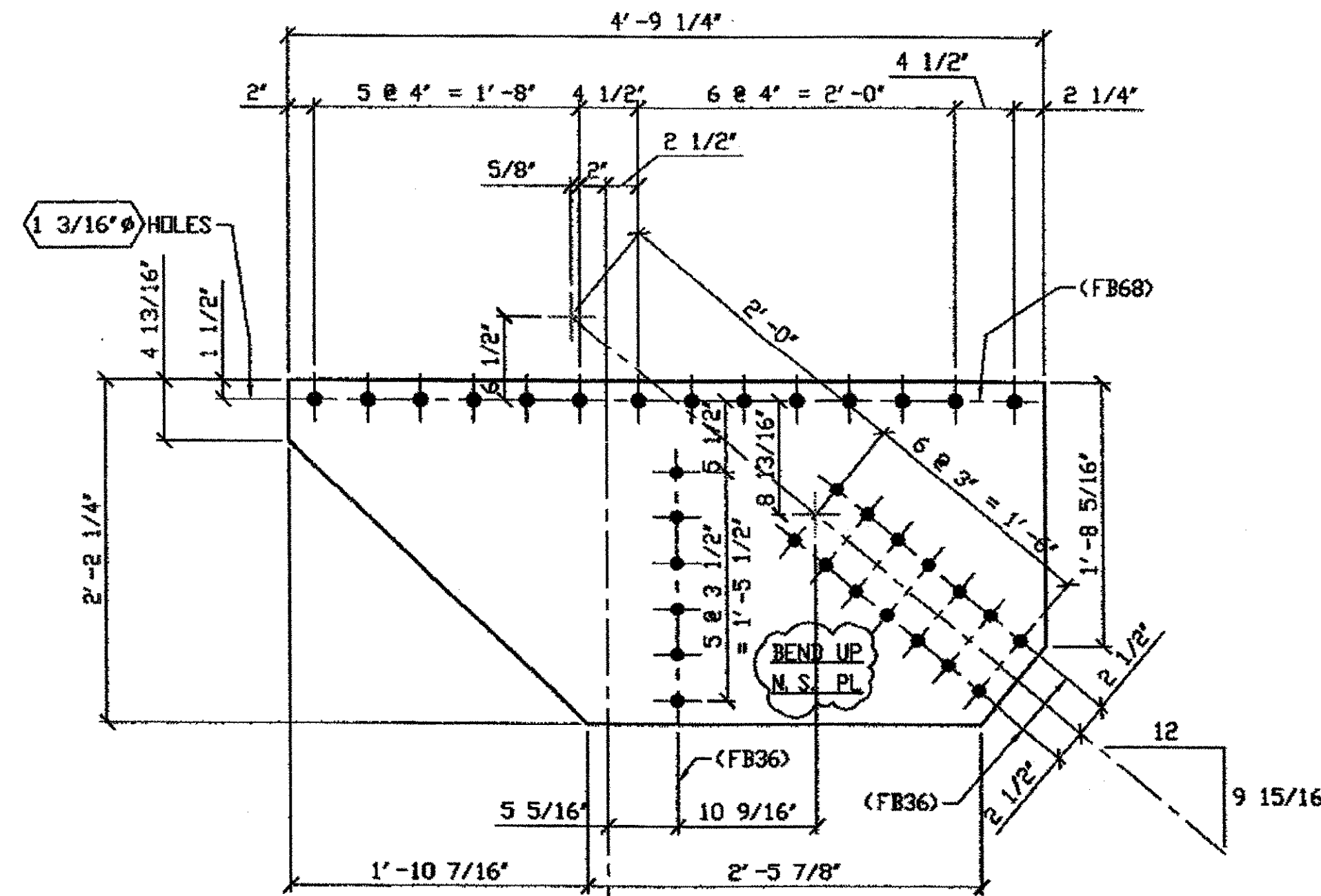
CIVIL ENGR. & CONTR. C  
 DEC 13 2001

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE				
2		370A	1	PL 1/2 X 26 1/4	4	9 1/4	BEND	177
3		370B	1	PL 1/2 X 26 1/4	4	10	BEND	179
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	40	1" DIA	0	2 1/2	NOTE 2	56
10		FB68	28	1 1/8" DIA	0	2 3/4	NOTE 2	54
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES N/A					FLGS. N/A		BOLTS NOTE 2	

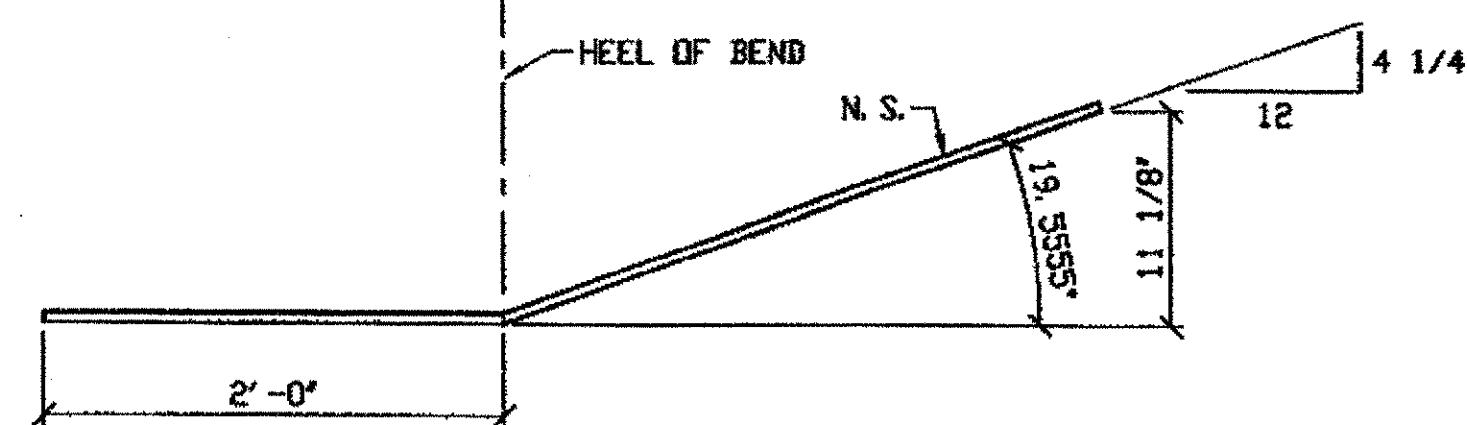
NOTES:

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



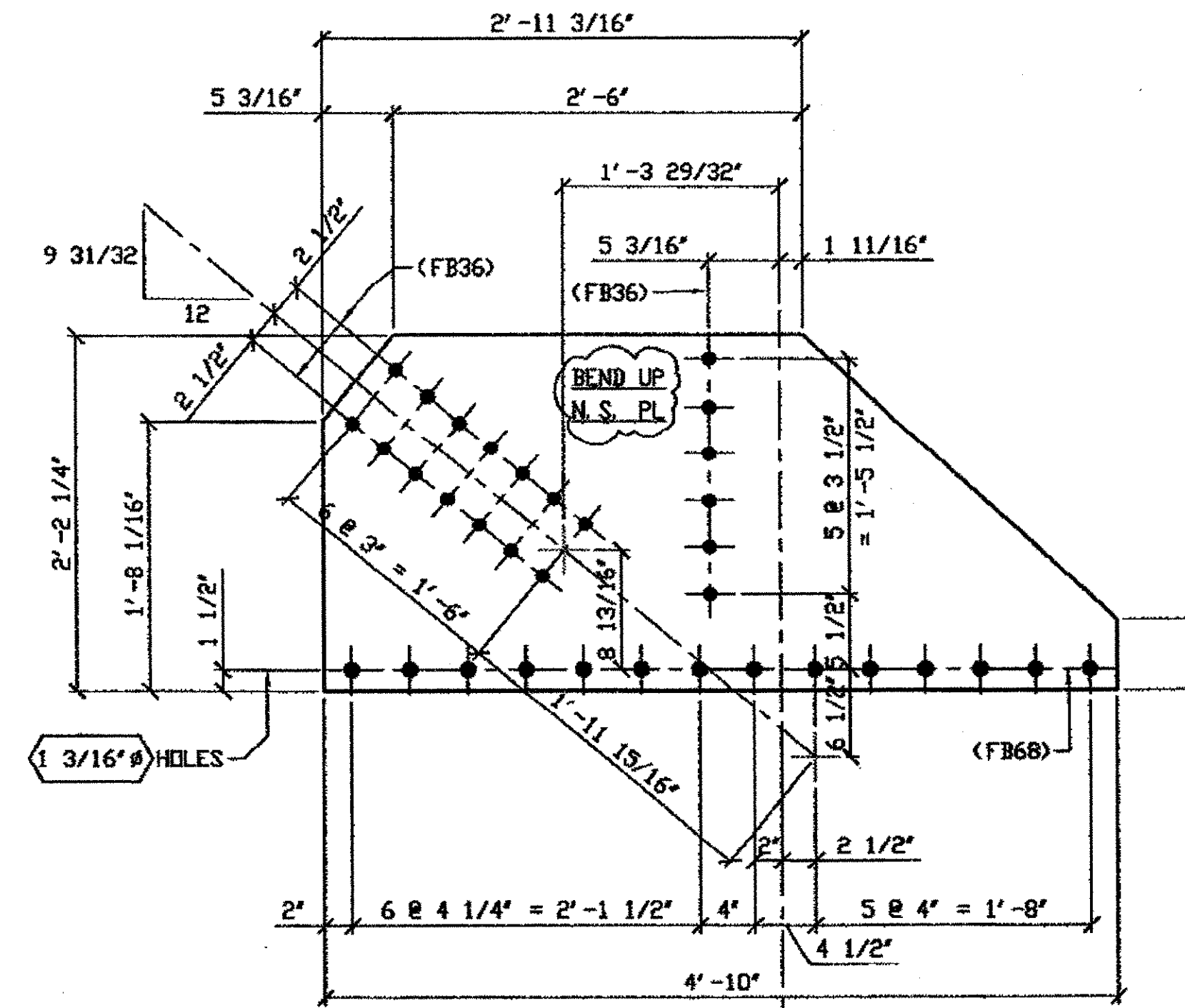
ONE - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 370A

ORIG SHOP DRAWING 341 L3L4-0-9/R  
ORIG SHOP MARK P310c/L  
REPAIR SHEETS 9-125



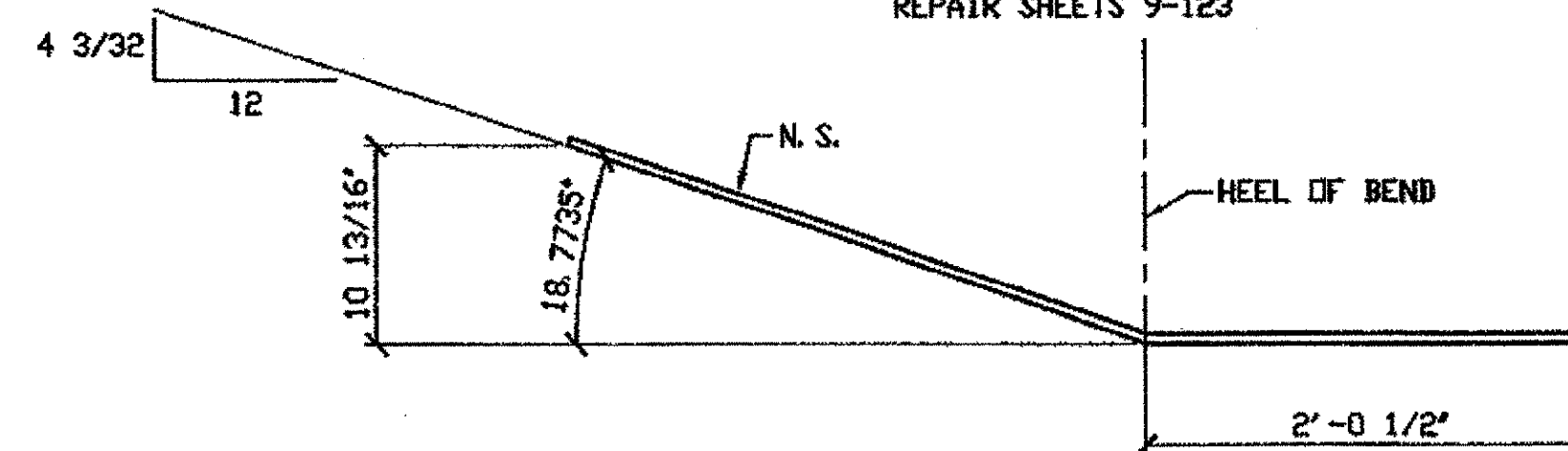
370A (AFTER BENDING)

SPAN 9 L4-E NORTH EXTERIOR 370A (TOP)



ONE - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 370B

ORIG SHOP DRAWING 310 L3L4-1-9/R  
ORIG SHOP MARK P310b/R  
REPAIR SHEETS 9-123



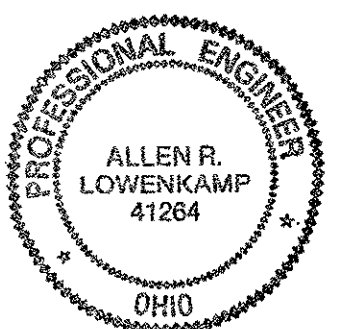
370B (AFTER BENDING)

SPAN 9 L3-D NORTH INTERIOR (TOP) 370B

O.D.O.T. DIST. 12

ACCEPTED	2/4/01	D.S.M.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0117  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COMMERCEVILLE, PA 15106  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

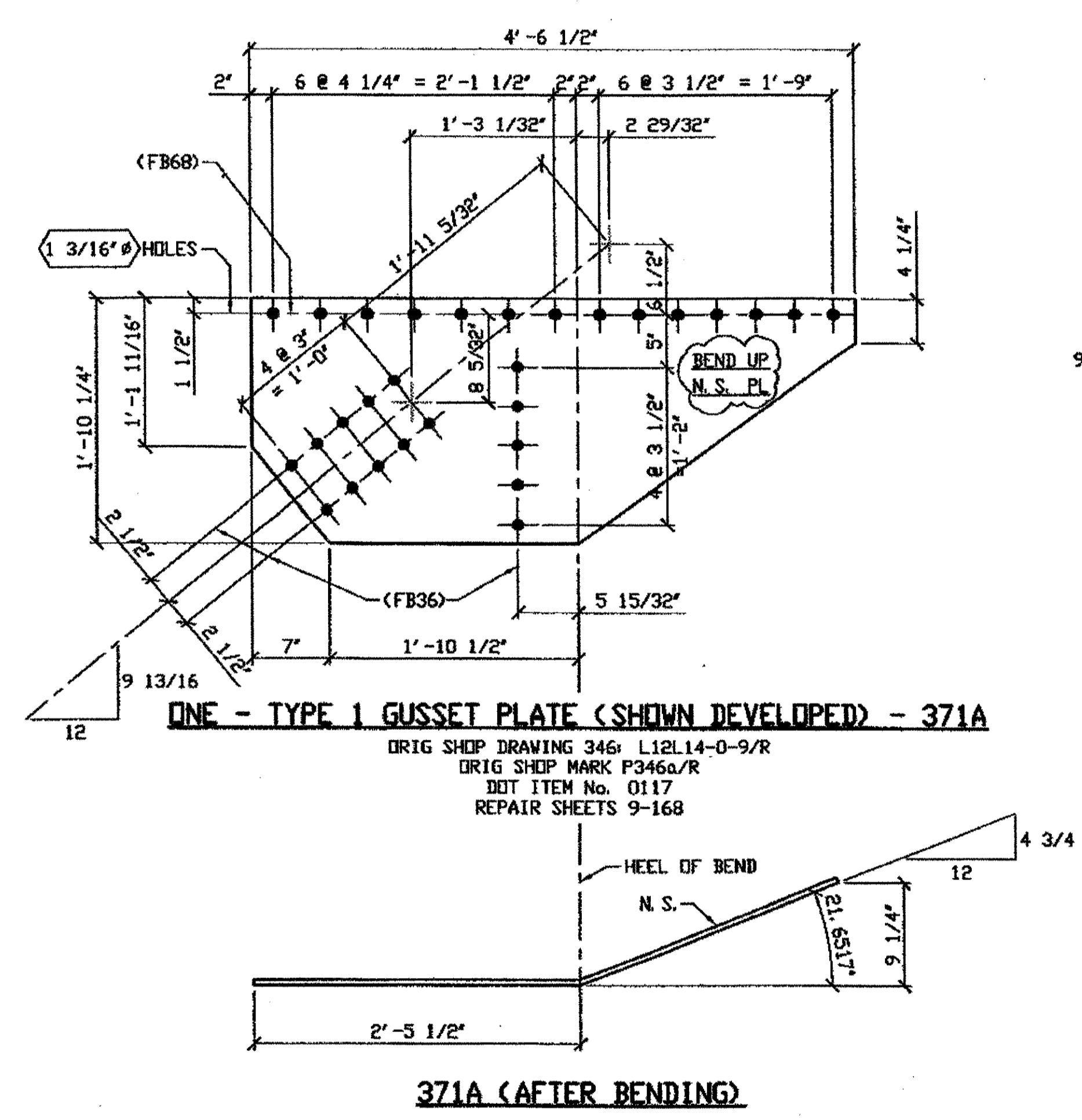
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 11/30/01  
CHECKED BY: DATE  
GAF 12/04/01

SHEET NUMBER: 370  
ABN JOB NUMBER: 800010

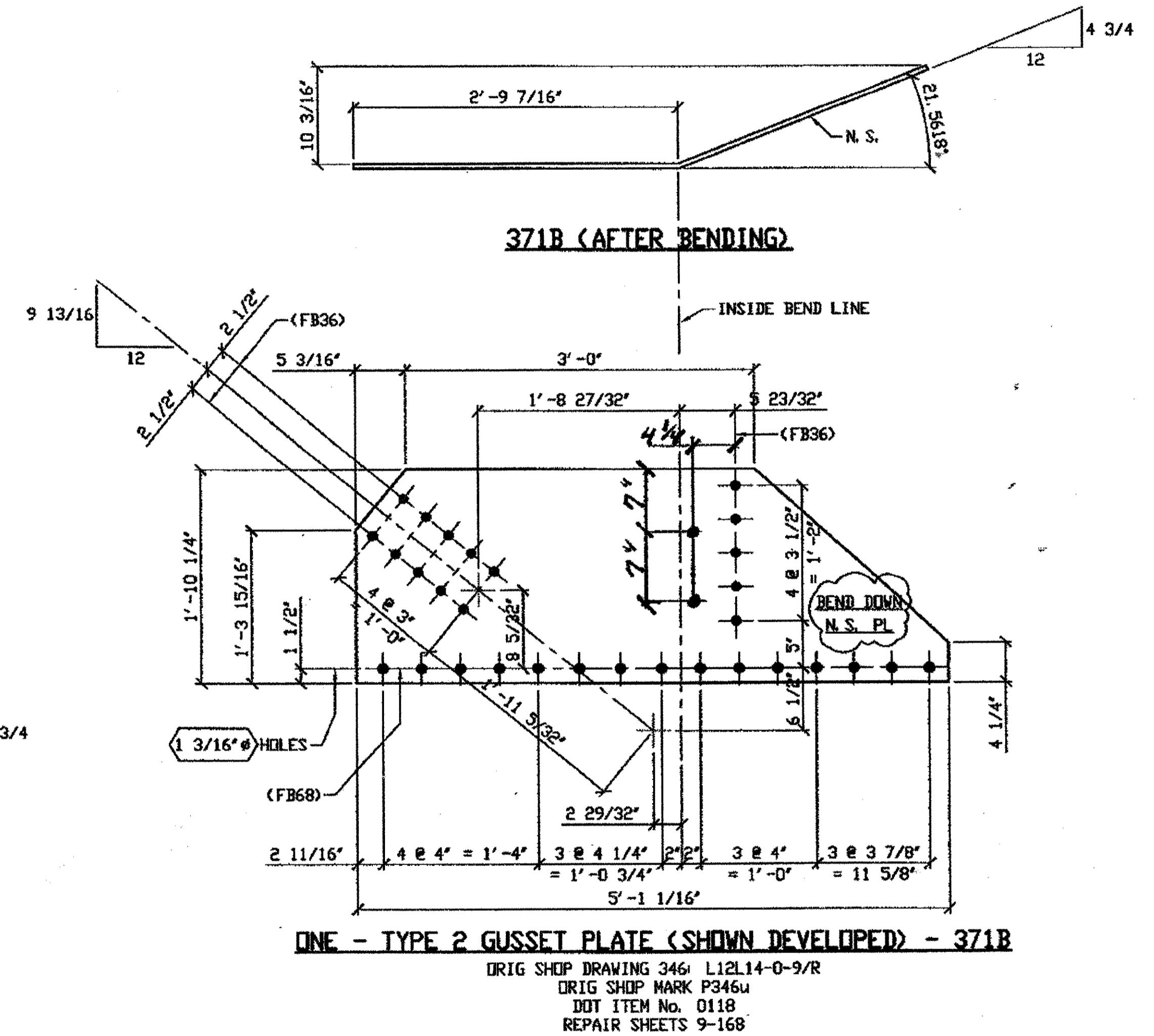
G:\Contract\301800010\Drawings\A1970A.dwg  
Save by r50 on Dec 17, 2001  
Plot by gfb on Dec 17, 2001  
Model space plot + Scale = 1/9

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE				
2		371A	1	PL 1/2 X 22 1/4	4	6 1/2	BEND	139
3								
4				TYPE 2 GUSSET PLATE				
5		371B	1	PL 1/2 X 22 1/4	5	1 1/16	BEND	169
6								
7								
8				FIELD BOLTS				
9		FB36	30	1" DIA	0	2 1/2	NOTE 2	42
10		FB68	29	1 1/8" DIA	0	2 3/4	NOTE 2	56
PLATE		A36		PIPE N/A			FITTINGS N/A	
SHAPES		N/A		FLGS. N/A			BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



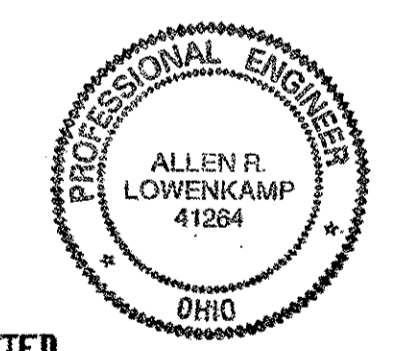
SPAN 9 L14-P NORTH EXTERIOR TOP 371A



SPAN 9 L14-P NORTH EXTERIOR BOTTOM 371B

O.D.O.T. DIST. 12	
ACCEPTED	2/1/01 PSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

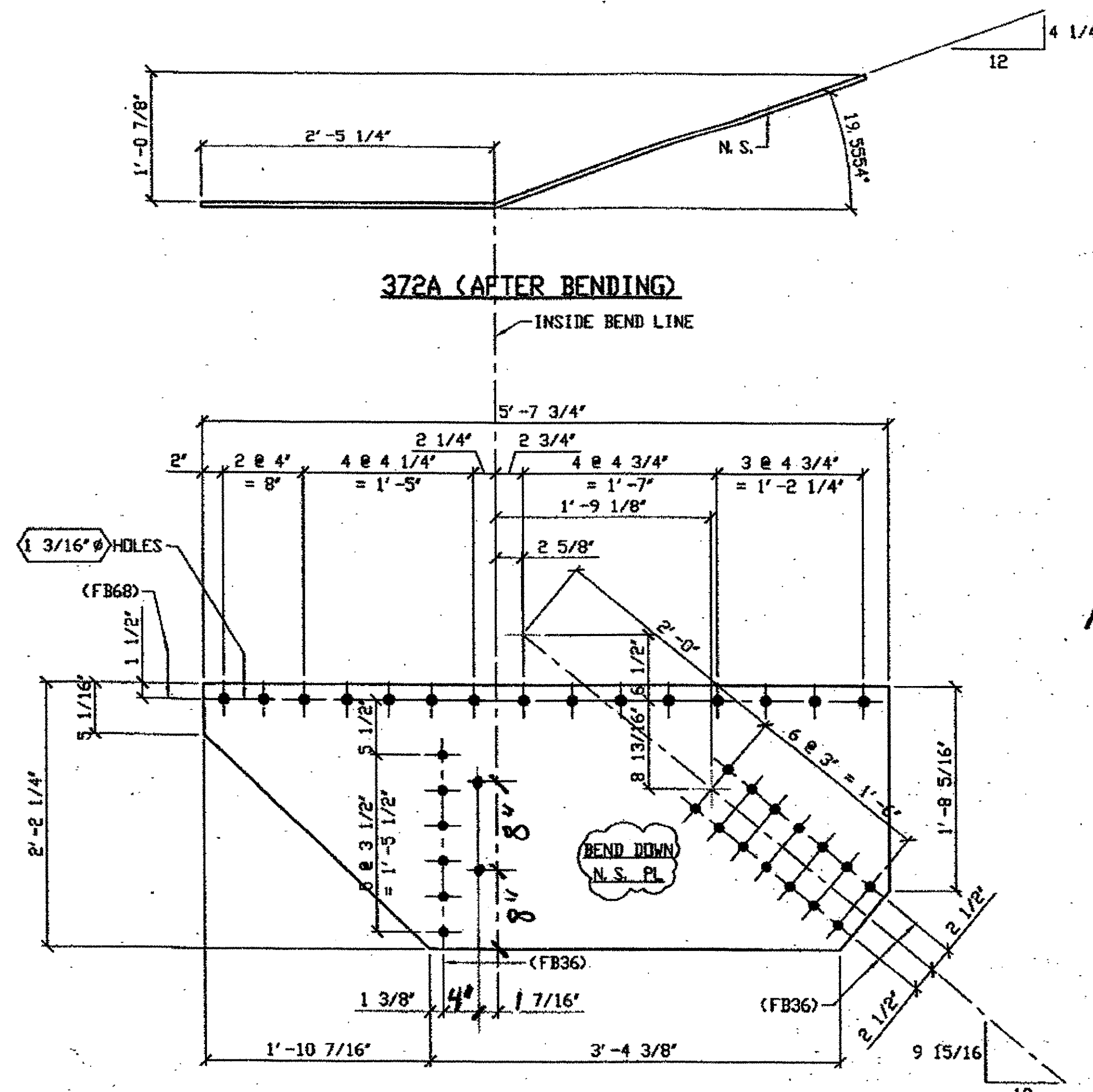
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



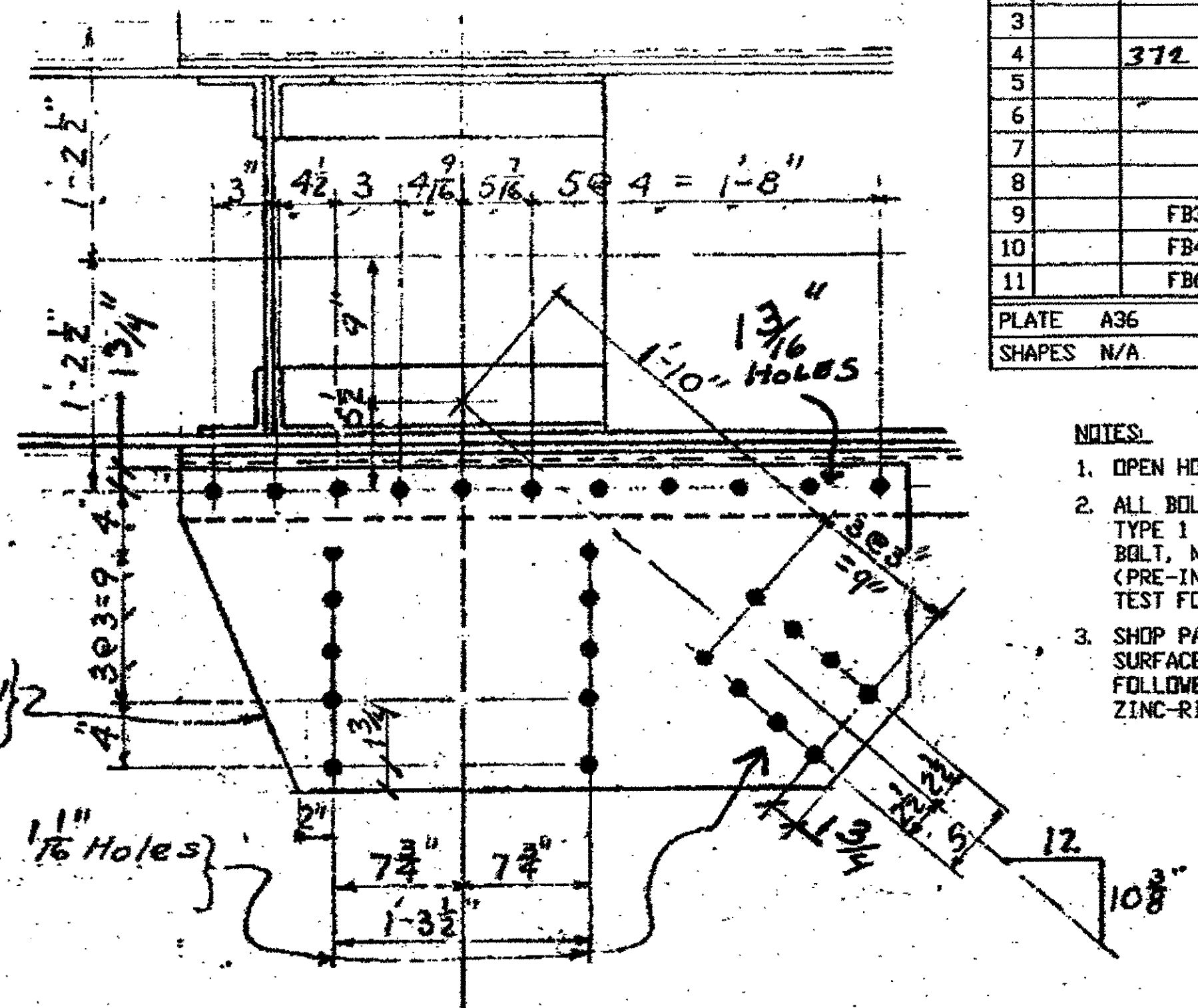
DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORAOPOLIS, PA. 15108 PHONE (412) 631-3000 FAX (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRENGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335	
IN CHARGE OF: L. SMITH DRAWN BY: DATE RAS 12/03/01 CHECKED BY: DATE GAF 12/03/01		SHEET NUMBER: 371 AWM JOB NUMBER: 800010	

G:\Contract\304800010\Drawings\371A.dwg  
 Save by rsl 08:08am Dec 17, 2001  
 Plot by gfb at 09:52am Dec 17, 2001  
 Model Space plot + Scale = 1/9



ONE - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 372A  
 ORIG SHOP DRAWING 341- L3L4-0-11/L  
 ORIG SHOP MARK P310K/R  
 REPAIR SHEETS 9-202  
SPAN 9 L4-E SOUTH EXTERIOR BOTTOM 372A



1-TYPE 5 GUSSET PLATE 372 B  
ORIGINAL SHOP MARK P94W  
SPAN 5  
L0-SOUTH EXTERIOR 372 B (TOP)

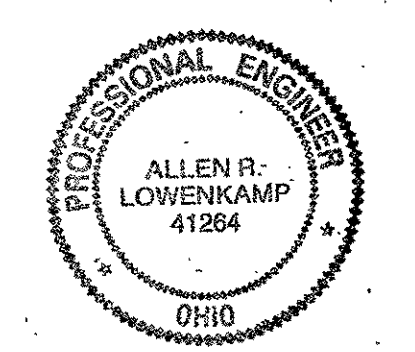
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 GUSSET PLATE				
2		372A	1	PL 1/2 X 26 1/4	5	7 3/4	BEND	221
3								
4		372 B	1	R 20 1/2 x 1 1/2	3	9		
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB44		1" DIA	0	3 1/2	NOTE 2	
11		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/10/01	DTM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



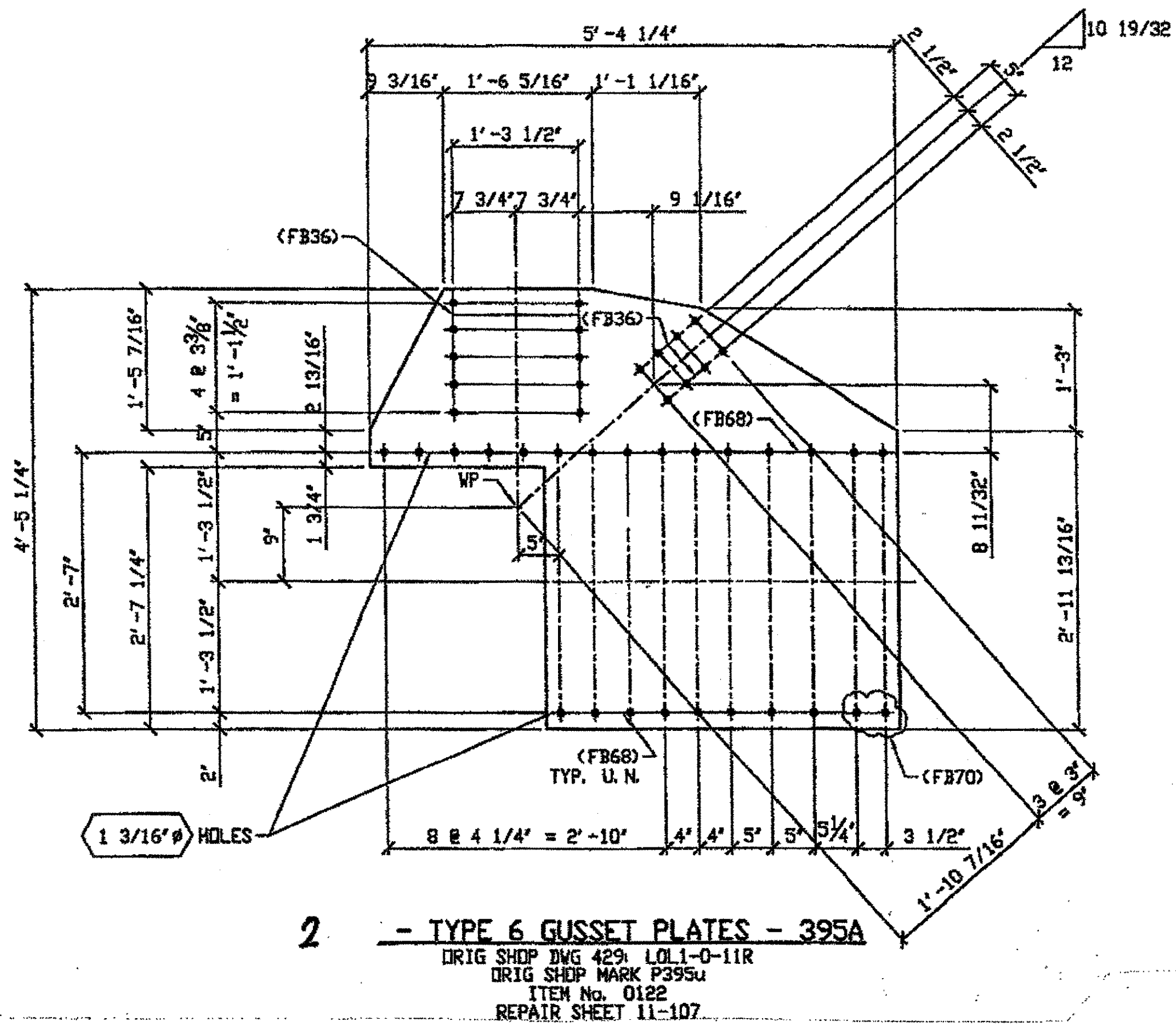
DOT ITEM LINE NO. 0118 UNO  
 DOT BID ITEM NO. 863E5000.

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORWINGERS, PA 15108 PHONE (412) 631-3000 FAX (412) 631-4001			
STEEL ERECTOR TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335			
IN CHARGE OF: L. SMITH			
DRAWN BY: DATE RAS 12/03/01		SHEET NUMBER 372	
CHECKED BY: DATE GAF 12/04/01		ADM. JOB NUMBER 800010	

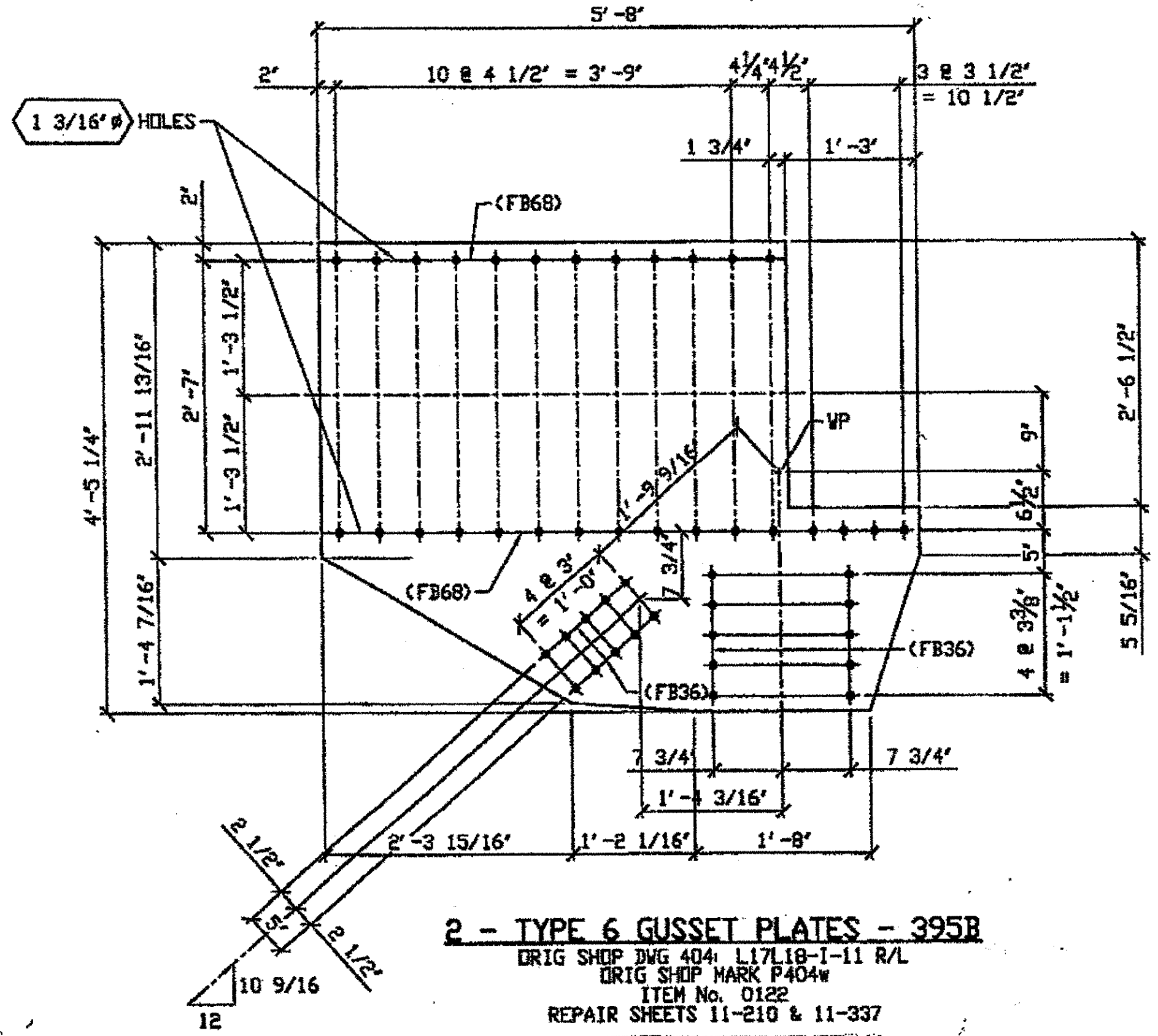
G:\Contract\10\800010\Drawings\372A.dwg  
 Save by rsl 08:08am Dec 17, 2001  
 Plot by gfas 11:09:52am Dec 17, 2001  
 Model space plot + Scale = 1/9



**SPAN 11**  
**LO-NORTH EXTERIOR BOTTOM 395A**  
**LO-SOUTH EXTERIOR BOTTOM 395A**



**SPAN 11**  
**L18-NORTH INTERIOR BOTTOM 395B**  
**L18-SOUTH INTERIOR BOTTOM 395B**



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 6 GUSSET PLATE				
2		395A	2	PL 5/8 X 53 1/4	5	4 1/2		
4								
5				TYPE 6 GUSSET PLATE				
6		395B	2	PL 5/8 X 53 1/4	5	8		1009
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
11		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

**O.D.O.T. DIST. 12**  
 ACCEPTED  2/9/02 JDSM  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC GLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

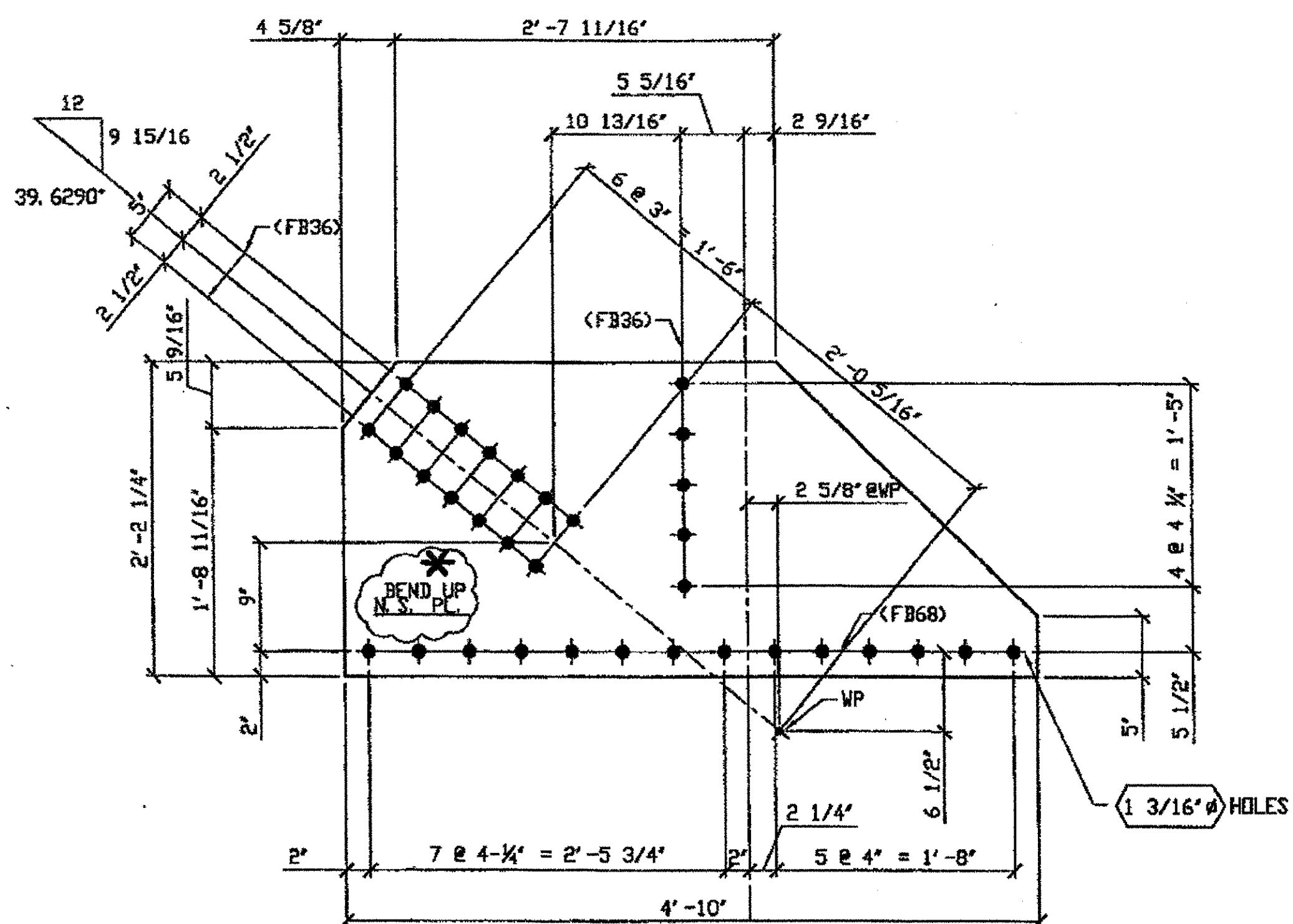
G:\Contracts\2000\800010\Drawings\1895A.dwg  
 Save by esr at 02:21pm Feb 25, 2002  
 Plot by ofos at 02:39pm Feb 25, 2002  
 Model space plot + Scale = 1/12

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/ess

 ALLEN R. LOWENKAMP 41264 OHIO	FABRICATOR  AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORAOPOLIS, PA. 15109 PHONE (412) 631-3000 FAX (412) 631-4001	DOT ITEM LINE NO. AS NOTED DOT BID ITEM NO. 863E5000
		STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS
STEEL ERECTOR TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX (440) 238-3335	IN CHARGE OF: L. SMITH DRAWN BY: DATE JRC 01/09/02 CHECKED BY: DATE GAF 01/30/02	SHEET NUMBER: 395 ASN JOB NUMBER: 800010

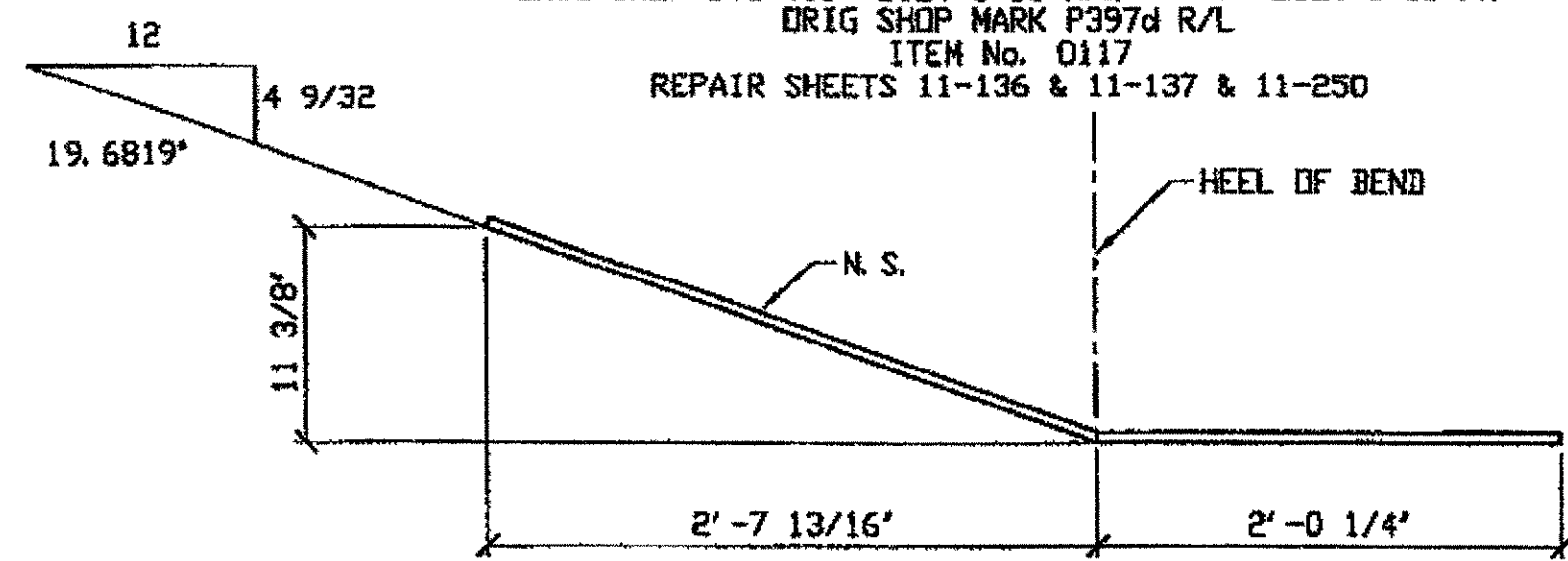
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE				
2		406A R/L	4	PL 1/2 x 26 1/4	4	10	BENT 2R	
3								
4				TYPE 2 GUSSET PLATE				
5		406B R/L	2	PL 1/2 x 26 1/4	5	8 1/2	BENT 2R	
6								
7				FIELD BOLTS				
8		FB36		1" DIA	0	2 1/2	NOTE 2	
9		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2



4 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 406A R/L

ORIG SHIP DWG 431: L3L4-0-11 R/L & 397: L3L4-I-11 /R  
ORIG SHIP MARK P397d R/L  
ITEM No. 0117  
REPAIR SHEETS 11-136 & 11-137 & 11-250

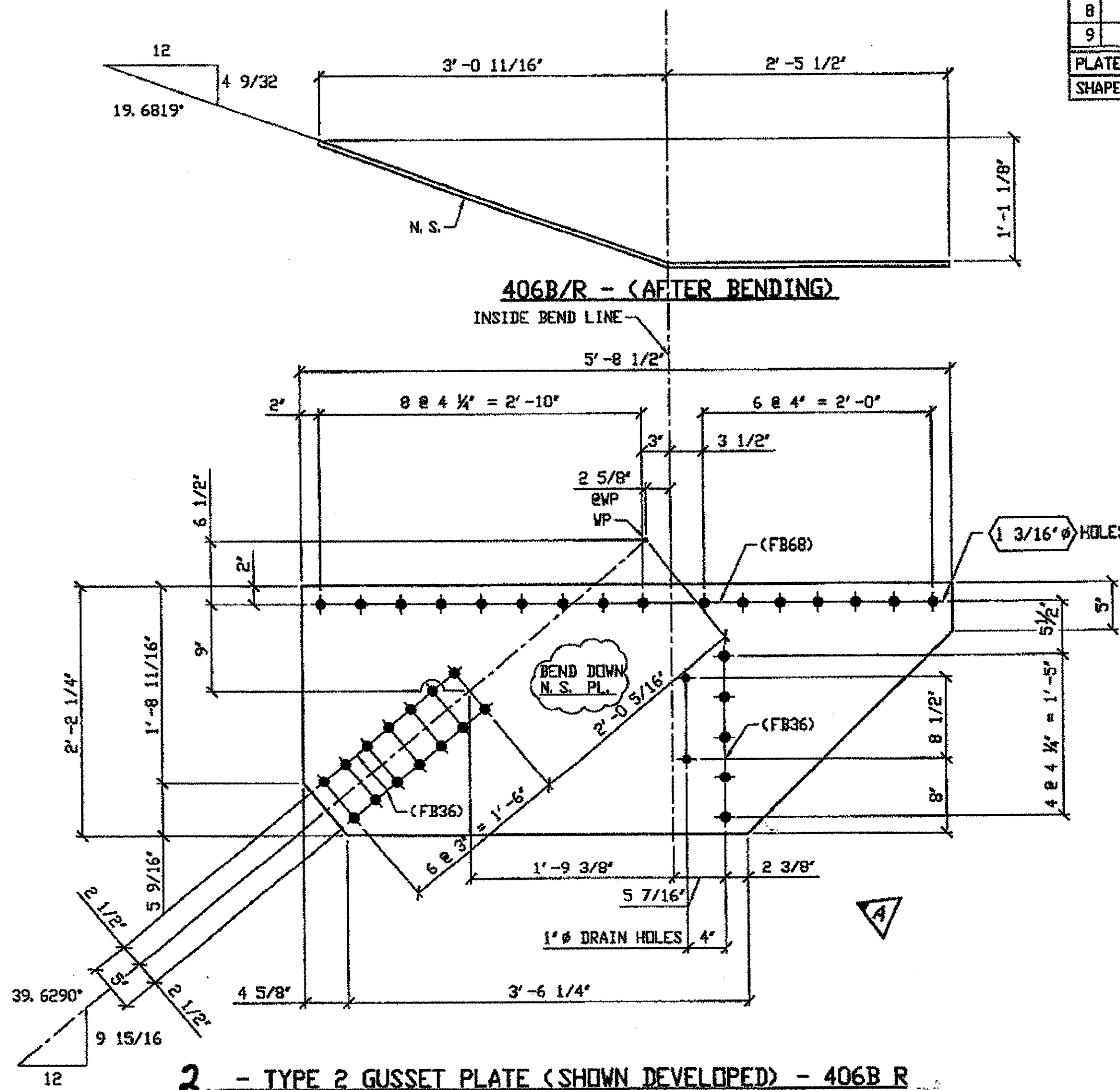


406A/R - (AFTER BENDING)

SPAN 11

- L3-D SOUTH INTERIOR TOP 406A/L
- L3-D NORTH EXTERIOR TOP 406A/L
- L3-D SOUTH EXTERIOR TOP 406A/R
- L3-D NORTH INTERIOR TOP 406A/R

\* Bend Down for L



2 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 406B R

ORIG SHIP DWG 431: L3L4-0-11 R/L & 397: L3L4-I-11/R  
ORIG SHIP MARK P397n R/L  
ITEM No. 0118  
REPAIR SHEETS 11-136 & 11-137 & 11-250

SPAN 11

- L3-D NORTH INTERIOR BOTTOM 406B/R
- L3-D SOUTH EXTERIOR BOTTOM 406B/R

O.D.O.T. DIST. 12

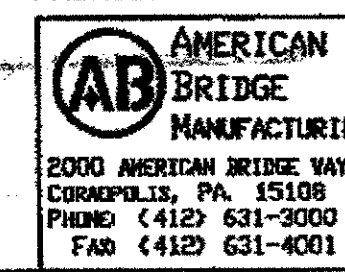
ACCEPTED	2/7/02	Bsm
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NOTES:

- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHIP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

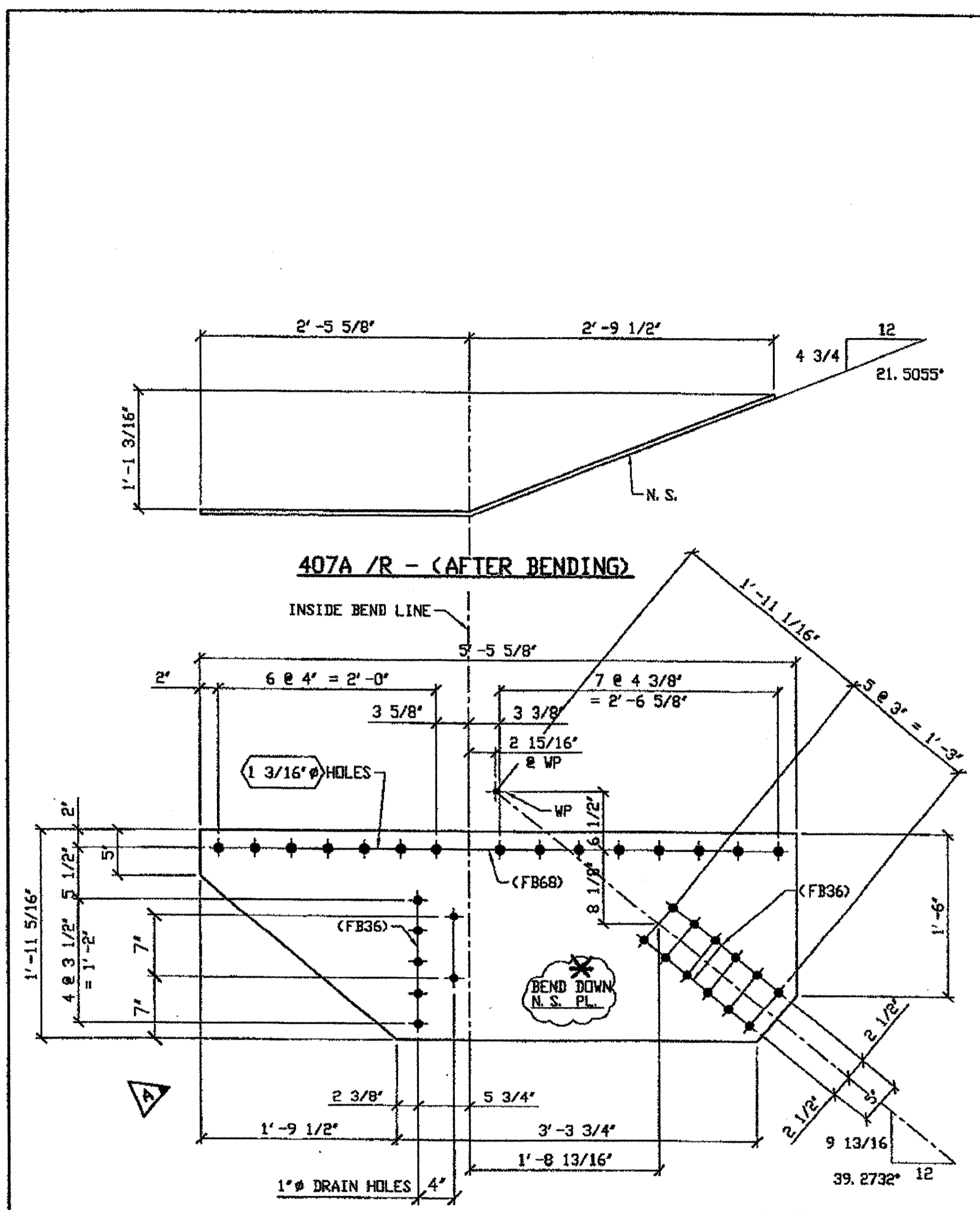
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: JRC 01/14/02  
CHECKED BY: DATE: GAF 02/11/02

NO.	DATE	REVISIONS	JRC BY
A	02/06/02	REVISED PER CUSTOMER APPROVAL	JRC

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

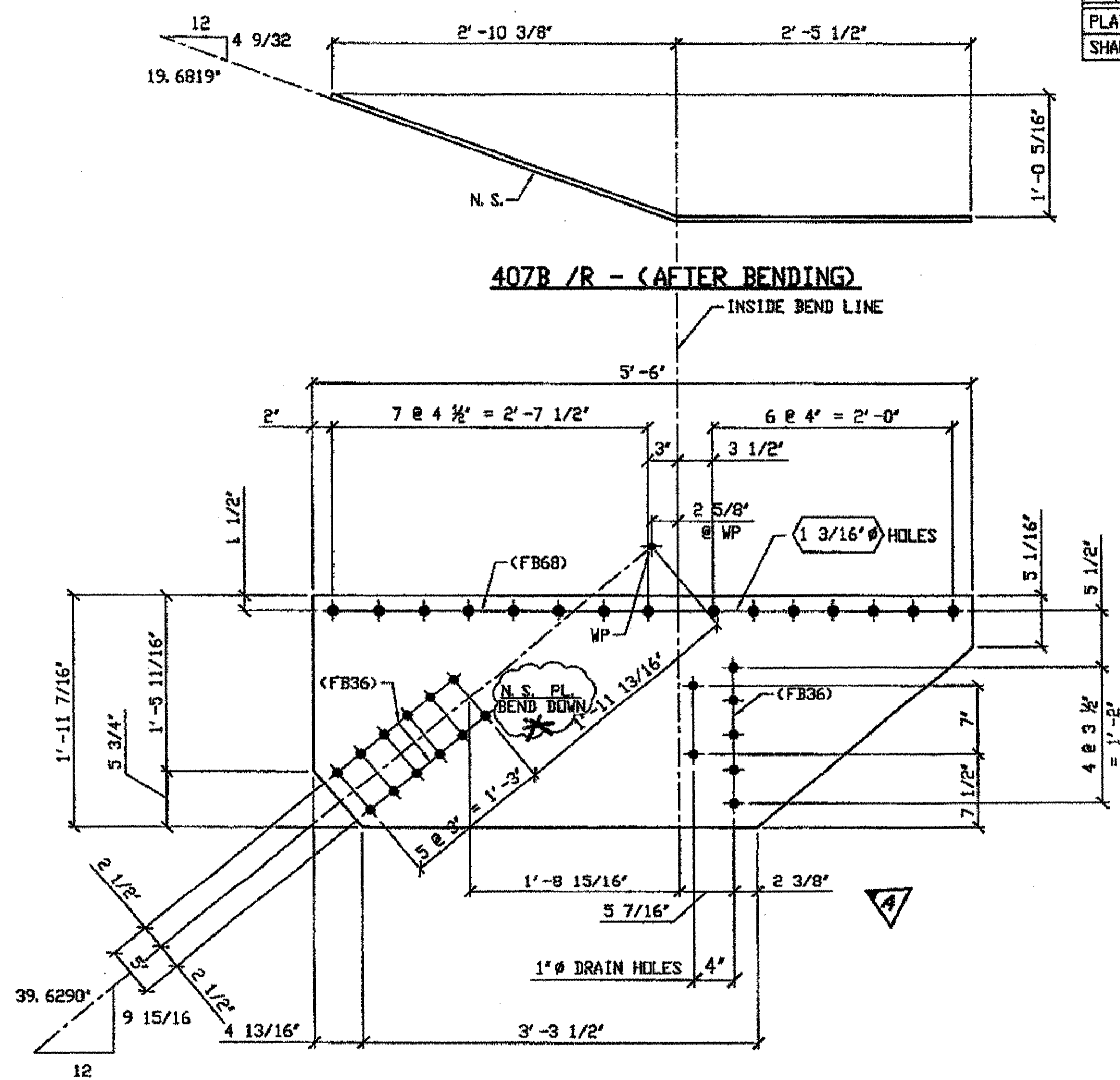
SHEET NUMBER: 406  
JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\10406A.dwg  
Save by rsm at 12:52pm Mar 06 2002  
Plot by gfac at 08:21am Mar 25 2002  
Model space Plot + Scale = 1/9



**3 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 407A R/L**  
 ORIG SHIP DWG 431; L3L4-0-11 R/L & 397; L3L4-I-11 L/L  
 ORIG SHIP MARK P397p R/L  
 ITEM No. 0118  
 REPAIR SHEETS 11-139, 11-254, & 11-255

**SPAN 11**  
 L4-E NORTH EXTERIOR BOTTOM 407A/L  
 L4-E SOUTH INTERIOR BOTTOM 407A/L  
 L4-E SOUTH EXTERIOR BOTTOM 407A/R  
 \* Bend up for L



**2 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 407B R/L**  
 ORIG SHIP DWG 431; L14L15-0-11 R/L  
 ORIG SHIP MARK P397as R/L  
 ITEM No. 0118  
 REPAIR SHEETS 11-189 & 11-318

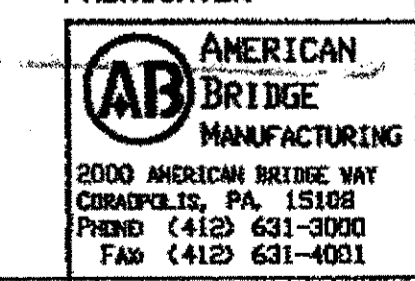
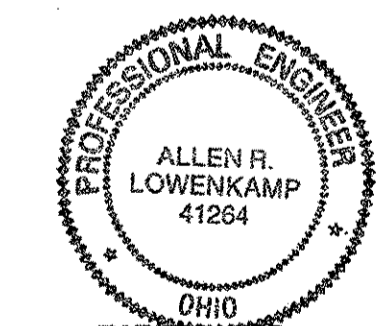
**SPAN 11**  
 L14-Q NORTH EXTERIOR BOTTOM 407B/L  
 L14-Q SOUTH EXTERIOR BOTTOM 407B/R  
 \* Bend up for L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 GUSSET PLATE				
2		407A R/L	3	PL 1/2 x 23 5/16	5	5 9/8	BENT 1R 2L	562
3								
4				TYPE 2 GUSSET PLATE				
5		407B R/L	2	PL 1/2 x 23 7/16	5	6	BENT	378
6								
7				FIELD BOLTS				
8		FB36	85	1" DIA	0	2 1/2	NOTE 2	119
9		FB68	75	1 1/8" DIA	0	2 3/4	NOTE 2	144
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863250000



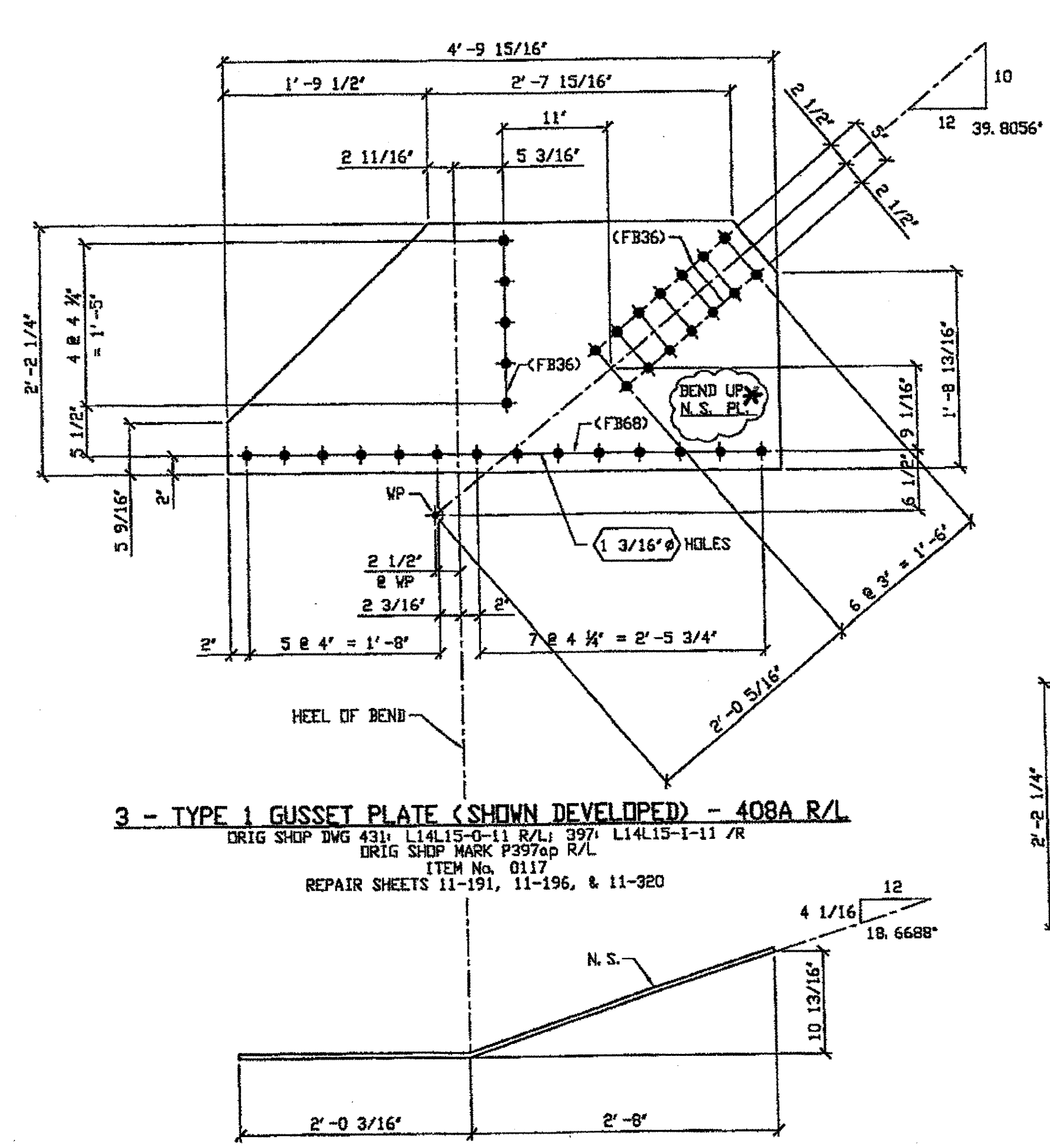
**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JRC 01/15/02  
 CHECKED BY: DATE: GAF 02/12/02  
 SHEET NUMBER: 407  
 AEM JOB NUMBER: 800010

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 11 REPAIRS**

G:\Contracts\2000\800010\Drawings\1407A.dwg  
 Save by rjpr at 12:32pm Mar 06, 2002  
 Plot by gfos at 08:21am Mar 25, 2002  
 Model space plot + Scale = 1/12

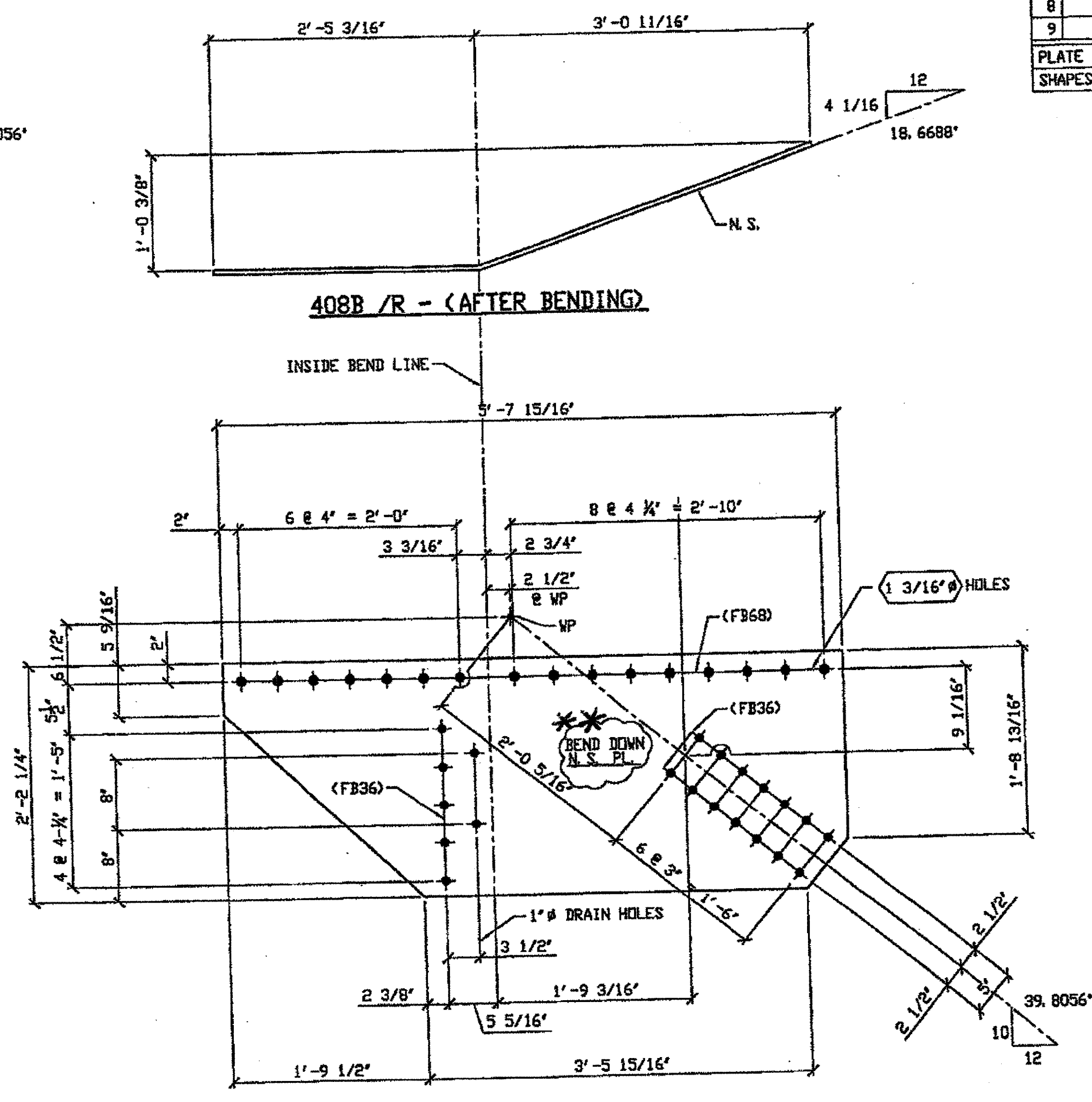
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE				
2		408A R/L	3	PL 1/2 x 26 1/4	4	9 15/16	BENT 2R/L	547
3								
4				TYPE 2 GUSSET PLATE				
5		408B R/L	3	PL 1/2 x 26 1/4	5	7 15/16	BENT 2R/L	659
6								
7				FIELD BOLTS				
8		FB36	114	1" DIA	0	2 1/2	NOTE 2	159
9		FB68	90	1 1/8" DIA	0	2 3/4	NOTE 2	173
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2



3 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 408A R/L  
 ORIG SHOP DWG 431 L14L15-0-11 R/L 397 L14L15-1-11 /R  
 ORIG SHOP MARK P397op R/L  
 ITEM No. 0117  
 REPAIR SHEETS 11-191, 11-196, & 11-320

- SPAN 11
- L15-R NORTH EXTERIOR TOP 408A/R
  - L15-R NORTH INTERIOR TOP 408A/R
  - L15-R SOUTH EXTERIOR TOP 408A/R

\* Bend Down for L



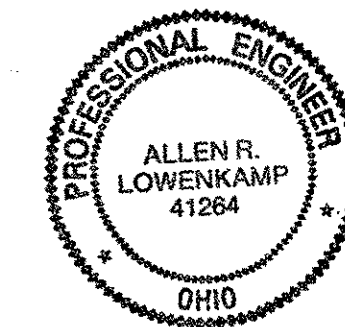
3 - TYPE 2 GUSSET PLATE (SHOWN DEVELOPED) - 408B R/L  
 ORIG SHOP DWG 431 L14L15-0-11 R/L 397 L14L15-1-11 /R  
 ORIG SHOP MARK P397op R/L  
 ITEM No. 0118  
 REPAIR SHEETS 11-191, 11-196 & 11-320

- SPAN 11
- L15-R NORTH EXTERIOR BOTTOM 408B/R
  - L15-R NORTH INTERIOR BOTTOM 408B/R
  - L15-R SOUTH EXTERIOR BOTTOM 408B/R

\*\* Bend up for L

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CHARLOTTE, PA 15108  
 PHONE (412) 631-2000  
 FAX (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 JRC 01/19/02  
 CHECKED BY: DATE  
 GAF 02/12/02

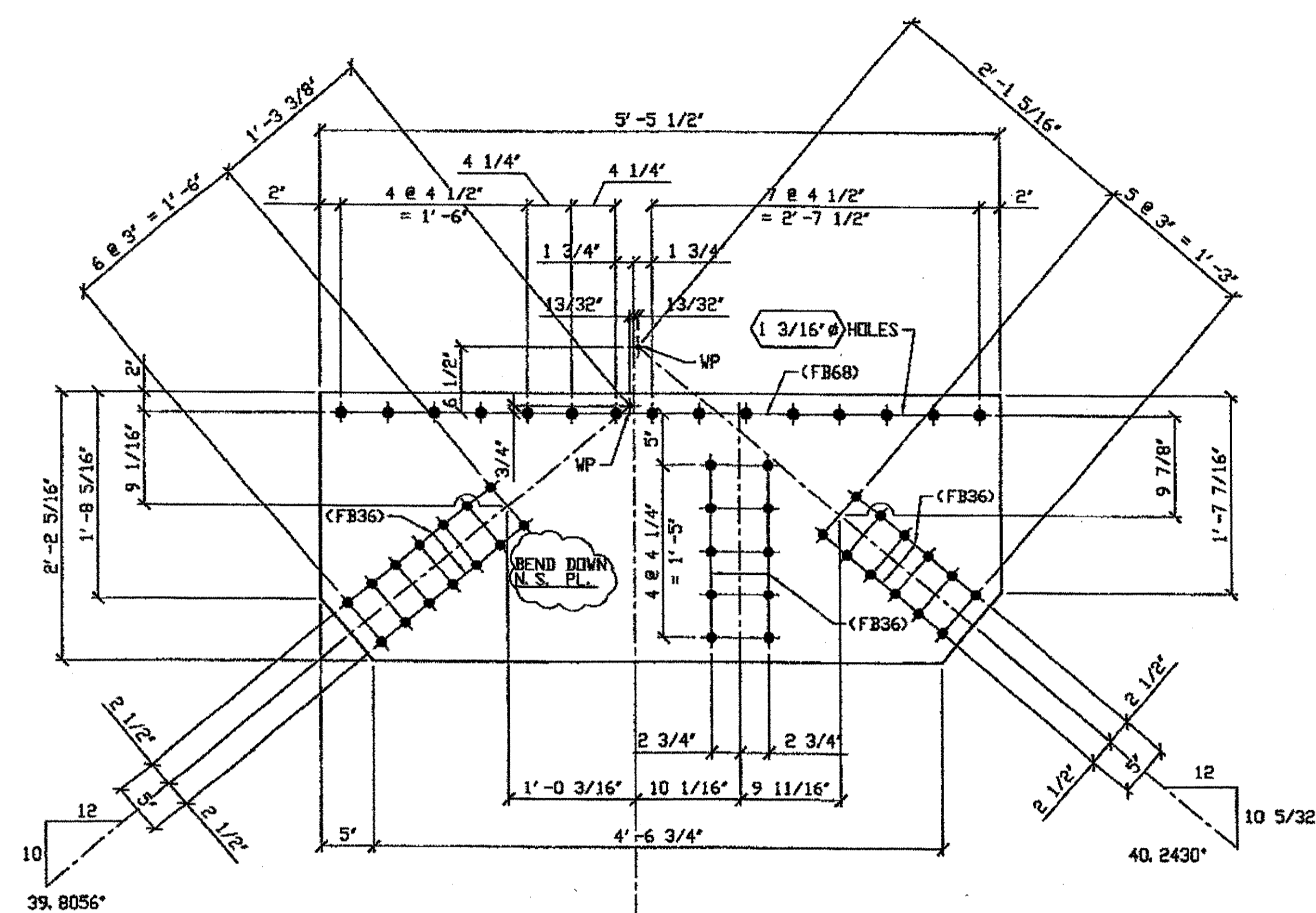
SHEET NUMBER: 408  
 A36 JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/ess

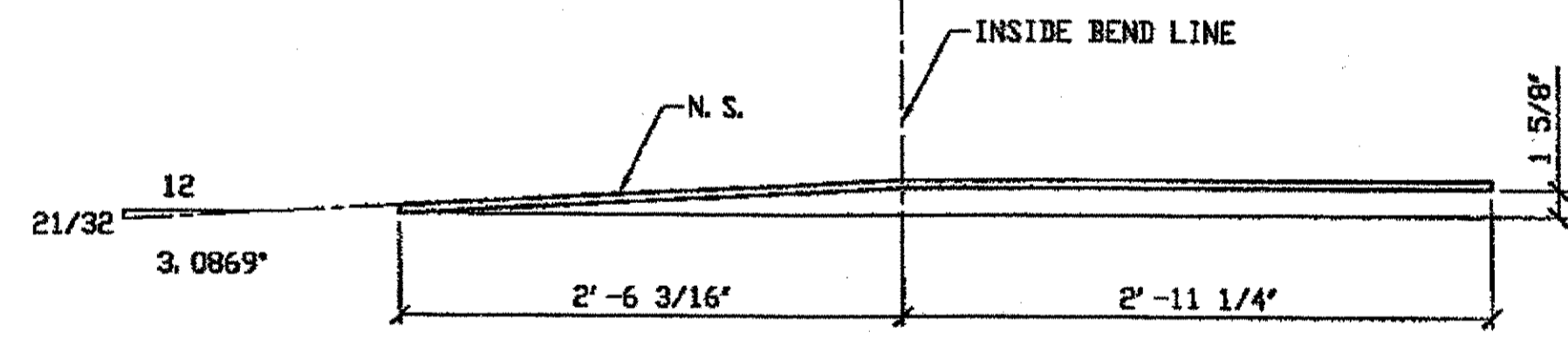
G:\Contracts\2001\800010\Drawings\408A.dwg  
 Save by rppr at 02:39pm Feb 25, 2002  
 Plot by gpus at 02:44pm Feb 25, 2002  
 Model space plot + Scale = 1/3

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		409A	1	PL 1/2 x 26 5/16	5	5 1/2	BENT	239
3								
4				TYPE 1 GUSSET PLATE				
5		409B R/L	2	PL 1/2 x 23 5/16	4	5 7/8	BENT	297
6								
7				FIELD BOLTS				
8								
9		FB36	70	1" DIA	0	2 1/2	NOTE 2	98
10		FB68	41	1 1/8" DIA	0	2 3/4	NOTE 2	79
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

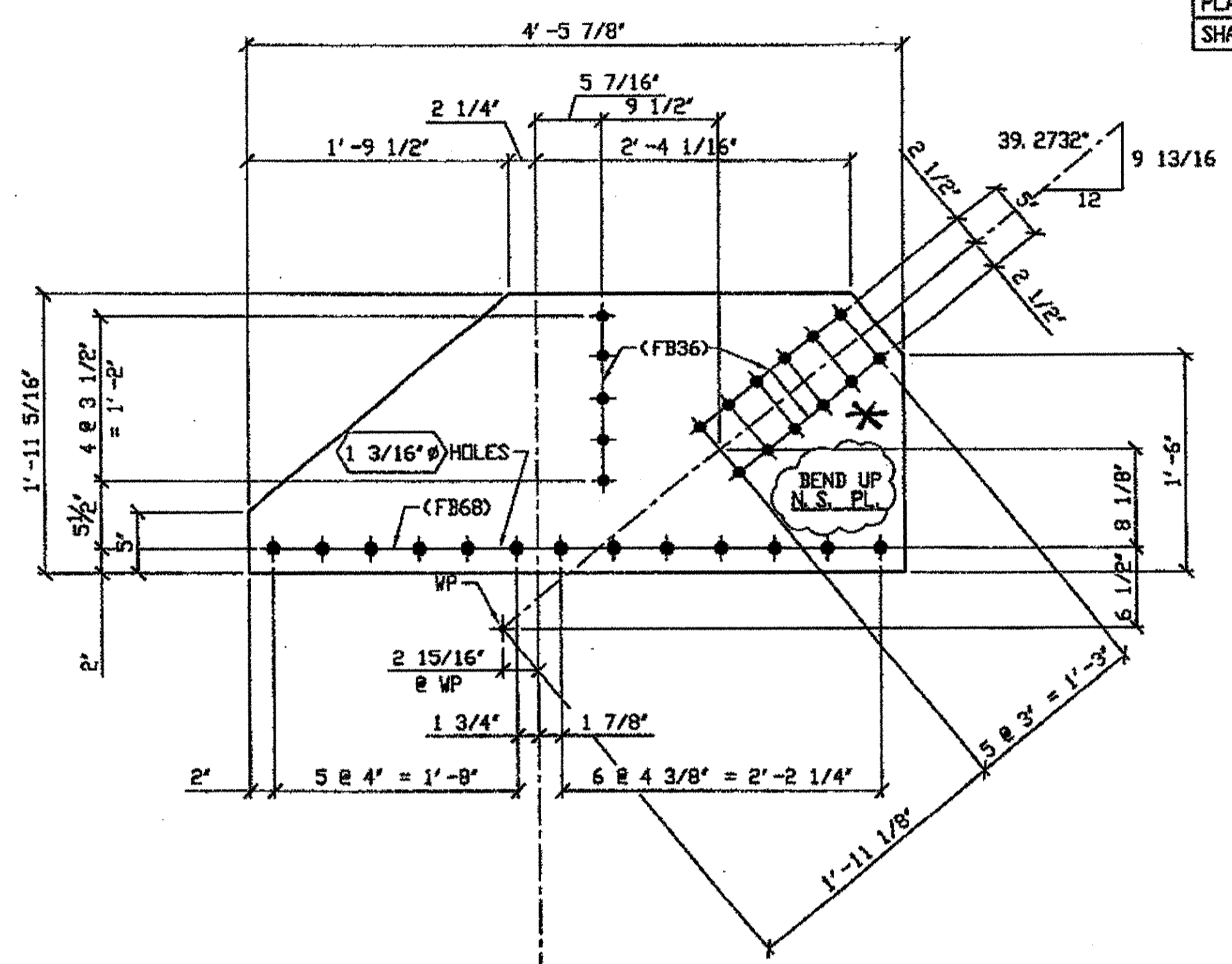


**ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 409A**  
 ORIG SHOP DWG 437: L15L17-0-11 /R  
 ORIG SHOP MARK P403p /L  
 ITEM No. 0119  
 REPAIR SHEETS 11-197

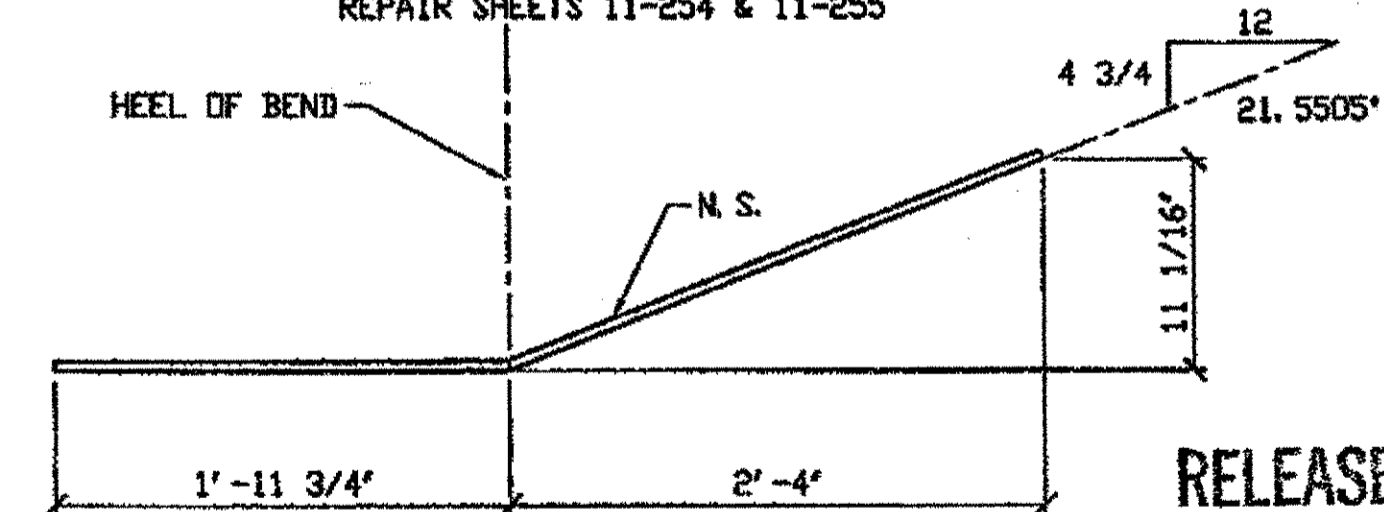


**409A - (AFTER BENDING)**

**SPAN 11**  
**L16-S NORTH EXTERIOR TOP 409A**



**2 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 409B R/L**  
 ORIG SHOP DWG 431: L3L4-0-11 /L & 397: L3L4-1-11 /L  
 ORIG SHOP MARK P397e R/L  
 ITEM No. 0117  
 REPAIR SHEETS 11-254 & 11-255



**409B /R - (AFTER BENDING)**

**SPAN 11**  
**L4-E SOUTH EXTERIOR TOP 409B/R**  
**L4-E SOUTH INTERIOR TOP 409B/L**

**\* BEND DOWN FOR L**

**RELEASED FOR CONSTRUCTION**  
**DATE 2/11/02 BY tdp/tss**

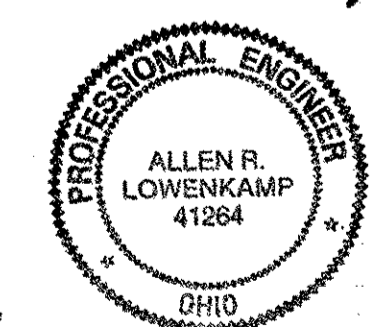
**O.D.O.T. DIST. 12**  
 ACCEPTED  2/11/02 PJM  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

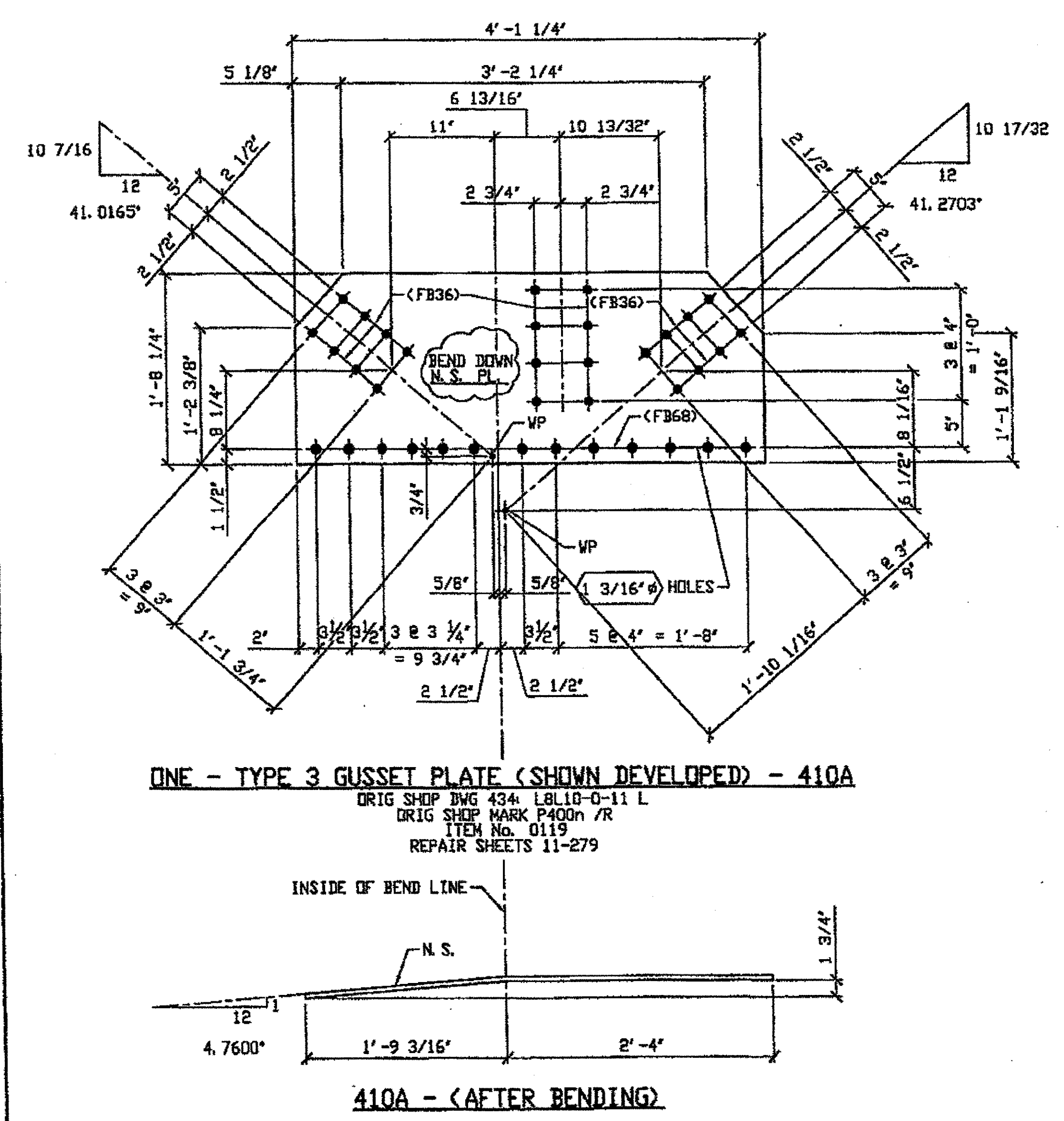
DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13		
SPAN 11 REPAIRS		
FABRICATOR <b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY CORONADO, PA 15108 PHONE (412) 631-3000 FAX (412) 631-4001		SHEET NUMBER 409
STEEL ERECTOR <b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335		AWN JOB NUMBER 800010
IN CHARGE OF: L. SMITH DRAWN BY: DATE: JRC 01/15/02 CHECKED BY: DATE: GAF 02/12/02		

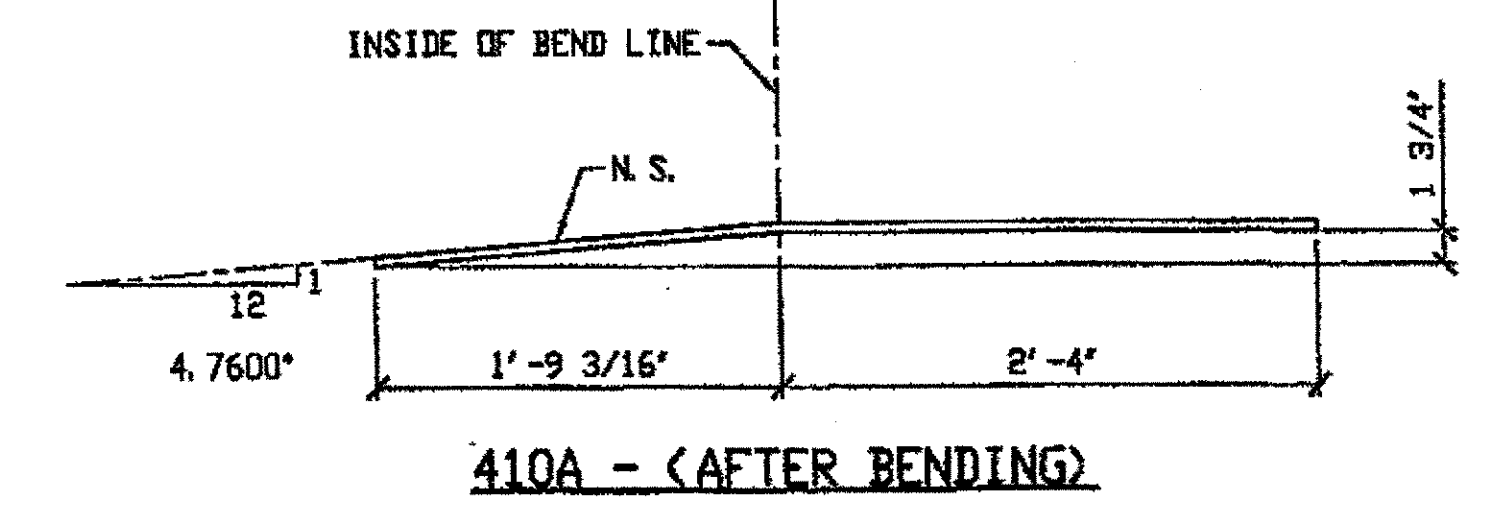
G:\Controls\000\800010\Drawings\409A.dwg  
 Save by psp at 01:34pm Feb 25, 2002  
 Plot by ofas at 02:45pm Feb 25, 2002  
 Model space plot + Scale = 1/9



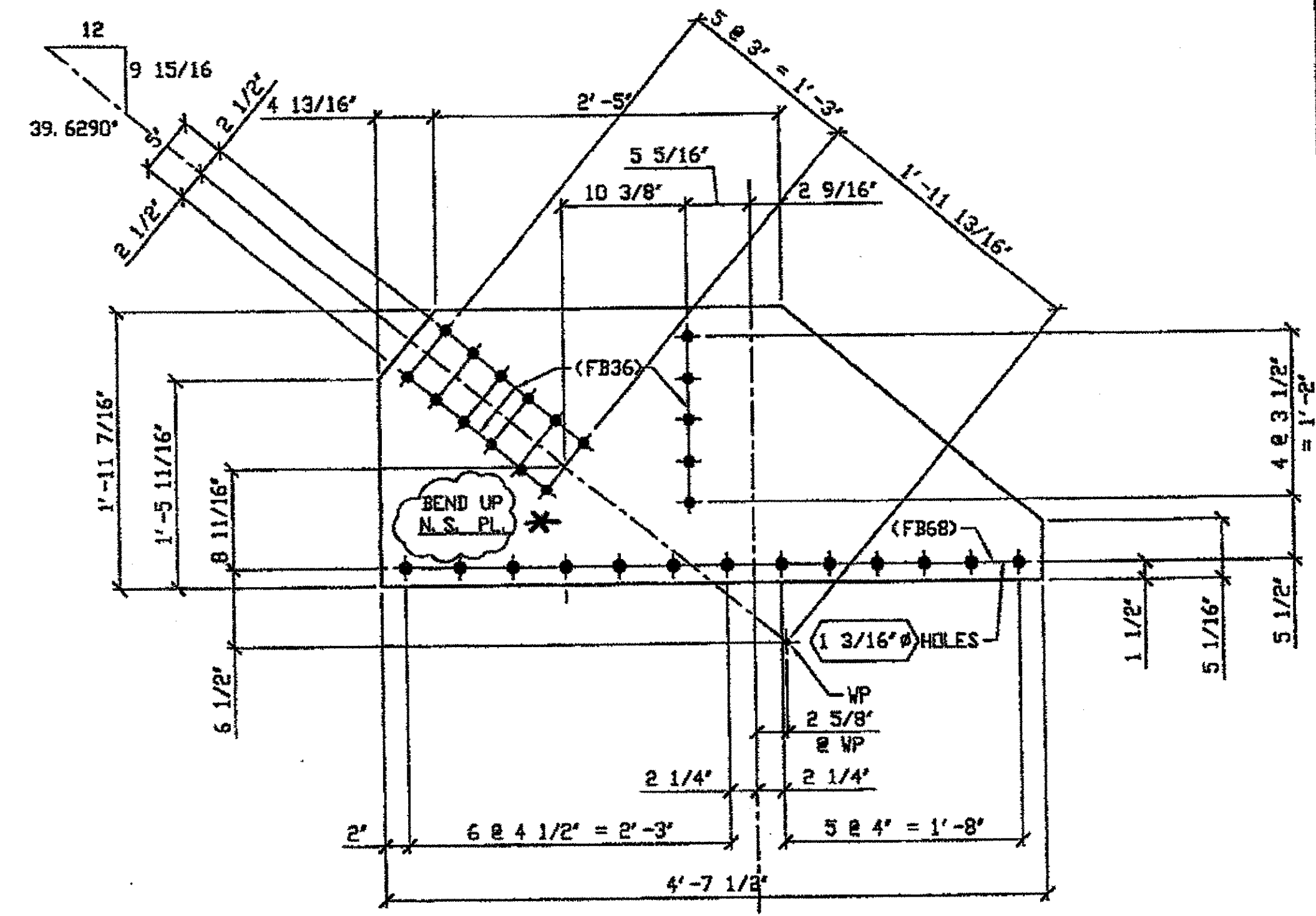
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATE				
2		410A	1	PL 1/2 x 20 1/4	4	1 1/4	BENT	137
3								
4				TYPE 1 GUSSET PLATE				
5		410B R/L	2	PL 1/2 x 23 7/16	4	7 1/2	BENT	308
6								
7								
8				FIELD BOLTS				
9		FB36	68	1" DIA	0	2 1/2	NOTE 2	95
10		FB68	39	1 1/8" DIA	0	2 3/4	NOTE 2	75
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



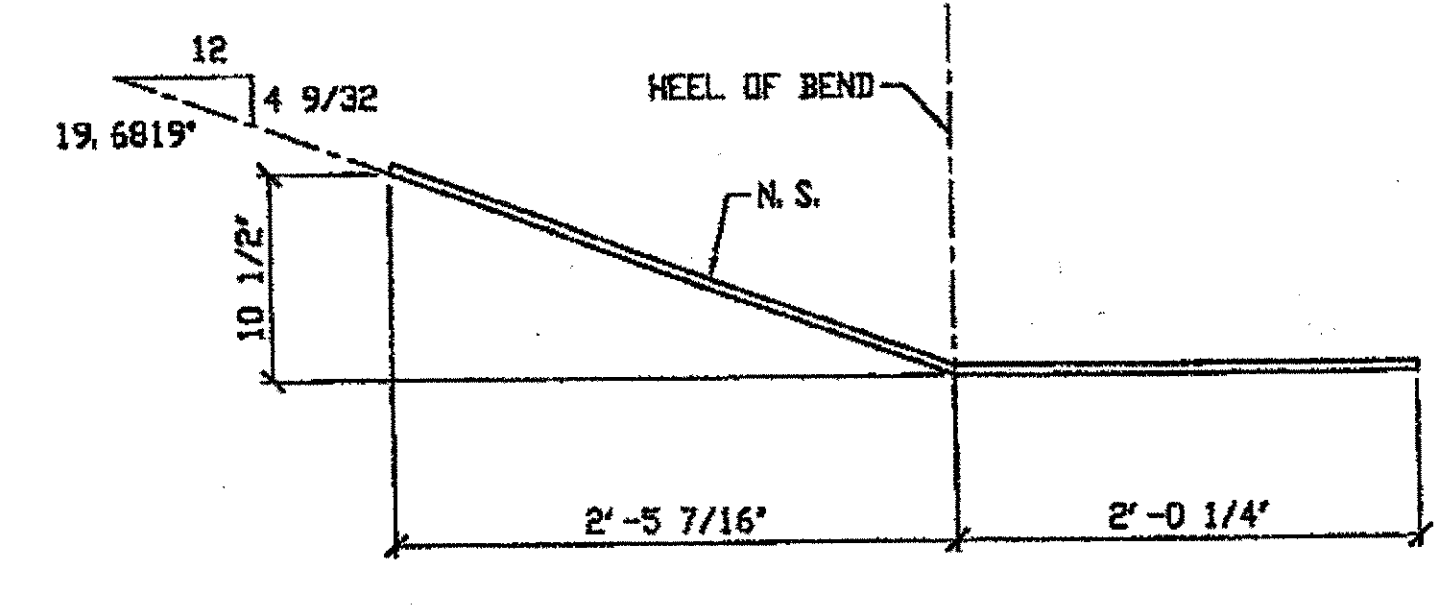
**ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 410A**  
 ORIG SHOP DWG 434 LBL10-0-11 L  
 ORIG SHOP MARK P400n /R  
 ITEM No. 0119  
 REPAIR SHEETS 11-279



SPAN 11  
 L8-J SOUTH EXTERIOR TOP 410A ✓



**2 - TYPE 1 GUSSET PLATE (SHOWN DEVELOPED) - 410B R/L**  
 ORIG SHOP DWG 431 L14L15-1-11 /L 397 L14L15-1-11 /L  
 ORIG SHOP MARK P397n R/L  
 ITEM No. 0117  
 REPAIR SHEETS 11-318 & 11-319



SPAN 11  
 \* Bend Down for L  
 L14-Q SOUTH INTERIOR TOP 410 B/L  
 L14-Q SOUTH EXTERIOR TOP 410 B/R

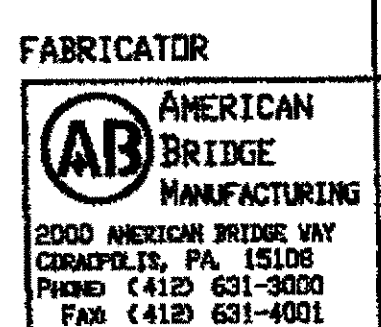
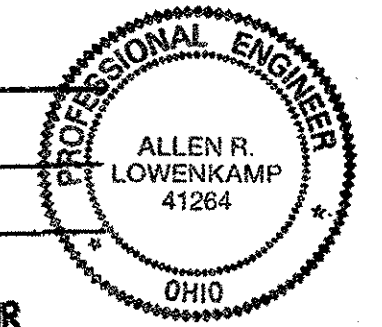
**O.D.O.T. DIST. 12**

ACCEPTED	2/3/02	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**RELEASED FOR CONSTRUCTION**  
 DATE 7/1/02 BY LDP/ESS



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF L. SMITH  
 DRAWN BY DATE  
 JRC 01/15/02  
 CHECKED BY DATE  
 GAF 02/13/02

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

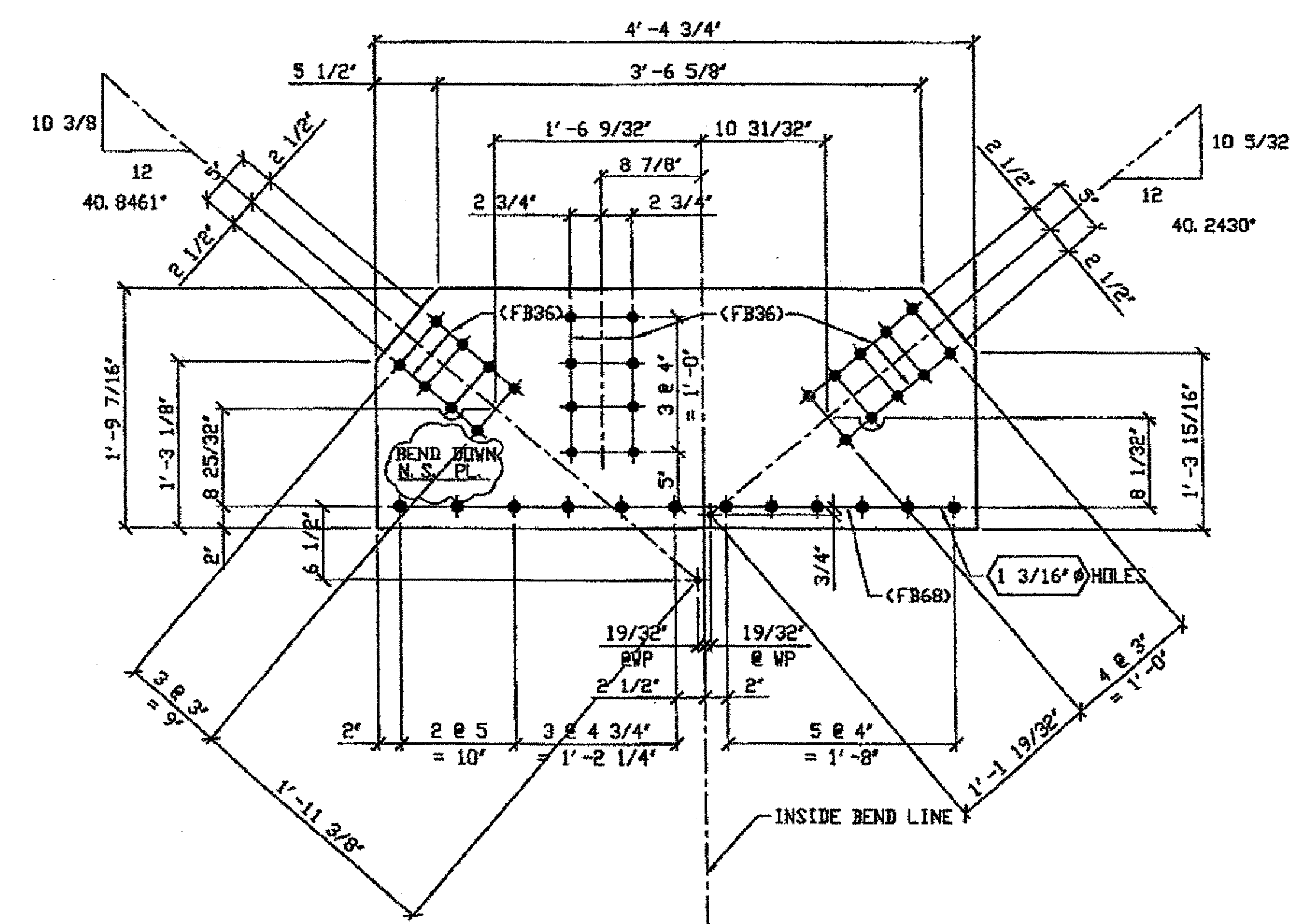
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 11 REPAIRS**

SHEET NUMBER: 410  
 ABA JOB NUMBER: 800010

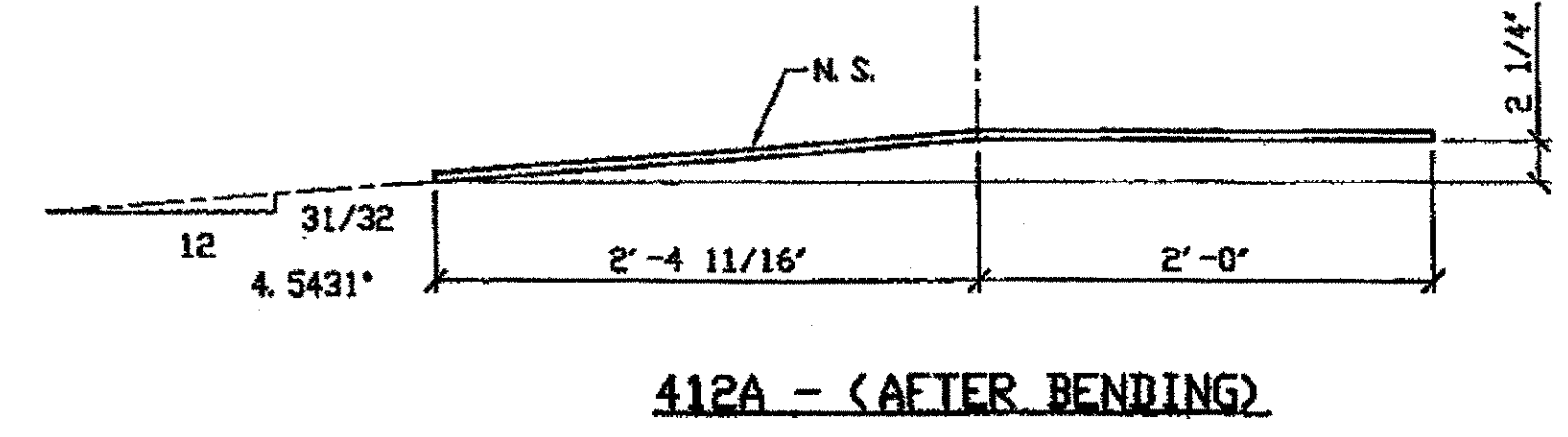
G:\Contracts\2000\800010\Drawings\A10A.dwg  
 Save by rjpr at 01:37pm Feb 25, 2002  
 Plot by gfos at 09:45pm Feb 25, 2002  
 Model Space plot + Scale = 1/7



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 3 GUSSET PLATE					
2		412A	1	PL 1/2 x 21 7/16	4	4 3/4	BENT	156	
3									
4				TYPE 3 GUSSET PLATE					
5		412B R/L	3	PL 1/2 x 21 1/2	4	4 1/4	BENT 2R; 1L	463	
6									
7				FIELD BOLTS					
8		FB36	104	1" DIA	0	2 1/2	NOTE 2	145	
9		FB68	48	1 1/8" DIA	0	2 3/4	NOTE 2	92	
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2	

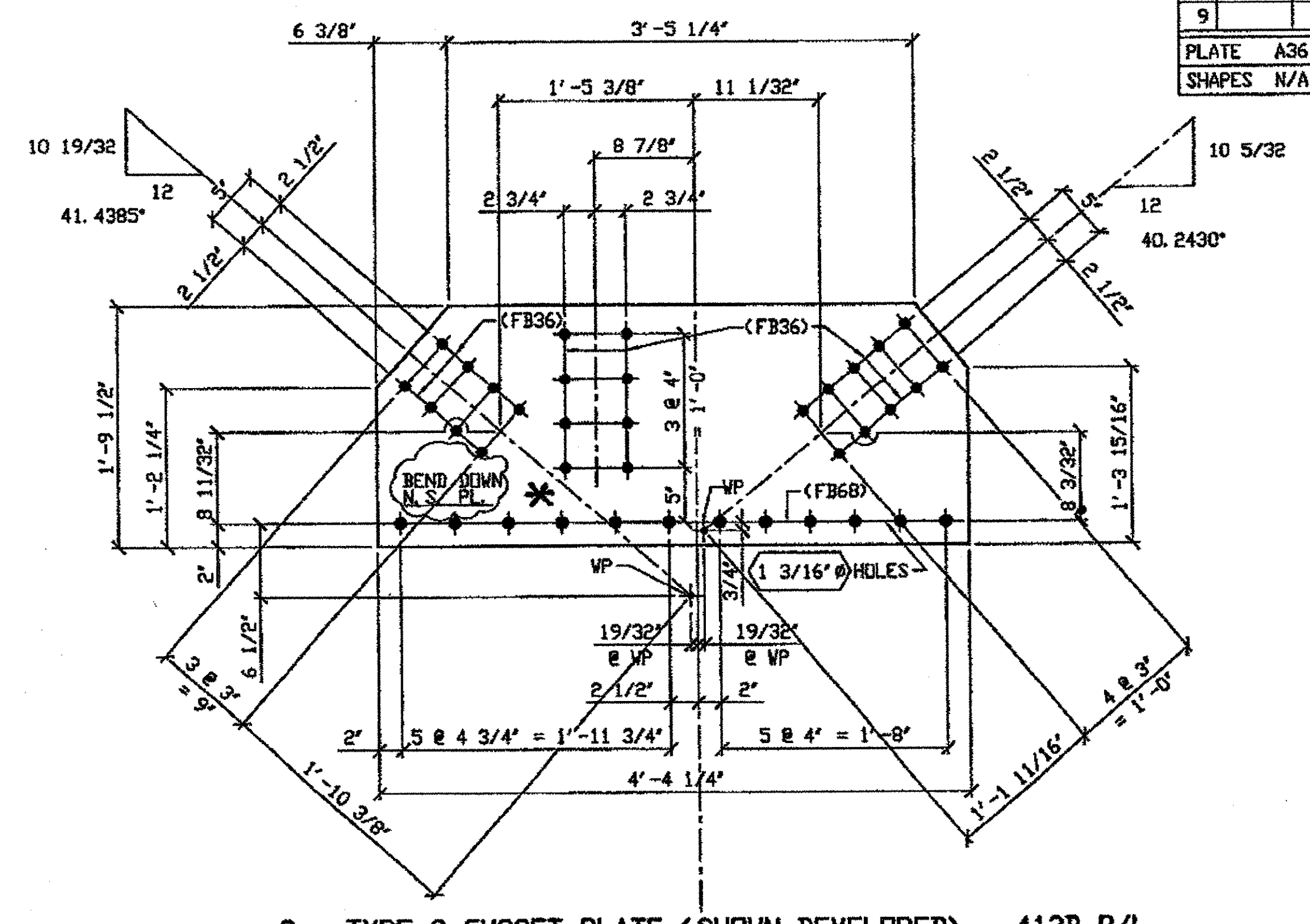


ONE - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 412A  
 ORIG SHOP DWG 436 L12L14-0-11 L  
 ORIG SHOP MARK P402b /R  
 ITEM No. 0119  
 REPAIR SHEETS 11-301

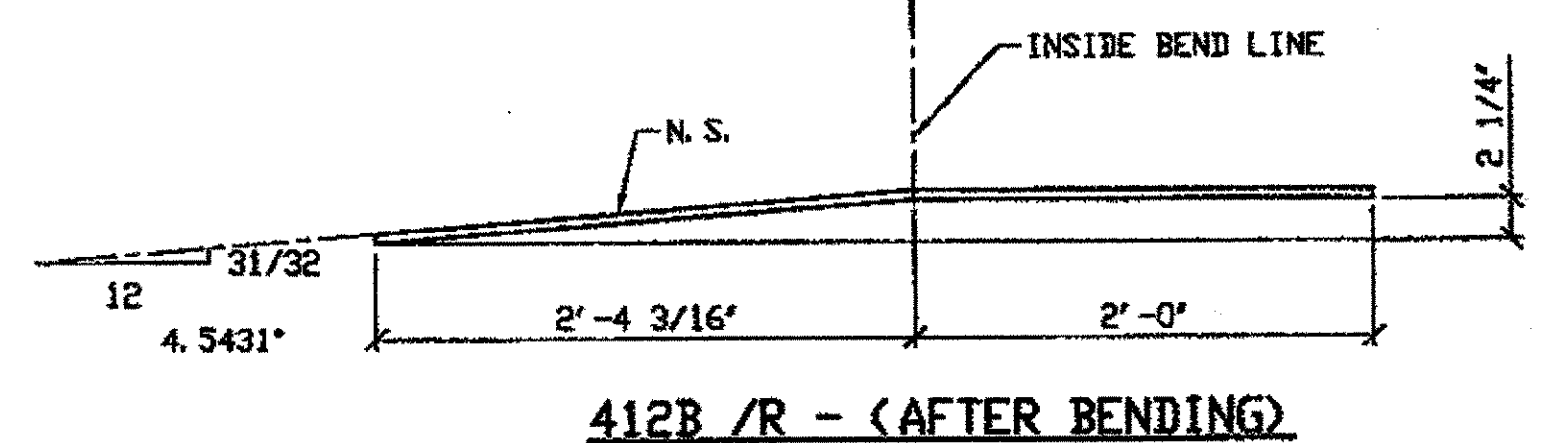


412A - (AFTER BENDING)

SPAN 11  
 L12-N SOUTH EXTERIOR TOP 412A



3 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 412B R/L  
 ORIG SHOP DWG 396 L1L3-1-11 R & 430 L1L3-0-11 R/L  
 ORIG SHOP MARK P396x R/L  
 ITEM No. 0119  
 REPAIR SHEETS 11-120, 11-121, & 11-236



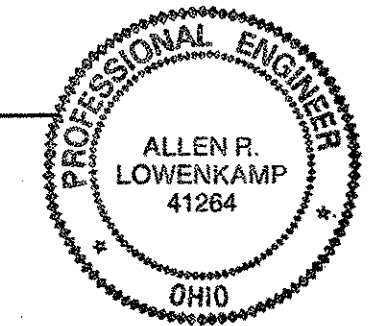
412B /R - (AFTER BENDING)

SPAN 11  
 L1-B SOUTH EXTERIOR TOP 412 B/R  
 L1-B NORTH INTERIOR TOP 412 B/R  
 L1-B NORTH EXTERIOR TOP 412 B/L

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/tss

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILLS: 3.0 - 5.0



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3500  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF L. SMITH  
 DRAWN BY DATE  
 JRC 01/16/02  
 CHECKED BY DATE  
 GAF 02/14/02

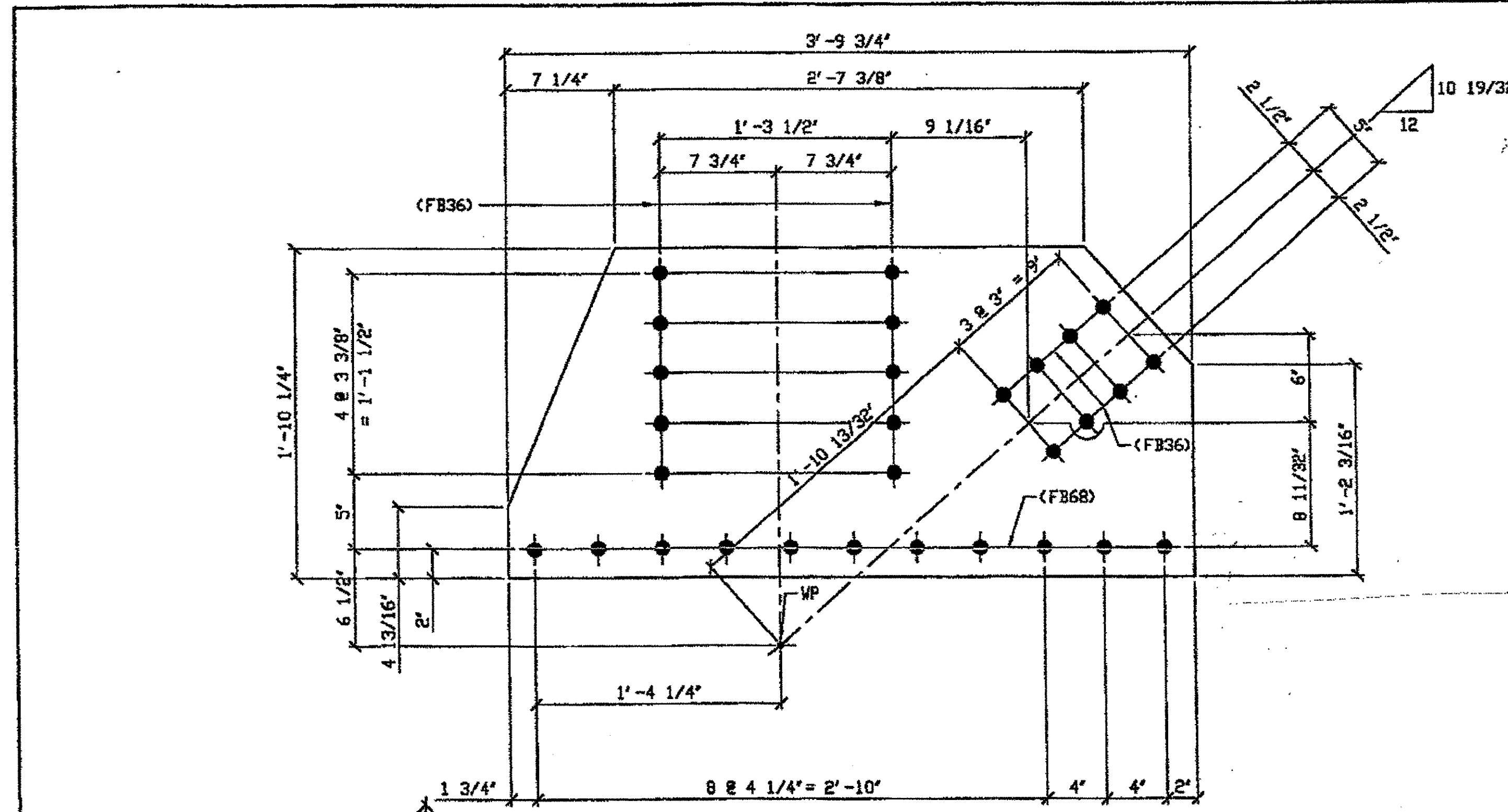
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

SHEET NUMBER: 412  
 JOB NUMBER: 800010

G:\Contract\...Drawings\AD12A.dwg  
 Save by rppr at 02:21pm Feb 25, 2002  
 Plot by gfas at 02:46pm Feb 25, 2002  
 Model space plot \* Scale = 1/9

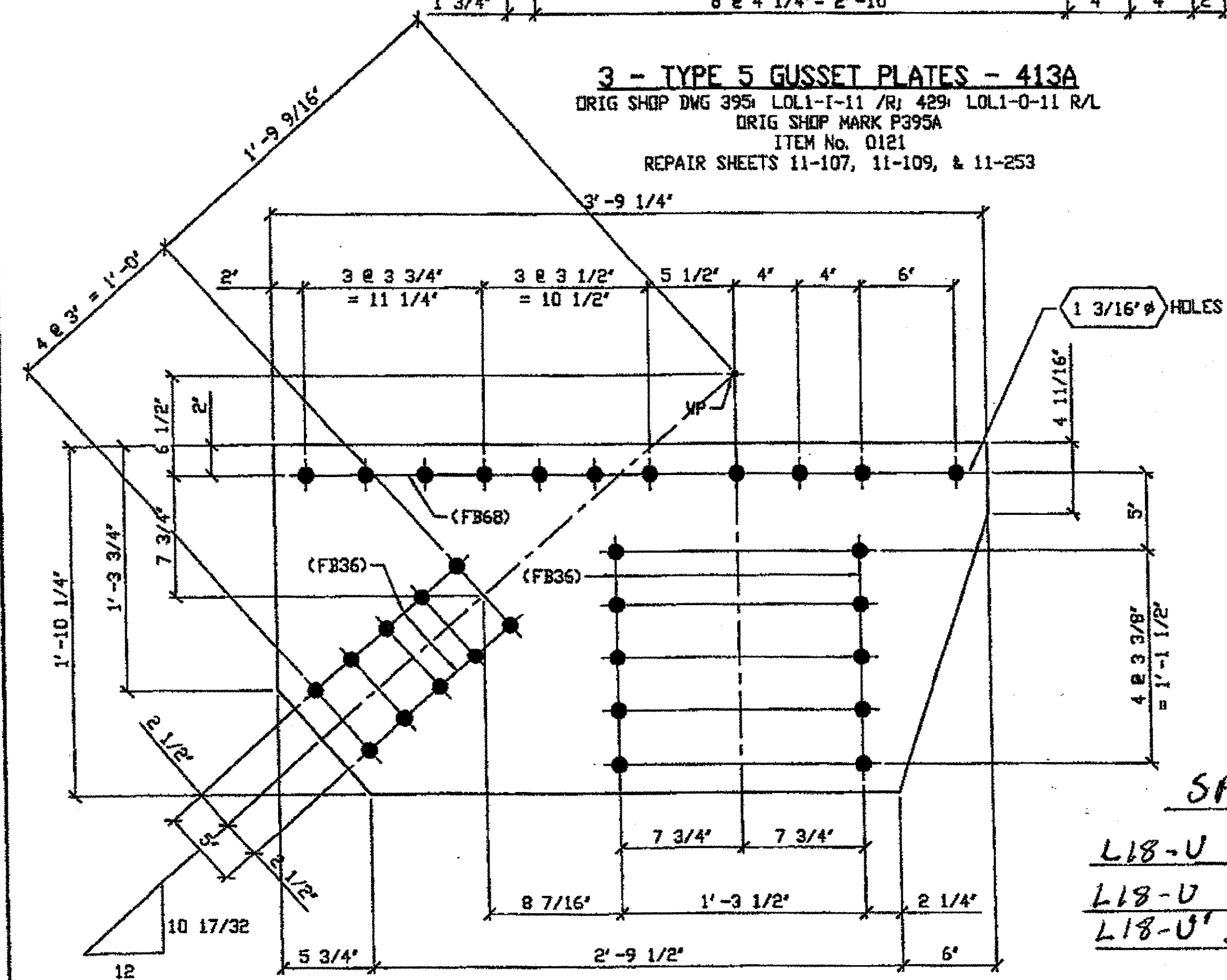




SPAN 11  
LO, A NORTH EXTERIOR TOP 413 A  
LO, A NORTH INTERIOR TOP 413 A  
LO, A SOUTH EXTERIOR TOP 413 A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 5 GUSSET PLATE				
2		413A	3	PL 1/2 X 1'-10 1/4	3	9 3/4		394
3								
4								
5				TYPE 6 GUSSET PLATE				
6		413C	3	PL 1/2 X 22 1/4	3	9 3/4		398
7								
8				FIELD BOLTS				
9		FB34	9	1" DIA	0	2 1/4	NOTE 2	12
9		FB36	114	1" DIA	0	2 1/2	NOTE 2	159
10		FB68	66	1 1/8" DIA	0	2 3/4	NOTE 2	127
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

**3 - TYPE 5 GUSSET PLATES - 413A**  
 ORIG SHOP DWG 395 L0L1-I-11 /R/ 429 L0L1-0-11 R/L  
 ORIG SHOP MARK P395A  
 ITEM No. 0121  
 REPAIR SHEETS 11-107, 11-109, & 11-253



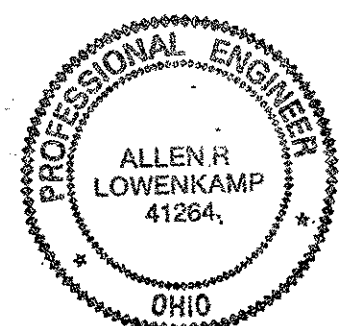
SPAN 11 413 C  
L18-U NORTH EXTERIOR TOP 413 C  
L18-U SOUTH EXTERIOR TOP 413 C  
L18-U SOUTH INTERIOR TOP 413 C

**3 - TYPE 5 GUSSET PLATES - 413C**  
 ORIG SHOP DWG 438 L17L18-0-11 R/L 404 L17L18-I-11 R/L  
 ORIG SHOP MARK P404J  
 ITEM No. 0121  
 REPAIR SHEETS 11-209, 11-337, & 11-338

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/ess

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
FABRICATOR AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY COLUMBIAS, PA 15109 PHONE (412) 621-3000 FAX (412) 621-4001			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
STEEL ERECTOR TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335		IN CHARGE OF L. SMITH DRAWN BY: DATE JRC 01/16/02 CHECKED BY: DATE GAF 02/14/02	
SHEET NUMBER: 413		A36 JOB NUMBER: 800010	

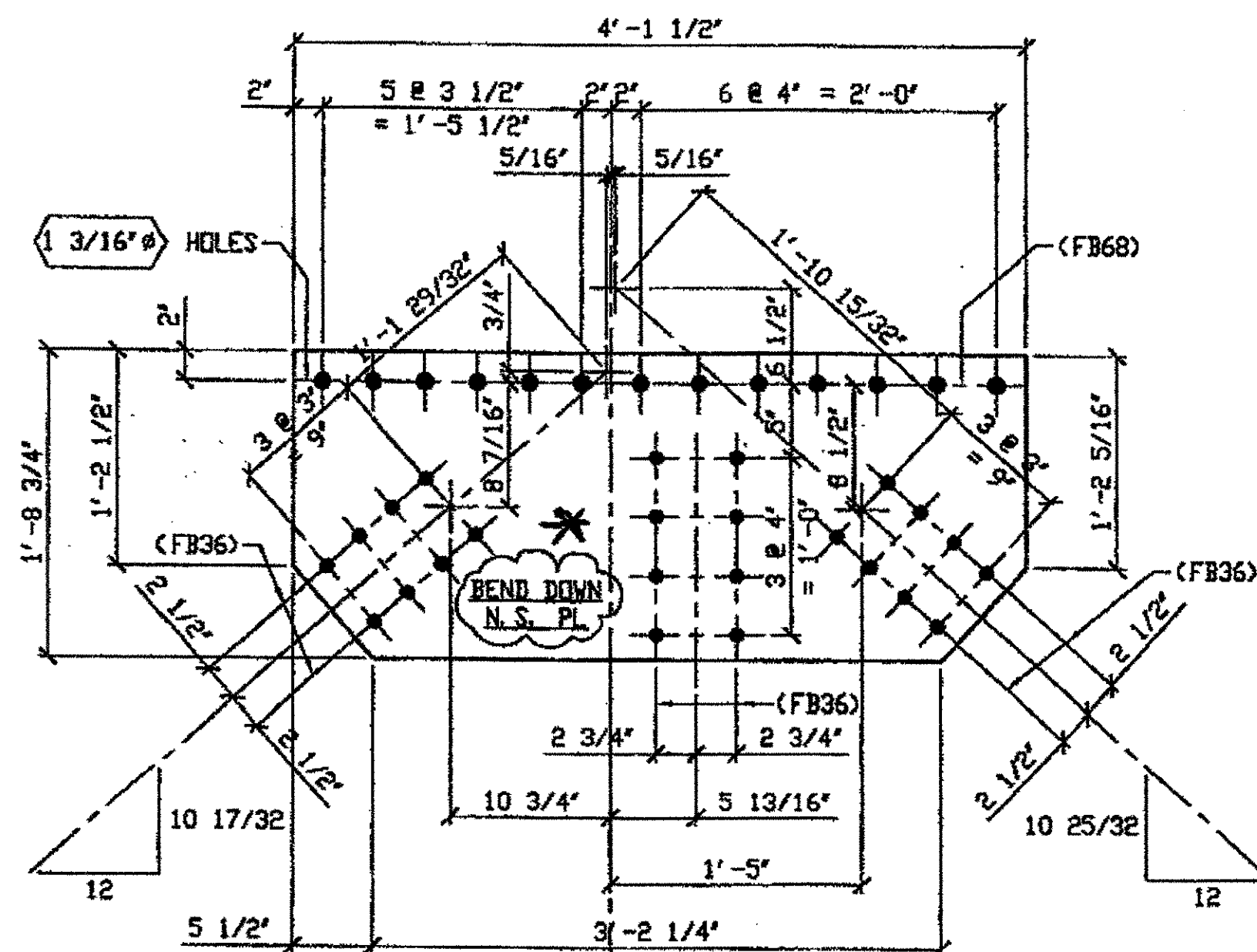
G:\Contracts\2000\800010\Drawings\DA13A.dwg  
 Save by rppr at 01:38pm Feb 25, 2002  
 Plot by gbs at 02:46pm Feb 25, 2002  
 Model Space Plot + Scale = 1/8

### BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2		457A R/L	2	PL 1/2 X 20 3/4	4	1 1/2	BEND	281
3		457B R/L	2	PL 1/2 X 20 3/4	5	11 5/16	BEND	397
4								
5								
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36	100	1" DIA	0	2 1/2	NOTE 2	139
15		FB68	60	1 1/8" DIA	0	2 3/4	NOTE 2	115
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

**NOTES:**

1. OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE T<sub>E</sub>-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT:  
SURFACE PREPARATION SSPC-SP10 BLAST,  
FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**2 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 457A R/L**

ORIG SHOP DWG 466 L2L4-0-12 R/L  
ORIG SHOP MARK P458F R/L  
REPAIRS SHEETS 12-113 & 153

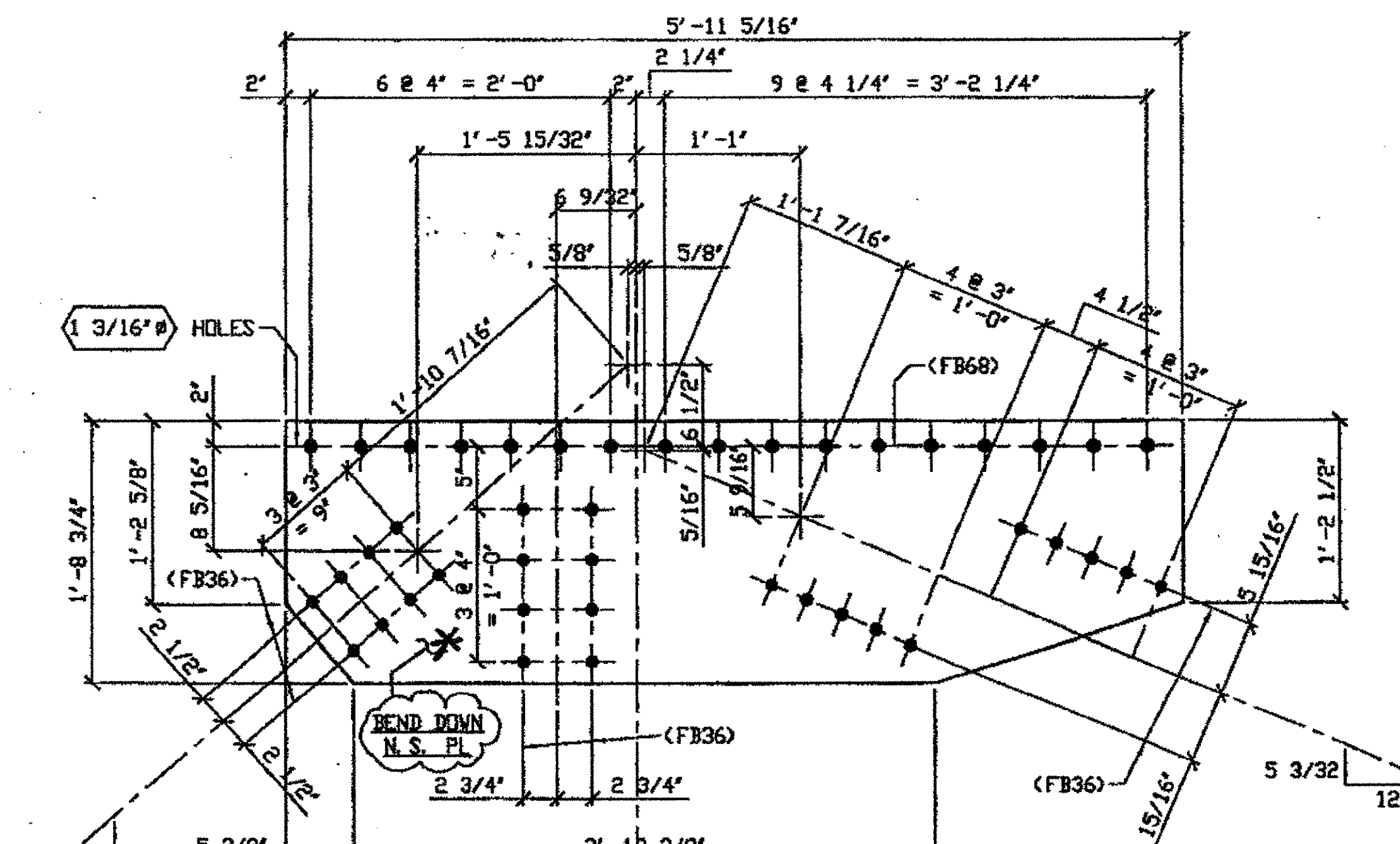


**457A/R (AFTER BENDING)**

- SPAN 1A**
- \* BEND UP FOR L**
- L2-C NORTH EXTERIOR TOP 457A/R
- L2-C SOUTH EXTERIOR TOP 457A/L

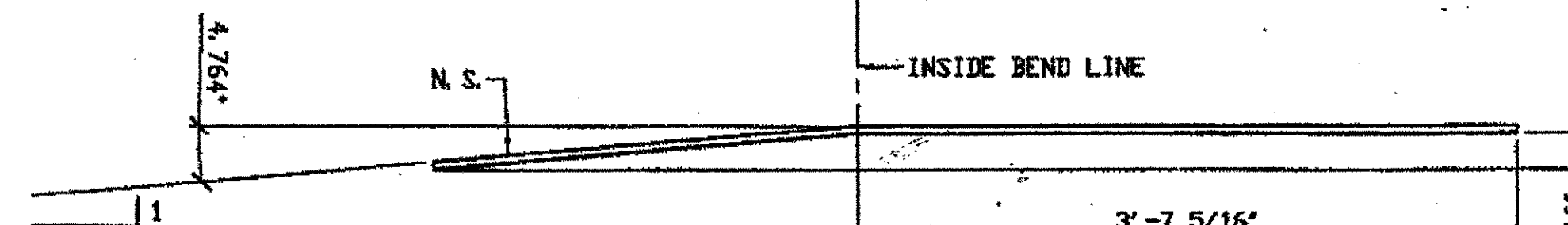
DATE ENGR' & CONTR. BY

By                                   
**DEC 10 2001**



**2 - TYPE 3 GUSSET PLATE (SHOWN DEVELOPED) - 457B R/L**

ORIG SHOP DWG 467 L4L0-0-12 R/L  
ORIG SHOP MARK P459G R/L  
REPAIRS SHEETS 12-129 & 164



**457B/R (AFTER BENDING)**

- SPAN 12**
- \* BEND UP FOR L**
- L4-E NORTH EXTERIOR TOP 457B/R
- L4-E SOUTH EXTERIOR TOP 457B/L

**O.D.O.T. DIST. 12**

ACCEPTED	2/4/02	ADVA
ACCEPTED AS NOTED		
NOT ACCEPTED		

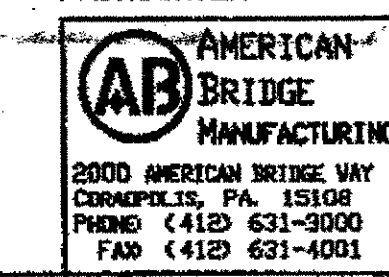
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 1/9/02 BY Lde/ESS

G:\Contract\01800010\Drawings\457A.dwg  
 Save by Rsp at 08:50am Nov 05, 2001  
 Plot by gfos at 11:51am Dec 07, 2001  
 Model space plot + Scale = 1/9



**FABRICATOR**



**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3013  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 07/27/01  
CHECKED BY: DATE  
GAF 10/22/01

DOT ITEM LINE NO. 0119  
DOT BID ITEM NO. 863E50000

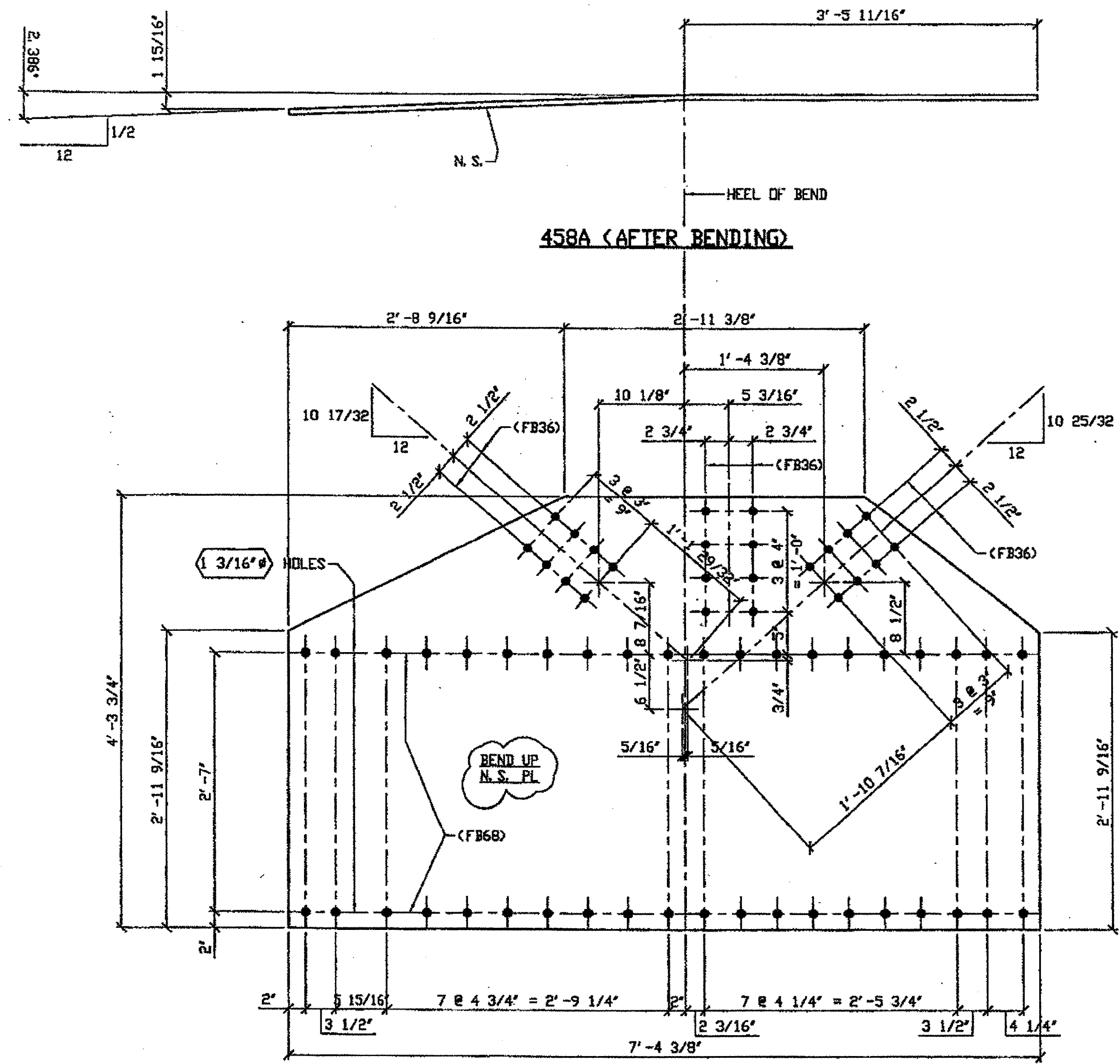
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
**SPAN 12 REPAIRS**

SHEET NUMBER  
457  
JOB NUMBER  
800010

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 4 GUSSET PLATES				
2		458A	1	PL 5/8 X 51 3/4	7	4 3/8	BEND	734
3								
4								
5								
6								
7								
8								
9								
10								
11								
12				FIELD BOLTS				
13		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
14		FB68	40	1 1/8" DIA	0	2 3/4	NOTE 2	77
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 4 GUSSET PLATE (SHOWN DEVELOPED) - 458A

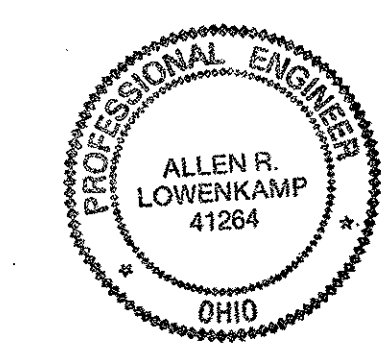
DRIG SHIP DWG 466 L2L4-0-12/R  
DRIG SHIP MARK P458h/L  
REPAIRS SHEETS 12-113

SPAN 12 L.2-C NORTH EXTERIOR BOTTOM 458A

DATE ENGR. & CONTN. BY  
DEC 10 2001

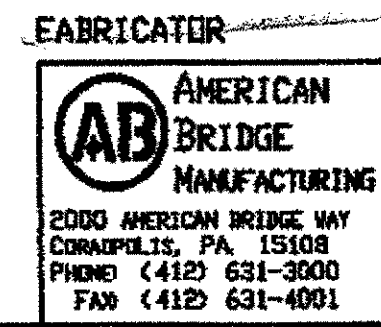
RELEASED FOR CONSTRUCTION  
DATE 11/9/02 BY tdp/ess

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/4/04 P.37M  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0120  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

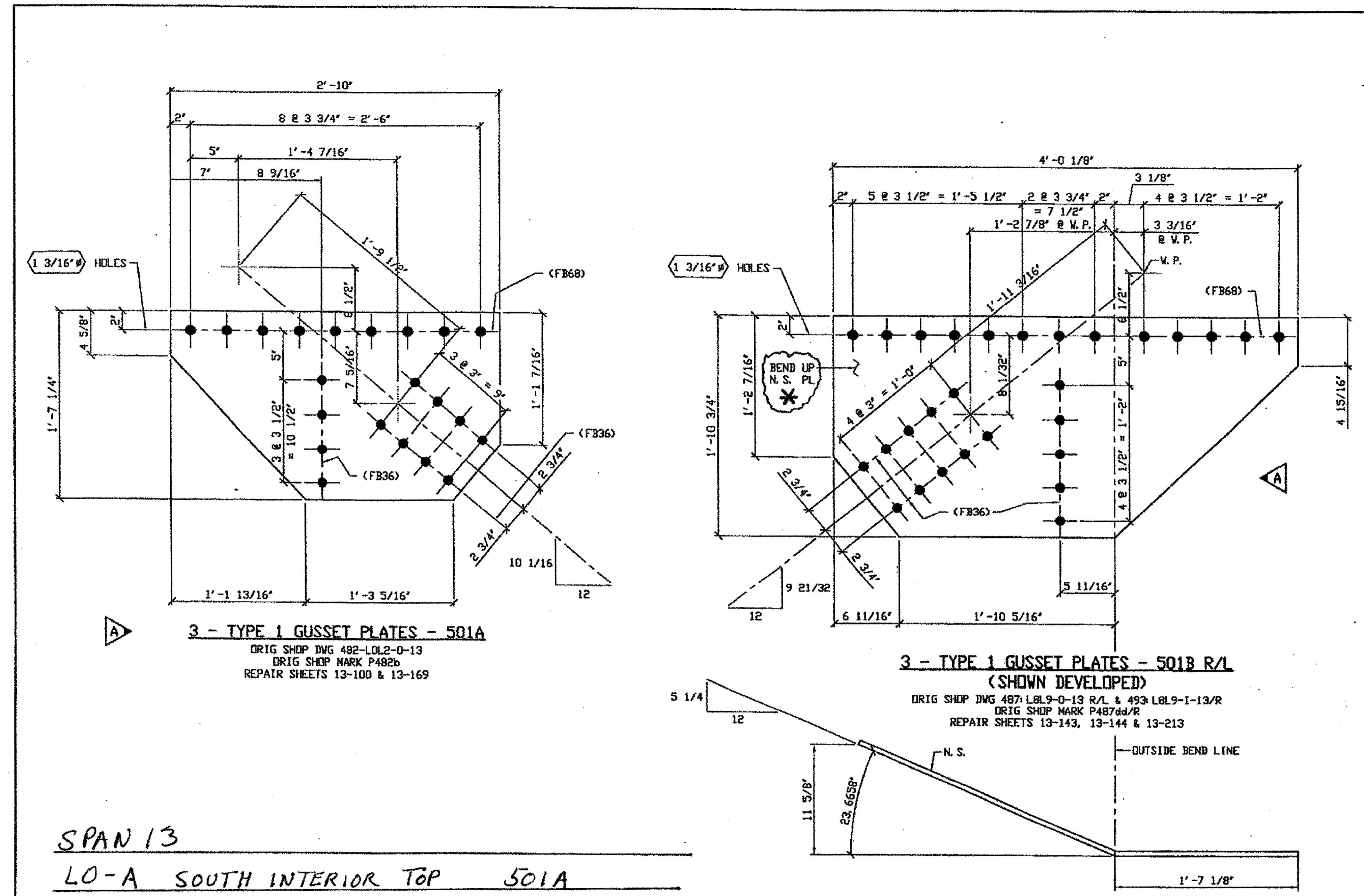


STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12508 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 07/27/01  
CHECKED BY: DATE: GAF 10/22/01  
SHEET NUMBER: 458  
JOB NUMBER: 800010

G:\Contracts\J04800010\Drawings\458A.dwg  
Save by rppr at 09:43am Nov 16, 2001  
Plot by gfoe at 11:57am Dec 07, 2001  
Model Space Plot + Scale = 1/5



SPAN 13

LO-A SOUTH INTERIOR TOP	501A
LO-A NORTH EXTERIOR TOP	501A
LO-A SOUTH EXTERIOR TOP	501A

501B/R (AFTER BENDING)  
\* Bend Down for L

SPAN 13

L8-J NORTH EXTERIOR TOP	501B/R
L8-J SOUTH EXTERIOR TOP	501B/L
L8-J NORTH INTERIOR TOP	501B/L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATES				
2		501A	3	PL 1/2 X 19 1/4	2	10		229
3		501B R/L	3	PL 1/2 X 22 3/4	4	0 1/8	1/R 2/L BEND	390
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36	81	1" DIA	0	2 1/2	NOTE 2	113
18		FB68	66	1 1/8" DIA	0	2 3/4	NOTE 2	127
PLATE A36					PIPE N/A	FITTINGS N/A		
SHAPES N/A					FLGS. N/A	BOLTS NOTE 2		

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED [Signature]

ACCEPTED AS NOTED

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR

**AB AMERICAN BRIDGE MANUFACTURING**

2000 AMERICAN BRIDGE WAY  
CRAWFORD, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

IN CHARGE OF: L. SMITH

DRAWN BY: DATE  
RAS 03/13/01

CHKD BY: DATE  
GAF 10/30/01

STEEL ERECTOR

**TRI-STATE STEEL CONSTRUCTION INC.**

12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

DOT ITEM LINE NO. 0117  
DOT BID ITEM NO. 863E5000

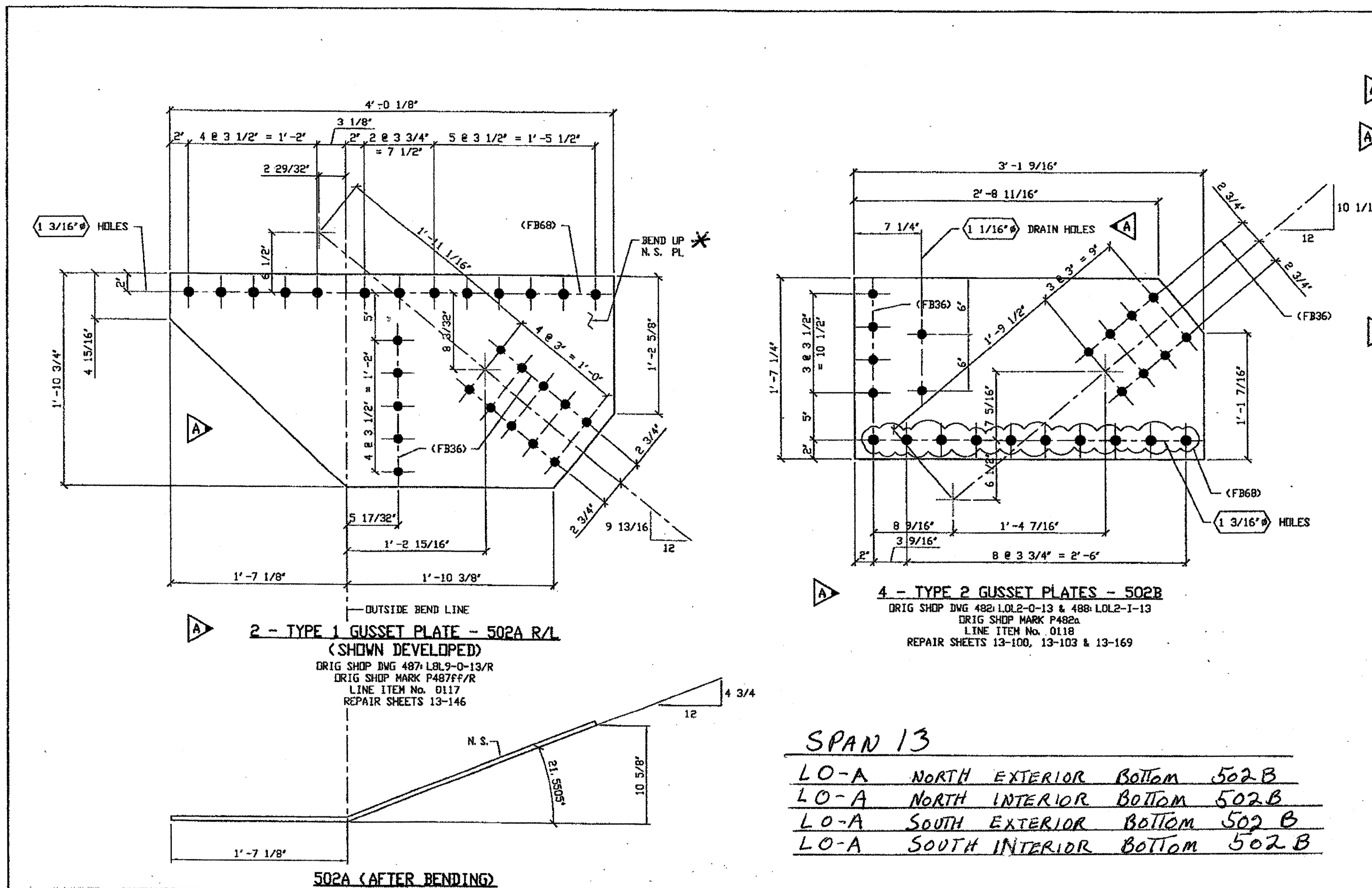
NO.	DATE	REVISIONS	DESCRIPTION	BY
A	01/21/02	REVISED PER APPROVAL	COMMENTS	GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 13 REPAIRS

SHEET NUMBER: 501  
ASH JOB NUMBER: 800010

G:\Contracts\800010\Drawings\501A.dwg  
 Save by: RAS 1:24am Feb 08, 2008  
 Plot by: GAF 6:58am Feb 04, 2008  
 Model space plot + Scale = 1/8"



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 GUSSET PLATE				
2		502A R/L	2	PL 1/2 X 22 3/4	4	0 1/8	BEND	260
3								
4				TYPE 2 GUSSET PLATE				
5		502B	4	PL 1/2 X 19 1/4	3	1 7/16		401
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16								
17		FB36	78	1" DIA	0	2 1/2	NOTE 2	109
18		FB68	66	1 1/8" DIA	0	2 3/4	NOTE 2	127
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES N/A					FLGS. N/A		BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/4/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**4 - TYPE 2 GUSSET PLATES - 502B**  
 DRIG SHOP DWG 482 L0L2-0-13 & 488 L0L2-1-13  
 DRIG SHOP MARK P482a  
 LINE ITEM No. 0118  
 REPAIR SHEETS 13-100, 13-103 & 13-169

**SPAN 13**

LO-A	NORTH EXTERIOR BOTTOM	502B
LO-A	NORTH INTERIOR BOTTOM	502B
LO-A	SOUTH EXTERIOR BOTTOM	502B
LO-A	SOUTH INTERIOR BOTTOM	502B

G:\Contracts\800010\Drawings\502EA.dwg  
 Save by rjpr  
 Plot by gfos  
 Model space plot + Scale = 1/6  
 12:46m Feb 02, 2002  
 11:59am Feb 04, 2002

**SPAN 13**

L9	NORTH EXTERIOR TOP	502A/R
L9	SOUTH EXTERIOR TOP	502A/L

\* BEND DOWN FOR L

STEEL ERECTOR

**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: RAS  
 DATE: 03/13/01

CHECKED BY: GAF  
 DATE: 10/30/01

**PROFESSIONAL ENGINEER**  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

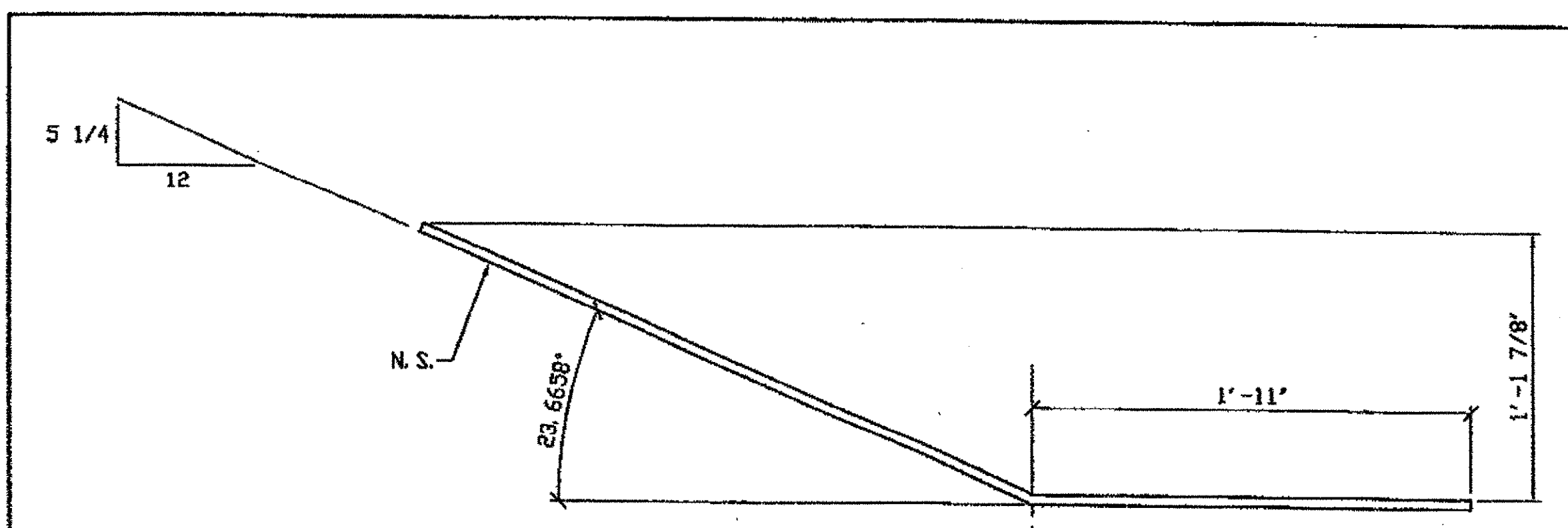
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORADELLE, PA 15106  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

REVISIONS

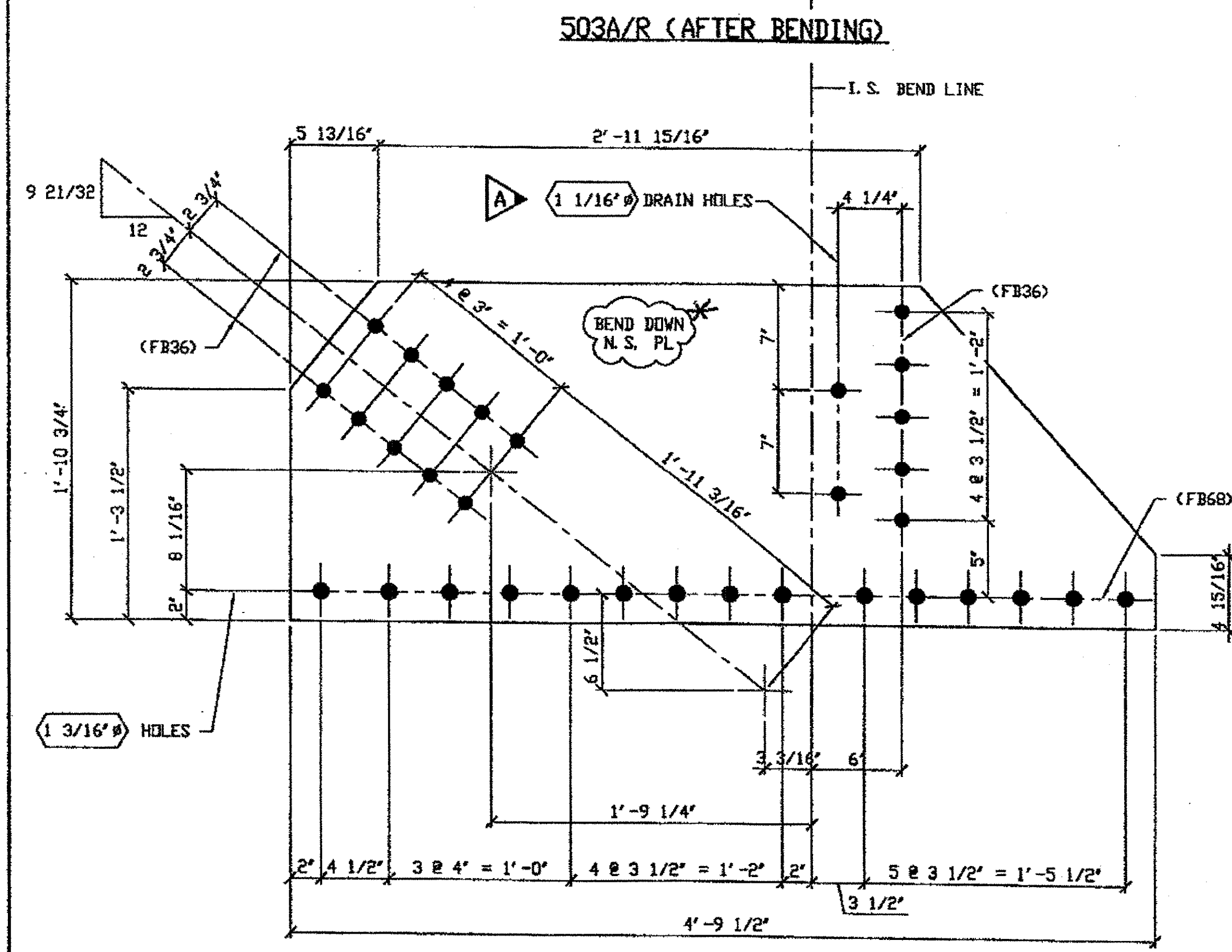
NO.	DATE	DESCRIPTION	BY
A	01/31/02	REVISED PER CUSTOMER APPROVAL	GAF

SHEET NUMBER: 502  
 JOB NUMBER: 800010



- NOTES:**
1. OPEN HOLES ARE  $(1 \frac{1}{16} \text{\"})$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 GUSSET PLATES				
2		503A R/L	3	PL 1/2 X 22 3/4	4	9 1/2	L/R) 2/L BEND	487
3		503B R/L	2	PL 1/2 X 22 3/4	4	9 1/2	BEND	323
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	75	1\" DIA	0	2 1/2	NOTE 2	105
10		FB68	75	1 1/8\" DIA	0	2 3/4	NOTE 2	144
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

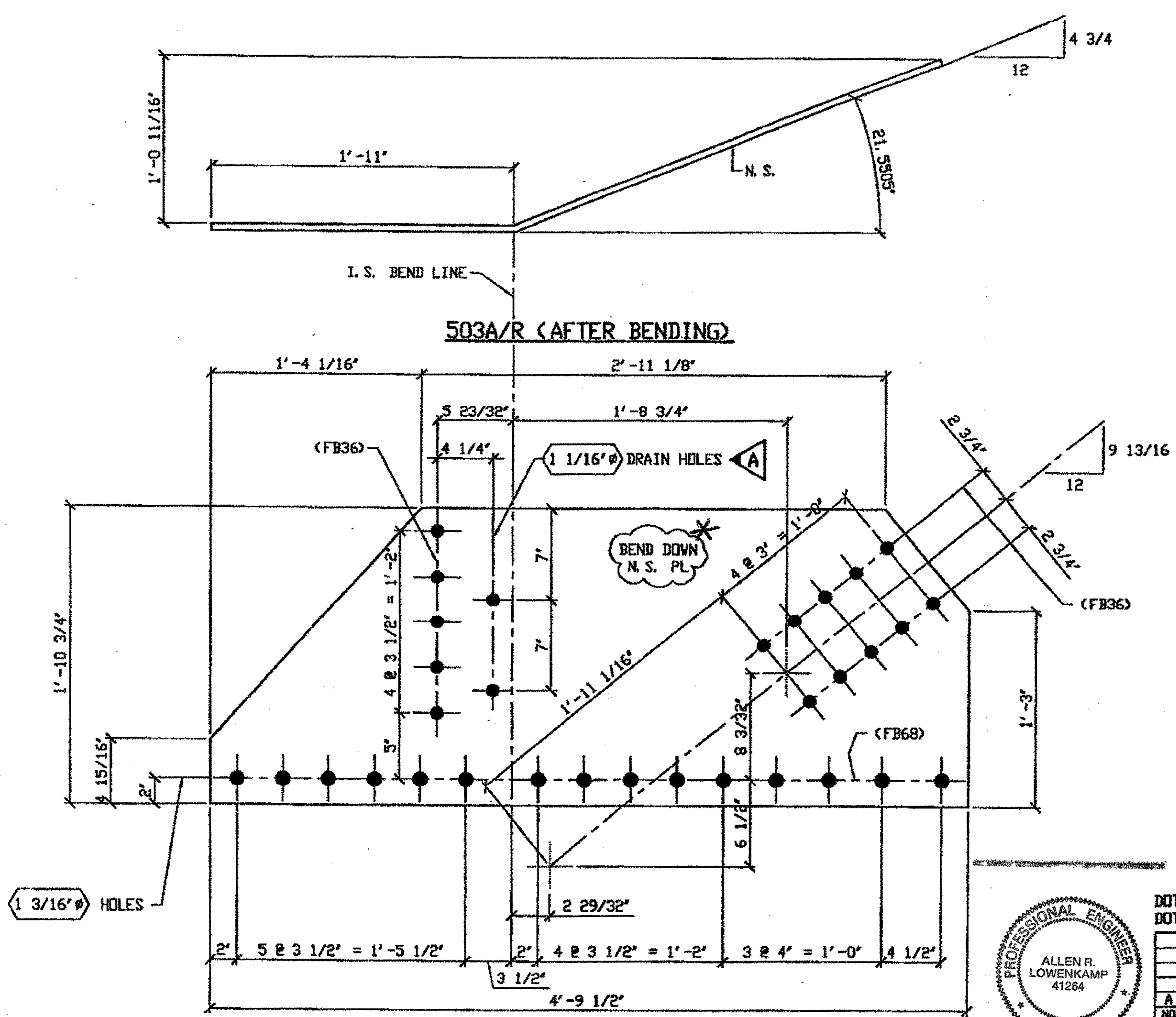


**3 - TYPE 2 GUSSET PLATE - 503A R/L (SHOWN DEVELOPED)**  
 ORIG SHOP DWG 487 LBL9-0-13 R/L & 493 LBL9-1-13/R  
 DRIG SHOP MARK P4870e/R  
 REPAIR SHEETS 13-143, 13-144 & 13-213

**SPAN 13**

L8-J	NORTH EXTERIOR	BOTTOM	503A/R
L8-J	NORTH INTERIOR	BOTTOM	503A/L
L8-J	SOUTH EXTERIOR	BOTTOM	503A/L

\* Bend up for L



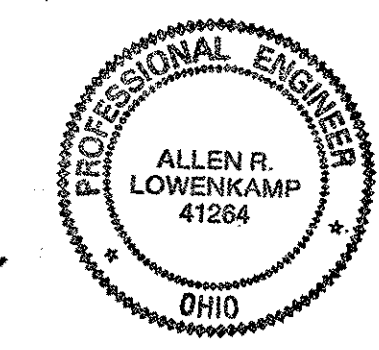
**2 - TYPE 2 GUSSET PLATE - 503B R/L (SHOWN DEVELOPED)**  
 ORIG SHOP DWG 487 LBL9-0-13 R/L  
 DRIG SHOP MARK P4870e/R  
 REPAIR SHEETS 13-146 & 13-214

**SPAN 13**

L9-K	NORTH EXTERIOR	BOTTOM	503B/R
L9-K	SOUTH EXTERIOR	BOTTOM	503B/L

\* Bend up for L

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED 2/4/04 BJA  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



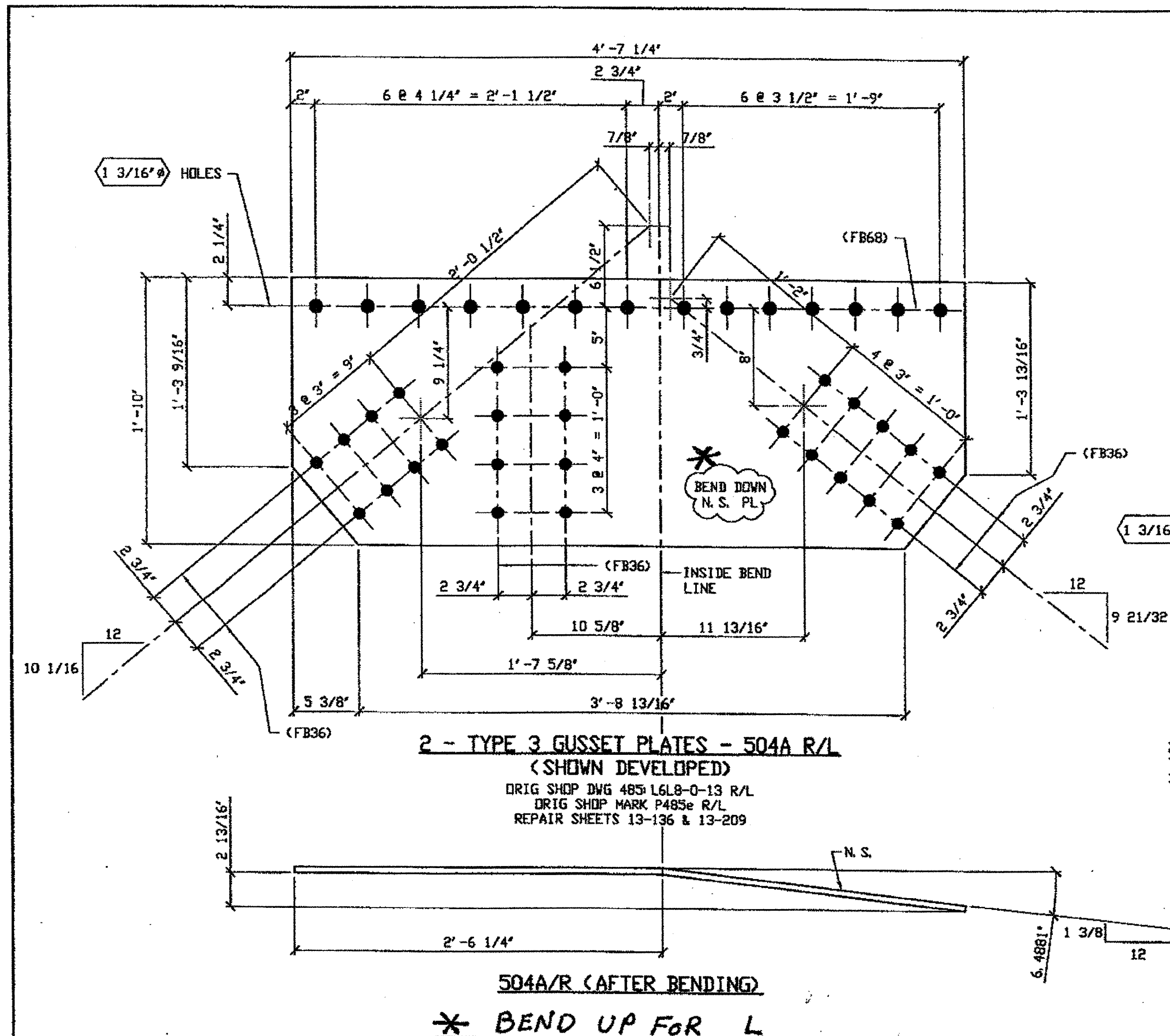
**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0118		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
A	01/31/04	REVISED PER CUSTOMER APPROVAL	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
SHEET NUMBER 503		ASN JOB NUMBER 800010	

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/15/01  
 CHECK BY: DATE  
 GAF 10/30/01

G:\Contracts\180001\Drawings\503A.dwg  
 Save by: at  
 Plot by: gms  
 Model space plot & Scale = 1/8"



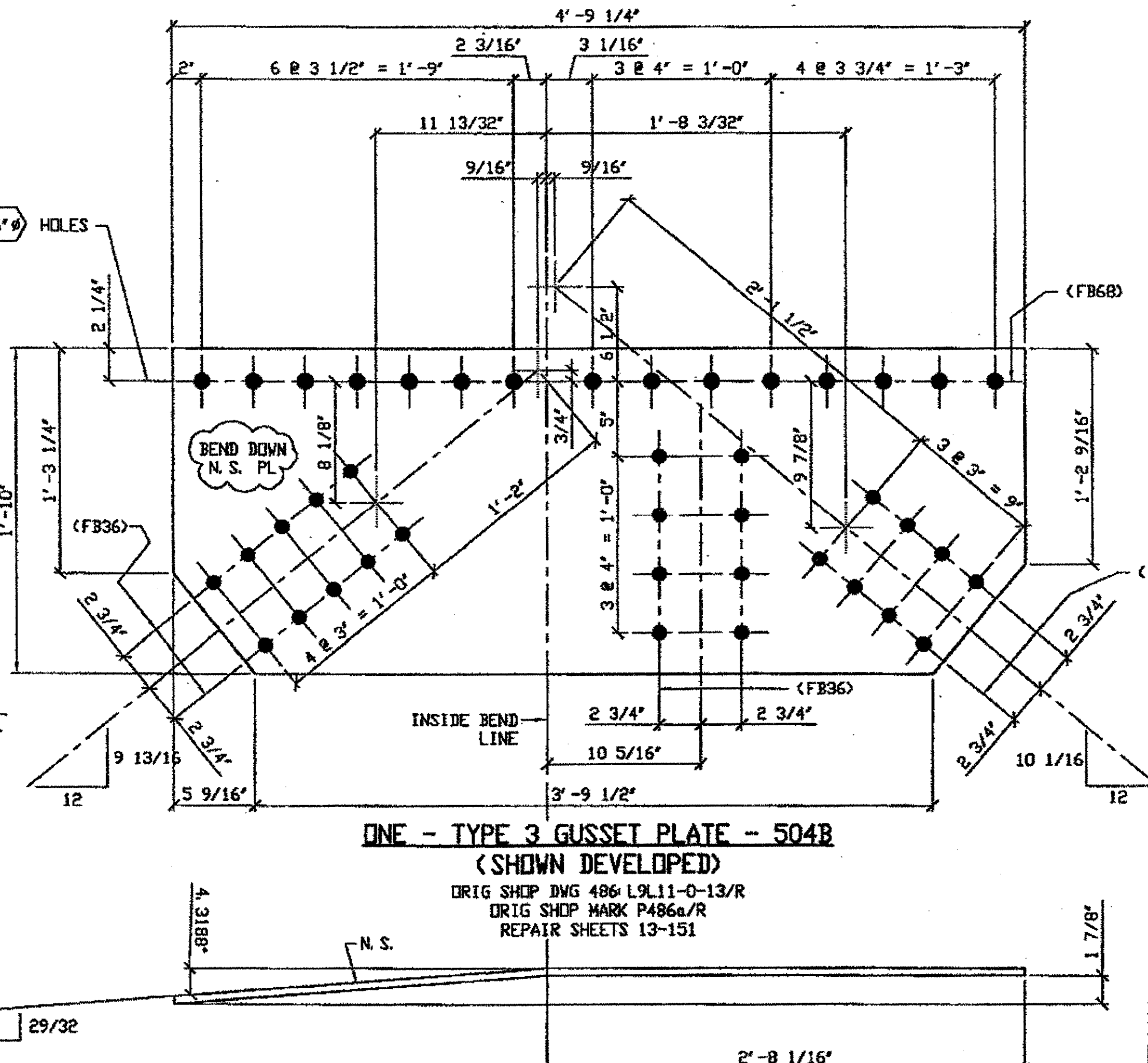
2 - TYPE 3 GUSSET PLATES - 504A R/L  
(SHOWN DEVELOPED)  
ORIG SHOP DWG 485 L6L8-0-13 R/L  
ORIG SHOP MARK P485e R/L  
REPAIR SHEETS 13-136 & 13-209

504A/R (AFTER BENDING)  
\* BEND UP FOR L

SPAN 13  
L7-H NORTH EXTERIOR TOP 504A/R  
L7-H SOUTH EXTERIOR TOP 504A/L

- NOTES:
1. OPEN HOLES ARE (1 3/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2		504A R/L	2	PL 1/2 X 22	4	7 1/4	BEND	335
3		504B	1	PL 1/2 X 22	4	9 1/4	BEND	173
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36	78	1" DIA	0	2 1/2	NOTE 2	109
10		FB68	43	1 1/8" DIA	0	2 3/4	NOTE 2	83
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			



ONE - TYPE 3 GUSSET PLATE - 504B  
(SHOWN DEVELOPED)  
ORIG SHOP DWG 486 L9L11-0-13/R  
ORIG SHOP MARK P486a/R  
REPAIR SHEETS 13-151

504B (AFTER BENDING)  
SPAN 13  
L10-L NORTH EXTERIOR TOP 504B

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

G:\Contracts\1800010\Drawings\1504A.dwg  
 Save by at on Feb 02, 2002  
 Plot by gfas at 09:00am Feb 04, 2002  
 Model Space Plot + Scale = 1/6

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

PROFESSIONAL ENGINEER  
ALLEN R. LOWERKAMP  
41284  
OHIO

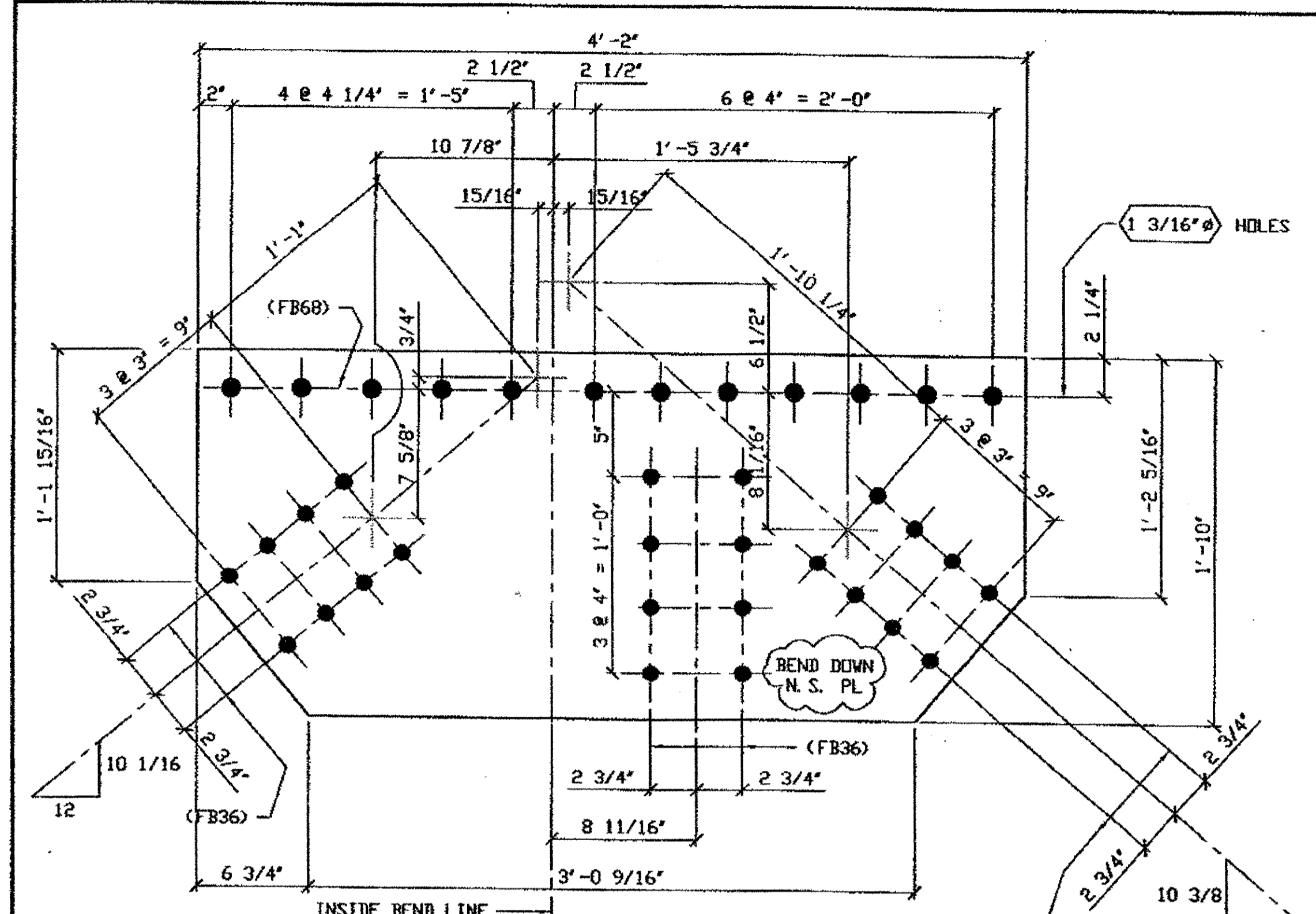
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 03/15/01  
CHECKED BY: DATE: GAF 10/30/01

DOT ITEM LINE NO. 0119  
DOT BID ITEM NO. 863E50000

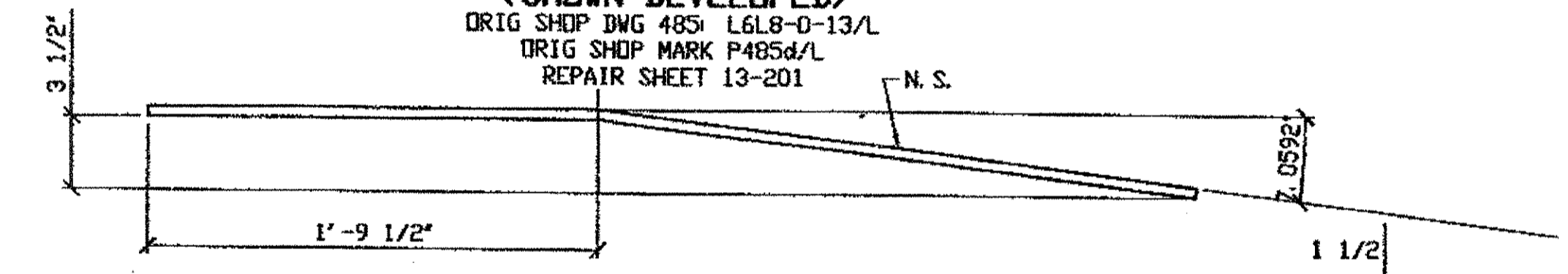
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16, 13  
SPAN 13 REPAIRS

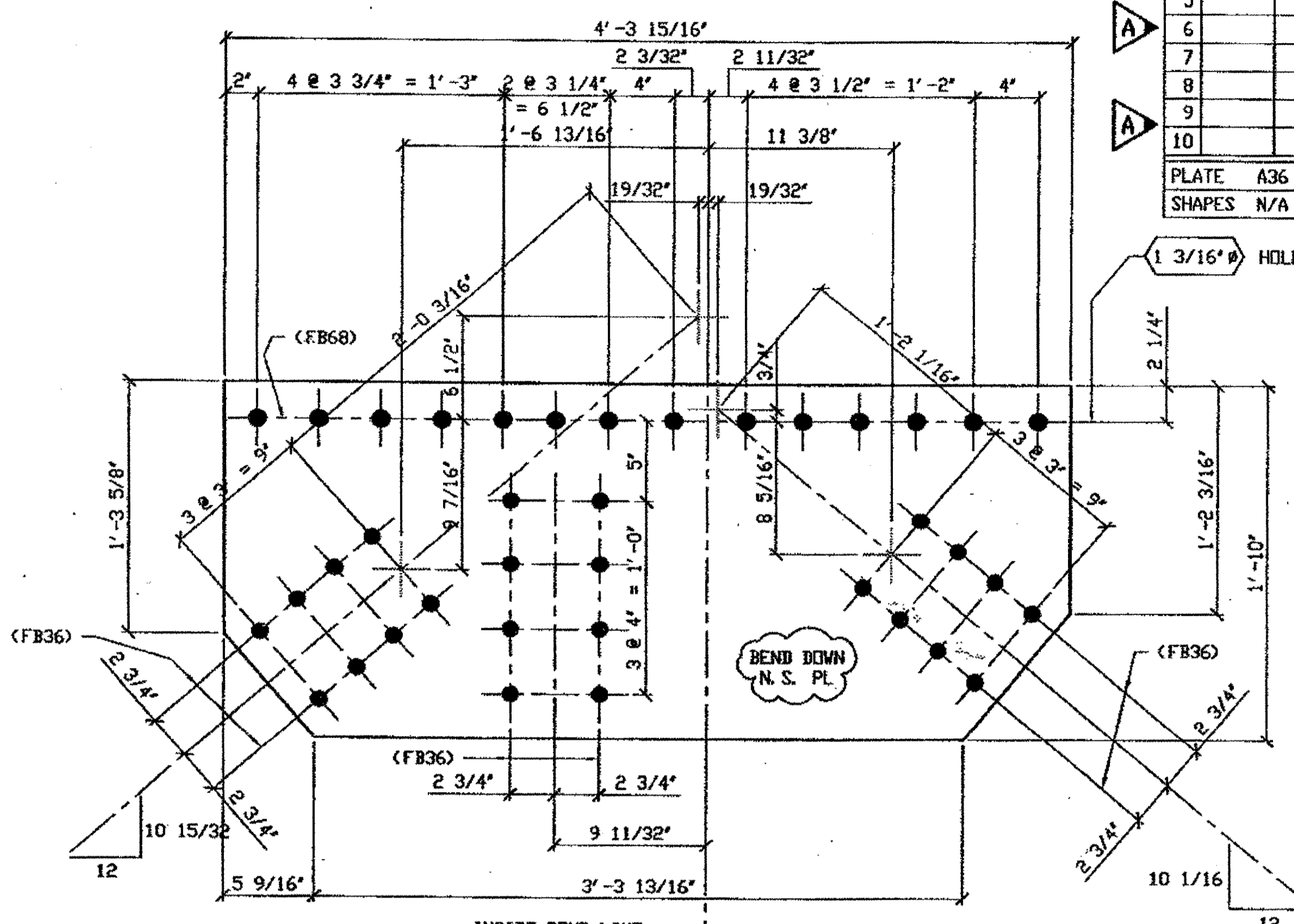
SHEET NUMBER: 504  
A36 JOB NUMBER: 800010



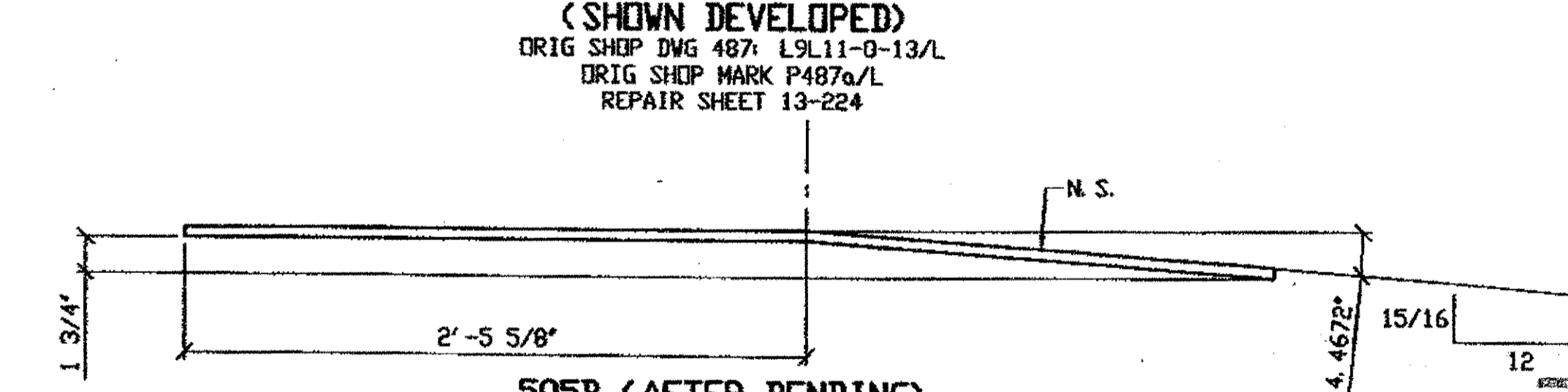
**ONE - TYPE 3 GUSSET PLATE - 505A**  
(SHOWN DEVELOPED)  
ORIG SHOP DNG 485 L6L8-0-13/L  
ORIG SHOP MARK P485d/L  
REPAIR SHEET 13-201



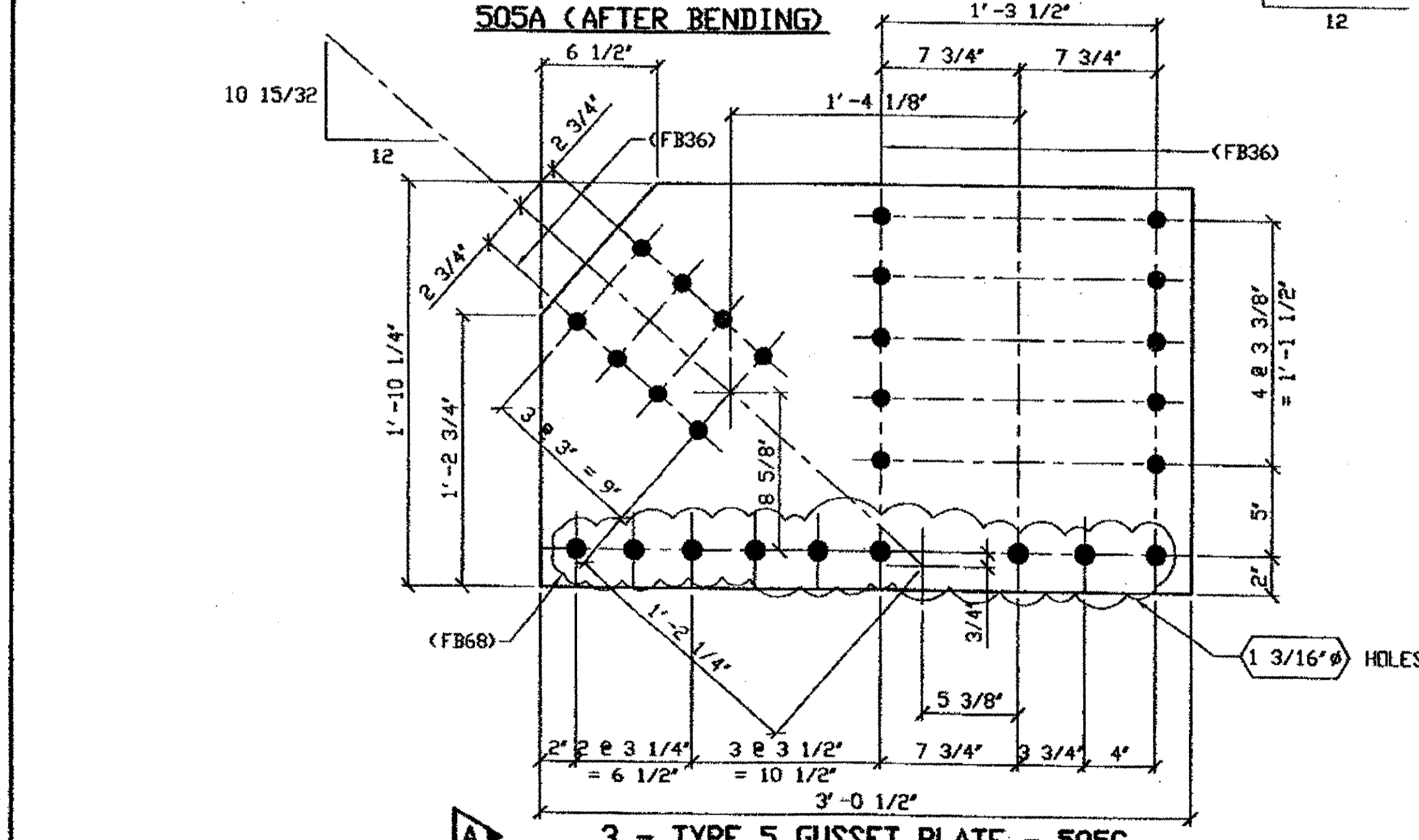
**505A (AFTER BENDING)**



**ONE - TYPE 3 GUSSET PLATE - 505B**  
(SHOWN DEVELOPED)  
ORIG SHOP DNG 487 L9L11-0-13/L  
ORIG SHOP MARK P487a/L  
REPAIR SHEET 13-224



**505B (AFTER BENDING)**



**3 - TYPE 5 GUSSET PLATE - 505C**  
ORIG SHOP DNG 493 L11L12-1-13 R/L  
ORIG SHOP MARK P487d  
REPAIR SHEET 13-233 (REV A) & 13-246  
DOT ITEM LINE No. 0121

**NOTES:**

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 GUSSET PLATES				
2		505A	1	PL 1/2 X 22	4	2	BEND	148
3		505B	1	PL 1/2 X 22	4	3 15/16	BEND	156
4								
5				TYPE 5 GUSSET PLATE				
6		505C	3	PL 1/2 X 22 1/4	3	0 1/2		336
7								
8				FIELD BOLTS				
9		FB36	102	1" DIA	0	2 1/2	NOTE 2	142
10		FB68	53	1 1/8" DIA	0	2 3/4	NOTE 2	102
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				N/A	FLGS.	N/A	BOLTS	NOTE 2

**SPAN 13**

- L6-G SOUTH EXTERIOR TOP 505A
- L11-M SOUTH EXTERIOR TOP 505B
- L12-N SOUTH INTERIOR TOP 505C
- L12-N NORTH INTERIOR TOP 505C
- L12-N NORTH EXTERIOR TOP 505C

**O.D.O.T. DIST. 12**

ACCEPTED	9/29/01	ASM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

G:\Contract\01800010\Drawings\505A.dwg  
 Save by rpb... 11:24am Feb 02, 2002  
 Plot by gpb... 09:00am Feb 04, 2002  
 Model space Plot + Scale = 1/6



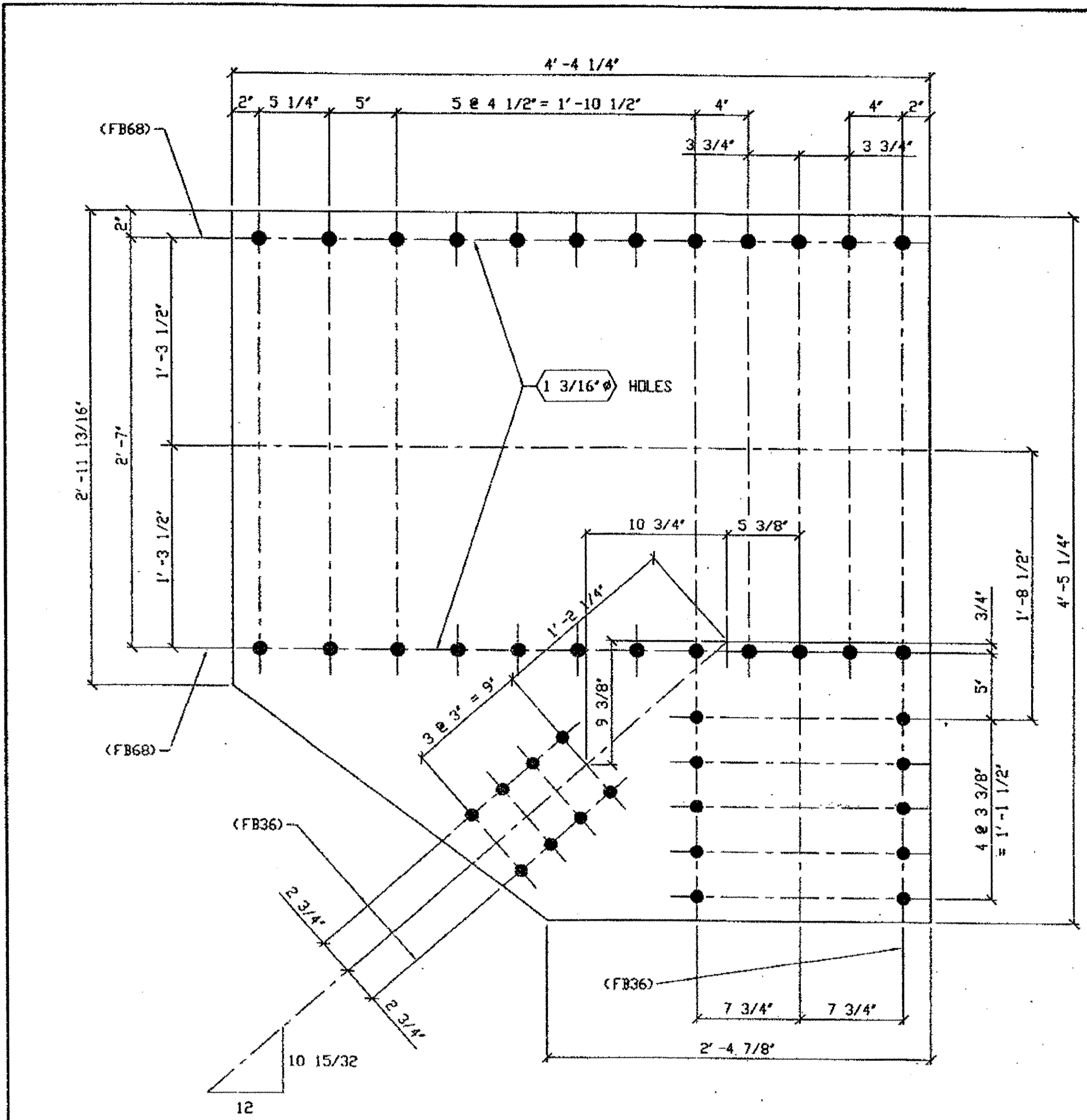
**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

**FABRICATOR**  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/15/01  
 CHECKED BY: DATE  
 GAF 10/31/01

DOT ITEM LINE NO. 0119 UNO  
 DOT BID ITEM NO. 863E50000

STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 13 REPAIRS	
SHEET NUMBER: 505	ABN JOB NUMBER: 800010

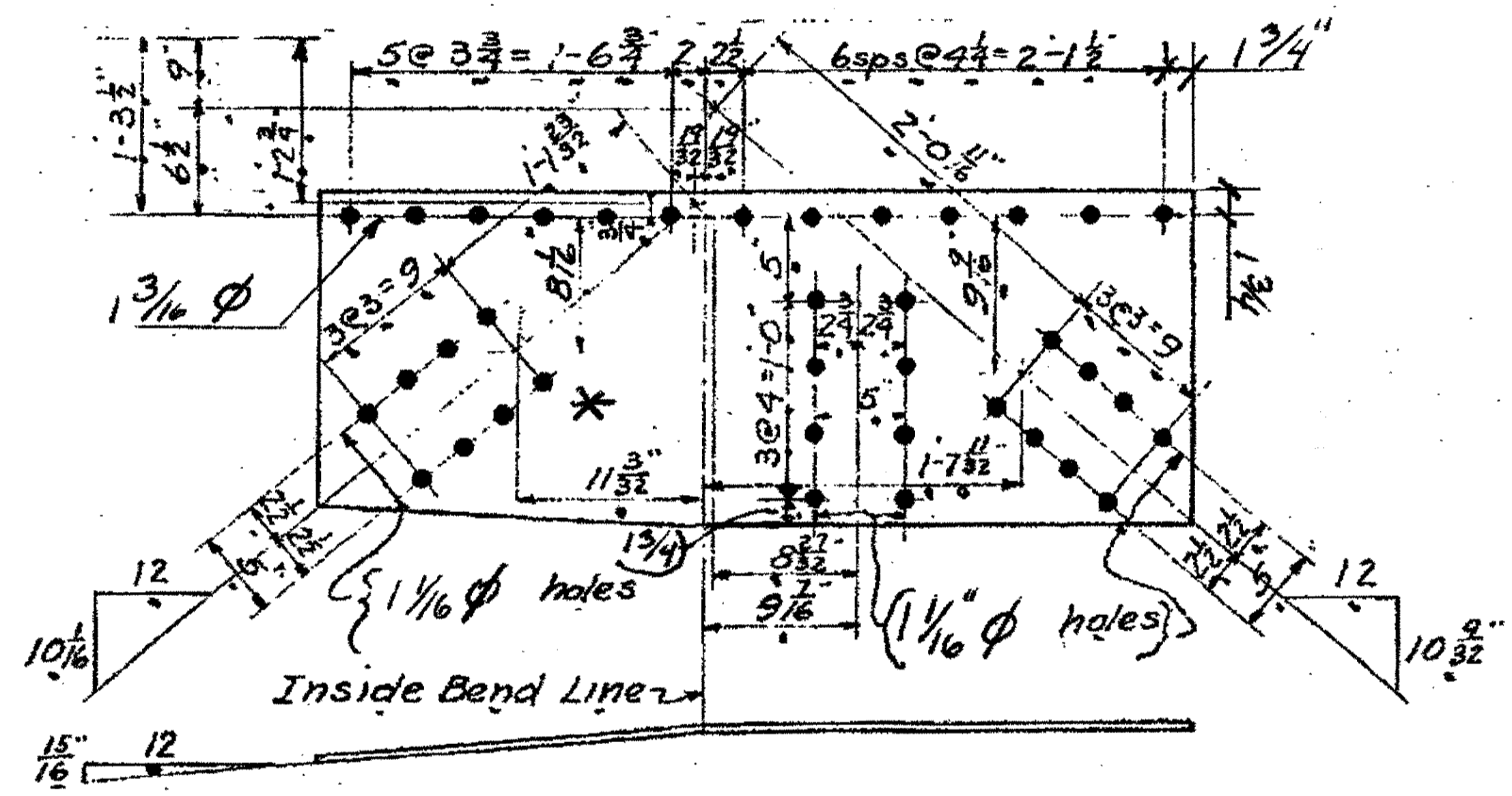




2 - TYPE 6 GUSSET PLATE - 529A  
 ORIG SHOP DWG 499- L11L12-1-13 R/L  
 ORIG SHOP MARK P497p  
 DOT ITEM LINE No. 0122  
 REPAIR SHEET 13-233 (REV A) & 13-246

SPAN 13  
L12-N' NORTH INTERIOR BOTTOM 529A  
L12-N' SOUTH INTERIOR BOTTOM 529A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 6 GUSSET PLATE				
2		529A	2	PL 5/8 X 52 1/4	4	5 1/4		914
3								
4								
5		529B	1	PL 20 1/2 X 1/2	4	4 3/4		
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36		1" DIA	0	2 1/2	NOTE 2	
13		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
13		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
13		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



ONE - TYPE 3 GUSSET PLATE 529 B  
ORIGINAL SHOP MARK P399N' DRAWING 433  
SPAN 11  
L6-NORTH EXTERIOR TOP 529B  
\* BEND DOWN

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
 ALLEN R. LOEWENKAMP  
 41264  
 OHIO

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CUMMERTS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 02/22/02  
 CHECKED BY: DATE: GAF 02/23/02

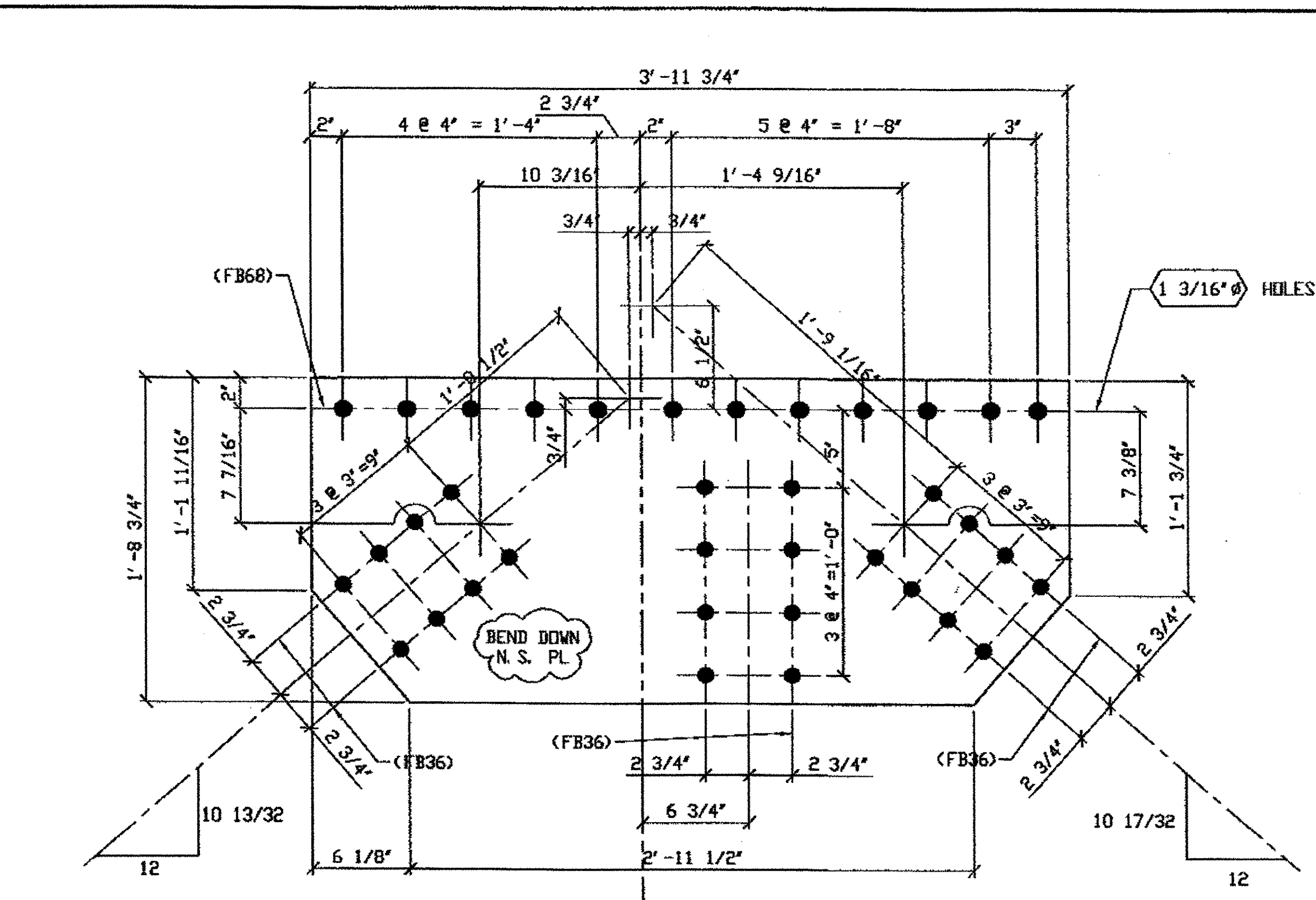
DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 UND

REVISIONS  
 A 02/01/02 REVISED PER CUSTOMER APPROVAL  
 NO. / DATE DESCRIPTION

SHEET NUMBER: 529  
 ABN JOB NUMBER: 800010

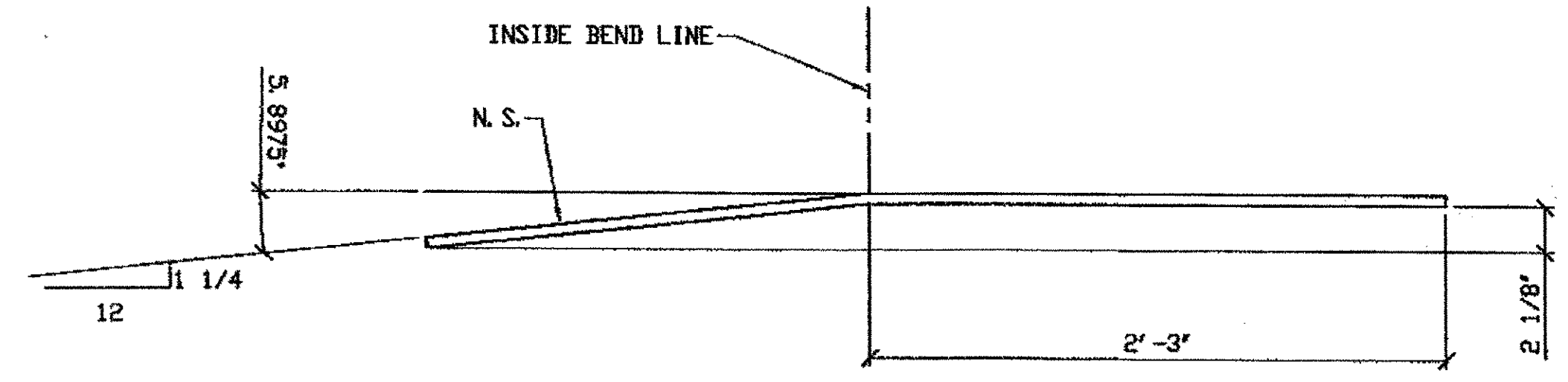
G:\Contract\J\800010\Drawings\AS29A.dwg  
 Save by gfos at 11:35am Feb 02, 2002  
 Plot by gfos at 09:27am Feb 04, 2002  
 Model space plot + Scale = 1/6

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET	REMARKS	
1				TYPE 3 GUSSET PLATE			
2		530A	1	PL 1/2 X 20 3/4	3 11 3/4	BEND 134	
3							
4				TYPE 3 GUSSET PLATE			
5		530B R/L	2	PL 1/2 X 20 3/4	4 10	BEND 330	
6							
7							
8				FIELD BOLTS			
9		FB36	72	1" DIA	0 2 1/2	NOTE 2 100	
10		FB68	40	1 1/8" DIA	0 2 3/4	NOTE 2 77	
PLATE		A36	PIPE		N/A	FITTINGS	N/A
SHAPES		N/A	FLGS.		N/A	BOLTS	NOTE 2



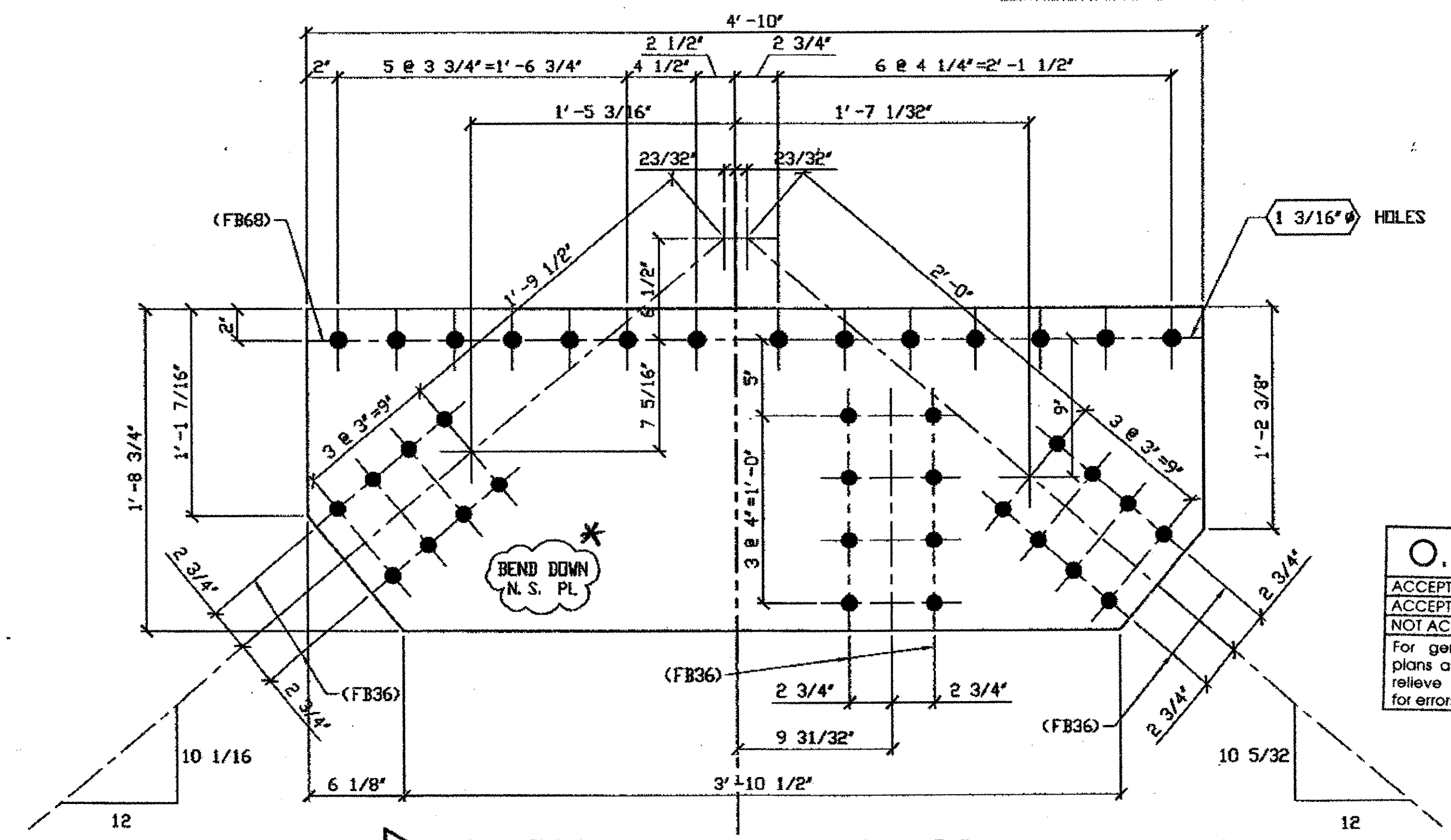
ONE - TYPE 3 GUSSET PLATE - 530A

ORIG SHOP DWG 483; L2L4-0-13/R  
ORIG SHOP MARK P483F/R  
DOT ITEM LINE No. 0119  
REPAIR SHEET 13-248



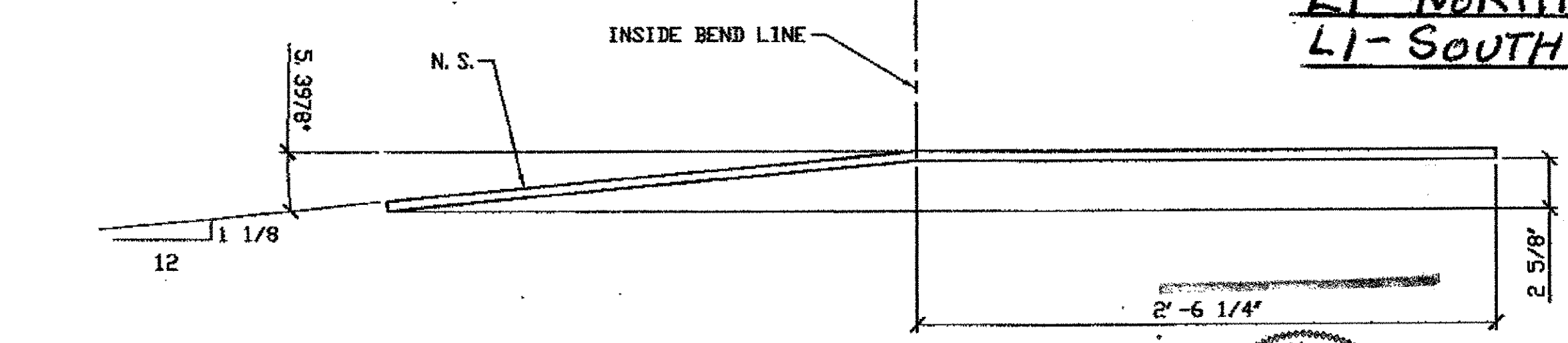
530A (AFTER BENDING)

SPAN 13  
L3 - NORTH EXTERIOR 530A



2 - TYPE 3 GUSSET PLATE - 530B R/L

ORIG SHOP DWG 482; L2L2-0-13/R  
ORIG SHOP MARK P482C/R  
DOT ITEM LINE No. 0119  
REPAIR SHEET 13-249



530B/R (AFTER BENDING)

\* Bend up for L

SPAN 13  
L1 - NORTH EXTERIOR 530B/R  
L1 - SOUTH EXTERIOR 530B/L

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/4/04 DJM  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER, RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contract\00\9000\Drawings\530A.dwg  
 Save by gfk 09:28am Feb 04, 2002  
 Plot by gfos at 09:34am Mar 23, 2002  
 Model space plot + Scale = 1/8"

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEBA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANVILLE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264  
OHIO

IN CHARGE OF L. SMITH  
DRAWN BY: DATE: GAF 02/23/02  
CHECKED BY: DATE: GAF 02/23/02

DOT ITEM LINE NO. 0119  
DOT BID ITEM NO. 863E5000

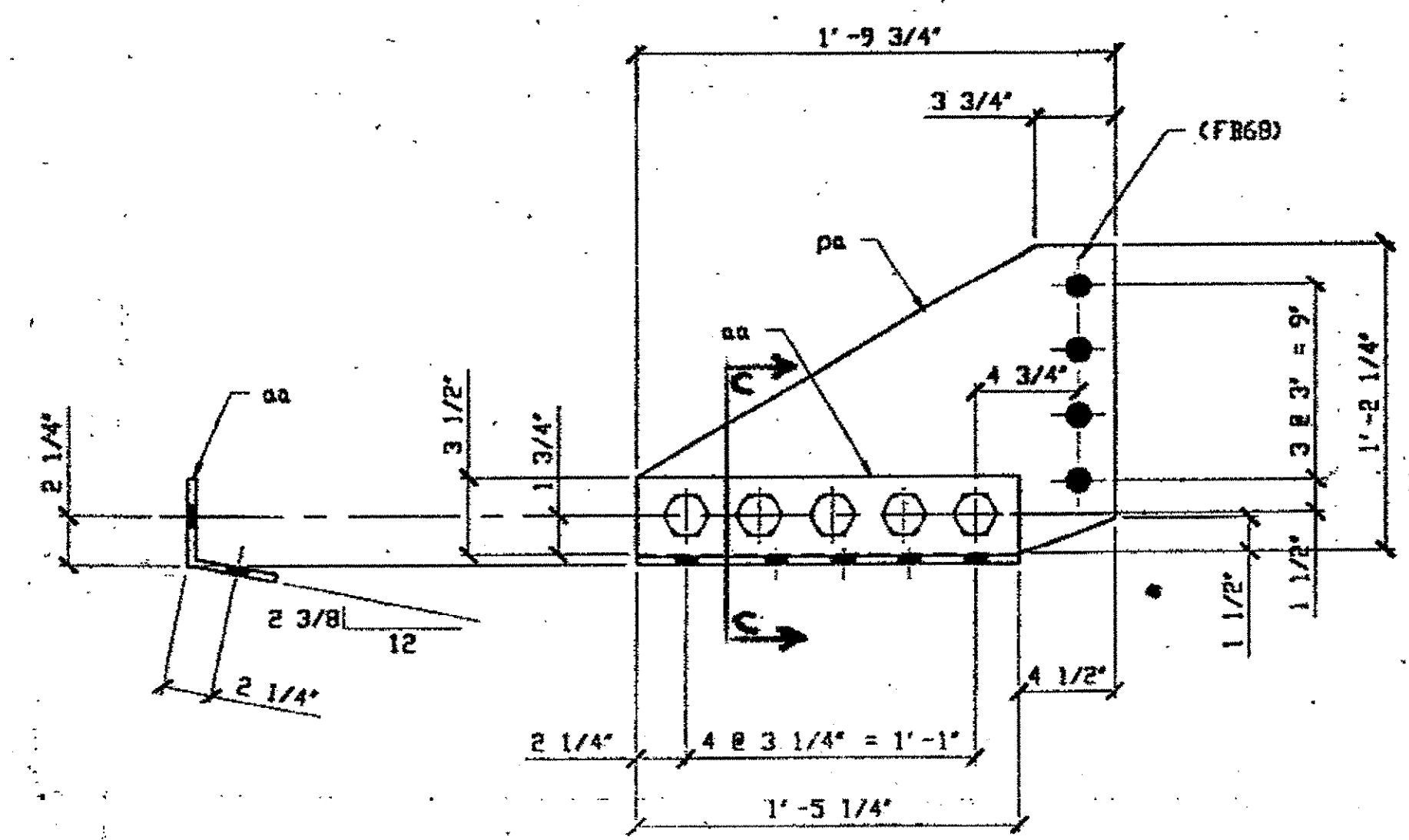
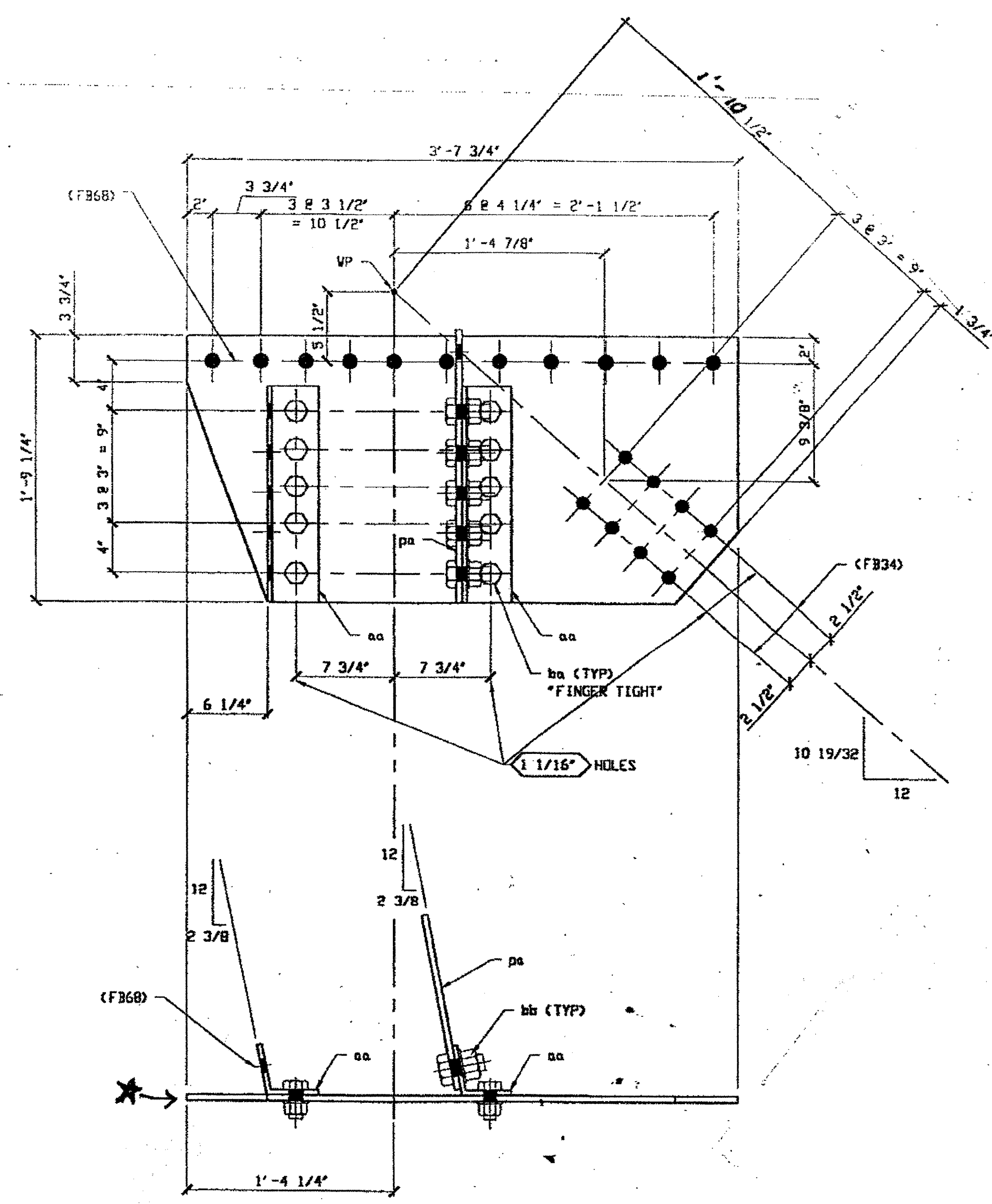
NO.	DATE	REVISIONS	REVISOR	APPROVAL	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL	GAF		

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 13 REPAIRS

SHEET NUMBER: 530  
JOB NUMBER: 800010

### BILL OF MATERIALS

Piece No.	Qty.	Description
<b>15A</b>		
PO	2	VERTICAL GUSSET + CONNECTING ANGLE
		FR 1/2 x 14 1/4 x 1 9/16
aa	1	L 4 x 4 x 3/8 x 1-5 1/4"



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

\* horizontal SEC C-C  
 \* GUSSET PLATE PART OF REF. 121

2 - VERTICAL GUSSETS + CONNECTING ANGLE 15A  
ORIGINAL SHOP MARKS P249AK A249U  
SPAN 1 LO - NORTH EXTERIOR 15A (aa + Pa)  
SPAN 1 LO - SOUTH EXTERIOR POV ONLY (part of 15A)



- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

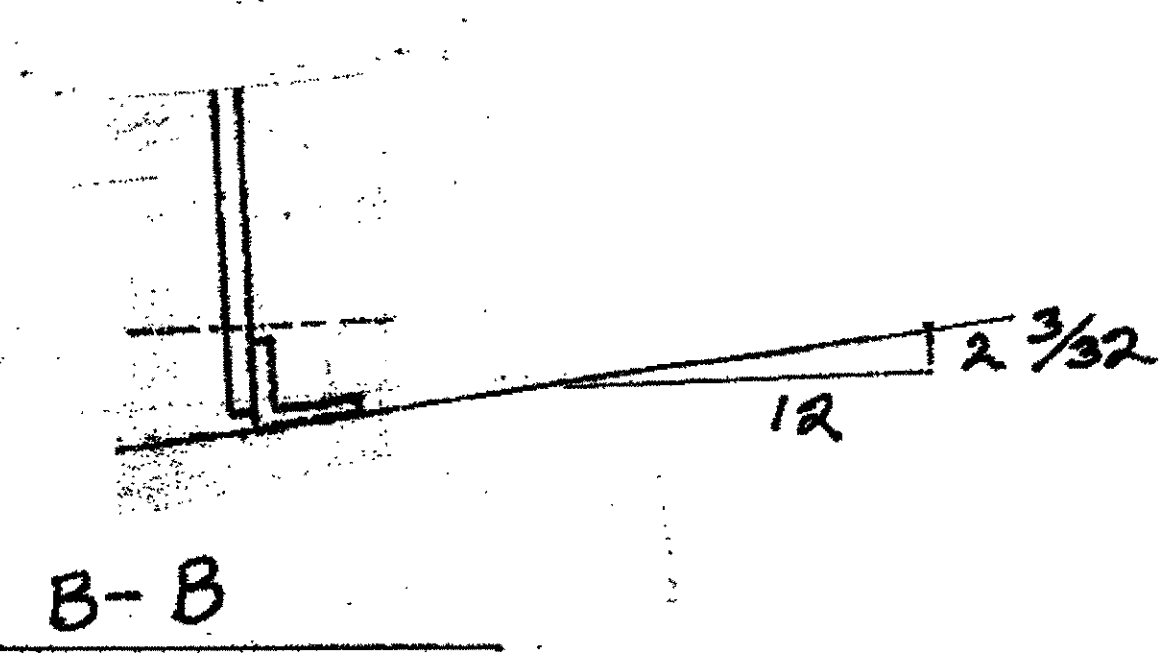
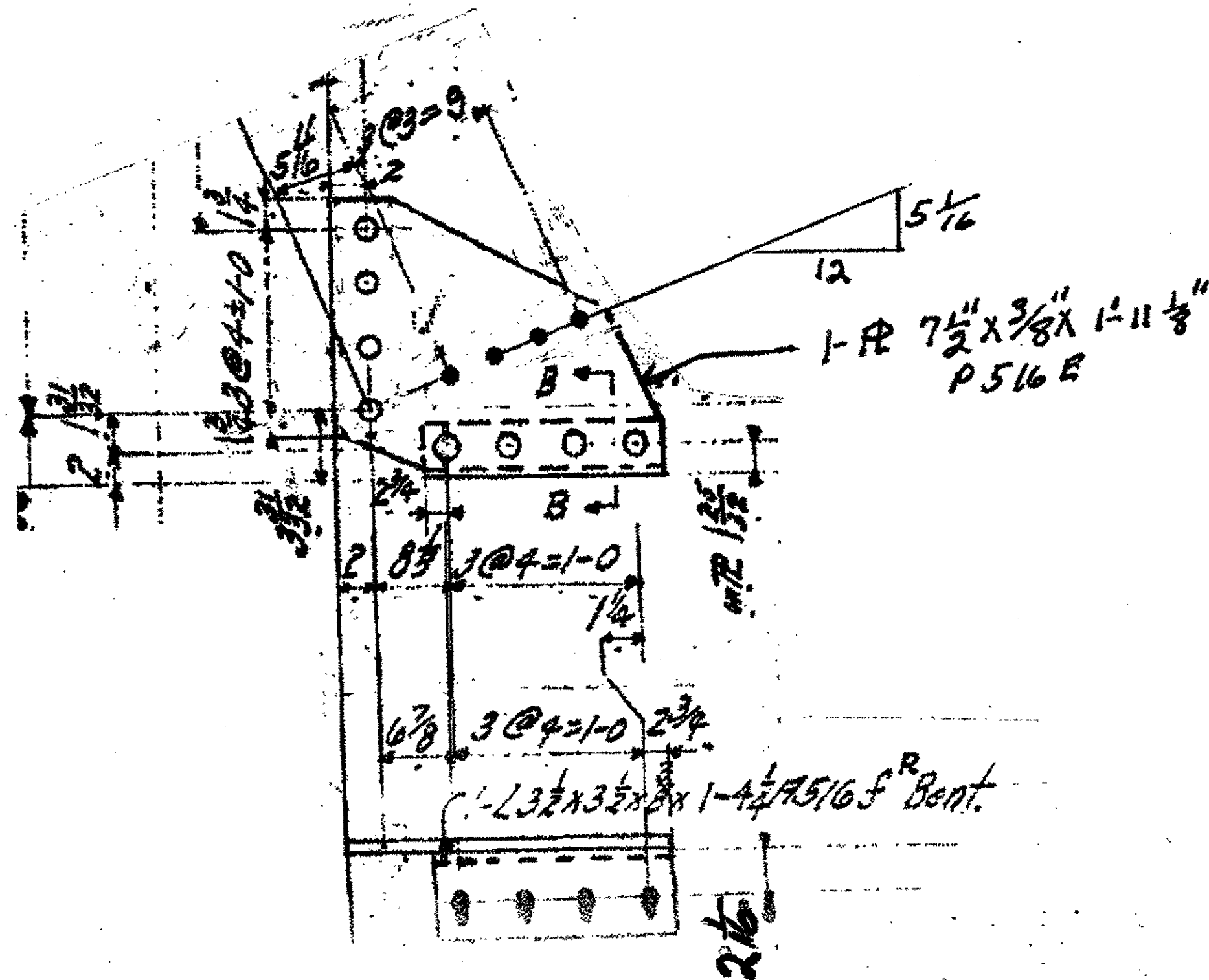
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

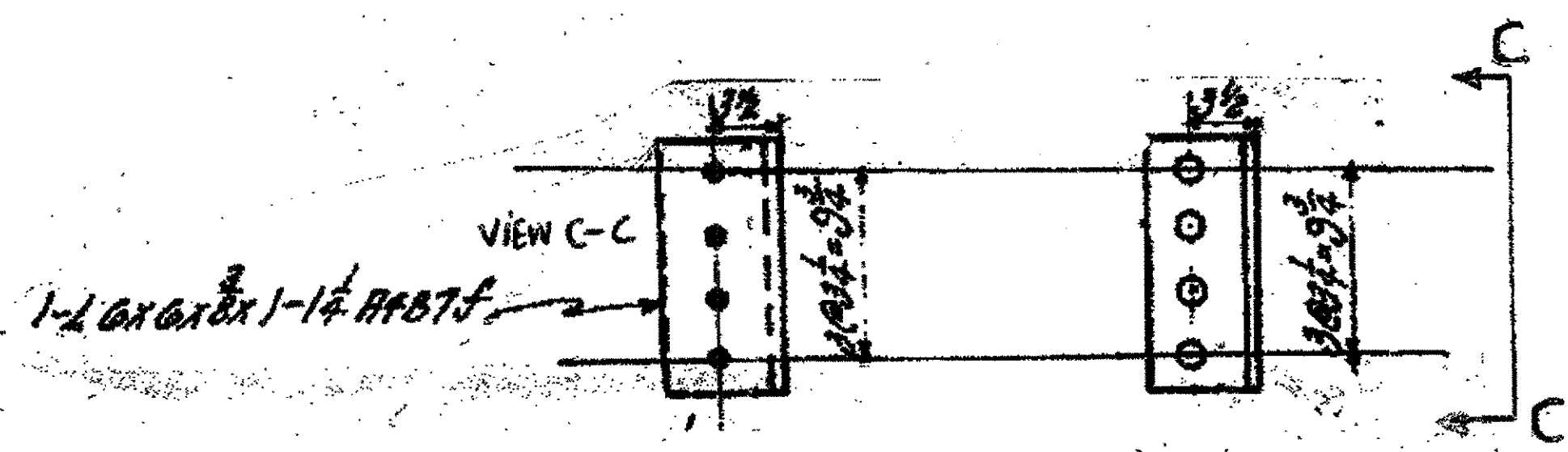
ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

DRIVEN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 SCALE NA \_\_\_\_\_ DATE \_\_\_\_\_

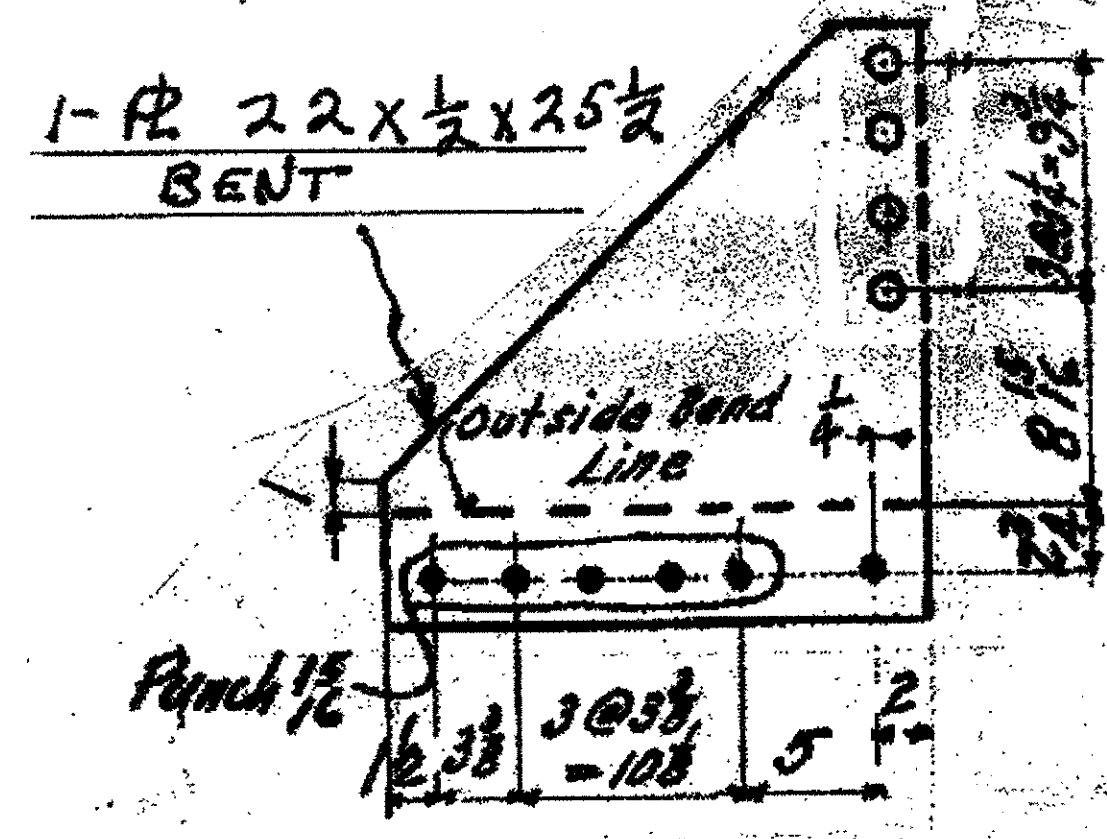
JOB NO. \_\_\_\_\_  
 DRAWING NO. 15



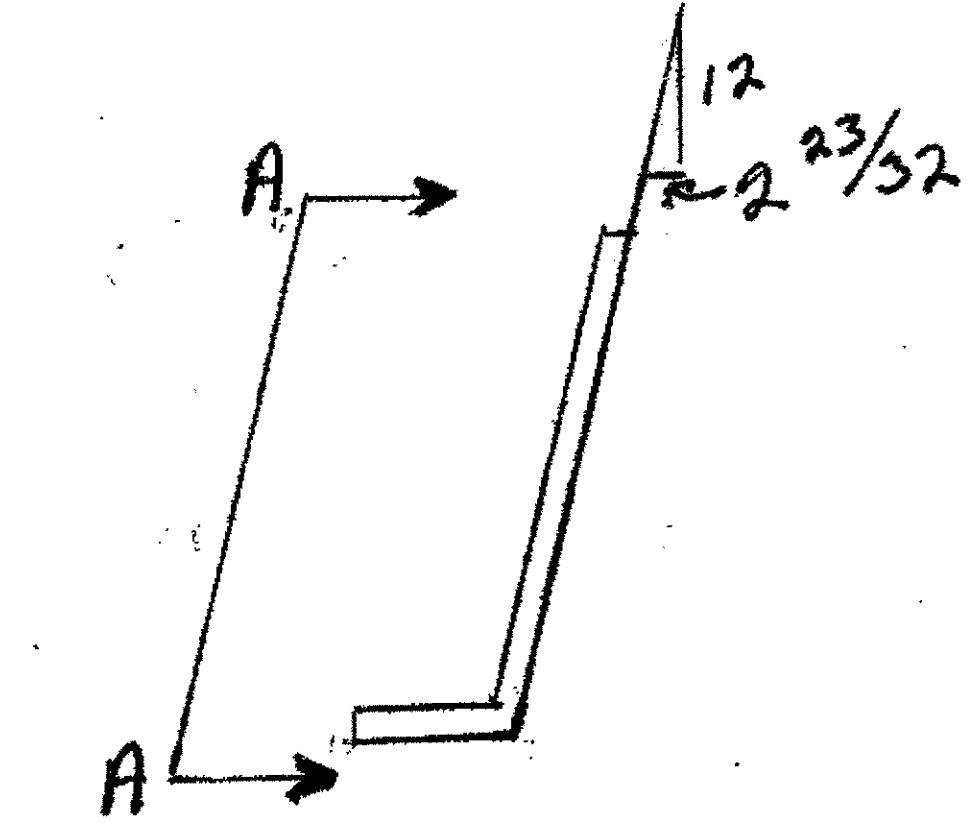
1-SWAY FRAME GUSSET & ANGLE 17A  
 ORIGINAL SHOP MARKS P516E & A516F  
 - SPAN 13, L2 SOUTH EXTERIOR, 17A



4-VERTICAL GUSSET CONNECTING ANGLES 17C  
 ORIGINAL SHOP MARK A487F,  
 SPAN 13 L12-NORTH INTERIOR "FOR GUSSET 17B/L", 17C  
 SPAN 13 L12-SOUTH INTERIOR "FOR GUSSET 17B/R", 17C  
 SPAN 13 L12-SOUTH INTERIOR "FOR GUSSET 509D/R", 17C  
 SPAN 13 L12-NORTH INTERIOR "FOR GUSSET 509D/L", 17C



2-SWAY FRAME VERTICAL 17B/R-L (L SHOWN)  
 ORIGINAL SHOP MARK P487X  
 SPAN 13 L12-SOUTH INTERIOR EAST PLATE 17B/R  
 SPAN 13 L12-NORTH INTERIOR EAST PLATE 17B/L

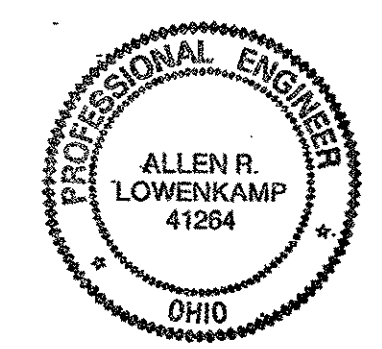


Vertical Gusset

### BILL OF MATERIALS

Piece No.	Qty.	Description
17A	1	SWAY FRAME GUSSET
P516E	1	R 7 1/2 x 3/8 x 1-11 1/8"
A516F	1	L 3 1/2 x 3 1/2 x 3/8 x 1-1 1/4" (BENT)
17B/R/L	2	R 22 x 1/2 x 25 1/2" (BENT)
		1 R-1 L
17C	4	L 6 x 6 x 3/8 x 1-1 1/4"
		PLATE A36 SHAPES A36

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED \_\_\_\_\_  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NO.	REVISION	DATE	BY

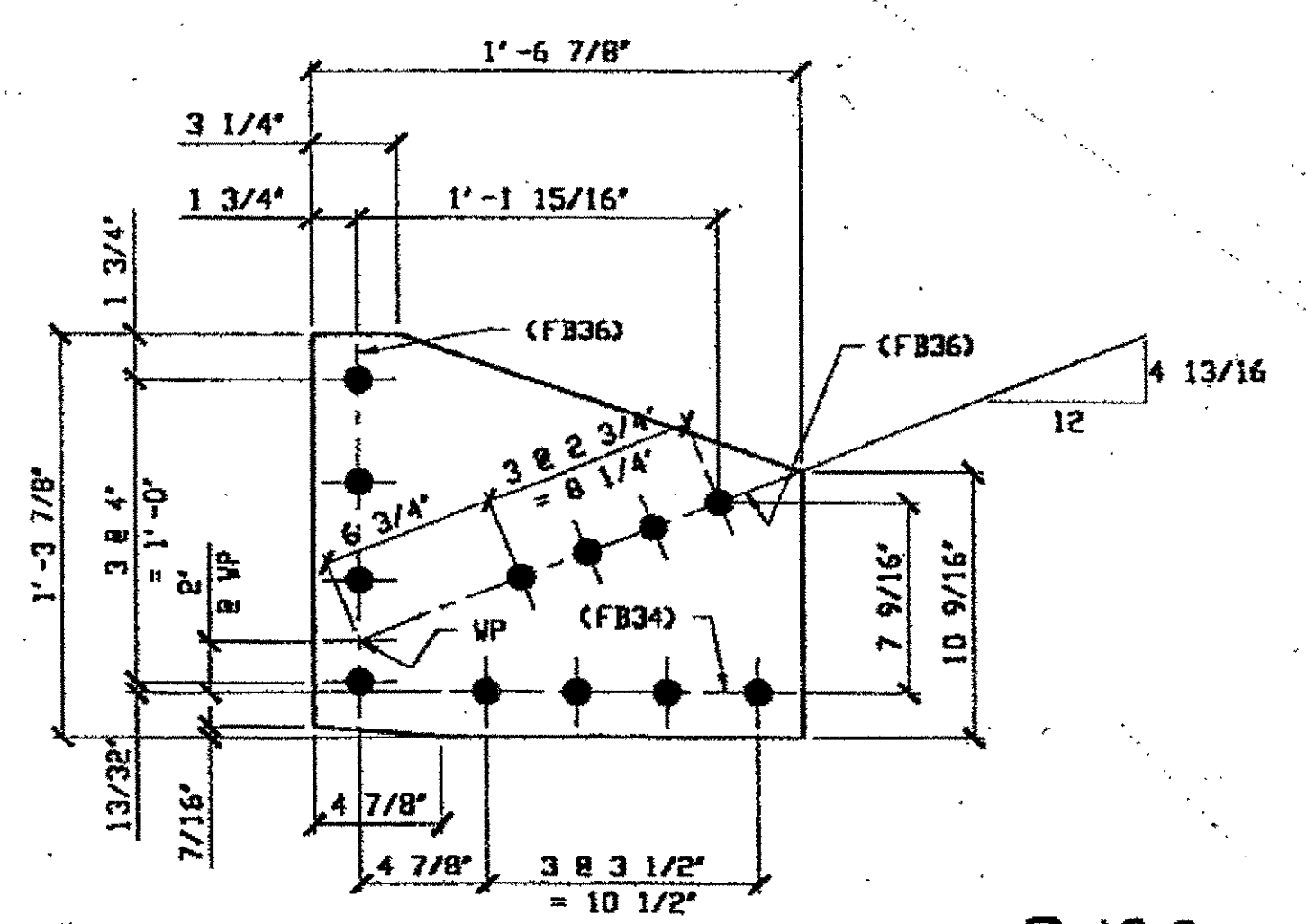
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

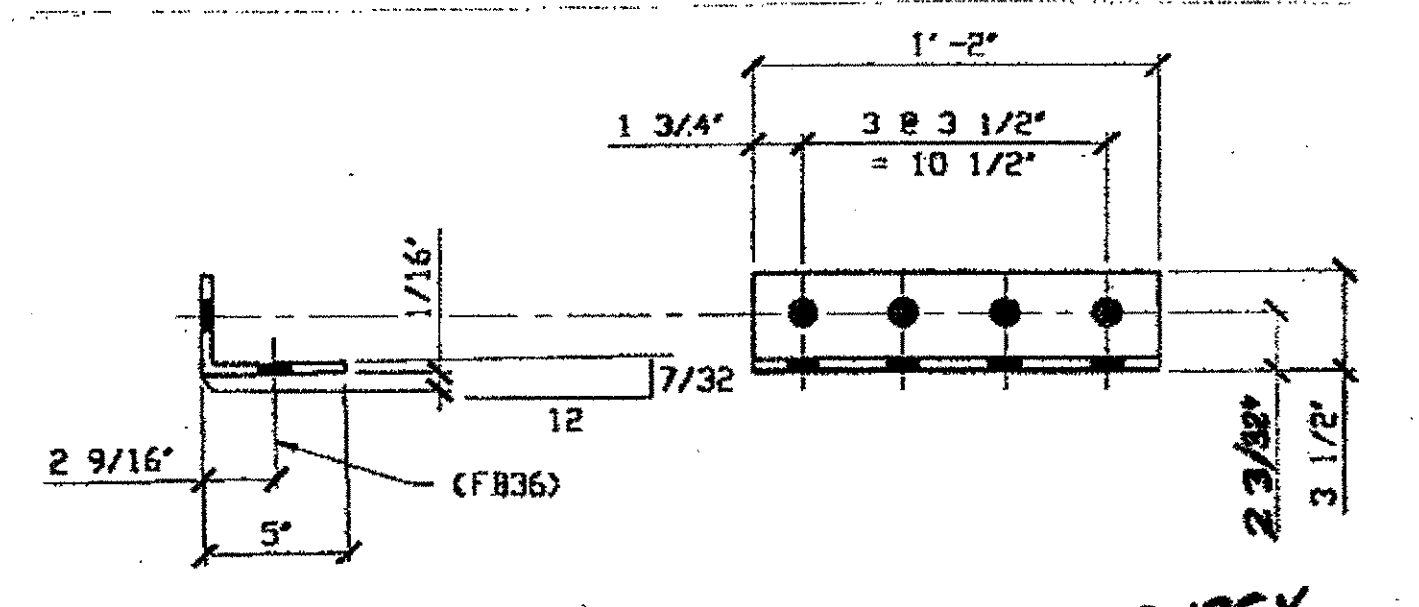
DRAWN BY _____	CHECKED BY _____
SCALE NA	DATE _____

JOB NO. \_\_\_\_\_  
DRAWING NO. 17

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1							
2							
3							
4			SWAY FRAME VERTICAL GUSSET PLATE				
5	P19S	3	PL 3/8 X 15 7/8	1	6 7/8		
6							
7			SWAY FRAME CONNECTION ANGLE				
8	A19SX	1	L 5 X 3 1/2 X 3/8	1	2	BEND	
9							
10	A19S	1	L 5 X 3 1/2 X 3/8	1	2	BEND	
11							
12			FIELD BOLTS				
13	FB34		1" DIA	0	2 1/4	NOTE 2	
14	FB36		1" DIA	0	2 1/2	NOTE 2	
15	FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
PLATE A36			PIPE N/A	FITTINGS N/A			
SHAPES A36			FLGS. N/A	BOLTS NOTE 2			



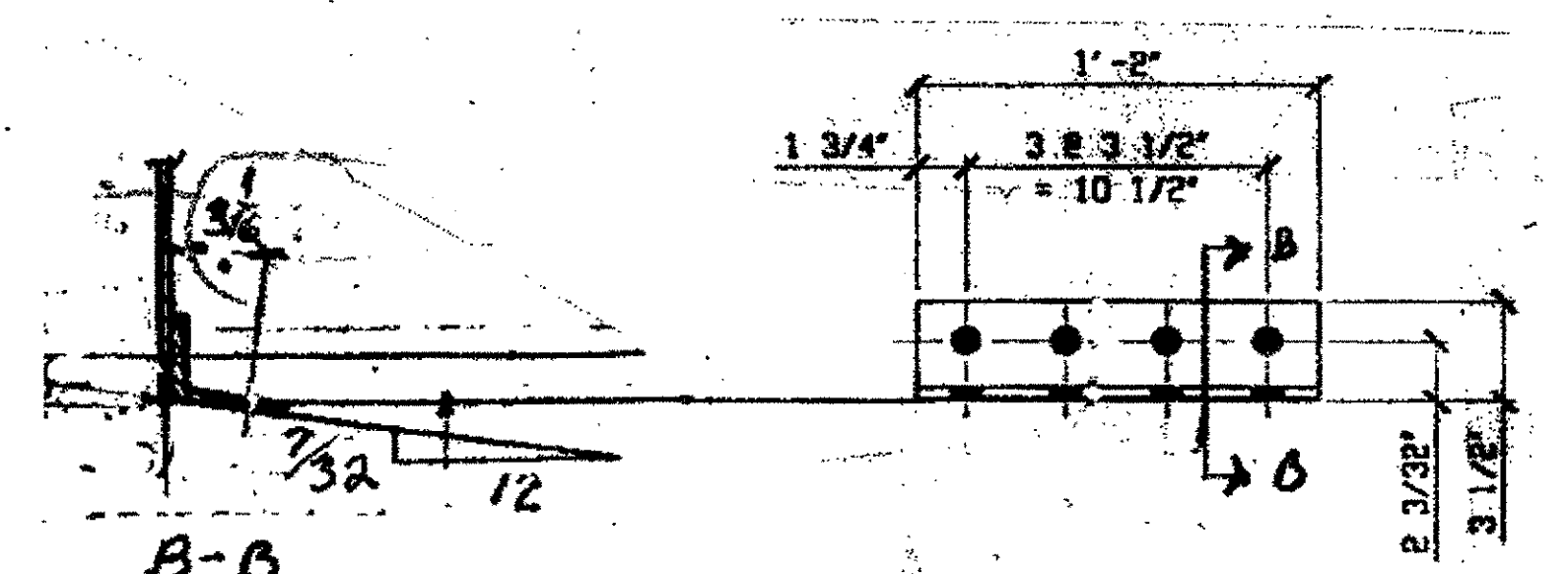
(3) SWAY FRAME VERTICAL GUSSET PLATE P19S  
 ORIG SHOP DWG 19  
 ORIG SHOP MARK P19s.  
 LINE ITEM No. 0142



(1) SWAY FRAME CONNECTION ANGLE A19SX  
 ORIG SHOP DWG 19  
 ORIG SHOP MARK A19sx  
 LINE ITEM No. 0153  
 BID ITEM No. 863E90000

SPAN 2 L1 SOUTH EXTERIOR P19S  
 SPAN 2 L2 SOUTH EXTERIOR P19S  
 SPAN 3 L6 NORTH EXTERIOR P19S

SPAN 2, L2 SOUTH EXTERIOR A19SX

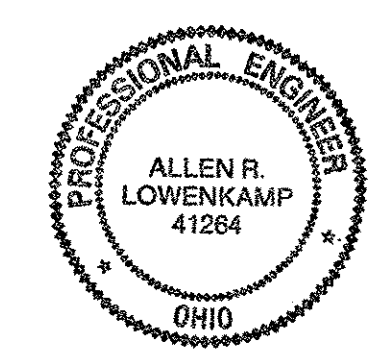


(1) SWAY FRAME CONNECTION ANGLE A19S  
 ORIG SHOP DWG 19  
 ORIG SHOP MARK A19s  
 LINE ITEM No. 0153  
 BID ITEM No. 863E90000

SPAN 2, L1 SOUTH EXTERIOR A19S

- NOTES:
- OPEN HOLES ARE (1 1/16\"/>

O.D.O.T. DIST. 12  
 ACCEPTED 2/4/09 PJM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

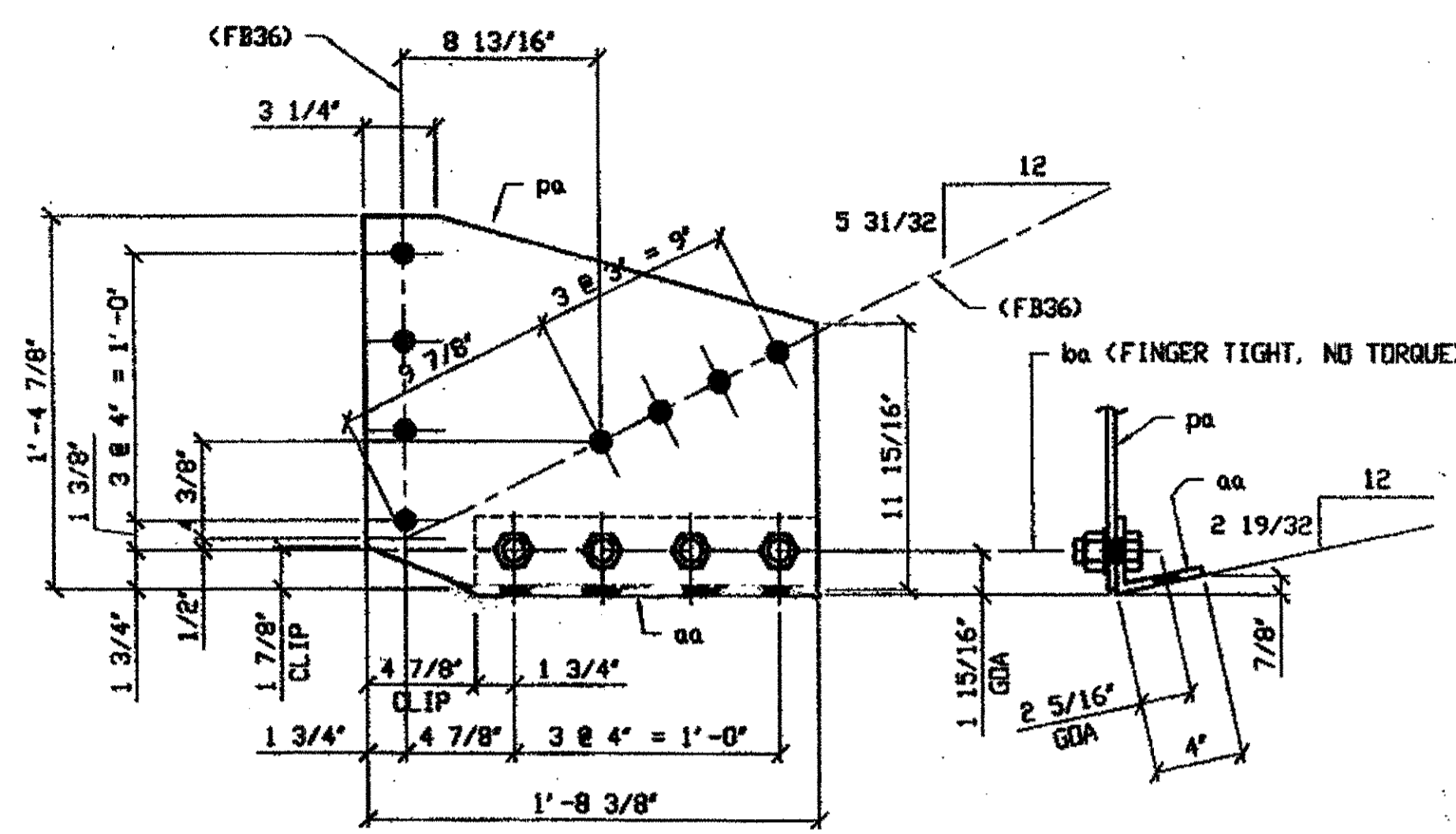


NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

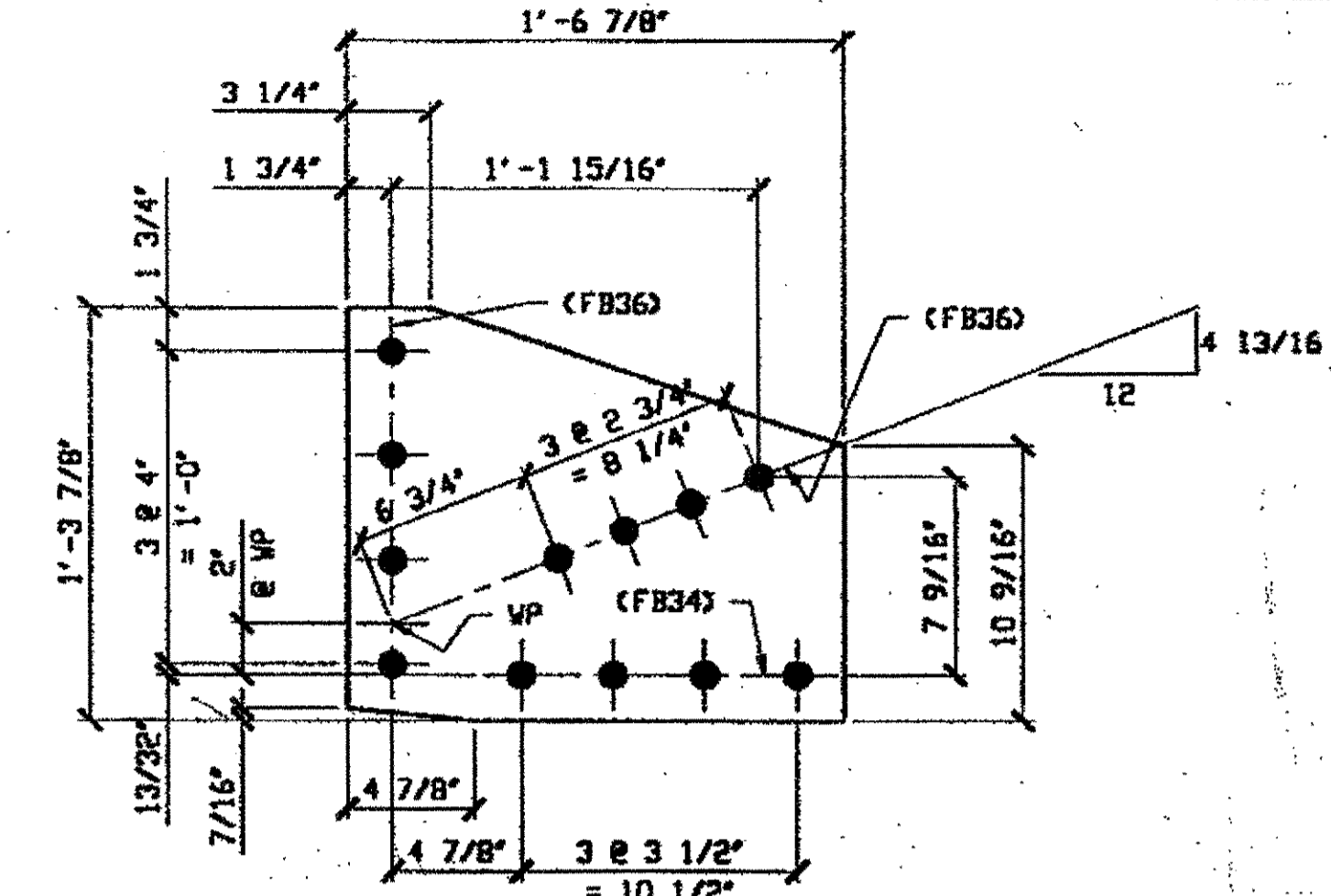
ODOT Project # 00215  
 BRIDGE NO. CVY-10-16-13

JOB NO. 2000212  
 DRAWING NO. 19



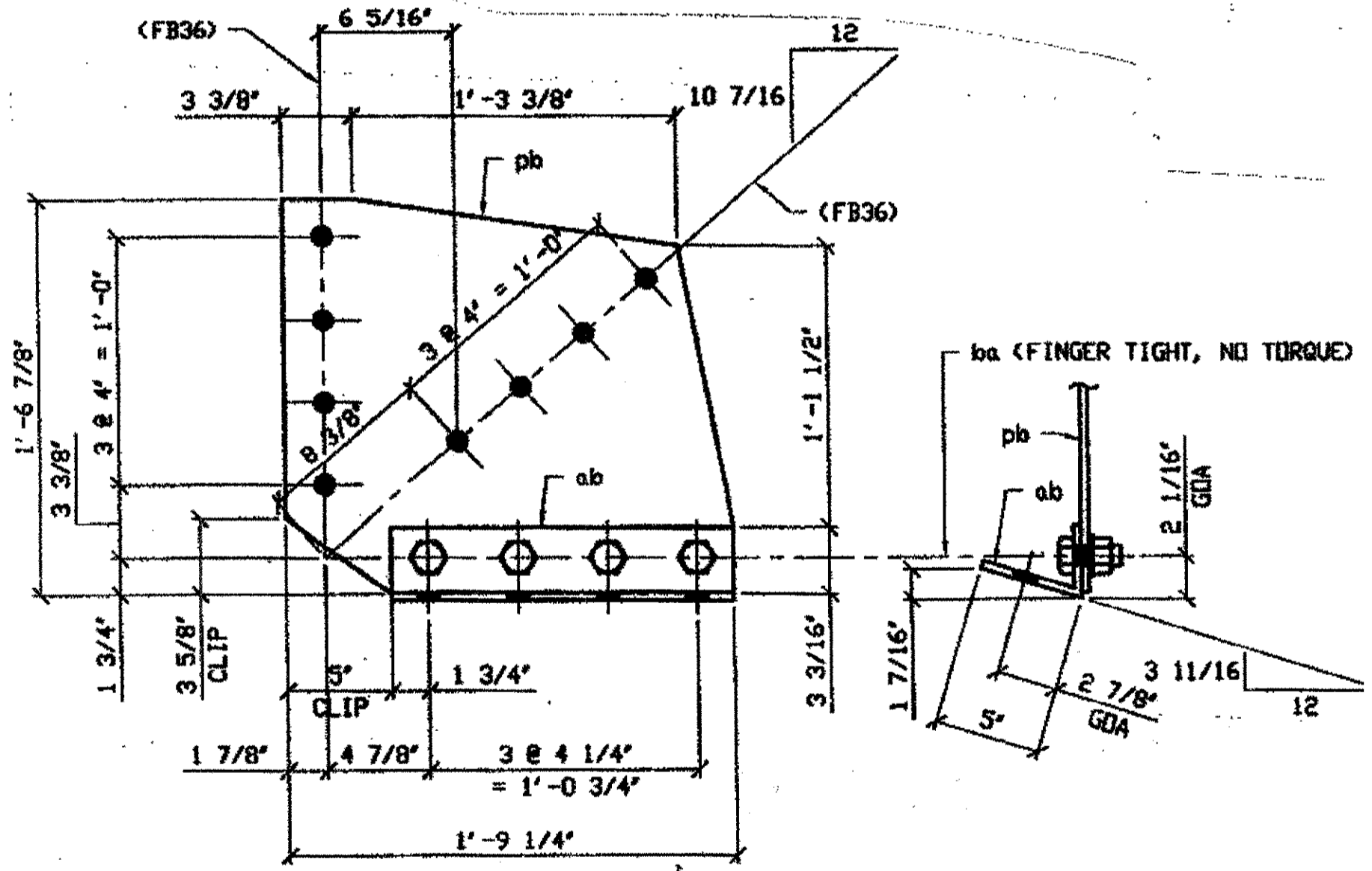
**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 21A**  
 ORIG SHOP DWG 163-SB117/L  
 ORIG SHIP MARK P163w & A163p  
 REPAIR SHEET 7-127

SPAN 7 L10 - NORTH EXTERIOR 21A  
SPAN 7 L10 - SOUTH EXTERIOR 21A



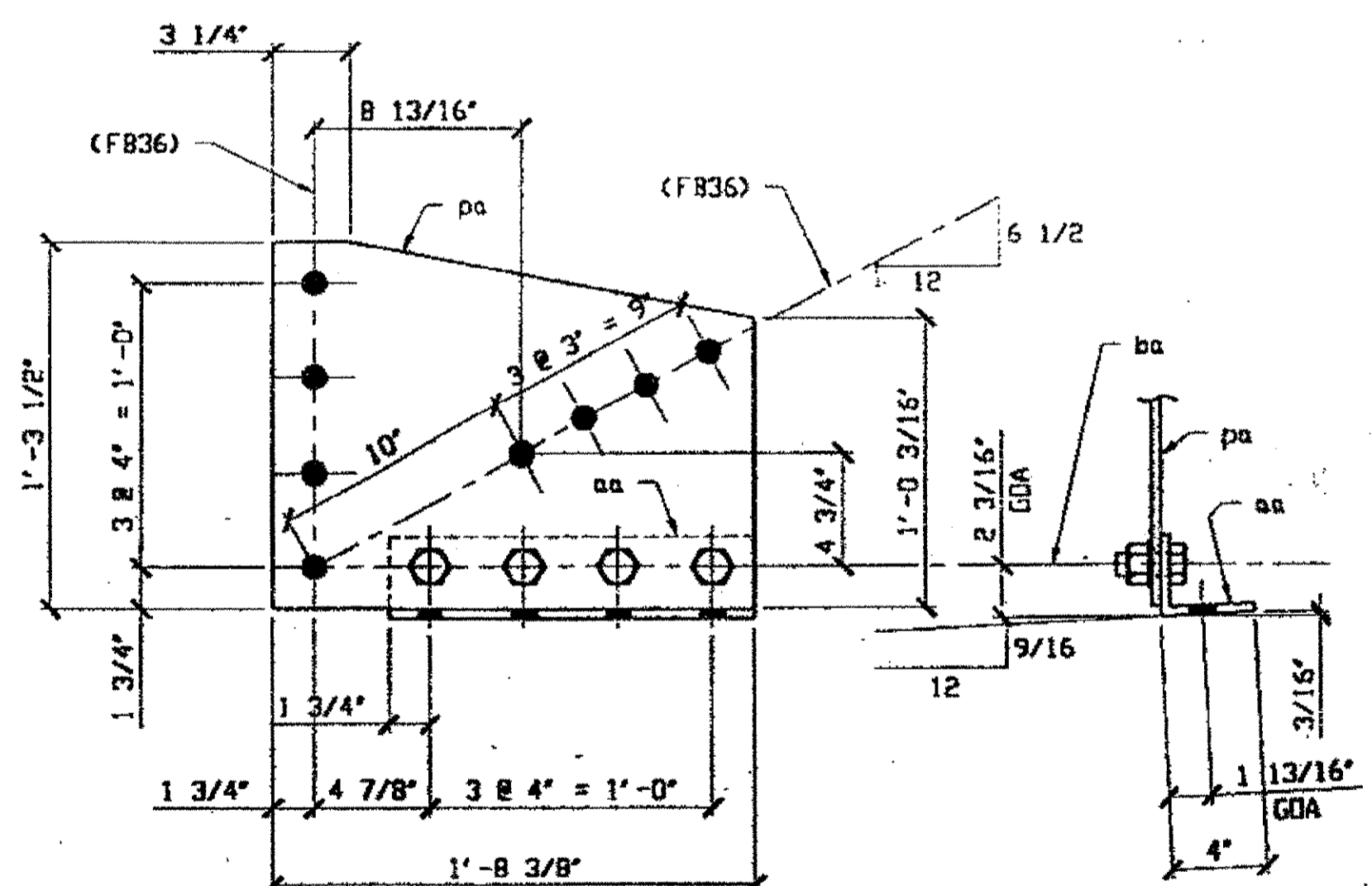
**2 - SWAY FRAME VERTICAL GUSSET PLATE - 21C-1**  
 ORIG SHOP DWG 19  
 ORIG SHIP MARK P19s  
 LINE ITEM No. 0142  
 (IDENTICAL TO 186B)  
 REPAIR SHEET 4-105 & 4-113

SPAN 4 L1 - NORTH EXTERIOR 21C-1  
SPAN 4 L1 - SOUTH EXTERIOR 21C-1



**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 21B**  
 ORIG SHIP DWG 163-SB108 R/L  
 ORIG SHIP MARK P163f & A163f  
 REPAIR SHEET 7-139 & 165

SPAN 7 L14 - NORTH EXTERIOR 21B  
SPAN 7 L14 - SOUTH EXTERIOR 21B



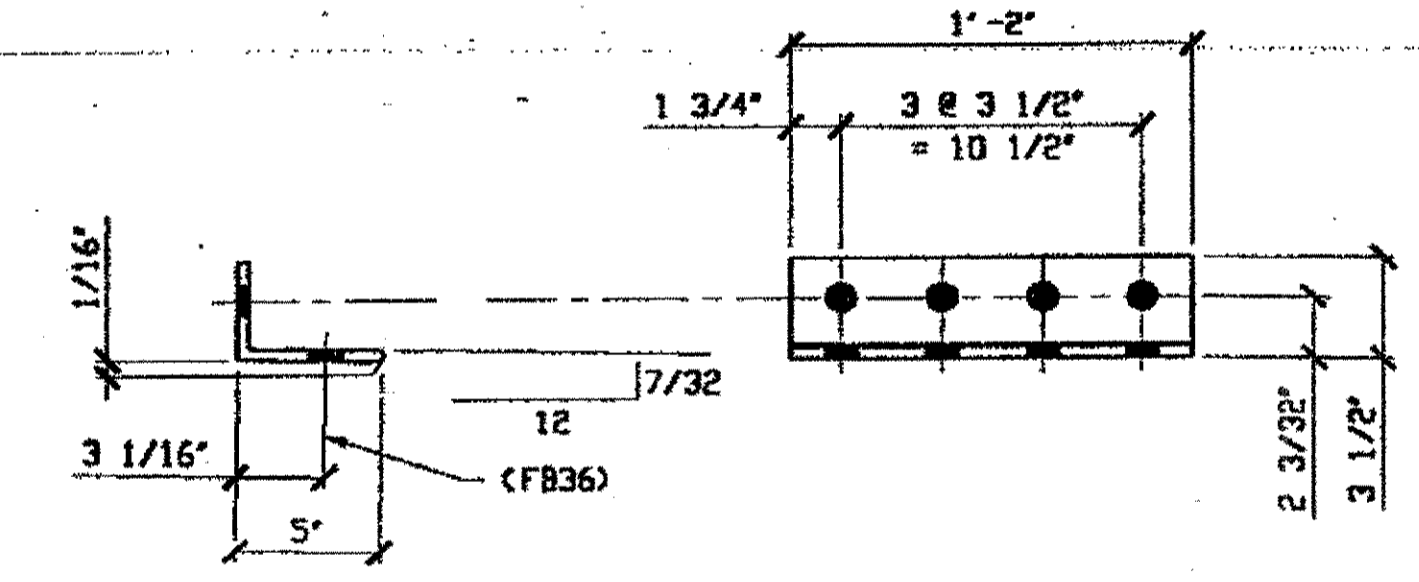
**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 21D**  
 ORIG SHIP DRAWING 144 - SB83/L  
 ORIG SHIP MARK P144b & A144a  
 LINE ITEM No. 0142 & 0153  
 REPAIR SHEETS 6-104

SPAN 6 L1 - NORTH EXTERIOR 21D  
SPAN 6 L1 - SOUTH EXTERIOR 21D

**BILL OF MATERIALS**

Piece No.	Qty.	Description
21A	2	SWAY FRAME GUSSET & CONN. ANGLE
pa	2	R 3/8" X 16 7/8" X 1' 8 3/4"
aa	2	L 4 X 3 1/2 X 3/8 X 1' 3 1/2 BEND
21B	2	SWAY FRAME GUSSET & CONN. ANGLE
pb	2	R 3/8" X 18 7/8" X 1' 9 1/4"
ab	2	L 5 X 3 1/2 X 3/8 X 1' 4"
21C-1	2	3/8" X 15 7/8" X 1' 6 7/8"
21C-2	1	L 5 X 3 1/2 X 3/8 X 1' 2" BEND
21D	2	GUSSET PLATE & CONN. ANGLE
pa	2	R 3/8" X 15 1/2" X 1' 8 3/4"
aa	2	L 4 X 3 1/2 X 3/8 X 1' 3 1/2 BEND
ba		1 HVY HEX BOLT NUT & WASHER 1" X 2 1/2"
PLATE A 36		SHAPES A 36

- NOTES:**
- OPEN HOLES ARE  $\leq 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**1 - SWAY FRAME CONNECTION ANGLE - 21C-2**  
 ORIG SHIP DWG 19  
 ORIG SHIP MARK A19s  
 LINE ITEM No. 0153  
 BID ITEM No. B63E90000  
 REPAIR SHEET 4-105 & 4-113

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/4/09 psy  
 NOT ACCEPTED

CONNECTING ANGLES FOR 21C-1  
SPAN 4 L1 - NORTH EXTERIOR

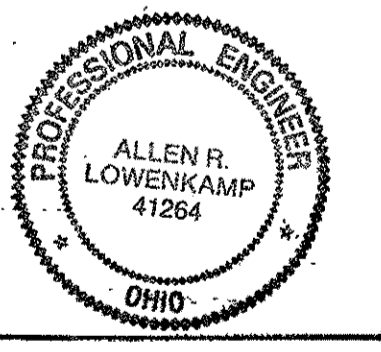
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16.13**

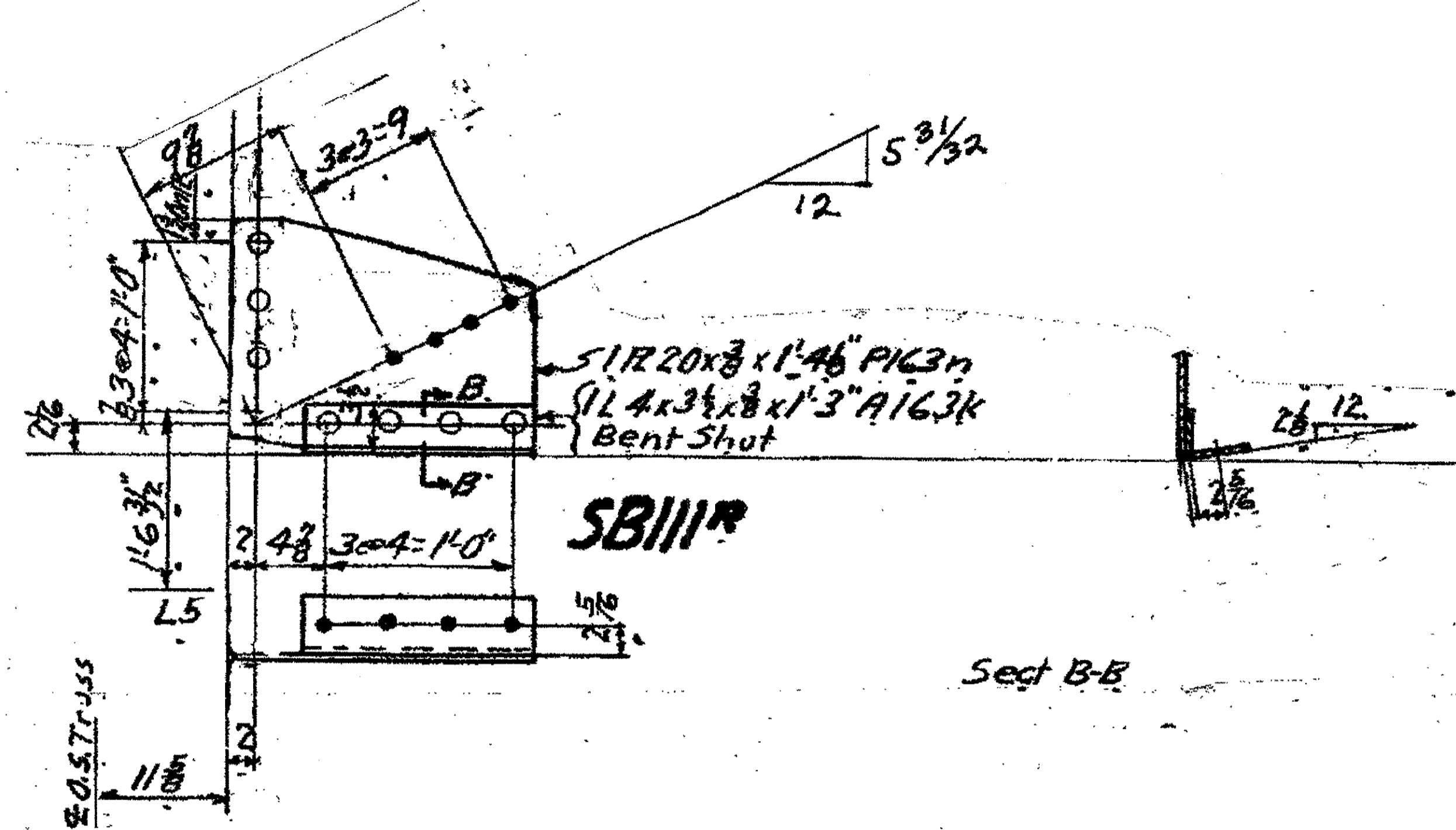
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: NA DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
 DRAWING NO. **21**

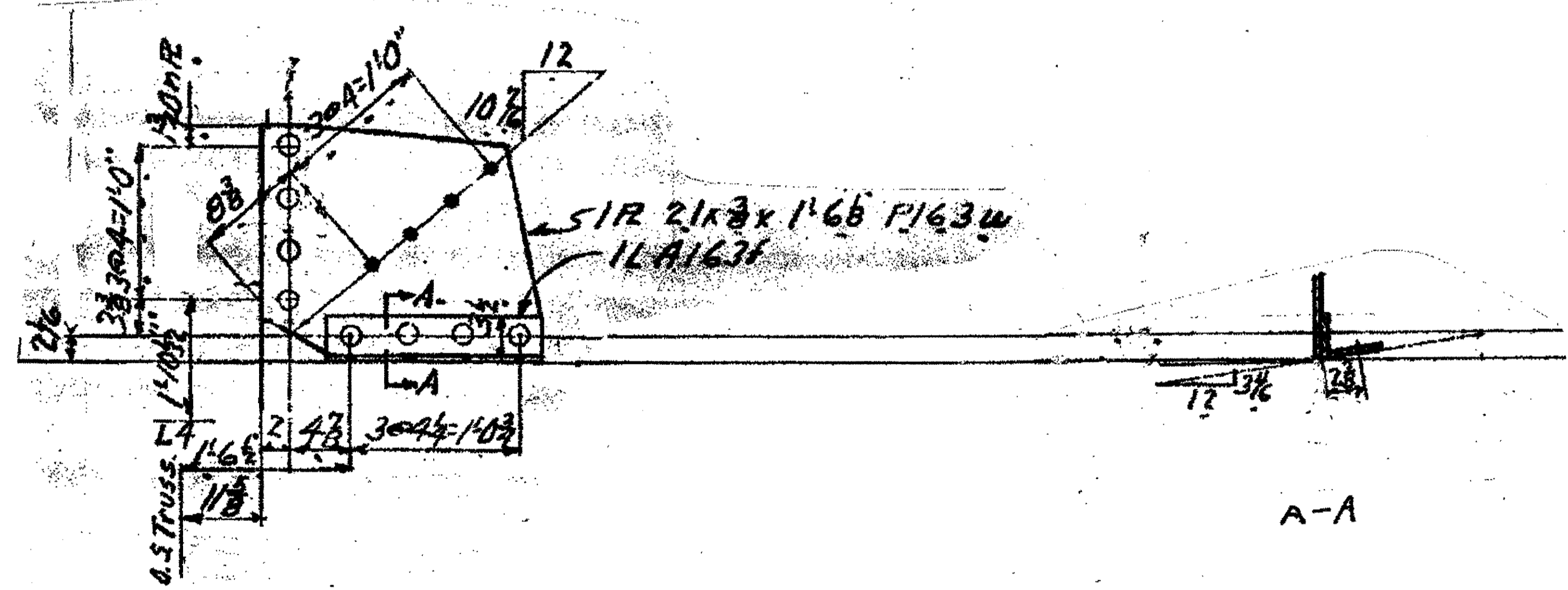


**BILL OF MATERIALS**

Piece No.	Qty.	Description
22 A	1	SWAY FRAME GUSSET ANGLE
P163N	1	PL 20x3/8x1-4 1/8"
A163K	1	L 4x3 1/2x1-3"x3/8"
22 B	1	SWAY FRAME GUSSET ANGLE
P163W	1	PL 21"x3/8"x1-6 3/8" PL
A163F	1	L 5"x3 1/2"x3/8"x1-3 3/4"
22 C	1	SWAY FRAME GUSSET ANGLE
P27AM	1	PL 11 3/4x1/2x1-9 1/4"
A275L	1	L 4x4x3/8x1-4 1/4"
PLATE A36 SHAPES A36		



1-SWAY FRAME GUSSET & ANGLE 22A  
ORIGINAL SHOP MARKS P163N & A163K  
SPAN 7 L5 NORTH EXTERIOR 22A



1-SWAY FRAME GUSSET & ANGLE 22B  
ORIGINAL SHOP MARKS P163W & A163F  
SPAN 7 L4-SOUTH EXTERIOR 22B

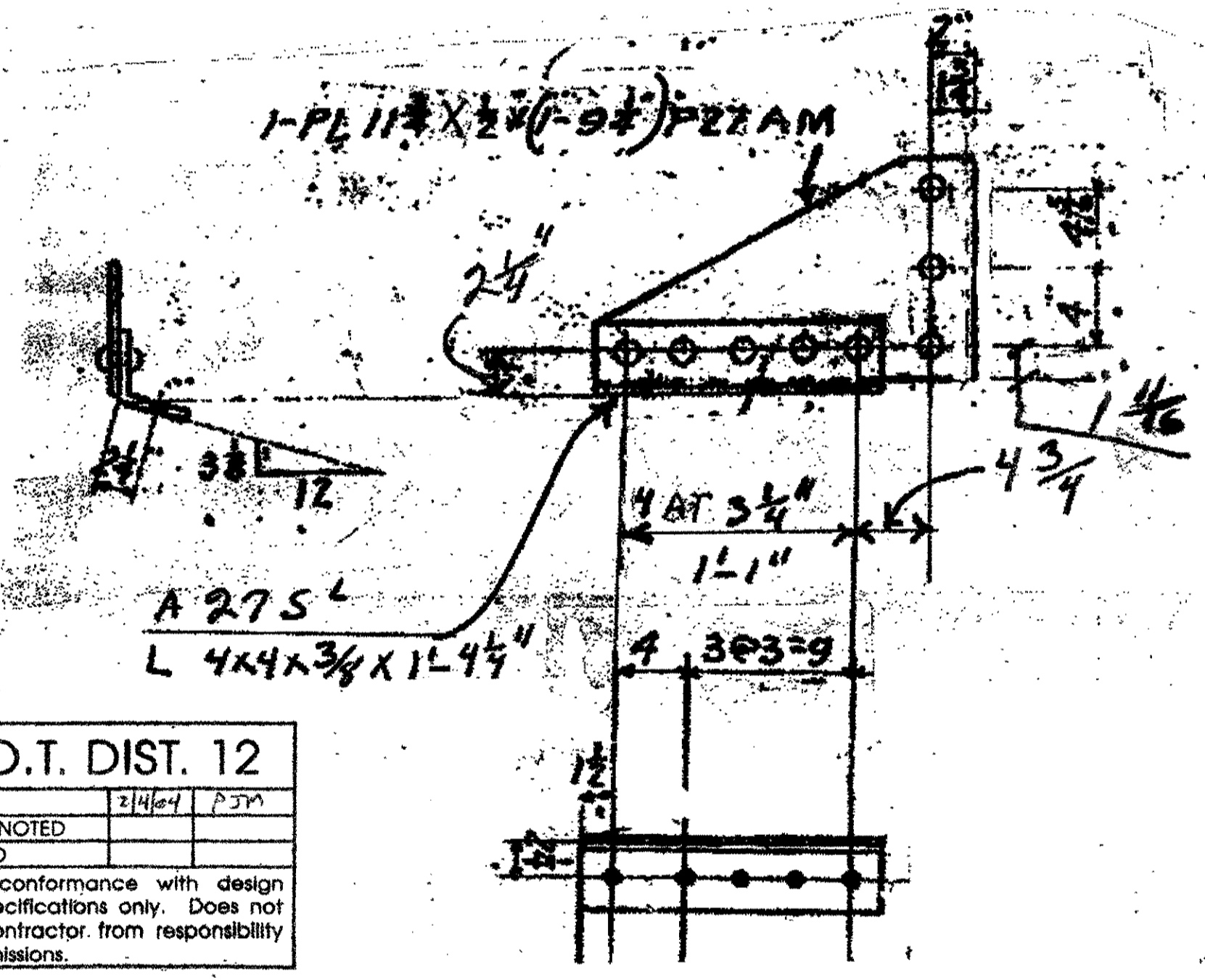
**NOTES:**

- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED \_\_\_\_\_  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



1-SWAY FRAME GUSSET-ANGLE, 22C  
ORIGINAL SHOP MARKS P27AM & A275L  
SPAN 3 L0 NORTH EXTERIOR (WEST) 22C

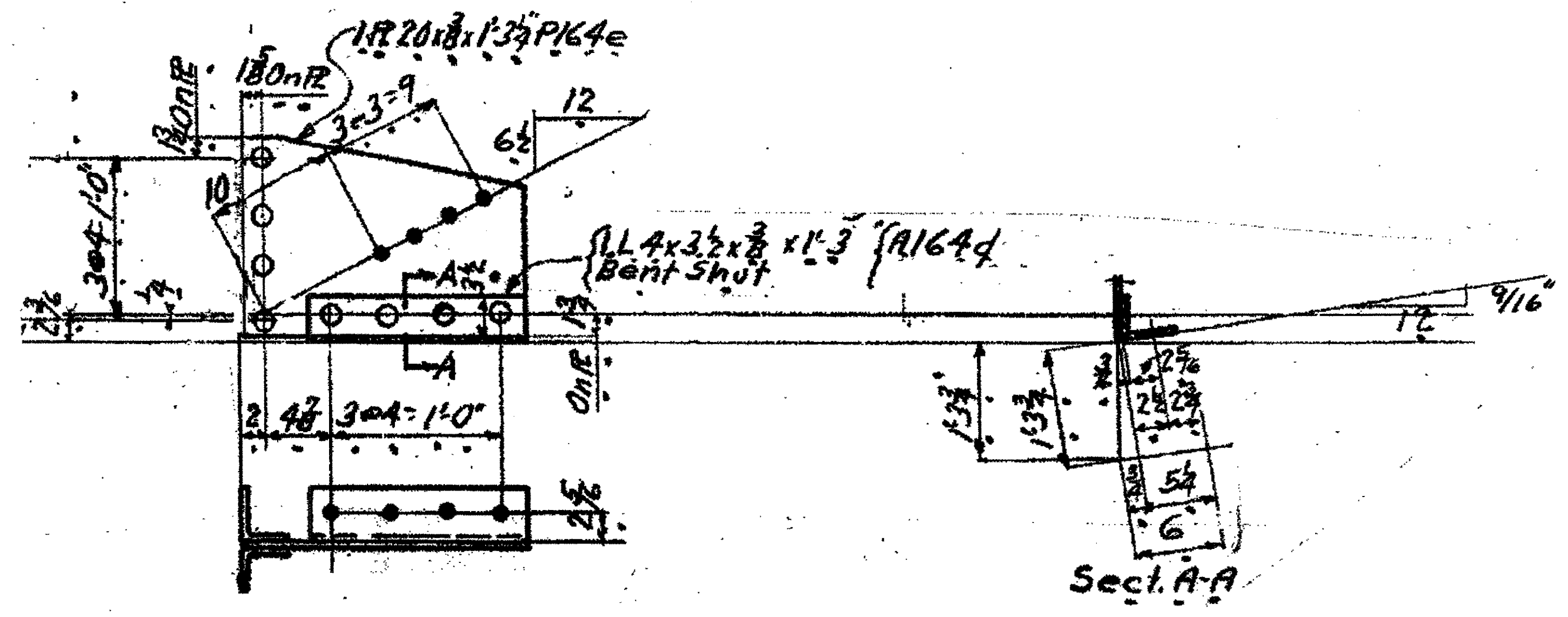


NO.	REVISION	DATE	BY

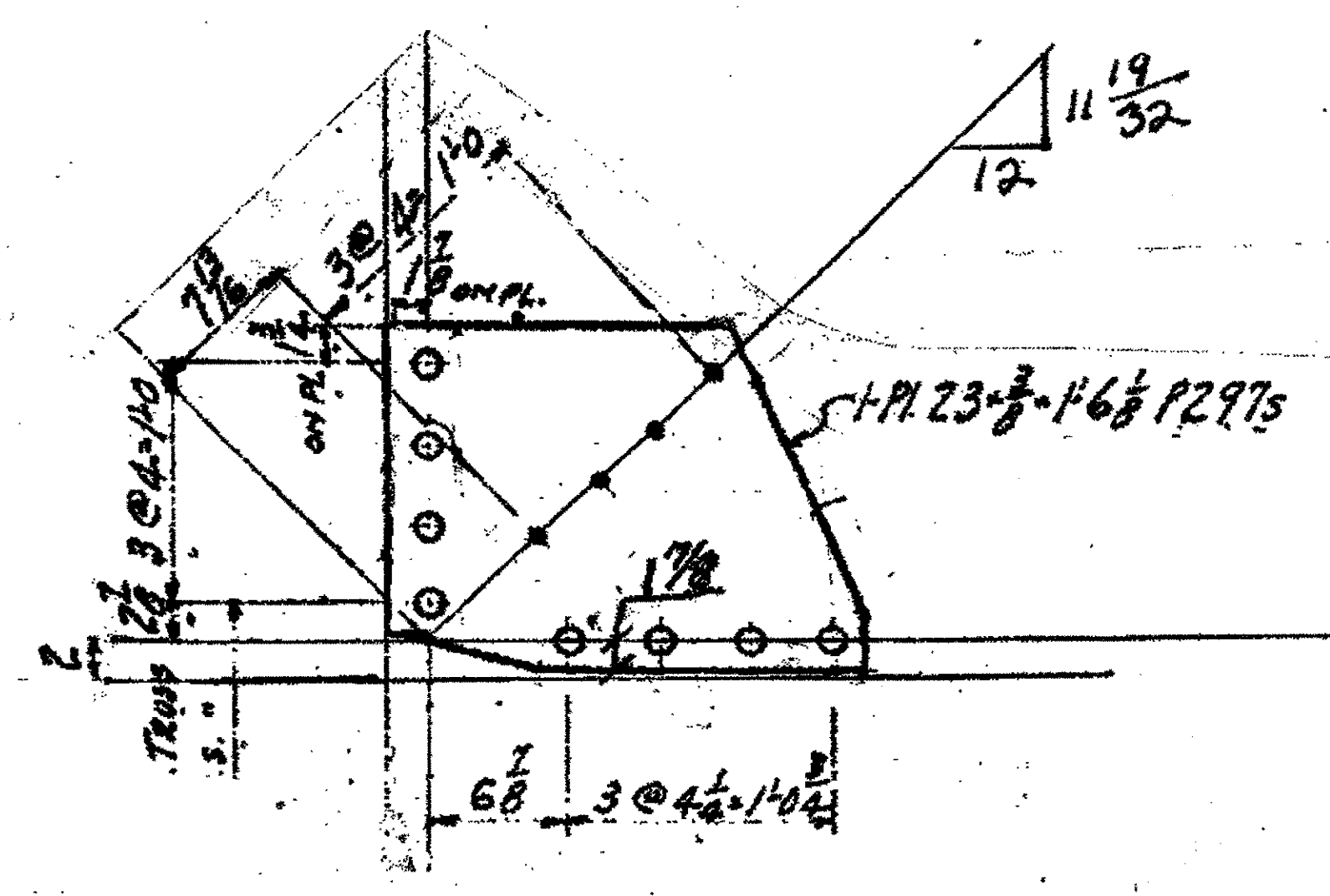
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015  
 ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**  
 JOB NO. \_\_\_\_\_  
 DRAWING NO. **22**  
 DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 SCALE NA \_\_\_\_\_ DATE \_\_\_\_\_

### BILL OF MATERIALS

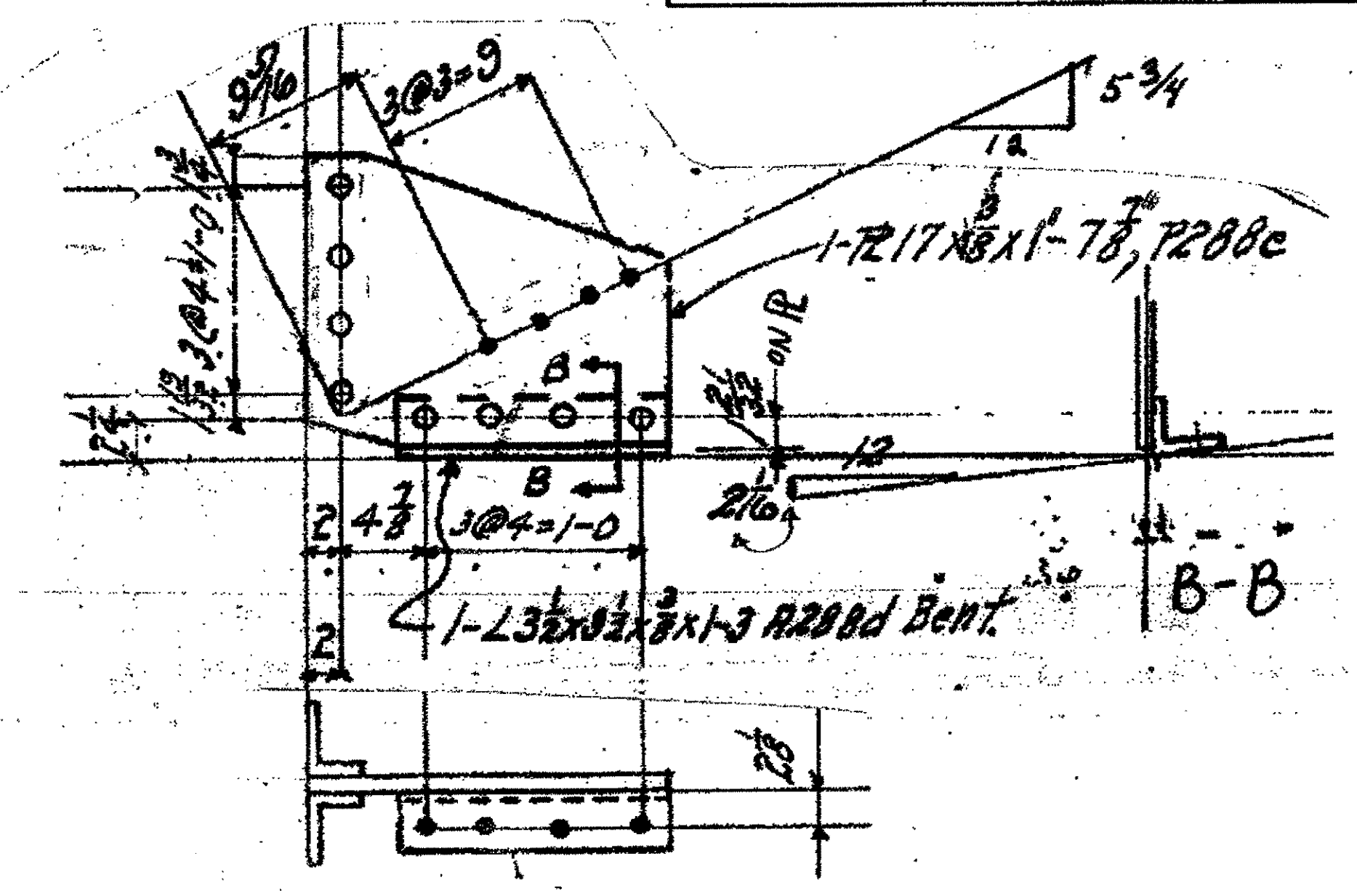
Piece No.	Qty.	Description
23 A		SWAY FRAME GUSSET & ANGLE
PL64E	1	P 20 X 3/8 X 1'-3 3/4"
A164D	1	L 4 X 3 1/2 X 3/8 X 1'-3"
23 B	1	P 23 X 3/8 X 1'-6 1/8"
23 C		SWAY FRAME GUSSET & ANGLE
P288E	2	P 17 X 3/8 X 1'-7 3/8"
A288D	2	L 3 1/2 X 3 1/2 X 3/8 X 1'-3"
		PLATE A36 SHAPES A36



1-SWAY FRAME GUSSET & CONNECTING ANGLE 23A  
 ORIGINAL SHOP MARKS PL64E & A164D  
 SPAN 7 L6 SOUTH EXTERIOR 23A



1-SWAY FRAME GUSSET 23B  
 ORIGINAL SHOP MARK P297S  
 SPAN 9 L5 SOUTH EXTERIOR 23B

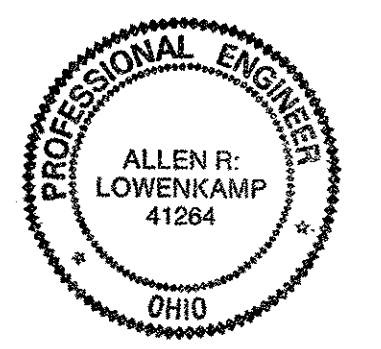


2-SWAY FRAME GUSSET & CONNECTING ANGLE 23C  
 ORIGINAL SHOP MARKS P288E & A288D  
 SPAN 1 L4 NORTH EXTERIOR 23C  
 SPAN 1 L4 SOUTH EXTERIOR 23C

**NOTES:**

- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX-NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

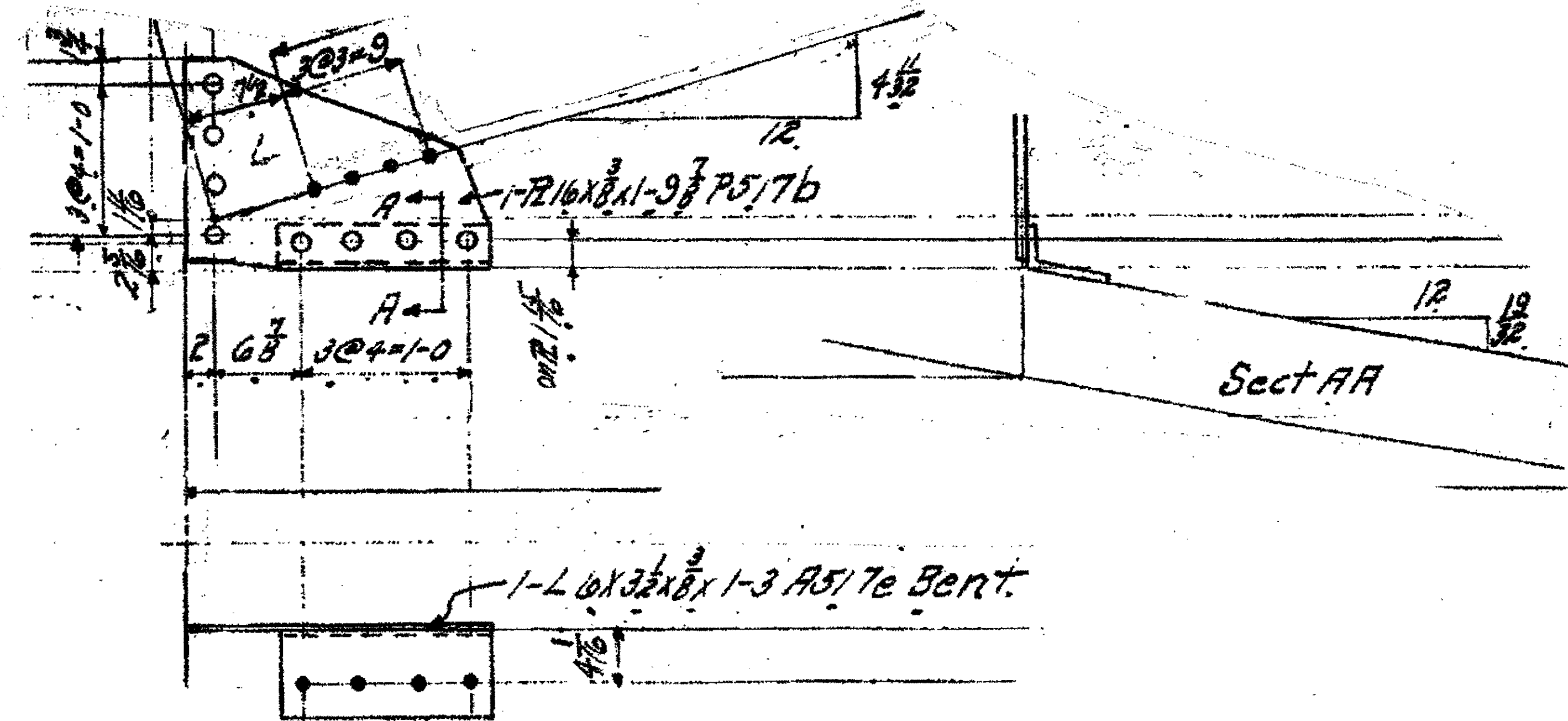
ODOT Project # 00215  
**BRIDGE NO. CVY-10-16.13**

SCALE: NA DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWING NO. **23**

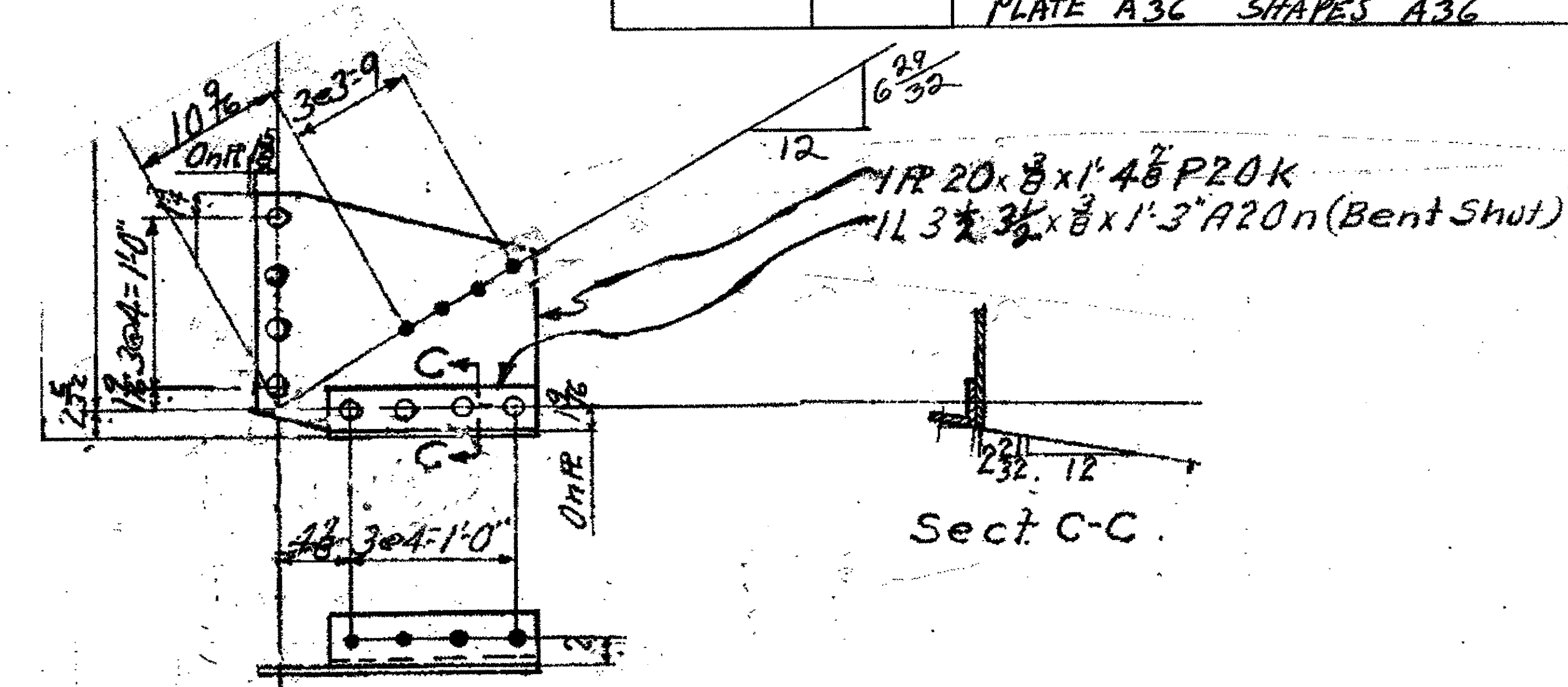


BILL OF MATERIALS

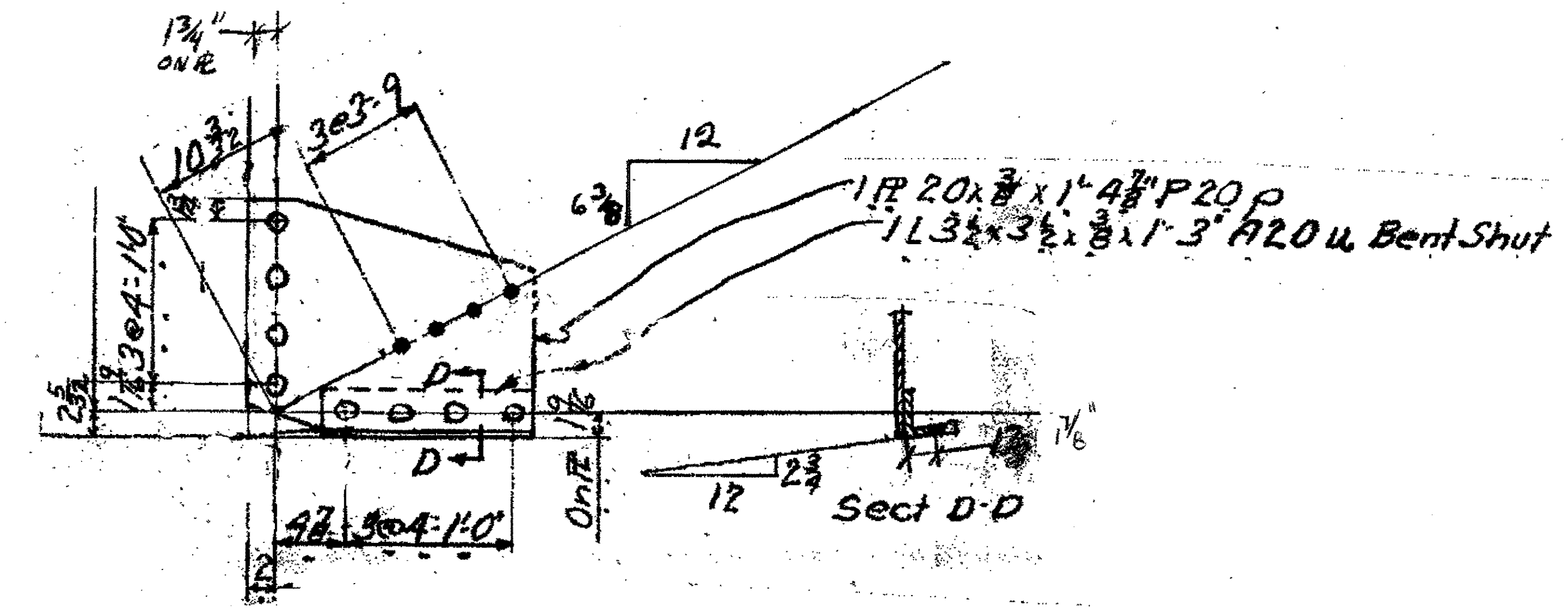
Piece No.	Qty.	Description
24A		SWAY FRAME GUSSET ANGLE
P517B	1	PL 16 x 3/8 x 1'-9 3/8"
A517E	1	L 6 x 3 1/2 x 3/8 x 1'-3" (BENT)
24B		SWAY FRAME GUSSET ANGLE
P20K	1	PL 20 x 3/8 x 1'-4 7/8"
A20N	1	L 3 1/2 x 3 1/2 x 3/8 x 1'-3" BENT SHOT
24C		SWAY FRAME GUSSET ANGLE
P20P	1	PL 20 x 3/8 x 1'-4 7/8"
A20U	1	L 3 1/2 x 3 1/2 x 3/8 x 1'-3" BENT SHOT
		PLATE A36 SHAPES A36



1 SWAY FRAME GUSSET ANGLE 24A  
 ORIGINAL SHOP MARKS P517B & A517E  
 SPAN 13 L4 SOUTH EXTERIOR 24A



1-SWAY FRAME GUSSET ANGLE 24B  
 ORIGINAL SHOP MARKS P20K A20N  
 SPAN 3 L4 SOUTH EXTERIOR 24B



1-SWAY FRAME GUSSET ANGLE 24C  
 ORIGINAL SHOP MARKS P20P & A20U  
 SPAN 3 L9 NORTH EXTERIOR 24C

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/4/04 DJM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



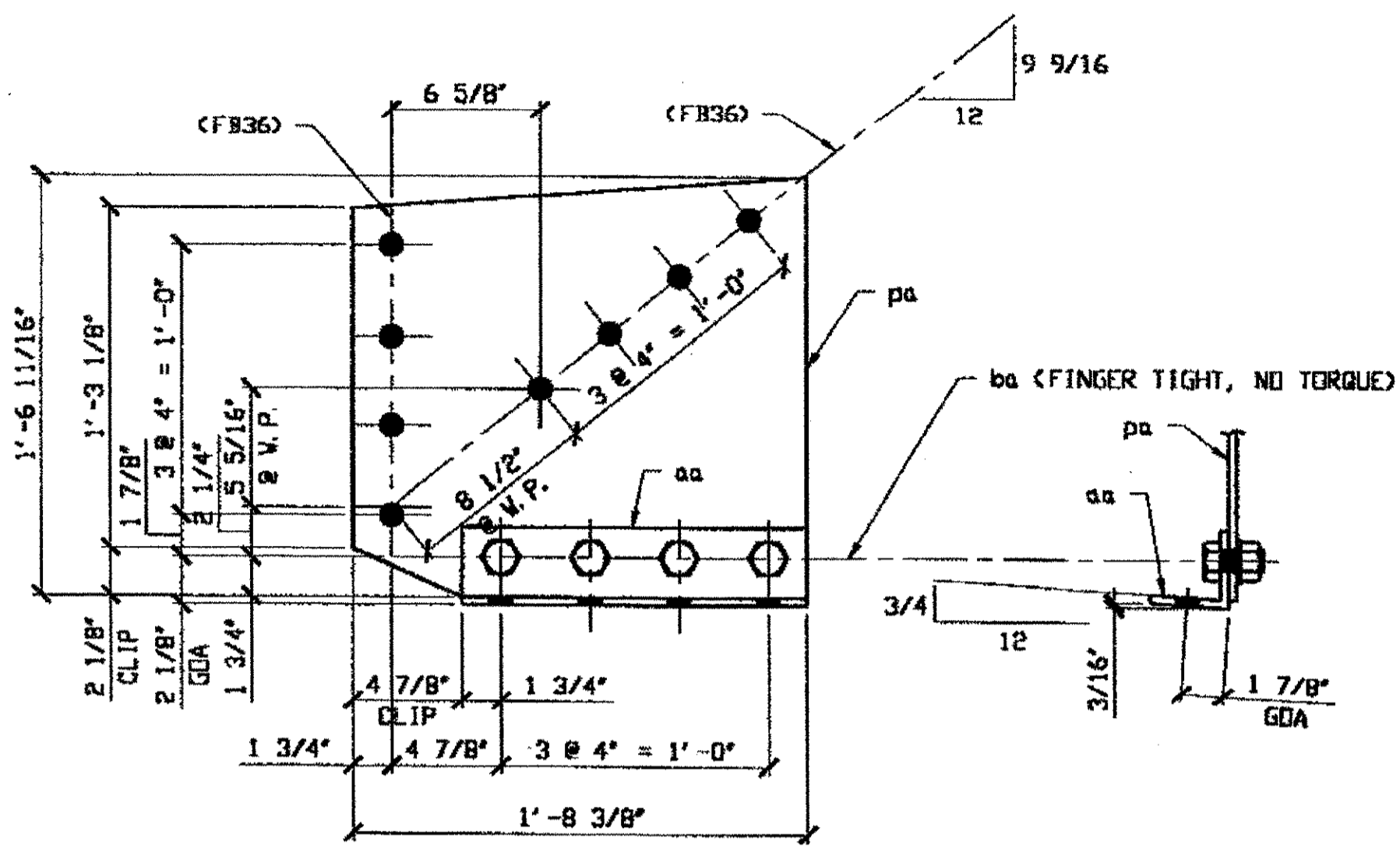
NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-5015

ODOT Project # 00215  
 BRIDGE NO. CUY-10-16.13

SCALE: NA DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ JOB NO. 24

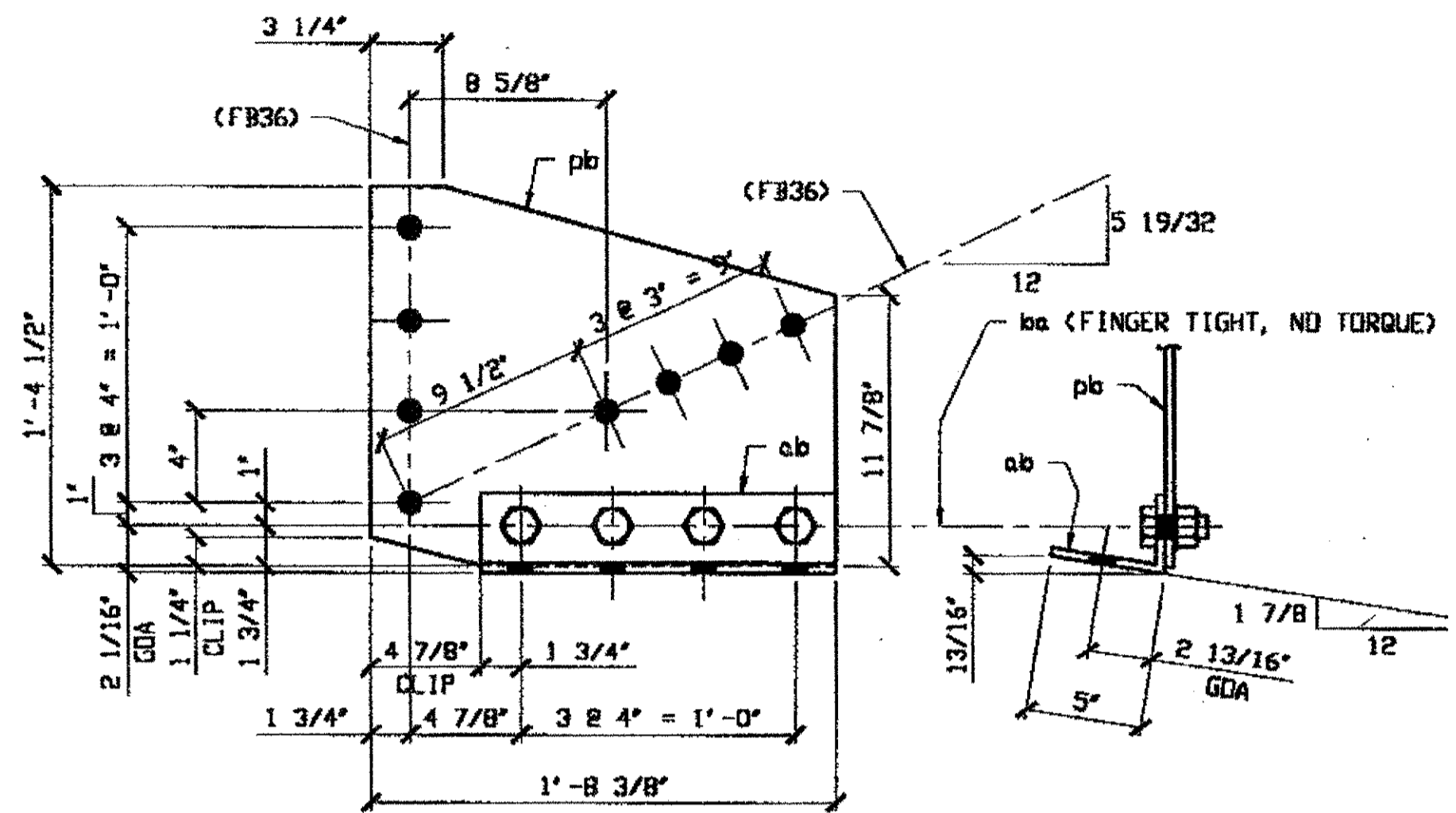
Last modified by repringer at 09:12am on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:04am on Fri Mar 23, 2001



**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 257A R/L**

SPAN 5  
L4 NORTH EXTERIOR 257A  
L4 SOUTH EXTERIOR 257A

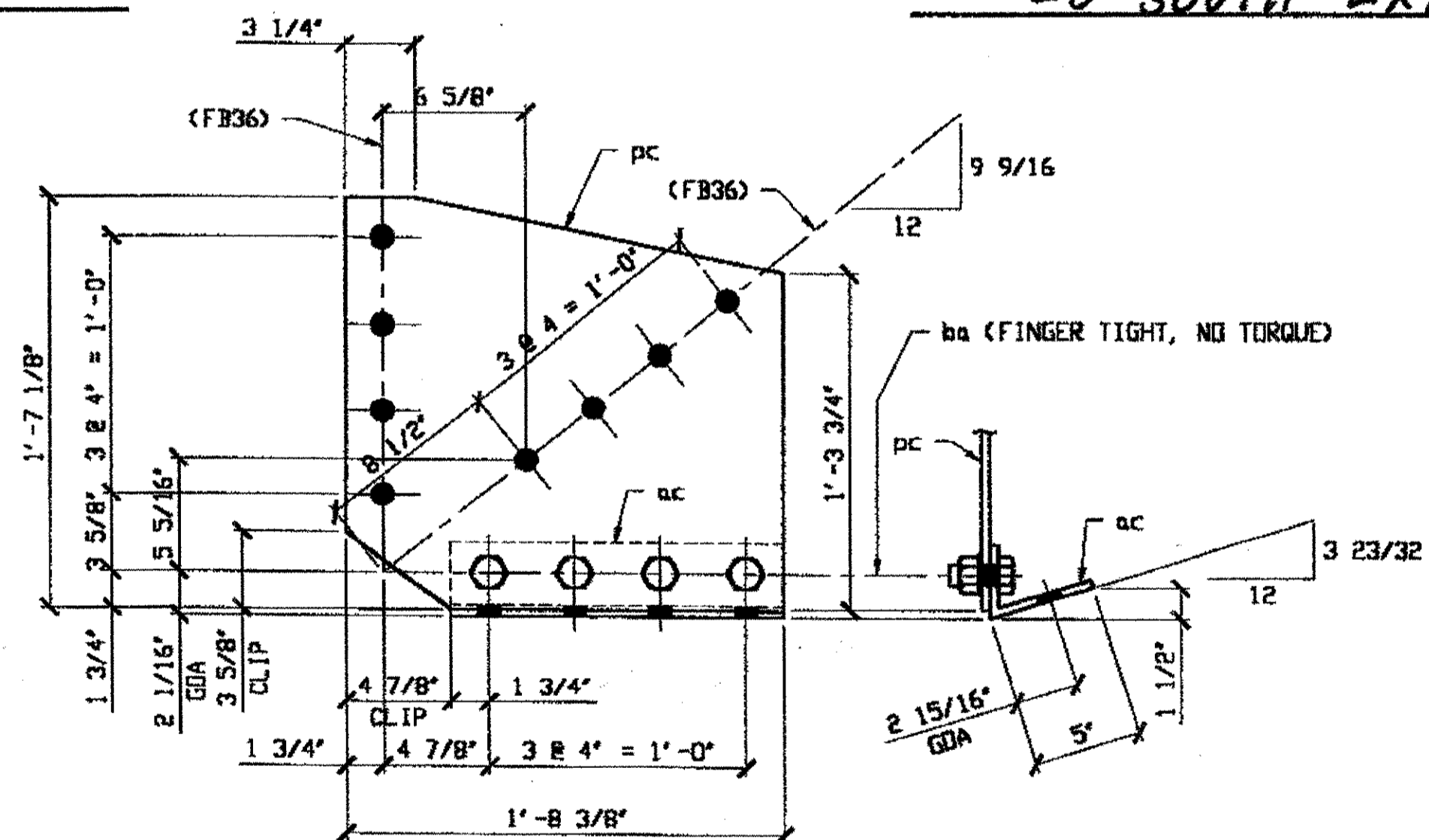
ORIG SHOP DWG 87-SB63 R/L  
 ORIG SHOP MARK PB7n & AB7y  
 REPAIR SHEET 5-116, 181 & 184



**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 257B R/L**

SPAN 5  
L5 NORTH EXTERIOR 257B  
L5 SOUTH EXTERIOR 257B

ORIG SHOP DWG 87-SB55 R/L  
 ORIG SHOP MARK PB7k & AB7n  
 REPAIR SHEET 5-122 & 186



**1 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 257C**

SPAN 5  
L1 SOUTH EXTERIOR 257C

ORIG SHOP DWG 87-SB52/R  
 ORIG SHOP MARK PB7fx & AB7g  
 REPAIR SHEET 5-172

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		257A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	E	/R	1/L		
2		pa	2	PL 3/8 X 18 11/16	1	8 3/8			
3		aa	2	L 3 1/2 X 3 1/2 X 3/8	1	3 1/2	BEND		
4		ba	8	1" DIA HVY HEX BOLT	D	2 1/4	NOTE 2		
5				W/HVY HEX NUT & WASHER					
6									
7		257B R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	E			101	
8		pb	2	PL 3/8 X 16 1/2	1	8 3/8		63	
9		ab	2	L 5 X 3 1/2 X 3/8	1	3 1/2	BEND	27	
10		ba	8	1" DIA HVY HEX BOLT	D	2 1/4	NOTE 2	11	
11				W/HVY HEX NUT & WASHER					
12									
13		257C	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE	E			55	
14		pc	1	PL 3/8 X 19 1/8	1	8 3/8		37	
15		ac	1	L 5 X 3 1/2 X 3/8	1	3 1/2	BEND	13	
16		ba	4	1" DIA HVY HEX BOLT	D	2 1/4	NOTE 2	5	
17				W/HVY HEX NUT & WASHER					
18									
19									
20									
21									
22									
23									
24				FIELD BOLTS					
25		FB36	48	1" DIA	D	2 1/2	NOTE 2	67	
26									
27									
28									
PLATE A36					PIPE N/A		FITTINGS N/A		
SHAPES A36					FLGS. N/A		BOLTS NOTE 2		

\* DOT ITEM LINE No. 0153

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NAT'L ENGR. & CONTR. CO.  
 by Edp/tsc

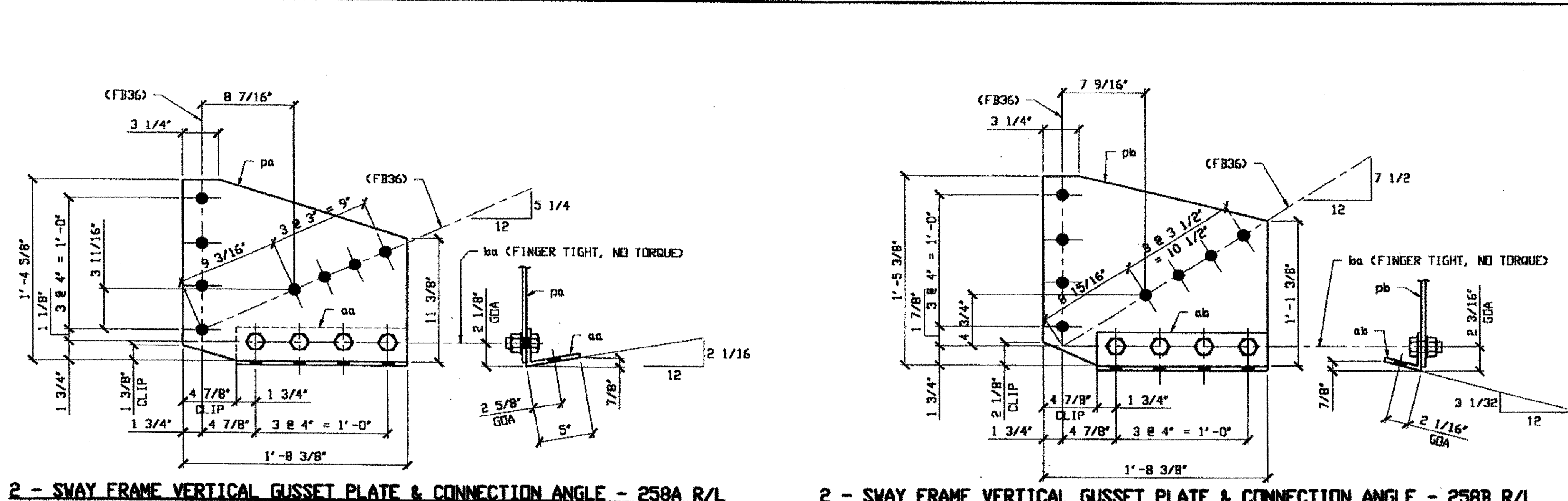
MAR 28 2001

RELEASED FOR CONSTRUCTION  
 DATE 3/6/01 BY Edp

DOT ITEM LINE NO. 0142 U. N. D.  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS			
FABRICATOR		STEEL ERECTOR	
(AB) AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORAOPOLIS, PA. 15108 PHONE: (412) 531-3000 FAX: (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH		DRAWN BY: DATE: RAS 02/28/01	
SHEET NUMBER: 257		CHECKED BY: DATE: GAF 03/09/01	
JOB NUMBER: 800010			

Last modified by rspringer at 09:19am on Wed Mar 21, 2001 - Last plotted by Gfooster at 09:04am on Fri Mar 23, 2001

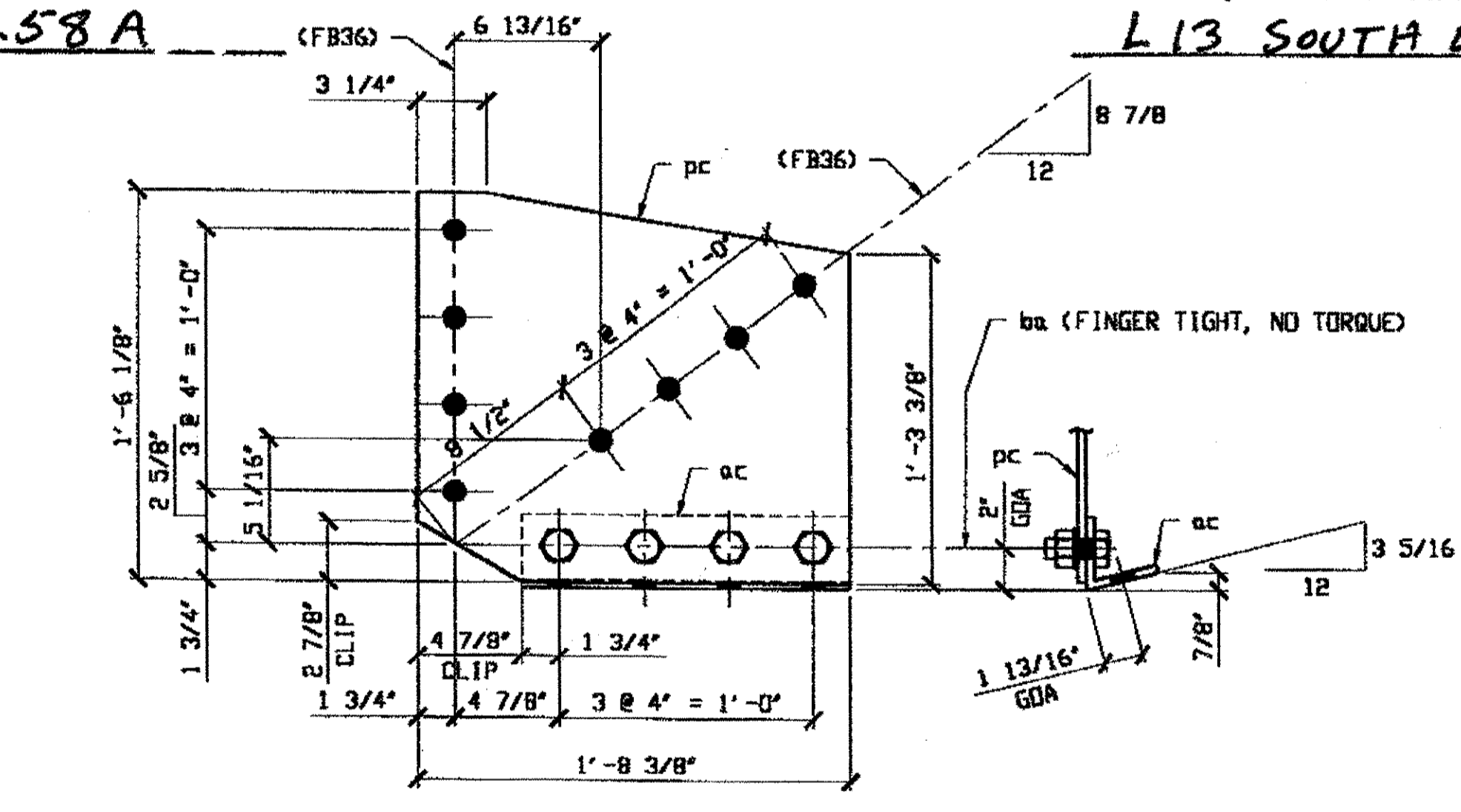


**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 258A R/L**

**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 258B R/L**

SPAN 5  
L9 NORTH EXTERIOR 258A  
L9 SOUTH EXTERIOR 258A

SPAN 5  
L13 NORTH EXTERIOR 258B  
L13 SOUTH EXTERIOR 258B



**1 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 258C**

SPAN 5 L10 SOUTH EXTERIOR 258C

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		258A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				100
2		pa	2	PL 3/8 X 16 5/8	1	8 3/8		62
3	*	aa	2	L 5 X 3 1/2 X 3/8	1	3 1/2	BEND	27
4		ba	8	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	11
5				W/HVY HEX NUT & WASHER				
6								
7		258B R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				100
8		pb	2	PL 3/8 X 17 3/8	1	8 3/8		67
9	*	ab	2	L 3 1/2 X 3 1/2 X 3/8	1	3 1/2	BEND	22
10		ba	8	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	11
11				W/HVY HEX NUT & WASHER				
12								
13		258C	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				52
14		pc	1	PL 3/8 X 18 1/8	1	8 3/8		36
15	*	ac	1	L 3 1/2 X 3 1/2 X 3/8	1	3 1/2	BEND	11
16		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	5
17				W/HVY HEX NUT & WASHER				
18								
19								
20								
21								
22								
23								
24				FIELD BOLTS				
25		FB36	40	1" DIA	0	2 1/2	NOTE 2	56
26								
27								
28								
PLATE				A36	PIPE	N/A	FITTINGS	N/A
SHAPES				A36	FLGS.	N/A	BOLTS	NOTE 2

\* DOT ITEM LINE No. 0153

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED



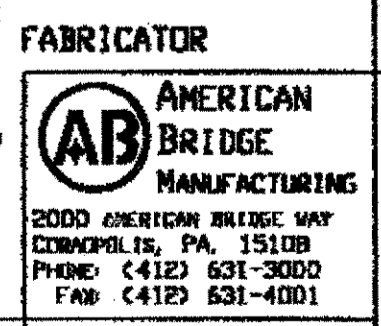
NAT'L ENGR. & CONTR. CO.  
 by Edp/ESS

MAR 26 2001

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY Edp

DOT ITEM LINE NO. 0142 U.N.D.  
 DOT BID ITEM NO. 863C50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

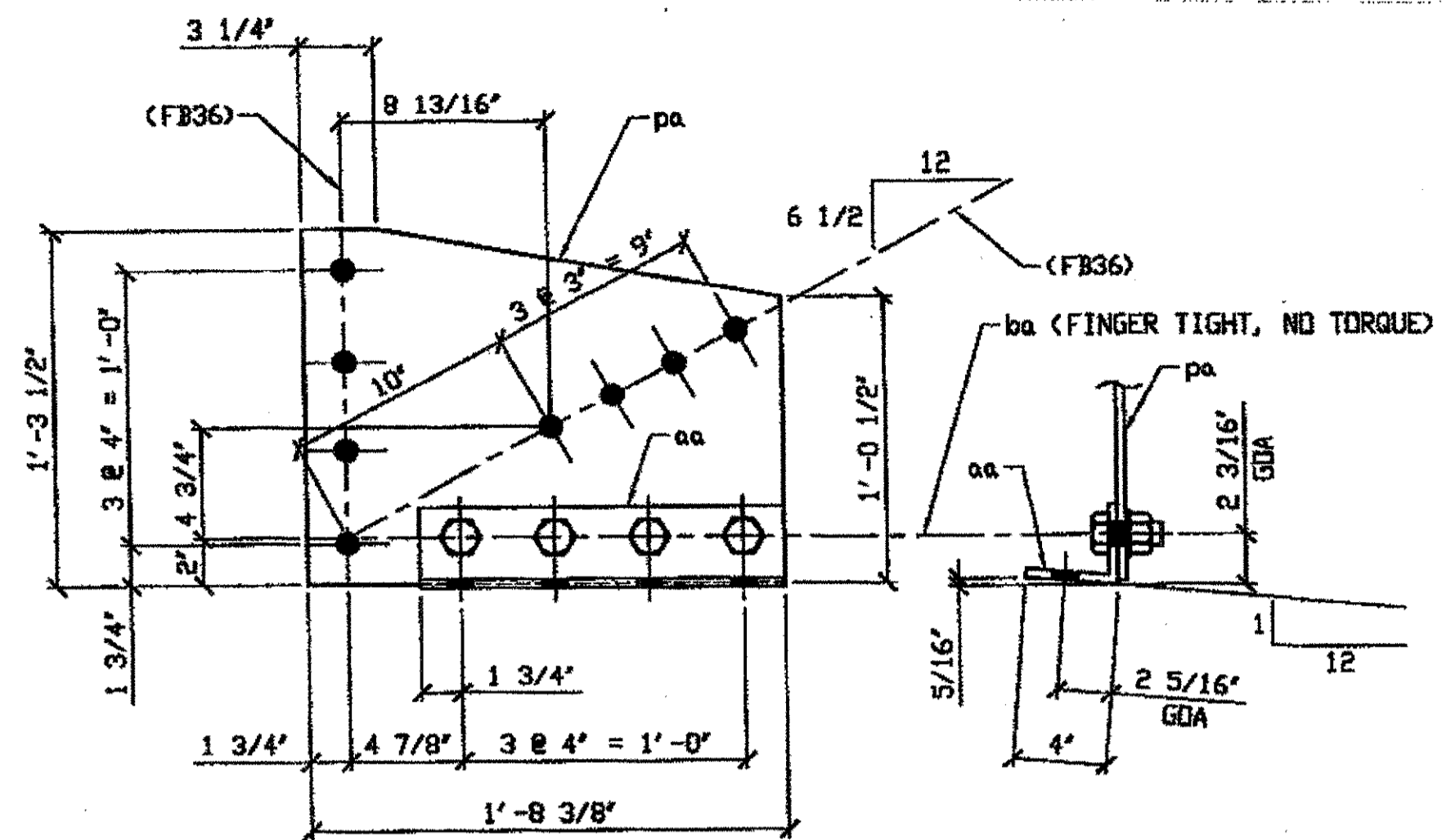


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

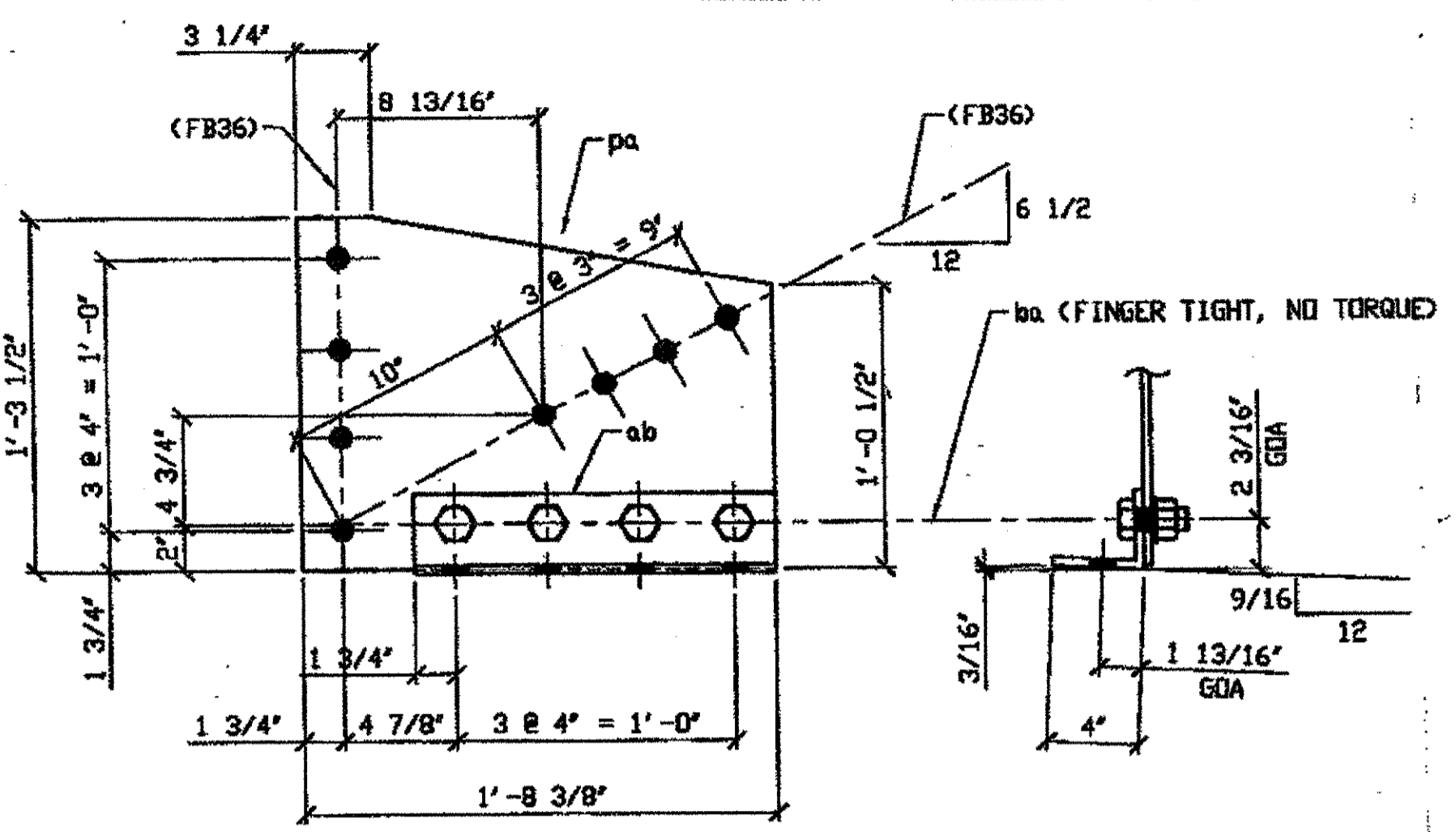
IN CHARGE OF: I. SMITH  
 DRAWN BY: DATE  
 RAS 03/01/01  
 CHECKED BY: DATE  
 GAF 03/16/01

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

SHEET NUMBER: 258  
 A36 JOB NUMBER: 800010



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 312A R/L  
 ORIG SHOP DWG 226 - SB154 R/L  
 ORIG SHOP MARK P226d & A164f  
 REPAIR SHEET 8-117 & 137

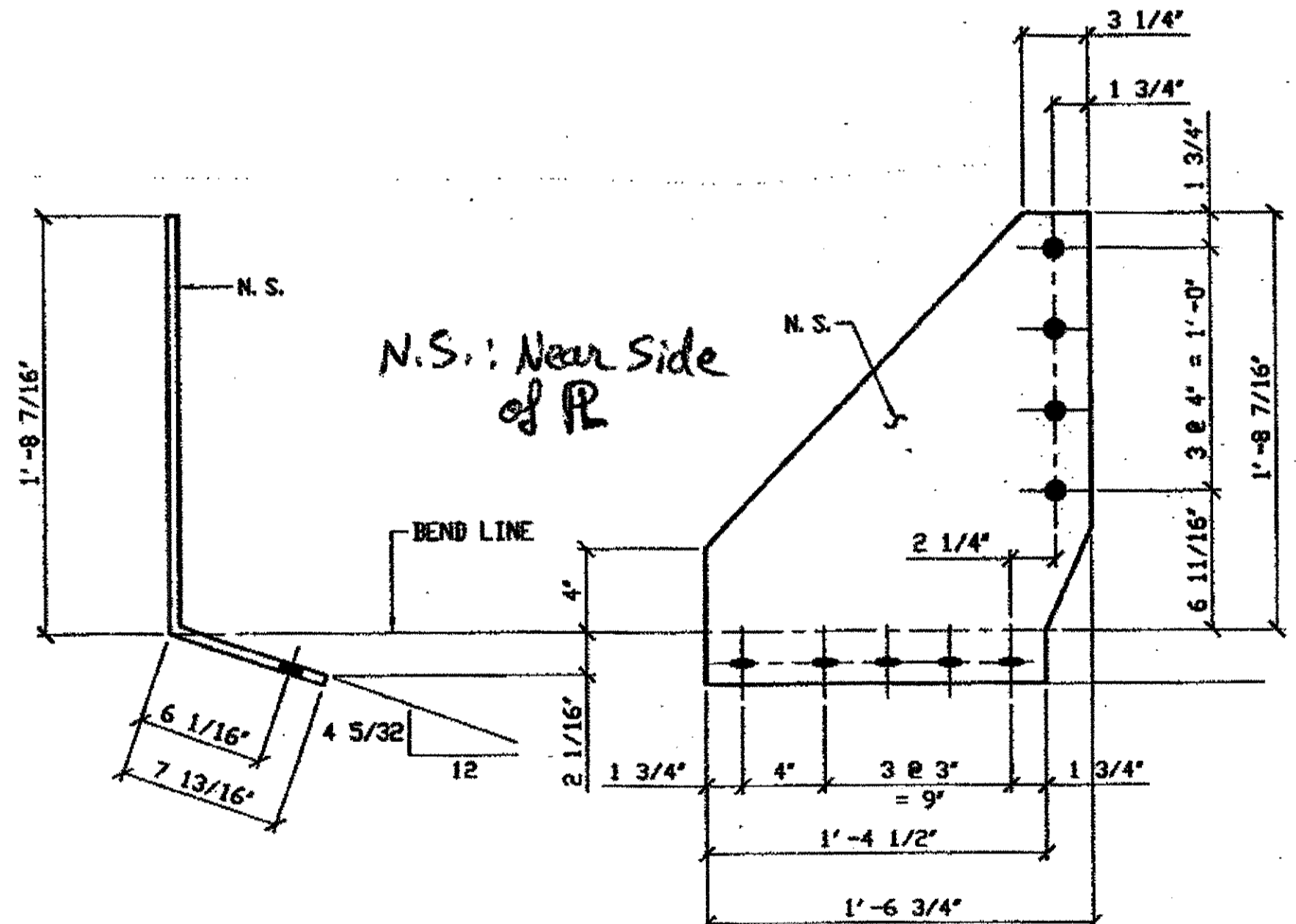


ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 312B  
 ORIG SHOP DWG 226 - SB152A/L  
 ORIG SHOP MARK P226f & A144e  
 REPAIR SHEET 8-132

BILL OF MATERIALS		
Piece No.	Qty.	Description
312A R/L	2	SWAY FRAME GUSSETS & CONN ANGLES
pa	2	R 3/8 X 15 1/2 X 1' 8 3/8"
aa	2	L 4 X 3 1/2 X 3/8 X 1' 3" BEND
ba	8	1" X 2 1/4" HVY HEX. BOLT NOT WASH. NOTE 2
312 B	1	SWAY FRAME GUSSET & CONN ANGLES
pa	1	R 3/8 X 15 1/2 X 1' 8 3/8"
ab	1	L 4 X 3 1/2 X 3/8 X 1' 3"
ba	8	1" X 2 1/4" HVY HEX. BOLT NOT WASH. NOTE 2
312 C	1	R 3/8 X 17" X 1' 8 3/8"
312 D	1	L 5 X 3 1/2 X 1' 3 1/2" BEND
312 E	1	R 1/2" X 18 3/4" X 2' 4 1/4" BEND
PLATE A36 SHAPES A36		

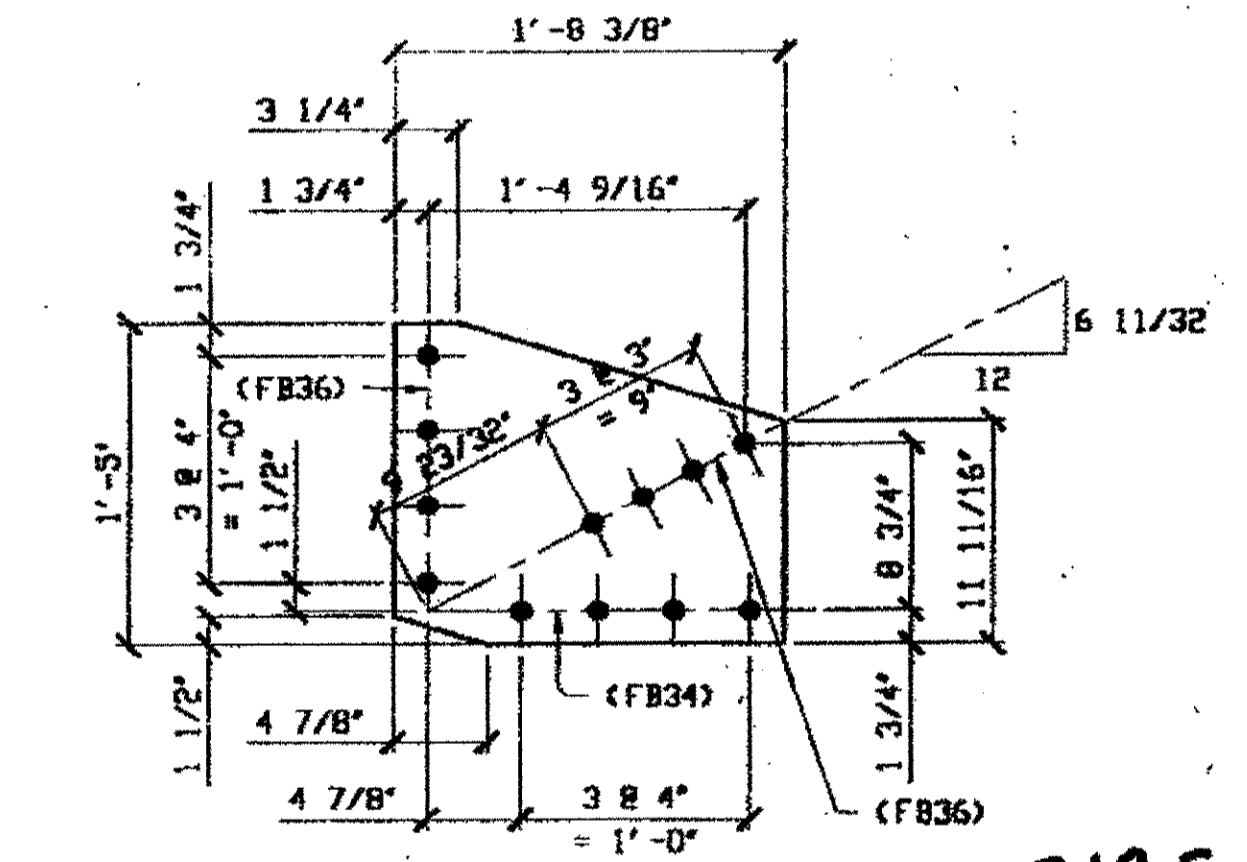
SPAN 8 L4 NORTH EXTERIOR 312A  
 SPAN 8 L4 SOUTH EXTERIOR 312A

SPAN 8 L1 SOUTH EXTERIOR 312B

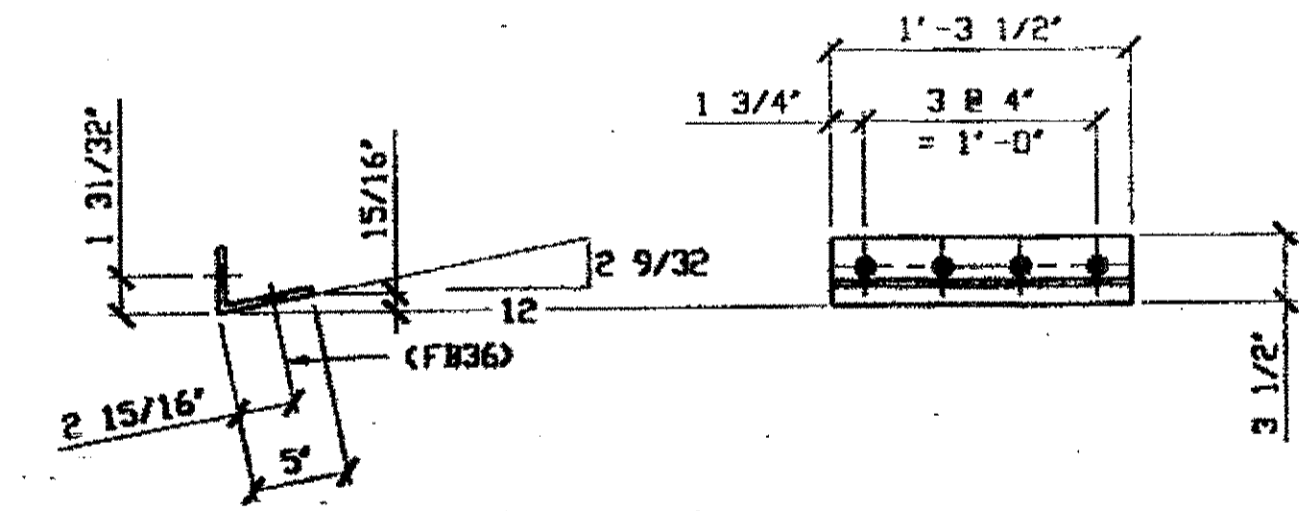


ONE - STEEL OVER SOLID - 312E  
 ORIG SHOP DWG 196 L0L2-0-7/R  
 ORIG SHOP MARK P196ak  
 LINE ITEM NO. 0152, BID ITEM No. 863E90000  
 REPAIR SHEETS 7-183

SPAN 7 L0 NORTH EXTERIOR 312E  
 (EAST)



1 - SWAY FRAME VERTICAL GUSSET PLATE - 312C  
 ORIG SHOP DWG 21-SB44  
 ORIG SHOP MARK P21b  
 LINE ITEM No. 0142



1 - SWAY FRAME CONNECTION ANGLE - 312D  
 ORIG SHOP DWG 21-SB44  
 ORIG SHOP MARK A21a  
 LINE ITEM No. 0152  
 BID ITEM No. 863E90000

SPAN 3 L12 NORTH EXTERIOR 312C + 312D

O.D.O.T. DIST. 12  
 ACCEPTED: 2/4/04  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16\"/>

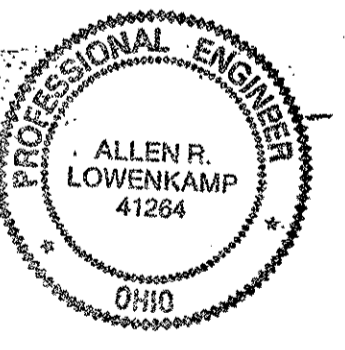
NO.	REVISION	DATE	BY

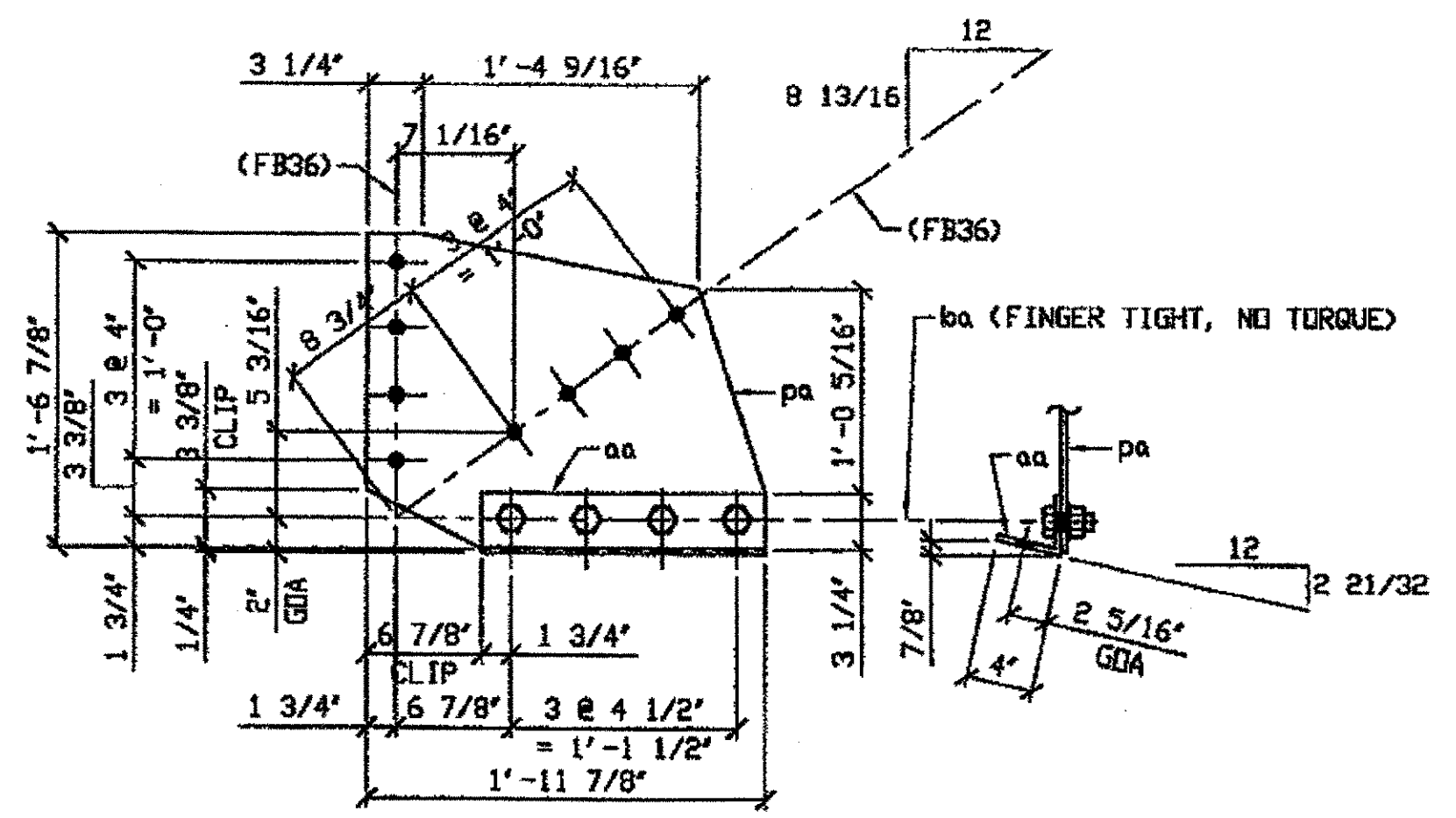
**Fri State Steel Construction Inc.**  
 12808 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

SCALE: NA  
 DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

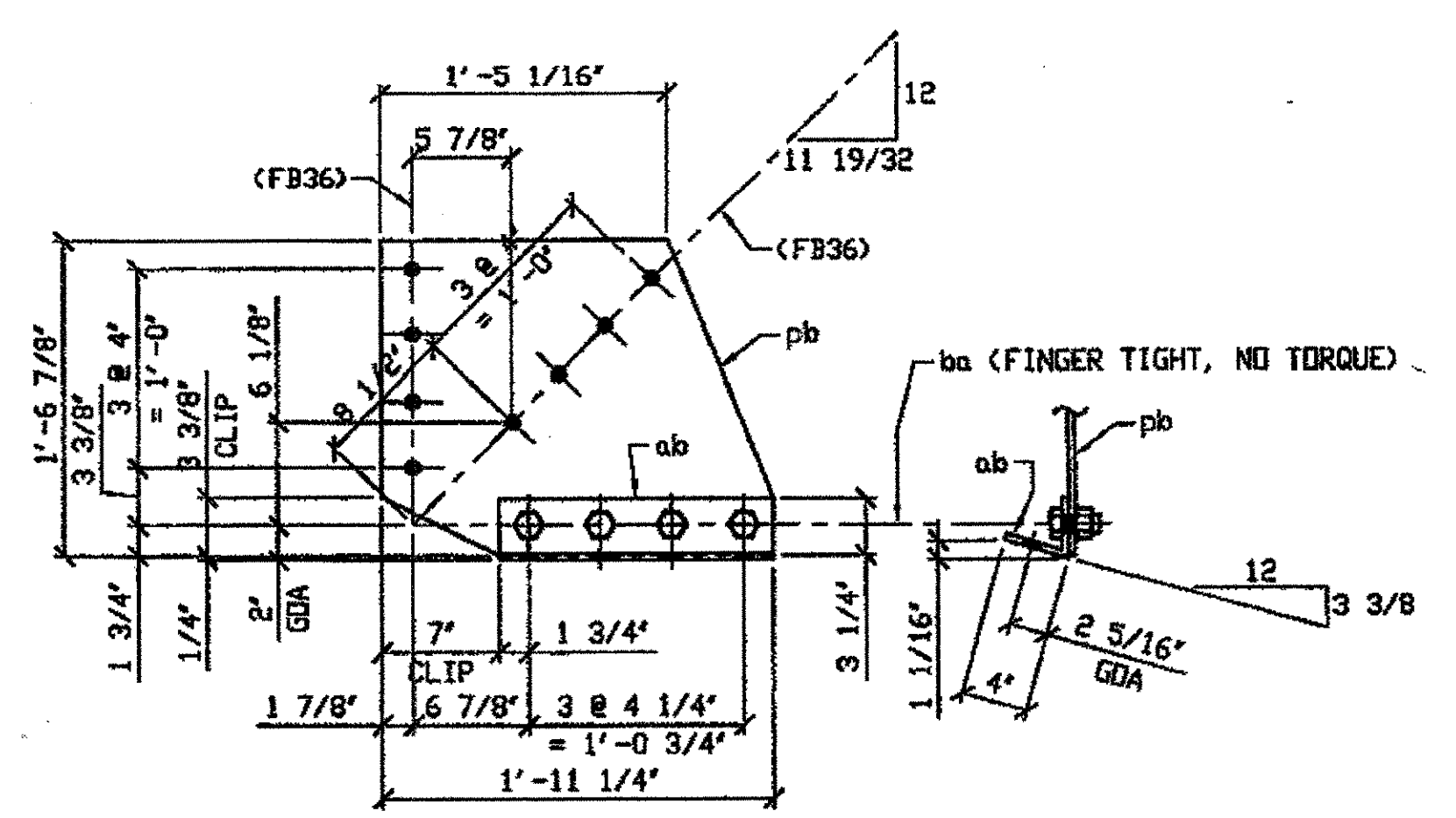
JOB NO. 312  
 DRAWING NO. 312





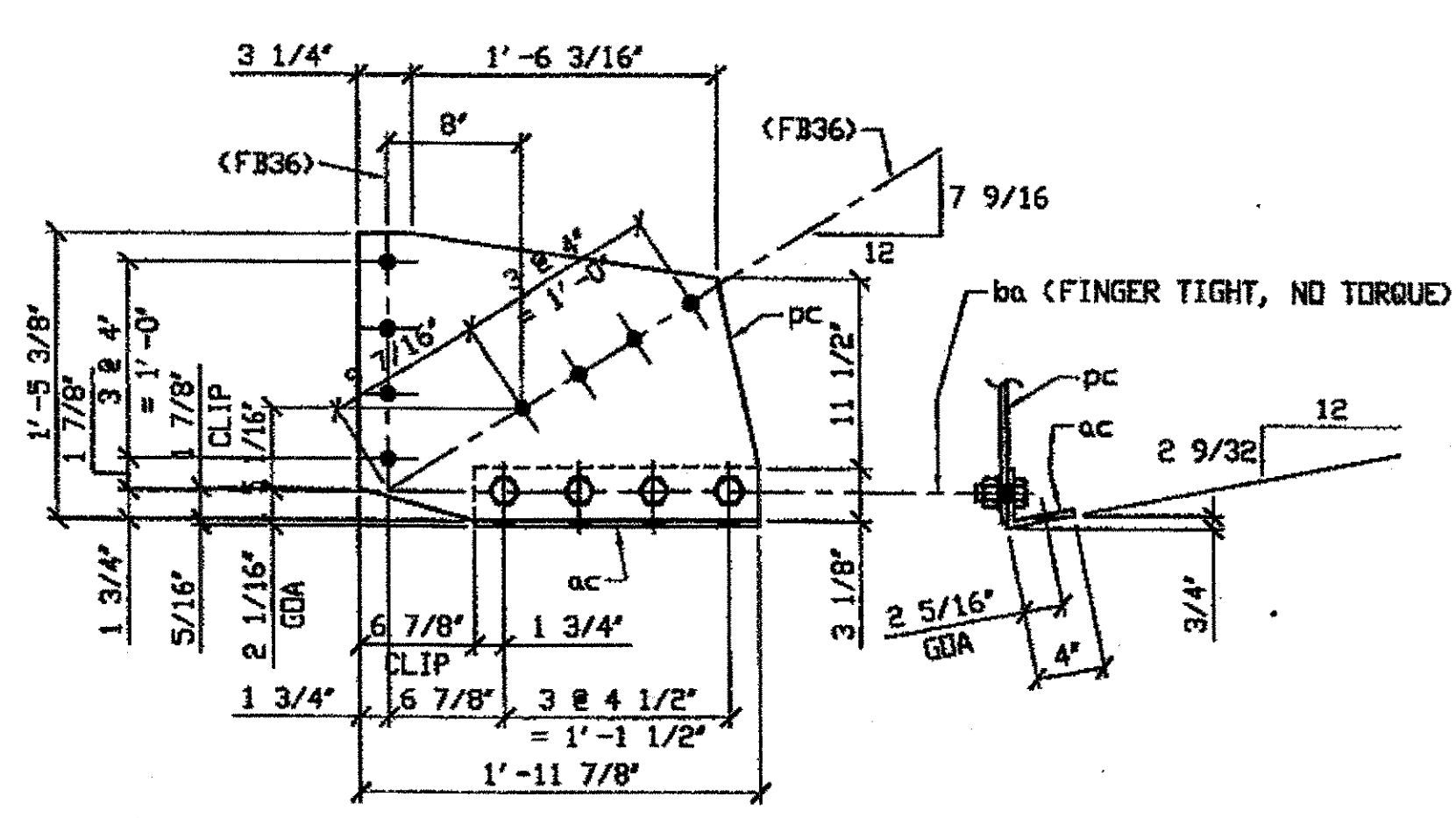
**ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 329A**  
 ORIG SHOP DRAWING 297, SB168/R  
 ORIG SHOP MARK P297b & A297a  
 REPAIR SHEETS 9-110

SPAN 9 L1 NORTH EXTERIOR 329A



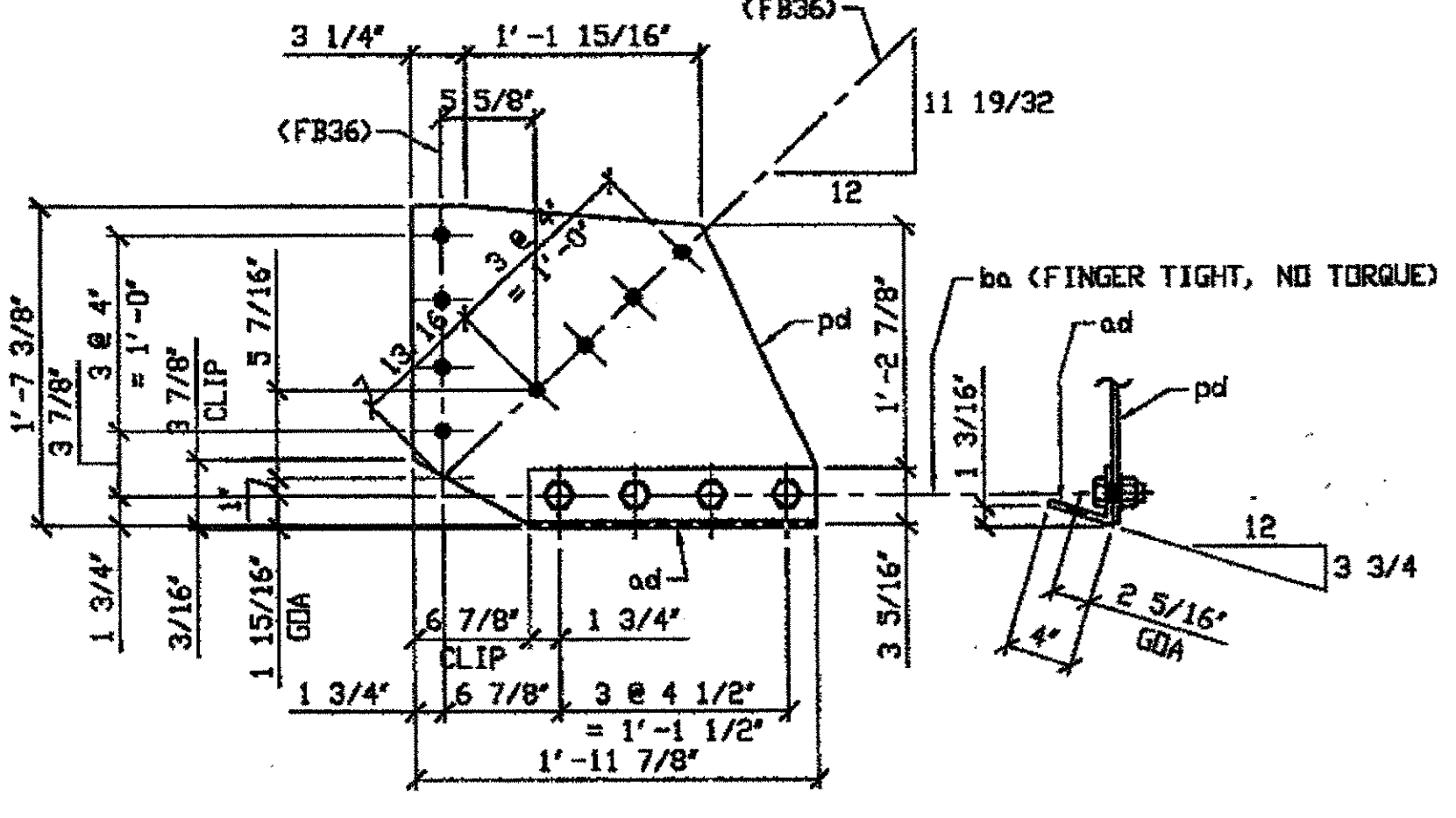
**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 329B**  
 ORIG SHOP DRAWING 297, SB172/R  
 ORIG SHOP MARK P297d & A297d  
 REPAIR SHEETS 9-115

SPAN 9 L2 NORTH EXTERIOR 329 B  
SPAN 9 L2 SOUTH EXTERIOR 329 B (ANGLE NOT RE-PLACED AT THIS LOCATION)



**ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 329C**  
 ORIG SHOP DRAWING 297, SB182/R  
 ORIG SHOP MARK P297k & A297m  
 REPAIR SHEETS 9-135

SPAN 9 L6 NORTH EXTERIOR 329C



**2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 329D**  
 ORIG SHOP DRAWING 297, SB202/R  
 ORIG SHOP MARK P297p & A297v  
 REPAIR SHEETS 9-165

SPAN 9 L13 NORTH EXTERIOR 329 D  
SPAN 9 L13 SOUTH EXTERIOR 329 D

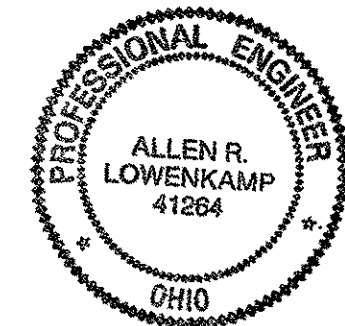
BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		329A	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				58	
2		pa	1	PL 3/8 X 18 7/8	1	11 7/8		40	
3	*	aa	1	L 4 X 3 1/2 X 3/8	1	5	BEND	13	
4		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	5	
5				W/HVY HEX NUT & WASHER					
6									
7		329B	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				114	
8		pb	2	PL 3/8 X 18 7/8	1	11 1/4		30	
9	*	ab	2	L 4 X 3 1/2 X 3/8	1	4 1/4	BEND	10	
10		ba	3	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	10	
11				W/HVY HEX NUT & WASHER					
12									
13		329C	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				57	
14		pc	1	PL 3/8 X 17 3/8	1	11 7/8		39	
15	*	ac	1	L 4 X 3 1/2 X 3/8	1	5	BEND	13	
16		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	5	
17				W/HVY HEX NUT & WASHER					
18									
19		329D	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				118	
20		pd	2	PL 3/8 X 19 3/8	1	11 7/8		32	
21	*	ad	2	L 4 X 3 1/2 X 3/8	1	5	BEND	26	
22		ba	3	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	10	
23				W/HVY HEX NUT & WASHER					
24									
25				FIELD BOLTS					
26		FB36		1" DIA	0	2 1/2	NOTE 2		
PLATE A36					PIPE N/A		FITTINGS N/A		
SHAPES A36					FLGS. N/A		BOLTS NOTE 2		

\* DOT ITEM LINE No. 0153, DOT BID ITEM No. 863E9000

NOTES:  
 1. OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.  
 2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.  
 3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 ASM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

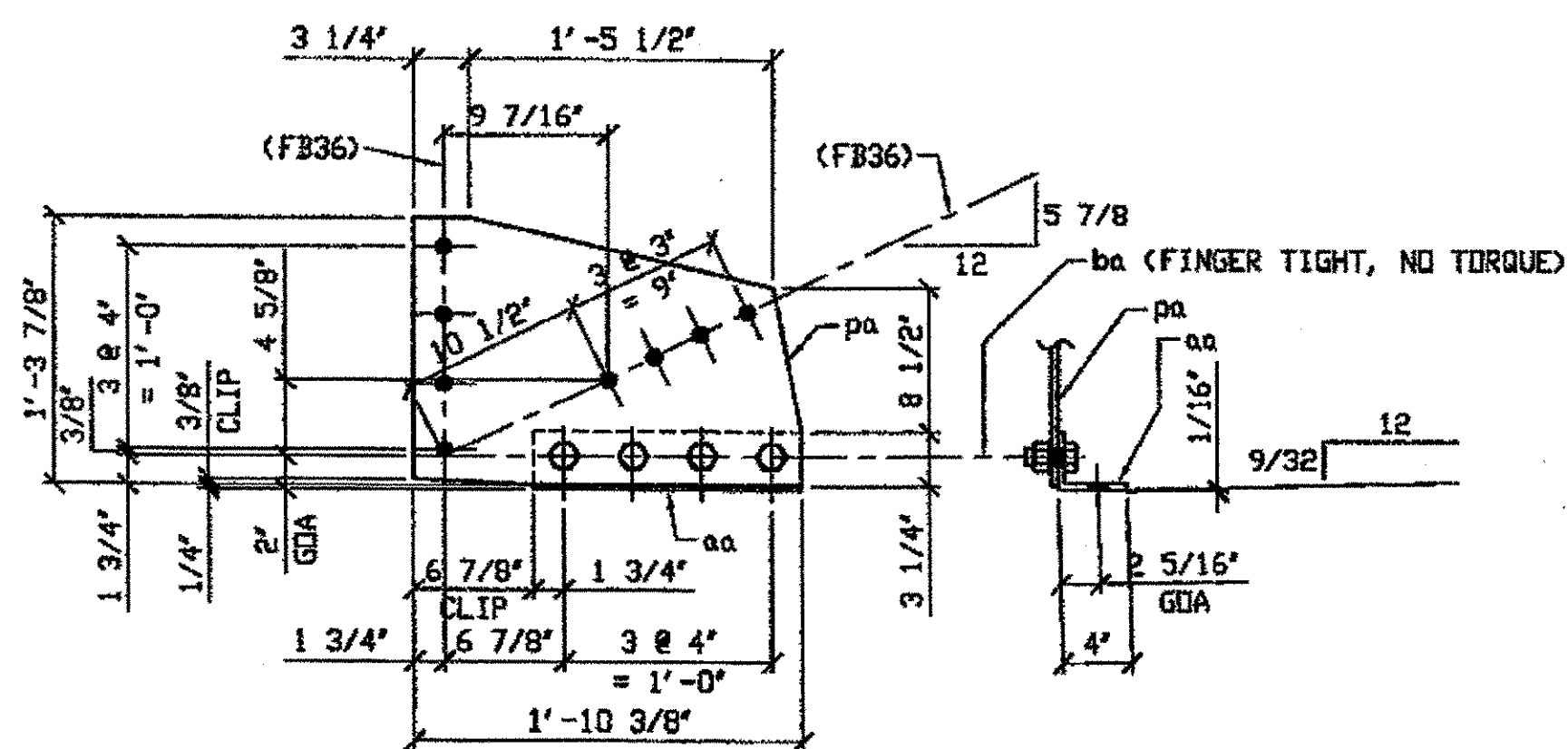


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRENGTHVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

DRWN BY: RAS	DATE: 07/09/01	SHEET NUMBER: 329
CHKD BY: GAF	DATE: 08/17/01	AM. JOB NUMBER: 800010

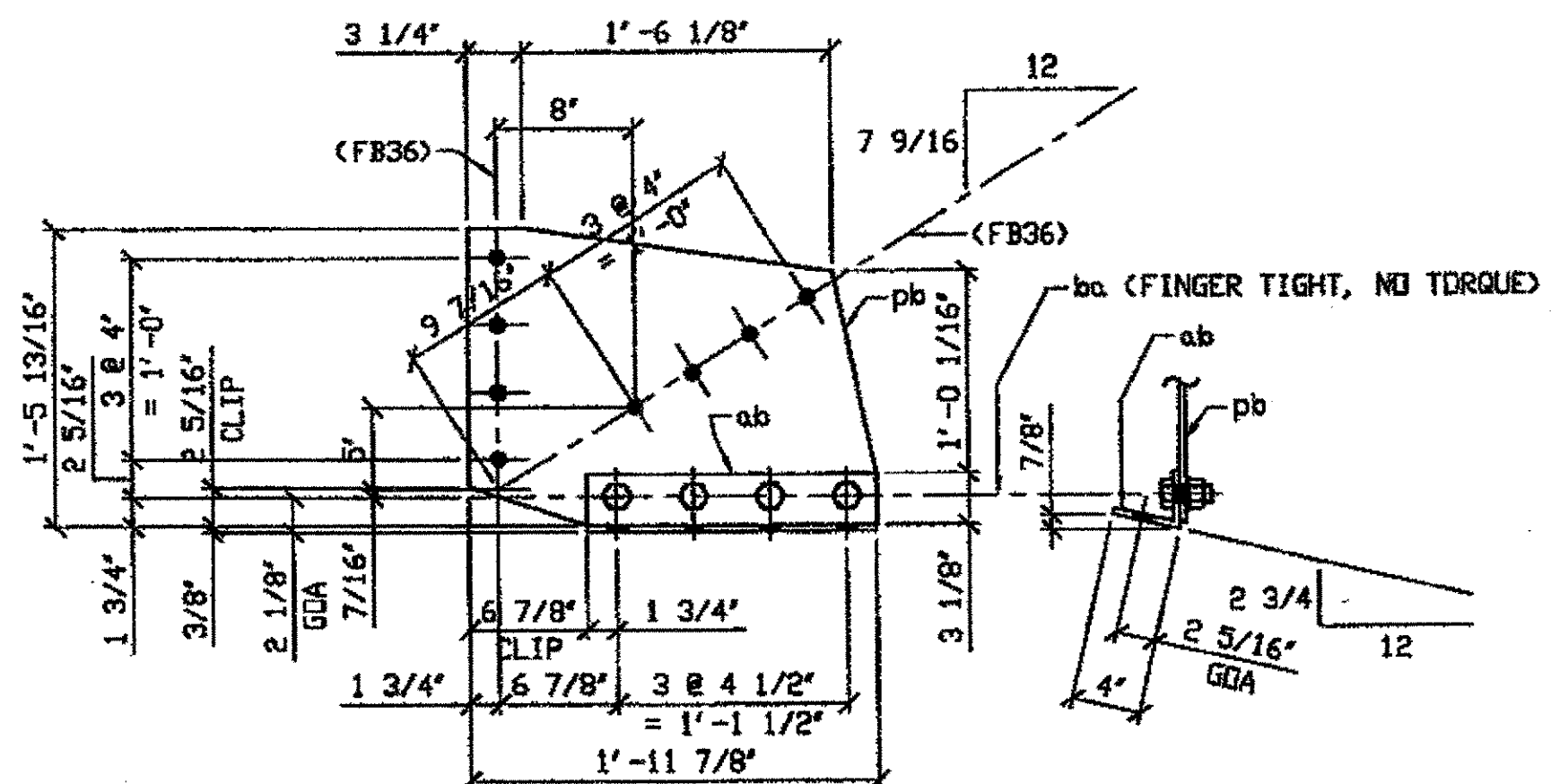
DOT ITEM LINE NO. 0142 U.N.O. DOT BID ITEM NO. 863E5000 U.N.O.	
NO. DATE	DESCRIPTION REVISIONS BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY COLUMBUS, PA 15109 PHONE: (412) 631-0000 FAX: (412) 631-4001	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS	

G:\Contracts\2000\900010\Drawings\329A.dwg  
 Save by psp at 03:54pm Dec 13, 2001  
 Plot by cfb at 09:37am Dec 17, 2001  
 Model space plot + Scale = 1/9



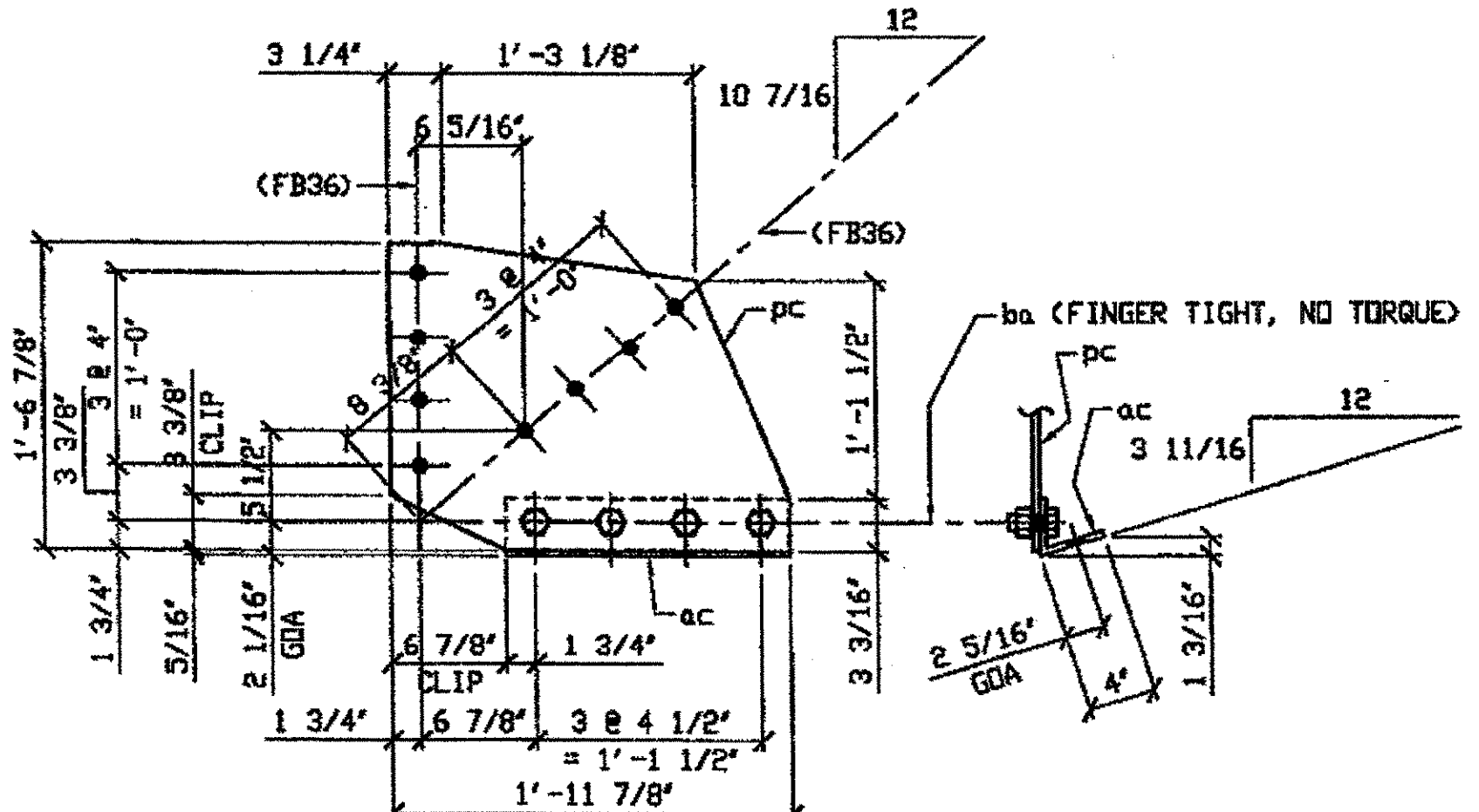
ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 330A  
 ORIG SHIP DRAWING 298i SB192/R  
 ORIG SHIP MARK P298f & A298e  
 REPAIR SHEETS 9-144

SPAN 9 L8 NORTH EXTERIOR 330A



ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 330B  
 ORIG SHIP DRAWING 298i SB201 R/L  
 ORIG SHIP MARK P298g & A298w  
 REPAIR SHEETS 9-159 & 265a

SPAN 9 L12 NORTH EXTERIOR 330B



ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 330C  
 ORIG SHIP DRAWING 298i SB187/R  
 ORIG SHIP MARK P298d & A298d  
 REPAIR SHEETS 9-176

SPAN 9 L16-NORTH EXTERIOR 330C

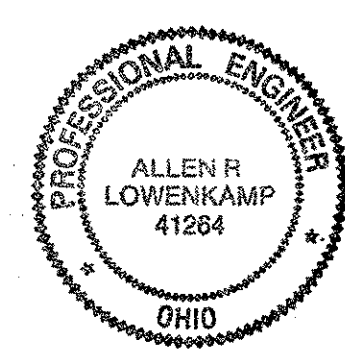
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		330A	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				49
2		pa	1	PL 3/8 X 15 7/8	1	10 3/8		32
3	*	aa	1	L 4 X 3 1/2 X 3/8	1	3 1/2	BEND	12
4		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	5
5				W/HVY HEX NUT & WASHER				
6								
7	A	330B R/	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				
8		pb	1	PL 3/8 X 17 13/16	1	11 7/8		
9	*	ab	1	L 4 X 3 1/2 X 3/8	1	5	BEND	
10		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	
11				W/HVY HEX NUT & WASHER				
12								
13		330C	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				58
14		pc	1	PL 3/8 X 18 7/8	1	11 7/8		40
15	*	ac	1	L 4 X 3 1/2 X 3/8	1	5	BEND	13
16		ba	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	5
17				W/HVY HEX NUT & WASHER				
18								
19				FIELD BOLTS				
20	A	FB36		1" DIA	0	2 1/2	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

\* DOT ITEM LINE No. 0153, DOT BID ITEM No. 863E90000

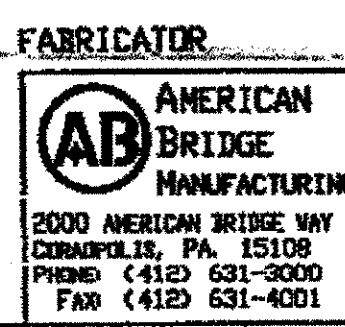
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0142 U. N. D.  
 DOT BID ITEM NO. 863E50000 U. N. D.

NO.	DATE	DESCRIPTION	BY
A	12/3/01	REVISE QUANTITY PER ADDITIONAL REPAIR SHEETS	RAS



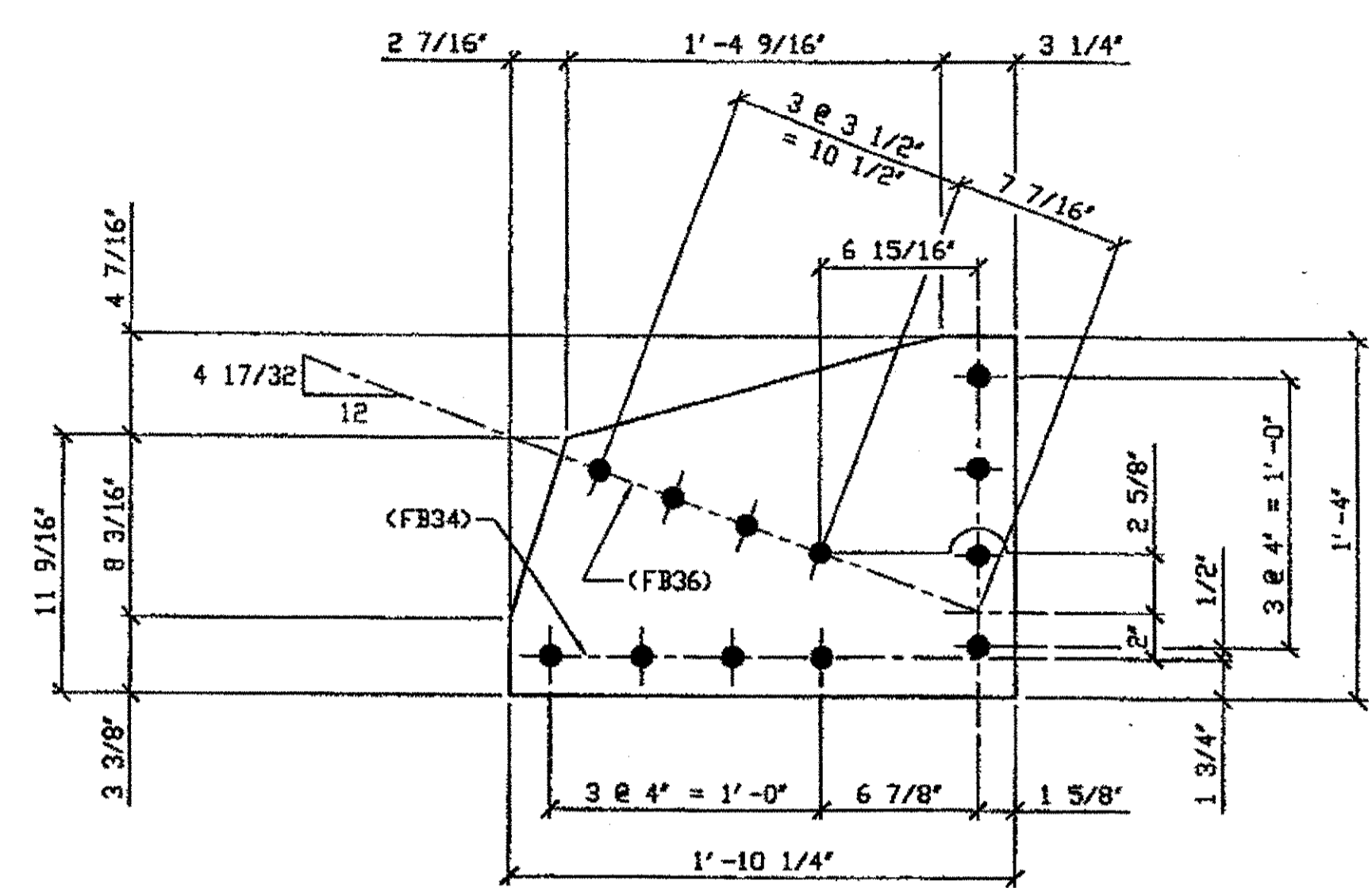
AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIA, PA. 15108  
 PHONE (412) 531-3000  
 FAX (412) 531-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATED: RAS 07/10/01  
 CHECKED BY: DATED: GAF 08/17/01  
 SHEET NUMBER: 330  
 JOB NUMBER: 800010

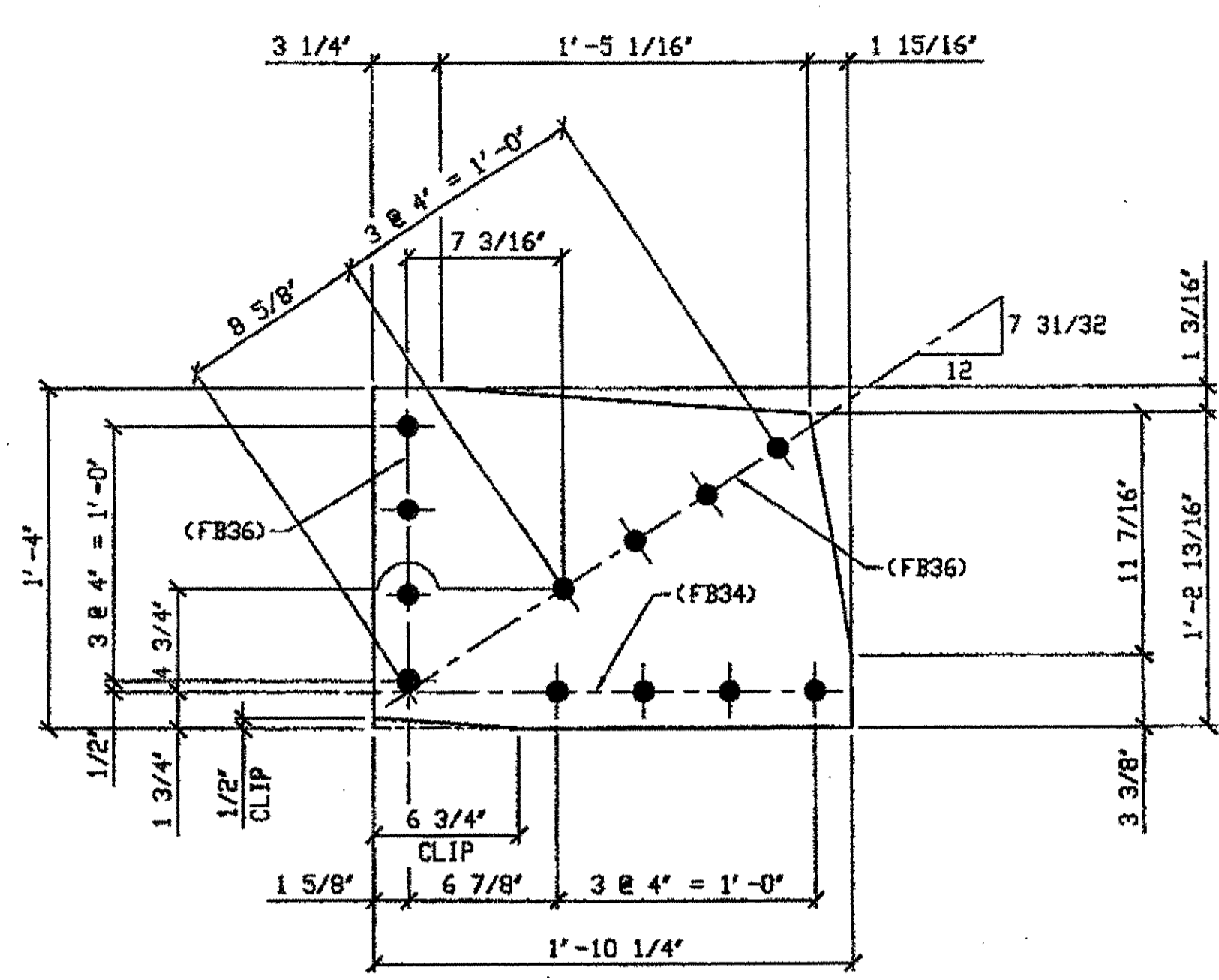
G:\Contracts\2001\800010\Drawings\330A.dwg  
 Save by RSP on 02/14/01 Dec 13, 2001  
 Plot by RSP on 02/14/01 Dec 17, 2001  
 Model space plot - Scale = 1/9



ONE - SWAY FRAME VERTICAL GUSSET PLATE - 358A

ORIG SHOP DWG 362-SB254L  
ORIG SHOP MARK P362h  
ITEM No. 0142  
REPAIR SHEET 10-112

SPAN 10 L3-NORTH INTERIOR 358A



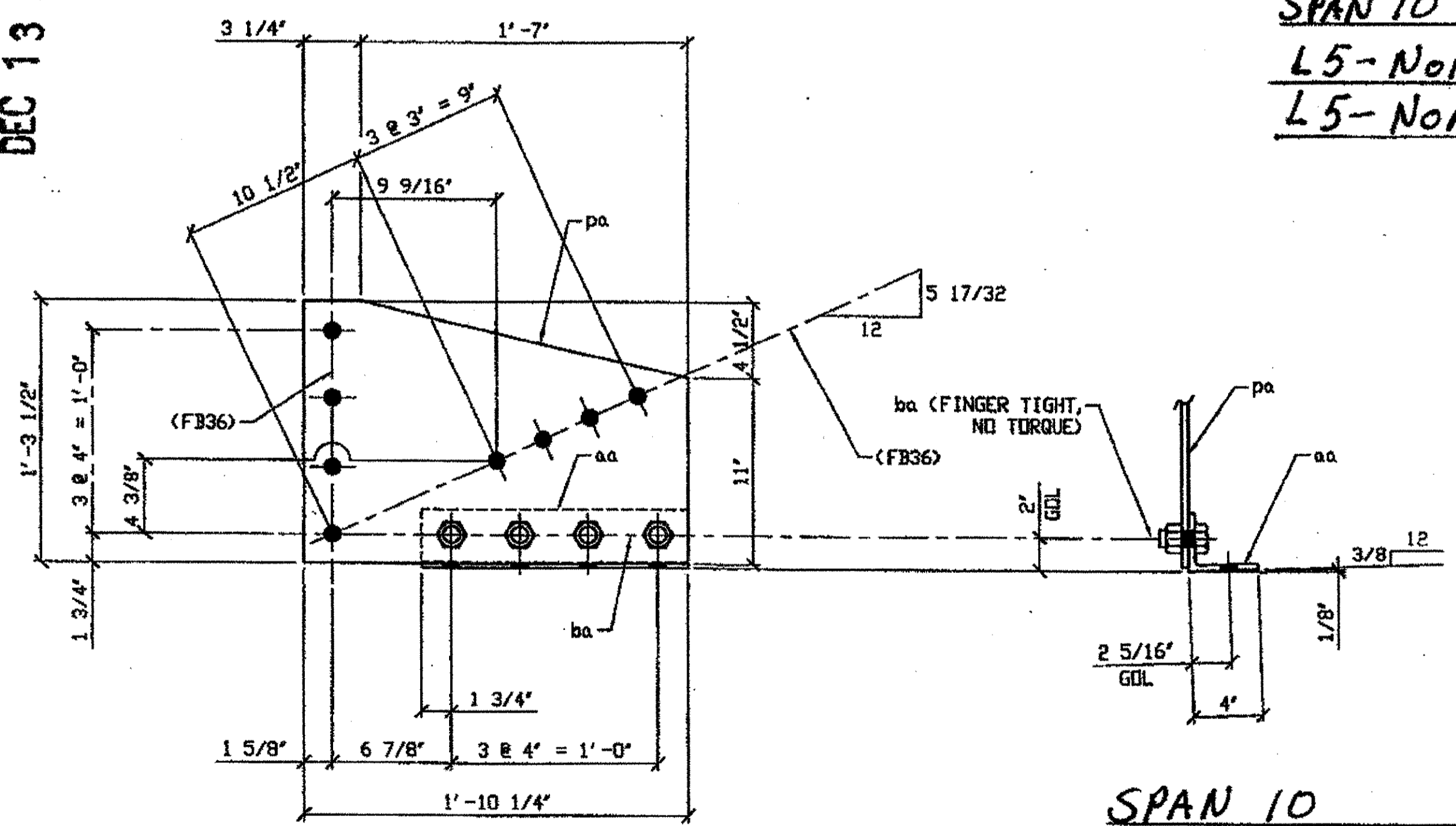
TWO - SWAY FRAME VERTICAL GUSSET PLATE - 358B

ORIG SHOP DWG 362-SB246R  
ORIG SHOP MARK P362b  
ITEM No. 0142  
REPAIR SHEET 10-124

SPAN 10  
L5-NORTH EXTERIOR 358 B  
L5-NORTH INTERIOR 358 B

SCALE ENGR. & CONTIN.

DEC 13 2001



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 358C

ORIG SHOP DWG 362-SB251R/L  
ORIG SHOP MARK P362F & A362F  
ITEM No. 0142 & 0153  
REPAIR SHEET 10-118 & 140

SPAN 10  
L4-NORTH EXTERIOR 358 C  
L2-SOUTH EXTERIOR 358 C

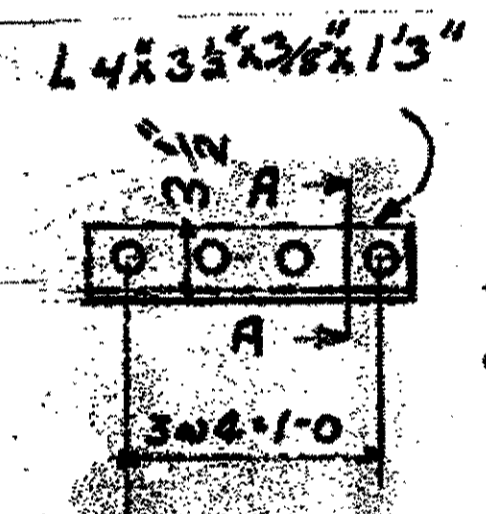
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
1				SWAY FRAME VERTICAL GUSSET PLATE				
2		358A	1	PL 3/8 X 16	1	10 1/4		32
3		358B	2	PL 3/8 X 14	1	10 1/4		20
4		358Ba	2	L4 X 3 1/2 X 3/8	1	3		
5		358C	2	SWAY FRAME VERTICAL GUSSET PLATE				100
6		pa	2	PL 3/8 X 15 1/2	1	10 1/4		64
7	*	aa	2	L4 X 3 1/2 X 3/8	1	3 1/2	BENT	24
8		ba	8	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	12
9								
10								
11				FIELD BOLTS				
12		FB34	1	1" DIA	0	2 1/4	NOTE 2	
13		FB36	1	1" DIA	0	2 1/2	NOTE 2	
14								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

\* = DOT ITEM No. 0153, BID ITEM No. 863E9000

NOTES:

- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHIP PAINT: SURFACE PREPARATION SPSB03-SHERWIN-WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

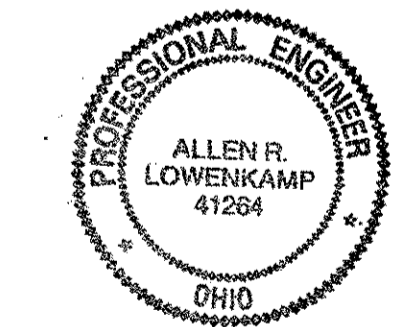


2- CONNECTION ANGLES 358Ba  
ORIGINAL SHOP MARK A362 9  
FOR PLATE 358B

O.D.O.T. DIST. 12

ACCEPTED	2/9/01	DST
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
AMW 07/17/01  
CHECKED BY: DATE  
GHW 12/05/01

DOT ITEM LINE NO. 0142 U. N. O.  
DOT BID ITEM NO. 863E50000 U. N. O.

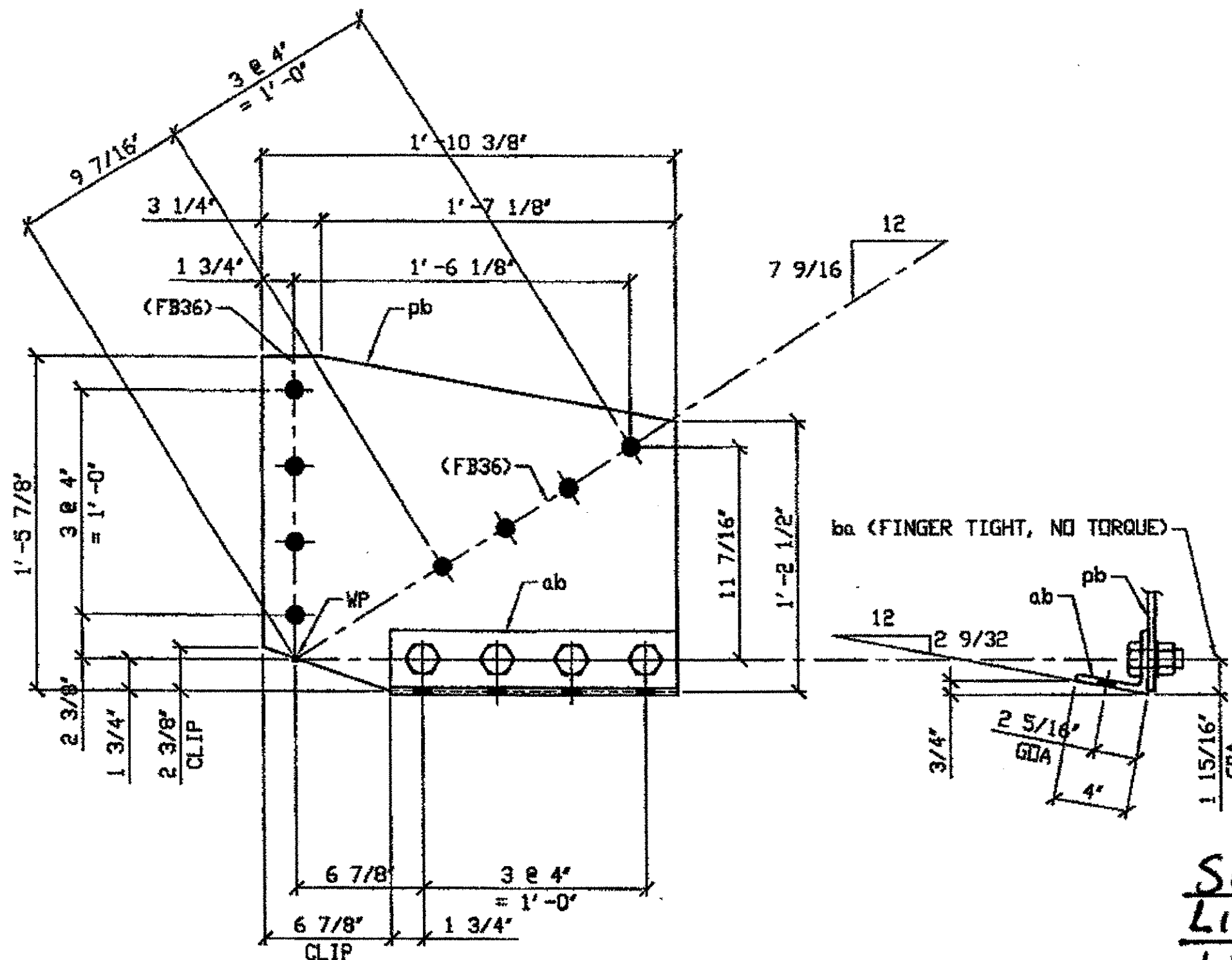
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13			
SPAN 10 REPAIRS			
SHEET NUMBER: 358			ASB JOB NUMBER: 800010

G:\Contracts\100\800010\Drawings\358A.dwg  
Save by rsp 11:58pm Dec 10, 2001  
Plot by ggl 12:45pm Dec 12, 2001  
Model Space Plot + Scale = 1/8

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		403B R/L	5	SWAY FRAME GUSSET PLATE & CONN. ANGLE			2 RJ 3L	
2		pb	5	PL 3/8 x 17 7/8	1	10 3/8		
3	*	ab	5	L4 x 3 1/2 x 3/8	1	3 1/2	BENT	
4		ba	20	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	
5				W/HVY. HEX NUT & WASHER				
6								
7		403C R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				108
8		pc	2	PL 3/8 x 17 7/8	1	10 3/8		74
9	*	ac	2	L4 x 3 1/2 x 3/8	1	3 1/2	BENT	24
10		ba	8	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	11
11				W/HVY. HEX NUT & WASHER				
12								
13		403D	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				56
14		pd	1	PL 3/8 x 18 5/8	1	10 3/8		39
15	*	ad	1	L4 x 3 1/2 x 3/8	1	3 1/2	BENT	12
16		ba	4	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	5
17				W/HVY. HEX NUT & WASHER				
18				FIELD BOLTS				
19								
20		FB36	1	1" DIA	0	2 1/2	NOTE 2	

PLATE A36 PIPE N/A FITTINGS N/A SHAPES A36 FLGS. N/A BOLTS NOTE 2 \* DOT ITEM LINE NO. 0153, DOT BID ITEM NO. 863E90000

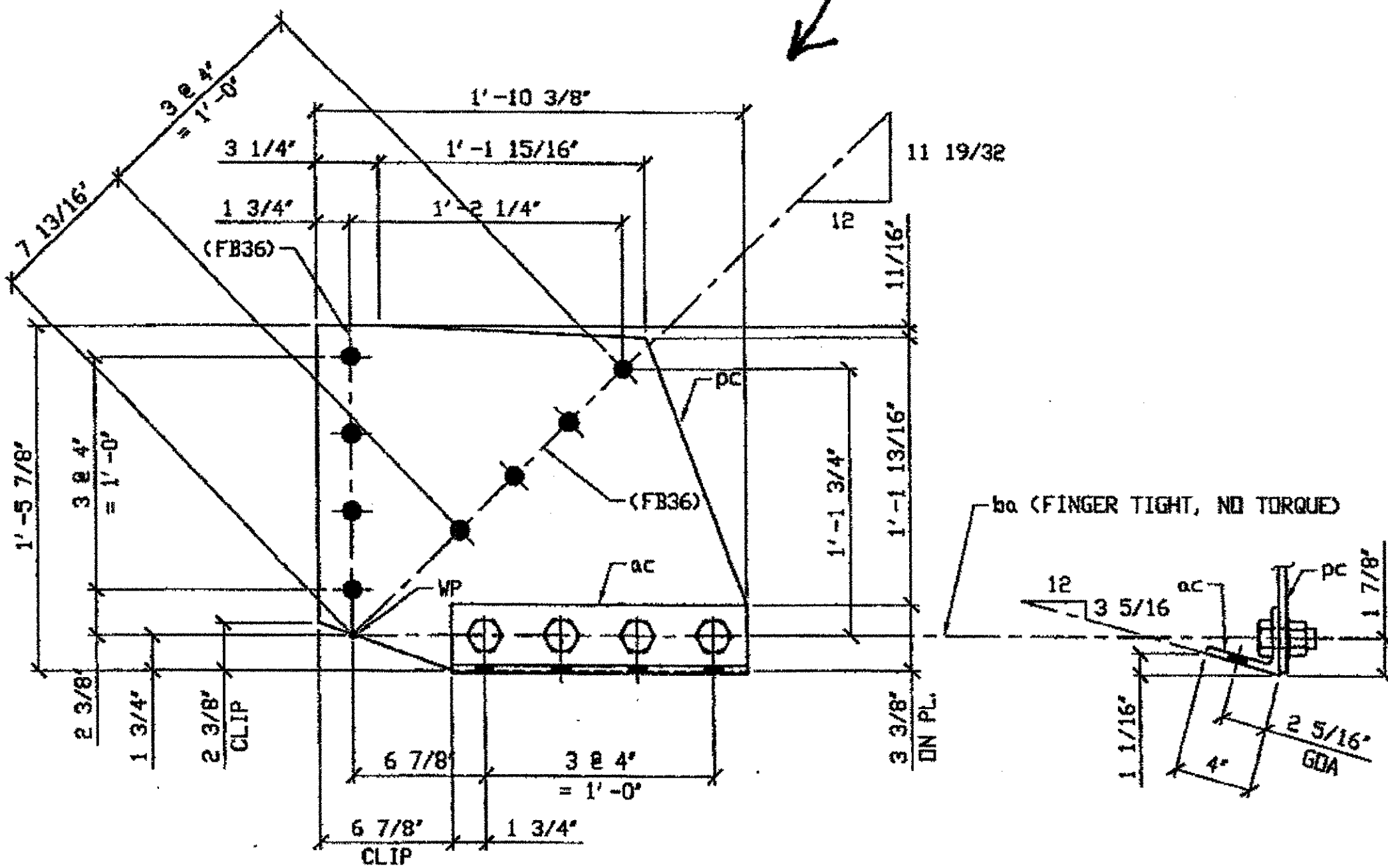


SPAN 11  
 L1-NORTH INTERIOR 403B  
 L1-NORTH EXTERIOR 403B  
 L12-NORTH EXTERIOR 403B  
 L1-SOUTH EXTERIOR 403B  
 L12-SOUTH EXTERIOR 403B

SPAN 11  
 L13-NORTH EXTERIOR 403C  
 L13-SOUTH EXTERIOR 403C

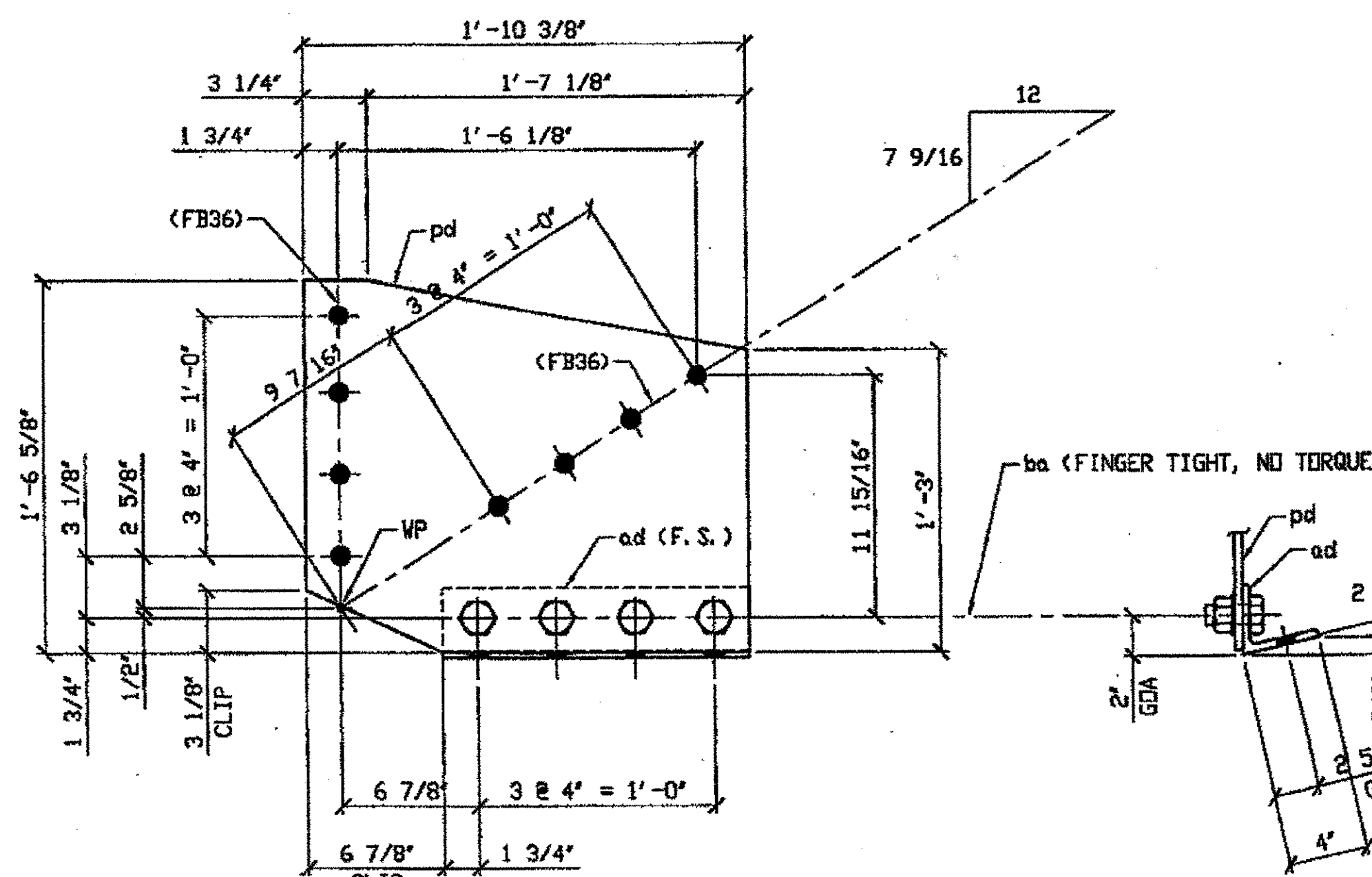
5- SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 403B R/L

DRIG SHOP DWG 382 SB257 R/L  
DRIG SHOP MARK P382a & A297h  
ITEM No. 0142 & 0153  
REPAIR SHEETS 11-120, 11-121, 11-176, 11-236, & 11-301



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 403C R/L

DRIG SHOP DWG 382 SB260 R/L  
DRIG SHOP MARK P382f & A382d  
ITEM No. 0142 & 0153  
REPAIR SHEETS 11-184 & 11-307



1 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 403D

DRIG SHOP DWG 382 SB258 R/L  
DRIG SHOP MARK P382k & A382c  
ITEM No. 0142 & 0153  
REPAIR SHEET 11-148

SPAN 11 L6-NORTH EXTERIOR 403D

O.D.O.T. DIST. 12

ACCEPTED	2/4/04	DJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME CDAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000 U. N.

NO.	DATE	DESCRIPTION	REVISED BY
A	03/06/02	REVISED PER CUSTOMER APPROVAL	JRC

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 11 REPAIRS**

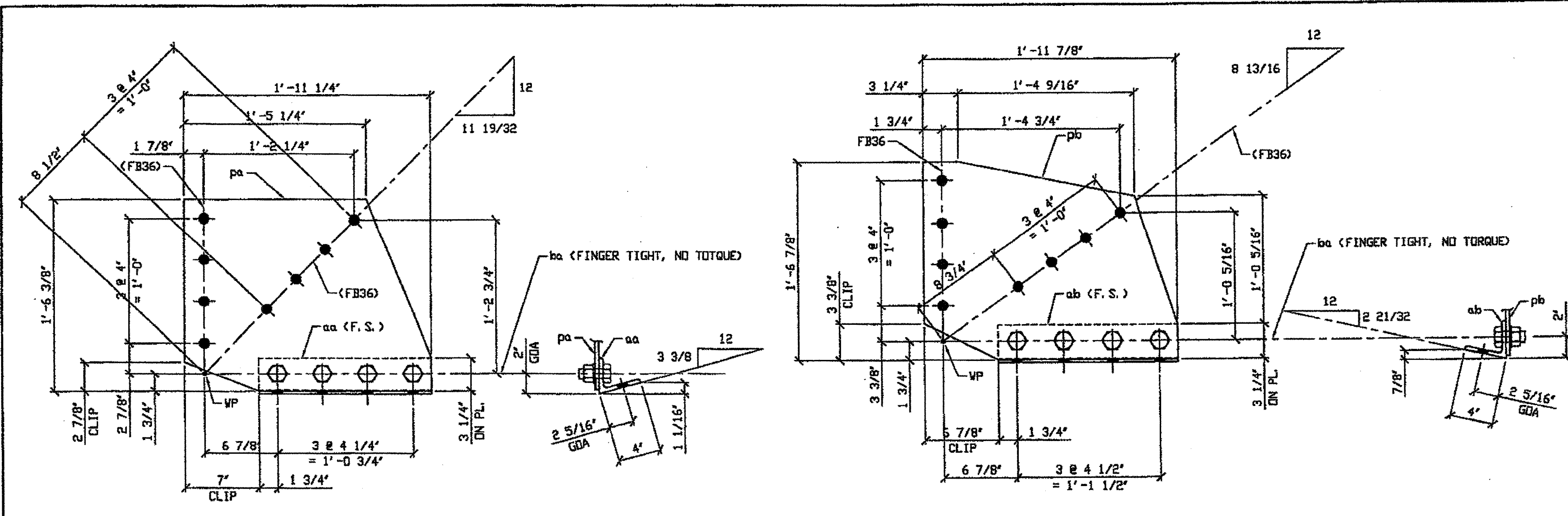
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

JN CHARGE OF: L SMITH  
 DRAWN BY: DATE:  
 JRC 01/11/02  
 CHECKED BY: DATE:  
 GAF 02/07/02

SHEET NUMBER: 403  
 DRAW JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\11\403A.dwg  
Save by rjpr at 12:52pm Mar 06, 2002  
Plot by gfas at 08:20am Mar 25, 2002  
Model space plot + Scale = 1/6





2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 404A R/L

2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 404B R/L

**SPAN 11**  
 L16-NORTH EXTERIOR 404A  
 L16-SOUTH EXTERIOR 404A

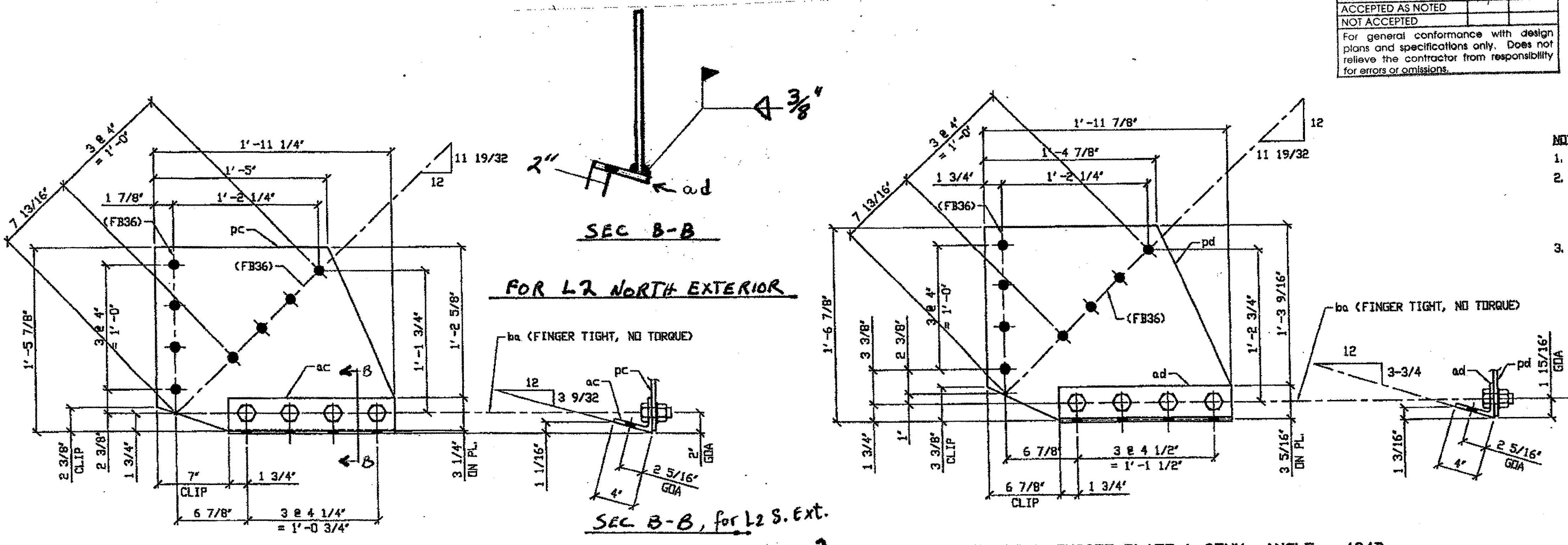
**SPAN 11**  
 L17-NORTH EXTERIOR 404B  
 L17-SOUTH EXTERIOR 404B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		404A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	1	11 1/4		115
2		pa	2	PL 3/8 x 18 3/8	1	11 1/4		80
3		aa	2	L4 x 3 1/2 x 3/8	1	4 1/4	BENT	24
4		ba	8	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	11
5				W/HVY. HEX NUT & WASHER				
6								
7		404B R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	1	11 7/8		117
8		pb	2	PL 3/8 x 18 7/8	1	11 7/8		80
9		ab	2	L4 x 3 1/2 x 3/8	1	5	BENT	26
10		ba	8	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	11
11				W/HVY. HEX NUT & WASHER				
12								
13		404C R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	1	11 1/4		111
14		pc	2	PL 3/8 x 17 7/8	1	11 1/4		76
15		ac	1	L4 x 3 1/2 x 3/8	1	4 1/4	BENT	24
16		ba	8	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	11
17				W/HVY. HEX NUT & WASHER				
18		ad	1	2 1/2 x 5	1	4		
19		404D	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE	1	11 7/8		113
20		pd	2	PL 3/8 x 18 7/8	1	11 7/8		82
21		ad	2	L4 x 3 1/2 x 3/8	1	5	BENT	26
22		ba	8	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	11
23				W/HVY. HEX NUT & WASHER				
24								
25				FIELD BOLTS				
26		FB36		1" DIA	0	2 1/2	NOTE 2	
PLATE A36				PIPE A/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	

\* DOT ITEM LINE NO. 0153, DOT BID ITEM NO. 863E9000

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/ess



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 404C R/L

2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 404D

**SPAN 11**  
 L2-SOUTH EXTERIOR 404C  
 L2-NORTH EXTERIOR 404C

**SPAN 11**  
 L5-NORTH EXTERIOR 404D  
 L5-SOUTH EXTERIOR 404D

(WELDED VERT. GUSSET TO PLATE IN LIEU OF BENT ANGLE)

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



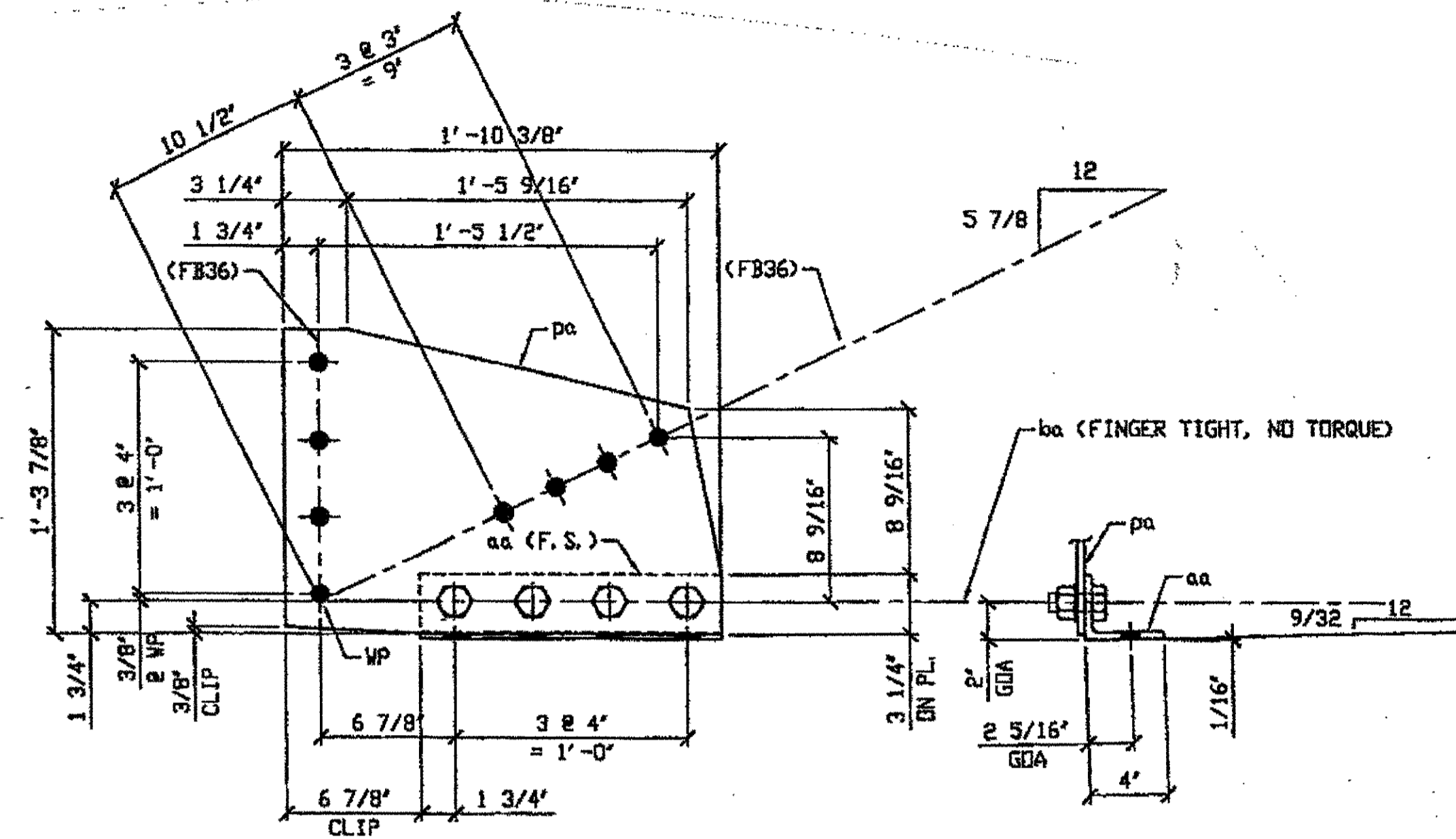
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORADELLO, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. AS NOTED DOT BID ITEM NO. 863E9000 U.N.	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 11 REPAIRS	
IN CHARGE DR. L. SMITH	SHEET NUMBER 404
TRISTATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335	ARM JOB NUMBER 800010
DRWN BY: JRC DATE: 01/14/02	
CHKD BY: GAF DATE: 02/07/02	

G:\Contracts\2000\800010\Drawings\10-404A.dwg  
 Save by esrp at 10:56pm Feb 25, 2002  
 Plot by cfoas at 09:43pm Feb 25, 2002  
 Model space plot + Scale = 1/6

BILL OF MATERIALS

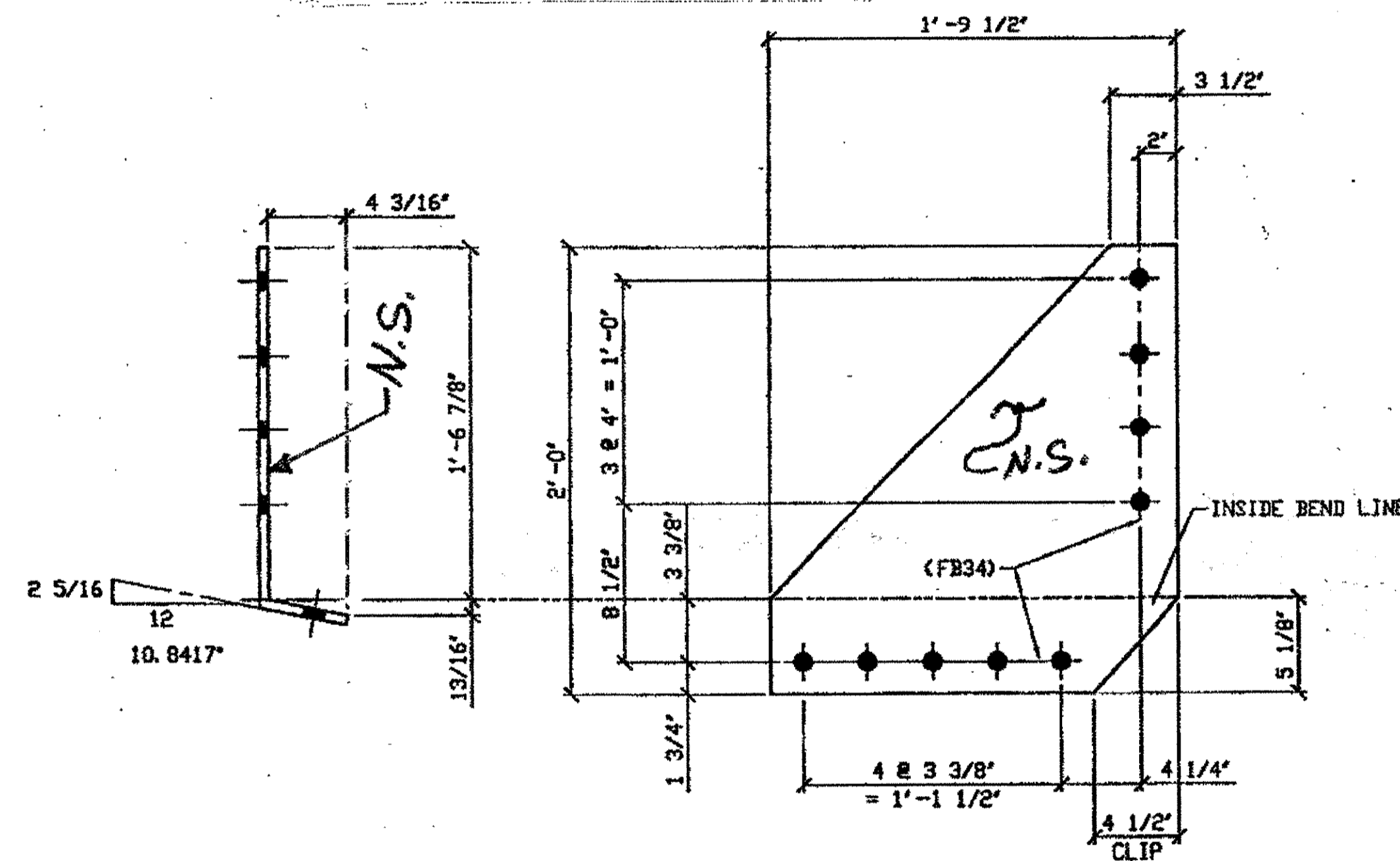
Piece No.	Qty.	Description
405 A	2	SWAY FRAME GUSSET & ANGLE
pa	2	PL 3/4 X 15 3/4 X 1'-10 3/8"
aa	2	L 4 X X 3/4 X 1'-3 1/2"
ba	4	1" X 2 1/4" H.V.Y. HEX BOLTS WITH NUTS & WASHERS
405 B	1	PL 1/2 X 24 X 1'-9 1/2"
PLATE A36 SHAPES A36		



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONN. ANGLE - 405A

ORIG SHIP DWG 383 SB267 /L  
ORIG SHIP MARK P298F & A298e  
ITEM No. 0142 & 0153  
REPAIR SHEET 11-289

SPAN 11 L10 SOUTH EXTERIOR 405A  
SPAN 11 L8 SOUTH EXTERIOR 405A



ONE - SWAY FRAME VERTICAL GUSSET PLATE - 405 B

ORIG SHIP DWG 429 L0L1-0-11 /R  
ORIG SHIP MARK P395y /L  
ITEM No. 0142  
REPAIR SHEETS 11-108

SPAN 11, L0 NORTH EXTERIOR WEST PLATE 405B

N.S.: Near side of R

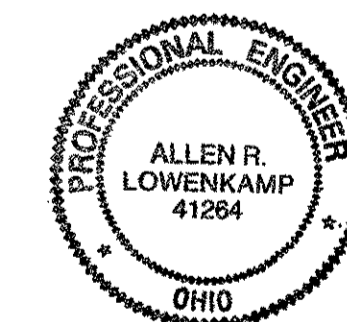
NOTES:

- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 H.V.Y. HEX HD W/H.V.Y. HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/4/09 AJM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

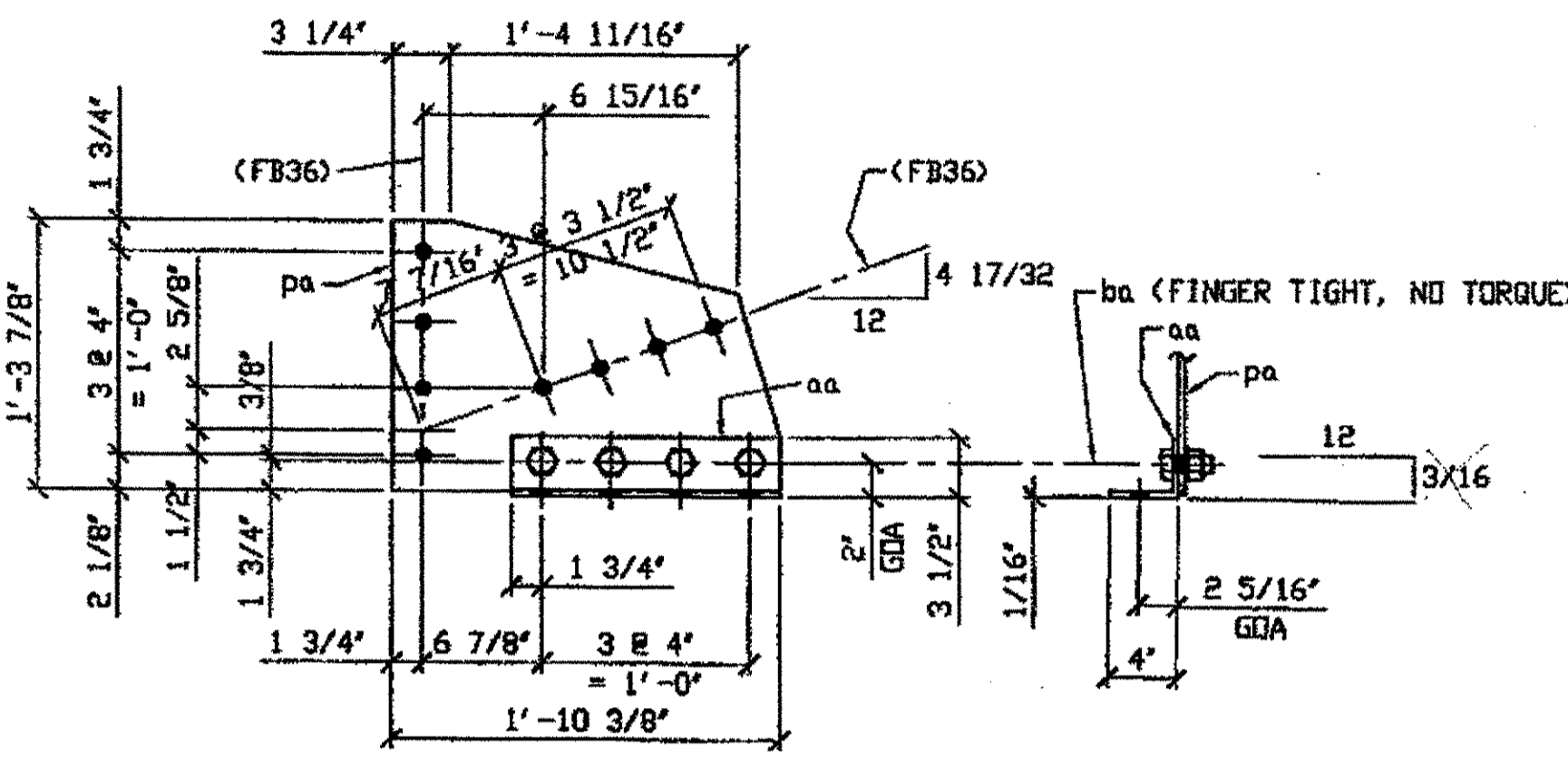


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**

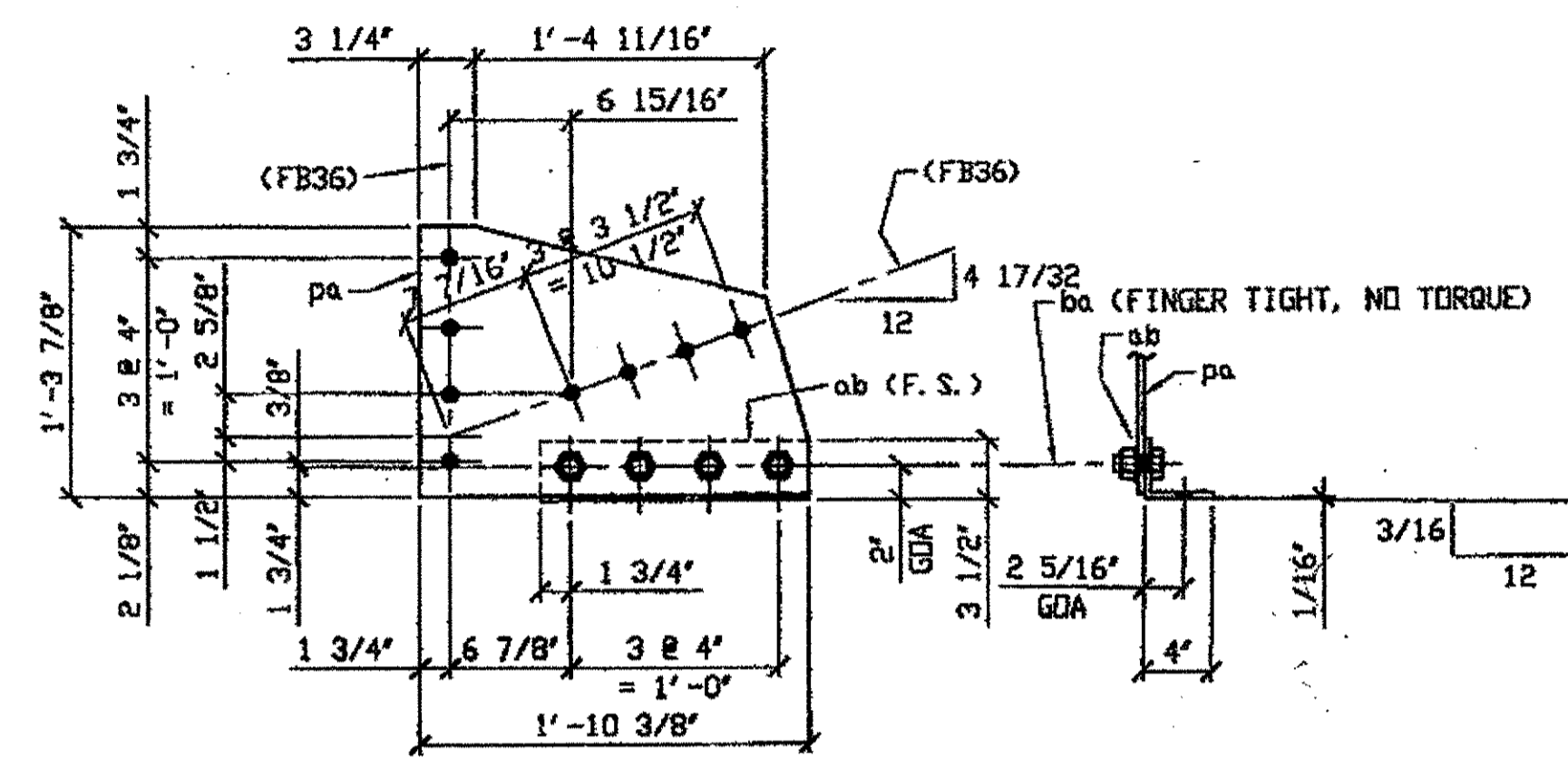
DRAWN BY _____	CHECKED BY _____	JOB NO. _____
SCALE NA	DATE _____	DRAWING NO. <b>405</b>



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 459A R/L

ORIG SHIP DWG 453 - S8272 R/L  
ORIG SHIP MARK P453a & A453b  
REPAIRS SHEETS 12-114 & 153

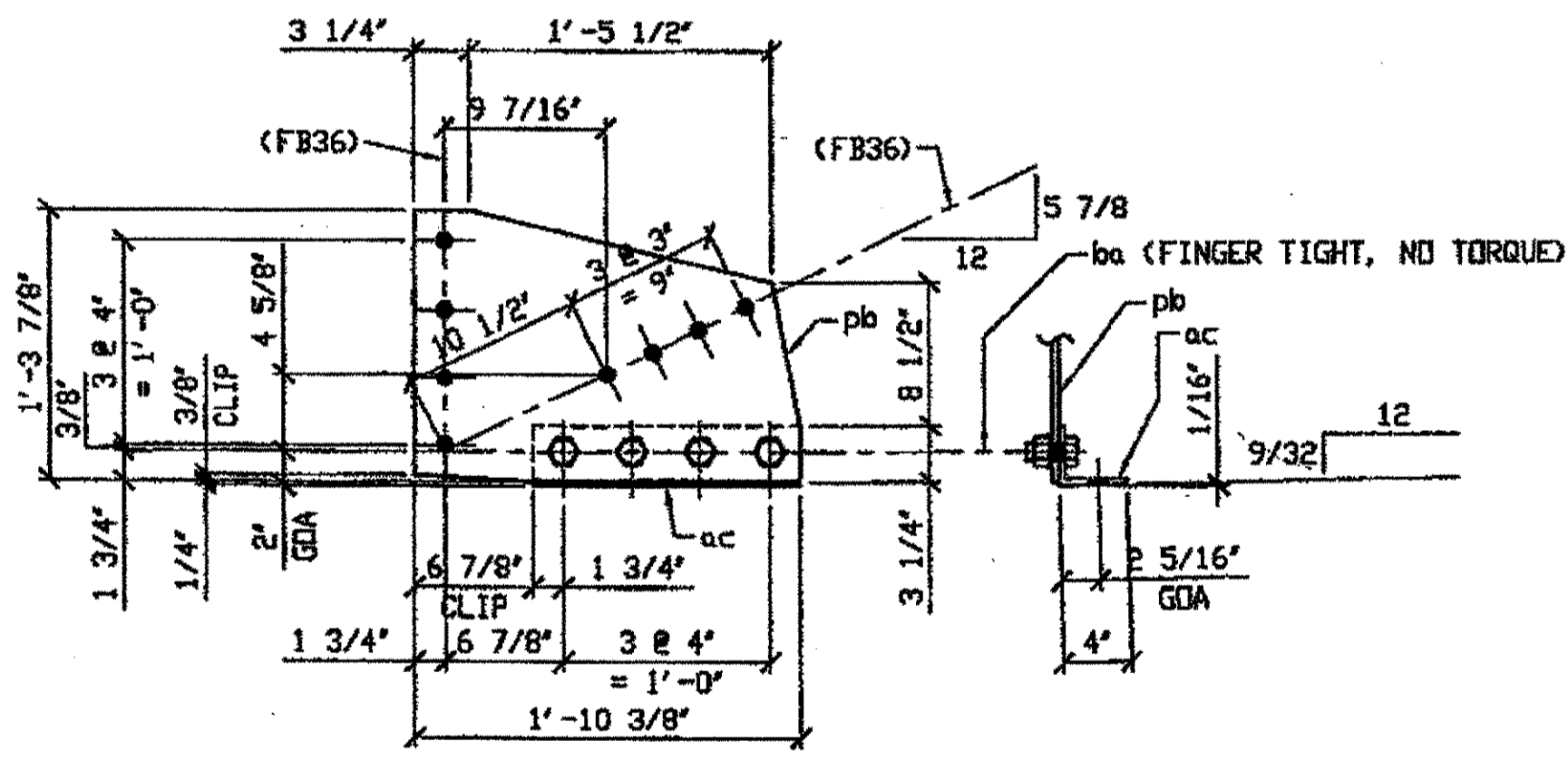
SPAN 12  
L2-NORTH EXTERIOR 459 A  
L2-SOUTH EXTERIOR 459 A



ONE - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 459B

ORIG SHIP DWG 453 - S8270/L  
ORIG SHIP MARK P453a & A453a  
REPAIRS SHEETS 12-158

SPAN 12 L3 SOUTH EXTERIOR 459 B



2 - SWAY FRAME VERTICAL GUSSET PLATE & CONNECTION ANGLE - 459C R/L

ORIG SHIP DRAWING 298 SB192 R/L  
ORIG SHIP MARK P298F & A298e  
REPAIR SHEETS 12-129 & 164  
(IDENTICAL TO 330A)

SPAN 12  
L4-NORTH EXTERIOR 459 C  
L4-SOUTH EXTERIOR 459 C

ENR. ENGR, & CONTR. C

By \_\_\_\_\_  
DEC 10 2001

G:\Contract\12\80001\Drawings\res\459A.dwg  
Save by user on 11/15/01  
Plot by gfcg at 11:57am Dec 07, 2001  
Model space plot + Scale = 1/9

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		459A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				99
2		pa	2	PL 3/8 X 15 7/8	1	10 3/8		64
3	*	aa	2	L 4 X 3 1/2 X 3/8	1	3 1/2	BEND SHUT	24
4		ba	8	1" DIA HVY HEX NUT	0	2 1/4	NOTE 2	11
5				W/HVY HEX NUT & WASHER				
6								
7		459B	1	SWAY FRAME GUSSET PLATE & CONN. ANGLE				49
8		pa	1	PL 3/8 X 15 7/8	1	10 3/8		32
9	*	ab	1	L 4 X 3 1/2 X 3/8	1	3 1/2	BEND OPEN	12
10		ba	4	1" DIA HVY HEX NUT	0	2 1/4	NOTE 2	5
11				W/HVY HEX NUT & WASHER				
12								
13		459C R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				99
14		pb	2	PL 3/8 X 15 7/8	1	10 3/8		64
15	*	ac	2	L 4 X 3 1/2 X 3/8	1	3 1/2	BEND SHUT	24
16		ba	8	1" DIA HVY HEX NUT	0	2 1/4	NOTE 2	11
17				W/HVY HEX NUT & WASHER				
18								
19				FIELD BOLTS				
20		FB36	40	1" DIA	0	2 1/2	NOTE 2	56
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

\* DOT ITEM LINE No. 0153, BID ITEM No. 863E90000

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 1/6/02 BY tdp/lss

O.D.O.T. DIST. 12

ACCEPTED	2/14/02	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0142 U.N.O.  
DOT BID ITEM NO. 863E30000 U.N.O.

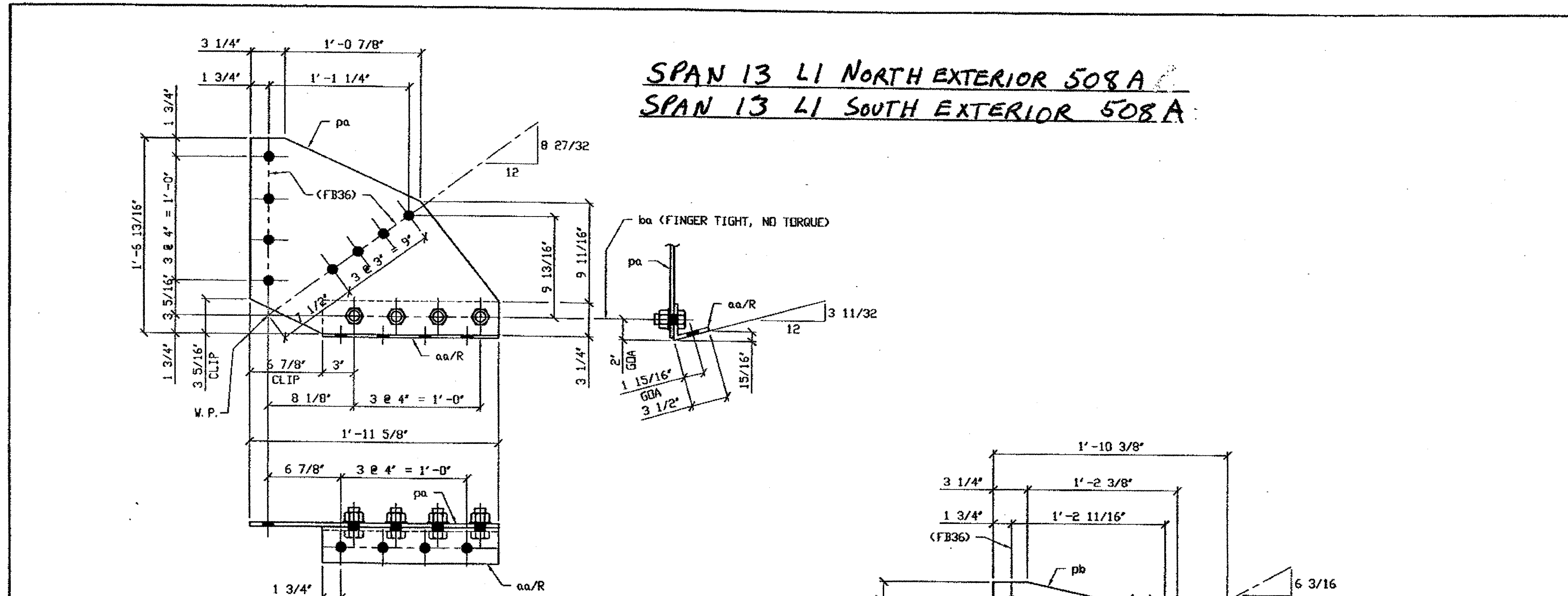
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

FABRICATOR: AMERICAN BRIDGE MANUFACTURING, 2000 AMERICAN BRIDGE WAY, CORAOPOLIS, PA 15108, PHONE (412) 631-3000, FAX (412) 631-4001.

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC., 12608 ALAMEDA DR., STRONGSVILLE, OH 44136, PHONE (440) 238-3015, FAX (440) 238-3335.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

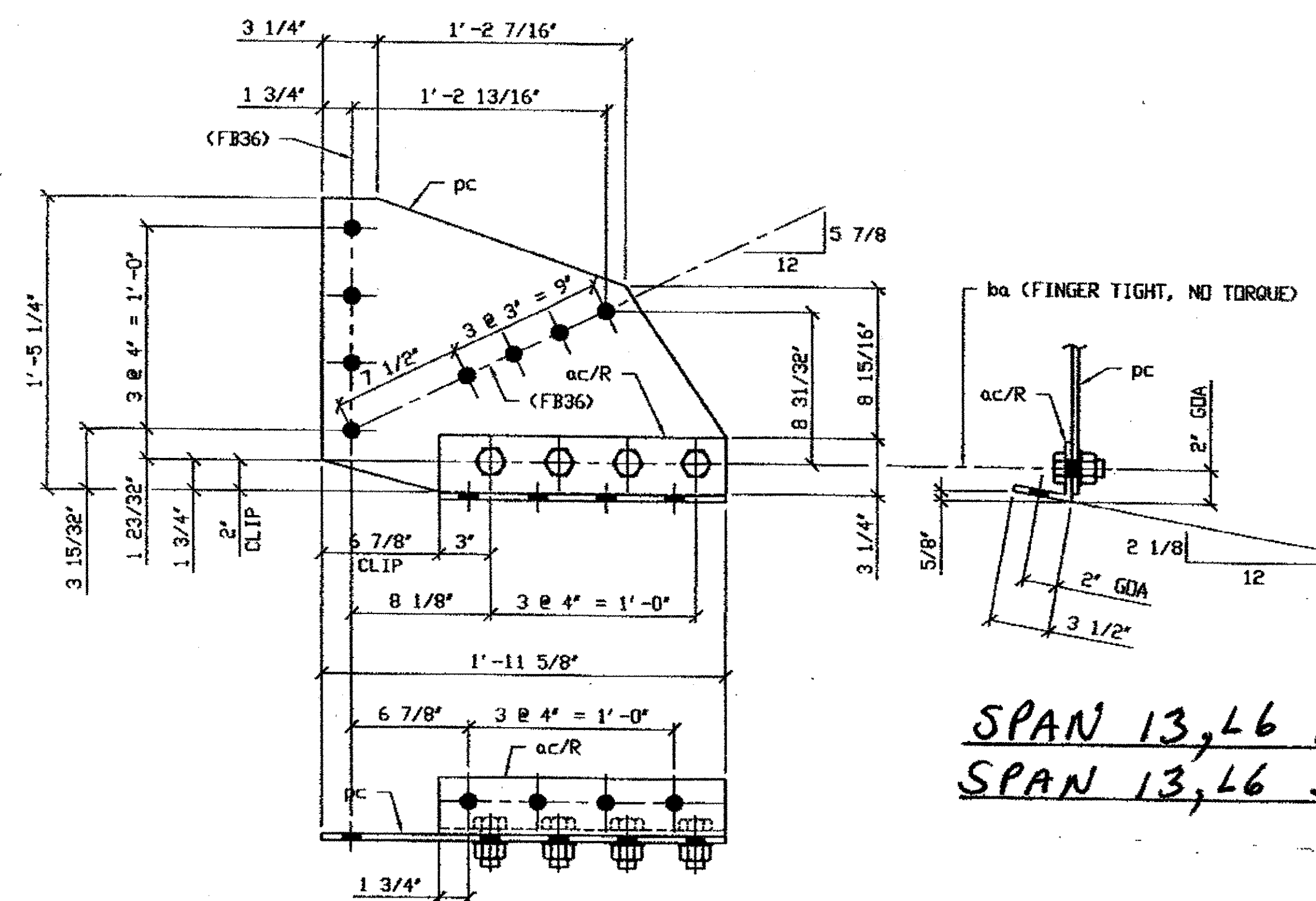
DRAWN BY: DATE: RAS 07/30/01  
CHECKED BY: DATE: GAF 10/22/01  
SHEET NUMBER: 459  
JOB NUMBER: 800010



SPAN 13 L1 NORTH EXTERIOR 508A  
SPAN 13 L1 SOUTH EXTERIOR 508A

**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 508A R/L**

DRIG SHOP DWG 516-SB206 R/L  
 DRIG SHOP MARK P516c & A516c R/L  
 REPAIR SHEETS 13-108 & 13-179



**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 508B R/L**

DRIG SHOP DWG 517-SB229 R/L  
 DRIG SHOP MARK P517ex & A517dx  
 REPAIR SHEETS 13-125 & 13-197

SPAN 13 L5 NORTH EXTERIOR 508B  
SPAN 13 L5 SOUTH EXTERIOR 508B

**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 508C R/L**

DRIG SHOP DWG 517-SB225 R/L  
 DRIG SHOP MARK P517k & A517n R/L  
 REPAIR SHEETS 13-127 & 13-202

SPAN 13, L6 NORTH EXTERIOR 508C  
SPAN 13, L6 SOUTH EXTERIOR 508C

**BILL OF MATERIAL**

LINE	ADVANCE	MARK	NO.	DESCRIPTION	LENGTH	REMARKS	WEIGHT
NO.	NO.	NO.	NO.		FEET		
					INCHES		
1		508A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE			101
2		pa	2	PL 3/8 X 18 13/16	1 11 3/8		67
3	*	aa R/L	2	L 3 1/2 X 3 1/2 X 3/8	1 4 3/4	BEND	23
4		ba	8	1" DIA HVY HEX BOLT	0 2 1/4	NOTE 2	11
5				W/HVY HEX NUT & WASHER			
6							
7		508B R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE			97
8		pb	2	PL 3/8 X 16	1 10 3/8		64
9	*	ab	2	L 3 1/2 X 3 1/2 X 3/8	1 3 1/2	BEND	22
10		ba	8	1" DIA HVY HEX BOLT	0 2 1/4	NOTE 2	11
11				W/HVY HEX NUT & WASHER			
12							
13		508C R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE			
14		pc	2	PL 3/8 X 17 1/4	1 11 5/8		
15	*	ac R/L	2	L 3 1/2 X 3 1/2 X 3/8	1 4 3/4	BEND	
16		ba	8	1" DIA HVY HEX BOLT	0 2 1/4	NOTE 2	
17				W/HVY HEX NUT & WASHER			
18				FIELD BOLTS			
19				1" DIA	0 2 1/2	NOTE 2	
20		FB36					
PLATE A36				PIPE N/A	FITTINGS N/A		
SHAPES A36				FLGS. N/A	BOLTS NOTE 2		

\* DOT ITEM LINE No. 0153, DOT BID ITEM No. 863E90000

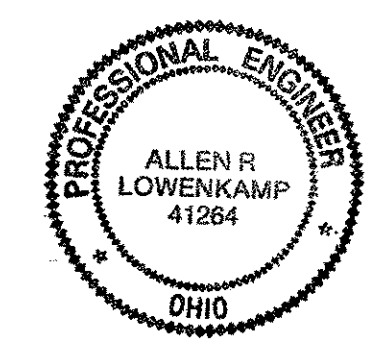
- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/4/04	AS/M
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

Contractor: 10800010Drawings\508A.dwg  
 Save by rspbr: 11:24am Feb 02, 2002  
 Plot by gfos at 09:04am Feb 04, 2002  
 Model space plot + Scale = 1/6



DOT ITEM LINE NO. 0142 U. N. O.  
 DOT BID ITEM NO. 863E50000 U. N. O.

NO.	DATE	DESCRIPTION	BY

FABRICATOR

**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3900  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

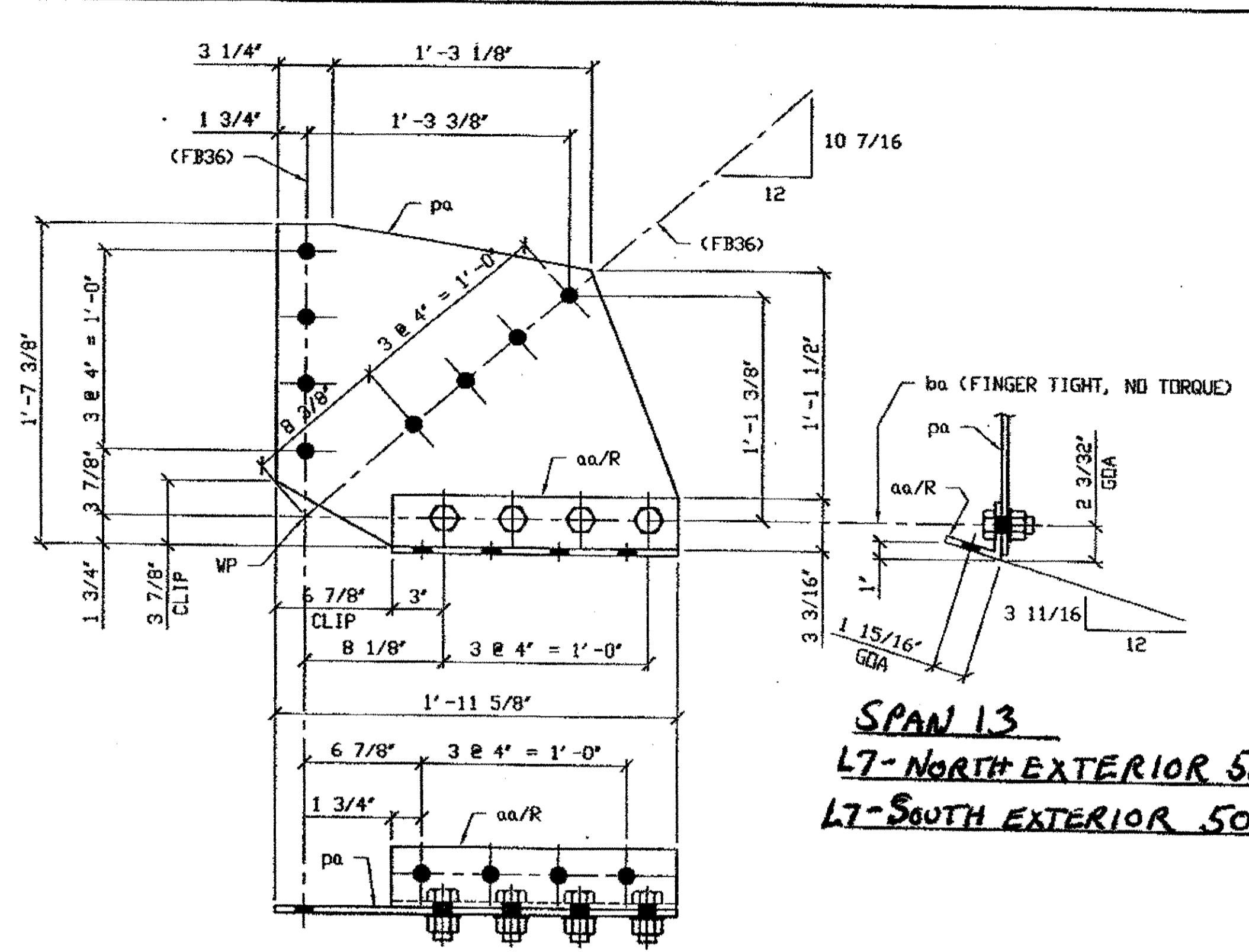
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 13 REPAIRS**

STEEL ERECTOR

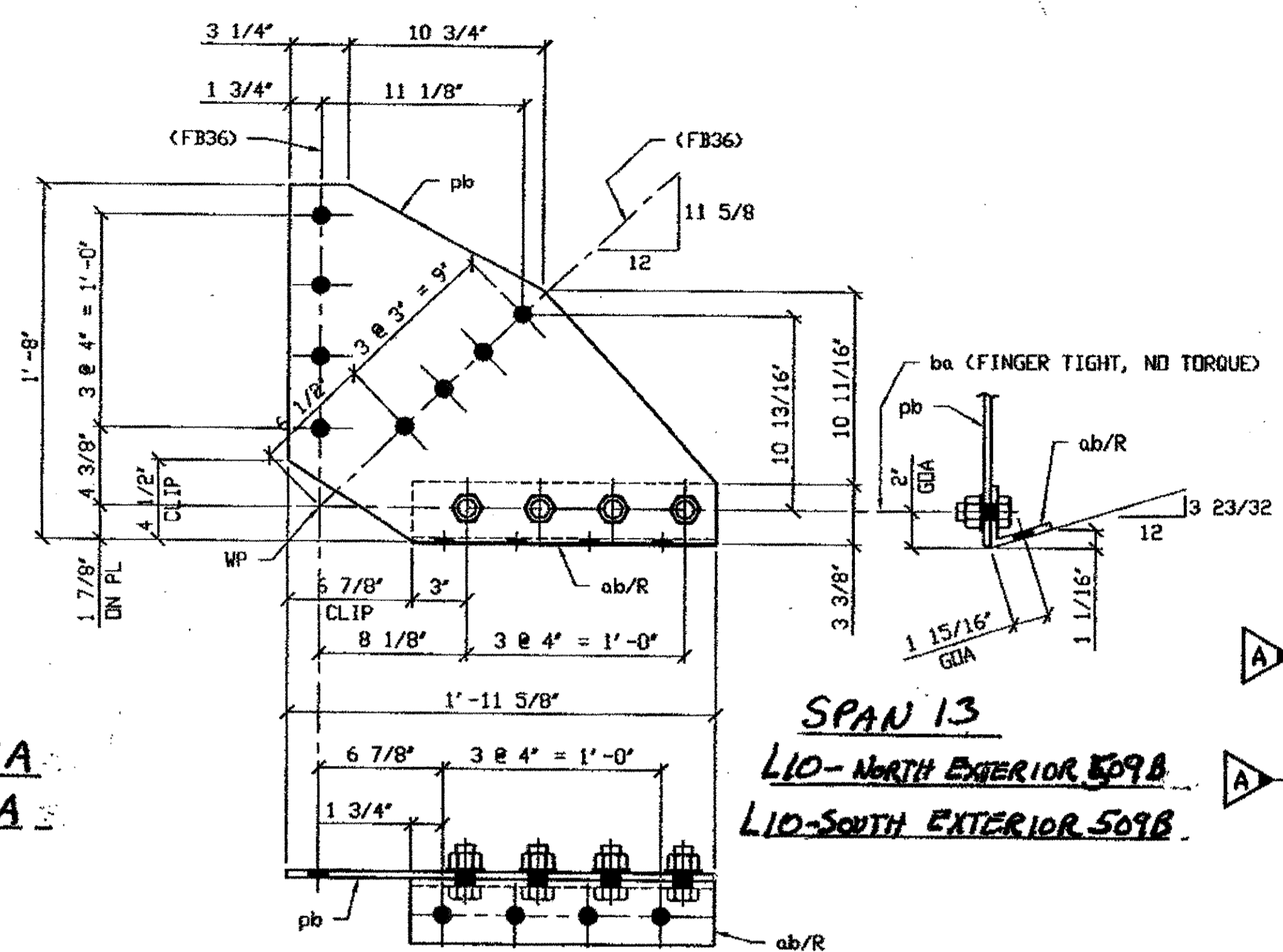
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 03/16/01  
 CHECKED BY: DATE:  
 GAF 12/06/01

SHEET NUMBER:  
508  
 ASN JOB NUMBER:  
800010



**SPAN 13**  
L7-NORTH EXTERIOR 509A  
L7-SOUTH EXTERIOR 509A



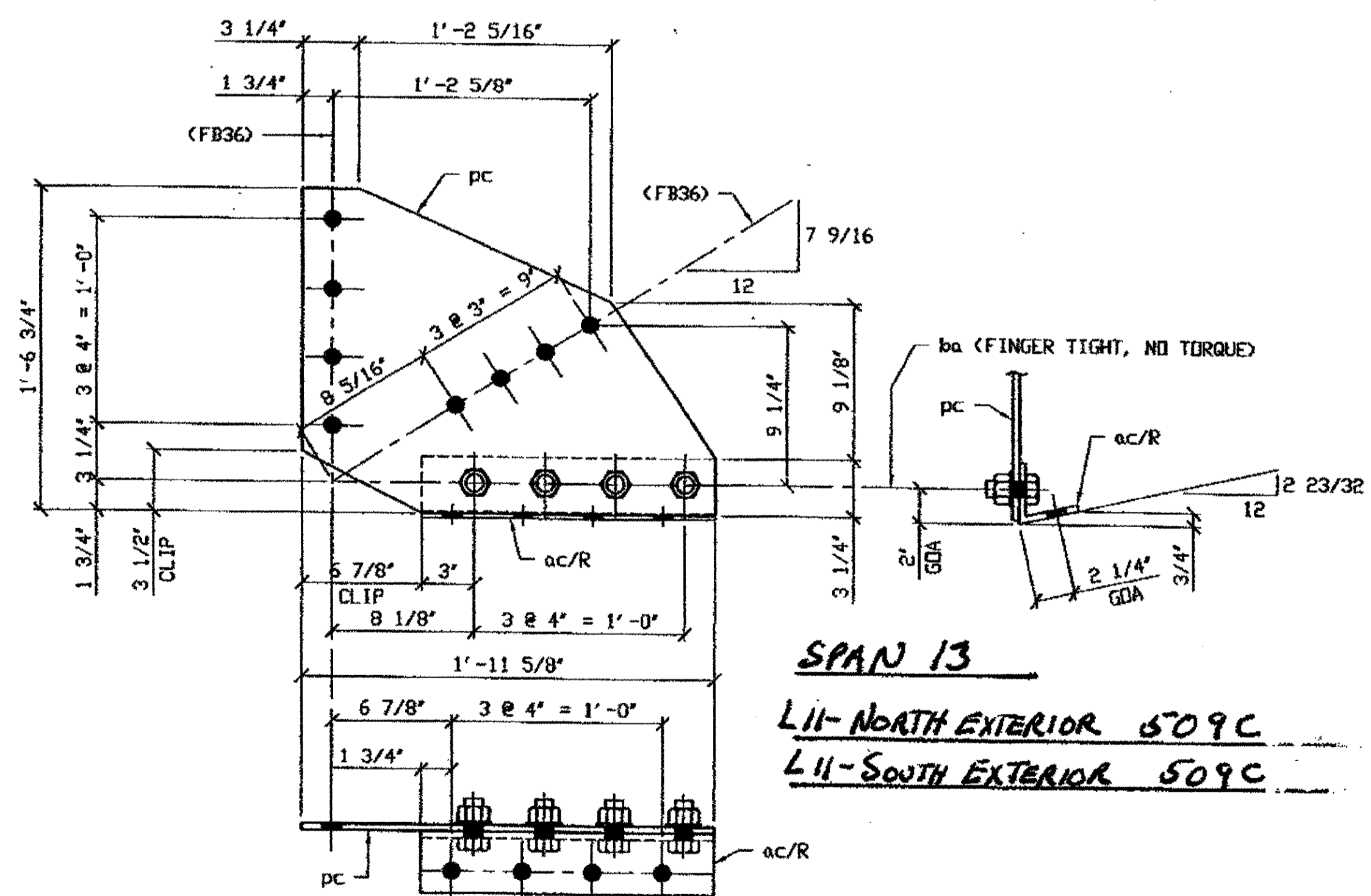
**SPAN 13**  
L10-NORTH EXTERIOR 509B  
L10-SOUTH EXTERIOR 509B

**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 509A R/L**

ORIG SHOP DWG 517-SB234 R/L  
ORIG SHOP MARK P517s & A517y R/L  
REPAIR SHEETS 13-136 & 13-209

**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 509B R/L**

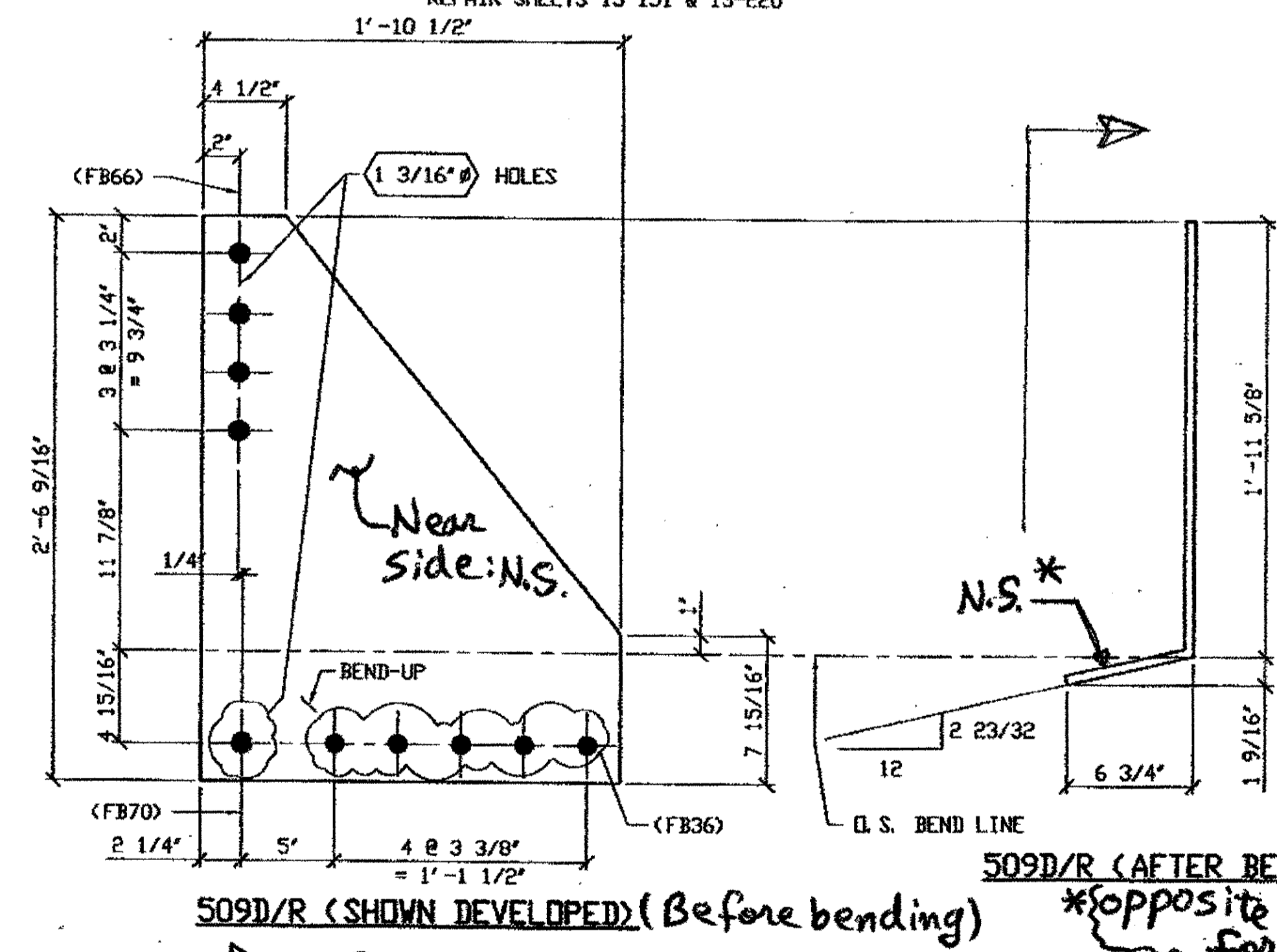
ORIG SHOP DWG 518-SB238 R/L  
ORIG SHOP MARK P518c & A518c R/L  
REPAIR SHEETS 13-151 & 13-220



**SPAN 13**  
L11-NORTH EXTERIOR 509C  
L11-SOUTH EXTERIOR 509C

**2 - SWAY FRAME VERTICAL GUSSET PLATE AND CONNECTION ANGLE - 509C**

ORIG SHOP DWG 518-SB242 R/L  
ORIG SHOP MARK P518f & A518e R/L  
REPAIR SHEETS 13-164 & 13-224



**SPAN 13-L12-NORTH INTERIOR 509D/R**  
**SPAN 13-L12-SOUTH INTERIOR 509D/L**  
(BOTH ARE WEST PLATES)

**2 - SWAY FRAME VERTICAL GUSSET PLATE - 509D R/L**

ORIG SHOP DWG 493-L11L12-I-13 R/L  
ORIG SHOP MARK P487w R/L  
REPAIR SHEETS 13-233-1 (REV A) & 13-247

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		509A R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				115
2		pa	2	PL 3/8 X 19 3/8	1	11 5/8		80
3	*	aa R/L	2	L 3 1/2 X 3 1/2 X 3/8	1	4 3/4	BEND	24
4		ba	8	1" DIA Hvy HEX BOLT	0	2 1/4	NOTE 2	11
5				W/Hvy HEX NUT & WASHER				
6								
7		509B R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				102
8		pb	2	PL 3/8 X 20	1	11 5/8		67
9	*	ab R/L	2	L 3 1/2 X 3 1/2 X 3/8	1	4 3/4	BEND	24
10		ba	8	1" DIA Hvy HEX BOLT	0	2 1/4	NOTE 2	11
11				W/Hvy HEX NUT & WASHER				
12								
13		509C R/L	2	SWAY FRAME GUSSET PLATE & CONN. ANGLE				103
14		pc	2	PL 3/8 X 18 3/4	1	11 5/8		68
15	*	ac R/L	2	L 3 1/2 X 3 1/2 X 3/8	1	4 3/4	BEND	24
16		ba	8	1" DIA Hvy HEX BOLT	0	2 1/4	NOTE 2	11
17				W/Hvy HEX NUT & WASHER				
18								
19				SWAY FRAME GUSSET PLATE				
20		509D R/L	2	PL 1/2 X 22 1/2	2	6 9/16	BEND 1/R	12
21								
22				FIELD BOLTS				
23		FB36		1" DIA	0	2 1/2	NOTE 2	
24		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
25		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

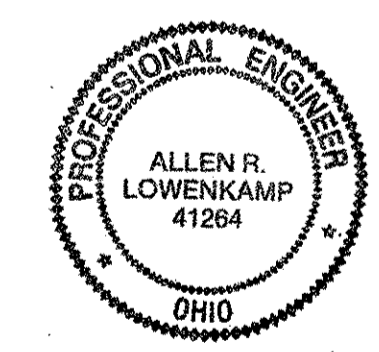
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATED) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/9/07	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**SPAN 13-L12-NORTH INTERIOR 509D/R**  
**SPAN 13-L12-SOUTH INTERIOR 509D/L**  
(BOTH ARE WEST PLATES)



DOT ITEM LINE NO. 0142 U.N.O.  
DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	APP. BY
A	01/31/02	REVISED PER CUSTOMER APPROVAL	GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 13 REPAIRS**

FABRICATOR: AMERICAN BRIDGE MANUFACTURING CO., 2000 AMERICAN BRIDGE WAY, CUMINGSVILLE, PA. 15108, PHONE (412) 631-3000, FAX (412) 631-4001

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC., 12608 ALAMEDA DR., STRONGSVILLE, OH 44136, PHONE (440) 238-3015, FAX (440) 238-3335

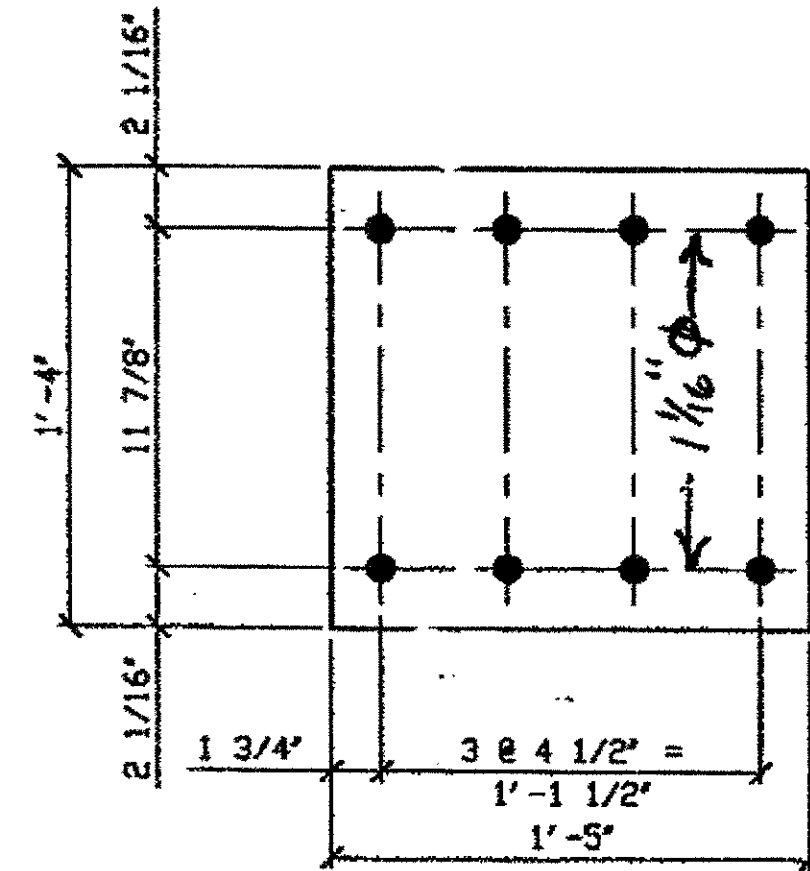
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 03/22/01  
CHECKED BY: DATE: GAF 12/06/01

SHEET NUMBER: 509  
JOB NUMBER: 800010

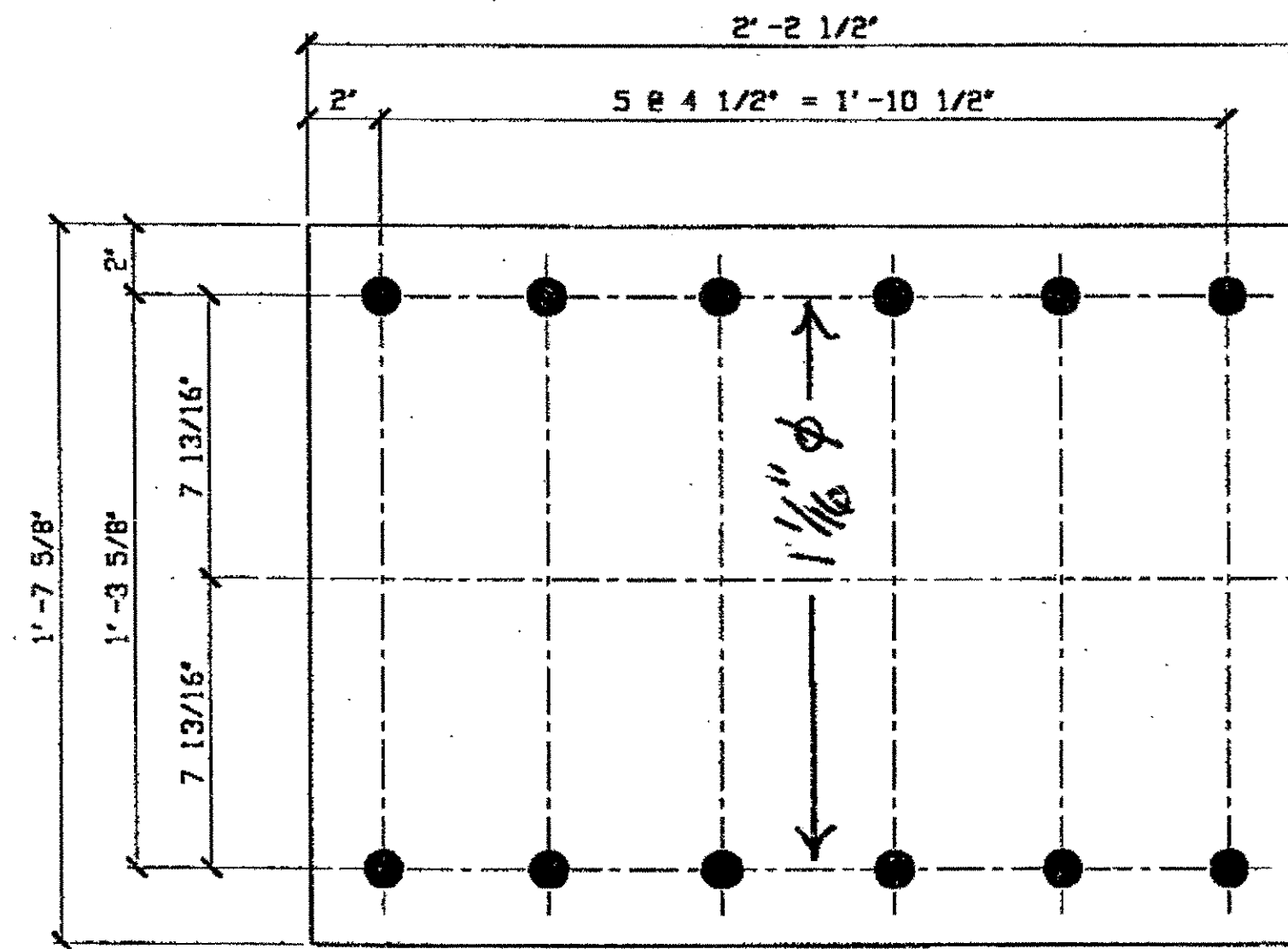
G:\Control\JOY800010\Drawings\0509A.dwg  
 Save by gfb, at 11:24am Feb 02, 2002  
 Plot by gfb at 09:02am Feb 04, 2002  
 Model space plot + Scale = 1/6

BILL OF MATERIALS

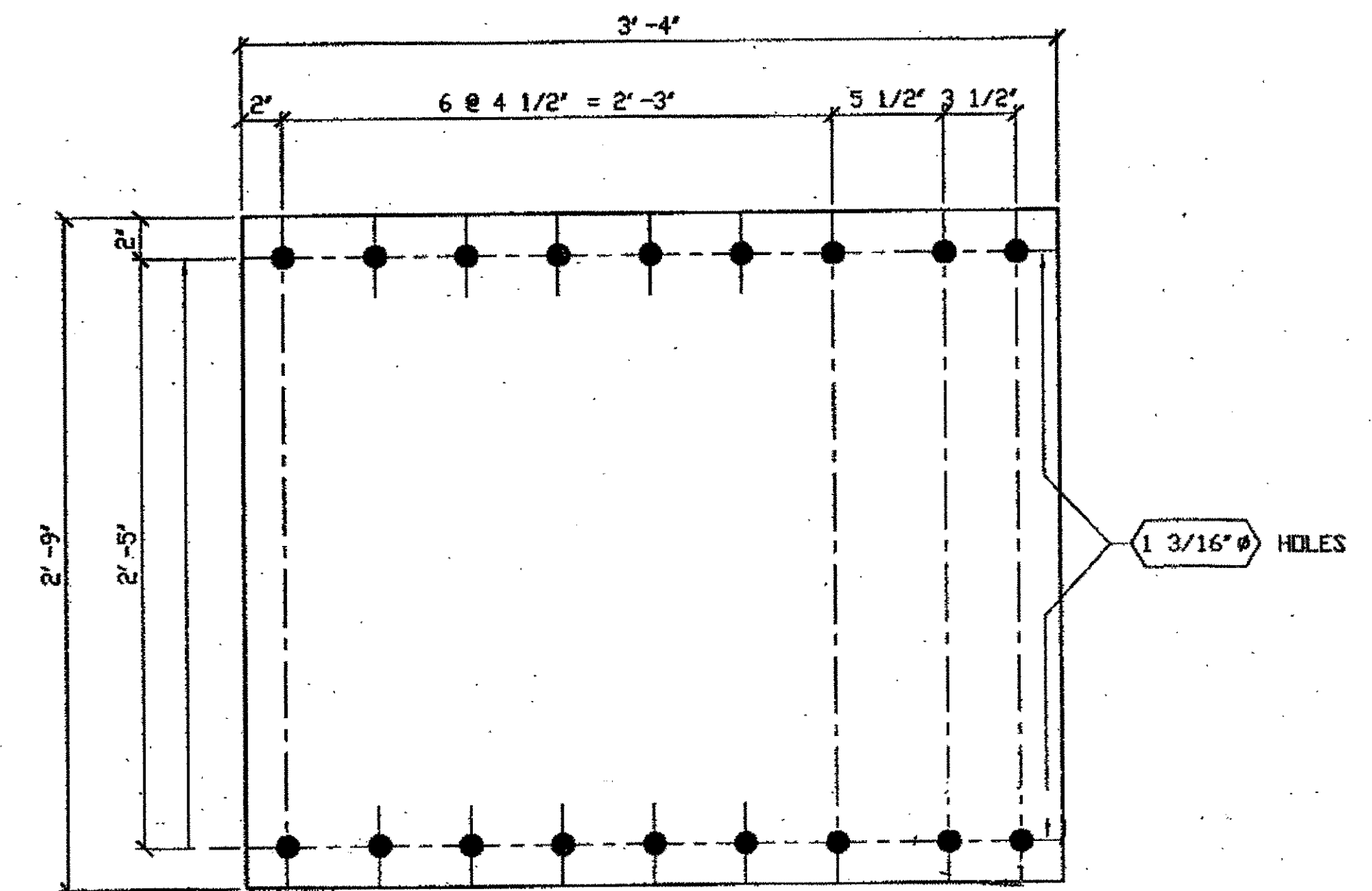
Piece No.	Qty.	Description
4A	8	PL 16" x 1-5" x 1/2"
4B	2	PL 1-7 5/8" x 2'-2 1/2" x 3/8"
4C	4	PL 20 1/4" x 2'-6 1/2" x 1/2"
4D	1	PL 33" x 3'-4" x 9/16"
PLATES A36 SHAPES A36		



DETAIL PLATE DC  
 8- TYPE 1 STAY PLATE - 4A  
 ORIG SHOP DWG 225 - BL90L  
 ORIG SHOP MARK P72p



2- TYPE 1 STAY PL - 4B  
 ORIG SHOP DWG 23  
 ORIG SHOP MARK P23m



1 - TYPE 3 STAY PLATE - 4D  
 ORIG SHOP DWG 240 L17L1-0-8/L  
 ORIG SHOP MARK P96p  
 LINE ITEM No. 0139  
 REPAIR SHEET 8-129

SPAN 2

C'-D NORTH @ D BOT 4A

SPAN 4

C-D NORTH @ D TOP 4A  
 C'-D SOUTH @ D BOT 4A

SPAN 6

E-F NORTH @ F TOP 4A

SPAN 8

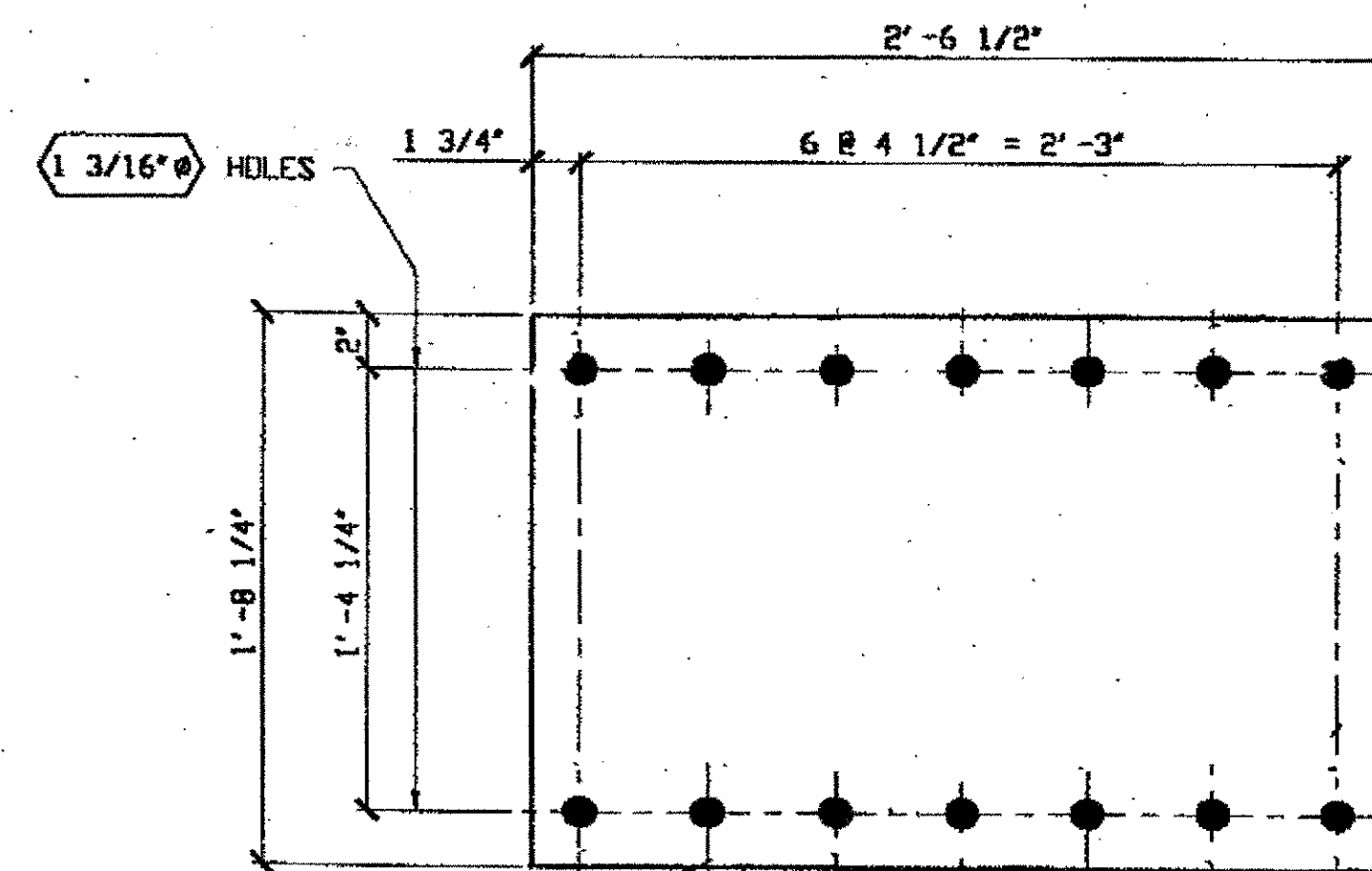
E'-F NORTH @ F BOT 4A

SPAN 10

F'-G NORTH @ G TOP 4A  
 F'-G NORTH @ G BOT 4A  
 F-G SOUTH @ G TOP 4A

SPAN W-LE

L6-U6 NORTH @ U6 EAST 4B  
 L6-U6 NORTH @ L6 EAST 4B



4- TYPE 1 STAY PLATE - 4C  
 ORIG SHOP DWG 141: U13L14-0-5 R/L  
 ORIG SHOP MARK P65h  
 REPAIR SHEETS 5-157 & 221

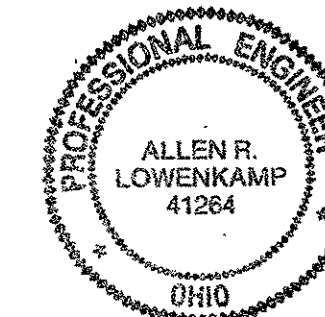
SPAN 3

LO-U1 @ LO N.EXT. BOT 4C  
 L13-U12 @ L13 N.EXT. BOT. 4C

SPAN 5

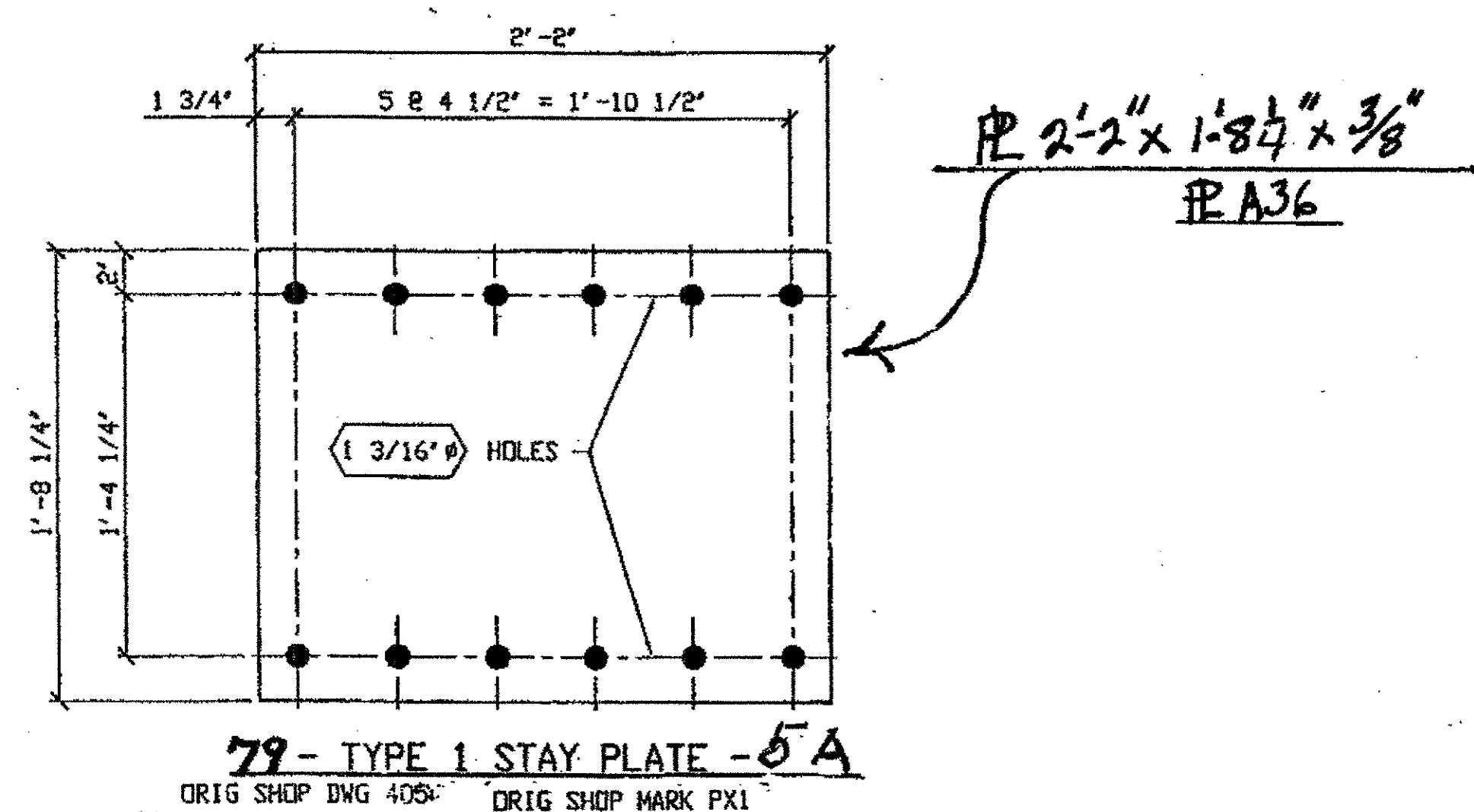
L14-U13 @ L14 N.EXT. BOT 4C  
 L14-U13 @ L14 S.EXT. BOT 4C

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13  
 JOB NO. [blank]  
 DRAWN BY [blank] CHECKED BY [blank] DRAWING NO. 4  
 SCALE NA DATE [blank]



SPAN 1

NORTH EXTERIOR L0-U1 AT L0 TOP 5A  
 SOUTH EXTERIOR L0-U1 AT L0 TOP 5A

SPAN 3

SOUTH INTERIOR L13-U13 @ U13 WEST 5A  
 SOUTH INTERIOR L13-U13 @ L13 WEST 5A  
 NORTH EXTERIOR L0-U1 AT L0 TOP 5A  
 NORTH EXTERIOR L13-U12 AT L13 TOP 5A  
 NORTH INTERIOR L13-U13 @ L13 WEST 5A  
 NORTH INTERIOR L13-U12 AT L13 TOP 5A  
 NORTH EXTERIOR L0-U0 @ U0 EAST 5A  
 NORTH EXTERIOR L13-U13 @ U13 EAST 5A

SPAN 5

NORTH EXTERIOR L0-U1 AT L0 TOP 5A  
 NORTH EXTERIOR L14-U13 AT L14 TOP 5A  
 SOUTH EXTERIOR L13-U12 AT L13 TOP 5A  
 SOUTH EXTERIOR L14-U13 AT L14 TOP 5A  
 SOUTH INTERIOR L14-U13 AT L14 TOP 5A  
 SOUTH INTERIOR L14-U14 @ U14 WEST 5A  
 SOUTH EXTERIOR L14-U14 @ L14 WEST 5A

NOTES:

- OPEN HOLES ARE (1 3/16")
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	2/1/04 DSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design options and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

SPAN 7

NORTH EXTERIOR L15-U15 @ L15 EAST 5A  
 NORTH INTERIOR L15-U14 AT L15 TOP 5A  
 NORTH INTERIOR L15-U14 AT L15 BOTTOM 5A  
 NORTH INTERIOR L15-U15 @ U15 EAST 5A  
 NORTH INTERIOR L15-U15 @ L15 EAST 5A  
 NORTH INTERIOR L15-U15 @ L15 WEST 5A  
 SOUTH EXTERIOR L0-U1 AT L0 TOP 5A  
 SOUTH EXTERIOR L15-U14 AT L15 TOP 5A  
 NORTH EXTERIOR L15-U14 AT L15 TOP 5A  
 NORTH EXTERIOR L0-U1 AT L0 TOP 5A  
 SOUTH EXTERIOR L15-U15 @ L15 EAST 5A  
 SOUTH EXTERIOR L15-U15 @ L15 WEST 5A  
 SOUTH INTERIOR L15-U14 AT L15 TOP 5A  
 SOUTH INTERIOR L15-U15 @ U15 EAST 5A  
 SOUTH INTERIOR L15-U15 @ U15 WEST 5A  
 SOUTH INTERIOR L15-U15 @ L15 WEST 5A  
 SOUTH INTERIOR L15-U15 @ L15 EAST 5A

SPAN 9

NORTH EXTERIOR L17-U16 AT L17 TOP 5A  
 NORTH INTERIOR L17-U17 @ U17 EAST 5A  
 NORTH INTERIOR L17-U17 @ L17 EAST 5A  
 NORTH INTERIOR L17-U17 @ L17 WEST 5A  
 SOUTH EXTERIOR L17-U16 @ L17 TOP 5A  
 SOUTH INTERIOR L17-U17 @ L17 EAST 5A  
 SOUTH INTERIOR L17-U17 @ L17 WEST 5A  
 SOUTH INTERIOR L17-U17 @ U17 EAST 5A  
 SOUTH INTERIOR L17-U17 @ U17 WEST 5A  
 SOUTH EXTERIOR L17-U17 @ U17 EAST 5A

SPAN 11

NORTH INTERIOR L0-U1 AT L0 TOP 5A  
 NORTH INTERIOR L18-U18 @ U18 EAST 5A  
 NORTH INTERIOR L18-U18 @ L18 EAST 5A  
 NORTH INTERIOR L18-U18 @ U18 WEST 5A  
 NORTH INTERIOR L18-U18 @ L18 WEST 5A  
 SOUTH EXTERIOR L0-U0 @ L0 WEST 5A  
 SOUTH EXTERIOR L8-U7 AT L8 TOP 5A  
 SOUTH EXTERIOR L18-U18 @ L18 WEST 5A  
 SOUTH INTERIOR L18-U17 AT L18 TOP 5A  
 SOUTH INTERIOR L18-U18 @ L18 WEST 5A

SPAN 11

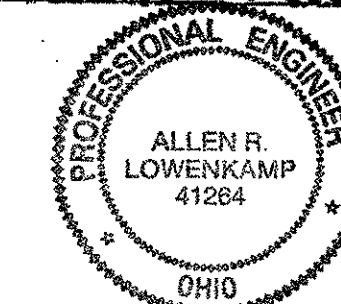
SOUTH INTERIOR L18-U18 @ U18 WEST 5A  
 SOUTH INTERIOR L18-U18 @ L18 EAST 5A  
 SOUTH INTERIOR L18-U18 @ U18 EAST 5A

SPAN 12

NORTH EXTERIOR L2-U1 AT L2 TOP 5A  
 NORTH EXTERIOR L4-U0 AT L4 TOP 5A  
 SOUTH EXTERIOR L3-U4 AT L3 TOP 5A  
 SOUTH EXTERIOR L3-U4 AT L3 BOTTOM 5A  
 SOUTH EXTERIOR L4-U0 AT L4 TOP 5A  
 SOUTH EXTERIOR L4-U0 AT L4 BOTTOM 5A

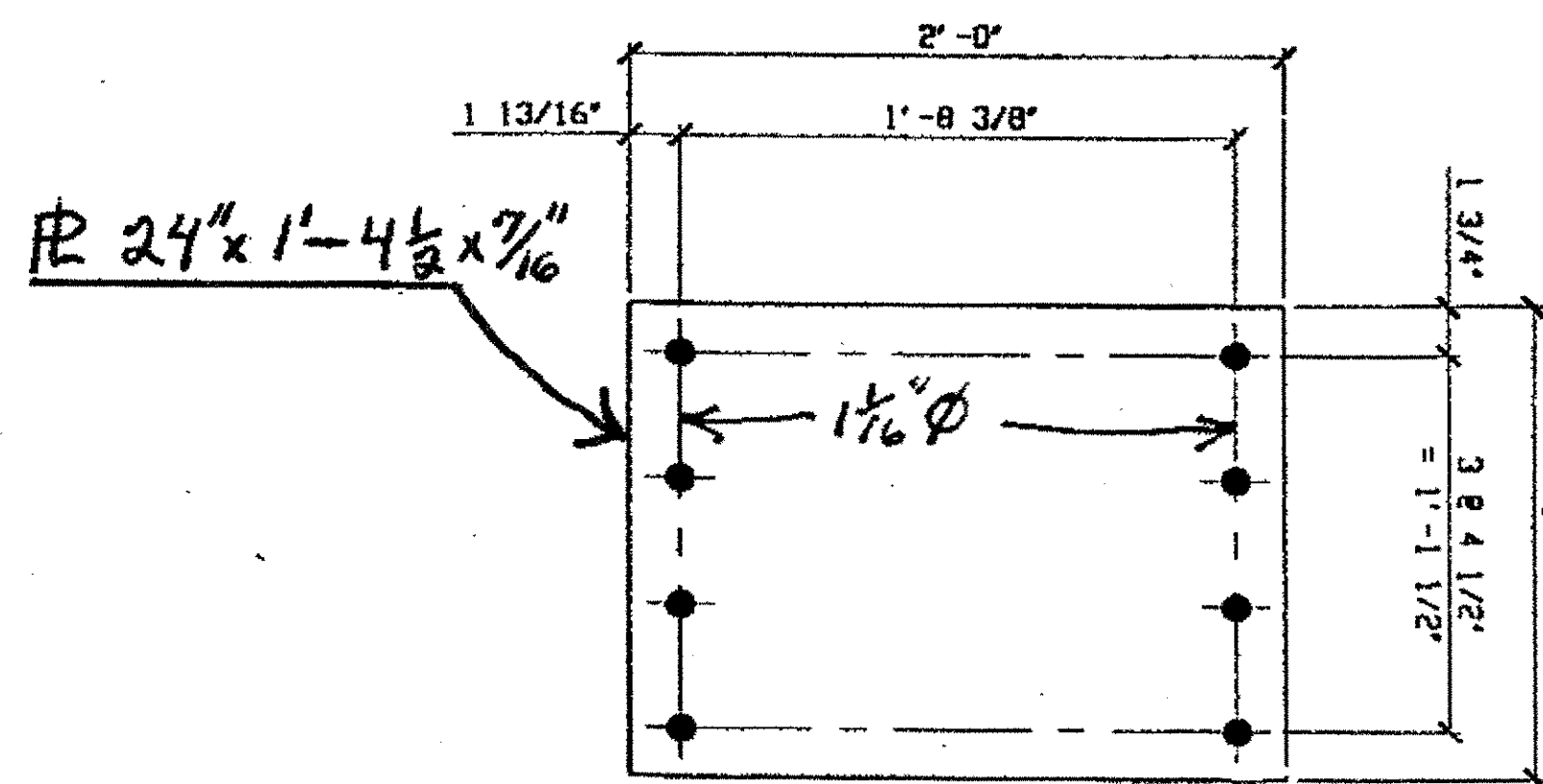
SPAN 13

NORTH EXTERIOR L0-U0 @ U0 WEST 5A  
 NORTH EXTERIOR L0-U0 @ L0 WEST 5A  
 NORTH INTERIOR L12-U12 @ U12 EAST 5A  
 NORTH INTERIOR L12-U12 @ L12 EAST 5A  
 NORTH EXTERIOR L12-U12 @ L12 WEST 5A  
 NORTH INTERIOR L12-U12 @ U12 WEST 5A  
 NORTH INTERIOR L12-U12 @ L12 WEST 5A  
 SOUTH EXTERIOR L0-U0 @ U0 WEST 5A  
 SOUTH EXTERIOR L3-U2 AT L3 TOP 5A  
 SOUTH EXTERIOR L3-U2 AT L3 BOTTOM 5A  
 SOUTH INTERIOR L12-U11 AT L12 TOP 5A  
 SOUTH INTERIOR L12-U12 @ L12 WEST 5A  
 SOUTH EXTERIOR L12-U12 @ L12 EAST 5A  
 SOUTH EXTERIOR L12-U12 @ L12 WEST 5A  
 SOUTH INTERIOR L12-U12 @ U12 EAST 5A  
 SOUTH INTERIOR L12-U12 @ U12 WEST 5A



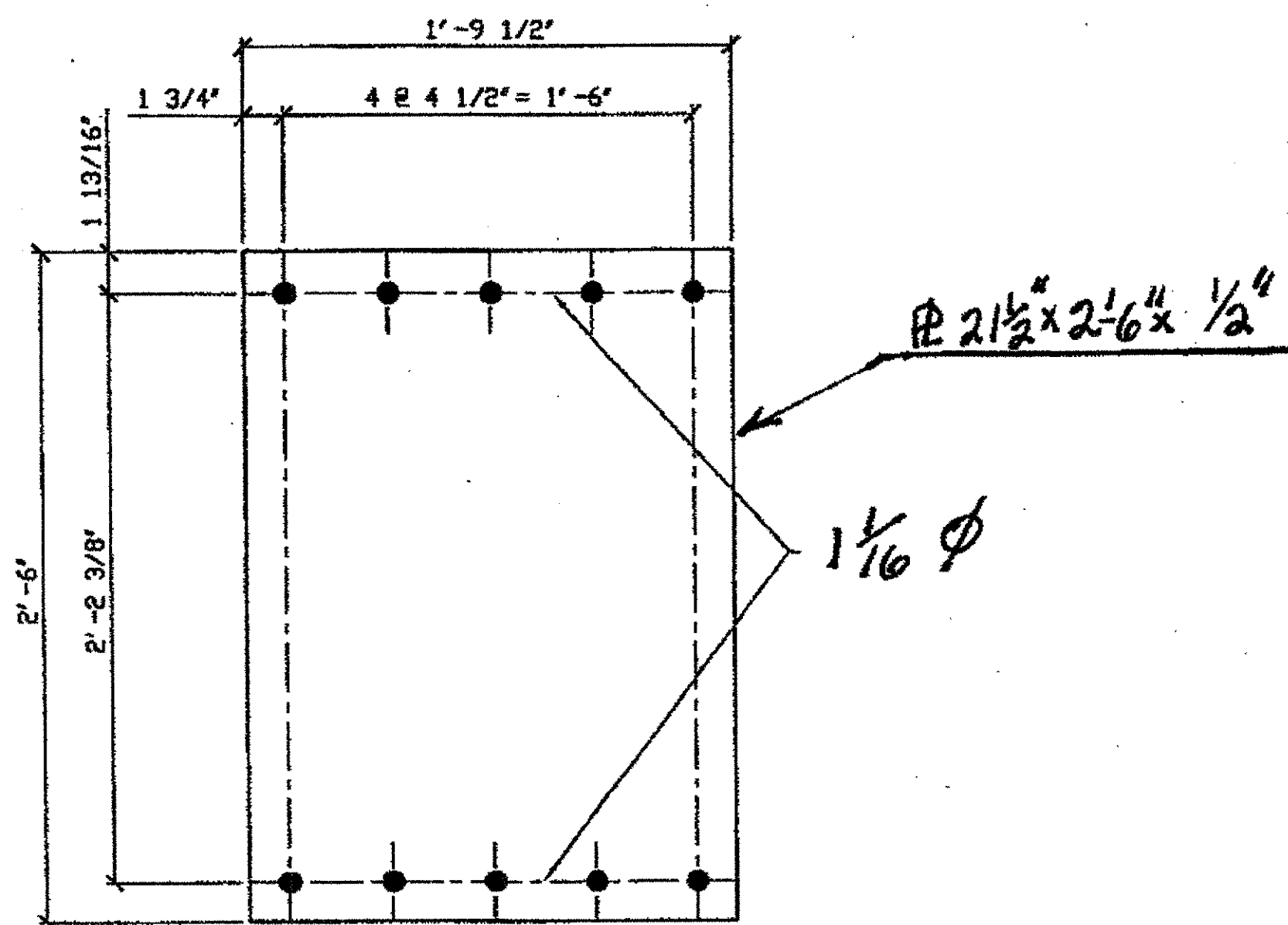
confair office

NO.	REVISION	DATE	BY
Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 BRIDGE No. CUY-10-16.13			
DRAWN BY		CHECKED BY	
SCALE N/A		DATE	
DRAWING NO.			5



21-TYPE 2 STAY PLATE 6A

ORIGINAL SHOP MARK PX II  
(PART OF BOT. LATERAL BRACING)



24-TYPE 2 STAY PLATE - 6B  
ORIG SHOP DWG 293-BS38 & BS39, 380-BL14U, BL143,  
380-BL152 & BL155  
ORIG SHOP MARK PX23

SPAN 1

- D-E' NORTH AT L 3 N. EXT. 6A
- E-F' NORTH AT L 5 N. EXT. 6A

SPAN 3

- D-E' NORTH AT L 3 N. EXT. 6A
- J-K' NORTH AT L 8 N. EXT. 6A
- M-N' NORTH AT L 11 N. EXT. 6A
- A-A' NORTH AT L 0 N. EXT. EAST 6A
- A-A' NORTH AT L 0 N. INT. EAST 6A
- A-A' SOUTH AT L 0 S. EXT. EAST 6A
- N-O' NORTH AT L 13 N. INT. 6A
- E-E' SOUTH AT L 4 S. EXT. 6A
- F-F' SOUTH AT L 5 S. EXT. 6A
- F-G' SOUTH AT L 5 S. EXT. 6A
- O-O' NORTH AT L 13 N. EXT. EAST 6A
- O-O' NORTH AT L 13 N. EXT. WEST 6A

SPAN 5

- N-P' NORTH AT L 12 N. EXT. 6A
- M-L' SOUTH AT L 11 S. EXT. 6A
- E-F' NORTH AT L 4 N. EXT. 6A
- Q-P' NORTH AT L 14 N. EXT. 6A
- Q-P' SOUTH AT L 14 S. EXT. 6A
- Q-Q' NORTH AT L 14 N. EXT. WEST 6A
- L-K' SOUTH AT L 10 S. EXT. 6A

SPAN 5

- A-A' @ L 0 N. EXT. EAST R 6B
- A-B' NORTH, SOUTH OF TIE R 6B

SPAN 7

- A-A' @ L 0 N. EXT. WEST R 6B
- A-A' @ L 0 N. EXT. EAST R 6B
- Q-P' @ L 15 N. EXT. 6B
- Q-Q' @ L 15 N. EXT. WEST R 6B
- A-A' @ L 0 S. INT. EAST R 6B
- B-B' @ L 1 S. EXT. 6B
- B-C' SOUTH, AT THE TIE R 6B
- Q-P' @ L 15 S. EXT. 6B
- Q-Q' @ L 15 S. EXT. WEST R 6B

SPAN 9

- R-S' @ L 16 N. EXT. 6B
- S-R' @ L 17 S. EXT. 6B

SPAN 11

- A-A' @ L 0 N. EXT. EAST R 6B
- A-A' @ L 0 N. EXT. WEST R 6B
- E-F' @ L 4 N. EXT. 6B
- T-U' @ L 18 N. INT. 6B
- B-A' @ L 1 S. EXT. 6B
- D-C' @ L 3 S. EXT. 6B
- U-U' @ L 18 S. EXT. WEST R 6B

SPAN 12

- C-D' @ L 2 N. EXT. 6B

SPAN 13

- A-B' @ L 0 N. EXT. 6B
- G-F' @ L 6 N. EXT. 6B
- N-N' @ L 12 S. EXT. EAST R 6B

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/14/04 B37M  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

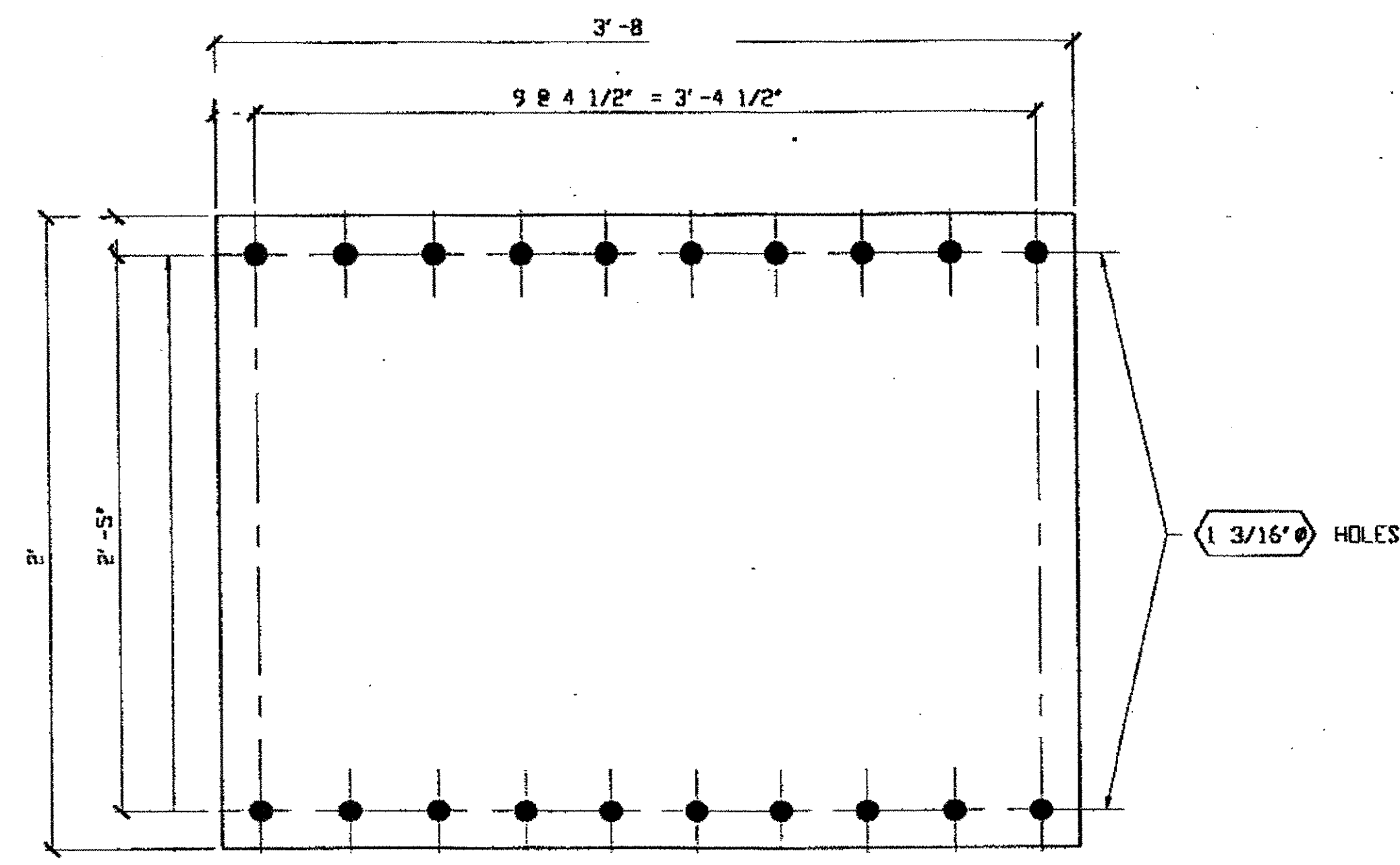
**Tri State Steel Construction Inc.**  
12508 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215

JOB NO. 2000212  
DRAWING NO. 6

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
SCALE: N/A DATE: \_\_\_\_\_

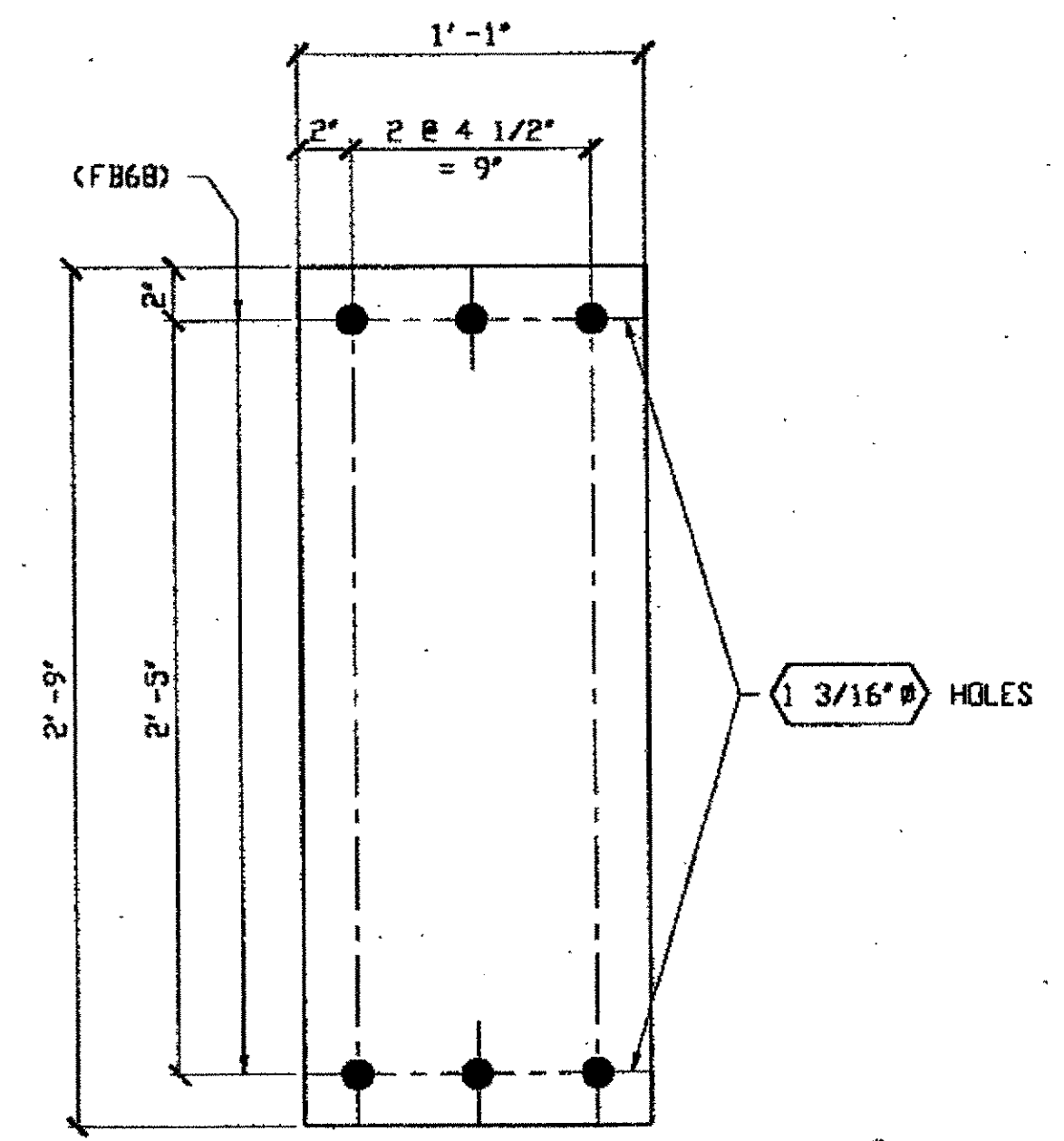




1 - TYPE 3 STAY PLATE - 7A

ORIG SHOP MARK P74ax  
ORIG SHOP DWG 74  
DOT ITEM NO. 0139  
REPAIR SHEET 4-117

SPAN 4  
L14-L1 @ L14 SOUTH INTERIOR BOTTOM 7A

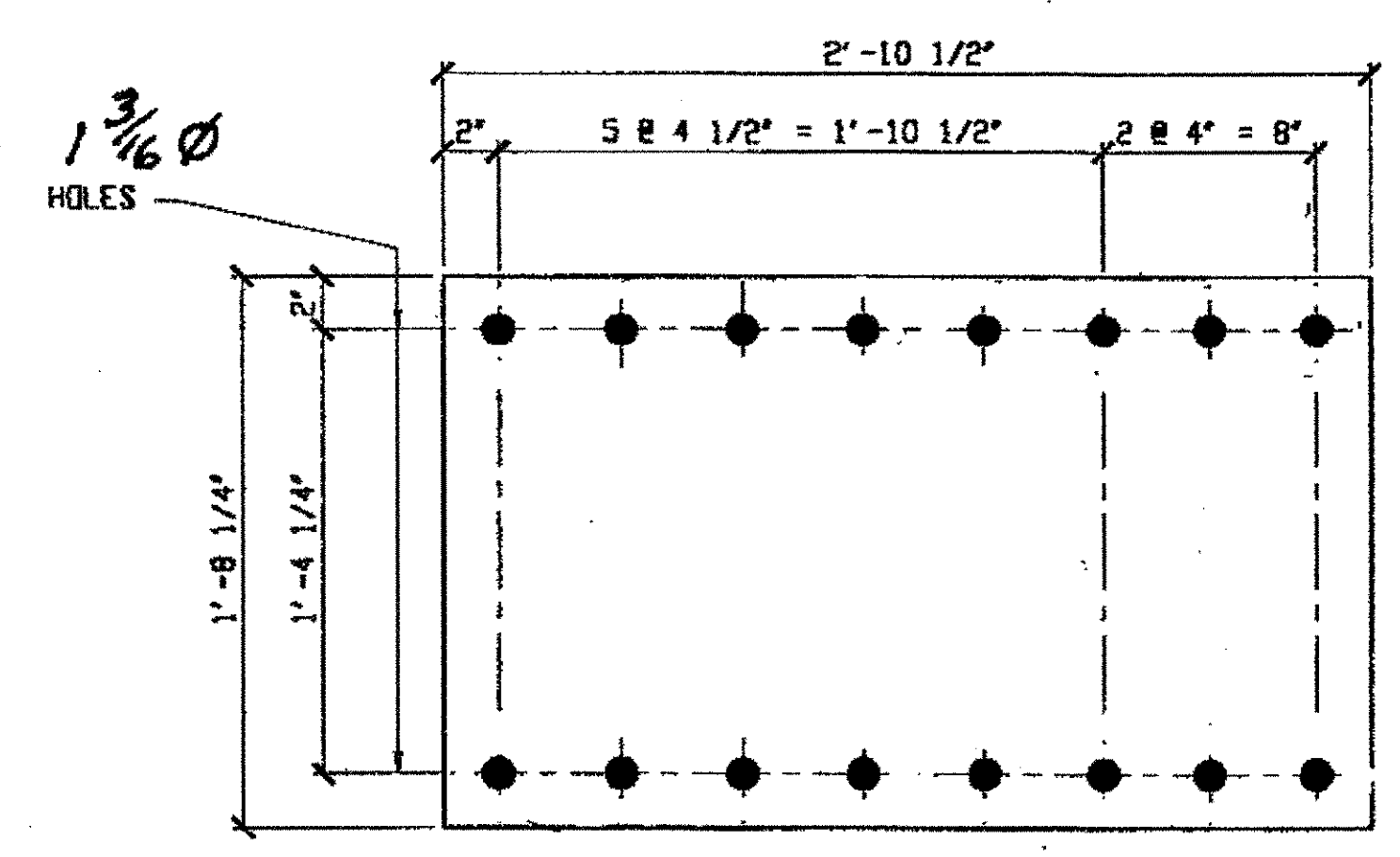


3 - TYPE 3 STAY PLATE - 7B

ORIG SHOP DRAWING 157 L15L2-D-6/L  
ORIG SHOP MARK P148an  
LINE ITEM No. 0139  
REPAIR SHEETS 6-118

SPAN 4  
L14-L1 @ L14 NORTH INTERIOR BOTTOM 7B

SPAN 6  
L15-L1 @ L15 NORTH EXTERIOR BOTTOM 7B  
L15-L1 @ L15 SOUTH EXTERIOR BOTTOM 7B



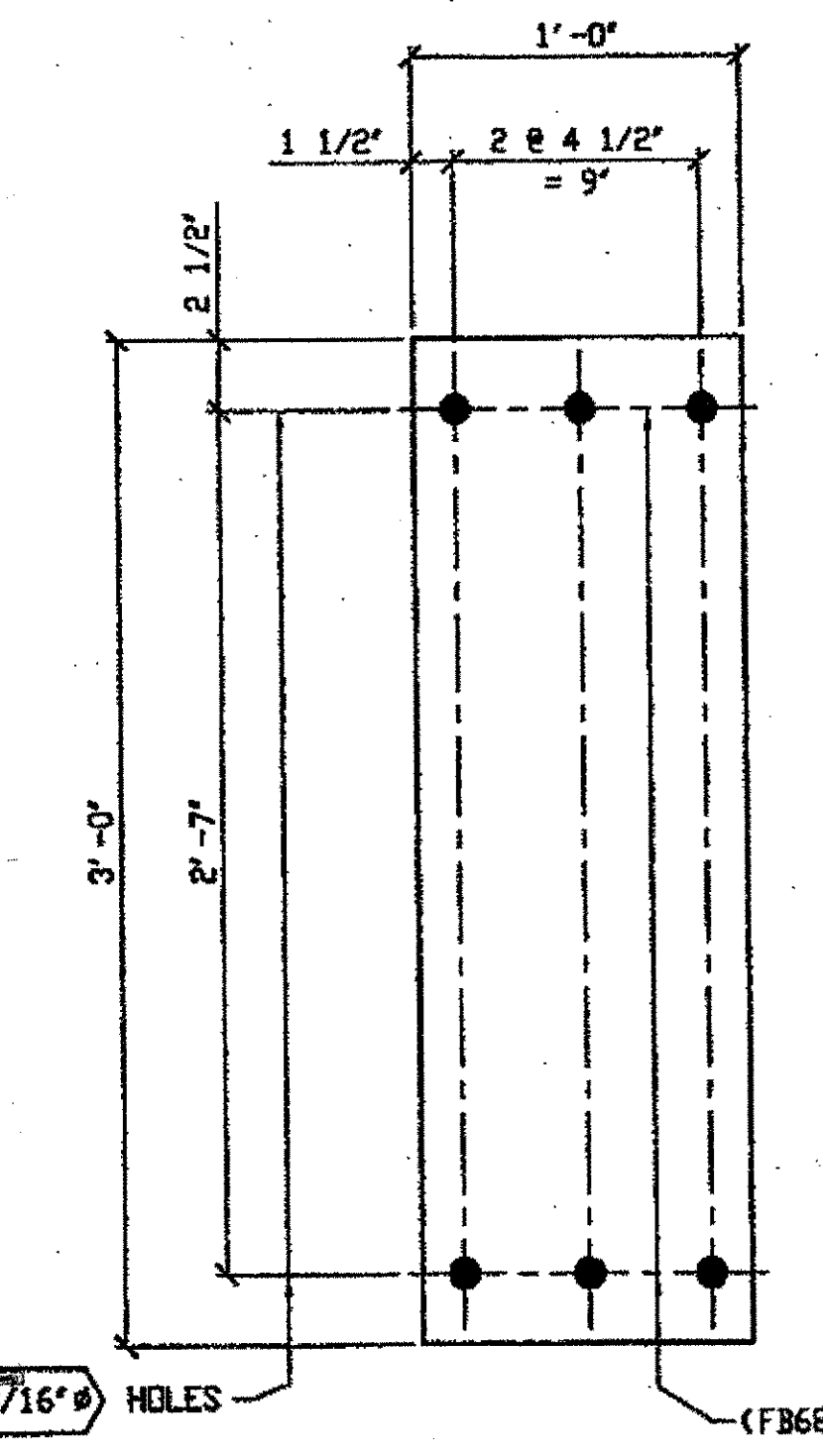
2 - STAY PLATES - 7C

ORIG SHOP DWG 44  
ORIG SHOP MARK P44f  
LINE ITEM No. 0139

SPAN 3  
L13-U12 @ L13 SOUTH INTERIOR TOP 7C  
L13-U12 @ L13 NORTH INTERIOR BOT. 7C

BILL OF MATERIALS

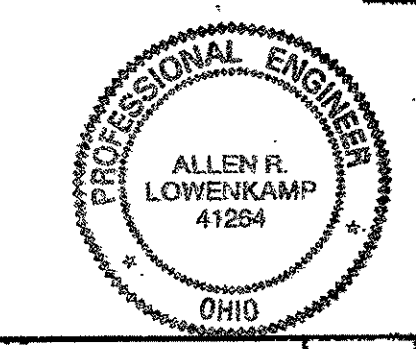
Piece No.	Qty.	Description
7A	1	PL 9/16" x 33" x 3'-8 1/2"
7B	3	PL 9/16" x 13" x 2'-9"
7C	2	PL 3/8" x 20 1/4" x 2'-10 1/2"
7D	2	PL 5/8" x 12" x 3'-0"
		PLATE A36 SHAPES A36



2 - TYPE 3 STAY PLATE - 7D

ORIG SHOP DWG 457 L12L2-F-12/R & 467 L4L0-D-12/R  
ORIG SHOP MARK P457ac  
REPAIRS SHEETS 12-100 & 133

SPAN 12  
L12-L1, L12 NORTH INTERIOR BOTTOM 7D  
L4-L0, L0 NORTH EXTERIOR BOTTOM 7D



O.D.O.T. DIST. 12  
ACCEPTED 2/1/04 PDM  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

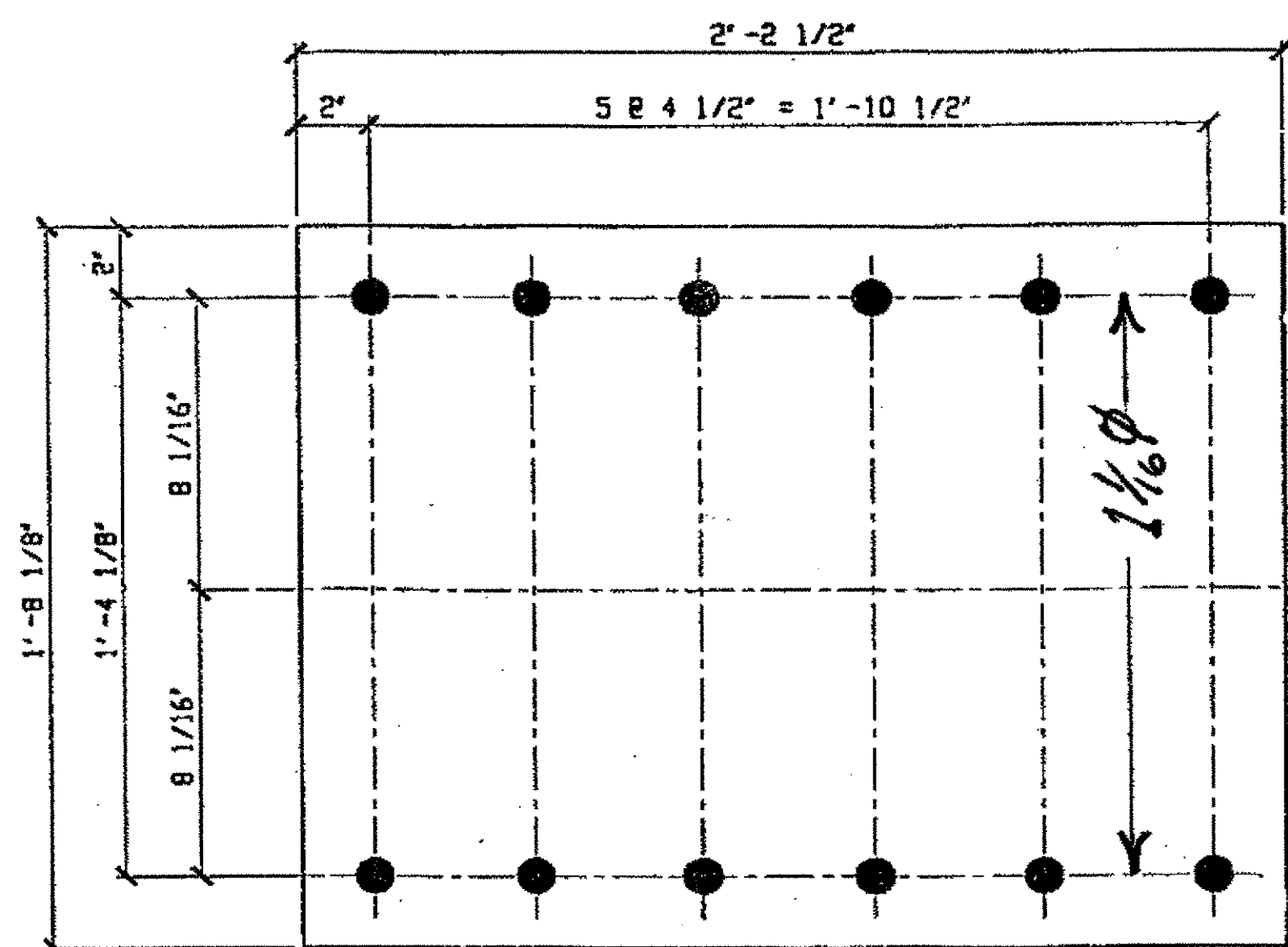
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-1D-16.13**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
SCALE: NA DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
DRAWING NO. **7**

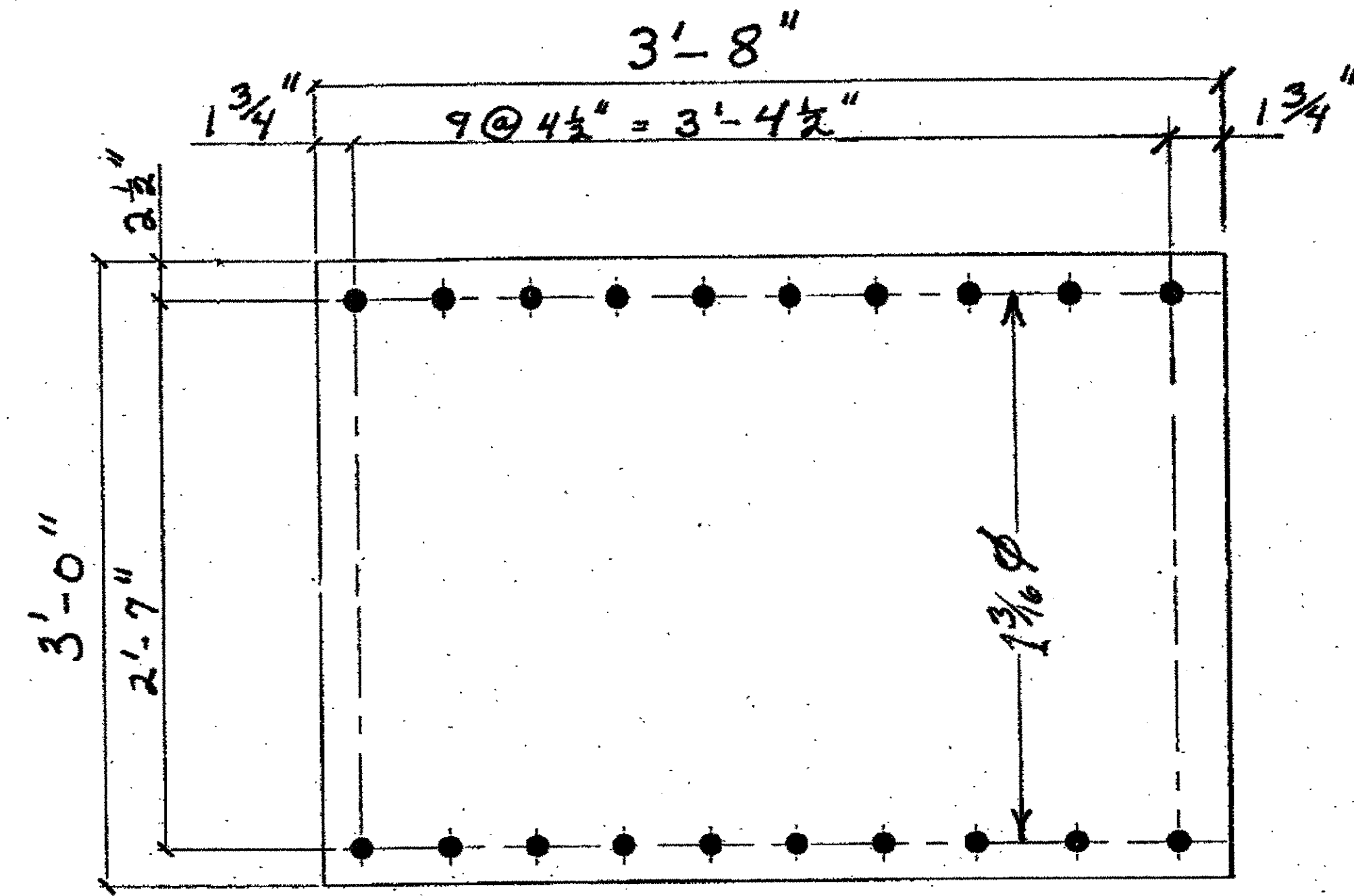


1 TYPE 1 STAY PL 8A

ORIG SHOP DVG 35  
ORIG SHOP MARK P24p  
DOT ITEM LINE No. 0139  
DOT BID ITEM No. 863E50000

SPAN WYLE

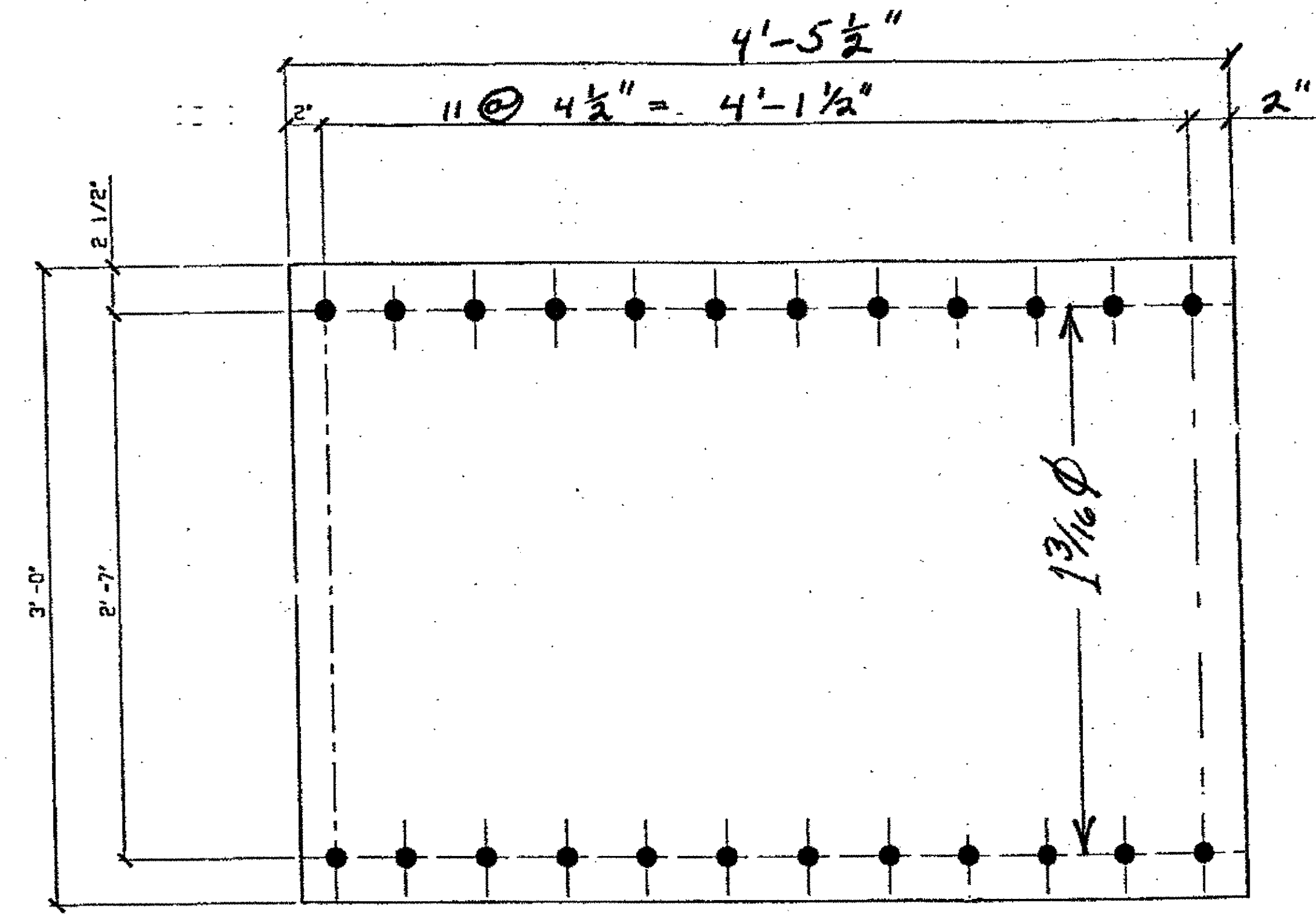
L6-U6 CENTER TRUSS @ L6, 9', EAST # 8A



1-TYPE 1 STAY PLATE 8B

ORIGINAL SHOP MARK PX 25

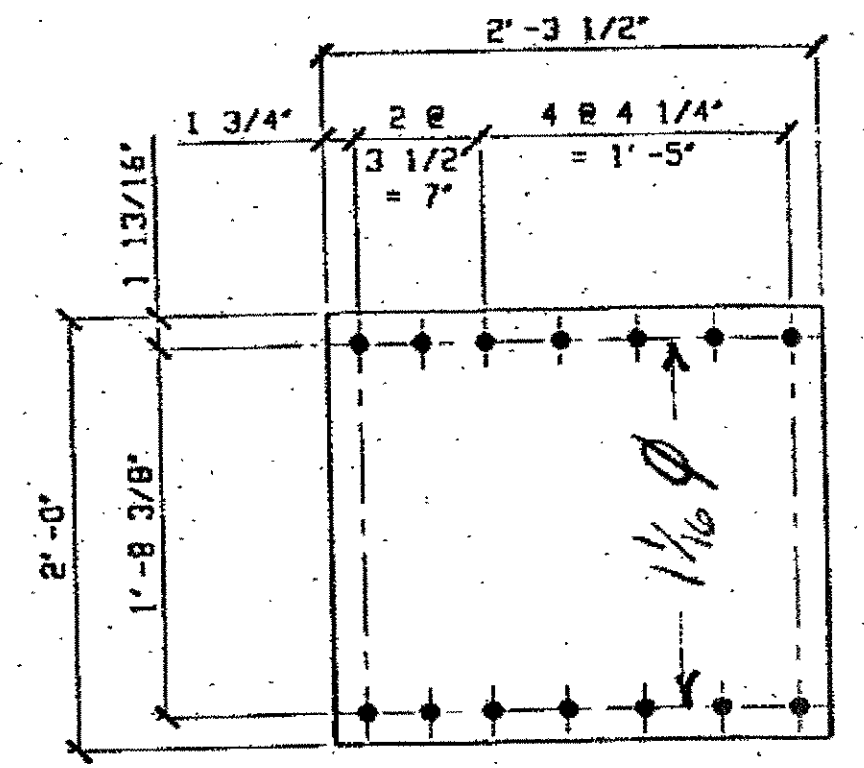
SPAN 11  
L4-L5 SOUTH @ L4 SOUTH EXTERIOR TOP. 8B



1 TYPE 1 STAY PLATE - 8C

ORIGINAL SHOP MARK P230F

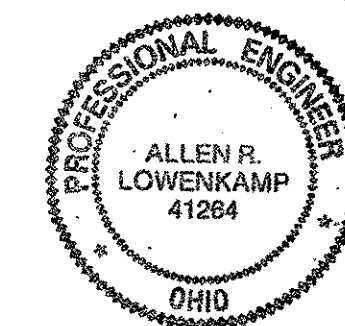
SPAN 8  
L17-L1 @ L17 NORTH INTERIOR BOTTOM 8C



1-TYPE 1 STAY PLATE-8D

ORIGINAL SHOP MARK P72Y

SPAN 2  
D-C', NORTH, SOUTH # AT D 8D



O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

BILL OF MATERIALS		
Piece No.	Qty.	Description
8A	1	PL 20 1/8" x 3/8" x 2'-2 1/2"
8B	1	PL 36" x 5/8" x 3'-8"
8C	1	PL 36" x 5/8" x 4'-5 1/2"
8D	1	PL 2'-0" x 2'-3 1/2" x 1/2"
PLATE A36 SHAPES A36		

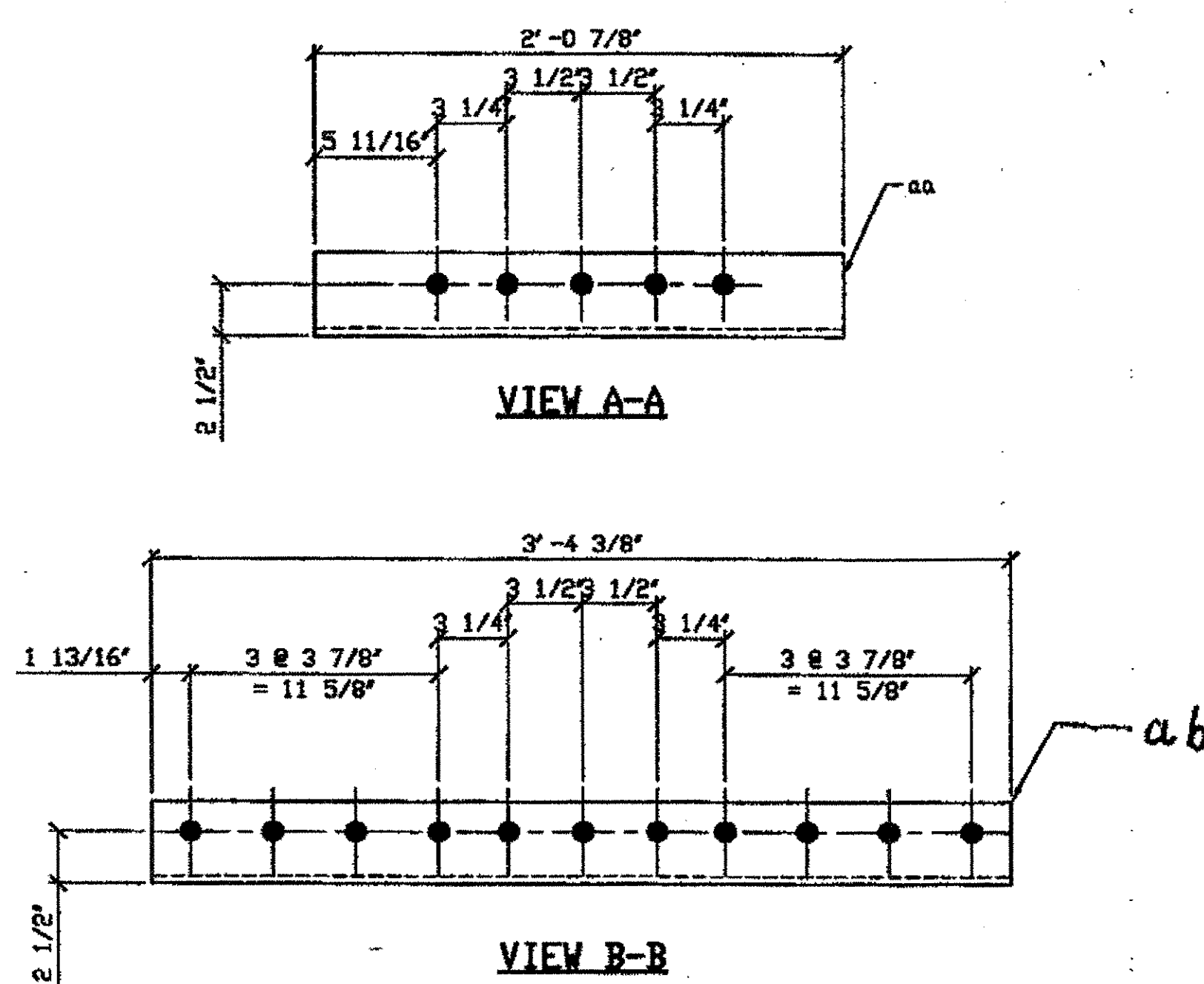
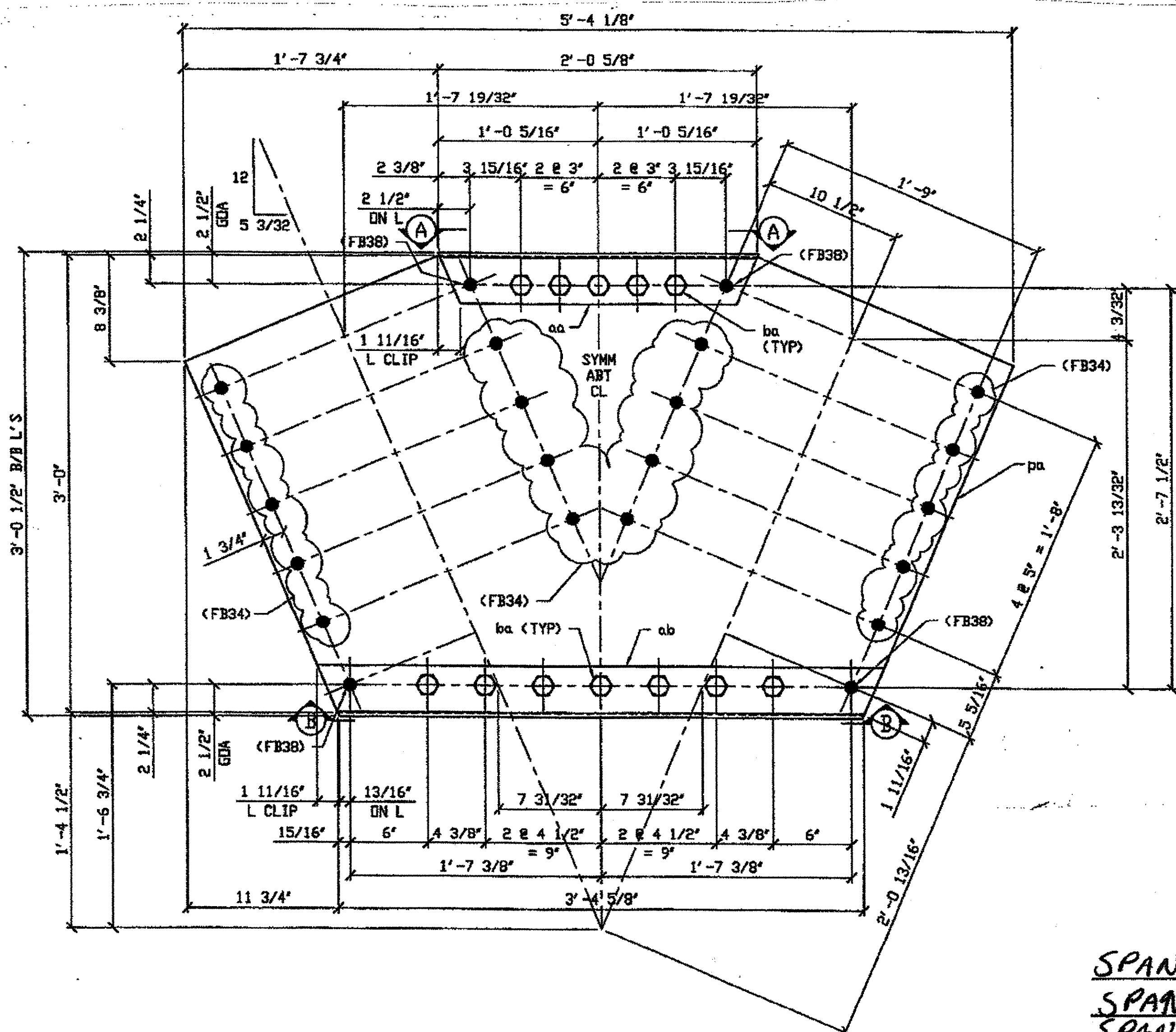
NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
BRIDGE No. CUY-10-16.13

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
SCALE: NA DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
DRAWING NO. 8



12 - SHEAR KEY BOX COVER PLATE ASSEMBLY - 311A  
 DRIG SHOP DWG 142-BS17  
 DRIG SHOP MARK A72a, A72b & A72b

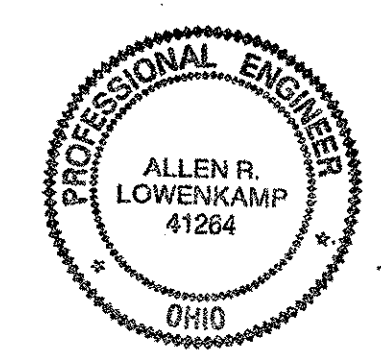
- SPAN 2, D, NORTH, TOP 311A
- SPAN 2, D, SOUTH, TOP 311A
- SPAN 4, D, NORTH, TOP 311A
- SPAN 4, D, SOUTH, TOP 311A
- SPAN 6, F, NORTH, TOP 311A
- SPAN 6, F, SOUTH, TOP 311A
- SPAN 8, F, NORTH, TOP 311A
- SPAN 8, F, SOUTH, TOP 311A
- SPAN 10, G, NORTH, TOP 311A
- SPAN 10, G, SOUTH, TOP 311A
- SPAN 12, F, NORTH, TOP 311A
- SPAN 12, F, SOUTH, TOP 311A

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		311A		COVER PLATE ASSEMBLY				
2		pa		PL 1/2 X 36	5	4 1/8		
3	*	aa		L 4 X 4 X 3/8	2	0 7/8		
4	*	ab		L 4 X 4 X 3/8	3	7 9/4		
5		ba		1" DIA. HVY HEX BOLT	0	2 1/4	NOTE 2	
6				W/ HVY HEX NUT & WASHER				
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34		1" DIA.	0	2 1/4	NOTE 2	
18		FB36		1" DIA.	0	2 3/4	NOTE 2	
19								
20								

PLATE	A36	PIPE	N/A	FITTINGS	N/A
SHAPES	A36	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



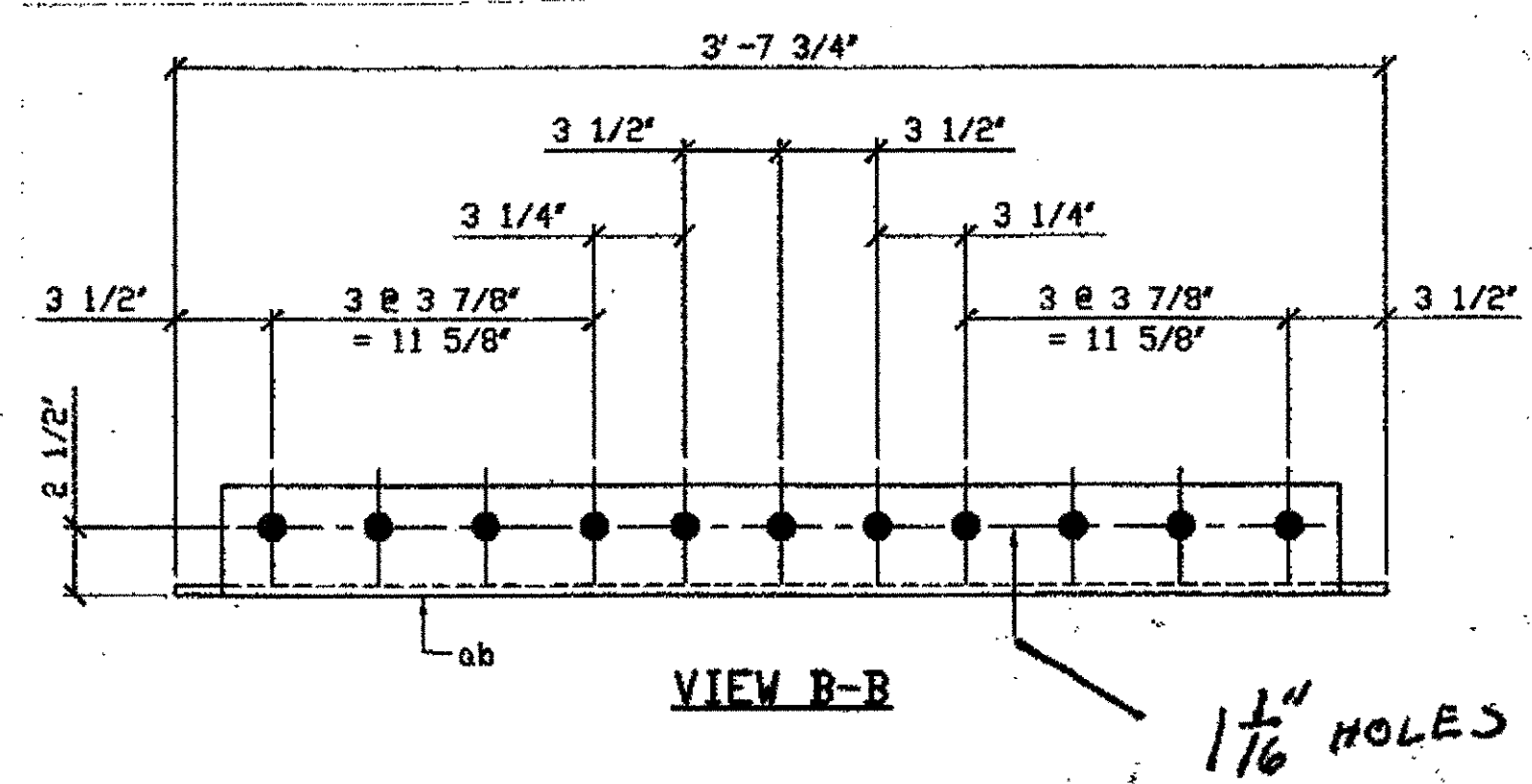
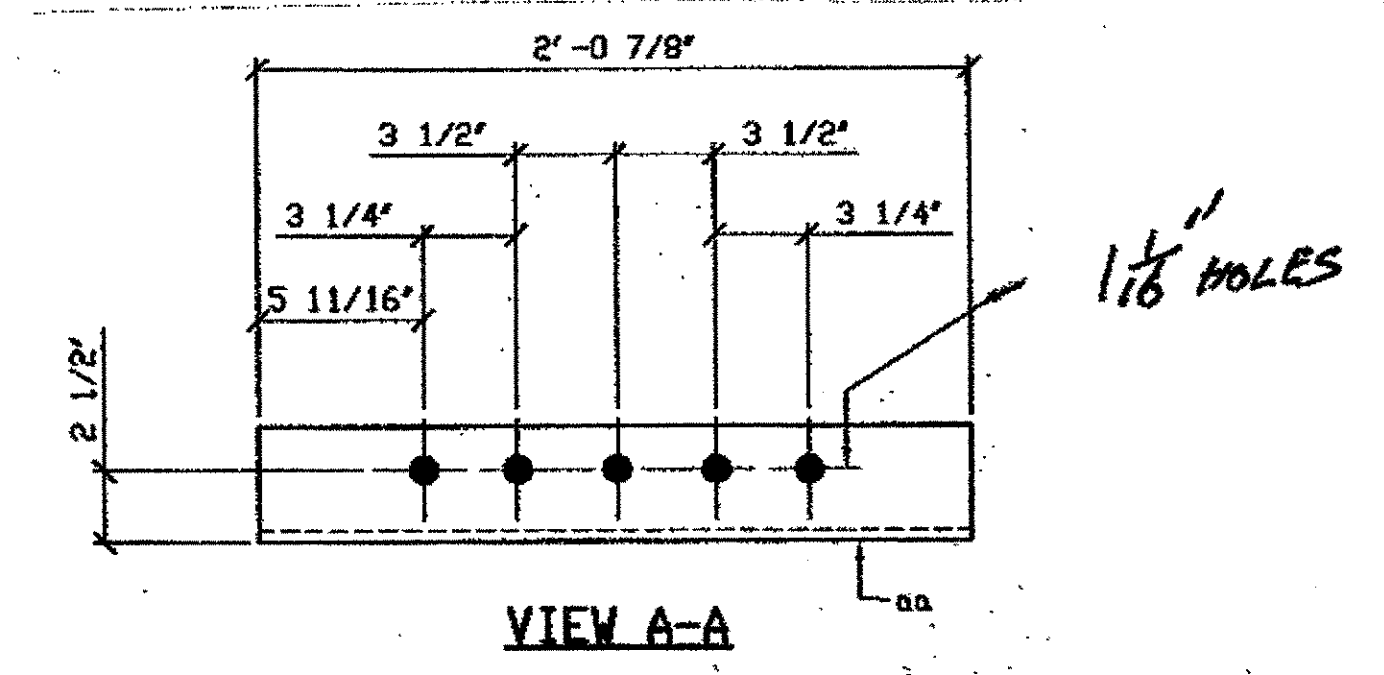
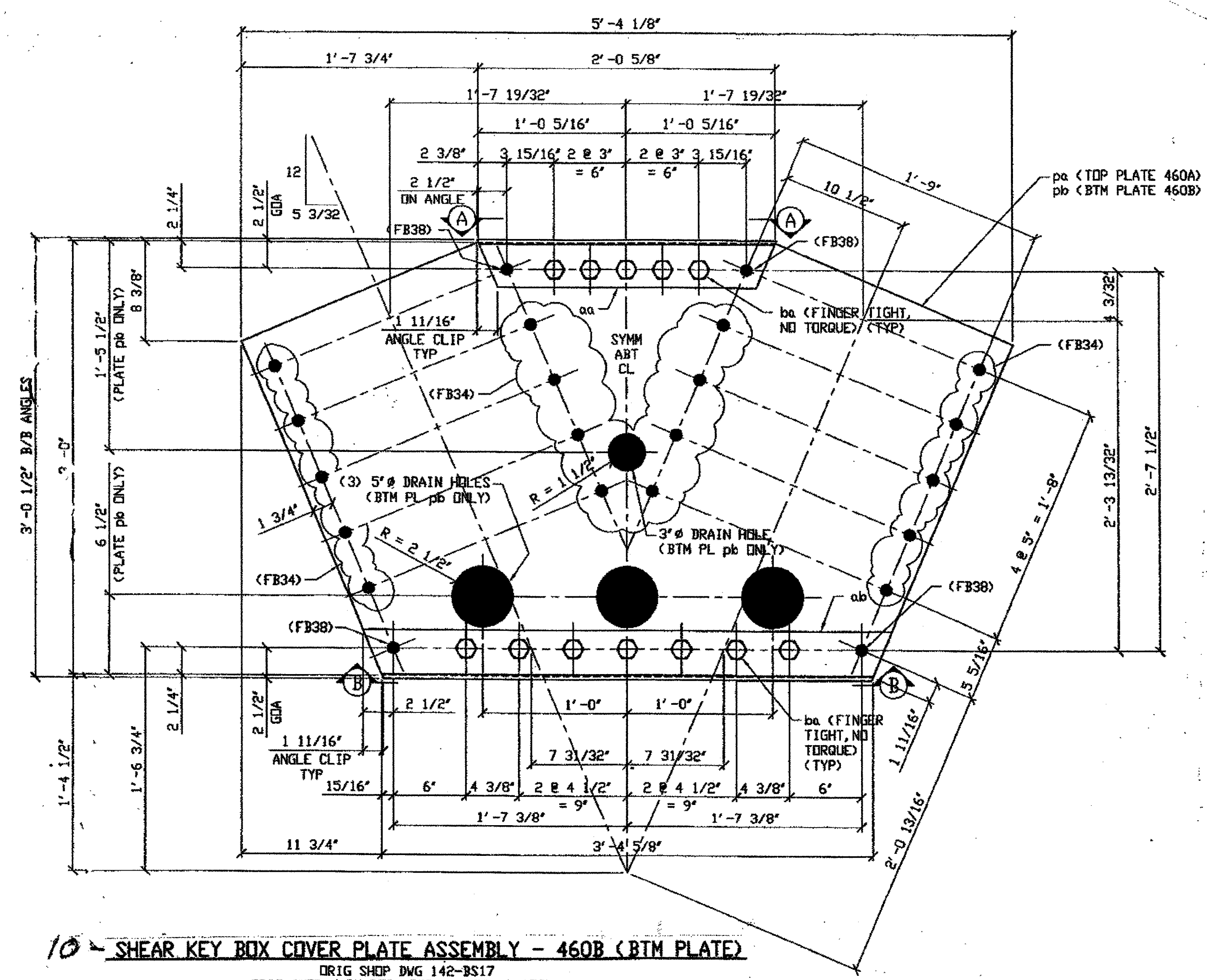
O.D.O.T. DIST. 12	
ACCEPTED	2/4/07
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY
Tri State Steel Construction Inc. 12808 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 BRIDGE NO. CUY-10-16.13			
DRAWN BY		CHECKED BY	
SCALE N/A		DATE	
JOB NO. 2000212			DRAWING NO. 311

BILL OF MATERIALS

Piece No.	Qty.	Description	WEIGHT
460 B		COVER PLATE ASSEMBLY	
pa		PL 1/2" X 36" X 5' 4 1/2"	
aa		L 4 X 4 X 3/8 X 2' 7 3/4"	
ab		L 4 X 4 X 3/8 X 3' 7 3/4"	
ba		1" X 2 1/2" HVY HEX BOLT NUT & WASHER	
		BOLTS	
FB 34		1X 2 1/2"	
FB 38		1X 2 3/4"	
PLATE		A36	
SHAPES		A36	



10 - SHEAR KEY BOX COVER PLATE ASSEMBLY - 460B (BTM PLATE)  
 ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK P72a, P72ay, A72a & A72b

- SPAN 2, D, NORTH, Bottom 460 B
- SPAN 4, D, NORTH, Bottom 460 B
- SPAN 6, F, NORTH, Bottom 460 B
- SPAN 6, F, SOUTH, Bottom 460 B
- SPAN 8, F, NORTH, Bottom 460 B
- SPAN 8, F, SOUTH, Bottom 460 B
- SPAN 10, G, NORTH, Bottom 460 B
- SPAN 10, G, SOUTH, Bottom 460 B
- SPAN 12, F, NORTH, Bottom 460 B
- SPAN 12, F, SOUTH, Bottom 460 B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature] 2/1/89 P.37M  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

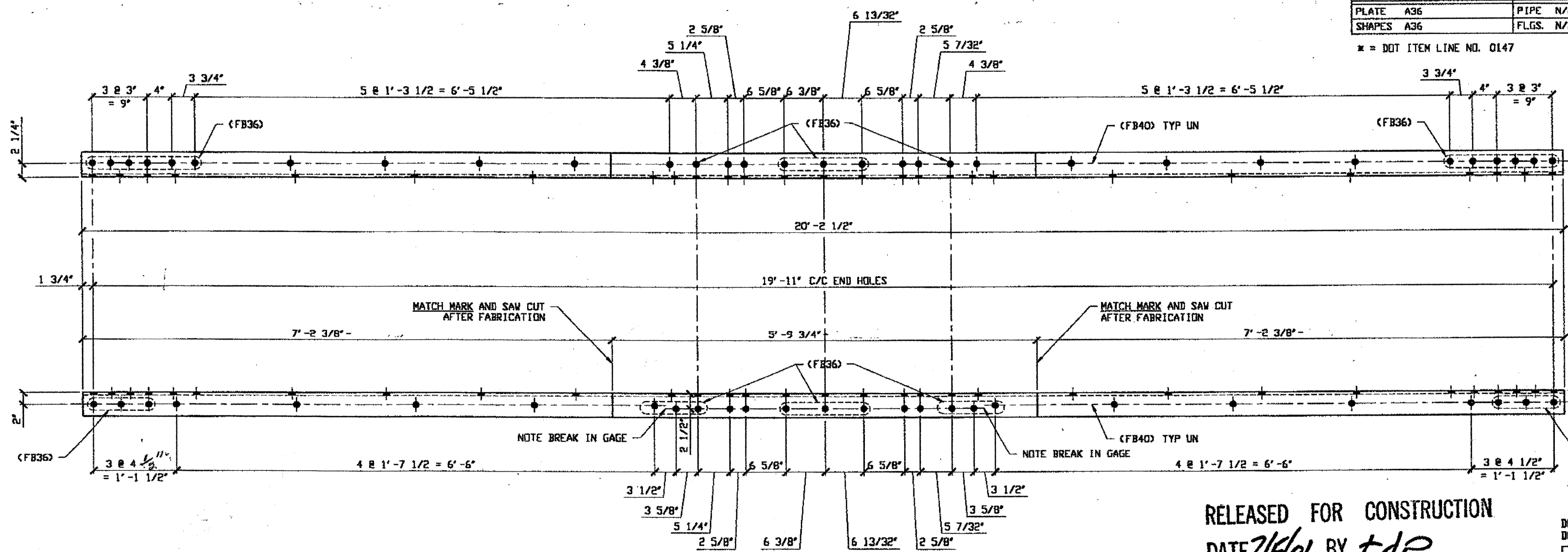
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 SCALE NA DATE \_\_\_\_\_ DRAWING NO. **460**

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		180A	4	TRUSS WIND SHEAR KEY FULL	20	2 1/2		
2								
4				L 4 X 4 X 1/2				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB36		1" DIA	0	2 1/2	NOTE 2	
18		FB40		1" DIA	0	3	NOTE 2	
19								

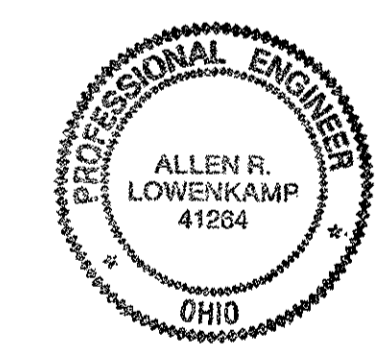
PLATE A36 PIPE N/A FITTINGS N/A  
 SHAPES A36 FLGS. N/A BOLTS NOTE 2

\* = DOT ITEM LINE NO. 0147 NOTE A: CUT FROM 4 ANGLES @ 20° - 2 1/2 LG.



O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 2/5/01 BY tdp

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/ Hvy HEX NUT & DNE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

4 - TRUSS WIND SHEAR KEY TRANSVERSE MEMBER FULL LENGTH REPLACEMENT 180A

FIELD MUST USE PIECE MARKS  
 MATCH MARKED TOGETHER

SPAN 1  
 A-A' NORTH TOP EAST 180A  
 A-A' NORTH TOP WEST 180A

SPAN 1  
 A-A' NORTH BOTTOM WEST 180A  
 A-A' NORTH BOTTOM EAST 180A

ORIG SHOP DWG - BSG  
 ORIG SHOP MARK BSG, A18a  
 ITEM LINE NO. 0147

FABRICATOR  
 (AB) AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 1 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 1260B ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 GAF 11/29/00  
 CHECKED BY: DATE:  
 GVG 12/05/00

SHEET NUMBER: 180  
 JOB NUMBER: 800010

Last modified by Jfooster at 09:02am on Wed Dec 06, 2000 -1- Last plotted by Gfooster at 02:21pm on Fri Dec 15, 2000

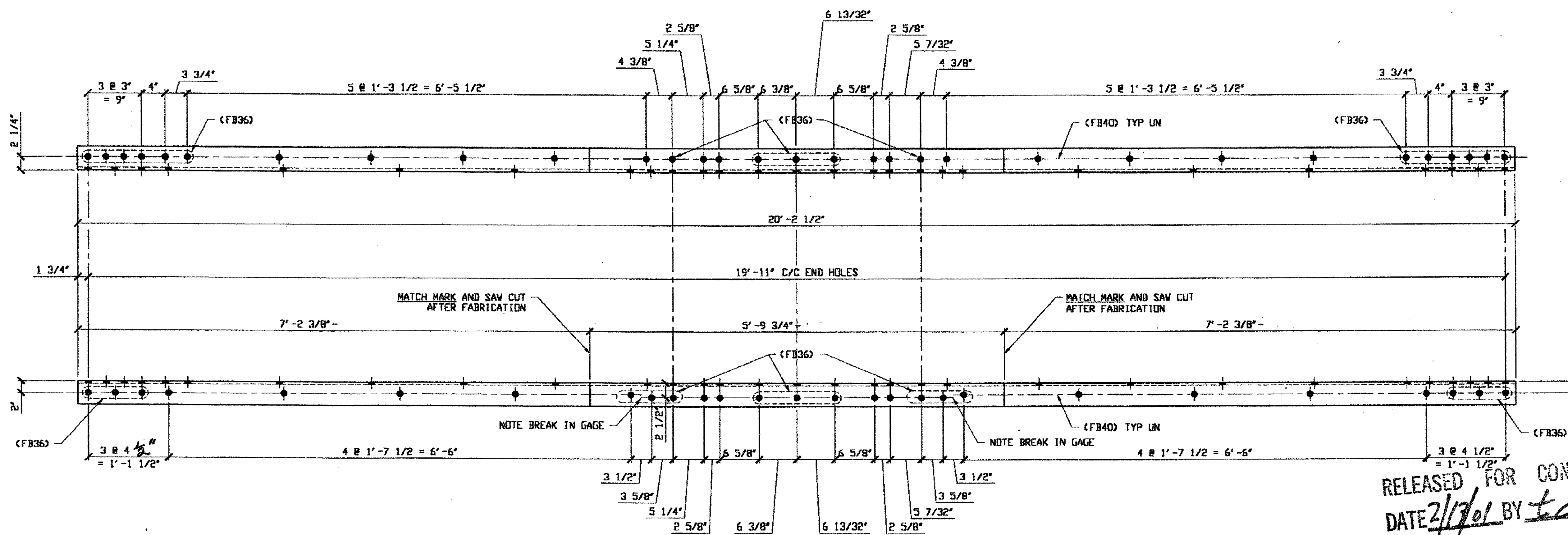
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				WIND SHEAR KEY TRANSVERSE FULL				
2		193A	7	L 4 X 4 X 1/2			NOTE A	
3								
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB40		1" DIA	0	3	NOTE 2	
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	

NOTE A: CUT FROM 6 ANGLES @ 20° - 2 1/2" LG

**NOTES:**

- OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



RELEASED FOR CONSTRUCTION  
DATE 2/17/01 BY tdr

**7 - WIND SHEAR KEY TRANSVERSE FULL LENGTH REPLACEMENT - 193A**

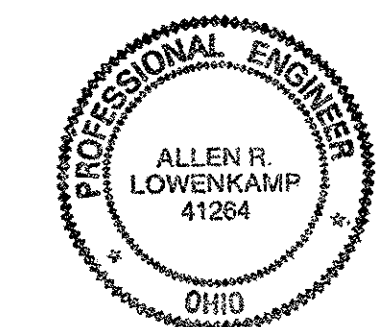
SPAN 3  
A-A' NORTH TOP EAST 193A  
A-A' NORTH TOP WEST 193A  
A-A' NORTH BOTTOM EAST 193A  
A-A' NORTH BOTTOM WEST 193A

18-116 SHOP DWG 18-BSS  
 ORIG SHOP MARK A18a R/L  
 IDENTICAL TO 180A R/L & 180B R/L

SPAN 3  
A-A' SOUTH TOP WEST 193A  
A-A' SOUTH BOTTOM EAST 193A  
A-A' SOUTH BOTTOM WEST 193A

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/01 P.J.M.  
 NOT ACCEPTED

For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



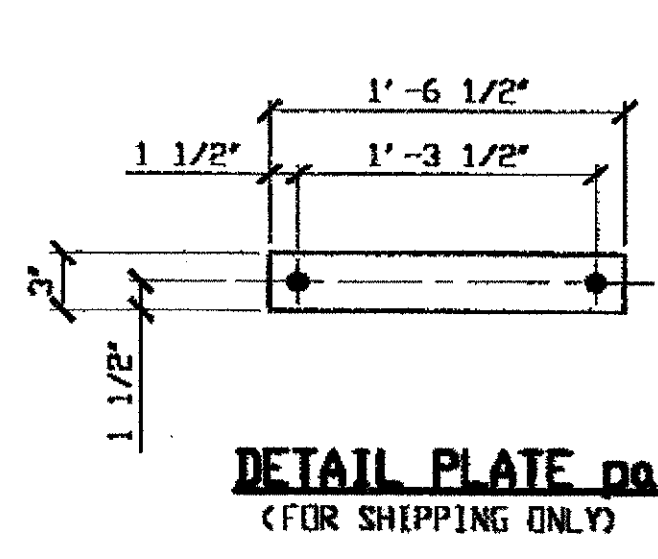
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 12/11/00  
 CHECKED BY: DATE  
 GAF 12/27/00

DOT ITEM LINE NO. 0147		DOT BID ITEM NO. 862E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
SHEET NUMBER 199		ADM. JOB NUMBER 800010	

Last modified: gfooster at 11:48am on Mon Feb 05, 2001 - Last plotted by gfooster : 04:05pm on Mon Feb 05, 2001

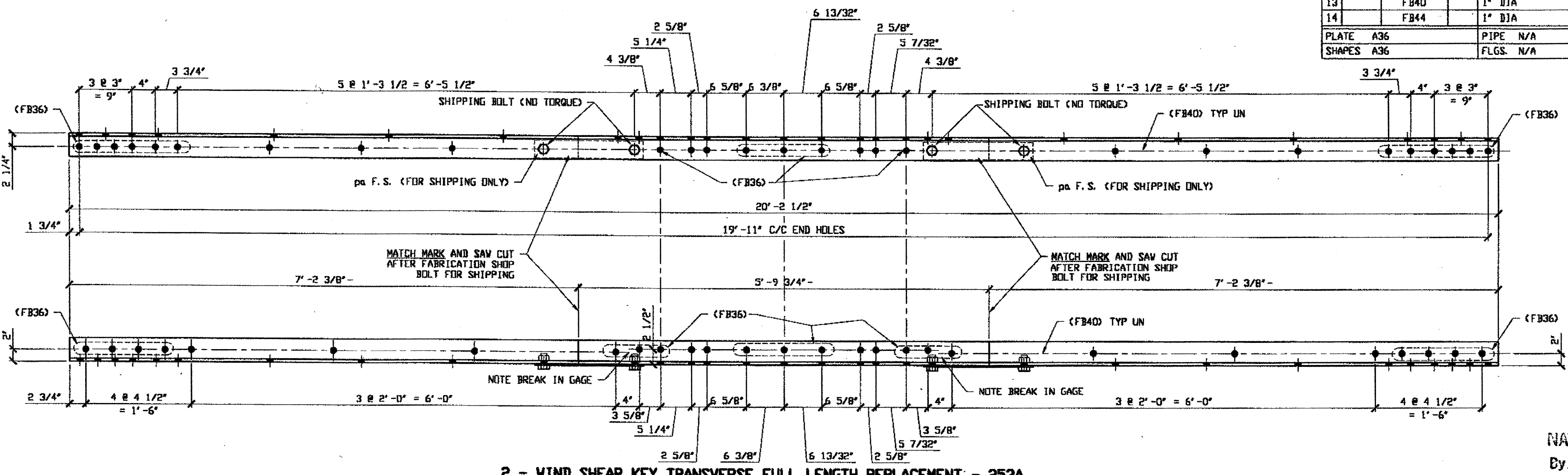


SPAN 5  
A-A' NORTH BOTTOM EAST 253A  
A-A' SOUTH BOTTOM EAST 253A

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAB II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				W. S. KEY TRANS FULL REPAIR				
2		253A	2	L 4 X 4 X 1/2	20	2 1/2		517
3		pa	4	PL 1/4 X 3	1	6 1/2		16
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36		1" DIA	0	2 1/2	NOTE 2	
13		FB40		1" DIA	0	3	NOTE 2	
14		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36					PIPE N/A	FITTINGS N/A		
SHAPES A36					FLGS. N/A	BOLTS NOTE 2		

Last modified by rspringer at 01:33pm on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:03am on Fri Mar 23, 2001

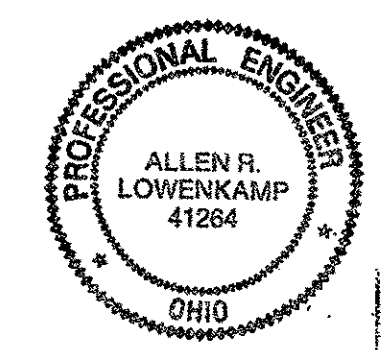


**2 - WIND SHEAR KEY TRANSVERSE FULL LENGTH REPLACEMENT - 253A**

ORIG SHIP DWG 84-B515  
 ORIG SHOP MARK AB4F  
 ITEM LINE NO. 0147  
 REPAIR SHEETS 5-102 & 170

NAT'L ENGR' & CONTR. CO.  
 By E. J. S.  
 MAR 26 2001

O.D.O.T. DIST. 12  
 ACCEPTED 2/4/01  
 ACCEPTED AS NOTED  
 NOT ACCEPTED



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

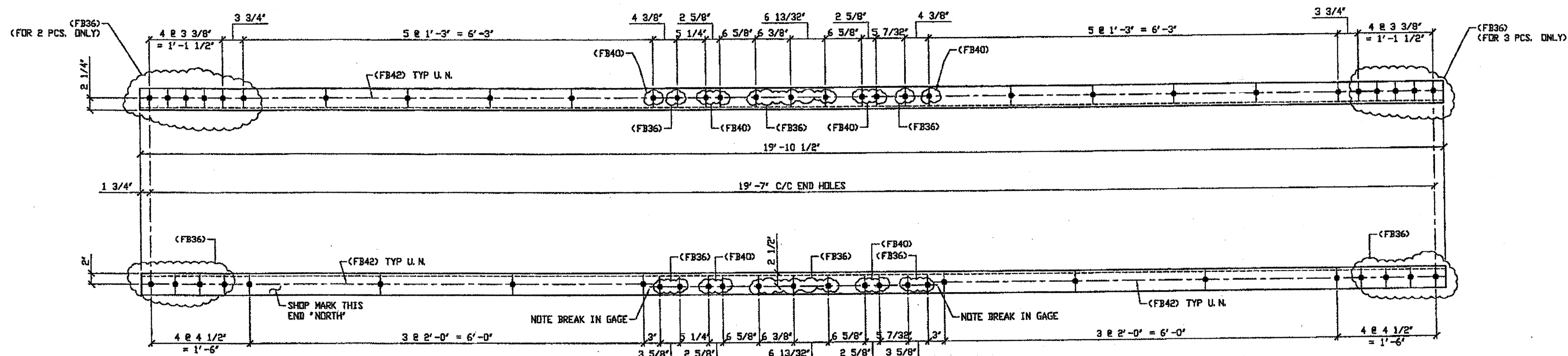
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONNEAUT, PA 15108  
 PHONE: (412) 831-3000  
 FAX: (412) 831-4001

DOT ITEM LINE NO. AS NOTED		
DOT BID ITEM NO. 863E50000		
NO.	DATE	DESCRIPTION REVISIONS
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO		
BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS		
DRAWN BY: RAS	DATE: 02/27/01	SHEET NUMBER: 253
CHECKED BY: GAF	DATE: 03/21/01	AMB JOB NUMBER: 800010

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				WIND SHEAR KEY TRANSVERSE FULL LENGTH				
2		423A R/L	8	L 4 X 4 X 1/2	19	10 1/2	4/R; 2/L	
3								
4								
5								
6								
7				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB40		1" DIA	0	3	NOTE 2	
11		FB42		1" DIA	0	3 1/4	NOTE 2	
12								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
1. OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



8 - WIND SHEAR KEY TRANSVERSE FULL LENGTH REPLACEMENT - 423A R/L \*

ORIG SHIP DWG 293-BS38  
ORIG SHIP MARK A293a R/L  
REPAIR SHEET 11-102 & 227

- SPAN 11 A-A' NORTH TOPEAST 423A/L
- SPAN 11 A-A' NORTH TOP WEST 423A/R
- SPAN 11 A-A' NORTH BOTTOM EAST 423A/R
- SPAN 11 A-A' NORTH BOTTOM WEST 423A/L
- SPAN 11 A-A' SOUTH TOPEAST 423A/L
- SPAN 11 A-A' SOUTH TOP WEST 423A/R
- SPAN 11 A-A' SOUTH BOTTOM WEST 423A/L

SPAN 11 A-A' SOUTH BOTTOM EAST 423A/R

\* R/L can be ignored (consider symmetry in angle)



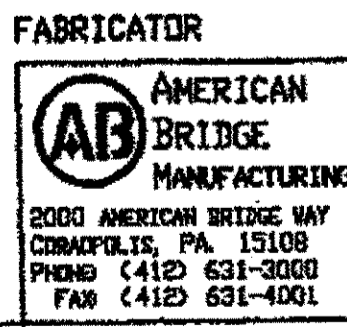
RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY tdp/tss

O.D.O.T. DIST. 12

ACCEPTED	2/1/02	P.P.T.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335



IN CHARGE OF L. SMITH  
DRAWN BY: DATE  
AKW 01/07/02  
CHECKED BY: DATE  
GAF 02/20/02

DOT ITEM LINE NO. 0147  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

SHEET NUMBER: 423  
JOB NUMBER: 800010

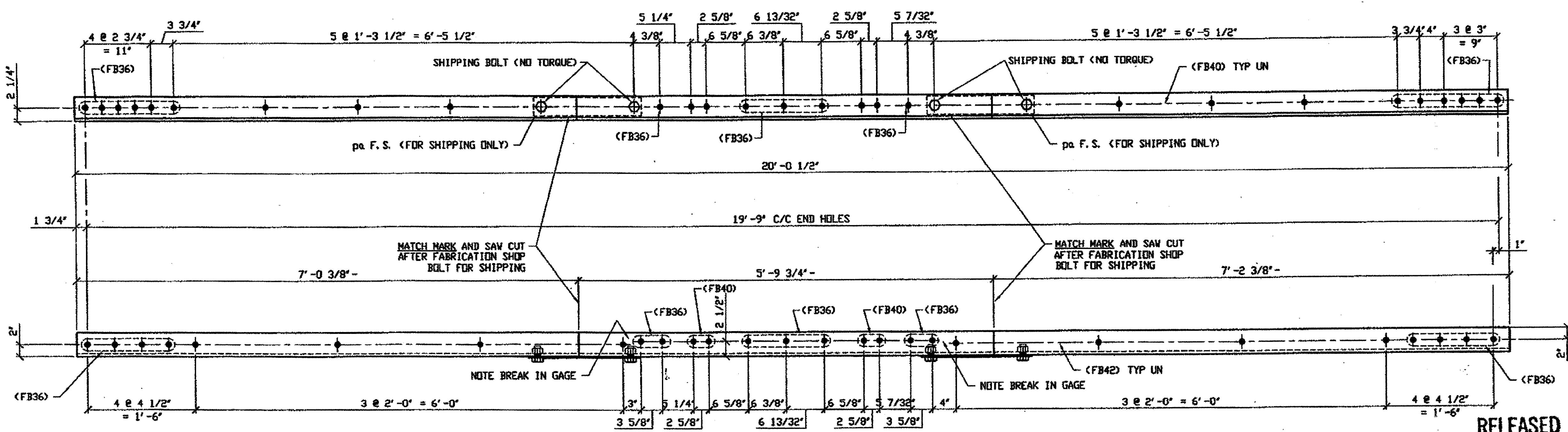
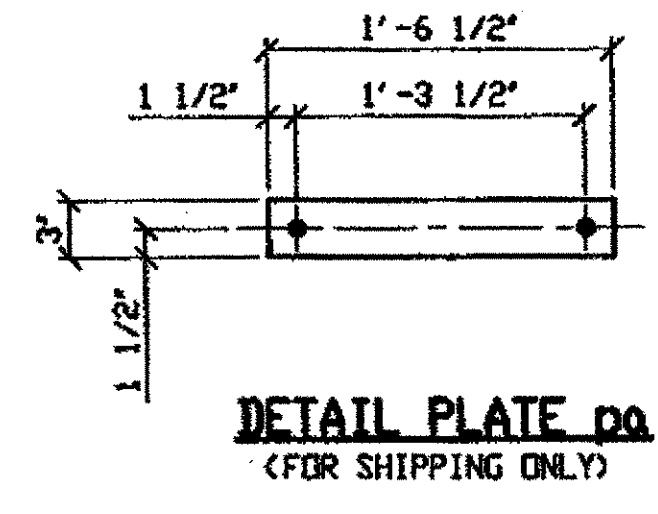
G:\Contracts\2000\800010\Drawings\14823A.dwg  
 Plotted at 09:23am Feb 21, 2002  
 Plot by rfb at 11:14am Feb 25, 2002  
 Model space plot + Scale = 1/9



BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				WIND SHEAR KEY TRANSVERSE FULL LENGTH				
2		297A R/L	8	L 4 X 4 X 1/2	20	0 1/2	R/L	
3		pa	16	PL 1/4 X 3	1	6 1/2		
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB40		1" DIA	0	3	NOTE 2	
11		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



8 - WIND SHEAR KEY TRANSVERSE FULL LENGTH REPLACEMENT - 297A R/L

SPAN 7

SPAN 7

- A-A' NORTH TOP EAST 297A/L
- A-A' NORTH TOP WEST 297A/R
- A-A' NORTH BOTTOM EAST 297A/R
- A-A' NORTH BOTTOM WEST 297A/L

- A-A' SOUTH TOP EAST 297A/R (AS SHOWN)
- A-A' SOUTH TOP WEST 297A/L
- A-A' SOUTH BOTTOM EAST 297A/L
- A-A' SOUTH BOTTOM WEST 297A/R

ORIG SHOP DWG 166-BS20/L  
ORIG SHOP MARK A166x R/L  
REPAIR SHEETS 7-181

RELEASED FOR CONSTRUCTION  
DATE 6/21/01 BY EDP

DOT ITEM LINE NO. 0147  
DOT BID ITEM NO. 863ES0000

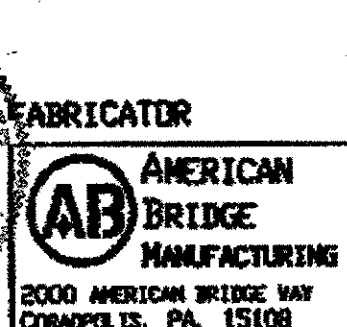
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN 7 REPAIRS			
SHEET NUMBER			297
JOB NUMBER			800010

O.D.O.T. DIST. 12

ACCEPTED	2/1/01	DSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONANVILLE, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

IN CHARGE DR. L. SMITH  
DRAWN BY: RAS  
DATE: 04/26/01  
CHECKED BY: GAF  
DATE: 05/16/01

Last modified by rspringer at \$ (EDTIME, ??) - Last plotted by rspringer at 10:32am on Wed May 16, 2001

- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{ DIA})$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				WIND SHEAR KEY TRANSVERSE FULL LENGTH	19	10 1/2	4/R/ 4/L	2035
2		337A R/L	8	L 4 X 4 X 1/2				
3								
4				SPLICE PLATE				
5								
6		337B	32	BAR 3 1/2 X 1/2	0	6	PLAIN MATL	95
7								
8				FIELD BOLTS				
9		FB36	200	1" DIA	0	2 1/2	NOTE 2	279
10		FB40	80	1" DIA	0	3	NOTE 2	120
10		FB42	144	1" DIA	0	3 1/4	NOTE 2	224
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

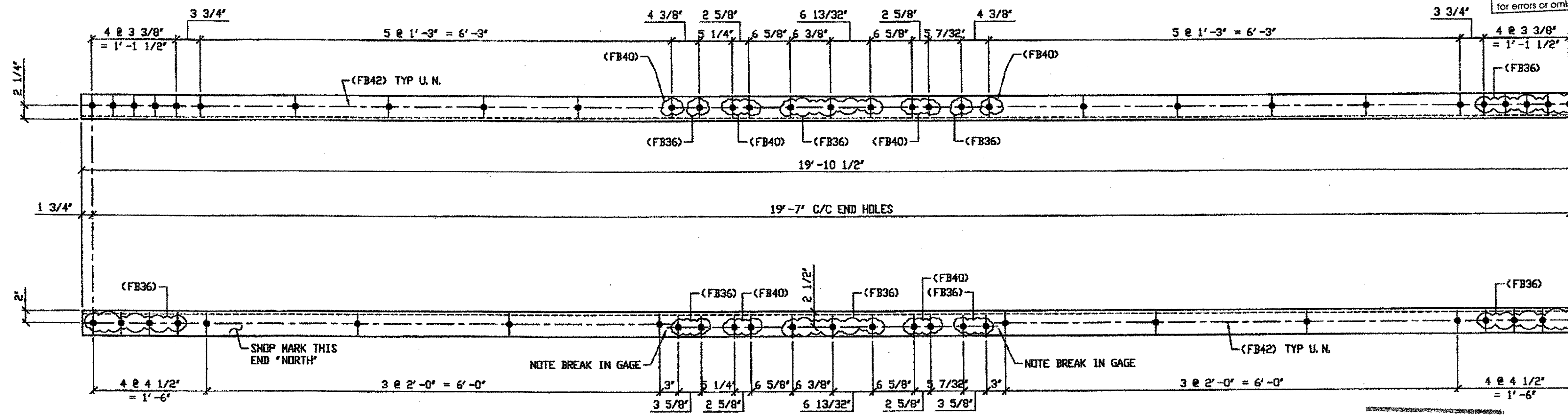
O.D.O.T. DIST. 12

ACCEPTED  2/9/04 ASYM

ACCEPTED AS NOTED

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



B - WIND SHEAR KEY TRANSVERSE FULL LENGTH REPLACEMENT - 337A R/L \*

ORIG SHOP DWG 293-BS36  
ORIG SHOP MARK A293a R/L  
REPAIR SHEET 9-102 & 190

**SPAN 9**

A-A' NORTH TOP EAST 337A/L

A-A' NORTH TOP WEST 337A/R

A-A' NORTH BOTTOM EAST 337A/R

A-A' NORTH BOTTOM WEST 337A/L

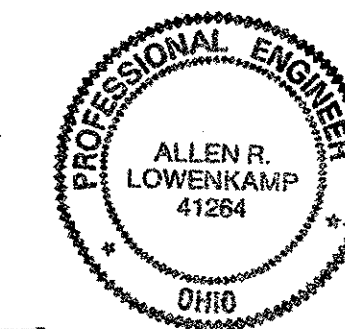
**SPAN 9**

A-A' SOUTH TOP EAST 337A/L

A-A' SOUTH TOP WEST 337A/R

A-A' SOUTH BOTTOM EAST 337A/R

A-A' SOUTH BOTTOM WEST 337A/L



DOT ITEM LINE NO. 0147  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
A	12/10/01	REMOVED SPLICE PER APPROVAL COMMENTS	GAF

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CONAPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 9 REPAIRS

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 07/11/01  
CHECKED BY: DATE  
GAF 08/22/01

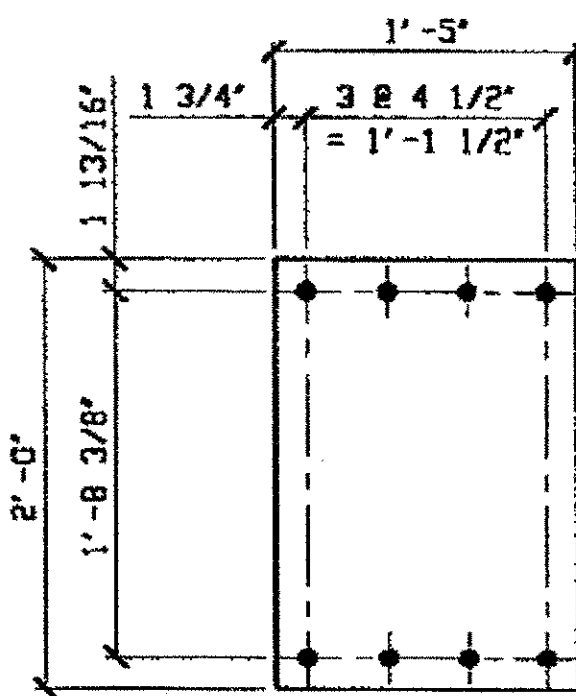
SHEET NUMBER: 337  
JOB NUMBER: 800010

\* R/L can be ignored (consider symmetry in angle)

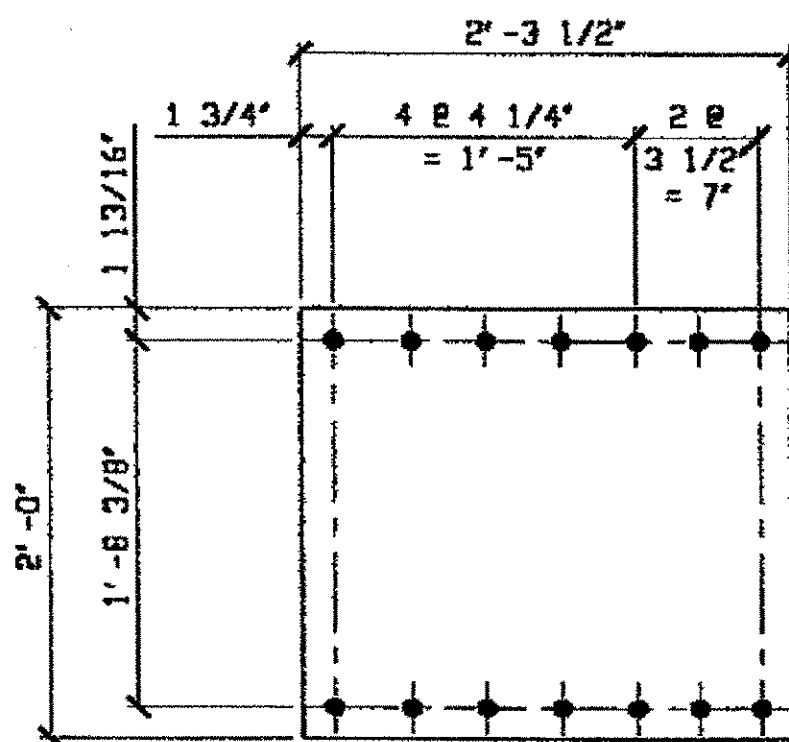
G:\Contracts\2000\800010\Drawings\337A.dwg  
Save by rspir at 08:04am Dec 17, 2001  
Plot by ofos at 09:42am Dec 17, 2001  
Model space plot + Scale = 1/9



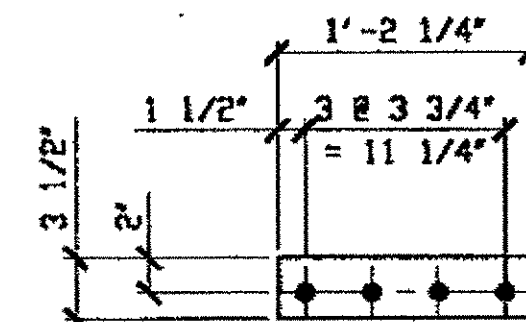
Last modified by Repringer at 11:07am on Fri Dec 08, 2000 - Last plotted by Gfooster at 10:34am on Tue Dec 19, 2000



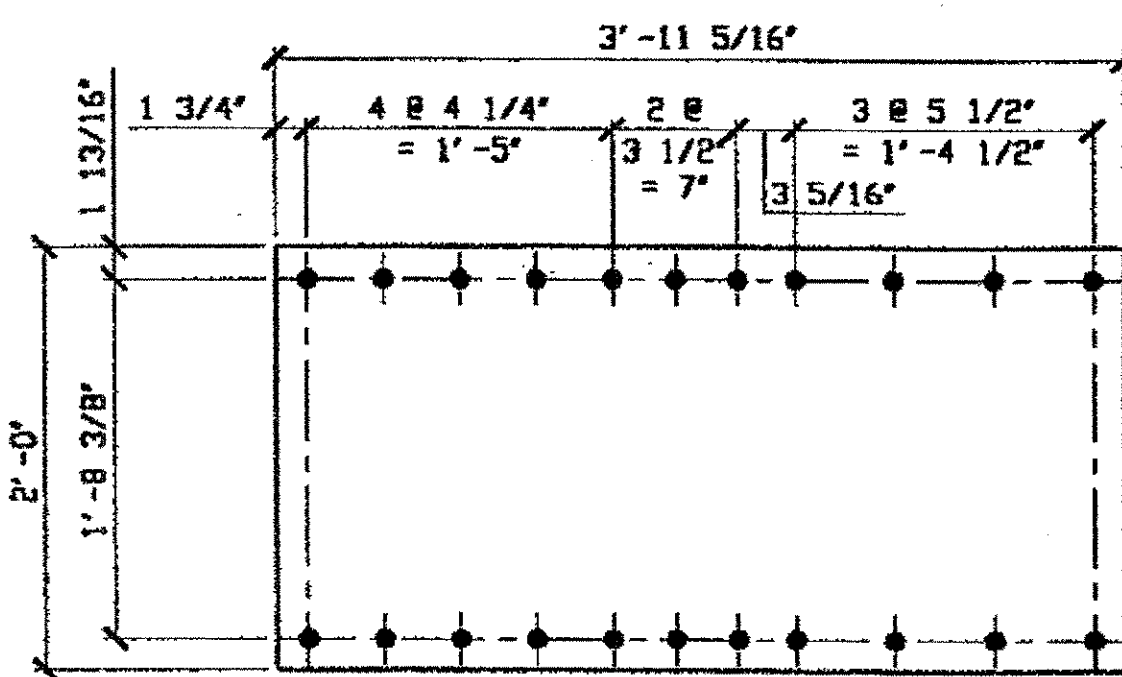
DETAIL PLATE pd



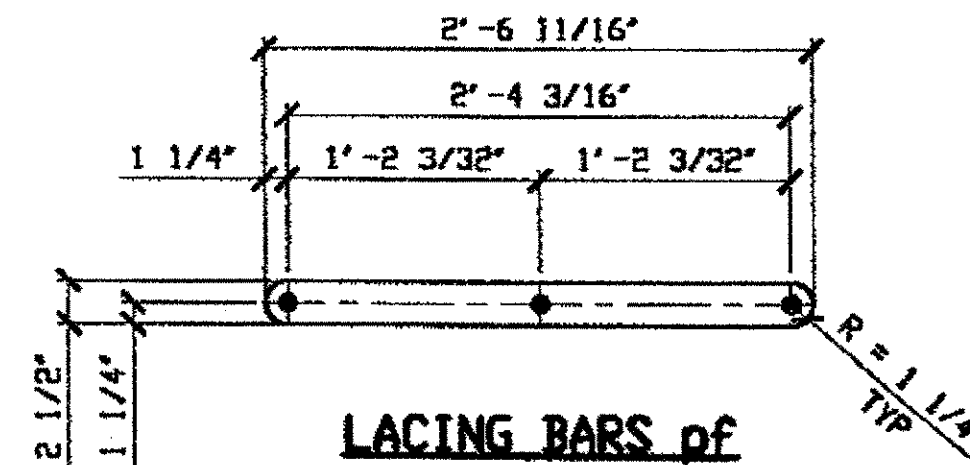
DETAIL PLATE pd



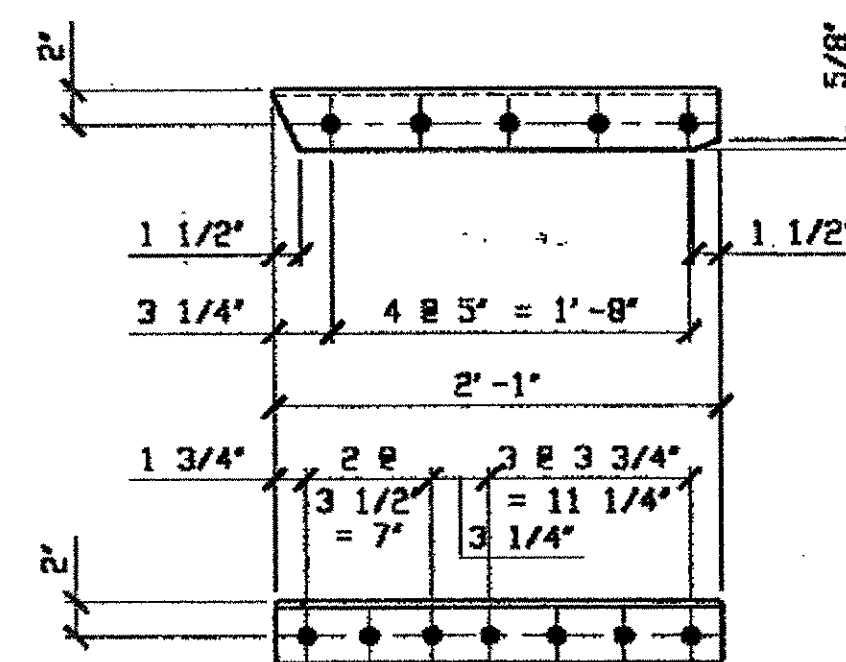
FILL PLATE ph



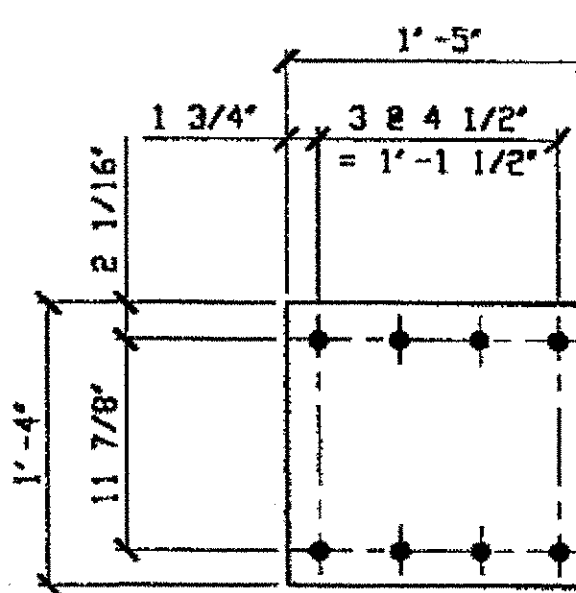
DETAIL PLATE pb



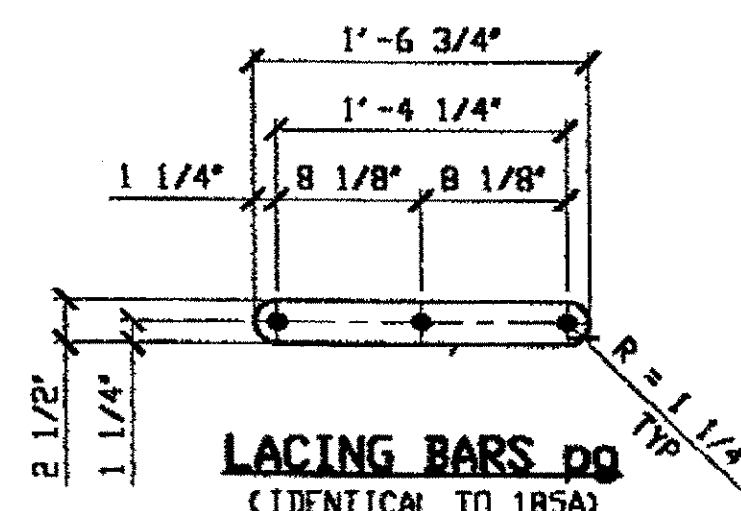
LACING BARS pf  
(IDENTICAL TO 185B)



ANGLE ac R/L

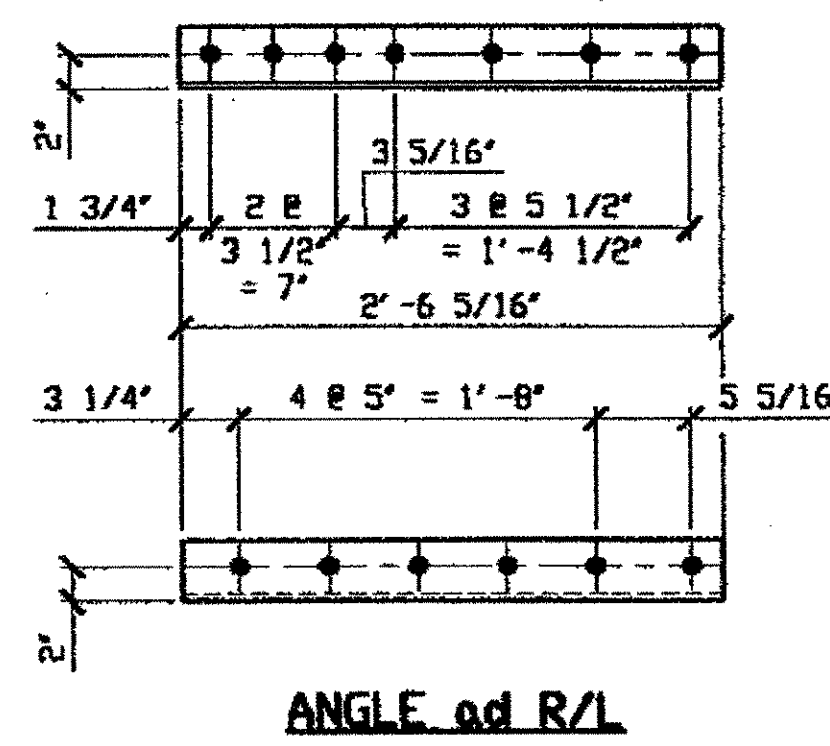


DETAIL PLATE pc



LACING BARS pg  
(IDENTICAL TO 185A)

O.D.O.T. DIST. 12  
ACCEPTED [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
ACCEPTED AS NOTED [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
NOT ACCEPTED [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



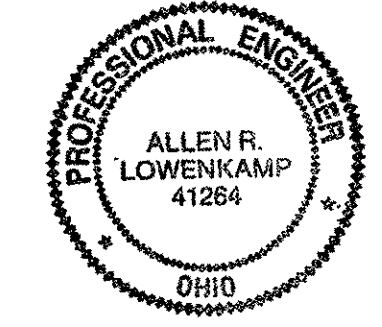
ANGLE ad R/L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		188A R/L	3	WIND SHEAR KEY DIAGONAL			2/R; 1/L	7735
2		aa R/L	6	L 3 1/2 X 3 1/2 X 3/8	22	4		1140
3		ab R/L	6	L 3 1/2 X 3 1/2 X 3/8	23	3 3/16		1189
4		ac R/L	3	L 3 1/2 X 3 1/2 X 3/8	2	1	2/R; 1/L	53
5		ad R/L	3	L 3 1/2 X 3 1/2 X 3/8	2	6 5/16	2/R; 1/L	65
6		pa	6	PL 1/2 X 17	2	0		348
7		pb	3	PL 1/2 X 24	3	11 5/16		486
8		pc	6	PL 1/2 X 16	1	5		234
9		pd	3	PL 1/2 X 24	2	3 1/2		279
10		pf	126	PL 1/2 X 2 1/2	2	6 1/16		1368
11		pg	222	PL 1/2 X 2 1/2	1	6 3/4		1476
12		ba	333	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	464
13				W/ HVY HEX NUT & WASHER				
14		bb	342	1" DIA HVY HEX BOLT	0	3	NOTE 2	514
15				W/ HVY HEX NUT & WASHER				
16		bc	84	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	120
17				W/ HVY HEX NUT & WASHER				
18				FIELD BOLTS				
19								
20		FB36	63	1" DIA	0	2 1/2	NOTE 2	87
21								
22								
23								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE-TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DRAWING 188AB FOR SHOP ASSEMBLY.

THESE ARE THE PLATES, FILL PLATES, LACING BARS & CONNECTING ANGLES THAT ARE USED ON WIND SHEAR KEY DIAGONALS 188A/R, 188A/L, SPANS 2 & 4

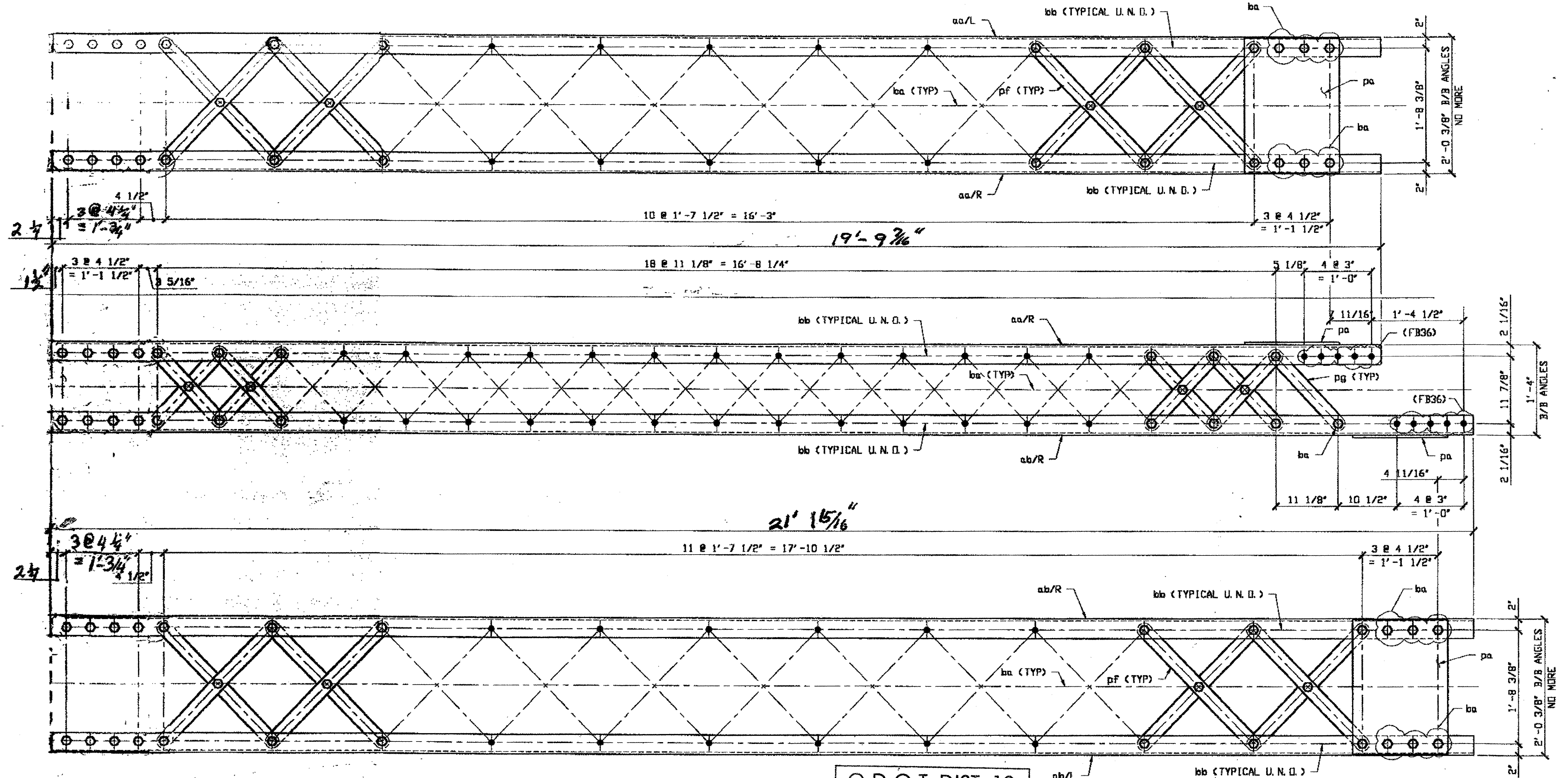
RELEASED FOR CONSTRUCTION  
DATE 1/31/01 BY tdf



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CINCINNATI, OH 45208  
PHONE: (419) 631-3000  
FAX: (419) 631-4003

DOT ITEM LINE NO. 0211		DOT BID ITEM NO. 863E30000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN REPAIRS			
IN CHARGE OF: L. SMITH		SHEET NUMBER: 188B	
DRAWN BY: DATE: RAS 12/06/00		JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 12/08/00			



Last modified by at \$ (EDTIME,??) on \$ (EDTIME,??) -|- Last plotted by Gfoster at 09:19am on Mon Feb 12, 2001

- NOTES:**
1. OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  4. SEE DRAWING 235B FOR DETAILS AND MATERIAL BILLS.
  5. SHOP BOLTS FINGER TIGHTEN ONLY \*DO NOT TORQUE\*.

(2) WIND SHEAR KEY DIAGONAL 235A  
 ORIG SHOP MARK BL29/L  
 ORIG SHOP DWG 72-BL29/L  
 IDENTICAL TO 188A/L  
 REPAIR SHEET 4-102 & 4-116

SPAN 4 A-B NORTH 235A  
SPAN 2 B-A SOUTH 235A

R/L can be ignored

**NOTE:**  
DIMENSIONS FOR PLATES Pa, LACING  
BARs Pf AND LACING BARs P9 ARE ON SHEET 188B

O.D.O.T. DIST. 12	
ACCEPTED	2/14/01
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

FEB 13 2001

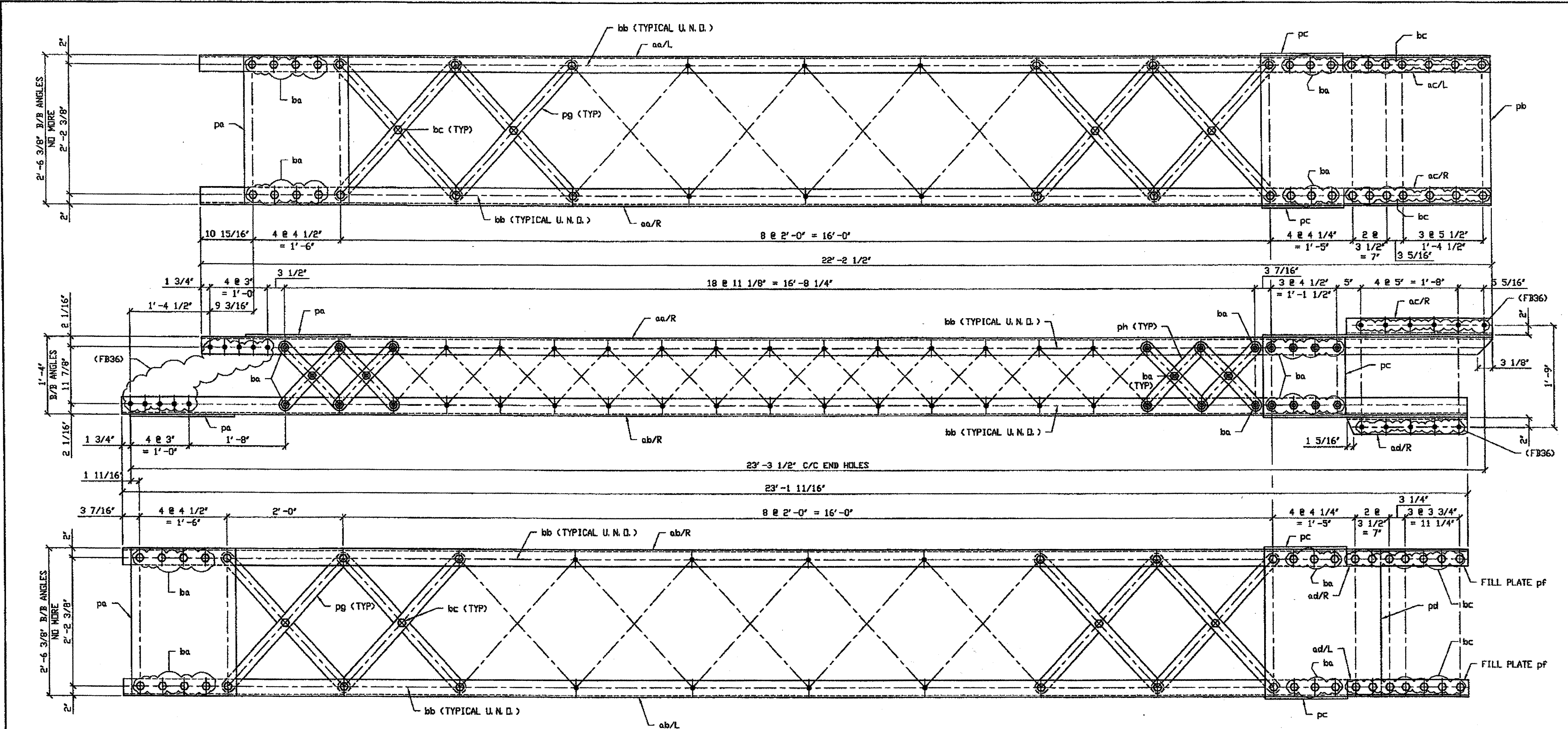


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12609 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE HWY  
 CUMBERLAND, PA 15109  
 PHONE: (412) 631-2000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0211  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN : REPAIRS			
SHEET NUMBER: 235AB			ARM. JOB NUMBER: 800010



G:\Contracts\2000\800010\Drawings\319AB.dwg  
 Save by gfos at 10:18am Nov 27, 2001  
 Plot by gfos at 02:36pm Nov 27, 2001  
 Model space plot + Scale = 1/8" = 1' 0"

- NOTES:
- OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DRAWING 319B FOR DETAILS AND MATERIAL BILLS.
  - SHOP BOLTS FINGER TIGHTEN ONLY "DO NOT TORQUE".

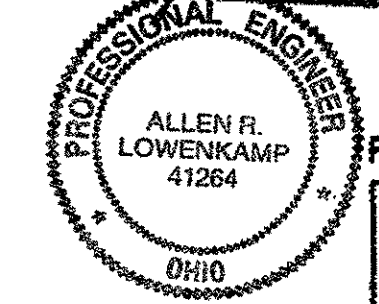
**2 - WIND SHEAR KEY DIAGONAL COMPLETE REPLACEMENT - 319A**

ORIG SHOP MARK BL52 R/L  
 ORIG SHOP DWG 142  
 REPAIR SHEET 8-121  
 (IDENTICAL TO 275A/R)

**SPAN 8 E-F NORTH 319A**  
**SPAN 6 E-F SOUTH 319A**

R/L can be ignored

**FOR CONSTRUCTION**  
 DATE 11/28/01 BY *EDP/TS*

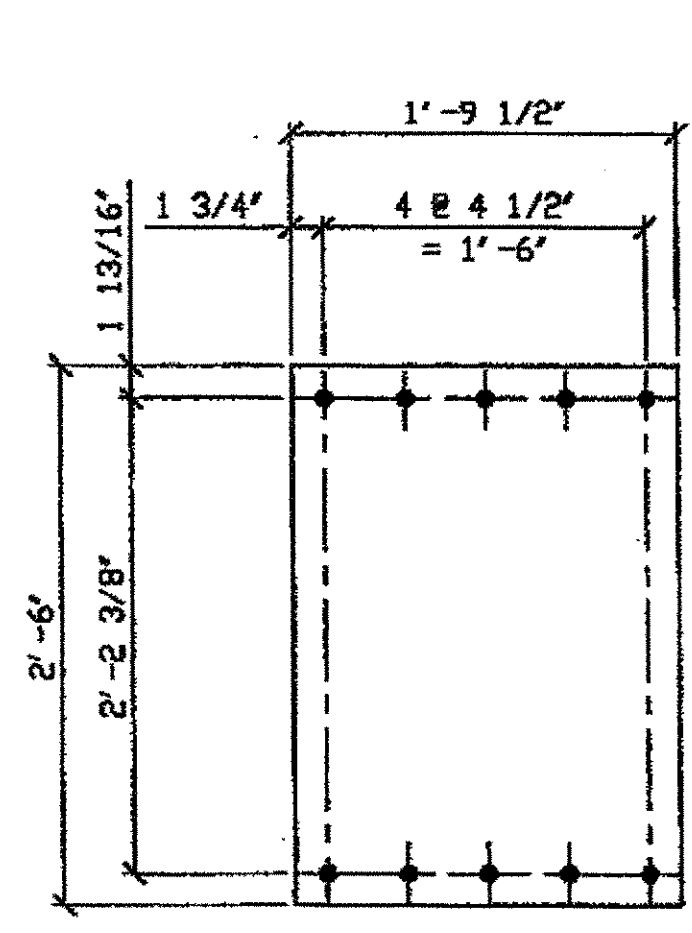


O.D.O.T. DIST. 12  
 ACCEPTED AS NO. 219101 DSYM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

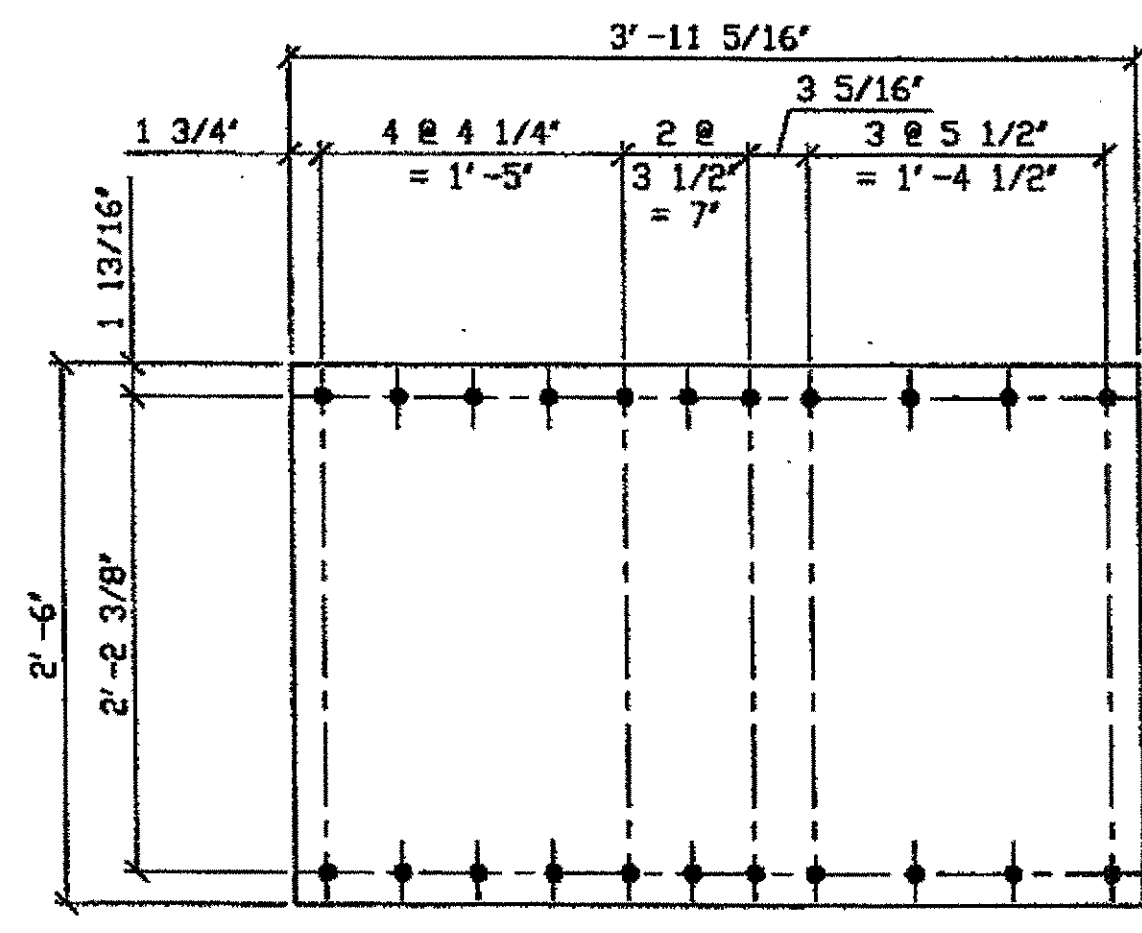
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 531-3000  
 FAX (412) 531-4001  
 IN CHARGE OF L. SMITH  
 DRAWN BY: DATE:  
 JRC 05/10/01  
 CHECKED BY: DATE:  
 GAF 08/07/01

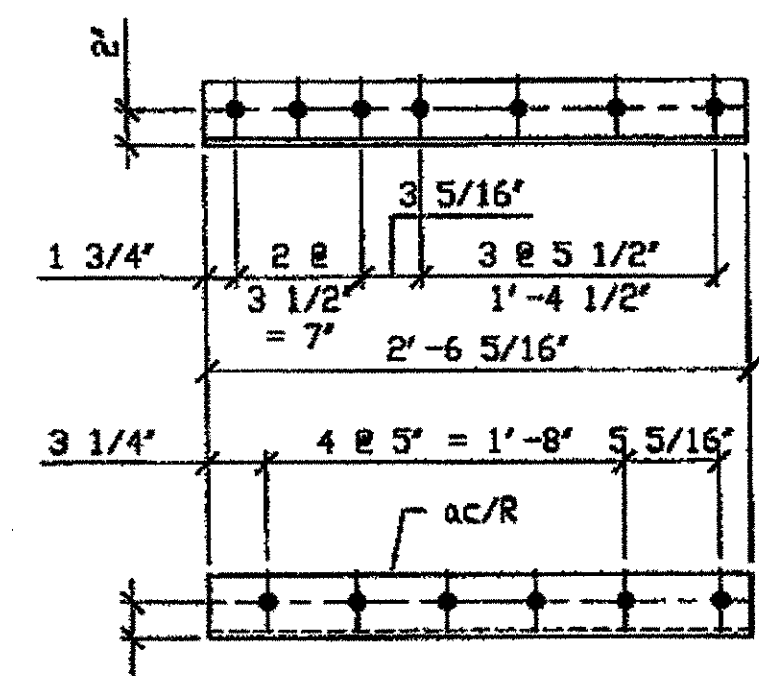
DOT ITEM LINE NO. 0211		DOT BID ITEM NO. 863E50000	
NO.	DATE	REVISED QTY.	PER APPROVAL
DESCRIPTION		GAF	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS			
SHEET NUMBER		319AB	
AWJ JOB NUMBER		800010	



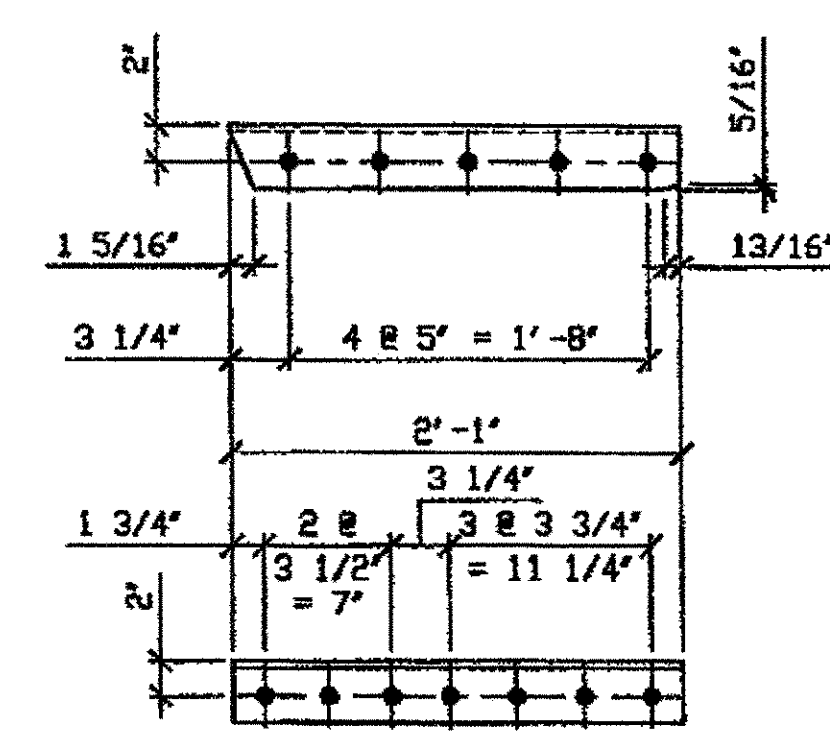
DETAIL PLATE pa



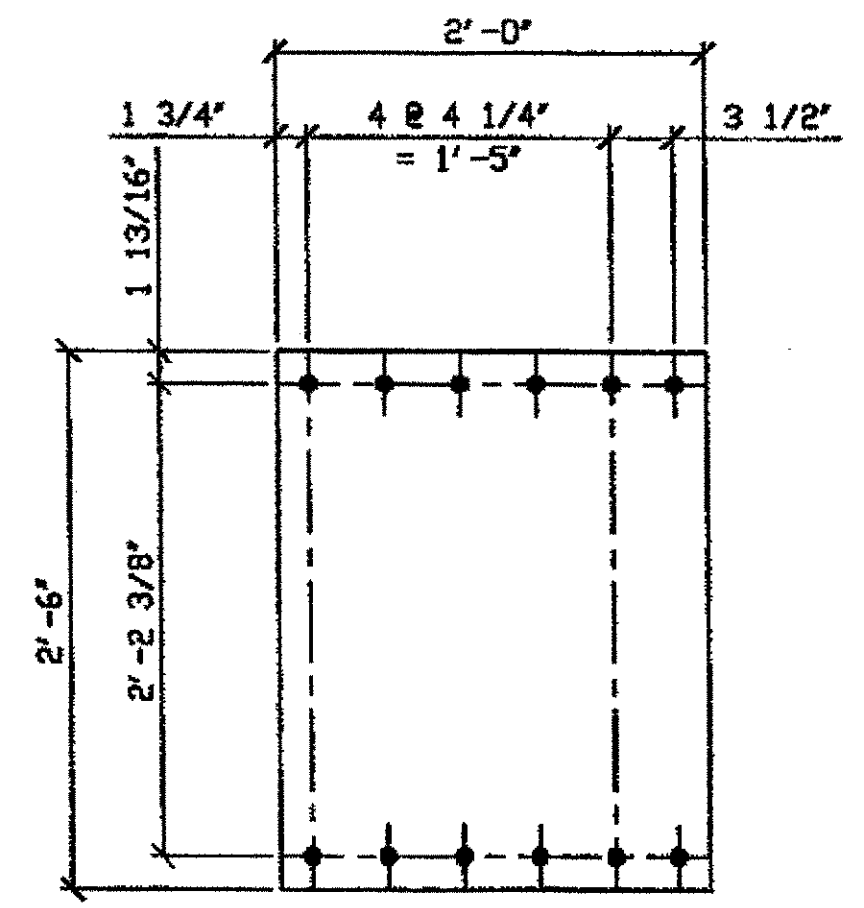
DETAIL PLATE pb



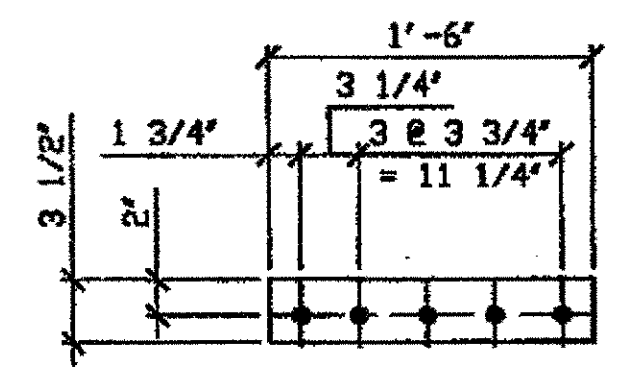
ANGLE ac R/L



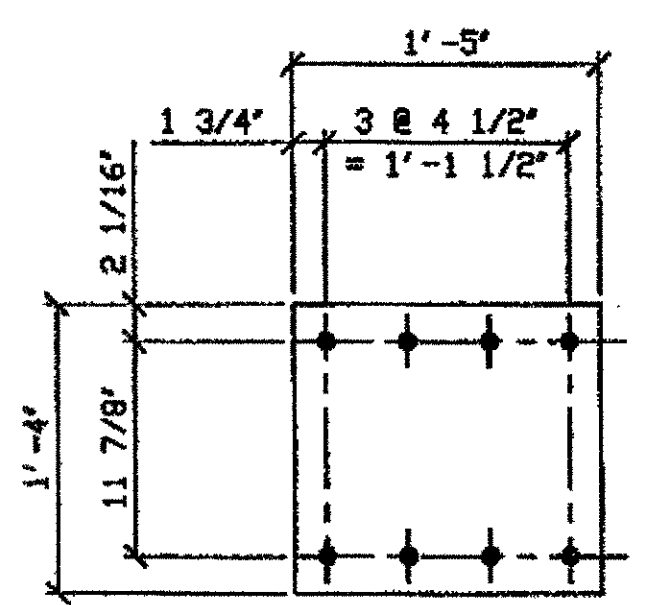
ANGLE ad R/L



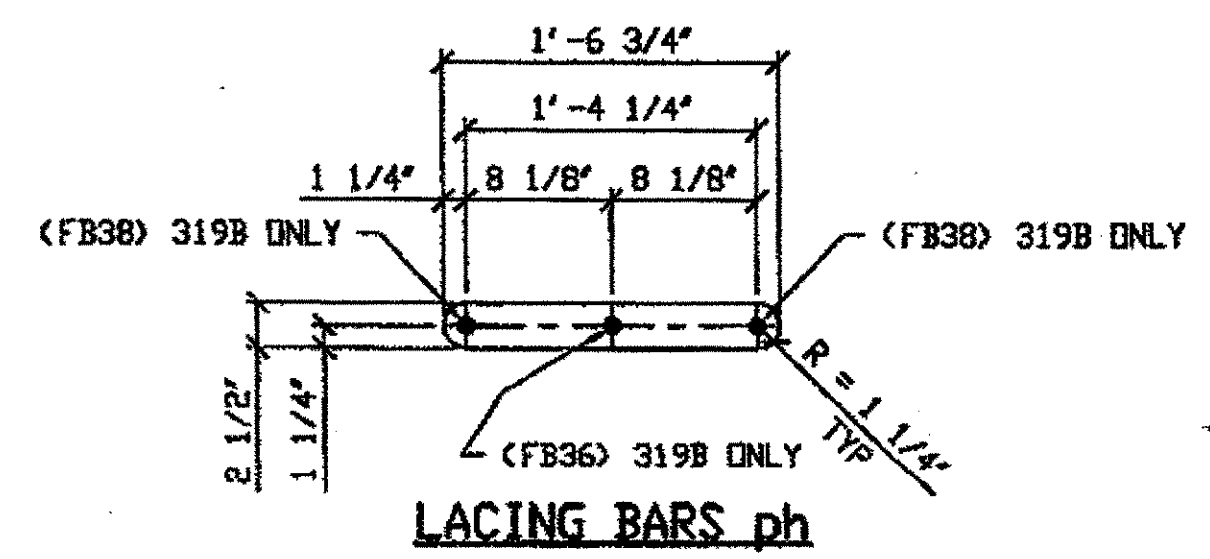
DETAIL PLATE pd



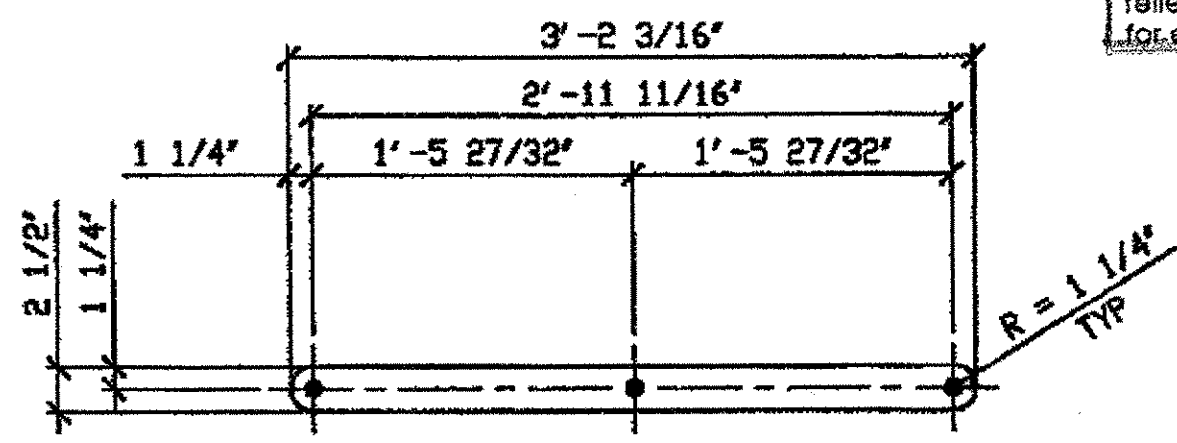
FILL PLATE pf



DETAIL PLATE pc



LACING BARS ph



DETAIL PLATE pg

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED 2/7/04 P.J.M.  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DRAWING 319AB FOR SHOP ASSEMBLY.
- ★ 5. BILL OF MATERIAL FOR ONE UNIT ONLY

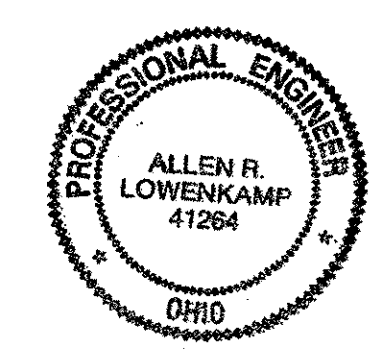
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		319A	1	WIND SHEAR KEY DIAGONAL				2811
2		aa R/L	2	L 3 1/2 X 3 1/2 X 3/8	22	2 1/2		377
3		ab R/L	2	L 3 1/2 X 3 1/2 X 3/8	23	1 11/16		393
4		ac R/L	2	L 3 1/2 X 3 1/2 X 3/8	2	6 5/16		43
5		ad R/L	2	L 3 1/2 X 3 1/2 X 3/8	2	1		36
6		pa	2	PL 1/2 X 21 1/2	2	6		183
7		pb	1	PL 1/2 X 30	3	11 5/16		201
8		pc	2	PL 1/2 X 16	1	5		77
9		pd	1	PL 1/2 X 24	2	6		102
10		pe	2	PL 1/2 X 3 1/2	1	6		18
11		pg	34	BAR 2 1/2 X 5/8	3	2 3/16		574
12		ph	72	BAR 2 1/2 X 1/2	1	6 3/4		478
13		ba	88	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	123
14				W/ HVY HEX NUT & WASHER				
15		bb	110	1" DIA HVY HEX BOLT	0	3	NOTE 2	165
16				W/ HVY HEX NUT & WASHER				
17		bc	28	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	41
18				W/ HVY HEX NUT & WASHER				
19								
20								
21								
22								
23								
24								
25								
26								
27				FIELD BOLTS				
28		FB36		1" DIA	0	2 1/2	NOTE 2	
29		FB38		1" DIA	0	2 3/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

G:\Contracts\2000\800010\Drawings\319B.dwg  
 Save by gfos at 10:18am Nov 27, 2001  
 Plot by gfos at 02:33pm Nov 27, 2001  
 Model space plot + Scale = 1/5.6

DRG SHOP DWG 142-BL52/L  
 DRG SHOP MARK LX4  
 ITEM LINE No. 0138  
 REPAIR SHEET 8-139  
 (IDENTICAL TO 185A)

PARTS FOR 319 A SPAN 8 E-F NORTH 11/20/01 BY tdp/tss  
 PARTS FOR 319 A SPAN 6 E-F SOUTH

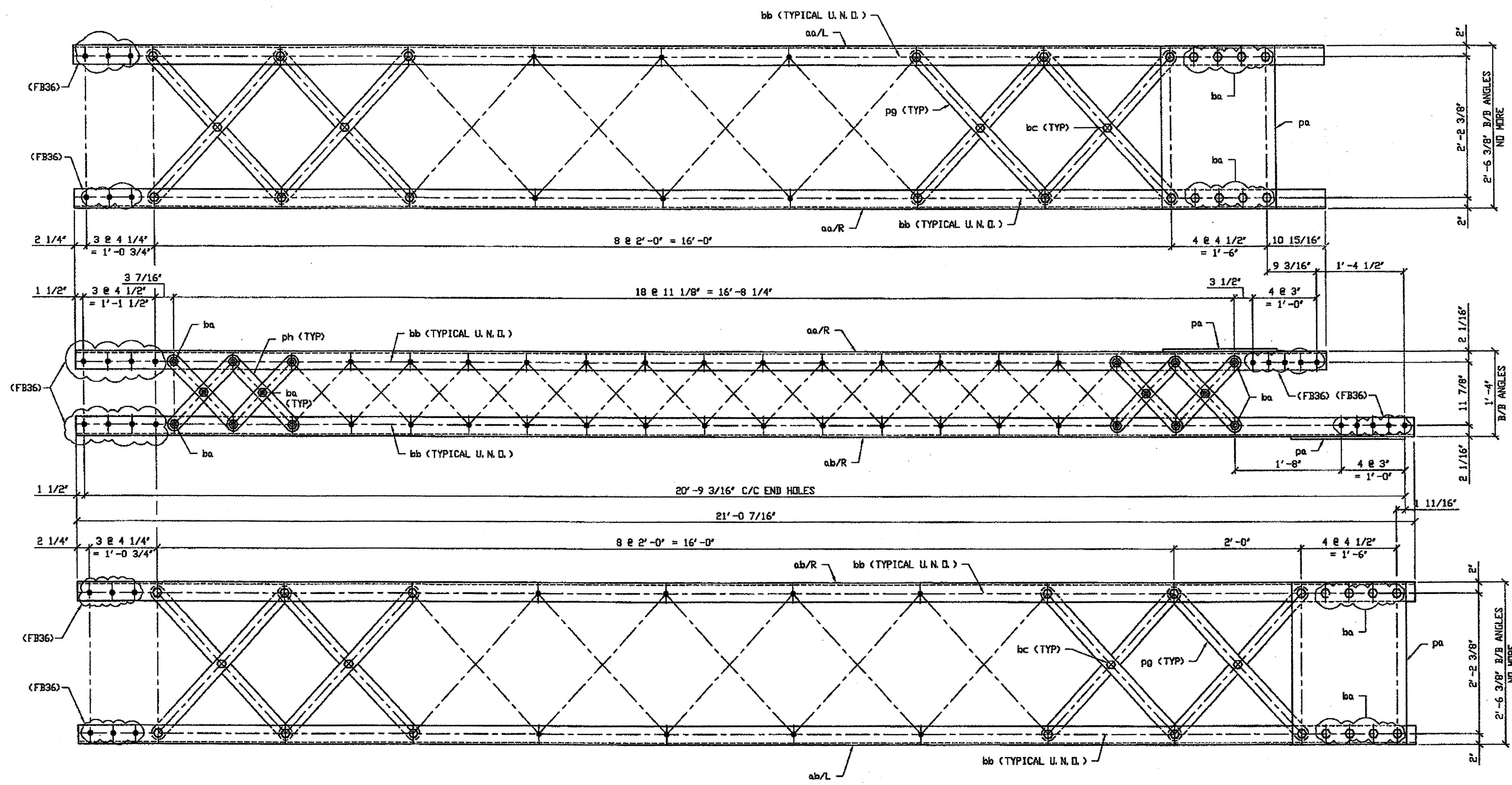
RELEASED FOR CONSTRUCTION



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 1260B ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COMBESVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS	
DRW N BY DATE	JRC 05/10/01
CHKD BY DATE	GAF 08/07/01
SHEET NUMBER	319B
AWB JOB NUMBER	80010



(3) - WIND SHEAR KEY DIAGONAL COMPLETE REPLACEMENT - 367A

ORIG SHOP MARK BL52/L  
ORIG SHOP DWG 142  
REPAIR SHEET 8-101

SPAN 8 A-B NORTH 367A  
SPAN 6 A-B NORTH 367A  
SPAN 6 A-B SOUTH 367A

RELEASED FOR CONSTRUCTION  
DATE 11/20/01 BY tlp/lss

NOTES:

- OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
- SEE DRAWING 367B FOR DETAILS AND MATERIAL BILLS.
- SHOP BOLTS FINGER TIGHTEN ONLY 'DO NOT TORQUE'.

O.D.O.T. DIST. 12  
ACCEPTED AS [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



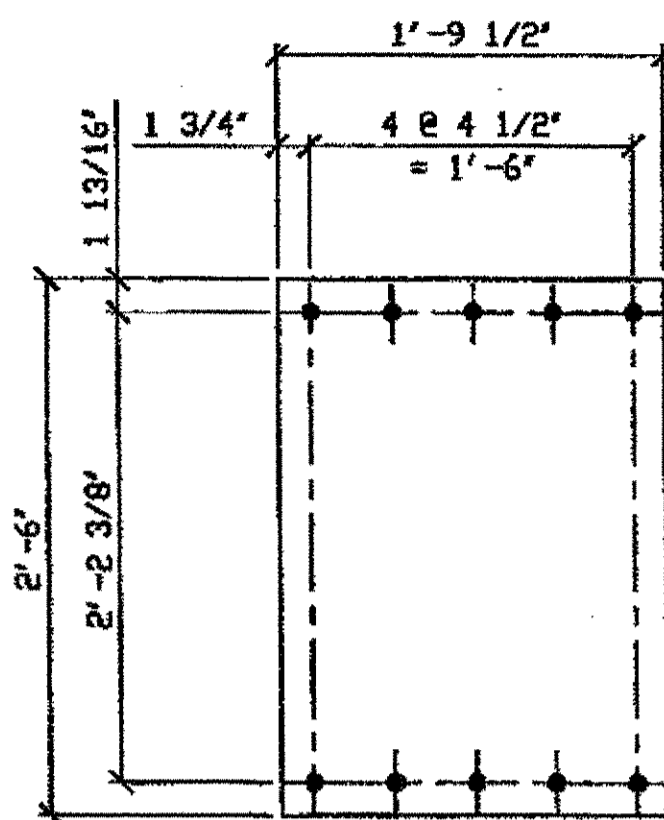
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

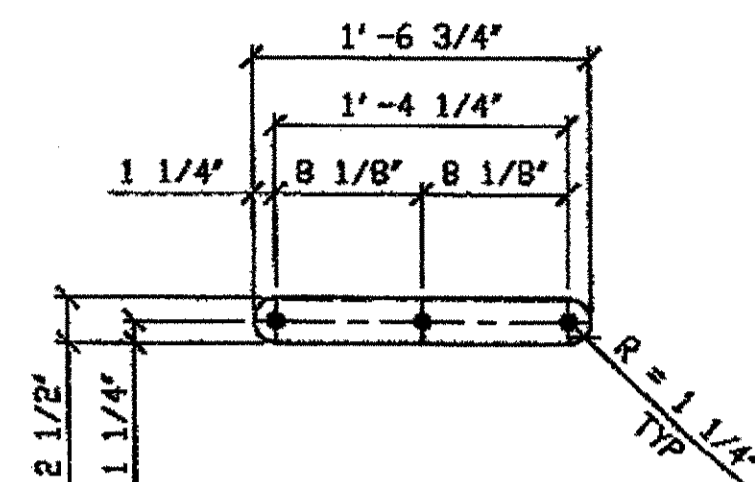
DOT ITEM LINE NO. 0211		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13			
SPAN REPAIRS			
DRAWN BY: GAF		DATE: 11/21/01	
CHECKED BY: GAF		DATE: 11/21/01	
IN CHARGE OF: L. SMITH		SHEET NUMBER: 367AB	
		JOB NUMBER: 800010	

G:\Contracts\2000\800010\Drawings\367AB.dwg  
Save by gfas at 10:18am Nov 27, 2001  
Plot by gfas at 02:33pm Nov 27, 2001  
Model space plot + Scale = 1/8" = 1'

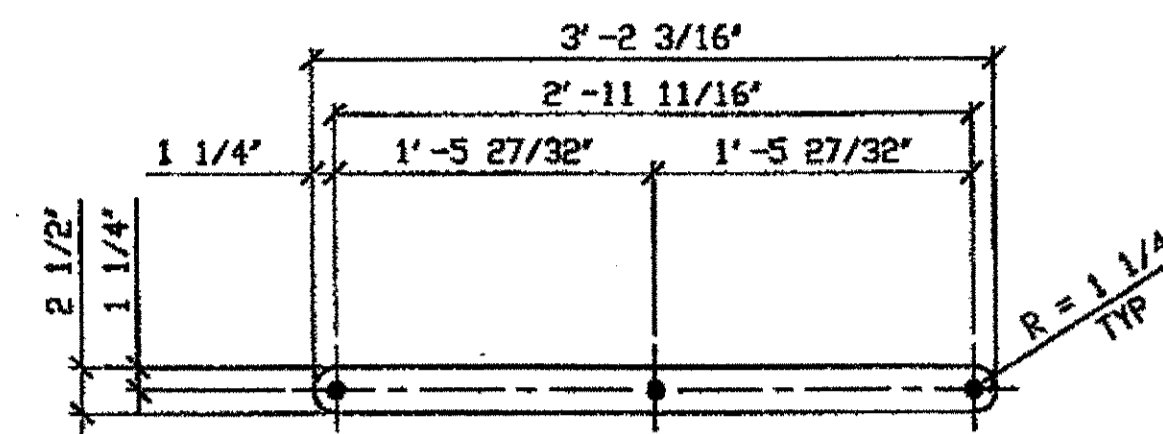




DETAIL PLATE pg  
(IDENTICAL TO 319pg)



LACING BARS ph  
(IDENTICAL TO 319ph)



DETAIL PLATE pg  
(IDENTICAL TO 319pg)

PARTS FOR 367A SPAN 8 A-B NORTH  
SPAN 6 A-B NORTH  
SPAN 6 A-B SOUTH

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'd	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		367A	1	WIND SHEAR KEY DIAGONAL				2196	
2		aa R/L	2	L 3 1/2 X 3 1/2 X 3/8	19	7 15/16		334	
3		ab R/L	2	L 3 1/2 X 3 1/2 X 3/8	21	0 7/16		358	
6		pa	2	PL 1/2 X 21 1/2	2	6		183	
11		pg	34	BAR 2 1/2 X 5/8	3	2 3/16		575	
12		ph	72	BAR 2 1/2 X 1/2	1	6 3/4		478	
13		ba	60	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	84	
14				W/ HVY HEX NUT & WASHER					
15		bb	106	1" DIA HVY HEX BOLT	0	3	NOTE 2	159	
16				W/ HVY HEX NUT & WASHER					
17		bc	17	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	25	
18				W/ HVY HEX NUT & WASHER					
19									
25									
26									
27				FIELD BOLTS					
28		FB36	30	1" DIA	0	2 1/2	NOTE 2	42	
PLATE		A36		PIPE	N/A			FITTINGS	N/A
SHAPES		A36		FLGS.	N/A			BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DRAWING 367AB FOR SHOP ASSEMBLY.
- ★ 5. BILL OF MATERIAL IS FOR ONE UNIT ONLY

O.D.O.T. DIST. 12	
ACCEPTED	2/7/01 ASM
ACCEPTED AS NOTED	
NOT ACCEPTED	

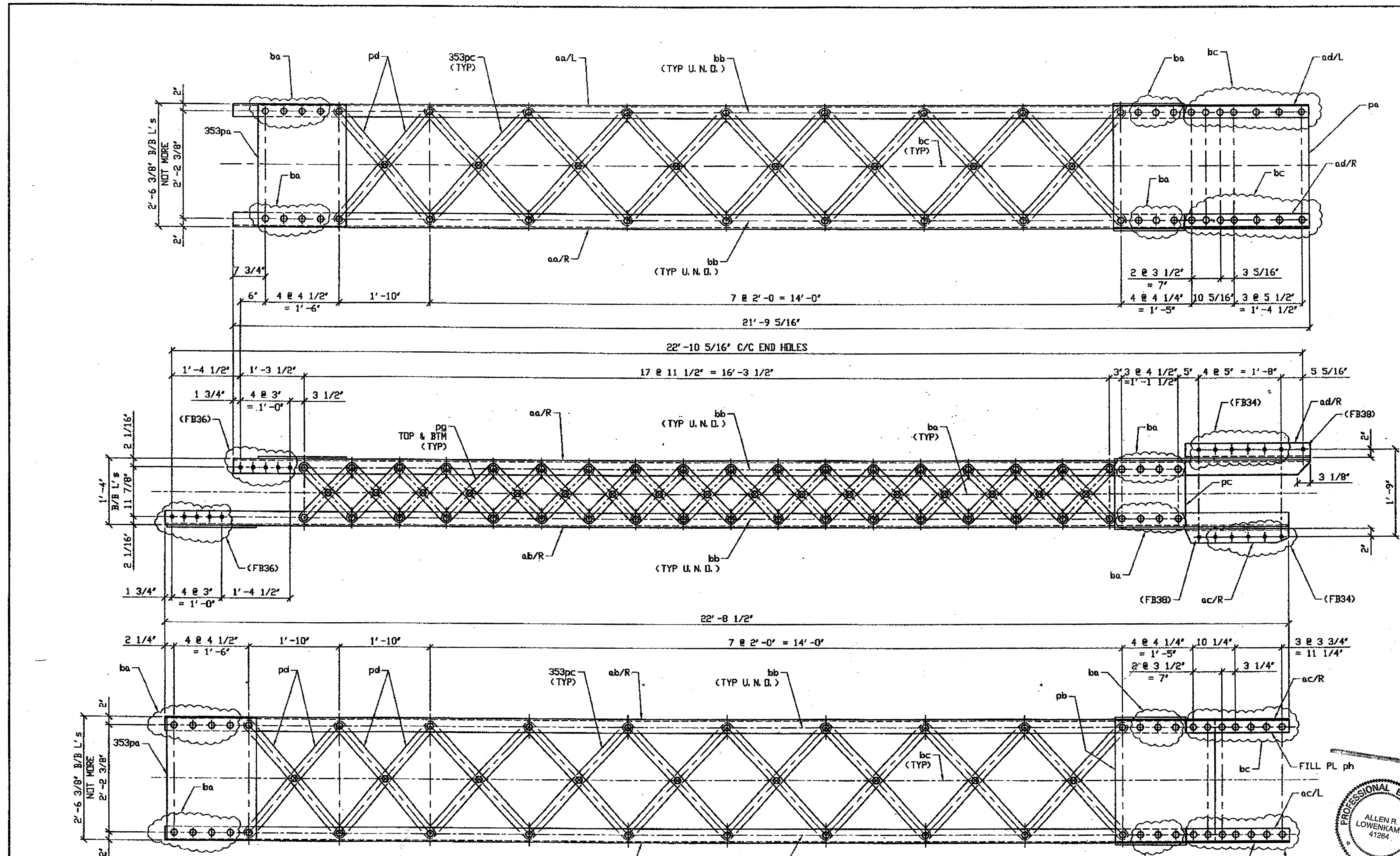
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 11/21/01 BY Edress

DOT ITEM LINE NO. 0211  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 8 REPAIRS			
STEEL ERECTOR TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		FABRICATOR AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORANPOLIS, PA. 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001	
DRAWN BY: DATE: GAF 11/21/01		IN CHARGE OF: L. SMITH	
CHECKED BY: DATE: GAF 11/21/01		SHEET NUMBER: 367B	
		ADM. JOB NUMBER: 800010	

G:\Contracts\2000\800010\Drawings\1367B.dwg  
Save by gfos at 10:18am Nov 27, 2001  
Plot by gfos at 02:33pm Nov 27, 2001  
Model space plot + Scale = 1/8" = 1' 6"



NOTES:

1. OPEN HOLES ARE (1 1/16\"/>

**ONE - TRUSS WIND KEY SHEAR DIAGONAL COMPLETE REPLACEMENT - 355A**

ORIG SHOP DWG 225-BL80R  
ORIG SHOP MARK BL80R  
ITEM No. 0211  
REPAIR SHEET 10-128

**SPAN 10 G-F NORTH 355A**

O.D.O.T. DIST. 12	
ACCEPTED	2/9/04 D57M
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR. & CONTR. CO.  
*Ed Press*

JAN 18 2002



DOT ITEM LINE NO. 0211  
DOT BID ITEM NO. 863E50000

NO.	DATE	REVISION	BY
A	1/17/02	REVISED PER APPROVAL COMMENTS	GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 10 REPAIRS**



AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR

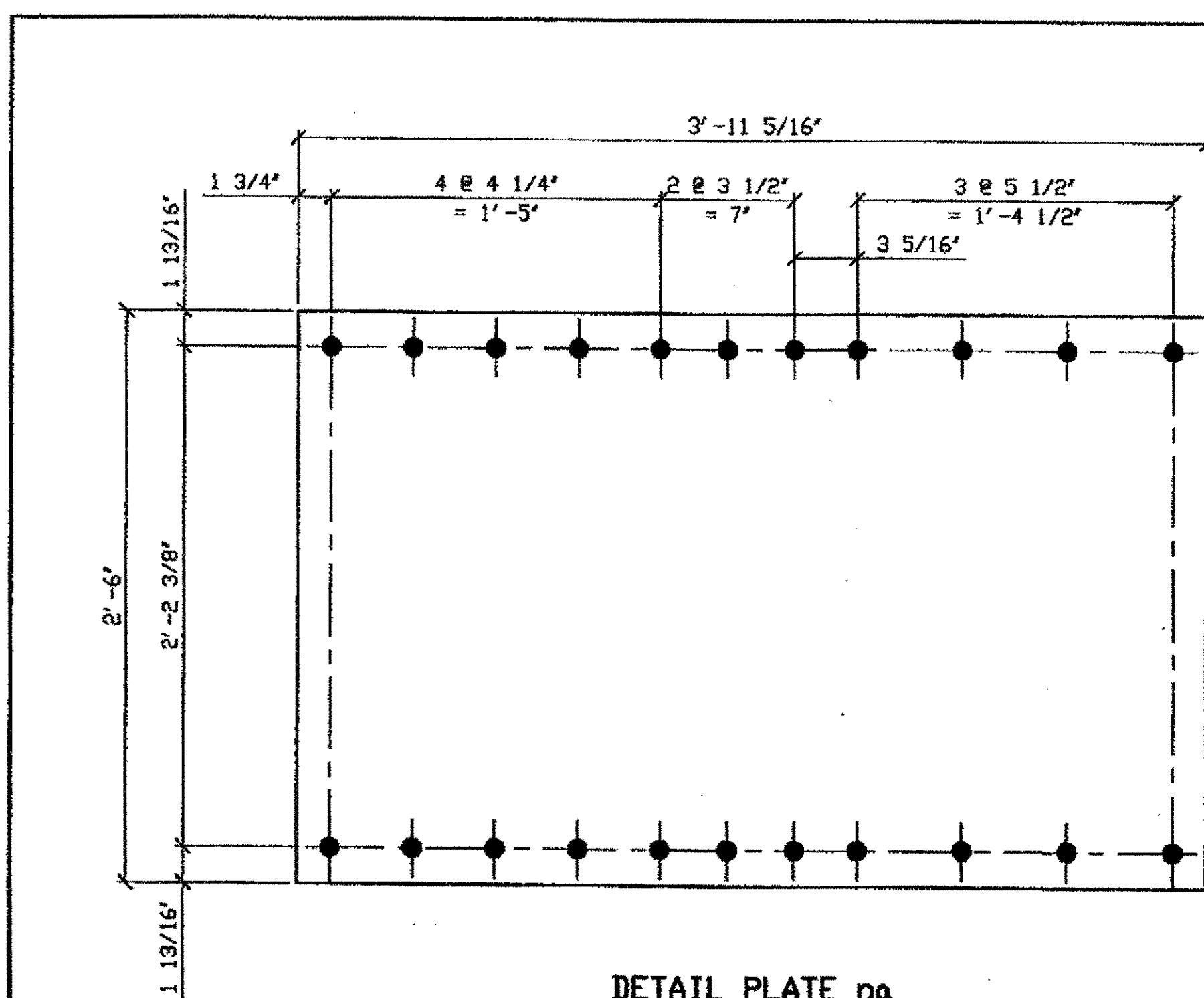
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE: L. SMITH

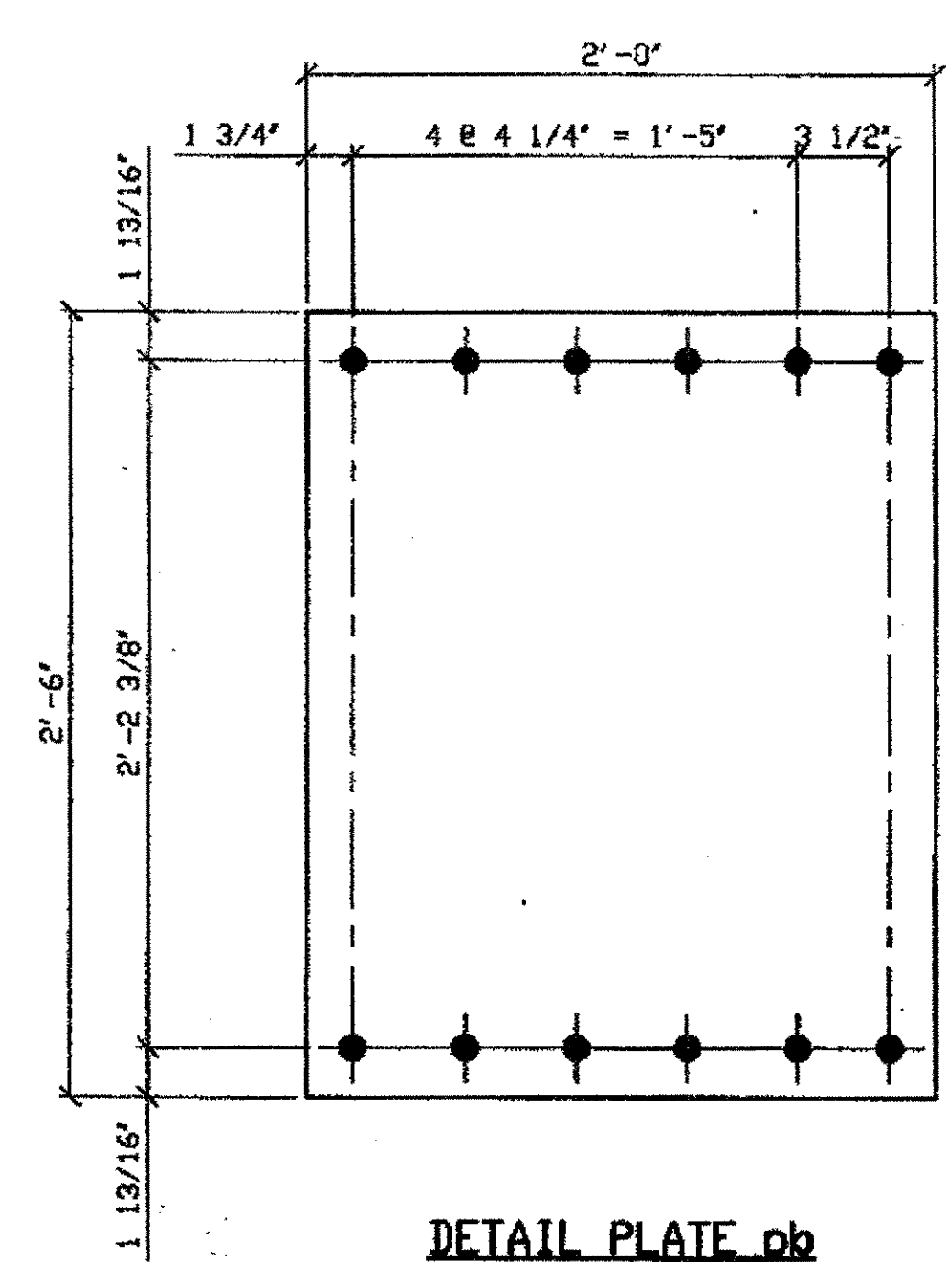
DRAWN BY: DATE:  
AMV 07/19/01  
CHKD BY: DATE:  
GWG 12/05/01

SHEET NUMBER:	355AB
ARM JOB NUMBER:	800010

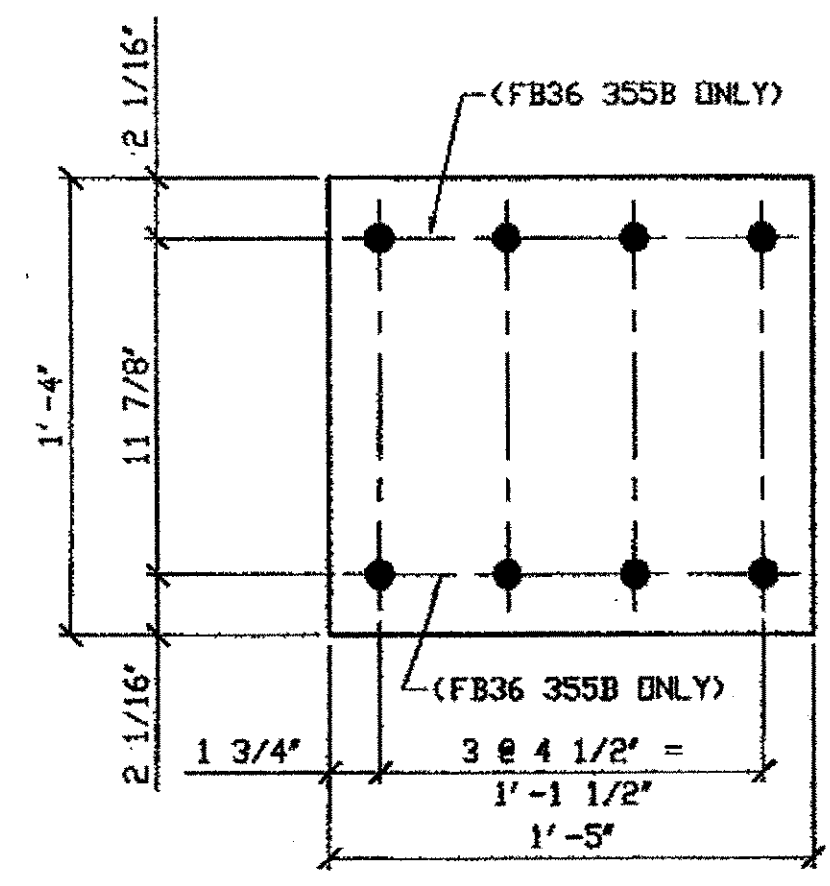
G:\Contractor\000\800010\Drawings\355A.dwg  
Save by: t 01:24pm Jan 17, 2002  
Plot by: bh at 09:54pm Jan 17, 2002  
Model space plot + Scale = 1/12



DETAIL PLATE pa

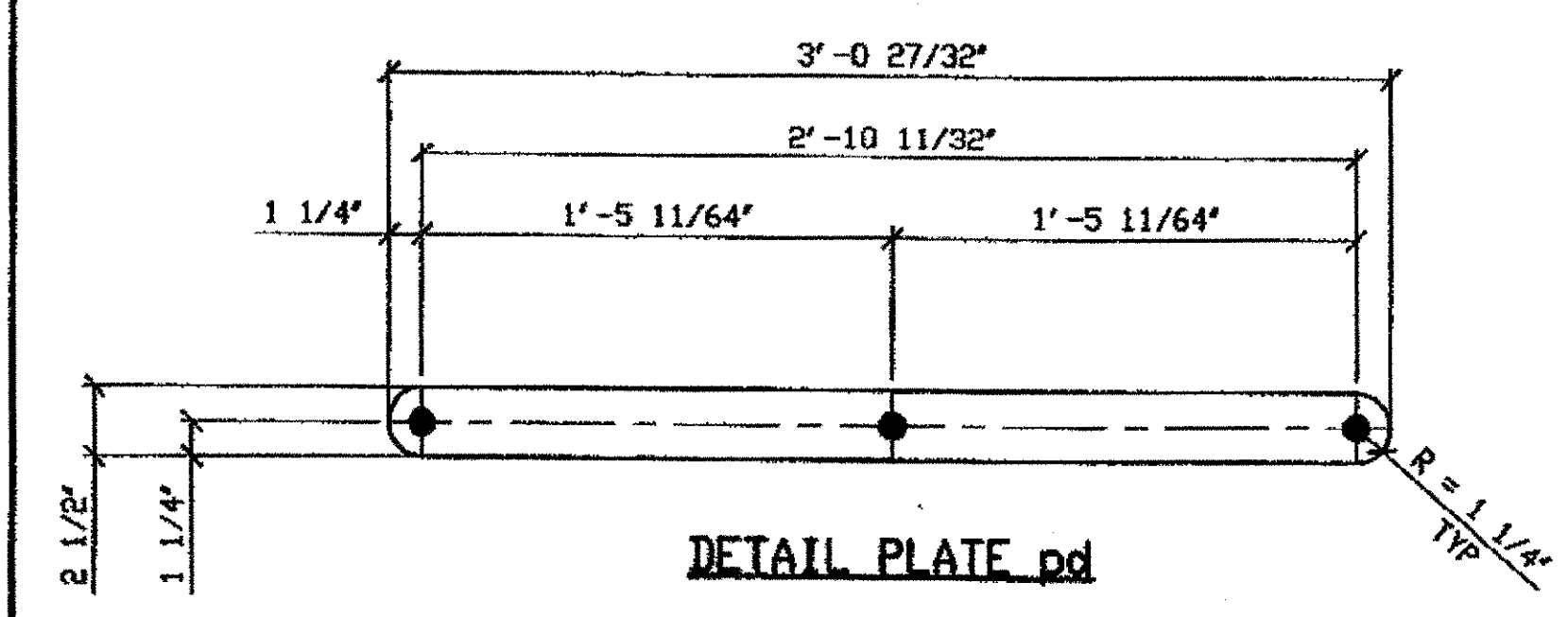


DETAIL PLATE pb

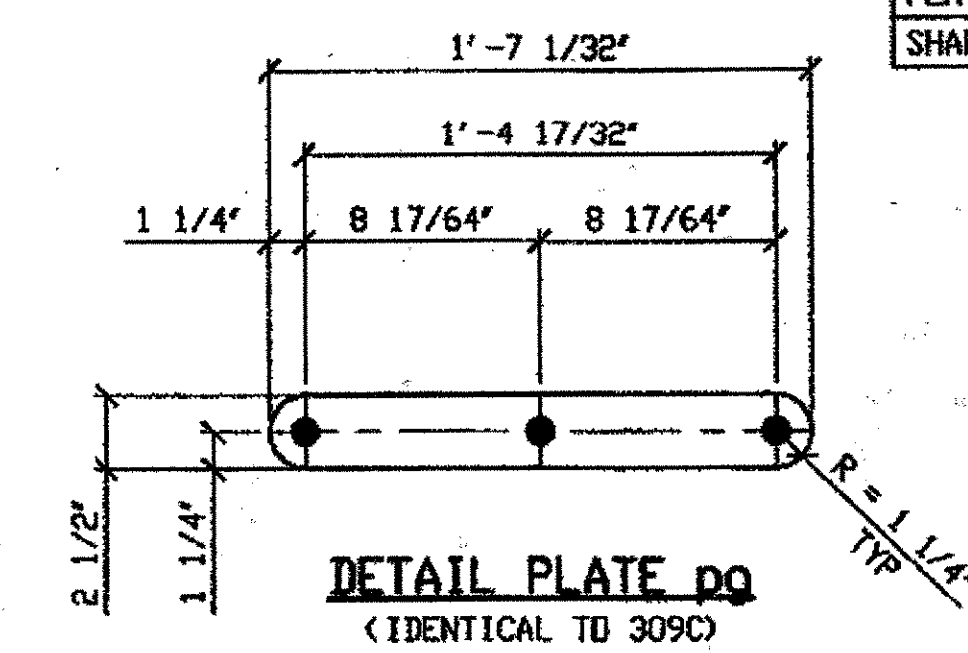


DETAIL PLATE pc

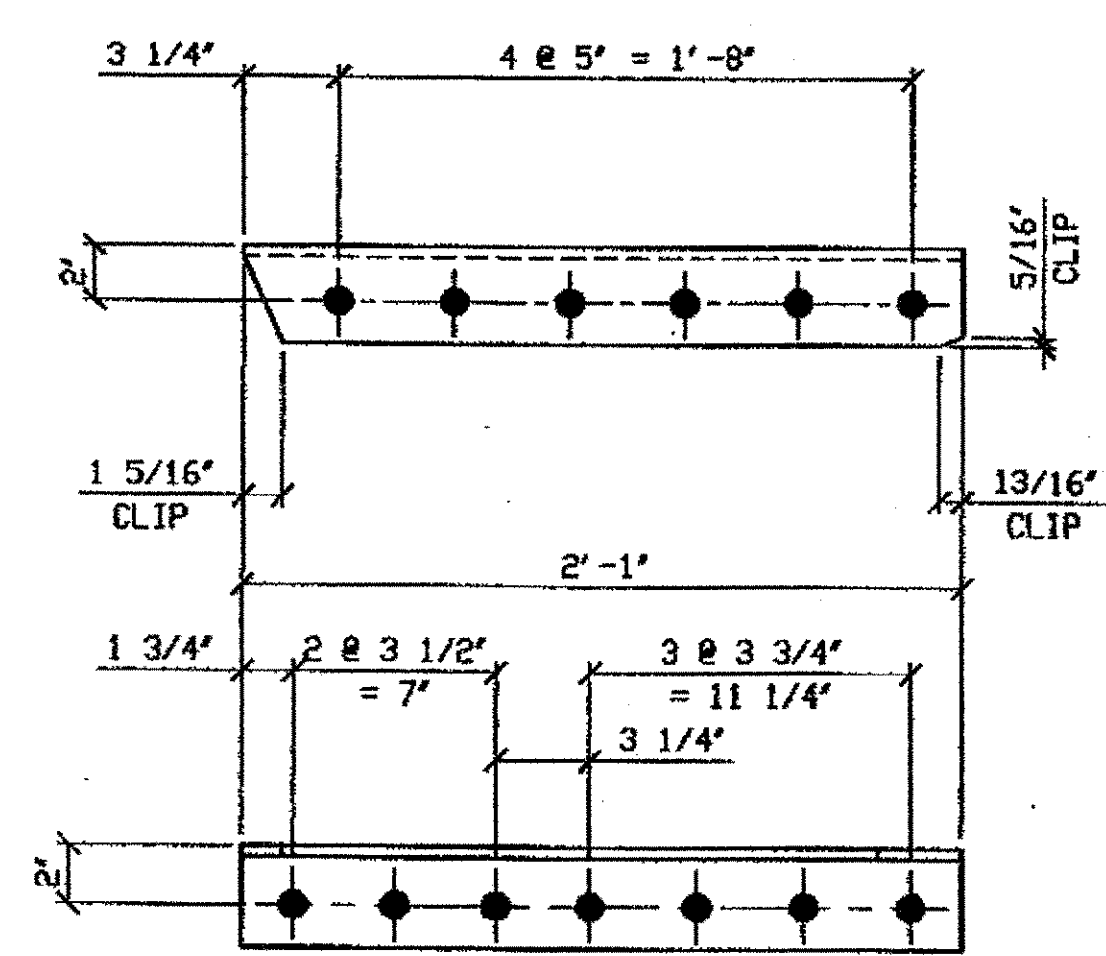
ORIG SHIP DWG 225 - BL80L  
ORIG SHIP MARK P72p  
ITEM No. 0139  
REPAIR SHEET 10-130 & 148



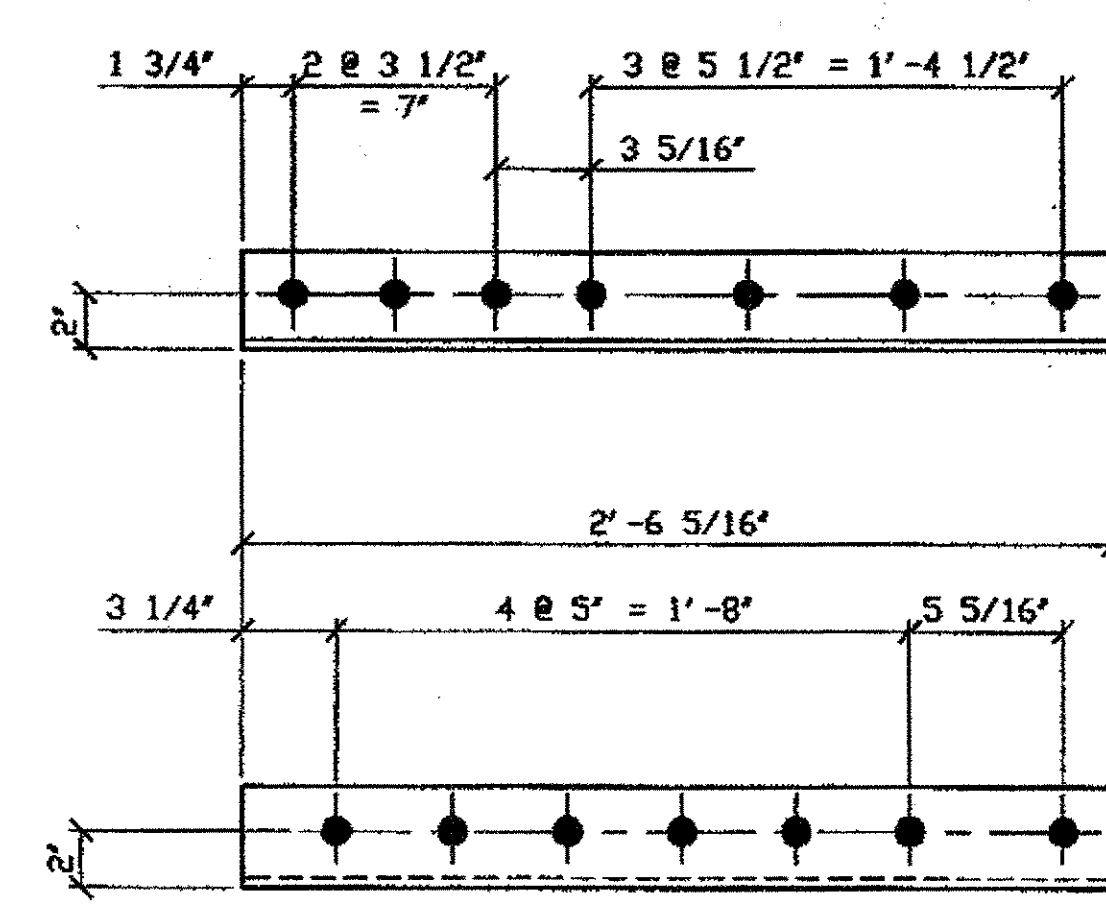
DETAIL PLATE pd



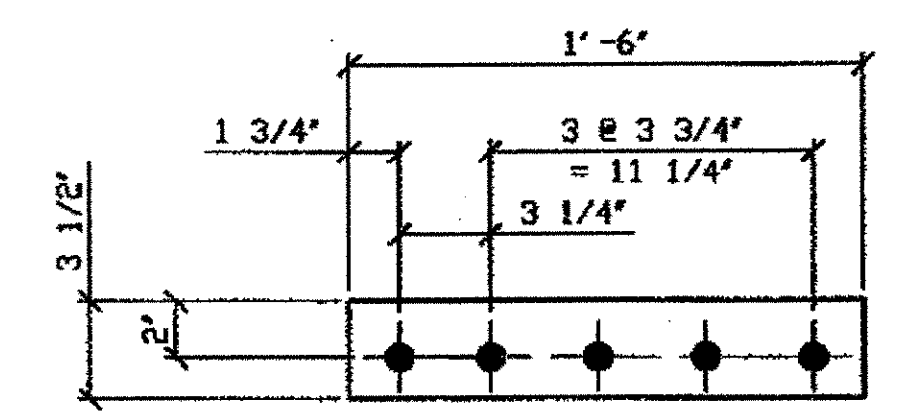
DETAIL PLATE pe  
(IDENTICAL TO 309C)



ANGLE ac R/L



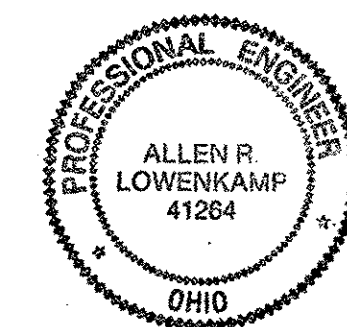
ANGLE ad R/L



DETAIL PLATE ph

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



NAT'L ENGR' & CONTR. CO.  
By Edp/ESS

JAN 18 2002

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		355A	1	TRUSS WIND KEY SHEAR DIAGONAL				2767	
2		aa R/L	2	L3 1/2 x 3 1/2 x 3/8	21	9 5/16		370	
3		ab R/L	2	L3 1/2 x 3 1/2 x 3/8	22	8 1/2		386	
4		ac R/L	2	L3 1/2 x 3 1/2 x 3/8	2	1		35	
5		ad R/L	2	L3 1/2 x 3 1/2 x 3/8	2	6 3/16		43	
6		pa	1	PL 1/2 x 30	3	11 3/16		201	
7		pb	1	PL 1/2 x 24	2	6		102	
8		pc	2	PL 1/2 x 16	1	5		77	
9		pd	6	BAR 2 1/2 x 5/8	3	0 27/32		97	
10		353pc	28	BAR 2 1/2 x 5/8	3	2 3/16		474	
11		pg	68	BAR 2 1/2 x 1/2	1	7 1/32		445	
12		ph	2	PL 1/2 x 3 1/2	1	6		18	
13		353pa	2	PL 1/2 x 21 1/2	2	6		183	
14		ba	78	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	109	
15				W/ HVY HEX NUT & WASHER					
16		bb	110	1" DIA HVY HEX BOLT	0	3	NOTE 2	165	
17				W/ HVY HEX NUT & WASHER					
18		bc	45	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	62	
19				W/ HVY HEX NUT & WASHER					
20									
21									
22									
23				FIELD BOLTS					
24		FB34	22	1" DIA	0	2 1/4	NOTE 2	29	
25		FB36	36	1" DIA	0	2 1/2	NOTE 2	50	
26		FB38	4	1" DIA	0	2 3/4	NOTE 2	6	
27									
28									
PLATE A36		PIPE N/A		FITTINGS N/A					
SHAPES A36		FLGS. N/A		BELTS NOTE 2					

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DWG 355AB FOR SHOP ASSEMBLY.

DOT ITEM LINE NO. 0211 U. N. D.  
DOT BID ITEM NO. 863E50000

NO.	DATE	REVISED PER APPROVAL COMMENTS	DESCRIPTION	GAFF
A	1/17/02			

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 10 REPAIRS

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
PITTSBURGH, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

IN CHARGE OF: L SMITH

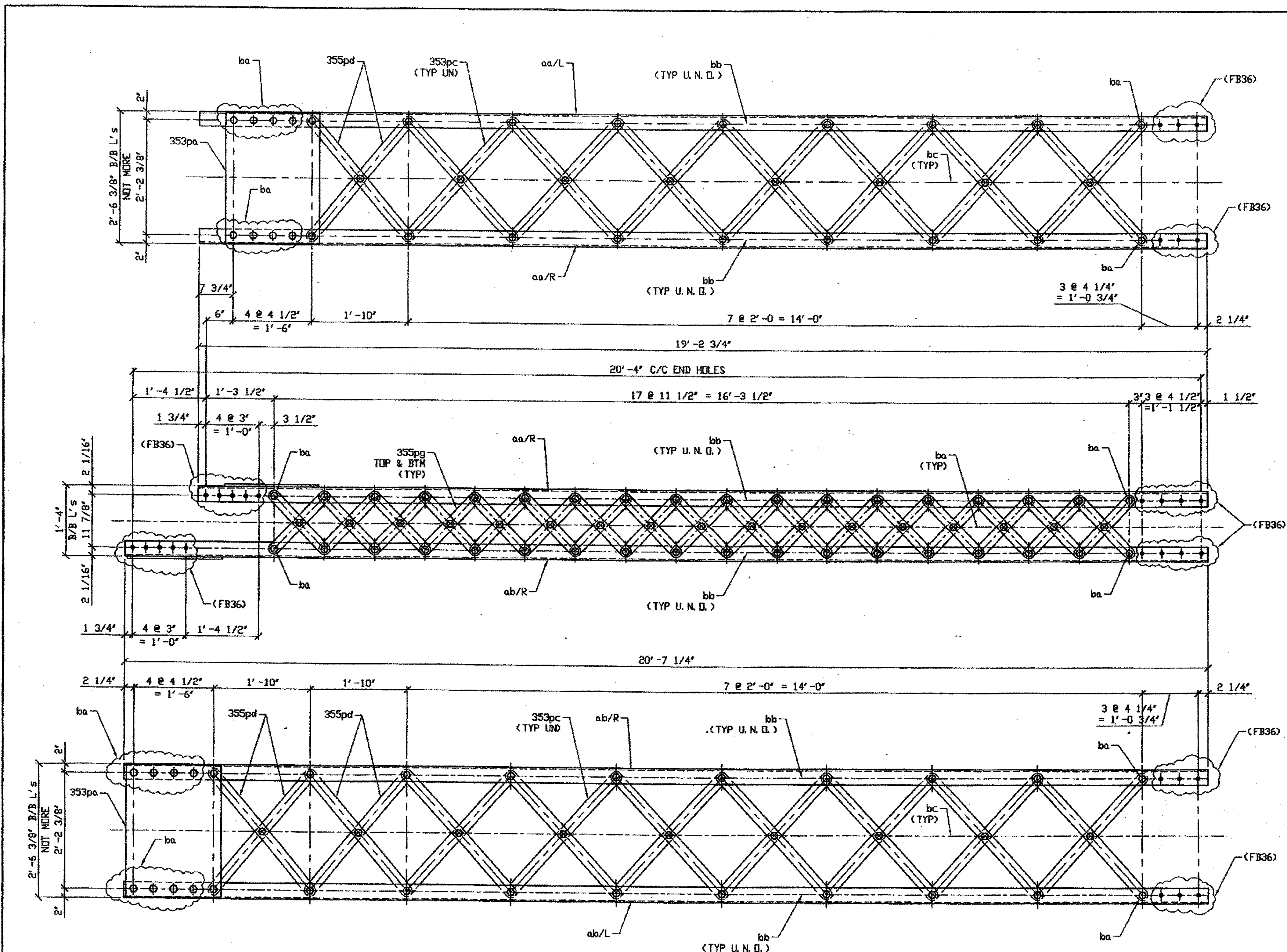
DRAWN BY: DATE  
AMN 07/19/01

CHECKED BY: DATE  
GWG 12/05/01

SHEET NUMBER  
355B

AMN JOB NUMBER  
800010

G:\Contractor\2000\800010\Drawings\355B.dwg  
Save by: [Signature] Jan 17, 2002  
Plot by: [Signature] at 09:54am Jan 17, 2002  
Model Space plot + Scale = 1/6



**ONE - TRUSS WIND KEY SHEAR DIAGONAL COMPLETE REPLACEMENT - 374A**  
 ORIG SHOP DWG 225-BL80R  
 ORIG SHOP MARK BL80R  
 ITEM No. 0211  
 REPAIR SHEET 10-133

**SPAN 10 A-B SOUTH**

**O.D.O.T. DIST. 12**

ACCEPTED	2/1/02	DSTM
ACCEPTED AS NOTED		
NOT ACCEPTED		

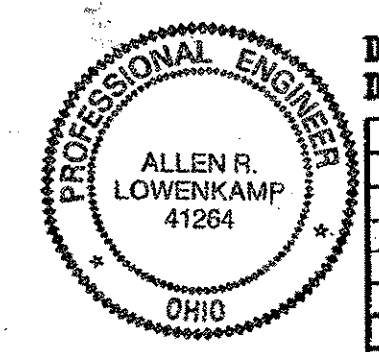
For general conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**BILL OF MATERIAL**

LINE	ADVANCE BILL L. LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		374A	1	TRUSS WIND KEY SHEAR DIAGONAL				2104
2		aa R/L	2	L3 1/2 x 3 1/2 x 3/8	19	2 3/4		327
3		ab R/L	2	L3 1/2 x 3 1/2 x 3/8	20	7 1/4		350
4		355pd	6	BAR 2 1/2 x 5/8	3	0 27/32		97
5		353pc	28	BAR 2 1/2 x 5/8	3	2 3/16		473
6		355pg	68	BAR 2 1/2 x 1/2	1	7 1/32		445
7		353pa	2	PL 1/2 x 21 1/2	2	6		183
8		ba	41	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	57
9				W/ HVY HEX NUT & WASHER				
10		bb	98	1" DIA HVY HEX BOLT	0	3	NOTE 2	147
11				W/ HVY HEX NUT & WASHER				
12		bc	17	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	25
13				W/ HVY HEX NUT & WASHER				
14				FIELD BOLTS				
15								
16		FB36	48	1" DIA	0	2 1/2	NOTE 2	67
17								
18								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

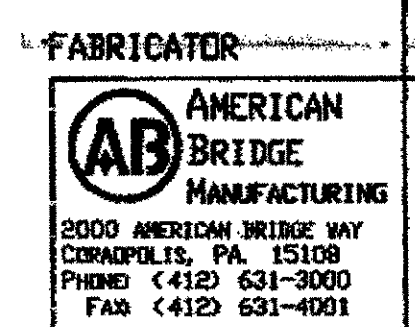
- NOTES:**
- OPEN HOLES ARE  $\leq 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SHOP BOLTS FINGER TIGHTEN ONLY "DO NOT TORQUE".

**NAT'L ENGR' & CONTN. CO.**  
 by *tdress*  
**JAN 18 2002**



DOT ITEM LINE NO. 0211  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY



**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 10 REPAIRS**

**STEEL ERECTOR**

**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

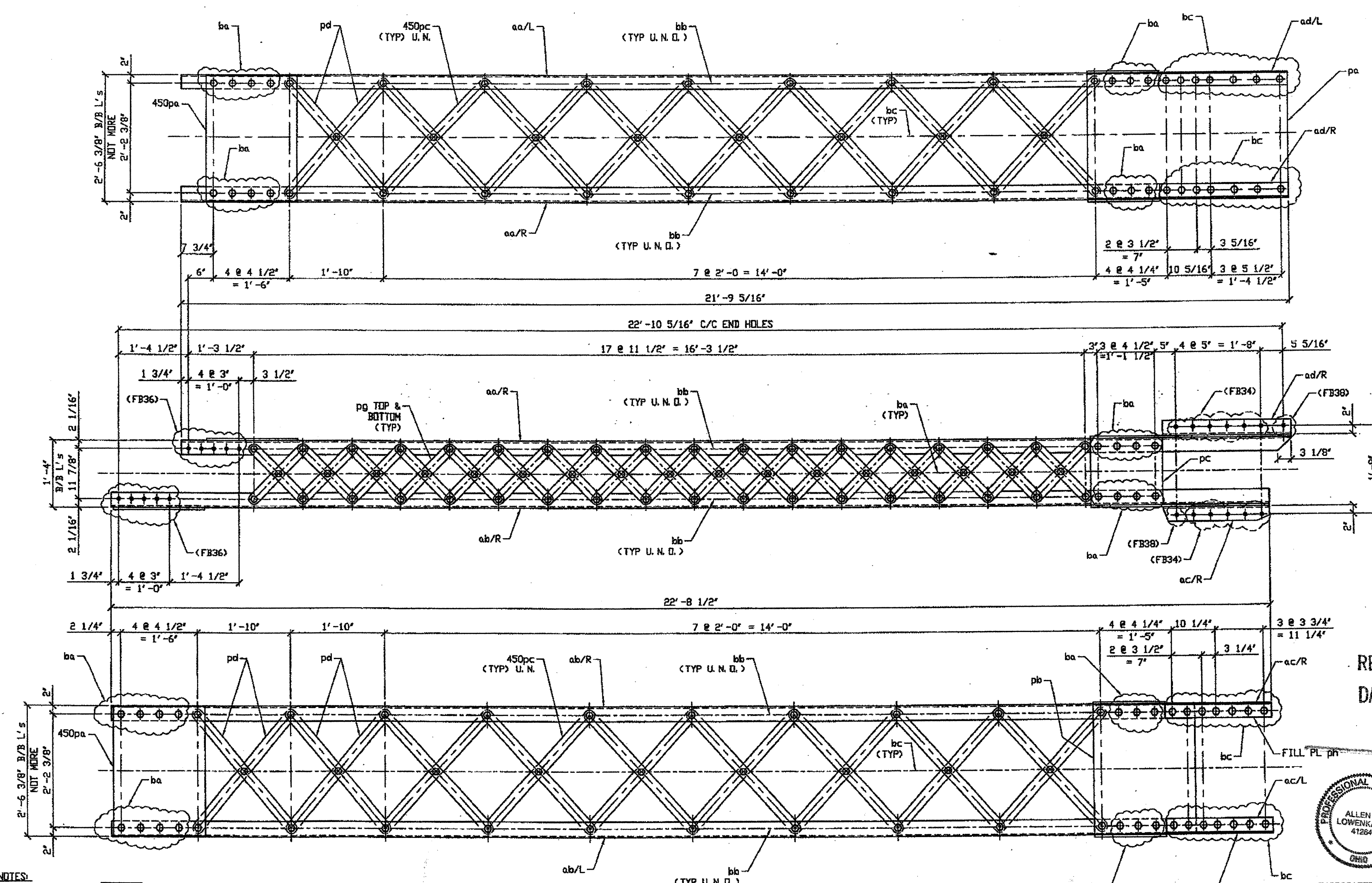
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 01/17/02  
 CHECKED BY: DATE: GAF 01/17/02

SHEET NUMBER: 374  
 AM. JOB NUMBER: 800010

G:\Conty\12000\800010\Drawings\374A.dwg  
 Save by: at 01:24pm Jan 17, 2002  
 Plot by: at 02:56pm Jan 17, 2002  
 Model space plot + Scale = 1/12

MATLENGR, & C. R. C.  
 DEC 10 2001

G:\Contract\00000001\Drawings\MSBA.dwg  
 Save by RSM on 08/20/01 Nov 15, 2001  
 Plot by RSM on 11/14/01 Dec 07, 2001  
 Model space plot + Scale = 1/12



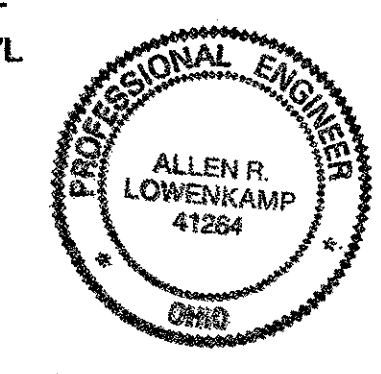
- NOTES:**
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  4. SEE DRAWING 452B FOR DETAILS AND MATERIAL BILL.
  5. SHOP BOLTS FINGER TIGHTEN ONLY "DO NOT TORQUE".

**3 - WIND SHEAR DIAGONAL COMPLETE REPLACEMENT 452A R/L**  
 ORIG SHOP DWG 225-BL80 R/L  
 ORIG SHOP MARK BL80 R/L  
 REPAIR SHEET 12-134, 140 & 167  
 (IDENTICAL TO 355A)  
**SPAN 12 E-F NORTH 452A/L**     **SPAN 12 E-F SOUTH 452A/L**  
**SPAN 12 E-F NORTH 452A/R**

R/L can be ignored

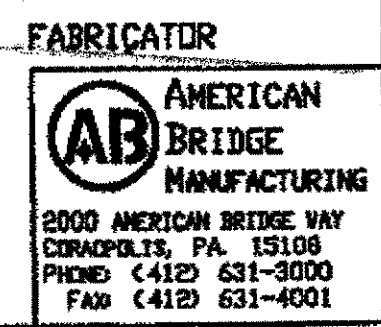
**O.D.O.T. DIST. 12**  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED 2/4/02 PJM  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 1/4/02 BY tdc/ess



DOT ITEM LINE NO. 0211  
 DOT BID ITEM NO. 863E50000

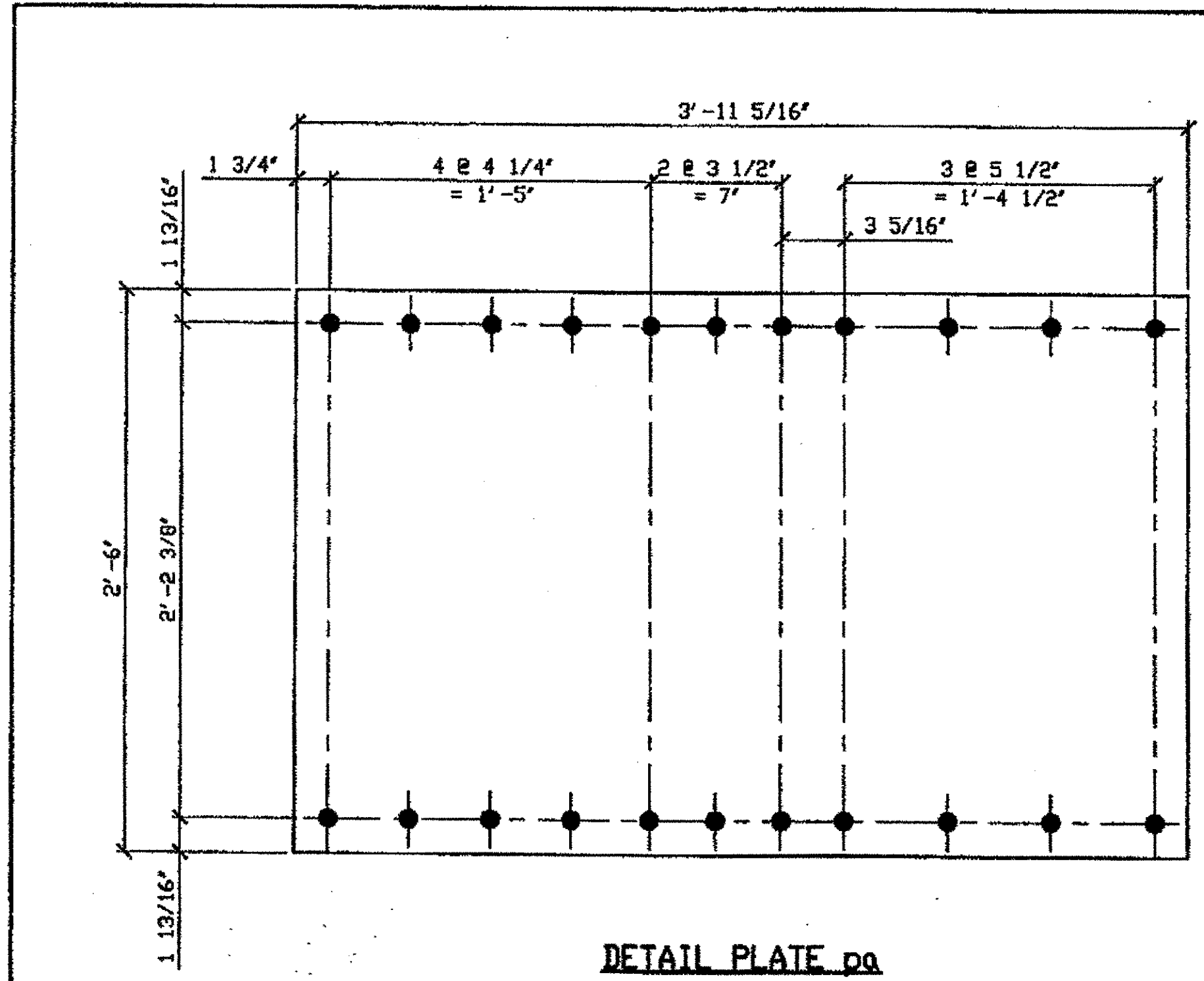
NO.	DATE	DESCRIPTION	BY



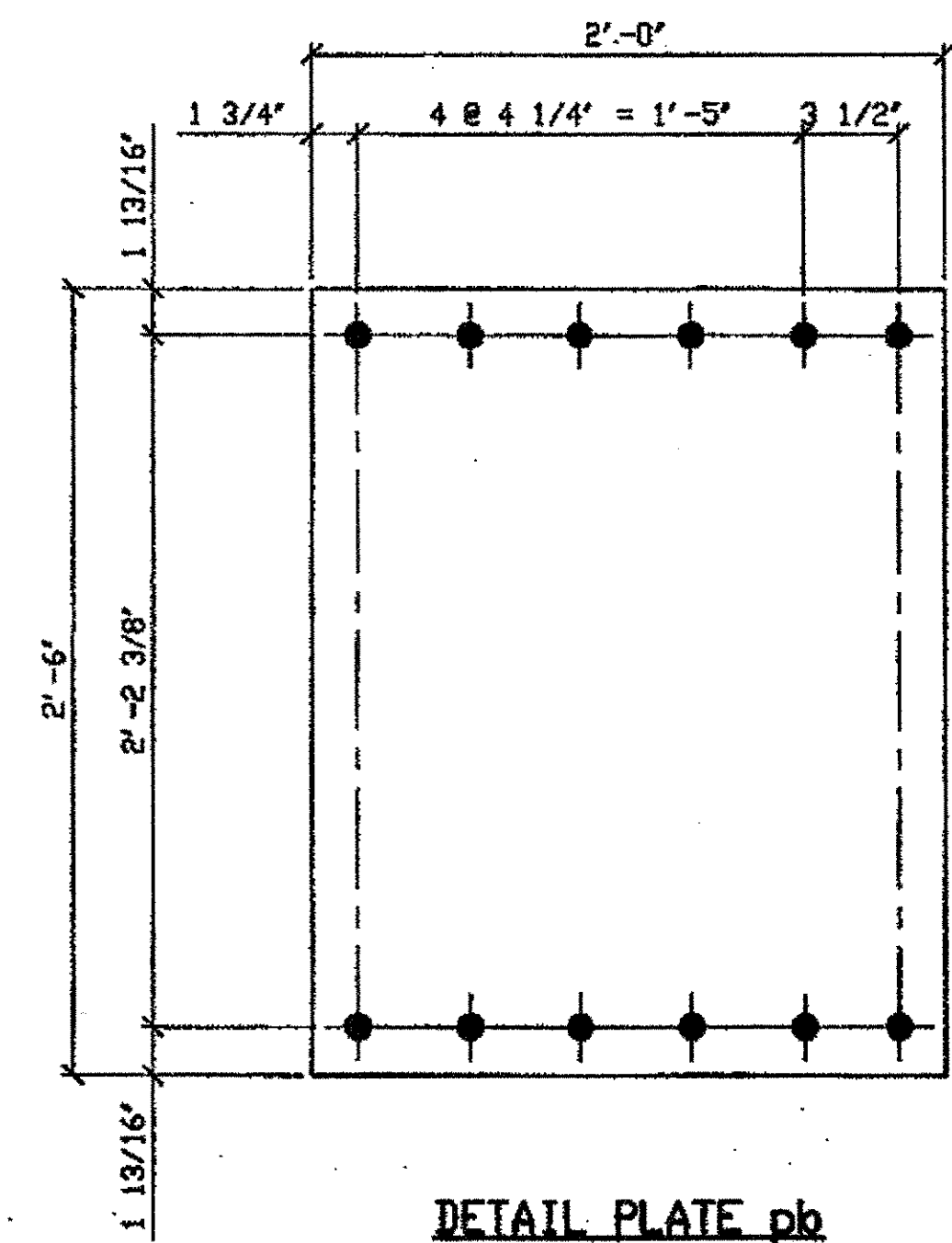
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 12 REPAIRS**

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 18608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

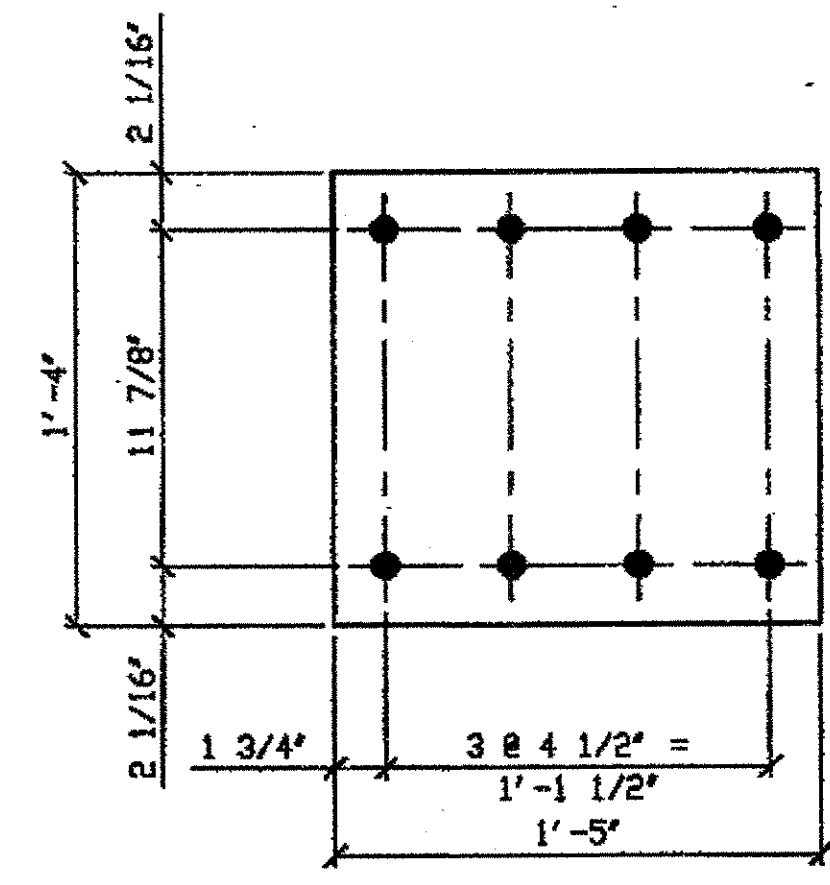
IN CHARGE: DPT. L. SMITH	SHEET NUMBER: 452AB
DRAWN BY: DATE: RAS 07/26/01	ASB JOB NUMBER: 800010
CHECKED BY: DATE: GAF 10/18/01	



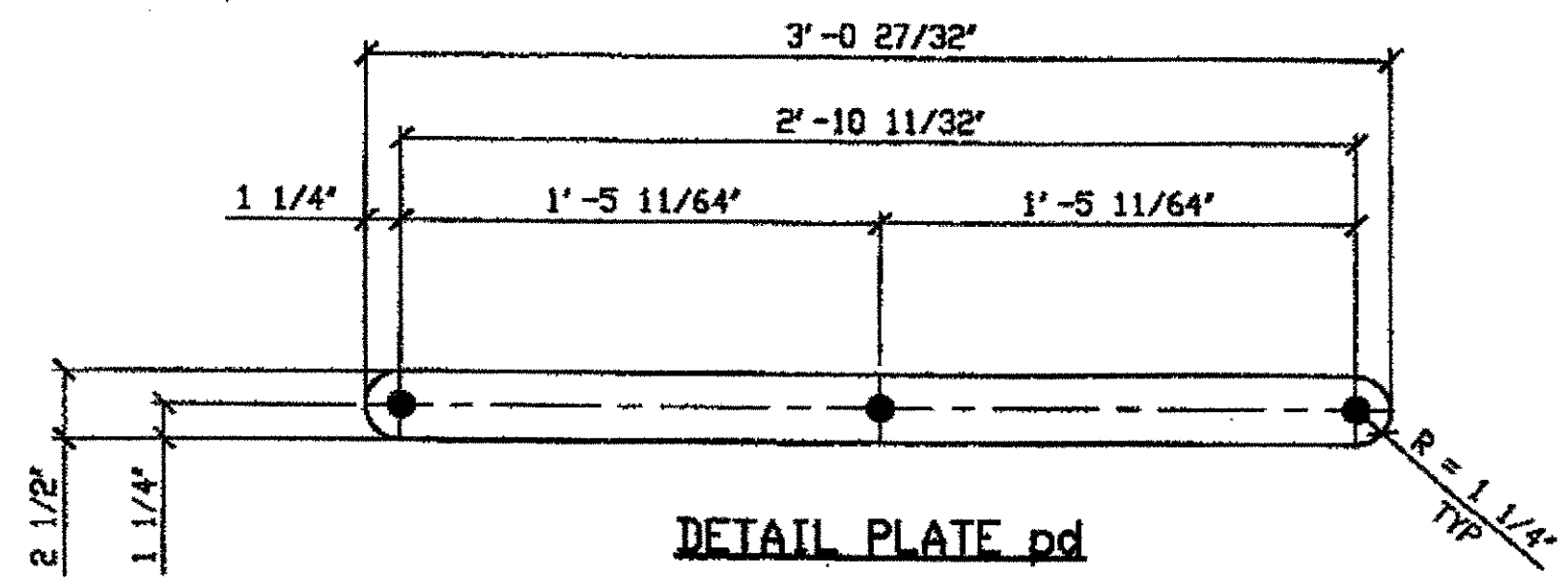
DETAIL PLATE pa



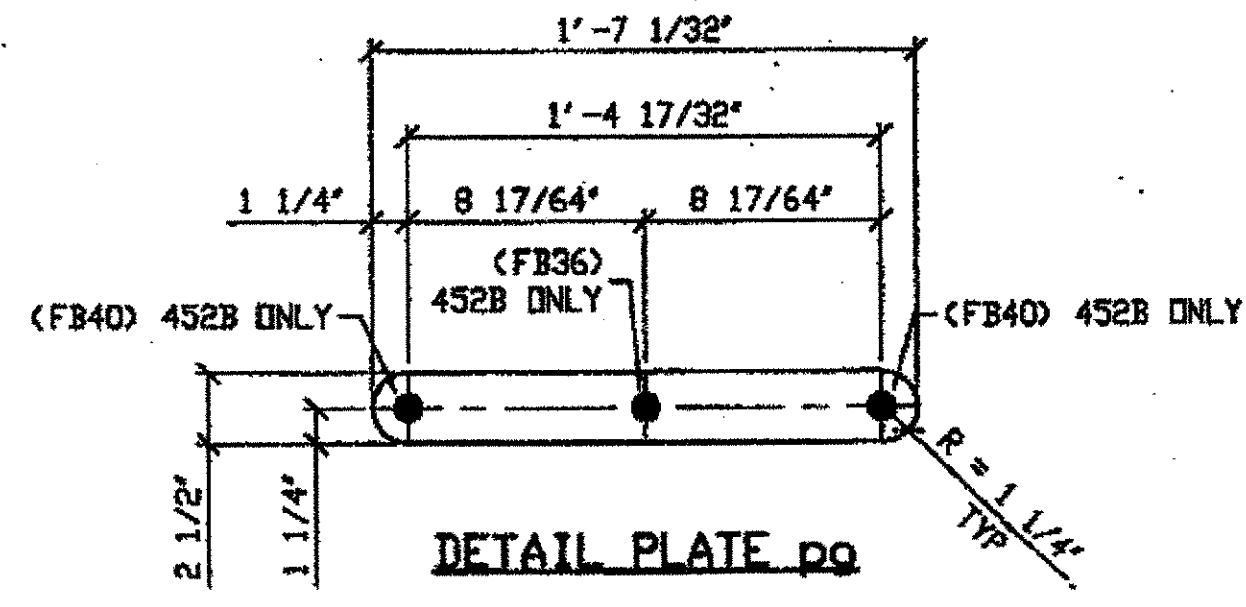
DETAIL PLATE pb



DETAIL PLATE pc



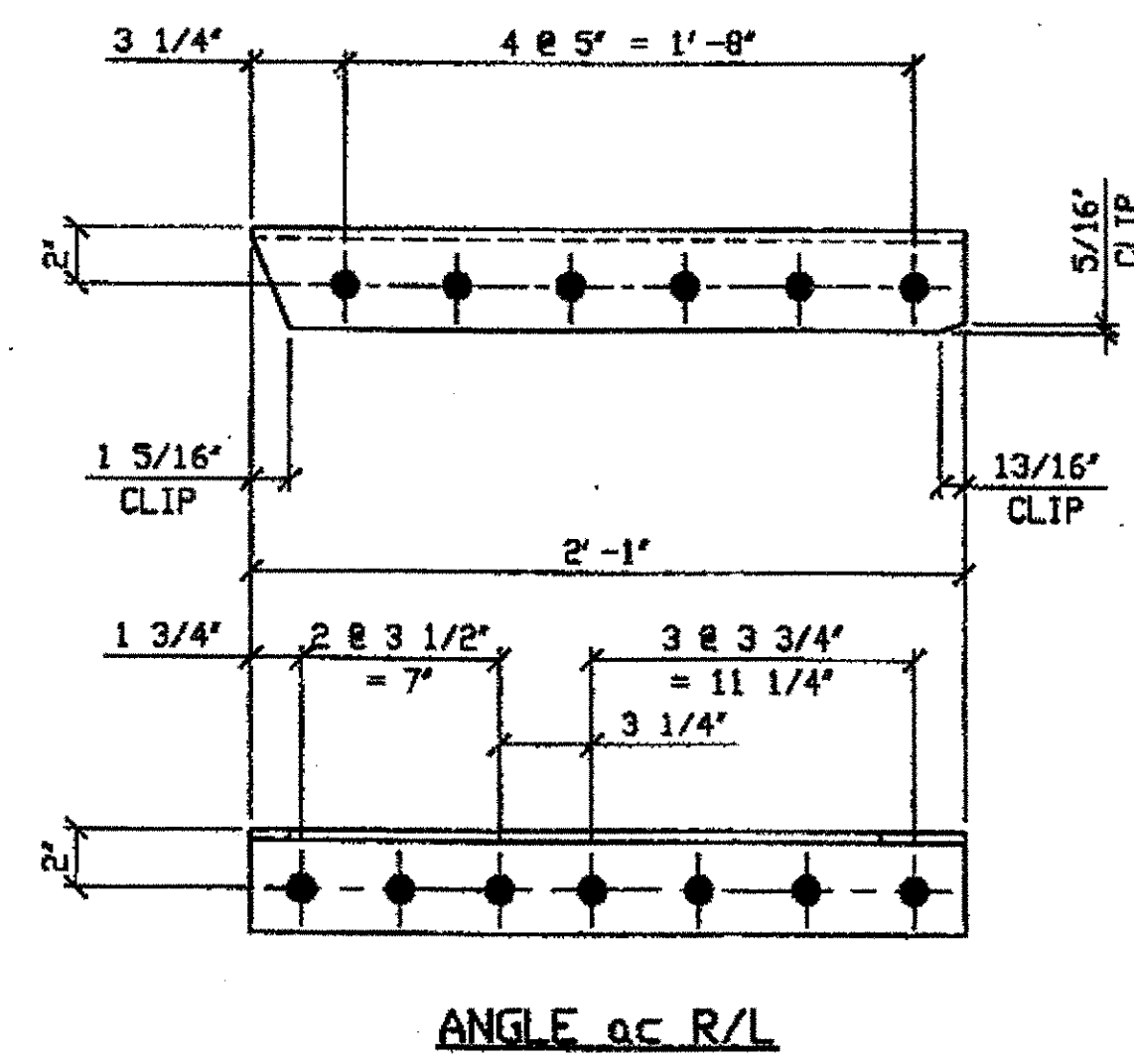
DETAIL PLATE pd



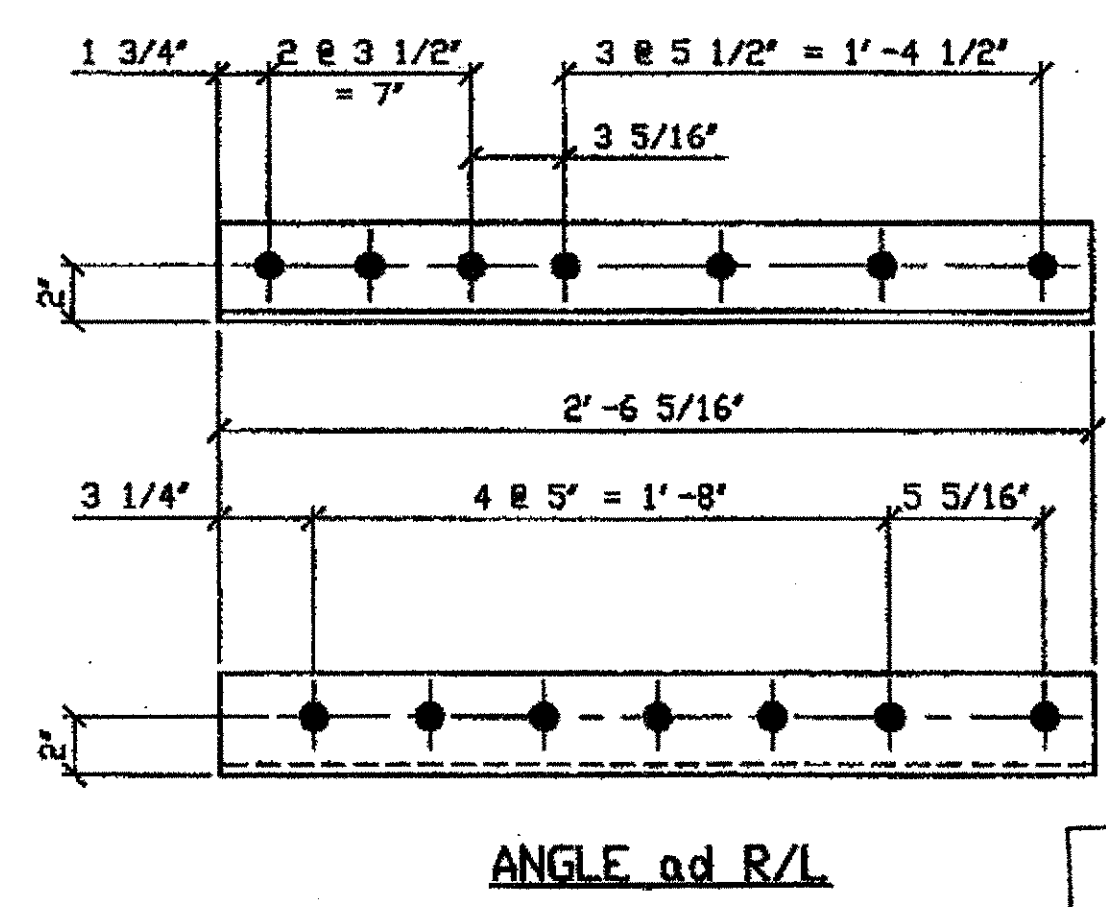
DETAIL PLATE pe

ORIG SHIP DWG 225-BL80/R  
ORIG SHIP MARK P225a  
LINE ITEM No. 0138  
REPAIR SHEET 12-173  
IDENTICAL TO 309C

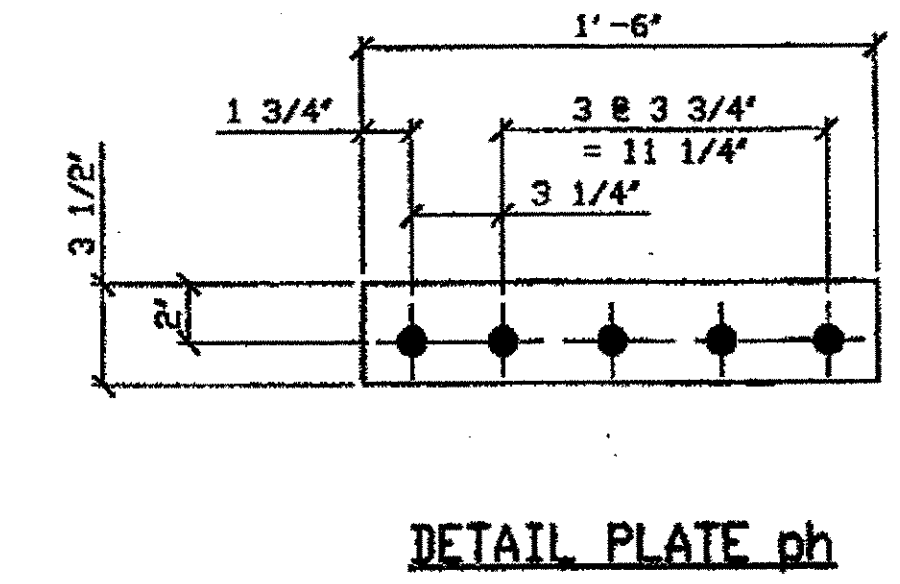
NAT'L ENGR. & CONTR. CO.  
DEC 10 2001



ANGLE ac R/L



ANGLE ad R/L



DETAIL PLATE ph

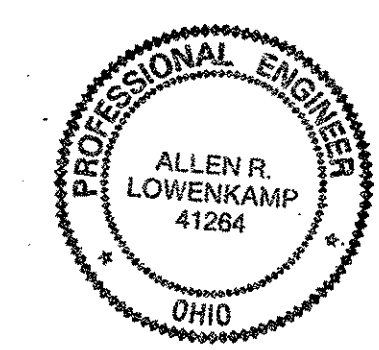
PARTS FOR 452A/L-452 A/R, SPAN 12  
e-f North, e-f North  
e-f South

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		452A R/L	3	WIND SHEAR DIAGONAL			1/R/ 2/L	8351	
2		aa R/L	6	L3 1/2 x 3 1/2 x 3/8	21	9 5/16		1111	
3		ab R/L	6	L3 1/2 x 3 1/2 x 3/8	22	8 1/2		1158	
4		ac R/L	6	L3 1/2 x 3 1/2 x 3/8	2	1		106	
5		ad R/L	6	L3 1/2 x 3 1/2 x 3/8	2	6 9/16		129	
6		pa	3	PL 1/2 x 30	3	11 5/16		603	
7		pb	3	PL 1/2 x 24	2	6		306	
8		pc	6	PL 1/2 x 16	1	5		231	
9		pd	18	BAR 2 1/2 x 5/8	3	0 27/32		294	
10		450pc	84	BAR 2 1/2 x 5/8	3	2 3/16		1421	
11		pg	204	BAR 2 1/2 x 1/2	1	7 1/32		1373	
12		ph	6	PL 1/2 x 3 1/2	1	6		54	
13		450pa	6	PL 1/2 x 21 1/2	2	6		548	
14		ba	234	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	326	
15				W/ HVY HEX NUT & WASHER					
16		bb	330	1" DIA HVY HEX BOLT	0	3	NOTE 2	496	
17				W/ HVY HEX NUT & WASHER					
18		bc	135	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	195	
19				W/ HVY HEX NUT & WASHER					
20									
21									
22									
23									
24									
25				FIELD BOLTS					
26		FB34		1" DIA	0	2 1/4	NOTE 2		
27		FB36		1" DIA	0	2 1/2	NOTE 2		
28		FB38		1" DIA	0	2 3/4	NOTE 2		
29		FB40		1" DIA	0	3	NOTE 2		
PLATE A36				PIPE N/A	FITTINGS N/A				
SHAPES A36				FLGS. N/A	BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD 11 INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - SEE DRAWING 452AB FOR SHIP ASSEMBLY.

RELEASED FOR CONSTRUCTION  
DATE 1/9/02 BY LDC/ESS



DOT ITEM LINE NO. 0211 U. N. D.  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

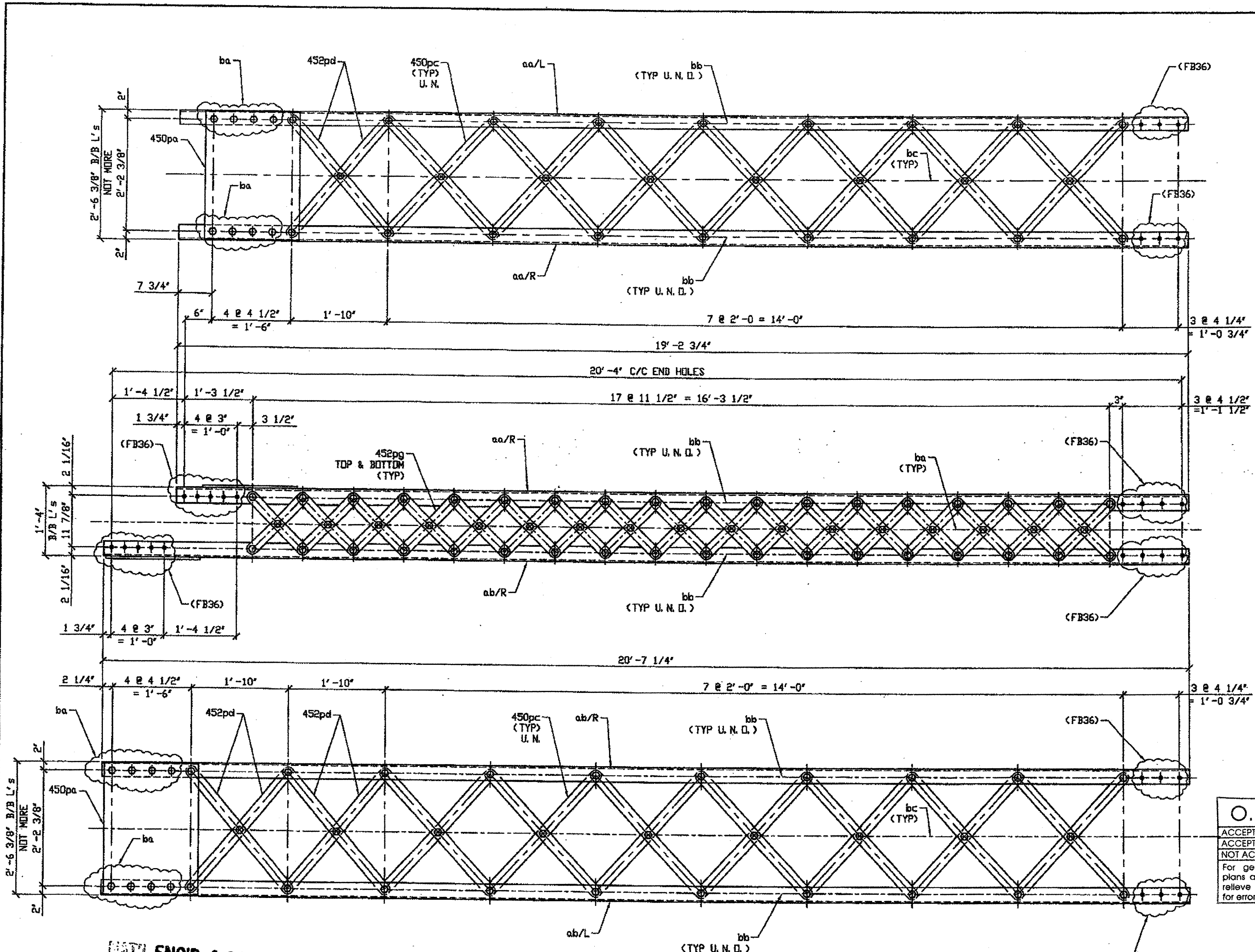
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12508 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF L. SMITH  
DRAWN BY DATE:  
RAS 07/26/01  
CHECKED BY DATE:  
GAF 10/18/01

SHEET NUMBER  
452B  
ASN JOB NUMBER  
800010

Contract: 00N800010 Drawing: REPAIR, WASHER, DWG  
Save by repair of 08 Dec 01 Nov 05, 2001  
Print by gfas at 11:56am Dec 07, 2001  
Model Space Plot - Scale = 1/6



### BILL OF MATERIAL

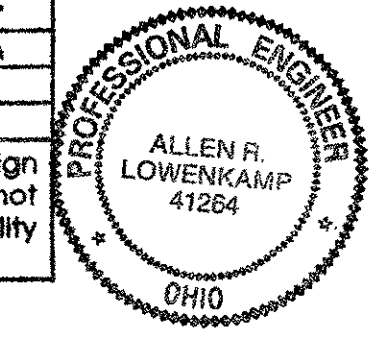
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		453A R/L	4	WIND SHEAR DIAGONAL			2/R) 2/L	8594
2		aa R/L	8	L3 1/2 x 3 1/2 x 3/8	19	2 3/4		1308
3		ab R/L	8	L3 1/2 x 3 1/2 x 3/8	20	7 1/4		1401
4		452pd	24	BAR 2 1/2 x 5/8	3	0 27/32		392
5		450pc	112	BAR 2 1/2 x 5/8	3	2 3/16		1893
6		452pg	272	BAR 2 1/2 x 1/2	1	7 1/32		1830
7		450pa	8	PL 1/2 X 21 1/2	2	6		731
8		ba	200	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	279
9				W/ HVY HEX NUT & WASHER				
10		bb	440	1" DIA HVY HEX BOLT	0	3	NOTE 2	662
11				W/ HVY HEX NUT & WASHER				
12		bc	68	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	98
13				W/ HVY HEX NUT & WASHER				
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36	192	1" DIA	0	2 1/2	NOTE 2	268
20								

PLATE A36 PIPE N/A FITTINGS N/A  
 SHAPES A36 FLGS. N/A BOLTS NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 1/4/02 BY tdd/ess

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	DATE	DESCRIPTION	BY

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 12 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE: L. SMITH  
 DRAWN BY: DATE: RAS 07/26/01  
 CHECKED BY: DATE: GAF 10/18/01

SHEET NUMBER: 453  
 AM JOB NUMBER: 800010

G:\Contract\2004\800010\Drawings\0453A.dwg  
 Save by rsp at 09:35am Nov 16, 2001  
 Plot by gfos at 11:49am Dec 07, 2001  
 Model space plot + Scale = 1/12

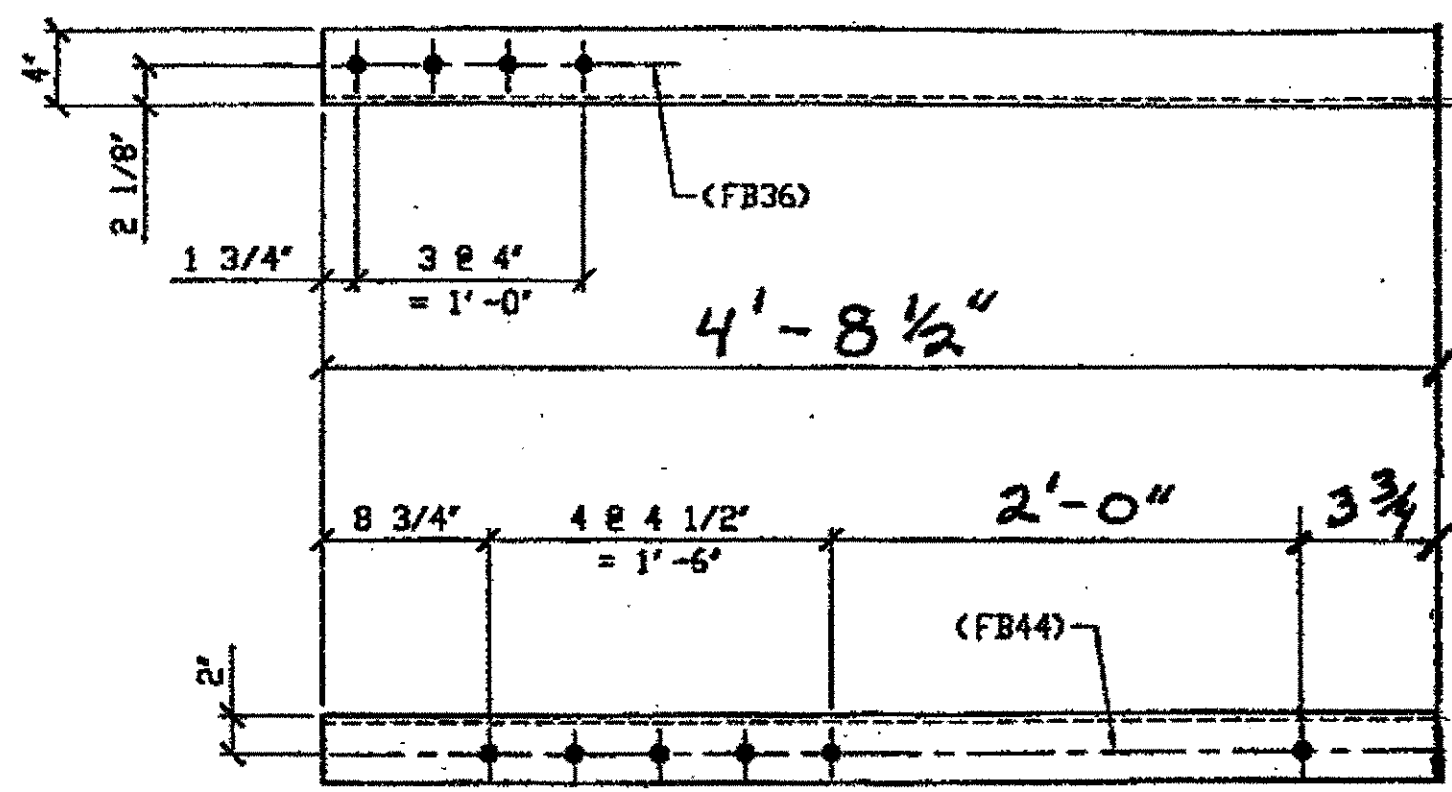
DATE ENGR. & CONTR. BY  
 DEC 10 2001

4 - WIND SHEAR DIAGONAL COMPLETE REPLACEMENT 453A R/L  
 ORIG SHOP DWG 225-BL80 R/L  
 ORIG SHOP MARK BL80 R/L  
 REPAIR SHEET 12-101, 103, 143 & 145

R/L can be ignored

SPAN 12 A-B NORTH 453A/R  
 SPAN 12 A-B SOUTH 453A/R

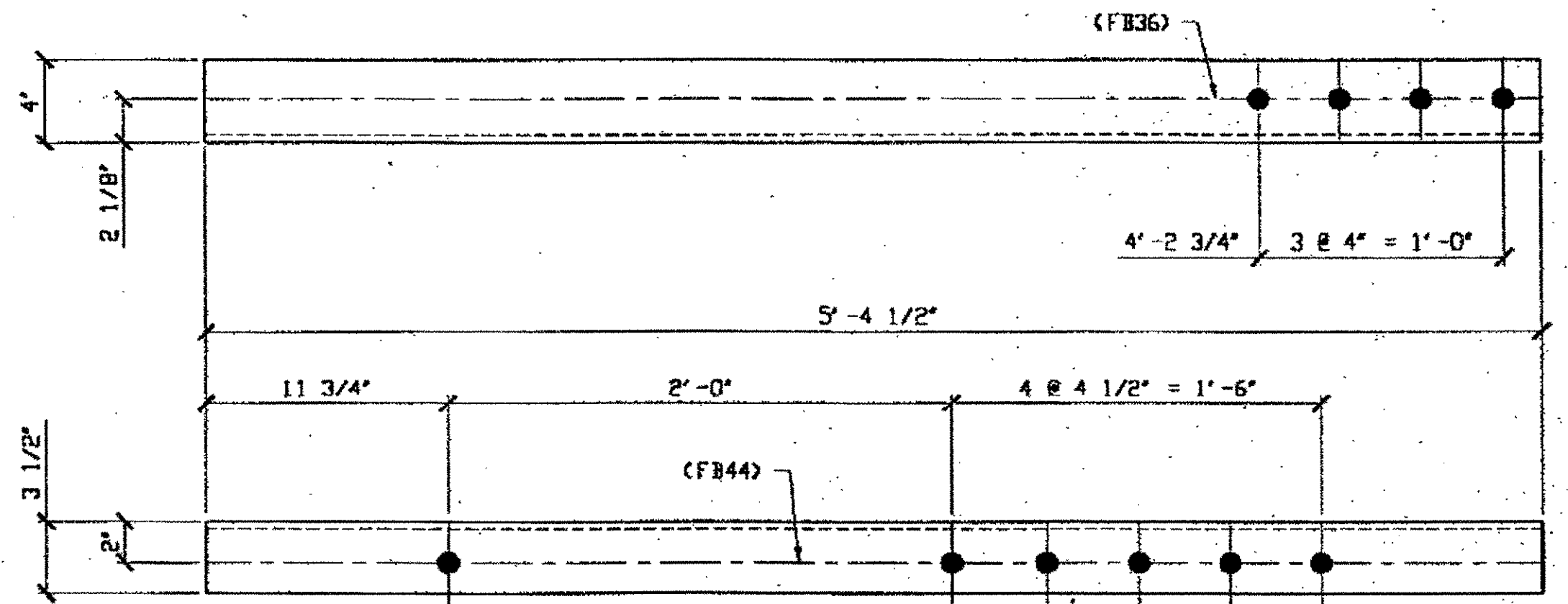
Last modified by repringer at 10:24am on Thu Mar 29, 2001 - Last plotted by sfoster at 01:12pm on Thu Mar 29, 2001



**SPAN II**  
 K-K' SOUTH TOP EAST 78A/R  
 K-K' SOUTH BOTTOM EAST 78A/L  
 (L SHOWN)

**2 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 78A R/L**

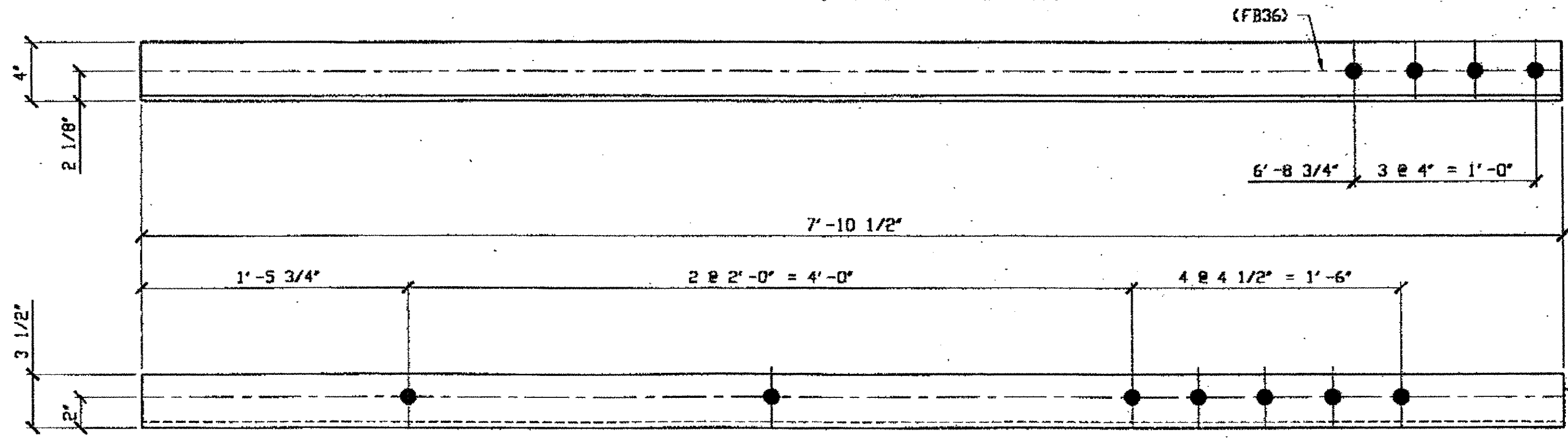
ORIG SHOP DRAWING 295-BS28  
 ORIG SHOP MARK A295d  
 DOT ITEM LINE No. 0113 & 0153



**SPAN 6**  
 B-B' SOUTH TOP EAST 78B/R  
 B-B' SOUTH BOTTOM WEST 78B/R  
 B-B' SOUTH TOP WEST 78B/L

**3 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 78B R/L**  
 (R SHOWN)

ORIG SHOP DRAWING 144-BS18  
 ORIG SHOP MARK A144x  
 LINE ITEM No. 0113 & 0153  
 REPAIR SHEET 6-121  
 ITEM LINE No. 0153, BID ITEM No. 863E90000



**SPAN 6**  
 B-B' SOUTH BOTTOM EAST 78C

**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 78C**

ORIG SHOP DRAWING 144-BS18  
 ORIG SHOP MARK A144x  
 LINE ITEM No. 0113 & 0153  
 REPAIR SHEET 6-121  
 ITEM LINE No. 0153, BID ITEM No. 863E90000

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL QUARTER	LENGTH			
2		78A	2	24x3 1/2 x 3/8	4	8 1/2	YL 3/R	
3		(R/L)						
4				TYPE 2 TRANSVERSE QUARTER	LENGTH			
5		R/L 78B	3	L 4 X 3 1/2 X 3/8	5	4 1/2	2R YL	
6		78C	1	L 4 X 3 1/2 X 3/8	7	10 1/2		72
7								
8								
9								
10								
11								
12				FIELD BOLTS				
13		FB36		1" DIA		2 1/2	NOTE 2	
14		FB44		1" DIA		3 1/2	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS		NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED: 2/9/01  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NAT'L ENGR. & CONTR. CO.  
 By tdp/tes  
 MAR 30 2001

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY tdp

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 EDINBURGH, PA. 15110  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4000

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U. N. D.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

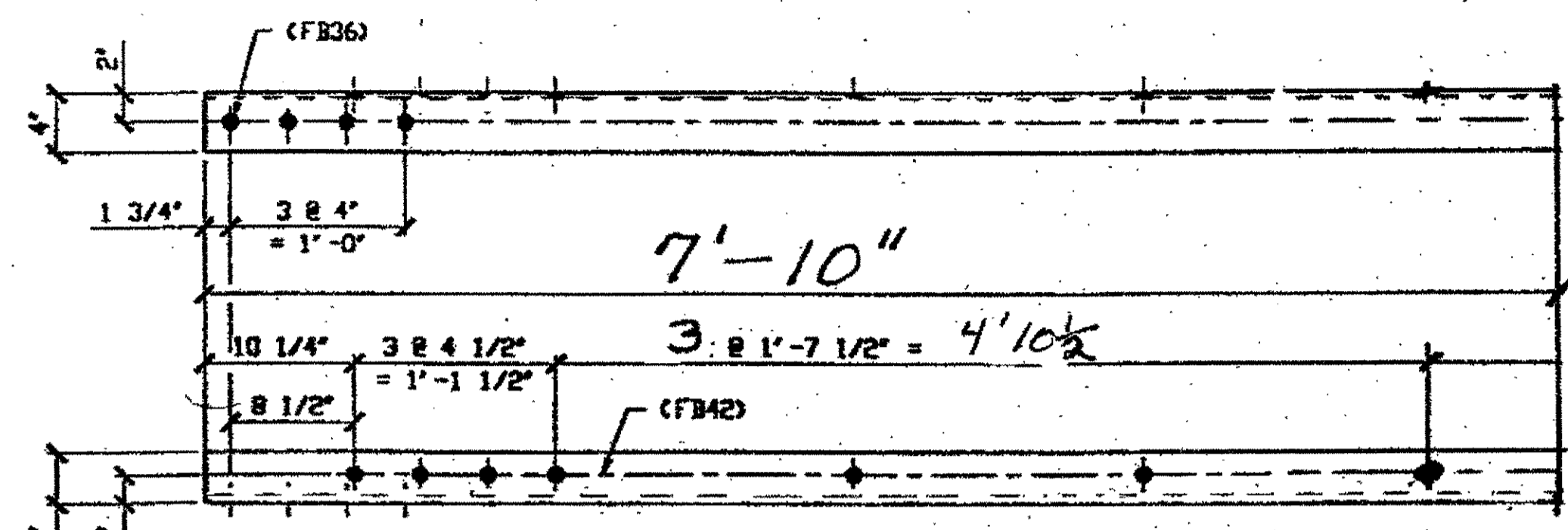
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS

SHEET NUMBER: 78  
 JOB NUMBER: 800010



**BILL OF MATERIALS**

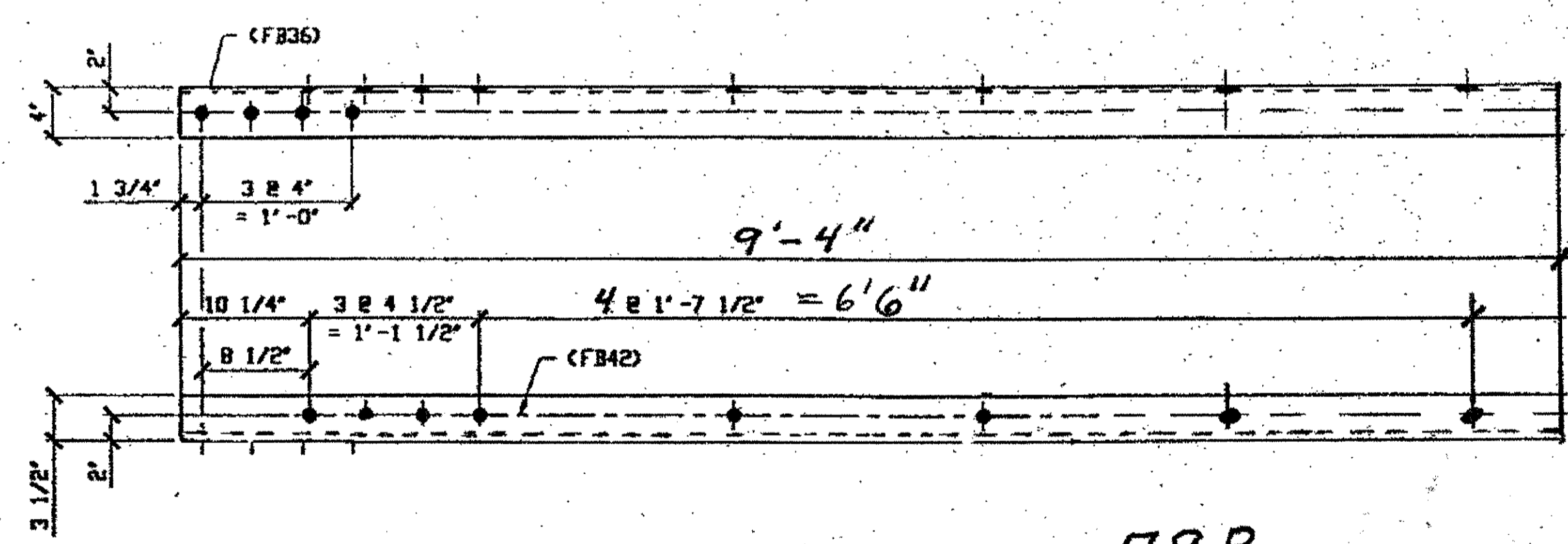
Piece No.	Qty.	Description
79A	1	L4 x 3 1/2 x 3/8 x 7'-10"
79B	1	L4 x 3 1/2 x 3/8 x 9'-4"
		PLATE A36 SHAPES A36



**(1) TYPE I TRANSVERSE QUARTER LENGTH REPLACEMENT - 79A**

ORIG SHOP DWG 17-351  
ORIG SHOP MARK A17g

SPAN 5  
P-P' SOUTH BOTTOM WEST 79A



**(1) TYPE I TRANSVERSE QUARTER LENGTH REPLACEMENT - 79B**

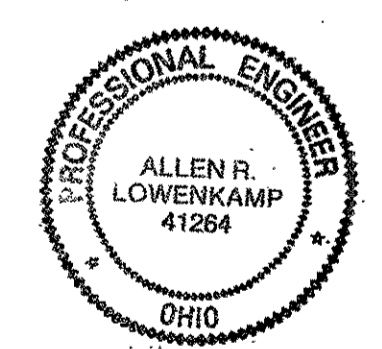
ORIG SHOP DWG 17-351  
ORIG SHOP MARK A17g

SPAN 5  
K-K' SOUTH TOP EAST 79B

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	2/4/97 DSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

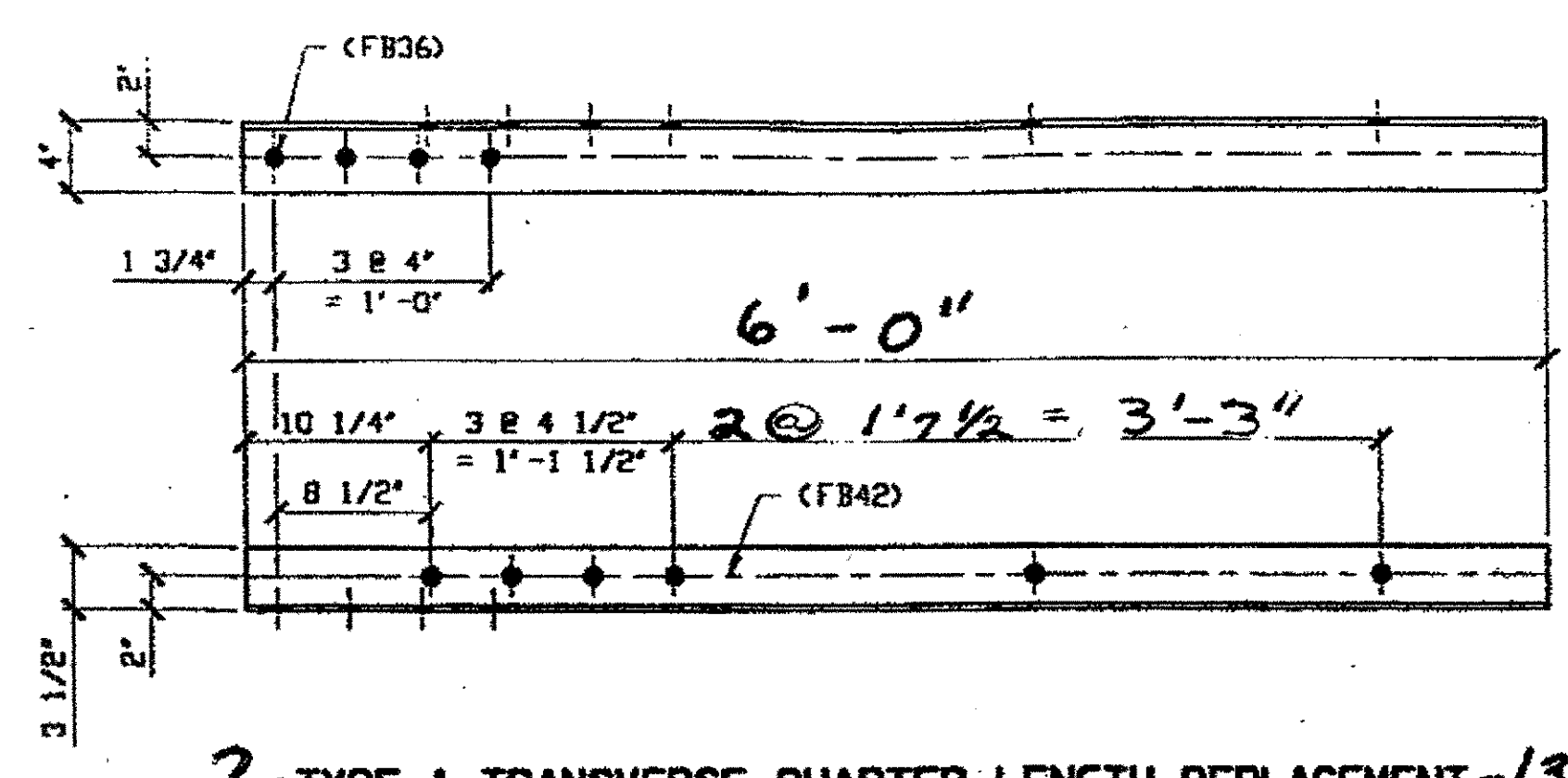
**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

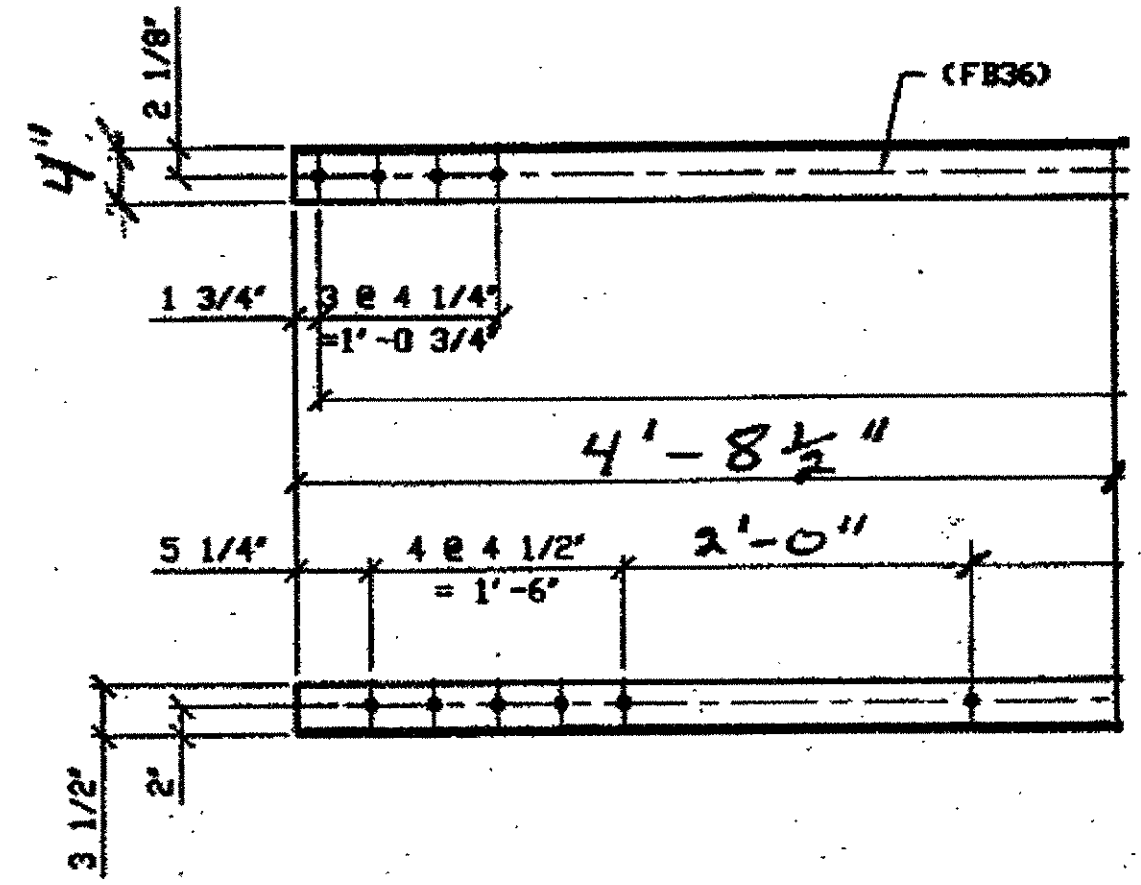
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
SCALE: NA DATE: \_\_\_\_\_ DRAWING NO. **79**

**BILL OF MATERIALS**

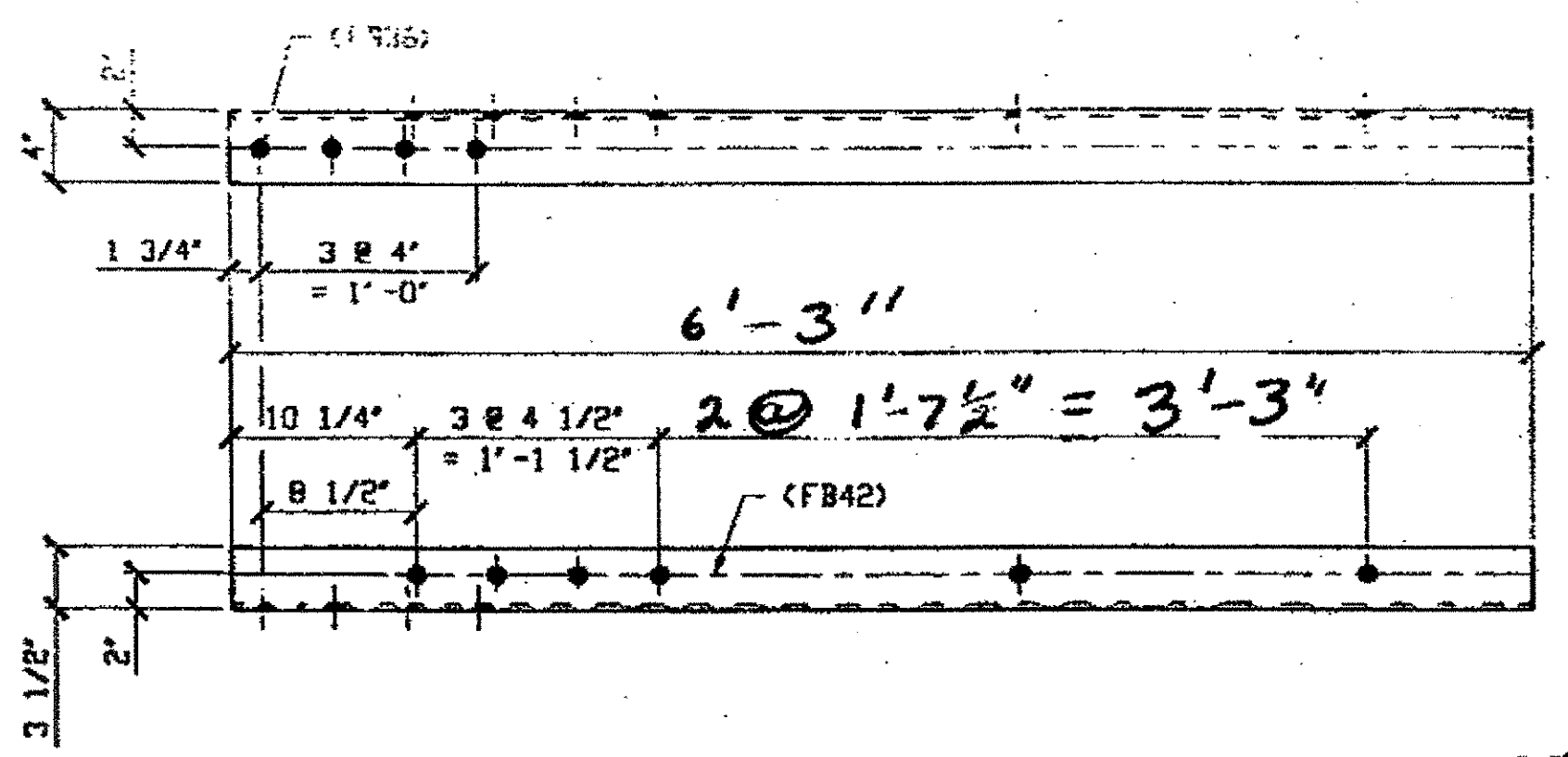
Piece No.	Qty.	Description
138A	2	L4 x 3 1/2" x 6'-0" x 3/8" (2/R 4/L)
138B	1	L4 x 3 1/2" x 6'-3" x 3/8"
138C	1	L4 x 3 1/2" x 4'-8 1/2" x 3/8"
138D	1	L5 x 3 1/2" x 4'-9" x 3/8"
138E	1	L4 x 3 1/2" x 3/8" x 8'-8 1/2"
		PLATE A36 SHAPES A36



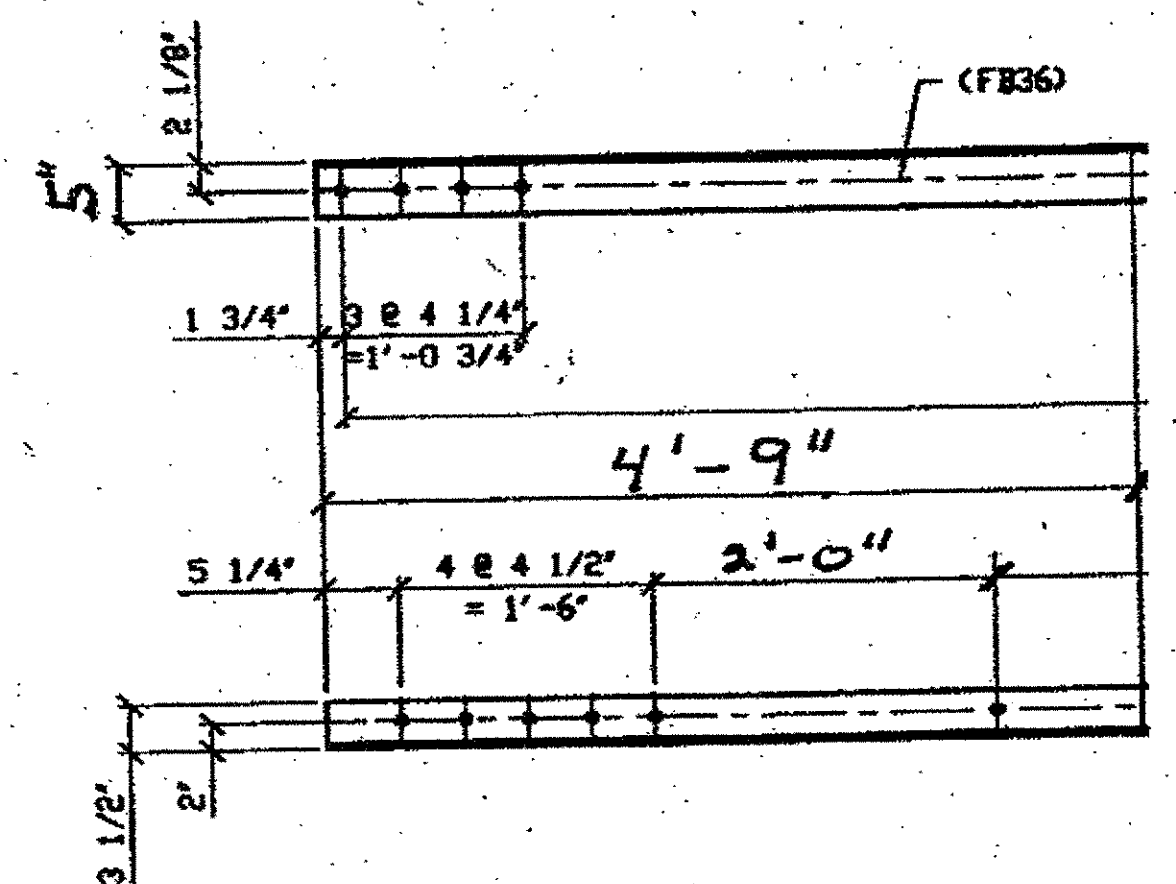
**2-TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT-138A**  
 ORIG SHOP DWG 17-351  
 ORIG SHOP MARK A17g  
SPAN 1  
E-E' SOUTH BOTTOM EAST 138A  
SPAN 3  
E-E' SOUTH BOTTOM EAST 138A



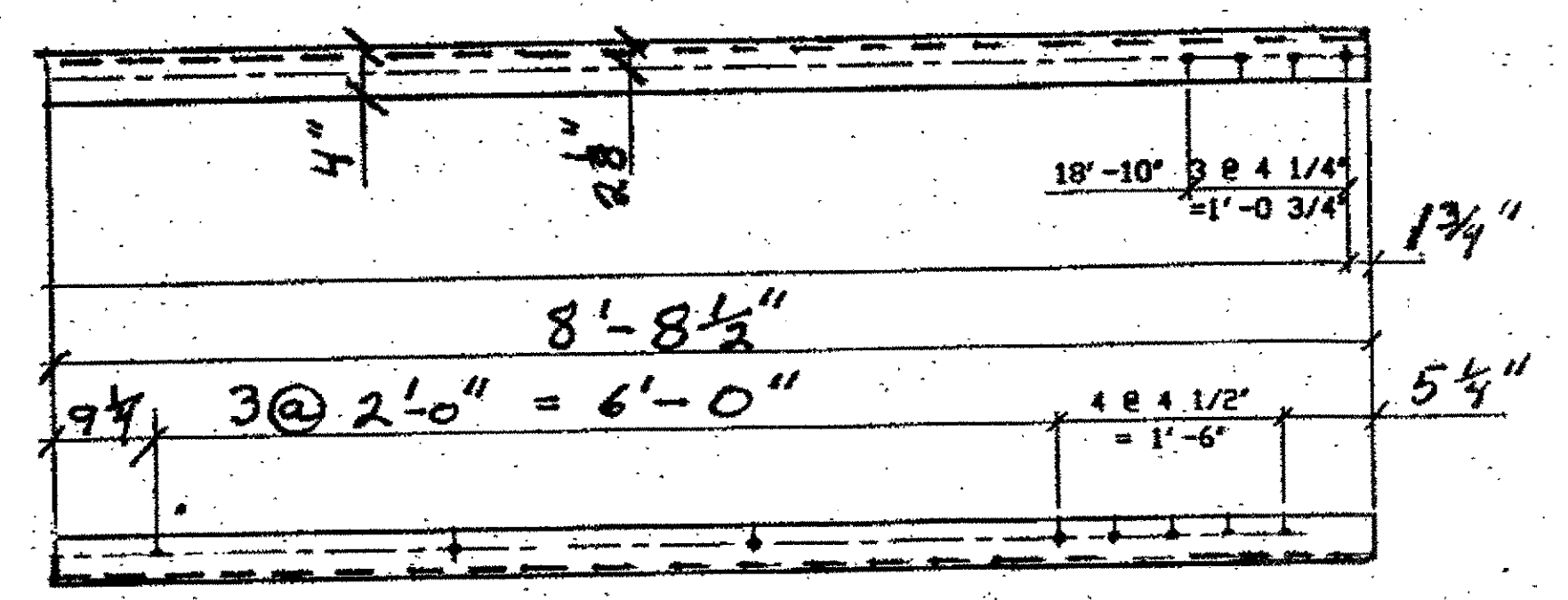
**1-TYPE 1 TRANSVERSE QUARTER LENGTH 138C**  
 ORIGINAL SHOP MARK BS30A, A295Kp  
SPAN II  
S-S' NORTH BOTTOM WEST 138C



**(1) TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT-138B**  
 ORIG SHOP DWG 17-351  
 ORIG SHOP MARK A17g  
SPAN 3  
E-E' NORTH BOTTOM EAST 138B



**1-TYPE 1 TRANSVERSE QUARTER LENGTH 138D**  
 ORIGINAL SHOP MARK BS30, A295a  
SPAN 9  
F-F' SOUTH BOTTOM EAST 138D

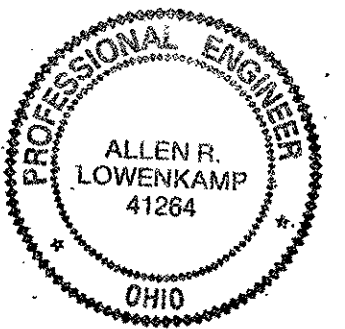


**1-TYPE 1 TRANSVERSE QUARTER LENGTH 138E**  
 ORIGINAL SHOP MARK BS30A, A295Kp  
SPAN II  
C-C' SOUTH BOTTOM EAST 138E

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	4/04 PSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

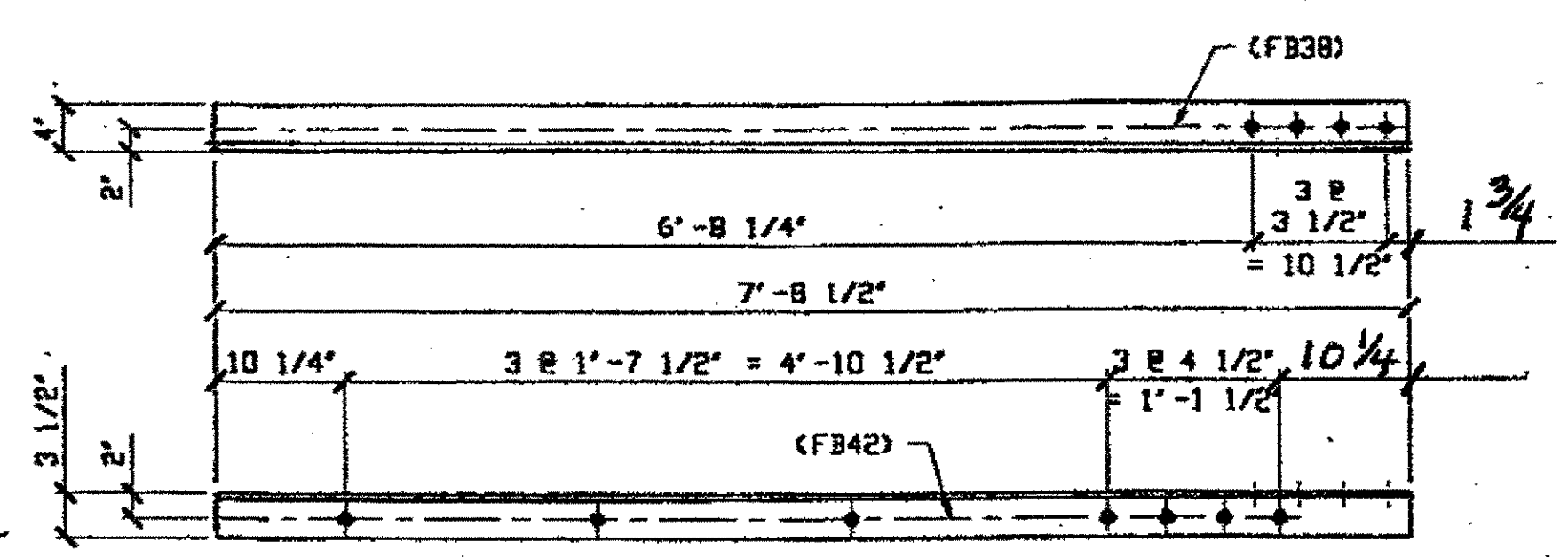
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY
<b>Tri State Steel Construction Inc.</b> 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 <b>BRIDGE No. CUY-10-16.13</b>			
DRAWN BY		CHECKED BY	
SCALE NA		DATE	
JOB NO.			DRAWING NO.
			138

### BILL OF MATERIALS

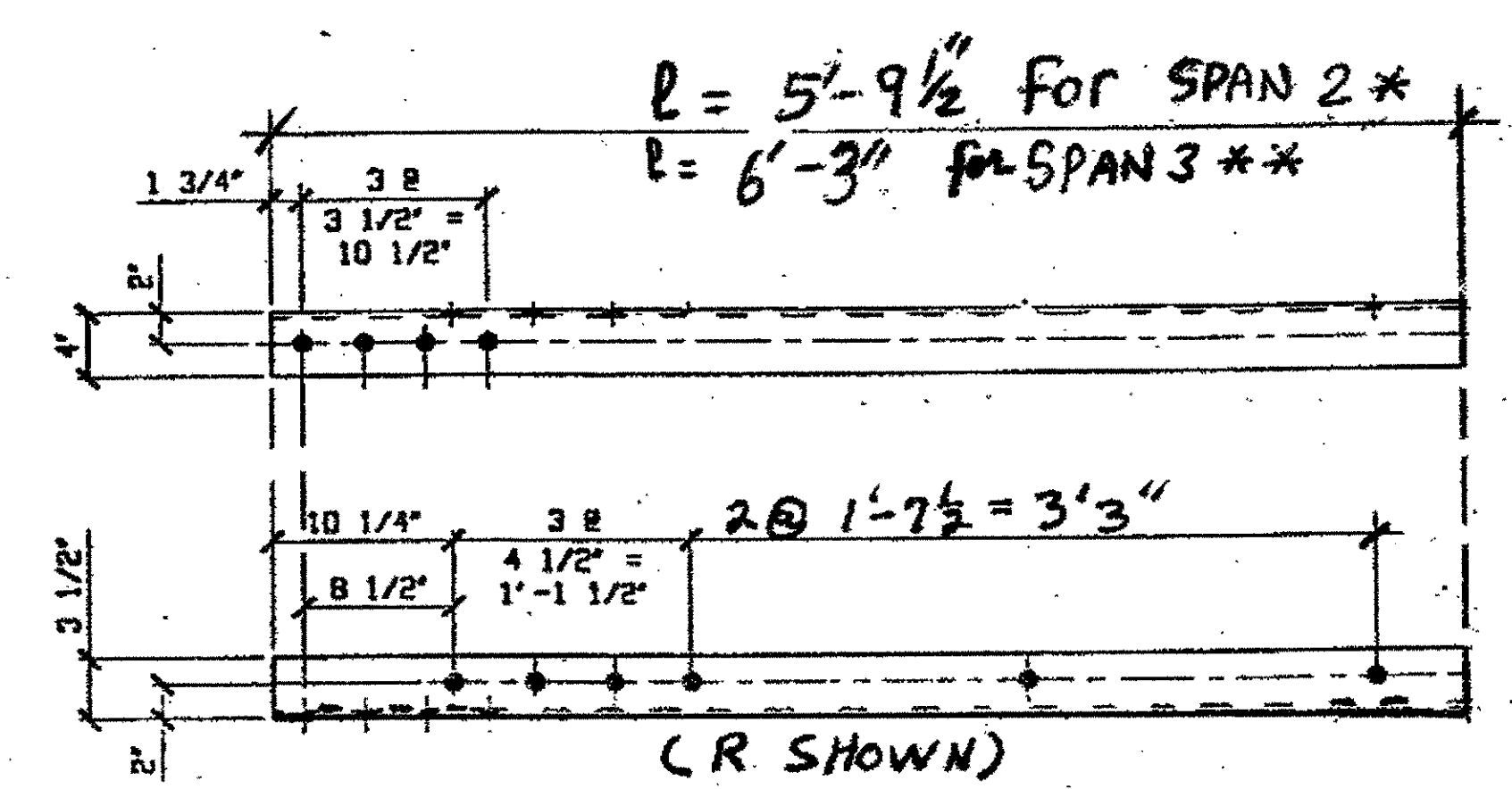
Piece No.	Qty.	Description
190 A	1	L 4x3 1/2 x 3/8 x 6'-8 1/4"
190 B R/L	3	L 4x3 1/2 x 3/8 x 4'-8 1/2" 1/R 2/L
190 C/R	1	L 4x3 1/2 x 3/8 x 5'-9 1/2" R
190 C R/L	2	L 4x3 1/2 x 3/8 x 6'-3" (1R+1L)
		PLATE A36 SHAPES A36



(1) TYPE 2 TRANSVERSE QUARTER LENGTH REPAIR 190A

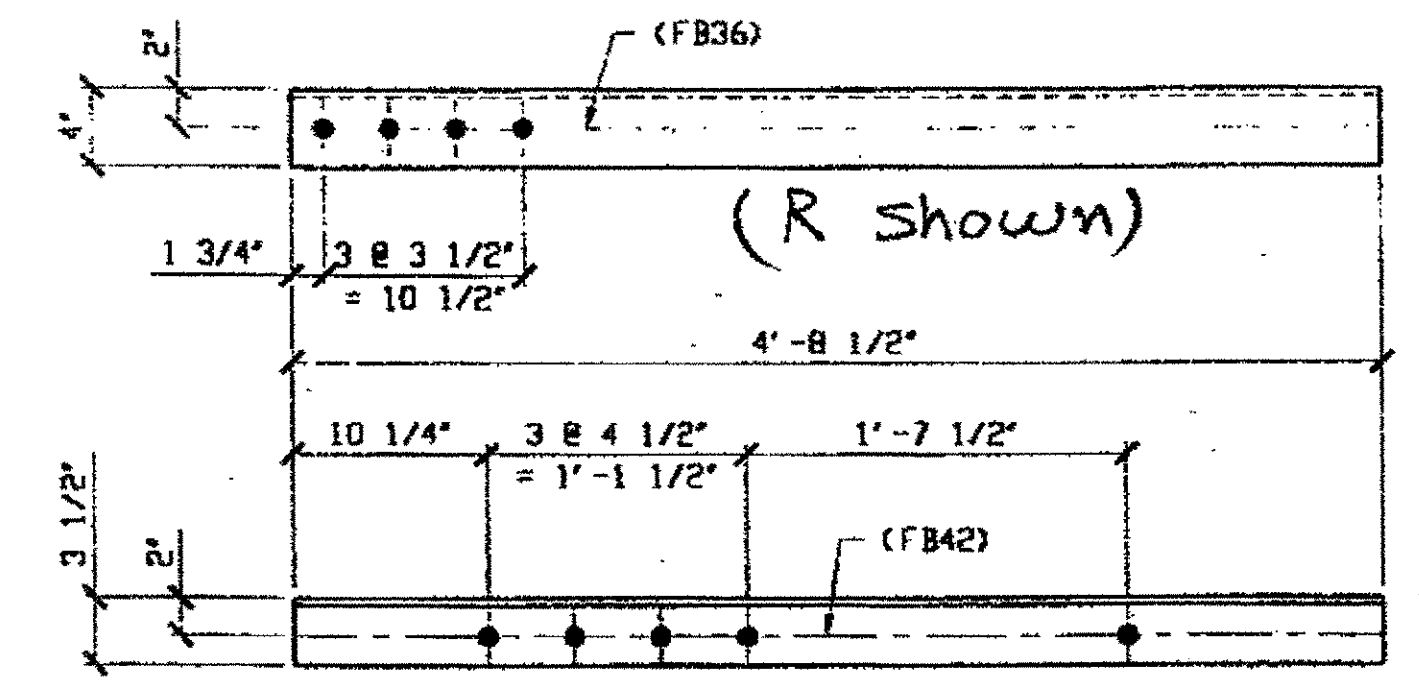
ORIG. SHOP DRAWING 17 - BS4  
ORIG. SHOP MARK A17h  
ITEM LINE No. 0113  
ITEM LINE No. 0153, BID ITEM No. 86390000

SPAN 2, B-B' NORTH TOP EAST 190A



(1+2) TYPE 2 TRANSVERSE 1/4 LENGTH 190C R/L  
ORIGINAL SHOP MARK BS4 A17h, DWG-17  
SPAN 2  
C-C' NORTH BOTTOM EAST 190C/R \*

SPAN 3  
G-G' NORTH TOP EAST 190C/L \*\*  
G-G' NORTH TOP WEST 190C/R \*\*



3 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 190B R/L

ORIG SHOP DWG 17-BS4  
ORIG SHOP MARK A17h  
LINE ITEM No. 0113

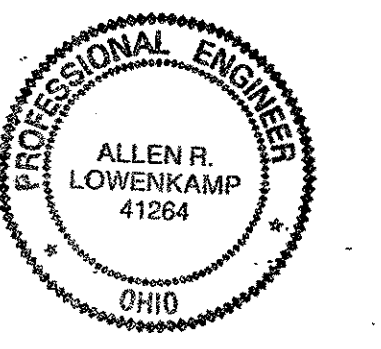
SPAN 3  
G-G' NORTH BOTTOM WEST 190B/L  
G-G' NORTH BOTTOM EAST 190B/R  
F-F' SOUTH BOTTOM EAST 190B/L

O.D.O.T. DIST. 12

ACCEPTED AS NOTED  2/4/04 PSM

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

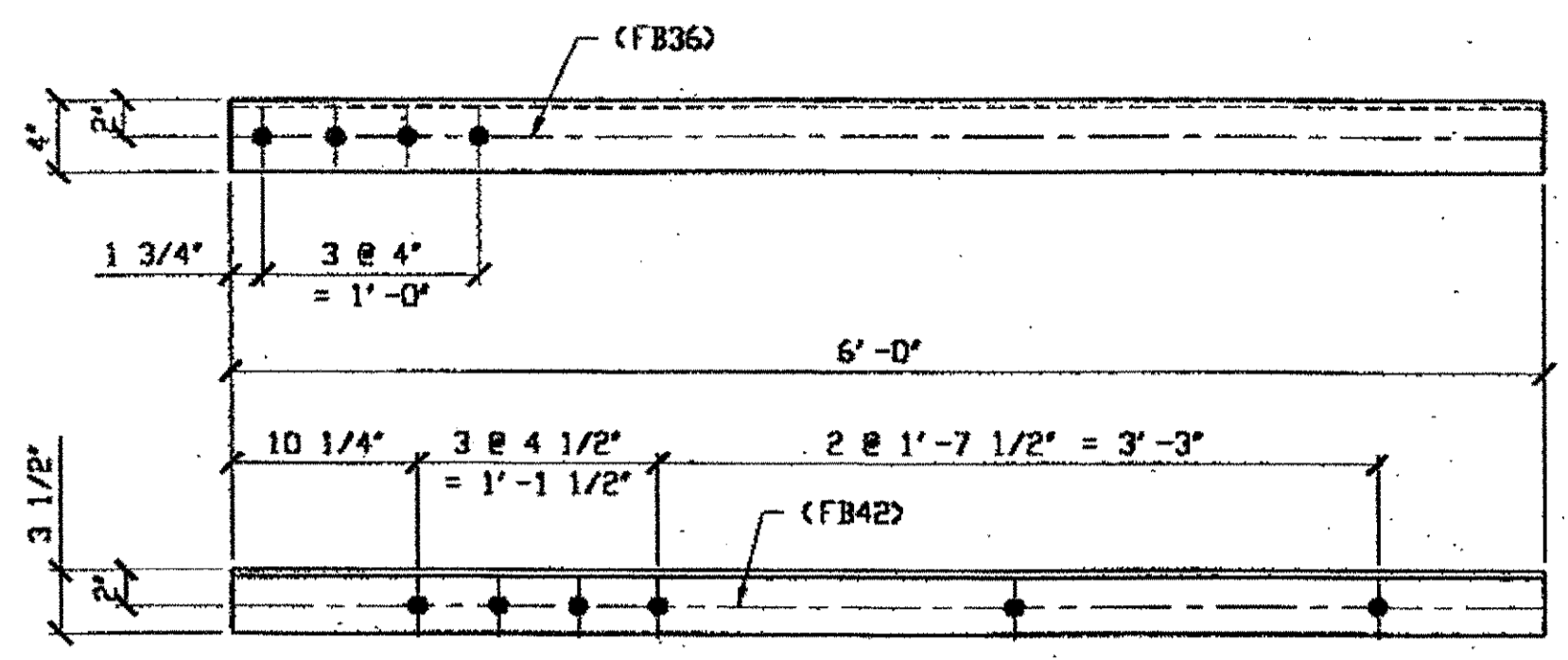
**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16.13**

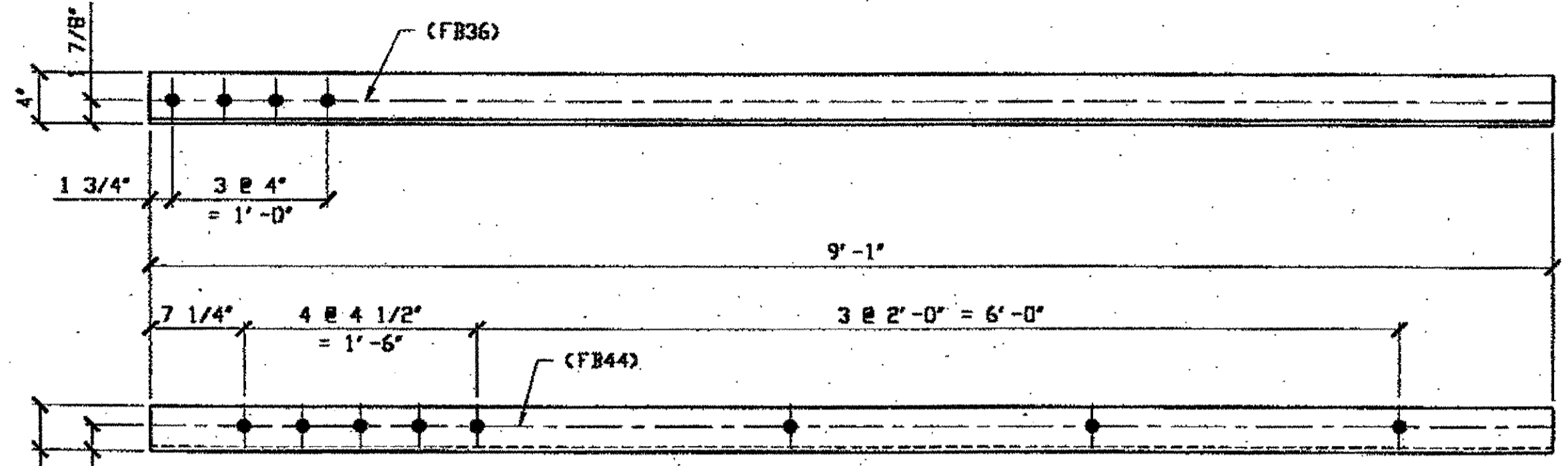
SCALE: NA  
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

DRAWING NO. **190**

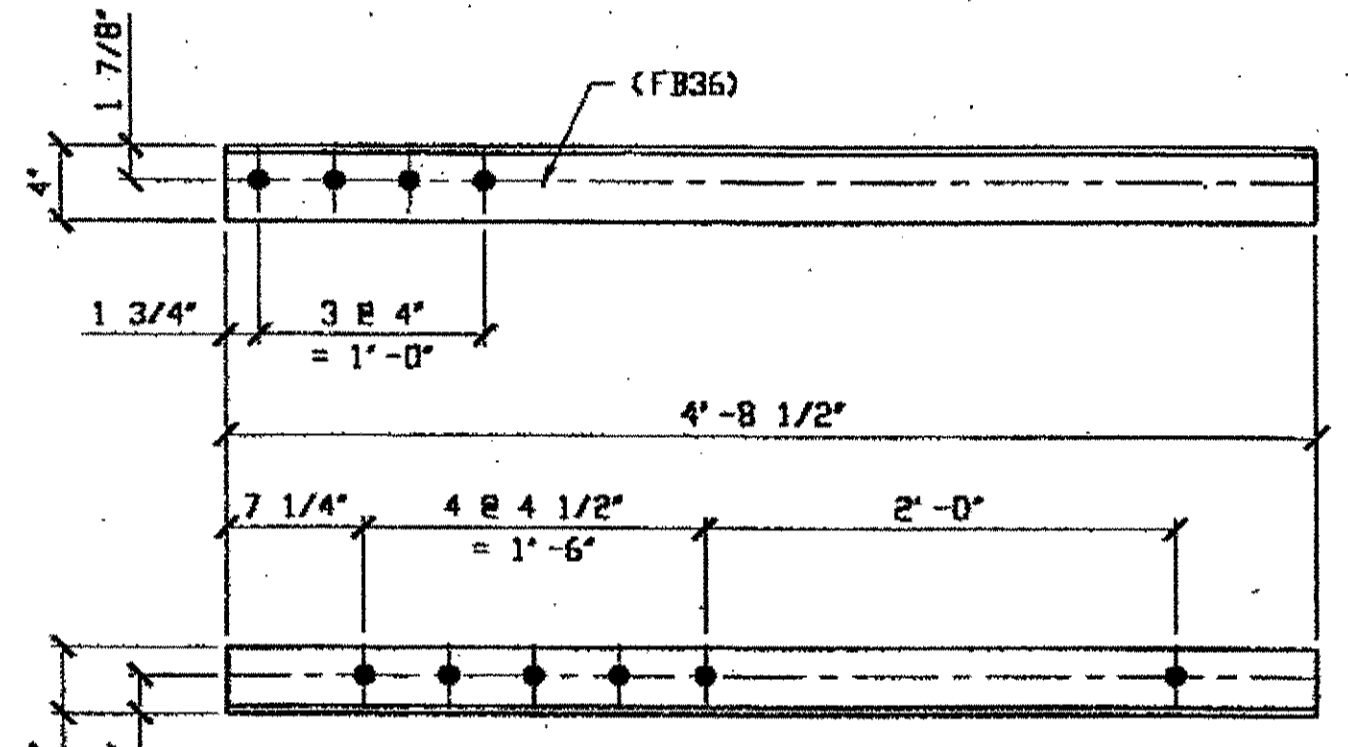
Last modified by rspringer at 08:13am on Thu Mar 22, 2001 -1- Last plotted by gfoster at 09:07am on Fri Mar 23, 2001



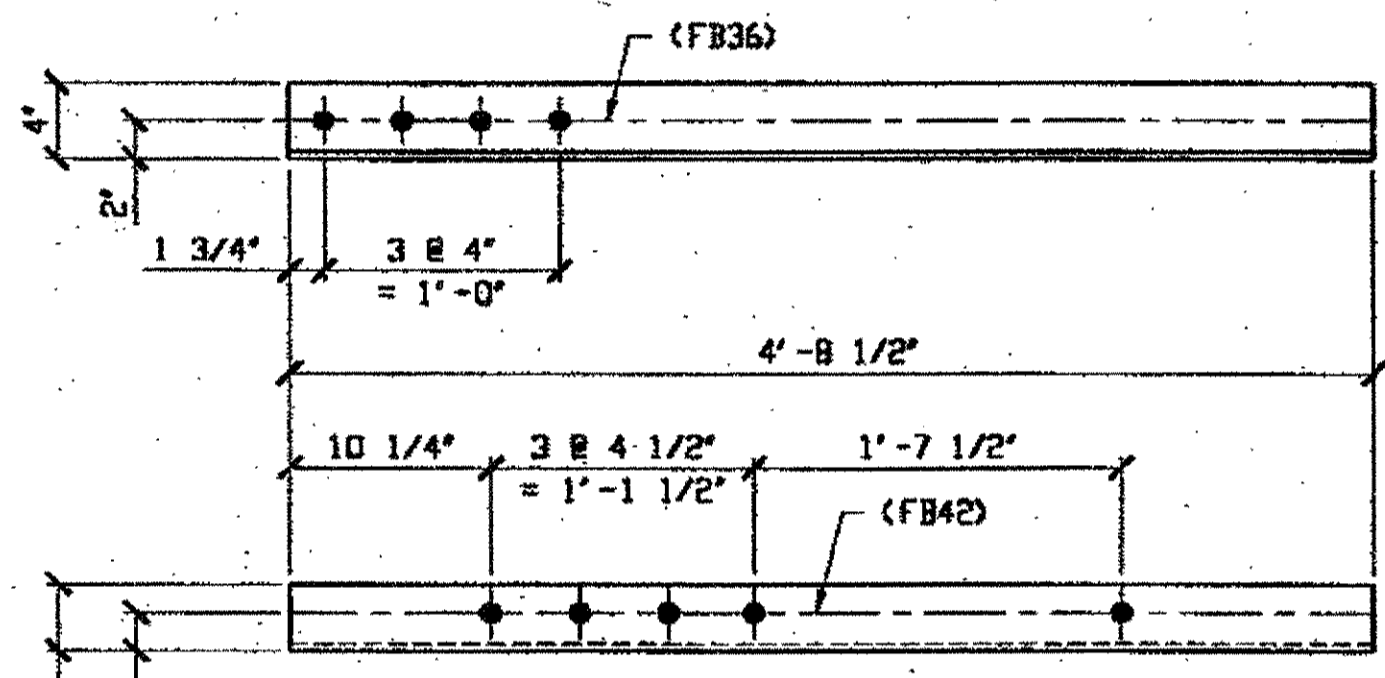
**2 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 267A**  
**SPAN 3**  
 B-B' SOUTH BOTTOM WEST 267A  
 ORIG SHOP DWG 17-BS1  
 ORIG SHOP MARK A17g  
 LINE ITEM No. 0109 & 0153  
**SPAN 5**  
 K-K' NORTH TOP WEST 267A



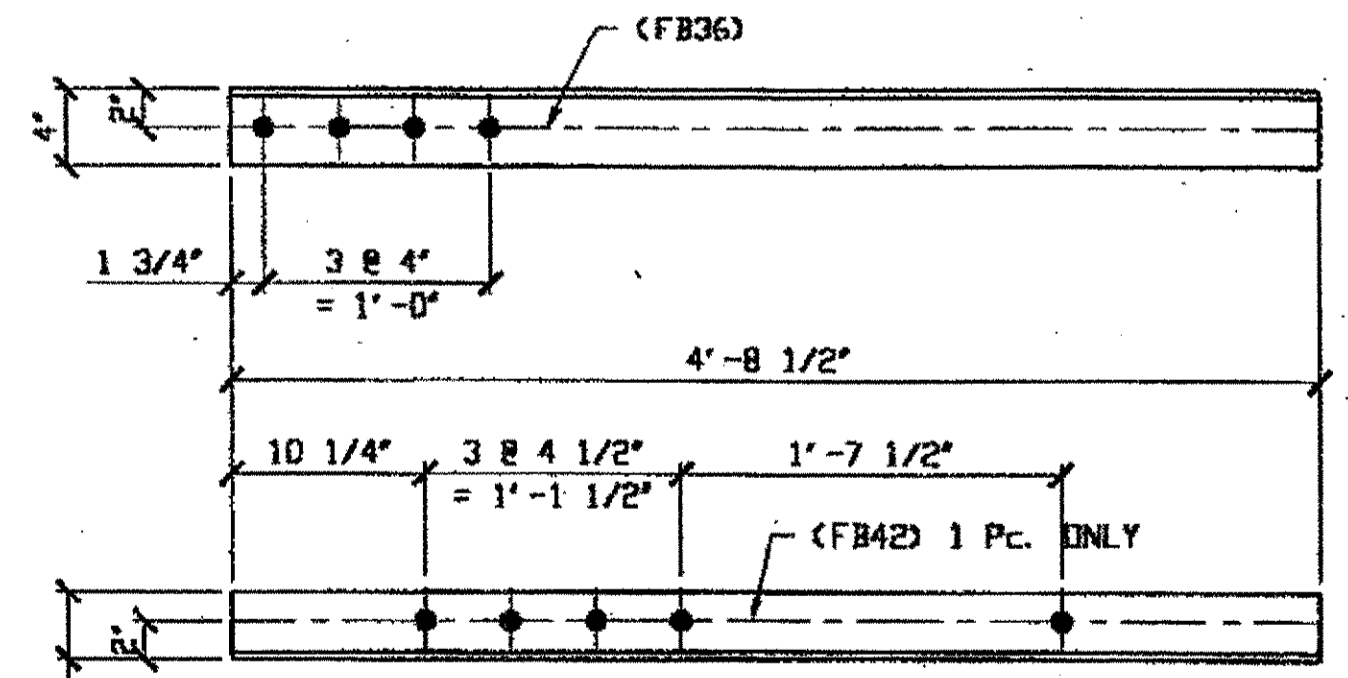
**1 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 267B**  
 ORIG SHOP DWG 84-BS16  
 ORIG SHOP MARK AB4p  
 LINE ITEM No. 0109 & 0153  
 REPAIR SHEET 5-173  
 ITEM LINE No. 0153, BID ITEM No. 863E90000  
**SPAN 5 B-B' SOUTH BOTTOM WEST 267B**



**1 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 267C**  
 ORIG SHOP DWG 84-BS16  
 ORIG SHOP MARK AB4p  
 LINE ITEM No. 0109  
 REPAIR SHEET 5-173  
**SPAN 5 B-B' SOUTH BOTTOM EAST 267C**

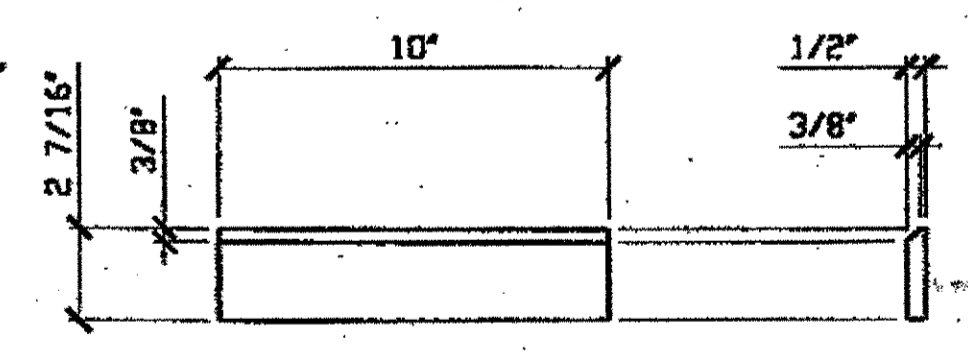


**3 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 267D R/L (R SHOWN)**  
 ORIG SHOP DWG 17-BS4A  
 ORIG SHOP MARK A17hx  
 LINE ITEM No. 0113  
 REPAIR SHEET 5-134 & 199  
**SPAN 5**  
 J-J' NORTH BOTTOM WEST 267D/L  
 J-J' SOUTH BOTTOM WEST 267D/R  
 J-J' SOUTH BOTTOM EAST 267D/L



**2 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 267F R/L (L SHOWN)**  
 ORIG SHOP DWG 17-BS1  
 ORIG SHOP MARK A17g  
 LINE ITEM No. 0109  
 REPAIR SHEET 5-210 & 187 REV. A

**SPAN 5**  
 F-F' SOUTH BOTTOM WEST 267F/R  
 L-L' SOUTH BOTTOM EAST 267F/L



**4 - SPLICE PLATES - 267H**  
 LINE ITEM No. 0109  
 IDENTICAL TO 138C

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TRANSVERSE QUARTER LENGTH REPAIR					
2		267A	2	L 4 X 3 1/2 X 3/8	6	0		110	
3		267B	1	L 4 X 3 1/2 X 3/8	9	1		83	
4		267C	1	L 4 X 3 1/2 X 3/8	4	8 1/2		43	
5		267D R/L	3	L 4 X 3 1/2 X 3/8	4	8 1/2	1/R, 2/L	129	
6		267F R/L	2	L 4 X 3 1/2 X 3/8	4	8 1/2			
7									
8									
9				TYPE 1 TRANSVERSE SPLICE PLATES					
10		267H	5	PL 1/2 X 2 7/16	0	10		18	
11		267K	5	BAR 3 1/2 X 1/2	0	10	PLAIN MATL	23	
12									
13				TYPE 2 TRANSVERSE SPLICE PLATES					
14		267N	3	BAR 3 1/2 X 1/2	0	6	PLAIN MATL	9	
15									
16									
17				FIELD BOLTS					
18		FB36	1	1" DIA	0	2 1/2	NOTE 2		
19		FB42	1	1" DIA	0	3 1/4	NOTE 2		
20		FB44	1	1" DIA	0	3 1/2	NOTE 2		
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY EDP

NAT'L ENGR' & CONTR. CO.  
 By EDP/ESS  
 MAR 26 2001  
 OHIO  
 ALLEN R. LOWENKAMP  
 41284  
 BUY ITEM LINE NO. AS NOTED  
 BUY BID ITEM NO. 863E90000 U.N.O.

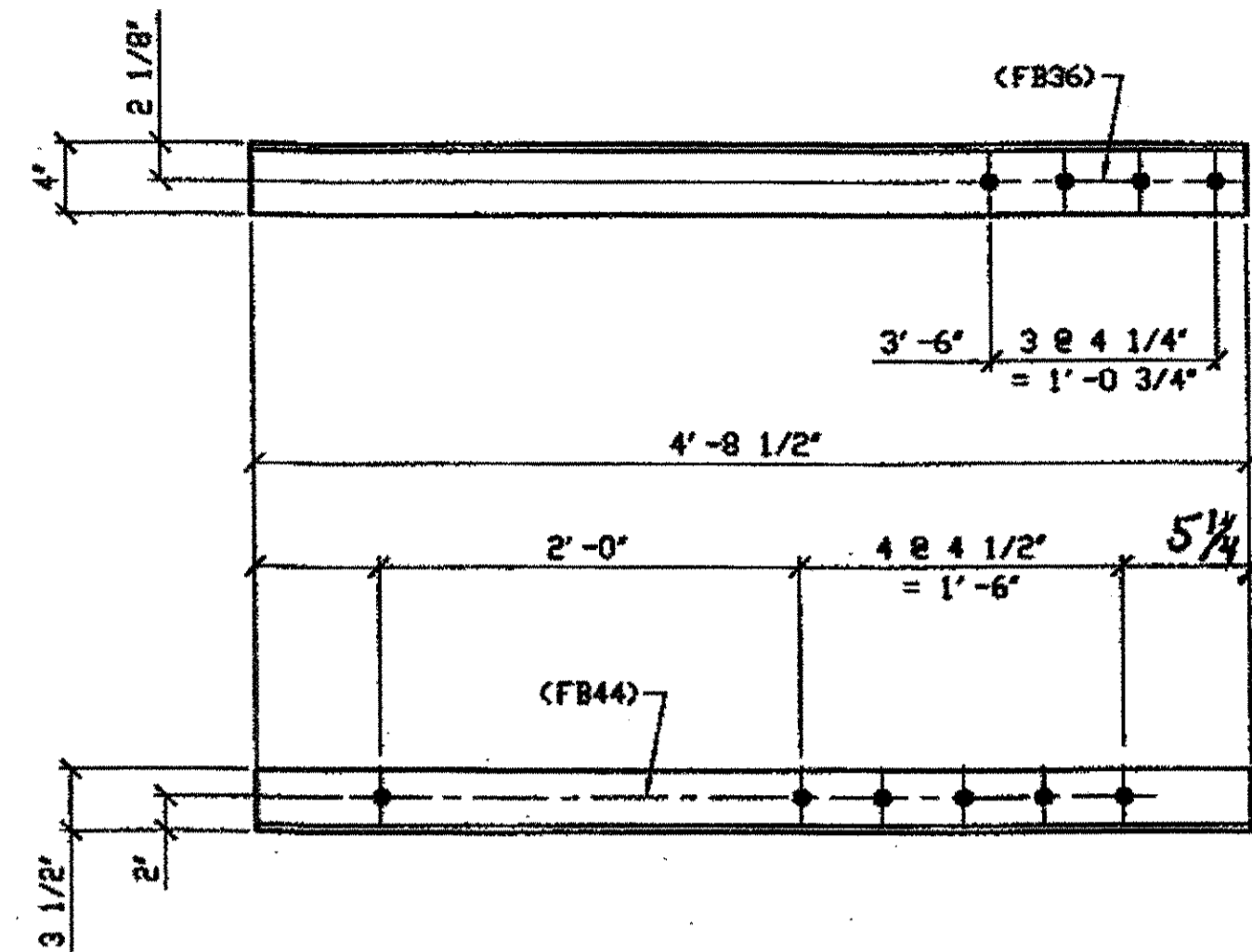
O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2010 AMERICAN BRIDGE WAY  
 CONROPS, PA. 15108  
 Phone: (412) 631-3000  
 Fax: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS  
 SHEET NUMBER: 267  
 AM JOB NUMBER: 800010

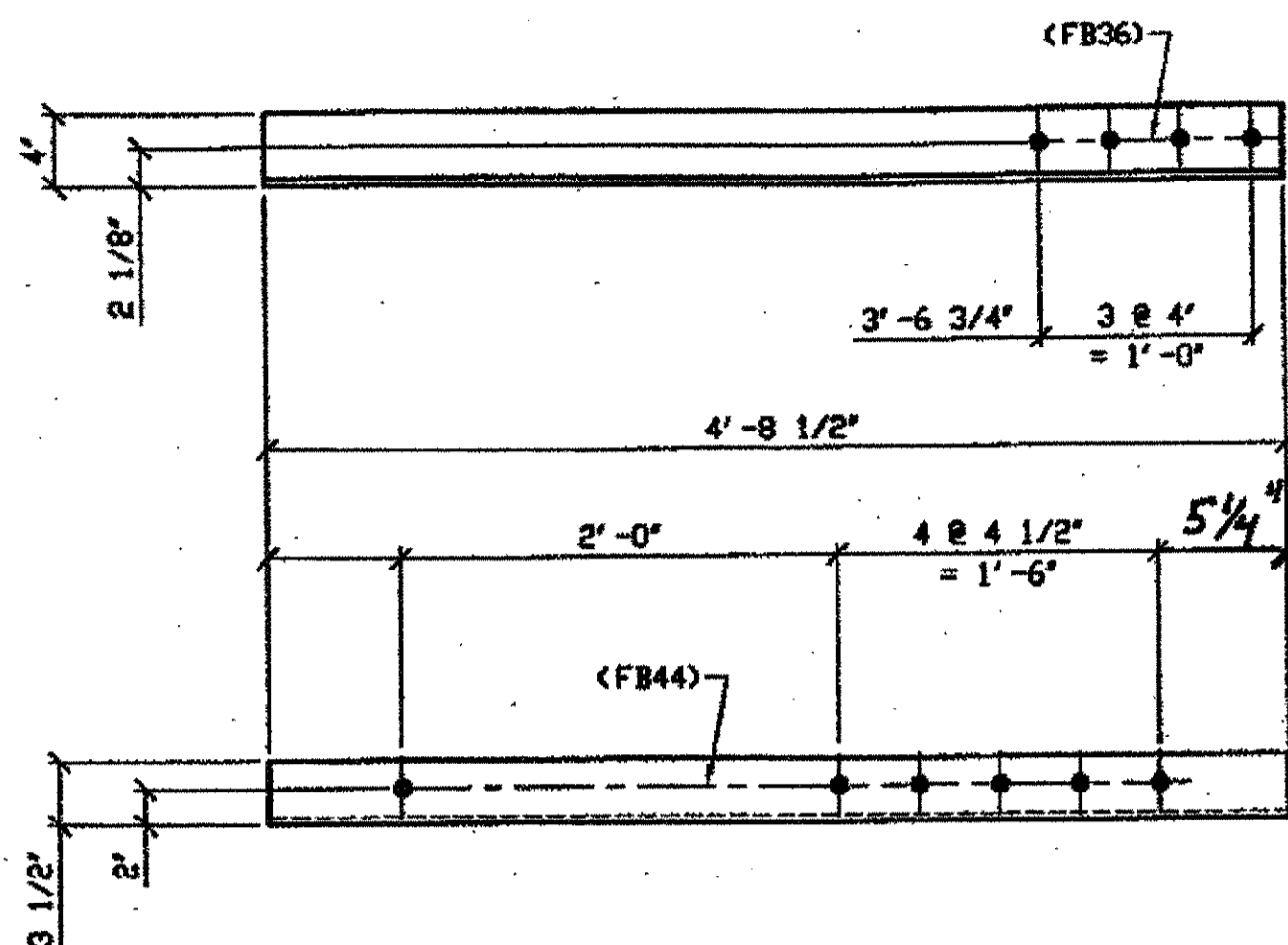
SPAN 7 M-M' SOUTH BOTTOM EAST - 307A/L



3 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 307A R/L (R SHOWN)

SPAN 7  
E-E' SOUTH BOTTOM EAST 307A/L  
P-P' SOUTH BOTTOM WEST 307A/R

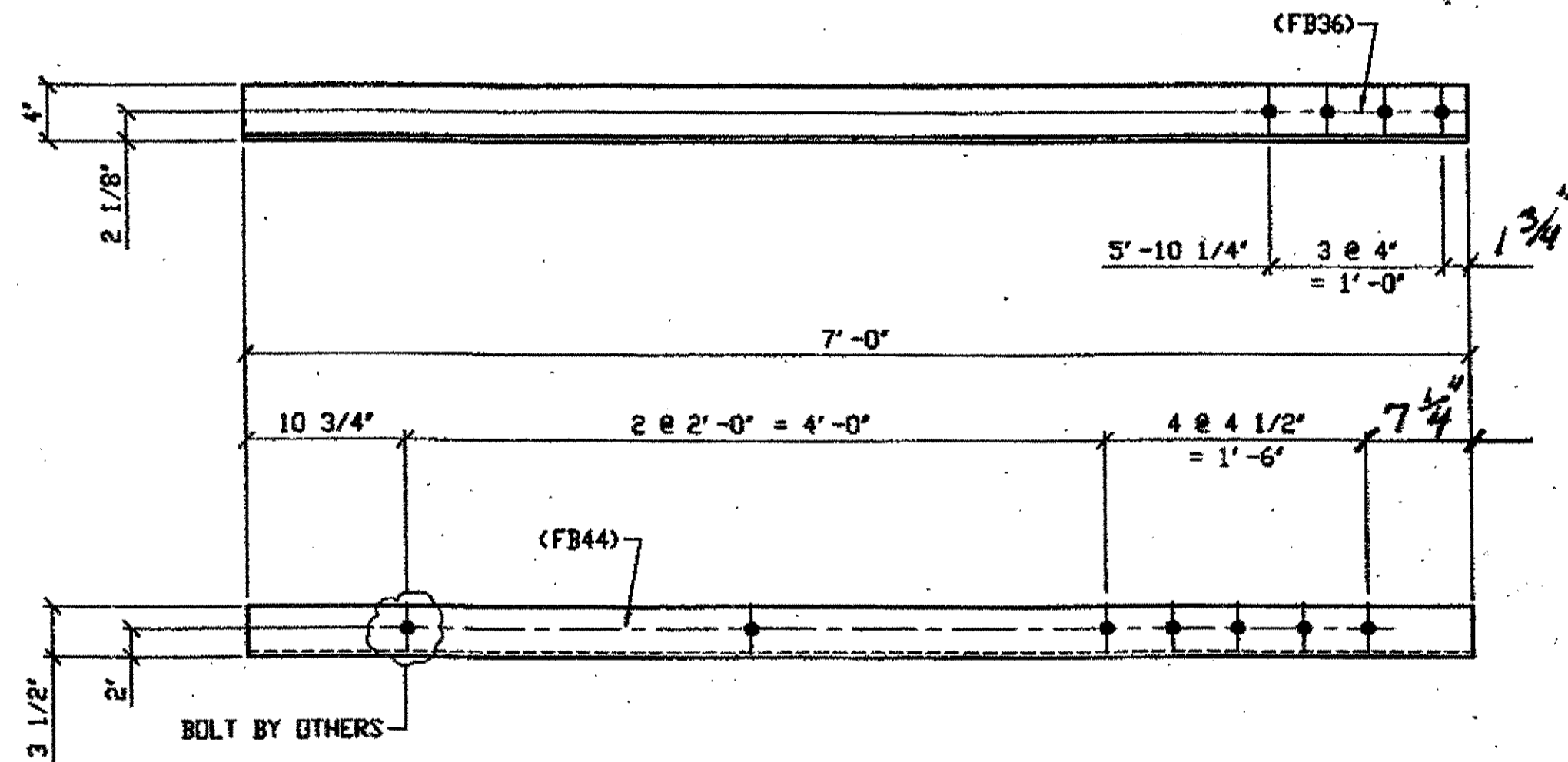
ORIG SHOP DRAWING 166-BS24  
 ORIG SHOP MARK A166k R/L  
 REPAIR SHEET 7-105 & 134  
 ITEM No. 0109



1 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 307C

SPAN 7  
F-F' NORTH BOTTOM WEST 307C

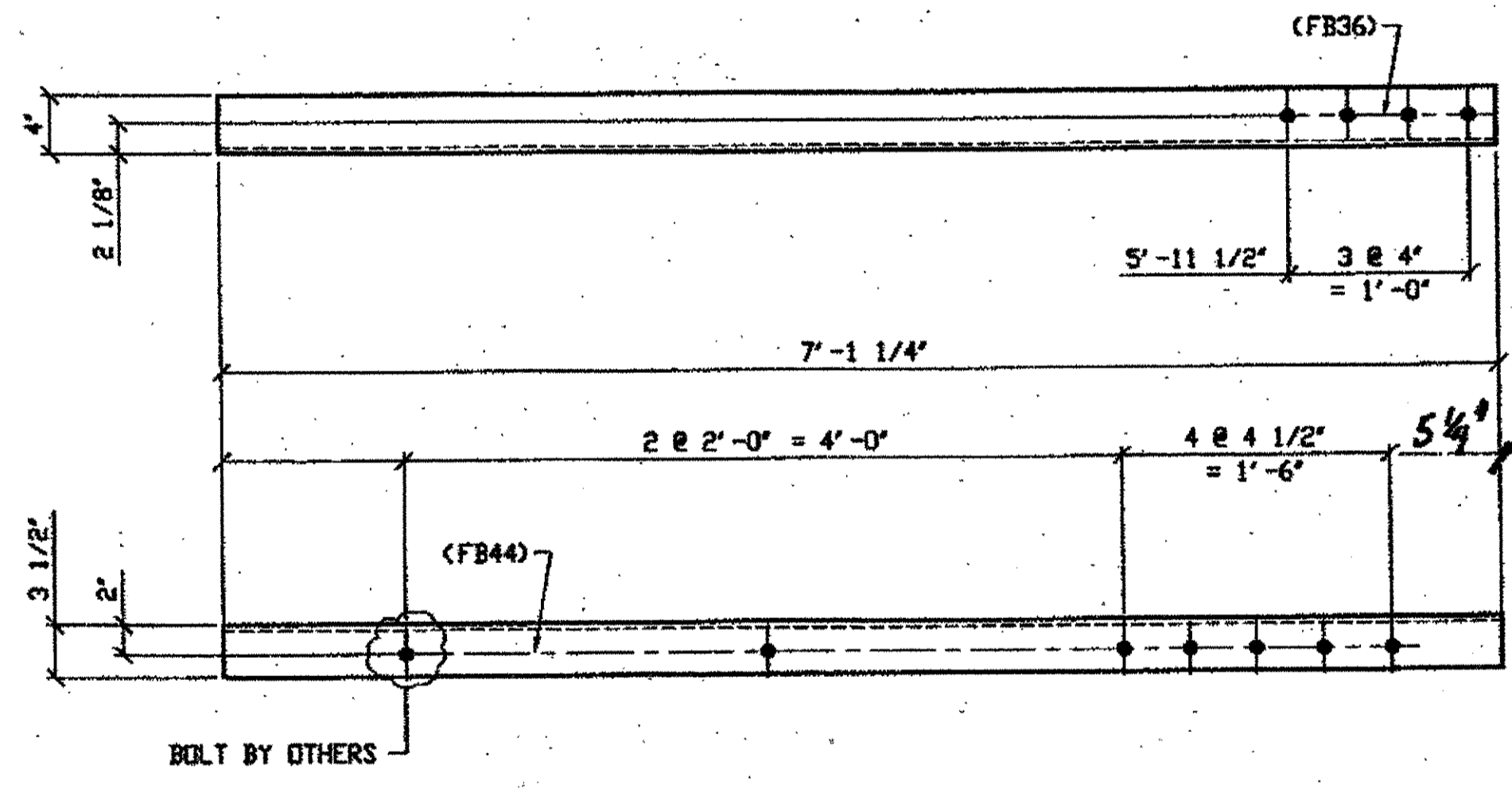
ORIG SHOP DRAWING 166-BS23  
 ORIG SHOP MARK A166h  
 REPAIR SHEET 7-206  
 ITEM No. 0109



1 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 307B

SPAN 7  
F-F' SOUTH BOTTOM EAST 307B

ORIG SHOP DRAWING 166-BS23  
 ORIG SHOP MARK A166h R/L  
 REPAIR SHEET 7-107  
 ITEM No. 0109 & 0153  
 ITEM No. 0153, BID ITEM No. 863E90000



2 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 307D R/L (R SHOWN)

SPAN 7  
F-F' NORTH TOP WEST 307D/R  
F-F' NORTH TOP EAST 307D/L

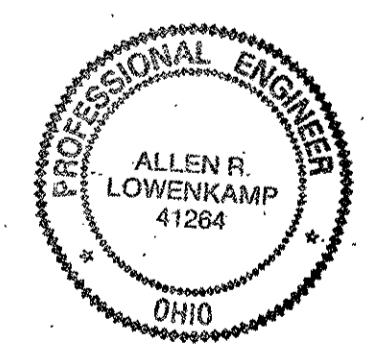
ORIG SHOP DRAWING 166-BS23  
 ORIG SHOP MARK A166h  
 REPAIR SHEET 7-207  
 ITEM No. 0109 & 0153  
 ITEM No. 0153, BID ITEM No. 863E90000

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANSVERSE QUARTER				
2		307A R/L	2	L 4 X 3 1/2 X 3/8	4	8 1/2	1R, 1L	86
3		307B	1	L 4 X 3 1/2 X 3/8	7	0		64
4		307C	1	L 4 X 3 1/2 X 3/8	4	8 1/2		43
5		R/L 307D	2	L 4 X 3 1/2 X 3/8	7	1 1/4	1R, 1L	
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE N/A		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/01  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



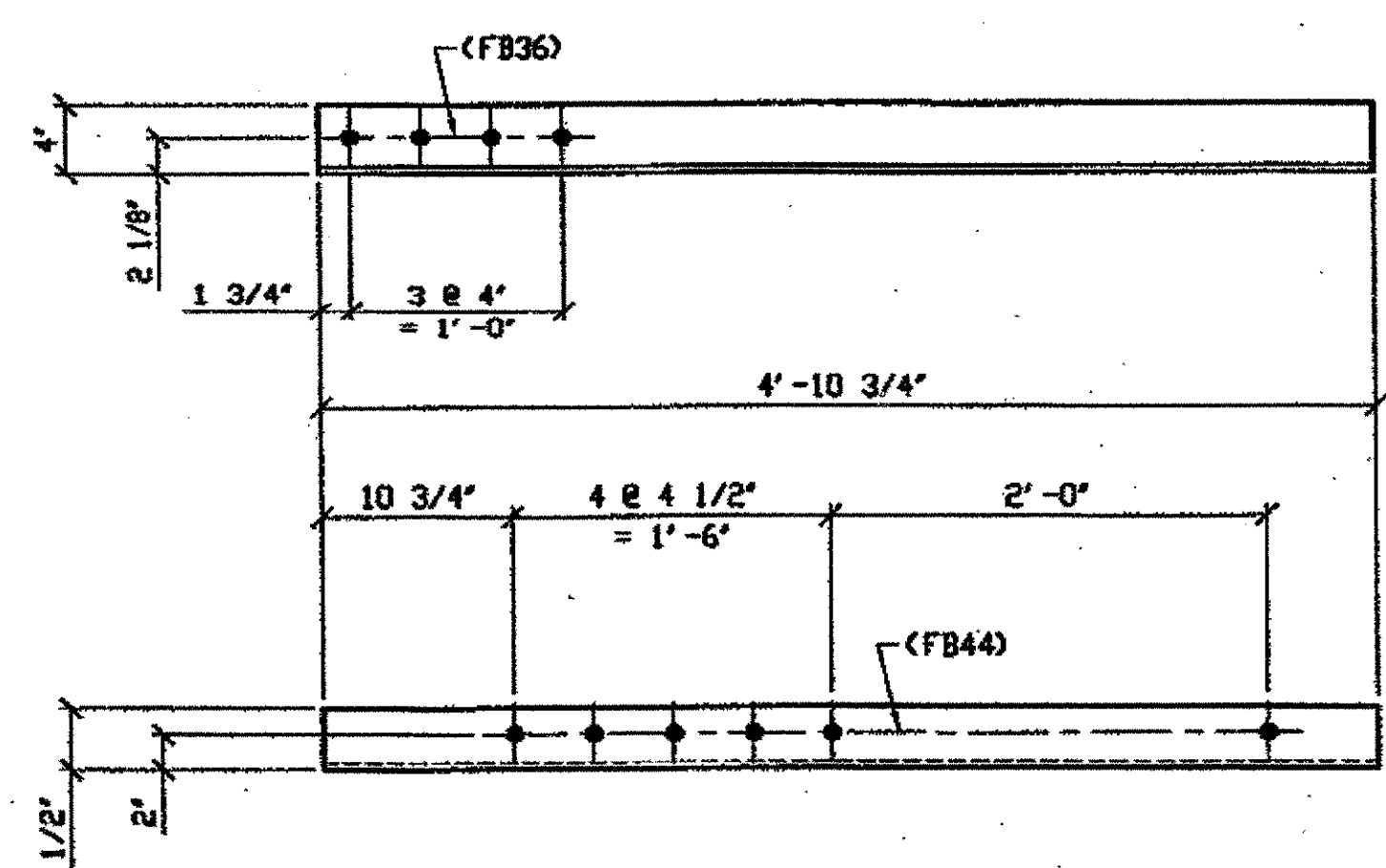
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44138  
 (440) 238-3015

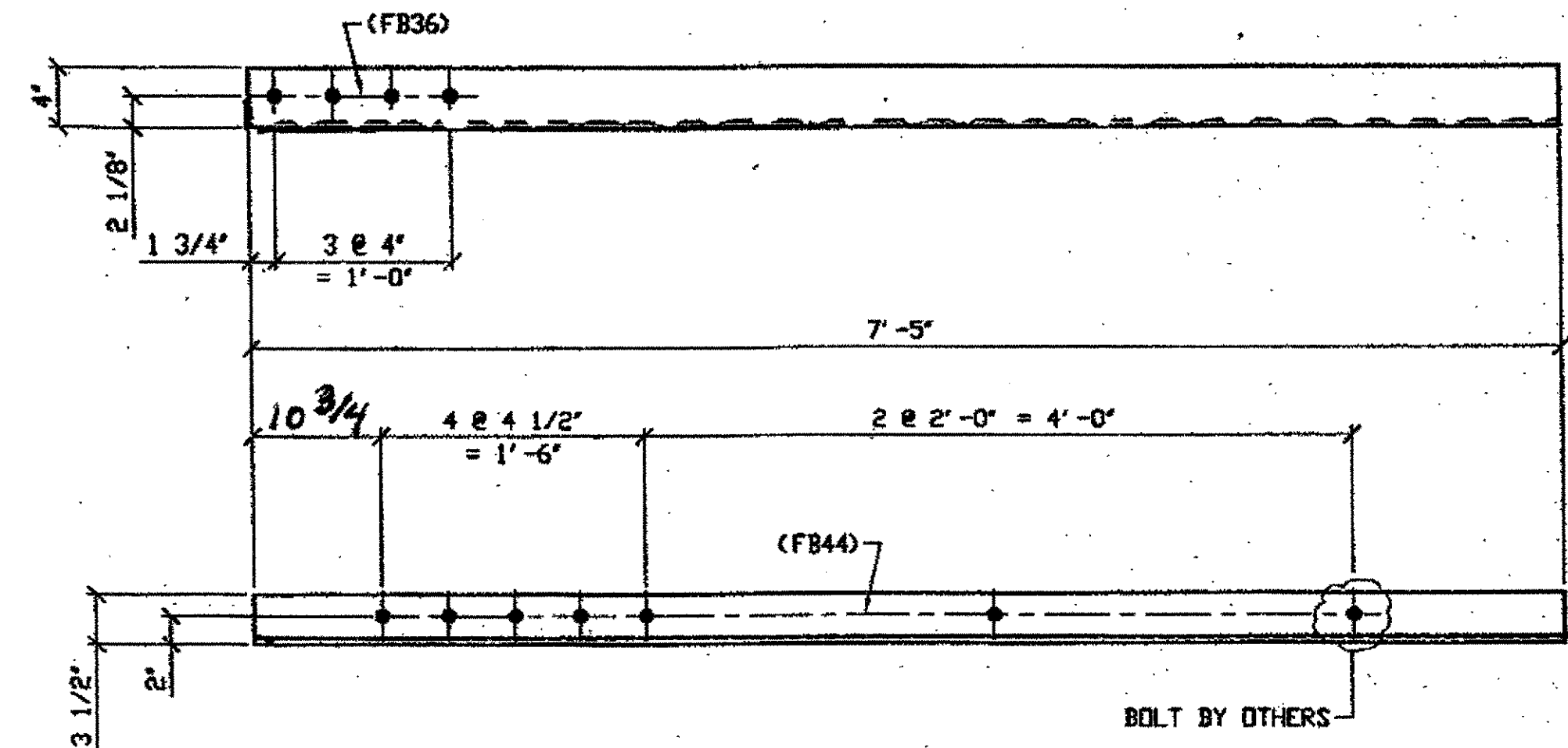
ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

JOB NO. 2000212  
 DRAWING NO. 307

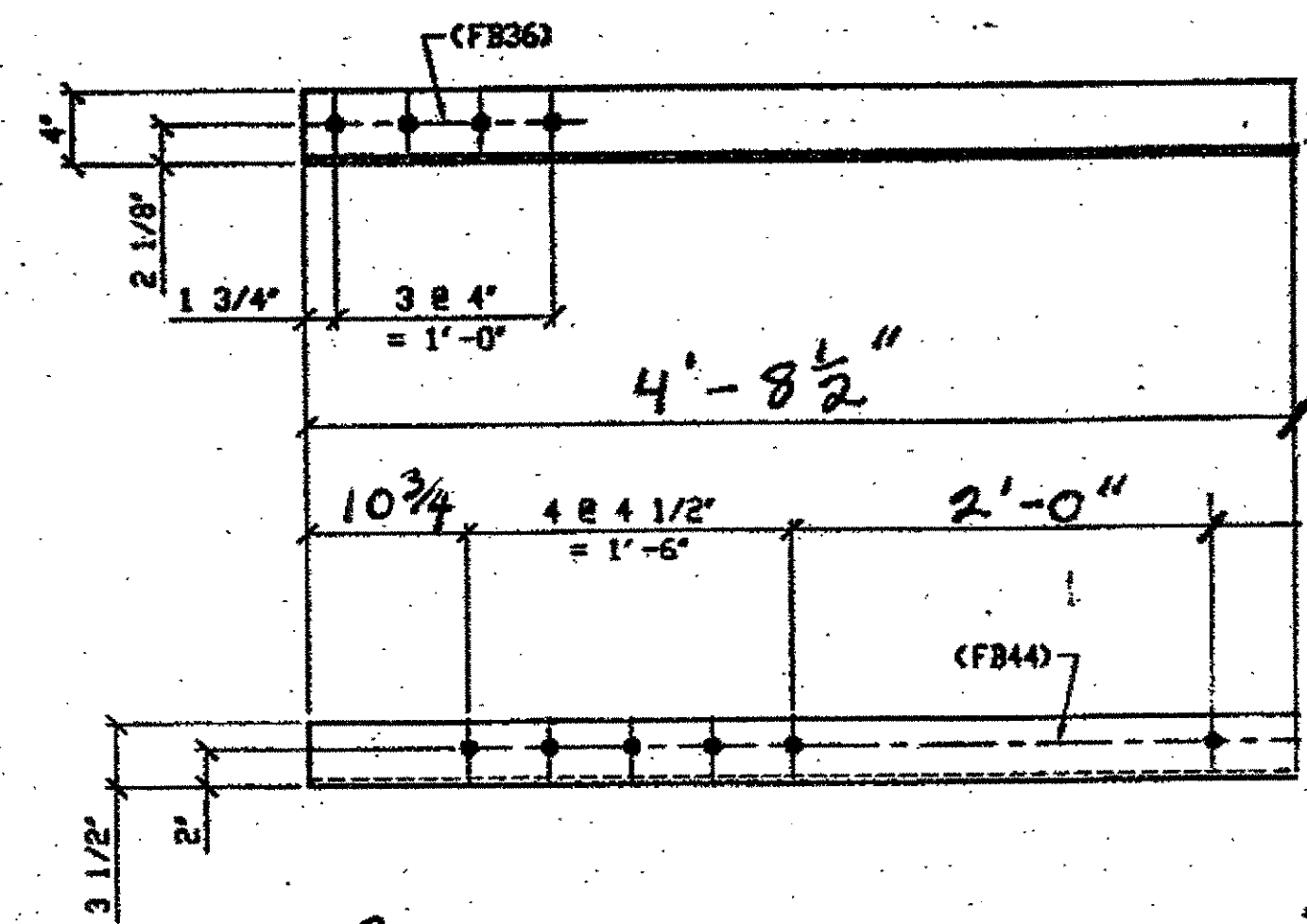
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_



**2 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 308A R/L**  
 ORIG SHOP DRAWING 165-BS19 R/L (R SHOWN)  
 ORIG SHOP MARK A165kg R/L  
 REPAIR SHEET 7-117 & 118  
 ITEM No. 0113  
**SPAN 7**  
 H-H' SOUTH TOP WEST 308A I/L  
 H-H' SOUTH BOTTOM WEST 308A I/R



**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 308B**  
 ORIG SHOP DRAWING 165-BS19/R  
 ORIG SHOP MARK A165kg R/L  
 REPAIR SHEET 7-216  
 ITEM No. 0113 & 0153  
 ITEM No. 0153, BID ITEM No. 863E90000  
 BOLT BY OTHERS  
**SPAN 7 J-J' NORTH BOTTOM WEST 308B**



**2 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 308C**  
 ORIG SHOP DRAWING 165-BS19/R  
 ORIG SHOP MARK A165kg R/L  
 REPAIR SHEET 7-216  
 ITEM No. 0113 & 0153  
 ITEM No. 0153, BID ITEM No. 863E90000  
**SPAN 7**  
 K-K' SOUTH BOTTOM WEST 308C  
 J-J' SOUTH BOTTOM EAST 308C

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 TRANSVERSE QUARTER				
2		308A R/L	2	L 4 X 3 1/2 X 3/8	4	10 3/4		89
3		308B	1	L 4 X 3 1/2 X 3/8	7	5		67
4								
5		308 C	2	L 4 X 3 1/2 X 3/8	4	8 1/2		
6								
7								
8								
9								
10								
11								
12								
13								
14				FIELD BOLTS				
15		FB36		1" DIA	0	2 1/2	NOTE 2	
16		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/1/04	ASM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

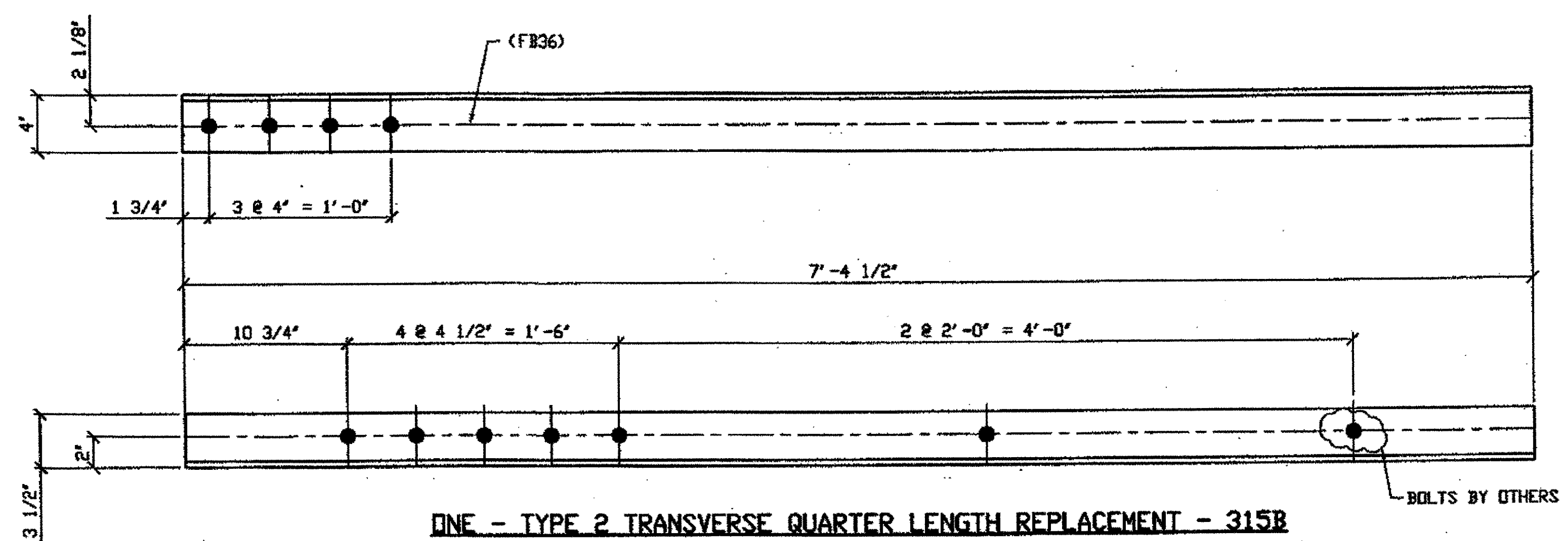


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**

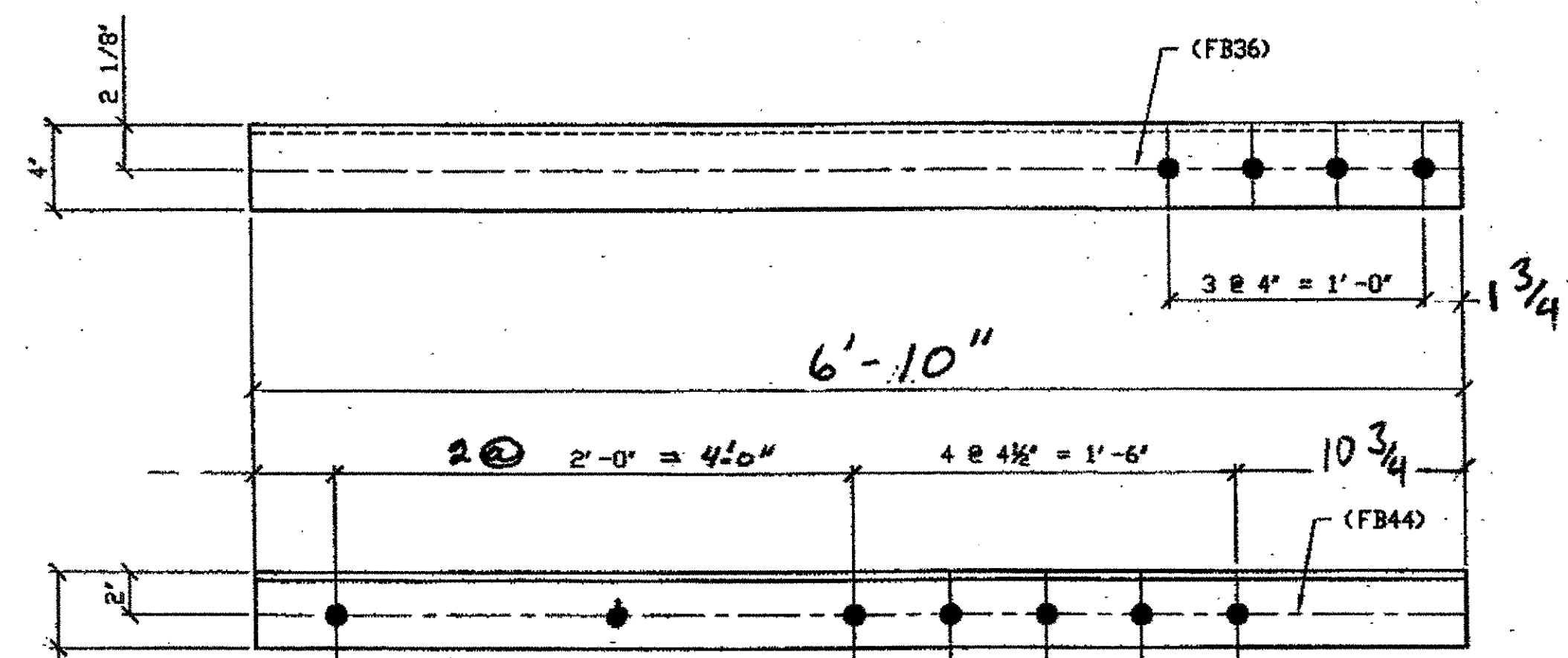
SCALE: N/A  
 DRAWING NO. 308



ONE - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 315B

ORIG SHOP DWG 165-BS19/L  
ORIG SHOP MARK A165kg R/L  
LINE ITEM No. 0113 & 0153  
REPAIR SHEET 8-134  
LINE ITEM NO. 0153, BID ITEM NO. 863E90000

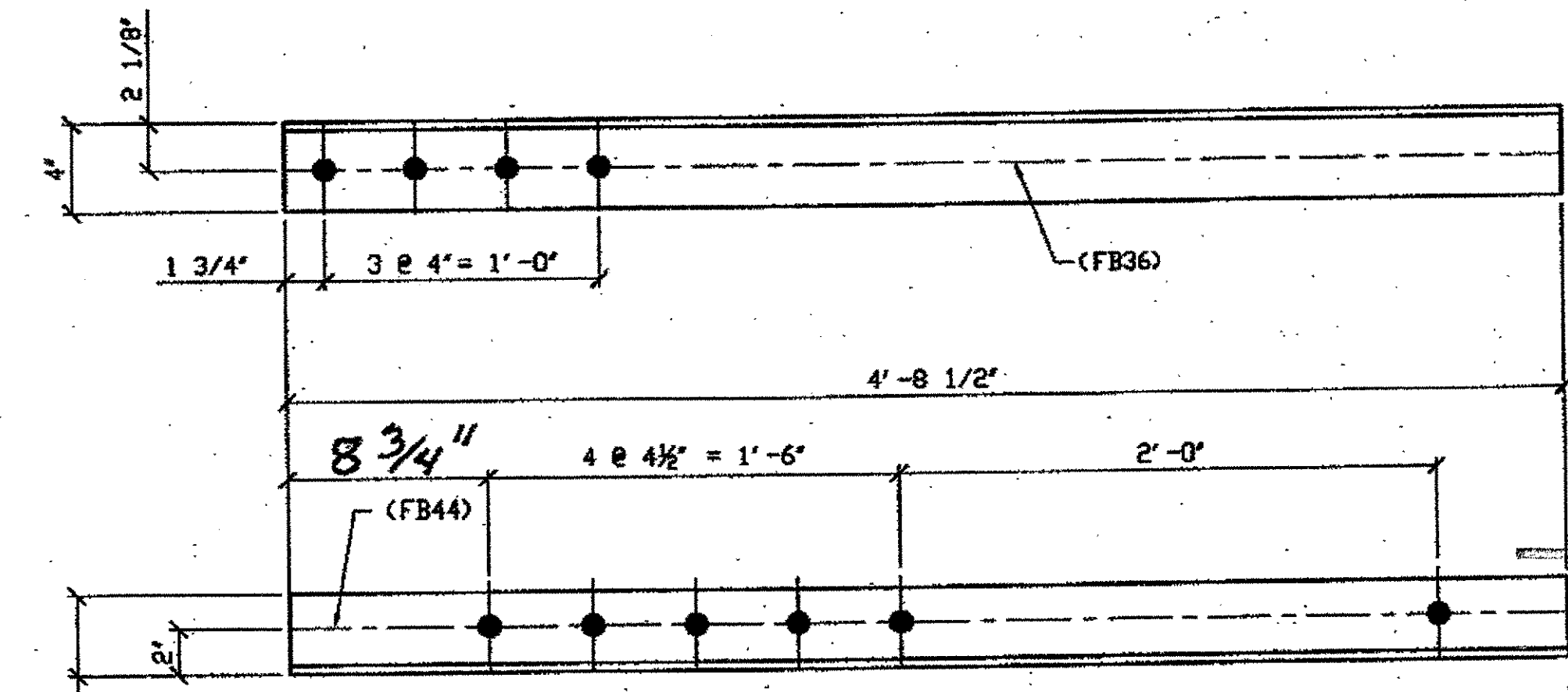
SPAN 8  
E-E' SOUTH BOTTOM EAST 315B



ONE - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 315A

ORIG SHOP DWG 165-BS19/R  
ORIG SHOP MARK A165kg/R  
LINE ITEM No. 0113  
REPAIR SHEET 8-118

SPAN 8 E-E' NORTH TOP EAST 315A



ONE - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 315C

ORIG SHOP DWG 165-BS19/L  
ORIG SHOP MARK A165kg  
LINE ITEM No. 0113  
REPAIR SHEET 8-125

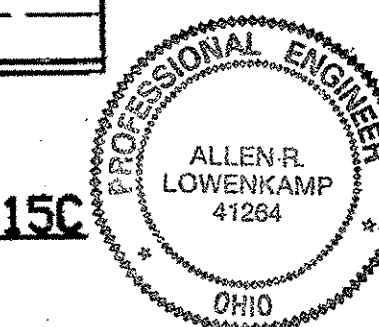
SPAN 8  
B-B' SOUTH BOTTOM EAST 315C

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 TRANS. QUARTER LENGTH REPAIR					
2		315A	1	L 4 X 3 1/2 X 3/8	4	8 1/2		43	
3		315B	1	L 4 X 3 1/2 X 3/8	7	4 1/2		67	
4		315C	1	L 4 X 3 1/2 X 3/8	4	8 1/2		43	
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15				FIELD BOLTS					
16		FB36	12	1" DIA.	0	2 1/2	NOTE 2	17	
17		FB44	12	1" DIA.	0	3 1/2	NOTE 2	19	
18									
19									
20									
PLATE N/A		PIPE N/A		FITTINGS N/A					
SHAPES A36		FLGS. N/A		BOLTS NOTE 2					

- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED 2/7/01 P.30  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 6/27/01 BY Edg/ESS



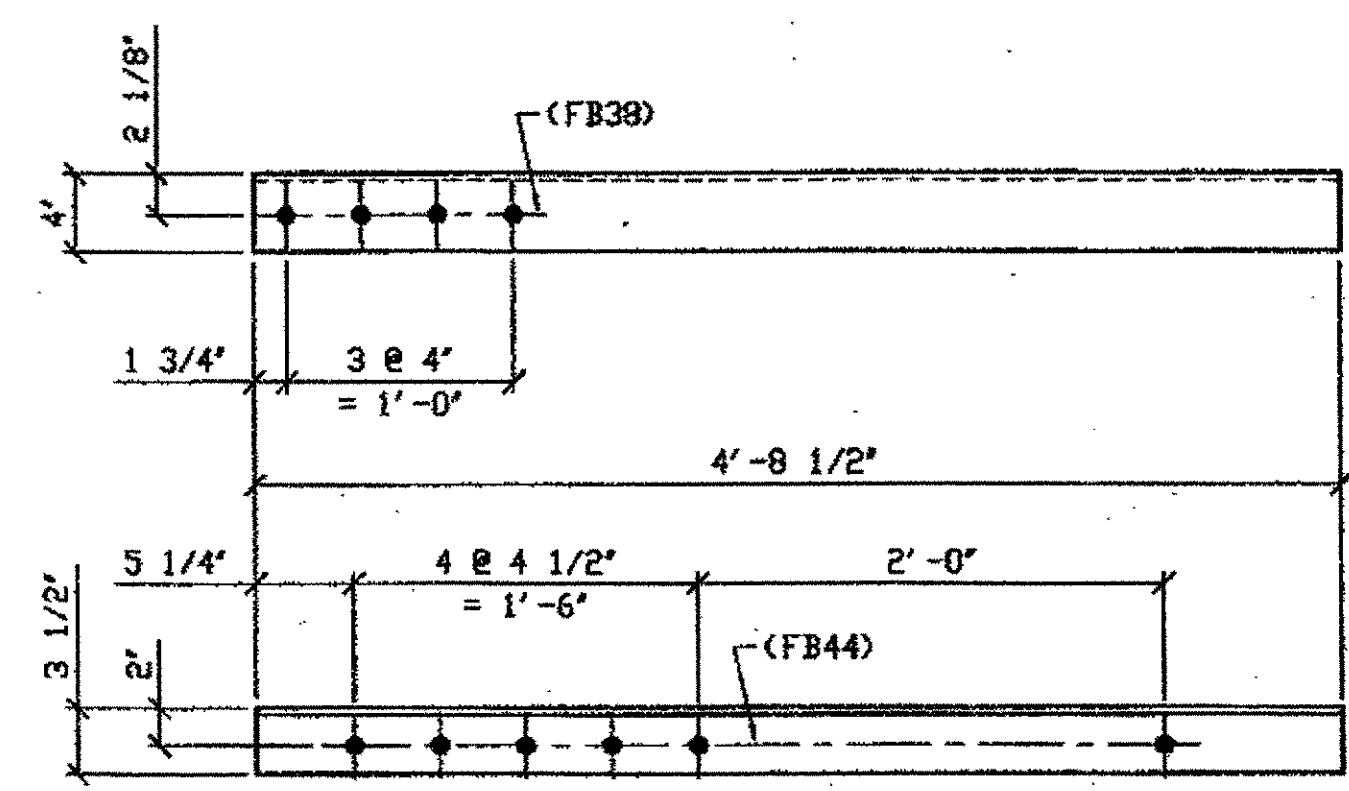
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CINCINNATI, OH 45208  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3395

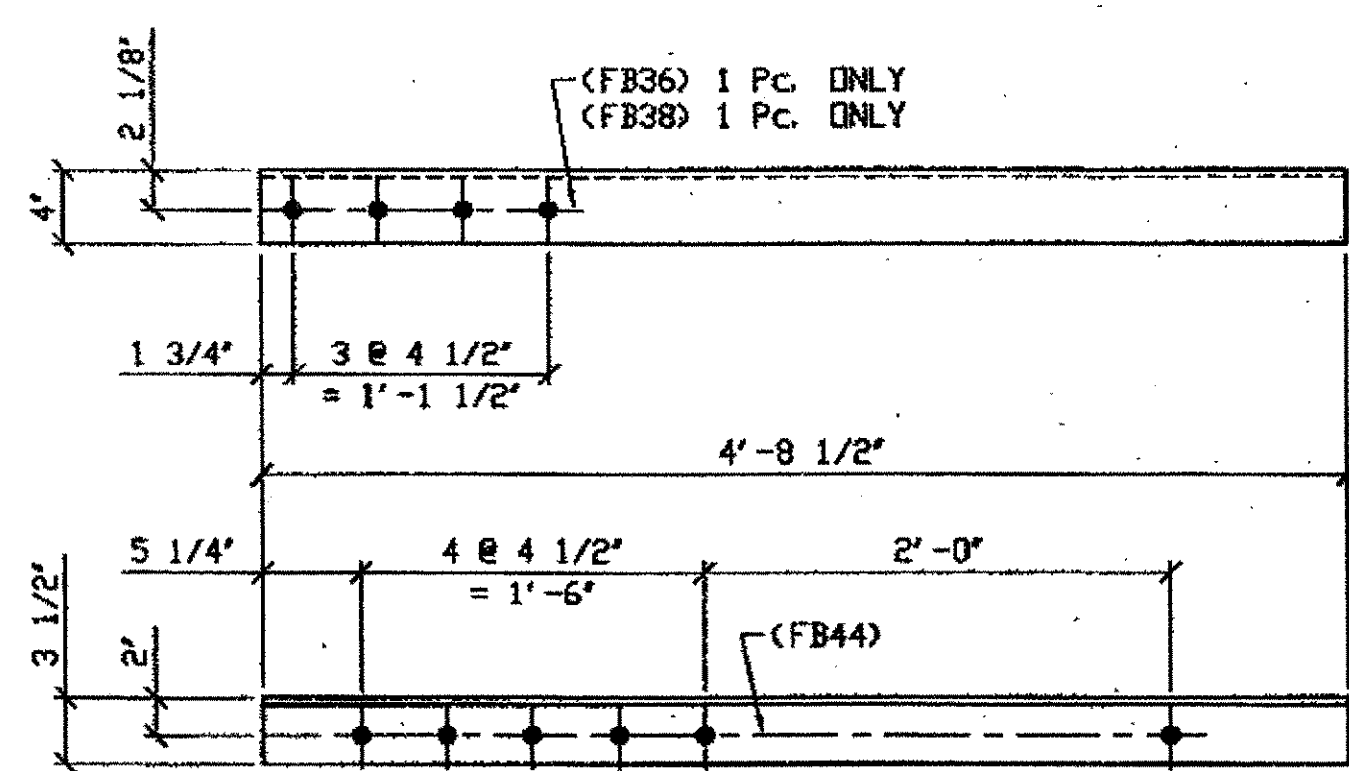
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: JRC 05/07/01  
CHECKED BY: DATE: GAF 08/06/01

NO.	DATE	DESCRIPTION	BY
DOT ITEM LINE NO. AS NOTED DOT BID ITEM NO. 863E30000 UN			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 8 REPAIRS			
		SHEET NUMBER	315
		ASH JOB NUMBER	800010

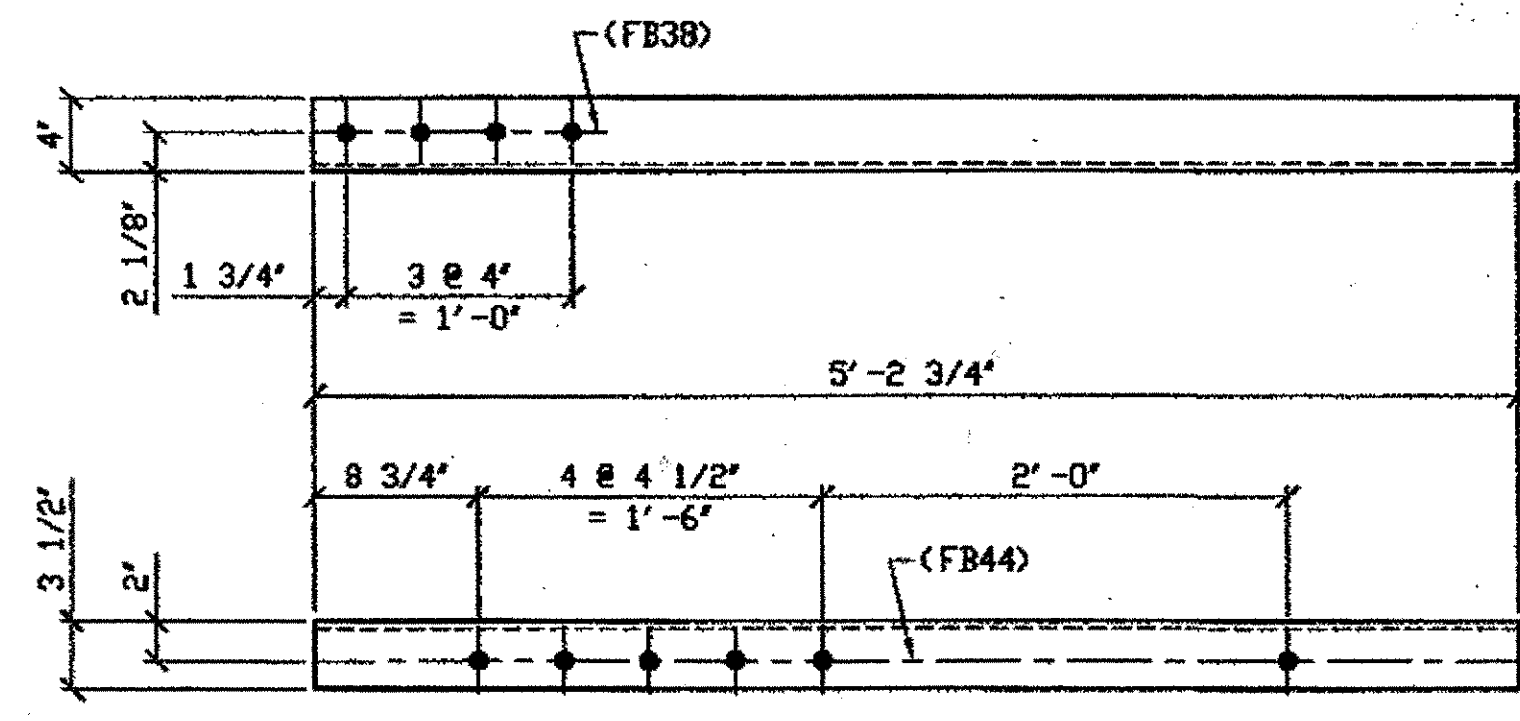
G:\Contracts\2001\Drawings\315a.dwg  
Save by sffos at 11:50am Oct 05, 2001  
Plot by sffos at 11:51am Oct 05, 2001  
Model space plot + Scale = 1/8"



**3 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 346A R/L (R SHOWN)**  
 ORIG SHOP DWG 295-BS29  
 ORIG SHOP MARK A295c  
 DOT ITEM No. 0109  
 REPAIR SHEET 9-140



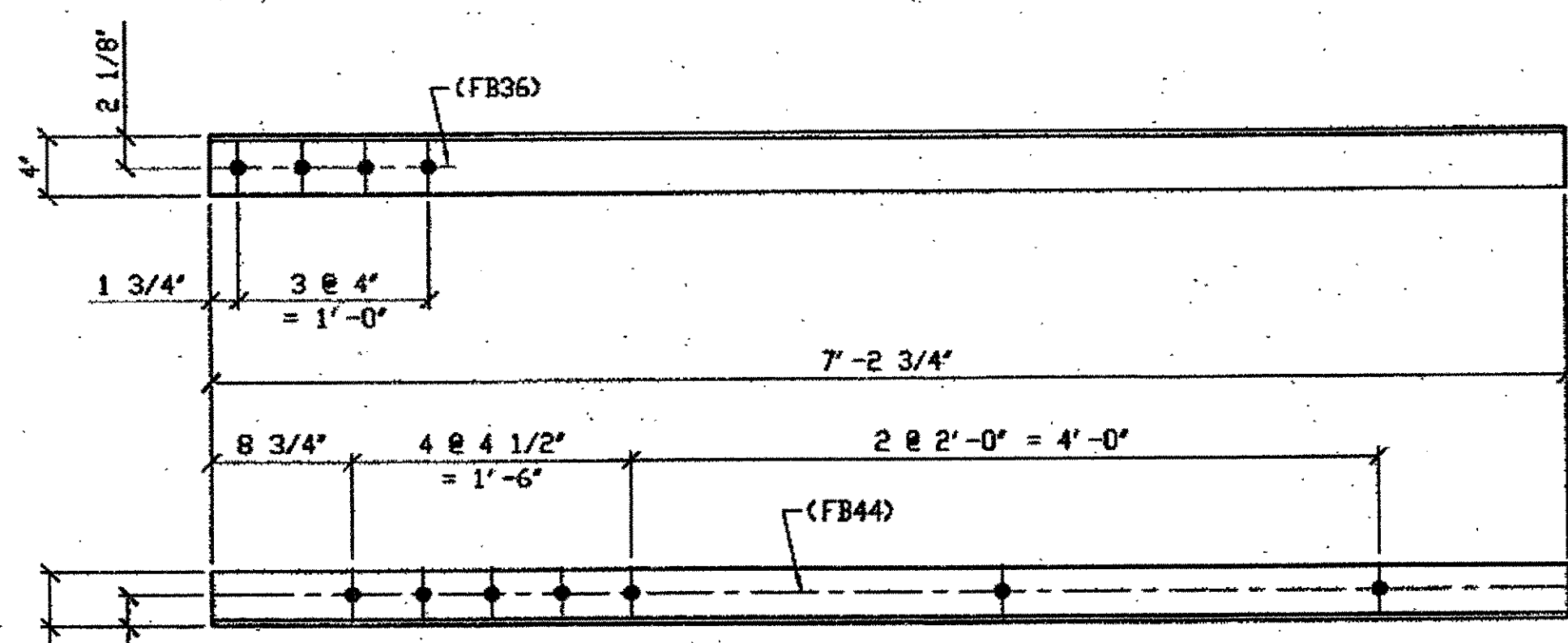
**2 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 346B**  
 ORIG SHOP DWG 295-BS31  
 ORIG SHOP MARK A295b  
 DOT ITEM No. 0109  
 REPAIR SHEET 9-237



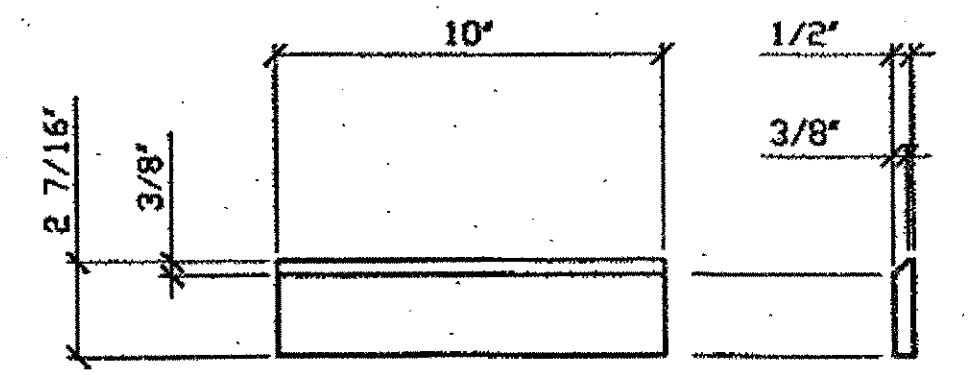
**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 346C**  
 ORIG SHOP DWG 295-BS28  
 ORIG SHOP MARK A295d  
 DOT ITEM No. 0113  
 REPAIR SHEET 9-221

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANSVERSE QUARTER LENGTH				
2		346A R/L	3	L 4 X 3 1/2 X 3/8	4	8 1/2	1/R/ 1/L	
3		346B	2	L 4 X 3 1/2 X 3/8	4	8 1/2		86
4								
5				TYPE 2 TRANSVERSE QUARTER LENGTH				
6		346C	1	L 4 X 3 1/2 X 3/8	5	2 3/4		48
7		346D	1	L 4 X 3 1/2 X 3/8	7	2 3/4		66
8								
9				SPLICE PLATES				
10		346F	4	PL 1/2 X 2 7/16	0	10		14
11	*	346G	4	PL 1/2 X 3 1/2	0	10	PLAIN MATL	20
12	**	346H	2	PL 1/2 X 3 1/2	0	6	PLAIN MATL	6
13								
14				FIELD BOLTS				
15		FB36		1" DIA	0	2 1/2	NOTE 2	
16		FB38		1" DIA	0	2 3/4	NOTE 2	
16		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				
* LINE ITEM No. 0109								
** LINE ITEM No. 0113								



**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 346D**  
 ORIG SHOP DWG 295-BS28  
 ORIG SHOP MARK A295d  
 DOT ITEM No. 0113 & 0153  
 REPAIR SHEET 9-221  
 ITEM LINE No. 0153, BID ITEM No. 863E90000



**4 - SPLICE PLATES - 346F**  
 IDENTICAL TO 206H  
 LINE ITEM No. 0109

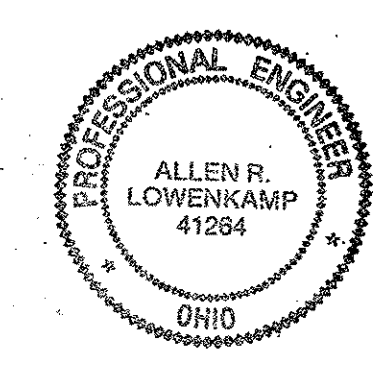
**SPAN 9**

H-H' NORTH	BOTTOM WEST	346A/L
H-H' NORTH	TOP EAST	346A/L
H-H' NORTH	TOP WEST	346A/R
R-R' SOUTH	TOP EAST	346B
R-R' SOUTH	BOTTOM WEST	346B
L-L' SOUTH	TOP WEST	346C
L-L' SOUTH	BOTTOM EAST	346D

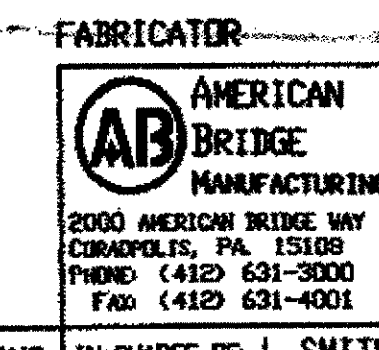
**O.D.O.T. DIST. 12**

ACCEPTED	
ACCEPTED AS NOTED	2/9/04 PJM
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U.N.



**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

NO.	DATE	DESCRIPTION	BY
REVISIONS			

FABRICATOR: AMERICAN BRIDGE MANUFACTURING  
 STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC.  
 IN CHARGE OF: I. SMITH

DRAWN BY: RAS	DATE: 07/17/01	SHEET NUMBER: 346
CHECKED BY: GAF	DATE: 08/24/01	ARM JOB NUMBER: 800010

G:\Contract\10-800010\Drawings\0346A.dwg  
 Save by rsl 08/04am Dec 17, 2001  
 Plot by gds u.c. 09/46am Dec 17, 2001  
 Model space plot + Scale = 1/3

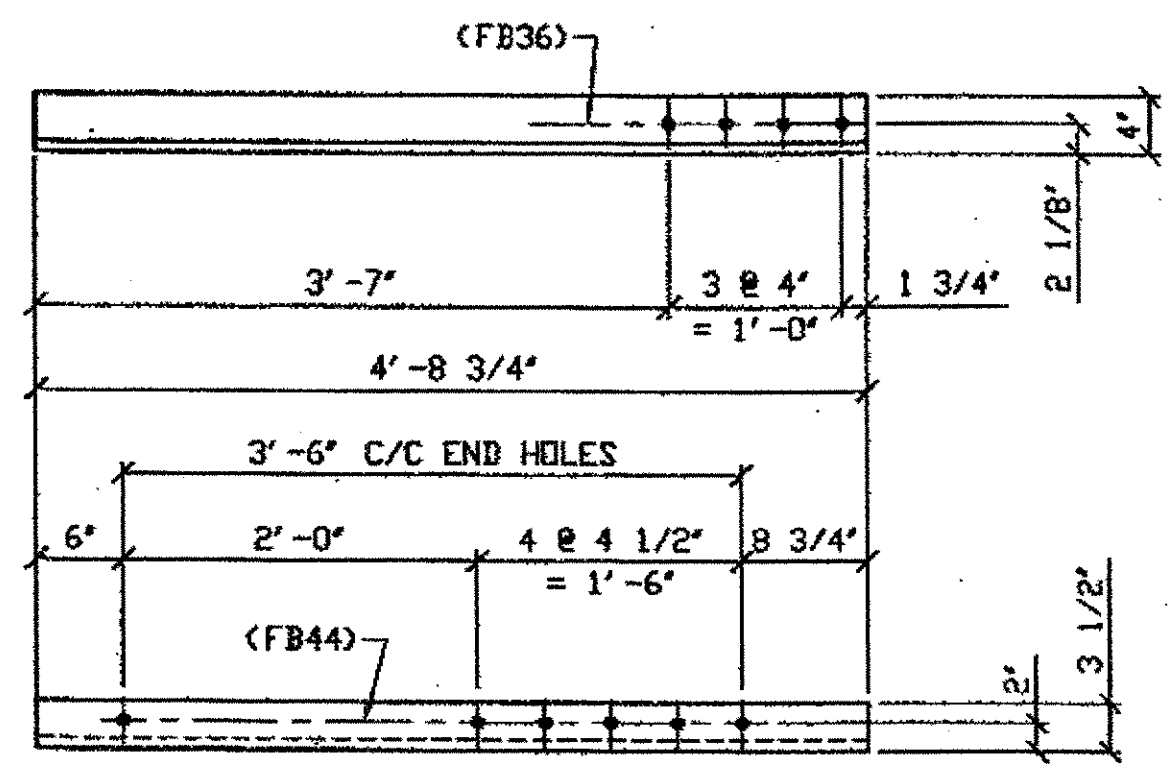


**SPAN 10**  
 B-B' NORTH BOTTOM WEST 360C/R  
 B-B' SOUTH BOTTOM EAST 360C/R  
 C-C' NORTH TOP WEST 360D/L  
 C-C' NORTH BOTTOM WEST 360D/R  
 C-C' NORTH BOTTOM EAST 360D/L  
 C-C' NORTH TOP EAST 360F  
 C-C' SOUTH BOTTOM WEST 360C/L  
 C-C' SOUTH BOTTOM EAST 360D/R  
 E-E' SOUTH BOTTOM WEST 360C/L

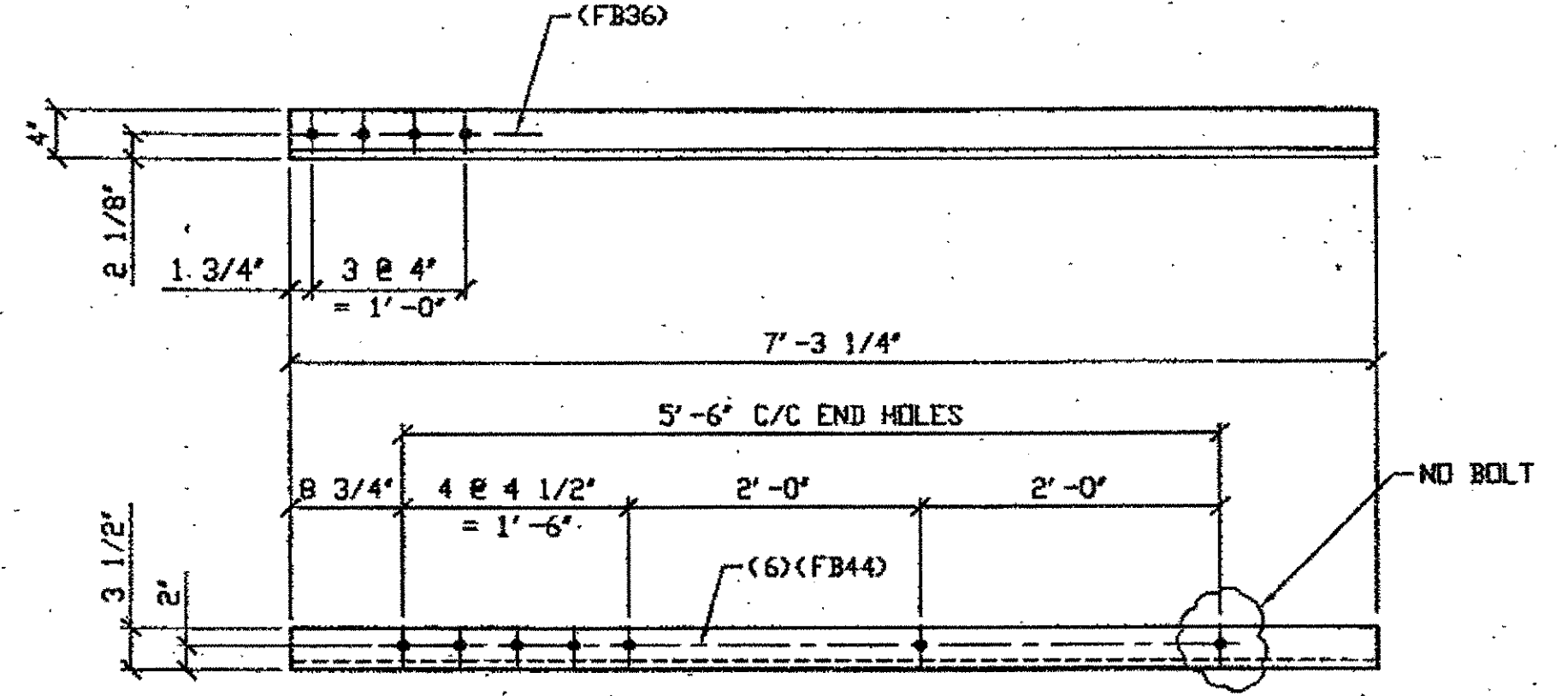
**SPAN 10**  
 F-F' NORTH TOP EAST 360D/R  
 F-F' NORTH TOP WEST 360D/L  
 F-F' SOUTH TOP EAST 360C/L  
 F-F' SOUTH BOTTOM WEST 360G

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL QUARTER	LENGTH				
2									
3									
4									
5									
6									
7				TYPE 2 TRANSVERSE QUARTER	LENGTH				
8	(1)	360C R/L	5	L 4 x 3 1/2 x 3/8	4	8 3/4	2/R 3/4		
9	*	360D R/L	6	L 4 x 3 1/2 x 3/8	7	3 1/4	2/R 3/4		
10	*	360F	1	L 4 x 3 1/2 x 3/8	5	8 3/4		53	
11	*	360G	1	L 4 x 3 1/2 x 3/8	7	8 3/4		70	
12									
13				SPLICE PLATE					
14		360H	27	PL 1/2 x 2 7/16	0	6		54	
15		360K	16	PL 1/2 x 2 7/8	0	6	PLAIN MAT'L	32	
16		360L	11	PL 1/2 x 3 1/2	0	6	PLAIN MAT'L	33	
17									
18									
19				FIELD BOLTS					
20		FB36		1" DIA	0	2 1/2	NOTE 2		
14		FB44		1" DIA	0	3 1/2	NOTE 2		
PLATE	N/A			PIPE	N/A		FITTINGS	N/A	
SHAPES	A36			FLGS.	N/A		BOLTS	NOTE 2	

- \* = DOT ITEM No. 0153, BID ITEM No. 863E90000
- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTH-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

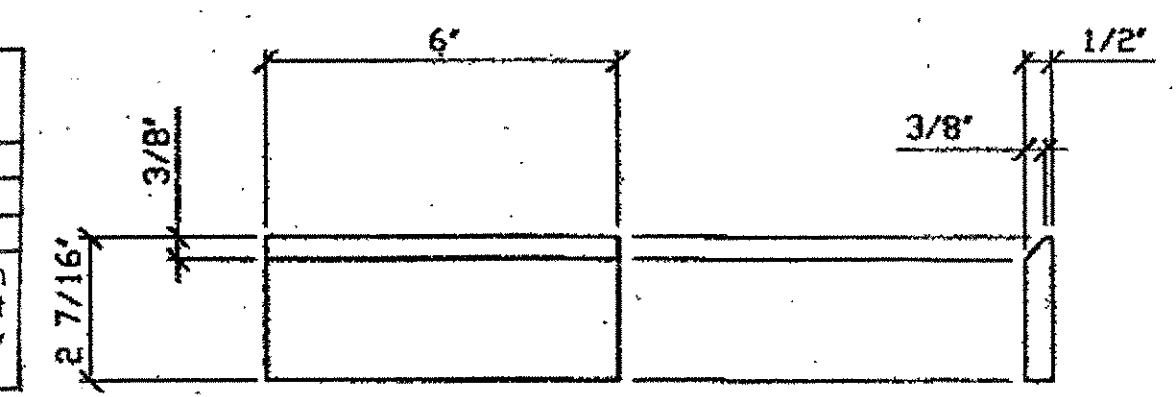


**5 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 360C R/L**  
 (R SHOWN)  
 ORIG SHOP DWG 295-BE28  
 ORIG SHOP MARK A295d  
 DOT ITEM No. 0113 & 153  
 REPAIR SHEET 10-134, 141, 146 & 158

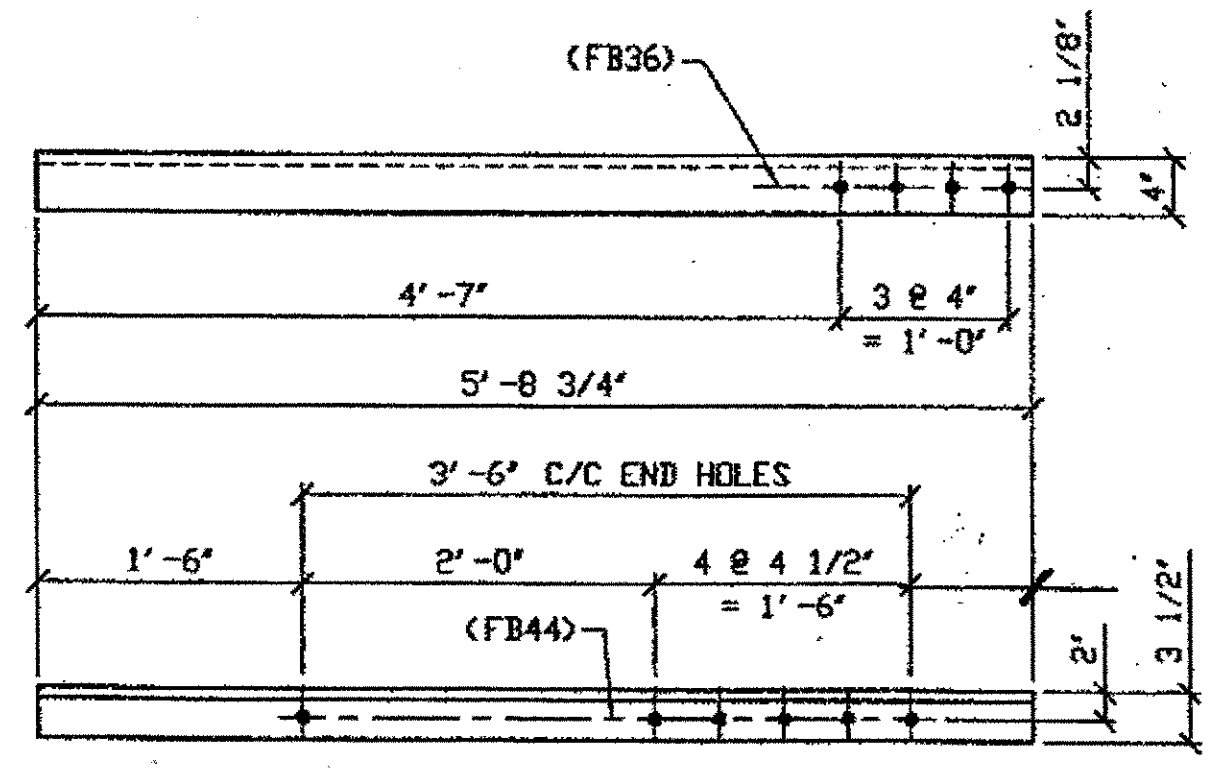


**6 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 360D R/L**  
 (L SHOWN)  
 ORIG SHOP DWG 295-BE28  
 ORIG SHOP MARK A295d  
 ITEM No. 0113 & 0153  
 REPAIR SHEET 10-105, 126 & 141

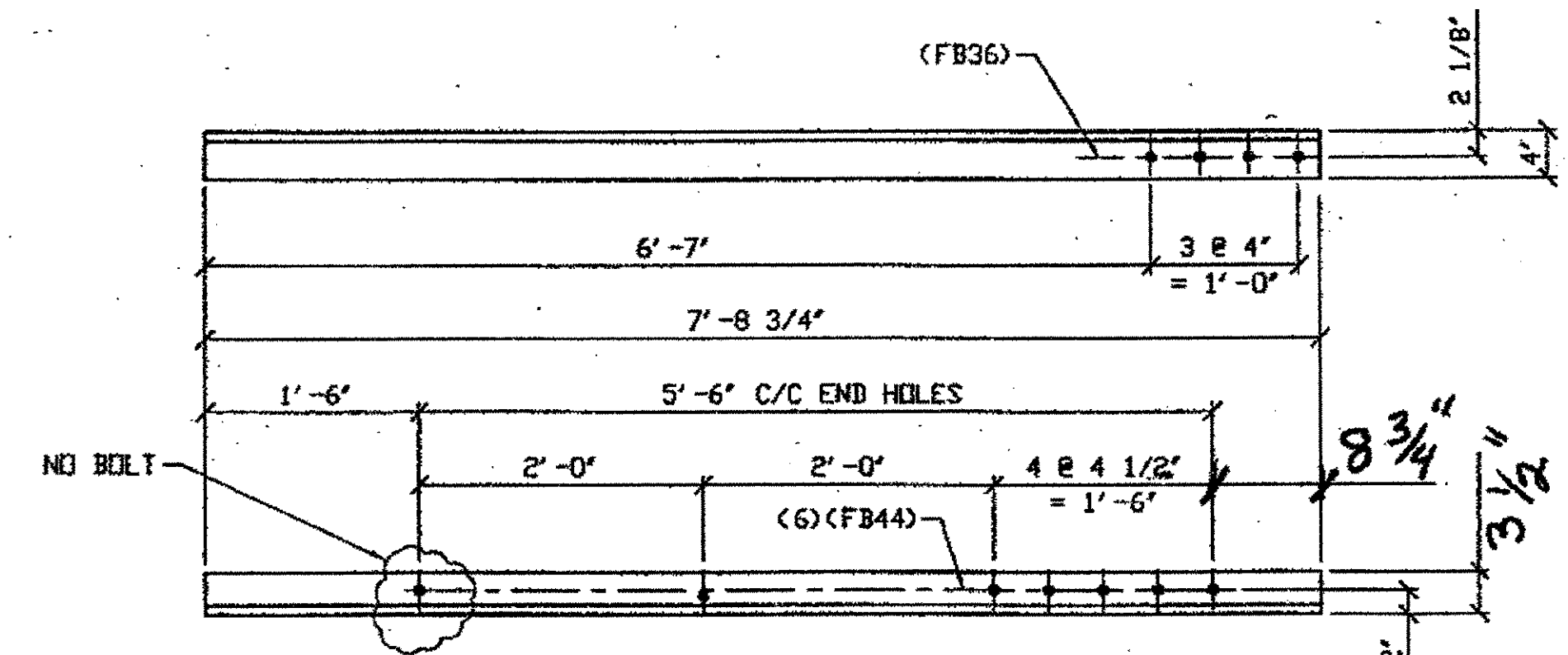
**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**27 - SPLICE PLATE - 360H**  
 (IDENTICAL TO 106C)

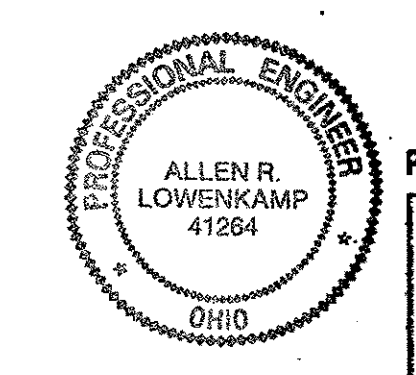


**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 360F**  
 ORIG SHOP DWG 295-BE28  
 ORIG SHOP MARK A295d  
 ITEM No. 0113 & 0153  
 REPAIR SHEET 10-106



**1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 360G**  
 ORIG SHOP DWG 295-BE28  
 ORIG SHOP MARK A295d  
 ITEM No. 0113 & 0153  
 REPAIR SHEET 10-146

**NAT'L ENGR. & CONTR. CO.**  
 By [initials]  
**JAN 18 2002**



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	12/17/02	REVISED PER CUSTOMER APPROVAL		GAF

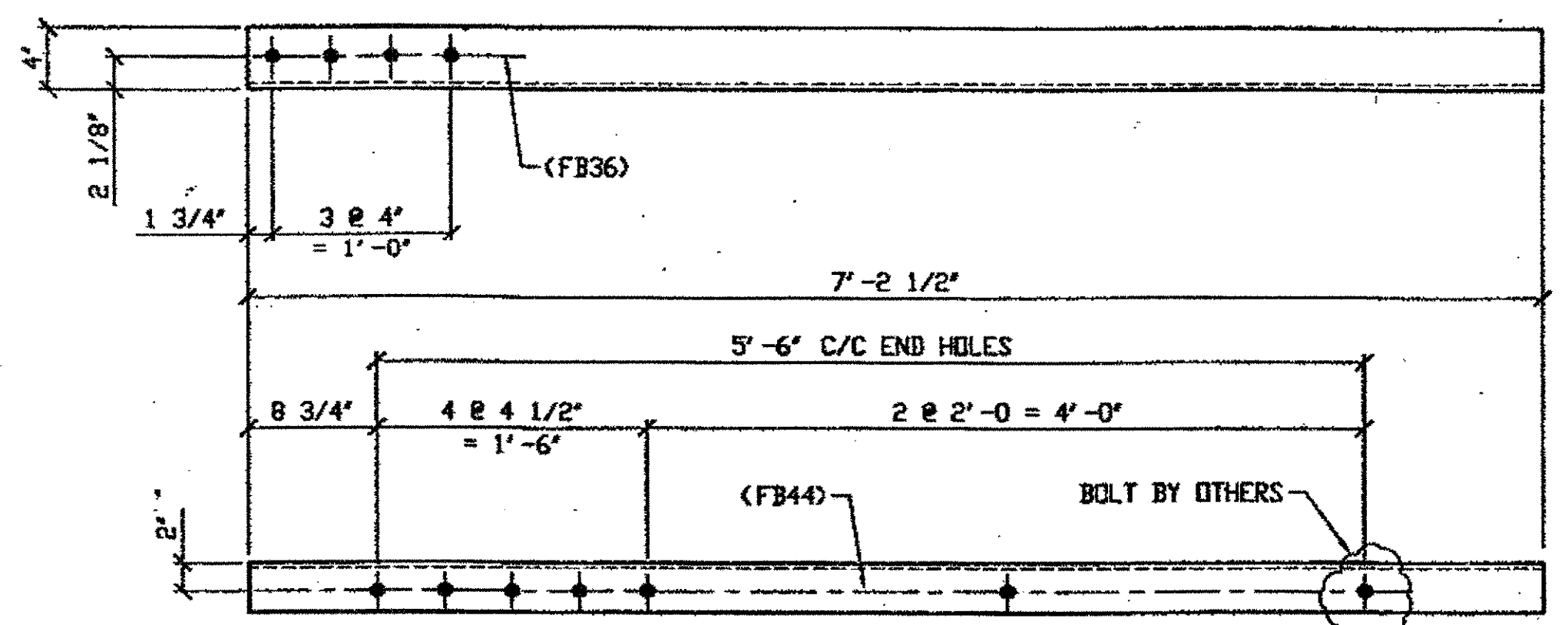
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 10 REPAIRS**

STEEL ERECTOR:  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 AMV 07/17/01  
 CHECKED BY: DATE:  
 GNG 12/10/01

SHEET NUMBER: 360  
 AM JOB NUMBER: 800010

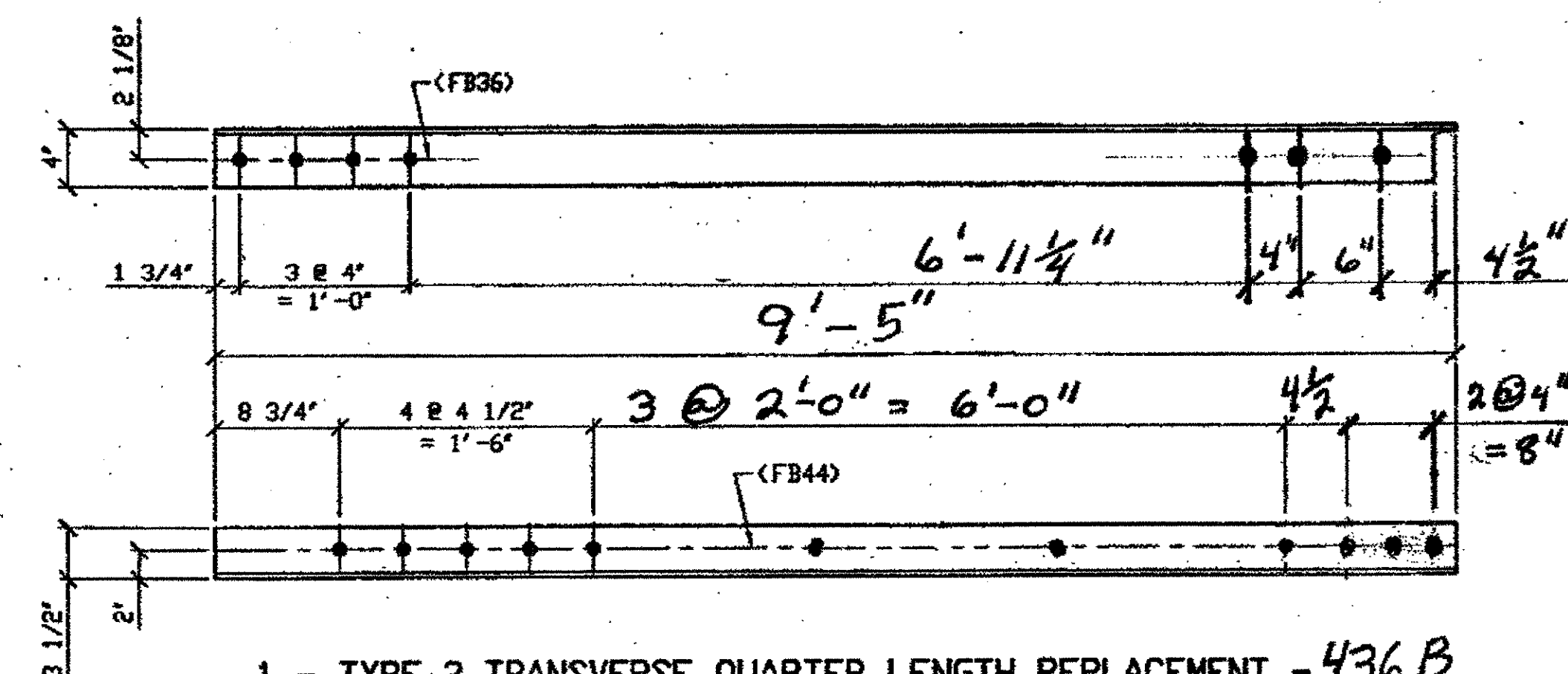
G:\Contracts\000\800010\Drawings\0360A.dwg  
 Save by rskr at 08:00am Jan 17, 2002  
 Plot by gfos at 02:55pm Jan 17, 2002  
 Model space plot + Scale = 1/12



ONE - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 436A

ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113 & 0153  
REPAIR SHEET 11-164

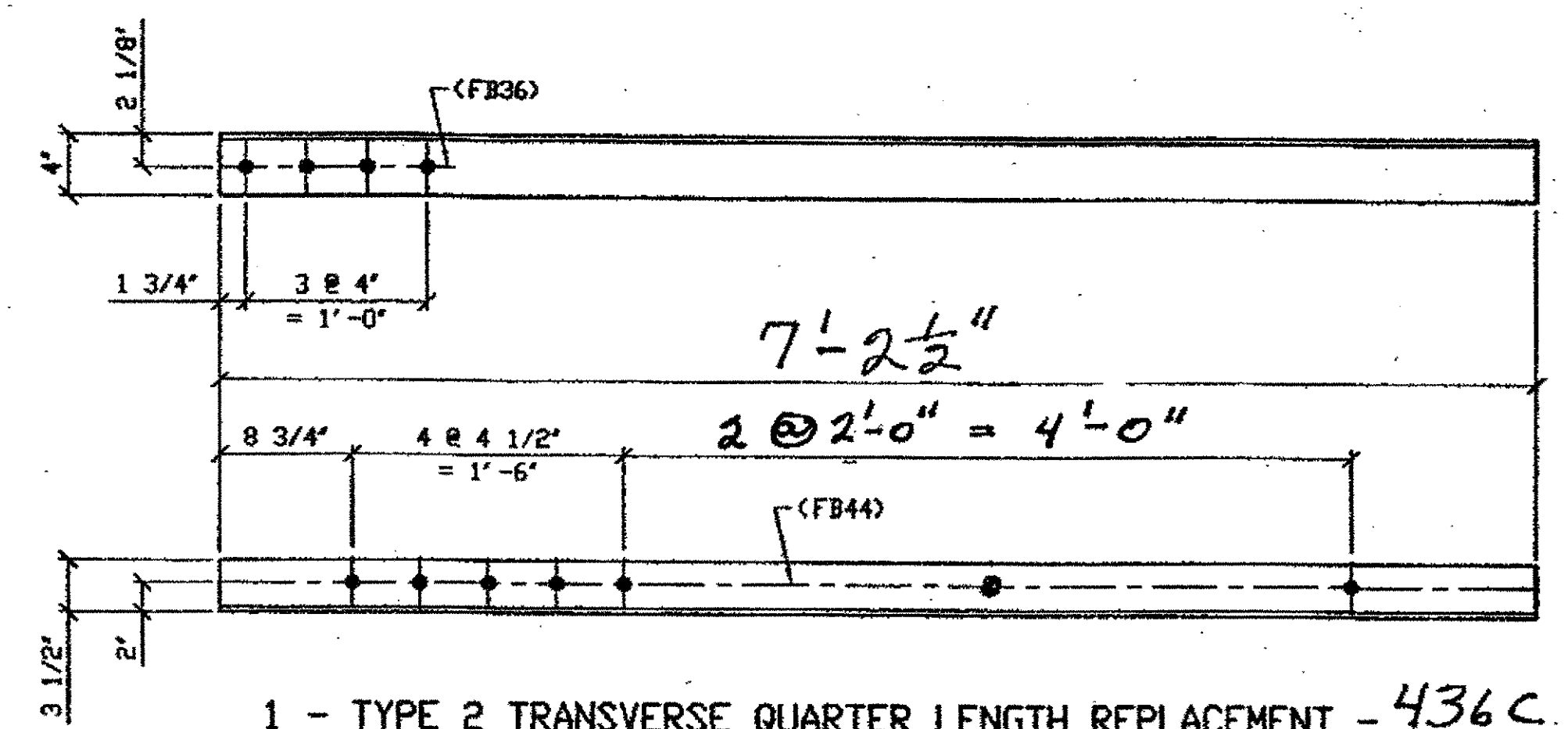
SPAN 11 K-K' NORTH TOP EAST 436A



1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 436B

ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113 & 0153

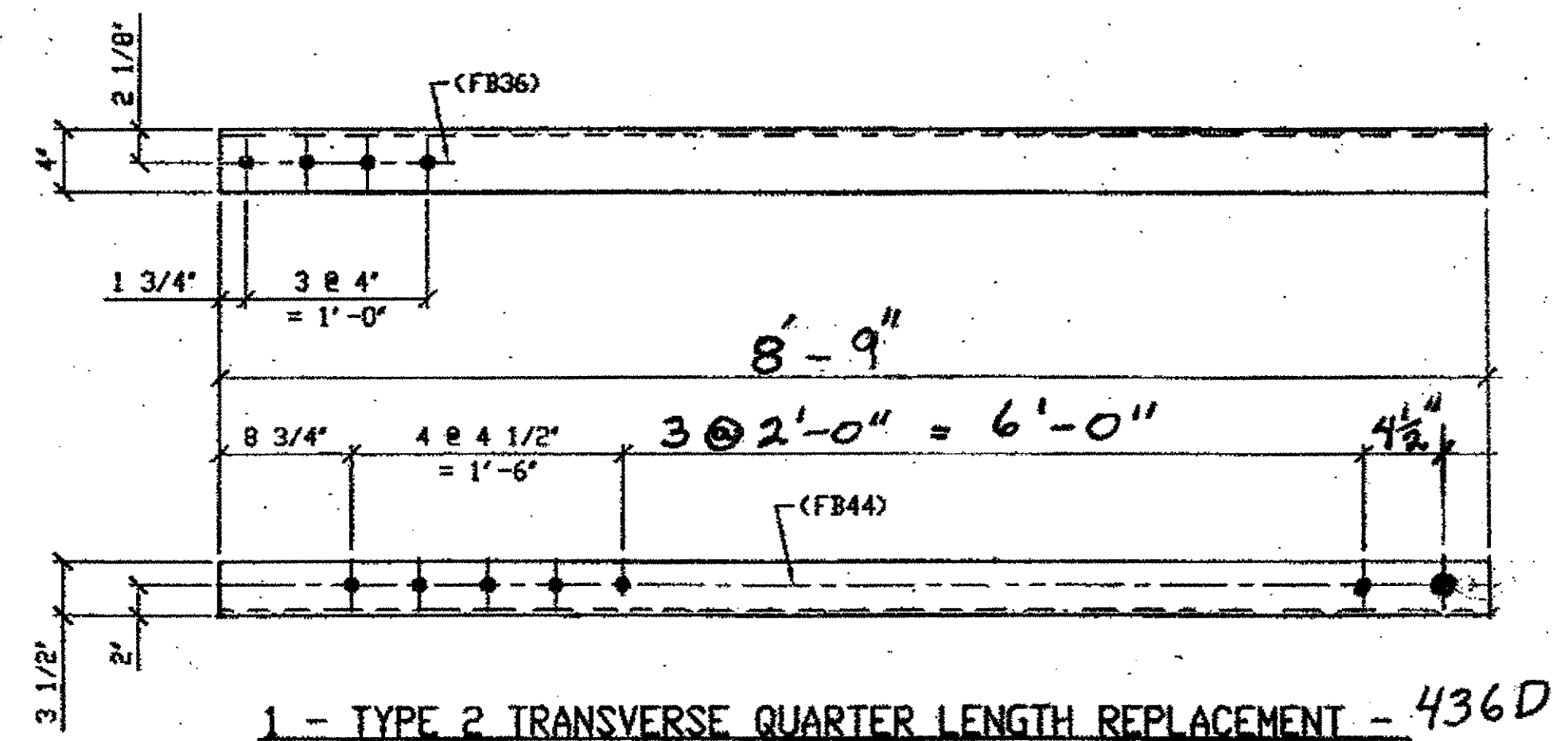
SPAN 9 L-L' NORTH TOP EAST 436B



1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 436C

ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113 & 0153

SPAN 9 L-L' NORTH BOTTOM WEST 436C



1 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 436D

ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113 & 0153

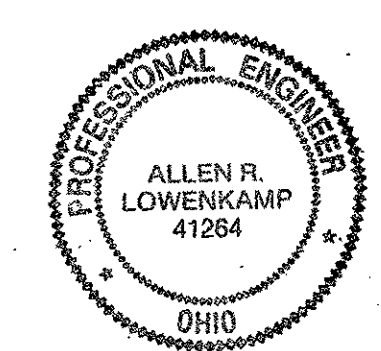
SPAN 9 L-L' NORTH TOP WEST 436D

BILL OF MATERIALS

Piece No.	Qty.	Description
436A	1	L 4x3 1/2 x 3/8 x 7'-2 1/2"
436B	1	L 4x3 1/2 x 3/8 x 8'-8 1/2"
436C	1	L 4x3 1/2 x 3/8 x 7'-2 1/2"
436D	1	L 4x3 1/2 x 3/8 x 9'-3 1/2"
		PLATE A36 SHAPES A36

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

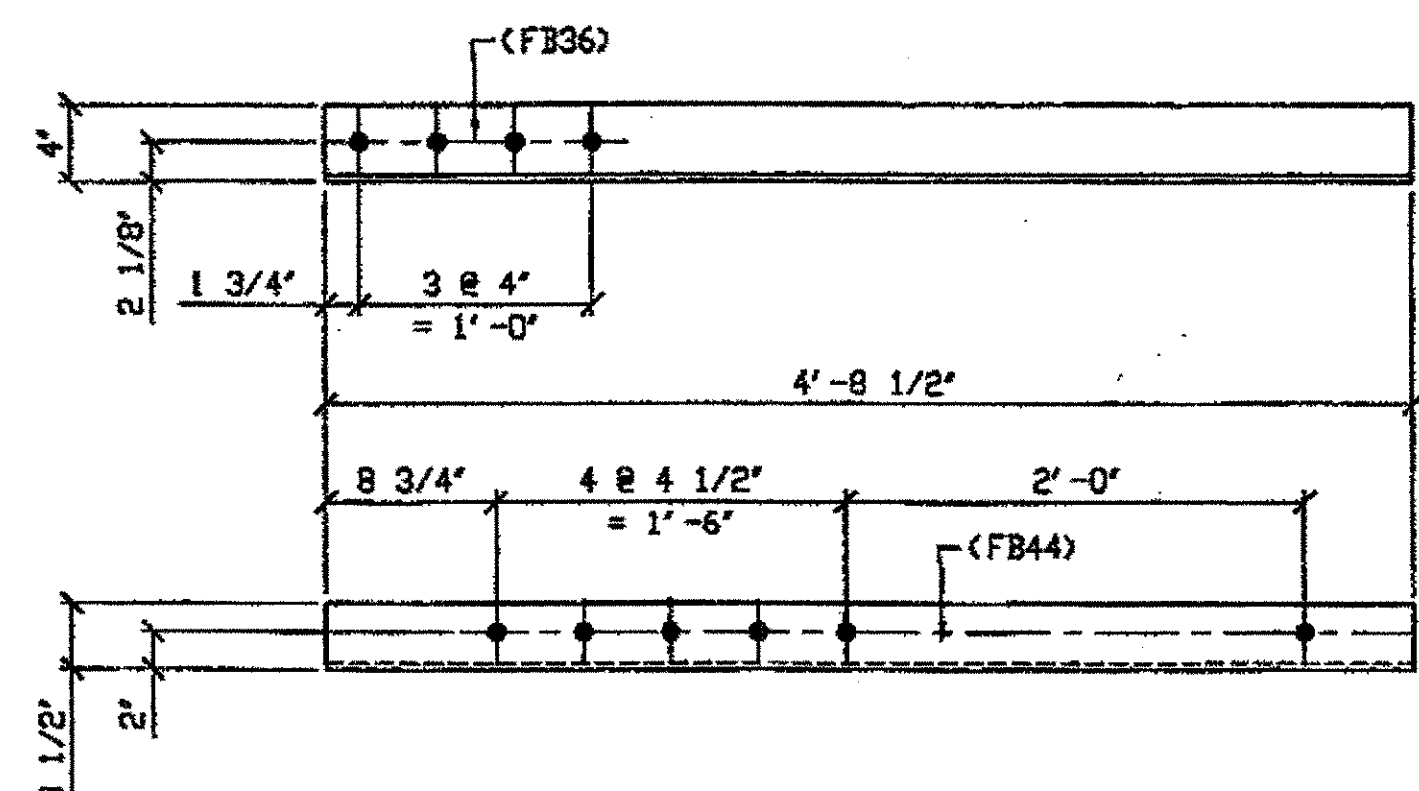
ODOT Project # 00215  
BRIDGE NO. CUY.-10-16.13

SCALE NA  
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
DATE \_\_\_\_\_

JOB NO.  
DRAWING NO. 436

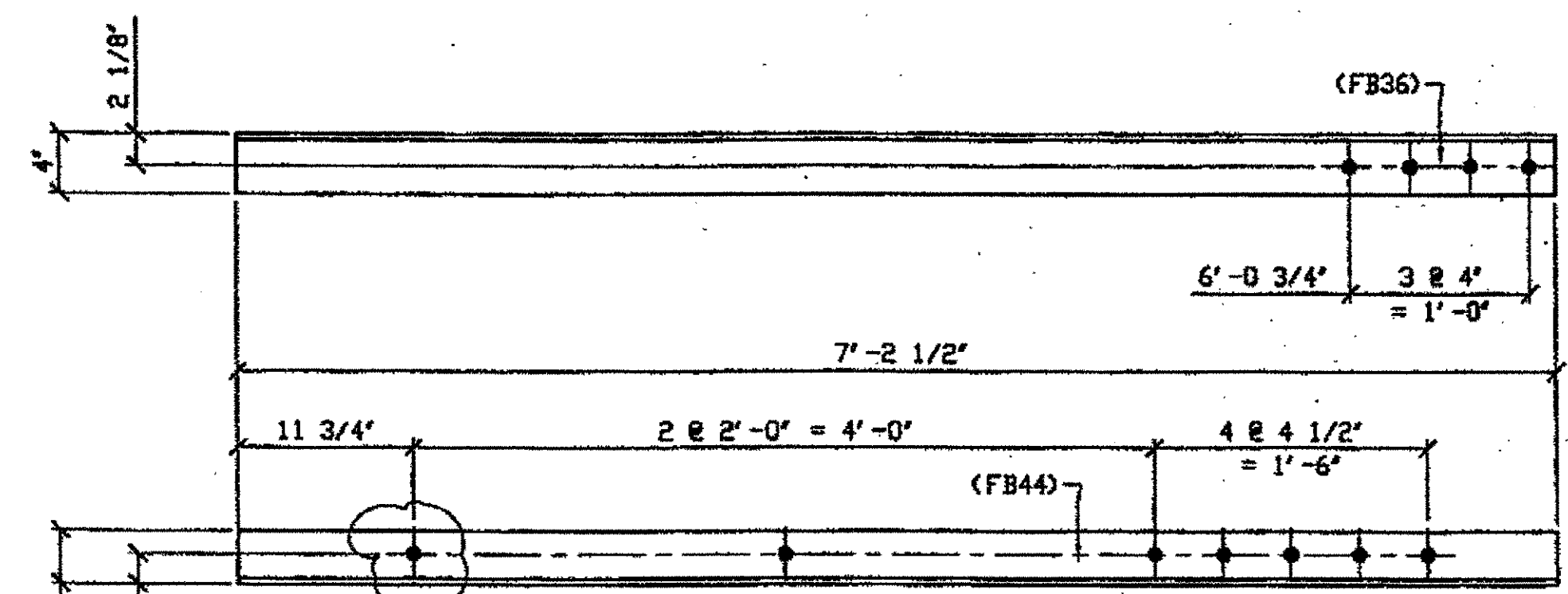
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 TRANSVERSE QUARTER LENGTH				
2		465A	1	L 4 X 3 1/2 X 3/8	4	8 1/2		43
3		465B R/L	2	L 4 X 3 1/2 X 3/8	7	2 1/2	L/R 1/L	131
4								
5								
6	ITEM No. 0113							
7		465C	4	L 4 X 3 1/2 X 3/8	4	8 1/2		172
8								
9	ITEM No. 0104							
10								
11								
12	ITEM No. 0148							
13	ITEM No. 0148							
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36	0	1" DIA	0	2 1/2	NOTE 2	
20		FB44	0	1" DIA	0	3 1/2	NOTE 2	
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	



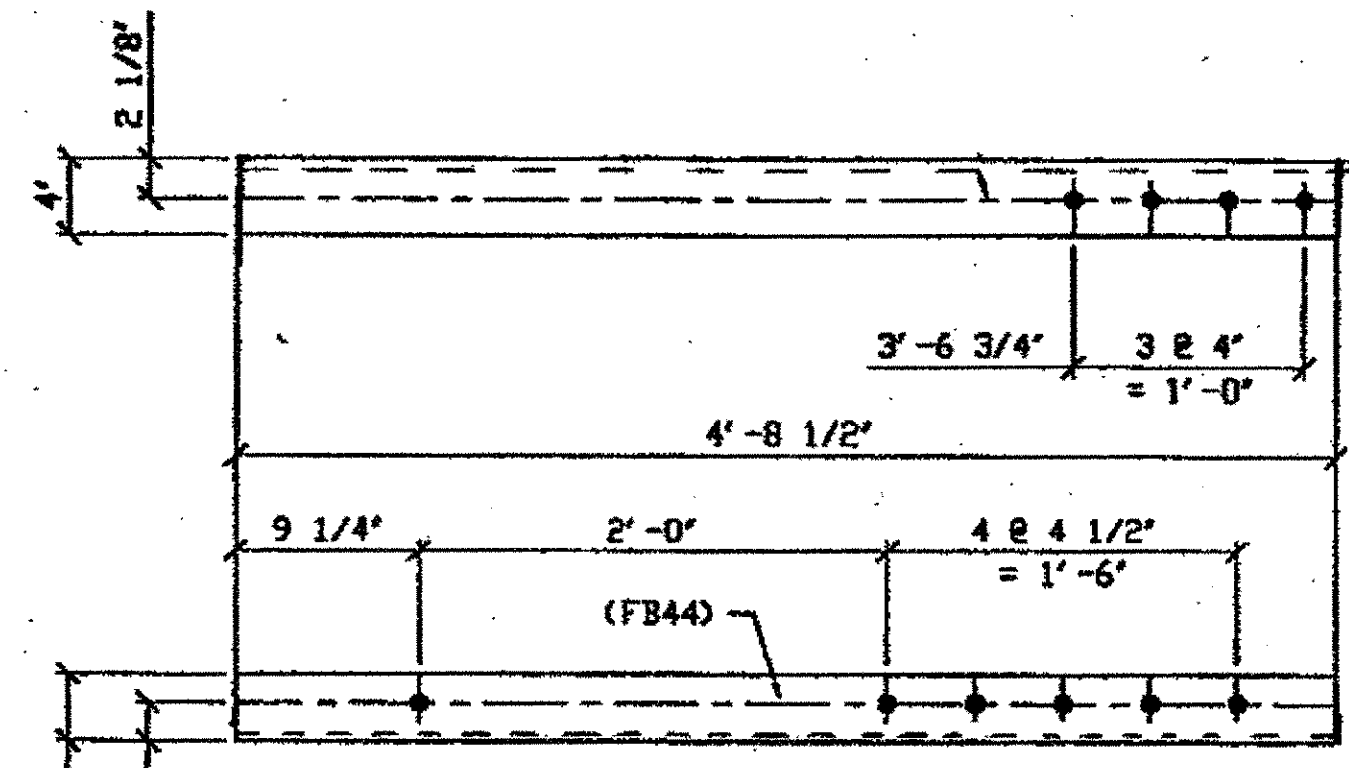
SPAN 12  
B-B' NORTH BOTTOM EAST 465A

ONE - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 465A  
ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113  
REPAIR SHEET 12-106



SPAN 12  
B-B' SOUTH BOTTOM EAST 465 B/L  
B-B' SOUTH BOTTOM WEST 465 B/R

TWO - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 465B R/L (R SHOWN)  
ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0113 & 153  
ITEM LINE No. 0153, BID ITEM No. 863E90000  
REPAIR SHEET 12-148



SPAN 13  
C-C' SOUTH BOTTOM EAST - 465C  
M-M' NORTH BOTTOM WEST - 465C

FOUR - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 465C  
ORIG SHOP DWG 295-BS29  
ORIG SHOP MARK A295c  
LINE ITEM No. 0109  
REPAIR SHEETS 13-219

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 ASTM
ACCEPTED AS NOTED	
NOT ACCEPTED	

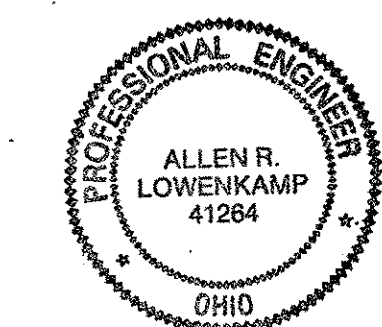
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 1/1/02 BY tdp/ess

SPAN 11  
B-B' SOUTH TOP WEST 465C  
M-M' NORTH BOTTOM WEST 465C

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000 U. N. O.

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS			
SHEET NUMBER 465			ASH JOB NUMBER 800010



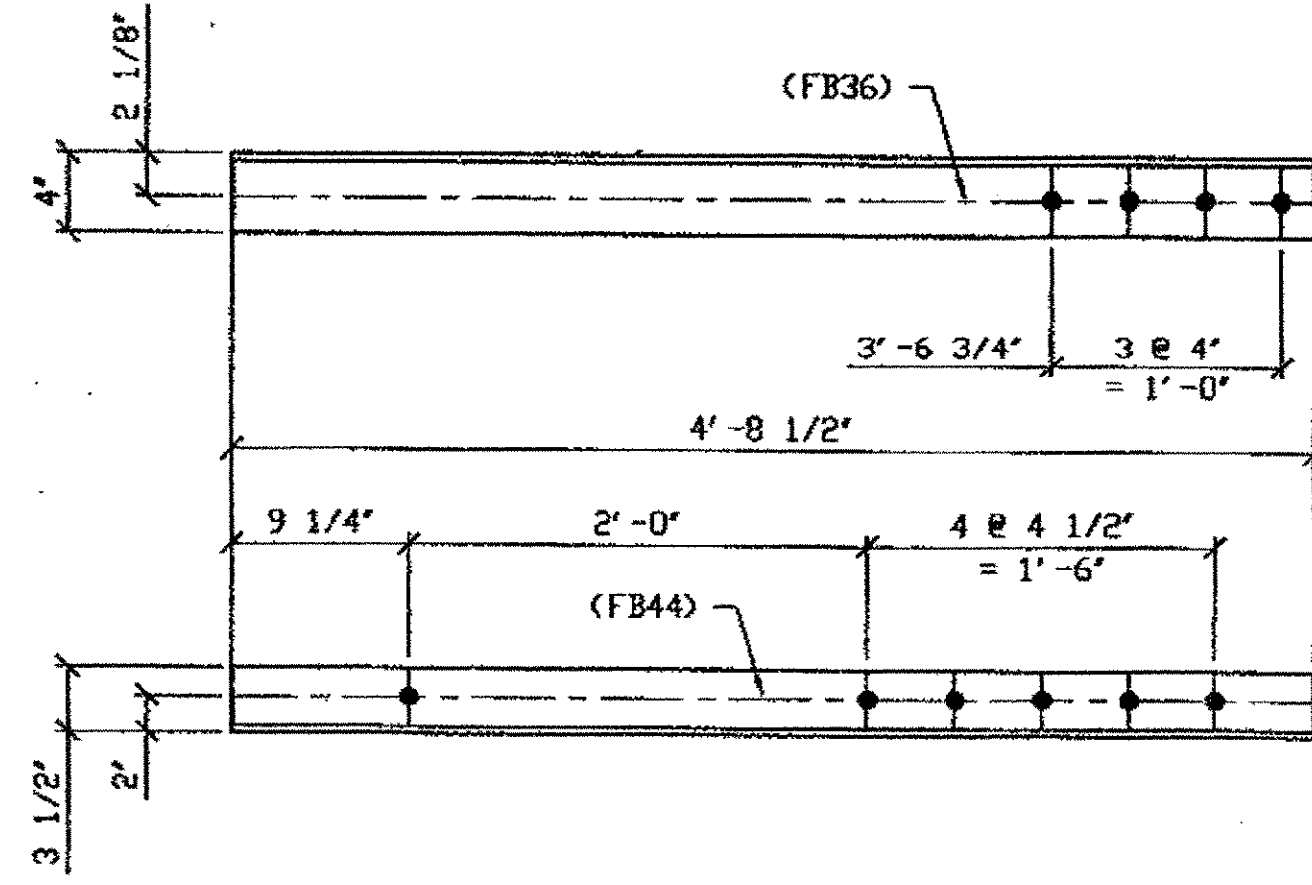
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROES, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

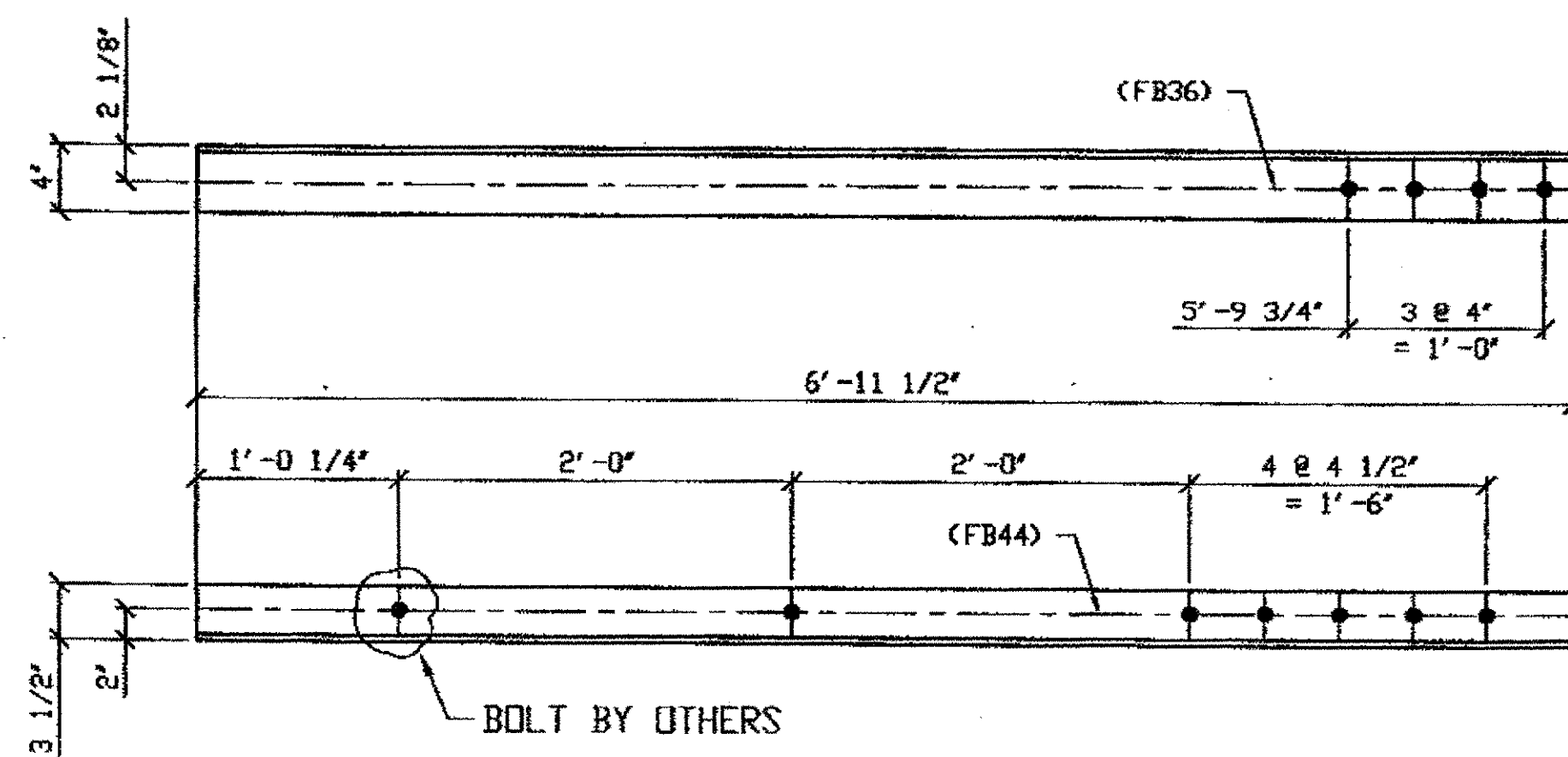
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 7/31/01  
CHECKED BY: DATE: GAF 10/23/01

CIVIL ENGR. & CONTIN. DEC 10 2001

G:\Contracts\J\800010\Drawings\465A.dwg  
Save by rspr at 12:59pm Nov 05, 2001  
Plot by gfos at 11:50am Dec 07, 2001  
Model space plot + Scale = 1/9

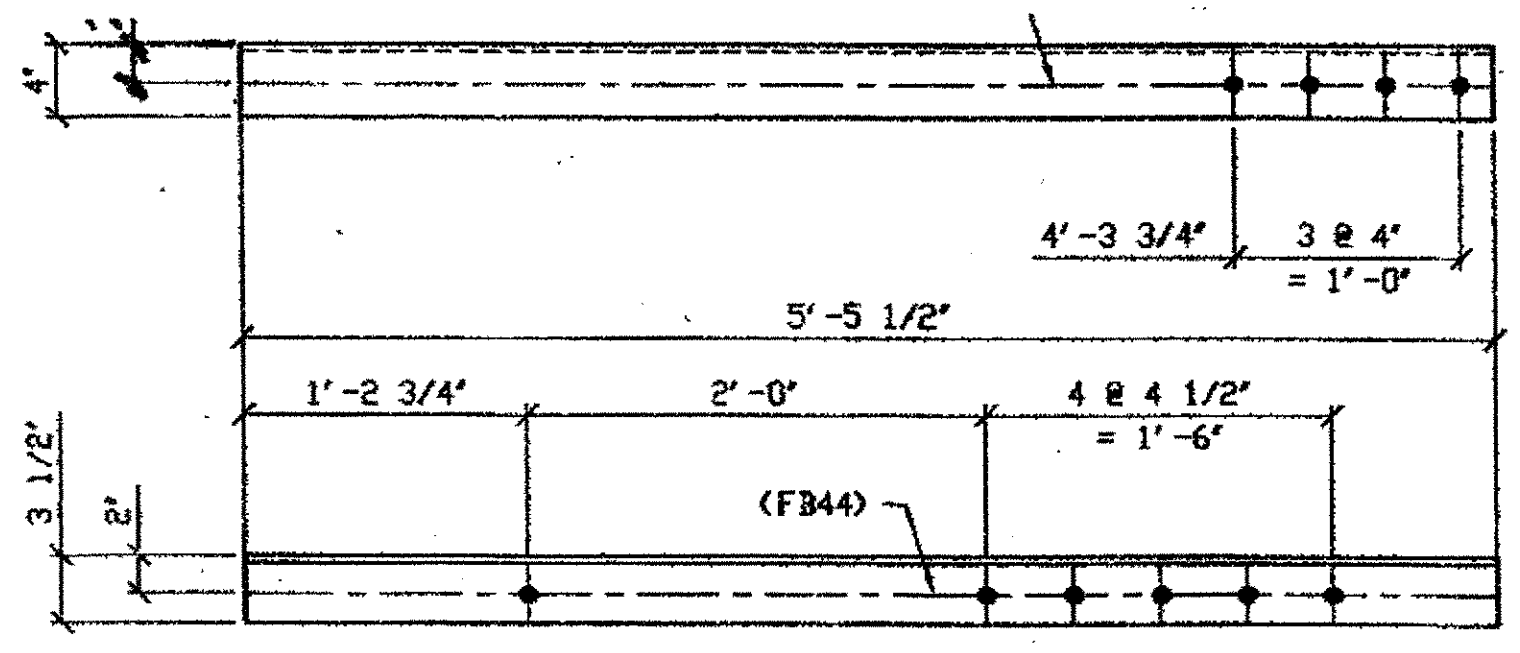


**3 - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 519A**  
 ORIG SHOP DWG 295-BS29  
 ORIG SHOP MARK A295C  
 LINE ITEM No. 0109  
 REPAIR SHEETS 13-219  
**SPAN 13**  
**L-L' SOUTH TOP EAST 519A**

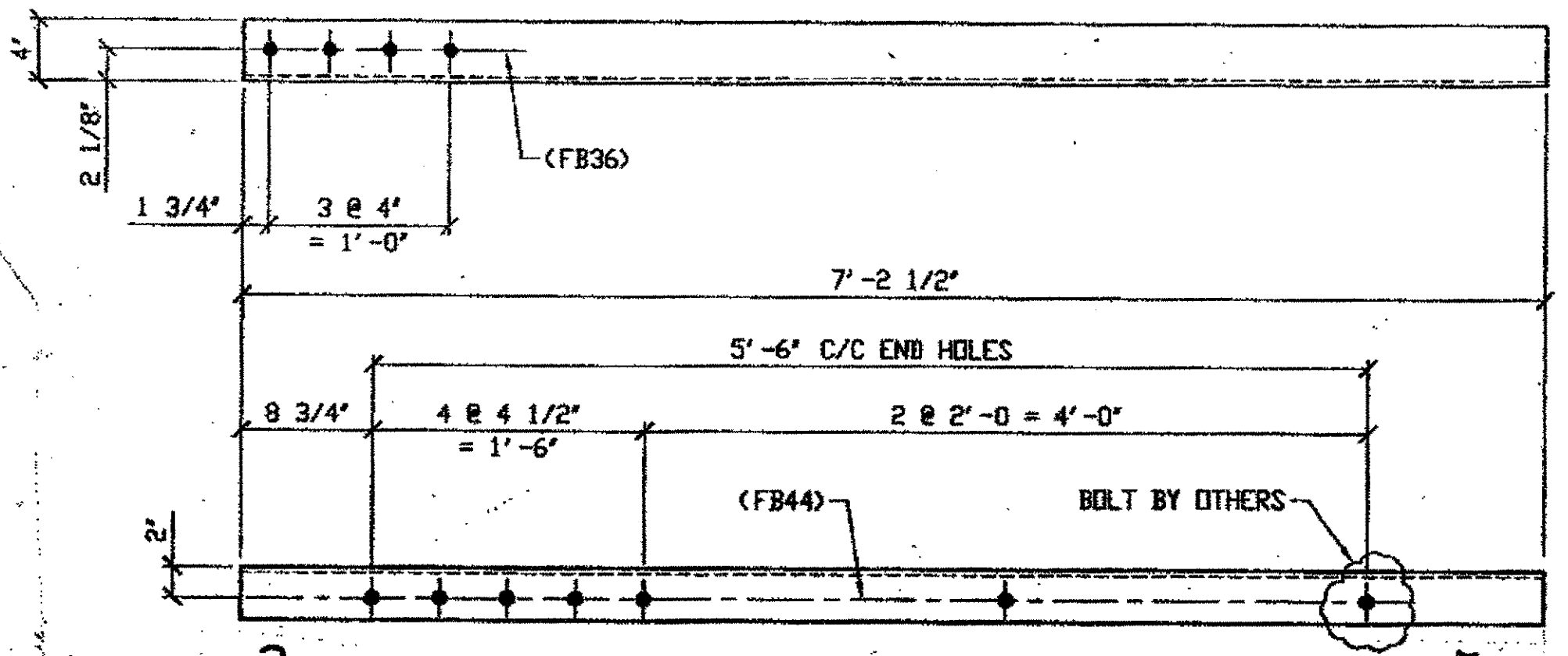


**ONE - TYPE 1 TRANSVERSE QUARTER LENGTH REPLACEMENT - 519B**  
 ORIG SHOP DWG 295-BS29  
 ORIG SHOP MARK A295C  
 LINE ITEM No. 0109 & 153  
 REPAIR SHEETS 13-219  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
**SPAN 13**  
**L-L' SOUTH BOTTOM WEST 519B**

**SPAN 11**  
**M-M' SOUTH BOTTOM WEST 519A**  
**P-P' NORTH TOP WEST 519A**



**2 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 519C R/L (R SHOWN)**  
 ORIG SHOP DWG 295-BS28  
 ORIG SHOP MARK A295d  
 LINE ITEM No. 0113 & 0153  
 REPAIR SHEETS 13-194  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
**SPAN 13**  
**E-E' SOUTH TOP EAST 519C/L**  
**E-E' SOUTH TOP WEST 519C/R**



**2 - TYPE 2 TRANSVERSE QUARTER LENGTH REPLACEMENT - 519D R/L**  
 ORIG SHOP DRAWING 295-BS28  
 ORIG SHOP MARK A295d  
 DOT ITEM LINE No. 0113 & 0153  
 REPAIR SHEET 11-164  
**SPAN 13**  
**D-D' SOUTH BOTTOM WEST 519D/L**  
**D-D' SOUTH BOTTOM EAST 519D/R (R SHOWN)**

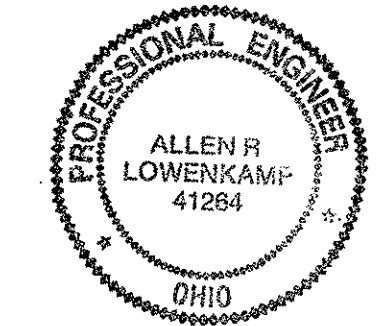
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANSVERSE QUARTER				
2		519A	3	L 4 X 3 1/2 X 3/8	4	8 1/2		
3		519B	1	L 4 X 3 1/2 X 3/8	6	11 1/2		63
4								
5				TYPE 2 TRANSVERSE QUARTER				
6		519C R/L	2	L 4 X 3 1/2 X 3/8	5	5 1/2	1R, 1L	100
7								
8		519D R/L	2	L 4 X 3 1/2 X 3/8	7	2 1/2	1R, 1L	
9								
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36		1" DIA	0	2 1/2	NOTE 2	
20		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

\* DOT ITEM LINE No. 0113  
 \*\* DOT ITEM LINE No. 0109  
 \*\*\* DOT ITEM LINE No. 0104

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12		
ACCEPTED	2/9/04	ASTM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U.N.

NO.	DATE	REVISIONS	REVISOR	APPROVED	DATE

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CLEVELAND, OH 44108  
 PHONE (412) 631-2000  
 FAX (412) 631-4001

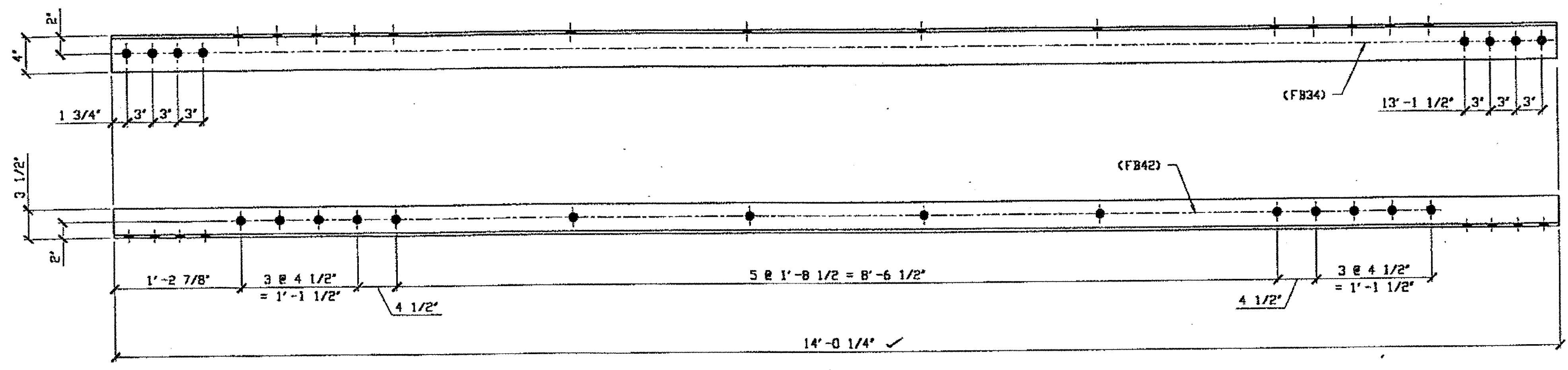
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12508 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3035

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 04/03/01  
 CHECKED BY: DATE  
 GAF 12/27/01

SHEET NUMBER: 519  
 AM JOB NUMBER: 800010

G:\Contract\JAN00010\Drawings\5119A.dwg  
 Save by rsp on Feb 02, 2002  
 Plot by gfas at 09:13am Feb 04, 2002  
 Model space plot + Scale = 1/9

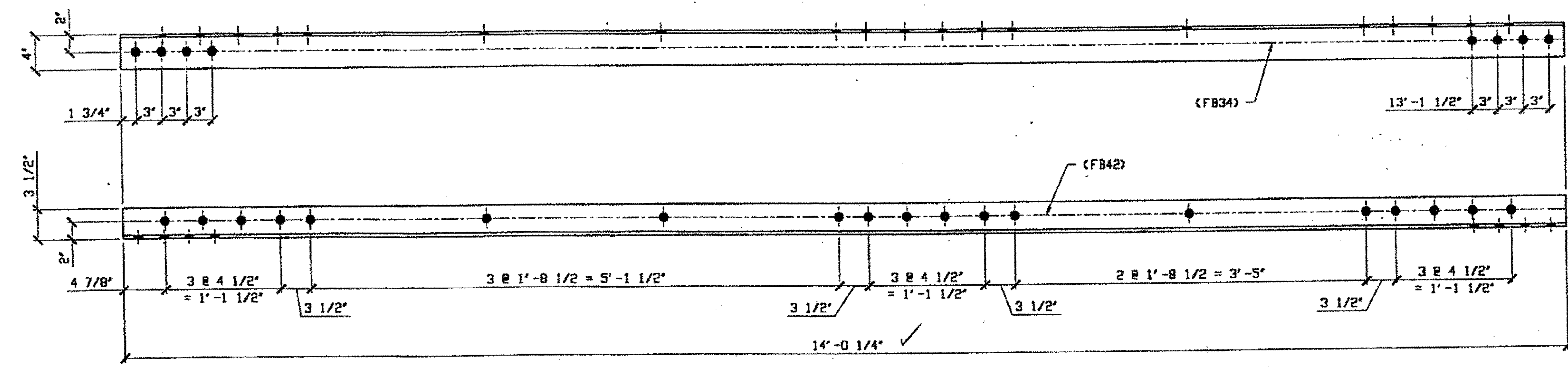
Last modified Gfroster at 03:59pm on Tue Oct 03, 2000 - Last plotted by Gfroster at 11:41am on Thu Oct 05, 2000



(1) TYPE 1 TRANSVERSE MEMBER FULL LENGTH REPLACEMENT 107A

ORIG SHOP DWG 14-BL12  
ORIG SHOP MARK A14a  
ITEM LINE NO. 0108

W & LE, A-A' SOUTH, BOTTOM WEST 107A



(1) TYPE 2 TRANSVERSE MEMBER FULL LENGTH REPLACEMENT 107B

ORIG SHOP DWG 13-BL1  
ORIG SHOP MARK A13ae/R  
ITEM LINE NO. 0112

SPAN W & LE, A-A' NORTH, BOTTOM WEST 107B

**BILL OF MATERIAL**

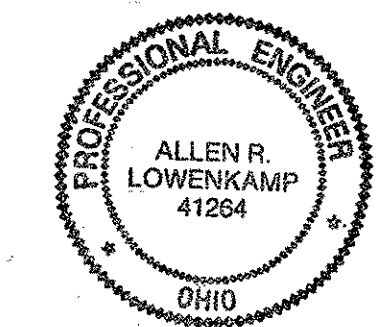
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		107A	1	TYPE 1 TRAN				
3			1	L 4 X 3 1/2 X 3/8	14	0 1/4		127
4								
5		107B	1	TYPE 2 TRAN				
6			1	L 4 X 3 1/2 X 3/8	14	0 1/4		127
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB34	16	1" DIA	0	2 1/4	NOTE 2	
19		FB42	33	1" DIA	0	3 1/4	NOTE 2	
20								
21								
22								
23								
24								
25								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD 1/2 HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

O.D.O.T. DIST. 12

ACCEPTED	
ACCEPTED AS NOTED	2/4/01 P. 377
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0108 & 0112  
DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION REVISIONS	BY

FABRICATOR

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**W & LE SPAN REPAIR**

SHEET NUMBER  
107  
JOB NUMBER  
800010

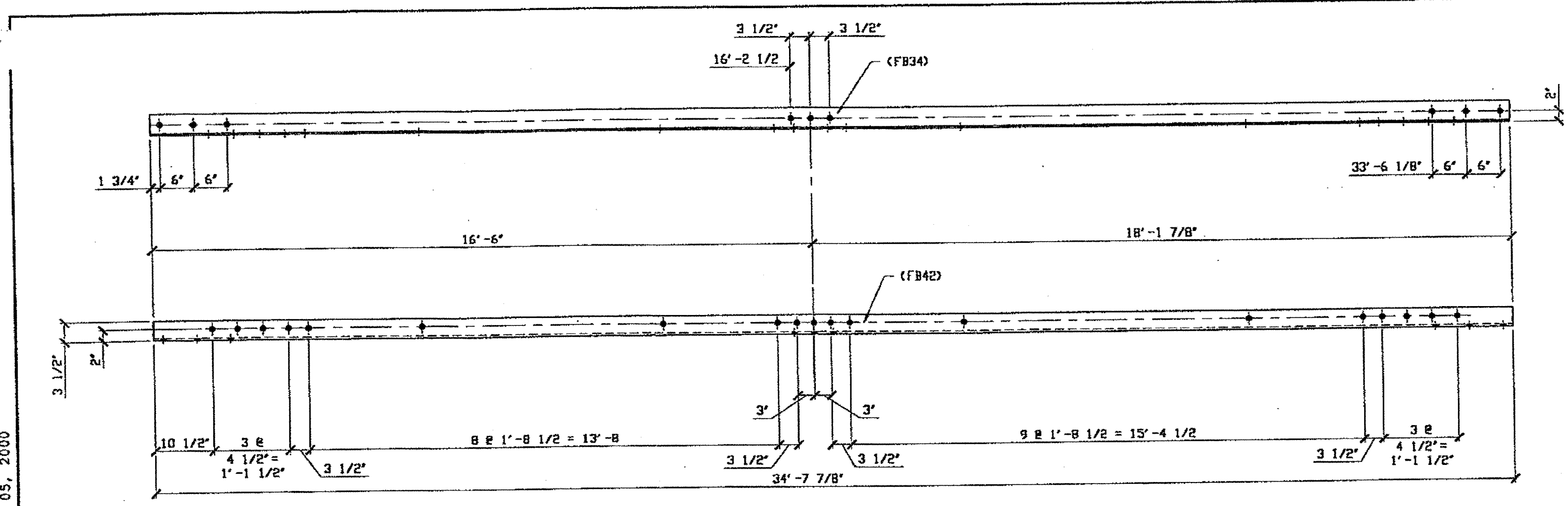
STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
GAF 09/01/00  
CHECKED BY: DATE:  
GAG 09/26/00

RELEASED FOR CONSTRUCTION  
DATE 10/9/00 BY ew

on Thu Oct 05, 2000  
 on \$(EDTIME,??) - Last plotted by Gfoster at 0'  
 on \$(EDTIME,??)  
 last modified



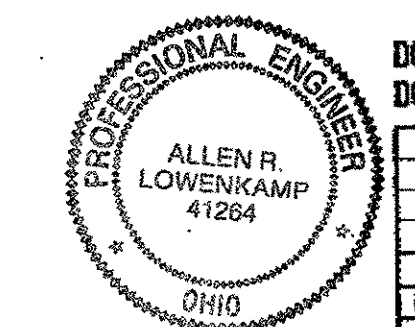
**(2) TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT 110A R/L**  
 (R SHOWN)  
 ORIG SHOP DWG 16-BL35/L  
 ORIG SHOP MARK A16ab R/L

**SPAN WYLE**  
 G-G' SOUTH, BOTTOM EAST 110A/R  
 G-G' SOUTH, BOTTOM WEST 110A/L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		110A R/L	2	TYPE 2 TRANS FULL				
3			2	L 4 X 3 1/2 X 3/8	34	7 7/8		630
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17								
18		FB34	6	1" DIA	0	2 1/4	NOTE 2	
19		FB42	60	1" DIA	0	3 1/4	NOTE 2	
20								
21								
22								
23								
24								
25								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0112  
 DOT BID ITEM NO. 863E30000

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA. 15109  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

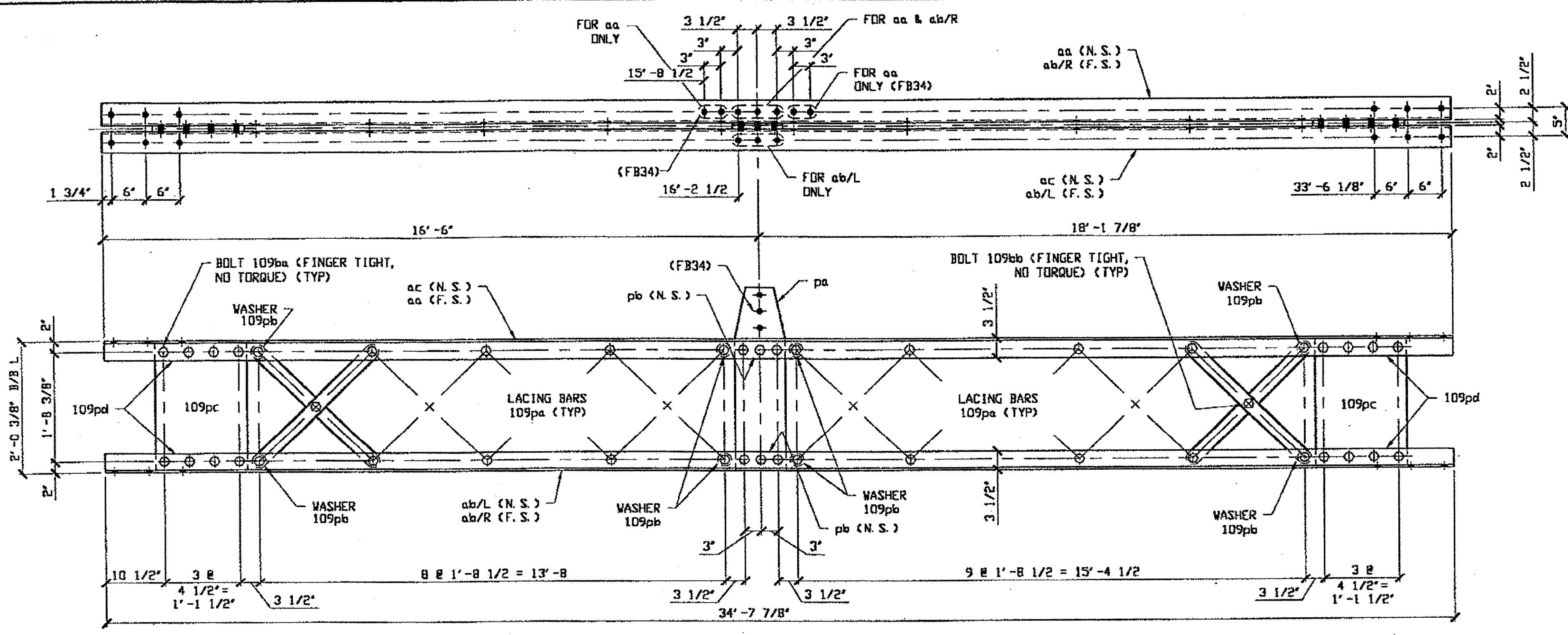
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>W &amp; LE SPAN REPAIR</b>			
			SHEET NUMBER: 110
			ADM JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 10/9/00 BY CW

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 GAF 09/11/00  
 CHECKED BY: DATE  
 GVG 09/27/00

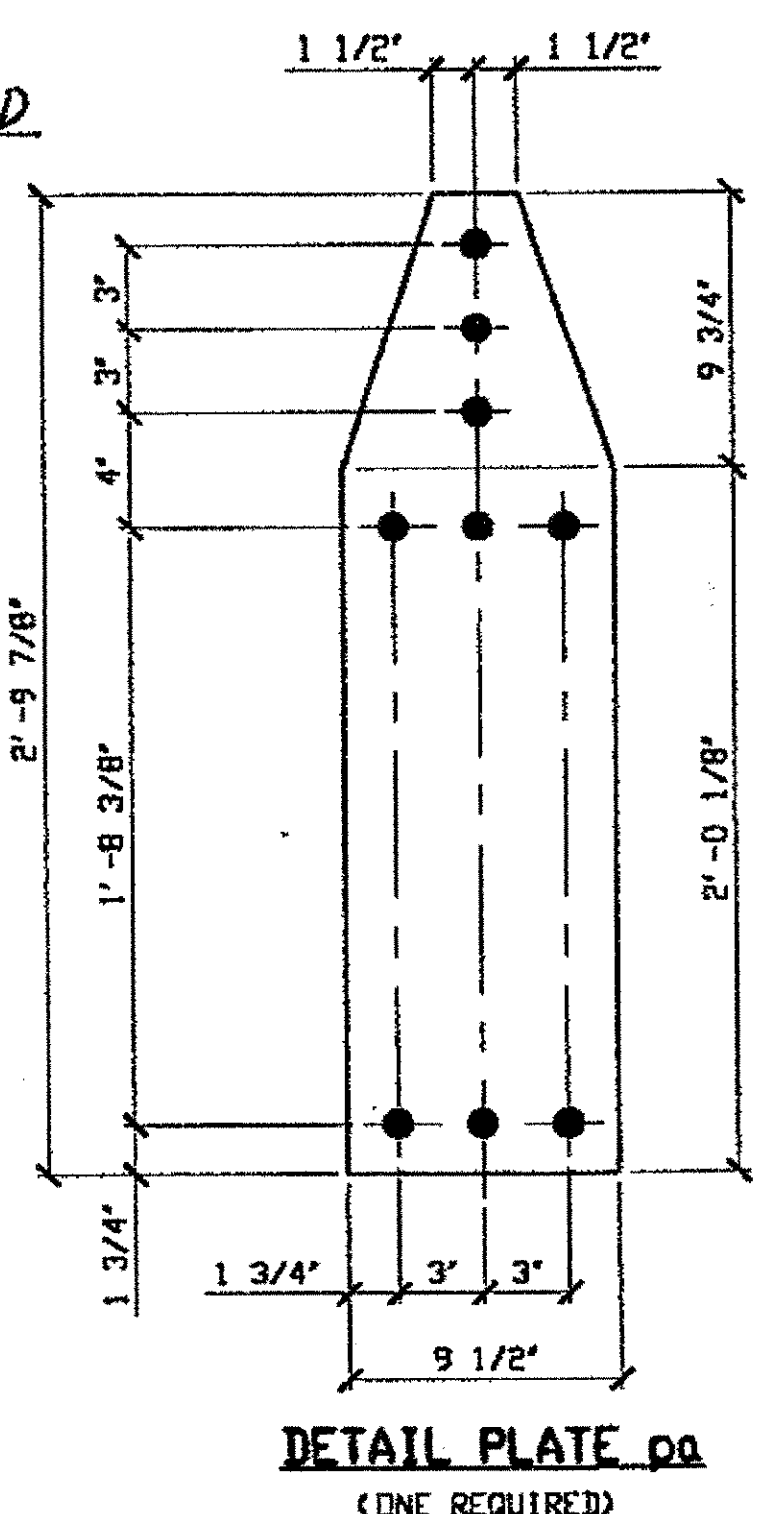
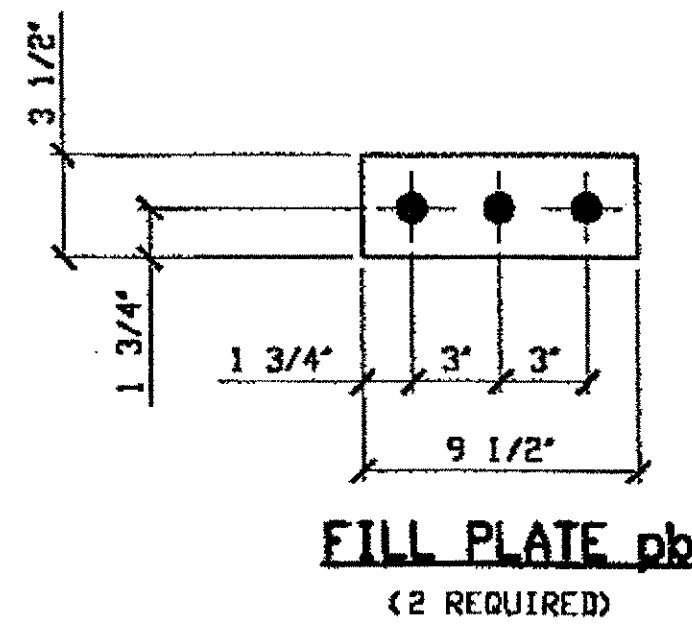
Last modifier  
 \$ (EDTIME, ??) on \$ (EDTIME, ??) - 1 - Last plotted by Gfoster at  
 sam on Thu Oct 05, 2000



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		113A	1	TYPE 2 TRANS COMPLETE				1920
3		aa	1	L 4 X 3 1/2 X 3/8	34	7 7/8		315
4		ab R/L	2	L 4 X 3 1/2 X 3/8	34	7 7/8		630
5		ac	1	L 4 X 3 1/2 X 3/8	34	7 7/8		315
6		pa	1	PL 3/8 X 9 1/2	2	9 1/2		31
7		pb	2	PL 5/8 X 3 1/2	0	9 1/2		10
8		109pa	34	BAR 2 1/2 X 1/2	2	7 3/8		371
9		109pb	8	PL 1/2 X 2 1/2 DD X 1 1/2	16	10		3
10		109pc	2	PL 7/16 X 16 1/2	1	11 1/2		96
11		109pd	4	PL 9/16 X 3	1	4 1/2		32
12		109ba	60	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	93
13				W/ HVY HEX NUT & WASHER				
14		109bb	17	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	24
15				W/ HVY HEX NUT & WASHER				
16								
17								
18				FIELD BOLTS				
19		FB34	10	1" DIA	0	2 1/4	NOTE 2	
20								
21								
22								
23								
24								
25								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

**TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 113A**

SPAN W-PILE (ALL 4 ANGLES)  
 G-G' NORTH, TOP EAST, TOP WEST, BOTTOM EAST & BOTTOM WEST, INSTALLED  
 Part of COMPLETE REPLACEMENT



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 10/9/00 BY *cue*

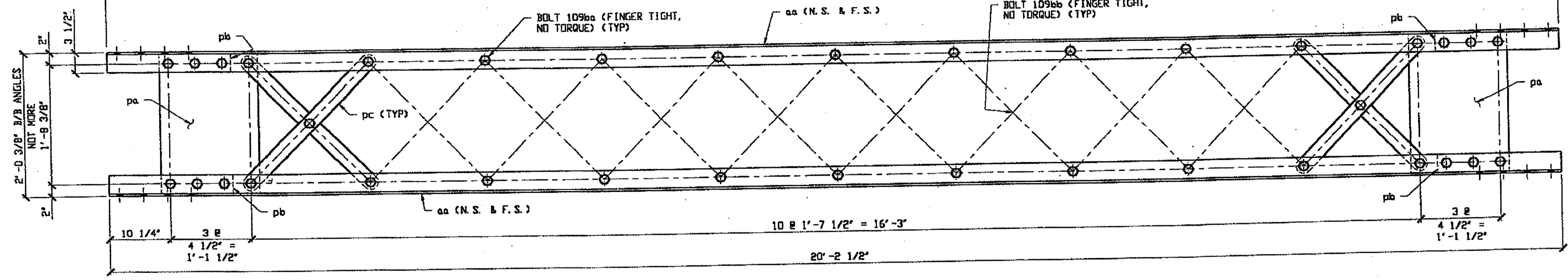
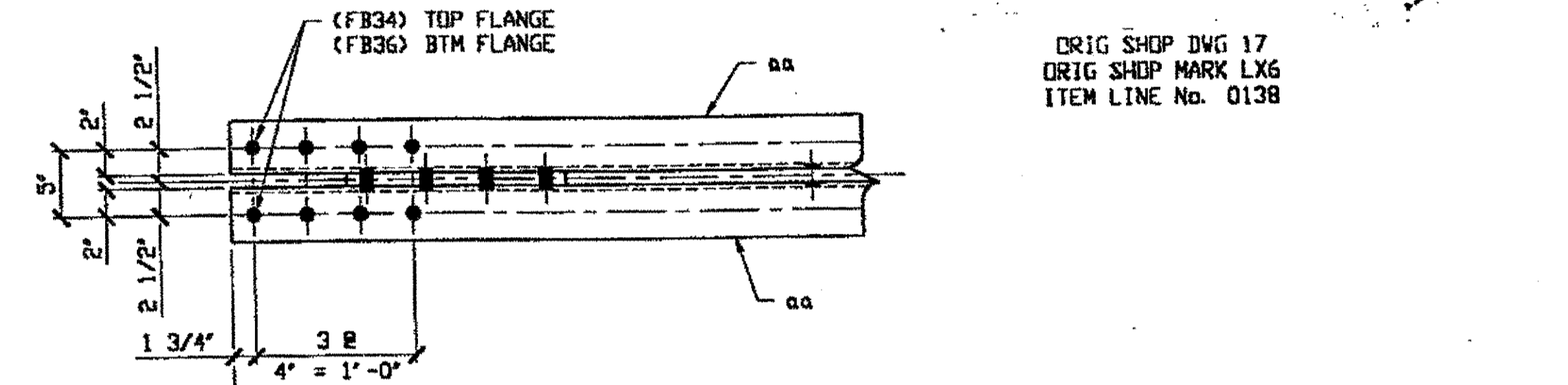
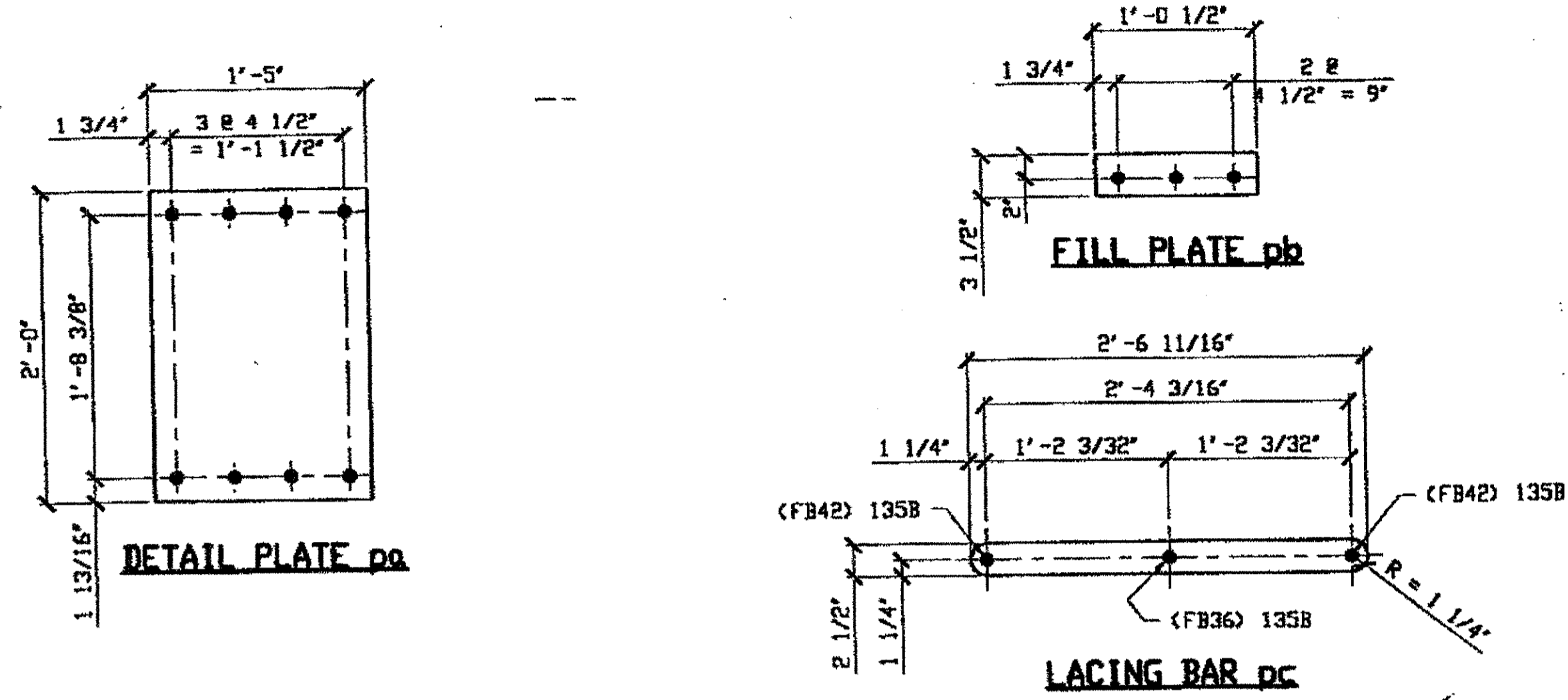


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 GAF 09/09/00  
 CHECK BY: DATE  
 GVG 09/30/00

DOT ITEM LINE NO. 0112		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO			
DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB			
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)			
CITY OF CLEVELAND			
CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
W & LE SPAN REPAIR			
DRAWN BY: DATE			SHEET NUMBER:
GAF 09/09/00			113
CHECK BY: DATE			ABM JOB NUMBER:
GVG 09/30/00			800010

Last modified by Repringer at 09:33am on Wed Oct 18, 2000 - 1 - Last plotted by Rsp/ at 07:56am on Thu Oct 19, 2000



ONE - TYPE 1 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT - 135A ✓

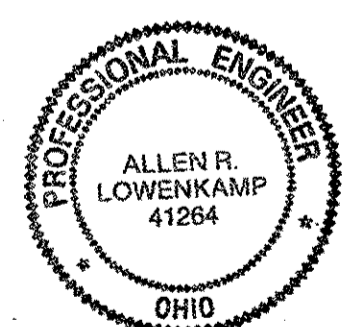
DRIG SHOP DWG 17-BS1  
 DRIG SHOP MARK BS1  
 ITEM LINE No. 0108

SPAN 1, E-E' NORTH 135A  
 (ALL 4 ANGLES, Part of Complete member)

RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY cm

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CHAMPELLS, PA. 15109  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0108 & 0138  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 1 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 9/15/00  
 CHECKED BY: GWG  
 DATE: 10/09/00

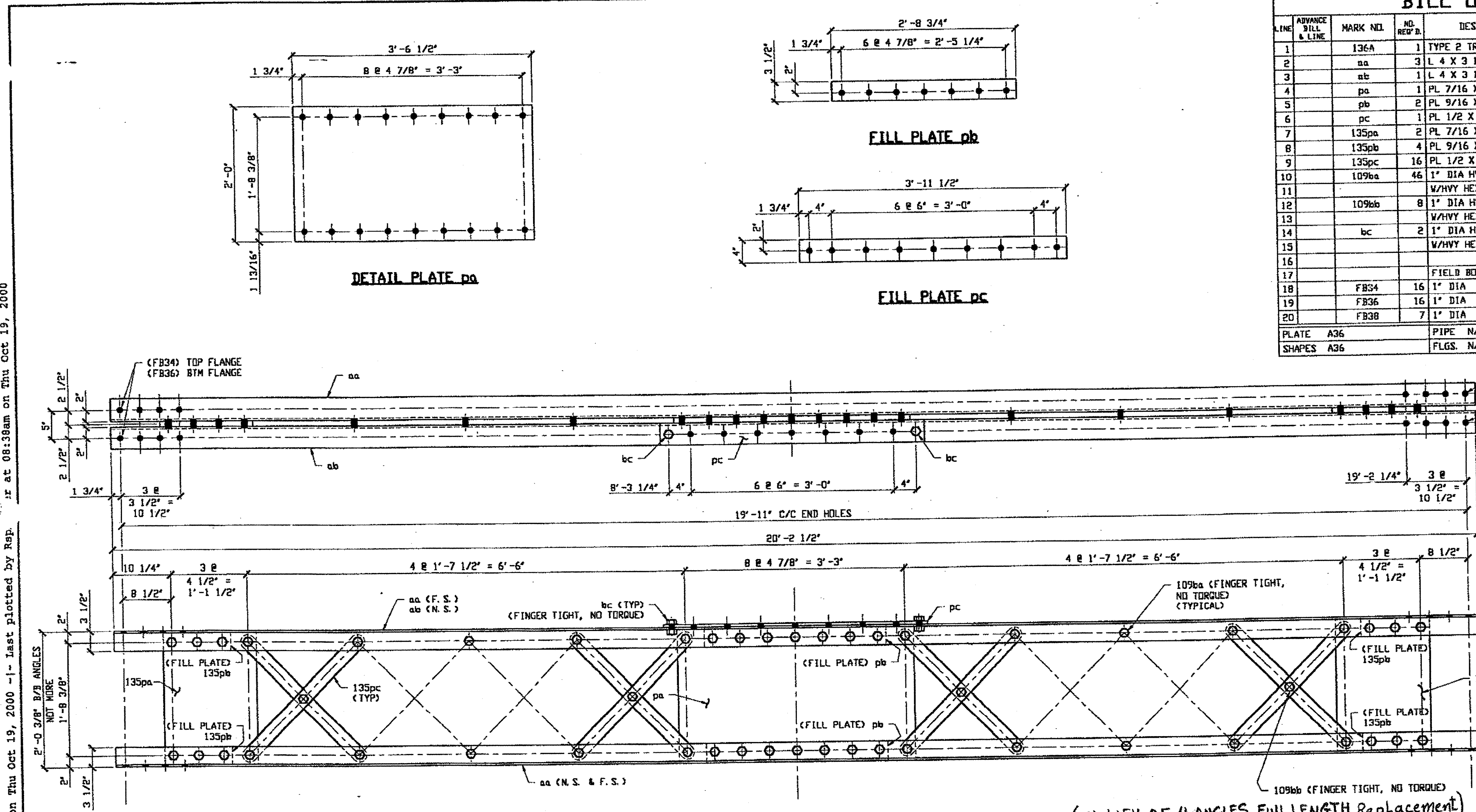
SHEET NUMBER: 135  
 ADR JOB NUMBER: 800010

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		135A	1	TYPE 1 TRANS COMPLETE				1138
2		aa	4	L 4 X 3 1/2 X 3/8	20	2 1/2		736
3		pa	2	PL 7/16 X 17	2	0 1/2		103
4		pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
5		pc	20	PL 1/2 X 2 1/2	2	6 1/16		205
6		109ba	34	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	53
7				W/ HVY HEX NUT & WASHER				
8		109bb	10	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	14
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14				FIELD BOLTS				
15								
16		FB34		1" DIA	0	2 1/4	NOTE 2	
17		FB36		1" DIA	0	2 1/2	NOTE 2	
18		FB42		1" DIA	0	3 1/4	NOTE 2	
19		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
20		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		136A	1	TYPE 2 TRANSVERSE				1304
2		aa	3	L 4 X 3 1/2 X 3/8	20	2 1/2		592
3		ab	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
4		pa	1	PL 7/16 X 24	3	6 1/2		126
5		pb	2	PL 9/16 X 3 1/2	2	8 3/4		36
6		pc	1	PL 1/2 X 4	3	11 1/2		27
7		135pa	2	PL 7/16 X 17	2	0 1/2		103
8		135pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
9		135pc	16	PL 1/2 X 2 1/2	2	6 1/16		164
10		109ba	46	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	71
11				W/HVY HEX NUT & WASHER				
12		109bb	8	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	11
13				W/HVY HEX NUT & WASHER				
14		bc	2	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	3
15				W/HVY HEX NUT & WASHER				
16				FIELD BOLTS				
17		FB34	16	1" DIA	0	2 1/4	NOTE 2	21
18		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
19		FB38	7	1" DIA	0	2 3/4	NOTE 2	10
20								
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	



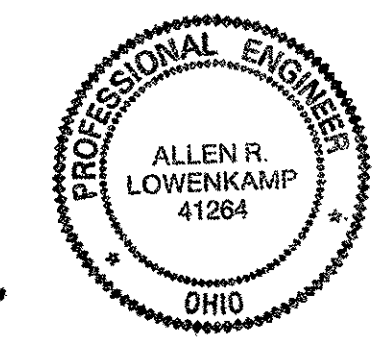
(1) TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 136A (IN LIEU OF 4 ANGLES FULL LENGTH Replacement)

ORIG SHOP DWG 17-BS4  
ORIG SHOP MARK BS4

SPAN 1, G-G' NORTH 136A

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 10/25/00 BY *ew*



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROPS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 9/18/00  
CHECKED BY: DATE:  
GWC 10/11/00

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

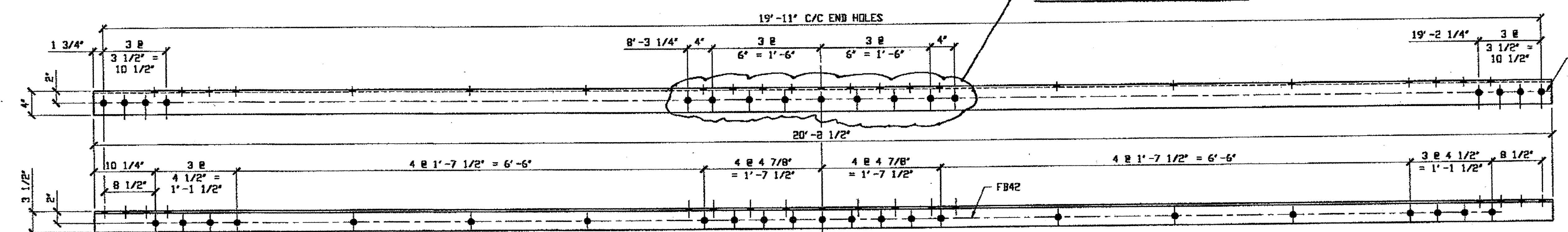
DOT ITEM LINE NO. 0108	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 1 REPAIRS	
SHEET NUMBER:	136
JOB NUMBER:	800010

Last modif. by Repringer at 08:38am on Thu Oct 19, 2000 -1- Last plotted by Rep. ir at 08:38am on Thu Oct 19, 2000

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 TRANS FULL				
2		137A	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
3		137B	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
4								
5				FIELD BOLTS				
6		FB34	17	1" DIA	0	2 1/4	NOTE 2	23
7		FB42	46	1" DIA	0	3 1/4	NOTE 2	71
8		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
9								
10								
11								
12								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

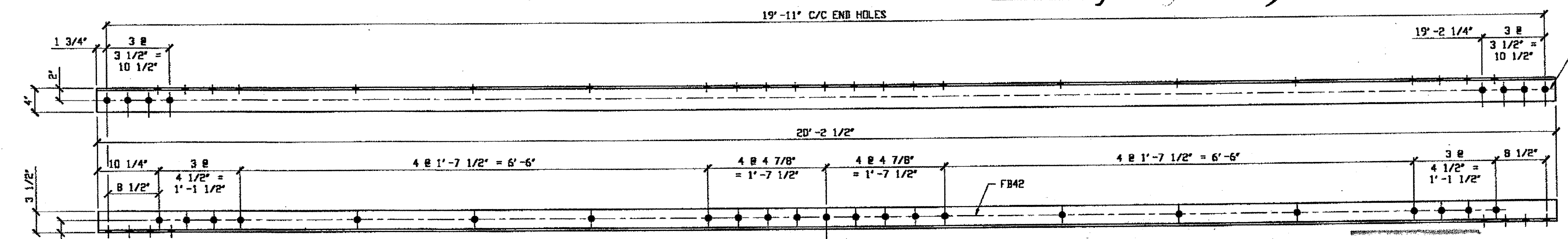
HOLES NOT NEEDED ON HORIZONTAL LEG FILLED HOLES WITH BOLTS



2 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT 137A

(SAME AS 136ab)  
ORIG SHOP DWG 17-BS4  
ORIG SHOP MARK A17k

SPAN 1, G-G' SOUTH, TOP EAST 137A  
SPAN 2, C-C' NORTH, TOP WEST 137A



2 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT 137B

(SAME AS 136aa)  
ORIG SHOP DWG 17-BS4  
ORIG SHOP MARK A17h

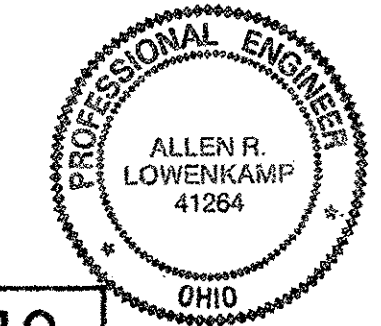
SPAN 1, G-G' SOUTH, BOTTOM EAST 137B  
SPAN 2, C-C' NORTH, BOTTOM WEST 137B

NOTES:

- OPEN HOLES ARE (1/16" Ø)
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

★ 4. BILL OF MATERIAL IS FOR UNIT OF 137A AND 1" UNIT OF 137B ONLY

RELEASED FOR CONSTRUCTION  
DATE 10/25/00 BY ew

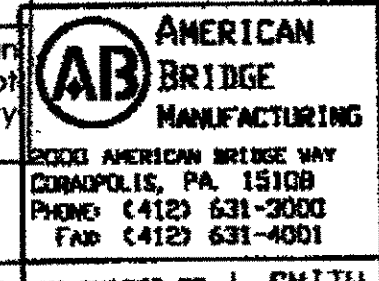


O.D.O.T. DIST. 12

ACCEPTED	2/24/01	RSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



AMERICAN BRIDGE MANUFACTURING  
8000 AMERICAN BRIDGE WAY  
CORANPOLIS, PA 15108  
PHONE: (412) 531-3000  
FAX: (412) 531-4001

DOT ITEM LINE NO. D112  
DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN REPAIR

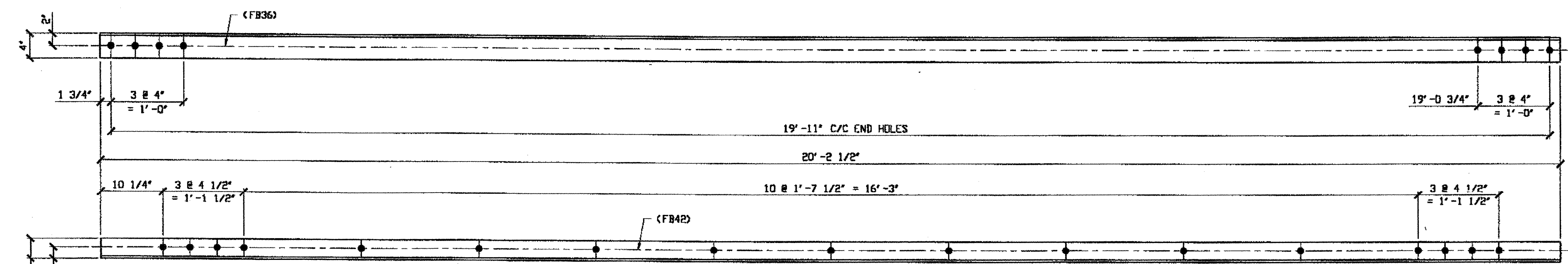
SHEET NUMBER: 137  
JOB NUMBER: 800010

Last modified by Repringer at 11:33am on Thu Oct 19, 2000 - Last plotted by R at 02:40pm on Thu Oct 19, 2000

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANS FULL REPAIR				
2		254A	7	L 4 X 3 1/2 X 3/8	20	2 1/2		1288
3								
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36		1" DIA	0	2 1/2	NOTE 2	
13		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**7-Type 1 TRANSVERSE FULL LENGTH REPLACEMENT - 254A**

ORIG SHOP DWG 17-BS1  
 ORIG SHOP MARK A17D  
 ITEM LINE No. 010B  
 REPAIR SHEETS 5-137, 187 REV. A, 204, 210 & 219  
 IDENTICAL TO 191B

- SPAN 5, F-F' SOUTH, BOTTOM EAST 254A
- SPAN 5, K-K' SOUTH, BOTTOM WEST 254A
- SPAN 5, K-K' NORTH, BOTTOM EAST 254A
- SPAN 5, K-K' NORTH, BOTTOM WEST 254A
- SPAN 5, L-L' SOUTH, BOTTOM WEST 254A
- SPAN 5, P-P' SOUTH, BOTTOM EAST 254A
- SPAN 3: N-N' SOUTH, BOTTOM EAST 254A

**O.D.O.T. DIST. 12**

ACCEPTED	2/4/01	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR' & CONTR. CO.  
 By Edp/ESS  
 MAR 26 2001

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY Edp

DOT ITEM LINE NO. AS NOTED		
DOT BID ITEM NO. 863E50000		
NO.	DATE	DESCRIPTION
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS		
FABRICATOR		SHEET NUMBER
 AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CLEVELAND, OH 44108 PHONE (412) 631-3000 FAX (412) 631-4000		254
STEEL ERECTOR		ASH JOB NUMBER
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEIDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		800010
IN CHARGE OF: L. SMITH DRAWN BY: DATE RAS 02/27/00 CHECKED BY: DATE GAF 03/20/01		

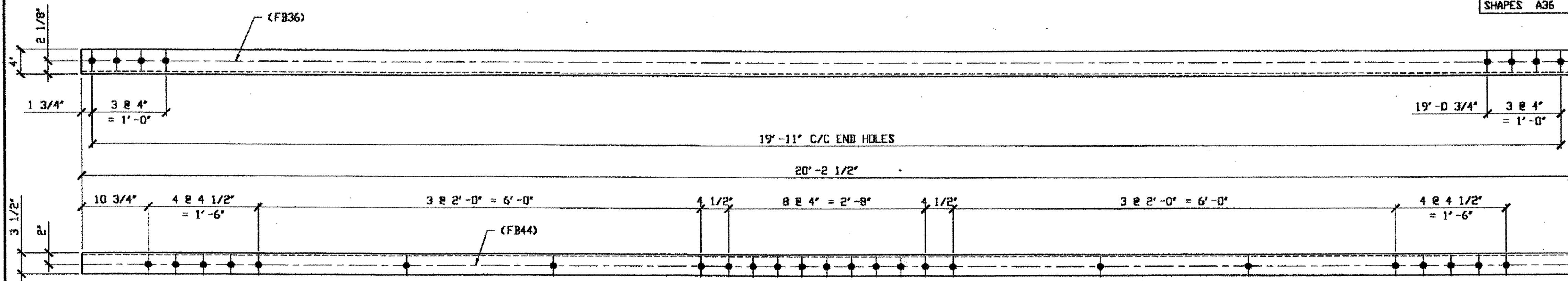
Last modified by repringer at Wed Mar 21, 2001 9:07am on Wed Mar 21, 2001 9:07am on Fri Mar 23, 2001 9:03am on Fri Mar 23, 2001 9:03am

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 TRANS MEMBER FULL LENGTH				
2		276A	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
3								
4				TYPE 2 DIAGONAL HALF LENGTH				
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB36		1" DIA	0	2 1/2	NOTE 2	
19		FB44		1" DIA	0	3 1/2	NOTE 2	
20								
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 6, B-B' NORTH, TOP EAST



**1 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT - 276A**  
 ORIG SHOP DRAWING 144-BS18  
 ORIG SHOP MARK A144x  
 LINE ITEM No. 0112  
 REPAIR SHEET 6-105

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**NAT'L ENGR' & CONTR. CO.**  
 By [Signature]  
**MAR 30 2001**

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY [Signature]

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

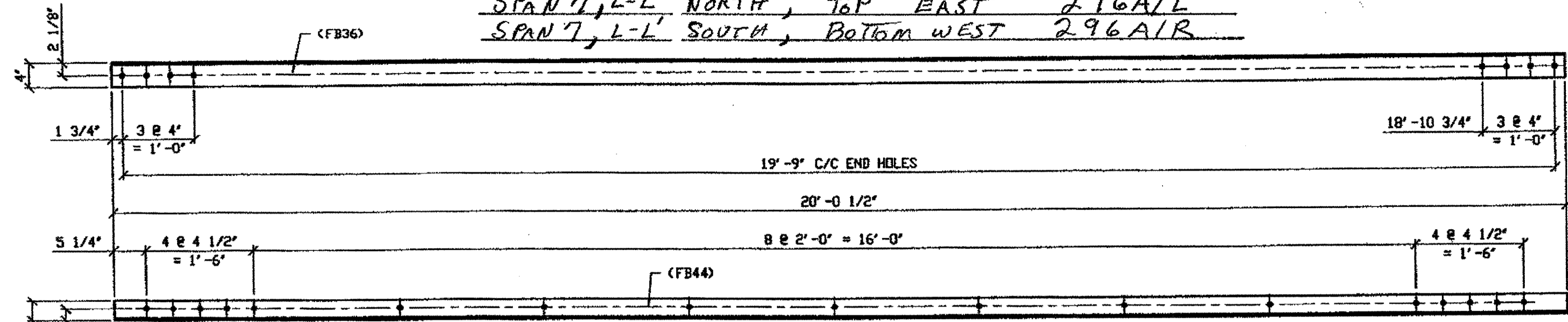
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 03/13/01  
 CHECKED BY: DATE: GAF 03/26/01

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 6 REPAIRS</b>			
			SHEET NUMBER: 276
			ADM JOB NUMBER: 800010

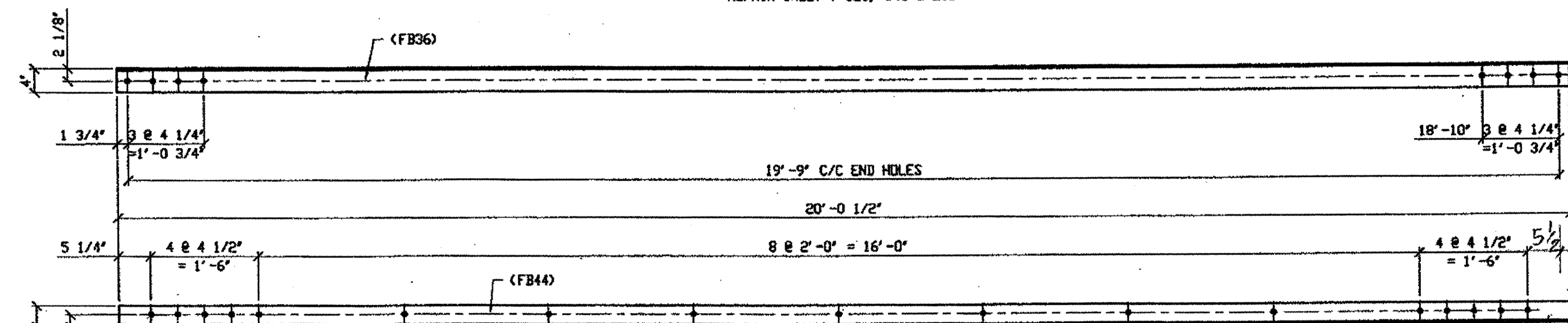
Last modified by rspringer at 09:56am on Thu Mar 29, 2001 - last plotted by Gfooster at 01:11pm on Thu Mar 29, 2001

SPAN 7, F-F' NORTH, BOTTOM EAST 296A/B  
 SPAN 7, L-L' NORTH, BOTTOM WEST 296A/L  
 SPAN 7, L-L' NORTH, TOP EAST 296A/L  
 SPAN 7, L-L' SOUTH, BOTTOM WEST 296A/R



**4 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 296A R/L**  
 (R SHOWN)

ORIG SHOP DRAWING 166-BS23  
 ORIG SHOP MARK A166h  
 REPAIR SHEET 7-123, 149 & 206



**8 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 296B R/L**  
 (R SHOWN)

ORIG SHOP DRAWING 166-BS24  
 ORIG SHOP MARK A166k  
 REPAIR SHEET 7-124, 134, 166, 176 & 202

**SPAN 7**

B-B' SOUTH, BOTTOM WEST 296B/R  
 B-B' SOUTH, BOTTOM EAST 296B/L  
 E-E' NORTH, BOTTOM EAST 296B/R  
 P-P' SOUTH, BOTTOM EAST 296B/L  
 P-P' NORTH, BOTTOM EAST 296B/R  
 M-M' SOUTH, BOTTOM WEST 296B/R

**SPAN 4**

B-B' SOUTH BOTTOM WEST, 296B/R } (PART OF TYPE 2 TRANSVERSE)  
 B-B' SOUTH BOTTOM EAST, 296B/L }

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANSVERSE FULL LENGTH				
2		296A R/L	4	L 4 X 3 1/2 X 3/8	20	0 1/2	2/R, 2/L	730
3								
4								
5		296B R/L	8	L 4 X 3 1/2 X 3/8	20	0 1/2	5/R, 3/L	1486
6								
7				FIELD BOLTS				
8		FB36		1" DIA	0	2 1/2	NOTE 2	
9		FB44		1" DIA	0	3 1/2	NOTE 2	
10								
PLATE N/A		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 6/21/01 BY tdp

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIA, PA 17109  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

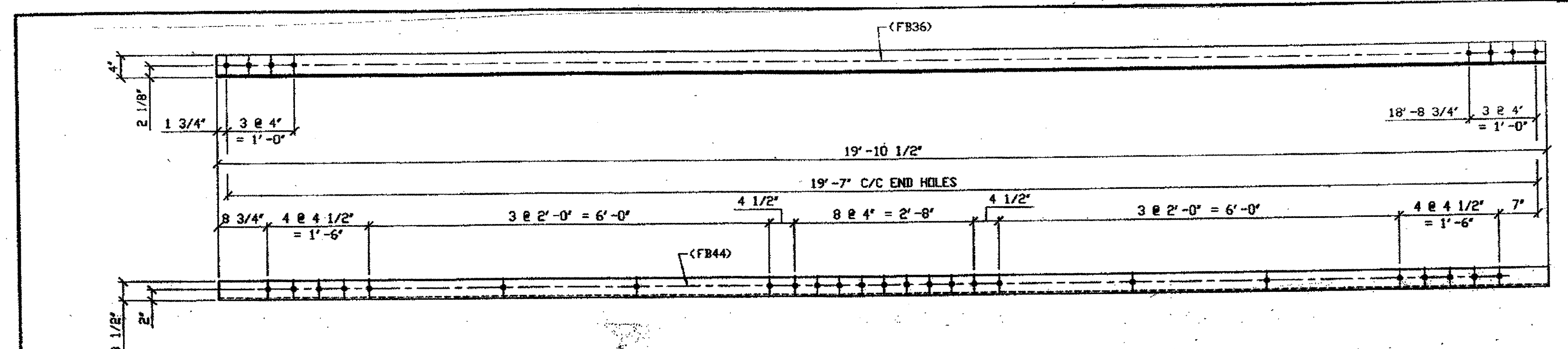
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12609 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/26/01  
 CHECKED BY: DATE: GAF 05/15/01

DOT ITEM LINE NO. 0108	DOT BID ITEM NO. 963E50000		
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN REPAIRS</b>			
SHEET NUMBER: 296		ARN JOB NUMBER: 800010	

Last modified by repringer at 8:58:11 AM on Wed May 16, 2001

Last modified by rpringer at 5:00PM on Wed May 16, 2001

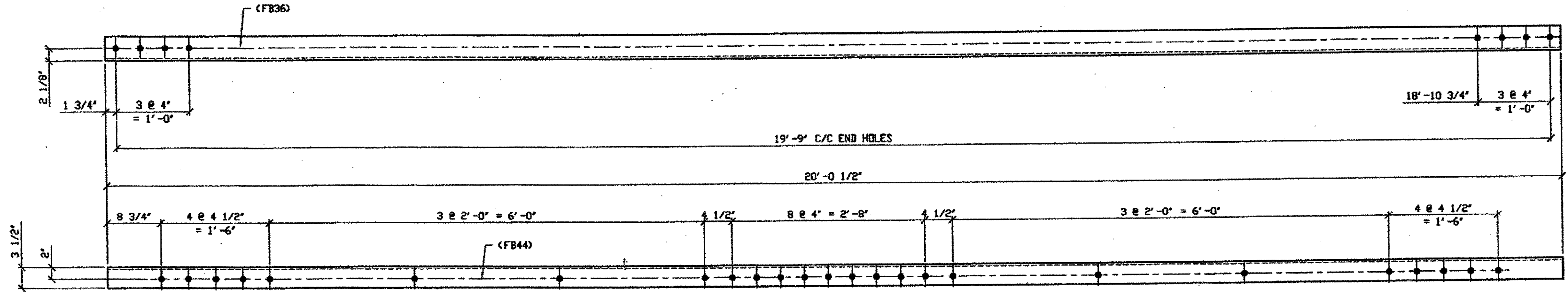


**3 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT 298B**

ORIG SHOP DWG 295-BS28  
ORIG SHOP MARK A295d  
DOT ITEM No. 0112  
REPAIR SHEET 9-220

**SPAN 10**  
**B-B' NORTH, BOTTOM EAST 298B**  
**F-F' NORTH, BOTTOM WEST 298B**

**SPAN 9, South L-L', Bottom WEST 298 B**



**1 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENT - 298A**

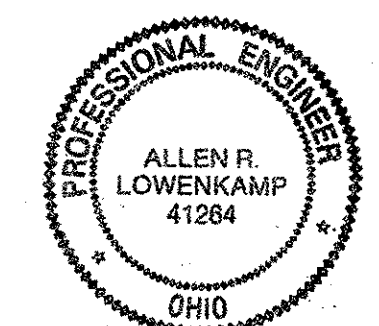
ORIG SHOP DRAWING 165-BS19/R  
ORIG SHOP MARK A165g/R  
REPAIR SHEET 7-217

**SPAN 7, J-J' NORTH, TOP WEST ANGLE 298A**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 TRANSVERSE FULL LENGTH				
2		298A	1	L 4 X 3 1/2 X 3/8	20	0 1/2		182
3								
4		298B	3	L 4 X 3 1/2 X 3/8	19	10 1/2		543
5								
6								
7								
8				FIELD BOLTS				
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 6/2/01 BY tdr



O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

FABRICATOR  
**AMERICAN BRIDGE**  
MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CAMPBELL, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

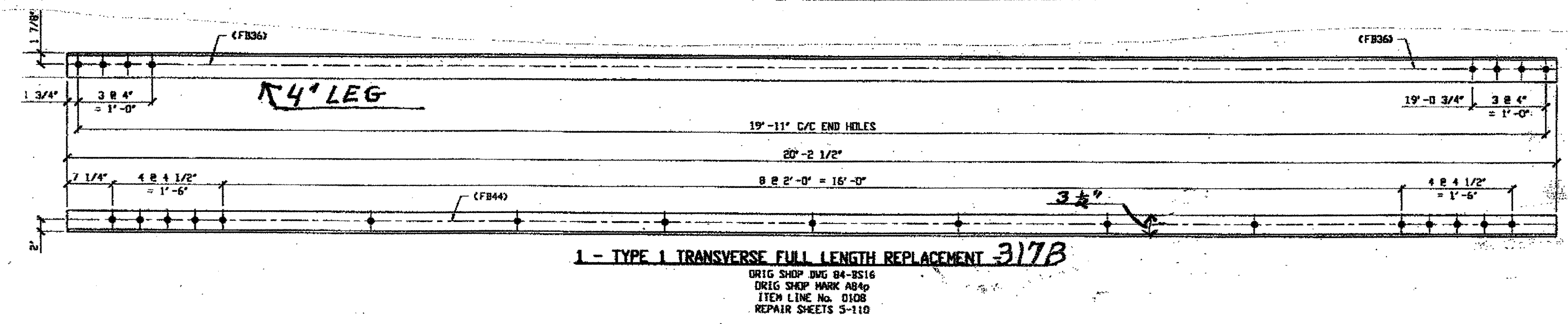
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 04/27/01  
CHECKED BY: DATE:  
GAF 05/15/01

DOT ITEM LINE NO. 0112  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN REPAIRS**

SHEET NUMBER: 298  
JOB NUMBER: 800010



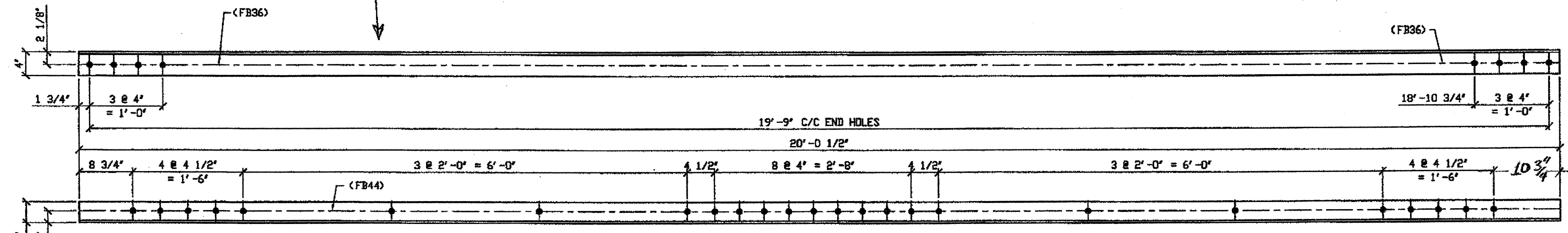
1 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT 317B

ORIG SHOP DWG 84-BS16  
ORIG SHOP MARK AB40  
ITEM LINE NO. 0108  
REPAIR SHEETS 5-110

SPAN 5, B-B', NORTH, BOTTOM WEST 317B

SPAN 8

E-E' NORTH, BOTTOM WEST, 317A/L  
E-E' NORTH, BOTTOM EAST, 317A/R  
E-E' SOUTH, BOTTOM WEST, 317A/R



3 - TYPE 2 TRANSVERSE FULL LENGTH REPLACEMENTS - 317A R/L

ORIG SHOP DWG 165-BS19 R/L  
ORIG SHOP MARK A165kg R/L  
REPAIR SHEET 8-118 & 134

(R SHOWN)

APPROVER NOTE:  
PLEASE VERIFY ANGLE DETAIL  
AND CORRECT QTY OF (RIGHT & LEFT PCS.)

BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				TYPE 2 TRANSVERSE FULL	LENGTH REPLACEMENTS	
2		317A R/L	3	L 4 X 3 1/2 X 3/8	20 0 1/2	R, L 547
3						
4						
5		317B	1	L 4 X 3 1/2 X 3/8	20 2 1/2	184
6						
7						
8						
9						
10						
11						
12						
13						
14						
15				FIELD BOLTS		
16		FB36		1" DIA.	0 2 1/2	NOTE 2
17		FB44		1" DIA.	0 3 1/2	NOTE 2
18						
19						
20						
PLATE		N/A		PIPE	N/A	FITTINGS N/A
SHAPES		A36		FLGS.	N/A	BOLTS NOTE 2

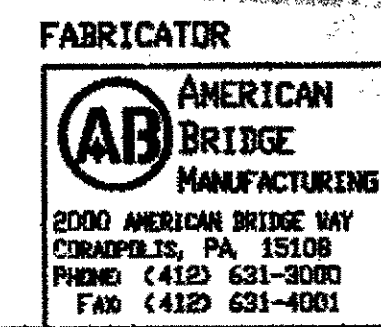
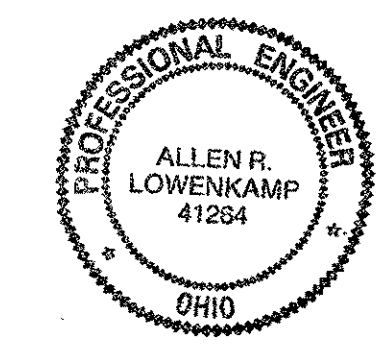
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contracts\2000\800010\Drawings\317A.dwg  
Save by ppos at 11:52am Oct 05, 2001  
Plot by ppos at 11:52am Oct 05, 2001  
Model space plot + Scale = 1/12

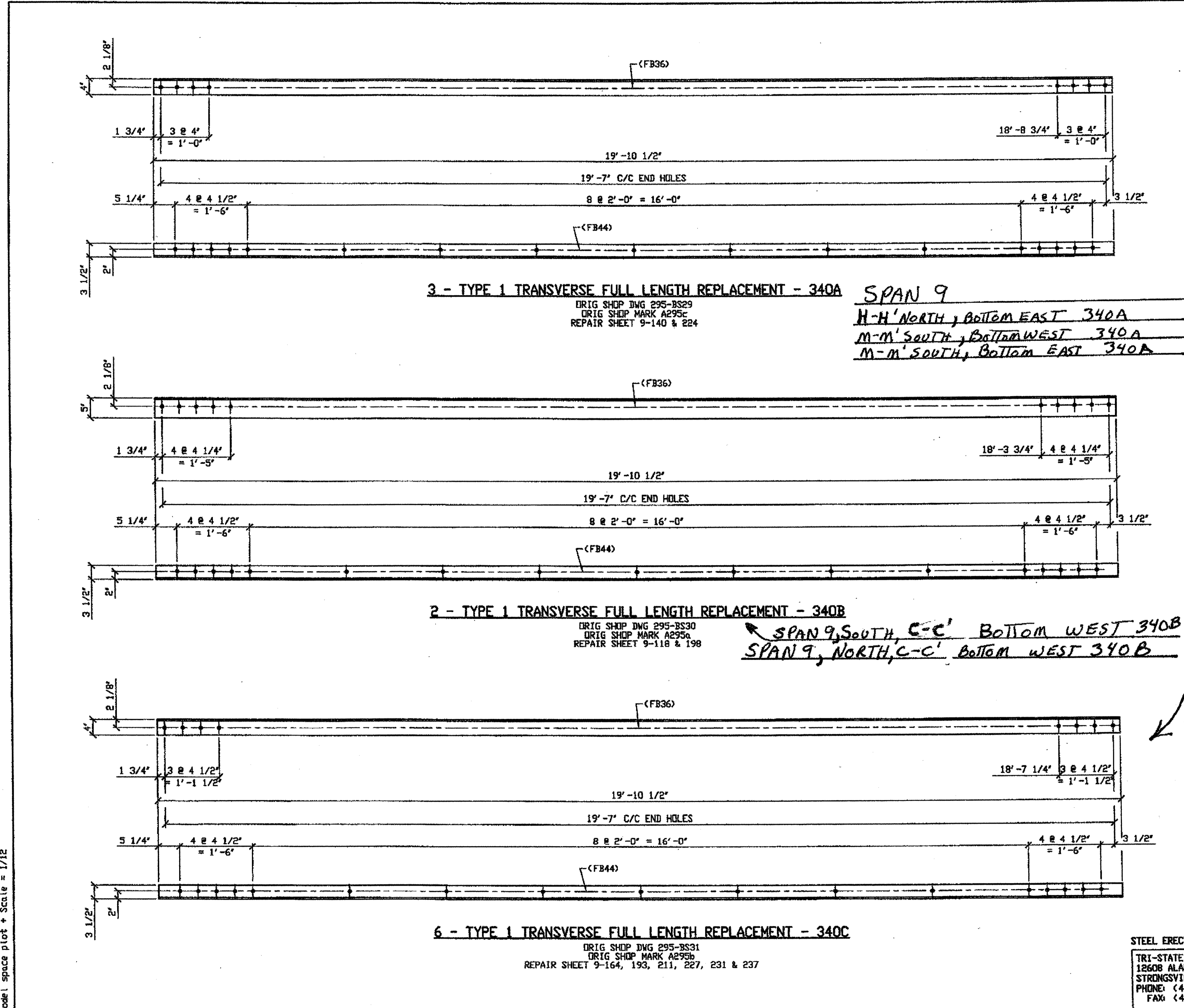
RELEASED FOR CONSTRUCTION  
DATE 11/16/01 BY EDP/ESS

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



DOT ITEM LINE NO. 0112 DOT BID ITEM NO. 863E50000	
NO. 1	DATE
DESCRIPTION REVISIONS	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS	
FABRICATOR	IN CHARGE OF: L. SMITH
BRAWN BY DATE	JRC 05/08/01
CHECKED BY DATE	GAF 08/06/01
SHEET NUMBER	317
ARM JOB NUMBER	800010



BILL OF MATERIAL									
LINE	ADVANCE BELL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 TRANSVERSE FULL					
2		340A	3	L 4 X 3 1/2 X 3/8	19	10 1/2		543	
3		340B	2	L 5 X 3 1/2 X 3/8	19	10 1/2		413	
4		340C	6	L 4 X 3 1/2 X 3/8	19	10 1/2		1085	
5									
6									
7									
8									
9									
10				FIELD BOLTS					
11		FB36	92	1\" DIA	0	2 1/2	NOTE 2	128	
12		FB44	170	1\" DIA	0	3 1/2	NOTE 2	273	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

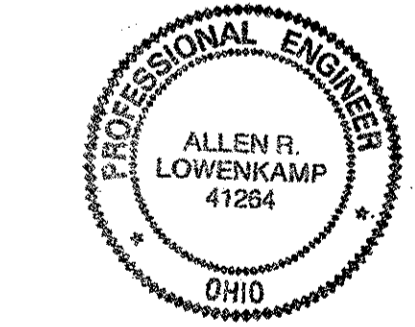
- NOTES:
- OPEN HOLES ARE (1 1/16\"/>

**SPAN 9**  
 H-H' NORTH, BOTTOM EAST 340A  
 M-M' SOUTH, BOTTOM WEST 340A  
 M-M' SOUTH, BOTTOM EAST 340A

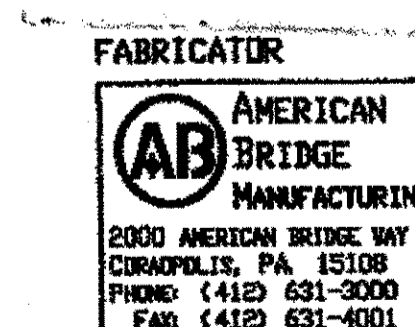
**SPAN 9**  
 B-B' SOUTH, BOTTOM WEST 340C  
 G-G' SOUTH, BOTTOM EAST 340C  
 N-N' SOUTH, BOTTOM WEST 340C  
 O-O' NORTH, BOTTOM WEST 340C  
 O-O' SOUTH, BOTTOM WEST 340C  
 R-R' SOUTH, BOTTOM EAST 340C

O.D.O.T. DIST. 12	
ACCEPTED	2/9/09 ASM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0108		
DOT BID ITEM NO. 863E50000		
REL. DATE	DESCRIPTION	BY



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH	
DRAWN BY: DATE	RAS 07/12/01
CHECKED BY: DATE	GAF 08/23/01
SHEET NUMBER	340
AM JOB NUMBER	800010

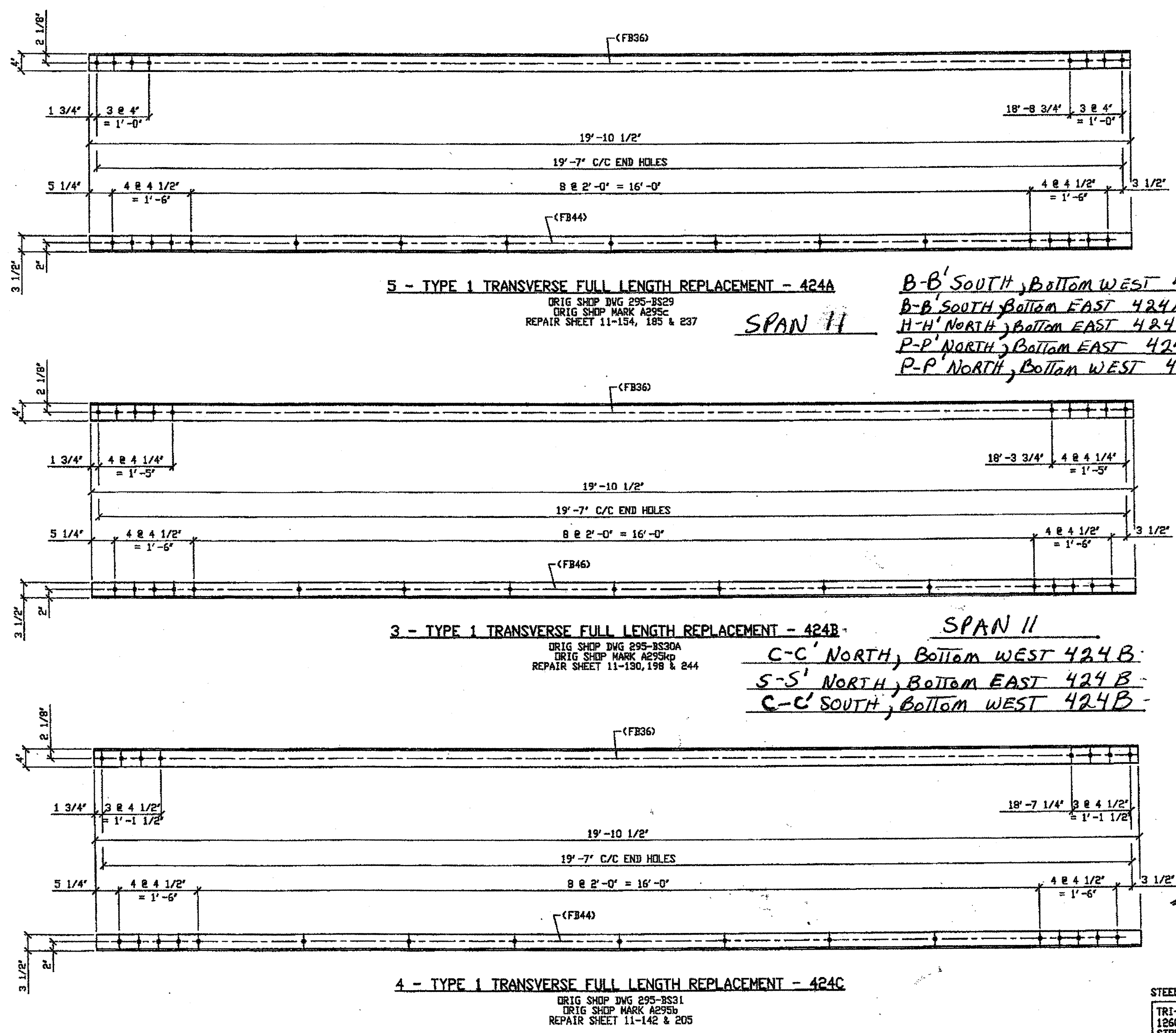
G:\Contracts\2000\800010\Drawings\DR40A.dwg  
 Save by rspir at 08:04am Dec 17, 2001  
 Plot by gfos at 09:43am Dec 17, 2001  
 Model space plot + Scale = 1/12

6 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 340C  
 ORIG SHOP DWG 295-BS31  
 ORIG SHOP MARK A295b  
 REPAIR SHEET 9-164, 193, 211, 227, 231 & 237

2 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 340B  
 ORIG SHOP DWG 295-BS30  
 ORIG SHOP MARK A295a  
 REPAIR SHEET 9-118 & 198  
 SPAN 9, SOUTH, C-C' BOTTOM WEST 340B  
 SPAN 9, NORTH, C-C' BOTTOM WEST 340B

3 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 340A  
 ORIG SHOP DWG 295-BS29  
 ORIG SHOP MARK A295c  
 REPAIR SHEET 9-140 & 224





BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 TRANSVERSE FULL LENGTH					
2		424A	5	L4 x 3 1/2 x 3/8	19	10 1/2		904	
3		424B	3	L4 x 3 1/2 x 1/2	19	10 1/2		709	
4		424C	4	L4 x 3 1/2 x 3/8	19	10 1/2		723	
5									
6									
7									
8				FIELD BOLTS					
9		FB36	102	1" DIA	0	2 1/2	NOTE 2	142	
10		FB44	85	1" DIA	0	3 1/2	NOTE 2	136	
11		FB44	51	1" DIA	0	3 3/4	NOTE 2	85	
12									
PLATE		N/A	PIPE		N/A	FITTINGS		N/A	
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2	

- NOTES:**
- OPEN HOLES ARE  $(1/16" \text{Ø})$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325 TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

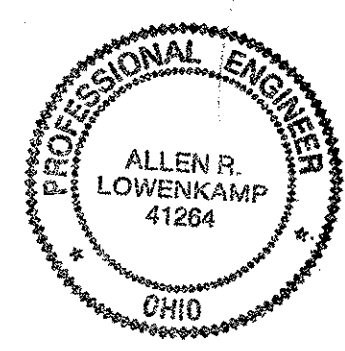
**B-B' SOUTH, BOTTOM WEST 424A**  
**B-B' SOUTH, BOTTOM EAST 424A**  
**H-H' NORTH, BOTTOM EAST 424A**  
**P-P' NORTH, BOTTOM EAST 424A**  
**P-P' NORTH, BOTTOM WEST 424A**

**SPAN 11**  
**F-F' NORTH, BOTTOM EAST 424C**  
**F-F' NORTH, BOTTOM WEST 424C**  
**T-T' NORTH, BOTTOM EAST 424C**  
**T-T' NORTH, BOTTOM WEST 424C**

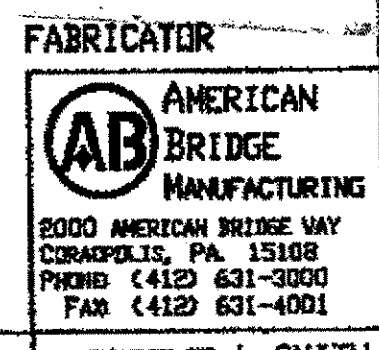
O.D.O.T. DIST. 12		
ACCEPTED		
ACCEPTED AS NOTED	2/4/02	1/31/02
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY t de/ess



REL.	DATE	DESCRIPTION	BY



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 11 REPAIRS**

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH	SHEET NUMBER: 424
DRAWN BY: DATE: AMV 01/07/02	ARN JOB NUMBER: 800010
CHECKED BY: DATE: GAF 02/20/02	

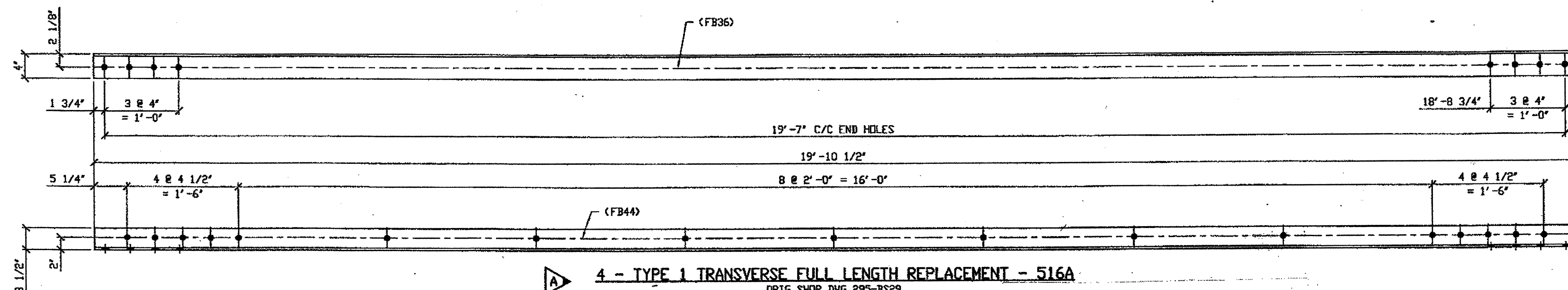
G:\Contracts\2000\800010\Drawings\TAP24A.dwg  
 Save by rshp at 09:58pm Feb 21, 2002  
 Plot by gshp at 11:53am Feb 21, 2002  
 Model space plot + Scale = 1/12

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 TRANSVERSE FULL				
2		516A	4	L 4 X 3 1/2 X 3/8	19	10 1/2		723
3								
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36	32	1" DIA	0	2 1/2	NOTE 2	45
13		FB44	68	1" DIA	0	3 1/2	NOTE 2	109
14								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



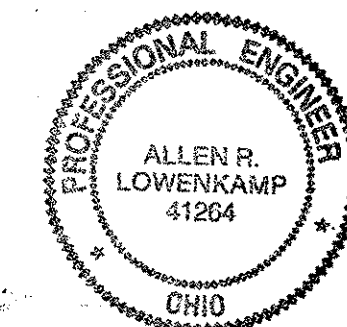
4 - TYPE 1 TRANSVERSE FULL LENGTH REPLACEMENT - 516A

DRIG SHOP DWG 295-BS29  
DRIG SHOP MARK A255C  
REPAIR SHEETS 13-155, 13-219, 13-203 & 13-225

SPAN 13  
L-L' SOUTH, BOTTOM EAST 516A  
M-M' NORTH, BOTTOM EAST 516A  
M-M' SOUTH, BOTTOM EAST 516A  
G-G SOUTH, BOTTOM WEST 516A

G:\Contracts\800010\Drawings\516A.dwg  
Save by gfas 11:31am Feb 02, 2002  
Plot by gfas at 09:11am Feb 01, 2002  
Model space plot + Scale = 1/9

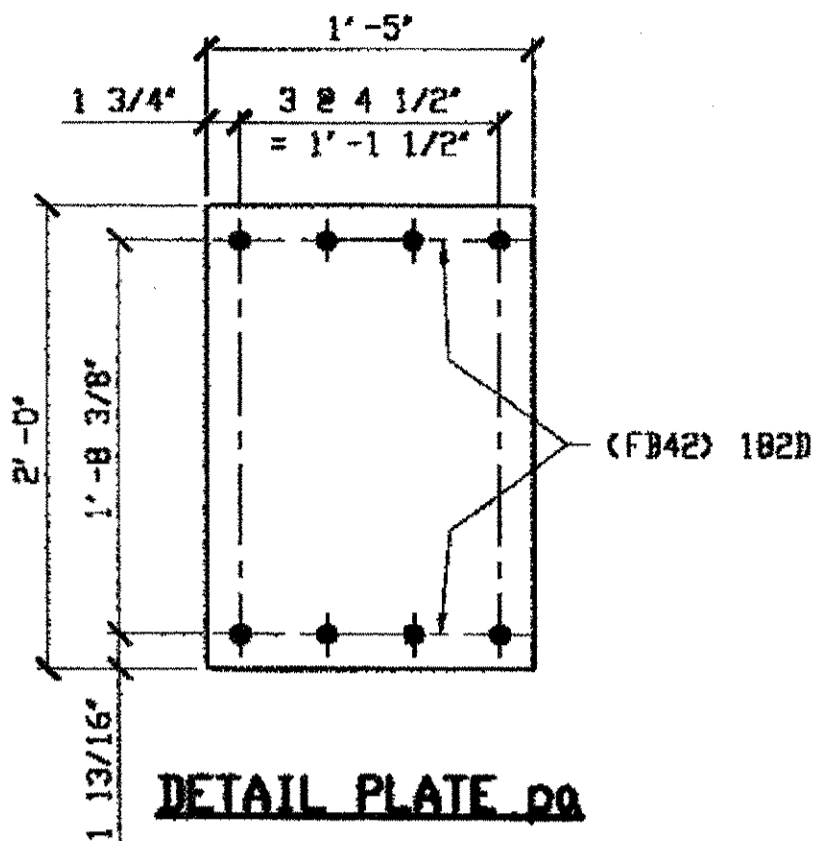
O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED 2/9/02 PSM  
NOT ACCEPTED



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 MERRICK BRIDGE WAY  
CORANSPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

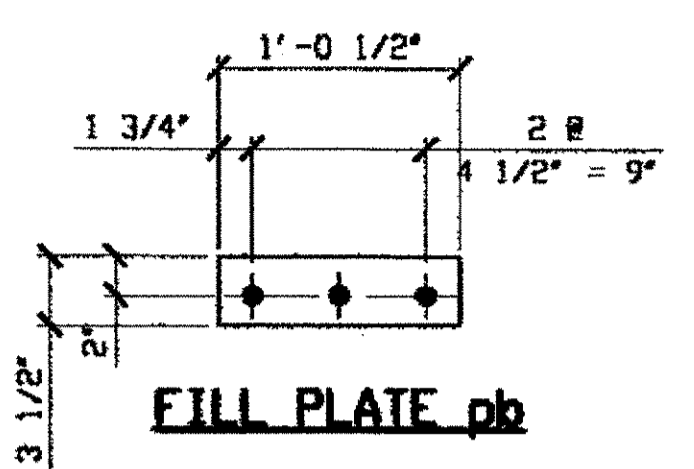
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

DOT ITEM LINE NO. 0108		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
A	01/31/02	REVISED PER CUSTOMER APPROVAL	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
SHEET NUMBER			516
JOB NUMBER			800010

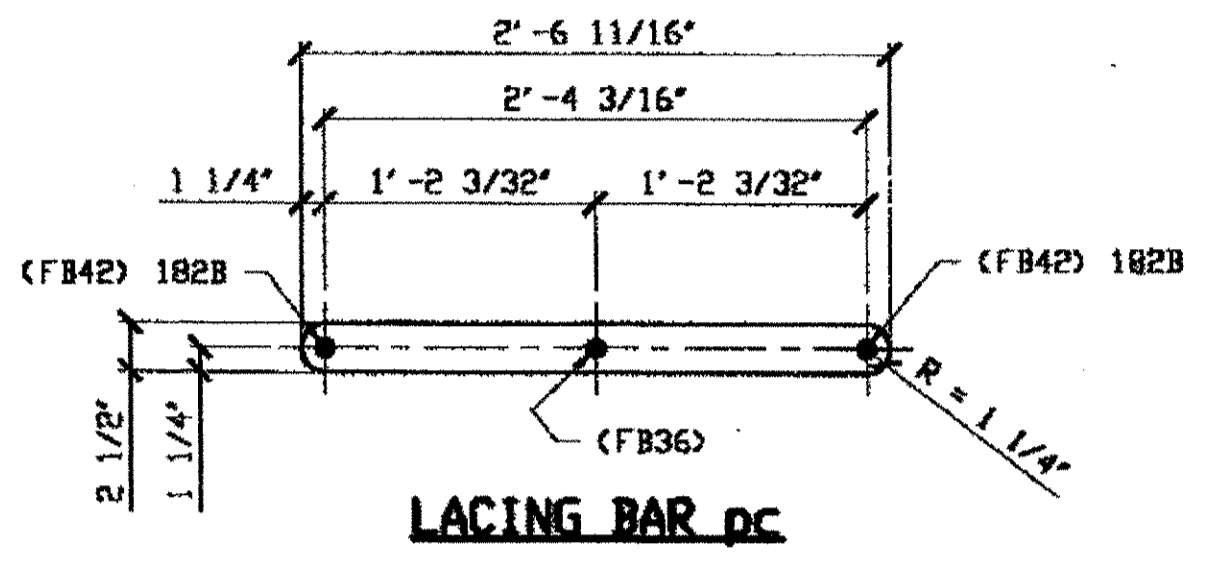


DETAIL PLATE pa

ORIG SHOP DWG 12 & 16  
ORIG SHOP MARK PX11  
ITEM LINE No. 0139  
IDENTICAL TO 119A

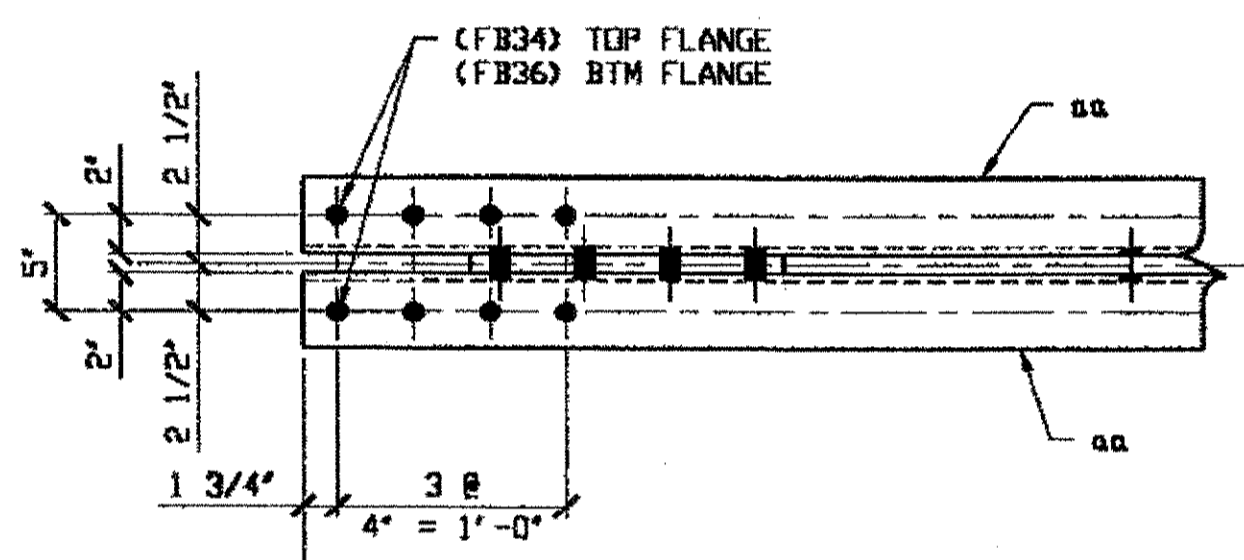


FILL PLATE pb



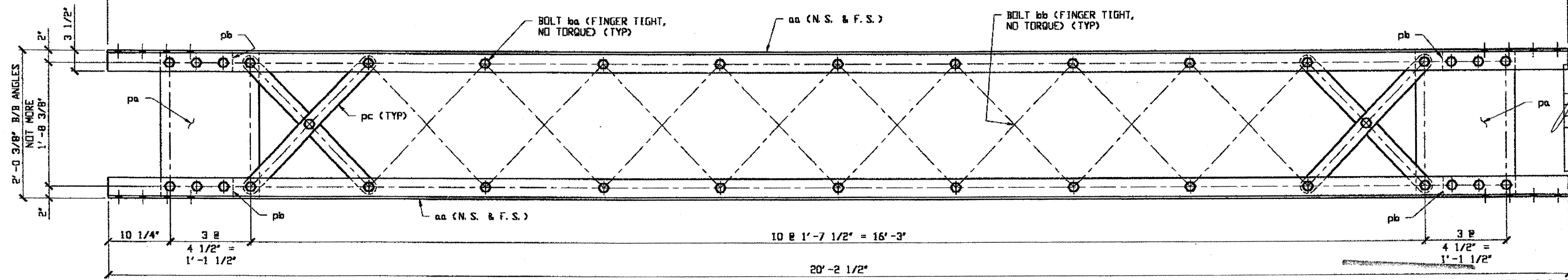
LACING BAR pc

ORIG SHOP DWG 12, 16 & 17  
ORIG SHOP MARK LX6  
ITEM LINE No. 0138  
IDENTICAL TO 135B



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		182A	4	TYPE 1 TRANS COMPLETE				4579
2		aa	16	L 4 X 3 1/2 X 3/8	20	2 1/2		2944
3		pa	8	PL 7/16 X 17	2	0		405
4		pb	16	PL 9/16 X 3 1/2	1	0 1/2		108
5		pc	80	PL 1/2 X 2 1/2	2	6 1/16		855
6		ba	136	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	211
7				W/ HVY HEX NUT & WASHER				
8		bb	40	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	56
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB34		1" DIA	0	2 1/4	NOTE 2	
20		FB36		1" DIA	0	2 1/2	NOTE 2	
21		FB42		1" DIA	0	3 1/4	NOTE 2	
22		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
23		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BELTS NOTE 2				

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



4 - TYPE 1 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT - 182A

ORIG SHOP DWG 17-B51  
ORIG SHOP MARK B51  
ITEM LINE No. 0208  
IDENTICAL TO 135A

SPAN 3			
B-B'	NORTH	182A	
K-K'	NORTH	182A	
N-N'	NORTH	182A	
K-K'	SOUTH	182A	

RELEASED FOR CONSTRUCTION  
DATE 2/8/01 BY *tdp*

O.D.O.T. DIST. 12  
ACCEPTED: [Signature]  
ACCEPTED AS NOTED: [Signature]  
NOT ACCEPTED: [Signature]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors of omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIA, PA 17518  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

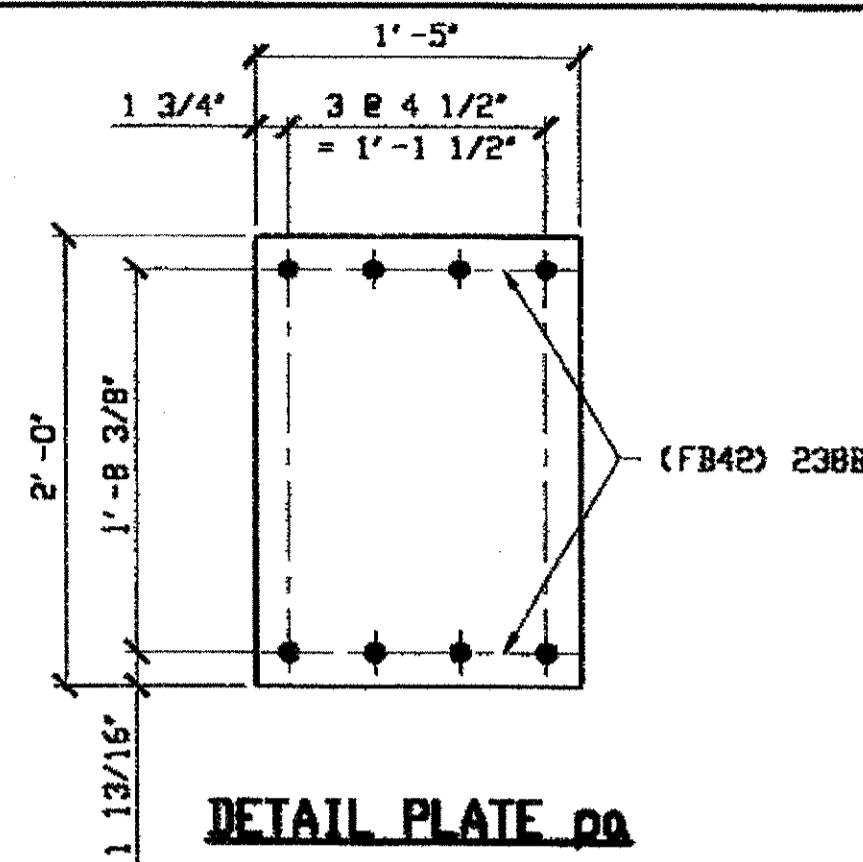
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 3 REPAIRS

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 12/21/00  
CHECKED BY: DATE: GAF 01/03/01

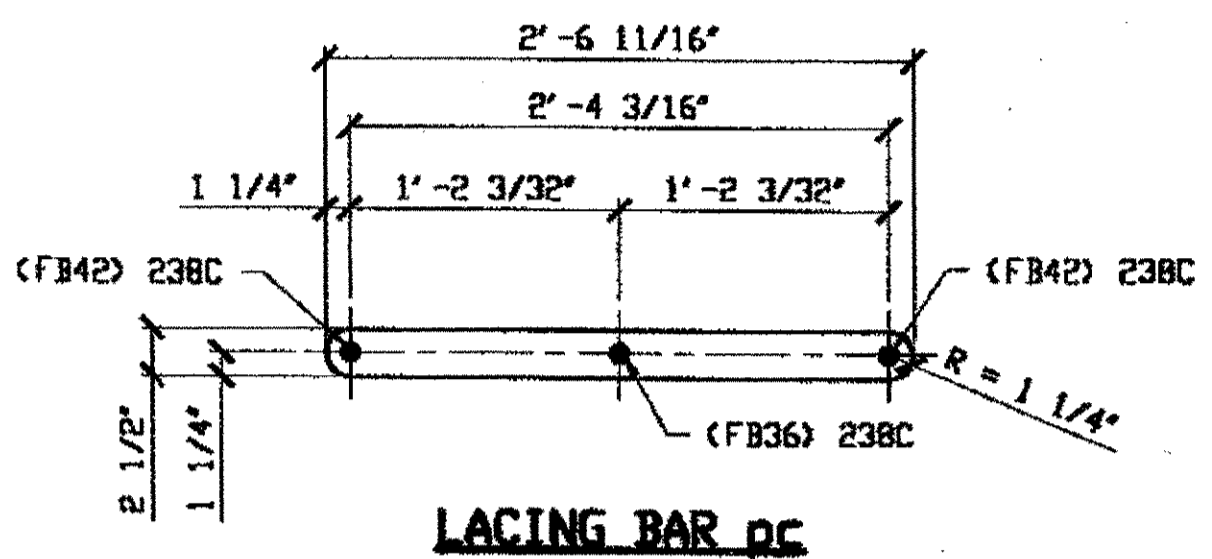
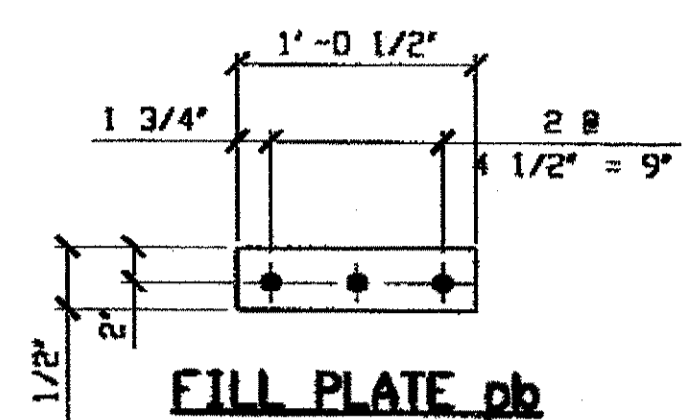
SHEET NUMBER: 182  
JOB NUMBER: 800010

reprinter at 09:03am on Mon Jan 29, 2001 - last plotted by Gfc at 04:03pm on Mon Feb 05, 2001

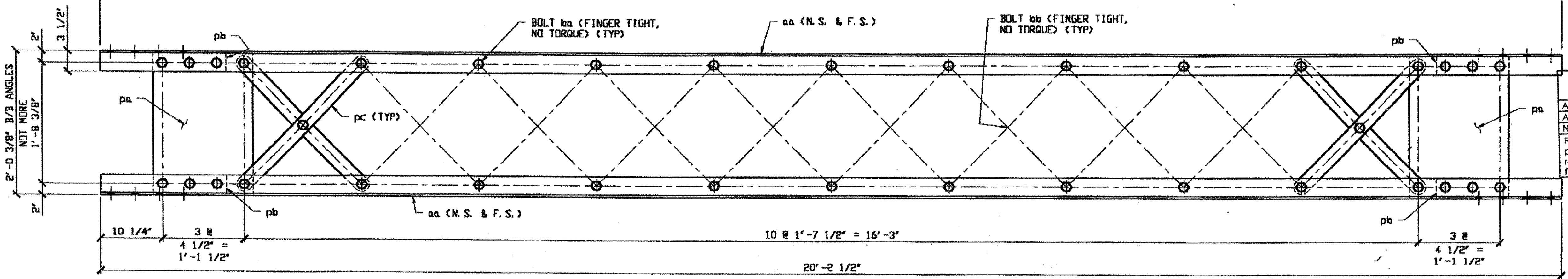
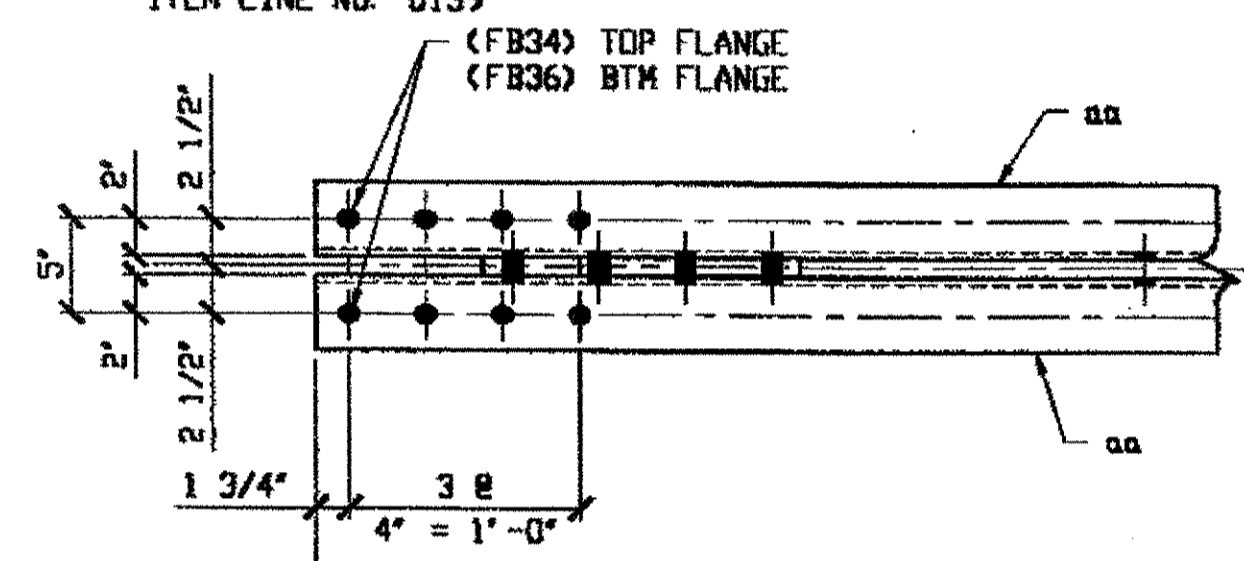
Last modified by espringer at 09:00am on Wed Mar 21, 2001 - Last plotted by Gfoster at 08:57am on Fri Mar 23, 2001



ORIG SHOP DWG 85-BL27, BL32 & BL42 DWG 12-BS14  
 ORIG SHOP MARK PX11  
 REPAIR SHEET 5-120, 156, 161, 208 & 226  
 IDENTICAL TO 119A  
 ITEM LINE No. 0139



ORIG SHOP DWG 12-BS14, 16-BL10, 17-BS1 & BS4A,  
 85-BL27, BL30, BL31, BL32, BL33, BL35,  
 BL36, BL38, BL39, BL41 & BL42  
 ORIG SHOP MARK LX6  
 REPAIR SHEET 5-114, 115, 120, 121, 124, 133,  
 135, 137, 154, 156, 161, 180, 188, 190, 197, 199,  
 202, 204, 208, 211, 212, 219, 222, 226, 228 & 230  
 ITEM LINE No. 0138  
 (IDENTICAL TO 135B)



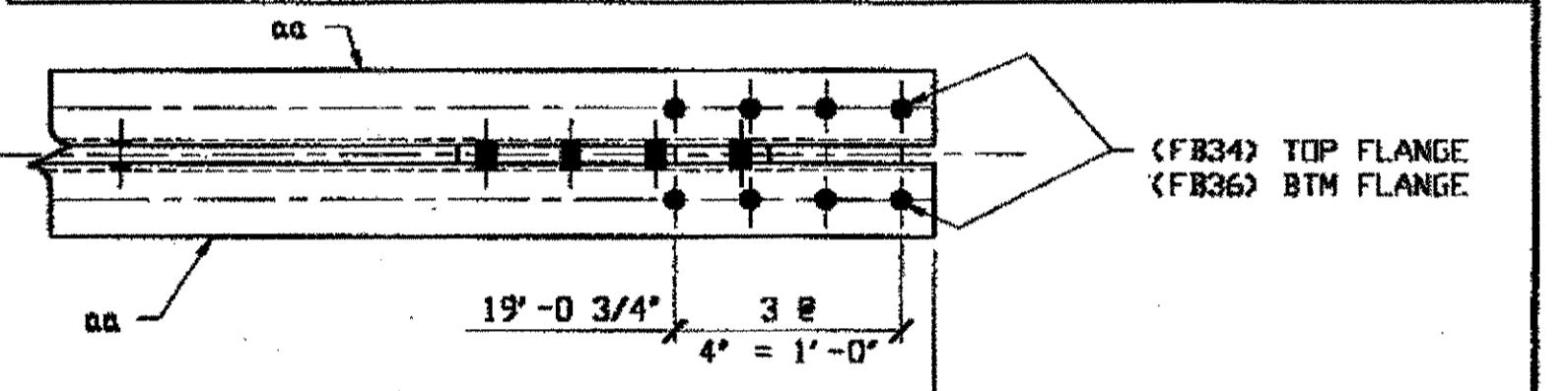
**3 - TYPE 1 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT - 238A**

ORIG SHOP DWG 17-BS1  
 ORIG SHOP MARK BS1  
 REPAIR SHEET 5-117, 126 & 151  
 IDENTICAL TO 135A

**SPAN 5**  
 E-E' NORTH 238A  
 F-F' NORTH 238A  
 P-P' NORTH 238A

- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16})$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

LINE	AIRWADE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		238A	3	TYPE 1 TRANS COMPLETE				3434
2		aa	12	L 4 X 3 1/2 X 3/8	20	2 1/2		2208
3		pa	6	PL 7/16 X 17	2	0		303
4		pb	12	PL 9/16 X 3 1/2	1	0 1/2		81
5		pc	60	PL 1/2 X 2 1/2	2	6 11/16		641
6		ba	102	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	159
7				W/ HVY HEX NUT & WASHER				
8		bb	30	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	42
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB34		1" DIA	0	2 1/4	NOTE 2	
19		FB36		1" DIA	0	2 1/2	NOTE 2	
20		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NAT'L ENGR. & CONTR. CO.  
 By *Edp/tss*  
 MAR 26 2001

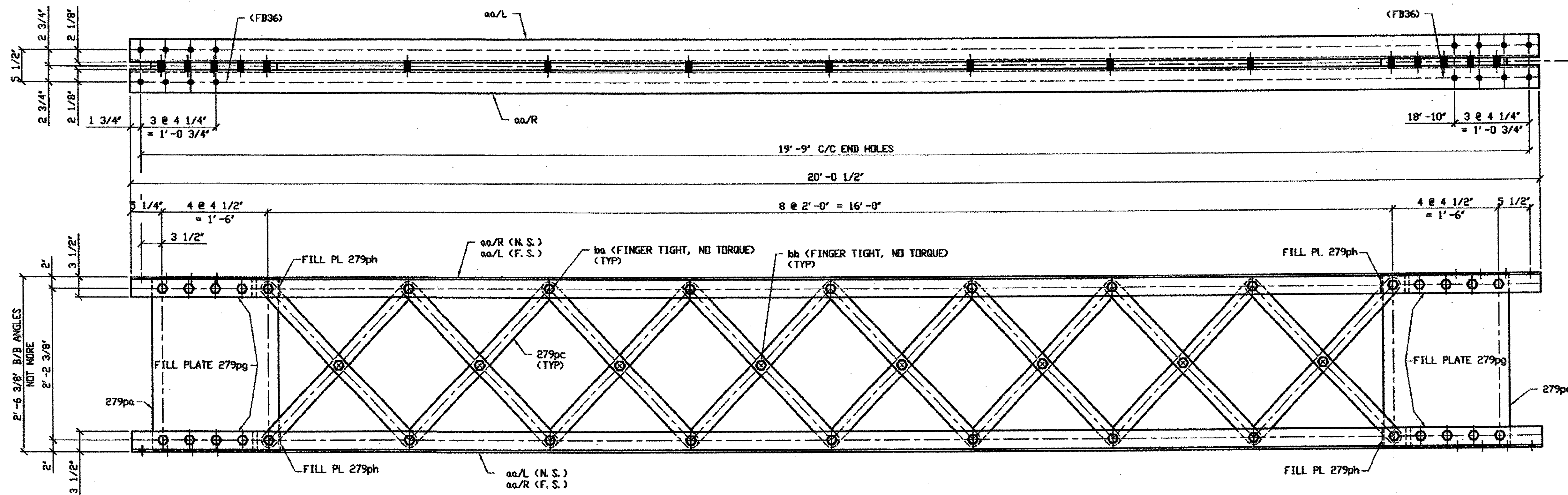
RELEASED FOR CONSTRUCTION  
 DATE *4/10/01* BY *tdp*

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0208 U. N. D.		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS			
SHEET NUMBER: 238		JOB NUMBER: 800010	

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		283A	2	TYPE 1 TRANSVERSE				2603	
2		aa R/L	8	L 4 X 3 1/2 X 3/8	20	0 1/2		1459	
3		279pa	4	PL 1/2 X 21 1/2	2	6		366	
4		279pc	32	BAR 2 1/2 X 5/8	3	2 3/16		541	
5		279pg	8	PL 3/4 X 3 1/2	1	5		101	
6		279ph	8	PL 1/8 X 3 1/2	0	4		4	
6		ba	68	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	109	
7				W/HVY HEX NUT & WASHER					
8		bb	16	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	23	
9				W/HVY HEX NUT & WASHER					
11				FIELD BOLTS					
12				1" DIA					
13		FB36	64	1" DIA	0	2 1/2	NOTE 2	89	
14									
PLATE		A36	PIPE		N/A	FITTINGS		N/A	
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2	



2 - TYPE 1 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 283A

ORIG SHOP DWG 166-BS24  
ORIG SHOP MARK BS24  
REPAIR SHEET 7-153 & 190

SPAN 7  
B-B' NORTH 283A  
M-M' NORTH 283A

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION

DATE 6/2/01 BY Edf

O.D.O.T. DIST. 12

ACCEPTED	2/4/04	137A
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORONELLS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

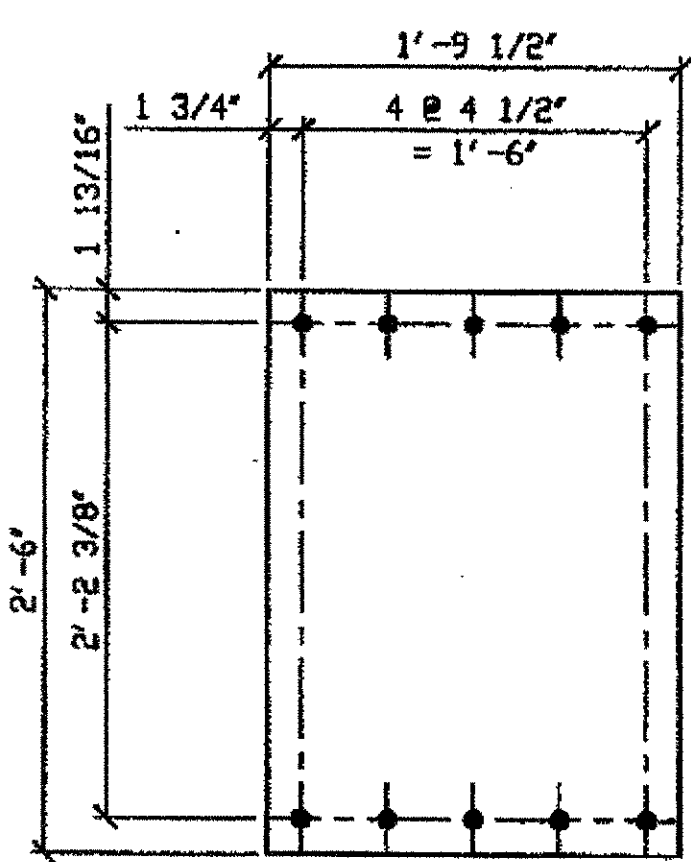
IN CHARGE OF L. SMITH  
DRAWN BY: DATE:  
RAS 04/19/01  
CHECKED BY: DATE:  
GAF 05/08/01

DOT ITEM LINE NO. 0209  
DOT BID ITEM NO. 863250000

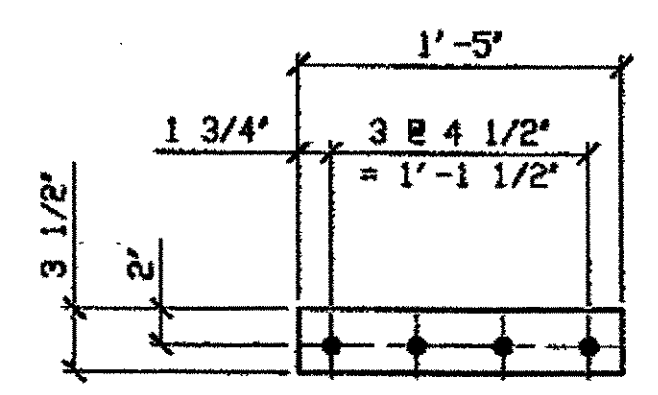
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
SHEET NUMBER: 283			AIM JOB NUMBER: 800010



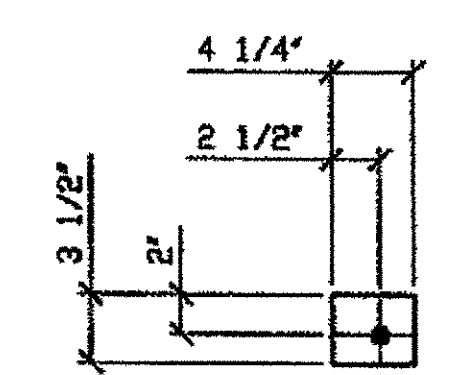
Last modified by repringer at 8 (EDTIME,??) -1- Last plotted by Repringer at 01:50pm on Tue May 15, 2001



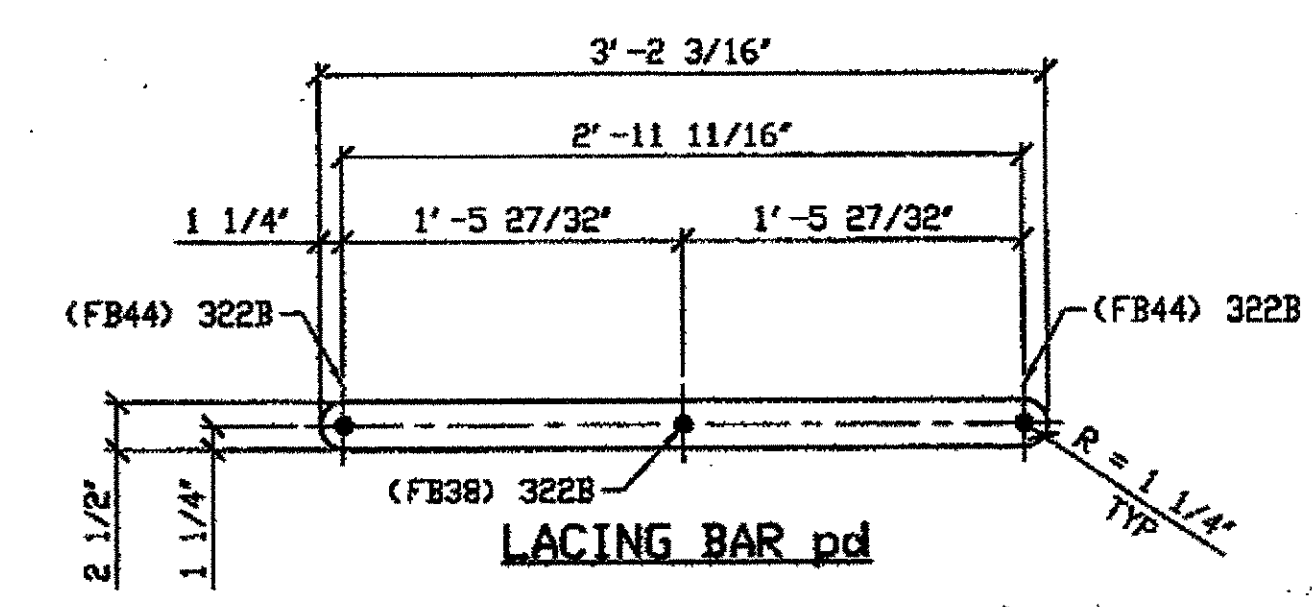
DETAIL PLATE pd



FILL PLATE pb



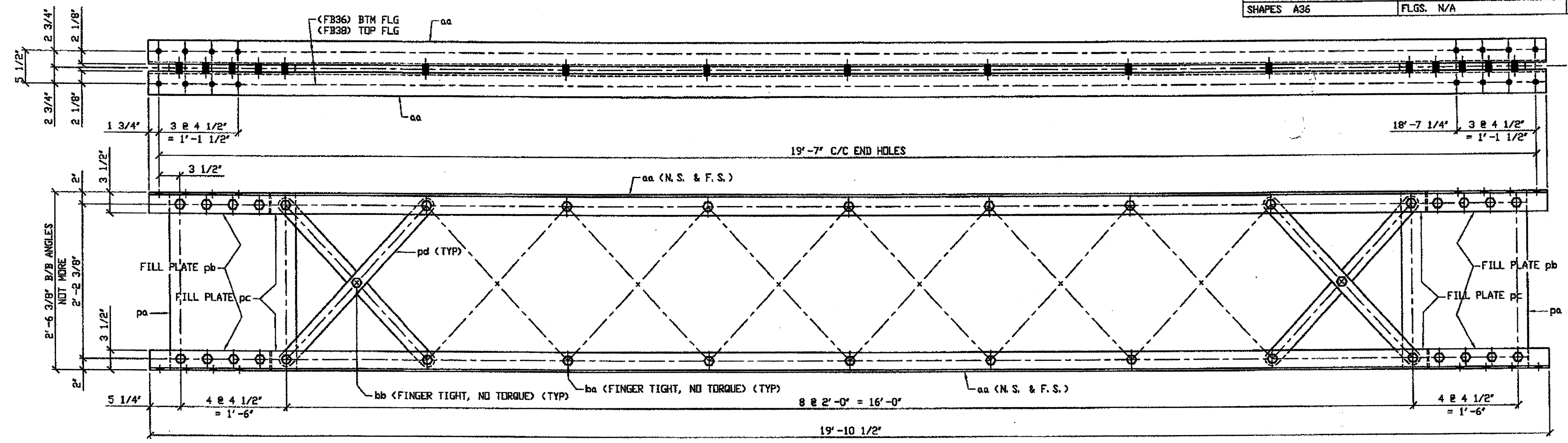
FILL PLATE pc



LACING BAR pd

ORIG SHOP DRAWING 293-BS36, 294-BL122, BL131, 295-BS28 & BS31, 293-BL119  
 ORIG SHOP MARK LX9  
 REPAIR SHEETS 9-102, 119, 138, 155, 190, 227, 237 & 240  
 ITEM No. 0138  
 (IDENTICAL TO 252B)

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		322A	4	TYPE 1 TRANSVERSE				5159
2		aa	16	L 4 X 3 1/2 X 3/8	19	10 1/2		2894
3		pa	8	PL 1/2 X 21 1/2	2	6		728
4		pb	16	PL 3/4 X 3 1/2	1	5		198
5		pc	16	PL 1/8 X 3 1/2	0	4 1/4		8
6		pd	64	PL 5/8 X 2 1/2	3	2 3/16		1067
6		ba	136	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	218
7				W/HVY HEX NUT & WASHER				
8		bb	32	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	46
9				W/HVY HEX NUT & WASHER				
10								
11								
12								
13								
14				FIELD BOLTS				
15		FB36		1" DIA	0	2 1/2	NOTE 2	
16		FB38		1" DIA	0	2 3/4	NOTE 2	
17		FB44		1" DIA	0	3 1/2	NOTE 2	
18								
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	



4 - TYPE 1 TRANSVERSE COMPLETE REPLACEMENT - 322A

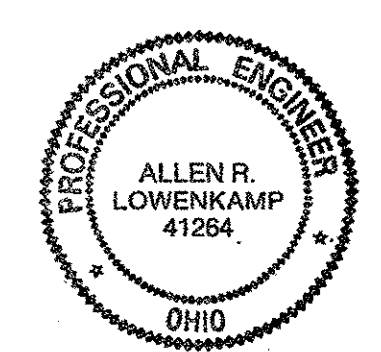
ORIG SHOP DRAWING 295-BS31  
 ORIG SHOP MARK BS31  
 REPAIR SHEETS 9-109, 136, 160 & 177

SPAN 9

B-B' NORTH	322A
G-G' NORTH	322A
N-N' NORTH	322A
R-R' NORTH	322A

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



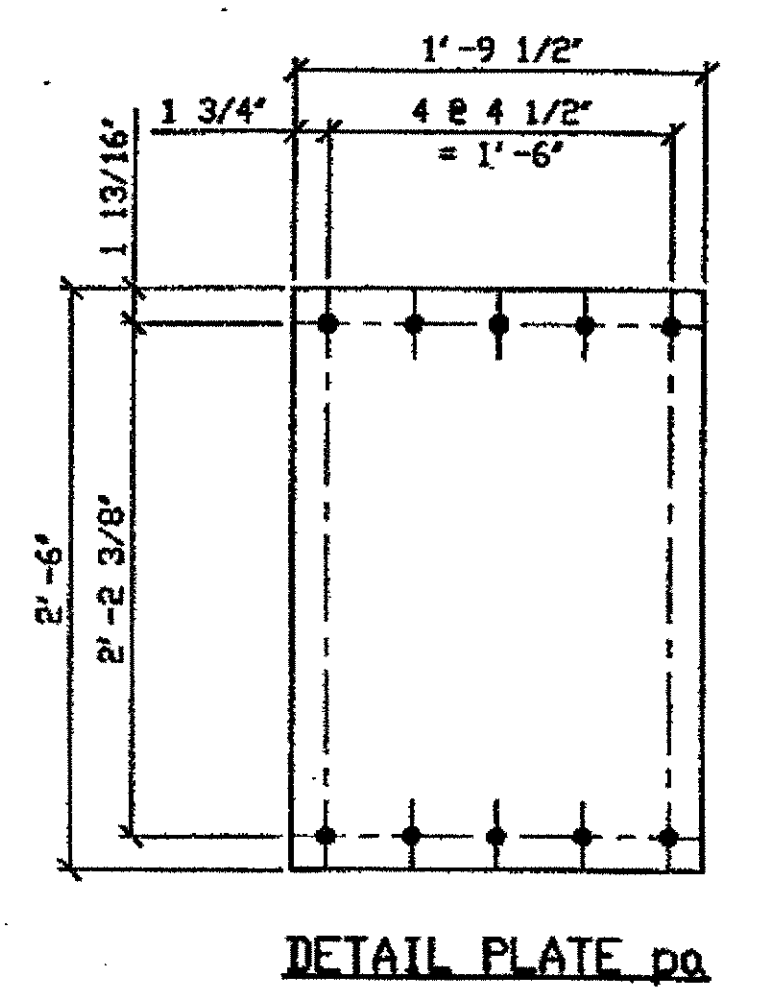
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-2000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0208 UN  
 DOT BID ITEM NO. 863ES0000

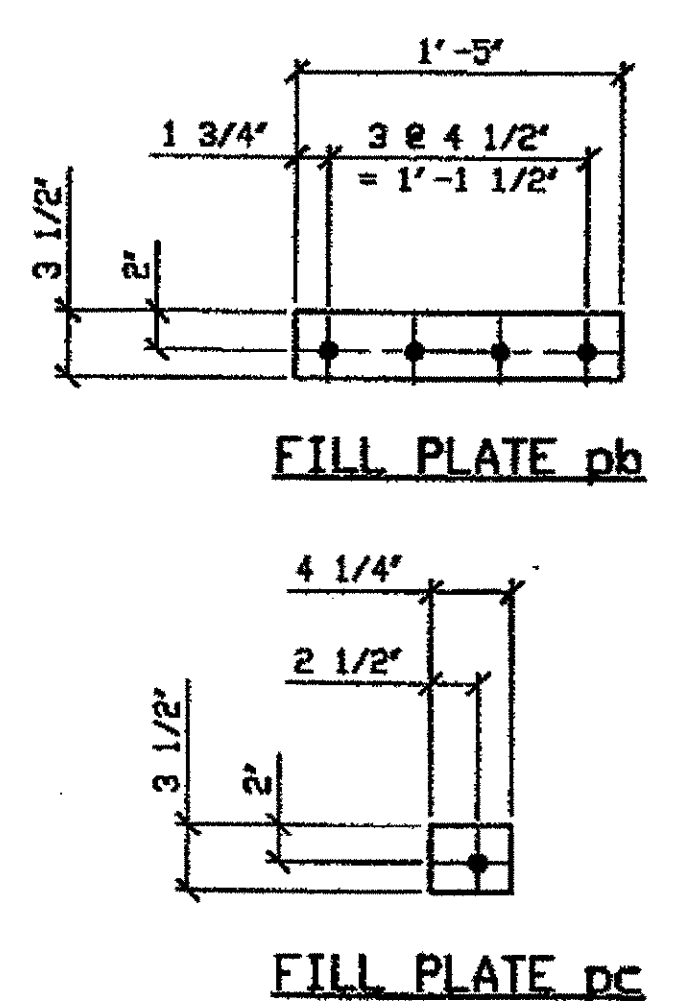
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
		IN CHARGE DR. L. SMITH	
	DRAWN BY: BATED		SHEET NUMBER 322
	RAS 07/03/01		ABM JOB NUMBER: 900010
	CHECKED BY: DATE		
	GAF 08/10/01		

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contracts\2000\900010\Drawings\0222A.dwg  
 Save by fsp at 09:54am Dec 17, 2001  
 Plot by gfs at 09:54am Dec 17, 2001  
 Model Space Plot - Scale = 1/3

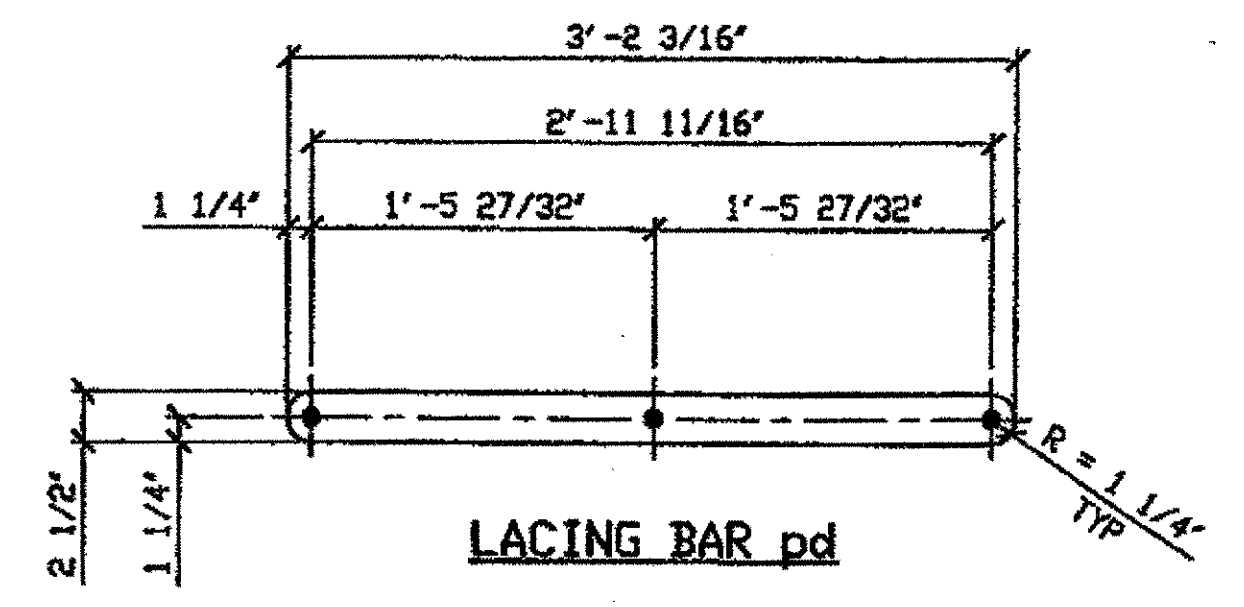


DETAIL PLATE po



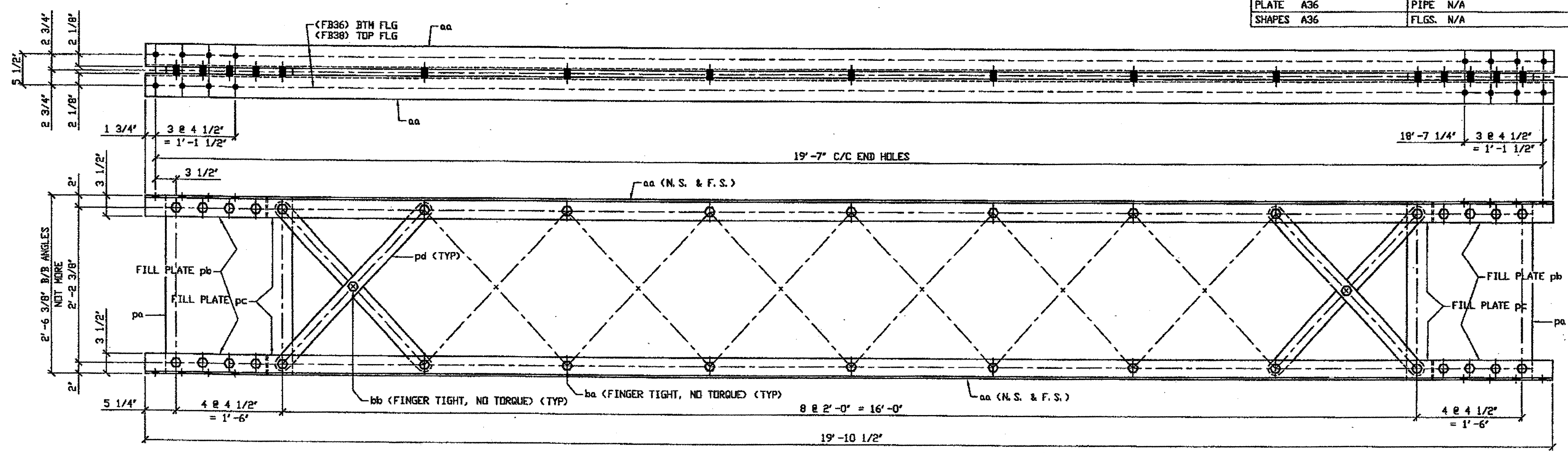
FILL PLATE pb

FILL PLATE pc



LACING BAR pd

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		380A	2	TYPE 1 TRANSVERSE				2580	
2		aa	8	L 4 X 3 1/2 X 3/8	19	10 1/2		1447	
3		pa	4	PL 1/2 X 21 1/2	2	6		364	
4		pb	8	PL 3/4 X 3 1/2	1	5		99	
5		pc	8	PL 1/8 X 3 1/2	0	4 1/4		4	
6		pd	32	PL 5/8 X 2 1/2	3	2 3/16		534	
6		ba	68	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	109	
7				W/HVY HEX NUT & WASHER					
8		bb	16	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	23	
9				W/HVY HEX NUT & WASHER					
10									
11									
12									
13									
14				FIELD BOLTS					
15		FB36	32	1" DIA	0	2 1/2	NOTE 2	45	
16		FB38	32	1" DIA	0	2 3/4	NOTE 2	46	
17									
18									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	



G:\Con... \s\2000\800010\Drawings\380A.dwg  
 Save by rspir at 09:18pm Feb 05, 2002  
 Plot by gfos at 07:38am Feb 11, 2002  
 Model Space plot + Scale = 1/9

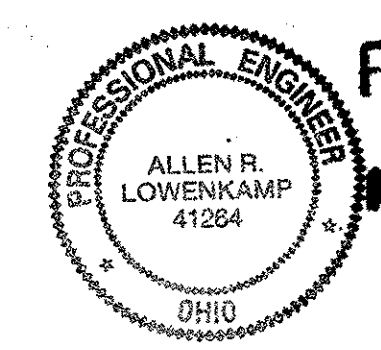
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12		
ACCEPTED	2/4/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

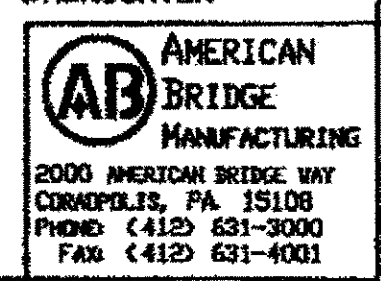
2 - TYPE 1 TRANSVERSE COMPLETE REPLACEMENT - 380A  
 ORIG SHOP DRAWING 295-BS31  
 ORIG SHOP MARK BS31  
 REPAIR SHEETS 11-262 & 332  
 (IDENTICAL TO 322A)

SPAN 11  
 F-F' SOUTH 380A  
 T-T' SOUTH 380A



FEB 12 REC'D  
 N.E. & C. CALCULATOR

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



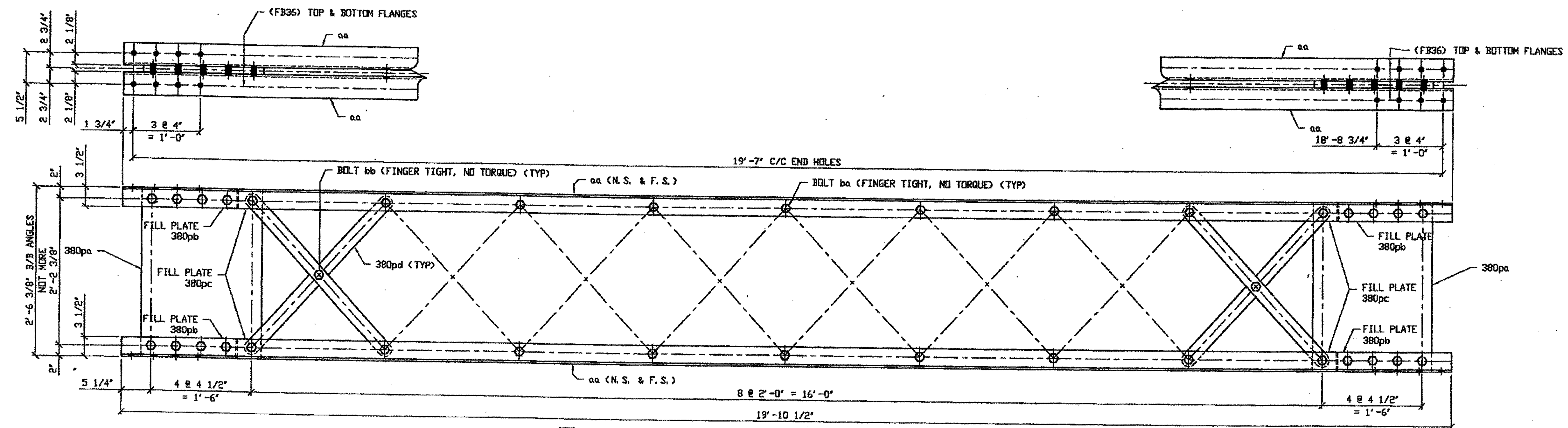
IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 12/06/01  
 CHECKED BY: GAF  
 DATE: 1/28/02

DOT ITEM LINE NO. 0208 DOT BID ITEM NO. 863E50000			
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER 380			ABR JOB NUMBER 800010

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		382A	6	TYPE 1 TRANS COMPLETE				7747
2		aa	24	L 4 X 3 1/2 X 3/8	19	10 1/2		4341
3		380pa	12	PL 1/2 X 21 1/2	2	5 7/8		1095
4		380pb	24	PL 3/4 X 3 1/2	1	5		303
5		380pc	24	PL 1/8 X 3 1/2	0	4 1/4		12
6		380pd	96	PL 5/8 X 2 1/2	3	2 3/16		1600
7		ba	204	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	327
8				W/HVY HEX NUT & WASHER				
9		bb	48	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	69
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14				FIELD BOLTS				
15		FB36	192	1" DIA	0	2 1/2	NOTE 2	269
16								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
- ★ 4. BILL OF MATERIAL IS FOR "6 UNITS" ONLY



7- TYPE 1 TRANSVERSE MEMBER COMPLETE REPLACEMENT - 382A

DRIG SHOP DWG 295-BS29  
DRIG SHOP MARK BS29  
REPAIR SHEETS 11-119, 149, 179, 269, 271 & 308

SPAN 11

P-P'	SOUTH	382A
B-B'	NORTH	382A
G-G'	NORTH	382A
N-N'	NORTH	382A
G-G'	SOUTH	382A
H-H'	SOUTH	382A
N-N'	SOUTH	382A

O.D.O.T. DIST. 12

ACCEPTED	2/1/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 2004  
N.E.C.

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROPSVILLE, PA 15108  
PHONE (412) 631-0000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE DR. L. SMITH  
DRAWN BY: DATE  
RAS 12/05/01  
CHECKED BY: DATE  
GAF 1/28/02

DOT ITEM LINE NO. 0208  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROPSVILLE, PA 15108  
PHONE (412) 631-0000  
FAX (412) 631-4001

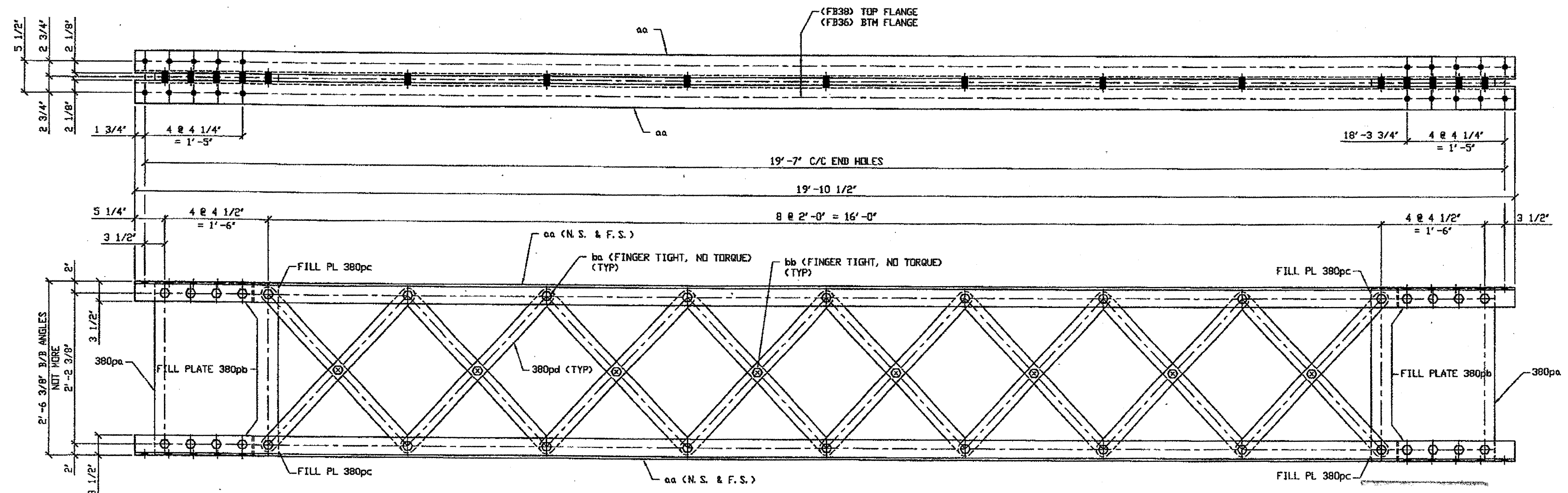
IN CHARGE DR. L. SMITH  
DRAWN BY: DATE  
RAS 12/05/01  
CHECKED BY: DATE  
GAF 1/28/02

SHEET NUMBER  
382  
JOB NUMBER  
800010

G:\CC\1512000\800010\Drawings\382A.dwg  
Save by: spr at 01:29pm Feb 08, 2002  
Plot by: gfos at 07:59am Feb 11, 2002  
Model space plot + Scale = 1/9



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		394A	1	TYPE 1 TRANSVERSE				1287
2		aa	4	L 4 X 3 1/2 X 3/8	19	10 1/2		723
3		380pa	2	PL 1/2 X 21 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
4		380pd	16	PL 5/8 X 2 1/2	3	2 3/16		261
7		ba	34	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	55
8				W/HVY HEX NUT & WASHER				
9		bb	8	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	12
10				W/HVY HEX NUT & WASHER				
11								
12								
13				FIELD BOLTS				
14		FB36	20	1" DIA	0	2 1/2	NOTE 2	28
15		FB38	20	1" DIA	0	2 3/4	NOTE 2	29
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**2 - TYPE 1 TRANSVERSE COMPLETE REPLACEMENT - 394A**  
 ORIG SHOP DWG 295-BS30a  
 ORIG SHOP MARK BS30a  
 REPAIR SHEET 11-325

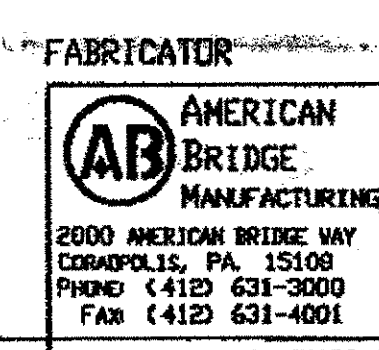
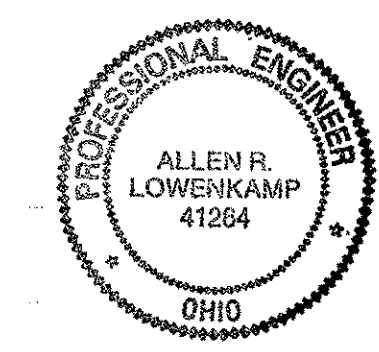
- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 11**  
 S-S' NORTH 394A  
 S-S' SOUTH 394A

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

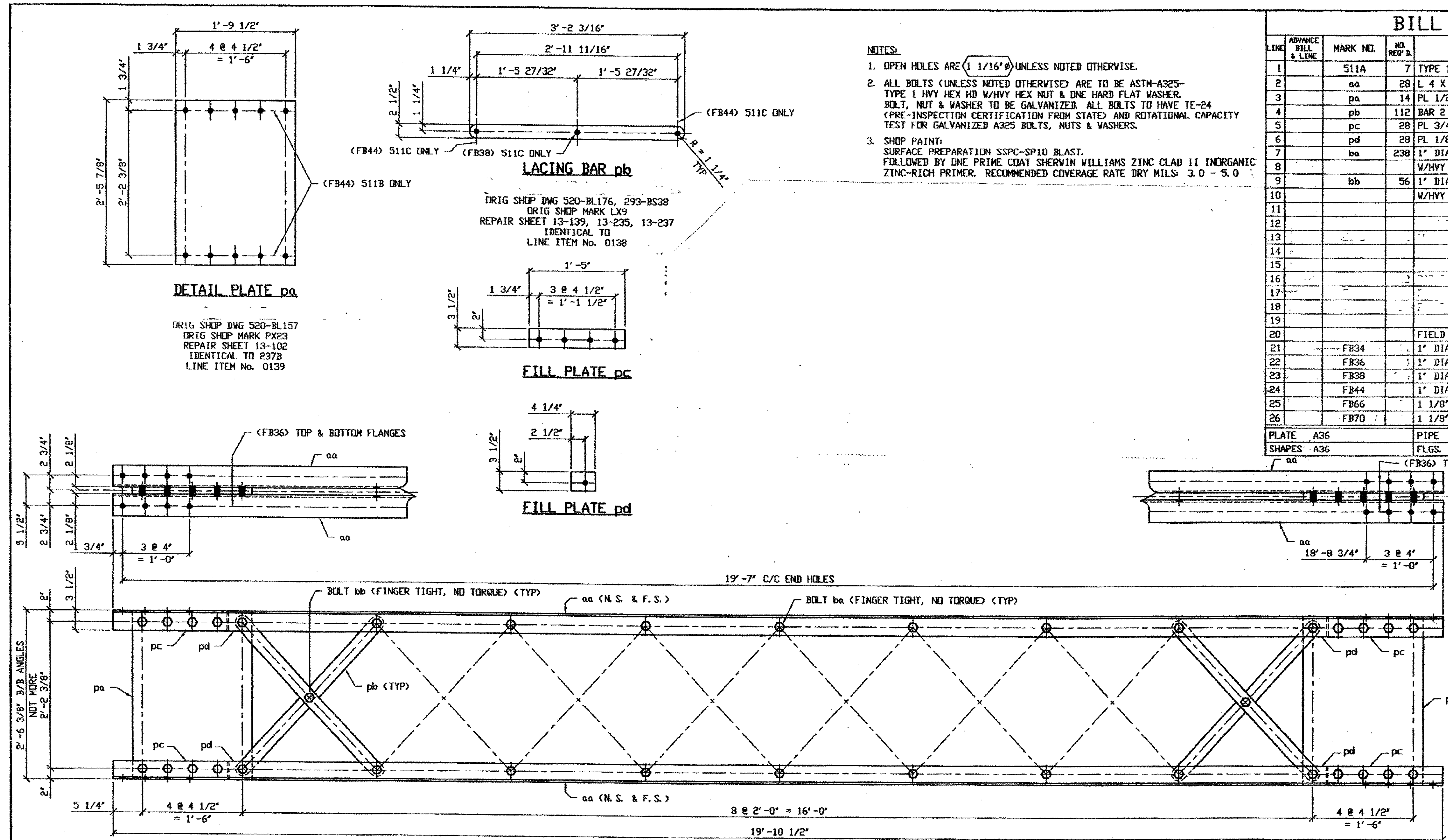
**FEB 12 REC'D**  
**N.E. & C.W.**  
 STEEL ERECTOR

**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335



DOT ITEM LINE NO. 0208		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
IN CHARGE OF: L. SMITH		SHEET NUMBER: 394	
DRAWN BY: DATE: RAS 12/07/01		JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 1/29/02			

G:\Cont\12000\800010\Drawings\394A.dwg  
 Save by rsmr at 07:38am Feb 11, 2002  
 Plot by efcs at 07:44am Feb 11, 2002  
 Model space plot + Scale = 1/9



- NOTES:**
- OPEN BOLTS ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. B.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		511A	7	TYPE 1 TRANS COMPLETE				9129
2		aa	28	L 4 X 3 1/2 X 3/8	19	10 1/2		5065
3		pa	14	PL 1/2 X 21 1/2	2	5 7/8		1274
4		pb	112	BAR 2 1/2 X 5/8	3	2 3/16		1894
5		pc	28	PL 3/4 X 3 1/2	1	5		354
6		pd	28	PL 1/8 X 3 1/2	0	4 1/4		79
7		ba	238	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	382
8				W/HVY HEX NUT & WASHER				
9		bb	56	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	81
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14								
15								
16								
17								
18								
19								
20				FIELD BOLTS				
21		FB34		1" DIA	0	2 1/4	NOTE 2	
22		FB36		1" DIA	0	2 1/2	NOTE 2	
23		FB38		1" DIA	0	2 3/4	NOTE 2	
24		FB44		1" DIA	0	3 1/2	NOTE 2	
25		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
26		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

**SPAN 13**

B-B' NORTH 511A  
 C-C' NORTH 511A  
 G-G' NORTH 511A  
 H-H' SOUTH 511A

**SPAN 13**

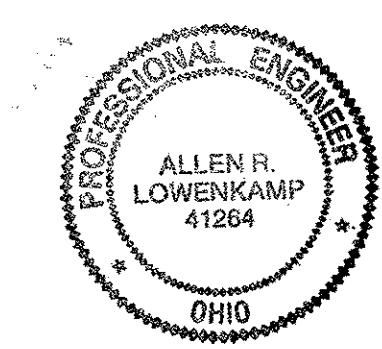
H-H' NORTH 511A  
 L-L' NORTH 511A  
 B-B' SOUTH 511A

**O.D.O.T. DIST. 12**

ACCEPTED  
 ACCEPTED AS NOTED 2/7/04 BSM  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO. 0208 U. N. D.  
 DOT BID ITEM NO. 863ES0000



**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**

2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-5000  
 FAX (412) 631-4001

**STEEL ERECTOR**

**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

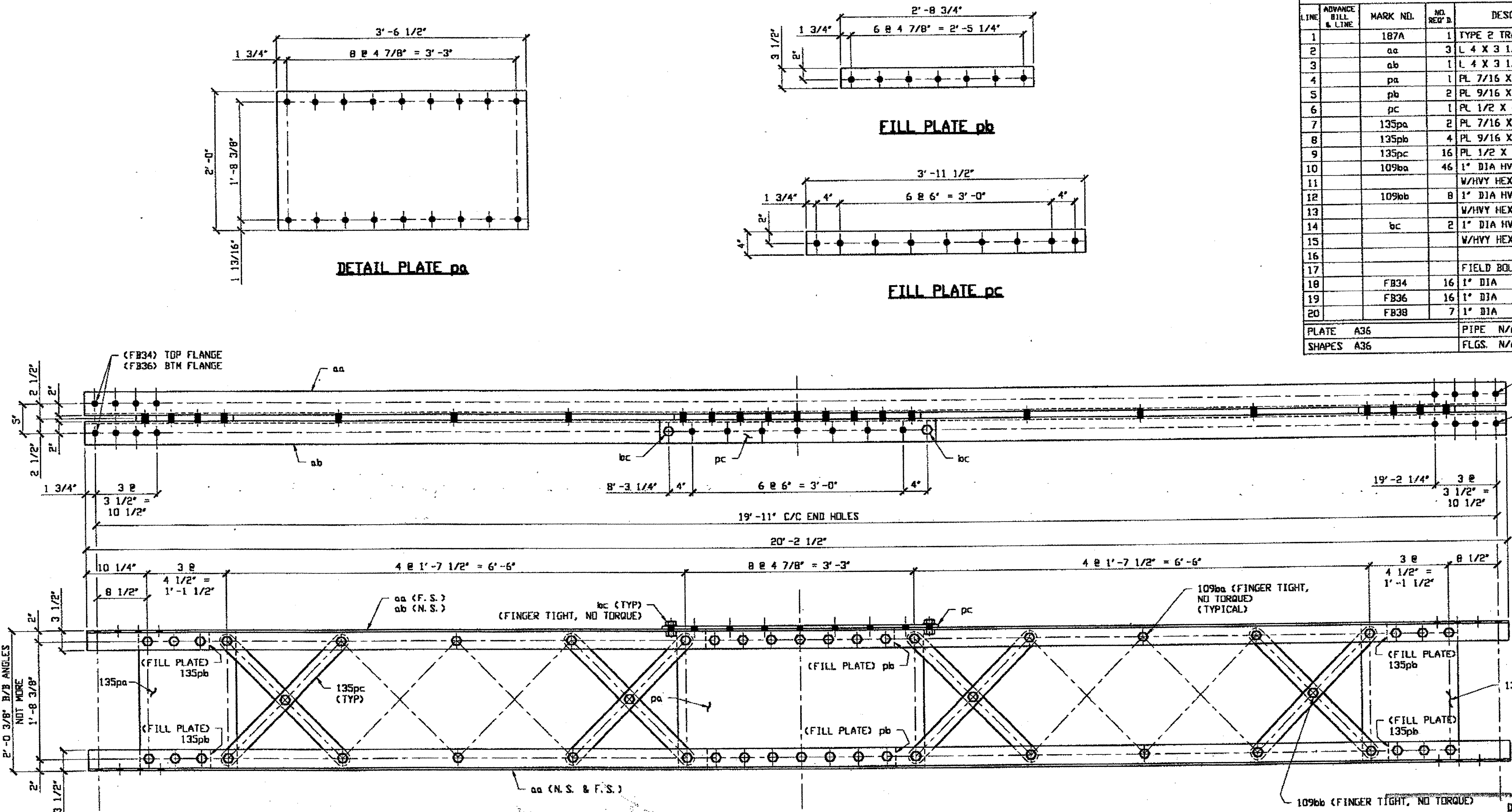
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

SHEET NUMBER: 511  
 JOB NUMBER: 800010

G:\Contract\10\800010\Drawings\0511A.dwg  
 Save by rsk 11:24am Feb 02 2002  
 Plot by gfas at 09:03am Feb 04 2002  
 Model Space plot + Scale = 1/9

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		187A	1	TYPE 2 TRANSVERSE				1304
2		aa	3	L 4 X 3 1/2 X 3/8	20	2 1/2		552
3		ab	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
4		pa	1	PL 7/16 X 24	3	6 1/2		126
5		pb	2	PL 9/16 X 3 1/2	2	8 3/4		36
6		pc	1	PL 1/2 X 4	3	11 1/2		27
7		135pa	2	PL 7/16 X 17	2	0 1/2		103
8		135pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
9		135pc	16	PL 1/2 X 2 1/2	2	6 11/16		164
10		109ba	46	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	71
11				W/HVY HEX NUT & WASHER				
12		109bb	8	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	11
13				W/HVY HEX NUT & WASHER				
14		bc	2	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	3
15				W/HVY HEX NUT & WASHER				
16				FIELD BOLTS				
17								
18		FB34	16	1" DIA	0	2 1/4	NOTE 2	21
19		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
20		FB38	7	1" DIA	0	2 3/4	NOTE 2	10
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			



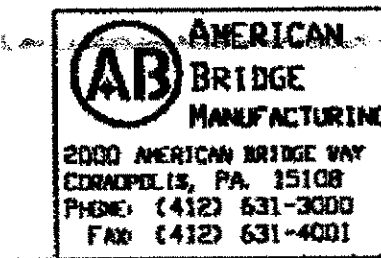
**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**(1) TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 187A**  
 ORIG SHOP DWG 17-BS4  
 ORIG SHOP MARK BS4  
 IDENTICAL TO 136A

- NOTES:**
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

*SPAN 2 B-B' SOUTH*

**RELEASED FOR CONSTRUCTION**  
 DATE 1/3/01 BY *tdp*  
*As NOTED*



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 12/04/00  
 CHECKED BY: DATE  
 GAF 12/07/00

DOT ITEM LINE NO. 0209  
 DOT BID ITEM NO. 863E50000

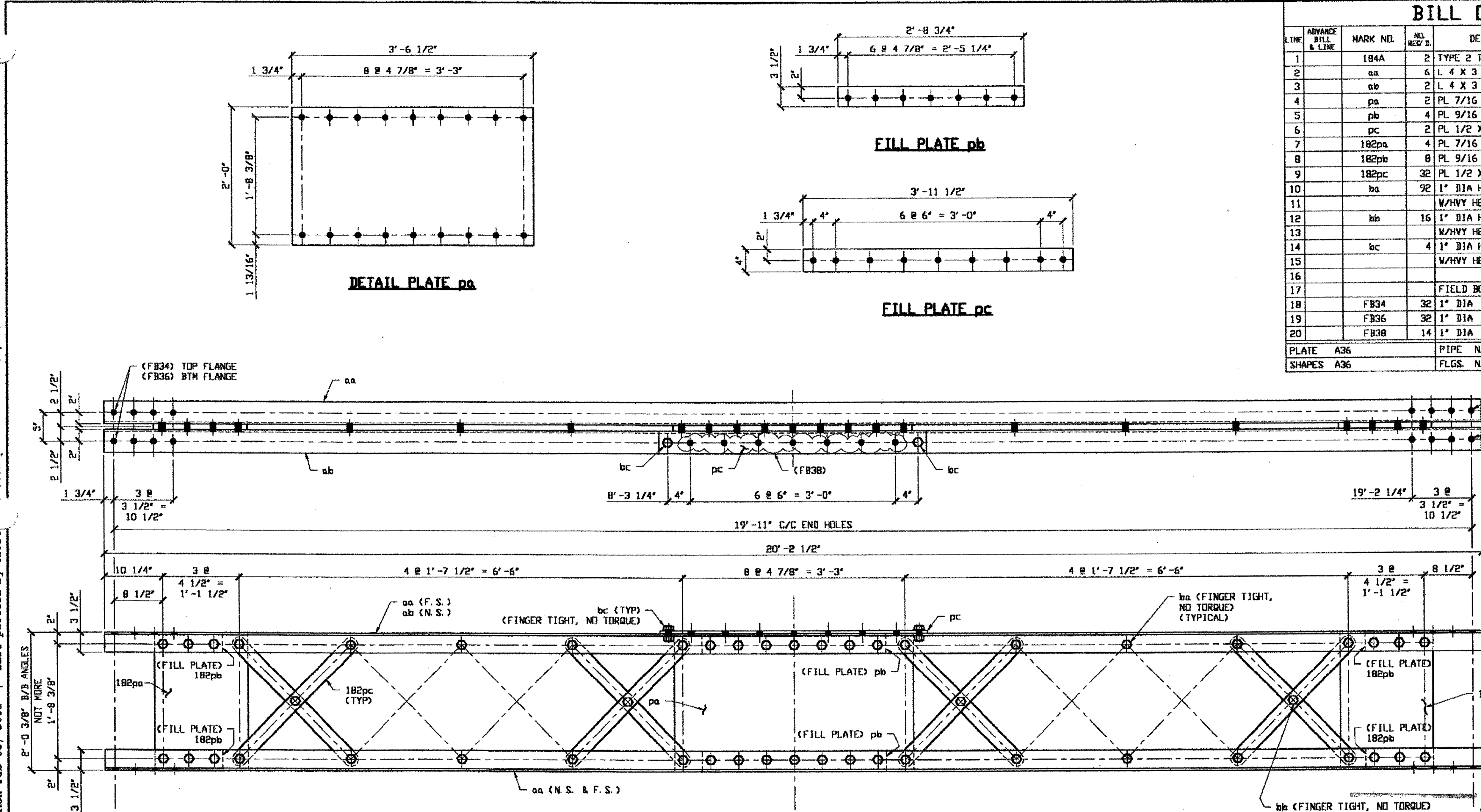
NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 2 REPAIRS**

SHEET NUMBER	187
ADM JOB NUMBER	800010

Last modified by Repringer at 10:12am on Thu Dec 07, 2000 - Last plotted by Gfoster at 10:33am on Tue Dec 19, 2000

Last modified Gfoster at 11:47am on Mon Feb 05, 2001 - Last plotted by Gfoster 04:04pm on Mon Feb 05, 2001

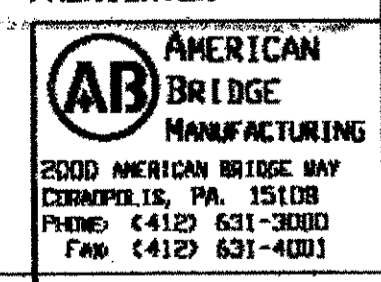
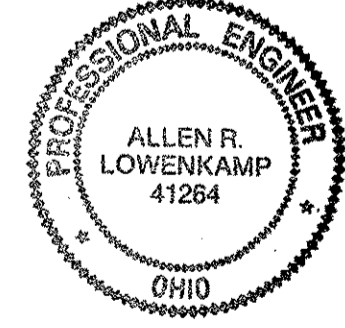


BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		184A	2	TYPE 2 TRANSVERSE				2608	
2		aa	6	L 4 X 3 1/2 X 3/8	20	2 1/2		1104	
3		ab	2	L 4 X 3 1/2 X 3/8	20	2 1/2		368	
4		pa	2	PL 7/16 X 24	3	6 1/2		252	
5		pb	4	PL 9/16 X 3 1/2	2	8 3/4		72	
6		pc	2	PL 1/2 X 4	3	11 1/2		54	
7		182pa	4	PL 7/16 X 17	2	0		206	
8		182pb	8	PL 9/16 X 3 1/2	1	0 1/2		54	
9		182pc	32	PL 1/2 X 2 1/2	2	6 11/16		328	
10		ba	92	1" DIA HVY HEX BOLT	D	3 1/4	NOTE 2	142	
11				W/HVY HEX NUT & WASHER					
12		bb	16	1" DIA HVY HEX BOLT	D	2 1/2	NOTE 2	22	
13				W/HVY HEX NUT & WASHER					
14		bc	4	1" DIA HVY HEX BOLT	D	2 1/4	NOTE 2	6	
15				W/HVY HEX NUT & WASHER					
16				FIELD BOLTS					
17									
18		FB34	32	1" DIA	D	2 1/4	NOTE 2	42	
19		FB36	32	1" DIA	D	2 1/2	NOTE 2	44	
20		FB38	14	1" DIA	D	2 3/4	NOTE 2	20	
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**2 - TYPE 2 TRANSVERSE COMPLETE REPLACEMENT 184A**  
 ORIG SHOP DWG 17-BS4  
 ORIG SHOP MARK BS4  
 IDENTICAL TO 136A  
**SPAN 3 J-J' NORTH**  
**SPAN 3 J-J' SOUTH**

RELEASED FOR CONSTRUCTION  
 DATE 2/8/01 BY *tdp*



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: E. SMITH  
 DRAWN BY: DATE  
 RAS 12/21/00  
 CHECKED BY: DATE  
 GAF 01/03/01

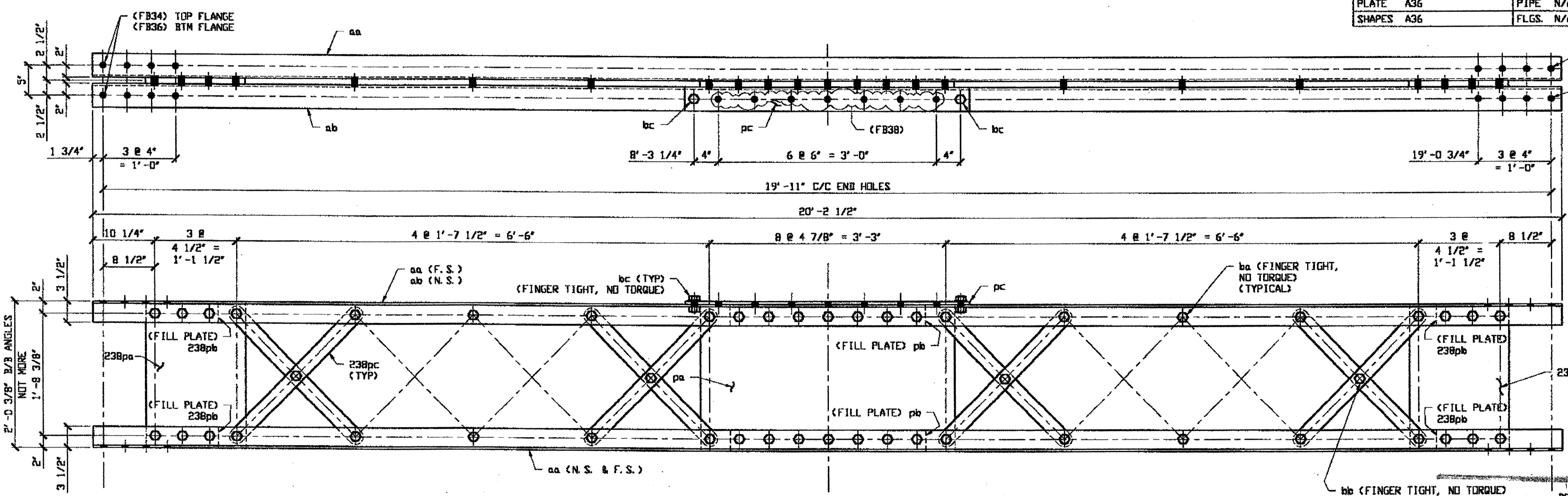
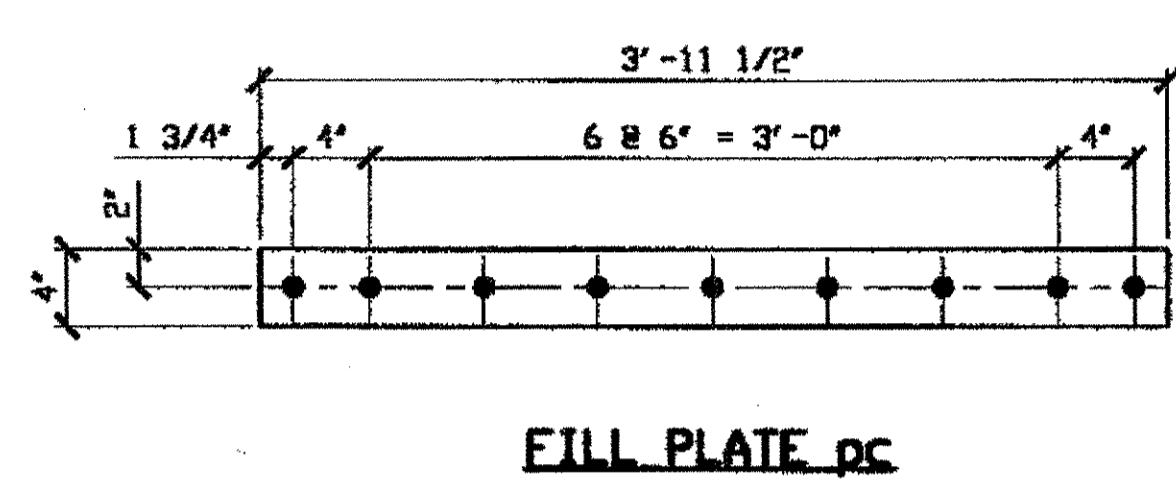
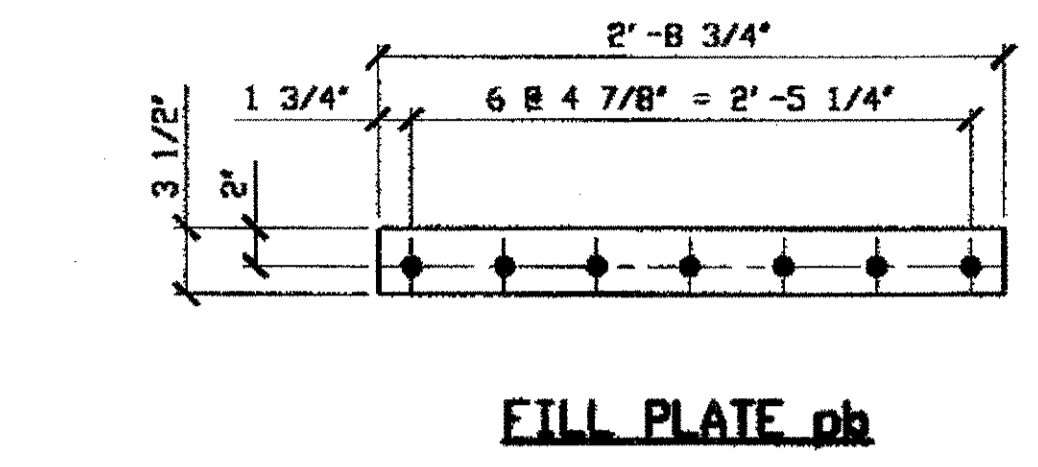
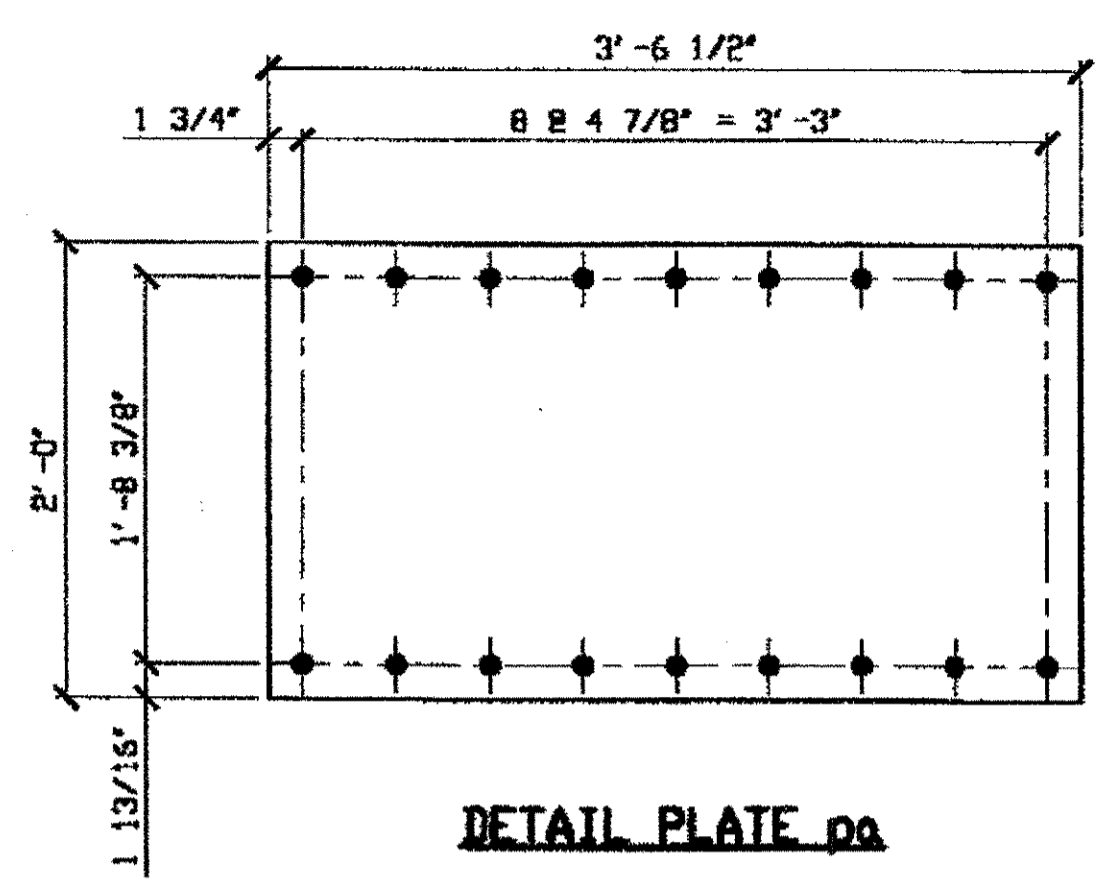
O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO. 0209  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN 3 REPAIRS			
SHEET NUMBER: 184			SHEET NUMBER: 800010

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		239A	2	TYPE 2 TRANSVERSE				2608
2		aa	6	L 4 X 3 1/2 X 3/8	20	2 1/2		1104
3		ab	2	L 4 X 3 1/2 X 3/8	20	2 1/2		368
4		pa	2	PL 7/16 X 24	3	6 1/2		252
5		pb	4	PL 9/16 X 3 1/2	2	8 3/4		72
6		pc	2	PL 1/2 X 4	3	11 1/2		54
7		238pa	4	PL 7/16 X 17	2	0		206
8		238pb	8	PL 9/16 X 3 1/2	1	0 1/2		54
9		238pc	32	PL 1/2 X 2 1/2	2	6 11/16		328
10		ba	92	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	142
11				W/HVY HEX NUT & WASHER				
12		bb	16	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	22
13				W/HVY HEX NUT & WASHER				
14		bc	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	6
15				W/HVY HEX NUT & WASHER				
16								
17				FIELD BOLTS				
18		FB34	32	1" DIA	0	2 1/4	NOTE 2	42
19		FB36	32	1" DIA	0	2 1/2	NOTE 2	44
20		FB38	14	1" DIA	0	2 3/4	NOTE 2	20
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
1. OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD 11 INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**2 - TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 239A**

ORIG SHOP DWG 17-BS4A  
 ORIG SHOP MARK BS4A  
 REPAIR SHEET 5-130 & 194

SPAN 5 H-H' NORTH  
SPAN 5 H-H' SOUTH

NAT'L ENGR. & CONTR. CO.  
 By tdp/ess

MAR 26 2001

RELEASED FOR CONSTRUCTION  
 DATE 4/9/01 BY ELP

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE HWY  
 CORNWALL, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4003

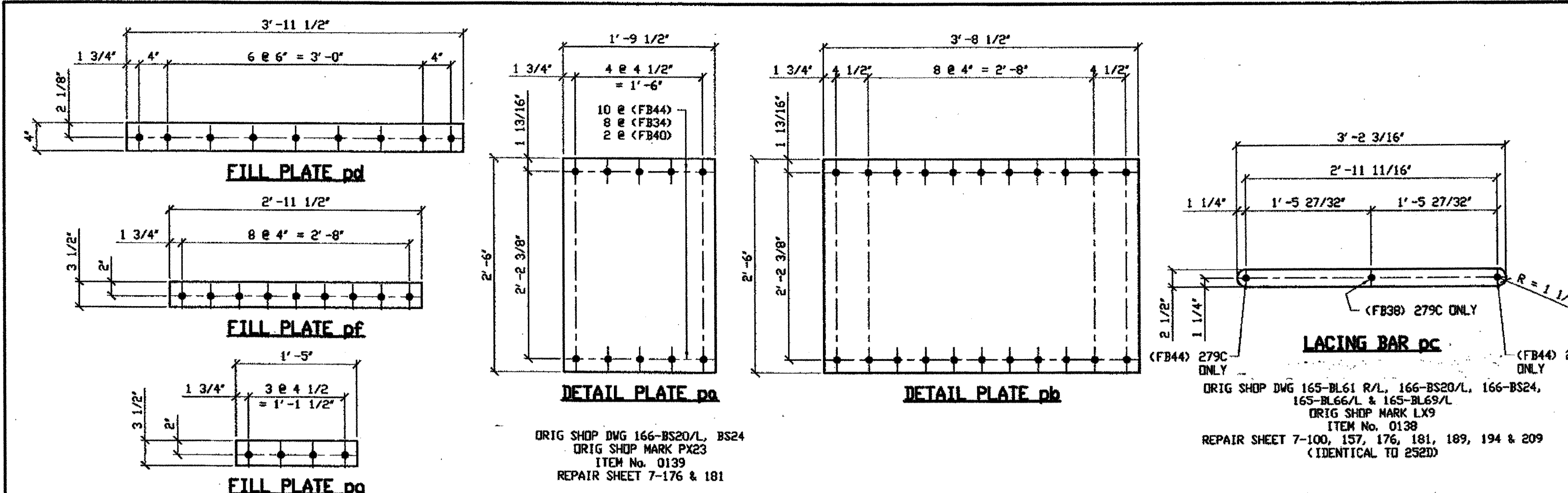
DOT ITEM LINE NO. 209  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

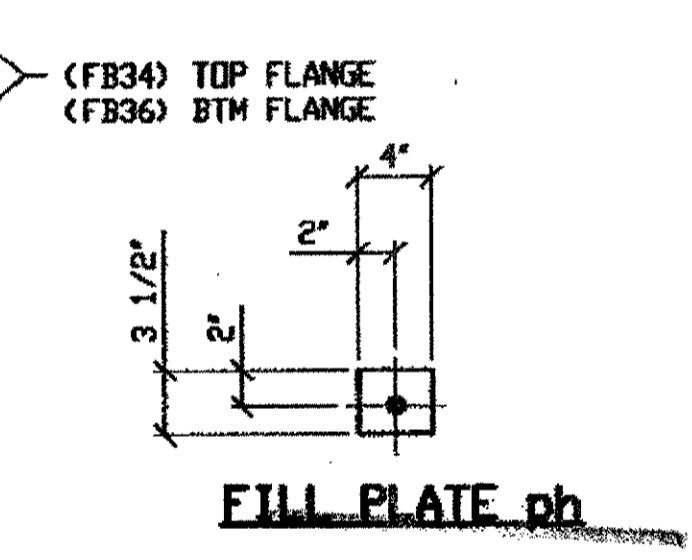
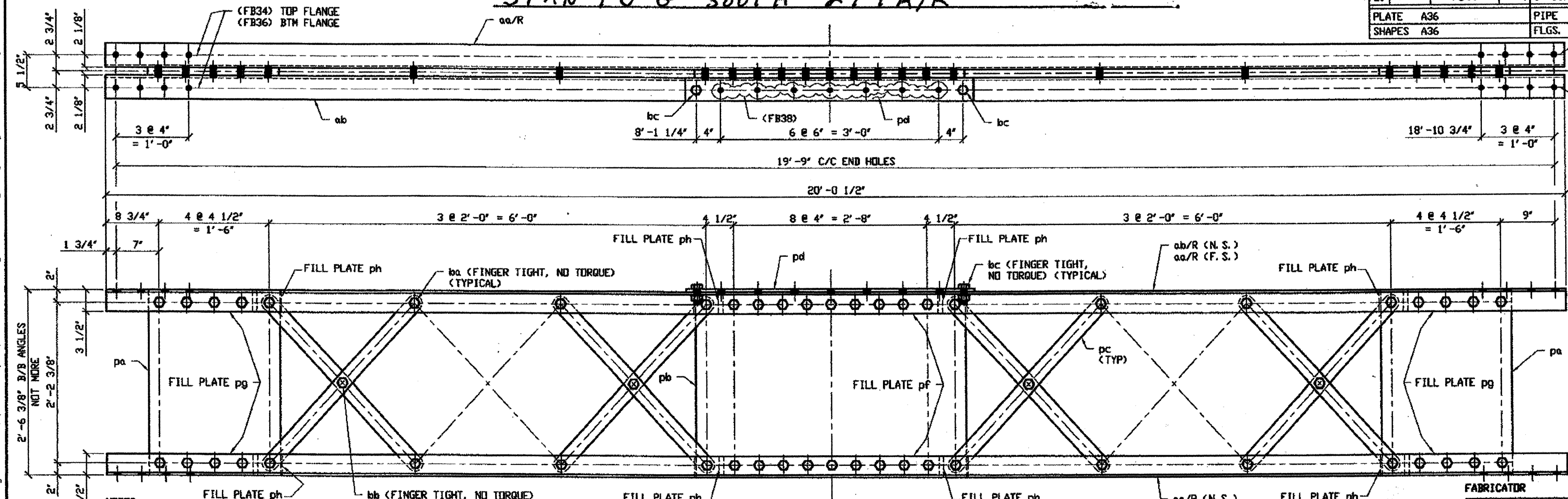
SHEET NUMBER: 239  
 AM. JOB NUMBER: 800010

Last modified by at \$(EDTIME,??) on \$(EDTIME,??) - Last plotted by gfooster at 08:57am on Fri Mar 23, 2001



BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET	REMARKS	WEIGHT
1		279A R/L	2	TYPE 2 TRANSVERSE			3061
2		aa R/L	6	L 4 X 3 1/2 X 3/8	20 0 1/2	4/R/ 2/L	1094
3		ab R/L	2	L 4 X 3 1/2 X 3/8	20 0 1/2		364
4		pa	4	PL 1/2 X 21 1/2	2 6		366
5		pb	2	PL 1/2 X 30	3 8 1/2		378
6		pc	24	BAR 2 1/2 X 5/8	3 2 3/16		406
7		pd	2	PL 1/2 X 4	3 11 1/2		54
8		pf	4	PL 3/4 X 3 1/2	2 11 1/2		106
9		pg	8	PL 3/4 X 3 1/2	1 5		101
10		ph	16	PL 1/8 X 3 1/2	0 4		8
11		ba	100	1" DIA HVY HEX BOLT	0 3 1/2	NOTE 2	160
12				W/HVY HEX NUT & WASHER			
13		bb	12	1" DIA HVY HEX BOLT	0 2 3/4	NOTE 2	18
14				W/HVY HEX NUT & WASHER			
15		bc	4	1" DIA HVY HEX BOLT	0 2 1/4	NOTE 2	6
16				W/HVY HEX NUT & WASHER			
17							
18							
19							
20							
21							
22							
23							
24				FIELD BOLTS			
25		FB34		1" DIA	0 2 1/4	NOTE 2	
26		FB36		1" DIA	0 2 1/2	NOTE 2	
27		FB38		1" DIA	0 2 3/4	NOTE 2	
28		FB40		1" DIA	0 3	NOTE 2	
29		FB44		1" DIA	0 3 1/2	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A		
SHAPES A36				FLGS. N/A	BOLTS NOTE 2		

SPAN 7 G-G' NORTH 279A/L  
SPAN 7 G-G' SOUTH 279A/R



- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**2 - TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT 279A R/L**

**O.D.O.T. DIST. 12**

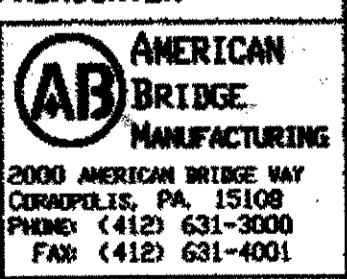
ACCEPTED	2/4/07	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

ORIG SHOP DWG 165-BS19 R/L  
ORIG SHOP MARK BS19 R/L  
ITEM No. 0209  
REPAIR SHEET 7-110 & 210

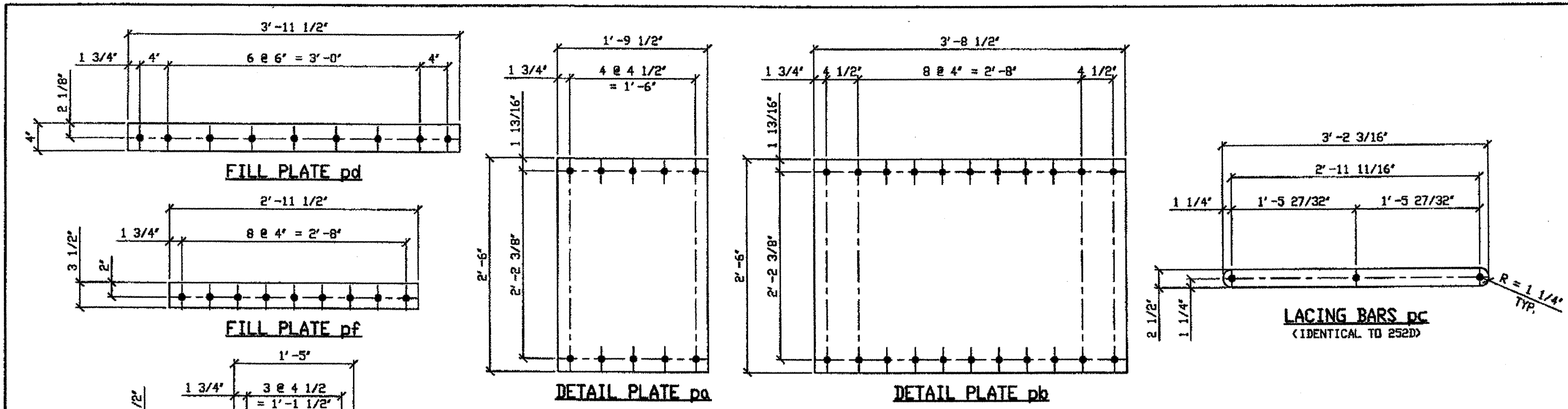
**RELEASED FOR CONSTRUCTION**  
DATE 2/2/07 BY tdp

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



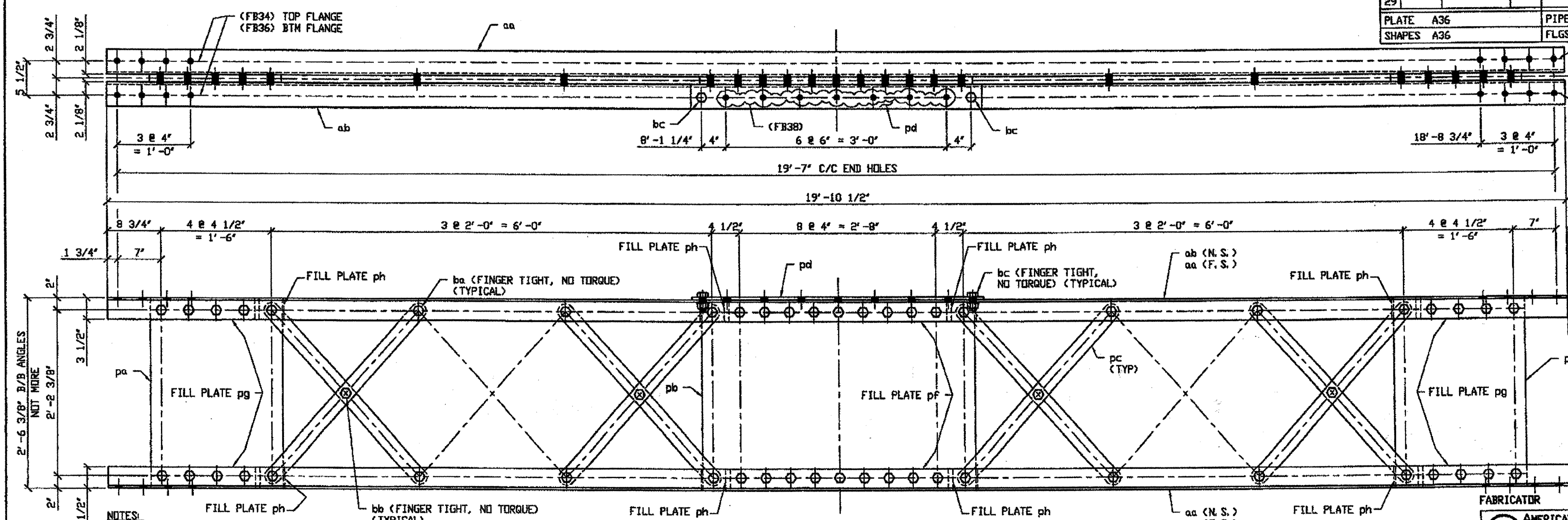
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
FABRICATOR			SHEET NUMBER
AMERICAN BRIDGE MANUFACTURING INC.			279
DRAWN BY DATE			ASN JOB NUMBER
RAS 04/18/01			800010
CHECKED BY DATE			
GAF 05/07/01			

Last modified by rspringer at \$(EDTIME,??) -|- Last plotted by Rspringer at 01:16pm on Tue May 15, 2001



SPAN 9 J-J' NORTH 353A  
 SPAN 10 E-E' NORTH 353A  
 SPAN 10 D-D' SOUTH 353A  
 SPAN 11 J-J' NORTH 353A  
 SPAN 11 J-J' SOUTH 353A  
 SPAN 11 L-L' NORTH 353A  
 SPAN 11 L-L' SOUTH 353A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		353A	2	TYPE 2 TRANSVERSE				3050
2		aa	6	L 4 X 3 1/2 X 3/8	19	10 1/2		1085
3		ab	2	L 4 X 3 1/2 X 3/8	19	10 1/2		362
4		pa	4	PL 1/2 X 21 1/2	2	6		366
5		pb	2	PL 1/2 X 30	3	8 1/2		378
6		pc	24	BAR 2 1/2 X 5/8	3	11 1/2		406
7		pd	2	PL 1/2 X 4	3	11 1/2		54
8		pf	4	PL 3/4 X 3 1/2	2	11 1/2		106
9		pg	8	PL 3/4 X 3 1/2	1	5		101
10		ph	16	PL 1/8 X 3 1/2	0	4		8
11		ba	100	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	160
12				W/HVY HEX NUT & WASHER				
13		bb	12	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	18
14				W/HVY HEX NUT & WASHER				
15		bc	4	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	6
16				W/HVY HEX NUT & WASHER				
17								
18								
19								
20								
21								
22								
23								
24				FIELD BOLTS				
25		FB34		1" DIA	0	2 1/4	NOTE 2	
26		FB36		1" DIA	0	2 1/2	NOTE 2	
27		FB38		1" DIA	0	2 3/4	NOTE 2	
28								
29								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



G:\Contract\00A00010\Drawings\353A.dwg  
 Save by rsh Dec 05 09:59pm Dec 05, 2001  
 Plot by 881v 12:44pm Dec 12, 2001  
 Model space plot + Scale = 1/3

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

7 - TYPE 2 TRANSVERSE FULL LENGTH COMPLETE REPLACEMENT - 353A  
 ENGR' & CONTR. DRIG SHOP DWG 295-BS28  
 DRIG SHOP MARK BS28  
 ITEM No. 0209  
 REPAIR SHEET 10-117 & 154  
 (IDENTICAL TO 325A)

By \_\_\_\_\_  
 DEC 13 2001  
 ★ 4. BILL OF MATERIAL IS FOR TWO UNITS ONLY  
 RELEASED FOR CONSTRUCTION  
 DATE 4/4/02 BY [Signature]

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 Fax: (412) 631-4001

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

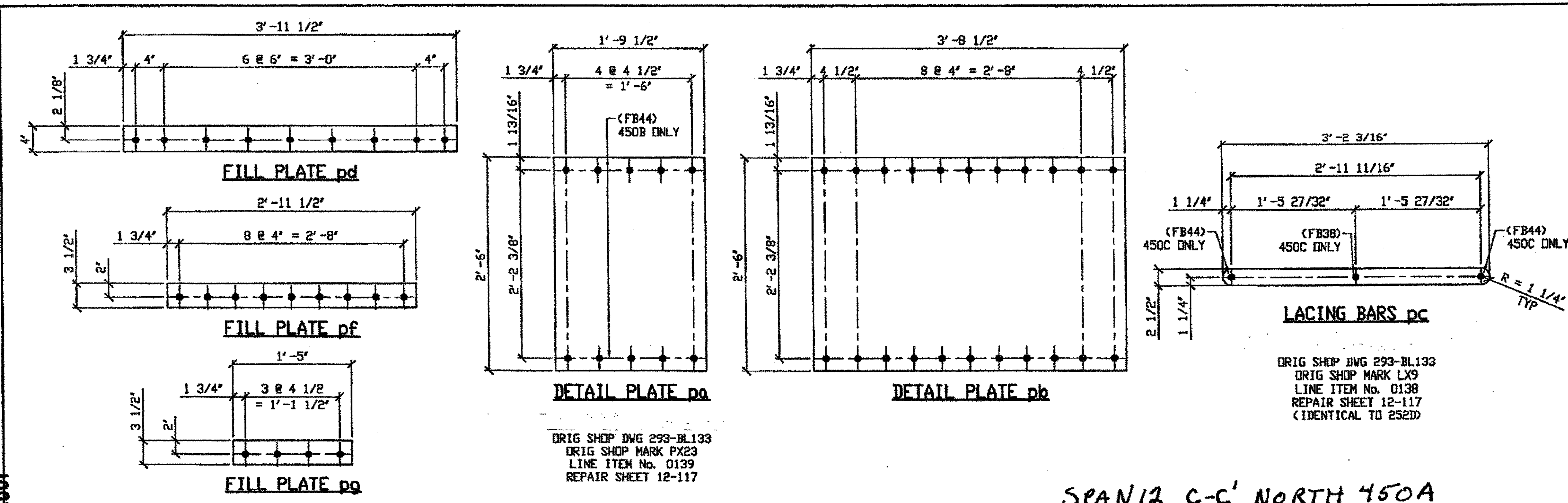
PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: AMV 07/18/01  
 CHECKED BY: DATE: GMG 12/04/01

SHEET NUMBER: 353  
 JOB NUMBER: 800010

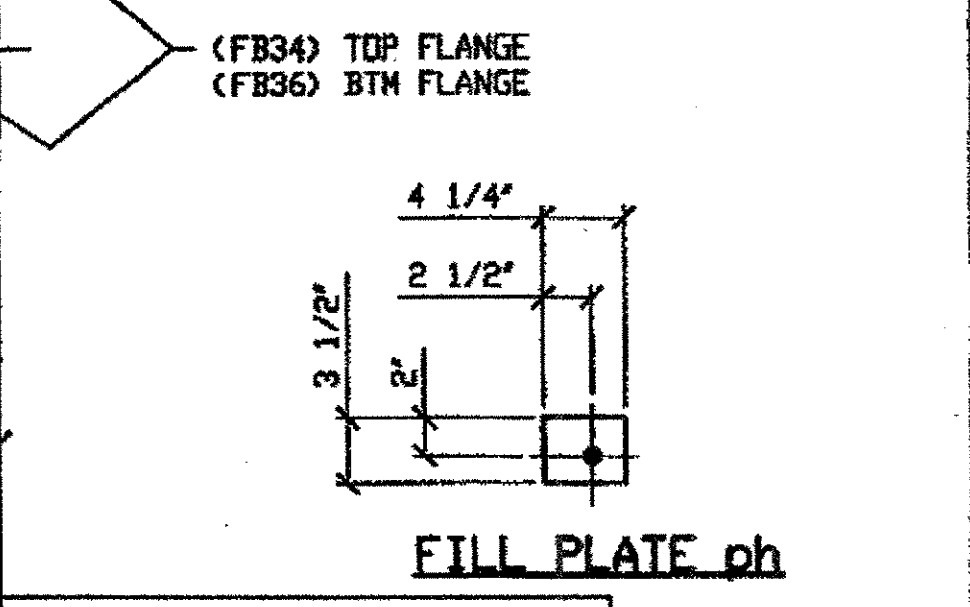
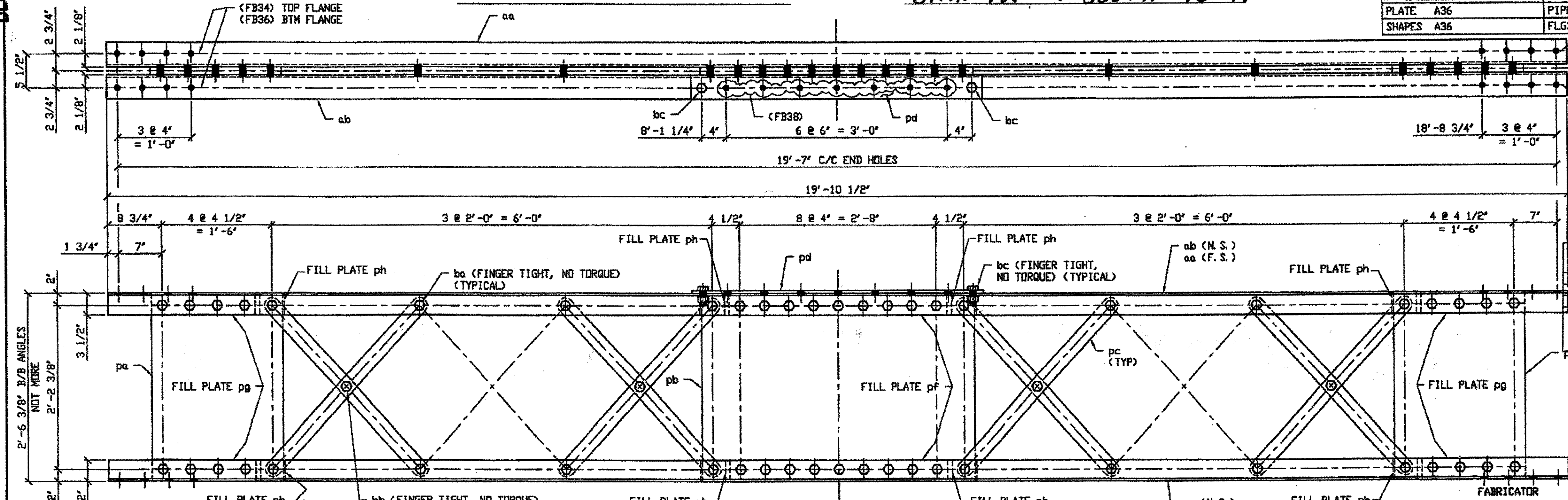


DRIG SHOP DWG 293-BL133  
DRIG SHOP MARK LX9  
LINE ITEM No. 0138  
REPAIR SHEET 12-117  
(IDENTICAL TO 252D)

SPAN 13 D-D' NORTH 450A  
SPAN 13 F-F' SOUTH 450A

SPAN 12 C-C' NORTH 450A  
SPAN 12 C-C' SOUTH 450A  
SPAN 12 E-E' NORTH 450A  
SPAN 12 E-E' SOUTH 450A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		450A	4	TYPE 2 TRANSVERSE				3061
2		aa	12	L 4 X 3 1/2 X 3/8	19	10 1/2		2170
3		ab	4	L 4 X 3 1/2 X 3/8	19	10 1/2		723
4		pa	8	PL 1/2 X 21 1/2	2	6		731
5		pb	4	PL 1/2 X 30	3	8 1/2		756
6		pc	48	BAR 2 1/2 X 5/8	3	2 3/16		811
7		pd	4	PL 1/2 X 4	3	11 1/2		108
8		pf	8	PL 3/4 X 3 1/2	2	11 1/2		211
9		pg	16	PL 3/4 X 3 1/2	1	5		202
10		ph	32	PL 1/8 X 3 1/2	0	4		16
11		ba	200	1" DIA Hvy HEX BOLT	0	3 1/2	NOTE 2	321
12				W/HVY HEX NUT & WASHER				
13		bb	24	1" DIA Hvy HEX BOLT	0	2 3/4	NOTE 2	35
14				W/HVY HEX NUT & WASHER				
15		bc	8	1" DIA Hvy HEX BOLT	0	2 1/4	NOTE 2	11
16				W/HVY HEX NUT & WASHER				
17								
18								
19								
20								
21								
22								
23								
24				FIELD BOLTS				
25		FB34		1" DIA	0	2 1/4	NOTE 2	*
26		FB36		1" DIA	0	2 1/2	NOTE 2	
27		FB38		1" DIA	0	2 3/4	NOTE 2	
28		FB44		1" DIA	0	3 1/2	NOTE 2	
29								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



ENGR. & CONTN.

G:\Contracts\2000\800010\Drawings\450A.dwg  
Save by r3pr at 10:58am Nov 01, 2001  
Plot by gfos at 11:47am Dec 07, 2001  
Model space plot + Scale = 1/5

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**6- TYPE 2 TRANSVERSE COMPLETE REPLACEMENT - 450A**

DRIG SHOP DWG 295-BS28  
DRIG SHOP MARK BS28  
REPAIR SHEET 12-115, 128, 154 & 163  
(IDENTICAL TO 353A)

**\* 4 BILL OF MATERIAL IS FOR FOUR UNITS ONLY**

RELEASED FOR CONSTRUCTION  
DATE 1/10/02 BY *[Signature]*

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**AB AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CONARDVILLE, PA 15108  
PHONE: (412) 631-2000  
FAX: (412) 631-0001

O.D.O.T. DIST. 12

ACCEPTED AS NOTED [Signature]

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

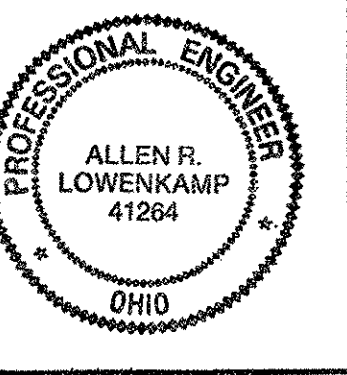
DOT ITEM LINE NO. 0209  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN REPAIRS

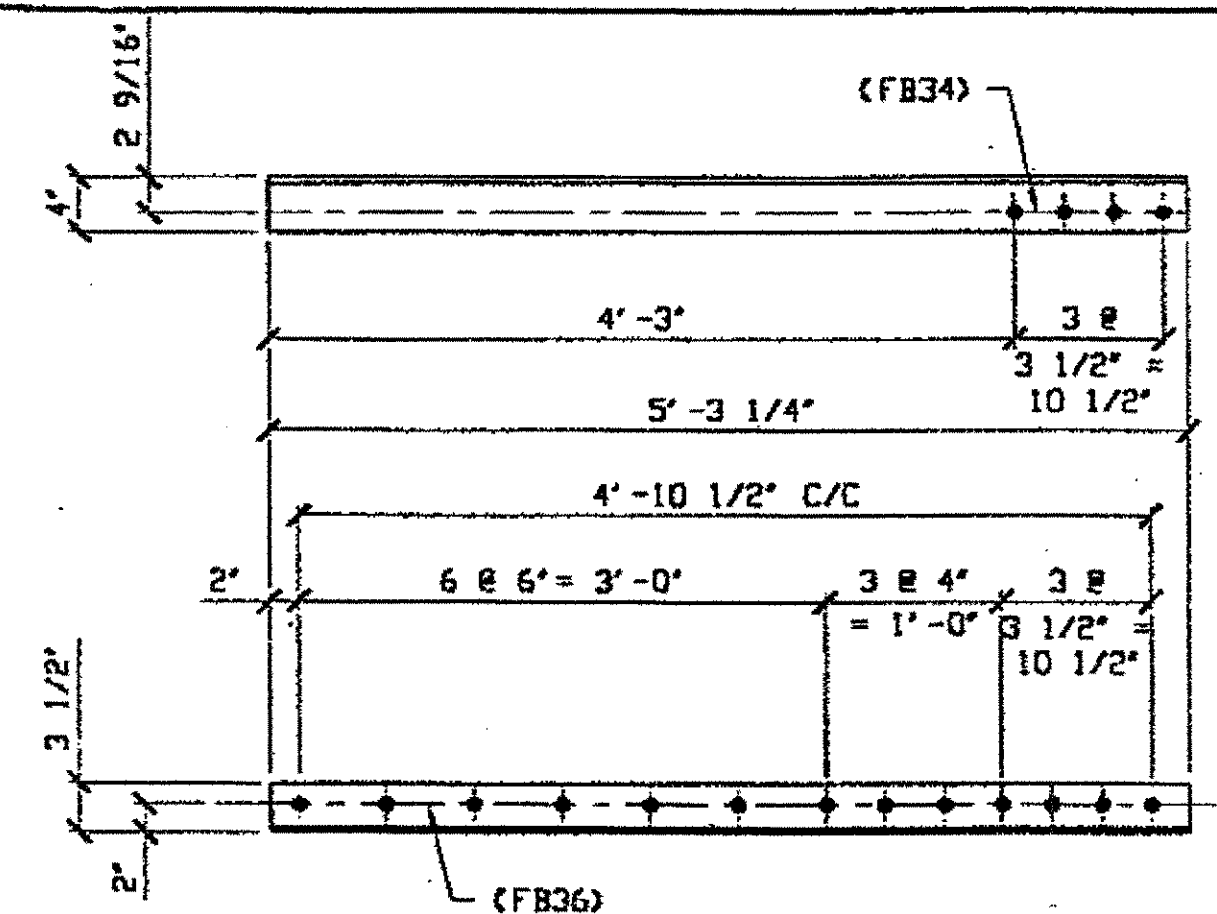
FABRICATOR  
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 07/26/01  
CHECKED BY: DATE  
GAF 10/18/01

SHEET NUMBER: 450  
JOB NUMBER: 800010





Last modified by aspringer at 10:55am on Wed Nov 08, 2000 - Last plotted by gfoote, at 04:20pm on Mon Dec 18, 2000

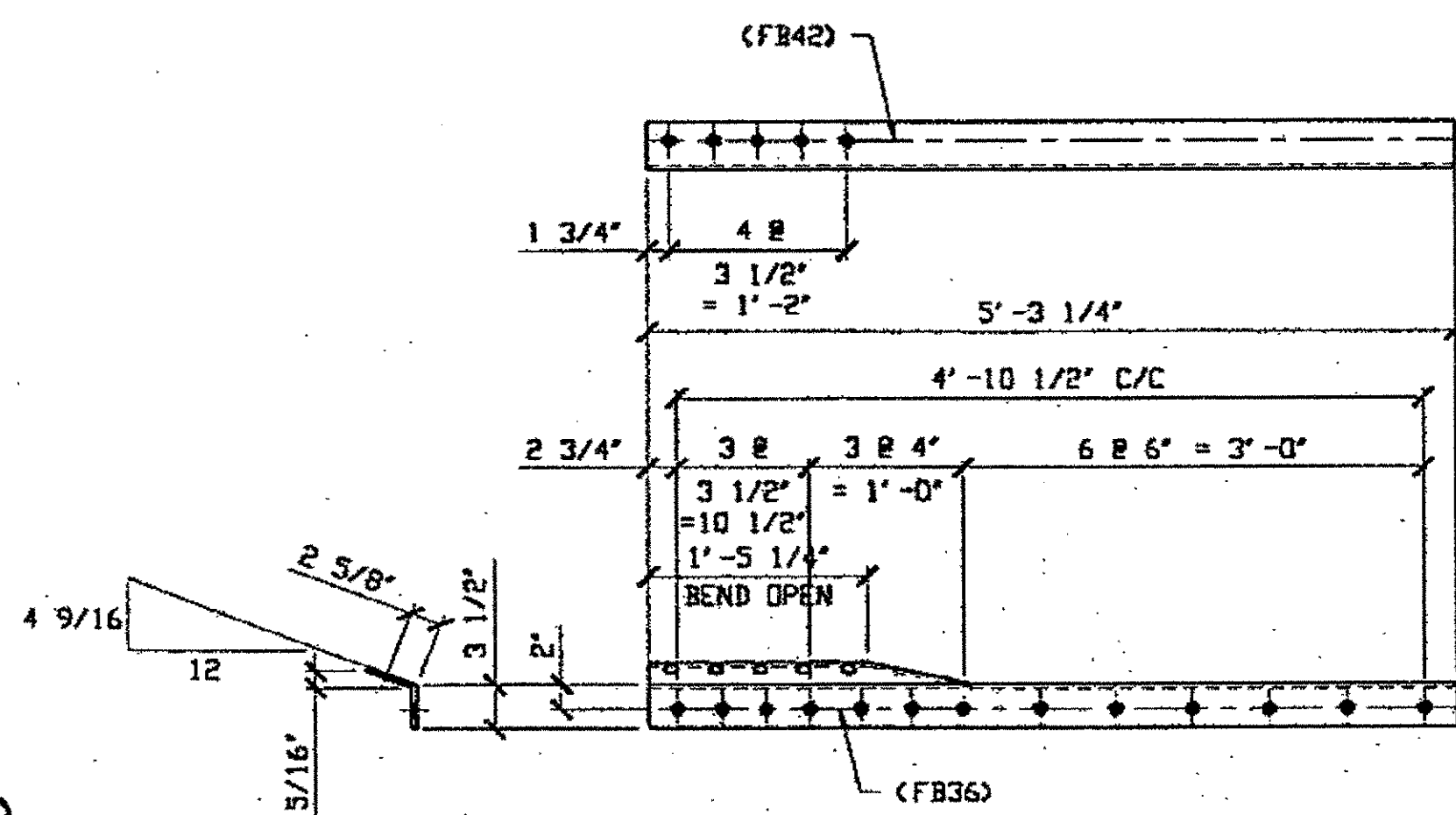


**2 - TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154A R (AS SHOWN)**

ORIG. SHOP DRAWING 17 - BS11, 17 - BS2, 86 - BS13  
ORIG. SHOP MARK A17F

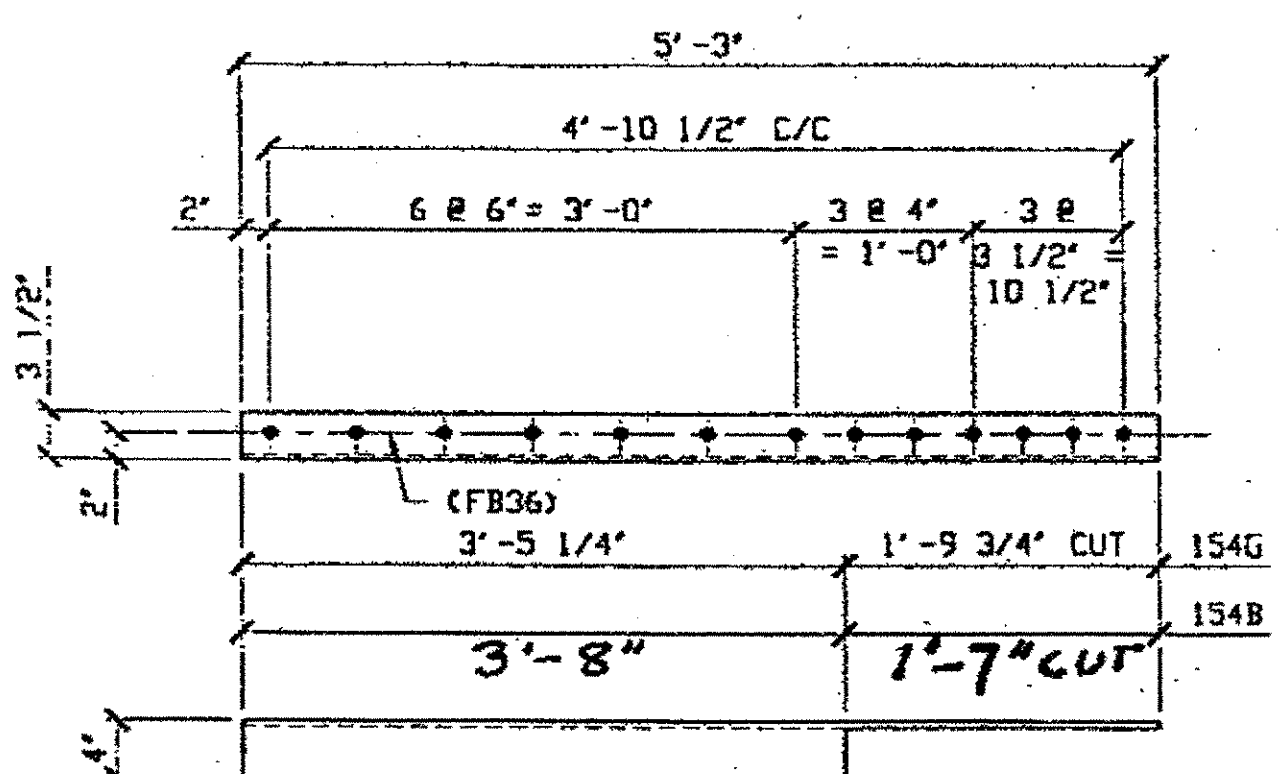
**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154A L (OPPOSITE HAND)**

ORIG. SHOP DRAWING 86 - BS13  
ORIG. SHOP MARK A17F



**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154D**

ORIG. SHOP DRAWING 86 - BS8  
ORIG. SHOP MARK AB6e

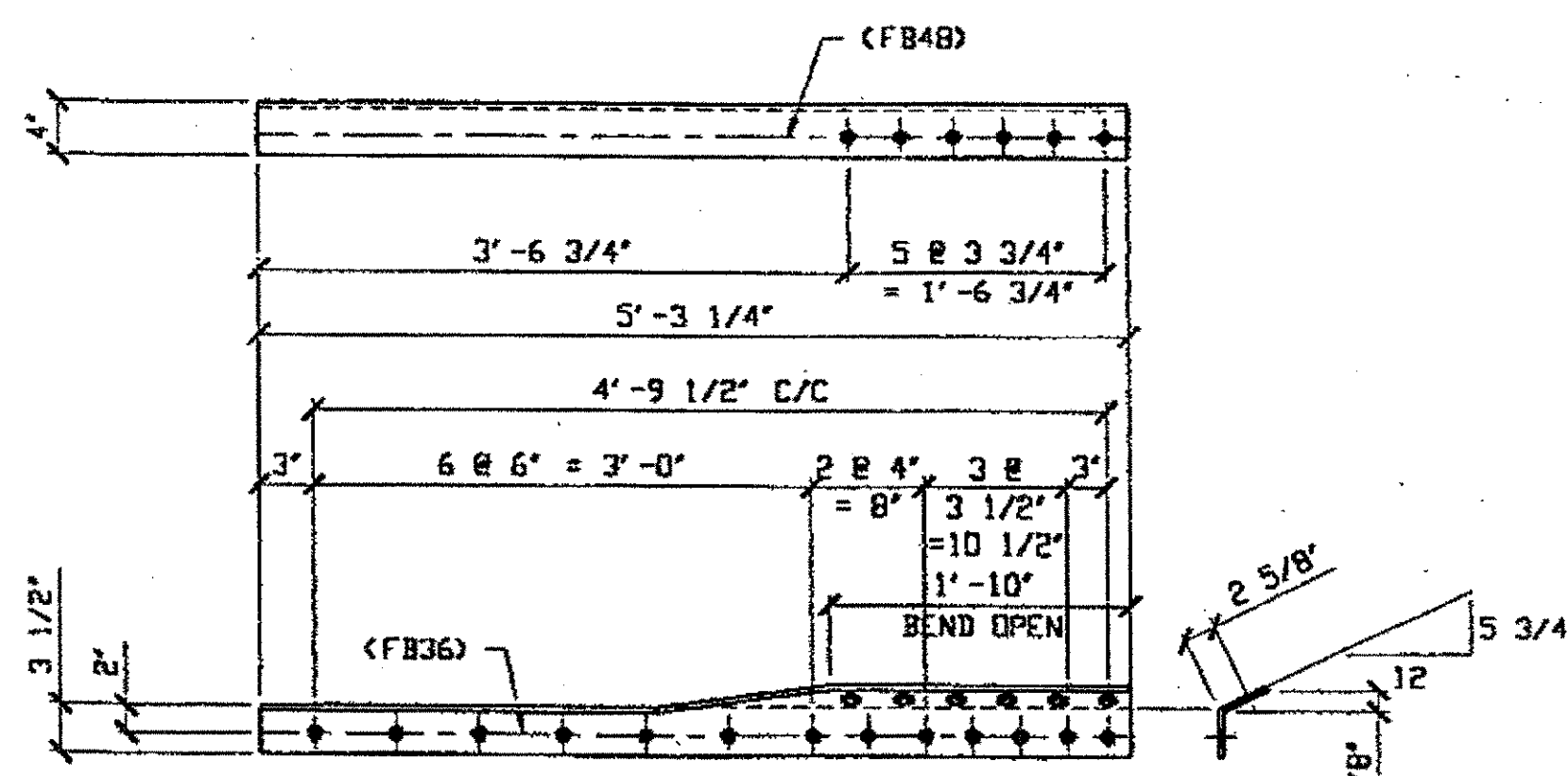


**3 - TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154B R/L**

ORIG. SHOP DRAWING 17 - BS11  
ORIG. SHOP MARK A17b

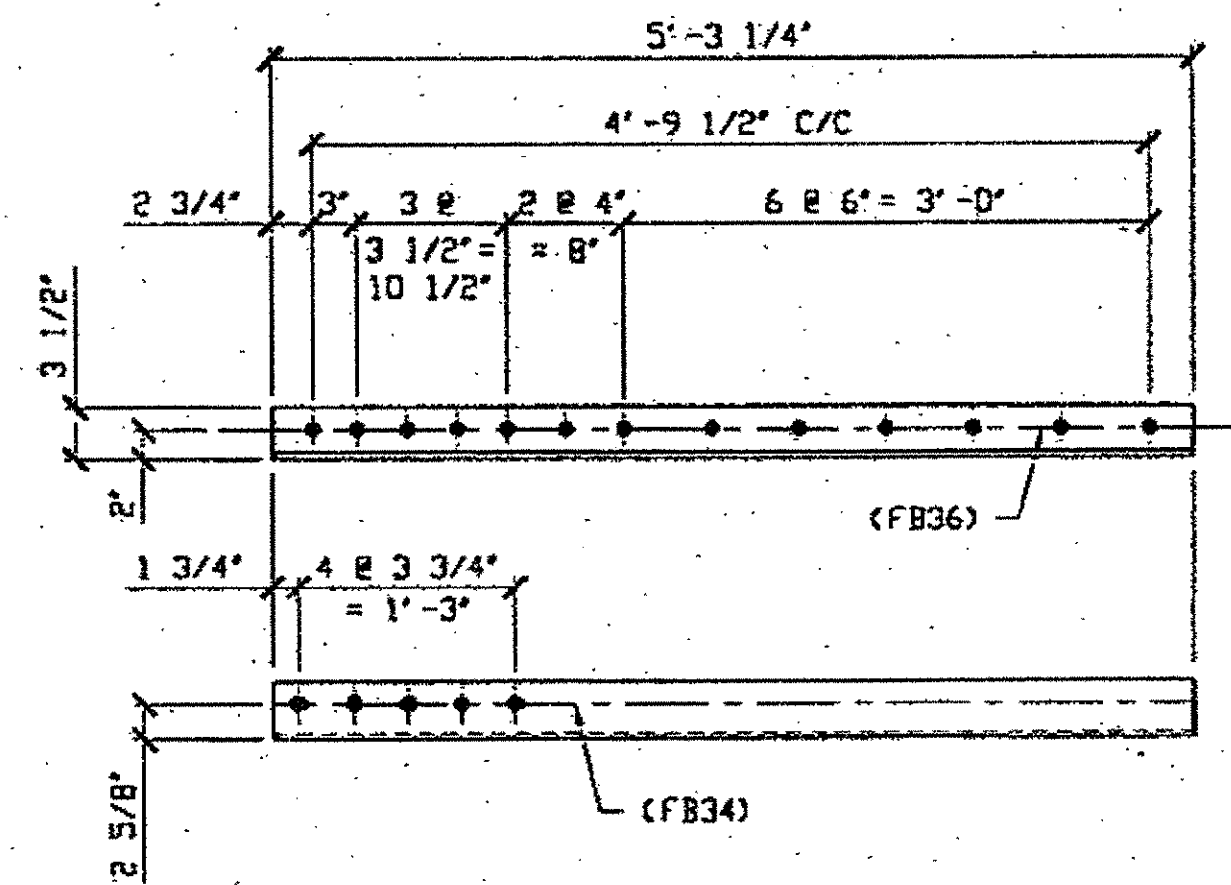
**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154G**

ORIG. SHOP DRAWING 166 - BS22R  
ORIG. SHOP MARK A166c4



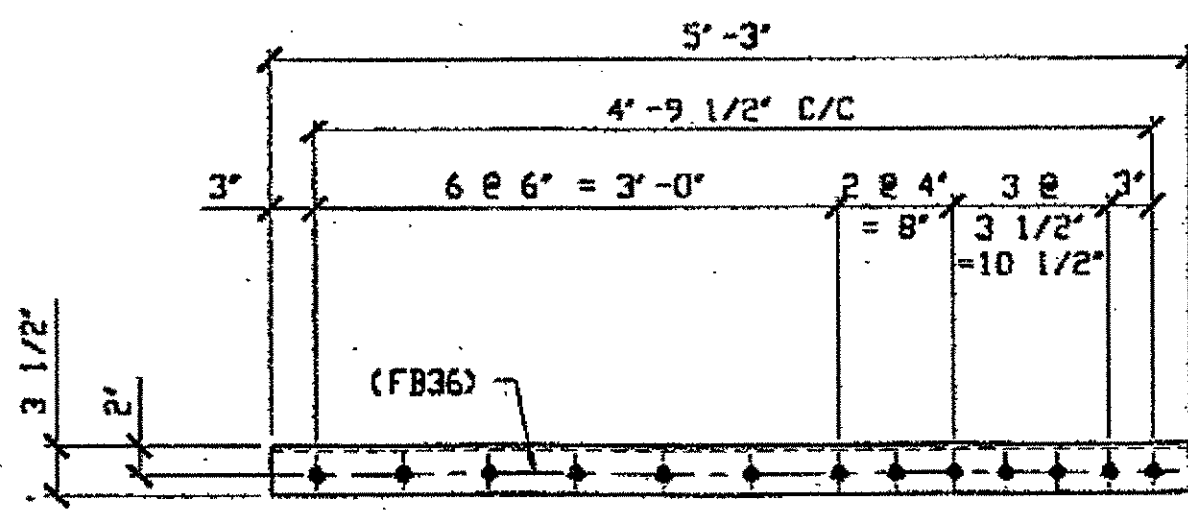
**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154H**

ORIG. SHOP DRAWING 166 - BS21L  
ORIG. SHOP MARK A166aL



**1 - TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154C**

ORIG. SHOP DRAWING 166 - BS22L, BS21L  
ORIG. SHOP MARK A166dL



**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 154K**

ORIG. SHOP DRAWING 166 - BS21L  
ORIG. SHOP MARK A166fL

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANSVERSE QUARTER				
2		154A R	2	L 4 x 3 1/2 x 3/8	5	3 1/4	AS SHOWN	
3		154A L	1	L 4 x 3 1/2 x 3/8	5	3 1/4	DPP HAND	48
4		154B R/L	3	L 4 x 3 1/2 x 3/8	5	3	2L+1R	
5		154C	1	L 4 x 3 1/2 x 3/8	5	3 1/4		
6		154D	1	L 4 x 3 1/2 x 3/8	5	3 1/4	BEND	48
7		154G	1	L 4 x 3 1/2 x 3/8	5	3		48
8		154H	1	L 4 x 3 1/2 x 3/8	5	3 1/4	BEND	48
9		154K	1	L 4 x 3 1/2 x 3/8	5	3		48
10								
11				SPLICE PLATE				
12		154M	40	PL 3/4 X 3 1/2	1	6	PLAIN MATL	536
13								
14				FIELD BOLTS				
15		FB34		1" DIA	0	2 1/4	NOTE 2	
16		FB36		1" DIA	0	2 1/2	NOTE 2	
17		FB42		1" DIA	0	3 1/4	NOTE 2	
18		FB48		1" DIA	0	4	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

**SPAN 3**  
M-M' SOUTH BOTTOM EAST 154B/R  
M-M' SOUTH BOTTOM WEST 154A/R  
C-C' NORTH BOTTOM EAST 154A/R

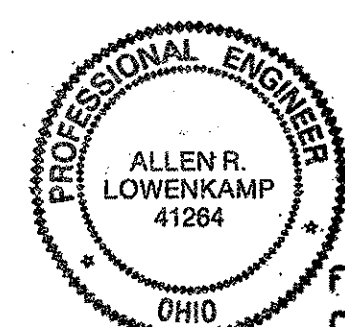
**SPAN 5**  
D-D' NORTH TOP EAST 154D  
C-C' SOUTH BOTTOM EAST 154A/L  
C-C' SOUTH BOTTOM WEST 154B/L  
M-M' SOUTH BOTTOM WEST 154B/L

**SPAN 7**  
N-N' SOUTH TOP EAST 154K  
N-N' SOUTH TOP WEST 154H  
N-N' SOUTH BOTTOM EAST 154C  
O-O' SOUTH BOTTOM EAST 154G

O.D.O.T. DIST. 12

ACCEPTED	2/7/01
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 9/29/00  
CHECKED BY: DATE  
GAF 11/7/00

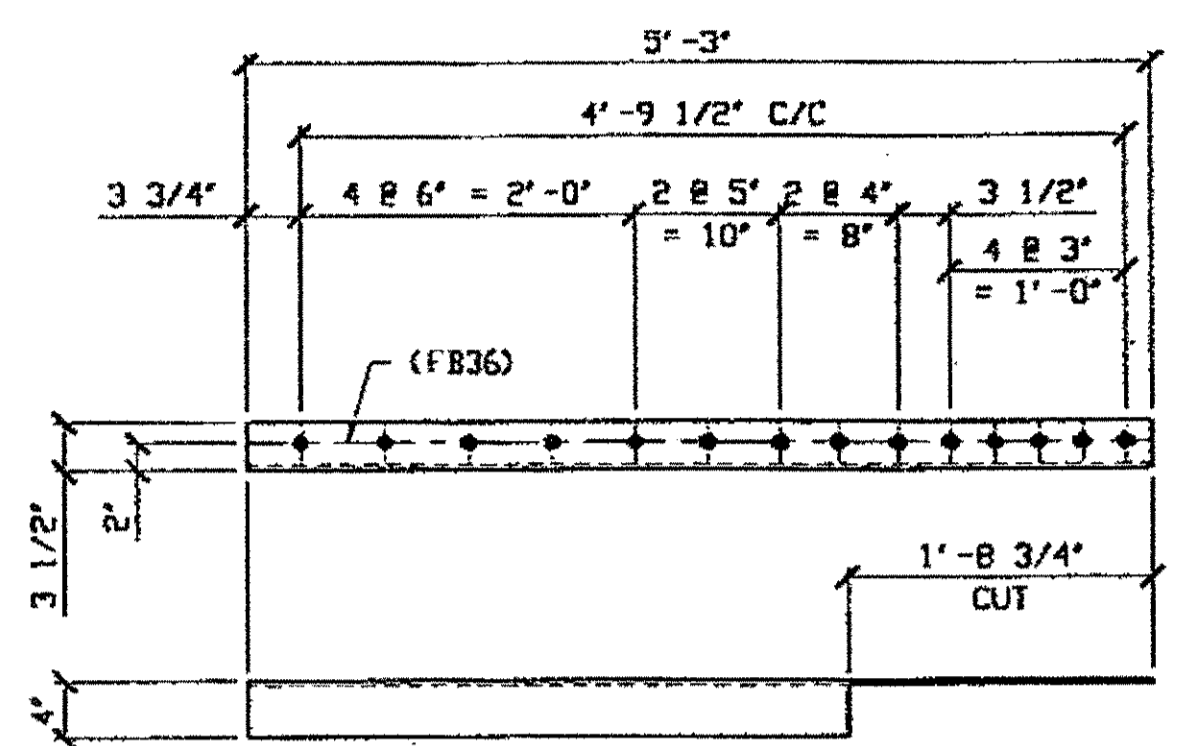
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO

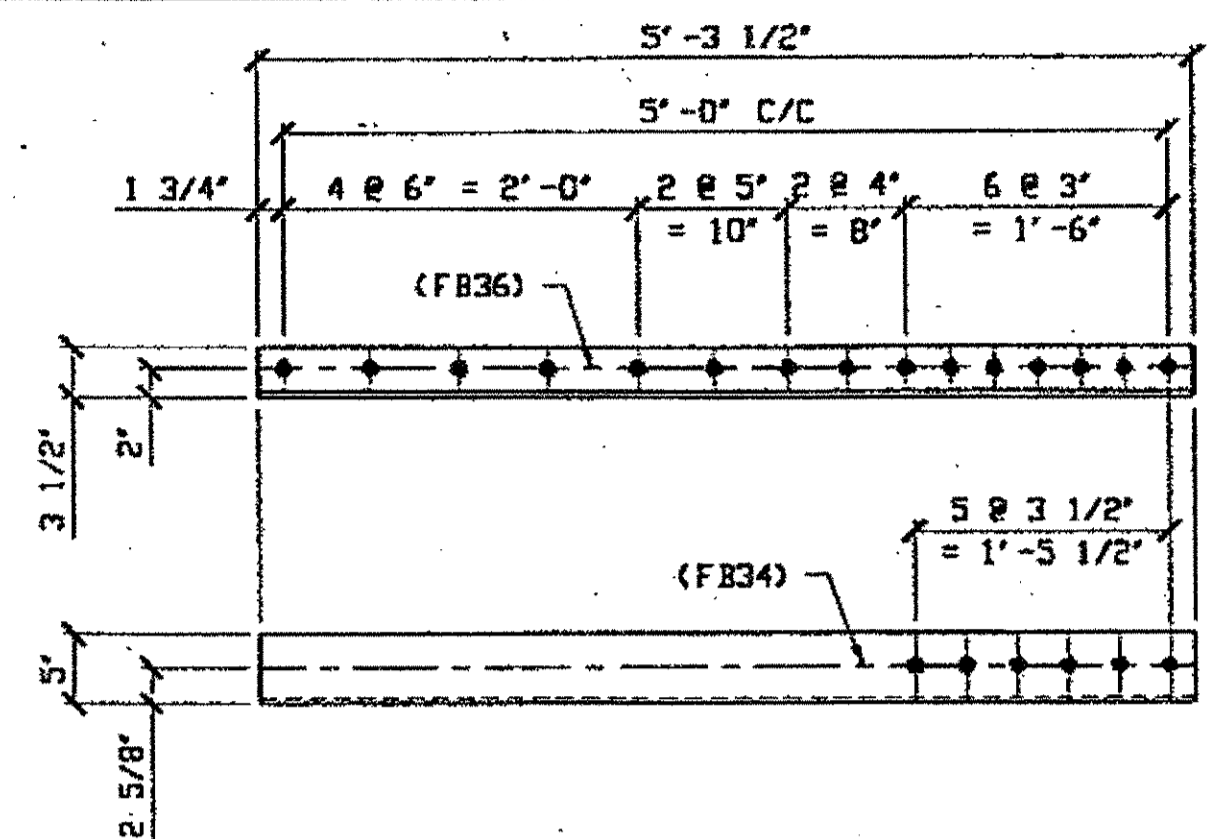
BRIDGE No. CUY-10-16.13  
TRANSVERSE MEMBER REPAIR

SHEET NUMBER  
154  
JOB NUMBER  
800010

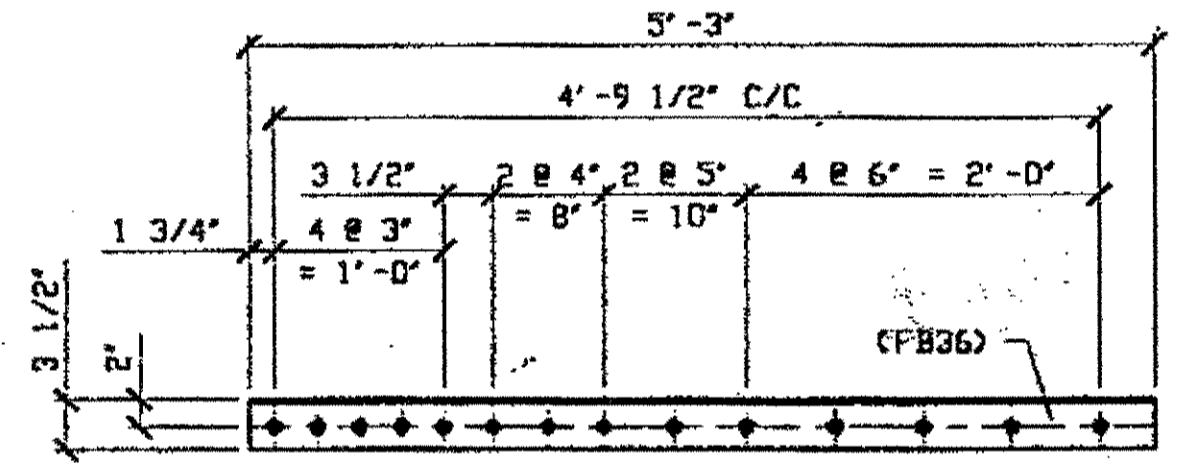
Last modified 11:31am on Wed Nov 08, 2000 - 1 - Last plotted by Gfoste 04:29pm on Mon Dec 18, 2000



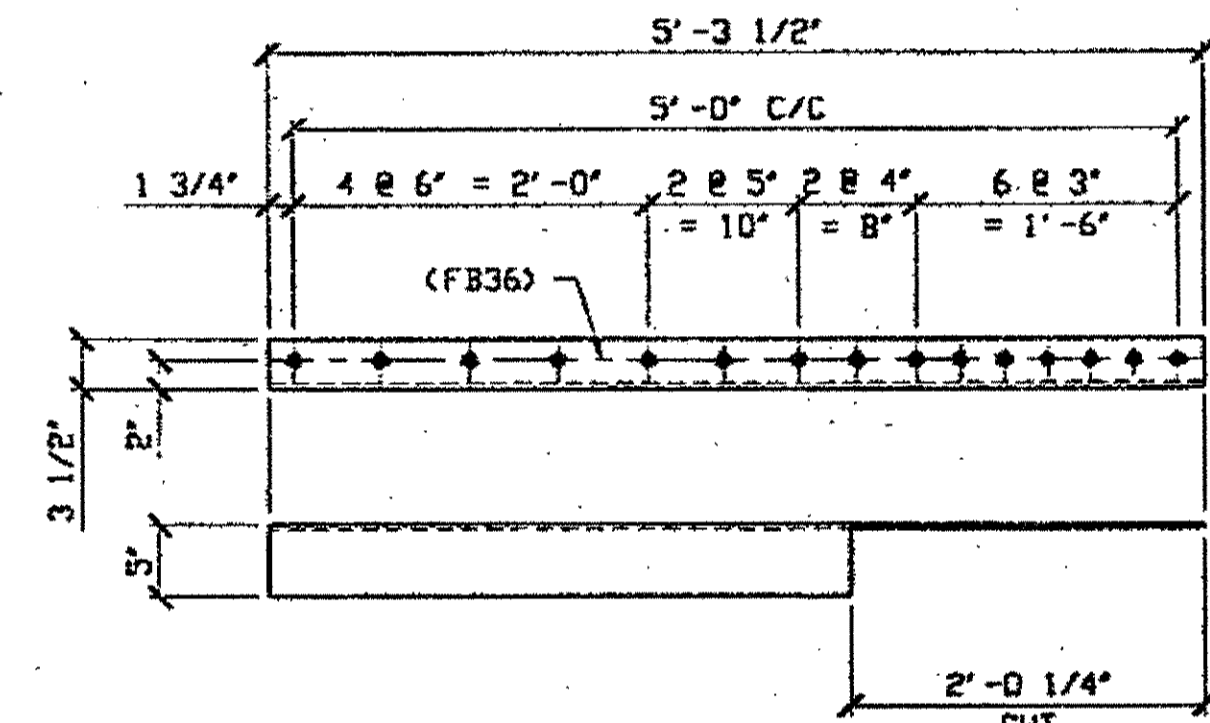
**3 TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163A R/L**  
 ORIG. SHOP DRAWING 295 - BS35  
 ORIG. SHOP MARK A295s (R SHOWN)  
**SPAN 9**  
 Q-Q' SOUTH BOTTOM EAST 163A/R  
 Q-Q' NORTH BOTTOM EAST 163A/L  
 P-P' SOUTH BOTTOM WEST 163A/L



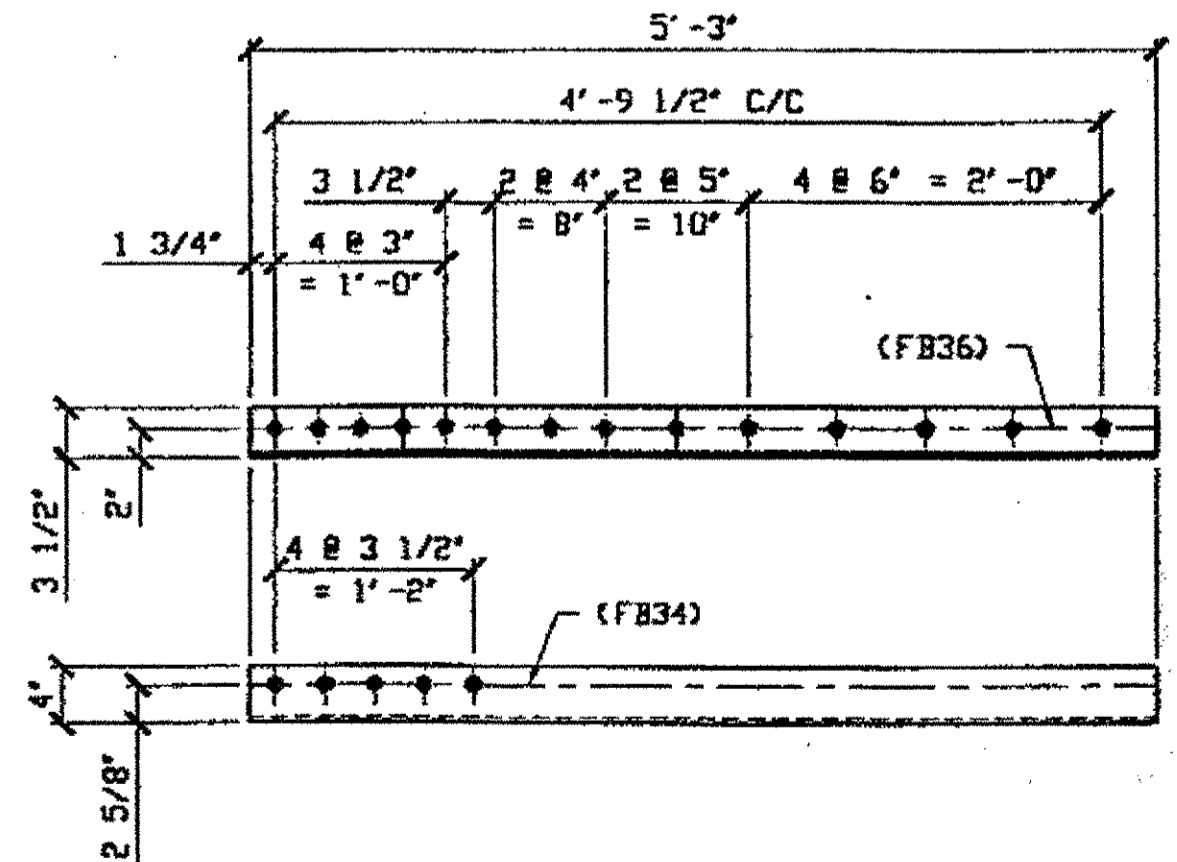
**(3) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163D R/L**  
 ORIG. SHOP DRAWING 295 - BS33<sup>2</sup>  
 ORIG. SHOP MARK A295f (R SHOWN)  
**SPAN 9**  
 E-E' NORTH BOTTOM WEST 163D/L  
 E-E' SOUTH BOTTOM WEST 163D/R  
 D-D' SOUTH BOTTOM EAST 163D/L



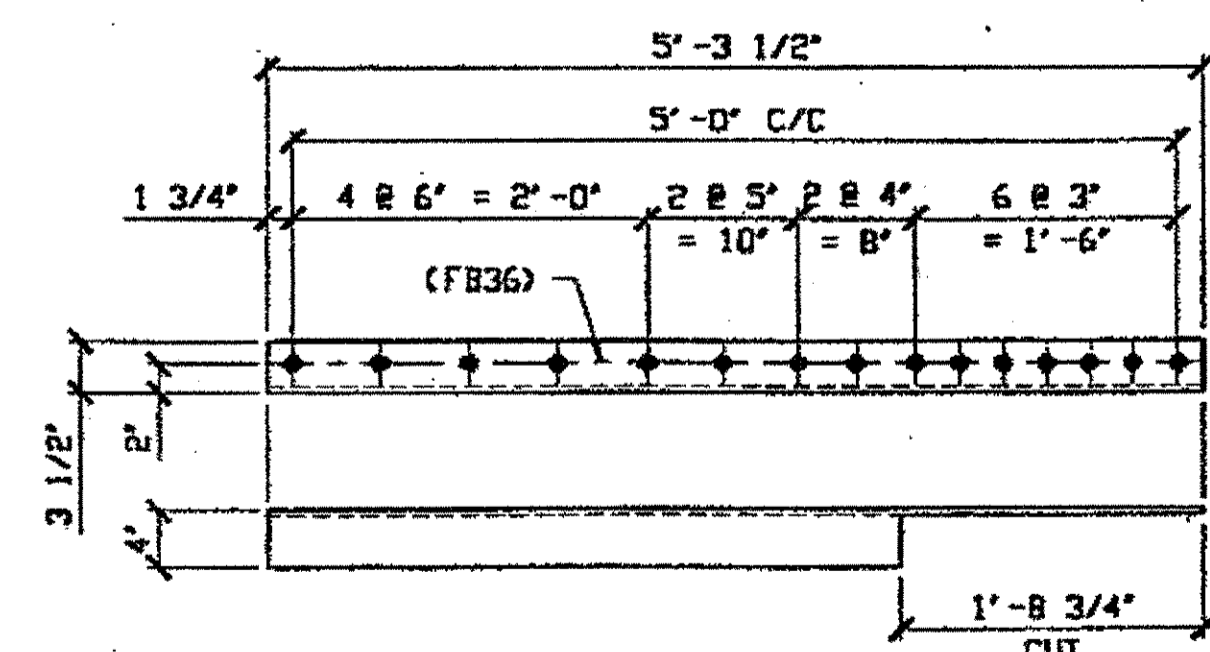
**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163B**  
 ORIG. SHOP DRAWING 295 - BS35  
 ORIG. SHOP MARK A295y  
**SPAN 9**  
 Q-Q' NORTH TOP WEST 163B



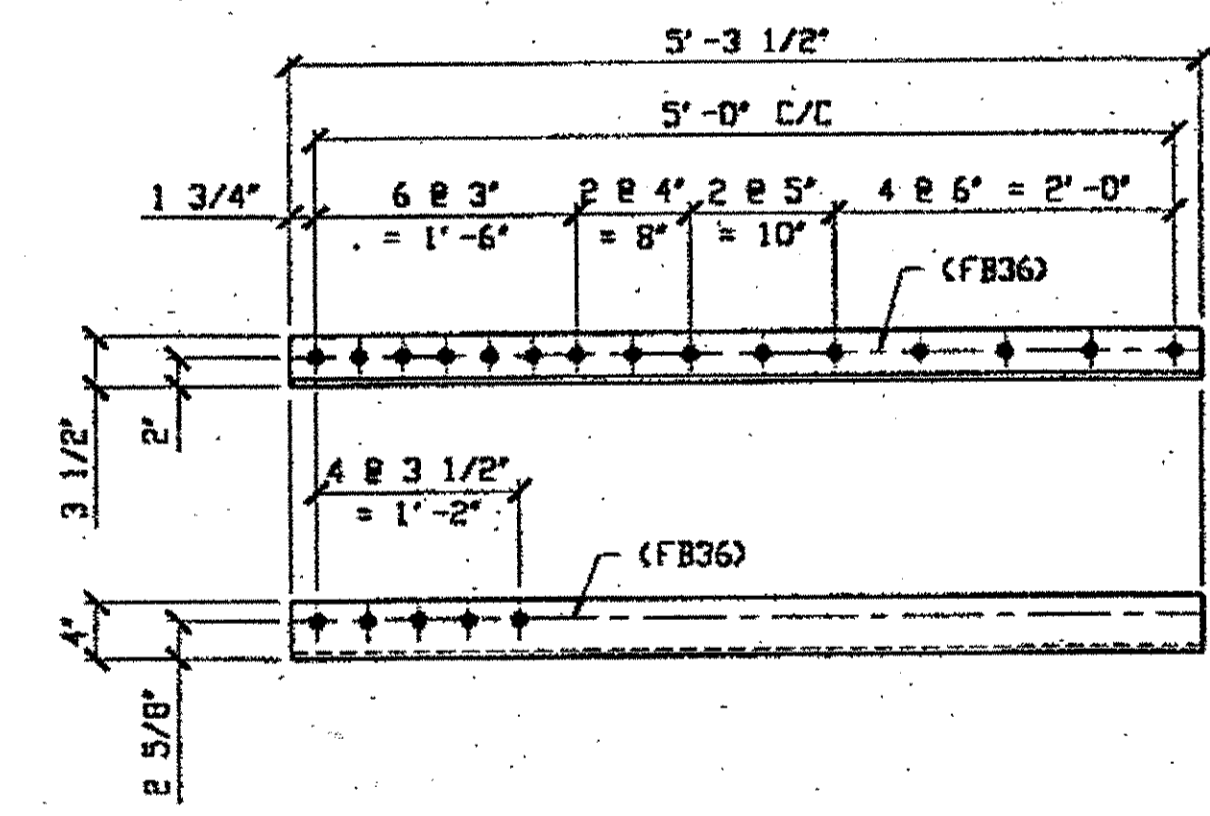
**(3) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163F R/L**  
 ORIG. SHOP DRAWING 295 - BS33<sup>2</sup>  
 ORIG. SHOP MARK A295e (R SHOWN)  
**SPAN 9**  
 E-E' NORTH BOTTOM EAST 163F/L  
 E-E' SOUTH BOTTOM EAST 163F/R  
 D-D' SOUTH BOTTOM WEST 163F/L



**(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163C**  
 ORIG. SHOP DRAWING 295 - BS34  
 ORIG. SHOP MARK A295p  
**SPAN 9**  
 P-P' SOUTH BOTTOM EAST 163C



**(3) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163G R/L**  
 ORIG. SHOP DRAWING 379 - BS42<sup>1</sup>  
 ORIG. SHOP MARK A379h (R SHOWN)  
**SPAN 11**  
 Q-Q' NORTH BOTTOM WEST 163G/R  
 Q-Q' SOUTH BOTTOM WEST 163G/L  
 E-E' NORTH BOTTOM EAST 163G/L



**(2) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 163H**  
 ORIG. SHOP DRAWING 379 - BS42<sup>1</sup>  
 ORIG. SHOP MARK A379m  
 ORIG. SHOP DRAWING 379 - BS41  
 ORIG. SHOP MARK A379n  
**SPAN 11**  
 Q-Q' SOUTH BOTTOM EAST 163H  
 E-E' NORTH BOTTOM WEST 163H

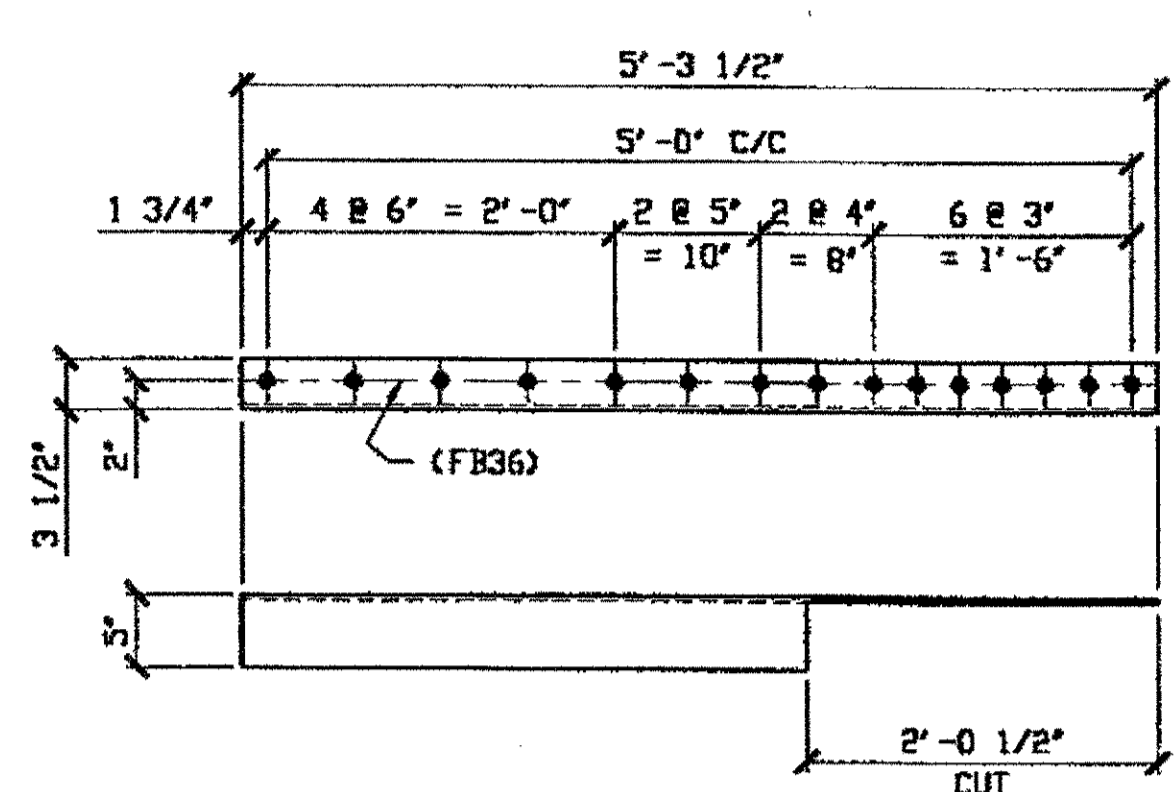
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANSVERSE QUARTER				
2		163A R	1	L 4 X 3 1/2 X 3/8	5	3	AS SHOWN	48
3		163A L	2	L 4 X 3 1/2 X 3/8	5	3	DPP HAND	96
4		163B	1	L 4 X 3 1/2 X 3/8	5	3		48
5		163C	1	L 4 X 3 1/2 X 3/8	5	3		48
6		163D R	1	L 5 X 3 1/2 X 3/8	5	3 1/2	AS SHOWN	55
7		163D L	2	L 5 X 3 1/2 X 3/8	5	3 1/2	DPP HAND	110
8		163F R	1	L 5 X 3 1/2 X 3/8	5	3 1/2	AS SHOWN	55
9		163F L	2	L 5 X 3 1/2 X 3/8	5	3 1/2	DPP HAND	110
10		163G R	1	L 4 X 3 1/2 X 7/16	5	3 1/2	AS SHOWN	56
11		163G L	2	L 4 X 3 1/2 X 7/16	5	3 1/2	DPP HAND	112
12		163H	2	L 4 X 3 1/2 X 7/16	5	3 1/2		112
13								
14								
15				FIELD BOLTS				
17		FB34	23	1" DIA	0	2 1/4	NOTE 2	31
18		FB36	245	1" DIA	0	2 1/2	NOTE 2	342
19								
20								
PLATE		PIPE		FITTINGS				
SHAPES A36		FLGS.		BOLTS NOTE 2				

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE T-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

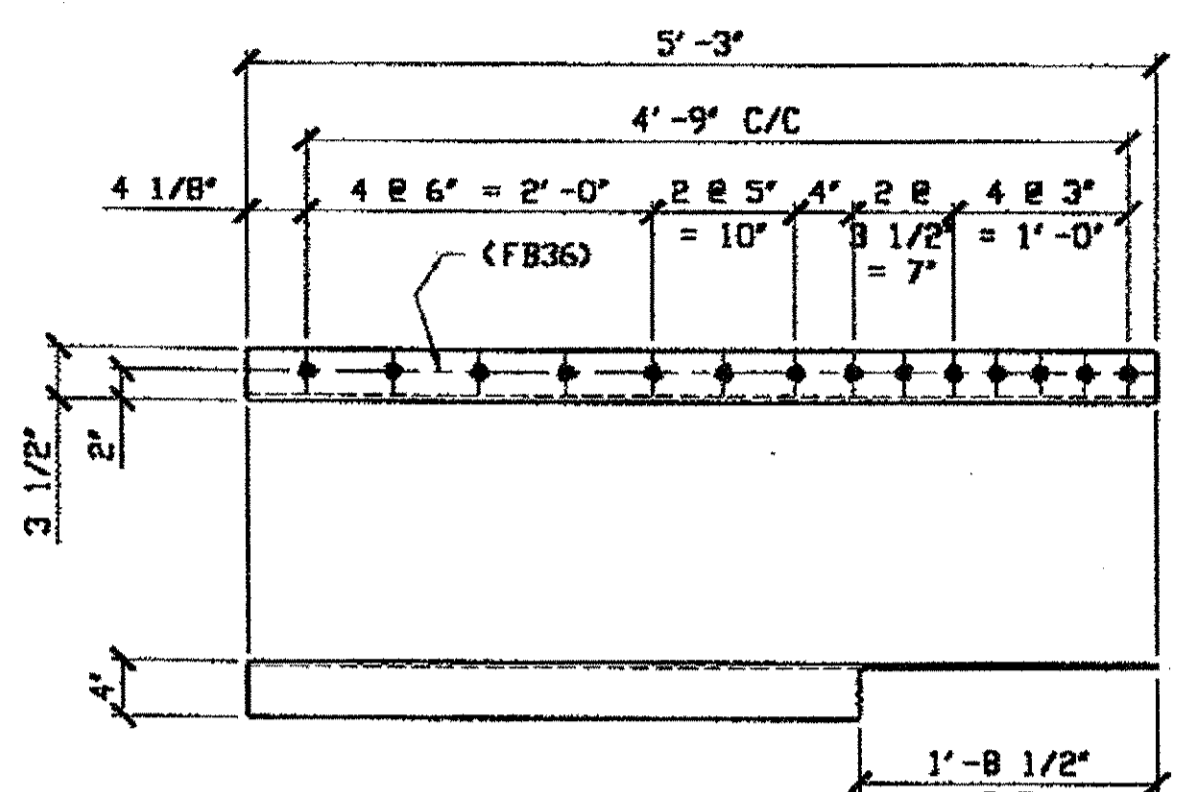
**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



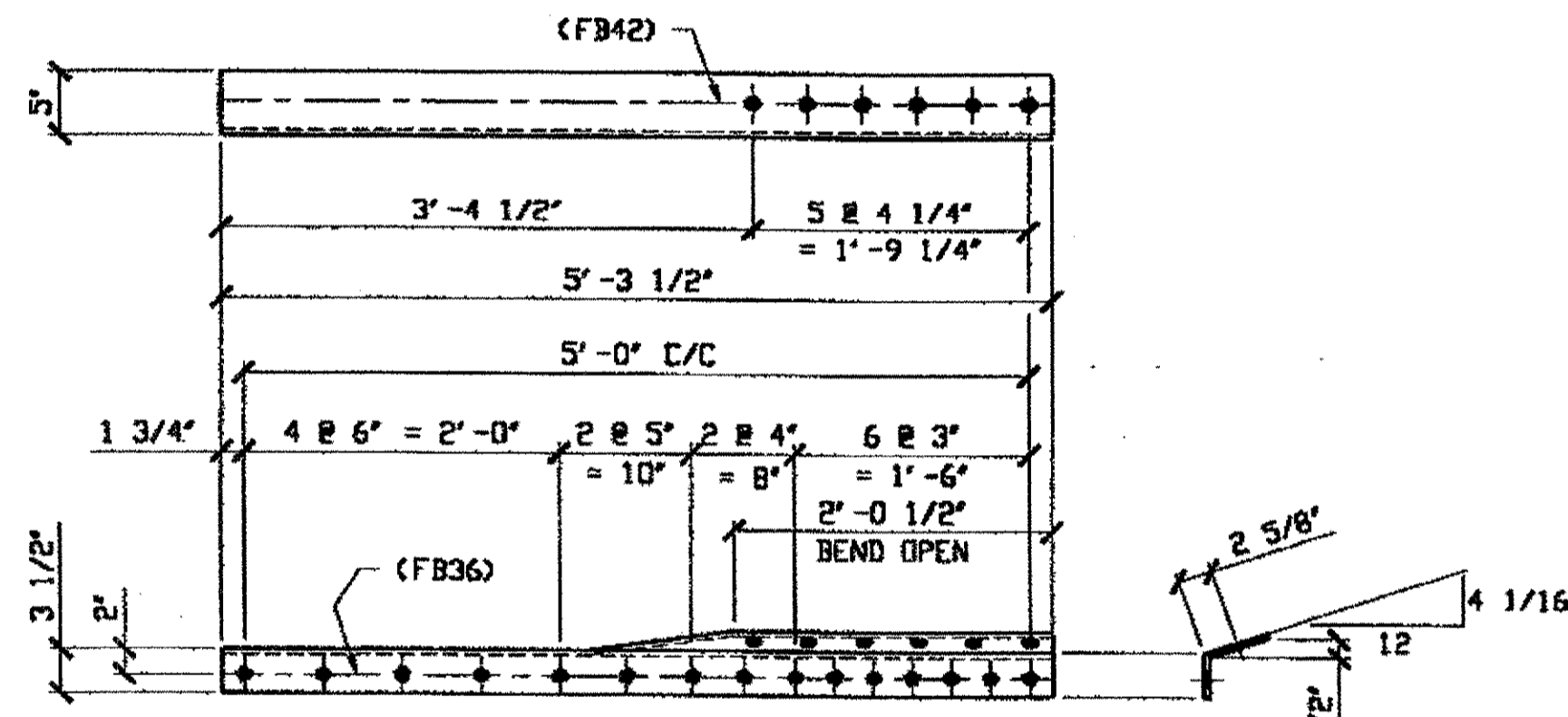
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	IN CHARGE OF: L. SMITH DRAWN BY: DATE: RAS 10/25/00 CHECKED BY: DATE: GAF 11/7/00	SHEET NUMBER 163 APM JOB NUMBER 800010
--	---	---



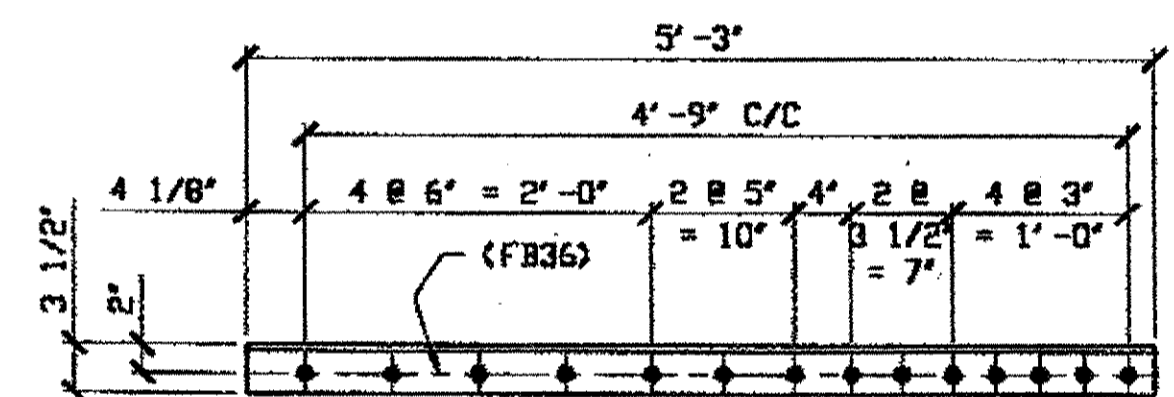
(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164A  
 ORIG. SHOP DRAWING 379 - BS43R  
 ORIG. SHOP MARK A379d  
**SPAN II**  
**R-R' SOUTH BOTTOM EAST 164A**



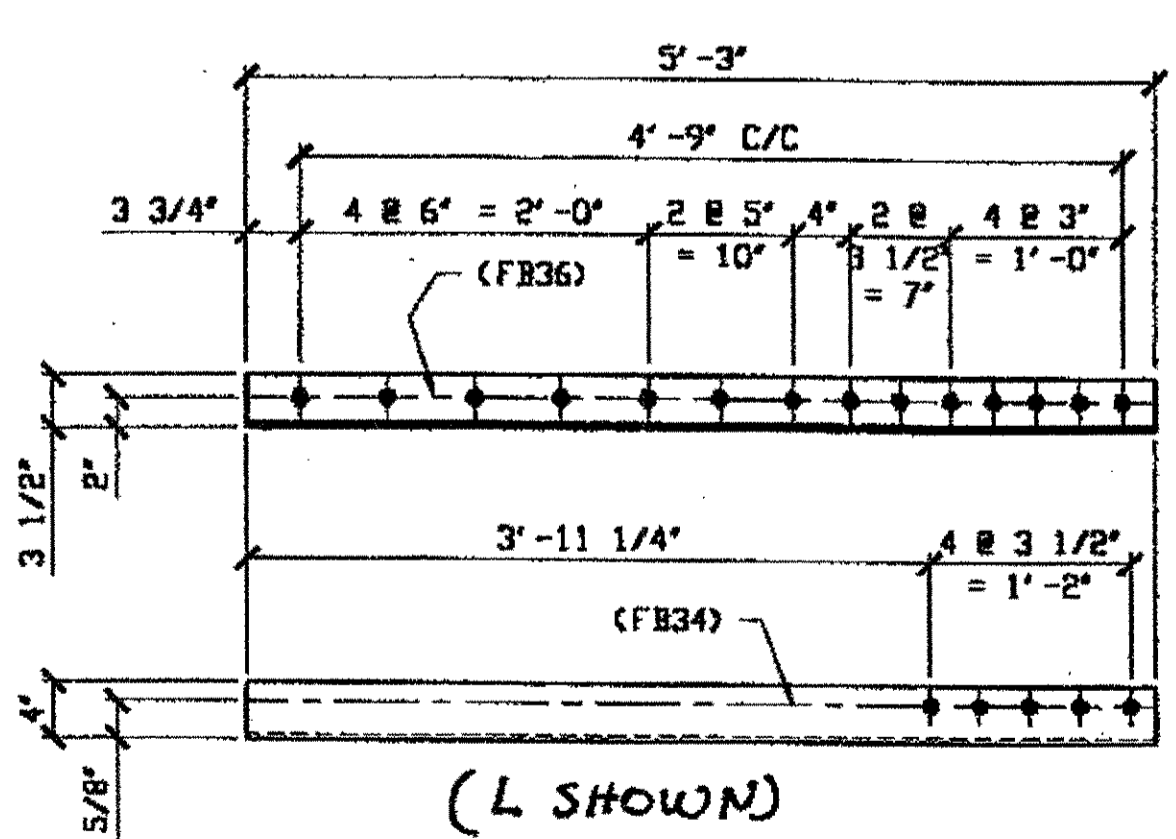
(2) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164D R/L  
 ORIG. SHOP DRAWING 518 - BS44L  
 ORIG. SHOP MARK AS18n  
 (L SHOWN)  
**SPAN 13**  
**J-J' SOUTH BOTTOM WEST 164D/R/L**  
**K-K' SOUTH BOTTOM EAST 164D/L**



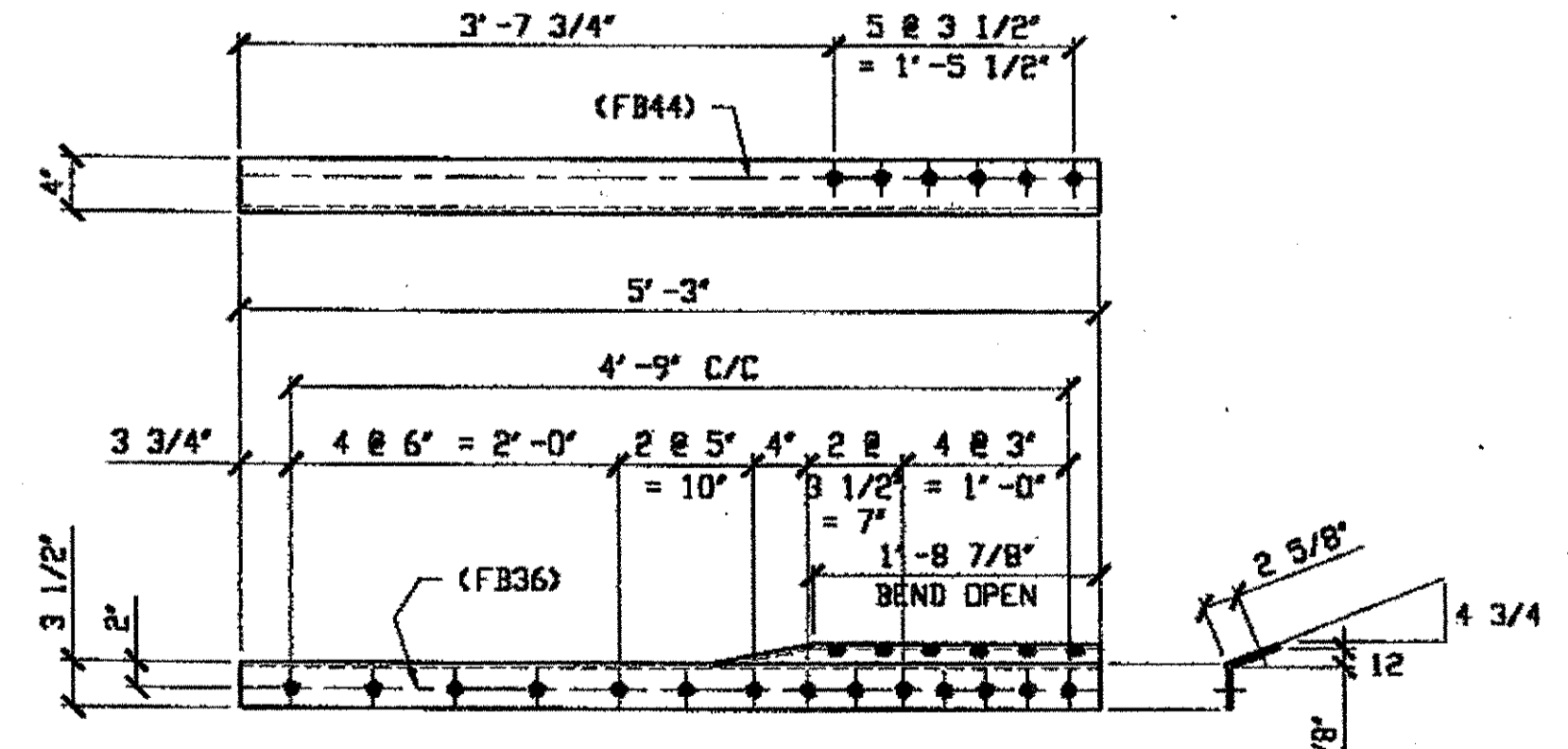
(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164B  
 ORIG. SHOP DRAWING 379 - BS43R  
 ORIG. SHOP MARK A379b  
**SPAN II**  
**R-R' SOUTH TOP EAST 164B**



(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164F  
 ORIG. SHOP DRAWING 518 - BS45R  
 ORIG. SHOP MARK AS18g  
**SPAN 13**  
**K-K' SOUTH TOP WEST 164F**



(2) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164C R/L  
 ORIG. SHOP DRAWING 518 - BS44L  
 ORIG. SHOP MARK AS18k  
 ORIG. SHOP DRAWING 518 - BS45R  
 ORIG. SHOP MARK AS18k  
**SPAN 13**  
**J-J' SOUTH BOTTOM EAST 164C/R**  
**K-K' SOUTH BOTTOM WEST 164C/L**

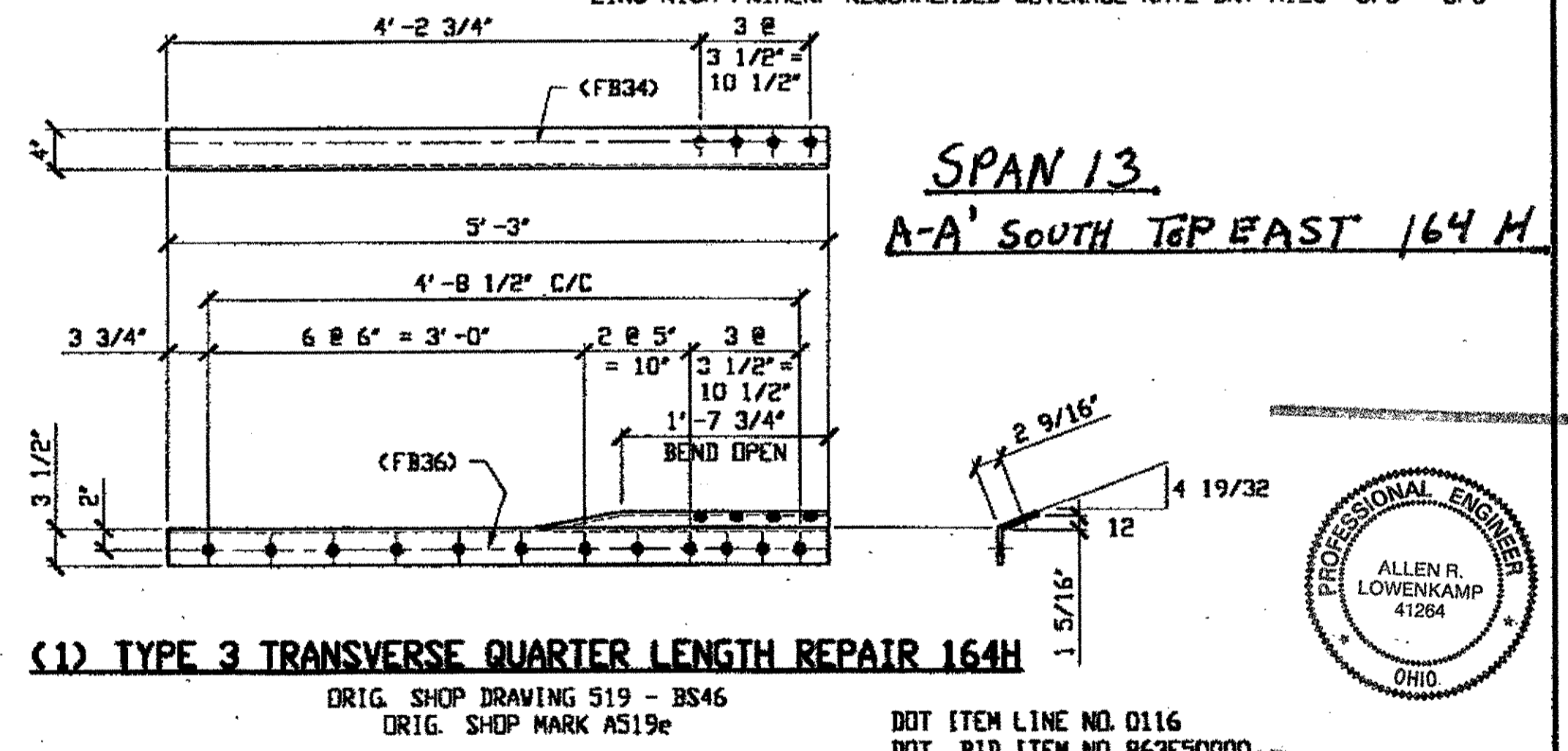


(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164G  
 ORIG. SHOP DRAWING 518 - BS45R  
 ORIG. SHOP MARK AS18f  
**SPAN 13**  
**K-K' SOUTH TOP EAST 164G**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANSVERSE QUARTER				
2		164A	1	L 5 X 3 1/2 X 3/8	5	3 1/2		55
3		164B	1	L 5 X 3 1/2 X 3/8	5	3 1/2		55
4		164C	2	L 4 X 3 1/2 X 3/8	5	3		96
5		164D	2	L 4 X 3 1/2 X 3/8	5	3		96
6		164F	1	L 4 X 3 1/2 X 3/8	5	3		48
7		164G	1	L 4 X 3 1/2 X 3/8	5	3		48
8		164H	1	L 4 X 3 1/2 X 3/8	5	3		48
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34	14	1" DIA	0	2 1/4	NOTE 2	19
17		FB36	126	1" DIA	0	2 1/2	NOTE 2	176
18		FB42	6	1" DIA	0	3 1/4	NOTE 2	9
18		FB44	6	1" DIA	0	3 1/2	NOTE 2	10
PLATE					PIPE	FITTINGS		
SHAPES A36					FLGS.	BOLTS NOTE 2		

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 164H  
 ORIG. SHOP DRAWING 519 - BS46  
 ORIG. SHOP MARK AS19e  
**SPAN 13**  
**A-A' SOUTH TOP EAST 164H**



RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY EDP

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNWALLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

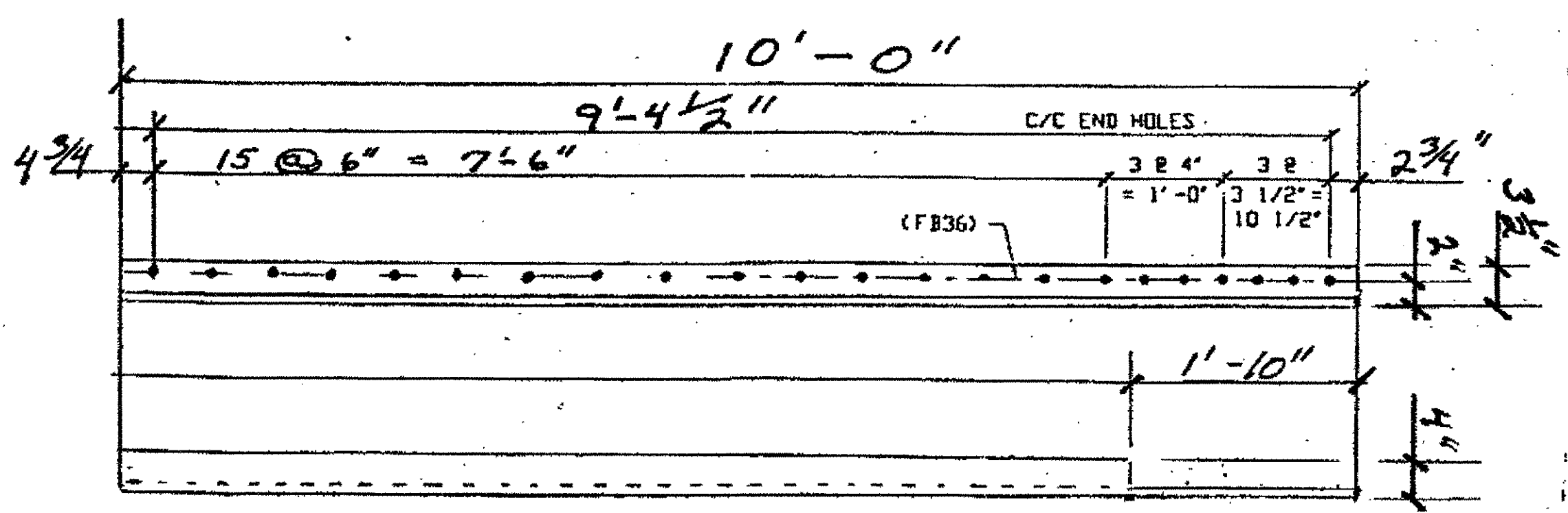
IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 10/26/00  
 CHECKED BY: GAF  
 DATE: 11/08/00

DOT ITEM LINE NO. 0116  
 DOT BID ITEM NO. 863E0000

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

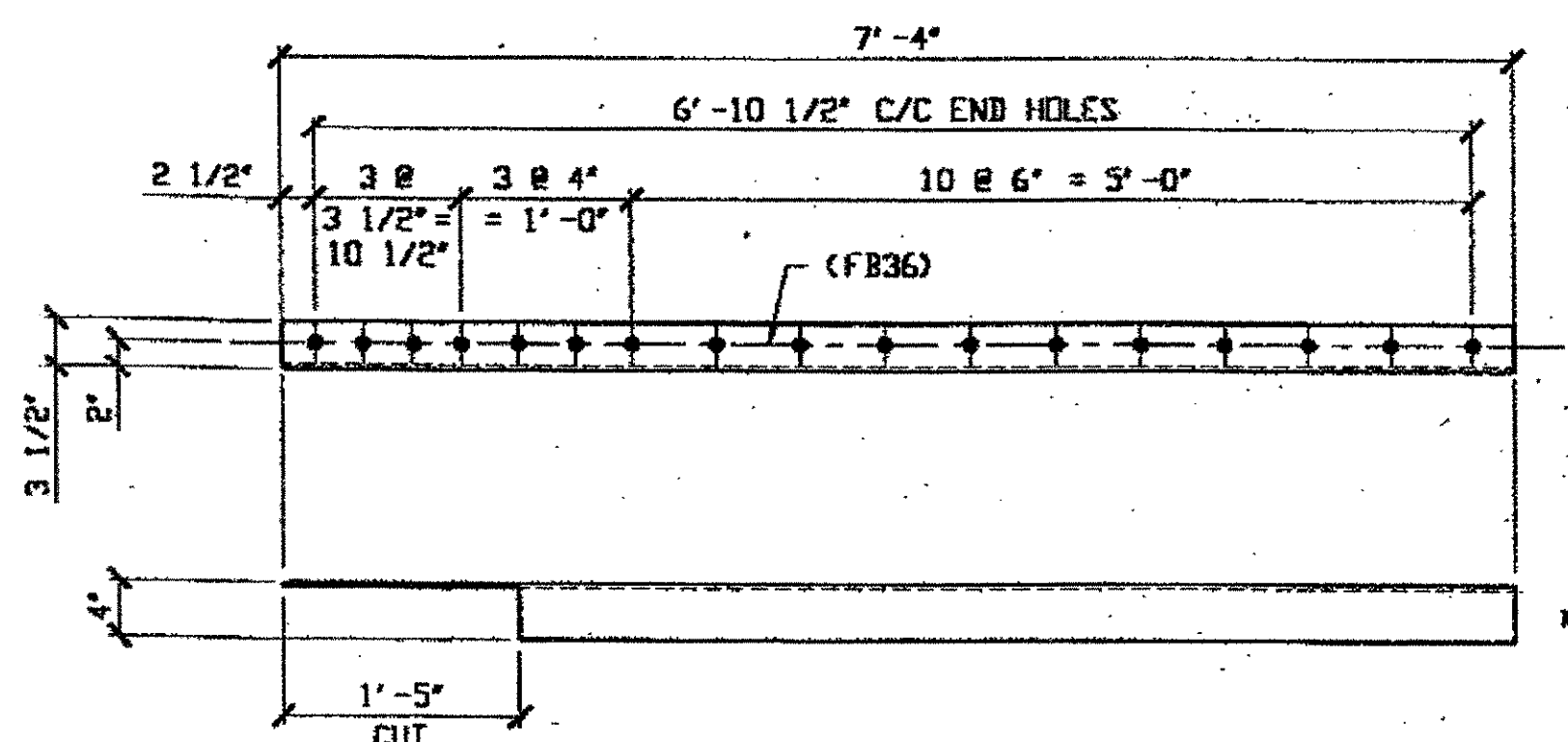
SHEET NUMBER: 164  
 AM. JOB NUMBER: 800010

Last modified by: springer at 11:11am on Wed Nov 08, 2000 - Last plotted by Gfoster - c 04:29pm on Mon Dec 18, 2000  
 H:\800010\164A.dwg



SPAN 7  
0-0' NORTH Bottom EAST 166A

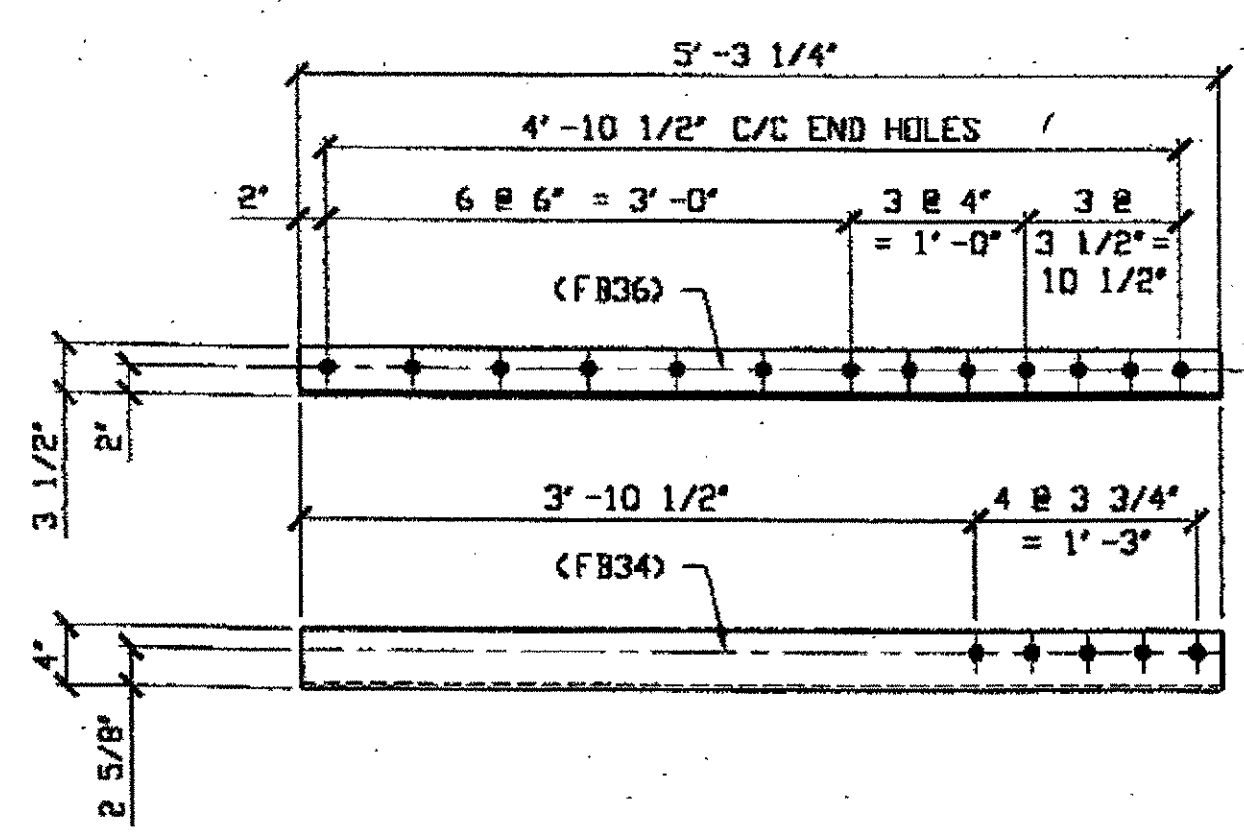
(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 166A  
ORIG. SHOP DRAWING 166 - BS22<sup>L</sup>  
ORIG. SHOP MARK A116c<sup>L</sup>



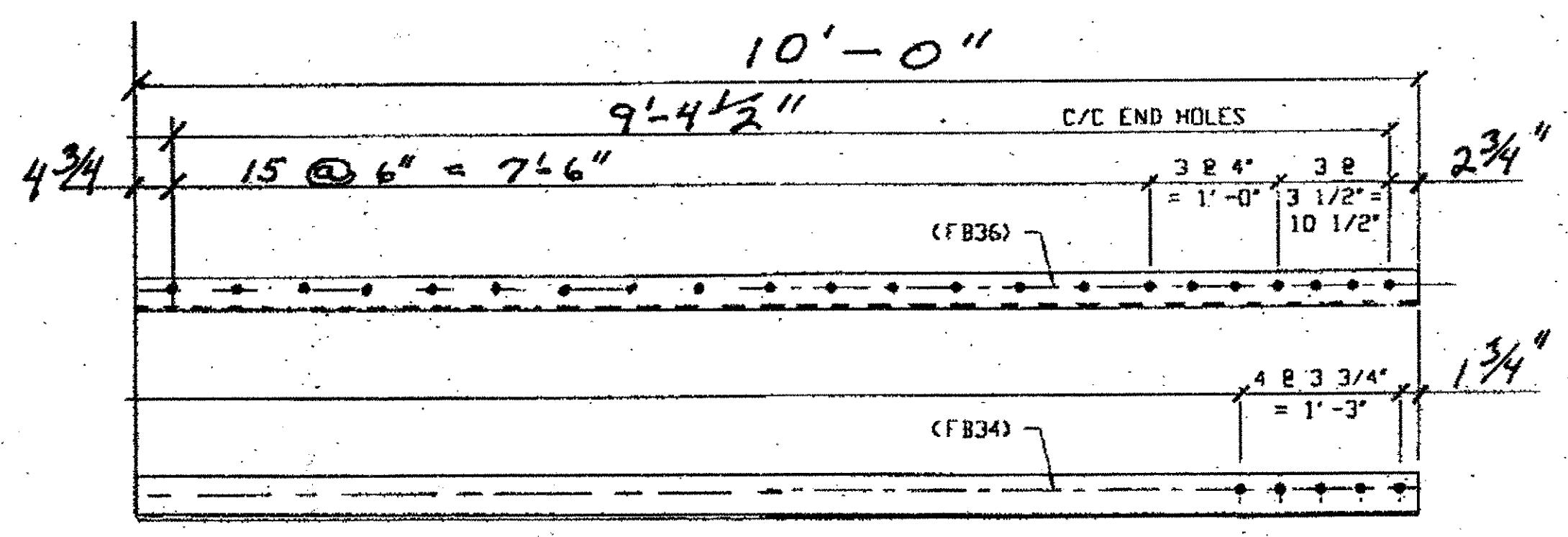
SPAN 1  
K-K' SOUTH Bottom WEST 166B

(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 166B  
ORIG. SHOP DRAWING \* - BS27<sup>R</sup>  
ORIG. SHOP MARK \*  
DOT ITEM LINE No. 0100, 0140 & 0152

\* = ORIG. SHOP DRAWING WAS NOT FOUND.  
FIELD VERIFY DIMENSIONS.



(2) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 166C  
ORIG. SHOP DRAWING 166 - BS22<sup>R</sup>  
ORIG. SHOP MARK A166d<sup>R</sup>  
SPAN 7  
0-0' SOUTH Bottom WEST 166C  
D-D' SOUTH Bottom WEST 166C

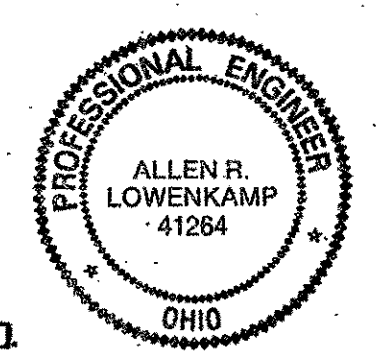


(1) TYPE 3 TRANSVERSE QUARTER LENGTH REPAIR 166D  
ORIG. SHOP DRAWING 166 - BS22<sup>R</sup>  
ORIG. SHOP MARK A166d<sup>R</sup>  
SPAN 7  
0-0' NORTH Bottom WEST 166D

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANSVERSE QUARTER	10	0		91x2
2		166A	1	L 4 X 3 1/2 X 3/8				67
3		166B	1	L 4 X 3 1/2 X 3/8				96
4		166C	2	L 4 X 3 1/2 X 3/8	5	3 1/4		
5		166D	1	L 4 X 3 1/2 X 3/8	10	0		91x2
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14								
15		FB34		1" DIA	0	2 1/4	NOTE 2	
16		FB36		1" DIA	0	2 1/2	NOTE 2	
PLATE N/A		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

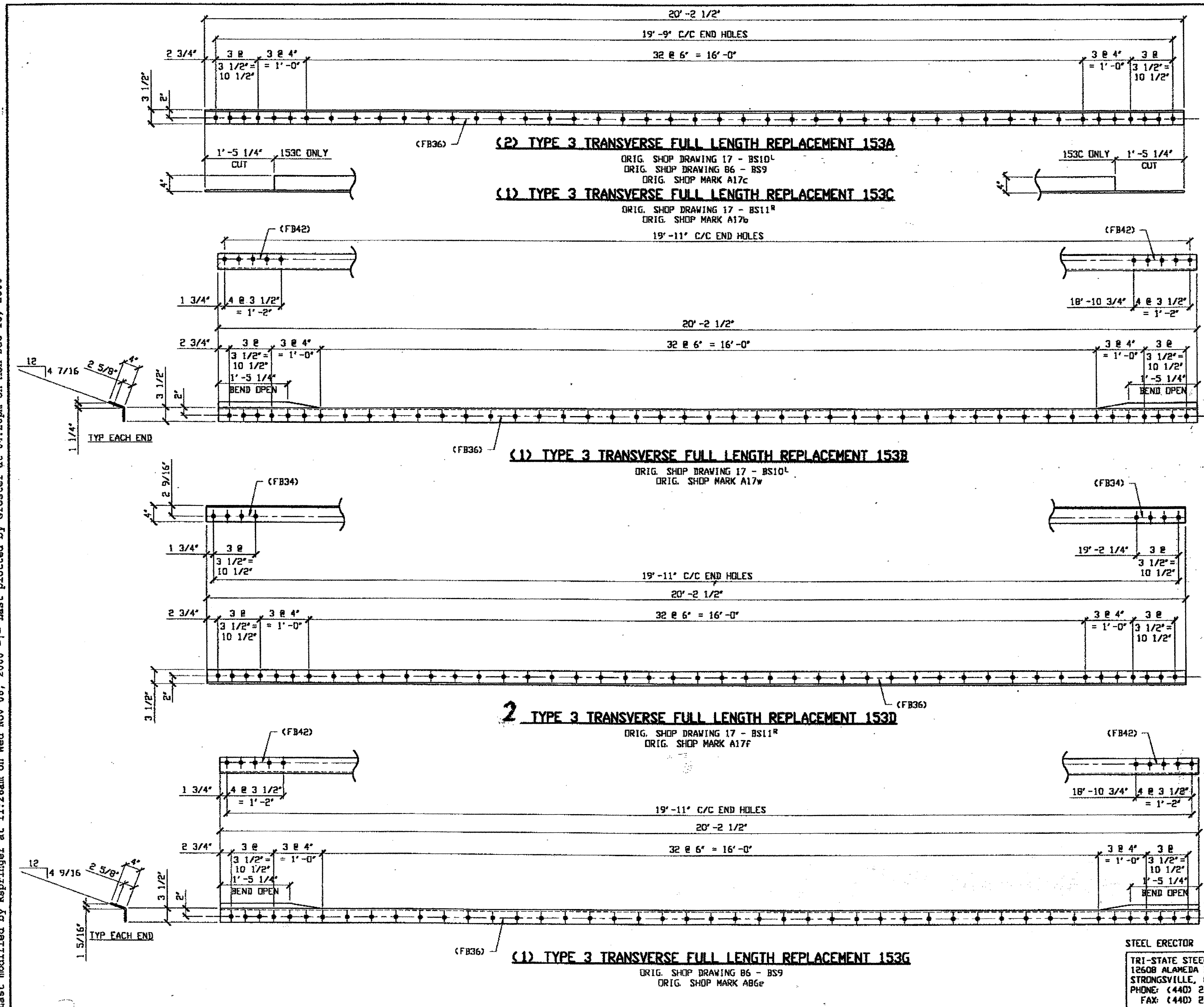


DOT ITEM LINE NO. 0116 U.N.O.  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 TRANSVERSE MEMBER REPAIR			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY COLUMBUS, PA. 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH DRAWN BY: DATE: RAS 11/7/00 CHECKED BY: DATE: GAF 11/7/00		SHEET NUMBER: 166 AWM JOB NUMBER: 800010	

Last modified by Repringer at 11:18am on Mon Nov 27, 2000 - Last plotted by Gfooster at 04:50pm on Mon Dec 18, 2000

Last modified by Repringer at 11:26am on Wed Nov 08, 2000 - Last plotted by Gfoister at 04:20pm on Mon Dec 18, 2000

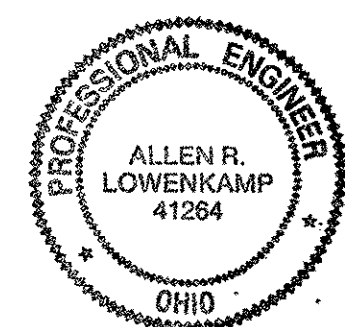


BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANS FULL REPAIR				
2		153A	2	L 4 X 3 1/2 X 3/8	20	2 1/2		368
3		153B	1	L 4 X 3 1/2 X 3/8	20	2 1/2	BEND	184
4		153C	1	L 4 X 3 1/2 X 3/8	20	2 1/2		184
5		153D	2	L 4 X 3 1/2 X 3/8	20	2 1/2		
6		153G	1	L 4 X 3 1/2 X 3/8	20	2 1/2	BEND	184
7								
8								
9				FIELD BOLTS Based on 6 Angles				
10		FB34	8	1" DIA	0	2 1/4	NOTE 2	11
11		FB36	270	1" DIA	0	2 1/2	NOTE 2	376
12		FB42	20	1" DIA	0	3 1/4	NOTE 2	31
13								
14								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16})$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 3 L-L' NORTH, TOP WEST 153 B  
 SPAN 3 L-L' NORTH, TOP EAST 153 A  
 SPAN 3 M-M' NORTH, BOTTOM EAST 153 C  
 SPAN 3 M-M' NORTH, BOTTOM WEST 153 D  
 SPAN 5 M-M' SOUTH, TOP WEST 153 G  
 SPAN 5 M-M' SOUTH, TOP EAST 153 A  
 SPAN 5 M-M' SOUTH, BOTTOM EAST 153 D

**O.D.O.T. DIST. 12**  
 ACCEPTED  2/1/04 PSM  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	DATE	DESCRIPTION	BY
		REVISIONS	

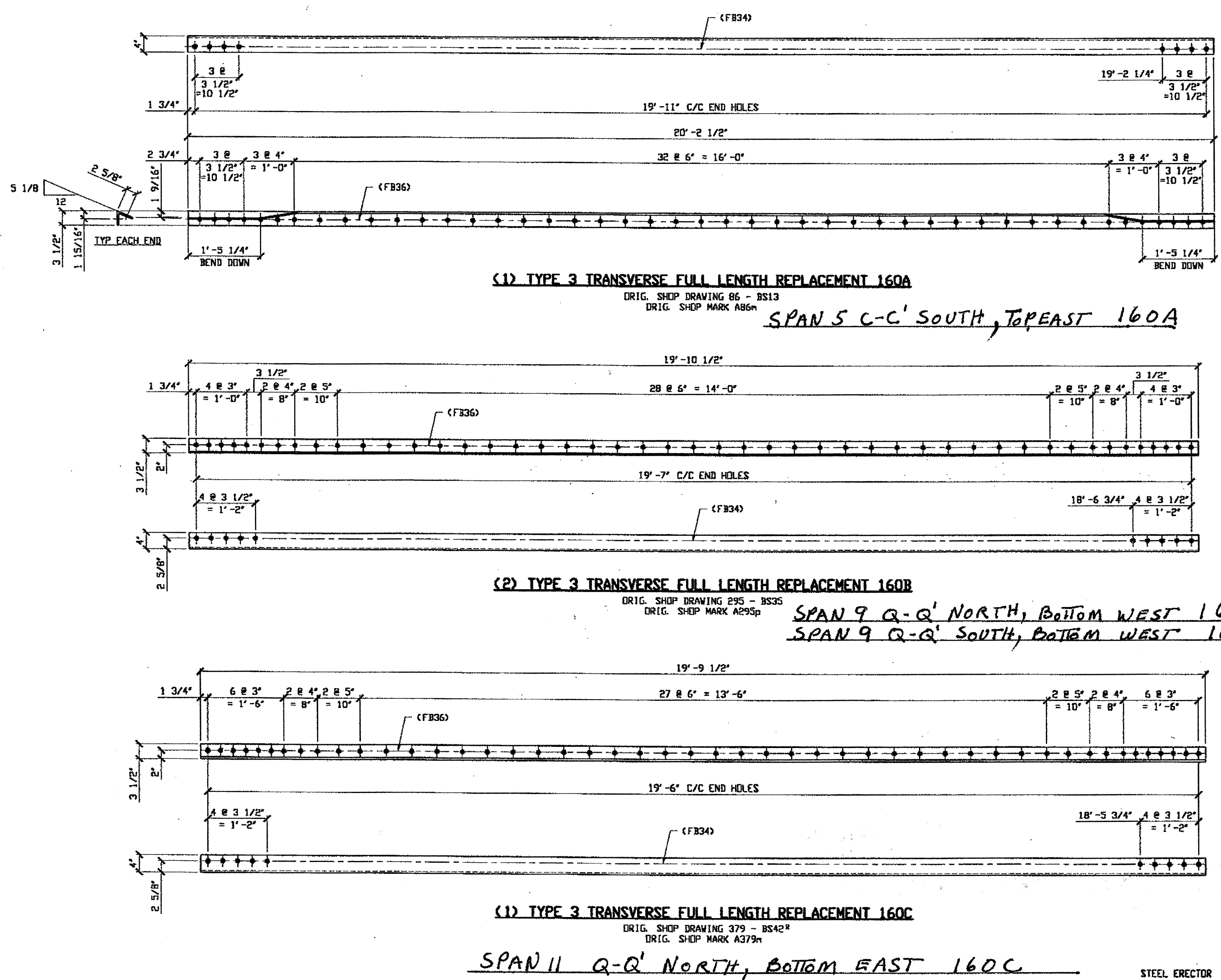
FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2800 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE NO. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH	DRAWN BY: DATE	SHEET NUMBER
	RAS 9/28/00	153
	CHECKED BY: DATE	AWB JOB NUMBER
	GAF 11/08/00	800010

Last modified by: springer at 10:52am on Wed Nov 08, 2000 - 1 - Last plotted by: Gfoote 04:22pm on Mon Dec 18, 2000



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 3 TRANS FULL REPAIR					
2		160A	1	L 4 X 3 1/2 X 3/8	20	2 1/2	BEND	184	
3		160B	2	L 4 X 3 1/2 X 3/8	19	10 1/2		362	
4		160C	1	L 4 X 3 1/2 X 7/16	19	9 1/2		210	
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16				FIELD BOLTS					
17		FB36	187	1" DIA	0	2 1/2	NOTE 2	261	
18		FB34	38	1" DIA	0	2 1/4	NOTE 2	51	
19									
20									
PLATE		PIPE		FITTINGS					
SHAPES A36		FLGS.		BOLTS				NOTE 2	

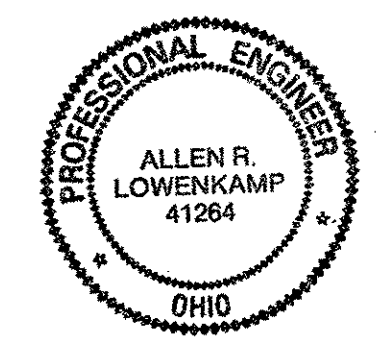
- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/1/01	tdp
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/1/01 BY tdp



DOT ITEM LINE NO. 0115  
DOT BID ITEM NO. 86350000



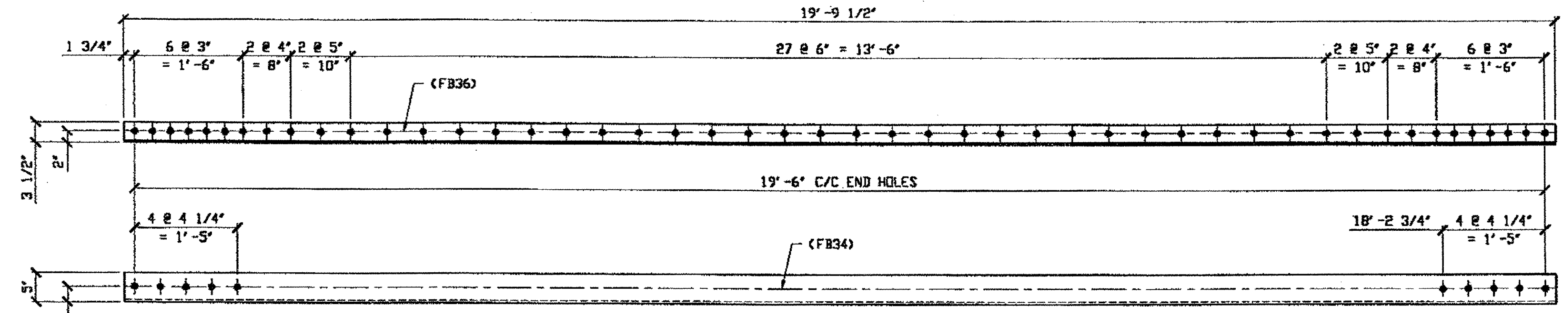
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
TRANSVERSE MEMBER REPAIR

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12508 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 10/17/00  
CHECKED BY: DATE: GAF 11/7/00

SHEET NUMBER: 160  
JOB NUMBER: 800010

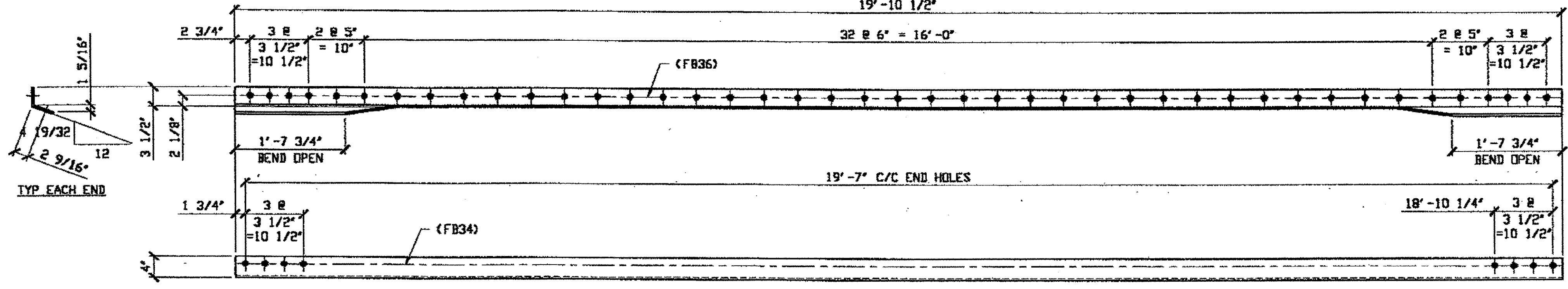
Last modified by aspringer at 03:41pm on Mon Dec 18, 2000 - Last plotted by Gfoster at 04:29pm on Mon Dec 18, 2000



**(1) TYPE 3 TRANSVERSE FULL LENGTH REPLACEMENT 165A**

ORIG. SHOP DRAWING 379 - BS43<sup>R</sup>  
ORIG. SHOP MARK A379e

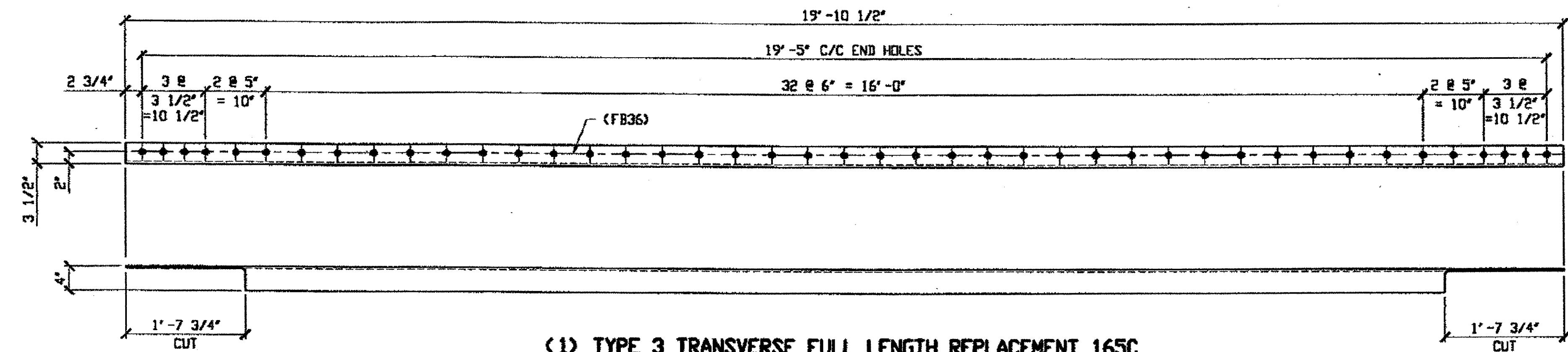
*SPAN 11 R-R SOUTH, BOTTOM WEST*



**(1) TYPE 3 TRANSVERSE FULL LENGTH REPLACEMENT 165B**

ORIG. SHOP DRAWING 519 - BS46  
ORIG. SHOP MARK A519e

*SPAN 13 A-A SOUTH, BOTTOM WEST*



**(1) TYPE 3 TRANSVERSE FULL LENGTH REPLACEMENT 165C**

ORIG. SHOP DRAWING 519 - BS46  
ORIG. SHOP MARK A519F

*SPAN 13 A-A SOUTH, BOTTOM EAST*

BILL OF MATERIAL									
LINE	ADVANCE BILL # LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 3 TRANS FULL REPAIR					
2		165A	1	L 5 X 3 1/2 X 3/8	19	9 1/2		206	
3		165B	1	L 4 X 3 1/2 X 3/8	19	10 1/2	BEND	181	
4		165C	1	L 4 X 3 1/2 X 3/8	19	10 1/2		166	
5									
6				SPOT REPAIR TO ANGLE					
7		165D	3	BAR 3 X 1/2	10	0	PLAIN MAT'L	153	
8		165F	1	BAR 4 X 1	10	0	PLAIN MAT'L	136	
9									
10				WEB SPOT REPAIR					
11		165G	6	BAR 4 X 3/8	10	0	PLAIN MAT'L	306	
12									
13									
14									
15									
16				FIELD BOLTS					
17		FB36	134	1" DIA	0	2 1/2	NOTE 2	187	
18		FB34	18	1" DIA	0	2 1/4	NOTE 2	24	
19									
20									
PLATE		PIPE		FITTINGS					
SHAPES A36		FLGS.		BOLTS NOTE 2					

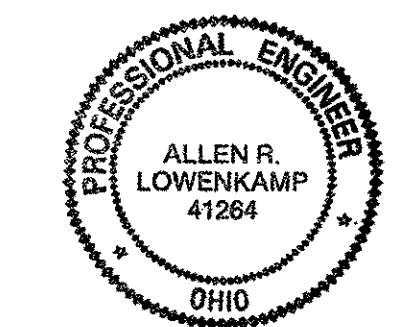
**NOTES:**

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HYV HEX HD W/HYV HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12		
ACCEPTED	2/4/01	DJP
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/1/01 BY *tDP*



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COSHOCTON, PA. 15102  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

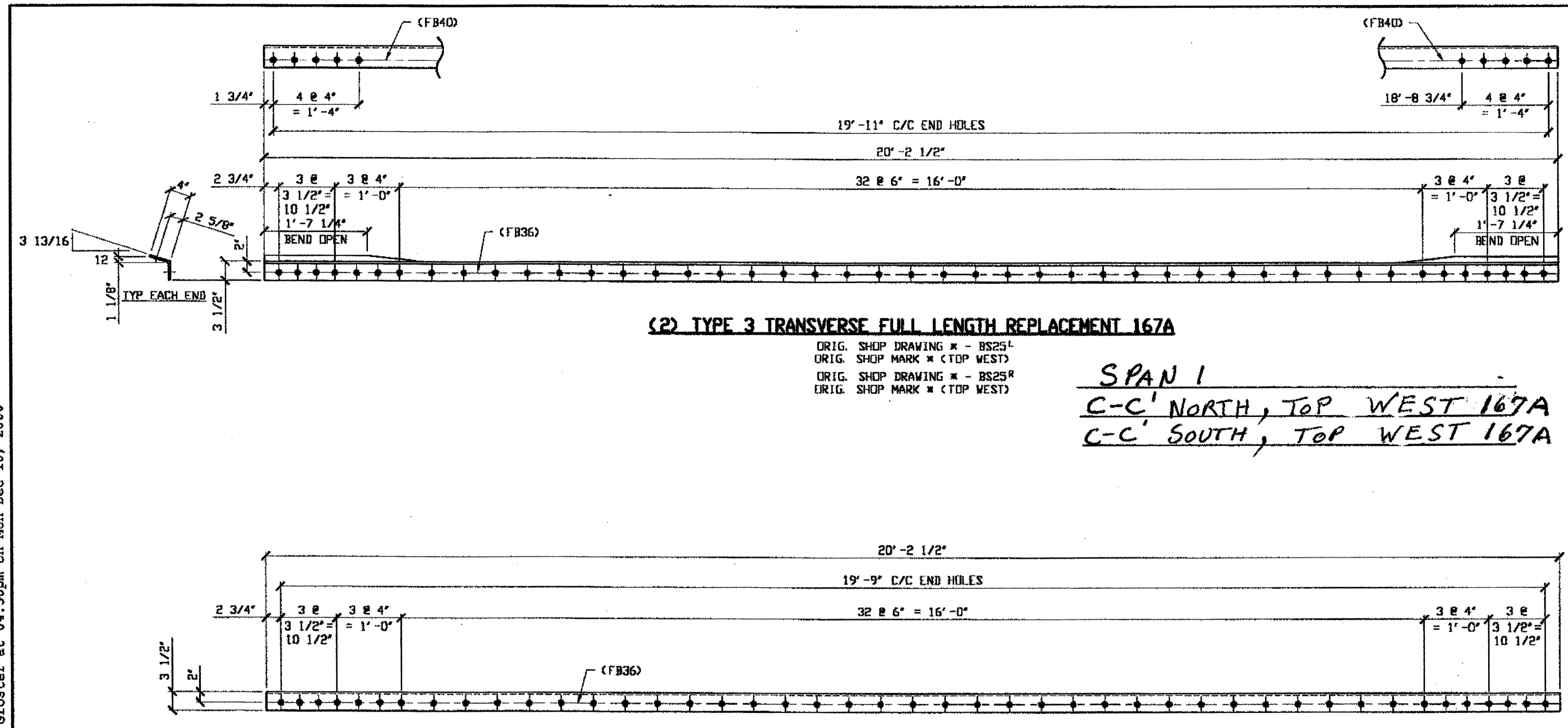
**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L SMITH  
DRAWN BY: DATE  
RAS 11/06/00  
CHECKED BY: DATE  
GAF 11/07/00

DOT ITEM LINE NO. 0115		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION REVISIONS	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 TRANSVERSE MEMBER REPAIR			
SHEET NUMBER		JOB NUMBER	
165		800010	

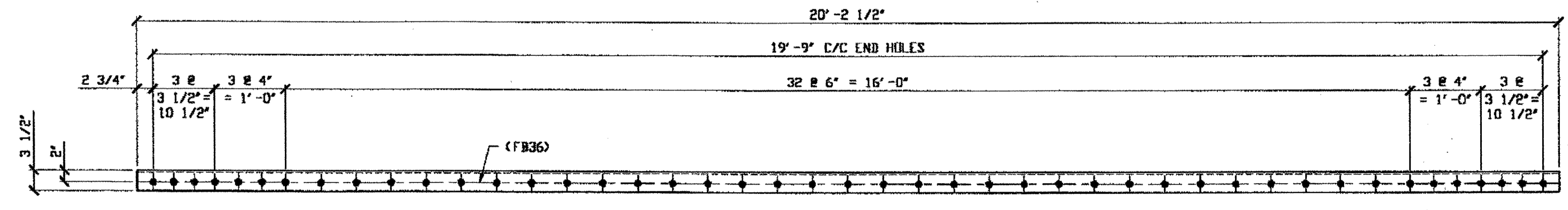
Last modified by at \$(EDTIME, ??) on \$(EDTIME, ??) -1- Last plotted by Gester at 04:30pm on Mon Dec 18, 2000



**(2) TYPE 3 TRANSVERSE FULL LENGTH REPLACEMENT 167A**

ORIG. SHOP DRAWING \* - BS25<sup>L</sup>  
 ORIG. SHOP MARK \* (TOP WEST)  
 ORIG. SHOP DRAWING \* - BS25<sup>R</sup>  
 ORIG. SHOP MARK \* (TOP WEST)

*SPAN 1*  
C-C' NORTH, TOP WEST 167A  
C-C' SOUTH, TOP WEST 167A



**(2) TYPE 3 TRANSVERSE FULL LENGTH REPLACEMENT 167B**

ORIG. SHOP DRAWING \* - BS25<sup>L</sup>  
 ORIG. SHOP MARK \* (TOP EAST)  
 ORIG. SHOP DRAWING \* - BS25<sup>R</sup>  
 ORIG. SHOP MARK \* (TOP EAST)

*SPAN 1*  
C-C' SOUTH, TOP EAST 167B  
C-C' NORTH, TOP EAST 167B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 3 TRANS FULL REPAIR				
2		167A	2	L 4 X 3 1/2 X 3/8	20	2 1/2	BEND	368
3		167B	2	L 4 X 3 1/2 X 3/8	20	2 1/2		368
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB36	180	1" DIA	0	2 1/2	NOTE 2	251
11		FB40	20	1" DIA	0	3	NOTE 2	30
12								
13								
PLATE	N/A			PIPE N/A			FITTINGS N/A	
SHAPES	A36			FLGS. N/A			BOLTS NOTE 2	

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

\* = ORIG. SHOP DRAWING WAS NOT FOUND FIELD VERIFY DIMENSIONS.

O.D.O.T. DIST. 12	
ACCEPTED	2/9/04 D.S.M.
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIA, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 11/08/00  
 CHECKED BY: DATE: GAF 11/08/00

DOT ITEM LINE NO. 0115  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

SHEET NUMBER: 167  
 JOB NUMBER: 800010



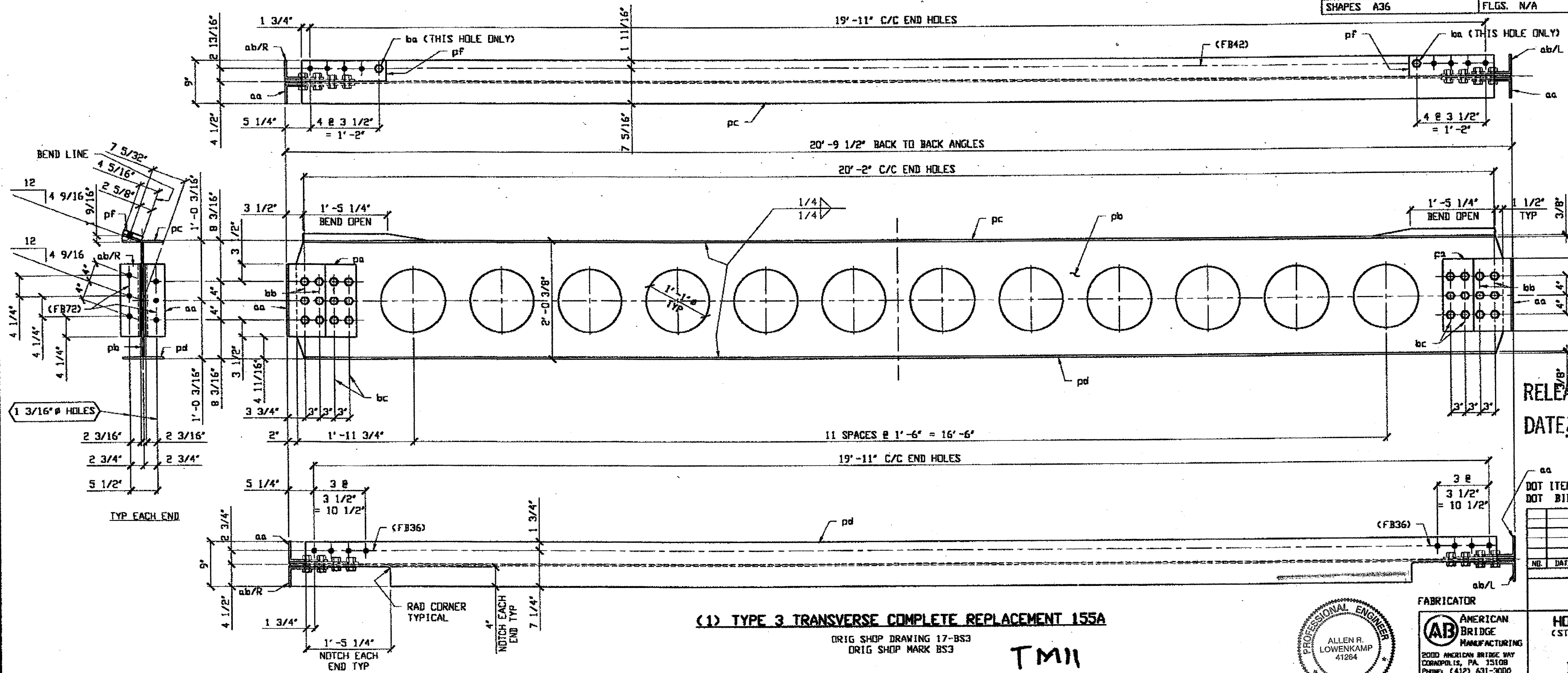
NOTES:

1. OPEN HOLES ARE  $(1 \frac{1}{16} \text{"} \phi)$  UNLESS NOTED OTHERWISE
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
4. ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		155A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1162
2		pc	1	PL 3/8 X 9	20	2 1/2	BEND	232
3		pd	1	PL 3/8 X 9	20	2 1/2		232
4		aa	2	L B X 4 X 1/2	1	3		49
5		ab R/L	2	L B X 4 X 1/2	1	3		49
6		pa	4	PL 3/8 X 12 1/2	1	3		80
7		pb	1	PL 3/8 X 23 5/8	20	5 1/2		446
8		pf	2	PL 13/16 X 4 5/16	1	5 1/2		35
9		ba	2	1" HVY HEX BOLT	0	2 3/4	NOTE 2	3
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" HVY HEX BOLT	0	3 1/2	NOTE 2	19
12				W/HVY HEX NUT & WASHER				
13		bc	12	1" HVY HEX BOLT	0	2 1/2	NOTE 2	17
14				W/HVY HEX NUT & WASHER				
15				FIELD BOLTS				
16		FB42	8	1" DIA	0	3 1/4	NOTE 2	12
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

SPAN 3, D-D' NORTH 155A



O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 DATE 2/1/01 BY tdf  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY tdf  
 As Noted

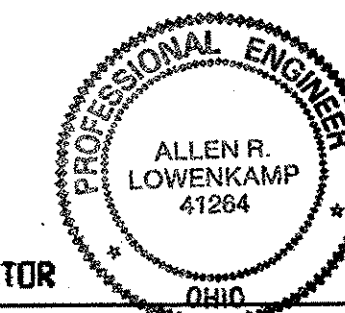
DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. B63E30000

NO.	DATE	DESCRIPTION	BY

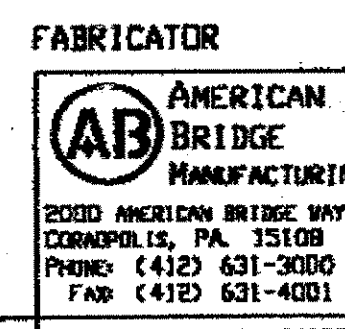
(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 155A

ORIG SHOP DRAWING 17-B53  
 ORIG SHOP MARK B53

TM11



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 TRANSVERSE MEMBER REPAIR

SHEET NUMBER: 153  
 JOB NUMBER: 800010

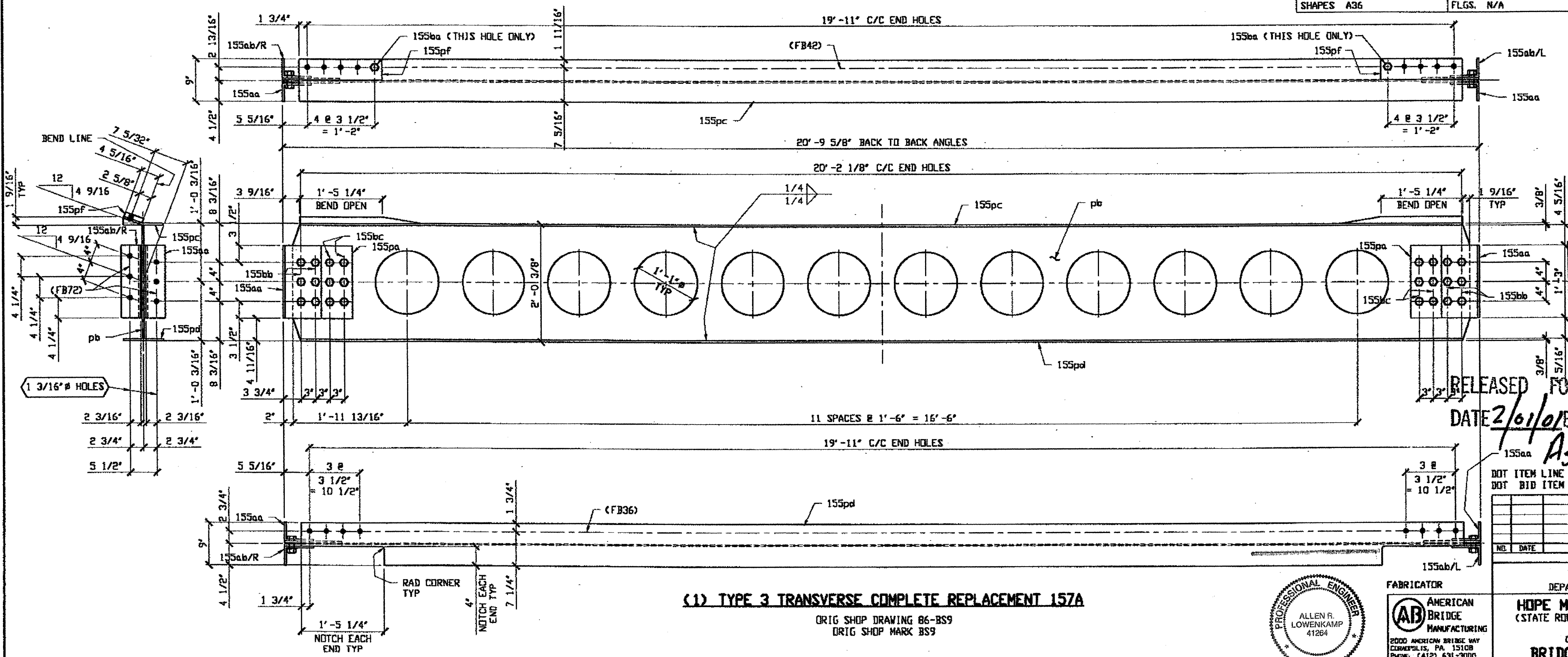
Last modified by Repringer at 07:45am on Mon Nov 27, 2000 - Last plotted by Gfosser at 04:20pm on Mon Dec 18, 2000

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		157A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1161
2		155pc	1	PL 3/8 X 9	20	2 1/2	BEND	232
3		155pd	1	PL 3/8 X 9	20	2 1/2		232
4		155aa	2	L 8 X 4 X 1/2	1	3		49
5		155ab R/L	2	L 8 X 4 X 1/2	1	3		49
6		155pa	4	PL 3/8 X 12 1/2	1	3		80
7		pb	1	PL 3/8 X 23 5/8	20	5 3/8		446
8		155pf	2	PL 13/16 X 4 5/16	1	5 1/2		34
9		155ba	2	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	3
10				W/HVY HEX NUT & WASHER				
11		155bb	12	1" # HVY HEX BOLT	0	3 1/2	NOTE 2	19
12				W/HVY HEX NUT & WASHER				
13		155bc	12	1" # HVY HEX BOLT	0	2 1/2	NOTE 2	17
14				W/HVY HEX NUT & WASHER				
15				FIELD BOLTS				
17		FB42	8	1" DIA	0	3 1/4	NOTE 2	12
18		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
19		FB72	12	1 1/8" DIA	0	3 1/2	NOTE 2	25
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES A36					FLGS. N/A		BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{ } \phi)$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN 5 M-M' NORTH 157A



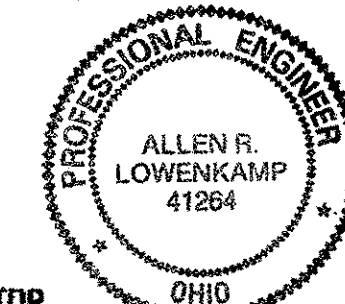
O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 2/6/01 BY *tsp*  
 AS NOTED

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 157A

ORIG SHOP DRAWING B6-BS9  
 ORIG SHOP MARK BS9



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COMMERCEVILLE, PA 15109  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 TRANSVERSE MEMBER REPAIR

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 10/02/00  
 CHECKED BY: DATE  
 GAF 11/10/00  
 SHEET NUMBER  
 157  
 AWM JOB NUMBER  
 800010

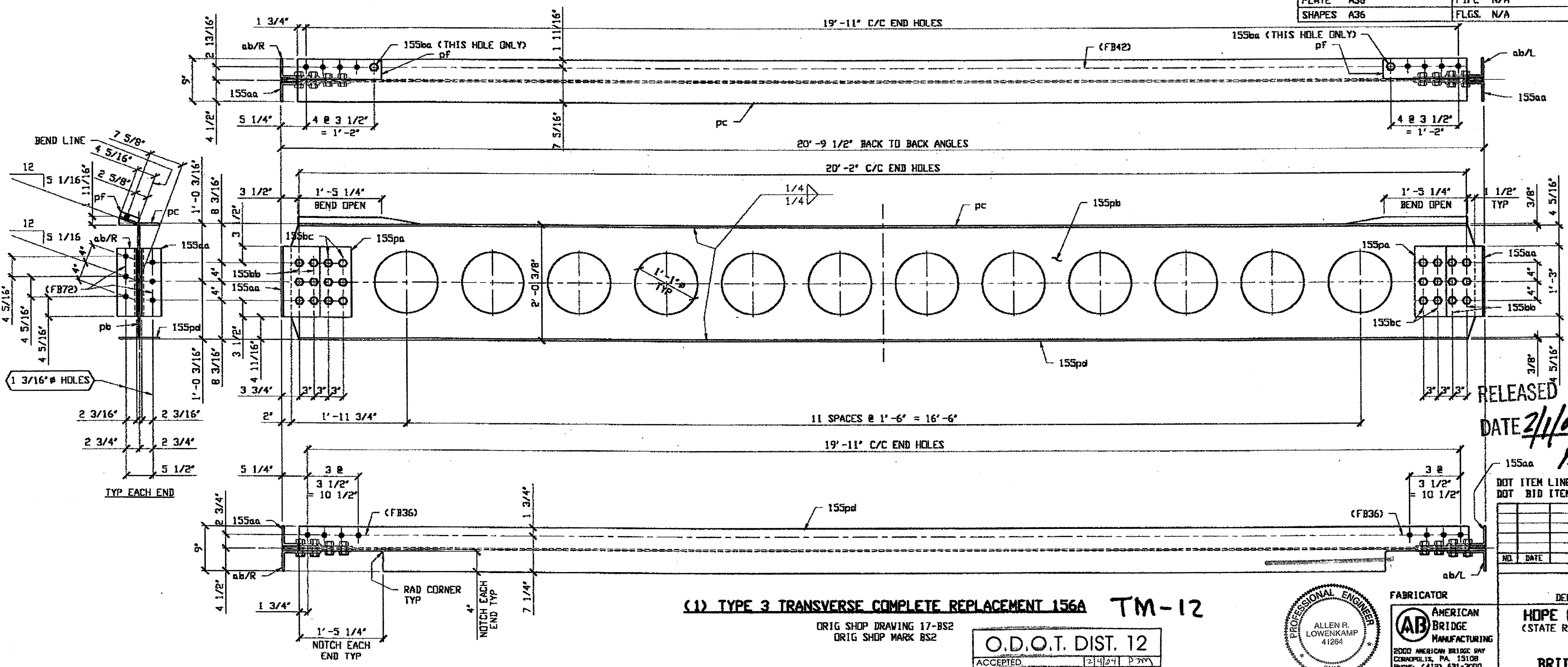
Last modified by Respringer at 03:31pm on Tue Nov 21, 2000 - last plotted by Gfoester at 04:21pm on Mon Dec 18, 2000

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**SPAN 3 C-C', SOUTH 156A**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		156A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1161
2		pc	1	PL 3/8 X 9	20	2 1/2	BEND	232
3		155pd	1	PL 3/8 X 9	20	2 1/2		232
4		155aa	2	L B X 4 X 1/2	1	3		49
5		ab R/L	2	L B X 4 X 1/2	1	3		49
6		155pa	4	PL 3/8 X 12 1/2	1	3		80
7		155pb	1	PL 3/8 X 23 5/8	20	5 1/2		446
8		pf	2	PL 1 X 4 5/16	1	5 1/2		34
8		155ba	2	1" HVY HEX BOLT	0	2 3/4	NOTE 2	3
9				W/HVY HEX NUT & WASHER				
10		155bb	12	1" HVY HEX BOLT	0	3 1/2	NOTE 2	19
11				W/HVY HEX NUT & WASHER				
12		155bc	12	1" HVY HEX BOLT	0	2 1/2	NOTE 2	17
13				W/HVY HEX NUT & WASHER				
14								
15				FIELD BOLTS				
16		FB42	8	1" DIA	0	3 1/4	NOTE 2	12
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

Last modified by Repringer at 03:30pm on Tue Nov 21, 2000 - 1 - Last plotted by cfozstar at 04:21pm on Mon Dec 18, 2000

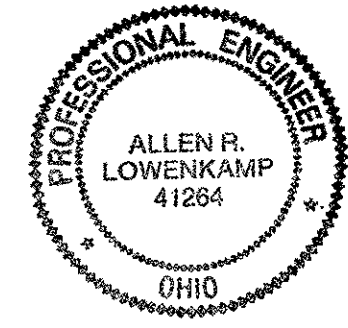


RELEASED FOR CONSTRUCTION  
DATE 2/1/01 BY EDP  
As NOTED

**(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 156A TM-12**

ORIG SHOP DRAWING 17-BS2  
ORIG SHOP MARK BS2

**O.D.O.T. DIST. 12**  
ACCEPTED AS NOTED  
NOT ACCEPTED



**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**FABRICATOR**  
AMERICAN BRIDGE  
MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CINCINNATI, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

SHEET NUMBER: 156  
JOB NUMBER: 800010

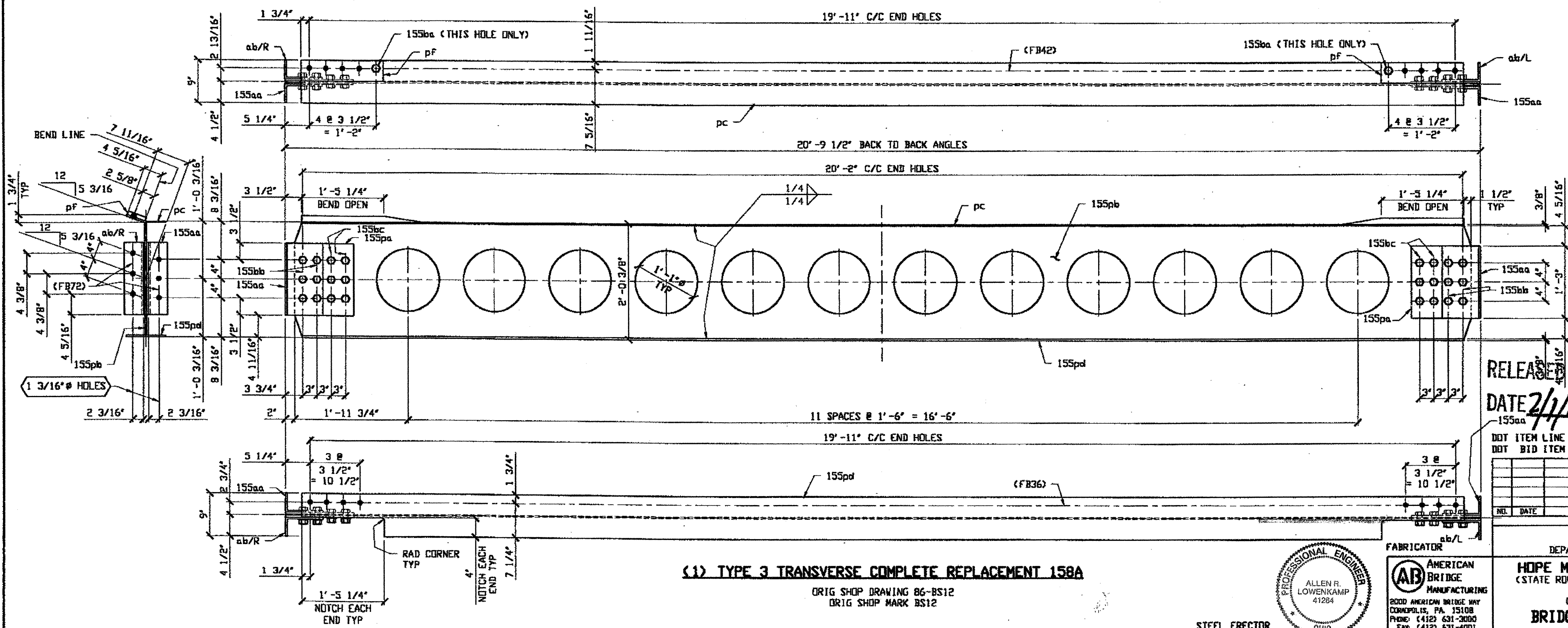
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		158A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1167
2		pc	1	PL 3/8 X 9	20	2 1/2	BEND	232
3		155pd	1	PL 3/8 X 9	20	2 1/2		232
4		155aa	2	L 8 X 4 X 1/2	1	3		49
5		ab R/L	2	L 8 X 4 X 1/2	1	3		49
6		155pa	4	PL 3/8 X 12 1/2	1	3		80
7		155pb	1	PL 3/8 X 23 5/8	20	5 1/2		446
8		pf	2	PL 15/16 X 4 5/16	1	5 1/2		40
9		155ba	2	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	3
10				W/HVY HEX NUT & WASHER				
11		155bb	12	1" # HVY HEX BOLT	0	3 1/2	NOTE 2	19
12				W/HVY HEX NUT & WASHER				
13		155bc	12	1" # HVY HEX BOLT	0	2 1/2	NOTE 2	17
14				W/HVY HEX NUT & WASHER				
15								
16				FIELD BOLTS				
17		FB42	8	1" DIA	0	3 1/4	NOTE 2	12
18		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $1 \frac{1}{16}$ " UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**APPROVER NOTE:**  
THICKNESS OF FILL PLATE pf WAS NOT CLEAR ON ORIGINAL DRAWING. PLEASE VERIFY THICKNESS ON APPROVAL.

**SPAN 5, N-N', NORTH 158 A**



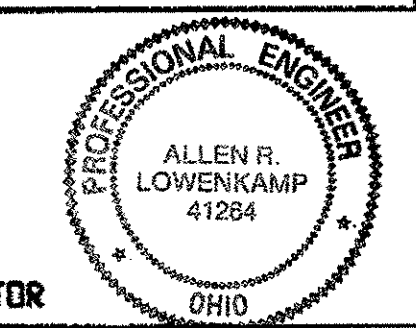
**O.D.O.T. DIST. 12**

ACCEPTED	2/1/01	ARM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 2/1/01 BY tdf  
DOT ITEM LINE NO. D114  
DOT BID ITEM NO. 863ES0000  
As Noted

**(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 158A**  
ORIG SHOP DRAWING 86-BS12  
ORIG SHOP MARK BS12



**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**FABRICATOR**  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONNEPOLIS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

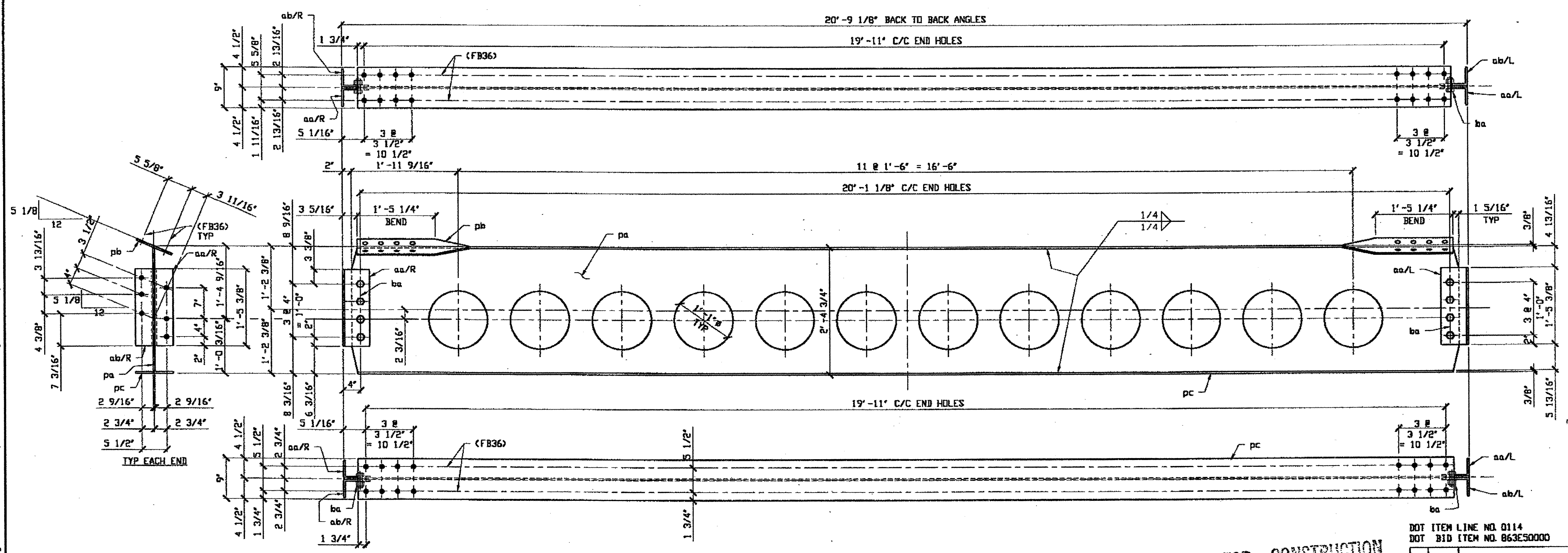
Last modified by repringer at 03:34pm on Tue Nov 21, 2000 -1- last plotted by Gfoister at 04:21pm on Mon Dec 18, 2000

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		159A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1070
2		pa	1	PL 3/8 X 28	20	5 1/8		559
3		pb	1	PL 3/8 X 9	20	2 1/2	BEND	232
4		pc	1	PL 3/8 X 9	20	2 1/2		232
5		aa R/L	2	L 6 X 4 X 3/8	1	5 3/8		18
6		ab R/L	2	L 6 X 4 X 3/8	1	5 3/8		18
7		ba	8	1" # HVY HEX BOLT	0	2 1/2	NOTE 2	11
8				W/HVY HEX NUT & WASHER				
9								
10				FIELD BOLTS				
11		FB36	44	1" DIA	0	2 1/2	NOTE 2	61
11								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{ } \phi)$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**SPAN 5 C-C' NORTH 159A**



**(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 159A**  
 ORIG SHOP DRAWING 86-BS13  
 ORIG SHOP MARK BS13

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY tdp  
 AS NOTED

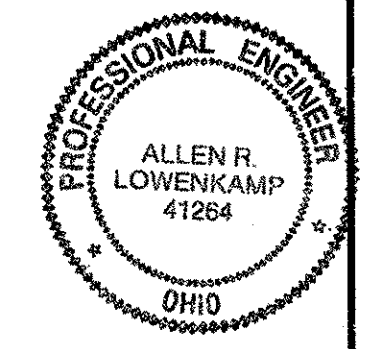
O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general convenience with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORONADO, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

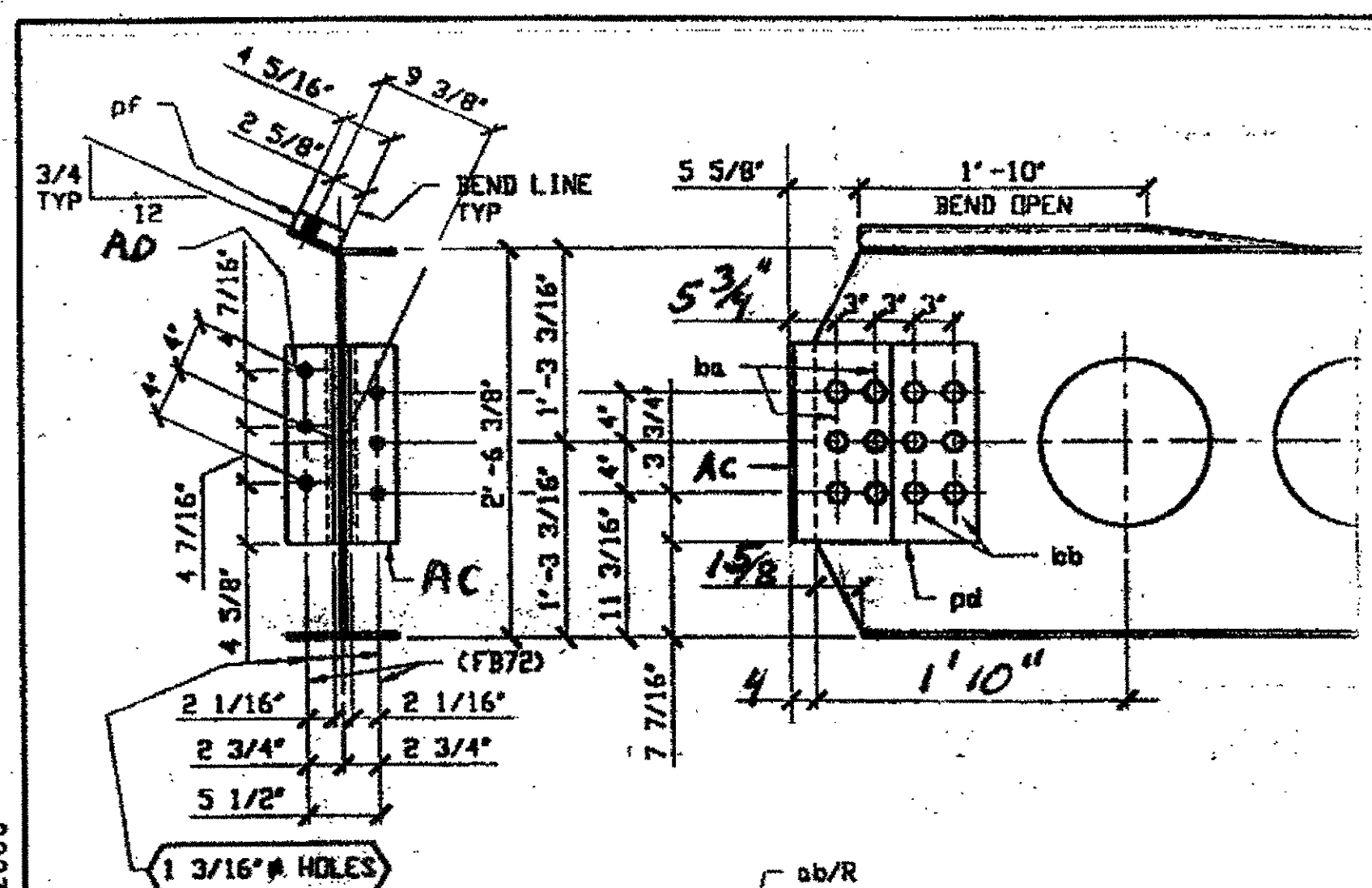
DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 TRANSVERSE MEMBER REPAIR			
SHEET NUMBER			159
JOB NUMBER			800010



Last modified by aspringer at Tue Nov 21, 2000 04:05pm on Tue Nov 21, 2000 04:22pm on Mon Dec 18, 2000

Last modified by Repringer at 04:11pm on Tue Nov 21, 2000 - Last plotted by Gfoster at 04:23pm on Mon Dec 18, 2000



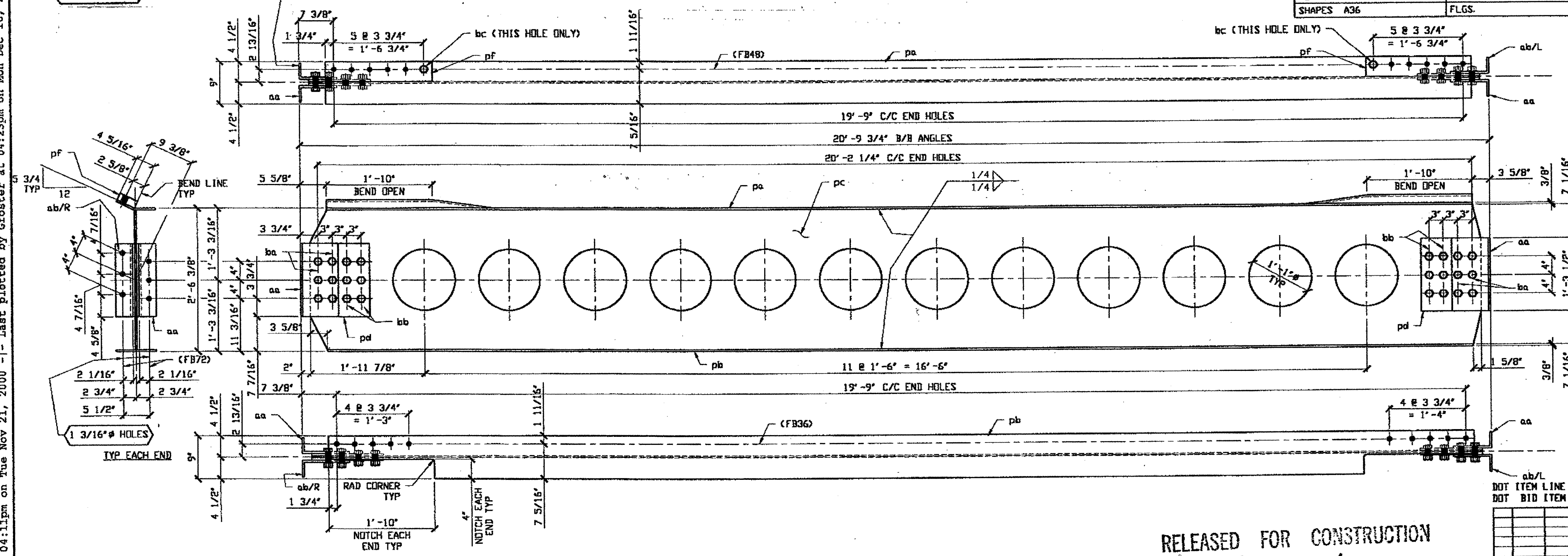
**DETAIL FOR C-C' SOUTH,  
SOUTH EXTERIOR END  
ONLY**

**AD+AC L: 4" x 10 1/4" x 1/16" x  
1'-3 1/2"**

- NOTES:**
1. OPEN HOLES ARE  $\phi 1 \frac{1}{16}$  UNLESS NOTED OTHERWISE
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  4. ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**BILL OF MATERIAL**

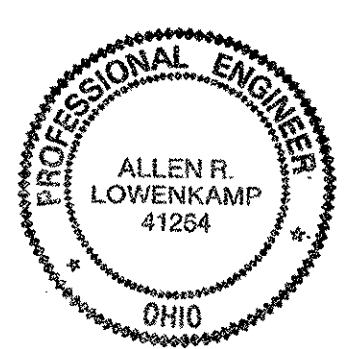
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS	WEIGHT
1		161A	3	TYPE 3 TRANS COMPLETE REPLACEMENT			4188
2		pa	3	PL 3/8 X 9	20 0 1/2	BEND	690
3		pb	3	PL 3/8 X 9	20 0 1/2		690
4		pc	3	PL 3/8 X 29 5/8	20 5 1/4		1802
5		pd	12	PL 1/2 X 12 1/2	1 3 1/2		330
6		pf	6	PL 1 9/16 X 4 5/16	1 10 1/4		255
7		aa	5	L 8 X 4 X 1/2	1 3 1/2		
8		ab R/L	5	L 8 X 4 X 1/2	1 3 1/2		
9		ba	36	1" HVY HEX BOLT	0 3 3/4	NOTE 2	60
10				W/HVY HEX NUT & WASHER			
11		bb	36	1" HVY HEX BOLT	0 2 3/4	NOTE 2	52
12				W/HVY HEX NUT & WASHER			
13		bc	6	1" HVY HEX BOLT	0 3 1/2	NOTE 2	10
14				W/HVY HEX NUT & WASHER			
15				FIELD BOLTS			
16		FB48		1" DIA	0 4	NOTE 2	
17		FB36		1" DIA	0 2 1/2	NOTE 2	
18		FB72		1 1/8" DIA	0 3 1/4	NOTE 2	
PLATE A36				PIPE	FITTINGS		
SHAPES A36				FLGS.	BOLTS NOTE 2		



**O.D.O.T. DIST. 12**

ACCEPTED [Signature] 12/18/00  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**SPAN 7**

C-C' NORTH 161A  
 C-C' SOUTH 161A  
 N-N' NORTH 161A

**(3) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 161A**

DRIG SHOP DWG 166-BS21R  
 DRIG SHOP MARK BS21R

**RELEASED FOR CONSTRUCTION**  
 DATE 2/1/01 BY EDP  
 AS NOTED

**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 10/20/00  
 CHECKED BY: DATE: GAF 11/16/00

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO

**BRIDGE No. CUY-10-16.13**

**TRANSVERSE MEMBER REPAIR**

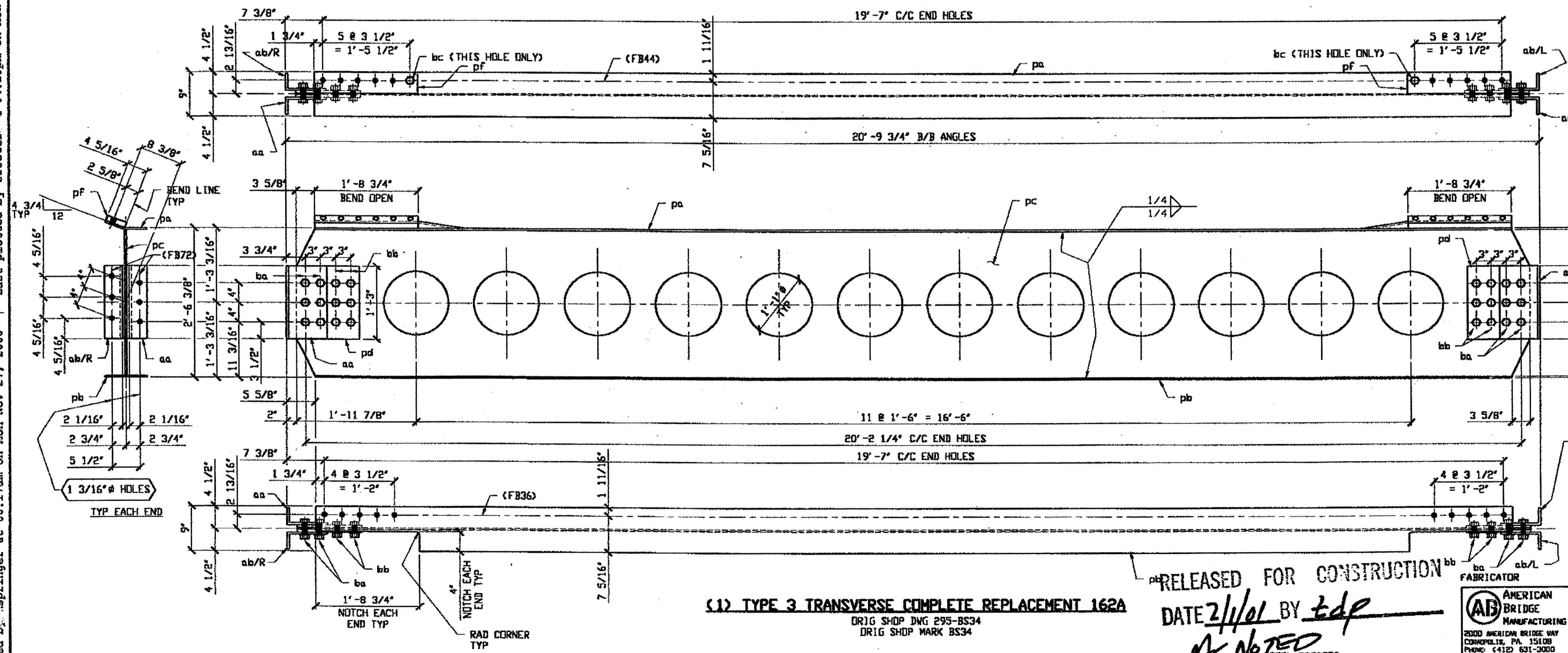
SHEET NUMBER: 161  
 JOB NUMBER: 800010

**BILL OF MATERIAL**

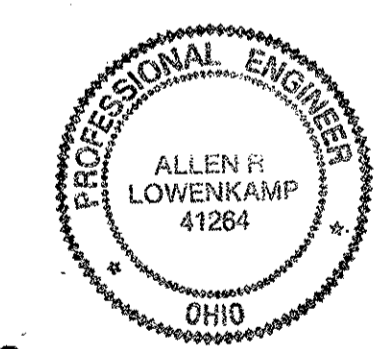
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		162A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1356
2		pa	1	PL 3/8 X 9	19	10 1/2	BEND	228
3		pb	1	PL 3/8 X 9	19	10 1/2		228
4		pc	1	PL 3/8 X 29 5/8	20	5 3/4		599
5		pd	4	PL 1/2 X 12 1/2	1	3		106
6		pf	2	PL 1 1/8 X 4 5/16	1	9		57
7		aa	2	L 8 X 4 X 1/2	1	3		49
8		ab R/L	2	L 8 X 4 X 1/2	1	3		49
9		ba	12	1" # HVY HEX BOLT	0	3 3/4	NOTE 2	20
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	17
12				W/HVY HEX NUT & WASHER				
13		bc	2	1" # HVY HEX BOLT	0	3	NOTE 2	3
14				W/HVY HEX NUT & WASHER				
15								
16				FIELD BOLTS				
17		FB44	10	1" DIA	0	3 1/2	NOTE 2	16
18		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE		A36		PIPE			FITTINGS	
SHAPES		A36		FLGS.			BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 3/16" Ø) UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**SPAN 9 P-P' NORTH 162A**



**O.D.O.T. DIST. 12**  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED \_\_\_\_\_  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



BOT ITEM LINE NO. 0114  
 BOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY *tdp*  
 AS NOTED

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 162A  
 ORIG SHOP DWG 295-BS34  
 DRIG SHOP MARK BS34

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNWALLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 10/23/00  
 CHECKED BY: DATE: GAF 11/17/00  
 SHEET NUMBER: 162  
 ASH JOB NUMBER: 800010

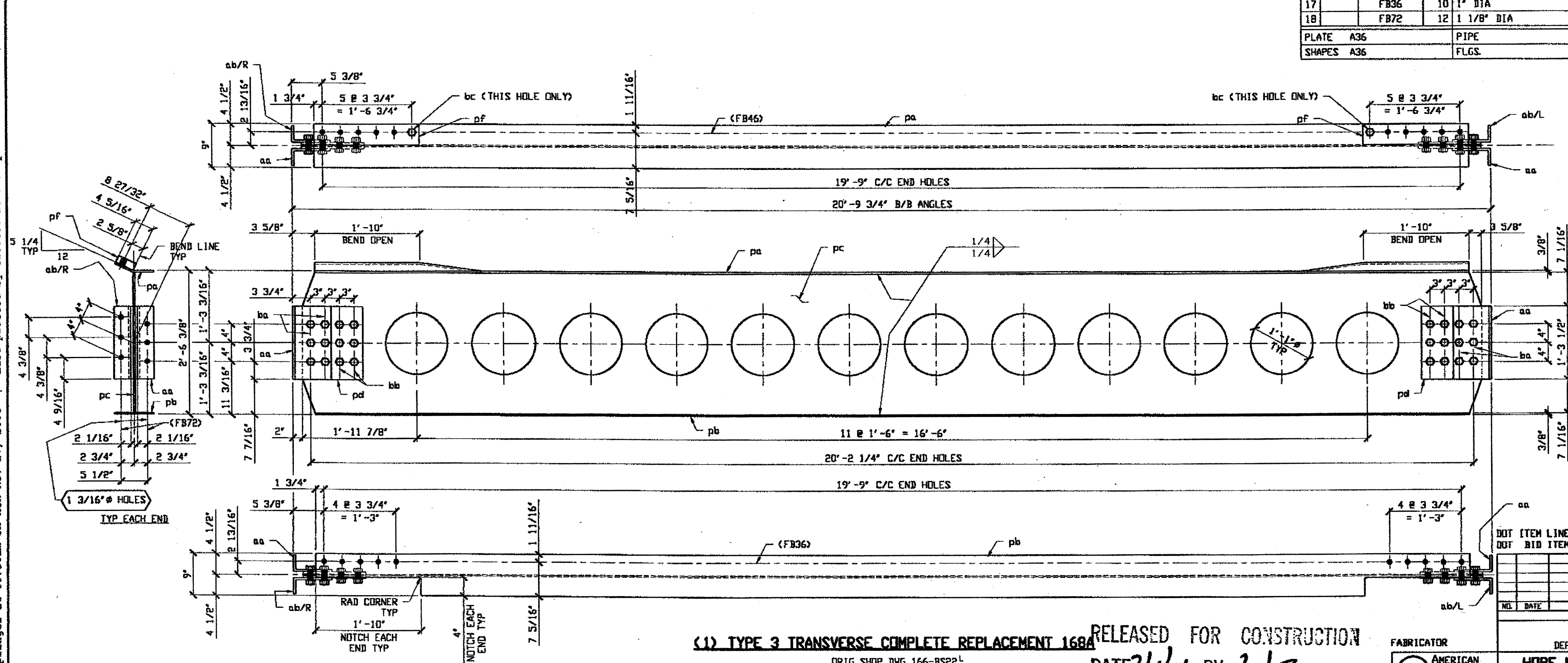
Last modified by: springer at 08:17am on Mon Nov 27, 2000 - Last plotted by Gfoote - 04:28pm on Mon Dec 18, 2000

BILL OF MATERIAL

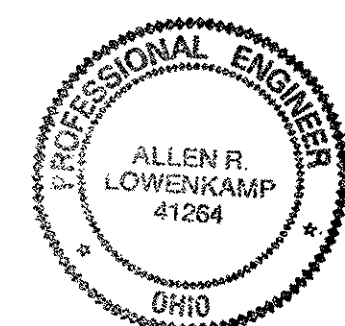
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		168A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				1385
2		pa	1	PL 3/8 X 9	20	0 1/2	BEND	230
3		pb	1	PL 3/8 X 9	20	0 1/2		230
4		pc	1	PL 3/8 X 29 5/8	20	5 3/4		601
5		pd	4	PL 1/2 X 12 1/2	1	3 1/2		110
6		pf	2	PL 1 5/16 X 4 5/16	1	10 1/4		71
7		aa	2	L 8 X 4 X 1/2	1	3 1/2		51
8		ab R/L	2	L 8 X 4 X 1/2	1	3 1/2		51
9		ba	12	1" H/VY HEX BOLT	0	3 3/4	NOTE 2	20
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" H/VY HEX BOLT	0	2 3/4	NOTE 2	18
12				W/HVY HEX NUT & WASHER				
13		bc	2	1" H/VY HEX BOLT	0	3 1/4	NOTE 2	3
14				W/HVY HEX NUT & WASHER				
15				FIELD BOLTS				
16		FB46	10	1" DIA	0	3 3/4	NOTE 2	17
17		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
18		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
PLATE A36		PIPE	FITTINGS					
SHAPES A36		FLGS.	BOLTS NOTE 2					

- NOTES:
- OPEN HOLES ARE (1 3/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 H/VY HEX HD W/HVY HEX-NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN 7 D-D' NORTH 168A



O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 168A

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY [Signature]  
 As Noted

TM-25

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 TRANSVERSE MEMBER REPAIR

Last modified by [Signature] on Mon Nov 27, 2000 - Last plotted by Gfoote.c on Mon Dec 18, 2000

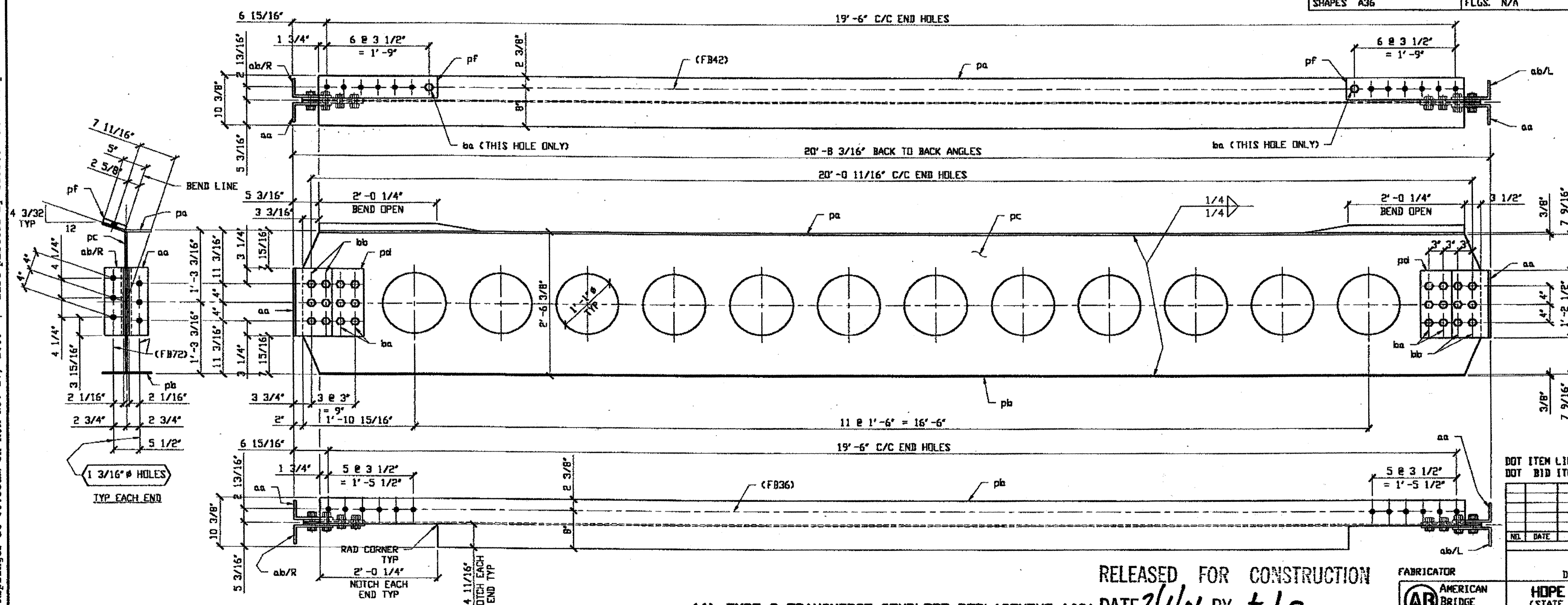


**BILL OF MATERIAL**

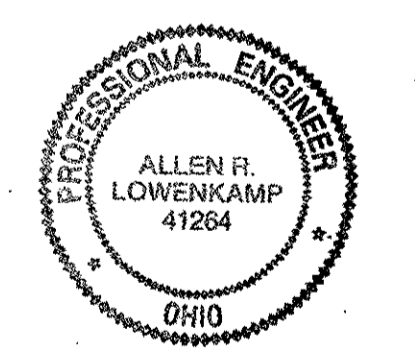
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		169A	1	TRANS COMPLETE REPLACEMENT				1415
2		pa	1	PL 3/8 X 10 3/8	19	9 1/2	BEND	262
3		pb	1	PL 3/8 X 10 3/8	19	9 1/2		262
4		pc	1	PL 3/8 X 29 5/8	20	4 3/16		594
5		pd	4	PL 1/2 X 12 1/2	1	2 1/2		103
6		pf	2	PL 7/8 X 5	2	0 1/2		60
7		aa	2	L 8 X 4 X 1/2	1	2 1/2		47
8		ab R/L	2	L 8 X 4 X 1/2	1	2 1/2		47
9		ba	14	1" HVY HEX BOLT	0	2 3/4	NOTE 2	20
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" HVY HEX BOLT	0	3 3/4	NOTE 2	20
12				W/HVY HEX NUT & WASHER				
13								
14								
15								
16				FIELD BOLTS				
17		FB36	12	1" DIA	0	2 1/2	NOTE 2	17
18		FB42	12	1" DIA	0	3 1/4	NOTE 2	19
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $1\ 1/16"$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

**SPAN 9 D-D' NORTH 169A**



**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

RELEASED FOR CONSTRUCTION

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 169A DATE 2/1/01 BY tdp

ORIG SHOP DWG 295-BS32R  
 ORIG SHOP MARK BS32R  
**TM-35**

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNELLVILLE, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 11/08/00  
 CHECKED BY: DATE:  
 GAF 11/17/00

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

SHEET NUMBER: 169  
 JOB NUMBER: 800010

Last modified by: repringer at 08:33am on Mon Nov 27, 2000 - Last plotted by: Gfoster at 04:31pm on Mon Dec 18, 2000

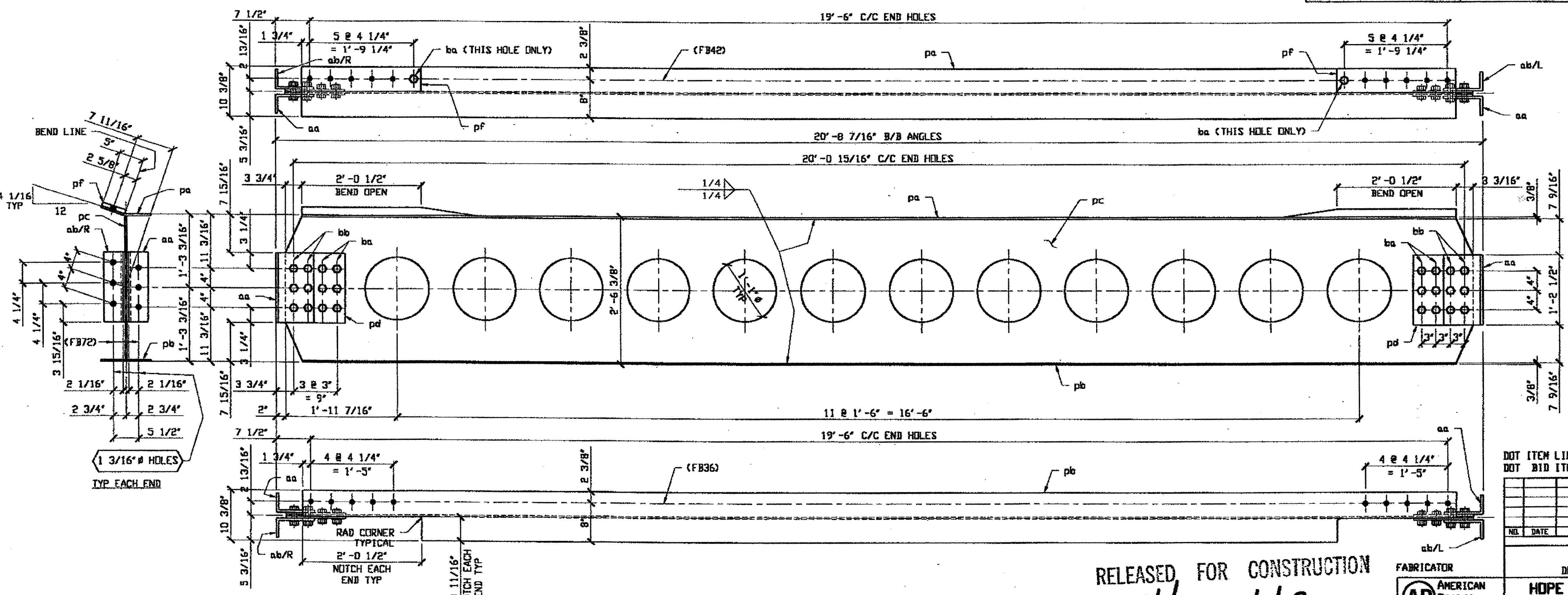
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		170A	1	TRANS COMPLETE REPLACEMENT				1412
2		pa	1	PL 3/8 X 10 3/8	19	9 1/2	BEND	262
3		pb	1	PL 3/8 X 10 3/8	19	9 1/2		262
4		pc	1	PL 3/8 X 29 5/8	20	4 7/16		595
5		pd	4	PL 1/2 X 12 1/2	1	2 1/2		103
6		pf	2	PL 13/16 X 5	2	0 3/4		56
7		aa	2	L 8 X 4 X 1/2	1	2 1/2		47
8		ab R/L	2	L 8 X 4 X 1/2	1	2 1/2		47
9		ba	14	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	20
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" HVY HEX BOLT	0	3 3/4	NOTE 2	20
12				W/HVY HEX NUT & WASHER				
13								
14								
15								
16				FIELD BOLTS				
17		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
18		FB42	10	1" DIA	0	3 1/4	NOTE 2	16
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN II R-R' NORTH 170A

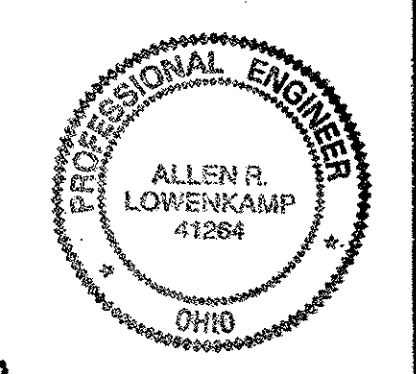
Last modified by Repringer at 08:34am on Mon Nov 27, 2000 - Last plotted by Groster at 04:31pm on Mon Dec 18, 2000



O.D.O.T. DIST. 12

ACCEPTED		
ACCEPTED AS NOTED	2/4/01	JSM
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

RELEASED FOR CONSTRUCTION  
 (1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 170A DATE 2/1/01 BY tdp  
 AS NOTED

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 8000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 531-3000  
 FAX: (412) 531-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 11/10/00  
 CHECKED BY: DATE: GAF 11/16/00

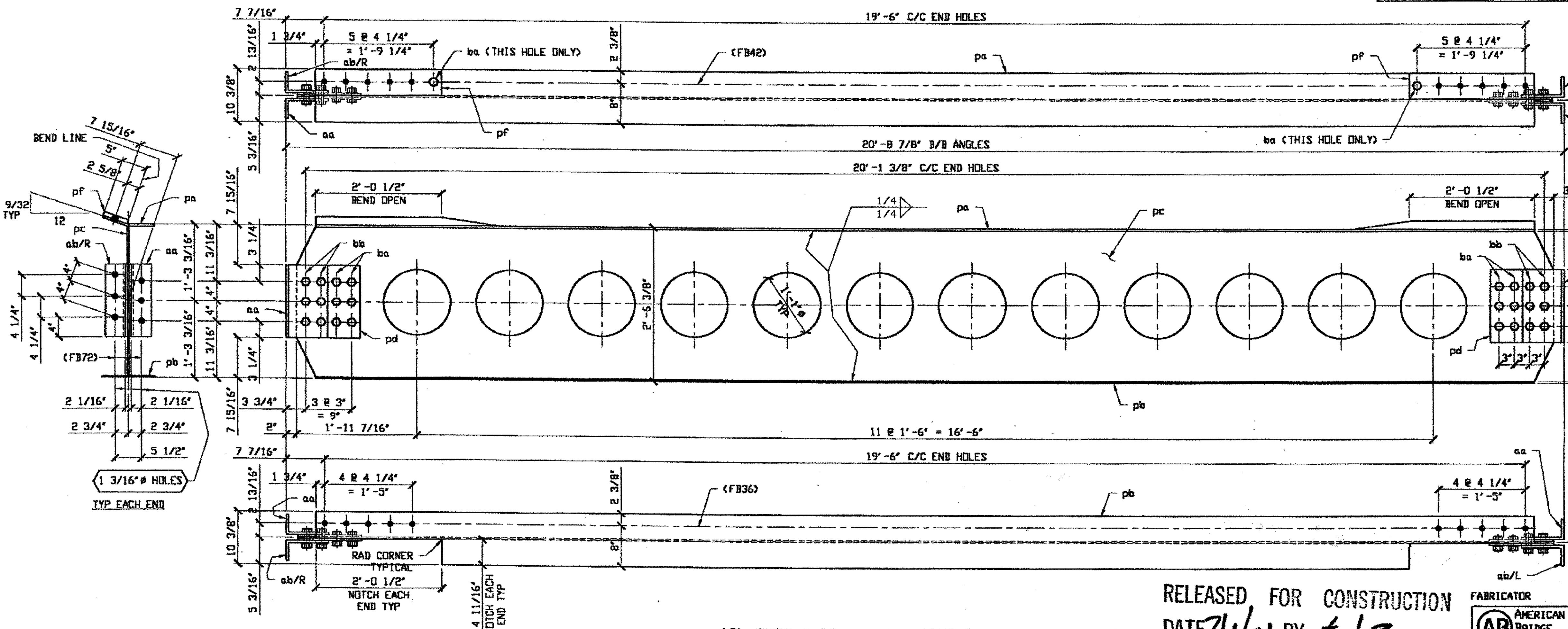
ORIG SHOP DWG 379-BS43-1  
 ORIG SHOP MARK BS43-1  
**TM-44**

SPAN II D-D' NORTH 171A  
SPAN II D-D' SOUTH 171A

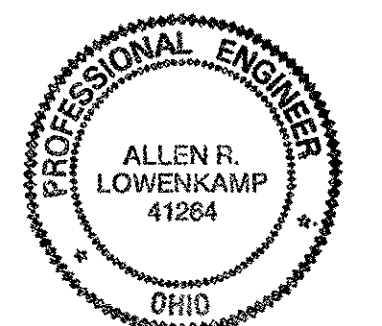
- NOTES:
- OPEN HOLES ARE  $\phi 1\frac{1}{16}$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

BILL OF MATERIAL				REMARKS	WEIGHT		
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES		
1		171A	2	TRANS COMPLETE REPLACEMENT			2846
2		pa	2	PL 3/8 X 10 3/8	19 9 1/2	BEND	524
3		pb	2	PL 3/8 X 10 3/8	19 9 1/2		524
4		pc	2	PL 3/8 X 29 5/8	20 4 7/8		1192
5		pd	8	PL 1/2 X 12 1/2	1 2 1/2		206
6		pf	4	PL 15/16 X 5	2 0 3/4		132
7		aa	4	L 8 X 4 X 1/2	1 2 1/2		94
8		ab R/L	4	L 8 X 4 X 1/2	1 2 1/2		94
9		ba	28	1" HVY HEX BOLT	0 2 3/4	NOTE 2	40
10				W/HVY HEX NUT & WASHER			
11		bb	24	1" HVY HEX BOLT	0 3 3/4	NOTE 2	40
12				W/HVY HEX NUT & WASHER			
13							
14							
15							
16				FIELD BOLTS			
17		FB36	20	1" DIA	0 2 1/2	NOTE 2	28
18		FB42	20	1" DIA	0 3 1/4	NOTE 2	31
19		FB72	24	1 1/8" DIA	0 3 1/4	NOTE 2	50
20							
PLATE		A36		PIPE	N/A	FITTINGS	N/A
SHAPES		A36		FLGS.	N/A	BOLTS	NOTE 2

Last modified by Repringer at 08:36am on Nov 27, 2000 - Last plotted by Gester at 04:32pm on Mon Dec 18, 2000



O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
TRANSVERSE MEMBER REPAIR			
FABRICATOR			SHEET NUMBER
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORANVILLE, PA. 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001			171
IN CHARGE OF: L. SMITH			ADM JOB NUMBER
DRAWN BY: DATE RAS 11/10/00			800010
CHECKED BY: DATE GAF 11/17/00			

RELEASED FOR CONSTRUCTION  
DATE 2/1/01 BY EJP  
As Noted  
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

(2) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 171A  
ORIG SHOP DWG 379-BS40  
ORIG SHOP MARK BS40  
TM-48,50

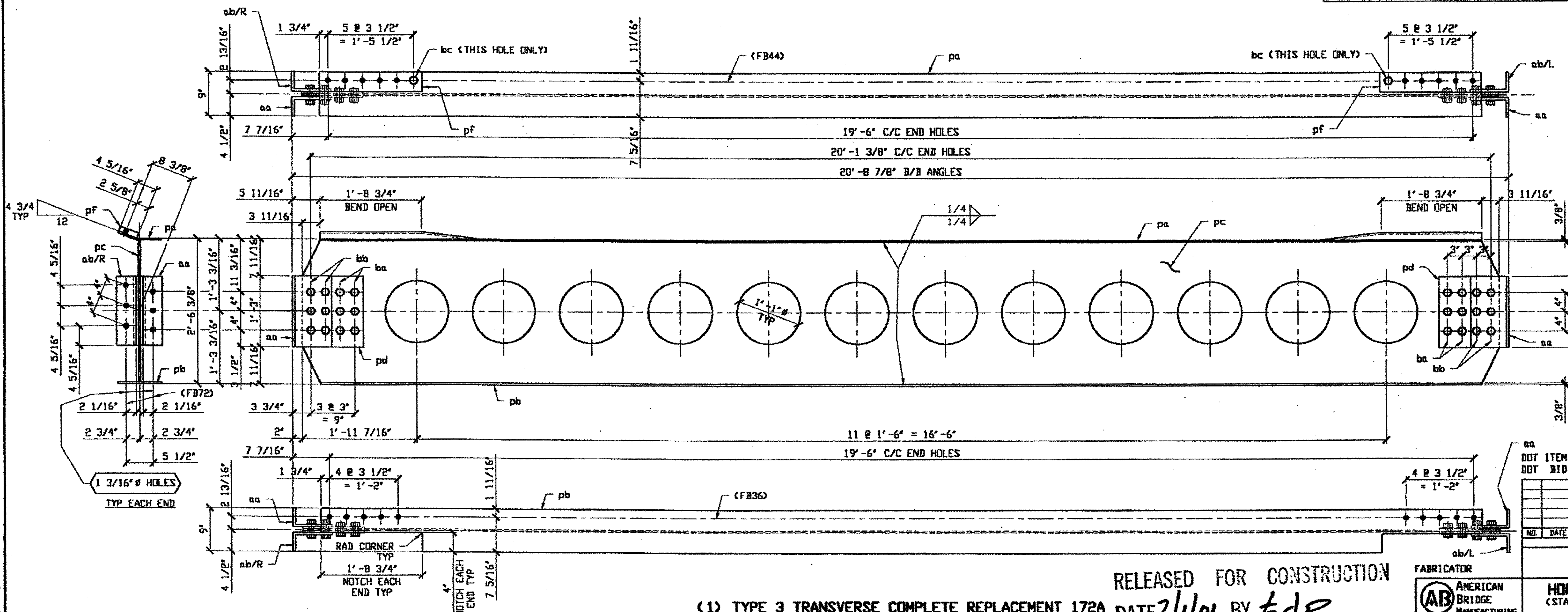
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		172A	1	TRANS COMPLETE REPLACEMENT				1352
2		pa	1	PL 3/8 X 9	19	9 1/2	BEND	227
3		pb	1	PL 3/8 X 9	19	9 1/2		227
4		pc	1	PL 3/8 X 29 5/8	20	4 7/8		596
5		pd	4	PL 1/2 X 12 1/2	1	3		106
6		pf	2	PL 1 1/8 X 4 5/16	1	9		58
7		aa	2	L 8 X 4 X 1/2	1	3		49
8		ab R/L	2	L 8 X 4 X 1/2	1	3		49
9		ba	12	1" HVY HEX BOLT	0	2 3/4	NOTE 2	17
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" HVY HEX BOLT	0	3 3/4	NOTE 2	20
12				W/HVY HEX NUT & WASHER				
13		bc	2	1" HVY HEX BOLT	0	3	NOTE 2	3
14				W/HVY HEX NUT & WASHER				
15								
16				FIELD BOLTS				
17		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
18		FB44	10	1" DIA	0	3 1/2	NOTE 2	16
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $1 \frac{1}{16}$ " UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN II E-E' SOUTH 172A

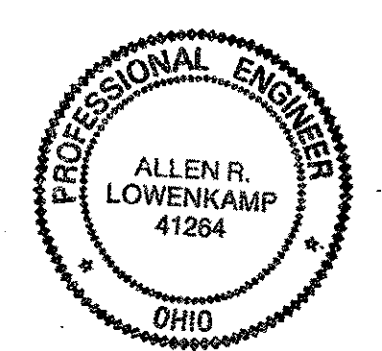
Last modified by Rappinger at 08:54am on Mon Nov 27, 2000 - Last plotted by Gfooster at 04:32pm on Mon Dec 18, 2000



**O.D.O.T. DIST. 12**

ACCEPTED *[Signature]*  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 172A

DRG SHOP DWG 379-BS41  
 DRG SHOP MARK BS41

TM-51

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY *tdp*  
 AS NOTED STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12600 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORADELLO, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 11/13/00  
 CHECKED BY: DATE  
 GAF 11/17/00

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. 863E50000

NO. DATE DESCRIPTION REVISIONS BY

SHEET NUMBER: 172  
 ADM JOB NUMBER: 800010

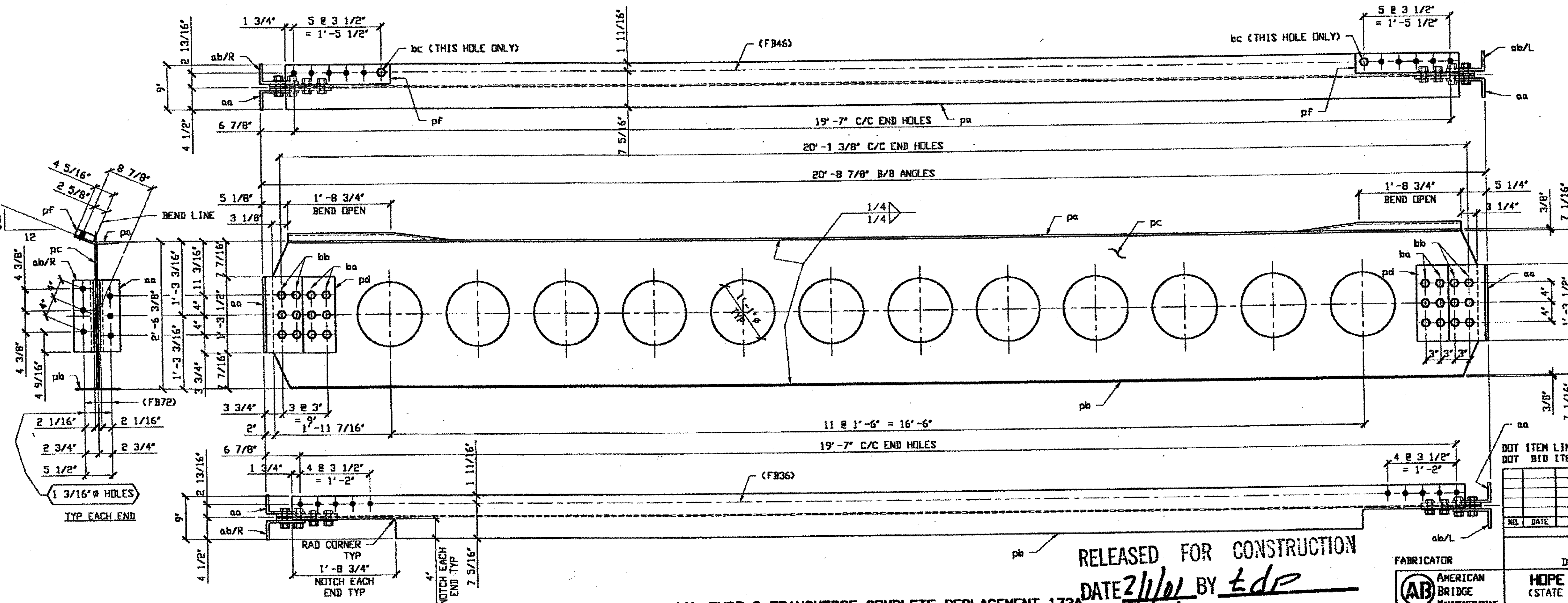
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		173A	1	TRANS COMPLETE REPLACEMENT				1373
2		pa	1	PL 3/8 X 9	19	10 1/2	BEND	228
3		pb	1	PL 3/8 X 9	19	10 1/2		228
4		pc	1	PL 3/8 X 29 5/8	20	4 7/8		597
5		pd	4	PL 1/2 X 12 1/2	1	3 1/2		110
6		pf	2	PL 1 5/16 X 4 5/16	1	9		67
7		aa	2	L 8 X 4 X 1/2	1	3 1/2		51
8		ab R/L	2	L 8 X 4 X 1/2	1	3 1/2		51
9		ba	12	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	18
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" HVY HEX BOLT	0	3 3/4	NOTE 2	20
12				W/HVY HEX NUT & WASHER				
13		bc	2	1" HVY HEX BOLT	0	3 1/4	NOTE 2	3
14				W/HVY HEX NUT & WASHER				
15								
16				FIELD BOLTS				
17		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
18		FB46	10	1" DIA	0	3 3/4	NOTE 2	17
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

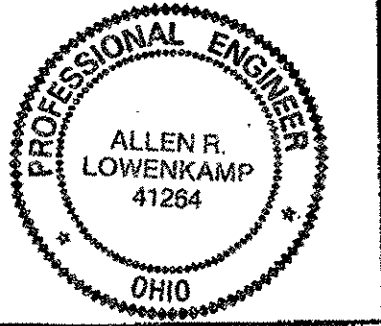
- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN 13 J-J' NORTH 173A

Last modified by Repringer at 08:59am on Mon Nov 27, 2000 - Last plotted by Groster at 04:32pm on Mon Dec 18, 2000



O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114	DOT BID ITEM NO. 863E50000
NO.	DATE
DESCRIPTION	REVISIONS
BY	

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY EDP  
 AS NOTED

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 173A  
 ORIG SHOP DVG 518-BS44\*  
 ORIG SHOP MARK BS44\*

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORONADO, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

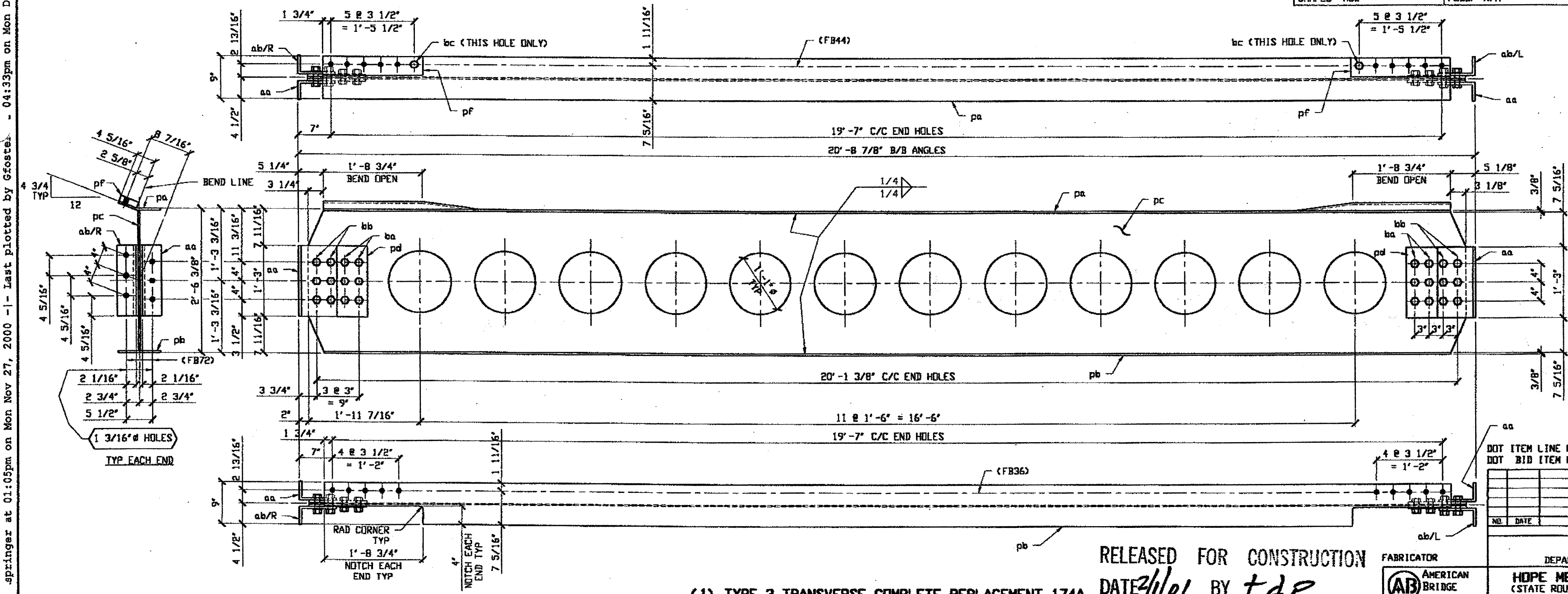
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 11/14/00  
 CHECKED BY: DATE  
 GAF 11/17/00

BILL OF MATERIAL

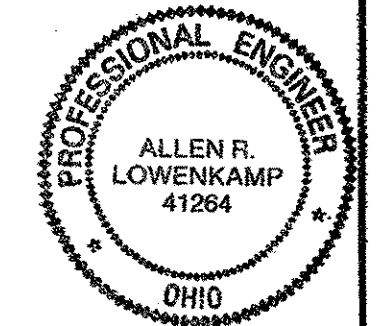
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		174A	1	TRANS COMPLETE REPLACEMENT				1355
2		pa	1	PL 3/8 X 9	19	10 1/2	BEND	228
3		pb	1	PL 3/8 X 9	19	10 1/2		228
4		pc	1	PL 3/8 X 29 5/8	20	4 7/8		597
5		pd	4	PL 1/2 X 12 1/2	1	3		106
6		pf	2	PL 1 1/8 X 4 5/16	1	9		58
7		aa	2	L 8 X 4 X 1/2	1	3		49
8		ab R/L	2	L 8 X 4 X 1/2	1	3		49
9		ba	12	1" # HVY HEX BOLT	0	2 3/4	NOTE 2	17
10				W/HVY HEX NUT & WASHER				
11		bb	12	1" # HVY HEX BOLT	0	3 3/4	NOTE 2	20
12				W/HVY HEX NUT & WASHER				
13		bc	2	1" # HVY HEX BOLT	0	3	NOTE 2	3
14				W/HVY HEX NUT & WASHER				
15				FIELD BOLTS				
16				1" DIA	0	2 1/2	NOTE 2	14
17		FB36	10	1" DIA	0	3 1/2	NOTE 2	16
18		FB44	10	1" DIA	0	3 1/2	NOTE 2	16
19		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN 13 K-K' NORTH 174A



O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
 DOT BID ITEM NO. 863E5000

NO.	DATE	DESCRIPTION	BY

RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY tdp  
 AS NOTED

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 174A  
 ORIG SHOP DWG S18-BS45<sup>L</sup>  
 ORIG SHOP MARK BS45<sup>L</sup>  
 TM-53

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15109  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 11/14/00  
 CHECKED BY: DATE: GAF 11/20/00

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

SHEET NUMBER: 174  
 A.M. JOB NUMBER: 800010

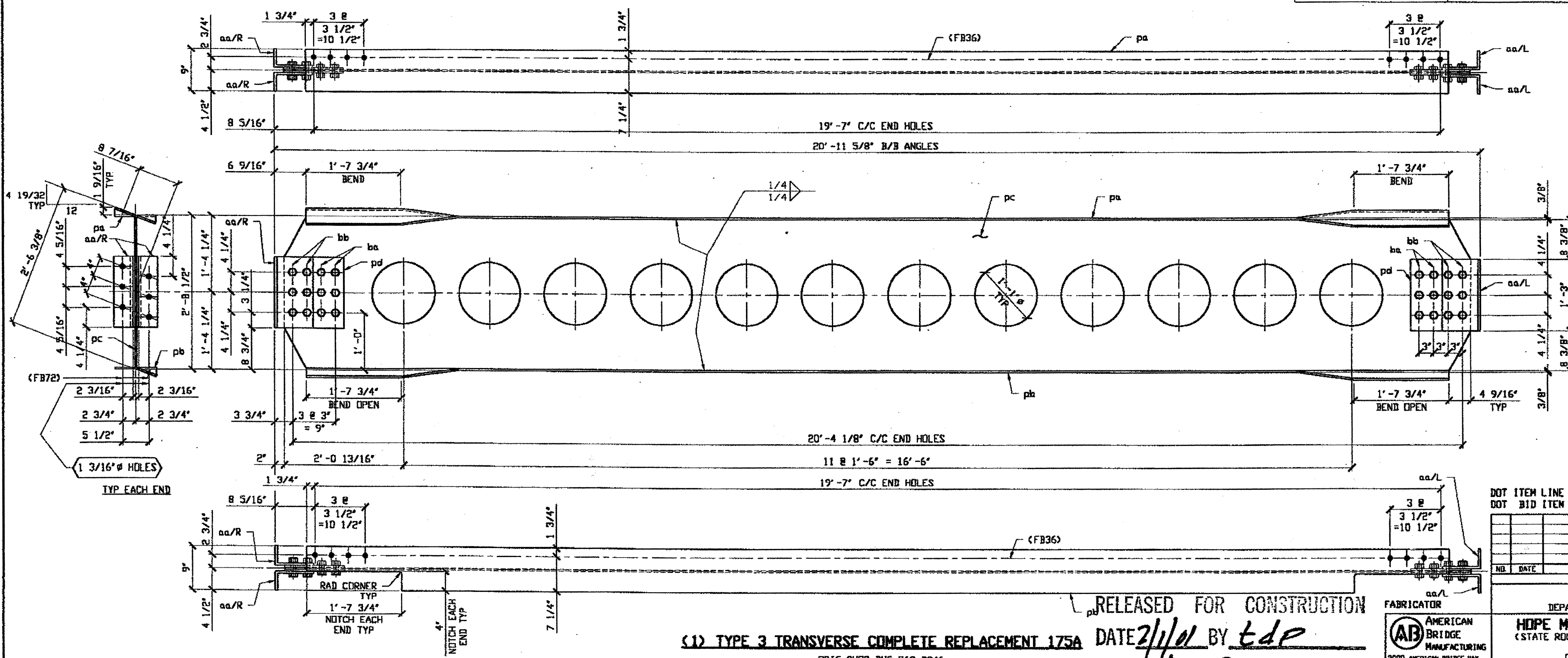
Last modified by: springer at 01:05pm on Mon Nov 27, 2000 - Last plotted by: gfoote - 04:33pm on Mon Dec 18, 2000

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		175A	1	TRANS COMPLETE REPLACEMENT				1328
2		pa	1	PL 3/8 X 9	19	10 1/2	BEND	228
3		pb	1	PL 3/8 X 9	19	10 1/2	BEND	228
4		pc	1	PL 3/8 X 31 3/4	20	7 5/8		658
5		pd	4	PL 3/8 X 12 1/2	1	3		80
6		aa R/L	4	L 8 X 4 X 1/2	1	3		98
7		ba	12	1" HVY HEX BOLT	0	2 1/2	NOTE 2	17
8				W/HVY HEX NUT & WASHER				
9		bb	12	1" HVY HEX BOLT	0	3 1/2	NOTE 2	19
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14				FIELD BOLTS				
15		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
16		FB72	12	1 1/8" DIA	0	3 1/4	NOTE 2	25
17								
PLATE		A36		PIPE	N/A		FLTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{"} \phi)$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

SPAN 13 A-A' NORTH 175A



O.D.O.T. DIST. 12

ACCEPTED AS NOTED 7/1/01 EDP

NOT ACCEPTED

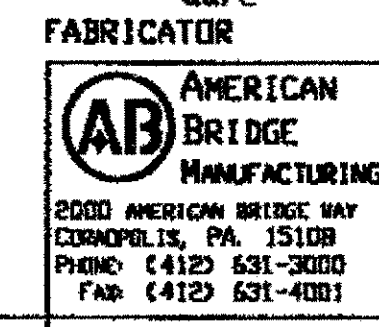
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
DOT BID ITEM NO. 863E3000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE RENOV  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
TRANSVERSE MEMBER REPAIR



EN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 11/15/00  
CHECKED BY: DATE  
GAF 11/20/00

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

RELEASED FOR CONSTRUCTION DATE 2/1/01 BY EDP

As NOTED

ORIG SHOP DWG 519-BS46  
ORIG SHOP MARK BS46

TM-57

Last modified by respringer at 10:58am on Mon Nov 27, 2000 -1- Last plotted by gfooster at 04:33pm on Mon Dec 18, 2000

BILL OF MATERIAL

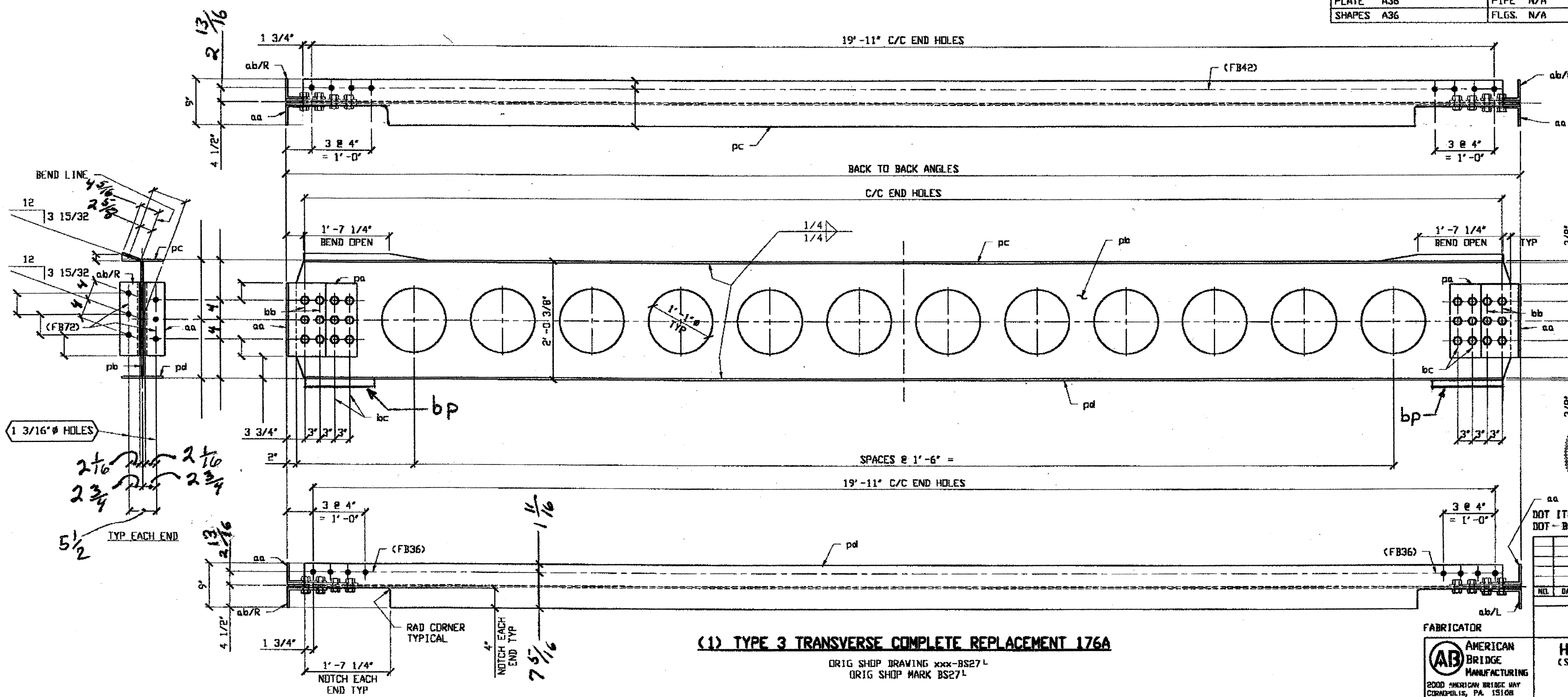
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		176A	1	TYPE 3 TRANS COMPLETE REPLACEMENT				
2		pc	1	PL 3/8 X 9	20	2 1/2	BEND	232
3		pd	1	PL 3/8 X 9	20	2 1/2		232
4		aa	2	L 8 X 4 X 1/2				
5		ab R/L	2	L 8 X 4 X 1/2				
6		pa	4	PL				
7		pb	1	PL 3/8 X				
8		ba		1" # HVY HEX BOLT			NOTE 2	
9				W/HVY HEX NUT & WASHER				
10		bb		1" # HVY HEX BOLT			NOTE 2	
11				W/HVY HEX NUT & WASHER				
12		bc		1" # HVY HEX BOLT			NOTE 2	
13				W/HVY HEX NUT & WASHER				
14		bp	2	--- X 3 1/2	1	4	beveled	
15				FIELD BOLTS				
16		FB42		1" DIA			NOTE 2	
17		FB36		1" DIA			NOTE 2	
18		FB72		1 1/8" DIA			NOTE 2	
PLATE		A36		PIPE N/A			FITTINGS N/A	
SHAPES		A36		FLGS. N/A			BOLTS NOTE 2	

NOTES:

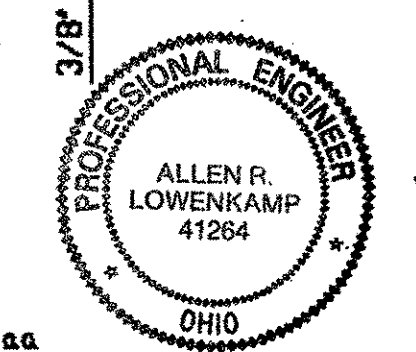
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE T-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
- ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

APPROVER NOTE:  
ORIGINAL SHOP DRAWING WAS NOT FOUND.  
APPROVER TO VERIFY INFORMATION GIVEN  
AND FURNISH ENOUGH INFORMATION TO  
COMPLETE THIS MEMBER.

SPAN I K-K' NORTH 176A



O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED [Signature]  
NOT ACCEPTED [Signature]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

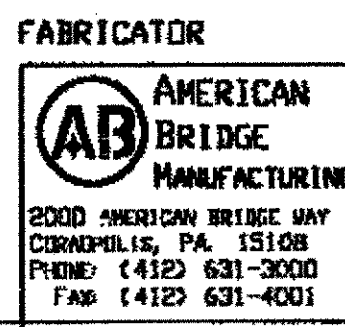


DOT ITEM LINE NO. D114  
DOT-BID-ITEM-NO. 863E50000  
TM-1

(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 176A

ORIG SHOP DRAWING xxx-BS27-L  
ORIG SHOP MARK BS27-L

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 11/21/00  
CHECKED BY: DATE

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
TRANSVERSE MEMBER REPAIR

SHEET NUMBER: 176  
JOB NUMBER: 800010

Last modified by Rspringer at 03:11pm on Mon Nov 27, 2000 - Last plotted by Gfooster at 04:34pm on Mon Dec 18, 2000



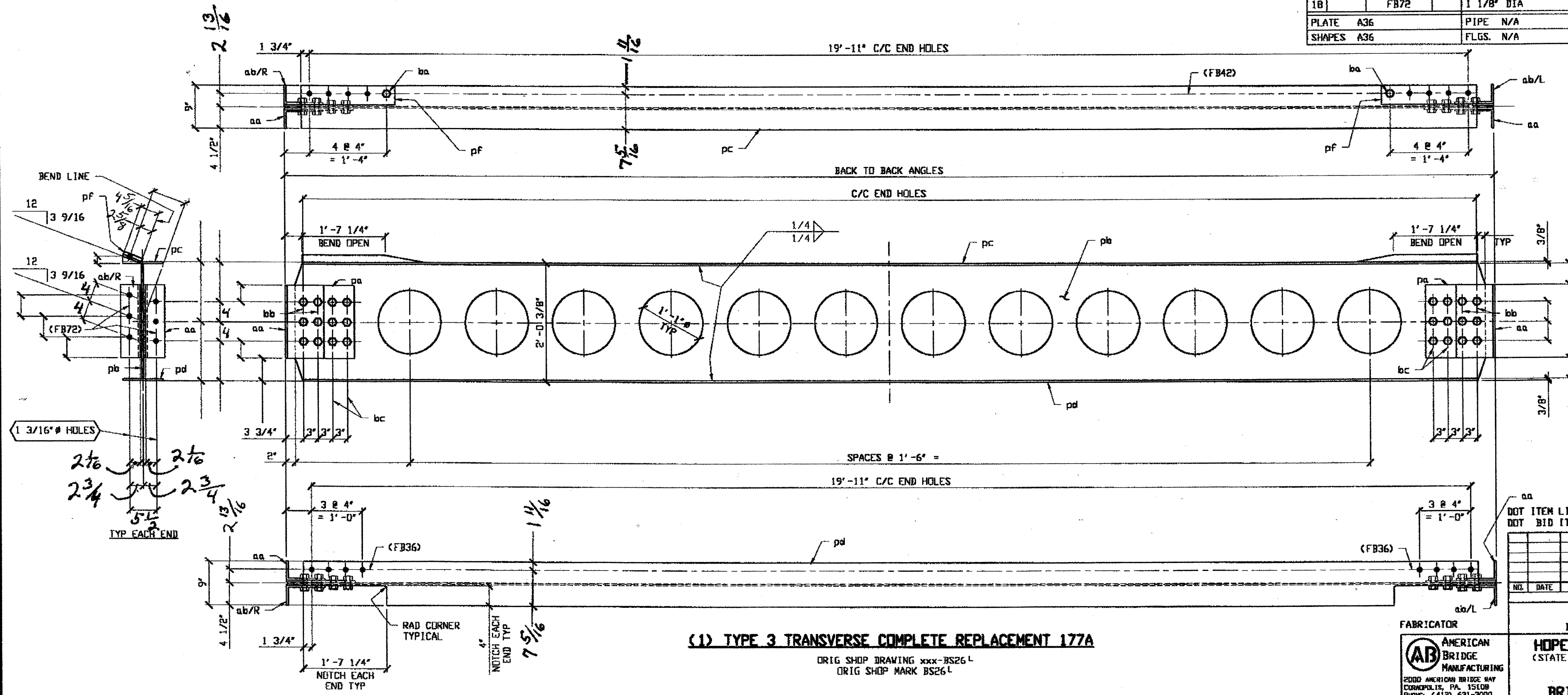
Last modified by Respringer at 03:11pm on Mon Nov 27, 2000 - Last plotted by Gfroster at 04:36pm on Mon Dec 18, 2000

APPROVER NOTE:  
ORIGINAL SHOP DRAWING WAS NOT FOUND.  
APPROVER TO VERIFY INFORMATION GIVEN  
AND FURNISH ENOUGH INFORMATION TO  
COMPLETE THIS MEMBER.

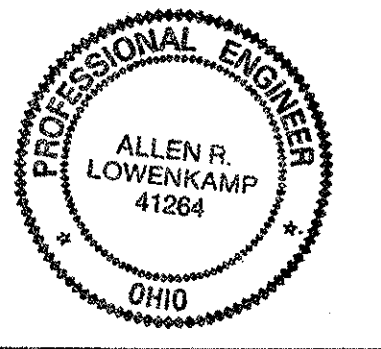
**SPAN 1 D-D' NORTH 177A**

- NOTES:**
- OPEN HOLES ARE  $(1\frac{3}{16} \text{ } \phi)$  UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL SHOP BOLTS TO BE FINGER TIGHT NO TORQUE.

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH	REMARKS	WEIGHT
					FEET INCHES		
1		177A	1	TYPE 3 TRANS COMPLETE REPLACEMENT			
2		pc	1	PL 3/8 X 9	20 2 1/2	BEND	232
3		pd	1	PL 3/8 X 9	20 2 1/2		232
4		aa	2	L 8 X 4 X 1/2			
5		ab R/L	2	L 8 X 4 X 1/2			
6		pa	4	PL			
7		pb	1	PL 3/8 X			
8		pf	2	PL 5/8 X			
9		ba		1" HVY HEX BOLT		NOTE 2	
10		bb		W/HVY HEX NUT & WASHER		NOTE 2	
11		bc		1" HVY HEX BOLT		NOTE 2	
12				W/HVY HEX NUT & WASHER		NOTE 2	
13				1" HVY HEX BOLT		NOTE 2	
14				W/HVY HEX NUT & WASHER		NOTE 2	
15				FIELD BOLTS			
16		FB42		1" DIA		NOTE 2	
17		FB36		1" DIA		NOTE 2	
18		FB72		1 1/8" DIA		NOTE 2	
PLATE		A36		PIPE	N/A	FITTINGS	N/A
SHAPES		A36		FLGS.	N/A	BOLTS	NOTE 2



O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0114  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

**(1) TYPE 3 TRANSVERSE COMPLETE REPLACEMENT 177A**

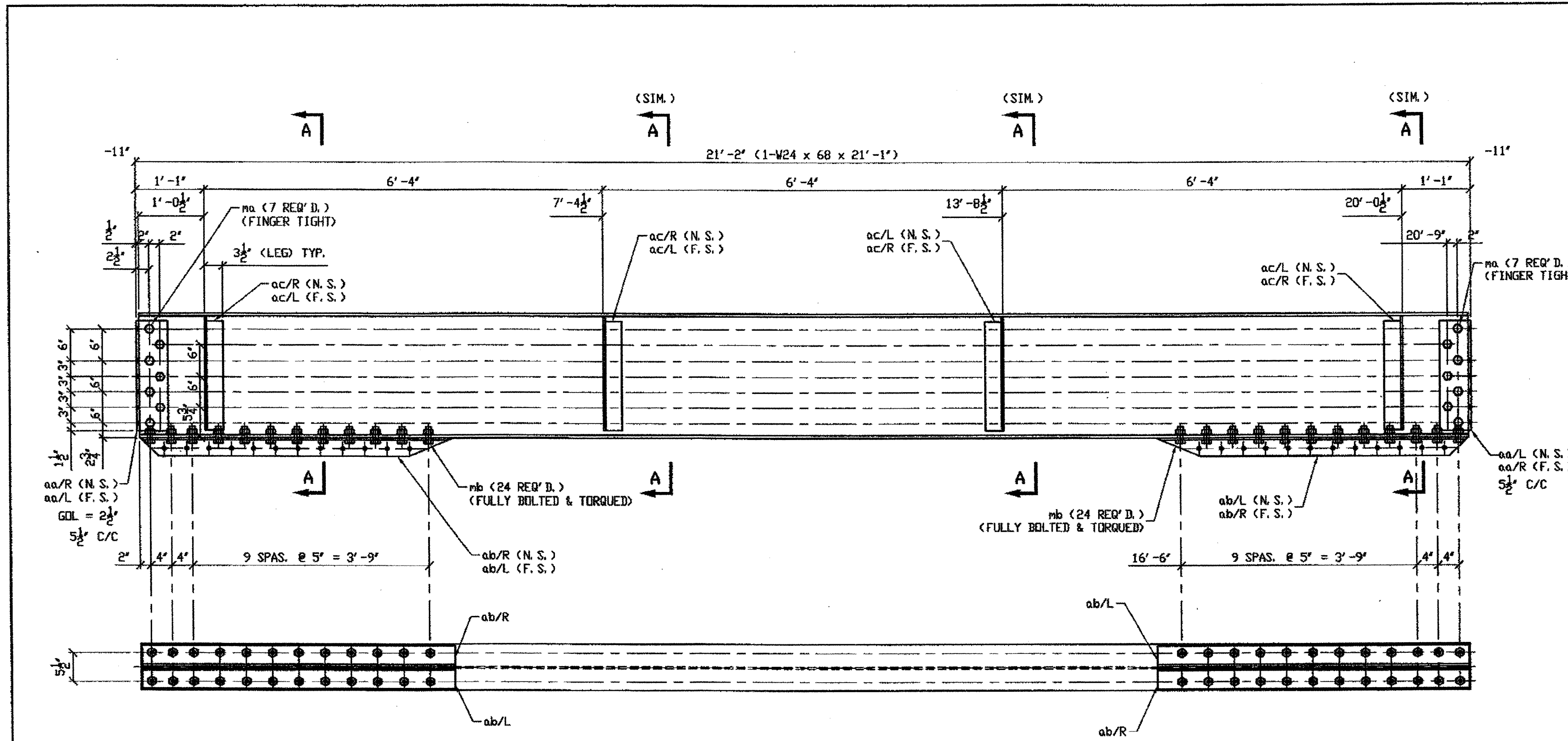
ORIG SHOP DRAWING xxx-9S26 L  
ORIG SHOP MARK BS26 L

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**FABRICATOR**  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORONADO, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

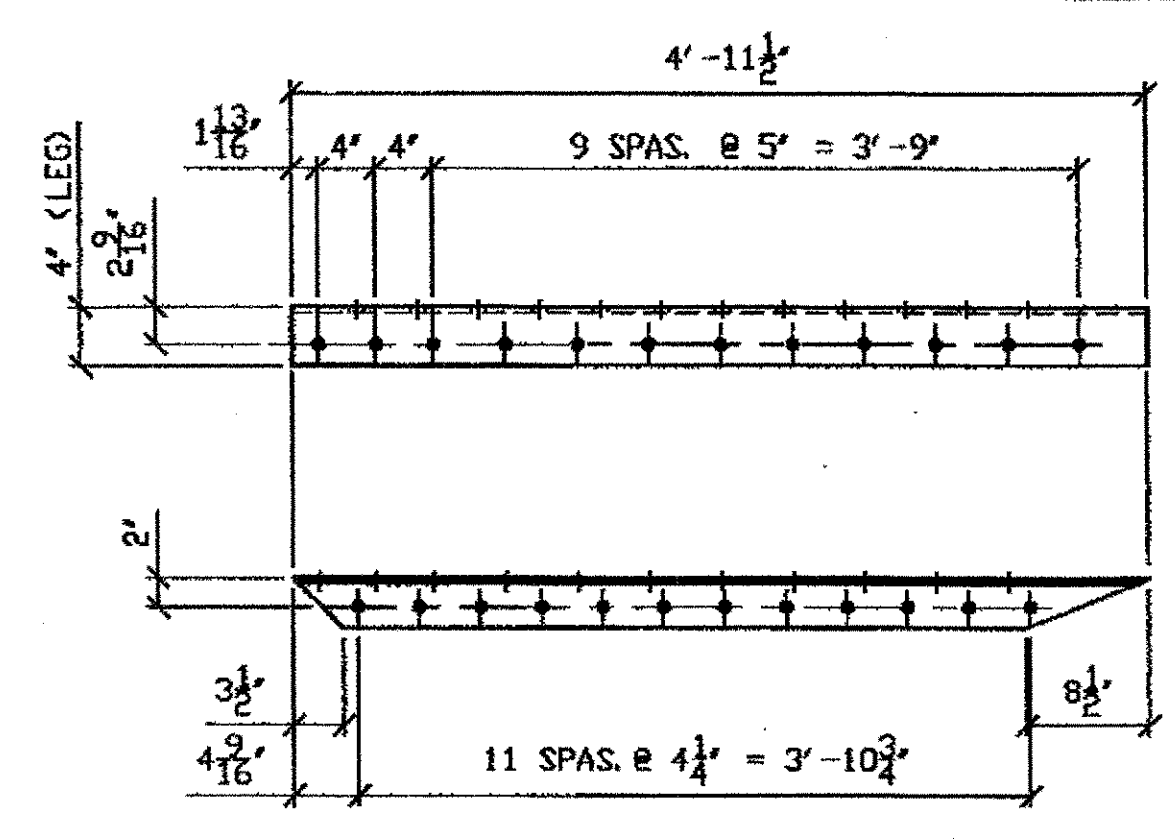
**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**TRANSVERSE MEMBER REPAIR**

SHEET NUMBER	177
JOB NUMBER	800010

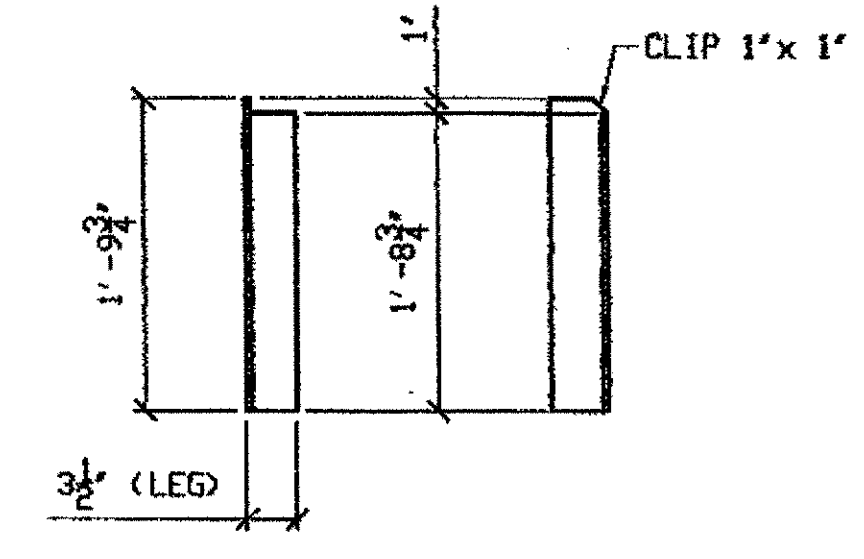


**ONE - FLOOR BEAM - 531B1**  
 SPAN 13  
 (ORIG. SHOP MARK FB43A)  
 (ORIG. SHOP DWG. 285)  
 (REPAIR NO. 114)

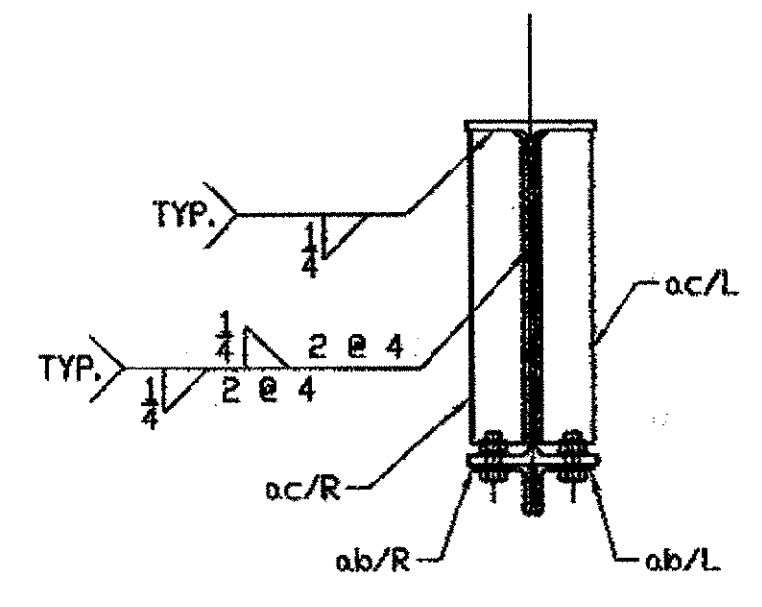
**SPAN 13 A-A' NORTH, LOWER DECK FLOOR BEAM 531B1**



**DETAIL ANGLE ab R/L**



**DETAIL ANGLE ac R/L**

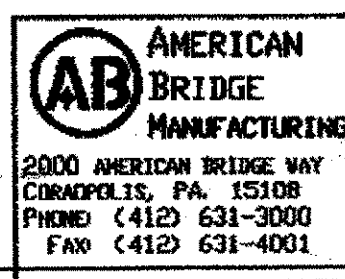


**SECTION A-A**

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 114		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b>			
<b>SPAN 13 FLOORBEAM REPLACEMENT</b>			
SHEET NUMBER: 531		JOB NUMBER: 800010	

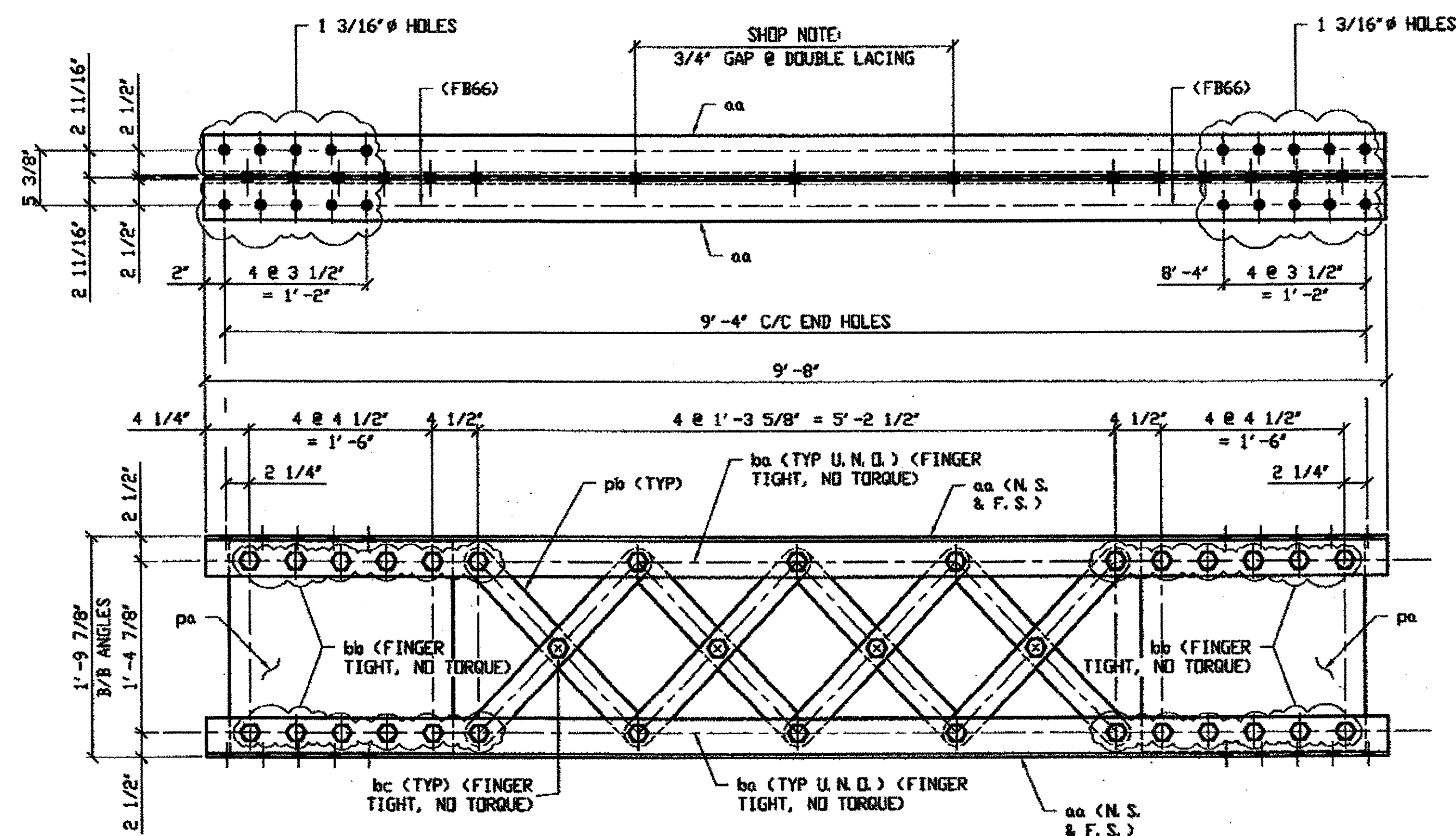
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		531B1	ONE	W24 x 68	21	1	W/CVN	1434
2		aa R/L	4	L 6 x 4 x 1/2	1	9	2/R 2/L	113
3		ab R/L	4	L 4 x 3 1/2 x 3/8	4	11 1/2	2/R 2/L	180
4		ac R/L	8	L 4 x 3 1/2 x 3/8	1	9 3/4	4/R 4/L	132
5		ma	14	1" A325 BOLT	0	2 3/4		19
6				W/1 HVY. HEX NUT & 1 HD	F. W.	EA.		
7		mb	48	1" A325 BOLT	0	2 1/2		62
8				W/1 HVY. HEX NUT & 1 HD	F. W.	EA.		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
PLATE		PIPE		FITTINGS				
SHAPES A572-50		FLGS.		BOLTS		SEE NOTE 2		

G:\Control\00\Drawings\Ins\531.dwg  
 Save by GAF 11:49am Mar 05 2002  
 Plot by GAF at 08:55am Mar 25 2002  
 Model space plot + Scale = 1/12

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		301A	2	POST STRUT REPLACEMENT				1168
2		aa	8	L 4 X 4 X 3/8	9	8		758
3		pa	4	PL 3/8 X 20 7/8	1	10		195
4		pb	16	PL 3/8 X 2 3/4	2	1 3/4		120
5		ba	12	1" DIA HVY HEX BOLT	0	3	NOTE 2	18
6				W/HVY HEX NUT & WASHER				
7		bb	48	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	67
8				W/HVY HEX NUT & WASHER				
9		bc	8	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	10
10				W/HVY HEX NUT & WASHER				
11								
12				FIELD BOLTS				
13		FB66	80	1 1/8" DIA	0	2 1/2	NOTE 2	148
14								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

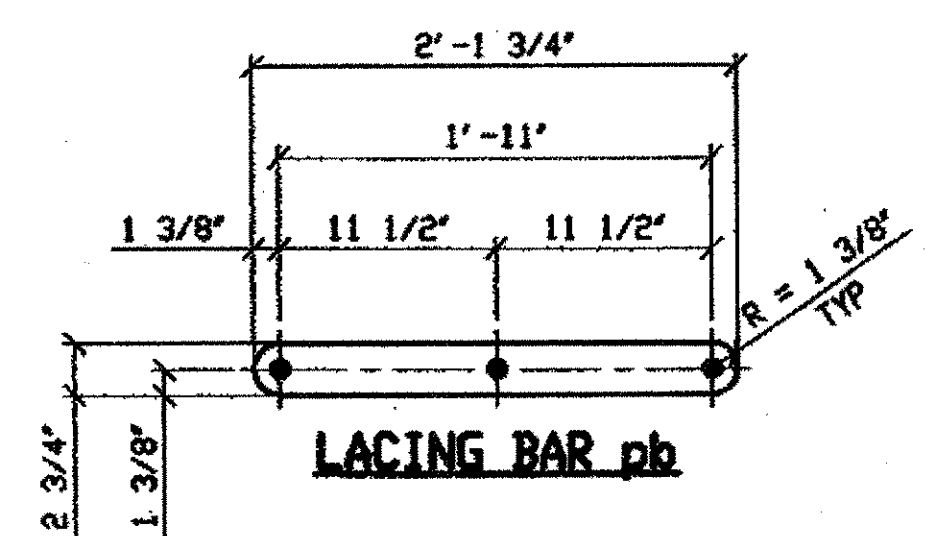
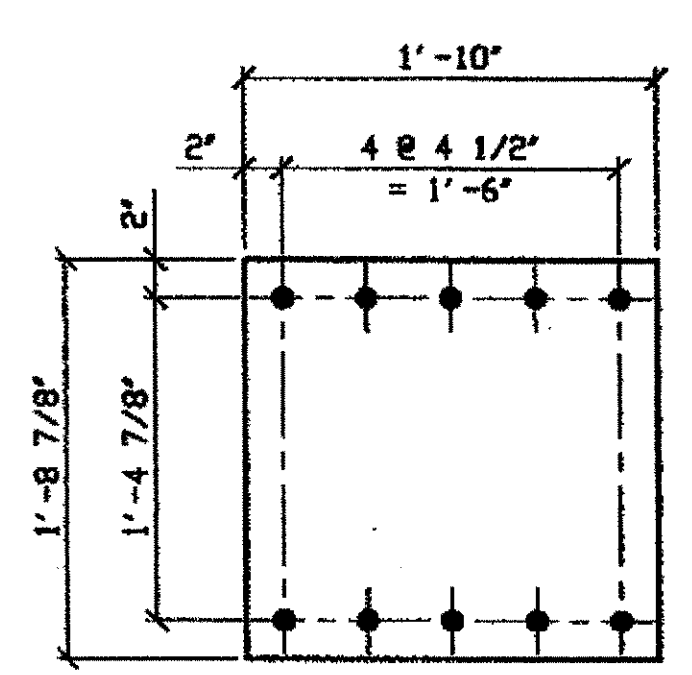
- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



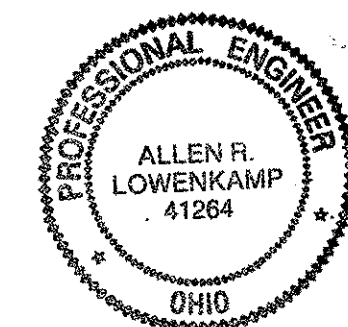
2 - POST STRUT FULL LENGTH COMPLETE REPLACEMENT - 301A

DRIG SHOP DRAWING 33-MS3  
DRIG SHOP MARK MS3  
REPAIR SHEET 7-173 & 197

SPAN 7 NORTH EXTERIOR L2/U2 - L3/U3 301A  
SPAN 7 NORTH EXTERIOR L12/U12 - L13/U13 301A



O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROPS, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

RELEASED FOR CONSTRUCTION  
DATE 4/27/01 BY tdp

BID ITEM LINE NO. 0144  
BID ITEM NO. 863E50000

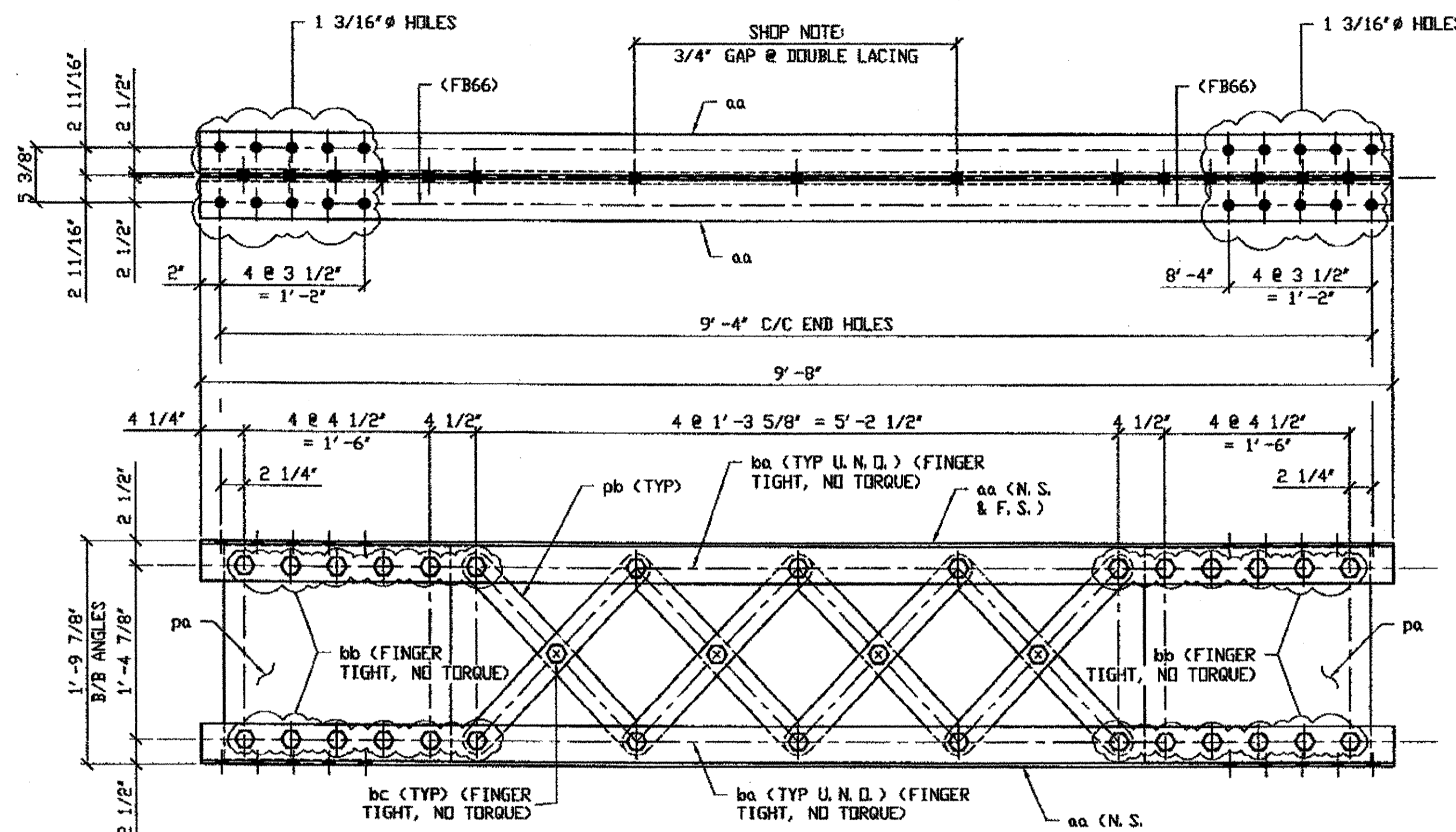
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
SHEET NUMBER			301
JOB NUMBER			800010

Last modified by rspringer at \$(EDTIME,??) - I- Last plotted by Rspringer at 09:24am on Wed May 23, 2001

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		326A	2	POST STRUT REPLACEMENT				1168
2		aa	8	L 4 X 4 X 3/8	9	8		758
3		pa	4	PL 3/8 X 20 7/8	1	10		195
4		pb	16	PL 3/8 X 2 3/4	2	1 3/4		120
5		ba	12	1" DIA HVY HEX BOLT	0	3	NOTE 2	18
6				W/HVY HEX NUT & WASHER				
7		bb	48	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	67
8				W/HVY HEX NUT & WASHER				
9		bc	8	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	10
10				W/HVY HEX NUT & WASHER				
11				FIELD BOLTS				
12								
13		FB66	80	1 1/8" DIA	0	2 1/2	NOTE 2	148
14								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

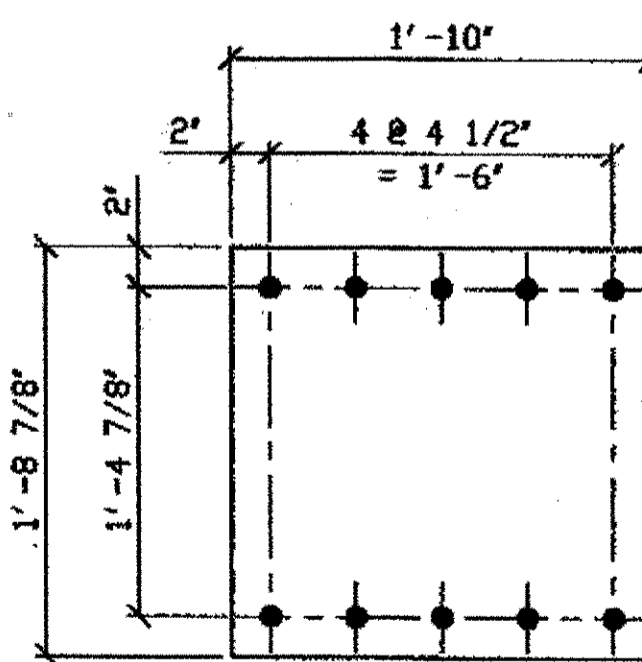
- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



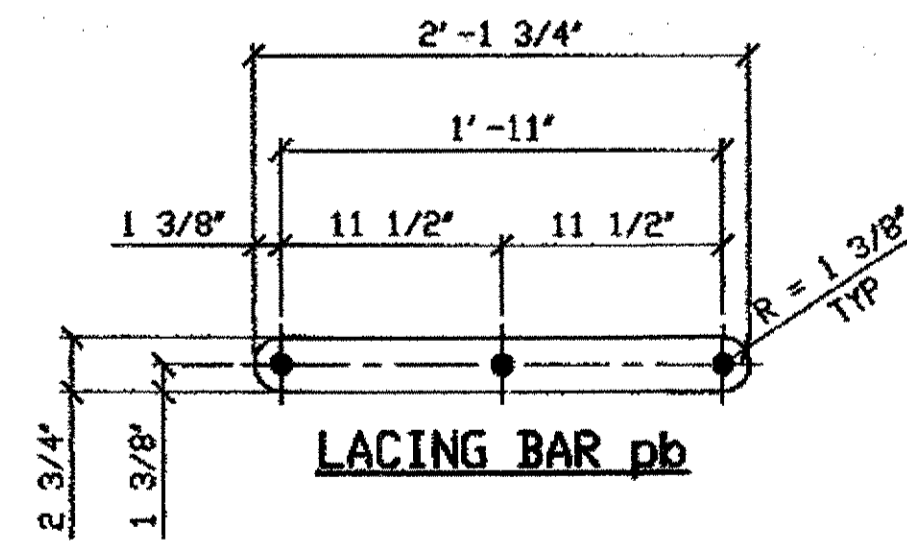
2 - POST STRUT FULL LENGTH COMPLETE REPLACEMENT - 326A

ORIG SHOP DRAWING 93-NS3  
ORIG SHOP MARK MS3  
REPAIR SHEET 9-124 & 182  
(IDENTICAL TO 301A)

SPAN 9 NORTH EXTERIOR L3/U3 - L4/U4 326A  
SPAN 9 NORTH EXTERIOR L14/U14 - L15/U15 326A



DETAIL PLATE pa



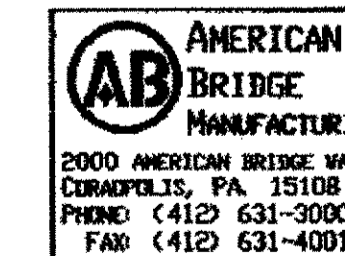
LACING BAR pb

O.D.O.T. DIST. 12  
ACCEPTED [Signature] 2/4/04  
ACCEPTED AS NOTED  
NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 07/09/01  
CHECKED BY: DATE:  
GAF 08/14/01

DOT ITEM LINE NO. 0144  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

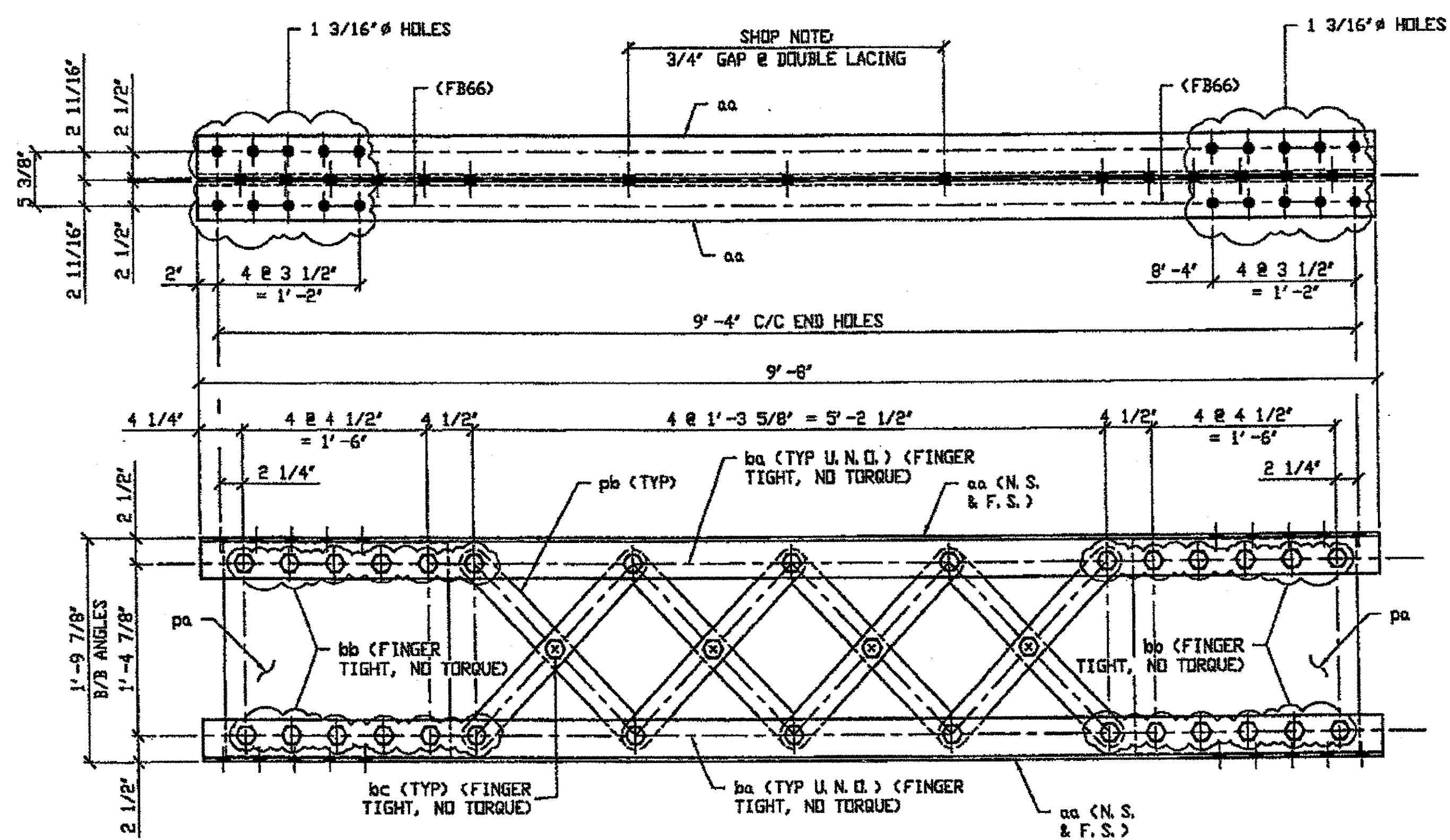
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 9 REPAIRS

SHEET NUMBER: 326  
JOB NUMBER: 800010

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		417A	3	POST STRUT REPLACEMENT				1752
2		aa	12	L 4 X 4 X 3/8	9	8		1137
3		pa	6	PL 3/8 X 20 7/8	1	10		293
4		pb	24	PL 3/8 X 2 3/4	2	1 3/4		180
5		ba	18	1" DIA HVY HEX BOLT	0	3	NOTE 2	27
6				W/HVY HEX NUT & WASHER				
7		bb	72	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	100
8				W/HVY HEX NUT & WASHER				
9		bc	12	1" DIA HVY HEX BOLT	0	2 1/4	NOTE 2	15
10				W/HVY HEX NUT & WASHER				
11				FIELD BOLTS				
12								
13		FB66	120	1 1/8" DIA	0	2 1/2	NOTE 2	222
14								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

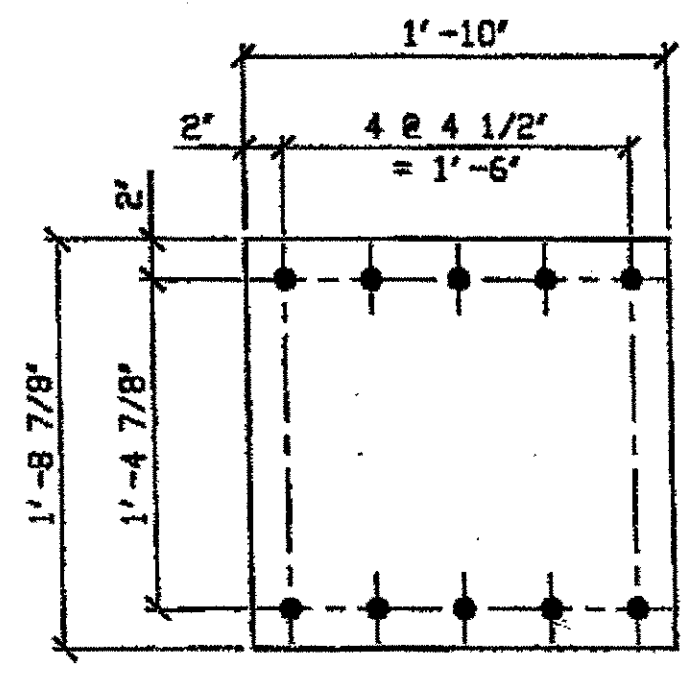
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



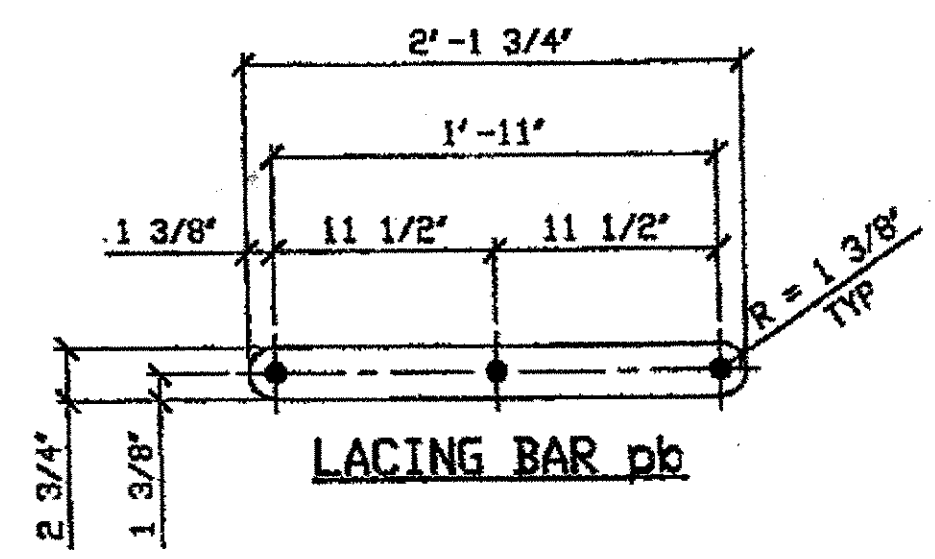
3 - POST STRUT FULL LENGTH COMPLETE REPLACEMENT - 417A

DRIG SHOP DRAWING 33-MS3  
DRIG SHOP MARK MS3  
REPAIR SHEET 11-138, 190 & 252  
(IDENTICAL TO 301A)

SPAN 11 NORTH EXTERIOR L3/U3 - L4/U4 417 A  
SPAN 11 NORTH EXTERIOR L14/U14 - L15/U15 417 A  
SPAN 11 SOUTH EXTERIOR L3/U3 - L4/U4 417 A

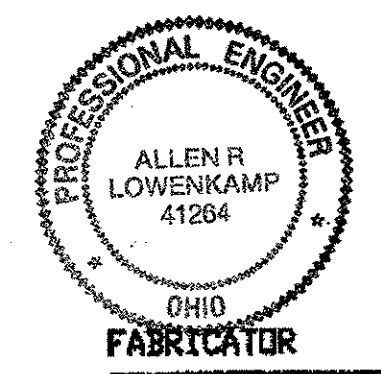


DETAIL PLATE pa



LACING BAR pb

O.D.O.T. DIST. 12  
ACCEPTED 2/1/04 P.J.M.  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



AMERICAN BRIDGE MANUFACTURING  
2800 AMERICAN BRIDGE WAY  
CHAMBERSBURG, PA 15708  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY bdp/ssf

DOT ITEM LINE NO. 0144  
DOT BID ITEM NO. 863E30000

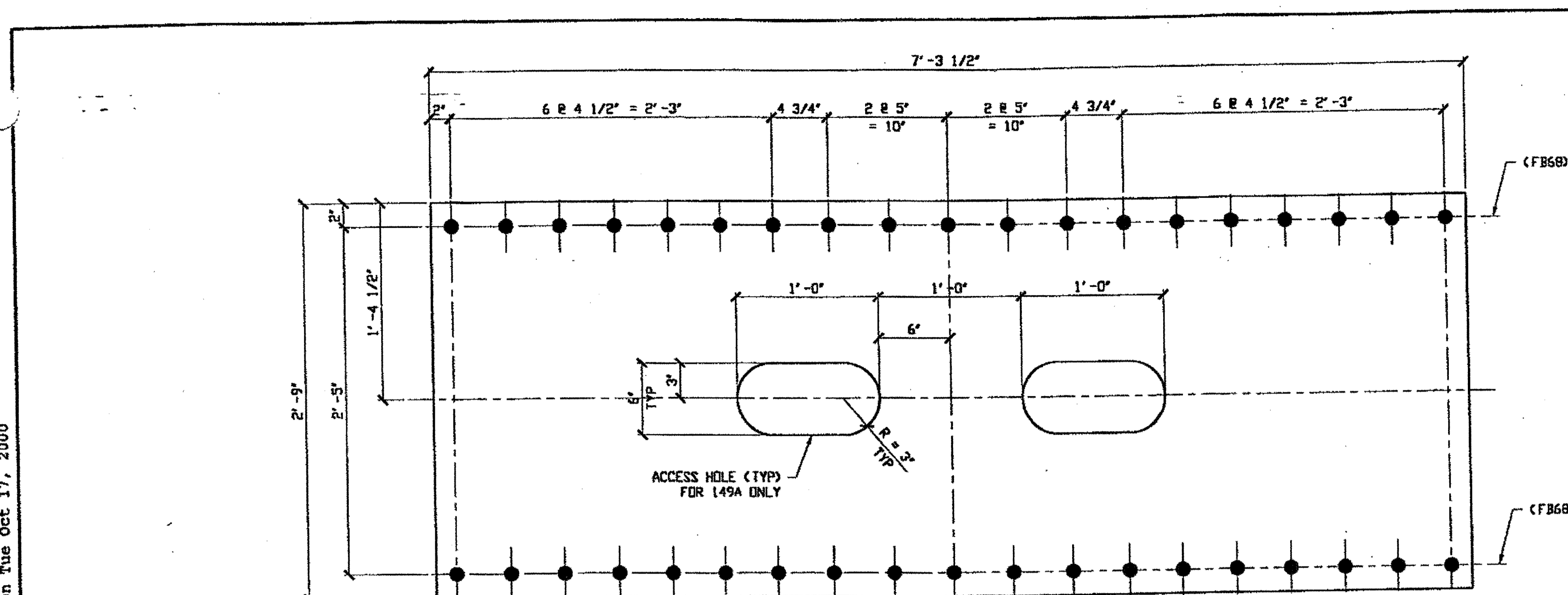
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

SHEET NUMBER	417
ASH JOB NUMBER	800010

G:\Contracts\2000\800010\Drawings\0417A.dwg  
Save by rjpr at 03:53pm Feb 20, 2002  
Plot by afos at 11:12am Feb 25, 2002  
Model space plot + Scale = 1/9

at 01:42pm on Tue Oct 17, 2000  
 at 01:42pm on Tue Oct 17, 2000 - Last plotted by Rsp  
 upringer at 01:42pm on Tue Oct 17, 2000 - Last plotted by Rsp  
 Last modified



**SPAN 1**

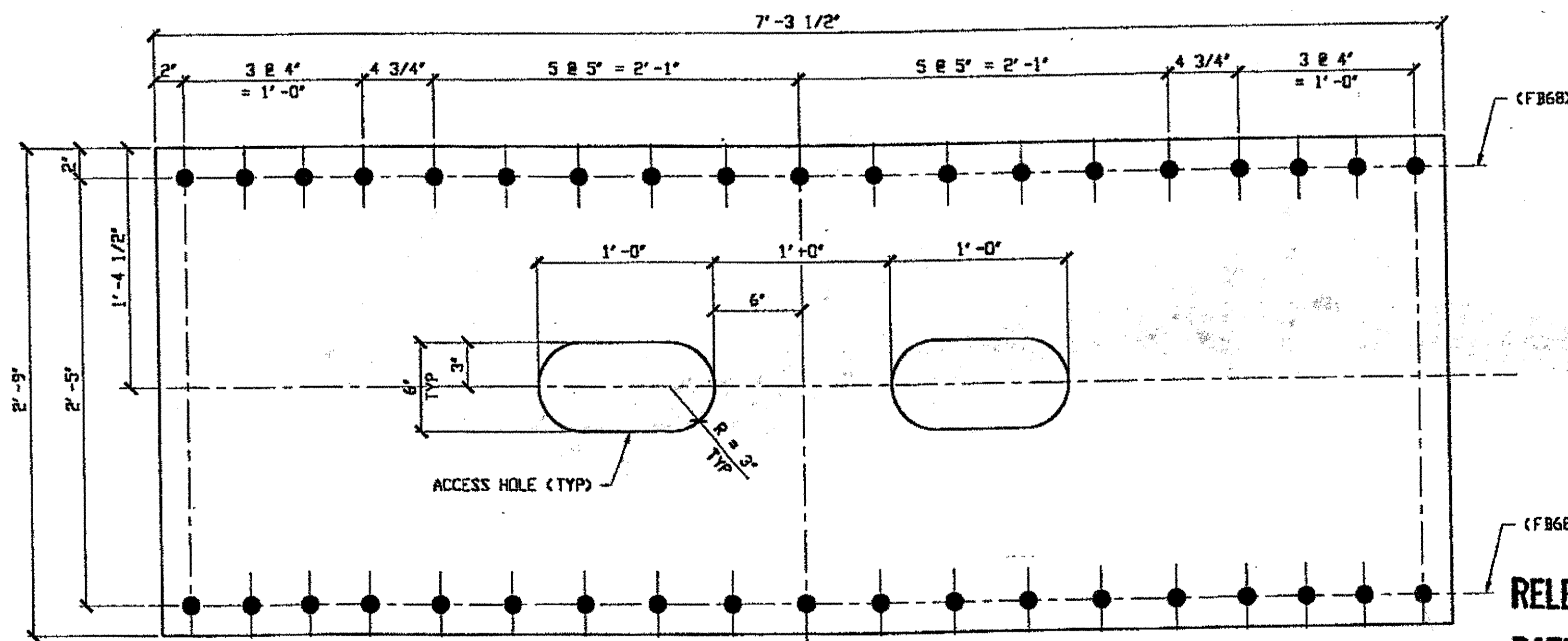
L2-L3 NORTH EXTERIOR BOTTOM 149A "5" BTM LOWER CHORD COVER PLATE 149A  
 L2-L3 SOUTH EXTERIOR TOP 149B

ORIG. SHOP DRAWING 49 L10-L11-0-3 (2 PLATES)  
 ORIG. SHOP DRAWING 49 L2-L3-0-3 (2 PLATES)  
 ORIG. SHOP MARK P49F

"2" TOP LOWER CHORD COVER PLATE 149B  
 ORIG. SHOP DRAWING 49 L2-L3-0-3  
 ORIG. SHOP MARK P49F

**SPAN 3**

L10-L11 NORTH EXTERIOR BOTTOM 149A  
 L10-L11 SOUTH EXTERIOR BOTTOM 149A  
 L2-L3 NORTH EXTERIOR TOP 149B  
 L2-L3 NORTH EXTERIOR BOTTOM 149A  
 L2-L3 SOUTH EXTERIOR BOTTOM 149A



**SPAN 7**

"4" BTM LOWER CHORD COVER PLATE 149C  
 ORIG. SHOP DRAWING 197 L12-L13-0-7  
 ORIG. SHOP DRAWING 197 L2-L3-0-7  
 ORIG. SHOP MARK P197a

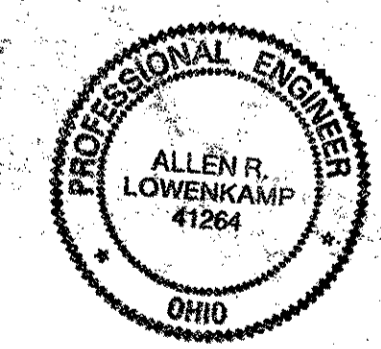
**SPAN 7**

L12-L13 NORTH EXTERIOR BOTTOM 149C  
 L12-L13 SOUTH EXTERIOR BOTTOM 149C  
 L2-L3 NORTH EXTERIOR BOTTOM 149C  
 L2-L3 SOUTH EXTERIOR BOTTOM 149C

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				COVER PLATES				
2		149A	5	PL 1/2 X 33	7	3 1/2		
3		149B	2	PL 1/2 X 33	7	3 1/2		
4		149C	4	PL 9/16 X 33	7	3 1/2		
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
17								
18								
19								
20								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:**
- OPEN HOLES ARE (1 3/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 12/1/01 DSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/19/00 BY ew

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0132 & 0123  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

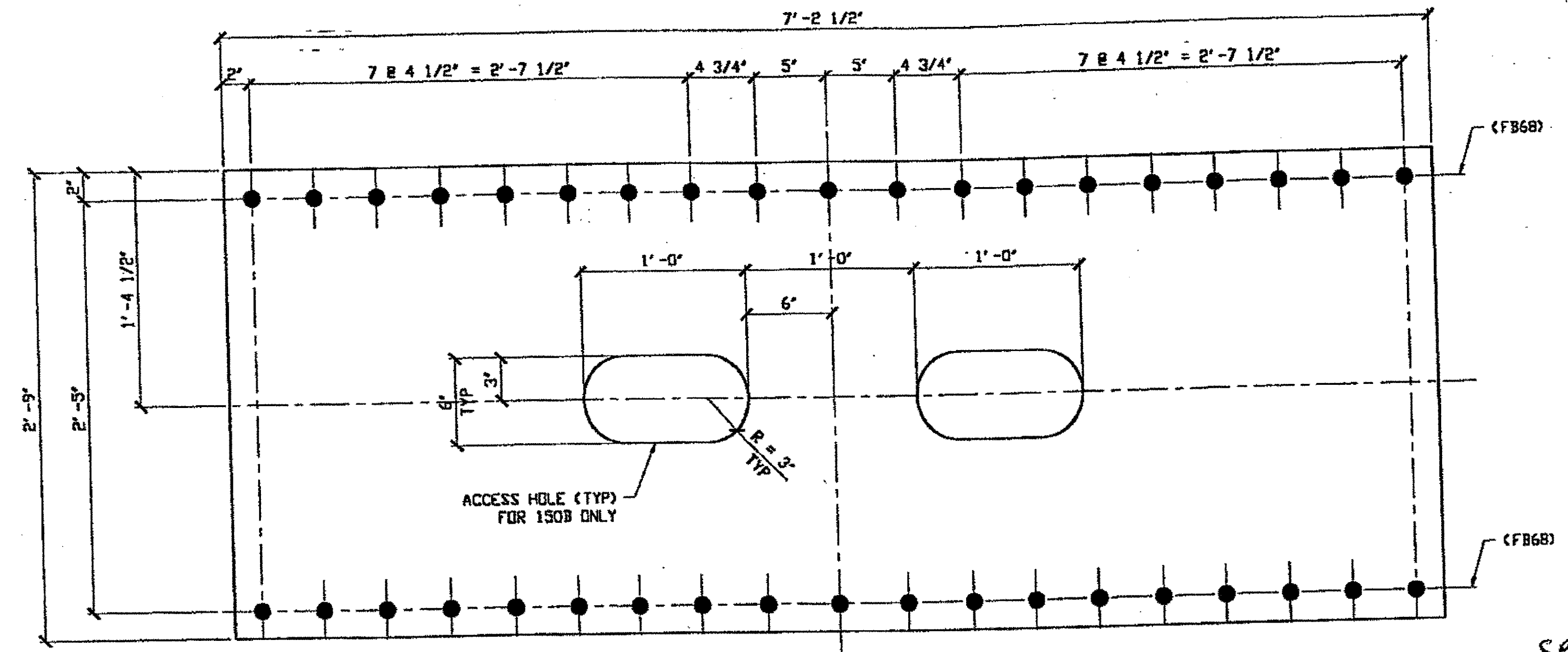
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 LOWER COVER PLATE DETAILS

SHEET NUMBER: 149  
 ADM. JOB NUMBER: 800010

01:54pm on Mon Oct 16, 2000

Springer at 01:54pm on Mon Oct 16, 2000 - Last plotted by Reprir

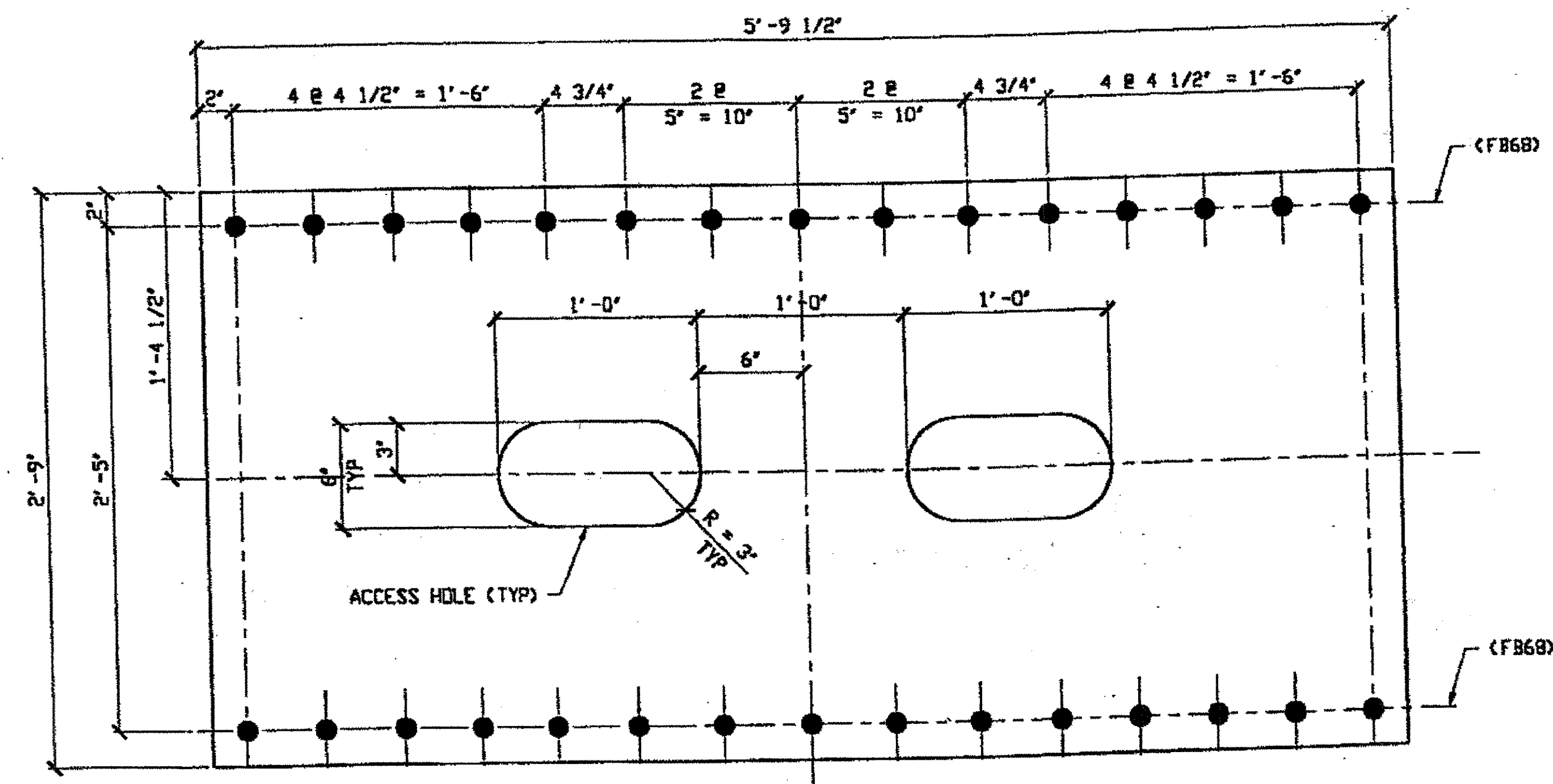
Last modified



**(No Access Holes), "2" TOP LOWER CHORD COVER PLATE 150A**  
 ORIG. SHOP DRAWING 117 L11-L12-0-5  
 ORIG. SHOP MARK P117w

**"2" BTM LOWER CHORD COVER PLATE 150B**  
 ORIG. SHOP DRAWING 117 L11-L12-0-5  
 ORIG. SHOP MARK P117w

L11-L12 NORTH EXTERIOR TOP 150A  
L11-L12 SOUTH EXTERIOR TOP 150A  
L11-L12 NORTH EXTERIOR BOTTOM 150B  
L11-L12 SOUTH EXTERIOR BOTTOM 150B



**(1) BTM LOWER CHORD COVER PLATE 150C**  
 ORIG. SHOP DRAWING 117 L2-L3-0-5  
 ORIG. SHOP MARK P117k

SPAN 5 L2-L3 NORTH EXTERIOR BOTTOM 150C

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				COVER PLATES				
2		150A	2	PL 1/2 X 33	7	2 1/2		810
3		150B	2	PL 1/2 X 33	7	2 1/2		773
4		150C	1	PL 9/16 X 33	5	9 1/2		345
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB68		1 1/8" DIA	0	2 3/4	NOTE 2	
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

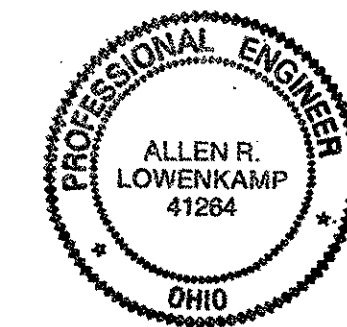
**NOTES:**

- OPEN HOLES ARE 1 3/16" UNLESS NOTED OTHERWISE
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/10/01	DJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

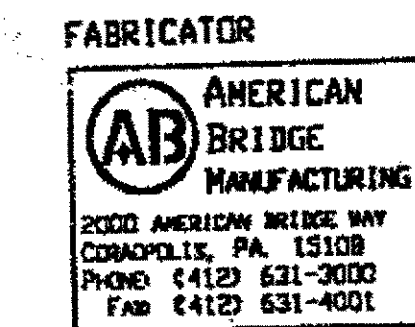
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0132 & 0123  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**LOWER COVER PLATE DETAILS**



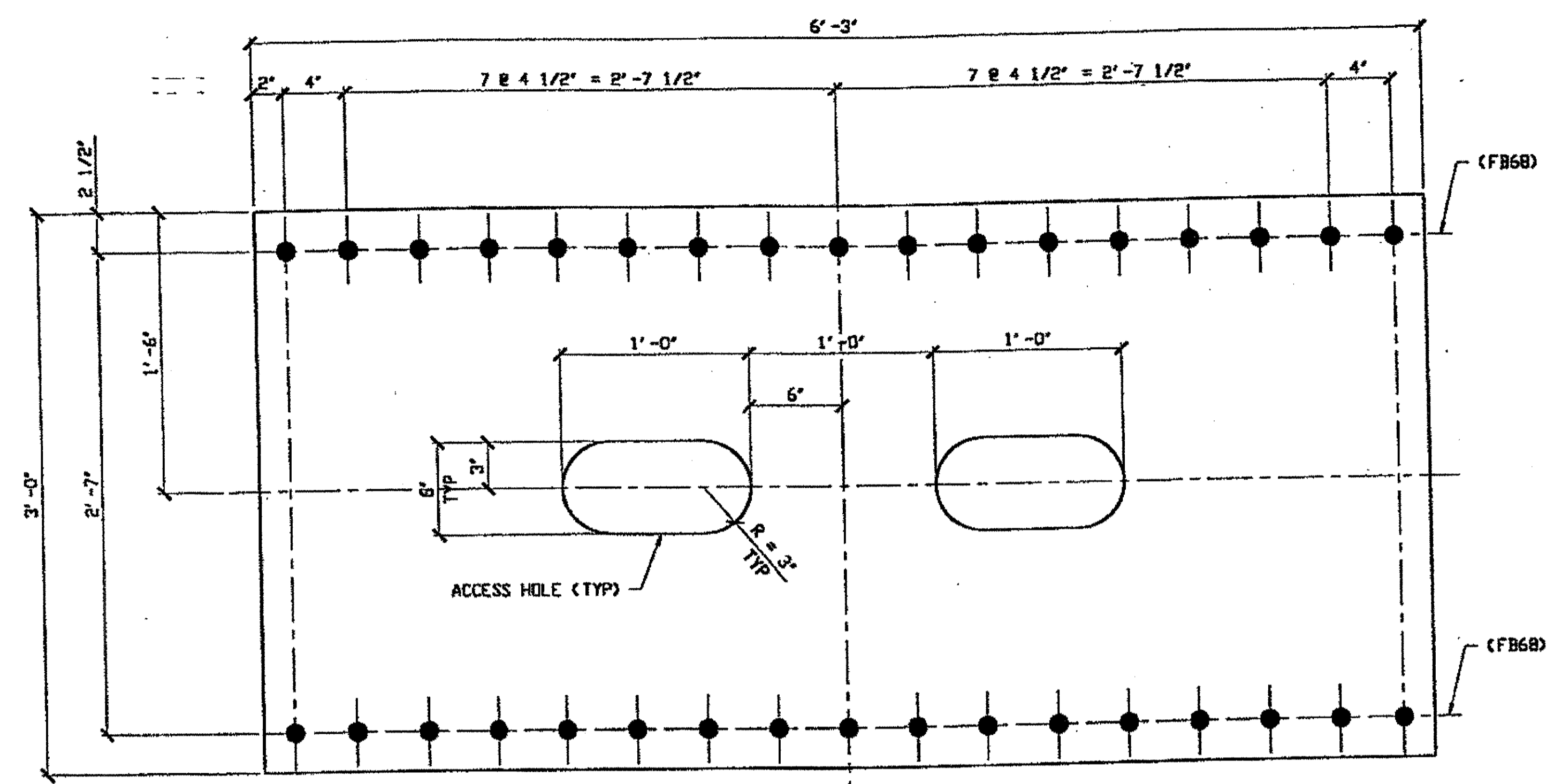
FABRICATOR  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 9/27/00  
 CHECKED BY: GAF  
 DATE: 10/16/00

**RELEASED FOR CONSTRUCTION**  
 DATE 10/19/00 BY cew

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

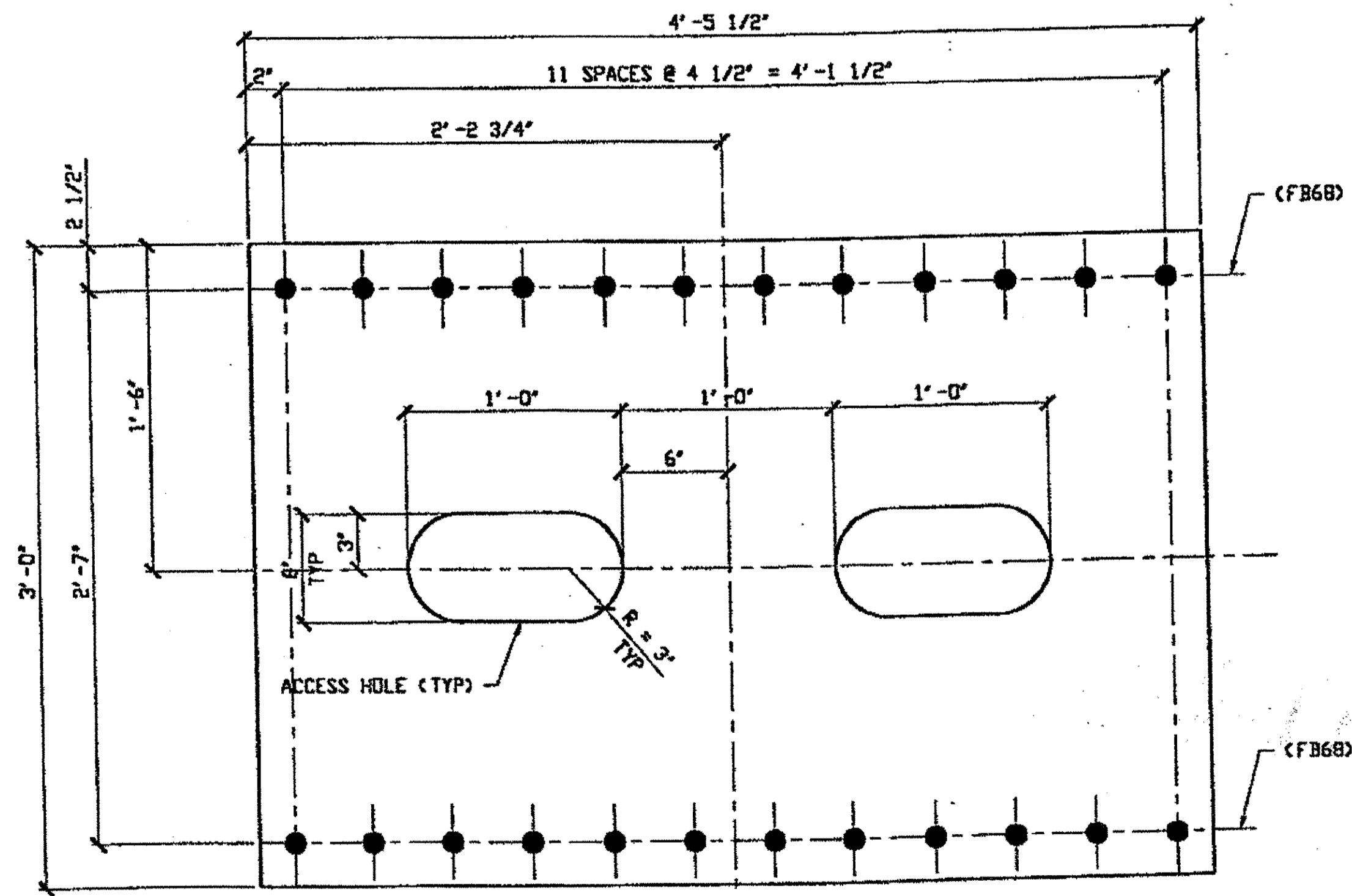
SHEET NUMBER	150
JOB NUMBER	800010

at 01:43pm on Tue Oct 17, 2000  
 Reprinter at 02:27pm on Mon Oct 16, 2000 -1- Last plotted by Rspri  
 Last modified.



**2\"/>**

SPAN 9  
 L14-L16 NORTH EXTERIOR BOTTOM 151A  
 L14-L15 SOUTH EXTERIOR BOTTOM 151A



**2\"/>**

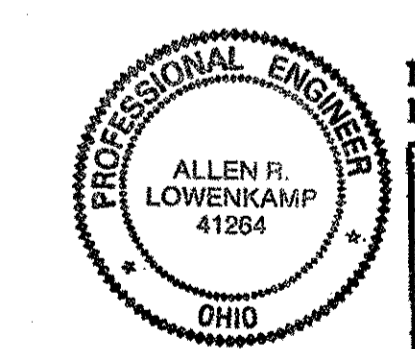
SPAN 9  
 L3-L4 NORTH EXTERIOR BOTTOM 151B  
 L3-L4 SOUTH EXTERIOR BOTTOM 151B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				COVER PLATES				911
2		151A	2	PL 5/8 X 36	6	3		
3		151B	2	PL 5/8 X 36	4	5 1/2		638
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB68		1 1/8\"/>				
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\leq 3/16\"/>$
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED: 2/4/04 PSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 10/19/03 BY CUU



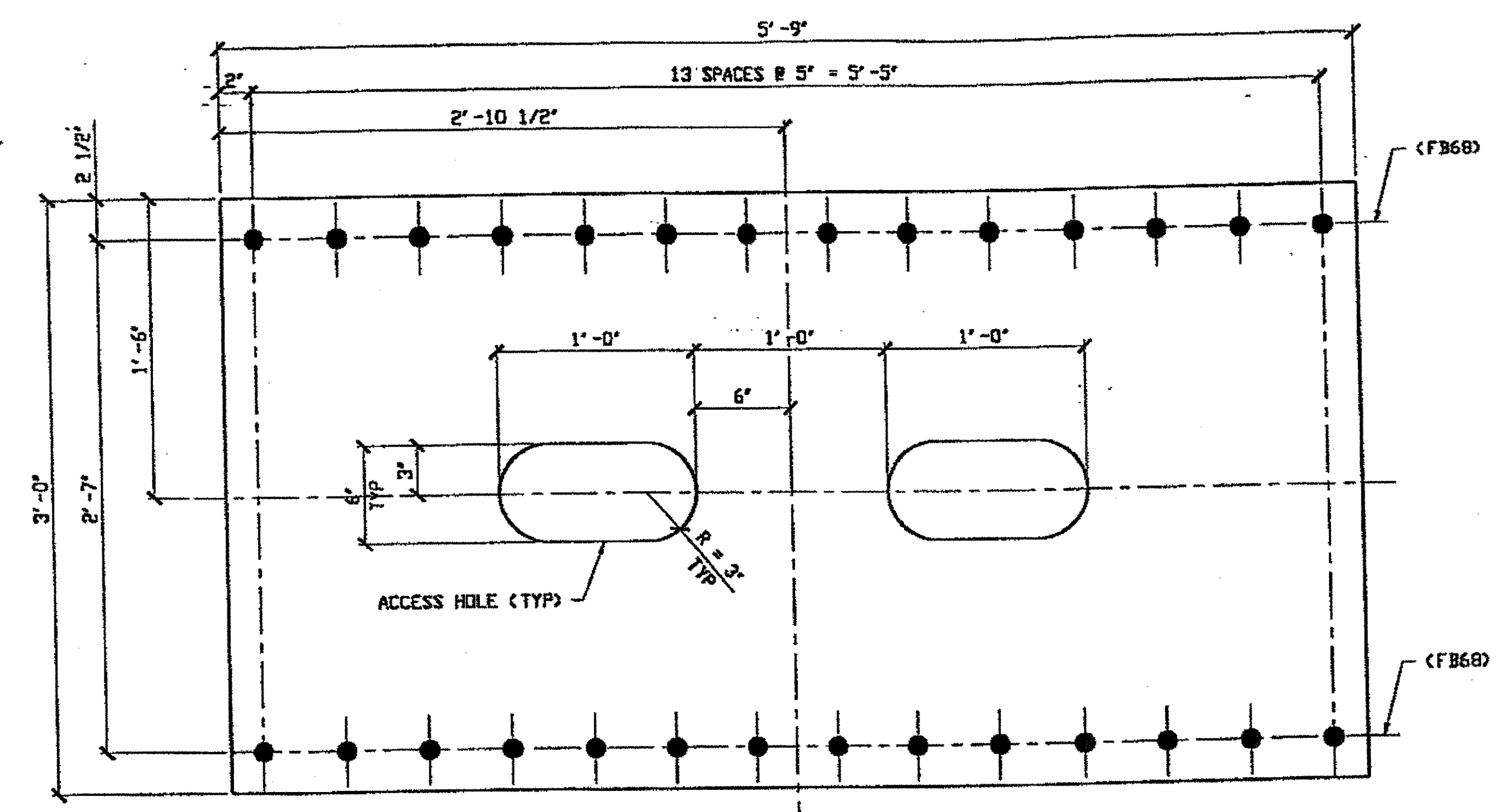
FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONROESVILLE, PA 15109  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

DOT ITEM LINE NO. 0132 & 0123		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO			
DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB			
STATE ROUTE 10 OVER THE CUYAHOGA RIVER			
CITY OF CLEVELAND			
CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
LOWER COVER PLATE DETAILS			
IN CHARGE OF: L. SMITH			SHEET NUMBER
DRAWN BY: RAS			151
DATE: 9/28/00			ABN JOB NUMBER
CHECKED BY: GAF			800010
DATE: 10/16/00			



Last modified by Repringer at 04:18pm on Mon Oct 16, 2000 - last plotted by Repringer at 01:43pm on Tue Oct 17, 2000



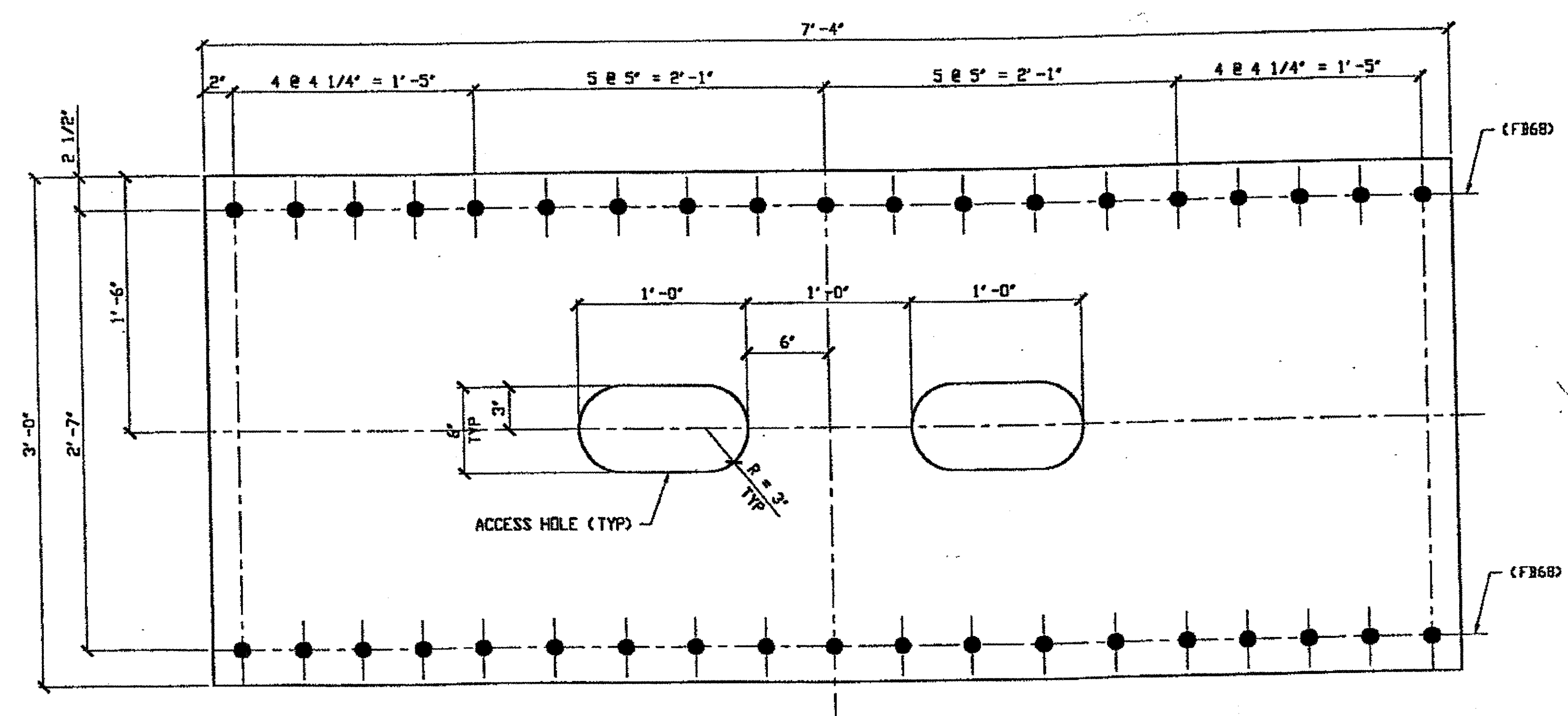
**(2) BTM LOWER CHORD COVER PLATE 152A**  
 ORIG. SHOP DRAWING 431 L14-L15-0-11  
 ORIG. SHOP DRAWING 431 L3-L4-0-11  
 ORIG. SHOP MARK P397H

SPAN II

L14-L15 SOUTH EXTERIOR BOTTOM 152A  
L3-L4 SOUTH EXTERIOR BOTTOM 152A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				COVER PLATES				
2		152A	2	PL 5/8 X 36	5	9		835
3		152B	2	PL 5/8 X 36	7	4		1077
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB68	132	1 1/8" DIA	0	2 3/4	NOTE 2	254
17								
18								
19								
20								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		N/A	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE (1 3/16") UNLESS NOTED OTHERWISE
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



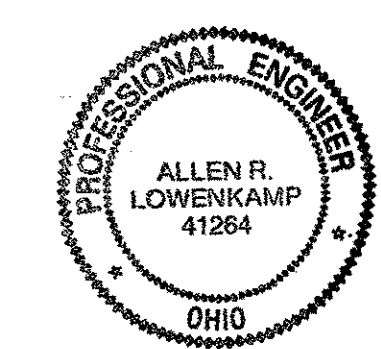
**(2) BTM LOWER CHORD COVER PLATE 152B**  
 ORIG. SHOP DRAWING 487 LB-L9-0-13  
 ORIG. SHOP MARK P487aa

SPAN 13

L8-L9 NORTH EXTERIOR BOTTOM 152B  
L8-L9 SOUTH EXTERIOR BOTTOM 152B

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/1/04 PSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 10/19/00 BY Cue

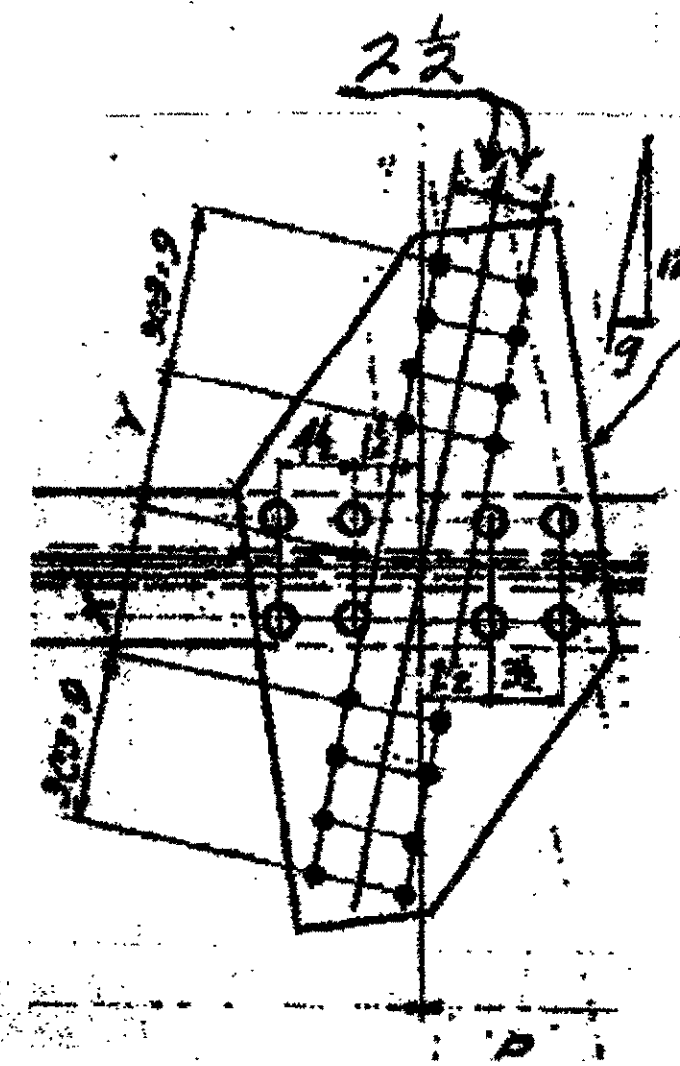


FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONROPSVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 9/28/00  
 CHECKED BY: DATE:  
 GAF 10/16/00

DOT ITEM LINE NO. 0132 & 0123	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
BY	
REVISIONS	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB	
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)	
CITY OF CLEVELAND	
CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
LOWER COVER PLATE DETAILS	
SHEET NUMBER	152
ARK JOB NUMBER	800010

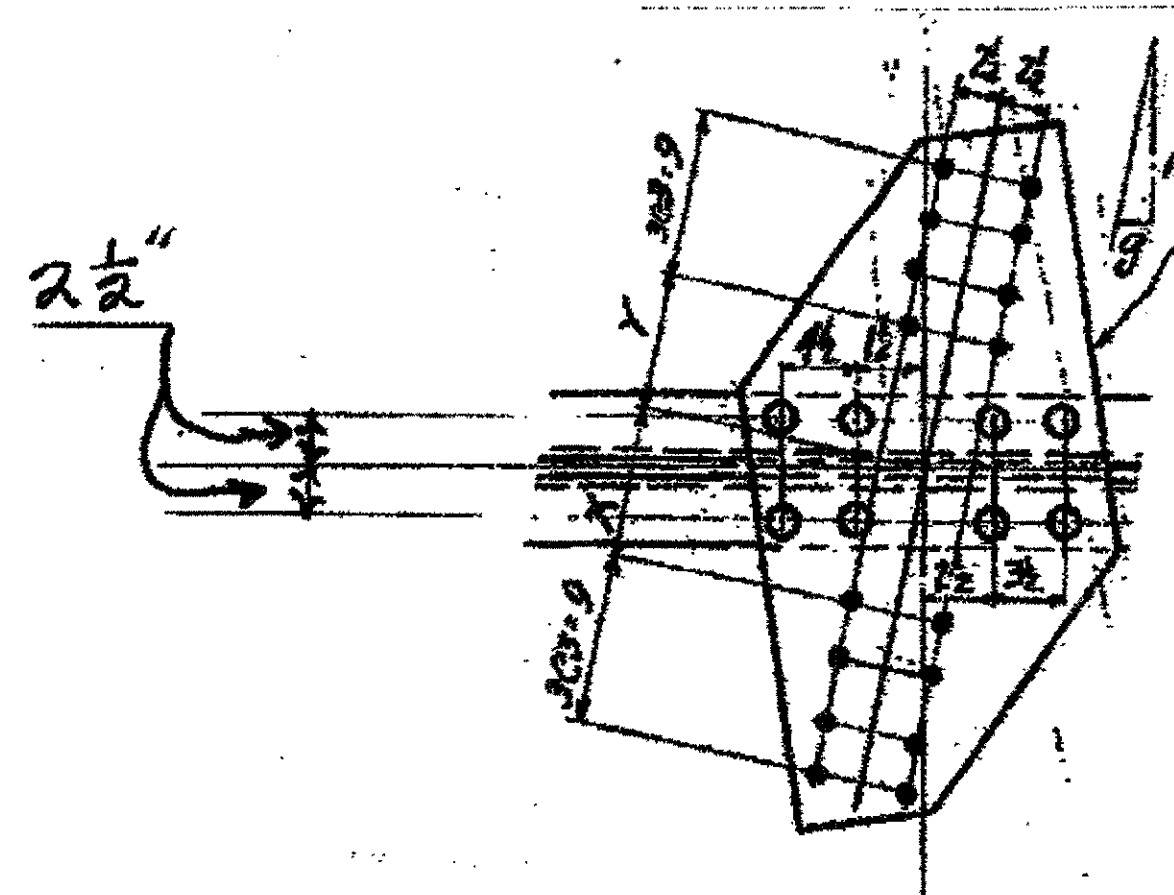


2 1/2"

$$g = 15 \frac{1}{16}''$$

$$x = 8 \frac{3}{16}''$$

$$y = 8 \frac{3}{16}''$$



2 1/2"

$$g = 2 \frac{11}{32}''$$

$$x = 7 \frac{1}{16}''$$

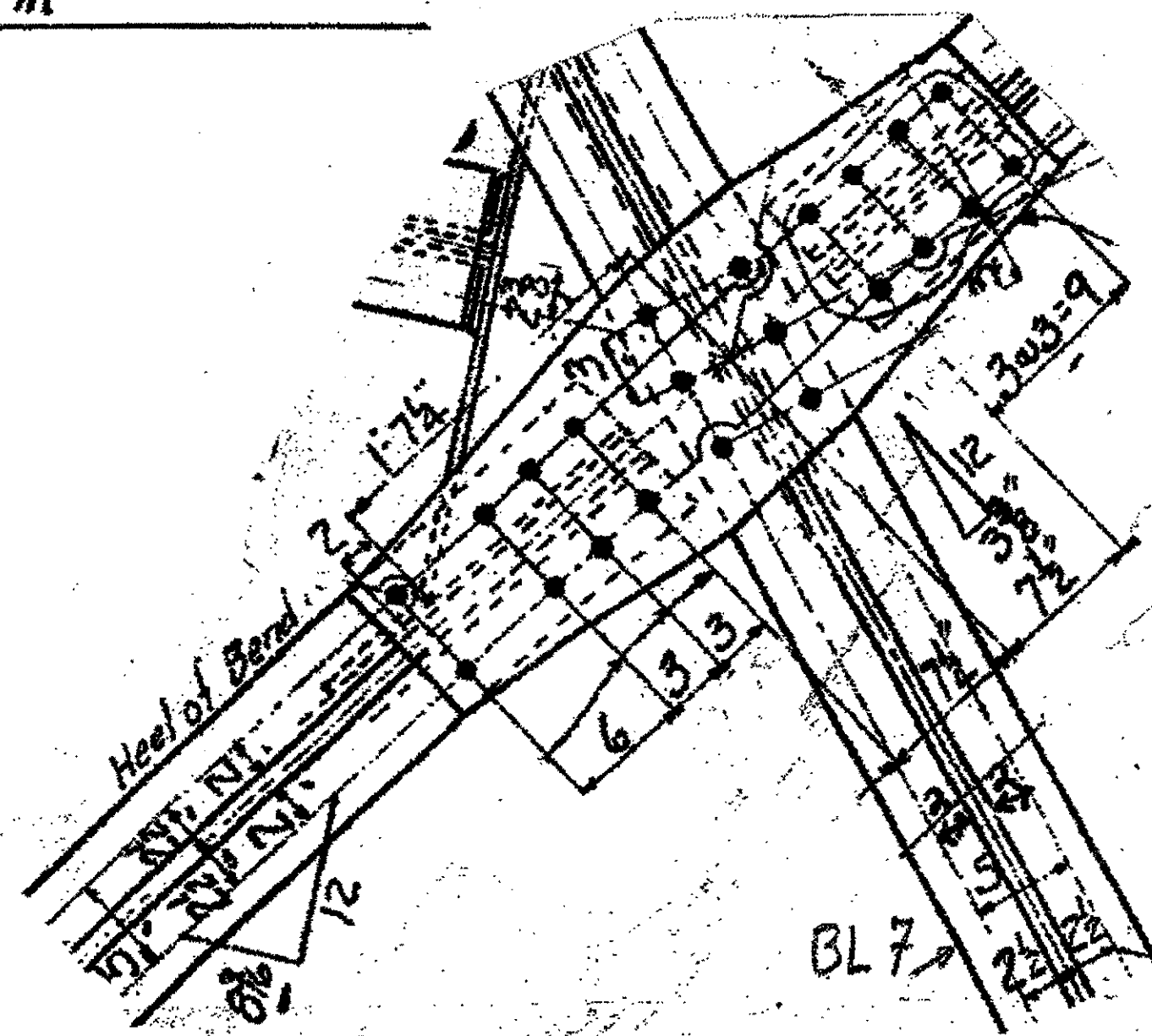
$$y = 7 \frac{1}{16}''$$

BILL OF MATERIALS

Piece No.	Qty.	Description
P16H	1	15" X 3 1/4" X 3/8"
P16M	1	15" X 3 1/4" X 3/8"
P16A	1	12" X 3 3/8" X 3/8"
		PLATE A36
ALL NOTES ON SHEET 179 APPLY		

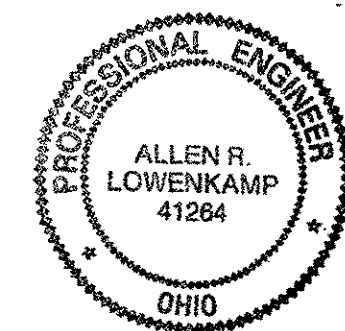
1 TIE PLATE P16M  
 — SPAN 2 C-B' NORTH, TOP, 16M —  
 ORIGINAL SHOP MARK P16M

1 TIE PLATE P16H  
 — SPAN 3 D-E' SOUTH, BOTTOM, 16H —  
 ORIGINAL SHOP MARK P16H



1 TIE PLATE P16A  
 — ORIG. SHOP MK. P13A —  
 — SPAN WYLE A-B' NORTH, 16A (TOP) —

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED \_\_\_\_\_  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

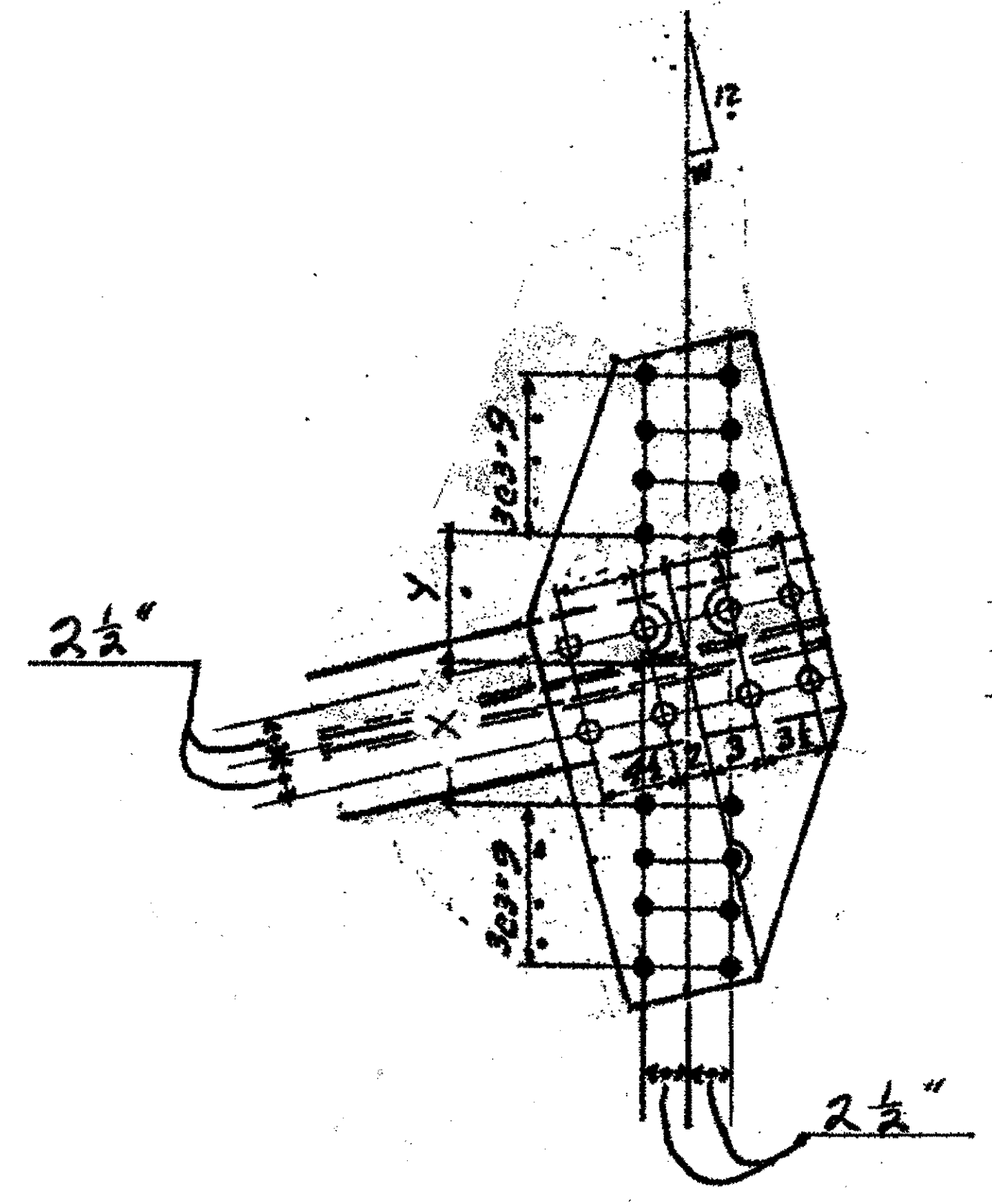
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE NO. CUY 10-16.13

SCALE: NA DATE: \_\_\_\_\_ DRAWING NO. 16

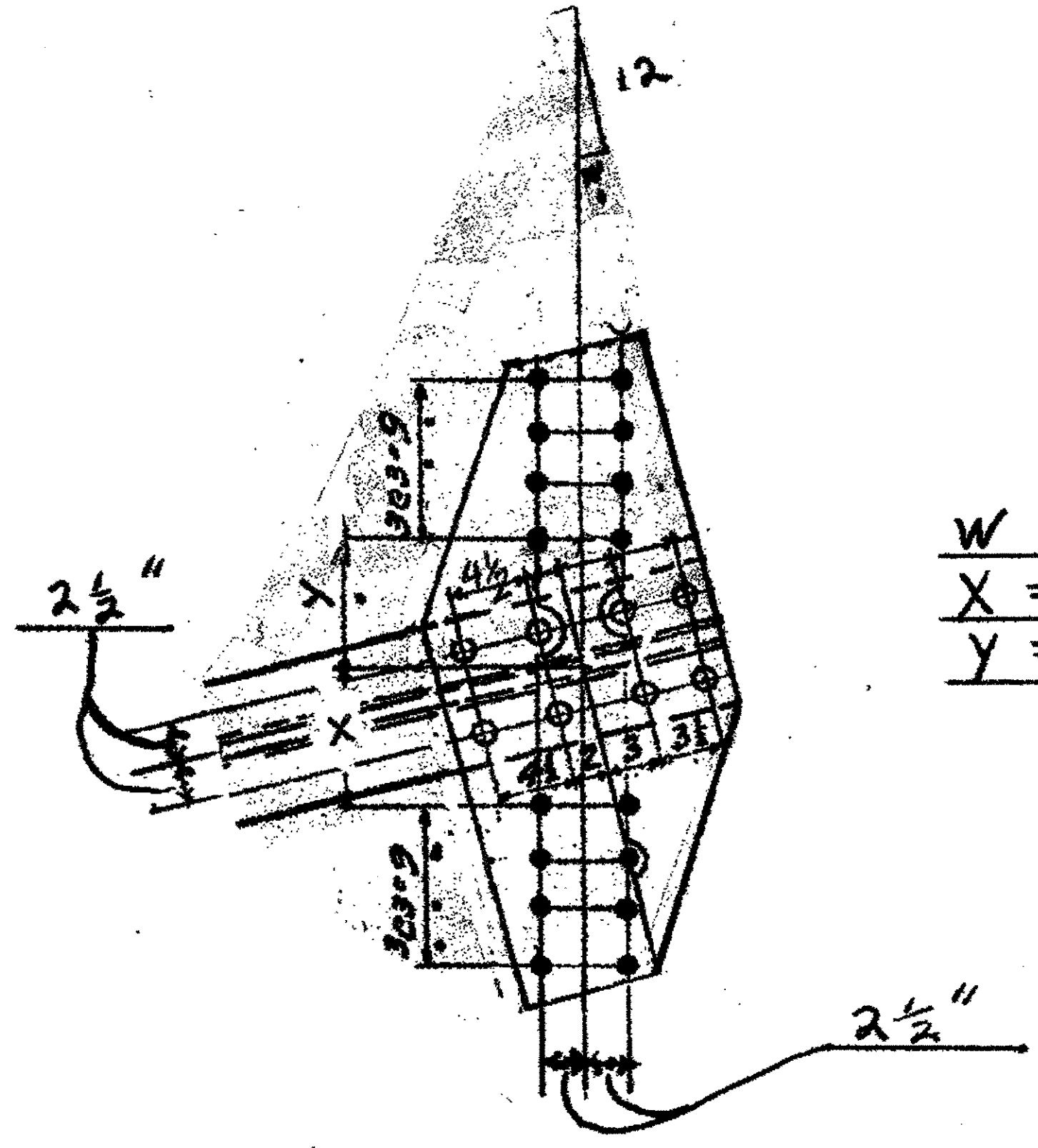
### BILL OF MATERIALS

Piece No.	Qty.	Description
18 K	1	16" x 3'-2" x 3/8"
18 N	1	16" x 3'-3" x 3/8"
ALL NOTES ON SHEET 179 APPLY		
PLATE A 36		



$$\begin{aligned}
 W &= 1 \frac{13}{16}'' \\
 X &= 8'' \\
 Y &= 7 \frac{3}{4}''
 \end{aligned}$$

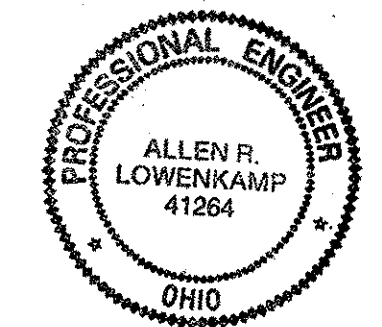
1 - TIE PLATE 18N  
ORIGINAL SHOP MARK P165N  
SPAN 7, L-K' SOUTH, TOP 18N



$$\begin{aligned}
 W &= 1 \frac{1}{2}'' \\
 X &= 7 \frac{1}{2}'' \\
 Y &= 7 \frac{1}{2}''
 \end{aligned}$$

1 - TIE PLATE 18K  
ORIGINAL SHOP MARK P165K  
SPAN 7 H-J' NORTH, TOP 18K

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED \_\_\_\_\_  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

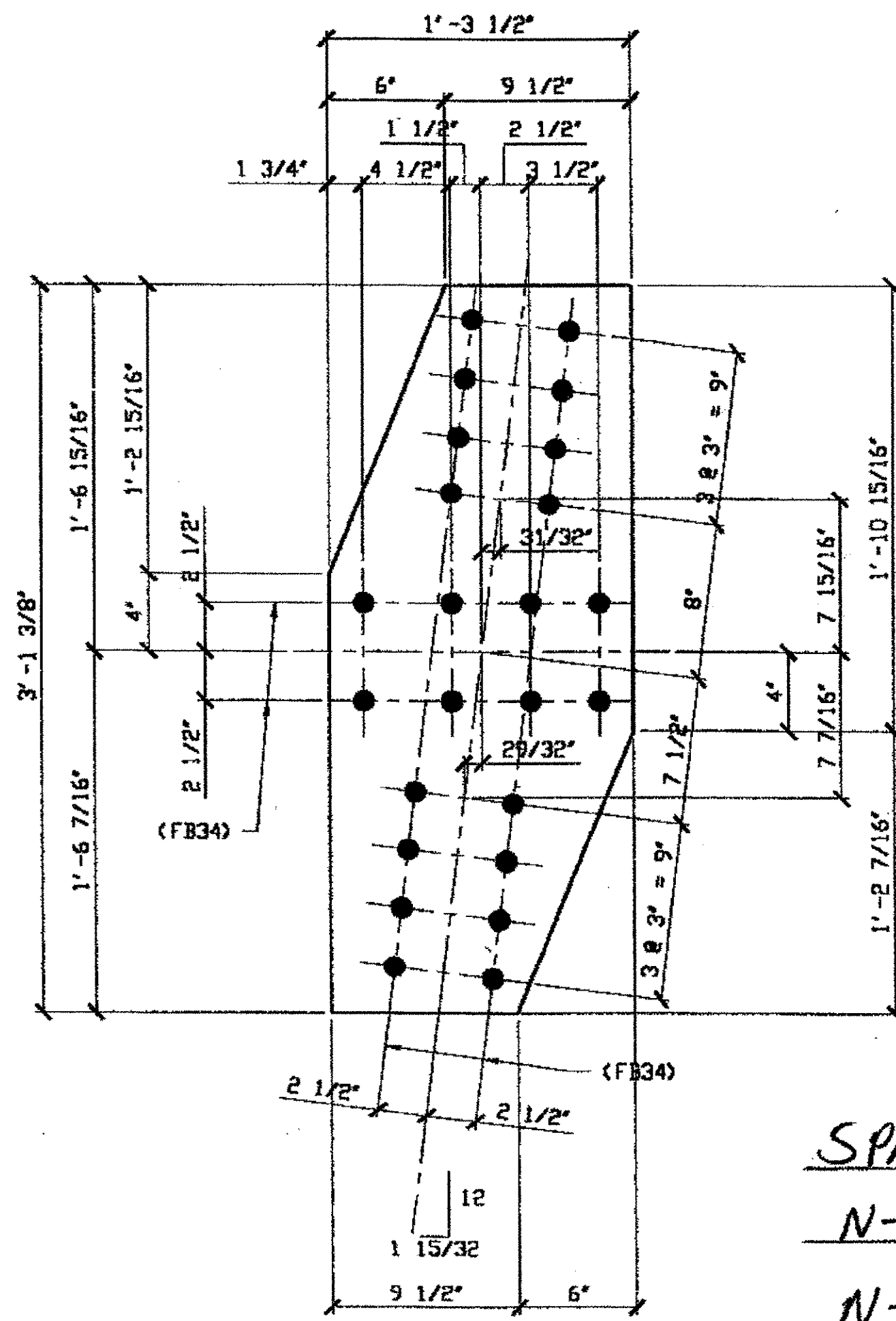
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY 10-16-13**

DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 SCALE NA \_\_\_\_\_ DATE \_\_\_\_\_

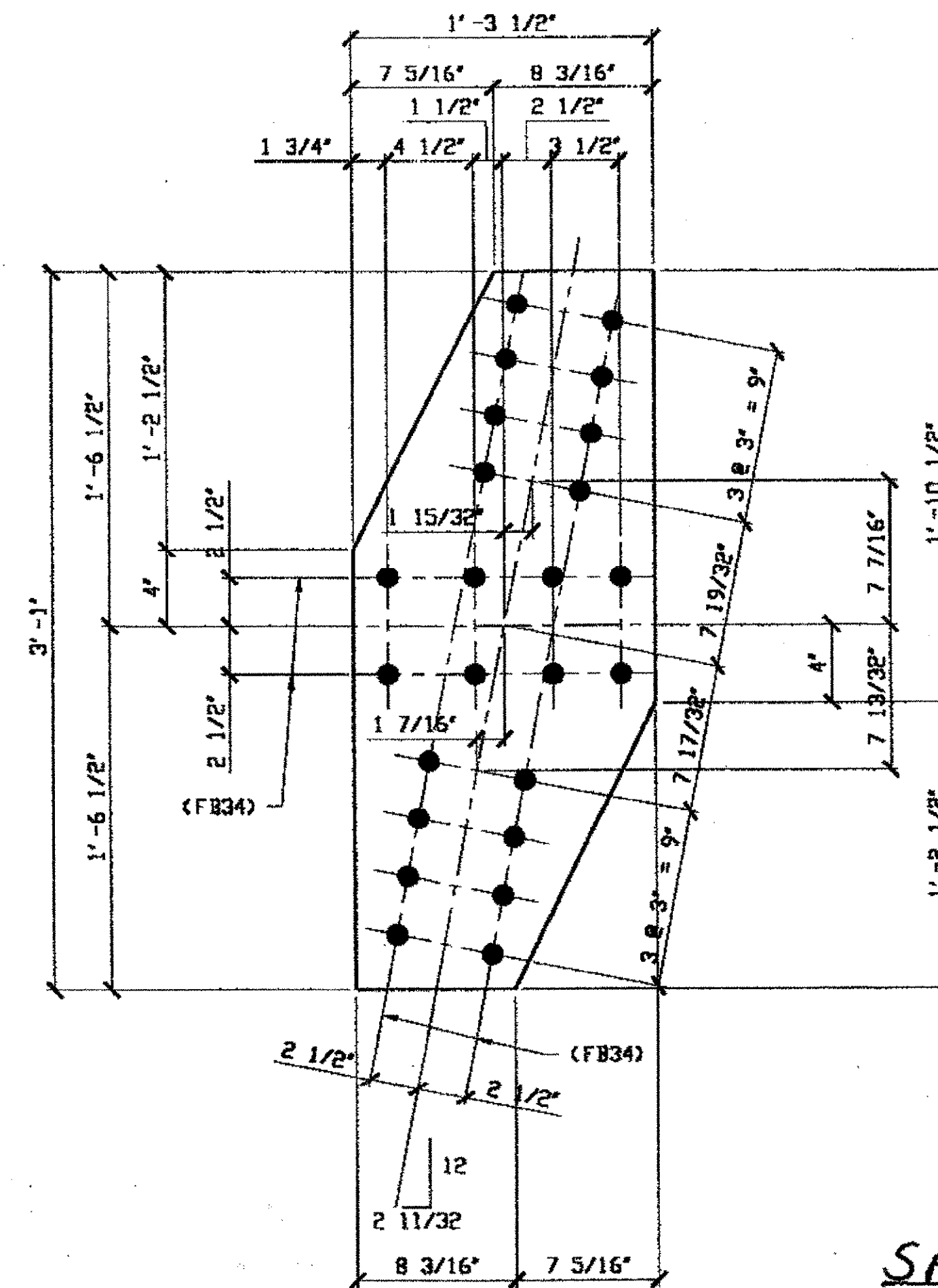
JOB NO. \_\_\_\_\_  
 DRAWING NO. **18**

Last modified: Rspinger at 03:15pm on Wed Jan 03, 2001 -|- Last plotted by Gfo at 04:03pm on Mon Feb 05, 2001



**2 - TIE PLATE - 179C**  
 ORIG SHOP DWG 16  
 ORIG SHOP MARK P16w  
 LINE ITEM No. 0105

SPAN 3  
N-0' NORTH TOP 179C  
N-0' NORTH BOTTOM 179C



**2 - TIE PLATE - 179B**  
 ORIG SHOP DWG 16  
 ORIG SHOP MARK P16w  
 LINE ITEM No. 0105

SPAN 3  
K-L' NORTH TOP 179B  
K-L' SOUTH TOP 179B

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2								
3								
4				TIE PLATE				
5		179B	2	PL 3/8 X 15 1/2	3	1 1/2		100
6		179C	2	PL 3/8 X 17 1/2	3	1 3/8		104
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34		1" DIA	0	2 1/4	NOTE 2	
18		FB36		1" DIA	0	2 1/2	NOTE 2	
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

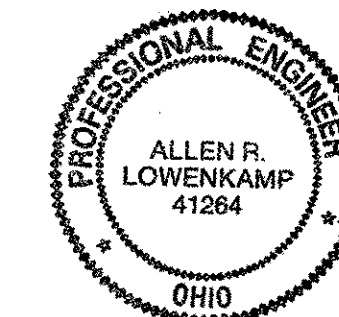
**NOTES:**

- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 2/8/01 BY tjp

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/1/01 DYM  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



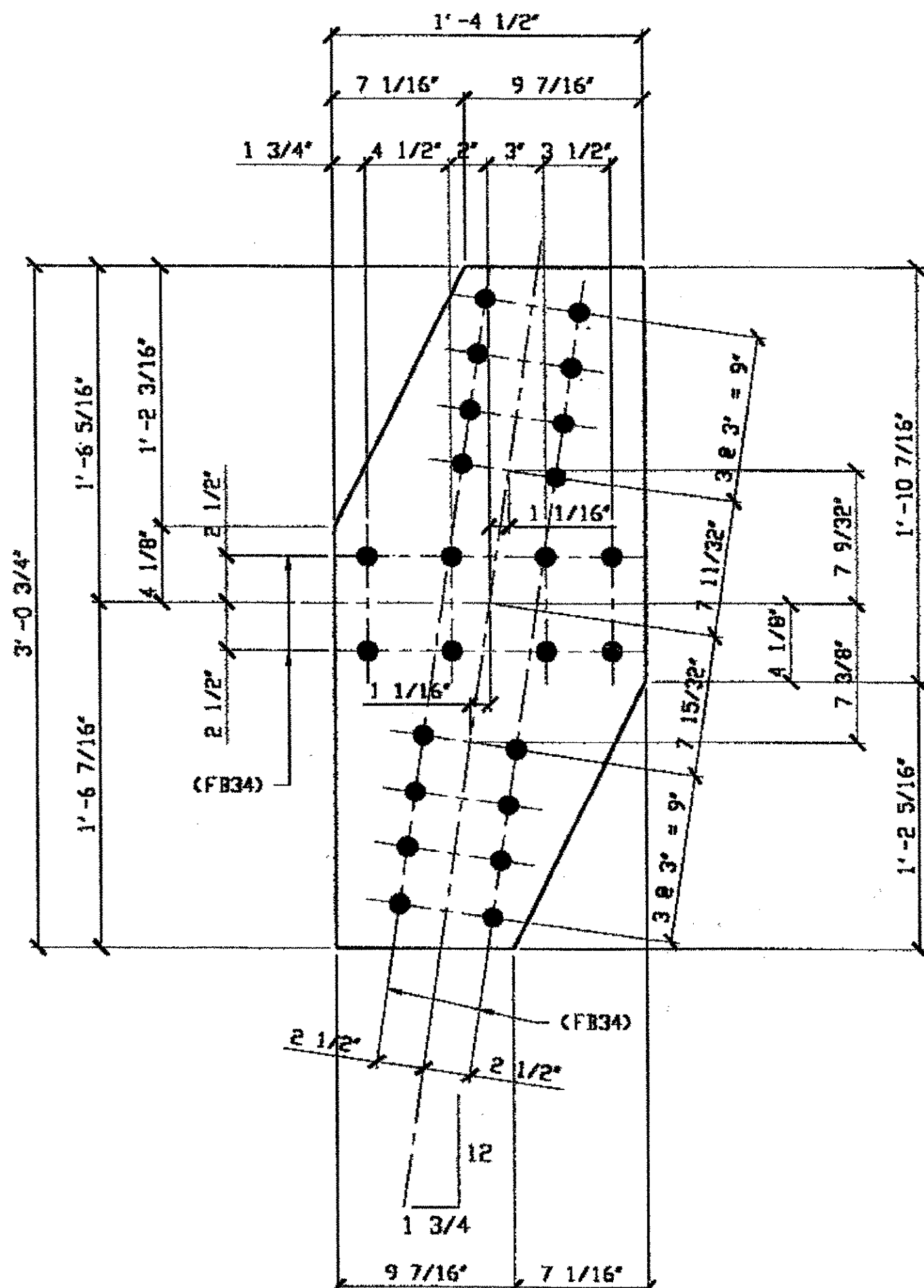
FABRICATOR  
**AR** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONROPSIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 12/20/00  
 CHECKED BY: DATE:  
 GAF 01/03/01

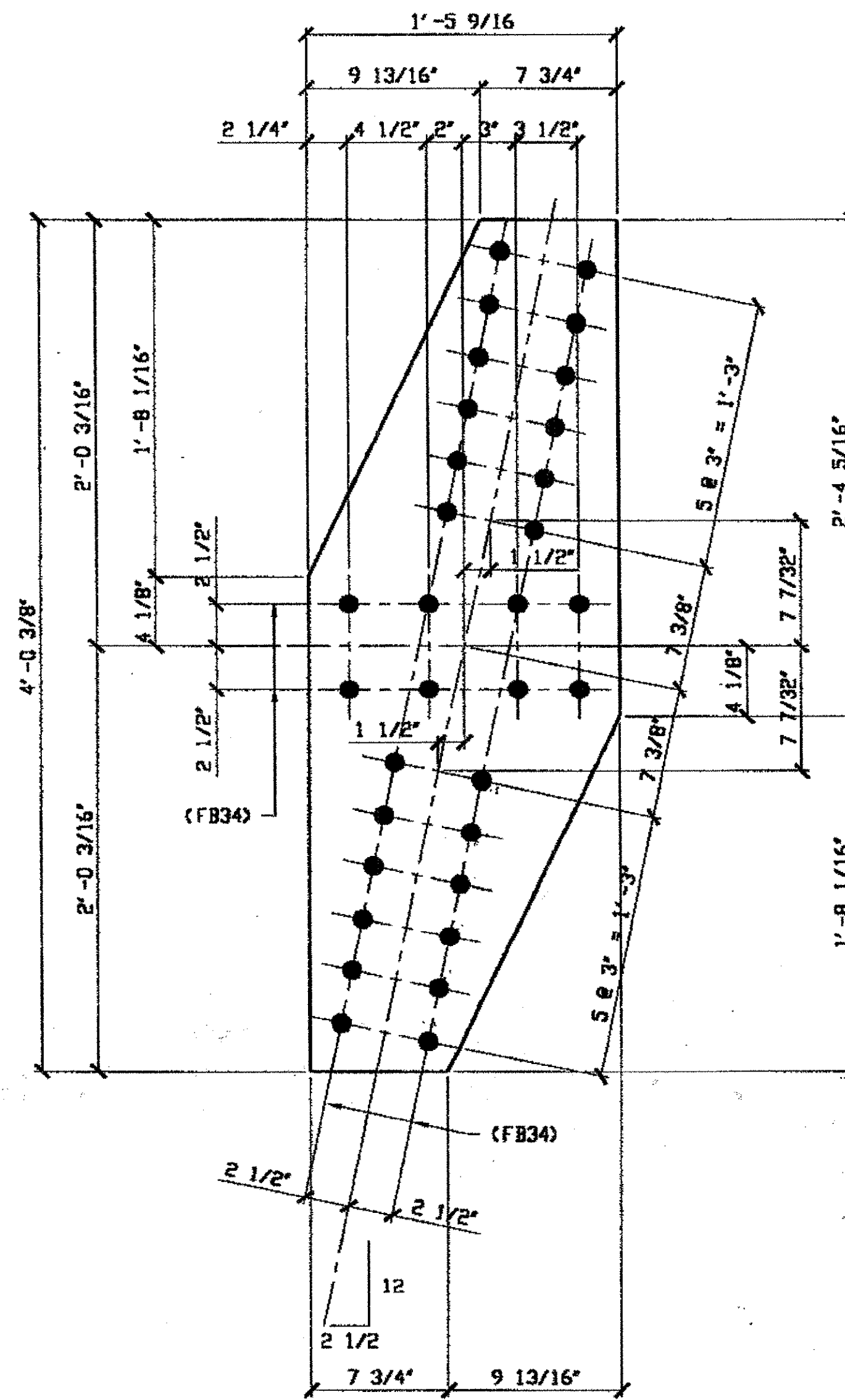
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 063E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
SHEET NUMBER: 179		JOB NUMBER: 800010	

Last modified by rspringer at 09:02am on Wed Mar 21, 2001 - Last plotted by Gfooster at 08:59am on Fri Mar 23, 2001



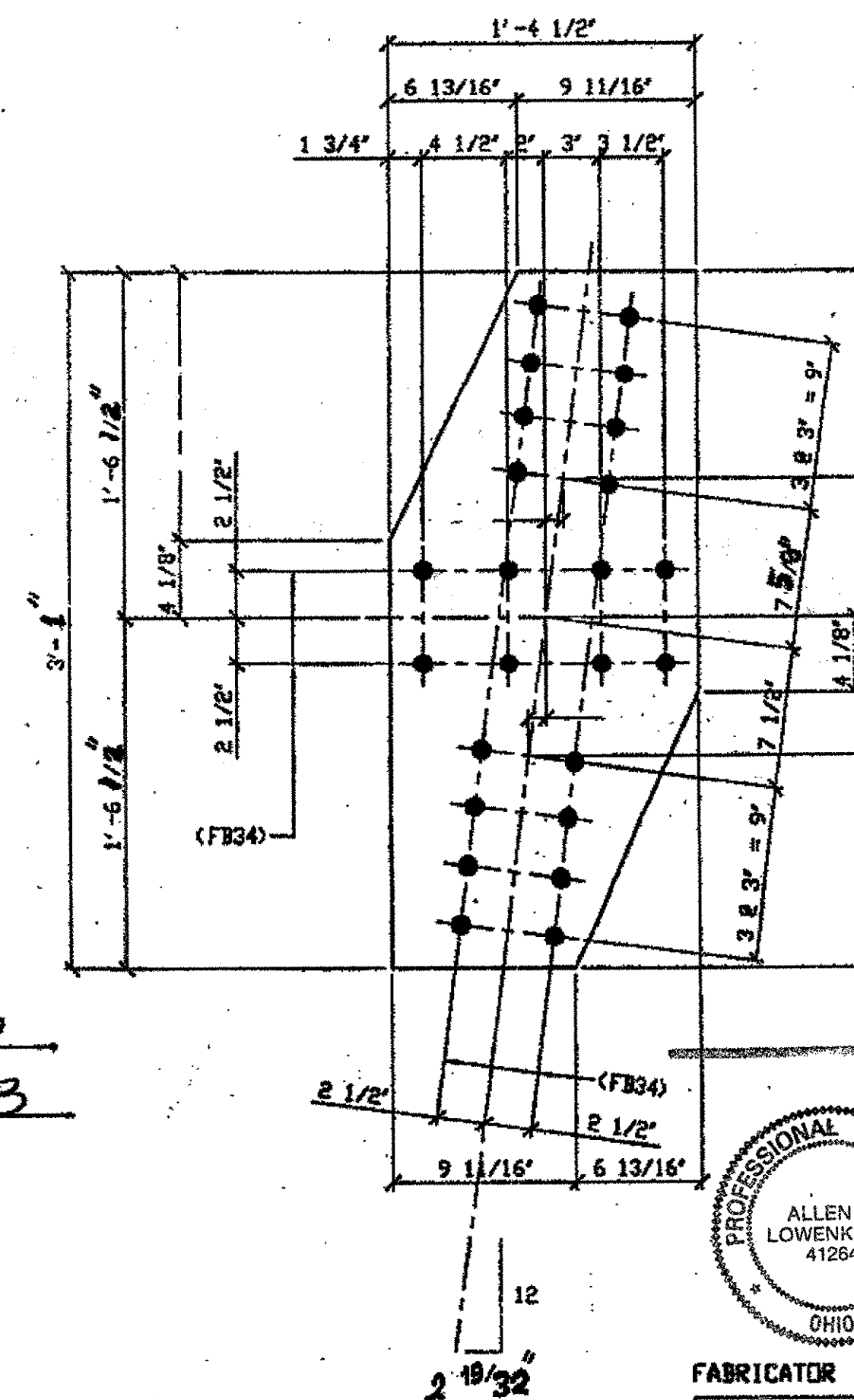
**1 - TIE PLATE - 242A**  
 ORIG SHOP DWG 84-BL46  
 ORIG SHOP MARK PB4k  
 REPAIR SHEET 5-10B

SPAN 5, A-B' NORTH TOP 242A



**2 - TIE PLATE - 242B**  
 ORIG SHOP DWG 84-BL47  
 ORIG SHOP MARK PB4m  
 REPAIR SHEET 5-112

SPAN 5, B-C' NORTH TOP 242B  
SPAN 5, C-B' SOUTH TOP 242B



**3 - TIE PLATES - 242H**  
 ORIG SHOP DWG 85-BL41  
 ORIG SHOP MARK P05h

BILL OF MATERIAL										
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT		
					FEET	INCHES				
1				TIE PLATES						
2		242A	1	PL 3/8 X 16 1/2	3	0 3/4		54		
3		242B	2	PL 3/8 X 17 9/16	4	0 3/8				
4										
5		242H	3	PL 3/8 X 16 1/2	3	1				
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16				FIELD BOLTS						
17		FB34		1" DIA	0	2 1/4	NOTE 2			
18										
19				ALL NOTES ON SHEET 243 APPLY						
20										
PLATE A36				PIPE N/A	FITTINGS N/A					
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2		Sheet			

243

SPAN 5 NORTH  
N-P' TOP 242 H  
N-P' Bottom 242 H

SPAN 5 SOUTH  
P-N' TOP 242 H

O.D.O.T. DIST. 12

ACCEPTED	2/5/01	ASMA
ACCEPTED AS NOTED		
NOT ACCEPTED		

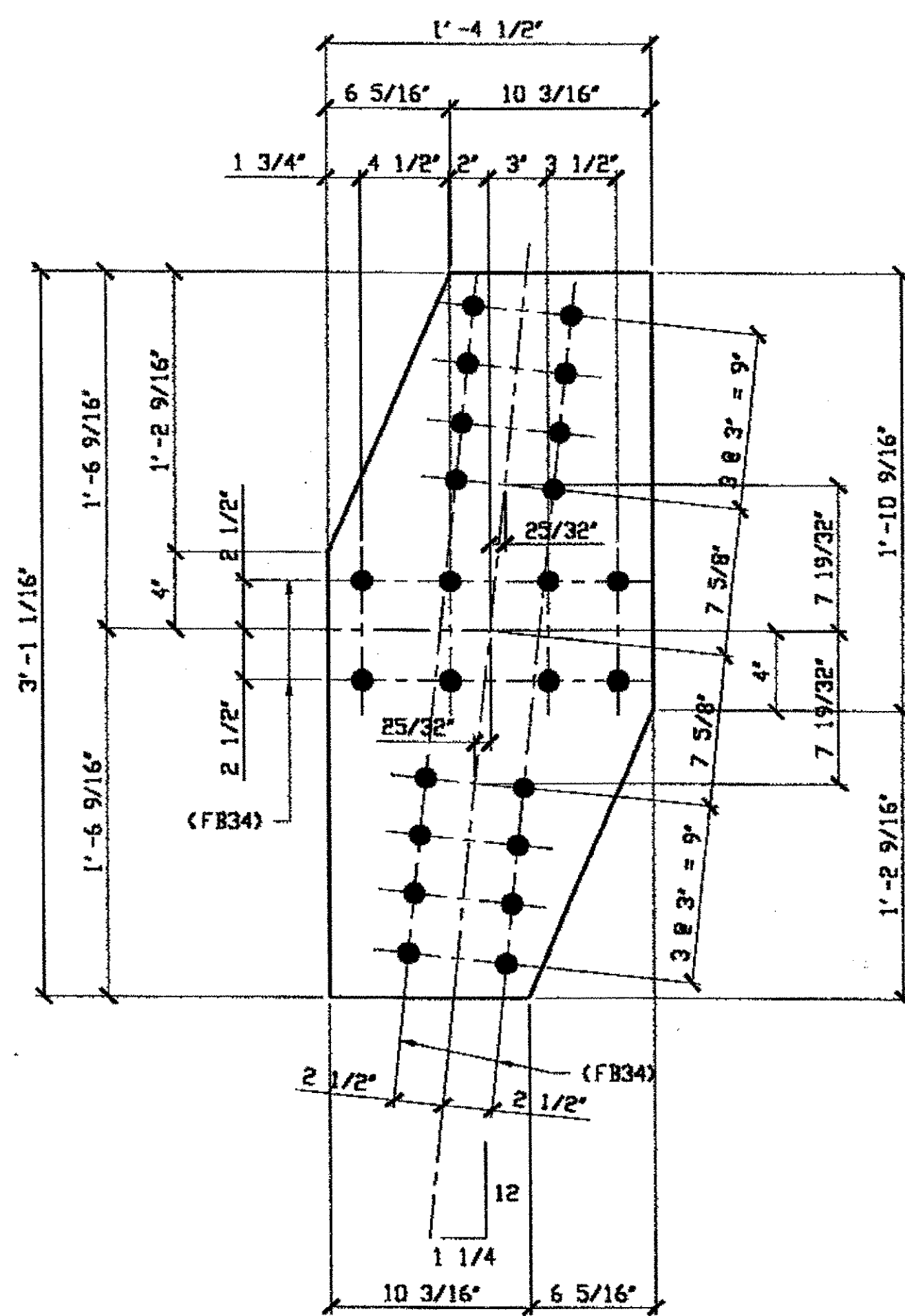
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONROPSIE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH

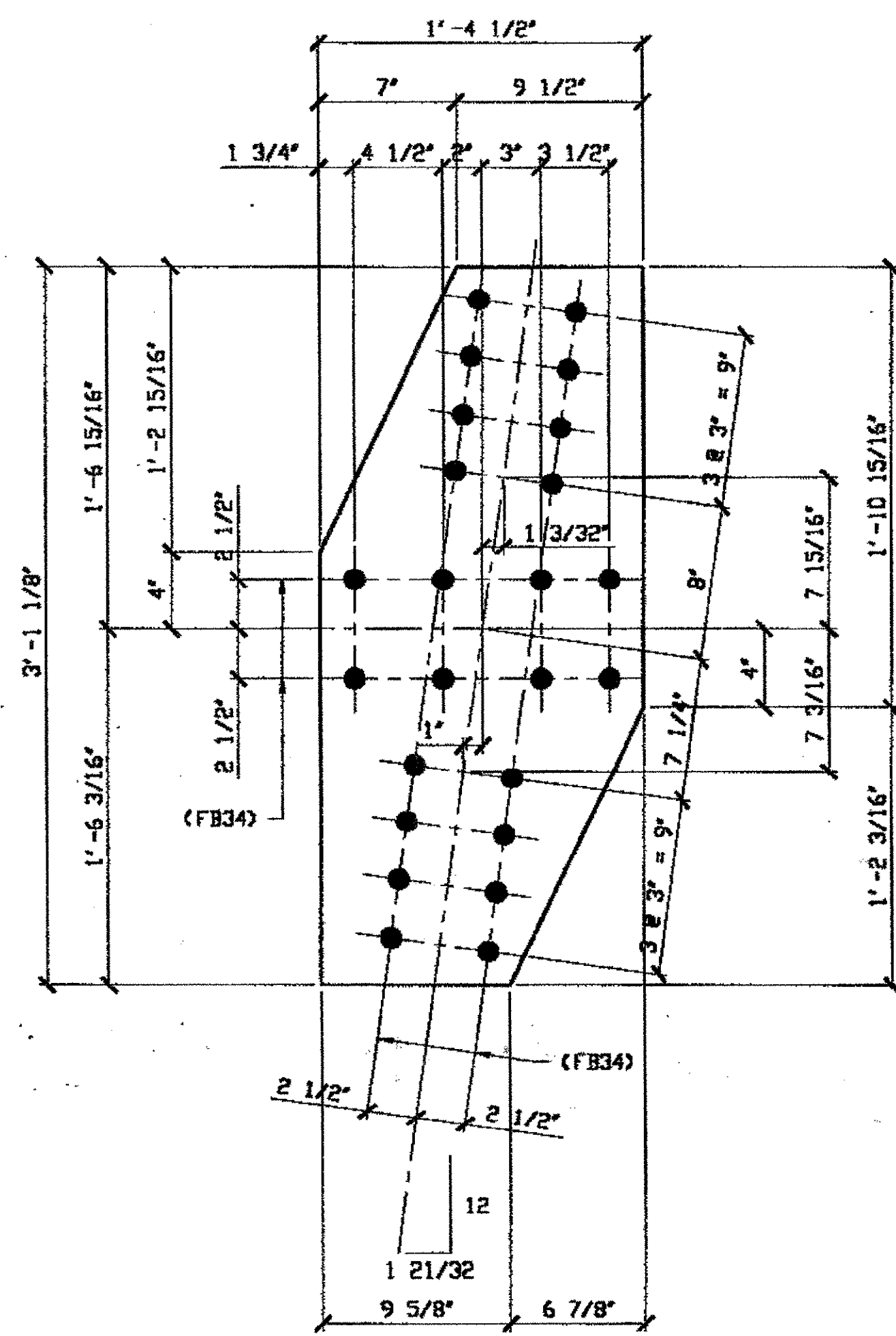
DOT ITEM LINE NO. 0105		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION REVISIONS	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS			
DRAWN BY: DATE: RAS 02/20/01		SHEET NUMBER: 242	
CHECKED BY: DATE: GAF 02/26/01		JOB NUMBER: 800010	

Last modified by repringer at 09:03am on Wed Mar 21, 2001 - Last plotted by Goster at 08:59am on Fri Mar 23, 2001



**1 - TIE PLATE - 243A**  
 ORIG SHOP DWG 85-BL37  
 ORIG SHOP MARK P85d  
 REPAIR SHEET 5-123

SPAN 5 G-H' TOP 243A  
 NORTH



**1 - TIE PLATE - 243B**  
 ORIG SHOP DWG 85-BL42  
 ORIG SHOP MARK P85k  
 REPAIR SHEET 5-223

SPAN 5 Q-P' SOUTH BOTTOM 243B

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		243A	1	PL 3/8 X 16 1/2	3	1 1/16		55
3		243B	1	PL 3/8 X 16 1/2	3	1 1/8		54
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34	48	1" DIA	0	2 1/4	NOTE 2	64
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILLS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/9/01 BY LDP

O.D.O.T. DIST. 12  
 ACCEPTED [Signature] P37M  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



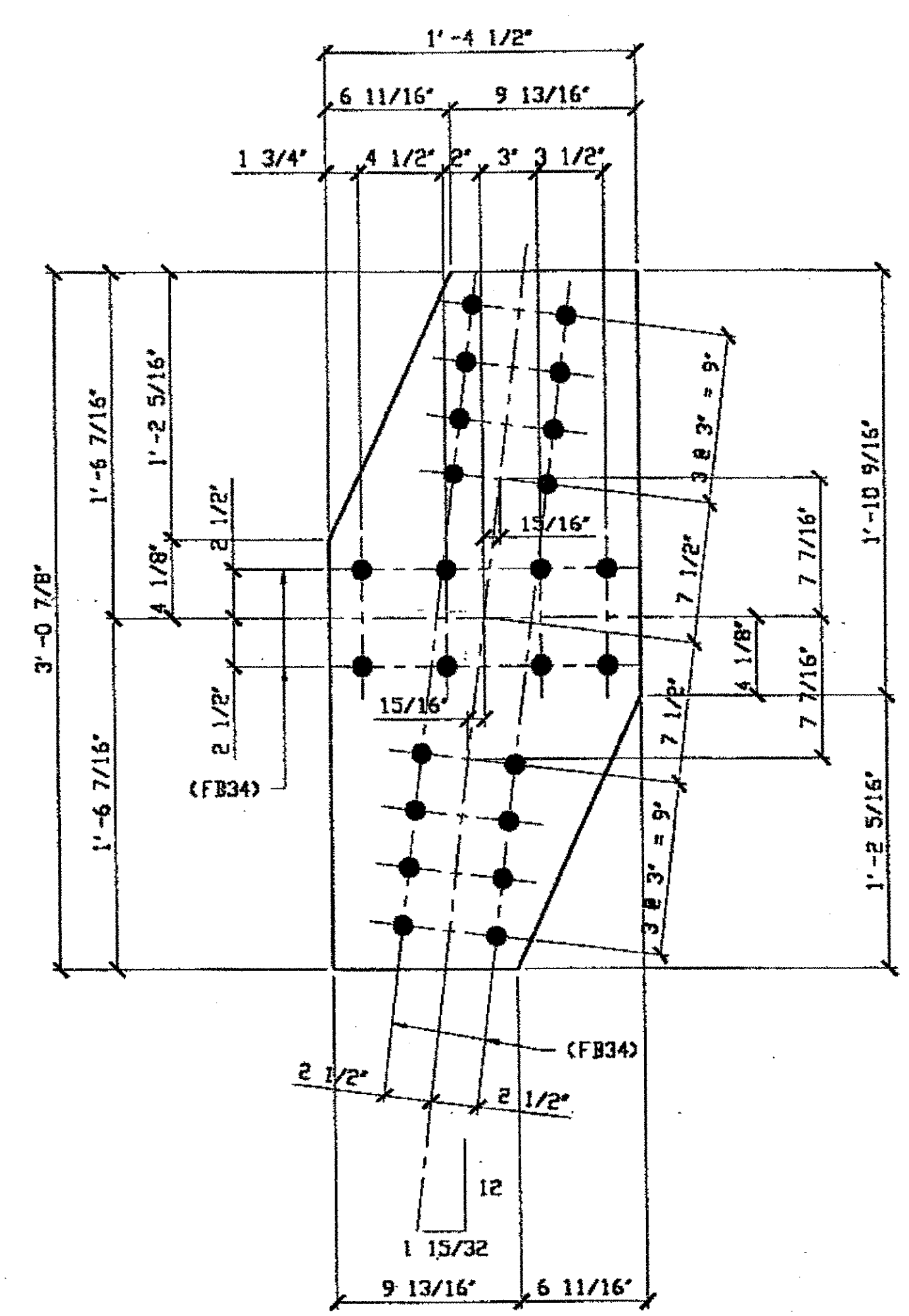
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CLEVELAND, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

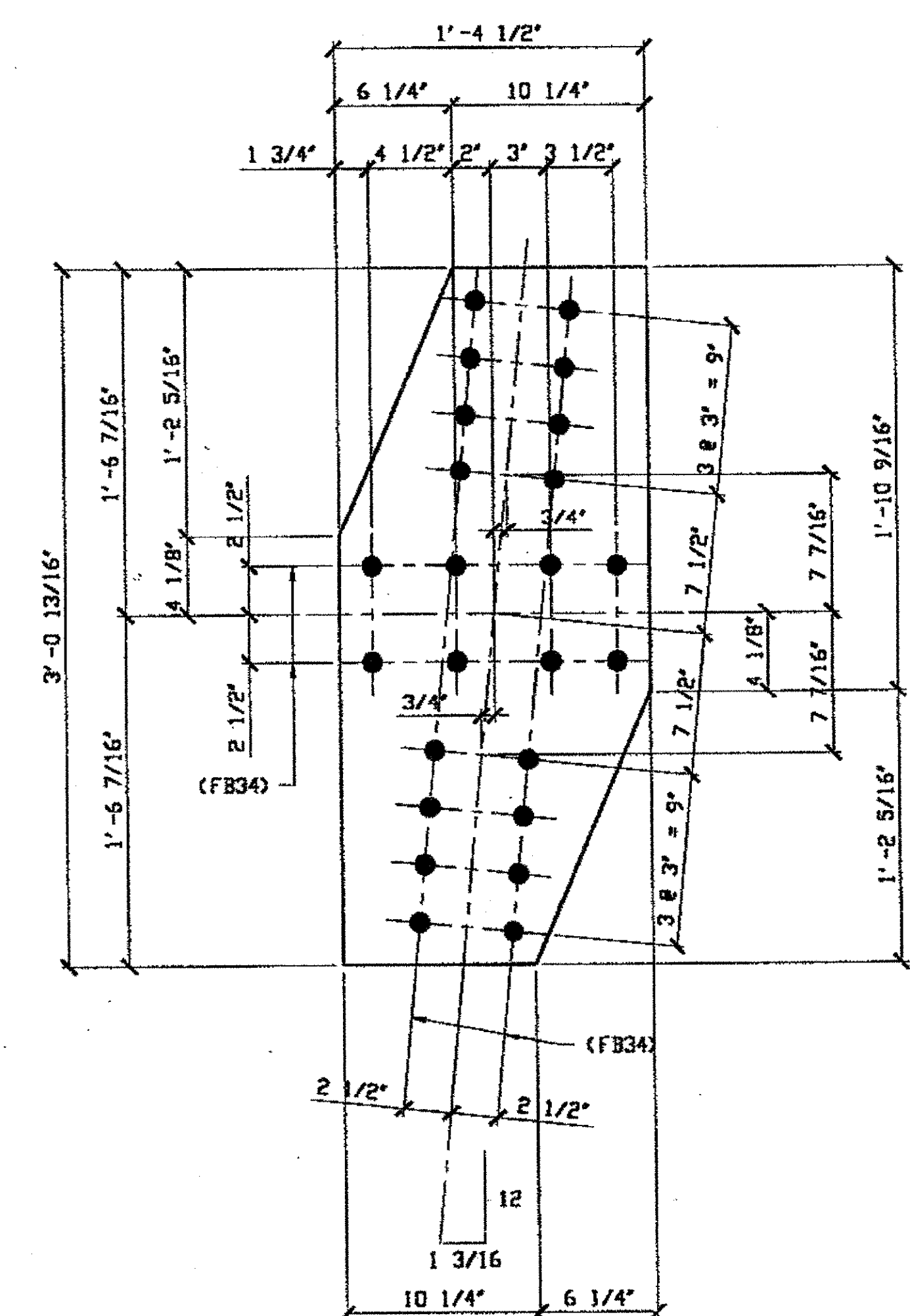
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 02/20/01  
 CHECKED BY: DATE: GAF 02/26/01

DOT ITEM LINE NO. 0105	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB	
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)	
CITY OF CLEVELAND	
CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 5 REPAIRS	
SHEET NUMBER	243
ADM. JOB NUMBER	800010

Last modified by [unclear] on Thu Mar 29, 2001 at 08:46am on Thu Mar 29, 2001 at 01:10pm on Thu Mar 29, 2001



**3 - TIE PLATE - 274A**  
 ORIG SHOP DWG 142-BL50  
 ORIG SHOP MARK P142F  
 REPAIR SHEET 6-107, 113 & 125



**1 - TIE PLATE - 274B**  
 ORIG SHOP DWG 142-BL51  
 ORIG SHOP MARK P142H  
 REPAIR SHEET 6-110  
 ITEM LINE No. 0105

SPAN 6  
B-C' NORTH TOP 274A  
C-B' SOUTH TOP 274A  
D-E' NORTH TOP 274A

SPAN 6 C-D' NORTH TOP 274B

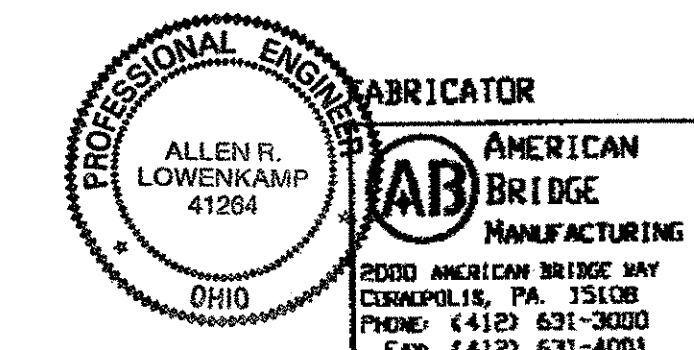
NAT'L ENGR' & CONTR. CO.  
 By tdp/tss  
 MAR 30 2001

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		274A	3	PL 3/8 X 16 1/2	3	0 7/8		165
3		274B	1	PL 3/8 X 16 1/2	3	0 13/16		55
4								
5								
6								
7								
8								
9								
10								
11								
12				FIELD BOLTS				
13		FB34		1" DIA	0	2 1/4	NOTE 2	
14		FB66		1 1/8" DIA	0	2 1/2	NOTE 2	
15		FB70		1 1/8" DIA	0	3	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

- NOTES:
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 2/9/01 BY tdp

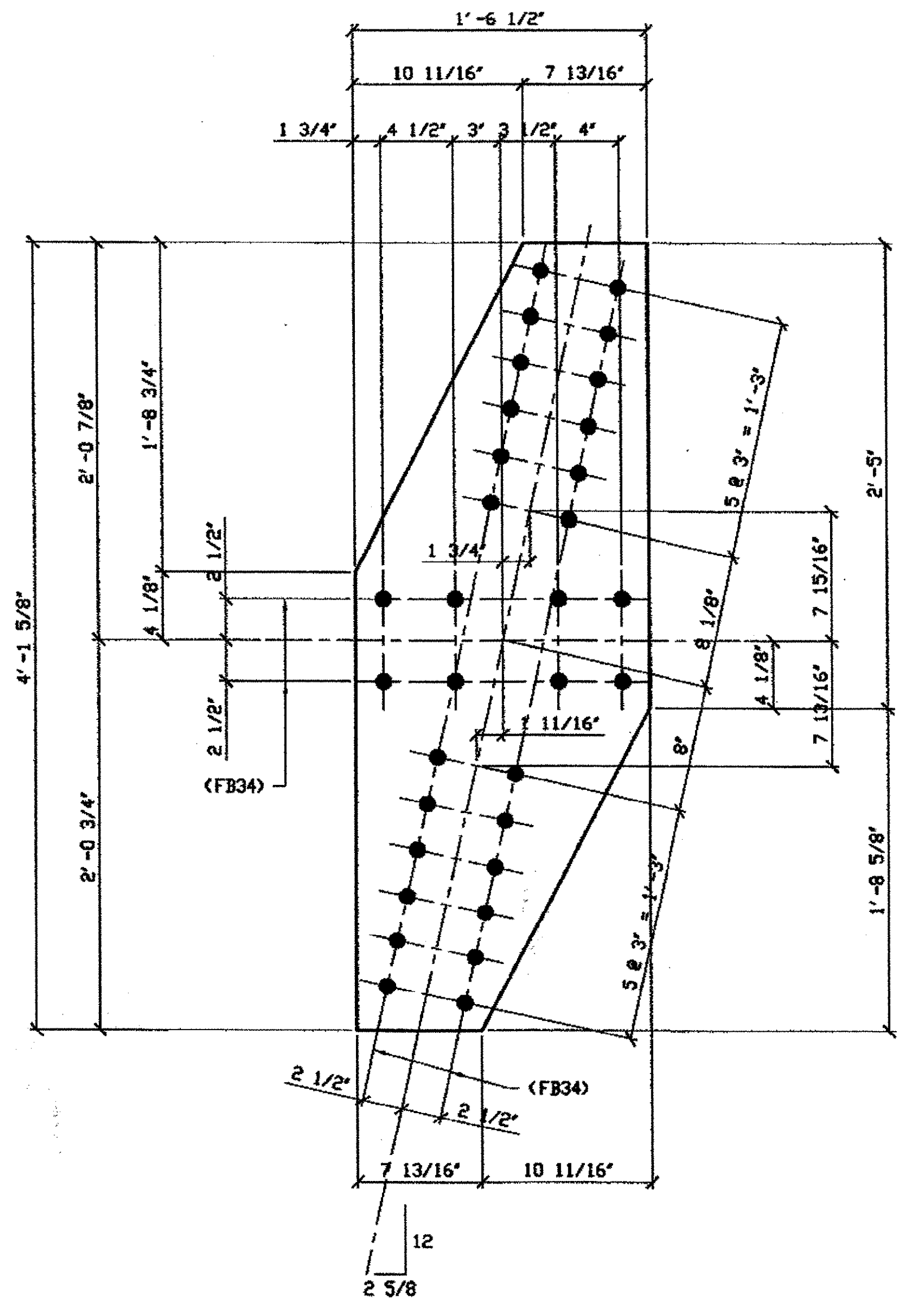
O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION-INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3333

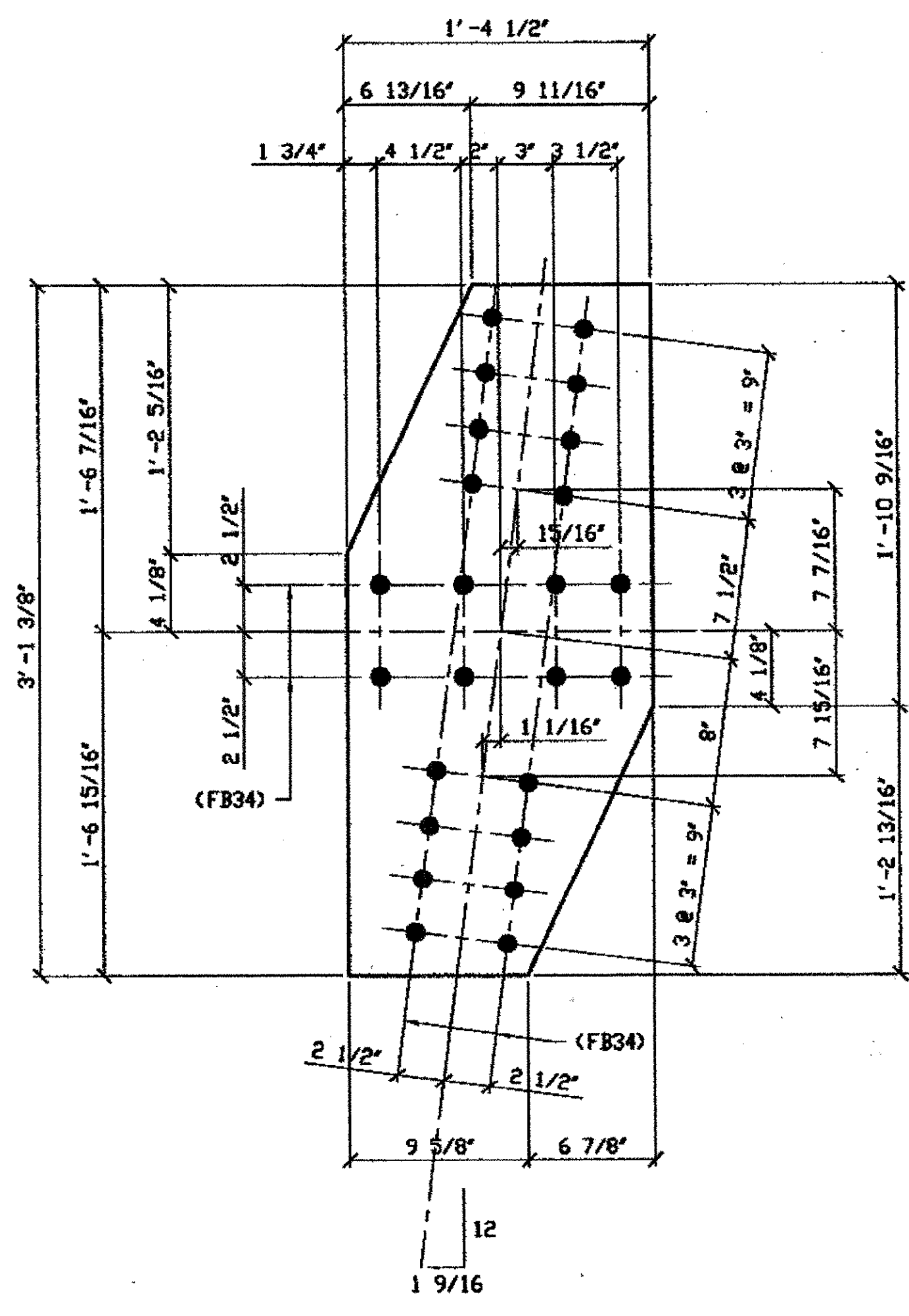
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 6 REPAIRS</b>			
SHEET NUMBER: 274		JOB NUMBER: 800010	

Last modified by repringer at \$(EDTIME,??) -| Last plotted by Repringer at 02:59pm on Tue May 15, 2001



**2 - TIE PLATES - 287A**  
 ORIG SHOP DWG 165-BL67 R/L  
 ORIG SHOP MARK P165b  
 REPAIR SHEET 7-102 & 200

**SPAN 7**  
**E-D' NORTH TOP 287A**  
**D-E' SOUTH TOP 287A**



**2 - TIE PLATES - 287B**  
 ORIG SHOP DWG 165-BL70 R/L  
 ORIG SHOP MARK P165h  
 REPAIR SHEET 7-113 & 214

**SPAN 7**  
**H-G' SOUTH TOP 287B**  
**H-G' NORTH TOP 287B**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		287A	2	PL 3/8 X 18 1/2	4	1 5/8		148
3		287B	2	PL 3/8 X 16 1/2	3	1 3/8		110
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34	112	1" DIA	0	2 1/4	NOTE 2	149
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/9/04 P. J.M.  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**RELEASED FOR CONSTRUCTION**  
 DATE 6/2/01 BY EJP

DOT ITEM LINE NO. 0105  
 DOT BID ITEM NO. 863E50000



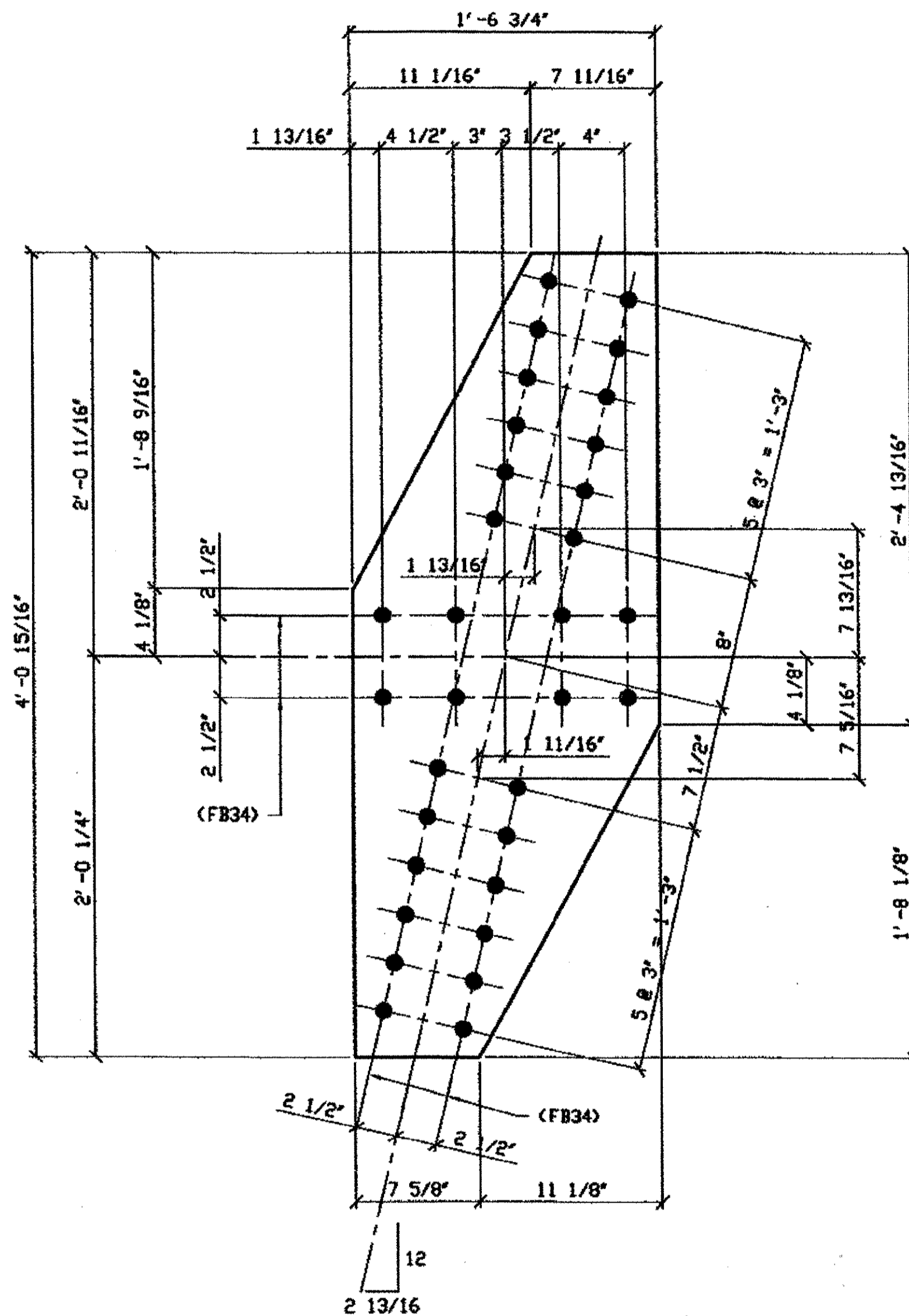
**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COMPTON, PA 15106  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
<b>STATE OF OHIO</b>			
DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
<b>BRIDGE No. CUY-10-16.13</b>			
<b>SPAN 7 REPAIRS</b>			
IN CHARGE OF: L. SMITH			SHEET NUMBER: 287
DRAWN BY: DATE: RAS 04/24/01			AM. JOB NUMBER: 800010
CHECKED BY: DATE: GAF 05/01/01			

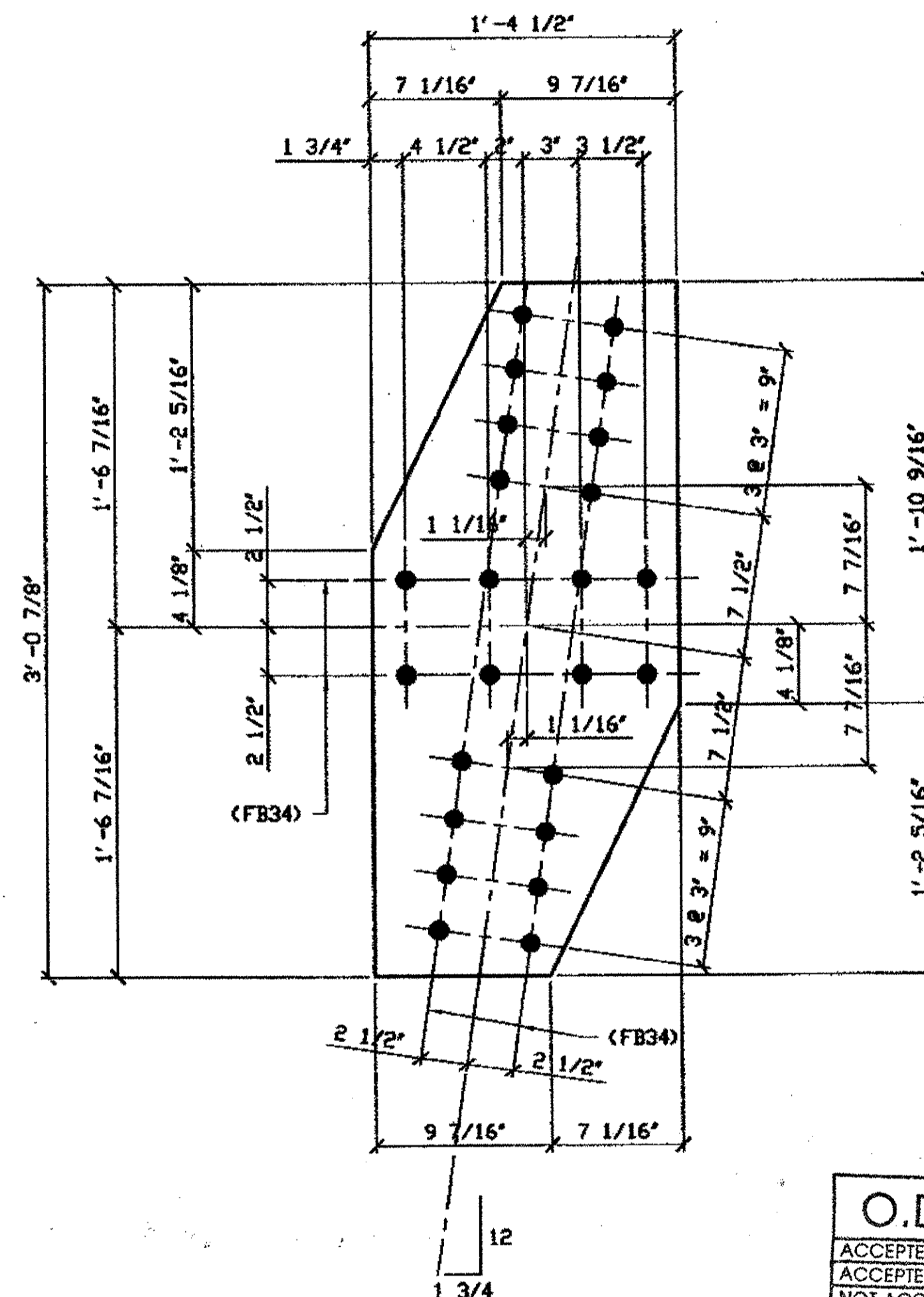


Last modified by rspringer at \$(EDTIME,??) -|- Last plotted by Rspringer at 03:26pm on Tue May 15, 2001



**3 - TIE PLATES - 288A**

ORIG SHOP DWG 165-BL61 R/L  
 ORIG SHOP MARK P165a  
 REPAIR SHEET 7-130 & 156  
SPAN 7, SOUTH N-M' TOP 288A  
SPAN 7, NORTH N-M' TOP 288A  
SPAN 7, NORTH B-C' TOP 288A



**3 - TIE PLATE - 288B**

ORIG SHOP DWG 165-BL76/R  
 ORIG SHOP MARK P165s  
 REPAIR SHEET 7-136  
SPAN 7 SOUTH Q-P' TOP 288B  
SPAN 7 SOUTH Q-P' BOTTOM 288B  
SPAN 7 NORTH Q-P' BOTTOM 288B

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		288A	3	PL 3/8 X 18 3/4	4	0 15/16		
3		288B	3	PL 3/8 X 16 1/2	3	0 7/8		
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34		1" DIA	0	2 1/4	NOTE 2	
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

**NOTES:**

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

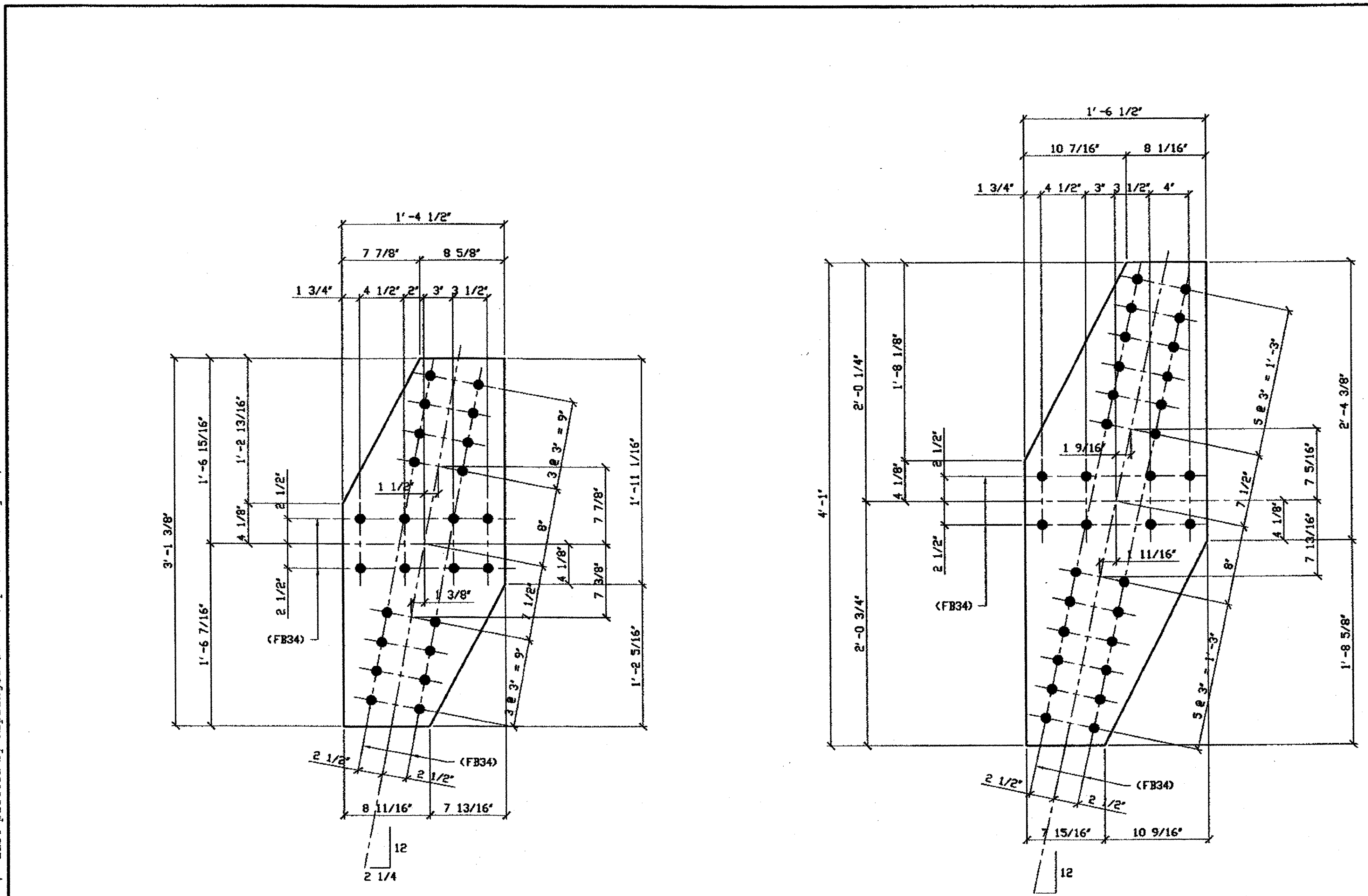


RELEASED FOR CONSTRUCTION  
 DATE 6/21/01 BY EDP

DOT ITEM LINE NO 0105  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
FABRICATOR AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CONAPOLIS, PA 15108 PHONE (412) 631-3000 FAX (412) 631-4001			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
STEEL ERECTOR TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335			SHEET NUMBER 288 JOB NUMBER 800010

Last modified by rspringer at \$ (EDTIME,??) -|- Last plotted by Rspringer at 03:31pm on Tue May 15, 2001



**ONE - TIE PLATE - 289A**  
 ORIG SHOP DWG 165-BL74/L  
 ORIG SHOP MARK P165p  
 REPAIR SHEET 7-150  
**SPAN 7 M-L' NORTH TOP 289A**

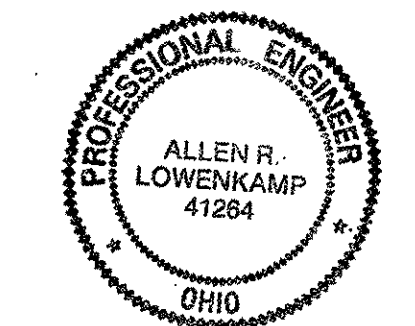
**ONE - TIE PLATE - 289B**  
 ORIG SHOP DWG 165-BL75/L  
 ORIG SHOP MARK P165c  
 REPAIR SHEET 7-161  
**SPAN 7 P-O' NORTH TOP 289B**

**O.D.O.T. DIST. 12**  
 ACCEPTED [ ] [ ] [ ] [ ] [ ] [ ]  
 ACCEPTED AS NOTED [ ] [ ] [ ] [ ] [ ] [ ]  
 NOT ACCEPTED [ ] [ ] [ ] [ ] [ ] [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		289A	1	PL 3/8 X 16 1/2	3	1 9/8		54
3		289B	1	PL 3/8 X 18 1/2	4	1		74
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34	56	1" DIA	0	2 1/4	NOTE 2	75
10								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**RELEASED FOR CONSTRUCTION**  
 DATE 6/21/01 BY *tdp*



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

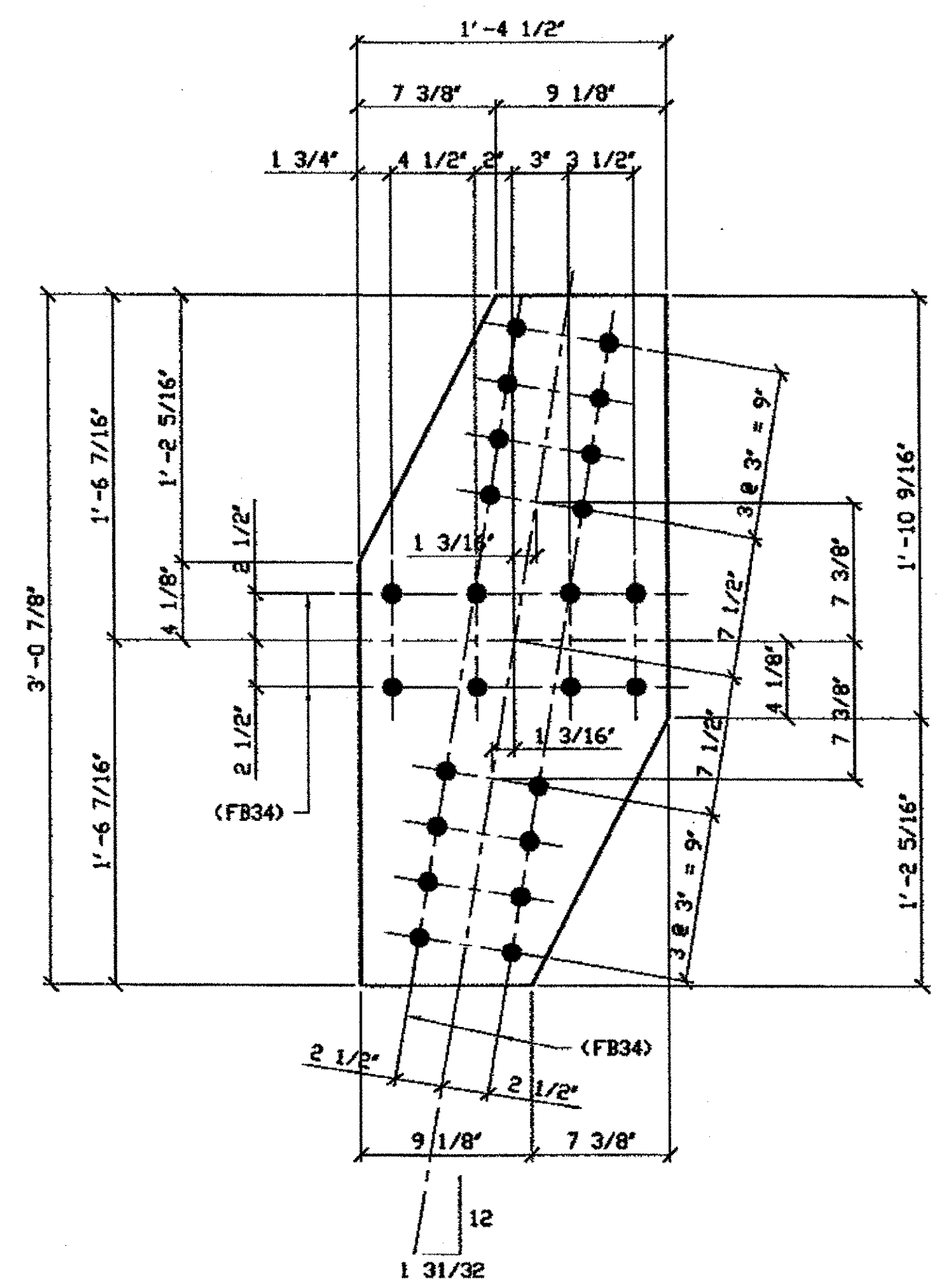
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/24/01  
 CHECKED BY: DATE: GAF 05/04/01

DOT ITEM LINE NO. 0105		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 7 REPAIRS			
SHEET NUMBER: 289		JOB NUMBER: 800010	

**BILL OF MATERIAL**

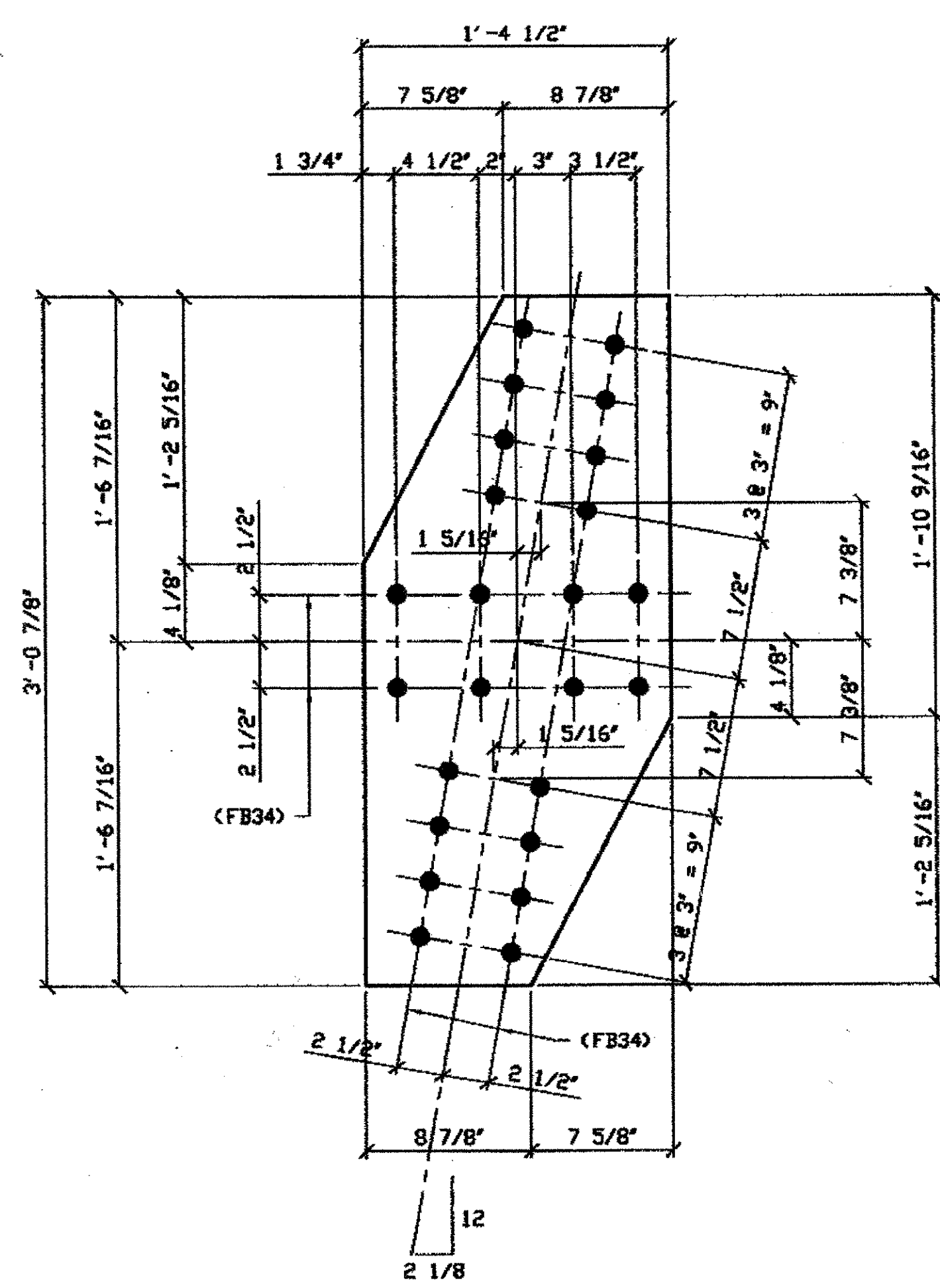
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		290A	4	PL 3/8 X 16 1/2	3	0 7/8		
3		290B	2	PL 3/8 X 16 1/2	3	0 7/8		
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34		1" DIA	0	2 1/4	NOTE 2	
10								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2			

- NOTES:**
- OPEN HOLES ARE (1 1/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**4 - TIE PLATES - 290A**  
 ORIG SHOP DWG 165-BL66 R/L  
 ORIG SHOP MARK P165e  
 REPAIR SHEET 7-178 & 188

SPAN 7  
A'-B NORTH TOP 290A  
A'-B NORTH BOTTOM 290A  
A'-B SOUTH TOP 290A  
A'-B SOUTH BOTTOM 290A

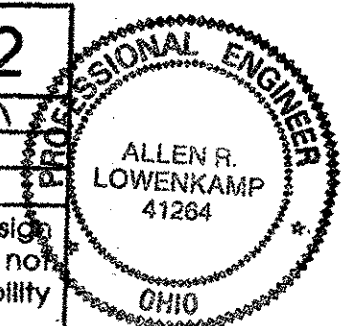


**2 - TIE PLATE - 290B**  
 ORIG SHOP DWG 165-BL68/L  
 ORIG SHOP MARK P165f  
 REPAIR SHEET 7-204

SPAN 7  
E'-F NORTH TOP 290B  
E'-F SOUTH TOP 290B

RELEASED FOR CONSTRUCTION  
 DATE 6/21/01 BY Edf

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/07 RSM  
 NOT ACCEPTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0105  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY



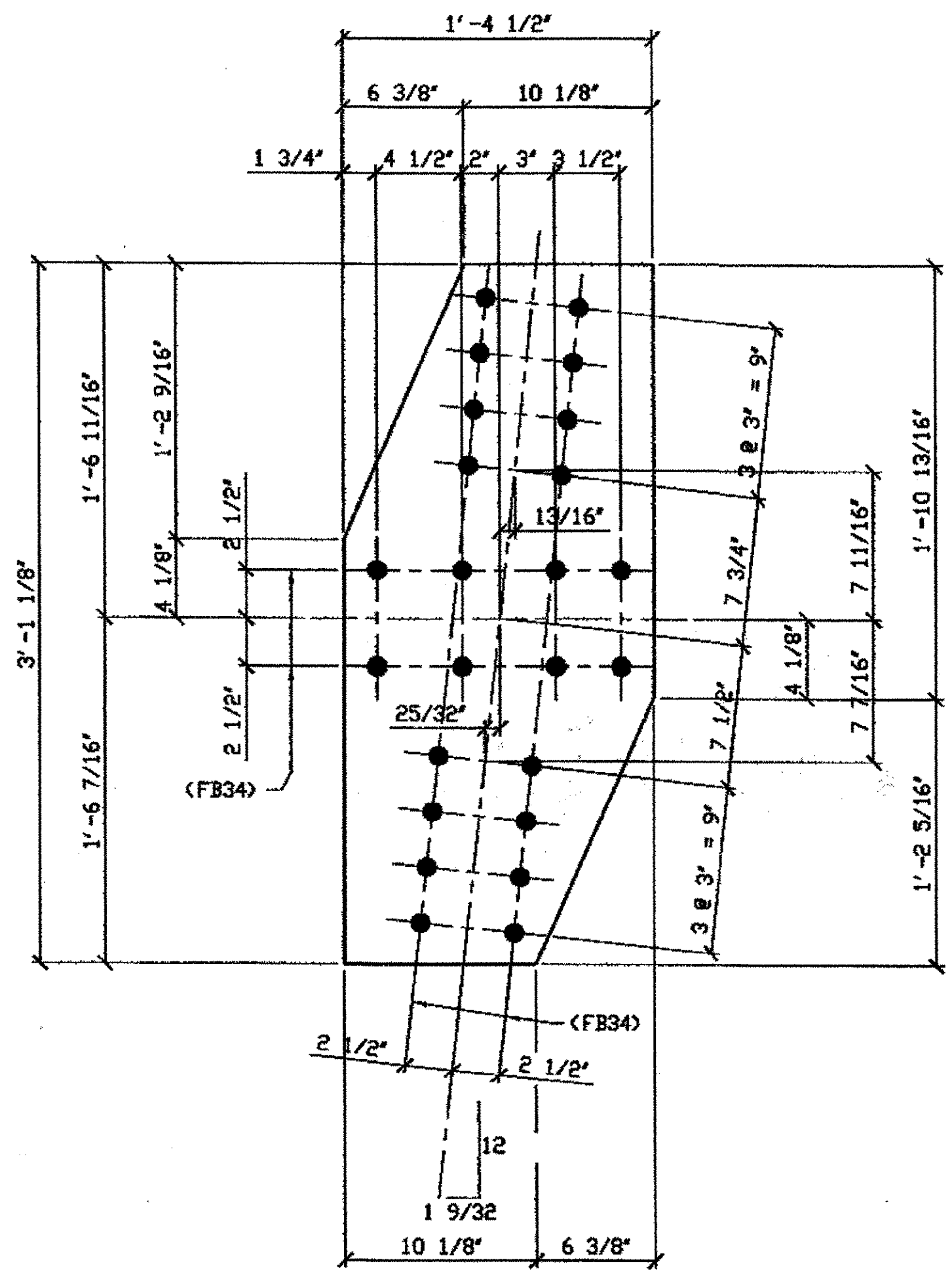
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/24/01  
 CHECKED BY: DATE: GAF 05/04/01

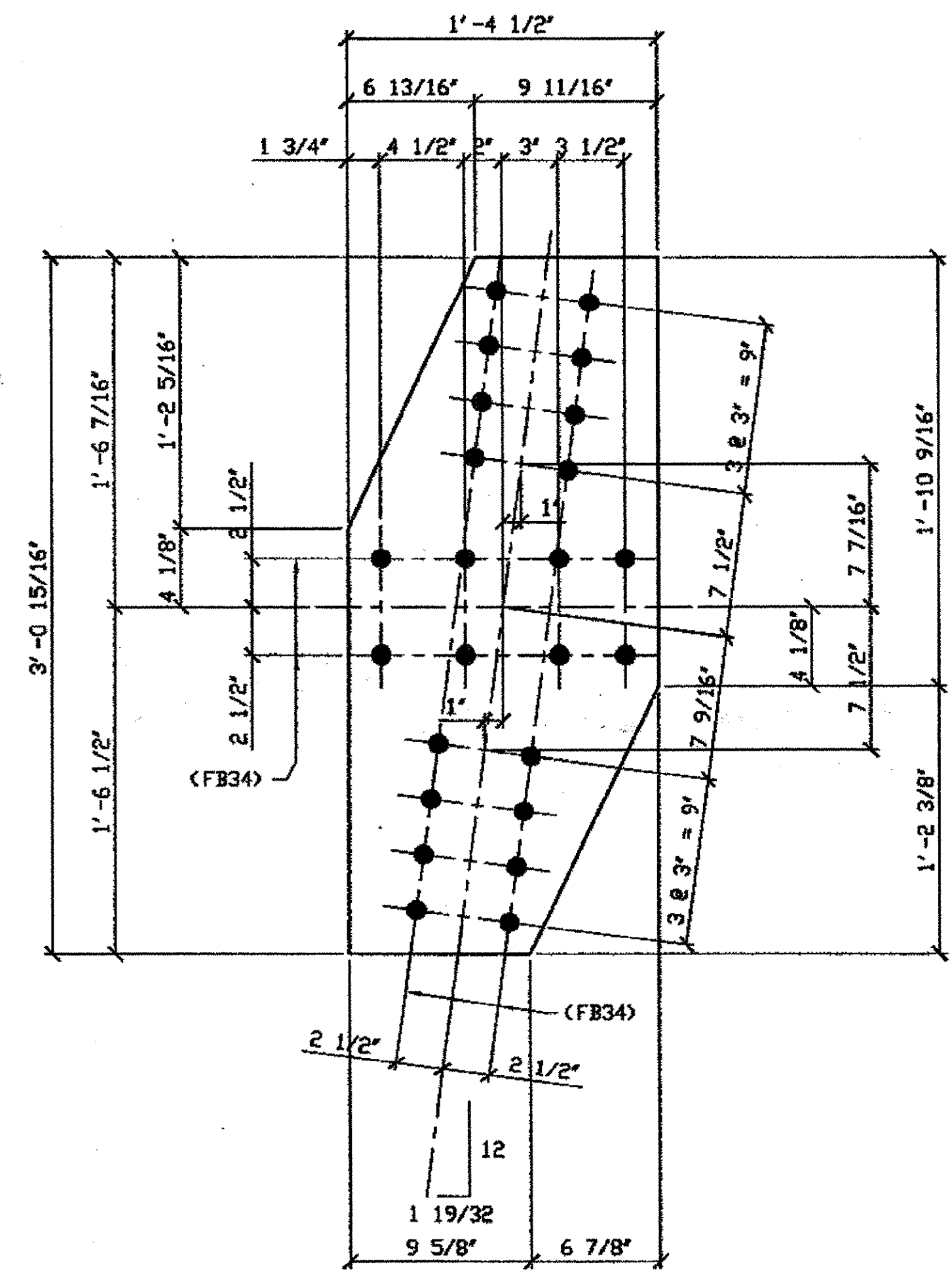
SHEET NUMBER: 290  
 ABN JOB NUMBER: 800010

Last modified by rspringer at 6:03:40pm on Tue May 15, 2001



**ONE - TIE PLATE - 310A**  
 ORIG SHIP DWG 225-BL78/L  
 ORIG SHIP MARK P225c  
 REPAIR SHEET 8-112

**SPAN 8 NORTH C-D' TOP 310A**



**ONE - TIE PLATE - 310B**  
 ORIG SHIP DWG 225-BL79/L  
 ORIG SHIP MARK P225d  
 REPAIR SHEET 8-115

**SPAN 8 NORTH E-D' TOP 310B**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		310A	1	PL 3/8 X 16 1/2	3	1 1/8		55
3		310B	1	PL 3/8 X 16 1/2	3	0 15/16		54
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34	48	1" DIA.	0	2 1/4	NOTE 2	64
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

**NOTES:**

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

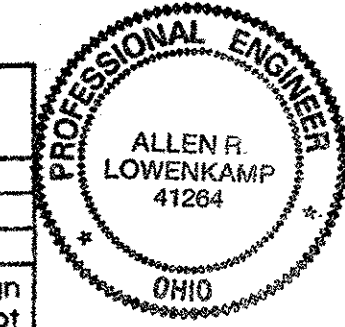
RELEASED FOR CONSTRUCTION  
 DATE 10/23/01 BY *Edo/tss*

G:\Contracts\100010\Drawings\310a.dwg  
 Save by gfos 05:47am Oct 05, 2001  
 Plot by gfos at 11:47am Oct 05, 2001  
 Model space plot + Scale = 1/6

O.D.O.T. DIST. 12

ACCEPTED	2/5/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

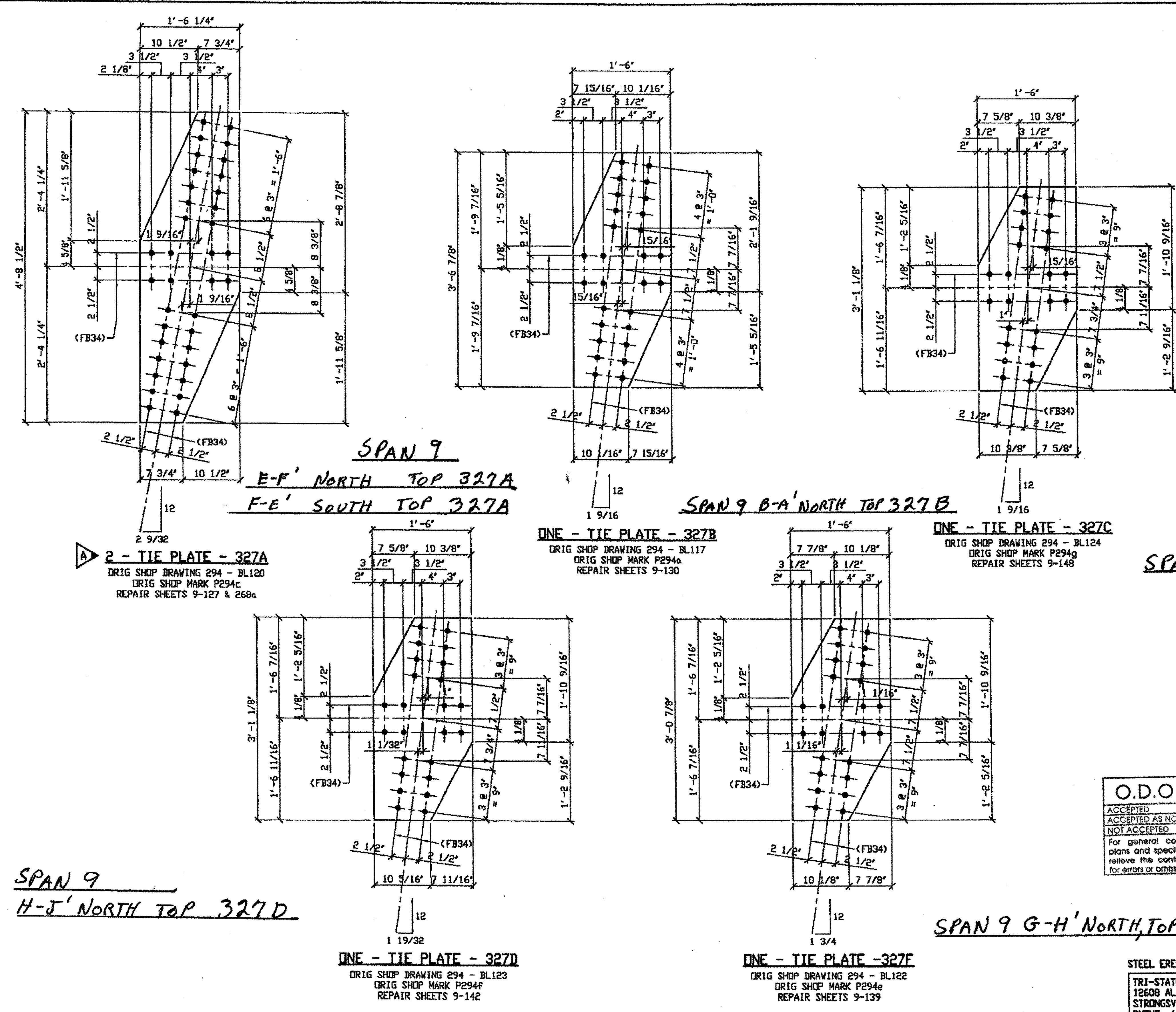
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 JRC 05/02/01  
 CHECKED BY: DATE  
 GAF 08/02/01

DOT ITEM LINE NO. 0105  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 8 REPAIRS**

SHEET NUMBER	310
ARN JOB NUMBER	800010



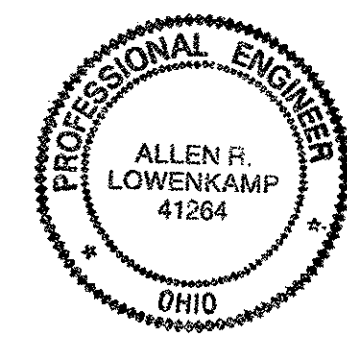
BILL OF MATERIAL								
LINE	ADVANCE BOLL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
TIE PLATES								
1								
2		327A	2	PL 3/8 X 18 1/4	4	8 1/2		164
3		327B	1	PL 3/8 X 18	3	6 7/8		68
4		327C	1	PL 3/8 X 18	3	1 1/8		60
5		327D	1	PL 3/8 X 18	3	1 1/8		60
6		327F	1	PL 3/8 X 18	3	0 7/8		59
FIELD BOLTS								
16		FB34	172	1" DIA	0	2 1/4	NOTE 2	229
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

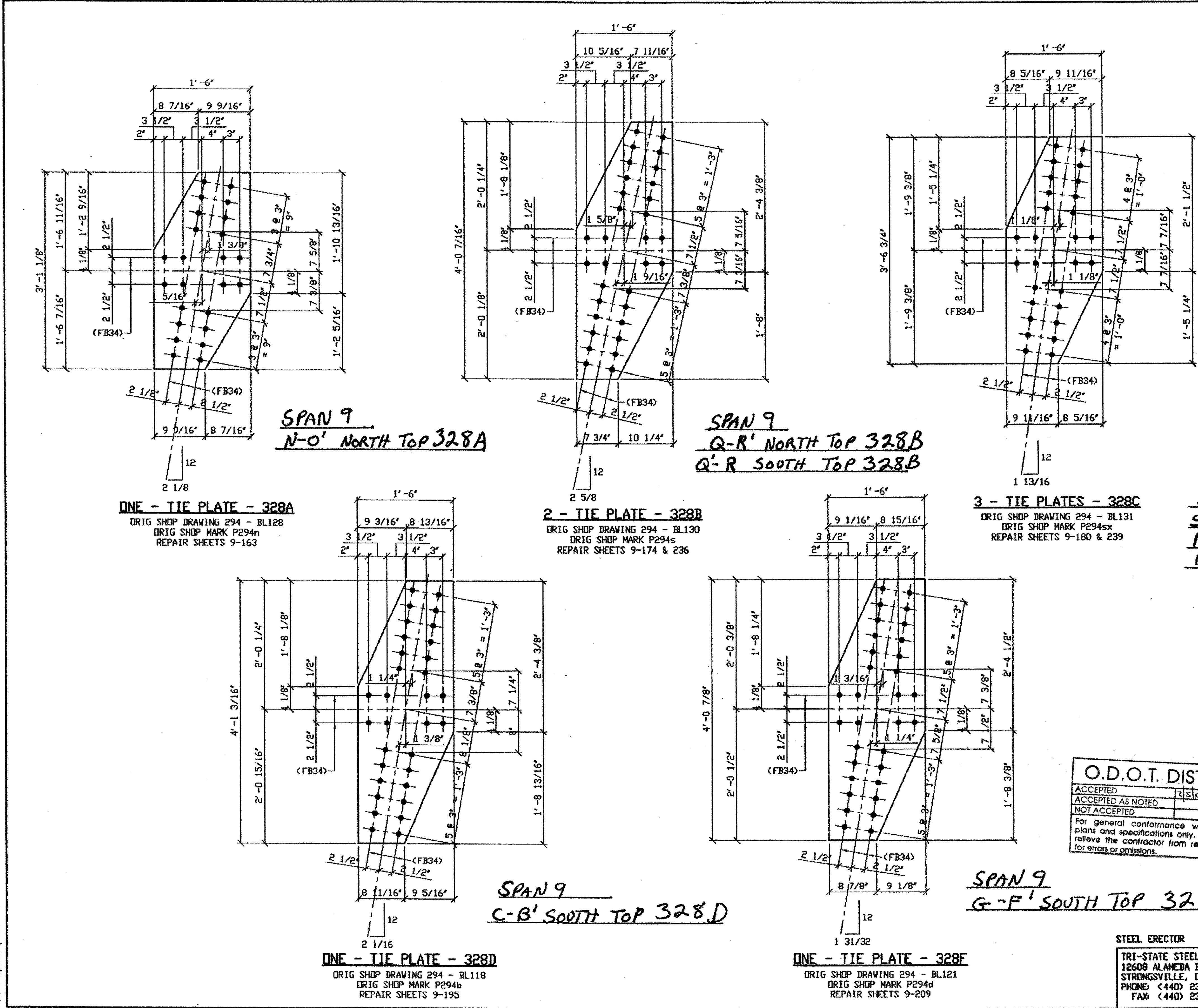
ACCEPTED	2/5/04	PJMA
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0105		DOT BID ITEM NO. 863E50000	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY COLUMBUS, PA. 15109 PHONE (412) 631-3000 FAX (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH DRAWN BY: DATE RAS 07/09/01 CHECKED BY: DATE GAF 08/15/01		SHEET NUMBER 327 ABB JOB NUMBER 800010	

G:\Contracts\2000\800010\Drawings\327A.dwg  
 Saved by RAS at 02:54am Dec 13, 2001  
 Plot by GAF at 09:36am Dec 17, 2001  
 Model Space Plot - Scale = 1/9



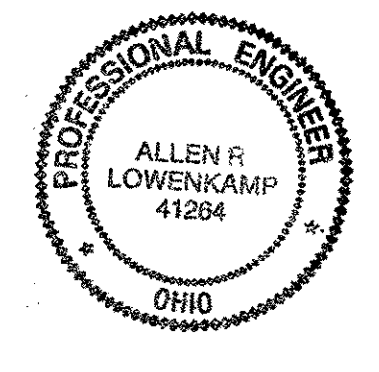
BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				TIE PLATES		
2		328A	1	PL 3/8 X 18	3 1 1/8	60
3		328B	2	PL 3/8 X 18	4 0 7/16	142
4		328C	3	PL 3/8 X 18	3 6 3/4	204
5		328D	1	PL 3/8 X 18	4 1 3/16	74
6		328F	1	PL 3/8 X 18	4 0 7/8	74
7						
8						
9						
10						
11						
12						
13						
14				FIELD BOLTS		
15						
16		FB34	236	1" DIA	0 2 1/4	NOTE 2 315
PLATE		A36		PIPE	N/A	FITTINGS N/A
SHAPES		A36		FLGS.	N/A	BOLTS NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 9**  
S-R' SOUTH TOP 328C  
R-S' NORTH TOP 328C  
R-S' NORTH BOTTOM 328C

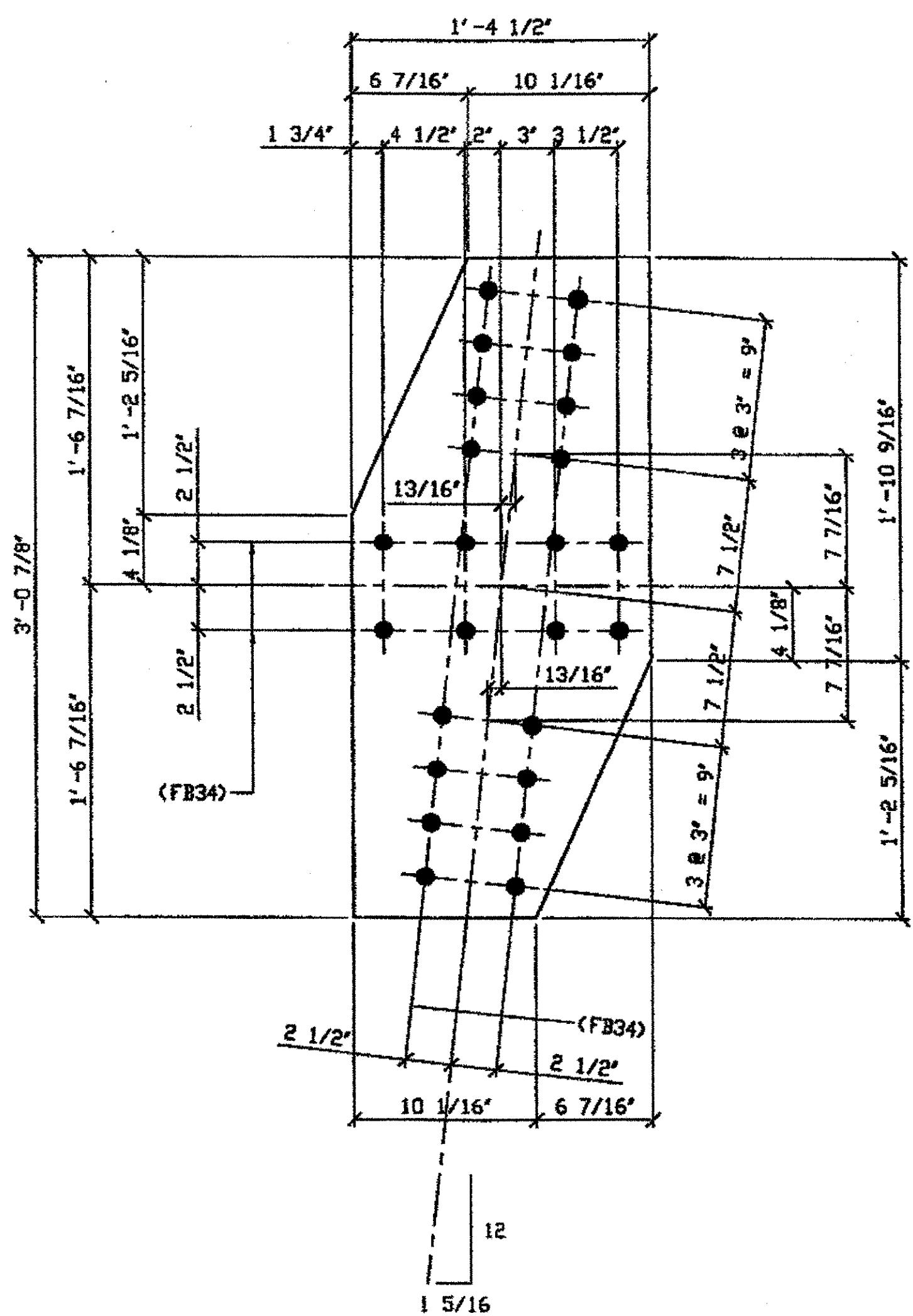
RELEASED FOR CONSTRUCTION  
DATE 11/24/01 BY EDP/ESS

O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



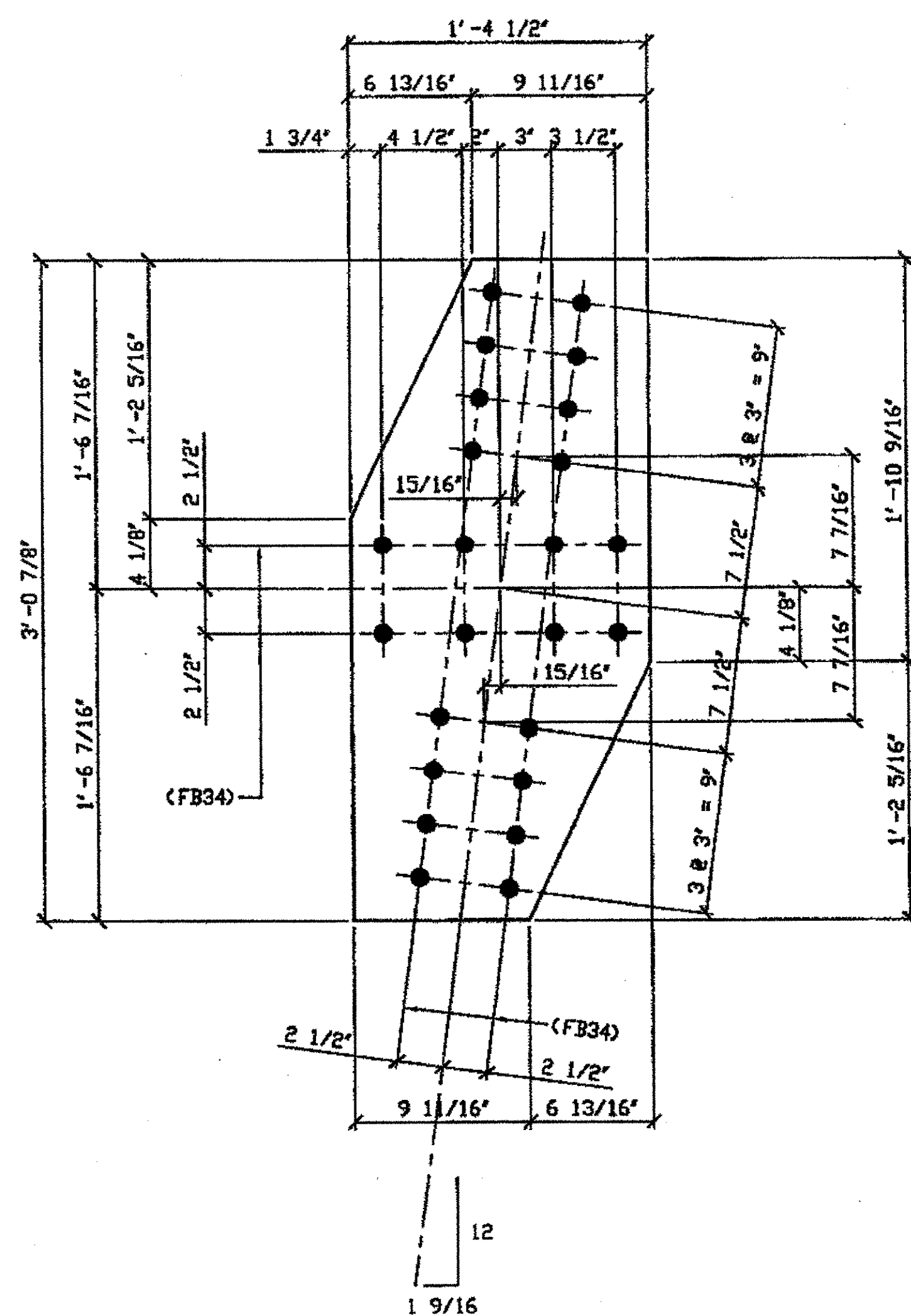
DOT ITEM LINE NO. 0105		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CORAOPOLIS, PA 15108 PHONE (412) 631-3000 FAX (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
DRAWN BY: DATE: RAS 07/09/01		IN CHARGE OF: L. SMITH CHECKED BY: DATE: GAF 08/16/01	
SHEET NUMBER: 328		ADM JOB NUMBER: 800010	

H:\contracts\800010\2\328A.dwg  
Save by RSPR at 01:45pm Oct 17, 2001  
Plot by RSPR at 02:01pm Oct 17, 2001  
Model space Plot + Scale = 1/9



**2 - TIE PLATES - 356A**  
 ORIG SHOP DWG 293-BL133  
 ORIG SHOP MARK P293d  
 ITEM No. 0105  
 REPAIR SHEET 10-109 & 139

SPAN 10  
C-D' NORTH TOP 356A  
D-C' SOUTH TOP 356A



**3 - TIE PLATES - 356B**  
 ORIG SHOP DWG 293-BL132  
 ORIG SHOP MARK P293c  
 ITEM No. 0105  
 REPAIR SHEET 10-104, 120 & 143

SPAN 10  
B-C' NORTH TOP 356B  
C-B' SOUTH TOP 356B  
E-F' NORTH TOP 356B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		356A	2	PL 3/8 x 16 1/2	3	0 7/8		110
3		356B	3	PL 3/8 x 16 1/2	3	0 7/8		163
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34	120	1" DIA	0	2 1/4	NOTE 2	160
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

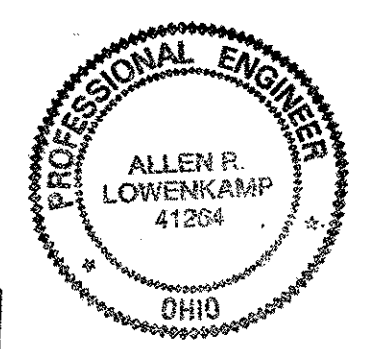
- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 1/4/02 BY Ed/ess

G:\Contract\00\800010\Drawings\0356A.dwg  
 Save by rsh... 01:51pm Dec 10, 2001  
 Plot by g91v at 12:49pm Dec 12, 2001  
 Model space plot + Scale = 1/6

DATE ENGR. & CONT. BY  
 DEC 13 2001

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

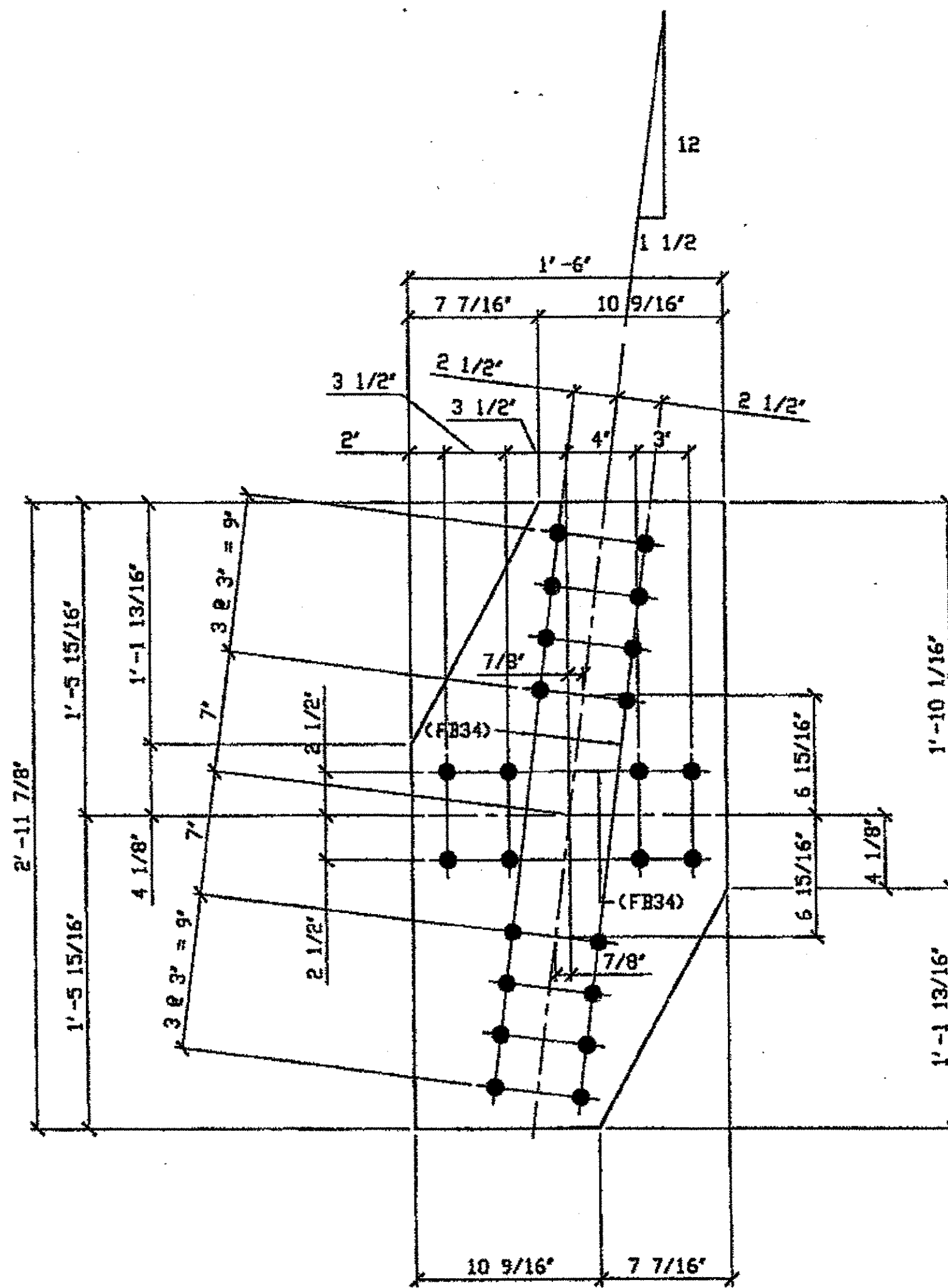


FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

DOT ITEM LINE NO. 0105		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 10 REPAIRS			
SHEET NUMBER		356	
JOB NUMBER		800010	

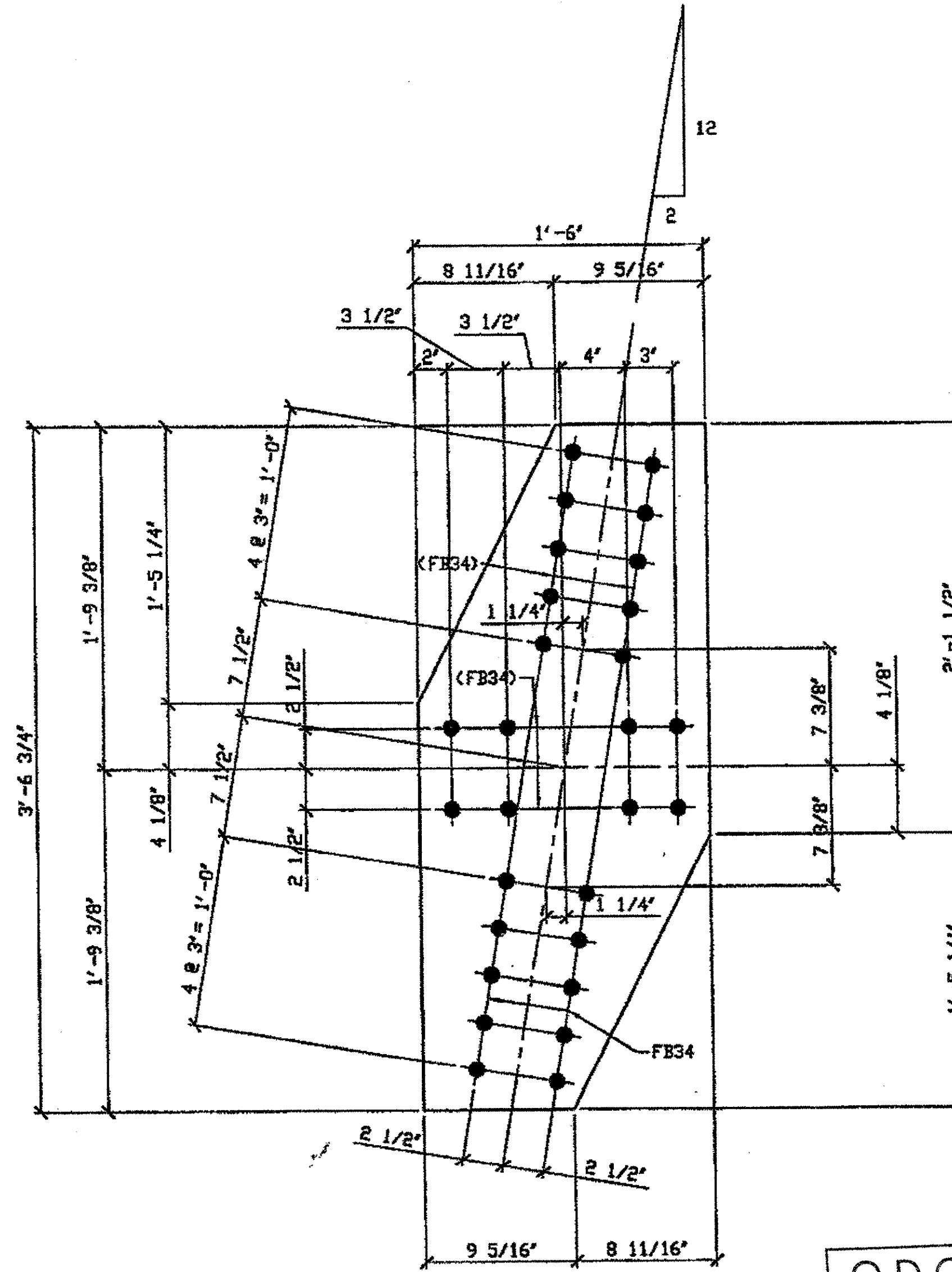
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		396A	3	PL 3/8 X 18	2	11 7/8		173
3								
4				TIE PLATE				
5		396B	4	PL 3/8 x 18	3	6 3/4		264
6								
7								
8				FIELD BOLTS				
9		FB34	184	1" DIA	0	2 1/4	NOTE 2	246
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



3 - TIE PLATES - 396A

ORIG SHOP DWG 3801 BL140  
ORIG SHOP MARK P380a  
LINE ITEM No. 0105  
REPAIR SHEET 11-118 & 11-233

SPAN II NORTH A'-B TOP 396A  
SPAN II NORTH A'-B BOTTOM 396A  
SPAN II SOUTH B-A' BOTTOM 396A



4 - TIE PLATES - 396B

ORIG SHOP DWG 3801 BL141  
ORIG SHOP MARK P380b  
LINE ITEM No. 0105  
REPAIR SHEET 11-125 & 11-240

SPAN II NORTH B-C' TOP 396B  
SPAN II NORTH B-C' BOTTOM 396B  
SPAN II SOUTH C-B' TOP 396B  
SPAN II SOUTH C-B' BOTTOM 396B

O.D.O.T. DIST. 12  
ACCEPTED [Signature] 2/5/02  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY tde/ess

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER 396			ABN JOB NUMBER 800010



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALANEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

FABRICATOR

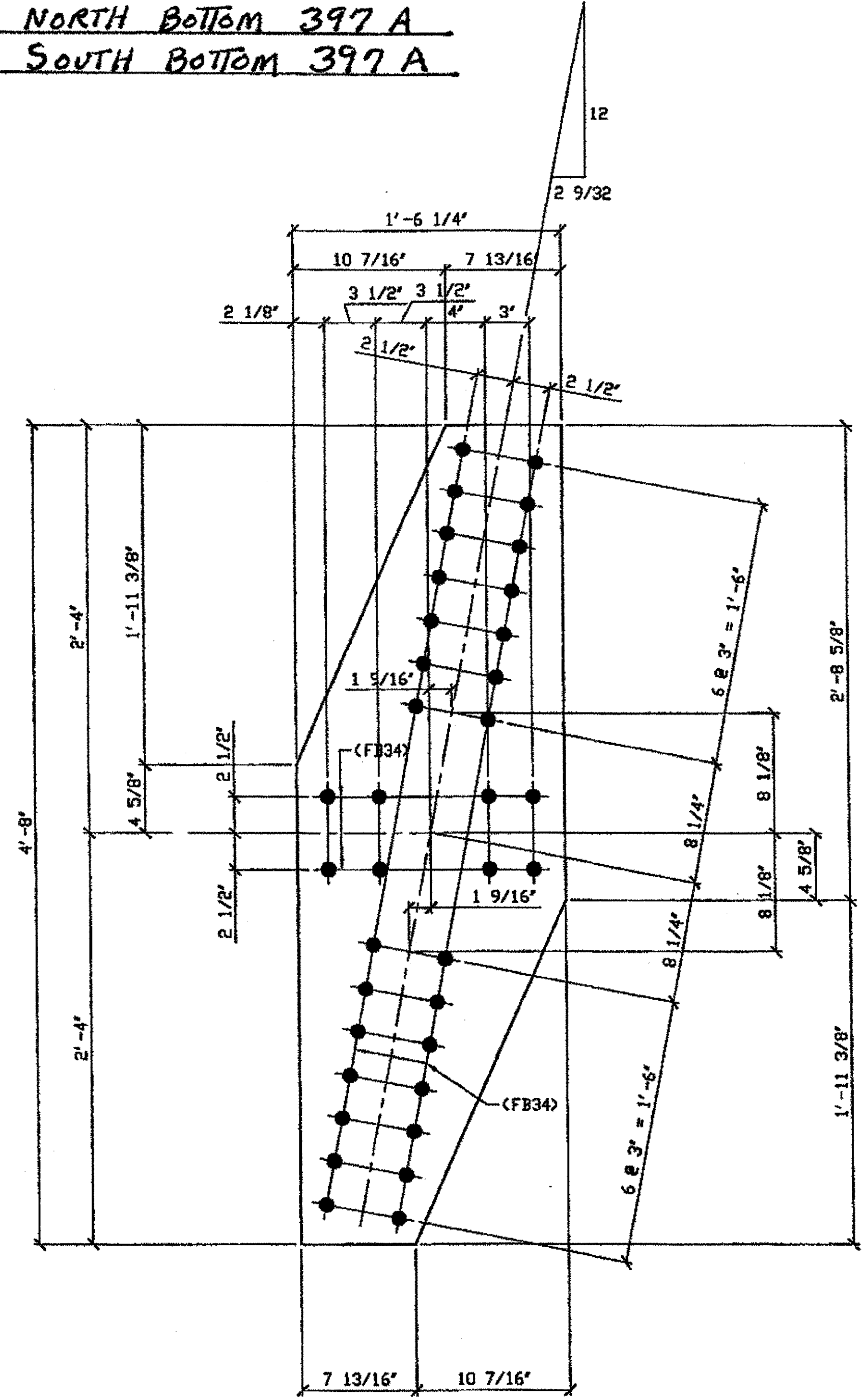
AMERICAN BRIDGE MANUFACTURING  
2900 AMERICAN BRIDGE WAY  
CONROPS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
JRC 1/08/02  
CHECKED BY: DATE  
GAF 1/30/02

G:\Contracts\2000\800010\Drawings\396A.dwg  
Save by user at 12:00pm Feb 23, 2002  
Plot by gfos at 02:40pm Feb 23, 2002  
Model space plot + Scale = 1/8"

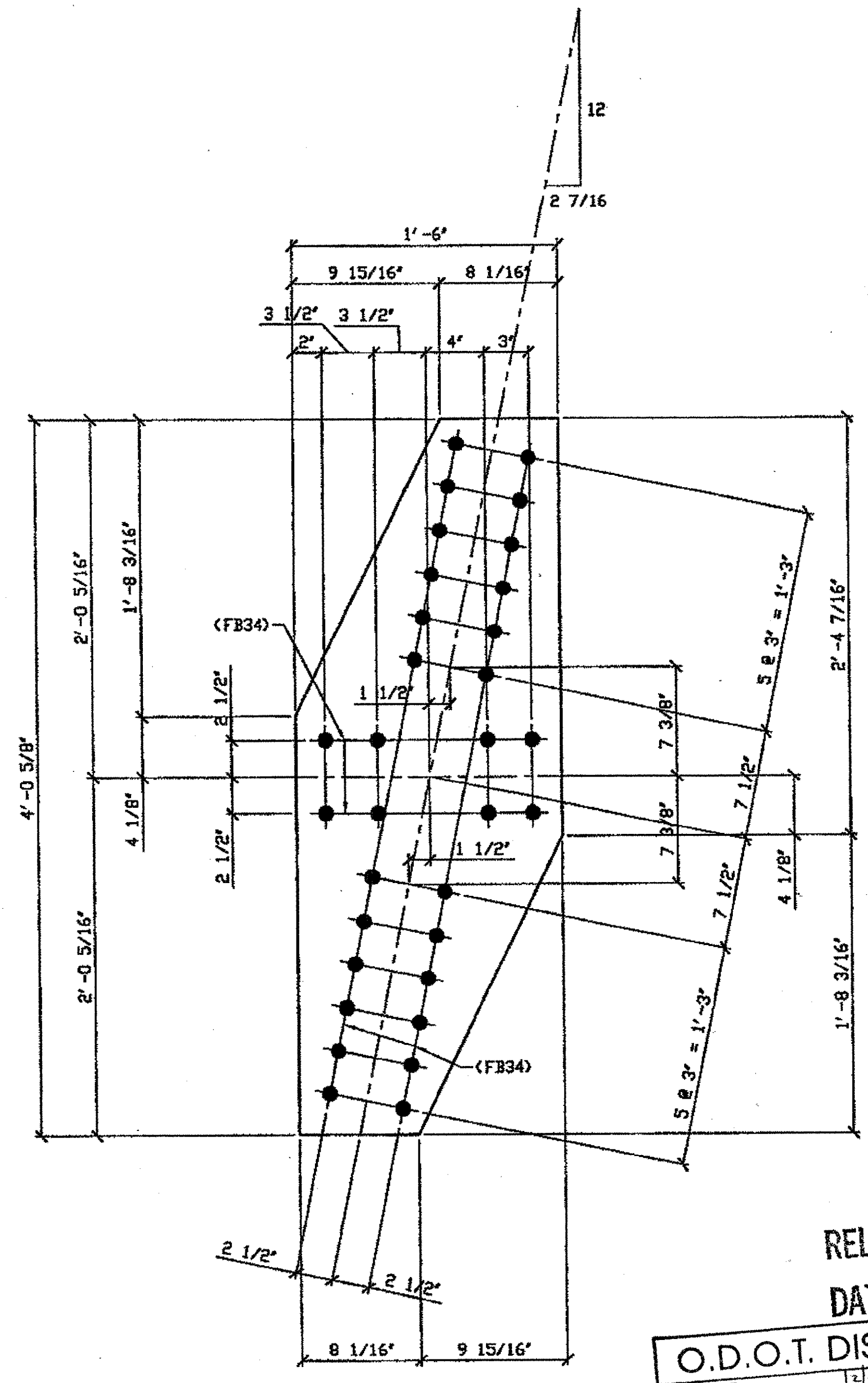


SPAN 11  
C-D' NORTH TOP 397A  
D-C' SOUTH TOP 397A  
C-D' NORTH BOTTOM 397A  
D-C' SOUTH BOTTOM 397A



4 - TIE PLATES - 397A  
ORIG SHOP DWG 380: BL142  
ORIG SHOP MARK P380c  
ITEM No. 0105  
REPAIR SHEET 11-132 & 11-247

SPAN 11  
F-E' SOUTH TOP 397B  
F-E' SOUTH BOTTOM 397B



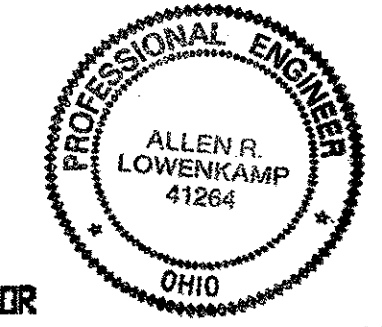
2 - TIE PLATES - 397B  
ORIG SHOP DWG 380: BL143  
ORIG SHOP MARK P380d  
ITEM No. 0105  
REPAIR SHEET 11-260

LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		397A	4	PL 3/8 X 18 1/4	4	8		330
3								
4				TIE PLATE				
5		397B	2	PL 3/8 X 18	4	0 5/8		144
6								
7								
8				FIELD BOLTS				
9		FB34	208	1" DIA	0	2 1/4	NOTE 2	278
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 H.V.Y. HEX HD W/H.V.Y. HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY tdp/ess

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
3000 AMERICAN BRIDGE HWY  
CONROPS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: JRC DATE: 1/08/02  
CHECKED BY: GAF DATE: 02/04/02

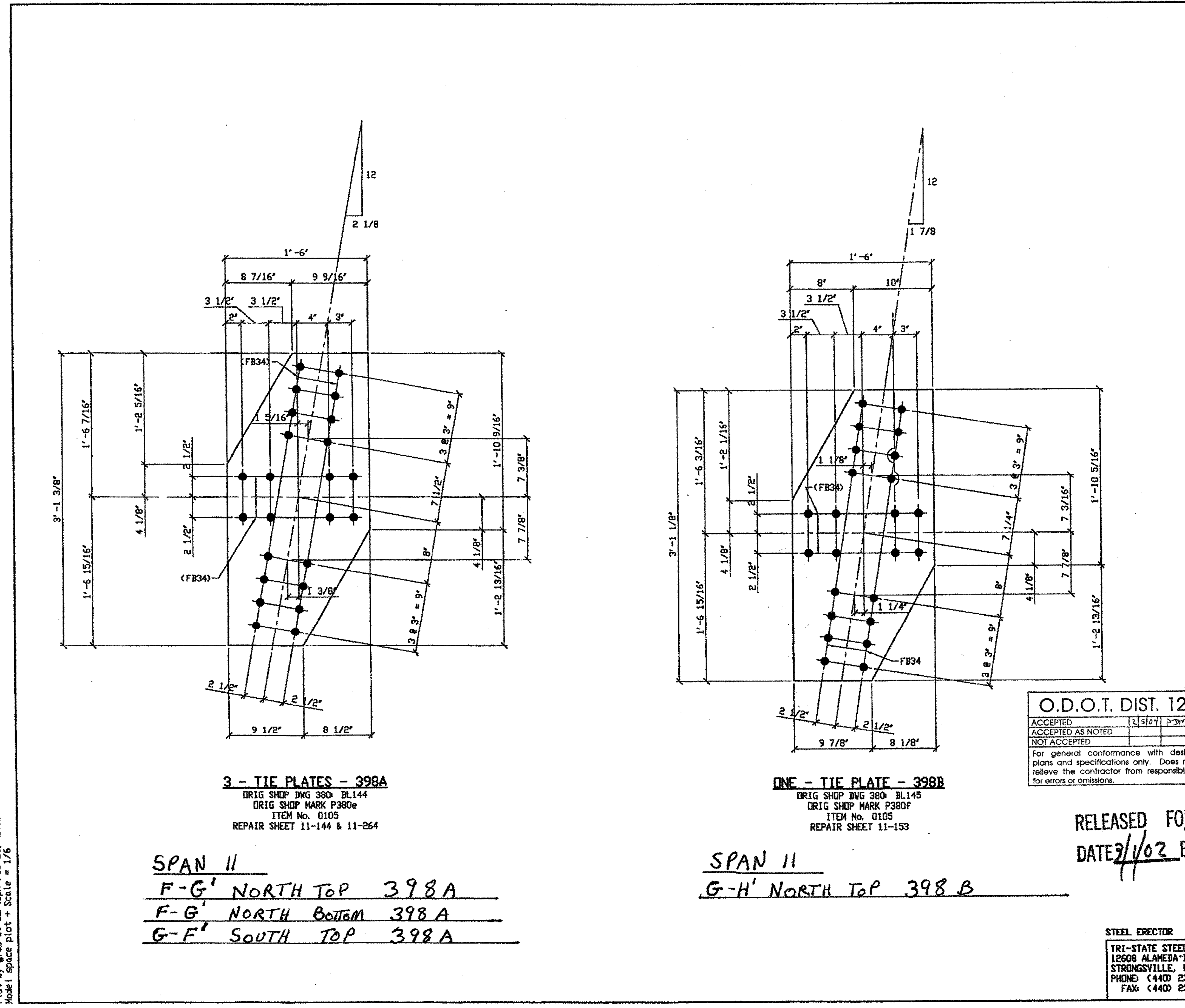
DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

SHEET NUMBER	397
AM. JOB NUMBER	800010

Gi \Contracts\0001800010\Drawings\0397A.dwg  
Save by rsm at 11:11am Feb 21, 2002  
Plot by rps at 09:40am Feb 25, 2002  
Model space plot + Scale = 1/6



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		398A	3	PL 3/8 x 18	3	1 3/8		175
3								
4				TIE PLATE				
5		398B	1	PL 3/8 x 18	3	1 1/8		59
6								
7								
8				FIELD BOLTS				
9		FB34	96	1" DIA	0	2 1/4	NOTE 2	128
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/5/02	AS
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**3 - TIE PLATES - 398A**  
 ORIG SHOP DWG 380 BL144  
 ORIG SHOP MARK P380e  
 ITEM No. 0105  
 REPAIR SHEET 11-144 & 11-264

**ONE - TIE PLATE - 398B**  
 ORIG SHOP DWG 380 BL145  
 ORIG SHOP MARK P380F  
 ITEM No. 0105  
 REPAIR SHEET 11-153

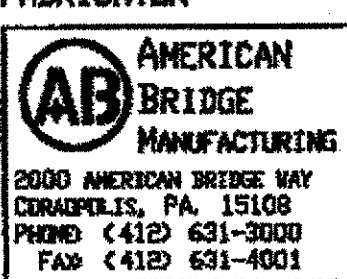
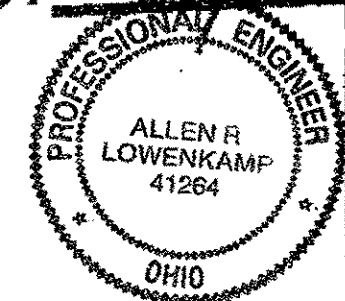
SPAN 11  
F-G' NORTH TOP 398A  
F-G' NORTH BOTTOM 398A  
G-F' SOUTH TOP 398A

SPAN 11  
G-H' NORTH TOP 398B

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY Ed/ESS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

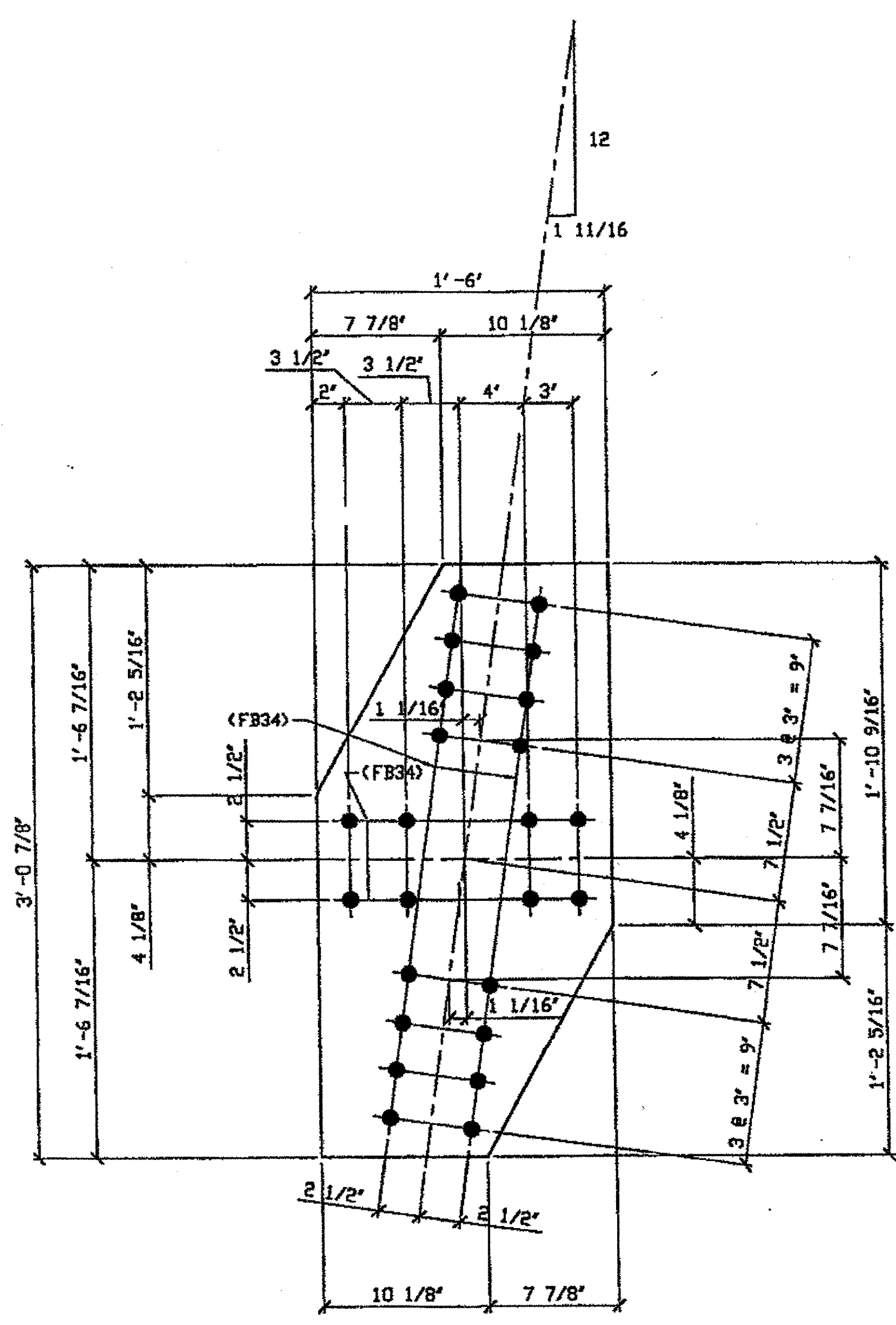
IN CHARGE OF: L. SMITH  
 DRAWN BY: JRC  
 DATE: 01/08/02  
 CHECKED BY: GAF  
 DATE: 02/05/02



DOT ITEM LINE NO. AS NOTED		
DOT BID ITEM NO. 863E50000		
NO.	DATE	DESCRIPTION
		REVISIONS
		BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO		
BRIDGE No. CUY-10-16.13		
SPAN 11 REPAIRS		
		SHEET NUMBER: 398
		AWB JOB NUMBER: 800010

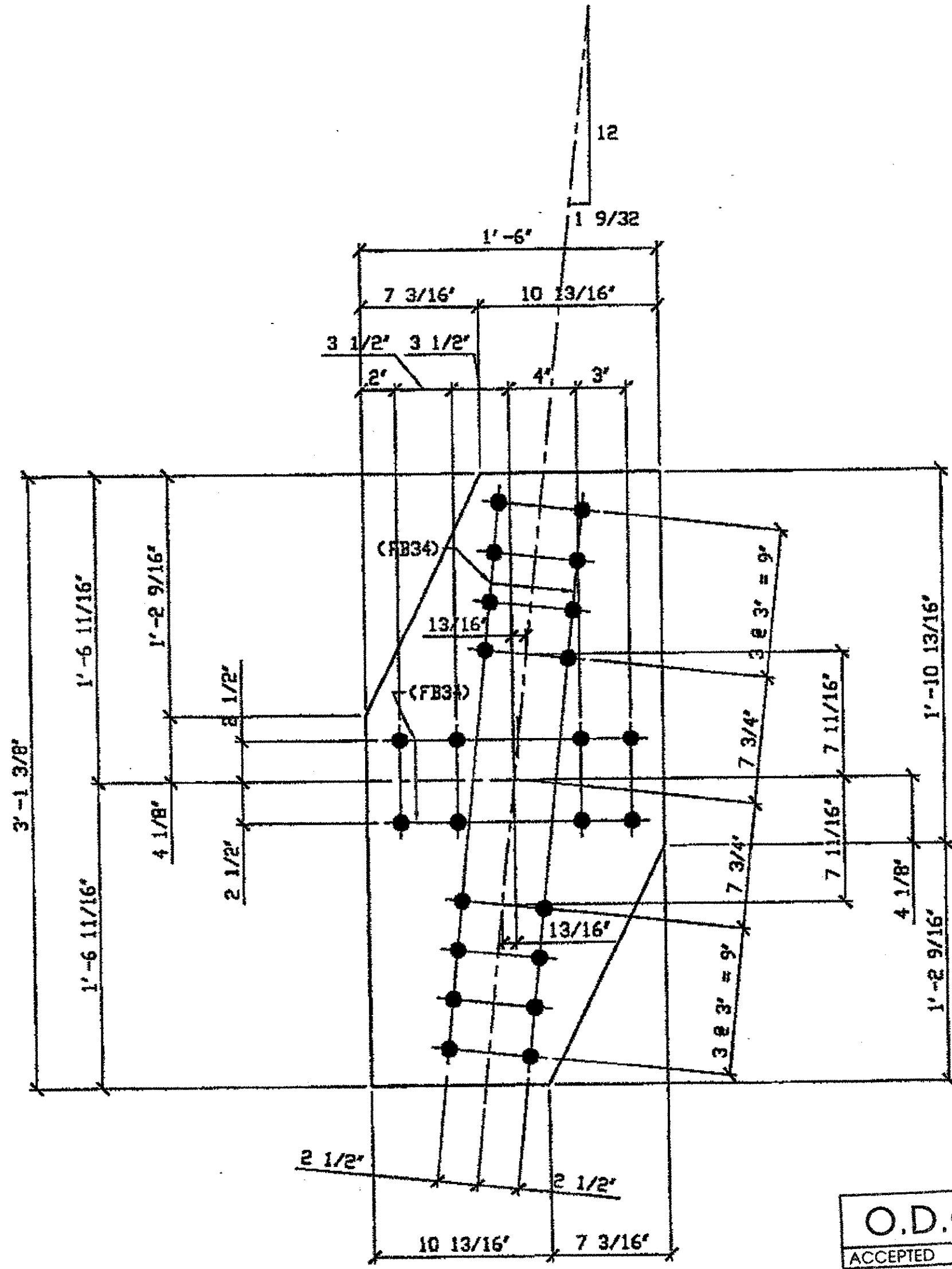
G:\Contract\0001800010\Drawings\398A.dwg  
 Save by rshp at 11:17 on Feb 21, 2002  
 Plot by gfos at 08:40 on Feb 25, 2002  
 Model space plot + Scale = 1/6

BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH	REMARKS
					FEET	INCHES
1				TIE PLATE		
2		399A	1	PL 3/8 x 18	3	0 7/8
3						
4				TIE PLATE		
5		399B	2	PL 3/8 x 18	3	1 3/8
6						
7				FIELD BOLTS		
8						
9		FB34	72	1" DIA	0	2 1/4 NOTE 2
10						
PLATE A36				PIPE N/A	FITTINGS N/A	
SHAPES N/A				FLGS. N/A	BOLTS NOTE 2	



**ONE - TIE PLATE - 399A**  
 ORIG SHOP DWG 380 BL146  
 ORIG SHOP MARK P380g  
 ITEM No. 0105  
 REPAIR SHEET 11-156

SPAN II NORTH H-J' TOP 399A



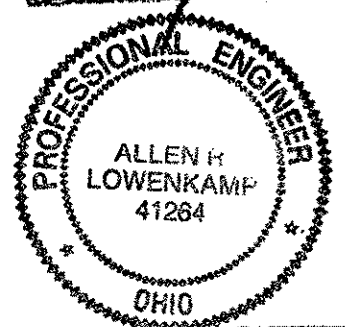
**2 - TIE PLATES - 399B**  
 ORIG SHOP DWG 380 BL148  
 ORIG SHOP MARK P380k  
 ITEM No. 0105  
 REPAIR SHEET 11-167

SPAN II K-L' NORTH TOP 399B  
SPAN II K-L' NORTH BOTTOM 399B

**O.D.O.T. DIST. 12**  
 ACCEPTED 12/5/04 PSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**RELEASED FOR CONSTRUCTION**  
 DATE 3/1/02 BY tdp/ESS

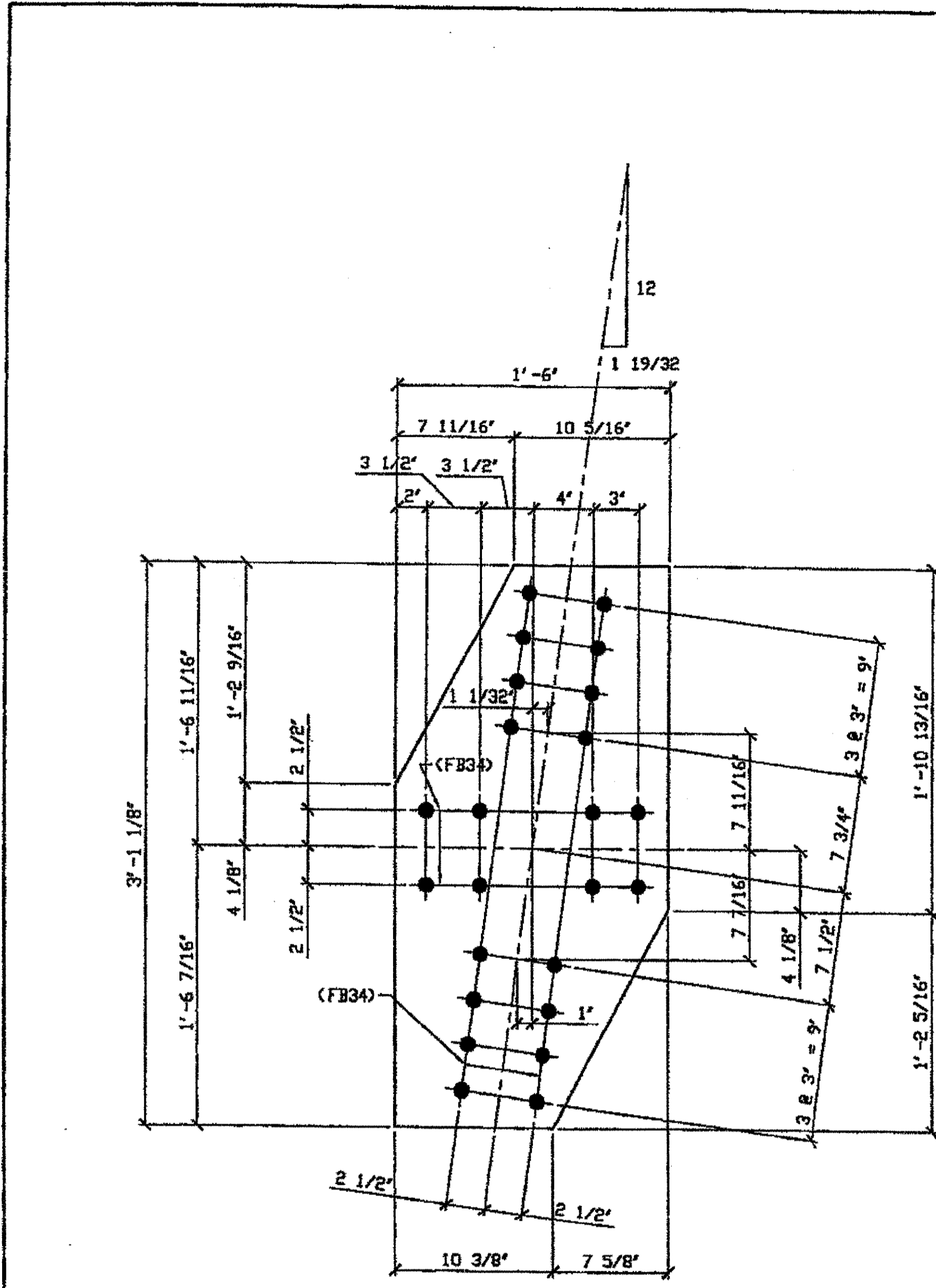


**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONROPSVILLE, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

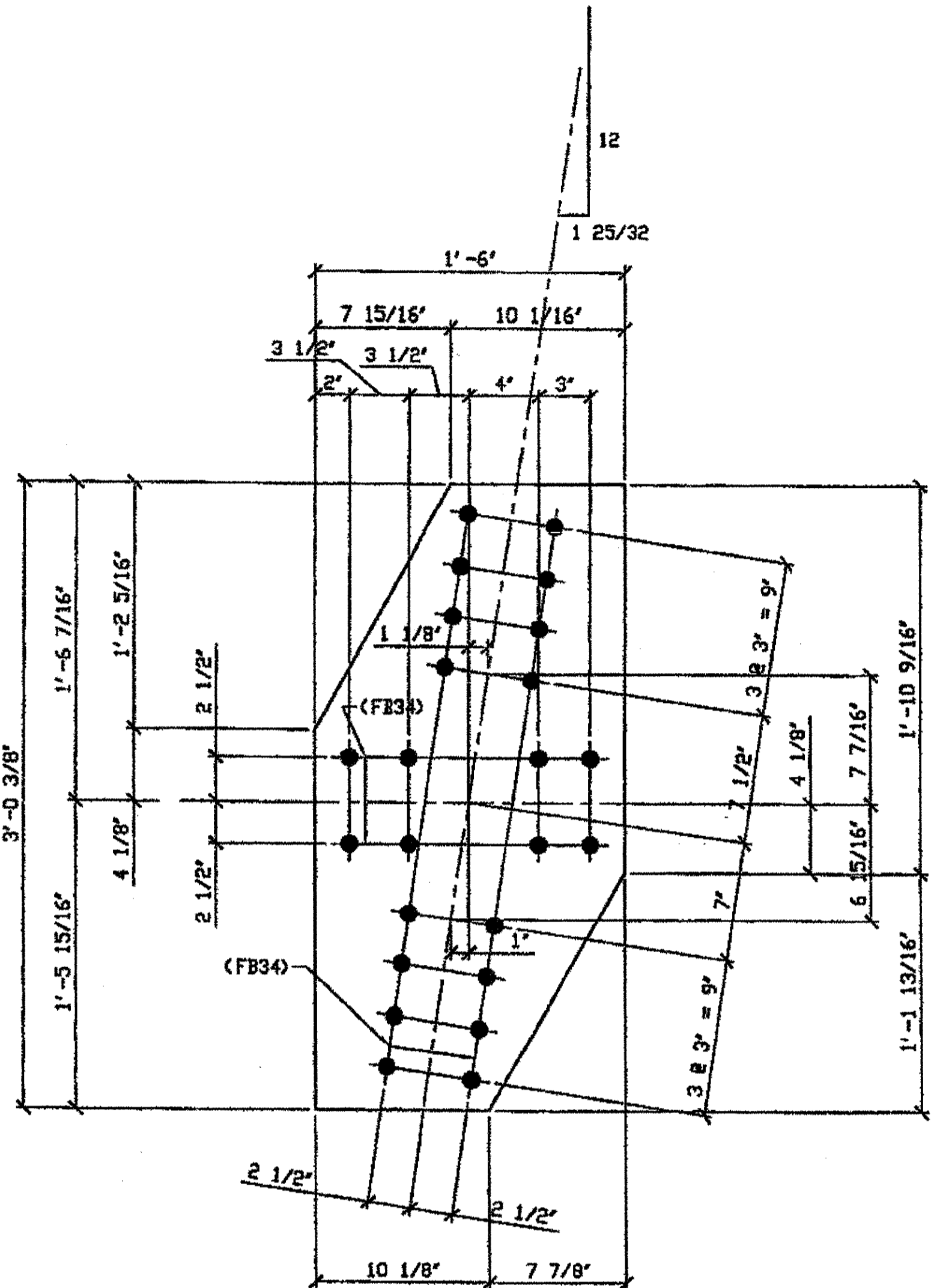
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER: 399			AM JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\399A.dwg  
 Save by: tdp at 11:24am Feb 21, 2002  
 Plot by: tdp at 09:41pm Feb 25, 2002  
 Model space plot + Scale = 1/5



**ONE - TIE PLATE - 400A**  
 ORIG SHIP DWG 380 BL149  
 ORIG SHIP MARK P380h  
 ITEM No. 0105  
 REPAIR SHEET 11-170

SPAN 11 NORTH L-M' BOTTOM 400A



**ONE - TIE PLATE - 400B**  
 ORIG SHIP DWG 380 BL150  
 ORIG SHIP MARK P380h  
 ITEM No. 0105  
 REPAIR SHEET 11-299

SPAN 11 SOUTH N-M' TOP 400B

**BILL OF MATERIAL**

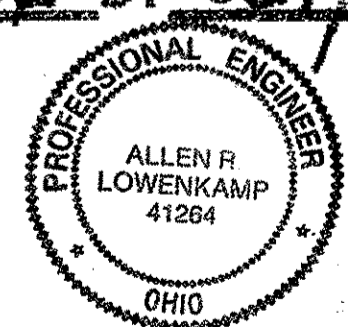
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'S	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		400A	1	PL 3/8 x 18	3	1 1/8		60
3								
4				TIE PLATE				
5		400B	1	PL 3/8 x 18	3	0 3/8		59
6								
7								
8				FIELD BOLTS				
9		FB34	48	1" DIA	0	2 1/4	NOTE 2	64
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E5000

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY *Edress*

**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2900 AMERICAN BRIDGE WAY  
 CINCINNATI, OH 45219  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR

**TRI-STATE STEEL CONSTRUCTION, INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 JRC 01/09/02  
 CHECKED BY: DATE:  
 GAF 02/05/02

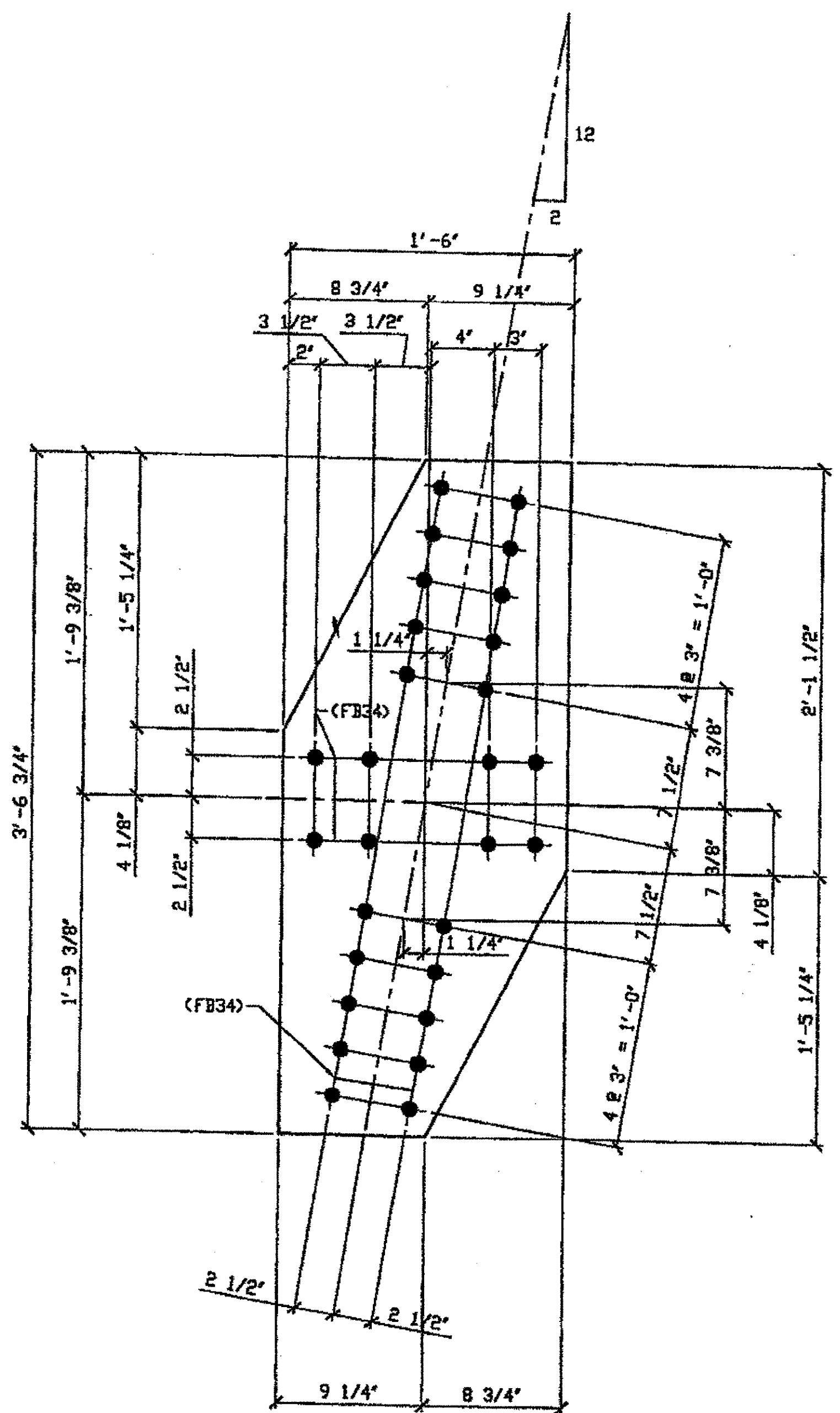
REV.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

SHEET NUMBER: 400  
 A36 JOB NUMBER: 800010

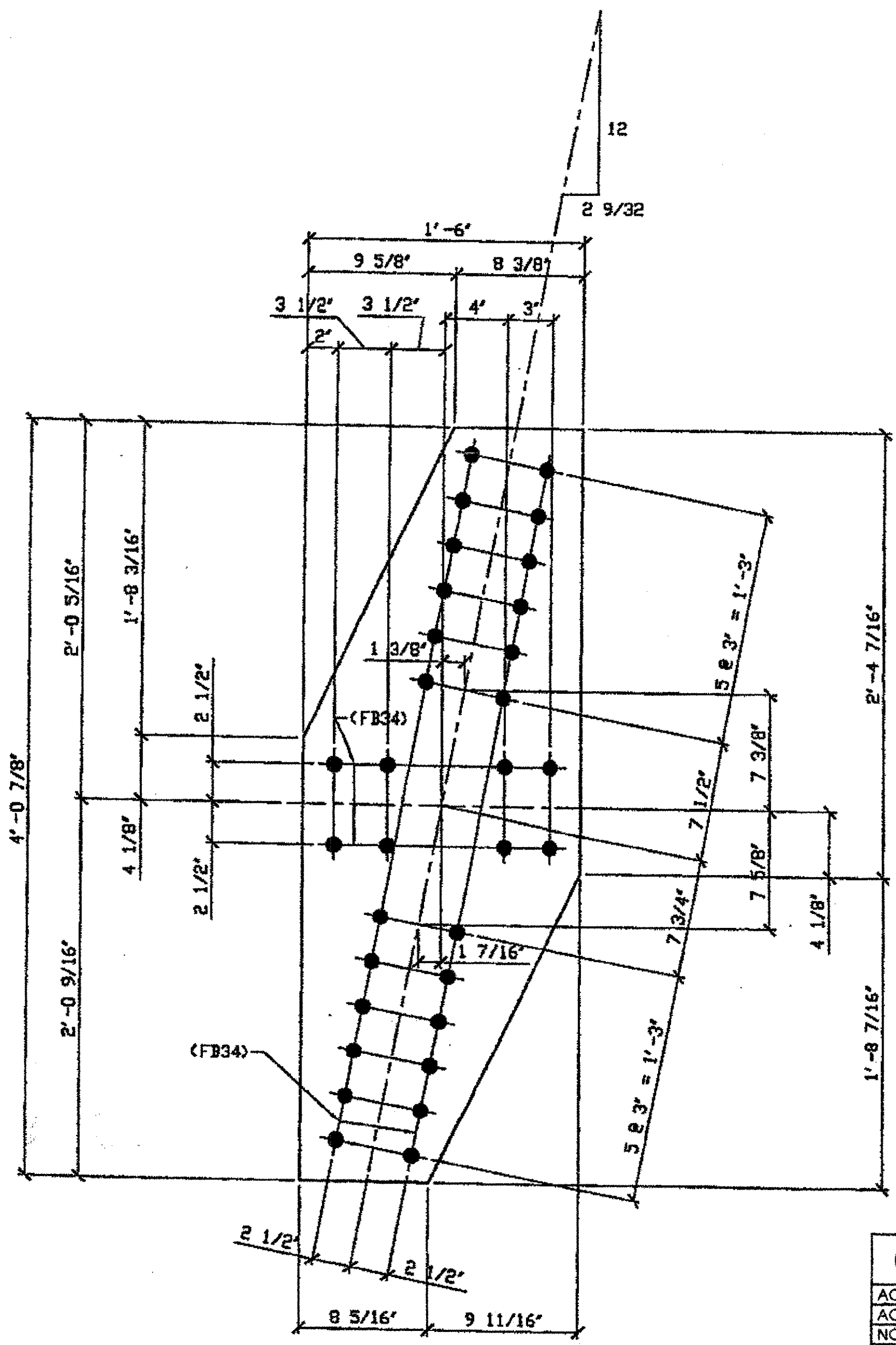
G:\ACh...acts\2000\800010\Drawings\AD400A.dwg  
 Save by rppr at 11:54am Feb 19, 2002  
 Plot by gfos at 02:41pm Feb 25, 2002  
 Model space plot + Scale = 1/6

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		401A	3	PL 3/8 x 18	3	6 3/4		200
3				TIE PLATE				
4				PL 3/8 x 18	4	0 7/8		219
5		401B	3	PL 3/8 x 18				
6								
7								
8				FIELD BOLTS				
9		FB34	180	1" DIA	0	2 1/4	NOTE 2	240
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



**3 - TIE PLATES - 401A**  
 ORIG SHOP DWG 380 BL151  
 ORIG SHOP MARK P380p  
 ITEM No. 0105  
 REPAIR SHEET 11-181 & 11-305

SPAN II NORTH N-P' TOP 401A  
 SPAN II SOUTH P-N' TOP 401A  
 SPAN II SOUTH P-N' BOTTOM 401A



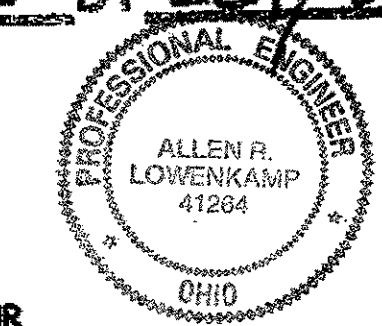
**3 - TIE PLATES - 401B**  
 ORIG SHOP DWG 390 BL152  
 ORIG SHOP MARK P380px  
 ITEM No. 0105  
 REPAIR SHEET 11-187 & 11-315

SPAN II NORTH P-Q' TOP 401B  
 SPAN II SOUTH Q-P' TOP 401B  
 SPAN II SOUTH Q-P' BOTTOM 401B

**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- OPEN HOLES ARE  $\phi 1 1/16$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSSP-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tde/ess



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNWALL, PA 15008  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

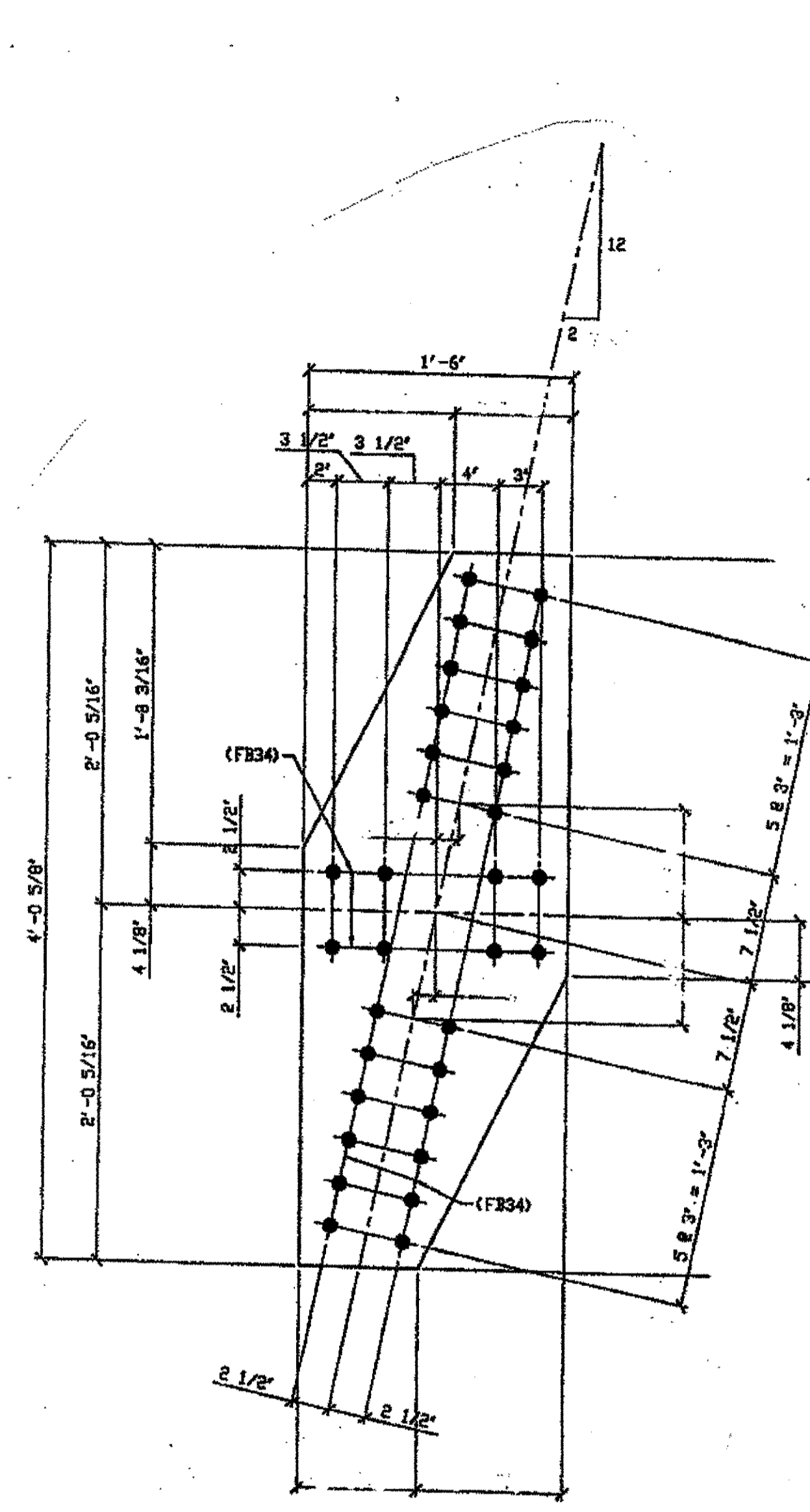
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JRC 01/09/02  
 CHECKED BY: DATE: GAF 02/05/02

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
		SHEET NUMBER	401
		AWK JOB NUMBER	800010

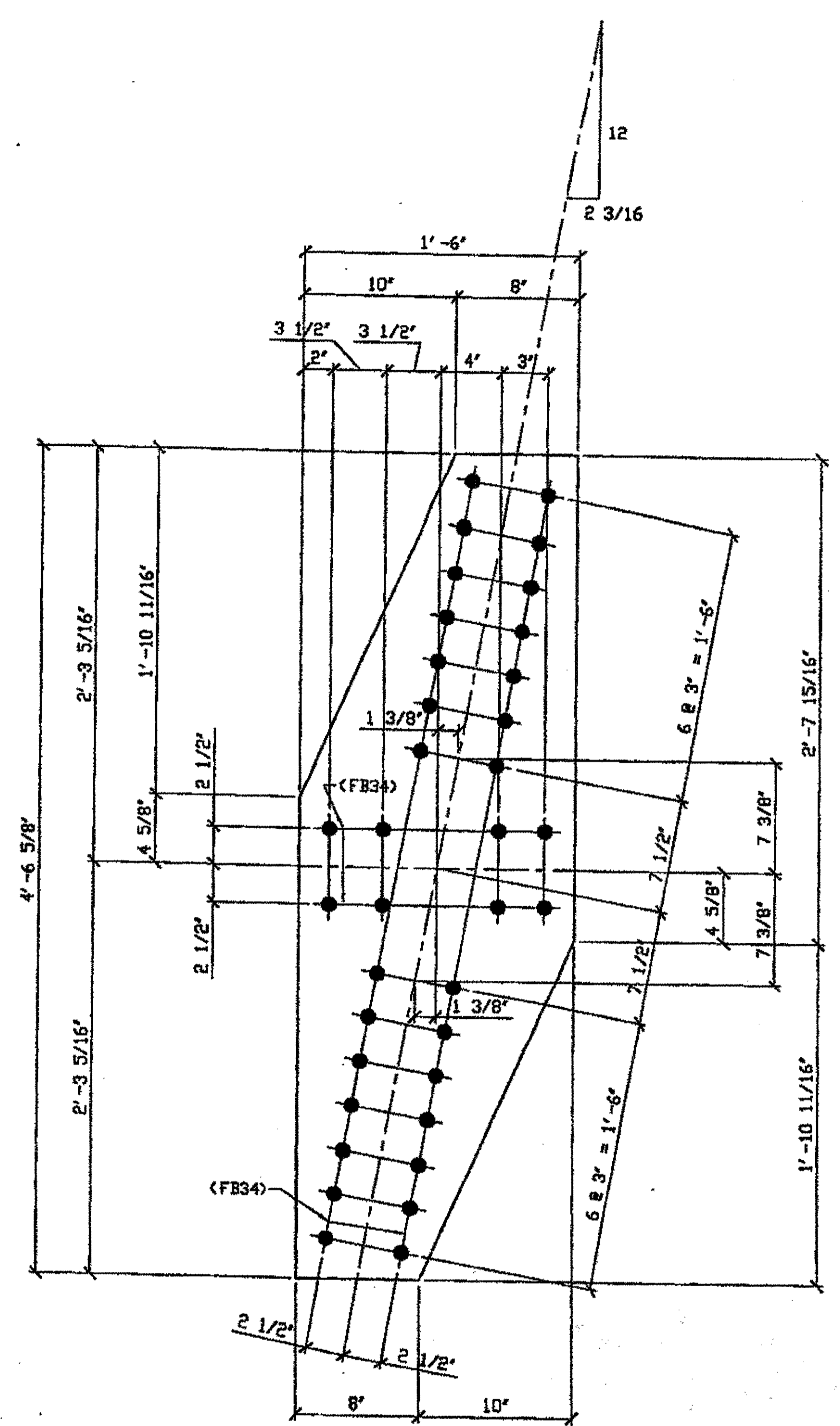
G:\projects\2000\8000010\Drawings\AD1A.dwg  
 Save by mpe at 12:41pm Feb 21, 2002  
 Plot by mpe at 02:41pm Feb 25, 2002  
 Model space plot \* Scale = 1/6

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATE				
2		402A	2	PL 3/8 x 18	4	6 5/8		
3		402S	1	R 3/8 x 18	4	0 5/8		
4								
5		402W	1	R 3/8 x 18	3	6 1/8		
6								
7								
8				FIELD BOLTS				
9		FB34		1" DIA	0	2 1/4	NOTE 2	
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



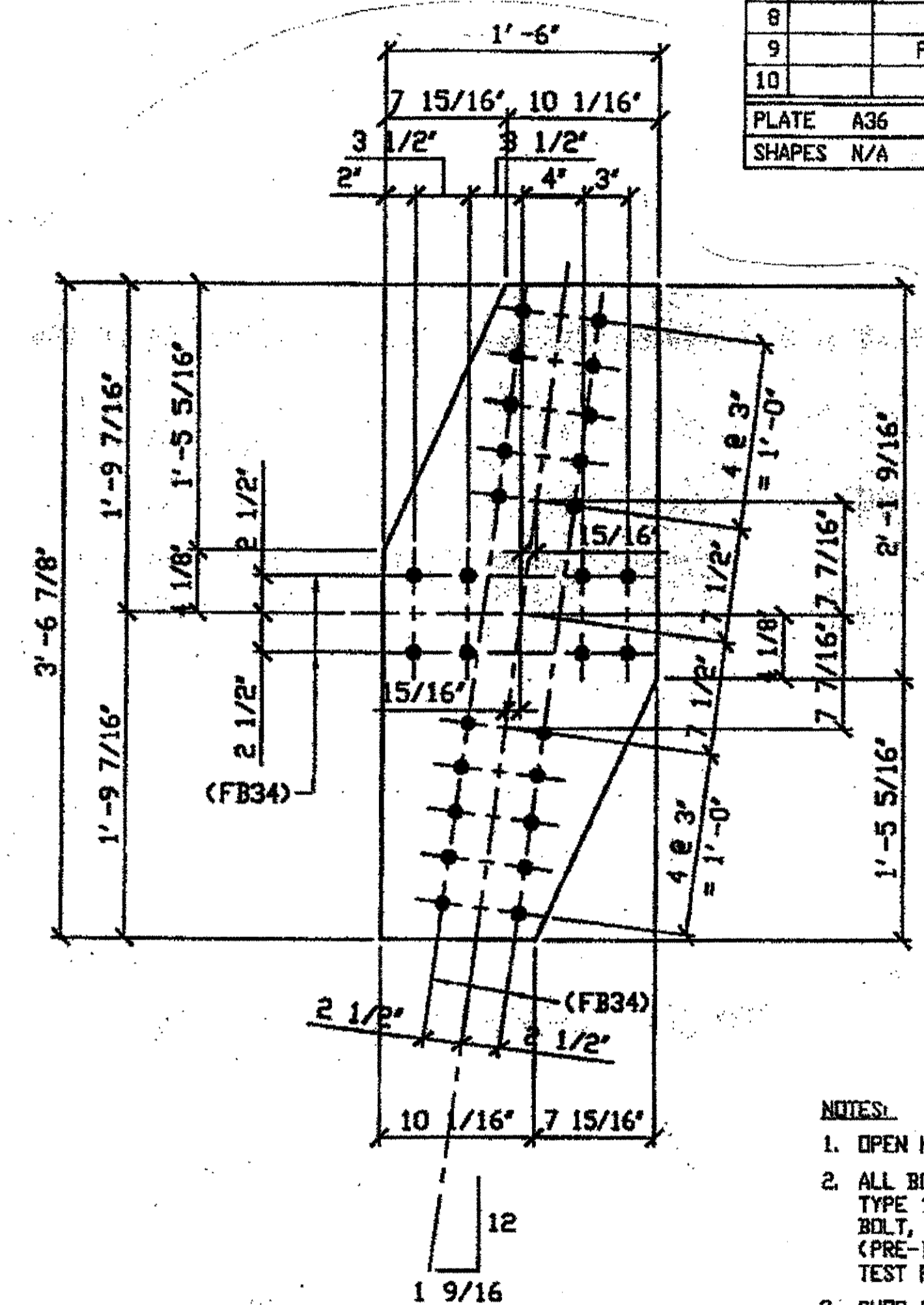
1 - TIE PLATES - 402S  
ORIG SHOP DWG 380-8L154  
ORIG SHOP MARK P380S

SPAN 11 SOUTH, T-S, TOP, 402S



2 - TIE PLATE - 402A  
ORIG SHOP DWG 379-8L153  
ORIG SHOP MARK P379K  
ITEM No. 0105  
REPAIR SHEET 11-195

SPAN 11 NORTH R-S' TOP 402A  
SPAN 11 NORTH R-S' BOTTOM 402A



ONE - TIE PLATE - 402W  
ORIG SHOP DRAWING 380-8L155  
ORIG SHOP MARK P380W

SPAN 11 NORTH, T-U, TOP, 402W

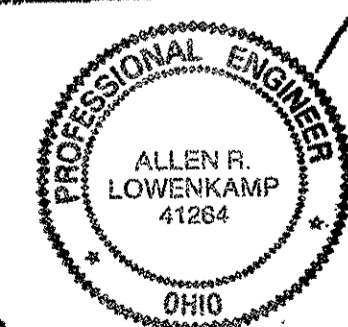
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\projects\2000\8000\10\Drawings\3402A.dwg  
 Save by psp at 01:14pm Feb 19, 2002  
 Plot by Bfos at 08:42pm Feb 25, 2002  
 Model space plot + Scale = 1/6

O.D.O.T. DIST. 12	
ACCEPTED	2/5/02/LSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY tdp/ess

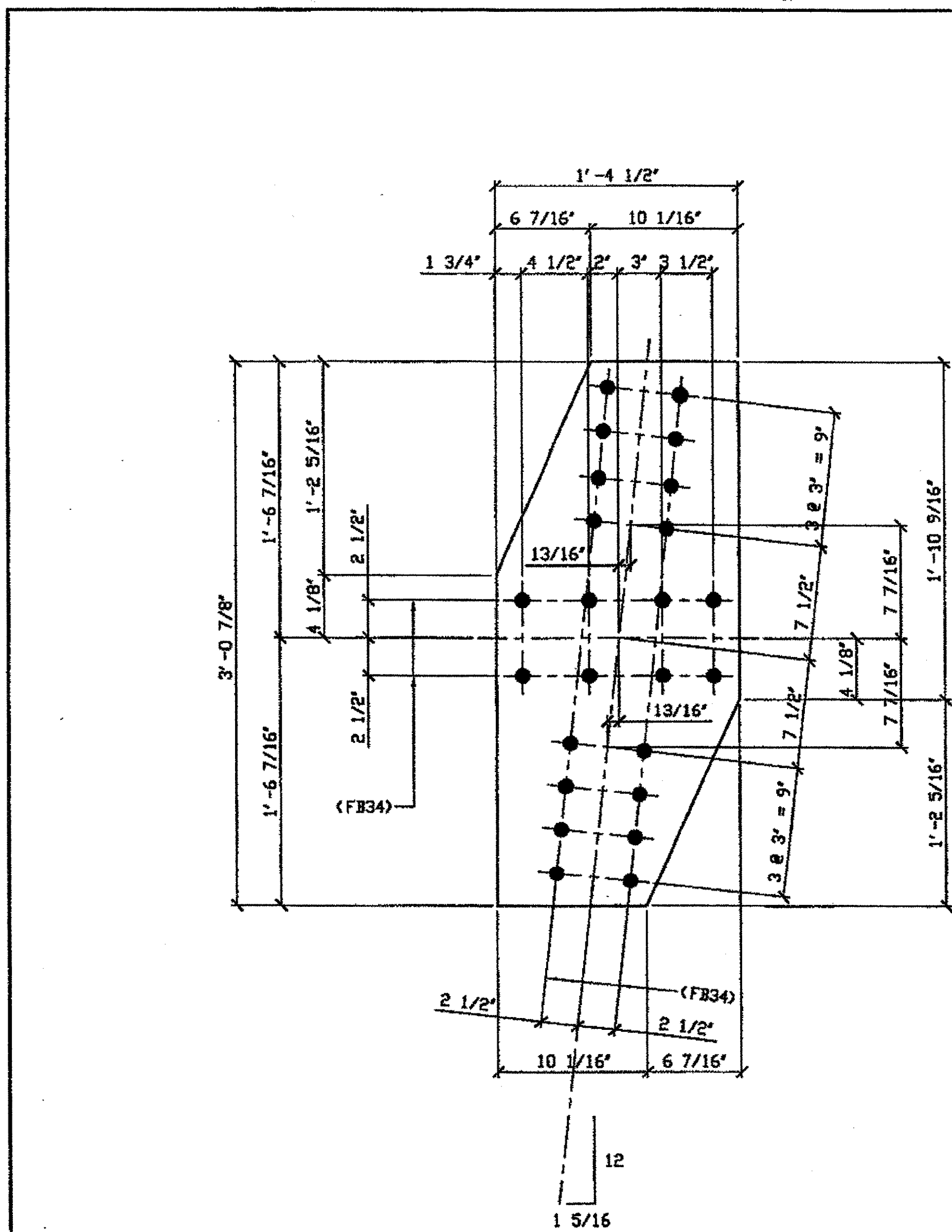


FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERSON BRIDGE WAY  
CONARVILLE, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION, INC.**  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
JRC 01/09/02  
CHECKED BY: DATE  
GAF 02/06/02

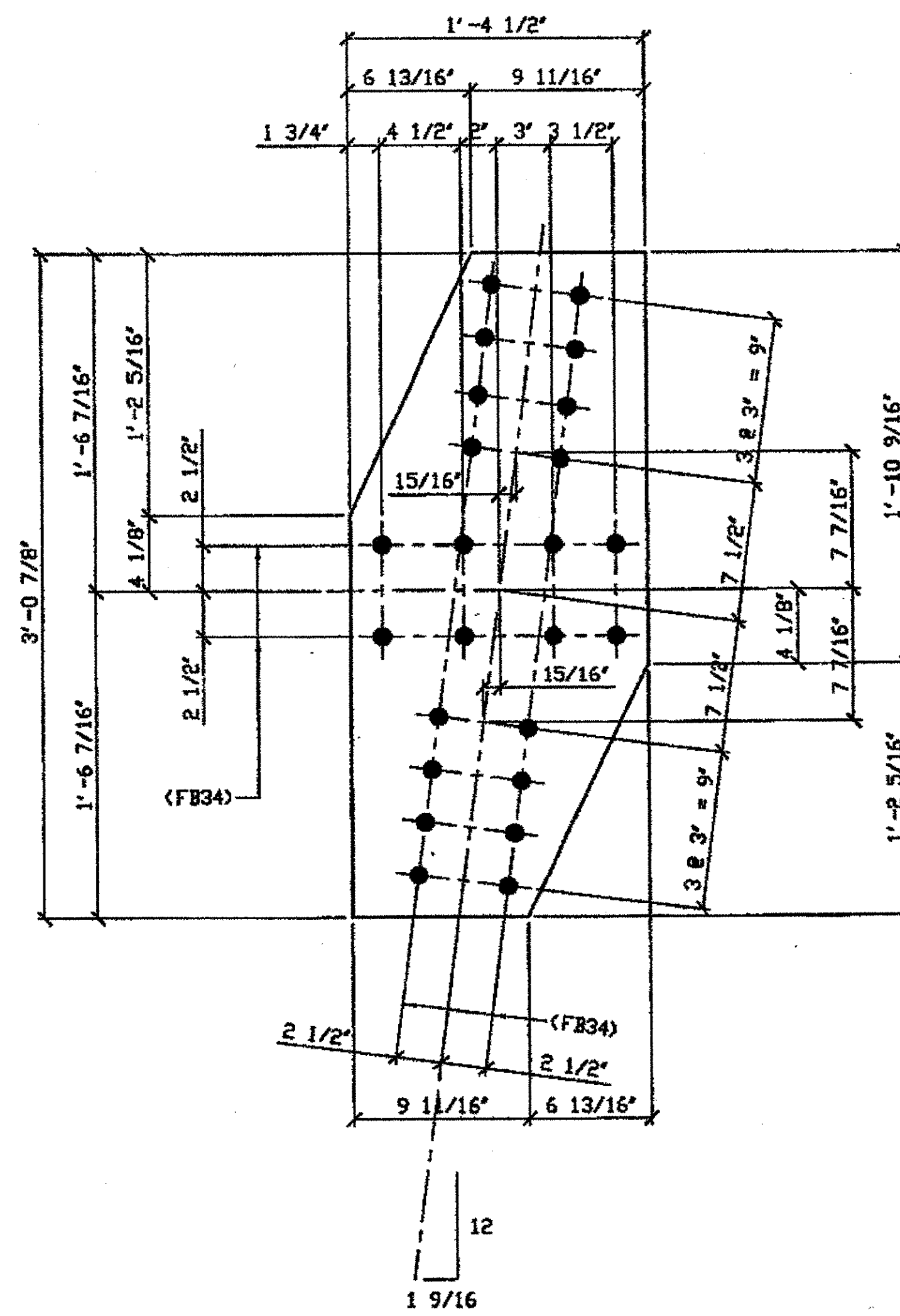
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER: 402		ARM JOB NUMBER: 800010	



2 - TIE PLATES - 455A

ORIG SHOP DWG 293-BL133  
 ORIG SHOP MARK P293d  
 ITEM No. 0105  
 REPAIR SHEET 12-118  
 (IDENTICAL TO 356A)

SPAN 12 D-C NORTH TOP 455A  
 SPAN 12 D-C NORTH BOTTOM 455A



4 - TIE PLATES - 455B

ORIG SHOP DWG 293-BL132  
 ORIG SHOP MARK P293c  
 ITEM No. 0105  
 REPAIR SHEET 12-108 & 126  
 (IDENTICAL TO 356B)

SPAN 12  
 C-B' NORTH TOP 455B  
 C-B' NORTH BOTTOM 455B  
 D-E NORTH TOP 455B  
 D-E NORTH BOTTOM 455B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		455A	2	PL 3/8 x 16 1/2	3	0 7/8		110
3		455B	4	PL 3/8 x 16 1/2	3	0 7/8		217
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34	144	1" DIA	0	2 1/4	NOTE 2	192
10								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		N/A	FLGS.		N/A	BOLTS		NOTE 2

NOTES:

- OPEN HOLES ARE  $\{ 1/16" \}$  UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED, FOR CONSTRUCTION  
 DATE 1/9/02 BY tdp/tss

G:\Contracts\2000\800010\Drawings\JM55A.dwg  
 Save by rspr at 09:19am Nov 05, 2001  
 Plot by gfos at 11:54am Dec 07, 2001  
 Model space plot + Scale = 1/6

CIVIL ENGR. & CONTR. J.C.

By \_\_\_\_\_  
 DEC 10 2001

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/02 DYM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12509 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3013  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COMMERCE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 07/27/01  
 CHECKED BY: DATE:  
 GAF 10/18/01

DOT ITEM LINE NO. 0105  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

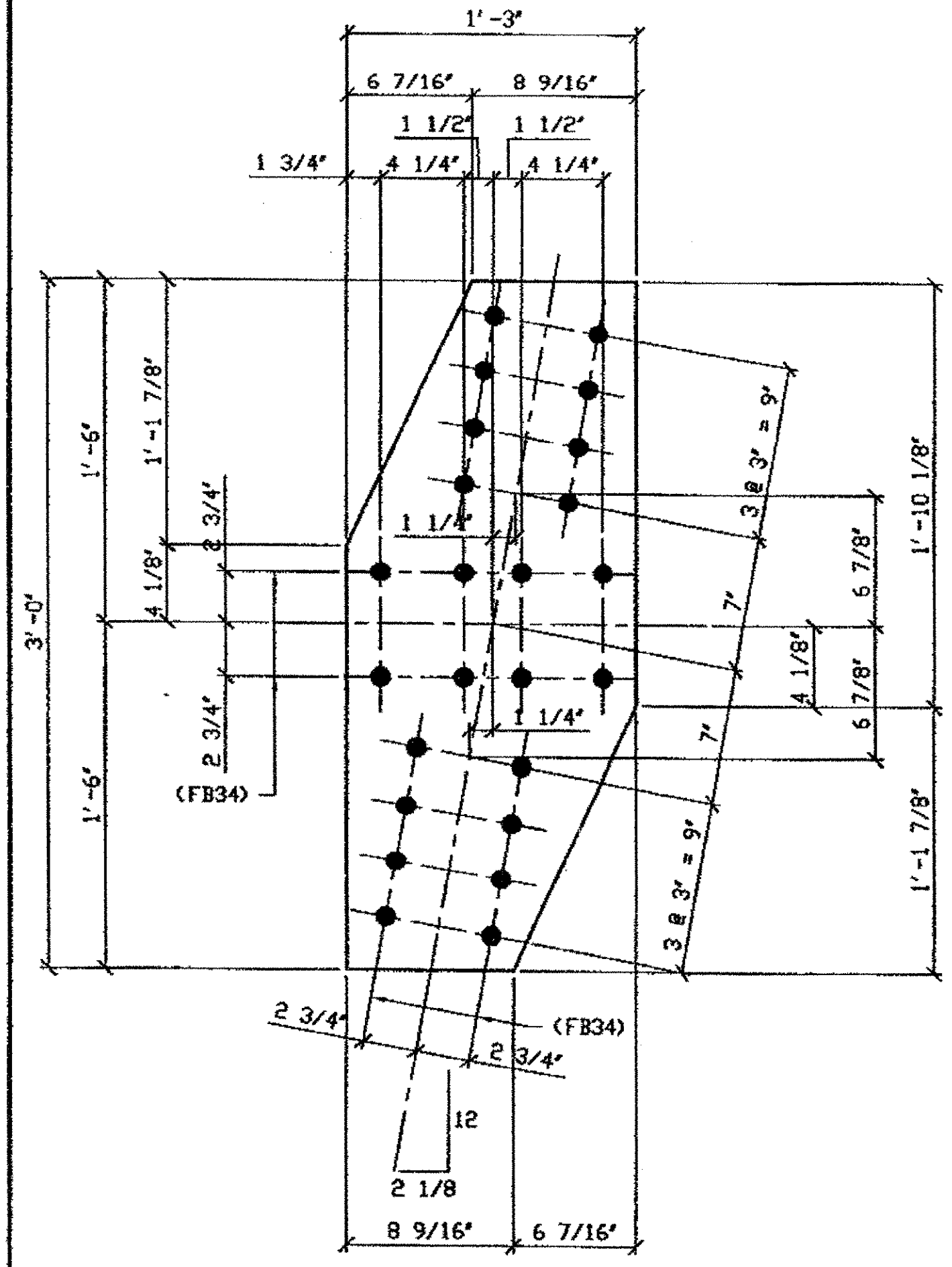
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE NO. CUY-10-16.13  
 SPAN 12 REPAIRS

IN CHARGE OF: L. SMITH

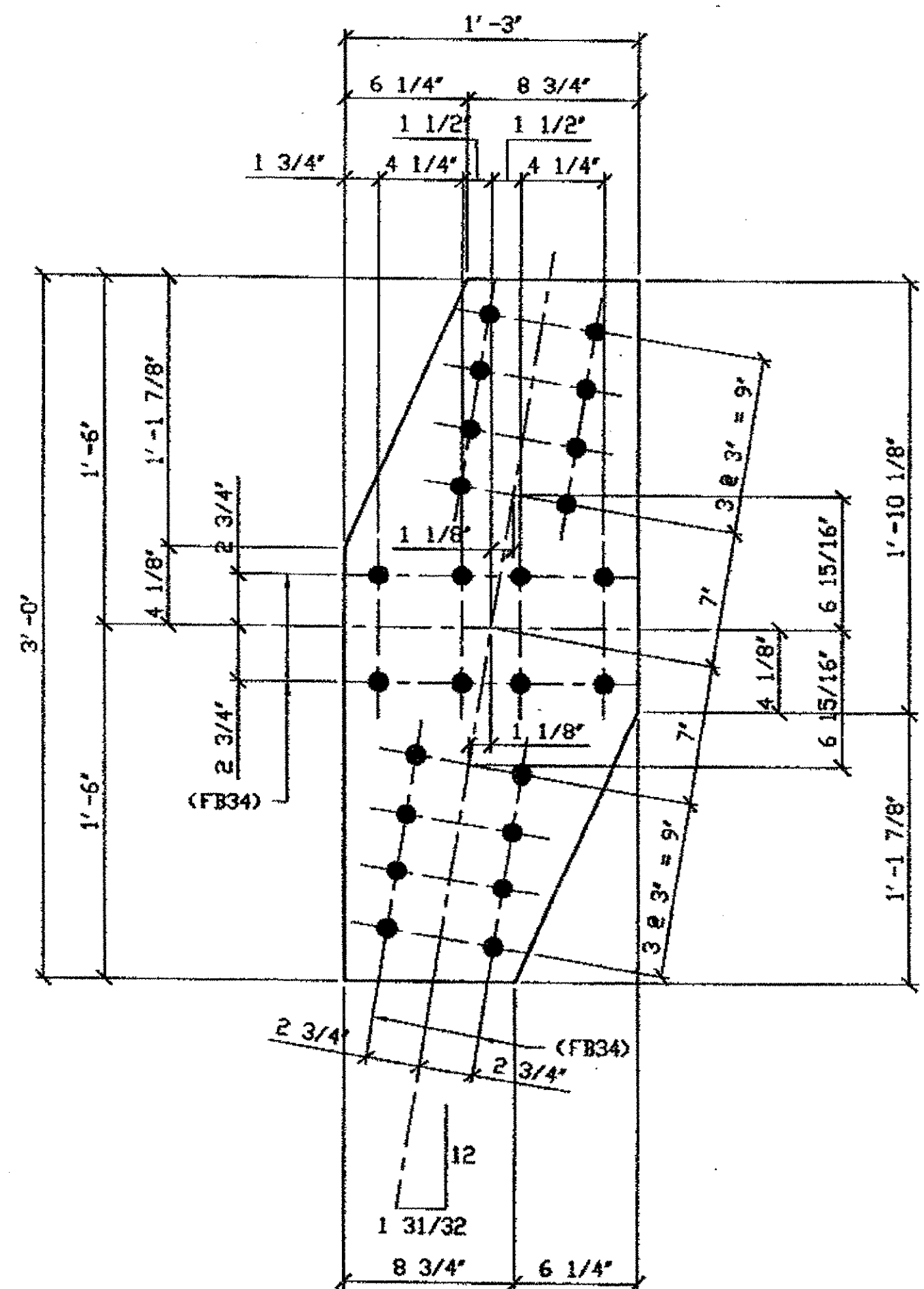
SHEET NUMBER: 455  
 JOB NUMBER: 800010

- NOTES:**
1. OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

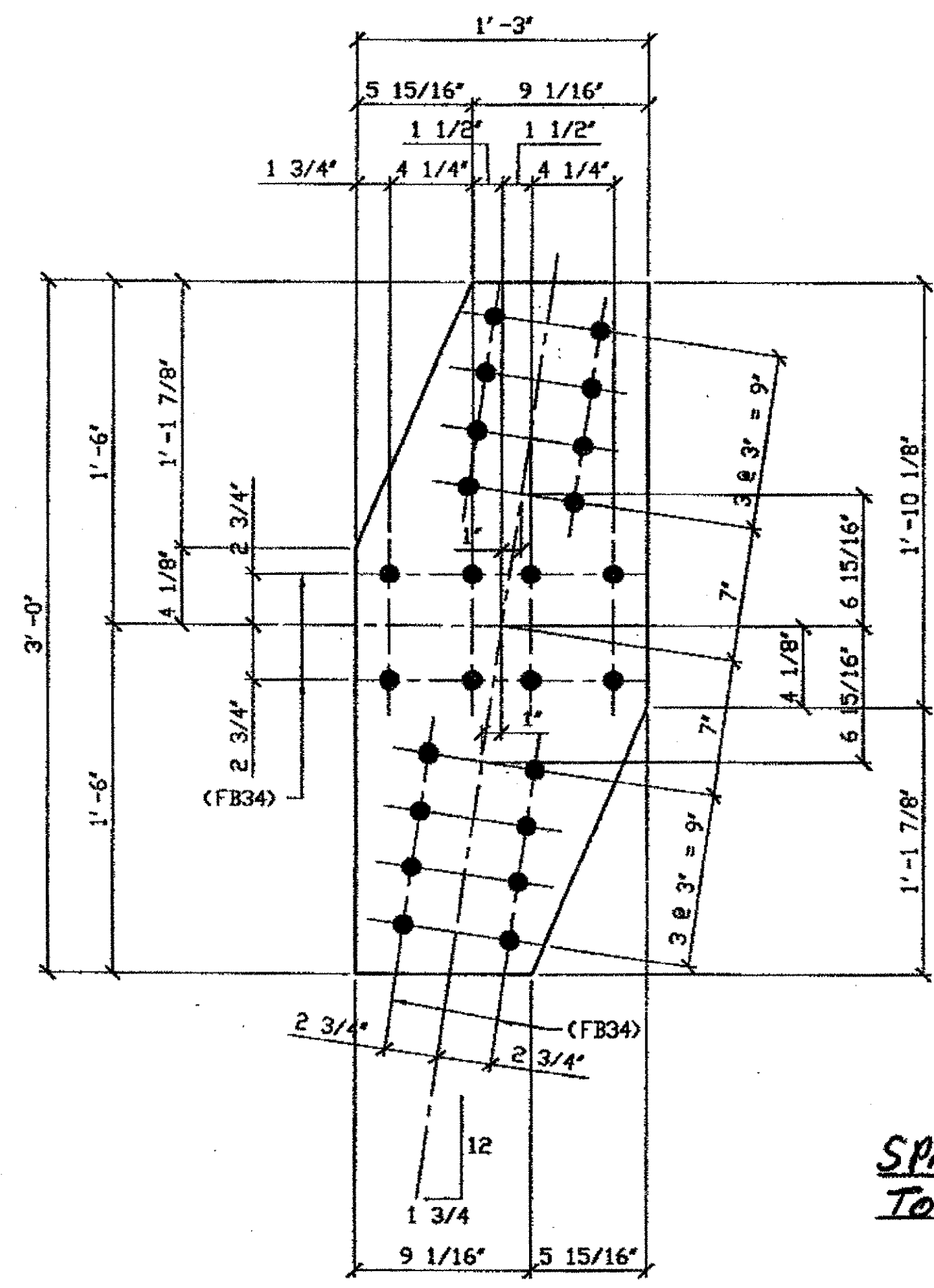
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		506A	6	PL 3/8 X 15	3	0		287
3		506B	2	PL 3/8 X 15	3	0		96
4		506C	5	PL 3/8 X 15	3	0		243
5		506D	2	PL 3/8 X 15	2	11 7/8		
6								
7				FIELD BOLTS				
8		FB34		1" DIA	0	2 1/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



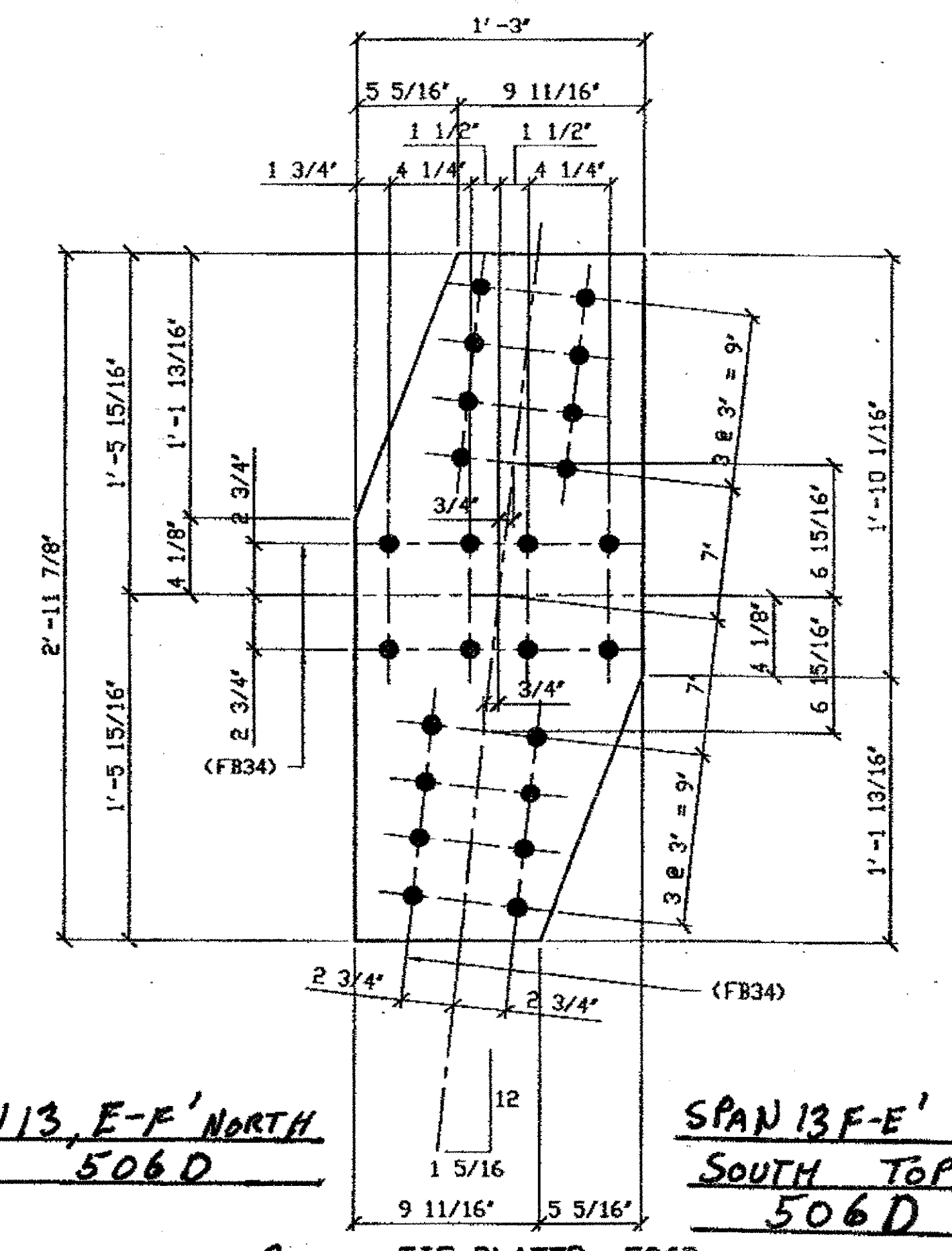
**6 - TIE PLATES - 506A**  
 ORIG SHOP DWG 520-BL157, BL173 & BL182  
 ORIG SHOP MARK P520a  
 REPAIR SHEETS 13-104, 13-154, 13-173 & 13-205



**2 - TIE PLATES - 506B**  
 ORIG SHOP DWG 520-BL159  
 ORIG SHOP MARK P520b  
 REPAIR SHEETS 13-110-11 & 13-187



**5 - TIE PLATES - 506C**  
 ORIG SHOP DWG 520-BL162 & BL-170  
 ORIG SHOP MARK P520c  
 REPAIR SHEETS 13-117, 13-131 & 13-200



**2 - TIE PLATES - 506D**  
 ORIG SHOP DWG 520-BL168  
 ORIG SHOP MARK P520e  
 REPAIR SHEETS 13-124

G:\Contract\10\800010\Drawings\DESIGN\506A.dwg  
 Save by RST on 11/24/01 Feb 02, 2002  
 Plot by gfas on 09/05/01 Feb 02, 2002  
 Model Space Plot - Scale = 1/6

- SPAN 13**
- A-B' NORTH TOP 506A
  - A-B' NORTH BOTTOM 506A
  - A'-B' SOUTH TOP 506A
  - A'-B' SOUTH BOTTOM 506A
  - H-G' SOUTH TOP 506A
  - L-M' NORTH TOP 506A

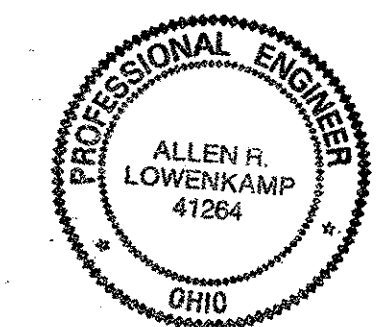
- SPAN 13**
- B-C' NORTH TOP 506B
  - B'-C' SOUTH TOP 506B

- SPAN 13**
- F-G' NORTH TOP 506C
  - F-G' NORTH BOTTOM 506C
  - G-F' SOUTH TOP 506C
  - G-F' SOUTH BOTTOM 506C
  - C-D' NORTH TOP 506C

**O.D.O.T. DIST. 12**

ACCEPTED	2/2/01	P377
ACCEPTED AS NOTE		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COMPAHLS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0105 DOT BID ITEM NO. 863E50000	
REVISIONS	DATE
1	03/15/01
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE RENOV (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
SPAN 13 REPAIRS	
SHEET NUMBER	506
ASB JOB NUMBER	800010

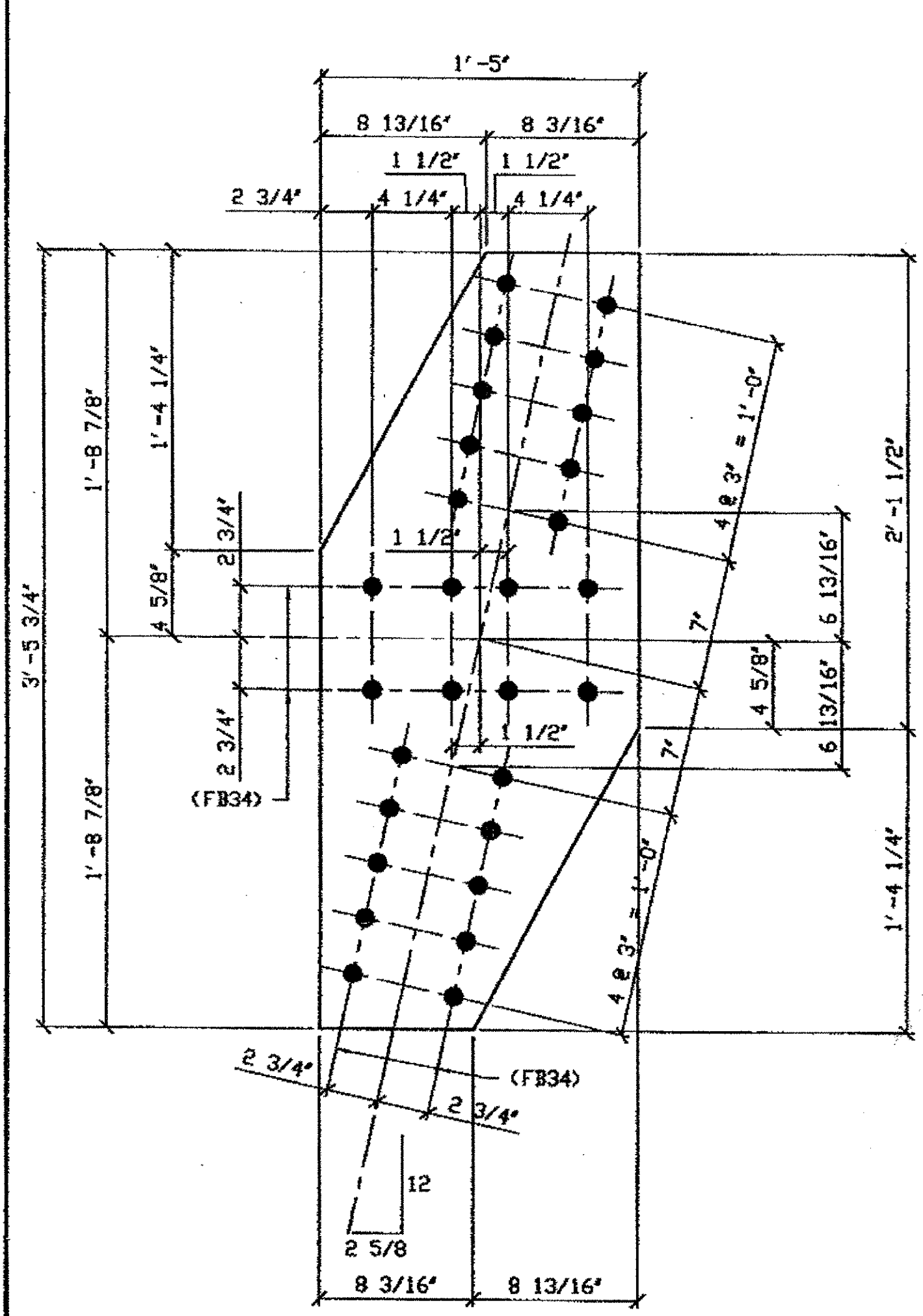
**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L SMITH  
 DRAWN BY: DATE  
 RAS 03/15/01  
 CHECKED BY: DATE  
 GAF 12/26/01



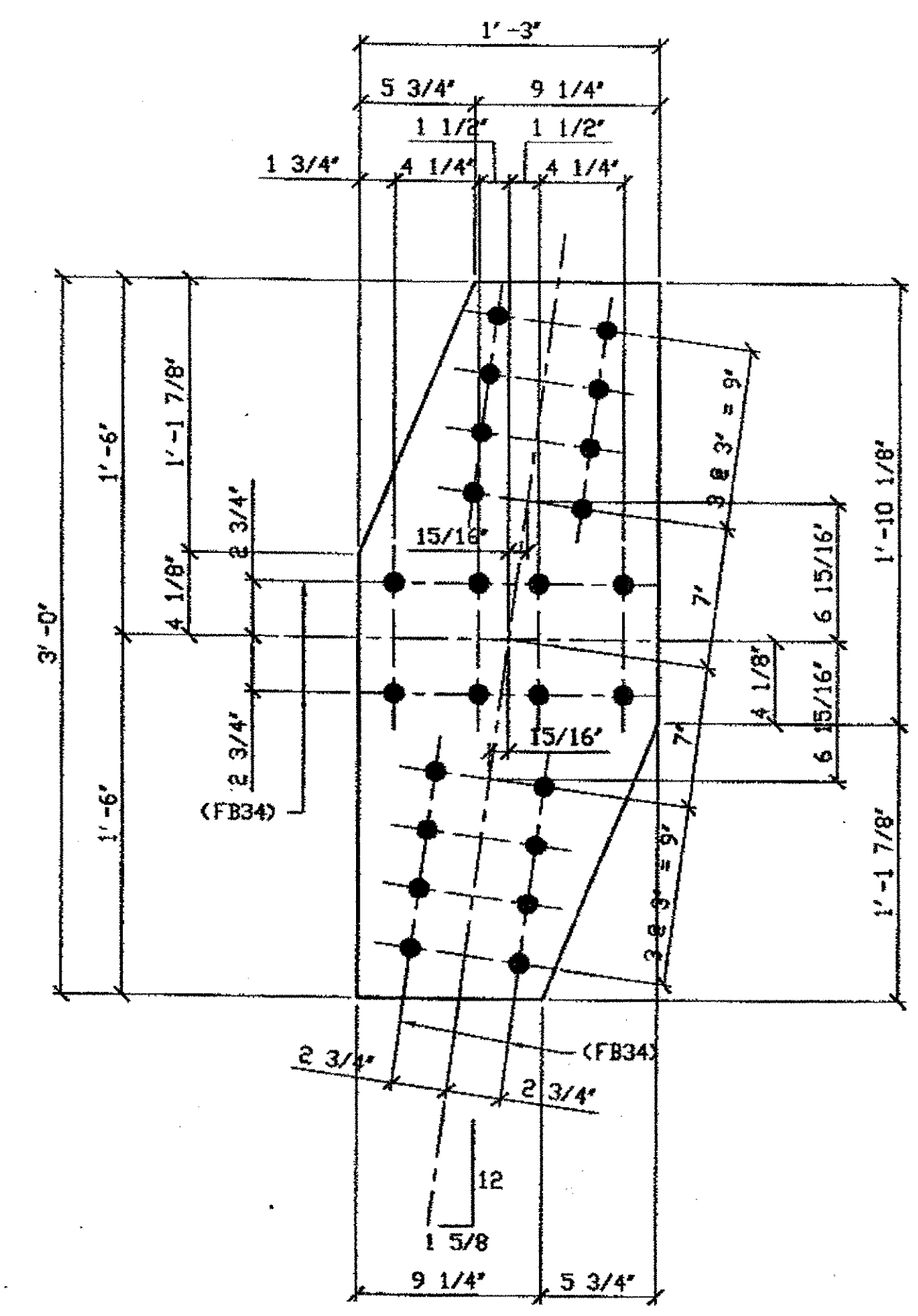
- NOTES:**
1. OPEN HOLES ARE  $1\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TIE PLATES				
2		507A	2	PL 3/8 X 17	3	5 3/4		120
3		507B	4	PL 3/8 X 15	3	0		195
4		507C	3	PL 3/8 X 16 7/16	3	5 7/8		
5		507D	1	PL 3/8 X 15	3	0		49
6								
7				FIELD BOLTS				
8		FB34		1" DIA	0	2 1/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	NOTE 2



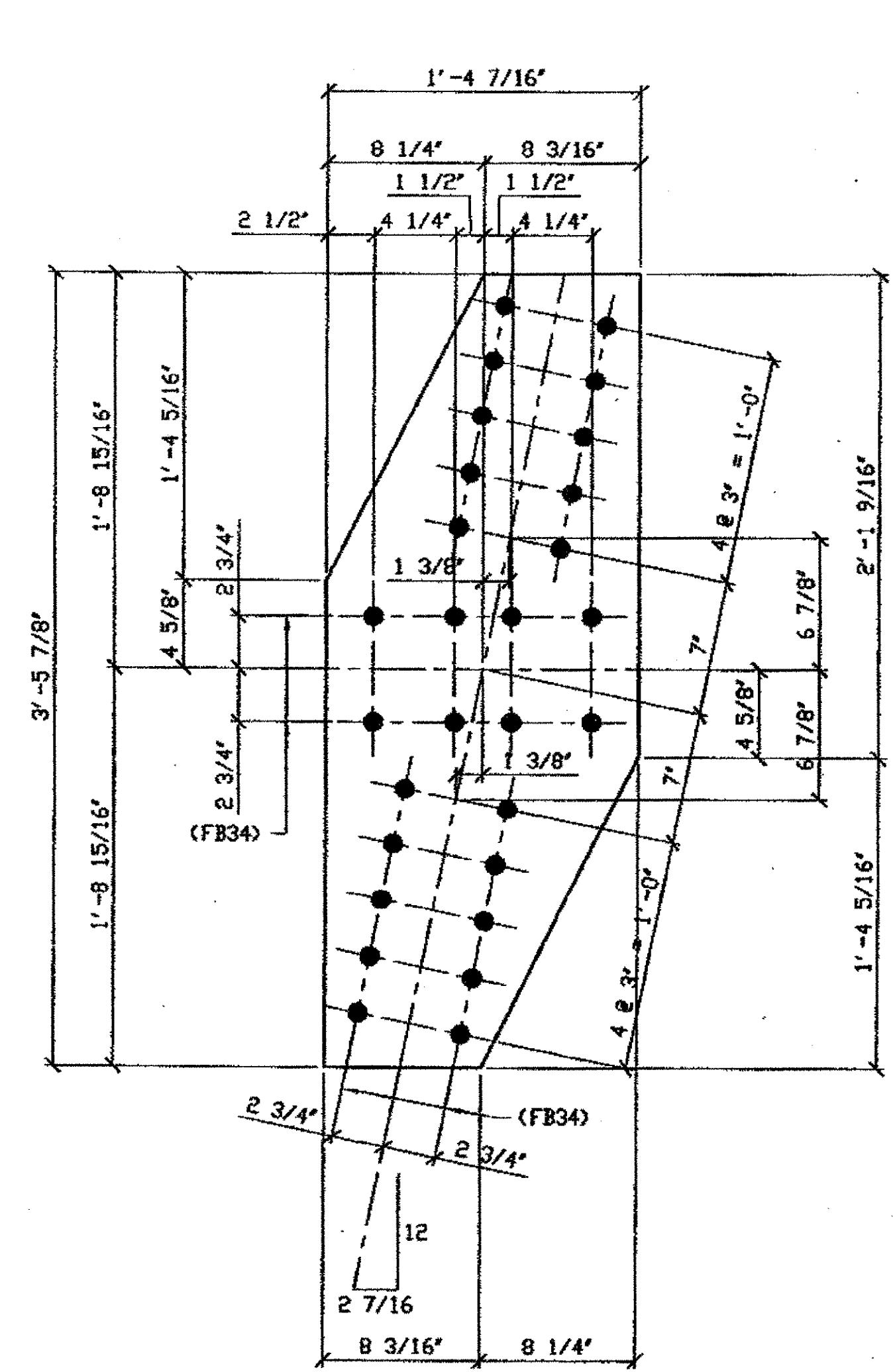
**2 - TIE PLATE - 507A**  
 ORIG SHOP DWG 520-BL176  
 ORIG SHOP MARK P520h  
 REPAIR SHEETS 13-141

**SPAN 13**  
 H-J' NORTH TOP 507A  
 H-J' NORTH BOTTOM 507A



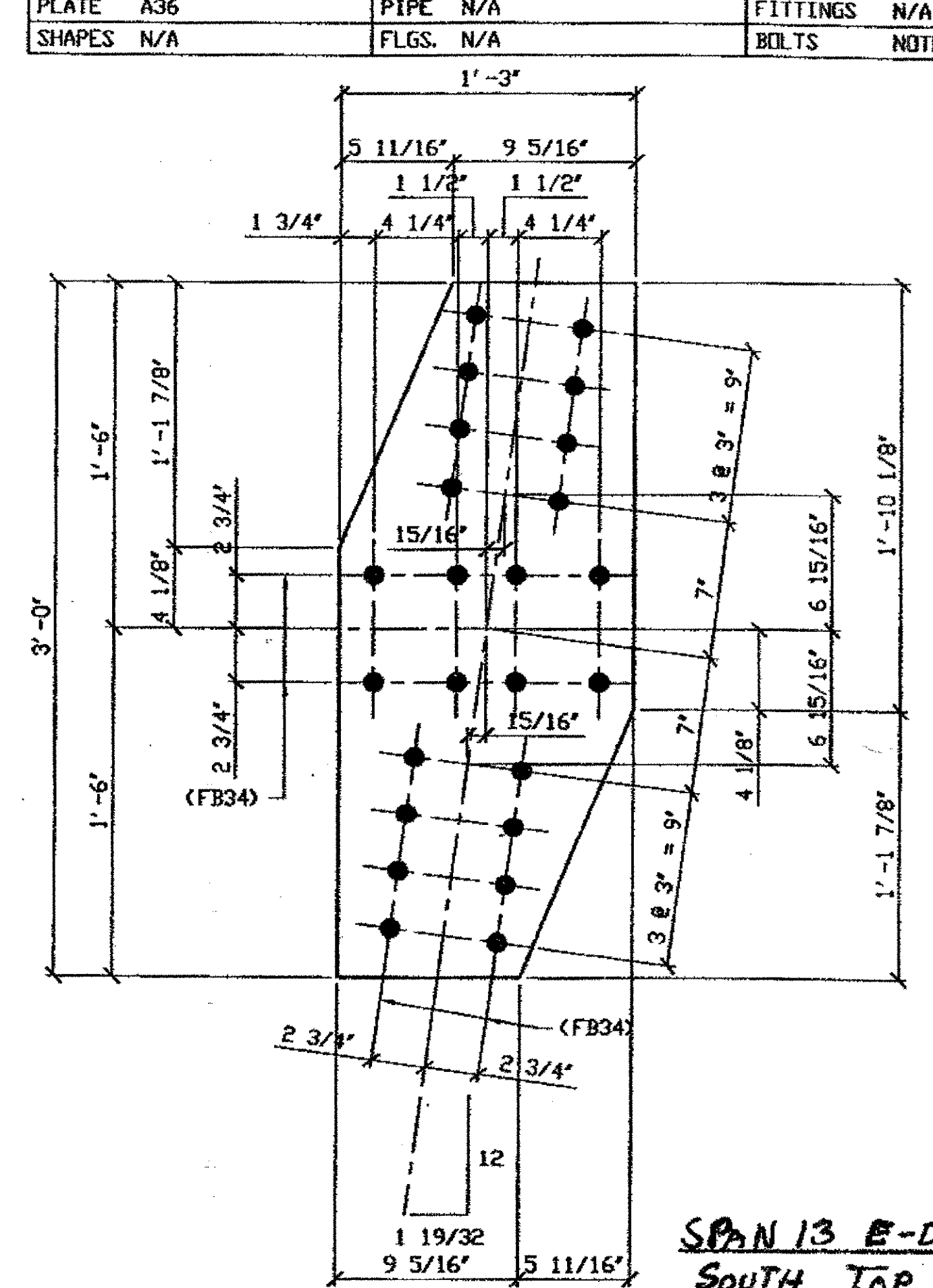
**4 - TIE PLATES - 507B**  
 ORIG SHOP DWG 520-BL185  
 ORIG SHOP MARK P520f  
 REPAIR SHEETS 13-157 & 13-227

**SPAN 13**  
 M-N' NORTH TOP 507B  
 M-N' NORTH BOTTOM 507B  
 N-M' SOUTH TOP 507B  
 N-M' SOUTH BOTTOM 507B



**3 - TIE PLATES - 507C**  
 ORIG SHOP DWG 520-BL179  
 ORIG SHOP MARK P520m  
 REPAIR SHEETS 13-163 & 13-216

**SPAN 13**  
 K-L' NORTH TOP 507C  
 K-L' NORTH BOTTOM 507C  
 L-K' SOUTH TOP 507C



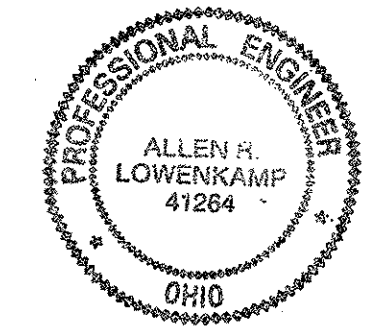
**1 - TIE PLATE - 507D**  
 ORIG SHOP DWG 520-BL165  
 ORIG SHOP MARK P520d  
 REPAIR SHEETS 13-191

**SPAN 13 E-D'**  
 SOUTH TOP 507D

G:\Contract\10\8600010\Drawings\AS\1507A.dwg  
 Save by: ms, 11:24am, Feb 02, 2002  
 Plot by: gfas, at: 09:01am, Feb 04, 2002  
 Model space plot, Scale = 1/6

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NO. 5  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335



**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0105  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	01/31/02	REVISED PER CUSTOMER APPROVAL		GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 13 REPAIRS**

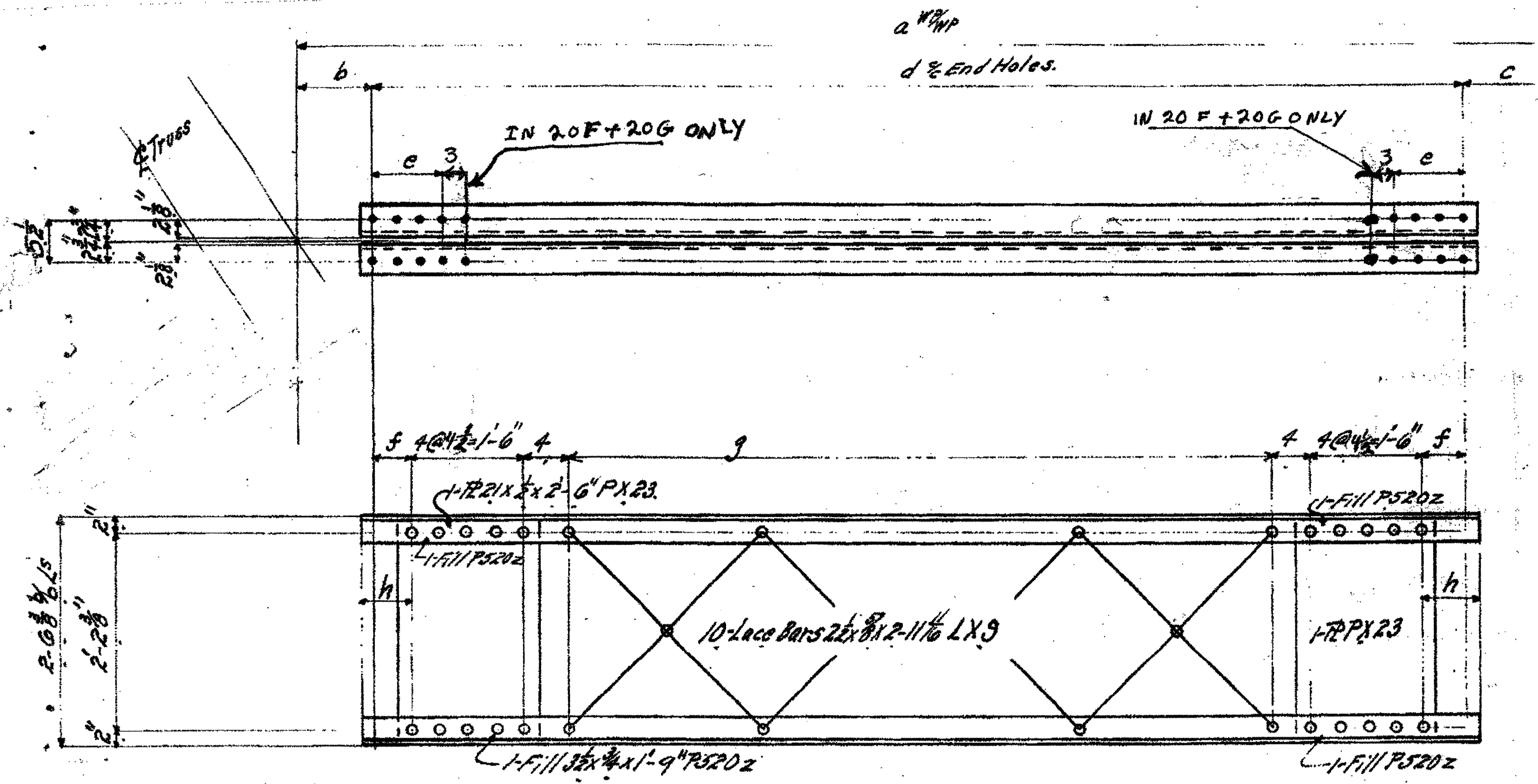
IN CHARGE: DR. L. SMITH  
 DRAWN BY: DATE  
 RAS 03/15/01  
 CHECKED BY: DATE  
 GAF 11/05/01

SHEET NUMBER: 507  
 AM JOB NUMBER: 800010



BILL OF MATERIALS

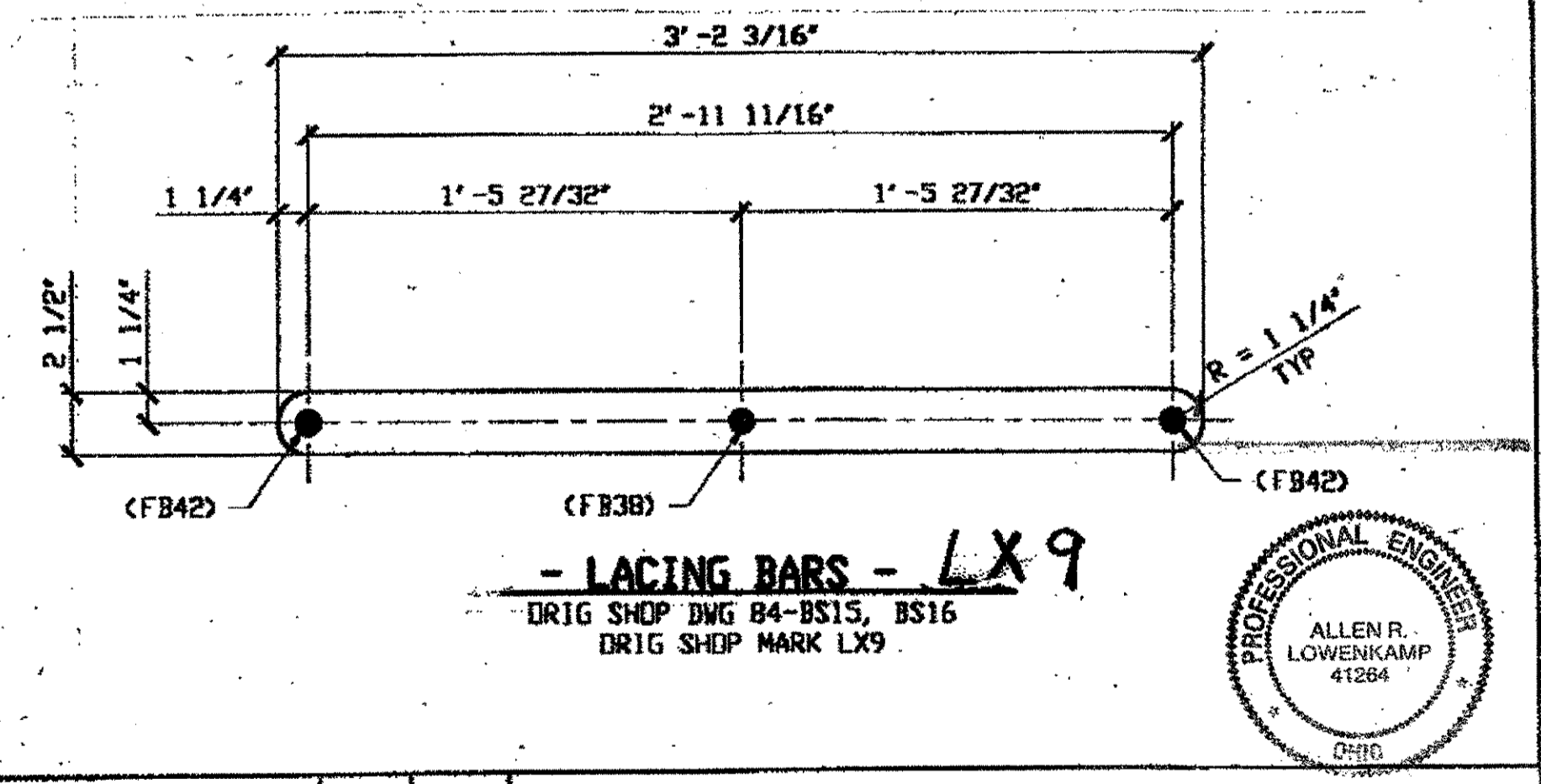
Piece No.	Qty.	Description
		PLATE A36
		SHAPES A36



SPAN 13

B-A'	NORTH	20h
D-C'	NORTH	20B
L-K'	NORTH	20G
A-B'	SOUTH	20h
B-C'	SOUTH	20A
D-E'	SOUTH	20C
E-F'	SOUTH	20D
G-H'	SOUTH	20E
H-J'	SOUTH	20F

PIECE NUMBER	d	e	f	h	g	ORIGINAL SHIP MARK
20h	14-4 1/8	3 @ 3-9	4 1/8	5 9/16	5 @ 2'-0" = 10'-0"	4-Ls 3 1/2 x 3 1/2 x 3/8 x 14-7 1/8 BL 158
20A	14-0 9/16	do	2 9/16	3 3/4	do	4- do x 14-3 9/16 BL 160
20B	14-0 1/8	do	2 1/2	3 7/8	do	4- do x 14-3 11/16 BL 164
20C	13-11 5/8	do	1 9/16	3 5/16	do	4- do x 14-2 5/8 BL 166
20D	13-9 1/16	do	1 7/32	2 1/32	do	4- do x 14-0 1/16 BL 169
20E	14-3 3/4	do	3 7/8	5 3/8	do	4- do x 14-6 3/4 BL 174
20F	14-7 7/8	do	5 3/16	7 7/16	do	4-Ls 4 x 3 1/2 x 3/8 x 14-10 5/8 BL 177
20G	14-5 1/2	do	4 3/4	6 7/16	do	4-Ls 4 x 3 1/2 x 3/8 x 14-8 13/16 BL 180



9- TYPE 2 DIAGNOL COMPLETE REPLACEMENT

O.D.O.T. DIST. 12  
 ACCEPTED 2/2/04 P 374  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE NO. CUY-10-16-13

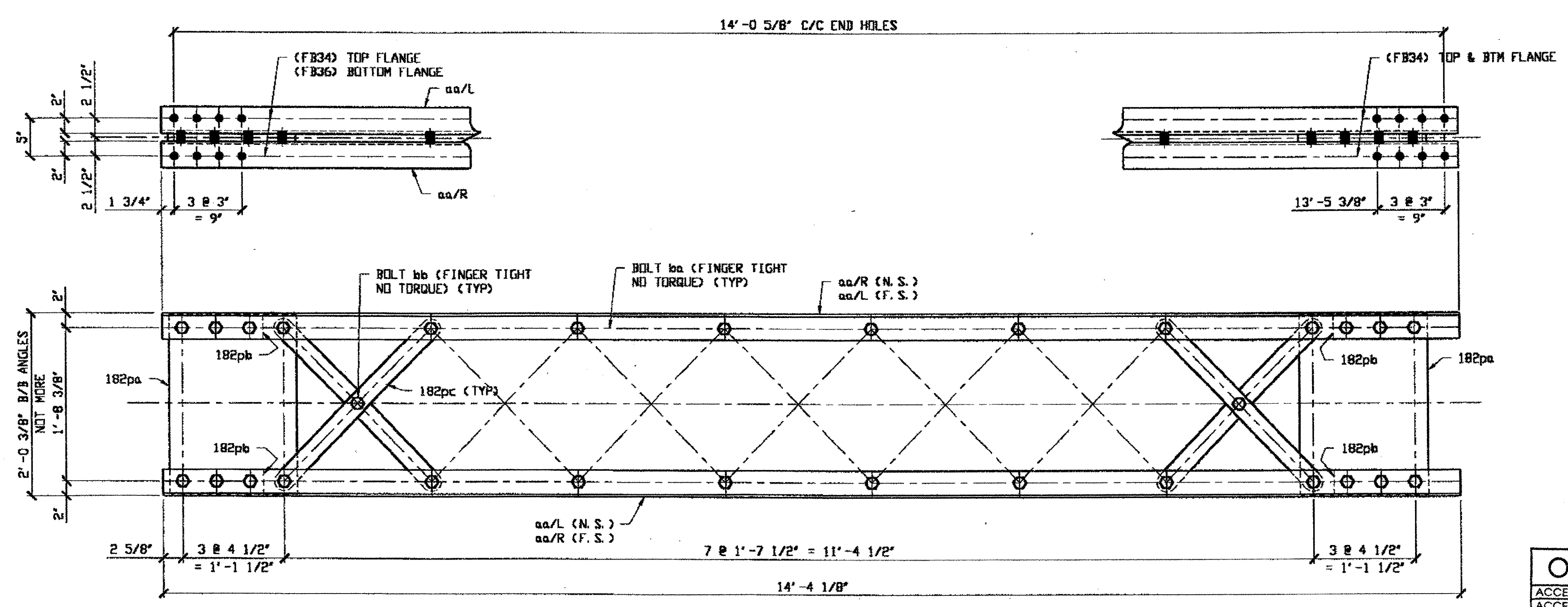
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ JOB NO. \_\_\_\_\_  
 SCALE: NA DATE: \_\_\_\_\_ DRAWING NO. 20

at 04:03pm on Mon Feb 05, 2001  
 at 03:38pm on Wed Jan 03, 2001 - Last plotted by Gfc  
 Last modified

- NOTES:**
- OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

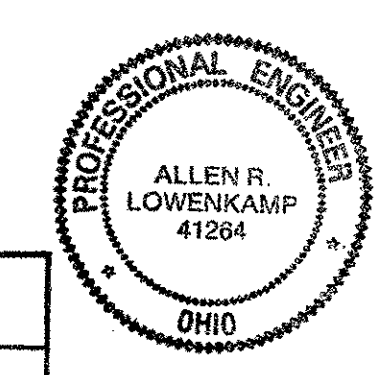
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		183A	1	TYPE 2 DIAGONAL COMPLETE				822
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	4 1/8		488
3		182pa	2	PL 7/16 X 17	2	0		103
4		182pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
5		182pc	14	PL 1/2 X 2 1/2	2	6 3/16		150
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/ HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 183A**  
 ORIG SHOP DWG 16-BL9  
 ORIG SHOP MARK BL9  
**SPAN 3 F-G NORTH 183A**

RELEASED FOR CONSTRUCTION  
 DATE 7/6/01 BY ELP

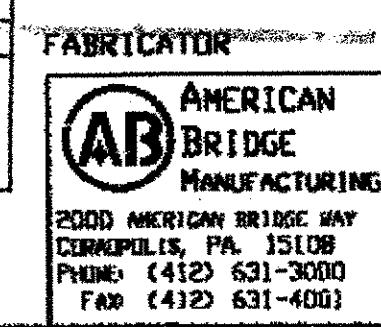


DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 863E50000

**O.D.O.T. DIST. 12**

ACCEPTED	
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 12/21/00  
 CHECKED BY: DATE  
 GAF 01/03/01

NO.	DATE	DESCRIPTION	BY

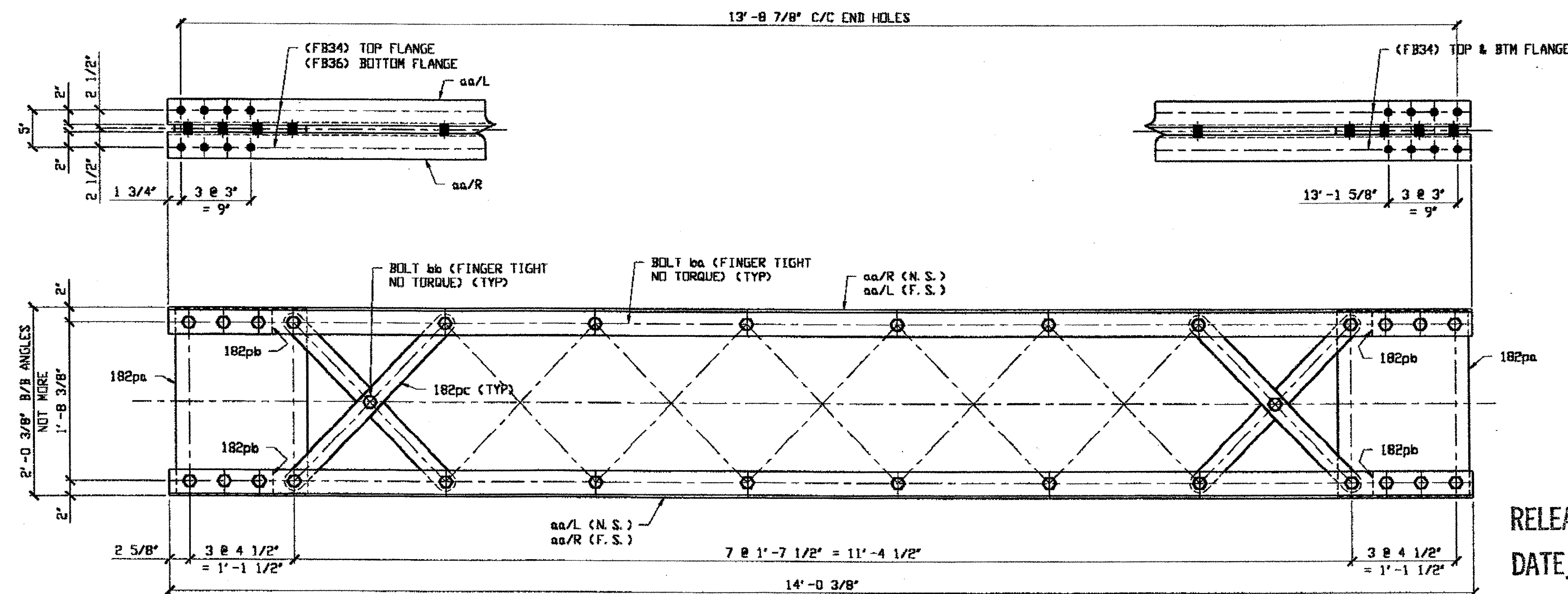
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

SHEET NUMBER: 183  
 A36 JOB NUMBER: 800010

Reprinter at 03:44pm on Wed Jan 03, 2001 - Last plotted by Gfo at 04:06pm on Mon Feb 05, 2001  
 Last modify

- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

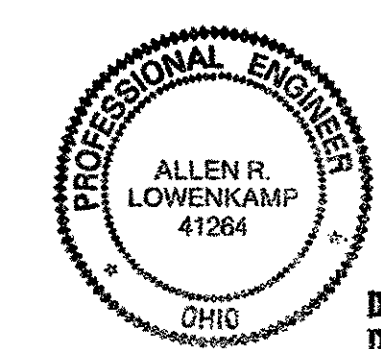
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		194A	1	TYPE 2 DIAGONAL COMPLETE				811
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	0 3/8		477
3		182pa	2	PL 7/16 X 17	2	0		103
4		182pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
5		182pc	14	PL 1/2 X 2 1/2	2	6 1/16		150
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/ HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 194A**

DRIG SHOP DWG 16-BL15  
DRIG SHOP MARK BL15

**SPAN 3 O-N' NORTH 194A**



RELEASED FOR CONSTRUCTION  
DATE 2/8/01 BY tdp

DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E0000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
FABRICATOR		STEEL ERECTOR	
<b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY COLUMBIA, PA. 15108 PHONE: (412) 631-2000 FAX: (412) 631-4001		<b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH DRAWN BY: RAS DATE: 12/22/00 CHECKED BY: GAF DATE: 01/03/01		SHEET NUMBER: 194 JOB NUMBER: 800010	

**O.D.O.T. DIST. 12**

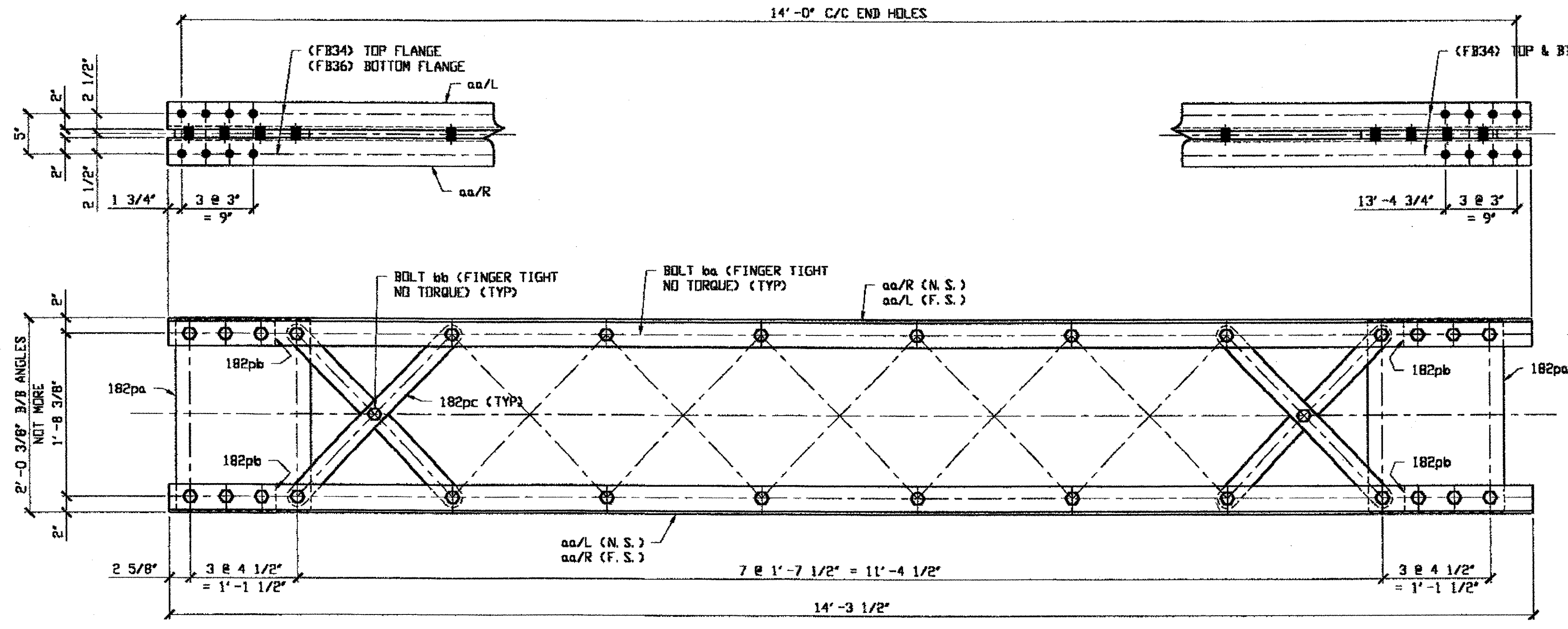
ACCEPTED [Signature] 2/8/01  
ACCEPTED AS NOTED  
NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

Reprinter at 04:04pm on Wed Jan 03, 2001 - Last plotted by Gfo at 04:09pm on Mon Feb 05, 2001  
 Last modify

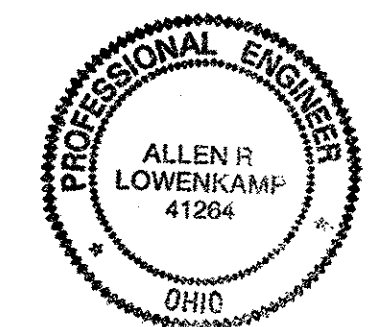
- NOTES:**
- OPEN HOLES ARE  $(1\frac{1}{16} \phi)$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

LINE		MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
BILL & LINE	FEET				INCHES			
1		203A	1	TYPE 2 DIAGONAL COMPLETE				820
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	3 1/2		486
3		182pa	2	PL 7/16 X 17	2	0		103
4		182pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
5		182pc	14	PL 1/2 X 2 1/2	2	6 1/16		150
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/ HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 203A**  
 ORIG SHOP DWG 16-BL7  
 ORIG SHOP MARK BL7  
**SPAN 3 K-J' NORTH 203A**

**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



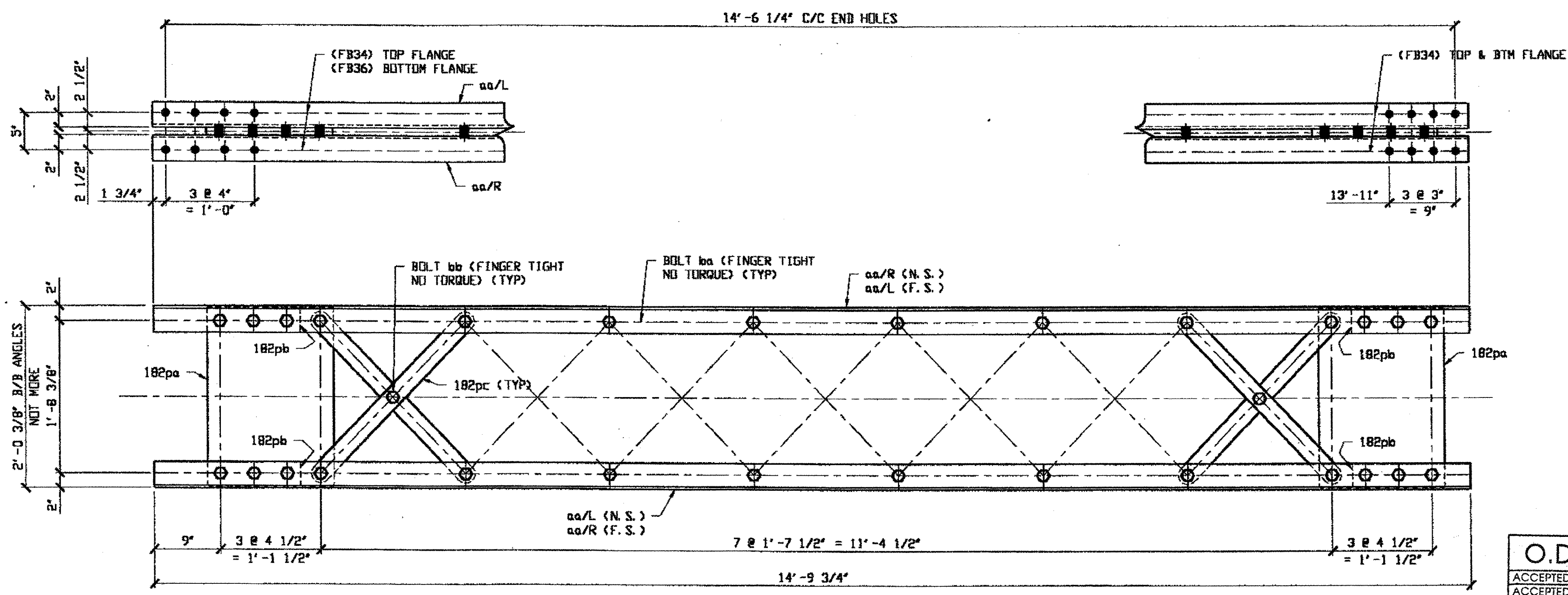
RELEASED FOR CONSTRUCTION  
 DATE 2/8/01 BY tdp

DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E0000	
NO.	DATE	DESCRIPTION	BY
		REVISIONS	
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
FABRICATOR <b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY CORNOLIS, PA. 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001		STEEL ERECTOR <b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH DRAWN BY: RAS DATE: 12/21/00		SHEET NUMBER: <b>203</b> JOB NUMBER: <b>800010</b>	

Reprinted at 07:54am on Thu Jan 04, 2001 - Last Plotted by efo at 04:10pm on Mon Feb 05, 2001  
 Last modify

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

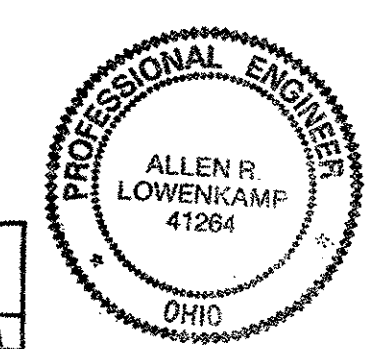
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		204A	1	TYPE 2 DIAGONAL COMPLETE				838
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	9 3/4		504
3		182pa	2	PL 7/16 X 17	2	0		103
4		182pb	4	PL 9/16 X 3 1/2	1	0 1/2		27
5		182pc	14	PL 1/2 X 2 1/2	2	6 11/16		150
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/ HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/ HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
17		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 204A**  
 ORIG SHOP DWG 16-BL14  
 ORIG SHOP MARK BL14

SPAN 3 N-M' NORTH 204A

RELEASED FOR CONSTRUCTION  
 DATE 2/2/01 BY tdf



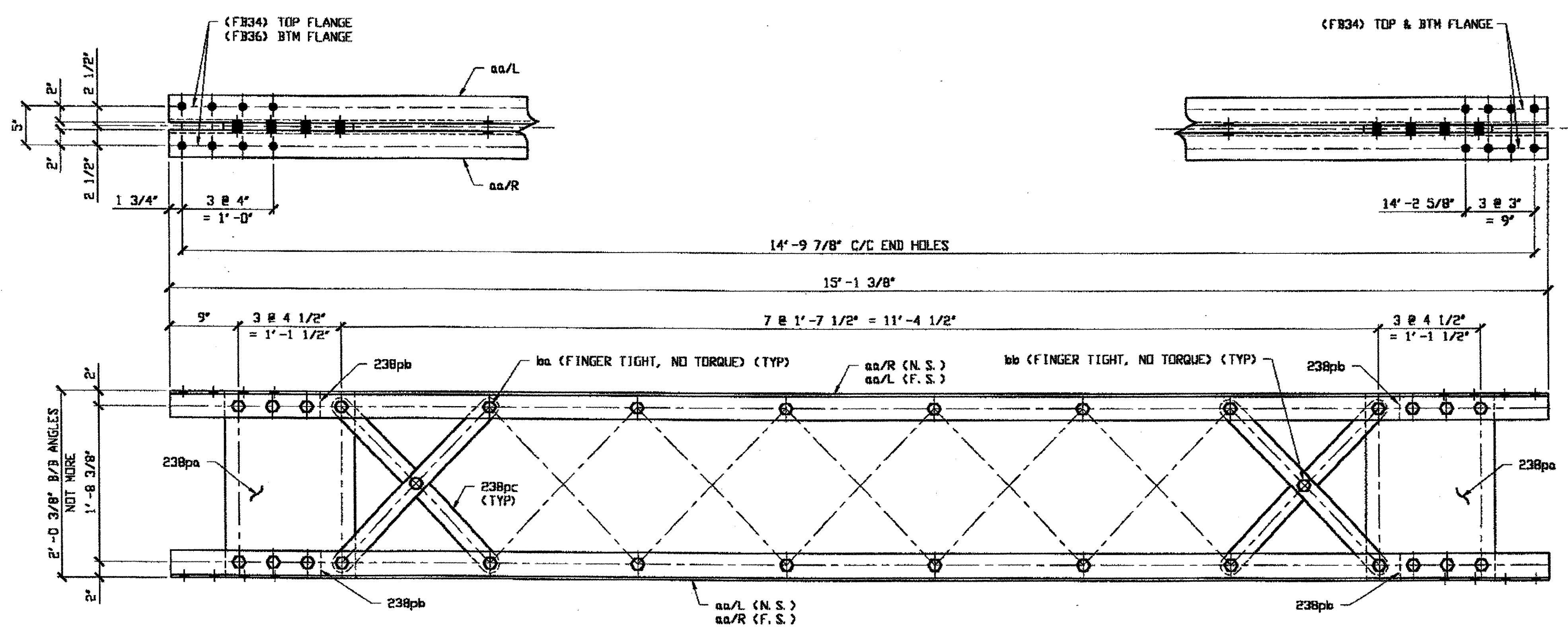
**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED 2/2/01 PSM  
 NOT ACCEPTED

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO			
DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY, OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
DRAWN BY: DATE		SHEET NUMBER	
RAS 12/21/00		204	
CHECKED BY: DATE		ADM JOB NUMBER	
GAF 01/02/01		800010	

Last modified by rspringer at 09:01am on Wed Mar 21, 2001 - Last plotted by Gfroster at 08:58am on Fri Mar 23, 2001



**1 - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT - 240A**  
 ORIG SHOP DWG 16-BL3  
 ORIG SHOP MARK BL3  
 REPAIR SHEET 5-148

SPAN 5 P-N' NORTH 240A

**BILL OF MATERIAL**

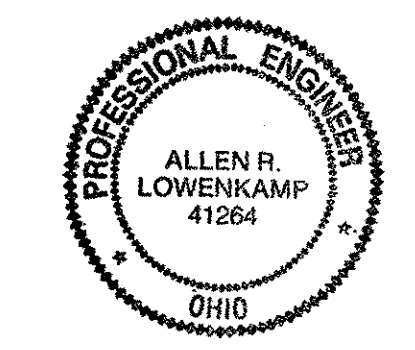
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		240A	1	TYPE 2 DIAGONAL COMPLETE				849
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	15	1 3/8		514
3		238pa	2	PL 7/16 X 17	2	0		101
4		238pb	4	PL 9/16 X 3 1/2	1	0 1/2		28
5		238pc	14	PL 1/2 X 2 1/2	2	6 11/16		152
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15								
16				FIELD BOLT				
17		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
18		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

**NOTES:**

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
 ACCEPTED  2/5/01 RSM  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

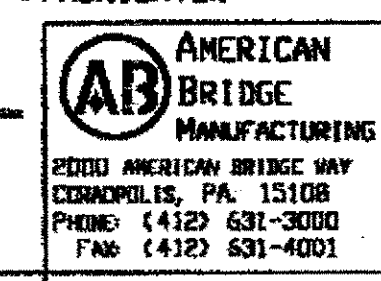
**NAT'L ENGR. & CONTR. CO.**  
 By Ede/ESS  
**MAR 26 2001**



DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. B63E50000

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY EAP

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

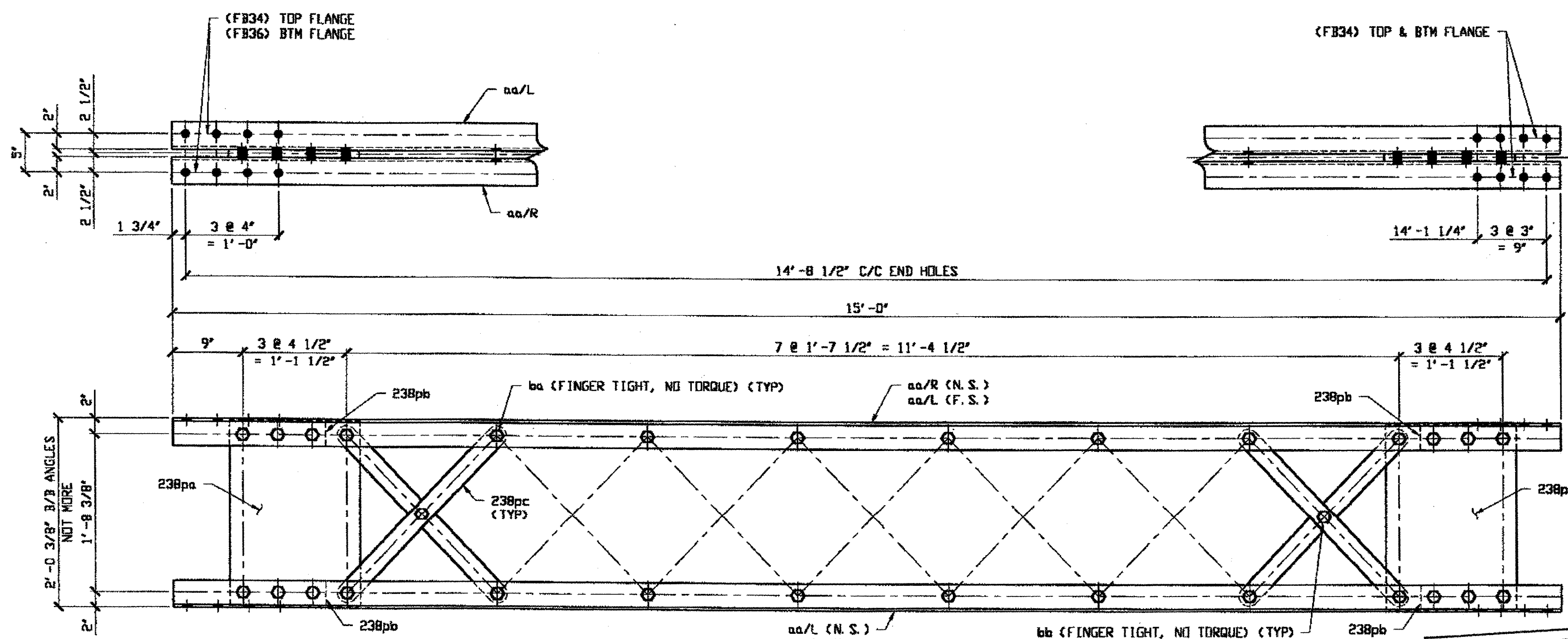


AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORONEL, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 02/19/01  
 CHECKED BY: GAF  
 DATE: 02/24/01

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 5 REPAIRS</b>			
			SHEET NUMBER: 240
			AM. JOB NUMBER: 800010



Last modified by espringer at 09:02am on Wed Mar 21, 2001 - Last plotted by Gfoster at 08:58am on Fri Mar 23, 2001



**1 - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT - 241A**

ORIG SHOP DWG BS-DL34  
ORIG SHOP MARK BL34  
REPAIR SHEET 5-229

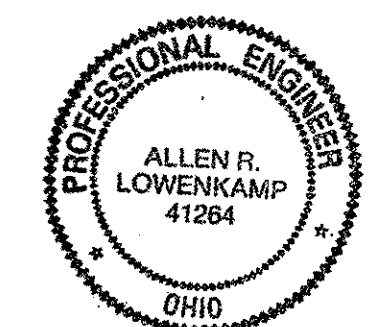
**SPAN 5 L-M' SOUTH 241A**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		241A	1	TYPE 2 DIAGONAL COMPLETE				B43
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	15	0		510
3		238pa	2	PL 7/16 X 17	2	0		101
4		238pb	4	PL 9/16 X 3 1/2	1	0 1/2		28
5		238pc	14	PL 1/2 X 2 1/2	2	6 11/16		152
6		ba	28	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	44
7				W/HVY HEX NUT & WASHER				
8		bb	7	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	10
9				W/HVY HEX NUT & WASHER				
10								
11								
12								
13								
14								
15								
16				FIELD BOLT				
17		FB34	24	1" DIA	0	2 1/4	NOTE 2	32
18		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

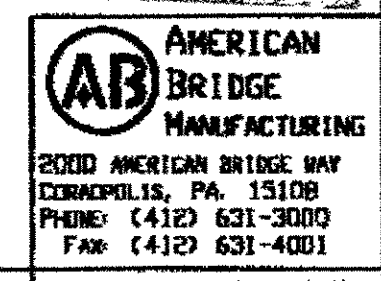
- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR' & CONTR. CO.  
By EdP/ESS  
RELEASED FOR CONSTRUCTION  
DATE 4/19/01 BY EdP  
MAR 26 2001

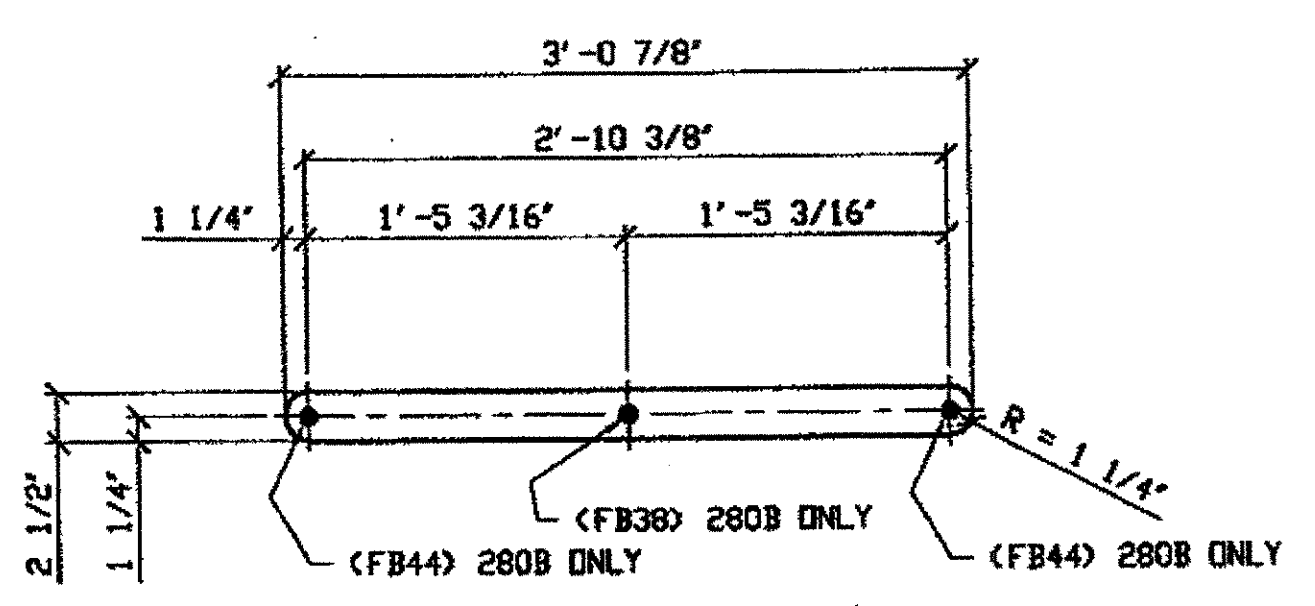


**O.D.O.T. DIST. 12**  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

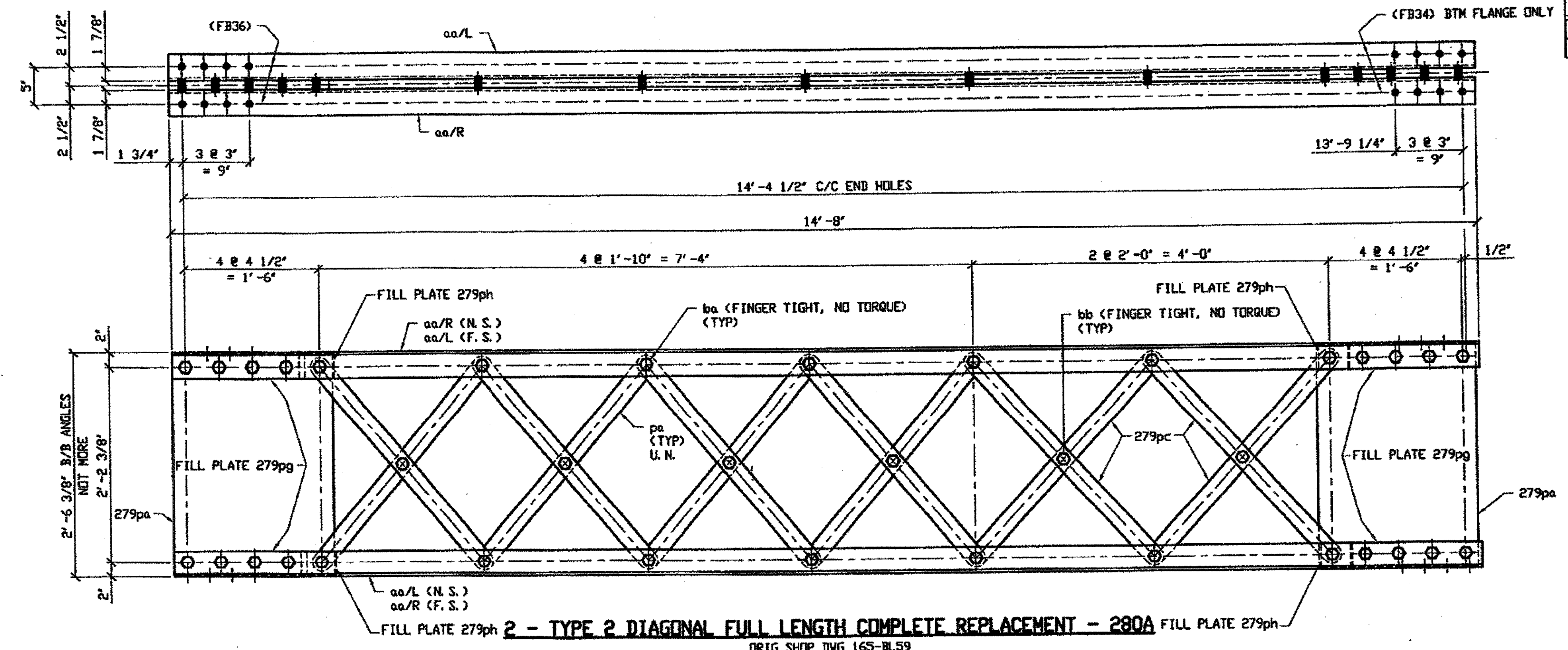


DOT ITEM LINE NO. 0210 DOT BID ITEM NO. B63E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 5 REPAIRS	
SHEET NUMBER	241
ABM JOB NUMBER	800010



LACING BAR pa

ORIG SHOP DWG 165-BL61/L  
ORIG SHOP MARK P142y  
ITEM No. 0138  
REPAIR SHEET 7-157 & 194



2 - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT - 280A

ORIG SHOP DWG 165-BL59  
ORIG SHOP MARK BL59  
ITEM No. 0210  
REPAIR SHEET 7-149 & 203

SPAN 7 E-F' NORTH 280A  
SPAN 7 L-M' NORTH 280A

- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/WHY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

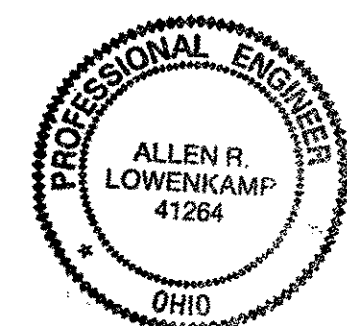
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. #	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		280A	2	TYPE 2 DIAGONAL				1977
2		aa R/L	8	L 3 1/2 X 3 1/2 X 3/8	14	8		997
3		pa	16	BAR 2 1/2 X 5/8	3	0 7/8		261
4		279pa	4	PL 1/2 X 21 1/2		2 6		366
5		279pc	8	BAR 2 1/2 X 5/8	3	2 3/16		135
6		279pg	8	PL 3/4 X 3 1/2		1 5		101
7		279ph	8	PL 1/8 X 3 1/2		0 4		4
8		ba	60	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	96
9				W/HVY HEX NUT & WASHER				
10		bb	12	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	17
11				W/HVY HEX NUT & WASHER				
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB34		1" DIA	0	2 1/4	NOTE 2	
18		FB36		1" DIA	0	2 1/2	NOTE 2	
19		FB38		1" DIA	0	2 3/4	NOTE 2	
20		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36		PIPE N/A	FITTINGS N/A					
SHAPES A36		FLGS. N/A	BOLTS NOTE 2					

O.D.O.T. DIST. 12

ACCEPTED	2/2/01	P-377
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E5000

RELEASED FOR CONSTRUCTION  
DATE 6/2/01 BY EDP



STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 7 REPAIRS

STEEL ERECTOR

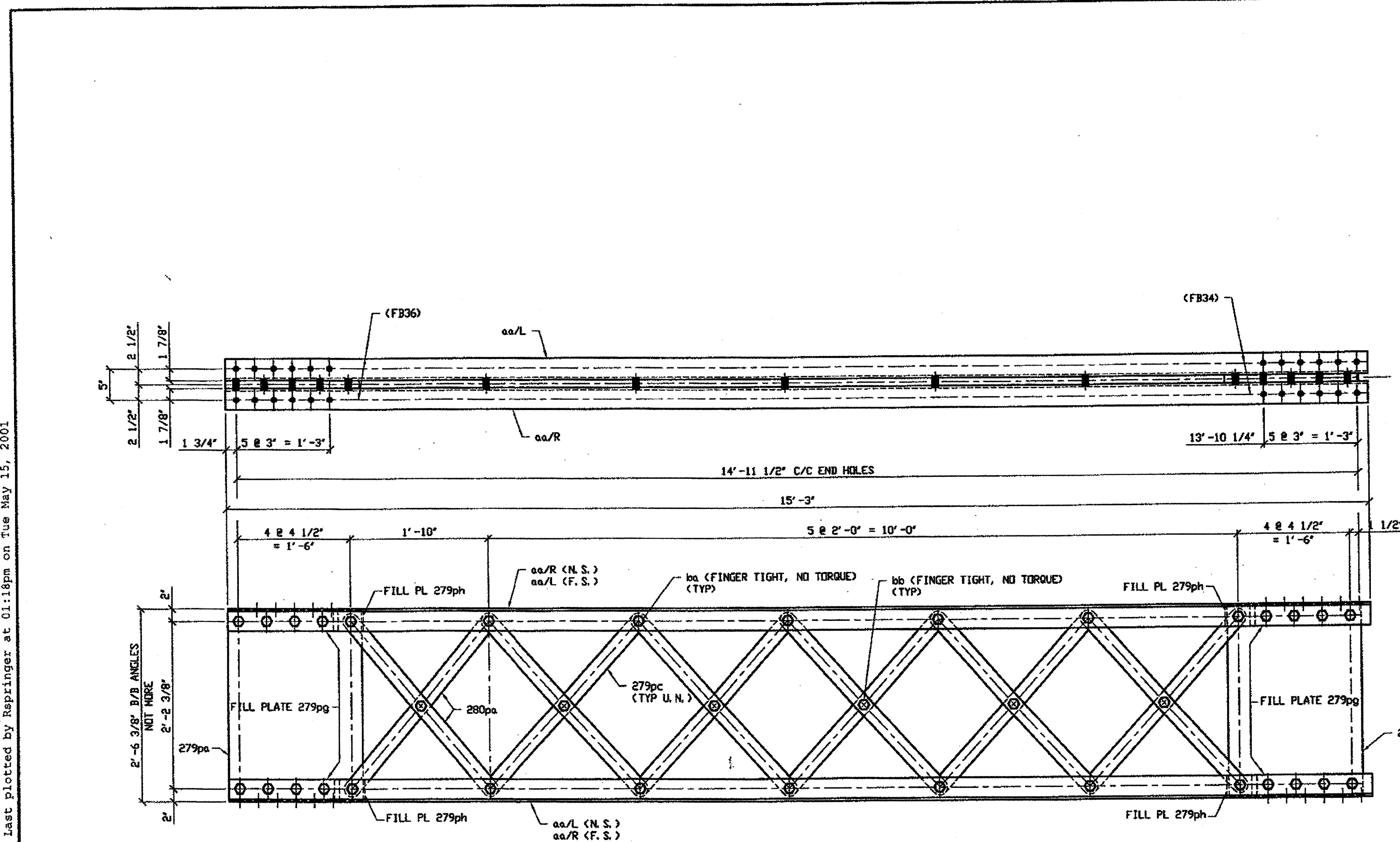
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF L. SMITH  
DRAWN BY: DATE:  
RAS 04/18/01  
CHECKED BY: DATE:  
GAF 05/07/01

SHEET NUMBER  
280  
JOB NUMBER  
800010

Last modified by repringer at 8:07PM on Tue May 15, 2001

Last modified by rspringer at 01:18pm on Tue May 15, 2001



**2 - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT 281A**

ORIG SHOP DWG 165-BL55  
ORIG SHOP MARK BL55  
REPAIR SHEET 7-155 & 192

SPAN 7 B-C' NORTH 281A  
SPAN 7 M-N' NORTH 281A

**NOTES:**

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		281A	2	TYPE 2 DIAGONAL				2024
2		aa R/L	8	L 3 1/2 X 3 1/2 X 3/8	15	3		1037
3		280pa	4	BAR 2 1/2 X 5/8	3	0 7/8		65
4		279pa	4	PL 1/2 X 21 1/2	2	6		366
5		279pc	20	BAR 2 1/2 X 5/8	3	2 9/16		338
6		279pg	8	PL 3/4 X 3 1/2	1	5		101
7		279ph	8	PL 1/8 X 3 1/2	0	4		4
8		ba	60	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	96
9				W/HVY HEX NUT & WASHER				
10		bb	12	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	17
11				W/HVY HEX NUT & WASHER				
12				FIELD BOLTS				
13								
14		FB34	48	1" DIA	0	2 1/4	NOTE 2	64
15		FB36	48	1" DIA	0	2 1/2	NOTE 2	67
PLATE A36				PIPE N/A			FITTINGS N/A	
SHAPES A36				FLGS. N/A			BOLTS NOTE 2	

O.D.O.T. DIST. 12

ACCEPTED 2/5/01 P.S.M.  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E0000

RELEASED FOR CONSTRUCTION  
DATE 6/21/01 BY tdp

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

FABRICATOR  
**AB** AMERICAN BRIDGE BRIDGE MANUFACTURING  
2003 AMERICAN BRIDGE WAY  
CONROPSVILLE, PA 15109  
PHONE (412) 631-3000  
FAX (412) 631-4001

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 7 REPAIRS

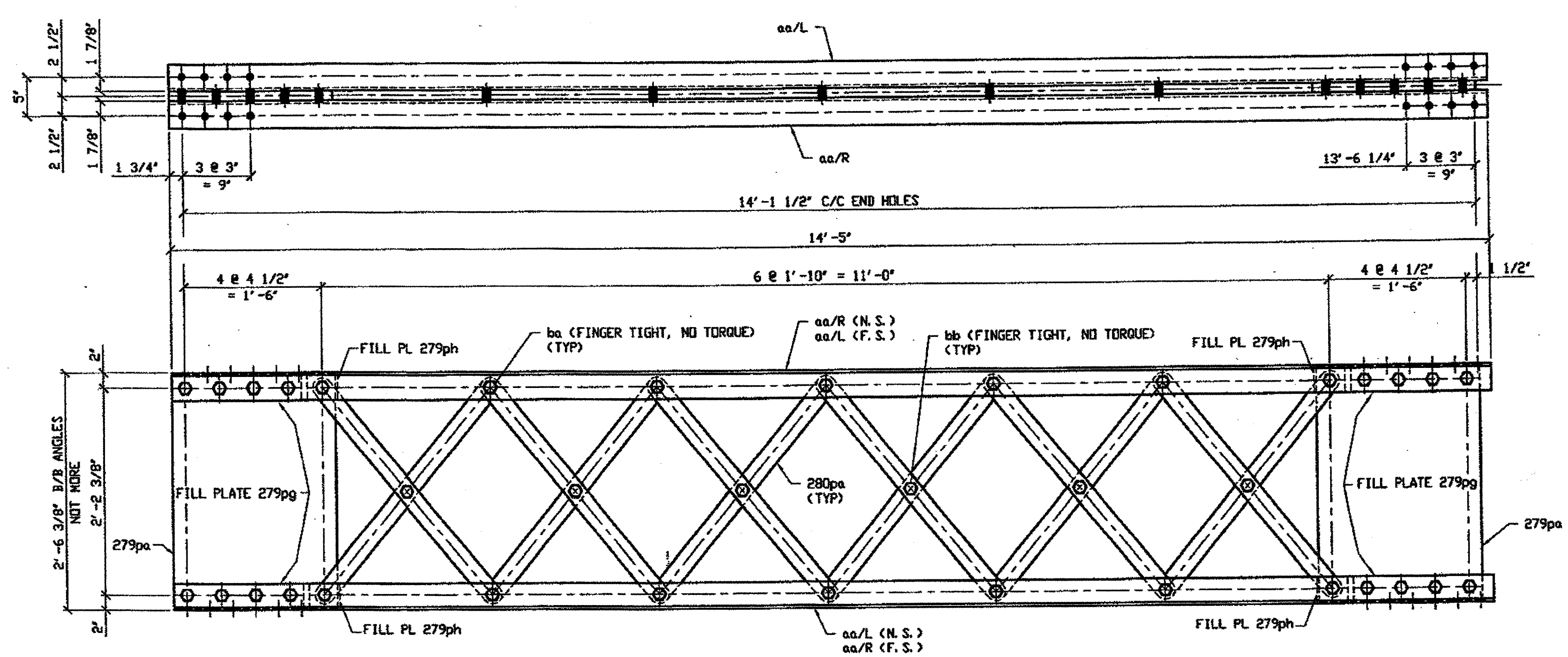
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF L. SMITH  
DRAWN BY: DATE  
RAS 04/18/01  
CHECKED BY: DATE  
GAF 05/08/01

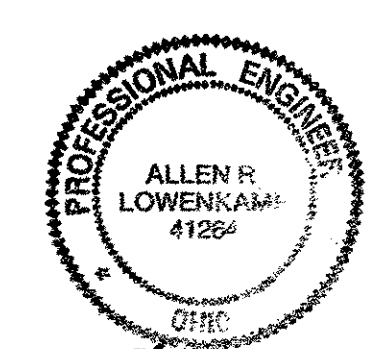
SHEET NUMBER  
281  
ABN JOB NUMBER  
800010

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		282A	1	TYPE 2 DIAGONAL				979
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	5		490
3		280pa	12	BAR 2 1/2 X 5/8	3	0 7/8		196
4		279pa	2	PL 1/2 X 21 1/2	2	6		183
5		279pg	4	PL 3/4 X 3 1/2	1	5		51
6		279ph	4	PL 1/8 X 3 1/2	0	4		2
7		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
8				W/HVY HEX NUT & WASHER				
9		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
10				W/HVY HEX NUT & WASHER				
11								
12								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



**ONE - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT 282A**  
 ORIG SHOP DWG 165-BL53  
 ORIG SHOP MARK BL53  
 REPAIR SHEET 7-186  
**SPAN 7 A-B NORTH 282A**



<b>O.D.O.T. DIST. 12</b>	
ACCEPTED	2/5/01 B.J.M.
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

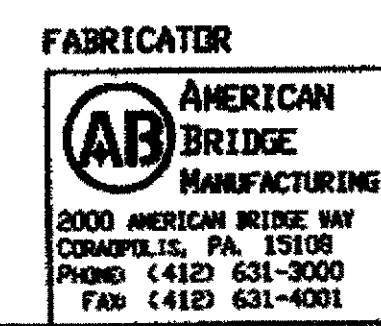
**RELEASED FOR CONSTRUCTION**  
 DATE 6/21/01 BY tdf

**NOTES:**

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335



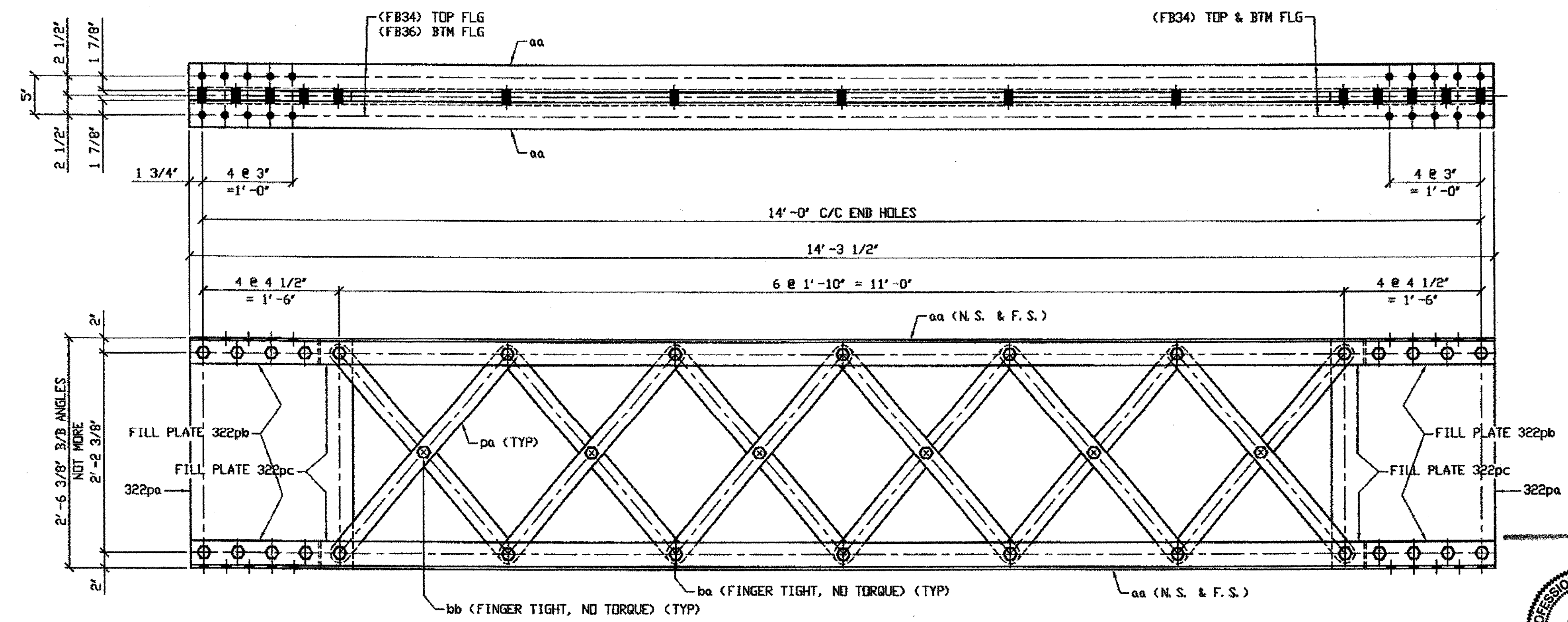
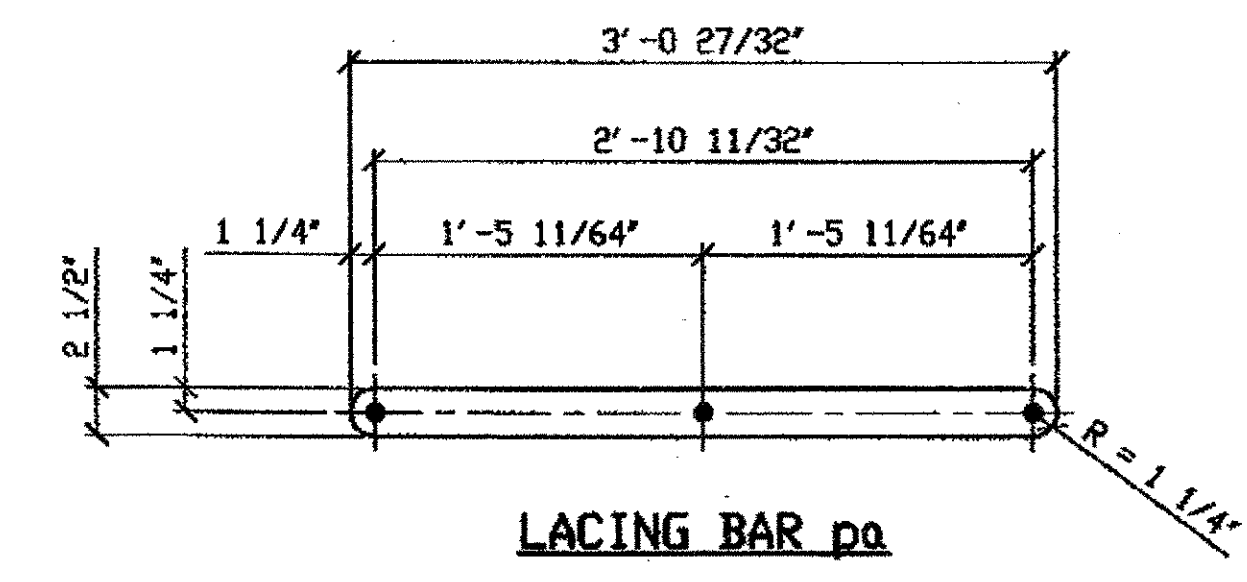
IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 04/18/01  
 CHECKED BY: GAF  
 DATE: 05/09/01

DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 663E30000

NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b>			
<b>DEPARTMENT OF TRANSPORTATION</b>			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY, OHIO			
<b>BRIDGE No. CUY-10-16.13</b>			
<b>SPAN 7 REPAIRS</b>			
SHEET NUMBER			282
ARK JOB NUMBER			800010

Last modified by repringer at \$(EDTIME,??) - Last plotted by Repringer at 01:28pm on Tue May 15, 2001

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		323A	1	TYPE 2 DIAGONAL				970
2		aa	4	L 3 1/2 X 3 1/2 X 3/8	14	3 1/2		486
3		322pa	2	PL 1/2 X 21 1/2	2	5 7/8		182
4		322pb	4	PL 3/4 X 3 1/2	1	5		50
5		322pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
6		pa	12	PL 5/8 X 2 1/2	3	0 27/32		193
6		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
7				W/HVY HEX NUT & WASHER				
8		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
9				W/HVY HEX NUT & WASHER				
10								
11				FIELD BOLTS				
12		FB34	30	1" DIA	0	2 1/4	NOTE 2	40
13		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
14								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 323A

ORIG SHOP DRAWING 294-DL111  
 ORIG SHOP MARK DL111  
 REPAIR SHEETS 9-181

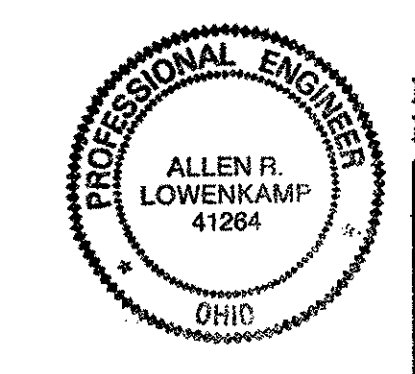
SPAN 9 S-R' NORTH 323A

RELEASED FOR CONSTRUCTION  
 DATE 11/20/01 BY [Signature]

NOTES:

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHIP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

H:\contracts\800010(2)\323A.dwg  
 Save by RSPR at 09:41am Dec 17, 2001  
 Plot by RSPR at 09:41am Dec 17, 2001  
 Model space plot + Scale = 1/9



DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

FABRICATOR: AMERICAN BRIDGE MANUFACTURING, 2000 AMERICAN BRIDGE WAY, CORAOPOLIS, PA 15108, PHONE (412) 631-3000, FAX (412) 631-4003

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC., 12608 ALAMEDA DR., STRENGSVILLE, OH 44136, PHONE (440) 238-3015, FAX (440) 238-3335

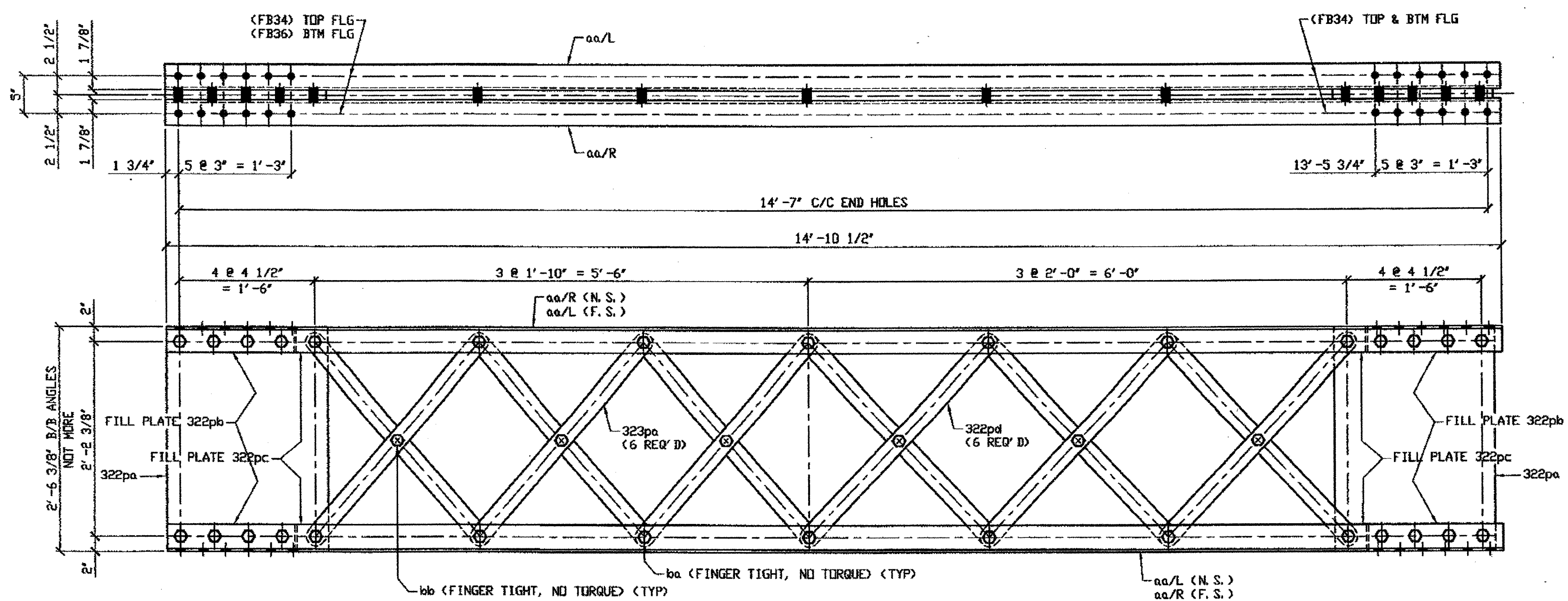
STATE OF OHIO DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 07/03/01  
 CHECKED BY: DATE: GAF 08/13/01

SHEET NUMBER: 323  
 ASH JOB NUMBER: 800010

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		324A	1	TYPE 2 DIAGONAL				994
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	10 1/2		506
3		322pa	2	PL 1/2 X 21 1/2	2	5 7/8		182
4		322pb	4	PL 3/4 X 3 1/2	1	5		50
5		322pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
6		322pd	6	PL 5/8 X 2 1/2	3	2 3/16		101
7		323pa	6	PL 5/8 X 2 1/2	3	0 27/32		96
8		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
9				W/HVY HEX NUT & WASHER				
10		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
11				W/HVY HEX NUT & WASHER				
12								
13								
14								
15								
16								
17								
18								
19								
20								
21				FIELD BOLTS				
22		FB34		1" DIA	2	2 1/4	NOTE 2	
23		FB36		1" DIA	2	1/2	NOTE 2	
24		FB38		1" DIA	2	3/4	NOTE 2	
25		FB40		1" DIA	3		NOTE 2	
26		FB42		1" DIA	3	1/4	NOTE 2	
27								
28								
29								
30								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



ONE - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 324A

ORIG SHOP DRAWING 165-BL56  
ORIG SHOP MARK BL56  
REPAIR SHEETS 9-175

SPAN 9 R-Q' NORTH 324A

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 11/24/01 BY [signature]

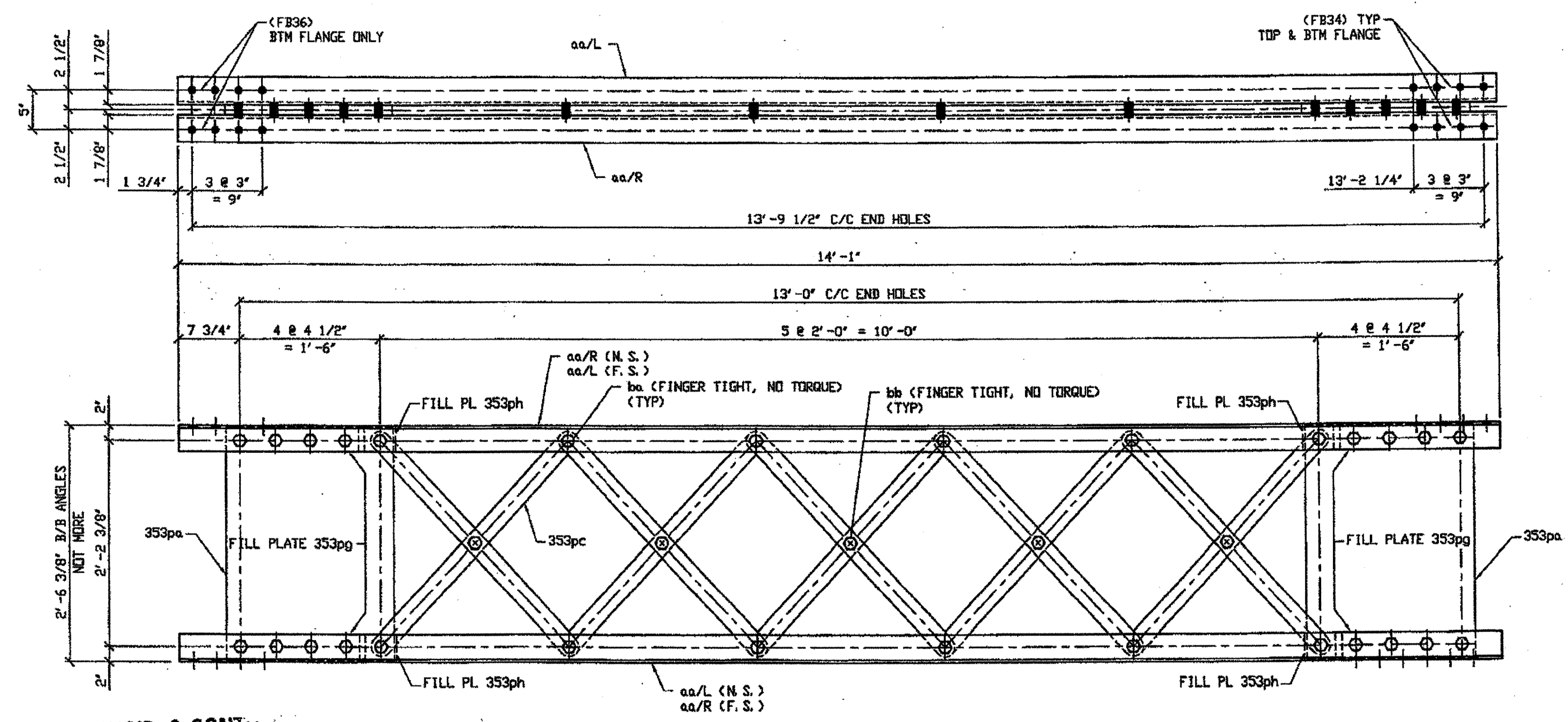


DOT ITEM LINE NO 0210 U.N.D.  
DOT BID ITEM NO 863E50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
FABRICATOR		AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CONARVILLE, PA 15108 PHONE (412) 631-3000 FAX (412) 631-4001	
STEEL ERECTOR		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335	
DRAWN BY: DATE		RAS 07/05/01	
CHECKED BY: DATE		GAF 08/13/01	
SHEET NUMBER			324
JOB NUMBER			800010

H:\contracts\800010\2\10324A.dwg  
Save by RSPR at 10:08am Dec 17, 2001  
Plot by RSPR at 10:08am Dec 17, 2001  
Model space Plot + Scale = 1/9

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		354A	1	TYPE 2 DIAGONAL					923
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	1			479
3		353pa	2	PL 1/2 X 21 1/2	2	6			183
4		353pc	10	BAR 2 1/2 X 5/8	3	2 3/16			167
5		353pg	4	PL 3/4 X 3 1/2	1	5			51
6		353ph	4	PL 1/8 X 3 1/2	0	4			2
7		ba	28	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2		45
8				W/HVY HEX NUT & WASHER					
9		bb	5	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2		7
10				W/HVY HEX NUT & WASHER					
11									
12									
13				FIELD BOLTS					
14		FB34	16	1" DIA	0	2 1/4	NOTE 2		21
15		FB36	8	1" DIA	0	2 1/2	NOTE 2		11
PLATE		A36		PIPE N/A			FITTINGS N/A		
SHAPES		A36		FLGS. N/A			BOLTS	NOTE 2	



ENGR. & CONTR. BY

DEC 13 2001

ONE - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT - 354A

ORIG SHOP DWG 165-BL62  
ORIG SHOP MARK BL62  
ITEM No. 0210  
REPAIR SHEET 10-116

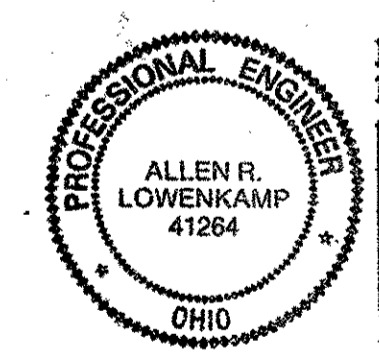
SPAN 10 E-D' NORTH 354 A

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

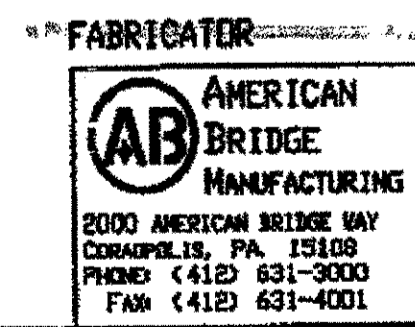
RELEASED FOR CONSTRUCTION  
DATE 1/4/02 BY *Edg/SS*

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 10 REPAIRS			
		SHEET NUMBER: 354	
		ASH JOB NUMBER: 800010	



AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANVILLE, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR

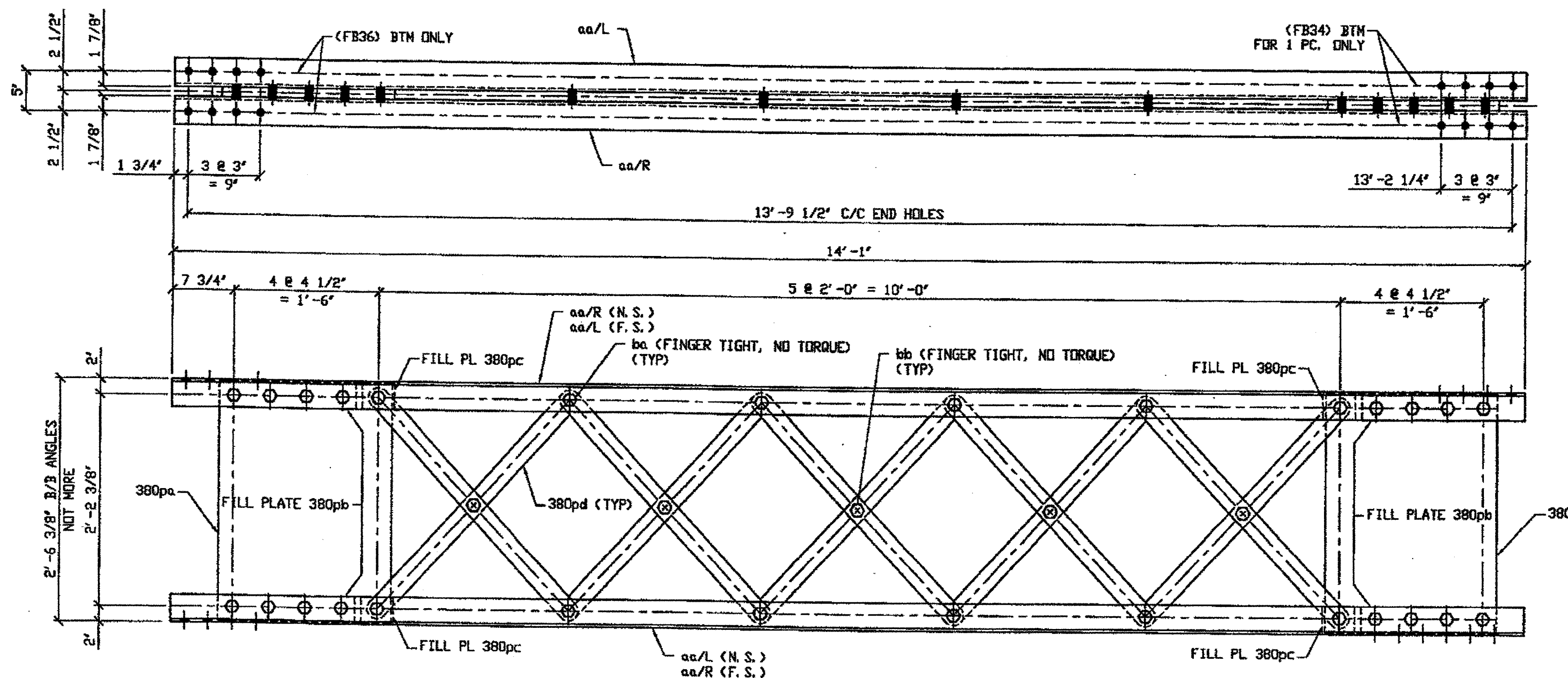
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
AMV 07/18/01  
CHECKED BY: DATE:  
GNG 12/04/01

G:\Contracts\8000\Drawings\354A.dwg  
Save by rppr 3:54pm Dec 04, 2001  
Plot by gblv 2:44pm Dec 12, 2001  
Model space Plot + Scale = 1/9

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1		383A	3 TYPE 2 DIAGONAL				2803
2		aa R/L	12 L 3 1/2 X 3 1/2 X 3/8	14	1		1437
3		380pa	6 PL 1/2 X 21 1/2	2	6		549
5		380pb	12 PL 3/4 X 3 1/2	1	5		153
6		380pc	12 PL 1/8 X 3 1/2	0	4 1/4		6
4		380pd	30 PL 5/8 X 2 1/2	3	2 9/16		501
7		ba	84 1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	135
8			W/HVY HEX NUT & WASHER				
9		bb	15 1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	22
10			W/HVY HEX NUT & WASHER				
11							
12							
13			FIELD BOLTS				
14		FB34	8 1" DIA	0	2 1/4	NOTE 2	11
15		FB36	24 1" DIA	0	2 1/2	NOTE 2	33
PLATE		A36	PIPE	N/A	FITTINGS		N/A
SHAPES		A36	FLGS.	N/A	BOLTS		NOTE 2

★ FOR 3 UNITS ONLY



4 TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 383A

ORIG SHOP DWG 165-BL62  
ORIG SHOP MARK BL62  
REPAIR SHEET 11-115, 116 & 232  
(IDENTICAL TO 354A)

SPAN II A'-B' NORTH 383A (FROM N. INTERIOR)  
SPAN II B-A' NORTH 383A  
SPAN II A-B' SOUTH 383A  
SPAN II T-U' SOUTH 383A

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/5/04	BSYR
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 REC'D  
N.E. & C. Co.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

IN CHARGE OF: L. SMITH

DRAWN BY: DATE  
RAS 12/05/01

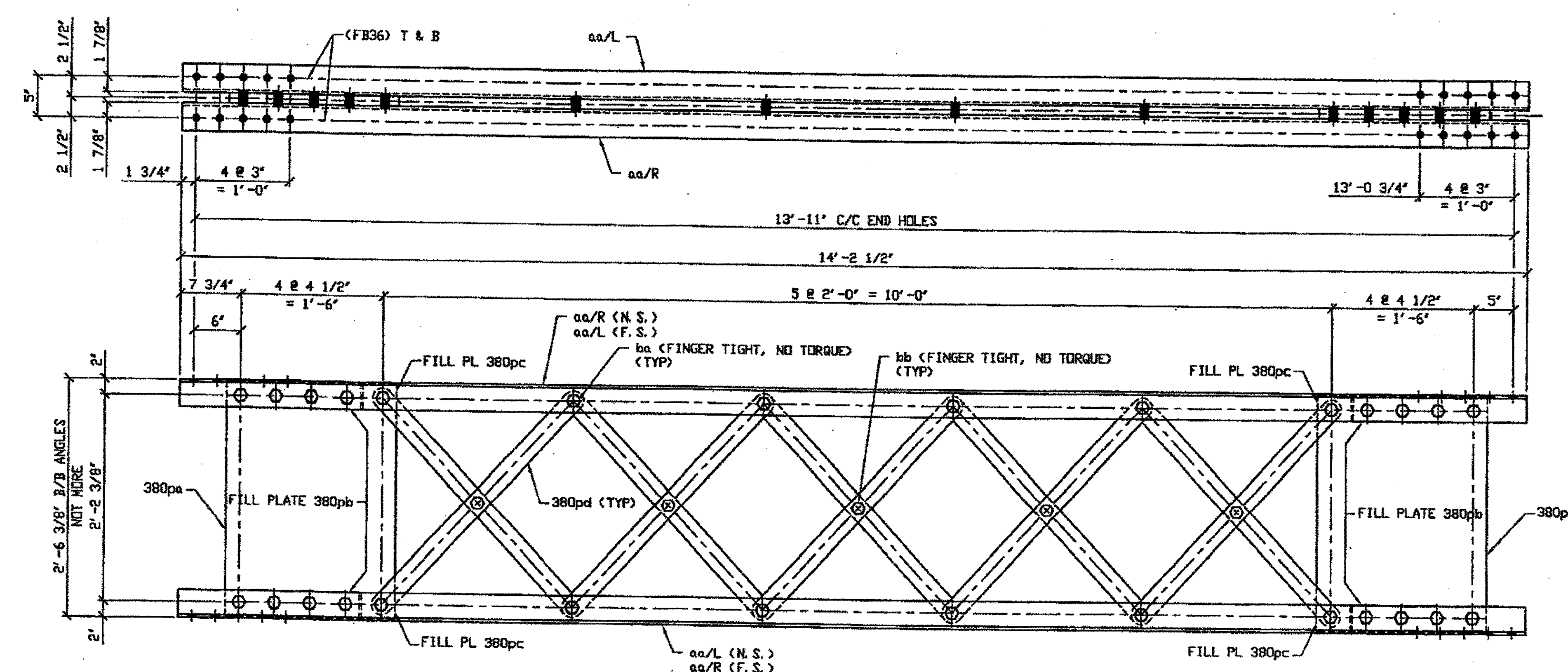
CHECKED BY: DATE  
GAF 1/28/02

SHEET NUMBER: 383  
JOB NUMBER: 800010

G:\AD\10000\1000010\Drawings\383A.dwg  
 Save by: spr at 01:41pm Feb 07, 2002  
 Plot by: gfos at 07:39am Feb 11, 2002  
 Model Space Plot + Scale = 1/9



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		384A	1	TYPE 2 DIAGONAL				938
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	2 1/2		483
3		380pa	2	PL 1/2 X 21 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
4		380pd	10	PL 5/8 X 2 1/2	3	2 3/16		167
7		ba	28	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	45
8				W/HVY HEX NUT & WASHER				
9		bb	5	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	7
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14				FIELD BOLTS				
15		FB36	20	1" DIA	0	2 1/2	NOTE 2	28
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				



ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 384A

ORIG SHOP DWG 380-BL135  
ORIG SHOP MARK BL135  
REPAIR SHEET 11-128

SPAN 11 C-B' NORTH 384A

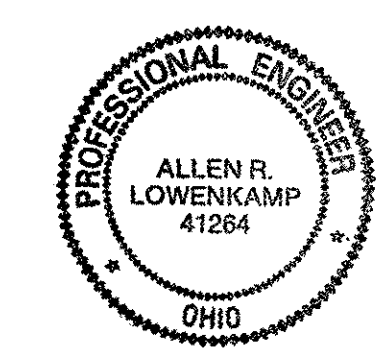
NOTES:

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/12/02	PSYM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 REC'D  
N. E. & C. CO.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROBERT, PA 15108  
PHONE: (412) 631-0000  
FAX: (412) 631-4001

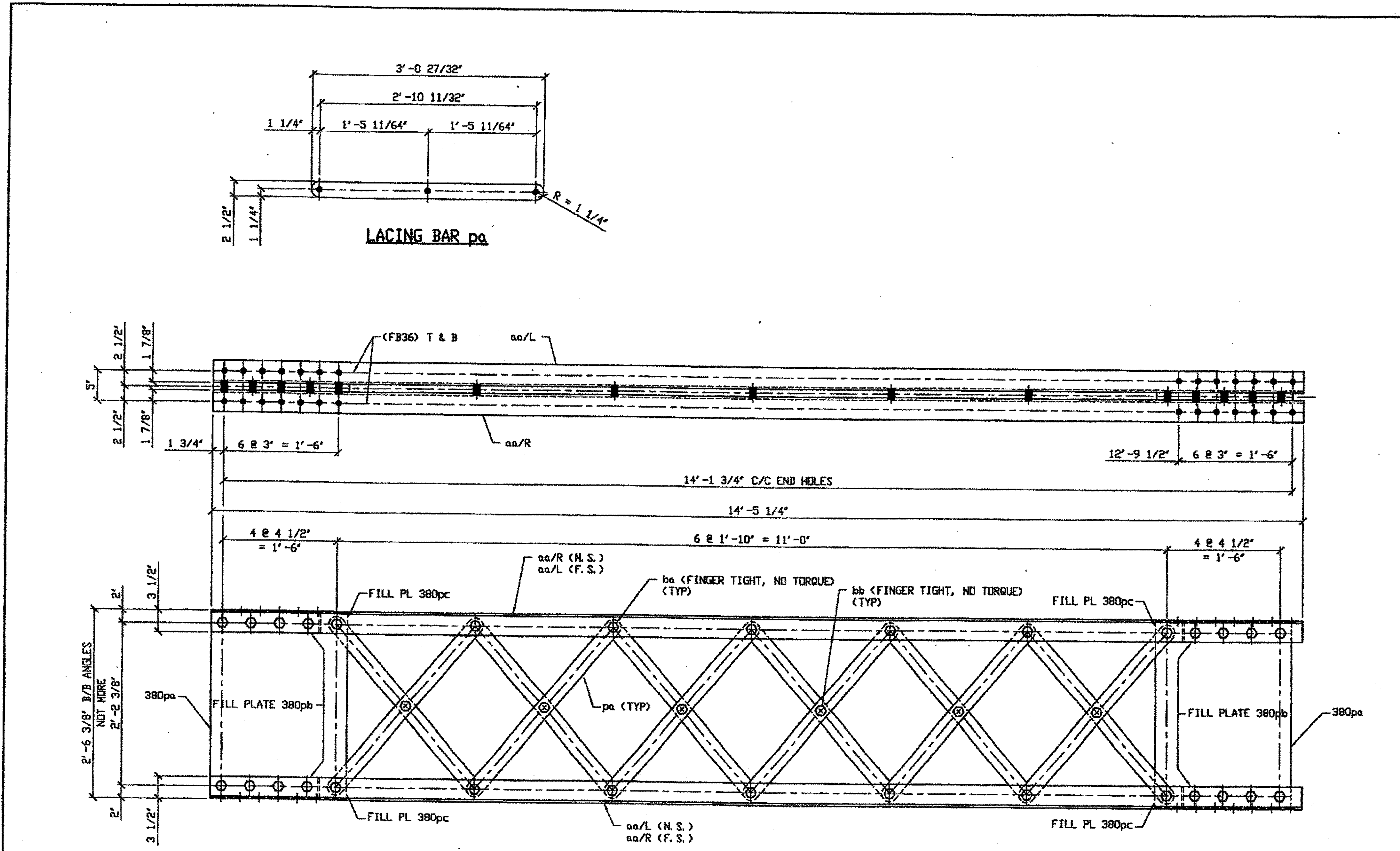
DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

IN CHARGE OF: L. SMITH	SHEET NUMBER: 384
DRAWN BY: DATE: RAS 12/05/01	ARN JOB NUMBER: 800010
CHECKED BY: DATE: GAF 1/28/02	

G:\Cork\152000\600010\Drawings\384A.dwg  
Save by: apr at 01:44pm Feb 07, 2002  
Plot by: gfas at 07:39am Feb 11, 2002  
Model Space plot + Scale = 1/9



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		385A	2	TYPE 2 DIAGONAL				2021
2		aa R/L	8	L 4 X 3 1/2 X 3/8	14	5 1/4		1051
3		pa	24	PL 5/8 X 2 1/2	3	0 27/32		386
4		380pa	4	PL 1/2 X 21 1/2	2	6		366
5		380pb	8	PL 3/4 X 3 1/2	1	5		101
6		380pc	8	PL 1/8 X 3 1/2	0	4 1/4		4
7		ba	60	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	96
8				W/HVY HEX NUT & WASHER				
9		bb	12	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	17
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14				FIELD BOLTS				
15		FB36	28	1" DIA	0	2 1/2	NOTE 2	39
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

2 - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 385A  
 ORIG SHOP DWG 294-BL116  
 ORIG SHOP MARK BL116  
 REPAIR SHEET 11-135 & 245  
SPAN 11 D-C' NORTH 385A  
SPAN 11 C-D' SOUTH 385A

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

G:\Corr...s\2000\8000\Drawings\385A.dwg  
 Save by r3p at 01:48pm Feb 07, 2002  
 Plot by ofas at 07:40am Feb 11, 2002  
 Model Space plot + Scale = 1/9

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

FEB 12  
 N.E.C.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CHAMBERS, PA 15106  
 PHONE (412) 631-3000  
 FAX (412) 631-4001  
 IN CHARGE OF: L. SMITH

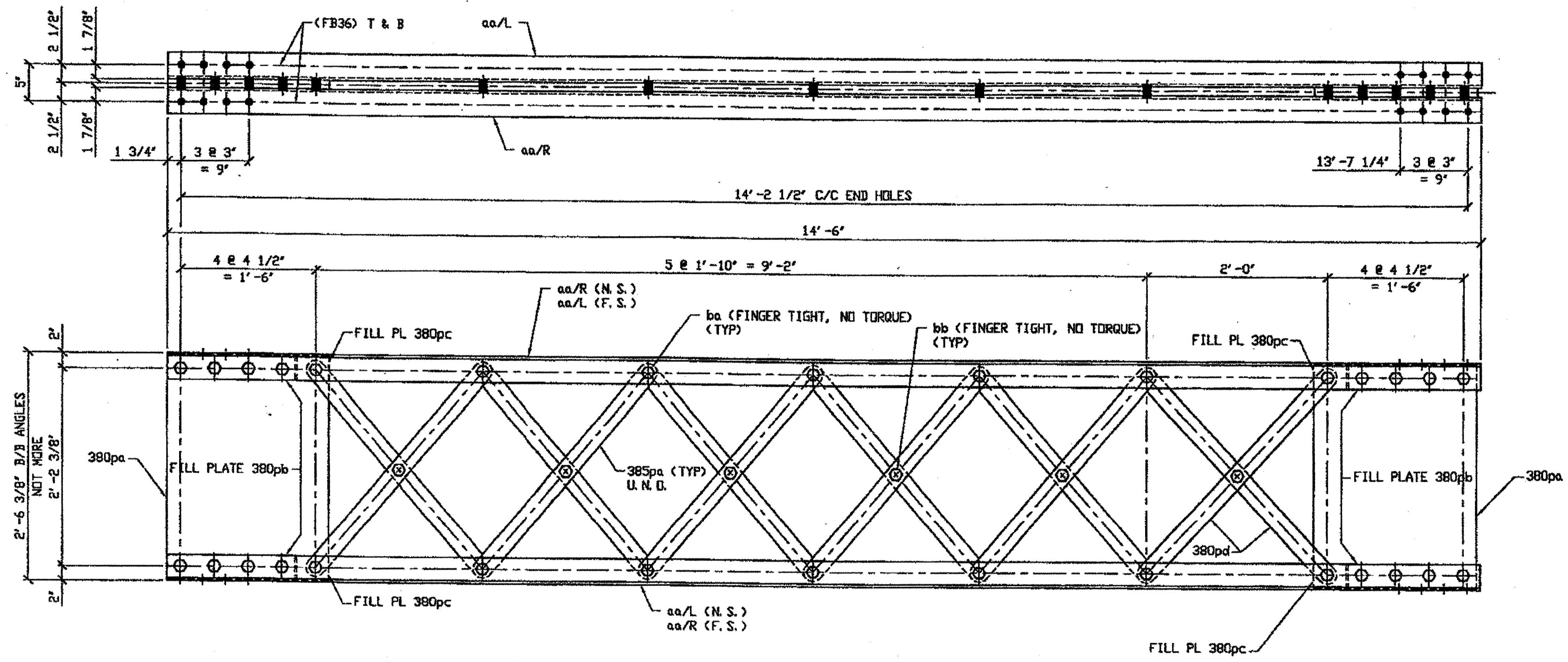
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

NO.	DATE	DESCRIPTION	BY

DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 863E50000

SHEET NUMBER: 385  
 JOB NUMBER: 800010

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. A	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		386A	1	TYPE 2 DIAGONAL				980
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	6		493
3		385pa	10	PL 5/8 X 2 1/2	3	0 27/32		161
4		380pa	2	PL 1/2 X 2 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
7		380pd	2	PL 5/8 X 2 1/2	3	2 9/16		33
8		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
9				W/HVY HEX NUT & WASHER				
10		bb	6	1" DIA HVY HEX BOLT	0	2 9/4	NOTE 2	9
11				W/HVY HEX NUT & WASHER				
12								
13								
14				FIELD BOLTS				
15		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
PLATE	A36			PIPE	N/A		FITTINGS	N/A
SHAPES	A36			FLGS.	N/A		BOLTS	NOTE 2



ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 386A  
 ORIG SHOP DWG 165-BL60  
 ORIG SHOP MARK BL60  
 REPAIR SHEET 11-145

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

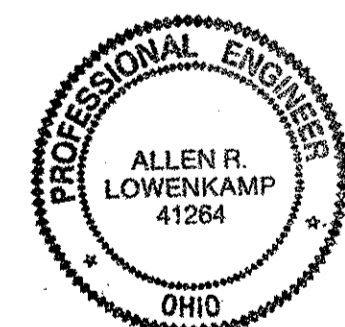
G:\com\1\2000\80001\01\Drawings\11\386A.dwg  
 Save by rsp on 01/11/01 5:00 PM Feb 07, 2002  
 Plot by gfos on 07/14/01 Feb 11, 2002  
 Model space plot + State = 1/3

- NOTES:**
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 11 G-F' NORTH 386A

RECEIVED BY [initials]  
 FEB 12 REC'D  
 N. E. & C. CO.  
 STEEL ERECTOR

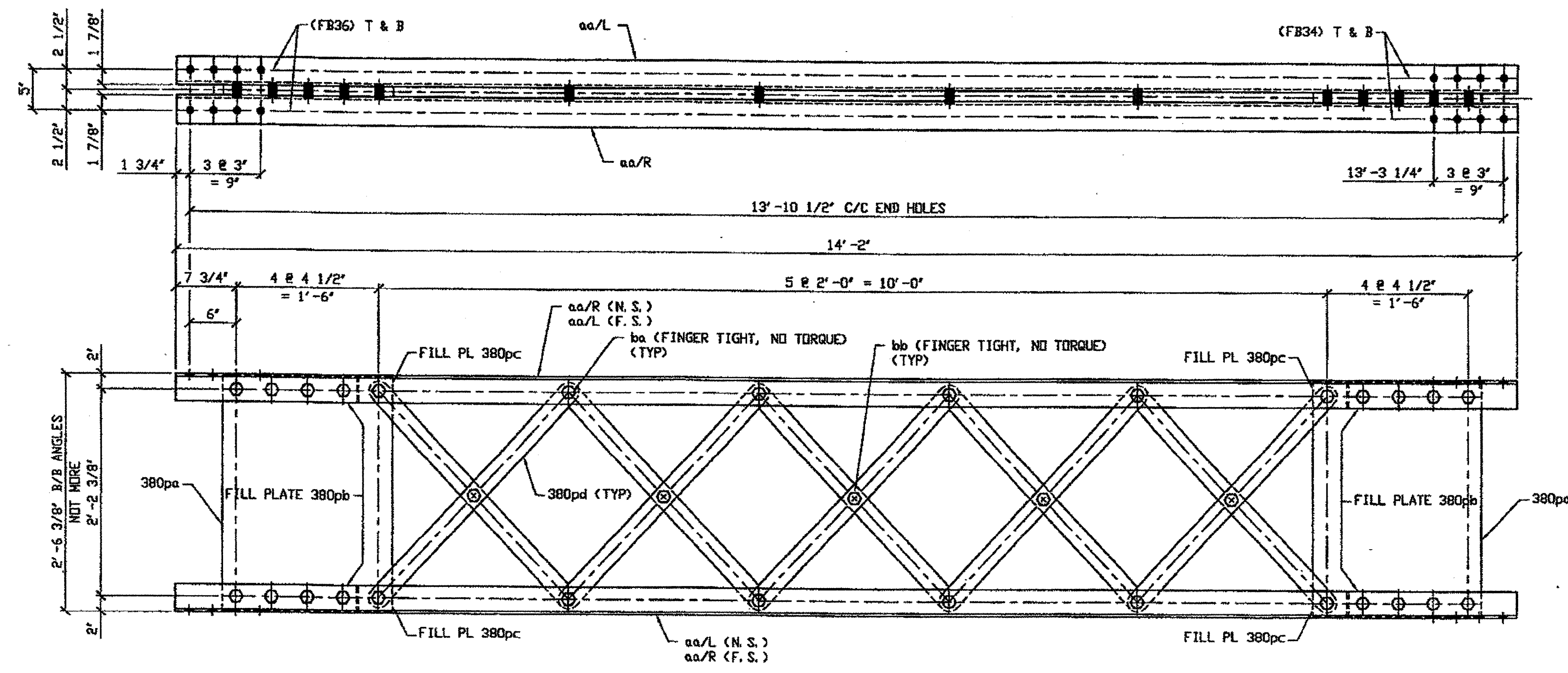
TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORADELLE, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13			
SPAN 11 REPAIRS			
DRAWN BY: DATE		SHEET NUMBER:	
RAS 12/05/01		386	
CHECKED BY: DATE		JOB NUMBER:	
GAF 1/29/02		800010	

BILL OF MATERIAL ★								
LINE	ADVANCE BILL & LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		387A	5	TYPE 2 DIAGONAL				4664
2		aa R/L	20	L 3 1/2 X 3 1/2 X 3/8	14	2		2408
3		380pa	10	PL 1/2 X 21 1/2	2	6		914
5		380pb	20	PL 3/4 X 3 1/2	1	5		253
6		380pc	20	PL 1/8 X 3 1/2	0	4 1/4		11
4		380pd	50	PL 5/8 X 2 1/2	3	2 3/16		817
7		ba	140	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	225
8				W/HVY HEX NUT & WASHER				
9		bb	25	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	36
10				W/HVY HEX NUT & WASHER				
11								
12								
13				FIELD BOLTS				
14		FB34		1" DIA	0	2 1/4	NOTE 2	
15		FB36		1" DIA	0	2 1/2	NOTE 2	
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



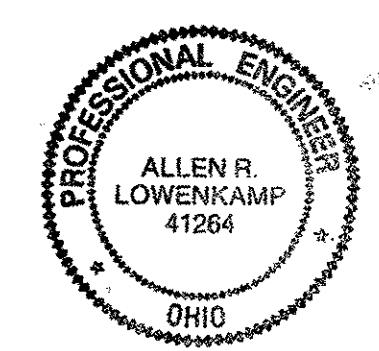
**6 - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 387A**

- DRIG SHOP DWG 142-BL48
- DRIG SHOP MARK BL48
- REPAIR SHEET 11-211, 263, 273, 294 & 336
- SPAN II U-T' NORTH 387A
- SPAN II F-G' SOUTH 387A
- SPAN II G-H' SOUTH 387A
- SPAN II L-M' SOUTH 387A
- SPAN II U-T' SOUTH 387A (FROM S. Interior)
- SPAN II M-L' NORTH 387A

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

★ 4. BILL OF MATERIAL FOR 5 MEMBERS ONLY

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 13 REC'D  
 N.E. & C. CO.  
 STEEL ERECTOR

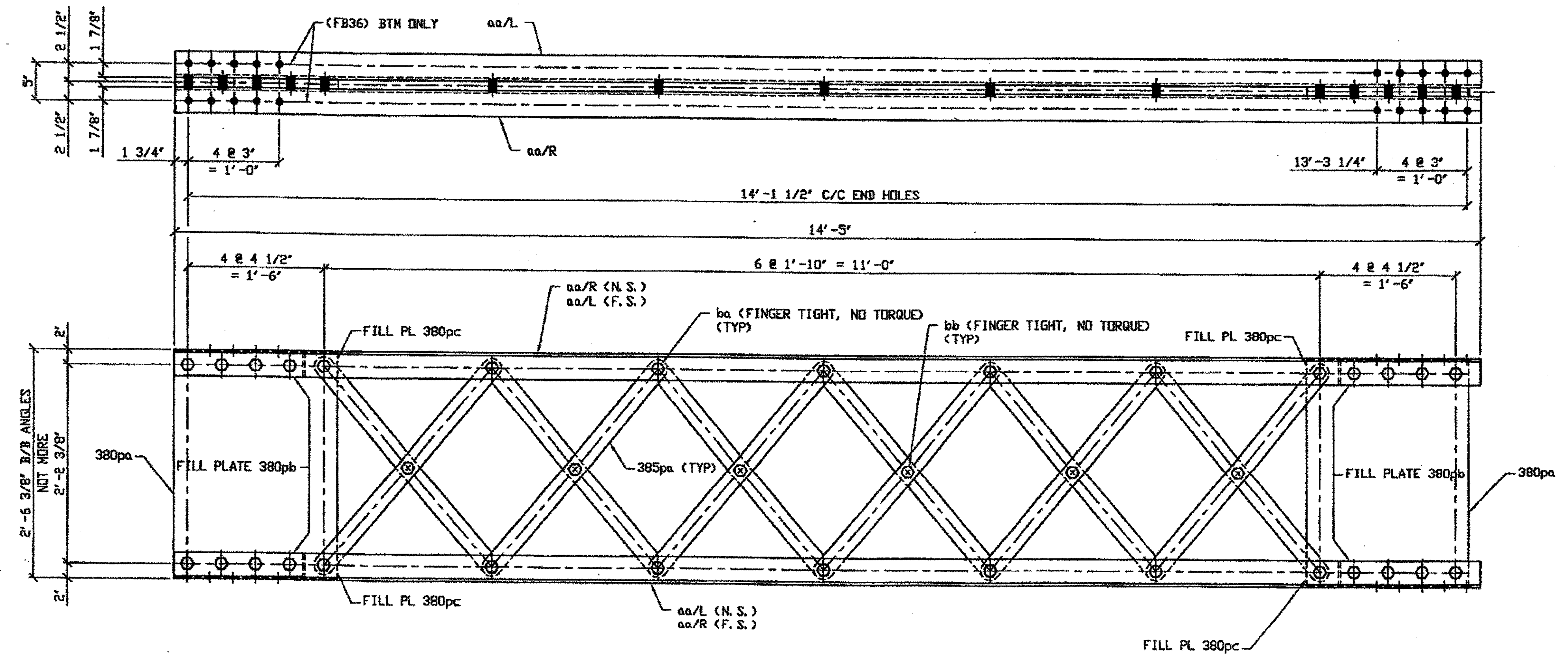
TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

DOT ITEM LINE NO. 0210 BUT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
SPAN 11 REPAIRS	
SHEET NUMBER	387
AM JOB NUMBER	800010

G:\Com\28000\800010\Drawings\087A.dwg  
 Save by: [Name] at 07:53pm Feb 07, 2008  
 Plot by: gms at 07:54am Feb 07, 2008  
 Model Space Plot + Scale = 1/8"

BILL OF MATERIAL \*

LINE	ADVANCE BILL & LINE	MARK NO.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1		388A	1 TYPE 2 DIAGONAL				976
2		aa R/L	4 L 3 1/2 X 3 1/2 X 3/8	14	5		490
3		385pa	12 PL 5/8 X 2 1/2	3	0 27/32		193
4		380pa	2 PL 1/2 X 21 1/2	2	6		183
5		380pb	4 PL 3/4 X 3 1/2	1	5		51
6		380pc	4 PL 1/8 X 3 1/2	0	4 1/4		2
7		ba	30 1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
8			W/HVY HEX NUT & WASHER				
9		bb	6 1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
10			W/HVY HEX NUT & WASHER				
11							
12							
13							
14			FIELD BOLTS				
15		FB36	1" DIA	0	2 1/2	NOTE 2	
PLATE A36			PIPE N/A	FITTINGS N/A			
SHAPES A36			FLGS. N/A	BOLTS NOTE 2			



2 - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 388A  
 ORIG SHOP DWG 380-BL134  
 ORIG SHOP MARK BL134  
 REPAIR SHEET 11-239

SPAN II B-C' SOUTH 388A  
 SPAN II N-P' SOUTH 388A

- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

\* 4. BILL OF MATERIAL FOR ONE UNIT ONLY (diagonal)

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/5/04 b sm  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 REC'D  
 N. E. & C. CO.

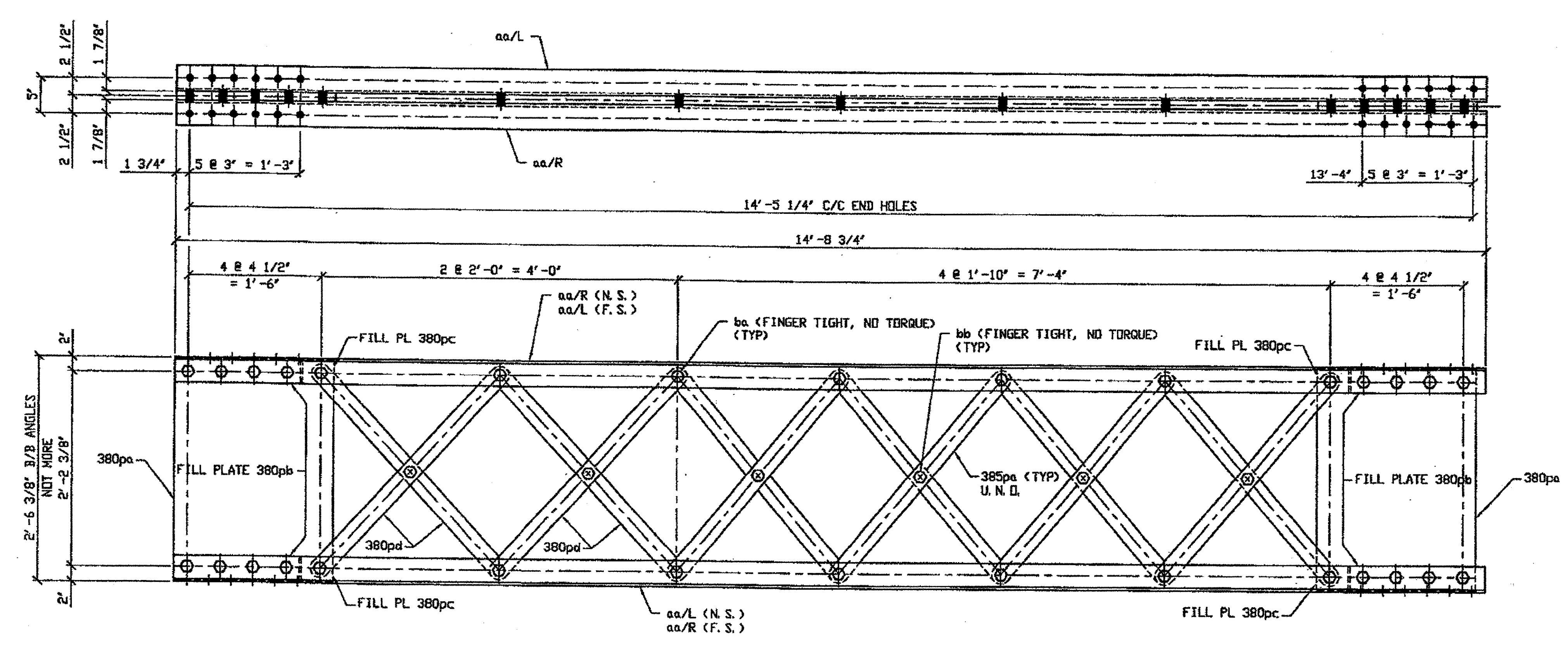
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12509 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
IN CHARGE OF: L. SMITH		SHEET NUMBER: 388	
DRAWN BY: DATE: RAS 12/05/01		JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 1/29/02			

G:\Cont\12000\800010\Drawings\12388A.dwg  
 Save by: at 01:57pm Feb 07, 2002  
 Plot by: gfos at 07:41am Feb 11, 2002  
 Model space plot + Scale = 1/9

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		389A	1	TYPE 2 DIAGONAL				988
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	8 3/4		501
3		385pa	8	PL 5/8 X 2 1/2	3	0 27/32		129
4		380pa	2	PL 1/2 X 2 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
7		380pd	4	PL 5/8 X 2 1/2	3	2 3/16		65
8		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
9				W/HVY HEX NUT & WASHER				
10		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
11				W/HVY HEX NUT & WASHER				
12								
13								
14								
15								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

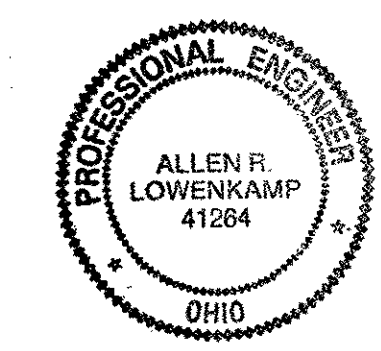


ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 389A  
 DRIG SHOP DWG 380-BL136  
 DRIG SHOP MARK BL136  
 REPAIR SHEET 11-259

SPAN 11 E-F' SOUTH 389A

- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



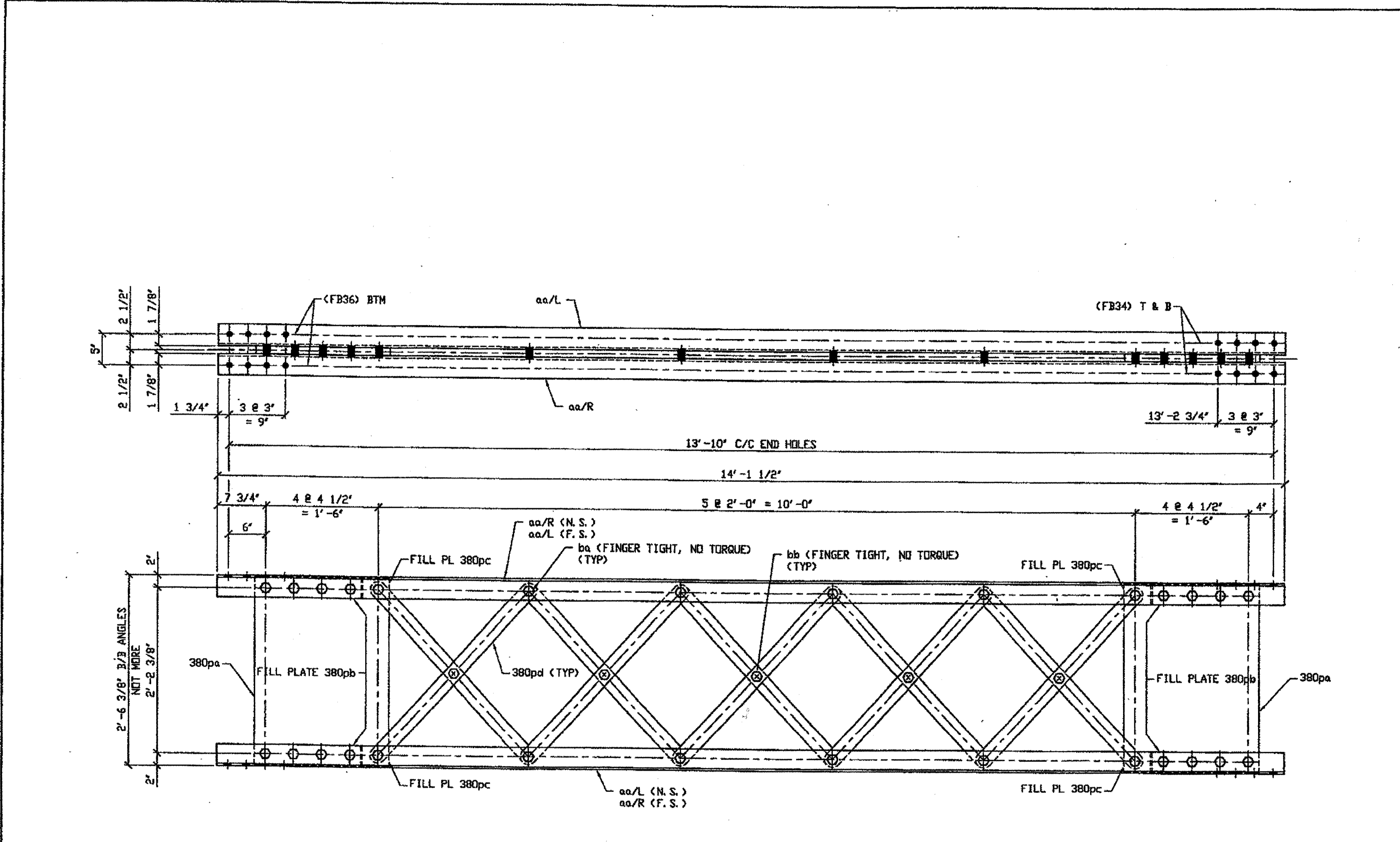
FEB 12 REC'  
 N.E. & C. Co.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12508 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 MERRIMAN BRIDGE WAY  
 CHARLOTTE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0210 DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS	
SHEET NUMBER 389	ARN JOB NUMBER 800010

G:\Con\1\2800A\00010\Drawings\389A.dwg  
 Save by [initials] at 01:59pm Feb 07, 2002  
 Plot by gfos at 07:41am Feb 11, 2002  
 Model space plot + Scale = 1/3



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		390A	1	TYPE 2 DIAGONAL				931
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	1 1/2		480
3		380pa	2	PL 1/2 X 21 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
4		380pd	10	PL 5/8 X 2 1/2	3	2 3/16		163
7		ba	28	1\" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	45
8				W/HVY HEX NUT & WASHER				
9		bb	5	1\" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	7
10				W/HVY HEX NUT & WASHER				
11								
12								
13				FIELD BOLTS				
14		FB34	16	1\" DIA	0	2 1/4	NOTE 2	21
15		FB36	8	1\" DIA	0	2 1/2	NOTE 2	11
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 390A  
 ORIG SHOP DWG 380-BL138  
 ORIG SHOP MARK BL138  
 REPAIR SHEET 11-282  
**SPAN 11 J-K' SOUTH 390A**

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Com\2000\80001\Drawings\J1390A.dwg  
 Save by rpr at 02:01pm Feb 07, 2002  
 Plot by ofos at 07:41am Feb 11, 2002  
 Model space plot + Scale = 1/9

DOT ITEM LINE NO 0210  
 DOT BID ITEM NO 863E50000

PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

FEB 12 REC'D  
 N. E. & C. CO.  
 STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

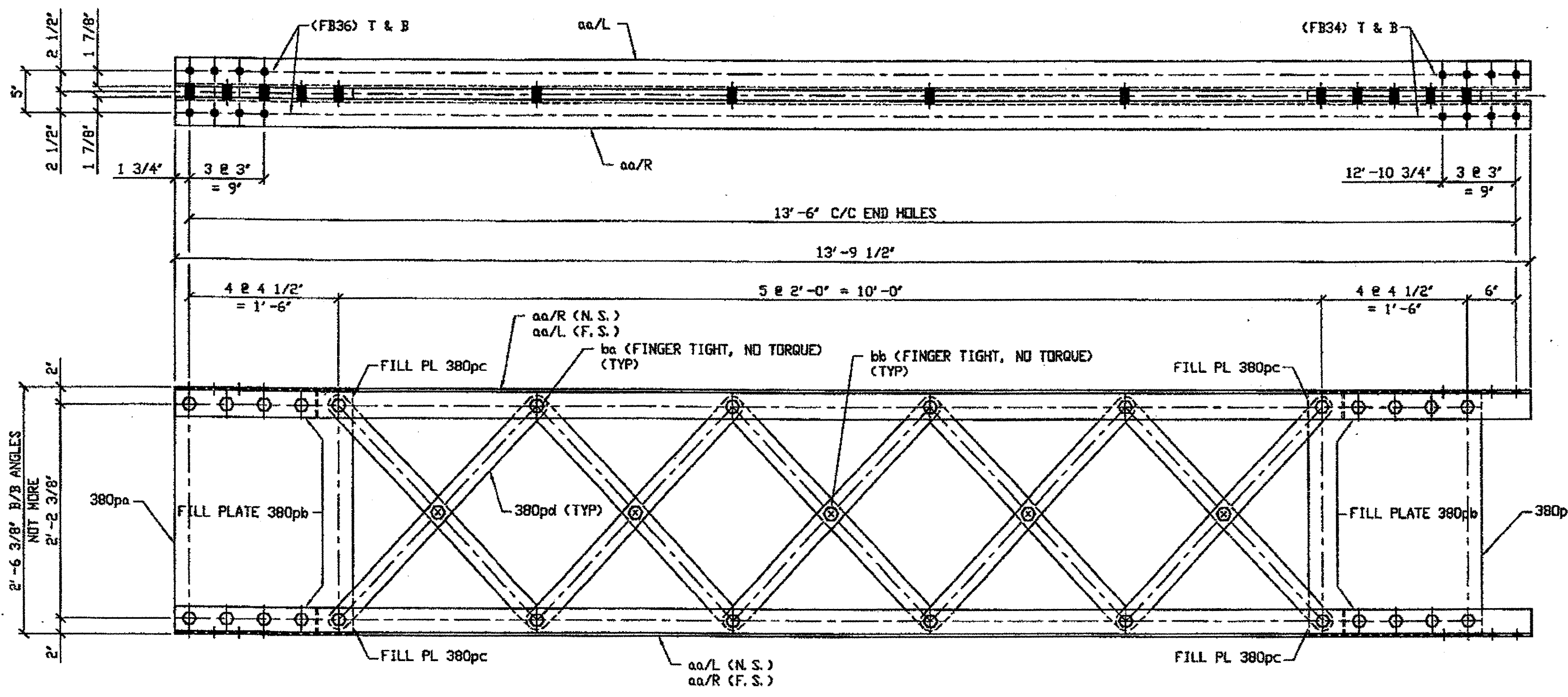
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 6000 AMERICAN BRIDGE WAY  
 CHESAPELLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 12/07/01  
 CHECKED BY: DATE: GAF 1/29/02

SHEET NUMBER: 390  
 AM. JOB NUMBER: 800010

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1		391A	1 TYPE 2 DIAGONAL				920
2		aa R/L	4 L 3 1/2 X 3 1/2 X 3/8	13	9 1/2		469
3		380pa	2 PL 1/2 X 21 1/2	2	6		183
5		380pb	4 PL 3/4 X 3 1/2	1	5		51
6		380pc	4 PL 1/8 X 3 1/2	0	4 1/4		2
4		380pd	10 PL 5/8 X 2 1/2	3	2 3/16		163
7		ba	28 1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	45
8			W/HVY HEX NUT & WASHER				
9		bb	5 1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	7
10			W/HVY HEX NUT & WASHER				
11							
12							
13			FIELD BOLTS				
14		FB34	16 1" DIA	0	2 1/4	NOTE 2	21
15		FB36	16 1" DIA	0	2 1/2	NOTE 2	22
PLATE		A36	PIPE	N/A	FITTINGS		N/A
SHAPES		A36	FLGS.	N/A	BOLTS		NOTE 2



**2- TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 391A**

ORIG SHOP DWG 380-BL139  
ORIG SHOP MARK BL139  
REPAIR SHEET 11-286

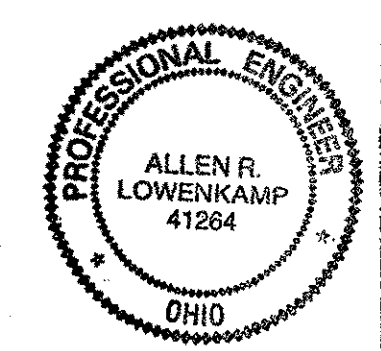
SPAN 11 K-L' SOUTH 391A  
SPAN 11 L-K' NORTH 391A

**NOTES:**

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS 3.0 - 5.0

**\*4. BILL OF MATERIAL FOR ONE UNIT ONLY (1 Diagonal)**

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 2002  
N.E.C.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

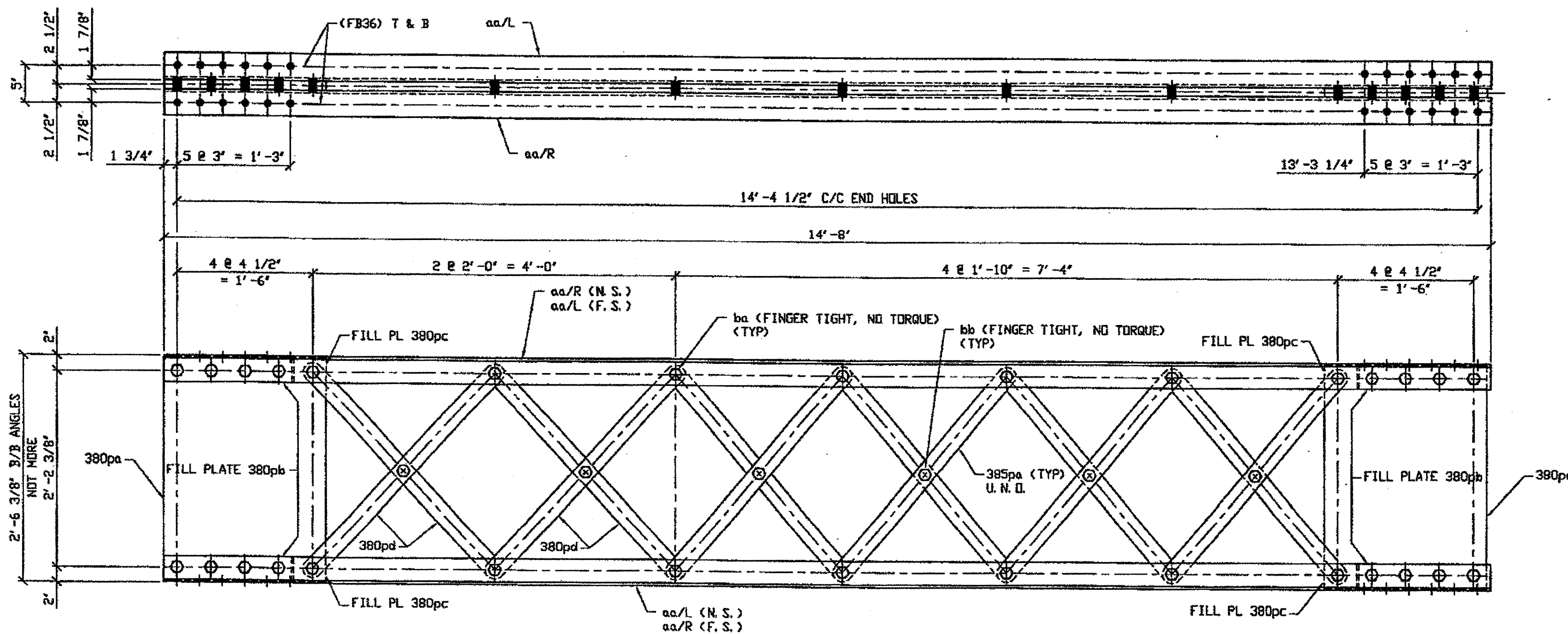
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
8000 AMERICAN BRIDGE WAY  
CORADELLO, PA 15109  
PHONE (412) 631-3000  
FAX (412) 631-4001

DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
DRAWN BY: DATE: RAS 12/07/01		SHEET NUMBER: 391	
CHECKED BY: DATE: GAF 1/29/02		JOB NUMBER: 800010	

G:\Cont\1\2000\800010\Drawings\0391A.dwg  
 Save by rfp at 09:35am Feb 06, 2002  
 Plot by gfos at 07:45am Feb 11, 2002  
 Model space plot + Scale = 1/9



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		392A	1	TYPE 2 DIAGONAL				986
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	8		499
3		385pa	8	PL 5/8 X 2 1/2	3	0 21/32		129
4		380pa	2	PL 1/2 X 21 1/2	2	6		183
5		380pb	4	PL 3/4 X 3 1/2	1	5		51
6		380pc	4	PL 1/8 X 3 1/2	0	4 1/4		2
7		380pd	4	PL 5/8 X 2 1/2	3	2 3/16		65
8		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
9				W/HVY HEX NUT & WASHER				
10		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
11				W/HVY HEX NUT & WASHER				
12								
13								
14				FIELD BOLTS				
15		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				



ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 392A

ORIG SHOP DWG 380-BL137  
ORIG SHOP MARK BL137  
REPAIR SHEET 11-314

SPAN 11 P-Q' SOUTH 392A

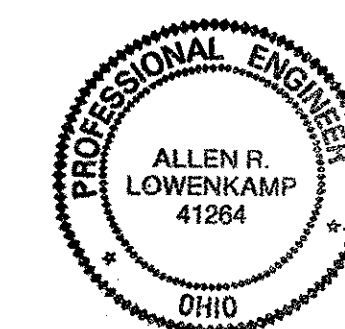
NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/5/04	P. SM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FEB 12 REC'D  
N. E. & C. W.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 12/07/01  
CHKD BY: DATE:  
GAF 1/29/02

DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

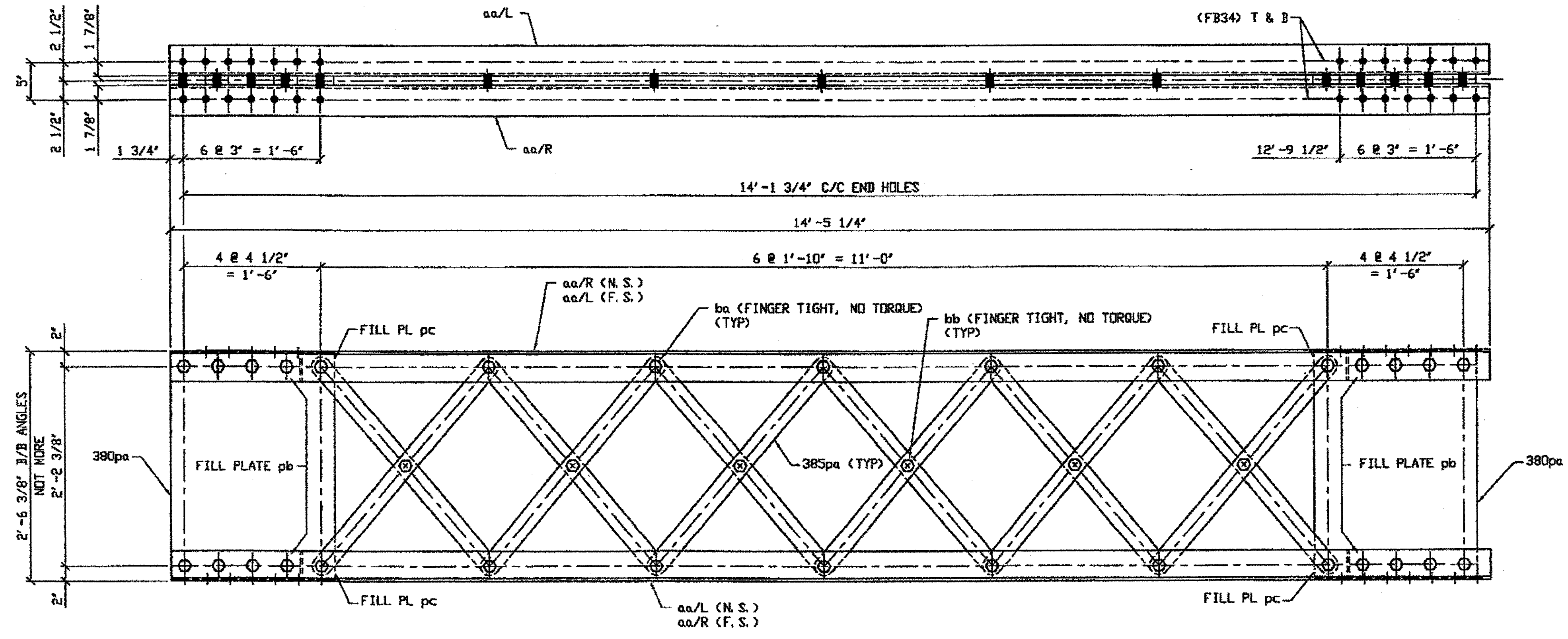
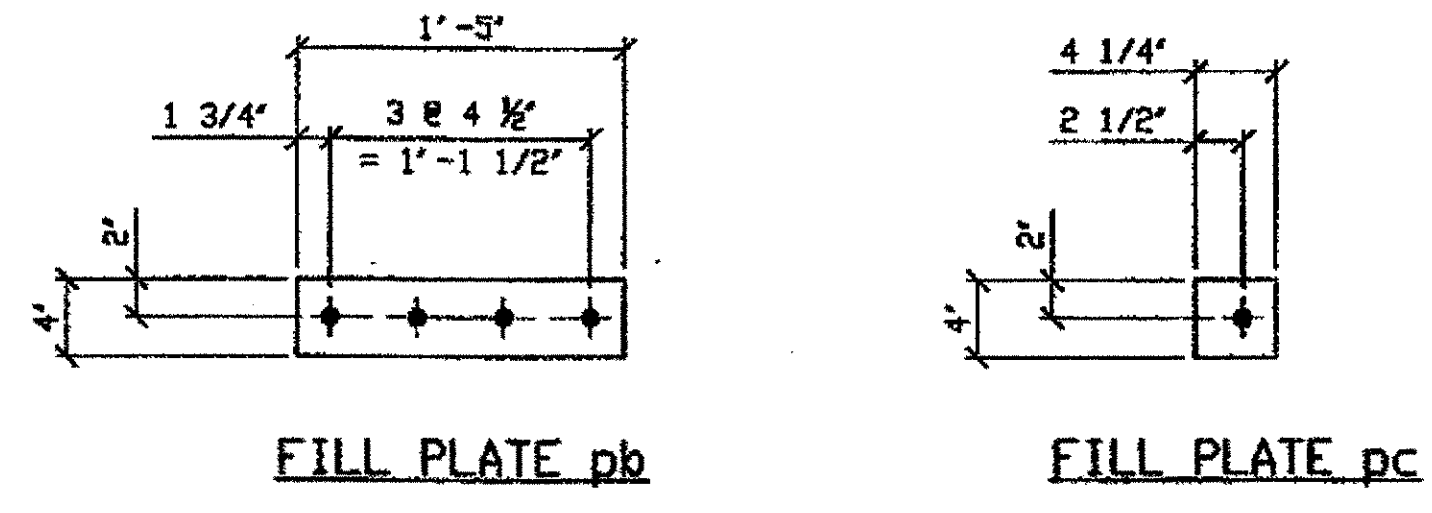
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CUMACPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

SHEET NUMBER: 392  
JOB NUMBER: 800010

G:\Cort\152000\B0010\Drawings\392A.dwg  
 Save by rspir at 08:03pm Feb 07, 2002  
 Plot by rspir at 07:42am Feb 11, 2002  
 Model Space Plot + Scale = 1/9



**ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 393A**  
 ORIG SHOP DWG 294-BL115  
 ORIG SHOP MARK BL115  
 REPAIR SHEET 11-322  
**SPAN 11 R-S' SOUTH 393A**

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		393A	1	TYPE 2 DIAGONAL				1059
2		aa R/L	4	L 4 X 4 X 3/8	14	5 1/4		566
3		385pa	12	PL 5/8 X 2 1/2	3	0 27/32		193
4		380pa	2	PL 1/2 X 2 1/2	2	6		183
5		pb	4	PL 3/4 X 4	1	5		58
6		pc	4	PL 1/8 X 4	0	4 1/4		2
7		ba	30	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	48
8				W/HVY HEX NUT & WASHER				
9		bb	6	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	9
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14				FIELD BOLTS				
15		FB34	28	1" DIA	0	2 1/4	NOTE 2	37
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED 2/5/04  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FEB 12 REC'D**  
**N. E. & C. CO.**

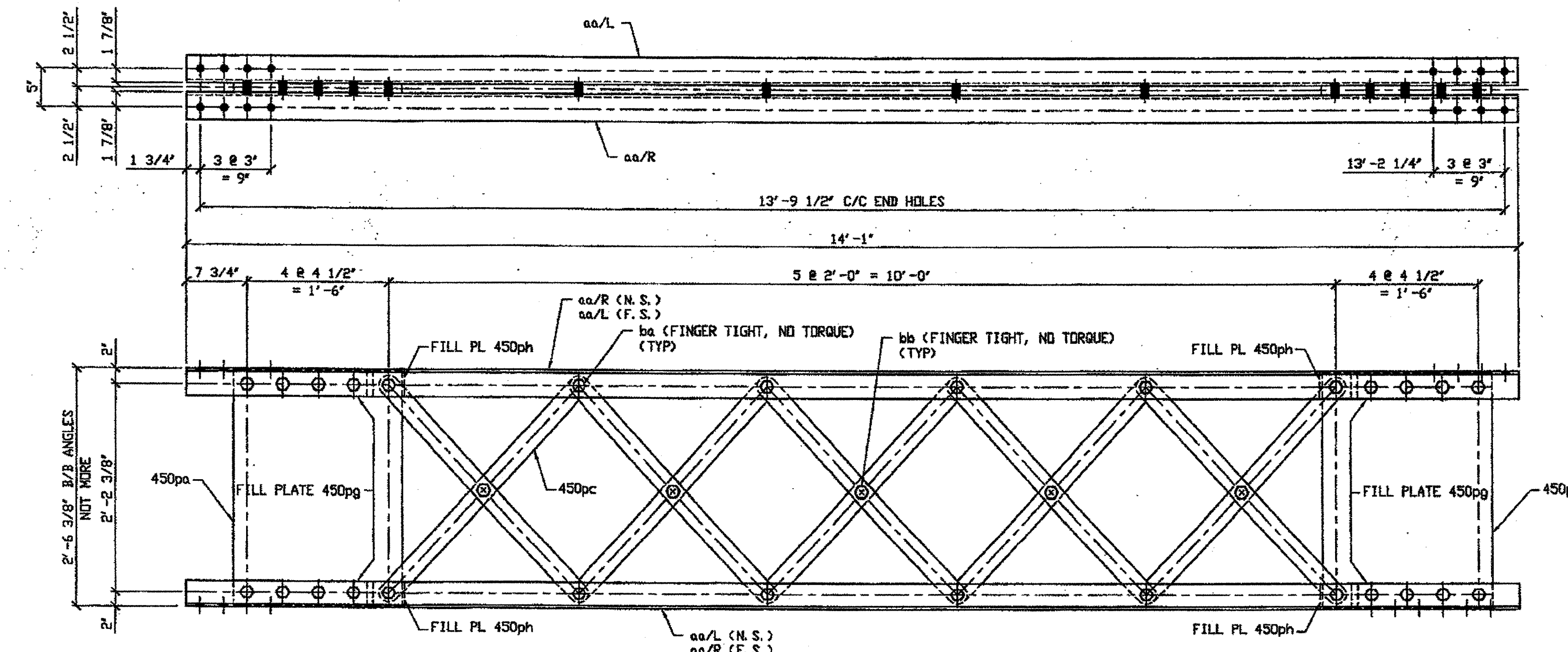
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

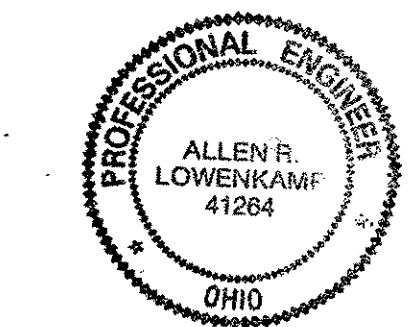
DOT ITEM LINE NO. 0210		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
IN CHARGE OF: L. SMITH		SHEET NUMBER: 393	
DRAWN BY: DATE: RAS 12/07/01		JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 1/29/02			

G:\Contr\...2000\800010\Drawings\393A.dwg  
 Save by rppr at 02:07pm Feb 07, 2002  
 Plot by gfos at 07:44am Feb 11, 2002  
 Model space plot + Scale = 1/3

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		451A	1	TYPE 2 DIAGONAL				934
2		aa R/L	4	L 3 1/2 X 3 1/2 X 3/8	14	1		479
3		450pa	2	PL 1/2 X 21 1/2	2	6		183
4		450pc	10	BAR 2 1/2 X 5/8	3	2 3/16		167
5		450pg	4	PL 3/4 X 3 1/2	1	5		51
6		450ph	4	PL 1/8 X 3 1/2	0	4 1/4		2
7		ba	28	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	45
8				W/HVY HEX NUT & WASHER				
9		bb	5	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	7
10				W/HVY HEX NUT & WASHER				
11								
12								
13								
14								
15								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



ONE - TYPE 2 DIAGONAL FULL LENGTH COMPLETE REPLACEMENT - 451A  
 ORIG SHOP DWG 165-BL62  
 ORIG SHOP MARK BL62  
 REPAIR SHEET 12-109  
**SPAN 12 C-B' NORTH 451A**

RELEASED FOR CONSTRUCTION  
 DATE 1/4/02 BY *tdg/tss*

DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

ENGR' & CONTR. CO.  
 DEC 10 2001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 8000 AMERICAN BRIDGE WAY  
 CLEVELAND, OH 44130  
 PHONE (419) 631-2000  
 FAX (419) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 12 REPAIRS

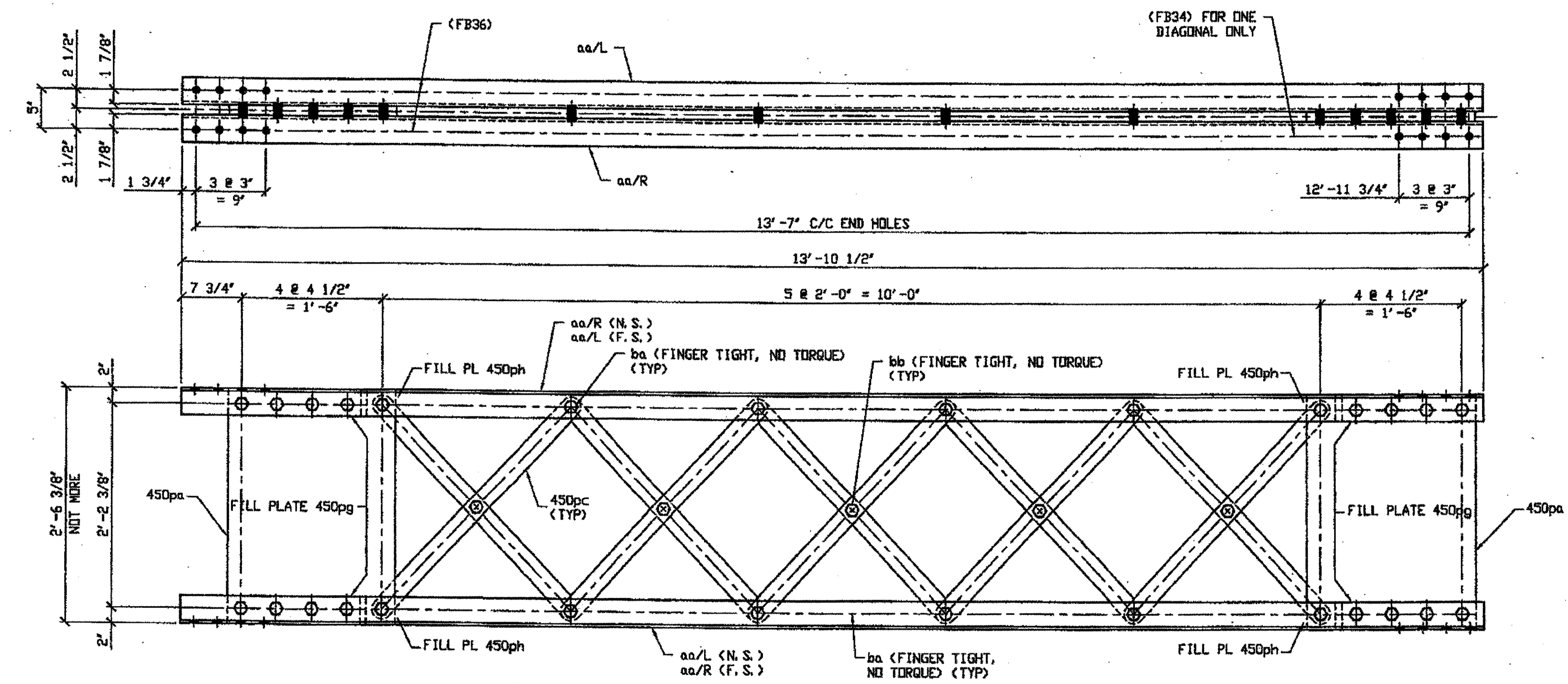
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/26/01  
 CHECKED BY: DATE  
 GAF 10/17/01

SHEET NUMBER  
 451  
 AM JOB NUMBER  
 800010

B:\Contract\1080010\Drawings\ASIA.dwg  
 Save by rsh on 4 Jan 02, 2001  
 Plot by gms at 11:47 am Dec 07, 2001  
 Model Space Plot + Scale = 1/3

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		454A	2	TYPE 2 DIAGONAL				1857
2		aa R/L	8	L 3 1/2 X 3 1/2 X 3/8	13	10 1/2		944
3		450pa	4	PL 1/2 X 21 1/2	2	6		366
4		450pc	20	BAR 2 1/2 X 5/8	3	2 3/16		338
5		450pg	8	PL 3/4 X 3 1/2	1	5		101
6		450ph	8	PL 1/8 X 3 1/2	0	4 1/4		4
7		ba	56	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	90
8				W/HVY HEX NUT & WASHER				
9		bb	10	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	14
10				W/HVY HEX NUT & WASHER				
11								
12								
13				FIELD BOLTS				
14		FB34	32	1" DIA	0	2 1/4	NOTE 2	43
15		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
PLATE		A36		PIPE N/A			FITTINGS N/A	
SHAPES		A36		FLGS. N/A			BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

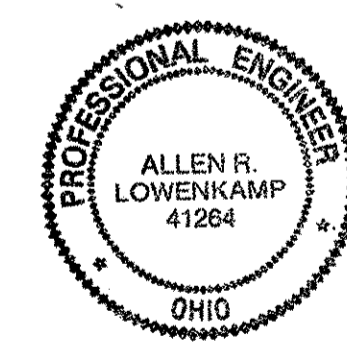


RELEASED FOR CONSTRUCTION  
DATE 1/9/02 BY *tdp/esj*

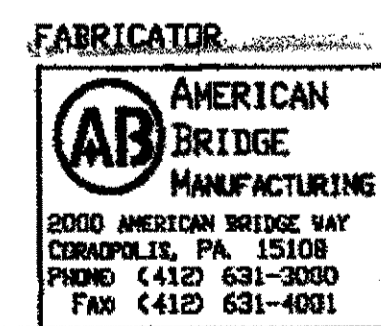
MATL ENGR, & CONTR.  
DEC 10 2001

2 - TYPE 2 DIAGONAL COMPLETE REPLACEMENT - 454A  
BRIG SHOP DNG 165-BL64  
BRIG SHOP MARK BL64  
LINE ITEM No. 0210  
REPAIRS SHEETS 12-120 & 156  
SPAN 12 D-C' NORTH 454 A  
SPAN 12 C-D' SOUTH 454 A

O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0210  
DOT BID ITEM NO. 863E50000



STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

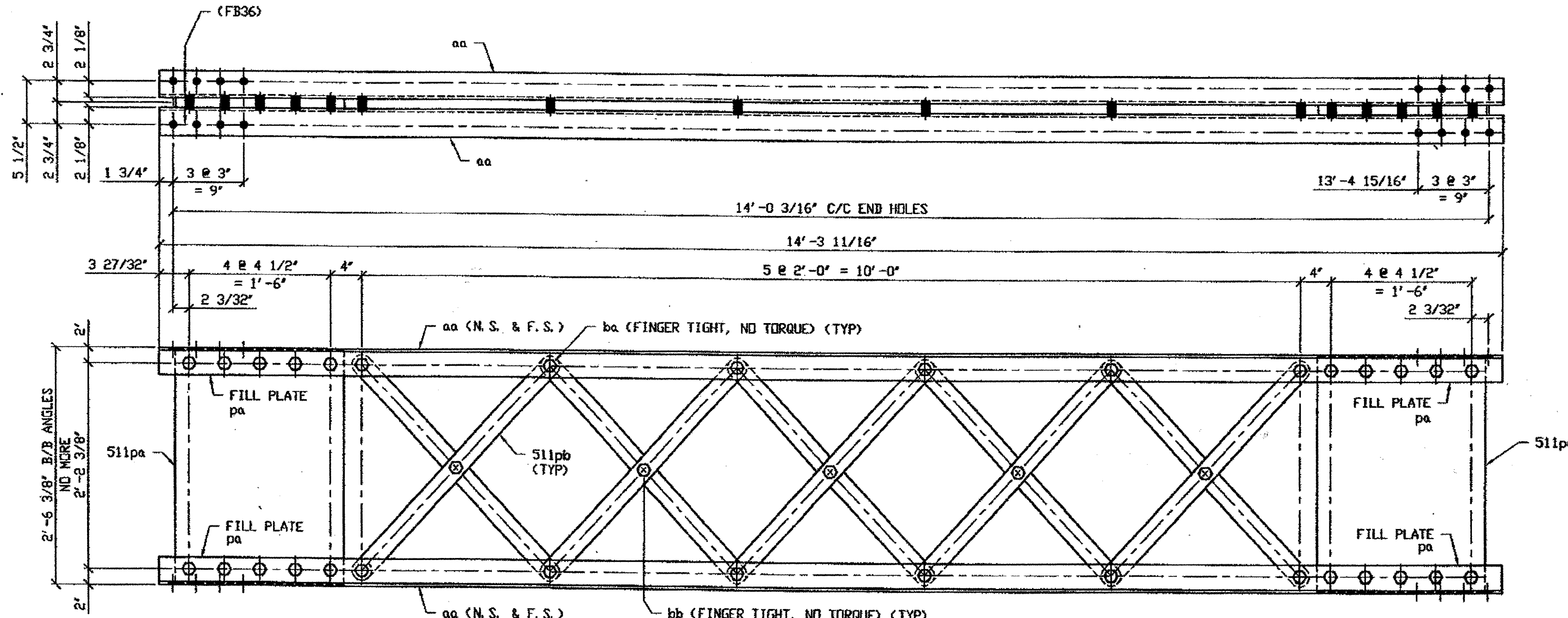
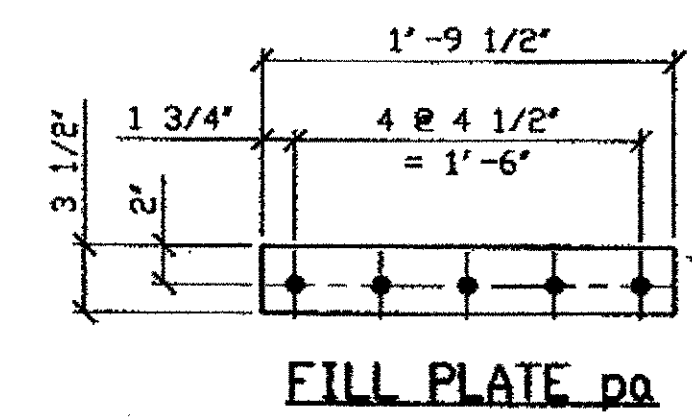
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 07/27/01  
CHECKED BY: DATE: GAF 10/18/01  
SHEET NUMBER: 454  
JOB NUMBER: 800010

G:\Contract\0\800010\Drawings\454A.dwg  
Save by rslp 08:17am Nov 05, 2001  
Plot by gbas 07:11:49am Dec 07, 2001  
Model Space plot + Scale = 1/3

BILL OF MATERIAL

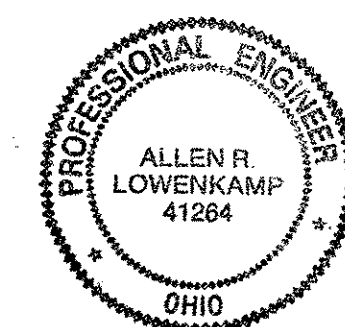
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		513A	1	TYPE 2 DIAGONAL COMPLETE				959
2		aa	4	L 3 1/2 X 3 1/2 X 3/8	14	3 11/16		486
3		pa	4	PL 3/4 X 3 1/2	1	9 1/2		64
4		511pa	2	PL 1/2 X 21 1/2	2	5 7/8		182
5		511pb	10	BAR 2 1/2 X 5/8	3	2 3/16		169
6		ba	32	1" DIA HVY HEX BOLT	0	3 1/2	NOTE 2	51
7				W/HVY HEX NUT & WASHER				
8		bb	5	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	7
9				W/HVY HEX NUT & WASHER				
10								
11								
12				FIELD BOLTS				
13		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
14								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

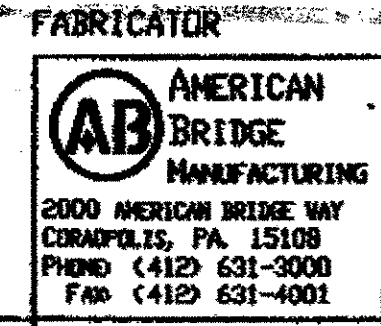


ONE - TYPE 2 DIAGONAL MEMBER COMPLETE REPLACEMENT - 513A  
 ORIG SHOP DWG 521-BL171  
 ORIG SHOP MARK BL171  
 REPAIR SHEETS 13-199  
**SPAN 13 F-G' SOUTH 513 A**

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/04 Bjm  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0210  
 DOT BID ITEM NO. 863E50000



NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 13 REPAIRS**

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/23/01  
 CHECKED BY: DATE  
 GAF 12/18/01

SHEET NUMBER: 513  
 ARI JOB NUMBER: 800010

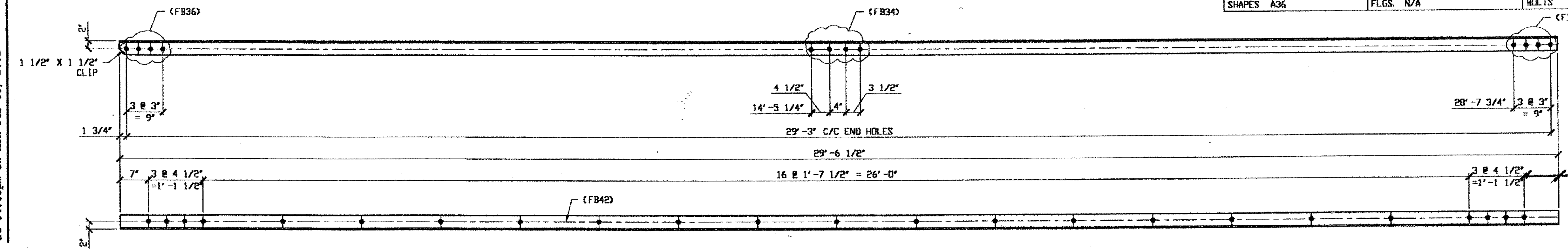
B:\Contract\1800010\Drawings\AS1515A.dwg  
 Save by rsm 11:24am Feb 02, 2002  
 Plot by gbs at 09:05am Feb 04, 2002  
 Model Space Plot + Scale = 1/9

BILL OF MATERIAL

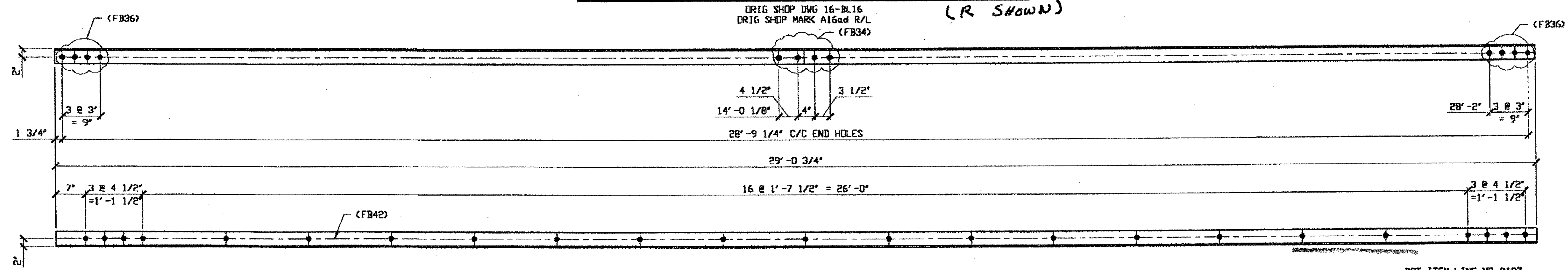
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
1				TYPE 1 DIAGONAL FULL				
2		192A R/L	2	L 3 1/2 X 3 1/2 X 3/8	29	6 1/2		502
3		192B	1	L 3 1/2 X 3 1/2 X 3/8	29	0 3/4		
4								
5								
6								
7								
8				FIELD BOLTS				
9		FB34		1" DIA	0	2 1/4	NOTE 2	
10		FB36		1" DIA	0	2 1/2	NOTE 2	
11		FB42		1" DIA	0	3 1/4	NOTE 2	
12								
PLATE N/A		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 3  
 A-B' NORTH, BOTTOM SOUTH 192A/R  
 A-B' NORTH, BOTTOM NORTH 192A/L



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 192A R/L  
 (R SHOWN)



1 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 192B

SPAN 3 O-N' SOUTH, BOTTOM NORTH 192B

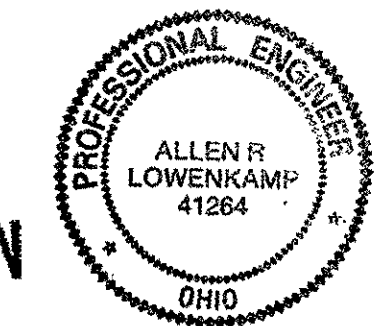
Reprinter at 02:03pm on Tue Jan 09, 2001 - Last plotted by Gfo at 04:05pm on Mon Feb 05, 2001  
 Last modify:

O.D.O.T. DIST. 12

ACCEPTED	2/1/01	D.S.M.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



RELEASED FOR CONSTRUCTION  
 DATE 2/1/01 BY EDP

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNHORNS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY
		REVISORS	

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 3 REPAIRS

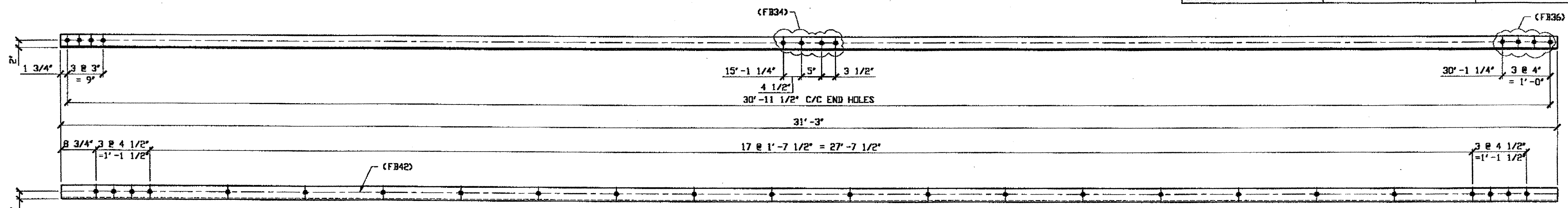
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 12/11/00  
 CHECKED BY: DATE: GAF 12/27/00

SHEET NUMBER: 192  
 A301 JOB NUMBER: 800010

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL REPAIR				
2		255A	1	L 3 1/2 X 3 1/2 X 3/8	31	3		266
3		255B R/L	4	L 3 1/2 X 3 1/2 X 3/8	29	11 3/4	2R, 2L	1019
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB34	20	1" DIA	0	2 1/4	NOTE 2	27
13		FB36	28	1" DIA	0	2 1/2	NOTE 2	39
14		FB42	72	1" DIA	0	3 1/4	NOTE 2	112
15								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

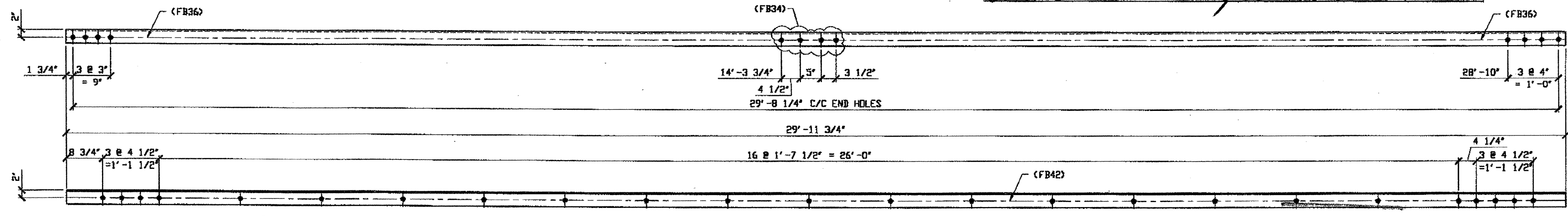
- NOTES:**
1. OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**1 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 255A**

ORIG SHOP DWG 85-BL41  
ORIG SHOP MARK AB55  
REPAIR SHEET 5-146

*SPAN 5 NORTH N-P, BOTTOM NORTH 255A*



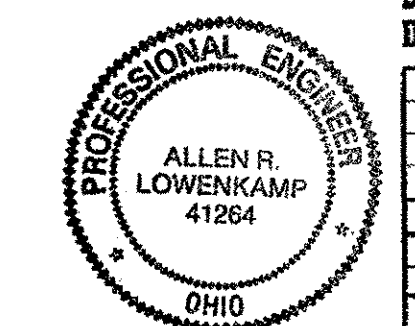
**4 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 255B R/L**

ORIG SHOP DWG 85-BL27  
ORIG SHOP MARK AB57 R/L  
REPAIR SHEET 5-208

*(L SHOWN)* NAT'L ENGR. & CONTR. CO.  
By *tdp/lss*

*SPAN 5*  
L-K' SOUTH, TOP NORTH 255B/R  
L-K' SOUTH, TOP SOUTH 255B/L  
L-K' SOUTH, BOTTOM SOUTH 255B/R  
L-K' SOUTH, BOTTOM NORTH 255B/L

DOT ITEM LINE NO. 0107  
DOT BID ITEM NO. 863E50000



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANAPOLIS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE *4/4/01* BY *tdp*

MAR 26 2001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 02/27/01  
CHECKED BY: DATE  
GAF 03/08/01

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

SHEET NUMBER: 255  
JOB NUMBER: 800010

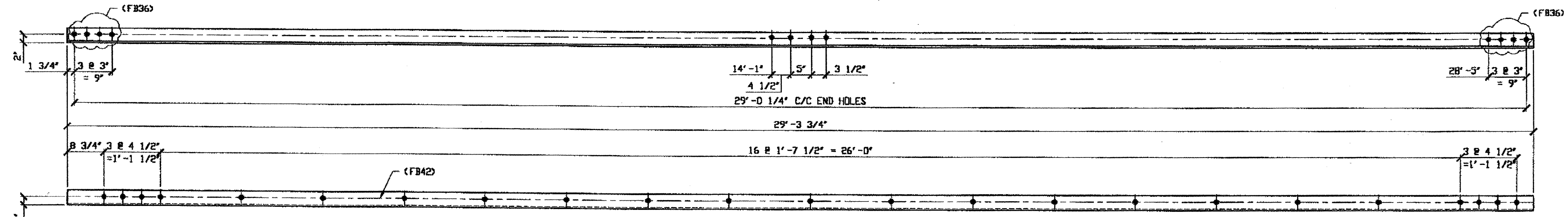
Last modified by rspringer at 09:08am on Wed Mar 21, 2001 - Last plotted by Gfooster at 09:03am on Fri Mar 23, 2001

Last modified by rspringer at 09:08am on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:04am on Fri Mar 23, 2001

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL REPAIR				
2		256A	1	L 3 1/2 X 3 1/2 X 3/8	29	3 3/4		249
3								
4								
5								
6								
7								
8								
9								
10				FIELD BOLTS				
11		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
12		FB42	23	1" DIA	0	3 1/4	NOTE 2	36
13								
14								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

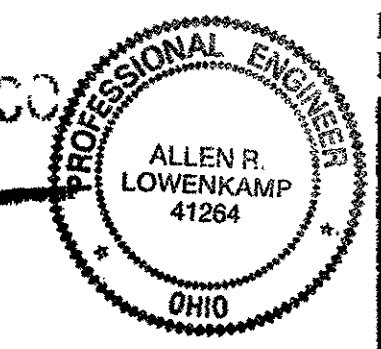
- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**1 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 256A**  
 ORIG SHOP DWG 85-BL42  
 ORIG SHOP MARK 885w  
 REPAIR SHEET 5-224

*SPAN 5 Q-P' SOUTH, Bottom NORTH 256A*

NAT'L ENGR' & CONTR. CO.  
 By *Edp/tss*



MAR 26 2001

RELEASED FOR CONSTRUCTION  
 DATE *4/9/01* BY *Edp*

O.D.O.T. DIST. 12

ACCEPTED	2/5/04	PJSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 02/27/01  
 CHECKED BY: DATE: GAF 03/08/01

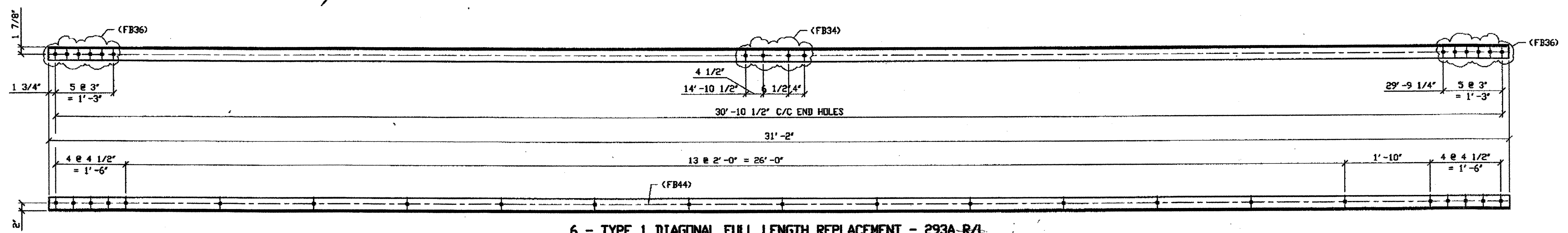
SHEET NUMBER: 256  
 ADM. JOB NUMBER: 800010



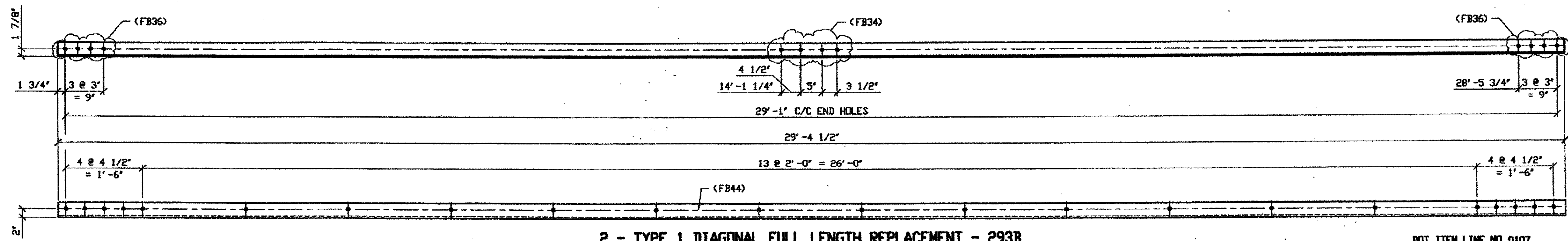
SPAN 7  
B'-C SOUTH, BOTTOM SOUTH 293A/L  
B'-C NORTH, TOP SOUTH 293A/R  
N-M' NORTH, TOP NORTH 293A/L  
N-M' NORTH, TOP SOUTH, 293A/R  
N-M' NORTH, BOTTOM NORTH 293A/R  
N-M' NORTH, BOTTOM SOUTH 293A/L

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		293A R/L	6	L 3 1/2 X 3 1/2 X 3/8	31	2	3/R, 3/L	1590
3		R/L 293B	2	L 3 1/2 X 3 1/2 X 3/8	29	4 1/2	1R, 1L	499
4								
5								
6								
7				FIELD BOLTS				
8		FB34	32	1" DIA	0	2 1/4	NOTE 2	43
9		FB36	88	1" DIA	0	2 1/2	NOTE 2	123
10		FB44	136	1" DIA	0	3 1/2	NOTE 2	218
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



**6 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 293A R/L**  
 (L SHOWN)  
 ORIG SHOP DRAWING 165-BL61 R/L  
 ORIG SHOP MARK A165b  
 REPAIR SHEET 7-100, 157 & 193



**2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 293B**  
 (R SHOWN)  
 ORIG SHOP DRAWING 165-BL76/R  
 ORIG SHOP MARK A165p  
 REPAIR SHEET 7-137 & 169

SPAN 7  
Q-P' SOUTH, BOTTOM NORTH 293B/R  
Q-P' NORTH, BOTTOM SOUTH 293B/L

RELEASED FOR CONSTRUCTION  
 DATE 6/21/01 BY tdp

O.D.O.T. DIST. 12  
 ACCEPTED [initials] DSM  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CUNIPORT, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

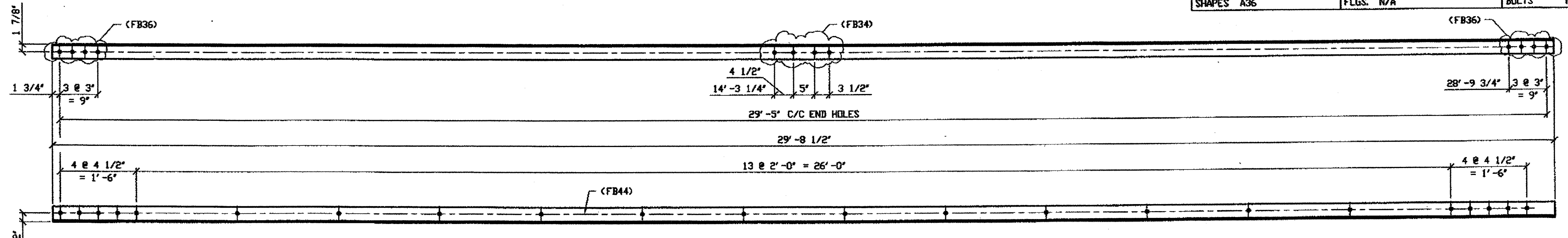
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/26/01  
 CHECKED BY: DATE: GAF 05/14/01

DOT ITEM LINE NO. 0107		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 7 REPAIRS</b>			
SHEET NUMBER			293
A.M. JOB NUMBER			800010

Last modified by rspringer at 5:52PM, 7/1/01 - Last plotted by Repringer at 08:30am on Wed May 16, 2001

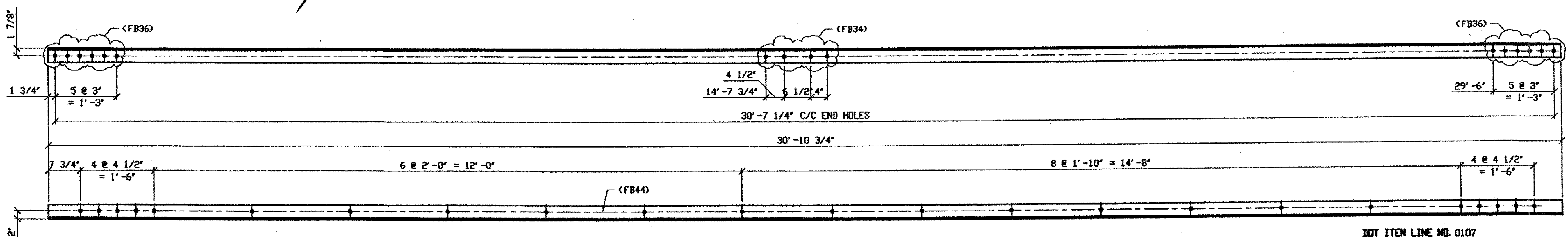
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		294A/R/L	2	L 3 1/2 X 3 1/2 X 3/8	29	8 1/2	IR, IL	
3		294B	1	L 3 1/2 X 3 1/2 X 3/8	30	10 3/4		263
4								
5								
6								
7								
8								
9				FIELD BOLTS one for 2 Angles only				
10		FB34	8	1" DIA	0	2 1/4	NOTE 2	11
11		FB36	20	1" DIA	0	2 1/2	NOTE 2	28
12		FB44	45	1" DIA	0	3 1/2	NOTE 2	72
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER, RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**SPAN 7**  
 B-A' SOUTH, BOTTOM NORTH 294A/R  
 B-A' SOUTH, BOTTOM SOUTH 294A/L

**2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 294A**  
 ORIG SHOP DRAWING 165-BL66/R (L SHOWN)  
 ORIG SHOP MARK A165a  
 REPAIR SHEET 7-175



**SPAN 7, E-D' NORTH, BOTTOM SOUTH 294B**

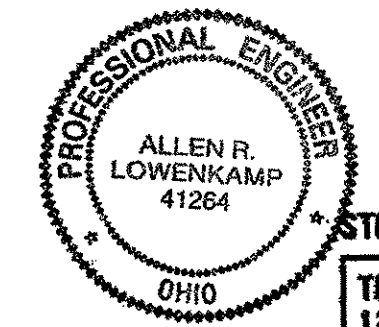
**ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 294B**  
 ORIG SHOP DRAWING 165-BL67/L  
 ORIG SHOP MARK A165c  
 REPAIR SHEET 7-201

RELEASED FOR CONSTRUCTION  
 DATE 6/2/01 BY tdp

O.D.O.T. DIST. 12

ACCEPTED	1/3/01	DJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

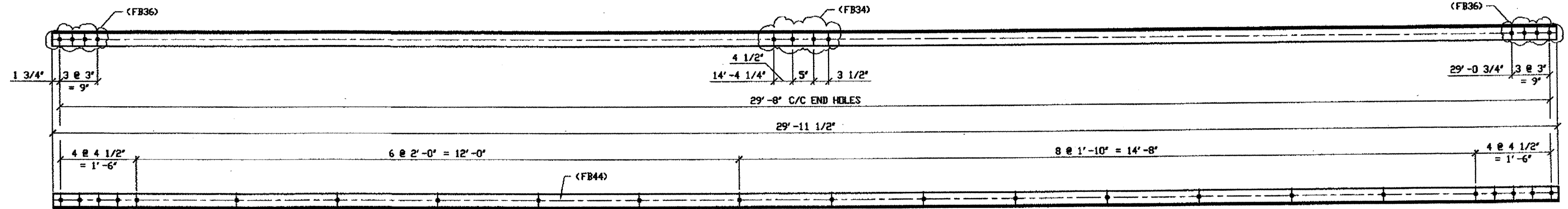
DOT ITEM LINE NO. 0107	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 7 REPAIRS	
SHEET NUMBER	294
AWB JOB NUMBER	800010

Last modified by repringer at 8:54am on Wed May 15, 2001

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		295A	1	L 3 1/2 X 3 1/2 X 3/8	29	11 1/2		255
3								
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB34	4	1" DIA	0	2 1/4	NOTE 2	5
11		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
12		FB44	23	1" DIA	0	3 1/2	NOTE 2	37
PLATE N/A				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 295A

ORIG SHOP DRAWING 165-BL68/L  
ORIG SHOP MARK A165d  
REPAIR SHEET 7-205

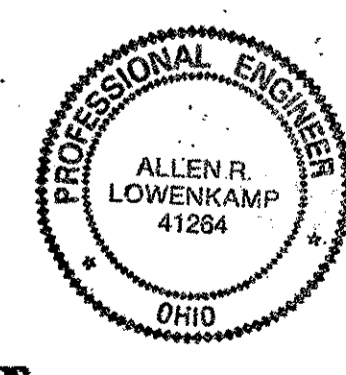
SPAN 7 F-E' NORTH, BOTTOM SOUTH 295A

RELEASED FOR CONSTRUCTION  
DATE 6/10/01 BY tdf

O.D.O.T. DIST. 12

ACCEPTED	2/5/01	P. SMY
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CERRITOS, CA 94508  
PHONE (415) 631-3000  
FAX (415) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 04/26/01  
CHECKED BY: DATE:  
GAF 05/14/01

DOT ITEM LINE NO. 0107  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

SHEET NUMBER: 295  
ADM JOB NUMBER: 800010

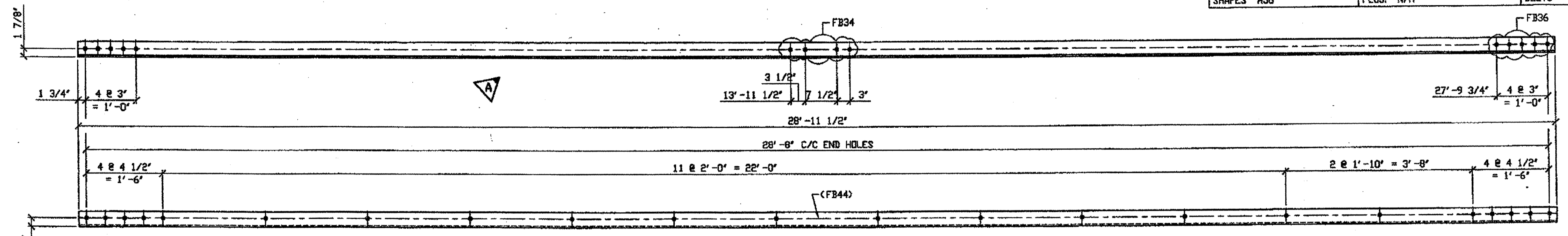
Last modified by rspringer at \$(EDTIME,??) -[- Last plotted by rspringer at 09:01am on Wed May 16, 2001

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		338A	1	L 3 1/2 X 3 1/2 X 3/8	28	11 1/2		246
3		338B R/L	2	L 3 1/2 X 3 1/2 X 3/8	29	2 3/4		497
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB34	4	1" DIA	0	2 1/4	NOTE 2	5
11		FB36	13	1" DIA	0	2 1/2	NOTE 2	18
12		FB44	66	1" DIA	0	3 1/2	NOTE 2	106
PLATE	N/A			PIPE	N/A		FITTINGS	N/A
SHAPES	A36			FLGS.	N/A		BOLTS	NOTE 2

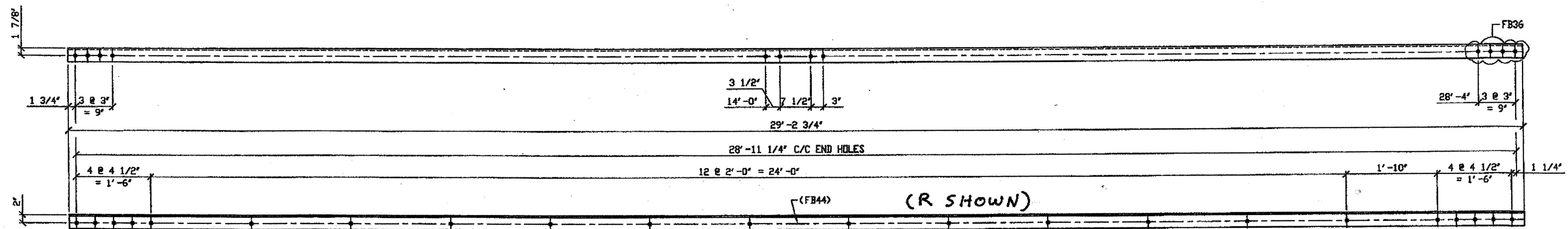
- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 9 A-B' NORTH, BOTTOM SOUTH 338 A



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 338A

ORIG SHOP DWG 294-BL117  
ORIG SHOP MARK A294ka  
REPAIR SHEET 9-108



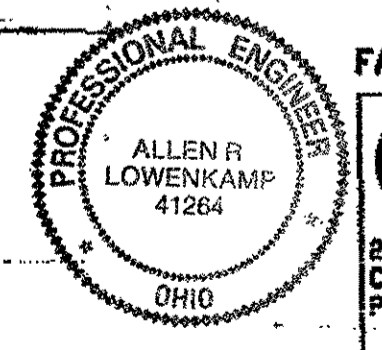
2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 338B R/L (R Shown)

ORIG SHOP DWG 294-BL123  
ORIG SHOP MARK A294r R/L  
REPAIR SHEET 9-141

SPAN 9 H-J' NORTH, TOP NORTH 338 B/R  
SPAN 9 H-J' NORTH, TOP SOUTH 338 B/L

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROESVILLE, PA 15109  
PHONE (412) 631-3000  
FAX (412) 631-4001  
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 07/11/01  
CHECKED BY: DATE  
GAF 08/22/01

DOT ITEM LINE NO. 0107  
DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	REVISOR	APPROVED
A	08/10/01	REVISED PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 9 REPAIRS

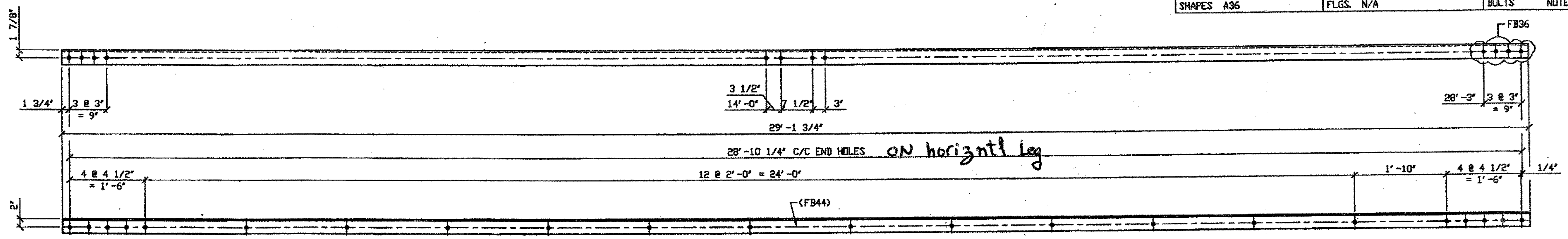
SHEET NUMBER: 338  
ABN JOB NUMBER: 800010

G:\Contracts\2000\800010\Drawings\338A.dwg  
Save by rsm at 08:04am Dec 17, 2001  
Plot by gfos at 09:43am Dec 17, 2001  
Model space plot + Scale = 1/6

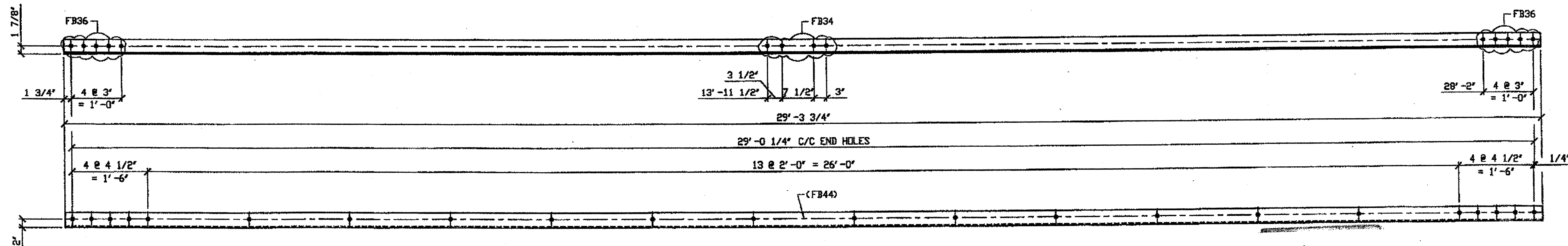
SPAN 9 J-K' NORTH, TOP SOUTH 339 A/L  
 SPAN 9 J-K' NORTH, TOP NORTH 339 A/R

- NOTES:**
1. OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		339A R/L	2	L 3 1/2 X 3 1/2 X 3/8	29	1 3/4		495
3		339B	1	L 3 1/2 X 3 1/2 X 3/8	29	3 3/4		249
4								
5								
6								
7								
8								
9				FIELD BOLTS				
10		FB34	4	1" DIA	0	2 1/4	NOTE 2	5
11		FB36	18	1" DIA	0	2 1/2	NOTE 2	25
12		FB44	44	1" DIA	0	3 1/2	NOTE 2	71
PLATE	N/A			PIPE N/A			FITTINGS N/A	
SHAPES	A36			FLGS. N/A			BOLTS NOTE 2	



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 339A R/L  
 (L SHOWN)  
 DRIG SHOP DWG 294-BL124  
 DRIG SHOP MARK A294s R/L  
 REPAIR SHEET 9-147

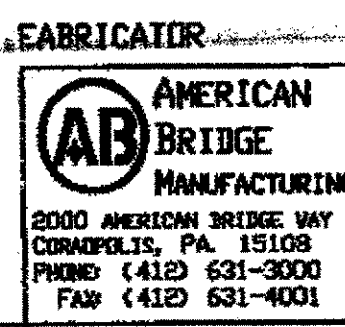
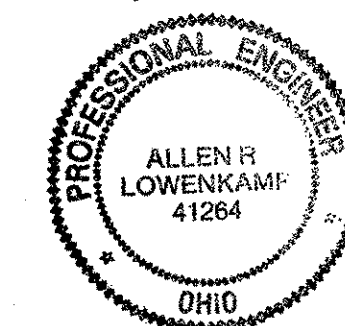


ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 339B  
 DRIG SHOP DWG 294-BL131  
 DRIG SHOP MARK A294od  
 REPAIR SHEET 9-240

SPAN 9 S-R' SOUTH, BOTTOM NORTH 339 B

G:\Contracts\2001\900010\Drawings\339A.dwg  
 Sent by email at 09:04am Dec 17, 2001  
 Plot by gfb at 09:43am Dec 17, 2001  
 Model Space Plot - Scale = 1/12

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/12/01  
 CHECKED BY: DATE  
 GAF 09/06/01

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

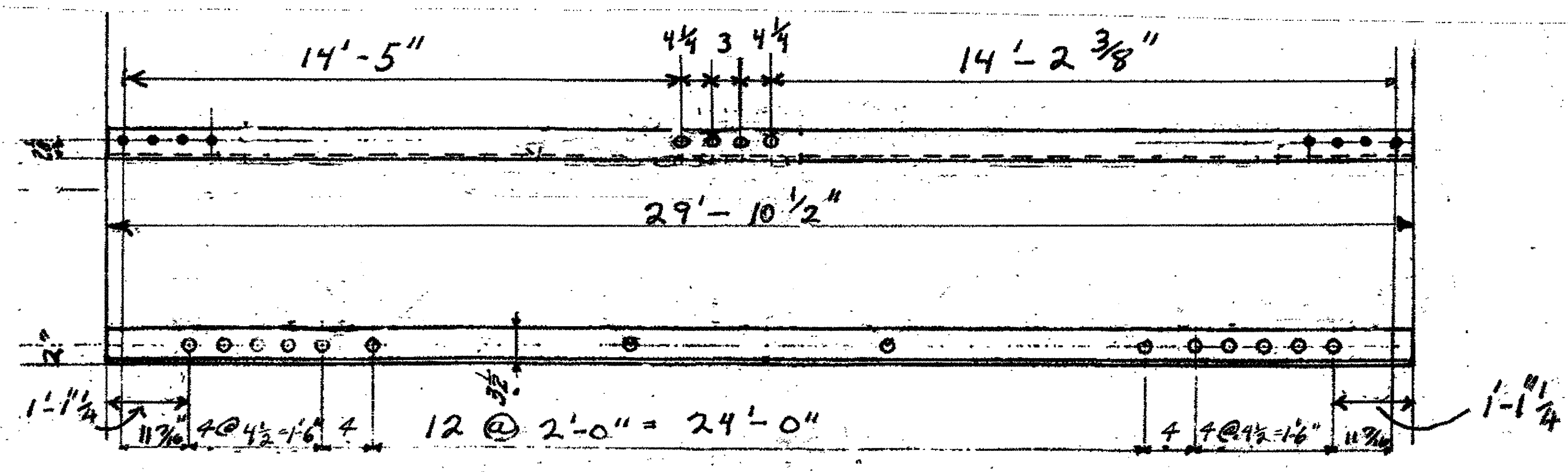
NO.	DATE	REMOVED APPROVAL NOTE	DESCRIPTION	BY
A	12/10/01			GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

SHEET NUMBER	339
ADJ. JOB NUMBER	800010

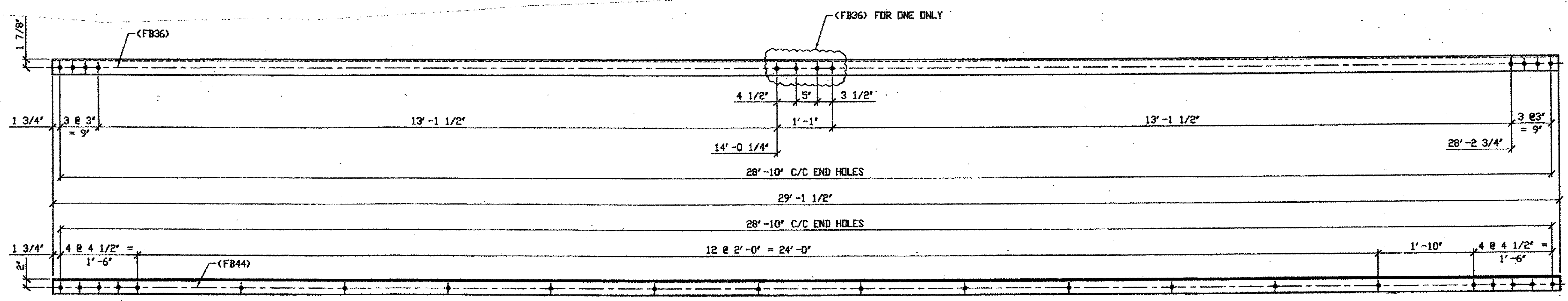
**BILL OF MATERIALS**

Piece No.	Qty.	Description
359 A	1	L 3 1/2 x 3 1/2 x 3/8 x 29'-9 3/8"
359 B R/L	3	L 3 1/2 x 3 1/2 x 3/8 x 29'-1 1/2" (1R-2L)
ANGLE A 36		



1-TYPE 1 DIAGONAL FULL LENGTH 359 A  
ORIGINAL SHOP MARK A5209 0L173  
SPAN 13 H-G' SOUTH, BOTTOM SOUTH 359A

- NOTES:**
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD 1/2" HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



3 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 359B R/L  
 ORIG SHOP DRAWING 293-BL132  
 ORIG SHOP MARK A293C/R  
 ITEM No. 0107  
 REPAIR SHEET 10-138  
 (L Shown)

SPAN 10  
C-B' SOUTH, TOP NORTH 359 B/R  
C-B' SOUTH, TOP SOUTH 359 B/L (AS SHOWN)  
C-B' SOUTH, BOTTOM NORTH 359 B/L

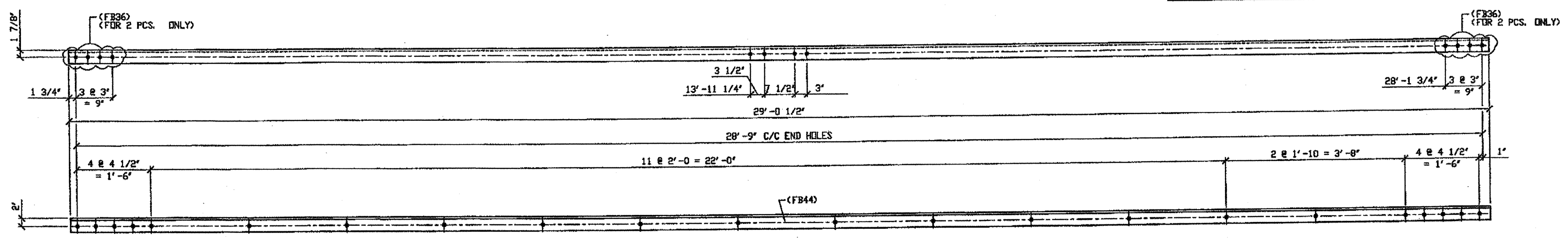
O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY
<b>Tri State Steel Construction Inc.</b> 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 <b>BRIDGE NO. CUY-10-16.13</b>			
DRAWN BY: _____ SCALE: NA		CHECKED BY: _____ DATE: _____	
PROFESSIONAL ENGINEER ALLEN R. LOWENKAMP 41284 OHIO			JOB NO. DRAWING NO. <b>359</b>

SPAN 11  
 A-B' NORTH, TOP NORTH 418A/R  
 A-B' NORTH, TOP SOUTH 418A/L  
 A-B' NORTH, BOTTOM SOUTH 418A/R  
 B-A' SOUTH, BOTTOM SOUTH 418A/R  
 B-A' SOUTH, BOTTOM NORTH 418A/L

- NOTES:**
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

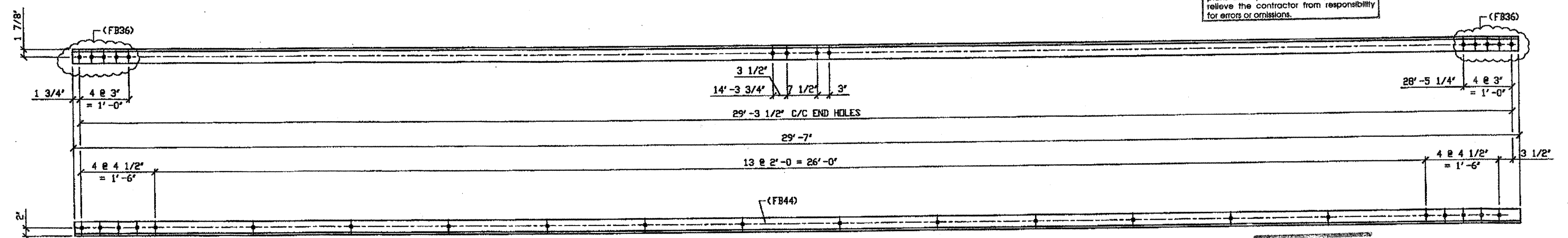
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		418A R/L	5	L 3 1/2 x 3 1/2 x 3/8	29	0 1/2	3/R, 2/L	1233
3		418B R/L	4	L 3 1/2 x 3 1/2 x 3/8	29	7	2R, 2L	
4								
5								
6				FIELD BOLTS				
7		FB36		1" DIA	0	2 1/2	NOTE 2	
8		FB44		1" DIA	0	3 1/2	NOTE 2	
9								
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



**5 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 418A R/L**  
 (L SHOWN)  
 ORIG SHIP DWG 380-BL140  
 ORIG SHIP MARK A380K R/L  
 REPAIR SHEET 11-117 & 234

O.D.O.T. DIST. 12	
ACCEPTED	2/3/02
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**4 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 418B R/L**  
 (R SHOWN)  
 ORIG SHIP DWG 380-BL141  
 ORIG SHIP MARK A380K R/L  
 REPAIR SHEET 11-124

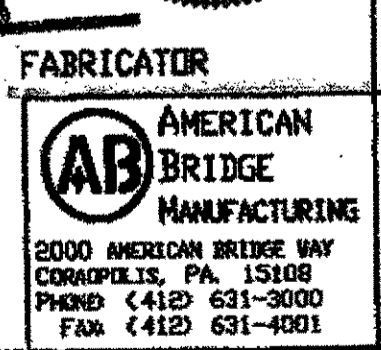
SPAN 11  
 B-C' NORTH, BOTTOM SOUTH 418B/R  
 B-C' NORTH, BOTTOM NORTH 418B/L  
 C-B' SOUTH, BOTTOM NORTH 418B/L  
 C-B' SOUTH, BOTTOM SOUTH 418B/R

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tdp/esc



DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

FABRICATOR  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 AMW 12/20/01  
 CHECKED BY: DATE  
 GAF 02/20/02

SHEET NUMBER: 418  
 AM JOB NUMBER: 800010

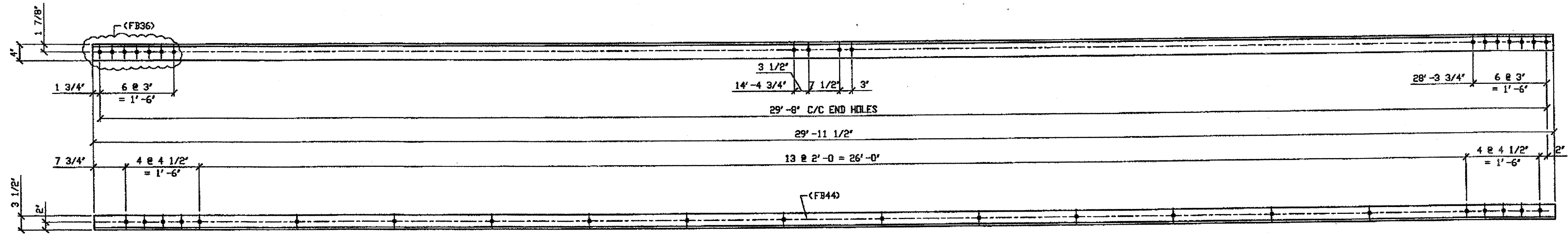
G:\Contractors\00000010\Drawings\418A.dwg  
 Save by rmp at 09:24pm Feb 25, 2002  
 Plot by gfos at 11:12am Feb 25, 2002  
 Model space plot + Scale = 1/12

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		419A	2	L 4 x 3 1/2 x 3/8	29	11 1/2		545
3		419B	1	L 3 1/2 x 3 1/2 x 3/8	29	3		249
4								
5								
6				FIELD BOLTS				
7		FB34	4	1" DIA	0	2 1/4	NOTE 2	5
8		FB36	22	1" DIA	0	2 1/2	NOTE 2	31
9		FB44	66	1" DIA	0	3 1/2	NOTE 2	106
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

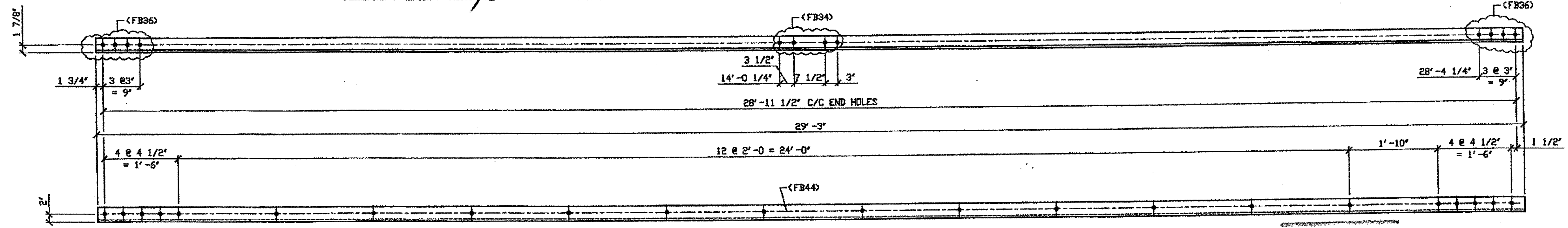
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 419A

SPAN II  
C-D' NORTH, BOTTOM SOUTH 419A  
D-C' SOUTH, BOTTOM SOUTH 419A

ORIG SHOP DWG 380-BL142  
ORIG SHOP MARK A380s  
REPAIR SHEET 11-131, 248



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 419B

SPAN II J-H' SOUTH, BOTTOM NORTH 419B

ORIG SHOP DWG 380-BL146  
ORIG SHOP MARK A380s  
REPAIR SHEET 11-276

G:\Contract\JUN080010\Drawings\419A.dwg  
 Save by psp at 03:28pm Feb 21, 2002  
 Plot by gfs at 11:58am Feb 26, 2002  
 Model Space Plot + Scale = 1/12

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY EDP/SS



DOT ITEM LINE NO. 0107  
DOT BID ITEM NO. 863E50000

**O.D.O.T. DIST. 12**

ACCEPTED	2/25/02
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**AMERICAN BRIDGE**  
MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROBERTS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

IN CHARGE DR. L. SMITH  
DRAWN BY: DATE  
AMV 12/20/01  
CHECK BY: DATE  
GAF 02/20/02

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROBERTS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

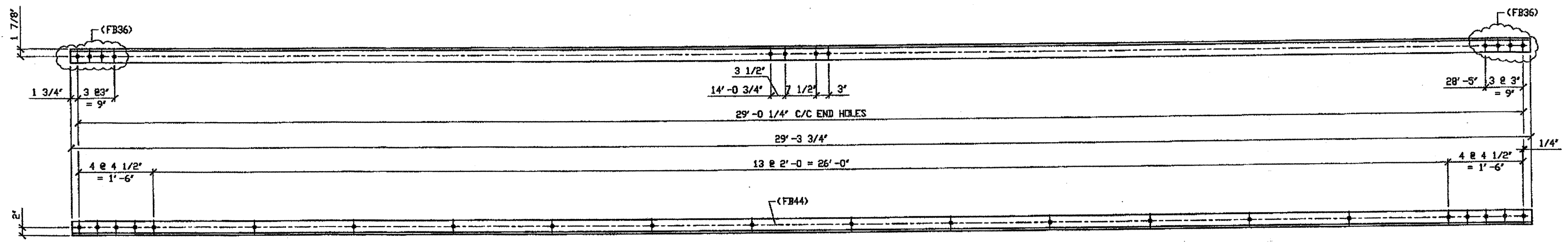
IN CHARGE DR. L. SMITH  
DRAWN BY: DATE  
AMV 12/20/01  
CHECK BY: DATE  
GAF 02/20/02

SHEET NUMBER: 419  
JOB NUMBER: 800010



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		420A	1	L 3 1/2 x 3 1/2 x 3/8	29	3 3/4		249
3		420B	1	L 3 1/2 x 3 1/2 x 3/8	30	2 1/4		257
4								
5								
6				FIELD BOLTS				
7		FB36	14	1" DIA	0	2 1/2	NOTE 2	20
8		FB44	44	1" DIA	0	3 1/2	NOTE 2	71
9								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

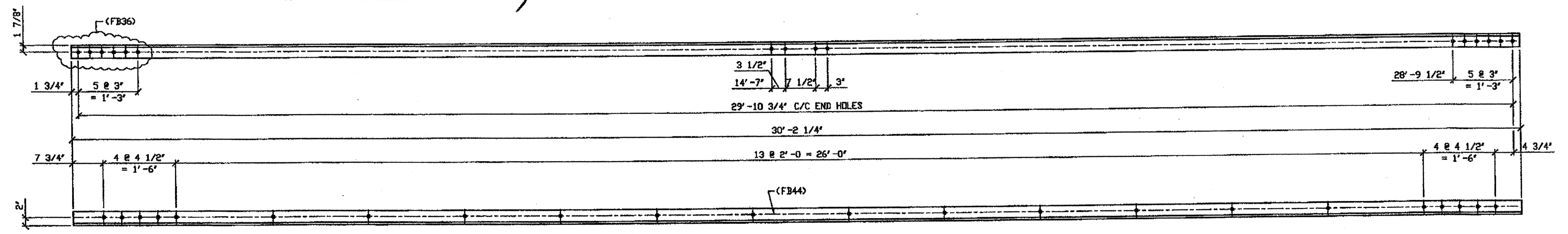
- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 420A

DRIG SHOP DWG 380-BL149  
DRIG SHOP MARK A380v  
REPAIR SHEET 11-168

SPAN II L-M' NORTH, BOTTOM SOUTH 420A



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 420B

DRIG SHOP DWG 380-BL152  
DRIG SHOP MARK A380cc  
REPAIR SHEET 11-316

SPAN II Q-P' SOUTH, BOTTOM SOUTH 420B

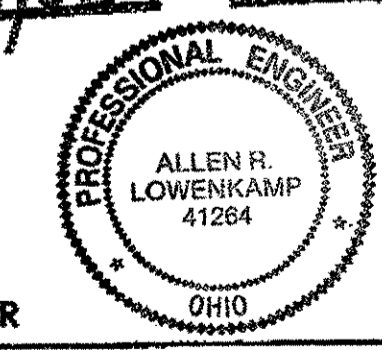
G:\Contracts\2002\000010\Drawings\A2420A.dwg  
 Save by rshp at 09:23am Feb 21, 2002  
 Plot by gshp at 11:33am Feb 25, 2002  
 Model Space plot - Scale = 1/12

O.D.O.T. DIST. 12

ACCEPTED	2/2/02 BSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY EJP/SS



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12508 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
8000 AMERICAN BRIDGE WAY  
CORADELIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

IN CHARGE OF L. SMITH  
DRAWN BY: DATED  
AMW 12/21/01  
CHECKED BY: DATED  
GAF 02/20/02

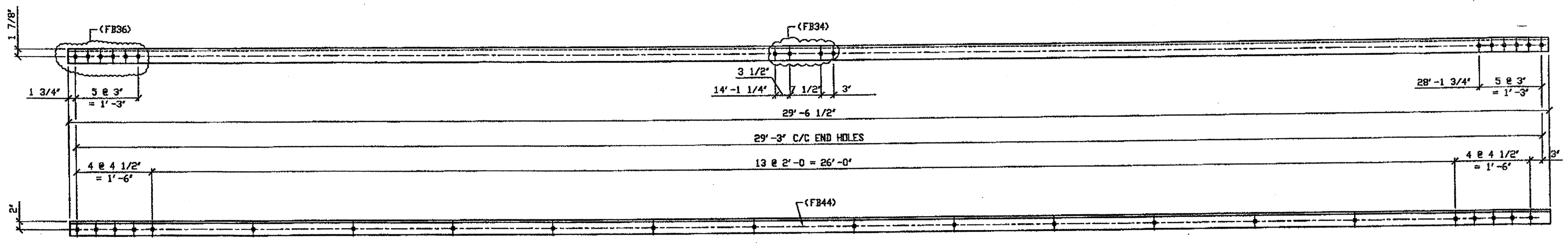
DOT ITEM LINE NO. 0107	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 11 REPAIRS	
SHEET NUMBER	420
ASH JOB NUMBER	800010

BILL OF MATERIAL

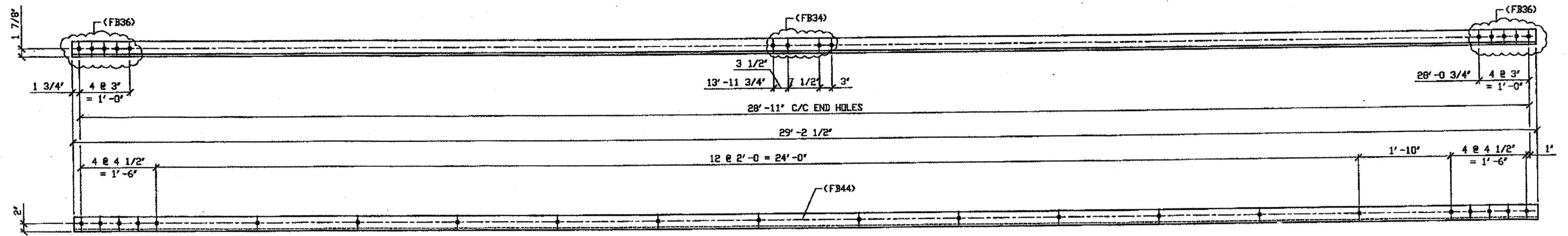
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL FULL LENGTH					
2		421A	1	L 3 1/2 x 3 1/2 x 3/8	29	6 1/2		251	
3		421B	2	L 3 1/2 x 3 1/2 x 3/8	29	2 1/2		497	
4									
5									
6				FIELD BOLTS					
7		FB34	12	1" DIA	0	2 1/4	NOTE 2	16	
8		FB36	21	1" DIA	0	2 1/2	NOTE 2	29	
9		FB44	66	1" DIA	0	3 1/2	NOTE 2	106	
PLATE		N/A	PIPE		N/A		FITTINGS		N/A
SHAPES		A36	FLGS.		N/A		BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE  $1 \frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ANY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 11 T-S' SOUTH, TOP SOUTH 421A



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 421A  
 ORIG SHOP DWG 380-BL154  
 ORIG SHOP MARK A380ad  
 REPAIR SHEET 11-328



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 421B  
 ORIG SHOP DWG 380-BL155  
 ORIG SHOP MARK A380ae R/L  
 REPAIR SHEET 11-208 & 335

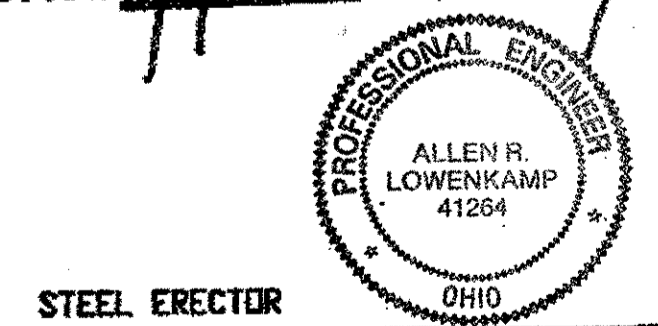
SPAN 11 T-U' NORTH, BOTTOM NORTH 421B  
 SPAN 11 T-U' SOUTH, BOTTOM NORTH 421B

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY LDP/SS

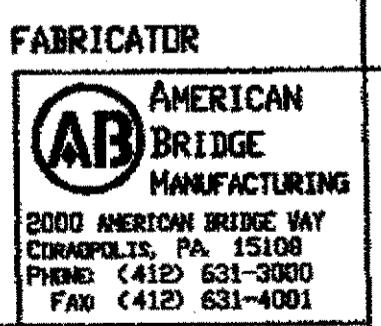
O.D.O.T. DIST. 12

ACCEPTED	2/2/04	BJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERTON BRIDGE WAY  
 COLUMBIANA, PA 15106  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

IN CHARGE OF: L SMITH  
 DRAWN BY: DATE: AMW 12/21/01  
 CHECKED BY: DATE: GAF 02/20/02

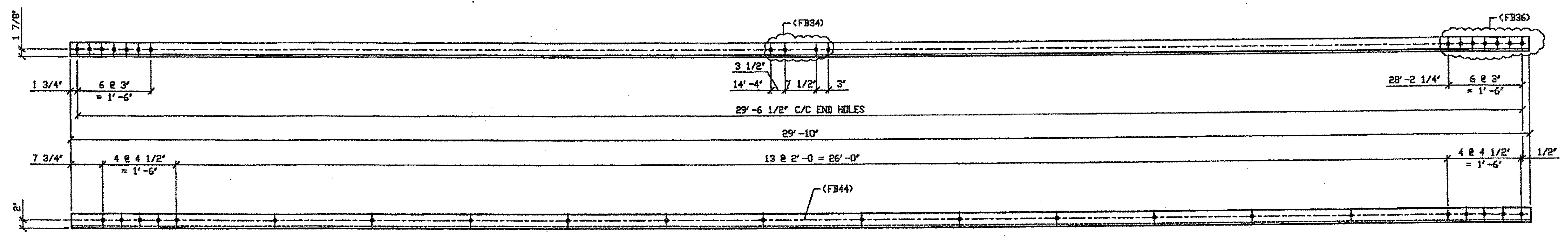
SHEET NUMBER: 421  
 ASH JOB NUMBER: 800010

G:\Contract\00V800010\Drawings\421A.dwg  
 Save by user at 03:24pm Feb 21, 2002  
 Plot by office at 11:14am Feb 25, 2002  
 Model Space plot + Scale = 1/12

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		422A	1	L 4 x 4 x 3/8	29	10		292
3								
4								
5								
6				FIELD BOLTS				
7		FB34	4	1" DIA	0	2 1/4	NOTE 2	5
8		FB36	7	1" DIA	0	2 1/2	NOTE 2	10
9		FB44	22	1" DIA	0	3 1/2	NOTE 2	35
10								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 422A  
 ORIG SHOP DWG 379-BL153  
 ORIG SHOP MARK A379s  
 REPAIR SHEET 11-194

SPAN 11 R-S' NORTH, BOTTOM NORTH 422A

G:\Constructs\2000\8000\Drawings\422A.dwg  
 Save by rshp at 09:24am Feb 21, 2002  
 Plot by gfos at 11:11am Feb 25, 2002  
 Model space plot - Scale = 1/12

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY tde/uss

O.D.O.T. DIST. 12  
 ACCEPTED [Signature] PSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 838-3015  
 FAX (440) 838-3335



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIAS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

IN CHARGE DR. L. SMITH  
 DRAWN BY: DATE  
 AMV 12/21/01  
 CHECKED BY: DATE  
 GAF 02/20/02

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

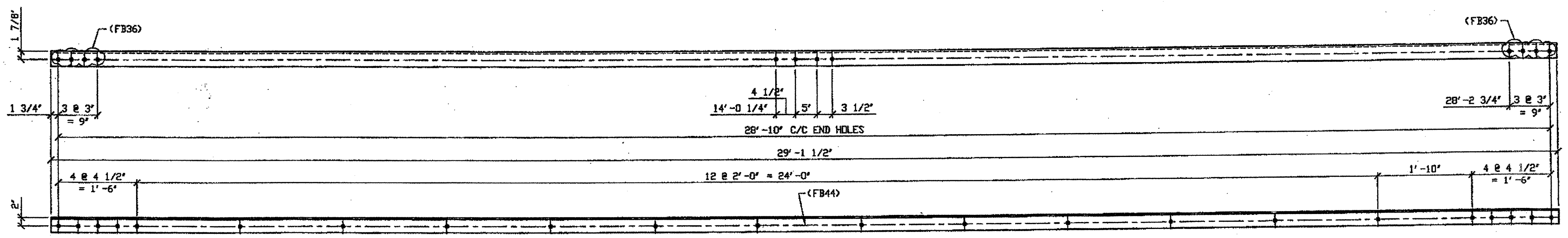
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

SHEET NUMBER:	422
AIN JOB NUMBER:	800010

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH	29	1 1/2	2R, 2L	990
2		462A R/L	4	L 3 1/2 X 3 1/2 X 3/8				
3								
4								
5								
6								
7								
8								
9								
10				FIELD BOLTS				
11		FB36	32	1" DIA	0	2 1/2	NOTE 2	45
12		FB44	44	1" DIA	0	3 1/2	NOTE 2	71
PLATE N/A		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS		NOTE 2		

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



4 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 462A R/L  
 ORIG SHOP DWG 293-BL132 (L SHOWN)  
 ORIG SHOP MARK A293c R/L  
 REPAIR SHEET 12-125

SPAN 12  
 D-E' NORTH, TOP NORTH 462A/R  
 D-E' NORTH, TOP SOUTH 462A/L  
 D-E' NORTH, BOTTOM SOUTH 462A/R  
 D-E' NORTH, BOTTOM NORTH 462A/L

RELEASED FOR CONSTRUCTION  
 DATE 1/9/02 BY tdp/tss

G:\Contracts\2000\8000\Drawings\462A.dwg  
 Save by rpr at 10:49am Nov 05, 2001  
 Plot by gfos at 01:14pm Dec 07, 2001  
 Model space plot + Scale = 1/12

ENGR. & CONTR. ...  
 DEC 10 2001

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/5/04 PSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41284  
 OHIO  
 FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 3000 AMERICAN BRIDGE WAY  
 CHARLOTTE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001  
 STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/30/01  
 CHECKED BY: DATE  
 GAF 10/23/01

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

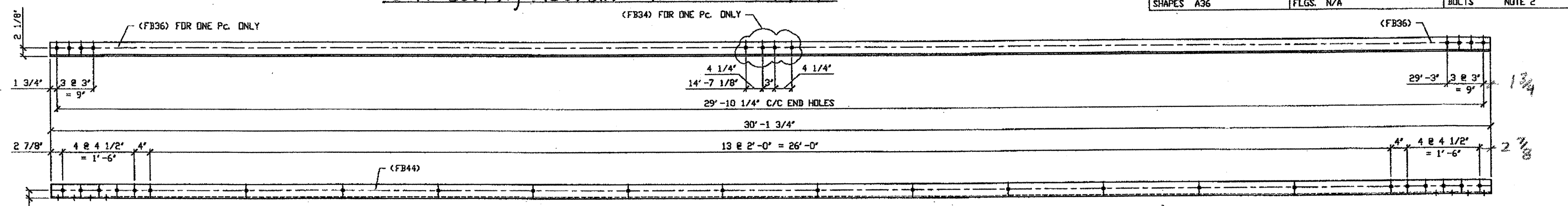
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 12 REPAIRS

SHEET NUMBER	462
AM JOB NUMBER	800010

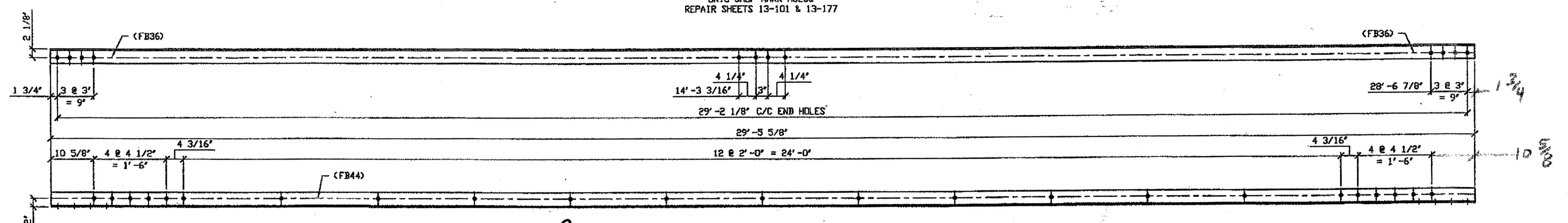
- NOTES:
1. OPEN HOLES ARE  $(1 \frac{1}{16} \text{")}$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 13  
 A-B' NORTH, BOTTOM NORTH 514 A  
 B-A' SOUTH, BOTTOM NORTH 514 A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL				
2		514A	2	L 3 1/2 X 3 1/2 X 3/8	30	1 3/4		512
3		514B	2	L 3 1/2 X 3 1/2 X 3/8	29	5 5/8		
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB34		1" DIA	0	2 1/4	NOTE 2	
13		FB36		1" DIA	0	2 1/2	NOTE 2	
14		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE	N/A			PIPE N/A			FITTINGS N/A	
SHAPES	A36			FLGS. N/A			BOLTS NOTE 2	



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 514A (Symmetrical)  
 DRIG SHOP DWG 520-BL157  
 DRIG SHOP MARK A520a  
 REPAIR SHEETS 13-101 & 13-177



2 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 514B  
 DRIG SHOP DWG 520-BL170  
 DRIG SHOP MARK A520f  
 REPAIR SHEETS 13-126

SPAN 13 F-G' NORTH, BOTTOM SOUTH 514 B  
 SPAN 13 G-F' SOUTH, BOTTOM SOUTH 514 B

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 HOESBORN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 Phone (412) 631-3000  
 Fax (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 03/28/01  
 CHECKED BY: DATE:  
 GAF 12/18/01

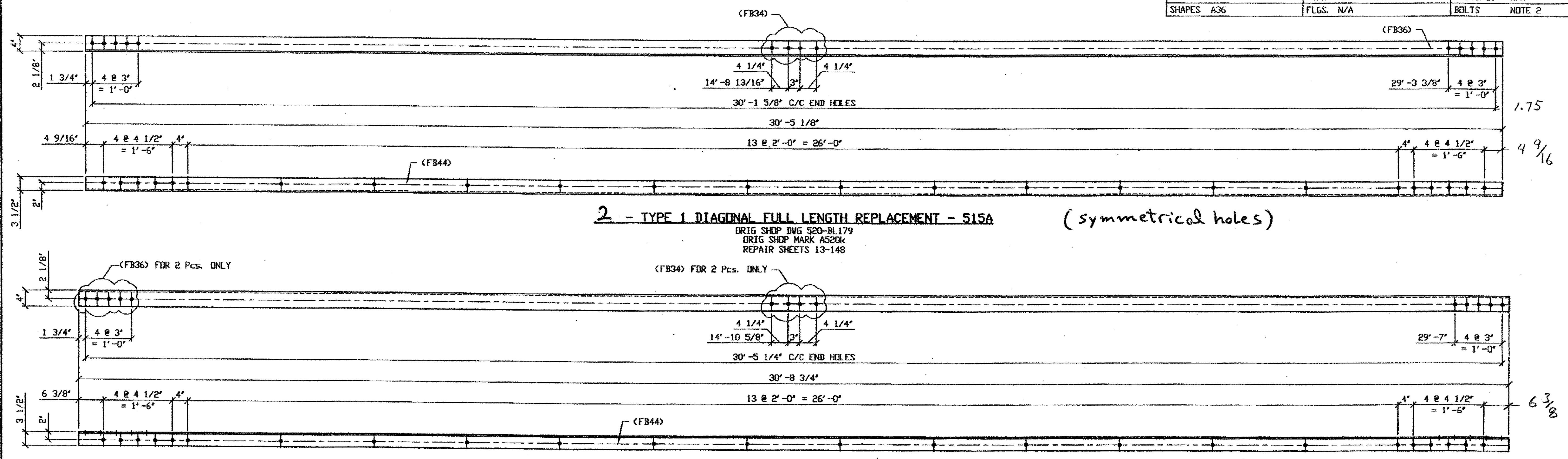
DOT ITEM LINE NO. 0107		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
SHEET NUMBER		514	
JOB NUMBER		800010	

G:\Contracts\800010\Drawings\DS14A.dwg  
 Save by rsmr 11:24am Feb 02, 2002  
 Plot by gfos at 09:04am Feb 04, 2002  
 Model space plot + Scale = 1/12

SPAN 13  
K-L' NORTH, BOTTOM NORTH 515A  
K-L' NORTH, BOTTOM SOUTH 515A

- NOTES:**
1. OPEN HOLES ARE  $1 \frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY. TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL				
2		515A	2	L 4 X 3 1/2 X 3/8	30	5 1/8		
3		515B	4	L 4 X 3 1/2 X 3/8	30	8 3/4		1119
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB34		1" DIA	0	2 1/4	NOTE 2	
13		FB36		1" DIA	0	2 1/2	NOTE 2	
14		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



SPAN 13  
H-J' NORTH, TOP NORTH 515 B  
H-J' NORTH, TOP SOUTH 515 B  
H-J' NORTH, BOTTOM NORTH 515 B  
H-J' NORTH, BOTTOM SOUTH 515 B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature] DSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNELIUS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

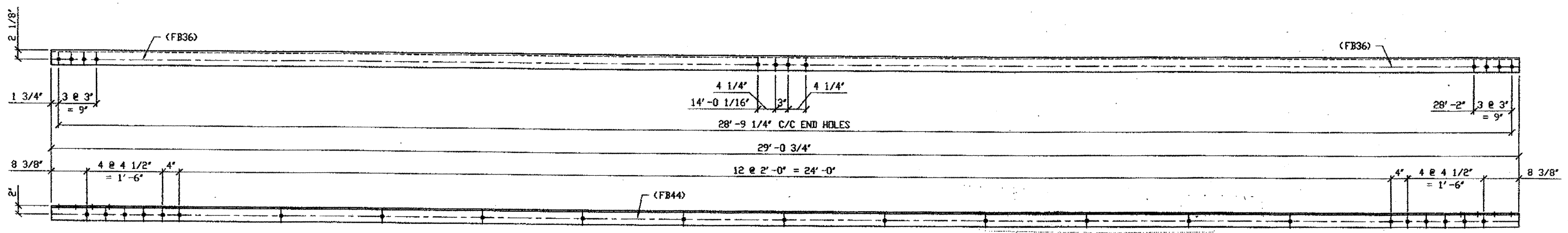
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 04/02/01  
 CHECKED BY: DATE  
 GAF 12/19/01

DOT ITEM LINE NO. 0107		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
SHEET NUMBER		515	
AM JOB NUMBER		800010	

G:\Contract\AR00010\Drawings\0515A.dwg  
 Save by rppr at 11:24am Feb 02 2002  
 Plot by gfcas at 09:04am Feb 04 2002  
 Model Space Plot + Scale = 1/12

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL FULL LENGTH				
2		527A R/L	6	L3 1/2 x 3 1/2 x 3/8	29	0 3/4	3/R, 3/L	1482
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14				FIELD BOLTS				
15		FB36	48	1" DIA	0	2 1/2	NOTE 2	67
16		FB44	92	1" DIA	0	3 1/2	NOTE 2	71
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



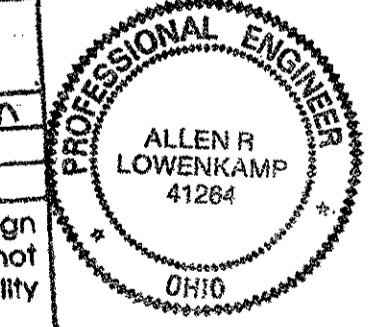
(L shown)

6 - TYPE 1 DIAGONAL FULL LENGTH REPLACEMENT - 527A R/L

DRG SHOP DWG 520-BL185  
DRG SHOP MARK AS200 R/L  
REPAIR SHEETS 13-158 & 13-232

- SPAN 13
- M-N' NORTH, TOP SOUTH 527AL (AS SHOWN)
  - M-N' NORTH, TOP NORTH 527AR
  - M-N' NORTH, BOTTOM NORTH 527AL
  - M-N' NORTH, BOTTOM SOUTH 527AR
  - N-M' SOUTH, TOP NORTH 527AR
  - N-M' SOUTH, BOTTOM NORTH 527AL

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORNELIUS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: GAF 1/18/02  
CHECKED BY: DATE: GAF 1/18/02

DOT ITEM LINE NO. 0107  
DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL		GAF

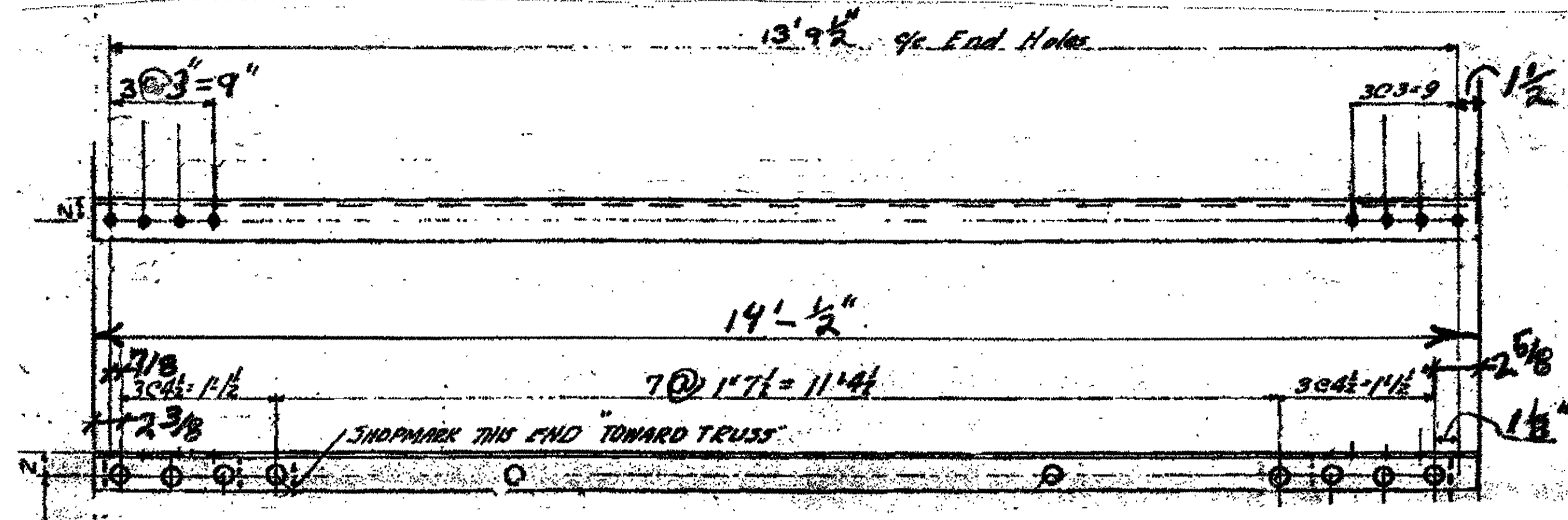
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 13 REPAIRS

SHEET NUMBER: 527  
JOB NUMBER: 800010

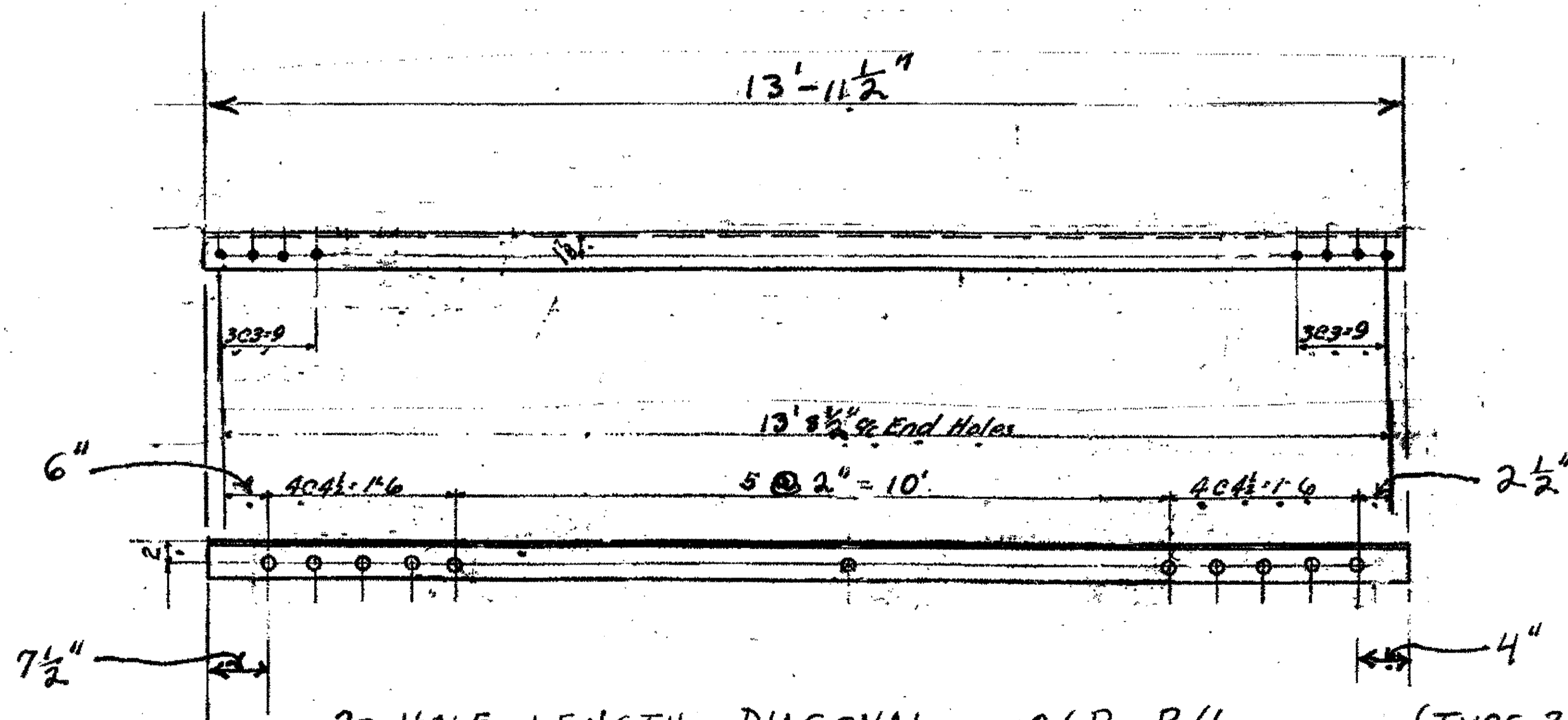
G:\Contract\JOA\0001\Drawings\0527A.dwg  
Save by gfas at 11:31am Feb 02, 2002  
Plot by gfas at 09:26am Feb 04, 2002  
Model Space Plot + Scale = 1/12

BILL OF MATERIALS

Piece No.	Qty.	Description
26 A/R/L	3	L 3 1/2 x 3 1/2 x 3/8 x 14'-1/2" IR - 2L
26 B/R/L	2	L 3 1/2 x 3 1/2 x 3/8 x 13'-11 1/2" 1R, 1L
		PLATE A36 SHAPES A36



3- HALF LENGTH DIAGONAL 26 A/R/L, (TYPE 2)  
 ORIGINAL SHOP MARK BL2 A16C<sup>R</sup>  
 SPAN 2 C-B' NORTH, TOP NORTH 26A/R (AS SHOWN)  
 SPAN 2 C-B' NORTH, TOP SOUTH 26A/L  
 SPAN 3 B-A' NORTH, TOP SOUTH 26A/L



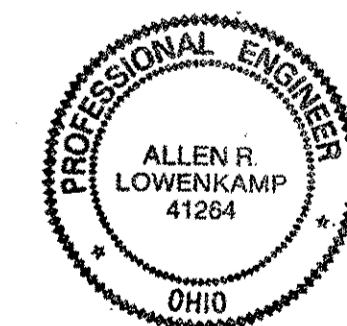
2- HALF LENGTH DIAGONAL 26 B R/L (TYPE 2)  
 ORIGINAL SHOP MARK BL63 A165a<sup>R</sup>  
 SPAN 7 H-J' NORTH, TOP SOUTH 26B/R (AS SHOWN)  
 SPAN 7 H-J' NORTH, TOP NORTH 26B/L

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED AS NOTED 2/5/24 D3M  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

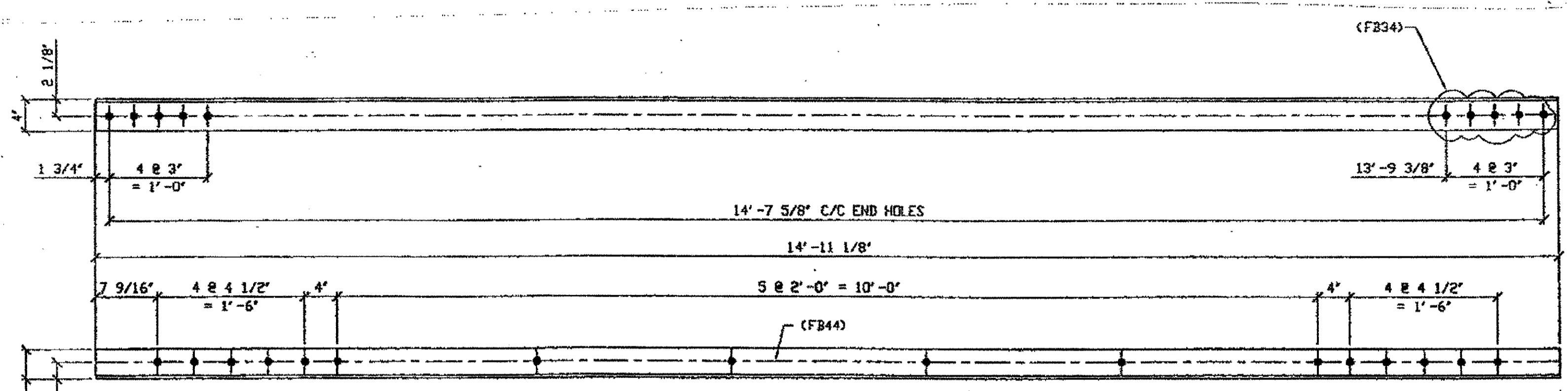
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE NO. CUY-10-16-13

DRAWN BY _____	CHECKED BY _____
SCALE NA	DATE _____

JOB NO. \_\_\_\_\_  
DRAWING NO. 26

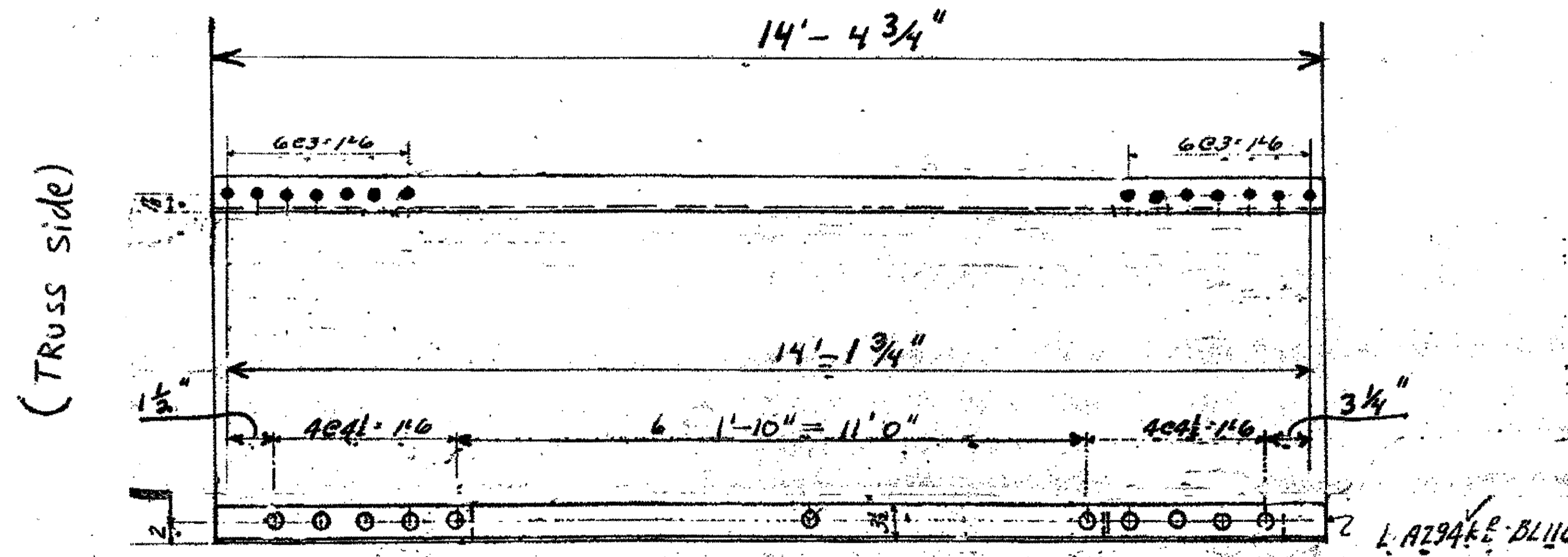




ONE - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 27A

ORIG SHOP DWG 521-BL177  
ORIG SHOP MARK AS215  
LINE ITEM No. 0111  
REPAIR SHEETS 13-142

SPAN 13 J-H' NORTH, BOTTOM NORTH 27A



ONE TYPE 2 DIAGONAL 1/2 LENGTH REPLACEMENT 27B

ORIGINAL SHOP MARK BL116 A 294K  
SPAN 9 E-F' SOUTH, BOTTOM SOUTH 27B

BILL OF MATERIALS

Piece No.	Qty.	Description
27 A	1	L 4 x 3 1/2 x 14'-11 1/8"
27 B	1	L 4 x 3 1/2 x 3/4" x 14'-4 3/4"
		PLATE A36 SHAPES A36

NOTES:

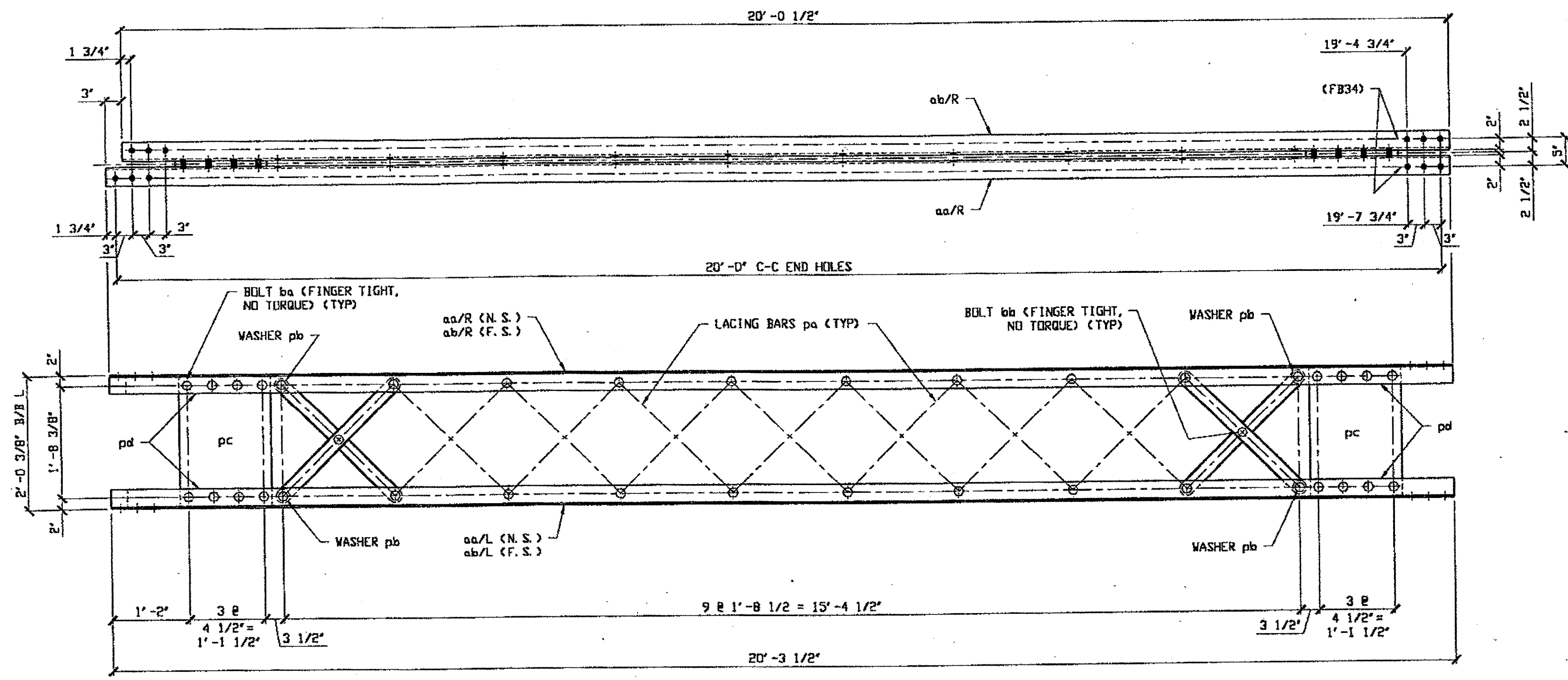
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED 8/5/07 D.J.M.  
NOT ACCEPTED



NO.	REVISION	DATE	BY
Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
DRAWN BY:		CHECKED BY:	
SCALE: NA		DATE:	
			DRAWING NO. 27

Last modified at \$(EDTIME,??) on \$(EDTIME,??) - Last plotted by gfooster at f an on Thu Oct 05, 2000



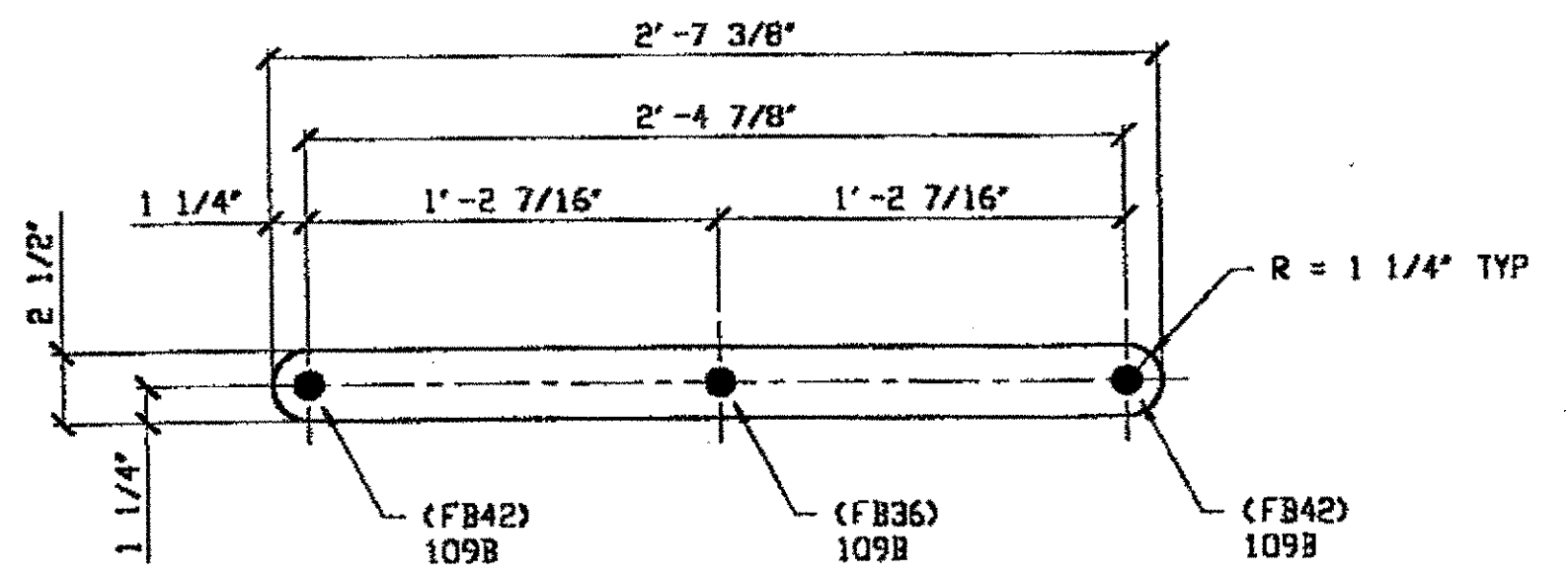
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		109A	1	TYPE 2 DIAG COMPLETE				1081
3		aa R/L	2	L 3 1/2 X 3 1/2 X 3/8	20	3 1/2		345
4		ab R/L	2	L 3 1/2 X 3 1/2 X 3/8	20	0 1/2		341
5		pa	18	BAR 2 1/2 X 1/2				196
6		pb	4	PL 1/2 X 2 1/2 OD X 1 1/16 ID				2
7		pc	2	PL 7/16 X 16 1/2	1	11 1/2		96
8		pd	4	PL 9/16 X 3	1	4 1/2		32
9		ba	36	1" DIA HVY HEX BOLT	0	3 1/4	NOTE 2	56
10				W/ HVY HEX NUT & WASHER				
11		bb	9	1" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	13
12				W/ HVY HEX NUT & WASHER				
13								
14		109B	16	LACING BAR				
15			16	BAR 2 1/2 X 1/2	2	7 3/8		175
16								
17		109C	8	WASHER				
18			8	PL 1/2 X 2 1/2 OD X 1 1/16 ID				5
19								
20				FIELD BOLTS				
21		FB34	12	1" DIA	0	2 1/4	NOTE 2	
22		FB36	16	1" DIA	0	2 1/2	NOTE 2	
23		FB42	32	1" DIA	0	3 1/4	NOTE 2	
24								
25								
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

(1) TYPE 2 DIAGONAL HALF LENGTH COMPLETE REPLACEMENT 109A

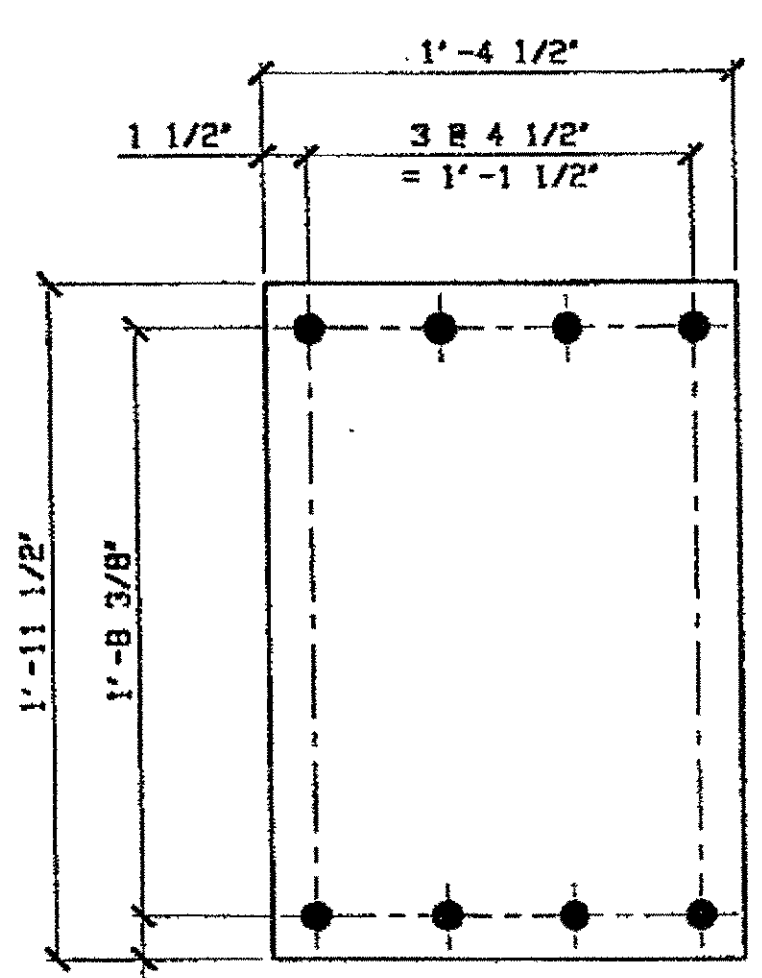
ORIG SHOP DWG 16  
ORIG SHOP MARK B330 (COMPLETE)  
ITEM LINE NO. 0111

W & LE G-F NORTH, COMPLETE REPLACEMENT

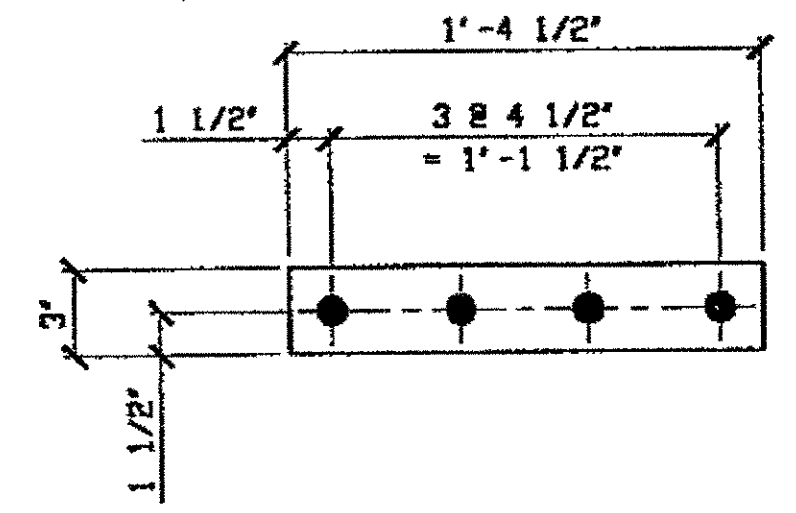
- NOTES:
- OPEN HOLES ARE 1/16" #
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.



LACING BAR pa  
(18 REQUIRED)  
(16) LACING BAR 109B  
ORIG SHOP DWG 16  
ORIG SHOP MARK P13h  
ITEM LINE NO. 0138



DETAIL PLATE pc  
(2 REQUIRED)  
ORIG SHOP DWG 16  
ORIG SHOP MARK P13g



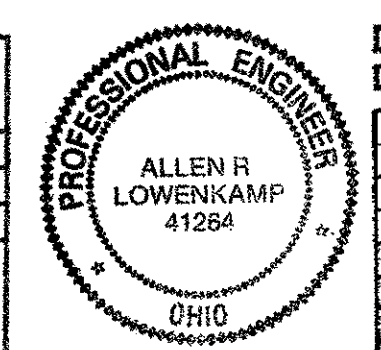
DETAIL PLATE pd  
(4 REQUIRED)  
ORIG SHOP DWG 16  
ORIG SHOP MARK P13h

WASHER pb  
(4 REQUIRED)  
(8) WASHER 109C  
ITEM LINE NO. 0138

O.D.O.T. DIST. 12

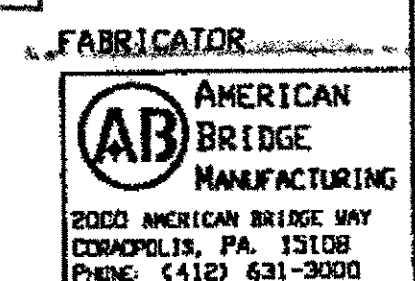
ACCEPTED	2/5/00	DJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0111 & 0138  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY



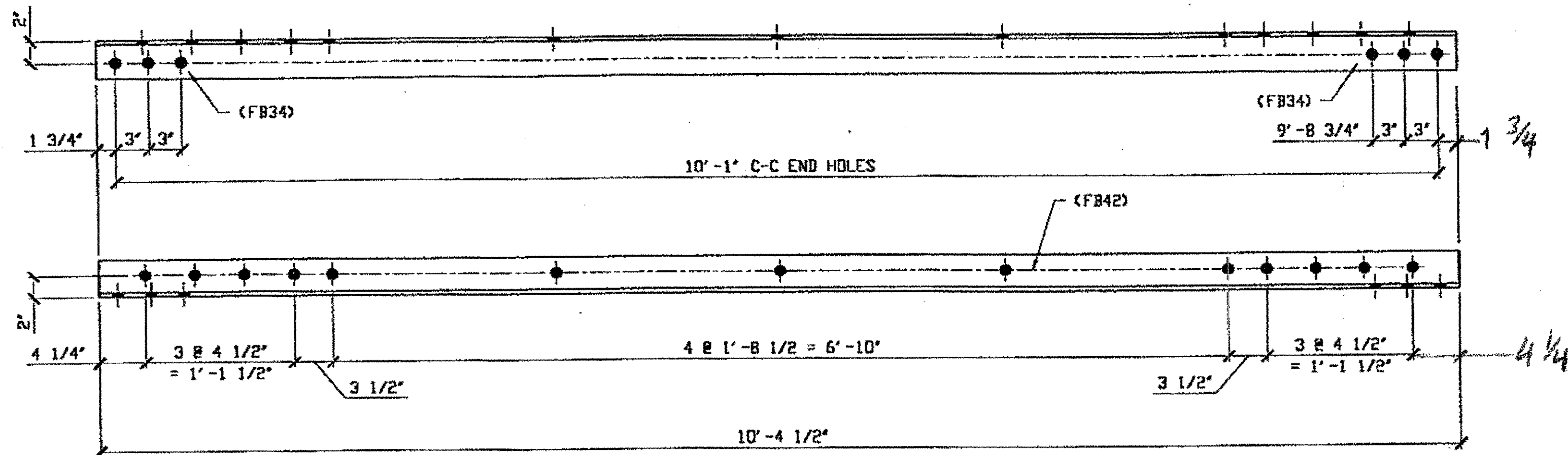
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
W & LE SPAN REPAIR

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: GAF 09/09/00  
CHECKED BY: DATE: CWG 09/26/00  
SHEET NUMBER: 109  
JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
DATE 10/9/00 BY *cuu*

259



(2) TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT 111A

ORIG SHOP DVG 16-BL31  
ORIG SHOP MARK A16k

*WYLE Q-R NORTH, Bottom NORTH 111A*  
*WYLE Q-R NORTH, Bottom SOUTH 111A*

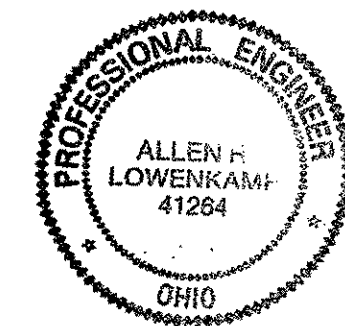
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1							
2		111A	1 TYPE 2 DIAG				
3			1 L 3 1/2 X 3 1/2 X 3/8	10	4 1/2		BB
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16			FIELD BOLTS				
18		FB34	6 1" DIA	0	2 1/4	NOTE 2	
19		FB42	13 1" DIA	0	3 1/4	NOTE 2	
20							
21							
22							
23							
24							
25							
PLATE		N/A	PIPE	N/A	FITTINGS	N/A	
SHAPES		A36	FLGS.	N/A	BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

★ 4 BILL OF MATERIAL FOR ONE UNIT ONLY

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0111  
DOT BID ITEM NO. B63C50000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 W & LE SPAN REPAIR			
SHEET NUMBER 111			ABN JOB NUMBER 800010

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROE, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

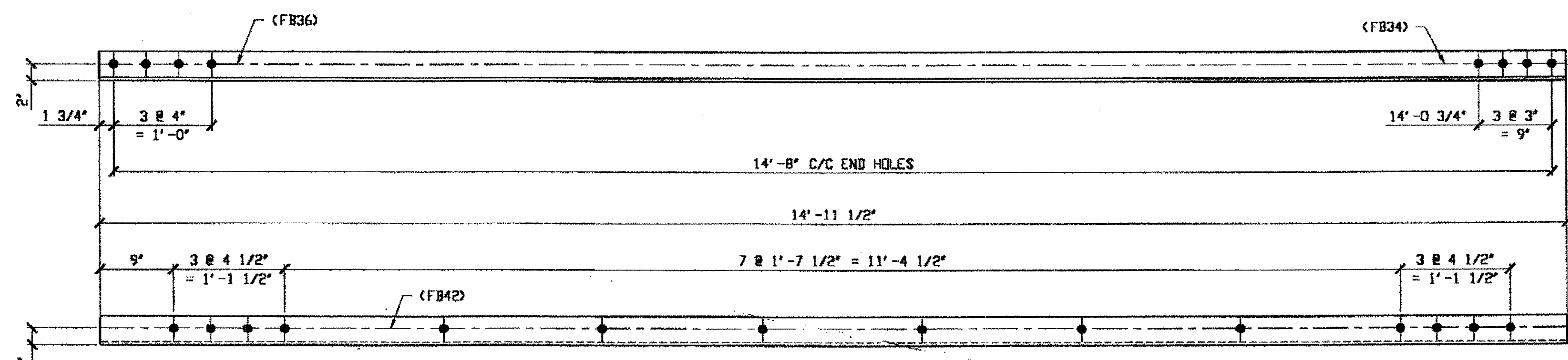
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: GAF 09/06/00  
CHECKED BY: DATE: GVG 09/27/00

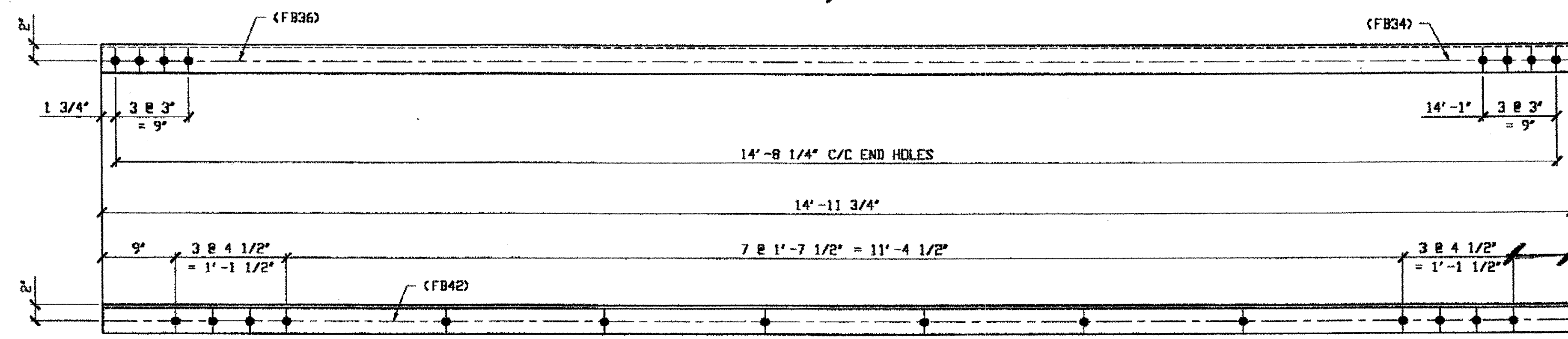
RELEASED FOR CONSTRUCTION  
DATE 10/9/00 BY cue

Last modified at 01:10pm on Tue Oct 03, 2000 - Last plotted by cfooster a 16am on Thu Oct 05, 2000

at 04:12pm on Mon Feb 05, 2001  
 Reprinted at 01:13pm on Tue Jan 09, 2001 - Last plotted by Gfo  
 Last modified



**1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 211A**  
 ORIG SHOP DWG 16-BL6  
 ORIG SHOP MARK A16H R/L  
 LINE ITEM No. 0111  
*SPAN 3 E-D' NORTH, BOTTOM SOUTH 211A*



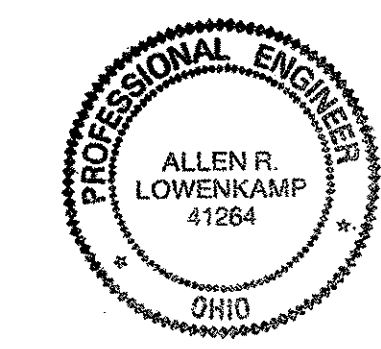
**2 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 211B R/L**  
 ORIG SHOP DWG 16-BL12  
 ORIG SHOP MARK A16W R/L  
 LINE ITEM No. 0111  
*SPAN 3 L-K' NORTH, TOP NORTH 211B/R (AS SHOWN)*  
*SPAN 3 L-K' NORTH, BOTTOM NORTH 211B/L*

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT				
2		211A	1	L 3 1/2 X 3 1/2 X 3/8	14	11 1/2		127
3		211B R/L	2	L 3 1/2 X 3 1/2 X 3/8	14	11 3/4	1R/1L	255
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB34	12	1" DIA	0	2 1/4	NOTE 2	16
19		FB36	12	1" DIA	0	2 1/2	NOTE 2	17
20		FB42	42	1" DIA	0	3 1/4	NOTE 2	65
PLATE N/A				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS NOTE 2			

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY *tdp*

- NOTES:
- OPEN HOLES ARE  $\phi 1 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED *2/5/01 dsm*  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



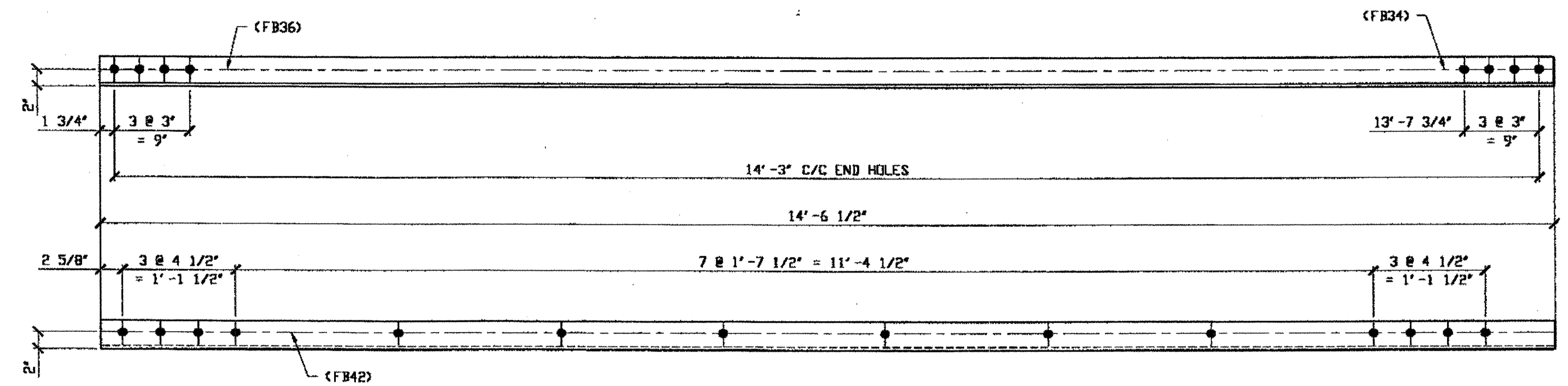
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, OH 45208  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

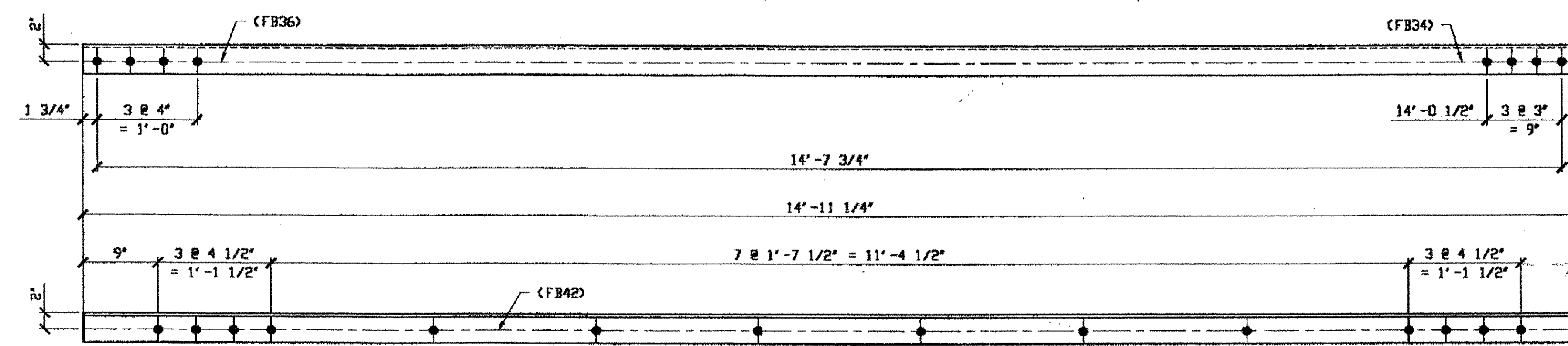
IN CHARGE: **DR. L. SMITH**  
 DRAWN BY: **RAS** DATE: **1/04/01**  
 CHECKED BY: **GAF** DATE: **01/08/01**

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. B63E30000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
SHEET NUMBER: <b>211</b>		JOB NUMBER: <b>800010</b>	

Reprinter at 03:49pm on Tue Jan 09, 2001 - last plotted by Gfo at 04:12pm on Mon Feb 05, 2001



**1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 212A**  
 ORIG SHIP DWG 17-BLB  
 ORIG SHIP MARK A16 R/L  
 LINE ITEM No. 0111  
**SPAN 3 J-K' SOUTH, BOTTOM NORTH**



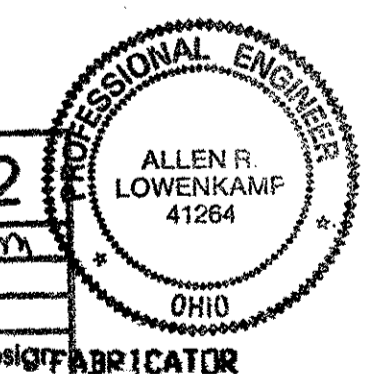
**2 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 212B R/L**  
 ORIG SHIP DWG 16-BL11  
 ORIG SHIP MARK A16 R/L  
 LINE ITEM No. 0111  
**SPAN 3 K-L' SOUTH, TOP NORTH 212B/L**  
**SPAN 3 K-L' SOUTH, TOP SOUTH 212B/R (AS SHOWN)**

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT					
2		212A	1	L 3 1/2 X 3 1/2 X 3/8	14	6 1/2		124	
3		212B R/L	2	L 3 1/2 X 3 1/2 X 3/8	14	11 1/4	IR, IL	254	
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17				FIELD BOLTS					
18		FB34	12	1" DIA	0	2 1/4	NOTE 2	16	
19		FB36	12	1" DIA	0	2 1/2	NOTE 2	17	
20		FB42	28	1" DIA	0	3 1/4	NOTE 2	44	
PLATE	N/A			PIPE	N/A		FITTINGS	N/A	
SHAPES	A36			FLGS.	N/A		BOLTS	NOTE 2	

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY tdp

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

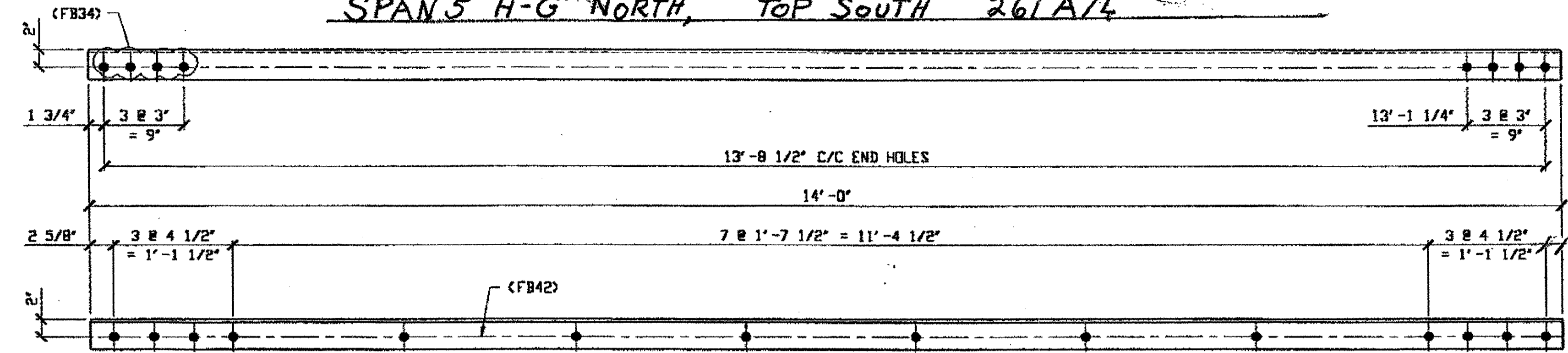


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE HWY  
 COLUMBUS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

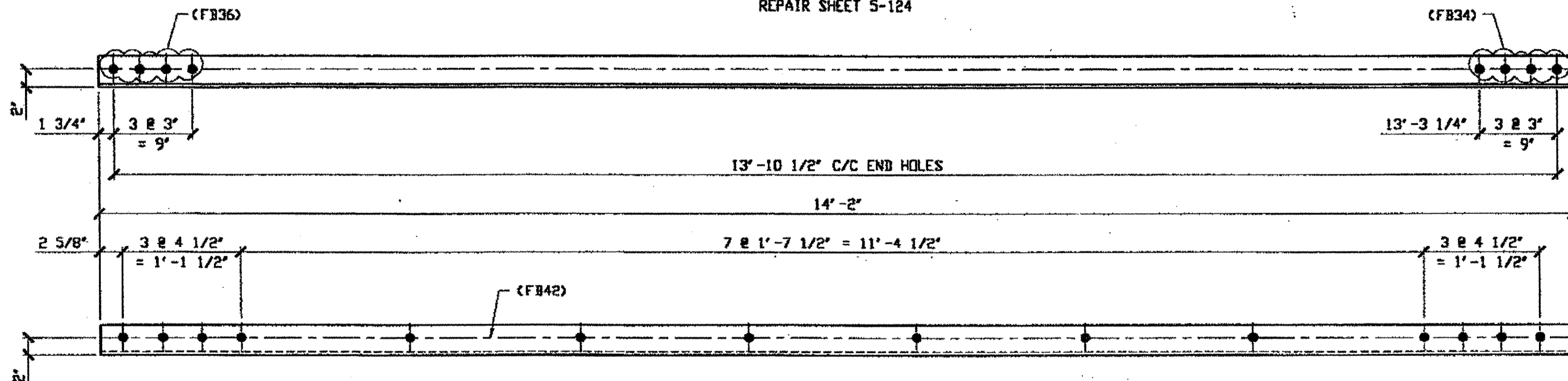
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E0000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
SHEET NUMBER: 212		ADM. JOB NUMBER: 800010	

SPAN 5 H-G' NORTH, TOP NORTH 261A/R (AS SHOWN)  
 SPAN 5 H-G' NORTH, TOP SOUTH 261A/4



2 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 261A R/L

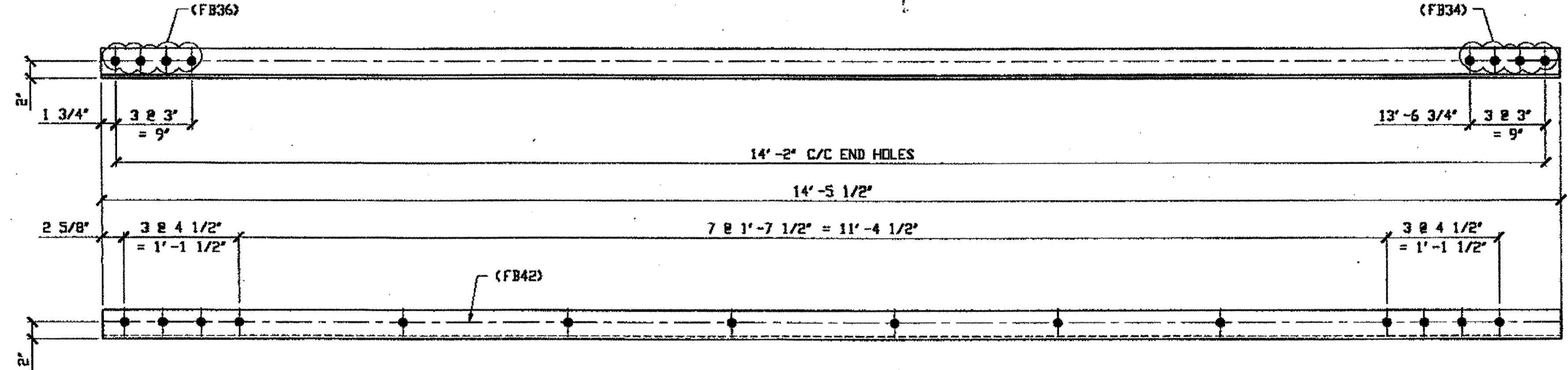
ORIG SHOP DWG 85-BL33  
 ORIG SHOP MARK A85d R/L  
 REPAIR SHEET 5-124



1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 261B

ORIG SHOP DWG 85-BL32  
 ORIG SHOP MARK A85c  
 REPAIR SHEET 5-156

SPAN 5 Q-P' NORTH, BOTTOM SOUTH 261B



1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 261C

ORIG SHOP DWG 16-BL1  
 ORIG SHOP MARK A16b  
 REPAIR SHEET 5-200

SPAN 5 K-J' SOUTH, BOTTOM NORTH 261C

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF LENGTH				
2		261A R/L	2	L 3 1/2 X 3 1/2 X 3/8	14	0	1R/1L	238
3		261B	1	L 3 1/2 X 3 1/2 X 3/8	14	2		120
4		261C	1	L 3 1/2 X 3 1/2 X 3/8	14	5 1/2		123
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB34	16	1" DIA	0	2 1/4	NOTE 2	21
19		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
20		FB42	42	1" DIA	0	3 1/4	NOTE 2	65
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY tdp

NAT'L ENGR. & CONTR. CO.

By tdp/tss

MAR 26 2001

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/5/01 D37M  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONROESVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/02/01  
 CHECKED BY: DATE  
 GAF 03/13/01

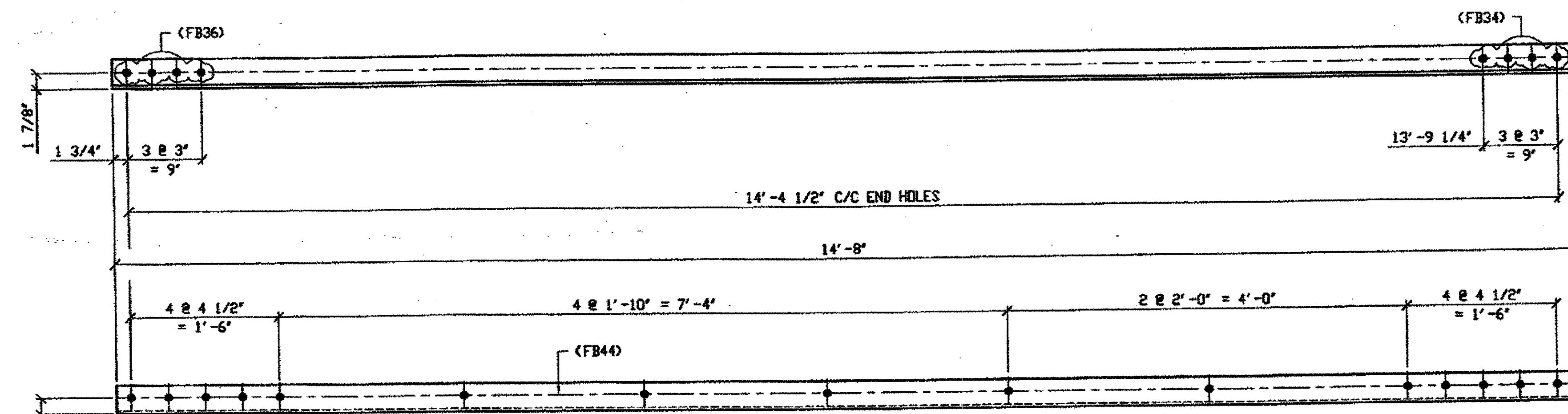
DOT ITEM LINE NO. 0111	DOT BID ITEM NO. 863250000
NO. DATE	DESCRIPTION REVISIONS
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS	
SHEET NUMBER: 261	ADM JOB NUMBER: 800010

Last modified by r... on Wed Mar 21, 2001 - Last plotted by Goster at 09:05am on Fri Mar 23, 2001

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF LENGTH				
2		299A	1	L 3 1/2 X 3 1/2 X 3/8	14	8		125
3		299B/R	3	L 3 1/2 X 3 1/2 X 3/8	14	5	2 R/1	
4								
5								
6				FIELD BOLTS				
7								
8		FB34		1" DIA	0	2 1/4	NOTE 2	
9		FB36		1" DIA	0	2 1/2	NOTE 2	
10		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

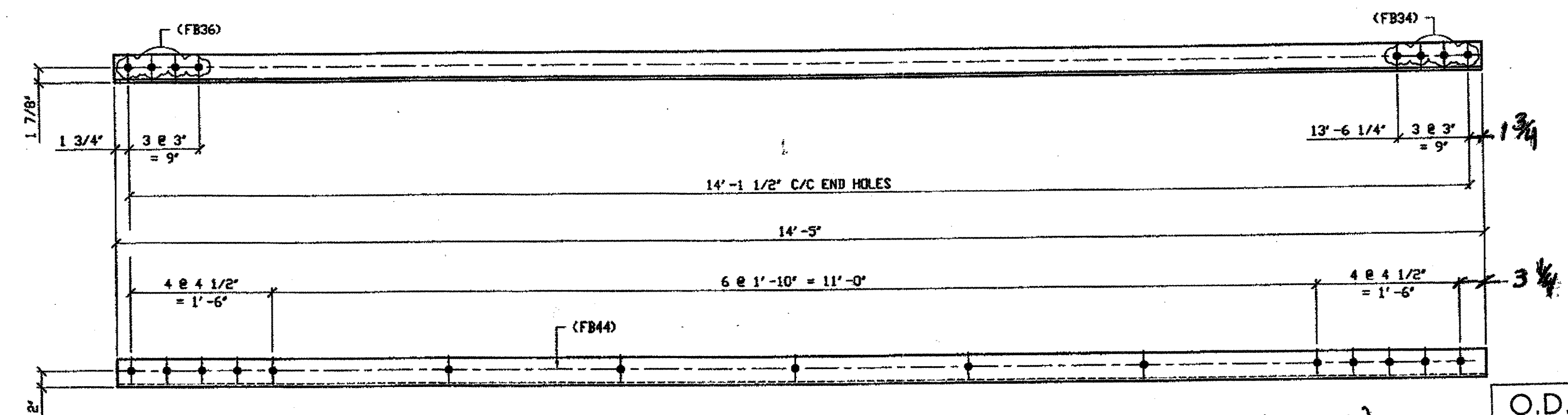
- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 299A**

DRIG SHOP DRAWING 165-BL59  
DRIG SHOP MARK A165ac  
REPAIR SHEET 7-128

*SPAN 7 L-M' SOUTH, BOTTOM NORTH 299A*

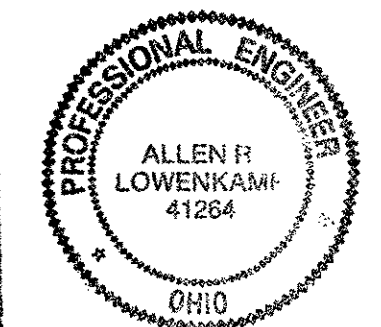


**3 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 299B, R/L (R SHOWN)**

DRIG SHOP DRAWING 165-BL53  
DRIG SHOP MARK A165s  
REPAIR SHEET 7-174

*SPAN 7 A-B' SOUTH, BOTTOM NORTH 299B/R*  
*SPAN 7 A-B' SOUTH, BOTTOM SOUTH 299B/L*  
*SPAN 7 A-B' SOUTH, TOP SOUTH 299B/R*

**RELEASED FOR CONSTRUCTION**  
DATE 6/21/01 BY tdf



**O.D.O.T. DIST. 12**  
ACCEPTED AS NOTED 2/5/04 RSM  
NOT ACCEPTED

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALANEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

**FABRICATOR**  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIUS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001  
IN CHARGE: L. SMITH  
DRAWN BY: RAS  
DATE: 04/27/01  
CHECKED BY: GAF  
DATE: 05/15/01

DOT ITEM LINE NO. 0111  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

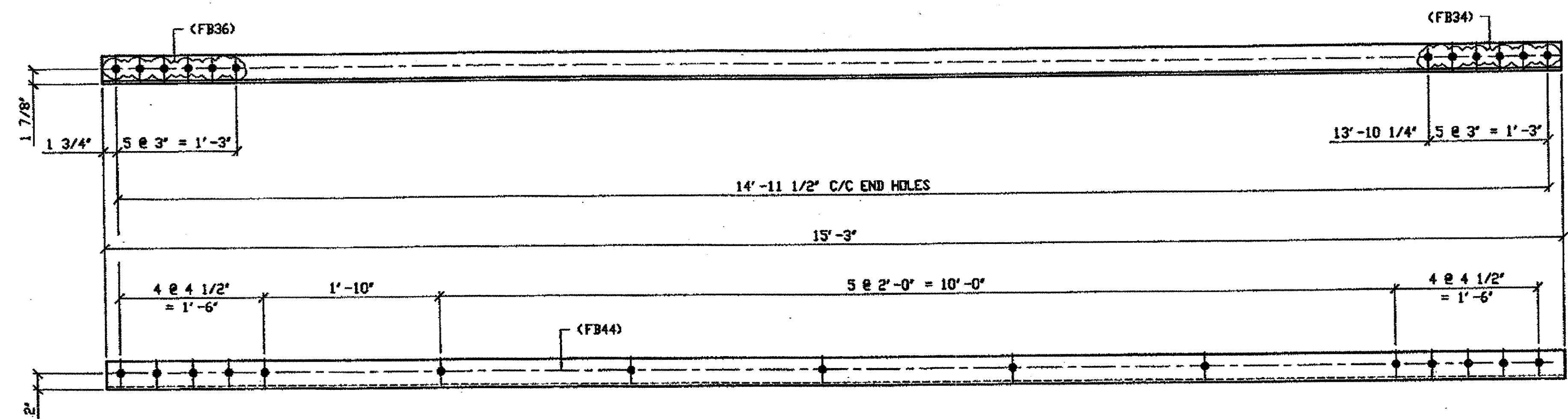
SHEET NUMBER: 299  
JOB NUMBER: 800010

Last modified by reprinter at \$(EDTIME,??) - I - Last plotted by Reprinter at 10:58am on Wed May 16, 2001

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL HALF LENGTH					
2		300A		L 3 1/2 X 3 1/2 X 3/8	15	3			
3		300B	1	L 3 1/2 X 3 1/2 X 3/8	14	10 1/2		126	
4									
5									
6									
7				FIELD BOLTS					
8		FB34		1" DIA	0	2 1/4	NOTE 2		
9		FB36		1" DIA	0	2 1/2	NOTE 2		
10		FB44		1" DIA	0	3 1/2	NOTE 2		
PLATE N/A					PIPE N/A		FITTINGS N/A		
SHAPES A36					FLGS. N/A		BOLTS NOTE 2		

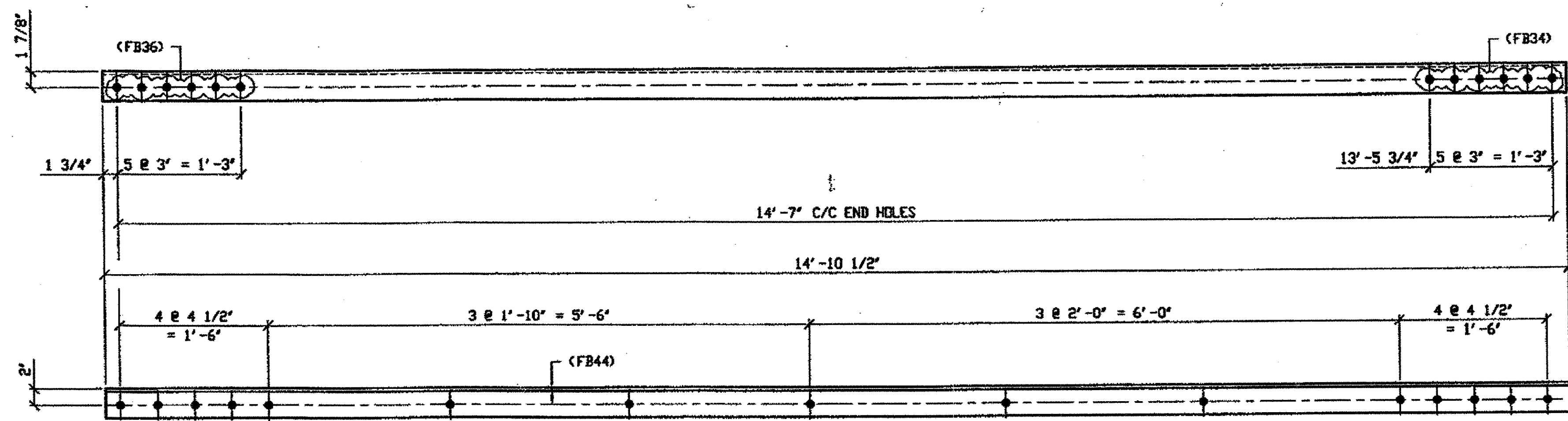
- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**2 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 300A**

ORIG SHIP DRAWING 165-BL55  
ORIG SHIP MARK A165x  
REPAIR SHEET 7-180

*SPAN 7 B-C' SOUTH, BOTTOM NORTH 300A*  
*SPAN 7 B-C' SOUTH, TOP SOUTH 300A*



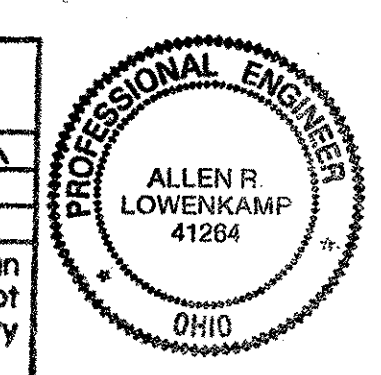
**1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 300B**

ORIG SHIP DRAWING 165-BL56  
ORIG SHIP MARK A165y  
REPAIR SHEET 7-196

*SPAN 7 C'-B NORTH, TOP NORTH 300B (N. Interior Side)*

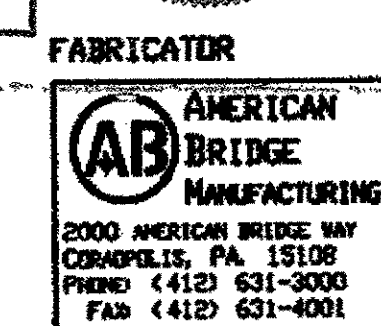
RELEASED FOR CONSTRUCTION  
DATE 6/21/01 BY tdp

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED 2/5/01 BSM  
NOT ACCEPTED



DOT ITEM LINE NO. 0111  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	



STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
**SPAN 7 REPAIRS**

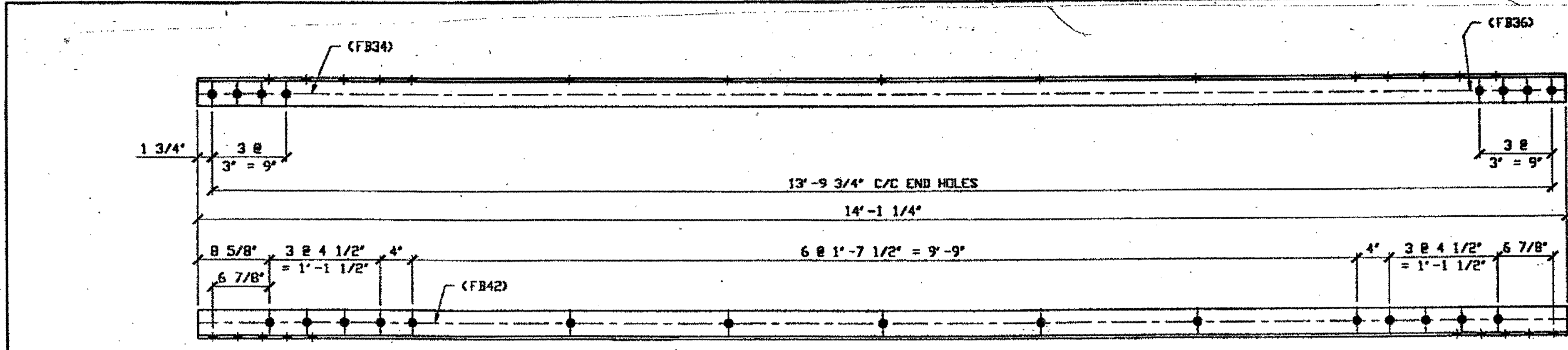
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: RAS  
DATE: 04/27/01  
CHECKED BY: GAF  
DATE: 05/15/01

SHEET NUMBER: 300  
JOB NUMBER: 800010

Last modified by repringer at 11:04am on Wed May 16, 2001

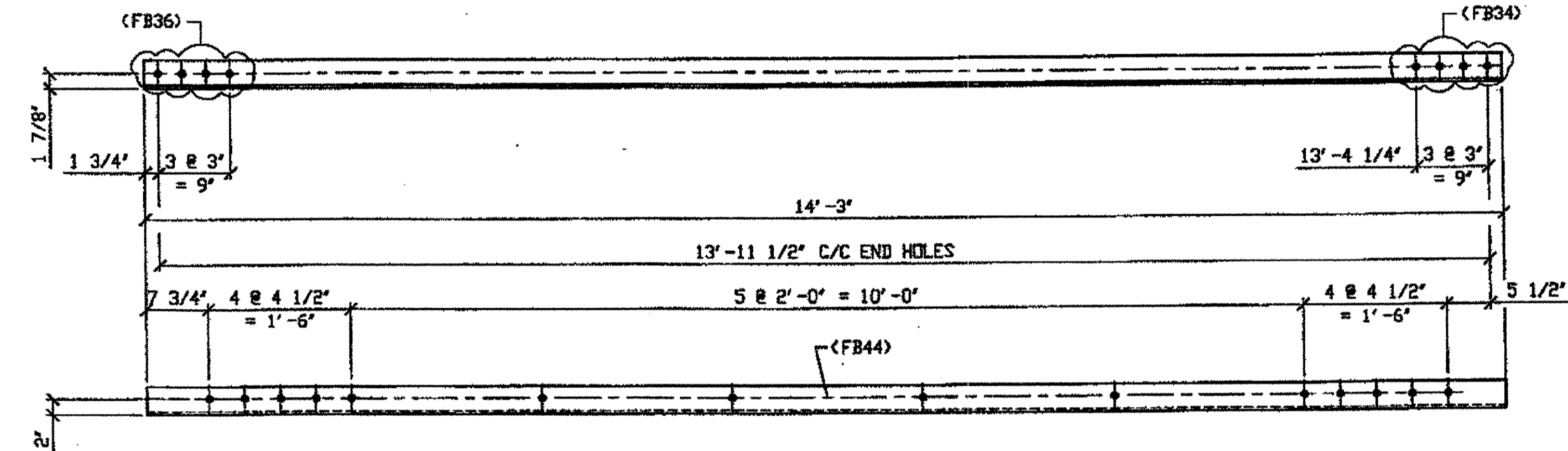




(1) TYPE 2 DIAG. HALF LENGTH REPLACEMENT-341A

SPAN 1, E-D' NORTH, Bottom South 341A

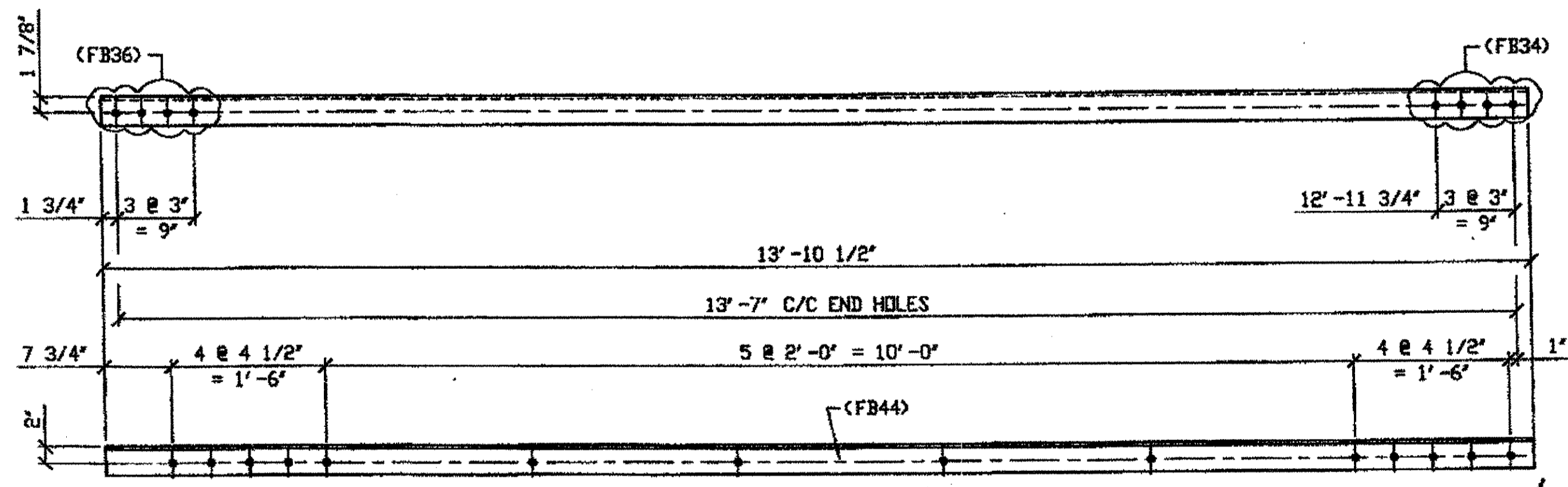
ORIG SHOP DWG 287-BL94  
ORIG SHOP MARK A287v  
ITEM LINE No. 0111



1 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 341B

SPAN 9 M-N' SOUTH, Bottom North 341B

ORIG SHOP DWG 165-BL65  
ORIG SHOP MARK A165sq R/L  
DOT ITEM No. 0111  
REPAIR SHEET 9-225



4 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 341C R/L

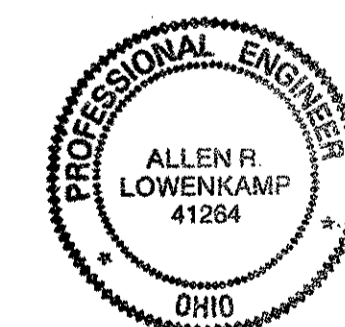
SPAN 10 D-C' NORTH, TOP NORTH 341C/R  
SPAN 10 D-C' NORTH, TOP SOUTH 341C/L

ORIG SHOP DWG 165-BL64  
ORIG SHOP MARK A165sq R/L  
DOT ITEM No. 0111  
REPAIR SHEET 9-156

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NL. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1									
2		341A	1	L 3 1/2 X 3 1/2 X 3/8	14	1 1/4			
3									
4				TYPE 2 DIAGONAL HALF LENGTH					
5		341B	1	L 3 1/2 X 3 1/2 X 3/8	14	3		121	
6		341C R/L	4	L 3 1/2 X 3 1/2 X 3/8	13	10 1/2	2R-2L		
7									
8									
9									
10				FIELD BOLTS					
11		FB34		1" DIA	0	2 1/4	NOTE 2		
12		FB36		1" DIA	0	2 1/2	NOTE 2		
13		FB44		1" DIA	0	3 1/2	NOTE 2		
14									
PLATE		N/A	PIPE		N/A		FITTINGS		N/A
SHAPES		A36	FLGS.		N/A		BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/3/07 PSM  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

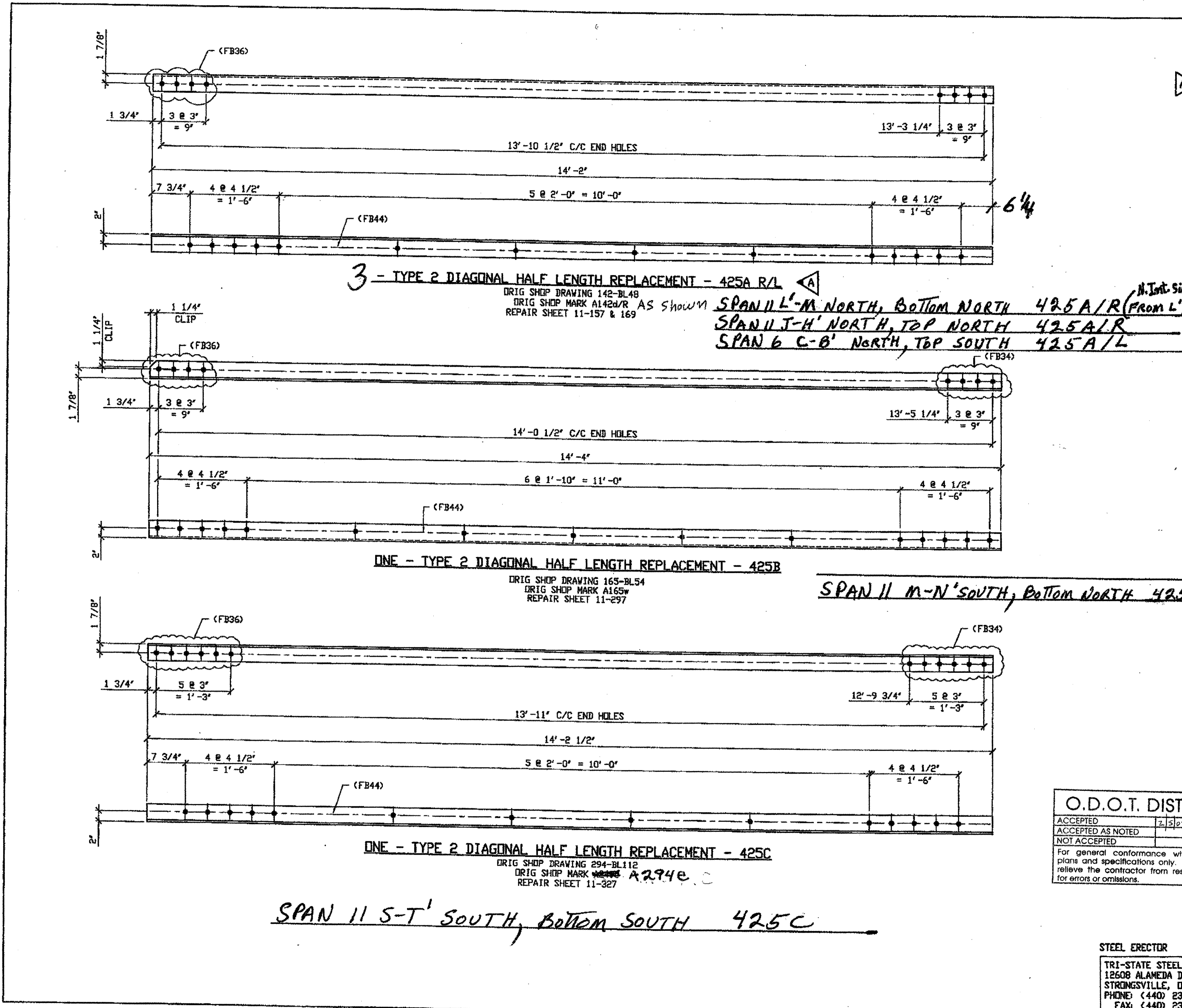


FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE HWY  
CORAOPOLIS, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

DOT ITEM LINE NO. AS NOTED		
DOT BID ITEM NO. 863E50000		
NO.	DATE	DESCRIPTION REVISIONS
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13		
SPAN 9 REPAIRS		
STEEL ERECTOR		SHEET NUMBER
TRI-STATE STEEL CONSTRUCTION INC. 12508 ALAMEDA DR STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335		341
DRAWN BY DATE RAS 07/13/01		ASN JOB NUMBER
CHECKED BY DATE GAF 08/23/01		800010

G:\Contracts\2000\800010\Drawings\341A.dwg  
Save by rpb on 08/04/01 11:00 AM  
Plot by gpb on 08/04/01 11:00 AM  
Model space plot - Scale = 1/12

(As shown)  
SPAN 9 L-K' NORTH, TOP NORTH 341C/R  
SPAN 9 L-K' NORTH, TOP SOUTH 341C/L



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL HALF LENGTH					
2		425A R/L	3	L3 1/2 x 3 1/2 x 3/8	14	2	2R/IL		
3				TYPE 2 DIAGONAL HALF LENGTH					
4				TYPE 2 DIAGONAL HALF LENGTH					
5		425B	1	L3 1/2 x 3 1/2 x 3/8	14	4		122	
6				TYPE 2 DIAGONAL HALF LENGTH					
7				TYPE 2 DIAGONAL HALF LENGTH					
8		425C	1	L3 1/2 x 3 1/2 x 3/8	14	2 1/2		121	
9				TYPE 2 DIAGONAL HALF LENGTH					
10									
11									
12									
13									
14									
15									
16				FIELD BOLTS					
17		FB34	1	1" DIA	0	2 1/4	NOTE 2		
18		FB36	1	1" DIA	0	2 1/2	NOTE 2		
19		FB44	1	1" DIA	0	3 1/2	NOTE 2		
20									
PLATE		N/A		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

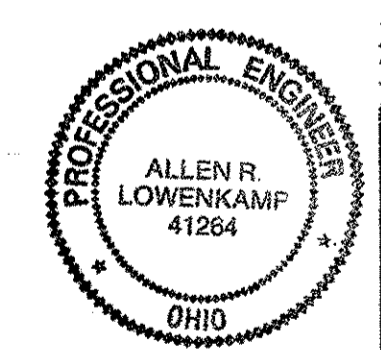
- NOTES:**
- OPEN HOLES ARE  $(1 \frac{1}{16} \phi)$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\projects\80000\800010\Drawings\425A.dwg  
 Save by rjpr at 12:59pm Mar 25, 2002  
 Plot by gjos at 08:20am Mar 25, 2002  
 Model Space Plot - Scale = 1/8" = 1'-0"

**O.D.O.T. DIST. 12**

ACCEPTED	2/5/02	DSTM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**

**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE: DFL SMITH  
 DRAWN BY: DATE: AMW 01/07/02  
 CHECKED BY: DATE: GAF 02/20/02

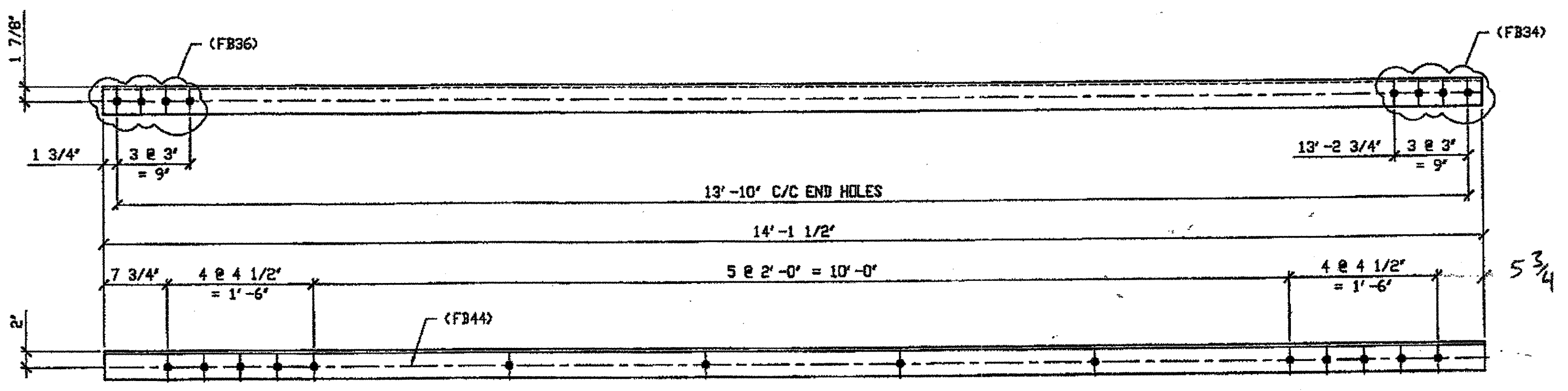
DOT ITEM LINE NO. 0111  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	JRC	BY
A	03/05/02	REVISED PER CUSTOMER APPROVAL			

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS

SHEET NUMBER: 425  
 ARN JOB NUMBER: 800010



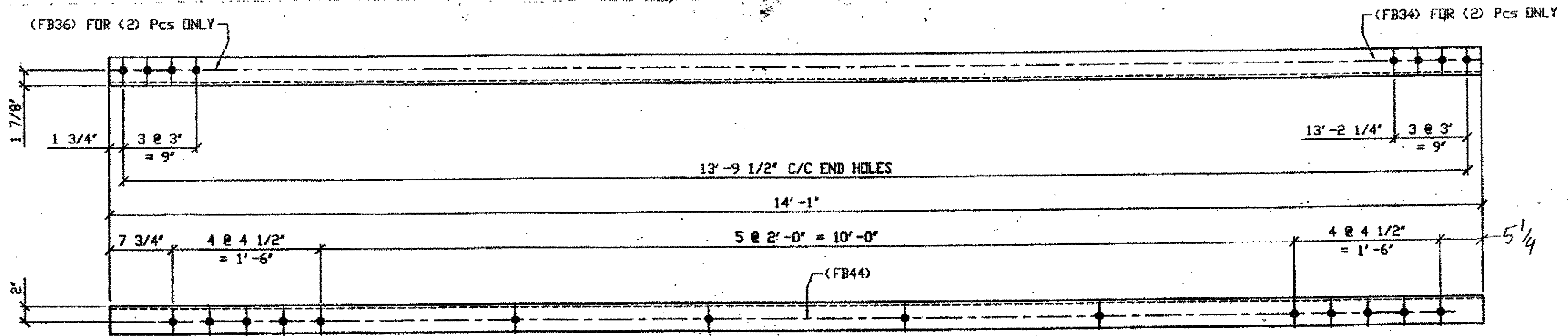
2 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 426A R/L

DRIG SHOP DRAWING 380-BL138  
DRIG SHOP MARK A390e R/L  
REPAIR SHEET 11-275

SPAN 11 H-J SOUTH, TOP NORTH 426 A/L  
SPAN 11 H-J SOUTH, TOP SOUTH 426 A/R (AS SHOWN)

BILL OF MATERIAL								
LINE	ADVANCE BELL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF LENGTH				
2		426A R/L	2	L3 1/2 x 3 1/2 x 3/8	14	1 1/2		240
3								
4								
5								
6								
7								
8								
9		426B/R	3	L 3 1/2 x 3 1/2 x 3/8	14	1 1/2	2 R/L 359	
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16								
17		FB34		1" DIA	0	2 1/4	NOTE 2	
18		FB36		1" DIA	0	2 1/2	NOTE 2	
19		FB44		1" DIA	0	3 1/2	NOTE 2	
20								
PLATE				N/A	PIPE	N/A	FITTINGS	N/A
SHAPES				A36	FLGS.	N/A	BELTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



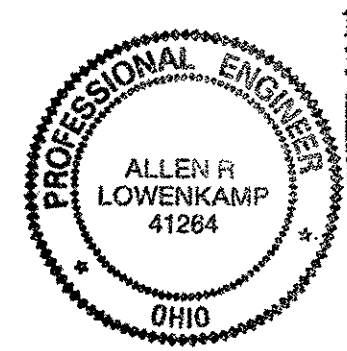
3 - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 426B R/L

DRIG SHOP DWG 165-BL62  
DRIG SHOP MARK A165oe  
DOT ITEM No. 0111  
REPAIR SHEET 12-127 & 151

SPAN 12 B-C' SOUTH, TOP NORTH 426B/R  
SPAN 12 B-C' SOUTH, TOP SOUTH 426B/L  
SPAN 12 E-D' NORTH, TOP SOUTH 426B/R

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

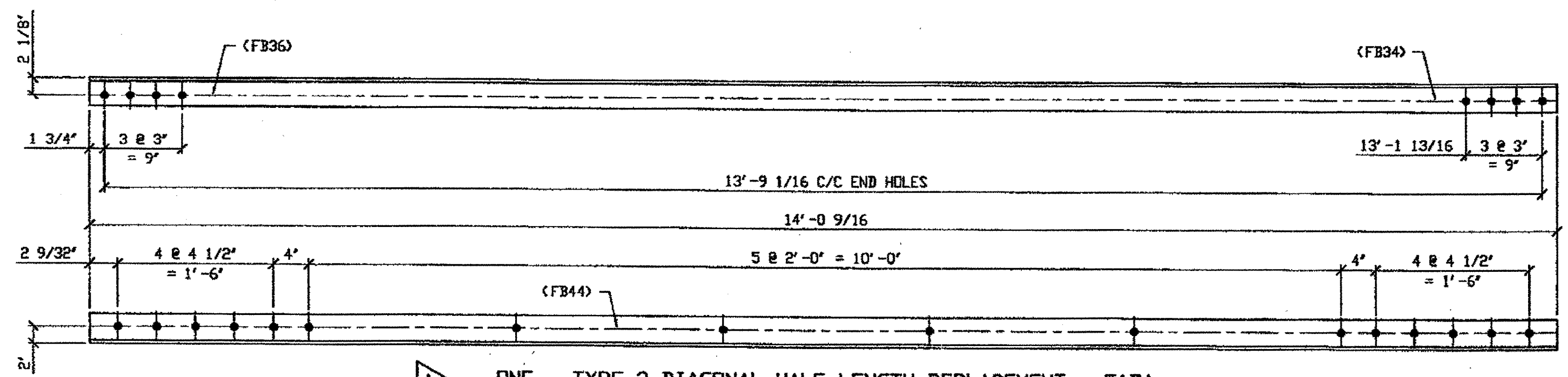
RELEASED FOR CONSTRUCTION  
DATE 3/1/02 BY tdp/lcs



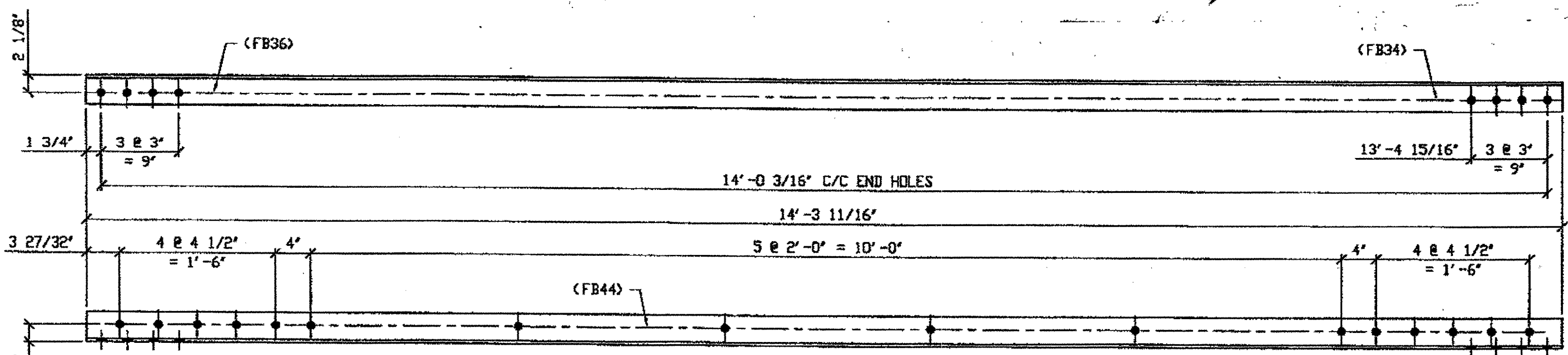
DOT ITEM LINE NO. 0111	
DOT BID ITEM NO. 863E5000	
NO.	DATE
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN REPAIRS	
IN CHARGE OF: L. SMITH	SHEET NUMBER: 426
DRWN BY: AMV DATE: 01/08/02	ABN JOB NUMBER: 800010
CHKD BY: GAF DATE: 02/20/02	

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

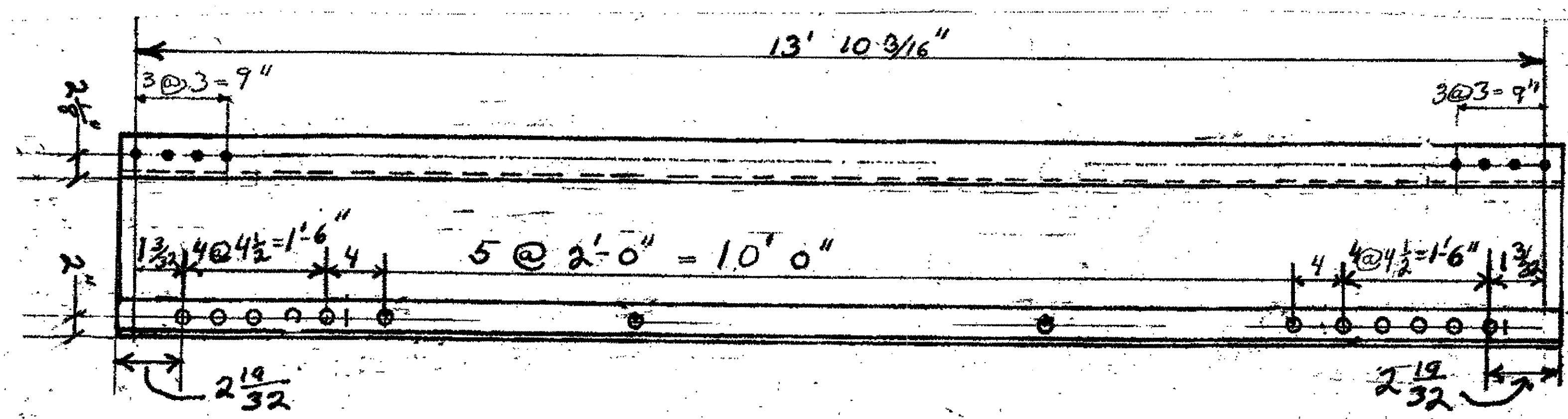
G:\Contracts\2000\800010\Drawings\426A.dwg  
Save by rspir at 09:23pm Feb 21, 2002  
Plot by gfos at 11:15am Feb 23, 2002  
Model space plot + Scale = 1/8" = 1'



**ONE - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 517A**  
 ORIG SHOP DWG 521-BL169  
 ORIG SHOP MARK A521h  
 REPAIR SHEETS 13-226  
**SPAN 13 M-N' SOUTH, BOTTOM SOUTH 517A**



**ONE - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 517B**  
 ORIG SHOP DWG 521-BL171  
 ORIG SHOP MARK A521k  
 REPAIR SHEETS 13-226  
**SPAN 13 L-M' SOUTH, BOTTOM SOUTH 517B**

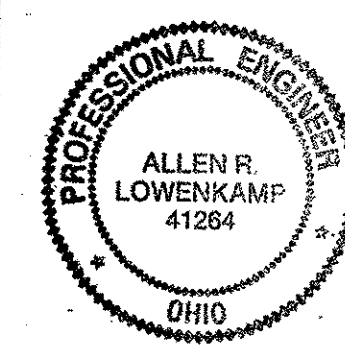


**TWO-TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT 517C**  
 ORIGINAL SHOP MARK A521X BL186  
**SPAN 13 N-M' NORTH, BOTTOM SOUTH 517C**  
**SPAN 13 N-M' NORTH, TOP NORTH 517C**

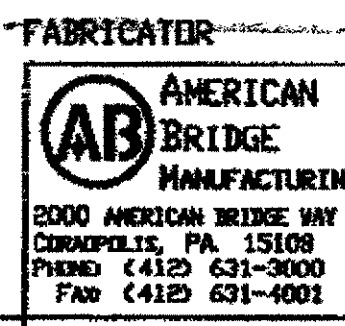
BILL OF MATERIAL								
LINE	ADVANCE BILL L LINE	MARK NO.	QTY	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF				
2		517A	1	L 3 1/2 X 3 1/2 X 3/8	14	0 9/16		119
3		517B	1	L 3 1/2 X 3 1/2 X 3/8	14	3 11/16		122
4								
5								
6		517C	2	L 3 1/2 X 3 1/2 X 3/8	14	1 3/8		
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB34		1\" DIA	0	2 1/4	NOTE 2	
13		FB36		1\" DIA	0	2 1/2	NOTE 2	
14		FB44		1\" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16\"/>
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER, RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0111	DOT BID ITEM NO. 863E50000
DATE	DESCRIPTION
01/21/02	REVISED PER CUSTOMER APPROVAL
	REVISIONS



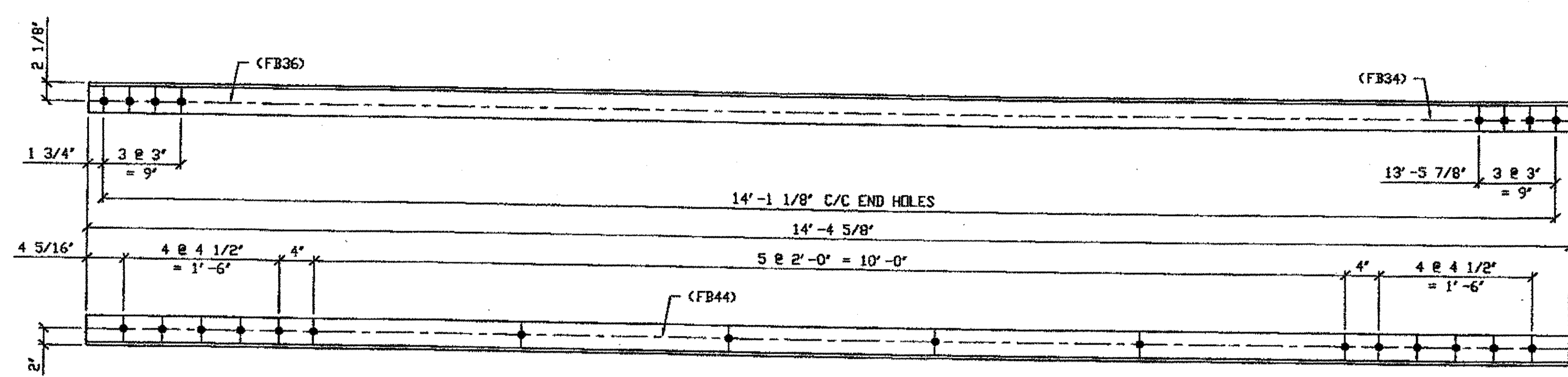
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 13 REPAIRS**

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATED  
 RAS 04/03/01  
 CHECKED BY: DATED  
 GAF 12/19/01

SHEET NUMBER: 517  
 AM JOB NUMBER: 800010

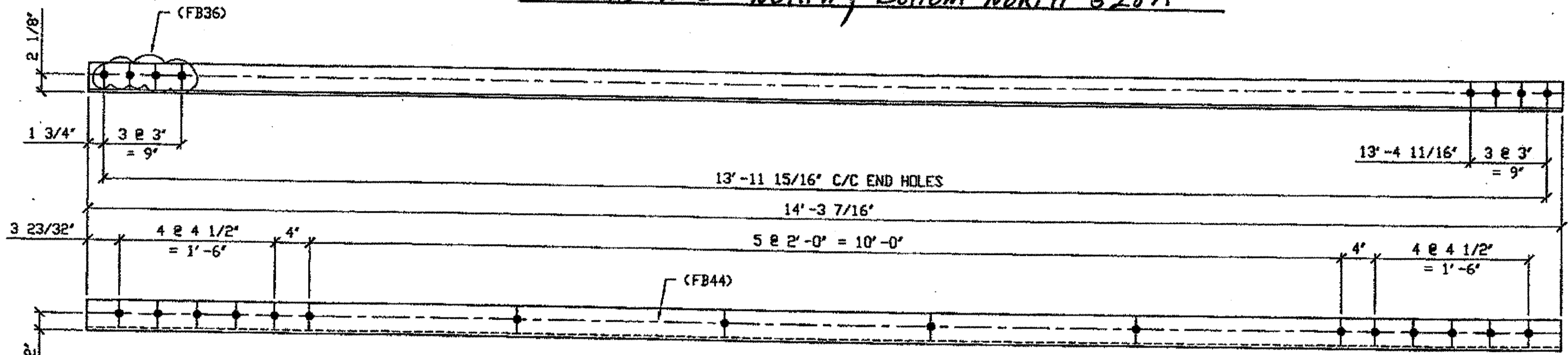
G:\Contracts\1800010\Drawings\517A.dwg  
 Save by resp 11:31am Feb 02, 2002  
 Plot by gfos 09:15am Feb 04, 2002  
 Model space plot + Scale = 1/9



ONE - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 528A

ORIG SHOP DWG 521-BL175  
ORIG SHOP MARK A521p  
REPAIR SHEETS 13-135 (REV A)

SPAN 13 H-G' NORTH, BOTTOM NORTH 528A



ONE - TYPE 2 DIAGONAL HALF LENGTH REPLACEMENT - 528B

ORIG SHOP DWG 521-BL172  
ORIG SHOP MARK A521m  
REPAIR SHEETS 13-132 (REV A)

SPAN 13 G-F' NORTH, BOTTOM SOUTH 528B

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL HALF LENGTH				
2		528A	1	L 3 1/2 X 3 1/2 X 3/8	14	4 9/8		122
3		528B	1	L 3 1/2 X 3 1/2 X 3/8	14	3 7/16		121
4								
5								
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB34	0	1" DIA	0	2 1/4	NOTE 2	
13		FB36	0	1" DIA	0	2 1/2	NOTE 2	
14		FB44	0	1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

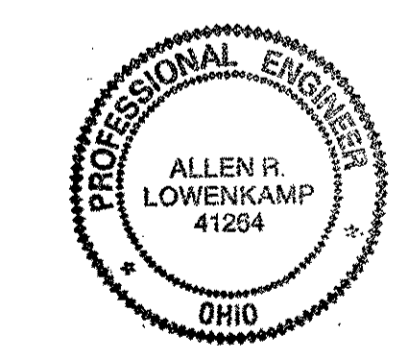
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY DNE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Conty\2000\80001\Drawings\0528A.dwg  
 Save by: at 11:31am Feb 02, 2002  
 Plot by: Ches at 09:26am Feb 04, 2002  
 Model space plot + Scale = 1/9

O.D.O.T. DIST. 12

ACCEPTED	2/5/02	D.S.M.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CUNNINGHAM, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 01/22/02  
 CHECKED BY: DATE: GAF 01/23/02

DOT ITEM LINE NO. 0111 UNO  
DOT BID ITEM NO. 863E50000

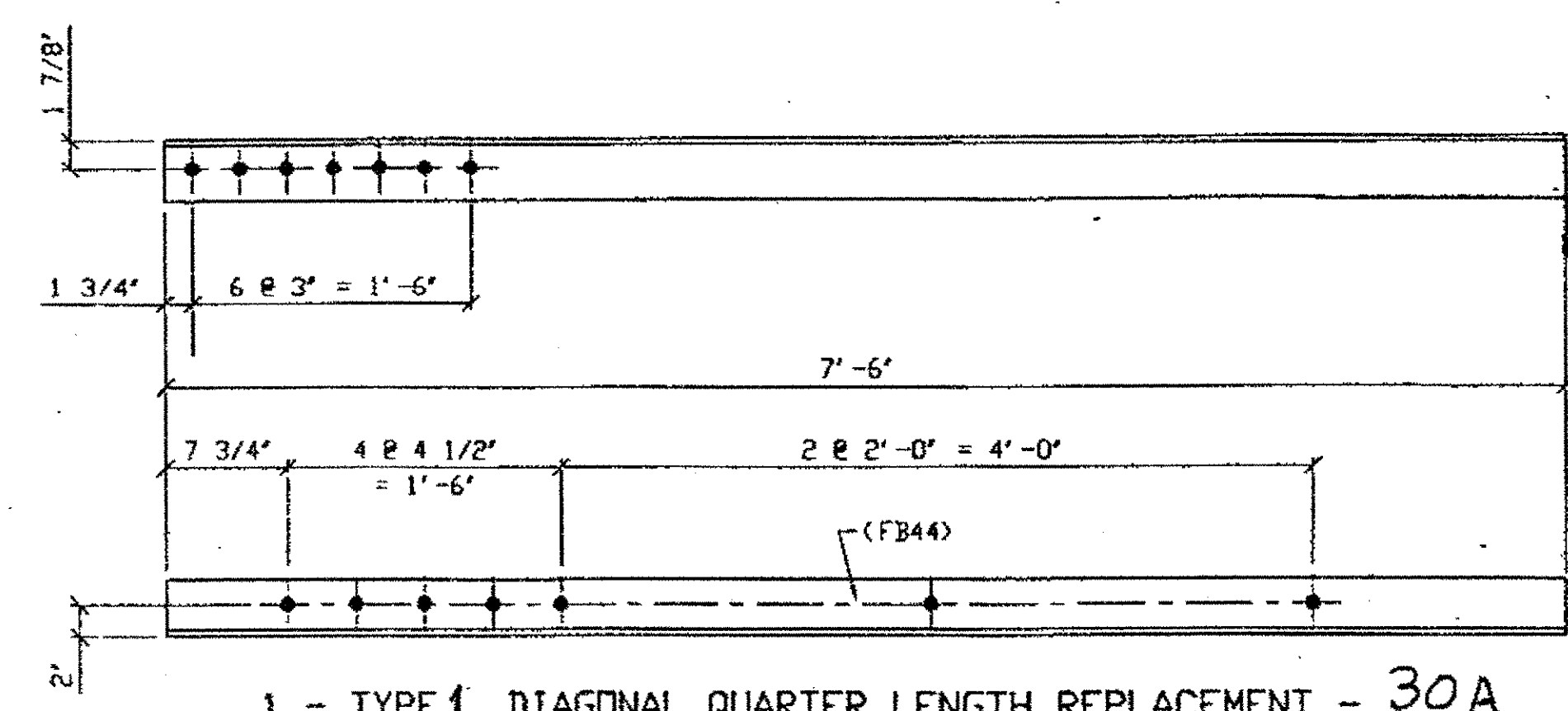
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

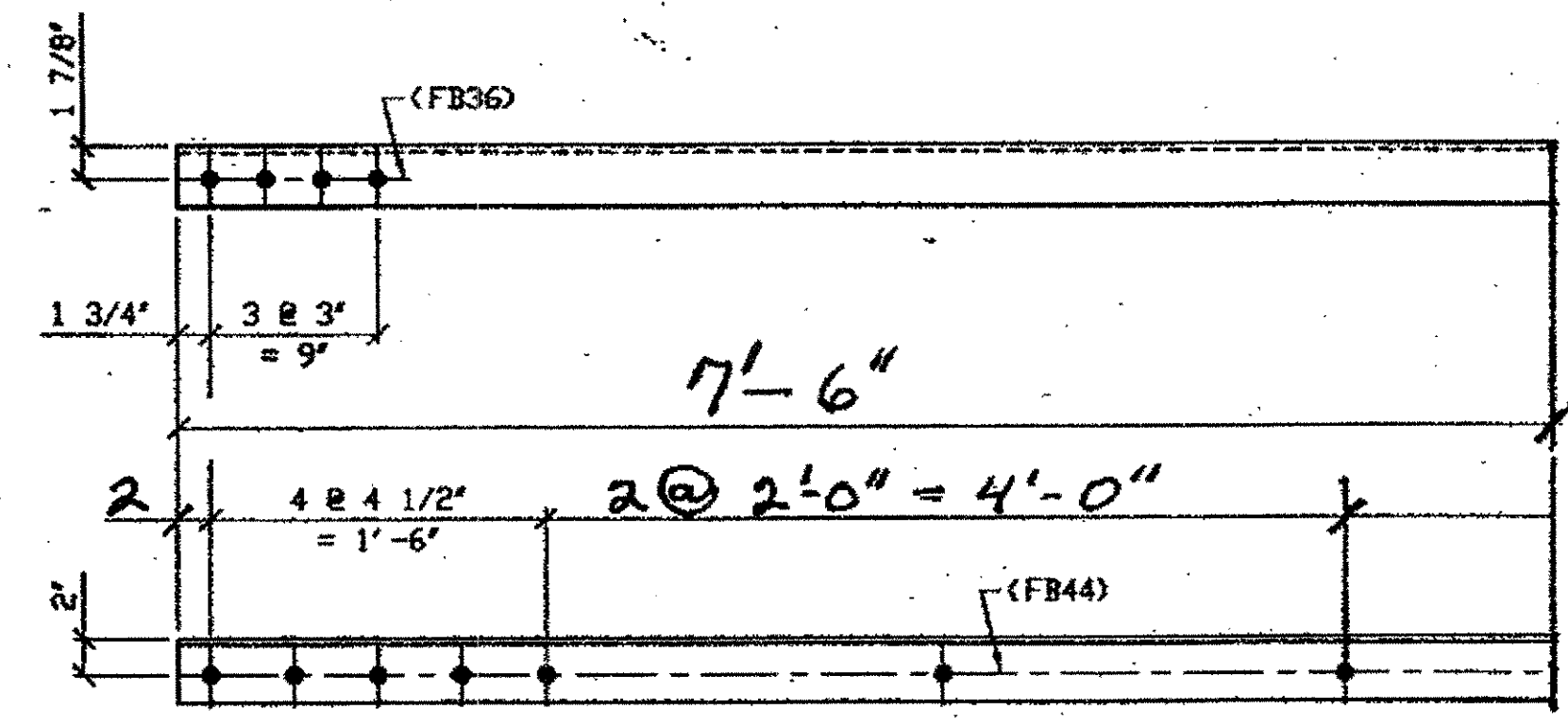
SHEET NUMBER: 528
AIM JOB NUMBER: 800010

BILL OF MATERIALS

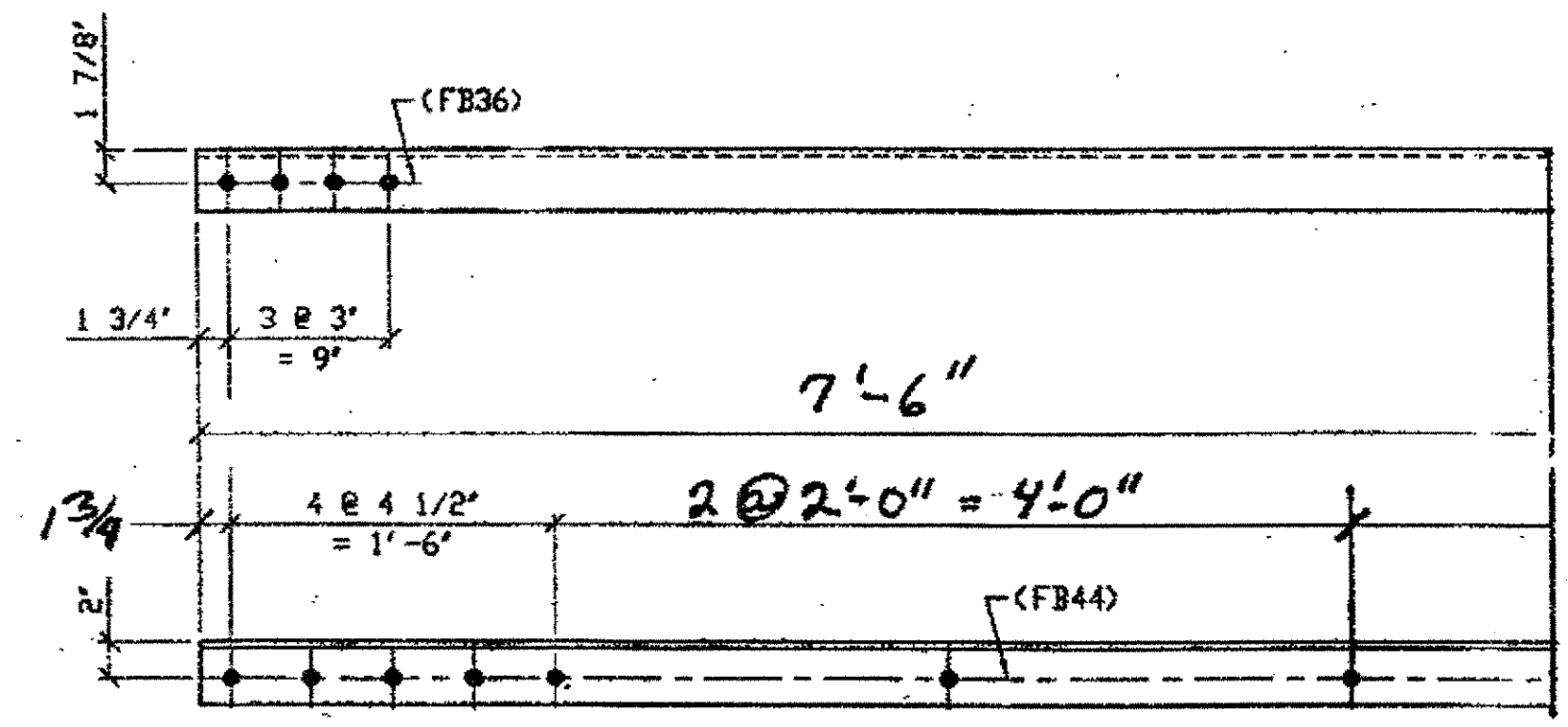
Piece No.	Qty.	Description
30A	1	L 3 1/2 x 3 1/2 x 3/8 x 7'-6"
30B	2	L 3 1/2 x 3 1/2 x 3/8 x 7'-6"
30C	3	L 3 1/2 x 3 1/2 x 3/8 x 7'-6" 2/R - 1/L
30D	1	L 3 1/2 x 3 1/2 x 3/8 x 7'-6"
		PLATE A36 SHAPES A36



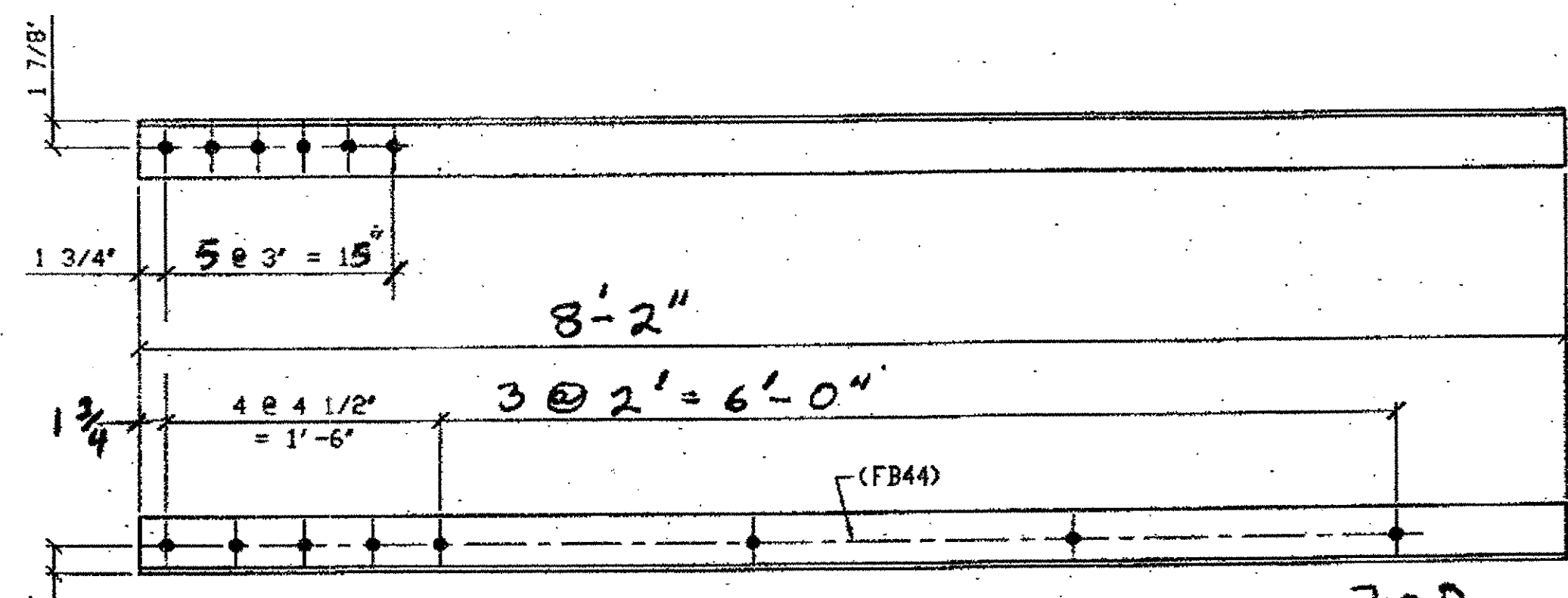
1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 30A  
 ORIG SHOP DWG 294-BL120  
 ORIG SHOP MARK A 294h  
 REPAIR SHEET  
 SPAN 9  
 F-E' SOUTH, BOTTOM NORTH 30A



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 30C R/L  
 ORIG SHOP DWG 294-BL126 (L SHOWN)  
 ORIG SHOP MARK A 294X R/L  
 DOT ITEM No. 0110  
 SPAN 9  
 L-M' NORTH, TOP NORTH 30C/R  
 L-M' NORTH, TOP SOUTH 30C/L  
 L-M' NORTH, BOTTOM SOUTH 30C/R



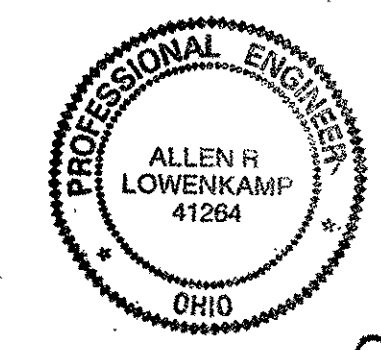
2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 30B R/L  
 ORIG SHOP DWG 294-BL126  
 ORIG SHOP MARK A 294X R/L  
 DOT ITEM No. 0110  
 SPAN 9  
 M-L' SOUTH, BOTTOM NORTH 30B/L  
 M-L' SOUTH, BOTTOM SOUTH 30B/R  
 (R SHOWN)



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 30D  
 ORIG SHOP DWG 294-BL126  
 ORIG SHOP MARK A 294X R/L  
 REPAIR SHEET 9-121  
 SPAN 9  
 G-F' SOUTH, BOTTOM NORTH 30D

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/04 DSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

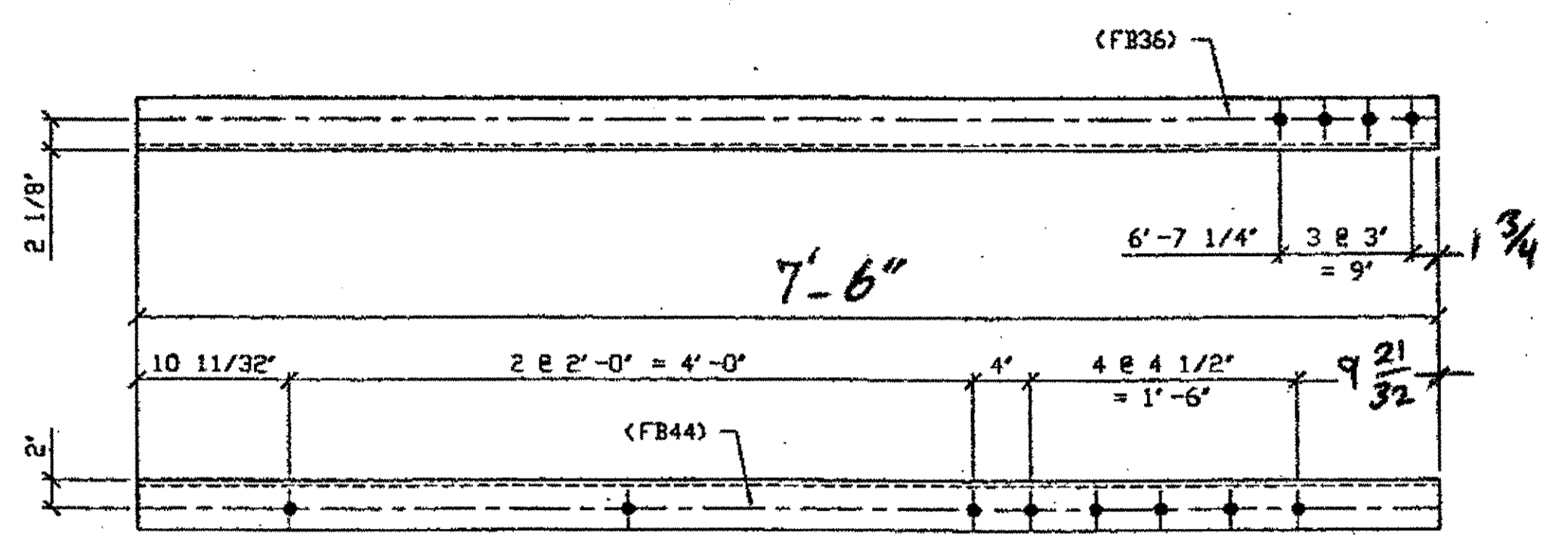


SPAN 9 REPAIRS

Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 BRIDGE No. CUY-10-16.13			
NO.	REVISION	DATE	BY
DRAWN BY: _____ SCALE: NA			CHECKED BY: _____ DATE: _____
JOB NO.			DRAWING NO. 30

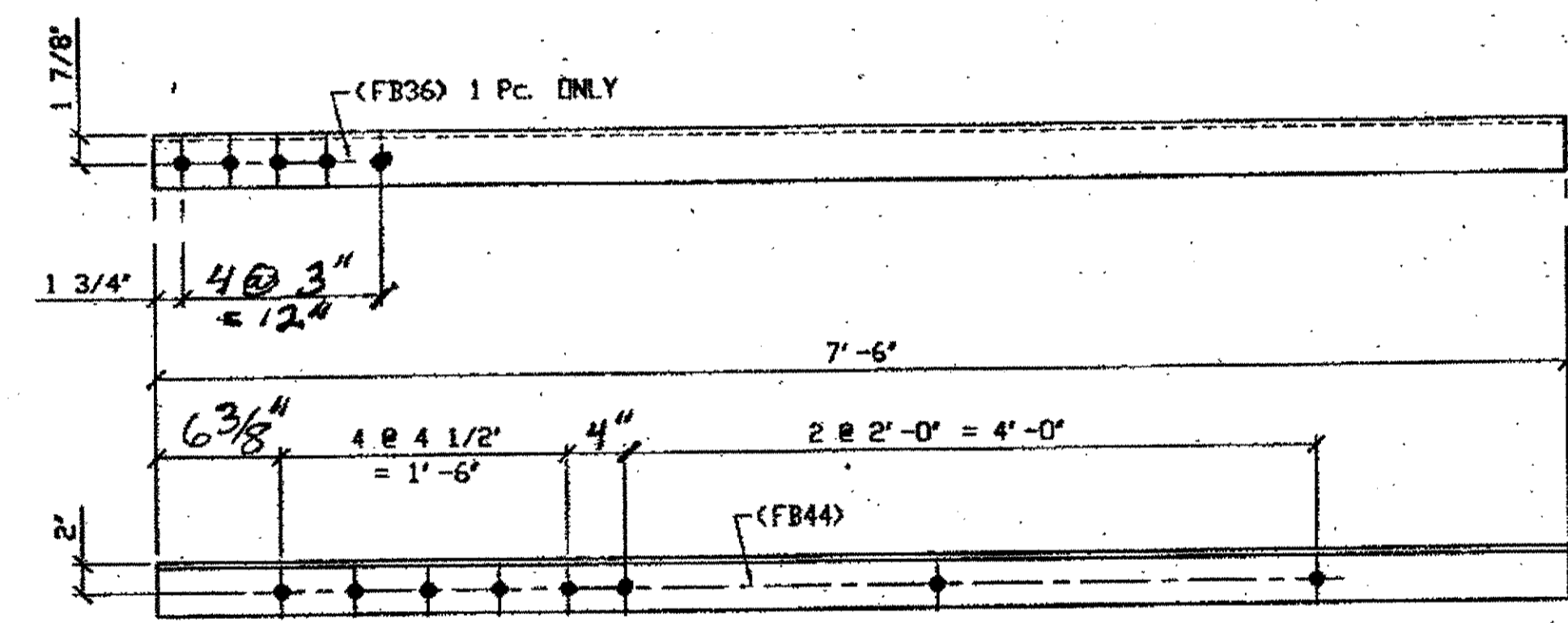
BILL OF MATERIALS

Piece No.	Qty.	Description
31A	1	L 3 1/2 x 3 1/2 x 3/8 x 8'-0"
31B	1	L 3 1/2 x 3 1/2 x 3/8 x 7'-6"
31C	1	L 4 x 3 1/2 x 3/8 x 7'-6"
		PLATE A36 SHAPES A36



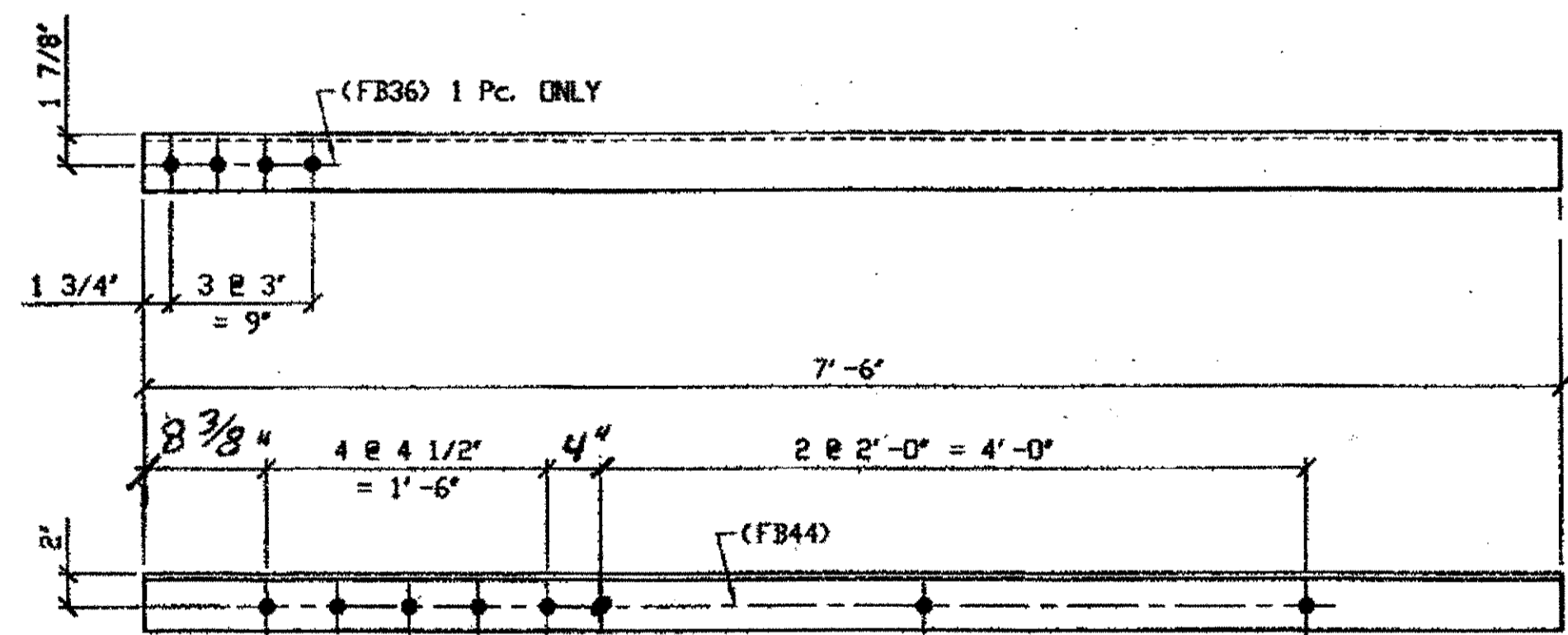
**A** - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 31A  
 ORIG SHOP DVG 520-BL165  
 ORIG SHOP MARK A520d  
 LINE ITEM No. 0106  
 REPAIR SHEETS 13-193

SPAN 13  
D-E' NORTH, TOP SOUTH 31A



**I** - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 31C  
 ORIG SHOP DVG 520-BL176  
 ORIG SHOP MARK A520h

SPAN 13 J-H' SOUTH, BOTTOM SOUTH 31C



**I** - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 31B  
 ORIG SHOP DVG 520-BL185  
 ORIG SHOP MARK A520h

SPAN 13 N-M' SOUTH, BOTTOM SOUTH 31B

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/5/01 13-5YM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



SPAN 13 REPAIRS

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NO.	REVISION	DATE	BY

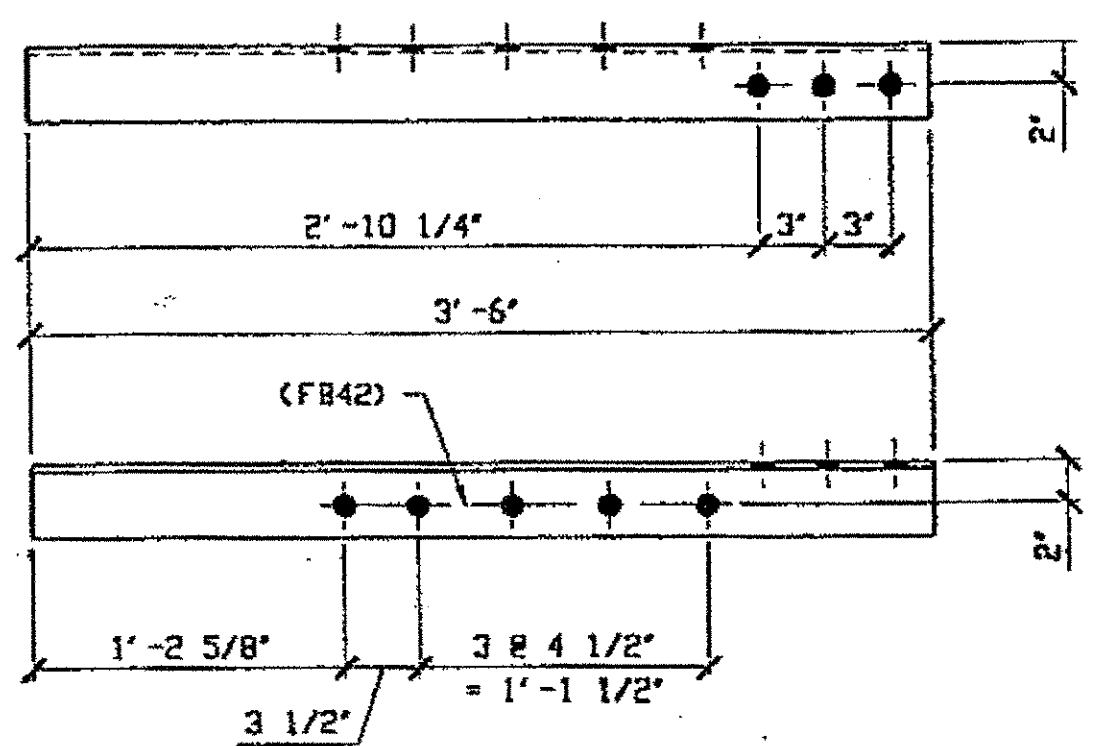
**Iri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**

DRIVEN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SCALE: N/A

JOB NO. \_\_\_\_\_  
 DRAWING NO. **31**

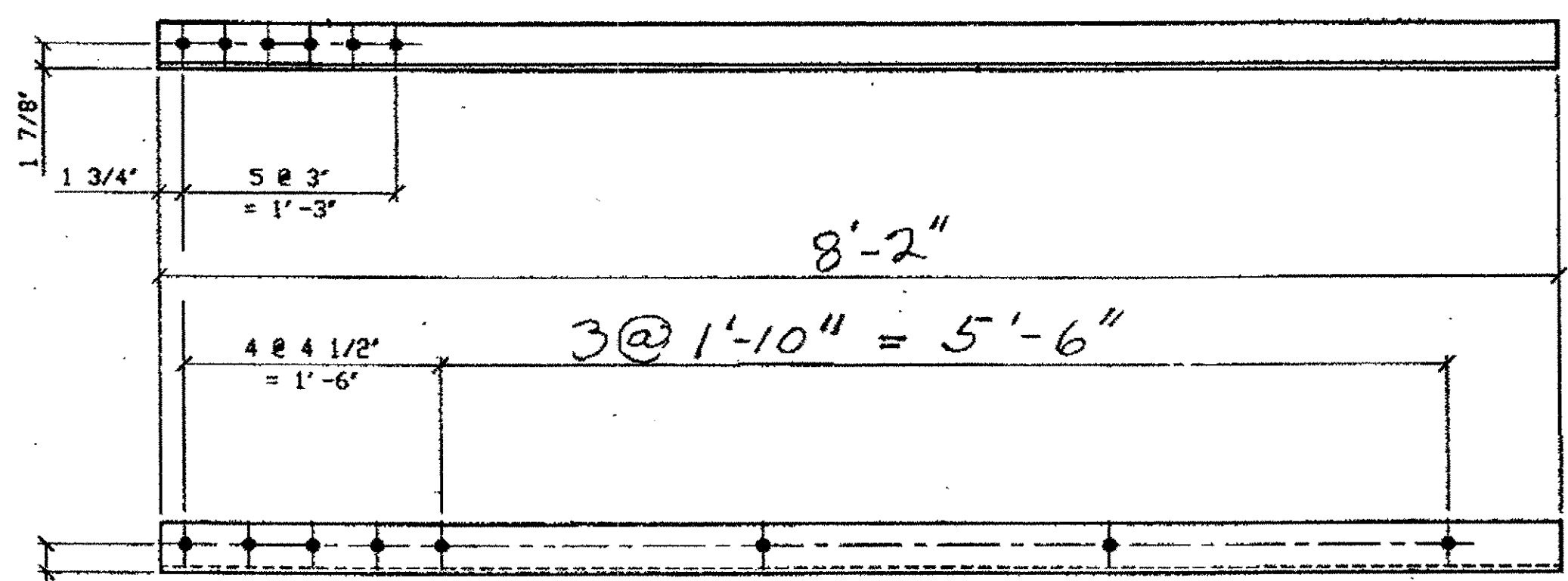
Last modified at \$(EDTIME,??) on \$(EDTIME,??) - Last plotted by Sfostar at lam on Thu Oct 05, 2000



1- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT 106A

ORIG SHOP DWG 16-BL33/R  
ORIG SHOP MARK A16s.

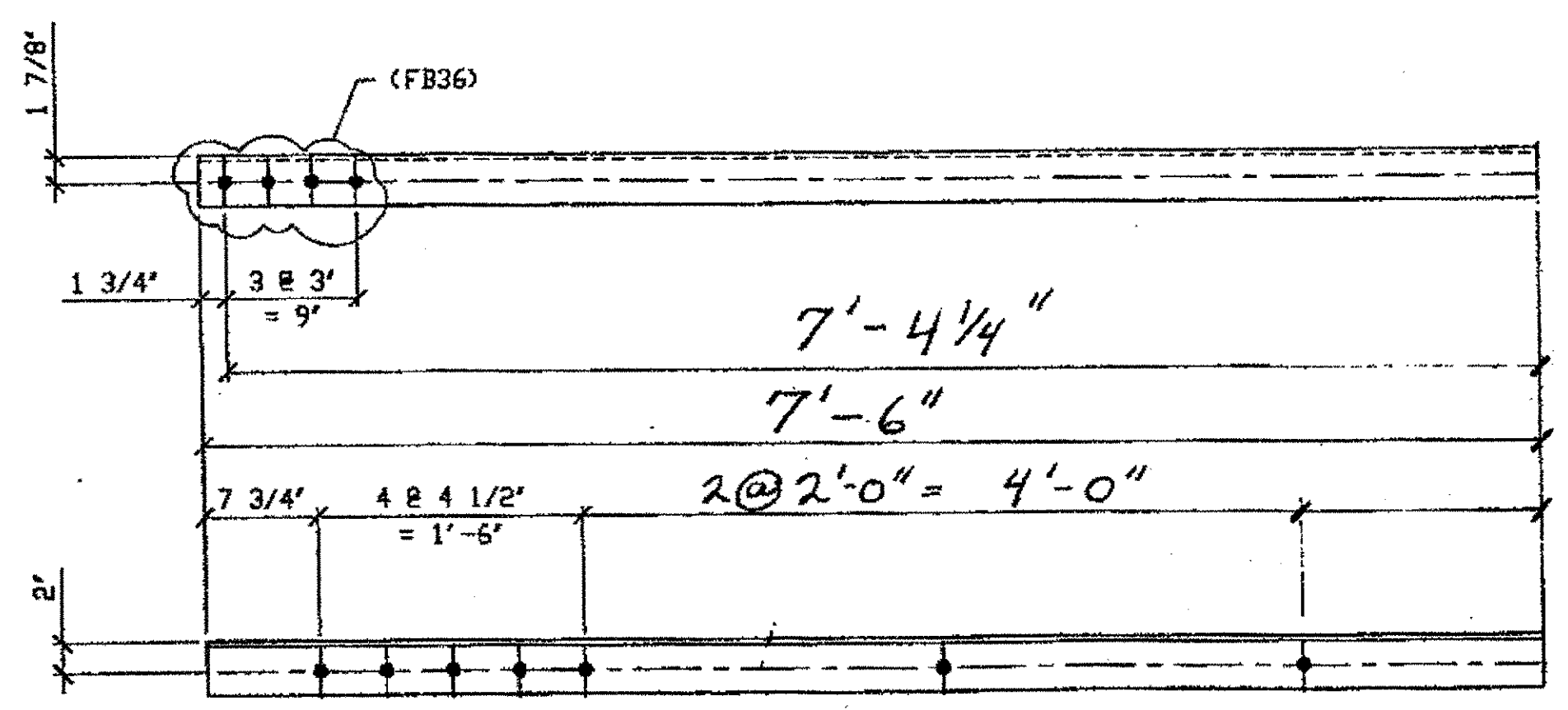
W+LE  
G-Q NORTH, TOP SOUTH WEST 106A



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 106B

ORIG SHOP DRAWING 380  
ORIG SHOP MARK A380g-BL156

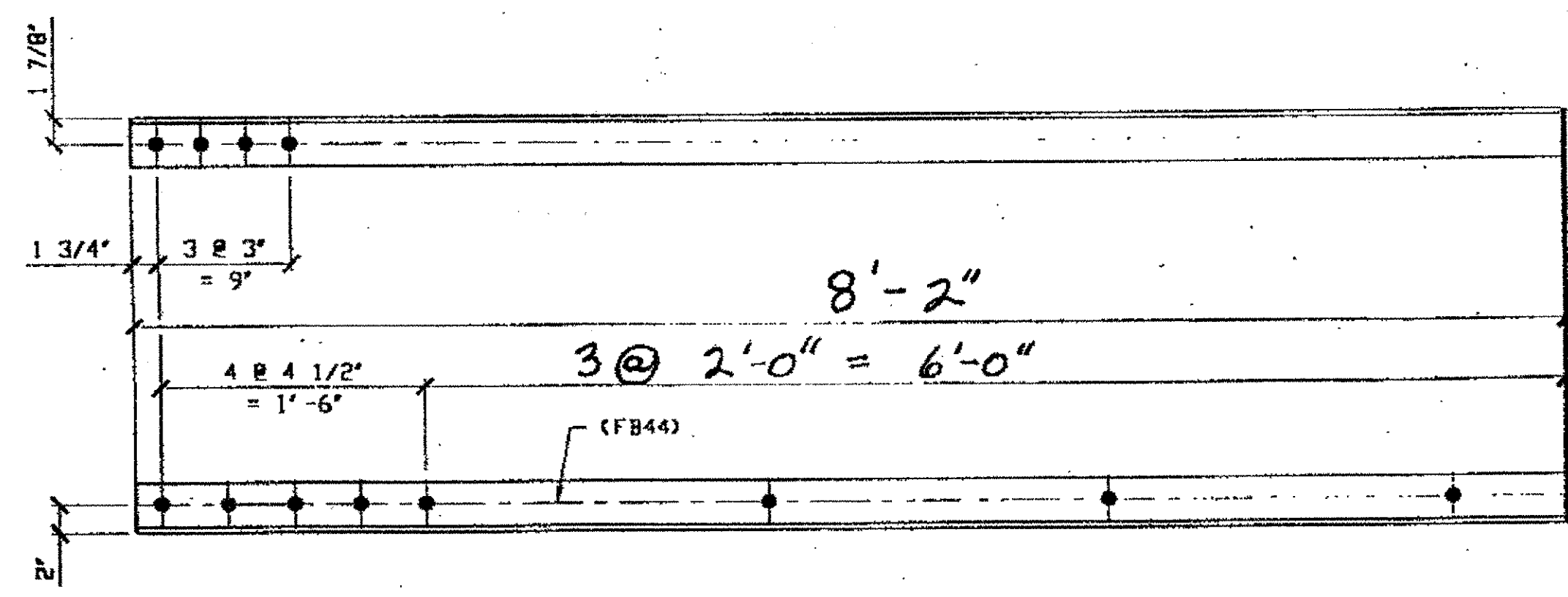
SPAN II  
Q-P' NORTH, BOTTOM NORTH 106B



1 - TYPE 2 DIAGONAL 1/4 LENGTH REPLACEMENT - 106C

ORIG SHOP DRAWING 380-BL138  
ORIG SHOP MARK A380g R/L  
REPAIR SHEET 11-275

SPAN II  
H-J' SOUTH, BOTTOM SOUTH 106C/L  
(opposite to shown)



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 106D

ORIG SHOP DWG 84-BL46  
ORIG SHOP MARK A84n

SPAN 5  
A-B' NORTH, TOP NORTH 106D

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		106A	1	TYPE 1 DIAG.				
3			1	L 3 1/2 X 3 1/2 X 3/8	3	6		30
4								
5		106B	1	3 1/2 x 3 1/2 x 3/8	8	2		
6								
7		106C/L	1	3 1/2 x 3 1/2 x 3/8	7	4 1/4		
8								
9								
10		106D	1	3 1/2 x 3 1/2 x 3/8	8	2		
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

O.D.O.T. DIST. 12

ACCEPTED	2/5/01	AJY
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0106  
DOT BID ITEM NO. 863E0000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO

BRIDGE No. CUY-10-16.13  
SPAN REPAIR

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

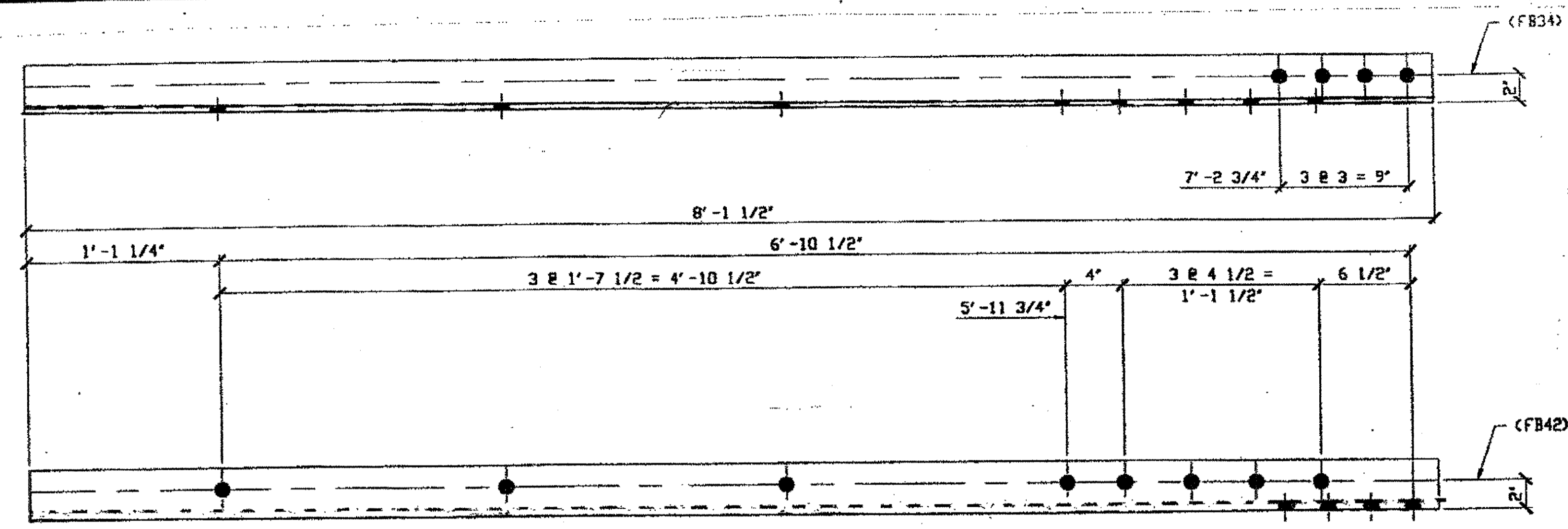
IN CHARGE OF: L. SMITH

DRAWN BY: DATE: GAF 09/01/00  
CHECKED BY: DATE: GWG 09/19/00

SHEET NUMBER: 106  
JOB NUMBER: 800010

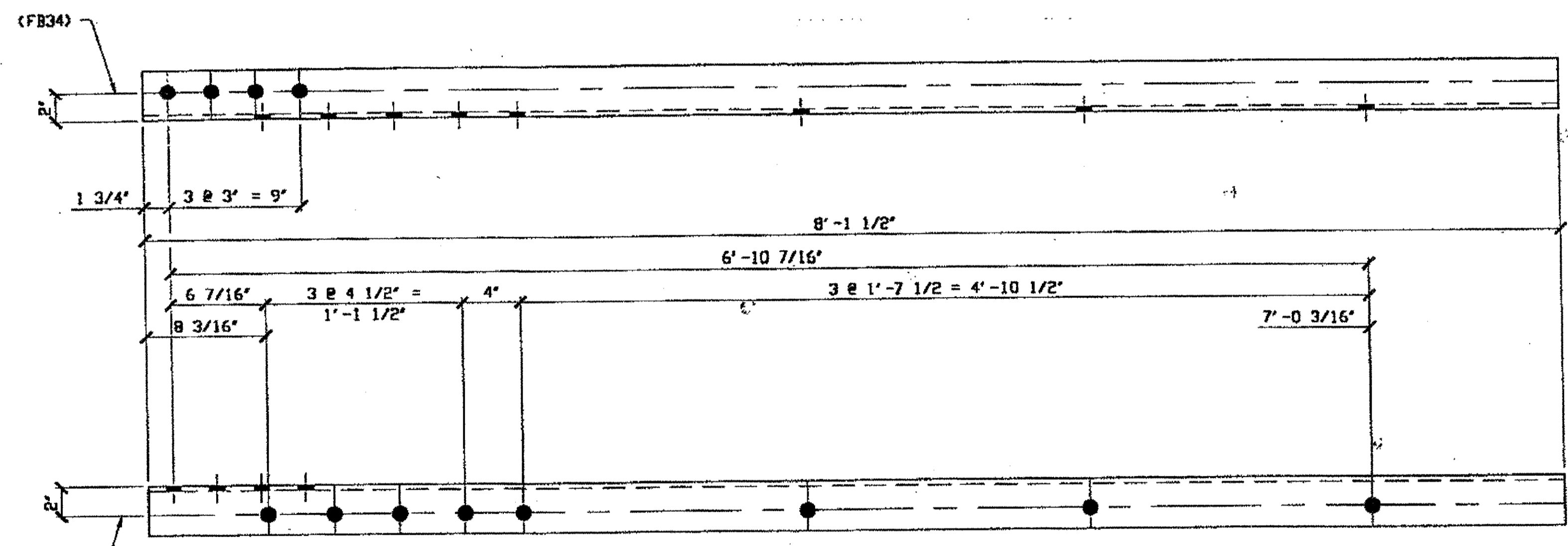


Last modified at 11:02am on Thu Oct 19, 2000 - Last plotted by Ggivens at 2:03am on Thu Oct 19, 2000



ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 114A  
 ORIG SHOP DWG 287 - BL105  
 ORIG SHOP MARK A287ag

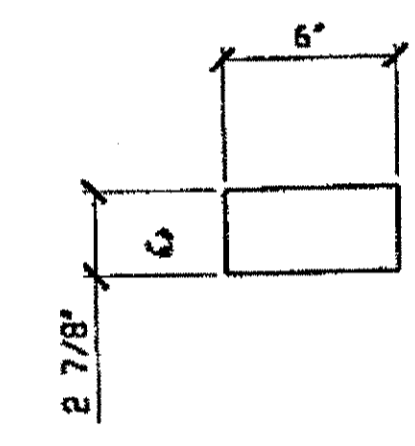
SPAN 1 K-J' NORTH, BOTTOM NORTH 114A



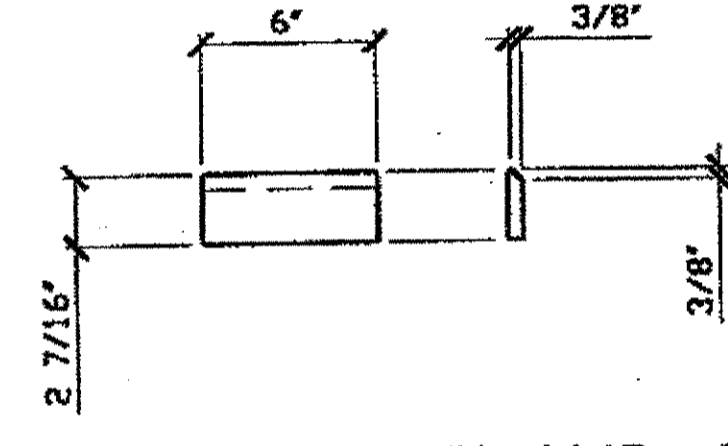
ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 114B  
 ORIG SHOP DWG 287 - BL82  
 ORIG SHOP MARK A287br

SPAN 1 B-C' NORTH, TOP NORTH 114B

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		114A	1	TYPE 1 DIAG QUARTER LENGTH				69	
2			1	L 3 1/2 X 3 1/2 X 3/8	B	1 1/2			
3									
4		114B	1	TYPE 1 DIAG QUARTER LENGTH				69	
5			1	L 3 1/2 X 3 1/2 X 3/8	B	1 1/2			
6									
7		114C	16	SPLICE PLATE				39	
8			16	PL 1/2 X 2 7/8	O	6			
9									
10		114D	16	SPLICE PLATE				33	
11			16	PL 1/2 X 2 7/16	O	6			
12									
13									
14									
15									
16									
17				FIELD BOLTS					
18		FB34		1" DIA.	O	2 1/4	NOTE 2		
19		FB42		1" DIA.	O	3 1/4	NOTE 2		
20									
PLATE A36				PIPE	FITTINGS				
SHAPES A36				FLGS.	BOLTS		NOTE 2		
* DOT ITEM LINE 0104									



(16) SPLICE PL 114C  
 IDENTICAL TO 106B

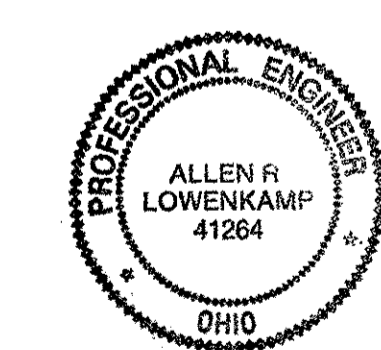


(16) SPLICE PL 114D  
 IDENTICAL TO 106C

TYPICAL SPLICES FOR ALL 1/4 LENGTH DIAGONALS

- NOTES:
- OPEN HOLES ARE  $\leq 1/16$  UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/ Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY *cu*

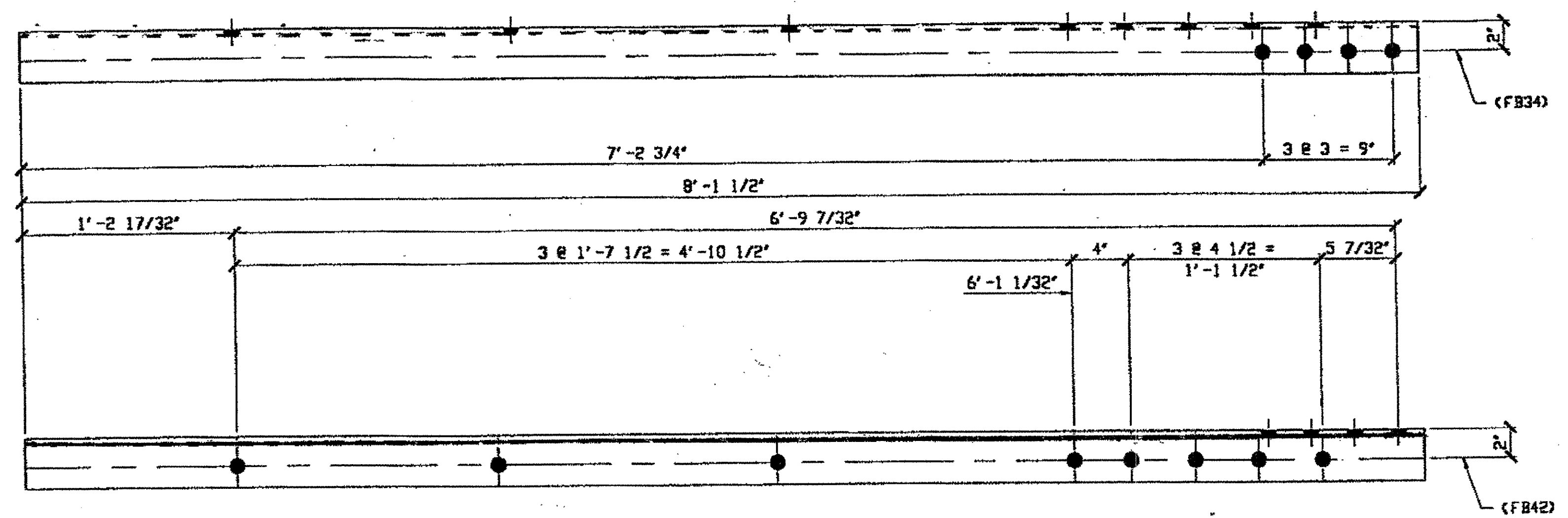
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNSVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44149  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 GWG 09/08/00  
 CHECKED BY: DATE:  
 GAF 10/12/00

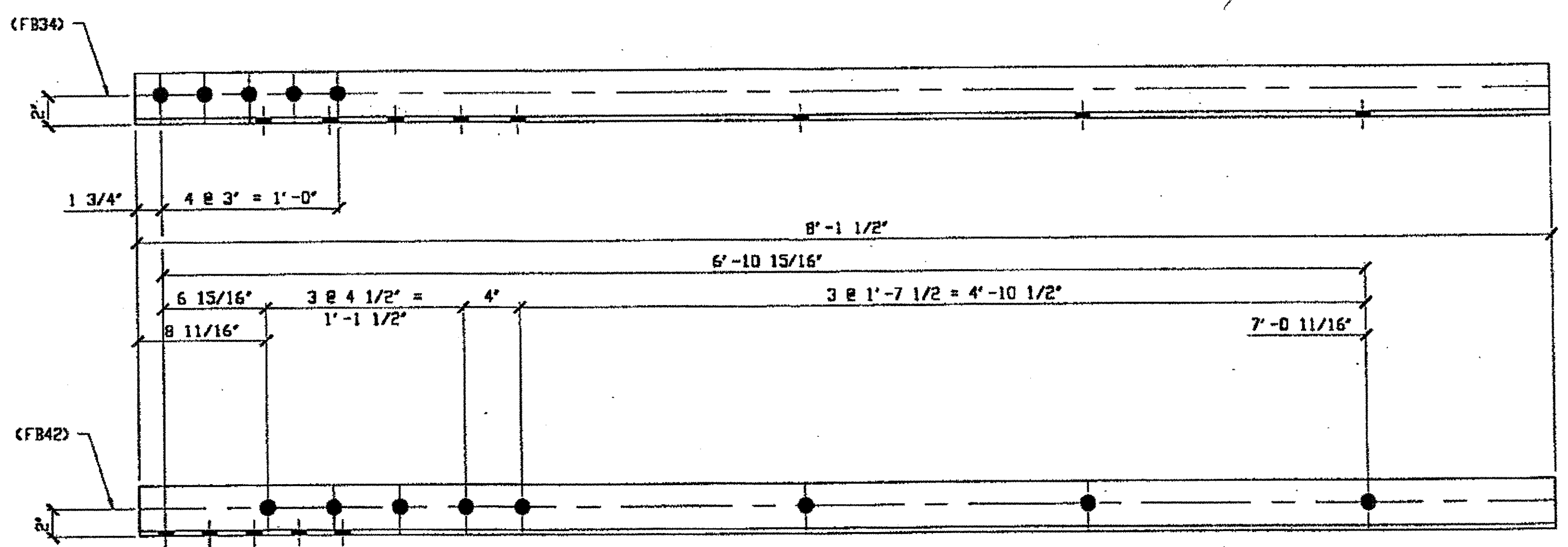
DOT ITEM LINE NO. 0106 TYP UND		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 1 REPAIR			
SHEET NUMBER 114		ASB JOB NUMBER 800010	

9:54am on Wed Oct 18, 2000  
 9:54am on Wed Oct 18, 2000 - Last Plotted by Ggivens  
 Last modified



ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 115A  
 ORIG SHOP DWG 287 - BL98  
 ORIG SHOP MARK A287z

SPAN 1  
 G-F' NORTH, TOP SOUTH 115A



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 115B  
 ORIG SHOP DWG 287 - BL93  
 ORIG SHOP MARK A287s

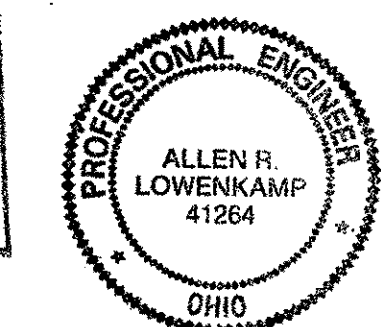
SPAN 1 D-E' SOUTH, BOTTOM SOUTH 115B

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		115A	1	TYPE 1 DIAG QUARTER LENGTH	8	1 1/2		69
2			1	L 3 1/2 X 3 1/2 X 3/8				
3								
4		115B	1	TYPE 1 DIAG QUARTER LENGTH	8	1 1/2		69
5			1	L 3 1/2 X 3 1/2 X 3/8				
6								
7								
8				CHORD ANGLE REPAIR				
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB34	0	1" DIA.	0	2 1/4	NOTE 2	
15		FB42	0	1" DIA.	0	3 1/4	NOTE 2	
16	*	FB68	0	1 1/8" DIA.	0	2 3/4	NOTE 2	
17								
18								
19								
20								
PLATE		PIPE		FITTINGS				
SHAPES A36		FLGS.		BOLTS NOTE 2				

\* DOT ITEM LINE 0148

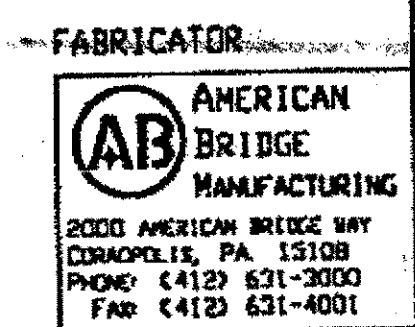
- NOTES:
- OPEN HOLES ARE  $\phi$  1/16 UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0106 TYP UNO  
 DOT BID ITEM NO. 863E50000

RELEASED FOR CONSTRUCTION  
 DATE 10/25/00 BY cu

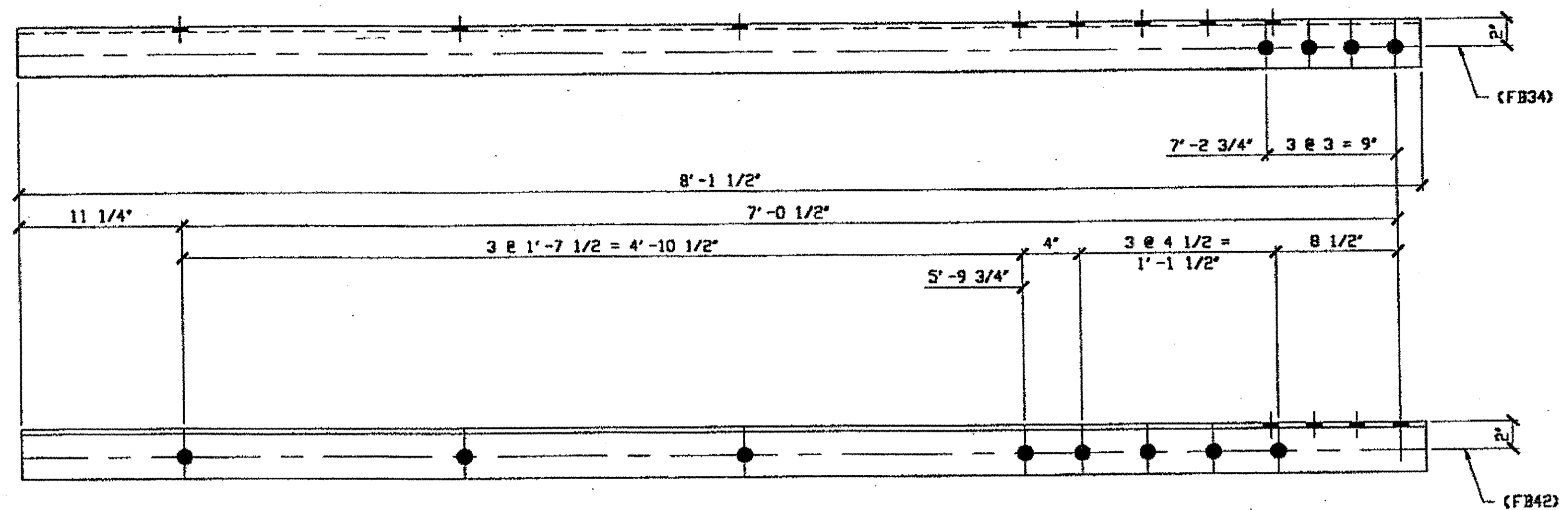


STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 1 REPAIR	
SHEET NUMBER	115
ADM JOB NUMBER	800010

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44149  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

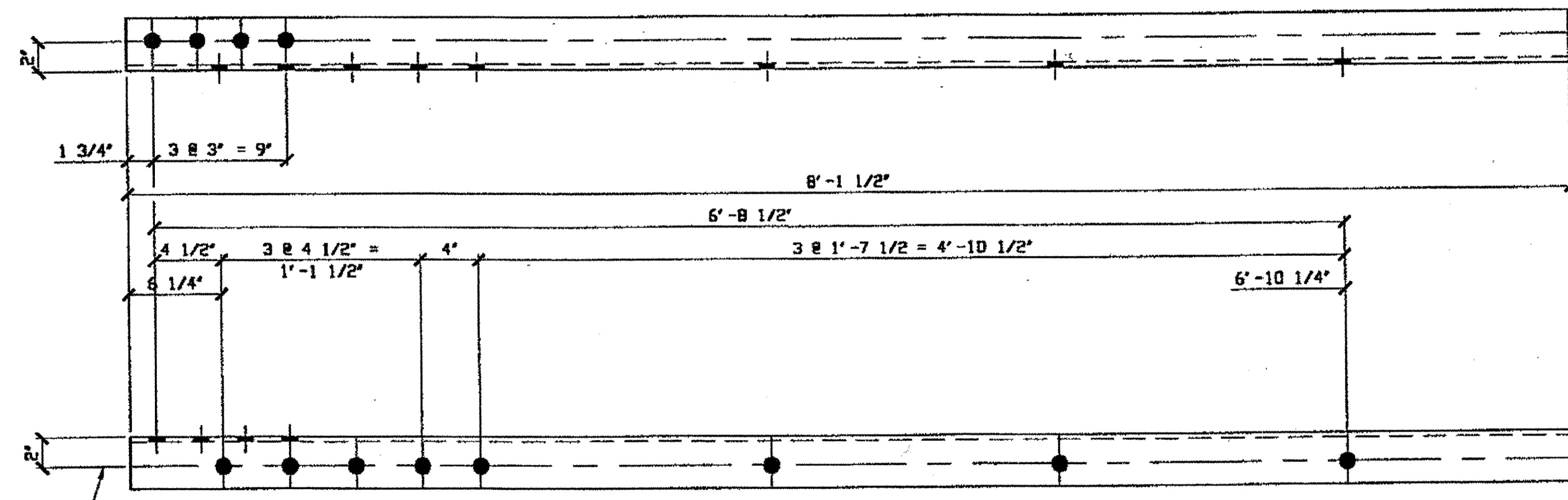
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GWC 10/03/00  
 CHECKED BY: DATE: GAF 10/12/00

Last modified at 10:02am on Wed Oct 18, 2000 - Last Plotted by Ggivens at 10:02am on Wed Oct 18, 2000



**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 116A R/L**  
ORIG SHOP DWG 287 - BL89  
 ORIG SHOP MARK A287k R/L  
**(R SHOWN)**

**SPAN 1**  
 K'-J' NORTH, TOP NORTH 116A/L (From N. Interior Truss)  
 K'-J' NORTH, TOP SOUTH 116A/R (From N. Interior Truss)  
 K'-J' SOUTH, BOTTOM NORTH 116A/R  
 K'-J' SOUTH, BOTTOM SOUTH 116A/L



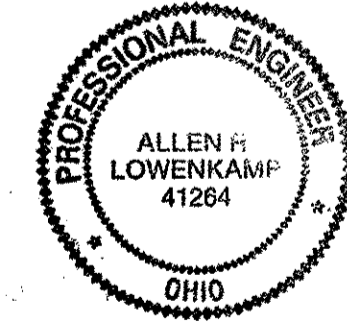
**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 116B R/L**  
ORIG SHOP DWG 287 - BL84  
 ORIG SHOP MARK A287d R/L  
**(L SHOWN)**

**SPAN 1**  
 E-F' NORTH, BOTTOM NORTH 116B/R  
 E-F' NORTH, BOTTOM SOUTH 116B/L  
 E-F' NORTH, TOP SOUTH 116B/R  
 E-F' NORTH, TOP NORTH 116B/L

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		116A R/L	4	TYPE 1 DIAG QUARTER LENGTH				276	
2			4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2			
3									
4		116B R/L	4	TYPE 1 DIAG QUARTER LENGTH				276	
5			4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2			
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16				FIELD BOLTS					
17		FB34	8	1" DIA.	0	2 1/4	NOTE 2	11	
18		FB42	64	1" DIA.	0	3 1/4	NOTE 2	99	
19									
20									
PLATE		PIPE		FITTINGS					
SHAPES A36		FLGS.		BOLTS NOTE 2					

- NOTES:**
- OPEN HOLES ARE  $\leq 1/16$  UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/ Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD-IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

**O.D.O.T. DIST. 12**  
 ACCEPTED  10/19/00 PSM  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**RELEASED FOR CONSTRUCTION**  
 DATE 10/25/00 BY cm

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, OH 45202  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0106  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

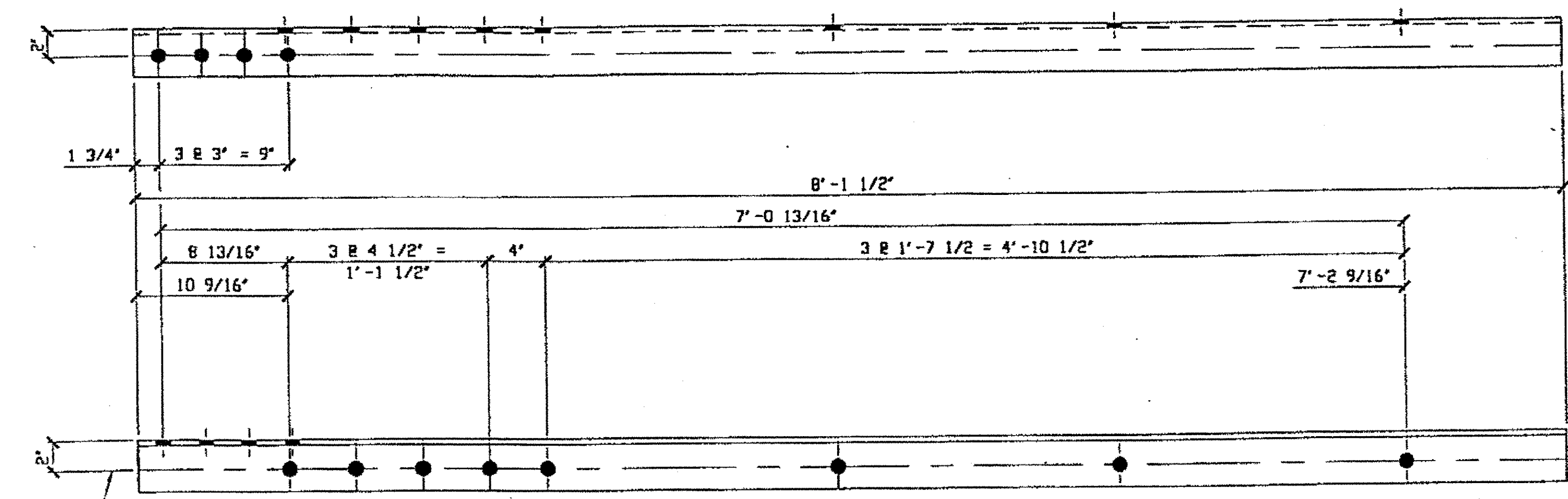
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 1 REPAIR**

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44149  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GVG 10/04/00  
 CHECKED BY: DATE: GAF 10/12/00

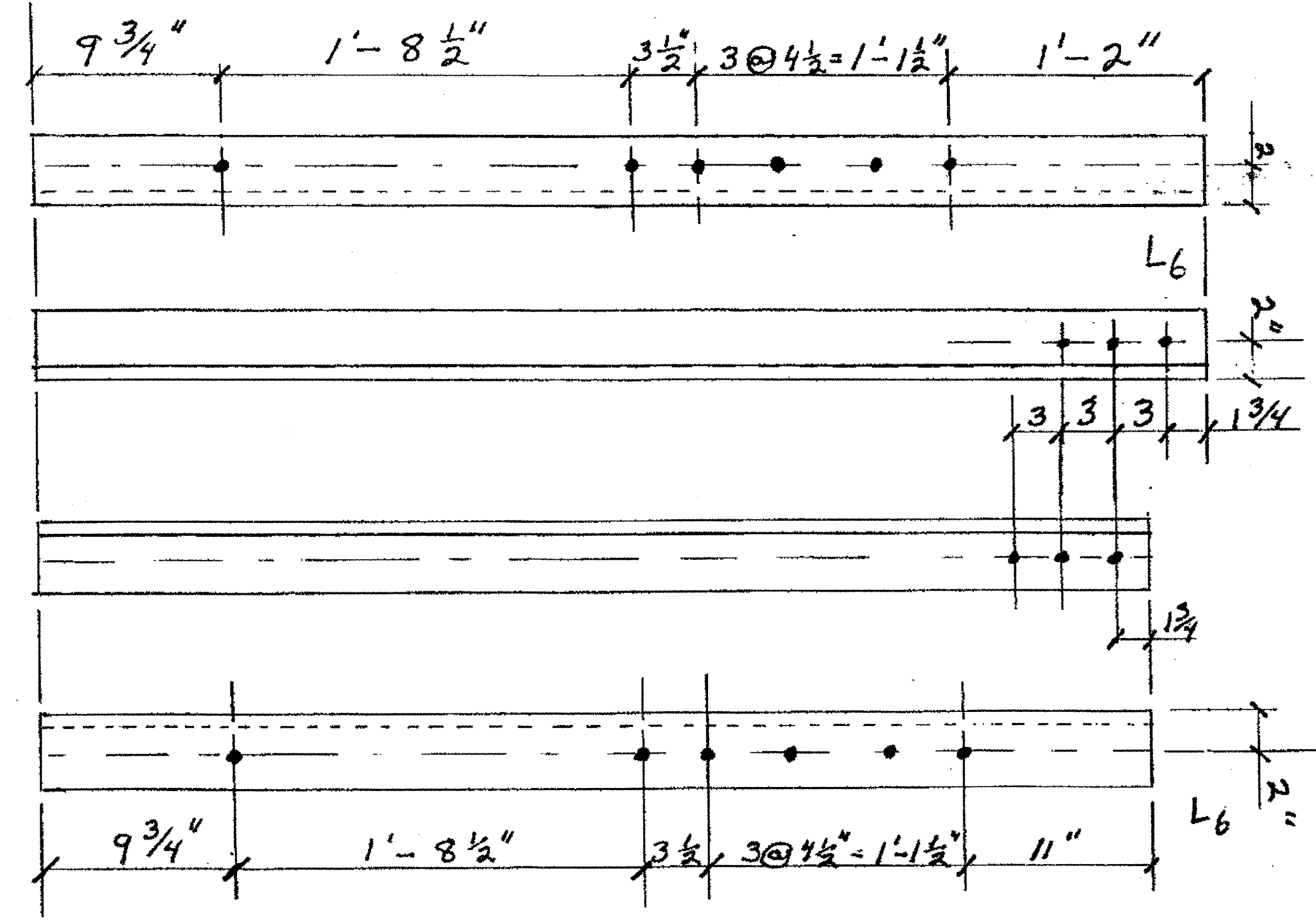
SHEET NUMBER: 116  
 A36 JOB NUMBER: 800010

10:04am on Wed Oct 18, 2000  
Givens at 10:04am on Wed Oct 18, 2000 - Last plotted by Givens  
Last modified H:\800010\d117.dwg



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 117A R/L  
ORIG SHOP DWG 287 - BL81  
 ORIG SHOP MARK A287a (R SHOWN)

SPAN 1  
A-B' NORTH, TOP SOUTH 117A/R  
A-B' NORTH, BOTTOM SOUTH 117A/L



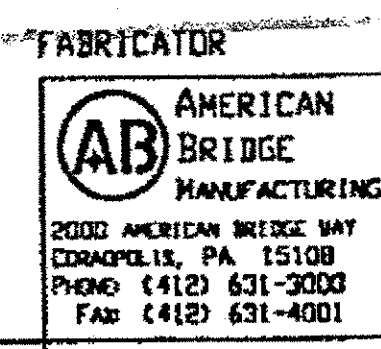
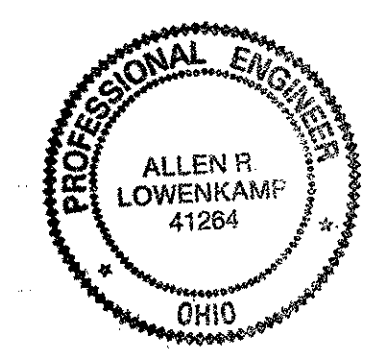
SPAN W4LE  
1-TYPE 2, 1/4 LENGTH DIAGONAL 117B  
ORIGINAL SHOP MARK A16G  
9-Q' SOUTH, TOP SOUTH 117B

SPAN W4LE  
1-TYPE 2, 1/4 LENGTH DIAGONAL 117C  
ORIGINAL SHOP MARK A16h  
9-Q' SOUTH, TOP NORTH 117C

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		117A R/L	2	TYPE 1 DIAG QUARTER LENGTH				138
2			2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		
3								
4		117 B	1	L 3 1/2 X 3 1/2 X 3/8	5	1 1/2		
5								
6								
7		117 C	1	L 3 1/2 X 3 1/2 X 3/8	4	10 1/4		
8								
9								
10								
11								
12								
13								
14								
15								
16				FIELD BOLTS				
17		FB42		1" DIA.	0	3 1/4	NOTE 2	
18								
19								
20								
PLATE				PIPE	FITTINGS			
SHAPES A36				FLGS.	BOLTS		NOTE 2	

O.D.O.T. DIST. 12  
 ACCEPTED 2/5/04 ASM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44149  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

DOT ITEM LINE NO. 0106  
 DOT BID ITEM NO. 863E30000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

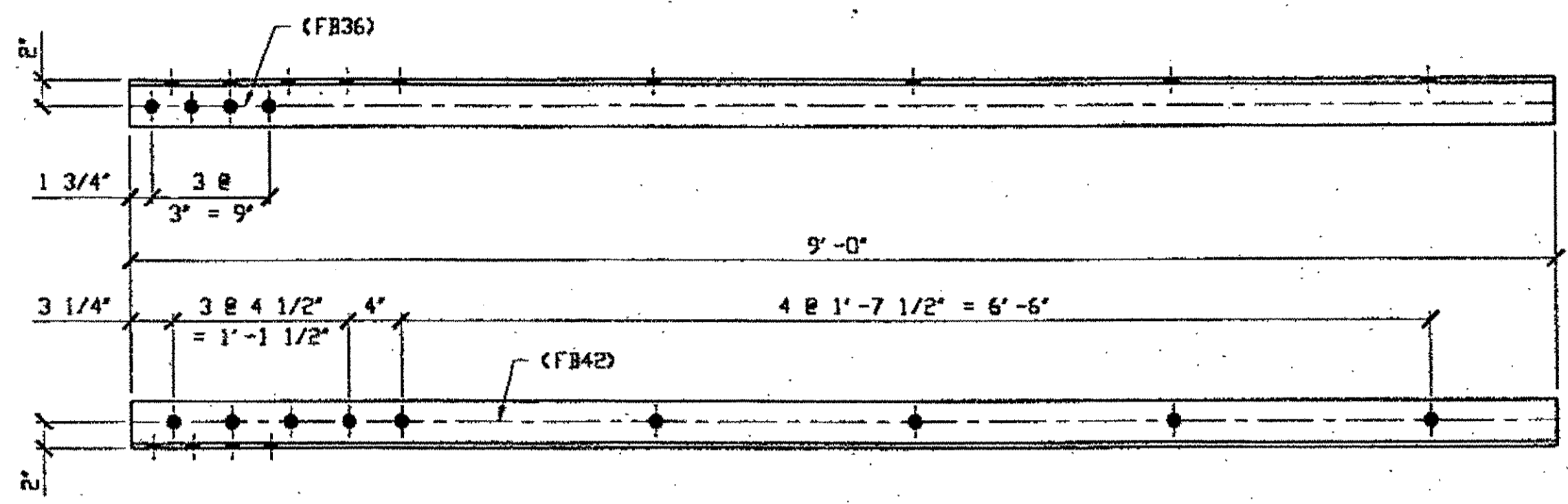
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIR

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-2000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: 10/04/00  
 CHECKED BY: DATE: 10/12/00

SHEET NUMBER: 117  
 A36 JOB NUMBER: 800010

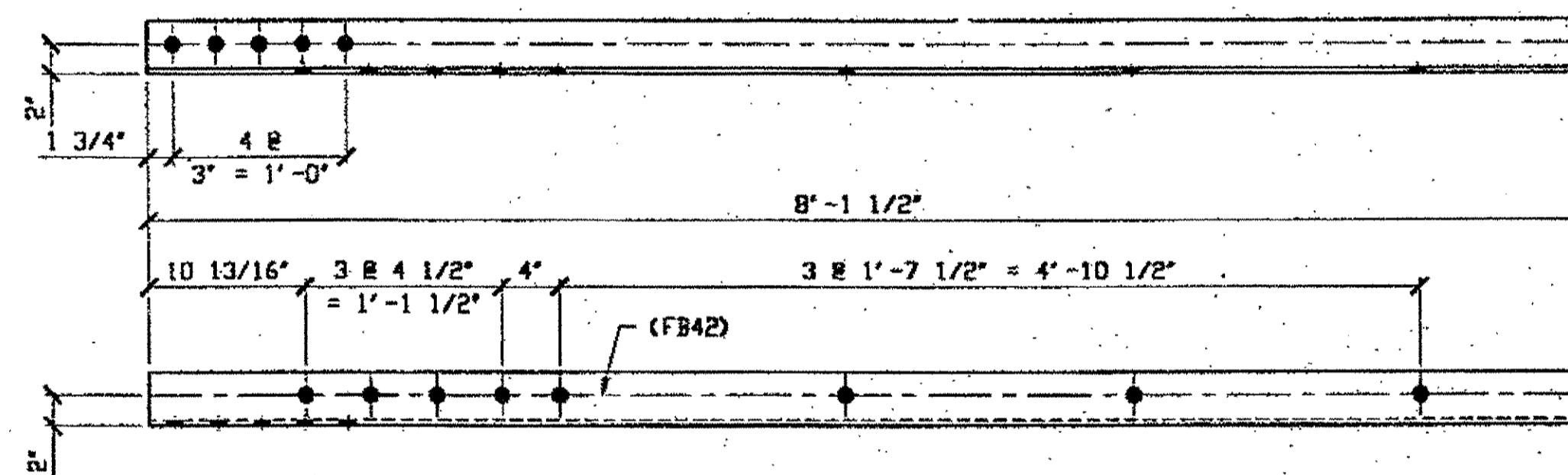
Last modified by Repringer at 02:03pm on Thu Oct 19, 2000 - Last plotted by Repringer at 02:40pm on Thu Oct 19, 2000



(1) TYPE 1 DIAG. QUARTER LENGTH REPLACEMENT 139A

ORIG SHOP DWG 287-BL86  
ORIG SHOP MARK A287F  
ITEM LINE No. 0106 & 0152

**SPAN 1**  
**G-H' NORTH BOTTOM SOUTH 139A**



(1) TYPE 1 DIAG. QUARTER LENGTH REPLACEMENT 139B

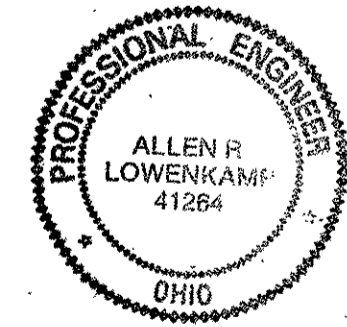
ORIG SHOP DWG 287-BL83  
ORIG SHOP MARK A287c  
ITEM LINE No. 0106

**SPAN 1**  
**D-E' NORTH BOTTOM NORTH 139B**

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAG QUARTER REPAIR					
2		139A	1	L 3 1/2 X 3 1/2 X 3/8	9	0		77	
3		139B	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69	
4									
5									
6									
7									
8									
9									
10									
11				FIELD BOLTS					
12		FB34	0	1" DIA	2	1/4	NOTE 2		
13		FB42	0	1" DIA	3	1/4	NOTE 2		
14		FB36	0	1" DIA	2	1/2	NOTE 2		
PLATE		N/A	PIPE		N/A		FITTINGS		N/A
SHAPES		A36	FLGS.		N/A		BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
DATE 10/25/00 BY *em*

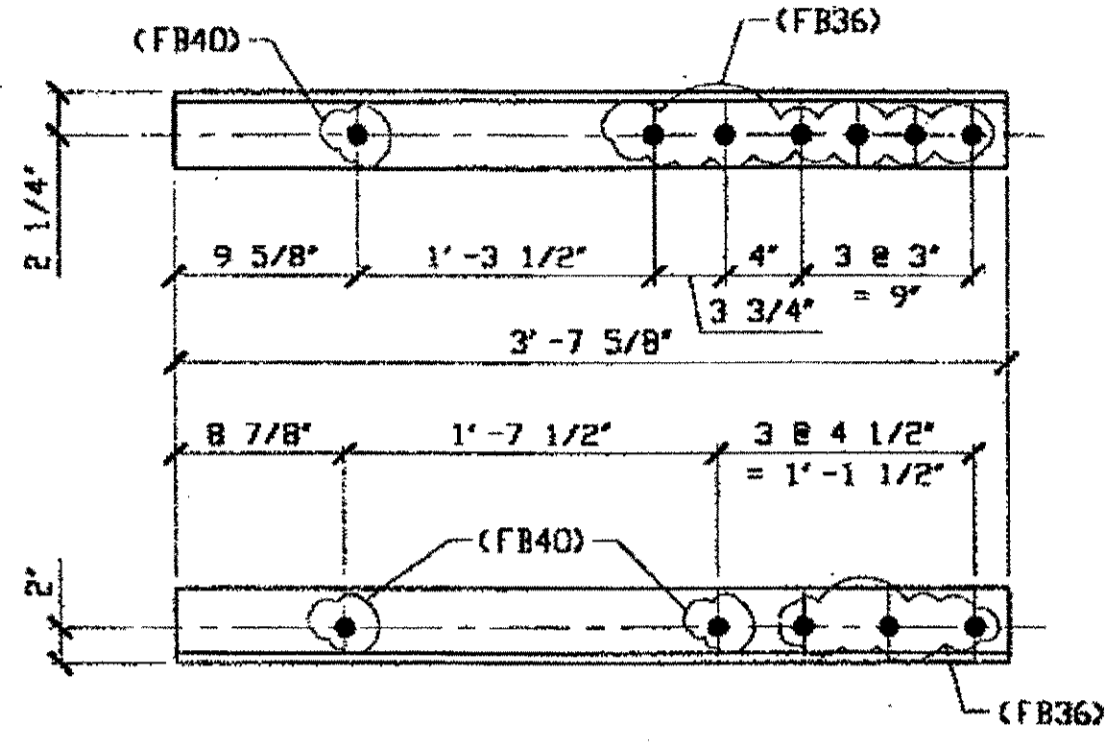
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

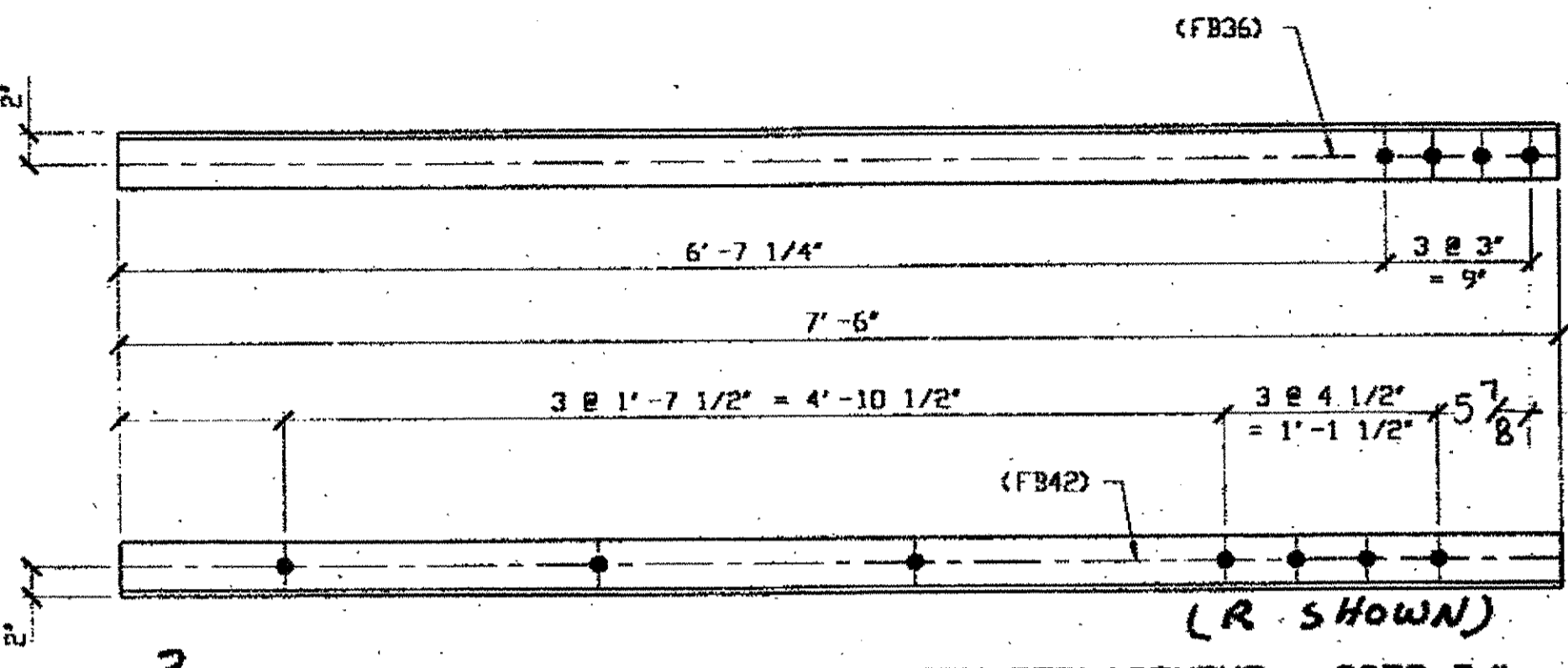
DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863ES000D

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 1 REPAIRS			
SHEET NUMBER			139
JOB NUMBER			800010

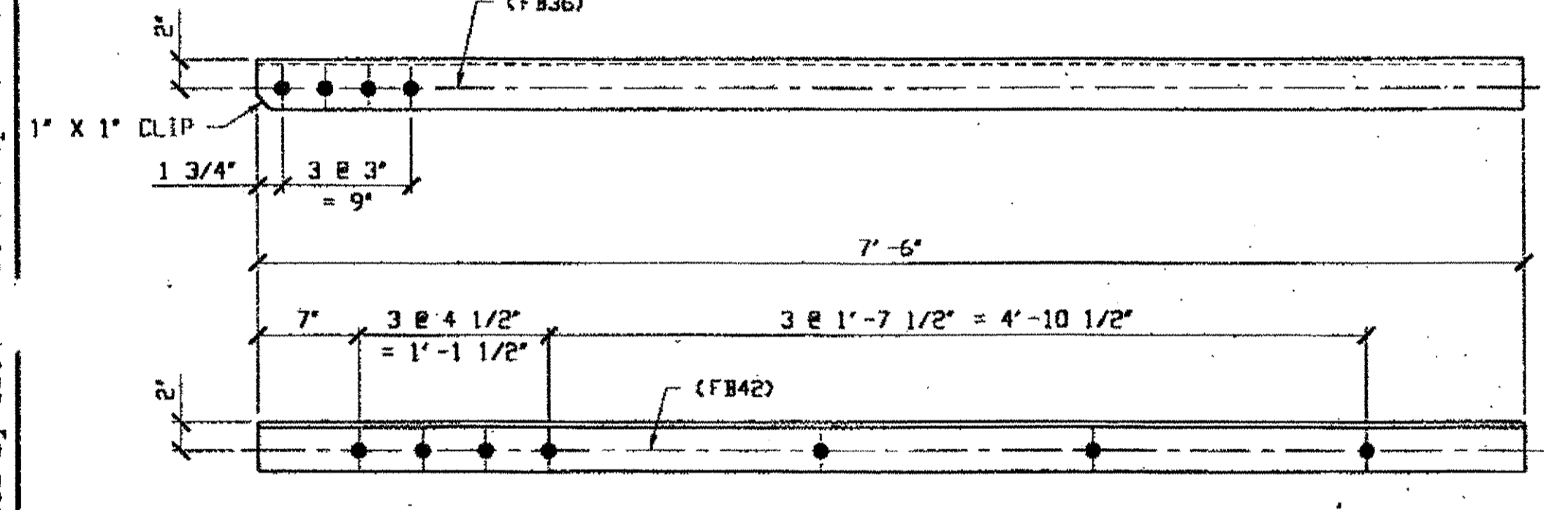
Last modified: reprinter at 01:00pm on Mon Feb 05, 2001 -1- Last plotted by Gfo. at 04:10pm on Mon Feb 05, 2001



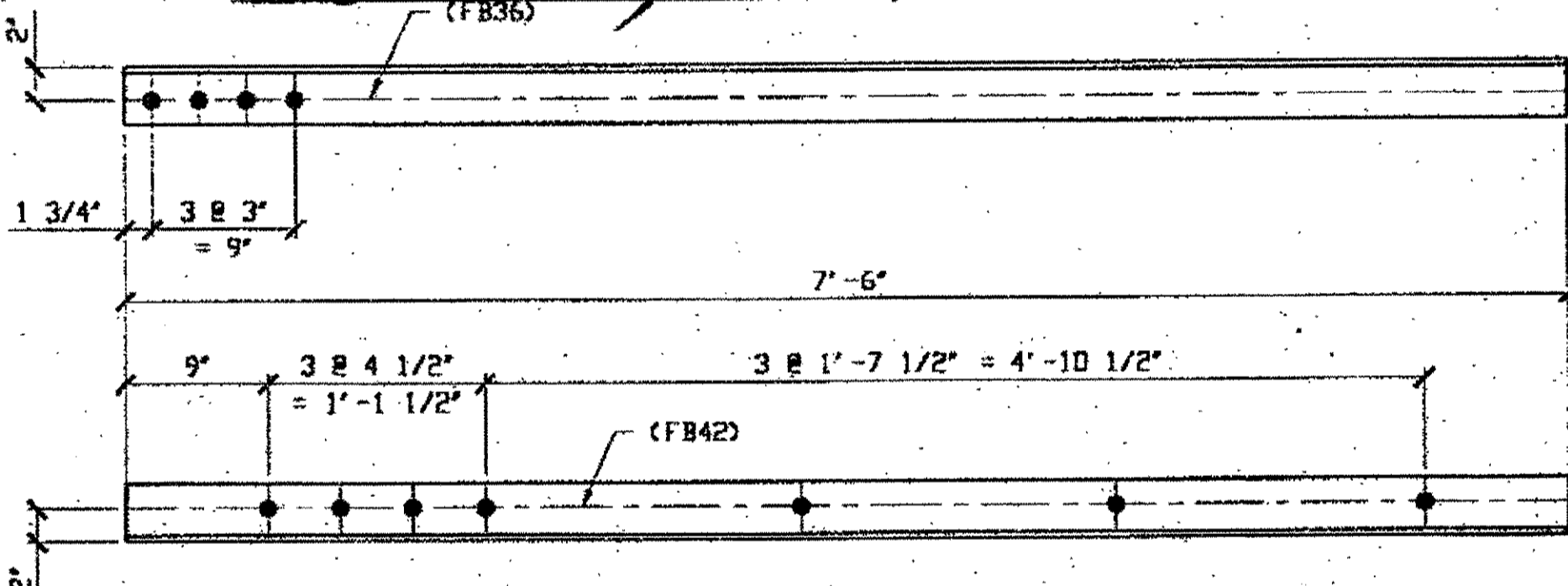
**1 - STEEL OVER 50 LB REPLACEMENT - 205A**  
 ORIG SHOP DWG 12-BS6  
 ORIG SHOP MARK A18a/L  
 LINE ITEM No. 0152  
 BID ITEM No. 863E90000  
**SPAN 3**  
 O-O' NORTH, BOTTOM WEST FROM O 205A



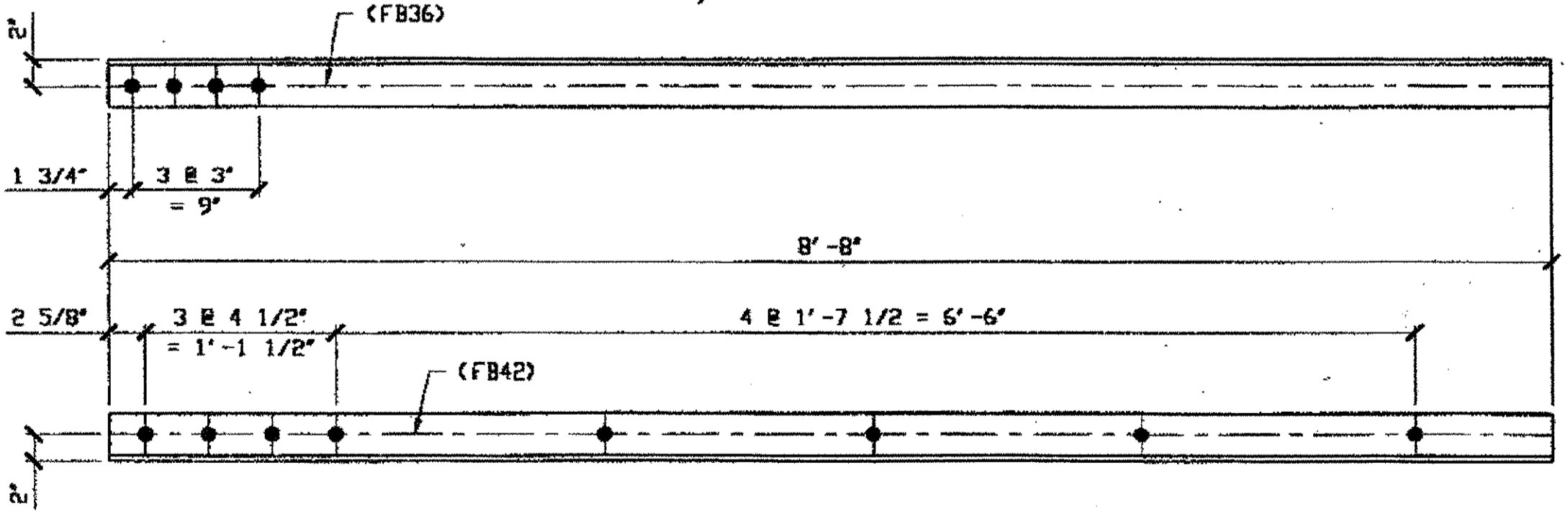
**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 205D R/L**  
 ORIG SHOP DWG 16-BL17  
 ORIG SHOP MARK A16a/R/L  
 LINE ITEM No. 0106  
**SPAN 3**  
 C-B' SOUTH, TOP NORTH 205D/R  
 C-B' SOUTH, TOP SOUTH 205D/L  
 C-B' SOUTH, BOTTOM SOUTH 205D/R



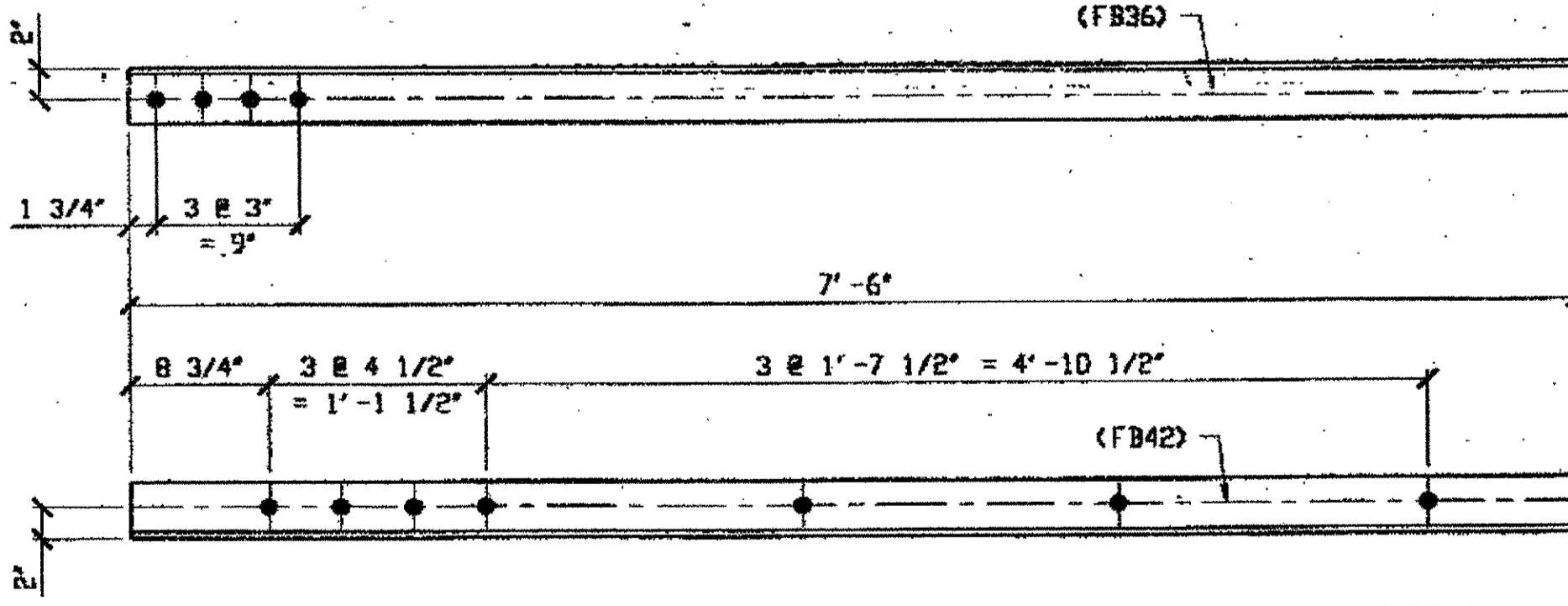
**- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 205B R/L**  
 ORIG SHOP DWG 16-BL16  
 ORIG SHOP MARK A16a/R  
 LINE ITEM No. 0106  
**SPAN 3 A-B' NORTH, TOP SOUTH 205B/R**  
**SPAN 3 A-B' NORTH, TOP NORTH 205B/L**



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 205E**  
 ORIG SHOP DWG 16-BL4  
 ORIG SHOP MARK A16a/L  
 LINE ITEM No. 0110



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 205C R/L**  
 ORIG SHOP DWG 16-BL2  
 ORIG SHOP MARK A16c/R  
 LINE ITEM No. 0110  
**SPAN 3**  
 NORTH B-A' BOTTOM NORTH 205C/L  
 NORTH B-A' BOTTOM SOUTH 205C/R



**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 205G R/L**  
 ORIG SHOP DWG 16-BL18  
 ORIG SHOP MARK A16a/R/L  
 LINE ITEM No. 0106  
**SPAN 3**  
 D-E' NORTH, BOTTOM NORTH 205G/L  
 D-E' NORTH, BOTTOM SOUTH 205G/R  
 D-E' NORTH, TOP SOUTH 205G/L  
 D-E' NORTH, TOP NORTH 205G/R

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL OVER 50 LB.				
2		205A	1	L 4 X 4 X 1/2	3	7 5/8		47
3								
4				QUARTER LENGTH REPLACEMENT				
5		205B	2	L 3 1/2 X 3 1/2 X 3/8	7	6	1/8" x 1/4"	
6		205C	2	L 3 1/2 X 3 1/2 X 3/8	8	8	1/8" x 1/4"	
7		205D R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	1/8" x 1/4"	
8		205E	2	L 3 1/2 X 3 1/2 X 3/8	7	6		
9		205G R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6		255
10								
11								
12								
13								
14								
15								
16								
17								
18								
19				FIELD BOLTS				
20		FB36		1" DIA	0	2 1/2	NOTE 2	
21		FB40		1" DIA	0	3	NOTE 2	
22		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE	A36			PIPE N/A			FITTINGS N/A	
SHAPES	A36			FLGS. N/A			BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 3 C-B' NORTH BOTTOM NORTH 205F**  
**SPAN 5 N-P' SOUTH BOTTOM SOUTH 205F.**

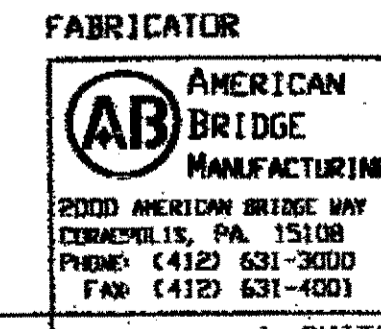
O.D.O.T. DIST. 12	
ACCEPTED	2/5/01 EJM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U.N.

NO.	DATE	DESCRIPTION	BY



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNELLVILLE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

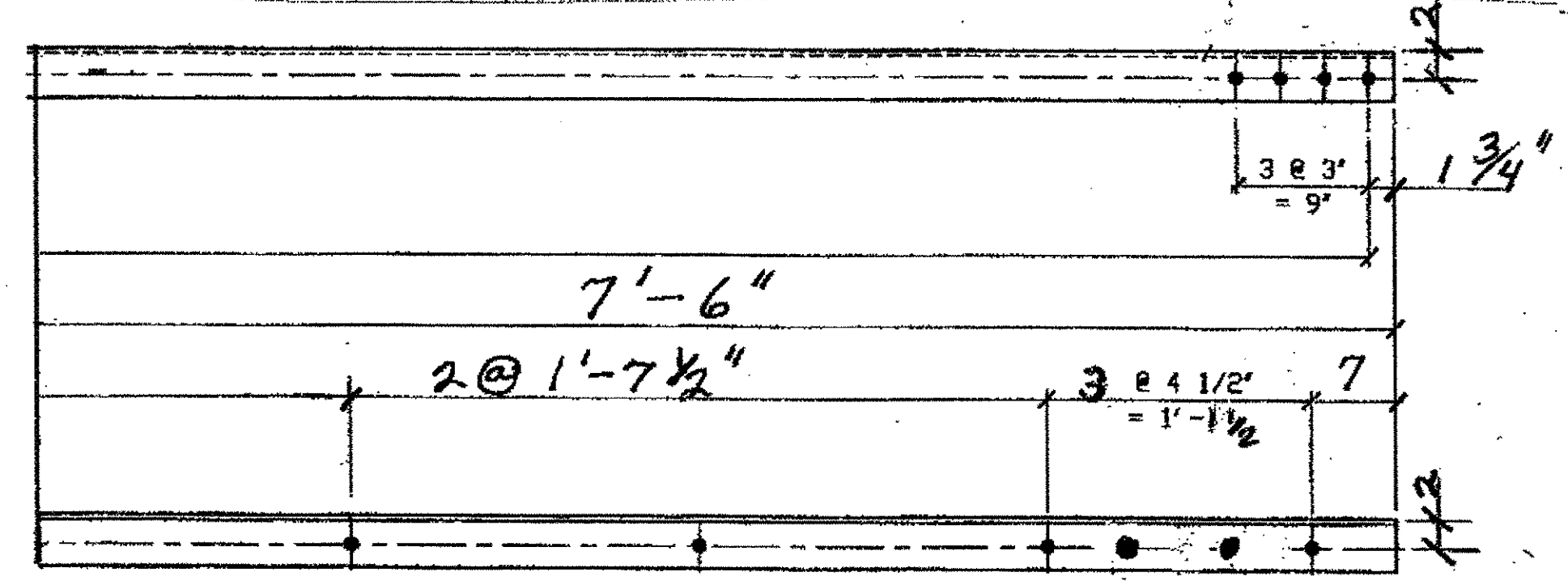
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN REPAIRS**

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY EJP

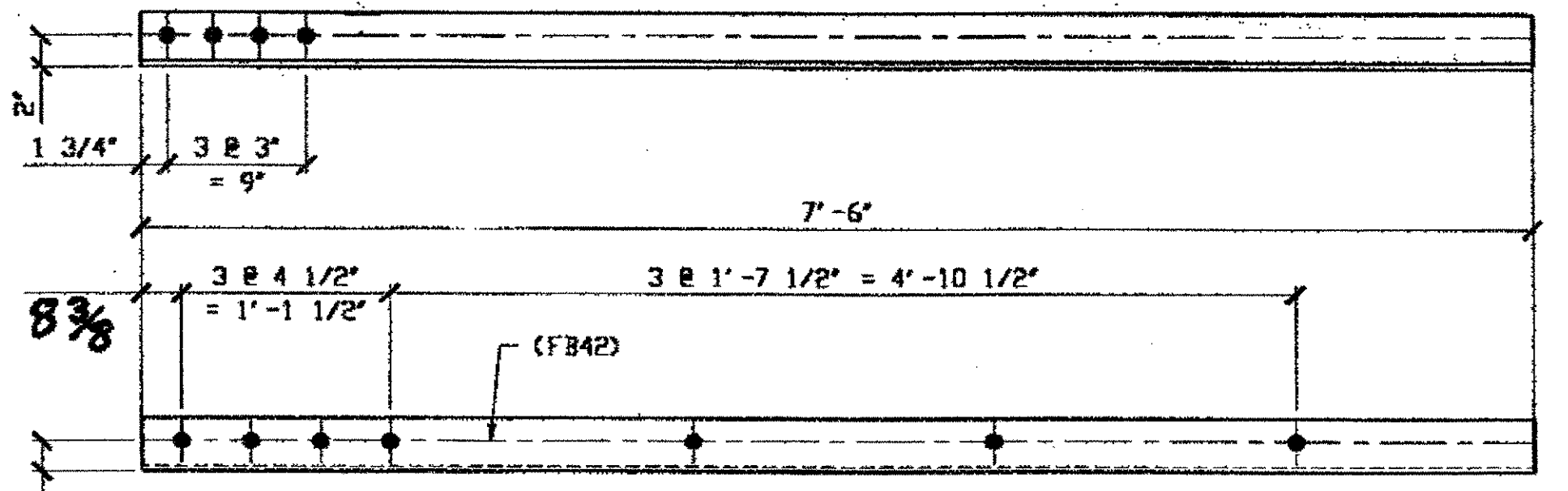
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 12/27/00  
 CHECKED BY: DATE  
 GAF 02/02/01

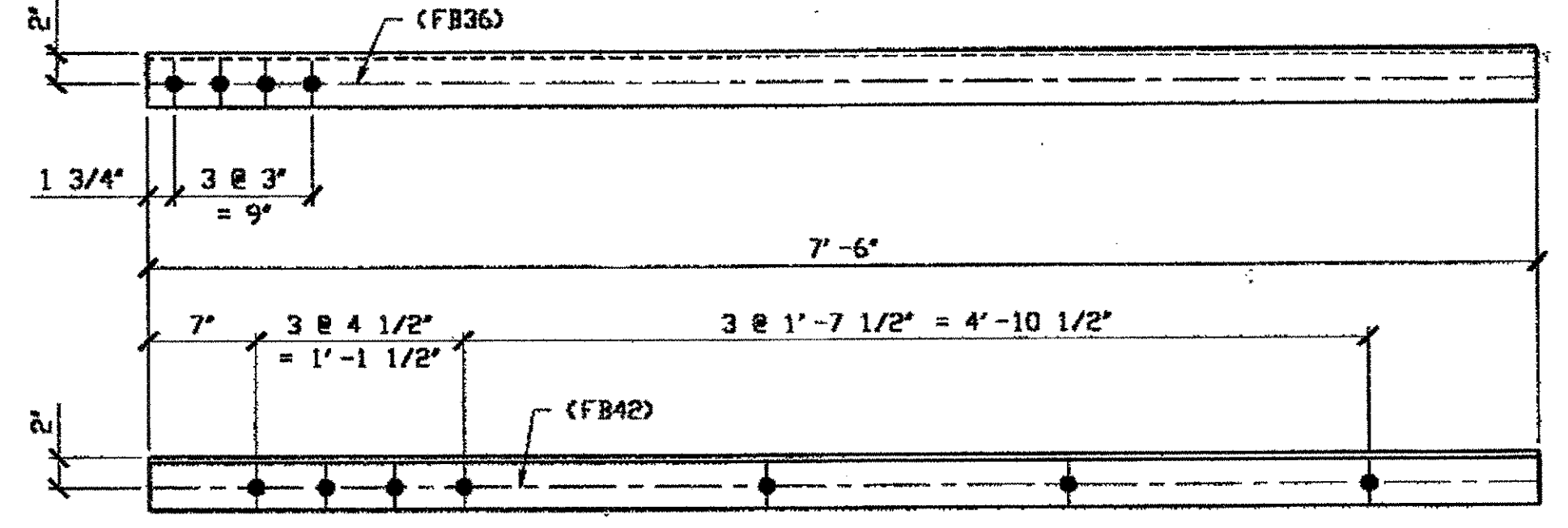
SHEET NUMBER: 205  
 AM JOB NUMBER: 800010



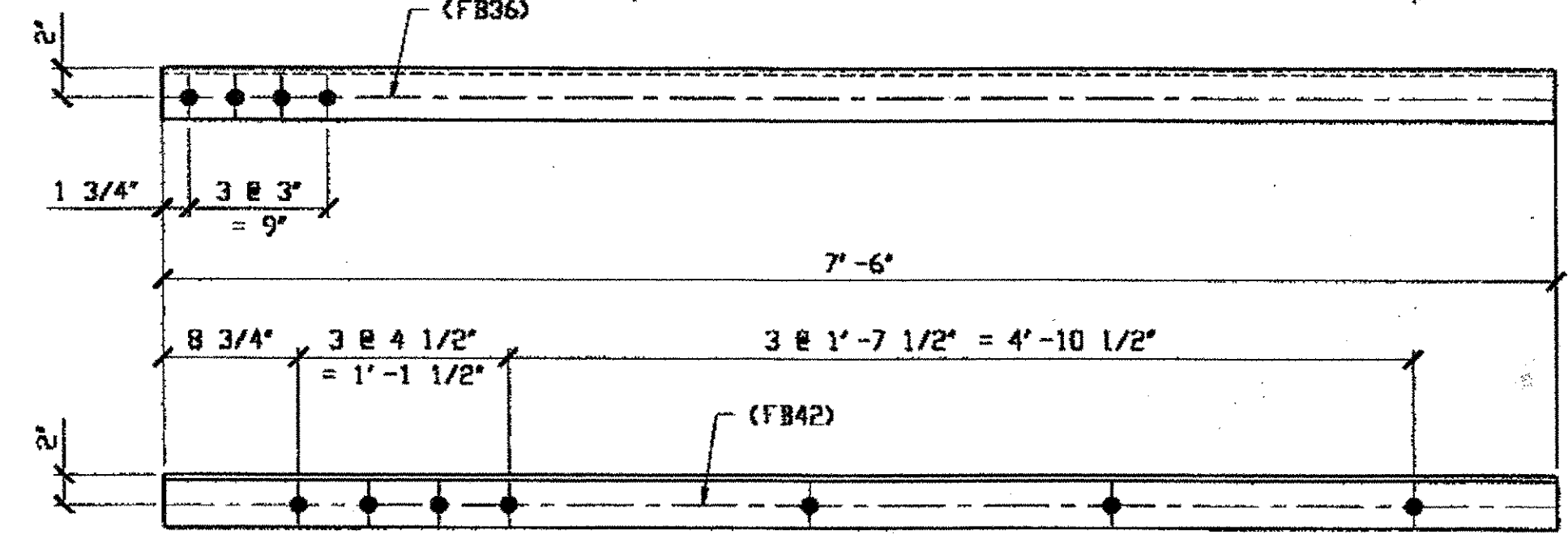
1 - TYPE 2, 1/4 LENGTH DIAGONAL 206A  
 ORIGINAL SHOP MARK A16h BL6  
**SPAN 3**  
 D-E' SOUTH, FROM TIE R TO E', Bot. SOUTH 206A



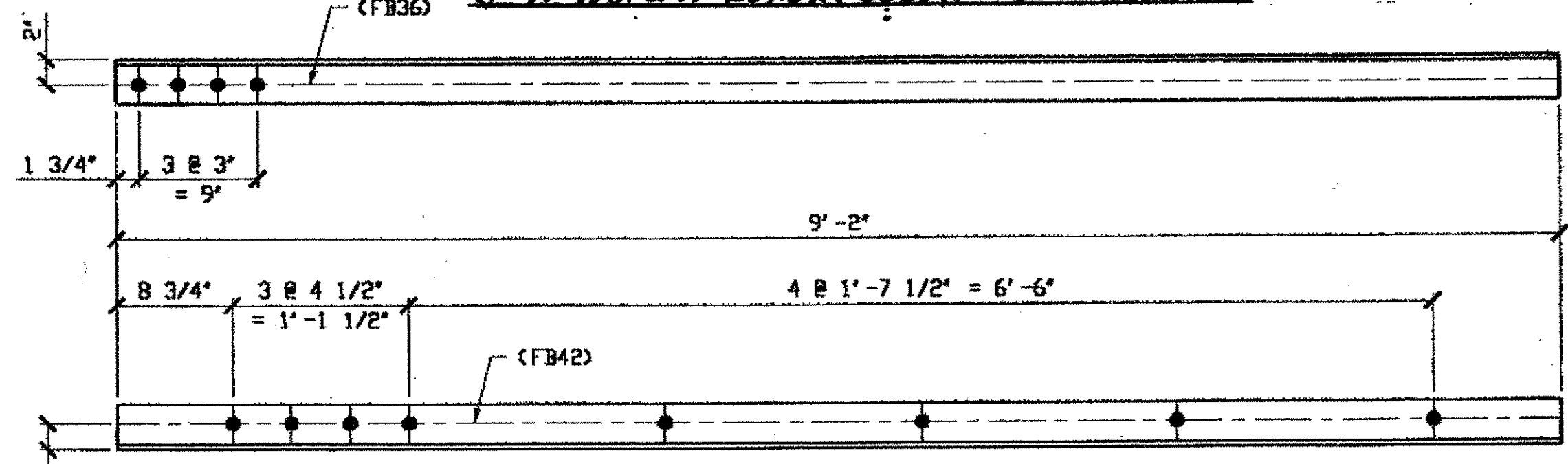
3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 206B R/L  
 ORIG SHOP DWG 16-BL8 (R SHOWN)  
**SPAN 3**  
 F-E' NORTH TOP NORTH 206B1R  
 F-E' NORTH TOP SOUTH 206B1L  
 F-E' NORTH BOTTOM SOUTH 206B1R



4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 206F R/L  
 ORIG SHOP DWG 16-BL21 (R SHOWN)  
**SPAN 3**  
 G-H' NORTH TOP NORTH 206F1L  
 G-H' NORTH TOP SOUTH 206F1R  
 G-H' NORTH BOTTOM SOUTH 206F1L



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 206C R/L  
 ORIG SHOP DWG 16-BL20 (R SHOWN)  
**SPAN 3**  
 F-G' NORTH TOP NORTH 206C1L  
 F-G' NORTH TOP SOUTH 206C1R



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 206G  
 ORIG SHOP DWG 16-BL23  
 ORIG SHOP MARK A16ac R/L  
 LINE ITEM No. 0106 & 0152  
 LINE ITEM No. 0152, BID ITEM No. 863E90000

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				QUARTER LENGTH REPLACEMENT				
2		206A	1	L 3 1/2 x 3 1/2 x 3/8	7	6		
3		206B R/L	3	L 3 1/2 x 3 1/2 x 3/8	7	6	2/R; 1/L	191
4		206C R/L	2	L 3 1/2 x 3 1/2 x 3/8	7	6		128
5								
6		206F R/L	4	L 3 1/2 x 3 1/2 x 3/8	7	6	2/R; 2/L	
7		206G	1	L 3 1/2 x 3 1/2 x 3/8	9	2		78
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36		1" DIA	0	2 1/2	NOTE 2	
20		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES A36					FLGS. N/A		BOLTS NOTE 2	

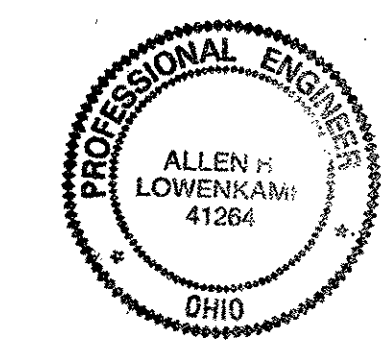
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 2**  
 B-C' SOUTH, Bot. NORTH 206F1R

O.D.O.T. DIST. 12

ACCEPTED	
ACCEPTED AS NOTED	3/5/01 DJM
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



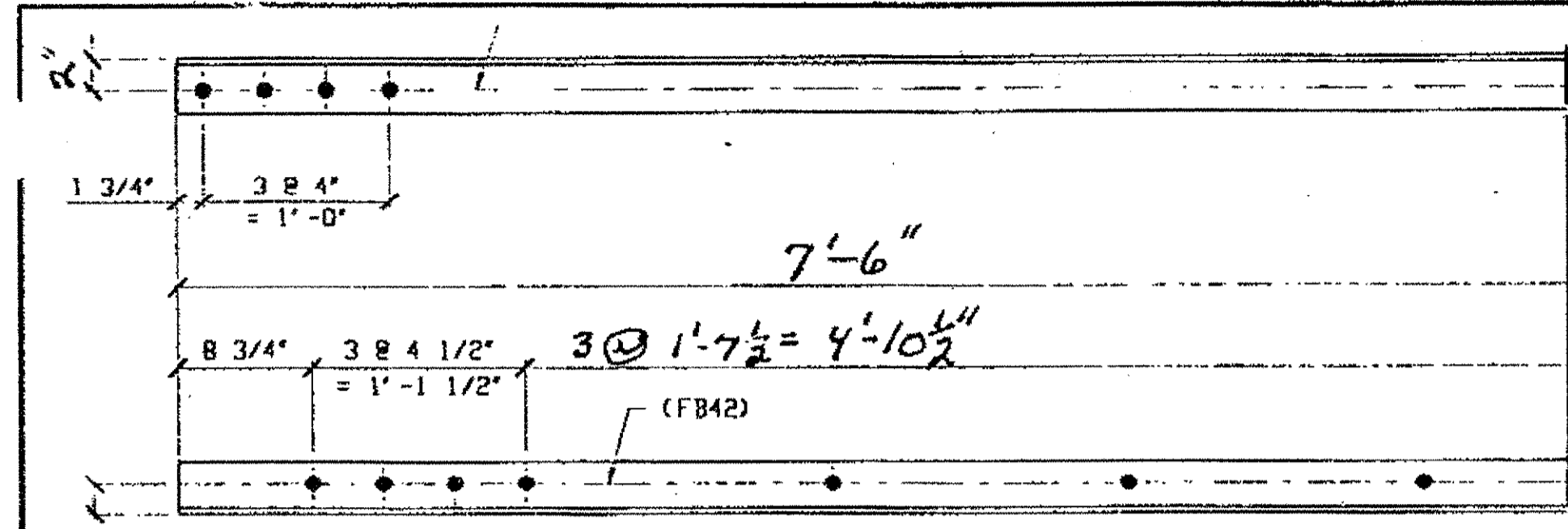
DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000 U.N.

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS			
DRAWN BY: DATE:		SHEET NUMBER:	
RAS 12/29/00		206	
CHECKED BY: DATE:		AMB JOB NUMBER:	
GAF 02/02/01		800010	

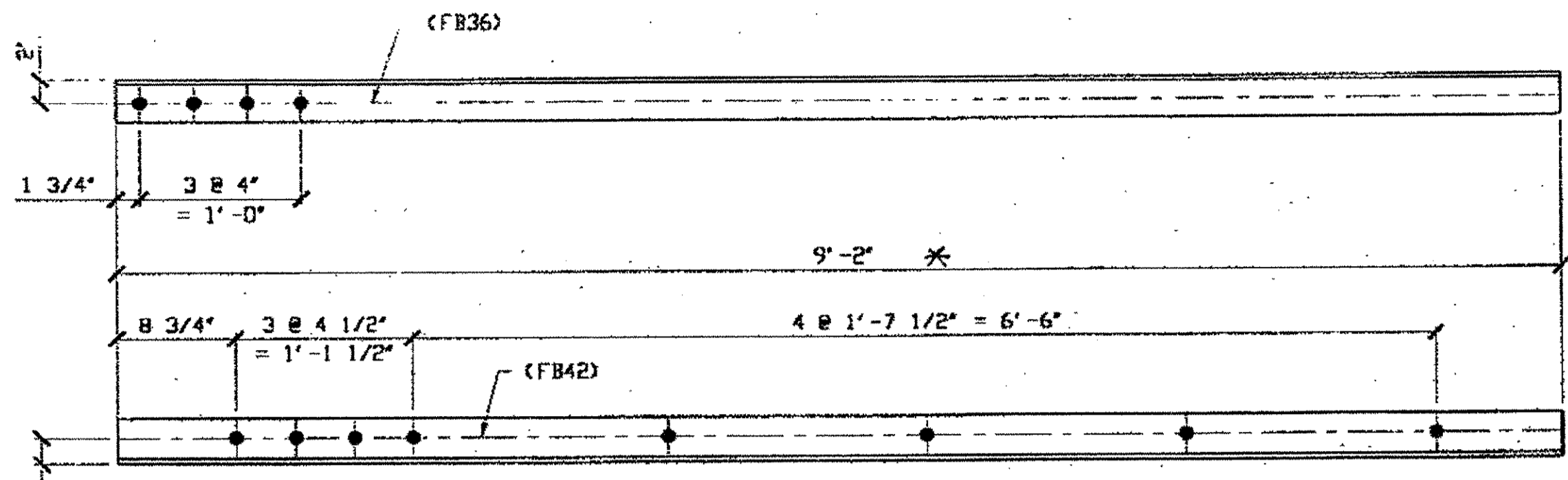
RELEASED FOR CONSTRUCTION  
 DATE 2/17/01 BY EDP

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

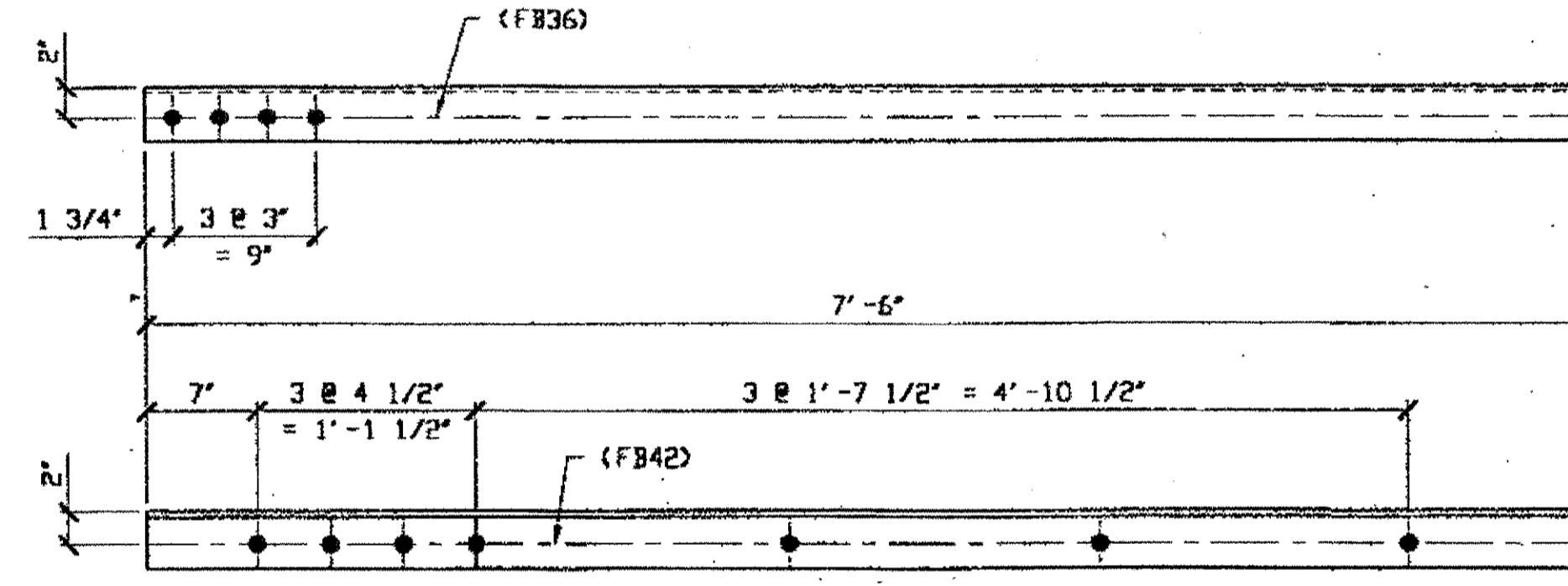
04:10pm on Mon Feb 05, 2001  
 03:133pm on Mon Feb 05, 2001 - Last plotted by Gfooster  
 Gfooster at 03:133pm on Mon Feb 05, 2001 - Last modified



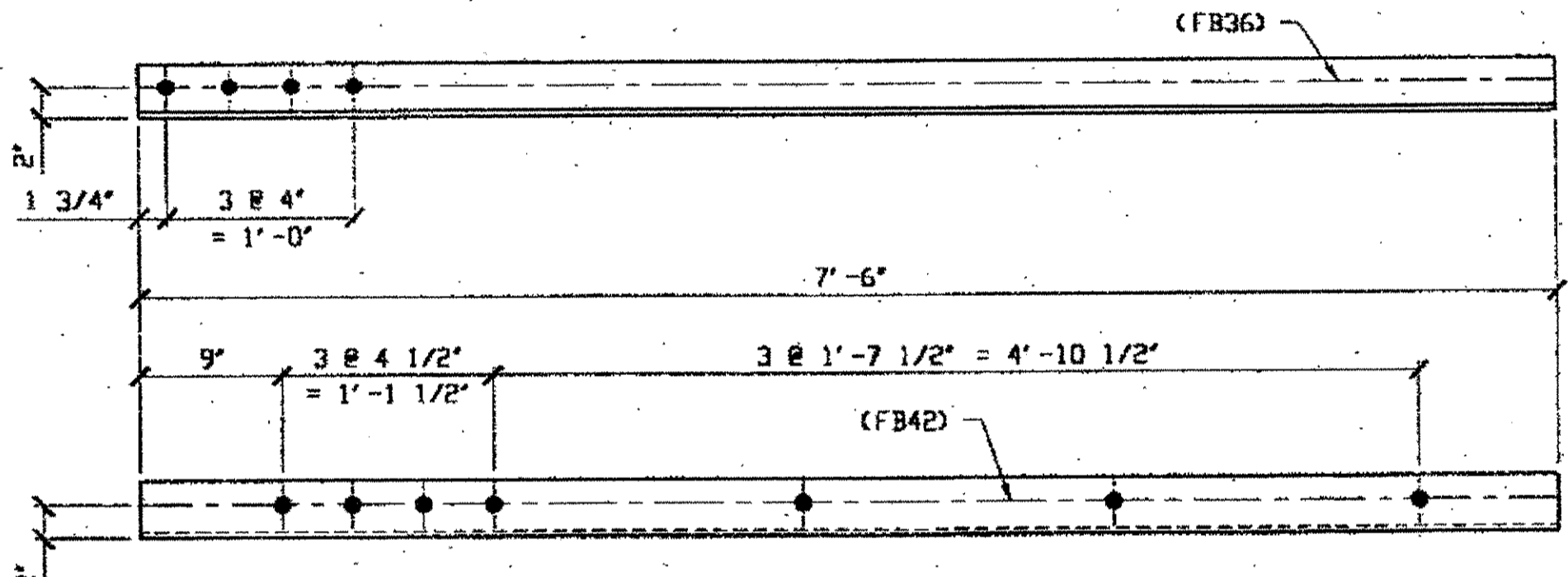
**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 207A R/L**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL24  
 ORIG SHOP MARK A16an  
 LINE ITEM No. 0106 & 0152  
**SPAN 3**  
 K-L' NORTH TOP NORTH 207A/R  
 K-L' NORTH TOP SOUTH 207A/L  
 B-C' NORTH BOTTOM SOUTH 207A/R



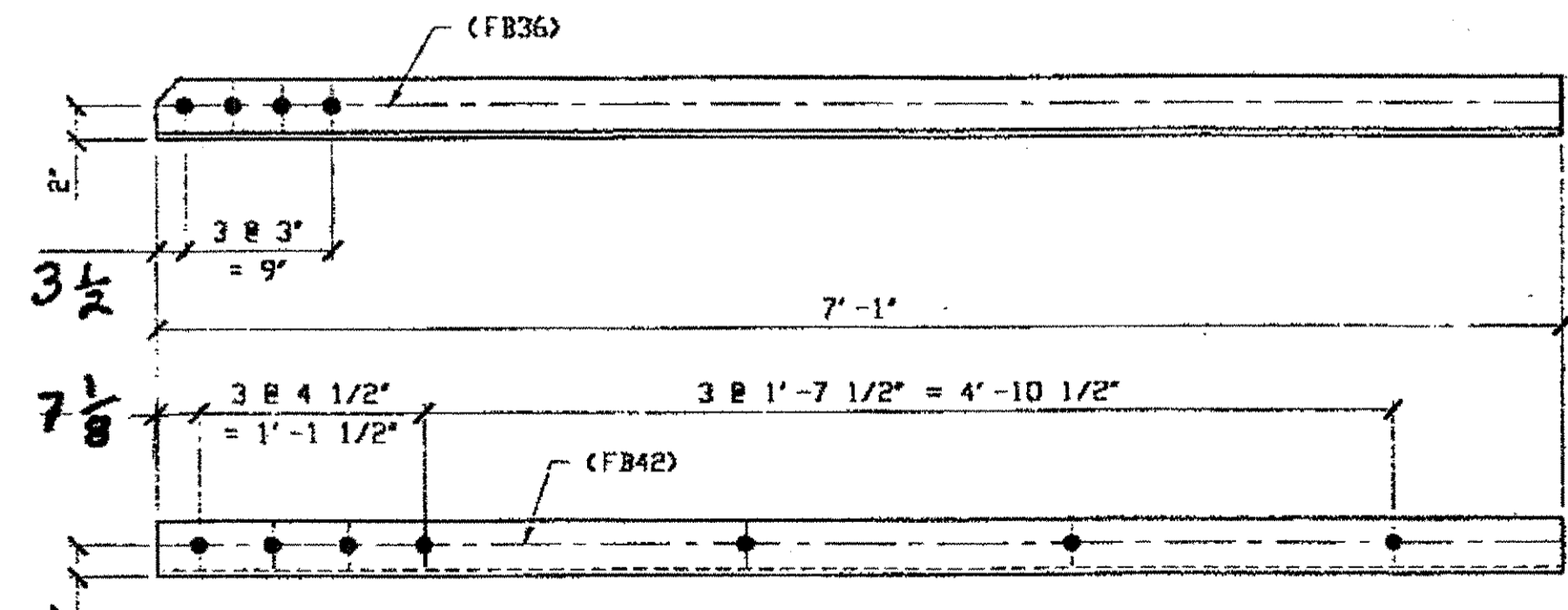
**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 207D**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL24  
 ORIG SHOP MARK A16an  
 LINE ITEM No. 0152, BID ITEM No. 863E90000  
**SPAN 3**  
 K-L' NORTH BOTTOM SOUTH 207D



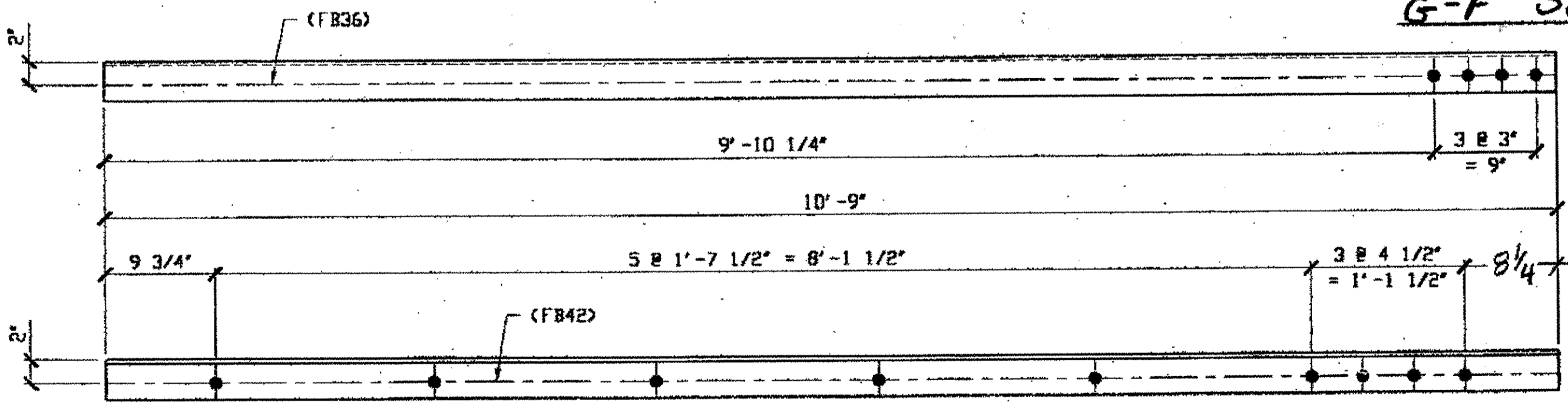
**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 207B R/L**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL25  
 ORIG SHOP MARK A16an R/L  
 LINE ITEM No. 0106  
**SPAN 3**  
 M-N' NORTH TOP SOUTH 207B/R  
 M-N' NORTH BOTTOM NORTH 207B/R  
 M-N' NORTH TOP NORTH 207B/L  
 M-N' NORTH BOTTOM SOUTH 207B/L



**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 207F**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL3  
 ORIG SHOP MARK A16F  
 LINE ITEM No. 0110  
**SPAN 3**  
 B-C' SOUTH BOTTOM NORTH 207F



**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 207C**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL1  
 ORIG SHOP MARK A16b R/L  
 LINE ITEM No. 0110  
**SPAN 3 SOUTH A-B' BOTTOM NORTH 207C**



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 207G R/L**  
 (R SHOWN)  
 DRIG SHOP DWG 16-BL20  
 ORIG SHOP MARK A16ag R/L  
 LINE ITEM No. 0152, BID ITEM No. 863E90000

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		207A/R	3	L 3 1/2 x 3 1/2 x 3/8	7	6	2/R 1/L	
3								
4				QUARTER LENGTH REPLACEMENT				
5		207B R/L	4	L 3 1/2 x 3 1/2 x 3/8	7	6		255
6		207C	1	L 3 1/2 x 3 1/2 x 3/8	7	1		60
7		207D	1	L 3 1/2 x 3 1/2 x 3/8	9	2	2 R/L	78
8		207F	1	L 3 1/2 x 3 1/2 x 3/8	7	6		64
9		207G R/L	2	L 3 1/2 x 3 1/2 x 3/8	10	9		183
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36	36	1" DIA	0	2 1/2	NOTE 2	50
20		FB42	68	1" DIA	0	3 1/4	NOTE 2	106
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U.N.

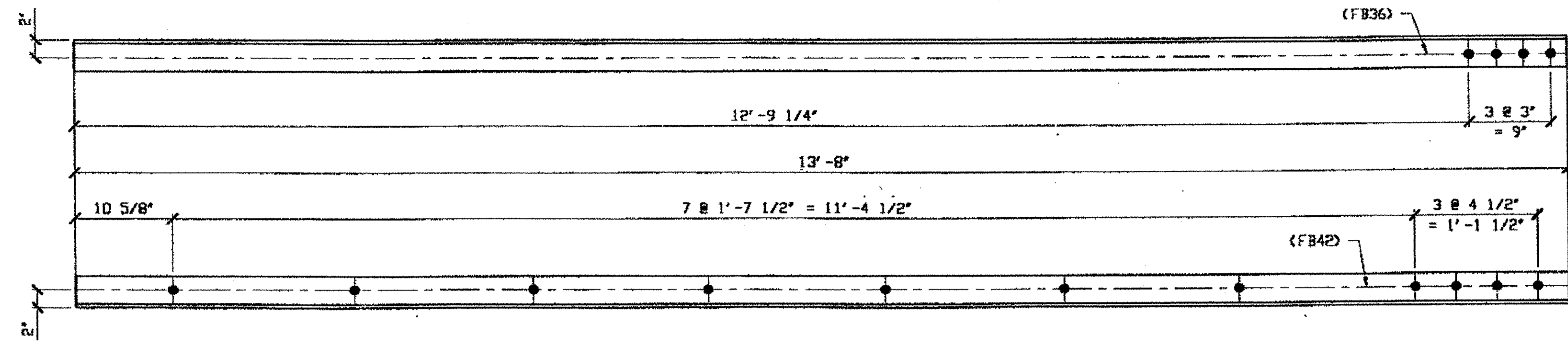
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 3 REPAIRS			
FABRICATOR		STEEL ERECTOR	
AMERICAN BRIDGE MANUFACTURING 2300 MERRIMAN BRIDGE WAY CORVU, PA. 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001		TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	
IN CHARGE OF: L. SMITH		DRAWN BY: DATE RAS 1/02/01	
CHECKED BY: DATE GAF 02/02/01		SHEET NUMBER: 207	
		JOB NUMBER: 800010	

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY TDP

Last modified: reprinter at 01:34pm on Mon Feb 05, 2001 - East plotted by GFC at 04:11pm on Mon Feb 05, 2001



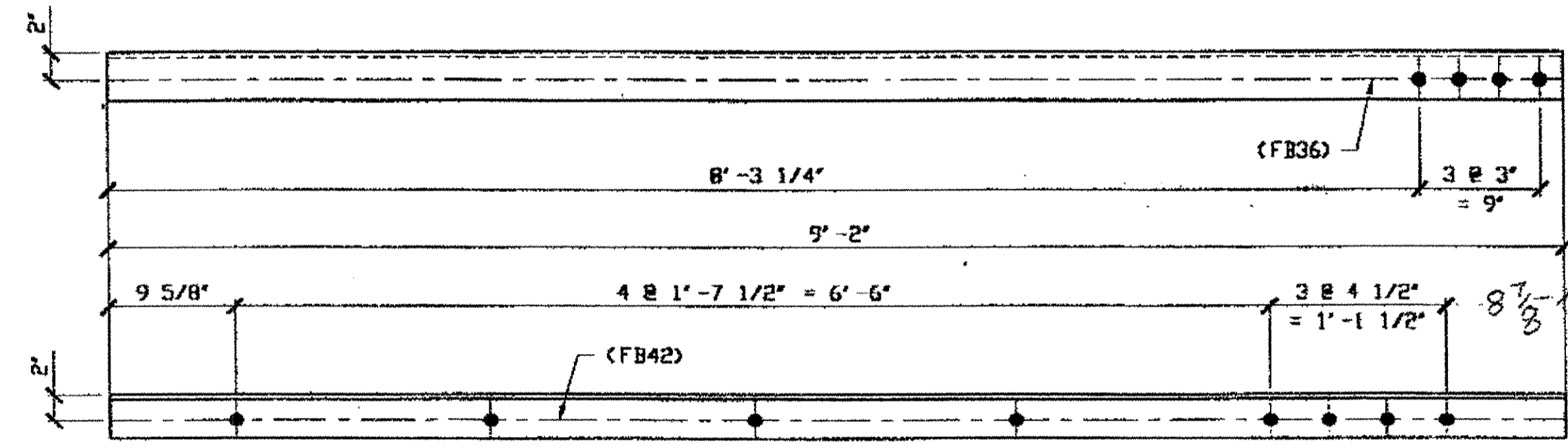
at 04:11pm on Mon Feb 05, 2001  
 at 01:39pm on Mon Feb 05, 2001  
 Last modified



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 208A**

ORIG SHOP DWG 16-BL24  
ORIG SHOP MARK A16ac R/L  
LINE ITEM No. 0106 & 0152

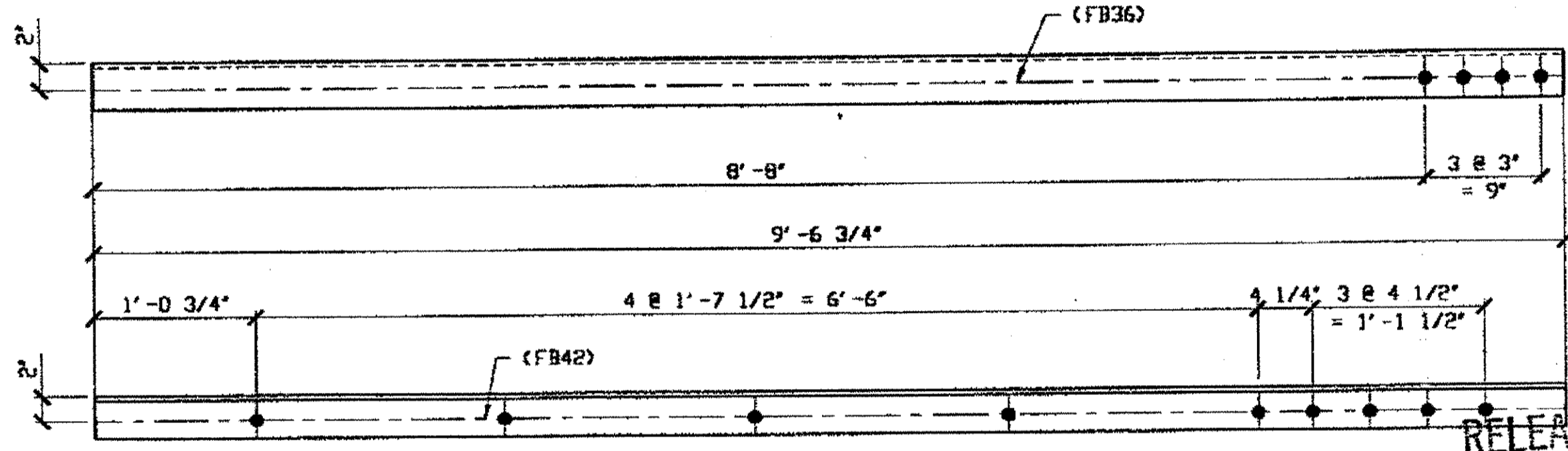
**SPAN 3**  
**L-K' SOUTH, BOTTOM SOUTH 208A**



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 208B R/L**

ORIG SHOP DWG 16-BL22  
ORIG SHOP MARK A16ac R/L  
LINE ITEM No. 0106 & 0152  
BID ITEM No. B63E90000

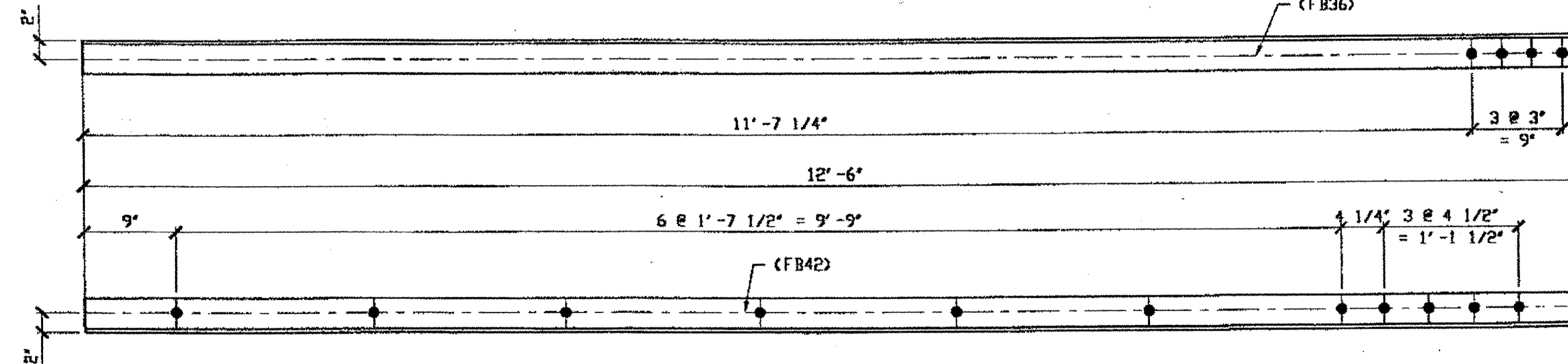
**SPAN 3**  
**J-H' SOUTH, TOP NORTH 208B/R**  
**J-H' SOUTH, TOP SOUTH 208B/L**



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 208C R/L**

ORIG SHOP DWG 16-BL23  
ORIG SHOP MARK A16ac R/L  
LINE ITEM No. 0106 & 0152  
BID ITEM No. B63E90000

**SPAN 3**  
**K-J' SOUTH TOP NORTH 208C/R**  
**K-J' SOUTH TOP SOUTH 208C/L**



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 208D**

ORIG SHOP DWG 16-BL23  
ORIG SHOP MARK A16ac R/L  
LINE ITEM No. 0106 & 0152

**SPAN 3**  
**K-J' SOUTH, BOTTOM SOUTH 208D**

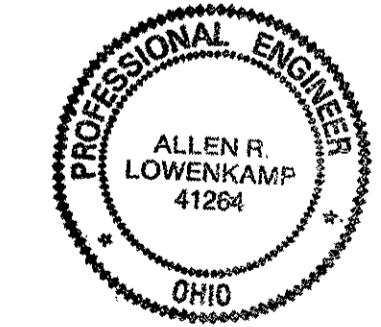
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				QUARTER LENGTH REPLACEMENT				
2		208A	1	L 3 1/2 X 3 1/2 X 3/8	13	8		116
3		208B R/L	2	L 3 1/2 X 3 1/2 X 3/8	9	2		156
4		208C R/L	2	L 3 1/2 X 3 1/2 X 3/8	9	6 3/4		163
5		208D	1	L 3 1/2 X 3 1/2 X 3/8	12	6		106
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36	24	1" DIA	0	2 1/2	NOTE 2	33
20		FB42	56	1" DIA	0	3 1/4	NOTE 2	87
PLATE N/A					PIPE N/A		FITTINGS N/A	
SHAPES A36					FLGS. N/A		BOLTS NOTE 2	

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY *tdp*

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED

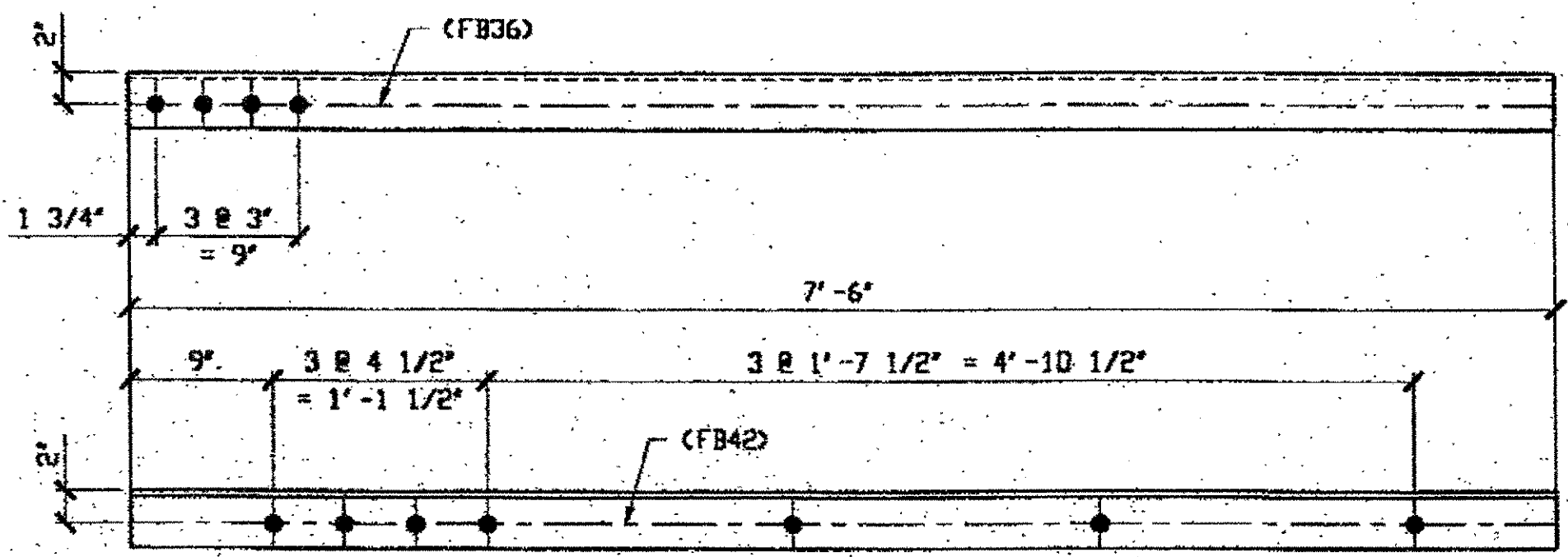


FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORANVILLE, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

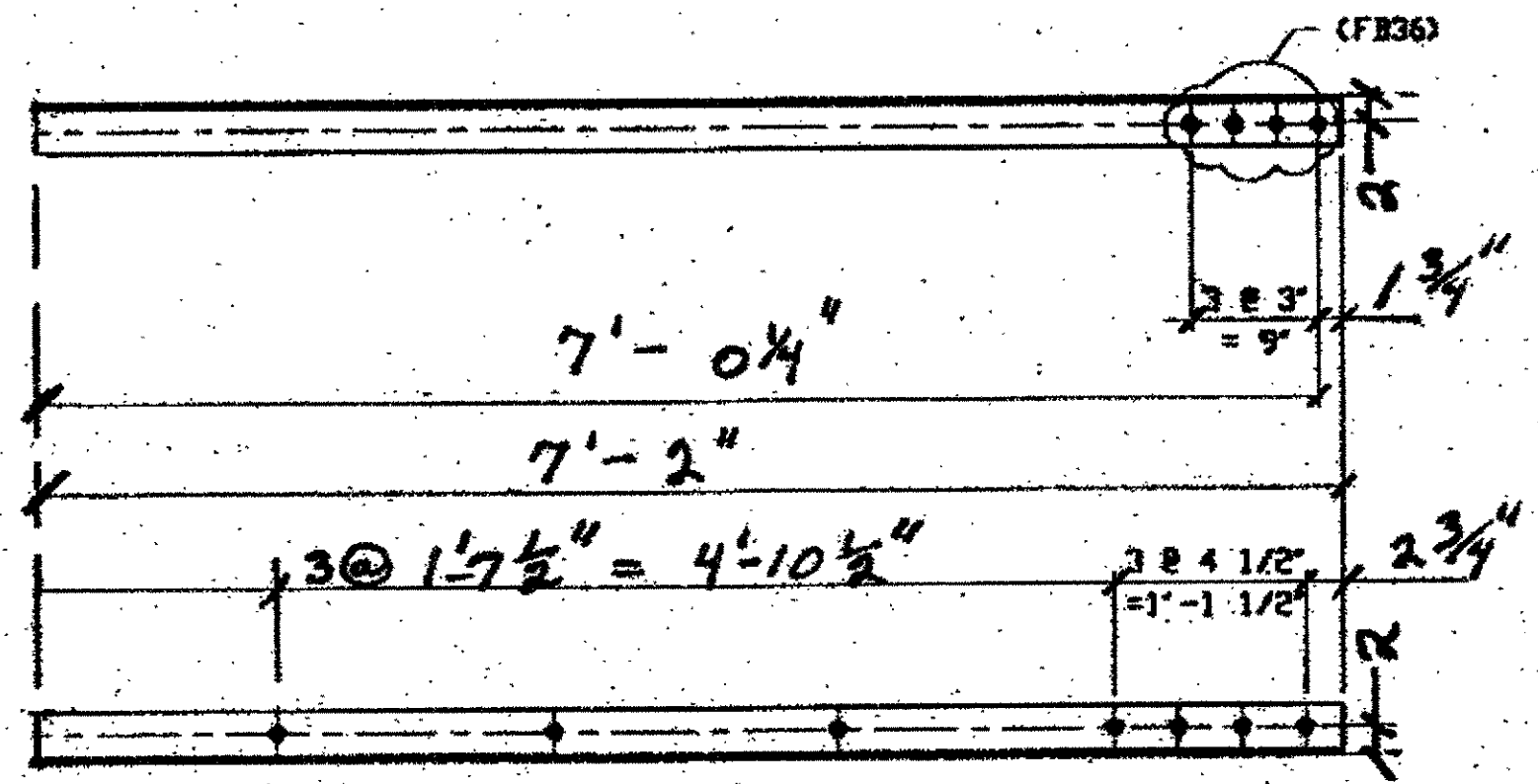
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 1/02/01  
CHECKED BY: DATE: GAF 02/02/01

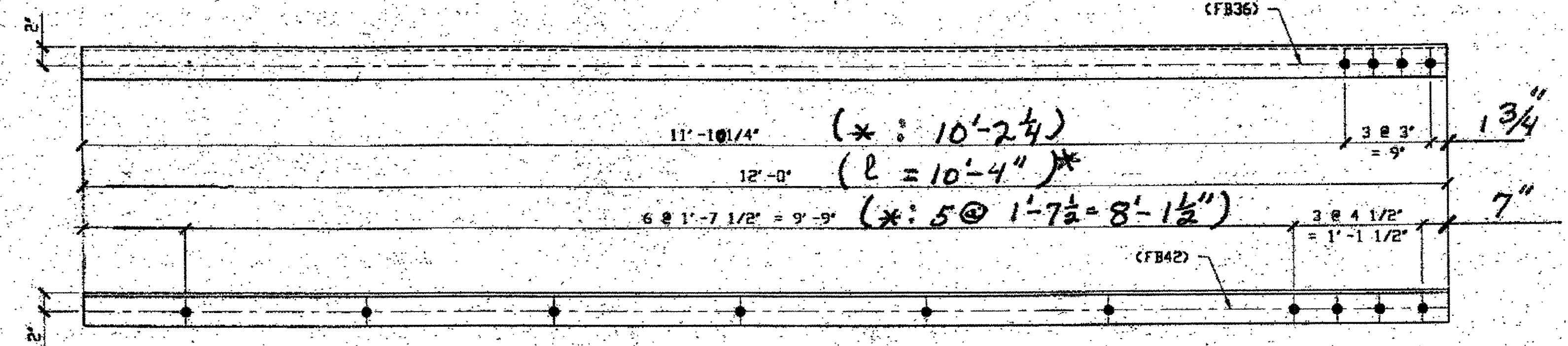
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
DOT ITEM LINE NO. AS NOTED DOT BID ITEM NO. B63E50000 U.N.			SHEET NUMBER: 208 AM. JOB NUMBER: 800010



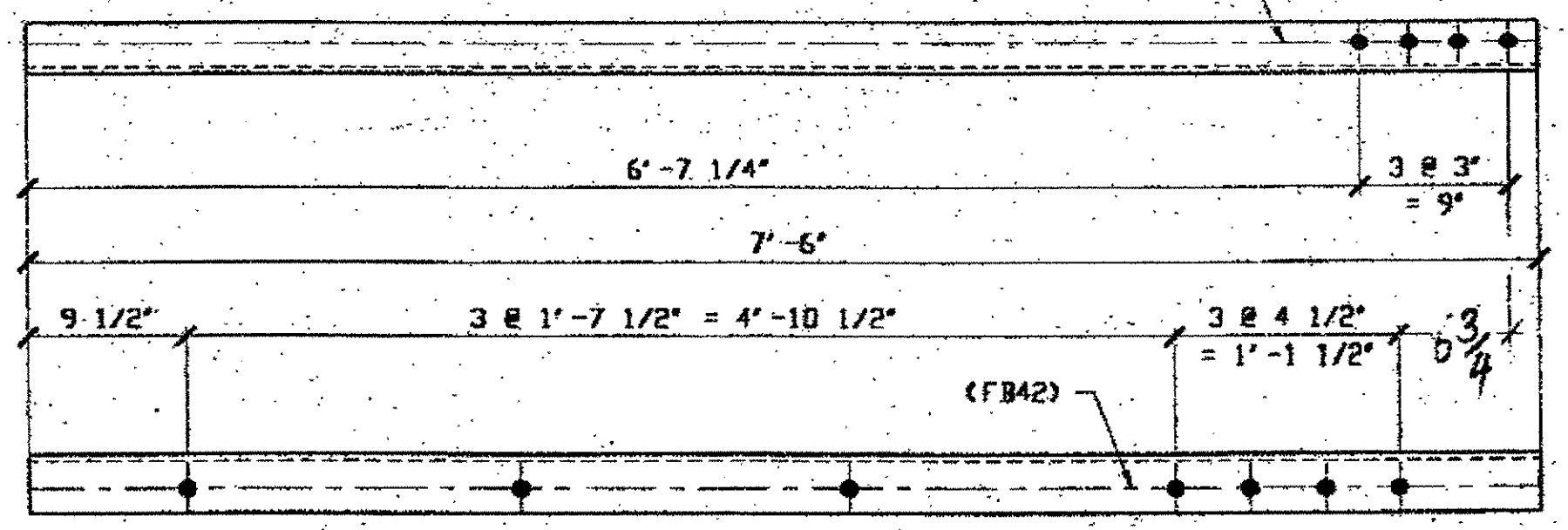
**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 209A R/L**  
 SPAN 3  
 ORIG SHOP DWG 16-BL13  
 ORIG SHOP MARK A16X R/L  
 LINE ITEM No. 0110 (R SHOWN)  
 M-N' SOUTH TOP NORTH 209A/L  
 M-N' SOUTH TOP SOUTH 209A/R  
 M-N' SOUTH Bottom SOUTH 209A/L



**1 - TYPE 1 1/4 LENGTH DIAGONAL 209C**  
 ORIGINAL SHOP MARK A16 R/L OF BL 26  
 SPAN 3 O'-N NORTH, Bottom SOUTH 209C  
 From N. Interior Truss



**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 209B R/L**  
 SPAN 3  
 ORIG SHOP DWG 16-BL26  
 ORIG SHOP MARK A16 R/L  
 LINE ITEM No. 0106 & 0152  
 LINE ITEM No. 0152, BID ITEM No. 863E90000 (L SHOWN)  
 O-N' SOUTH TOP SOUTH 209 B/L  
 O-N' SOUTH TOP NORTH 209 B/R  
 O-N' SOUTH Bottom SOUTH 209 B/R



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 209D**  
 SPAN 3 B-A' SOUTH, TOP NORTH 209.D  
 ORIG SHOP DWG 16-BL16  
 ORIG SHOP MARK A16 R/L  
 LINE ITEM No. 0106

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				QUARTER LENGTH REPLACEMENT				
2		209A R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	1/R, 2/L	191
3		209B R/L	3	L 3 1/2 X 3 1/2 X 3/8	12	0	2/R, 1/L	
4								
5								
6		209C	1	L 3 1/2 X 3 1/2 X 3/8	7	2		
7								
8				QUARTER LENGTH REPLACEMENT				
9		209D	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36		1" DIA	0	2 1/2	NOTE 2	
20		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE				N/A	PIPE	N/A	FITTINGS	N/A
SHAPES				A36	FLGS.	N/A	BOLTS	NOTE 2

RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY EDP

- NOTES:**
- OPEN HOLES ARE  $\phi 1/16$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



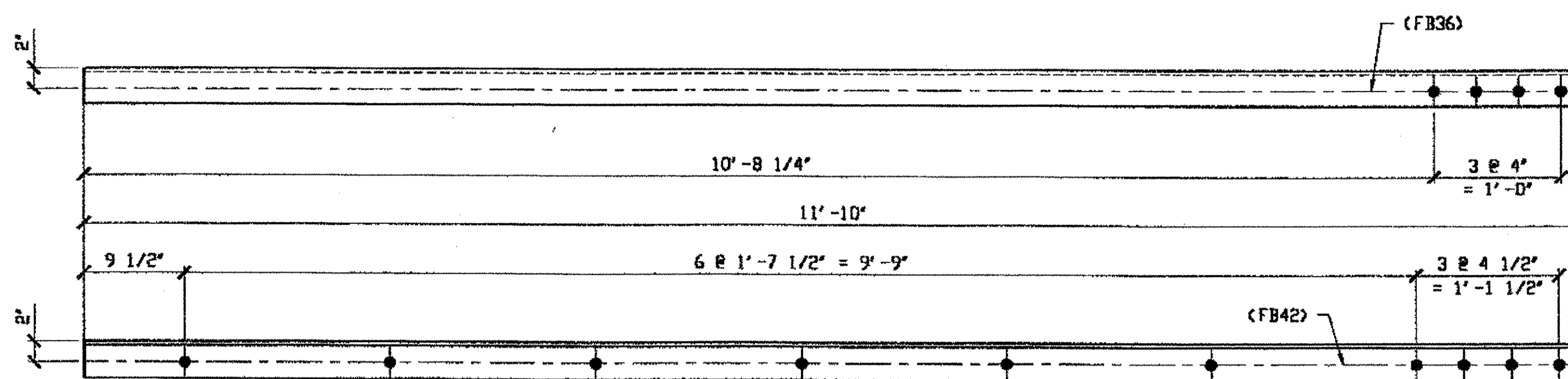
FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNWALL, PA 15108  
 PHONE: (412) 531-2000  
 FAX: (412) 631-0001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 1/03/01  
 CHECKED BY: GAF  
 DATE: 02/02/01  
 SHEET NUMBER: 209  
 JOB NUMBER: 800010

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 3 REPAIRS**

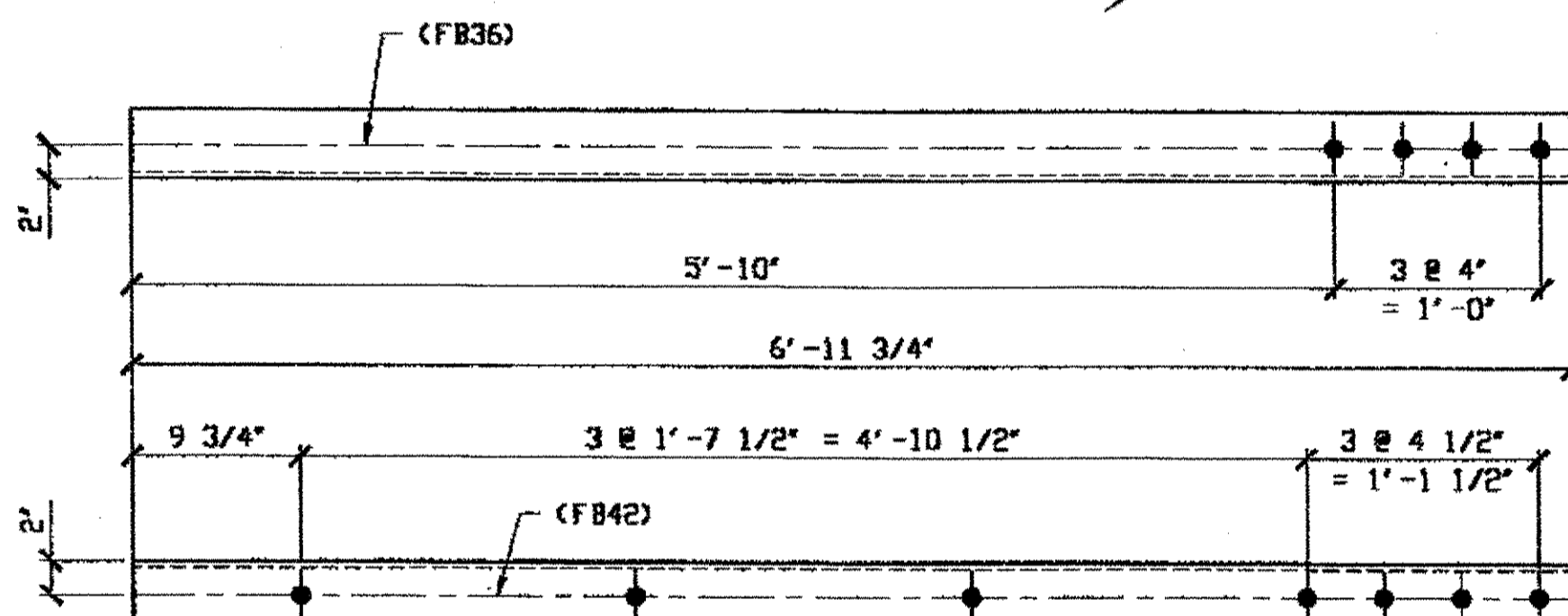
at 04:11pm on Mon Feb 05, 2001 - Last plotted by Gfo  
 rspringer at 02:29pm on Mon Feb 05, 2001 - Last modified by Gfo  
 H:\800010\209A.dwg



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 210A

ORIG SHOP DWG 16-BL25  
ORIG SHOP MARK A16an R/L  
LINE ITEM No. 0106 & 0153  
LINE ITEM No. 0153, BID ITEM No. 863E90000

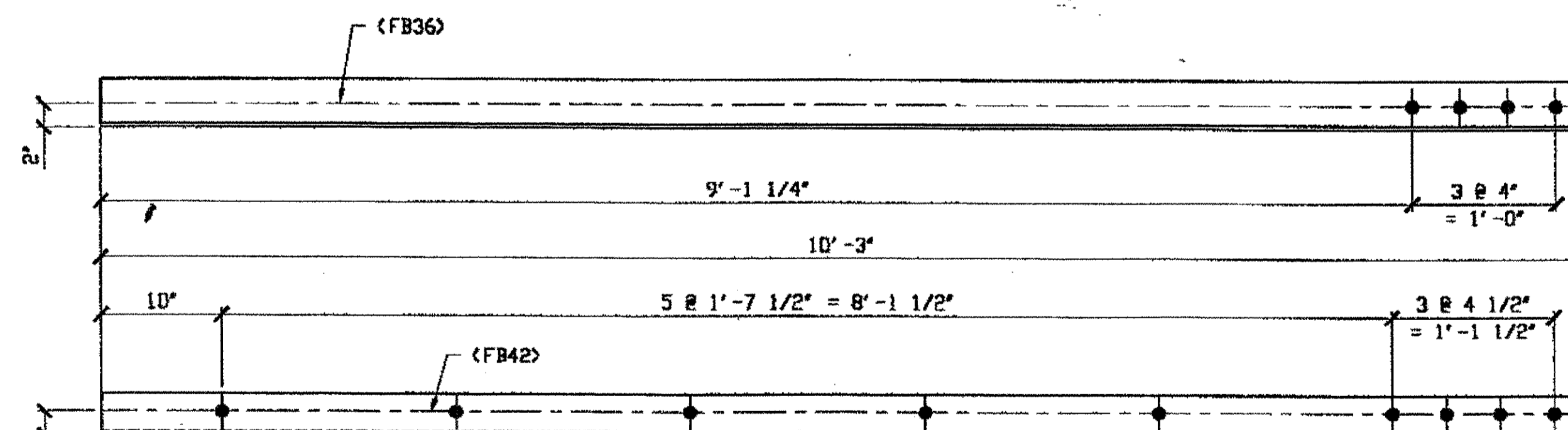
SPAN 3 N-M' SOUTH TOP SOUTH 210A



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 210B

ORIG SHOP DWG 16-BL25  
ORIG SHOP MARK A16an R/L  
LINE ITEM No. 0106

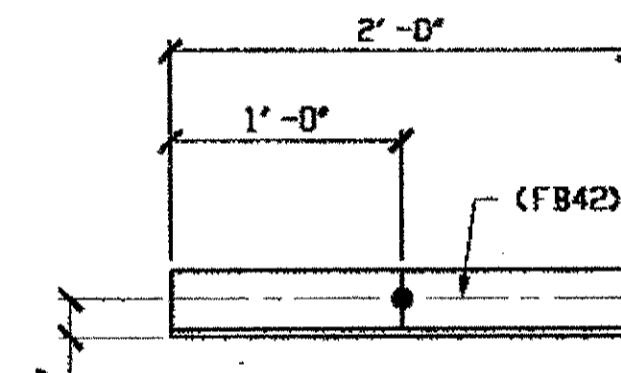
SPAN 3 N-M' SOUTH, TOP NORTH 210B



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 210C

ORIG SHOP DWG 16-BL25  
ORIG SHOP MARK A16an R/L  
LINE ITEM No. 0106 & 0153  
LINE ITEM No. 0153, BID ITEM No. 863E90000

SPAN 3 N-M' SOUTH, BOTTOM NORTH 210C



1 - STEEL UNDER 50 LB REPLACEMENT - 210D

ORIG SHOP DWG 16-BL25  
ORIG SHOP MARK A16an R/L  
LINE ITEM No. 0152  
BID ITEM No. 863E90000

SPAN 3  
M-N' NORTH BOTTOM SOUTH 210D

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				QUARTER LENGTH REPLACEMENT				
2		210A	1	L 3 1/2 X 3 1/2 X 3/8	11	10		101
3		210B	1	L 3 1/2 X 3 1/2 X 3/8	6	11 3/4		59
4		210C	1	L 3 1/2 X 3 1/2 X 3/8	10	3		87
5								
6				STEEL UNDER 50 LB				
7		210D	1	L 3 1/2 X 3 1/2 X 3/8	2	0		17
8								
9				TYPE 1 CHORD ANGLE REPAIR				
10		210F	7	BAR 3 1/2 X 1/2	10	0	PLAIN MAT.	417
11		FB6B	135	1 1/8" DIA	0	2 3/4	NOTE 2	260
12								
13				SPOT REPAIRS TO ANGLE				
14		210G	4	BAR 3 X 1/2	10	0	PLAIN MAT.	204
15								
16								
17				FIELD BOLTS				
18								
19		FB36	12	1" DIA	0	2 1/2	NOTE 2	17
20		FB42	27	1" DIA	0	3 1/4	NOTE 2	42
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

DOT ITEM LINE No. 0148

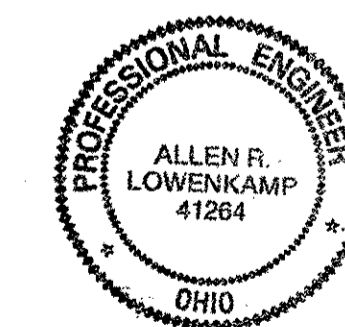
DOT ITEM LINE No. 0104

RELEASED FOR CONSTRUCTION  
DATE 2/13/01 BY tdp

NOTES:

- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER-RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED [Signature]  
NOT ACCEPTED [Signature]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CINCINNATI, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: RAS DATE: 1/03/01  
CHECKED BY: GAF DATE: 02/02/01  
SHEET NUMBER: 210  
JOB NUMBER: 800010

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E90000 U.N.

NO.	DATE	DESCRIPTION	BY

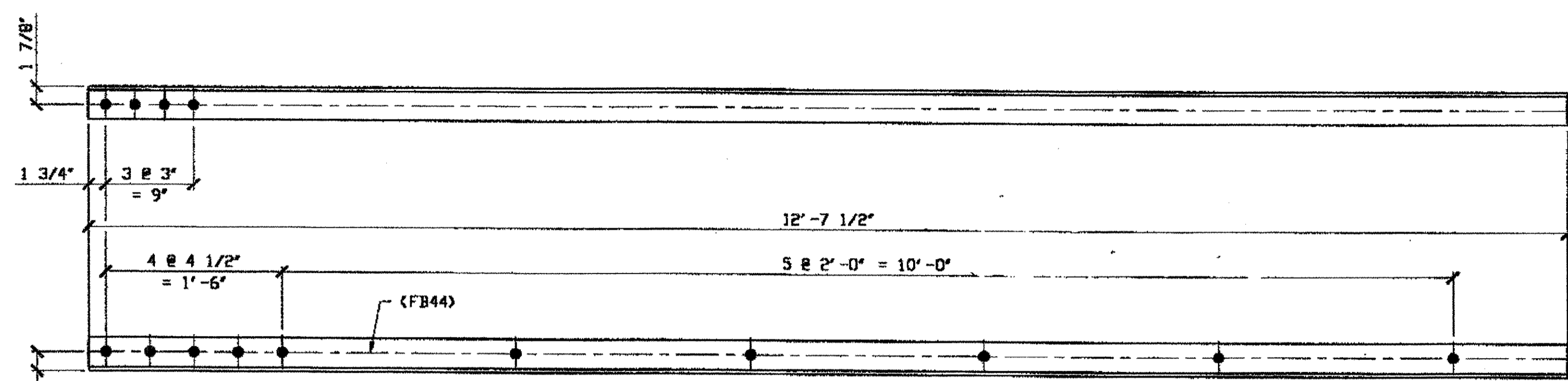
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 3 REPAIRS

at 04:12pm on Mon Feb 05, 2001

rspringer at 02:45pm on Mon Feb 05, 2001 - Last plotted by Gfo

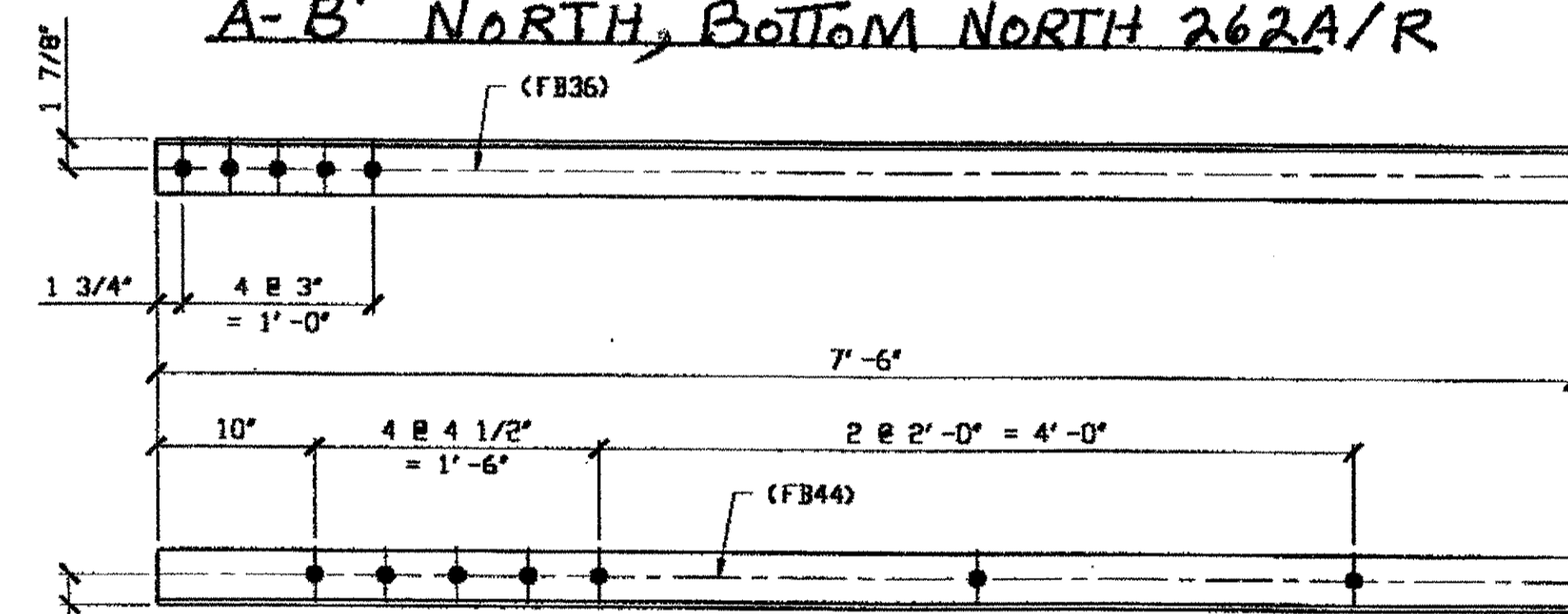
Last modified

Last modified by repringer at 09:21am on Wed Mar 21, 2001 - Last plotted by groebler at 09:05am on Fri Mar 23, 2001



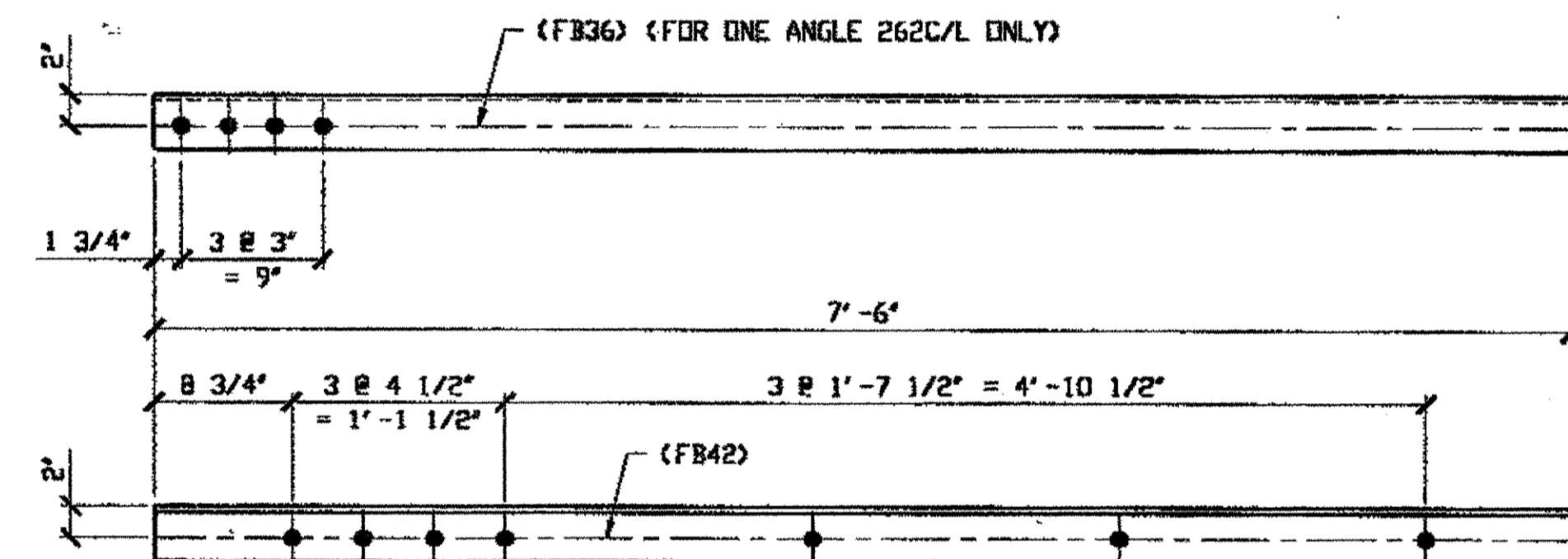
**2- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 262A R/L**  
 (L SHOWN)  
 ORIG SHOP DWG B4-BL46  
 ORIG SHOP MARK AB4m  
 LINE ITEM No. 0106 & 0152  
 REPAIR SHEET 5-107  
 LINE ITEM No. 0152, DOT BID ITEM No. 863E90000

**SPAN 5**  
 A-B' NORTH, BOTTOM SOUTH 262A/L  
 A-B' NORTH, BOTTOM NORTH 262A/R



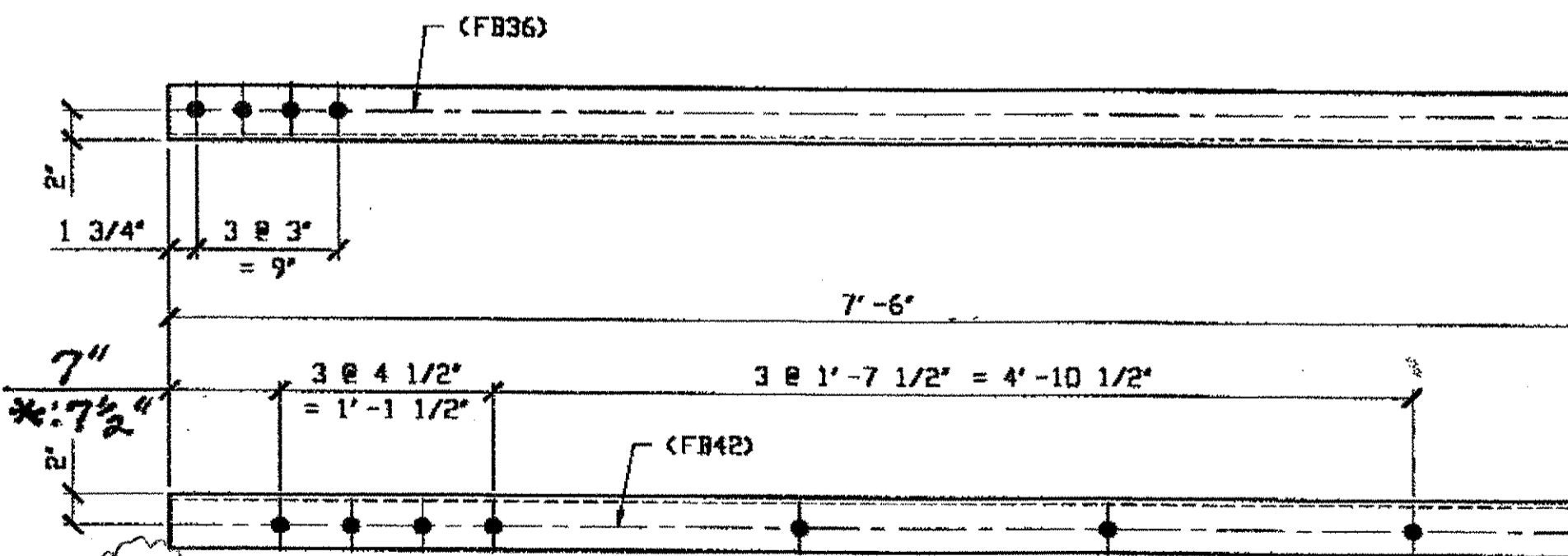
**1- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 262B**

**SPAN 5**  
 B-C' NORTH BOTTOM SOUTH 262B



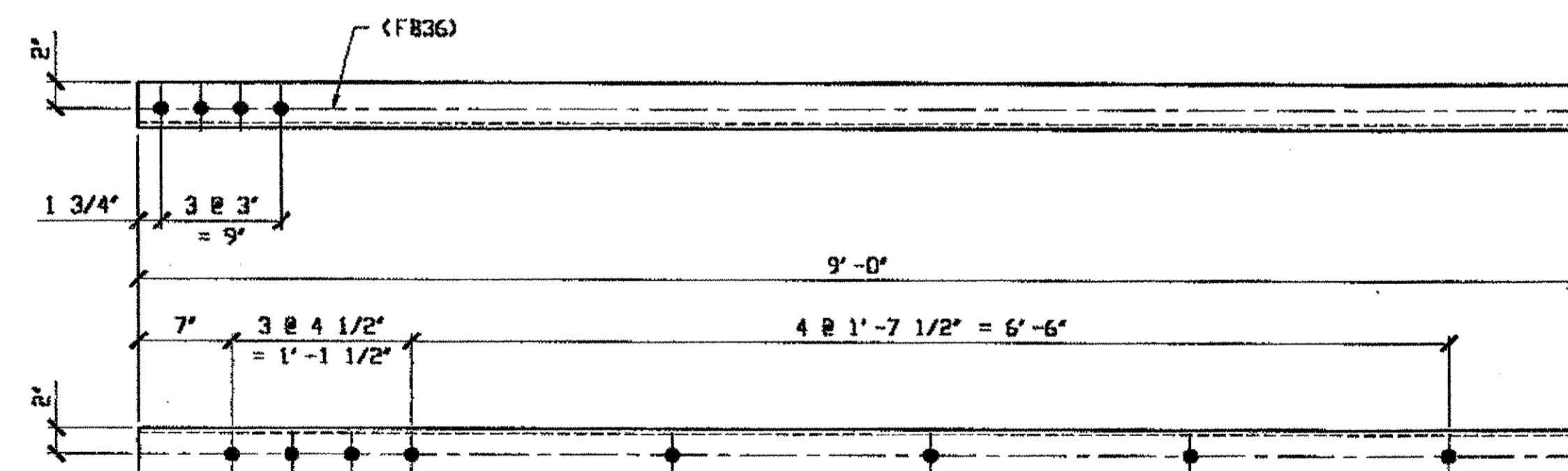
**4- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 262C R/L (R SHOWN)**

**SPAN 5**  
 F-G' NORTH TOP NORTH 262C/L  
 F-G' NORTH TOP SOUTH 262C/R



**5- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 262D R/L**

**SPAN 5**  
 H-J' NORTH TOP SOUTH 262D/R  
 H-J' NORTH BOTTOM SOUTH 262D/L



**1- TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 262F**

**SPAN 5**  
 H-J' NORTH, TOP NORTH 262 F

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL QUARTER	LENGTH				
2		262A R/L	2	L 3 1/2 X 3 1/2 X 3/8	12	7 1/2			
3		262B	1	L 3 1/2 X 3 1/2 X 3/8	7	6			
4		262C R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R, 2/L		
5		262D R/L	5	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R, 3/L		
6		262F	1	L 3 1/2 X 3 1/2 X 3/8	9	0			
7									
8									
9									
10									
11									
12				FIELD BOLTS					
13		FB36		1" DIA	0	2 1/2	NOTE 2		
14		FB42		1" DIA	0	3 1/4	NOTE 2		
15		FB44		1" DIA	0	3 1/2	NOTE 2		
PLATE		N/A		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 H.V.Y. HEX HD W/H.V.Y. HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/10/01 BY EDP

O.D.O.T. DIST. 12

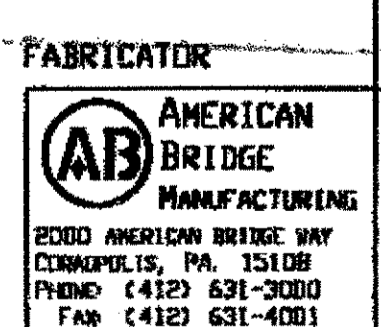
ACCEPTED	
ACCEPTED AS NOTED	2/5/01
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR. & CONTR. CO.  
 By EDP/SS  
**MAR 26 2001**



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U.N.D.



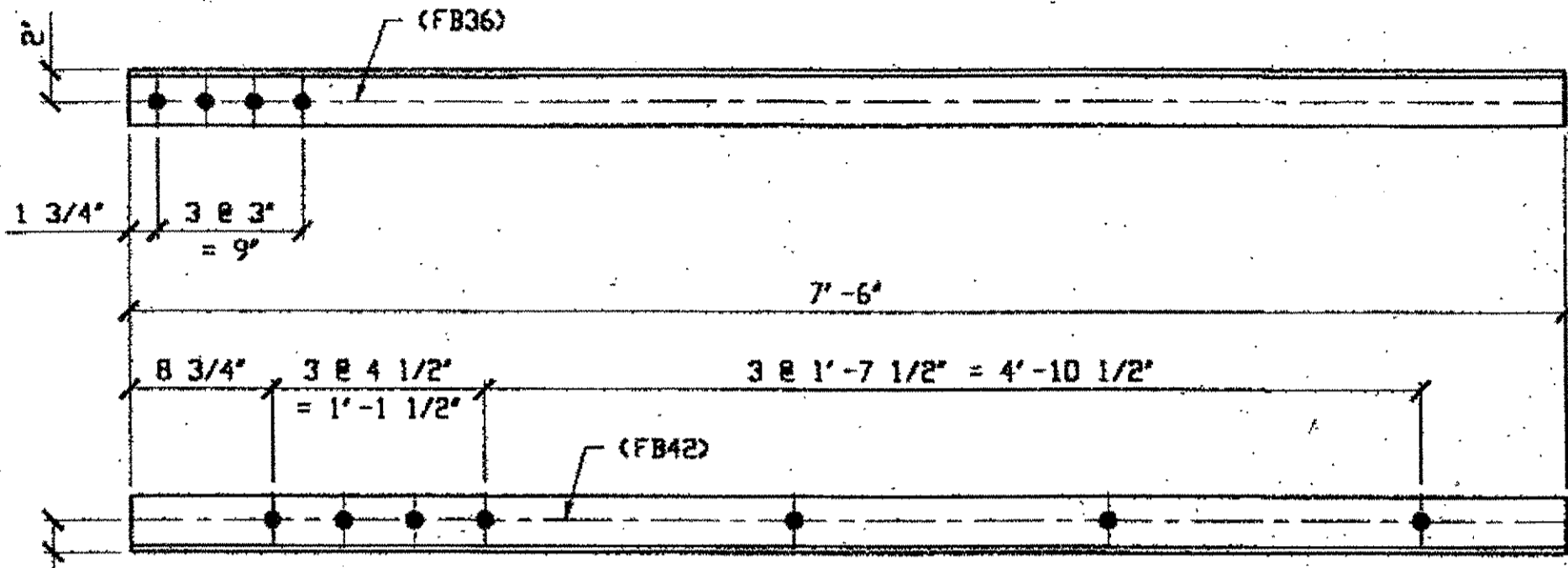
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

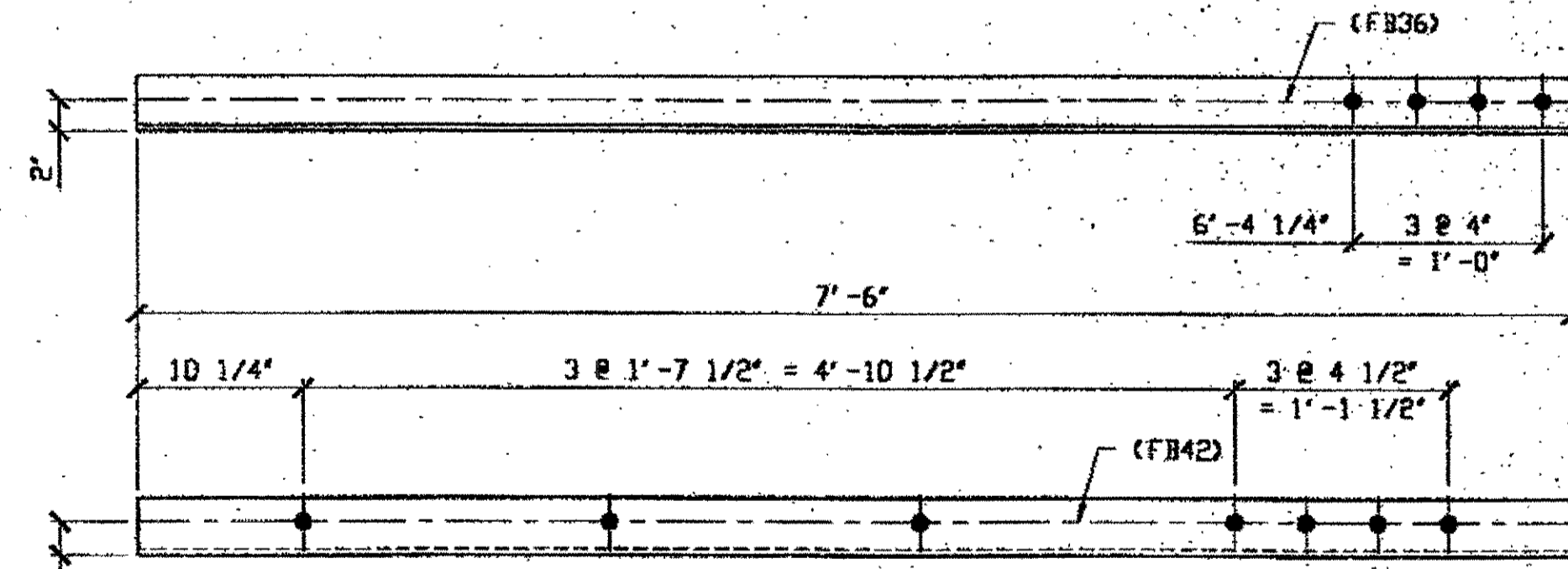
IN CHARGE: D.V. L. SMITH  
 DRAWN BY: DATE: RAS 03/02/01  
 CHECKED BY: DATE: GAF 03/16/01

SHEET NUMBER: 262  
 AM. JOB NUMBER: 800010

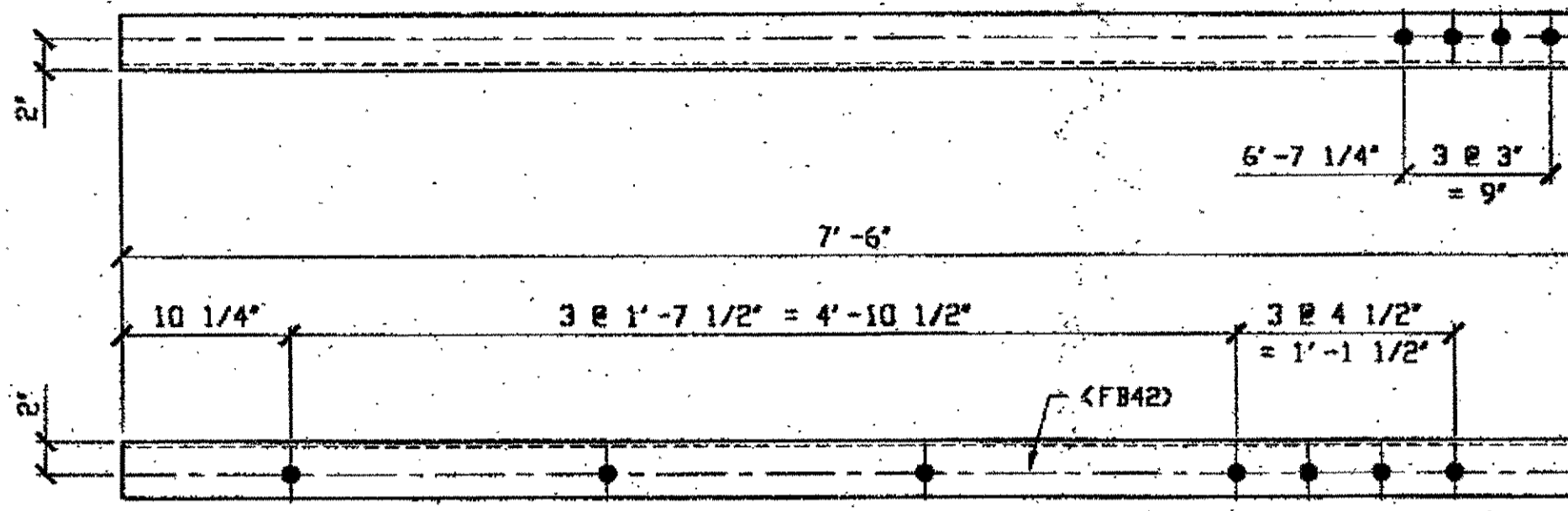


**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 263A**  
 ORIG SHOP DWG 85-BL39  
 ORIG SHOP MARK A85s R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-135  
**SPAN 5**  
 J-K' NORTH, BOTTOM SOUTH 263A  
 K-L' NORTH, BOTTOM SOUTH 263A

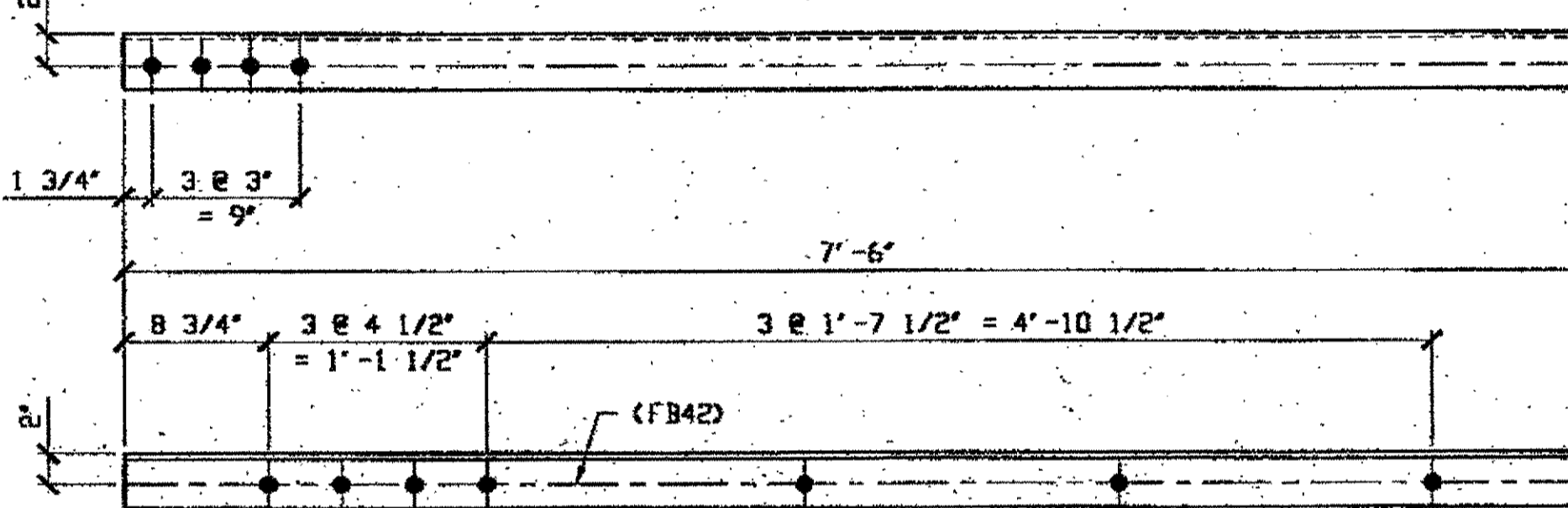
**SPAN 5**  
 N-P' NORTH TOP NORTH 263D/L  
 N-P' NORTH TOP SOUTH 263D/R  
 N-P' NORTH BOTTOM SOUTH 263D/L



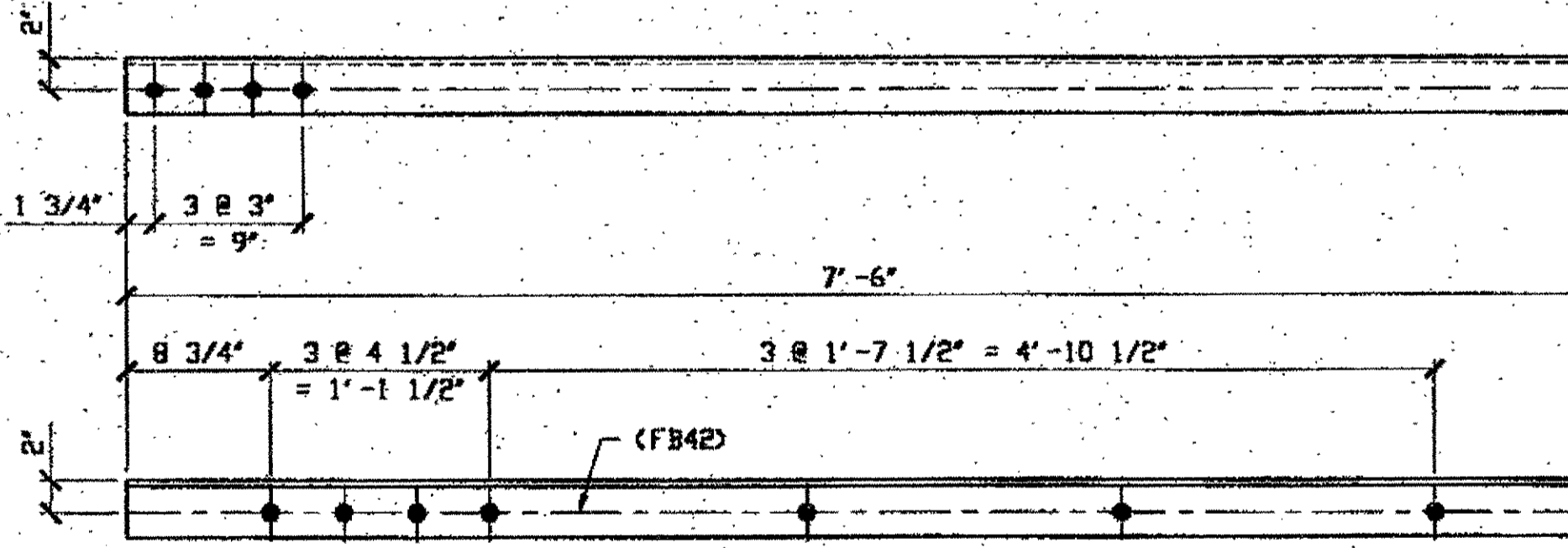
**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 263F R/L (R SHOWN)**  
 ORIG SHOP DWG 85-BL41  
 ORIG SHOP MARK A85s R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-230  
**SPAN 5**  
 P-N' SOUTH, BOTTOM NORTH 263F/R  
 M-L' SOUTH, BOTTOM SOUTH 263F/L



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 263B**  
 ORIG SHOP DWG 85-BL39  
 ORIG SHOP MARK A85s R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-202  
**SPAN 5**  
 K-J' SOUTH TOP NORTH 263B



**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 263D R/L**  
 ORIG SHOP DWG 85-BL41  
 ORIG SHOP MARK A85s R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-146



**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 263G R/L**  
 ORIG SHOP DWG 85-BL42  
 ORIG SHOP MARK A85s R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-154  
**SPAN 5**  
 P-Q' NORTH TOP NORTH 263G/L  
 P-Q' NORTH TOP SOUTH 263G/R  
 P-Q' NORTH BOTTOM NORTH 263G/L  
 P-Q' NORTH BOTTOM SOUTH 263G/L

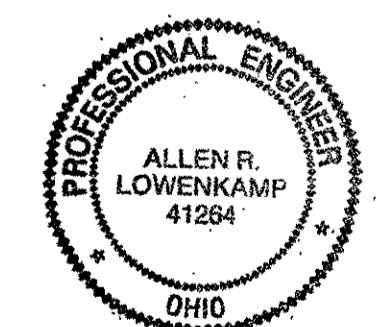
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		263A	2	L 3 1/2 X 3 1/2 X 3/8	7	6		128
3		263B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
4								
5		263D R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	1/R; 2/L	191
6		263F R/L	2	L 3 1/2 X 3 1/2 X 3/8	7	6	YR Y/L	128
7		263G R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6		255
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB36	12	1" DIA	0	2 1/2	NOTE 2	17
19		FB42	57	1" DIA	0	3 1/4	NOTE 2	89
20								
PLATE	N/A			PIPE N/A			FITTINGS N/A	
SHAPES	A36			FLGS. N/A			BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLEAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/6/01 BY EDP

O.D.O.T. DIST. 12  
 ACCEPTED [ ] [ ] [ ] [ ]  
 ACCEPTED AS NOTED [ ] [ ] [ ] [ ]  
 NOT ACCEPTED [ ] [ ] [ ] [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR' & CONTR. CO.  
 By EDP/SS  
 MAR 26 2001



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 862ES0000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

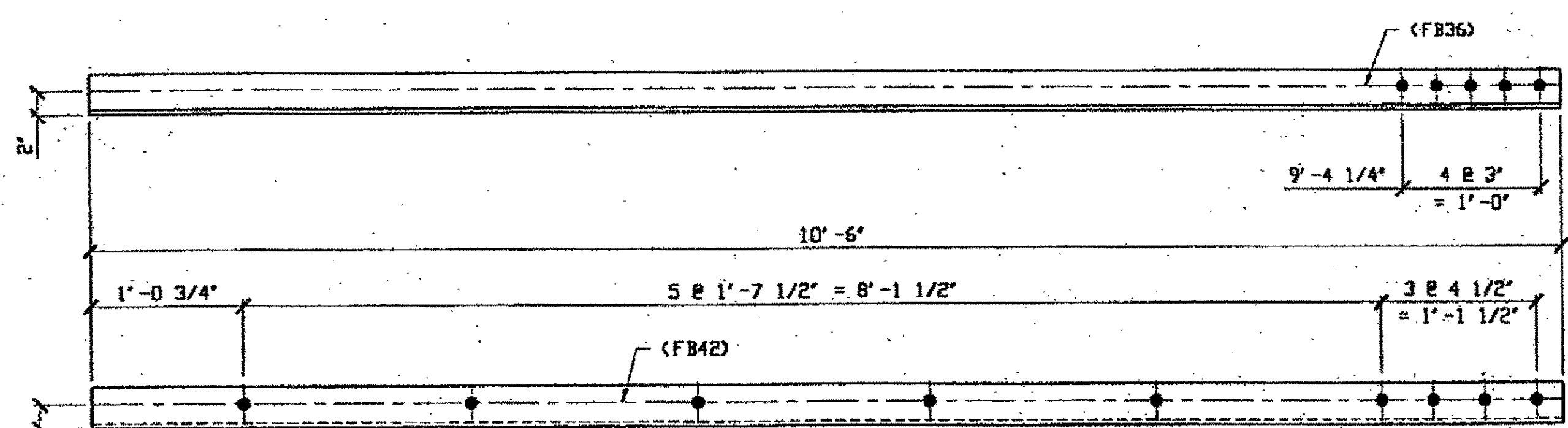
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 03/05/01  
 CHECKED BY: DATE:  
 GAF 03/13/01

SHEET NUMBER: 263  
 AM. JOB NUMBER: 800010

Last modified by rspringer at 09:22am on Wed Mar 21, 2001 - Last plotted by Groster at 09:06am on Fri Mar 23, 2001

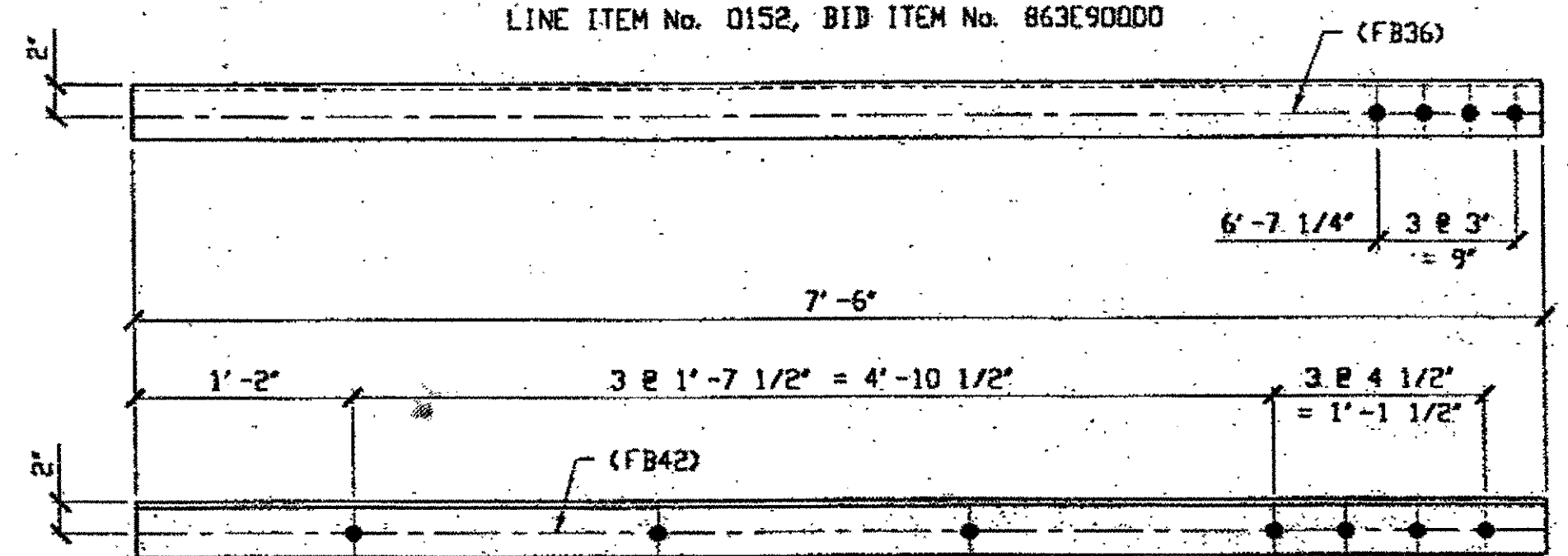
-inger at 08:10am on Thu Mar 22, 2001 -1- Last plotted by Gfooster at 09:06am on Fri Mar 23, 2001  
Last modified by :



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 264A

ORIG SHOP DWG BS-BL35  
ORIG SHOP MARK A85g R/L  
LINE ITEM No. 0106 & 0152  
REPAIR SHEET 5-179  
LINE ITEM No. 0152, BID ITEM No. 863E90000

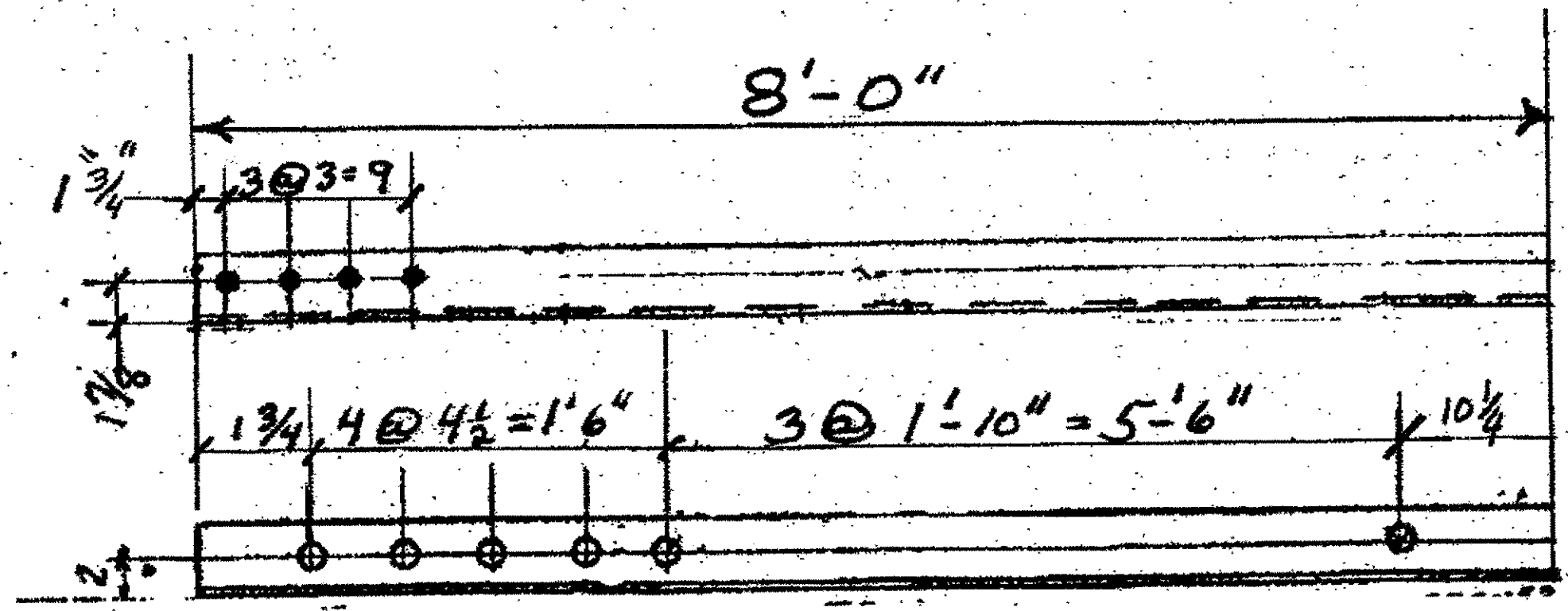
SPAN 5 E-D' SOUTH BOTTOM NORTH 264 A



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 264B

ORIG SHOP DWG BS-BL42  
ORIG SHOP MARK A85w R/L  
LINE ITEM No. 0106  
REPAIR SHEET 5-224

SPAN 5 Q-P' SOUTH, TOP SOUTH 264 B



1-TYPE 2 1/4 LENGTH DIAGONAL 264 E  
ORIGINAL SHOP MARK BL59 A165ac

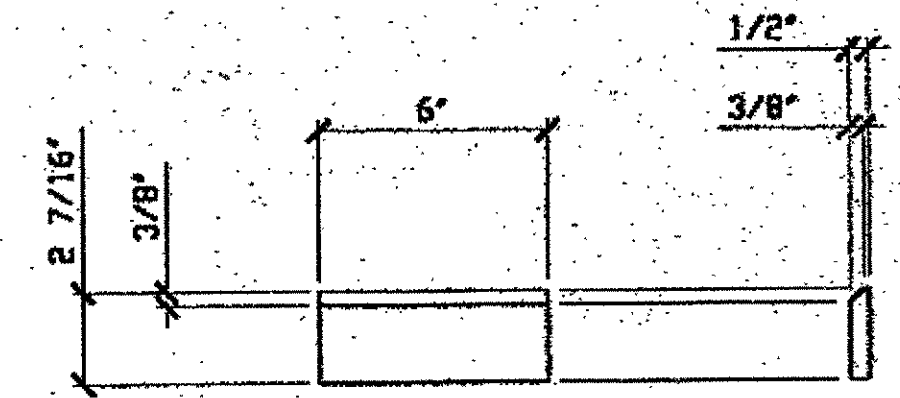
SPAN 7 E-F' SOUTH BOTTOM SOUTH 264 E

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		264A	1	L 3 1/2 X 3 1/2 X 3/8	10	6		89
3		264B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
4								
5				SPLICE PLATES				
6		264C	55	PL 1/2 X 2 7/16	0	6		113
7		264D	52	PL 1/2 X 2 7/8	0	6	PLAIN MATL	117
8								
9		264E	1	L 3 1/2 X 3 1/2 X 3/8	7	6		
10								
11								
12								
13								
14								
15								
16								
17								
18				FIELD BOLTS				
19		FB36	1	1" DIA	0	2 1/2	NOTE 2	
20		FB42	1	1" DIA	0	3 1/4	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

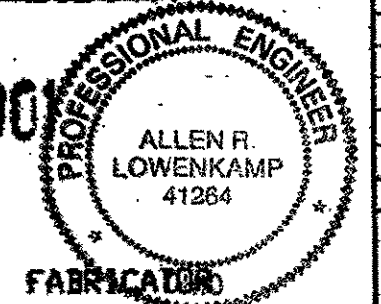
O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



51 - SPLICE PLATES - 264C  
LINE ITEM No. 0106, 0110 & 0113  
IDENTICAL TO 1056

NAT'L ENGR. & CONTR. CO.  
By tdp/ess

MAR 26 2001



RELEASED FOR CONSTRUCTION  
DATE 4/4/01 BY tdp

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANVILLE, PA 15108  
PHONE: (412) 631-2000  
FAX: (412) 631-4001

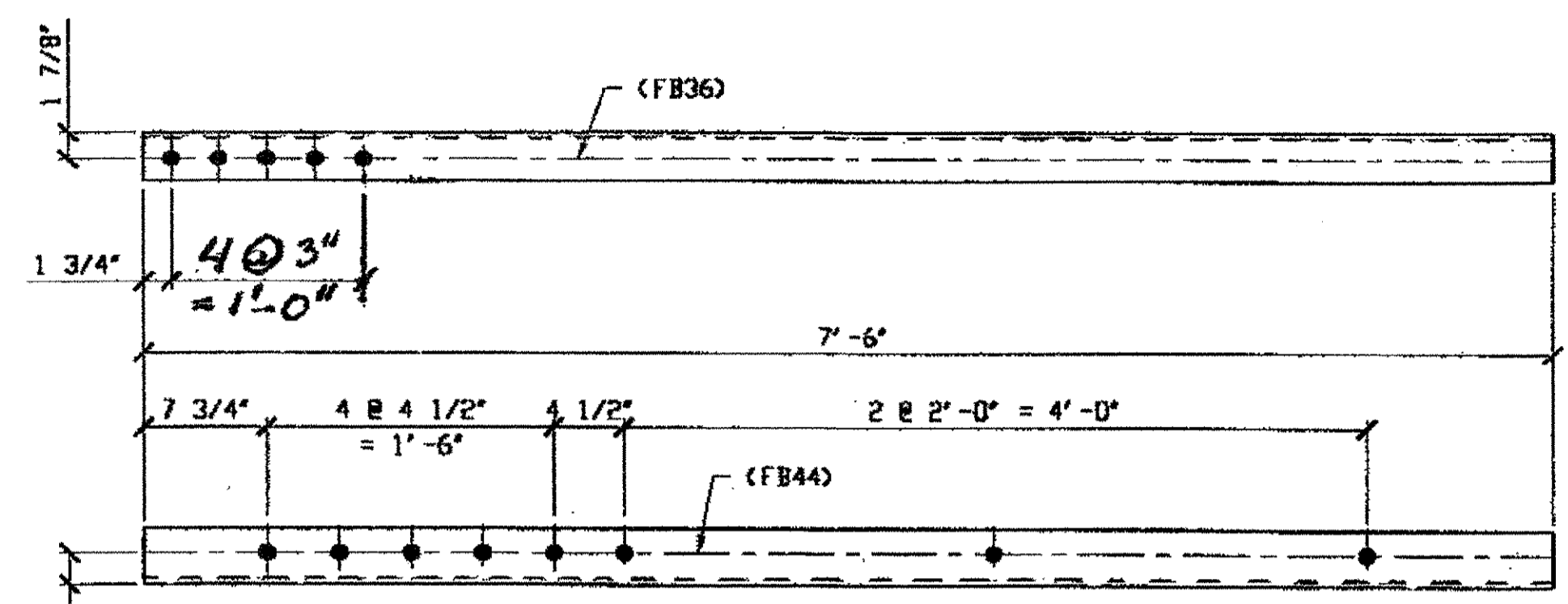
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN REPAIRS

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 03/05/01  
CHECKED BY: DATE: GAF 03/16/01

SHEET NUMBER: 264  
ADM JOB NUMBER: 800010

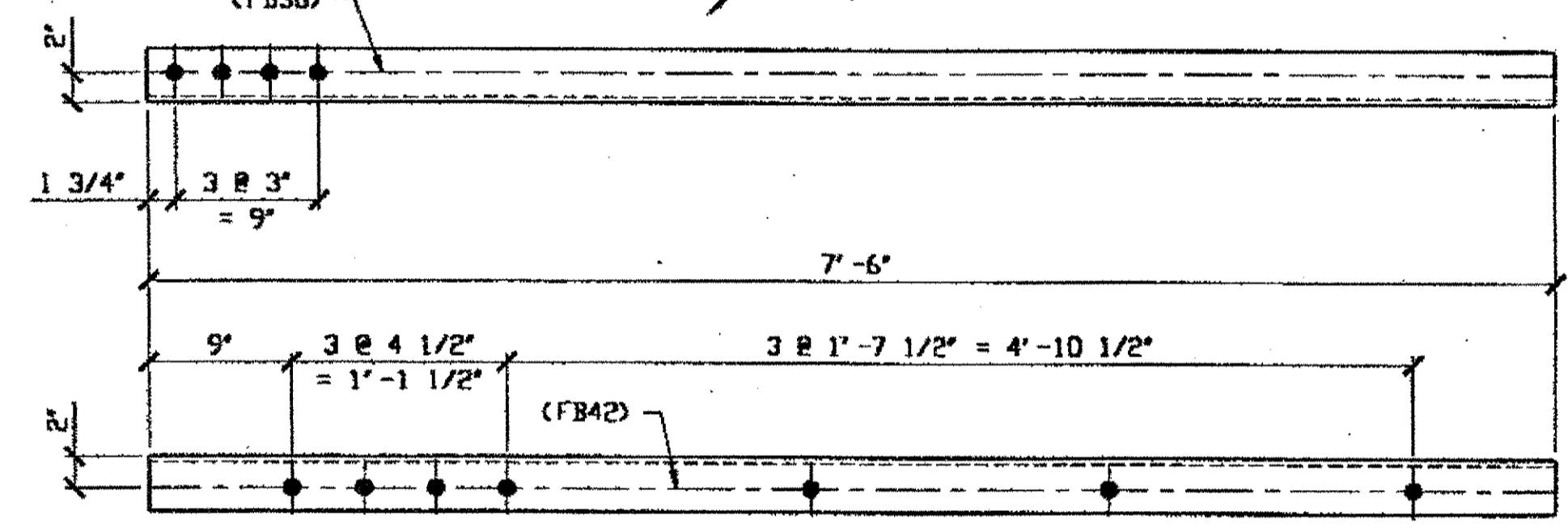
Last modified by repringer at 09:22am on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:06am on Fri Mar 23, 2001



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265A

ORIG SHOP DWG 84-BL45  
ORIG SHOP MARK AB44  
LINE ITEM No. 0110  
REPAIR SHEET 5-113

SPAN 5  
B-C' SOUTH, BOTTOM NORTH 265A



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265B

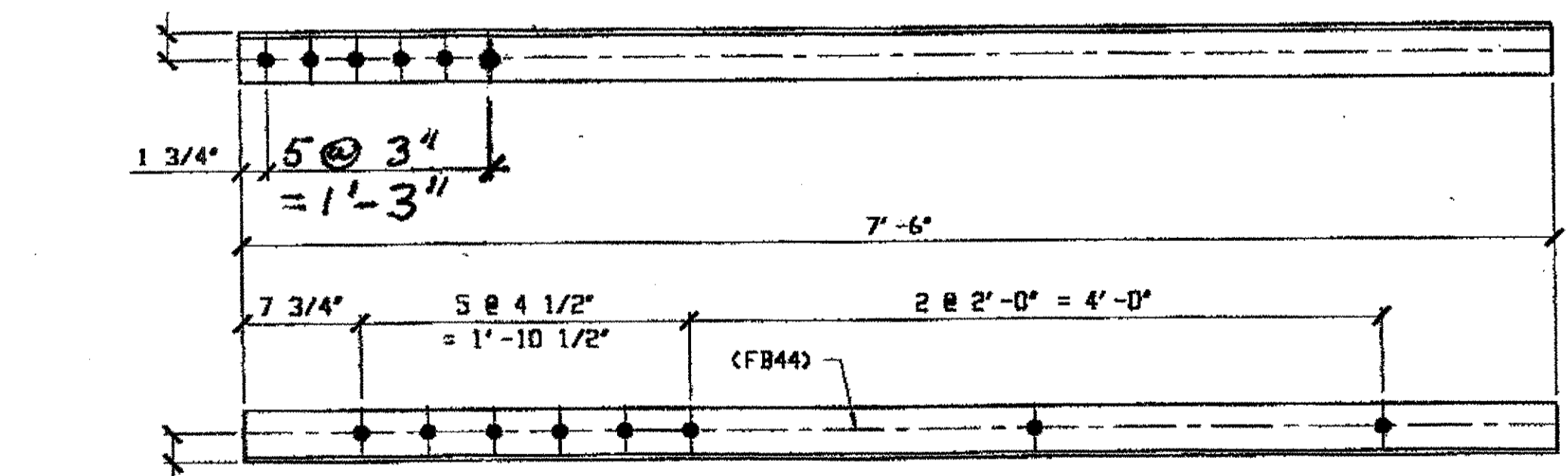
ORIG SHOP DWG 85-BL30  
ORIG SHOP MARK AB50x  
LINE ITEM No. 0110  
REPAIR SHEET 5-115

SPAN 5  
E-D' NORTH, BOTTOM SOUTH 265B

3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265C R/L

ORIG SHOP DWG 85-BL30A  
ORIG SHOP MARK AB50a  
LINE ITEM No. 0110  
REPAIR SHEET 5-143

SPAN 5  
M-L' NORTH, TOP NORTH 265C/L  
M-L' NORTH, TOP SOUTH 265C/R  
M-L' NORTH, BOTTOM NORTH 265C/LR



2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265D R/L (L SHOWN)

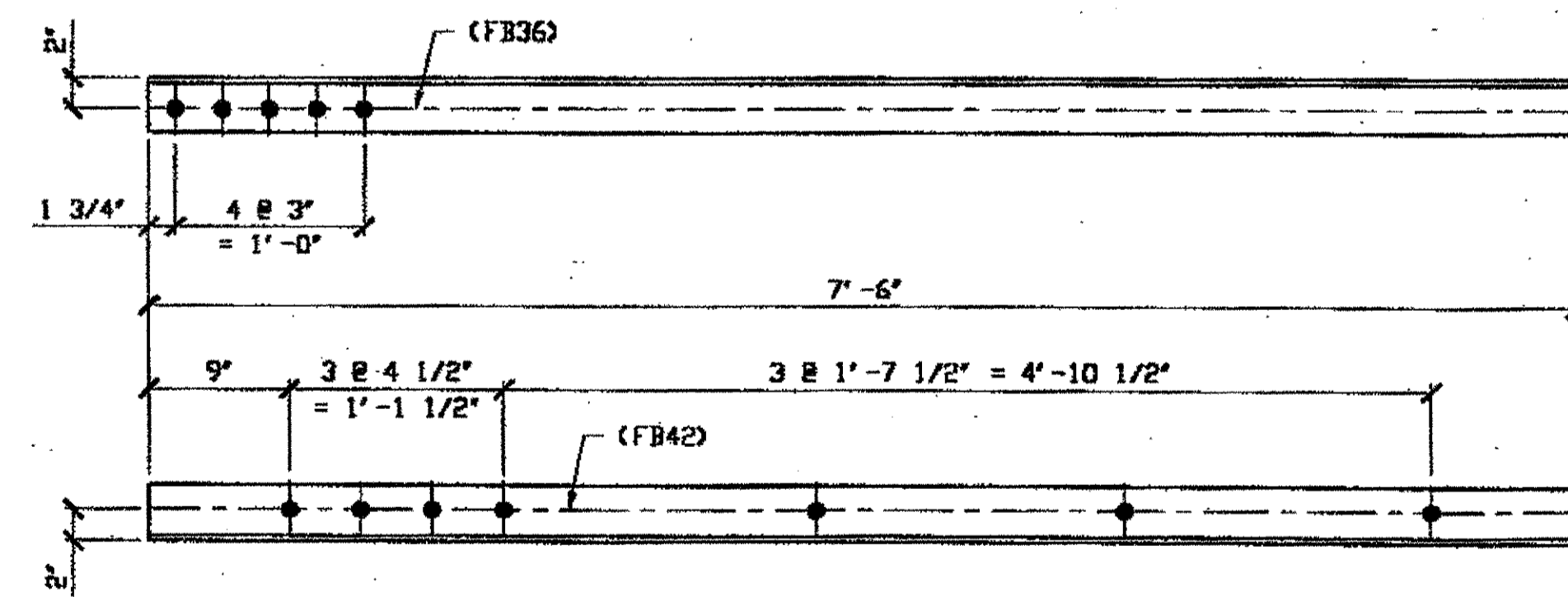
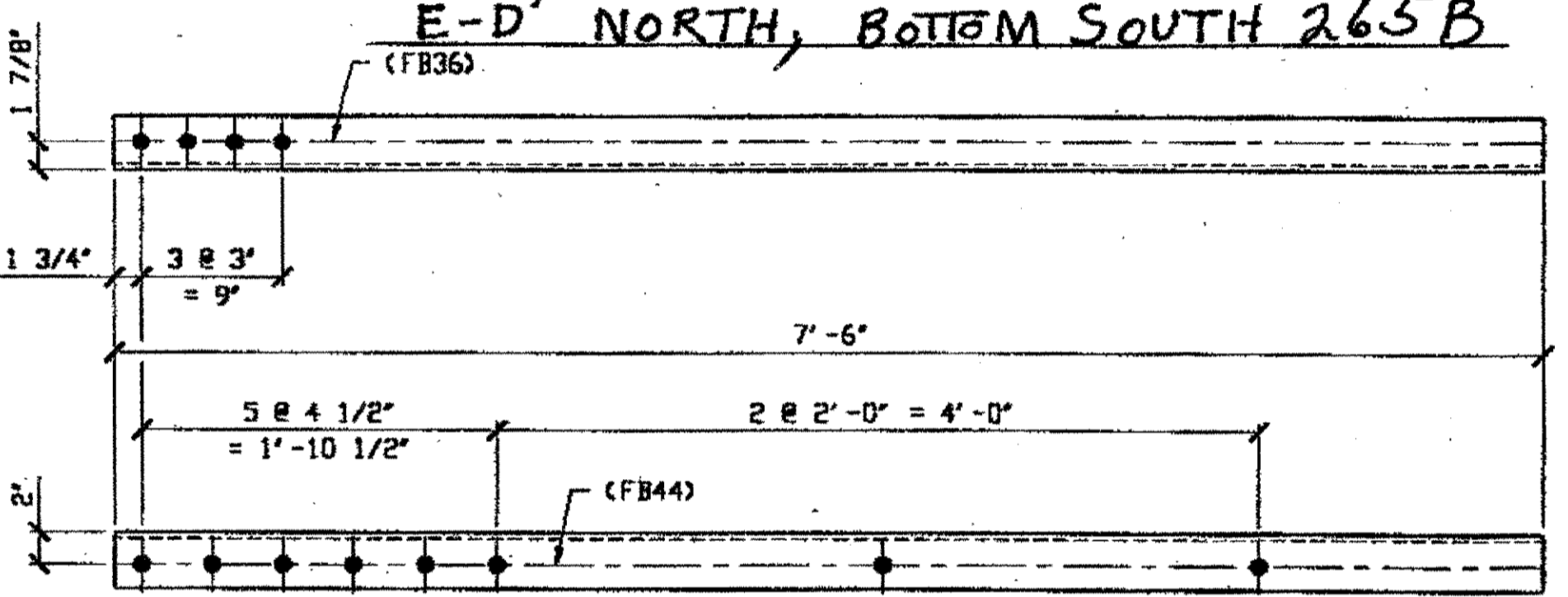
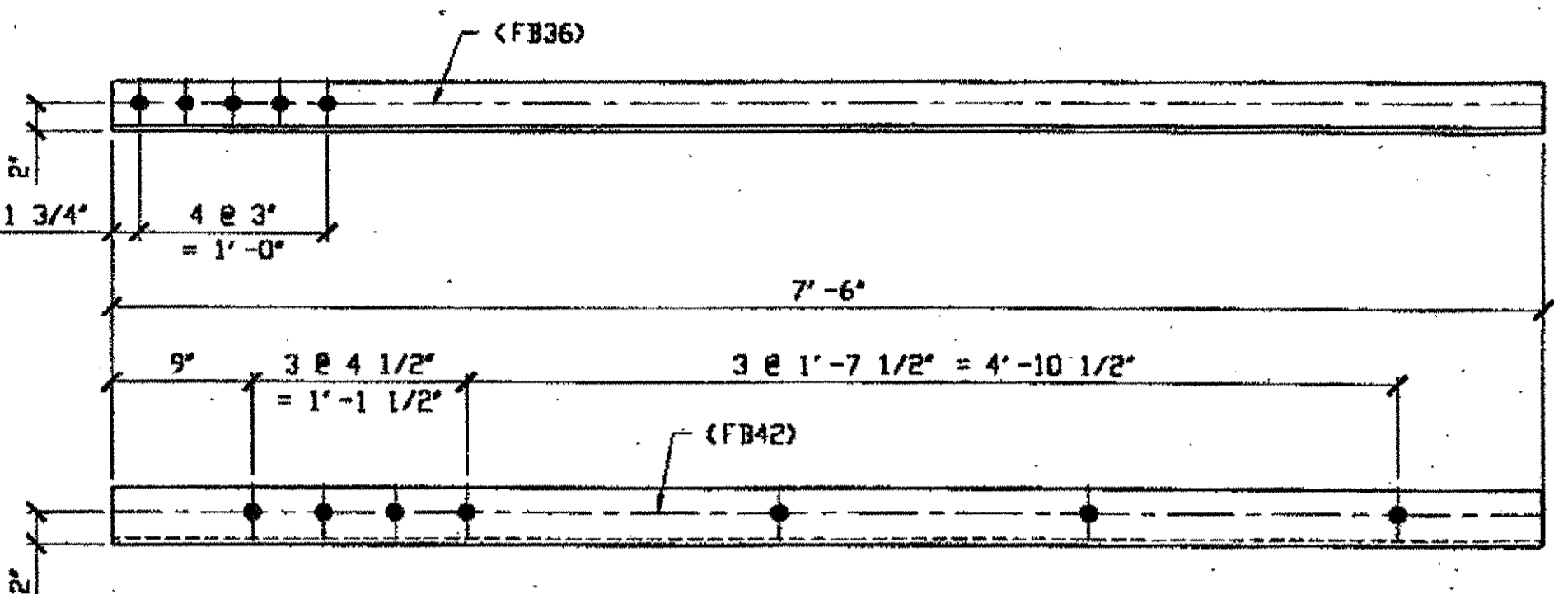
ORIG SHOP DWG 84-BL43  
ORIG SHOP MARK AB43  
LINE ITEM No. 0110  
REPAIR SHEET 5-171

SPAN 5  
A-B' SOUTH, BOTTOM NORTH 265D/R  
A-B' SOUTH, BOTTOM SOUTH 265D/L

2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265E

ORIG SHOP DWG 84-BL45  
ORIG SHOP MARK AB45  
LINE ITEM No. 0110  
REPAIR SHEET 5-175

SPAN 5  
C-B' NORTH, BOTTOM NORTH 265F  
B-C' SOUTH, BOTTOM SOUTH 265F



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 265G

ORIG SHOP DWG 85-BL30  
ORIG SHOP MARK AB30  
LINE ITEM No. 0110  
REPAIR SHEET 5-178

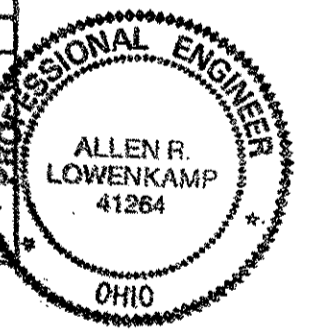
SPAN 5  
D-E' SOUTH, BOTTOM SOUTH 265G

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL QUARTER	LENGTH				
2		265A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64	
3		265B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64	
4		265C R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R; 1/L	191	
5		265D R/L	2	L 3 1/2 X 3 1/2 X 3/8	7	6		128	
6		265F R/L	2	L 3 1/2 X 3 1/2 X 3/8	7	6		128	
7		265G	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64	
8									
9									
10									
11									
12									
13									
14									
15									
16									
17				FIELD BOLTS					
18		FB36	32	1" DIA	0	2 1/2	NOTE 2	45	
19		FB42	28	1" DIA	0	3 1/4	NOTE 2	44	
20		FB44	32	1" DIA	0	3 1/2	NOTE 2	51	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED



For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR. & CONTR. CO. DOT ITEM LINE NO AS NOTED  
By Edp/SS DOT BID ITEM NO. 863E50000

MAR 26 2001

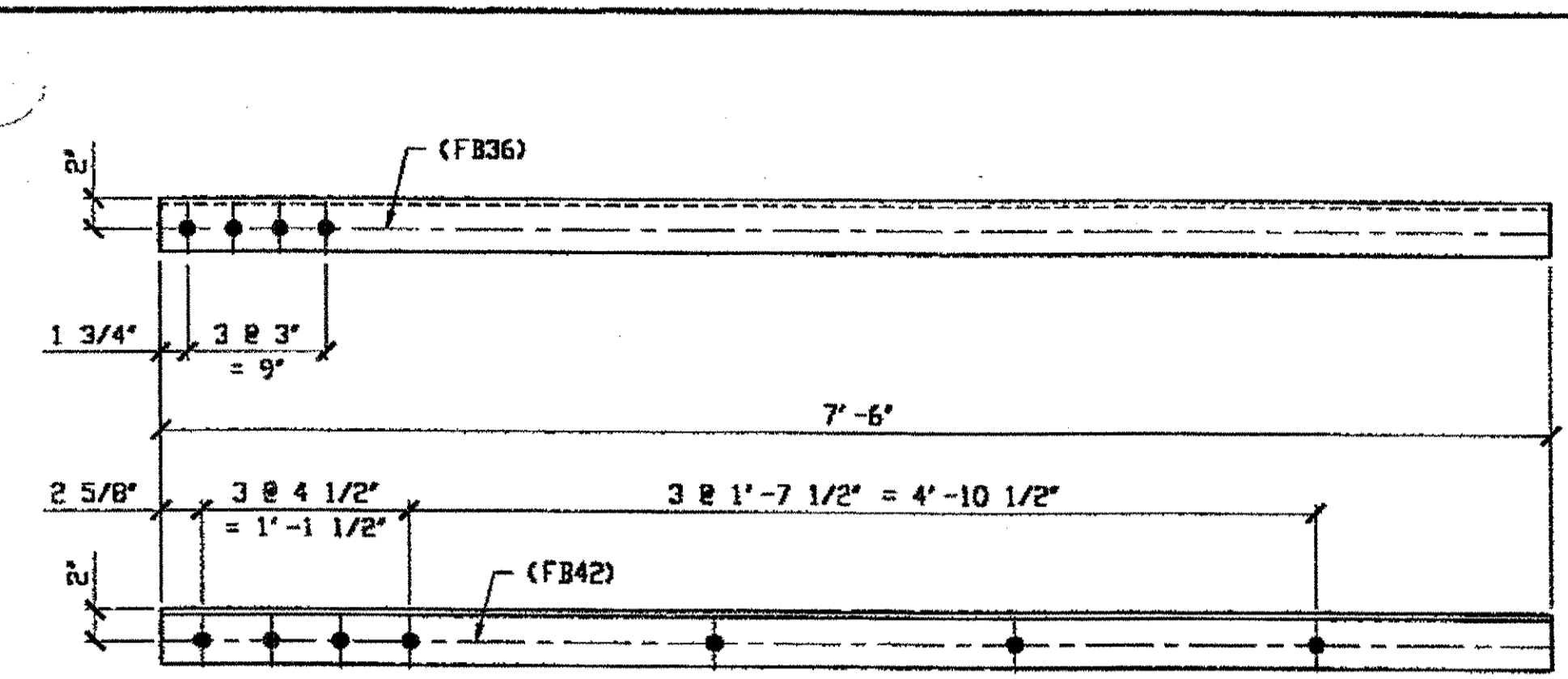
RELEASED FOR CONSTRUCTION  
DATE 4/1/01 BY Edp

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

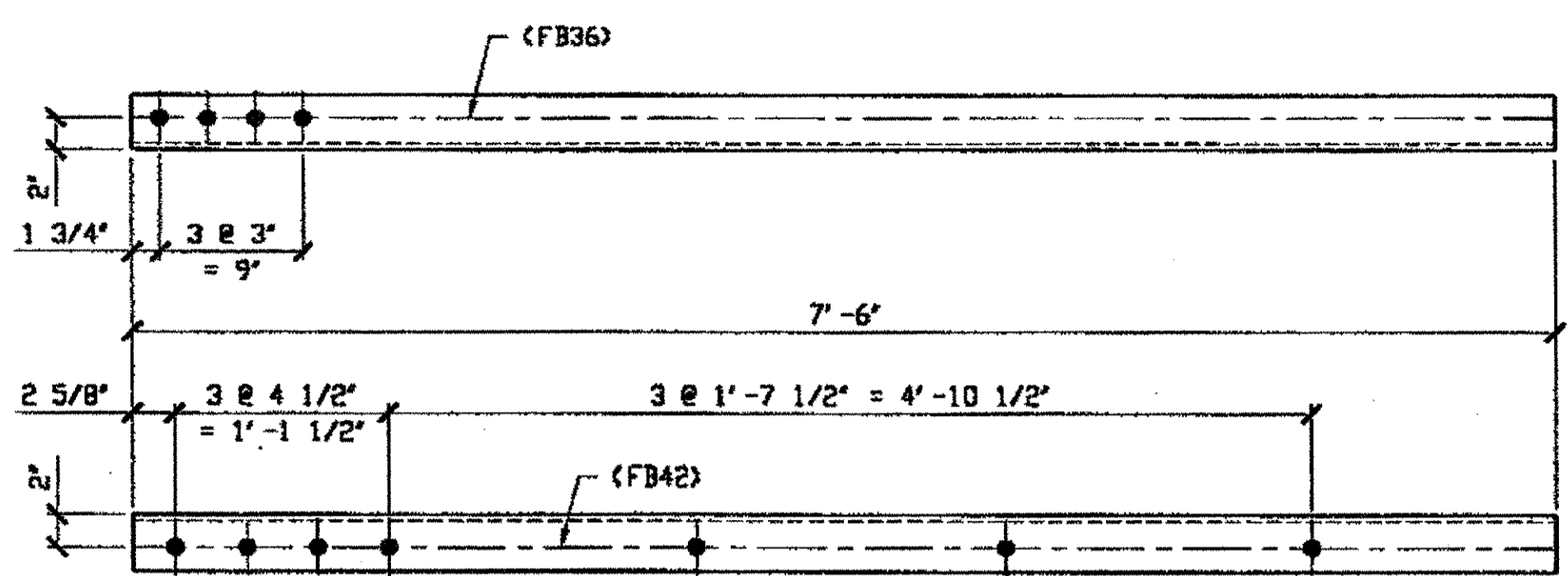
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIANA, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 5 REPAIRS			
SHEET NUMBER: 265			AM JOB NUMBER: 800010

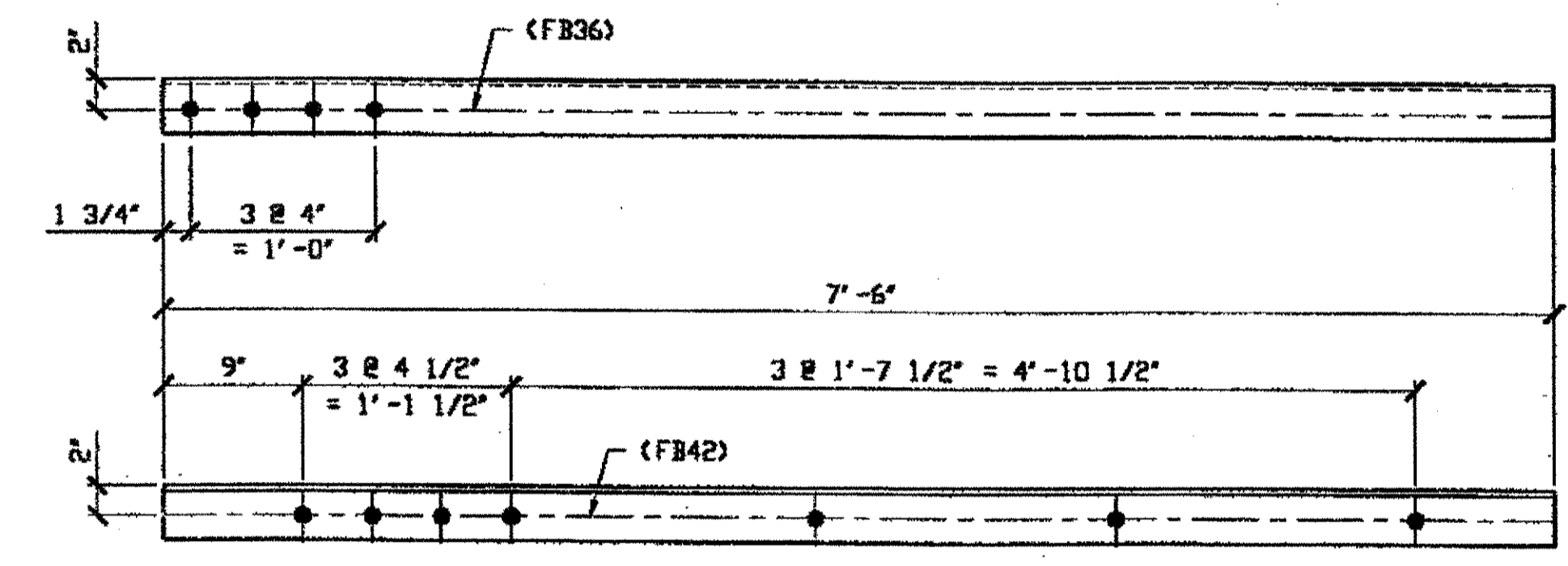
Last modified by tinger at 09:23am on Wed Mar 21, 2001 - Last plotted by Gfoster at 09:07am on Fri Mar 23, 2001



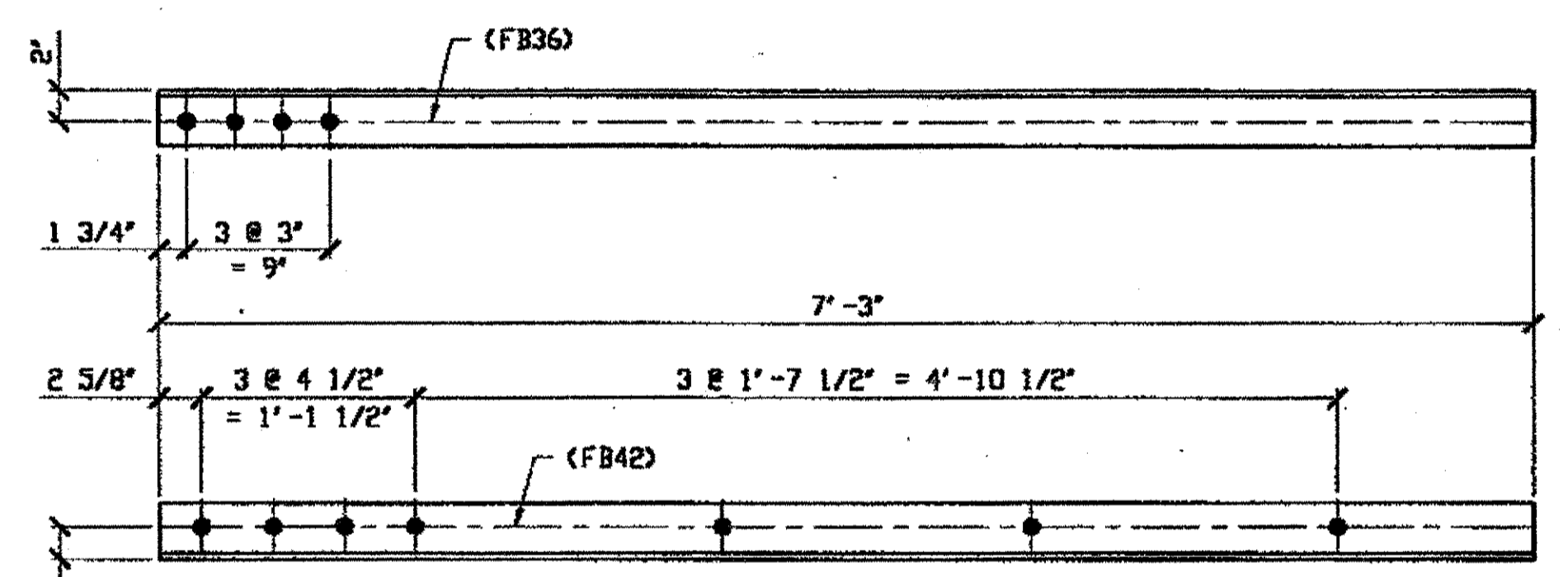
**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 266A**  
 ORIG SHOP DWG 85-BL32  
 ORIG SHOP MARK A85c  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-189  
**SPAN 5 F-G' SOUTH TOP SOUTH 266A**



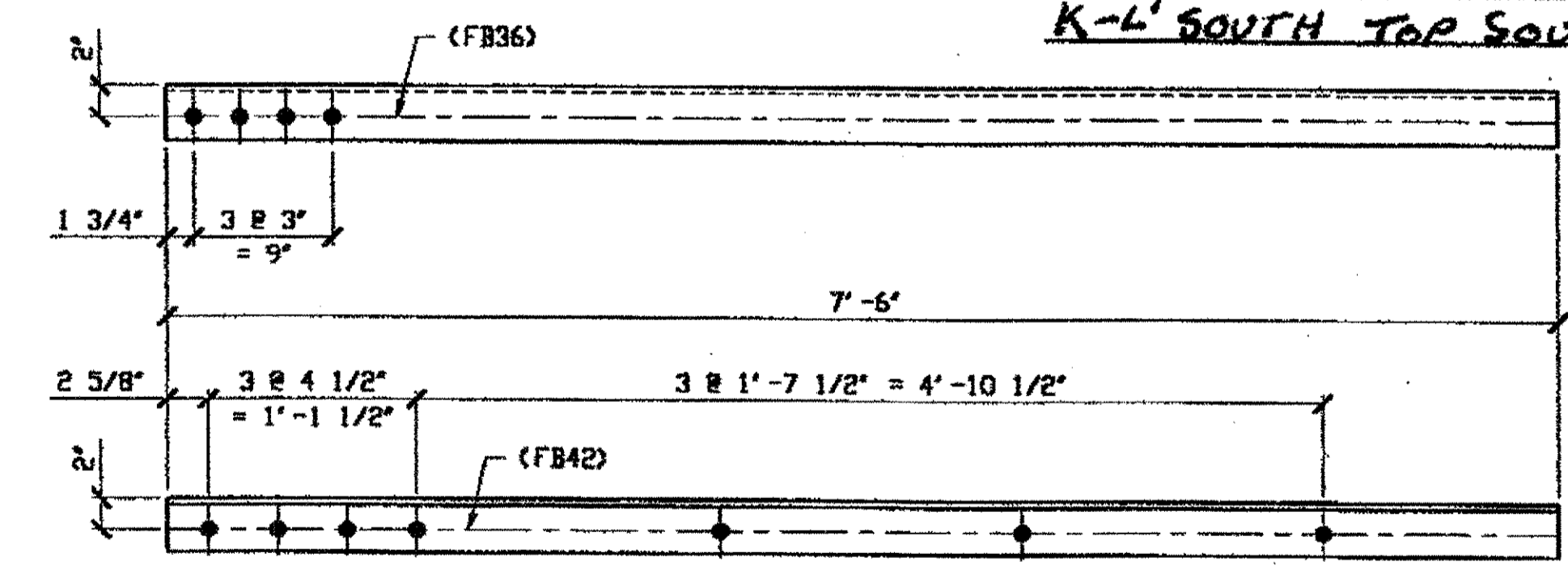
**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 266B**  
 ORIG SHOP DWG 85-BL33  
 ORIG SHOP MARK A85d  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-192  
**SPAN 5 G-H' SOUTH TOP NORTH 266B**



**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 266C R/L (R SHOWN)**  
 ORIG SHOP DWG 85-BL31  
 ORIG SHOP MARK A85b  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-206  
**SPAN 5**  
**K-L' SOUTH BOTTOM NORTH 266C/R**  
**K-L' SOUTH BOTTOM SOUTH 266C/L**  
**K-L' SOUTH TOP SOUTH 266C/R**



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 266D (R SHOWN)**  
 ORIG SHOP DWG 85-BL32  
 ORIG SHOP MARK A85c  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-222  
**SPAN 5 P-Q' SOUTH BOTTOM SOUTH 266D/R**  
**SPAN 5 Q-P' NORTH TOP NORTH 266D/L**



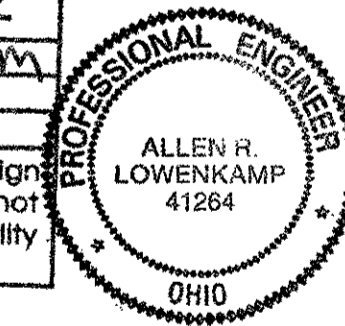
**4 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 266F R/L (R SHOWN)**  
 ORIG SHOP DWG 16-BL10  
 ORIG SHOP MARK A16p R/L  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-197

- SPAN 5**
- H-J' SOUTH BOTTOM NORTH 266F/R**
  - H-J' SOUTH BOTTOM SOUTH 266F/L**
  - H-J' SOUTH TOP NORTH 266F/L**
  - H-J' SOUTH TOP SOUTH 266F/R**

BILL OF MATERIAL							
LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1			TYPE 2 DIAGONAL QUARTER LENGTH				
2	266A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
3	266B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
4	266C R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R; 1/L	191
5	266D R/L	2	L 3 1/2 X 3 1/2 X 3/8	7	3	1/R 1/L	
6	265F R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6		255
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18			FIELD BOLTS				
19	FB36		1" DIA	0	2 1/2	NOTE 2	
20	FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE N/A				PIPE N/A		FITTINGS N/A	
SHAPES A36				FLGS. N/A		BOLTS NOTE 2	

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/Hvy HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD 11 INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/6/01 PDM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NAT'L ENGR' & CONTR. CO.  
 By Edp/ESS  
**MAR 26 2001**

RELEASED FOR CONSTRUCTION  
 DATE 4/9/01 BY Edp

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E5000

NO.	DATE	DESCRIPTION	BY
REVISIONS			

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

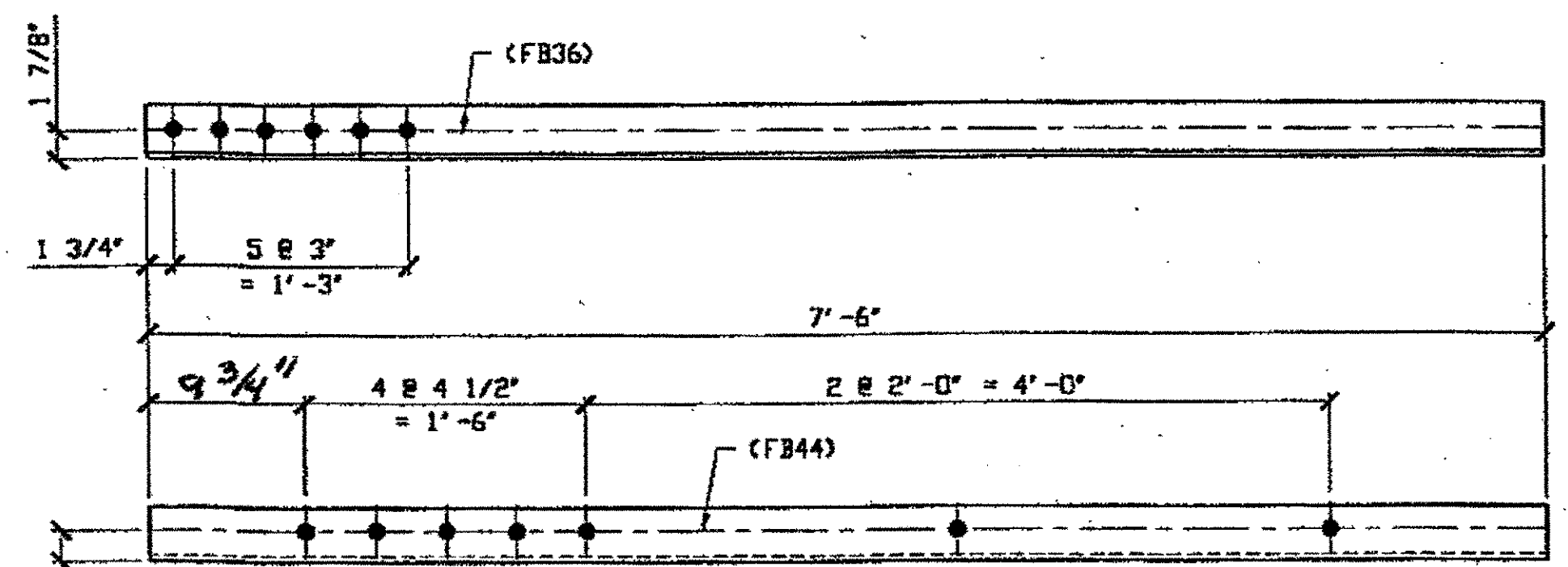
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 5 REPAIRS**

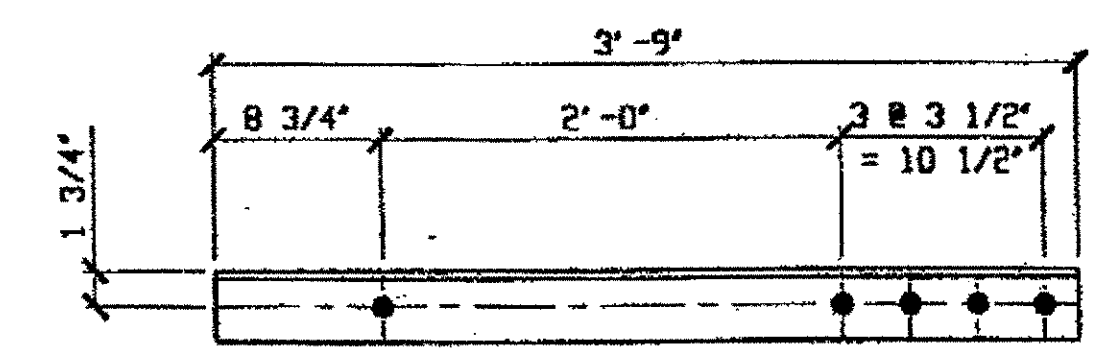
DRAWN BY: RAS DATE: 03/06/01  
 IN CHARGE OF: L. SMITH  
 SHEET NUMBER: 266  
 ADM. JOB NUMBER: 800010



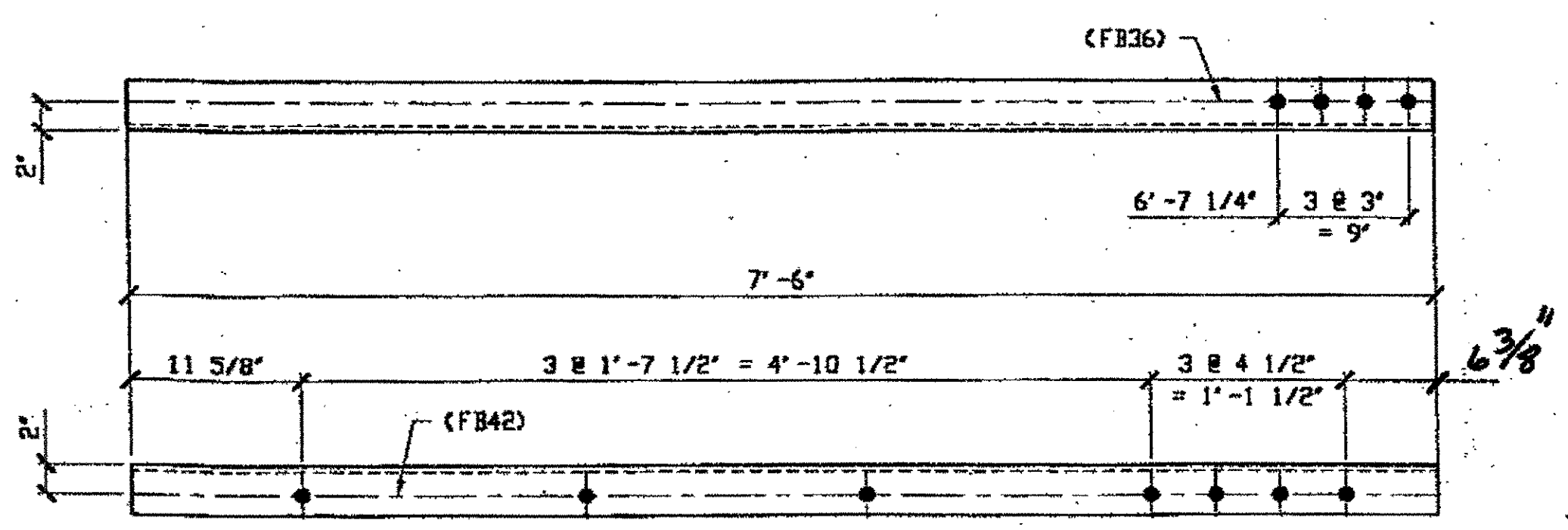
ing at 10:43am on Wed Mar 21, 2001 - Last plotted by gfooster at 09:08am on Fri Mar 23, 2001  
 Last modified by:



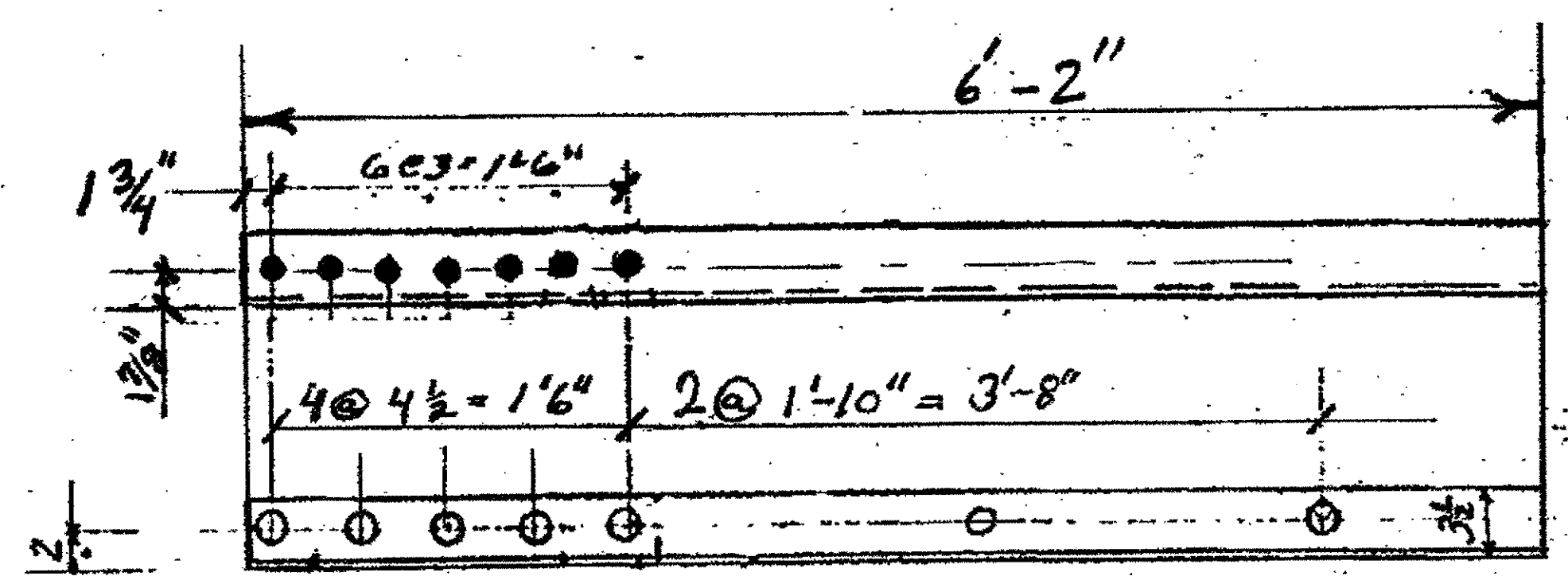
**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 269A**  
 ORIG SHOP DVG 84-BL47  
 ORIG SHOP MARK A84S  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-176  
**SPAN 5**  
**C-B' SOUTH BOTTOM SOUTH 269A**



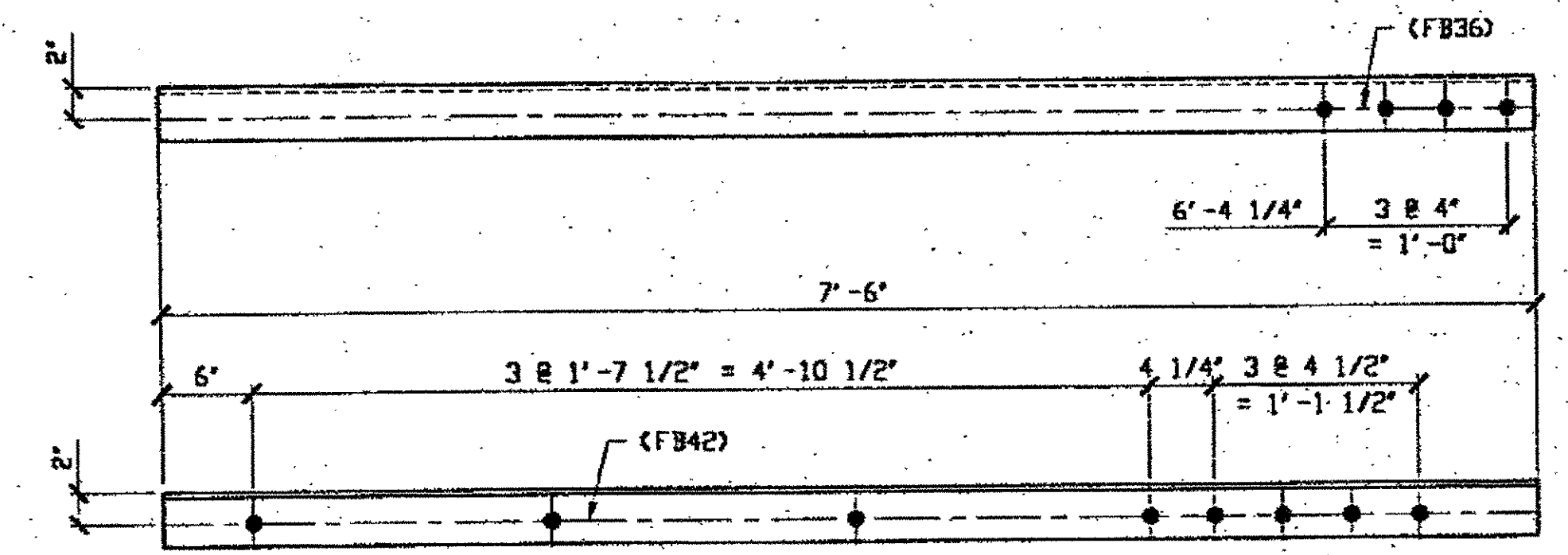
**2 - STEEL UNDER 50 LBS - 269B R/L**  
 ORIG SHOP DVG 88-SB71  
 ORIG SHOP MARK A88F R/L  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
 REPAIR SHEET 5-152  
**SPAN 5**  
**P-P' NORTH (2) SWAY FRAME ANGLES 269B R/L**



**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 269C R/L**  
 ORIG SHOP DVG 16-BL10  
 ORIG SHOP MARK A16P R/L  
 LINE ITEM No. 0110  
 REPAIR SHEET 5-120



**1 - TYPE 2 1/4 LENGTH DIAGONAL 269E**  
**ORIGINAL SHOP MARK BL116 A294K2**  
**SPAN 11 D-C SOUTH, BOTTOM NORTH 269E**  
**(Begins At Interior Truss)**



**5 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 269D R/L**  
**(R SHOWN)**  
 ORIG SHOP DVG 85-BL27  
 ORIG SHOP MARK A85F R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 5-121

- SPAN 5**
- F-E' NORTH, TOP SOUTH 269D/R
  - F-E' NORTH, BOTTOM SOUTH 269D/L
  - F-E' SOUTH, TOP NORTH 269D/L
  - F-E' SOUTH, BOTTOM NORTH 269D/R
  - F-E' SOUTH, BOTTOM SOUTH 269D/L

**SPAN 5**  
**E-F' NORTH TOP NORTH 269C/L**  
**E-F' NORTH TOP SOUTH 269C/R**  
**E-F' NORTH BOTTOM NORTH 269C/R**

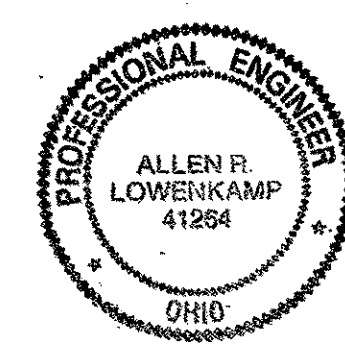
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER	LENGTH			
2		269A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
3		269D R/L	5	L 3 1/2 X 3 1/2 X 3/8	7	6		
4								
5				STEEL UNDER 50 LBS				
6		269B R/L	2	L 3 1/2 X 3 1/2 X 3/8	3	9		64
7								
8				TYPE 2 DIAGONAL QUARTER	LENGTH			
9		269C R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R; 1/L	191
10								
11		269E	1	L 3 1/2 X 3 1/2 X 3/8	6	2		
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB36		1" DIA	0	2 1/2	NOTE 2	
19		FB42		1" DIA	0	3 1/4	NOTE 2	
20		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS NOTE 2				

- NOTES:**
- OPEN HOLES ARE (1/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/9/01 BY EDP

CIVIL ENGR. & CONTR. CO.  
 By EDP/TSS  
 MAR 26 2001

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2800 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

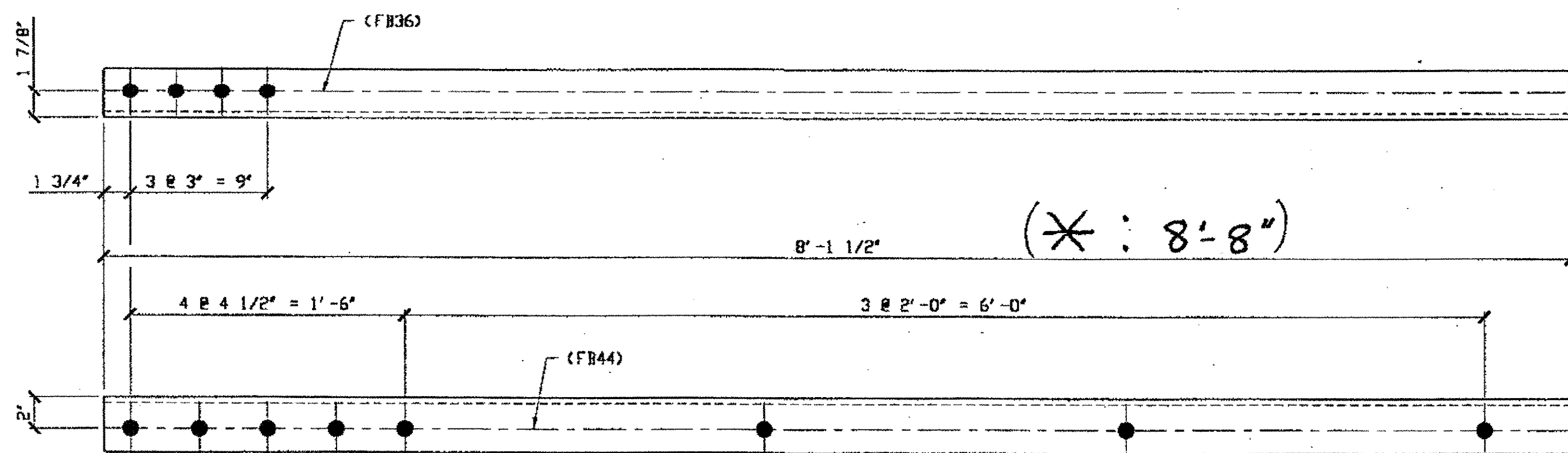
IN CHARGE OF: L. SMITH  
 DRAWN BY: BAC  
 RAS 03/20/01  
 CHECKED BY: BAC  
 GAF 03/21/01

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000 U.N.O.

NO.	DATE	DESCRIPTION REVISIONS	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN REPAIRS**

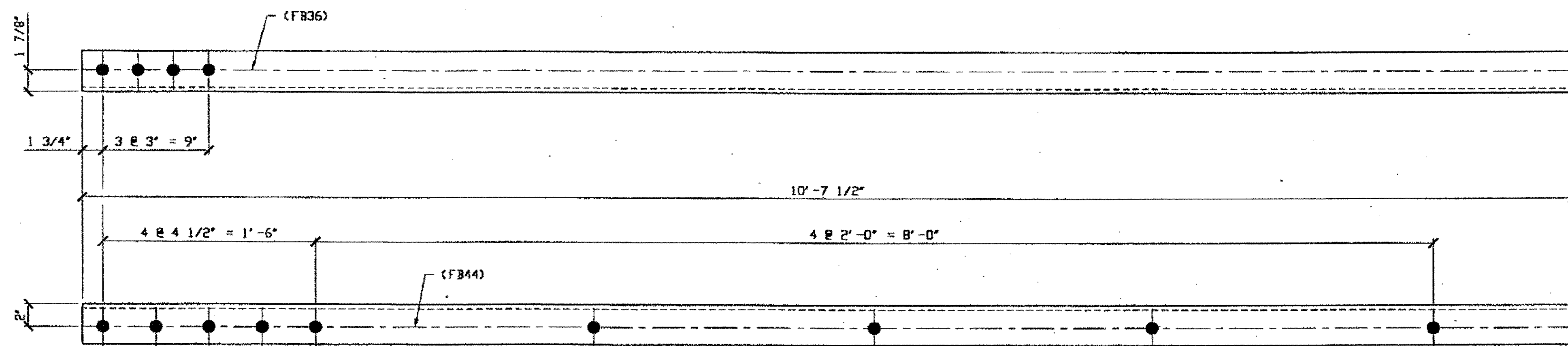
SHEET NUMBER: 269  
 ADM. JOB NUMBER: 800010



SPAN 5  
\*A-B' NORTH TOP NORTH 277A

2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 277A  
 ORIG SHIP DRAWING 142-BL5D  
 ORIG SHIP MARK A142F  
 LINE ITEM No. 0106  
 REPAIR SHEET 6-106

SPAN 6  
B-C' NORTH TOP NORTH 277A



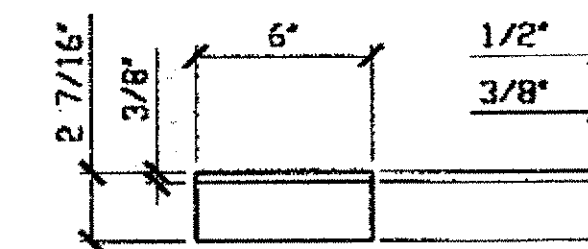
1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 277B  
 ORIG SHIP DRAWING 142-BL5I  
 ORIG SHIP MARK A142G  
 LINE ITEM No. 0106 & 0153  
 REPAIR SHEET 6-111  
 ITEM LINE No. 0153, BID ITEM No. 863E90000

SPAN 6  
C-D' NORTH TOP NORTH 277B

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS	WEIGHT
1				TYPE 1 DIAGONAL QUARTER LENGTH			
2		277A	2	L 3 1/2 X 3 1/2 X 3/8	11 8 1 1/2	1 (8'-8")	
3		277B	1	L 3 1/2 X 3 1/2 X 3/8	10 7 1/2		
4							
5							
6							
7				SPLICE PLATES			
8		277C		PL 1/2 X 2 7/16	0 6		14
9		277D		PL 1/2 X 2 7/8	0 6	PLAIN MATL	9
10							
11							
12							
13							
14							
15							
16							
17				FIELD BOLTS			
18		FB36		1" DIA	0 2 1/2	NOTE 2	
19		FB44		1" DIA	0 3 1/2	NOTE 2	
20							
	PLATE	A36		PIPE	N/A	FITTINGS	N/A
	SHAPES	A36		FLGS.	N/A	BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



- SPLICE PLATES - 277C  
 ITEM LINE No. 0106, 0110 & 0113  
 IDENTICAL TO 106C

NAT'L ENGR' & CONTR. CO.  
 By EDP/ESS

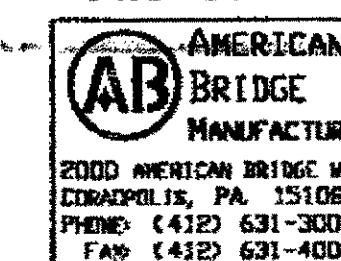
MAR 30 2001



RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY EDP

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



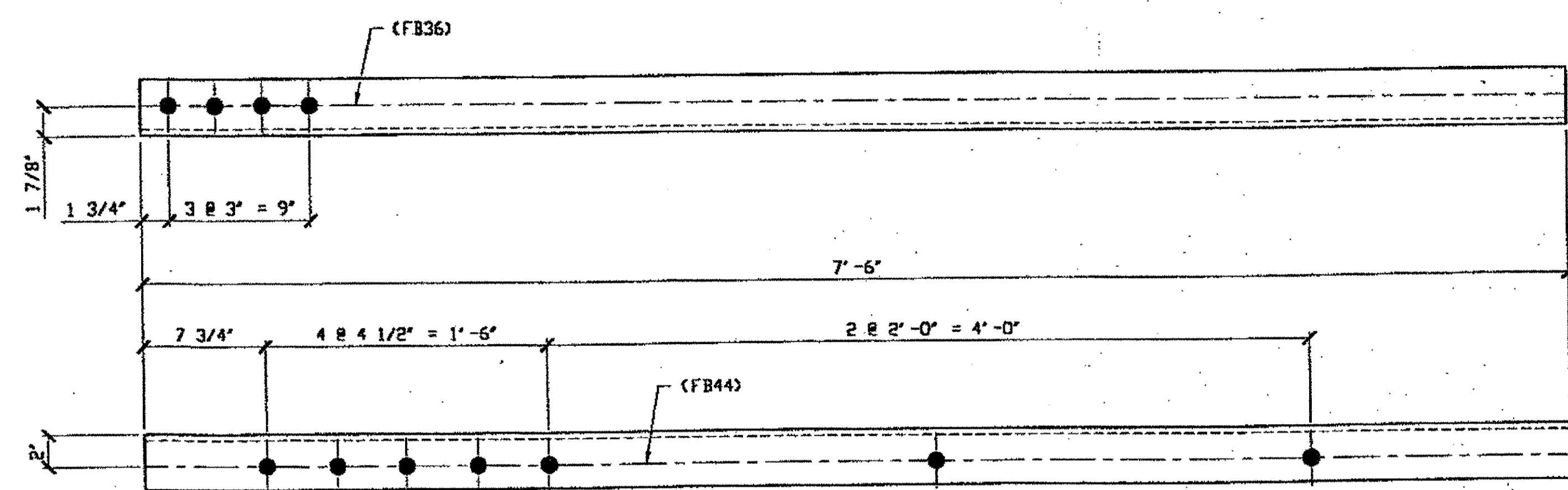
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U. N. O.

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 03/13/01  
 CHECKED BY: DATE: GAF 03/28/01  
 SHEET NUMBER: 277  
 A.M. JOB NUMBER: 800010

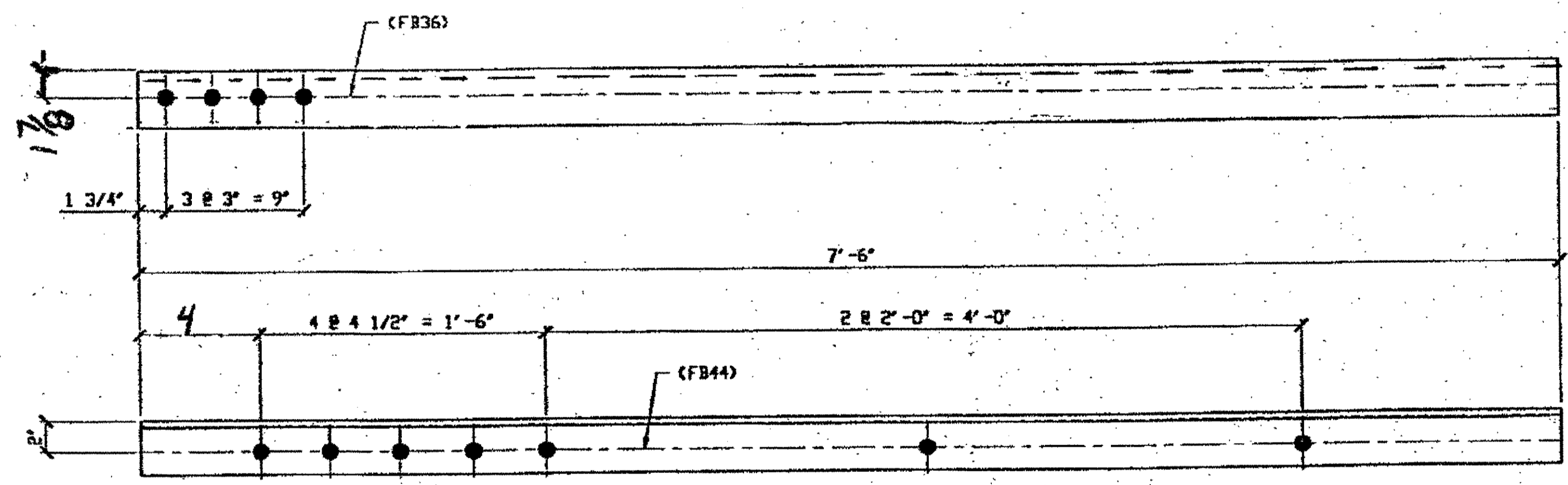
Last modifier: respringer at 10:10am on Thu Mar 29, 2001 - Last plotted by gfostru. at 01:11pm on Thu Mar 29, 2001



**1- TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 278A**

DRIG SHOP DRAWING 142-BL48 & BL49  
 DRIG SHOP MARK A142d R/L & A142e R/L  
 LINE ITEM No. 0110  
 REPAIR SHEET 6-124 & 126

**SPAN 6  
 B-C' SOUTH, TOP NORTH 278A**



**1- TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 278 D**

DRIG SHOP DRAWING 142-BL48 & BL49  
 DRIG SHOP MARK A142d R/L & A142e R/L  
 LINE ITEM No. 0110  
 REPAIR SHEET 6-124 & 126

**SPAN 6 C-D' SOUTH, TOP SOUTH 278 D**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL QUARTER LENGTH				
2		278A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		
3								
4								
5								
6								
7		278 D	1	L 3 1/2 X 3 1/2 X 3/8	7	6		
8								
9								
10								
11								
12				FIELD BOLTS				
13		FB36		1" DIA	0	2 1/2	NOTE 2	
14		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36					PIPE N/A		FITTINGS N/A	
SHAPES A36					FLGS. N/A		BOLTS NOTE 2	

**NOTES:**

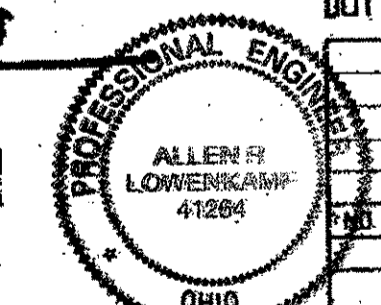
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325 TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/6/01 DSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR' & CONTR. CO.

By tdp/ESS

MAR 30 2001



RELEASED FOR CONSTRUCTION

DATE 4/9/01 BY tdp

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CLEVELAND, OH 44115  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/14/01  
 CHECKED BY: DATE  
 GAF 03/28/01

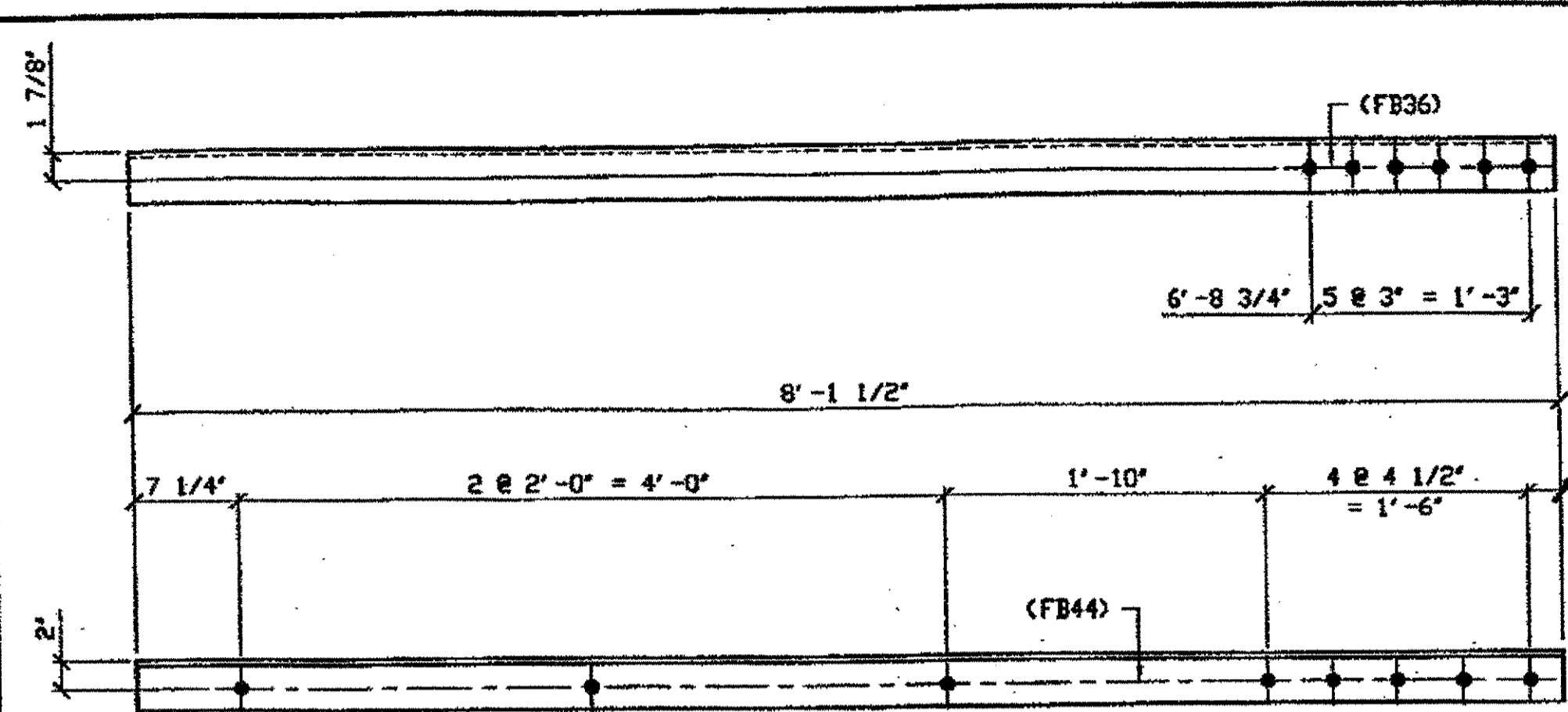
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 6 REPAIRS**

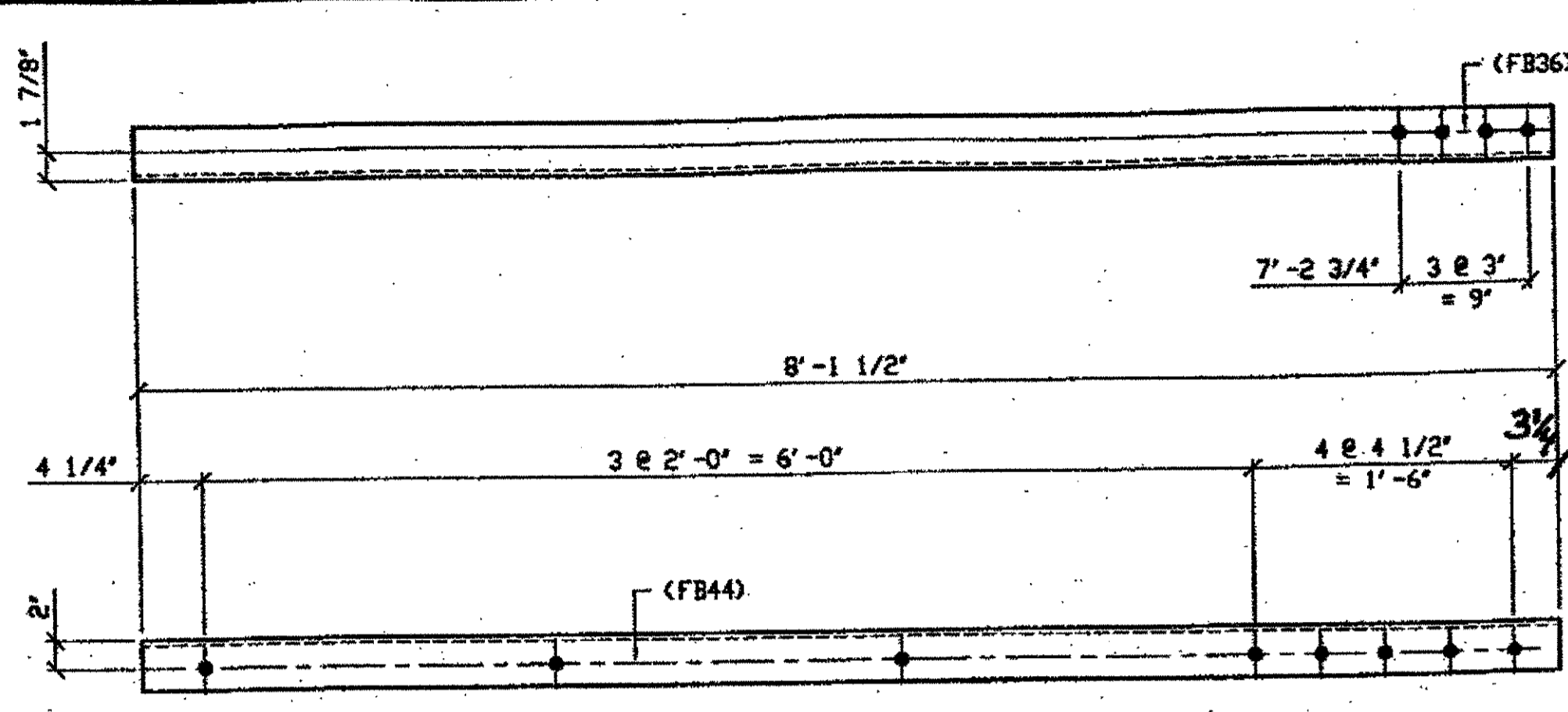
SHEET NUMBER: 278  
 A36 JOB NUMBER: 800010

nger at 10:24am on Thu Mar 29, 2001 -1- last plotted by gfoster at 01:12pm on Thu Mar 29, 2001  
 last modified by r

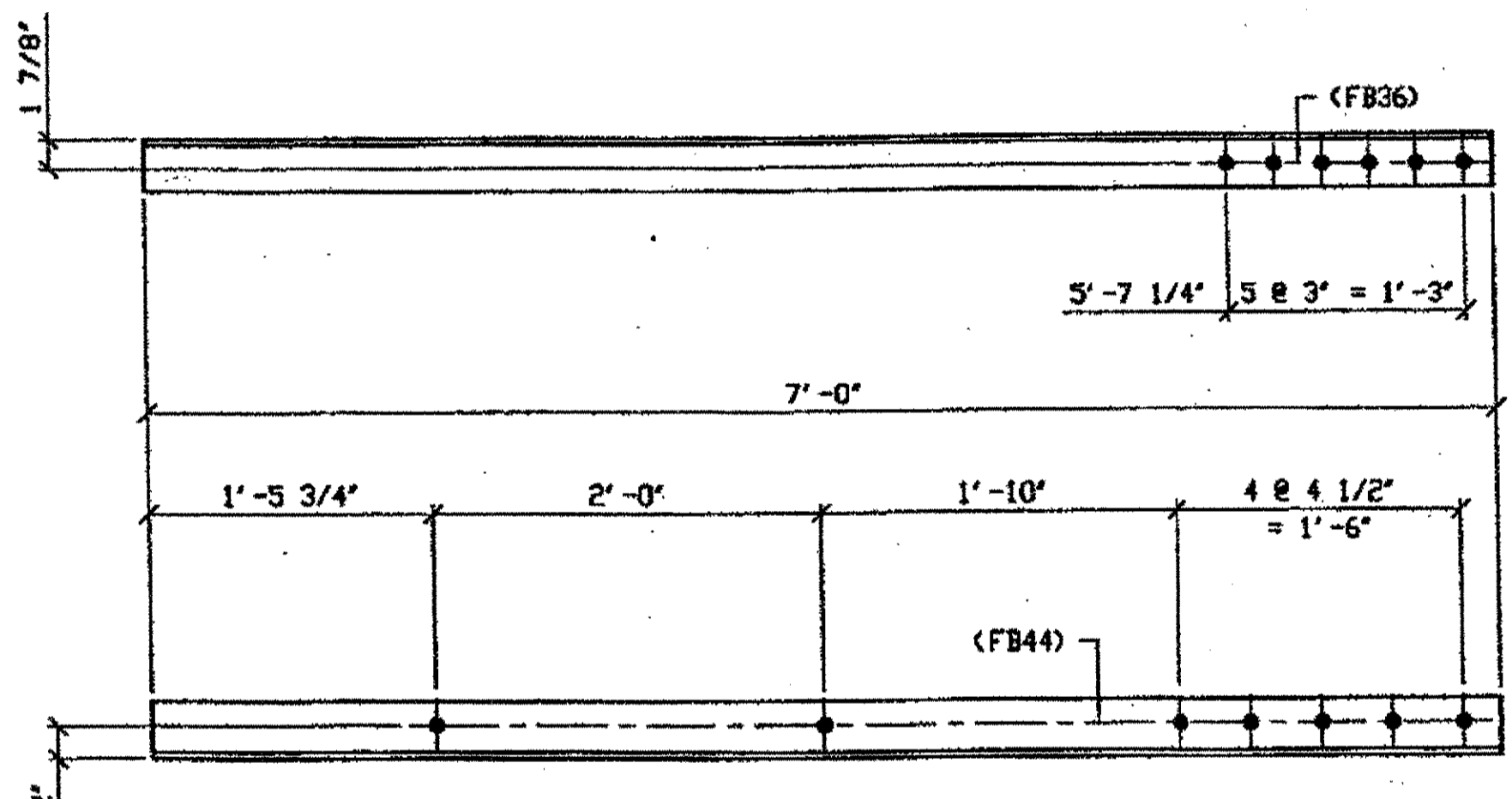
Last modified by rspringer at \$(EDTIME,??) -|- Last plotted by rspringer at 09:40am on Wed May 23, 2001



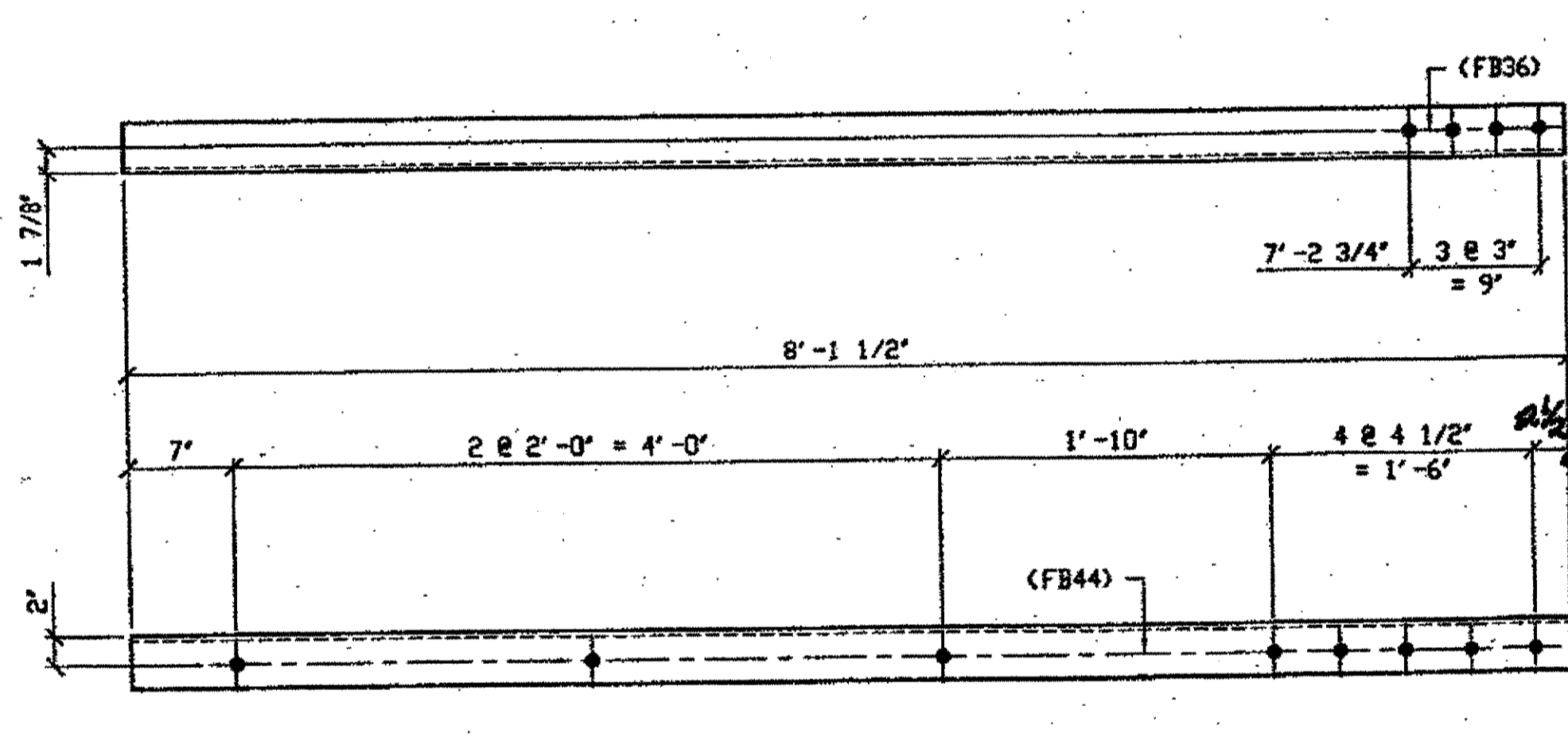
**5 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302A R/L (L-SHOWN)**  
 ORIG SHOP DRAWING 165-BL61/R  
 ORIG SHOP MARK A165b R/L  
 REPAIR SHEET 7-100 & 193



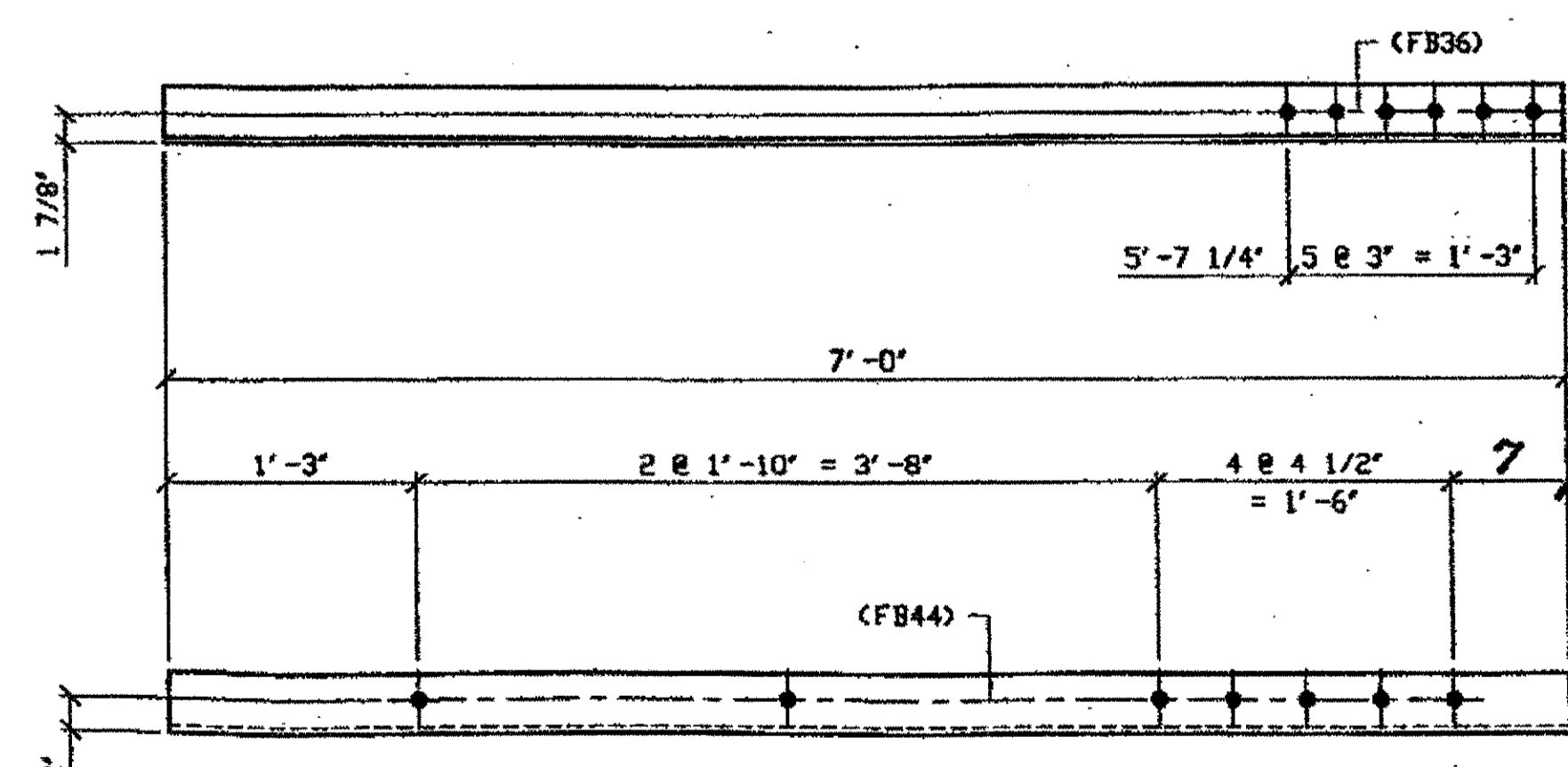
**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302D R/L (L-SHOWN)**  
 ORIG SHOP DRAWING 165-BL69/R  
 ORIG SHOP MARK A165e R/L  
 REPAIR SHEET 7-109



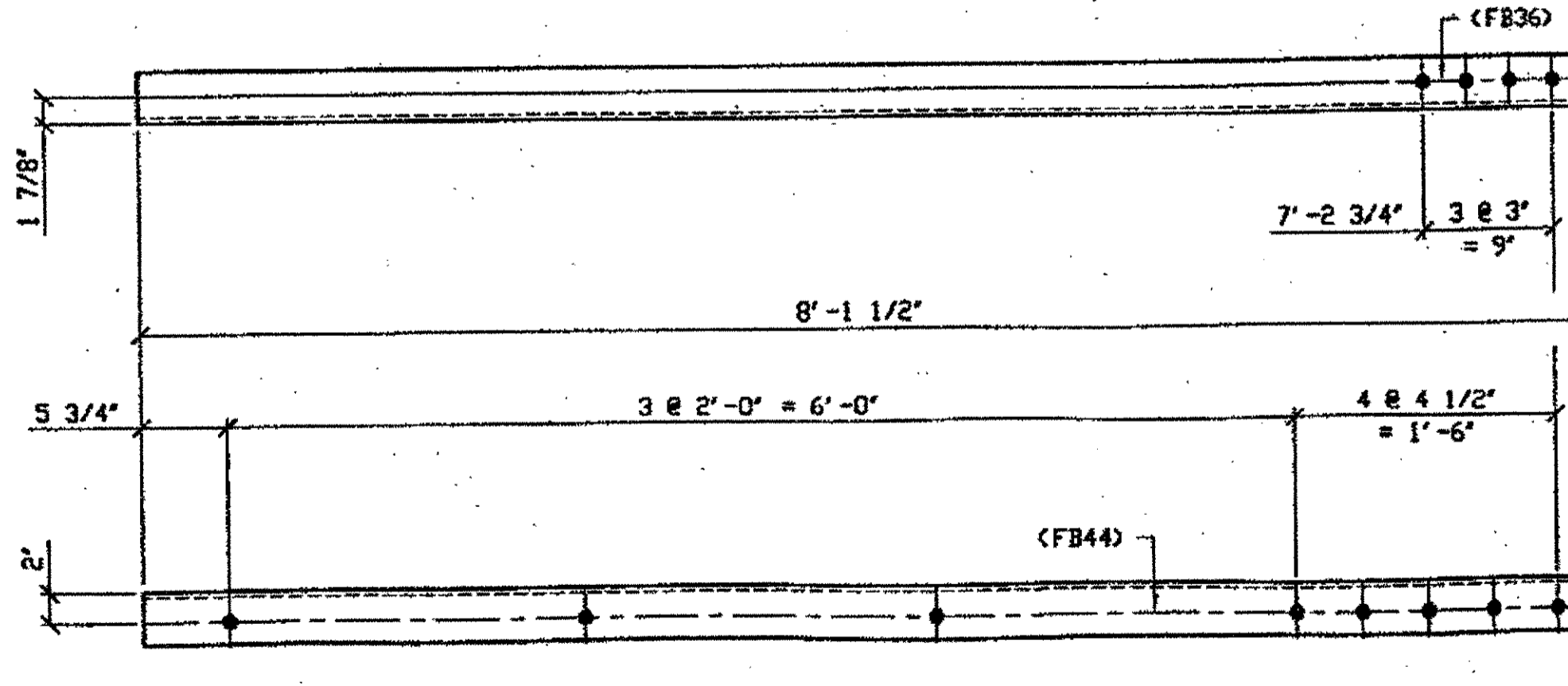
**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302B**  
 ORIG SHOP DRAWING 165-BL61/R  
 ORIG SHOP MARK A165b R/L  
 REPAIR SHEET 7-126



**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302F R/L (L-SHOWN)**  
 ORIG SHOP DRAWING 165-BL70/R  
 ORIG SHOP MARK A165F R/L  
 REPAIR SHEET 7-114



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302C**  
 ORIG SHOP DRAWING 165-BL67/R  
 ORIG SHOP MARK A165c R/L  
 REPAIR SHEET 7-104



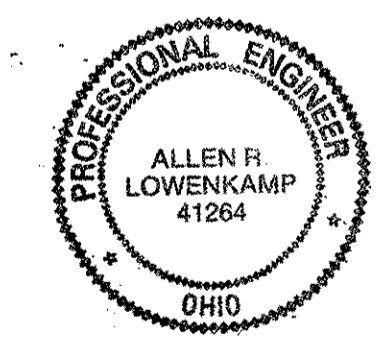
**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 302G**  
 ORIG SHOP DRAWING 165-BL72/R  
 ORIG SHOP MARK A165h R/L  
 REPAIR SHEET 7-119

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL QUARTER					
2		302A R/L	5	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R 3/L	60	
3		302B	1	L 3 1/2 X 3 1/2 X 3/8	7	0		60	
4		302C	1	L 3 1/2 X 3 1/2 X 3/8	7	0		60	
5		302D R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R 1/L	207	
6		302F R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R 2/L	207	
7		302G	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69	
8				FIELD BOLTS					
9		FB36		1" DIA	0	2 1/2	NOTE 2		
10		FB44		1" DIA	0	3 1/2	NOTE 2		
PLATE A36				PIPE N/A	FITTINGS N/A				
SHAPES A36				FLGS. N/A	BOLTS NOTE 2				

**NOTES:**

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 7**  
 C-B' NORTH, TOP NORTH 302A/R  
 C-B' NORTH, BOTTOM NORTH 302A/L  
 C-B' SOUTH, BOTTOM NORTH 302A/L  
 C-B' SOUTH, TOP SOUTH 302A/L  
 C-B' SOUTH, TOP NORTH 302A/R  
 N-M' SOUTH, BOTTOM SOUTH 302B  
 E-D' SOUTH, BOTTOM NORTH 302C  
 G-F' SOUTH, BOTTOM NORTH 302D/R  
 G-F' SOUTH, TOP NORTH 302D/L  
 G-F' NORTH, BOTTOM NORTH 302D/R  
 H-G' SOUTH, BOTTOM NORTH 302F/R  
 H-G' SOUTH, TOP NORTH 302F/L  
 H-G' SOUTH, TOP SOUTH 302F/R  
 K-J' SOUTH, TOP NORTH 302G



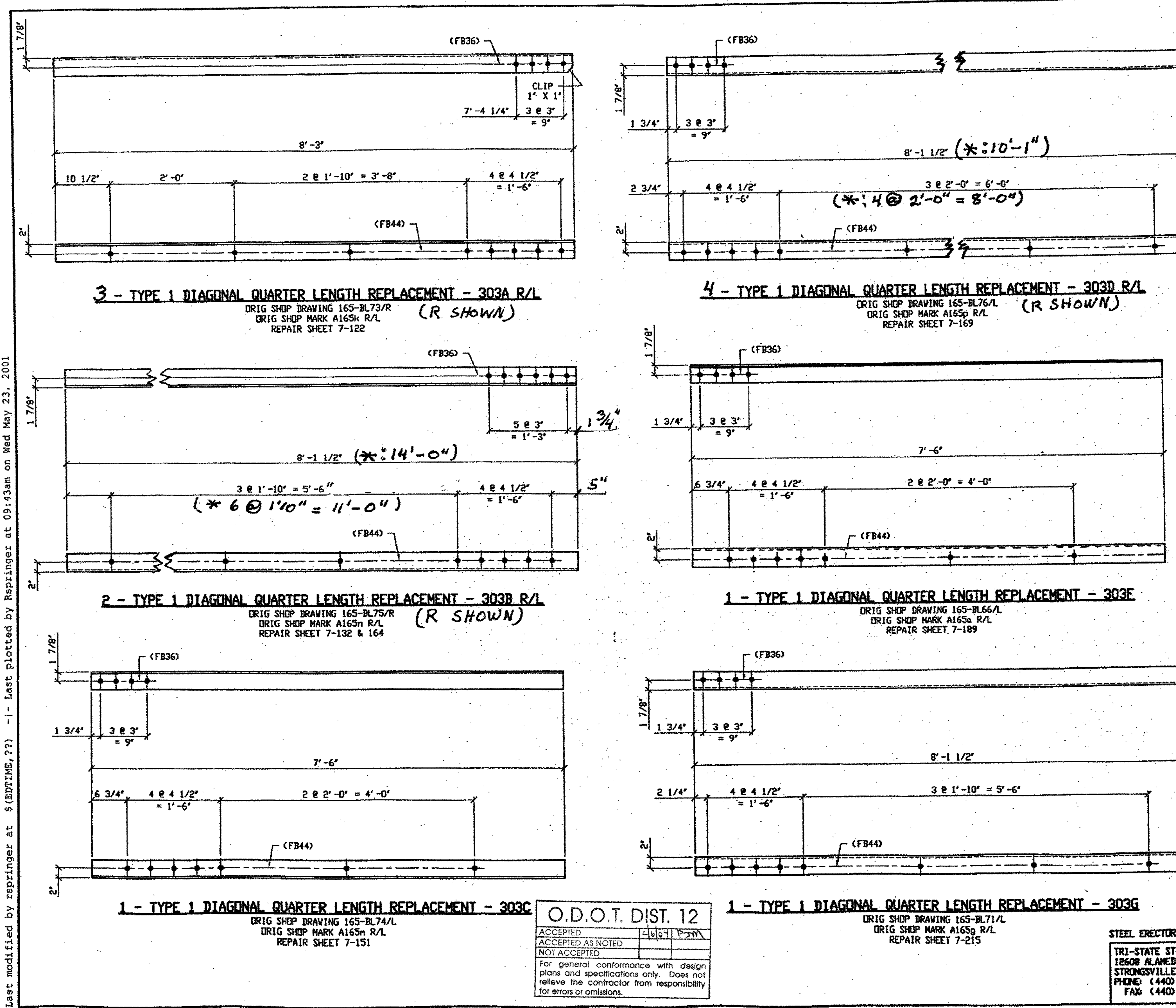
**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED 2/6/01 DSM  
 NOT ACCEPTED

**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAUGHS, PA. 15008  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

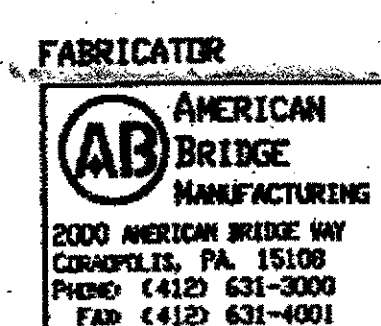
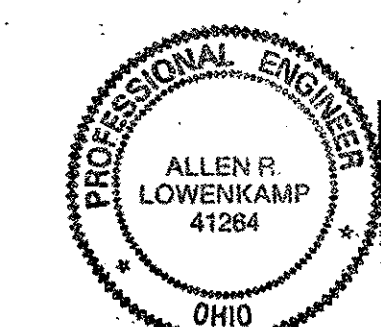
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/30/01  
 CHECKED BY: DATE: GAF 05/23/01  
 SHEET NUMBER: 302  
 AM JOB NUMBER: 800010



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		303A R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	3	2/L 1/R	
3		303B R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		138
4		303C	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
5		303D R/L	4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/L 2/R	
6		303F	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
7		303G	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69
13				FIELD BOLTS				
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/WHY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 7**  
 L-K' SOUTH, BOTTOM SOUTH 303A/L  
 L-K' SOUTH, TOP SOUTH 303A/R  
 L-K' SOUTH, TOP NORTH 303A/L  
 \*P-O' NORTH, BOTTOM SOUTH 303B/L  
 P-O' SOUTH, BOTTOM NORTH 303B/R  
 M-L' NORTH, TOP SOUTH 303C  
 Q-P' NORTH, BOTTOM NORTH 303D/R  
 Q-P' NORTH, TOP NORTH 303D/L  
 Q-P' SOUTH, BOTTOM SOUTH 303D/L  
 \*Q-P' NORTH, TOP SOUTH 303D/R  
 B-A' NORTH, TOP SOUTH 303F  
 J-H' NORTH, TOP SOUTH 303G



NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

FABRICATOR: AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CLEVELAND, OH 44108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALANEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 04/30/01  
 CHECKED BY: GAF  
 DATE: 05/17/01

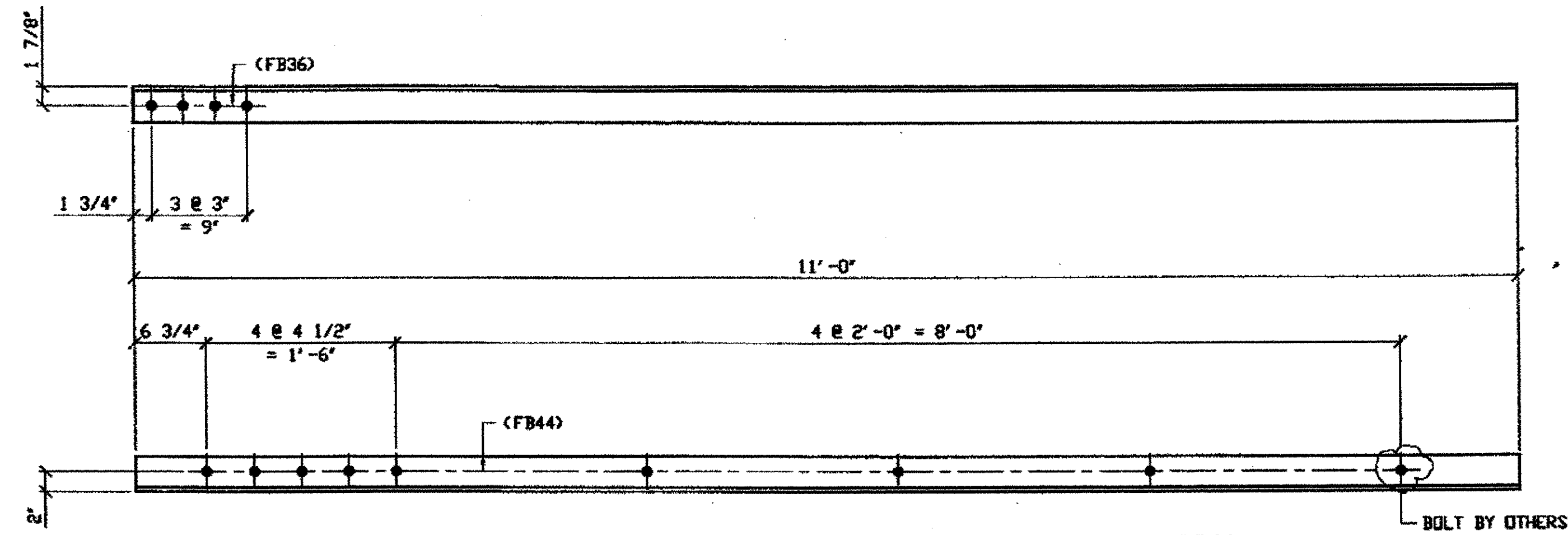
SHEET NUMBER: 303  
 AM JOB NUMBER: 800010

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

Last modified by repringer at \$(EDTIME,??) -1- Last plotted by Repringer at 09:43am on Wed May 23, 2001

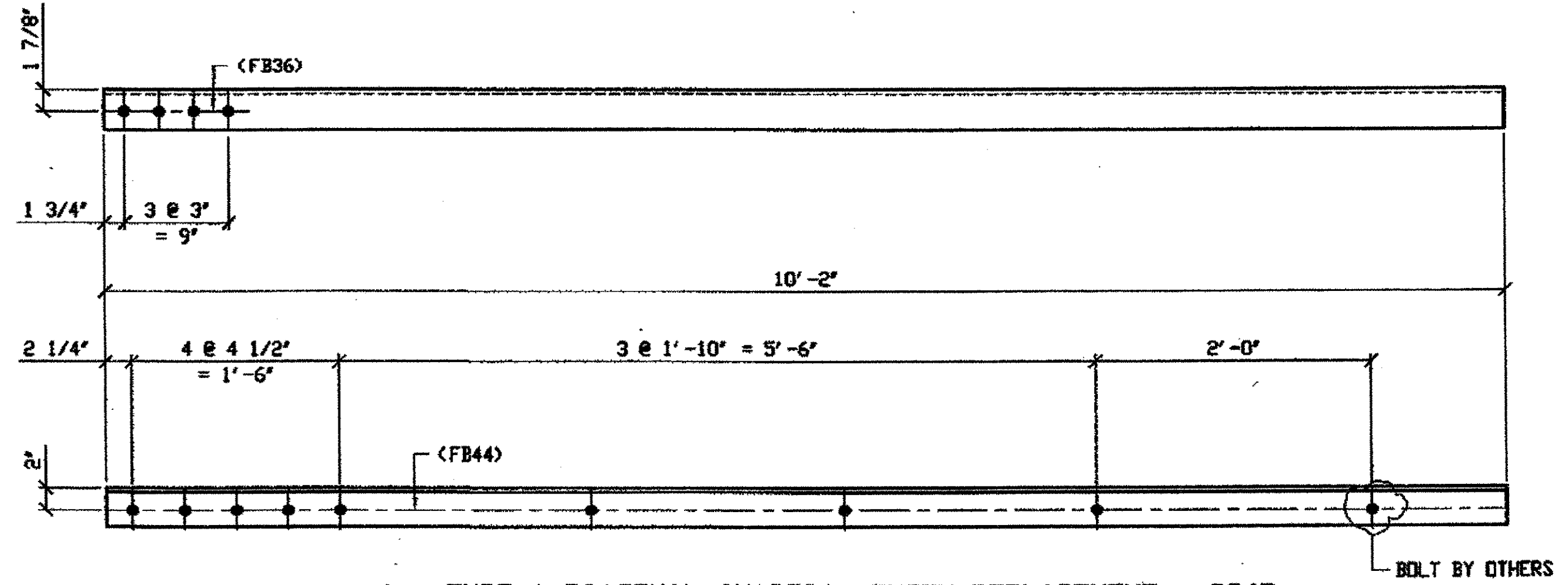
Last modified by rspringer at \$(EDTIME,??) - Last plotted by Rspringer at 09:48am on Wed May 23, 2001



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 304A**

ORIG SHOP DRAWING 165-BL74/L  
 ORIG SHOP MARK A165g R/L  
 REPAIR SHEET 7-152  
 ITEM No. 0106 & 0152  
 ITEM LINE No. 0152, BID ITEM No. 863E90000

**SPAN 7 M-L' NORTH, Bottom NORTH 304A**



**1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 304B**

ORIG SHOP DRAWING 165-BL71/L  
 ORIG SHOP MARK A165g R/L  
 REPAIR SHEET 7-215  
 ITEM No. 0106 & 0152  
 ITEM LINE No. 0152, BID ITEM No. 863E90000

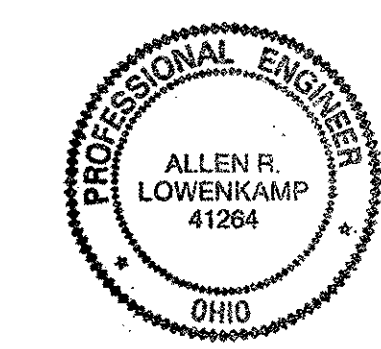
**SPAN 7 J-H' NORTH, Top NORTH 304B**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		304A	1	L 3 1/2 X 3 1/2 X 3/8	11	0		94
3		304B	1	L 3 1/2 X 3 1/2 X 3/8	10	2		86
4								
5								
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36	8	1" DIA	0	2 1/2	NOTE 2	11
15		FB44	16	1" DIA	0	3 1/2	NOTE 2	26
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 Ref. general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 6/2/01 BY tdp

DOT ITEM LINE NO. AS NOTED	
DOT BID ITEM NO. 863E90000	
NO.	DATE
DESCRIPTION	
BY	

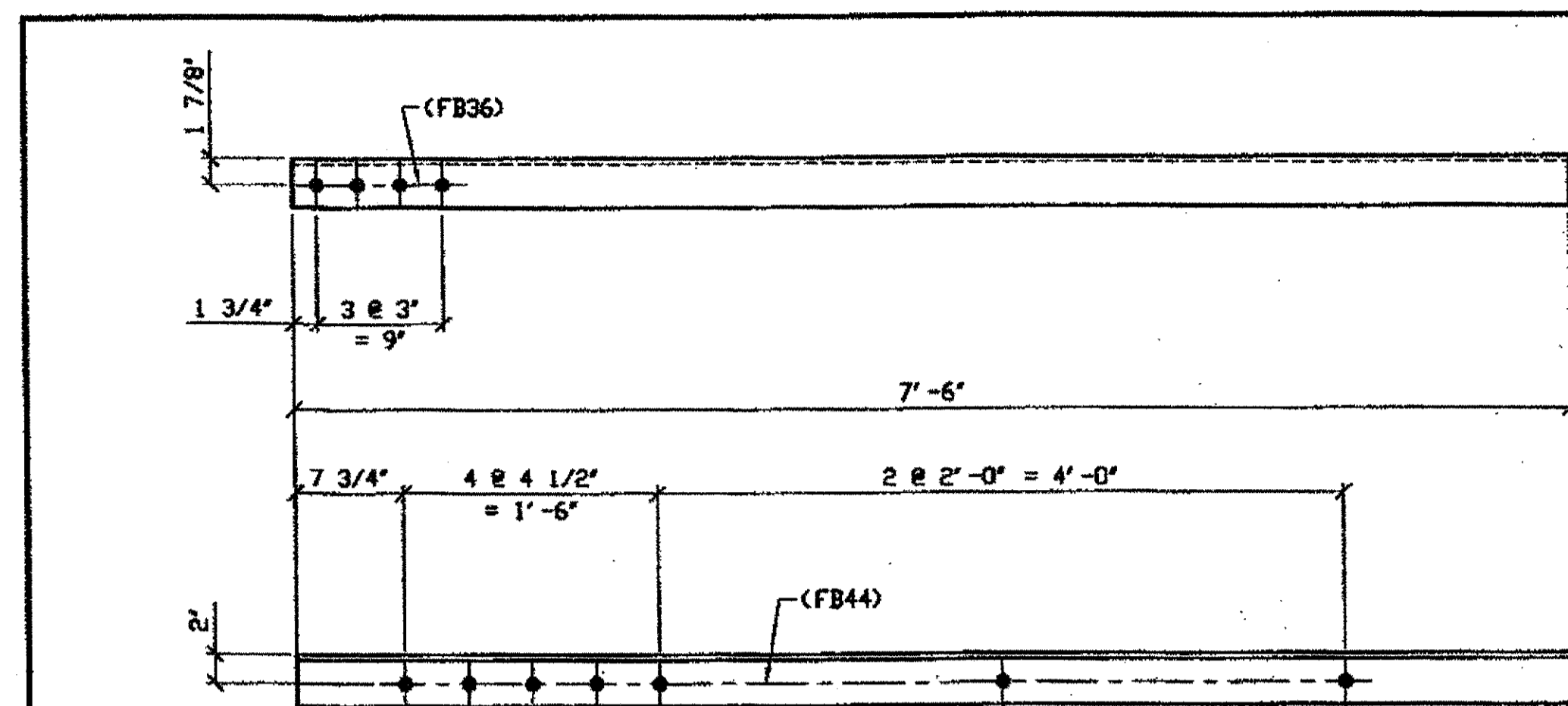
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA. 15109  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 7 REPAIRS**

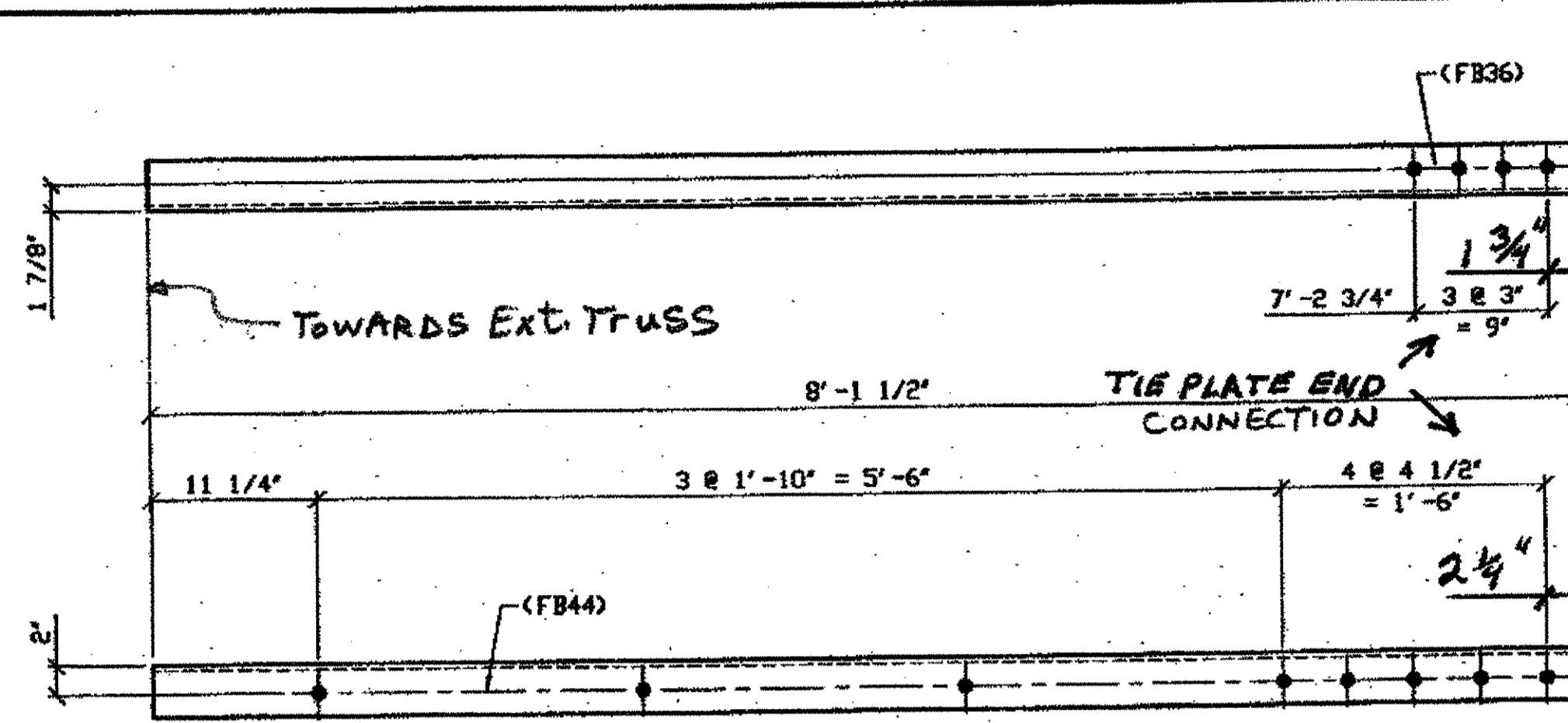
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 04/30/01  
 CHECKED BY: DATE:  
 GAF 05/18/01

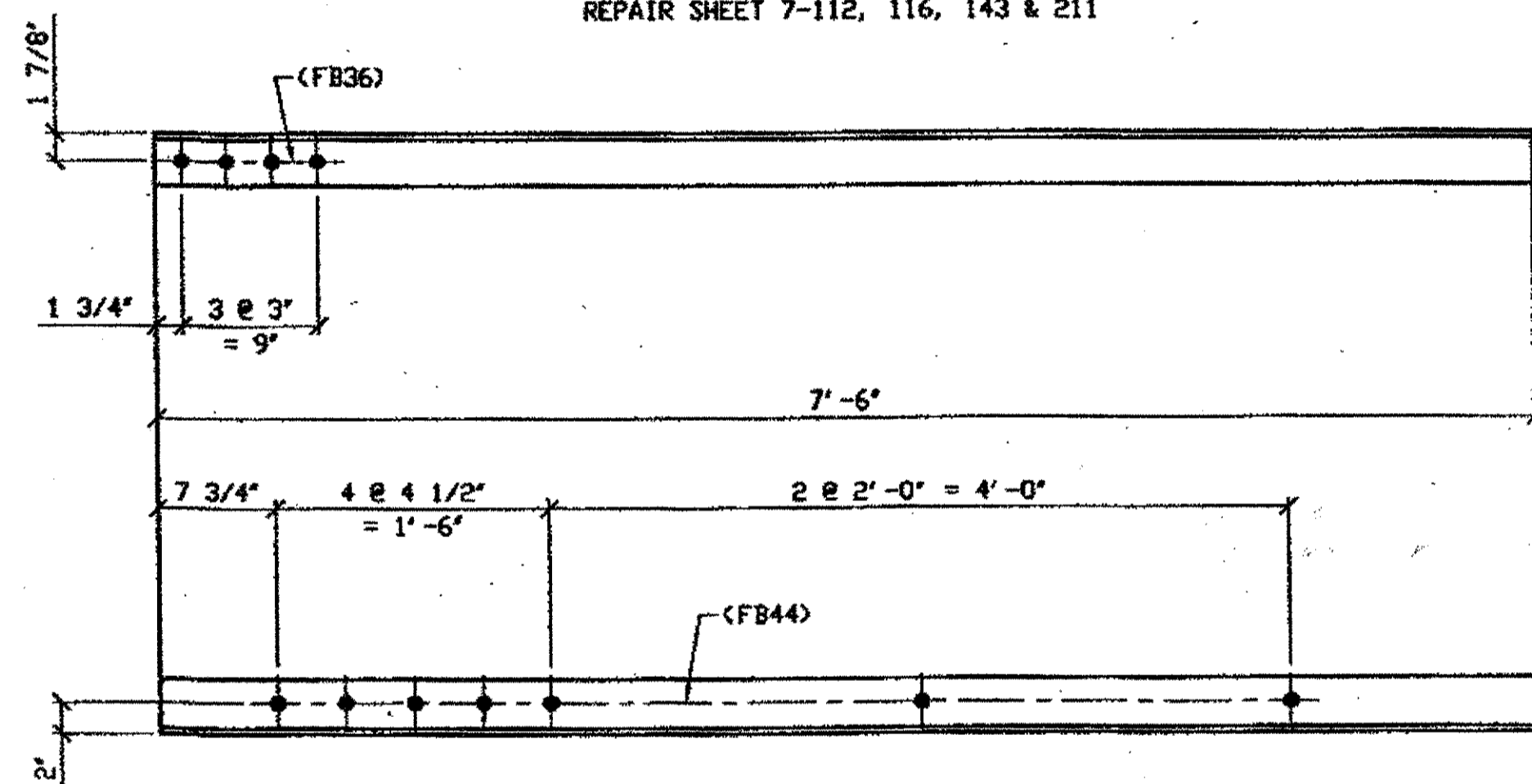
SHEET NUMBER: 304  
 AM JOB NUMBER: 800010



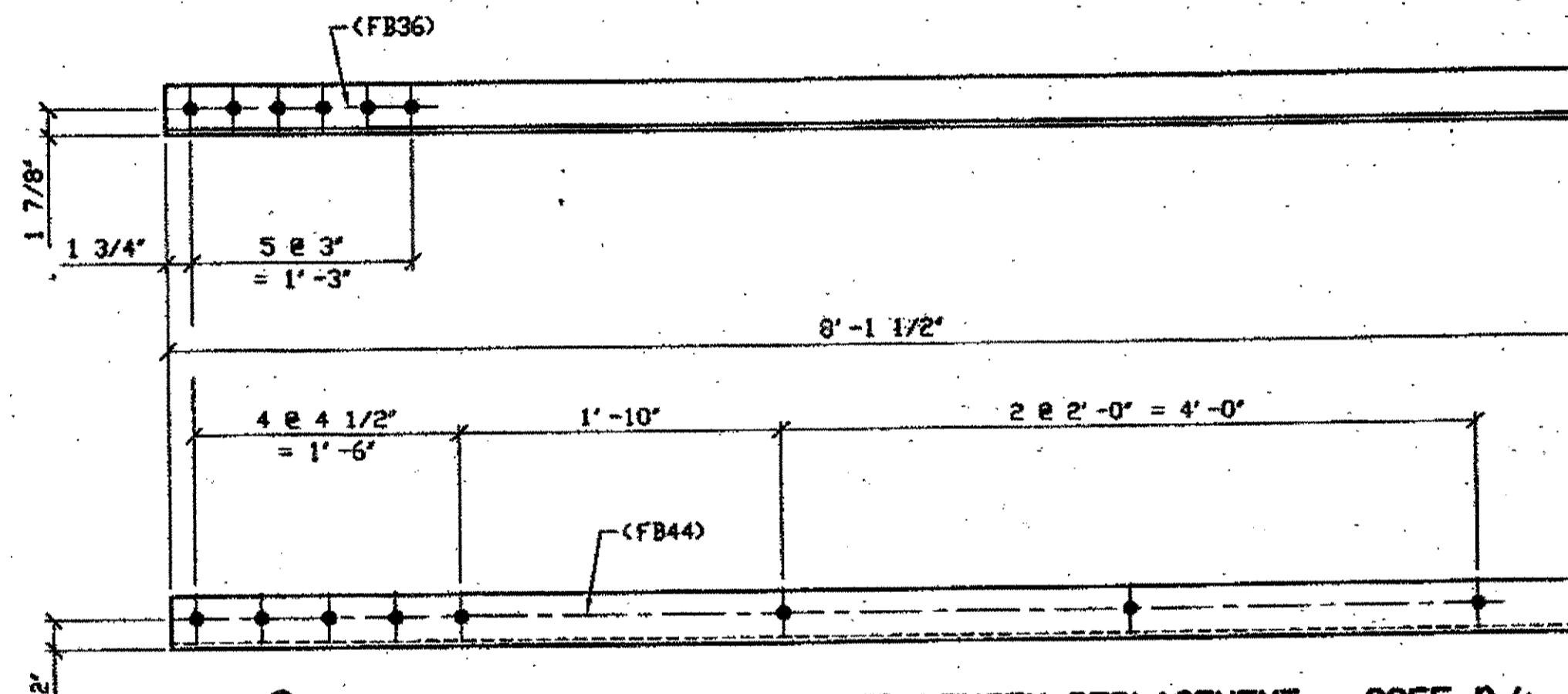
**8 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305A R/L (R SHOWN)**  
 ORIG SHOP DRAWING 142-BL48  
 ORIG SHOP MARK A142d R/L  
 REPAIR SHEET 7-112, 116, 143 & 211



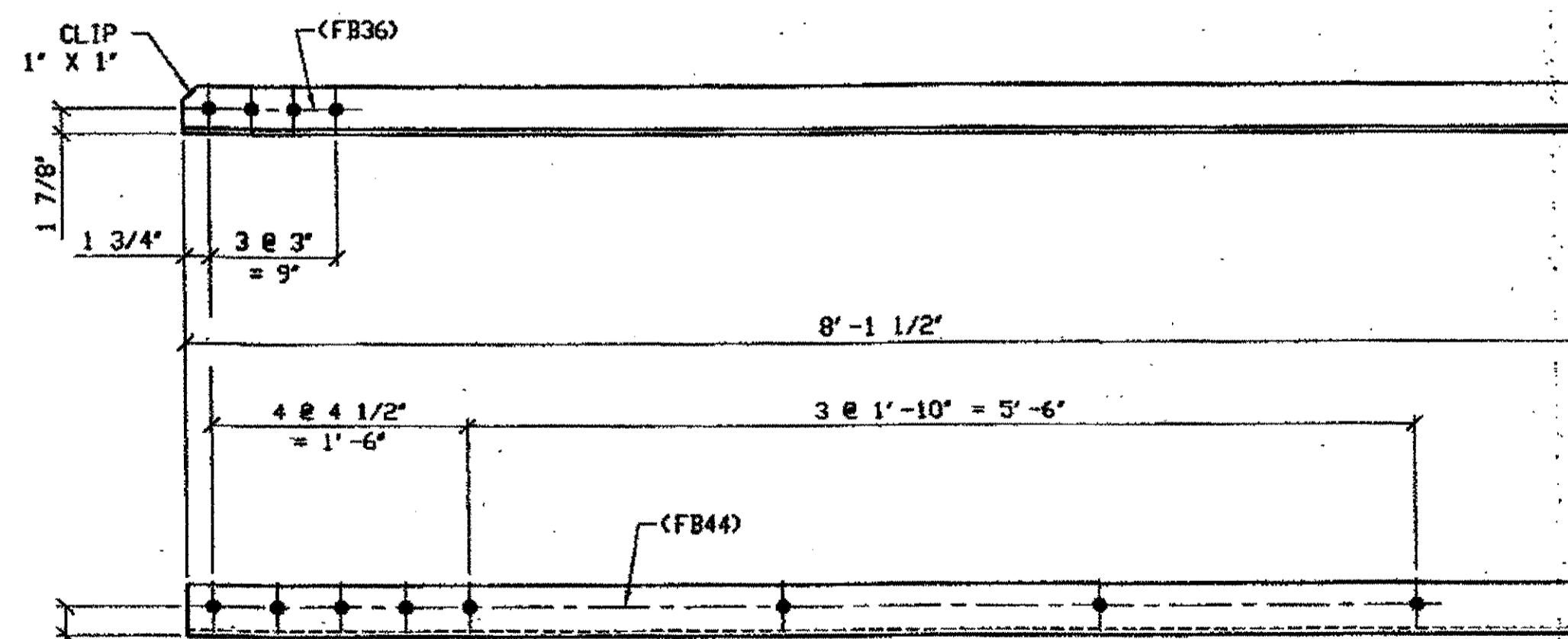
**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305D**  
 ORIG SHOP DRAWING 165-BL54  
 ORIG SHOP MARK A165w R/L  
 REPAIR SHEET 7-146



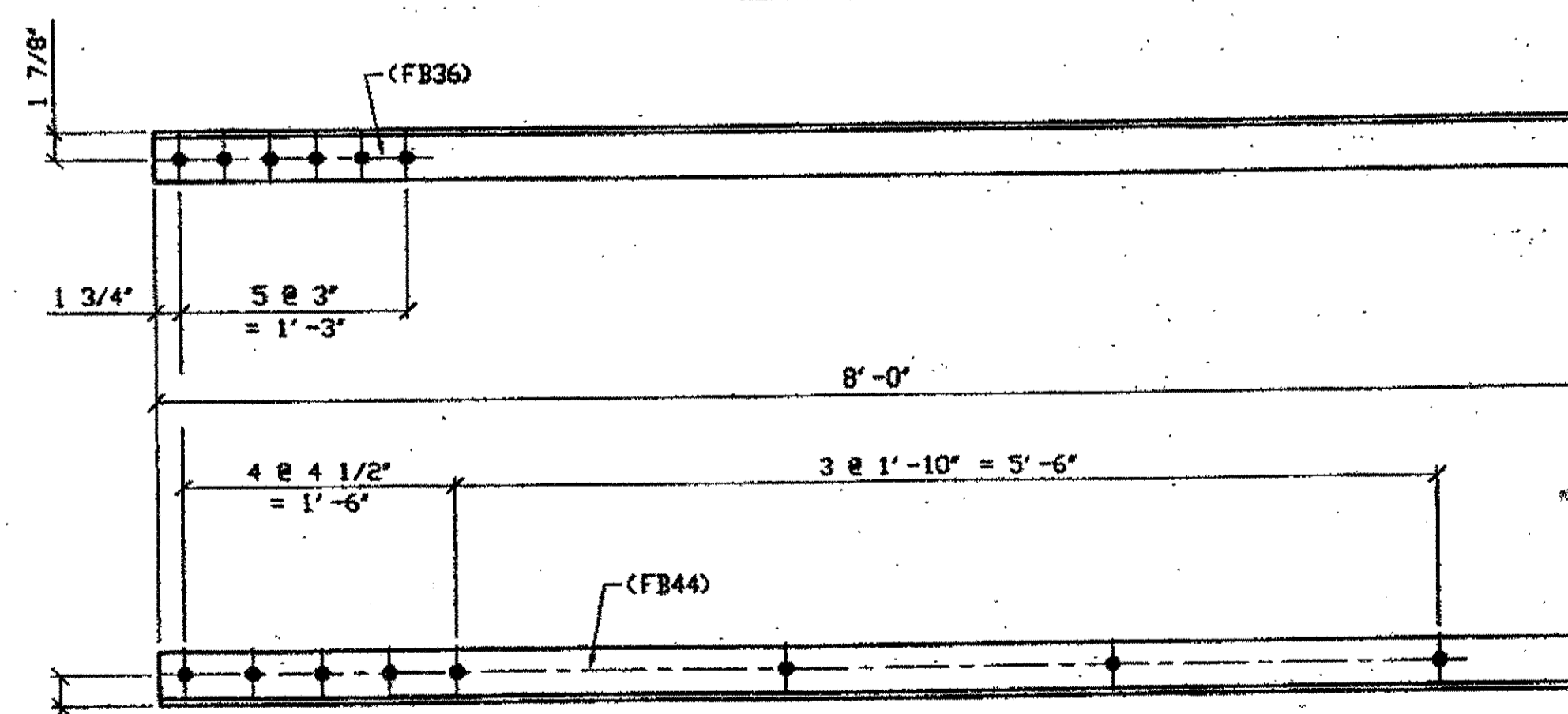
**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305B R/L (R SHOWN)**  
 ORIG SHOP DRAWING 165-BL63  
 ORIG SHOP MARK A165af R/L  
 REPAIR SHEET 7-115 & 213



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305E R/L (R SHOWN)**  
 ORIG SHOP DRAWING 165-BL55  
 ORIG SHOP MARK A165x R/L  
 REPAIR SHEET 7-129



**6 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305C R/L (R SHOWN)**  
 ORIG SHOP DRAWING 165-BL54  
 ORIG SHOP MARK A165w R/L  
 REPAIR SHEET 7-120 & 208



**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 305G**  
 ORIG SHOP DRAWING 165-BL57  
 ORIG SHOP MARK A165aa R/L  
 REPAIR SHEET 7-131

BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	ML REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				TYPE 2 DIAGONAL QUARTER		
2		305A R/L	8	L 3 1/2 X 3 1/2 X 3/8	7 6	3/R 4/L
3		305B R/L	2	L 3 1/2 X 3 1/2 X 3/8	7 6	
4		305C R/L	6	L 3 1/2 X 3 1/2 X 3/8	8 1 1/2	3/R 1/L
5		305D	1	L 3 1/2 X 3 1/2 X 3/8	8 1 1/2	
6		305F	2	L 3 1/2 X 3 1/2 X 3/8	8 1 1/2	
7		305G	3	L 3 1/2 X 3 1/2 X 3/8	8 0	
8				FIELD BOLTS		
9		FB36		1\" DIA	0 2 1/2	NOTE 2
10		FB44		1\" DIA	0 3 1/2	NOTE 2
PLATE		A36		PIPE N/A		FITTINGS N/A
SHAPES		A36		FLGS. N/A		BOLTS NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16\"/>
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 Hvy HEX HD W/WHY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 7**

G-H' NORTH, BOTTOM SOUTH 305A/L  
 G-H' SOUTH, BOTTOM NORTH 305A/R  
 G-H' SOUTH, TOP NORTH 305A/L  
 G-H' SOUTH, TOP SOUTH 305A/R  
 J-K' NORTH, BOTTOM NORTH 305A/R  
 J-K' NORTH, BOTTOM SOUTH 305A/L  
 J-K' SOUTH, BOTTOM NORTH 305A/R  
 J-K' SOUTH, TOP NORTH 305A/L  
 H-J' NORTH, BOTTOM SOUTH 305B/R  
 H-J' SOUTH, BOTTOM NORTH 305B/L  
 F-G' SOUTH, TOP NORTH 305C/L  
 F-G' SOUTH, TOP SOUTH 305C/R  
 F-G' NORTH, BOTTOM NORTH 305C/R  
 F-G' NORTH, TOP SOUTH 305C/R  
 F-G' NORTH, BOTTOM SOUTH 305C/L  
 K-L' SOUTH, BOTTOM NORTH 305C/R  
 Tie R-K' NORTH, TOP NORTH K-L' 305D  
 M-N' SOUTH, TOP NORTH 305F/L  
 M-N' SOUTH, BOTTOM NORTH 305F/R  
 O-P' SOUTH, TOP NORTH 305G  
 O-P' SOUTH, BOTTOM SOUTH 305G  
 D-E' SOUTH, BOTTOM SOUTH 305G

O.D.O.T. DIST. 12

ACCEPTED	2/1/01	psm
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**PROFESSIONAL ENGINEER**  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

**FABRICATOR**  
**AB AMERICAN BRIDGE MANUFACTURING**  
 2020 WENDELL WISSE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION, INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 05/02/01  
 CHECKED BY: DATE: GAF 05/21/01

REVISORS

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

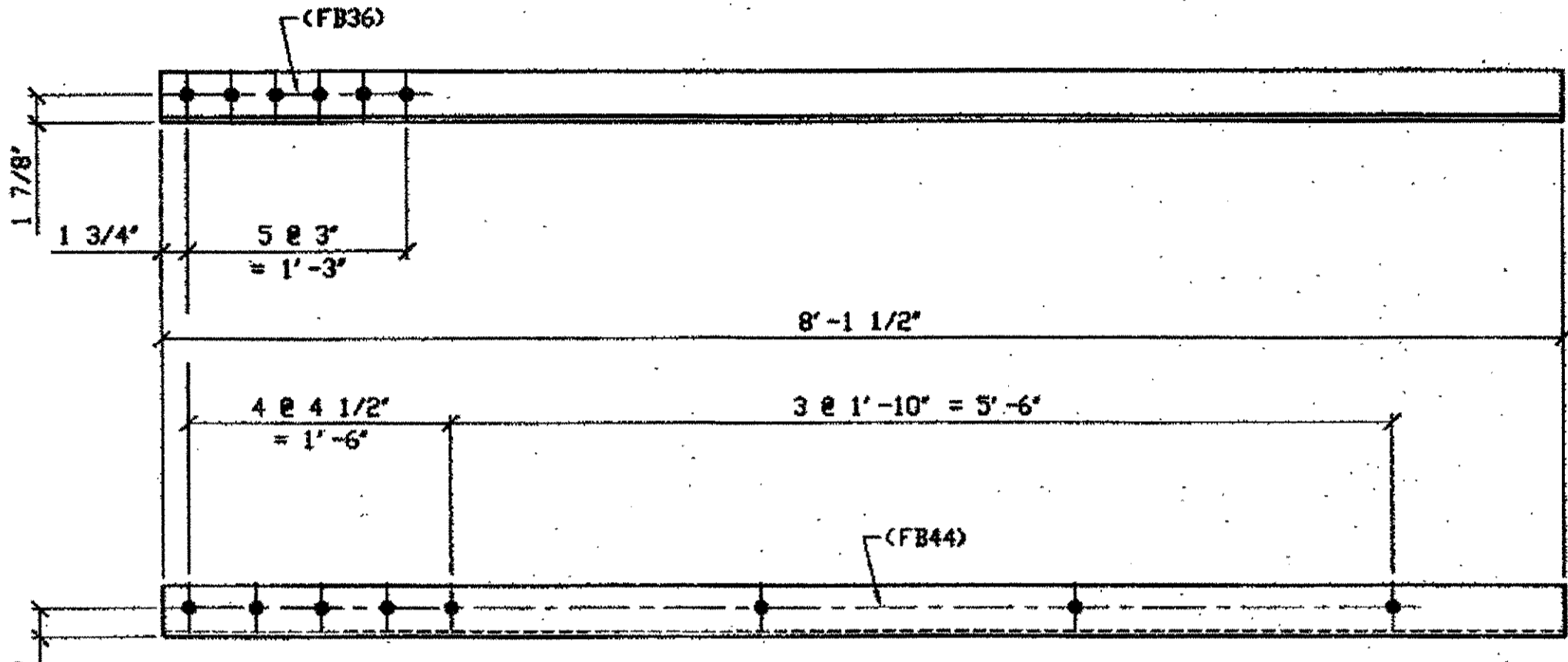
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13

**SPAN 7 REPAIRS**

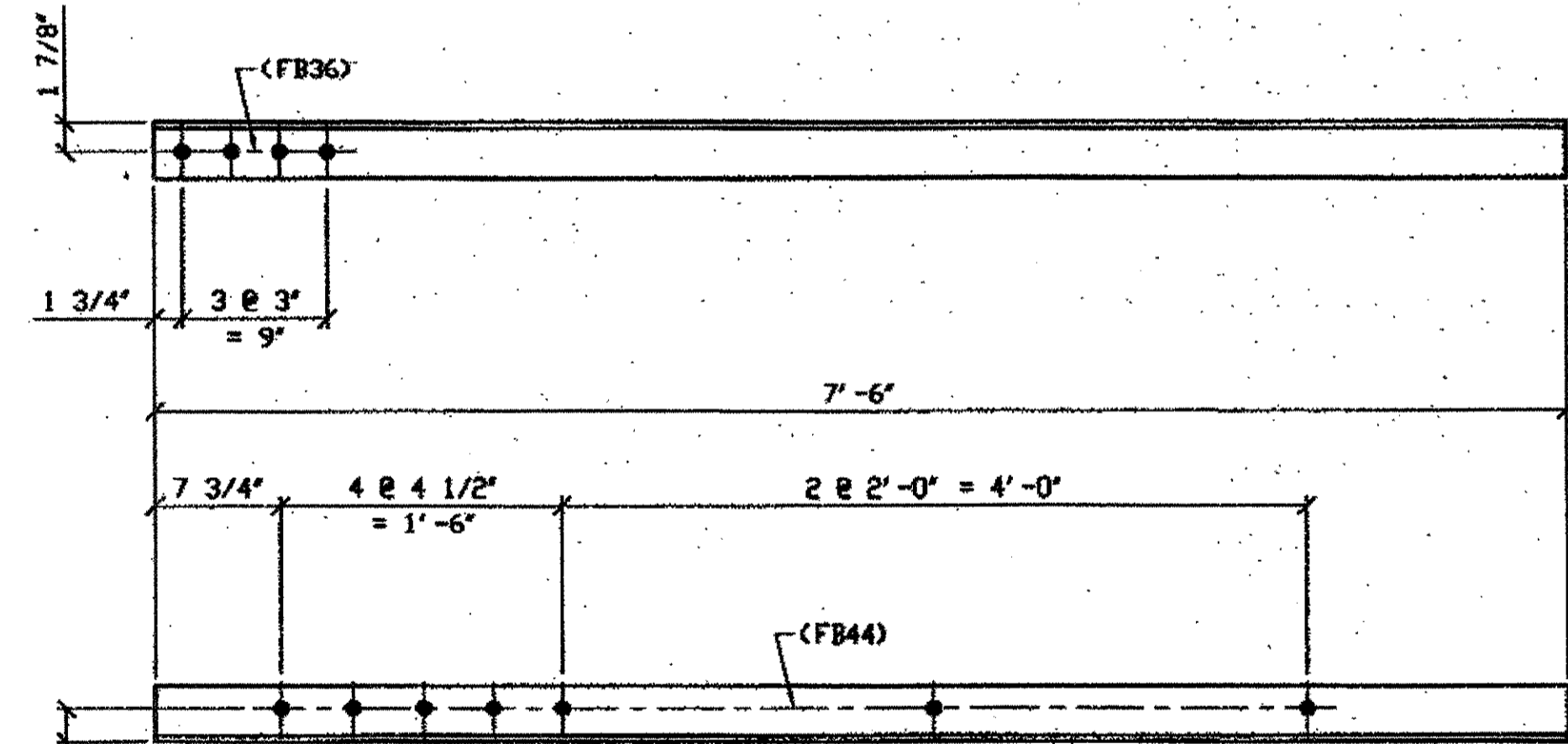
SHEET NUMBER	305
AWB JOB NUMBER	800010

Last modified by rspringer at 5 (EDTIME,??) - 1 - Last plotted by Repringer at 10:08am on Wed May 23, 2001

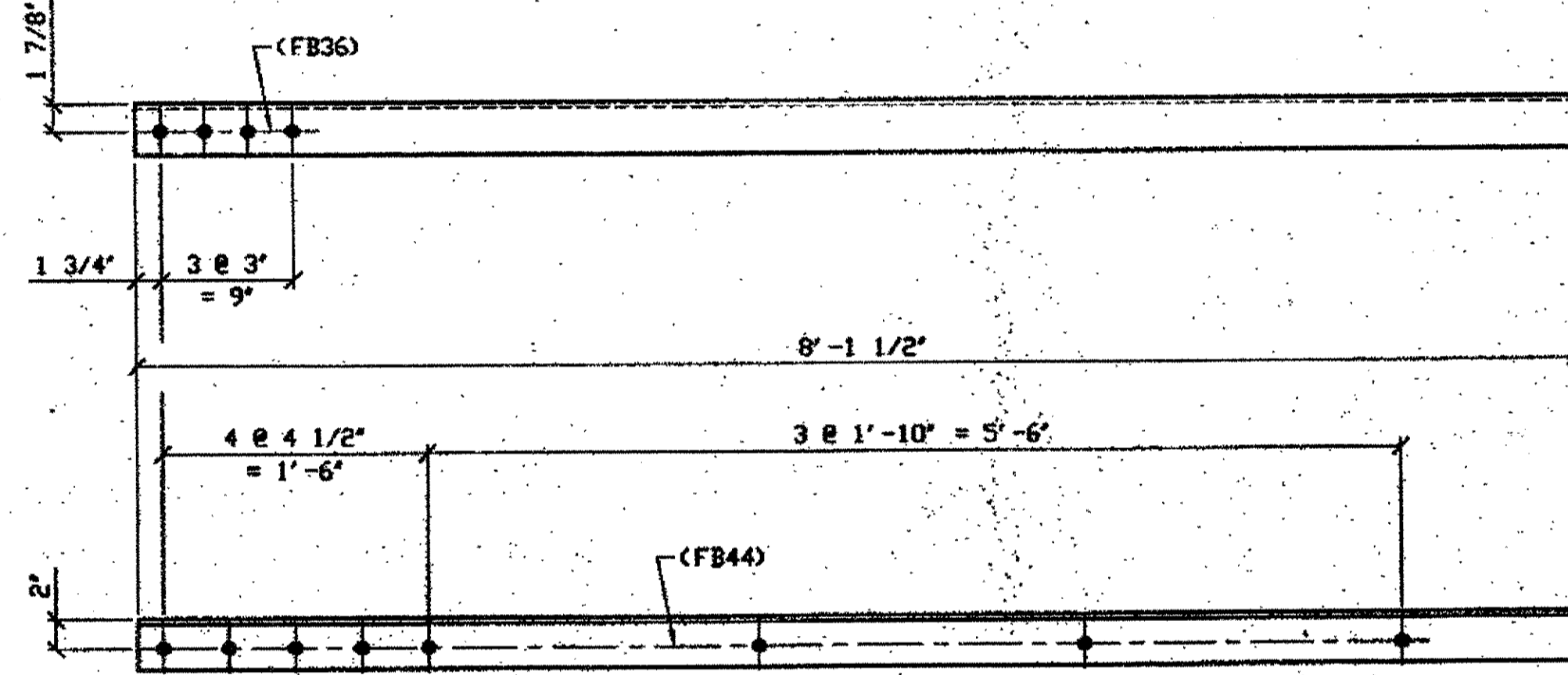
Last modified by rspringer at \$\$(EDTIME??) - Last plotted by Rspringer at 10:14am on Wed May 23, 2001



**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 306A**  
 SPAN 7  
 O-P' NORTH BOTTOM NORTH 306A  
 ORIG SHOP DRAWING 165-BL57  
 ORIG SHOP MARK A165aa R/L  
 REPAIR SHEET 7-160



**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 306B R/L (L SHOWN)**  
 SPAN 7  
 P-Q' NORTH TOP SOUTH 306B/R  
 P-Q' NORTH BOTTOM NORTH 306B/R  
 P-Q' SOUTH BOTTOM SOUTH 306B/L  
 ORIG SHOP DRAWING 165-BL65  
 ORIG SHOP MARK A165ah R/L  
 REPAIR SHEET 7-135 & 168

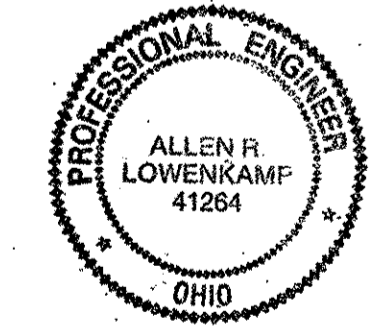


**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 306C R/L (R SHOWN)**  
 SPAN 7  
 A-B' SOUTH TOP NORTH 306C/L  
 ORIG SHOP DRAWING 165-BL53  
 ORIG SHOP MARK A165s R/L  
 REPAIR SHEET 7-174

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL QUARTER				
2		306A	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69
3		306B R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	1/R 2/L	191
4		306C R/L	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/L	
5								
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE  $\frac{1}{16}$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 05/02/01  
 CHECKED BY: GAF  
 DATE: 05/21/01

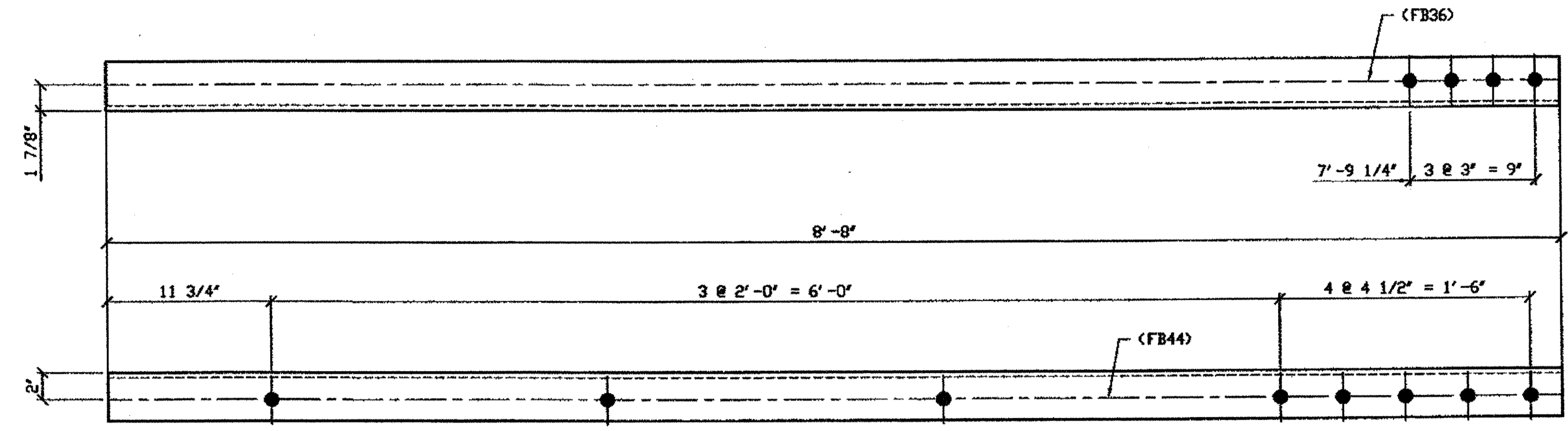
DOT ITEM LINE NO. 0110 DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
SPAN 7 REPAIRS	
SHEET NUMBER: 306	AWN JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 6/21/01 BY tdp



BILL OF MATERIAL

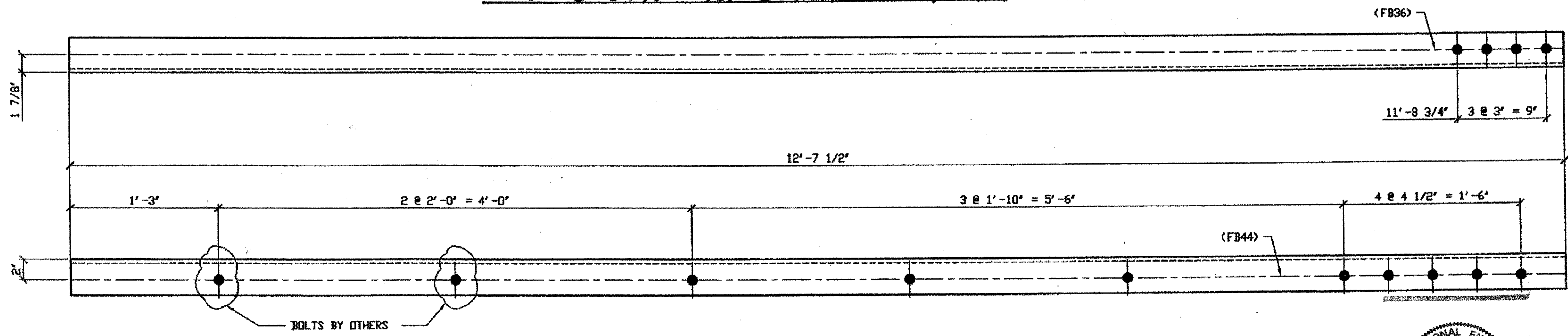
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAG. QUARTER LENGTH REPAIR				
2		313A R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	8	2/R 1/L	
3		313B R/L	2	L 3 1/2 X 3 1/2 X 3/8	12	7 1/2	1/R 1/L	215
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16								
15		FB36		1" DIA.	0	2 1/2	NOTE 2	
17		FB44		1" DIA.	0	3 1/2	NOTE 2	
19								
20								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 313A R/L  
(L SHOWN)  
ORIG SHOP DWG 225-BL77/L  
ORIG SHOP MARK A225c R/L  
LINE ITEM NO. 0106 & 0153  
REPAIR SHEET 8-106  
LINE ITEM NO. 0153, BID ITEM NO. 863E90000

SPAN 8  
C-B' NORTH TOP SOUTH 313A/R  
C-B' NORTH TOP NORTH 313A/L  
C-B' SOUTH TOP SOUTH 313A/R

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 313B R/L  
(L SHOWN)  
ORIG SHOP DWG 225-BL78/L  
ORIG SHOP MARK A225d R/L  
LINE ITEM NO. 0106 & 0152  
REPAIR SHEET 8-113  
LINE ITEM NO. 0152, BID ITEM NO. 863E90000

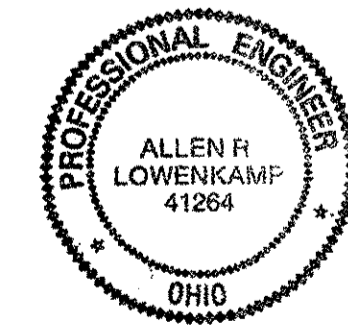
SPAN 8  
D-C' NORTH TOP SOUTH 313B/R  
D-C' NORTH TOP NORTH 313B/L

RELEASED FOR CONSTRUCTION  
DATE 10/23/01 BY tde/bcc

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000 UN

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 8 REPAIRS			
SHEET NUMBER		313	
ASH JOB NUMBER		800010	

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

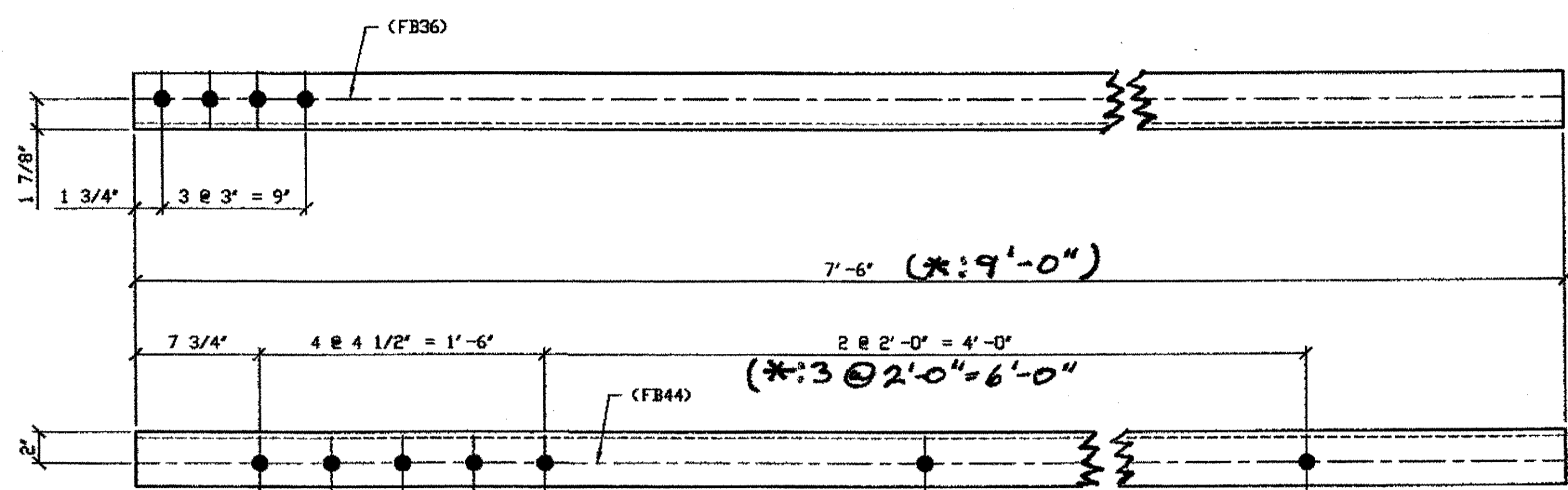


FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIANA, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
JRC 05/04/01  
CHECKED BY: DATE  
GAF 08/07/01

G:\Contract\00\800010\Drawings\0313a.dwg  
Save by gfos at 11:45am Dec 03, 2001  
Plot by gfos at 11:45am Dec 03, 2001  
Model space plot + Scale = 1/8

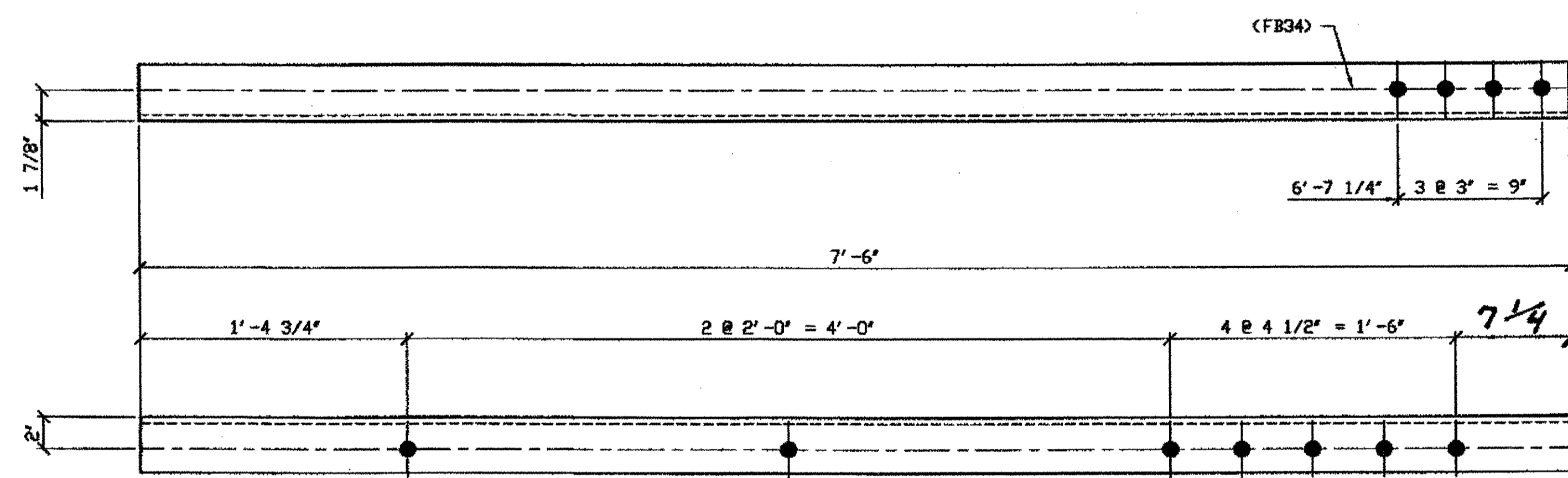


**6 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 314A R/L**  
 ORIG SHIP DWG 165-BL65  
 ORIG SHIP MARK A165ah R/L  
 REPAIR SHEET 8-105, 127 & 136  
 (R SHOWN)

**SPAN 8**  
 B-C' NORTH TOP NORTH 314A/R  
 B-C' NORTH TOP SOUTH 314A/L  
 D-E' SOUTH TOP SOUTH 314A/L  
 \*D-E' SOUTH BOTTOM NORTH 314A/L  
 B-C' SOUTH TOP NORTH 314A/R  
 B-C' SOUTH BOTTOM NORTH 314A/L

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAG. QUARTER LENGTH REPAIR				
2		314A R/L	6	L 3 1/2 X 3 1/2 X 3/8	7	6	2R, 4/L	
3		314B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15				FIELD BOLTS				
16		FB36		1" DIA.	0	2 1/2	NOTE 2	
17		FB44		1" DIA.	0	3 1/2	NOTE 2	
18		FB34		1" DIA.	0	2 1/4	NOTE 2	
19								
20								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



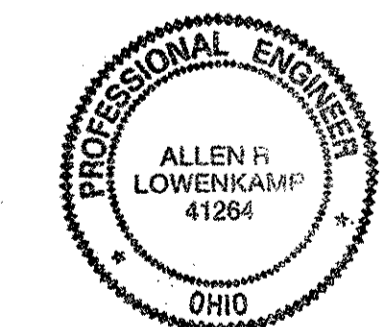
**ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 314B**  
 ORIG SHIP DWG 165-BL65  
 ORIG SHIP MARK A165ah R/L  
 REPAIR SHEET 8-136

**SPAN 8**  
 D-E' SOUTH, TOP NORTH 314B  
 (FROM TIE PLATE TO L4 SOUTH EXTERIOR)

← Tie R side

RELEASED FOR CONSTRUCTION  
 DATE 10/23/01 BY tdp/ess

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

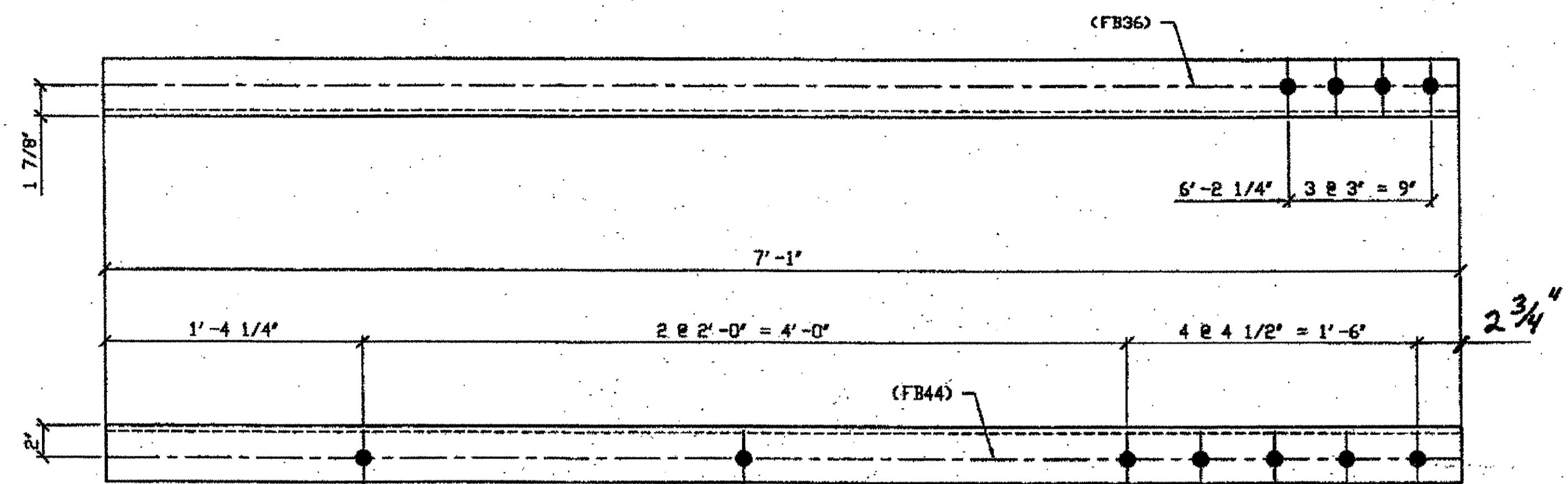


FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

DOT ITEM LINE NO. 0110 DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 8 REPAIRS	
IN CHARGE OF: L. SMITH	SHEET NUMBER: 314
DRAWN BY: DATE: JRC 05/04/01	ABM JOB NUMBER: 80010
CHECKED BY: DATE: GAF 08/03/01	

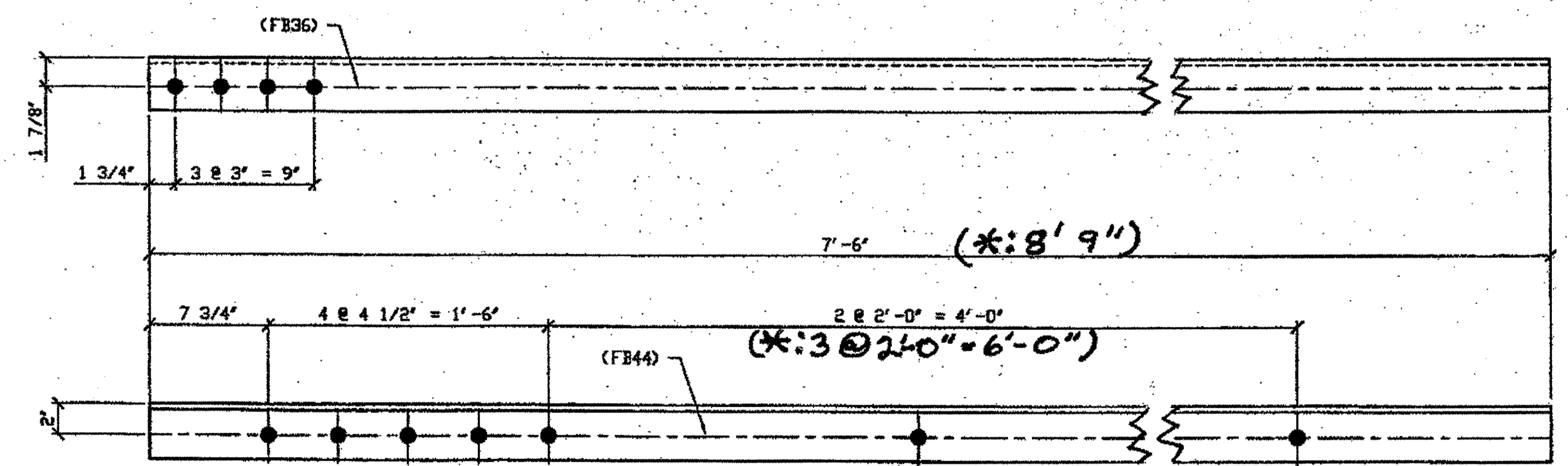
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

G:\Contracts\2001\Drawings\0314a.dwg  
 Save by gfas at 11:50am Oct 05 2001  
 Plot by gfas at 11:50am Oct 05 2001  
 Model space plot + Scale = 1/5



**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 316A R/L (L SHOWN)**  
 ORIG SHOP DWG 225-BL79/L  
 ORIG SHOP MARK A225e R/L  
 LINE ITEM No. 0106  
 REPAIR SHEET 8-116

**SPAN 8**  
 E-D' NORTH BOTTOM SOUTH 316A/L  
 E-D' NORTH TOP NORTH 316A/L  
 E-D' NORTH TOP SOUTH 316A/R

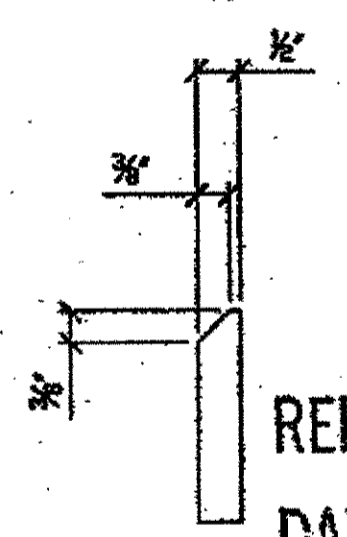
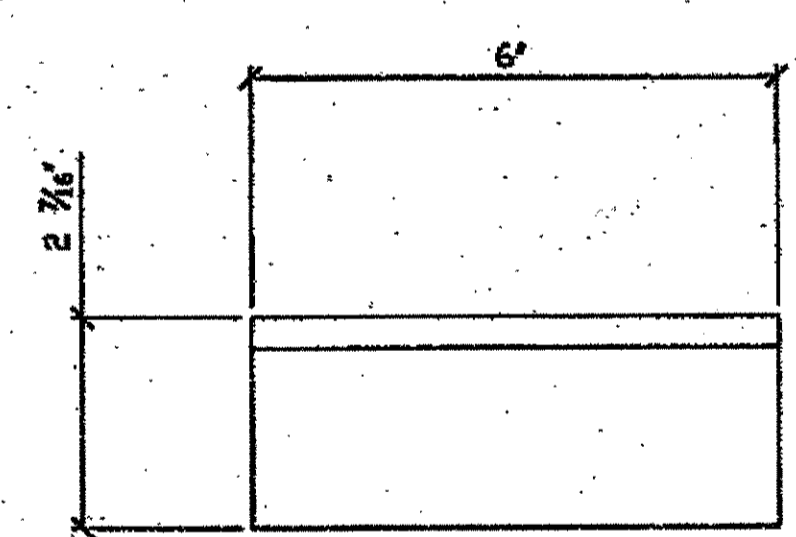


**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 316B R/L (R SHOWN)**  
 ORIG SHOP DWG 165-BL62  
 ORIG SHOP MARK A165ae R/L  
 LINE ITEM No. 0110  
 REPAIR SHEET 8-111

**SPAN 8**  
 C-D' NORTH TOP SOUTH 316B/R  
 \*C-D' NORTH TOP NORTH 316B/L

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REF. A.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAG. QUARTER LENGTH REPAIR					
2		316A	3	L 3 1/2 X 3 1/2 X 3/8	7	1	1/2 R 3/4		
3									
4				TYPE 2 DIAG. QUARTER LENGTH REPAIR					
5		316B/R/L		L 3 1/2 X 3 1/2 X 3/8	7	6			
6	*	316B/L		L 3 1/2 X 3 1/2 X 3/8	8	9"			
7				SPLICE PLATES					
8		316C	16	PL 1/2 X 2 7/16			6		33
9									
10									
11									
12									
13									
14									
15									
16				FIELD BOLTS					
15		FB36		1" DIA.	0	2 1/2	NOTE 2		
17		FB44		1" DIA.	0	3 1/2	NOTE 2		
19									
20									
PLATE		N/A		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

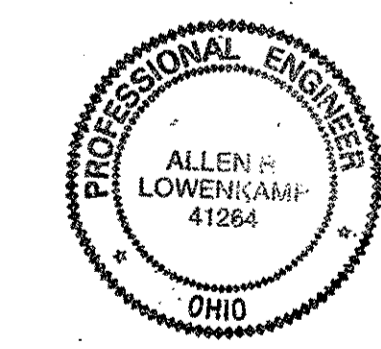
- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



RELEASED FOR CONSTRUCTION  
 DATE 10/27/01 BY tdp/ESS

**16 - SPLICE PLATES - 316C**  
 ITEM LINE NO. 0106, 0110, 0113  
 (IDENTICAL TO 106C)

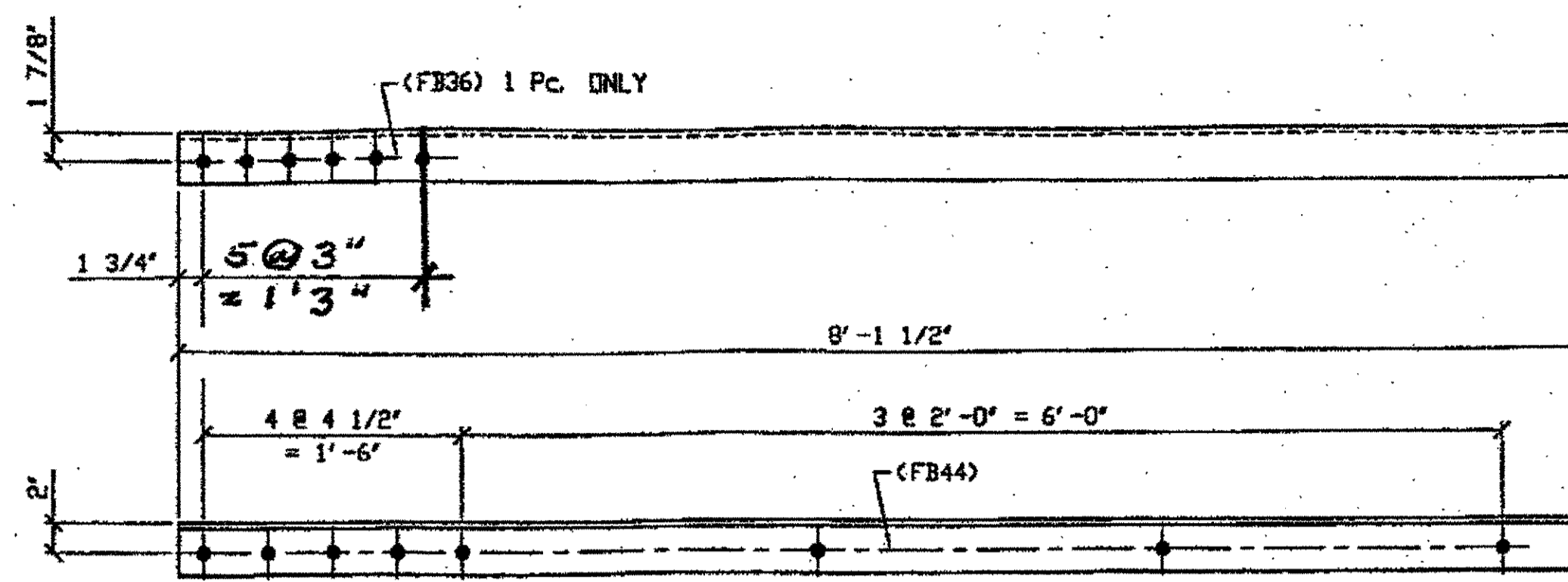
**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E30000

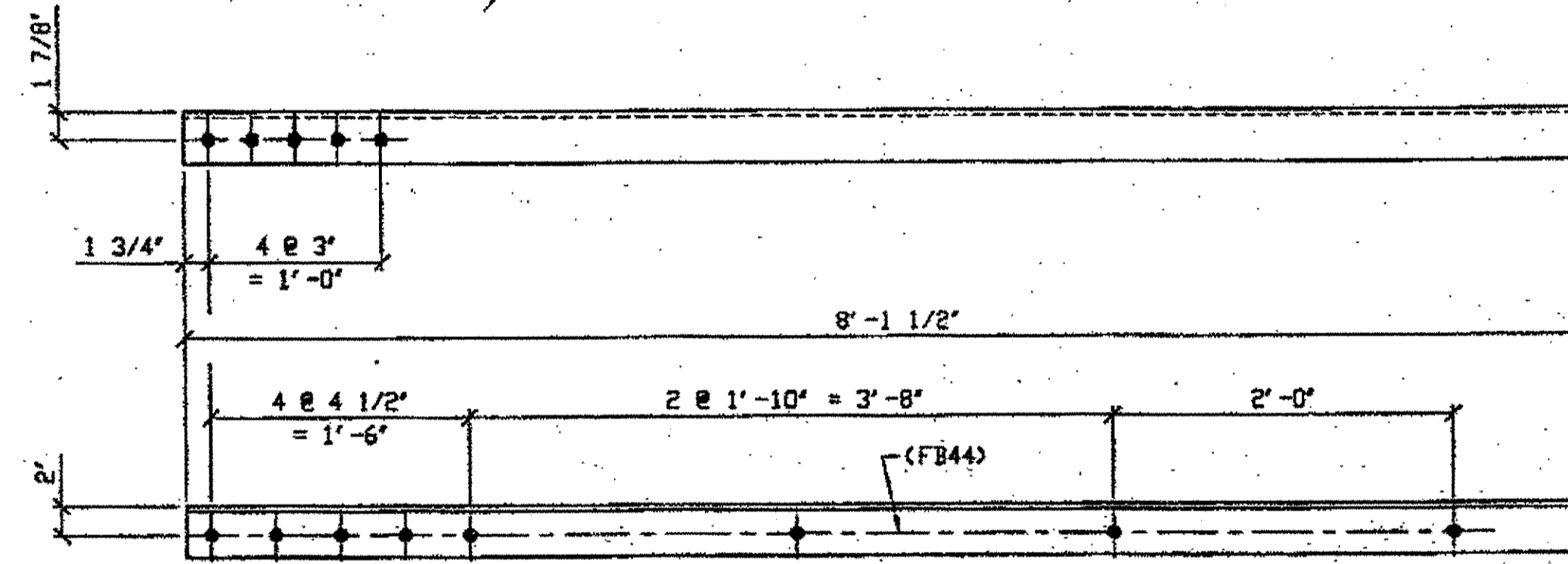
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 8 REPAIRS			
FABRICATOR		AMERICAN BRIDGE MANUFACTURING	
STEEL ERECTOR		TRI-STATE STEEL CONSTRUCTION INC.	
DRAWN BY: JRC		DATE: 05/07/01	
CHECKED BY: GAF		DATE: 08/06/01	
SHEET NUMBER		316	
JOB NUMBER		800010	

G:\Contracts\01\010\Drawings\AD316a.dwg  
 Save by gfos at 11:51am Oct 05, 2001  
 Plot by gfos at 11:51am Oct 05, 2001  
 Model space plot + Scale = 1/6



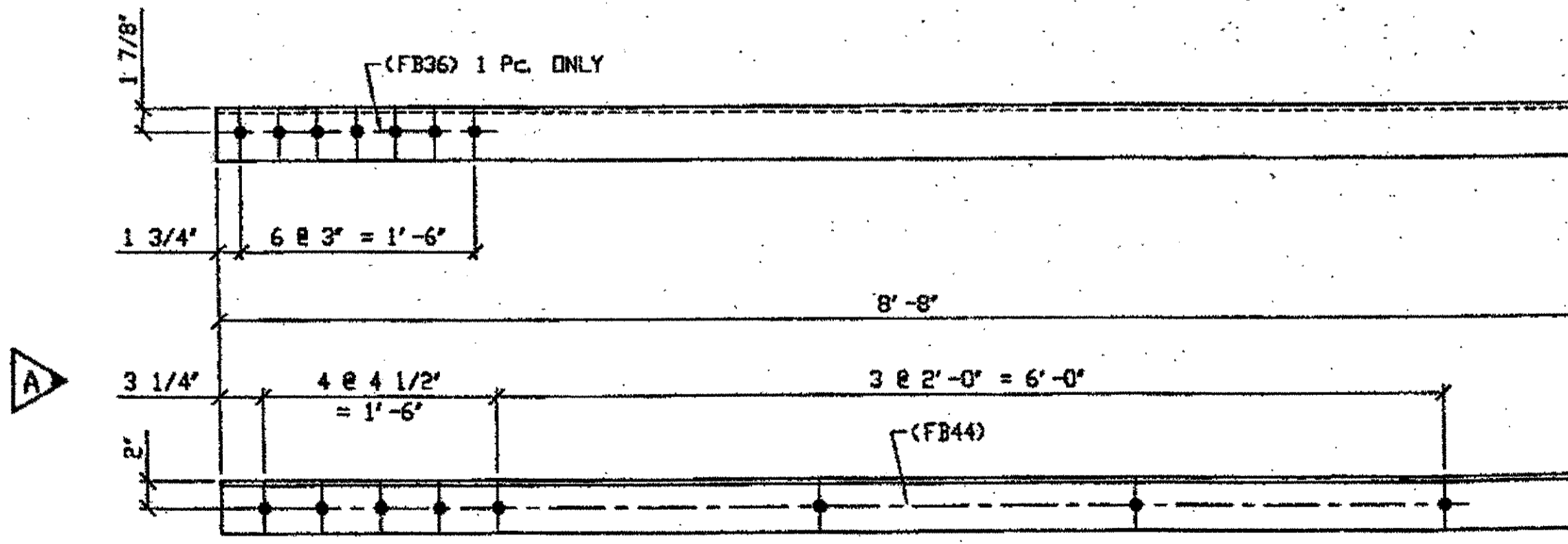
**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 342A R/L (R SHOWN)**  
 ORIG SHOP DWG 294-BL118  
 ORIG SHOP MARK A294m R/L  
 REPAIR SHEET 9-113

SPAN 9  
 B-C' NORTH, BOTTOM SOUTH 342A/L  
 B-C' NORTH, TOP NORTH 342A/L  
 B-C' NORTH, TOP SOUTH 342A/R



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 342B (R SHOWN)**  
 ORIG SHOP DWG 294-BL117  
 ORIG SHOP MARK A294ka  
 REPAIR SHEET 9-108

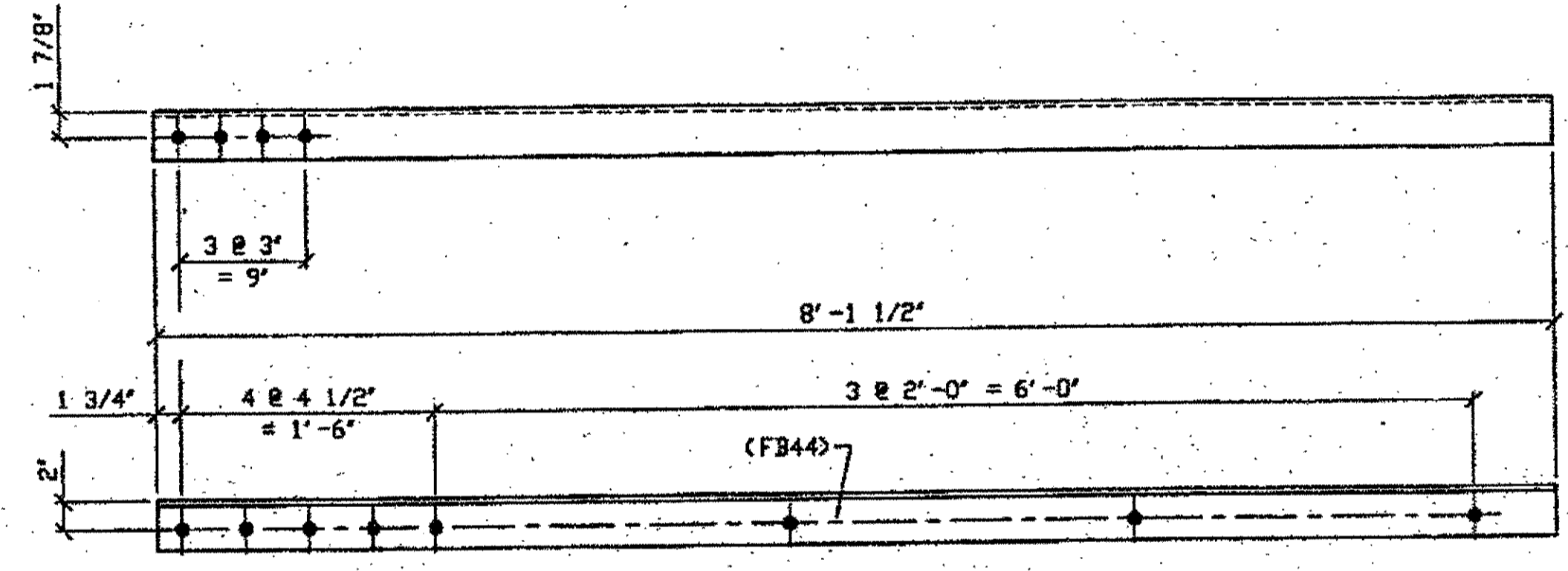
SPAN 9  
 A-B' NORTH, BOTTOM NORTH 342B  
 A-B' NORTH, TOP SOUTH 342B



**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 342C R/L (R SHOWN)**  
 ORIG SHOP DWG 293-BL119  
 ORIG SHOP MARK A293b R/L  
 REPAIR SHEET 9-119 REV A

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER	LENGTH			
2		342A R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R; 2/L	207
3		342B	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		
4		342C R/L	3	L 4 X 4 X 3/8	8	1 1/2	1/R; 2/L	239
5		342D R/L	4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R; 2/L	276
6								
7								
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE	N/A			PIPE	N/A		FITTINGS	N/A
SHAPES	A36			FLGS.	N/A		BOLTS	NOTE 2



**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 342D R/L (R SHOWN)**  
 ORIG SHOP DWG 294-BL122  
 ORIG SHOP MARK A294p R/L  
 REPAIR SHEET 9-138

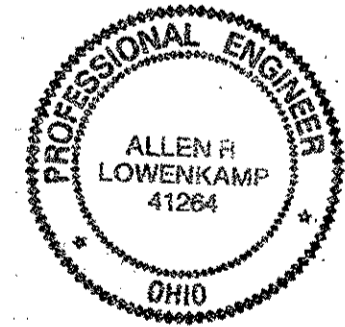
SPAN 9  
 G-H' NORTH, TOP NORTH 342D/L  
 G-H' NORTH, TOP SOUTH 342D/R  
 G-H' NORTH, BOTTOM NORTH 342D/R  
 G-H' NORTH, BOTTOM SOUTH 342D/L

SPAN 9  
 C-D' NORTH, TOP NORTH 342C/L  
 C-D' NORTH, BOTTOM SOUTH 342C/L  
 C-D' NORTH, TOP SOUTH 342C/R

G:\Contracts\2000\800010\Drawings\0342A.dwg  
 Save by rsm at 08:04am Dec 17, 2001  
 Plot by rsm at 09:44am Dec 17, 2001  
 Model space plot + Scale = 1/8"

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 8000 MERRITT WINE WAY  
 COLUMBIAS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0106  
 DOT BID ITEM NO. 863E50000

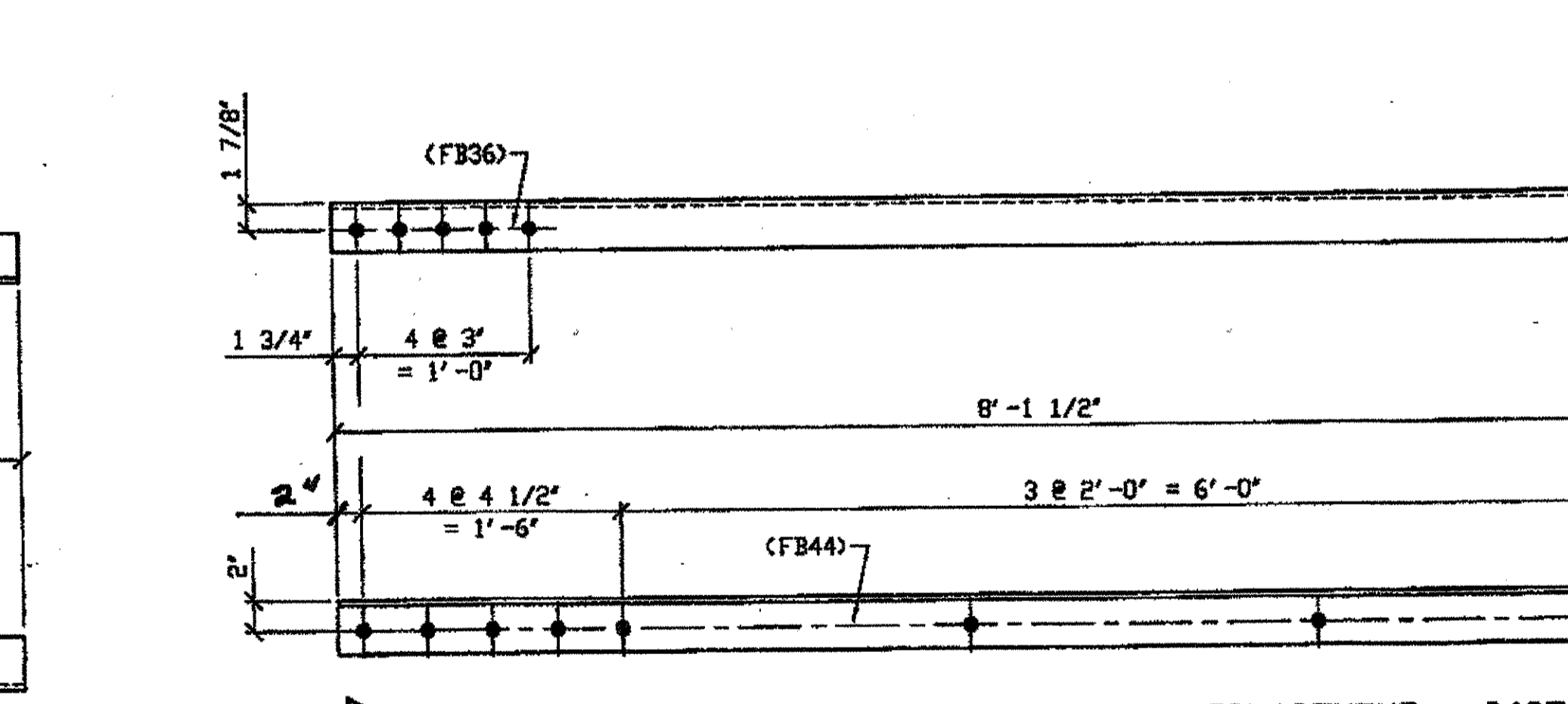
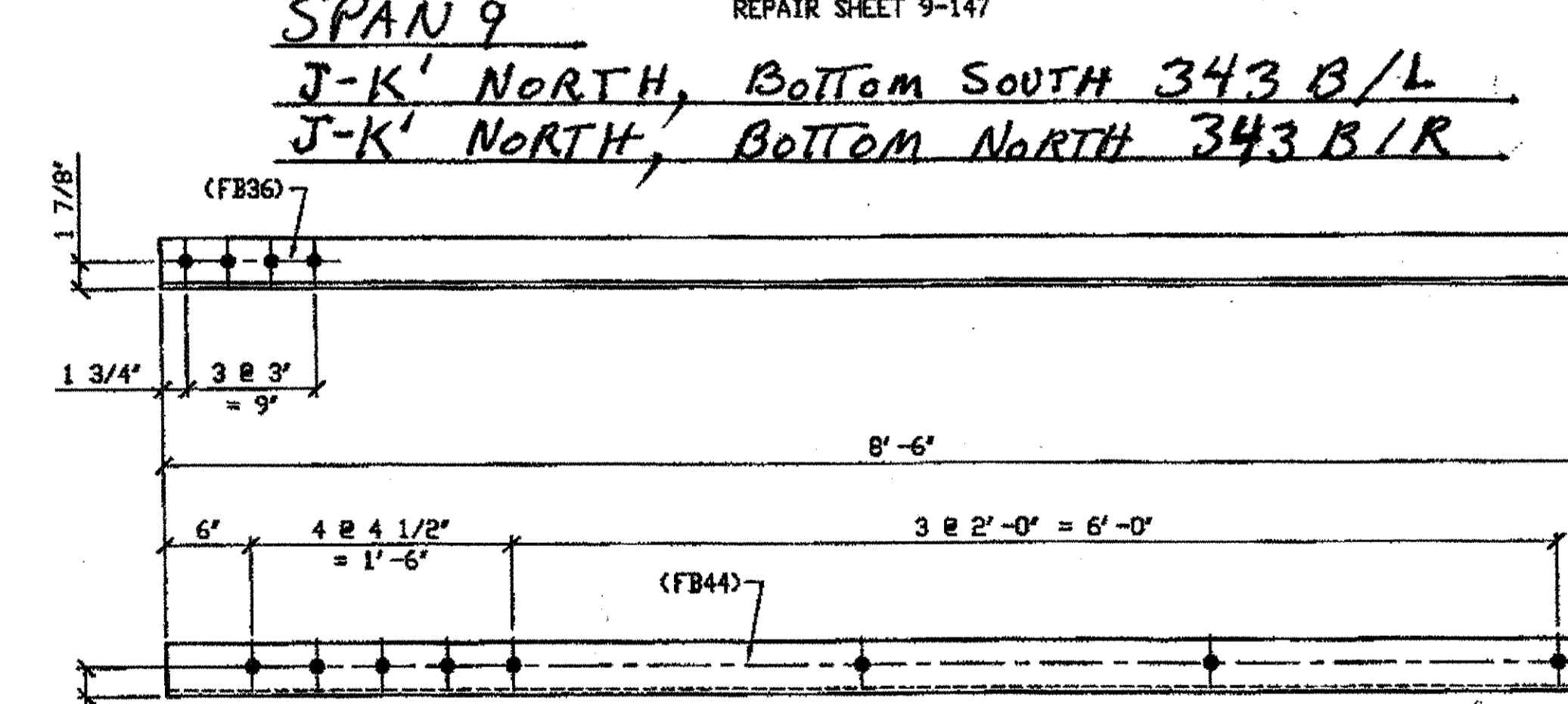
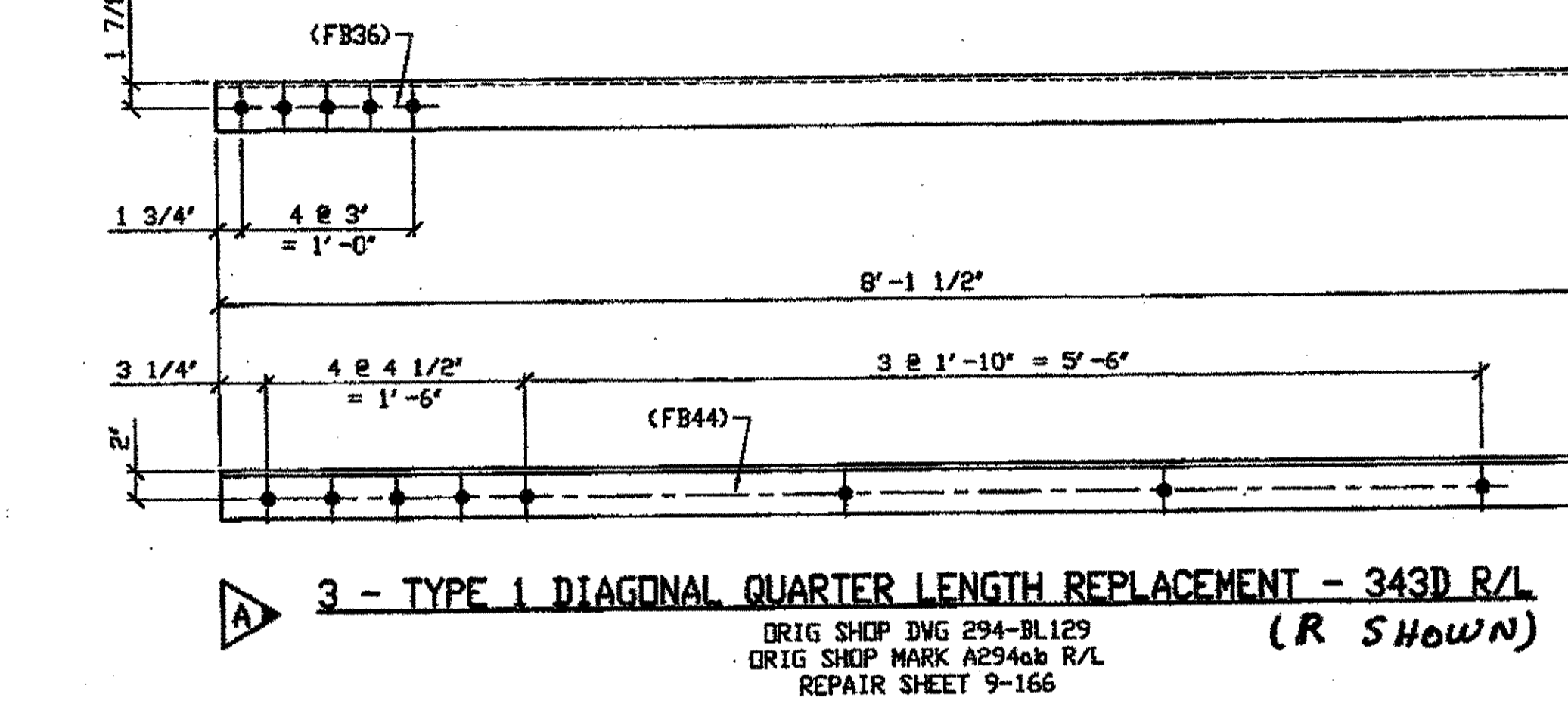
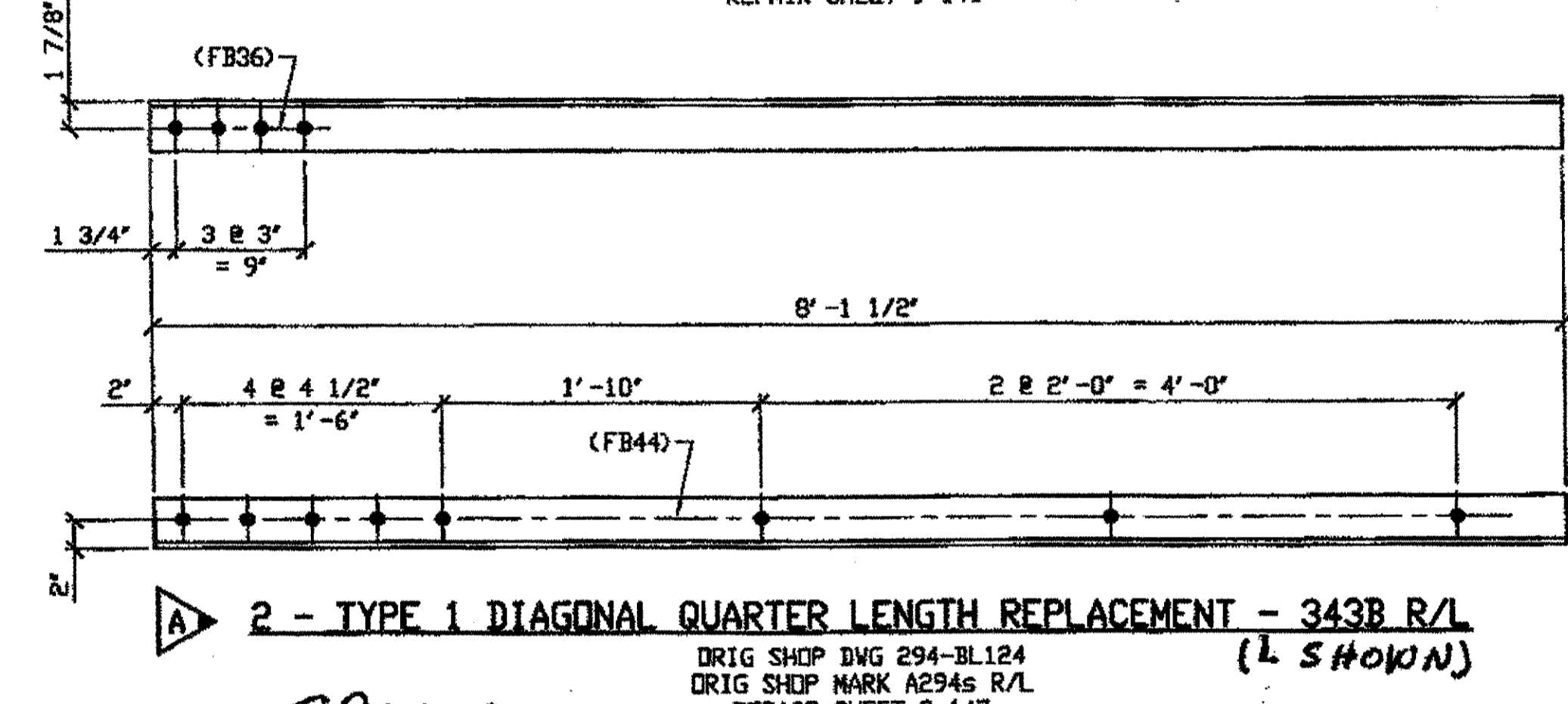
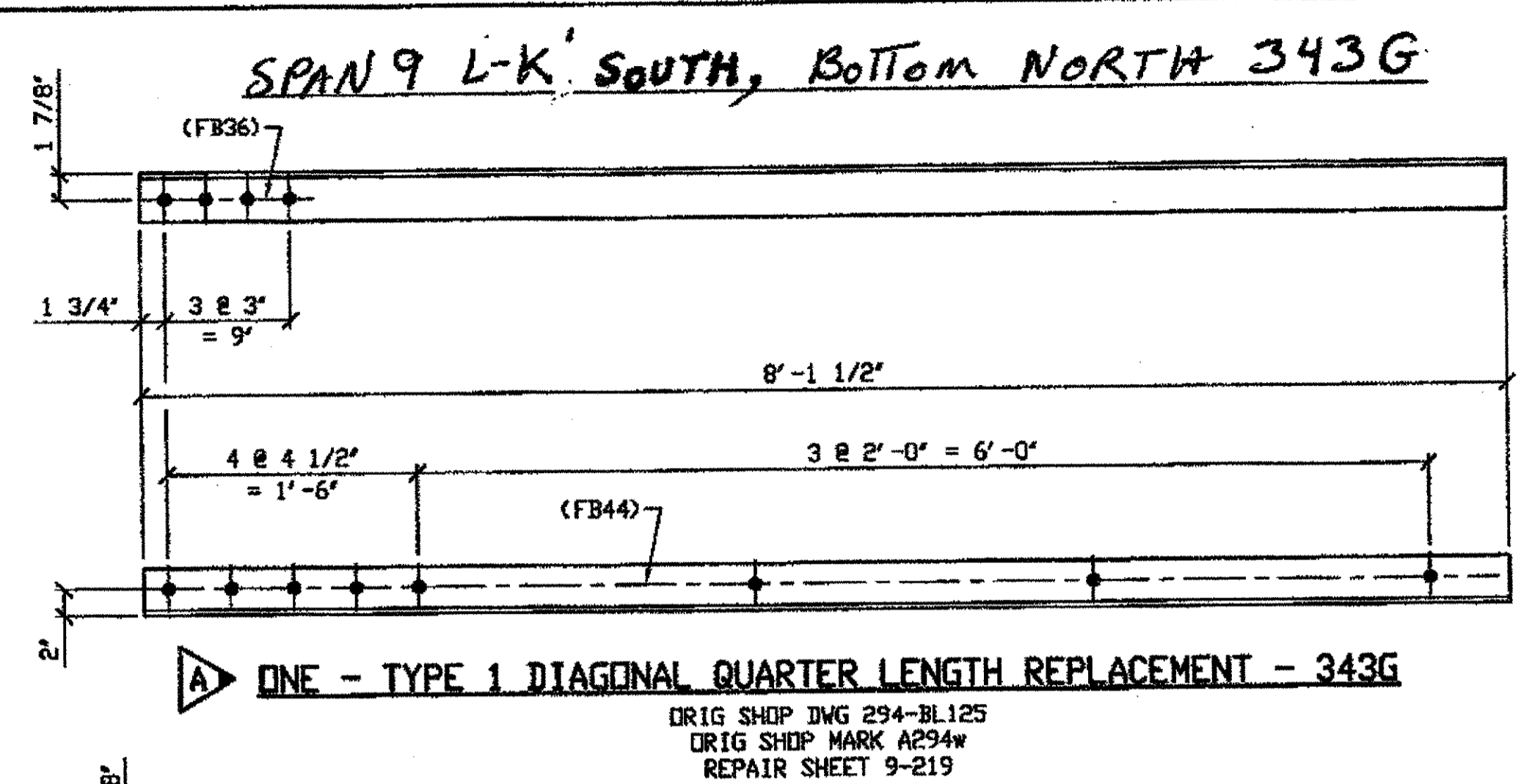
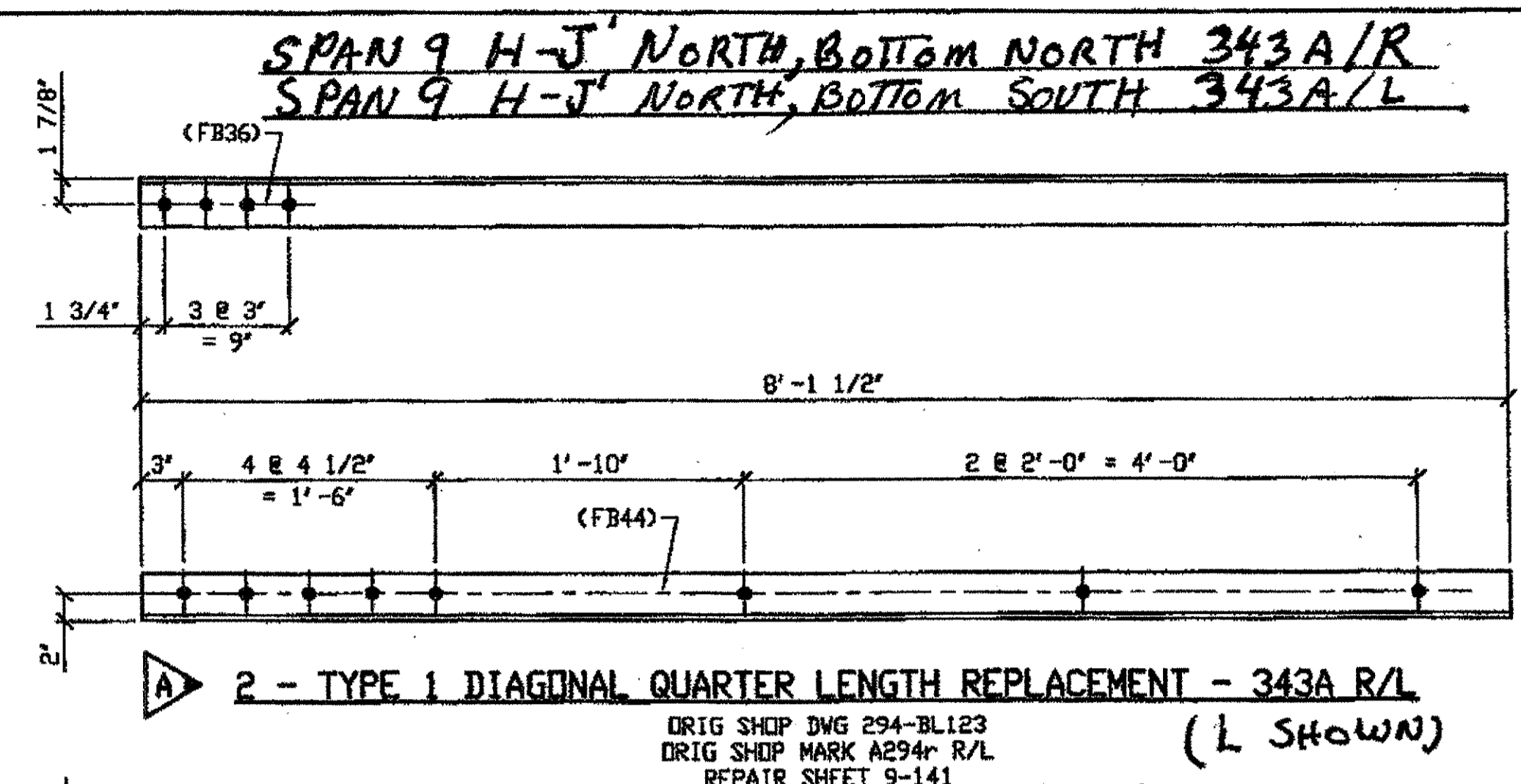
NO.	DATE	REVISIONS	DESCRIPTION	BY
A	11/30/01	REVISE PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 07/16/01  
 CHECKED BY: DATE:  
 GAF 10/15/01

SHEET NUMBER: 342  
 A36 JOB NUMBER: 800010

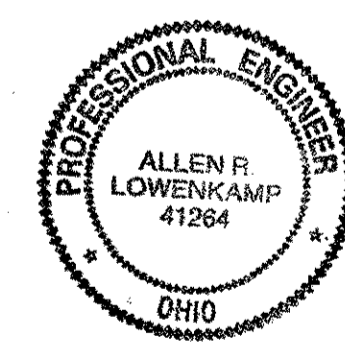


**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER	LENGTH			
2		343A R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R, 1/L	138
3		343B R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R, 1/L	138
4		343C	2	L 3 1/2 X 3 1/2 X 3/8	8	6		
5		343D R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R, 2/L	207
6		343F R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R, 1/L	138
7		343G	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69
8								
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36	35	1" DIA	0	2 1/2	NOTE 2	49
15		FB44	48	1" DIA	0	3 1/2	NOTE 2	77
PLATE		A36		PIPE N/A			FITTINGS N/A	
SHAPES		A36		FLGS. N/A			BOLTS NOTE 2	



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED 2/6/01 AS 37M  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0106  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	APPROVAL	BY
A	12/17/01	REVISED PER CUSTOMER APPROVAL			GAF

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 9 REPAIRS

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

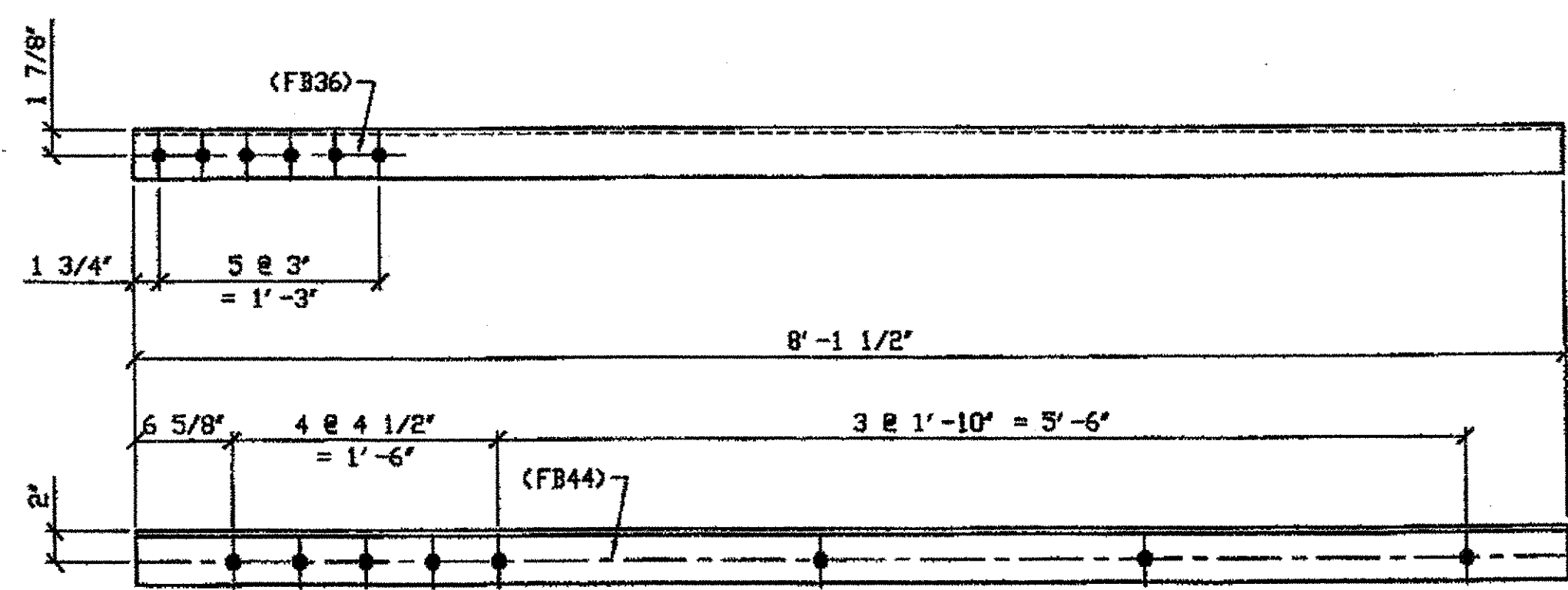
**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12609 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/17/01  
 CHECKED BY: DATE  
 GAF 09/07/01

SHEET NUMBER: 343  
 AWM JOB NUMBER: 800010

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contracts\2000\800010\Drawings\343A.dwg  
 Save by rspir at 08:04am Dec 17, 2001  
 Plot by gfos at 09:45am Dec 17, 2001  
 Model space plot \* Scale = 1/9



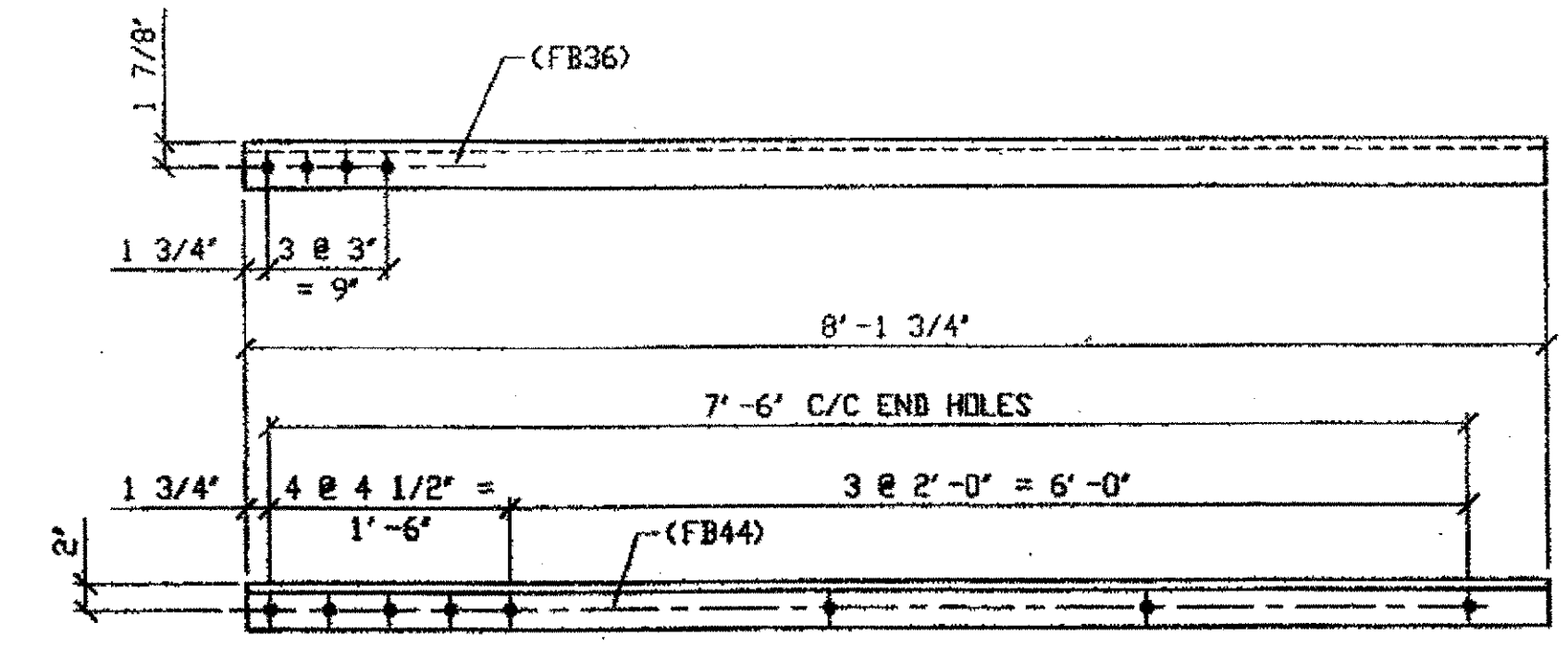
3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 344A R/L (R SHOWN)

SPAN 9  
 Q-R' NORTH, TOP NORTH 344A/L  
 Q-R' NORTH, TOP SOUTH 344A/R  
 Q-R' NORTH, BOTTOM NORTH 344A/R

ORIG SHIP DWG 294-BL130  
 ORIG SHIP MARK A294ac R/L  
 REPAIR SHEET 9-173

- NOTES:
1. OPEN HOLES ARE  $(1 \frac{1}{16} \phi)$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

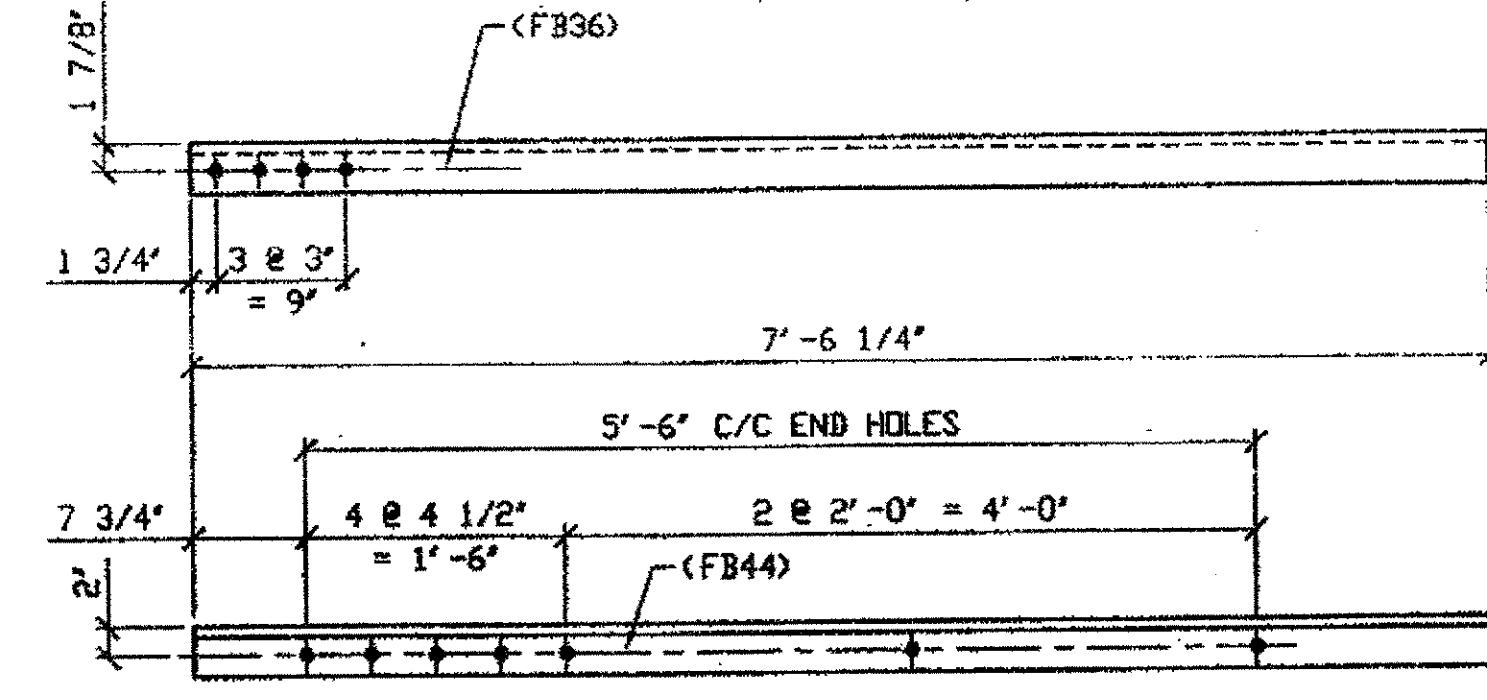
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		344A R/L	3	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R 1/L	207
3								
4								
5		344B R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 3/4	1/R 1/L	146
6								
7								
8		344C	1	L 3 1/2 X 3 1/2 X 3/8	7	6		
9								
10								
11								
12								
13				FIELD BOLTS				
14		FB36		1" DIA	0	2 1/2	NOTE 2	
15		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 344B R/L (R-SHOWN)

SPAN 10  
 D-E' NORTH TOP NORTH 344B/L  
 D-E' NORTH TOP SOUTH 344B/R

ORIG SHIP DRAWING 293-BL132  
 ORIG SHIP MARK A293c R/L  
 ITEM No. 0106  
 REPAIR SHEET 10-115



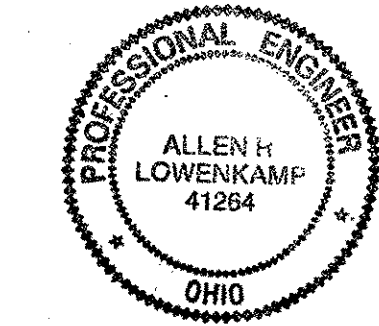
ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 344C

SPAN 10 D-E' South Bottom NORTH 344C

ORIG SHIP DRAWING 165-BL62  
 ORIG SHIP MARK A165ae R/L  
 ITEM No. 0110  
 REPAIR SHEET 10-155

G:\Contracts\2000\800010\Drawings\J344A.dwg  
 Save by rsep at 09:04am Dec 17, 2001  
 Plot by ofos at 09:45am Dec 17, 2001  
 Model space plot + Scale = 1/9

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

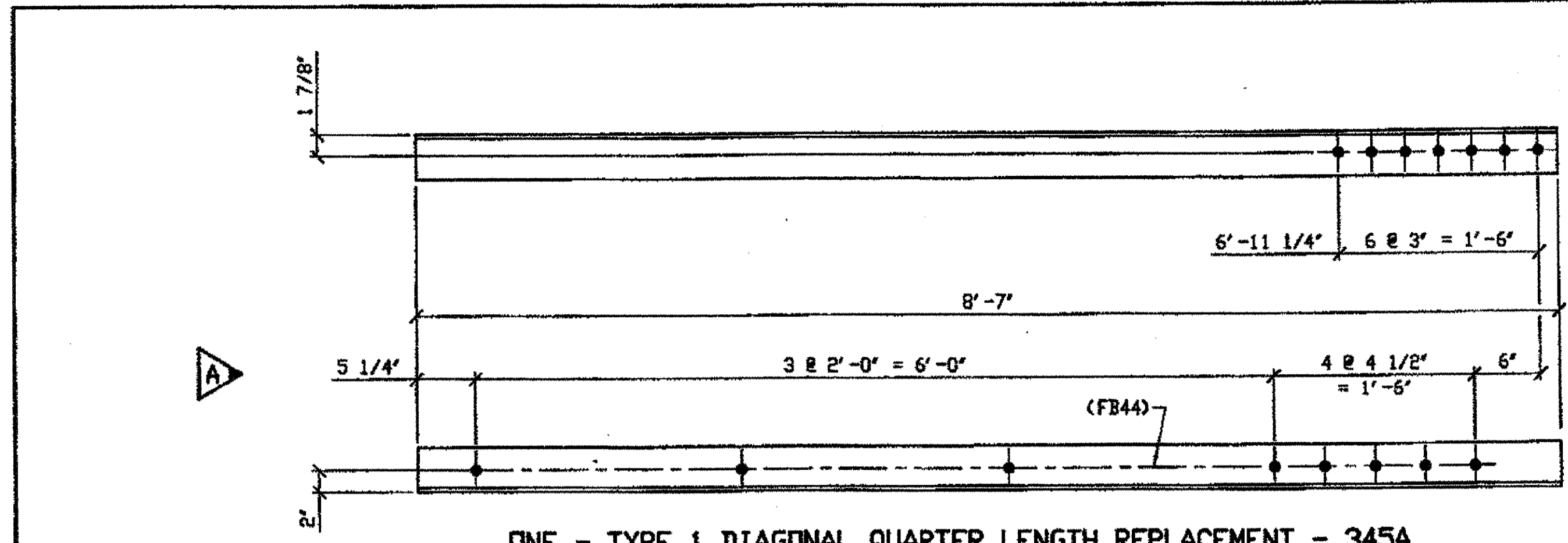


FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 8000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/17/01  
 CHECKED BY: DATE  
 GAF 09/07/01

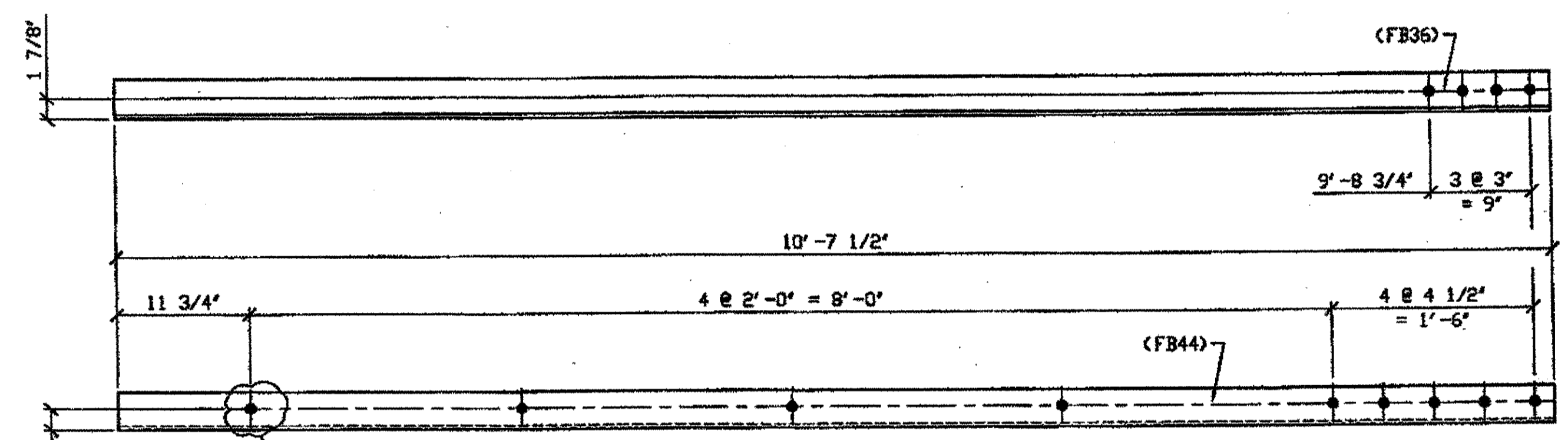
DOT ITEM LINE NO. 0106		DOT BID ITEM NO. 863E50000	
NO.	DATE	REVISIONS	BY
A	12/10/01	REVISED PER APPROVAL COMMENTS	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS			
SHEET NUMBER 344		JOB NUMBER 800010	



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 345A

ORIG SHOP DWG 293-BL119  
ORIG SHOP MARK A293b R/L  
REPAIR SHEET 9-200

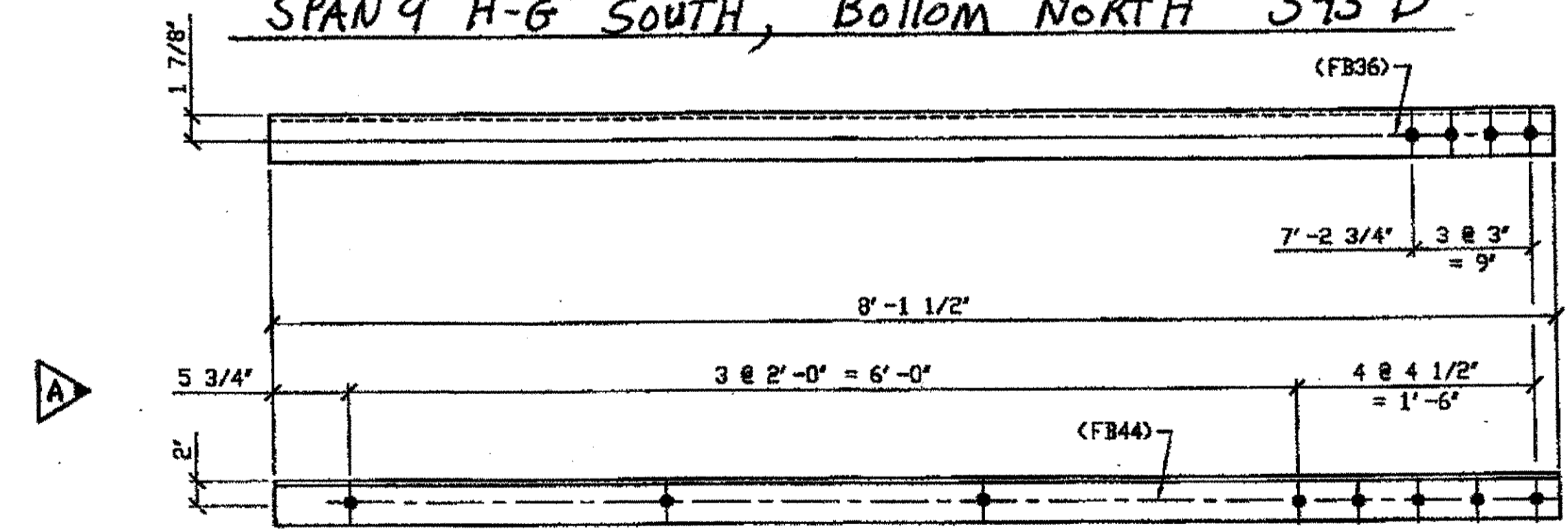
SPAN 9 D-C' SOUTH, BOTTOM SOUTH 345A



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 345B

ORIG SHOP DWG 294-BL122  
ORIG SHOP MARK A294p R/L  
ITEM No. 0106 & 0153  
REPAIR SHEET 9-212  
ITEM No. 0153, BID ITEM No. 863E90000

SPAN 9 H-G' SOUTH, BOTTOM NORTH 345B



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 345C R/L (R SHOWN)

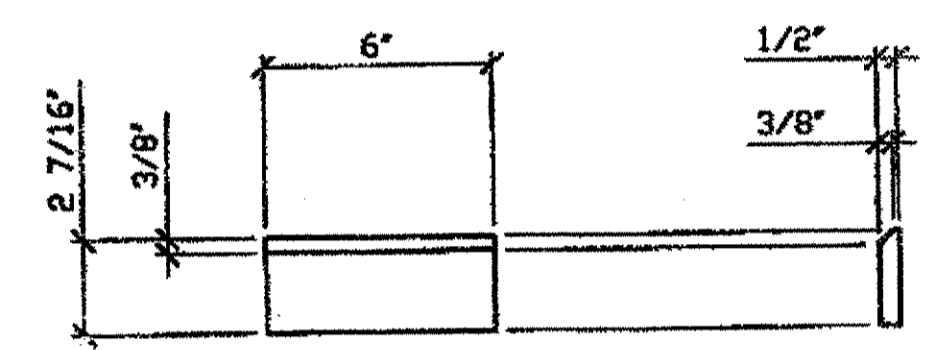
ORIG SHOP DWG 293-BL123  
ORIG SHOP MARK A294r R/L  
REPAIR SHEET 9-216

SPAN 9  
J-H' SOUTH, TOP NORTH 345C/L  
J-H' SOUTH, TOP SOUTH 345C/R

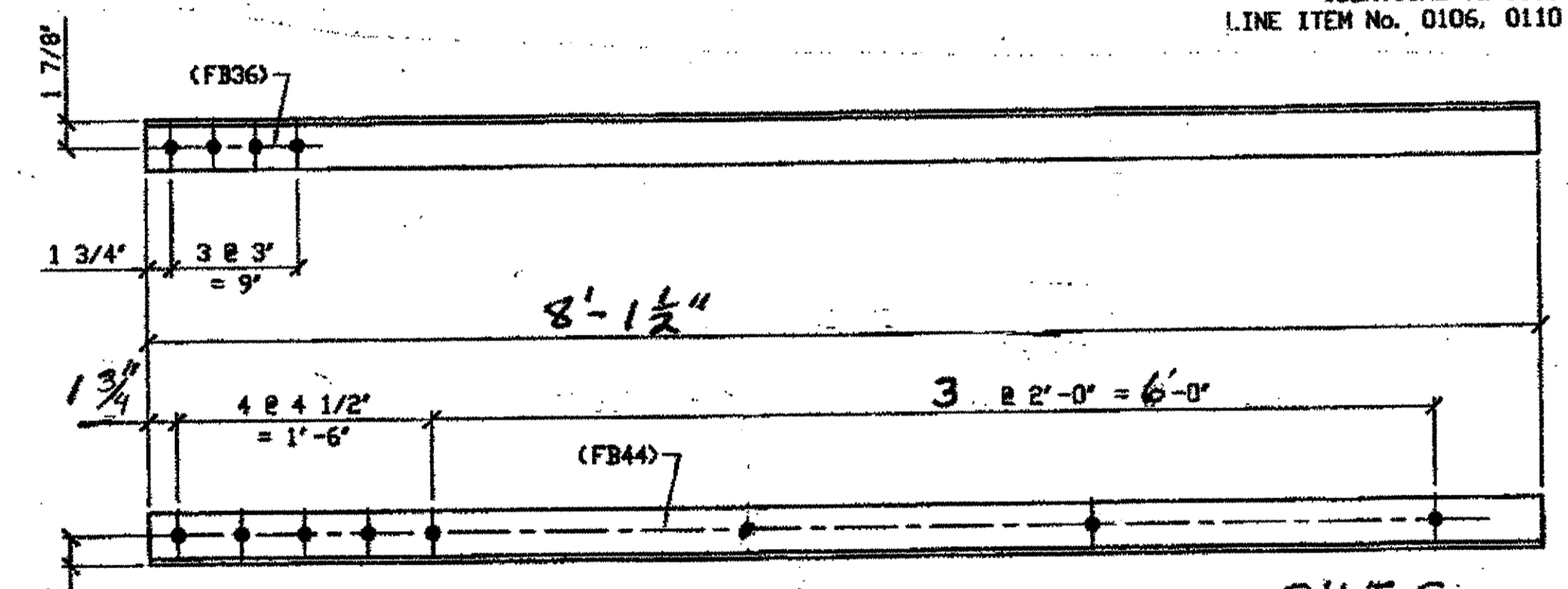
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL							
LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1			TYPE 1 DIAGONAL QUARTER LENGTH				
2	345A	1	L 4 X 4 X 3/8	8	7		84
3	345B	1	L 3 1/2 X 3 1/2 X 3/8	10	7 1/2		90
4	345C R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R, 1/L	138
5							
6	345G	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		
7							
8			SPLICE PLATES				
9	345D		PL 1/2 X 2 7/16	0	6		
10							
11							
12							
13			FIELD BOLTS				
14	FB36		1" DIA	0	2 1/2	NOTE 2	
15	FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE A36				PIPE N/A	FITTINGS N/A		
SHAPES A36				FLGS. N/A	BOLTS NOTE 2		

\* DOT ITEM LINE No. 0106 & 0110



51 - SPLICE PLATES - 345D  
IDENTICAL TO 106C  
LINE ITEM No. 0106, 0110 & 0113



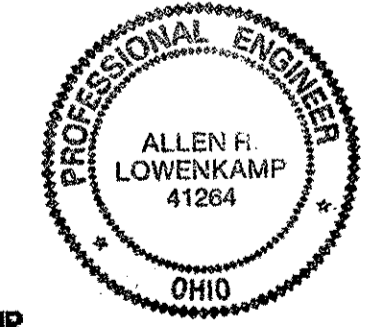
ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 345G

ORIG SHOP DWG 294-BL124  
ORIG SHOP MARK A294s R/L  
REPAIR SHEET 9-147

SPAN 9  
K-J' SOUTH, BOTTOM NORTH 345G

G:\Contracts\2000\800010\Drawings\345A.dwg  
Save by rspir at 08:04am Dec 17, 2001  
Plot by gfos at 09:46am Dec 17, 2001  
Model space plot + Scale = 1/5

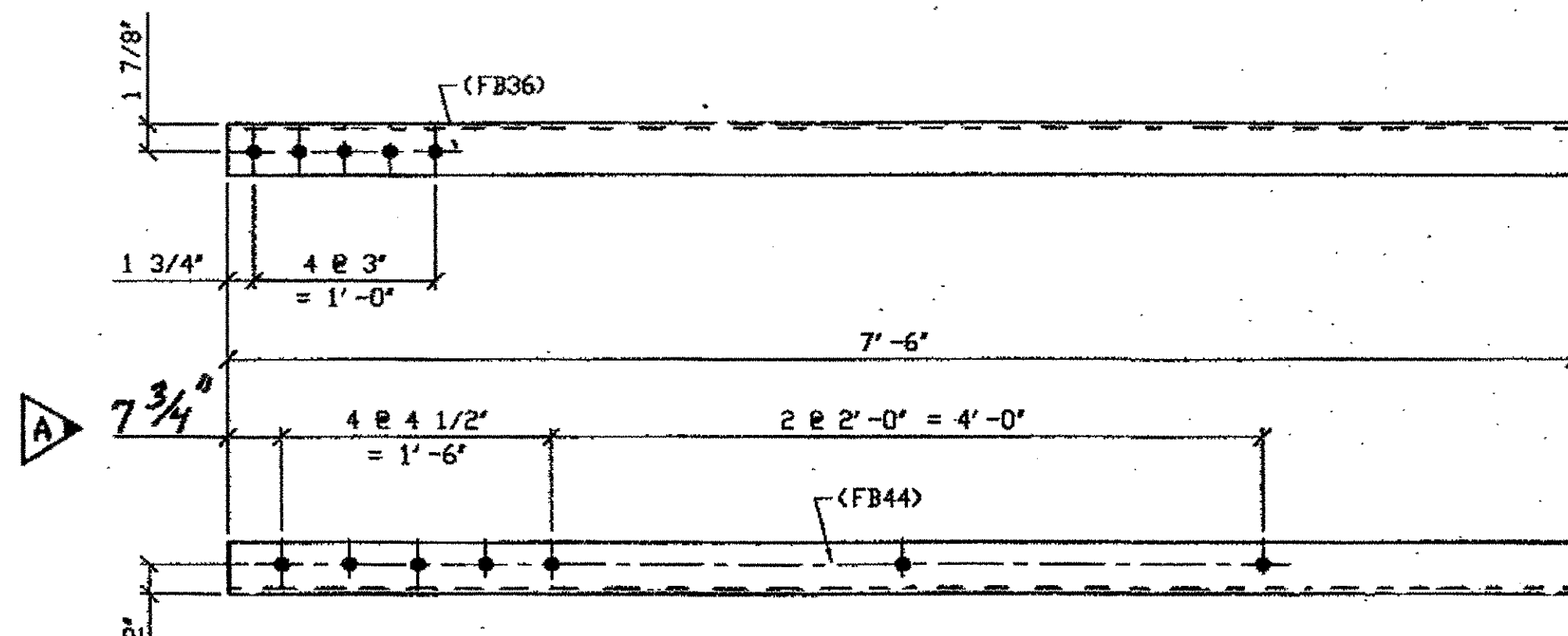
O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/4/04 P.S.Y.A.  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONAROLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

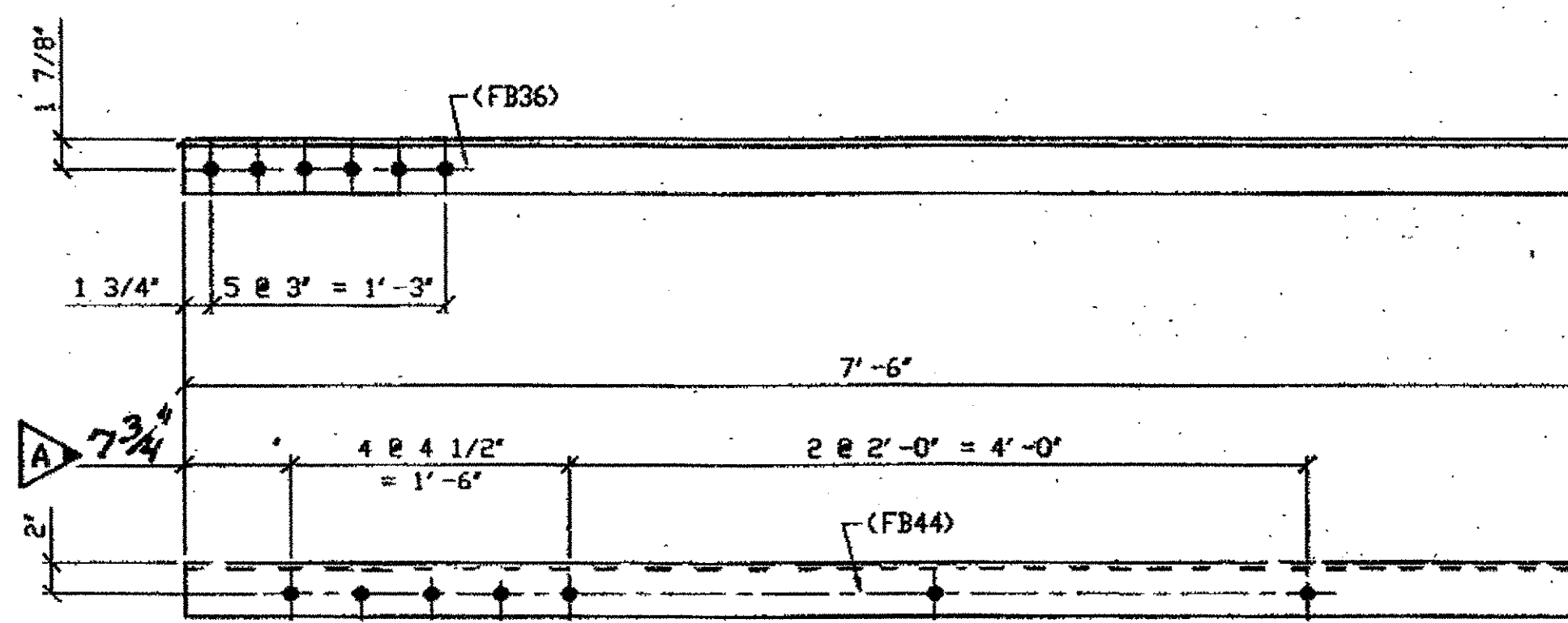
DOT ITEM LINE NO. 0106 U. N. DOT BID ITEM NO. 863E50000 U. N.			
NO.	DATE	REVISION	BY
A	12/10/01	REVISED PER APPROVER COMMENTS	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
DRAWN BY: RAS DATE: 07/17/01			SHEET NUMBER: 345
CHECKED BY: GAF DATE: 09/10/01			APP. JOB NUMBER: 800010



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 347A

ORIG SHOP DWG 294-BL109  
ORIG SHOP MARK A294b R/L  
REPAIR SHEET 9-111

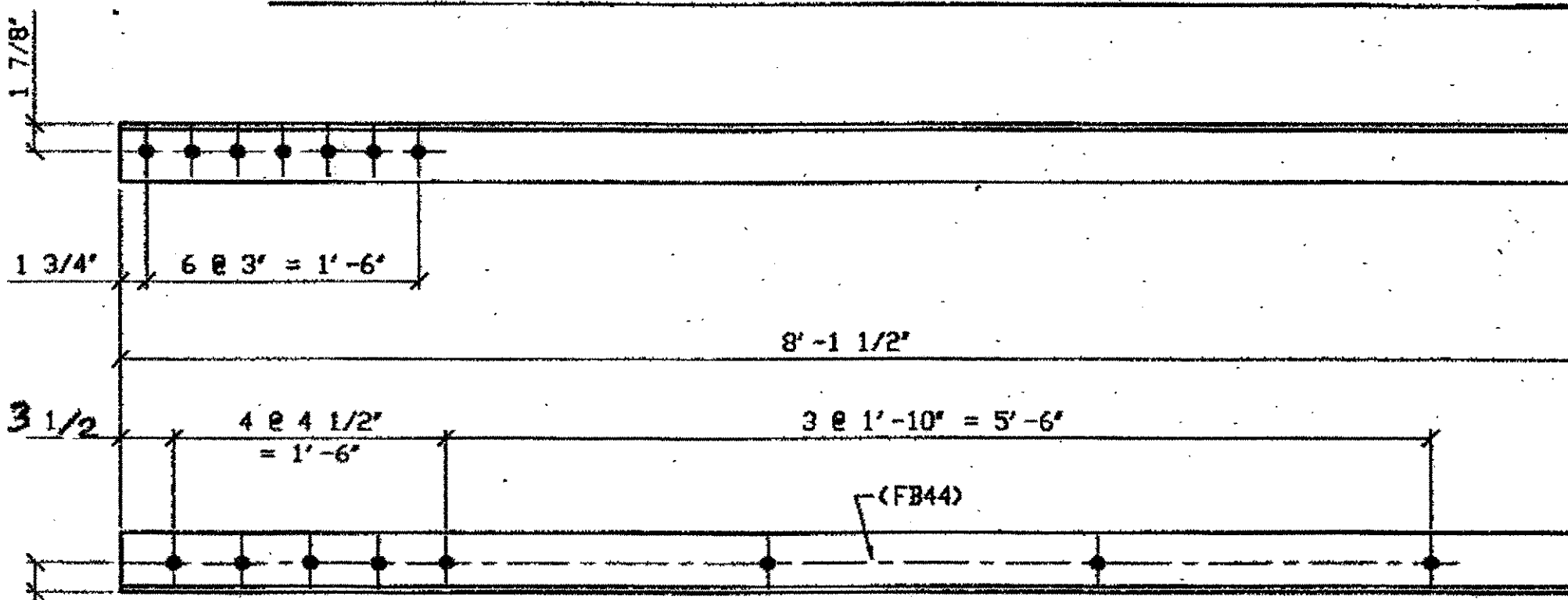
SPAN 9 B-A' NORTH BOTTOM NORTH 347A



1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 347B

ORIG SHOP DWG 294-BL112  
ORIG SHOP MARK A294e R/L  
REPAIR SHEET 9-114

SPAN 9  
C-B' NORTH TOP SOUTH 347B



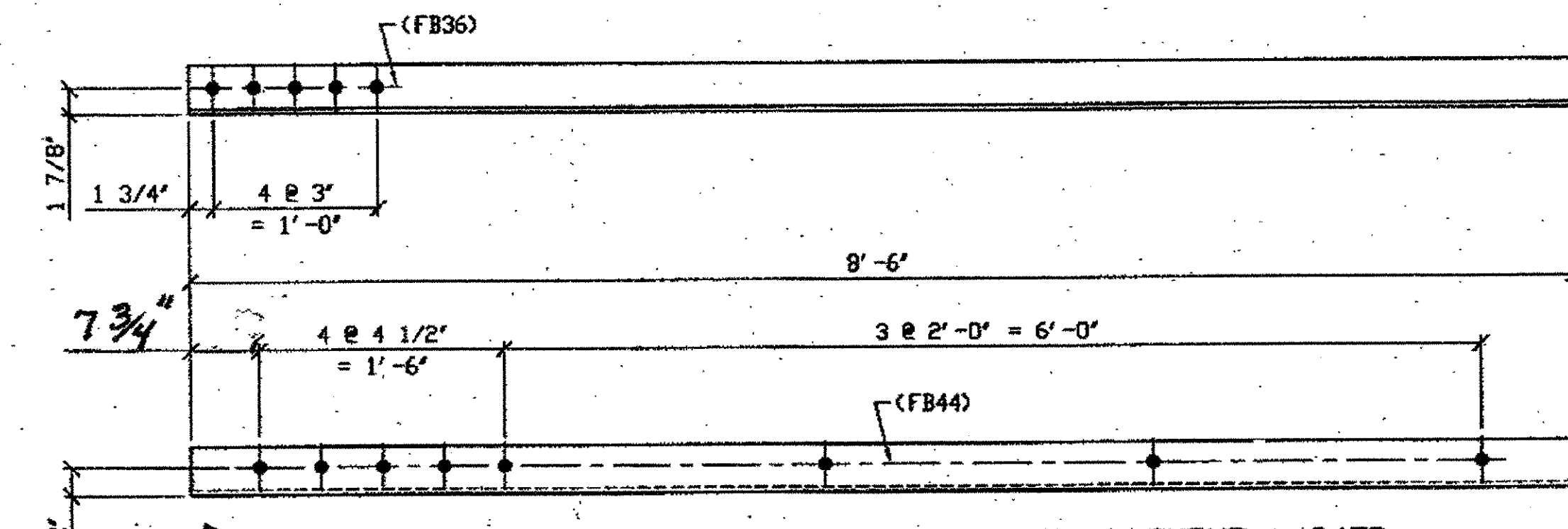
2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 347C

ORIG SHOP DWG 294-BL115  
ORIG SHOP MARK A294ae R/L  
REPAIR SHEET 9-121

SPAN 9  
D-C' NORTH TOP SOUTH 347C  
D-C' NORTH BOTTOM NORTH 347C

- NOTES:
- OPEN HOLES ARE  $1 \frac{1}{16}''$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

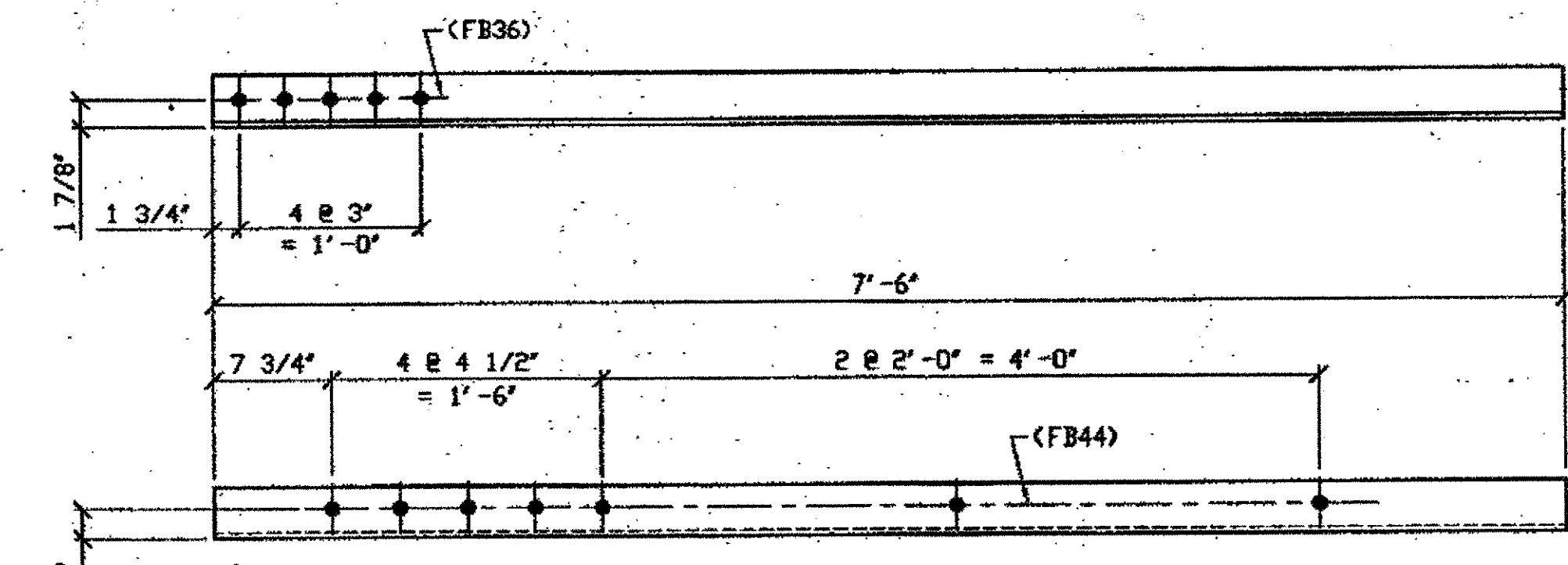
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL QUARTER	LENGTH			
2		347A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
3		347B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
4		347C	2	L 4 X 4 X 3/8	8	1 1/2		159
5		347D	2	L 3 1/2 X 3 1/2 X 3/8	8	6		145
6		347F	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
7								
8								
9								
10								
11								
12								
13								
14				FIELD BOLTS				
15		FB36	21	1" DIA	0	2 1/2	NOTE 2	29
16		FB44	54	1" DIA	0	3 1/2	NOTE 2	87
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2



2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 347D

ORIG SHOP DWG 294-BL108  
ORIG SHOP MARK A294a R/L  
REPAIR SHEET 9-191

SPAN 9  
A-B' SOUTH TOP SOUTH 347D  
A-B' SOUTH BOTTOM NORTH 347D



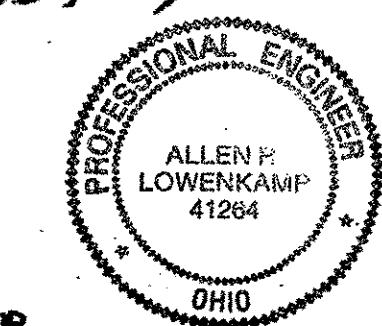
ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 347E

ORIG SHOP DWG 294-BL108  
ORIG SHOP MARK A294a R/L  
REPAIR SHEET 9-129

SPAN 9 A-B NORTH BOTTOM NORTH 347F

(Begins at Interior Truss, Lo)

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROPSIS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

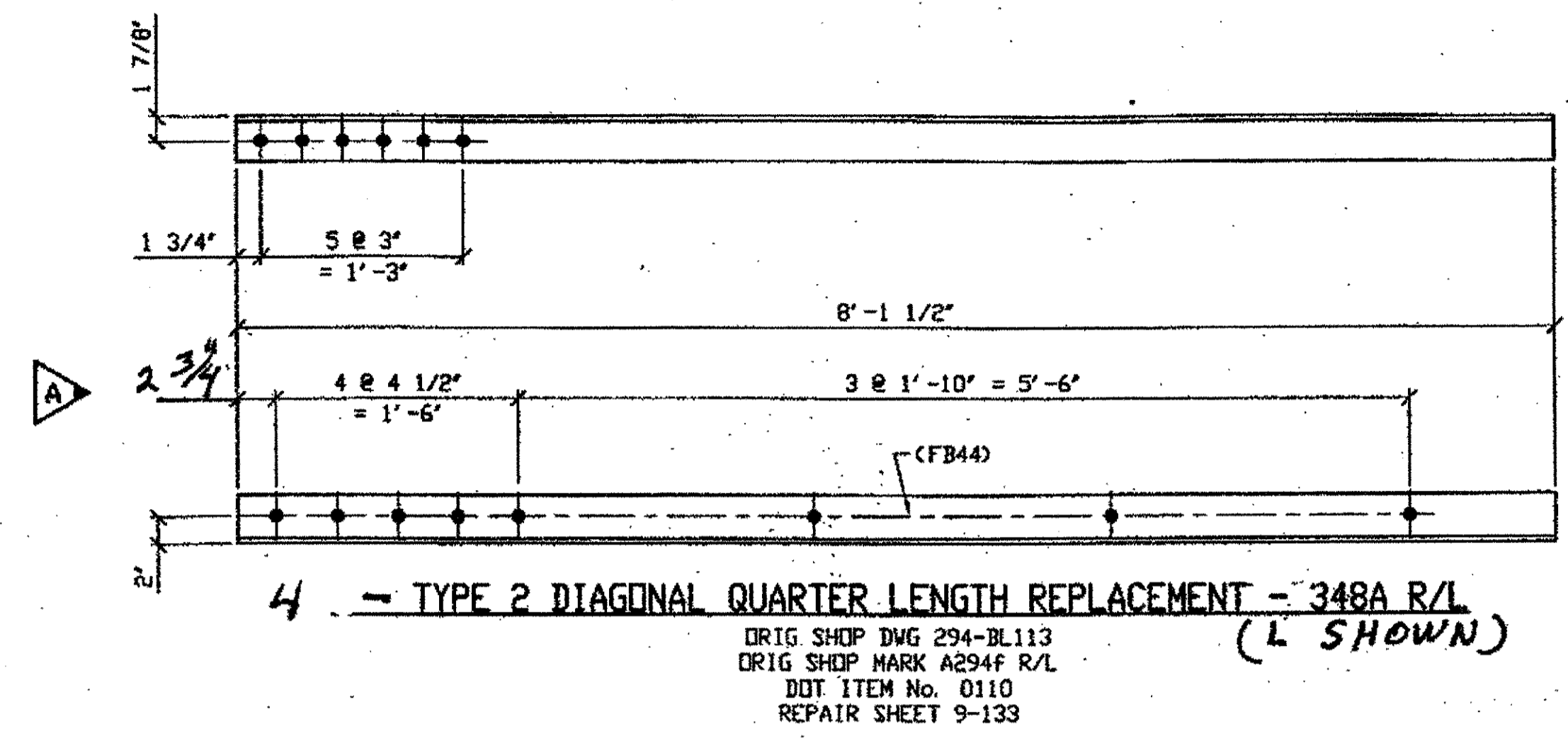
IN CHARGE: L. SMITH  
DRAWN BY: DATE: RAS 07/18/01  
CHECKED BY: DATE: GAF 08/24/01

DOT ITEM LINE NO. 0110	
DOT BID ITEM NO. 863E50000	
NO.	DATE
REVISIONS	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
SPAN 9 REPAIRS	
SHEET NUMBER	347
JOB NUMBER	800010

G:\Contract\10\800010\Drawings\B347A.dwg  
 Save by rjf: 08/04/01 Dec 17, 2001  
 Plot by gfos at 09:46am Dec 17, 2001  
 Model Space plot + Scale = 1/9



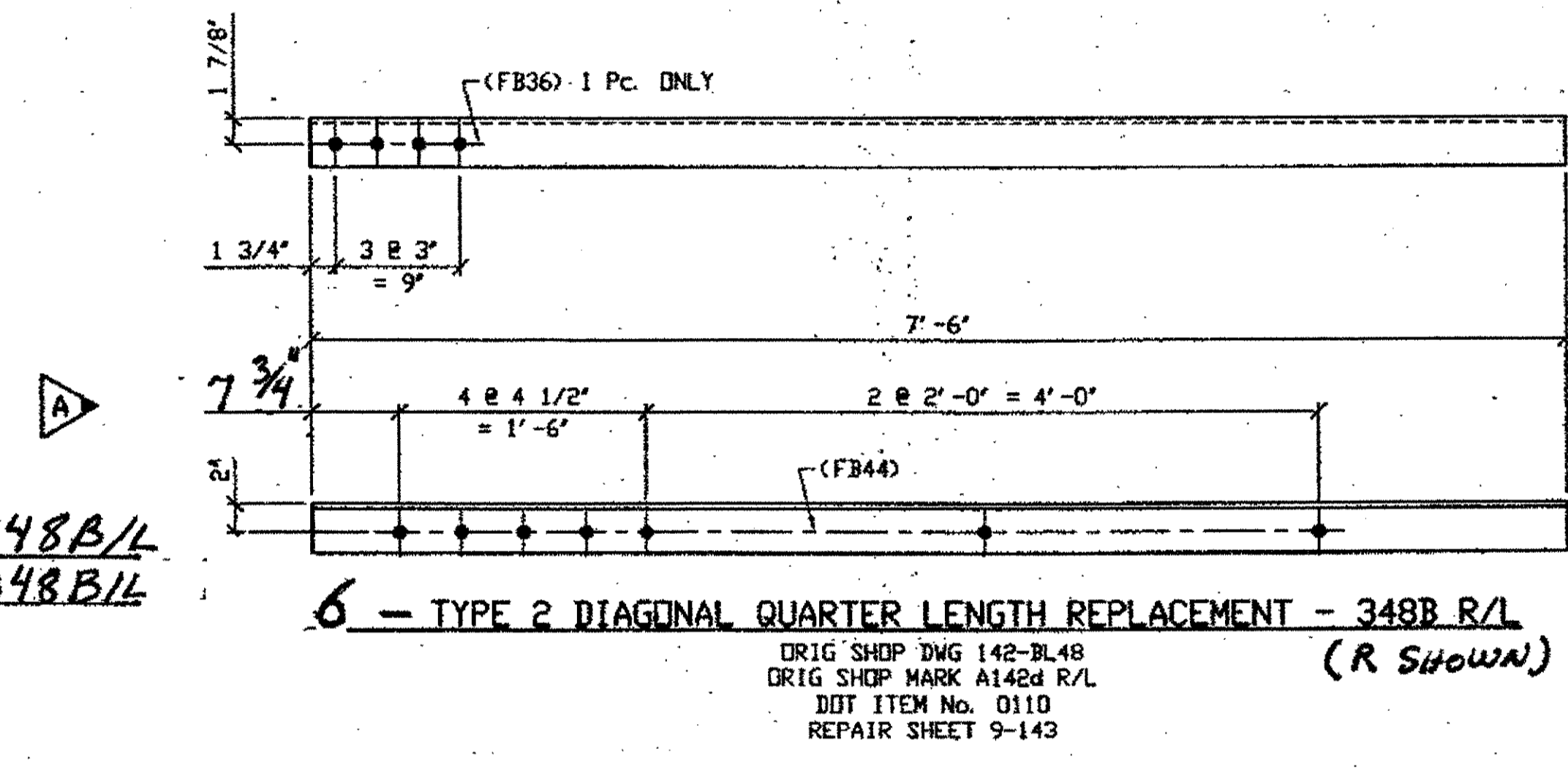
**SPAN 9**  
 G-F' NORTH, TOP NORTH 348A/R  
 G-F' NORTH, TOP SOUTH 348A/L  
 G-F' NORTH, BOTTOM SOUTH 348A/R  
 G-F' NORTH, BOTTOM NORTH 348A/L



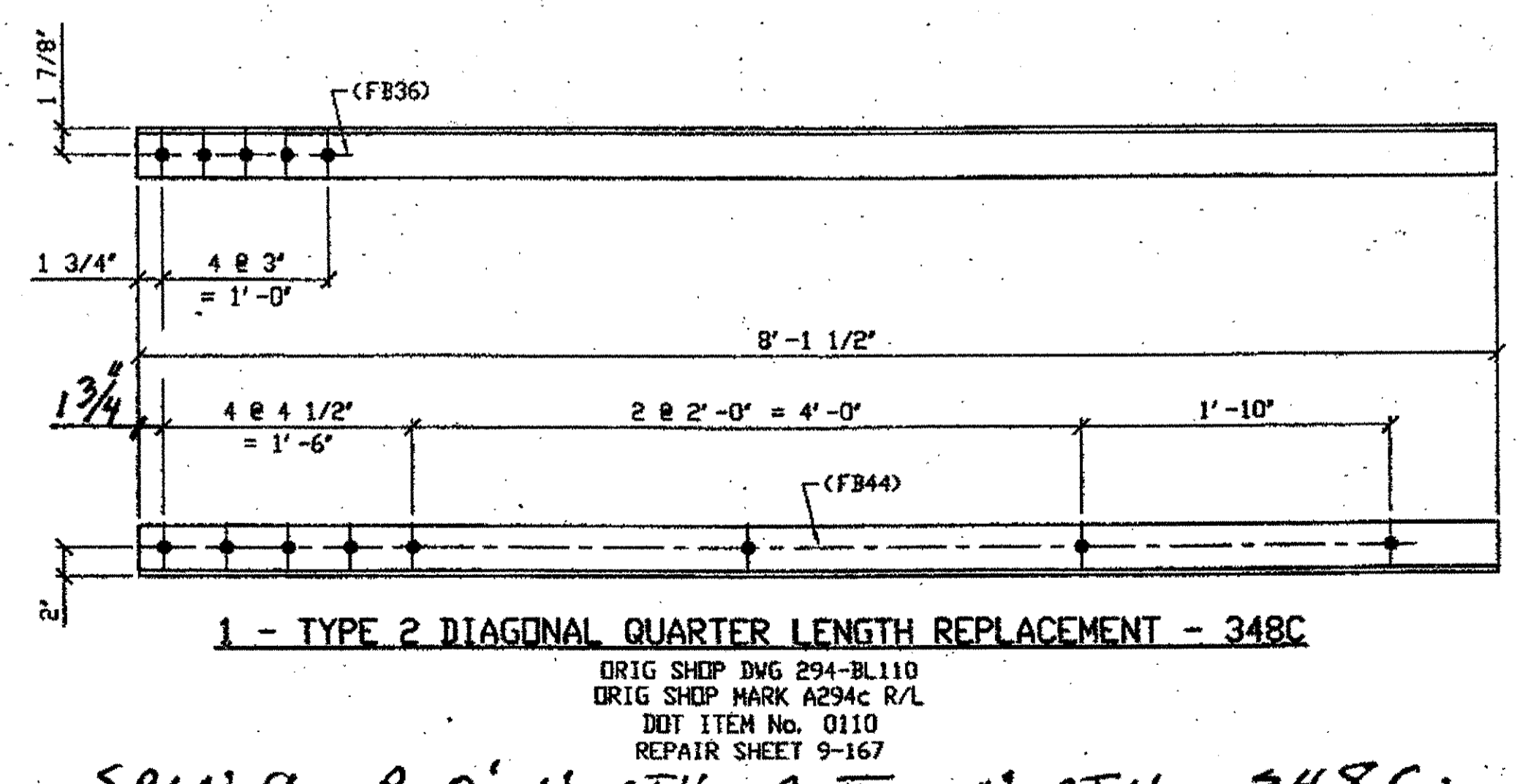
BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ' D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL QUARTER LENGTH					
2		348A R/L	4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R, 2/L		
3		348B R/L	6	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R, 4/L		
4		348C	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69	
5									
6									
7									
8									
9									
10									
11									
12									
13									
14				FIELD BOLTS					
15		FB36		1" DIA	0	2 1/2	NOTE 2		
16		FB44		1" DIA	0	3 1/2	NOTE 2		
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 11**  
 J-H' NORTH TOP SOUTH 348B/L  
 N-M' NORTH BOTTOM NORTH 348B/L



**SPAN 9**  
 J-H' NORTH, TOP NORTH 348B/R  
 J-H' NORTH, TOP SOUTH 348B/L  
 N-M' NORTH, TOP SOUTH 348B/L  
 J-H' NORTH, BOTTOM SOUTH 348B/R



**SPAN 9 P-0' NORTH, BOTTOM NORTH 348C**

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/1/07 PSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

DOT ITEM LINE NO 0110  
 DOT BID ITEM NO 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	12/10/01	REVISED PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN REPAIRS



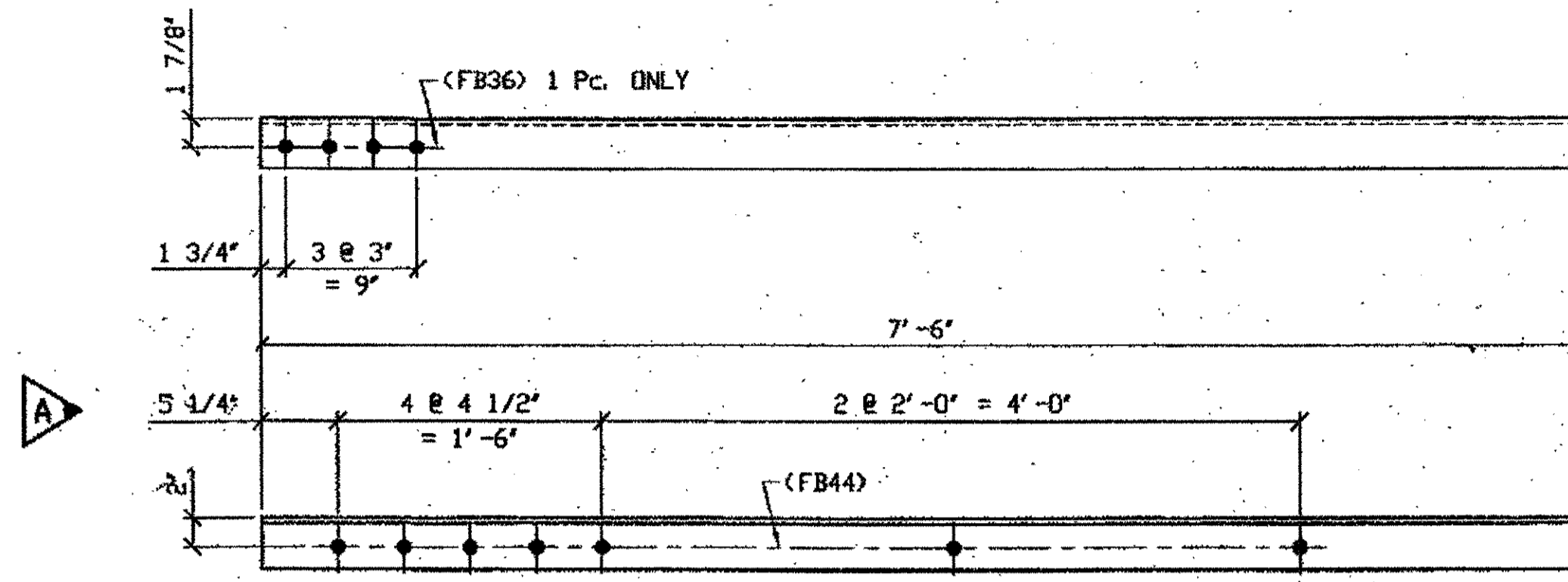
FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/18/01  
 CHECKED BY: DATE  
 GAF 09/04/01

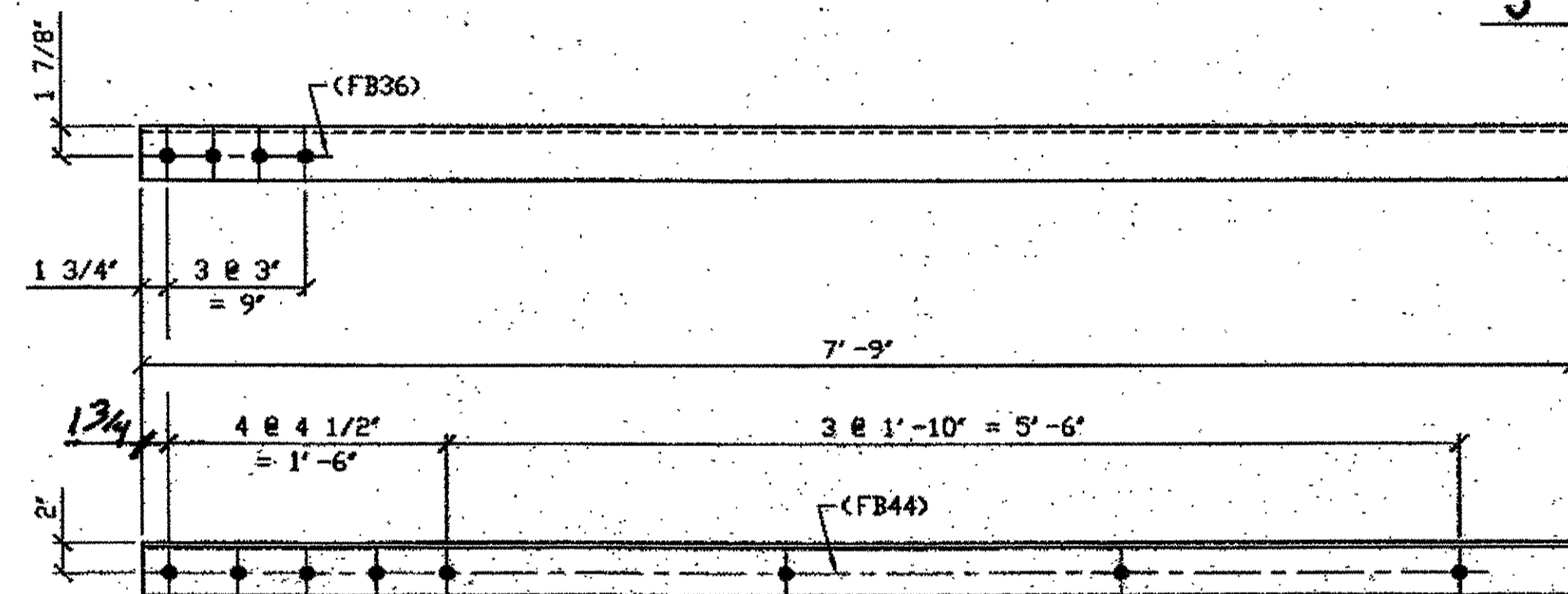
SHEET NUMBER: 348  
 ASN JOB NUMBER: 800010

G:\Contract\10\800010\Drawings\348A.dwg  
 Save by rs, 08:04am Dec 17, 2001  
 Plot by gfos at 09:47am Dec 17, 2001  
 Model space plot + Scale = 1/9



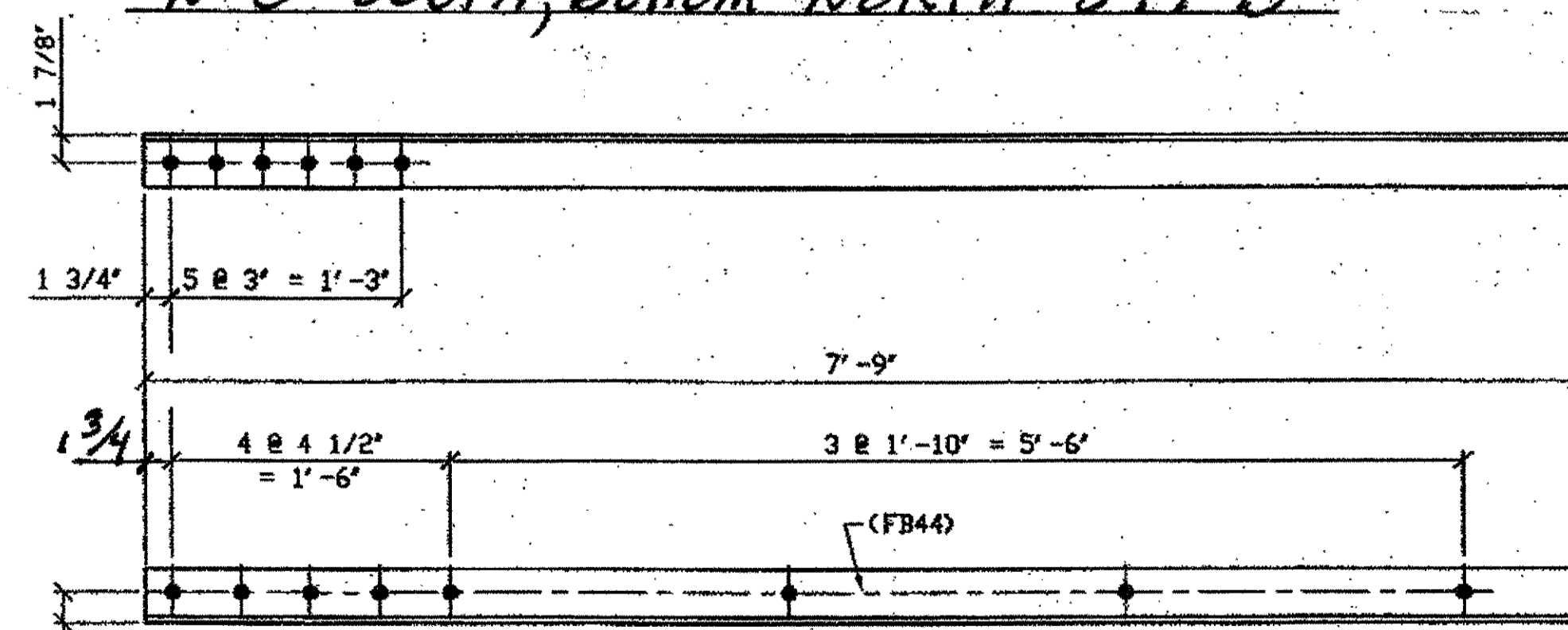
**4 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 349A R/L**  
 (R SHOWN)  
 ORIG SHOP DWG 165-BL62  
 ORIG SHOP MARK A165ae R/L  
 DOT ITEM No. 0110  
 REPAIR SHEET 9-214

**SPAN 9**  
 G-H' SOUTH, BOTTOM SOUTH 349A/L  
 J-K' SOUTH, TOP NORTH 349A/L  
 J-K' SOUTH, TOP SOUTH 349A/R  
 J-K' SOUTH, BOTTOM NORTH 349A/R



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 349B**  
 ORIG SHOP DWG 165-BL53  
 ORIG SHOP MARK A165e R/L  
 DOT ITEM No. 0110  
 REPAIR SHEET 9-228

**SPAN 9**  
 N-O' SOUTH, TOP SOUTH 349 B  
 N-O' SOUTH, BOTTOM NORTH 349 B



**1 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 349C**  
 ORIG SHOP DWG 165-BL56  
 ORIG SHOP MARK A165y R/L  
 DOT ITEM No. 0110  
 REPAIR SHEET 9-235

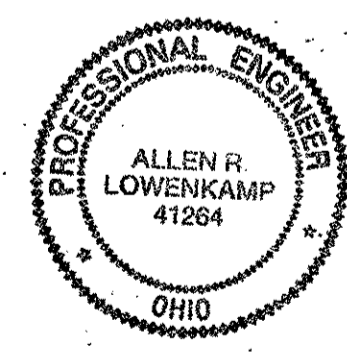
**SPAN 9 Q-R' SOUTH, BOTTOM SOUTH 349C**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL QUARTER	LENGTH			
2		349A R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R; 2/L	
3		349B	2	L 3 1/2 X 3 1/2 X 3/8	7	9		132
4		349C	1	L 3 1/2 X 3 1/2 X 3/8	7	9		66
5								
6								
7								
8								
9								
10								
11								
12								
13								
14				FIELD BOLTS				
15		FB36		1" DIA	0	2 1/2	NOTE 2	
16		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0.

G:\Contract\10\800010\Drawings\349A.dwg  
 Save by rsl, 08/04/01 Dec 17, 2001  
 Plot by gfb, 11/09/01 Dec 17, 2001  
 Model Space Plot + Scale = 1/5

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/6/01  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

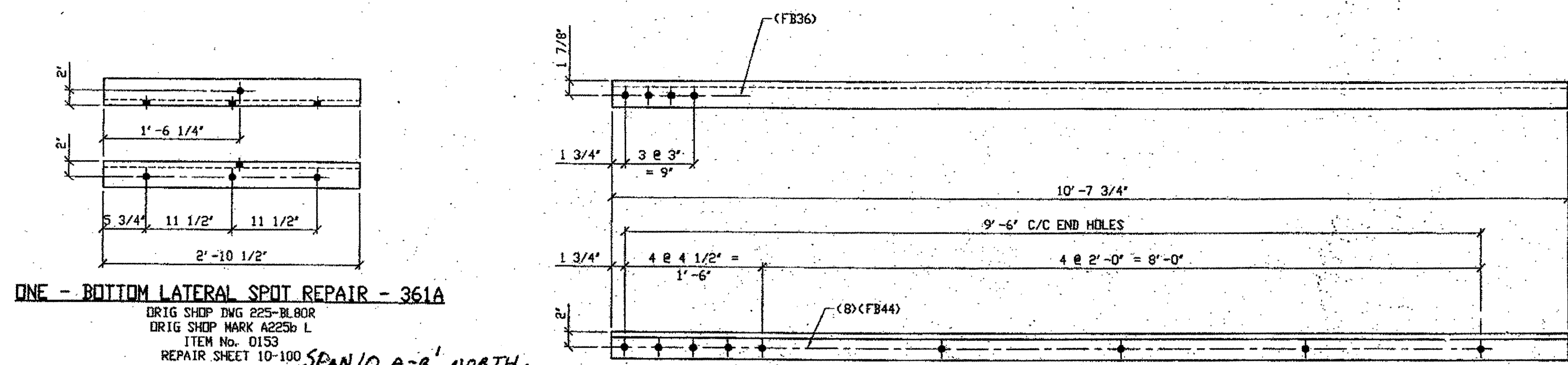
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 07/18/01  
 CHECKED BY: DATE:  
 GAF 08/27/01

DOT ITEM LINE NO. 0110  
 DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

SHEET NUMBER: 349  
 A/RN JOB NUMBER: 800010

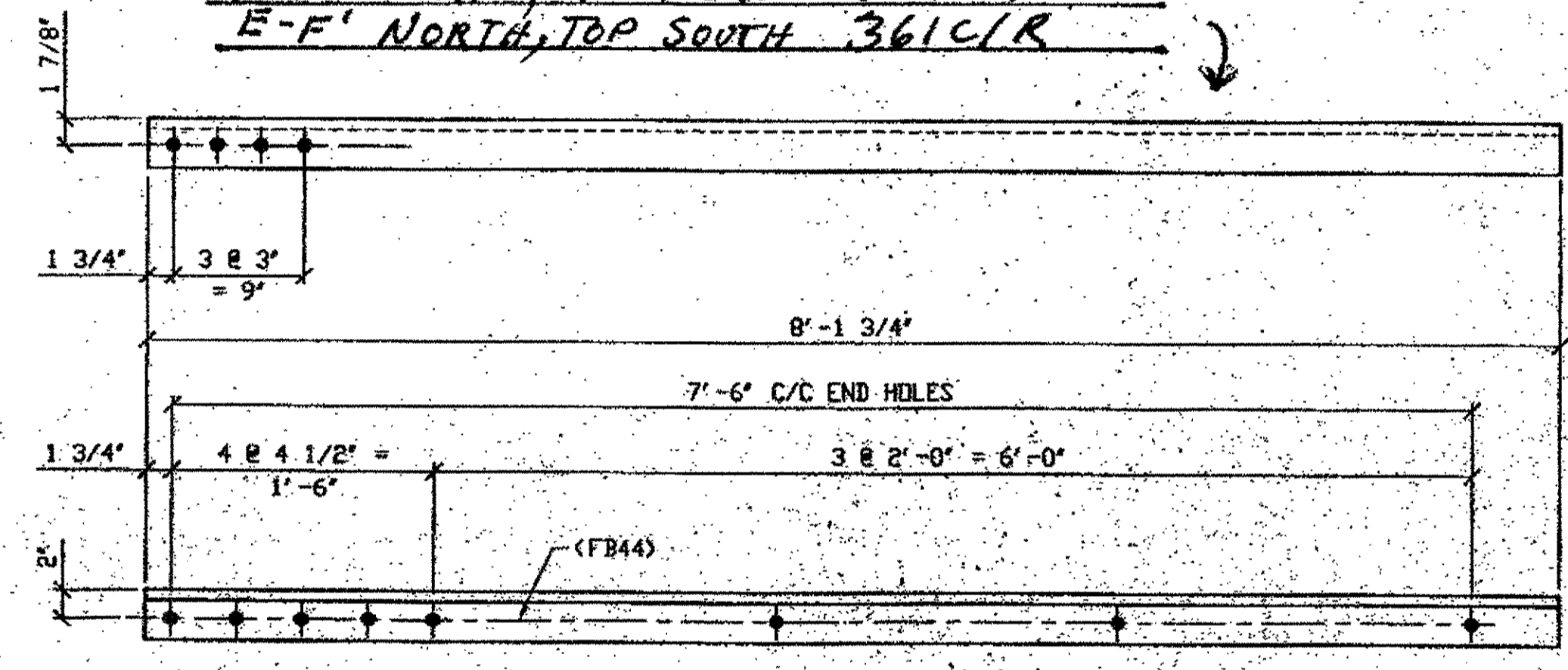


ONE - BOTTOM LATERAL SPOT REPAIR - 361A  
 ORIG SHOP DWG 225-BL80R  
 ORIG SHOP MARK A225b L  
 ITEM No. 0153  
 REPAIR SHEET 10-100

TWO - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 361B R/L  
 (R SHOWN)  
 ORIG SHOP DRAWING 293-BL132  
 ORIG SHOP MARK A293c R/L  
 ITEM No. 0106 & 0152  
 REPAIR SHEET 10-103

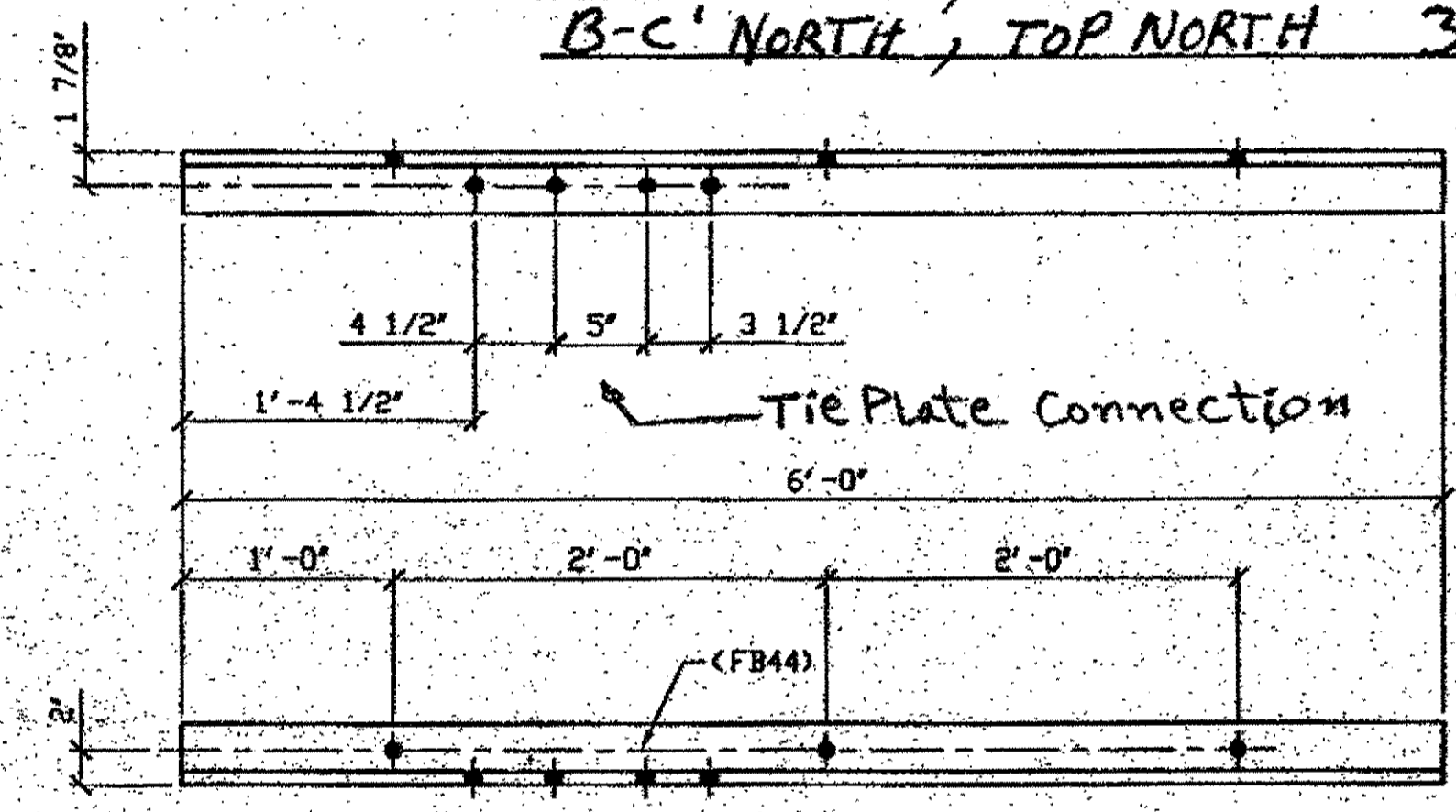
BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				BOTTOM LATERAL SPOT REPAIR		
2		361A	1	L 3 1/2 X 3 1/2 X 3/8	2 10 1/2	24
3						
4				TYPE 1 DIAGONAL QUARTER LENGTH		
5		361B R/L	2	L3 1/2 x 3 1/2 x 3/8	10 7 3/4	181
6		361C R/L	2	L3 1/2 x 3 1/2 x 3/8	8 1 3/4	138
7		361D	1	L3 1/2 x 3 1/2 x 3/8	6 0	51
8		361F	1	L3 1/2 x 3 1/2 x 3/8	10 0 1/4	85
9						
10						
11						
12				FIELD BOLTS		
13						
14		FB36	12	1" DIA	0 2 1/2	NOTE 2: 17
15		FB44	26	1" DIA	0 3 1/2	NOTE 2: 42
16						
PLATE		N/A		PIPE	N/A	FITTINGS N/A
SHAPES		A36		FLGS.	N/A	BOLTS NOTE 2

SPAN 10  
 E-F' NORTH, TOP NORTH 361C/L  
 E-F' NORTH, TOP SOUTH 361C/R



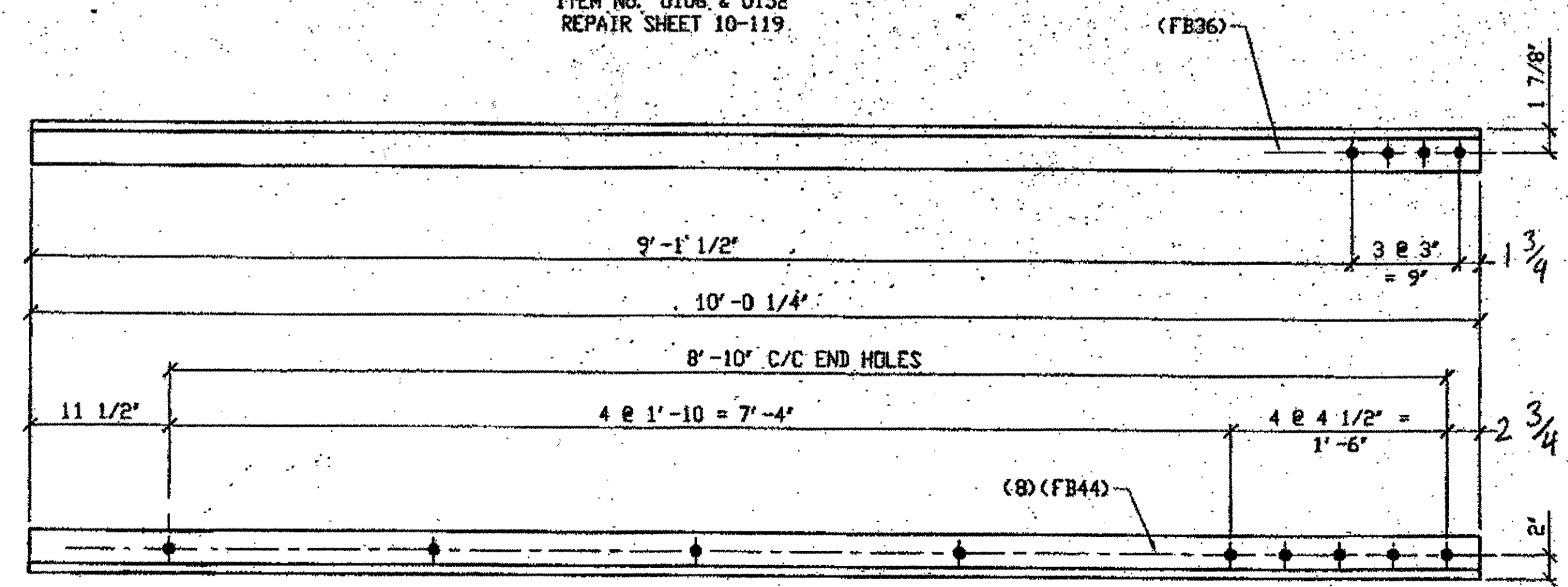
TWO - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 361C R/L  
 ORIG SHOP DRAWING 293-BL132  
 ORIG SHOP MARK A293c R/L  
 ITEM No. 0106 & 0152  
 REPAIR SHEET 10-119

B-C' NORTH, TOP SOUTH 361B/R  
 B-C' NORTH, TOP NORTH 361B/L



ONE - DIAGONAL PARTIAL LENGTH REPLACEMENT - 361D  
 ORIG SHOP DRAWING 293-BL132  
 ORIG SHOP MARK A293c R/L  
 ITEM No. 0152  
 REPAIR SHEET 10-121

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY-HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

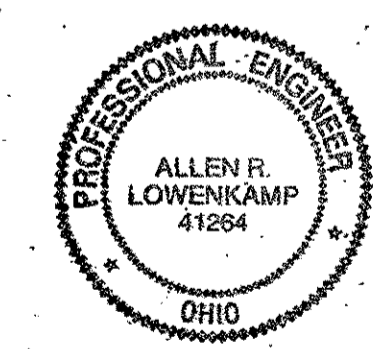


TWO - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 361F  
 ORIG SHOP DRAWING 293-BL133  
 ORIG SHOP MARK A293d  
 ITEM No. 0106 & 0152  
 REPAIR SHEET 10-144

SPAN 10 D-C' SOUTH, BOTTOM SOUTH 361F

NAT'L ENGR. & CONTR. CO.  
 by *Idress*  
 JAN 18 2002

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



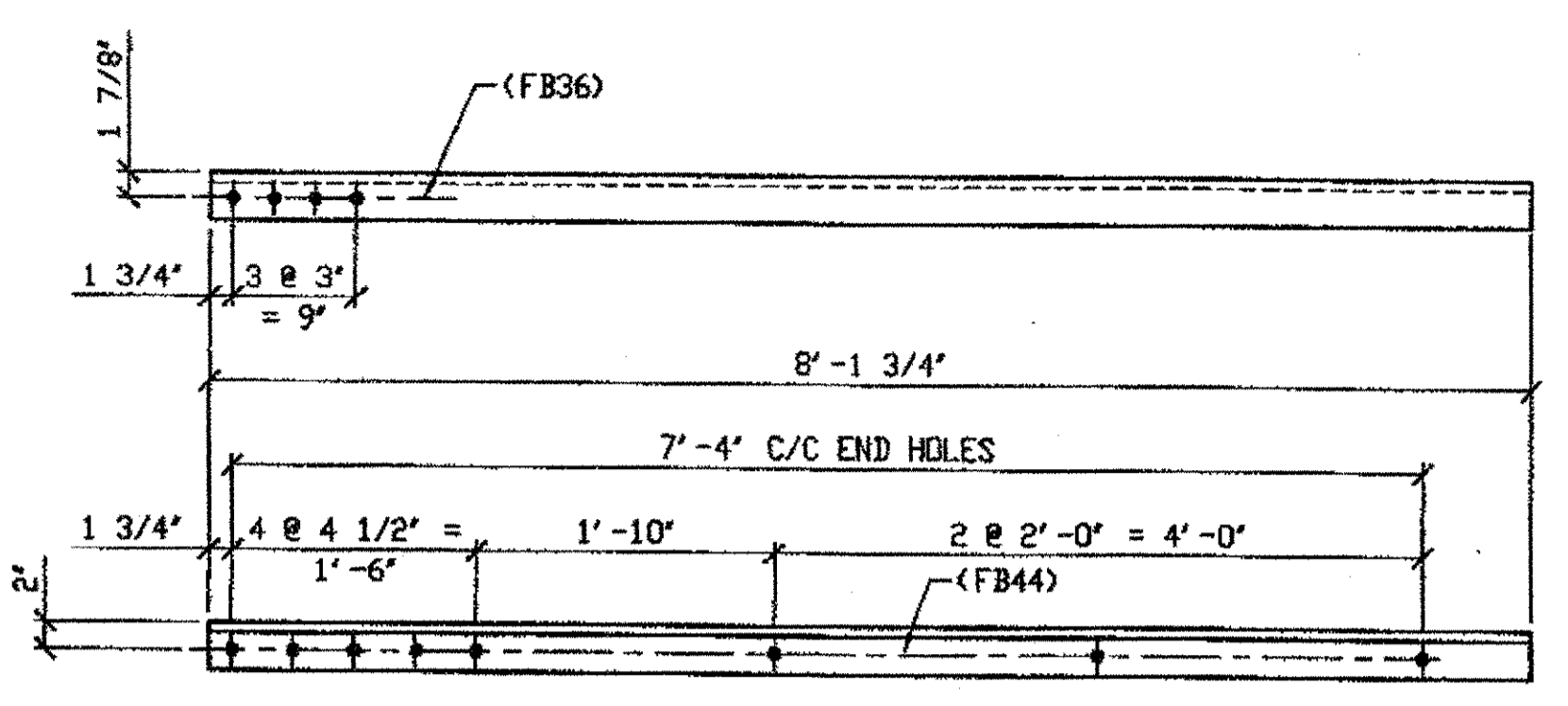
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L SMITH  
 DRAWN BY: DATE: AHM 07/25/01  
 CHECKED BY: DATE: GVG 12/11/01

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E90000	
NO.	DATE	DESCRIPTION	BY
A	1/17/02	REVISED PER APPROVAL COMMENTS	GAJ
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 10 REPAIRS			
SHEET NUMBER: 361		ABM JOB NUMBER: 800010	

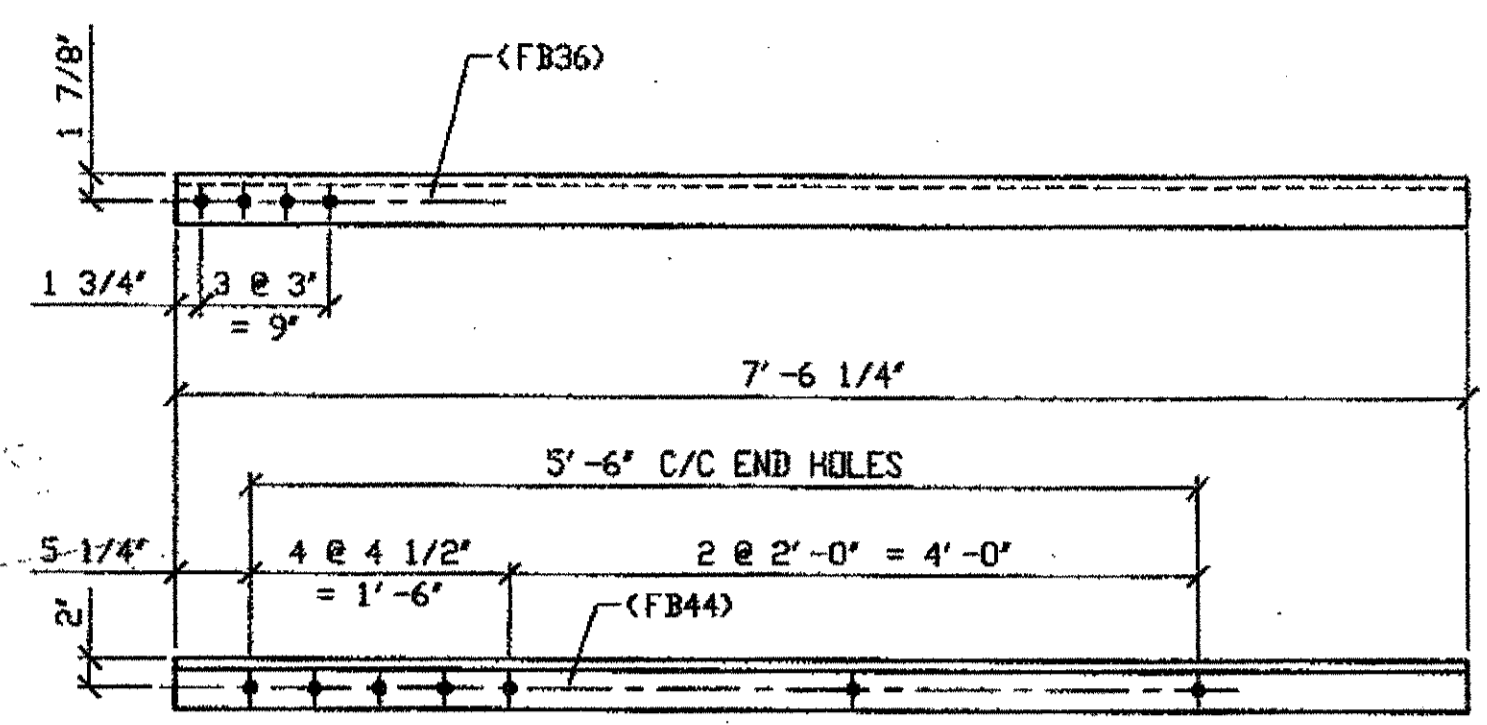
G:\Contra\2001\800010\Drawings\863E90000.dwg  
 Plot by: at 08:59pm Jan 17, 2002  
 Plot by: at 09:04am Jan 17, 2002  
 Model Space Plot Scale = 1/7



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 373A

ORIG SHOP DRAWING 293-BL132  
ORIG SHOP MARK A293c R/L  
ITEM No. 010G  
REPAIR SHEET 10-145

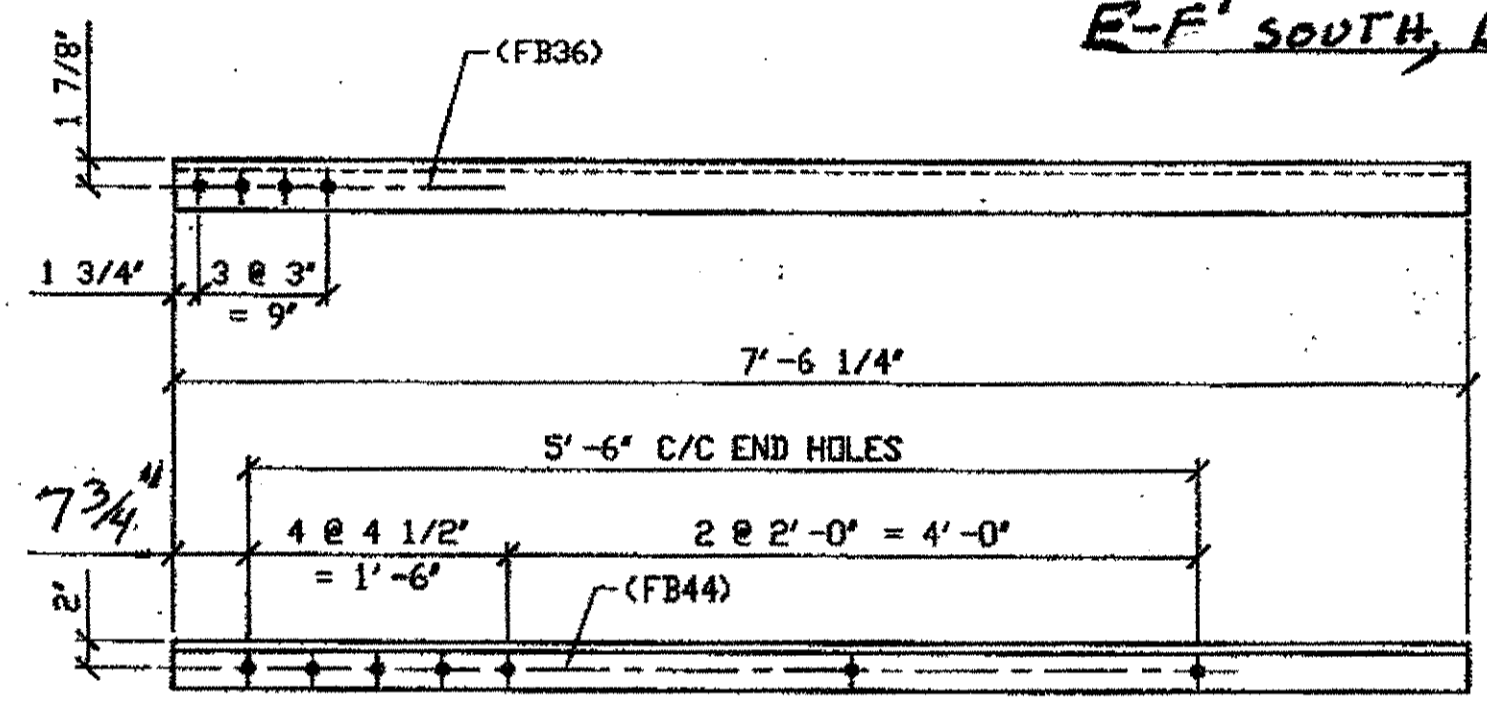
SPAN 10 F-E' SOUTH, TOP NORTH 373A



3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 373B R/L

ORIG SHOP DRAWING 165-BL62  
ORIG SHOP MARK A165ae R/L  
ITEM No. 0110  
REPAIR SHEET 10-135, 159

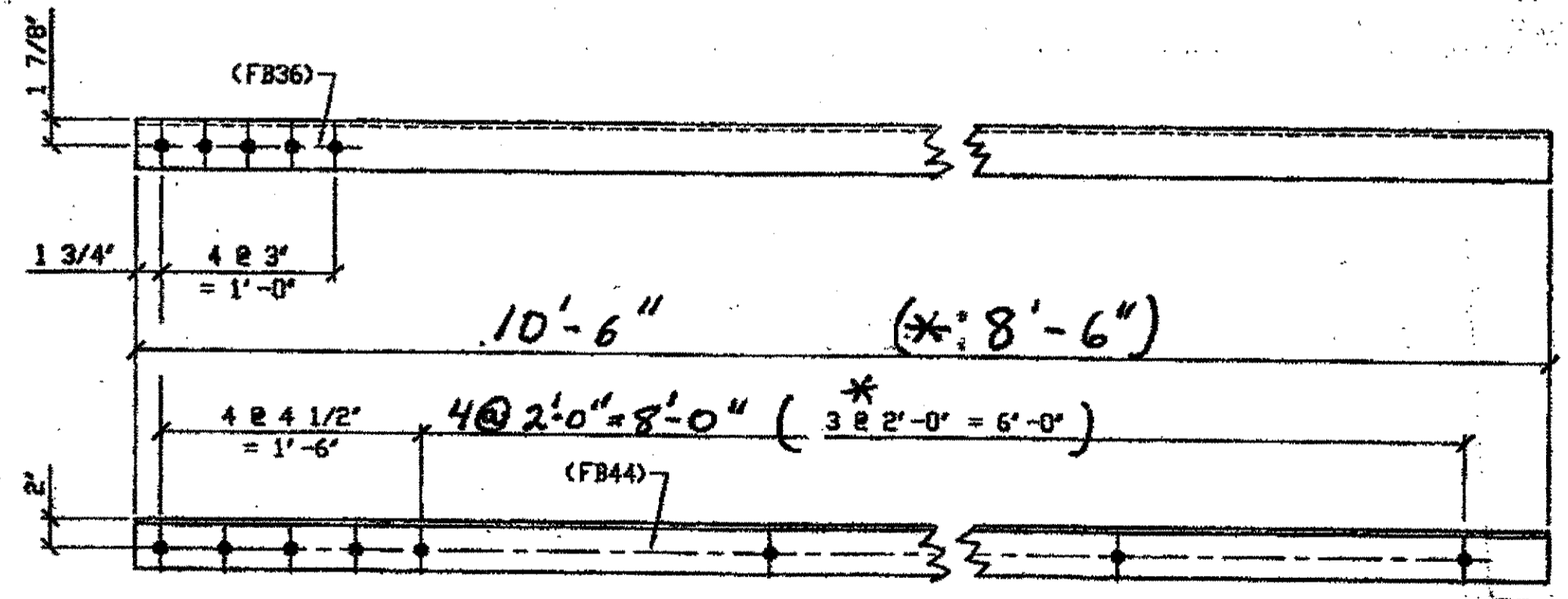
(R SHOWN) SPAN 10  
B-C' SOUTH, TOP NORTH 373B/L  
B-C' SOUTH, TOP SOUTH 373B/R  
E-F' SOUTH, BOTTOM NORTH 373B/L



2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 373C R/L

ORIG SHOP DRAWING 165-BL64  
ORIG SHOP MARK A165ag R/L  
ITEM No. 0110  
REPAIR SHEET 10-142

SPAN 10  
C-D' SOUTH, TOP SOUTH 373C/R  
C-D' SOUTH, TOP NORTH 373C/L



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 373D R/L

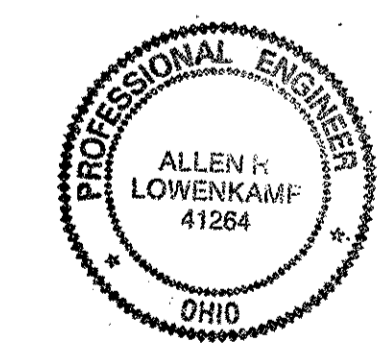
ORIG SHOP DNG 294-BL131  
ORIG SHOP MARK A294ad R/L  
REPAIR SHEET 9-179

SPAN 9  
\*S-R' SOUTH, BOTTOM SOUTH 373D/R  
S-R' SOUTH, TOP NORTH 373D/R  
S-R' SOUTH, TOP SOUTH 373D/L  
(R SHOWN)

BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1				TYPE 1 DIAGONAL QUARTER LENGTH		
2		373A	1	L3 1/2 x 3 1/2 x 3/8	8 1 3/4	103
3						
4				TYPE 2 DIAGONAL QUARTER LENGTH		
5		373B R/L	3	L3 1/2 x 3 1/2 x 3/8	7 6 1/4	2/R, 1/L 192
6						
7				TYPE 2 DIAGONAL QUARTER LENGTH		
8		373C R/L	2	L3 1/2 x 3 1/2 x 3/8	7 6 1/4	1/R, 1/L 128
9						
10						
11						
12						
13						
14		373D R/L	3	L3 1/2 x 3 1/2 x 3/8		2/R 1/L
15						
16						
17				FIELD BOLTS		
18		FB36		1" DIA	0 2 1/2	NOTE 2
19		FB44		1" DIA	0 3 1/2	NOTE 2
20						
21						
PLATE N/A		PIPE N/A		FITTINGS N/A		
SHAPES A36		FLGS. N/A		BOLTS NOTE 2		

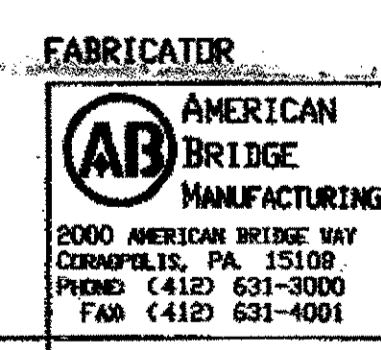
- \* = DOT ITEM No. 0153, BID ITEM No. 863E90000
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR. & CONTR. CO.  
by tdp/ess  
JAN 18 2002



DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY



STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN REPAIRS

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/4/02  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: GAF 01/16/02  
CHECKED BY: DATE: GAF 01/16/02

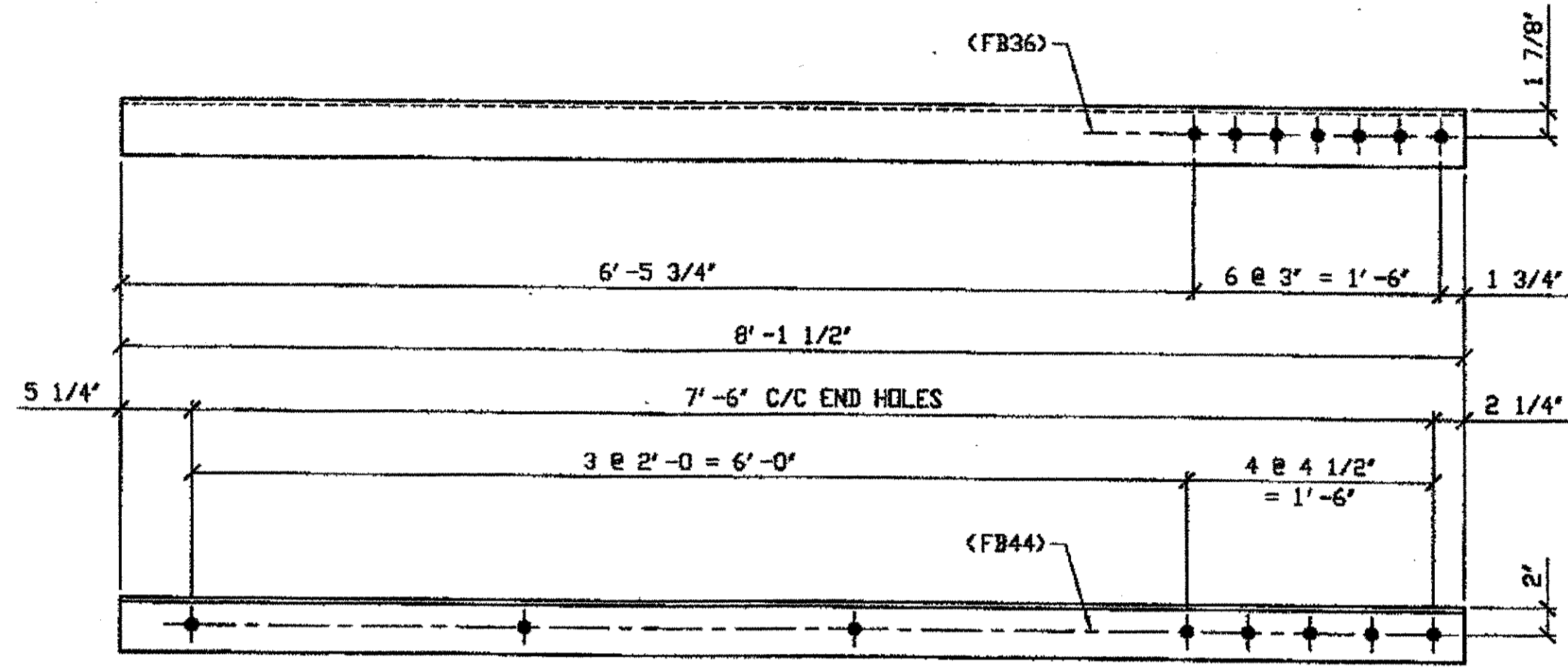
SHEET NUMBER: 373  
JOB NUMBER: 800010

G:\Contractors\2000\8000\10\Drawings\1373A.dwg  
Save by: at 04:14pm Jan 15, 2002  
Plot by: at 02:56pm Jan 17, 2002  
Model space plot \* Scale = 1/12

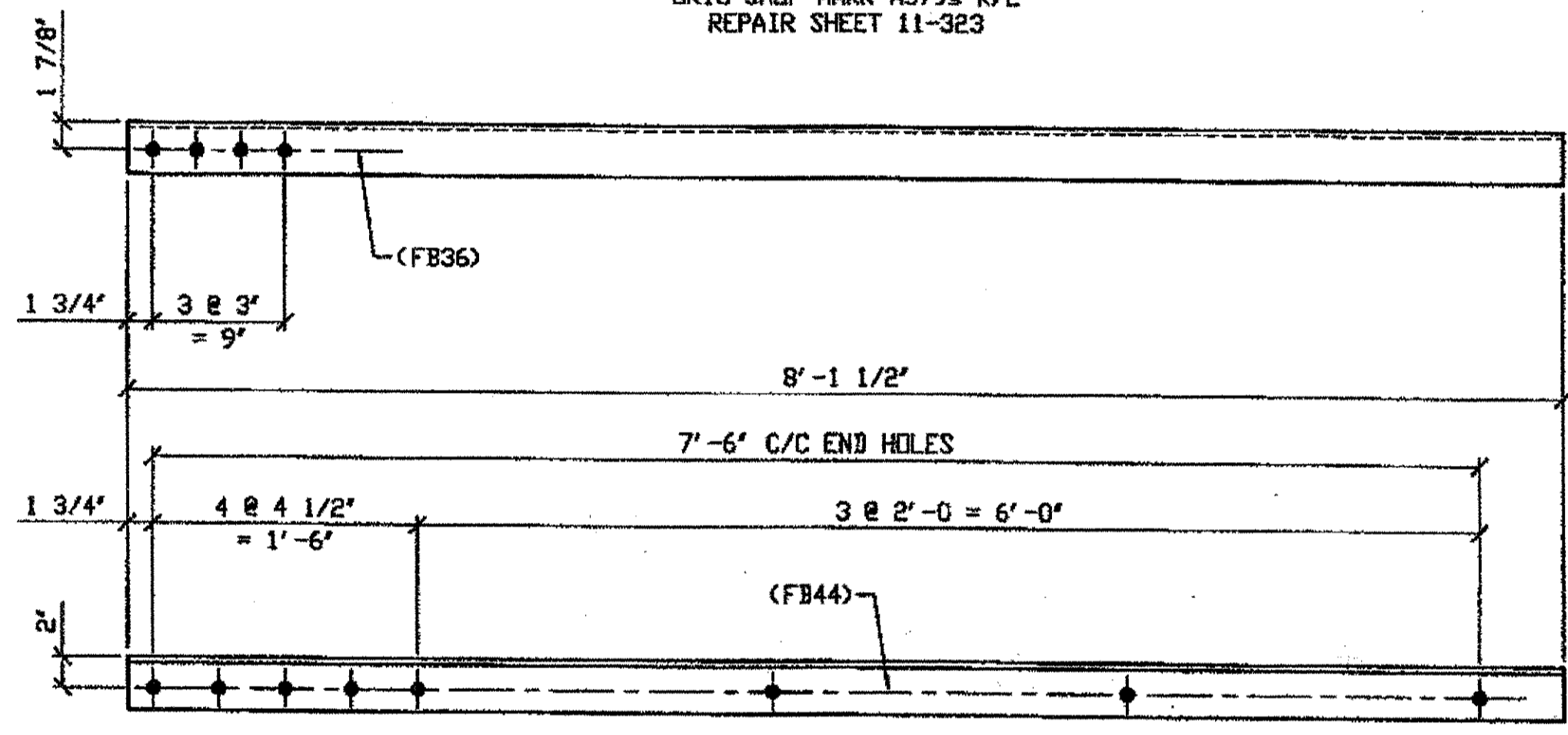
BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER	LENGTH			
2		427A R/L	3	L4 x 4 x 3/8	8	1 1/2	2/R, 1/L	239
3		427B	4	L3 1/2 x 3 1/2 x 3/8	8	1 1/2	5/R, 4/L	
4		427C R/L	3	L4 x 3 1/2 x 3/8	7	6	2/R, 1/L	205
5		427D R/L	7	L3 1/2 x 3 1/2 x 3/8	8	4	4/R, 3/L	496
6		427F R/L	2	L4 x 3 1/2 x 3/8	7	6		137
7								
8				SPLICE PLATE				
9		427G		PL 1/2 x 2 7/16	0	6		
10		427H		PL 1/2 x 2 7/8	0	6	PLAIN MAT'L	
11								
12				FIELD BOLTS				
13		FB36		1" DIA	0	2 1/2	NOTE 2	
14		FB44		1" DIA	0	3 1/2	NOTE 2	
15								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

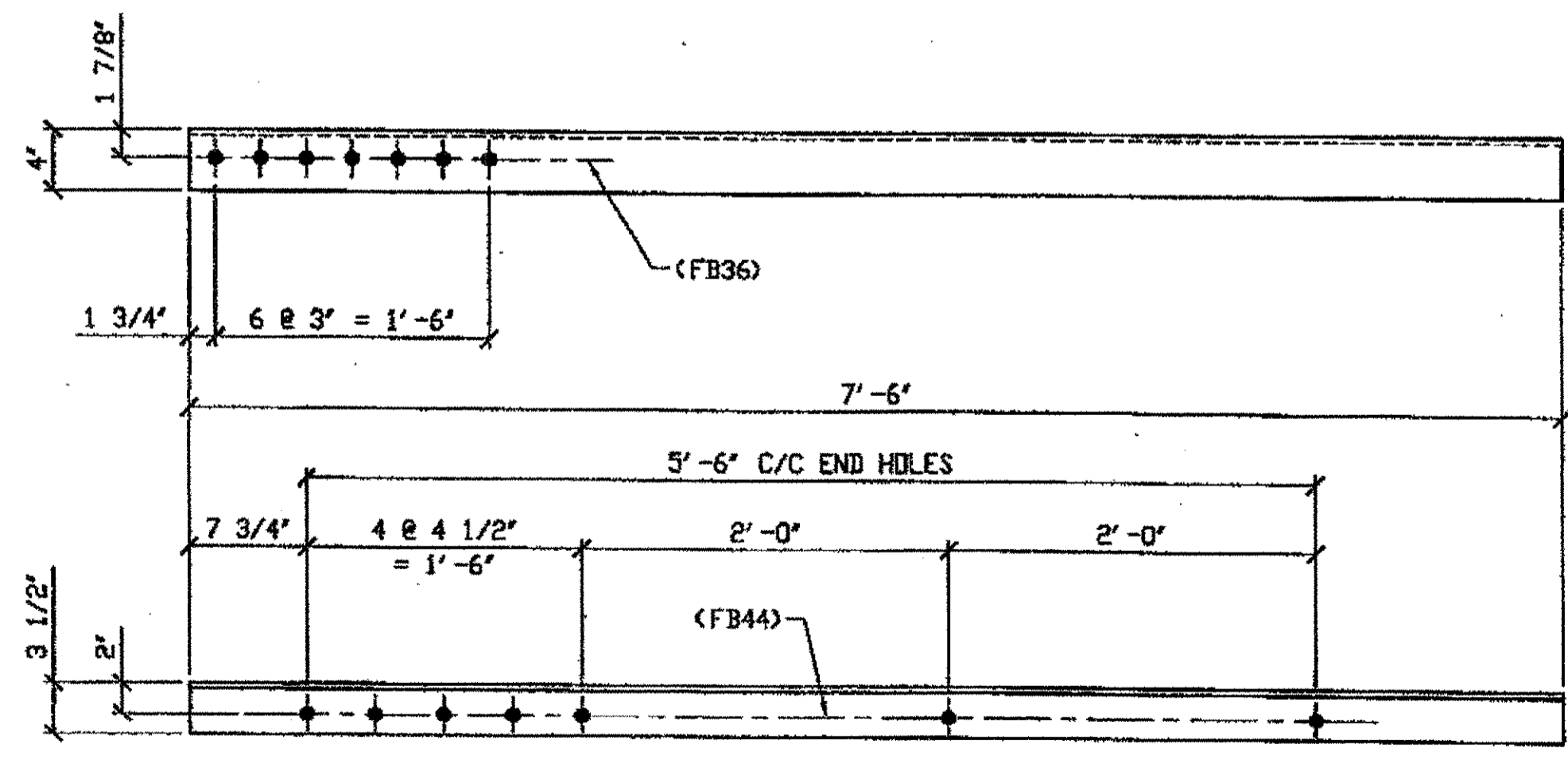
- NOTES:
- OPEN HOLES ARE  $(1/16")$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



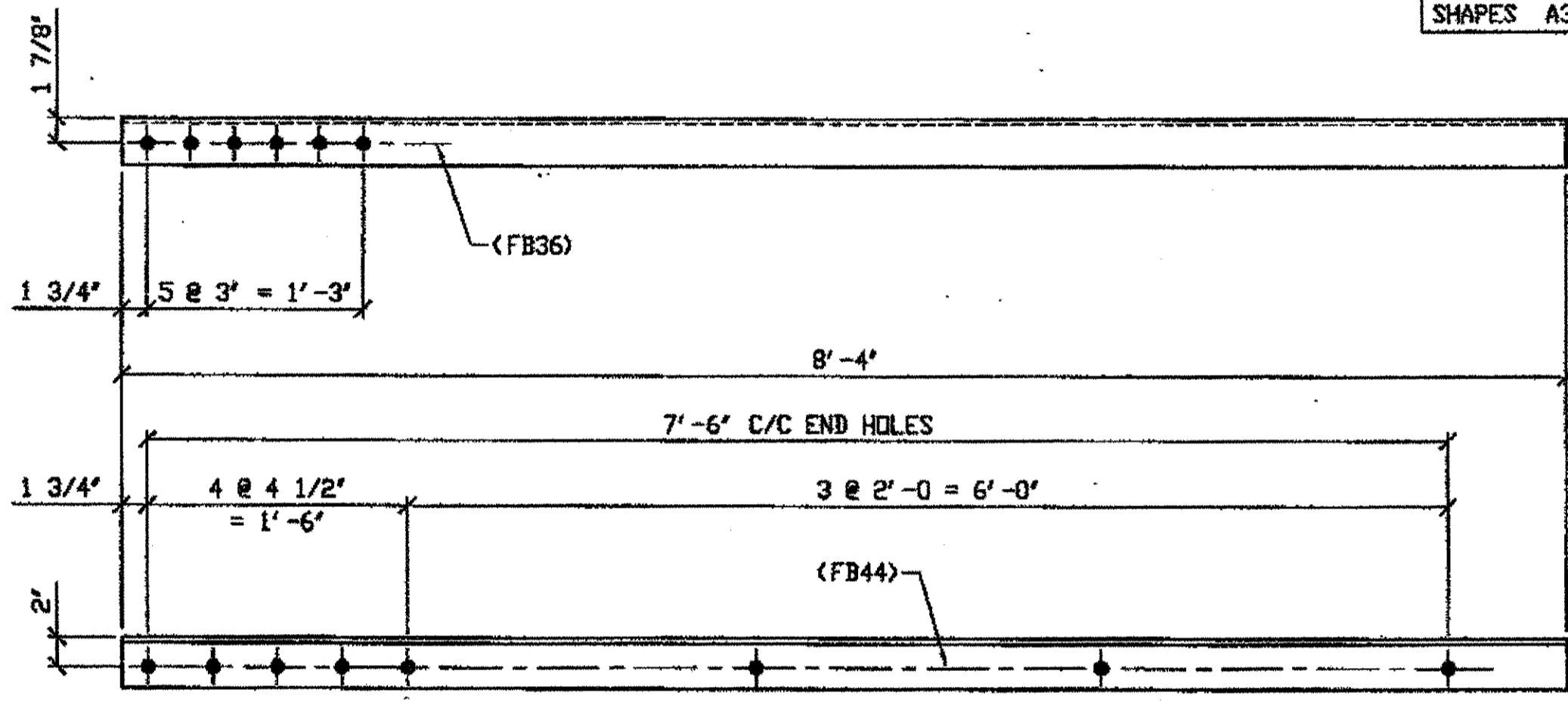
3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 427A R/L  
 ORIG SHOP DRAWING 379-BL153  
 ORIG SHOP MARK A379 R/L  
 REPAIR SHEET 11-323  
 (R SHOWN)



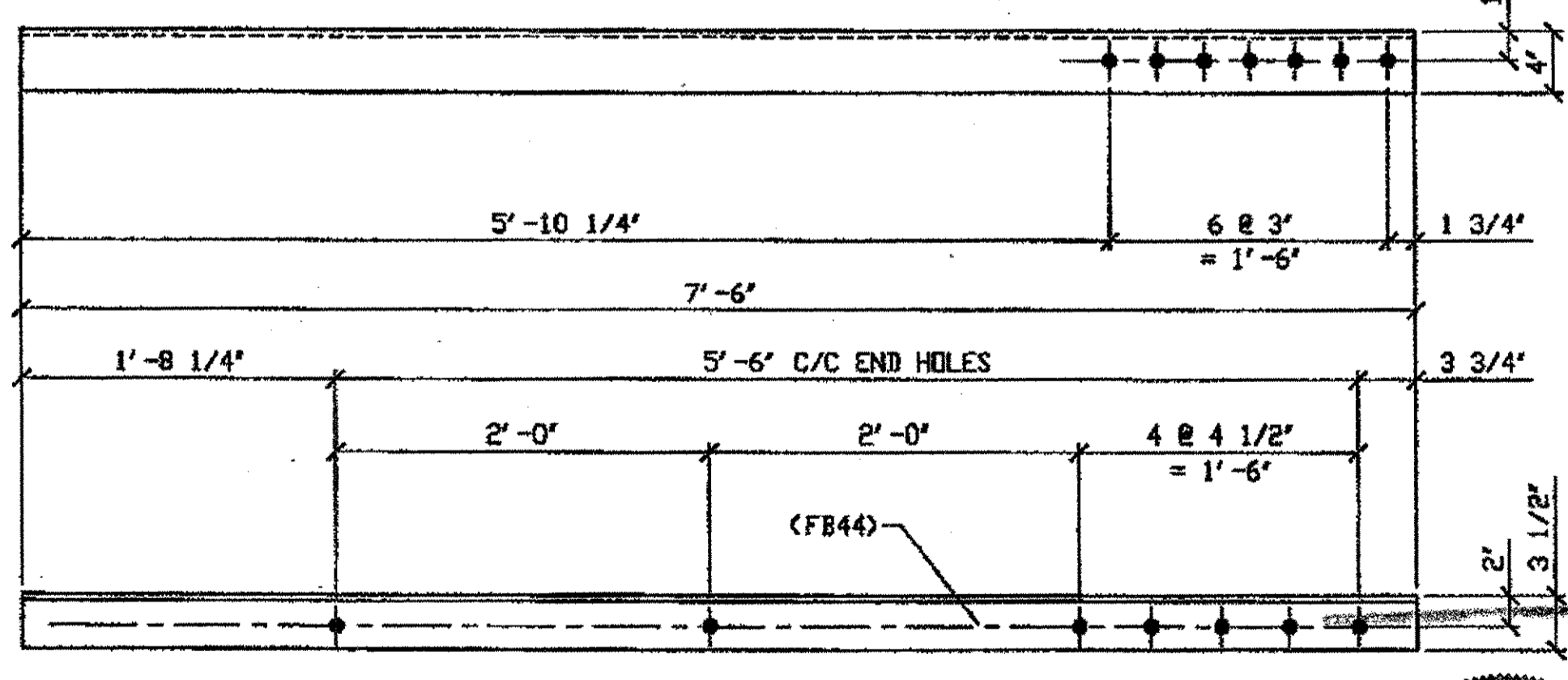
9 TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 427B R/L  
 ORIG SHOP DRAWING 380-BL140, BL145, BL147 & BL149  
 ORIG SHOP MARK A380 R/L, A380P, A380W R/L, A380Y/R  
 REPAIR SHEET 11-117, 152, 160 & 168  
 (R SHOWN)



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 427C R/L  
 ORIG SHOP DRAWING 380-BL142  
 ORIG SHOP MARK A380H R/L  
 REPAIR SHEET 11-131  
 (R SHOWN)



7 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 427D R/L  
 ORIG SHOP DRAWING 380-BL143 & BL154  
 ORIG SHOP MARK A380H R/L, 380ad R/L  
 REPAIR SHEET 11-141, 199  
 (R SHOWN)



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 427F R/L  
 ORIG SHOP DRAWING 380-BL142  
 ORIG SHOP MARK A380H R/L  
 REPAIR SHEET 11-248  
 (R SHOWN)

- \* DOT ITEM LINE No. 0106 & 0110
- SPAN 11
- S-R' SOUTH, TOP NORTH 427A/L
  - S-R' SOUTH, TOP SOUTH 427A/R
  - S-R' SOUTH, BOTTOM NORTH 427A/R
  - J-K' NORTH, TOP NORTH 427B/L
  - J-K' NORTH, TOP SOUTH 427B/R
  - J-K' NORTH, BOTTOM SOUTH 427B/L
  - G-H' NORTH, TOP NORTH 427B/L
  - G-H' NORTH, TOP SOUTH 427B/R
  - L-M' NORTH, BOTTOM NORTH 427B/R
  - C-D' NORTH, TOP NORTH 427C/L
  - C-D' NORTH, TOP SOUTH 427C/R
  - C-D' NORTH, BOTTOM NORTH 427C/R
  - E-F' NORTH, BOTTOM NORTH 427D/R
  - E-F' NORTH, TOP NORTH 427D/L
  - E-F' NORTH, TOP SOUTH 427D/R
  - E-F' NORTH, BOTTOM SOUTH 427D/L
  - S-T' NORTH, TOP SOUTH 427D/R
  - S-T' NORTH, BOTTOM NORTH 427D/R
  - S-T' NORTH, TOP NORTH 427D/L
  - D-C' SOUTH, BOTTOM NORTH 427F/R
  - D-C' SOUTH, TOP NORTH 427F/L
  - G-H' NORTH, BOTTOM SOUTH 427B/L
  - G-H' NORTH, BOTTOM NORTH 427B/R
  - A-B' NORTH, BOTTOM NORTH 427B/R

O.D.O.T. DIST. 12

ACCEPTED	2/7/01	P-377
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41284

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 3000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-8001

IN CHARGE OF: L. SMITH

DRAWN BY: DATE  
 AMV 01/08/02

CHECKED BY: DATE  
 GAF 02/21/02

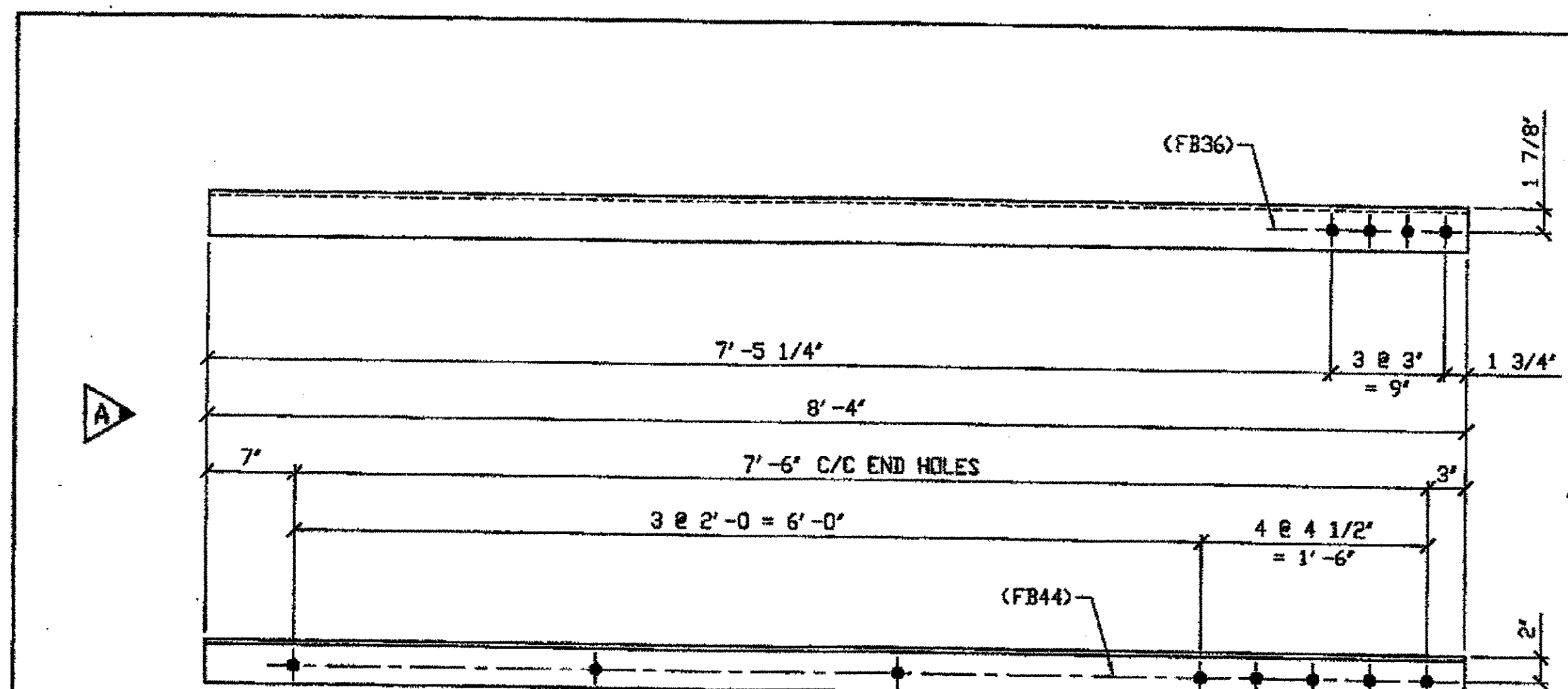
NO.	DATE	REVISIONS	DESCRIPTION	BY
A	3/22/02	REVISED PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

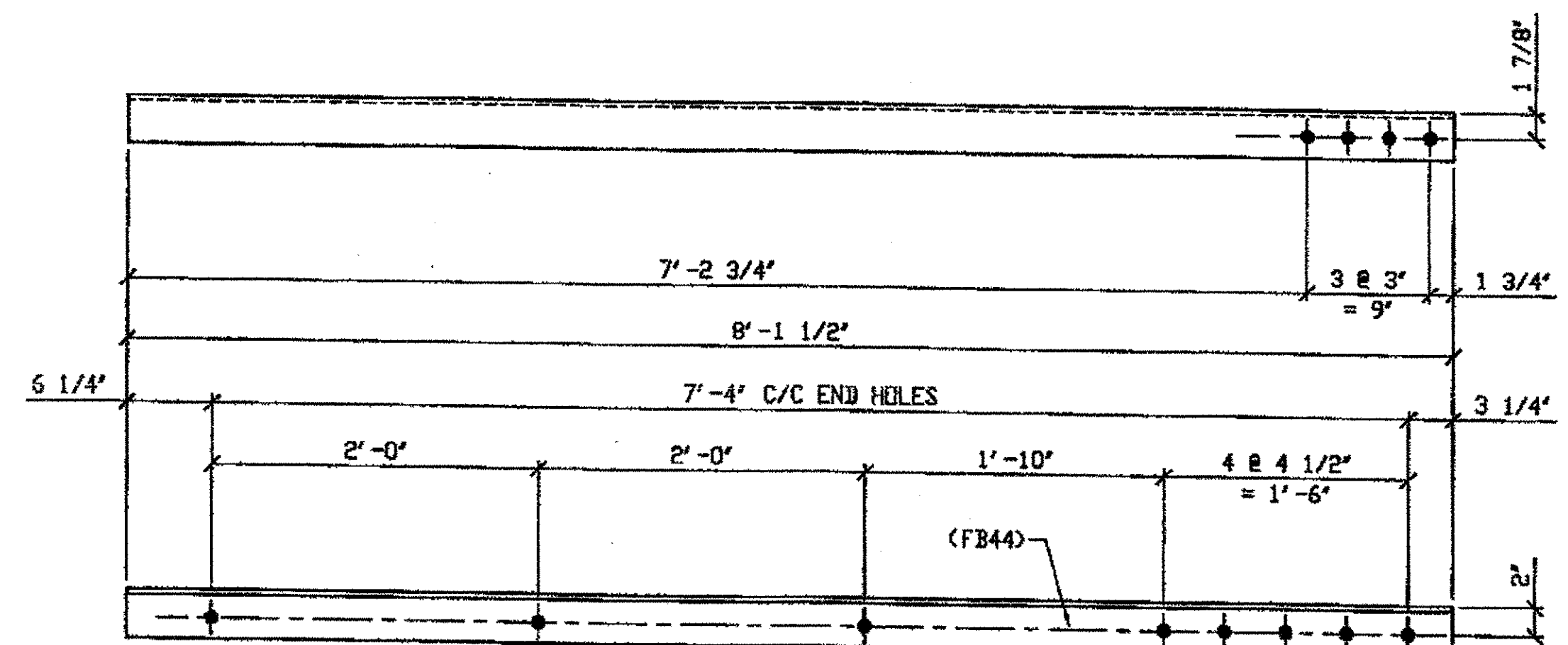
HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

SHEET NUMBER: 427  
 AM JOB NUMBER: 800010

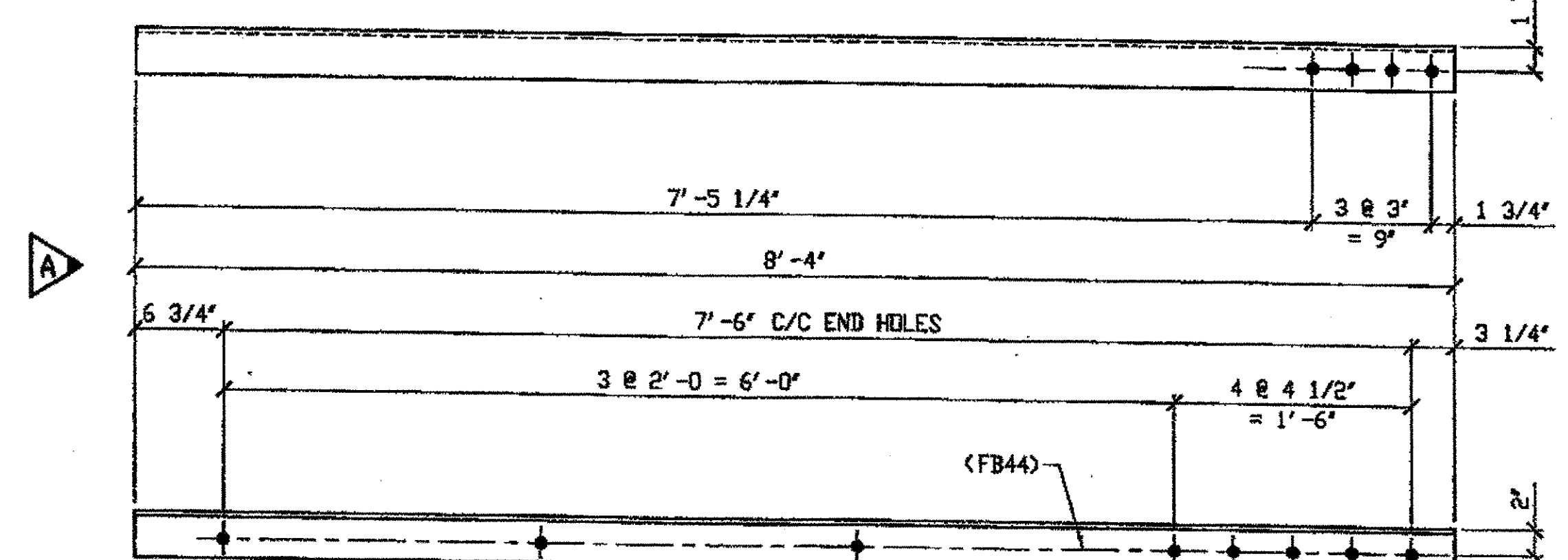
G:\Contracts\2000\800010\Drawings\427A.dwg  
 Save by rsp at 03:30pm Mar 22, 2002  
 Plot by gfs at 09:22am Mar 25, 2002  
 Model space plot + Scale = 1/3



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 428A R/L  
(R SHOWN)  
ORIG SHOP DRAWING 380-BL145  
ORIG SHOP MARK A380px R/L  
REPAIR SHEET 11-274



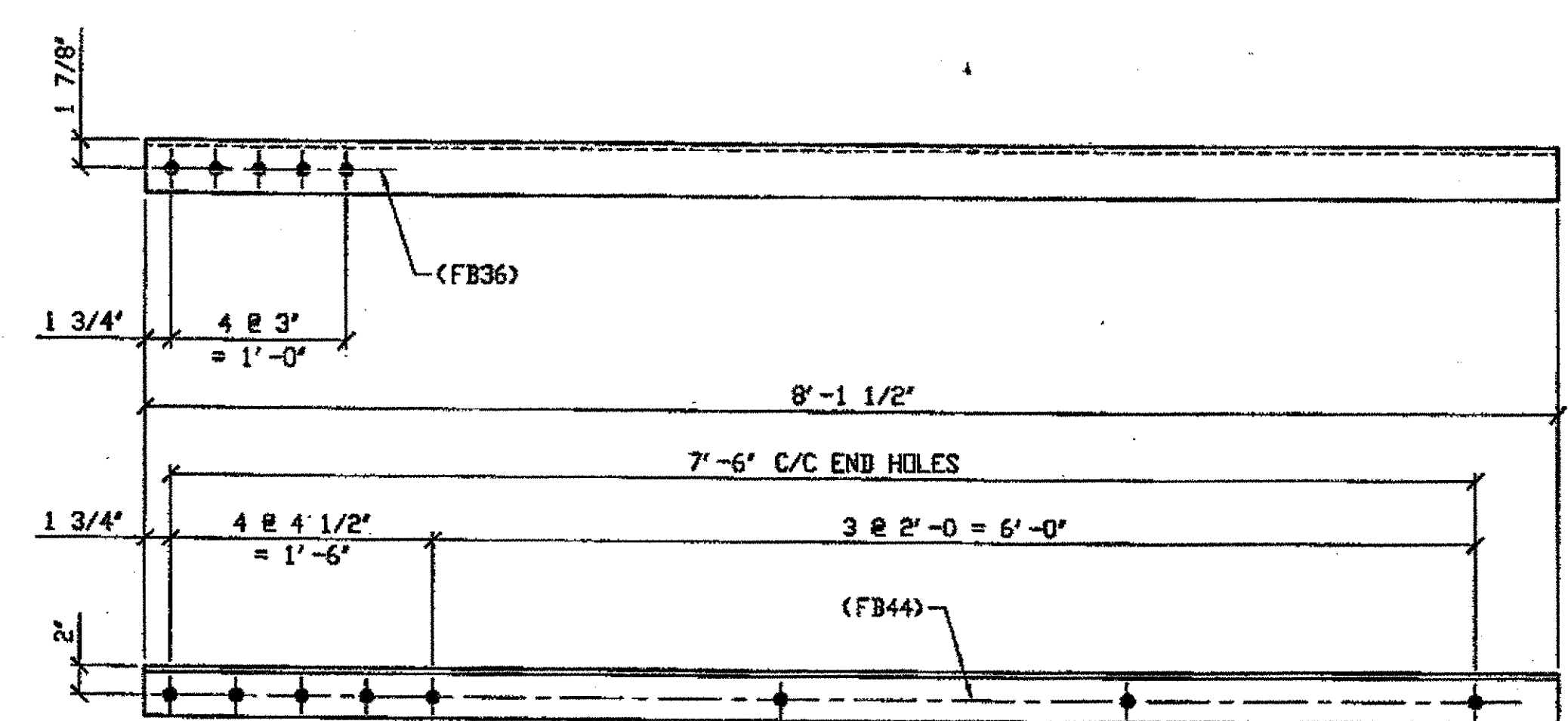
2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 428B R/L  
(R SHOWN)  
ORIG SHOP DRAWING 380-BL146  
ORIG SHOP MARK A380px R/L  
REPAIR SHEET 11-276



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 428C R/L  
(R SHOWN)  
ORIG SHOP DRAWING 380-BL150  
ORIG SHOP MARK A380aa R/L  
REPAIR SHEET 11-300

SPAN 11  
H-G' SOUTH, TOP NORTH 428 A/L  
H-G' SOUTH, TOP SOUTH 428 B/R  
H-G' SOUTH, BOTTOM NORTH 428A/R

SPAN 11  
J-H' SOUTH, TOP SOUTH 428 B/R  
J-H' SOUTH, TOP NORTH 428 B/L



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 428D R/L  
(R SHOWN)  
ORIG SHOP DRAWING 380-BL151  
ORIG SHOP MARK A380ab R/L  
REPAIR SHEET 11-180

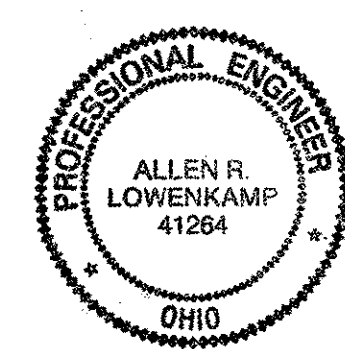
SPAN 11  
N-P' NORTH, BOTTOM SOUTH 428 D/L  
N-P' NORTH, TOP NORTH 428 D/L  
N-P' NORTH, TOP SOUTH 428 D/R

SPAN 11  
N-M' SOUTH, TOP NORTH 428 C/L  
N-M' SOUTH, TOP SOUTH 428 C/R

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER LENGTH				
2		428A R/L	3	L3 1/2 x 3 1/2 x 3/8	8	4	2/R, 1/L	212
3		428B R/L	2	L3 1/2 x 3 1/2 x 3/8	8	1 1/2		138
4		428C R/L	2	L3 1/2 x 3 1/2 x 3/8	8	4		142
5		428D R/L	3	L3 1/2 x 3 1/2 x 3/8	8	1 1/2	1/R, 2/L	207
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36	27	1" DIA	0	2 1/2	NOTE 2	38
13		FB44	48	1" DIA	0	3 1/2	NOTE 2	77
14								
15								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

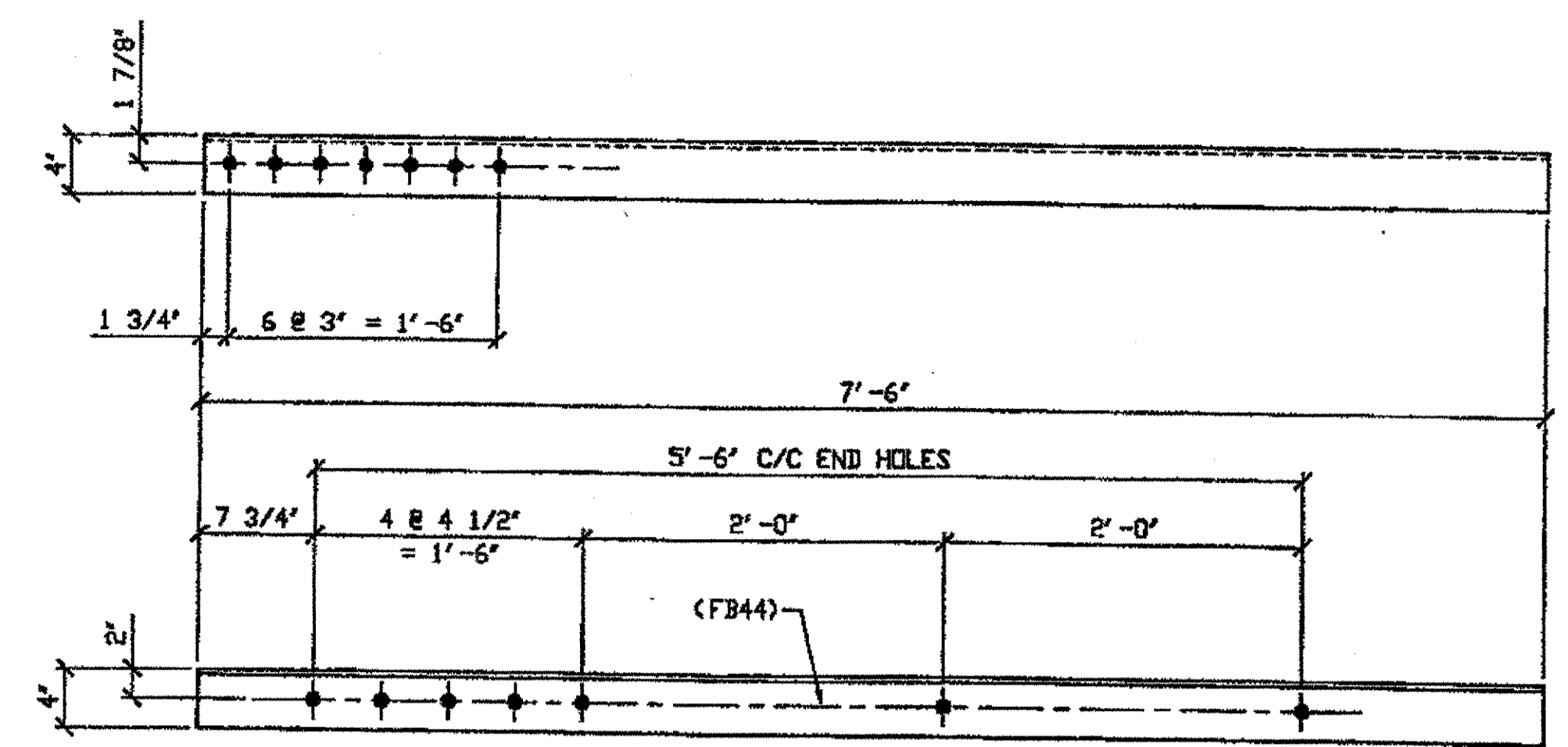


FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONARVILLE, PA 15103  
PHONE (412) 631-3000  
FAX (412) 631-4001  
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
AMV 01/09/02  
CHECKED BY: DATE  
GAF 02/21/02

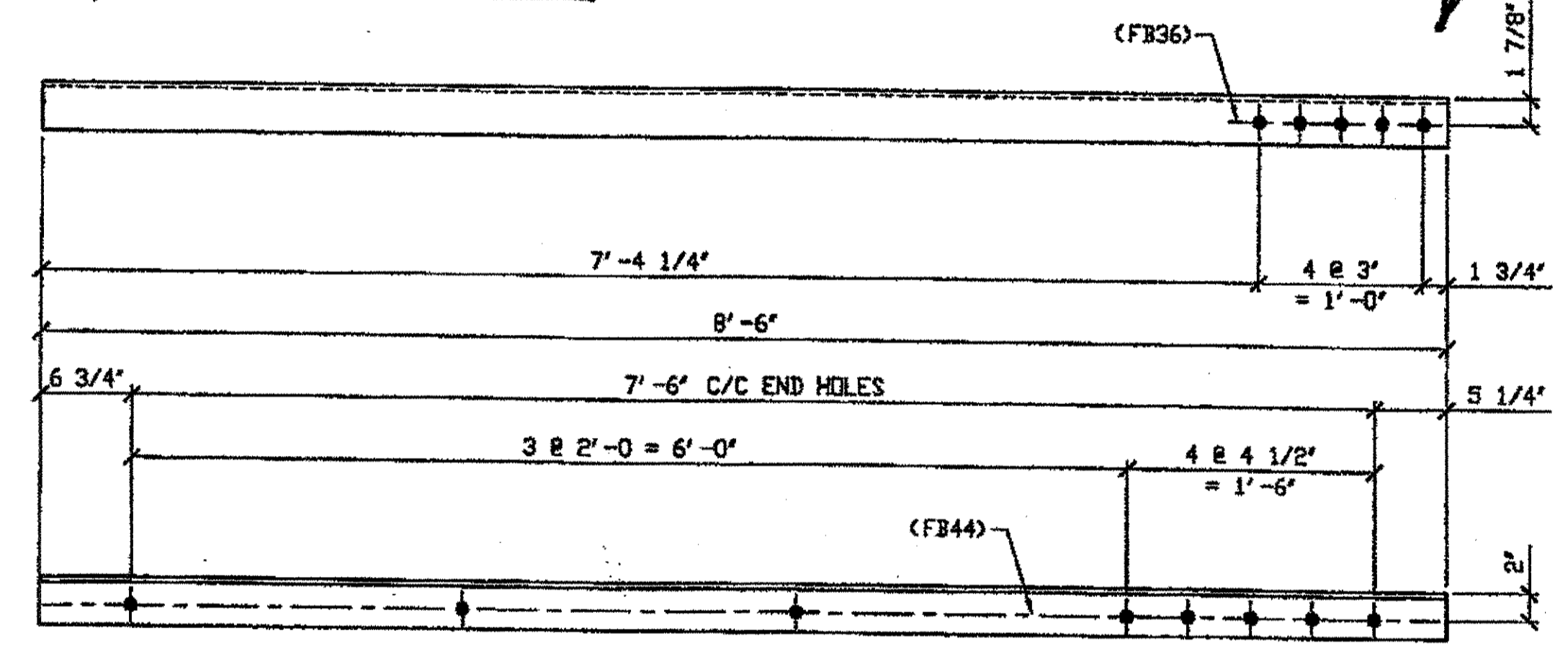
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

DOT ITEM LINE NO. 0106	DOT BID ITEM NO. 863E50000
DATE: 3/22/08	REVISIONS
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS	
SHEET NUMBER: 428	ABN JOB NUMBER: 800010

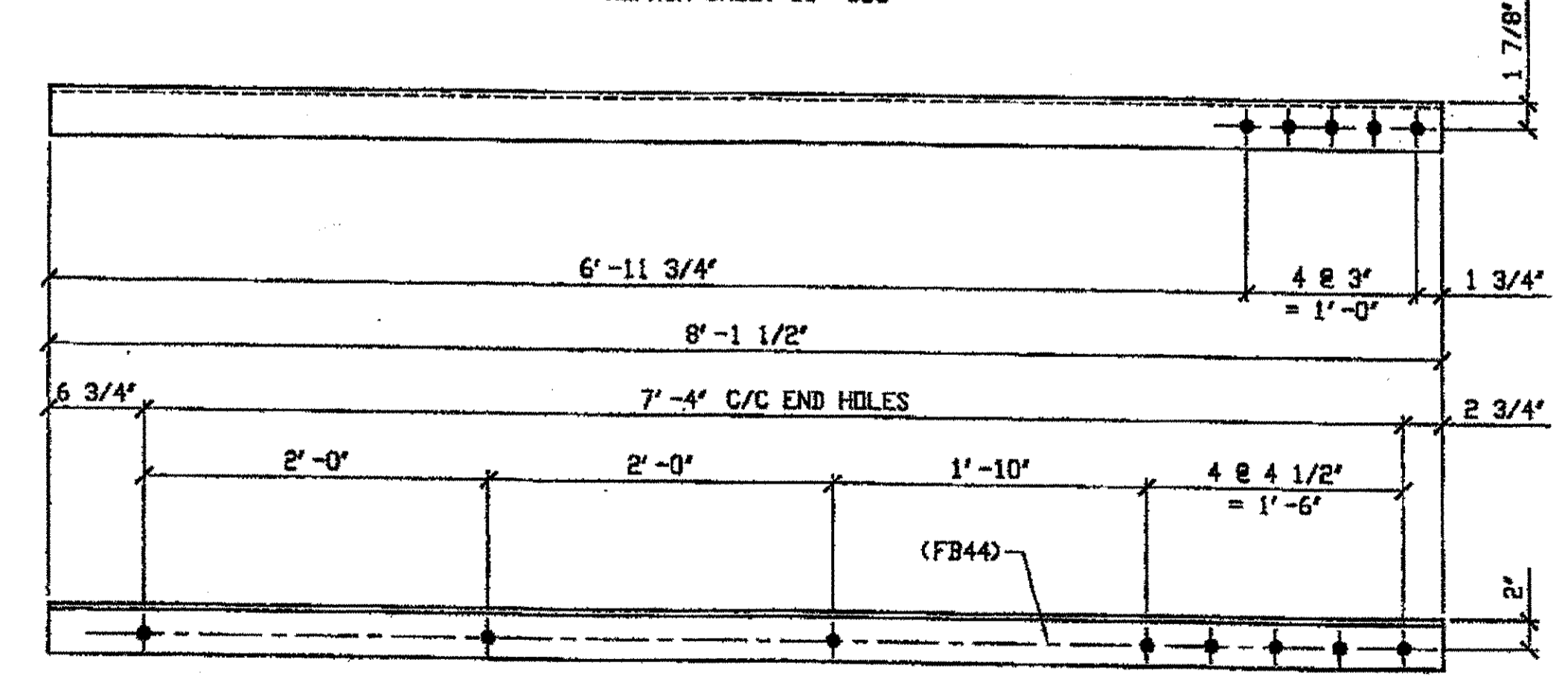
G:\projects\2000\8000\01\Drawings\0428A.dwg  
 Save by rmp at 03:30pm Mar 22 2002  
 Plot by rmp at 06:22am Mar 25 2002  
 Model space plot + Scale = 1/9



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 429A R/L**  
 SPAN 11  
 R-5' NORTH, TOP NORTH 429A/L  
 R-5' NORTH, TOP SOUTH 429A/R  
 ORIG SHIP DRAWING 379-BL153 (R SHOWN)  
 ORIG SHIP MARK A379s R/L  
 REPAIR SHEET 11-194



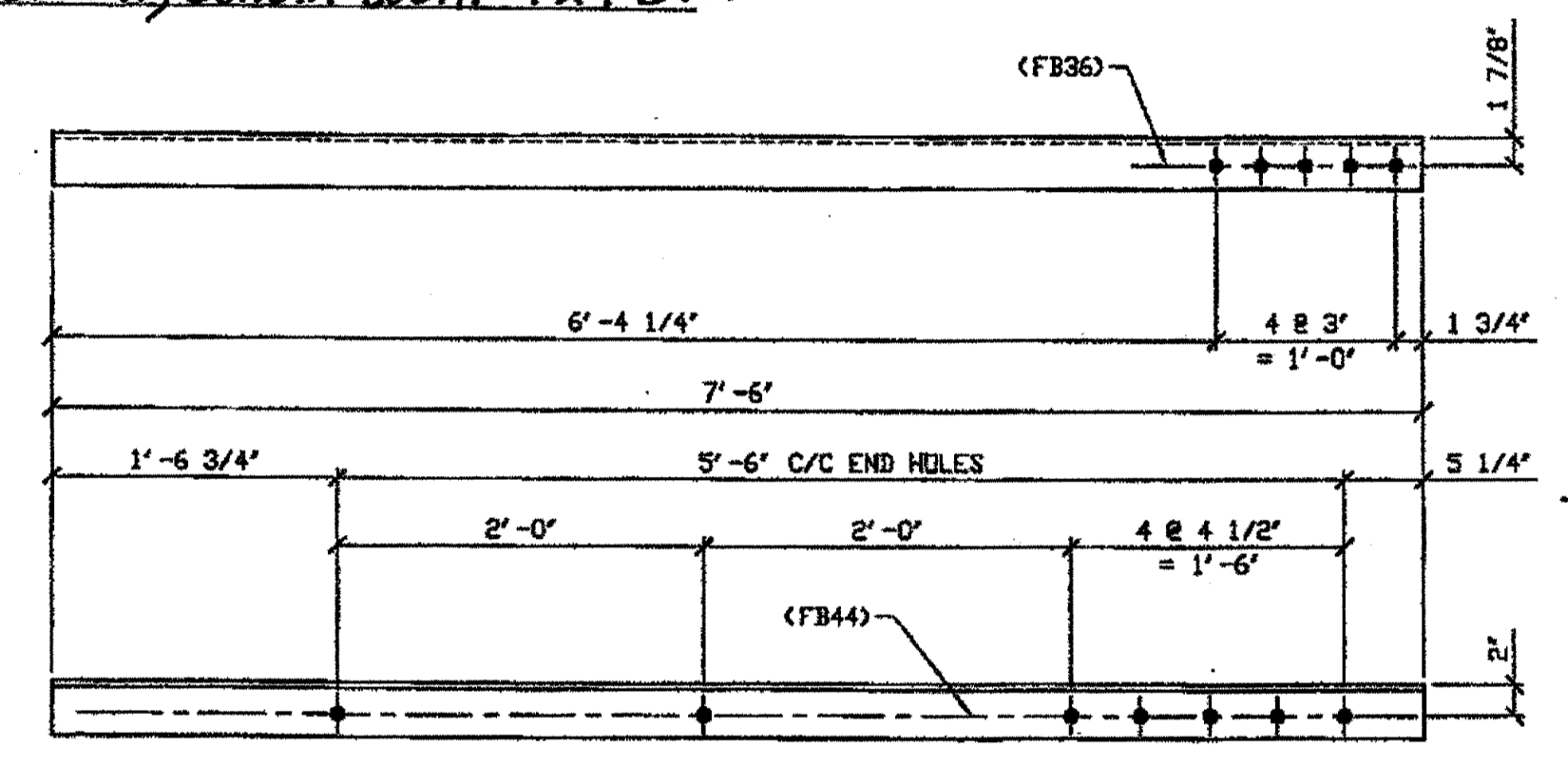
**3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 429B R/L**  
 SPAN 11  
 ORIG SHIP DRAWING 380-BL151 (R SHOWN)  
 ORIG SHIP MARK A380ab R/L  
 REPAIR SHEET 11-306



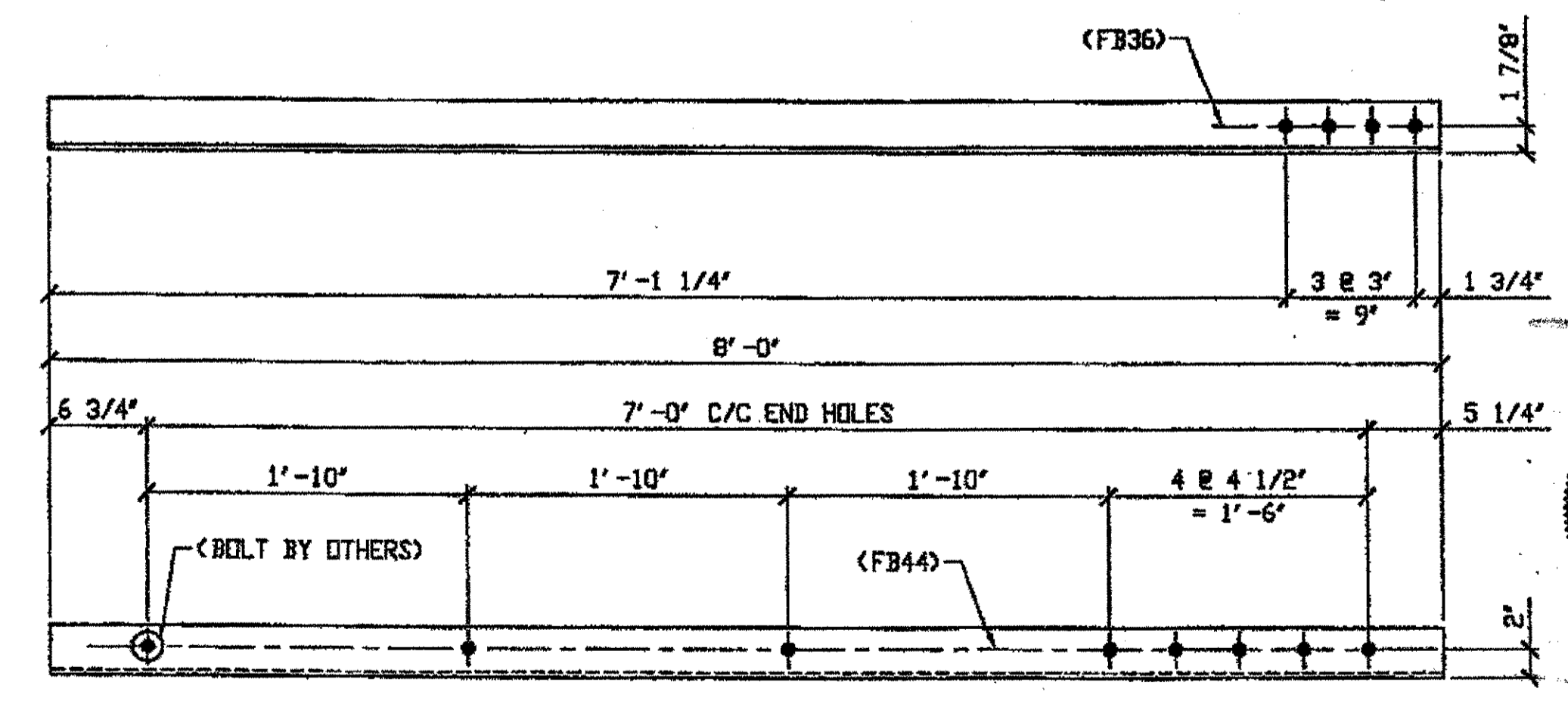
**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 429C R/L**  
 SPAN 11  
 U-T NORTH, TOP SOUTH 429C/R  
 ORIG SHIP DRAWING 380-BL155 (R SHOWN)  
 ORIG SHIP MARK A380ae R/L  
 REPAIR SHEET 11-208 & 335  
 \* FROM N. INT.

- NOTES:
1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 11  
 P-N' SOUTH, TOP NORTH 429 B/L  
 P-N' SOUTH, TOP SOUTH 429 B/R  
 P-N' SOUTH, BOTTOM SOUTH 429 B/L



**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 429D R/L**  
 SPAN 11  
 C-B' SOUTH, TOP NORTH 429 D/L  
 C-B' SOUTH, TOP SOUTH 429 D/R  
 ORIG SHIP DRAWING 380-BL141 (R SHOWN)  
 ORIG SHIP MARK A380m R/L  
 REPAIR SHEET 11-241

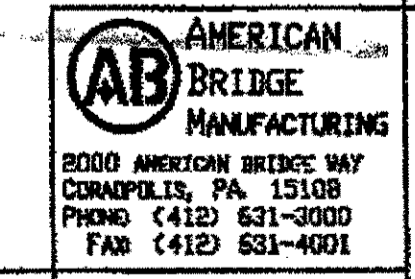


**ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 429F**  
 SPAN 11  
 U-T NORTH, TOP NORTH 429C/L  
 U-T SOUTH, TOP NORTH 429C/L  
 U-T SOUTH, TOP SOUTH 429C/R  
 ORIG SHIP DRAWING 380-BL148  
 ORIG SHIP MARK A380x  
 REPAIR SHEET 11-288

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER LENGTH				
2		429A R/L	2	L4 x 4 x 3/8	7	6		147
3		429B R/L	3	L3 1/2 x 3 1/2 x 3/8	8	6	1/R, 2/L	217
4		429C R/L	4	L3 1/2 x 3 1/2 x 3/8	8	1 1/2	2/R, 2/L	
5		429D R/L	5	L3 1/2 x 3 1/2 x 3/8	7	6	1/R, 1/L	
6		429F	1	L3 1/2 x 3 1/2 x 3/8	8	0		68
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36		1" DIA	0	2 1/2	NOTE 2	
13		FB44		1" DIA	0	3 1/2	NOTE 2	
14								
15								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/02  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

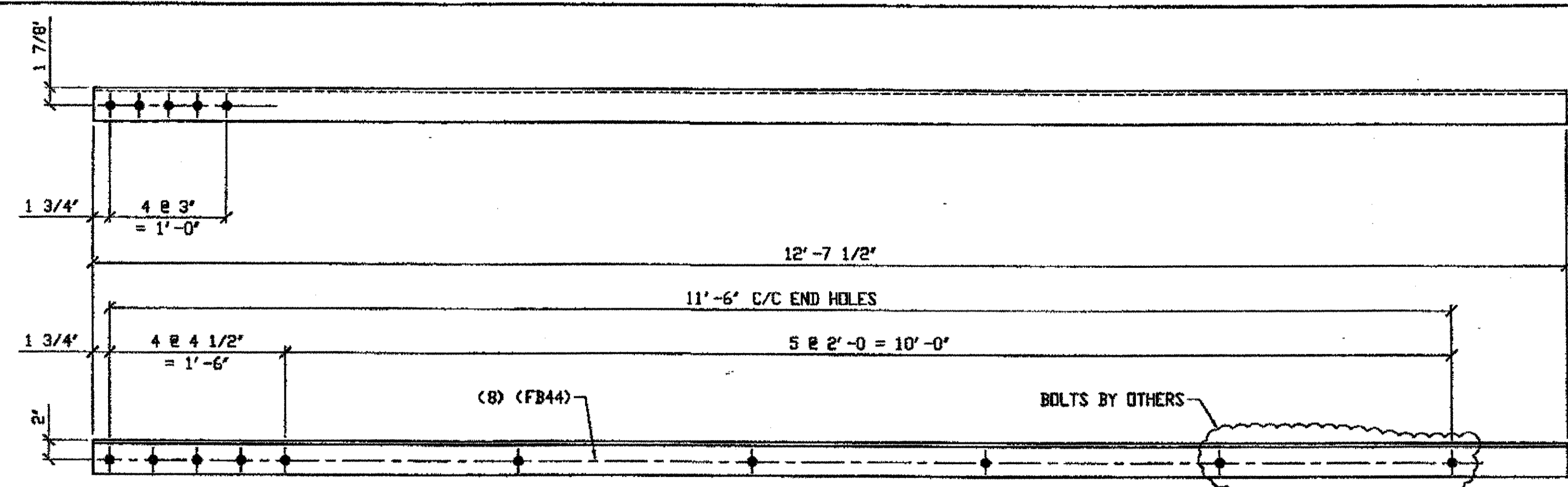
SPAN 11  
 L-K' SOUTH, BOTTOM NORTH 429 F



DOT ITEM LINE NO. 0106		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN 11 REPAIRS			
DRAWN BY:	DATE:	SHEET NUMBER:	
AMV	01/10/02	429	
CHECKED BY:	DATE:	JOB NUMBER:	
GAF	02/25/02	800010	

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

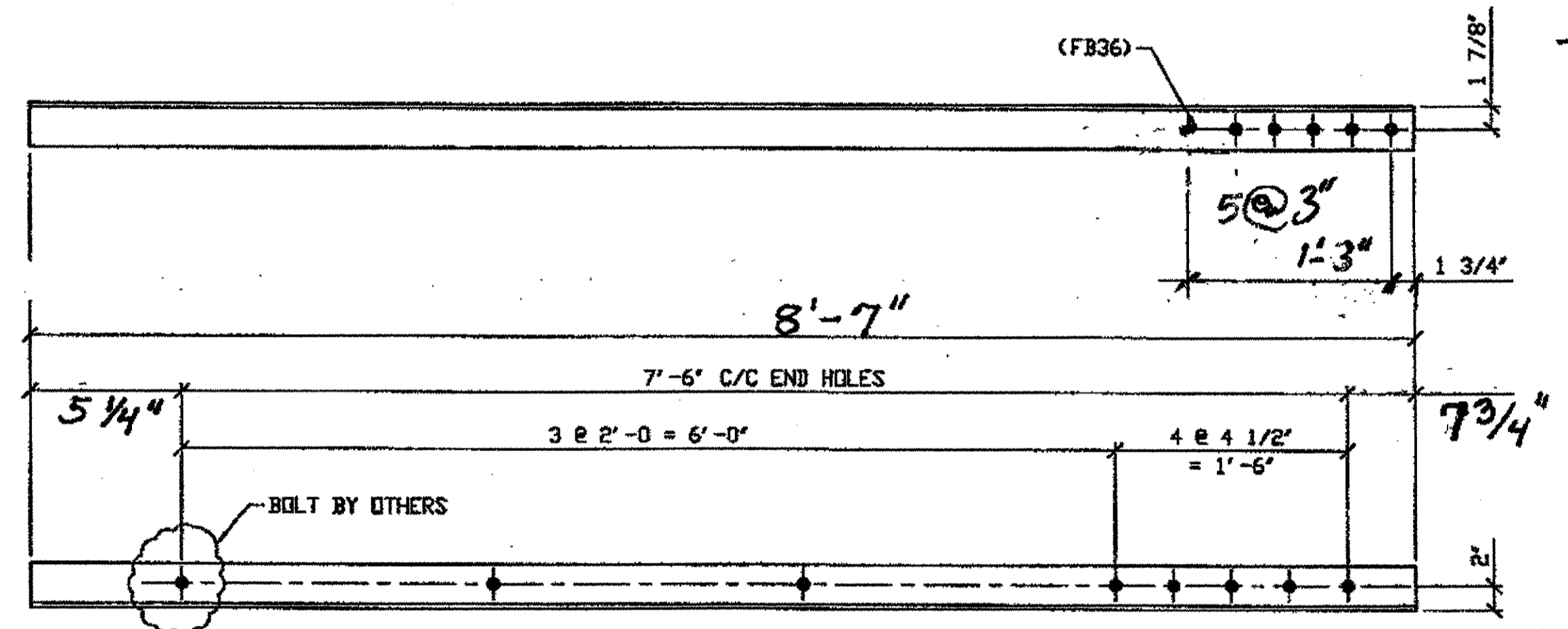
G:\Com\projects\2000\8000010\Drawings\429A.dwg  
 Save by rspir at 02:44pm Feb 27, 2002  
 Plot by rspir at 02:45pm Feb 27, 2002  
 Model space plot + Scale = 1/9



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 430A R/L

ORIG SHOP DRAWING 380-BL141 (R SHOWN)  
 ORIG SHOP MARK A380m R/L  
 DOT ITEM LINE No. 0106 & 0153  
 REPAIR SHEET 11-123

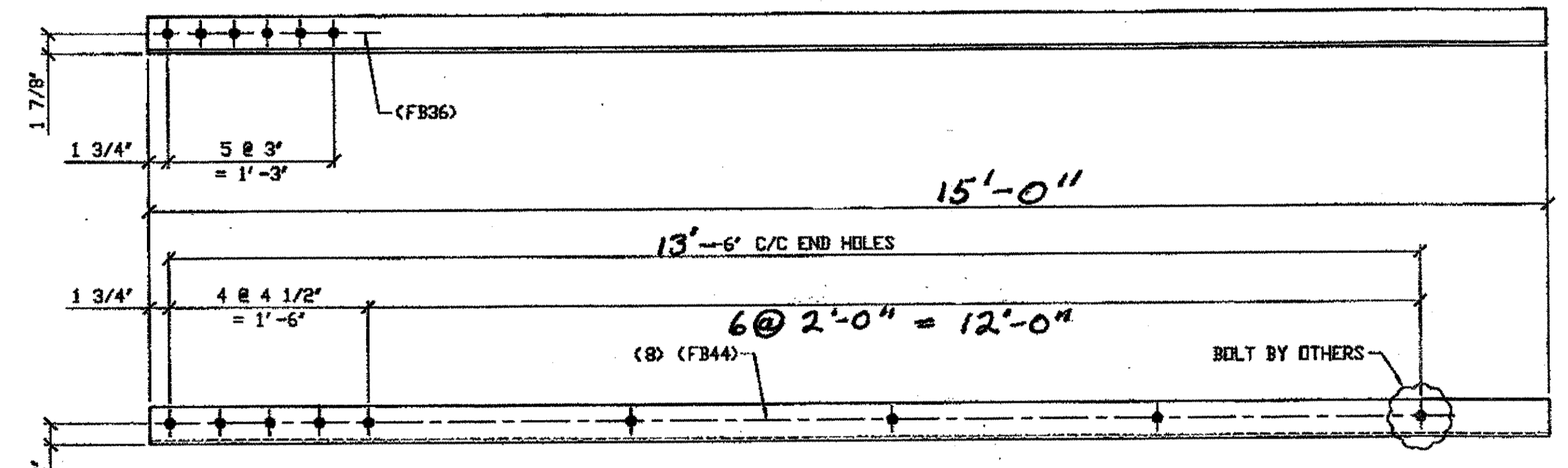
SPAN II  
 B-C' NORTH, TOP SOUTH 430A/R  
 B-C' NORTH, TOP NORTH 430A/L



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 430B

ORIG SHOP DRAWING 380-BL141  
 ORIG SHOP MARK A380m  
 DOT ITEM LINE No. 0106 & 0153  
 REPAIR SHEET 11-241

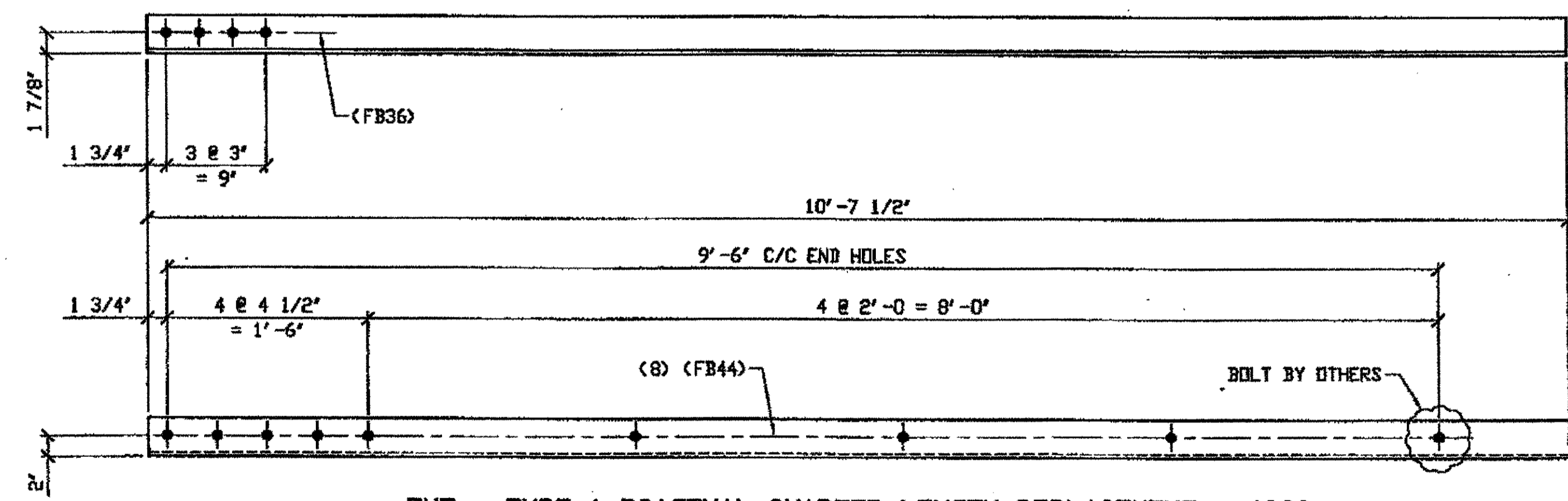
SPAN II  
 P-Q' NORTH TOP SOUTH 430B



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 430D

ORIG SHOP DRAWING 380-BL154  
 ORIG SHOP MARK A380d  
 DOT ITEM LINE No. 0106 & 0153  
 REPAIR SHEET 11-200

SPAN II  
 P-Q' NORTH, TOP NORTH 430D



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 430C

ORIG SHOP DRAWING 380-BL144  
 ORIG SHOP MARK A380p  
 DOT ITEM LINE No. 0106 & 0153  
 REPAIR SHEET 11-143

SPAN II  
 F-G' NORTH, BOTTOM NORTH 430C

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		430A R/L	2	L3 1/2 x 3 1/2 x 3/8	12	7 1/2		215
3		430B	1	L3 1/2 x 3 1/2 x 3/8	8	11		76
4		430C	1	L3 1/2 x 3 1/2 x 3/8	10	7 1/2		90
5		430D	1	L3 1/2 x 3 1/2 x 3/8	10	7 1/2		90
6								
7								
8								
9								
10								
11				FIELD BOLTS				
12		FB36	15	1" DIA	0	2 1/2	NOTE 2	21
13		FB44	24	1" DIA	0	3 1/2	NOTE 2	38
14								
15								
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

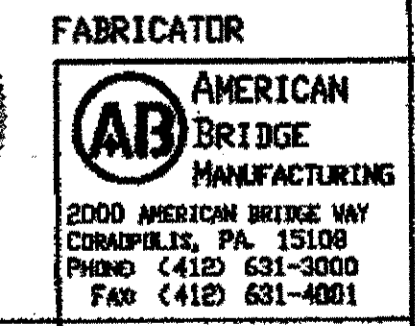
- NOTES:
- OPEN HOLES ARE  $\leq 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

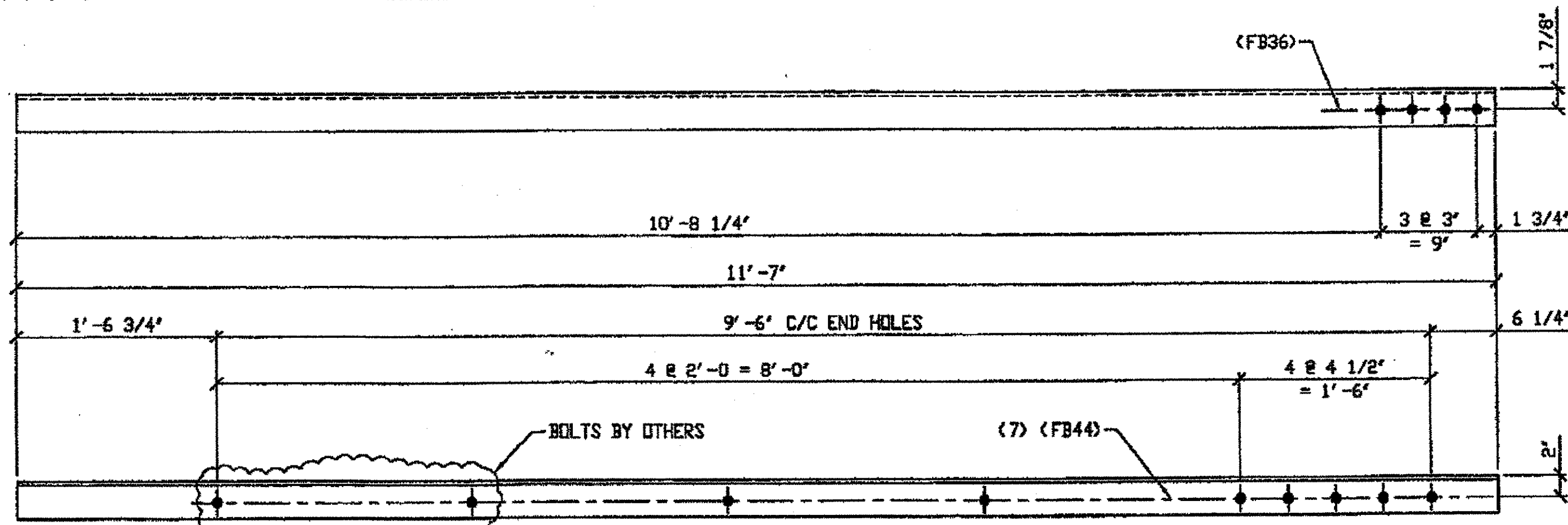


IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 AMW 01/11/02  
 CHECKED BY: DATE  
 GAF 02/26/02

DOT ITEM LINE NO. 0106 & 0153 DOT BID ITEM NO. 863E50000 & 863E90000	
REV. DATE	DESCRIPTION REVISIONS BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
SPAN 11 REPAIRS	
SHEET NUMBER 430	ABM JOB NUMBER 800010

G:\Control\000\800010\Drawings\AR\430A.dwg  
 Save by Psp. at 02:29pm Feb 27, 2002  
 Plot by sps at 02:43pm Feb 27, 2002  
 Model space plot & Scale = 1/7

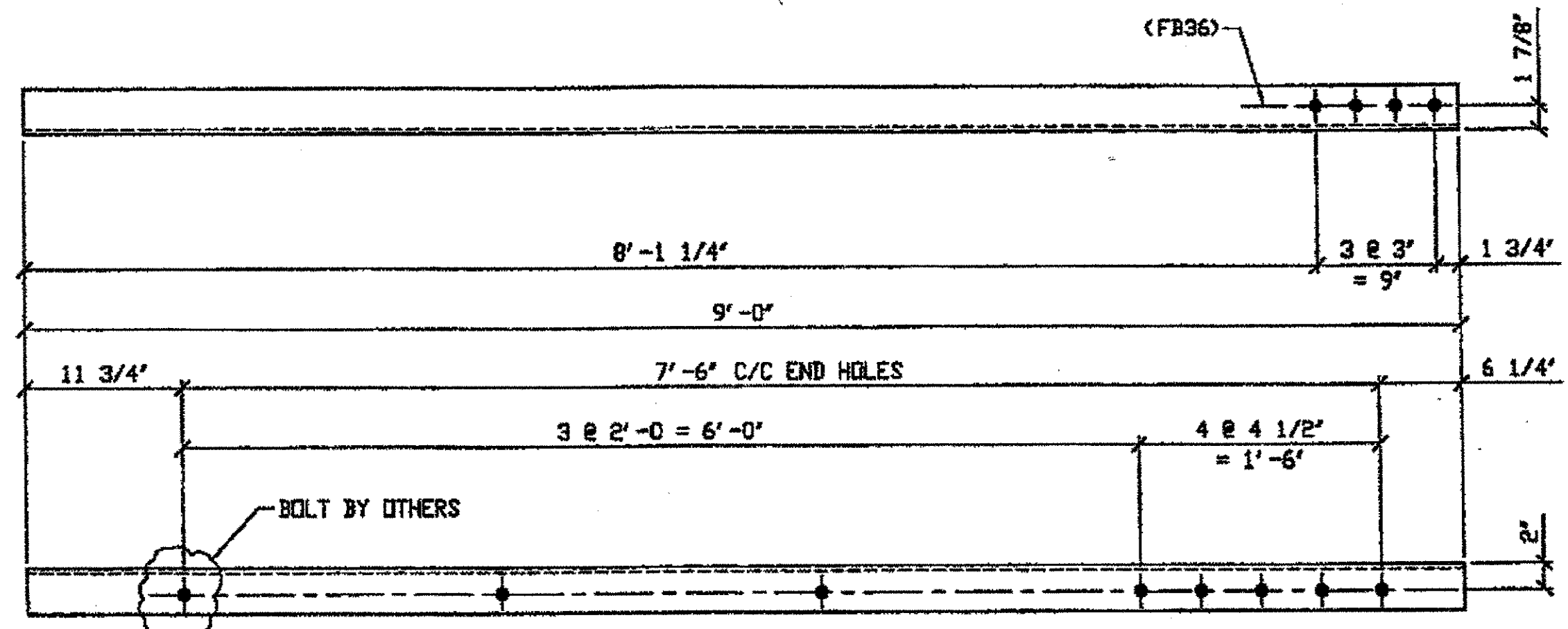




ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 431A

ORIG SHOP DRAWING 380-BL144  
ORIG SHOP MARK A380p R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-266

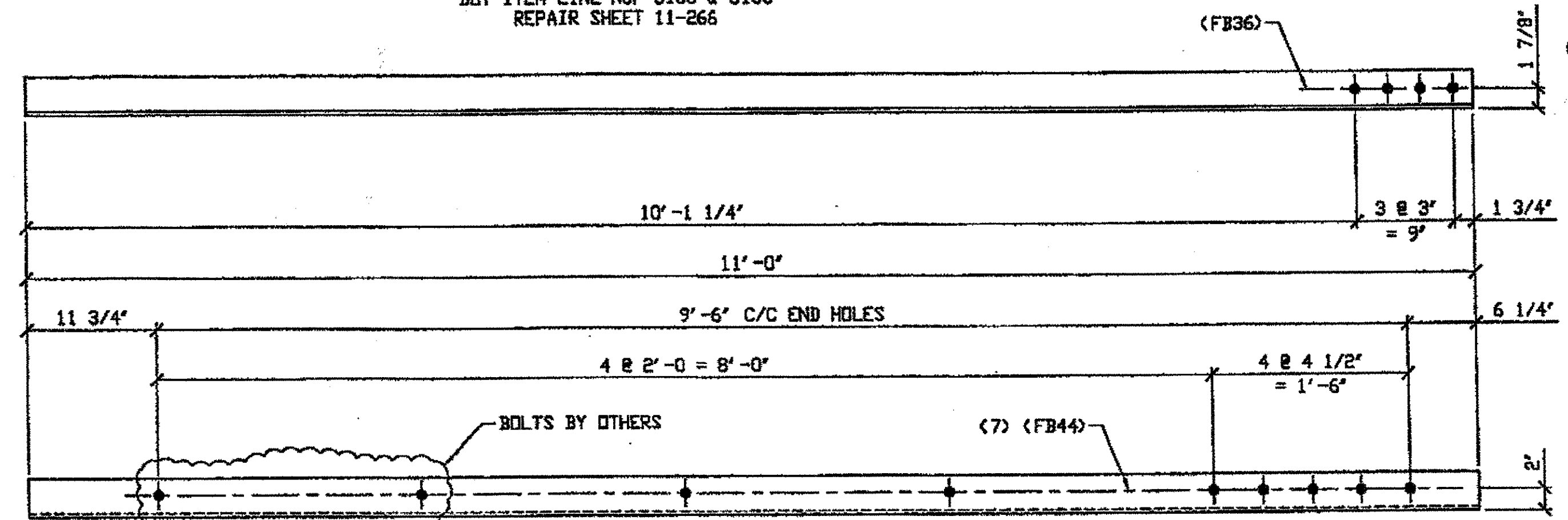
SPAN 11 G-F' SOUTH, TOP SOUTH 431A



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 431B

ORIG SHOP DRAWING 380-BL144  
ORIG SHOP MARK A380p R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-266

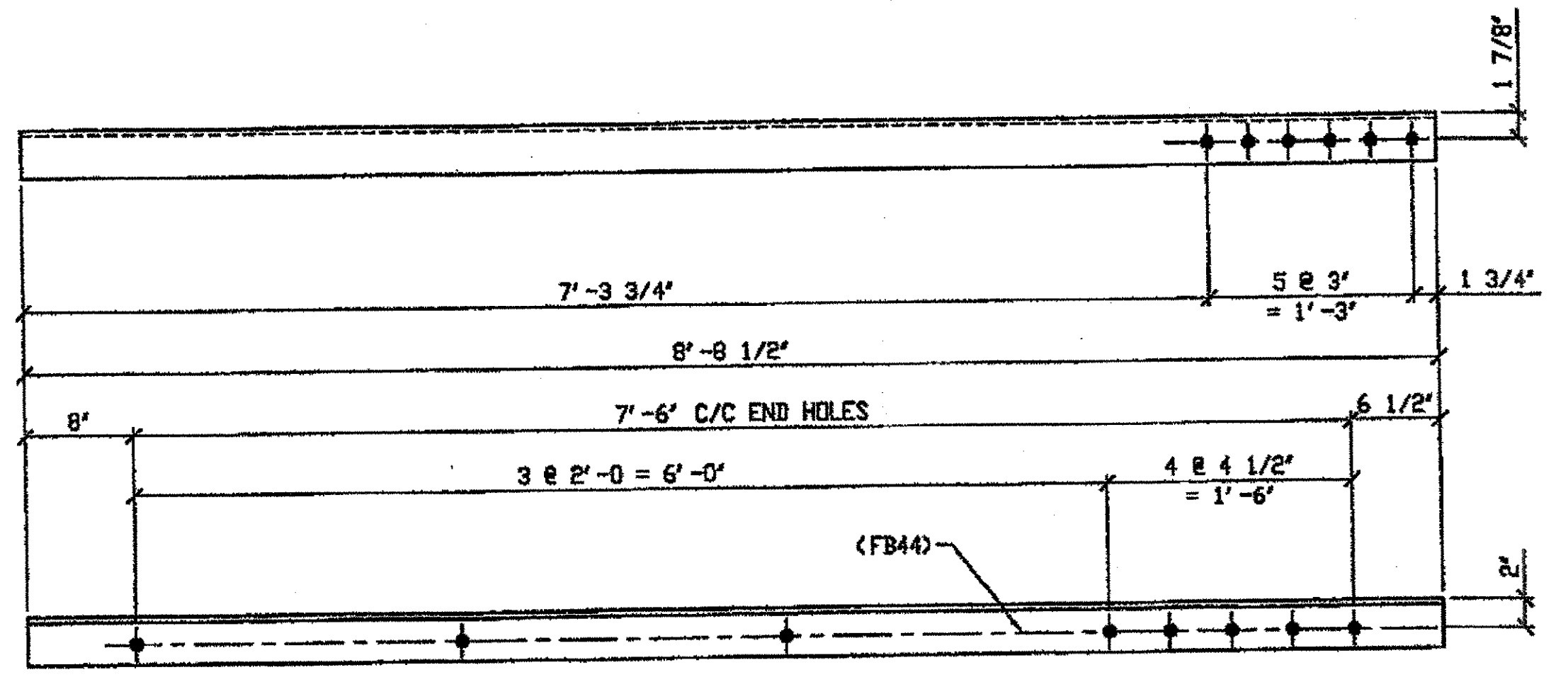
SPAN 11 G-F' SOUTH, TOP NORTH 431B



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 431C

ORIG SHOP DRAWING 380-BL144  
ORIG SHOP MARK A380p R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-266

SPAN 11 G-F' SOUTH, BOTTOM NORTH 431C



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 431D R/L (R SHOWN)

ORIG SHOP DRAWING 380-BL152  
ORIG SHOP MARK A380ac R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-316, 317

SPAN 11  
Q-P' SOUTH, BOTTOM NORTH 431D/R  
Q-P' SOUTH, TOP NORTH 431D/L  
Q-P' SOUTH, TOP SOUTH 431D/R

DOT ITEM LINE NO. 0106 & 0153  
DOT BID ITEM NO. 863E50000 & 863E90000

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER: 431			ADN JOB NUMBER: 800010



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CINCINNATI, OH 45202  
PHONE (412) 621-3000  
FAX (412) 621-4001

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

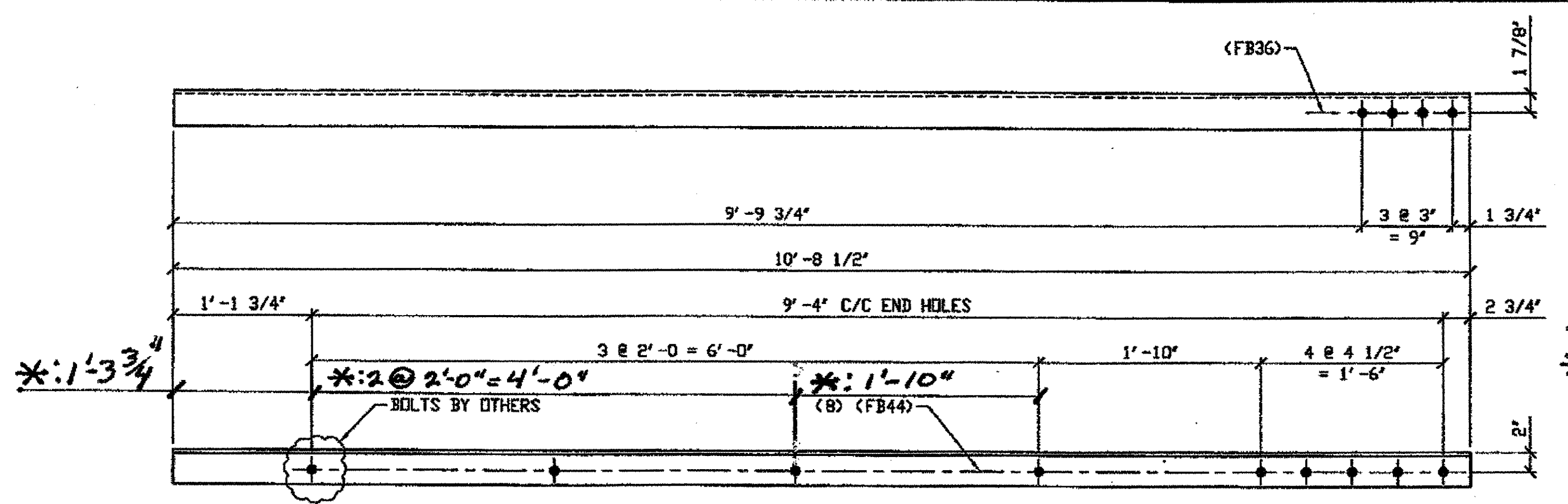
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
AMW 01/11/02  
CHECKED BY: DATE  
GAF 02/26/02

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		431A	1	L3 1/2 x 3 1/2 x 3/8	11	7		98
3		431B	1	L3 1/2 x 3 1/2 x 3/8	9	0		77
4		431C	1	L3 1/2 x 3 1/2 x 3/8	11	0		94
5		431D R/L	3	L3 1/2 x 3 1/2 x 3/8	8	8 1/2	2/R, 1/L	222
6								
7								
8				FIELD BOLTS				
9		FB36	12	1" DIA	0	2 1/2	NOTE 2	17
10		FB44	22	1" DIA	0	3 1/2	NOTE 2	35
11								
12								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

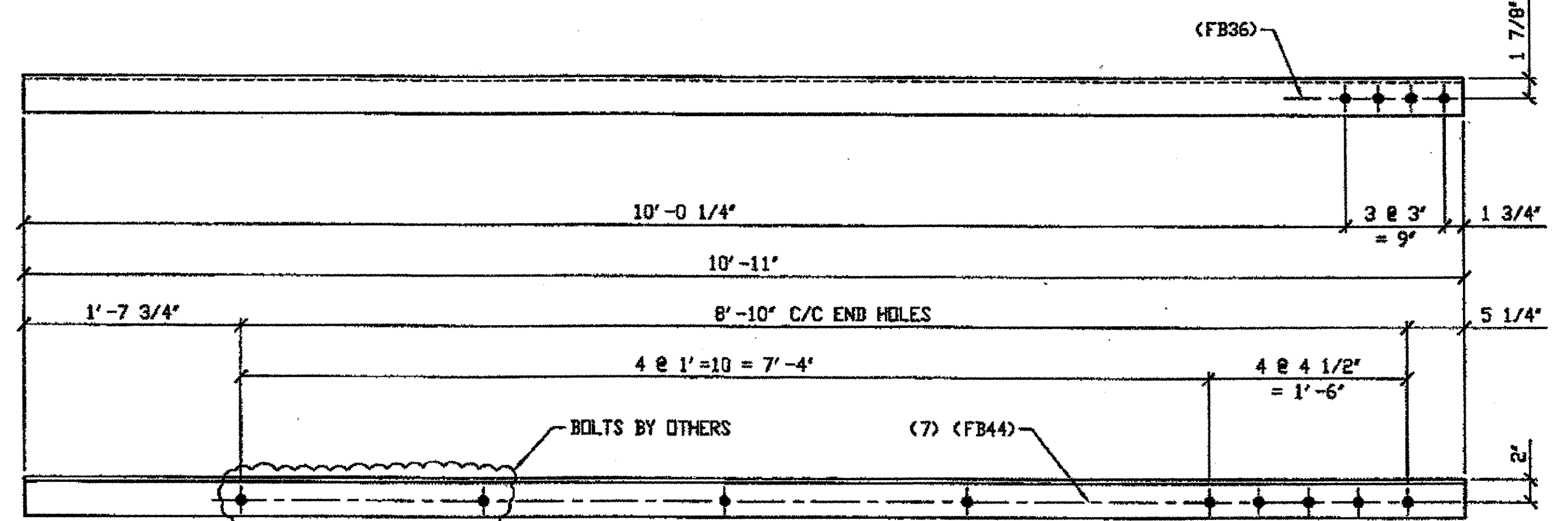
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

E:\Contracts\2000\800010\Drawings\DA31A.dwg  
 Save by ASP on 01/11/02 at 01:48pm Feb 27, 2002  
 Plot by ASP on 02/26/02 at 02:46pm Feb 27, 2002  
 Model space plot + Scale = 1/9



**4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 432A R/L**  
(R SHOWN)

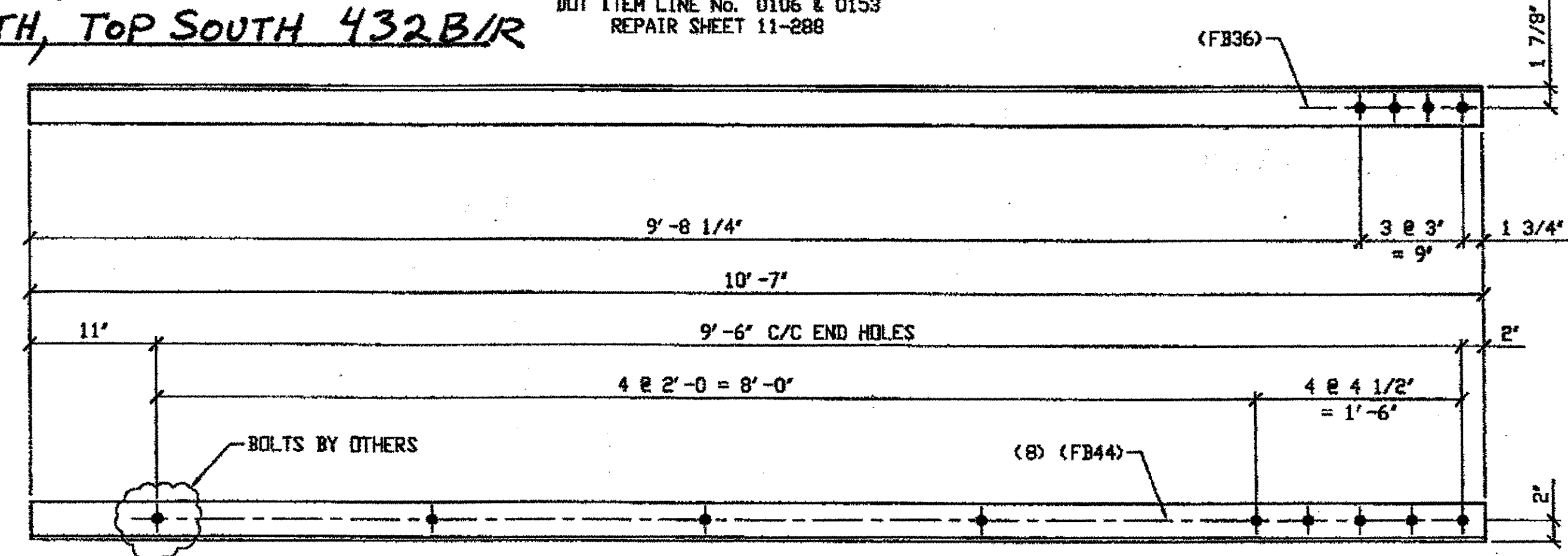
ORIG SHOP DRAWING 380-BL147  
ORIG SHOP MARK A380x R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-284



**SPAN II**  
**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 432B R/L**  
(R SHOWN)

**L-K' SOUTH, TOP NORTH 432B/L**  
**L-K' SOUTH, TOP SOUTH 432B/R**

ORIG SHOP DRAWING 380-BL148  
ORIG SHOP MARK A380x R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-288



**ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 432C**

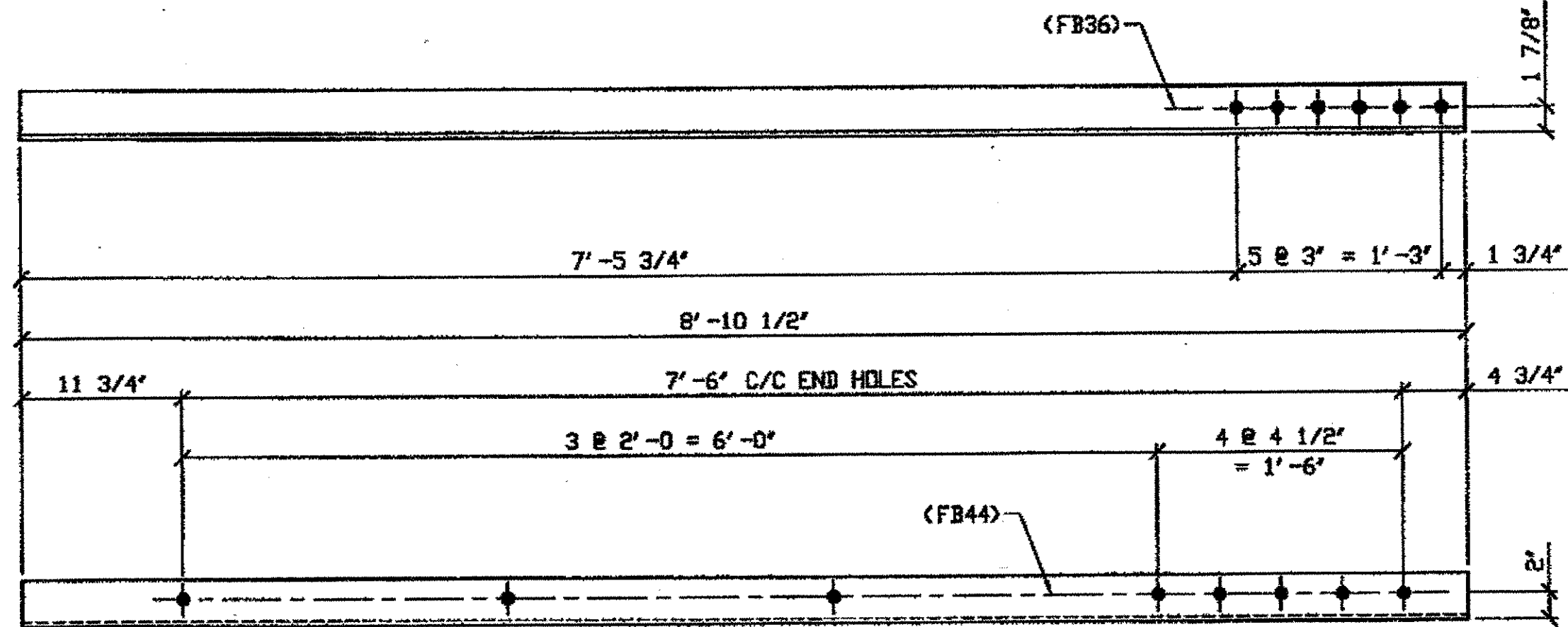
ORIG SHOP DRAWING 380-BL149  
ORIG SHOP MARK A380y R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11-295

**SPAN II**  
**M-L' SOUTH, BOTTOM SOUTH 432C**

**SPAN II**  
**K-J' SOUTH, TOP NORTH 432A/L**  
**K-J' SOUTH, TOP SOUTH 432A/R**  
**\*B-A' SOUTH, TOP SOUTH 432A/R**  
**\*B-A' SOUTH, TOP NORTH 432A/L**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER LENGTH				
2		432A R/L	4	L3 1/2 x 3 1/2 x 3/8	10	8 1/2	3/R 2/L	
3		432B R/L	2	L3 1/2 x 3 1/2 x 3/8	10	11		186
4		432C	1	L3 1/2 x 3 1/2 x 3/8	10	7		90
5		432D	1	L3 1/2 x 3 1/2 x 3/8	8	10 1/2		75
6								
7								
8								
9								
10				FIELD BOLTS				
12		FB36	26	1" DIA	0	2 1/2	NOTE 2	36
13		FB44	31	1" DIA	0	3 1/2	NOTE 2	50
14								
15								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



**ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 432D**

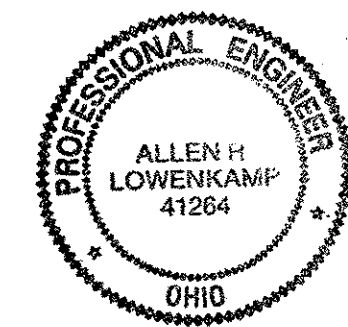
ORIG SHOP DRAWING 380-BL154  
ORIG SHOP MARK A380ad R/L  
DOT ITEM LINE No. 0106 & 0153  
REPAIR SHEET 11- 329

**SPAN II**  
**T-S' SOUTH, BOTTOM NORTH 432D**

DOT ITEM LINE NO. 0106 & 0153  
DOT BID ITEM NO. 863E50000 & 863E90000

G:\Contract\2000\800010\Drawings\3432A.dwg  
Save by rjpr at 01:50pm Feb 27, 2002  
Plot by gfos at 02:47pm Feb 27, 2002  
Model space plot + Scale = 1/9

**O.D.O.T. DIST. 12**  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general convenience with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

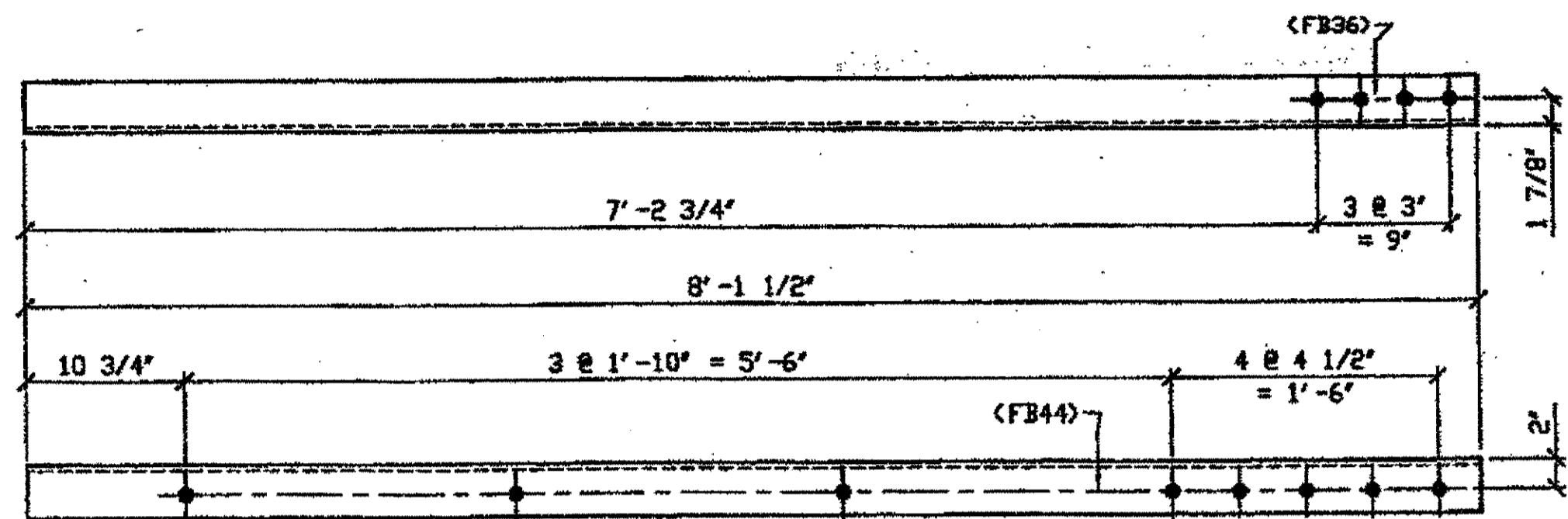


FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORADOLIS, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION, INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE: E. L. SMITH  
DRAWN BY: DATE: AMV 01/11/02  
CHECKED BY: DATE: GAF 02/26/02

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS			
SHEET NUMBER: 432			ARB JOB NUMBER: 800010



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 433A

ORIG SHOP DWG 293-BL133  
ORIG SHOP MARK A293d  
DOT ITEM No. 0106  
REPAIR SHEET 12-157

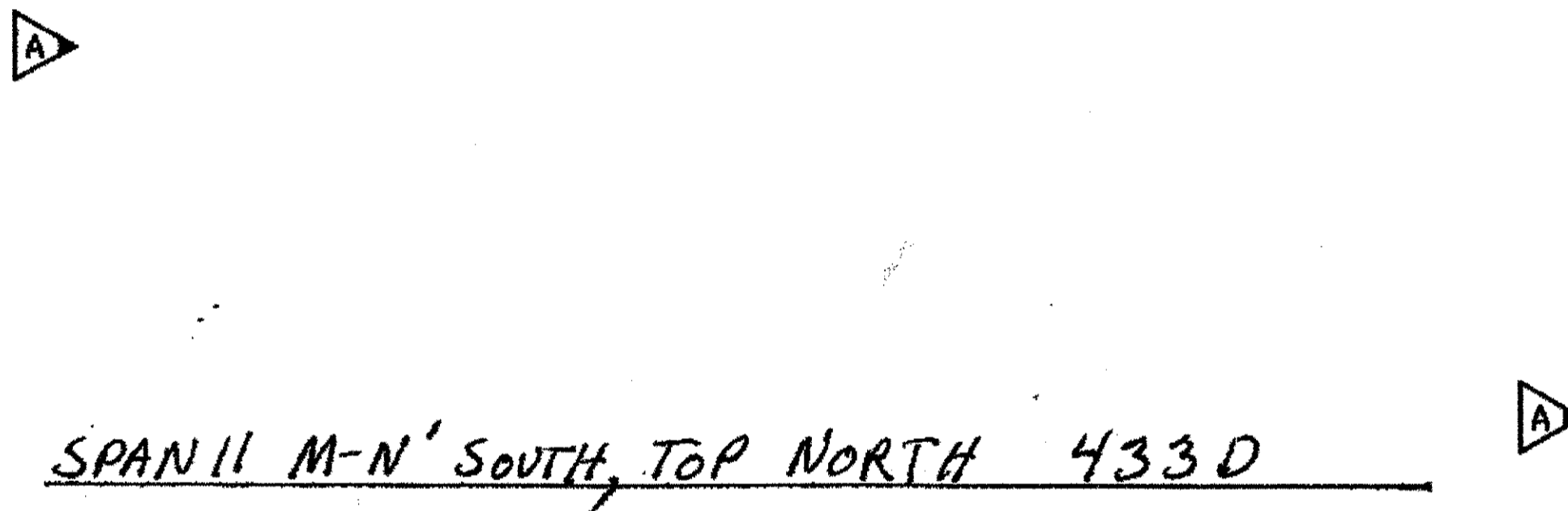
SPAN 12 D-C' SOUTH, TOP NORTH 433A

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2								
3	433A	1		L 3 1/2 x 3 1/2 x 3/8	8	1 1/2		69
4								
5				TYPE 2 DIAGONAL QUARTER LENGTH				
6								
7	433D	1		L3 1/2 x 3 1/2 x 3/8	8	1 1/2		69
8	433F	1		L3 1/2 x 3 1/2 x 3/8	8	1 1/2		69
9								
10				SPLICE PLATE				
11	433G			PL 1/2 x 2 7/16	0	10		
12	* 433H			PL 1/2 x 3 1/2	0	10	PLAIN MAT'L	
13								
14				FIELD BOLTS				
15	FB36			1" DIA	0	2 1/2	NOTE 2	
16	FB44			1" DIA	0	3 1/2	NOTE 2	
17	FB46			1" DIA	0	3 3/4	NOTE 2	
18								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

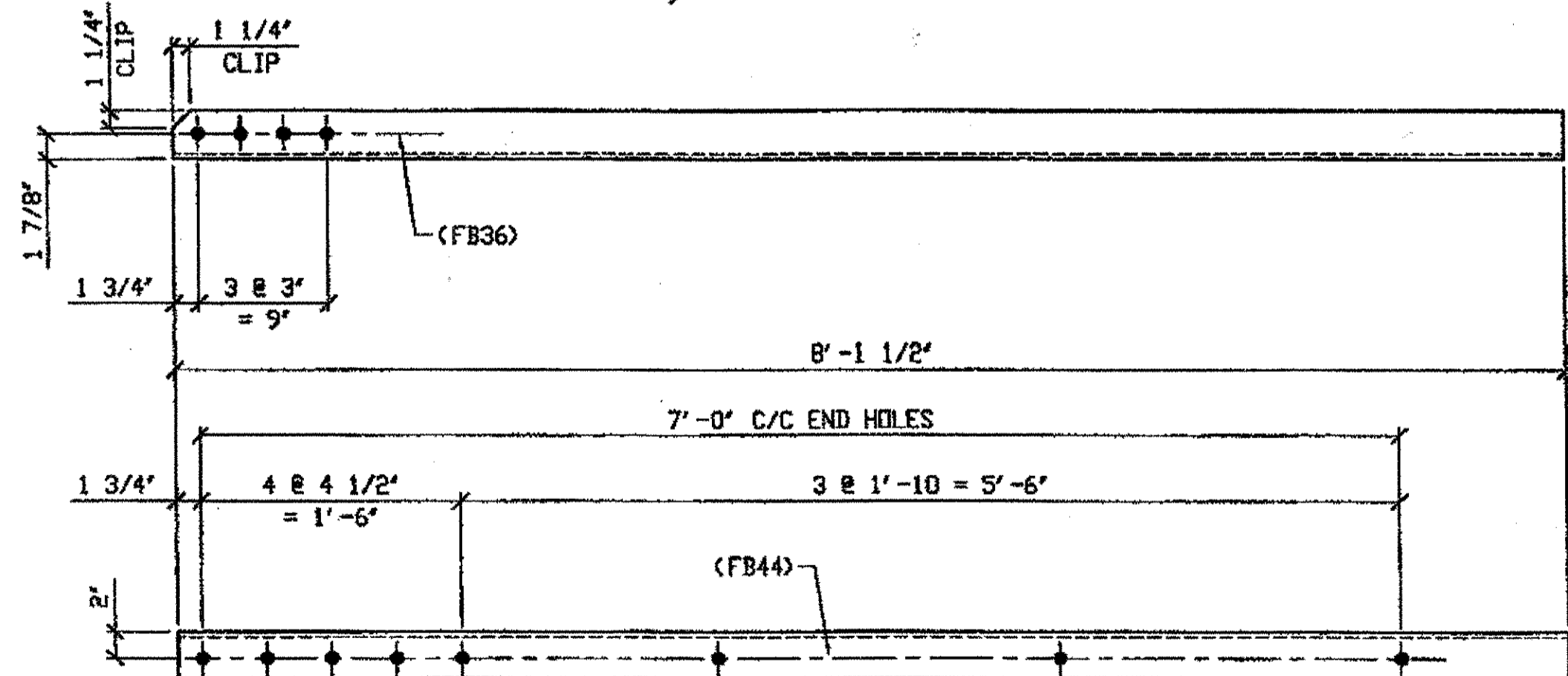
\* DOT ITEM LINE No. 0109

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

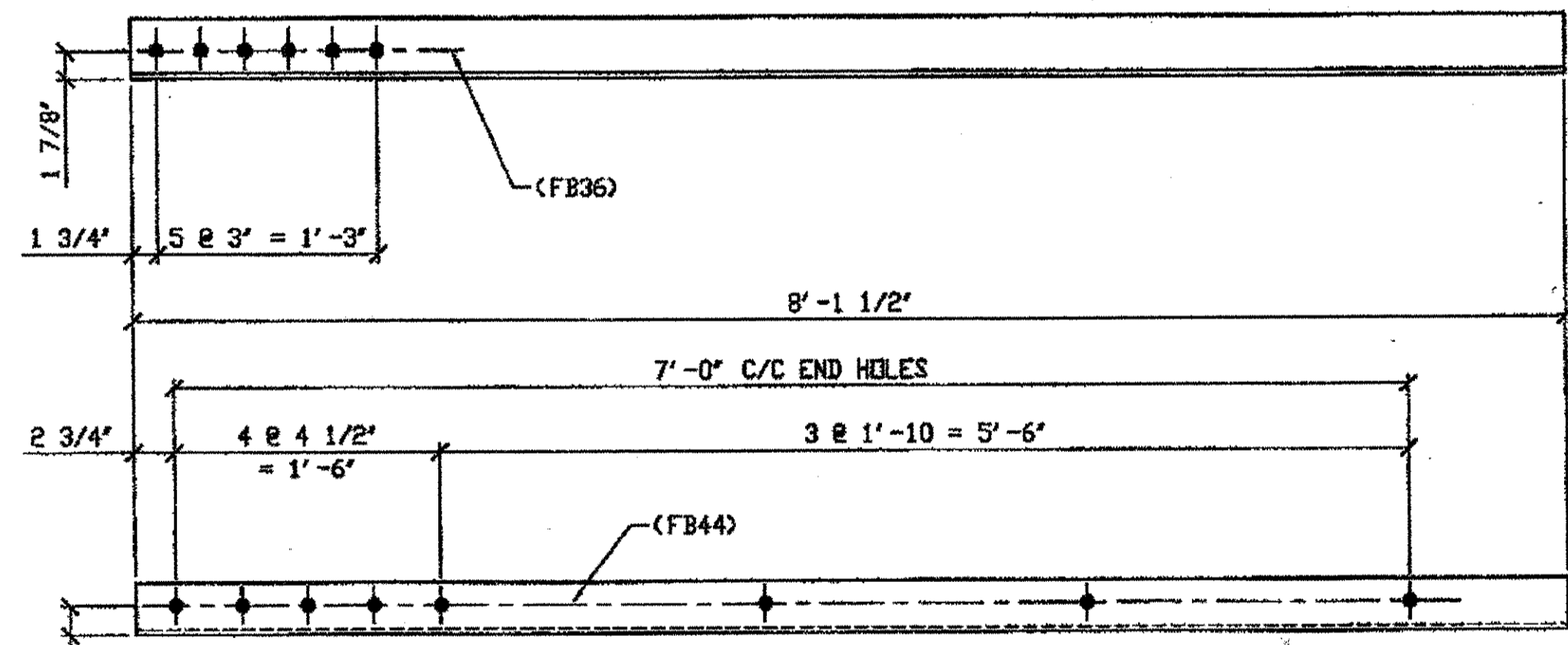


SPAN 11 M-N' SOUTH, TOP NORTH 433D



ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 433D

ORIG SHOP DRAWING 165-BL54  
ORIG SHOP MARK A165w R/L  
DOT ITEM LINE No. 0110  
REPAIR SHEET 11-297

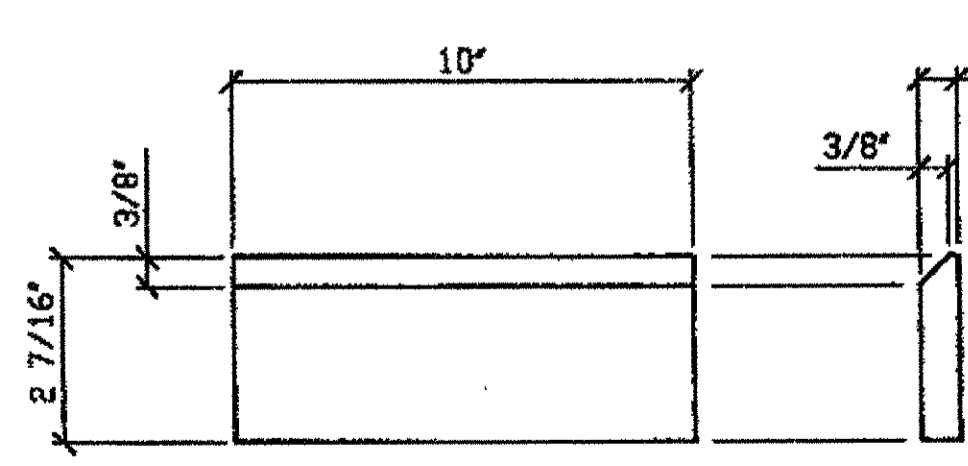


ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 433F

ORIG SHOP DRAWING 294-BL113  
ORIG SHOP MARK A294F R/L  
DOT ITEM LINE No. 0110  
REPAIR SHEET 11-204

SPAN 11  
T-S' NORTH BOT. SOUTH 433F

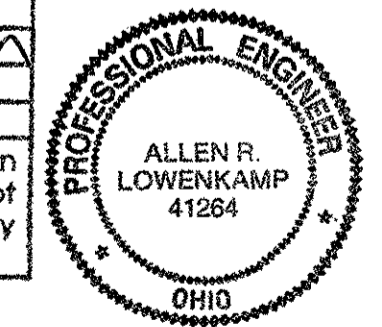
G:\Contracts\2000\800010\Drawings\433A.dwg  
Save by rppr at 03:30pm Mar 22, 2002  
Plot by gfos at 08:22am Mar 23, 2002  
Model space plot + Scale = 1/9



4 - SPLICE PLATE - 433G

(IDENTICAL TO 206H)  
(ITEM No. 0109)

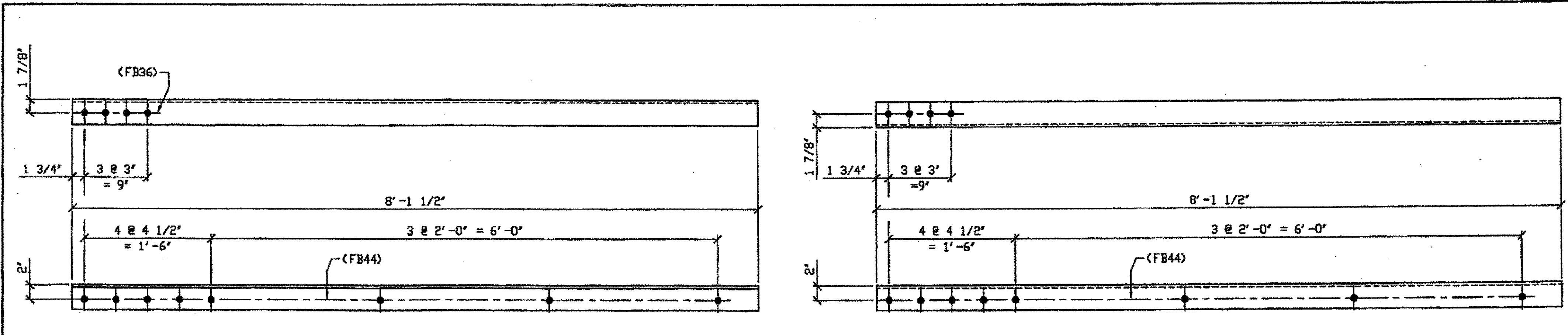
O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORPUS CHRISTI, TX 78408  
PHONE (412) 631-3000  
FAX (412) 631-4001

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E5000G	
NO.	DATE	DESCRIPTION	BY
A	3/22/02	REVISED PER APPROVAL COMMENTS	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN REPAIRS			
IN CHARGE: D. L. SMITH		DRAWN BY: DATE	SHEET NUMBER
		AMW 01/12/02	433
		CHEKED BY: DATE	AWN JOB NUMBER
		GAF 02/26/02	800010



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 464A R/L  
(R SHOWN)

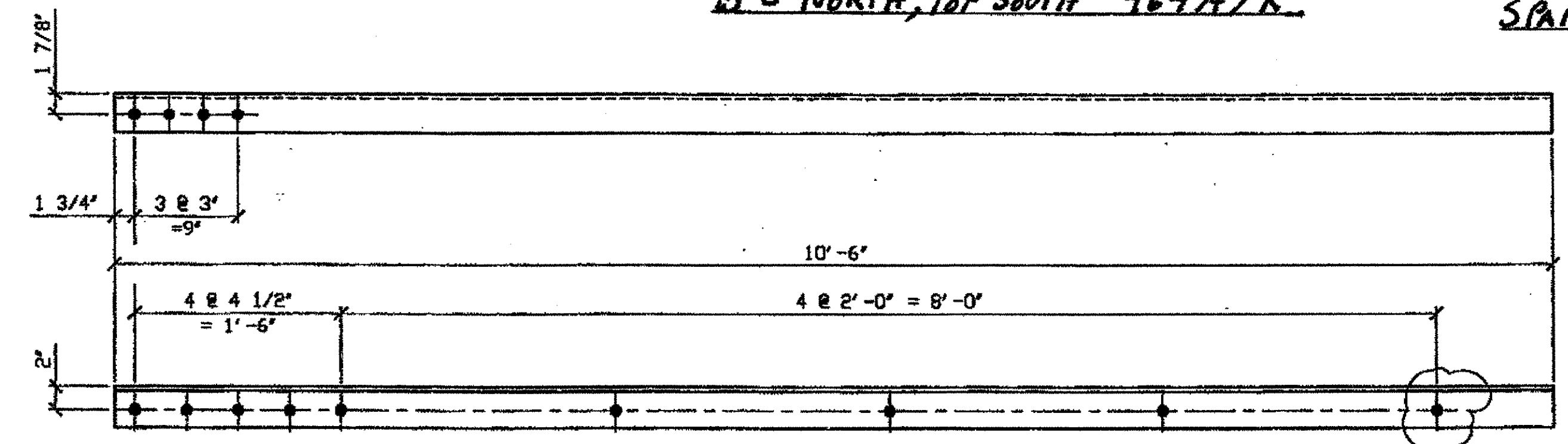
ORIG SHOP DWG 293-BL132  
ORIG SHOP MARK A293c R/L  
DOT ITEM No. 0106  
REPAIR SHEET 12-107

SPAN 12  
B-C' NORTH, TOP NORTH 464A/L  
B-C' NORTH, TOP SOUTH 464A/R

ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 464B

ORIG SHOP DWG 293-BL133  
ORIG SHOP MARK A293d R/L  
DOT ITEM No. 0106  
REPAIR SHEET 12-116

SPAN 12 C-D' NORTH, TOP NORTH 464B

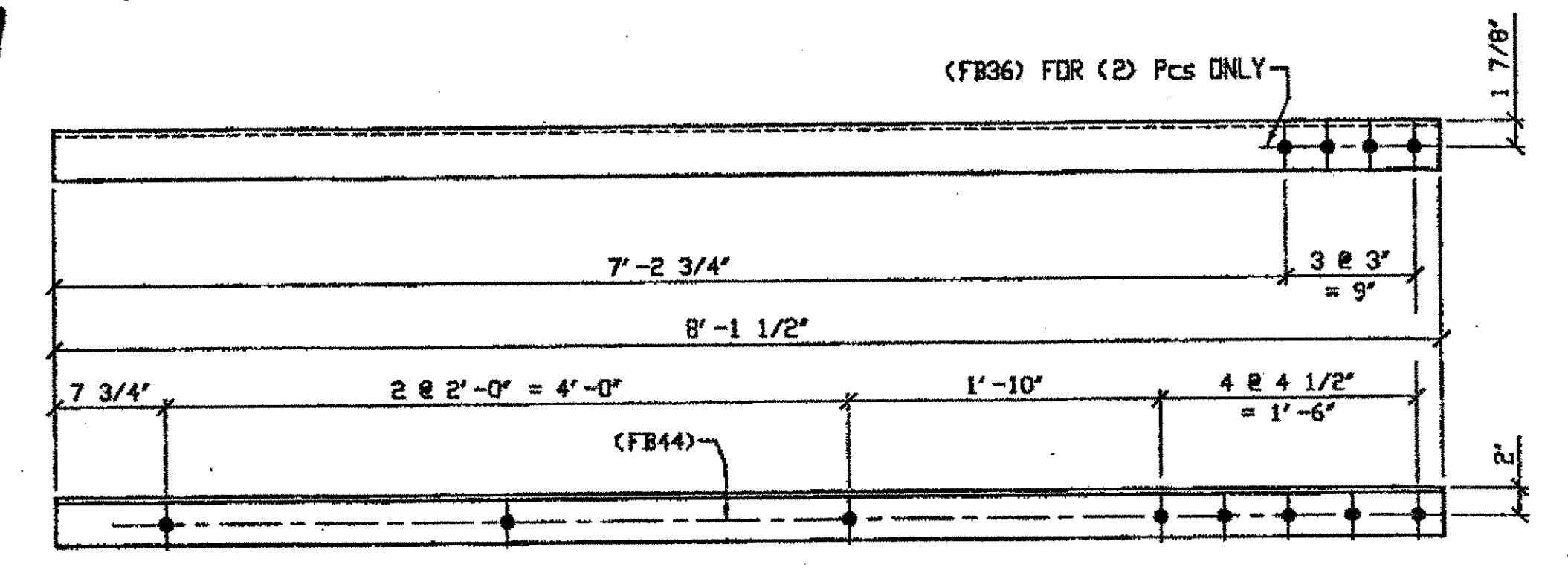


2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 464C R/L  
(R SHOWN)

ORIG SHOP DWG 293-BL133  
ORIG SHOP MARK A293d R/L  
DOT ITEM No. 0106 & 0152  
ITEM LINE No. 0152, BID ITEM No. 863E90000  
REPAIR SHEET 12-116

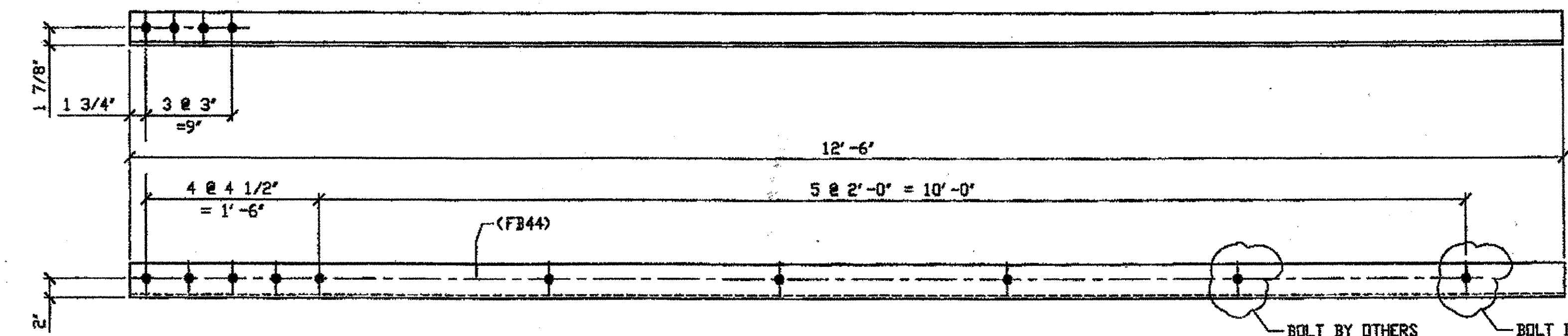
SPAN 12  
C-D' NORTH, BOTTOM SOUTH 464C/L  
C-D' NORTH, TOP SOUTH 464C/R

SPAN 12  
C-B' SOUTH, TOP NORTH 464F/L  
C-B' SOUTH, TOP SOUTH 464F/R  
C-B' SOUTH, BOTTOM SOUTH 464F/L  
C-B' SOUTH, BOTTOM NORTH 464F/R



4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 464F R/L  
(R SHOWN)

ORIG SHOP DWG 293-BL132  
ORIG SHOP MARK A293c R/L  
DOT ITEM No. 0106  
REPAIR SHEET 12-152



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 464D

ORIG SHOP DWG 293-BL133  
ORIG SHOP MARK A293d R/L  
DOT ITEM No. 0106 & 152  
ITEM LINE No. 0152, BID ITEM No. 863E90000  
REPAIR SHEET 12-116

SPAN 12 C-D' NORTH, BOTTOM NORTH 464D

DATE ENGR. & CONTINUED  
By \_\_\_\_\_  
DEC 10 2001

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER LENGTH				
2		464A R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R; 1/L	138
3		464B	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69
4		464C R/L	2	L 3 1/2 X 3 1/2 X 3/8	10	6	1/R; 1/L	179
5		464D	1	L 3 1/2 X 3 1/2 X 3/8	12	6		106
6		464F R/L	4	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	2/R; 2/L	276
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18								
19		FB36	16	1" DIA	0	2 1/2	NOTE 2	22
20		FB44	40	1" DIA	0	3 1/2	NOTE 2	64
PLATE N/A					PIPE N/A		FITTINGS N/A	
SHAPES A36					FLGS. N/A		BOLTS NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 1/4/02 BY Edg/RS

O.D.O.T. DIST. 12  
ACCEPTED 4/9/01 PSM  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRINGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CUMBERSVILLE, PA 15106  
PHONE: (412) 631-3000  
FAX: (412) 631-4001  
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 7/31/01  
CHECKED BY: DATE  
GAF 10/23/01

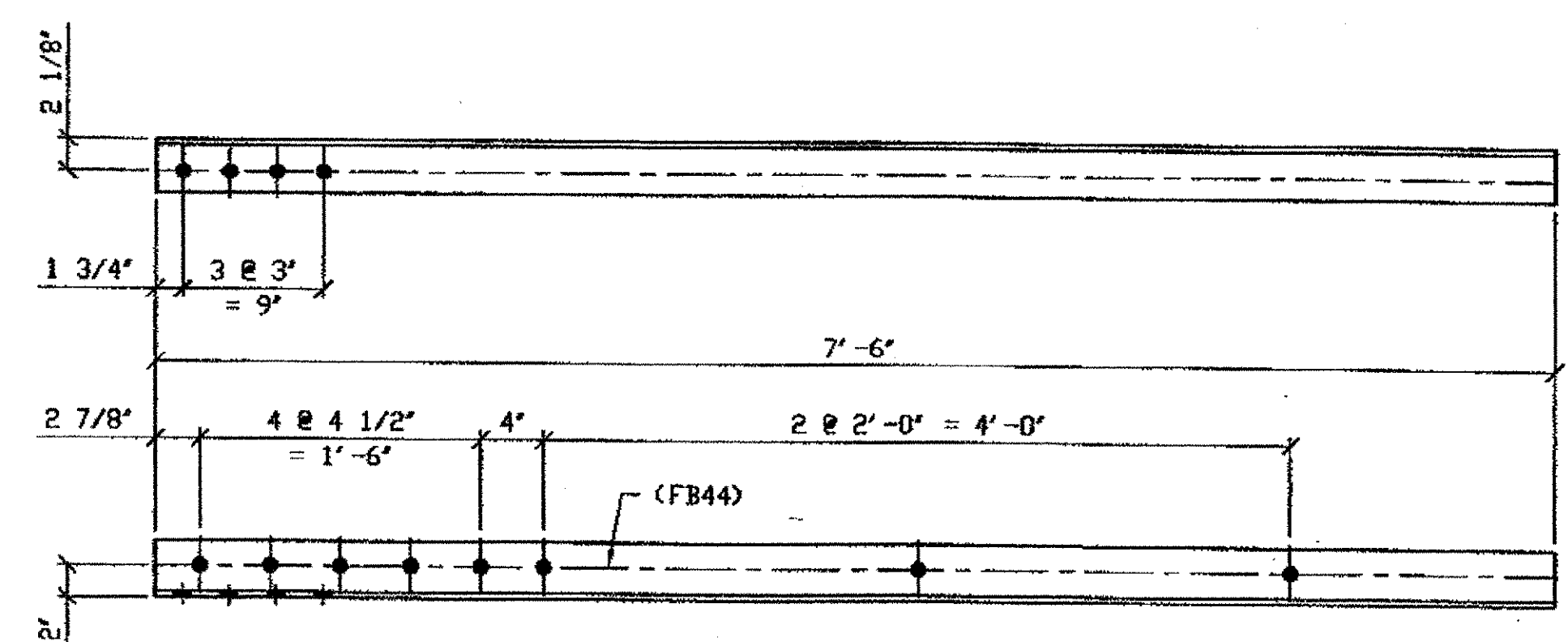
DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E90000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

SHEET NUMBER: 464  
JOB NUMBER: 800010

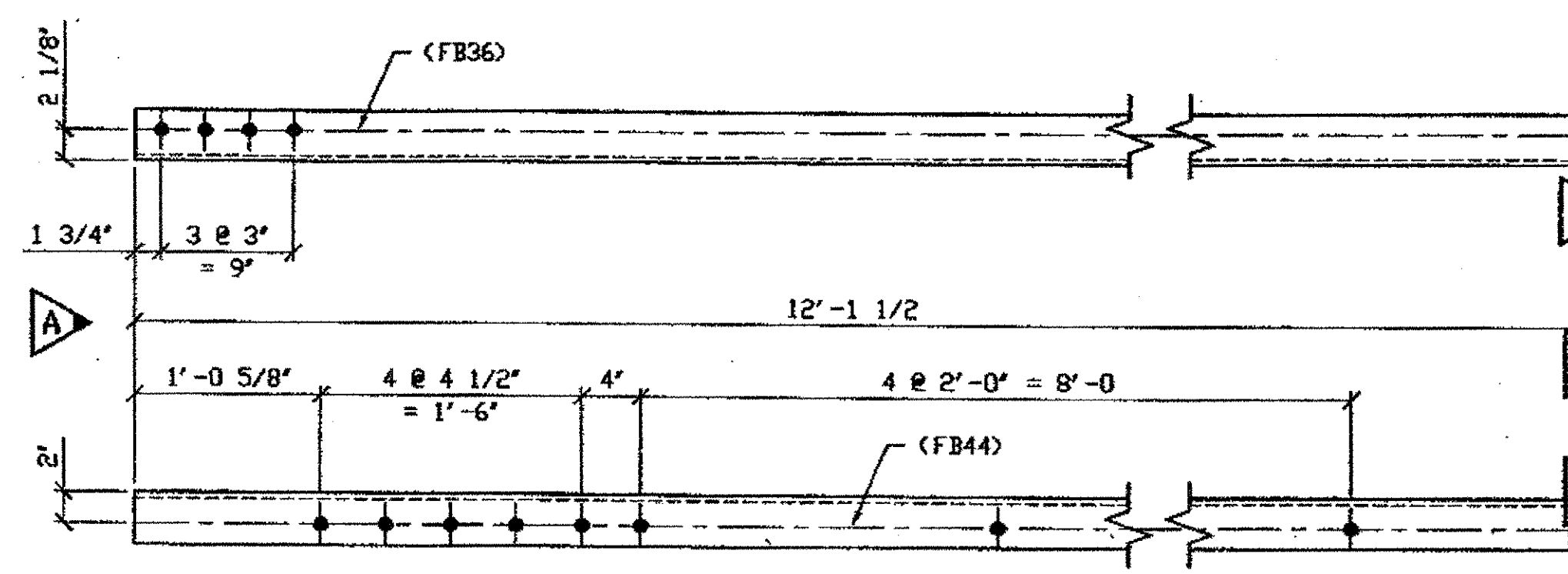
G:\Contracts\JAB00010\Drawings\464A.dwg  
 Save by rsg on 11/28/01 Nov 05, 2001  
 Plot by rsg on 11/28/01 Nov 05, 2001  
 Model space plot + Scale = 1/9



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 520A R/L  
 (L SHOWN)

SPAN 13  
 A-B' NORTH, TOP NORTH 520A/L  
 A-B' NORTH, TOP SOUTH 520A/R  
 A-B' NORTH, BOTTOM SOUTH 520A/L

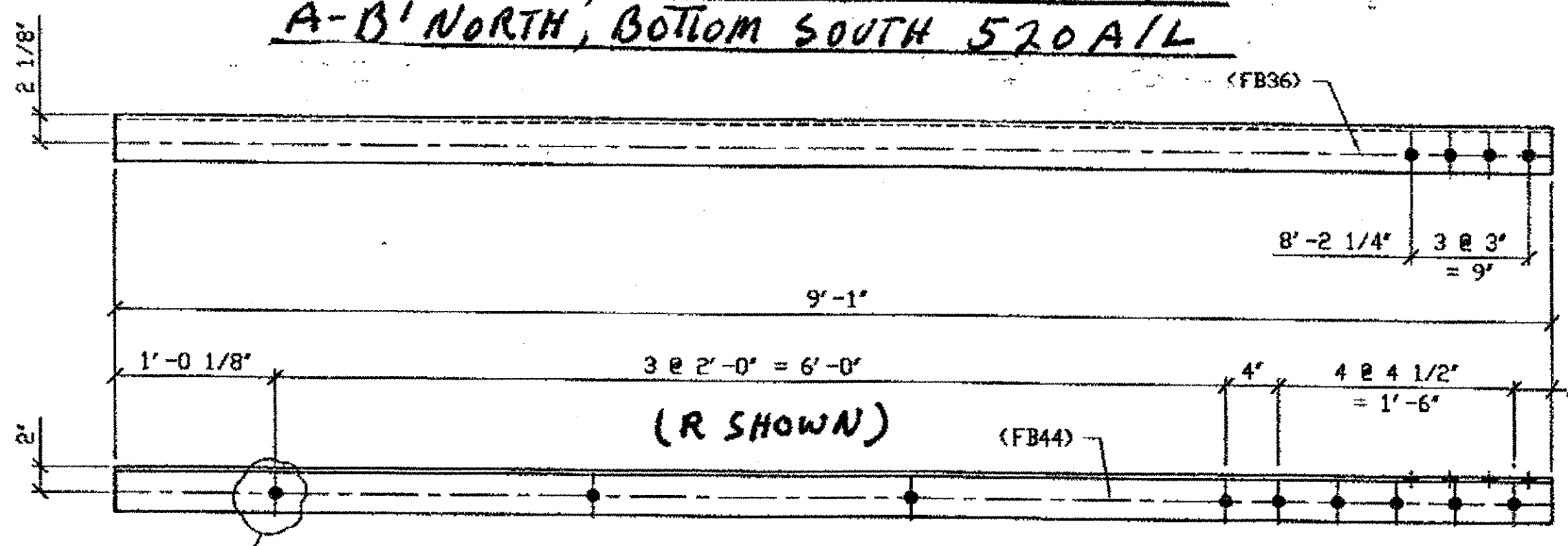
ORIG SHOP DWG 520-BL157  
 ORIG SHOP MARK A520a  
 LINE ITEM No. 0106  
 REPAIR SHEETS 13-101



ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 520B

SPAN 13 B-C' NORTH, BOTTOM SOUTH 520B

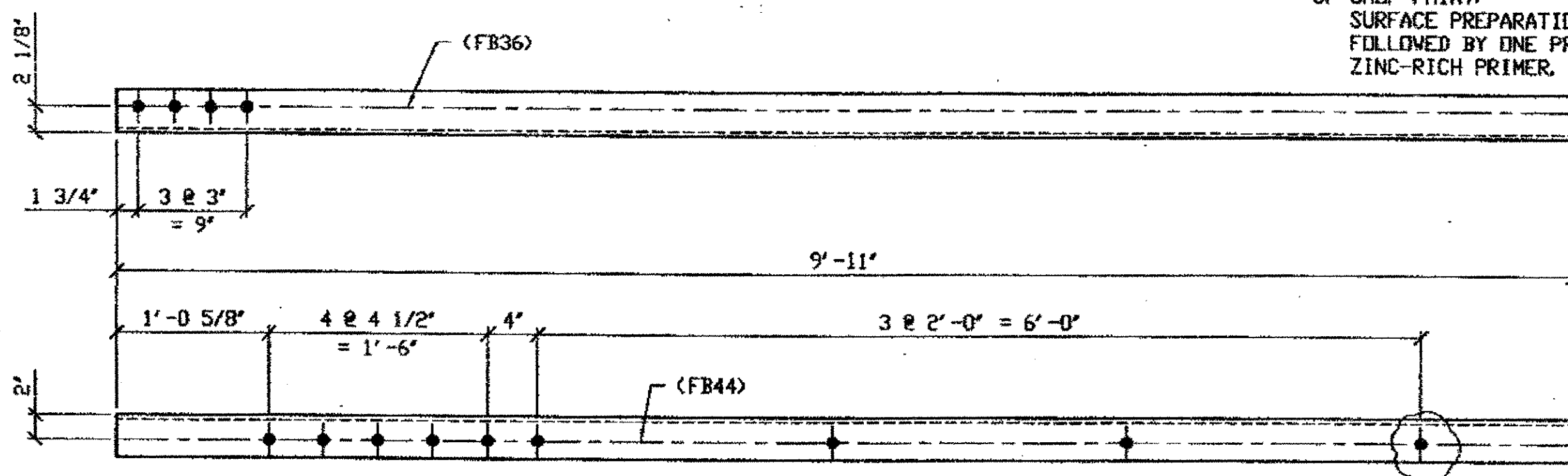
ORIG SHOP DWG 520-BL159  
 ORIG SHOP MARK A520b  
 LINE ITEM No. 0106 & 153  
 REPAIR SHEETS 13-109  
 LINE ITEM No. 0153, BID ITEM No. 863E90000



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 520C R/L  
 (R SHOWN)

SPAN 13  
 B-A' SOUTH, BOT. SOUTH 520C/L

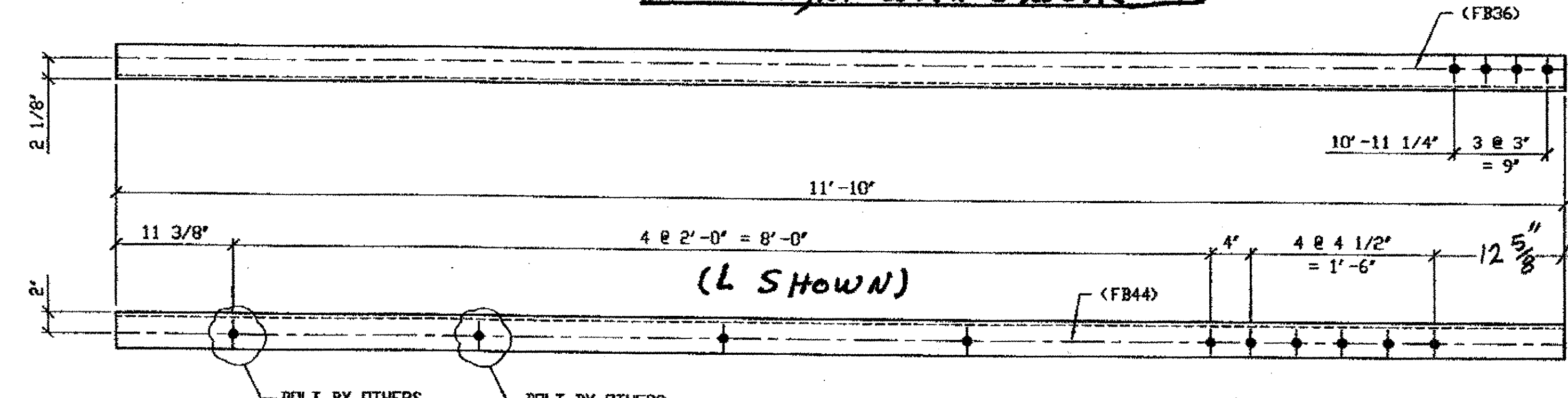
ORIG SHOP DWG 520-BL157  
 ORIG SHOP MARK A520c  
 LINE ITEM No. 0106 & 0153  
 REPAIR SHEETS 13-177  
 LINE ITEM No. 0153, BID ITEM No. 863E90000



3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 520D R/L  
 (L SHOWN)

SPAN 13  
 B-C' NORTH, TOP NORTH 520D/L  
 B-C' NORTH, BOTTOM NORTH 520D/R  
 B-C' NORTH, TOP SOUTH 520D/R

ORIG SHOP DWG 520-BL159  
 ORIG SHOP MARK A520d  
 LINE ITEM No. 0106 & 0153  
 REPAIR SHEETS 13-109  
 LINE ITEM No. 0153, BID ITEM No. 863E90000



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 520F R/L  
 (L SHOWN)

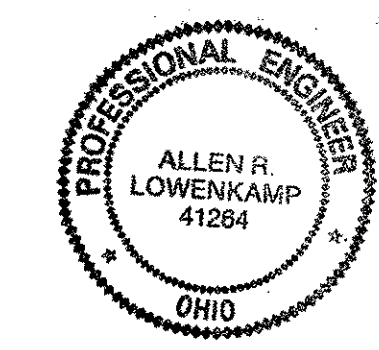
SPAN 13  
 C-B' SOUTH, TOP NORTH 520F/L  
 C-B' SOUTH, BOTTOM NORTH 520F/R

ORIG SHOP DWG 520-BL159  
 ORIG SHOP MARK A520f  
 LINE ITEM No. 0106 & 0153  
 REPAIR SHEETS 13-182  
 LINE ITEM No. 0153, BID ITEM No. 863E90000

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL QUARTER					
2		520A R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R; 1/L	191	
3		520B	1	L 3 1/2 X 3 1/2 X 3/8	12	1 1/2		103	
4		520C R/L	3	L 3 1/2 X 3 1/2 X 3/8	9	1	2/R; 2/L		
5		520D R/L	3	L 3 1/2 X 3 1/2 X 3/8	9	11	1/R; 2/L	254	
6		520F R/L	2	L 3 1/2 X 3 1/2 X 3/8	11	10	1/R; 1/L	202	
7									
8				SPLICE PLATES					
9	*	520G	36	PL 1/2 X 2 7/8	0	6	PAIN MATL	88	
10									
11				FIELD BOLTS					
12		FB36		1" DIA	0	2 1/2	NOTE 2		
13		FB44		1" DIA	0	3 1/2	NOTE 2		
14									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

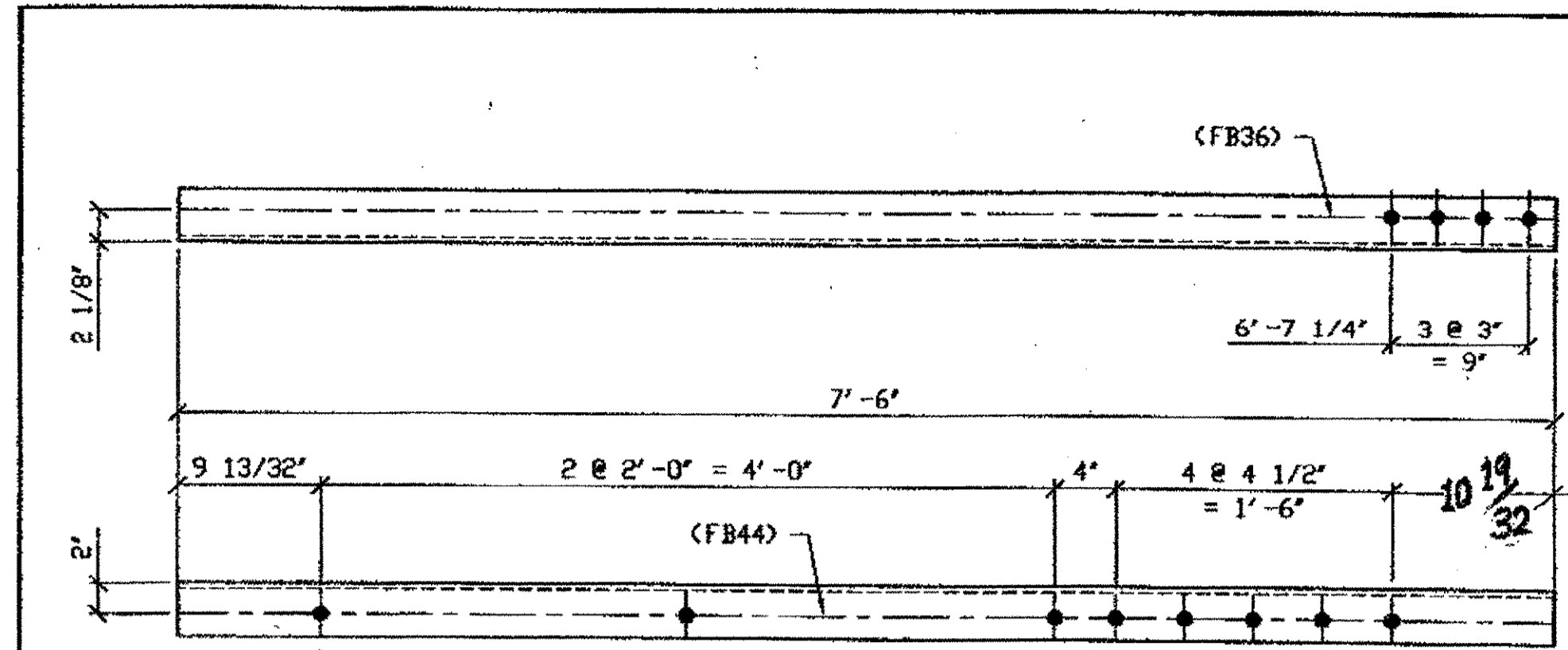
O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/04 BSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 15106  
 PHONE (412) 631-3000  
 FAX (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 04/03/01  
 CHECKED BY: DATE  
 GAF 12/27/01

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E90000 U. N. D.	
NO.	DATE	REVISIONS	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL	GAF
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
STEEL ERECTOR		SHEET NUMBER	
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE (440) 238-3015 FAX (440) 238-3335		520	
		JOB NUMBER	
		800010	

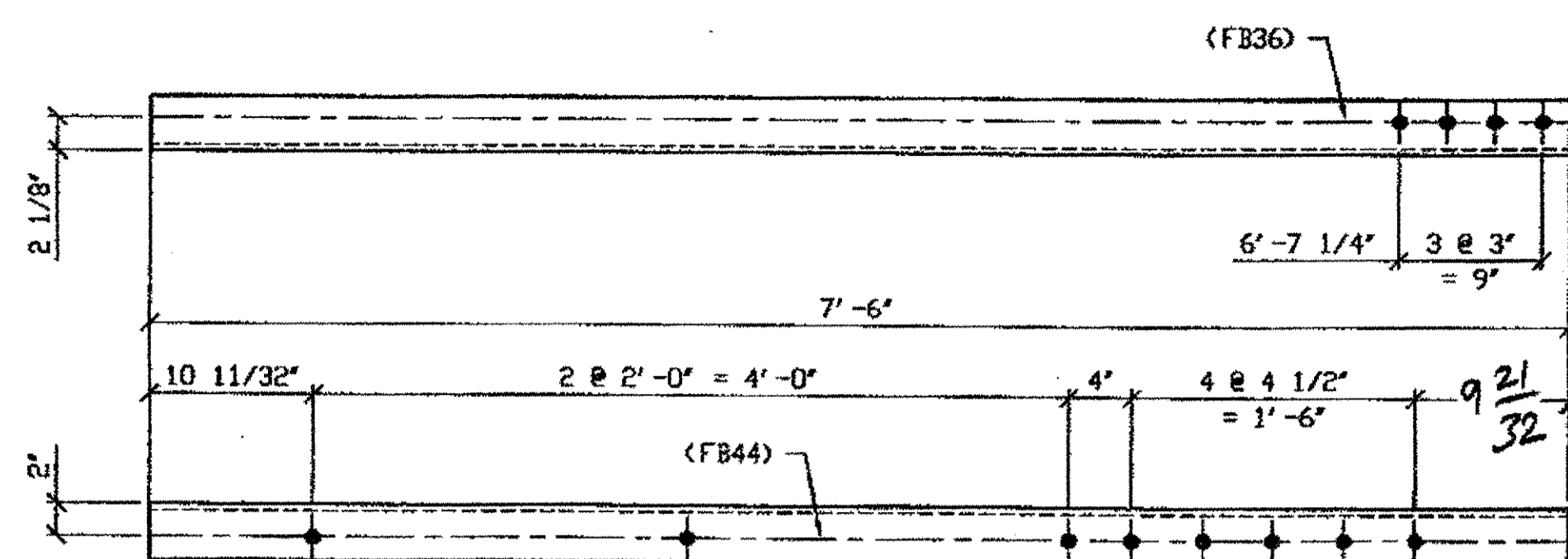
G:\Contract\01800010\Drawings\520A.dwg  
 Save by resp. at 1:05pm Feb 04, 2002  
 Plot by gbas at 09:53am Feb 04, 2002  
 Model Space Plot - Scale = 1/3"



(R shown)

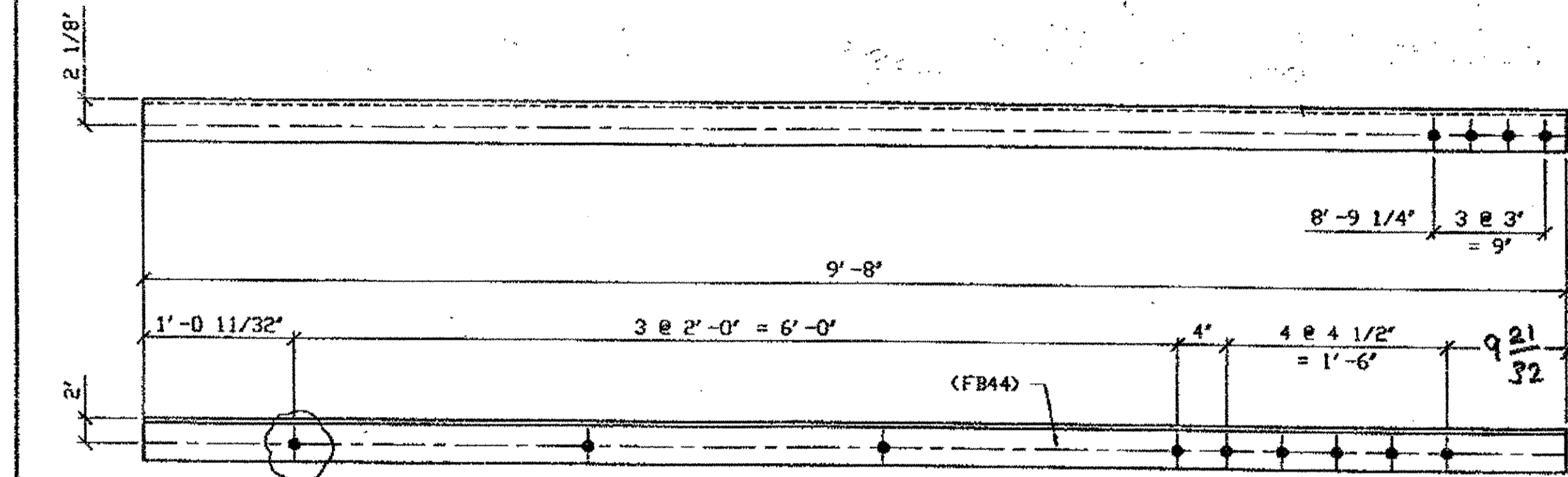
4 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 521A R/L

ORIG SHOP DWG 520-BL162  
ORIG SHOP MARK A520c  
LINE ITEM No. 0106  
REPAIR SHEETS 13-185



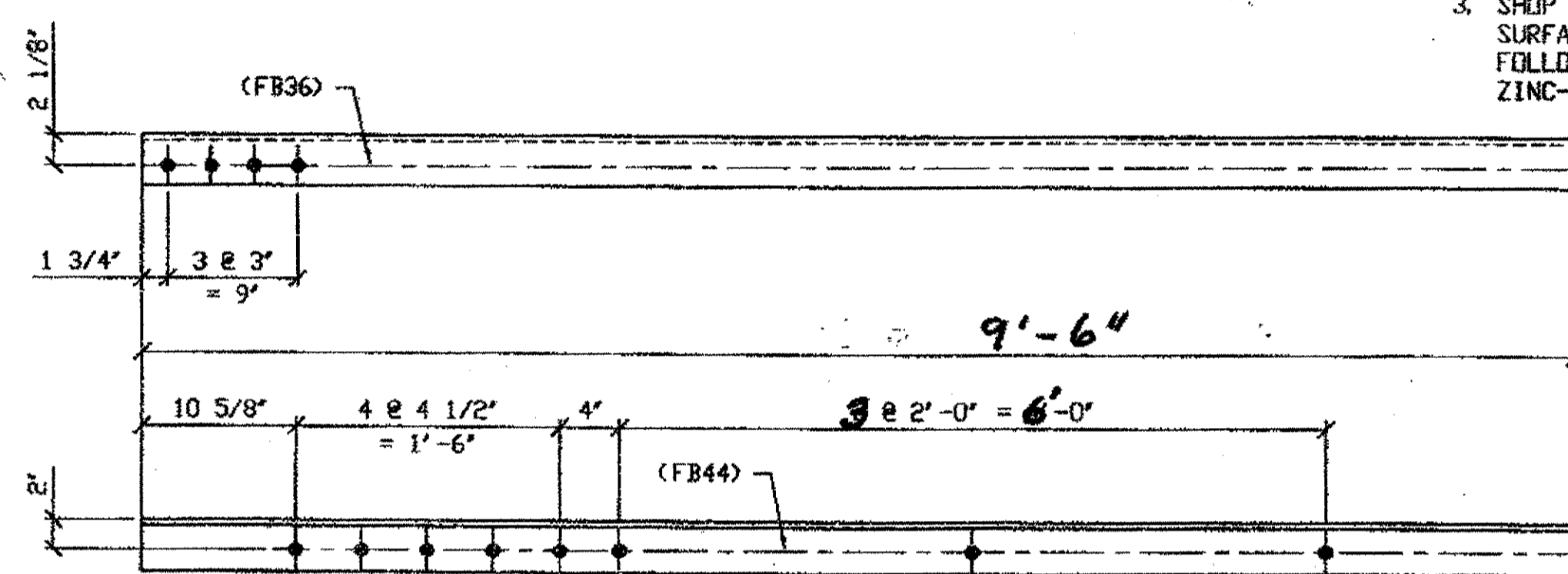
3 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 521B R/L

(R shown) ORIG SHOP DWG 520-BL165  
ORIG SHOP MARK A520d  
LINE ITEM No. 0106  
REPAIR SHEETS 13-193



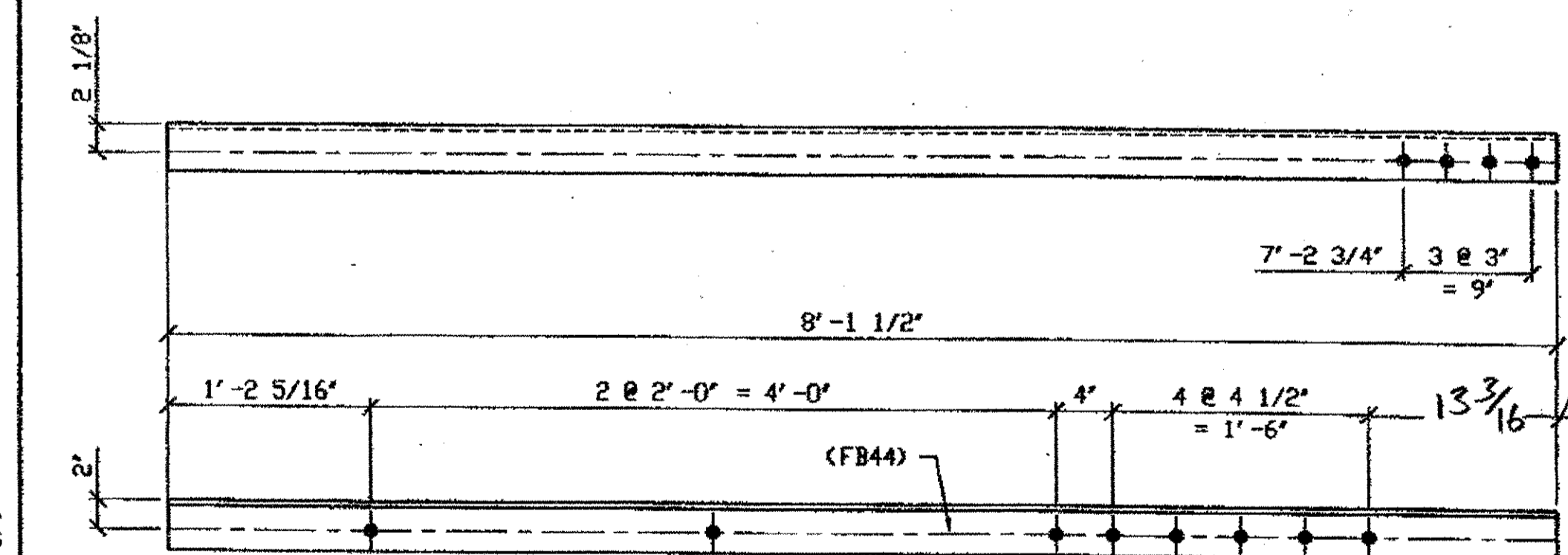
ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 521C

ORIG SHOP DWG 520-BL165  
ORIG SHOP MARK A520d  
LINE ITEM No. 0106 & 0153  
REPAIR SHEETS 13-193  
LINE ITEM No. 0153, BID ITEM No. 863E90000



1 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 521D

ORIG SHOP DWG 520-BL170  
ORIG SHOP MARK A520f  
LINE ITEM No. 0106  
REPAIR SHEETS 13-126



2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 521E R/L

(R shown)

ORIG SHOP DWG 520-BL173  
ORIG SHOP MARK A520g  
LINE ITEM No. 0106  
REPAIR SHEETS SP13-207

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 1 DIAGONAL QUARTER					
2		521A R/L	4	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R 2/L		
3		521B R/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	2/R 1/L	192	
4		521C	1	L 3 1/2 X 3 1/2 X 3/8	9	8		82	
5		521D	1	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2			
6		521E R/L	2	L 3 1/2 X 3 1/2 X 3/8	8	1 1/2	1/R 1/L	138	
7									
8									
9				FIELD BOLTS					
10		FB36		1" DIA	0	2 1/2	NOTE 2		
11		FB44		1" DIA	0	3 1/2	NOTE 2		
12									
PLATE		N/A	PIPE		N/A		FITTINGS		N/A
SHAPES		A36	FLGS.		N/A		BOLTS		NOTE 2

- NOTES:
- OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/9/04	AS
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

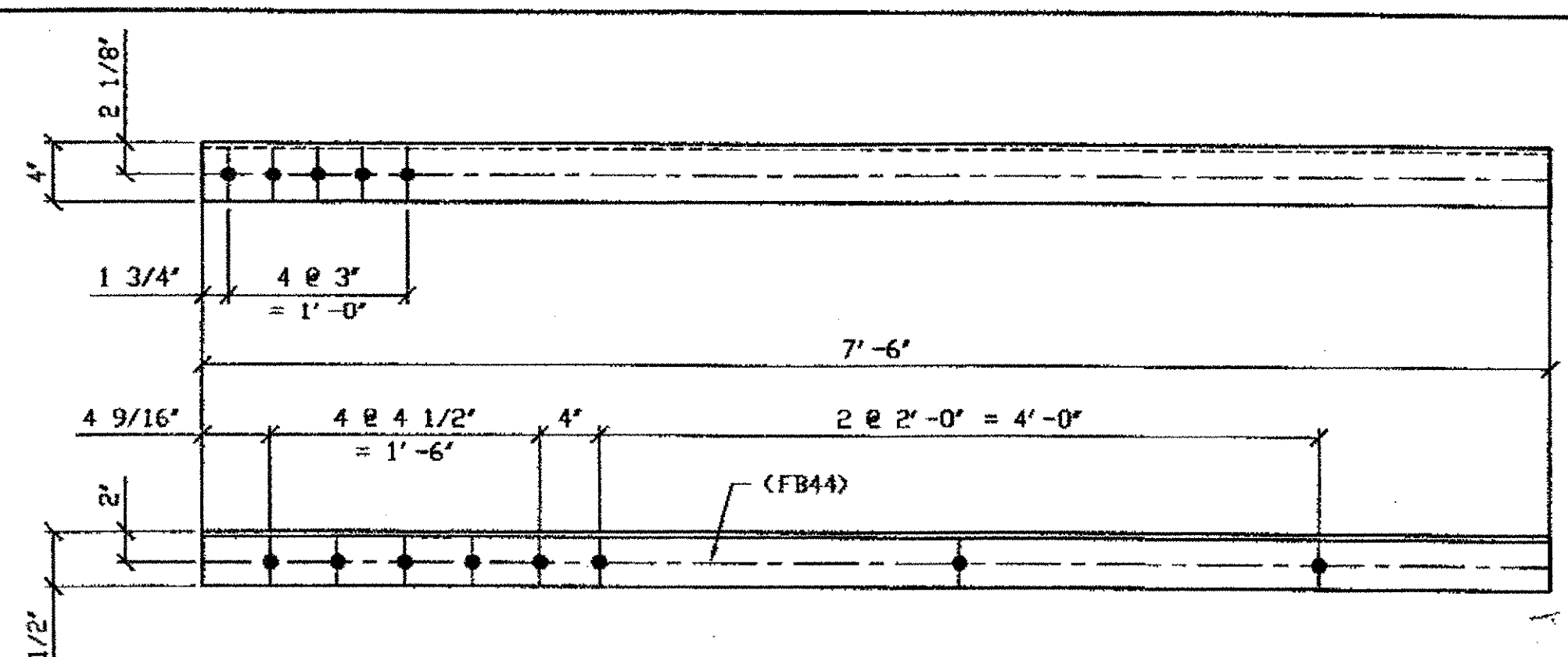
- SPAN 13
- D-C' SOUTH, TOP NORTH 521A/R
  - D-C' SOUTH, BOTTOM NORTH 521A/L
  - F-G' NORTH, TOP NORTH 521A/L
  - F-G' NORTH, TOP SOUTH 521A/R
  - E-D' SOUTH, TOP NORTH 521B/R
  - E-D' SOUTH, BOTTOM SOUTH 521B/R
  - E-D' SOUTH, BOTTOM NORTH 521B/L
  - E-D' SOUTH, TOP SOUTH 521C
  - C-D' NORTH, BOTTOM NORTH 521D
  - H-G' SOUTH, TOP NORTH 521F/L
  - H-G' SOUTH, TOP SOUTH 521F/R



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONARDVILLE, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

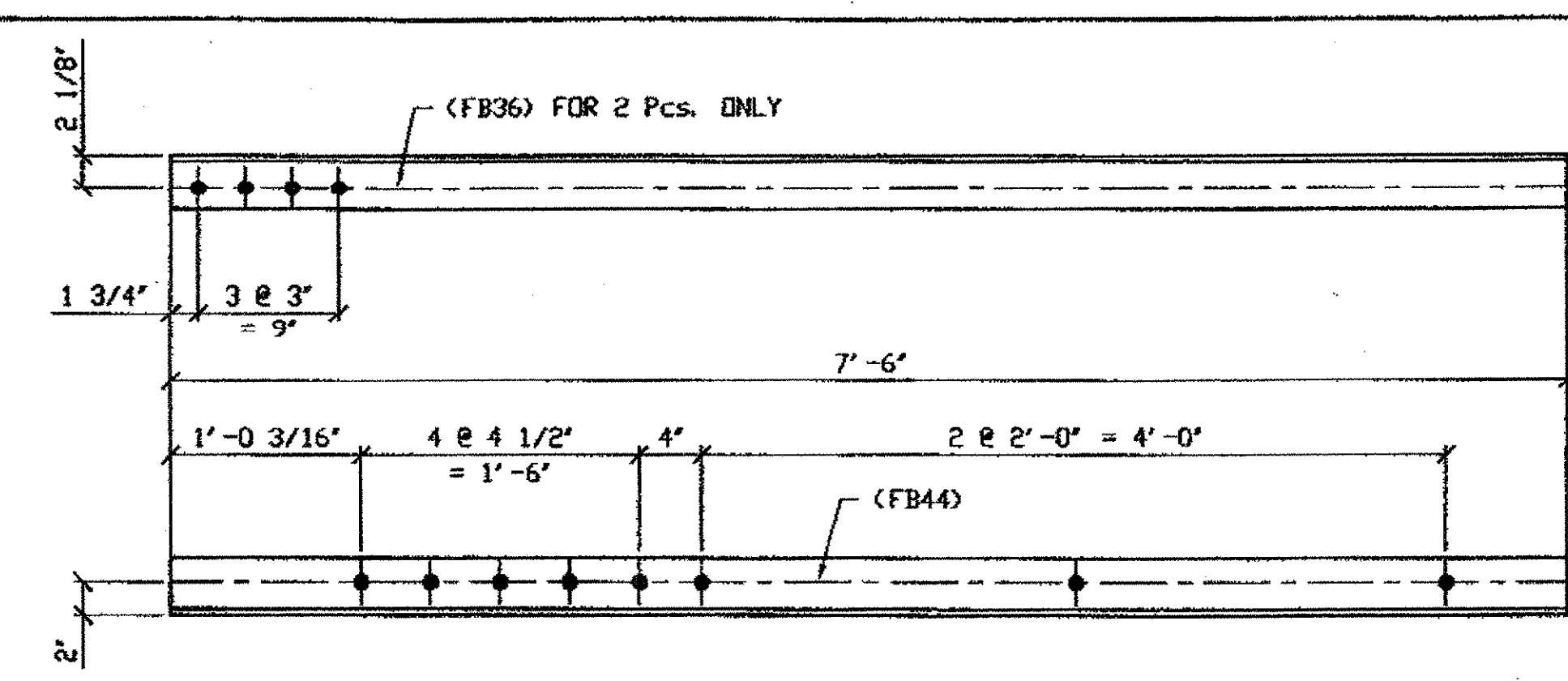
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000 U. N. O.	
NO.	DATE	DESCRIPTION	GAF BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		IN CHARGE OF: L. SMITH DRAWN BY: DATE RAS 04/03/01 CHECKED BY: DATE GAF 12/19/01	
SHEET NUMBER 521		JOB NUMBER 800010	

G:\Contract\0800010\Drawings\AS21A.dwg  
 Save by rshp on 11/31/04 Feb 02, 2002  
 Plot by gfos on 05/14/04 Feb 04, 2002  
 Model space plot + Scale = 1/9



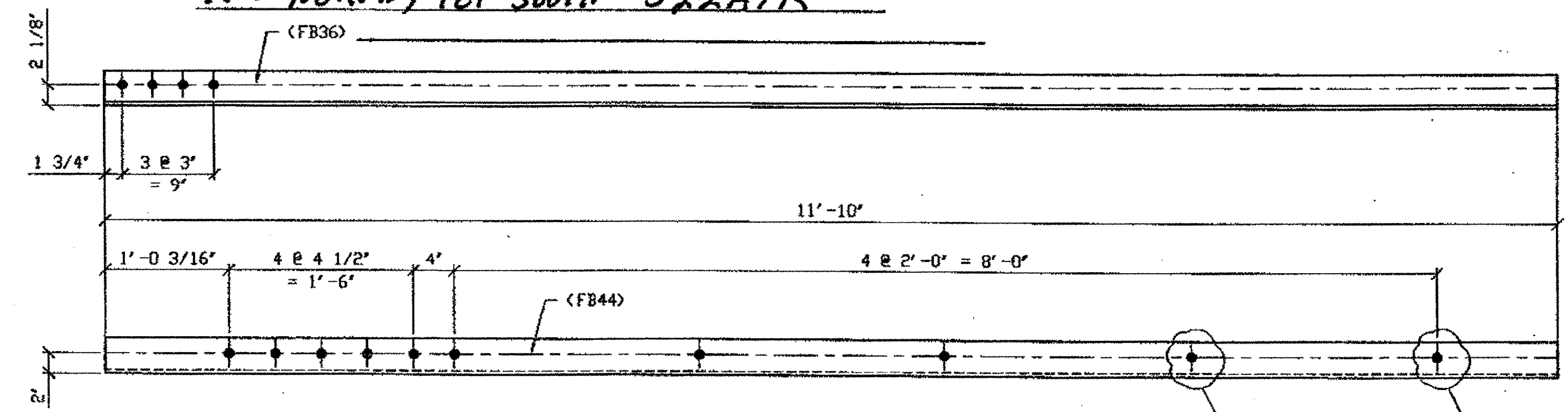
**2 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 522A R/L**  
 ORIG SHOP DWG 520-BL179 (R SHOWN)  
 ORIG SHOP MARK A520k  
 LINE ITEM No. 0106  
 REPAIR SHEETS 13-148

**SPAN 13**  
 K-L' NORTH, TOP NORTH 522A/L  
 K-L' NORTH, TOP SOUTH 522A/R



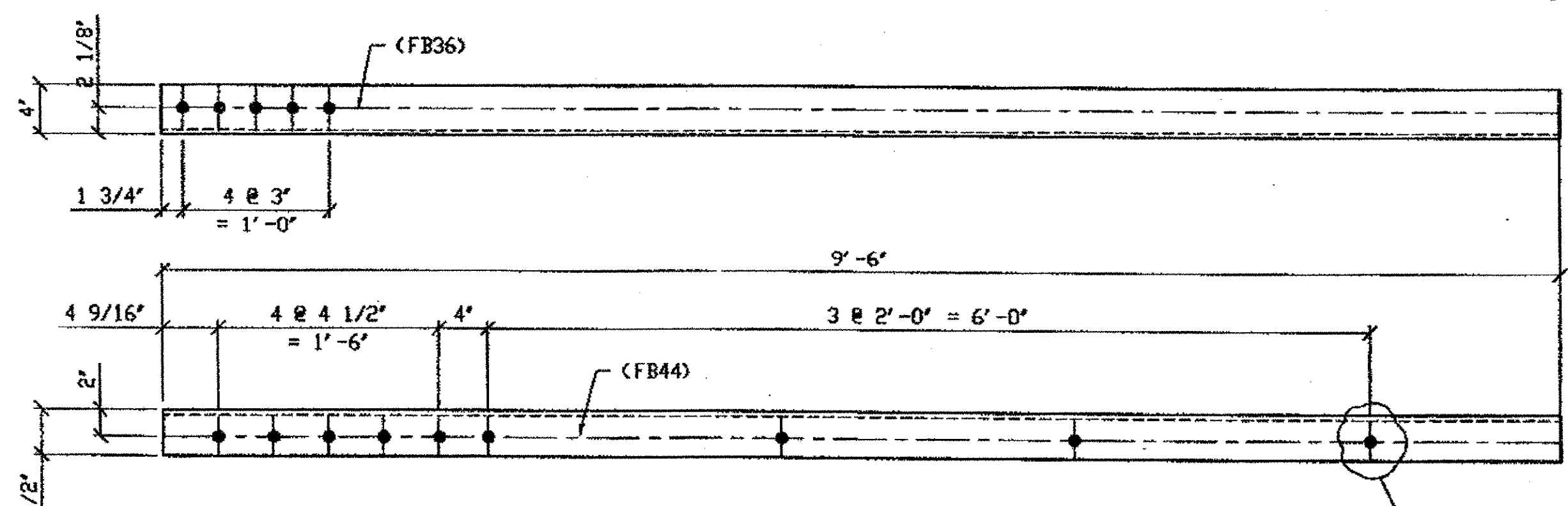
**7 - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 522B R/L**  
 ORIG SHOP DWG 520-BL182 (R SHOWN)  
 ORIG SHOP MARK A520m  
 LINE ITEM No. 0106  
 REPAIR SHEETS 13-153 & 13-223

**SPAN 13**  
 L-M' NORTH, TOP NORTH 522B/R  
 L-M' NORTH, BOTTOM SOUTH 522B/R  
 L-M' NORTH, TOP SOUTH 522B/L  
 M-L' SOUTH, TOP NORTH 522B/L  
 M-L' SOUTH, TOP SOUTH 522B/R  
 M-L' SOUTH, BOTTOM SOUTH 522B/L  
 M-L' SOUTH, BOTTOM NORTH 522B/R



**ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 522C**  
 ORIG SHOP DWG 520-BL182  
 ORIG SHOP MARK A520m  
 LINE ITEM No. 0106 & 0153  
 REPAIR SHEETS 13-153  
 LINE ITEM No. 0153, BID ITEM No. 863E90000

**SPAN 13**  
 L-M' NORTH, BOTTOM NORTH 522C



**ONE - TYPE 1 DIAGONAL QUARTER LENGTH REPLACEMENT - 522D**  
 ORIG SHOP DWG 520-BL179  
 ORIG SHOP MARK A520k  
 LINE ITEM No. 0106 & 153  
 REPAIR SHEETS 13-218  
 LINE ITEM No. 0153, BID ITEM No. 863E90000

**SPAN 13 L-K' SOUTH, BOTTOM NORTH 522D**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 1 DIAGONAL QUARTER				
2		522A R/L	2	L 4 X 3 1/2 X 3/8	7	6	1/R; 1/L	138
3		522B R/L	7	L 3 1/2 X 3 1/2 X 3/8	7	6	3/R; 4/L	
4		522C	1	L 3 1/2 X 3 1/2 X 3/8	11	10		101
5		522D	1	L 4 X 3 1/2 X 3/8	9	6		86
6								
7								
8								
9				FIELD BOLTS				
10		FB36		1" DIA	0	2 1/2	NOTE 2	
11		FB44		1" DIA	0	3 1/2	NOTE 2	
12								
PLATE		N/A	PIPE		N/A	FITTINGS		N/A
SHAPES		A36	FLGS.		N/A	BOLTS		NOTE 2

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED, ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contract\01800010\Drawings\5222A.dwg  
 Save by rshp at 11:31am Feb 02, 2002  
 Plot by gfas at 09:14am Feb 04, 2002  
 Model space plot + Scale = 1/9

**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

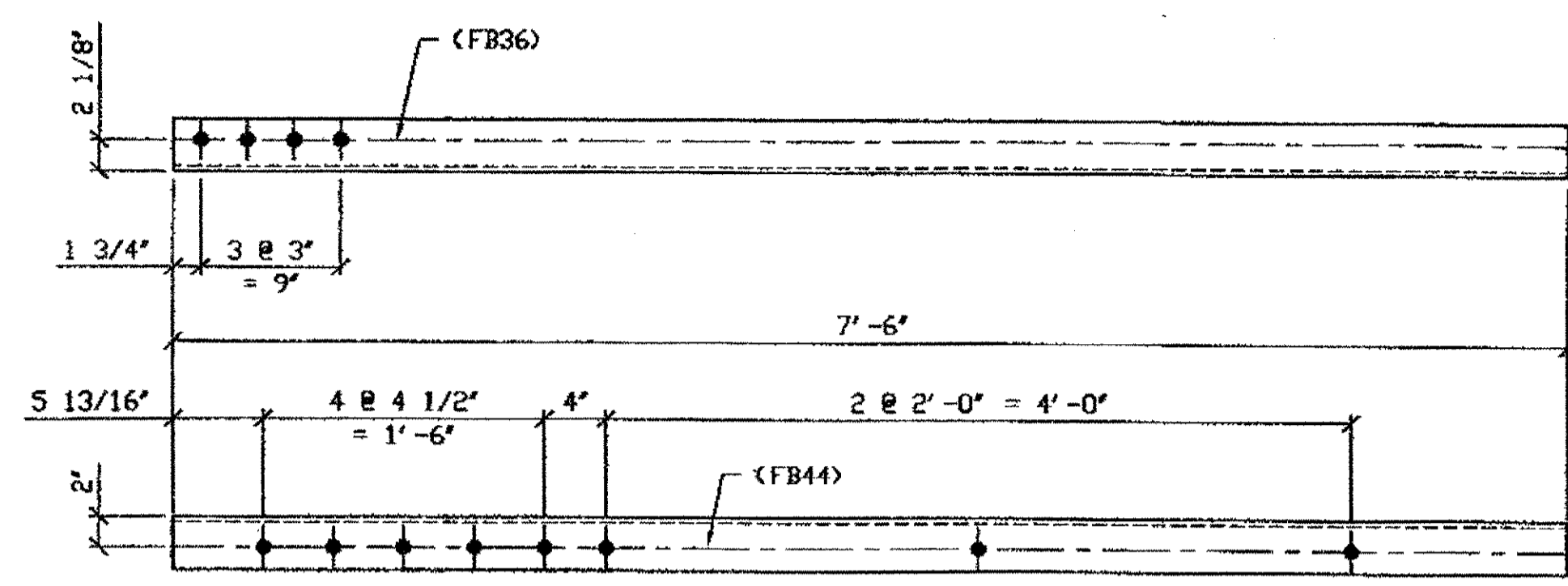


**FABRICATOR**  
**AB AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 691-3000  
 FAX: (412) 631-4001

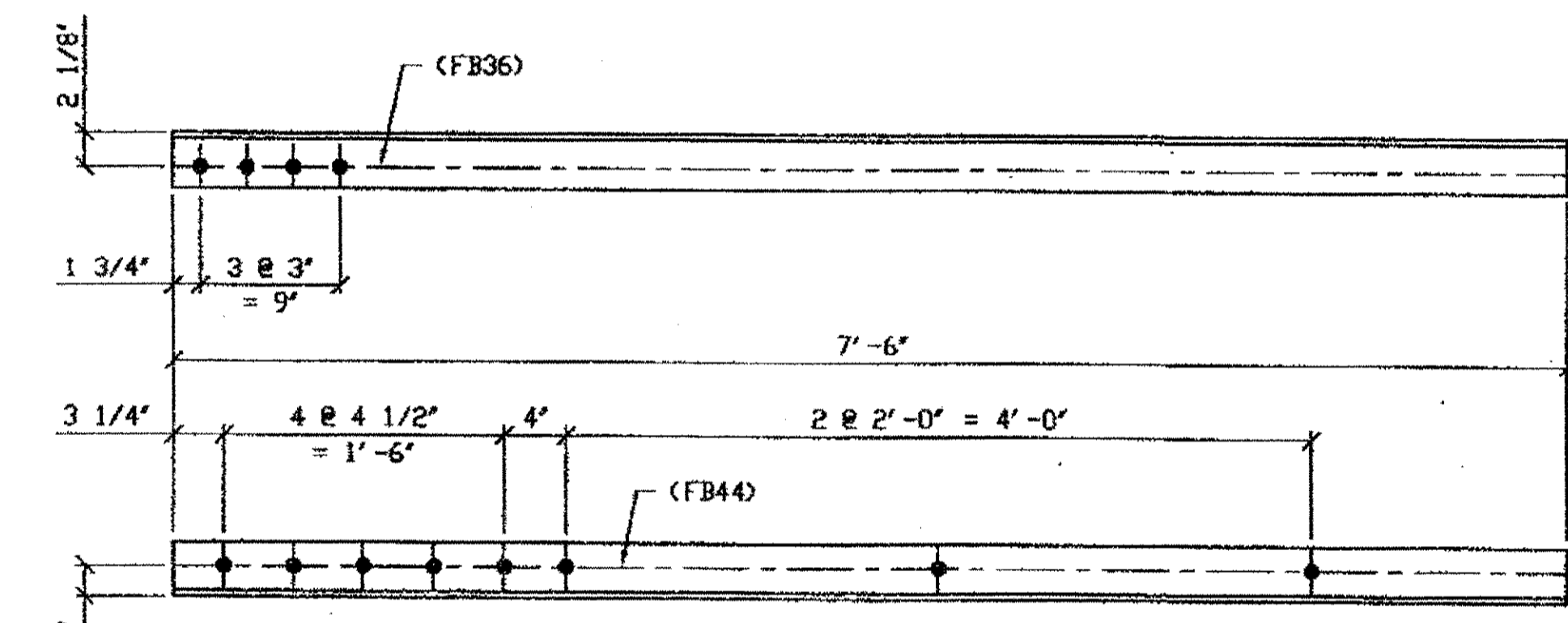
**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 04/03/01  
 CHECKED BY: DATE: GAF 12/20/01

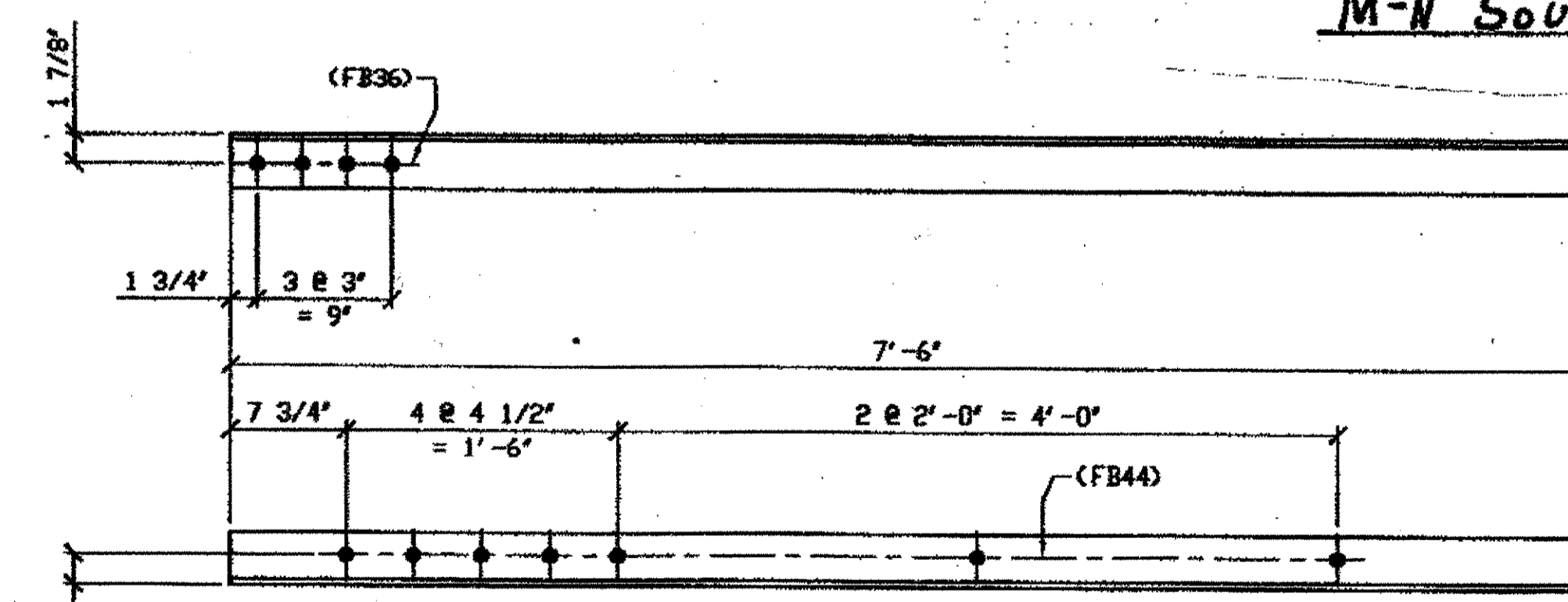
DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E50000 U. N. O.	
NO.	DATE	REVISIONS	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL	GAF
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS			
SHEET NUMBER: 522		JOB NUMBER: 800010	



**ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 523A**  
 ORIG SHIP DWG 521-BL158  
 ORIG SHIP MARK A521a  
 LINE ITEM No. 0110  
 REPAIR SHEETS 13-114



**2 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 523C**  
 ORIG SHIP DWG 521-BL163  
 ORIG SHIP MARK A521d  
 LINE ITEM No. 0110  
 REPAIR SHEETS 13-186



**ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 523D**  
 ORIG SHIP DWG 165-BL62  
 ORIG SHIP MARK A165ae  
 DOT ITEM No. 0110  
 REPAIR SHEET 12-151

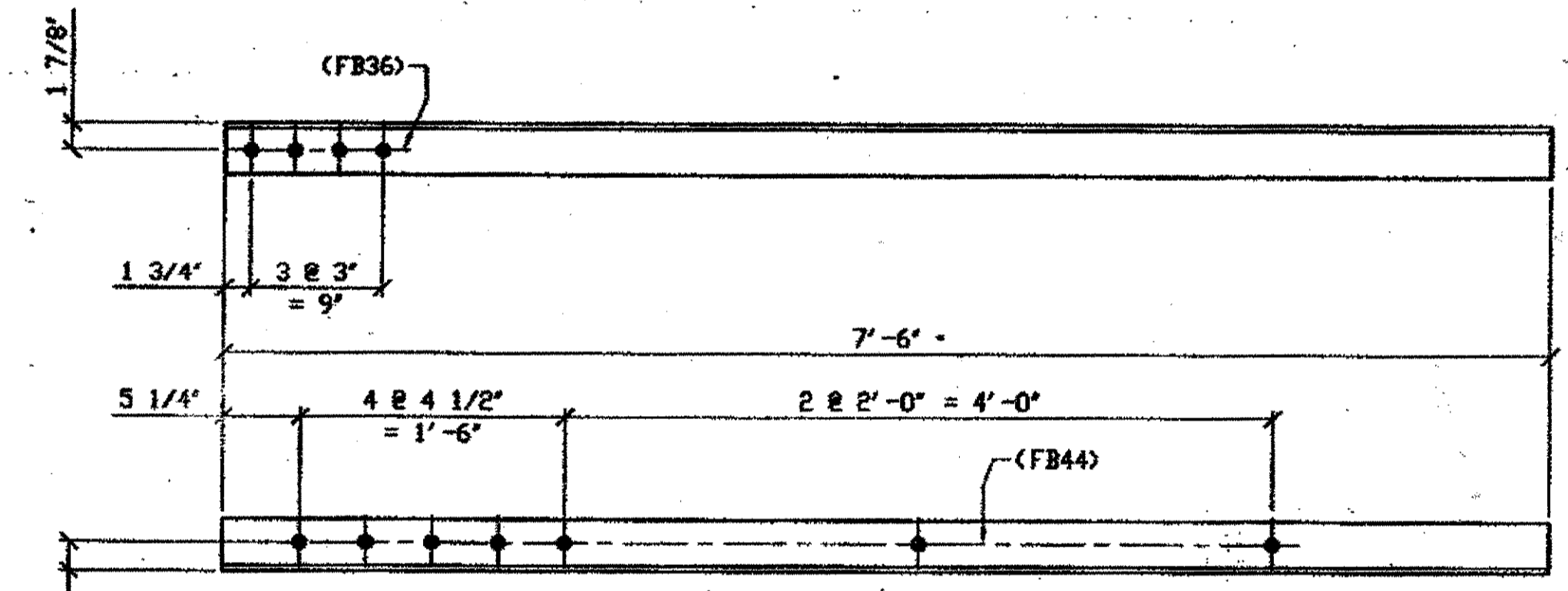
**SPAN 13**  
**A'-B NORTH, BOTTOM SOUTH 523A**  
 (From N. Interior Truss)

**SPAN 13**  
**C-D SOUTH, BOTTOM SOUTH 523C**  
**M-N SOUTH, TOP NORTH 523C**

**SPAN 12 B-C SOUTH, BOTTOM SOUTH 523D**

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				TYPE 2 DIAGONAL QUARTER					
2		523A	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64	
3									
4		523C	2	L 3 1/2 X 3 1/2 X 3/8	7	6		128	
5									
6		523BR/L	3	L 3 1/2 X 3 1/2 X 3/8	7	6	1/R, 2/L	191	
7									
8		523D	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64	
9				FIELD BOLTS					
10		FB36		1" DIA	0	2 1/2	NOTE 2		
11		FB44		1" DIA	0	3 1/2	NOTE 2		
12									
PLATE		N/A	PIPE		N/A		FITTINGS		N/A
SHAPES		A36	FLGS.		N/A		BOLTS		NOTE 2

- NOTES:**
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

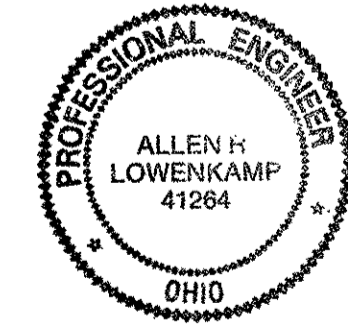


**3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 523B/R/L**  
 ORIG SHIP DWG 165-BL62  
 ORIG SHIP MARK A165ae  
 DOT ITEM No. 0110  
 REPAIR SHEET 12-160

**SPAN 12**  
**D-E SOUTH, TOP SOUTH 523B/L**  
**D-E SOUTH, BOTTOM NORTH 523B/L**  
**D-E SOUTH, TOP NORTH 523B/R**

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 U. N. D.

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

**FABRICATOR**  
**AMERICAN BRIDGE**  
 BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA 15108  
 PHONE (412) 621-3000  
 FAX (412) 621-4001

NO.	DATE	REVISIONS	APPROVAL	DATE
A	02/01/01	REVISED PER CUSTOMER APPROVAL		

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN REPAIRS**

IN CHARGE OF: L. SMITH

DRAWN BY: DATE: RAS 04/03/01  
 CHECKED BY: DATE: GAF 12/20/01

SHEET NUMBER: 523  
 AM. JOB NUMBER: 800010

G:\Contract\1\9800010\Drawings\523A.dwg  
 Save by rshp: 11/03/01 10:56:02 AM  
 Plot by gshp: 02/01/01 10:56:02 AM  
 Model Space Plot Scale = 1/7

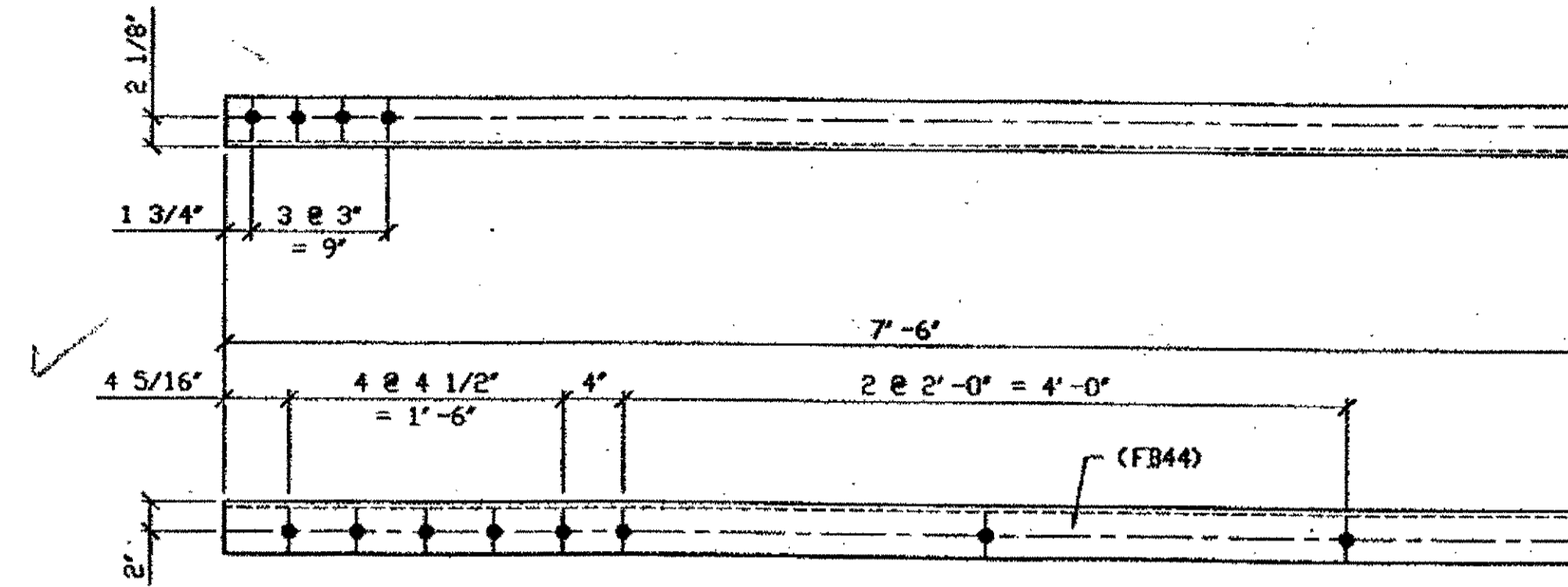


BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REP'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				TYPE 2 DIAGONAL 1/4 LENGTH				
2		524B	1	L 3 1/2 X 3 1/2 X 3/8	7	6		
3								
4								
5				TYPE 2 DIAGONAL QUARTER				
6		524C	3	L 4 X 3 1/2 X 3/8	7	6		
7		524D	1	L 3 1/2 X 3 1/2 X 3/8	7	6		64
8								
9				FIELD BOLTS				
10		FB34		1" DIA	0	2 1/4	NOTE 2	
11		FB36		1" DIA	0	2 1/2	NOTE 2	
12		FB44		1" DIA	0	3 1/2	NOTE 2	
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

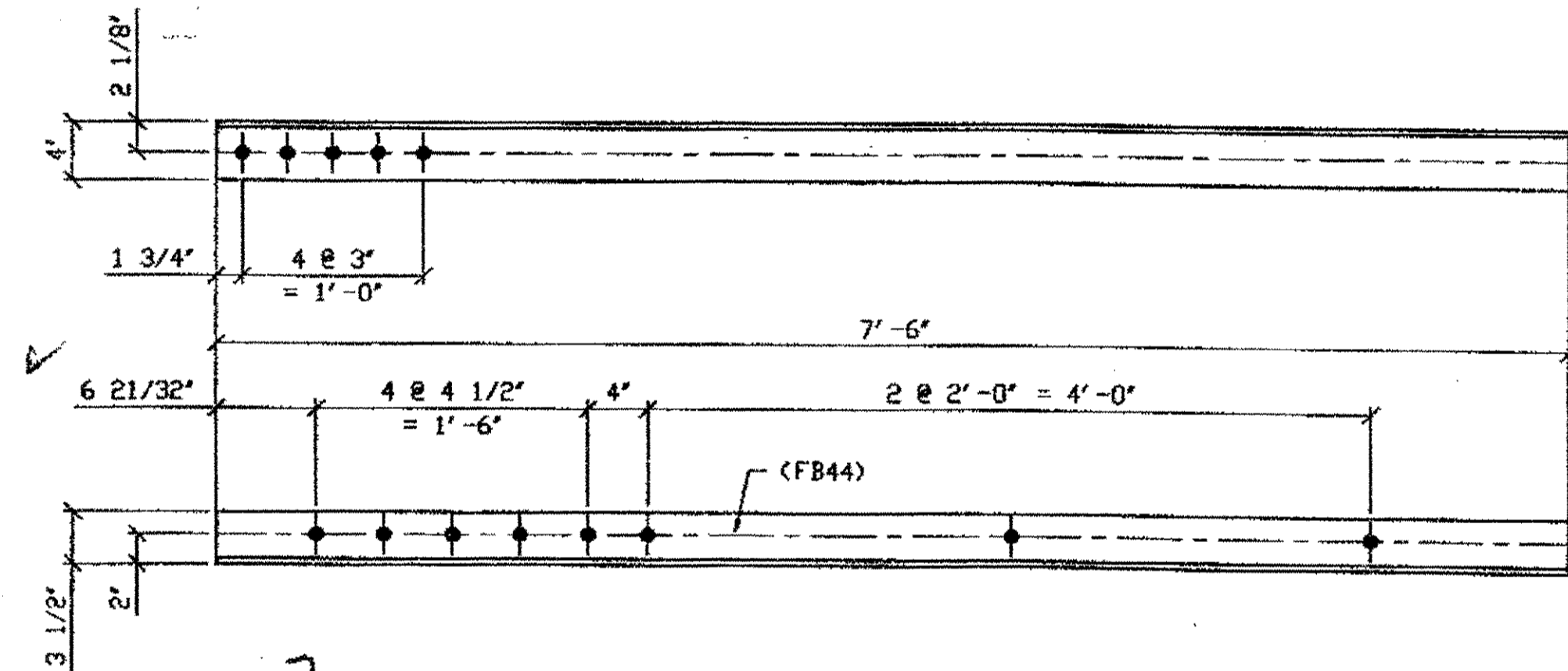
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 524B

ORIG SHOP DWG 521-BL175  
ORIG SHOP MARK A521p  
LINE ITEM No. 0110  
REPAIR SHEETS 13-135 (REV A)

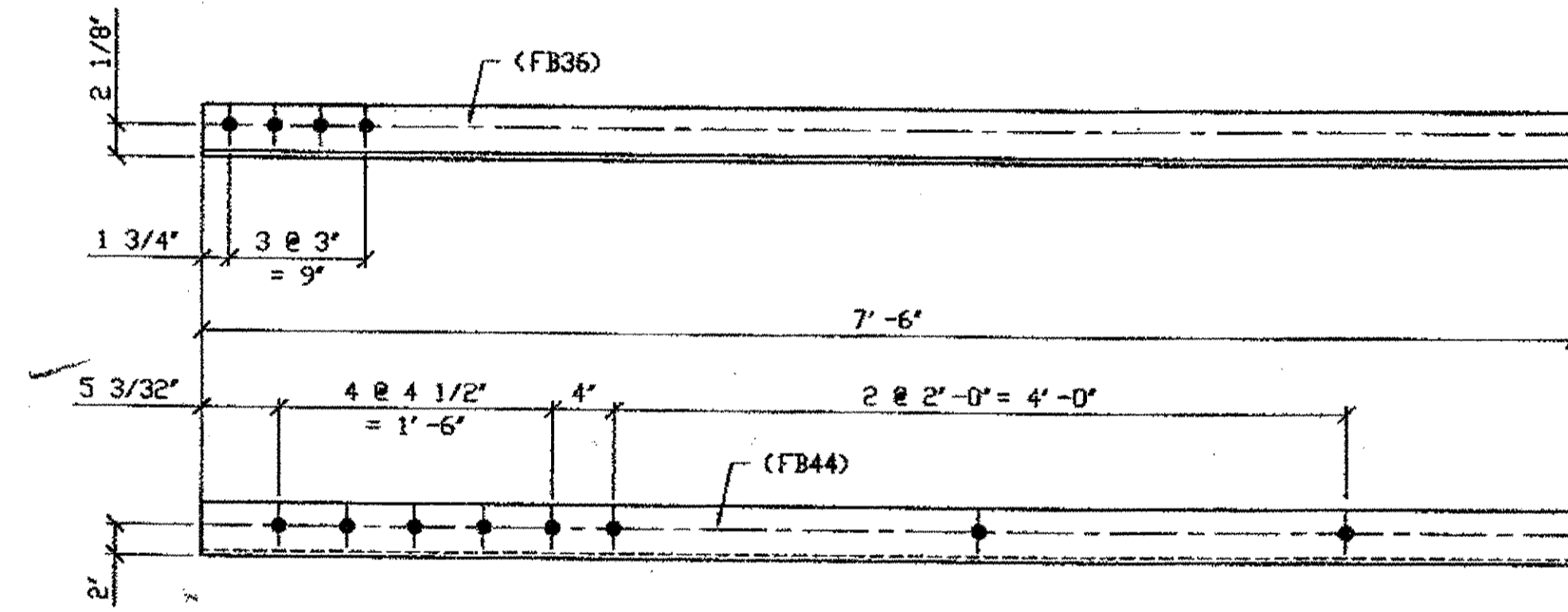
SPAN 13  
H-G' NORTH, TOP SOUTH 524B



3 - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 524C/R/L

ORIG SHOP DWG 521-BL180  
ORIG SHOP MARK A521v  
LINE ITEM No. 0110  
REPAIR SHEETS 13-215  
(R SHOWN)

SPAN 13  
K-L' SOUTH, BOTTOM SOUTH 524C/R  
K-L' SOUTH, TOP NORTH 524C/R  
K-L' SOUTH, TOP SOUTH 524C/L



ONE - TYPE 2 DIAGONAL QUARTER LENGTH REPLACEMENT - 524D

ORIG SHOP DWG 521-BL183  
ORIG SHOP MARK A521w  
LINE ITEM No. 0110  
REPAIR SHEETS 13-165

SPAN 13  
M-L' NORTH, BOTTOM SOUTH 524D

G:\Contract\01980001\Drawings\0524A.dwg  
 Save by RAS at 11:31am Feb 06, 2002  
 Plot by GRS at 09:15am Feb 04, 2002  
 Model space plot - Scale = 1/8"

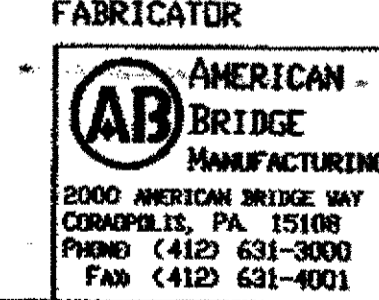
O.D.O.T. DIST. 12

ACCEPTED	2/9/04	RSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335



IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 04/03/01  
CHECKED BY: DATE  
GAF 12/20/01

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E50000

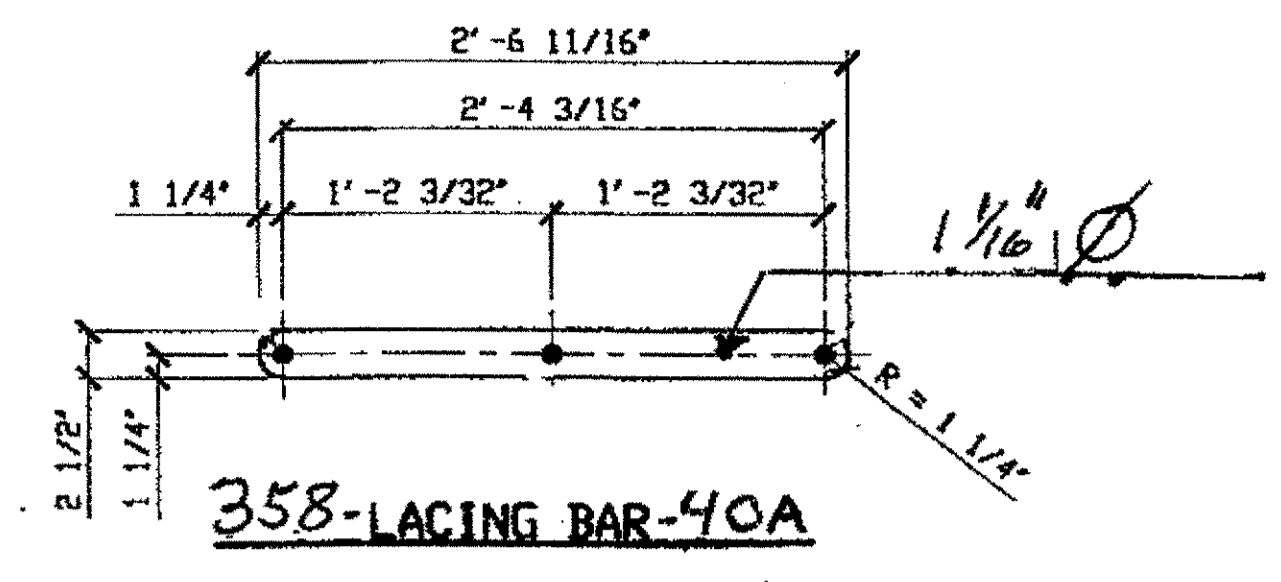
NO.	DATE	REVISIONS	DESCRIPTION	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL		GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 13 REPAIRS

SHEET NUMBER: 524  
ADM JOB NUMBER: 800010

MATERIAL  
E 2 1/2" x 1/2" x 2'-6 1/16"  
PLATE A36



ORIG SHOP DWG 17  
 ORIG SHOP MARK LX6  
 ITEM LINE No. 0138

SPAN 1 TOTAL = 50

A-A'	NORTH 5 EAST FACE
A-A'	NORTH 6 WEST FACE
A-B'	NORTH 2
B-A'	NORTH 3
D-E'	NORTH 3
E-F'	NORTH 4
G-G'	NORTH 7
H-H'	NORTH 2
K'-J	NORTH 1
A-A'	SOUTH 4 EAST FACE
A-A'	SOUTH 3 WEST FACE
D-E'	SOUTH 2
G-G'	SOUTH 3
K-J'	SOUTH 5

SPAN 2 TOTAL = 14

A-B'	NORTH 3 NORTH FACE
C-B'	NORTH 1
C-C'	NORTH 4
C-C'	SOUTH 6

SPAN 3 TOTAL = 114

A-A'	NORTH 8 EAST FACE
A-A'	NORTH 4 WEST FACE
A-B'	NORTH 6
B-A'	NORTH 5
B-C'	NORTH 2
C-B'	NORTH 1
D-E'	NORTH 7
F-F'	NORTH 1
J-K'	NORTH 2
N-O'	NORTH 6
O-O'	NORTH 4 EAST FACE
O-O'	NORTH 6 WEST FACE
A-A'	SOUTH 7 WEST FACE
A-A'	SOUTH 8 EAST FACE
B-A'	SOUTH 4
B-B'	SOUTH 7
B-C'	SOUTH 1
C-B'	SOUTH 4
F-F'	SOUTH 2
F-G'	SOUTH 2
J-H'	SOUTH 1
K-J'	SOUTH 1
K-L'	SOUTH 3
N-M'	SOUTH 8
O-N'	SOUTH 12
O-N'	SOUTH 2

SPAN 4 TOTAL = 11

B-B'	SOUTH 11
------	----------

SPAN 5 TOTAL = 169

D-E'	NORTH 1
E-D'	NORTH 3
E-F'	NORTH 2
F-E'	NORTH 2
H-G'	NORTH 1
H-J'	NORTH 2
J-K'	NORTH 2
K-K'	NORTH 4
N-P'	NORTH 6
P-Q'	NORTH 9
Q-Q'	NORTH 1 WEST FACE
Q-P'	NORTH 5
E-D'	SOUTH 3
F-F'	SOUTH 6
G-F'	SOUTH 2
H-J'	SOUTH 6
J-H'	SOUTH 8
J-J'	SOUTH 1
K-J'	SOUTH 8
K-K'	SOUTH 9
L-K'	SOUTH 20
L-L'	SOUTH 11
M-L'	SOUTH 4
N-P'	SOUTH 4
P-N'	SOUTH 8
P-P'	SOUTH 12
P-Q'	SOUTH 2
Q-P'	SOUTH 24
Q-Q'	SOUTH 3 WEST FACE

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

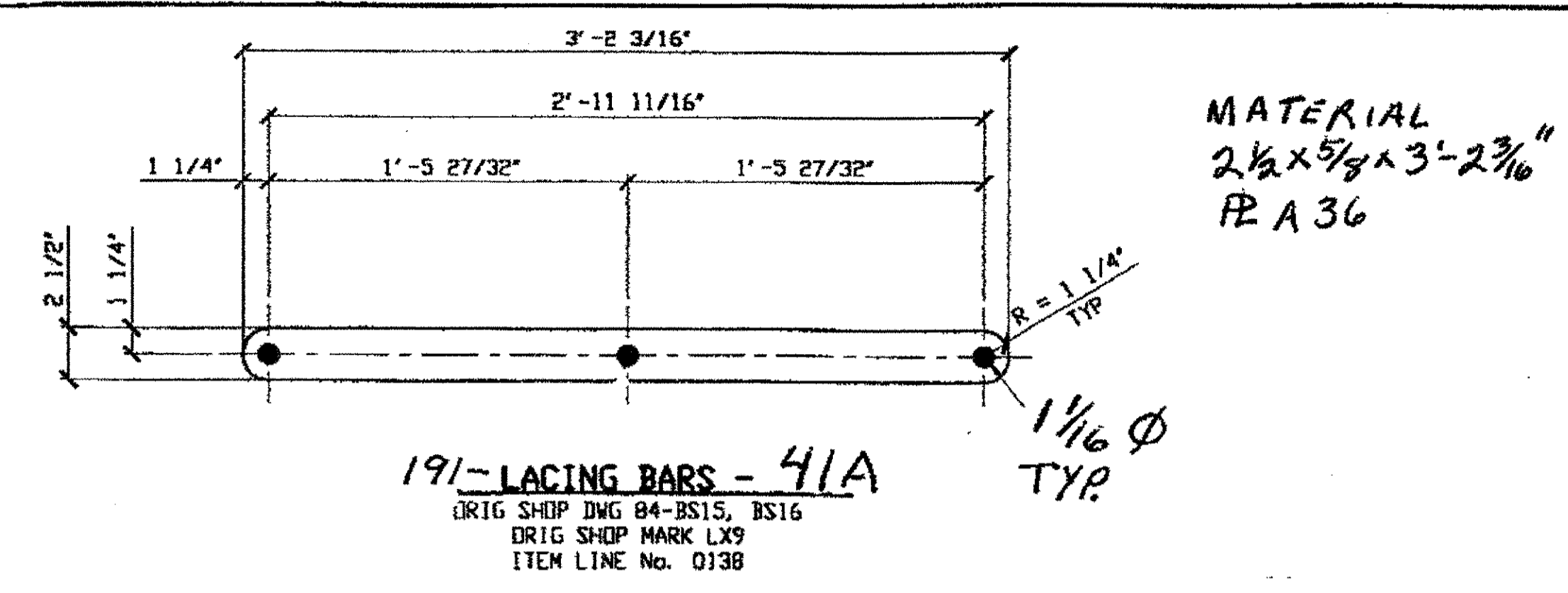
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16.13**

SCALE: N/A  
 DRAWING NO. 40





**SPAN 5** TOTAL = 26

A-A'	NORTH	6	EAST FACE
A-A'	NORTH	6	WEST FACE
B-B'	NORTH	1	
A-A'	SOUTH	6	WEST FACE
A-A'	SOUTH	4	EAST FACE
B-B'	SOUTH	3	

**SPAN 6** TOTAL = 6

B-C'	NORTH	1	
B-B'	SOUTH	5	

**SPAN 7** TOTAL = 50

A-A'	NORTH	6	EAST FACE
A-A'	NORTH	6	WEST FACE
B-A'	NORTH	1	
C-B'	NORTH	6	
G-F'	NORTH	3	
N-M'	NORTH	4	
A-A'	SOUTH	6	WEST FACE
A-A'	SOUTH	4	EAST FACE
B-B'	SOUTH	7	
C-B'	SOUTH	2	
Q-P'	SOUTH	5	

**SPAN 9** TOTAL = 38

A-A'	NORTH	4	EAST FACE
A-A'	NORTH	2	WEST FACE
C-D'	NORTH	2	
G-F'	NORTH	2	
G-H'	NORTH	2	
K-K'	NORTH	2	
A-A'	SOUTH	6	EAST FACE
A-A'	SOUTH	6	WEST FACE
N-N'	SOUTH	4	
R-R'	SOUTH	3	
S-R'	SOUTH	5	

**SPAN 11** TOTAL = 43

A-A'	NORTH	5	EAST FACE
A-A'	NORTH	5	WEST FACE
E-F'	NORTH	6	
F-F'	NORTH	2	
R-S'	NORTH	2	
S-S'	NORTH	6	
T-T'	NORTH	4	
U-U'	NORTH	1	EAST FACE
B-B'	SOUTH	4	
C-B'	SOUTH	2	
C-C'	SOUTH	3	
D-C'	SOUTH	2	
U-U'	SOUTH	1	EAST FACE

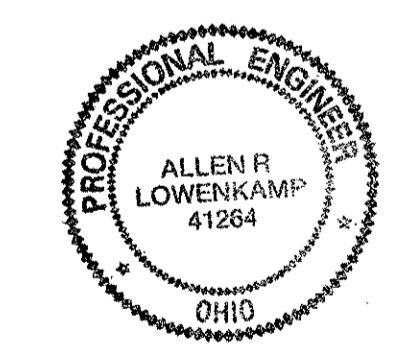
**SPAN 12** TOTAL = 4

C-D'	NORTH	4	
------	-------	---	--

**SPAN 13** TOTAL = 24

A-B'	NORTH	2	
B-C'	NORTH	1	
G-F'	NORTH	4	
H-J'	NORTH	8	
L-L'	SOUTH	1	
N-N'	SOUTH	4	EAST FACE
N-N'	SOUTH	4	WEST FACE

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/04 DSYA  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



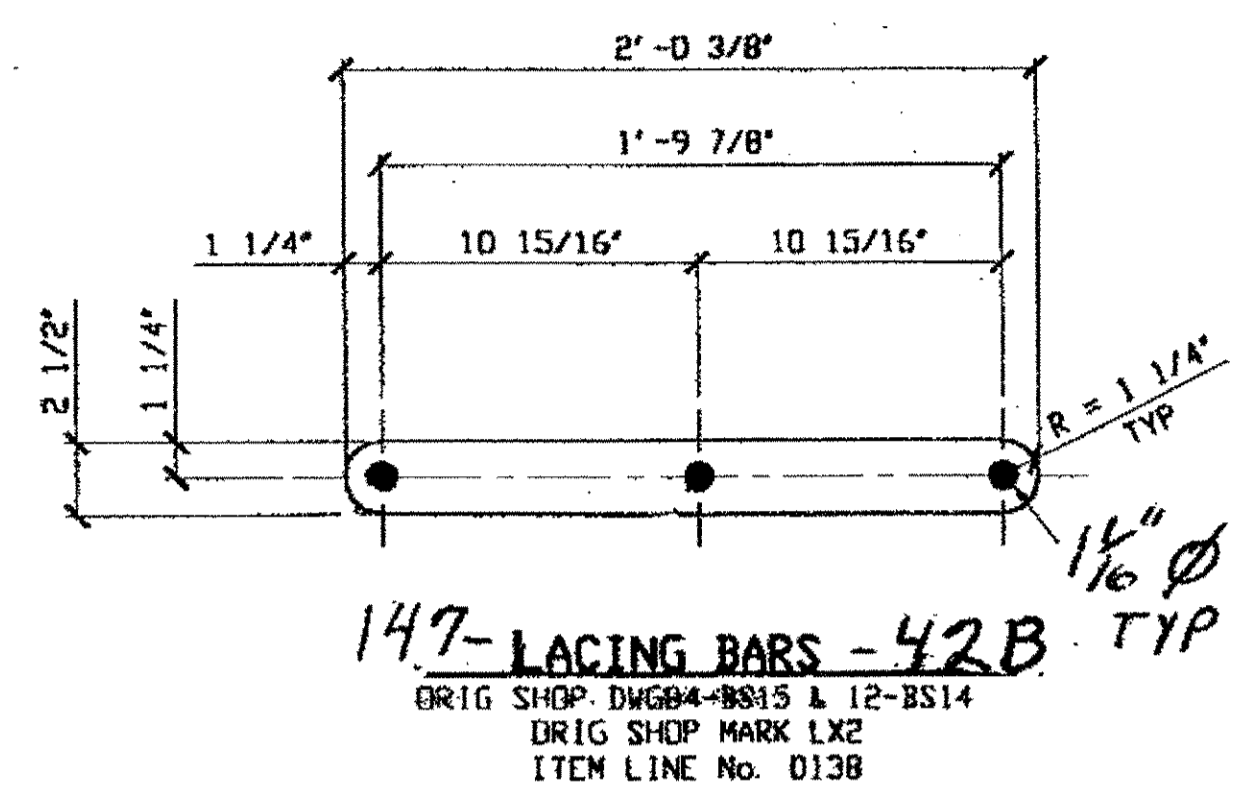
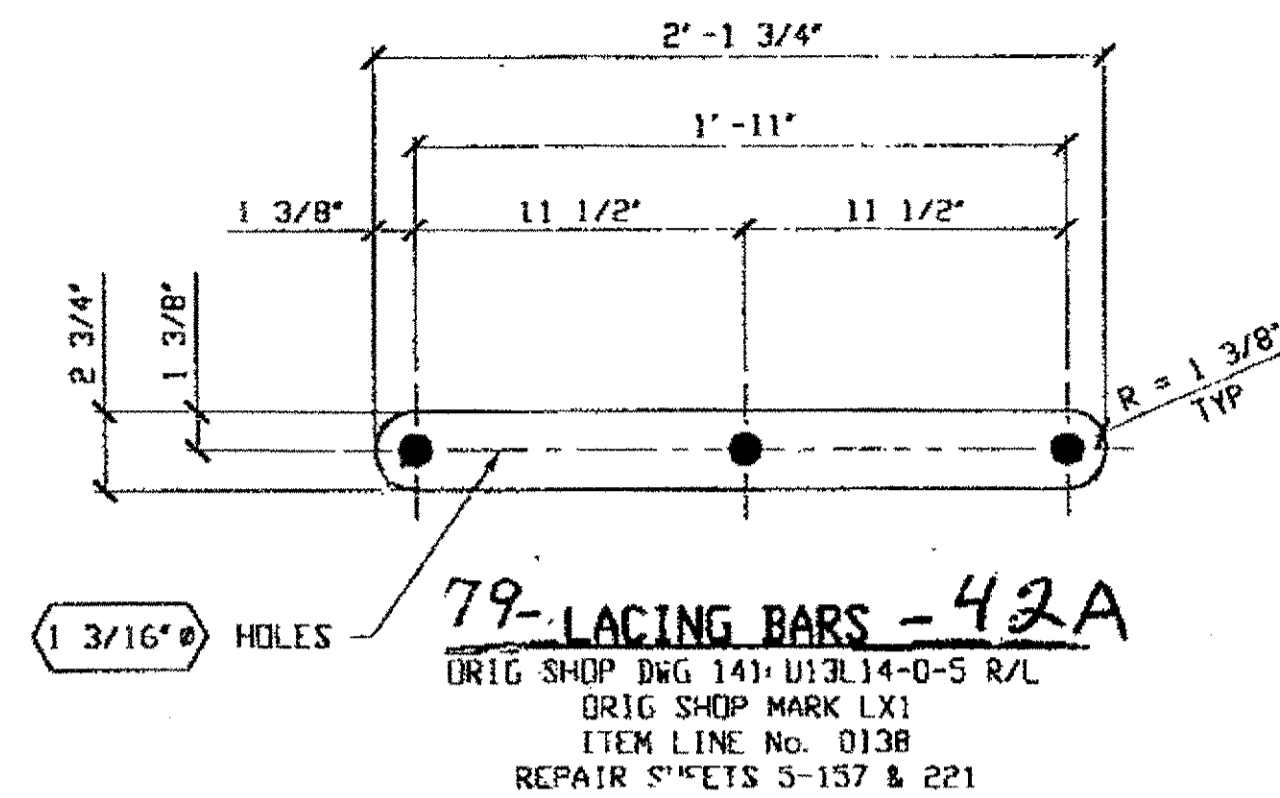
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**

JOB NO. 2000212  
 DRAWING NO. 41

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2								
3		42A		79 BAR 2 3/4\" x 3/8\"	2	1 3/4		
4								
5								
6		42B		147 BAR 2 1/2\" x 1/2\" x 2 3/8\"	2	3/8		
7								
8								
9								
10								
11								
12								
13								
14								
PLATE	A36			PIPE	N/A		FITTINGS	N/A
SHAPES	N/A			FLGS.	N/A			

SPAN 1,      42A    TOTAL 2

L0-U1    N. EXT.    TOP, 2

SPAN 2,      42A    TOTAL 6

L13-U1    N. EXT    TOP, 2  
 L13-U1    N. INT    TOP, 2  
 L13-U1    N. INT    BOT, 2

SPAN 3,      42A    TOTAL 22

L13-U12    N. EXT.    BOT, 4  
 L13-U12    N. EXT.    TOP, 9  
 L13-U12    N. INT.    BOT, 2 1/2 TOP 4  
 U12-U13    N. INT.    BOT, 3

SPAN 5,      42A    TOTAL 15

L14-U13    N. EXT.    E.F. 7 & W.F. 4  
 L14-U13    S. EXT    TOP, 1  
 L14-U14    S. INT.    W.F. 2  
 L14-U14    S. EXT.    W.F. 1

SPAN 9,      42A    TOTAL 17

L17-U16    N. EXT.    TOP, 7  
 L17-U16    N. INT.    TOP, 2  
 L17-U16    S. EXT.    TOP, 6  
 L17-U16    S. EXT.    BOT, 2

SPAN 11,      42A    TOTAL 17

L8-U7      N. EXT.    TOP, 1  
 L6-U5      S. EXT.    TOP, 2  
 L8-U7      S. EXT.    TOP, 2  
 L12-U13    S. EXT.    TOP, 1  
 L18-U17    S. EXT.    TOP, 6  
 L18-U17    S. EXT.    BOT, 1  
 L18-U17    S. INT.    TOP, 4

SPAN 1    42B    TOTAL - 10

A-A' NORTH, TOP 6  
 A-A' SOUTH, TOP 2  
 A-A' SOUTH BOT 2

SPAN 3    42B    TOTAL 43

A-A' NORTH TOP 10  
 A-A' NORTH BOT. 2  
 O-O' NORTH TOP 2  
 O-O' NORTH BOT. 2  
 A-A' SOUTH TOP 12  
 A-A' SOUTH BOT. 3  
 O-O' SOUTH TOP 6  
 O-O' SOUTH BOT. 6

SPAN 5    42B    TOTAL - 44

A-A' NORTH TOP 12  
 A-A' NORTH BOT 14  
 A-A' SOUTH TOP 2  
 A-A' SOUTH BOT 10  
 Q-Q' NORTH TOP 4  
 Q-Q' SOUTH BOT 2

SPAN 7    42B    TOTAL - 50

A-A' NORTH TOP 12  
 A-A' NORTH BOT. 14  
 Q-Q' NORTH TOP 4  
 A-A' SOUTH TOP 10  
 A-A' SOUTH BOT. 10

O.D.O.T. DIST. 12

ACCEPTED \_\_\_\_\_

ACCEPTED AS NOTED \_\_\_\_\_

NOT ACCEPTED \_\_\_\_\_

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

E.F. = EAST FACE

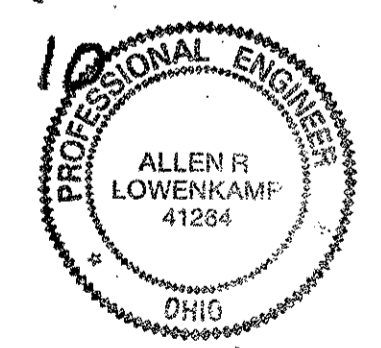
W.F. = WEST FACE

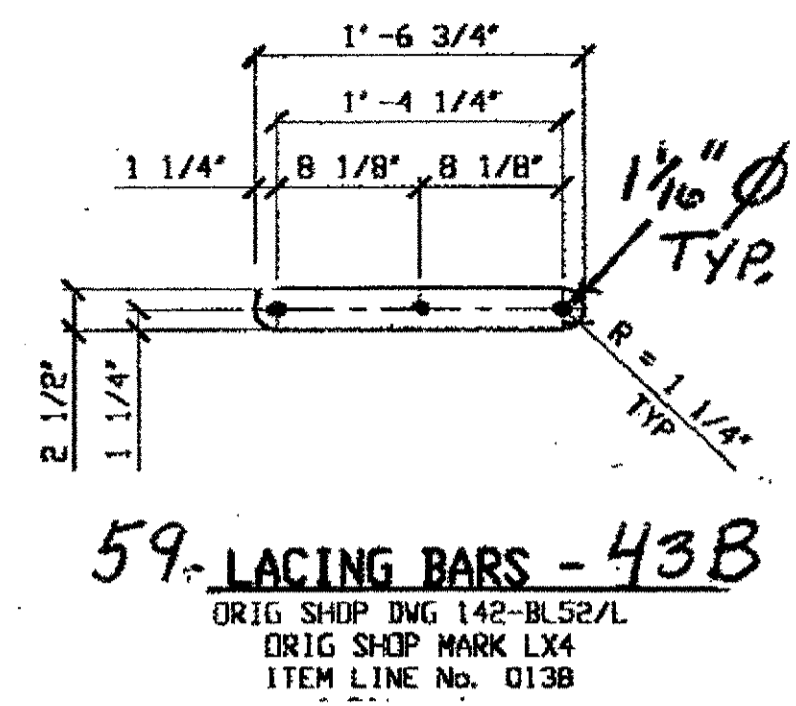
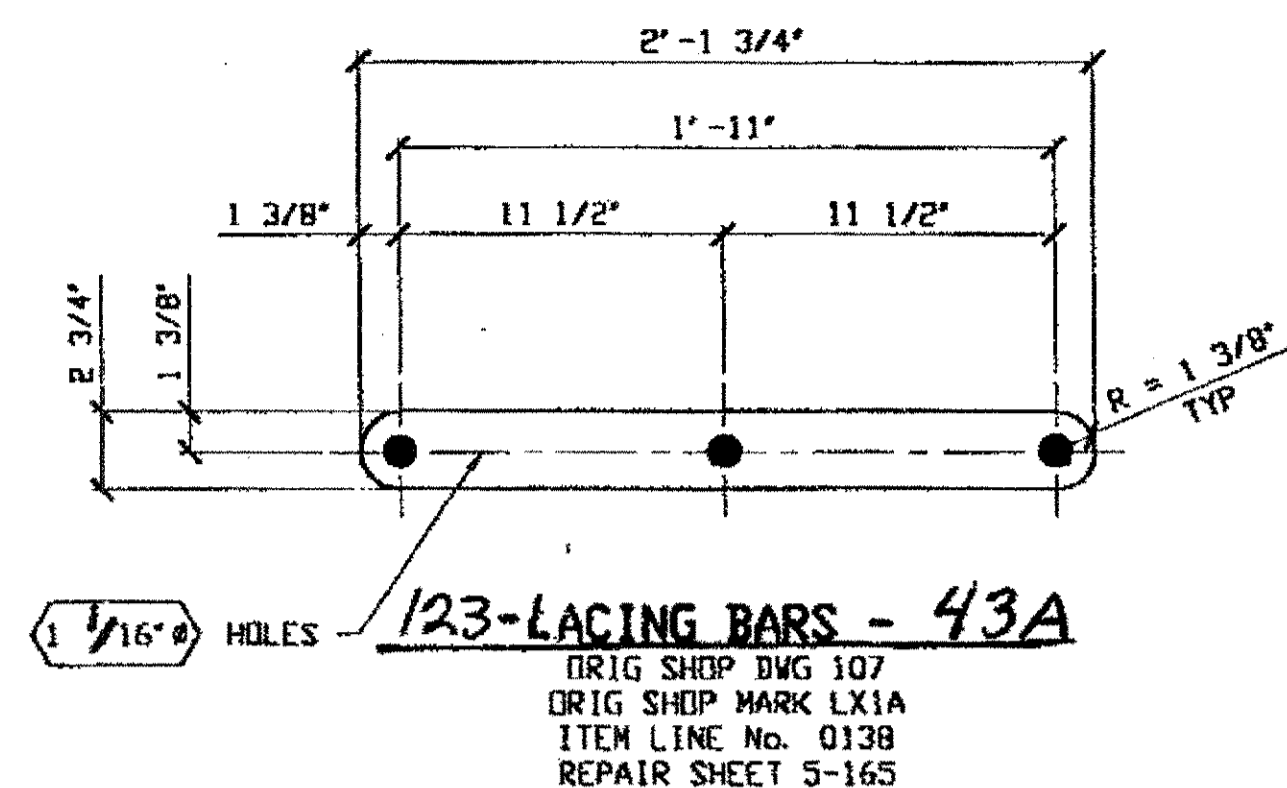
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13

SCALE N/A      DRAWING NO. 42





BILL OF MATERIALS		
Piece No.	Qty.	Description
43A	123	2 3/4" x 7/16" x 2'-1 3/4"
43B	59	2 1/2" x 1/2" x 1'-6 3/4"
43C	9	2 1/2" x 3/8" x 11 1/16"
		RA36

SPAN 3 43A  
L13-U13 N.EXT. W.F. 1

SPAN 2 43B

SPAN 4 43A

SPAN 9 43A

SPAN 4 43B

U14-U1 N.EXT. TOP 2  
U14-U1 N.INT. TOP 2  
U14-U1 N.INT. BOT 2

L17-U17 S.INT. E.F. 2  
L17-U17 S.INT. W.F. 2

A-B NORTH, TOP, 6  
A-B SOUTH, TOP, 12 1/2 BOT, 1

SPAN 6 43A

SPAN 11 43A

SPAN 6 43B

U15-U1 N.EXT. TOP 2  
U15-U1 N.INT. TOP 2  
U15-U1 S.INT. TOP 4

L18-U18 S.INT. E.F. 1  
L18-U18 S.INT. W.F. 9

A-B' SOUTH, BOT, 2

SPAN 7 43A

SPAN 13 43A

SPAN 8 43B

L15-U15 N.EXT. W.F. 1

L0-U0 N.EXT. W.F. 56  
L12-U12 N.INT. W.F. 20  
L0-U0 S.EXT. W.F. 2  
L12-U12 S.EXT. W.F. 4  
L12-U12 S.INT. W.F. 9

A-B' NORTH TOP 9  
A-B' NORTH BOT 3  
E-F SOUTH TOP 19  
E-F SOUTH BOT 4  
F-E' NORTH TOP 3

SPAN 8 43A

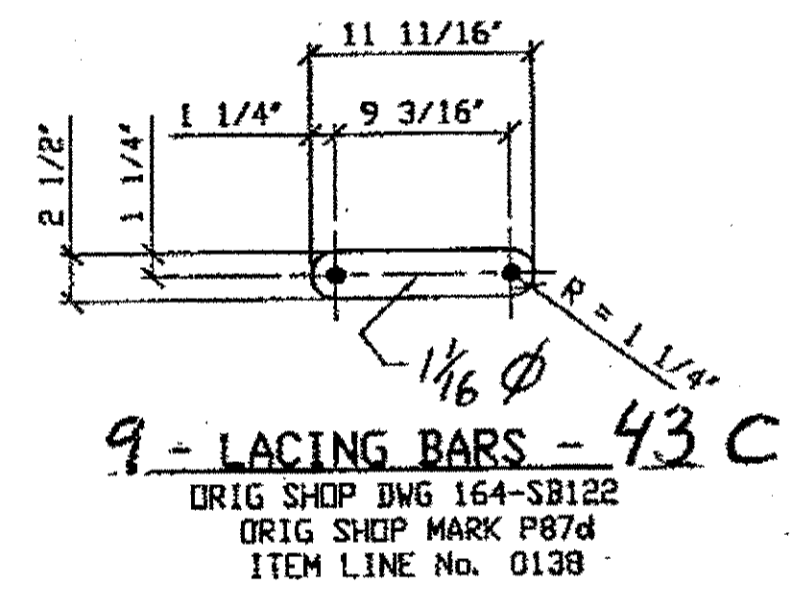
SPAN 5 43C

U17-U1 N.INT. BOT, 2

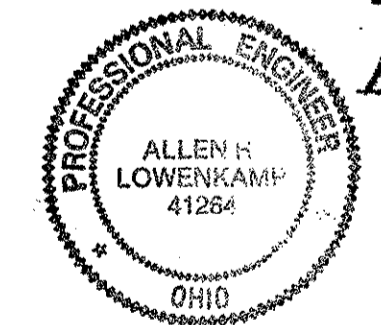
A-A' NORTH SWAY FRAME 4

SPAN 7 43C

A-A' NORTH SWAY FRAME 5



O.D.O.T. DIST. 12  
ACCEPTED 2/9/04 D.S.M.  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



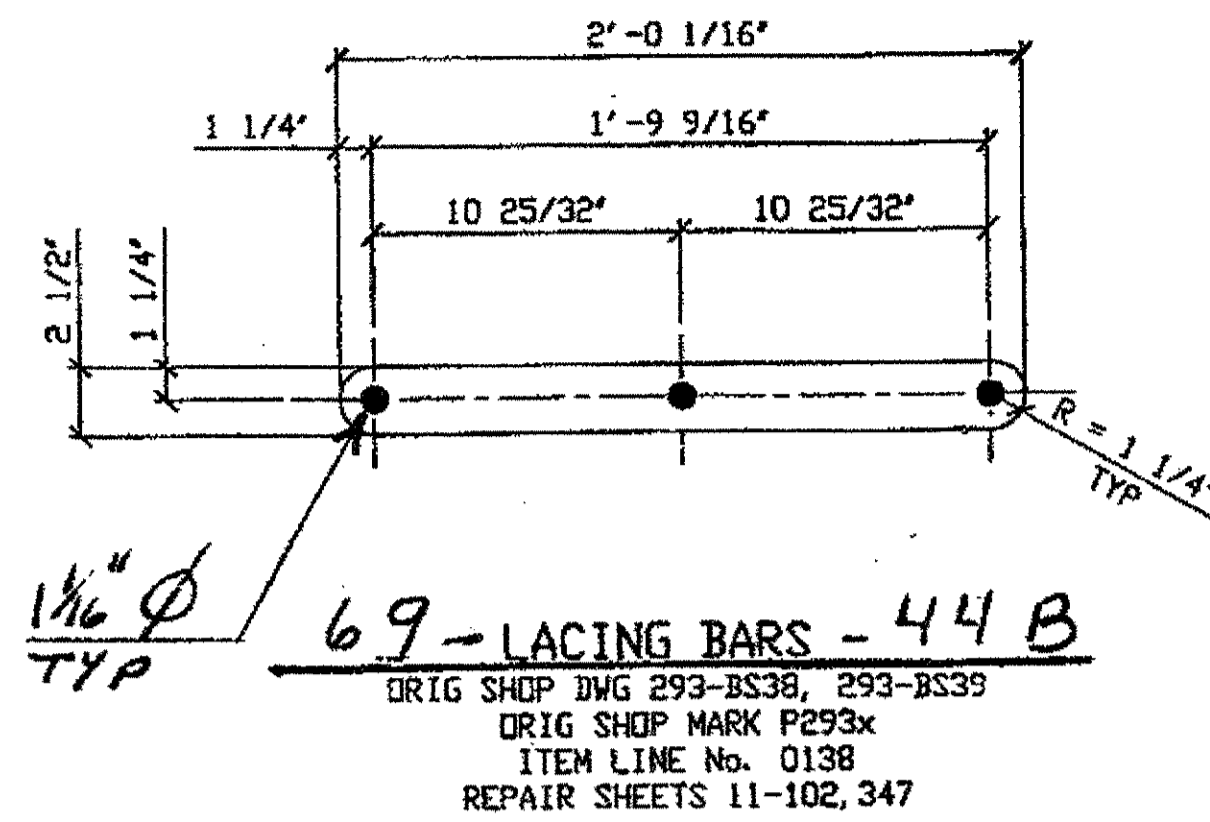
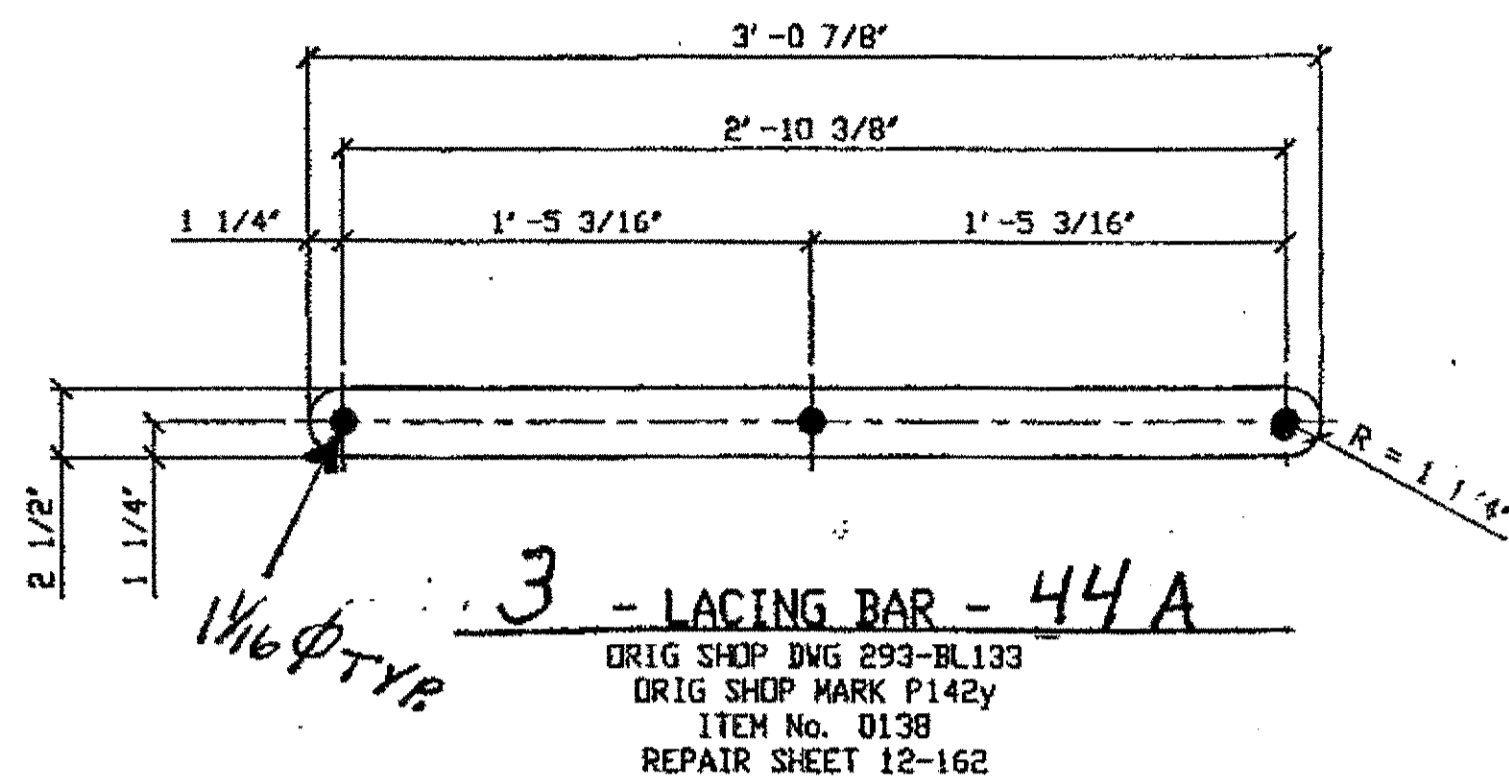
E.F. = EAST FACE  
W.F. = WEST FACE

NO.	REVISION	DATE	BY

**Jri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16, 13**

DRAWN BY _____	CHECKED BY _____	JOB NO. _____
SCALE NA	DATE _____	DRAWING NO. <b>43</b>



BILL OF MATERIALS		
Piece No.	Qty.	Description
44A	3	2 1/2" x 5/8" x 3'-0 7/8"
44B	69	2 1/2" x 5/8" x 2'-0 1/16"
44C	8	2 3/4" x 3/8" x 2'-13/16"
44D	2	2 3/4" x 7/16" x 2'-1 9/16"
PLATES A36		

SPAN 7

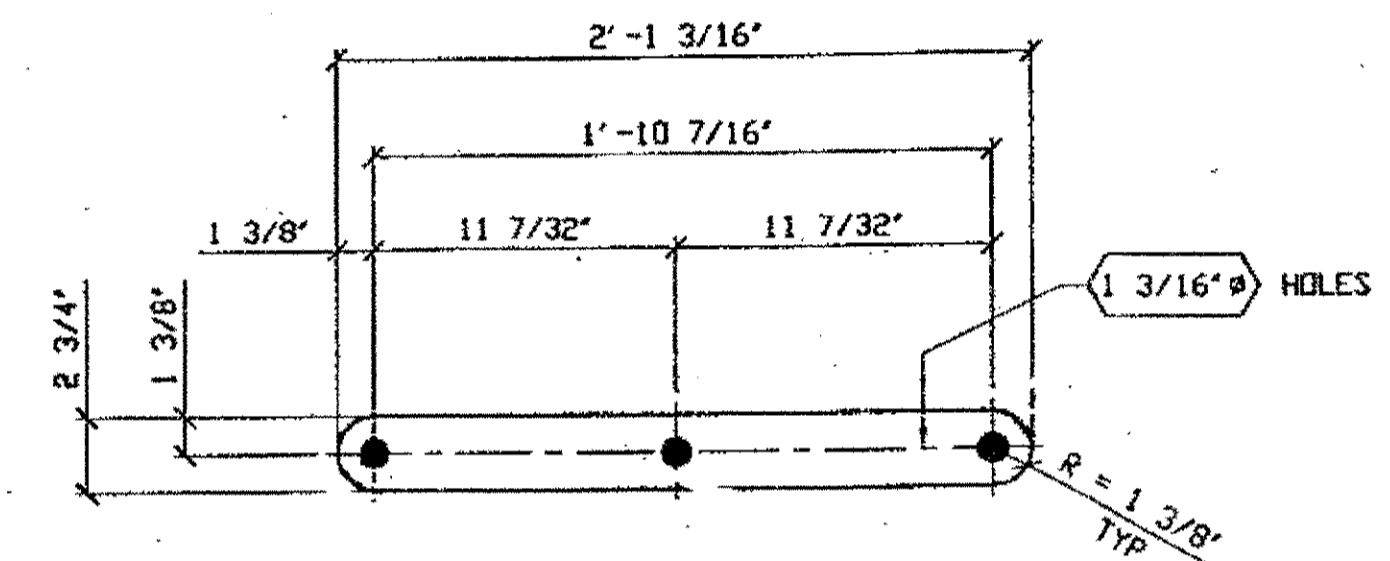
N-M' NORTH 2 - 44A

SPAN 12

E-D' SOUTH 1 - 44A

SPAN 9

A-A' NORTH TOP, 8 - 44B  
 A-A' NORTH BOT., 6 - 44B  
 S-S' NORTH BOT., 4 - 44B  
 A-A' SOUTH TOP, 10 - 44B  
 A-A' SOUTH BOT., 10 - 44B

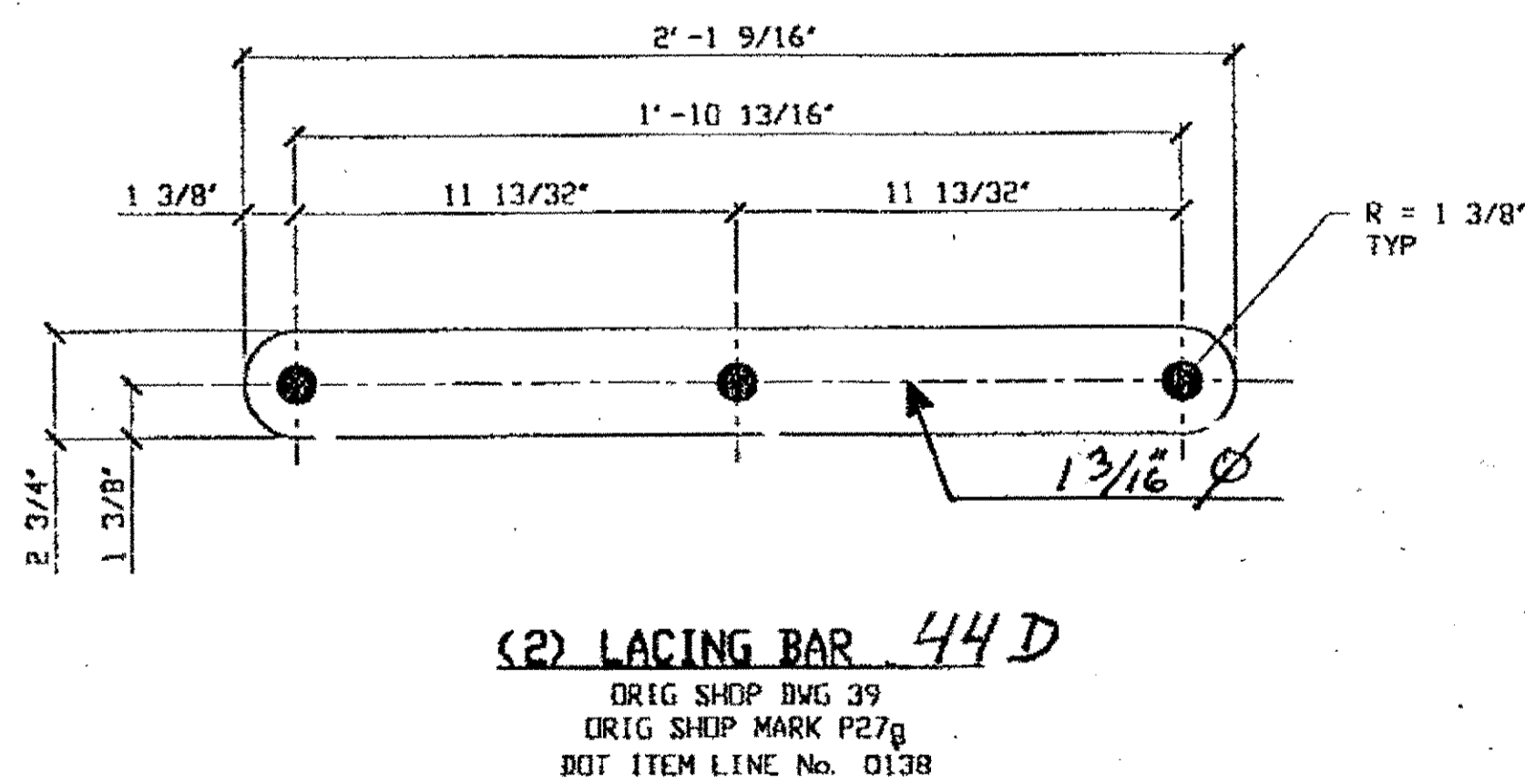


SPAN 11

A-A' NORTH TOP, 12 - 44B  
 U-U' SOUTH TOP, 1 - 44B  
 U-U' SOUTH BOT., 6 - 44B

SPAN 7

L15-U14 N.EXT TOP 4 - 44C  
 L15-U14 S.EXT TOP 2 - 44C  
 L15-U14 S.INT TOP 2 - 44C

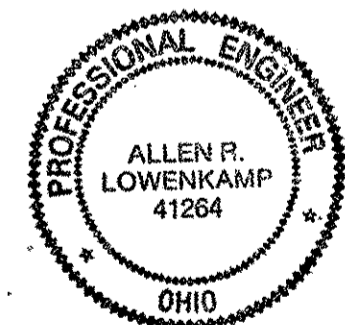


SPAN 13

N-N' SOUTH TOP, 6 - 44B  
 N-N' SOUTH BOT., 6 - 44B

SPAN WYLE  
 L3-U4 SOUTH TOP, 2, 44D

O.D.O.T. DIST. 12  
 ACCEPTED [initials] [initials]  
 ACCEPTED AS NOTED [initials] [initials]  
 NOT ACCEPTED [initials] [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

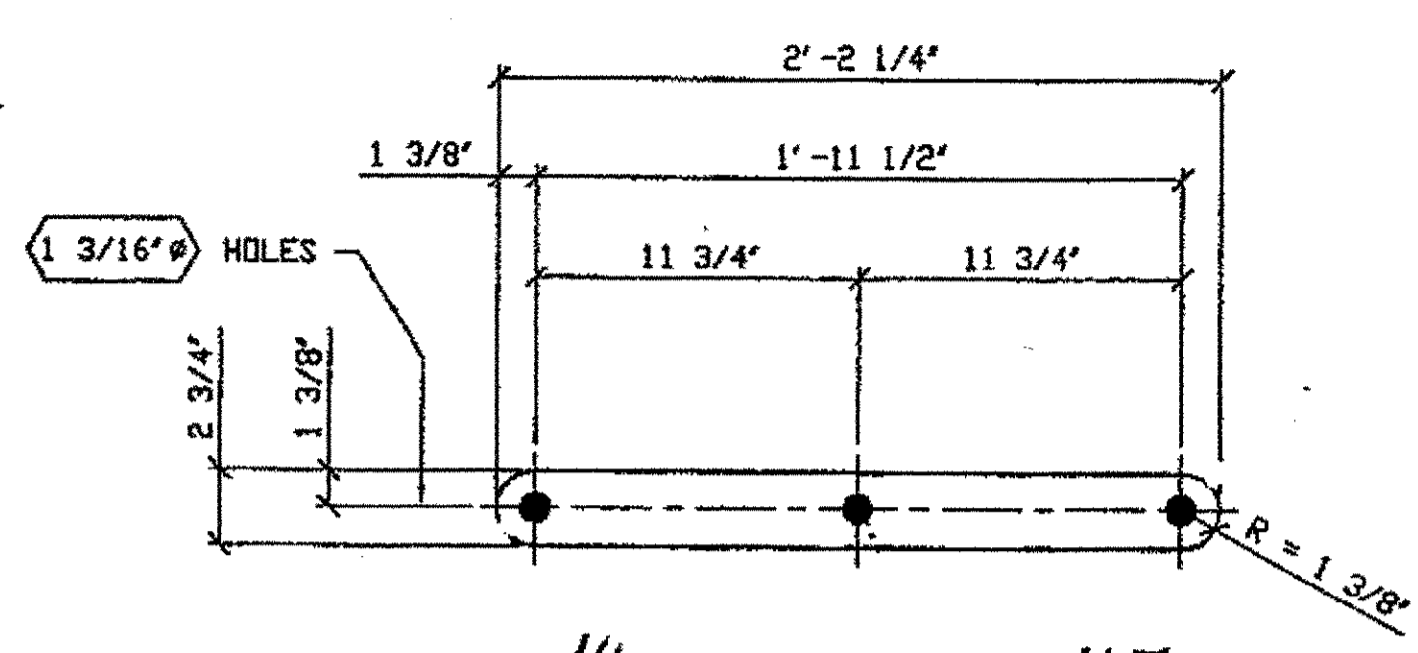
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13

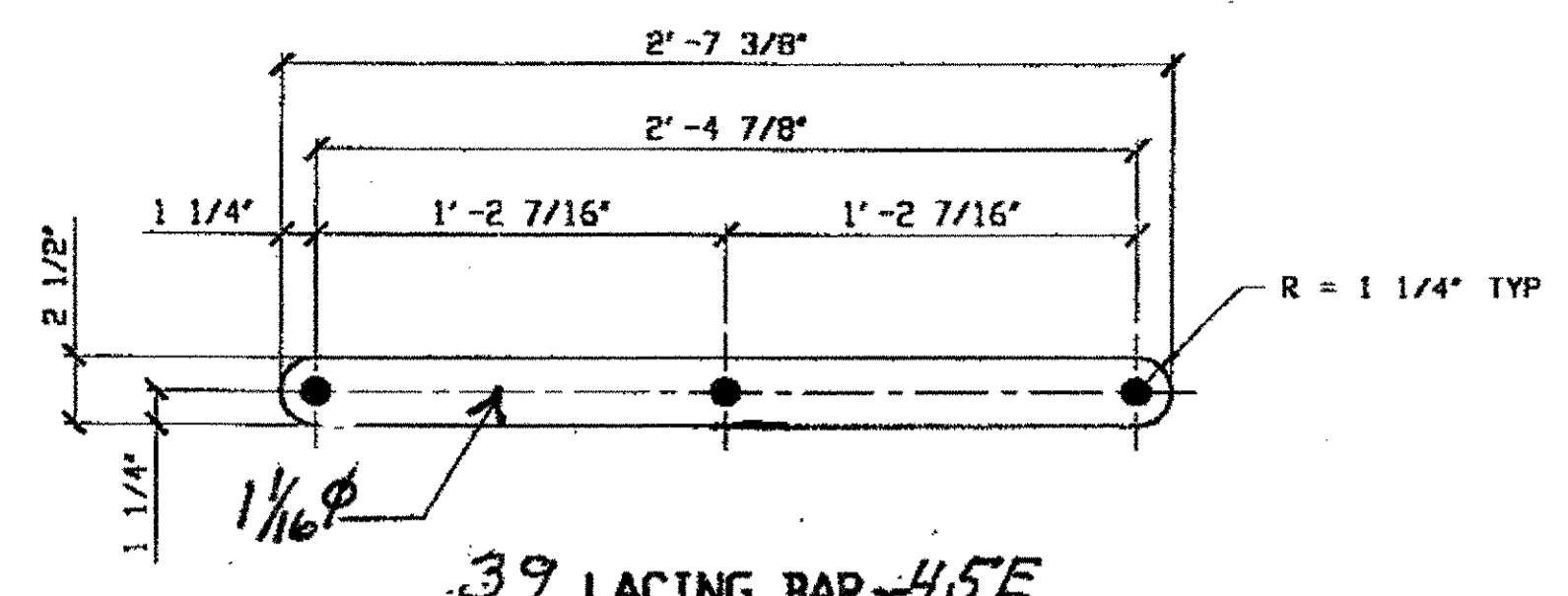
SCALE: NA DATE: \_\_\_\_\_ DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ JOB NO. 44

BILL OF MATERIALS

Piece No.	Qty.	Description
45A	14	2 3/4" x 3/8" x 2'-2 1/4"
45B	5	2 1/2" x 1/2" x 1'-7 1/32"
45C	11	2 3/4" x 3/8" x 1'-11 9/16"
45D	12	2 3/4" x 7/16" x 2'-0 7/8"
45E	39	2 1/2" x 1/2" x 2'-7 3/8"
		PLATE, A36



14 - LACING BARS - 45A  
 ORIG SHOP DWG 468 L304-0-12 R/L  
 ORIG SHOP MARK P42e  
 LINE ITEM No. 0138  
 REPAIRS SHEETS 12-122, 130, 159 & 165



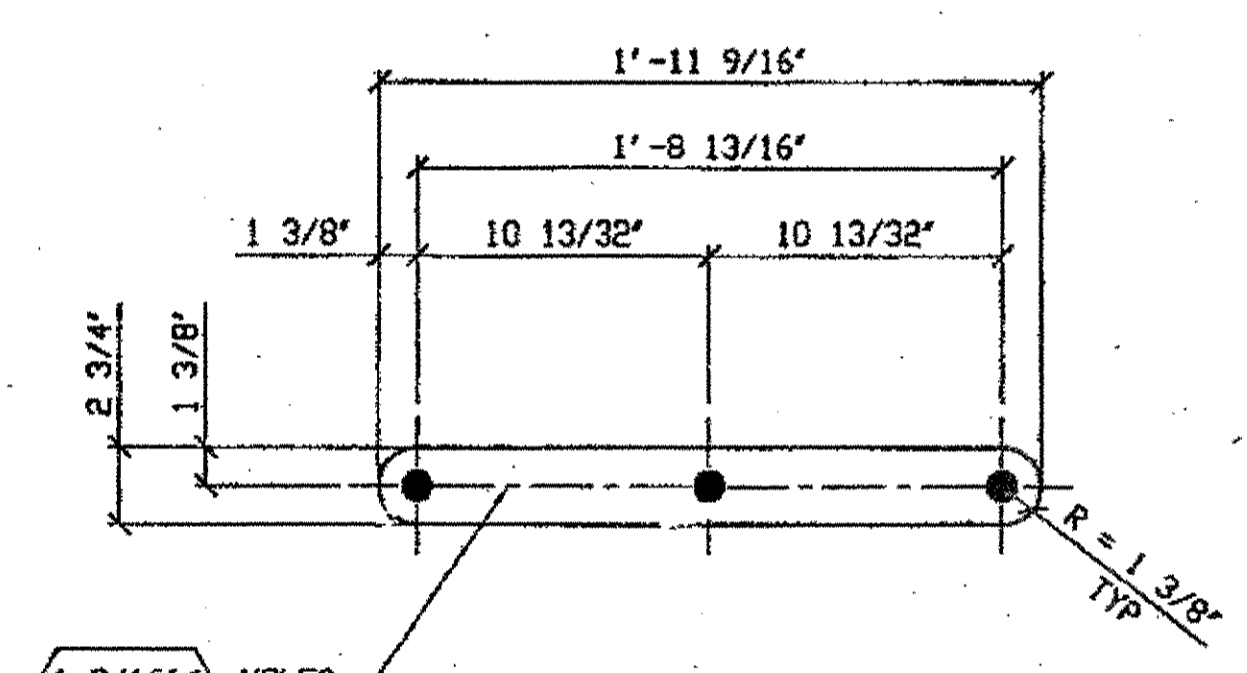
39 LACING BAR - 45E  
 ORIG SHOP DWG 16  
 ORIG SHOP MARK P13h  
 ITEM LINE NO. 0138

SPAN WYLE

- G-Q' NORTH 11, - 45E
- G-G' NORTH 11, - 45E
- Q-R, NORTH 3, - 45E
- G-G' SOUTH 10, - 45E
- G-Q' SOUTH 4, - 45E

SPAN 12

- L3-U4 N.EXT. TOP, 4 - 45A
- L3-U4 N.EXT. BOT., 2 - 45A
- L4-U0 NoEXT. TOP, 2 - 45A
- L4-U0 NoEXT. BOT., 2 - 45A
- L3-U4 S.EXT. TOP, 2 - 45A
- L4-U0 S.EXT. TOP, 2 - 45A



11 - LACING BARS - 45C  
 ORIG SHOP DWG 441: U13-L12-0-11/L  
 ORIG SHOP MARK LX12

SPAN 7

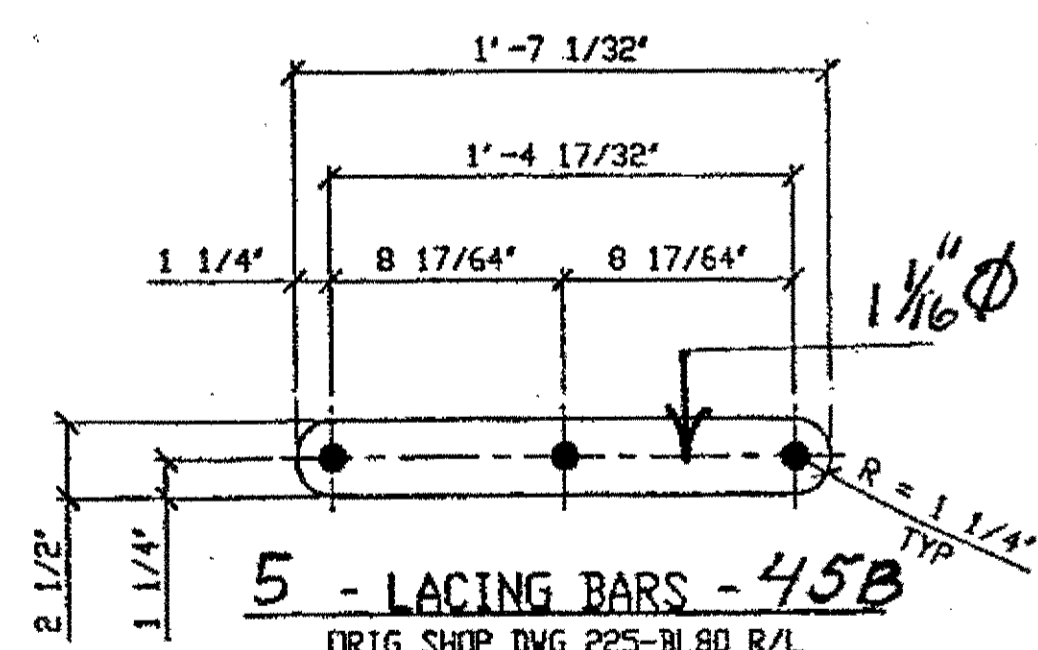
- L0-U1 N.EXT. TOP 5 - 45C

SPAN 11

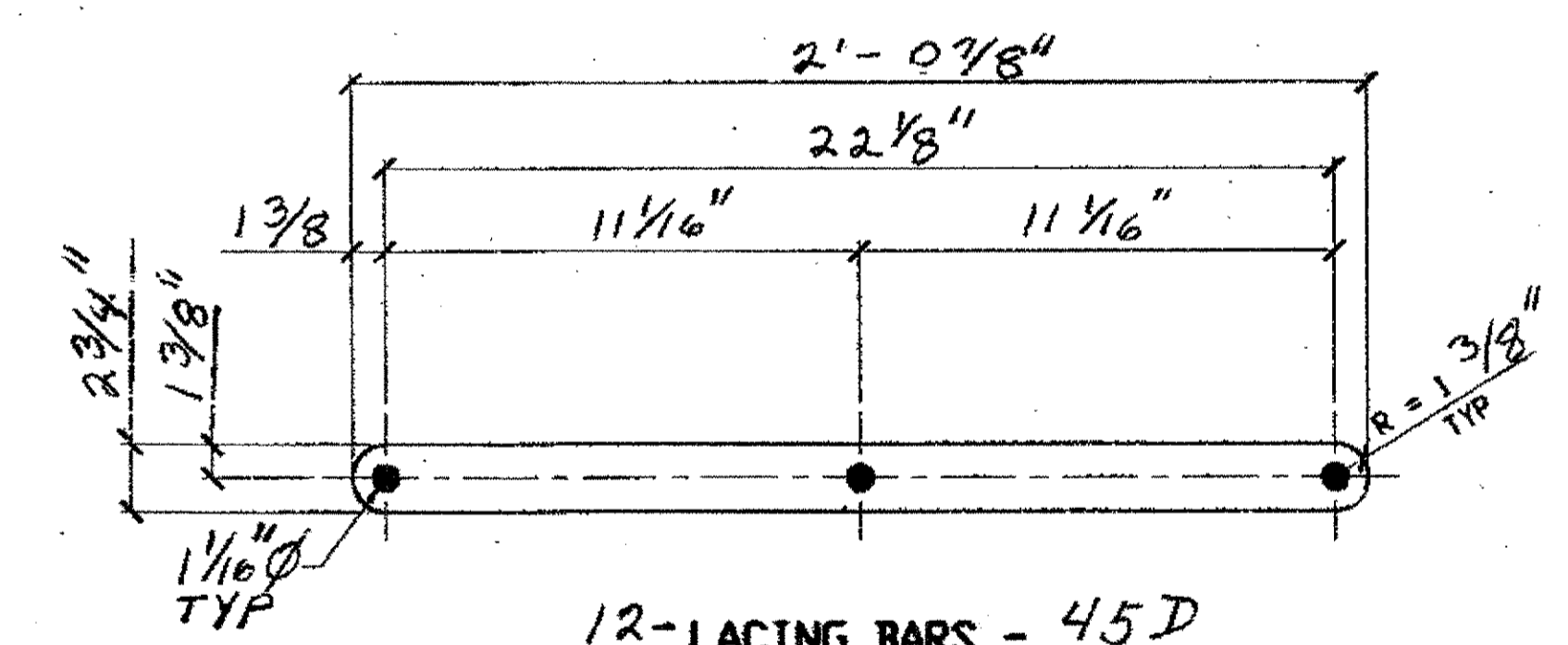
- L12-U13, S.EXT. TOP 1 - 45C

SPAN 13

- L5-U6 S.EXT. TOP 1 - 45C
- L12-U11 S.INT. TOP 4 - 45C



5 - LACING BARS - 45B  
 ORIG SHOP DWG 225-BL80 R/L  
 ORIG SHOP MARK P225a  
 LINE ITEM No. 0138  
 REPAIR SHEET 8-103 & 123



12 - LACING BARS - 45D  
 ORIGINAL SHOP DWG 23  
 ORIGINAL SHOP MARK P23M

SPAN WYLE

- L6-U6 NORTH, EAST FACE, - 12, - 45D

SPAN 12

- F-E' SOUTH 5, - 45B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature] 2/9/07 BSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY

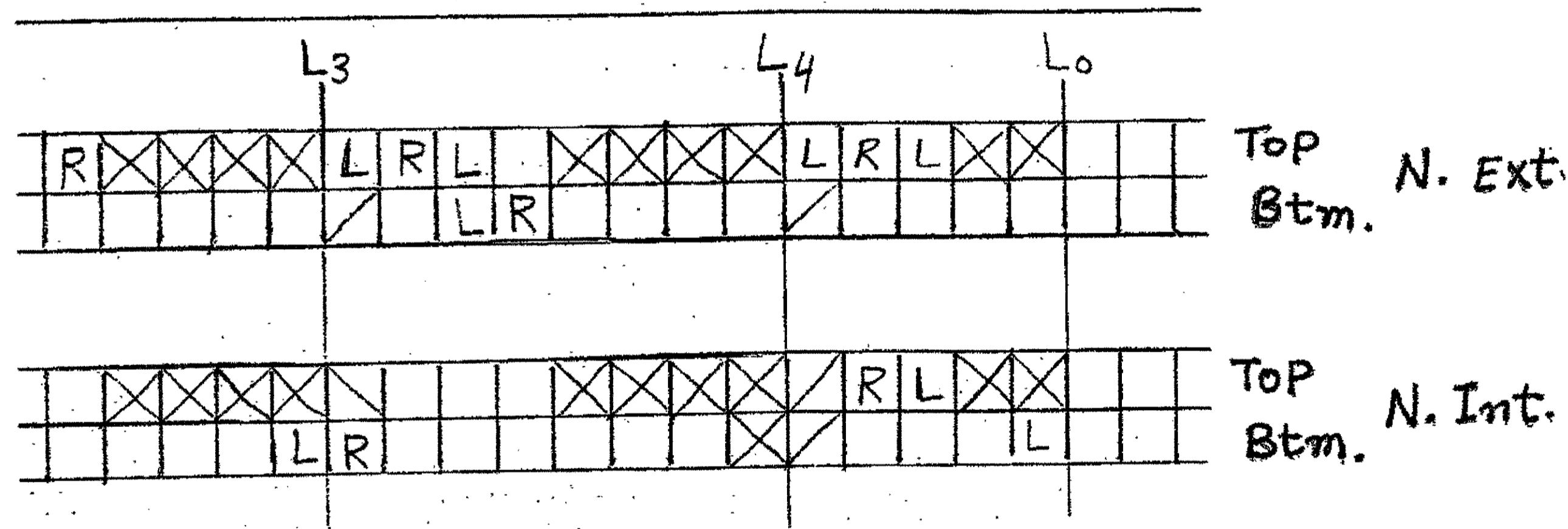
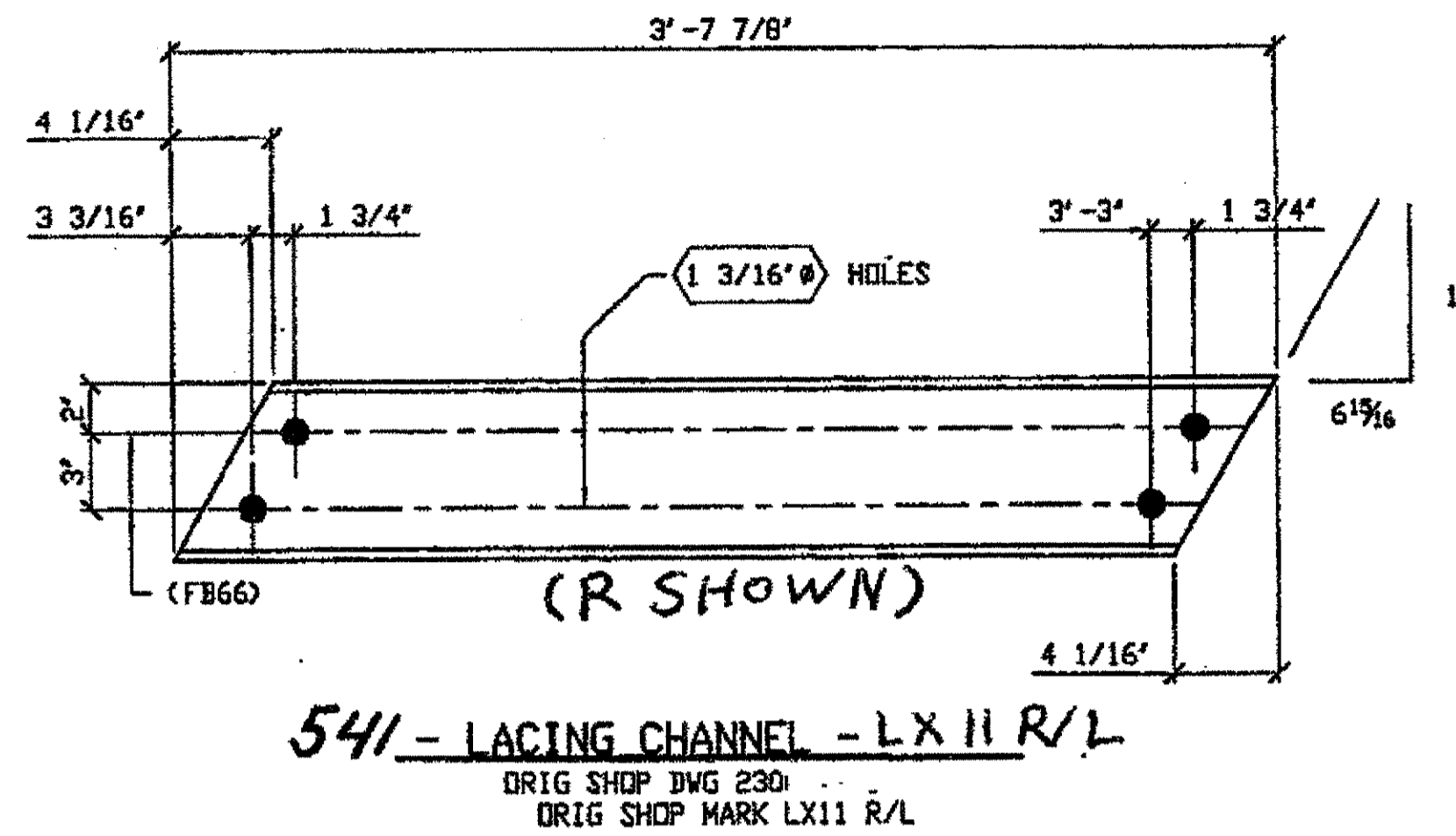
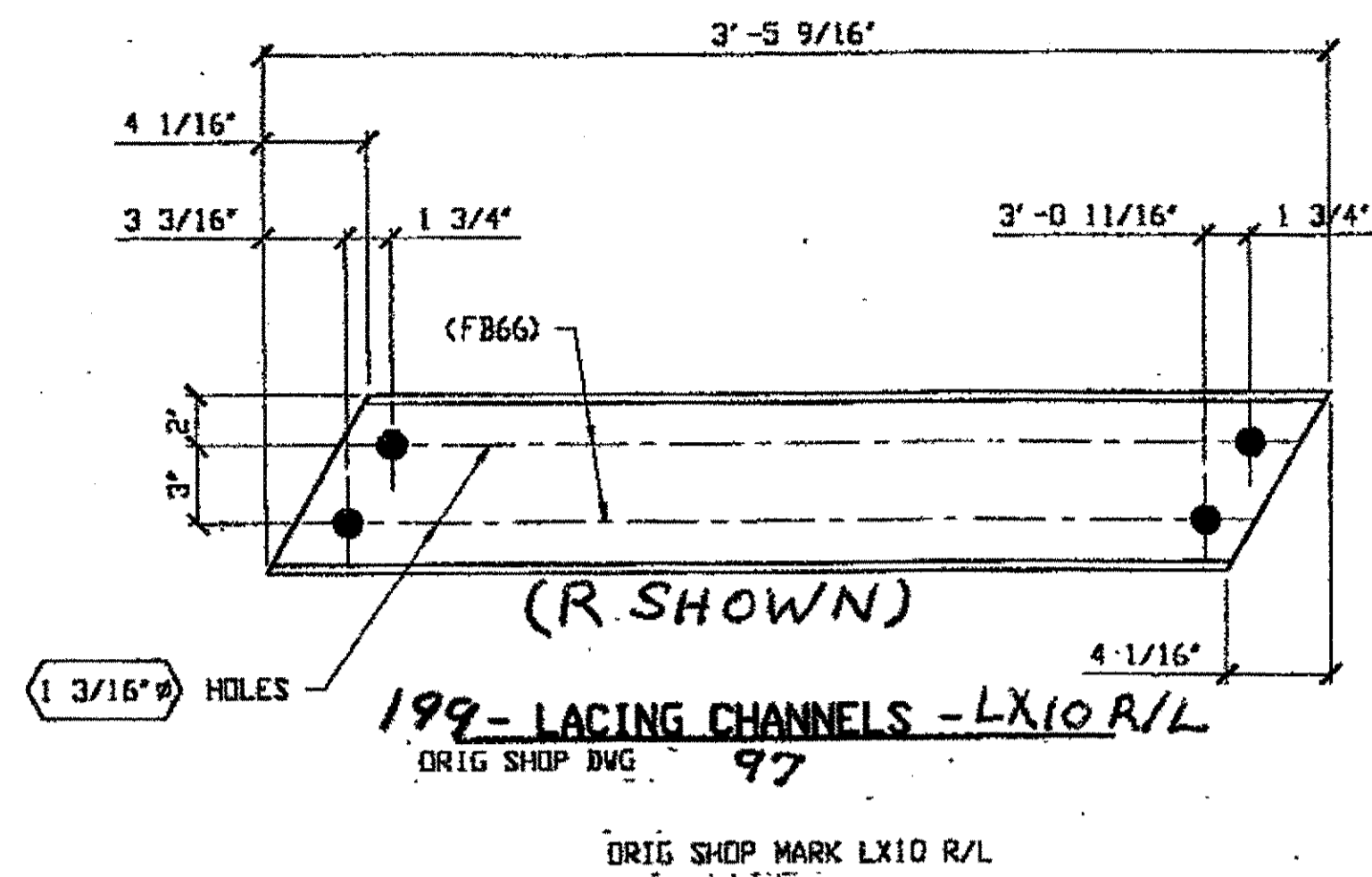
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13

SCALE: NA  
 DRAWING NO. 45

BILL OF MATERIALS

Piece No.	Qty.	Description
LX10 R/L	199	C7 x 12.25 x 3'-5 9/16" 103-R'S + 96-L'S
LX11 R/L	541	C7 x 12.25 x 3'-7 7/8" 283-R'S + 258-L'S
		SHAPES A36



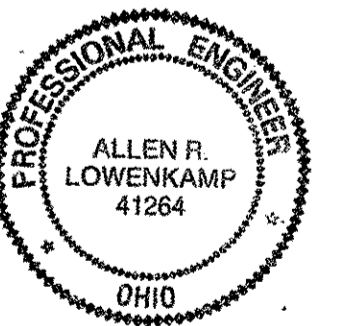
EXAMPLE

LEGEND

- BTM = BOTTOM
- Ch = LACING CHANNELS
- EXT. = EXTERIOR
- INT. = INTERIOR
- L = LEFT
- R = RIGHT
- N = NORTH
- S = SOUTH

NOTES

1. / INDICATES LEFT CHANNEL NOT REPLACED  
 \ INDICATES RIGHT CHANNEL NOT REPLACED  
 PURPOSE: TO SHOW CHANNEL ARRANGEMENT
2. CHANNELS ARE MODELED BY: LOOKING DOWN AT TOP OF CHORD AND LOOKING UP AT BOTTOM OF CHORD
3. TOTAL CHANNELS BETWEEN PANEL POINTS IS THE NUMBER OF SQUARES WITHOUT X, EXAMPLE: BETWEEN L3 + L4 N. INT. THERE ARE 4 TOP AND 7 BOTTOM CHANNELS.
4. R = RIGHT CHANNEL REPLACEMENT  
 L = LEFT CHANNEL REPLACEMENT



O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY

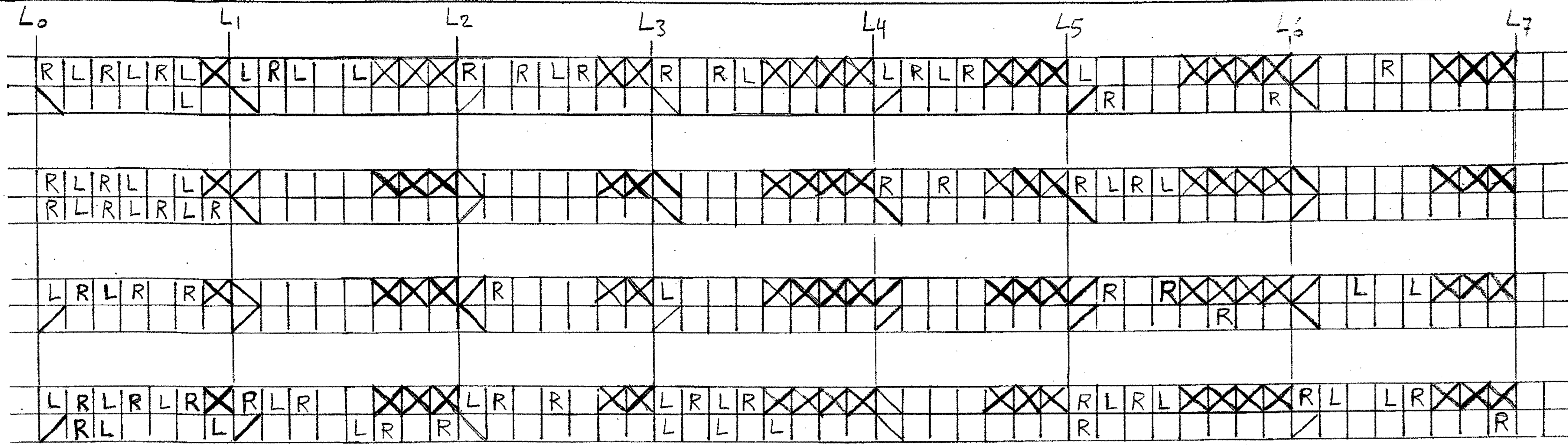
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: NA DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_





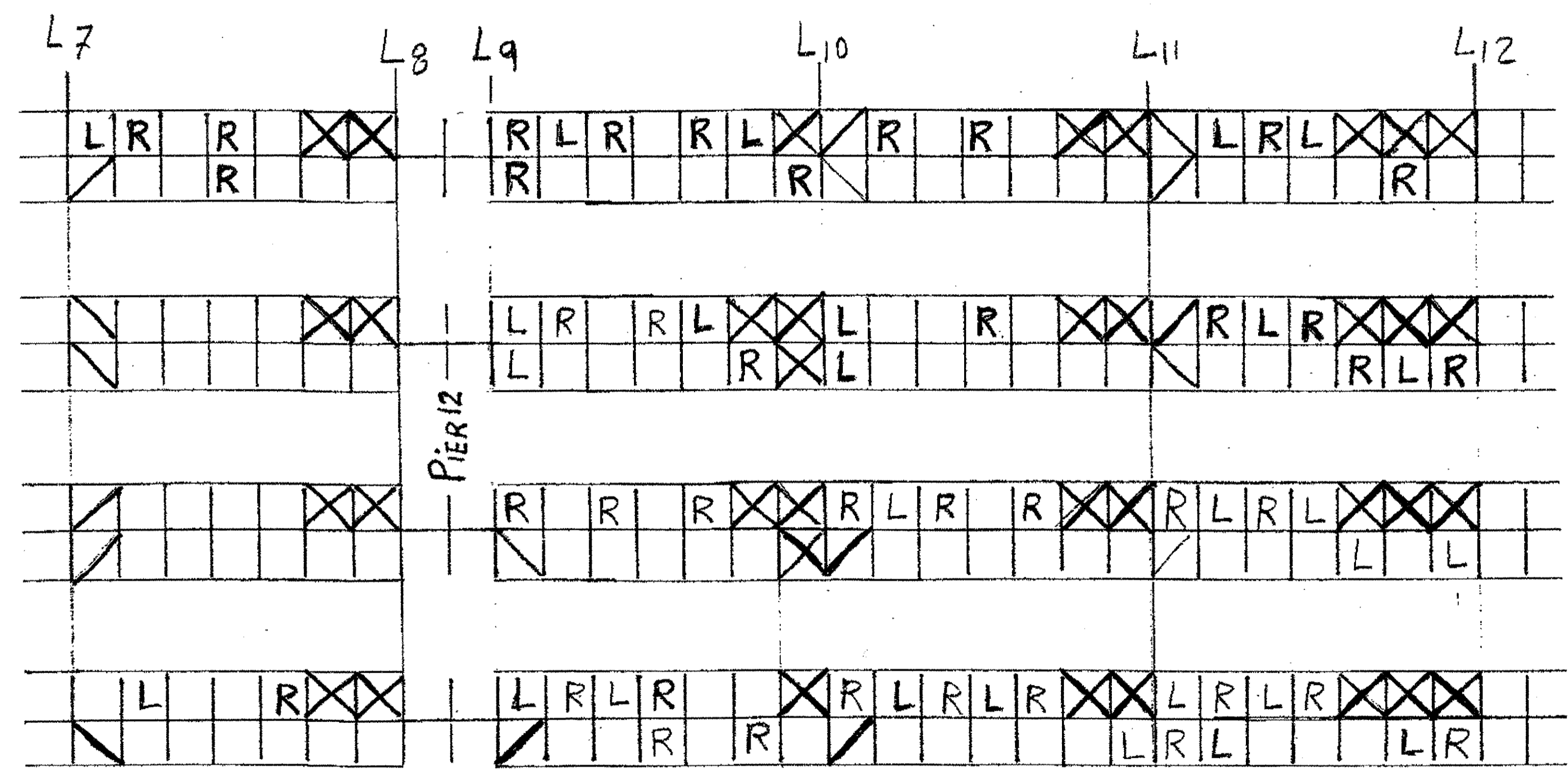
Top  
Btm. N. Ext. Truss

Top  
Btm. N. Int. Truss

SPAN 13

Top  
Btm. S. Int. Truss

Top  
Btm. S. Ext. Truss



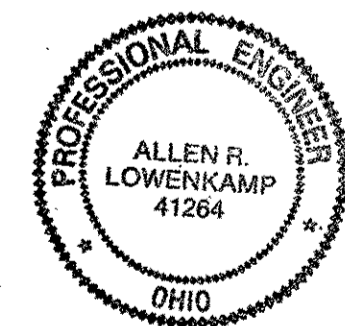
Top  
Btm. N. Ext. Truss

Top  
Btm. N. Int. Truss

SPAN 13

Top  
Btm. S. Int. Truss

Top  
Btm. S. Ext. Truss



89 Lacing Channels LX11 R  
68 Lacing Channels LX11 L

For More Details See Sheet 328

O.D.O.T. DIST. 12

ACCEPTED	2/9/13	psm
ACCEPTED AS NOTED		
NOT ACCEPTED		

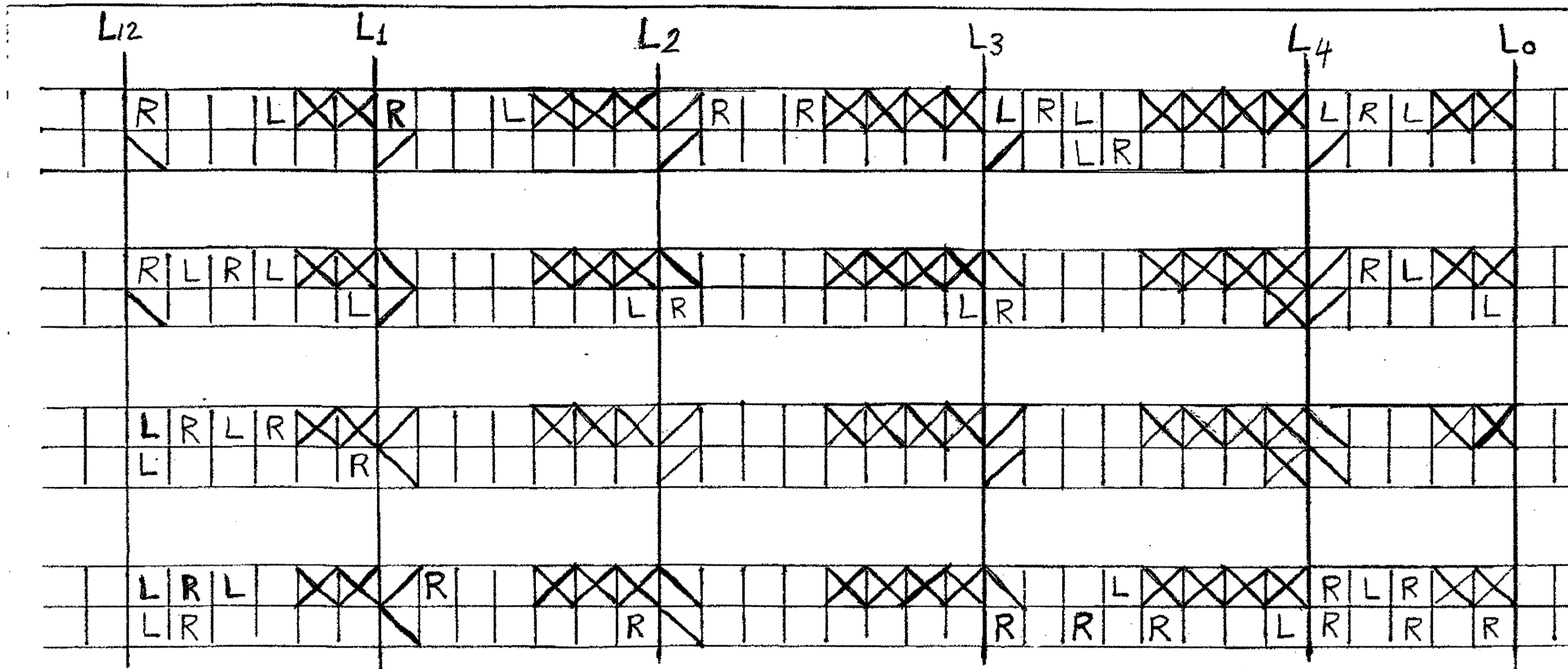
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
BRIDGE No. Cuy. 10-16.13

JOB NO. 2000212

DRAWN BY S.R.P. CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE N/A



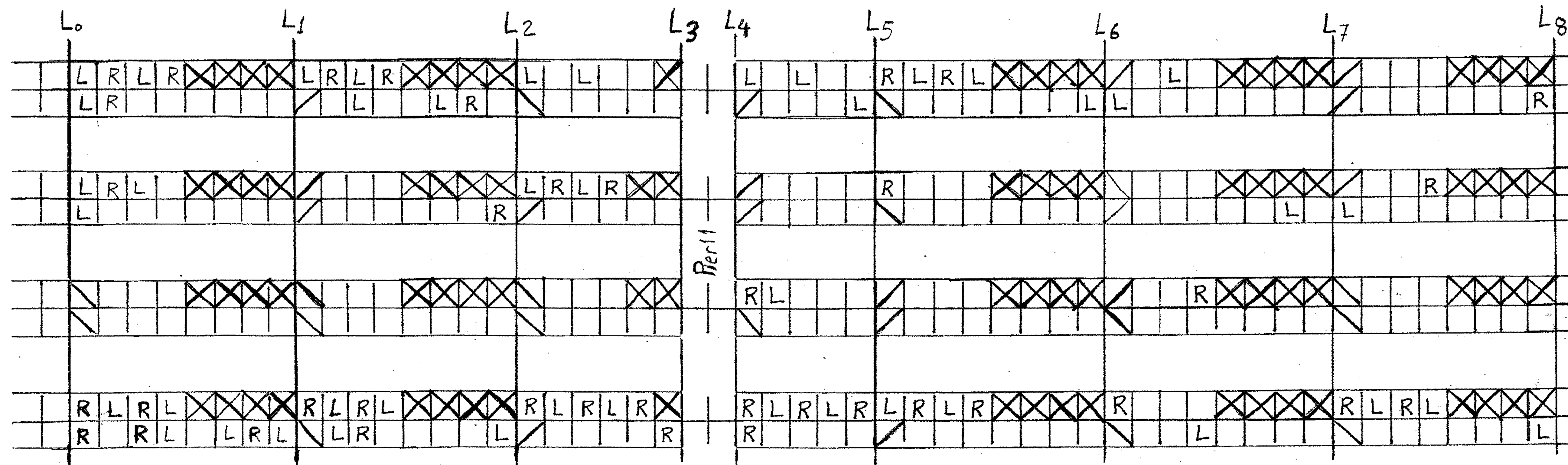
Top  
Btm. N. Ext. Truss

Top  
Btm. N. Int. Truss

SPAN 12

Top  
Btm. S. Int. Truss

Top  
Btm. S. Ext. Truss



Top  
Btm. N. Ext. Truss

Top  
Btm. N. Int. Truss

SPAN 11

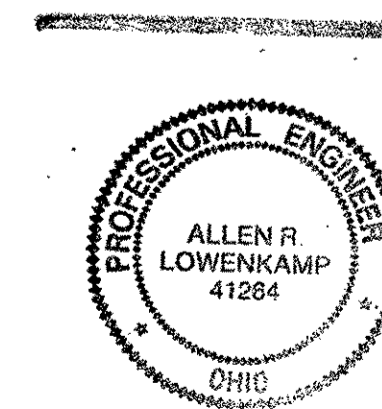
Top  
Btm. S. Int. Truss

Top  
Btm. S. Ext. Truss

64 Lacing Channels LX11R  
61 Lacing Channels LX11L

For More Details See Sheet 328

O.D.O.T. DIST. 12	
ACCEPTED	<input type="checkbox"/>
ACCEPTED AS NOTED	<input type="checkbox"/>
NOT ACCEPTED	<input type="checkbox"/>
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	

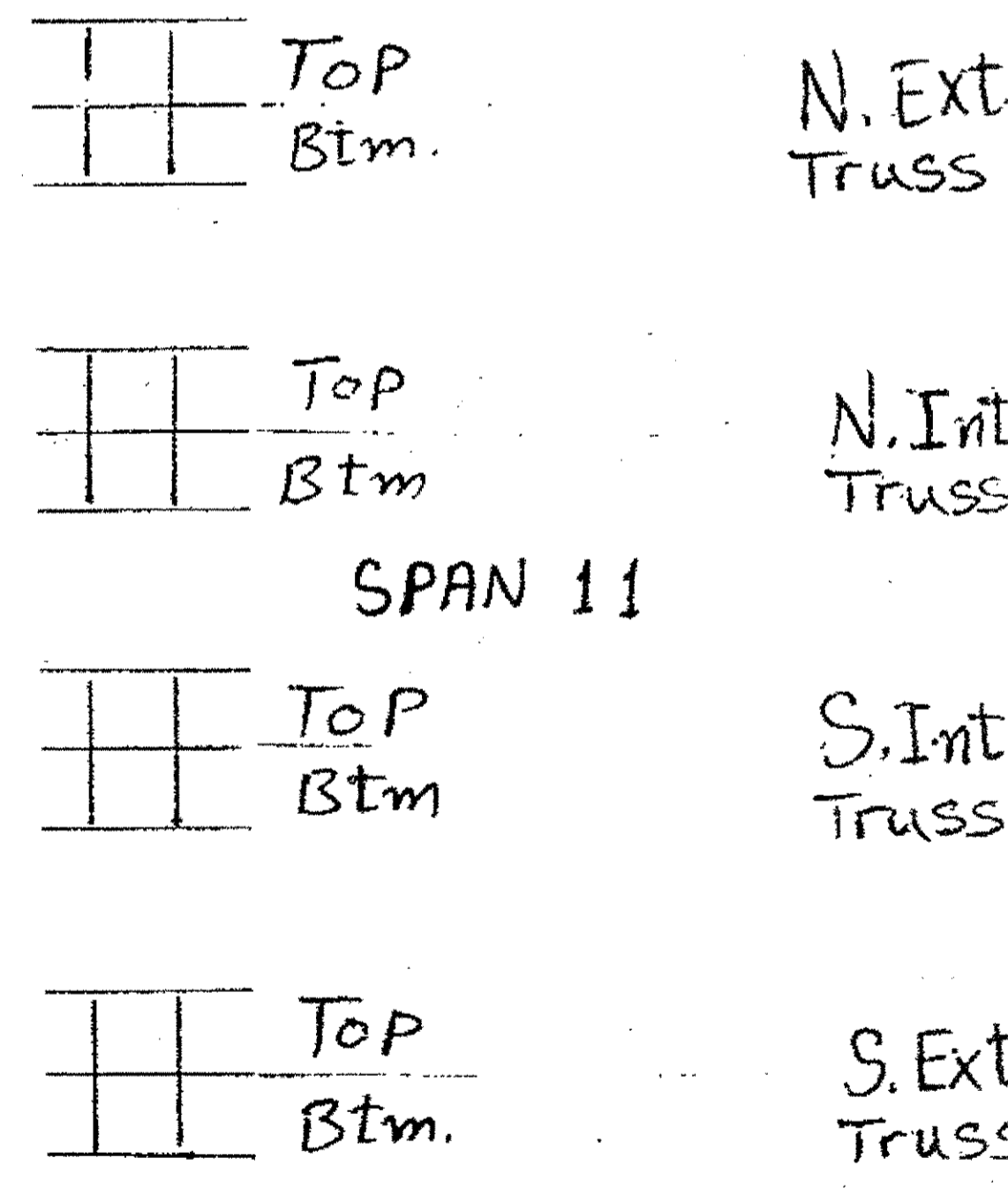
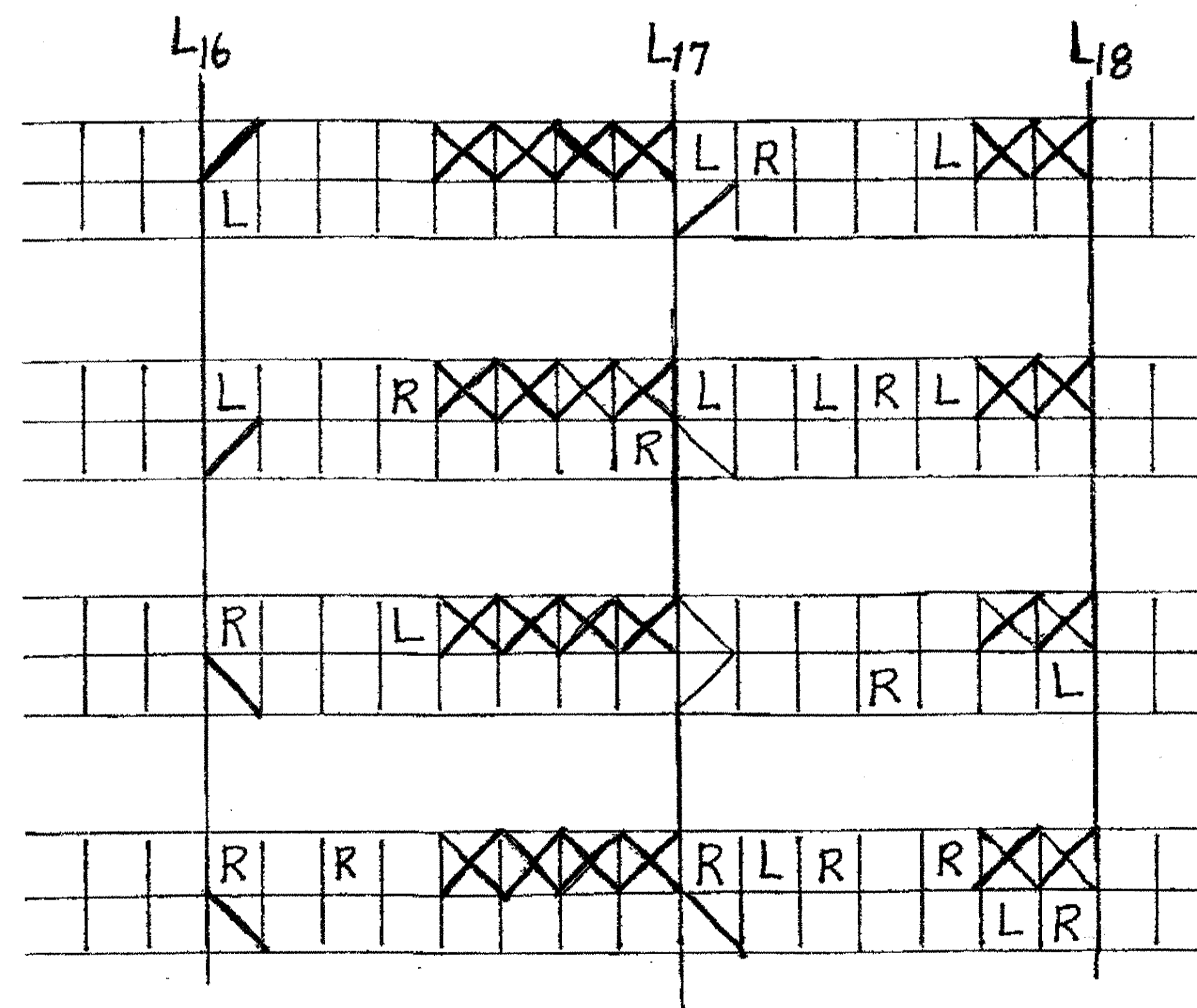
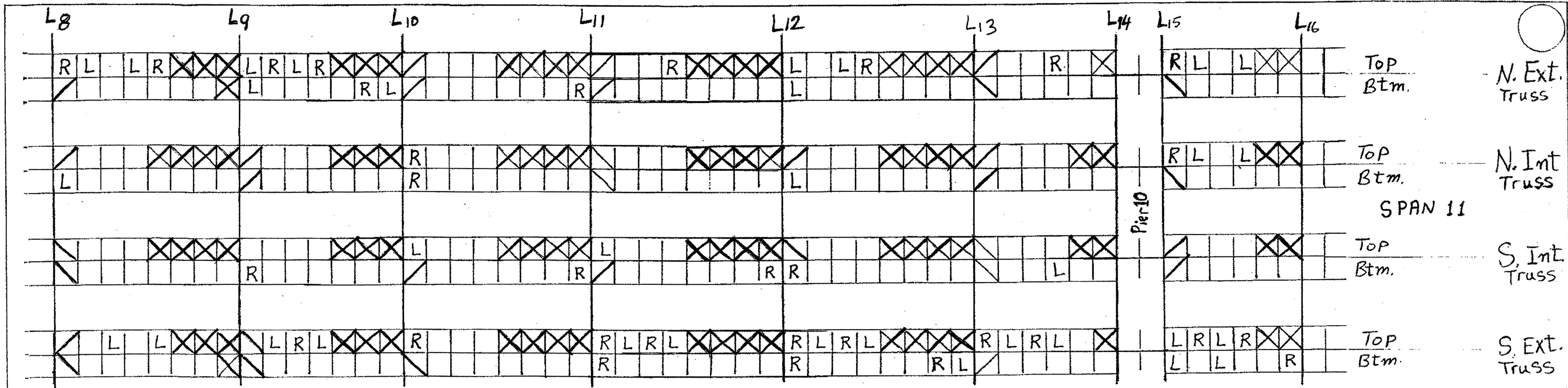


*Tri State Steel Construction Inc.*  
12508 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
BRIDGE No. Cuy. 10-16.13

SCALE N/A

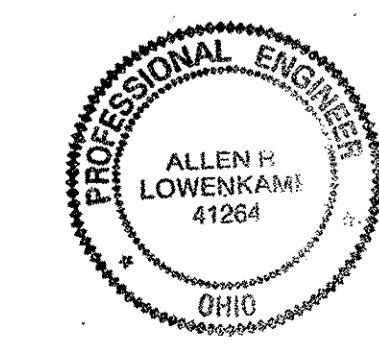
DRAWN BY: S.R.R. CHECKED BY: DATE: DRAWING NO. JOB NO. 200021



43 Lacing Channels LX11 R  
 44 Lacing Channels LX11 L

For More Details See Sheet 328

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

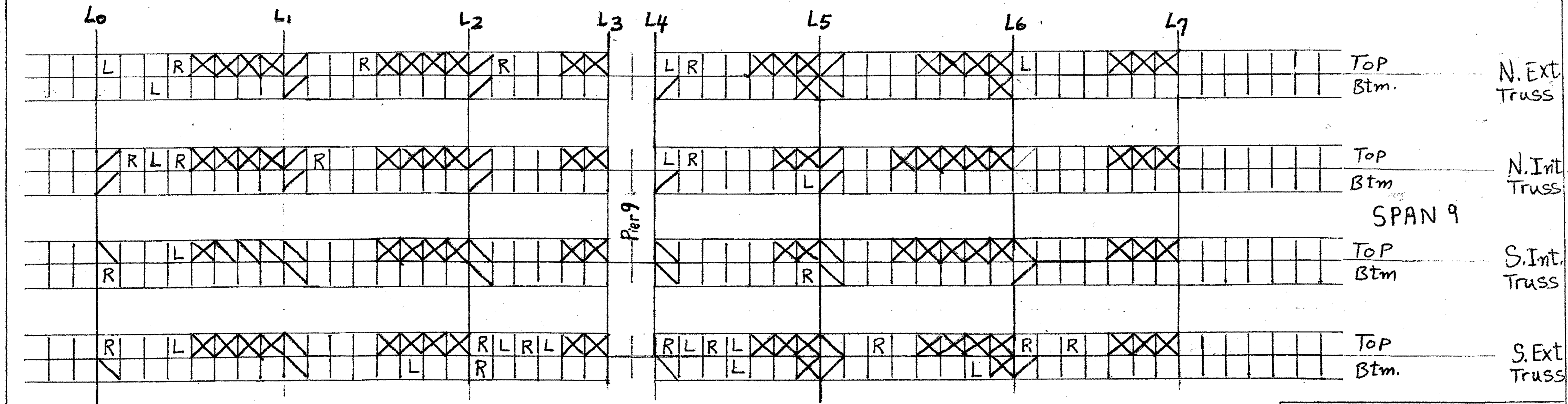
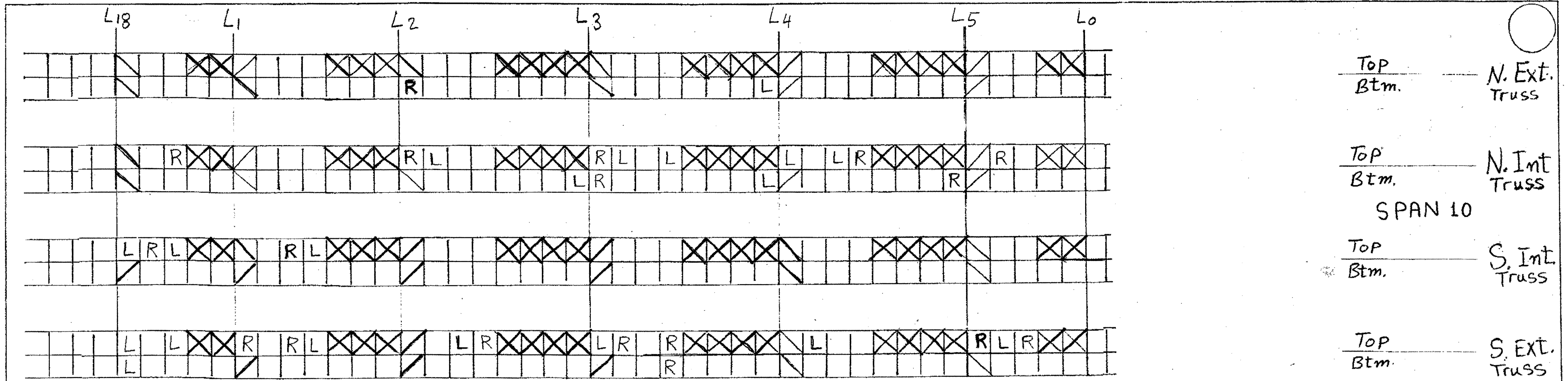


Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

SCALE: N/A  
 DRAWN BY: S.R.R.  
 CHECKED BY: [ ]  
 DATE: [ ]

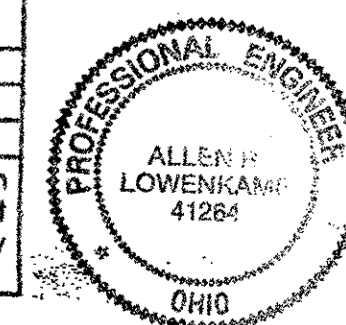
JOB NO. 2000215  
 DRAWING NO. [ ]



36 Lacing Channels LX11 R  
 36 Lacing Channels LX11 L

For More Details See Sheet 328

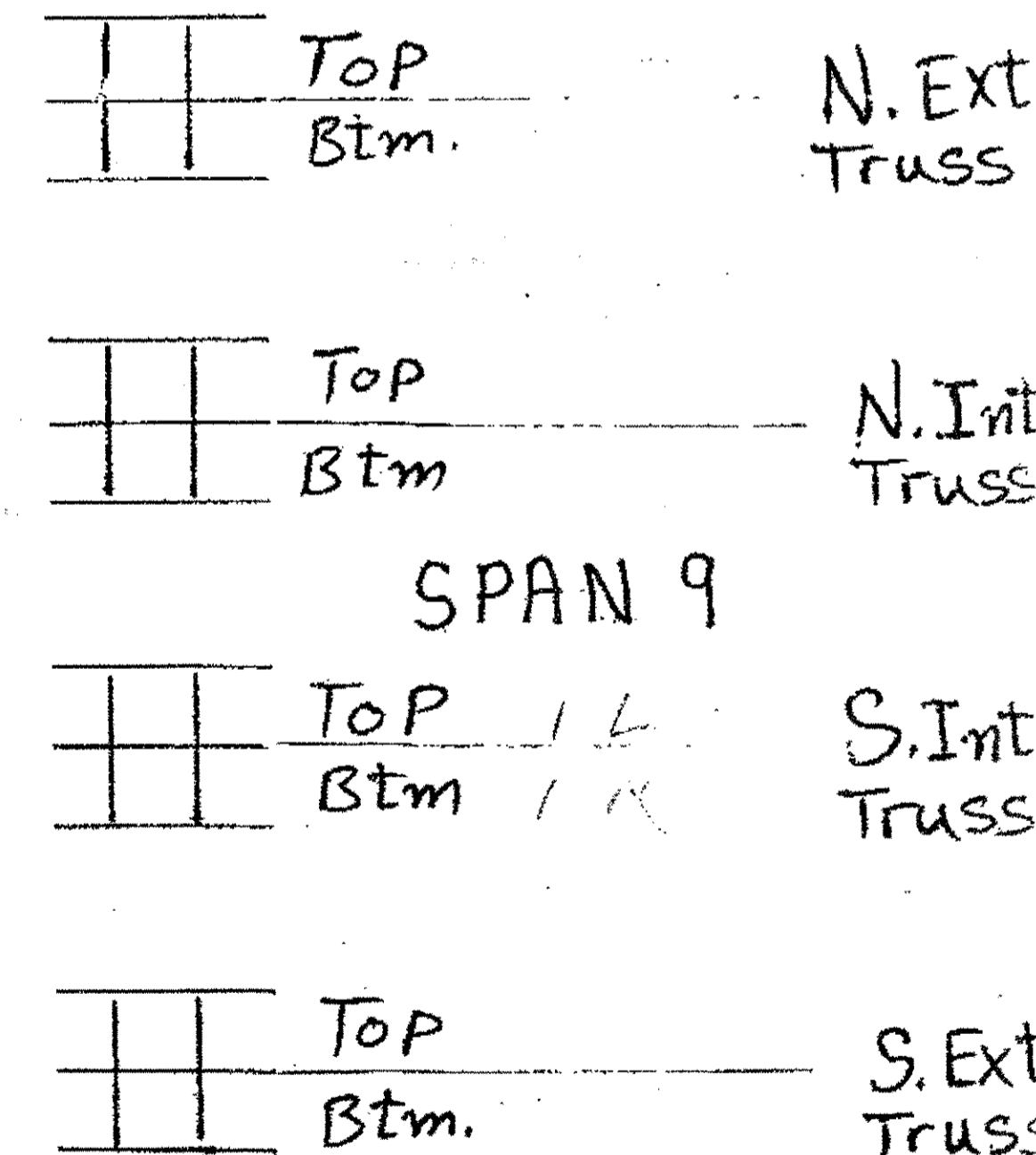
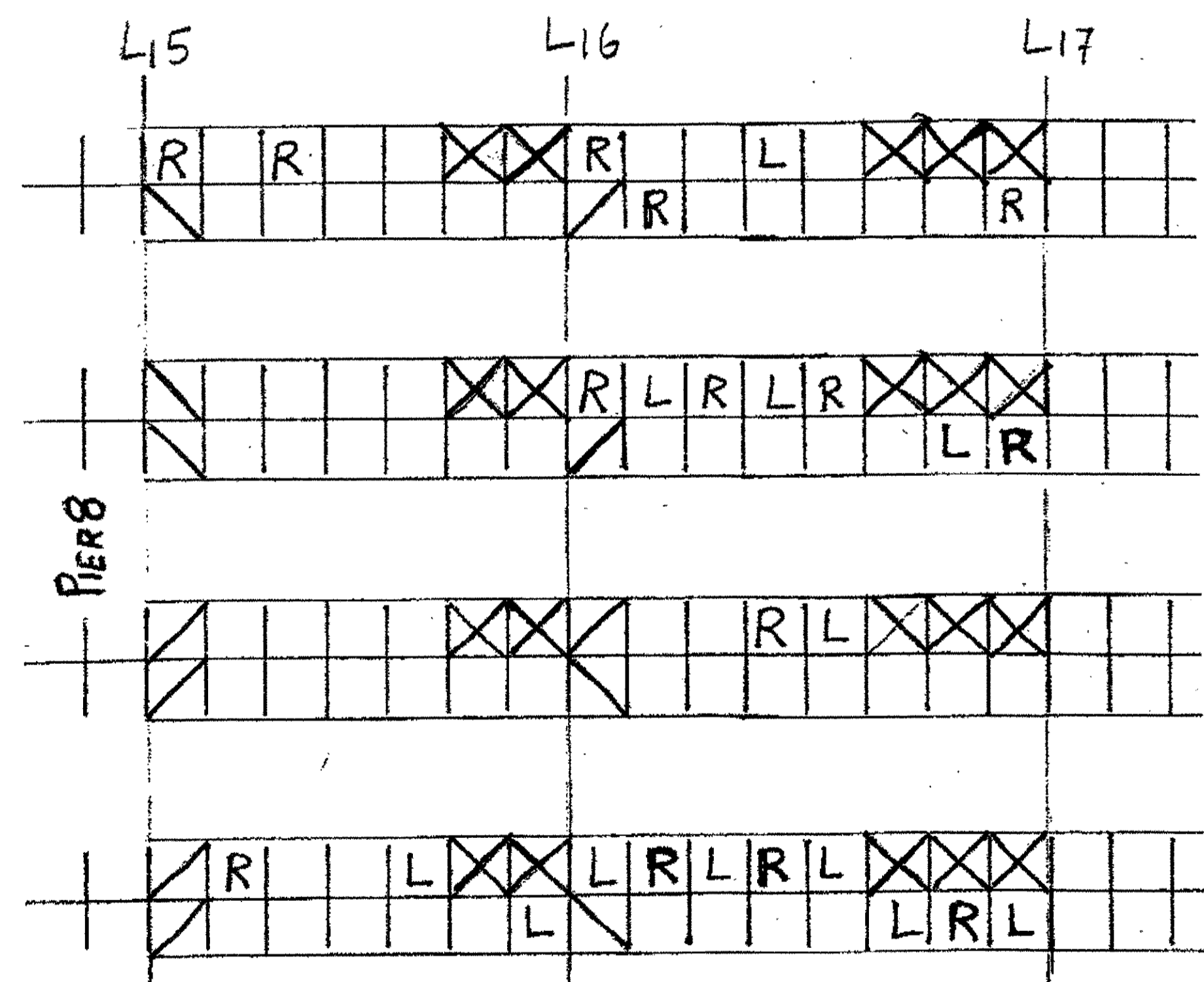
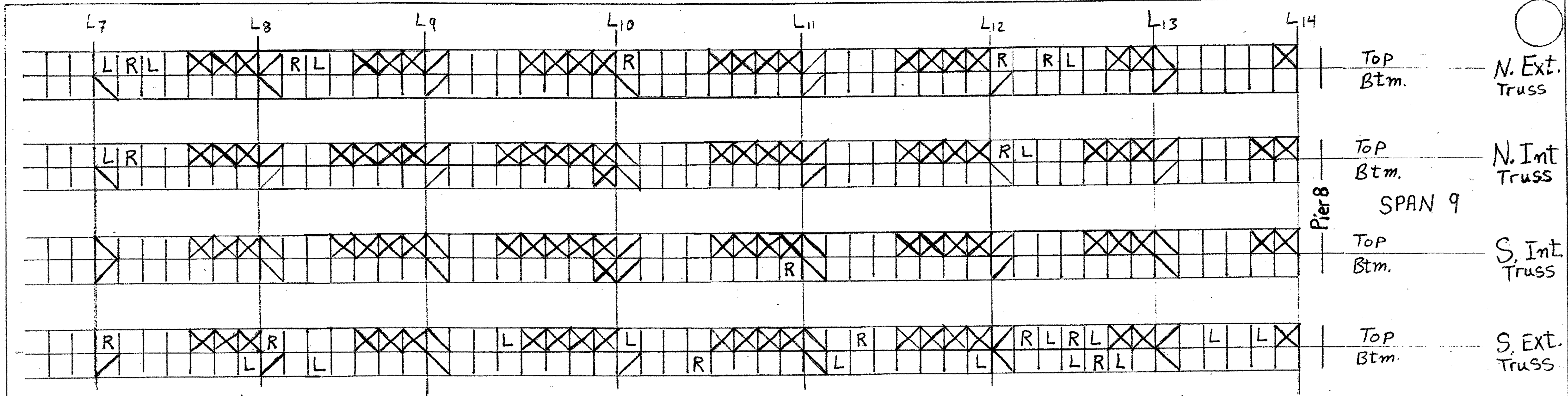
O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/9/04 PSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



*Tri State Steel Construction Inc.*  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

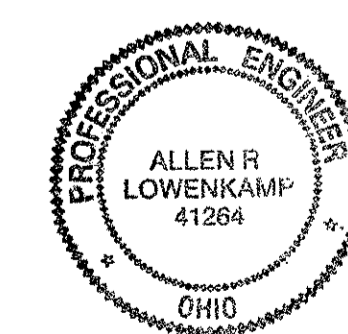
SCALE: N/A  
 DRAWN BY: S.R.R. CHECKED BY: DATE: DRAWING NO. JOB NO. 2000212



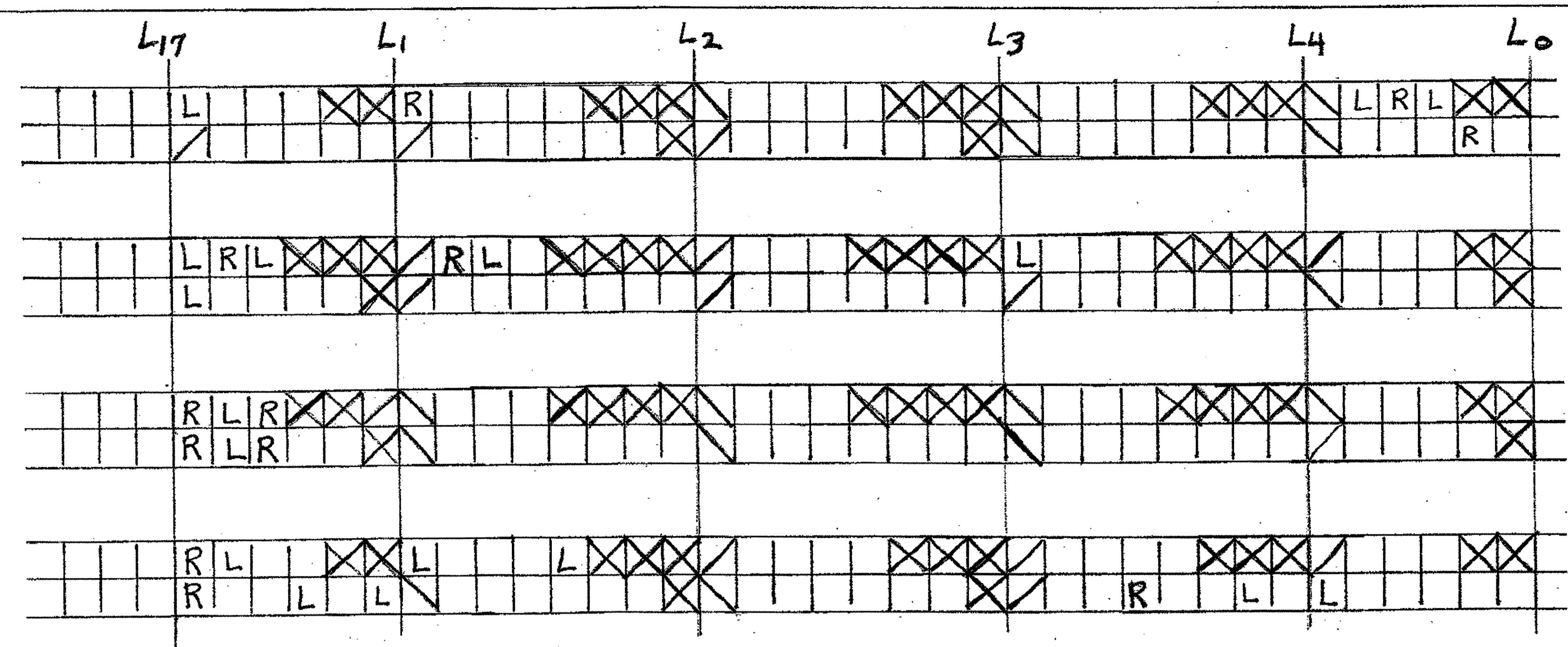
29 Lacing Channels LX11R  
 30 Lacing Channels LX11L

For More Details See Sheets

O.D.O.T. DIST. 12	
ACCEPTED	2/10/09 D.M.
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



Tri State Steel Construction Inc.	
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015	
ODOT Project # 00215	
BRIDGE No. Cuy. 10-16.13	
JOB NO. 200021	DRAWING NO.
DRAWN BY: S.R.R.	CHECKED BY:
SCALE: N/A	DATE:



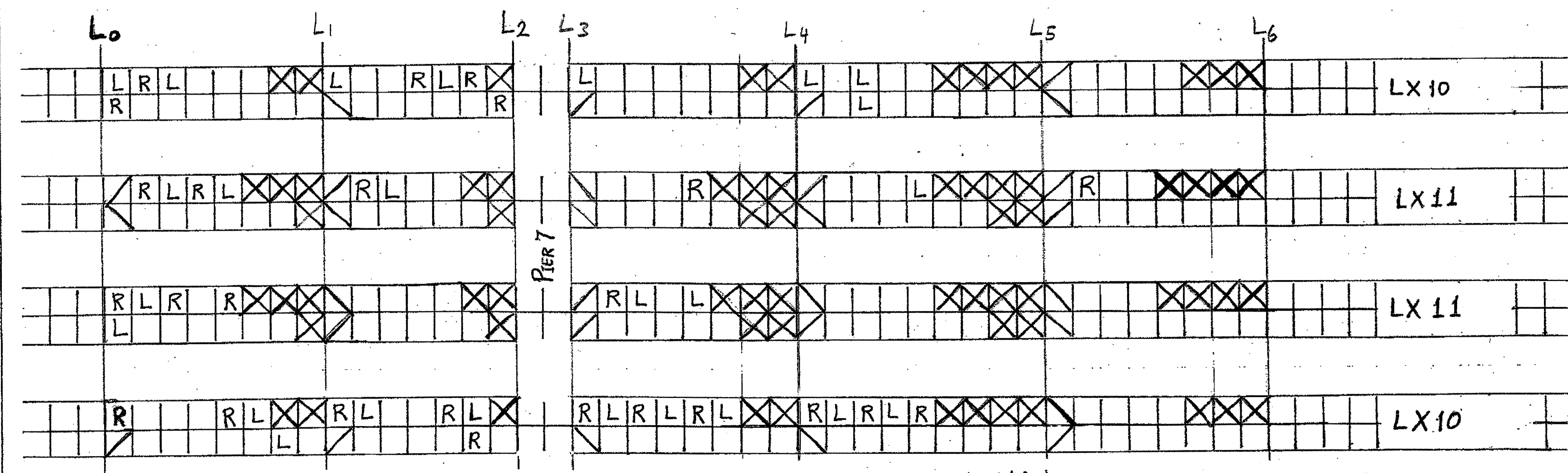
LX10 Top Btm. N. Ext. Truss

LX11 Top Btm. N. Int. Truss

SPAN 8

LX11 Top Btm. S. Int. Truss

LX10 Top Btm. S. Ext. Truss



LX10 Top Btm. N. Ext. Truss

LX11 Top Btm. N. Int. Truss

SPAN 7

LX11 Top Btm. S. Int. Truss

LX10 Top Btm. S. Ext. Truss

24 Lacing Channels LX10 L  
 25 Lacing Channels LX10 R  
 15 Lacing Channels LX11 L  
 15 Lacing Channels LX11 R  
 For More Details See Sheet 328

O.D.O.T. DIST. 12

ACCEPTED	2/9/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

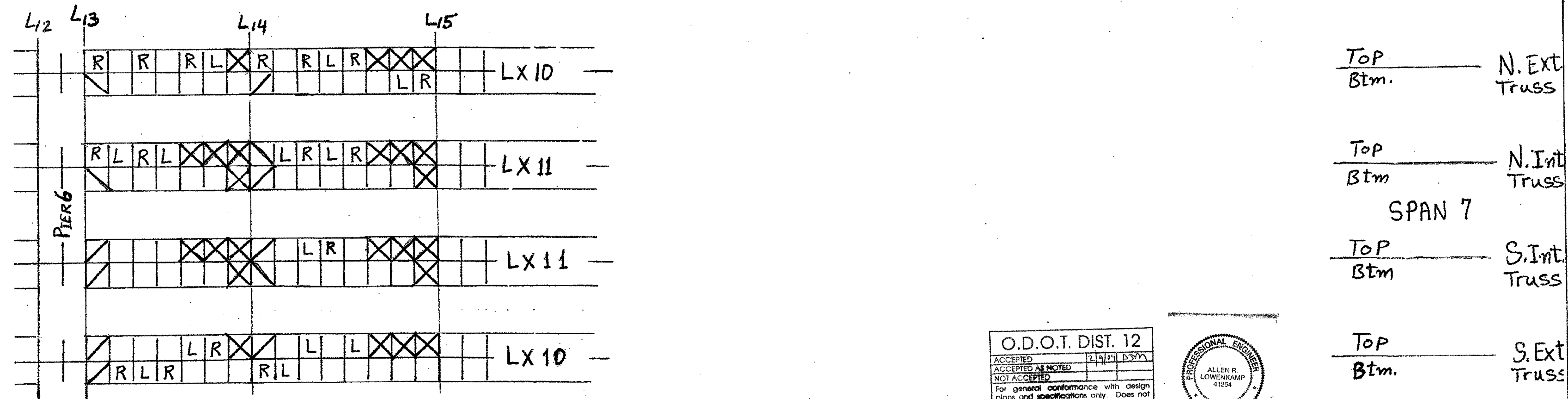
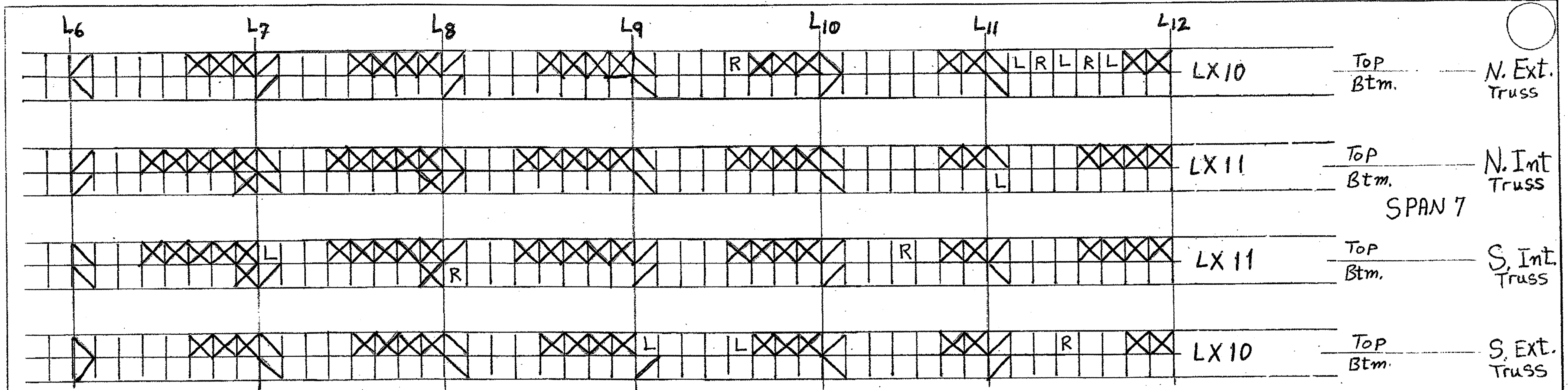


**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

SCALE: N/A DATE: \_\_\_\_\_

JOB NO. 200021  
 DRAWING NO. \_\_\_\_\_



O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/9/54 DSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



15-Lacing Channels LX10R  
 13-Lacing Channels LX10L

7-Lacing Channels LX11R  
 7-Lacing Channels LX11L

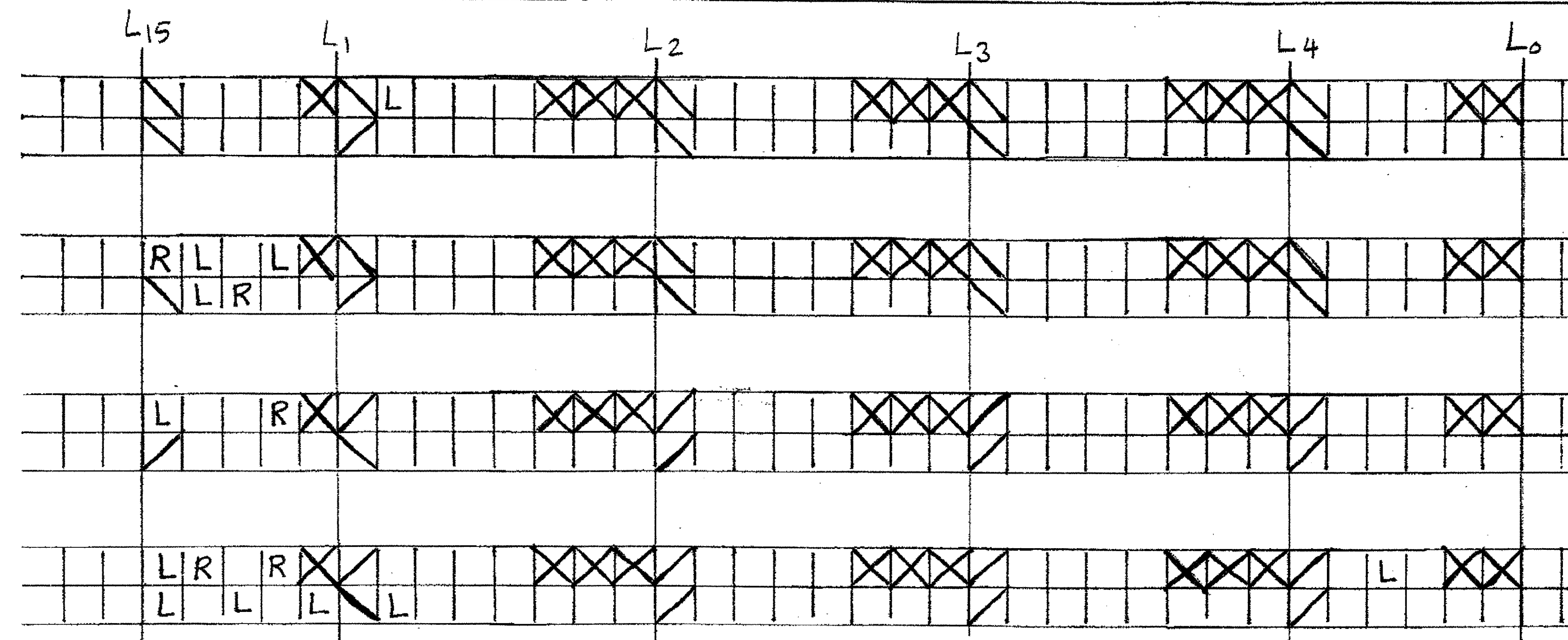
For More Details See Sheet: 328

**Tri State Steel Construction Inc.**  
 12808 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

SCALE: N/A  
 DRAWN BY: S.R.R. CHECKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

JOB NO. 200021  
 DRAWING NO. \_\_\_\_\_



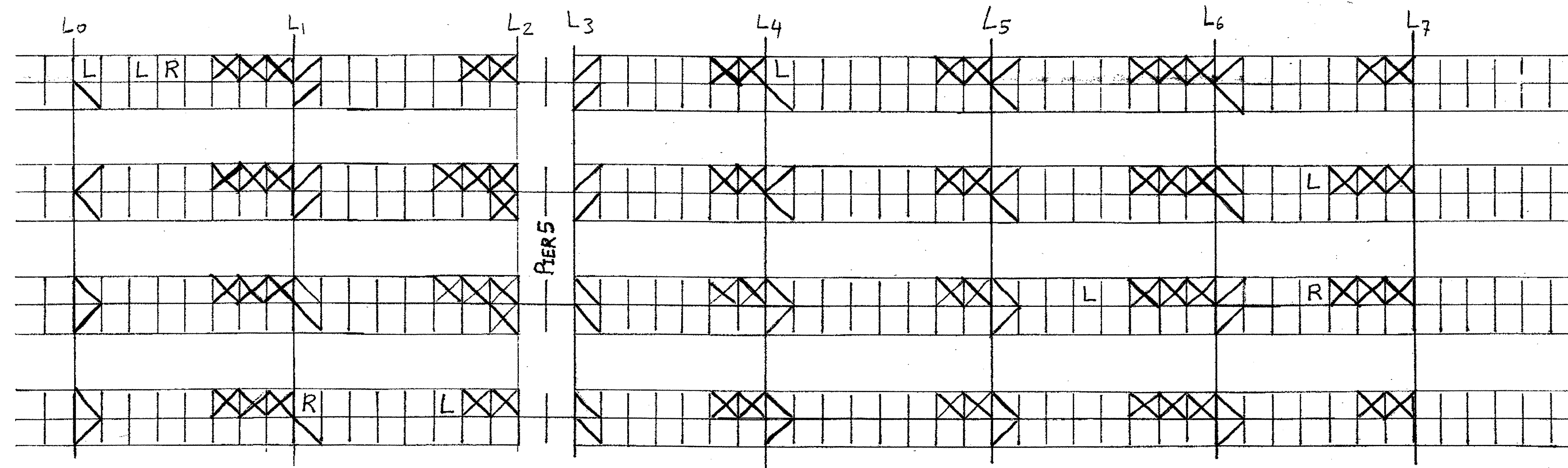
TOP  
Btm. N. Ext. Truss

TOP  
Btm. N. Int. Truss

SPAN 6

TOP  
Btm. S. Int. Truss

TOP  
Btm. S. Ext. Truss



TOP  
Btm. N. Ext. Truss

TOP  
Btm. N. Int. Truss

SPAN 5

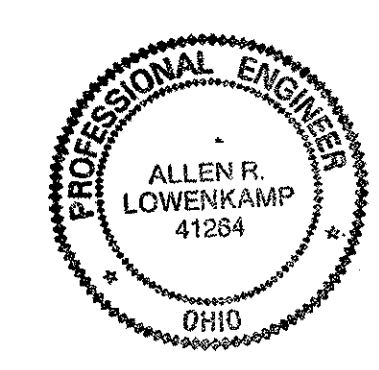
TOP  
Btm. S. Int. Truss

TOP  
Btm. S. Ext. Truss

8 - Lacing Channels LX10 R  
16 - Lacing Channels LX10 L

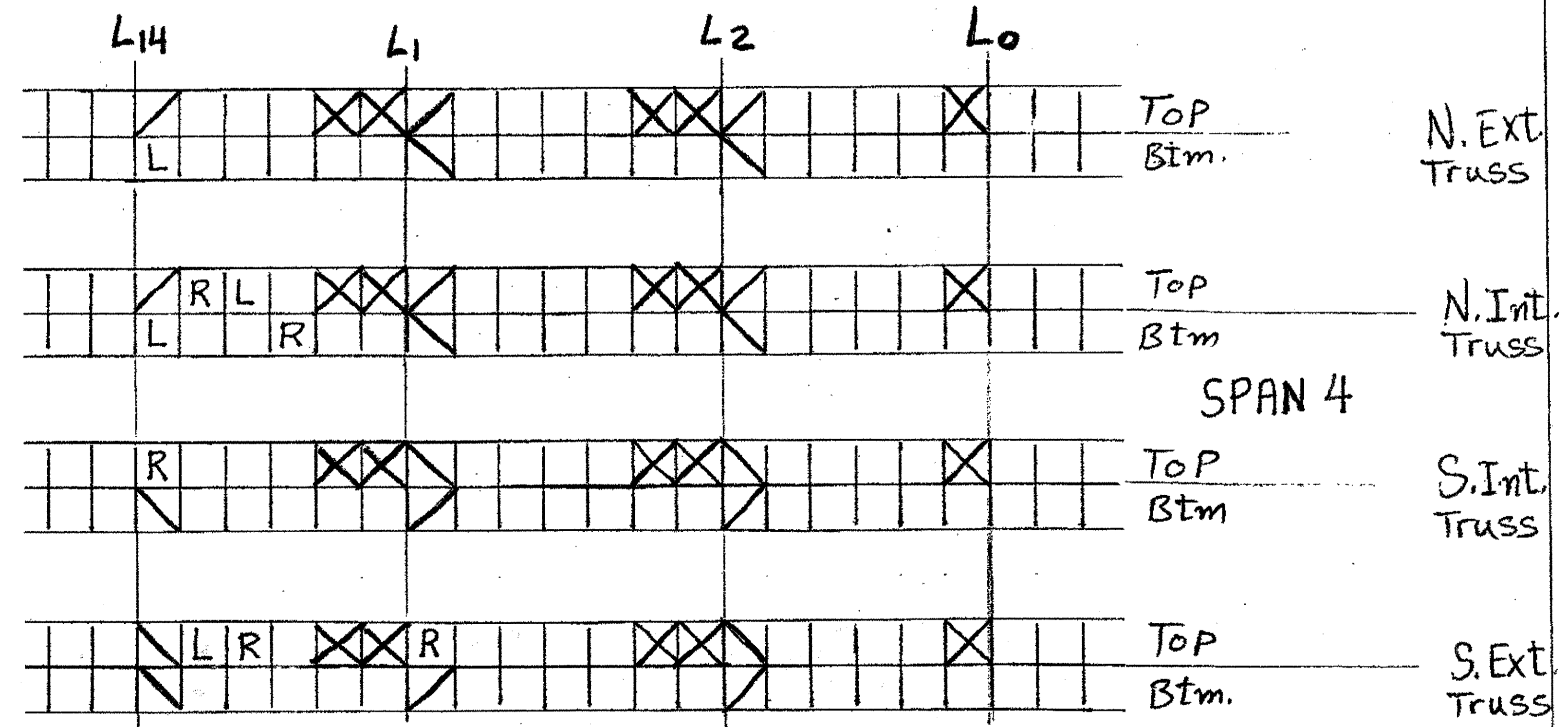
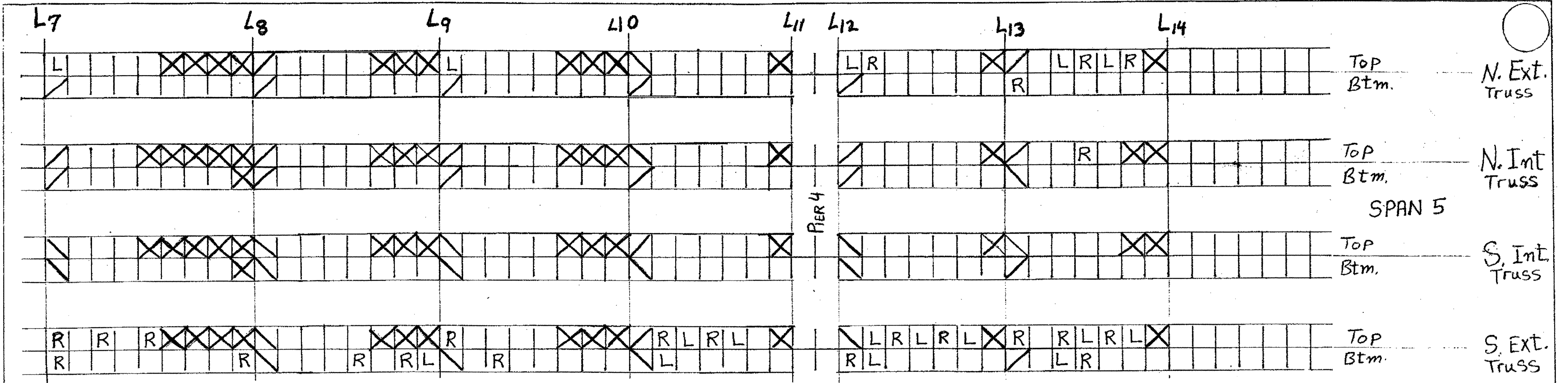
For More Details See Sheet 328

O.D.O.T. DIST. 12	
ACCEPTED	2/27/57
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



Tri State Steel Construction Inc.	
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015	
OHIO PROJECT # 00215	
BRIDGE No. Cuy. 10-16.13	
DRAWN BY: S.R.R.	CHECKED BY:
SCALE: N/A	DATE:
JOB NO. 2000212	
DRAWING NO.	

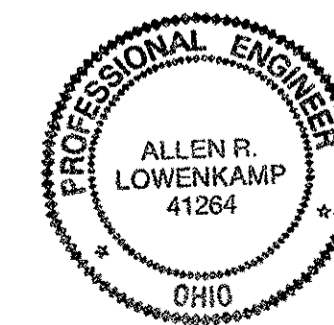




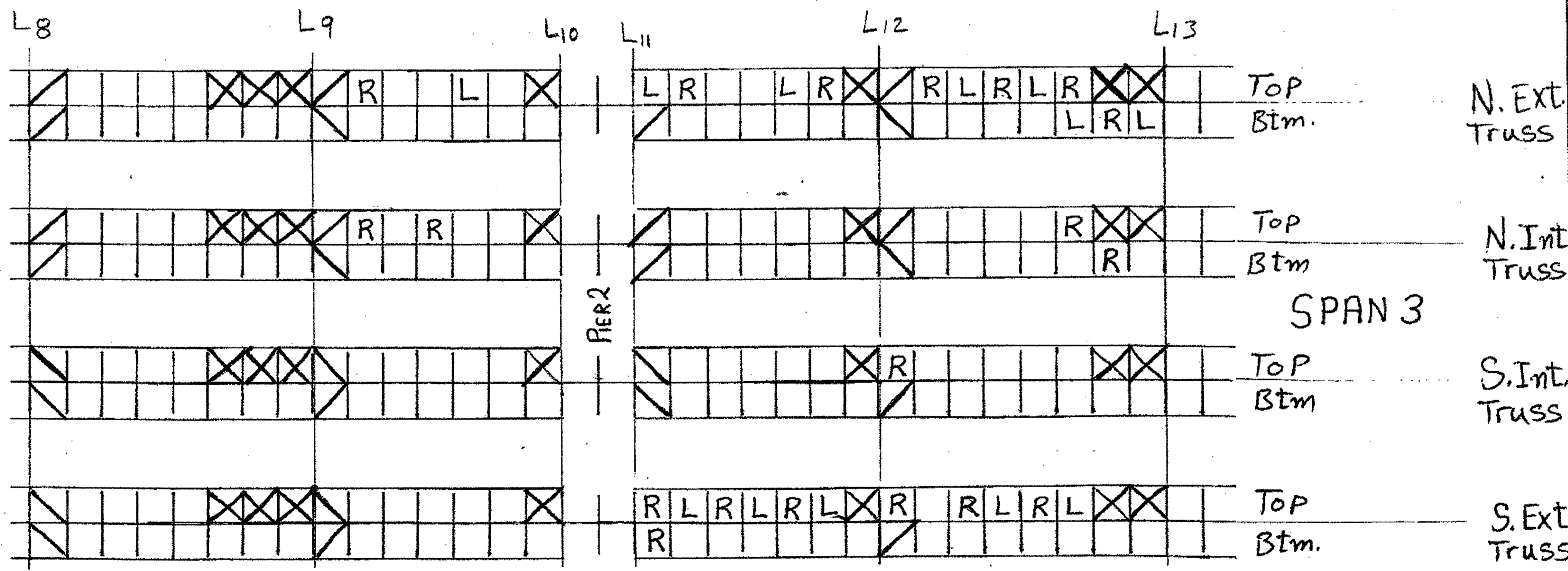
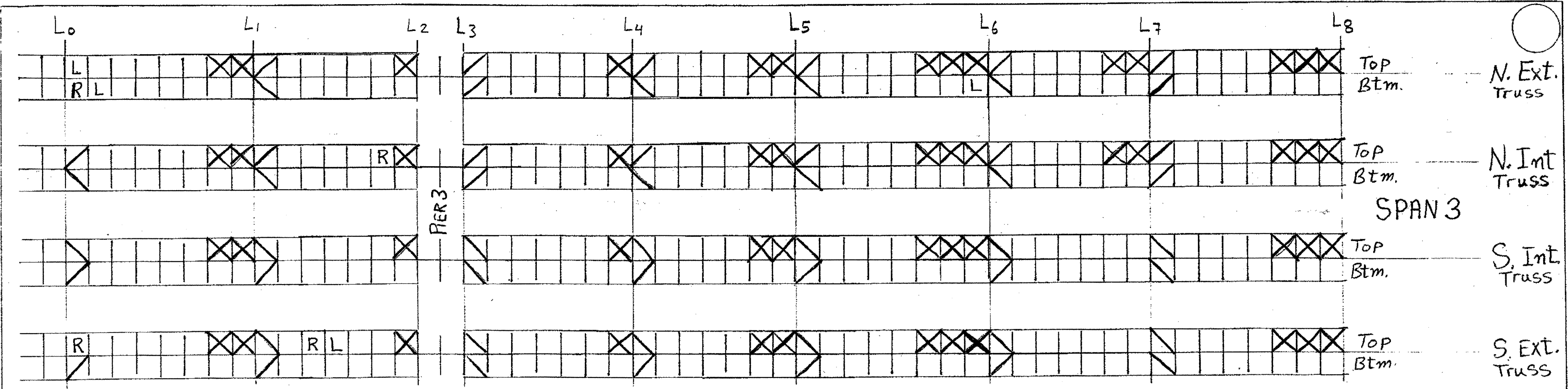
28-Lacing Channels LX10 R  
 20-Lacing Channels LX10 L

For More Details See Sheet 328

O.D.O.T. DIST. 12	
ACCEPTED	2/3/04 BSM
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



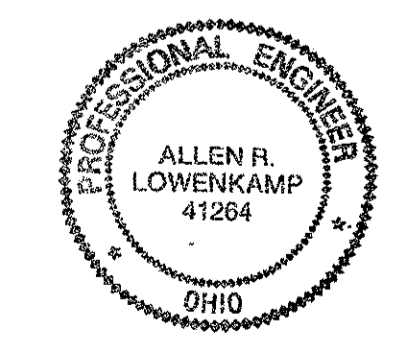
Tri State Steel Construction Inc.	
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015	
ODOT Project # 00215	
BRIDGE No. Cuy. 10-16.13	
SCALE: N/A	DATE:
DRAWN BY: S.R.R.	CHECKED BY:
JOB NO. 2000212	DRAWING NO.



23 Lacing Channels LX10 R  
 15 Lacing Channels LX10 L

For More Details See Sheet 328

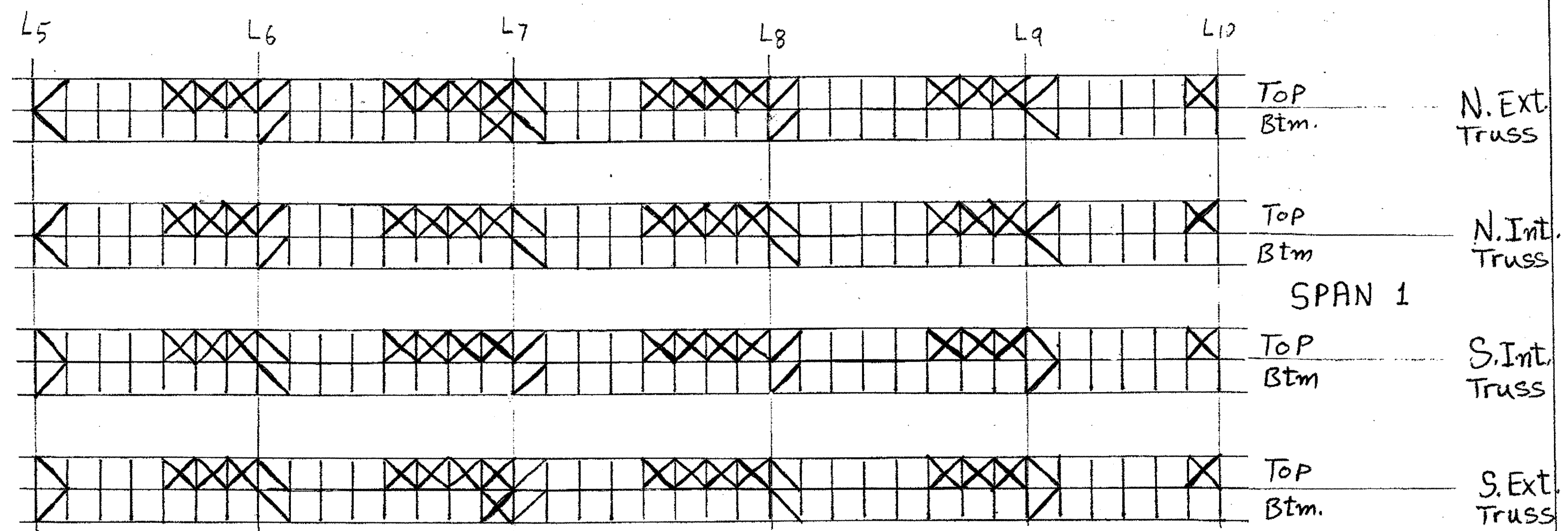
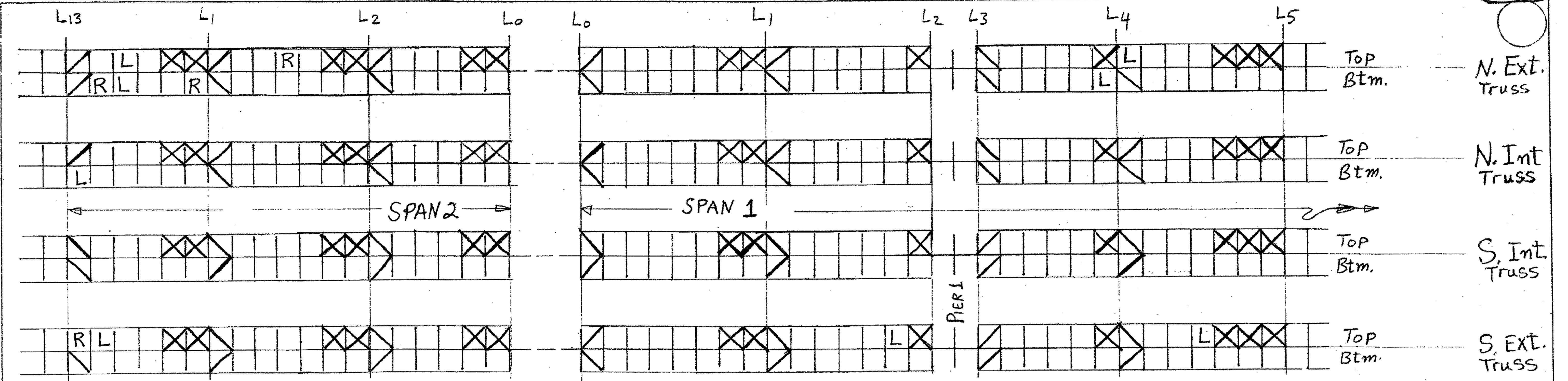
O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/24/13 BSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

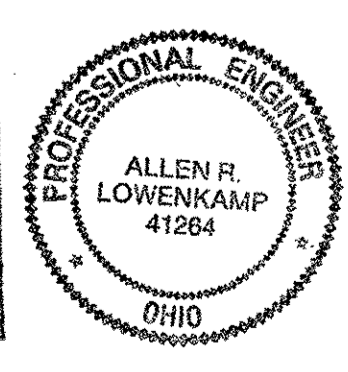
SCALE N/A DATE \_\_\_\_\_ DRAWING NO. 2000212



4 Lacing Channels LX10 R  
 8 Lacing Channels LX10 L

For More Details See Sheet 328

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

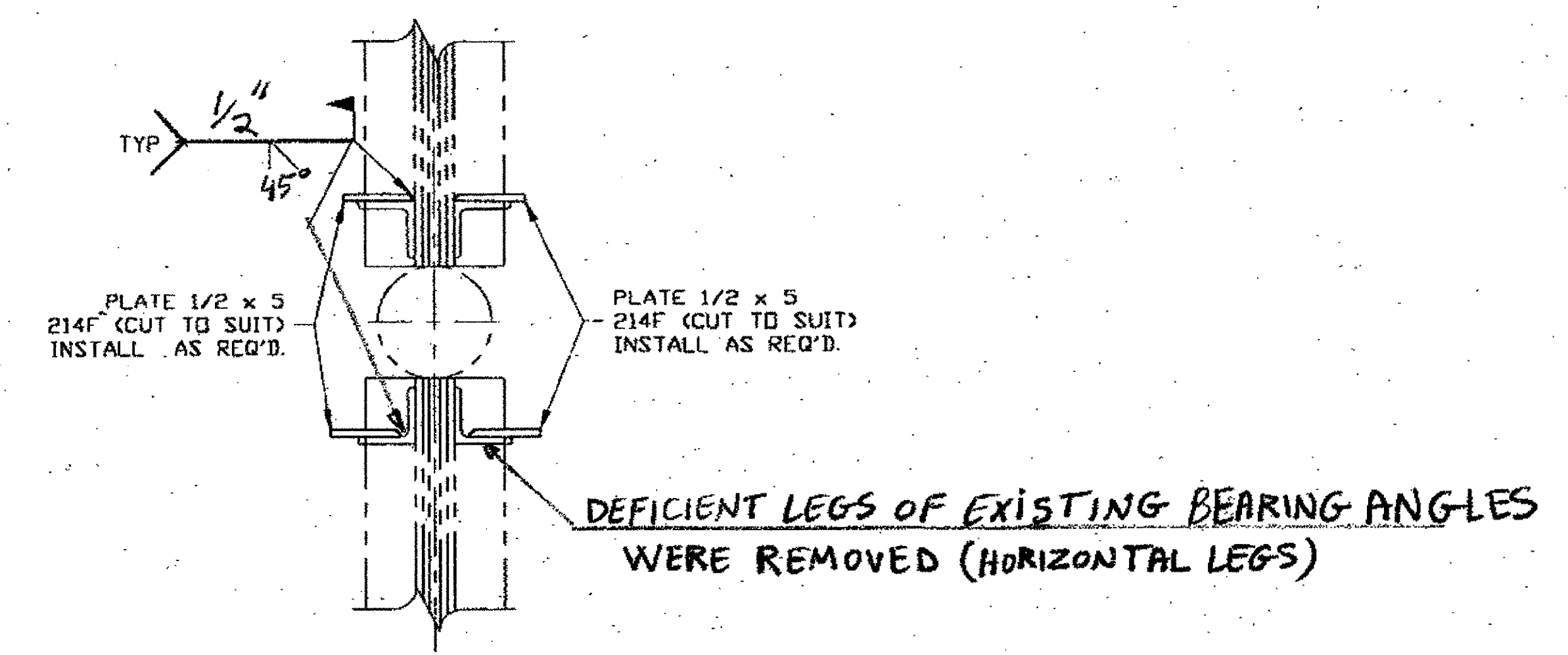


**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. Cuy. 10-16.13

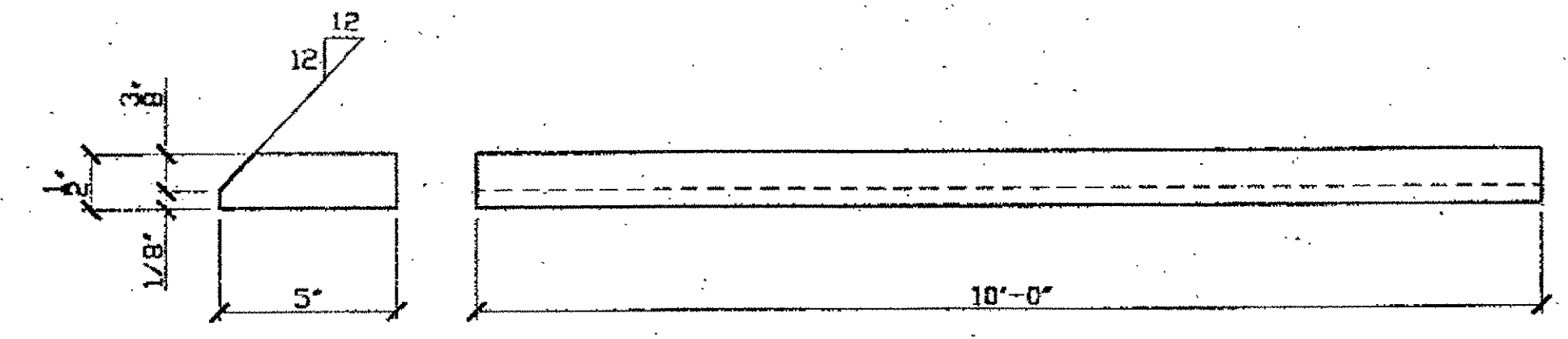
JOB NO. 2000212  
 DRAWN BY S.R.R. CHECKED BY \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 SCALE N/A DATE \_\_\_\_\_

SPAN	LINE	N. EXT.		N. INT.		S. INT.		S. EXT.	
		TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT
		E	W	E	W	E	W	E	W
3	L0-U0	C	B	A	B	A	C	B	A
3	L13-U13	C	C	C	C	C	C	C	C
5	L0-U0		B						
5	L14-U14	A	A	C	B	C	A	B	C
7	L15-U15	A			B	C	C	B	C
9	L17-U17				C	C	C	C	C
11	L18-U18				C	C	C	C	C
13	L12-U12	A	A	B	B	C	C	C	A



TYPICAL DETAIL AT HORIZONTAL BEARING ANGLES  
(ADJACENT TO THE TRUSS VERTICAL PINS)  
SEE adache - cluni - lynn associates DESIGN DRAWING  
10P/154 AND 79/154

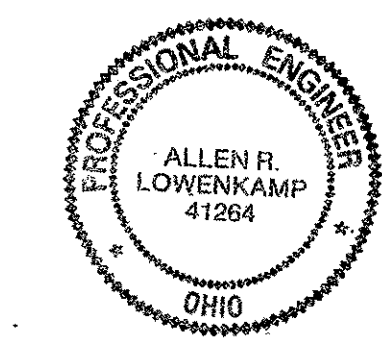
A = ABOVE PIN  
B = BELOW PIN  
C = ABOVE & BELOW PIN



HORIZONTAL BEARING REPAIR PLATES  
CUT LENGTH IN FIELD TO FIT

Last modified: Gfoster at 10:00am on Mon Feb 05, 2001 - Last plotted by Gfoster 04:25pm on Mon Feb 05, 2001

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

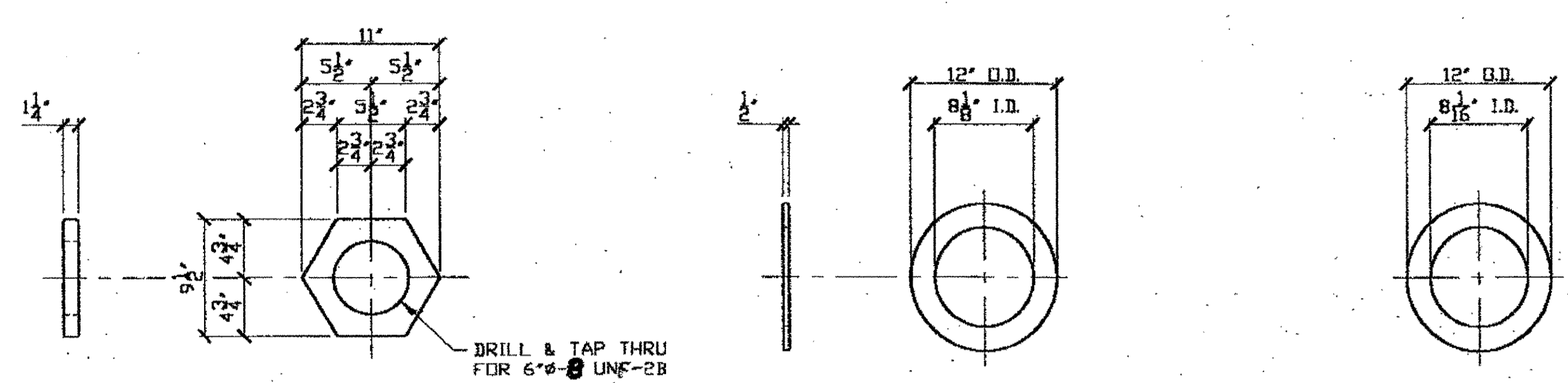
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORNHORNS, PA. 15106  
PHONE: (412) 631-3800  
FAX: (412) 631-4001  
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: KJR 01/10/01  
CHECKED BY: DATE: GAF 01/17/01

DOT BID ITEM LINE NO. B63E50000 U.N.D.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
PIN RETROFIT

SHEET NUMBER: E111  
ASH JOB NUMBER: 800010



(192) PIN NUTS 214A      (192) PLATE WASHERS 214B      (192) NEOPRENE GASKETS 214C  
 (384) NEOPRENE GASKETS 214D

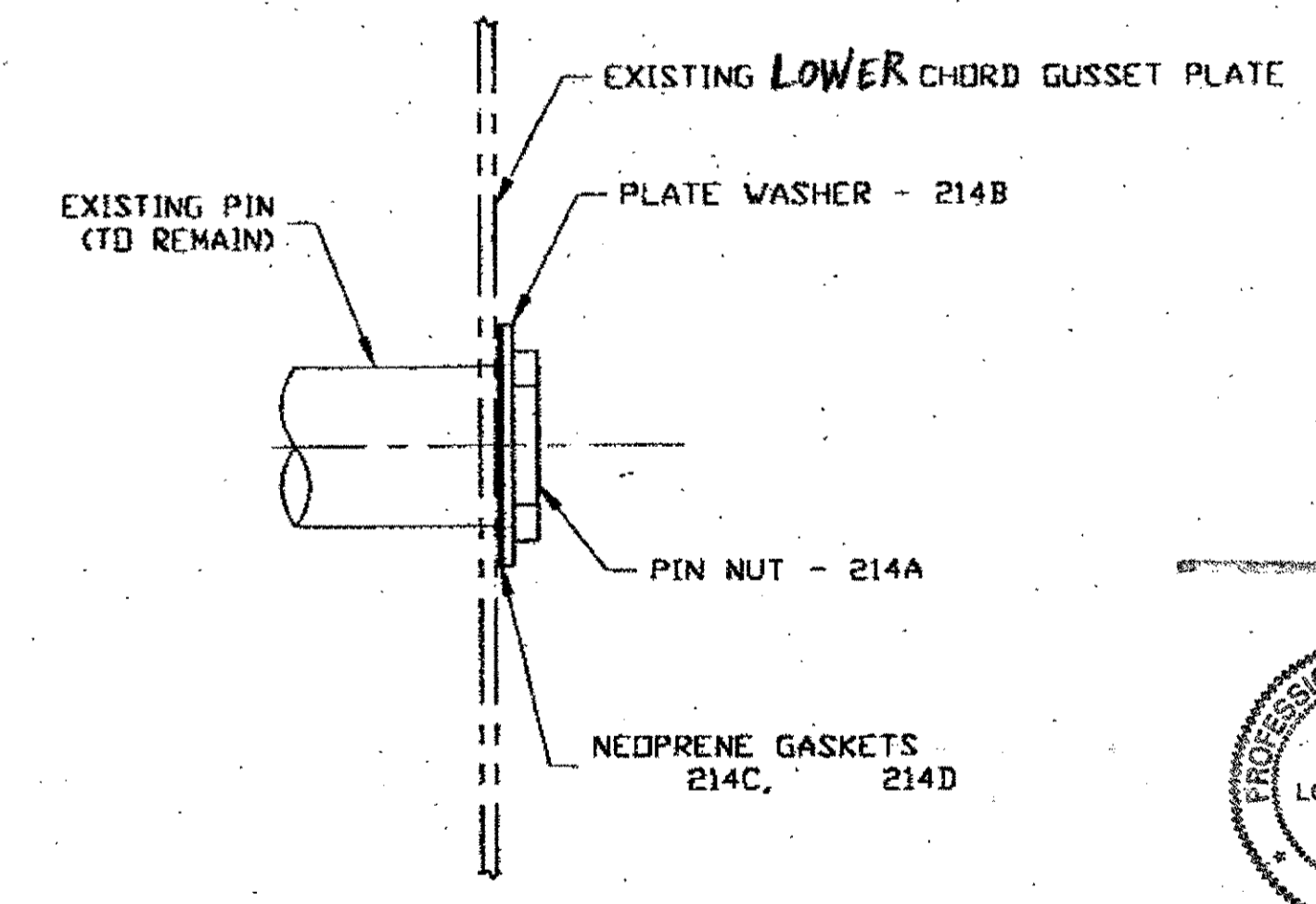
LOCATIONS FOR 214A AND 214B 214C & D AS NEEDED

SPAN	LINE	N. EXT		N. INT		S. INT.		S. EXT			
		TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT		
		N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S		
1	L0-U0	X	X	X	X	X	X	X	X	X	X
3	L0-U0	X	X	X	X	X	X	X	X	X	X
3	L13-U13	X	X	X	X	X	X	X	X	X	X
5	L0-U0	X	X	X	X	X	X	X	X	X	X
5	L14-U14	X	X	X	X	X	X	X	X	X	X
7	L0-U0	X	X	X	X	X	X	X	X	X	X
7	L15-U15	X	X	X	X	X	X	X	X	X	X
9	L0-U0	X	X	X	X	X	X	X	X	X	X
9	L17-U17	X	X	X	X	X	X	X	X	X	X
11	L0-U0	X	X	X	X	X	X	X	X	X	X
11	L18-U18	X	X	X	X	X	X	X	X	X	X
13	L12-U12	X	X	X	X	X	X	X	X	X	X

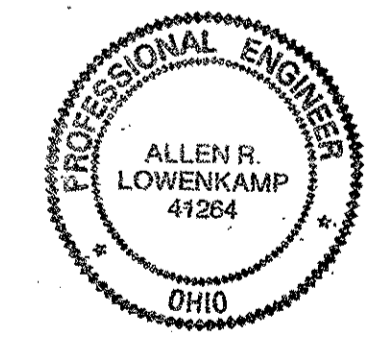
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		214A	192	PIN NUT (ASTM A108 GRADE	1018	or 1020)		
2			192	PL 1/4 x 9 1/2	0	11		3410
3								
4		214B	192	PLATE WASHER (ASTM A108 GRADE	1018	or 1020)		
5			192	PL 1/2 x 12" O.D. x 8 1/8" I.D.				1710
6								
7		214C	192	NEOPRENE GASKET				
8			192	12" O.D. x 8 1/16" I.D. x 3/8" THK.			NI	
9								
10								
11		214D	384	NEOPRENE GASKET				
12			384	12" O.D. x 8 1/16" I.D. x 1/8" THK.			NI	
13								
14								
15						10		
16								
17								
18								
19								
20								

NI = NEOPRENE GASKETS SHALL BE 50 DUROMETER HARDNESS AND MEET THE REQUIREMENTS OF 711.23.

SHOP PAINT: FOR 214B ONLY  
 SURFACE PREPARATION SSPC-SP10 BLAST.  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD TV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY tdp



DOT ITEM LINE NO. 0135 U.M.D.  
 DOT BID ITEM LINE NO. 863E50000 U.M.D.

SEE adache - clunt - lynn associates DESIGN DRAWING 9/15/94 AND 7/9/15/94

O.D.O.T. DIST. 12

ACCEPTED [Signature] 2/1/01 P-3M

ACCEPTED AS NOTED

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE  
 MANUFACTURING  
 8000 AMERICAN BRIDGE WAY  
 CORNELIUS, PA 15106  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH

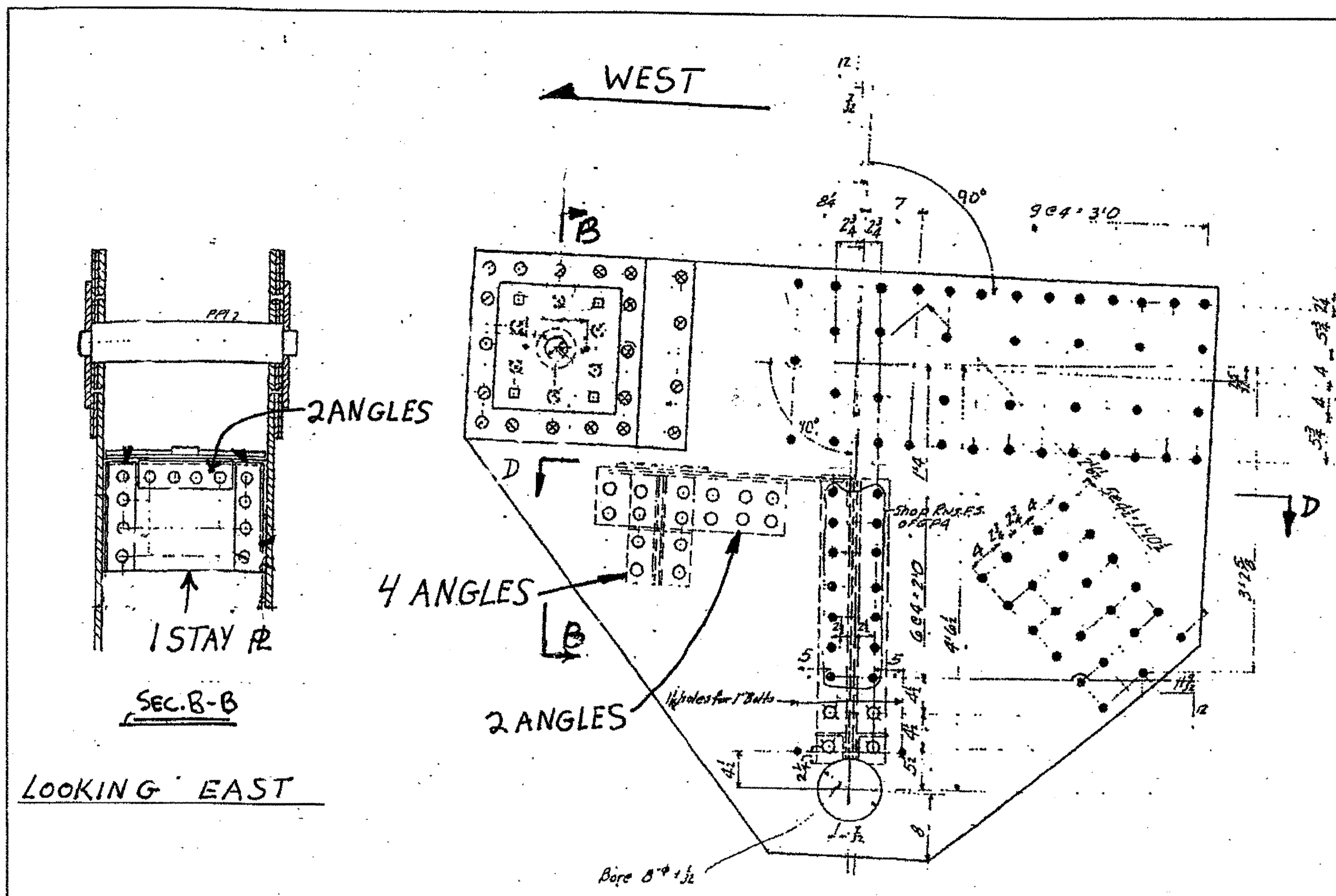
DRAWN BY: DATE  
 K.J.R. 01/09/01

CHECKED BY: DATE  
 GAF 01/17/01

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 PIN RETROFIT

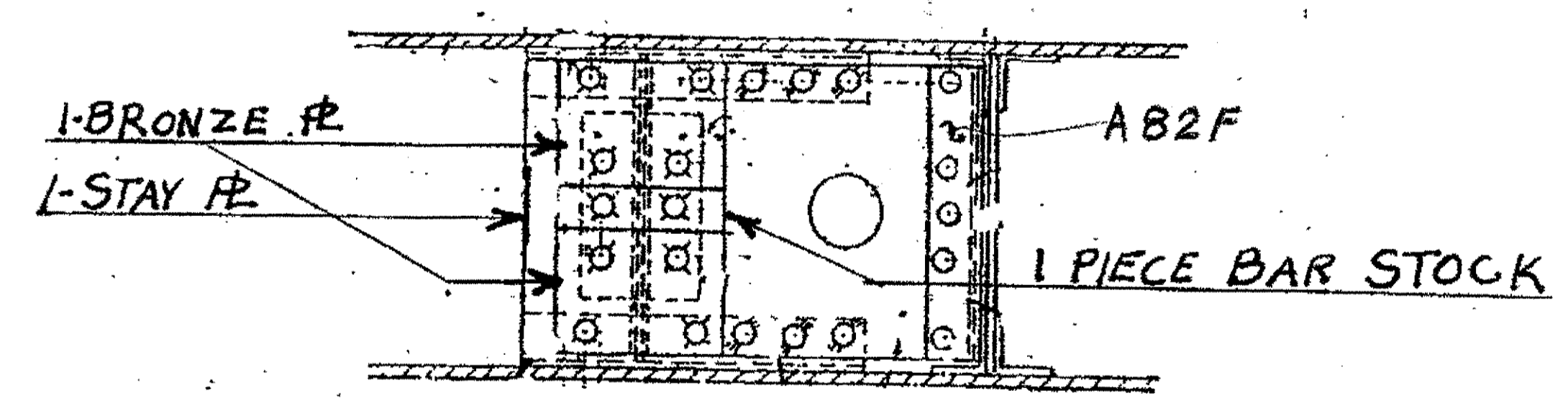
SHEET NUMBER: 214  
 ASN JOB NUMBER: 800010

04:13pm on Mon Feb 05, 2001  
 Gfoster at 10:05am on Mon Feb 05, 2001 -|- Last plotted by Gfost  
 Last modif:

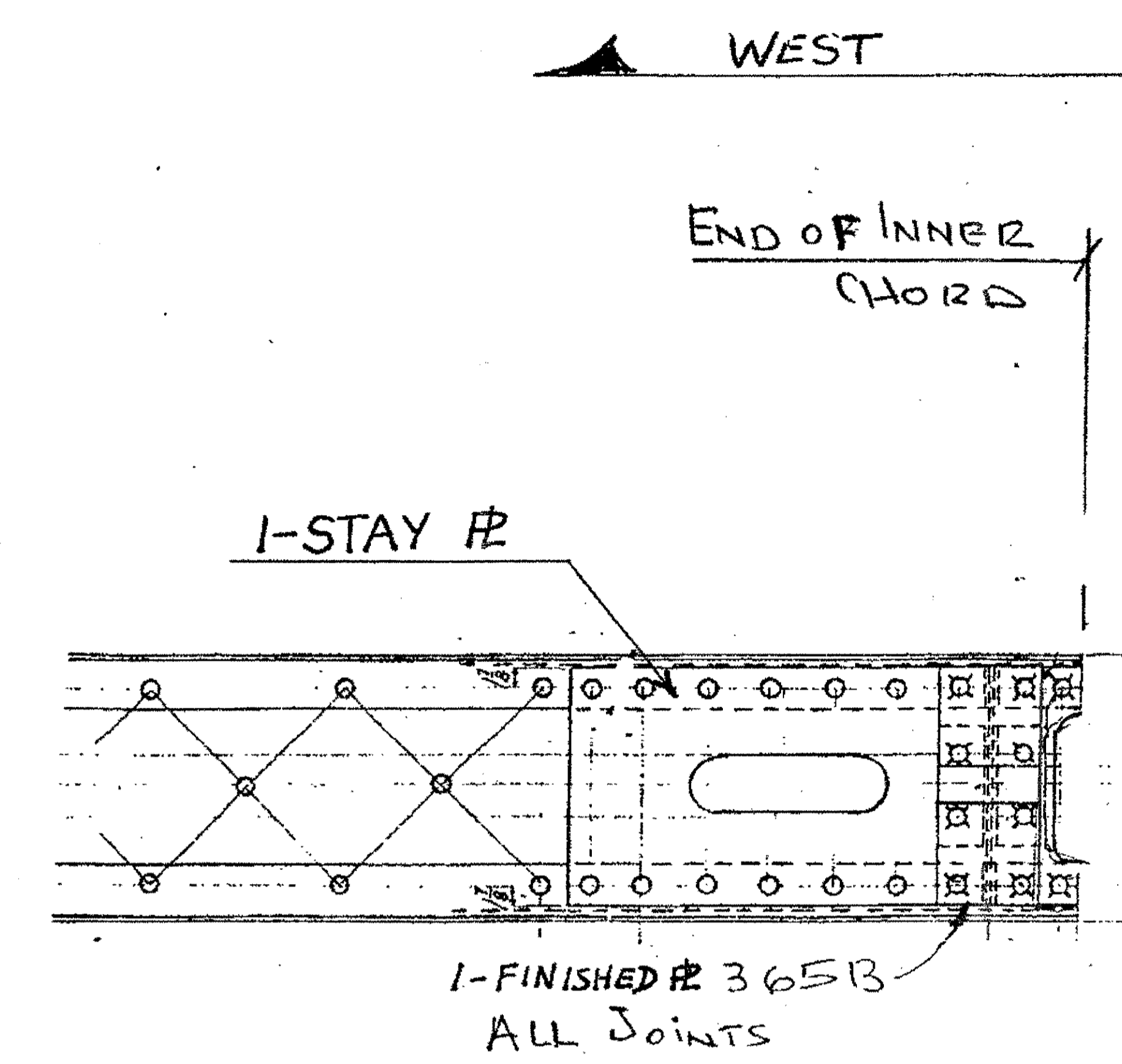


LOOKING EAST

VERTICAL GUSSET OF EVEN NUMBERED SPANS AT EXPANSION JOINT

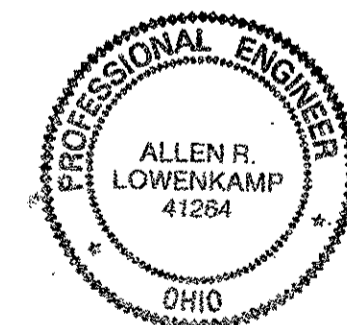


SEC. D-D  
VIEW LOOKING DOWN



UPPER CHORD OF ODD NUMBERED SPANS  
(LOOKING UP)

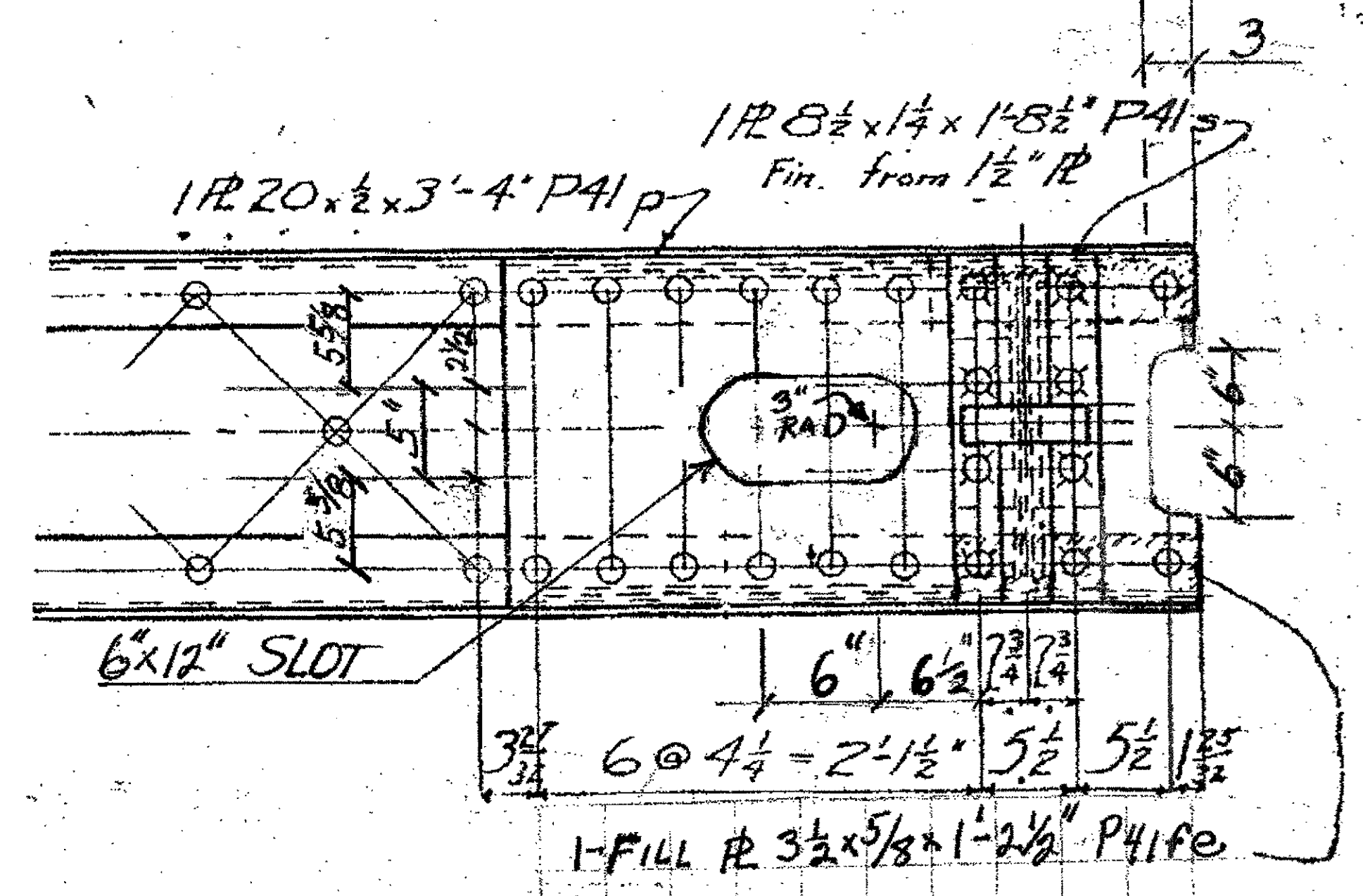
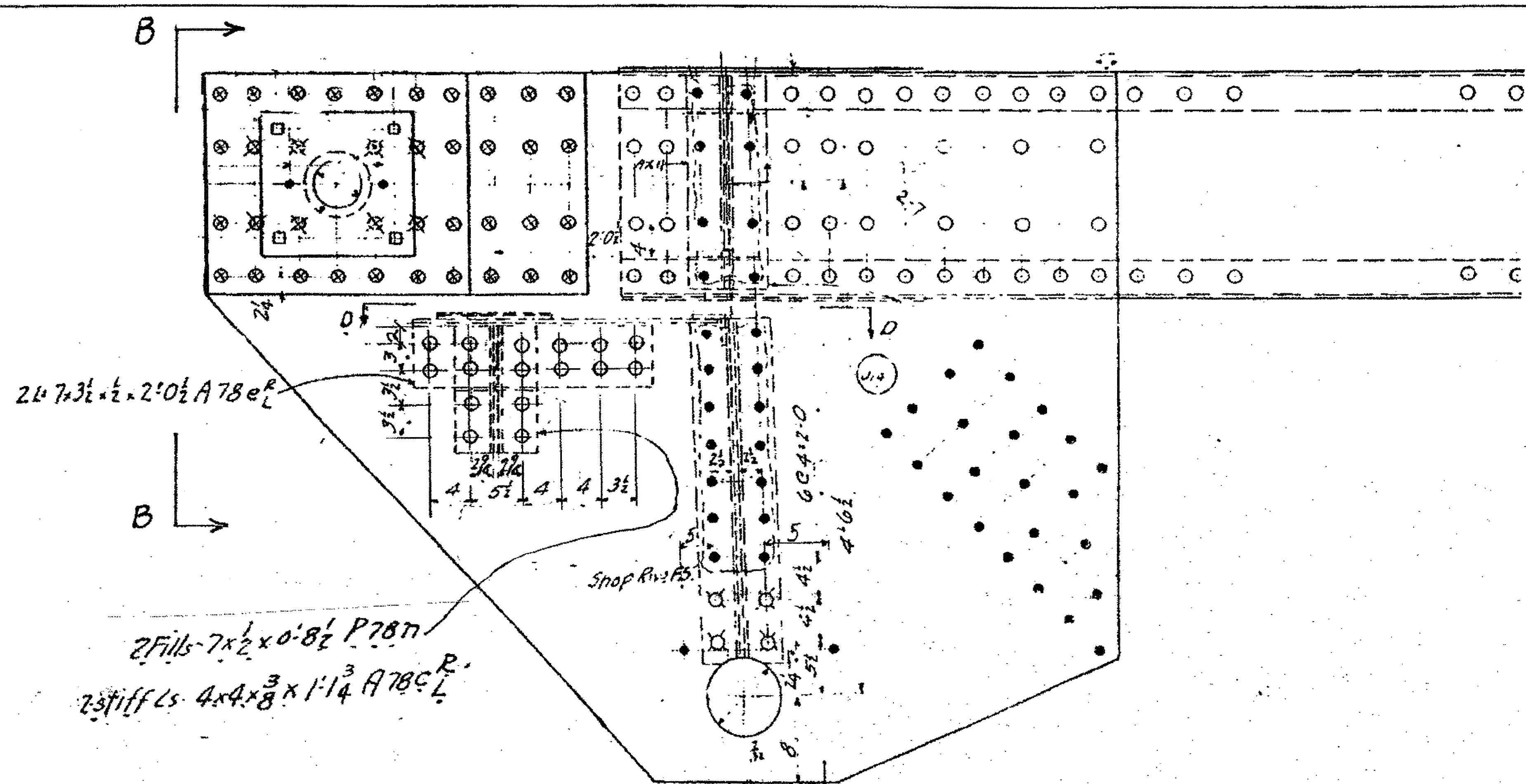
UPPER REPAIRS  
PIECES REPLACED AT EVERY EXPANSION POINT  
WORK WITH DETAIL ON SHEETS 365A-E



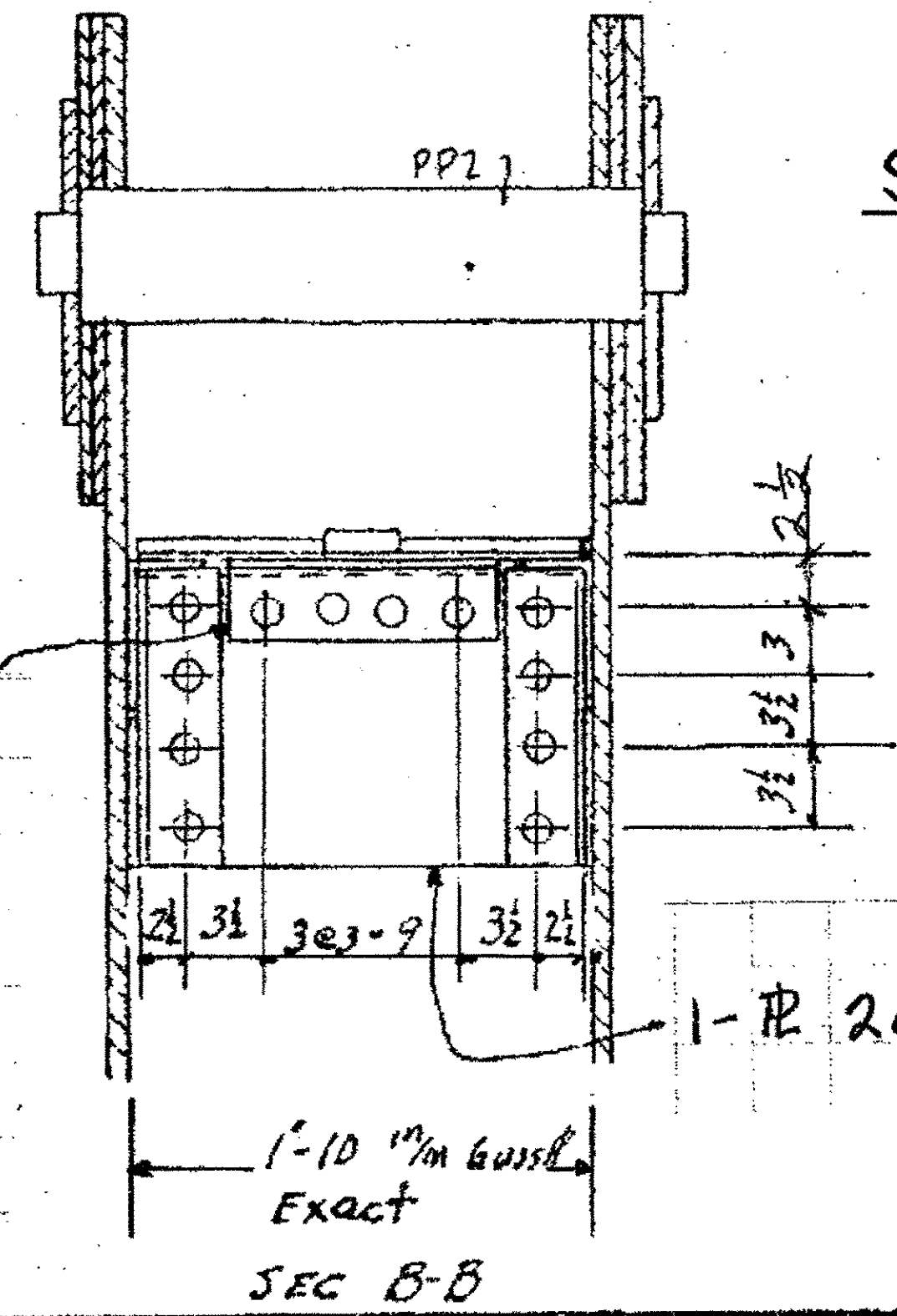
O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY

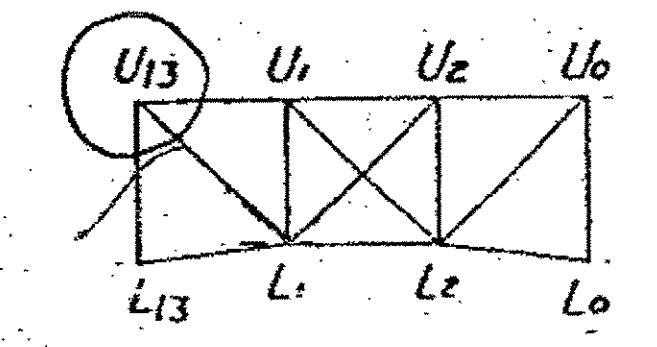
Iron State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015  
 ODOT Project # 00215  
**UPPER EXPANSION REPAIRS**  
 JOB NO. 2000212  
 DRAWING NO. **E150**  
 DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_



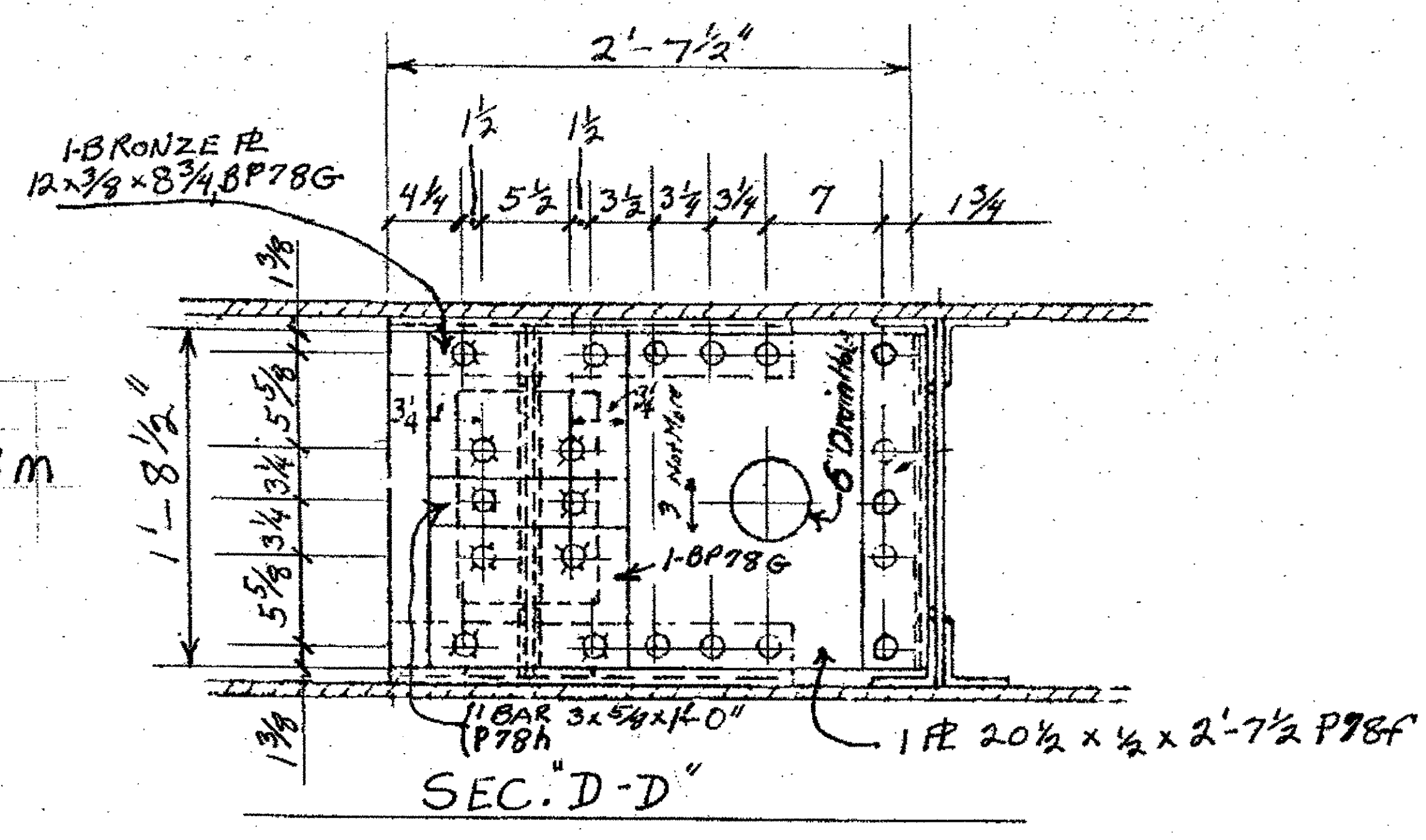
SPAN 3, U13 N.EXT. N.INT. S.INT. + S.EXT.  
 (LOOKING UP)



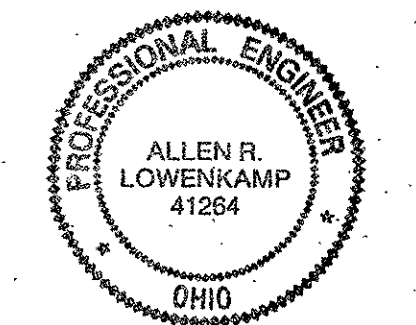
SPAN 2 U13 N.EXT. N.INT. S.INT. + S.EXT.



SPAN 2 TRUSS



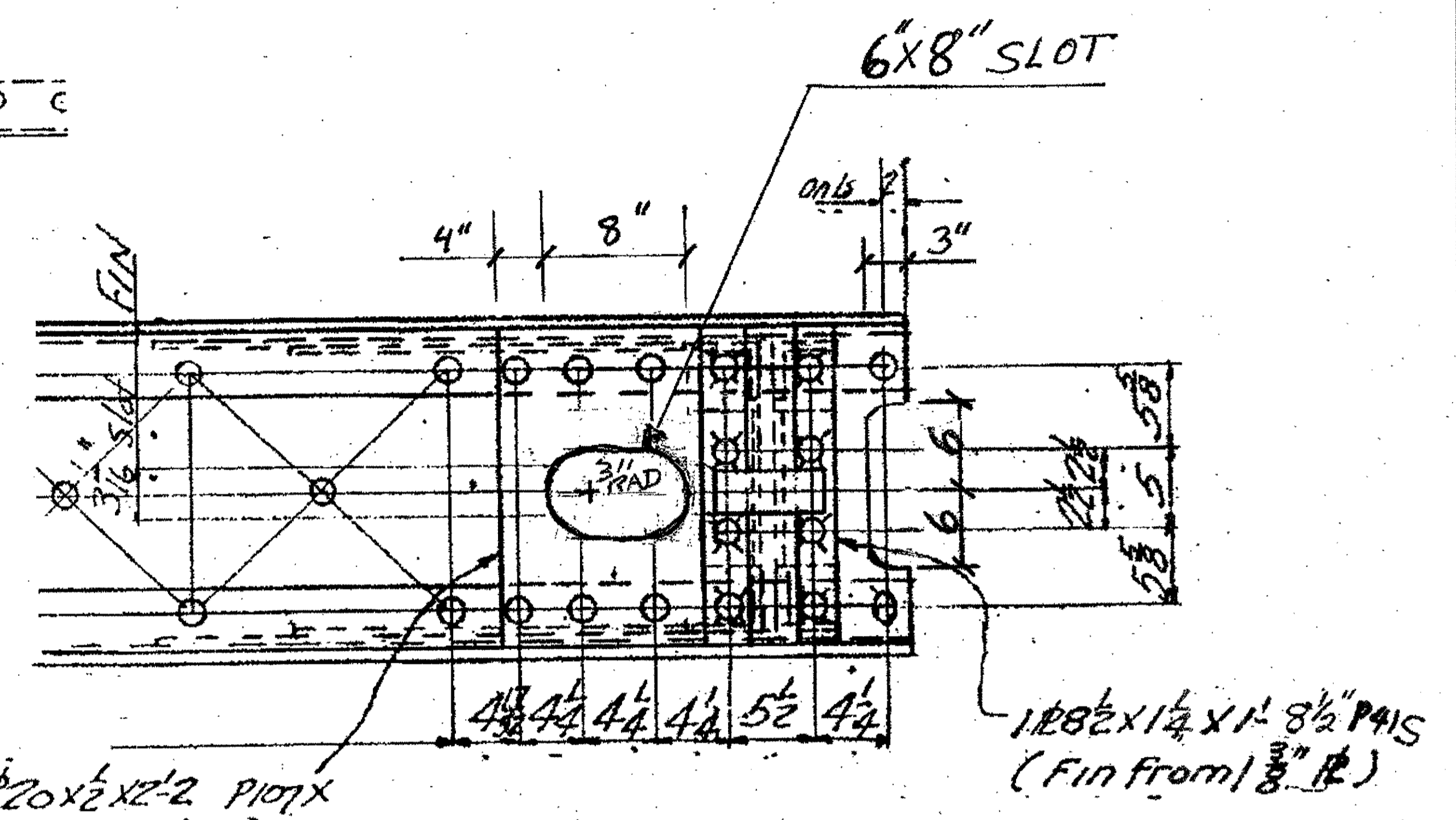
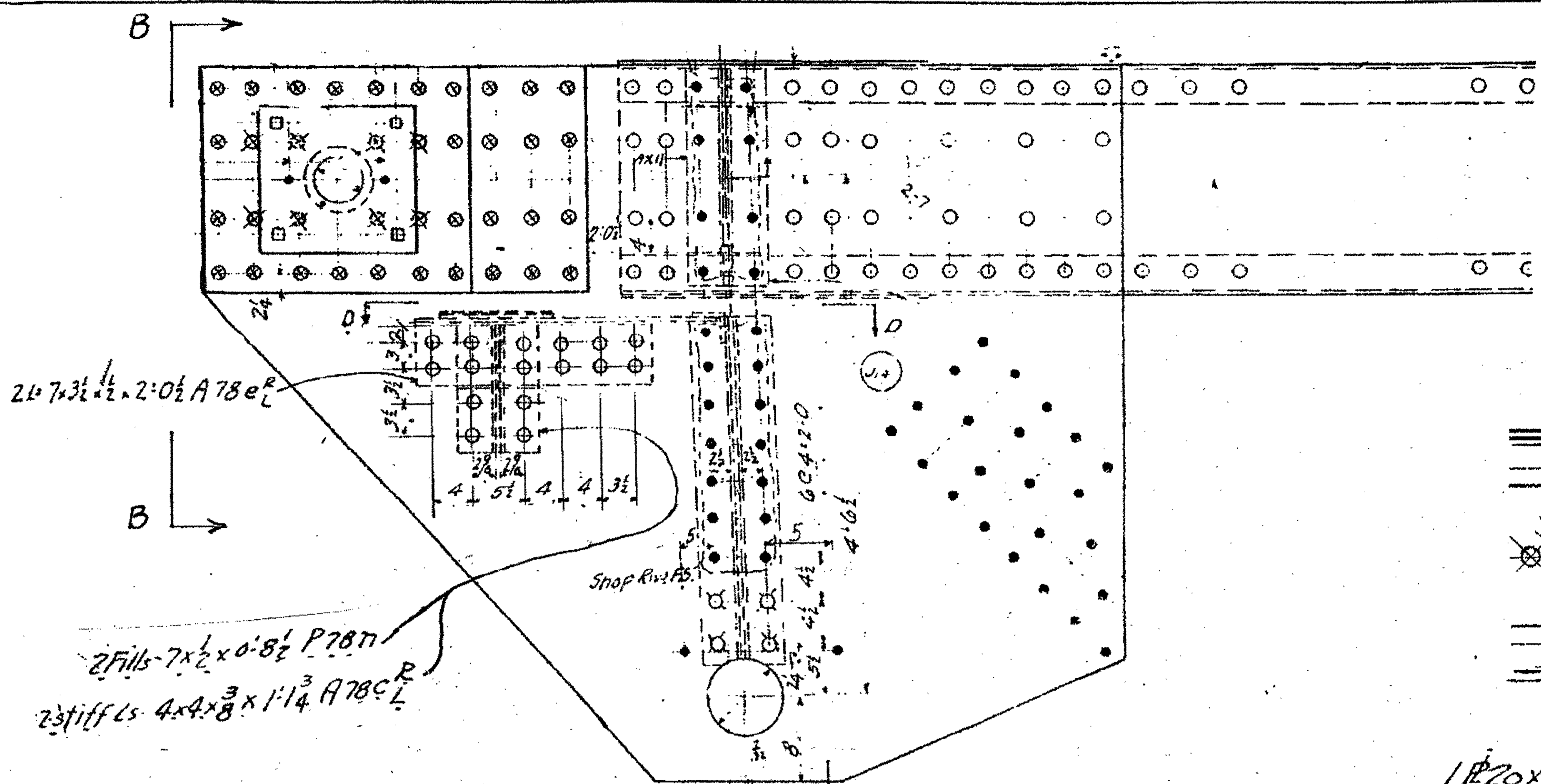
O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

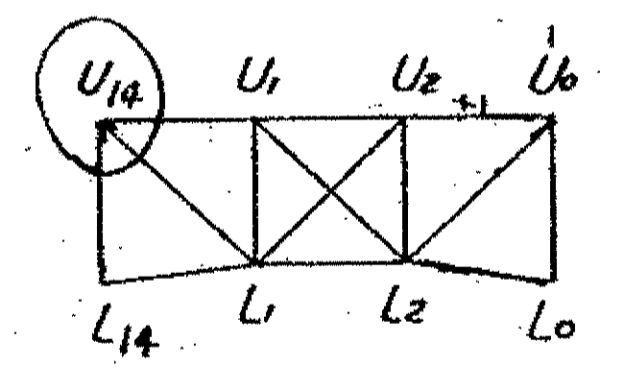
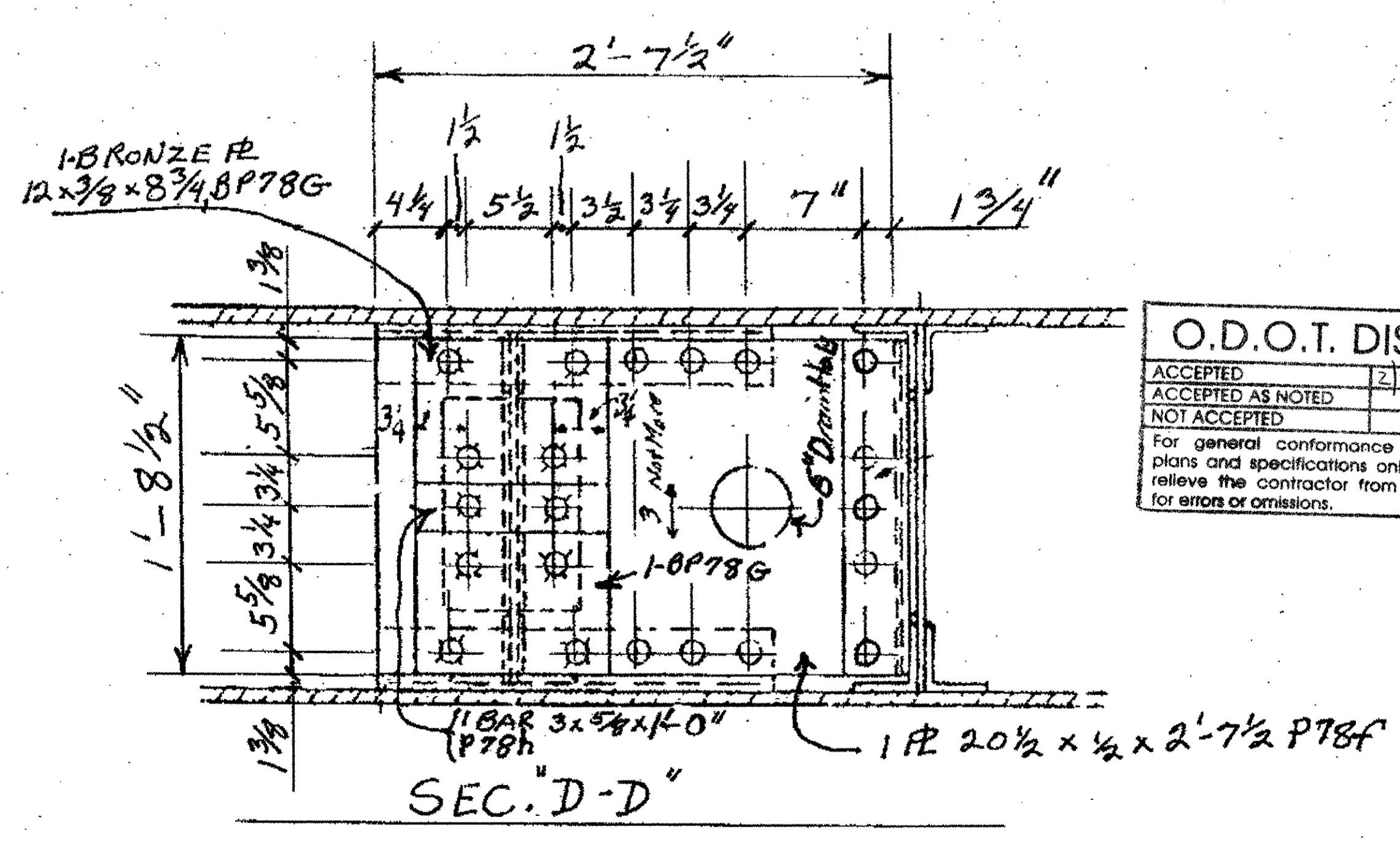
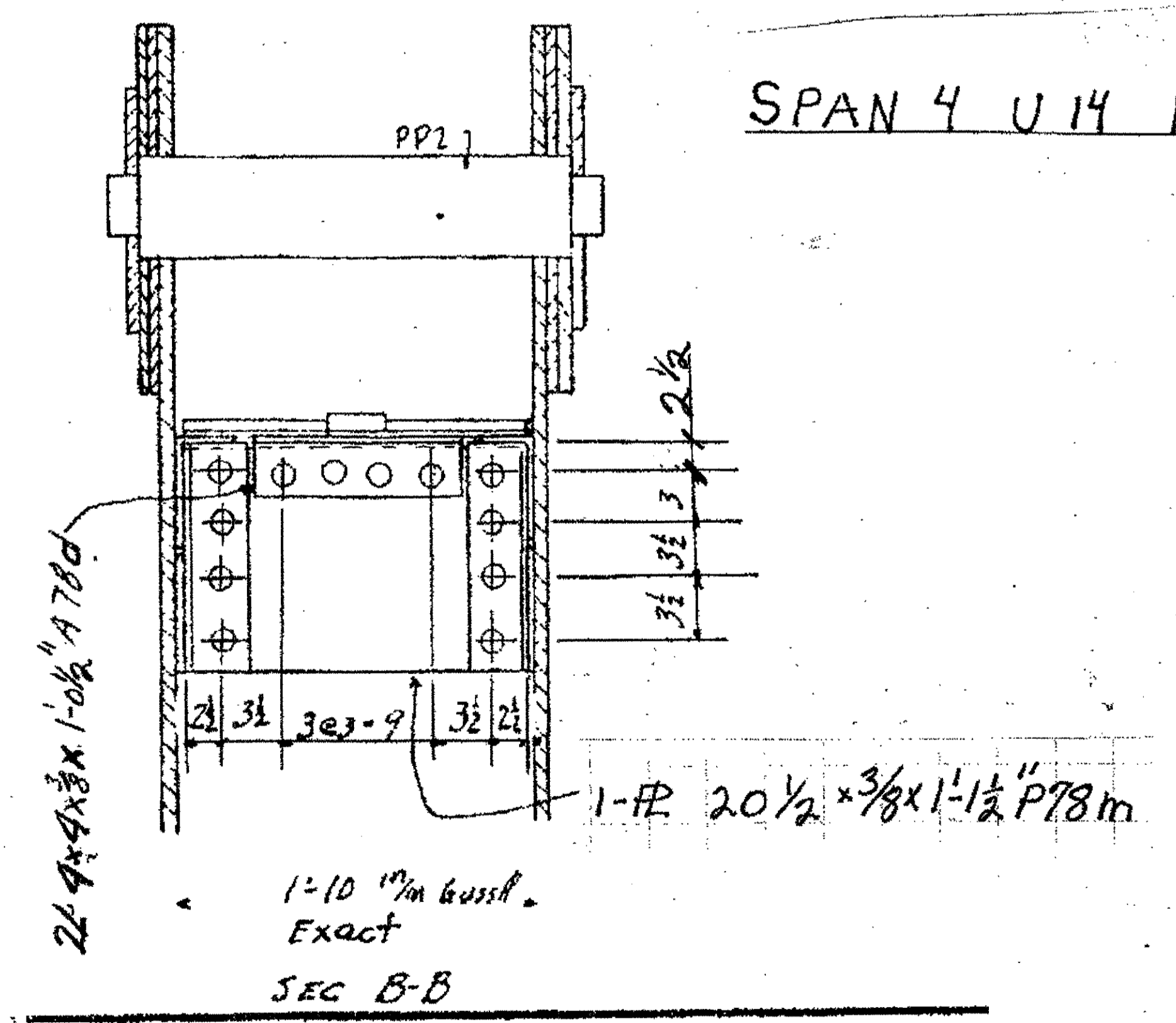
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16.13  
 SPAN 2 + 3 (UPPER EXPANSION)  
 DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_  
 DRAWING NO. 2000212  
 50



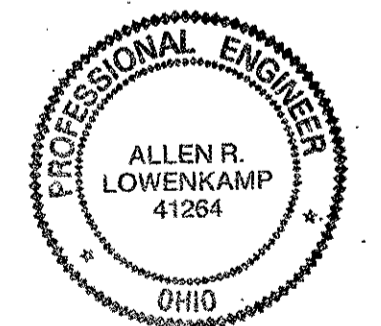
SPAN 4 U14 N.EXT. N.INT. S. INT. & S.EXT.

SPAN 5 U14 N.EXT. N.INT. S. INT. & S.EXT.



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/17/04 DSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

SPAN 4 TRUSS



NO.	REVISION	DATE	BY

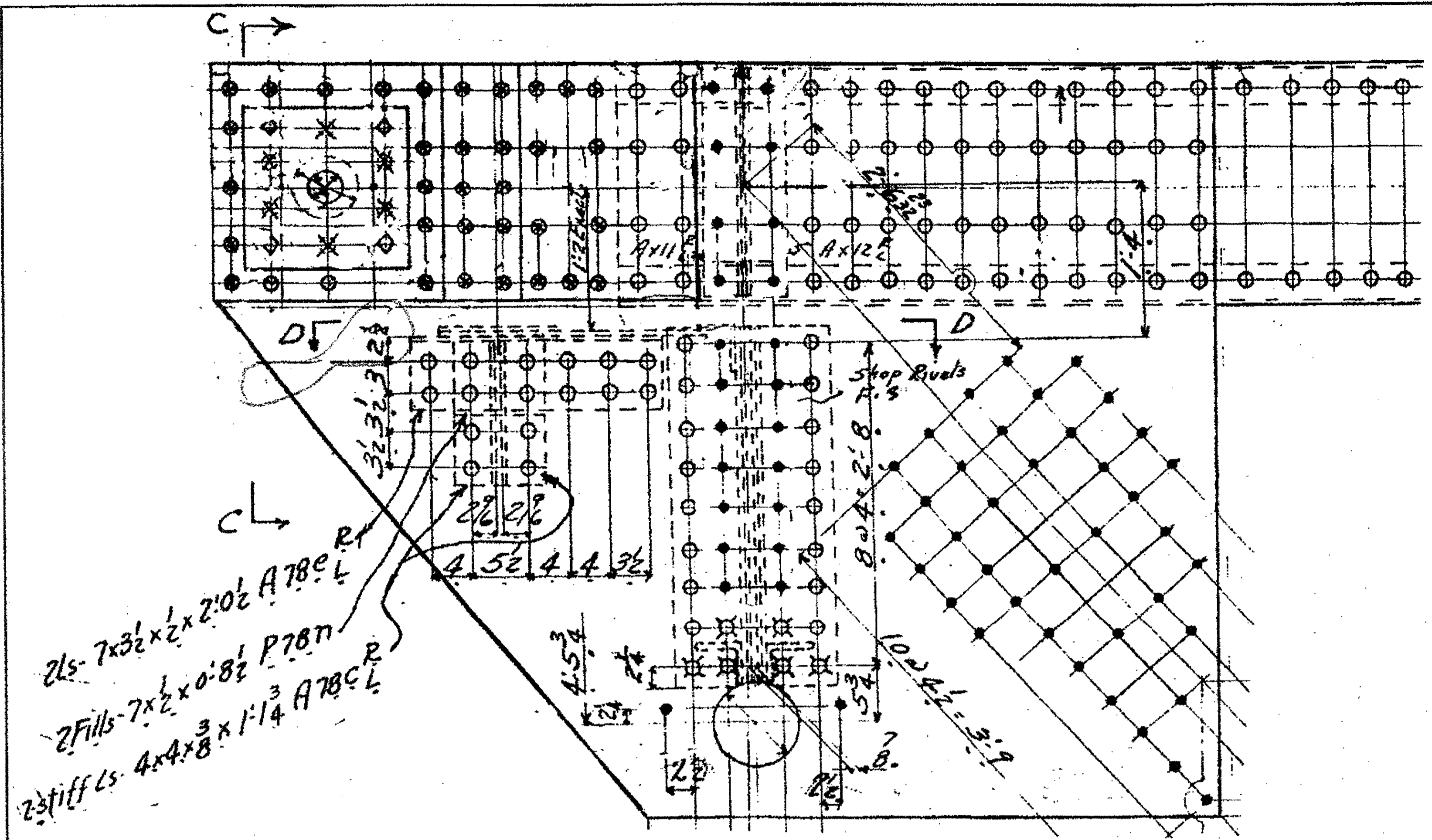
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13  
 SPAN 415 (UPPER EXPANSION) JOB NO. 2000212

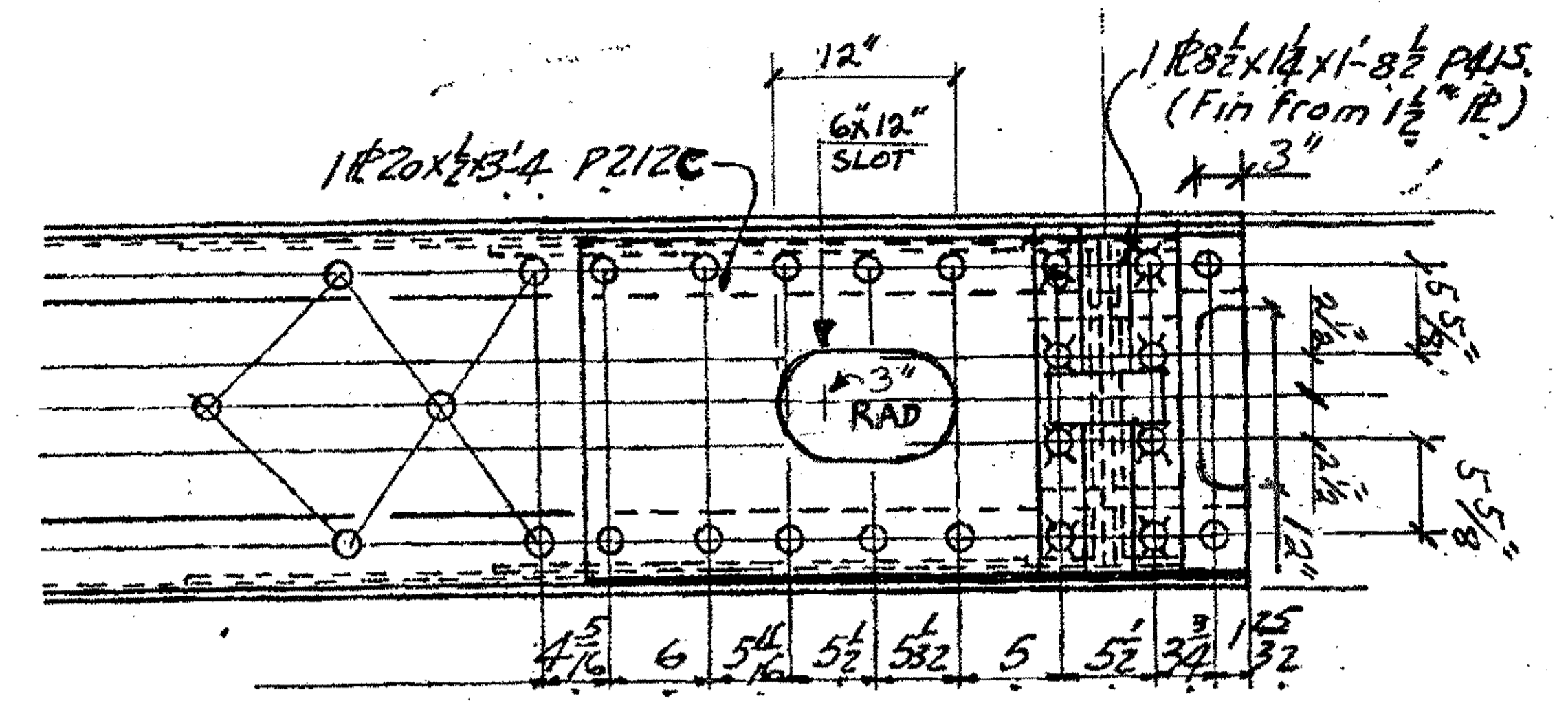
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 SCALE: N/A

DRAWING NO. 51

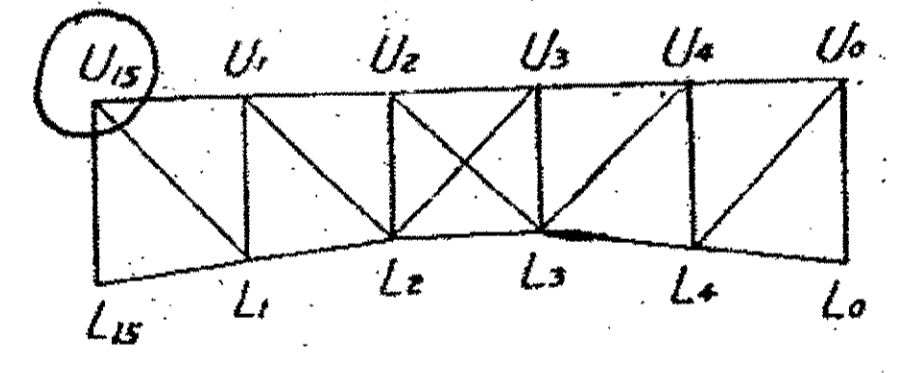




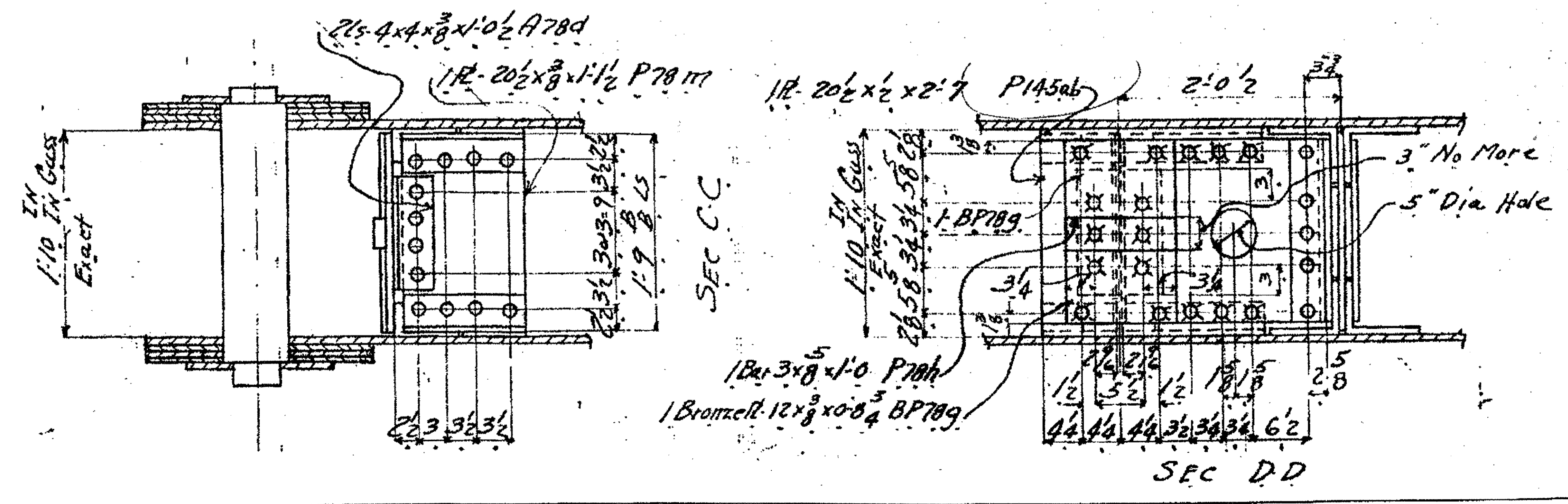
SPAN 6 U15 N. EXT. & S. EXT.



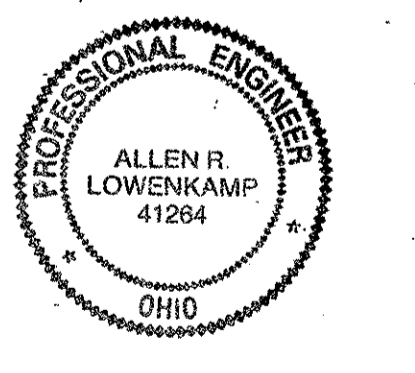
SPAN 7 U15 N. EXT. & S. EXT. (LOOKING UP)



SPAN 6



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



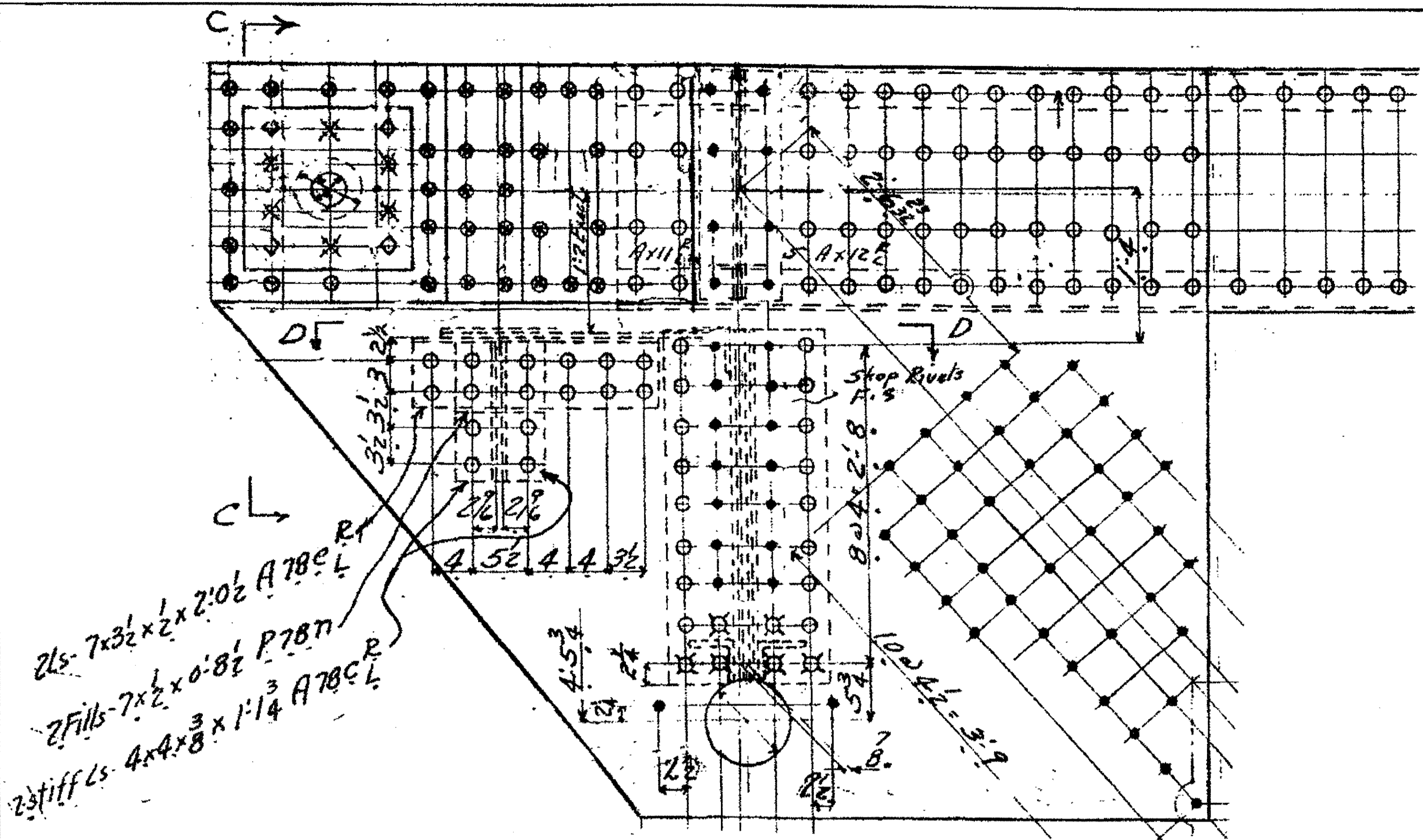
NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**  
**SPAN 6-P7 (UPPER EXPANSION)**

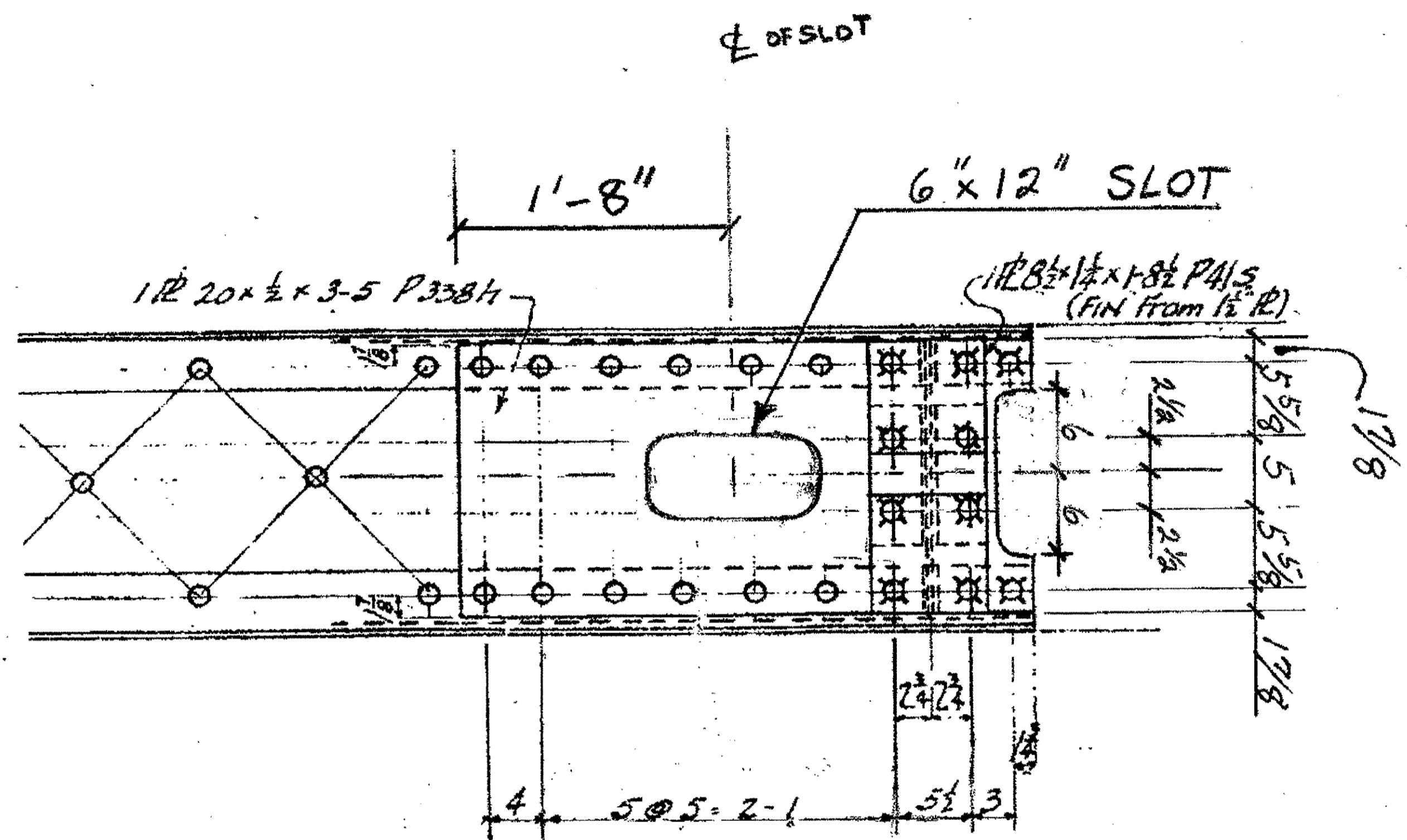
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 SCALE N/A DATE \_\_\_\_\_ DRAWING NO. **53**



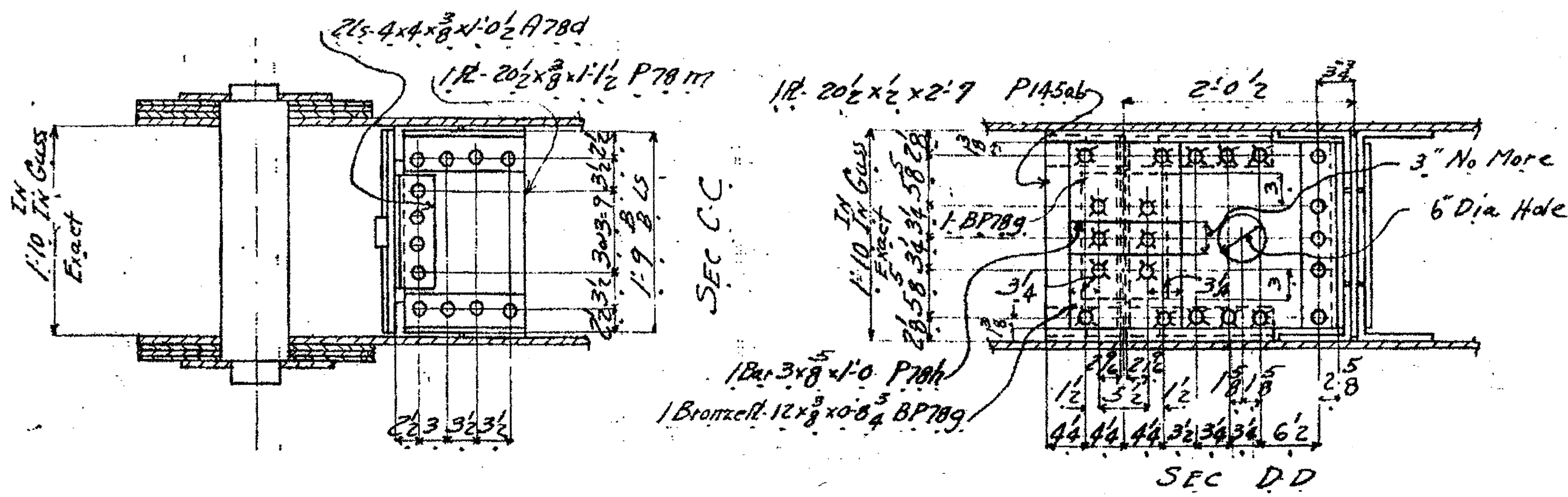


2ls- 7x3 1/2 x 2 x 2:0 1/2 A78CL  
 2Fills- 7x2 1/2 x 0:8 1/2 P78T  
 2stiff ls- 4x4 x 3/8 x 1:14 A78CL

SPAN 8 N. EXT. + S. EXT. @ U17

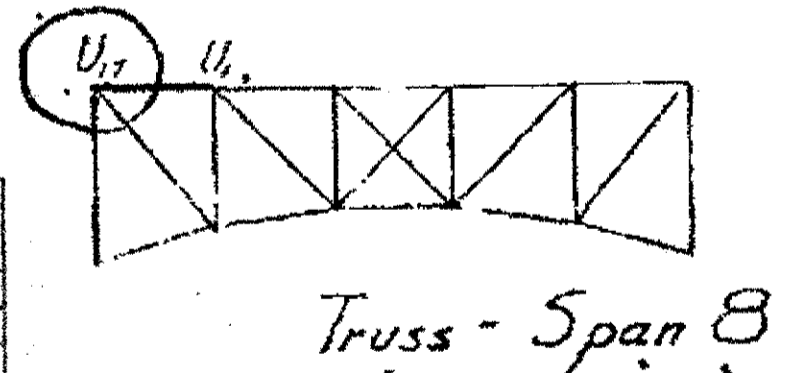


SPAN 9 U17 N.EXT + S.EXT. (LOOKING UP)



SEC C-C

SEC D-D



O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

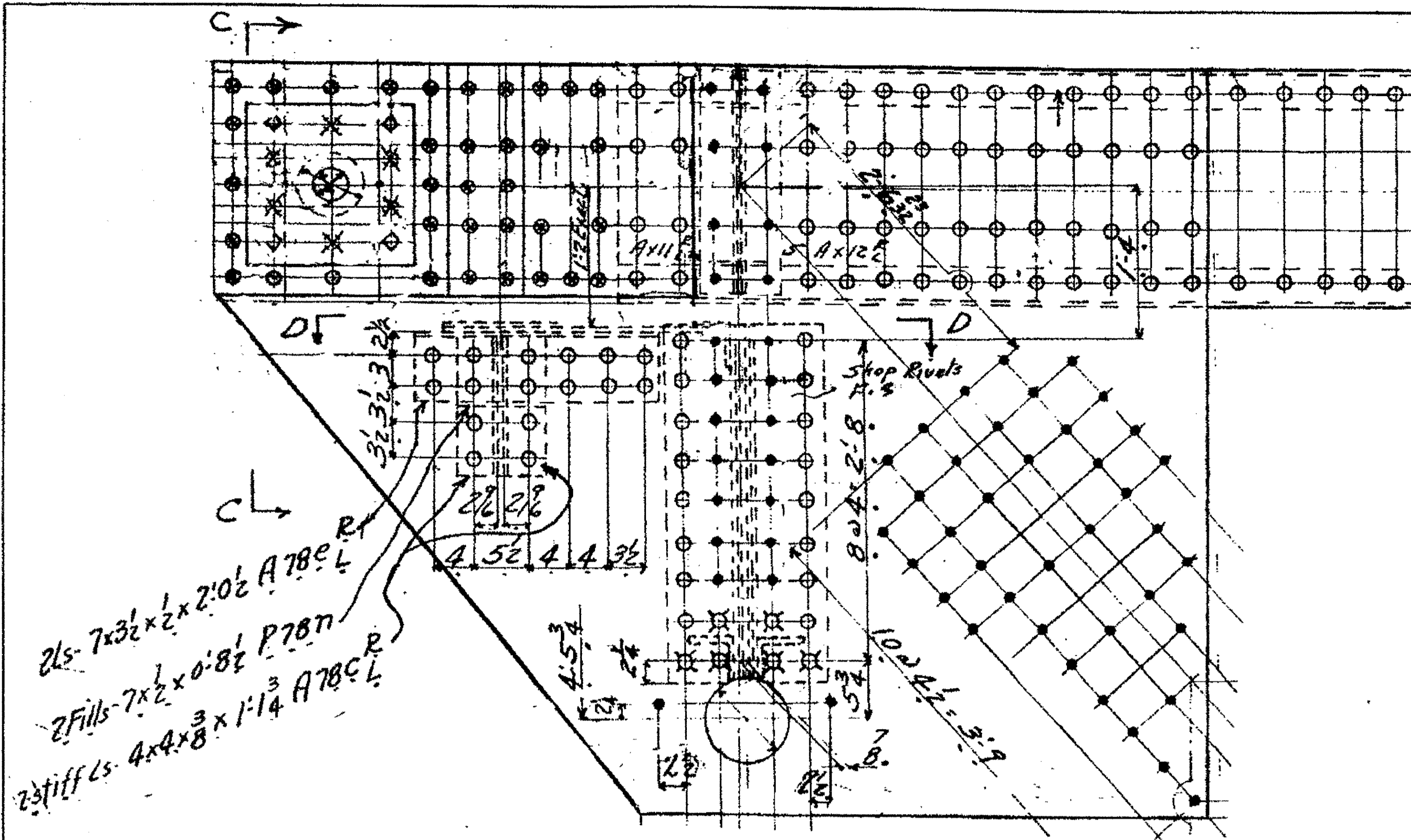
PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

NO.	REVISION	DATE	BY

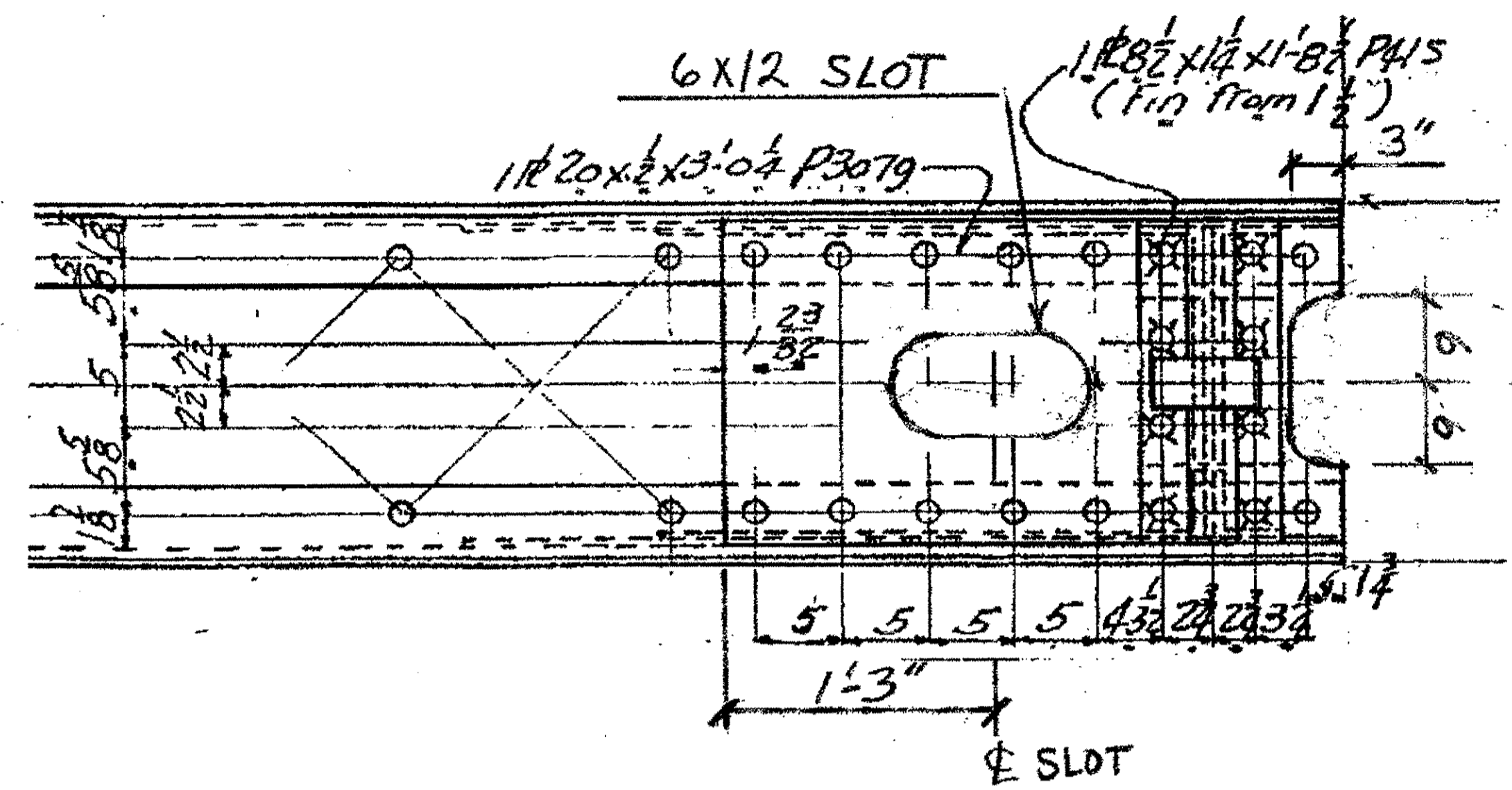
Iri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE NO. CUY-10-16.13  
 SPAN 8 + 9 (UPPER EXPANSION) JOB NO. 2000212

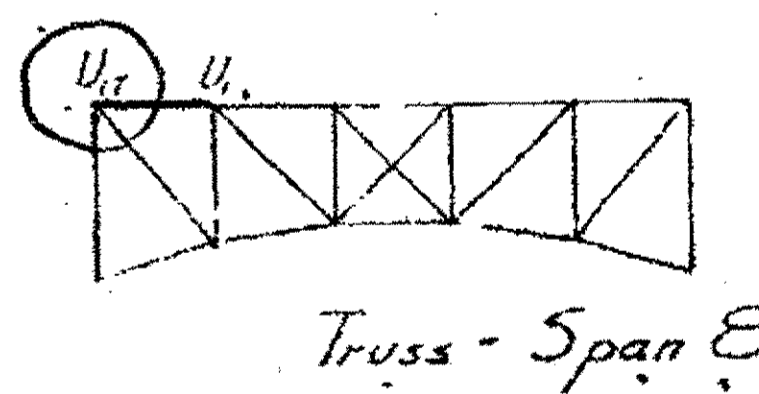
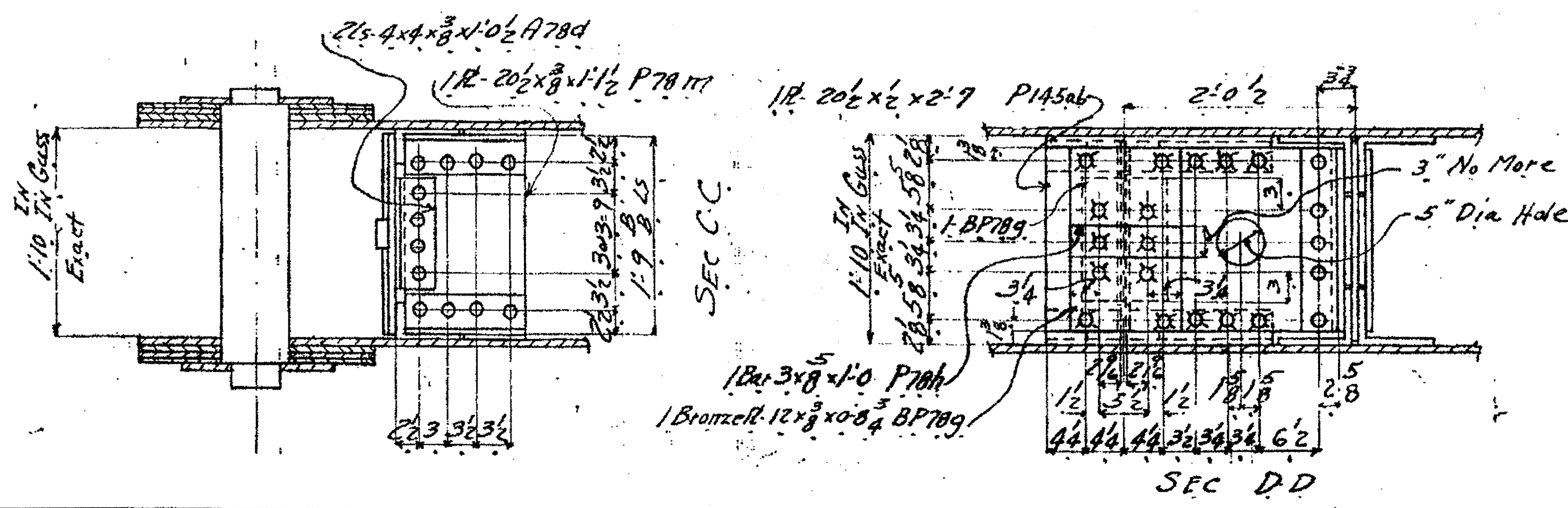
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. 55  
 SCALE: N/A DATE: \_\_\_\_\_



SPAN 8 N.INT. + S.INT. @ U17



SPAN 9 U17 N.INT. + S.INT. (LOOKING UP)



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/9/04  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

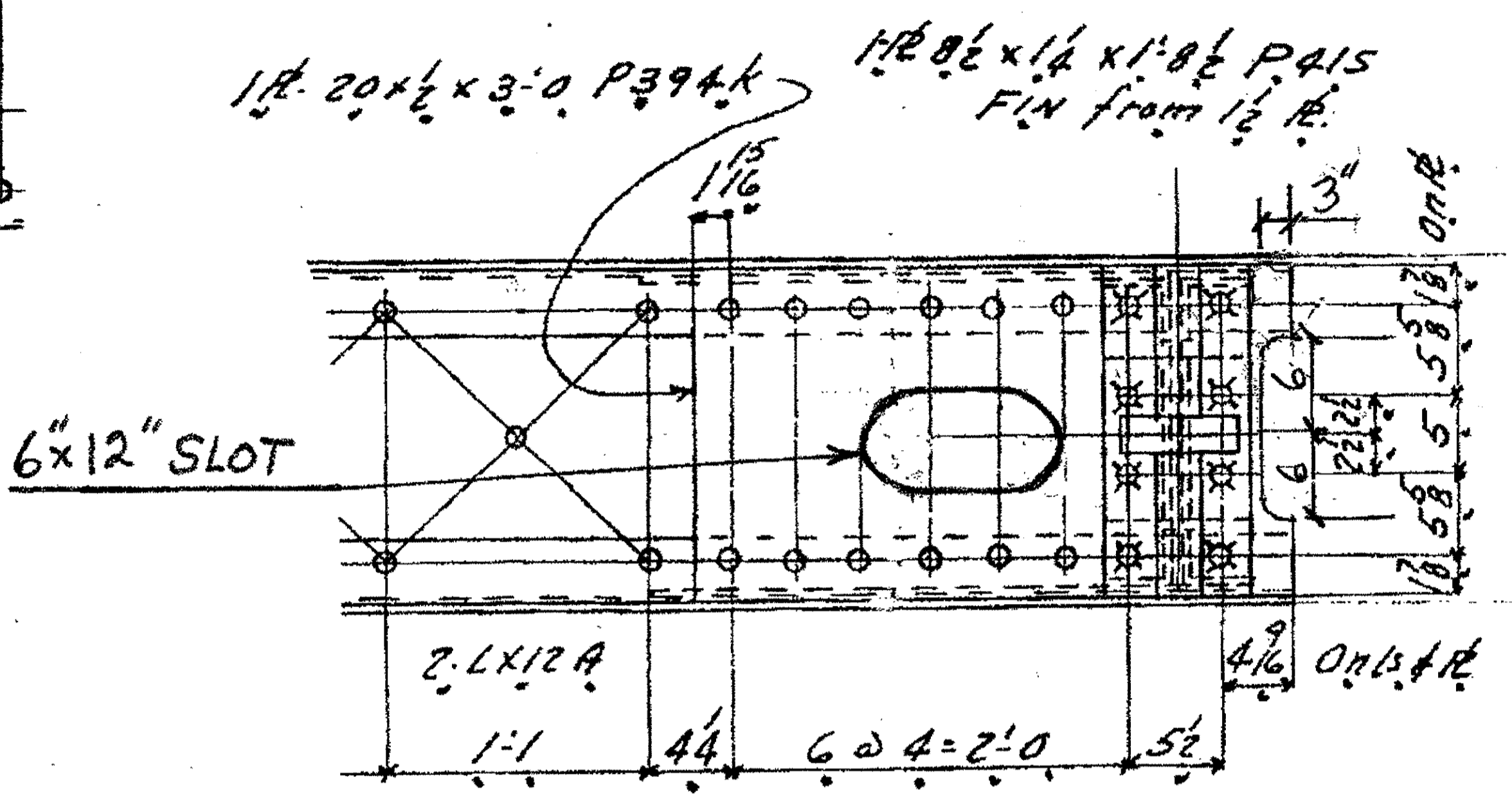
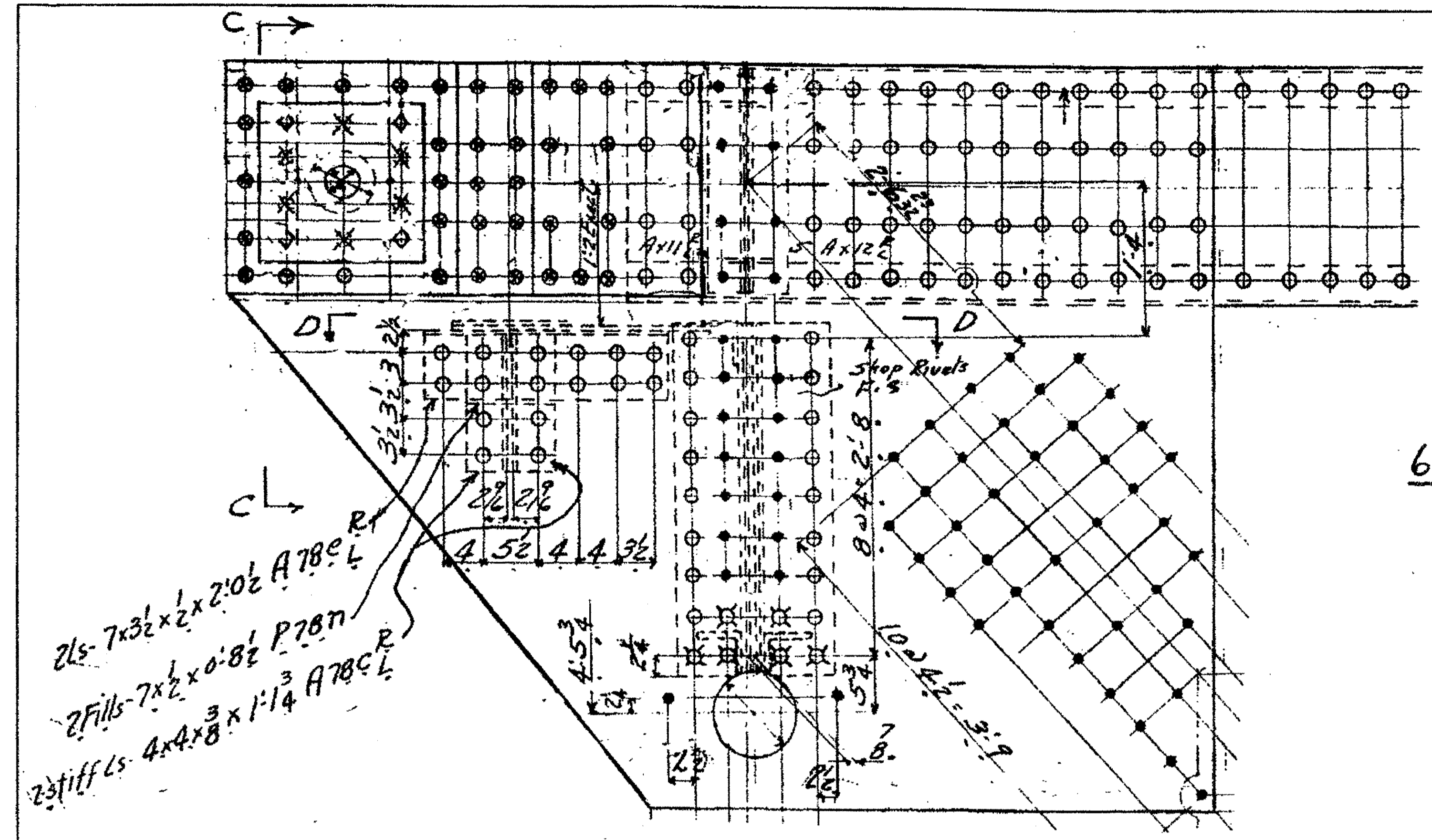


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

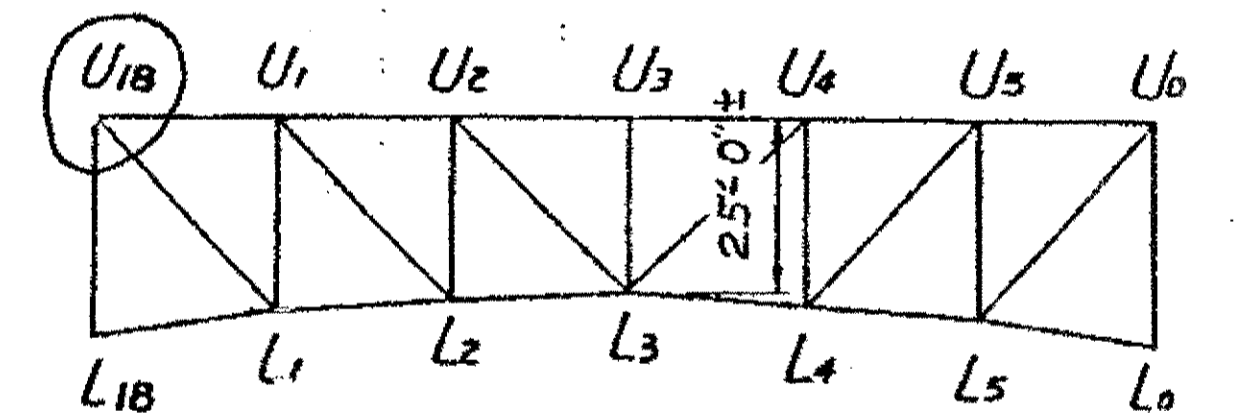
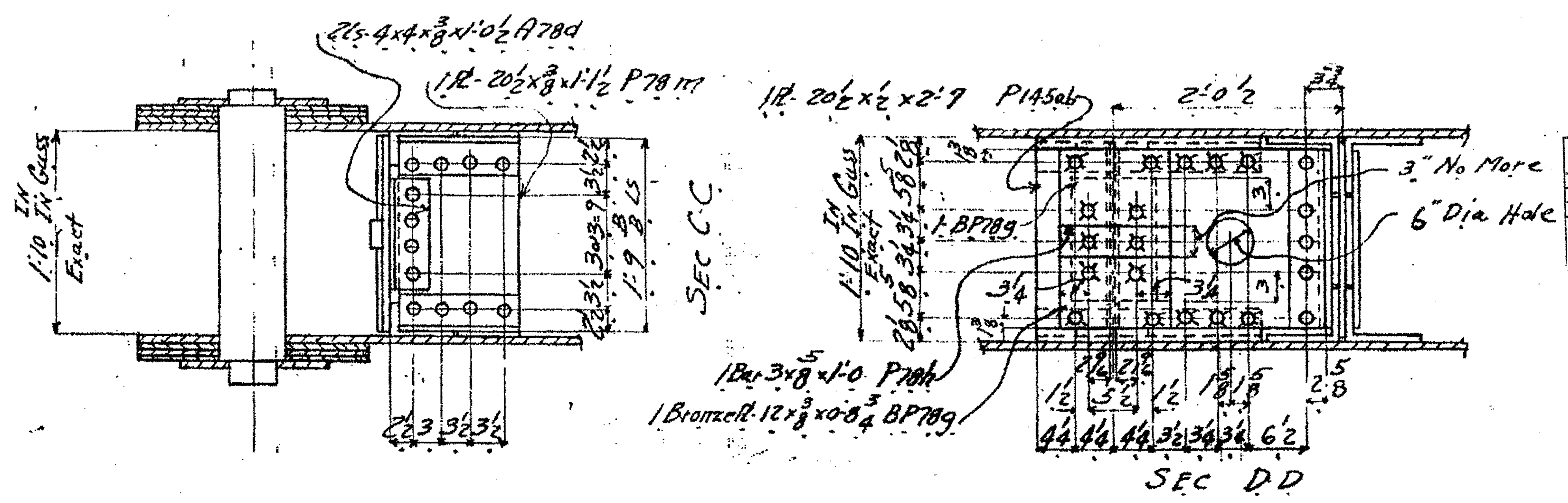
ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**  
**SPAN 8 + 9 (UPPER EXPANSION)** JOB NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_ DRAWING NO. **56**



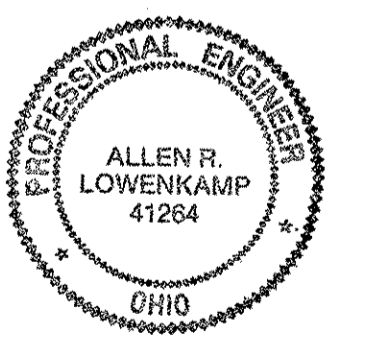
SPAN 11 U18 N.EXT. N.INT. S.INT. + S.EXT.  
 (P394K NOT DETAILED ON SHEET 365)

SPAN 10 U18 N.EXT. N.INT. S.INT. + S.EXT



SPAN 10

O.D.O.T. DIST. 12  
 ACCEPTED 2/17/04 BSM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

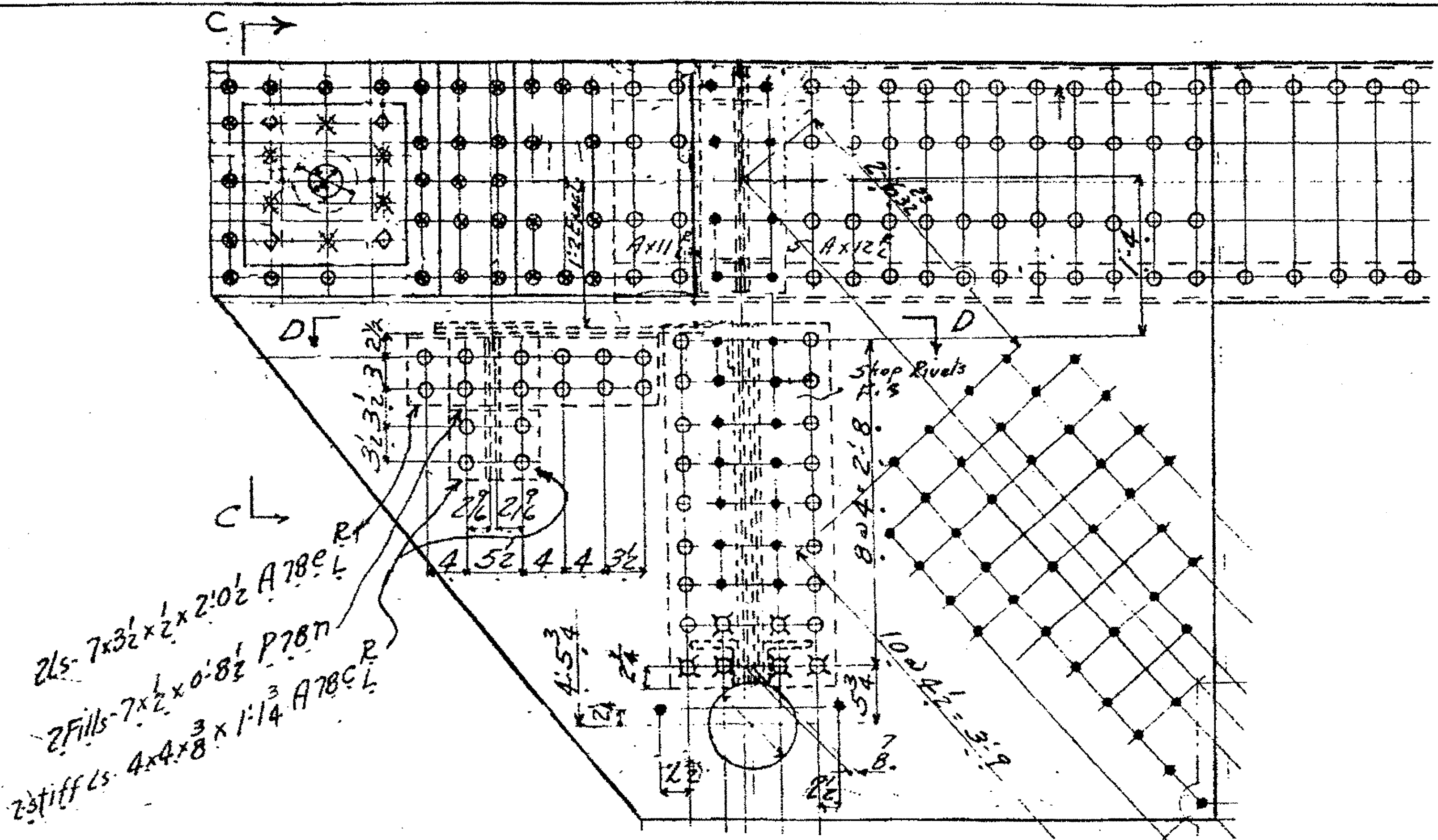


NO.	REVISION	DATE	BY

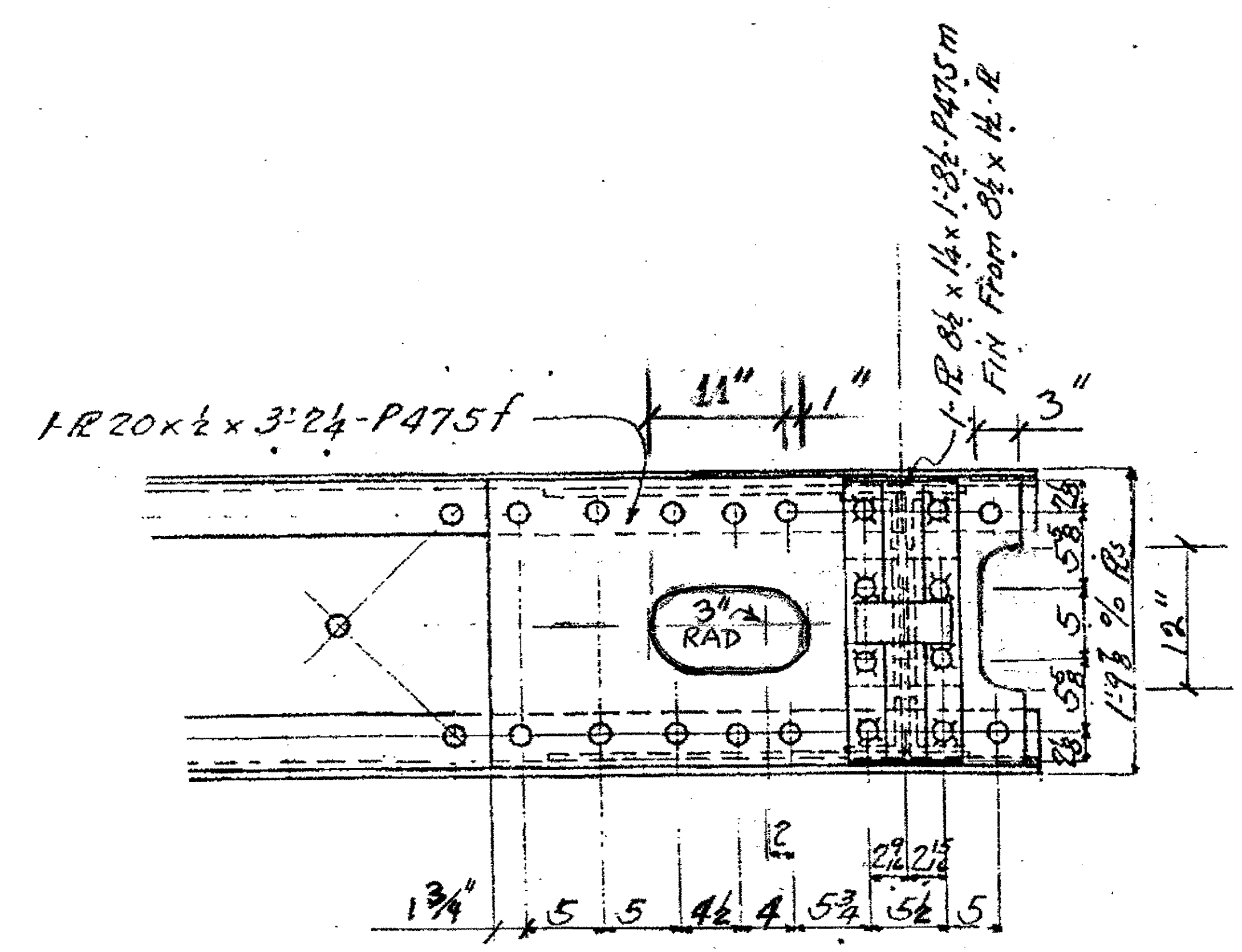
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE NO. CUY-10-16.13  
 SPAN 10 - II UPPER EXPANSION

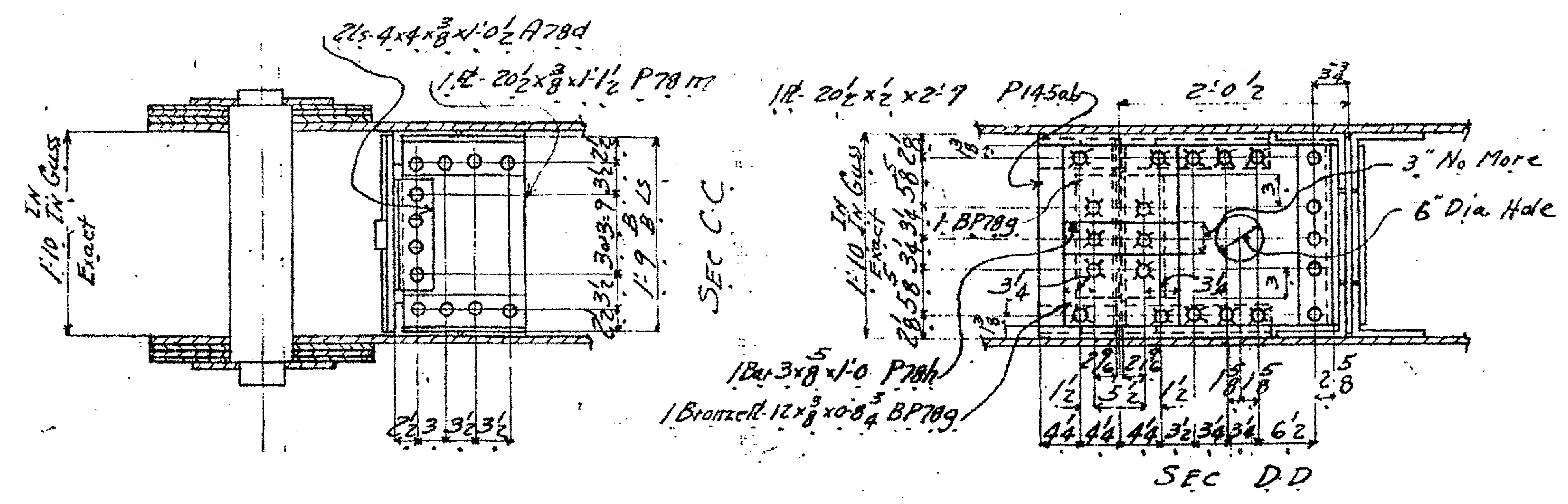
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. 57  
 SCALE: N/A DATE: \_\_\_\_\_



SPAN 12 @ U 12 N.EXT. N.INT. S.INT. + S.EXT.



SPAN 13 @ U12 N.EXT. N.INT. S.INT. + S.EXT.  
 (P475f-NOT DETAILED ON SHEET 365)



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/7/04 P. STW  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

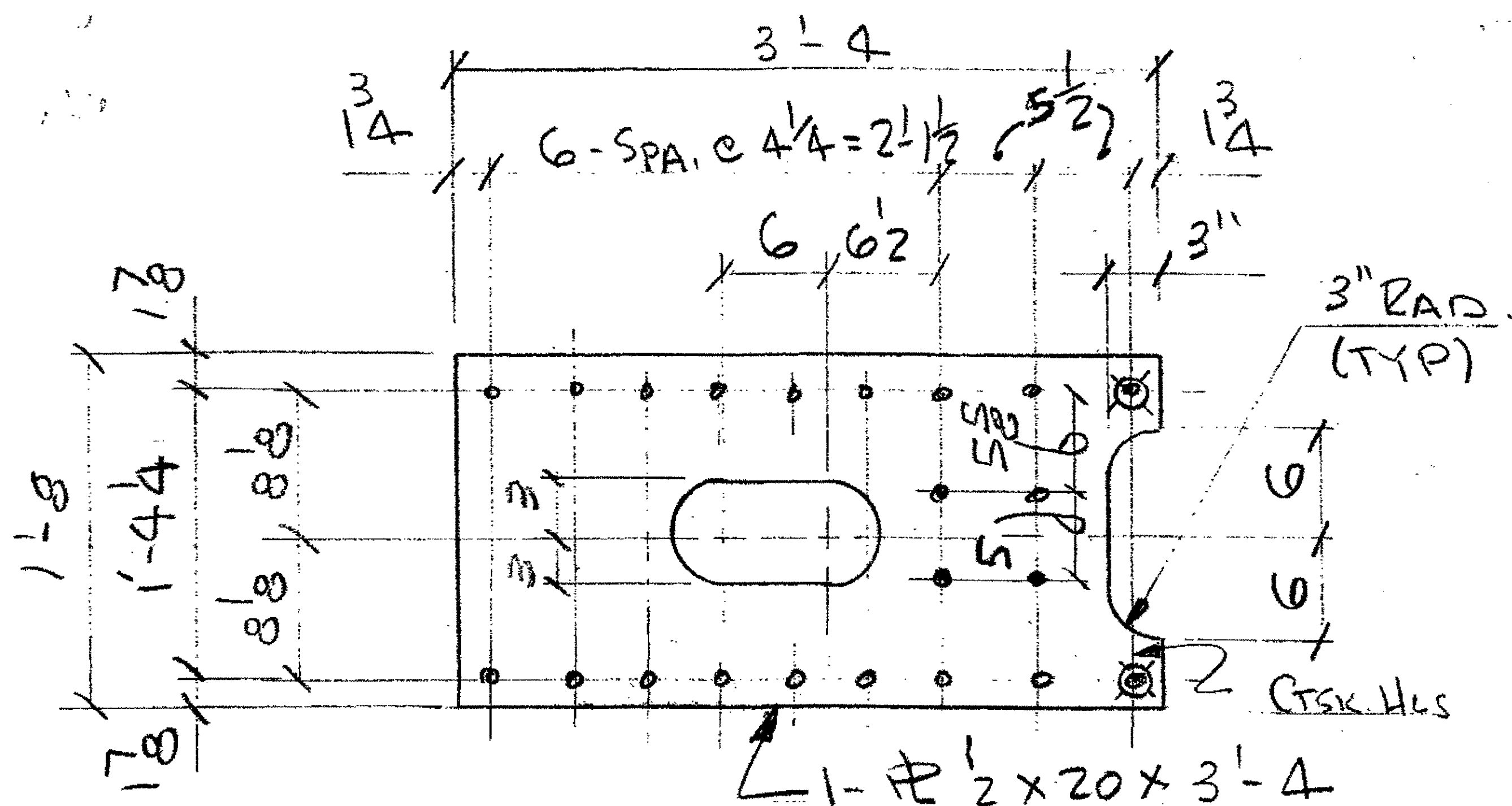


NO.	REVISION	DATE	BY

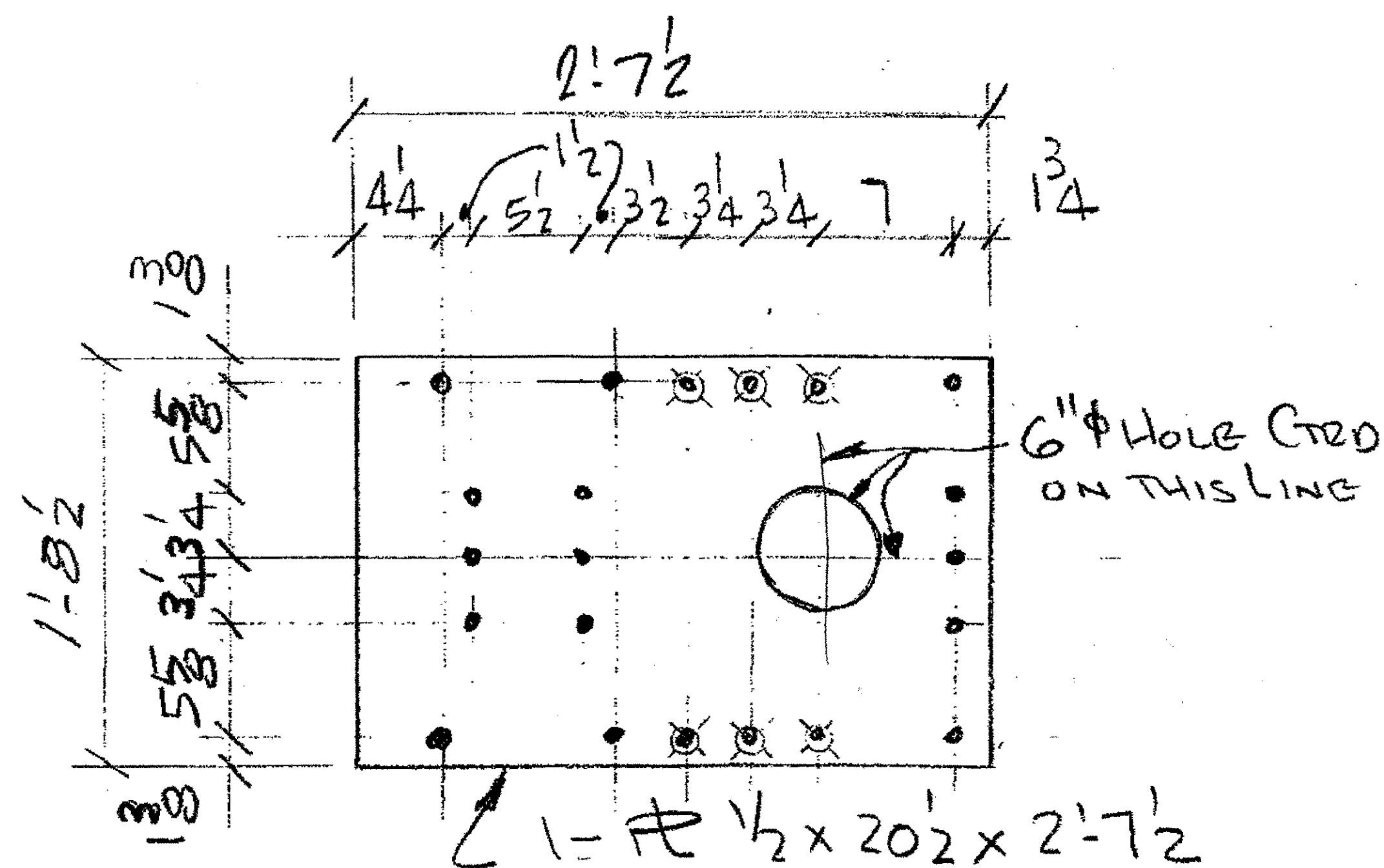
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**  
**SPAN 12 + 13 UPPER EXPANSION**

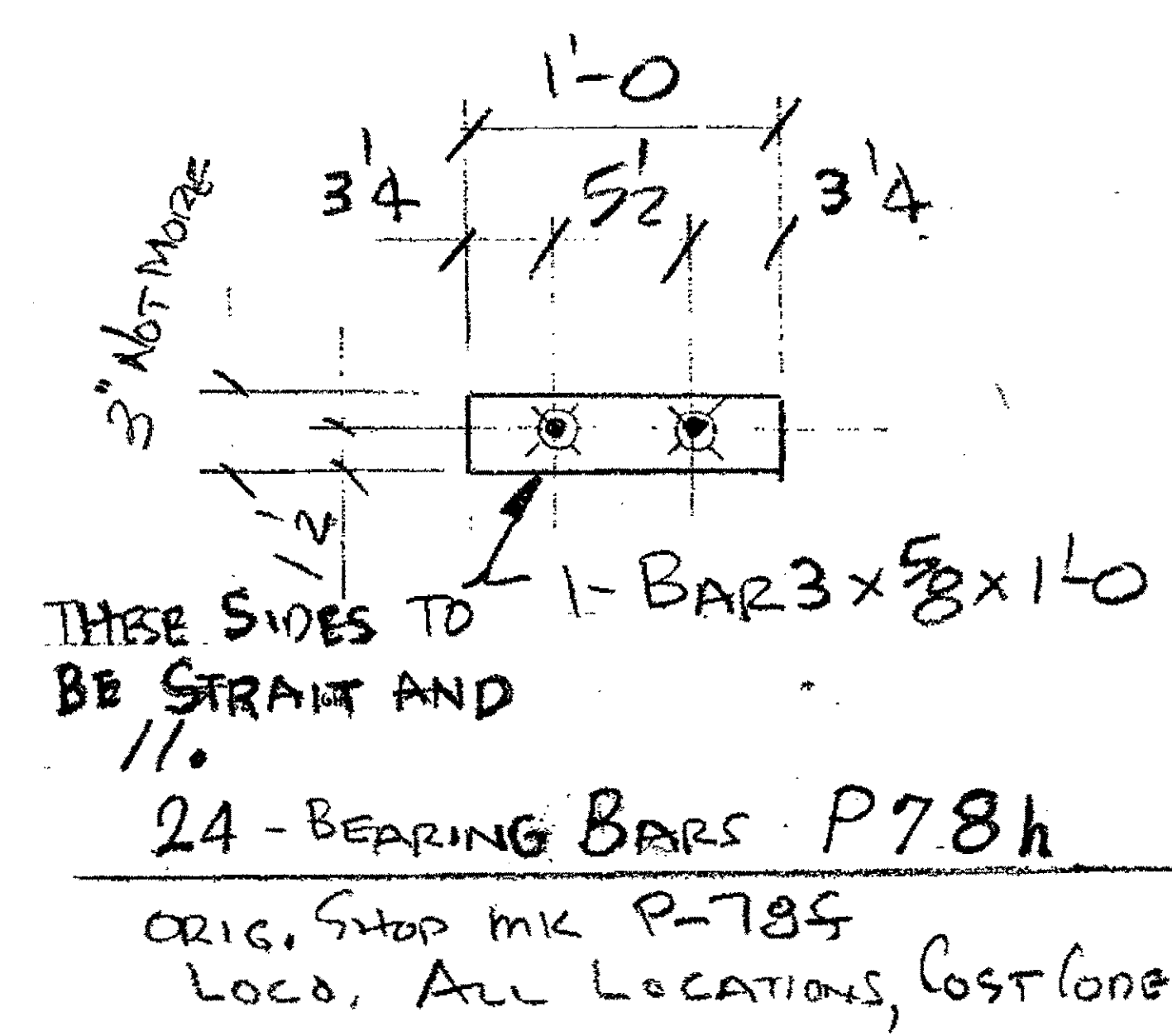
BRNWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. 58  
 SCALE: N/A DATE: \_\_\_\_\_



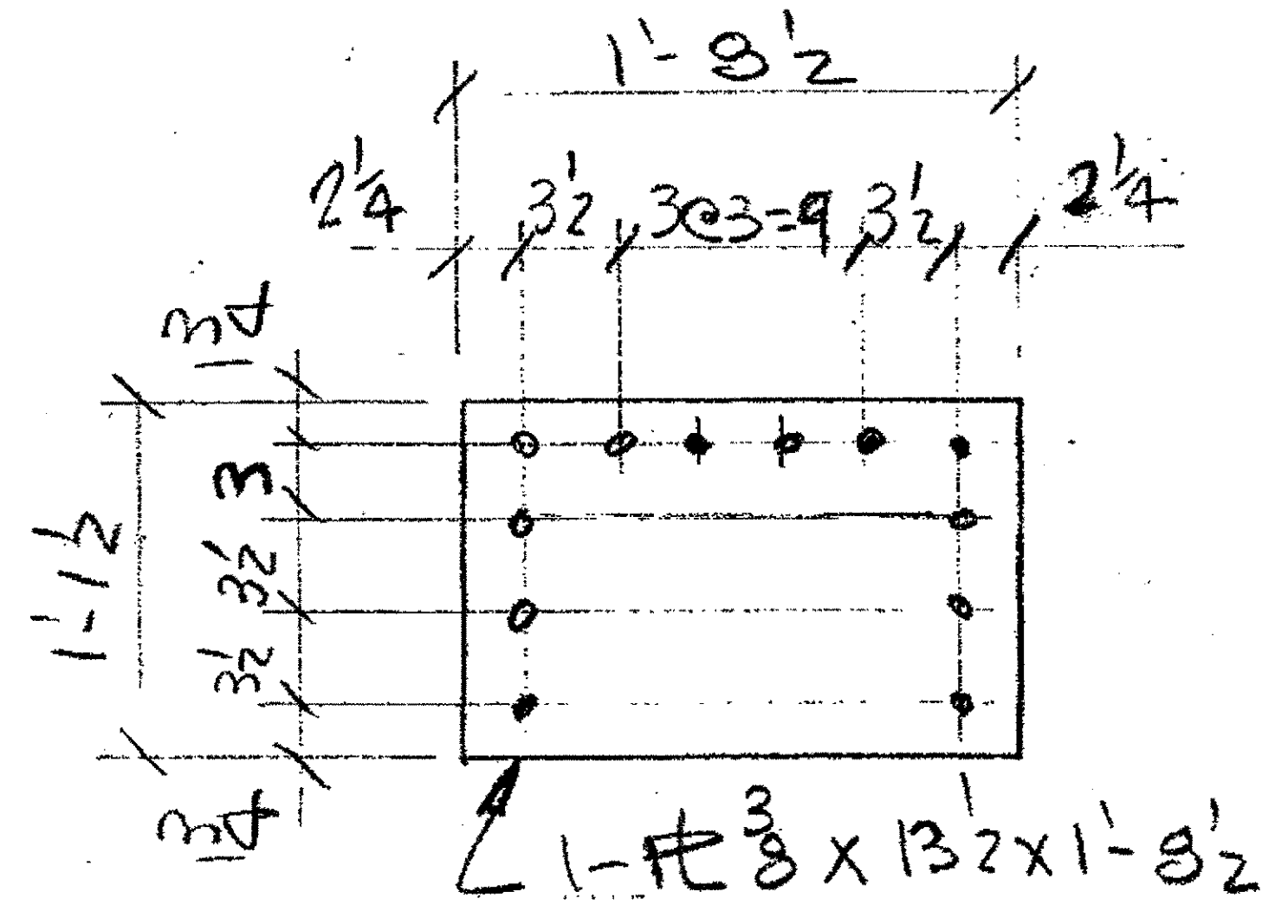
**4 - BOTTOM STAY PLATES P41P**  
 ORIG. SHOP MARK P-41P  
 COST CODE 239, LOCO EXP. JT. 1 SPAN 2/3



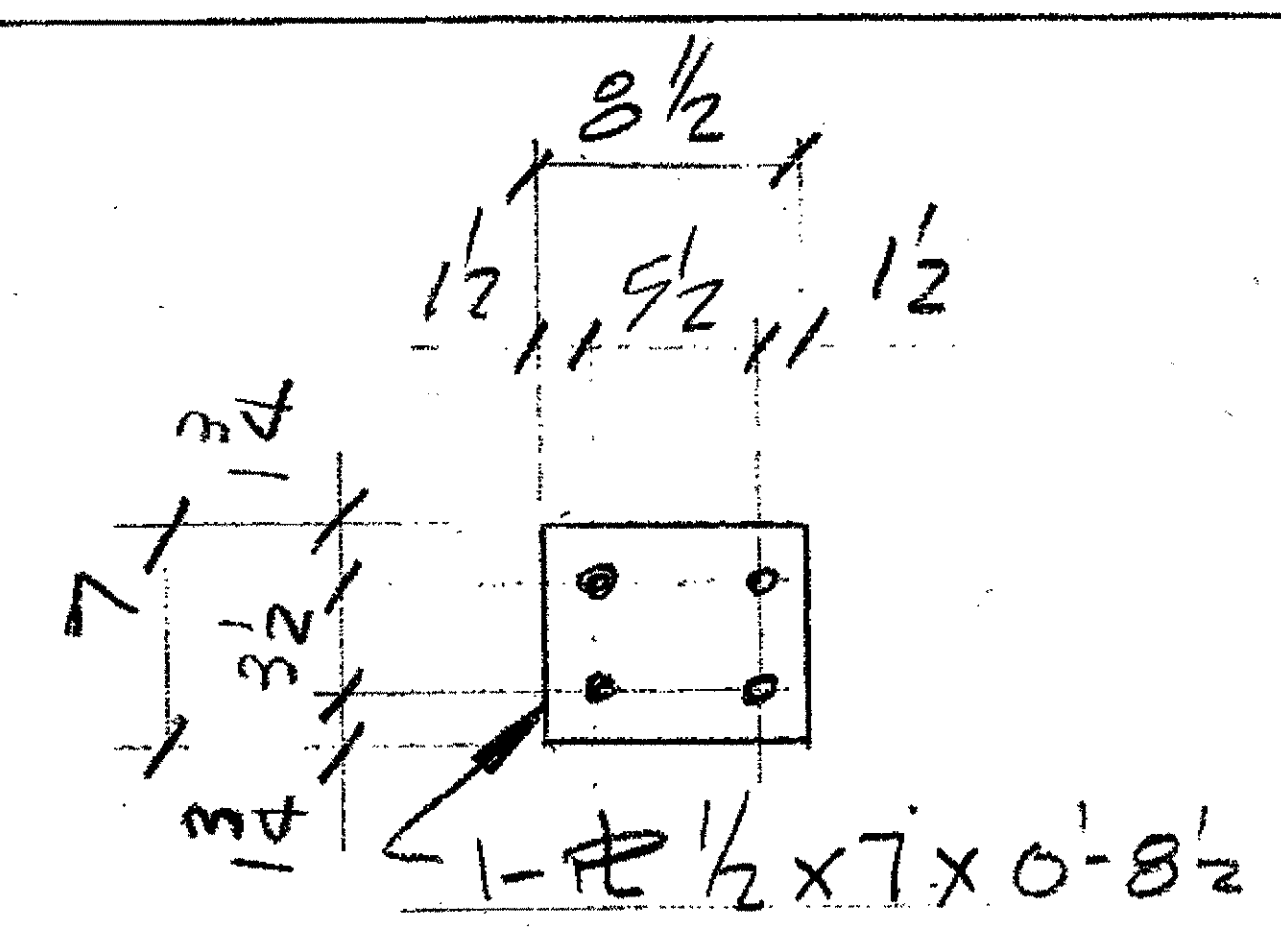
**8 - BEARING STAY PLATE P78F**  
 ORIG. SHOP MARK P-78F  
 COST CODE 239, LOCO. EXP. JT. 1+2  
 - SPAN 2/3 AND SPAN 4/5



**24 - BEARING BARS P78h**  
 ORIG. SHOP MARK P-78F  
 LOCO. ALL LOCATIONS, COST CODE 239



**24 - VERTICAL R'S - P78m**  
 ORIG. PART MARK P-78m  
 LOCO. ALL LOCATIONS COST CODE 239

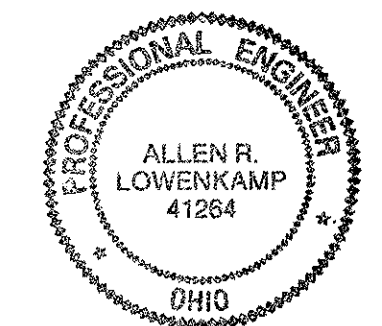


**48 - FILL R'S P78n**  
 ORIG. SHOP MARK P-78n  
 LOCO. ALL LOCATIONS  
 COST CODE 239

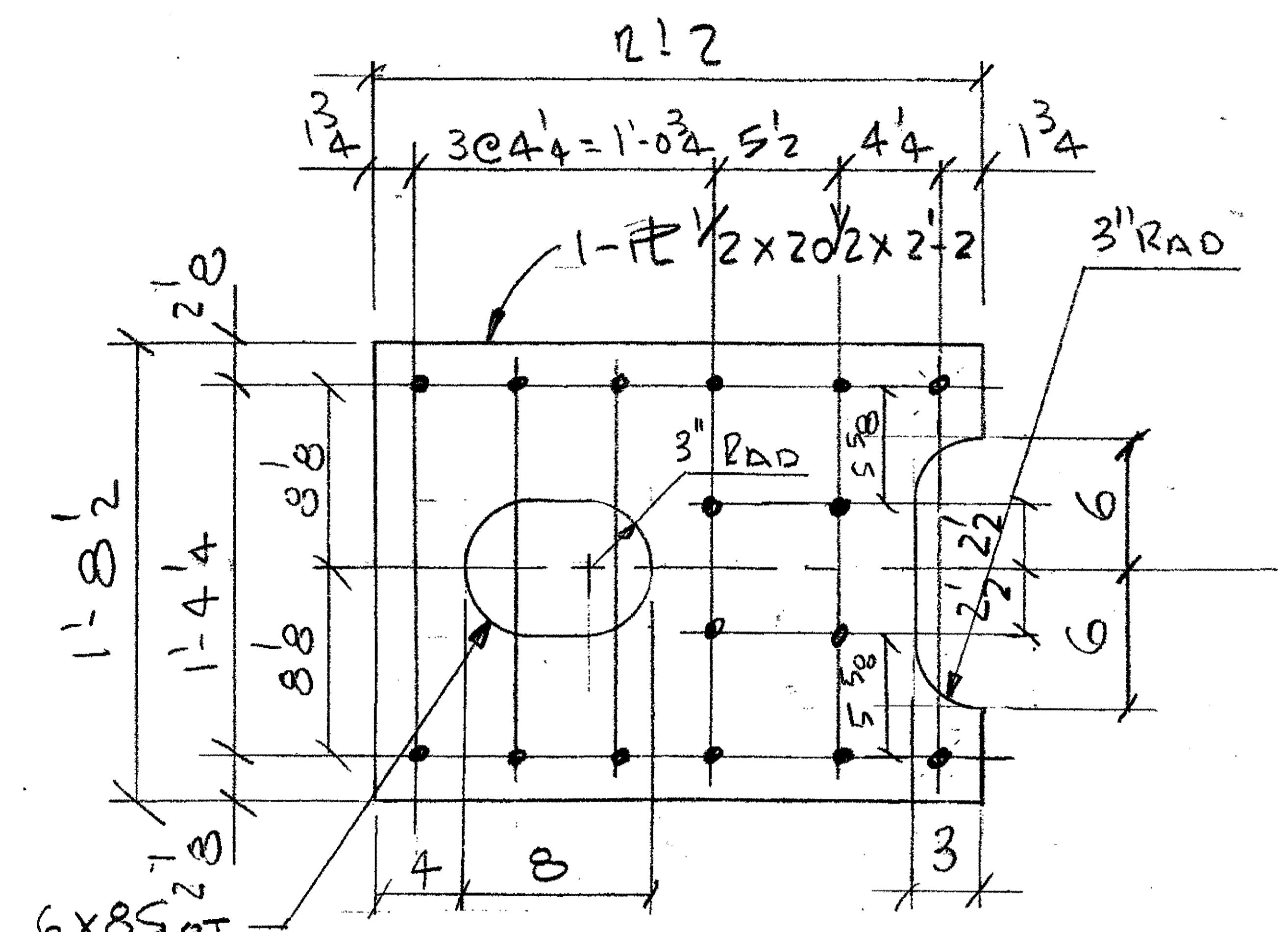
- NOTES:
- 1) ALL STEEL TO BE A-36 DOMESTIC W/ MILL CERTS.
  - 2) ALL HOLES 1/16" UNO
  - 3) ALL STEEL SHALL BE PAINTED W/ SHOP COAT OF SHEERWIN-WILLIAMS ZINC CHAD # INORGANIC ZINC RICH PRIMER. 3.0-50 MILLS
  - 4) SURFACE PREP SSPC-SPI0 BLAST

O.D.O.T. DIST. 12		
ACCEPTED	2/9/24	PSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

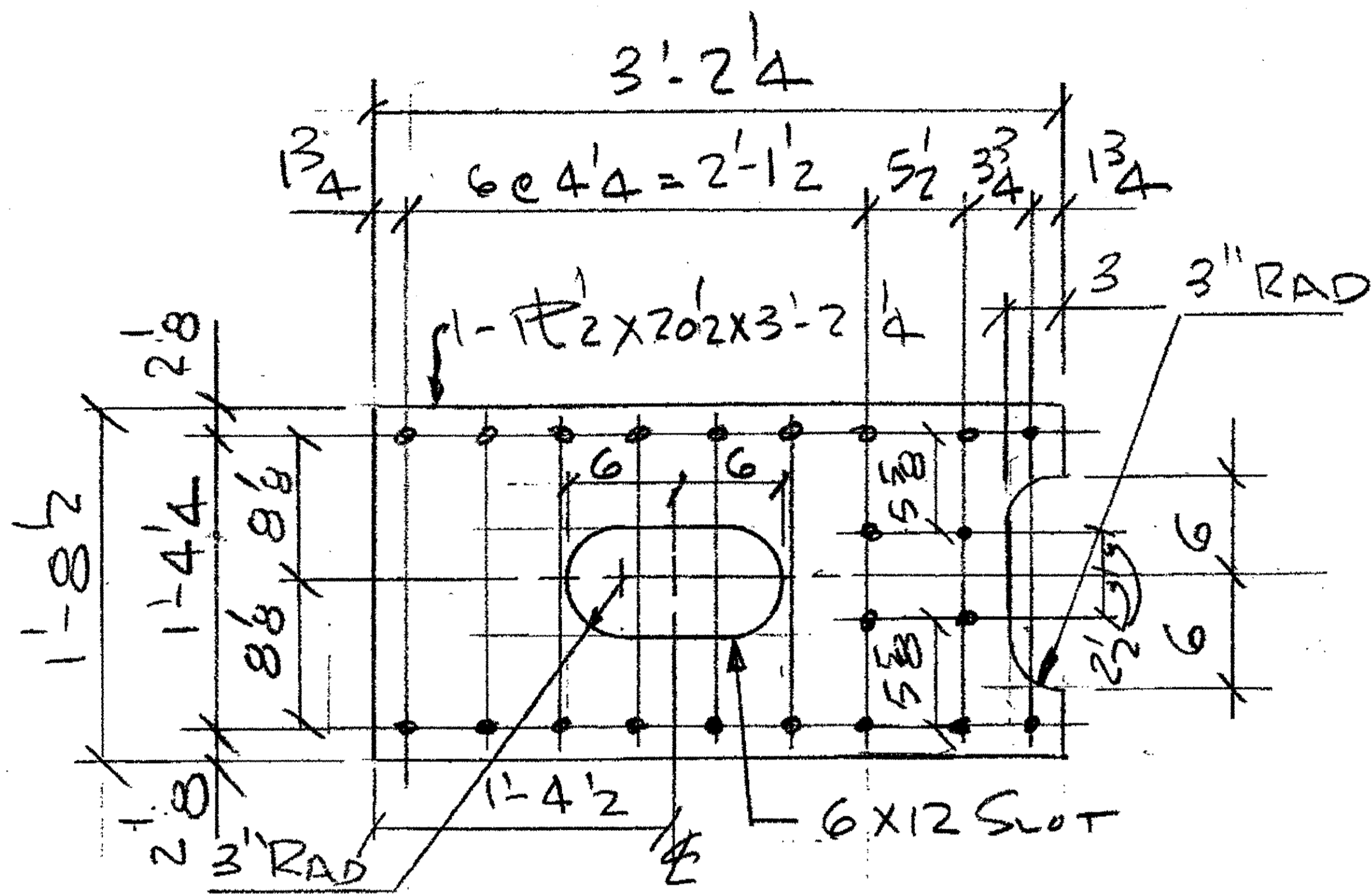
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY	<b>Tri State Steel Construction Inc.</b> 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015 IDOT Project # 00215 <b>BRIDGE No. CUY-10-16-13</b> UPPER EXPANSION JOB NO. 2000212 DRAWING NO. 365A



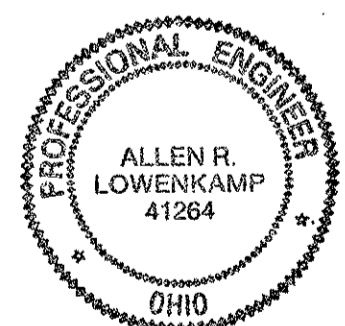
4 - BOTTOM STAY PLATE P107X  
 ORIG. SHOP MK P107X (Loco: INTERIOR & OUTER)  
 COST CODE 239, LOCO EXP. JT. 2, SPAN 4/5



2 - BOTTOM STAY PLATE P186n  
 ORIG. SHOP MK - P186n (Loco: INTERIOR TRUSS ONLY)  
 COST CODE 239, LOCO. EXP. JT. 3, SPAN 6/7

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD V/HWY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - PLATE A36

O.D.O.T. DIST. 12  
 ACCEPTED 2/9/09 BSK  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



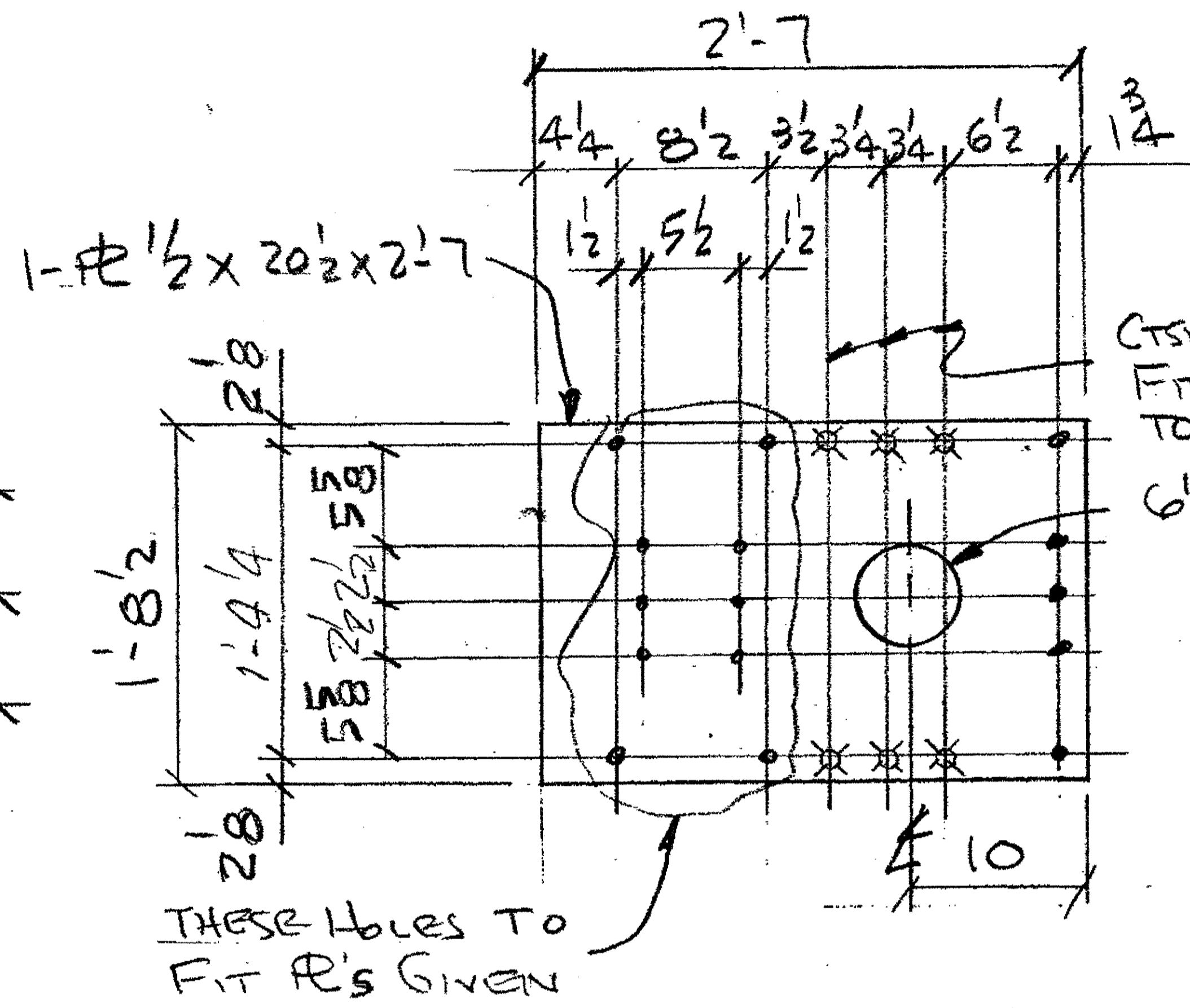
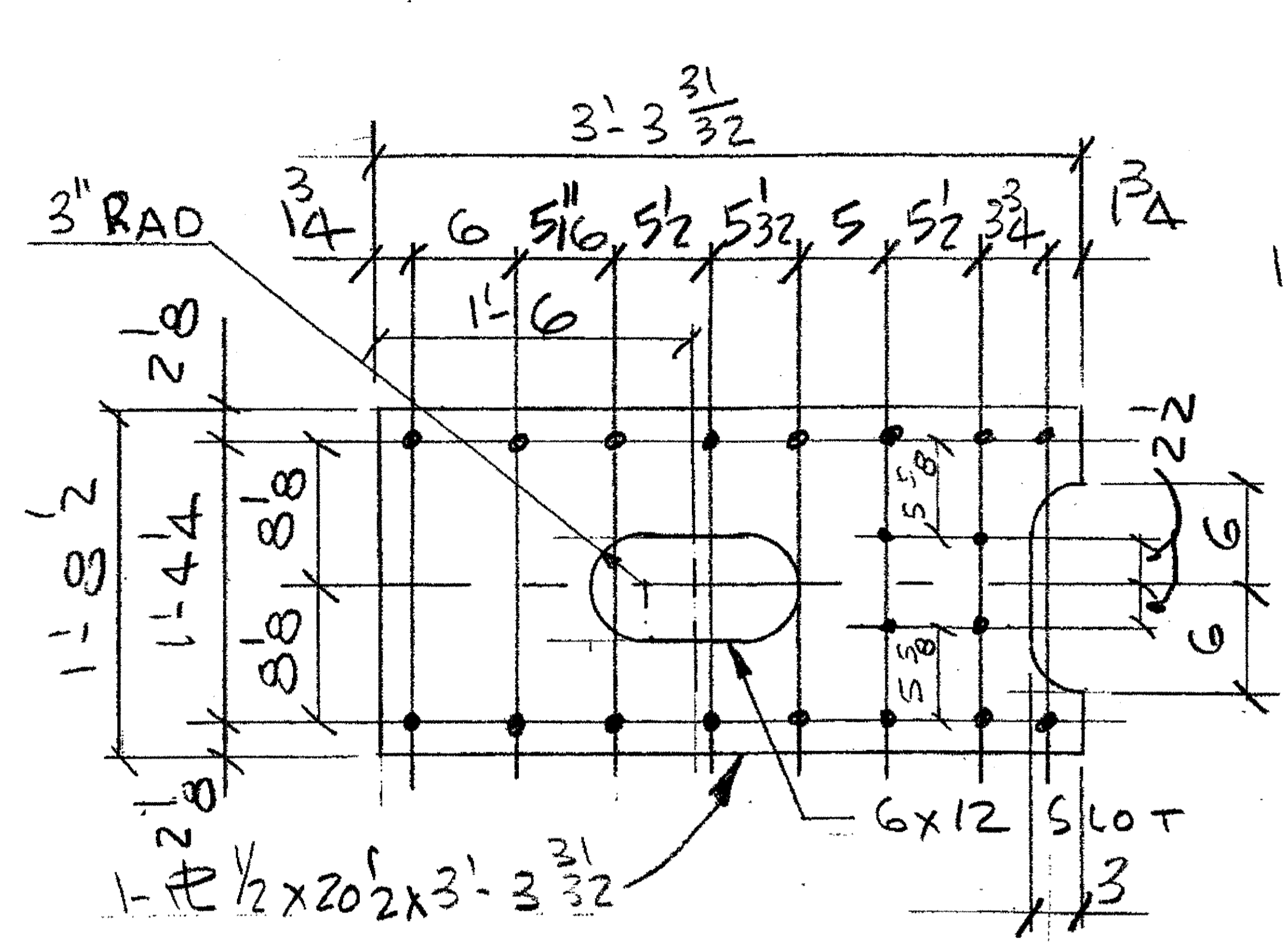
NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13  
 UPPER EXPANSION  
 DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_

JOB NO. 2000212  
 DRAWING NO. 365B





**2 - BOTTOM STAY PLATE - P212c**  
 ORIG. SHOP MK - P212c (Loco: EXTERIOR TRUSSES)  
 Cost Code 239, Loco EXP. JT 3 SPAN 6/7

**16 - BEARING STAY PLATE - P145ab**  
 ORIG. SHOP MK - P145ab (Loco INT. & EXT. TRUSSES)  
 Cost Code 239, Loco EXP. JT'S {3 & 4} SPANS 6/7 & 8/9 & 10/11 & 12/13  
 {5 & 6}

- NOTES:**
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HXV HEX HD V/HYV HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
- 4 R A36

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

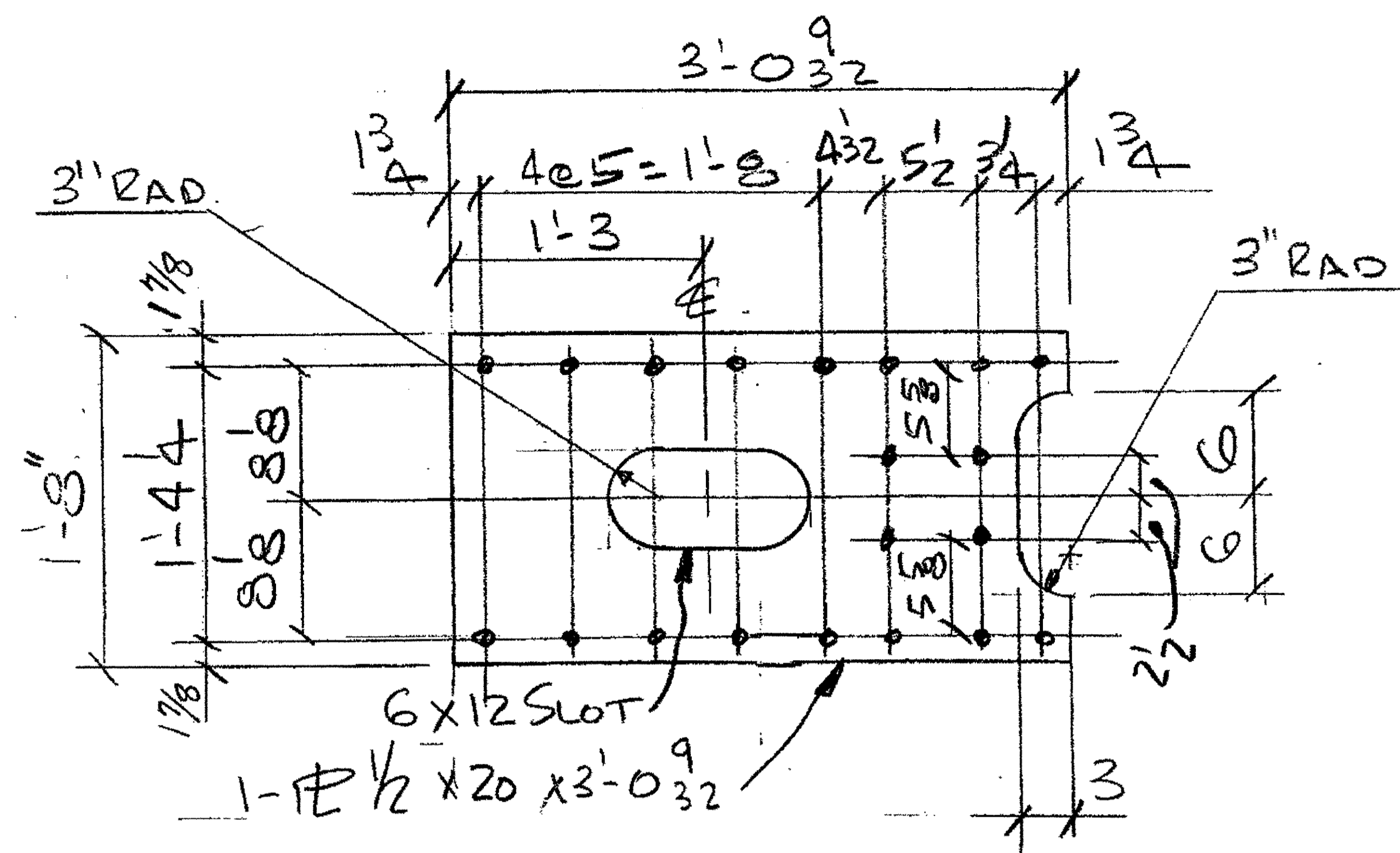


NO.	REVISION	DATE	BY

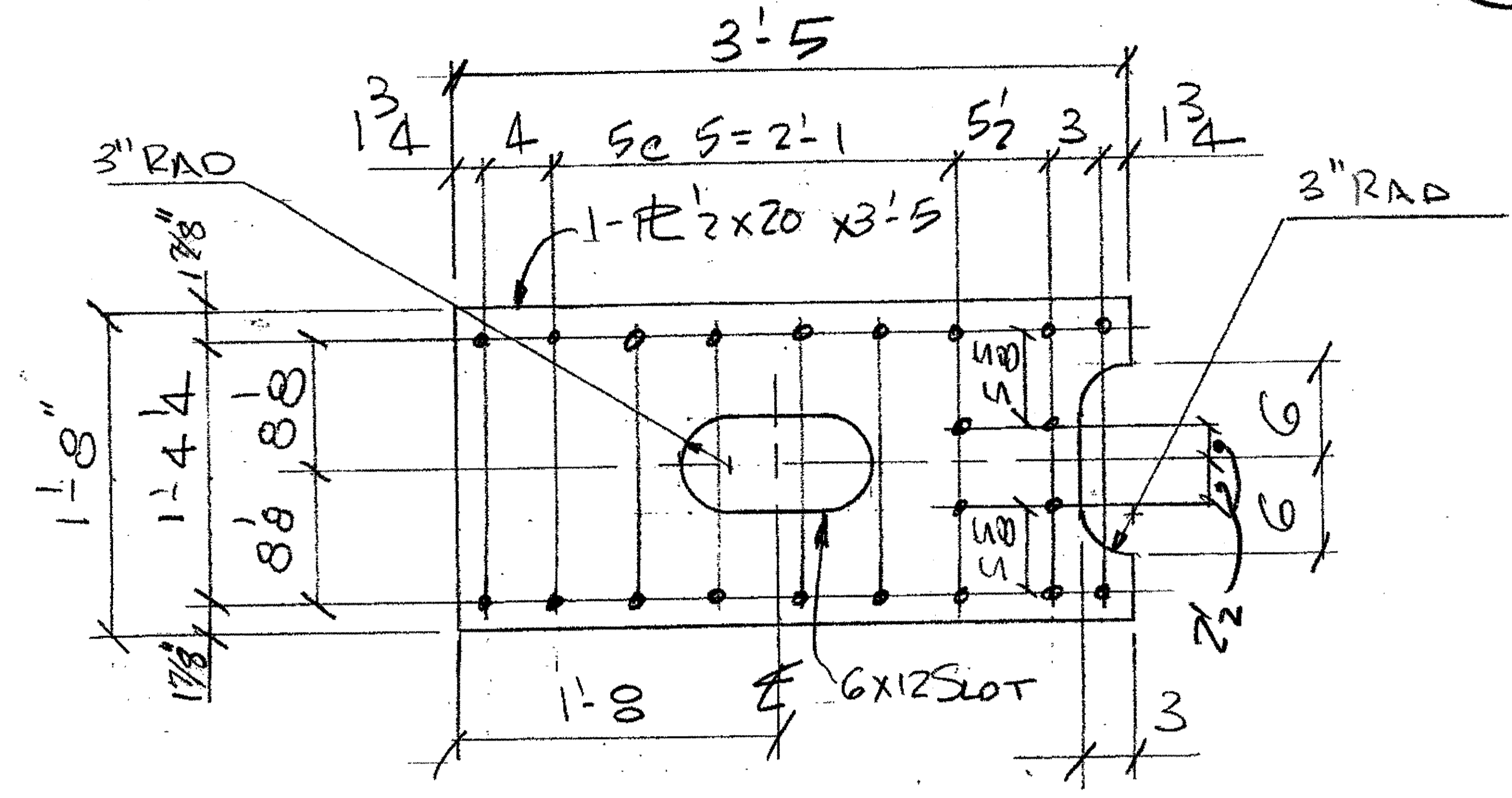
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**  
**UPPER EXPANSION** JOB NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. 365C  
 SCALE: N/A DATE: \_\_\_\_\_



2-BOTTOM STAY TRUSS - P3079  
 ORIG. SHOP MK - P307g (Loco. INTERIOR TRUSSES)  
 COST CODE 239, Loco. EXP JT. 4, SPAN 8/9



2-BOTTOM STAY TRUSS - P338h  
 ORIG. SHOP MK - P338h (Loco. EXTERIOR TRUSSES)  
 COST CODE 239, Loco EXP JT. 4, SPAN 8/9

- NOTES:
1. OPEN HOLES ARE  $(1/16" \phi)$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD V/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SF10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
- 4 RA36

O.D.O.T. DIST. 12

ACCEPTED	2/7/04	BJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

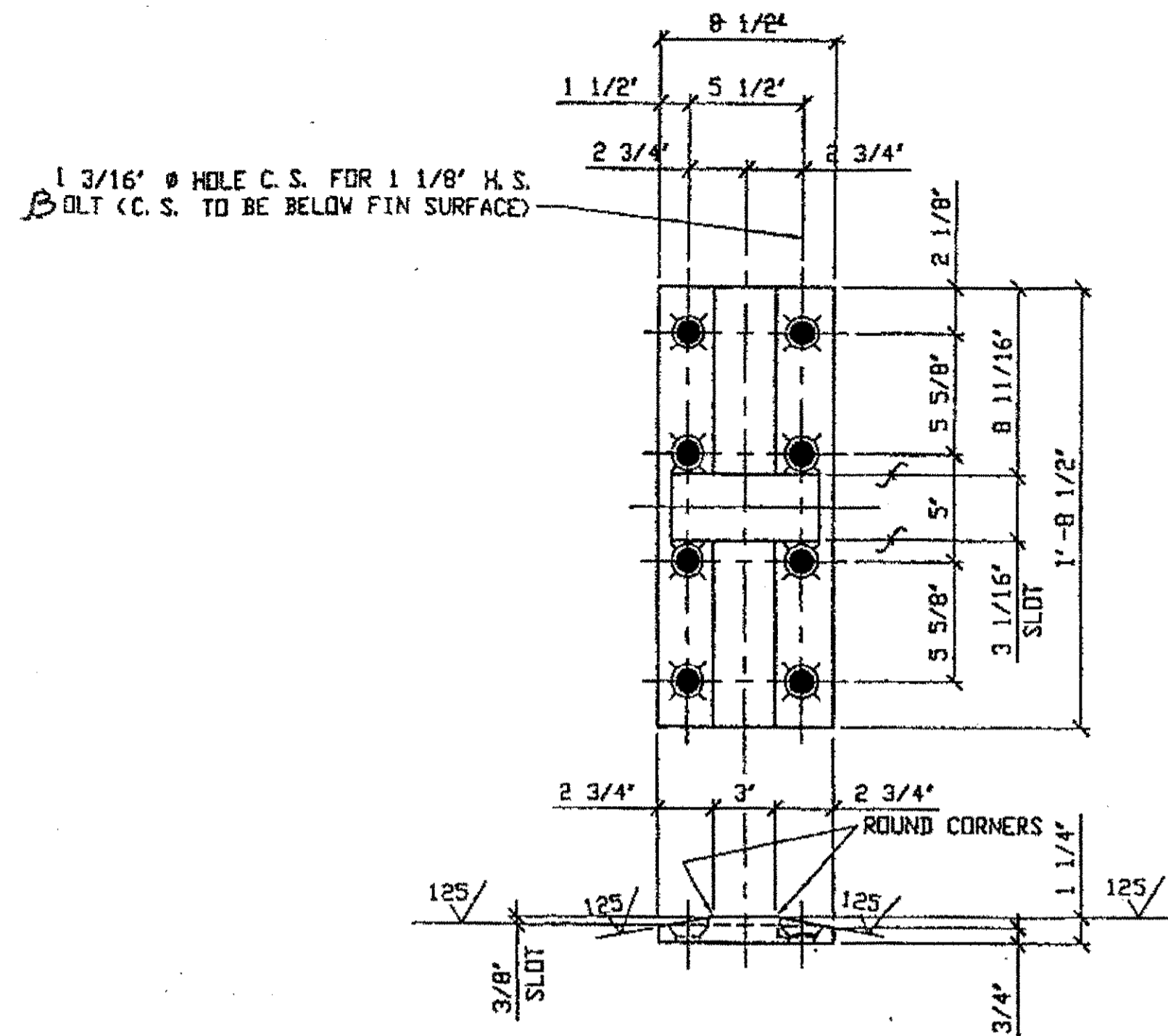
**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**  
**SPAN 9 (UPPER EXPANSION)** JOB NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. **365D**  
 SCALE: N/A DATE: \_\_\_\_\_

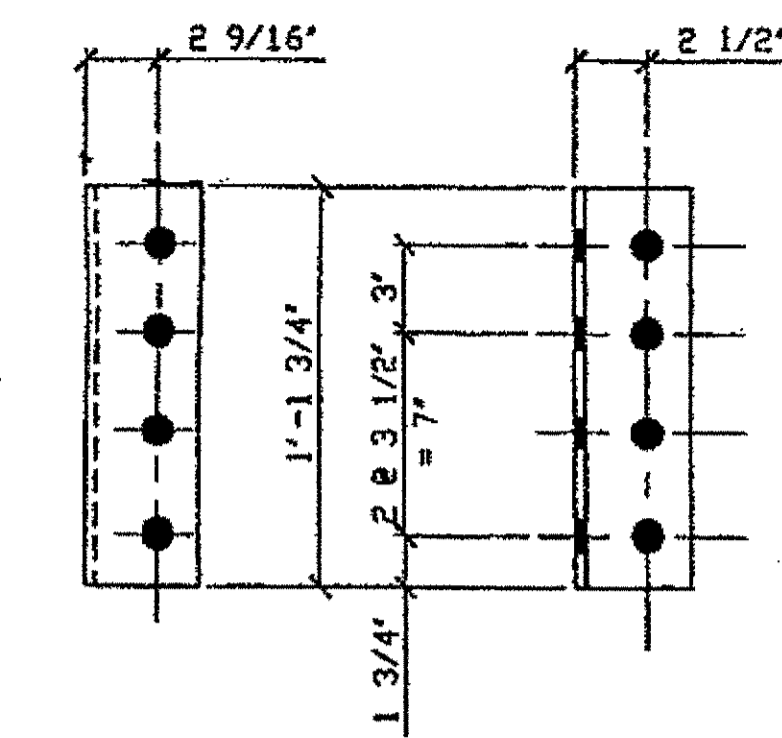
BILL OF MATERIALS

Piece No.	Qty.	Description
A78c R/L	48R/48L	L 4x4x3/8 x 1'-13/4"
A78d R/L	24R/24L	L 7x3 3/4 x 1/2 x 2'-0 1/2"
P41S	24	PL 1/4 FX 8 1/2 x 1'-8 1/2" MACH. FINISH
A78d	48	L 4x4x3/8 x 1'-0 1/2"
BP-78G	48	BRONZE PL 3/8 x 8 3/4 x 1'-0"
A-82F		L 4x4x1/2 x 1'-8 1/2"
		PLATE A36 SHAPES A36



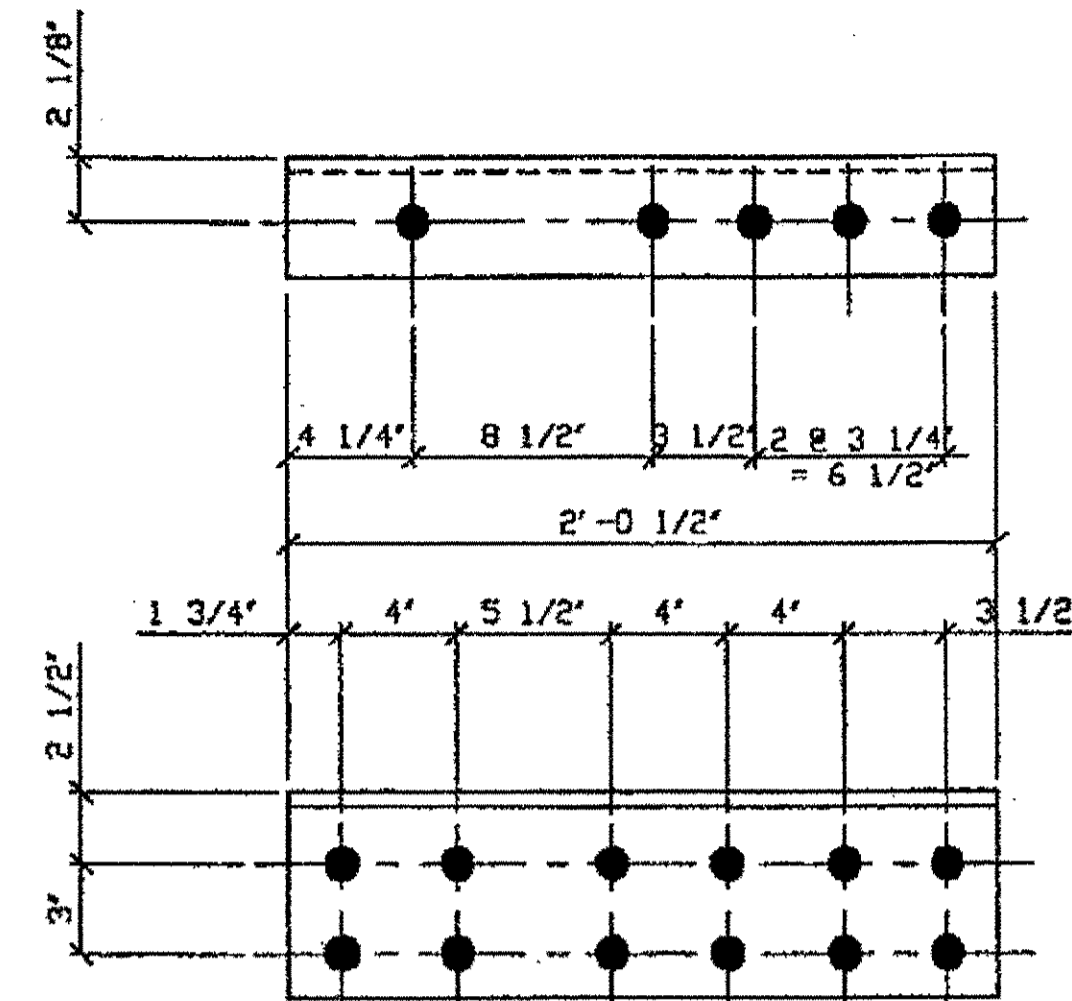
24 - FINISHED BEARING PLATE - P41S

ORIG SHOP DWG. 338 U15U17-0-9/R  
ORIG SHOP MARK P41S  
DOT ITEM No. 0152  
REPAIR SHEET 9-184, 9-187, 9-243, & 9-246



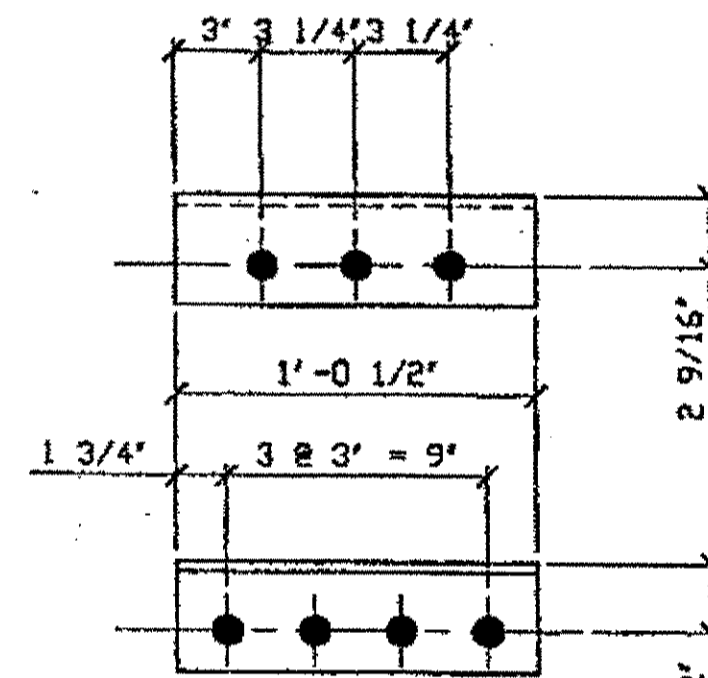
96 - ANGLE - A78c R/L

ORIG SHOP DWG. 338 U17U1-0-8/R  
ORIG SHOP MARK A78c R/L  
DOT ITEM No. 0153



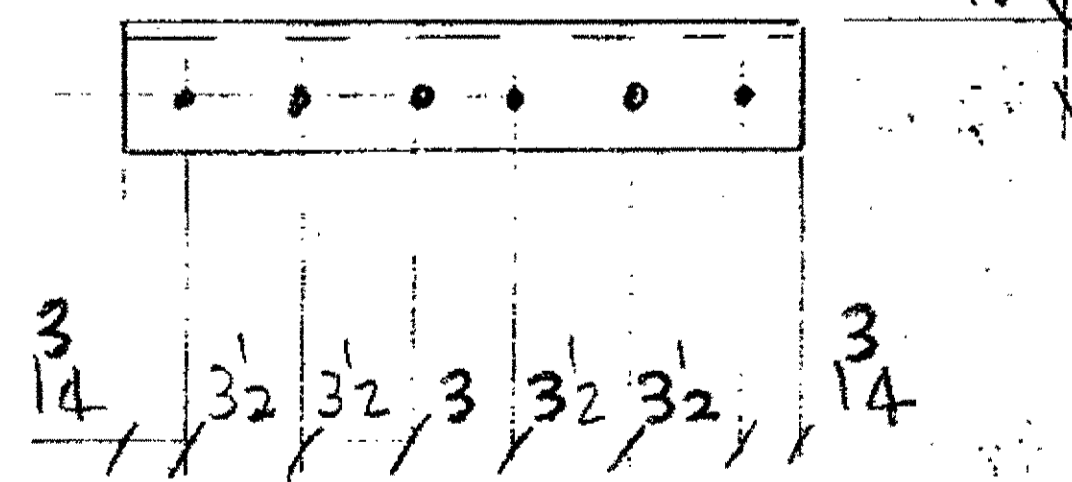
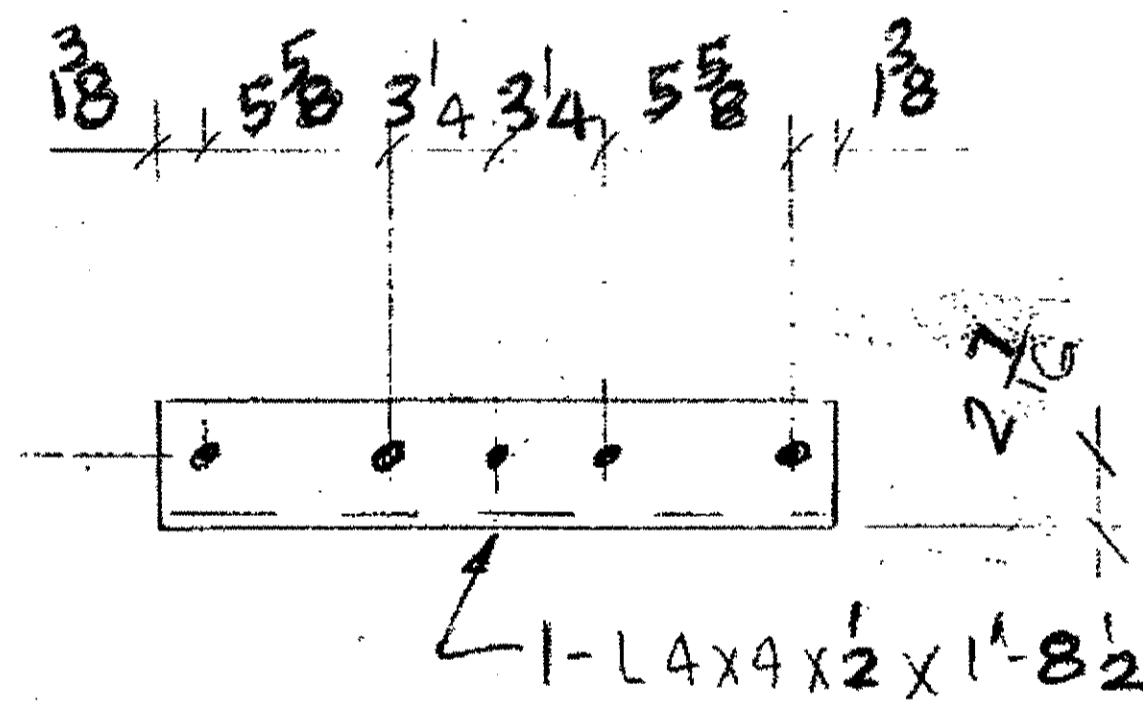
48 - ANGLE - A78e R/L

ORIG SHOP DWG. 338 U17U1-0-8/R  
ORIG SHOP MARK A78e R/L  
DOT ITEM No. 0153

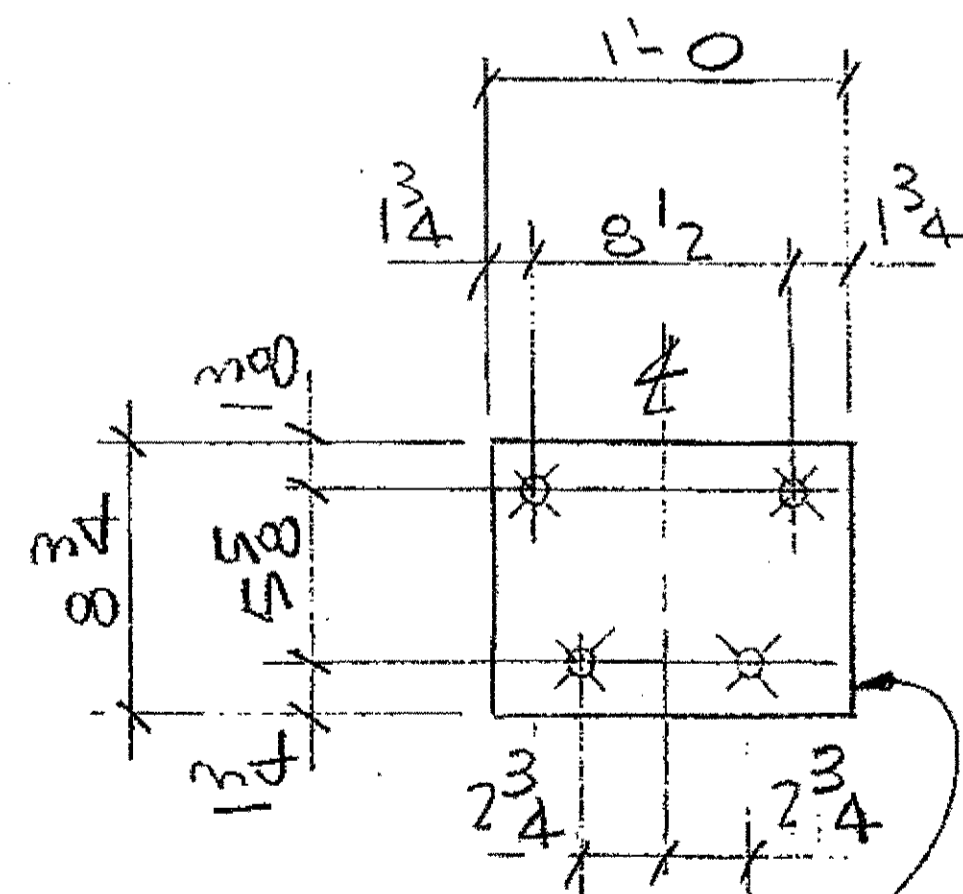


48 - ANGLE - A78d

ORIG SHOP DWG. 338 U17U1-0-8/R  
ORIG SHOP MARK A78-d  
DOT ITEM No. 0153



ANGLE - A82F  
ORIGINAL SHOP MARK A82F



COUNTERSUNK HOLES  
FOR 1" BOLTS 78°  
PER ANSI B8.5-1978

1 - BRONZE PL 3/8 x 8 3/4 x 1'-0"

48 - BRONZE PLATES - BP-78G  
ORIGINAL SHOP MARK BP-78G

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215

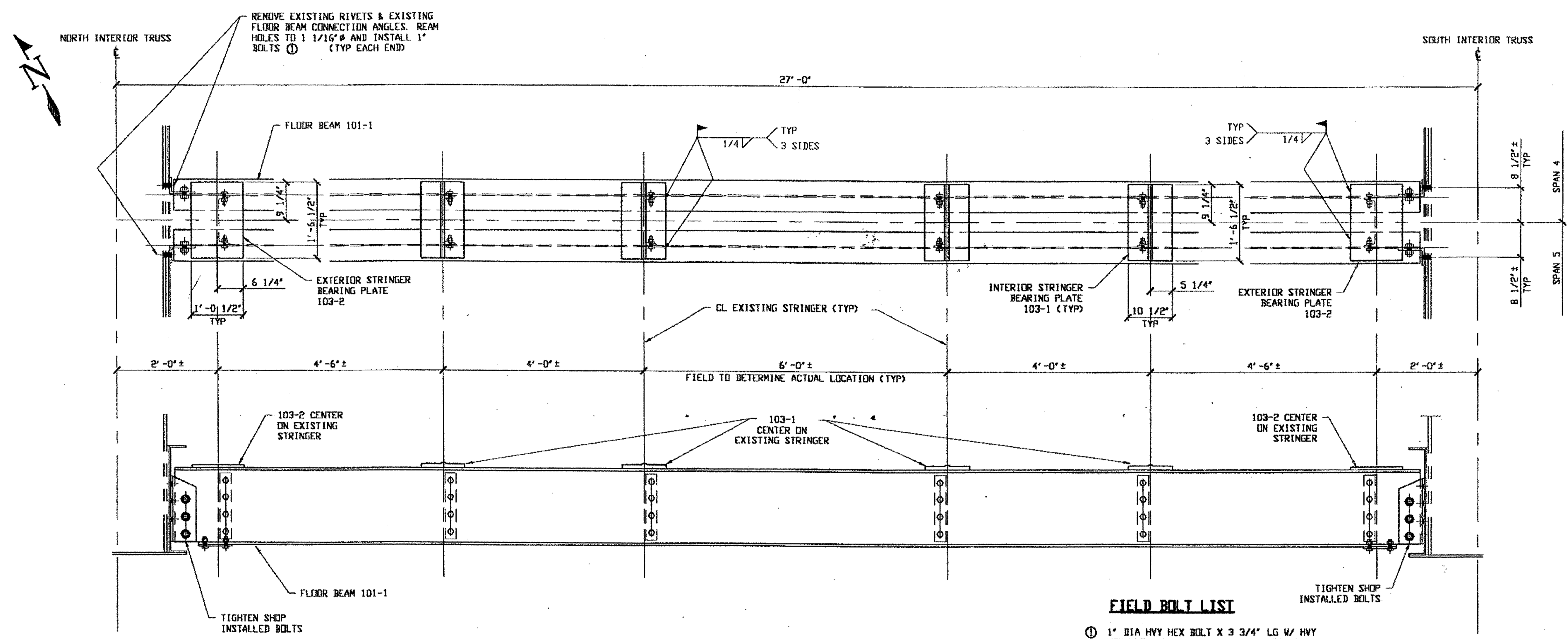
UPPER EXPANSION

DRAWING NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
SCALE: N/A

DRAWING NO. 365E

Last modified by fofoster at 11:21am on Tue Aug 29, 2000 - Last plotted by fofoster at 1:22am on Tue Aug 29, 2000



**DOUBLE FLOOR BEAM REPLACEMENT  
SPAN 4**

**FIELD BOLT LIST**

- ① 1" DIA HVY HEX BOLT X 3 3/4" LG W/ HVY HEX NUT & ONE WASHER EACH (12 REQ'D.)
- BOLTS = A325-1 (GALV) NUTS = A194-2H (GALV)
- WASHERS = F436 (GALV)

- NOTES:
1. WORK THIS DRAWING WITH adache-cluni-lynn associates DESIGN DRAWING 80/154 & 81/154
  2. TIGHTEN BOLTS BY TURN-OF-NUT METHOD.

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



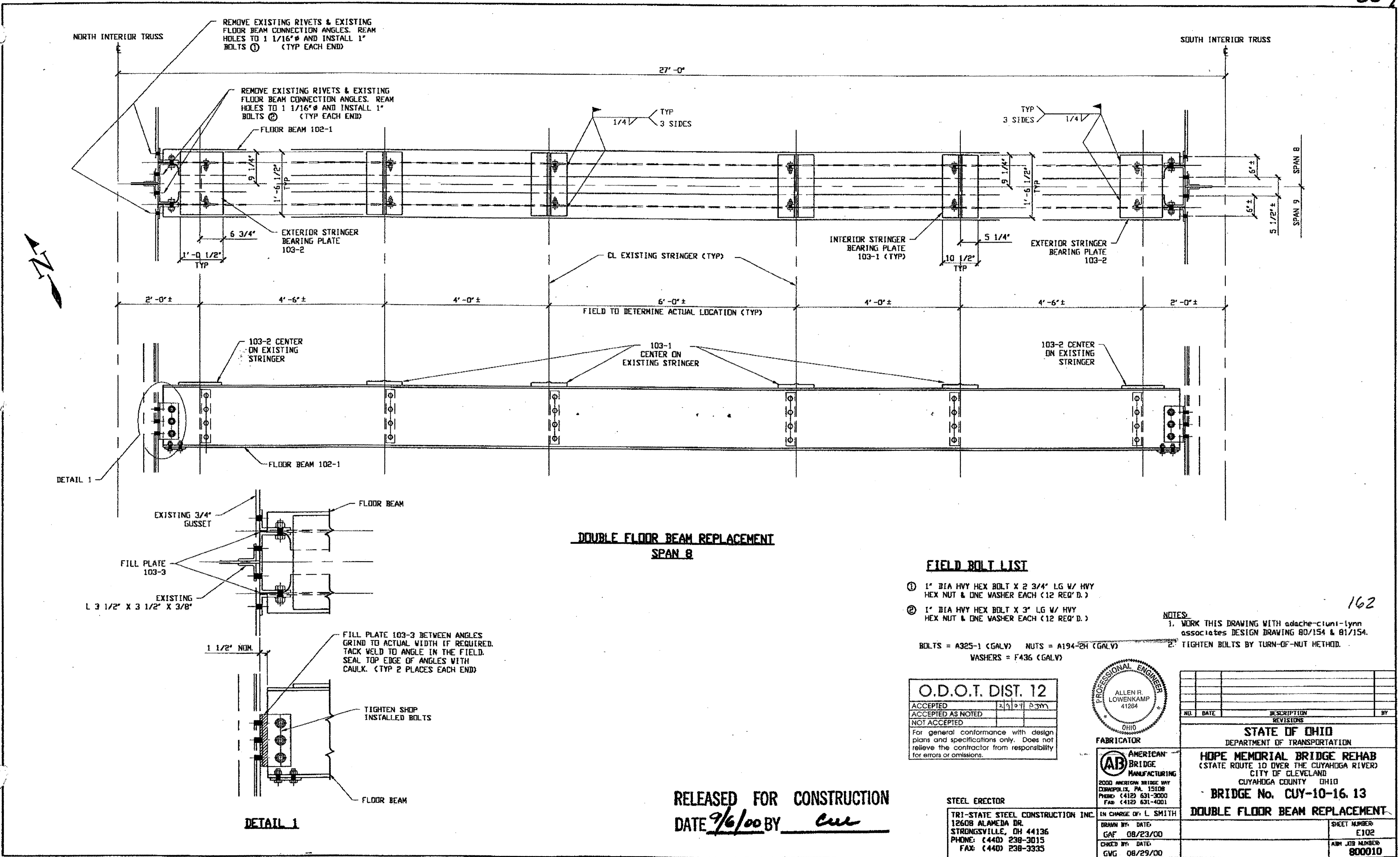
RELEASED FOR CONSTRUCTION  
 DATE 9/6/00 BY cm

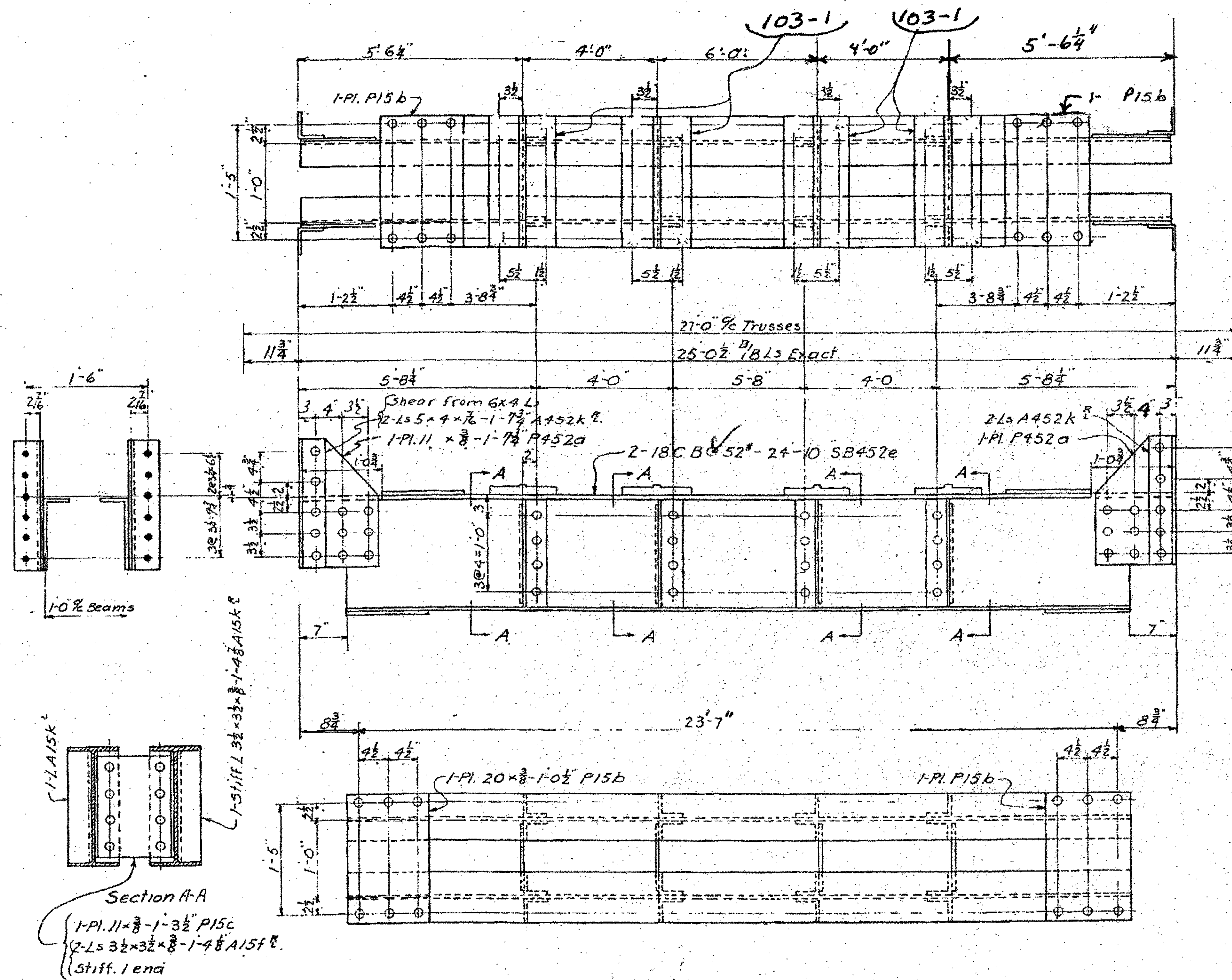
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

NO.	DATE	DESCRIPTION REVISIONS	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>DOUBLE FLOOR BEAM REPLACEMENT</b>			
			SHEET NUMBER EJ01
			JOB NUMBER 806010

last modified by gfofster at 11:01am on Tue Aug 29, 2000 - last plotted by gfofster at 1:01am on Tue Aug 29, 2000





1-DOUBLE FLOOR BEAM 12A  
 ORIGINAL SHOP MARK FB 81 SHOP DRAWING 452

SPAN 12-13  
 L12 NORTH INTERIOR TO L12 SOUTH INTERIOR  
 UNDER MAINTENANCE DECK 12A

SEE SHEET 103 FOR BEARING PLATES DETAIL

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

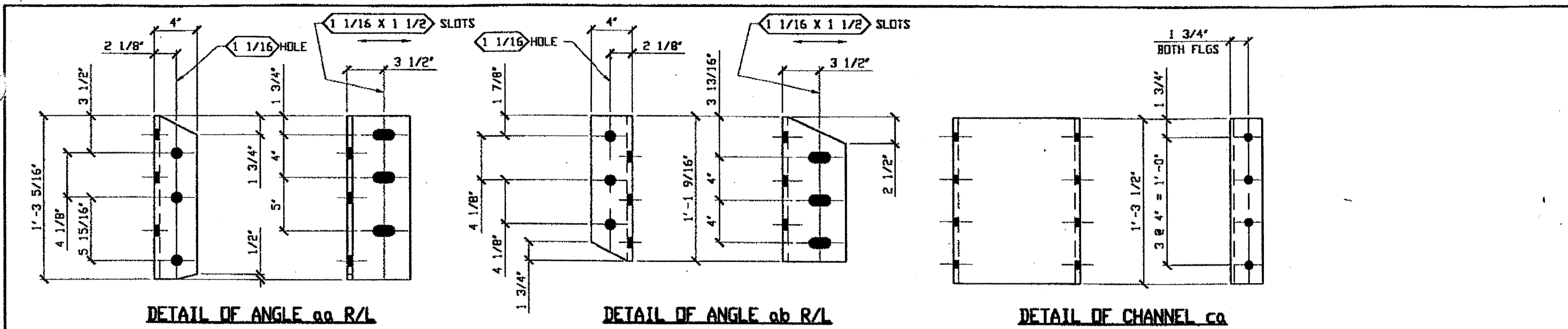


NO.	REVISION	DATE	BY

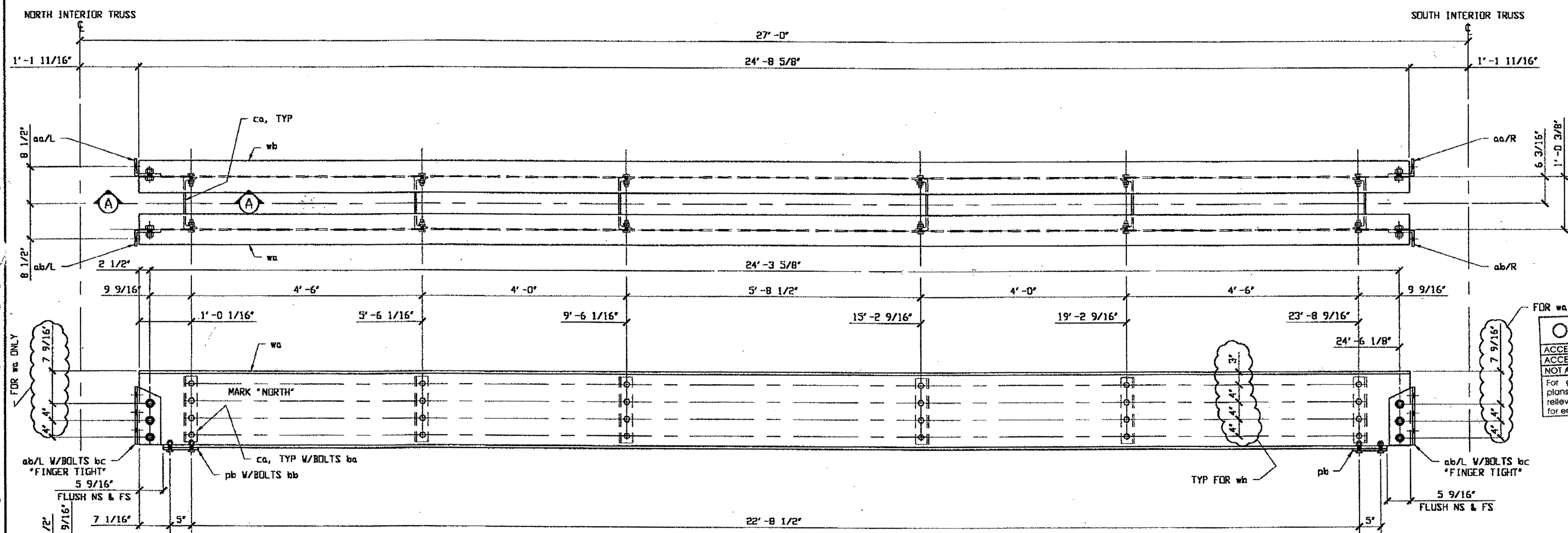
Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16.13  
 DOUBLE FLOOR BEAM  
 JOB NO. 2000212

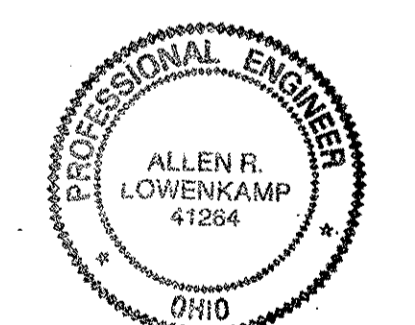
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_ DRAWING NO. 12



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		101-1	1	DOUBLE FLOOR BEAM				2855
2		wa	1	W18x50	24	8 5/8	W/CVN	1236
3		wb	1	W18x50	24	8 5/8	W/CVN	1236
4		ca	6	C12x25	1	3 1/2		194
5		aa R/L	2	L6x4x1/2	1	3 5/16		41
6		ab R/L	2	L6x4x1/2	1	1 9/16		37
7		pb	2	PL 1/2 X 8	1	7		43
8		ba	48	HVY HEX BOLT 3/4" DIA	0	2 1/2	NOTE A	41
9		bb	16	HVY HEX BOLT 3/4" DIA	0	2 1/4	NOTE B	11
10		bc	12	HVY HEX BOLT 1" DIA	0	2 1/4	NOTE B	16
11								
12								
PLATE		A572-50	PIPE		FITTINGS			
SHAPES		A572-50	FLGS.		BOLTS A325-1 GALV			



FOR wa ONLY  
**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**ONE - DOUBLE FLOOR BEAM - 101-1**  
 SPAN 4 (REFERENCE SHEET 80/154)  
 SPAN 5 - SPAN 4 L14 NI TO L14 SI 101-1

NOTE A = PERMANENT BOLTS TO HAVE HVY HEX NUTS W/C(1) HARDENED WASHER & C(1) BEVEL WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS, WASHERS & BEVEL WASHERS ARE GALVANIZED.  
 NOTE B = PERMANENT BOLTS TO HAVE HVY HEX NUTS W/C(1) HARDENED WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS & WASHERS ARE GALVANIZED.

RELEASED FOR CONSTRUCTION  
 DATE 9/6/00 BY *am*

NOTES:  
 1. > HOLES ARE  $\langle 3/16 \rangle$  UNLESS (NOTED OTHERWISE.)  
 2. > ALL PERMANENT BOLTS TO BE TIGHTENED BY TURN-OF-NUT METHOD, UND.  
 3. > ANGLE FASTENERS ARE TO HAVE THE WASHERS ON THE "SLOTTED" SIDE.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

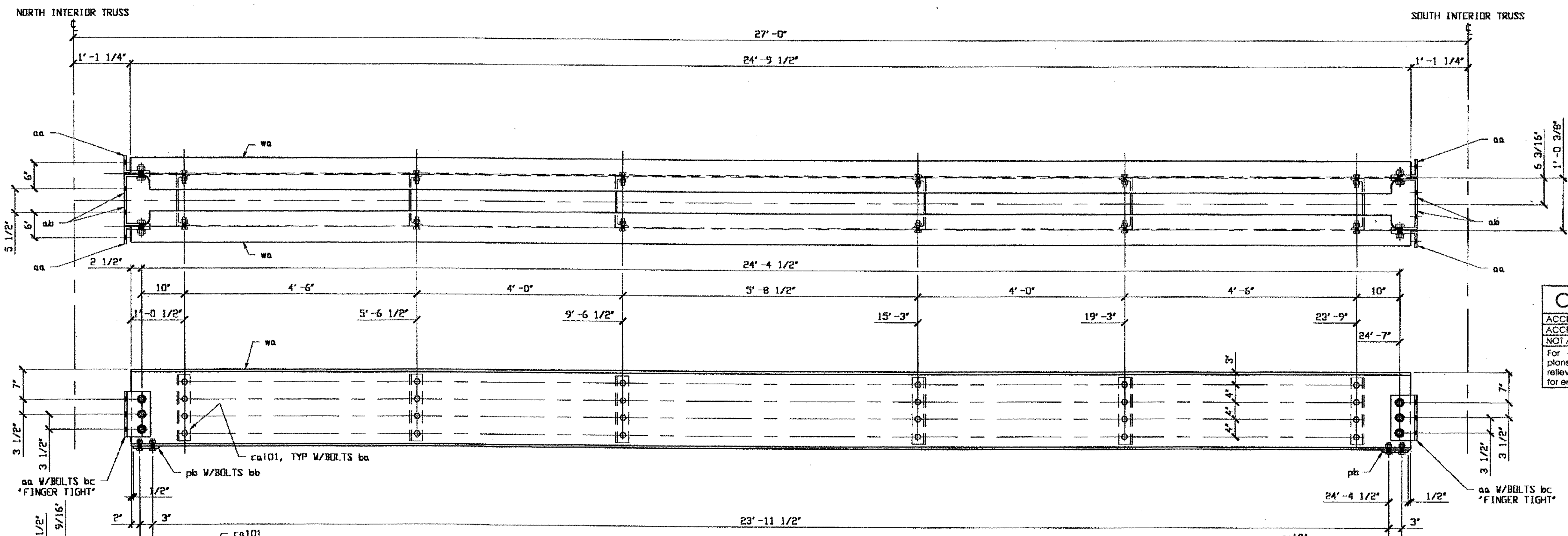
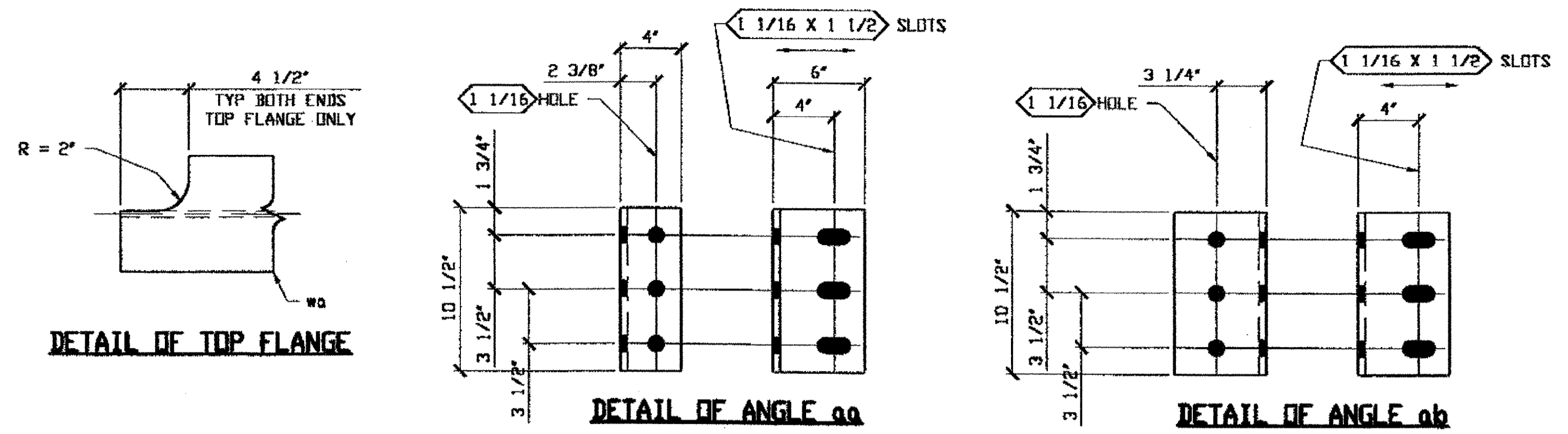
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-2000  
 FAX (412) 631-4001

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DOUBLE FLOOR BEAM			
SHEET NUMBER: 101			AIR JOB NUMBER: 800010

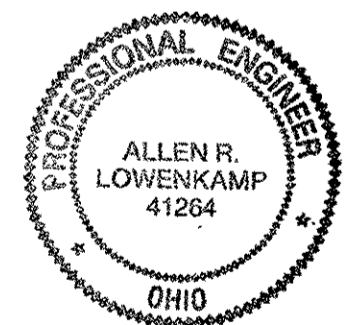
last modified by Ggivens at 12:14pm on Mon Aug 28, 2000 - last plotted by Ggivens at 03:03pm on Mon Aug 28, 2000

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		102-1	1	DOUBLE FLOOR BEAM				2902
2		wa	2	W18x50	24	9 1/2	N/CVN	2480
3		ca101	6	C12x25	1	3 1/2		194
4		aa	4	L 6 X 4 X 1/2	0	10 1/2		57
5		ab	4	L 6 X 6 X 1/2	0	10 1/2		69
6		pb	2	PL 1/2 X 6	1	7		32
7		ba	48	HVY HEX BOLT 3/4" DIA	0	2 1/2	NOTE A	41
8		bb	16	HVY HEX BOLT 3/4" DIA	0	2 1/4	NOTE B	11
9		bc	12	HVY HEX BOLT 1" DIA	0	2 3/4	NOTE B	18
10								
11								
12								
PLATE		A572-50	PIPE		FITTINGS			
SHAPES		A572-50	FLGS.		BOLTS A325-1 GALV			



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**ONE - DOUBLE FLOOR BEAM - 102-1**  
 SPAN 9 - SPAN 8  
 L17 NI TO L17 SI 102-1  
 SPAN B  
 (REFERENCE SHEET B1/154)

- NOTES:**
- Holes are  $\text{Ø} 3/16$  UNLESS NOTED OTHERWISE.
  - ALL PERMANENT BOLTS TO BE TIGHTENED BY TURN-OF-NUT METHOD, UNID.
  - ANGLE FASTENERS ARE TO HAVE THE WASHERS ON THE "SLOTTED" SIDE.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

- NOTE A** = PERMANENT BOLTS TO HAVE HVY HEX NUTS W/(1) HARDENED WASHER & (1) BEVEL WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS, WASHERS & BEVEL WASHERS ARE GALVANIZED.
- NOTE B** = PERMANENT BOLTS TO HAVE HVY HEX NUTS W/(1) HARDENED WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS & WASHERS ARE GALVANIZED.

**RELEASED FOR CONSTRUCTION**  
 DATE 10/5/00 BY eme

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE HWY  
 COMMERCE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 124  
 DOT BID ITEM NO. 963E50000

NO.	DATE	DESCRIPTION	BY
B	9/22/00	REV ANGLE THK aa, ab	GAF
A	5/16/00	ADDED PAINT NOTE AND ITEM NOS	GAF

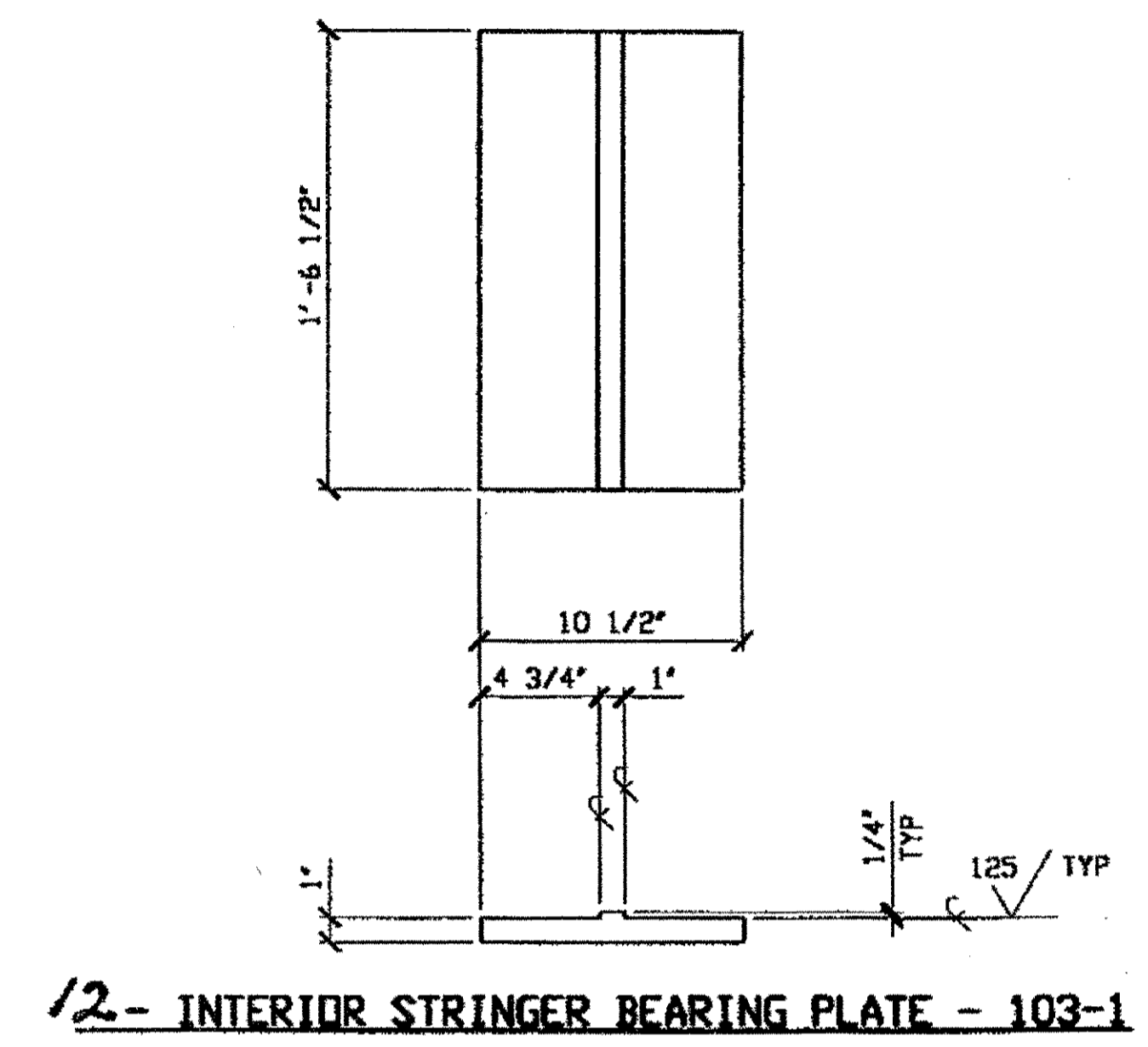
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUVAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DOUBLE FLOOR BEAM**

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GVG 08/20/00  
 CHECKED BY: DATE: GAF 08/23/00  
 SHEET NUMBER: 102  
 A.M. JOB NUMBER: 800010

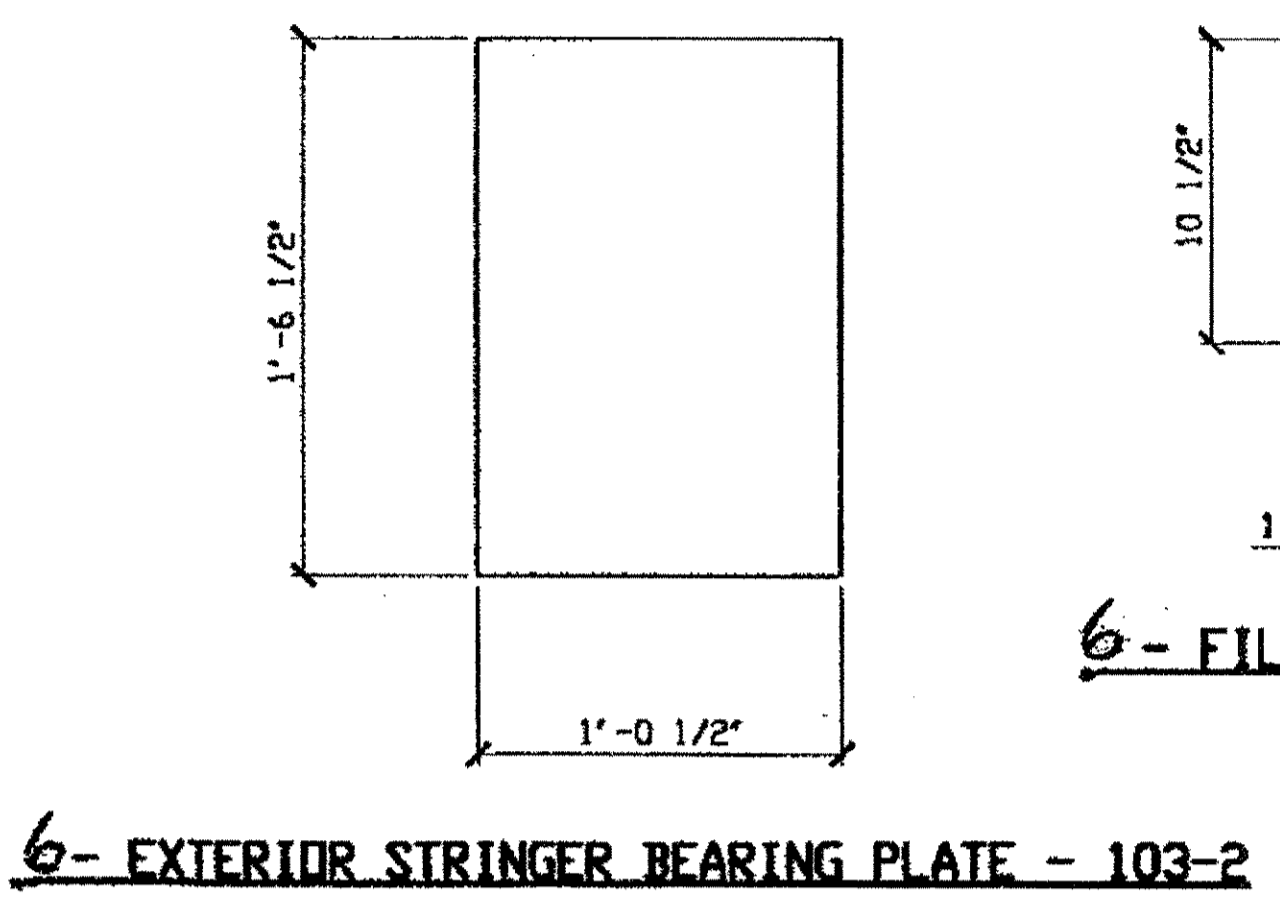
Last modified: gfooster at 09:10am on Fri Sep 29, 2000 -1- Last plotted by gfooster 10:08am on Fri Sep 29, 2000



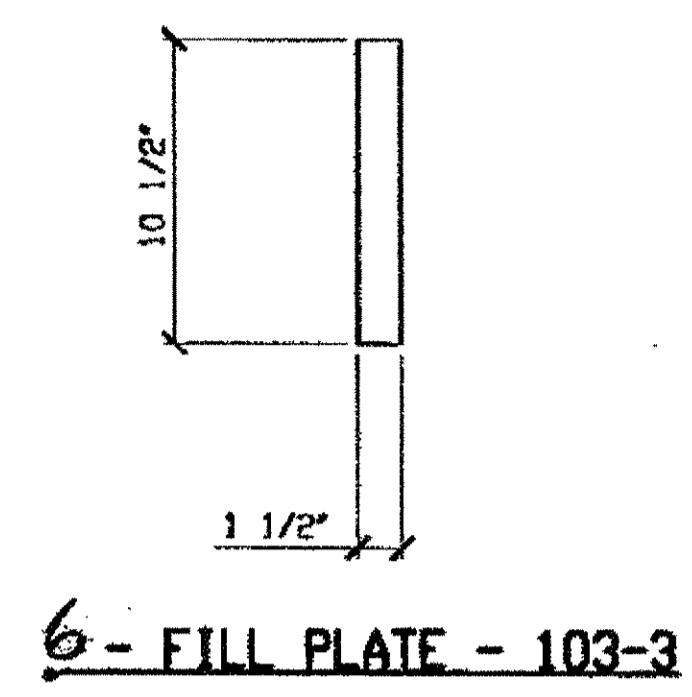
Last modified by Ggivens at 03:10pm on Mon Aug 28, 2000 - last plotted by Ggivens at 03:10pm on Mon Aug 28, 2000



**12 - INTERIOR STRINGER BEARING PLATE - 103-1**



**6 - EXTERIOR STRINGER BEARING PLATE - 103-2**



**6 - FILL PLATE - 103-3**

BILL OF MATERIAL								
LINE	ADVANCE WTL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		103-1	12	INTERIOR STRINGER BEARING PLATE				
2			12	PL 1 1/4 X 10 1/2	1	6 1/2		
3								
4		103-2	6	EXTERIOR STRINGER BEARING PLATE				
5			6	PL 3/4 X 12 1/2	1	6 1/2		
6								
7		103-3	6	FILL PLATE				
8			6	PL 3/8 X 1 1/2	0	10 1/2		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE		A572-50		PIPE			FITTINGS	
SHAPES				FLGS.			BOLTS	

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	DATE	DESCRIPTION REVISIONS	BY

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

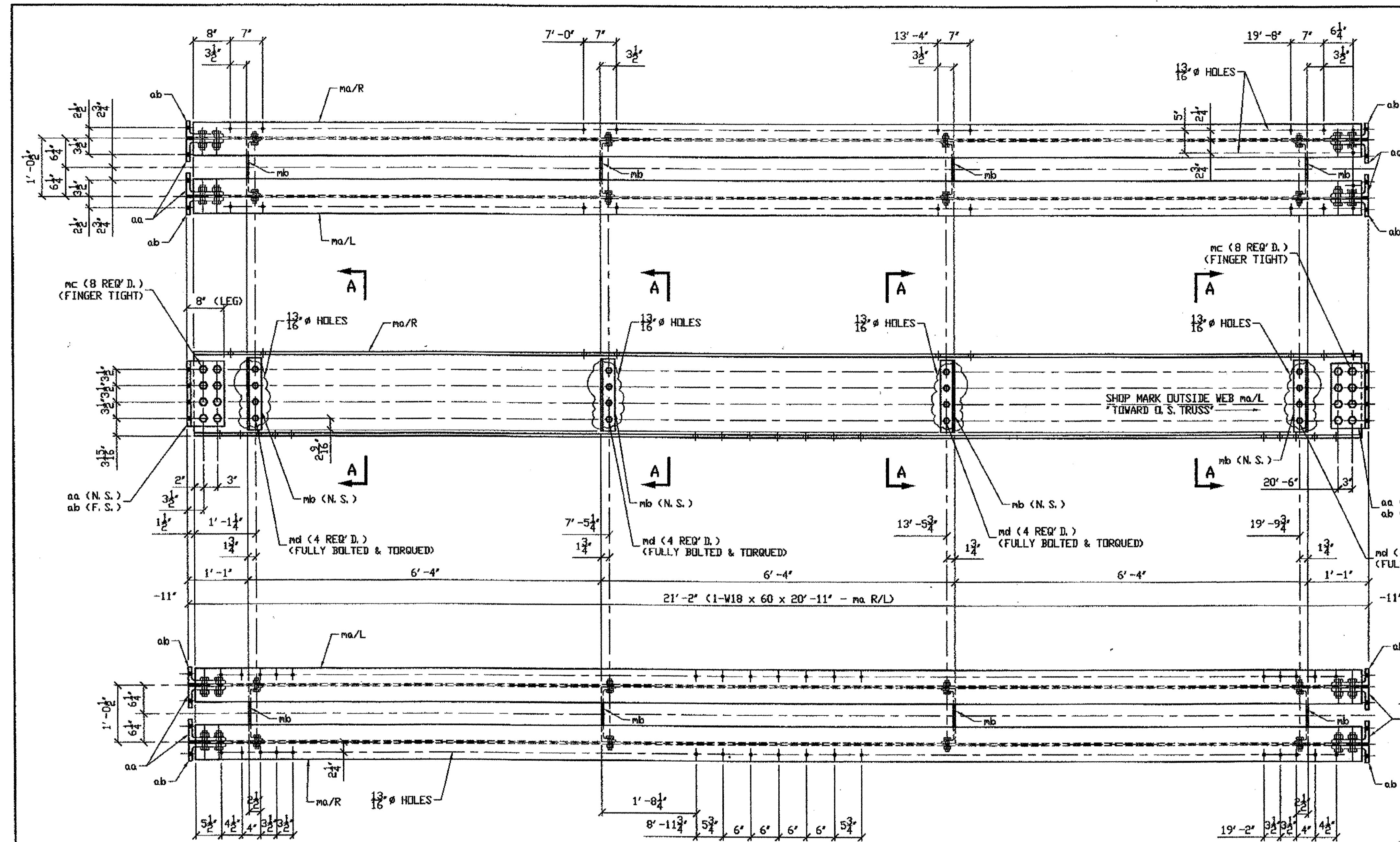
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16. 13**  
**DOUBLE FLOOR BEAM**

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GVG 08/26/00  
 CHECKED BY: DATE: GAF 08/28/00

SHEET NUMBER: 103  
 JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 9/6/00 BY *ccw*



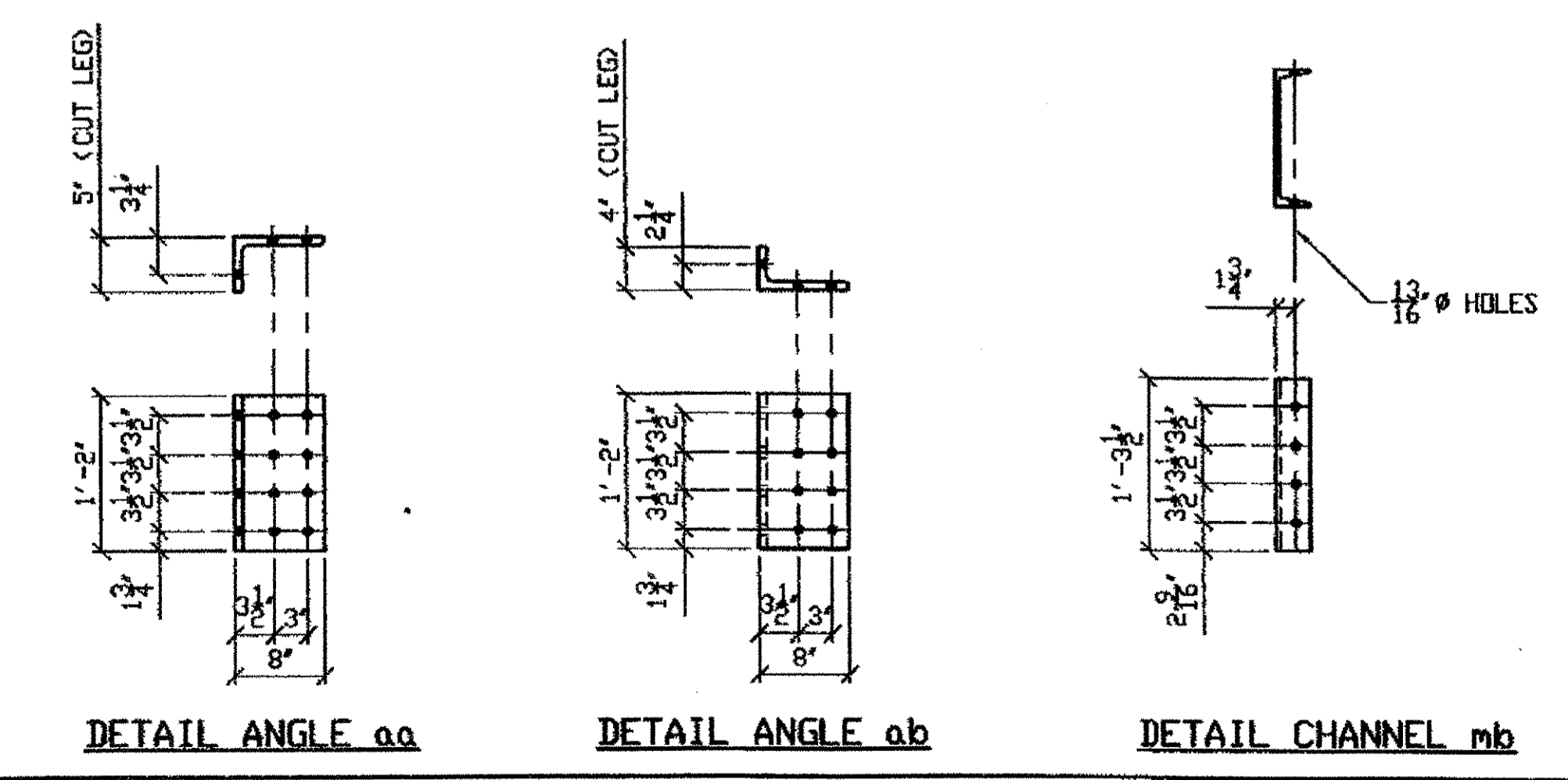
BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1		532B1	ONE	DOUBLE FLOOR BEAM		2990
2		ma R/L	2	W18 x 60	20 11	W/CVN 2510
3		mb	4	C12 x 25	1 3 1/2	129
4		mc	32	1" A325 BOLT	0 3 1/2	51
5				W/1 HVY. HEX NUT & 1 HD. F.W. EA.		
6		md	32	3/4" A325 BOLT	0 2 1/2	26
7				W/1 HVY. HEX NUT, 1 BEVELED & 1 FLAT WA. EA.		
8		aa	4	L 8 x 6 x 3/4	1 2	CUT 6" LEG 143
9		ab	4	L 8 x 6 x 3/4	1 2	CUT 6" LEG 131
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

PLATE SHAPES A572-50 PIPE FLGS. FITTINGS BOLTS SEE NOTE 2

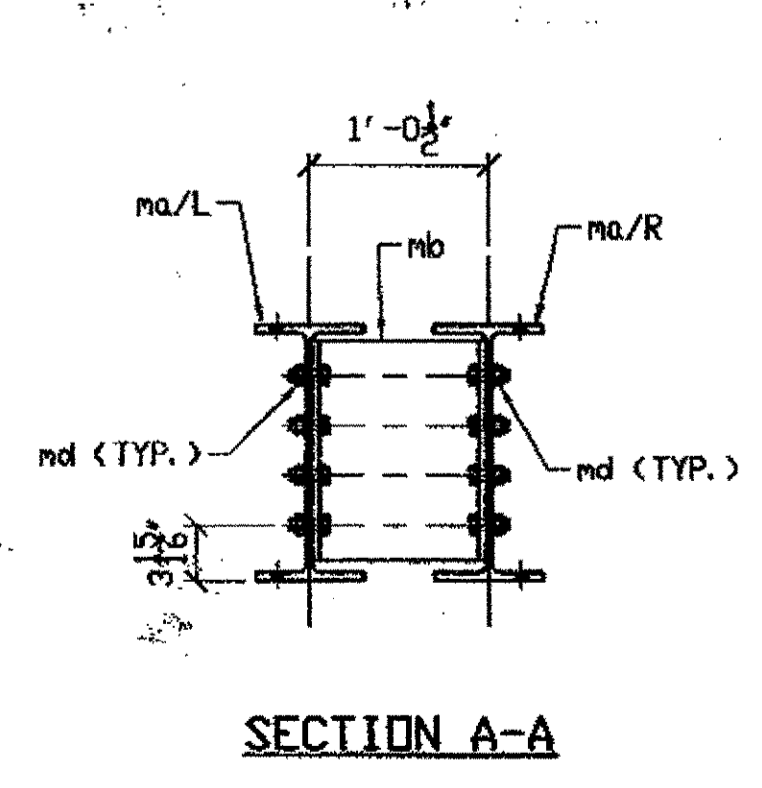
**SPAN 13 - SPAN 12, LINE 12 N**  
**N-N' NORTH LOWER DECK FLOOR BEAMS**  
**532 B1**

- NOTES:
- OPEN HOLES ARE  $(1/16" \phi)$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS. 3.0 - 5.0

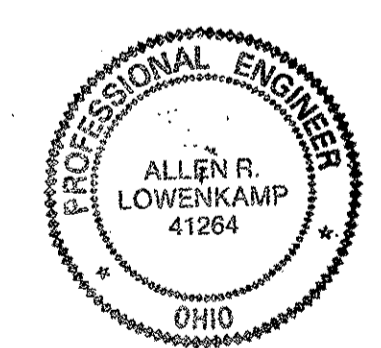
Gi:Contry 00\800010\Drawings\J552.dwg  
 Save by GFC... 11:49am Mar 05, 2006  
 Plot by gfc at 08:55am Mar 25, 2006  
 Model space plot + Scale = 1/12



**ONE - DOUBLE FLOOR BEAM - 532B1**  
 SPAN 13  
 (ORIG. SHOP MARK FB13B/R)  
 (ORIG. SHOP DWG. 12)  
 (REPAIR NO. 124)



**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

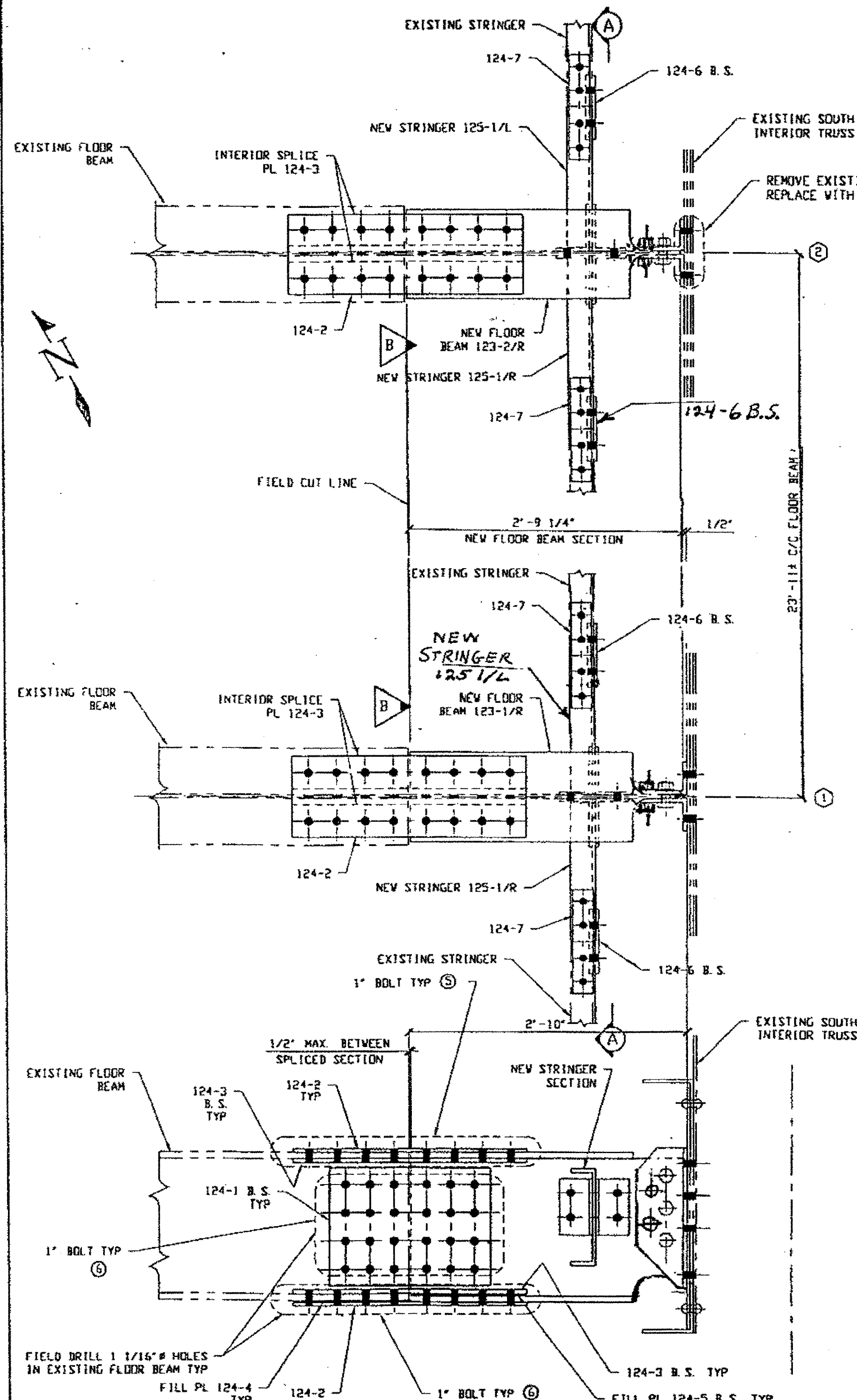
**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

DOT ITEM LINE NO. 124		DOT BID ITEM NO. 063E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPAN 13 FLOORBEAM REPLACEMENT			
IN CHARGE: L. SMITH		SHEET NUMBER: 532	
DRAWN BY: DATE: KJR 02/15/02		ABN JOB NUMBER: 800010	
CHECKED BY: DATE: GAF 2/19/02			

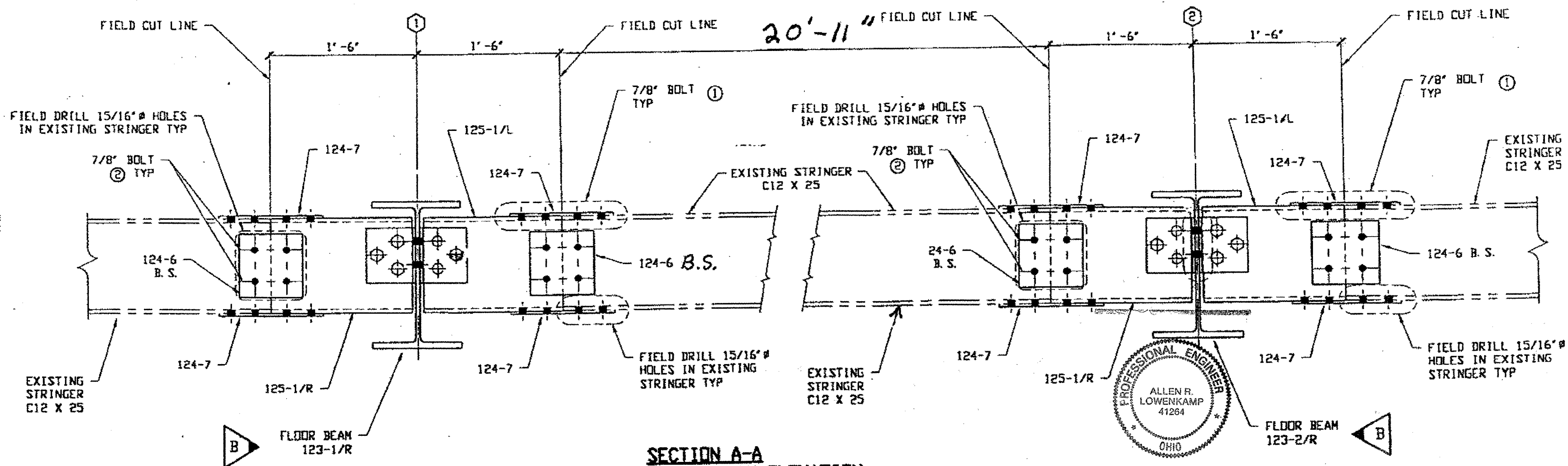
**FIELD BOLT LIST**

- ① 7/8" DIA HVY HEX BOLT X 2 1/2" LG W/ HVY HEX NUT, ONE WASHER & ONE BEVEL WASHER EACH (32 REQ'D.)
- ② 7/8" DIA HVY HEX BOLT X 2 1/2" LG W/ HVY HEX NUT & ONE WASHER EACH (16 REQ'D.)
- ③ 1" DIA HVY HEX BOLT X 2 3/4" LG W/ HVY HEX NUT & ONE WASHER EACH (32 REQ'D.)
- ④ 1" DIA HVY HEX BOLT X 2 3/4" LG W/ HVY HEX NUT & ONE WASHER EACH (16 REQ'D.)
- ⑤ 1" DIA HVY HEX BOLT X 3" LG W/ HVY HEX NUT & ONE WASHER EACH (64 REQ'D.)
- ⑥ 1" DIA HVY HEX BOLT X 3 1/4" LG W/ HVY HEX NUT & ONE WASHER EACH (160 REQ'D.)

BOLTS = A325-1 (GALV) NUTS = A194-2H (GALV)  
WASHERS = F436 (GALV)



**NEW FLOOR BEAM SECTION ELEVATION**  
SPAN 4 SOUTH END LINE ① & ② AS SHOWN  
SPAN 4 NORTH END LINE ① & ② OPP. HAND



**SECTION A-A**  
**NEW STRINGER SECTION ELEVATION**

**O.D.O.T. DIST. 12**  
ACCEPTED \_\_\_\_\_  
ACCEPTED AS NOTED \_\_\_\_\_  
NOT ACCEPTED \_\_\_\_\_  
For general conformance with design plans and specifications only. District does not relieve the contractor from responsibility for errors or omissions.

**B.S. = BOTH SIDES**

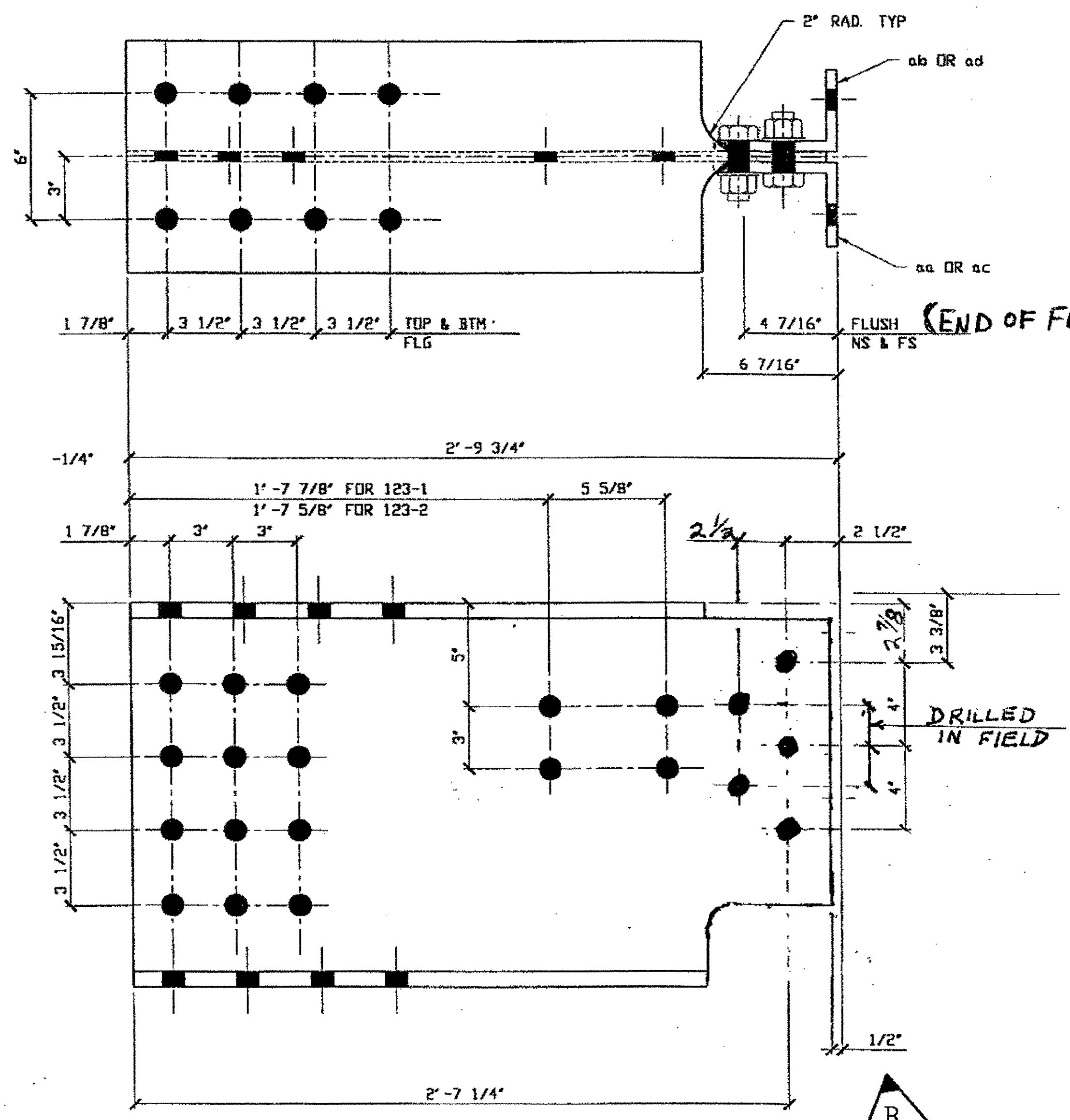
REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264  
OHIO

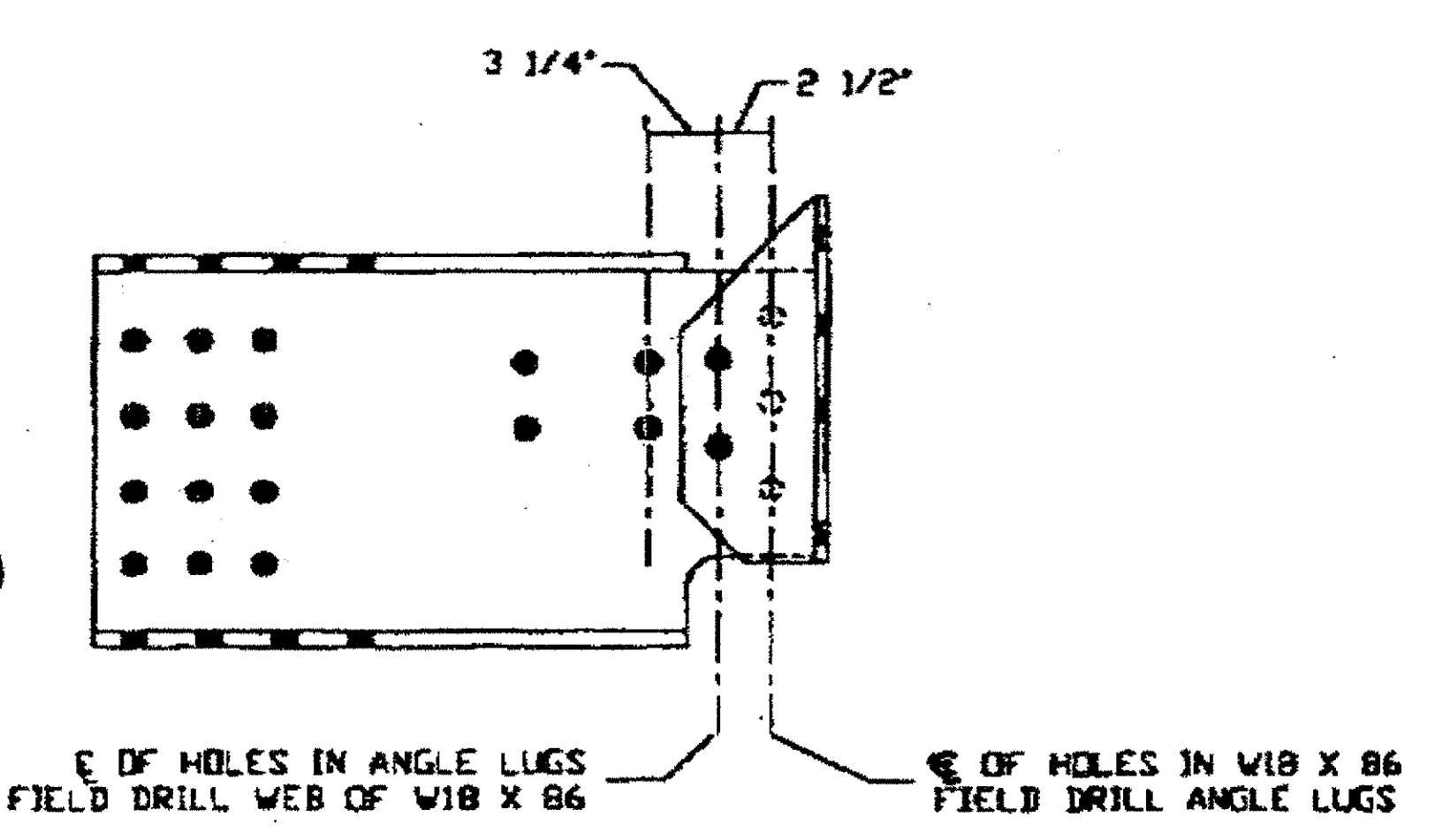
ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**  
**FLOOR BEAM END REPLACEMENT**  
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
SCALE N/A DATE \_\_\_\_\_  
JOB NO. 2000212  
DRAWING NO. **E121**

Last modified by at \$(EDTIME,??) on \$(EDTIME,??) - 1 - Last plotted by Gfooster on Fri Sep 29, 2000 11:10am



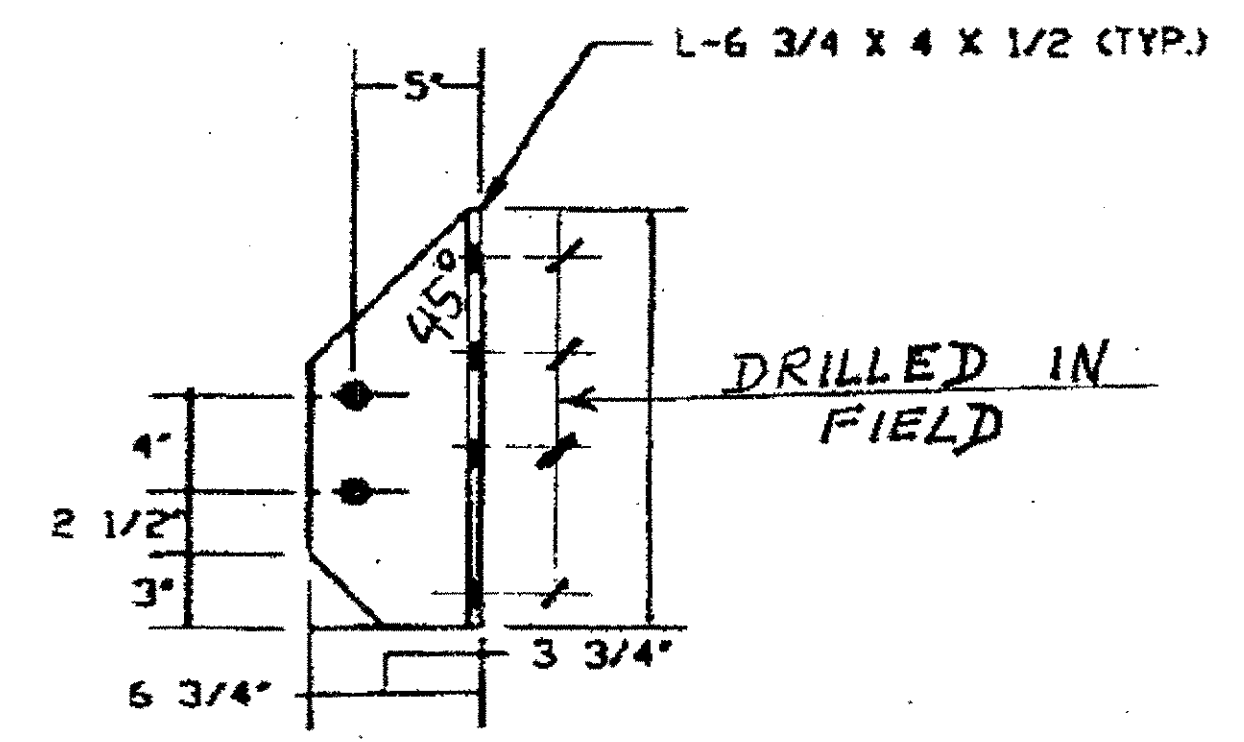
**(1) FLOOR BEAM END 123-1**  
SPAN 4 LINE ①

**(1) FLOOR BEAM END 123-2**  
SPAN 4 LINE ②



**(2) FLOOR BEAM END 123-1 R/L**

**(2) FLOOR BEAM END 123-2 R/L**



PIECE MARKS aa R/L, ab R/L,  
ac R/L, AND ad R/L

NOTE "A"  
PERMANENT BOLTS TO HAVE HVY HEX NUTS W/ (1) HARDENED WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS & WASHERS ARE GALVANIZED.

**BILL OF MATERIAL**

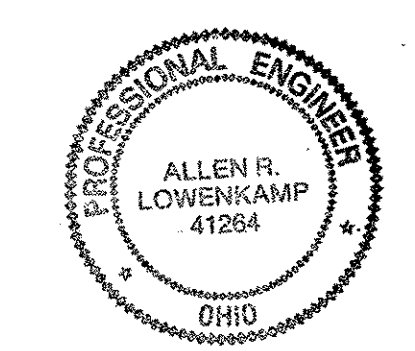
LINE NO.	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		123-1	1	FLOOR BEAM END				278
2			1	W 18 X 86	2	9 1/4	W/ CVN	236
3		aa	1	L 4 X 4 X 1/2	1	5 1/8		18
4		ab	1	L 4 X 4 X 1/2	1	5 1/8		18
5		ba	4	1" HVY HEX BOLT W/ NUT & HARDENED WASHER	0	3	NOTE "A"	6
6								
7								
8								
9		123-2	1	FLOOR BEAM END				278
10			1	W 18 X 86	2	9 1/4	W/ CVN	236
11		ac	1	L 4 X 4 X 1/2	1	5 1/8		18
12		ad	1	L 4 X 4 X 1/2	1	5 1/8		18
13		ba	4	1" HVY HEX BOLT W/ NUT & HARDENED WASHER	0	3	NOTE "A"	6
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A572-50		FLGS.	N/A		BOLTS	A325 (GALV)

- NOTES:
- OPEN HOLES ARE  $\phi 1/16"$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS TO BE TIGHTENED BY TURN-OF-THE-NUT METHOD.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED \_\_\_\_\_  
ACCEPTED AS NOTED \_\_\_\_\_  
NOT ACCEPTED \_\_\_\_\_

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 127  
DOT BID ITEM NO. 863E50000

NO.	DATE	REVISIONS	BY
B	9/27/00	REV ANGLE THK aa, ab, ac, ad	GAF/GAF
A	9/16/00	ADDED PAINT NOTE AND ITEM NOS.	GAF

FABRICATOR

**AB** AMERICAN BRIDGE MANUFACTURING

2000 AMERICAN BRIDGE WAY  
CONARVILLE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO

**BRIDGE No. CUY-10-16.13**  
**FLOOR BEAM END REPLACEMENT**

RELEASED FOR CONSTRUCTION  
DATE 10/5/00 BY cuu

STEEL ERECTOR

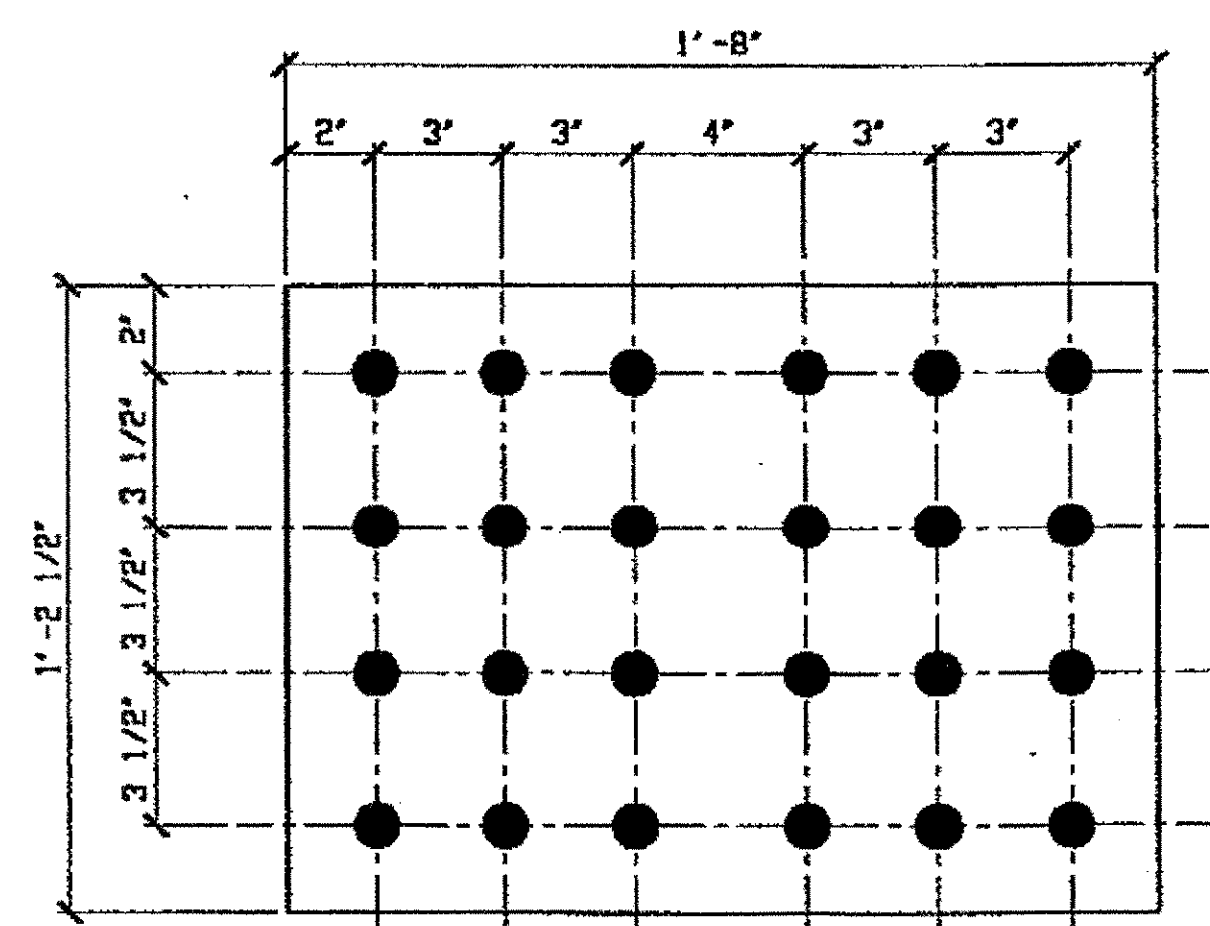
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH

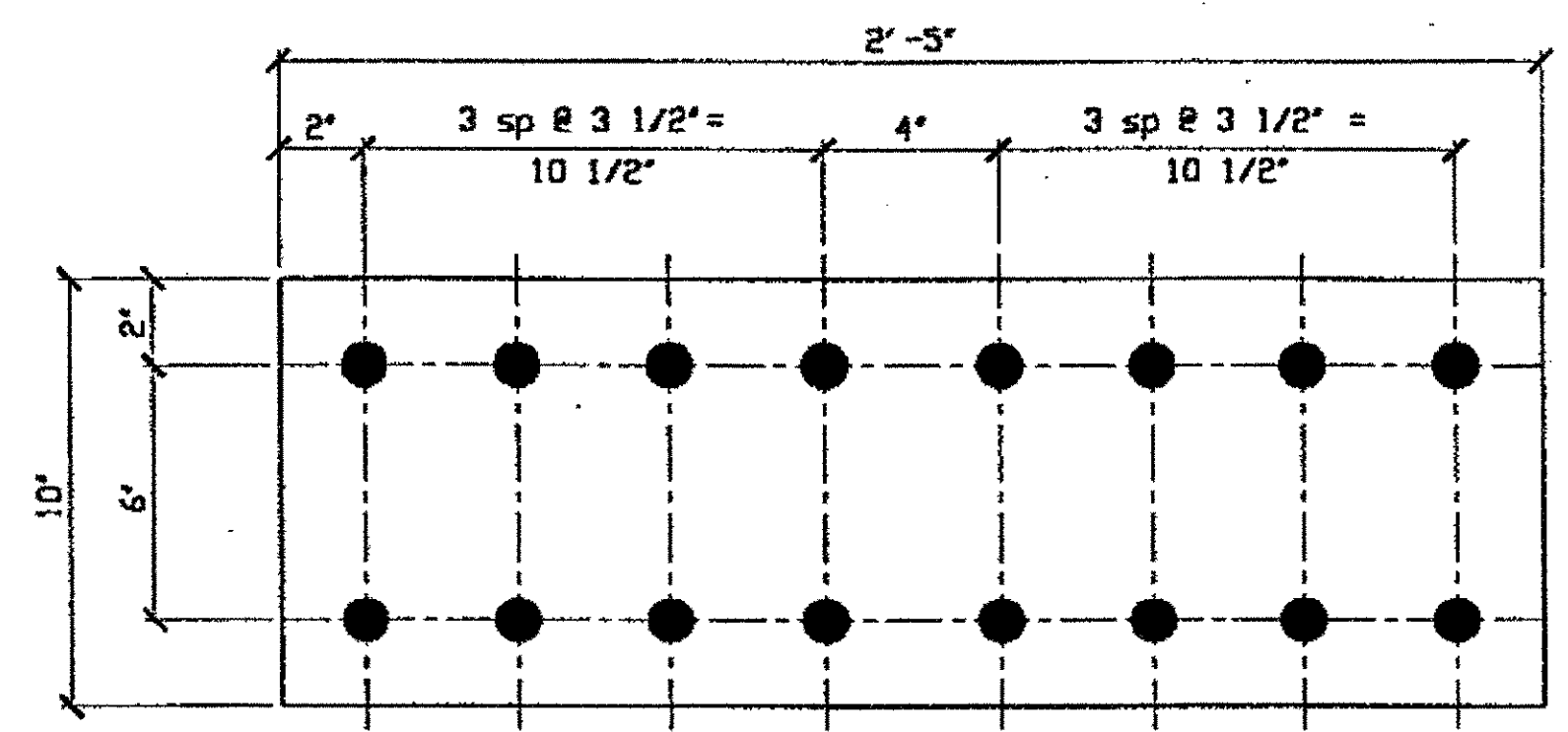
DRAWN BY: DATE: GAF 08/15/00  
CHECKED BY: DATE: GVG 08/25/00

SHEET NUMBER: 123  
JOB NUMBER: 800010

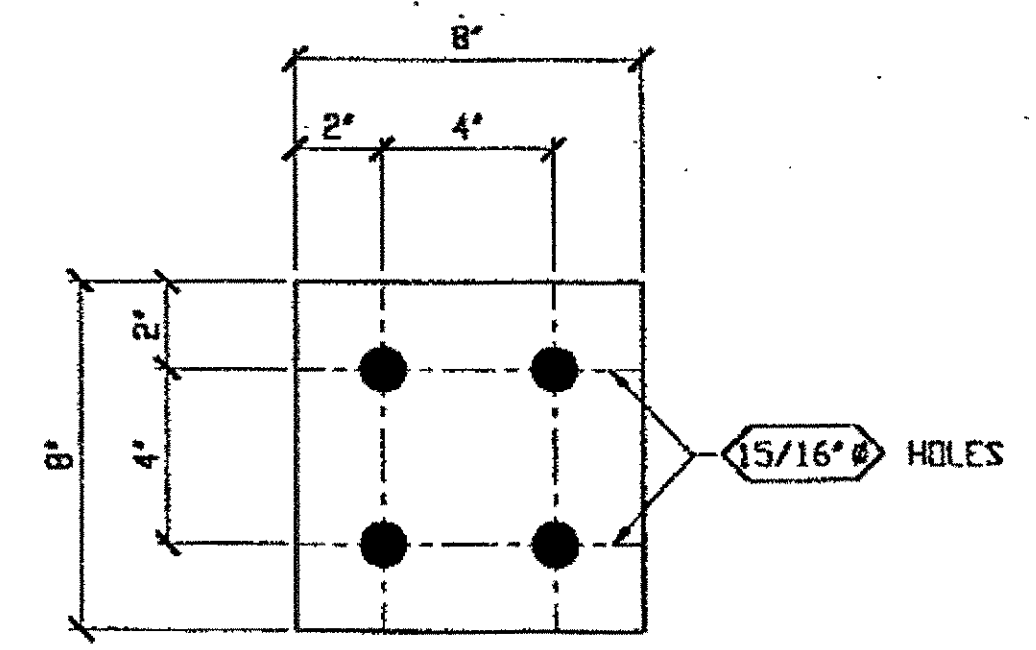
Last modifier: 03:29pm on Fri Aug 25, 2000 - J - Last plotted by Gfooster :40pm on Fri Aug 25, 2000



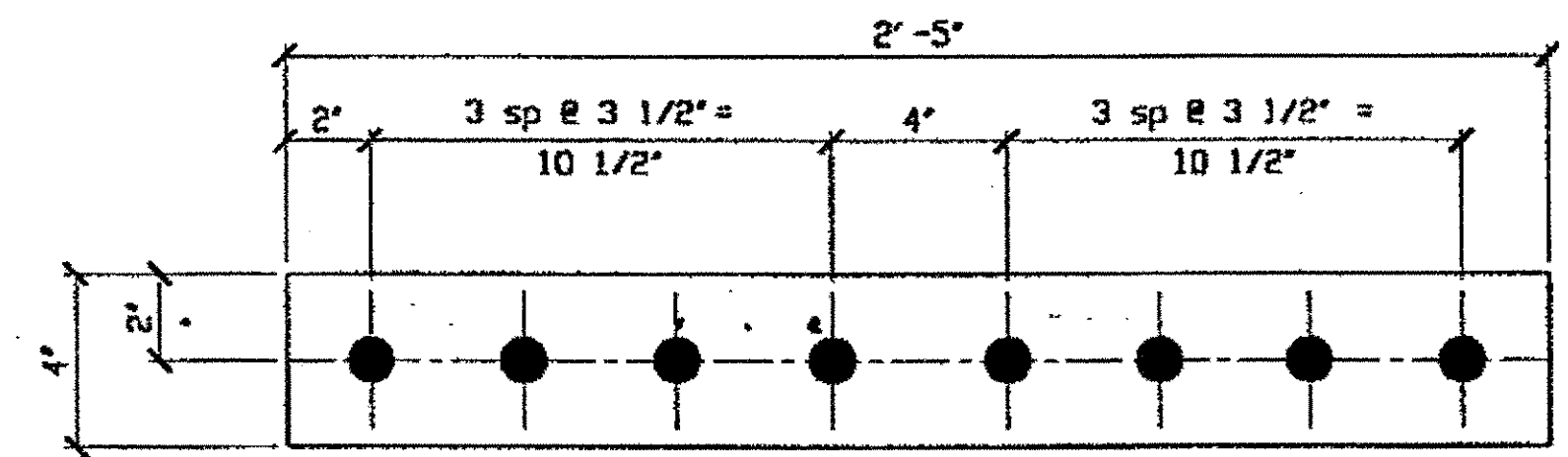
**8-FLOOR BEAM SPLICE PL 124-1**  
SPAN 4 LINE ① & ②



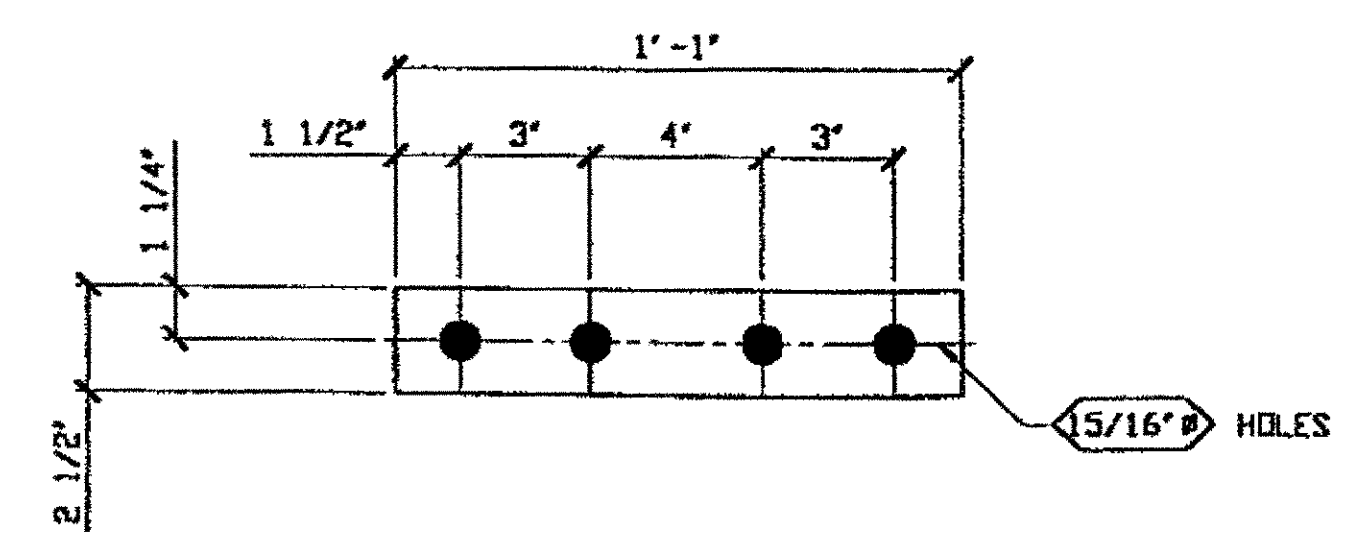
**8-FLOOR BEAM SPLICE PL 124-2**  
SPAN 4 LINE ① & ②



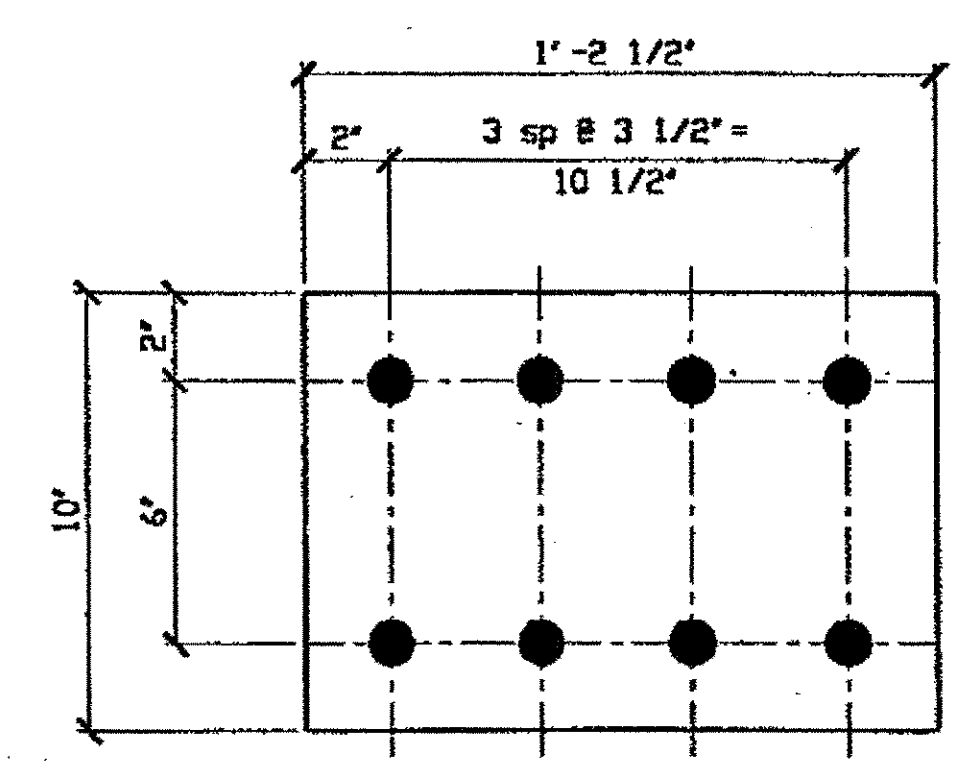
**16-STRINGER SPLICE PL 124-6**  
SPAN 4 LINE ① & ②



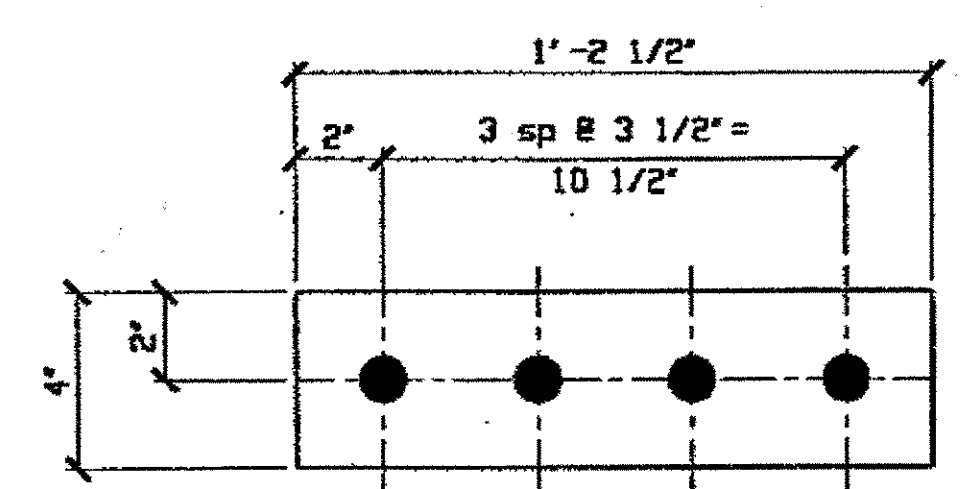
**16-FLOOR BEAM SPLICE PL 124-3**  
SPAN 4 LINE ① & ②



**16-STRINGER SPLICE PL 124-7**  
SPAN 4 LINE ① & ②



**4-FLOOR BEAM FILL PL 124-4**  
SPAN 4 LINE ① & ②

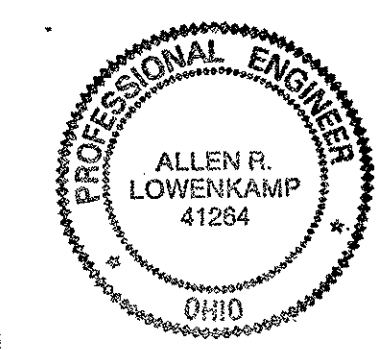


**8-FLOOR BEAM FILL PL 124-5**  
SPAN 4 LINE ① & ②

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		124-1	8	FLOOR BEAM SPLICE PL				
3			8	PL 5/8 X 14 1/2	1	8		
4								
5		124-2	8	FLOOR BEAM SPLICE PL				
6			8	PL 3/8 X 10	2	5		
7								
8		124-3	16	FLOOR BEAM SPLICE PL				
9			16	PL 1/2 X 4	2	5		
10								
11		124-4	4	FLOOR BEAM FILL PL				
12			4	PL 1/4 X 10	1	2 1/2		
13								
14		124-5	8	FLOOR BEAM FILL PL				
15			8	PL 5/16 X 4	1	2 1/2		
16								
17		124-6	16	STRINGER SPLICE PL				
18			16	PL 3/8 X 8	0	8		
19								
20		124-7	16	STRINGER SPLICE PL				
21			16	PL 3/8 X 2 1/2	1	1		
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE	A572-50	PIPE	N/A	FITTINGS	N/A			
SHAPES	N/A	FLGS.	N/A	BOLTS	N/A			

NOTES:  
1. OPEN HOLES ARE 1/16" UNLESS NOTED OTHERWISE.

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CONROPSVILLE, PA 15108  
PHONE: (412) 531-3000  
FAX: (412) 531-4001

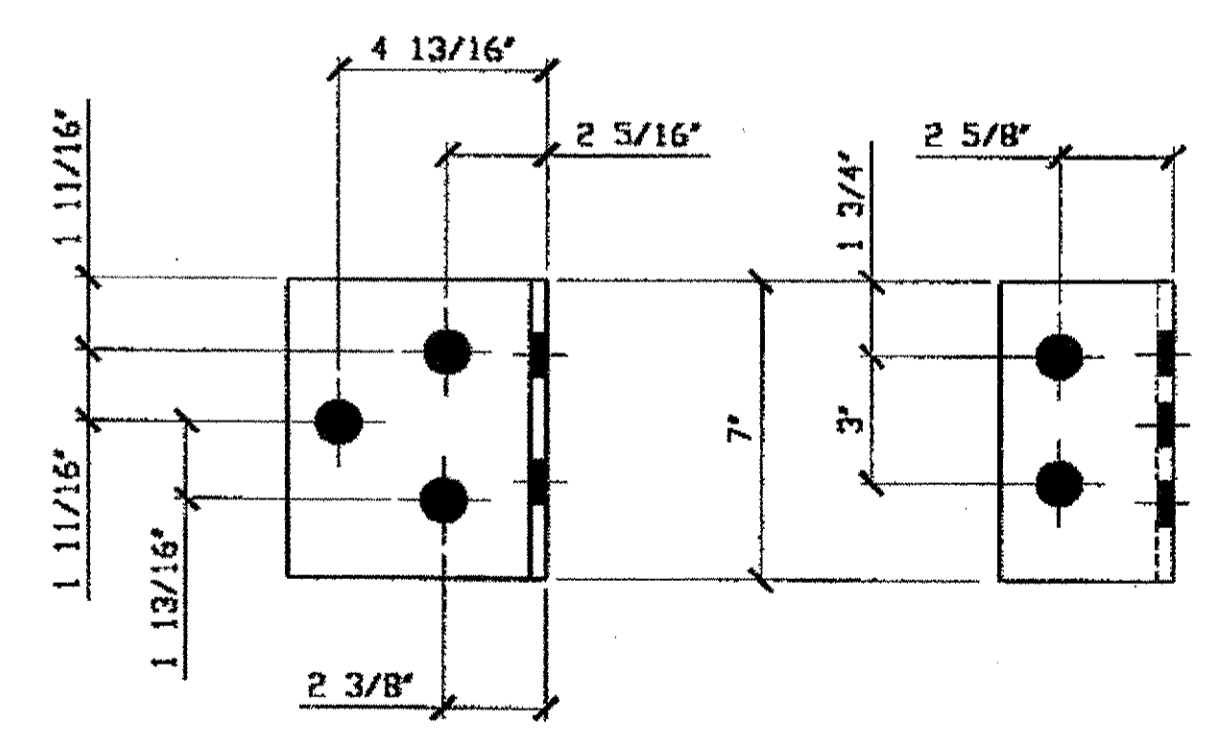
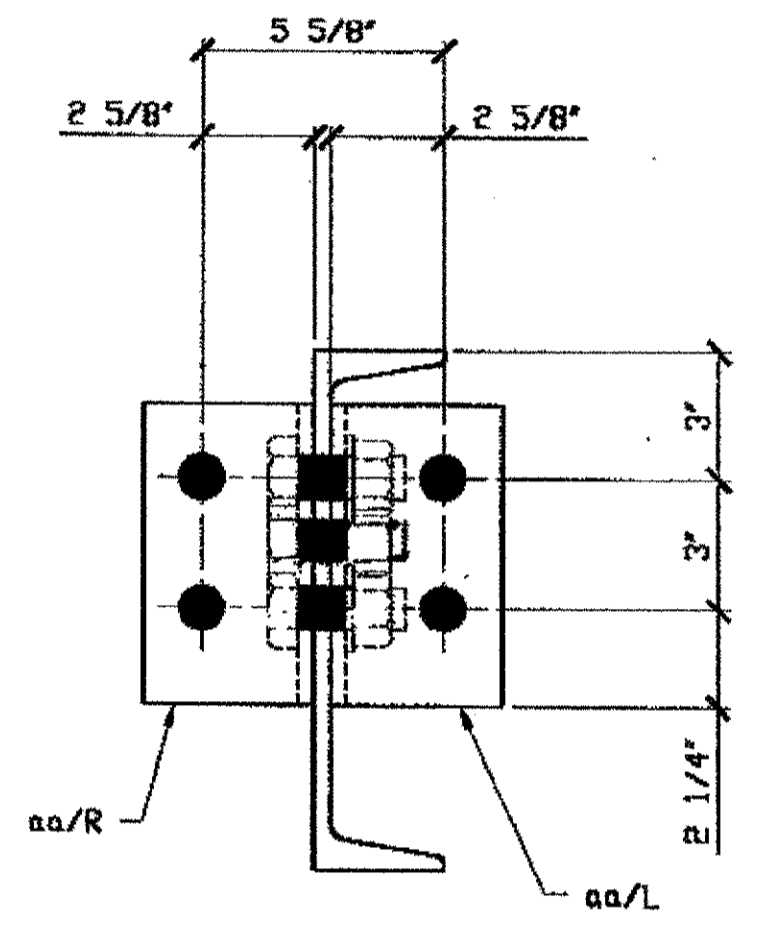
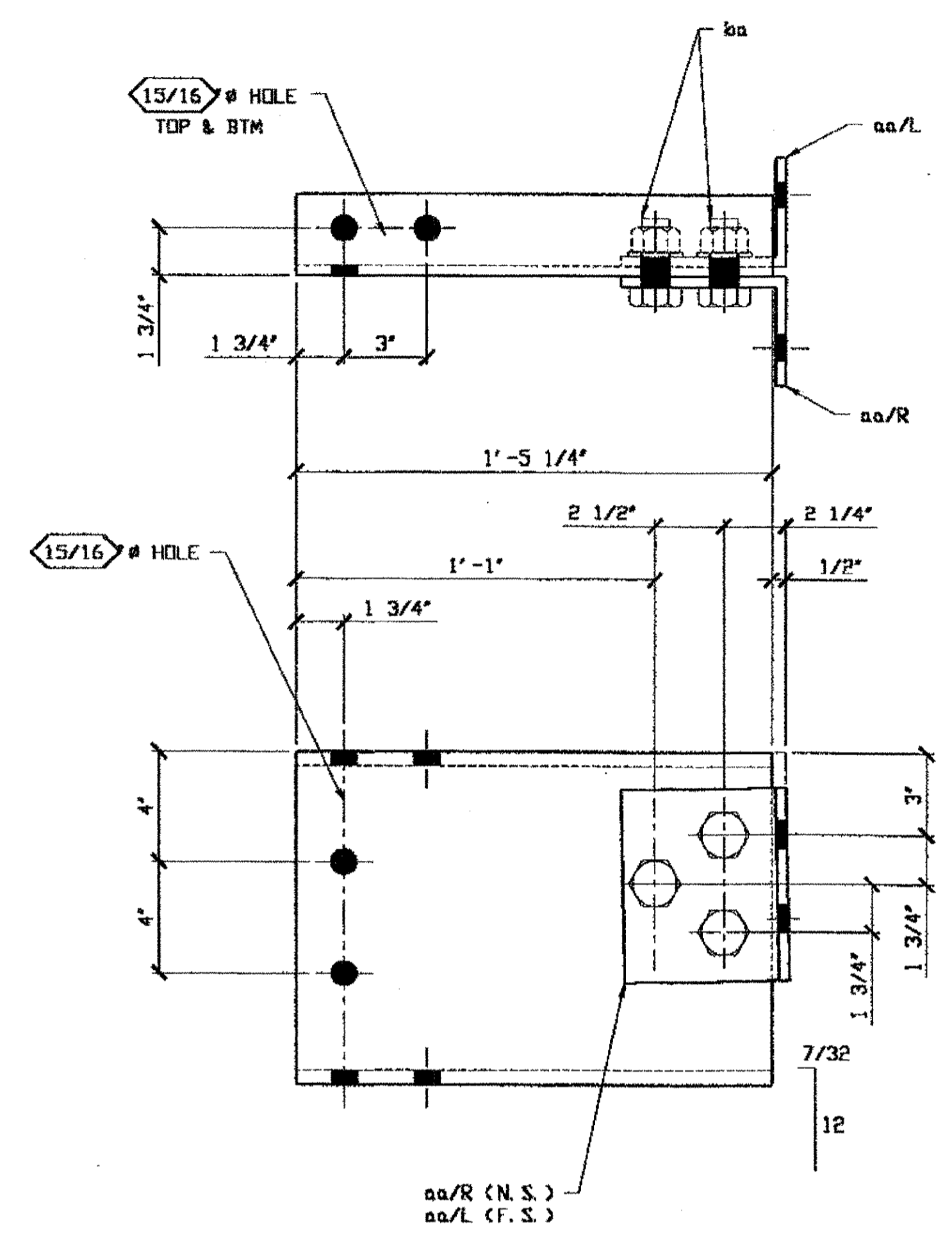
NO.	DATE	DESCRIPTION	BY
		REVISIONS	
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>FLOOR BEAM END REPLACEMENT</b>			
SHEET NUMBER			124
JOB NUMBER			800010

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: GAF  
DATE: 08/15/00  
CHECKED BY: GNG  
DATE: 08/25/00

RELEASED FOR CONSTRUCTION  
DATE 9/6/00 BY *cuu*

Last modified by Gfoster at 10:38am on Mon Sep 18, 2000 -|- Last plotted by Gfoster at 10:10am on Fri Sep 29, 2000



**8- STRINGER END 125-1 R/L**  
 125-1/R FOR SPAN 4 LINE ①+②  
 125-1/L FOR SPAN 4 LINE ②+①

ANGLE aa/R

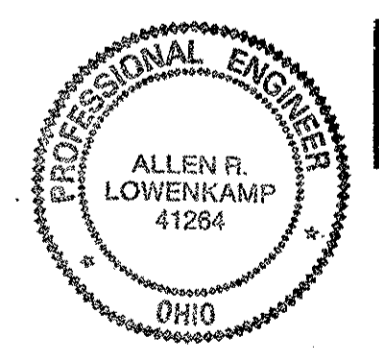
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		125-1 R/L	8	STRINGER END				
3			8	C 12 X 25	1	5 1/4	W/ CVN	
4		aa/R/L	16	L 6 X 4 X 3/8	0	7		
5		ba	24	1\"/>				

PLATE	N/A	PIPE	N/A	FITTINGS	N/A
SHAPES	A572-50	FLGS.	N/A	BOLTS	A325 (GALV)

- NOTES:**
- OPEN HOLES ARE  $\langle 1/16 \rangle$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS TO BE TIGHTENED BY TURN-OF-THE-NUT METHOD.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**NOTE "A"**  
 PERMANENT BOLTS TO HAVE HVY HEX NUTS W/ (1) HARDENED WASHER EACH. BOLTS A325-1, NUTS A194-2H, WASHERS F436. BOLTS, NUTS & WASHERS ARE GALVANIZED.

**RELEASED FOR CONSTRUCTION**  
 DATE 10/5/00 BY cm

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

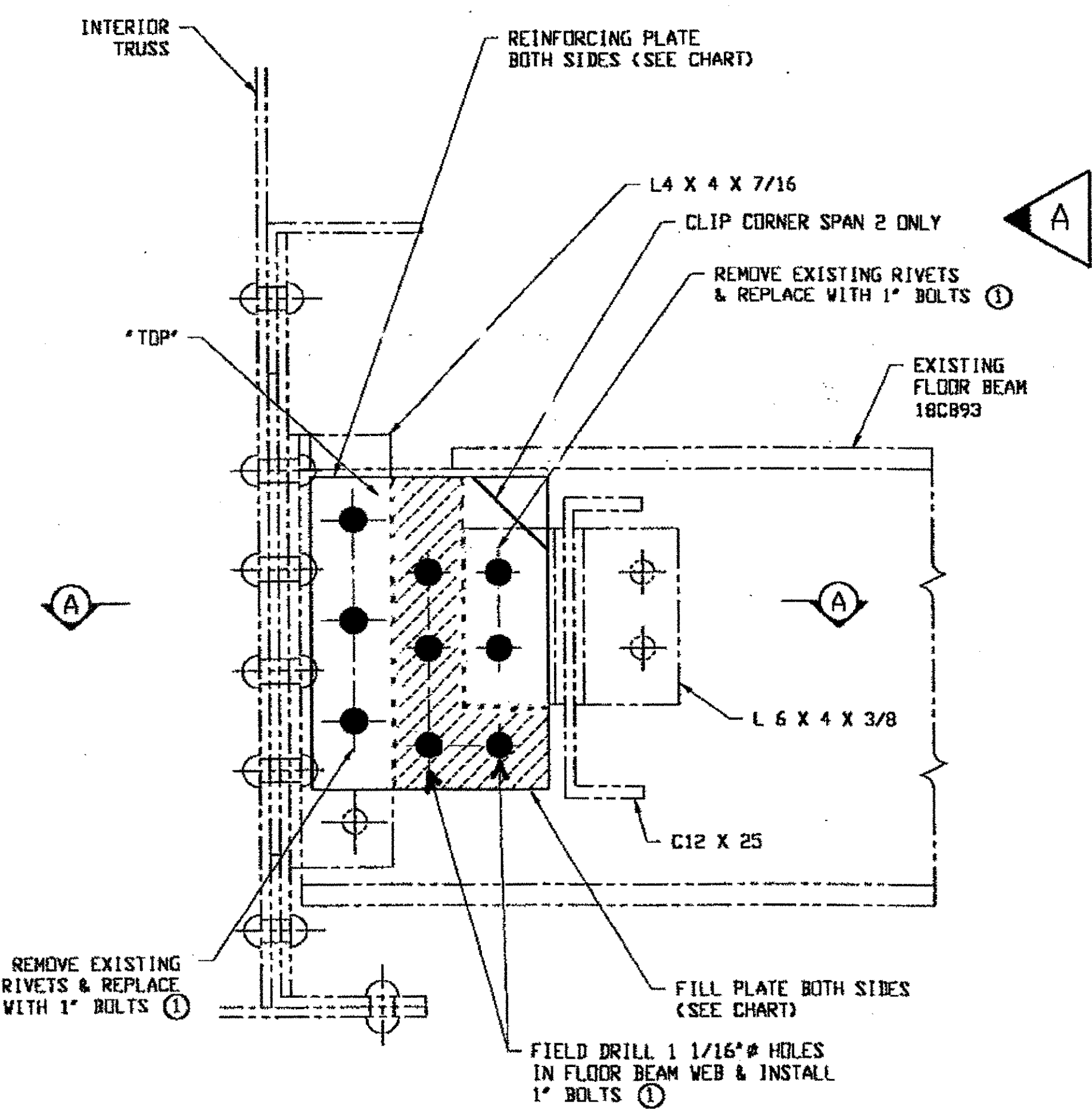
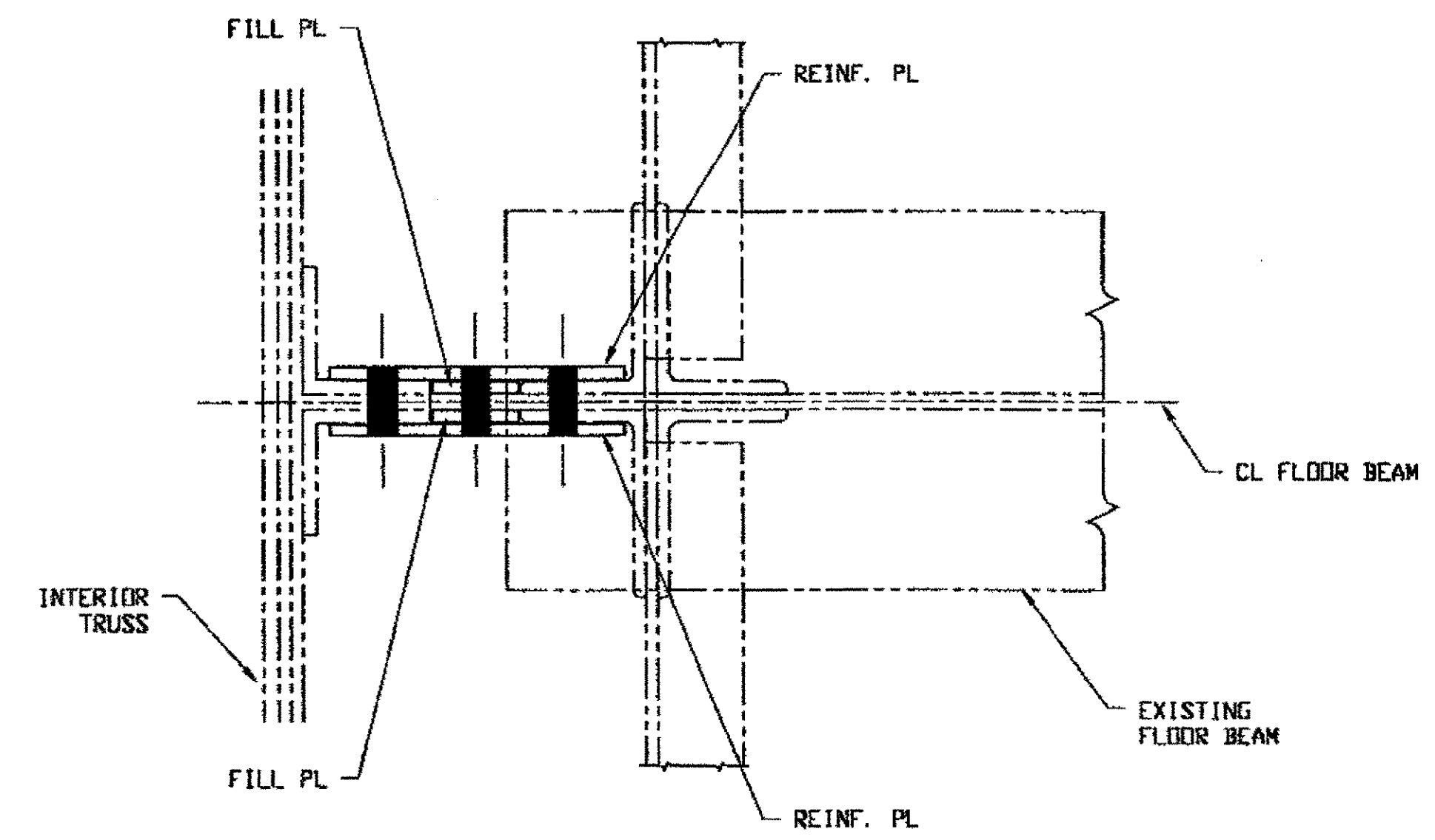
DOT ITEM LINE NO. 127  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
A	9/16/00	ADDED PAINT NOTE AND ITEM NOS.	GAF

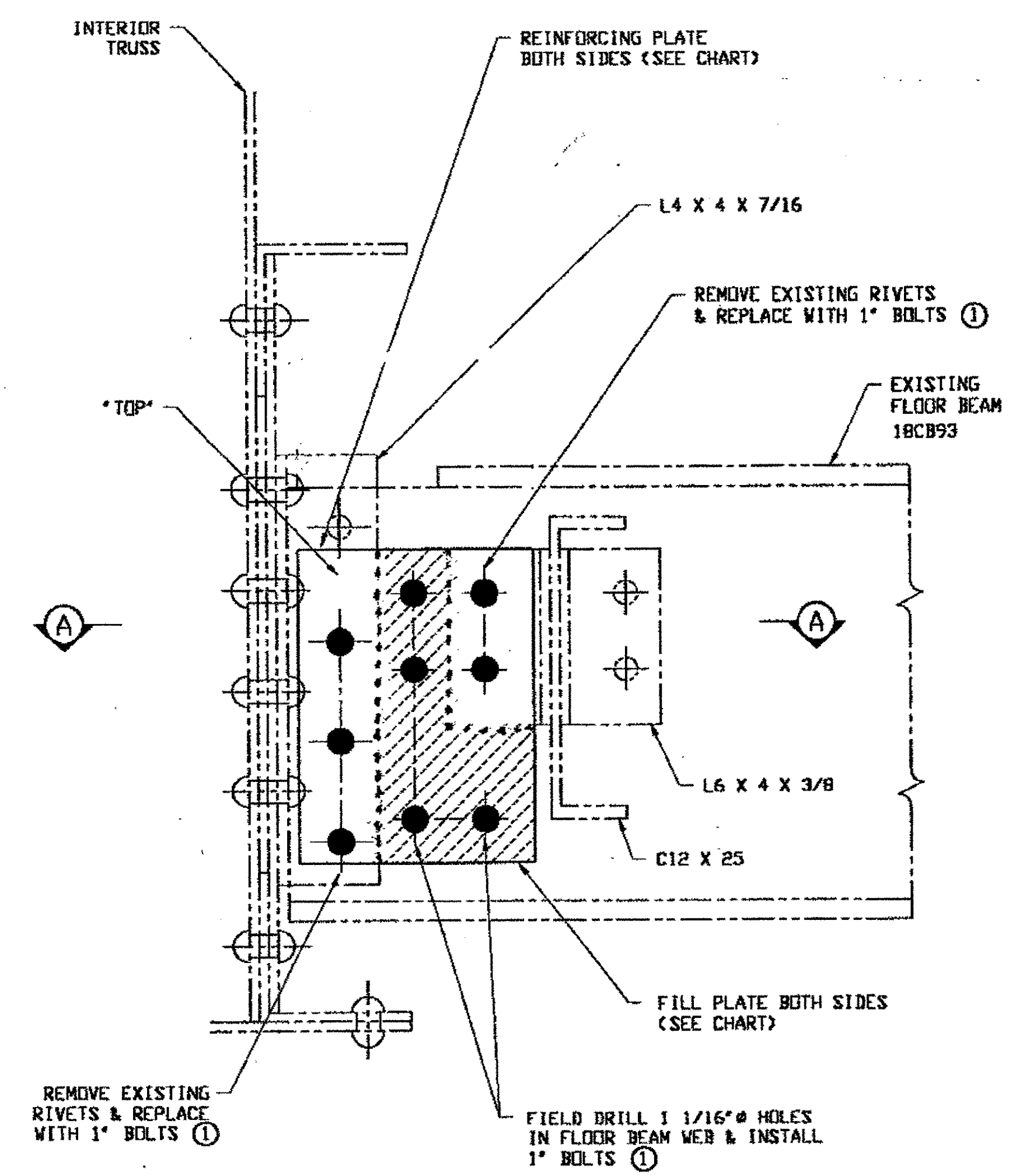
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**FLOOR BEAM END REPLACEMENT**

SHEET NUMBER: 125  
 JOB NUMBER: 800010

Last modified by Gfoster at 07:52am on Wed Dec 06, 2000 -|- Last plotted by Gfoster at 02:19pm on Fri Dec 15, 2000



**FLOOR BEAM WEB REINFORCEMENT**  
 (TYP BOTH NORTH & SOUTH ENDS)  
 SPANS 2 LINE ① & ②  
 SPANS 12 LINE ①

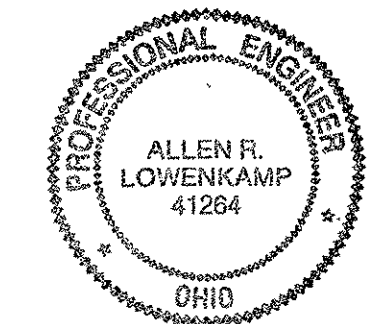


**FLOOR BEAM WEB REINFORCEMENT**  
 (TYP BOTH NORTH & SOUTH ENDS)  
 SPANS 6 & 8 LINE ② & ③  
 SPANS 10 LINE ②, ③ & ④  
 SPANS 12 LINE ② & ③

**FIELD BOLT LIST**  
 ① 1" DIA HVY HEX BOLT X 3 1/2" LG W/ HVY HEX NUT & ONE WASHER EACH (216 REQ'D.)  
 BOLTS = A325-1 (GALV) NUTS = A194-2H (GALV)  
 WASHERS = F436 (GALV)

SPAN	LINE	FILL PLATE PC MARK	REINFORCING PLATE PC MARK
2	①	120-2	120-1
2	②	120-2	120-1
6	②	120-4	120-3
6	③	120-4	120-3
8	②	120-4	121-1
8	③	120-4	121-1
10	②	121-3	121-2
10	③	121-3	121-2
10	④	121-3	121-2
12	①	122-2	122-1
12	②	122-2	122-3
12	③	122-2	122-4

NOTES:  
 1. WORK THIS DRAWING WITH adache-cluni-lynn associates DESIGN DRAWINGS B2/154.



RELEASED FOR CONSTRUCTION  
 DATE 2/3/01 BY EDP

O.D.O.T. DIST. 12  
 ACCEPTED 2/3/01  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2800 AMERICAN BRIDGE WAY  
 CONROPSIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 08/18/00  
 CHECKED BY: DATE: GVG 08/25/00

NO.	DATE	DESCRIPTION	BY
A	10/26/00	REMOVED REPAIR @ SPAN 4 NORTH	GAF/GMG

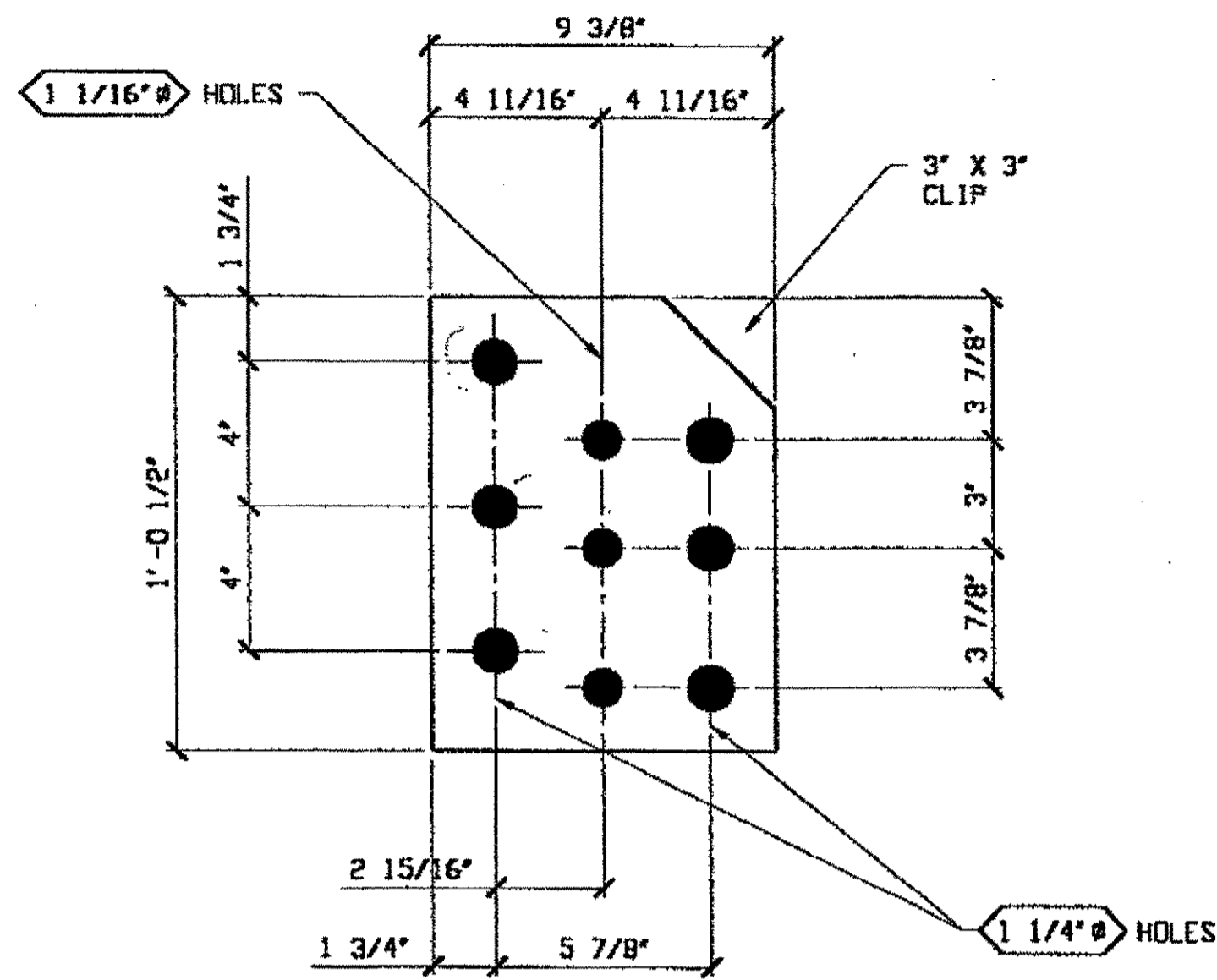
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 FLOOR BEAM WEB REPAIR

SHEET NUMBER: E120  
 A.M. JOB NUMBER: 800010

10:09am on Fri Sep 29, 2000

Last modified by Gfooster at 10:06am on Mon Sep 18, 2000 - Last plotted by Gfooster

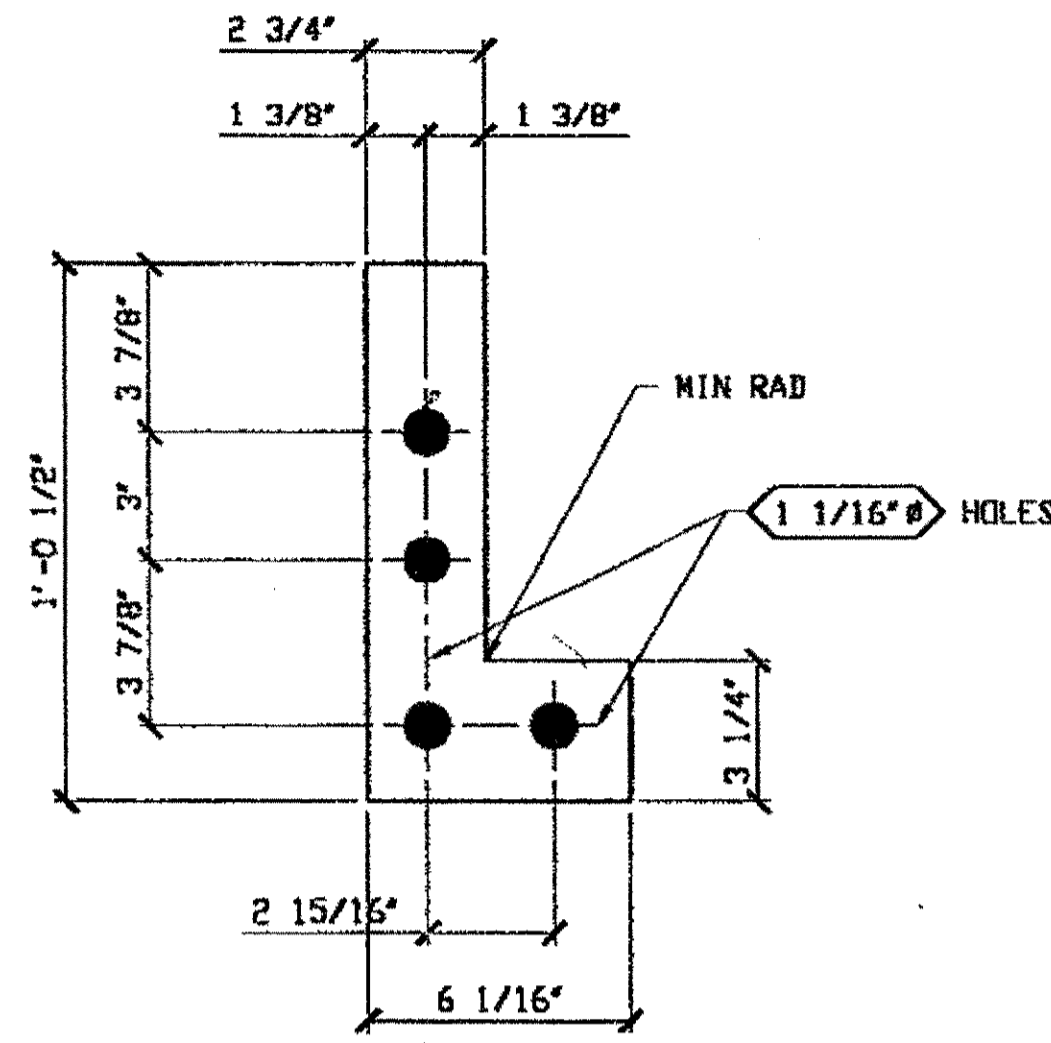
B:\800010\0120.dwg



**8 - REINFORCING PLATES 120-1**

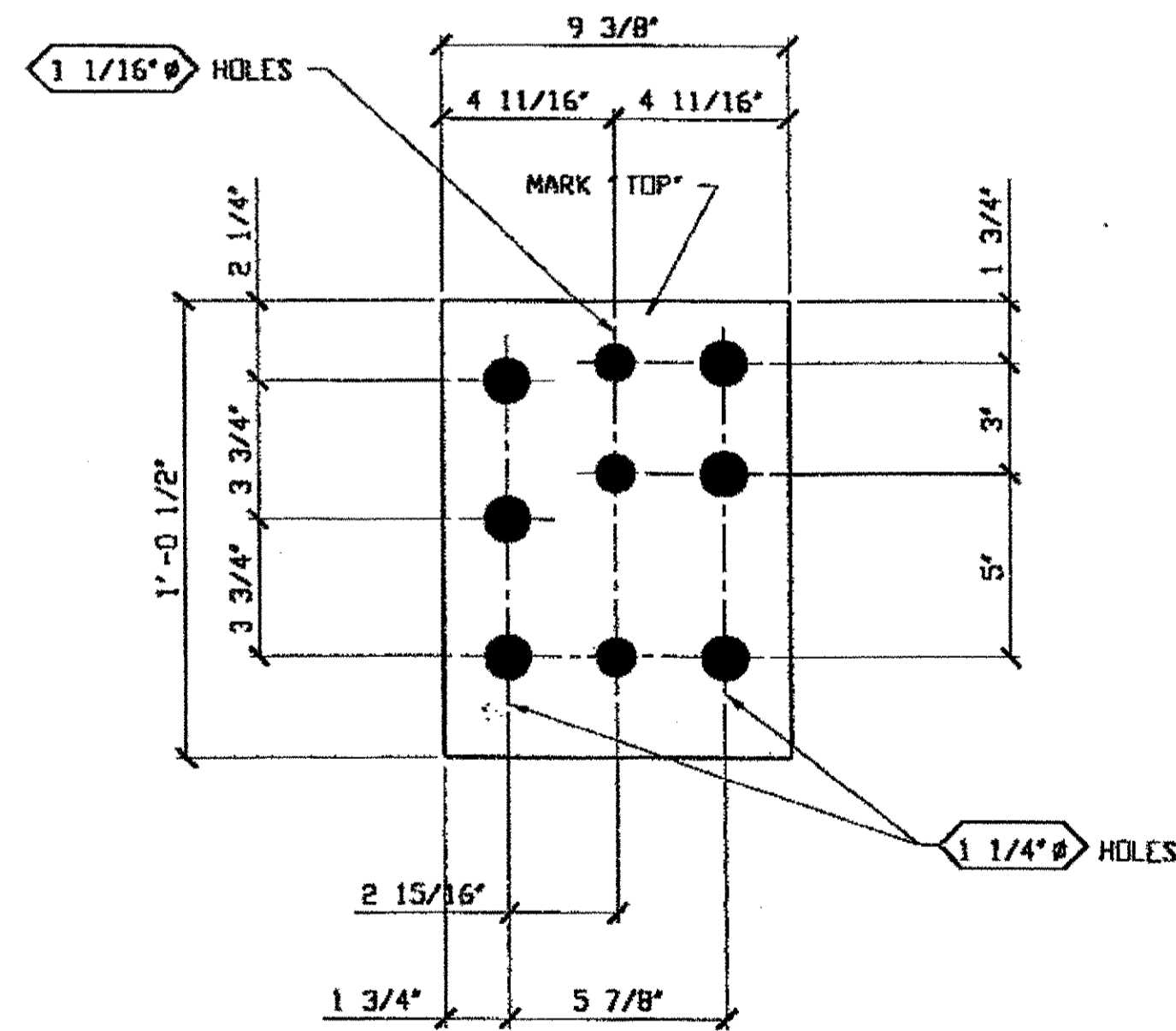
SPAN 2 LINE ① & ②

(SCALE 3" = 1'-0")



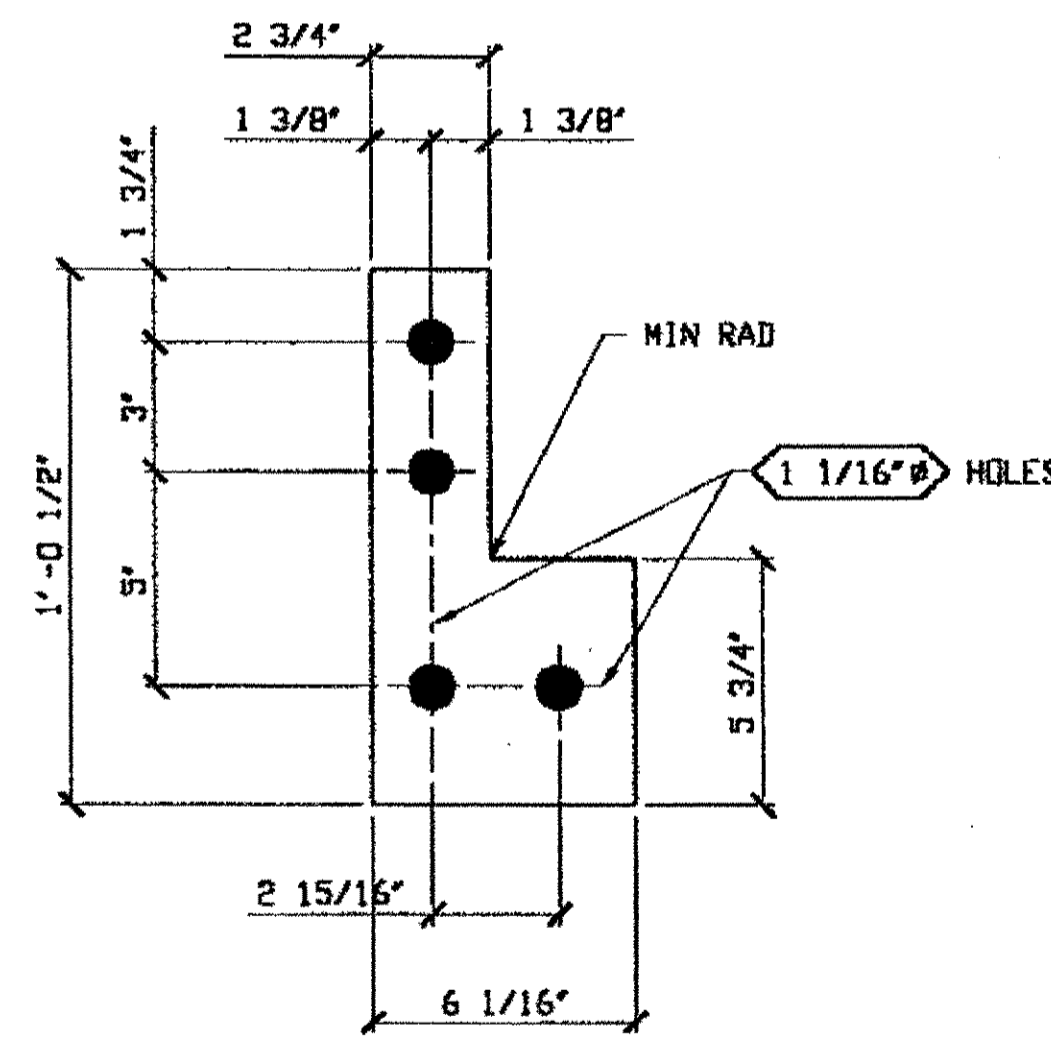
**8 - FILL PLATES 120-2**

SPAN 2 LINE ① & ②



**(8) REINFORCING PLATES 120-3**

SPAN 6 LINE ② & ③



**(16) FILL PLATES 120-4**

SPAN 6 LINE ② & ③

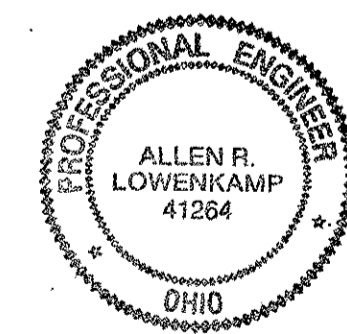
SPAN 8 LINE ② & ③

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		120-1	8	REINFORCING PLATE				
3			8	PL 3/8 X 9 3/8	1	0 1/2		
4								
5		120-2	8	FILL PLATE				
6			8	PL 3/8 X 6 1/16	1	0 1/2		
7								
8		120-3	8	REINFORCING PLATE				
9			8	PL 3/8 X 9 3/8	1	0 1/2		99
10								
11		120-4	16	FILL PLATE				
12			16	PL 3/8 X 6 1/16	1	0 1/2		91
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE		A572-50	PIPE	N/A	FITTINGS	N/A		
SHAPES		N/A	FLGS.	N/A	BOLTS	N/A		

- NOTES:**
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

EN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 GAF 08/14/00  
 CHECKED BY: DATE  
 GVG 08/25/00

DOT ITEM LINE NO. 0129  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
A	8/16/00	ADDED PAINT NOTE AND ITEM NOS.	GAF

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**FLOOR BEAM WEB REPAIR**

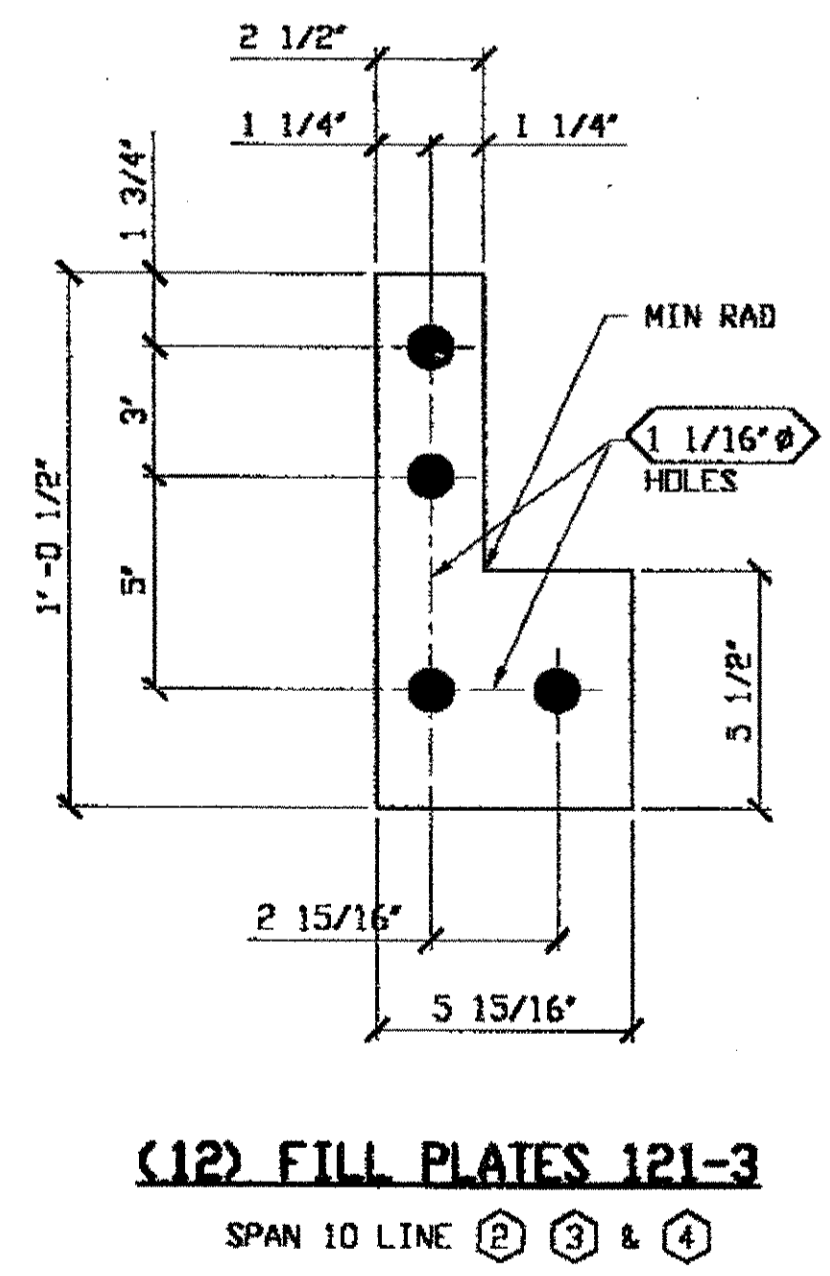
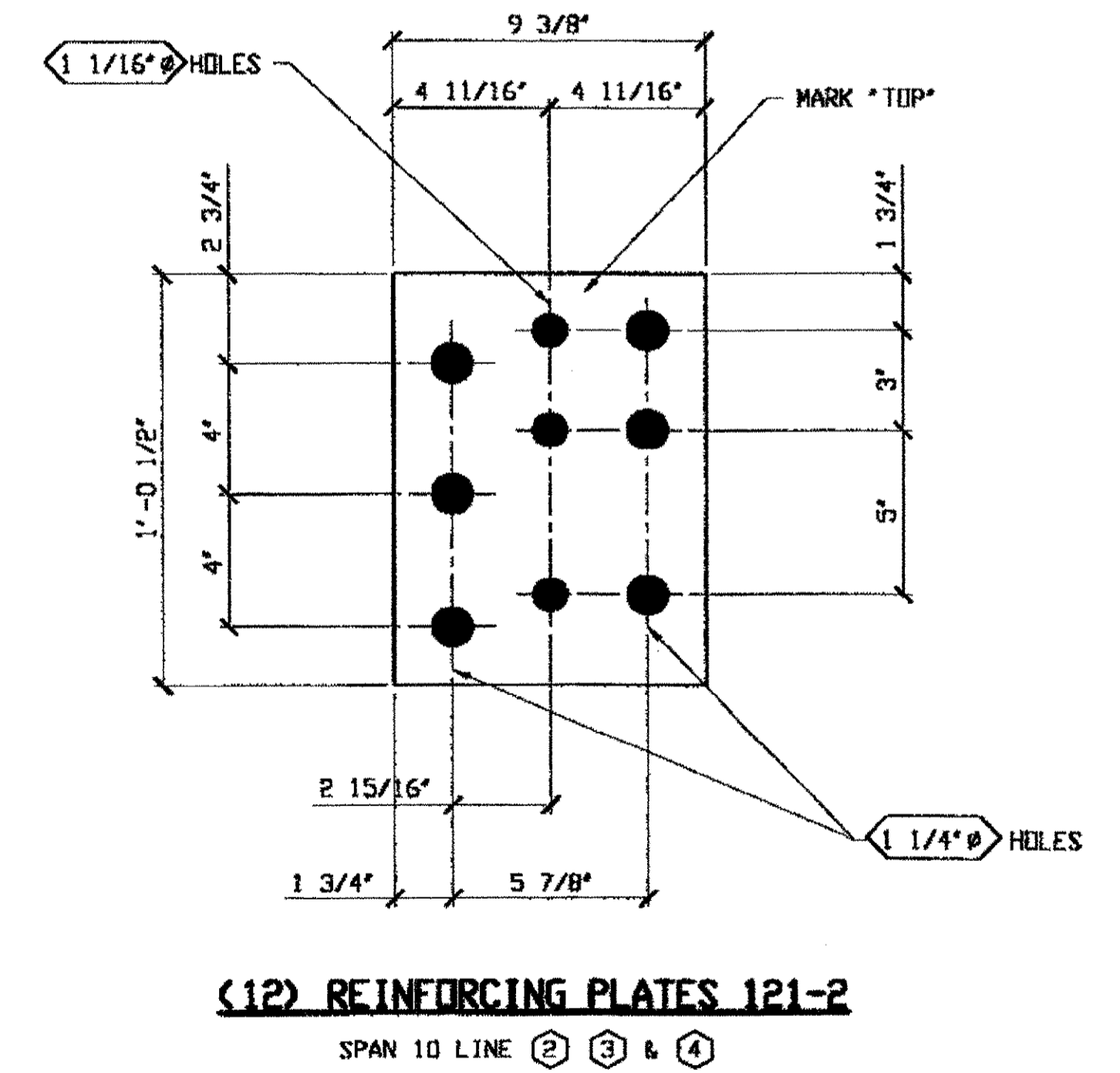
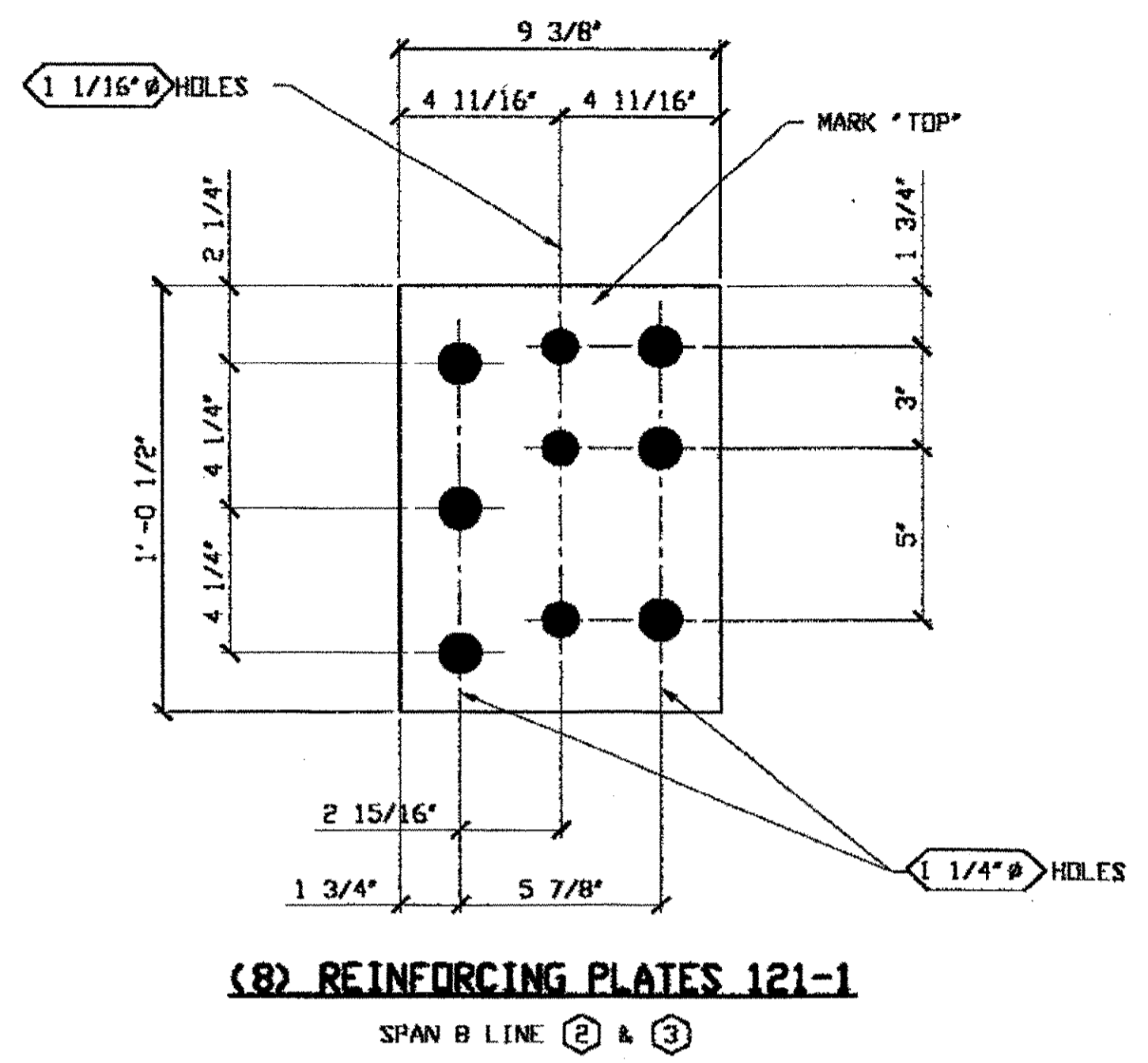
REVISIONS

SHEET NUMBER: 120  
 JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 10/5/00 BY cu



Last modified by Gfooster at 10:26am on Mon Sep 18, 2000 - Last plotted by sfooster at 10:09am on Fri Sep 29, 2000

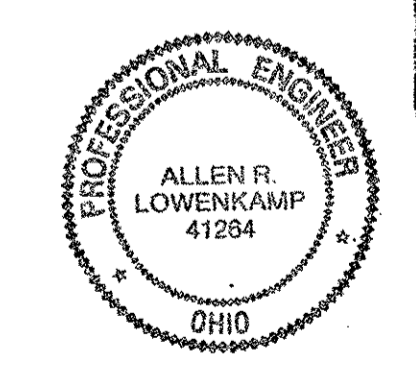


**BILL OF MATERIAL**

LINE NO.	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		121-1	8	REINFORCING PLATE				
3			8	PL 3/8 X 9 3/8	1	0 1/2		99
4								
5		121-2	12	REINFORCING PLATE				
6			12	PL 3/8 X 9 3/8	1	0 1/2		149
7								
8		121-3	12	FILL PLATE				
9			12	PL 3/8 X 5 15/16	1	0 1/2		64
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE	A572-50	PIPE	N/A	FLTINGS	N/A			
SHAPES	N/A	FLGS.	N/A	BOLTS	N/A			

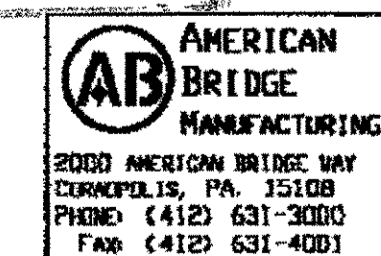
NOTES:  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST.  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED 2/9/00  
 NOT ACCEPTED



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335



AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 129  
 DOT BID ITEM NO. B63ES0000

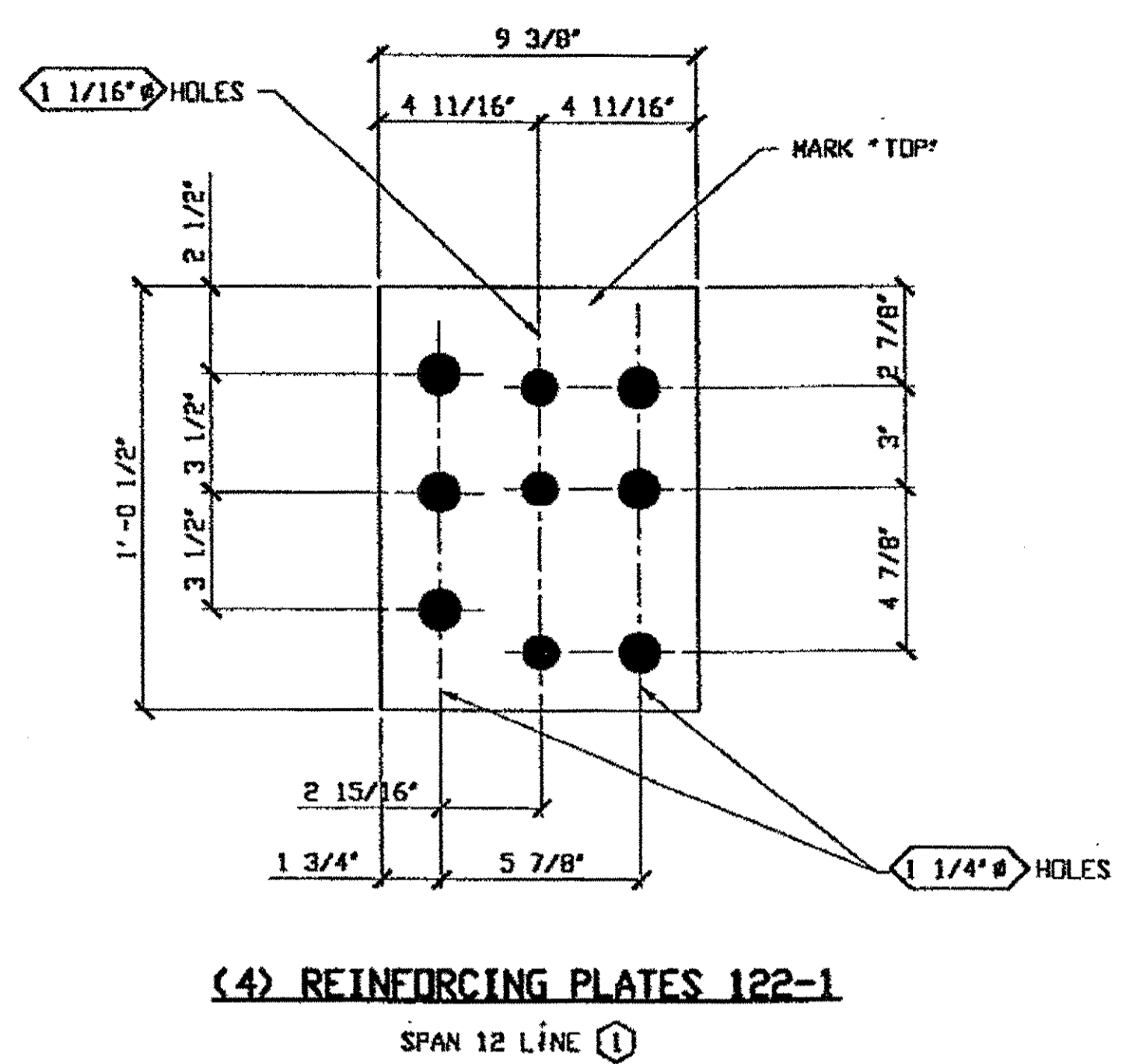
NO.	DATE	DESCRIPTION	BY
A	9/16/00	ADDED PAINT NOTE AND ITEM NOS.	GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**FLOOR BEAM WEB REPAIR**

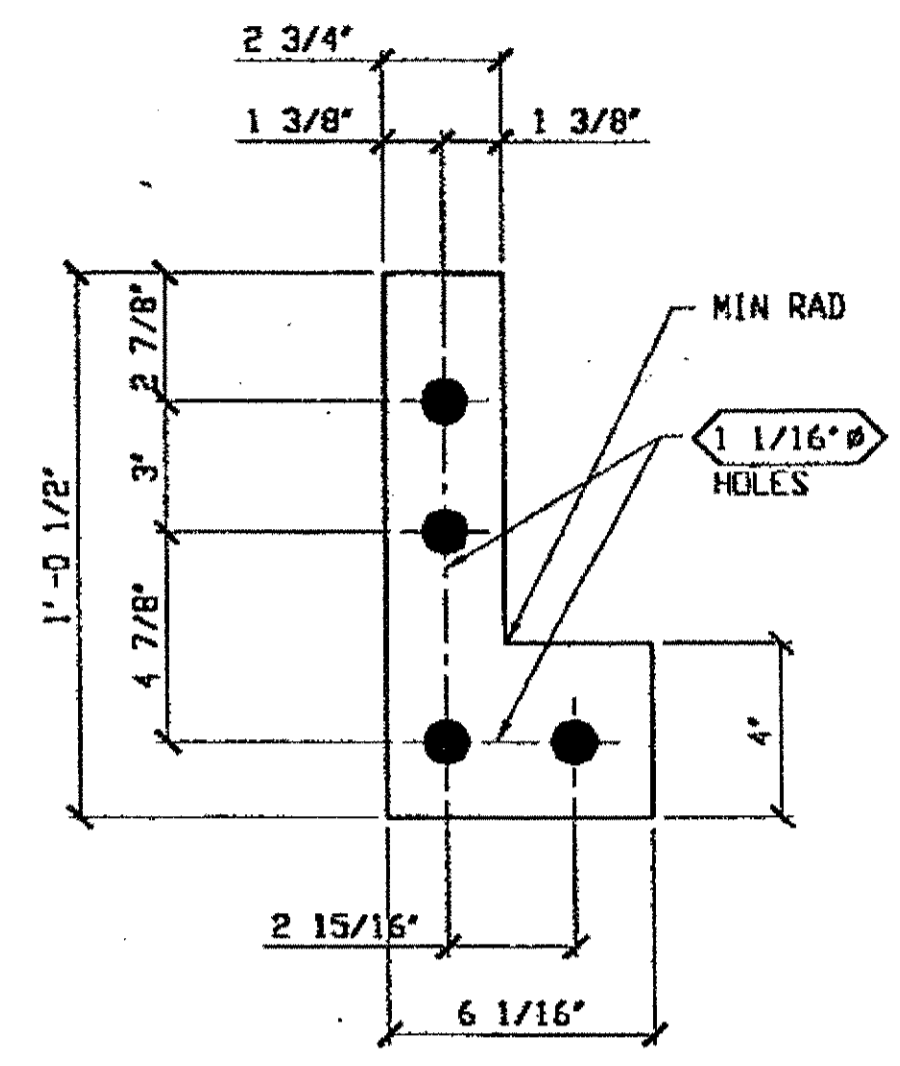
IN CHARGE OF: L. SMITH  
 DRAWN BY: GAF  
 DATE: 08/15/00  
 CHECKED BY: GWG  
 DATE: 08/25/00  
 SHEET NUMBER: 121  
 JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 10/5/00 BY CEU

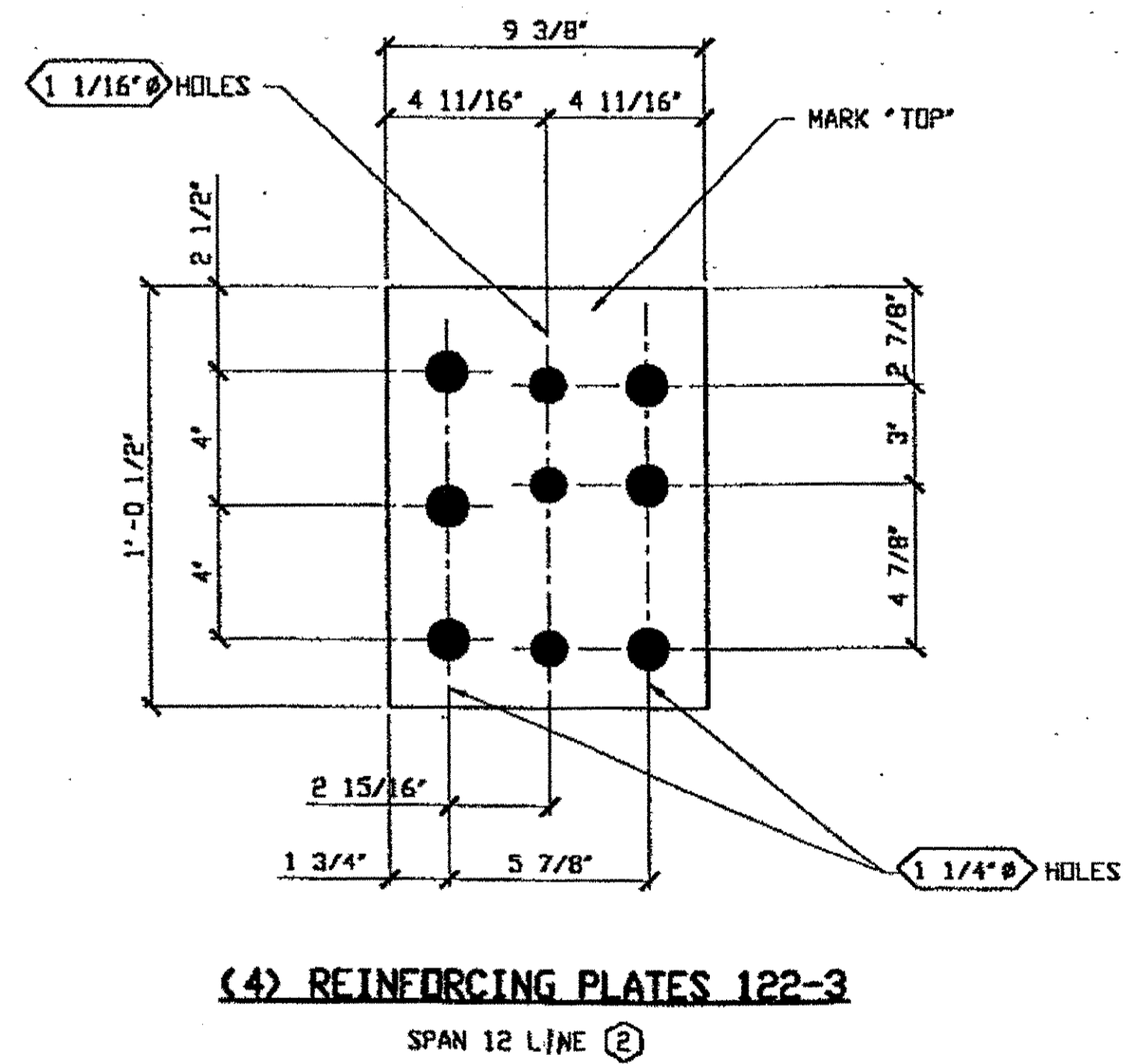
Last modified at 02:27pm on Fri Aug 25, 2000 - last plotted by Gfoster  
Gfoster on Mon Aug 28, 2000



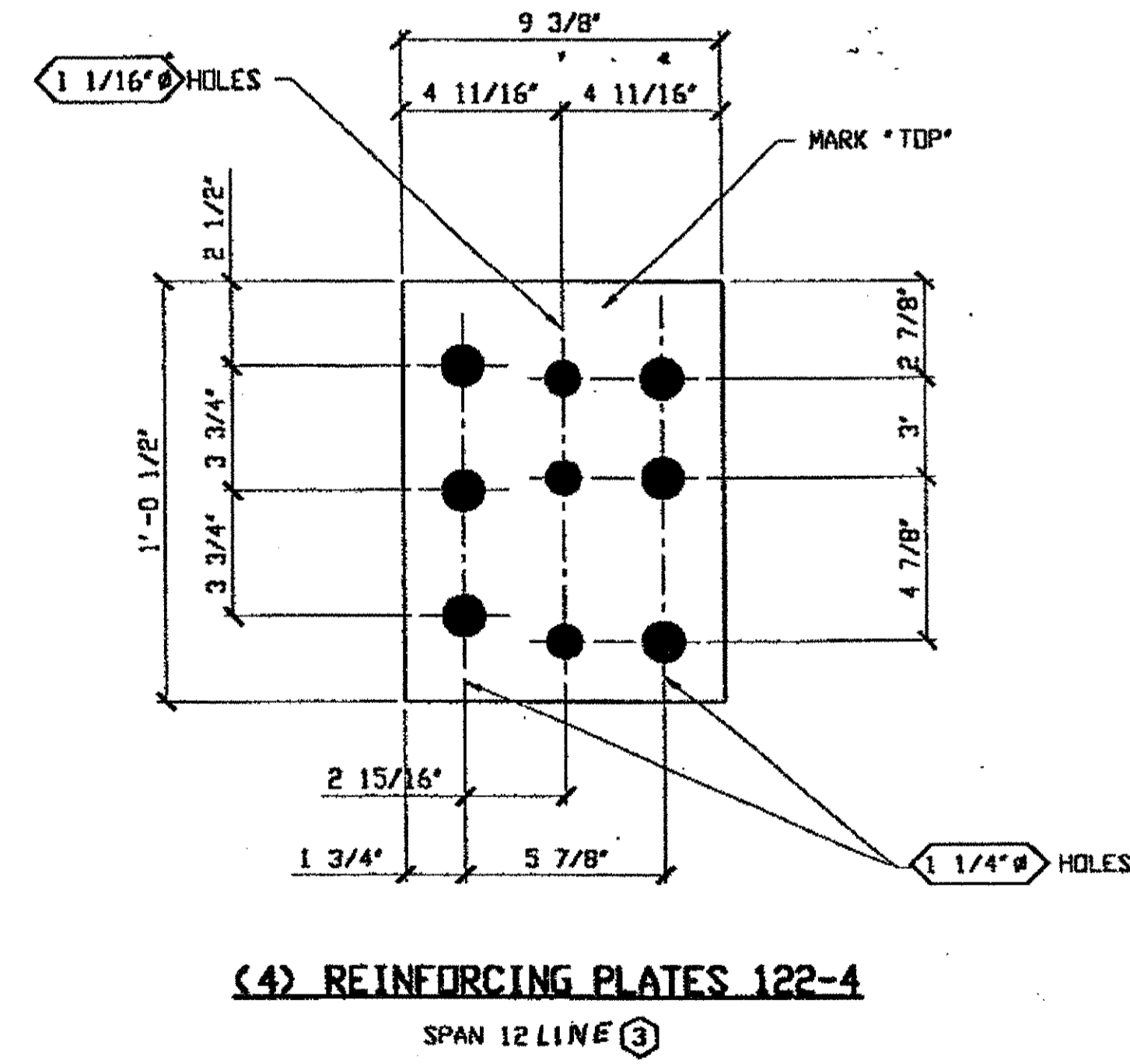
(4) REINFORCING PLATES 122-1  
SPAN 12 LINE ①



(12) FILL PLATES 122-2  
SPAN 12 LINE ① ② & ③



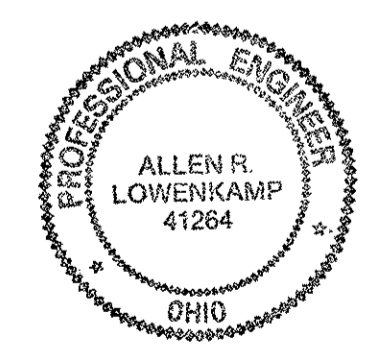
(4) REINFORCING PLATES 122-3  
SPAN 12 LINE ②



(4) REINFORCING PLATES 122-4  
SPAN 12 LINE ③

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		122-1	4	REINFORCING PLATE				
3			4	PL 3/8 X 9 3/8	1	0 1/2		52
4								
5		122-2	12	FILL PLATES				
6			12	PL 3/8 X 6 1/16	1	0 1/2		61
7								
8		122-3	4	REINFORCING PLATE				
9			4	PL 3/8 X 9 3/8	1	0 1/2		52
10								
11		122-4	4	REINFORCING PLATE				
12			4	PL 3/8 X 9 3/8	1	0 1/2		52
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
PLATE	AS72-50	PIPE	N/A	FITTINGS	N/A			
SHAPES	N/A	FLGS.	N/A	BOLTS	N/A			

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



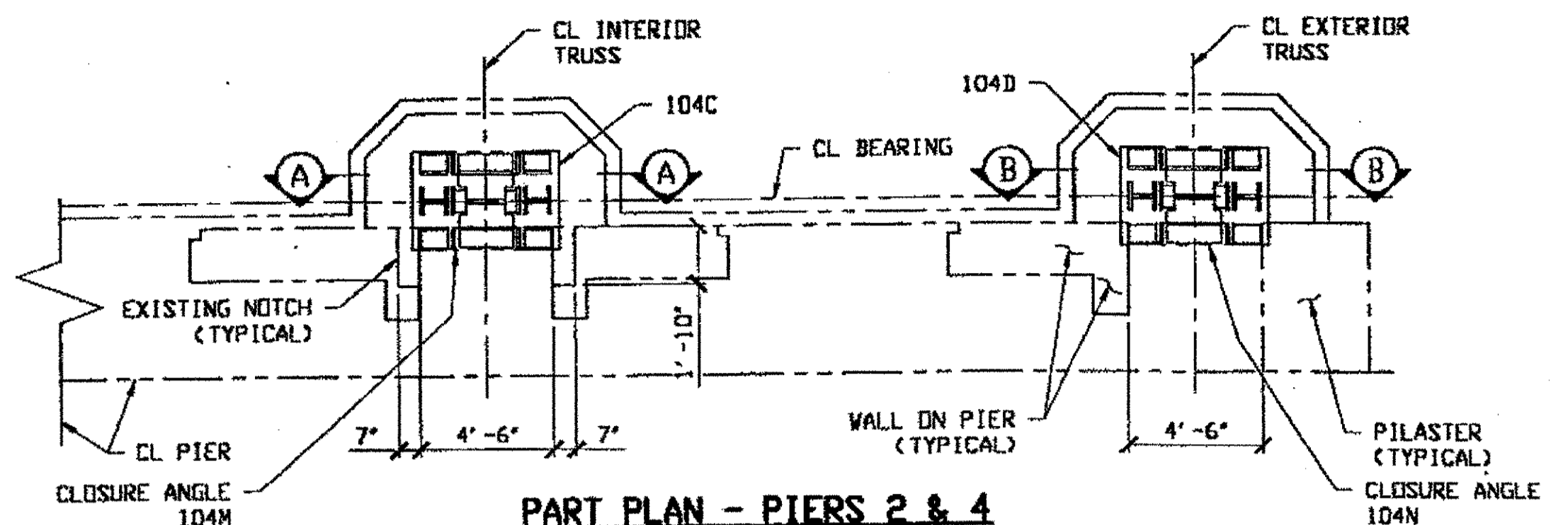
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIANA, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 FLOOR BEAM WEB REPAIR			
		SHEET NUMBER	122
		AWB JOB NUMBER	800010

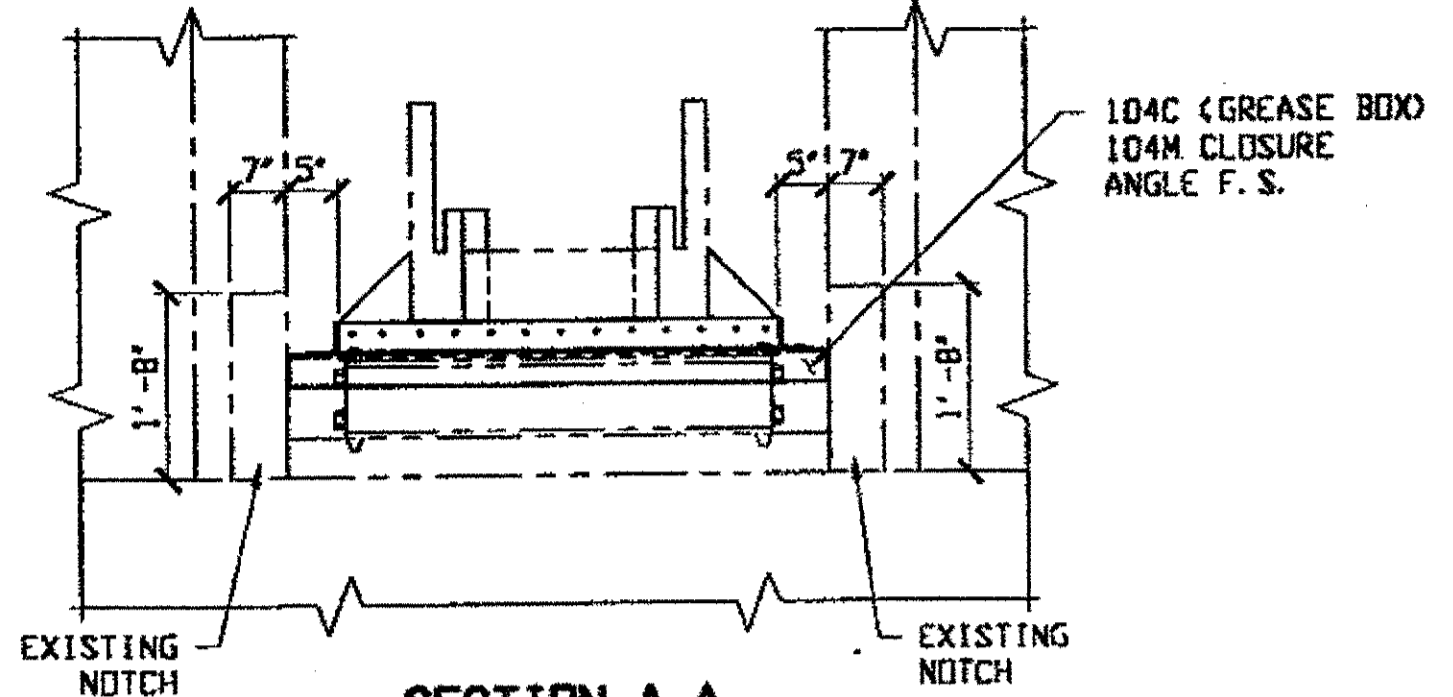
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
GAF 08/15/00  
CHECK BY: DATE:  
GVG 08/25/00

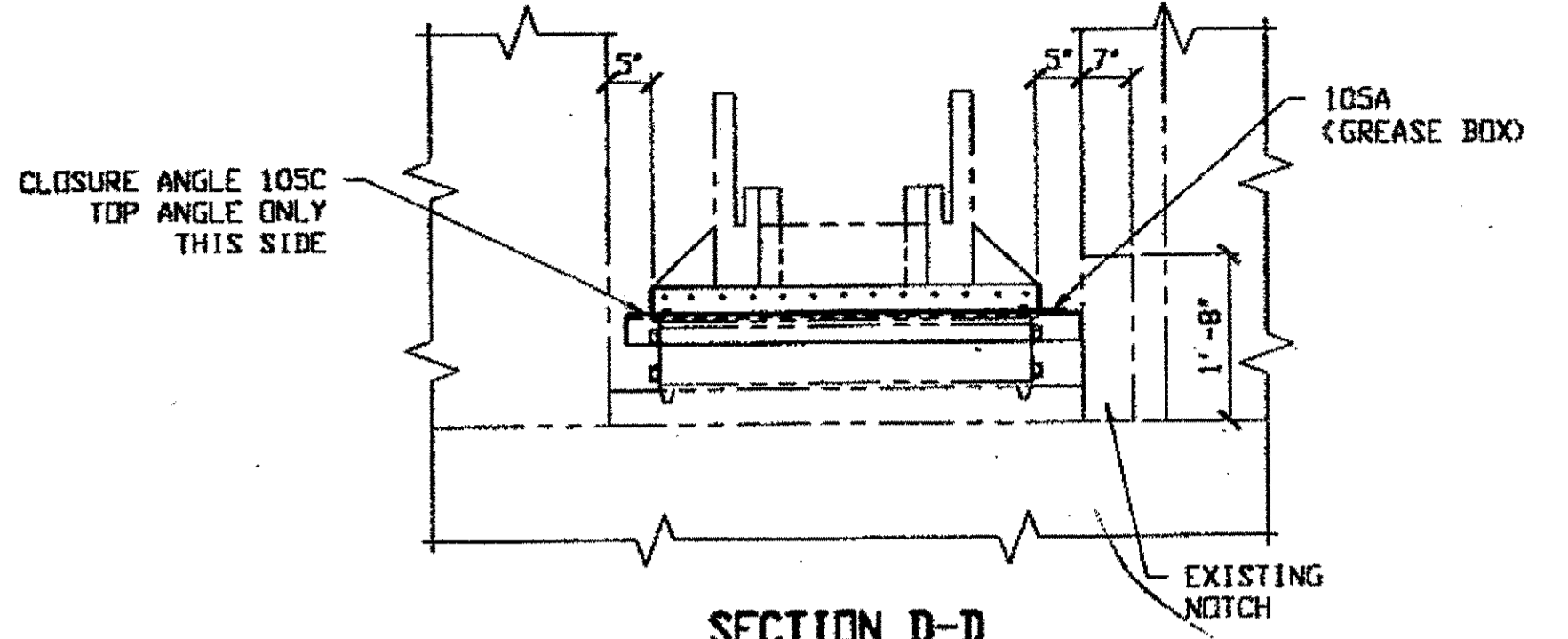
RELEASED FOR CONSTRUCTION  
DATE 9/6/00 BY *Cue*



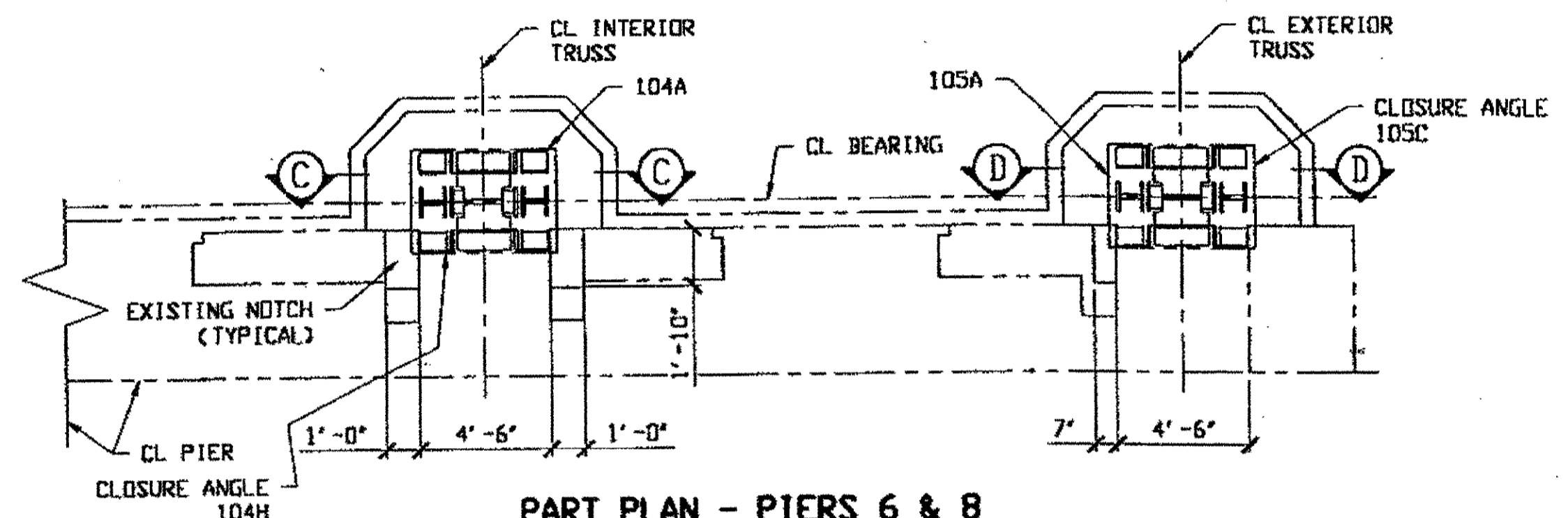
PART PLAN - PIERS 2 & 4



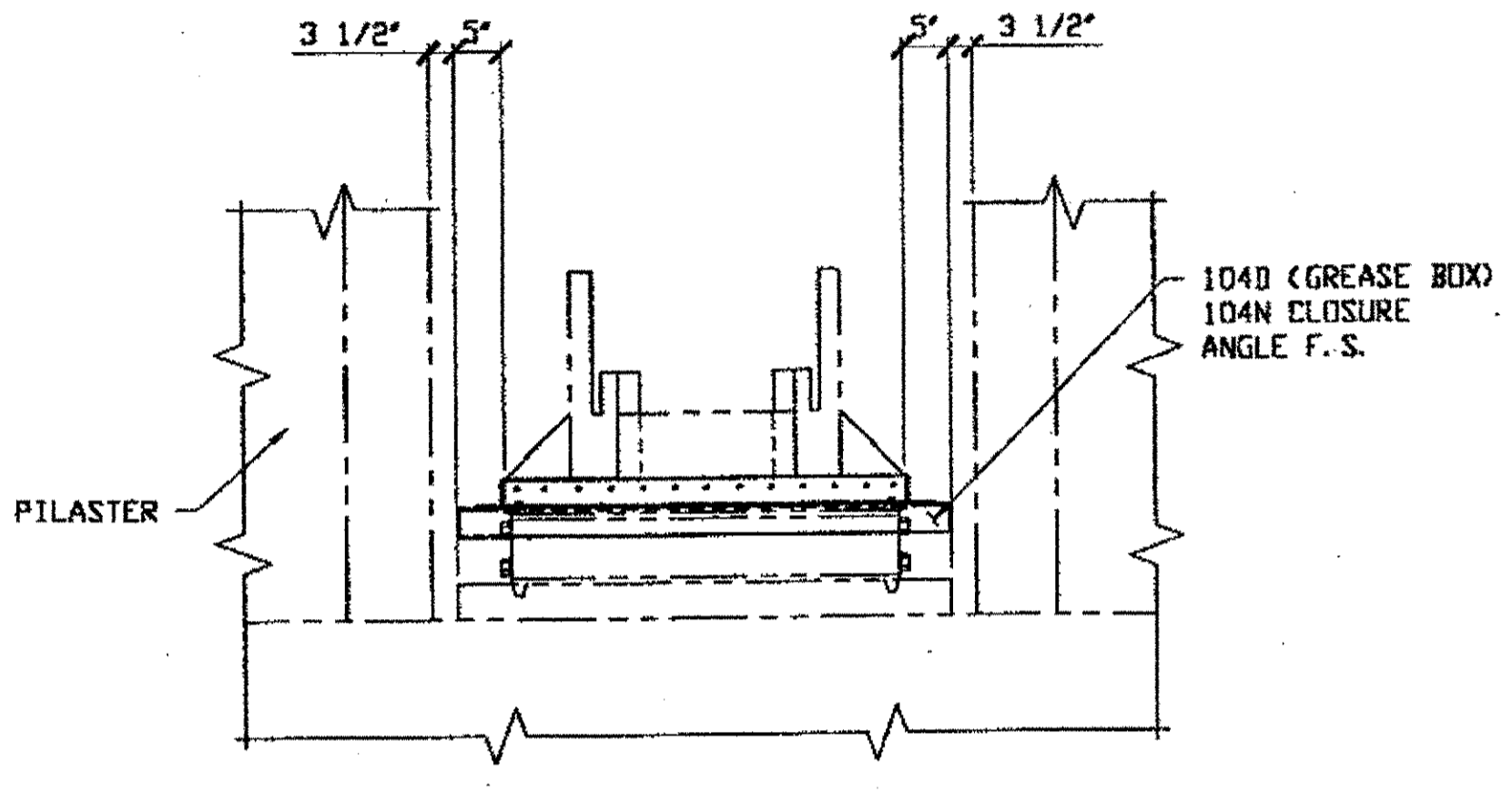
SECTION A-A



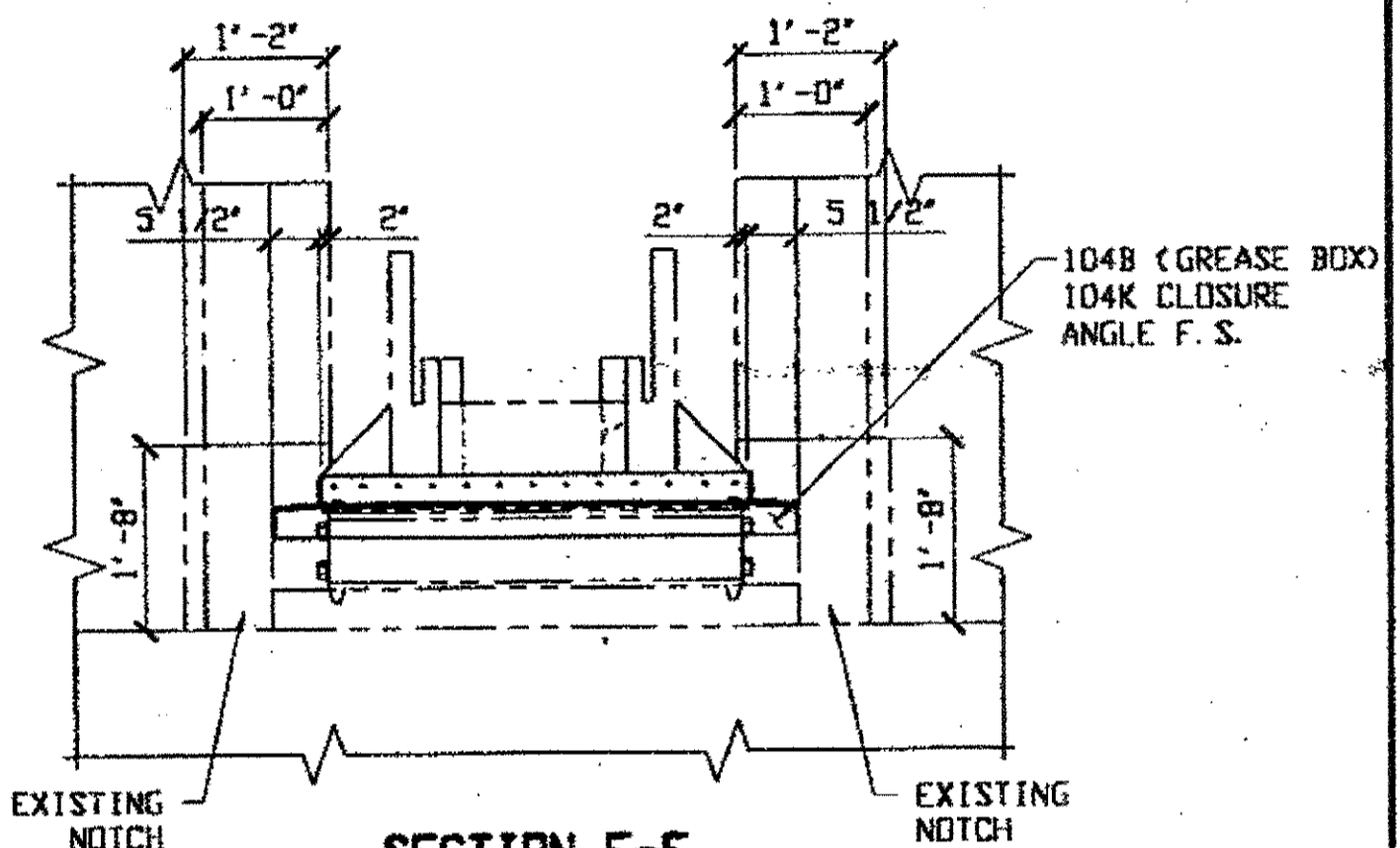
SECTION D-D



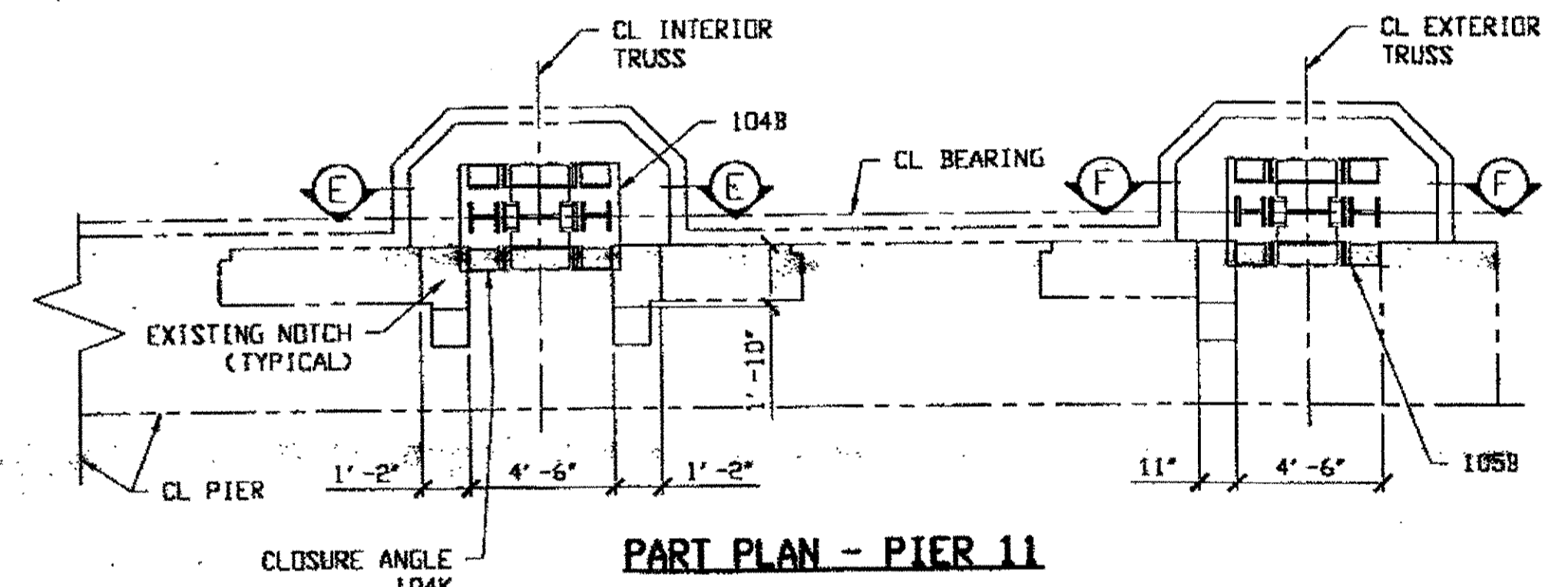
PART PLAN - PIERS 6 & 8



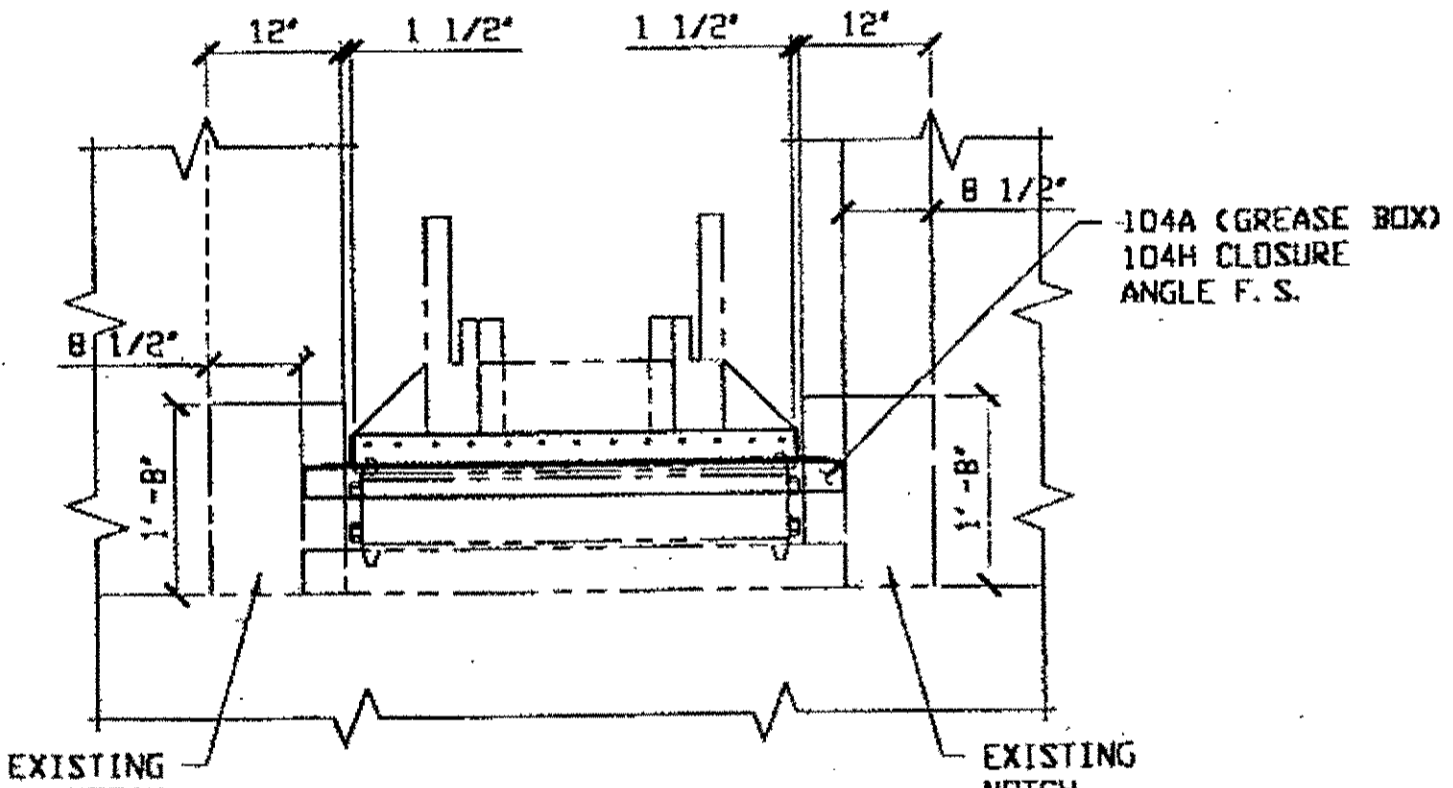
SECTION B-B



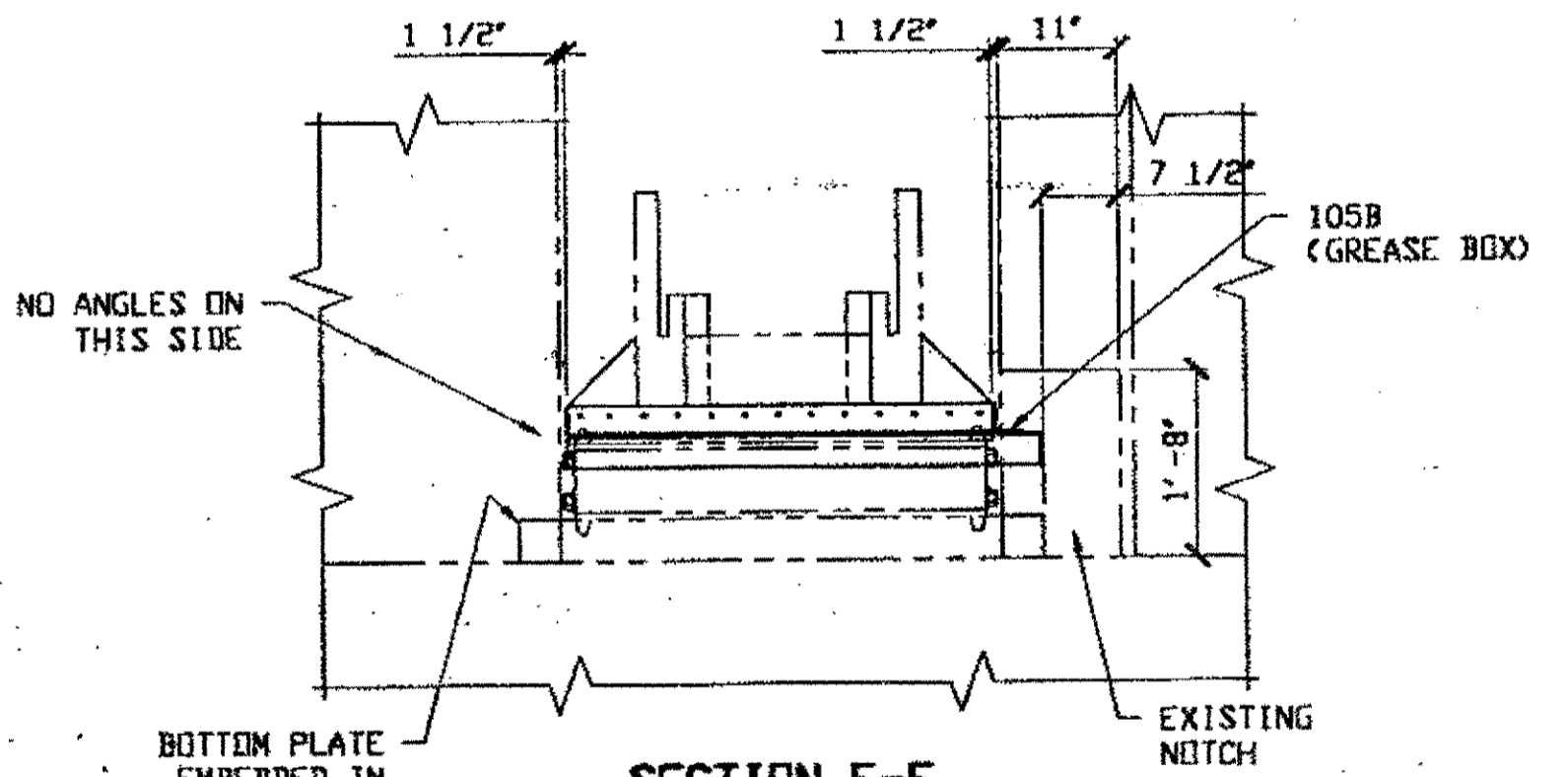
SECTION E-E



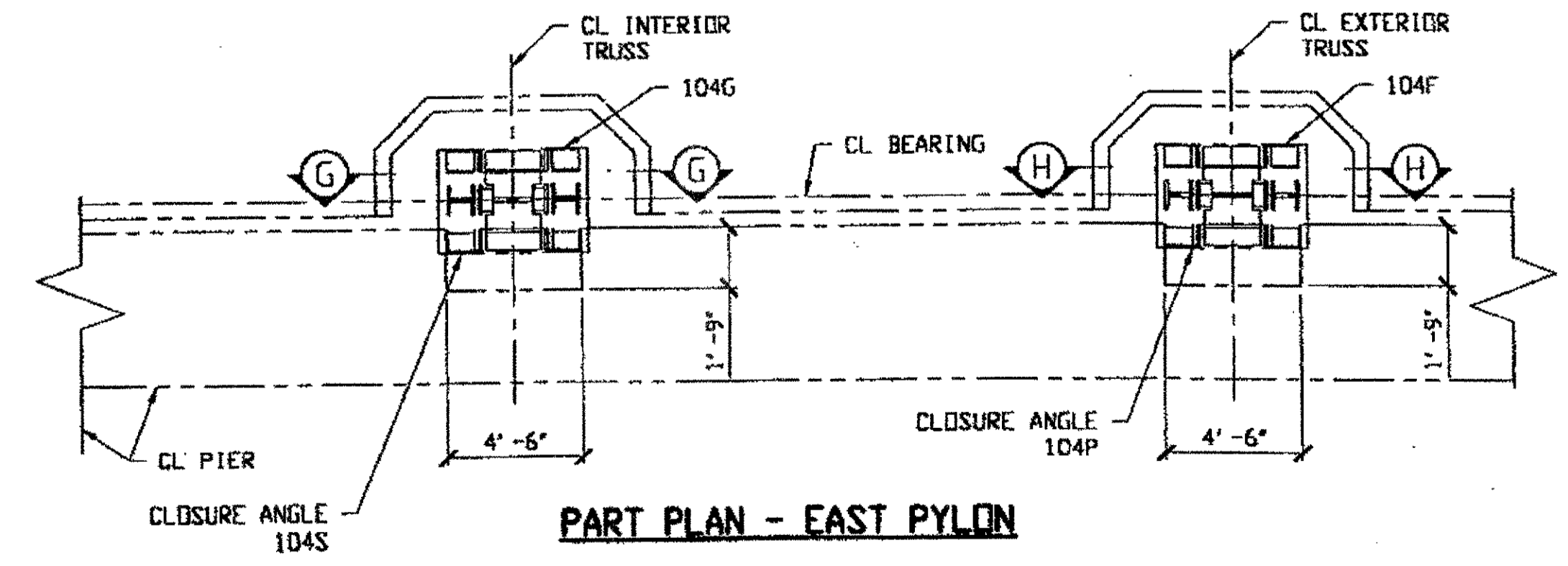
PART PLAN - PIER 11



SECTION C-C



SECTION F-F



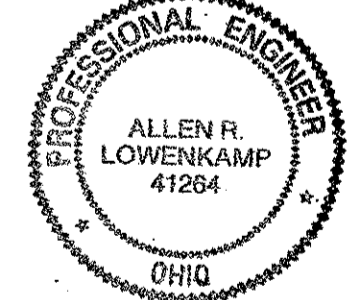
PART PLAN - EAST PYLON

**NOTE:**  
 1. WHERE BOLTS COULD BE REMOVED 1/2" x 1 1/4" STAINLESS BOLTS WERE USED TO ATTACH GREASE BOX ANGLES TO BEARING PLATES  
 2. WHERE BOLTS COULD NOT BE REMOVED THE GREASE BOX ANGLES WERE WELDED TO BEARING PLATE.

O.D.O.T. DIST. 12

ACCEPTED	2/9/04	B.S.M.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 08/28/00  
 CHECKED BY: DATE:  
 GAF 09/01/00

DOT ITEM LINE NO. 0143  
 DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY

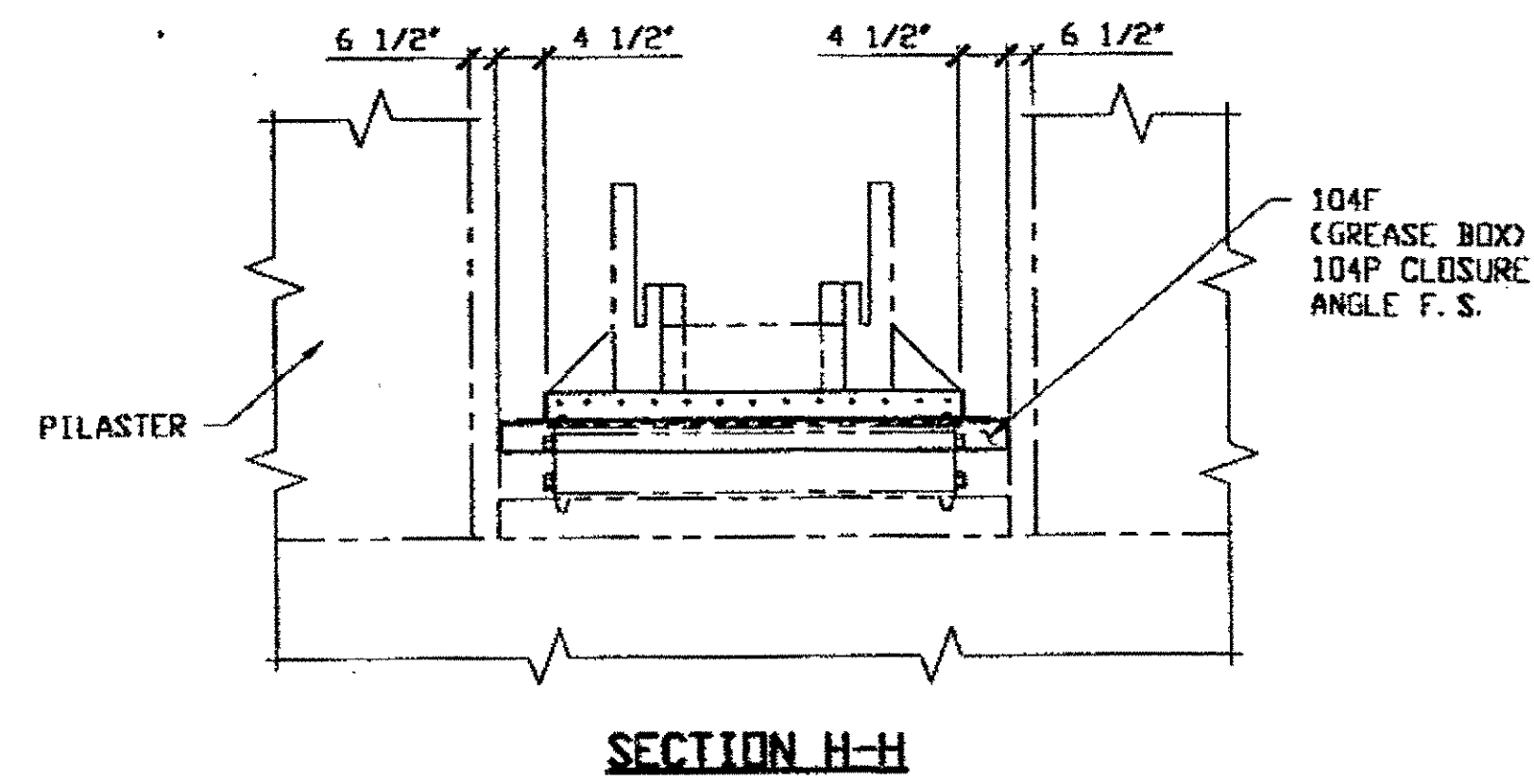
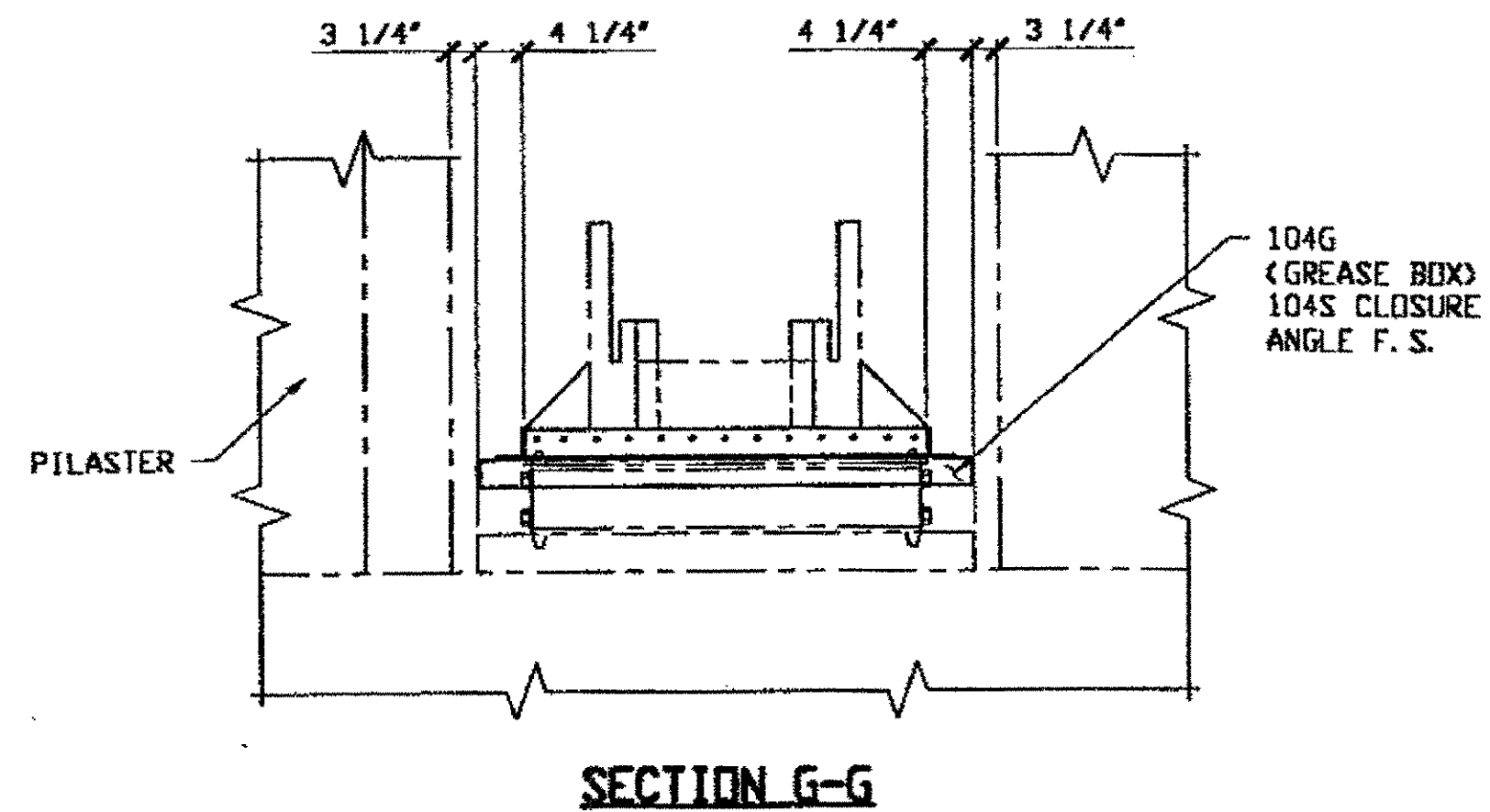
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**GREASE BOX ERECTION LAYOUT**

SHEET NUMBER: E104B  
 A3M JOB NUMBER: 80010

r at 11:32am on Tue Sep 05, 2000

Rspringer at 02:53pm on Fri Sep 01, 2000 - Last plotted by Rsp

Last modified:



**NOTE:**

1. WHERE BOLTS COULD BE REMOVED  $\frac{1}{2}$ " x  $\frac{1}{4}$ " STAINLESS BOLTS WERE USED TO ATTACH GREASE BOX ANGLES TO BEARING PLATES
2. WHERE BOLTS COULD NOT BE REMOVED THE GREASE BOX ANGLES WERE WELDED TO BEARING PLATE.

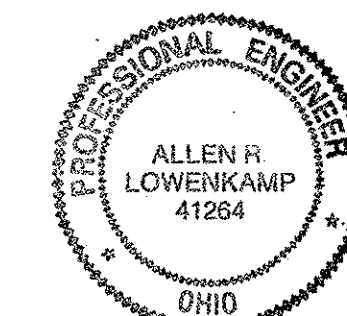
pr at 11:32am on Tue Sep 05, 2000

7 Reprinter at 03:09pm on Fri Sep 01, 2000 -1- Last Plotted by Rsj

Last modified

O.D.O.T. DIST. 12	
ACCEPTED	2/7/01 RSM
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	

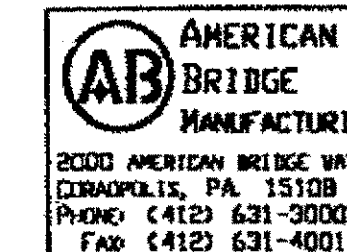
RELEASED FOR CONSTRUCTION  
DATE 9/8/00 BY cm



DOT ITEM LINE NO. 0143  
DOT BID ITEM NO. B63E50000

NO.	DATE	DESCRIPTION	BY

FABRICATOR



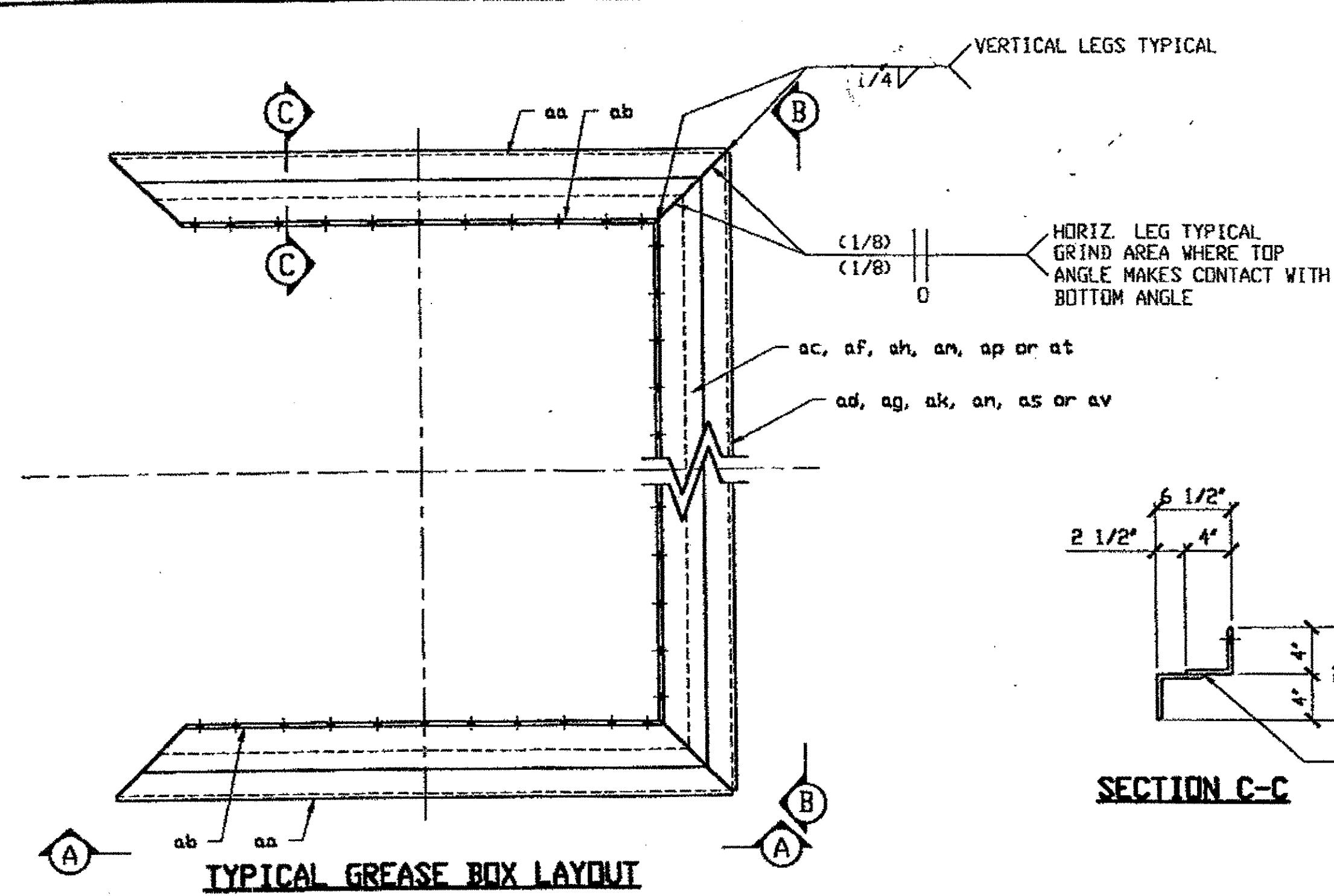
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**GREASE BOX ERECTION LAYOUT**

STEEL ERECTOR

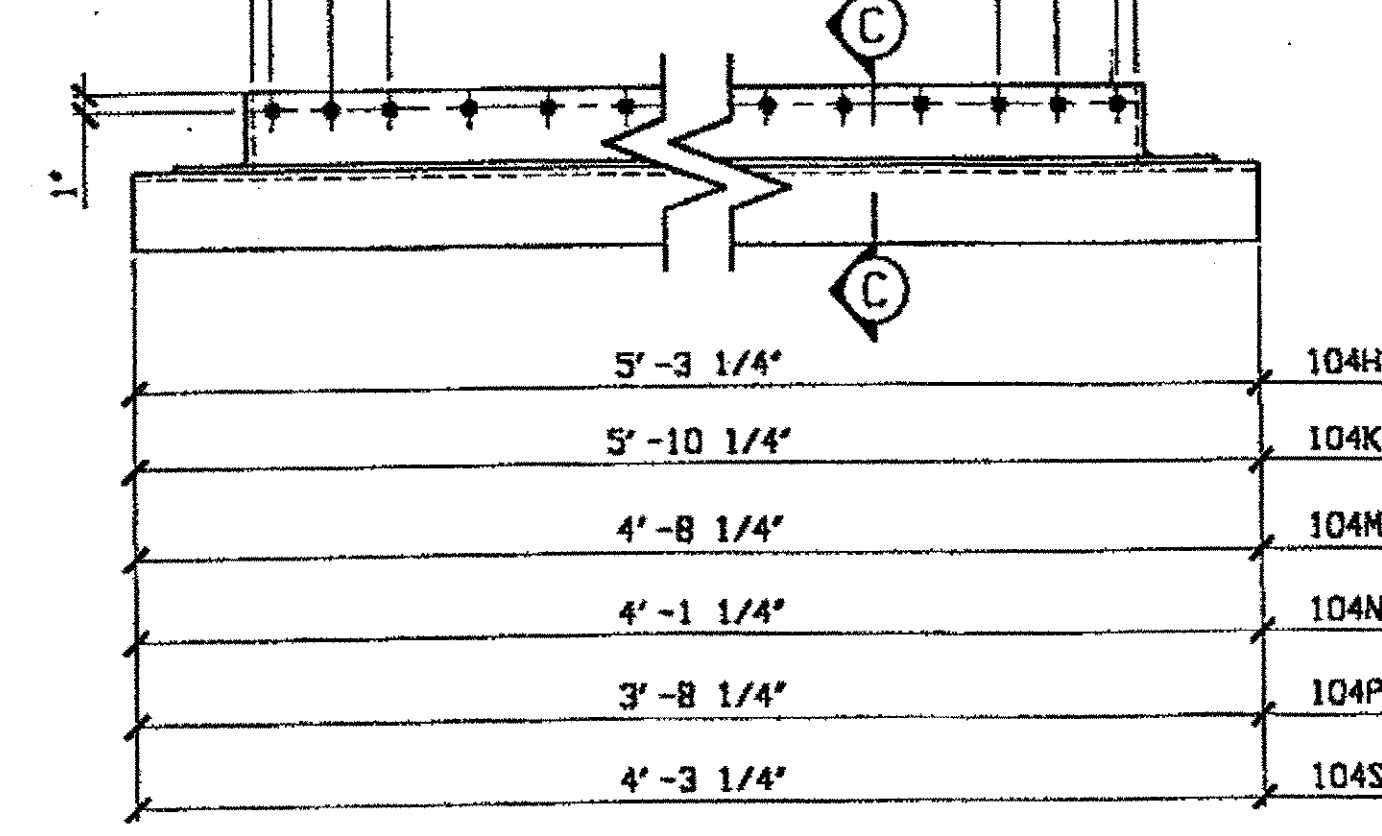
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 08/28/00  
CHECKED BY: DATE: GAF 09/01/00

SHEET NUMBER: E104B  
JOB NUMBER: 800010

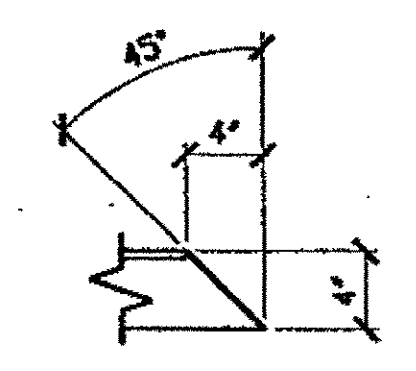


4'-3"	104H (ac)	
4'-10"	104K (af)	
3'-8"	104M (ah)	
3'-1"	104N (an)	
2'-8"	104P (ap)	
3'-3"	104S (at)	
1' 2 1/2"	11 SPCS @ 4" = 3'-8"	104H (ac)
1' 3" 3"	11 SPCS @ 4" = 3'-8"	104K (af)
1 1/2" 2 1/2"	9 SPCS @ 4" = 3'-0"	104M (ah)
1 1/2" 3"	7 SPCS @ 4" = 2'-4"	104N (an)
2"	7 SPCS @ 4" = 2'-4"	104P (ap)
1 1/2"	9 SPCS @ 4" = 3'-0"	104S (at)

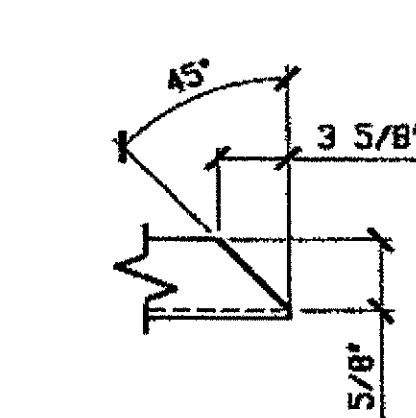


CLOSURE ANGLE DETAILS

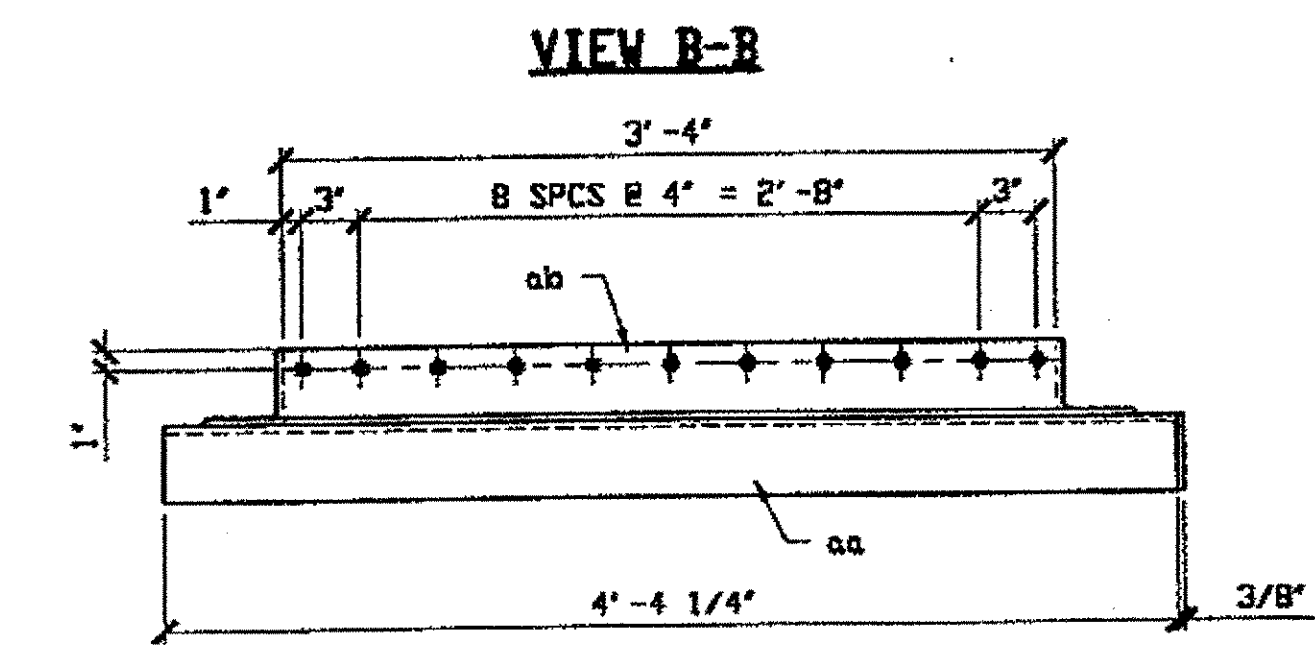
TYPICAL BOLTING ANGLE EDGE CUT



TYPICAL BOTTOM ANGLE EDGE CUT



4'-3"	104A (ac)	
4'-10"	104B (af)	
3'-8"	104C (ah)	
3'-1"	104D (an)	
2'-8"	104F (ap)	
3'-3"	104G (at)	
1' 2 1/2"	11 SPCS @ 4" = 3'-8"	104A (ac)
1' 3" 3"	11 SPCS @ 4" = 3'-8"	104B (af)
1 1/2" 2 1/2"	9 SPCS @ 4" = 3'-0"	104C (ah)
1 1/2" 3"	7 SPCS @ 4" = 2'-4"	104D (an)
2"	7 SPCS @ 4" = 2'-4"	104F (ap)
1 1/2"	9 SPCS @ 4" = 3'-0"	104G (at)
5'-3 1/4"	104A (ad)	
5'-10 1/4"	104B (ag)	
4'-8 1/4"	104C (ak)	
4'-1 1/4"	104D (ar)	
3'-8 1/4"	104F (as)	
4'-3 1/4"	104G (av)	



VIEW A-A (TYPICAL ALL GREASE BOXES)

LINE NO.	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		104A	8	GREASE BOX				2108
2		aa	16	L 4 X 4 X 3/8	4	4 1/4		683
3		ab	16	L 4 X 4 X 3/8	4	0		627
4		ac	8	L 4 X 4 X 3/8	4	11		393
5		ad	8	L 4 X 4 X 3/8	5	3 1/4		413
6		104B	4	GREASE BOX				1101
7		aa	8	L 4 X 4 X 3/8	4	4 1/4		341
8		ab	8	L 4 X 4 X 3/8	4	0		314
9		af	4	L 4 X 4 X 3/8	5	6		216
10		ag	4	L 4 X 4 X 3/8	5	10 1/4		230
11		104C	8	GREASE BOX				2018
12		aa	16	L 4 X 4 X 3/8	4	4 1/4		683
13		ab	16	L 4 X 4 X 3/8	4	0		627
14		ah	8	L 4 X 4 X 3/8	4	4		340
15		ak	8	L 4 X 4 X 3/8	4	8 1/4		368
16		104D	8	GREASE BOX				1926
17		aa	16	L 4 X 4 X 3/8	4	4 1/4		683
18		ab	16	L 4 X 4 X 3/8	4	0		627
19		an	8	L 4 X 4 X 3/8	3	9		294
20		ar	8	L 4 X 4 X 3/8	4	1 1/4		322
21		104F	2	GREASE BOX				467
22		aa	4	L 4 X 4 X 3/8	4	4 1/4		171
23		ab	4	L 4 X 4 X 3/8	4	0		157
24		ap	2	L 4 X 4 X 3/8	3	4		66
25		as	2	L 4 X 4 X 3/8	3	8 1/4		73
26		104G	2	GREASE BOX				489
27		aa	4	L 4 X 4 X 3/8	4	4 1/4		171
28		ab	4	L 4 X 4 X 3/8	4	0		157
29		at	2	L 4 X 4 X 3/8	3	11		77
30		av	2	L 4 X 4 X 3/8	4	3 1/4		84
31		104H	4	GREASE BOX CLOSURE ANGLE				400
32		ac	4	L 4 X 4 X 3/8	4	11		193
33		ad	4	L 4 X 4 X 3/8	5	3 1/4		207
34		104K	4	GREASE BOX CLOSURE ANGLE				446
35		af	4	L 4 X 4 X 3/8	5	6		216
36		ag	4	L 4 X 4 X 3/8	5	10 1/4		230
37		104M	8	GREASE BOX CLOSURE ANGLE				708
38		ah	8	L 4 X 4 X 3/8	4	4		340
39		ak	8	L 4 X 4 X 3/8	4	8 1/4		368
40		104N	8	GREASE BOX CLOSURE ANGLE				616
41		an	8	L 4 X 4 X 3/8	3	9		294
42		ar	8	L 4 X 4 X 3/8	4	1 1/4		322
43		104P	2	GREASE BOX CLOSURE ANGLE				139
44		ap	2	L 4 X 4 X 3/8	3	4		66
45		as	2	L 4 X 4 X 3/8	3	8 1/4		73
46		104S	2	GREASE BOX CLOSURE ANGLE				161
47		at	2	L 4 X 4 X 3/8	3	11		77
48		av	2	L 4 X 4 X 3/8	4	3 1/4		84

PLATE PIPE FITTINGS  
SHAPES A36 FLGS. BOLTS

11:36am on Tue Sep 05, 2000  
 on \$ (EDTIME,??) - Last plotted by Repring.  
 at \$ (EDTIME,??)  
 Last modified:

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NOTES:  
 ALL HOLES ARE (3/4") U. N. D.  
 PROFESSIONAL ENGINEER  
 ALLEN R. LOWENKAMP  
 41264  
 OHIO

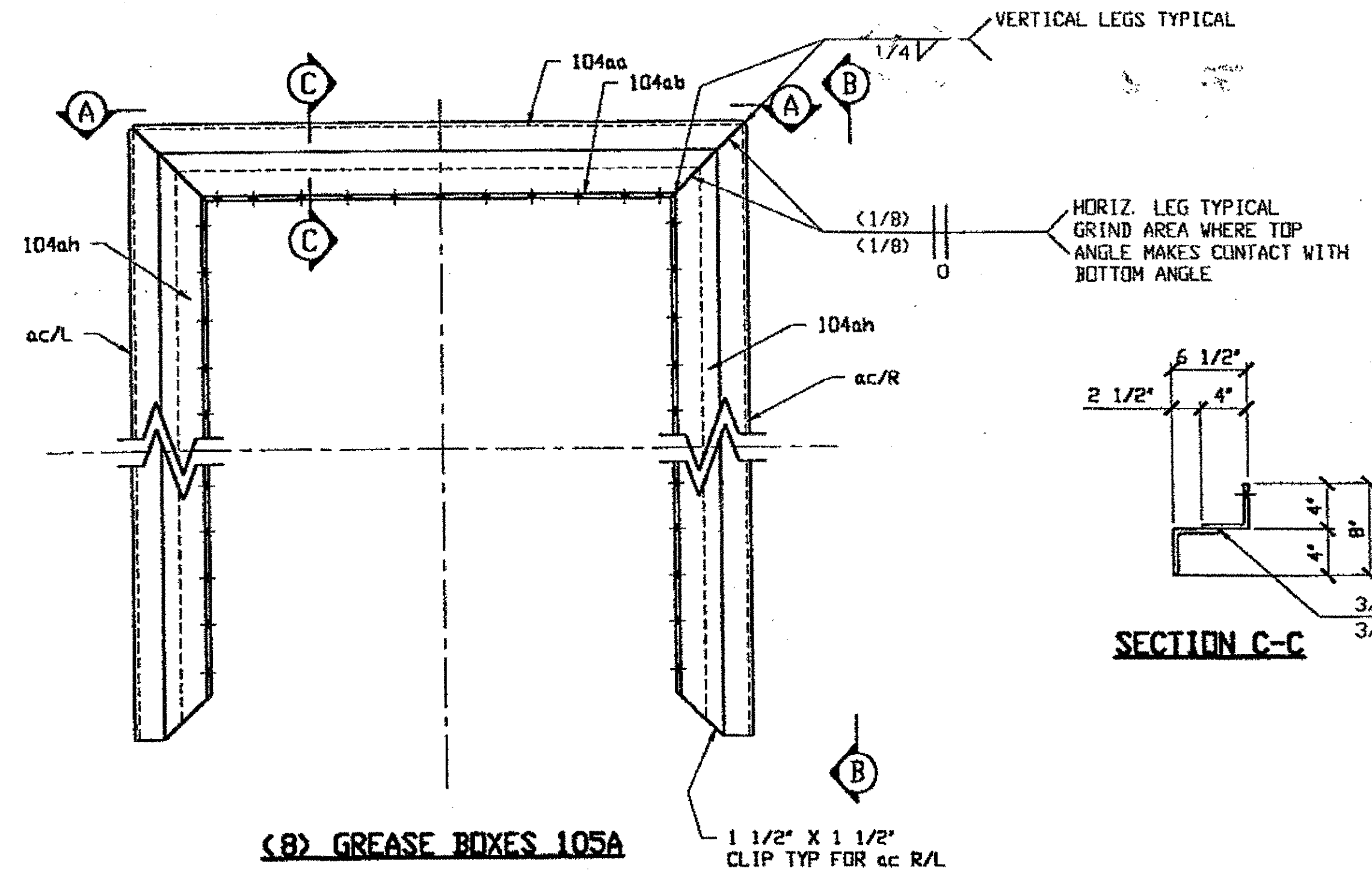
RELEASED FOR CONSTRUCTION AS NOTED  
 DATE 9/8/00 BY CW

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

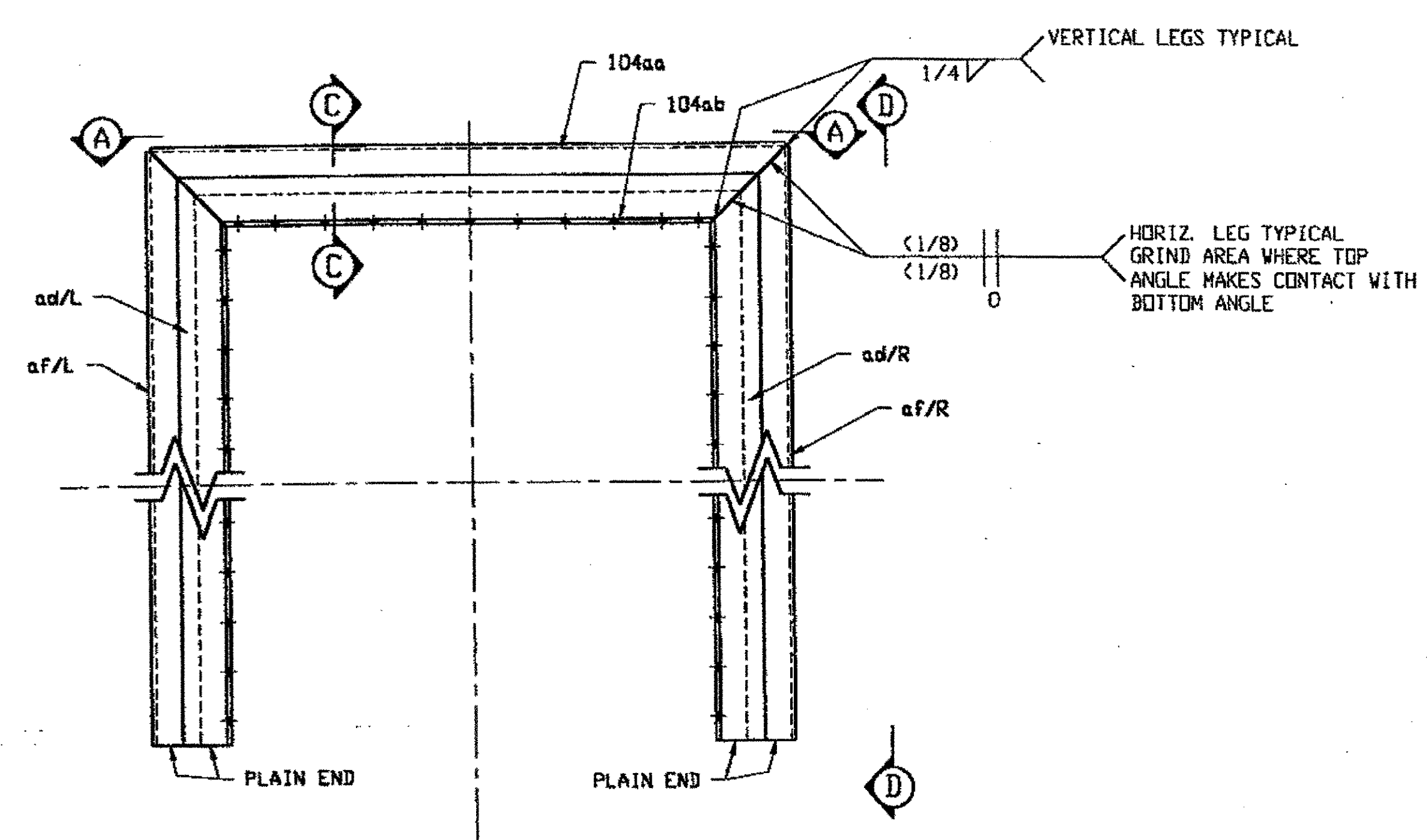
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CLEVELAND, OH 44115  
 PHONE: (412) 631-2000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0143	
DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB	
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)	
CITY OF CLEVELAND	
CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
GREASE BOX DETAILS	
SHEET NUMBER	104
ASN JOB NUMBER	800010

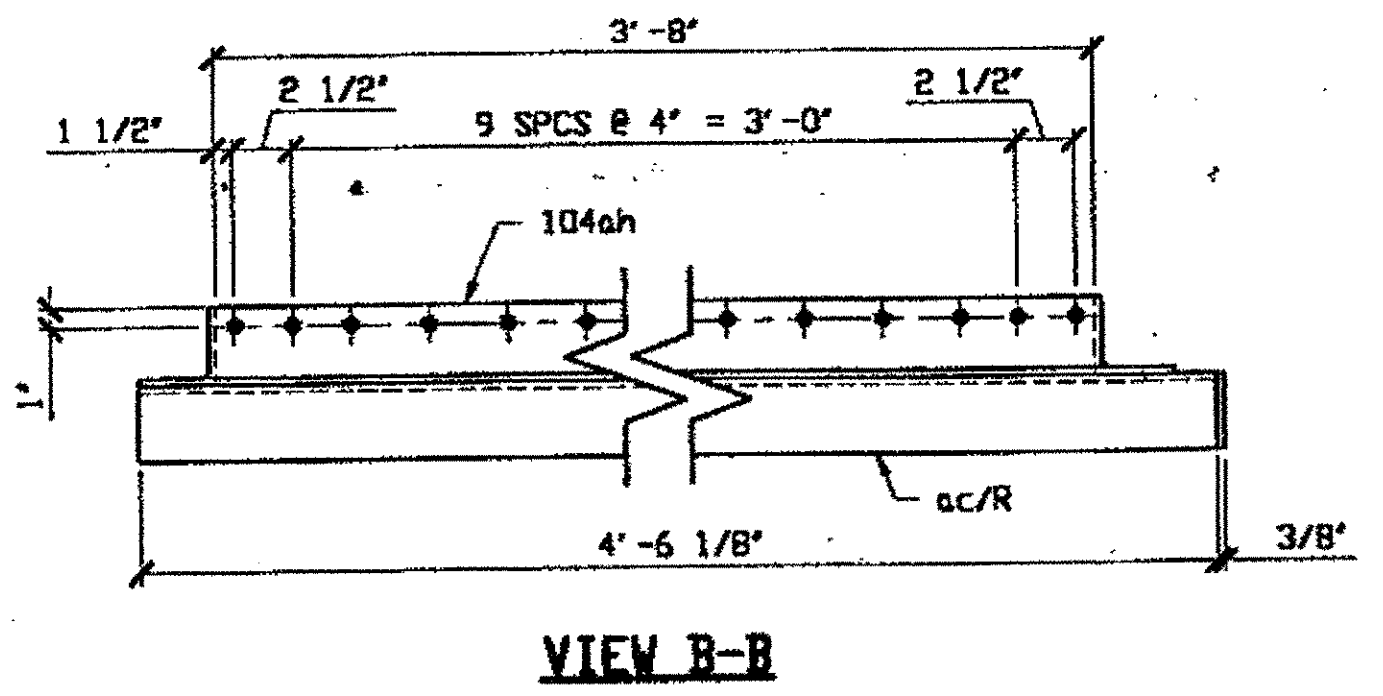
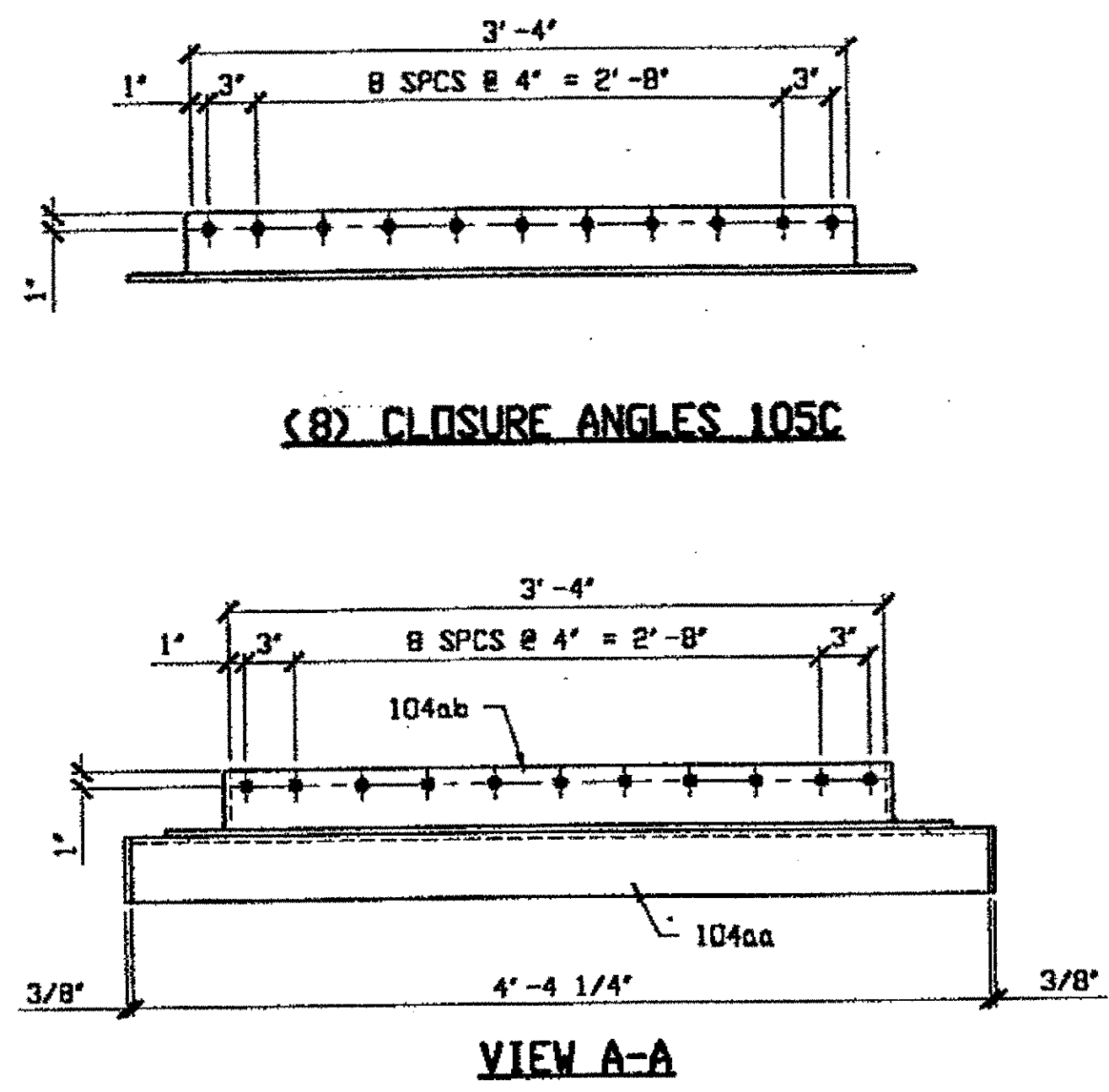
Last modified by Rspinger at 11:52am on Tue Sep 05, 2000 - l - last plotted by Rsp at 11:58am on Tue Sep 05, 2000



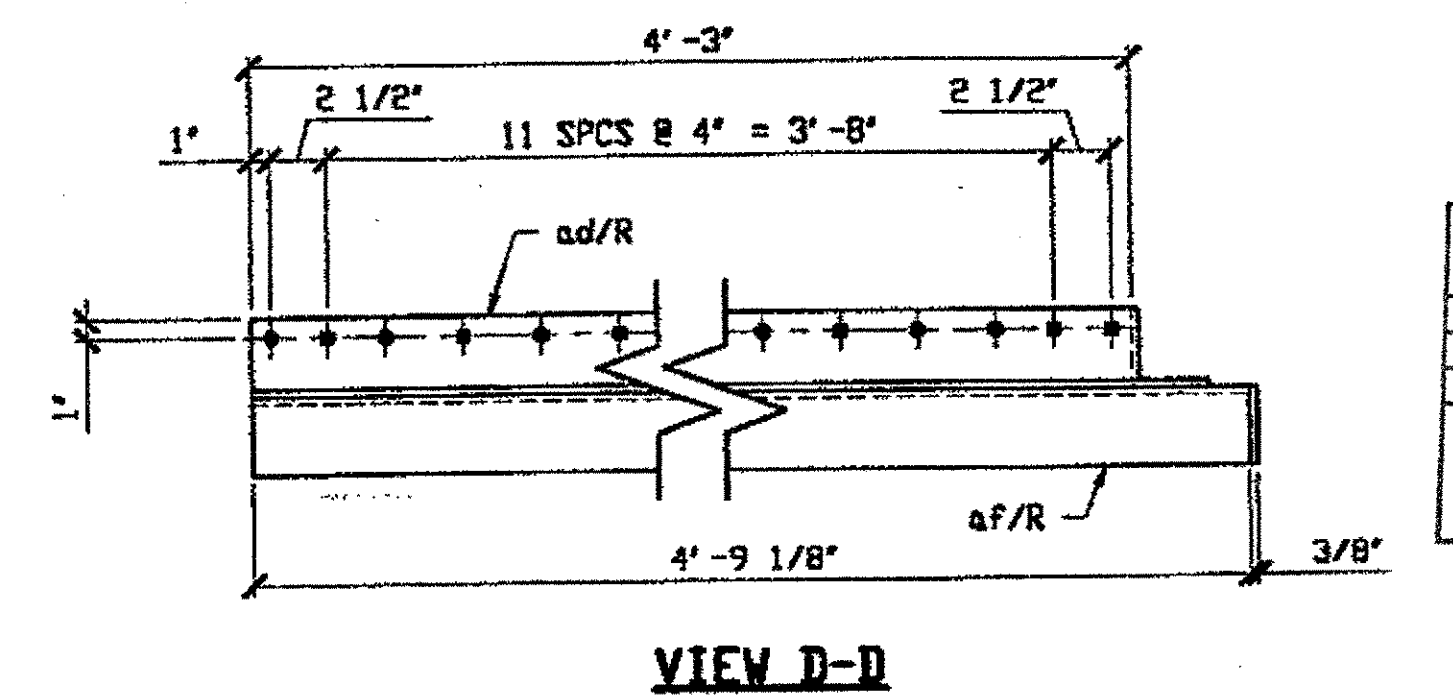
(8) GREASE BOXES 105A



(4) GREASE BOXES 105B



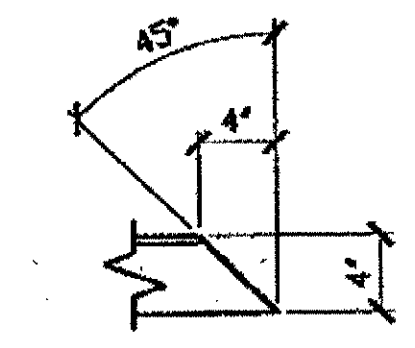
VIEW B-B



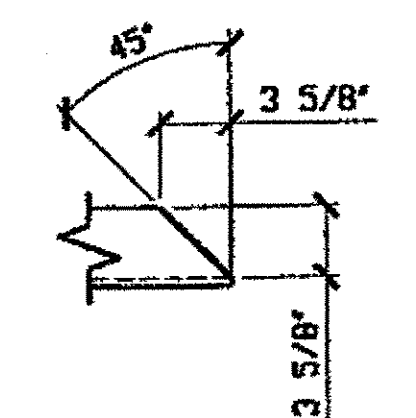
VIEW D-D

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		105A	8	GREASE BOX				2043
2		104aa	8	L 4 X 4 X 3/8	4	4 1/4		341
3		104ab	8	L 4 X 4 X 3/8	4	0		314
4		104ah	16	L 4 X 4 X 3/8	4	4		680
5		ac R/L	16	L 4 X 4 X 3/8	4	6 1/8		708
6								
7		105B	4	GREASE BOX				1060
8		104aa	4	L 4 X 4 X 3/8	4	4 1/4		171
9		104ab	4	L 4 X 4 X 3/8	4	0		157
10		ad R/L	8	L 4 X 4 X 3/8	4	7		359
11		af R/L	8	L 4 X 4 X 3/8	4	9 1/8		373
12								
13				CLOSURE ANGLE				
14		105C	8	L 4 X 4 X 3/8	4	0		314
15				BOLTS				
16				1/2 X 1/4 STAINLES				
PLATE		PIPE		FITTINGS				
SHAPES A36		FLGS.		BOLTS				

NOTES:  
1. ALL HOLES ARE (3/4" Ø) U. N. C.

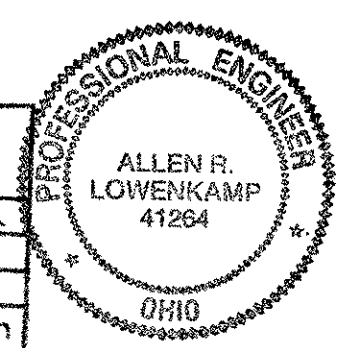


BOLTING ANGLE EDGE CUT TYPICAL U. N. C.



BOTTOM ANGLE EDGE CUT TYPICAL U. N. C.

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED 2/9/04 bsm  
NOT ACCEPTED



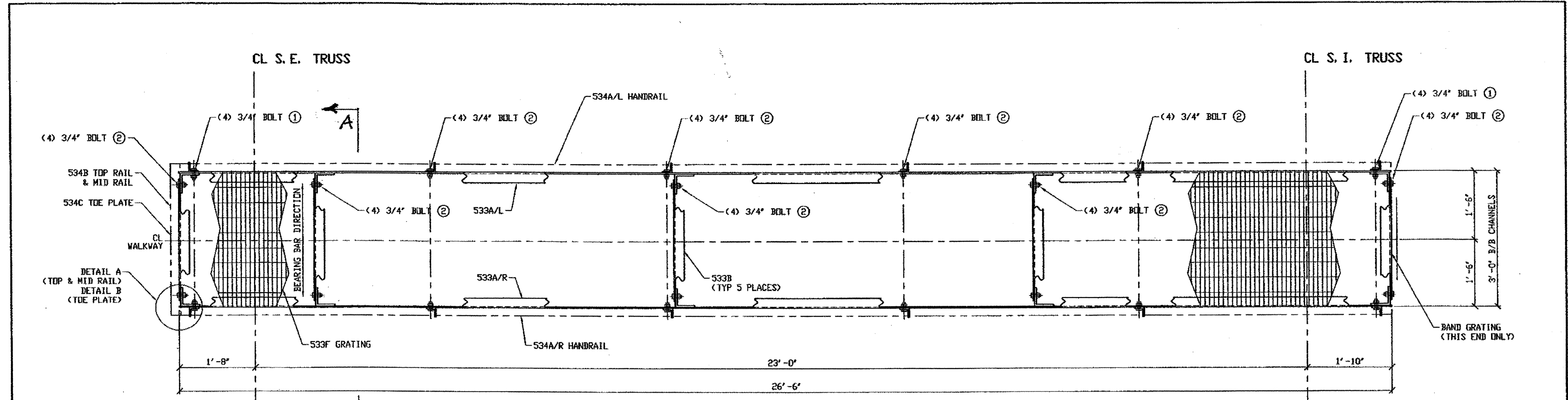
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANPOLIS, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

DOT ITEM LINE NO. 0143		DOT BID ITEM NO. 863E5000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13 GREASE BOX DETAILS			
SHEET NUMBER		105	
JOB NUMBER		800010	

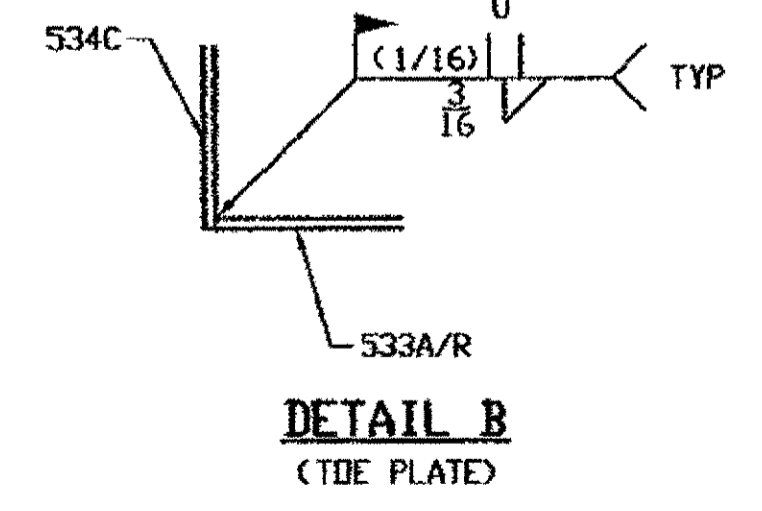
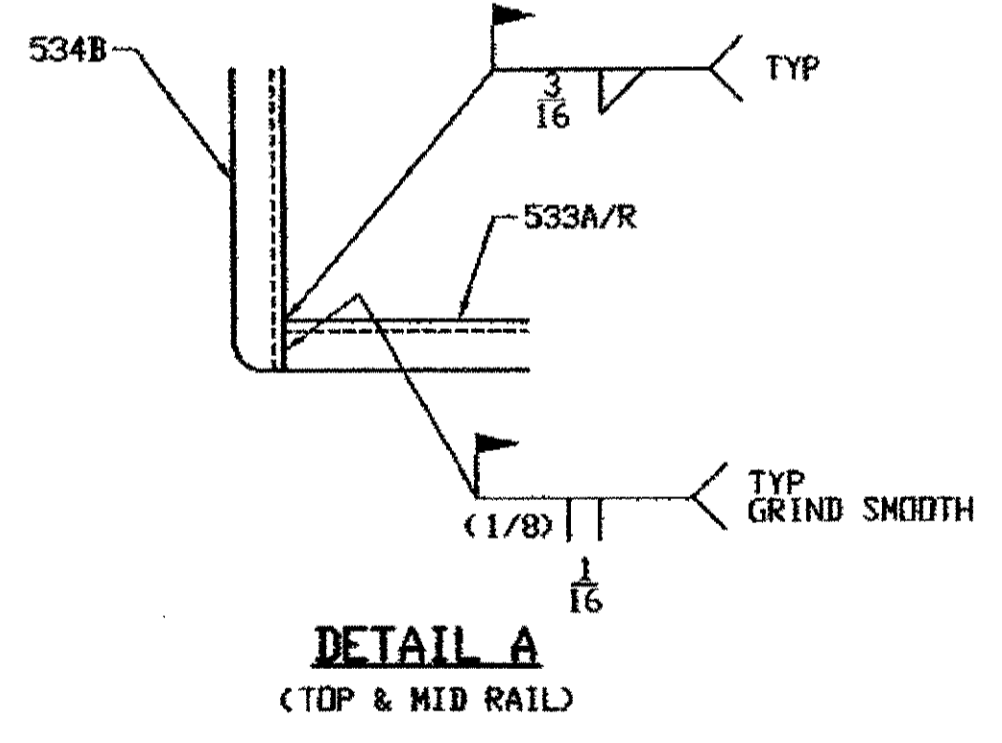
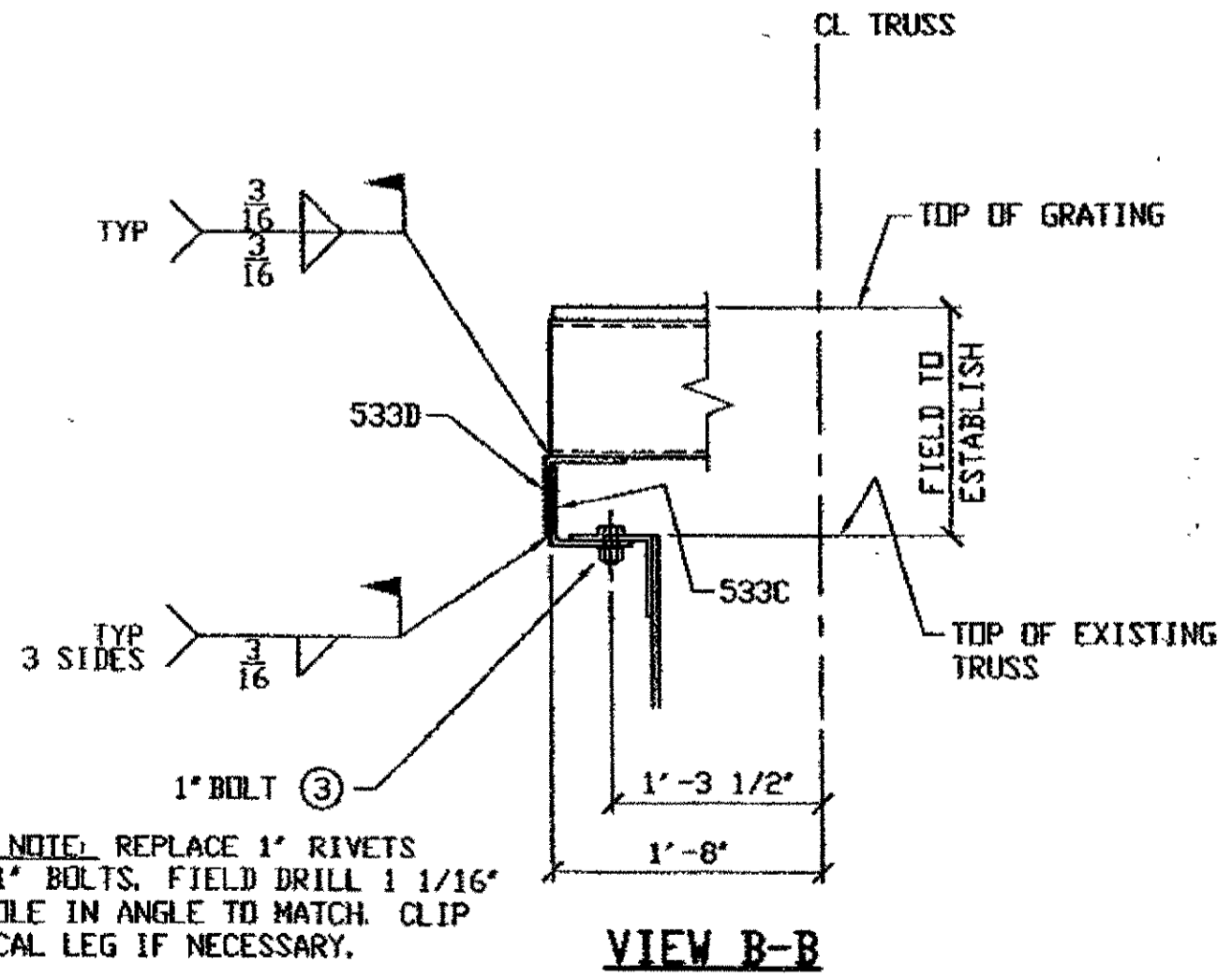
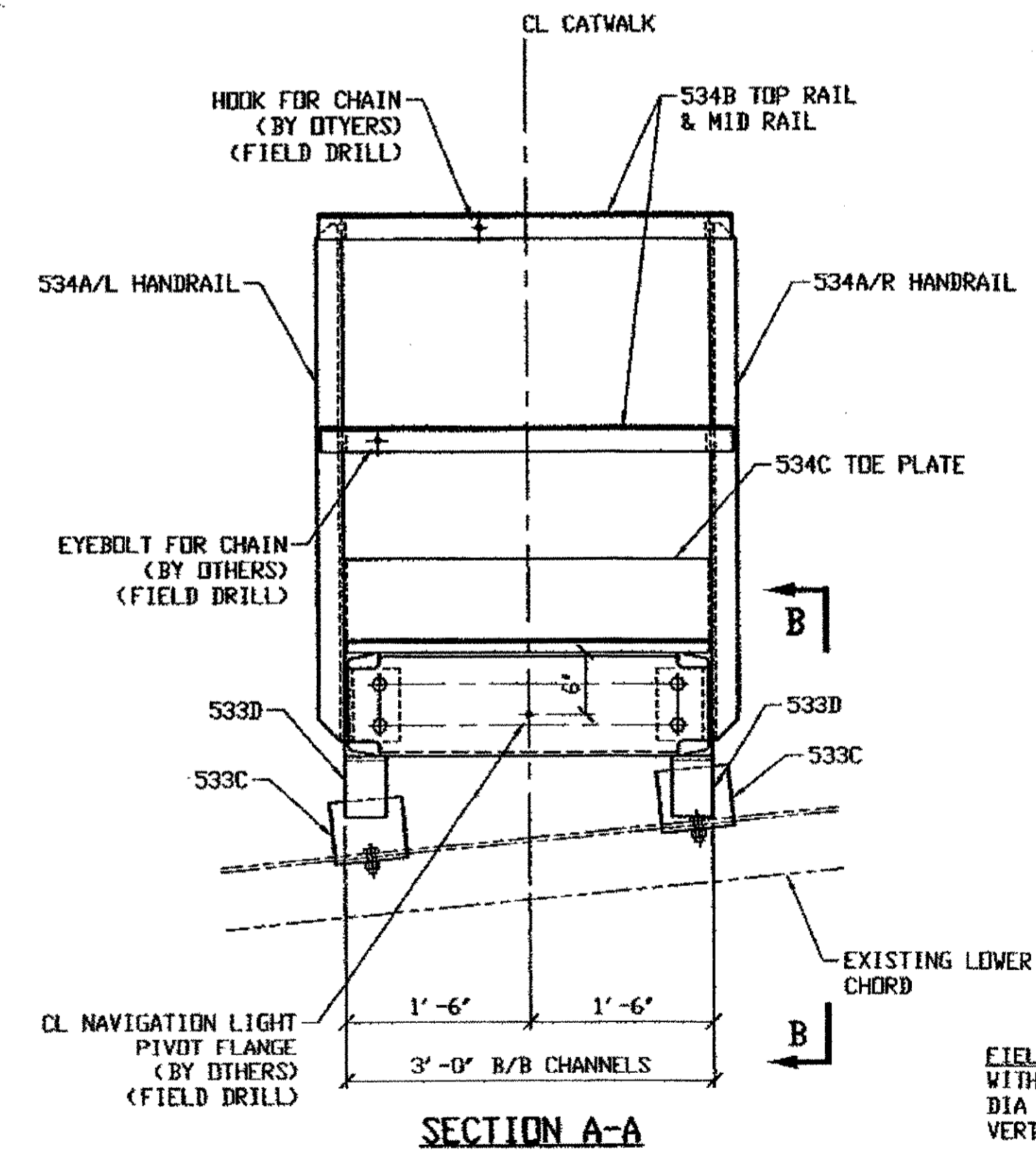
RELEASED FOR CONSTRUCTION AS NOTED  
DATE 9/8/00 BY cu

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: RAS  
DATE: 9/01/00  
CHECKED BY: GAF  
DATE: 9/05/00



1 - SOUTH CENTER NAVIGATION LIGHT CATWALK (SHOWN)  
 / - NORTH CENTER NAVIGATION LIGHT CATWALK (OPP. HAND)  
**AT THE CENTER OF SPAN 10**



- FIELD BOLT LIST**
- ① 3/4" DIA. HVY. HEX BOLT x 0'-2 1/2" LG. W/HVY. HEX NUT & ONE WASHER EACH (16 REQUIRED)
  - ② 3/4" DIA. HVY. HEX BOLT x 0'-2" LG. W/HVY. HEX NUT & ONE WASHER EACH (72 REQUIRED)
  - ③ 1" DIA. HVY. HEX BOLT x 0'-2" LG. W/HVY. HEX NUT & ONE WASHER EACH (10 REQUIRED)

**NOTES:**

1. ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
2. WORK THIS DRAWING WITH adache-civini-lynn associates DRAWING 147/154 & 148/154 BURGESS & NIPLE LIMITED DRAWINGS 10N/154, 146A/154, 146B/154.

G:\Contracts\9000\Drawings\E146A.dwg  
 Save by rsp on 07 May 07, 2002  
 Plot by gfos at 03:25pm May 07, 2002  
 Model space plot + Scale = 1/12

**O.D.O.T. DIST. 12**

ACCEPTED	3/3/02	PSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

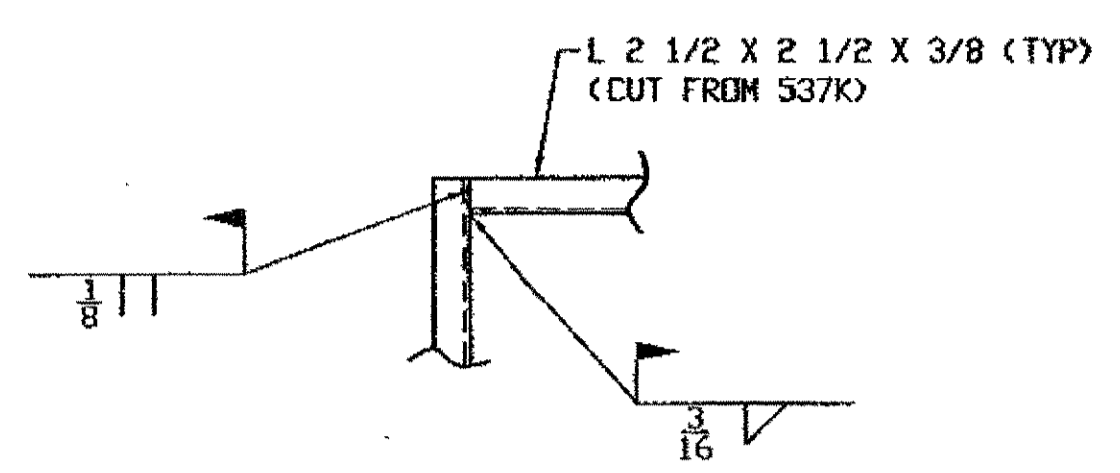


**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12508 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

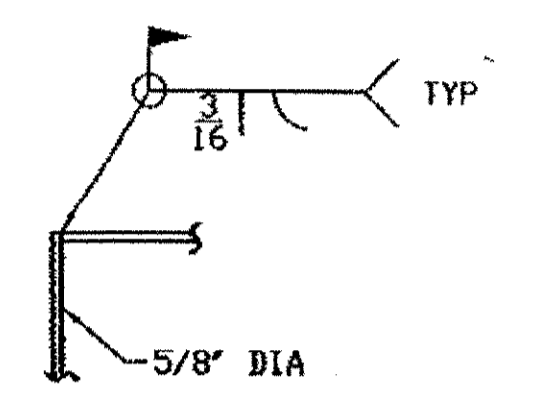
**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNHILLS, PA 15106  
 PHONE: (412) 631-9000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0134		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO			
DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
NAVIGATION LIGHT CATWALK			
DRAWN BY: DATE AMW 02/25/02		SHEET NUMBER E146	
CHECKED BY: DATE GAF 5/6/02		JOB NUMBER 800010	

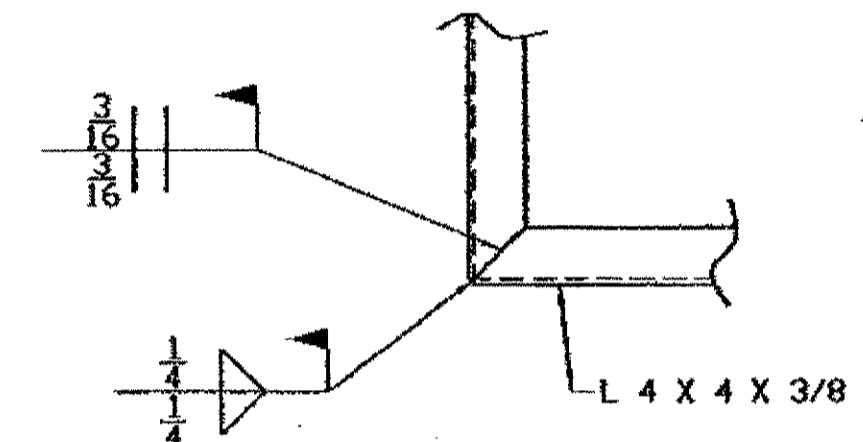
**R-1 @ NORTH WEST SIDE OF SPAN 10**  
**R-2 @ SOUTH WEST SIDE OF SPAN 10**  
**(AT EXPANSION JOINT)**



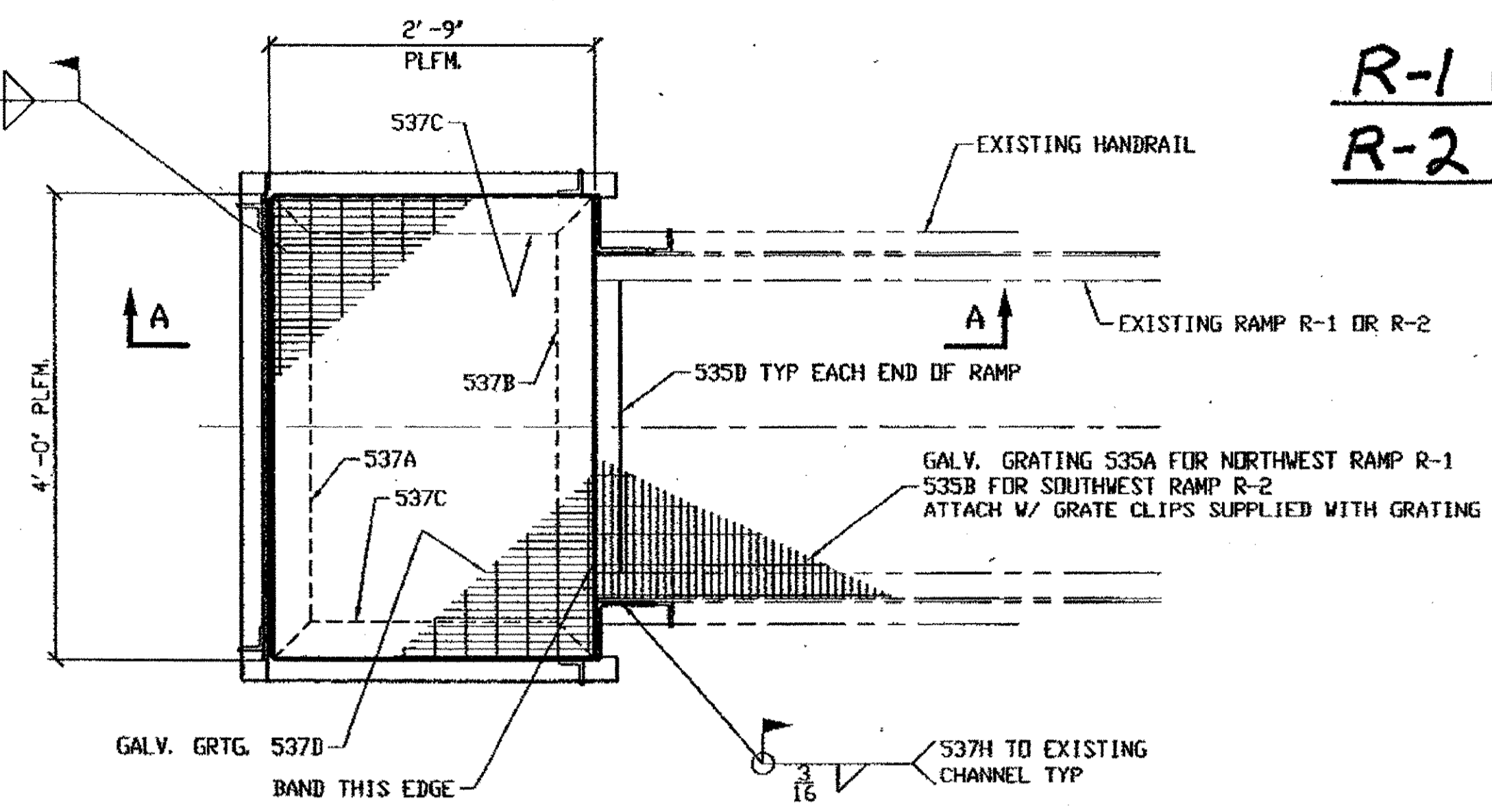
TYPICAL TOP RAIL CORNER DETAIL



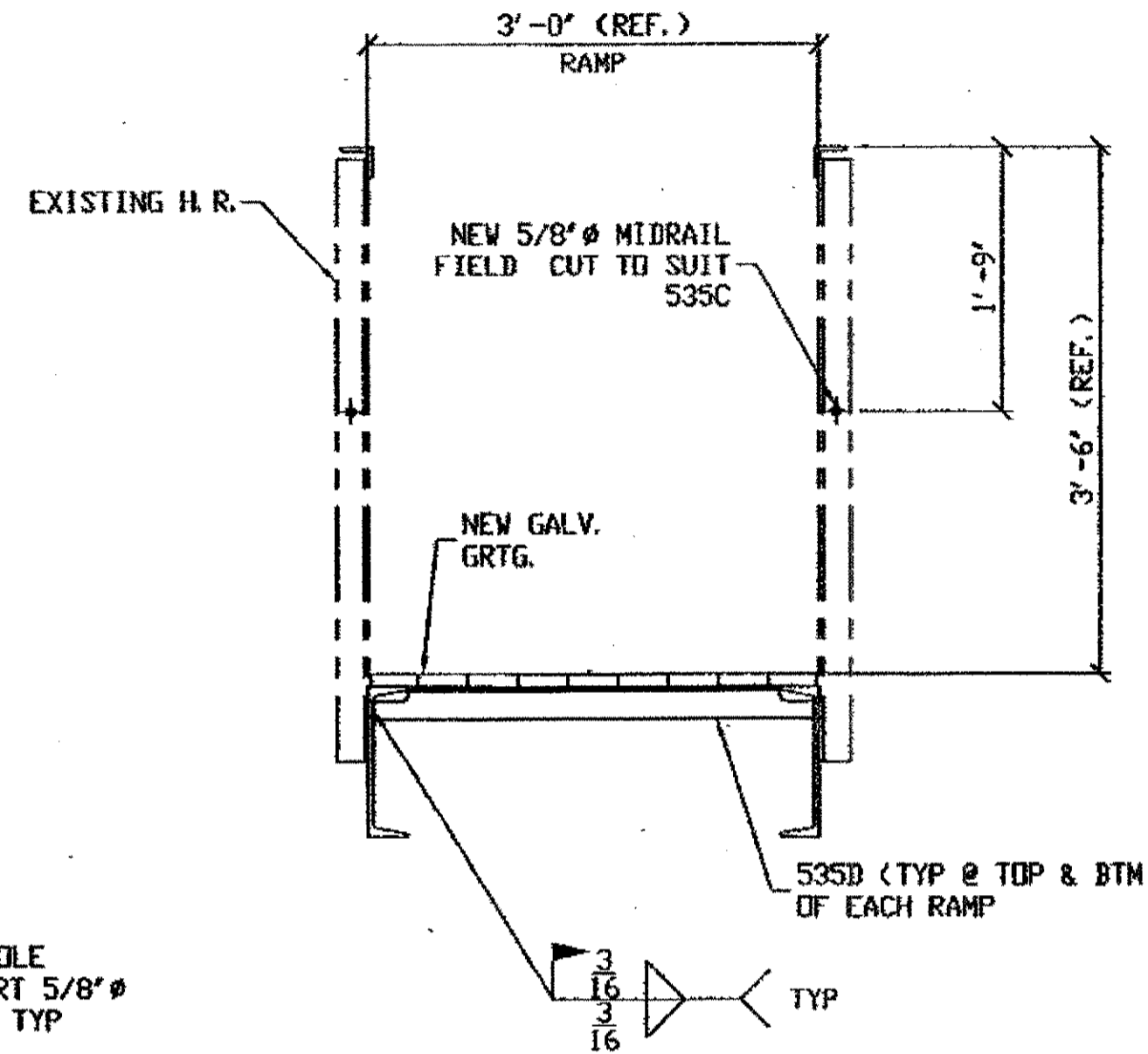
TYPICAL MIDRAIL CORNER DETAIL



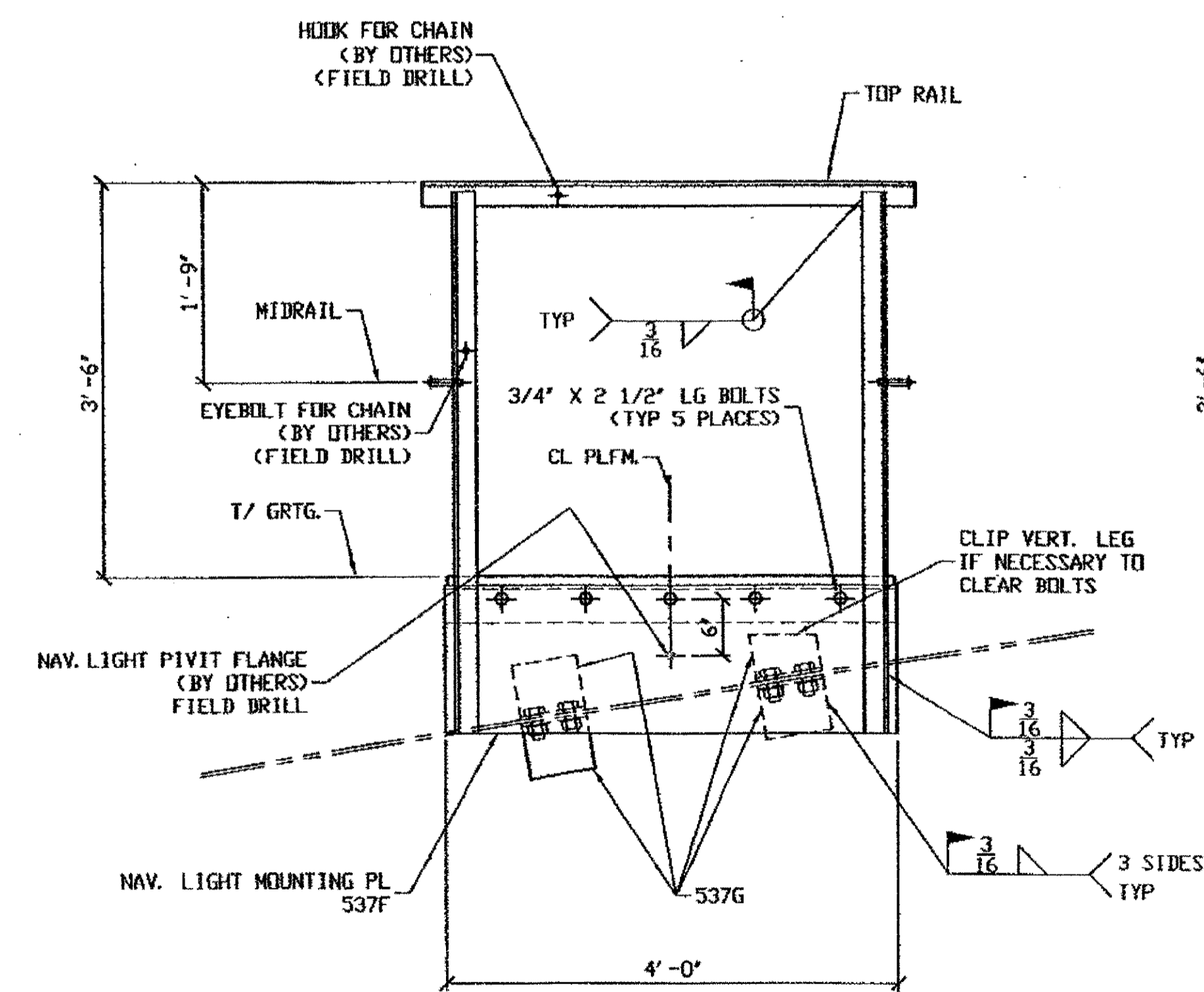
TYPICAL PLFM CORNER DETAIL



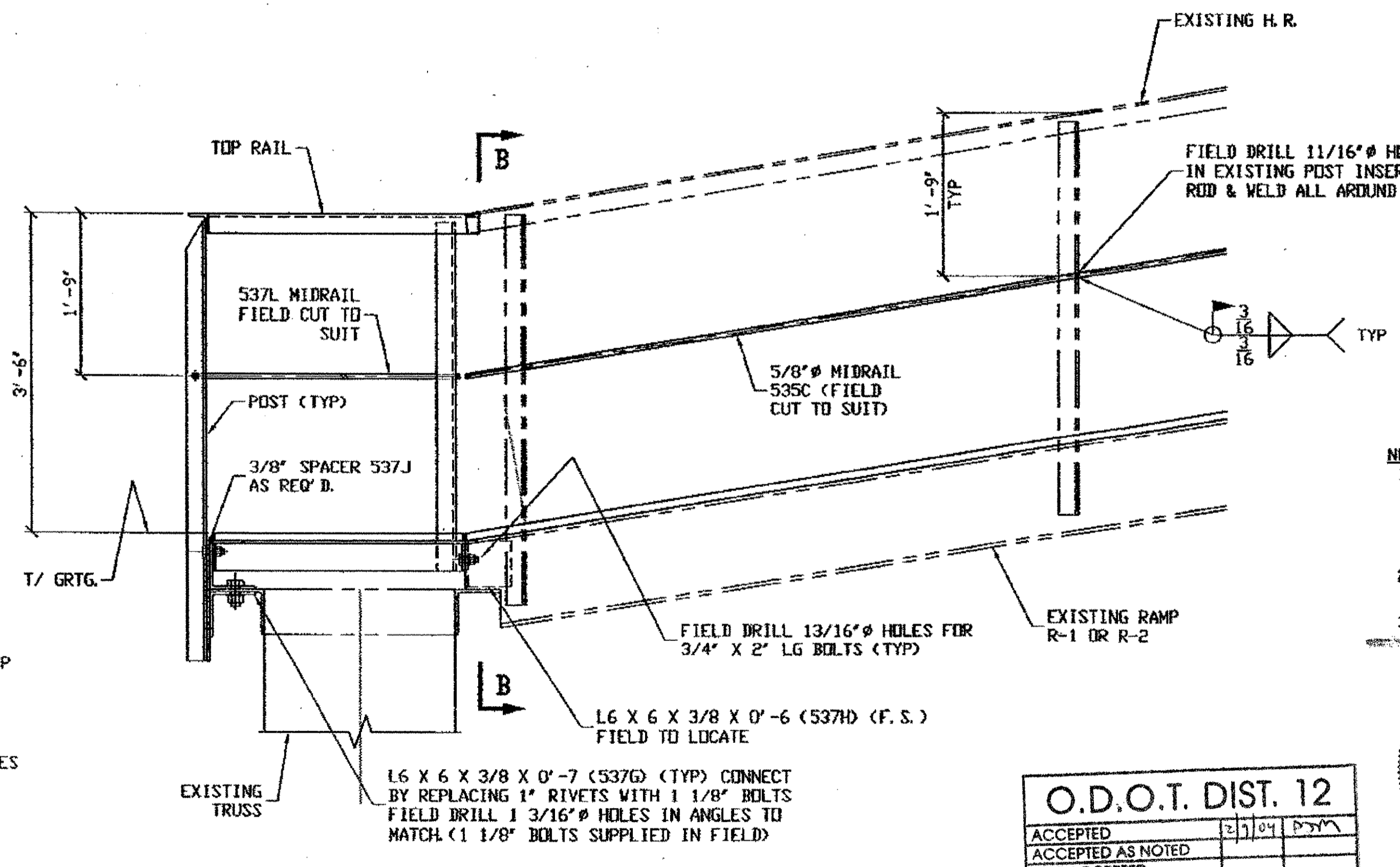
PLAN AT EXISTING RAMPS R-1 & R-2  
 FIELD TO CUT ALL TOP RAIL AND POSTS TO SUIT FROM L 2 1/2 X 2 1/2 X 3/8 (537K)



SECTION B-B



SECTION A-A



- NOTES:
1. ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  2. WORK THIS DRAWING WITH BURGESS AND NIPLE LTD DRAWINGS 146A/154 AND 146B/154.
  3. DAMAGE TO GALV. GRATING DUE TO WELDING, TO BE REPAIRED WITH GALV. GRATING COMPOUND.

O.D.O.T. DIST. 12  
 ACCEPTED [ ] [ ] [ ] [ ]  
 ACCEPTED AS NOTED [ ] [ ] [ ] [ ]  
 NOT ACCEPTED [ ] [ ] [ ] [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



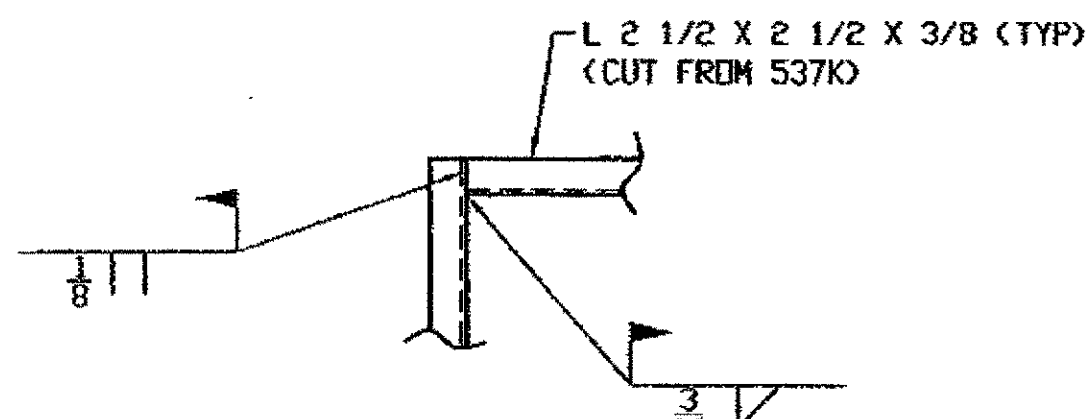
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA 15108  
 PHONE: (412) 531-3000  
 FAX: (412) 531-4001

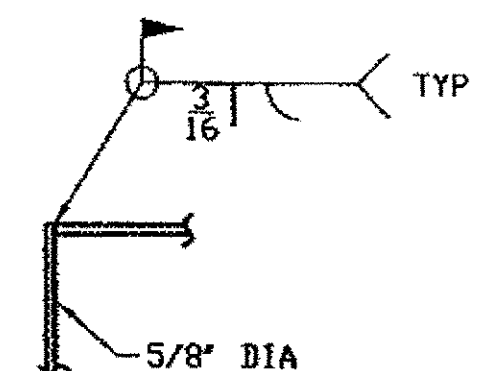
DOT ITEM LINE NO. 0134		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 NAVIGATION PLFM. @ RAMPS			
DRAWN BY: DATE: GAF 05/20/02		SHEET NUMBER: E147	
CHECKED BY: DATE:		JOB NUMBER: 800010	

G:\Contracts\800010\Drawings\E147.dwg  
 Save by gfas 1:17pm May 21, 2002  
 Plot by gfas at 02:18pm May 21, 2002  
 Model space plot + Scale = 1/12

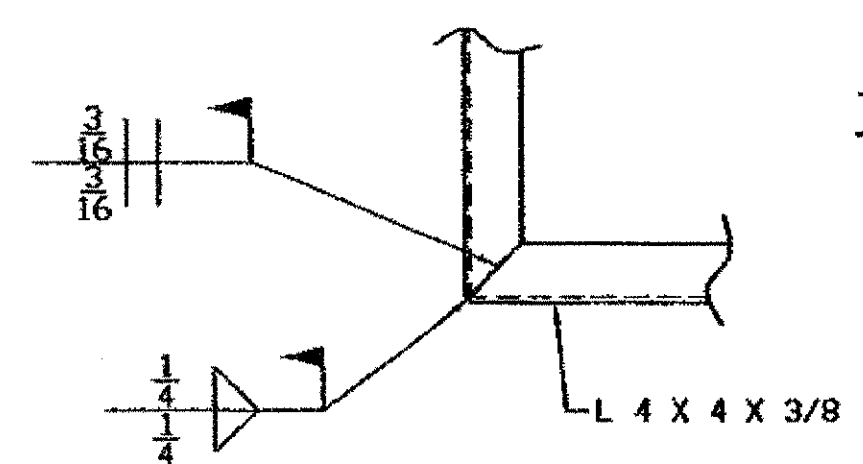




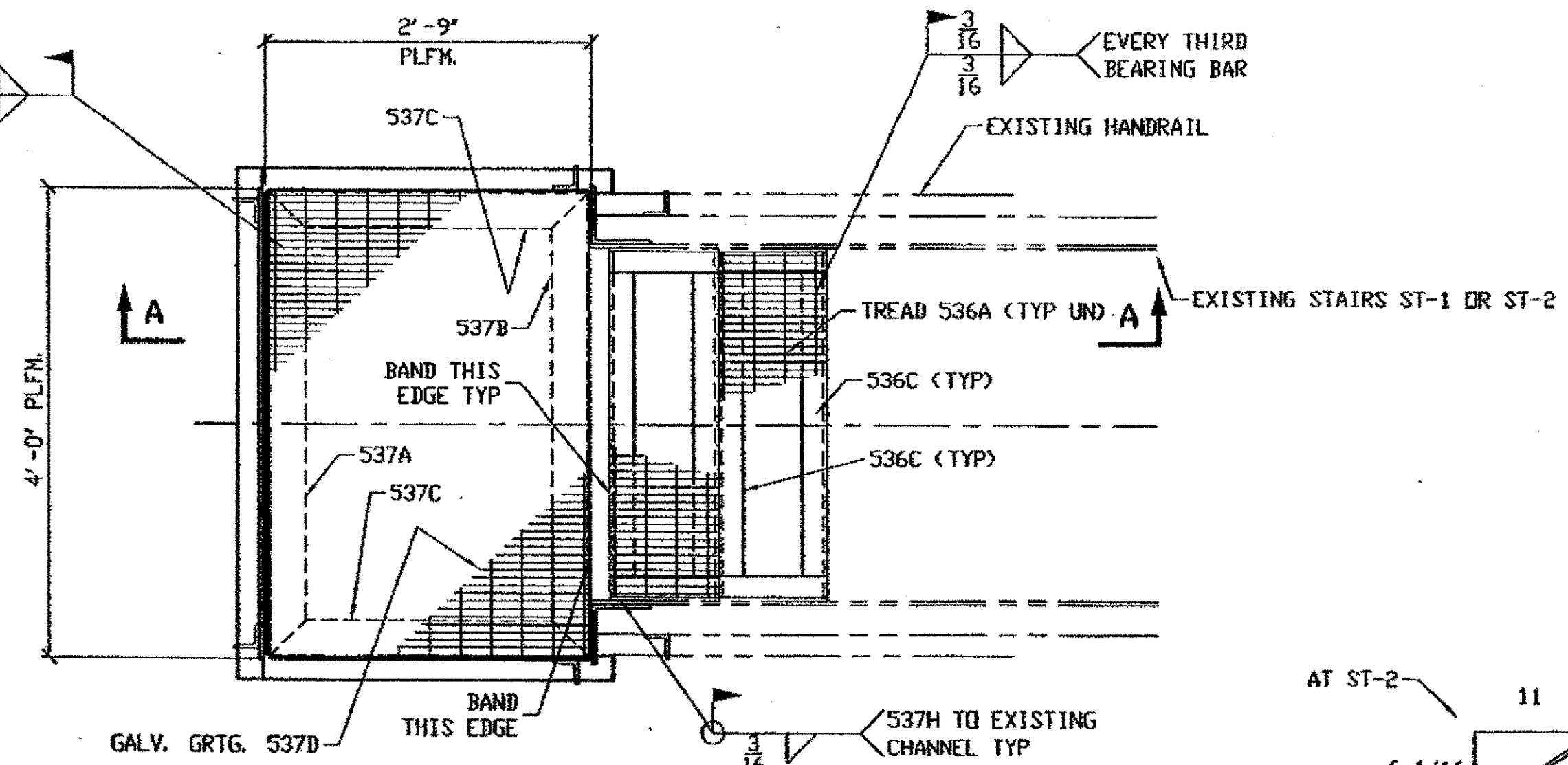
TYPICAL TOP RAIL CORNER DETAIL



TYPICAL MIDRAIL CORNER DETAIL

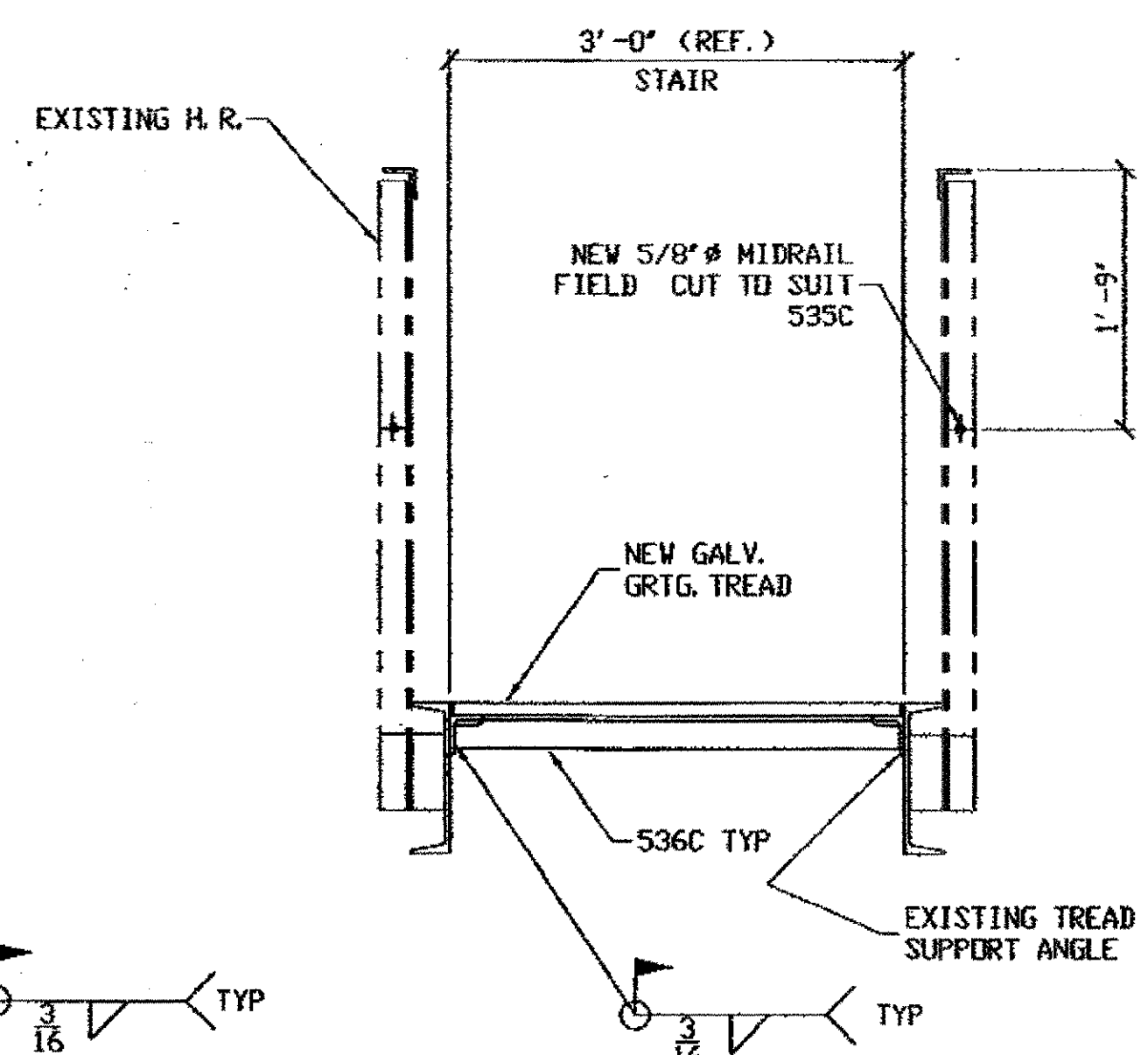


TYPICAL PLFM CORNER DETAIL

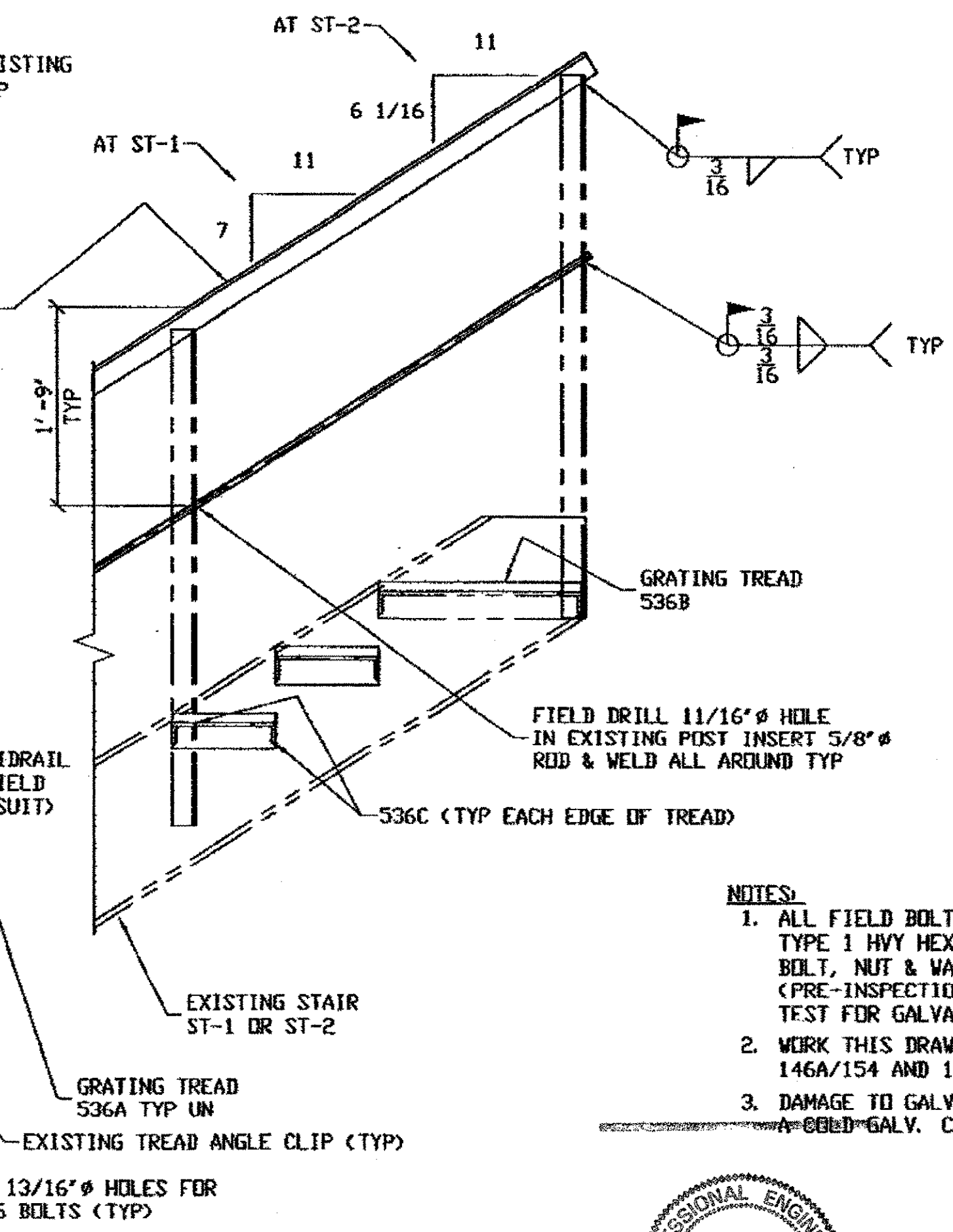
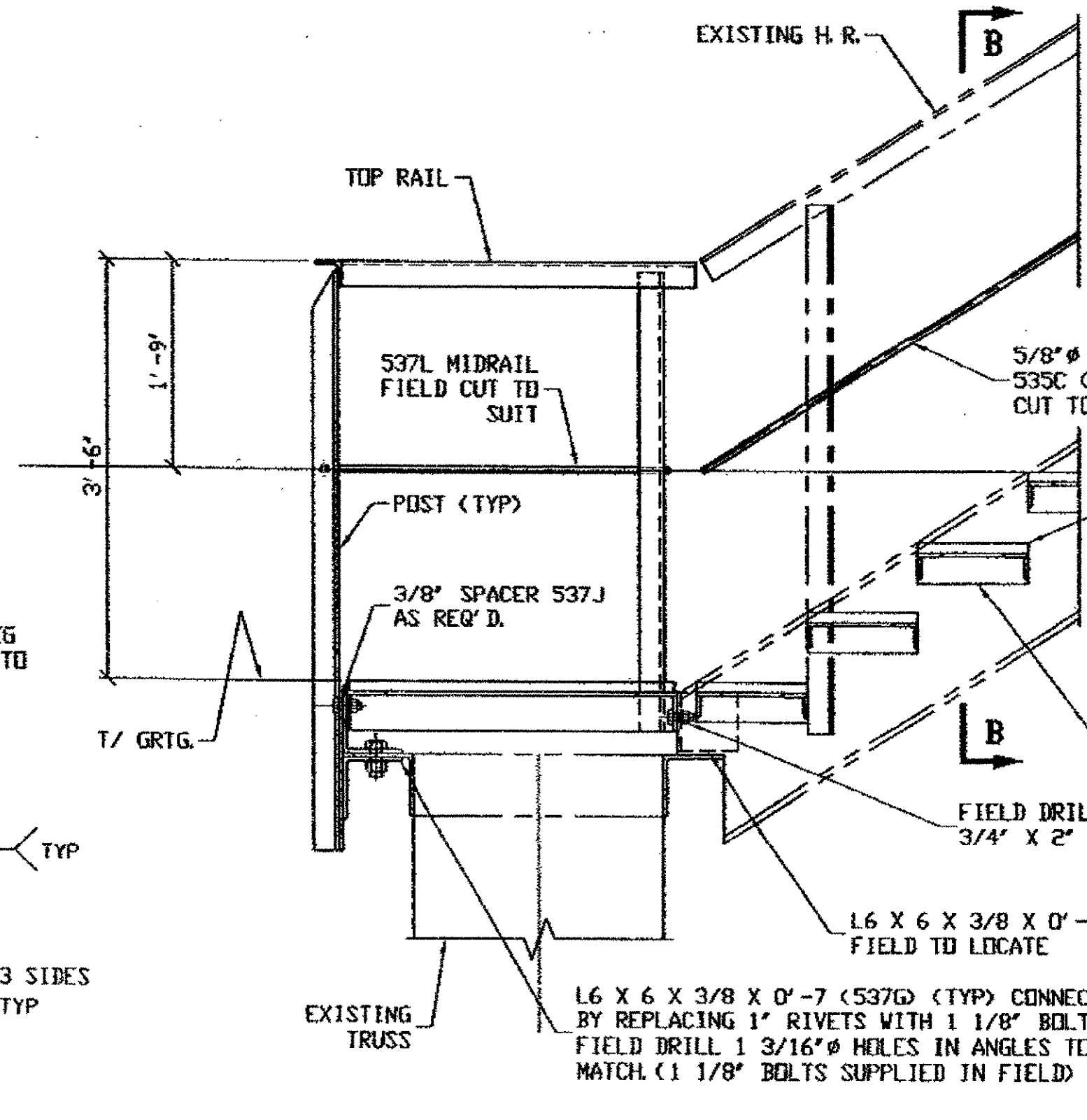
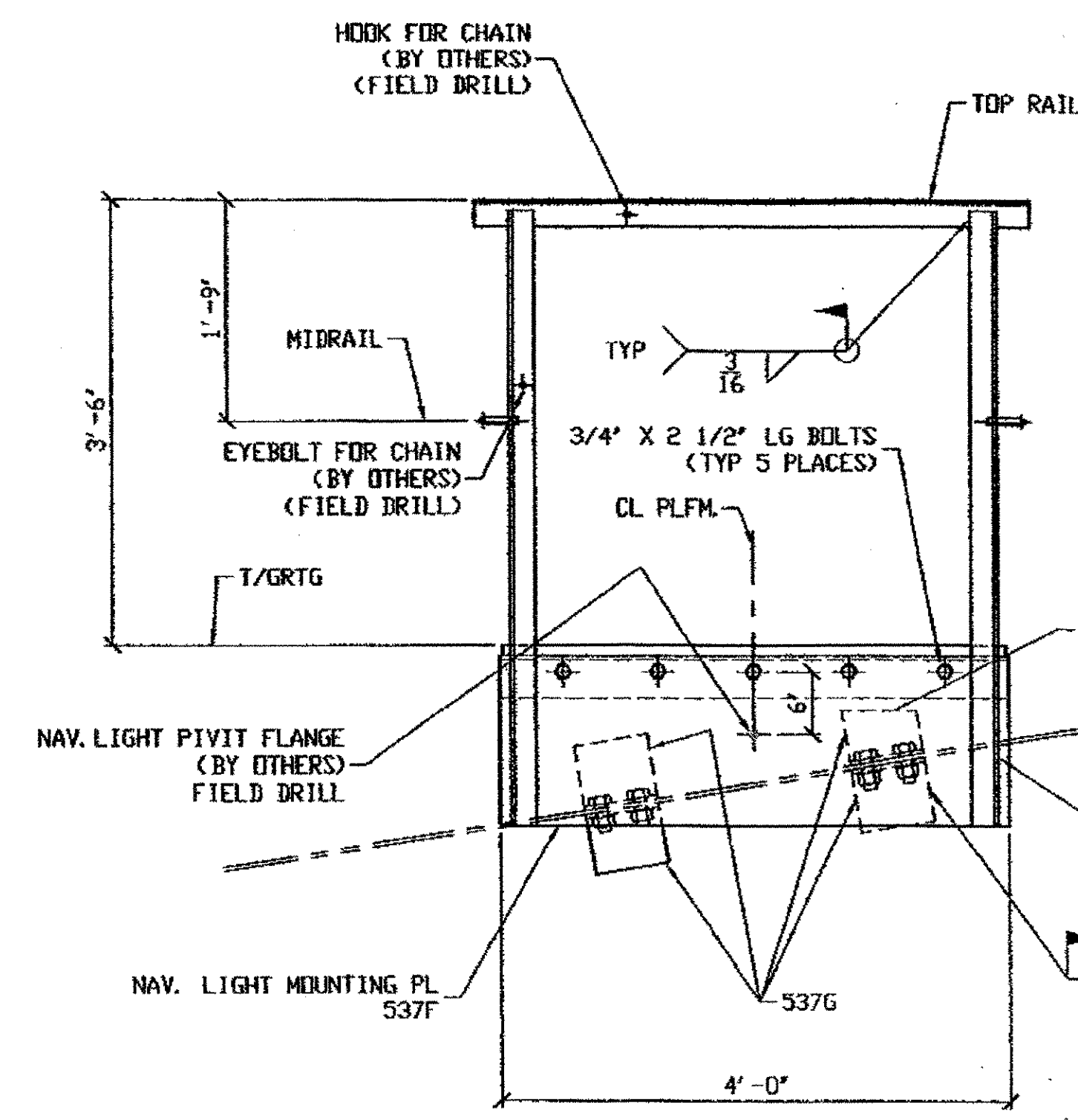


PLAN AT EXISTING STAIRS ST-1 & ST-2  
FIELD TO CUT ALL TOP RAIL AND POSTS TO SUIT FROM L 2 1/2 X 2 1/2 X 3/8 (537K) (TYP UNLESS NOTED)

ST-1 @ NORTH EAST SIDE OF SPAN 10  
ST-2 @ SOUTH EAST SIDE OF SPAN 10



SECTION B-B

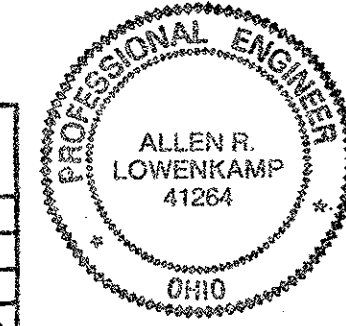


SECTION A-A

- NOTES:
1. ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  2. WORK THIS DRAWING WITH BURGESS AND NIPLE LTD DRAWINGS 146A/154 AND 146B/154.
  3. DAMAGE TO GALV. GRATING DUE TO WELDING, TO BE REPAIRED WITH A-888D-GALV. COMPOUND.

O.D.O.T. DIST. 12	
ACCEPTED	12/3/04 BSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0134  
DOT BID ITEM NO. 863E50000

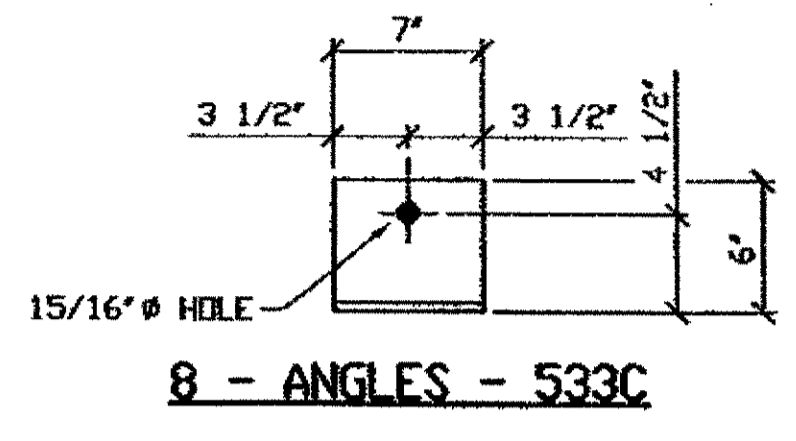
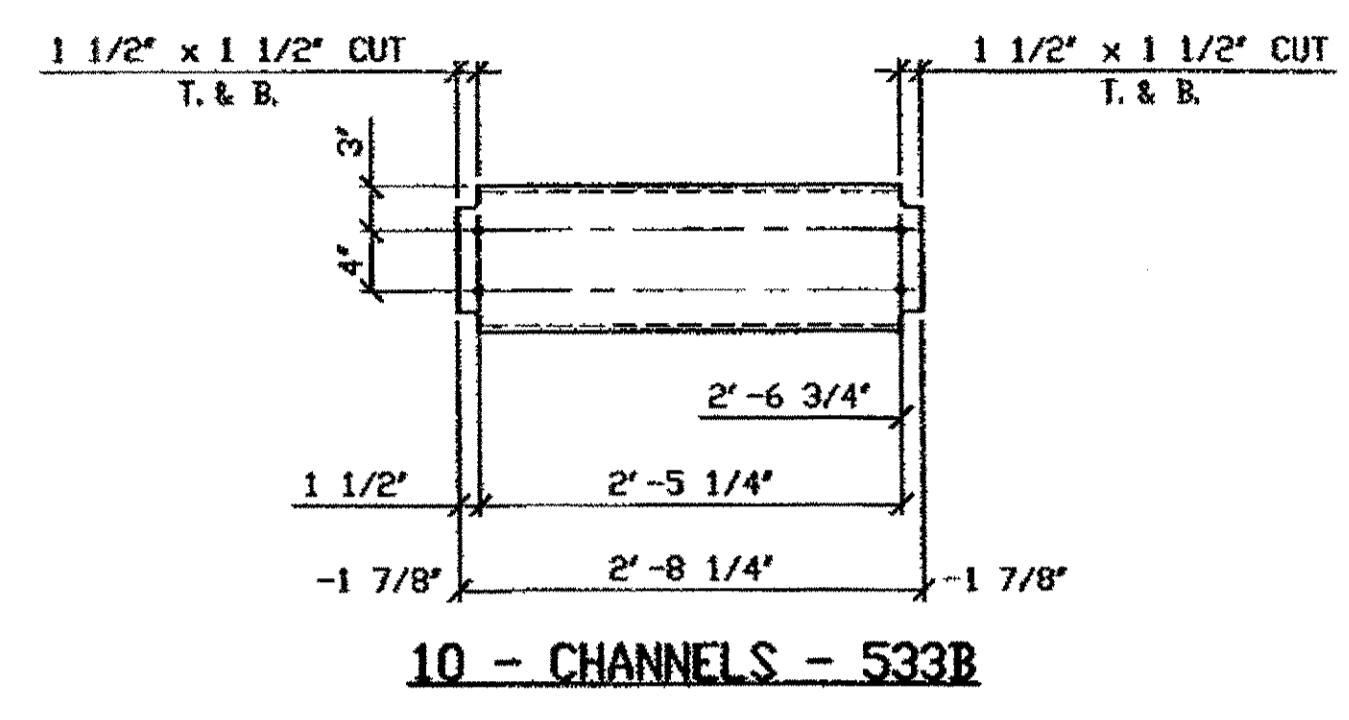
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 NAVIGATION PLFM. @ STAIRS			
SHEET NUMBER		E148	
JOB NUMBER		800010	

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIUS, PA. 15109  
PHONE (412) 631-3000  
FAX (412) 631-0001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
GAF 05/20/02  
CHECKED BY: DATE

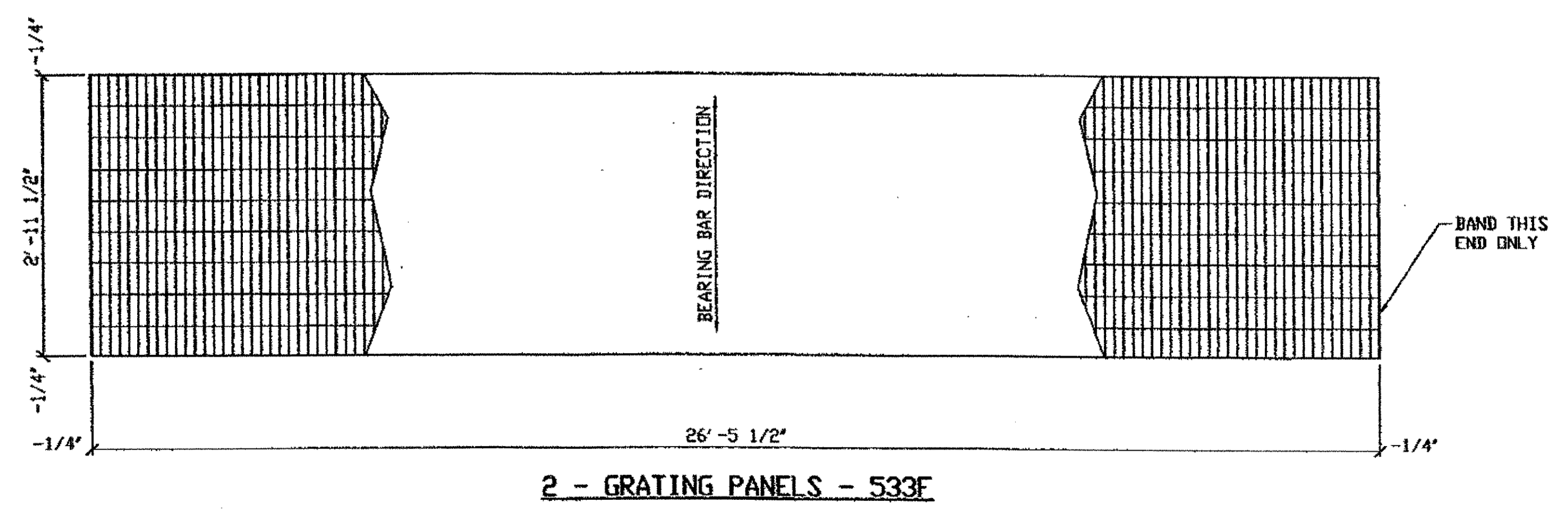
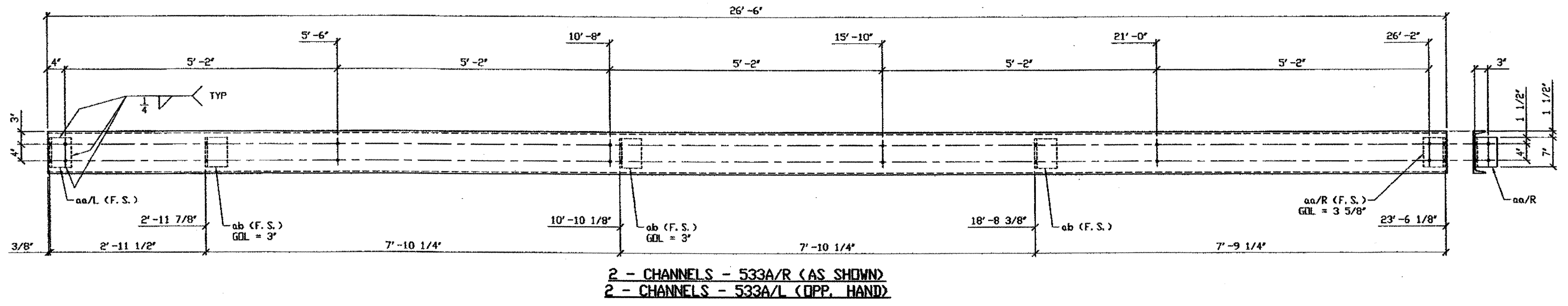
G:\Contracts\800010\Drawings\E148.dwg  
Save by Gfos 11:29pm May 21, 2002  
Plot by gfos at 08:19pm May 21, 2002  
Model space plot + Scale = 1/12



**NOTES:**

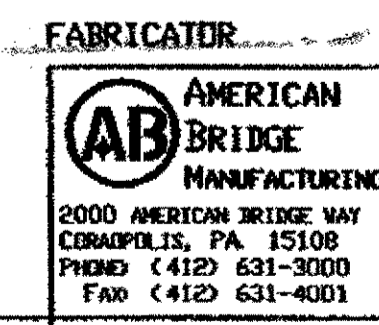
- OPEN HOLES ARE  $\frac{13}{16}$ " UNLESS NOTED OTHERWISE.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				NAVIGATION LIGHT CATWALKS				
2		533A/R	2	C10 x 20	26	6	AS SHOWN	1060
3		aa R/L	4	L 5 x 5 x 1/2	0	7		38
4		ab	6	L 5 x 5 x 1/2	0	7		57
5								
6		533A/L	2	C10 x 20	26	6	OPP. HAND	1060
7		aa R/L	4	L				38
8		ab	6	L				57
9								
10		533B	10	C10 x 20	2	8 1/4	COPE ENDS	538
11				CATWALK SUPPORTS				
12		533C	8	L 6 x 6 x 3/8	0	7		70
13		533D	8	L 6 x 6 x 3/8	0	4	PLAIN MAT'L	40
14								
15				GRATING PANELS				
16								
17		533F	2	35 1/2" SPAN	26	5 1/2	GALVANIZED GALV.	1034
18								
19								
20								



**GRATING NOTE:**  
 GALVANIZED STEEL GRATING TO BE WELDED WITH 1" x 3/16" BEARING BARS AT 1 3/16" CENTERS AND TWISTED SQUARE CROSS BARS AT 4" CENTERS W-19-4 ASTM A-569 SUPPLIED WITH 4 GALVANIZED SADDLE CLIPS PER PANEL. BOLTS, NUTS, AND WASHERS EACH TO FIT 7/16" THICK FLANGE PER PANEL.

GRATING SHALL BE MANUFACTURED BY BORDO METAL COMPANY, RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION, I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.



**O.D.O.T. DIST. 12**

ACCEPTED [Signature]

ACCEPTED AS NOTED [Signature]

NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

DOT ITEM LINE NO. 0107  
 DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO

BRIDGE No. CUY-10-16.13  
 NAVIGATION LIGHT CATWALK

IN CHARGE OF: L. SMITH

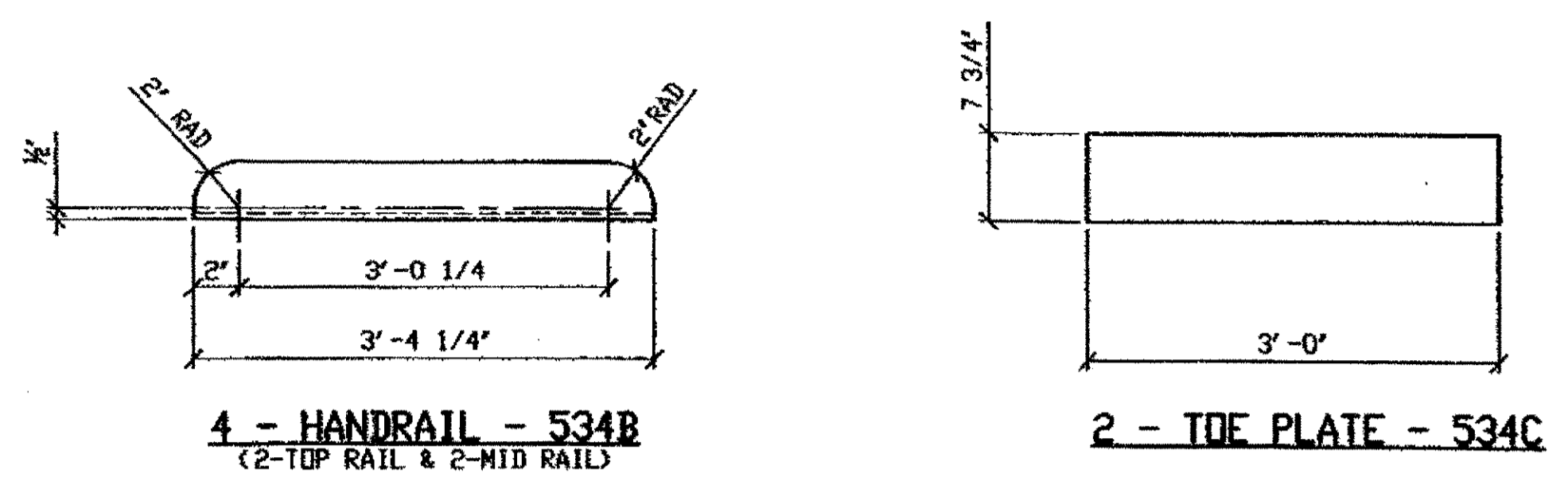
DRAWN BY DATE: AMW 02/18/02

CHECKED BY DATE: GAF 5/6/02

SHEET NUMBER: 533

AM JOB NUMBER: 800010

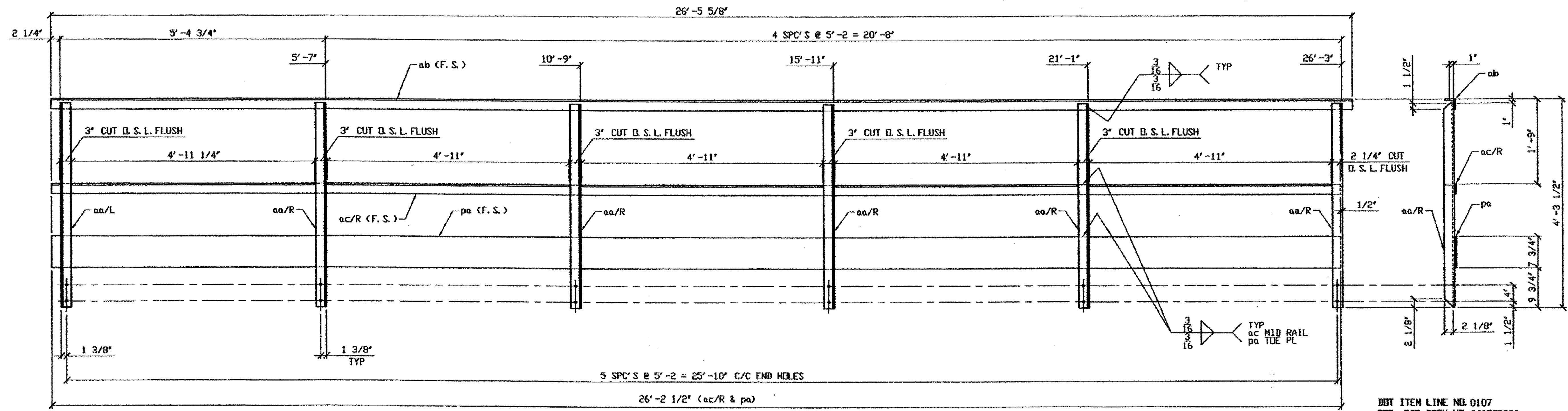
G:\Contracts\800010\Drawings\863E5000.dwg  
 Save by: rsc  
 Plot by: grom  
 Model Space Plot - Scale = 1/12



**NOTES:**

- OPEN HOLES ARE  $\frac{13}{16} \phi$  UNLESS NOTED OTHERWISE.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		534/R	2	HANDRAIL			AS SHOWN	1271
2		aa R/L	12	L 2 1/2 x 2 1/2 x 3/8	4	3 1/2	MCE, 10/R, 2/L	304
3		ab	2	L 2 1/2 x 2 1/2 x 3/8	26	5 9/8		312
4		ac/R	2	L 2 1/2 x 2 1/2 x 3/8	26	2 1/2		309
5		pa	2	PL 1/4 x 7 3/4	26	2 1/2		346
6								
7		534/L	2	HANDRAIL			OPP. HAND	1271
8		aa R/L	12	L 2 1/2 x 2 1/2 x 3/8	4	3 1/2	MCE, 2/R, 10/L	304
9		ab	2	L				312
10		ac/L	2	L				309
11		pa	2	PL				346
12								
13				HANDRAIL				
14		534B	4	L 2 1/2 x 2 1/2 x 3/8	3	4 1/4	RAD CORNERS	79
15								
16				TOE PLATE				
17		534C	2	PL 1/4 x 7 3/4	3	0		40
18								
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS N/A				

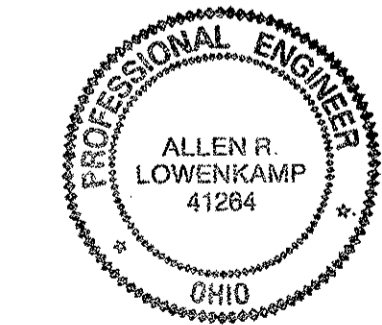


**2 - HANDRAIL - 534A/R (AS SHOWN)**  
**2 - HANDRAIL - 534A/L (OPP. HAND)**

**O.D.O.T. DIST. 12**

ACCEPTED	2/9/04	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**

2000 AMERICAN BRIDGE WAY  
CONARVILLE, PA 15103  
PHONE (412) 631-3000  
FAX (412) 631-4001

**STEEL ERECTOR**

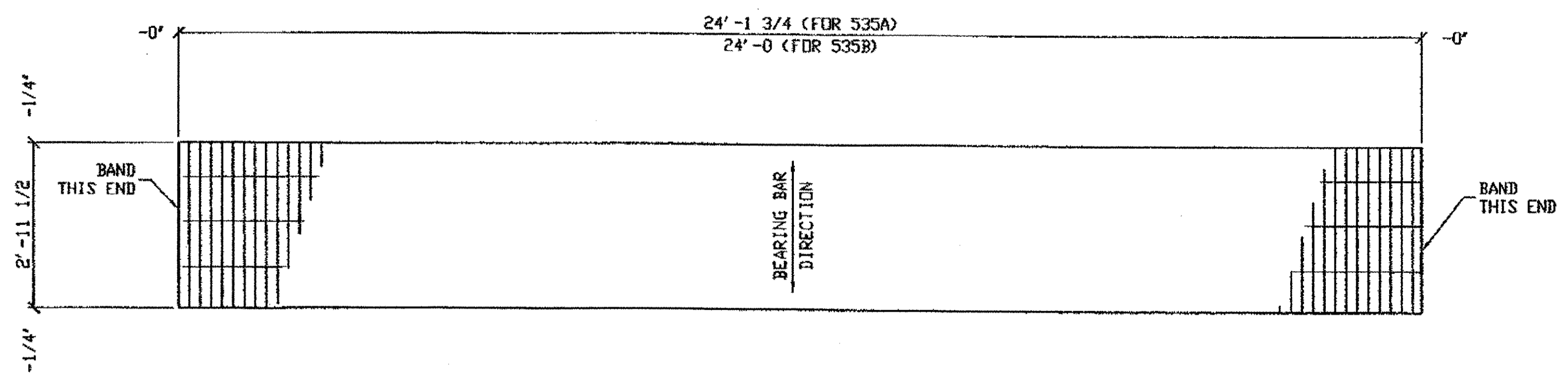
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: DATE	
AMM 02/18/02	
CHECKED BY: DATE	
GAF 5/6/02	

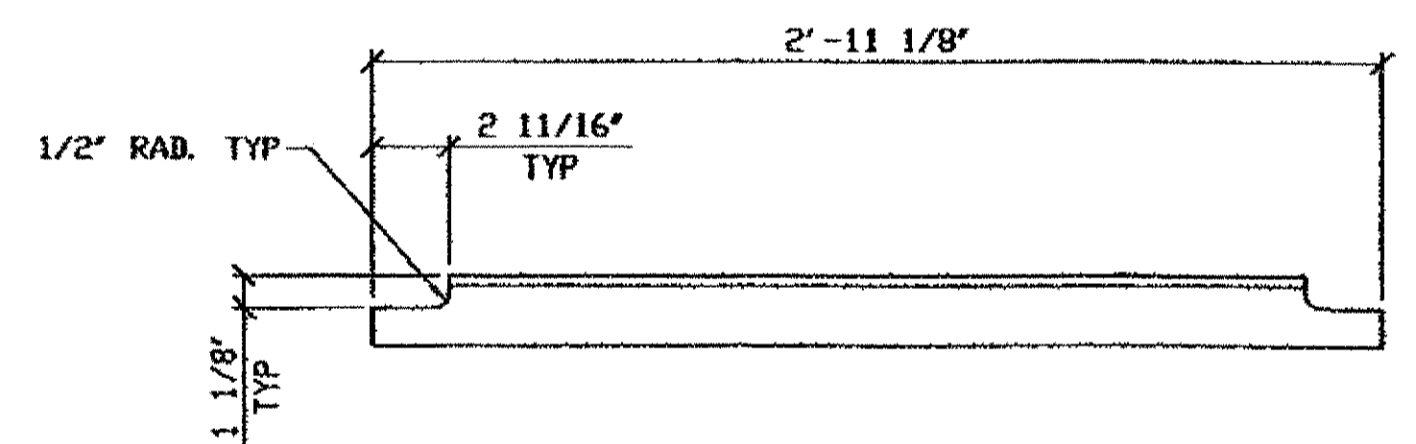
DOT ITEM LINE NO. 0107		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
<b>STATE OF OHIO</b>			
DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b>			
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)			
CITY OF CLEVELAND			
CUYAHOGA COUNTY OHIO			
<b>BRIDGE No. CUY-10-16.13</b>			
<b>NAVIG. LIGHT CATWALK HANDRAIL</b>			
SHEET NUMBER: 534		ADM. JOB NUMBER: 800010	

G:\Contracts\800010\Drawings\DESIGN.dwg  
 Save by: rpbp 3:30pm May 07, 2002  
 Plot by: gbs at 3:33pm May 07, 2002  
 Model Space Plot Scale = 1/12



**ONE - GRATING PANEL - 535A (FOR NORTHWEST RAMP R-1)**  
**ONE - GRATING PANEL - 535B (FOR SOUTHEAST RAMP R-2)**

GALVANIZED STEEL GRATING TO BE WELDED WITH  
 1" X 3/16" BEARING BARS AT 1 3/16" CENTERS AND  
 TWISTED SQUARE CROSS BARS AT 4" CENTERS  
 19-W-4 ASTM A-569 SUPPLIED WITH 4 GALVANIZED  
 SADDLE CLIPS, BOLTS, NUTS AND WASHERS,  
 4 PER PANEL EACH TO FIT 1/2" THICK FLANGE  
 GRATING SHALL BE MANUFACTURED BY BURDEN METAL COMPANY,  
 RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION,  
 I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.



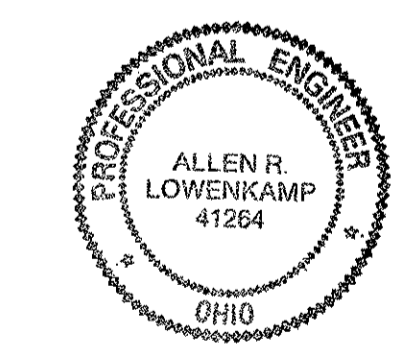
**4 - END ANGLES FOR GRATING - 535D**

BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	MATERIAL REF. No.	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		535A	1	GRATING			GALV.	525	
2			1	35 1/2" SPAN	24	1 3/4		525	
3									
4		535B	1	GRATING			GALV.	522	
5			1	35 1/2" SPAN	24	0		522	
6									
7		535C	4	MIDRAIL				104	
8			4	ROD 5/8" DIA	25	0	PLAIN MAT'L	104	
9									
10		535D	4	END ANGLE FOR GRATING				69	
11			4	L 2 1/2 X 2 1/2 X 3/8	2	11 1/8		69	
12									
13									
PLATE		N/A	PIPE		N/A	FITTINGS		N/A	
SHAPES		A36	FLGS.		N/A	BOLTS		N/A	

**NOTES:**

- SHOP PAINT: UNLESS NOTED SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature] 2/7/02  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



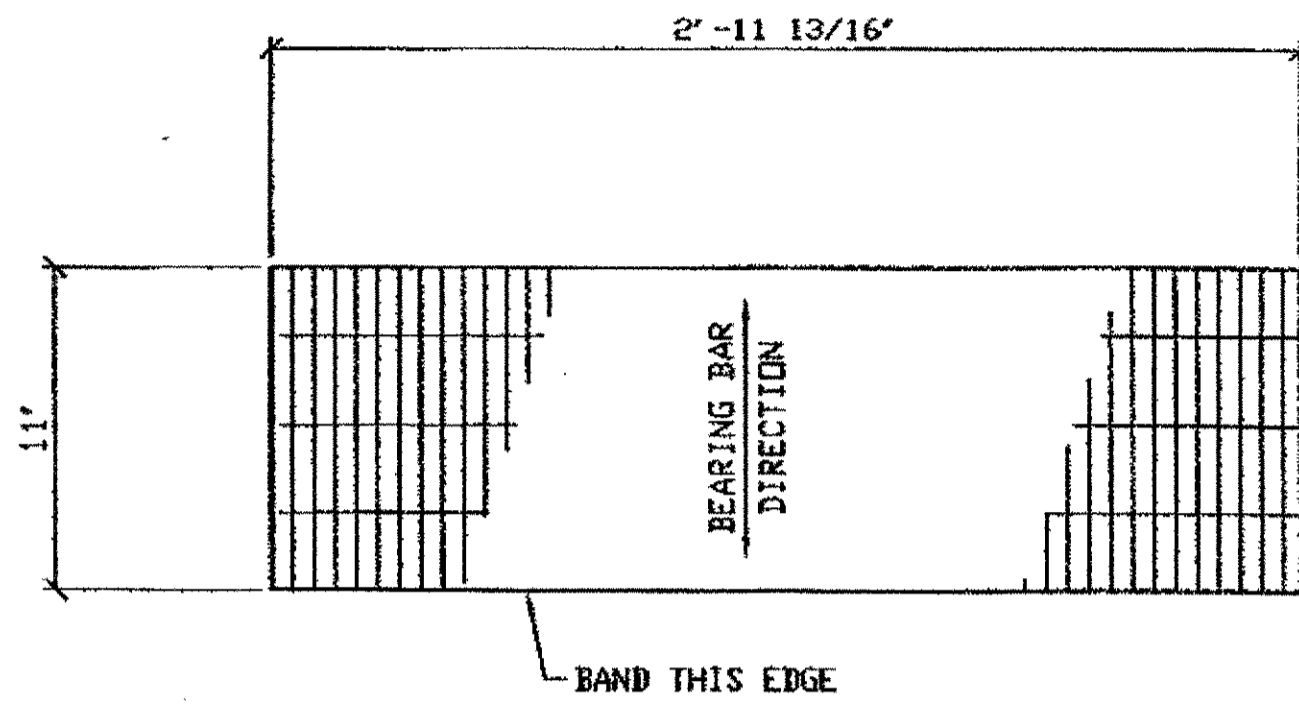
**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORADELIS, PA. 15109  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRENGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

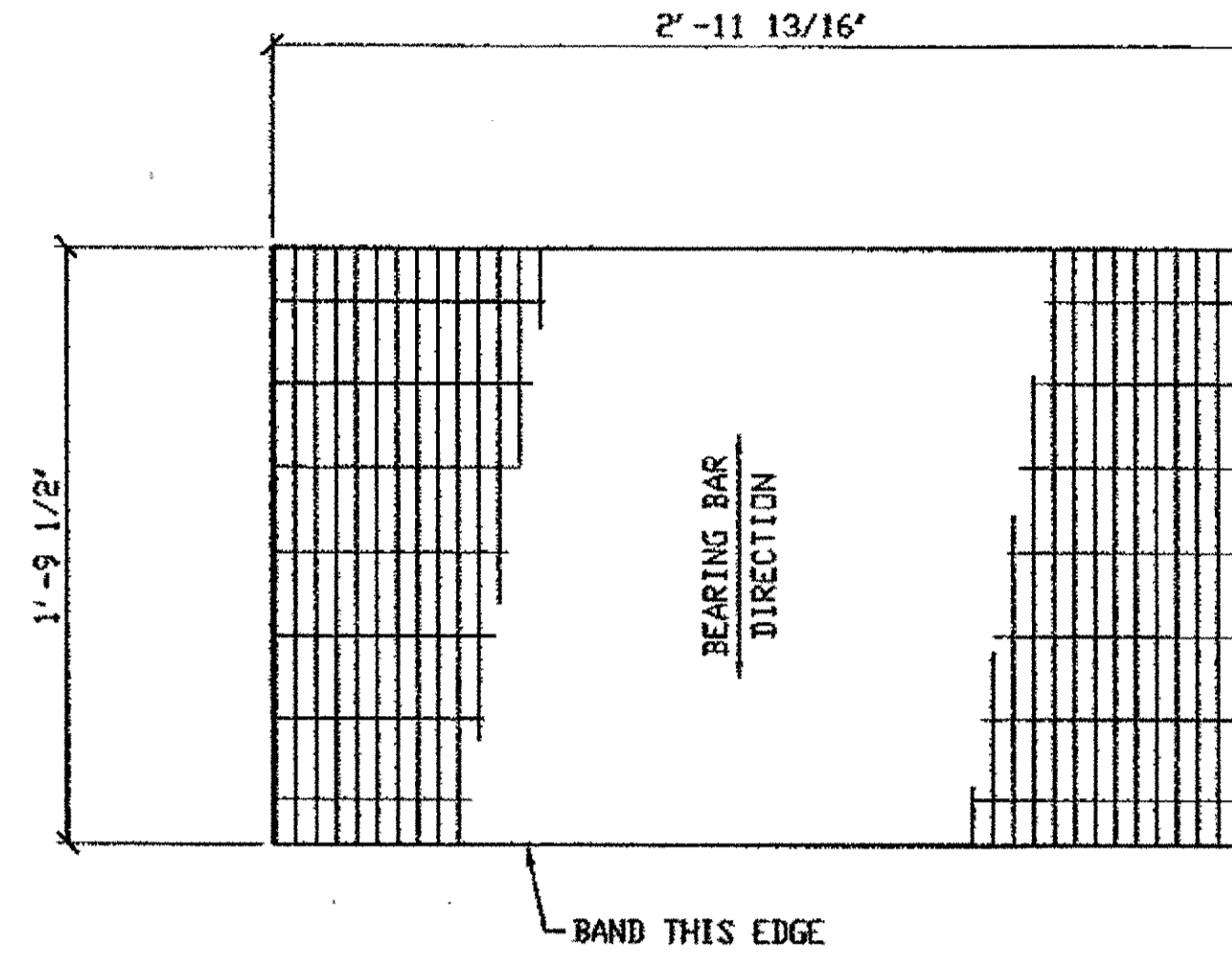
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: GAF 05/16/02  
 CHECKED BY: DATE:

DOT ITEM LINE NO. 0134		DOT BID ITEM NO. 863E50000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>NAVIGATION LIGHT RAMPS</b>			
SHEET NUMBER: 535		ABN JOB NUMBER: 800010	

G:\Contracts\1800010\Drawings\535A.dwg  
 Save by TSP on May 20, 2002  
 Plot by GFDs on May 21, 2002  
 Model space plot - Scale = 1/6



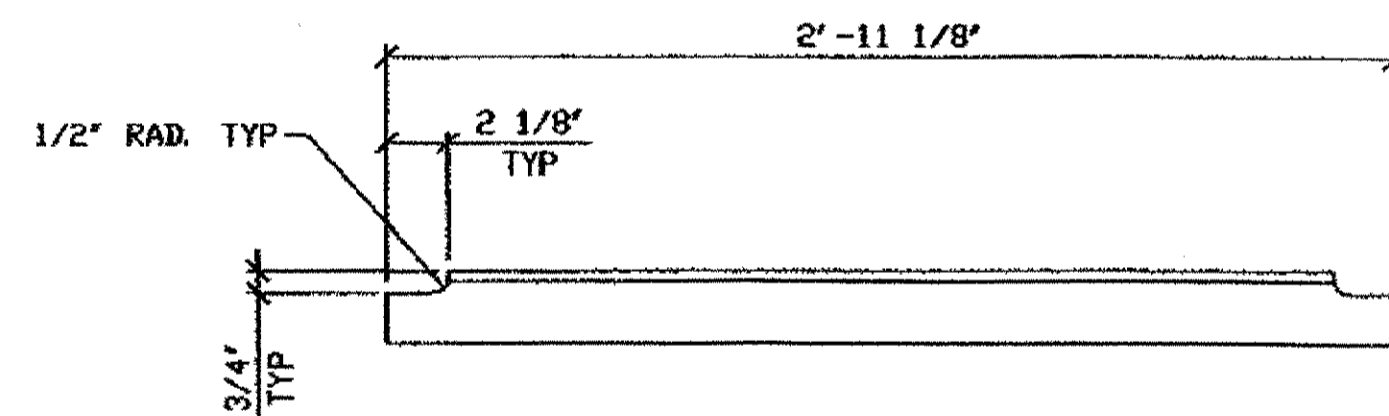
48 - STAIR TREADS 536A



2 - STAIR TREADS 536B

GALVANIZED STEEL GRATING TO BE WELDED WITH  
1' X 3/16" BEARING BARS AT 1 3/16" CENTERS AND  
TWISTED SQUARE CROSS BARS AT 4" CENTERS  
19-W-4 ASTM A-569

GRATING SHALL BE MANUFACTURED BY BORDEN METAL COMPANY,  
RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION,  
I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.



100 - STAIR TREAD ANGLES - 536C

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		536A	48	GRATING TREADS			GALV.	960
2			48	11' SPAN	2	11 13/16		960
3								
4		536B	2	GRATING TREADS			GALV.	78
5			2	21 1/2" SPAN	2	11 13/16		78
6								
7		536C	100	STAIR TREAD ANGLES				1727
8			100	L 2 1/2 X 2 1/2 X 3/8	2	11 1/8		1727
9								
10		536D	2	TOP HANDRAIL				354
11			2	L 2 1/2 X 2 1/2 X 3/8	30	0	PLAIN MAT'L	354
12								
13								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

NOTES:

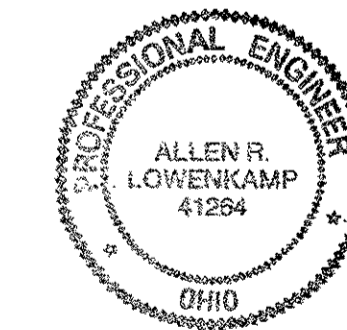
- SHOP PAINT: UNLESS NOTED SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contracts\800010\Drawings\DES36A.dwg  
 Save by rsp on May 17, 2002  
 Plot by gfs on May 21, 2002  
 Model space plot + Scale = 1/6

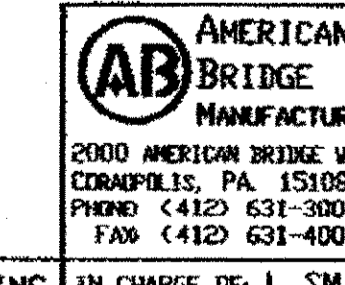
O.D.O.T. DIST. 12

ACCEPTED	2/2/02	PSM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR



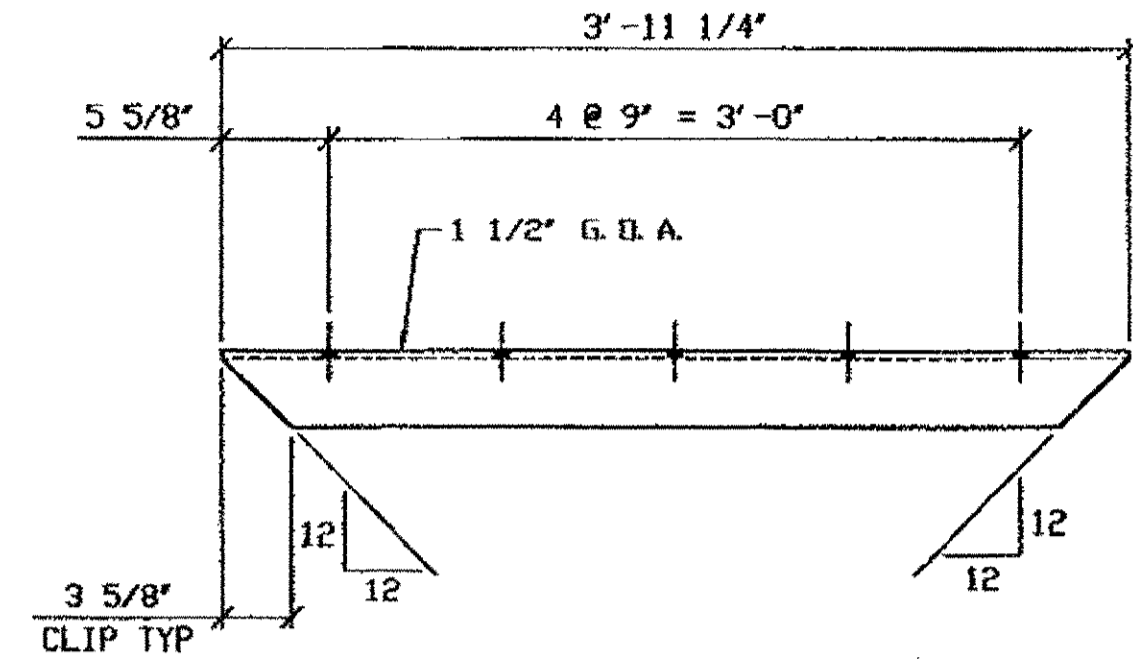
STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

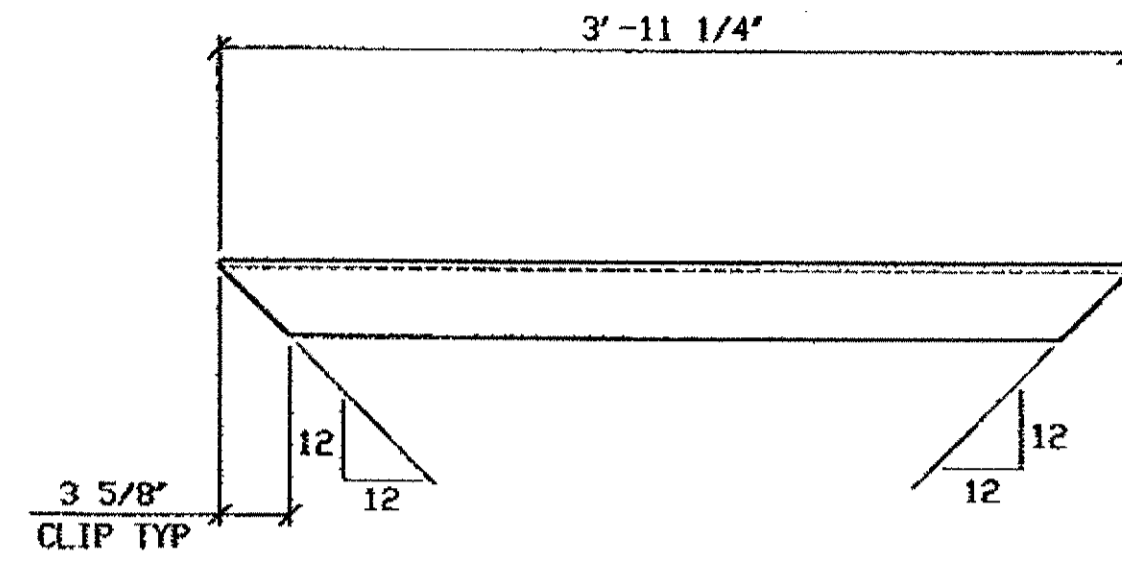
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
GAF 05/16/02  
CHECKED BY: DATE

DOT ITEM LINE NO. 0134  
DOT BID ITEM NO. 863E50000

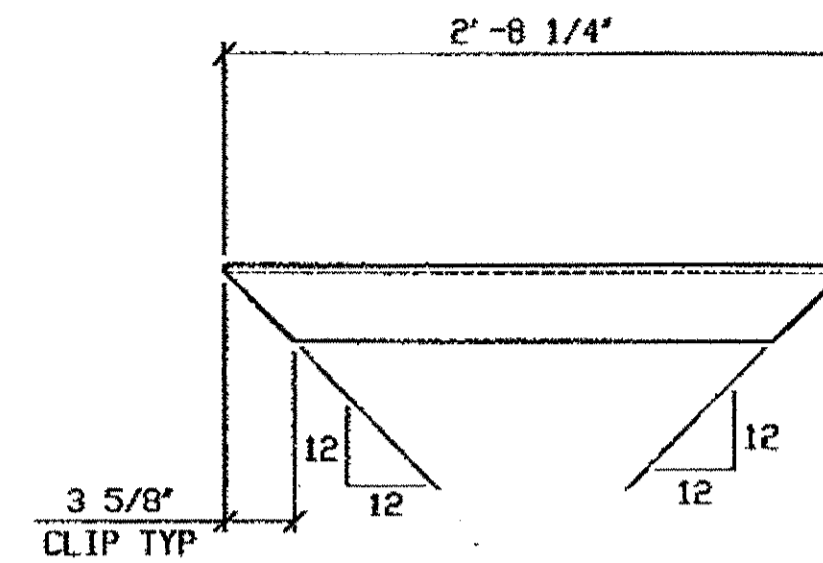
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 NAVIGATION LIGHT STAIRS			
			SHEET NUMBER: 536
			ADM. JOB NUMBER: 800010



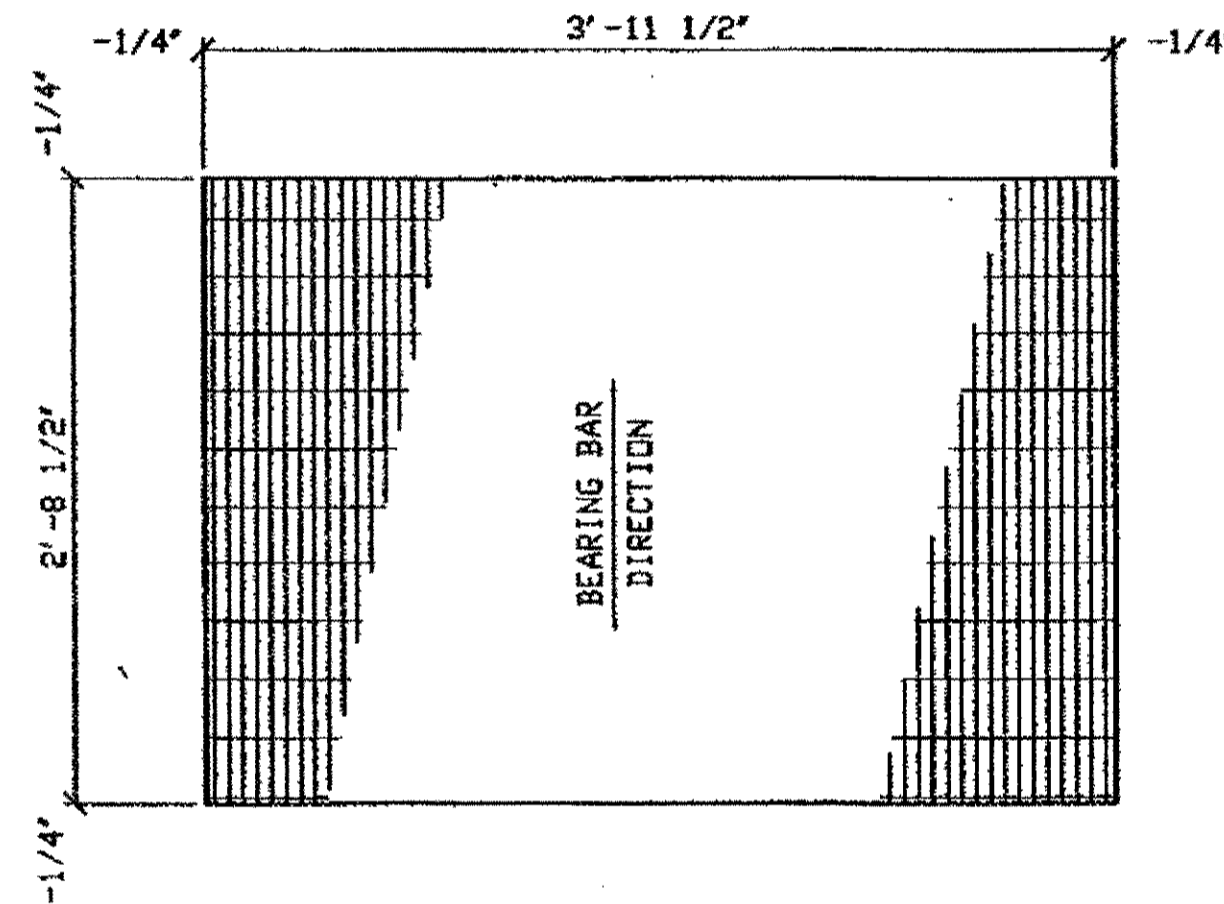
4 - PLFM. ANGLES - 537A



4 - PLFM. ANGLES - 537B



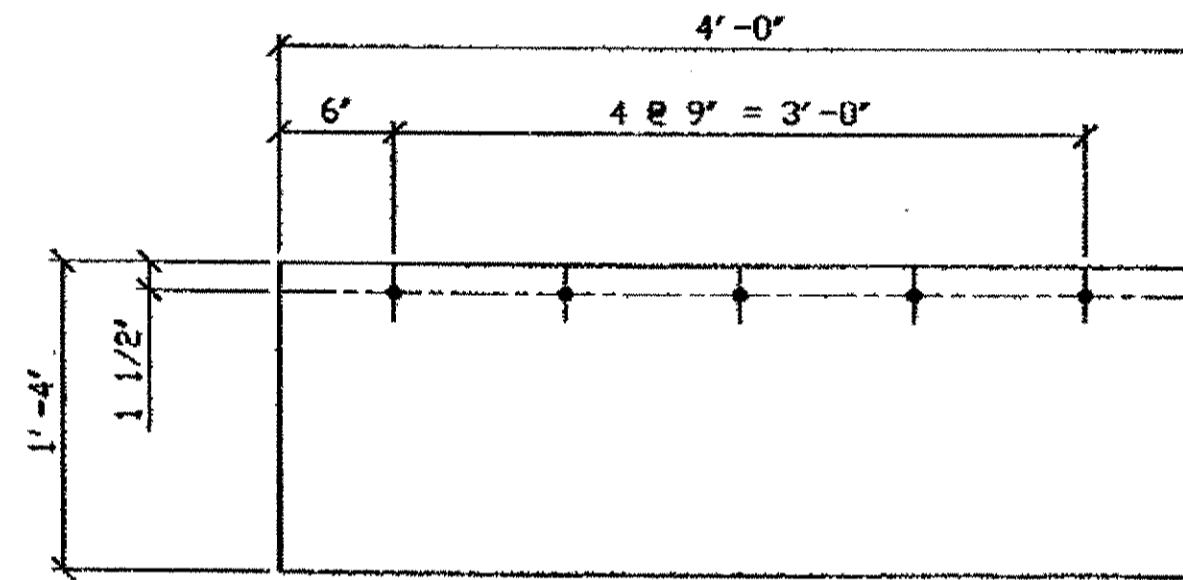
8 - PLFM. ANGLES - 537C



4 - PLFM. GRATING - 537D

GALVANIZED STEEL GRATING TO BE WELDED WITH  
1" X 3/16" BEARING BARS AT 1 3/16" CENTERS AND  
TWISTED SQUARE CROSS BARS AT 4" CENTERS  
19-W-4 ASTM A-569

GRATING SHALL BE MANUFACTURED BY BORDEN METAL COMPANY,  
RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION,  
I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.



4 - NAV. LIGHT MOUNTING PL - 537E

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REP. B.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		537A	4	PLFM. ANGLES				134
2			4	L 4 X 4 X 3/8	3	11 1/4		134
3								
4		537B	4	PLFM. ANGLES				134
5			4	L 4 X 4 X 3/8	3	11 1/4		134
6								
7		537C	8	PLFM. ANGLES				183
8			8	L 4 X 4 X 3/8	2	8 1/4		183
9								
10		537D	4	PLFM. GRATING			GALV.	315
11			4	32 1/2" SPAN	3	11 1/2		315
12								
13		537F	4	NAV. LIGHT MOUNTING PL				327
14			4	PL 3/8 X 16	4	0		327
15								
16				PLFM. SUPPORT ANGLES				
17		537G	16	L 6 X 6 X 3/8	0	7	PLAIN MAT'L	139
18		537H	8	L 6 X 6 X 3/8	0	6	PLAIN MAT'L	60
19								
20		537J	20	3/8" SPACER				14
21			20	PL 3/8" X 3" DD X 13/16" ID			PLAIN MAT'L	14
22								
23		537K	8	HANDRAIL (TOP RAIL & POSTS)				944
24			8	L 2 1/2 X 2 1/2 X 3/8	20	0	PLAIN MAT'L	944
25								
26		537L	4	HANDRAIL (MIDRAIL)				83
27			4	RDD 5/8" DIA	20	0	PLAIN MAT'L	83
28								
29								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

NOTES:

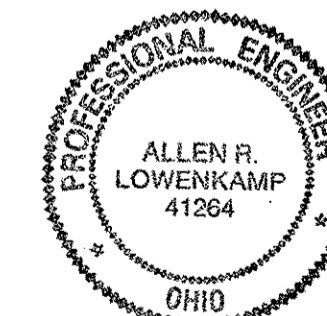
- OPEN HOLES ARE (13/16" Ø) UNLESS NOTED OTHERWISE.
- SHOP PAINT: UNLESS NOTED SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC GLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

G:\Contracts\800010\Drawings\537A.dwg  
 Save by rpr on 26pm May 31, 2002  
 Plot by gds on 2:08pm May 31, 2002  
 Model space plot + Scale = 1/9

O.D.O.T. DIST. 12

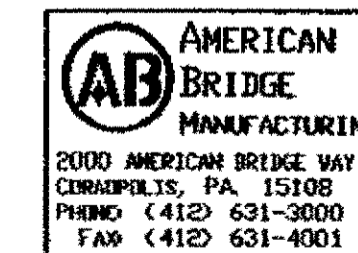
ACCEPTED	2/9/02	brm
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335



IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: 05/17/02  
CHECKED BY: DATE:

DOT ITEM LINE NO. 0134  
DOT BID ITEM NO. 863E50000

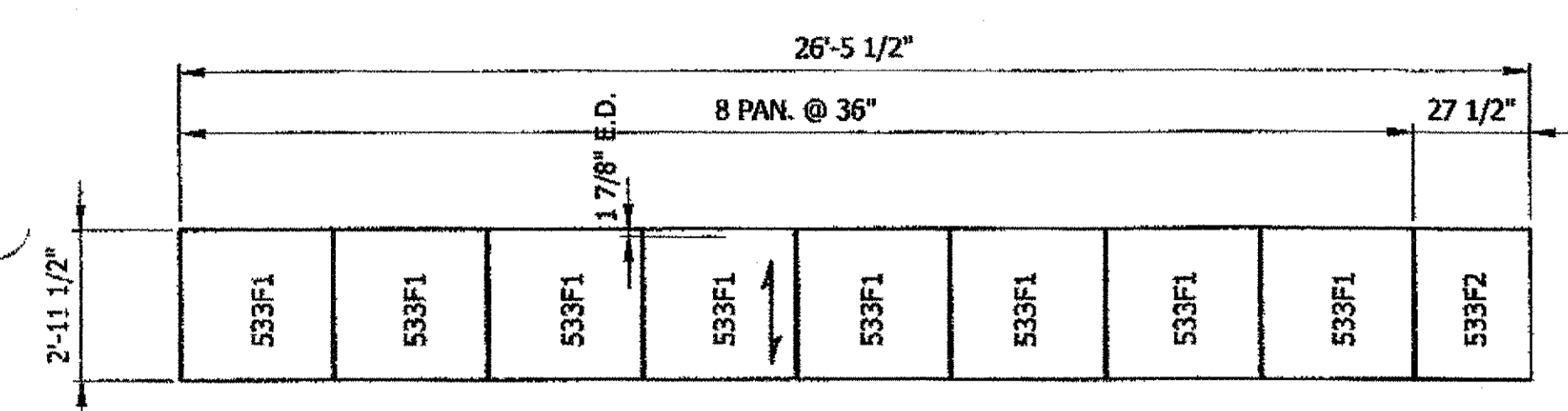
NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

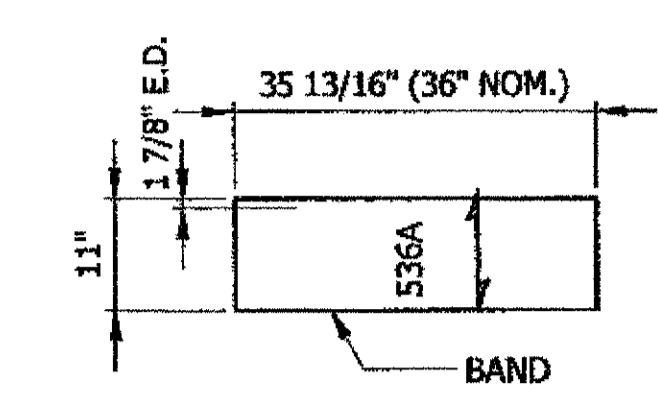
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO

BRIDGE No. CUY-10-16.13  
NAVIGATION LIGHT PLATFORMS

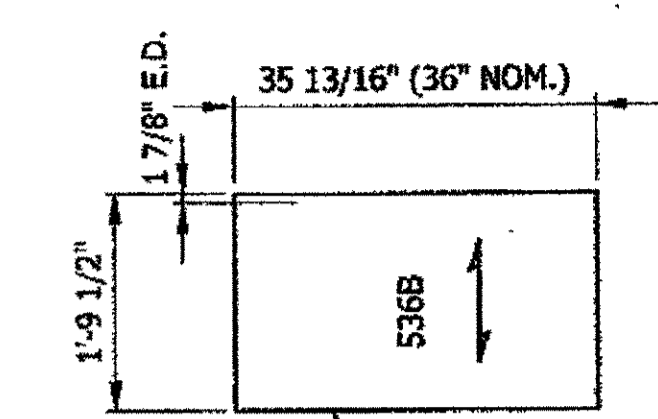
SHEET NUMBER: 537  
JOB NUMBER: 800010



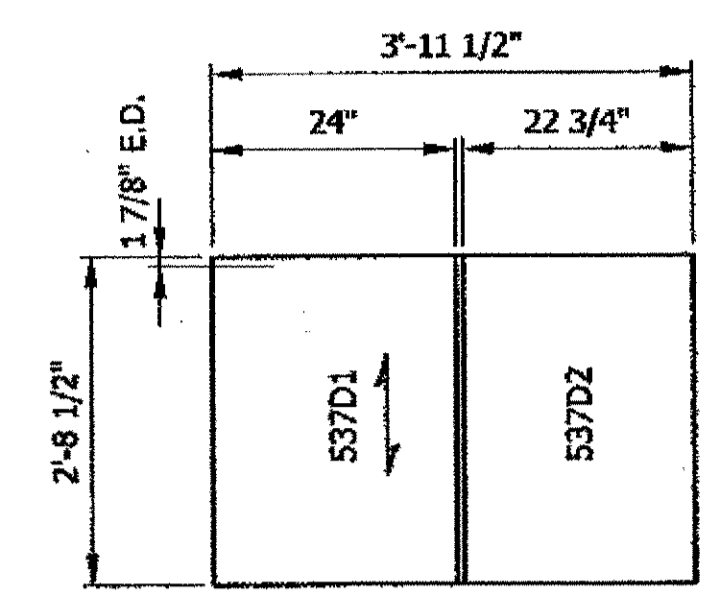
**2 AREAS REQ'D - MK. 533F**  
REF. DWG. SHEET 533



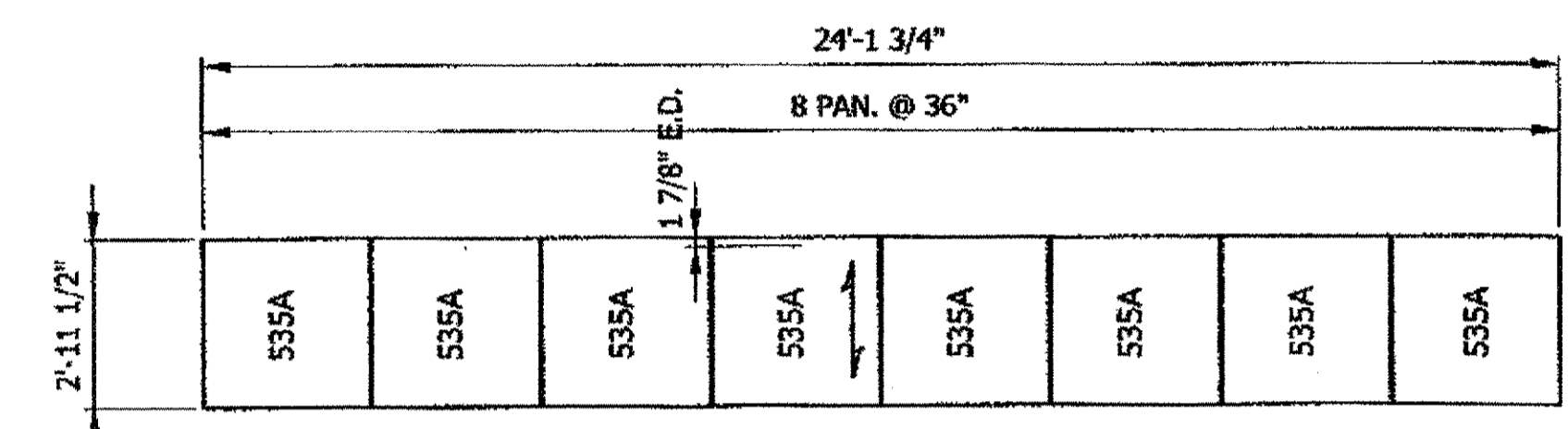
**48 - STAIRTREADS REQ'D - MK. 536A**  
(SPAN OPPOSITE TO TRADITIONAL TREADS)  
REF. DWG. SHEET 536



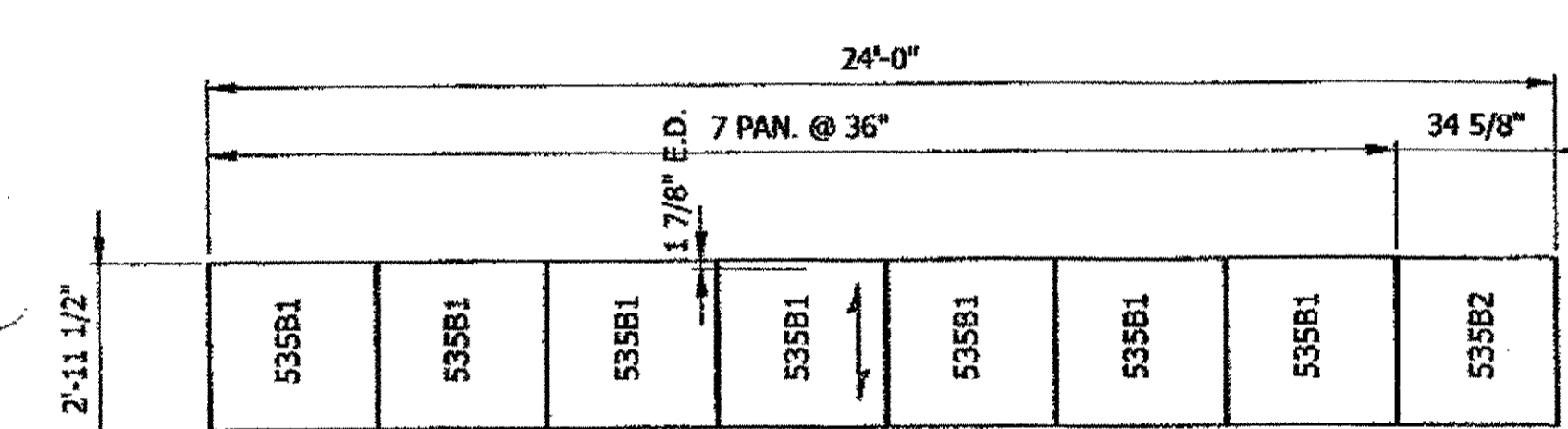
**2 - STAIRTREADS REQ'D - MK. 536B**  
(SPAN OPPOSITE TO TRADITIONAL TREADS)  
REF. DWG. SHEET 536



**4 - PLFM. GRATING REQ'D - MK. 537D**  
REF. DWG. SHEET 537



**ONE AREA REQ'D - MK. 535A (FOR NORTHWEST RAMP R-1)**  
REF. DWG. SHEET 535

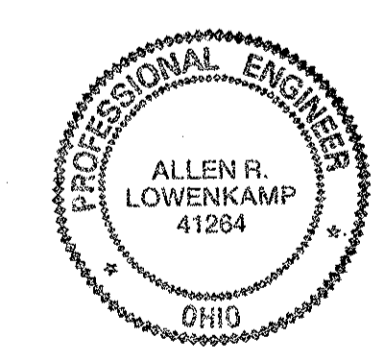


**ONE AREA REQ'D - MK. 535B (FOR SOUTHEAST RAMP R-2)**  
REF. DWG. SHEET 535

**NOTE:**  
ALL MATERIAL IS TO BE DOMESTIC.  
MATERIAL TEST REPORTS ARE REQ'D.

**SHOP NOTE:**  
ALL GRATING MUST BE PIECE MARKED.

- NOTES**
- GRATING TYPE J21(1 x 3/16)
  - TW. RODS SPACED ON 4" CTRS
  - INDICATES DIRECTION OF BEARING BARS
  - FINISH HOT DIP GALV.
  - 400 GALV. SADDLE CLIPS
  - 400 GALV. 1/4-28 x 2" BOLTS
  - 800 GALV. 1/4-20 NUTS
  - 400 GALV. FLAT WASHERS



APPROX. 1/4" ALLOWED BETWEEN PANELS FOR PACKING OUT  
AMERICAN BRIDGE P.O. #800010-00074  
AMERICAN BRIDGE JOB #800010

**O.D.O.T. DIST. 12**

ACCEPTED	2/29/04	BJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

FABRICATED GRATING PRODUCTS, INC.  
FT. OF 25TH STREET 886-447-4880 PH  
P.O. BOX 3068 888-281-6320 FAX  
MCKEESPORT PA 15132

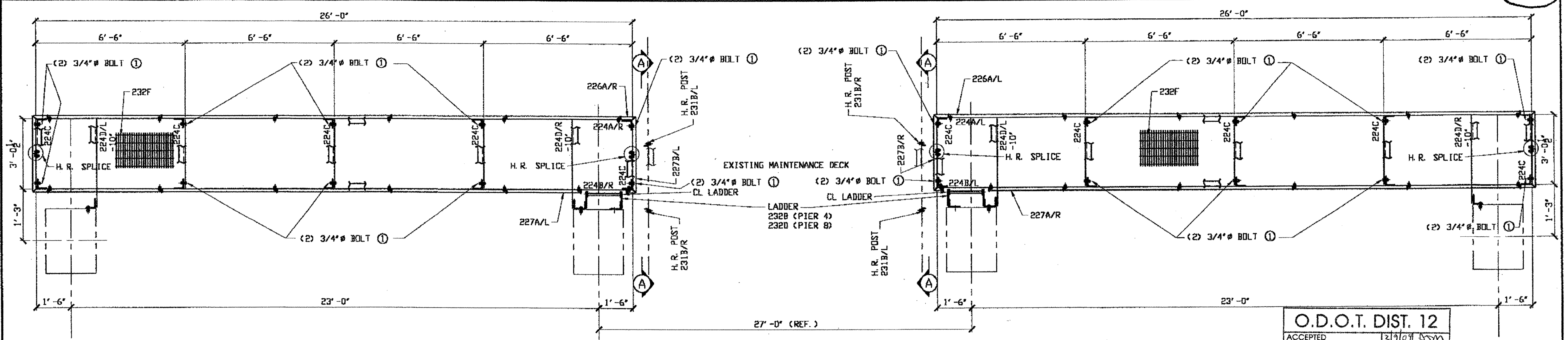
AMERICAN BRIDGE MANUFACTURING  
CORAOPOLIS, PA  
HOPE MEMORIAL BRIDGE REHAB

BRIDGE NO. CLY-10-16.13  
GRATING PLANS (NAVIGATION LIGHT ACCESS)

MADE BY	SDL	SCALE	
DATE	5-29-2002	CONT.	3399
CHK'D	PM	P.O. NO.	
NO.	REVISION	DATE	APPROVED XXXX DRAWING 3399-1

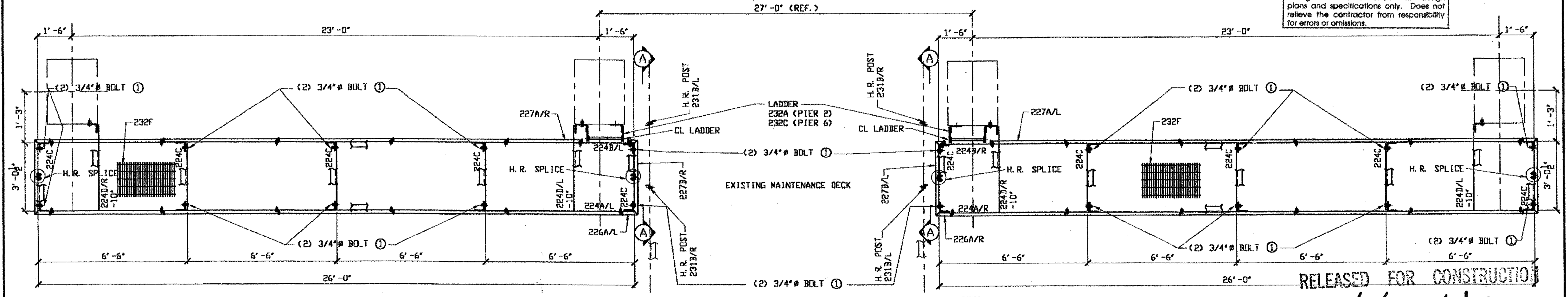
ALL FABRICATION IS PER NAAMM STANDARDS

Last modified by Gfoster at 09:02am on Thu Feb 22, 2001 - Last plotted by Gfoster at 09:22am on Thu Feb 22, 2001



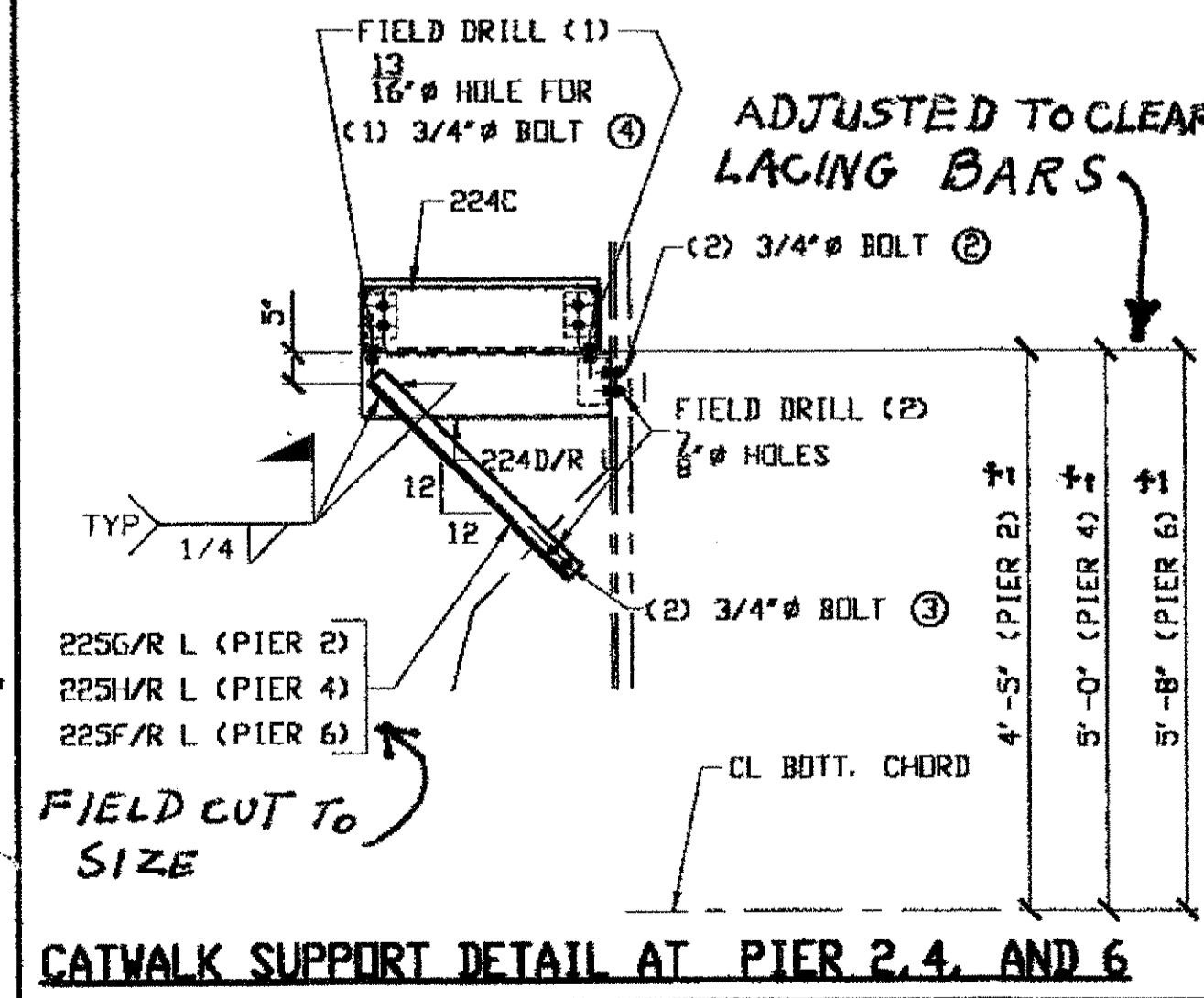
CATWALK FRAMING PLAN PIER 4 AND 8

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/21/01  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

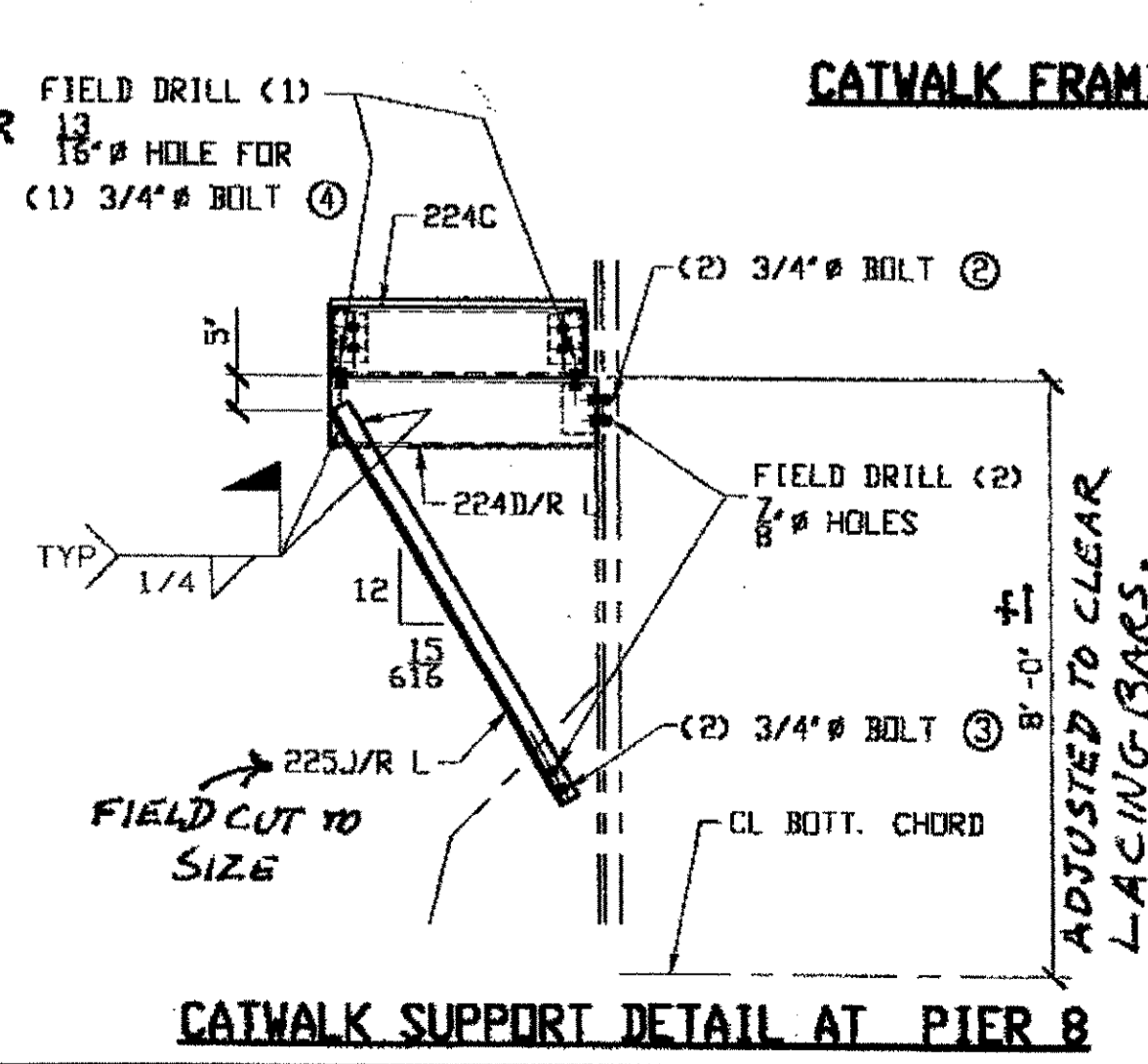


CATWALK FRAMING PLAN PIER 2 AND 6

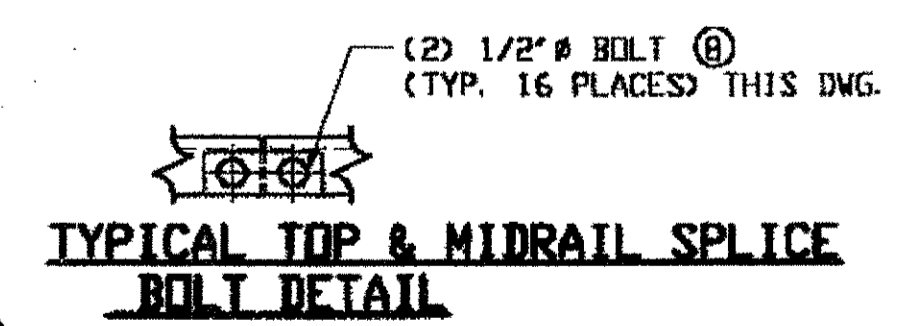
NOTES:  
 1. ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.  
 2. WORK THIS DRAWING WITH adache-cluni-lynn associates DRAWING 140/154, DOT ITEM LINE NO. 0130 & 0151, 141/154, 142/154, 143/154, 147/154, 148/154 & A. B. DWG. E119.  
 DATE 2/24/01 BY tdp



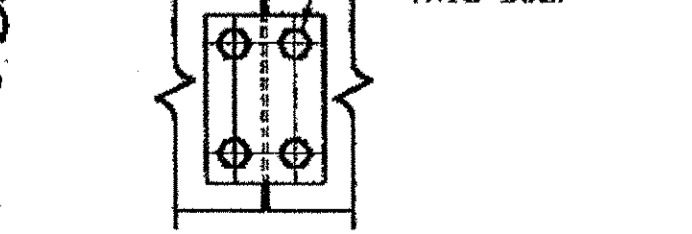
CATWALK SUPPORT DETAIL AT PIER 2, 4, AND 6



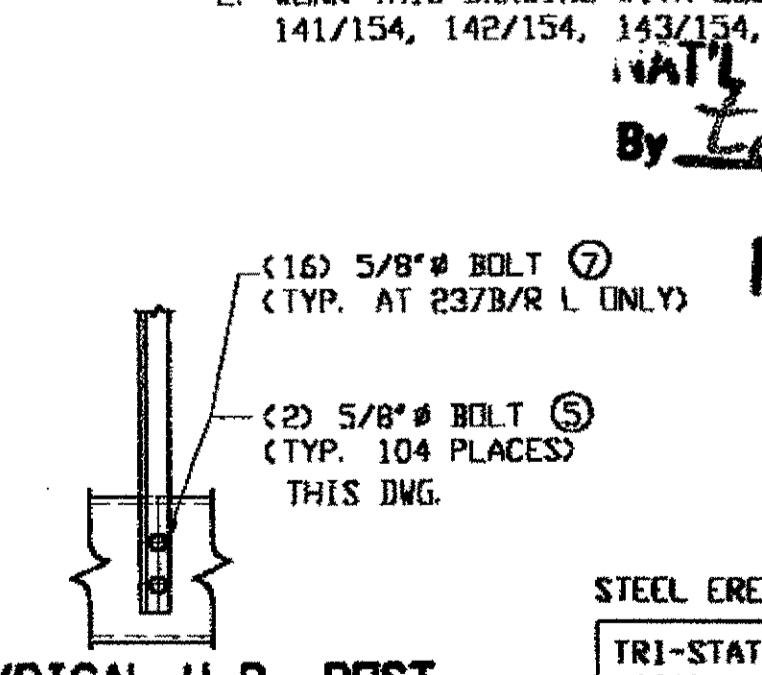
CATWALK SUPPORT DETAIL AT PIER 8



TYPICAL TOP & MIDRAIL SPLICE BOLT DETAIL



TYPICAL TOP PL SPLICE BOLT DETAIL



TYPICAL H.R. POST BOLT DETAIL

WALL ENGR. & CONTR. CO.  
 By tdp/ESS

FEB 23 2001

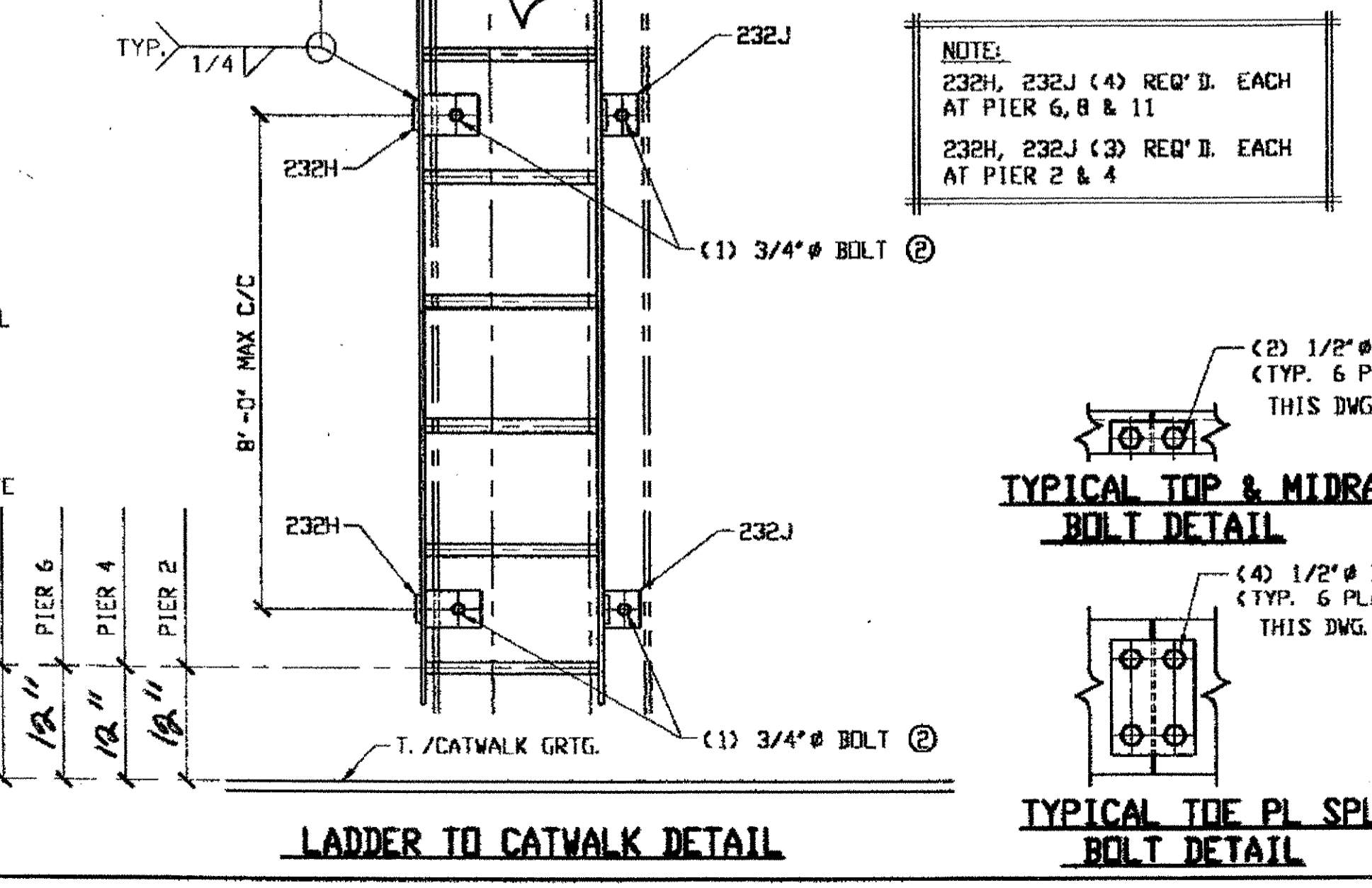
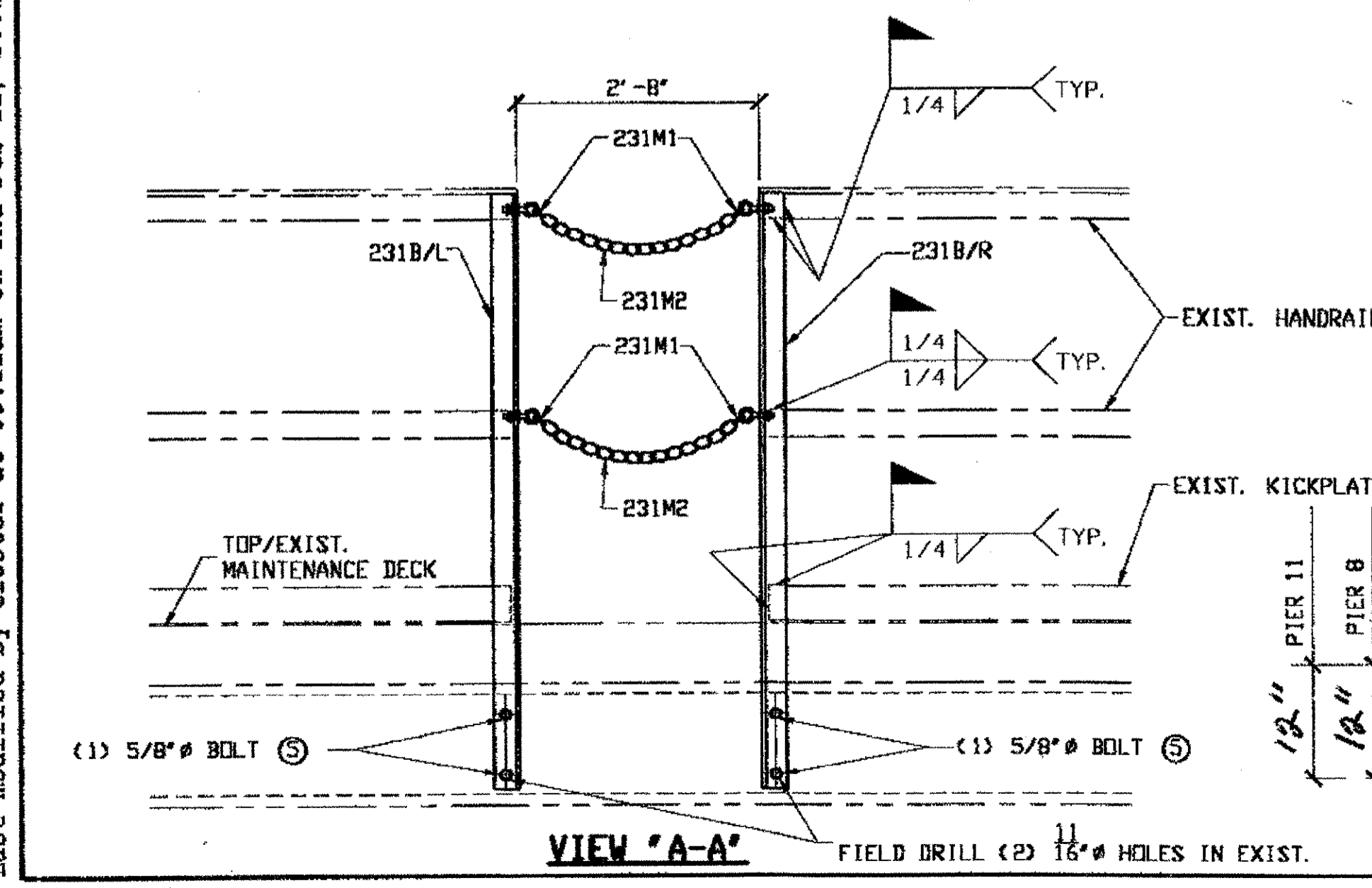
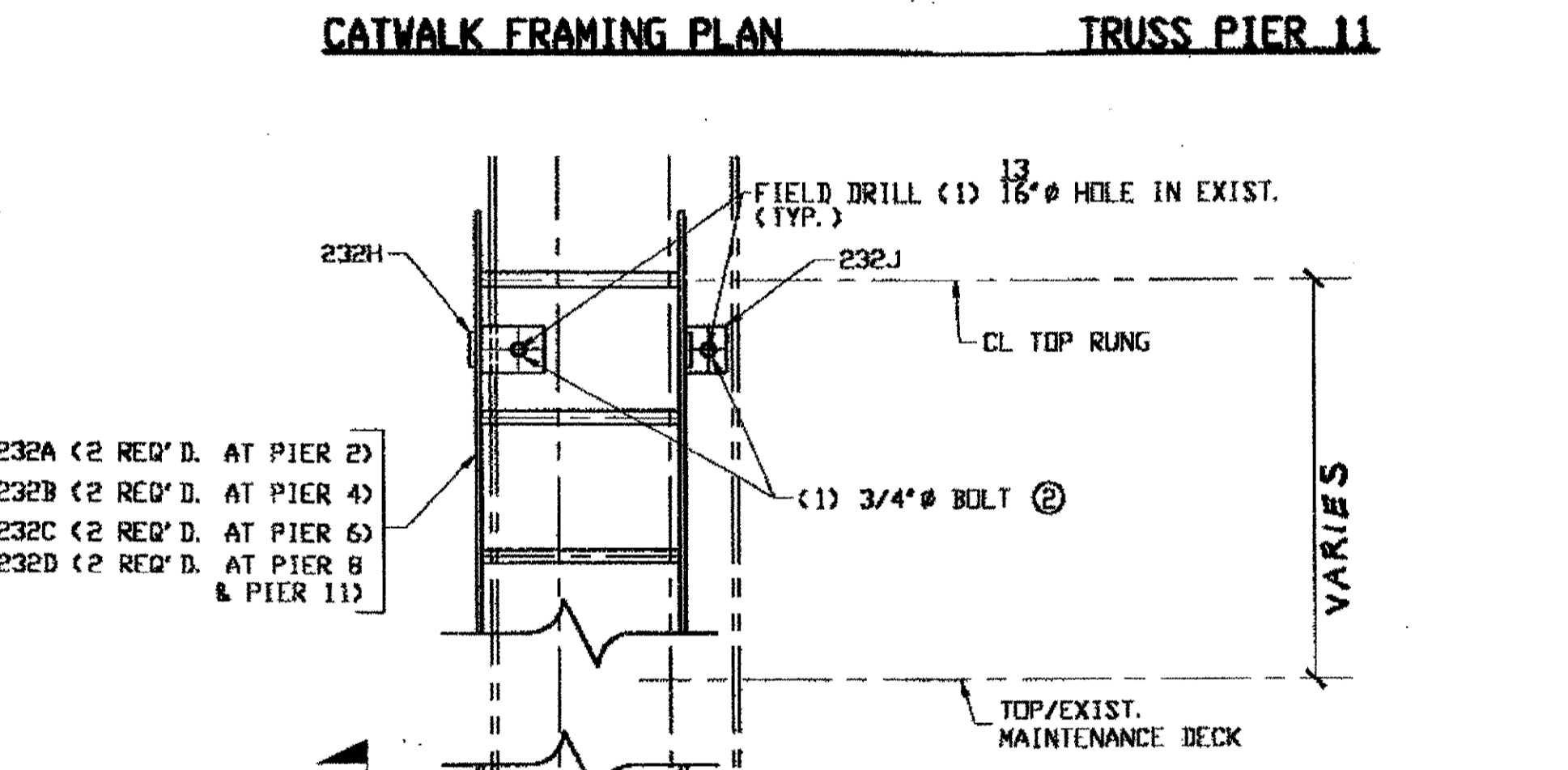
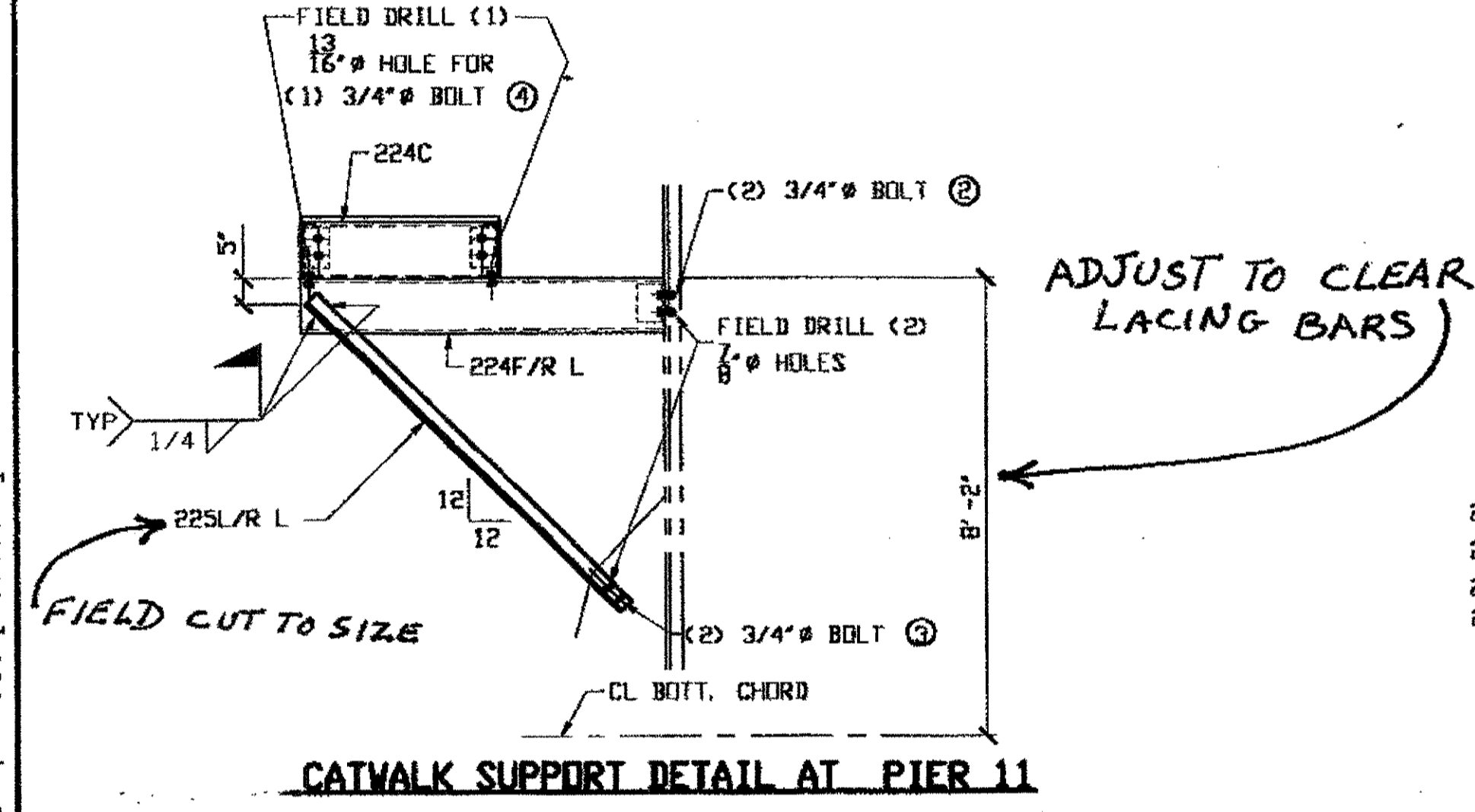
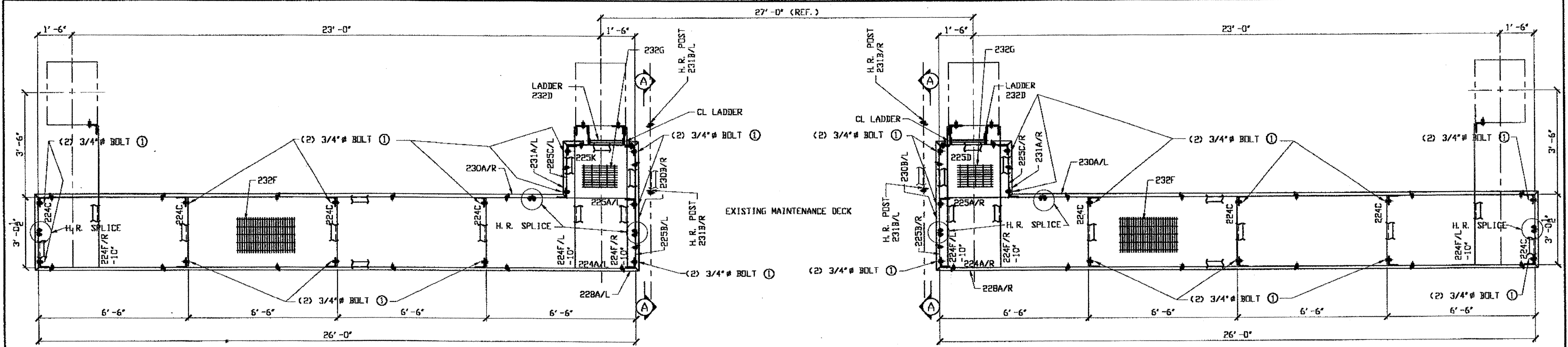


STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION, INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 ZIONSVILLE, PA. 15106  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 KJR 02/06/01  
 CHECKED BY: DATE  
 GAF 2/16/01

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
DRAINAGE INSPECTION ACCESS			
			SHEET NUMBER E118
			ADM. JOB NUMBER 800010





CATWALK FRAMING PLAN TRUSS PIER 11

CATWALK SUPPORT DETAIL AT PIER 11

LADDER TO CATWALK DETAIL

VIEW 'A-A'

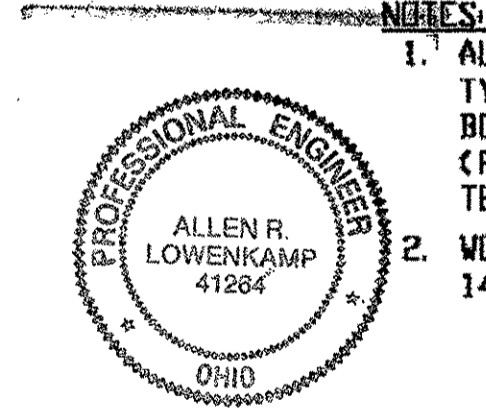
O.D.O.T. DIST. 12	
ACCEPTED	2/19/01 P57M
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR. & CONTR. CO.  
By t.d.p./t.s.s.

FEB 23 2001

- FIELD BOLT LIST**
- ① 3/4" DIA. HVY. HEX BOLT x 0'-2" LG. W/HVY. HEX NUT & ONE WASHER EACH (212 REQUIRED)
  - ② 3/4" DIA. HVY. HEX BOLT x 0'-2 1/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (116 REQUIRED)
  - ③ 3/4" DIA. HVY. HEX BOLT x 0'-2 1/2" LG. W/HVY. HEX NUT & ONE WASHER EACH (44 REQUIRED)
  - ④ 3/4" DIA. HVY. HEX BOLT x 0'-2 1/2" LG. W/HVY. HEX NUT & 2 BEVEL WASHERS EACH (44 REQUIRED)
  - ⑤ 5/8" DIA. HVY. HEX BOLT x 0'-1 3/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (292 REQUIRED)
  - ⑥ 1/2" DIA. HVY. HEX BOLT x 0'-1 1/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (88 REQUIRED)
  - ⑦ 5/8" DIA. HVY. HEX BOLT x 0'-2 1/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (20 REQUIRED)
  - ⑧ 1/2" DIA. HVY. HEX BOLT x 0'-1 1/2" LG. W/HVY. HEX NUT & ONE WASHER EACH (88 REQUIRED)
- RELEASED FOR CONSTRUCTION  
DATE 2/24/01 BY t.d.p.



**NOTES:**

- ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- WORK THIS DRAWING WITH adache-eluni-lynn associates DRAWING 140/154, 141/154, 142/154, 143/154, 147/154, 148/154 & A.B. DWG. E11B.

DOT ITEM LINE NO. 0130 & 0151  
DOT BID ITEM NO. 863E50000

NO.	DATE	DESCRIPTION	BY

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
8000 AMERICAN BRIDGE WAY  
COLUMBUS, OH 43108  
PHONE: (614) 631-3000  
FAX: (614) 631-4001

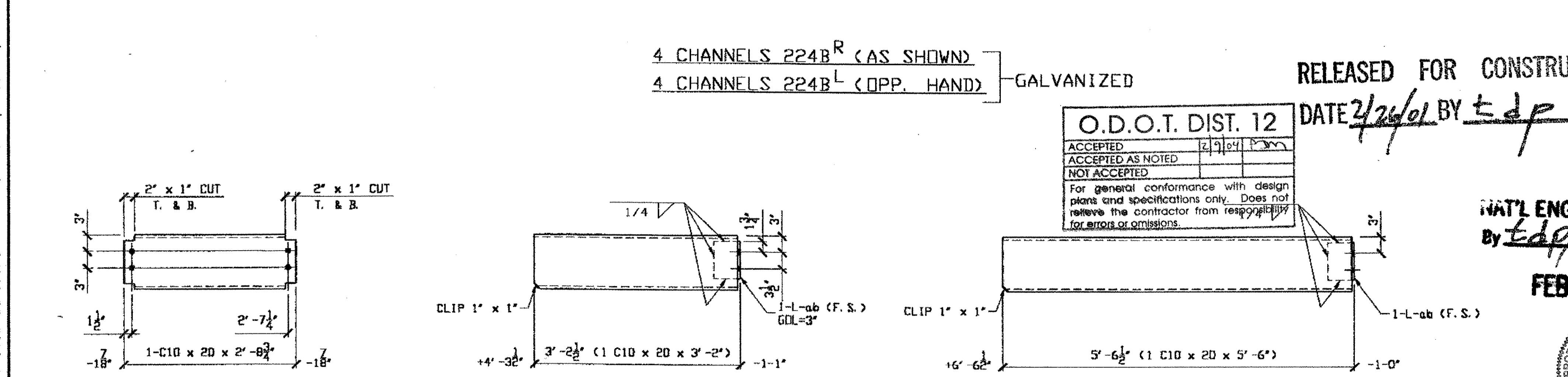
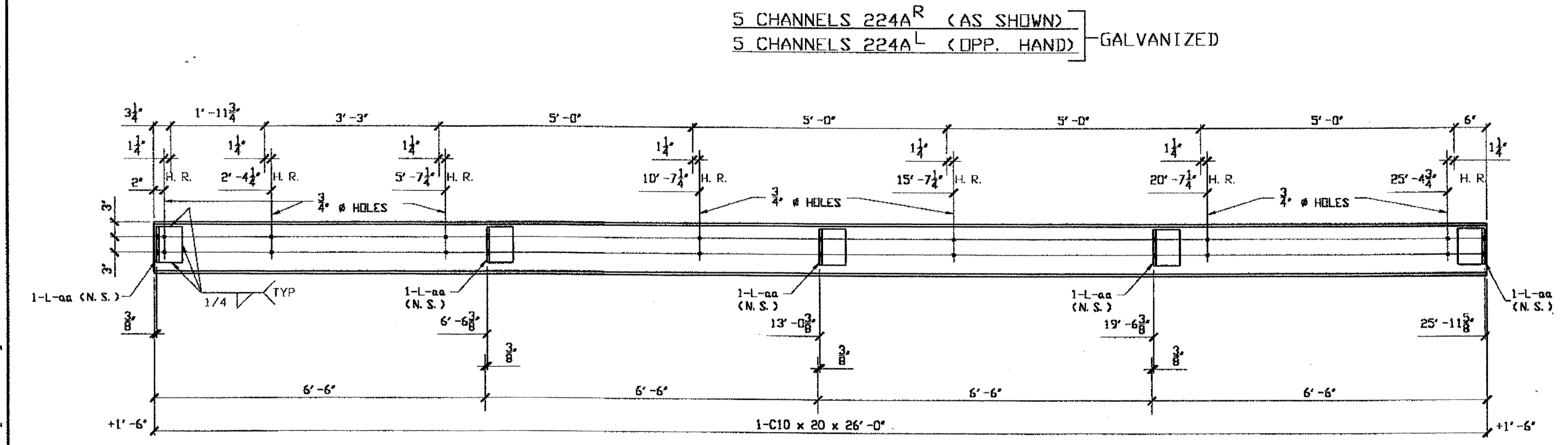
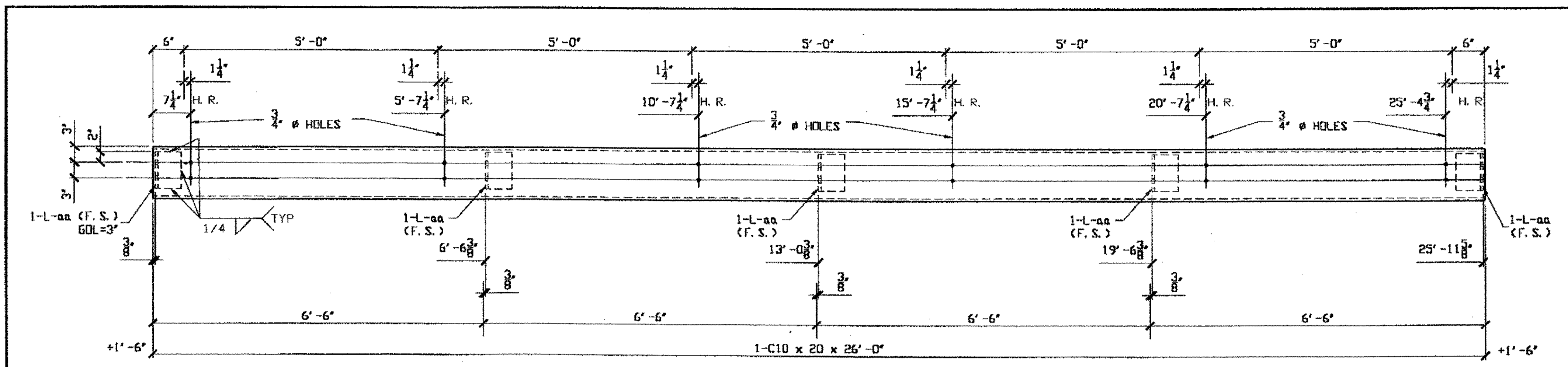
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**INSPECTION ACCESS**

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
KJR 02/06/01  
CHECKED BY: DATE  
GAF 2/16/01

SHEET NUMBER:  
E119  
ABM JOB NUMBER:  
800010

Last modified by Gfoester at 09:12am on Thu Feb 22, 2001 -j- Last plotted by Gfoester at 09:22am on Thu Feb 22, 2001



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'S	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		224A/R	5	C10 x 20	26	0	AS SHOWN	2600
2		aa	25	L 5 x 5 x 1/2	0	7		236
3								
4		224A/L	5	C10 x 20	26	0	OPP. HAND	2600
5		aa	25	L				236
6								
7		224B/R	4	C10 x 20	26	0	AS SHOWN	2080
8		aa	20	L				189
9								
10		224B/L	4	C10 x 20	26	0	OPP. HAND	2080
11		aa	20	L				189
12								
13		224C	48	C10 x 20	2	8 3/4		2620
14								
15		224D/R	8	C10 x 20	3	2	AS SHOWN	507
16		ab	8	L 5 x 5 x 1/2	0	7		76
17								
18		224D/L	8	C10 x 20	3	2	OPP. HAND	507
19		ab	8	L				76
20								
21		224F/R	3	C10 x 20	5	6	AS SHOWN	330
22		ab	3	L				27
23								
24		224F/L	3	C10 x 20	5	6	OPP. HAND	330
25		ab	3	L				27
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

PLATE	PIPE	FITTINGS
SHAPES A36	FLGS.	BOLTS

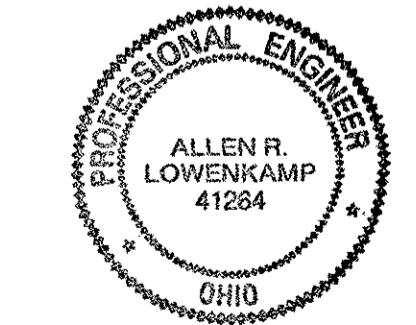
- NOTES:
- OPEN HOLES ARE 7/8" # UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS. 3.0 - 5.0
  - ALL WELDS TO BE SEAL WELDS.

RELEASED FOR CONSTRUCTION  
DATE 2/26/01 BY tdp

O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED [Signature]  
NOT ACCEPTED [Signature]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NAT'L ENGR. & CONTR. CO.  
By tdp/tss

FEB 23 2001

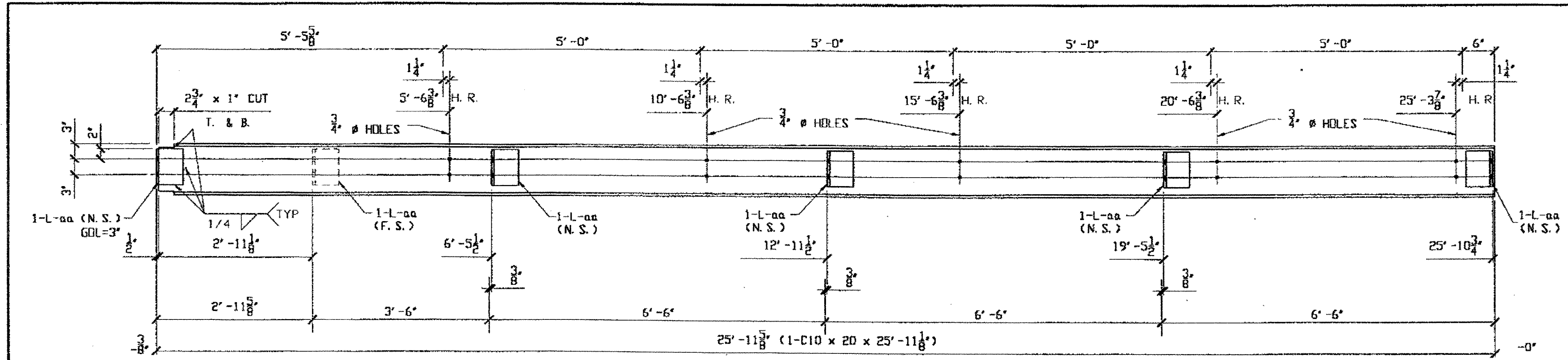


STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

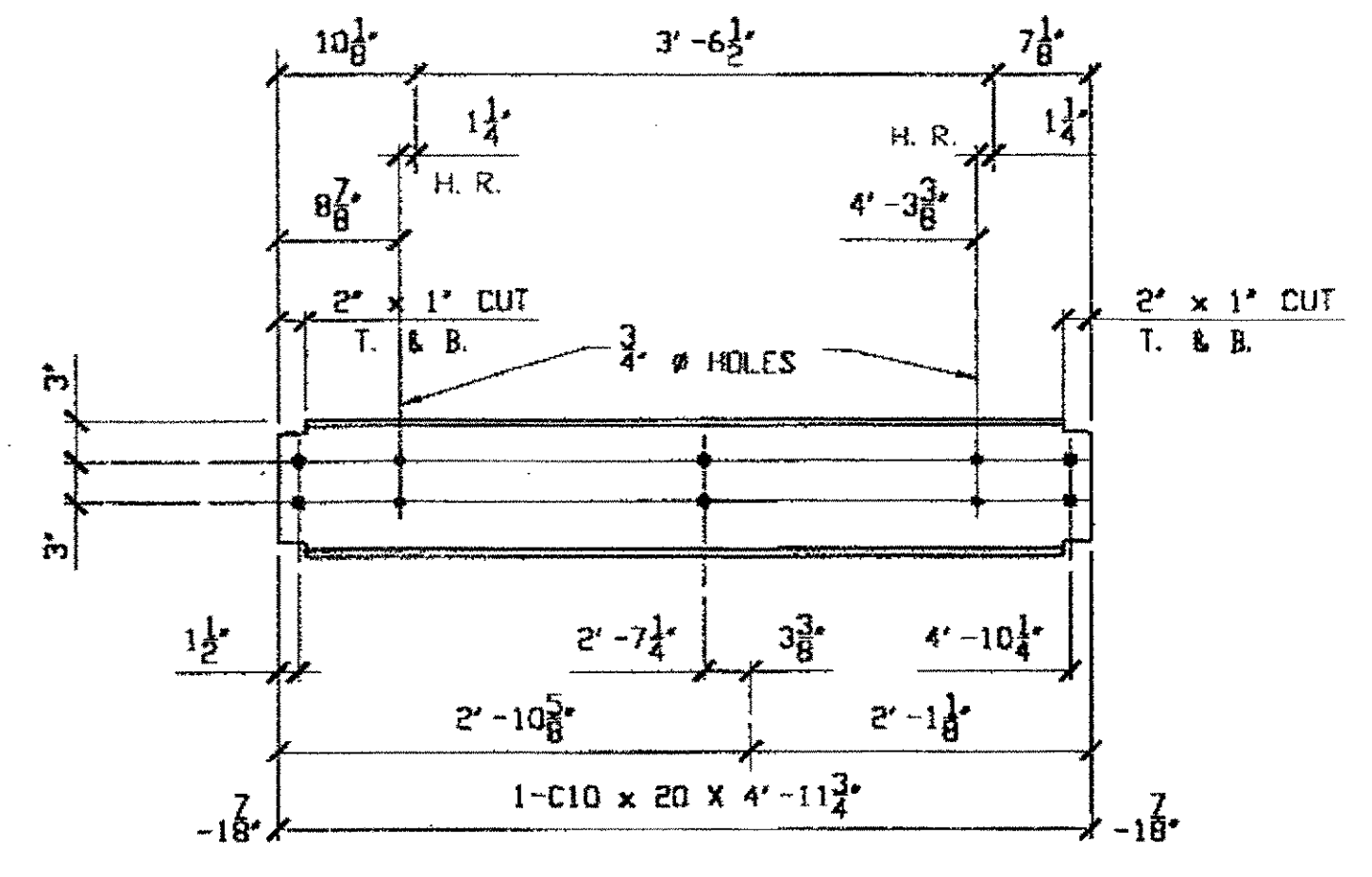
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROSBURG, PA 15106  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0130 U.N. DOT BID ITEM NO. 863E50000	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 INSPECTION ACCESS DETAILS	
SHEET NUMBER: 224	ARM JOB NUMBER: 800010

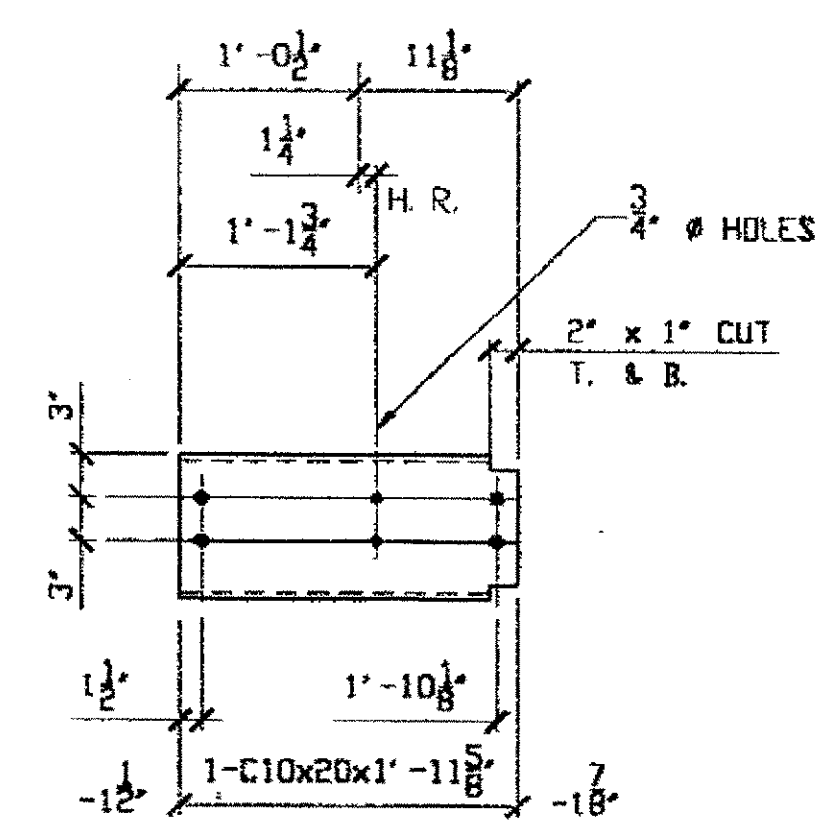
Last modified by Groster at 09:13am on Thu Feb 22, 2001 - Last plotted by Groster at 09:23am on Thu Feb 22, 2001



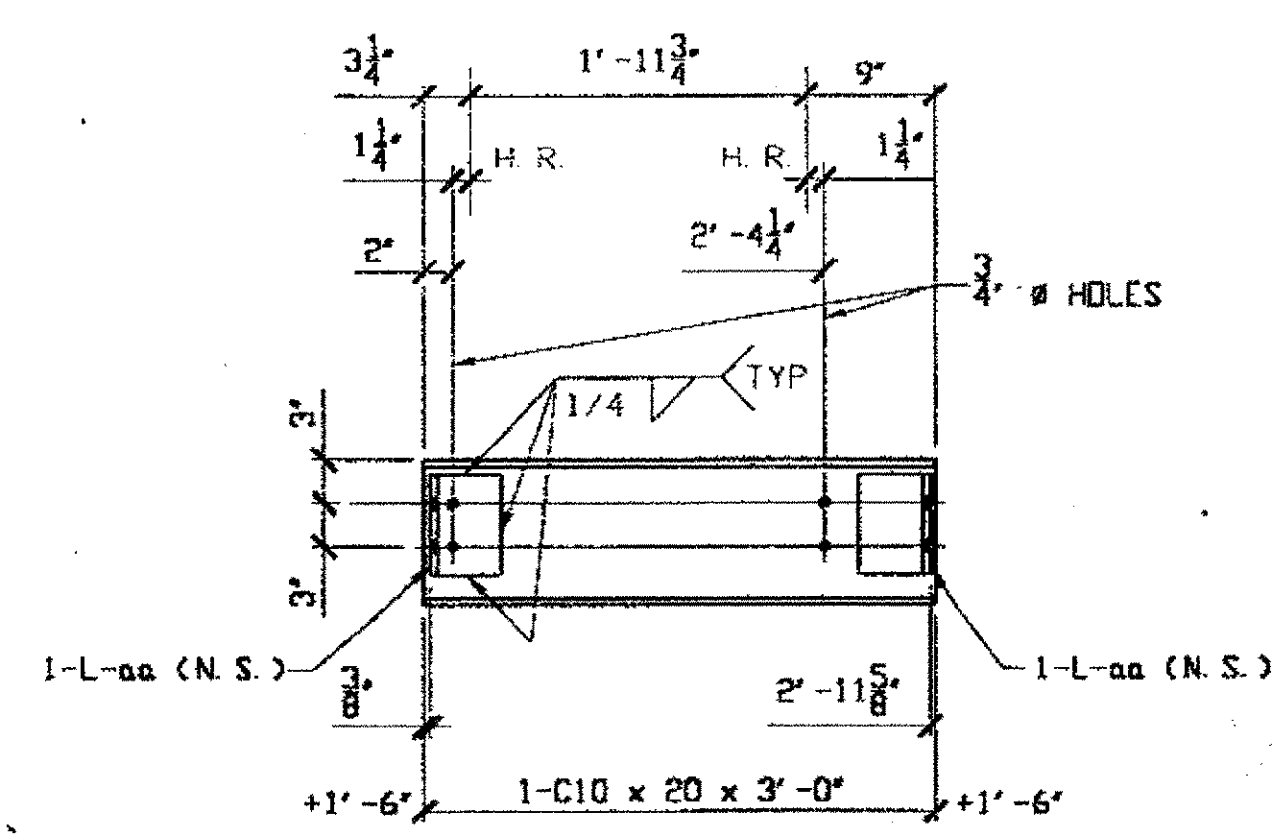
ONE CHANNEL 225A<sup>R</sup> (AS SHOWN)  
 ONE CHANNEL 225A<sup>L</sup> (OPP. HAND) GALVANIZED



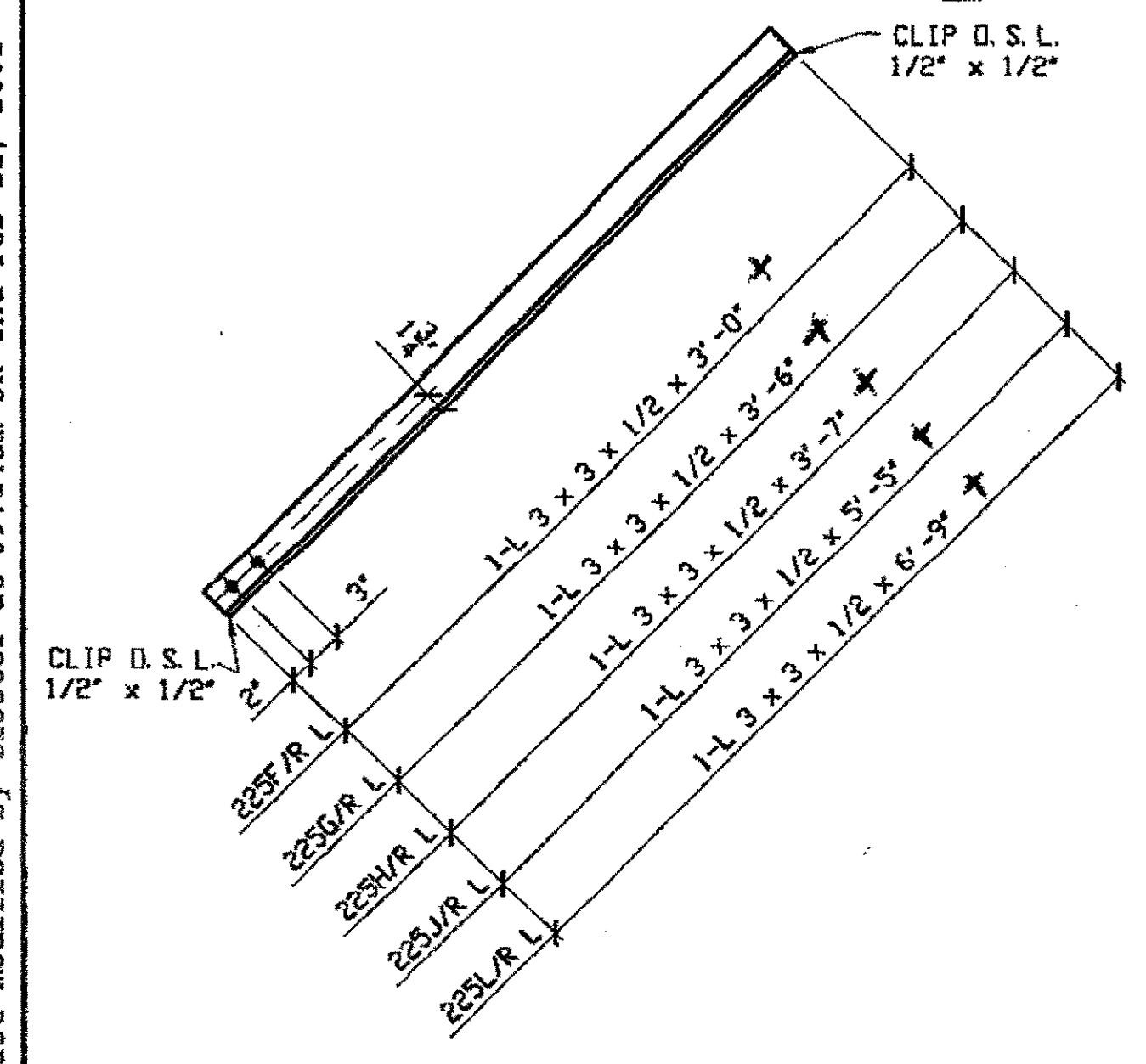
ONE CHANNEL 225B<sup>R</sup> (AS SHOWN)  
 ONE CHANNEL 225B<sup>L</sup> (OPP. HAND) GALVANIZED



ONE CHANNEL 225C<sup>R</sup> (AS SHOWN)  
 ONE CHANNEL 225C<sup>L</sup> (OPP. HAND) GALVANIZED



GALVANIZED ONE CHANNEL 225D

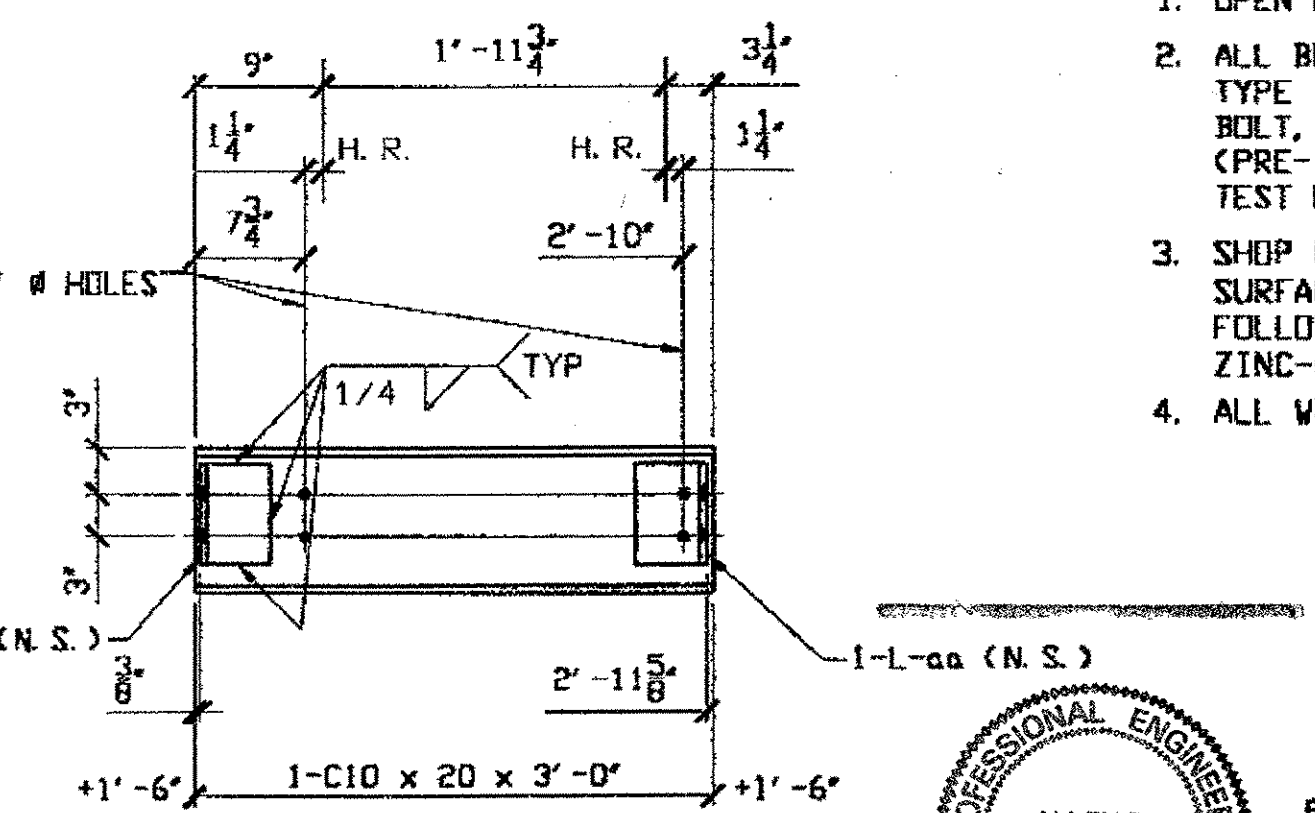


2 DIAGONAL 225F<sup>R</sup> (AS SHOWN)  
 2 DIAGONAL 225F<sup>L</sup> (OPP. HAND)  
 2 DIAGONAL 225G<sup>R</sup> (AS SHOWN)  
 2 DIAGONAL 225G<sup>L</sup> (OPP. HAND)  
 2 DIAGONAL 225H<sup>R</sup> (AS SHOWN)  
 2 DIAGONAL 225H<sup>L</sup> (OPP. HAND)  
 2 DIAGONAL 225J<sup>R</sup> (AS SHOWN)  
 2 DIAGONAL 225J<sup>L</sup> (OPP. HAND)  
 3 DIAGONAL 225L<sup>R</sup> (AS SHOWN)  
 3 DIAGONAL 225L<sup>L</sup> (OPP. HAND)

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 2/26/01 BY tdp

PAINTED (SEE NOTE 3)  
 NOTE:  
 SUPPORT ANGLE LENGTHS  
 NOT EXACT  
 CUT TO LENGTH IN FIELD



GALVANIZED ONE CHANNEL 225K

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		225A/R	ONE	C10 x 20	25	11 1/8	AS SHOWN	518
2		aa	6	L 5 x 5 x 1/2	0	7		57
3								
4		225A/L	ONE	C10 x 20	25	11 1/8	OPP. HAND	518
5		aa	6	L				57
6								
7		225B/R	ONE	C10 x 20	4	11 3/4	AS SHOWN	99
8		225B/L	ONE	C10 x 20	4	11 3/4	OPP. HAND	99
9								
10		225C/R	ONE	C10 x 20	1	11 5/8	AS SHOWN	39
11		225C/L	ONE	C10 x 20	1	11 5/8	OPP. HAND	39
12								
13		225D	ONE	C10 x 20	3	0		60
14		aa	2	L				19
15								
16								
17								
18		225F/R	2	L 3 x 3 x 1/2				
19								
20		225F/L	2	L 3 x 3 x 1/2				
21								
22		225G/R	2	L 3 x 3 x 1/2				
23								
24		225G/L	2	L 3 x 3 x 1/2				
25								
26		225H/R	2	L 3 x 3 x 1/2				
27								
28		225H/L	2	L 3 x 3 x 1/2				
29								
30		225J/R	2	L 3 x 3 x 1/2				
31								
32		225J/L	2	L 3 x 3 x 1/2				
33								
34		225K	ONE	C10 x 20	3	0		60
35		aa	2	L				19
36								
37		225L/R	3	L 3 x 3 x 1/2				
38								
39		225L/L	3	L 3 x 3 x 1/2				
40								

PLATE SHAPES A36 PIPE FLGS. FITTINGS BOLTS

- NOTES:
- OPEN HOLES ARE 7/8" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HYV HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL WELDS TO BE SEAL WELDS.

DOT ITEM LINE NO. 0130 U.N.  
 DOT BID ITEM NO. 863E0000

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 INSPECTION ACCESS DETAILS

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNWALLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
 ALLEN R. LOVENKAMP  
 41284  
 OHIO

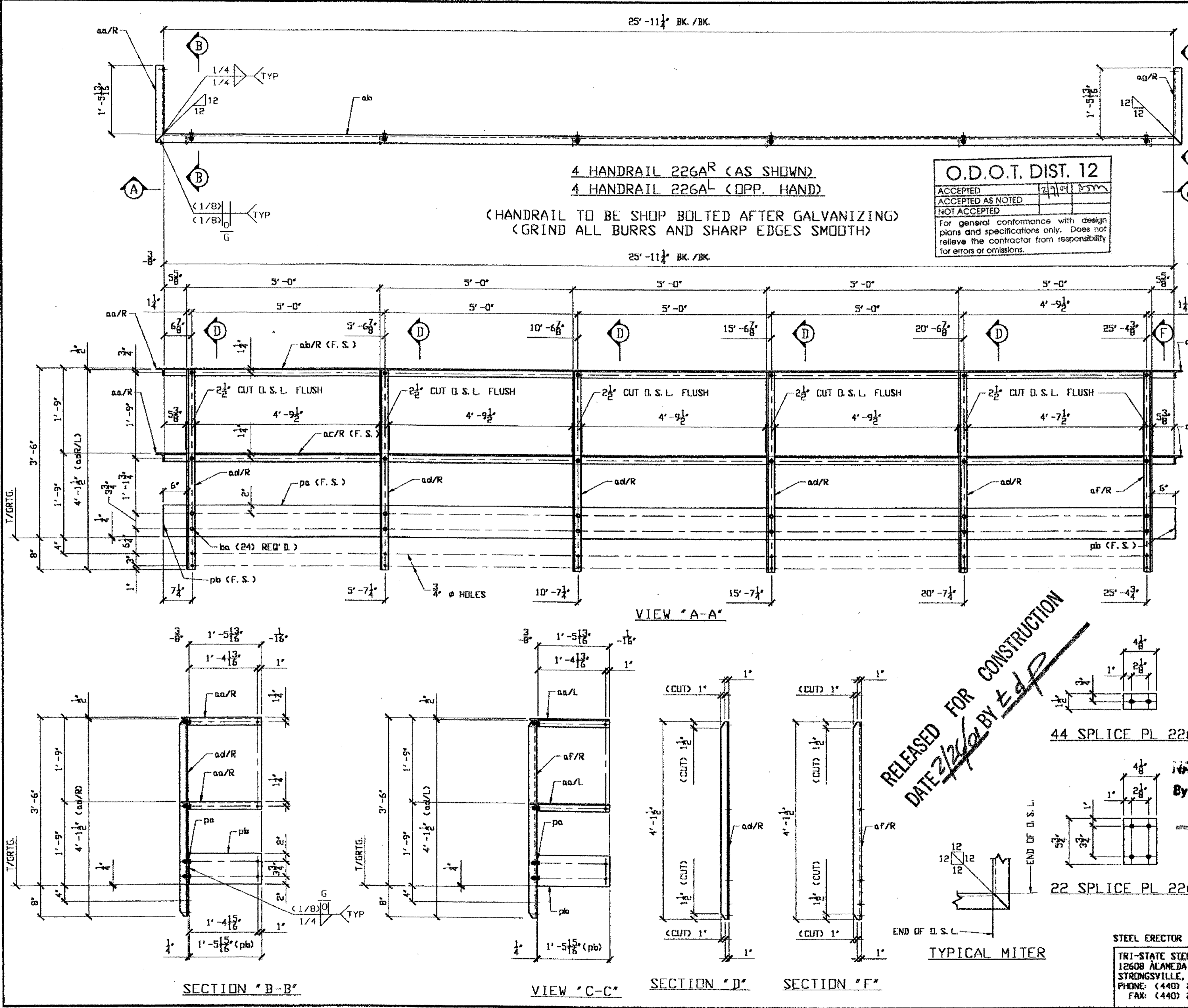
IN CHARGE OF: L. SMITH

DRAWN BY: DATE: KJR 01/25/01  
 CHECKED BY: DATE: GAF 2/15/01

SHEET NUMBER: 225  
 JOB NUMBER: 800010

Last modified by Gfooster at 09:14am on Thu Feb 22, 2001 - Last plotted by Gfooster at 09:23am on Thu Feb 22, 2001

Last modified by krudolf at 03:55pm on Mon Feb 19, 2001 - Last plotted by krudolf at 03:55pm on Mon Feb 19, 2001



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**BILL OF MATERIAL**

LINE	ADVANCE BILL # LINE	MARK NO.	MATERIAL	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		226A/R	4	HANDRAIL			AS SHOWN	
2		aa/R	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62
3		ag/R	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62
4		ab/R	4	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	494
5		ac/R	4	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	494
6		ad/R	20	L 2 x 2 x 3/8	4	1 1/2		387
7		af/R	4	L 2 x 2 x 3/8	4	1 1/2		77
8		pa	4	PL 1/4 x 7 3/4	26	0		685
9		pb	8	PL 1/4 x 7 3/4	1	5 15/16		79
10		ba	96	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	19
11				W/1 HVY. HEX NUT & WASHER EA.				
12								
13		226A/L	4	HANDRAIL			OPP. HAND	
14		aa/L	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62
15		ag/L	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62
16		ab/L	4	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	494
17		ac/L	4	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	494
18		ad/L	20	L 2 x 2 x 3/8	4	1 1/2		387
19		af/L	4	L 2 x 2 x 3/8	4	1 1/2		77
20		pa	4	PL				685
21		pb	8	PL				79
22		ba	96	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	19
23				W/1 HVY. HEX NUT & WASHER EA.				
24								
25		226SP1	44	PL 3/8 x 1 1/2	0	4 1/8		29
26								
27		226SP2	22	PL 1/4 x 4 1/8	0	5 3/4		38
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

PLATE A36 PIPE FITTINGS  
 SHAPES A36 FLGS. BOLTS

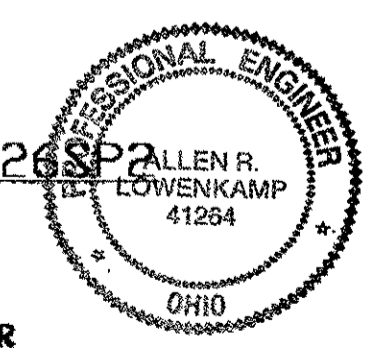
- NOTES:**
- OPEN HOLES ARE (5/8" #) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: NONE  
ALL MATERIAL TO BE GALVANIZED
  - ALL WELDS TO BE SEAL WELDS.

**RELEASED FOR CONSTRUCTION**  
 DATE 2/26/01 BY *tdp*

44 SPLICE PL 226SP1

NAT'L ENGR' & CONTR. CO.  
 By *tdp/ess*

FEB 23 2001



22 SPLICE PL 226SP2

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION, INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2800 AMERICAN BRIDGE WAY  
 CORNWALLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0130  
 DOT BID ITEM NO. 863E30000

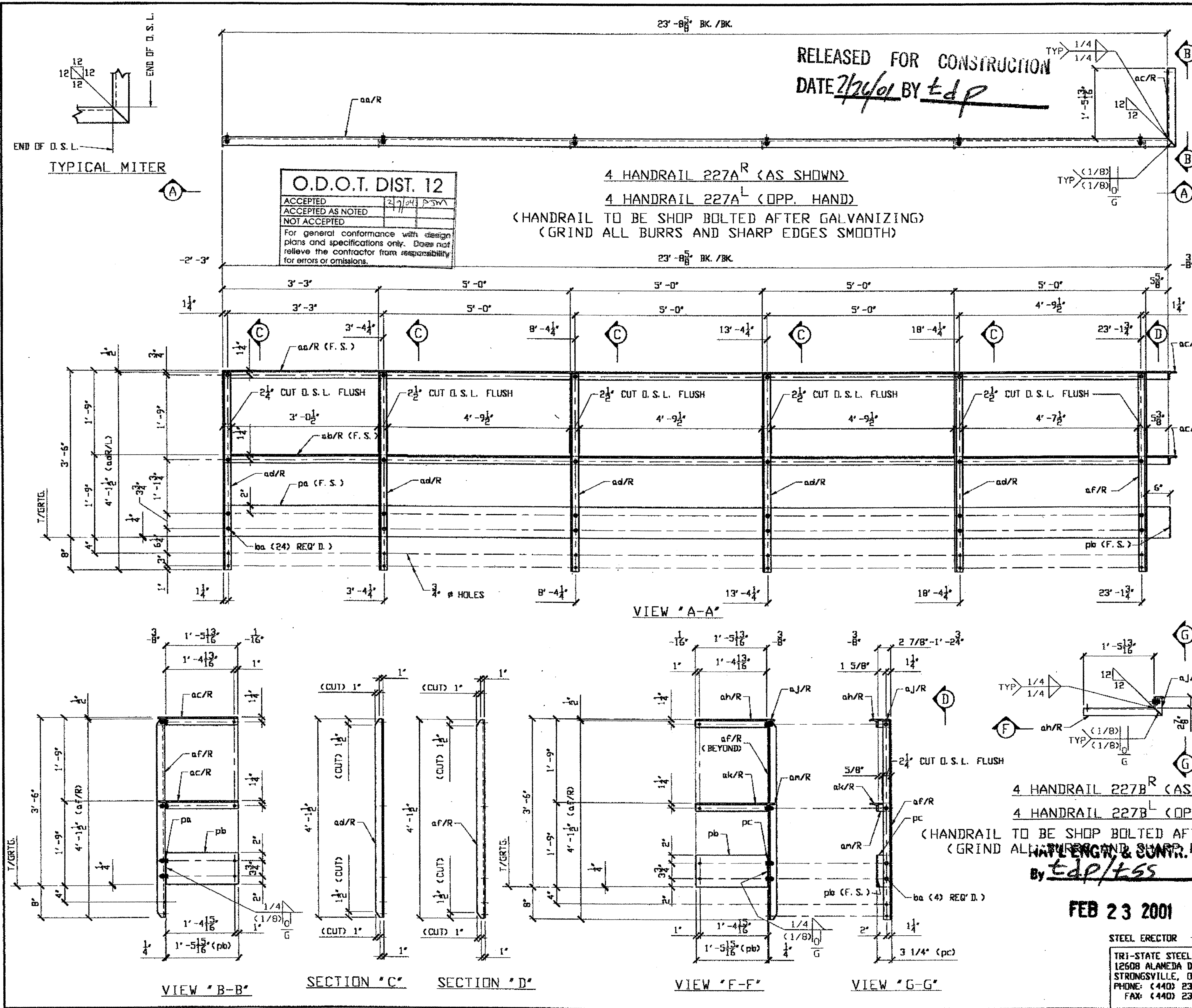
NO.	DATE	DESCRIPTION	BY
		REVISIONS	

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**

INSPECTION ACCESS H.R. DETAILS

SHEET NUMBER: 226  
 FAB JOB NUMBER: 800010

Last modified by krudolf at 04:24pm on Mon Feb 19, 2001 - Last plotted by krudolf at 04:24pm on Mon Feb 19, 2001



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		227A/R	4	HANDRAIL			AS SHOWN		
2		aa/R	4	L 2 x 2 x 3/8	23	10 5/8	MITER 1E	449	
3		ab/R	4	L 2 x 2 x 3/8	23	10 5/8	MITER 1E	449	
4		ac/R	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62	
5		ad/R	20	L 2 x 2 x 3/8	4	1 1/2		388	
6		af/R	4	L 2 x 2 x 3/8	4	1 1/2		77	
7		pa	4	PL 1/4 x 7 3/4	23	9		626	
8		pb	4	PL 1/4 x 7 3/4	1	5 15/16		39	
9		ba	96	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	19	
10				W/1 HVY. HEX NUT & WASHER EA.					
11									
12		227A/L	4	HANDRAIL			OPP. HAND		
13		aa/L	4	L 2 x 2 x 3/8	23	10 5/8	MITER 1E	449	
14		ab/L	4	L 2 x 2 x 3/8	23	10 5/8	MITER 1E	449	
15		ac/L	8	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	62	
16		ad/L	20	L 2 x 2 x 3/8	4	1 1/2		388	
17		af/L	4	L 2 x 2 x 3/8	4	1 1/2		77	
18		pa	4	PL				626	
19		pb	4	PL				39	
20		ba	96	1/2 # HVY. HEX BOLT			NOTE 2	19	
21									
22		227B/R	4	HANDRAIL			AS SHOWN		
23		af/R	4	L				77	
24		ah/R	4	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	31	
25		aj/R	4	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	5	
26		ak/R	4	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	31	
27		am/R	4	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	5	
28		pb	4	PL				39	
29		pc	4	PL 1/4 x 3 1/4	0	7 3/4		8	
30		ba	16	1/2 # HVY. HEX BOLT			NOTE 2	3	
31									
32		227B/L	4	HANDRAIL			OPP. HAND		
33		af/L	4	L				77	
34		ah/L	4	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	31	
35		aj/L	4	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	5	
36		ak/L	4	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	31	
37		am/L	4	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	5	
38		pb	4	PL				39	
39		pc	4	PL				8	
40		ba	16	1/2 # HVY. HEX BOLT			NOTE 2	3	
PLATE A36				PIPE	FITTINGS				
SHAPES A36				FLGS.	BOLTS				

**NOTES:**

- OPEN HOLES ARE 5/8" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE 1E-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: NONE  
ALL MATERIAL TO BE GALVANIZED.
- ALL WELDS TO BE SEAL WELDS.

4 HANDRAIL 227B<sup>R</sup> (AS SHOWN)  
4 HANDRAIL 227B<sup>L</sup> (OPP. HAND)  
(HANDRAIL TO BE SHOP BOLTED AFTER GALVANIZING)  
(GRIND ALL BURRS AND SHARP EDGES SMOOTH)

By EdP/tss

**FEB 23 2001**

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
KJR 01/30/01  
CHECKED BY: DATE:  
GAF 2/15/01

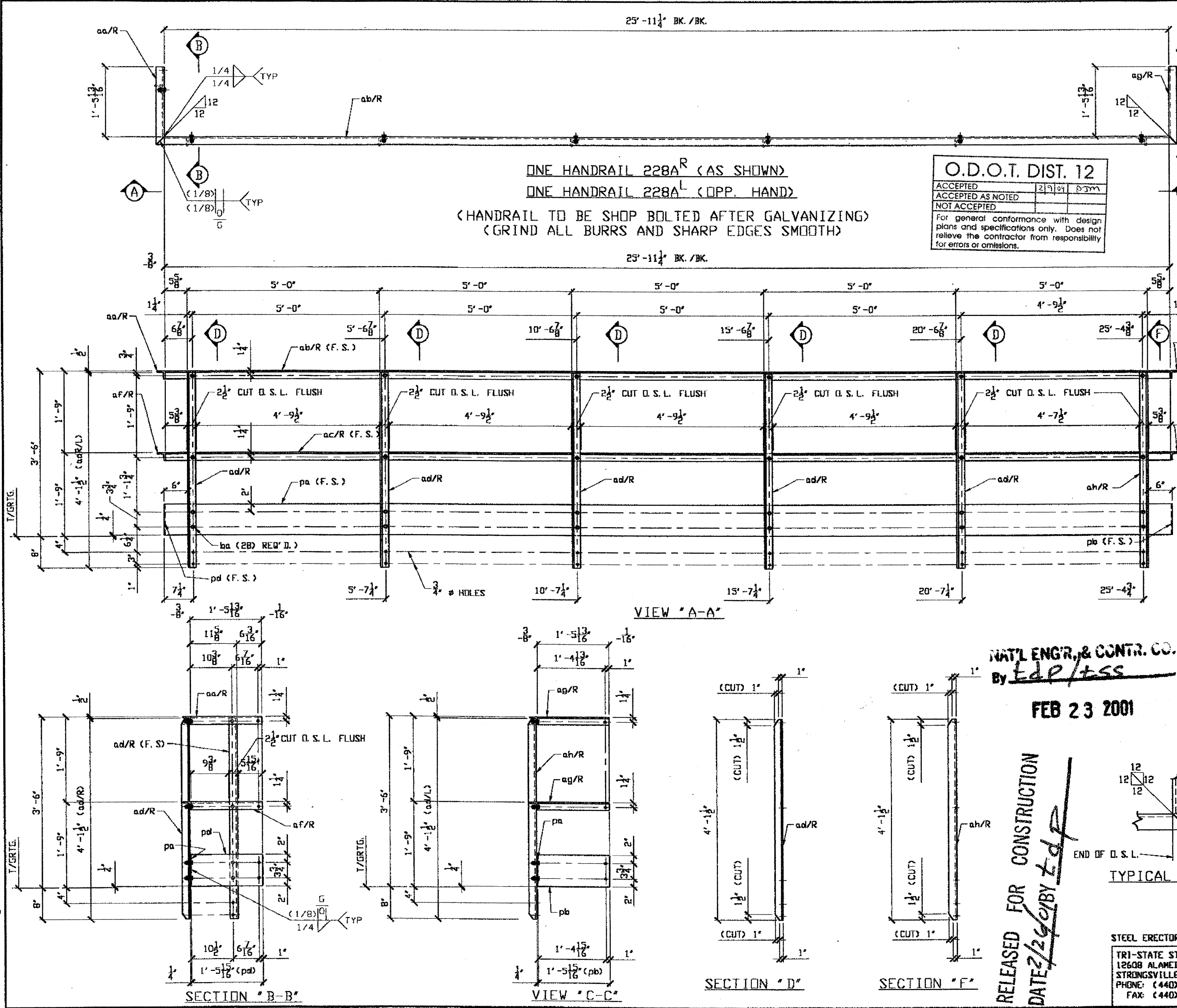
DOT ITEM LINE NO. 0130  
DOT BID ITEM NO. 863E50000

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**

**INSPECTION ACCESS H. R. DETAILS**

SHEET NUMBER:  
227  
JOB NUMBER:  
800010

Last modified by gfooster at 09:16am on Thu Feb 22, 2001 - Last plotted by gfooster at 09:24am on Thu Feb 22, 2001



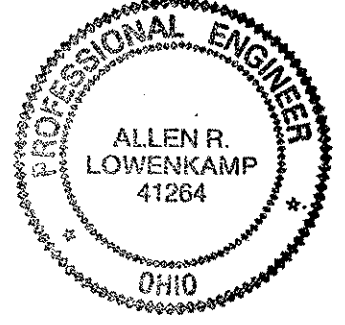
BILL OF MATERIAL									
LINE	ADVANCE BILL # LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		228A/R	ONE	HANDRAIL			AS SHOWN		
2		aa/R	ONE	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	8	
3		ab/R	ONE	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	123	
4		ac/R	ONE	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	123	
5		ad/R	6	L 2 x 2 x 3/8	4	1 1/2		116	
6		ah/R	ONE	L 2 x 2 x 3/8	4	1 1/2		19	
7		af/R	ONE	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	8	
8		ag/R	2	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	16	
9		pa	ONE	PL 1/4 x 7 3/4	26	0		171	
10		pb	ONE	PL 1/4 x 7 3/4	1	5 <sup>15</sup> / <sub>16</sub>		10	
11		pd	ONE	PL 1/4 x 7 3/4	1	5 <sup>15</sup> / <sub>16</sub>		10	
12		ba	28	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	5	
13				W/1 HVY. HEX NUT & WASHER EA.					
14									
15		228A/L	ONE	HANDRAIL			OPP. HAND		
16		aa/L	ONE	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	8	
17		ab/L	ONE	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	123	
18		ac/L	ONE	L 2 x 2 x 3/8	26	3 1/4	MITER 2E	123	
19		ad/L	6	L 2 x 2 x 3/8	4	1 1/2		116	
20		ah/L	ONE	L 2 x 2 x 3/8	4	1 1/2		19	
21		af/L	ONE	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	8	
22		ag/L	2	L 2 x 2 x 3/8	1	7 <sup>13</sup> / <sub>16</sub>	MITER 1E	16	
23		pa	ONE	PL				171	
24		pb	ONE	PL				10	
25		pd	ONE	PL				10	
26		ba	28	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	5	
27				W/1 HVY. HEX NUT & WASHER EA.					
28									
29									
30									
31									
32									
33									
34									
35									
36									
37									
38									
39									
40									
PLATE		A36		PIPE			FITTINGS		
SHAPES		A36		FLGS.			BOLTS		

- NOTES:**
1. OPEN HOLES ARE 5/8" # UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: NONE  
ALL MATERIAL TO BE GALVANIZED.
  4. ALL WELDS TO BE SEAL WELDS

NAT'L ENGR. & CONTR. CO.  
By *Ed P / tss*

FEB 23 2001

RELEASED FOR CONSTRUCTION  
DATE 2/29/01 BY *Ldf*



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANVILLE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0130  
DOT BID ITEM NO. 863E50000

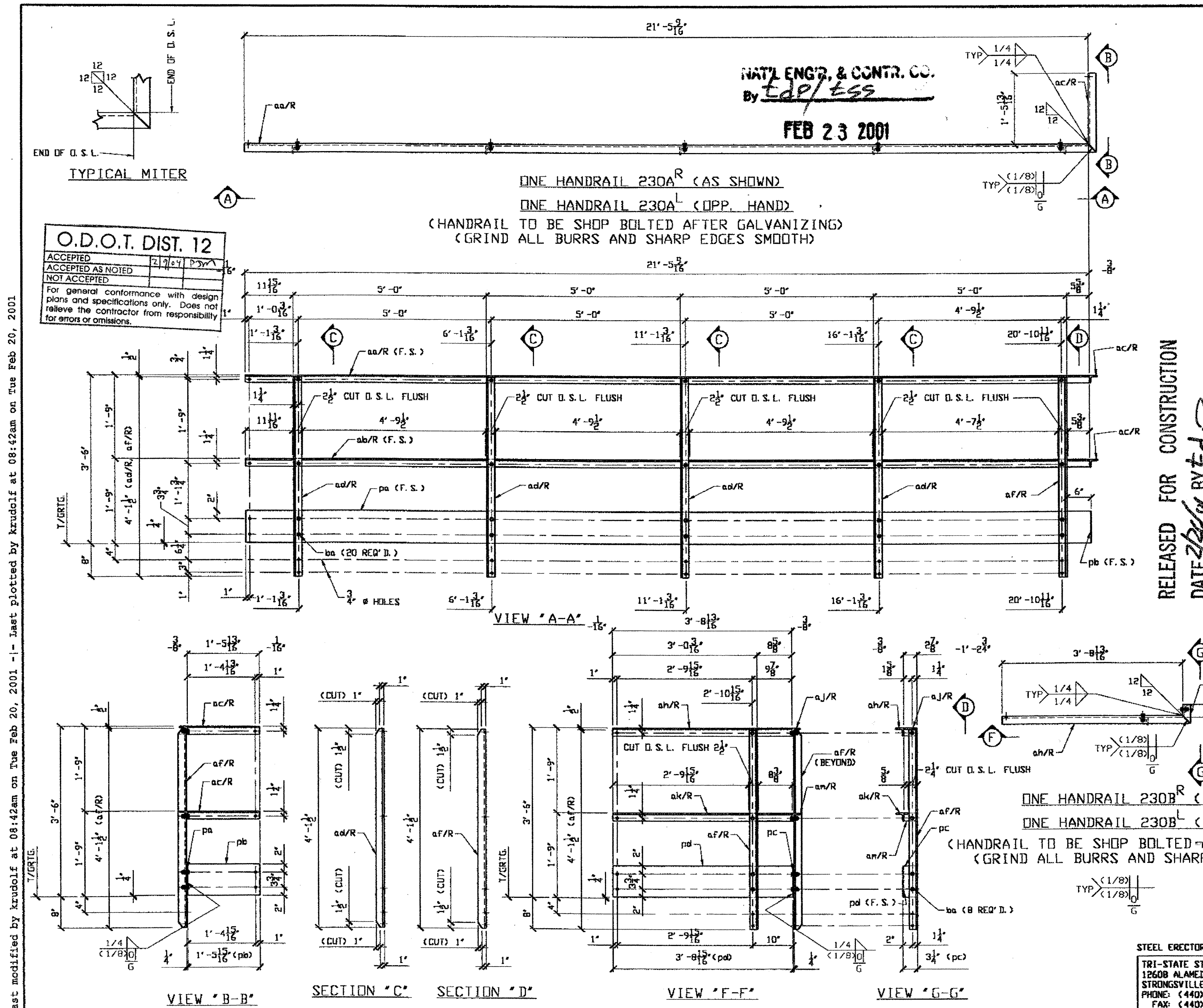
NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L SMITH  
DRAWN BY: DATE  
KJR 01/31/01  
CHECKED BY: DATE  
GAF 2/15/01

INSPECTION ACCESS H. R. DETAILS  
SHEET NUMBER: 228  
ASB JOB NUMBER: 800010



BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1		230A/R	ONE	HANDRAIL			AS SHOWN		
2		aa/R	ONE	L 2 x 2 x 3/8	21	7 3/16	MITER 1E	102	
3		ab/R	ONE	L 2 x 2 x 3/8	21	7 3/16	MITER 1E	102	
4		ac/R	2	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	15	
5		ad/R	4	L 2 x 2 x 3/8	4	1 1/2		77	
6		af/R	ONE	L 2 x 2 x 3/8	4	1 1/2		19	
7		pa	ONE	PL 1/4 x 7 3/4	21	5 15/16		142	
8		pb	ONE	PL 1/4 x 7 3/4	1	5 15/16		10	
9		ba	20	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	4	
10				W/1 HVY. HEX NUT & WASHER	EA.				
11									
12		230A/L	ONE	HANDRAIL			OPP. HAND		
13		aa/L	ONE	L 2 x 2 x 3/8	21	7 3/16	MITER 1E	102	
14		ab/L	ONE	L 2 x 2 x 3/8	21	7 3/16	MITER 1E	102	
15		ac/L	2	L 2 x 2 x 3/8	1	7 13/16	MITER 1E	15	
16		ad/L	4	L 2 x 2 x 3/8	4	1 1/2		77	
17		af/L	ONE	L 2 x 2 x 3/8	4	1 1/2		19	
18		pa	ONE	PL				142	
19		pb	ONE	PL				10	
20		ba	20	1/2 # HVY. HEX BOLT			NOTE 2	4	
21									
22		230B/R	ONE	HANDRAIL			AS SHOWN		
23		af/R	2	L				38	
24		ah/R	ONE	L 2 x 2 x 3/8	3	10 13/16	MITER 1E	18	
25		aj/R	ONE	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	1	
26		ak/R	ONE	L 2 x 2 x 3/8	3	10 13/16	MITER 1E	18	
27		am/R	ONE	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	1	
28		pc	ONE	PL 1/4 x 3 1/4	0	7 3/4		2	
29		pd	ONE	PL 1/4 x 7 3/4	3	8 15/16		25	
30		ba	8	1/2 # HVY. HEX BOLT			NOTE 2	1	
31									
32		230B/L	ONE	HANDRAIL			OPP. HAND		
33		af/L	2	L				38	
34		ah/L	ONE	L 2 x 2 x 3/8	3	10 13/16	MITER 1E	18	
35		aj/L	ONE	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	1	
36		ak/L	ONE	L 2 x 2 x 3/8	3	10 13/16	MITER 1E	18	
37		am/L	ONE	L 2 x 2 x 3/8	0	4 7/8	MITER 1E	1	
38		pc	ONE	PL				2	
39		pd	ONE	PL				25	
40		ba	8	1/2 # HVY. HEX BOLT			NOTE 2	1	
PLATE A36				PIPE	FITTINGS				
SHAPES A36				FLGS.	BOLTS				

**NOTES:**

- OPEN HOLES ARE 5/8" # UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: NONE  
ALL MATERIAL TO BE GALVANIZED.
- ALL WELDS ARE TO BE SEAL WELDS.

DOT ITEM LINE NO. 0130  
DOT BID ITEM NO. B63E50000

REV. DATE	DESCRIPTION	BY

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**

**INSPECTION ACCESS H.R. DETAILS**

**FABRICATOR**  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE HWY  
CHANDLER, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

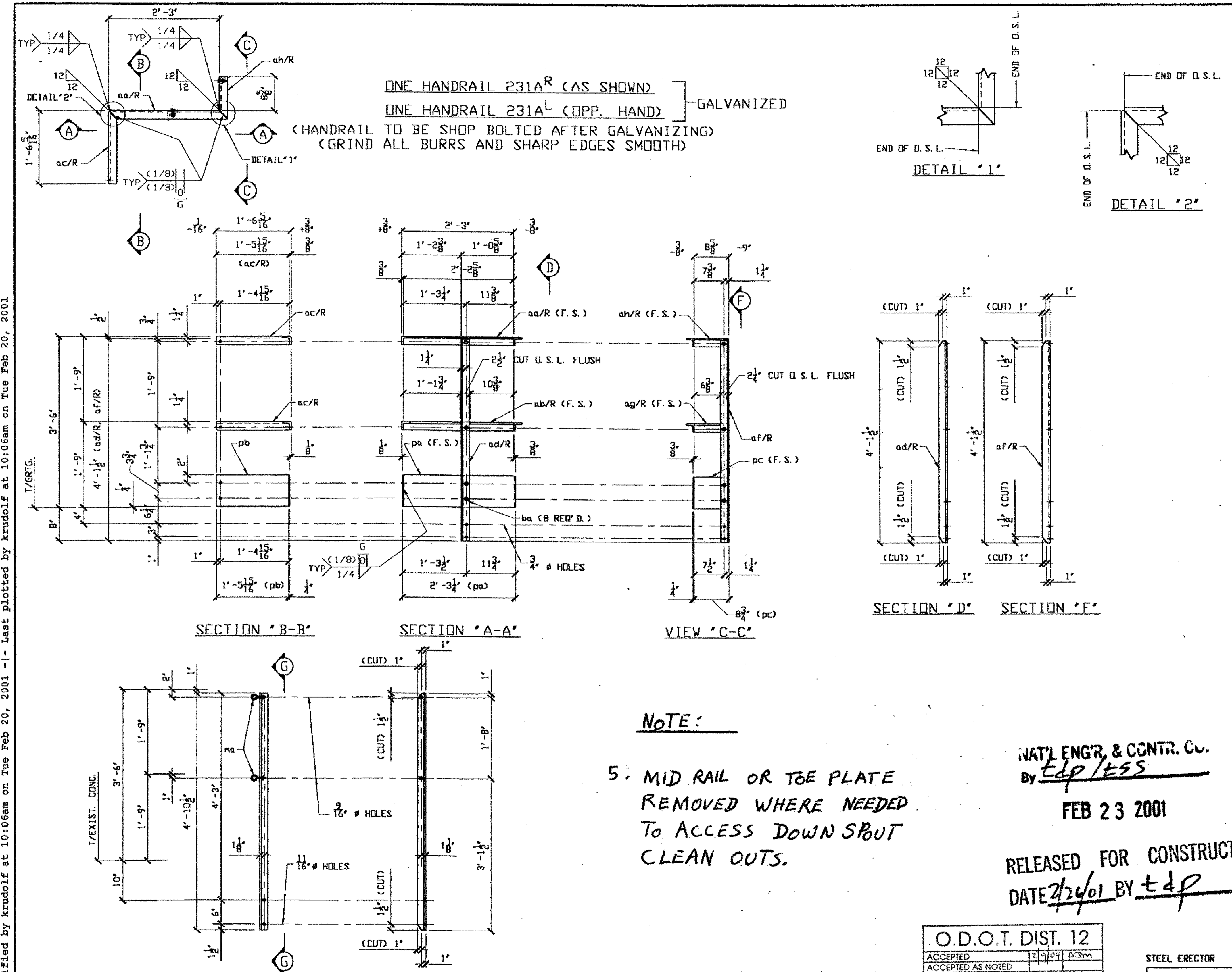
**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

**PROFESSIONAL ENGINEER**  
ALLEN R. LOWENKAMP  
41264  
OHIO

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: KJR 02/01/01  
CHECKED BY: DATE: GAF 2/15/01

SHEET NUMBER: 230  
JOB NUMBER: 800010

Last modified by krudolf at 08:42am on Tue Feb 20, 2001 - Last plotted by krudolf at 08:42am on Tue Feb 20, 2001



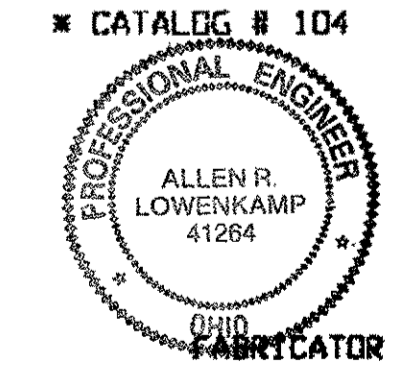
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		231A/R	ONE	HANDRAIL			AS SHOWN	
2		aa/R	ONE	L 2 x 2 x 3/8	2	4 5/8	MITER 2E	11
3		ab/R	ONE	L 2 x 2 x 3/8	2	4 5/8	MITER 2E	11
4		ac/R	2	L 2 x 2 x 3/8	1	5 15/16	MITER 1E	14
5		ad/R	ONE	L 2 x 2 x 3/8	4	1 1/2		19
6		af/R	ONE	L 2 x 2 x 3/8	4	1 1/2		19
7		ag/R	ONE	L 2 x 2 x 3/8	0	10 3/8	MITER 1E	4
8		ah/R	ONE	L 2 x 2 x 3/8	0	10 3/8	MITER 1E	4
9		pa	ONE	PL 1/4 x 7 3/4	2	3 1/4		15
10		pb	ONE	PL 1/4 x 7 3/4	1	5 15/16		10
11		pc	ONE	PL 1/4 x 7 3/4	0	8 3/4		5
12		ba	8	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	1
13				W/1 HVY. HEX NUT & WASHER EA.				
14								
15		231A/L	ONE	HANDRAIL			DPP. HAND	
16		aa/L	ONE	L 2 x 2 x 3/8	2	4 5/8	MITER 2E	11
17		ab/L	ONE	L 2 x 2 x 3/8	2	4 5/8	MITER 2E	11
18		ac/L	2	L 2 x 2 x 3/8	1	5 15/16	MITER 1E	14
19		ad/L	ONE	L 2 x 2 x 3/8	4	1 1/2		19
20		af/L	ONE	L 2 x 2 x 3/8	4	1 1/2		19
21		ag/L	ONE	L 2 x 2 x 3/8	0	10 3/8	MITER 1E	4
22		ah/L	ONE	L 2 x 2 x 3/8	0	10 3/8	MITER 1E	4
23		pa	ONE	PL 1/4 x 7 3/4	2	3 1/4		15
24		pb	ONE	PL 1/4 x 7 3/4	1	5 15/16		10
25		pc	ONE	PL 1/4 x 7 3/4	0	8 3/4		5
26		ba	8	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	1
27								
28		231B/R	10	HANDRAIL POST			AS SHOWN	
29			10	L 2 x 2 x 3/8	4	10 1/2		229
30		ma	20	1/2 - 13 EYEBOLT	0	3 1/4	STAINLESS	6
31	x			McMASTER-CARR # 3032T44				
32		231B/L	10	HANDRAIL POST			DPP. HAND	
33			10	L 2 x 2 x 3/8	4	10 1/2		229
34	x	ma	20	1/2 - 13 EYEBOLT			STAINLESS	6
35								
36		231M1	40	3/8 DOUBLE END BOLT SNAP			STAINLESS	10
37	x			McMASTER-CARR # 3901T31				
38								
39	x	231M2	20	3/16 WELDED CHAIN	2	10	STAINLESS	40
40				TYPE 316(LTI) McMASTER-CARR # 3618T715				

PLATE	A36	PIPE		FITTINGS	
SHAPES	A36	FLGS.		BOLTS	

- NOTES:
- OPEN HOLES ARE 5/8" # UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - ALL WELDS TO BE SEAL WELDS.

NOTE:  
5. MID RAIL OR TOE PLATE REMOVED WHERE NEEDED TO ACCESS DOWN SPOUT CLEAN OUTS.

NAT'L ENGR' & CONTR. CO.  
By Edp/ESS  
FEB 23 2001  
RELEASED FOR CONSTRUCTION  
DATE 2/26/01 BY tdp



O.D.O.T. DIST. 12  
ACCEPTED [Signature]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE HWY  
EUROPE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

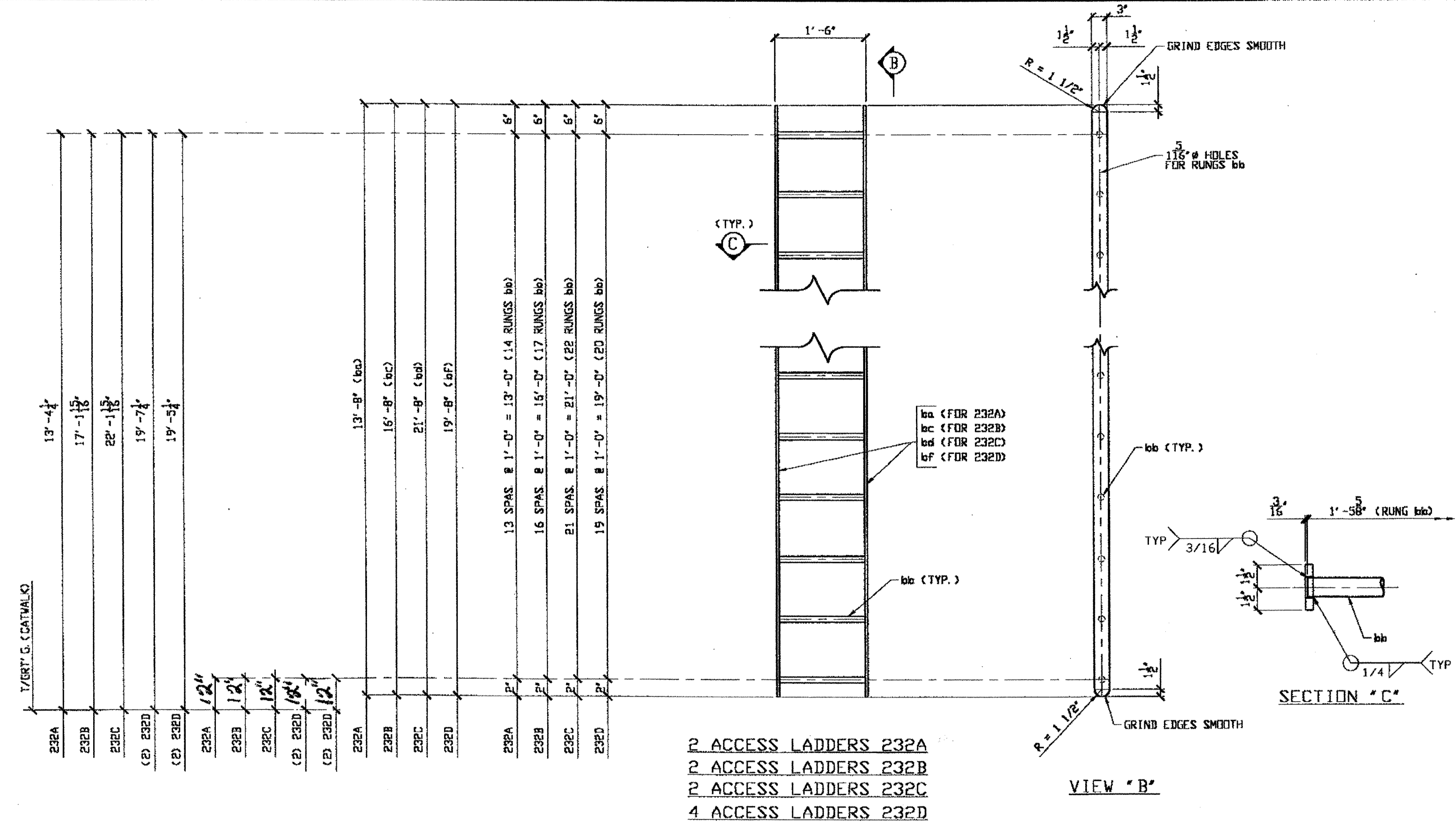
STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND, OHIO  
CUYAHOGA COUNTY  
BRIDGE No. CUY-10-16.13  
INSPECTION ACCESS H. R. DETAILS

Last modified by krudolf at 10:06am on Tue Feb 20, 2001 - Last plotted by krudolf at 10:06am on Tue Feb 20, 2001

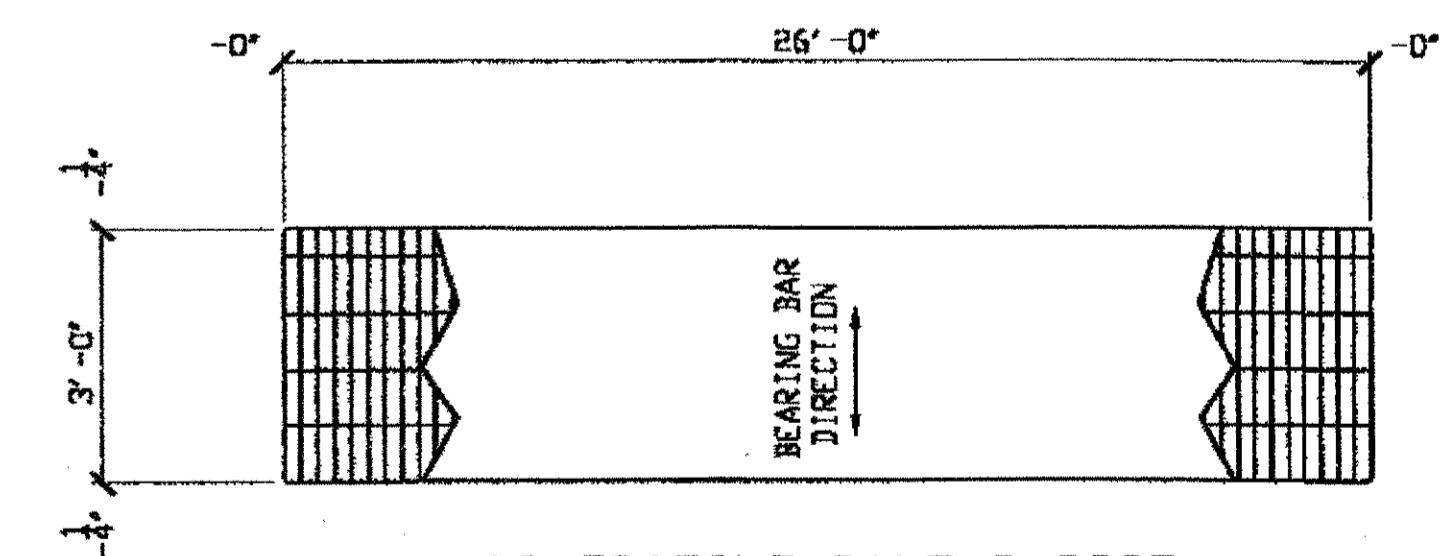
10 HANDRAIL POSTS 231B R (AS SHOWN)  
10 HANDRAIL POSTS 231B L (OPP. HAND) - PAINTED (SEE NOTE 3)



Last modified by krudolf at 09:51am on Tue Feb 20, 2001 - Last plotted by krudolf at 09:51am on Tue Feb 20, 2001

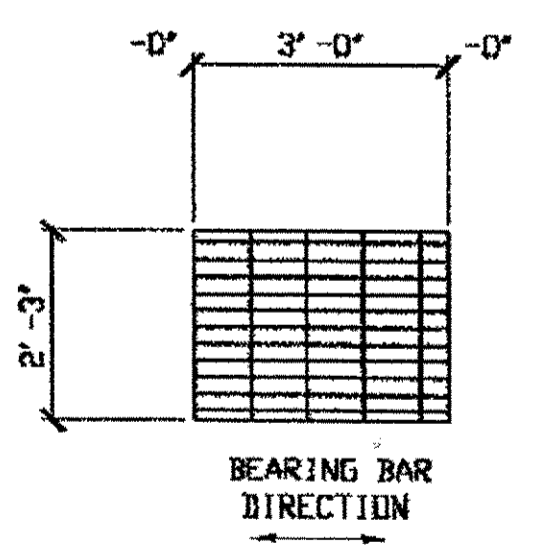


2 ACCESS LADDERS 232A  
 2 ACCESS LADDERS 232B  
 2 ACCESS LADDERS 232C  
 4 ACCESS LADDERS 232D



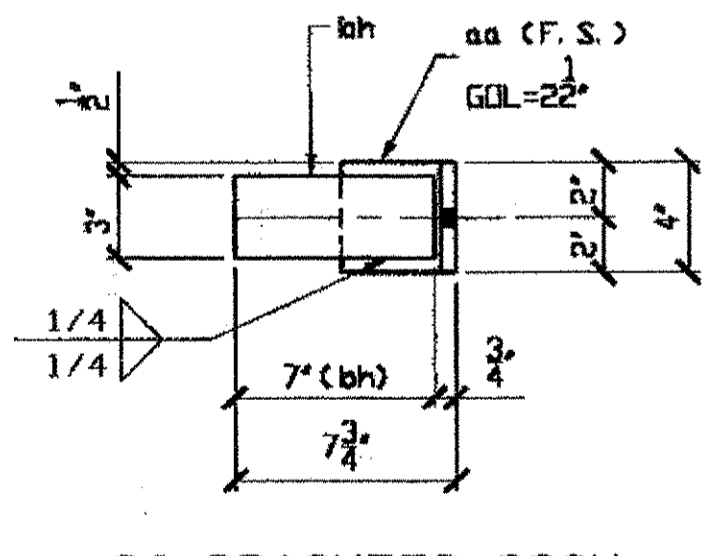
10 GRATING PANELS 232F  
 DOT ITEM LINE NO. 0130  
 GALVANIZED STEEL GRATING TO BE WELDED WITH 1" x 3/16" BEARING BARS AT 1 3/16" CENTERS AND TWISTED SQUARE CROSS BARS AT 4" CENTERS W-19-4 ASTM A-569 SUPPLIED WITH 12 GALVANIZED SADDLE CLIPS, BOLTS, NUTS, AND WASHERS EACH TO FIT 7/16" THICK FLANGE PER PANEL.

GRATING SHALL BE MANUFACTURED BY BORDO METAL COMPANY, RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION, I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.

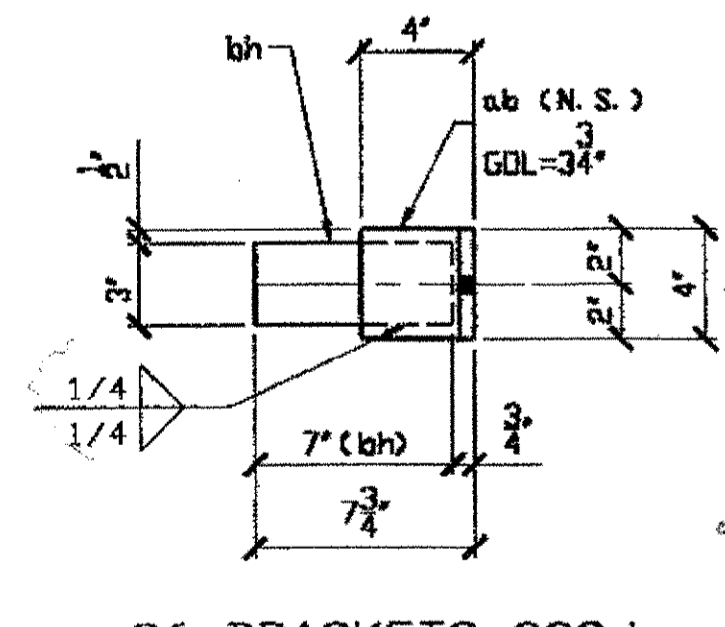


2 GRATING PANELS 232G  
 DOT ITEM LINE NO. 0130  
 WITH 4 SADDLE CLIPS EACH

O.D.O.T. DIST. 12  
 ACCEPTED [ ]  
 ACCEPTED AS NOTED [ ]  
 NOT ACCEPTED [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



36 BRACKETS 232H



36 BRACKETS 232J

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		232A	2	ACCESS LADDERS				730
2		ba	4	BAR 3 x 1/2	13	8		558
3		bb	28	BAR 1 1/4#	1	5 5/8		172
4								
5		232B	2	ACCESS LADDERS				548
6		bb	34	BAR 1 1/4#				208
7		bc	4	BAR 3 x 1/2	16	8		340
8								
9		232C	2	ACCESS LADDERS				712
10		bb	44	BAR 1 1/4#				270
11		bd	4	BAR 3 x 1/2	21	8		442
12								
13		232D	4	ACCESS LADDERS				1293
14		bb	80	BAR 1 1/4#				491
15		bf	8	BAR 1 1/4#	19	8		802
16								
17		232F	10	GRATING PANELS				
18			10	3'-0" SPAN	26	0	GALV.	5733
19								
20								
21		232G	2	GRATING PANELS				
22			2	3'-0" SPAN	2	3	GALV.	99
23								
24		232H	36	BRACKETS				261
25		bh	36	BAR 3 x 1/2	0	7		107
26		aa	36	L 4 x 4 x 1/2	0	4		154
27								
28		232J	36	BRACKETS				301
29		bh	36	BAR				107
30		ab	36	L 6 x 4 x 1/2	0	4		194
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

NOTES:  
 1. OPEN HOLES ARE (3/16") UNLESS NOTED OTHERWISE.  
 2. SHOP PAINT: (UNLESS NOTED) SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR. & CONTR. CO.  
 By *tdp/hts*  
 FEB 23, 2001



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIA, PA. 17510  
 PHONE (412) 631-3000  
 FAX (412) 631-4001  
 IN CHARGE OF: L. SMITH

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 INSPECTION ACCESS DETAILS

DOT ITEM LINE NO. 0103 U.N.  
 DOT BID ITEM NO. 863E50000

DRAWN BY: BMTG  
 KJR 02/02/01  
 CHECKED BY: DATE  
 GAF 2/16/01

SHEET NUMBER: 232  
 BRIDGE JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE *2/20/01* BY *tdp*

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION, INC.  
 12609 ALAMEIDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

pd 6/5/01 EX-44  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPANS: 2, 4, 6, 8, 10, 12 REF. NOS.: 153 / 104  
 LOCATION: Line S DESCRIPTION: Repair under 50 lb  
 C.P.P. W10x26 mount on W6x20 at Expansion Jt. SPOT Repair (51.52)

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan Modified Extra

Plan Page 30/152: To permit expansion of double floor beam, the weld connecting (W10x26) to (W6x20) is nonperformed. Repair Comments: detail Section X-X, Page 29/152 is used, with plate size modifications.

Plate size:  $5\frac{1}{2} \times 13\frac{1}{2} \times \frac{1}{2}$ , weight =  $5.25 \times 3.5 \times 0.5 \times \frac{490}{12} = 2.605$  lb

Plates needed: 8

Plate size:  $4\frac{1}{2} \times 6 \times \frac{1}{2}$ , weight =  $4.5 \times 6 \times 0.5 \times \frac{490}{12} = 3.83$  lb

Plates needed: 8

Ref 153:  $8 \cdot (2.605 + 3.83) = 51.47$  lb

Lengths of welds per plate =  $3.5 \times 3.5 = 7"$   
 " " " for 16 plates =  $16 \times 7 = 112"$

Ref 104:  $112 \div 20 = 6$  SPOTS

By: NK  
 Date: Mar 5 - 2001  
 Field Book Ref:

pd 6/5/01 EX-44  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPANS: 2, 4, 6, 8, 10, 12 REF. NOS.: 153  
 LOCATION: Line S DESCRIPTION: Repair under 50 lb  
 C.P.P. mounting at Double Flr Bms (At Expansion Joint)

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan Modified Extra

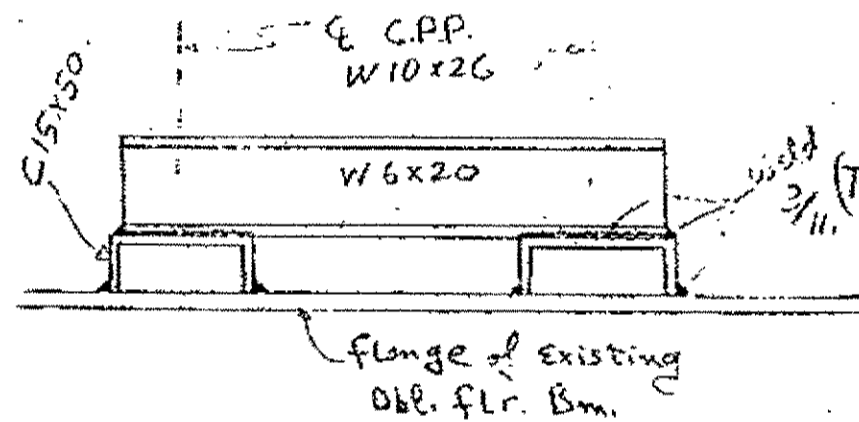
Plan Page 30/152: The (W6x20) at the Expn. Jt. has insufficient height, channels were used to provide an adequate height. Repair Comments: A channel size available at "THE STATE" yard was chosen to avoid delays.

Channel size: C15x50, 7" Long, weight = 29.17 lb

Channels used: 4

Total weight:  $4 \times 29.17 = 116.68$  lb

No additional payment for spot repairs is considered, because the size of weld length is practically unchanged.



By: NK  
 Date: Mar 5 - 2001  
 Field Book Ref:

pd 4/3/01 EX-25  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 1 REF. NOS.: 153 / 104  
 LOCATION: Line 10 South Pass DESCRIPTION: Repair under 50 lb  
 C.P.P. Supports (not 152) Spot Repair

ERECTOR DRWG: E133 SHOP MARK:

SHOP DRWG: E134 Plan Modified Extra

Repair Comments: REF 153: 4 of C5x9, 3 3/4" Long, weight =  $4 \times 9 \times 3.75 \times \frac{490}{12} = 11.25$  lb

4 of R 6 1/2 x 4 1/2 x 1/2, weight =  $4 \times 6.5 \times 4.25 \times 0.5 \times \frac{490}{12} = 15.67$  lb

Total REF 153 =  $11.25 + 15.67 = 26.92$  lb

REF 104: Length of welds for 1 unit =  $3.75 + 3.75 = 7.5"$  per unit  
 total for 8 units =  $8 \times 7.5 = 60"$

$60 \div 20 = 3$  SPOTS

By: NK  
 Date: 3-7-01  
 Field Book Ref:

pd 4/3/01  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 1 REF. NOS.: 152 / 104  
 LOCATION: Line 10 South Pass DESCRIPTION: Repair over 50 lb  
 C.P.P. Supports (not 152) Spot Repair

ERECTOR DRWG: E133 SHOP MARK:

SHOP DRWG: E134 Plan Modified Extra

Repair Comments: REF 152: 2 pieces of Channels, each: C15x50, 14" Long, weight = 58.33 lb each

Total weight of 2 Pieces:  $2 \times 58.33 = 116.66$  lb

Length of weld for 1 channel =  $9.6 \times 2 = 19.2$  inches  
 for 2 channels =  $2 \times 19.2 = 38.4$  "

Ref 104:  $38.4 \div 20 = 2$  Spots

By: NK  
 Date: 3-7-01  
 Field Book Ref:

**I BEAM 127M HAD INSUFFICIENT HEIGHT.**  
**2 CHANNELS, C15x50x14" LONG, WELDED ON TOP OF**  
**I BEAM 127M TO SUPPORT THE 2 I BEAMS W10x26**  
**SEE DETAILS 3 1/2 6, Sheet E134**

**DESCRIPTION OF DETAIL 8**  
**SPAN W/LE LINE 1 SOUTH LOCATION**  
**SHOWN ON E133**

pd 6/5/01  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: W/LE REF. NOS.: 152 / 104  
 LOCATION: Line 1, S DESCRIPTION: Repair over 50 lb  
 C.P.P. Conduits SPOT Repair

ERECTOR DRWG: E133 SHOP MARK:

SHOP DRWG: Plan Modified Extra

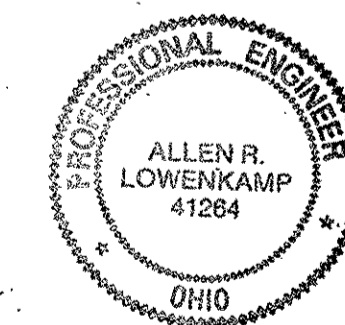
Repair Comments: An I beam: W6x20, 3'-6" long was used to support the W10x26 that carries the C.P.P. conduits (missed by plans)

Total weight:  $20$  lb  $\times$   $3.5'$  = 70 lbs

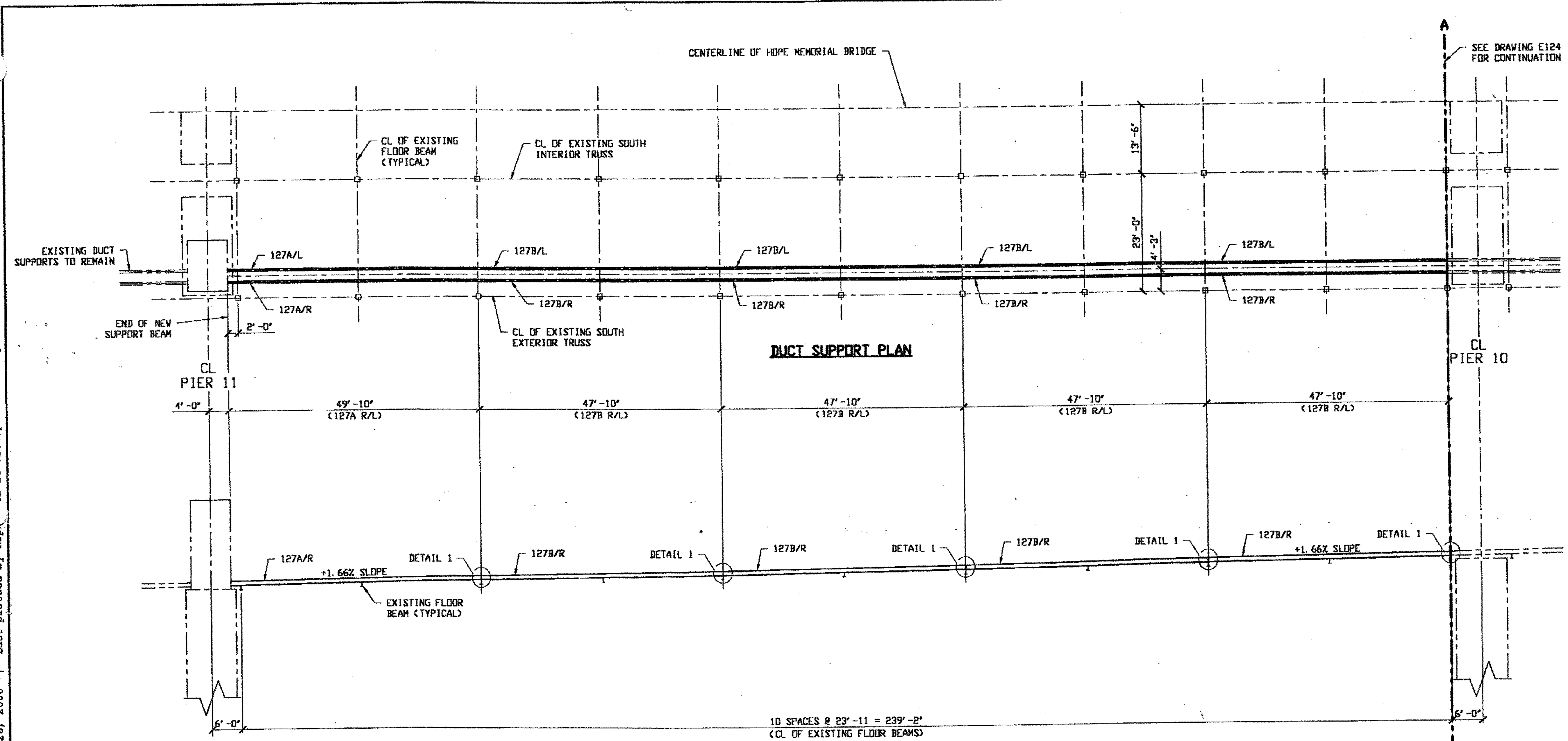
A 3/16" seal weld was provided at coin flng of W6x20 full circumference:  $(3.5 \times 12 + 6) \times 2 = 96"$

Equivalent spot repairs:  $96 \div 20 = 5$  spots

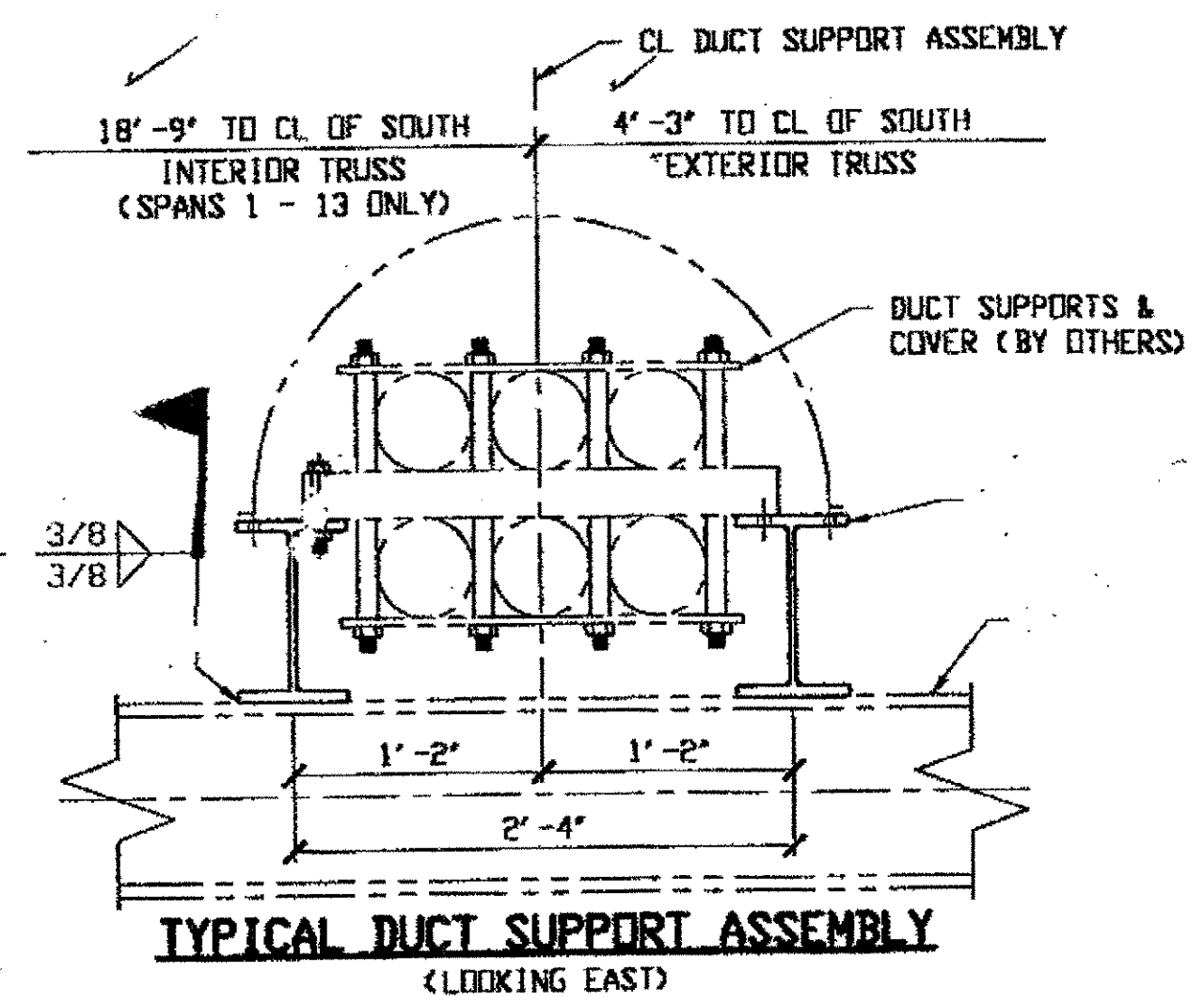
O.D.O.T. DIST. 12	
ACCEPTED	2/2/04 ASM
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



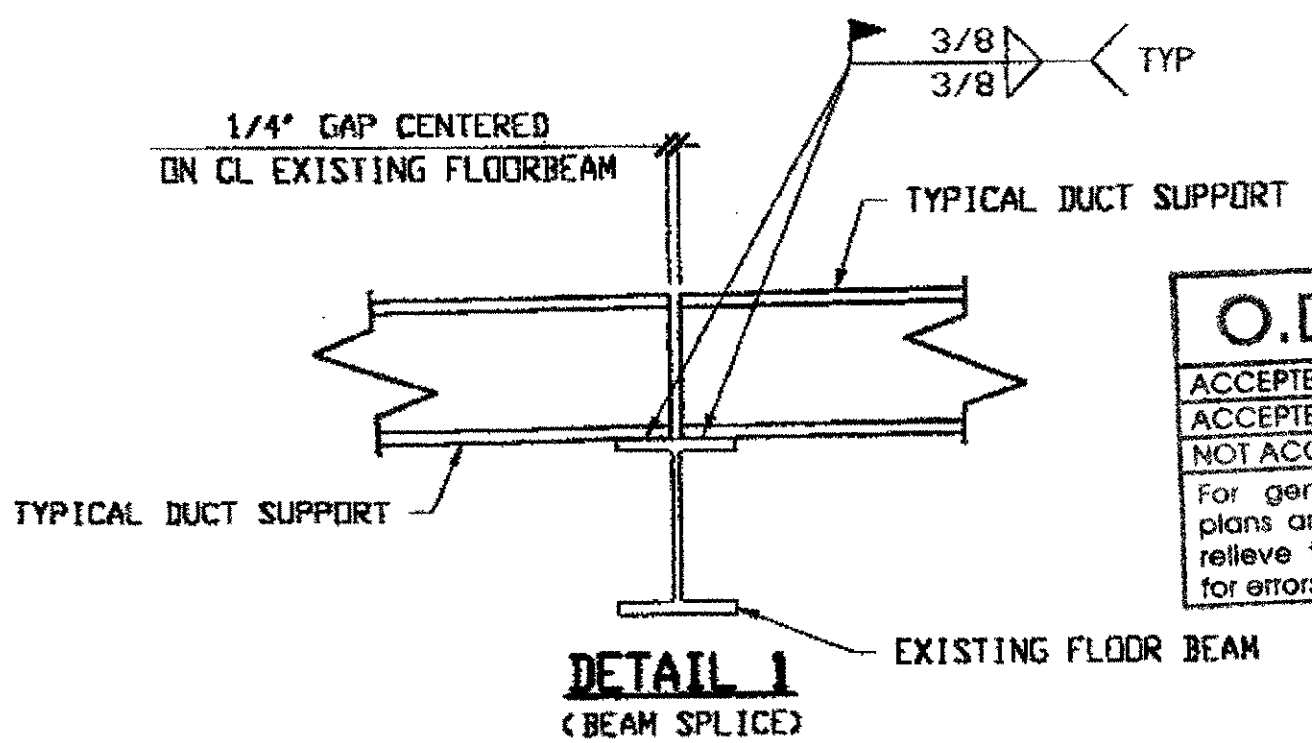
NO.	REVISION	DATE	BY
Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 POWER DUCT SUPPORT (ELECTRIC)			
DRAWN BY		CHECKED BY	
SCALE N/A		DATE	
JOB NO. 2000212			DRAWING NO. E122



Last modified by Rspringer at 10:57am on Tue Sep 26, 2000 - 1 - Last plotted by Rsp, jr at 02:19pm on Tue Sep 26, 2000



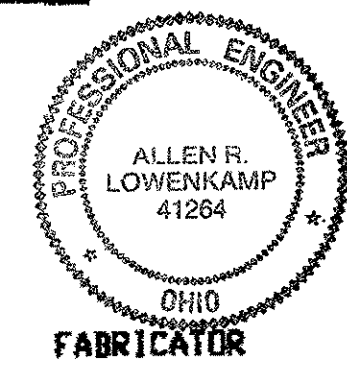
**DUCT SUPPORT ELEVATION**



RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY *Cee*

NOTES:  
1. WORK THIS DRAWING WITH ATTACHED  
CLUNI-LYNN ASSOCIATES DESIGN  
DRAWINGS 9/25 THRU 20/25.

**O.D.O.T. DIST. 12**  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



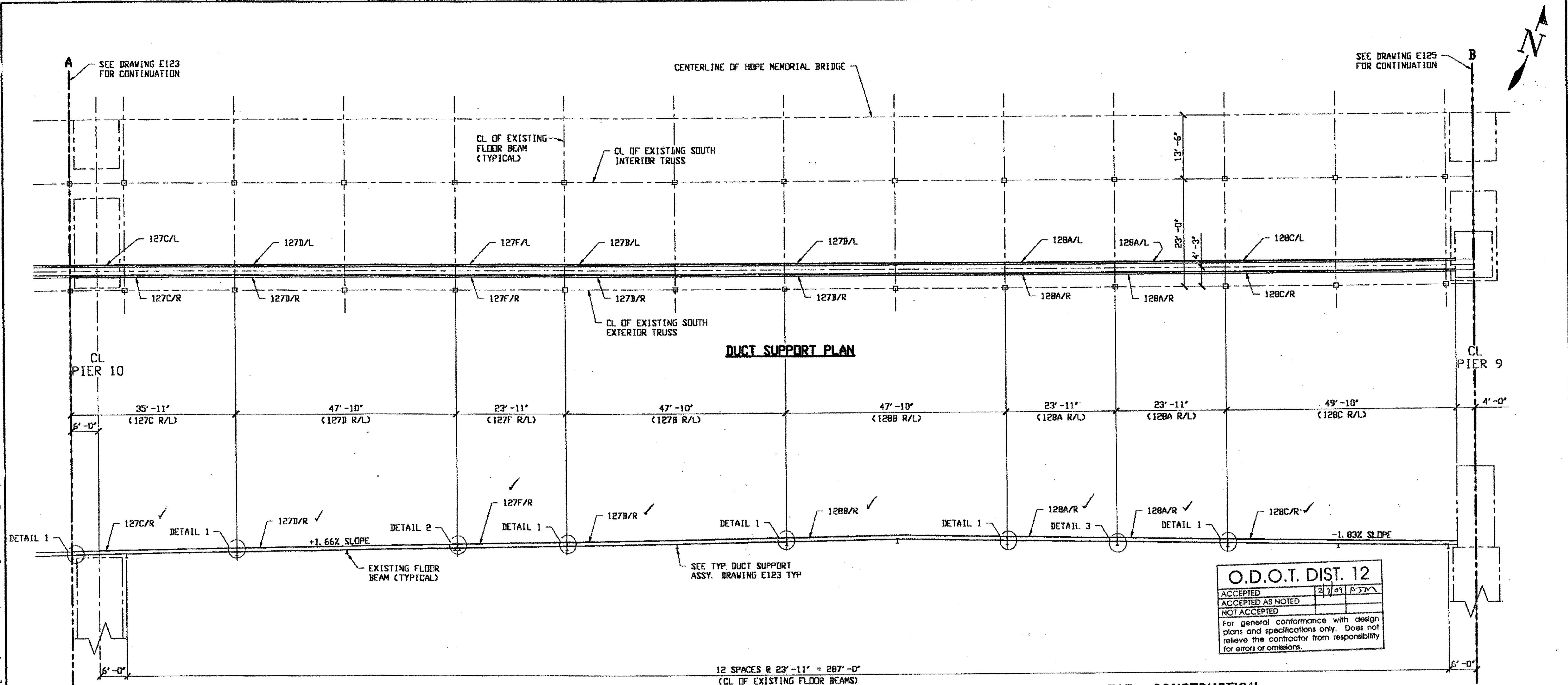
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORADOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

**STEEL ERECTOR**  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

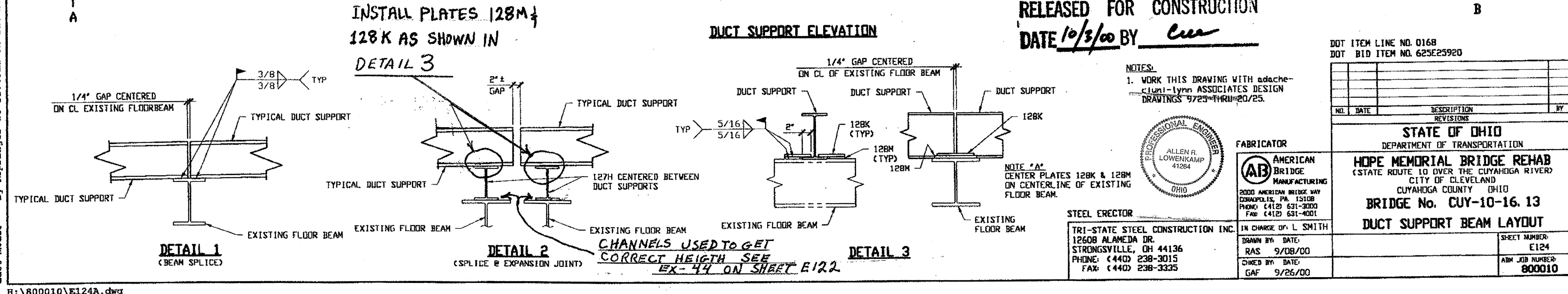
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 9/08/00  
CHECKED BY: DATE:  
GAF 9/26/00

DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 625E25920	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
<b>STATE OF OHIO</b>			
DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b>			
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)			
CITY OF CLEVELAND			
CUYAHOGA COUNTY OHIO			
<b>BRIDGE No. CUY-10-16.13</b>			
<b>DUCT SUPPORT BEAM LAYOUT</b>			
SHEET NUMBER:		ADM JOB NUMBER:	
E123		800010	

Last modif. by Rspringer at 11:40am on Tue Sep 26, 2000 -1- Last plotted by Rspringer at 02:19pm on Tue Sep 26, 2000



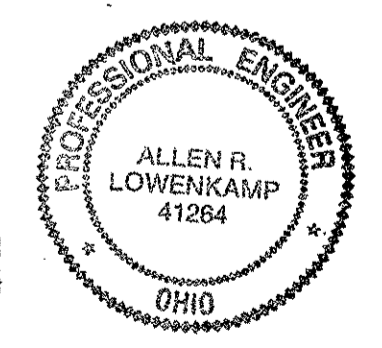
DUCT SUPPORT PLAN



DUCT SUPPORT ELEVATION

RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY *cuu*

NOTES:  
1. WORK THIS DRAWING WITH adache-cluni-lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

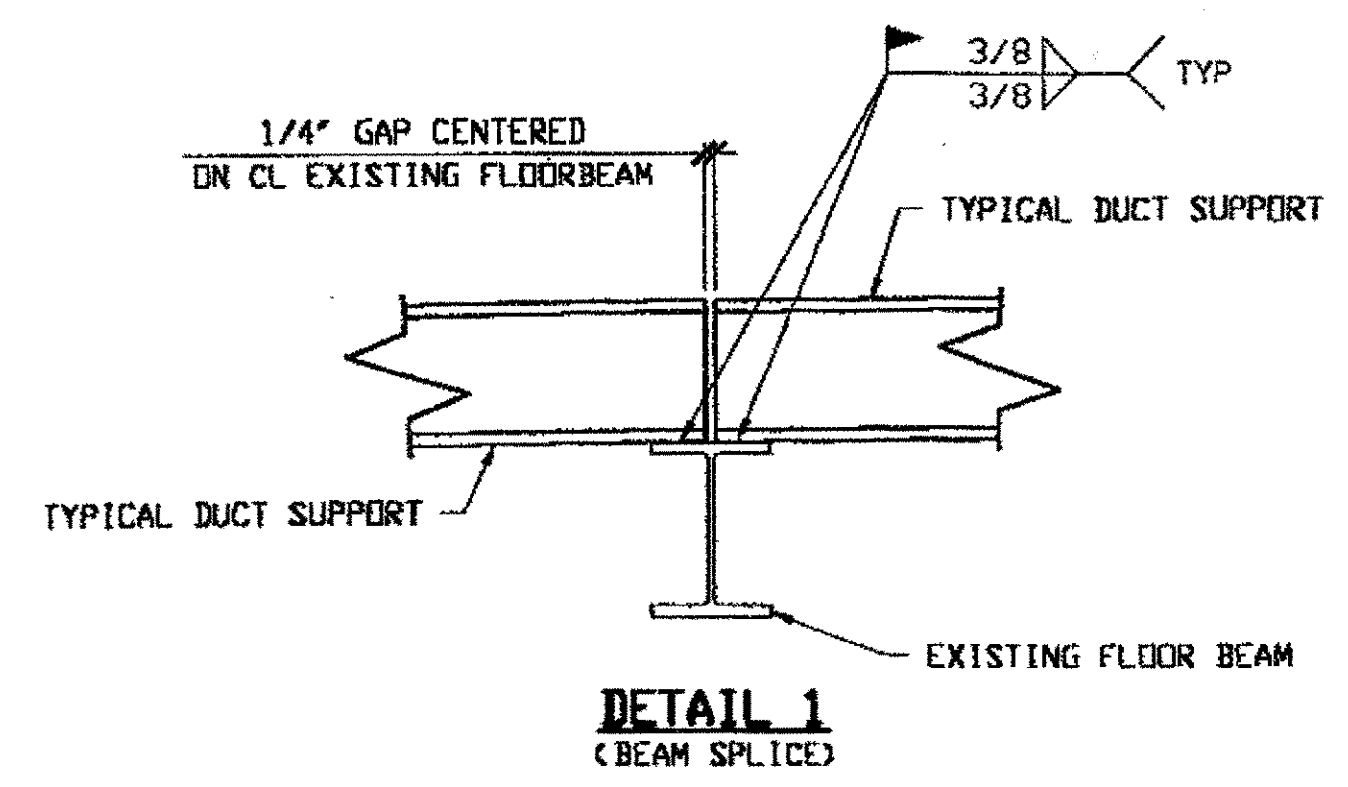
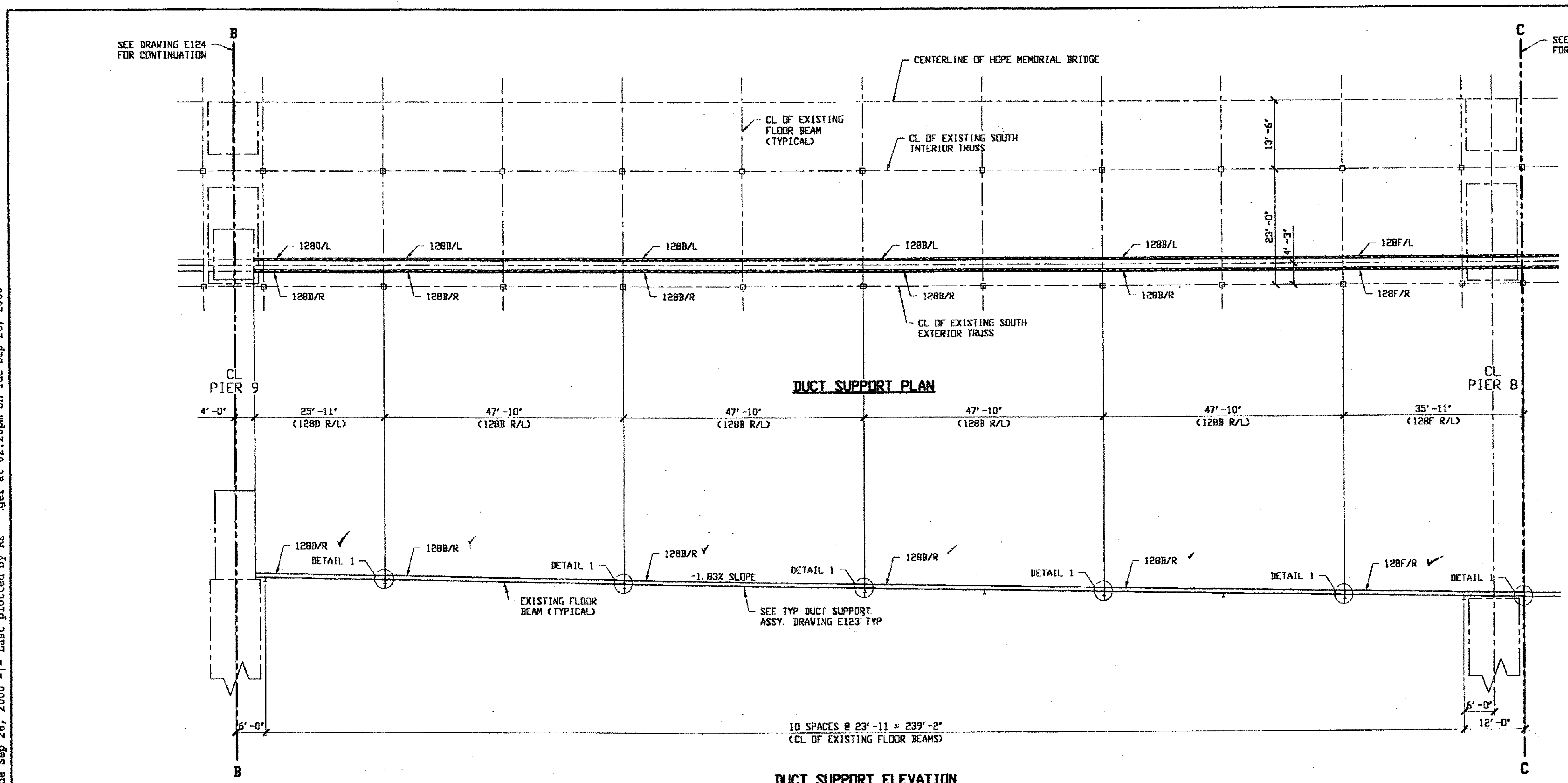


STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIANA, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0168 DOT BID ITEM NO. 625E25920	
NO.	DATE
DESCRIPTION	
REVISIONS	
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
DUCT SUPPORT BEAM LAYOUT	
DRAWN BY: RAS	DATE: 9/08/00
CHECKED BY: GAF	DATE: 9/26/00
IN CHARGE OF: L. SMITH	
SHEET NUMBER: E124	ABM JOB NUMBER: 800010

Last mod. by Repringer at 11:49am on Tue Sep 26, 2000 - Last plotted by Rsg at 02:20pm on Tue Sep 26, 2000

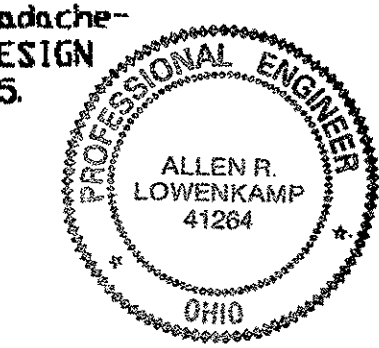


**DUCT SUPPORT ELEVATION**

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**RELEASED FOR CONSTRUCTION**  
 DATE 10/3/00 BY CUL

NOTES:  
 1. WORK THIS DRAWING WITH addendum-lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.



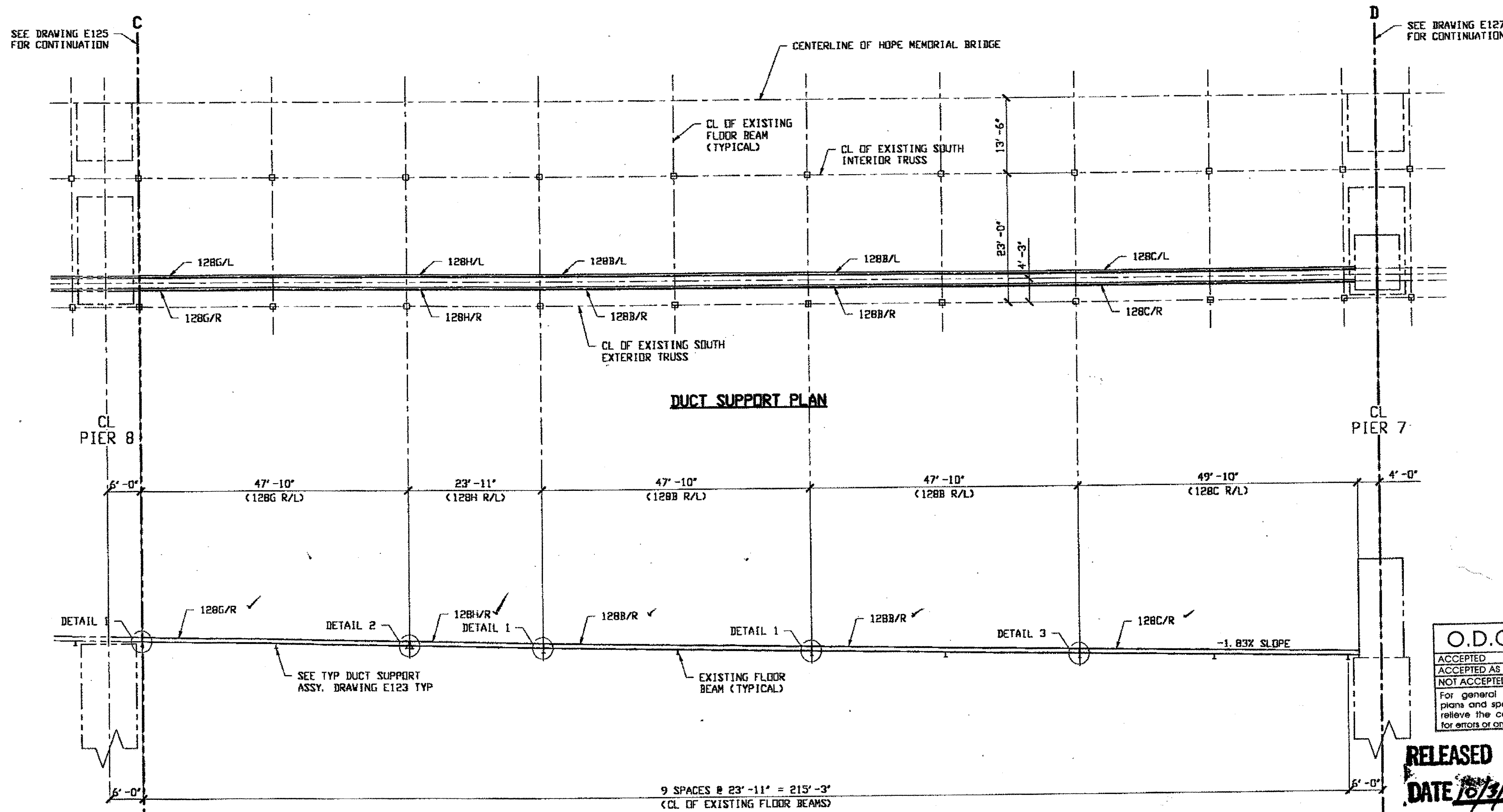
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COVINGTON, PA. 15110  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 9/08/00  
 CHECKED BY: DATE: GAF 9/26/00

DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 625E2592D	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT BEAM LAYOUT			
SHEET NUMBER: E125		ADM JOB NUMBER: 80010	

Last mod. by Rspringer at 11:55am on Tue Sep 26, 2000 -|- Last plotted by R... at 02:20pm on Tue Sep 26, 2000



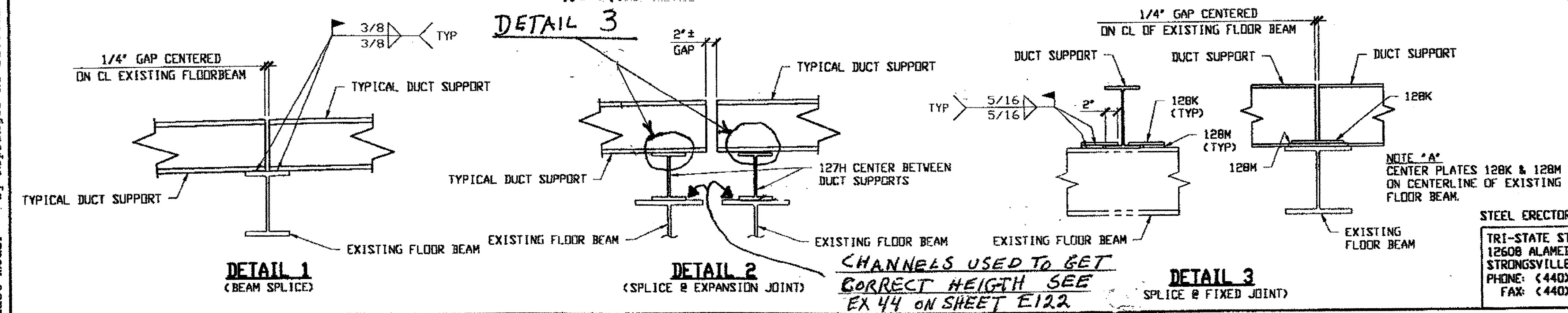
O.D.O.T. DIST. 12	
ACCEPTED	2/10/01 BSM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

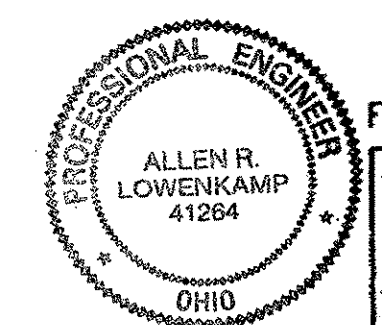
RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY *cue*

INSTALL RATES 128M & 128K AS SHOWN IN DETAIL 3

DUCT SUPPORT ELEVATION



NOTES:  
1. WORK THIS DRAWING WITH attached Ciani-Lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

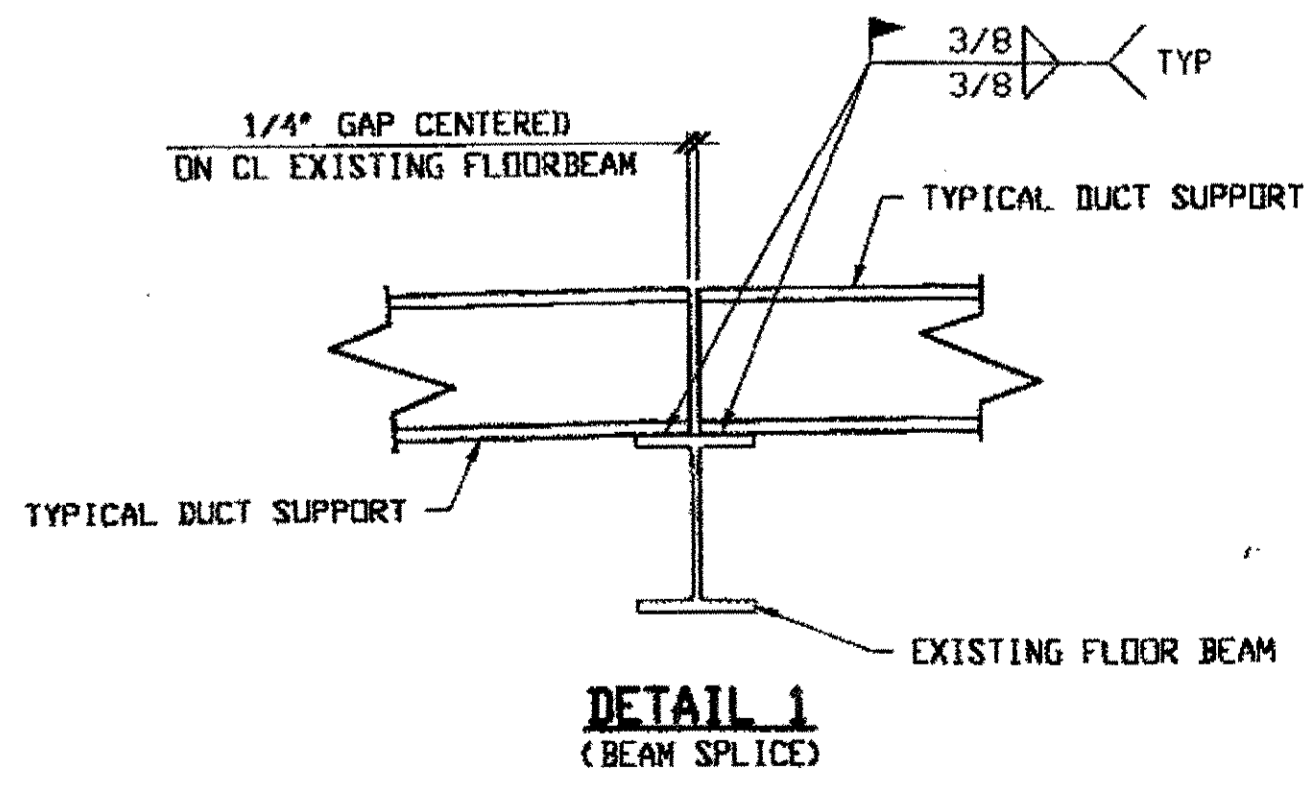
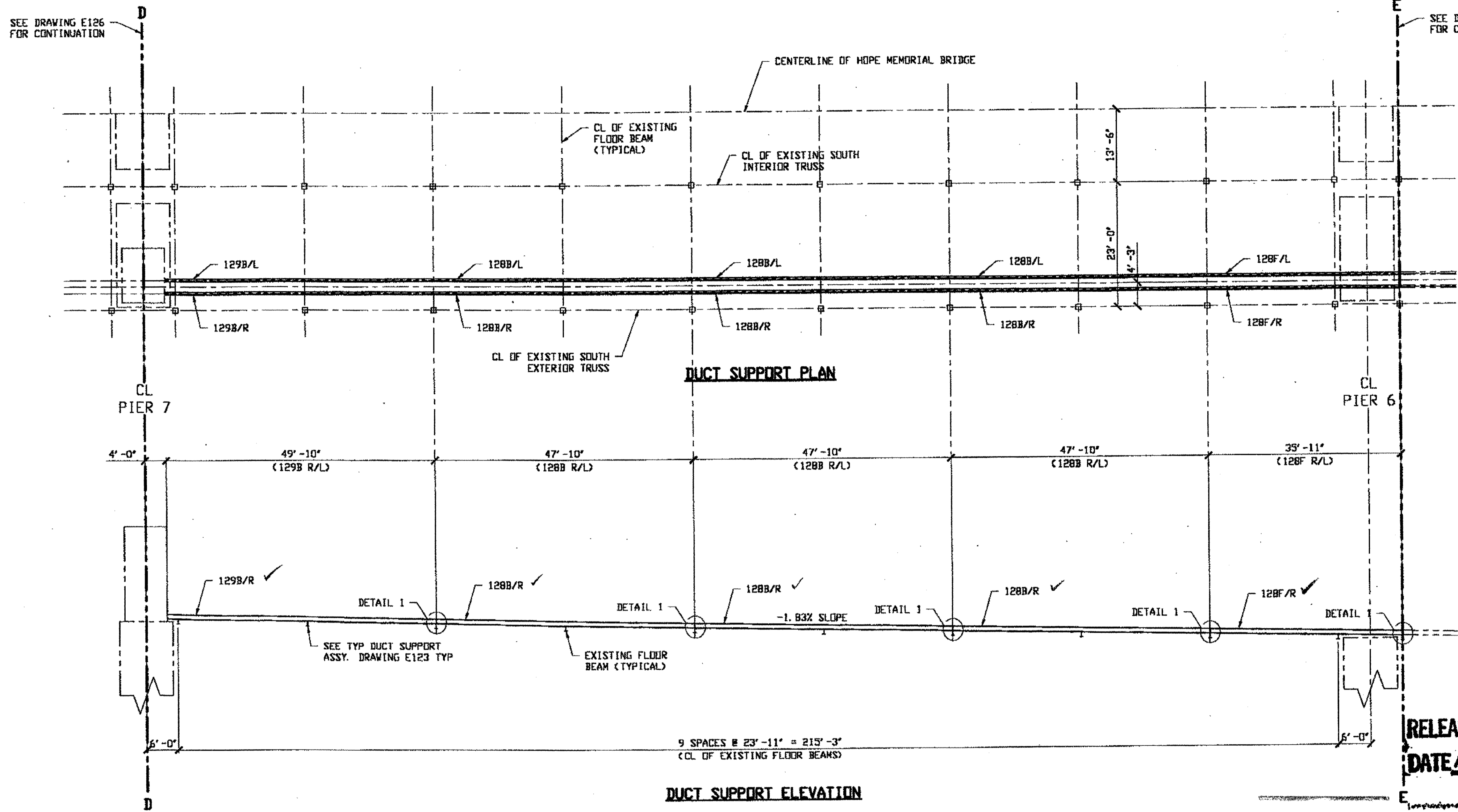


FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
DOWNSVILLE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

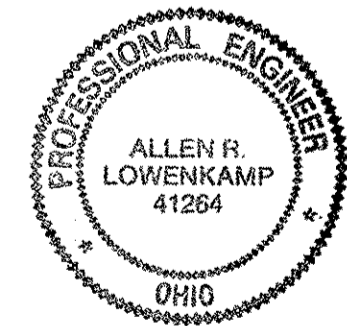
DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 625E25920	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT BEAM LAYOUT			
DRAWN BY: RAS		DATE: 9/11/00	
CHECKED BY: GAF		DATE: 9/26/00	
IN CHARGE OF: L. SMITH		SHEET NUMBER: E126	
		JOB NUMBER: 800010	

Last mod. by Repringer at 02:21pm on Tue Sep 26, 2000 -1- Last plotted by R. Gaf at 02:22pm on Tue Sep 26, 2000



DUCT SUPPORT ELEVATION

RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY *cu*



NOTES:  
1. WORK THIS DRAWING WITH attached ciani-lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

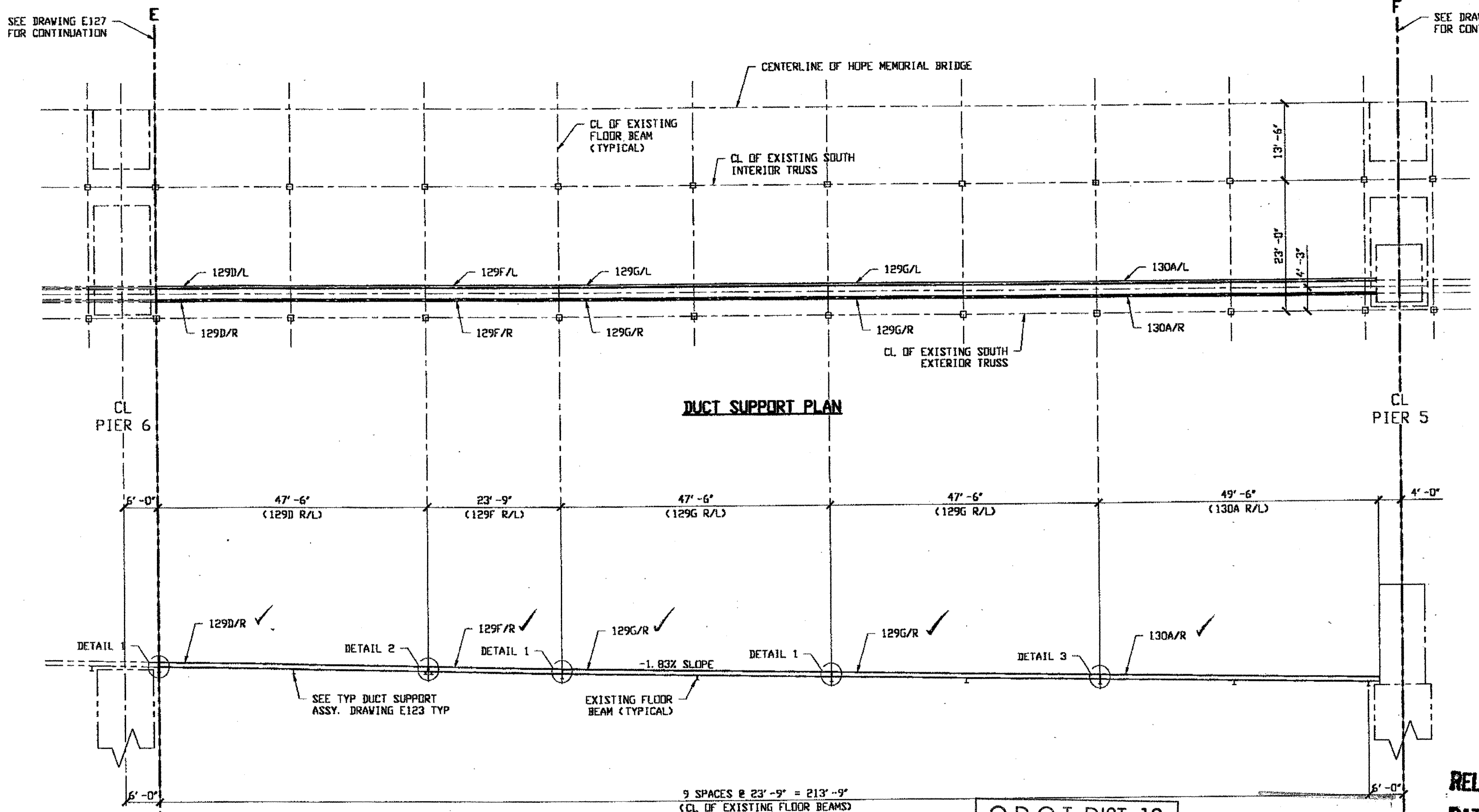
FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0168		
DOT BID ITEM NO. 625E25920		
NO.	DATE	DESCRIPTION
REVISIONS		

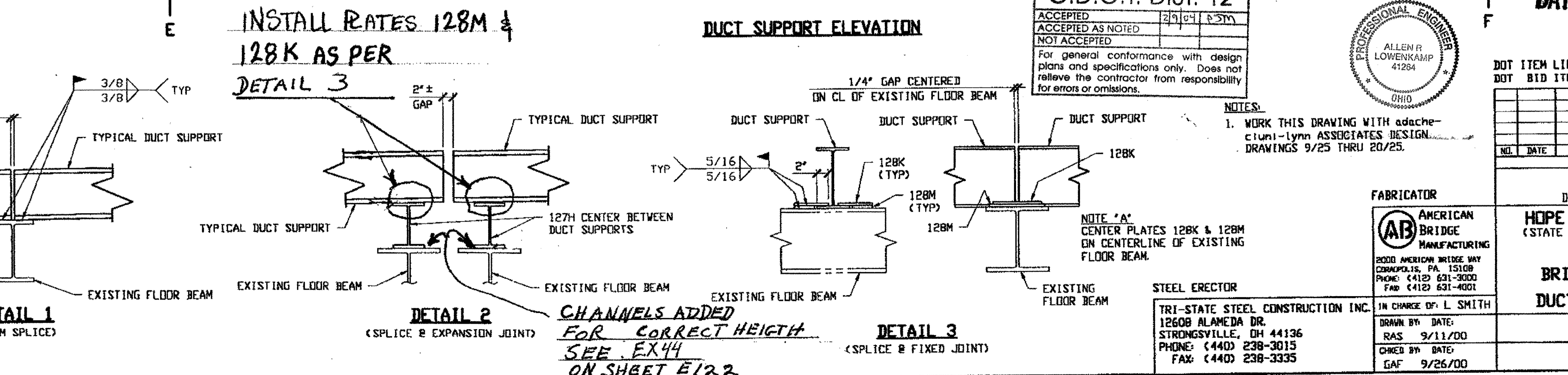
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
DUCT SUPPORT BEAM LAYOUT	
DRAWN BY: RAS	DATE: 9/11/00
CHECKED BY: GAF	DATE: 9/26/00
IN CHARGE OF: L. SMITH	
SHEET NUMBER: E127	ADN JOB NUMBER: 800010



by Repringer at 02:27pm on Tue Sep 26, 2000 - Last plotted by R... at 02:33pm on Tue Sep 26, 2000



DUCT SUPPORT PLAN



DUCT SUPPORT ELEVATION

INSTALL RATES 128M &  
128K AS PER  
DETAIL 3

O.D.O.T. DIST. 12	
ACCEPTED	2/9/04
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NOTES:  
1. WORK THIS DRAWING WITH attached drawings 9/25 THRU 20/25.

RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY *cm*

DOT ITEM LINE NO. 0168  
DOT BID ITEM NO. 625E25920

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT BEAM LAYOUT**

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

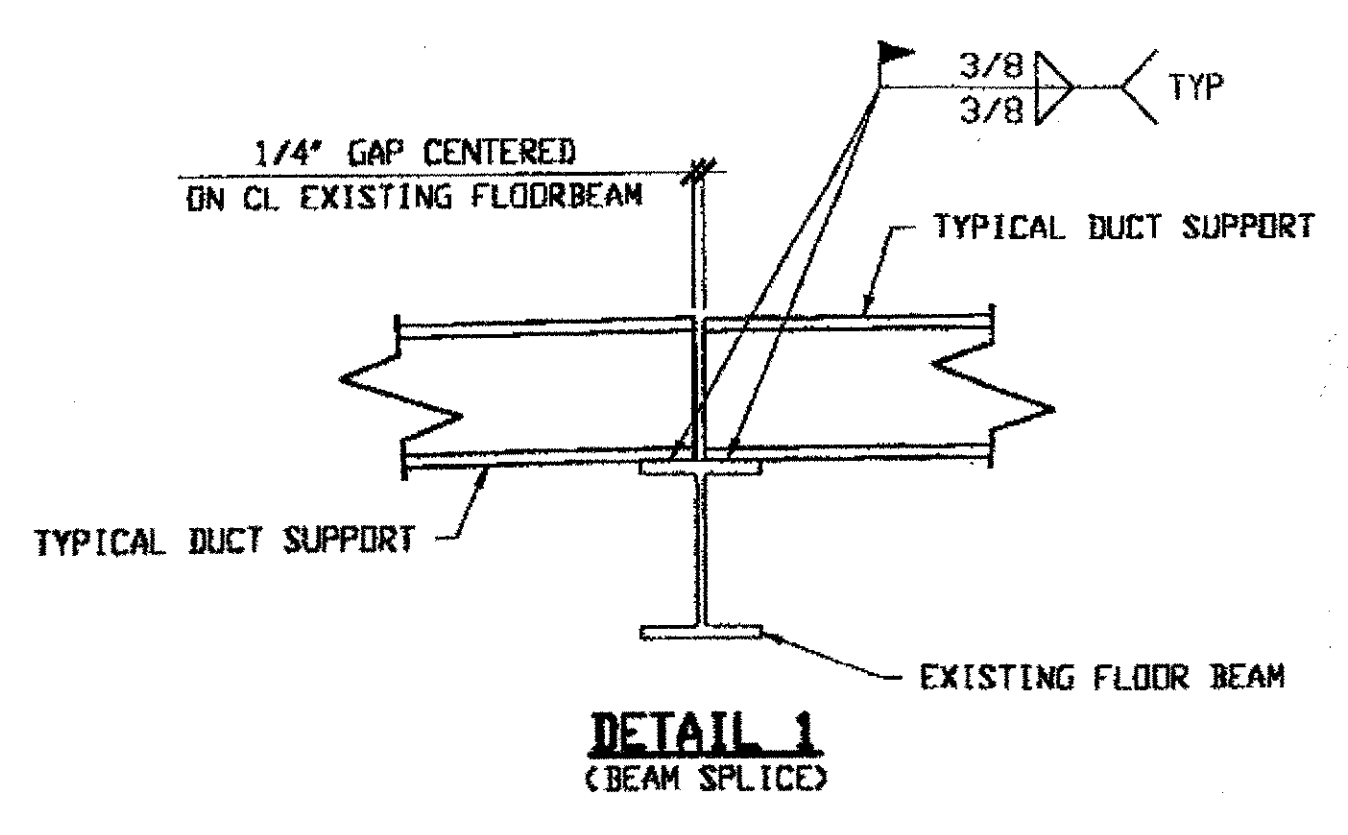
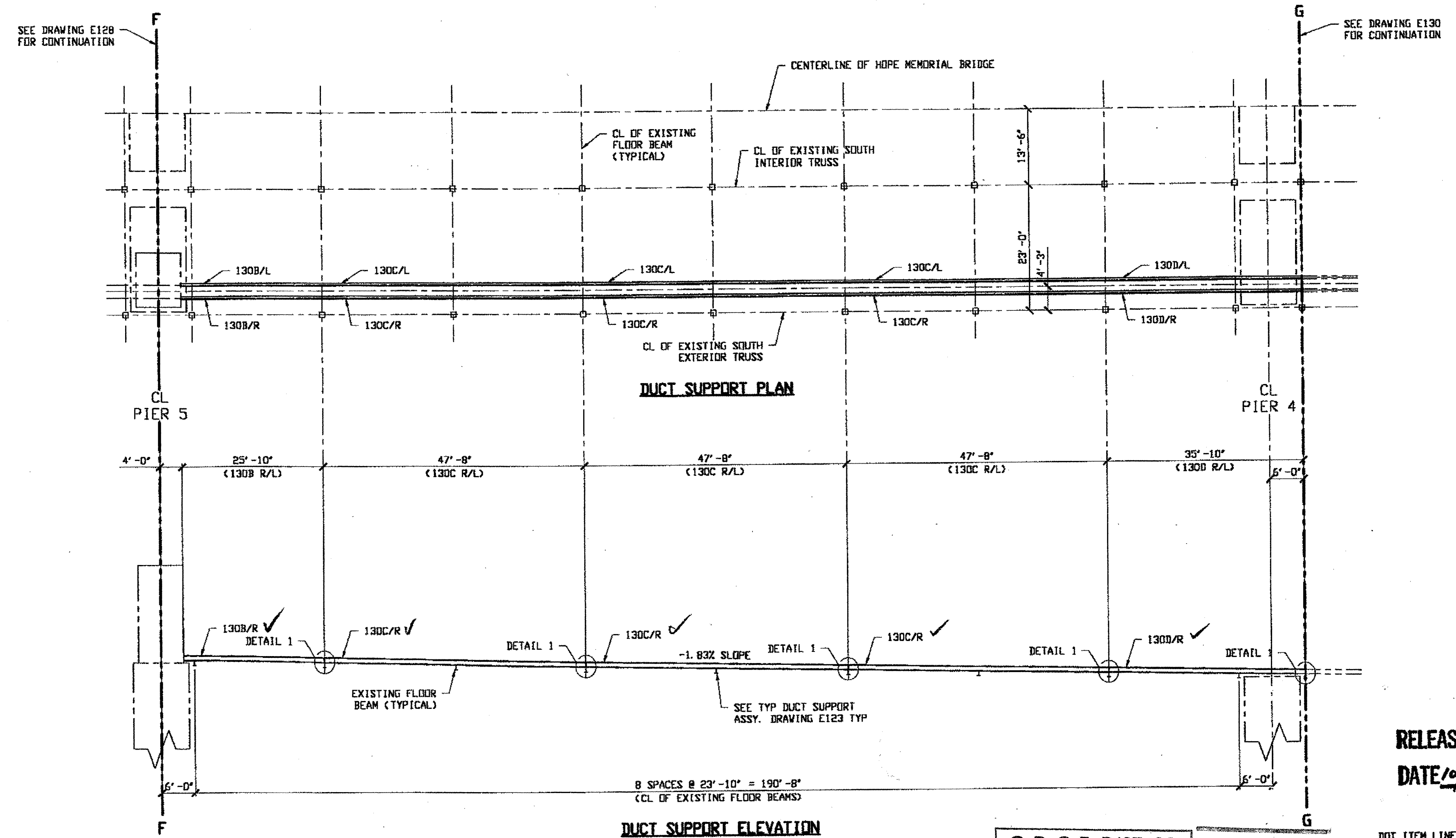
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: RAS  
DATE: 9/11/00  
CHECKED BY: GAF  
DATE: 9/26/00

SHEET NUMBER: E128  
ABN JOB NUMBER: 800010

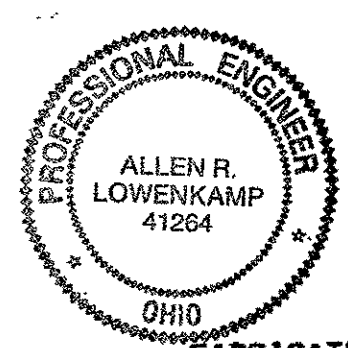


Last modified: 9/27/2000 01:20pm on Tue Sep 26, 2000 - 1 - last plotted by R. [unclear] at 02:28pm on Tue Sep 26, 2000



O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 [signature]
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**NOTES:**  
 1. WORK THIS DRAWING WITH ATTACHED [unclear] LYNNE ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

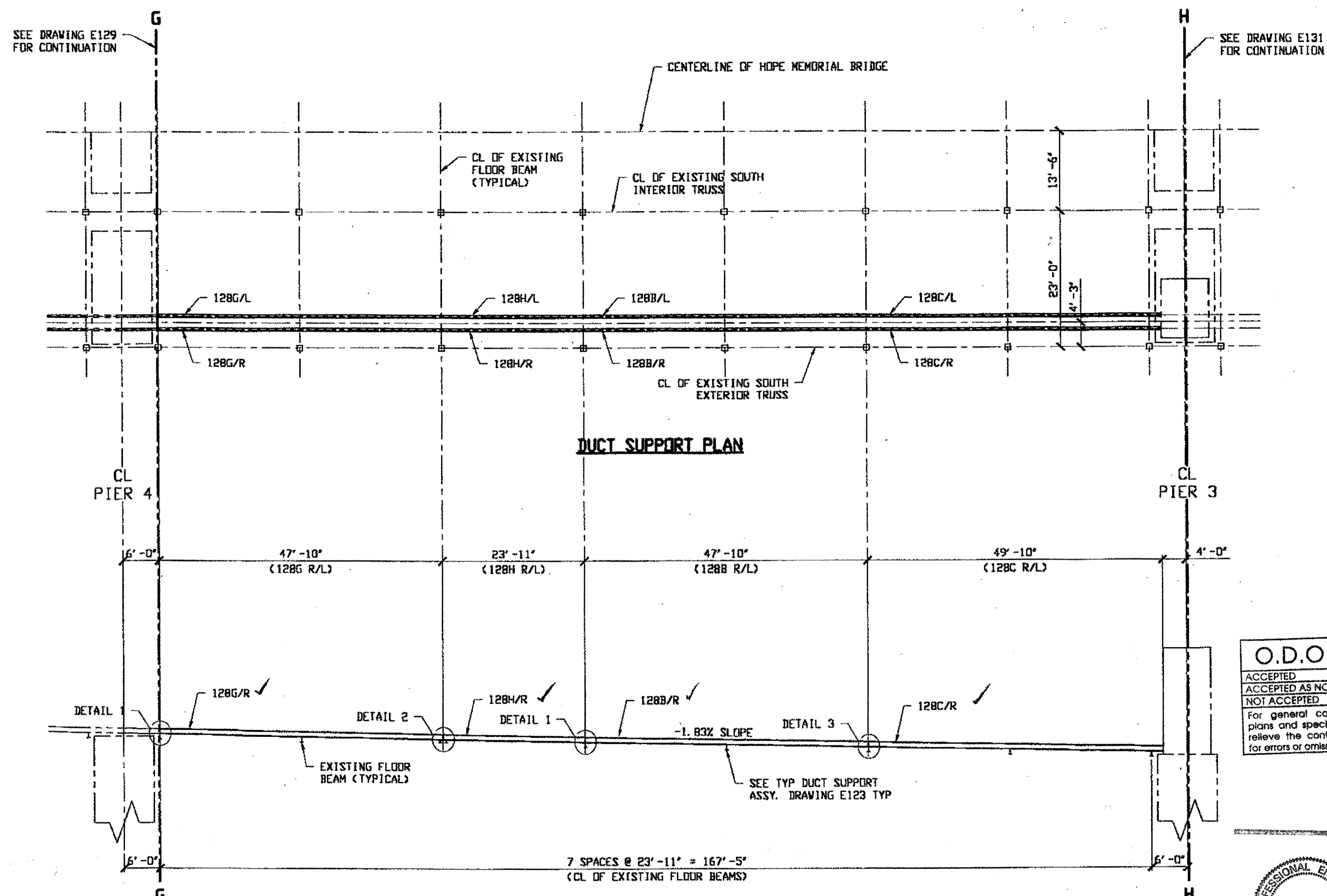
**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIANA, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 9/11/00  
 CHECKED BY: DATE: GAF 9/26/00

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY [signature]

DOT ITEM LINE NO. 0168			
DOT BID ITEM NO. 625E25920			
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT BEAM LAYOUT			
SHEET NUMBER: E129		JOB NUMBER: 800010	

Last modified by Repringer at 02:28pm on Tue Sep 26, 2000 - 1 - Last plotted by R. Repringer at 02:28pm on Tue Sep 26, 2000



O.D.O.T. DIST. 12	
ACCEPTED	2/9/04
ACCEPTED AS NOTED	
NOT ACCEPTED	

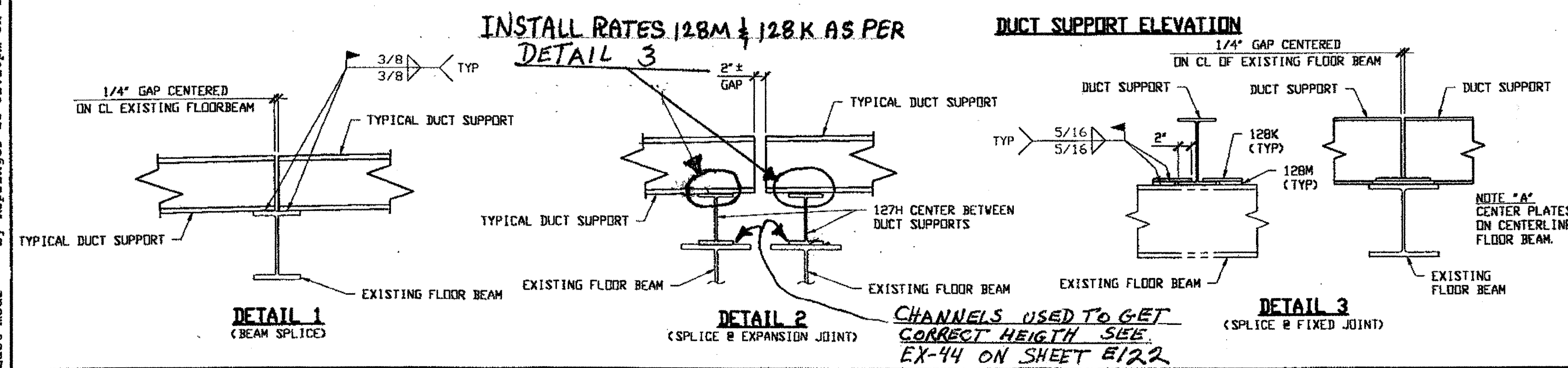
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY CLM

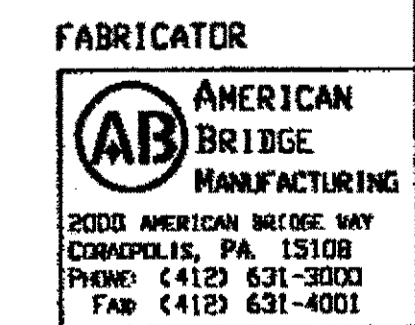


DOT ITEM LINE NO. 0168  
 DOT BID ITEM NO. 625E25920

NO.	DATE	DESCRIPTION	BY



NOTES:  
 1. WORK THIS DRAWING WITH adache-clun-lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

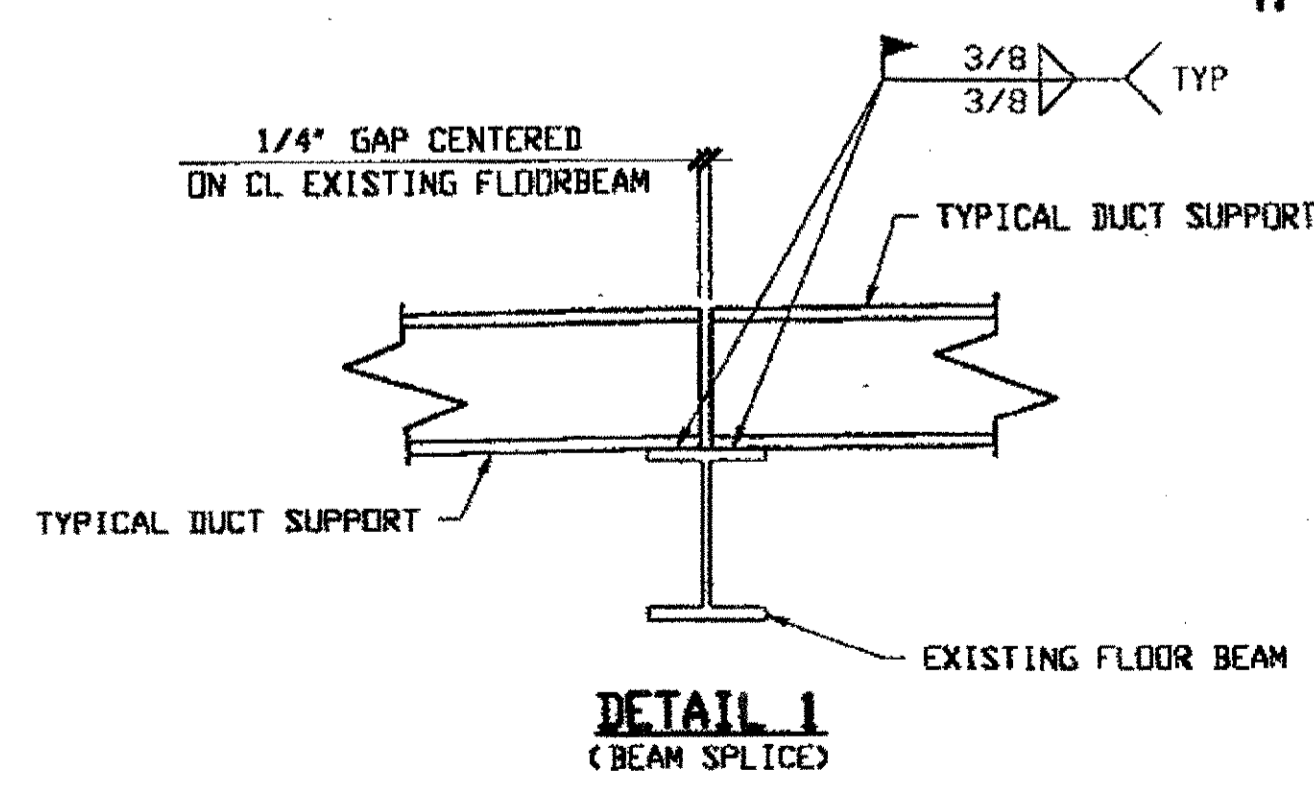
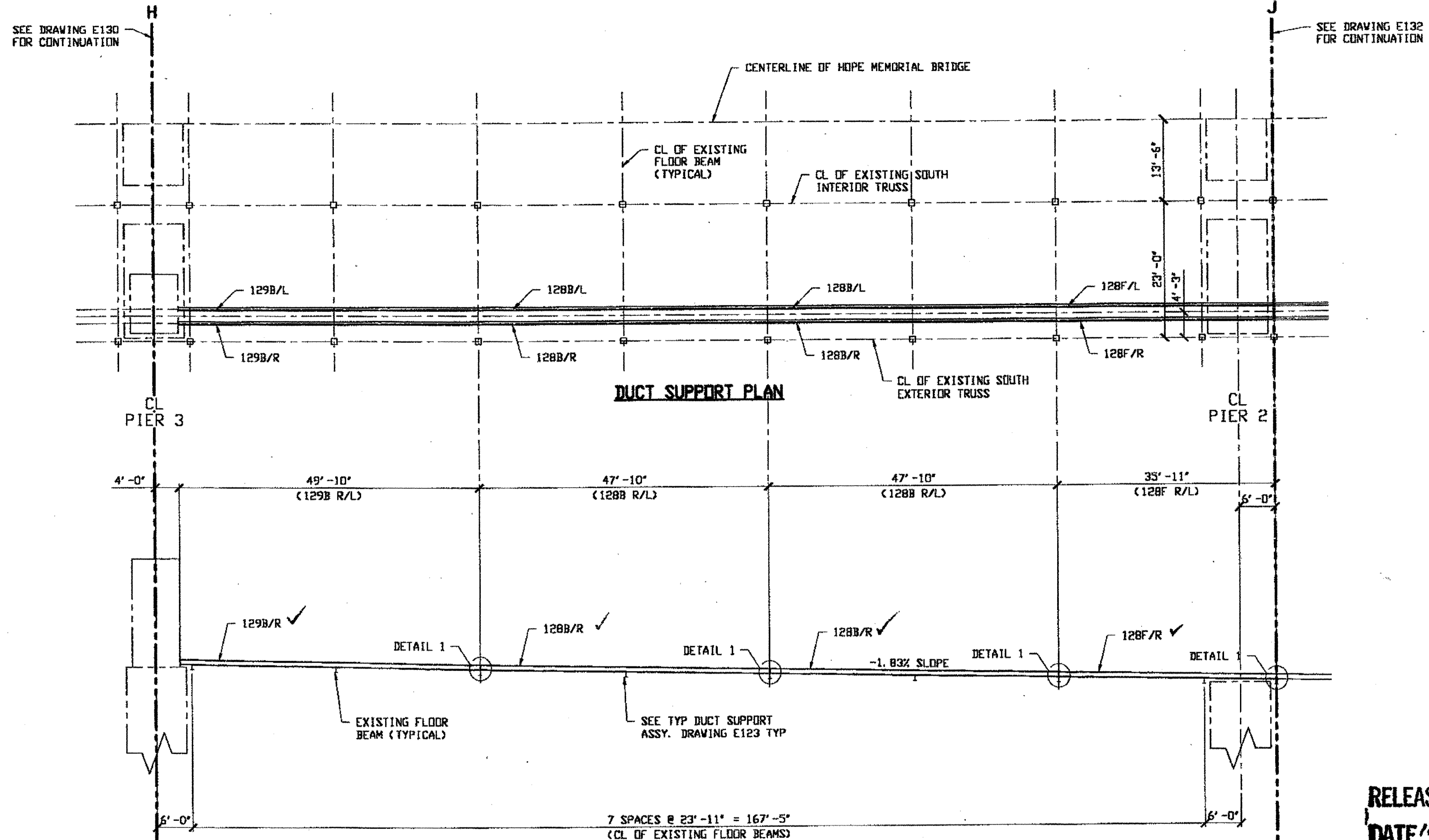


2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

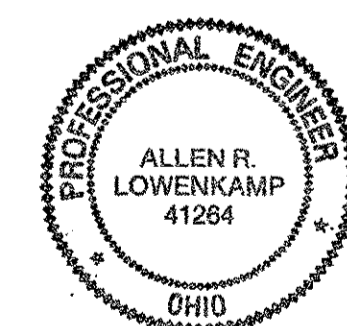
STATE OF OHIO DEPARTMENT OF TRANSPORTATION		HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13		DUCT SUPPORT BEAM LAYOUT	
STEEL ERECTOR	TRI-STATE STEEL CONSTRUCTION INC. 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335	IN CHARGE OF: L. SMITH	SHEET NUMBER: E130
DRAWN BY: RAS	DATE: 9/11/00	CHECKED BY: GAF	DATE: 9/26/00
AWB JOB NUMBER: 800010			



Last modified by Repringer at 02:29pm on Tue Sep 26, 2000 - Last plotted by Repringer at 02:29pm on Tue Sep 26, 2000



O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 BSTV
ACCEPTED AS NOTED	
NOT ACCEPTED	
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.	



**NOTES:**  
 1. WORK THIS DRAWING WITH ATTACHED Linn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.

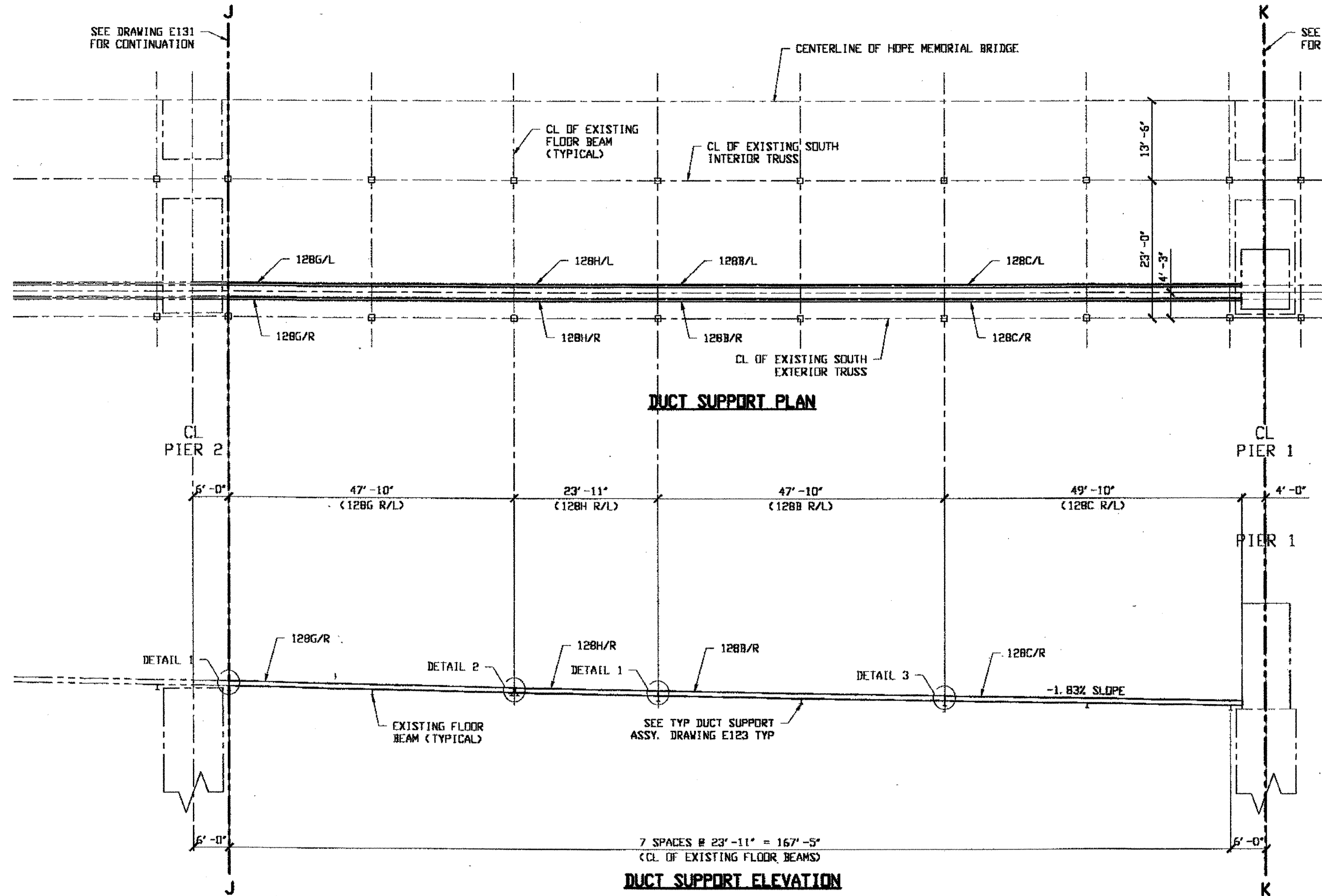
RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY *lee*

DOT ITEM LINE NO. 0168	
DOT BID ITEM NO. 625E25920	
NO.	DATE
DESCRIPTION	
REVISIONS	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO	
BRIDGE No. CUY-10-16.13	
DUCT SUPPORT BEAM LAYOUT	
SHEET NUMBER	E131
ABR JOB NUMBER	800010

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

Last modified by Repringer at 02:29pm on Tue Sep 26, 2000 - 1 - Last plotted by R... at 02:29pm on Tue Sep 26, 2000

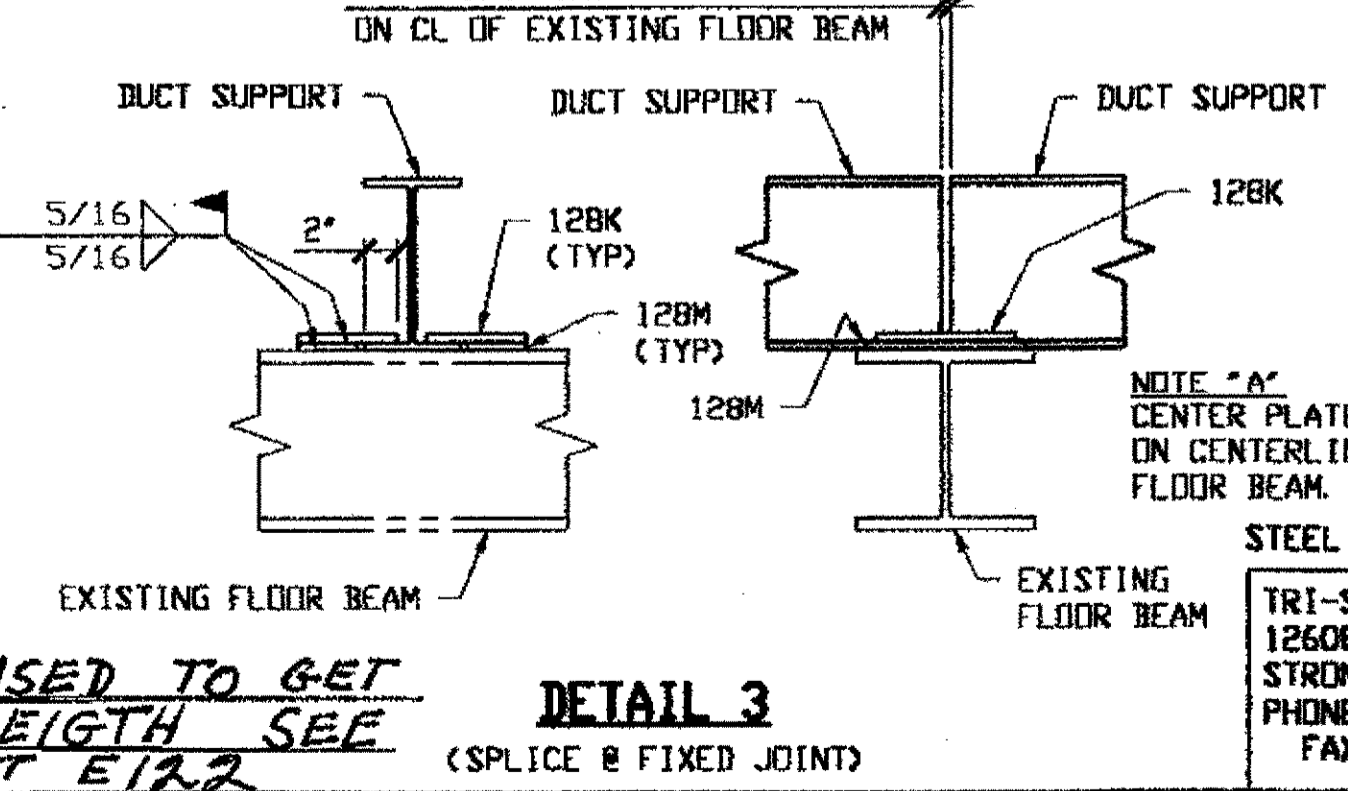
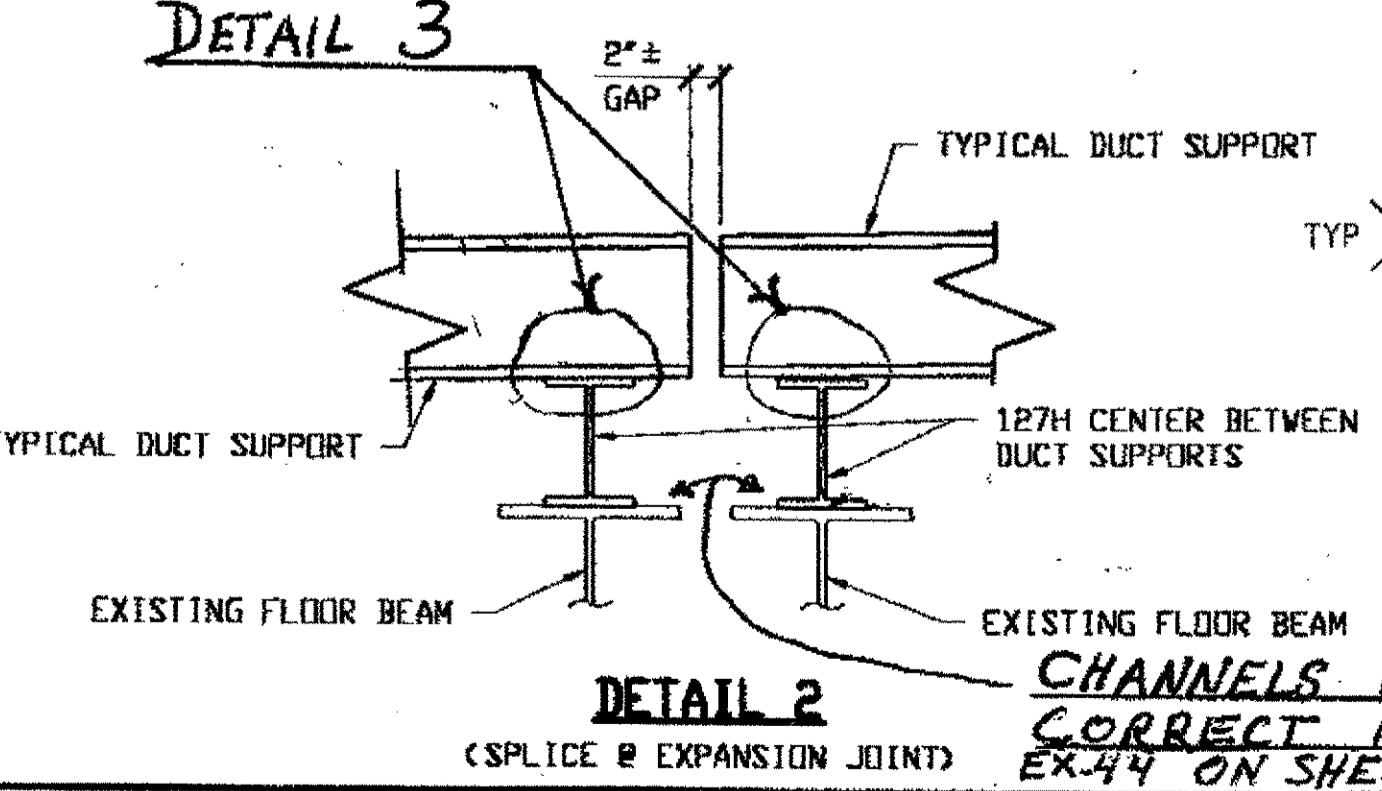
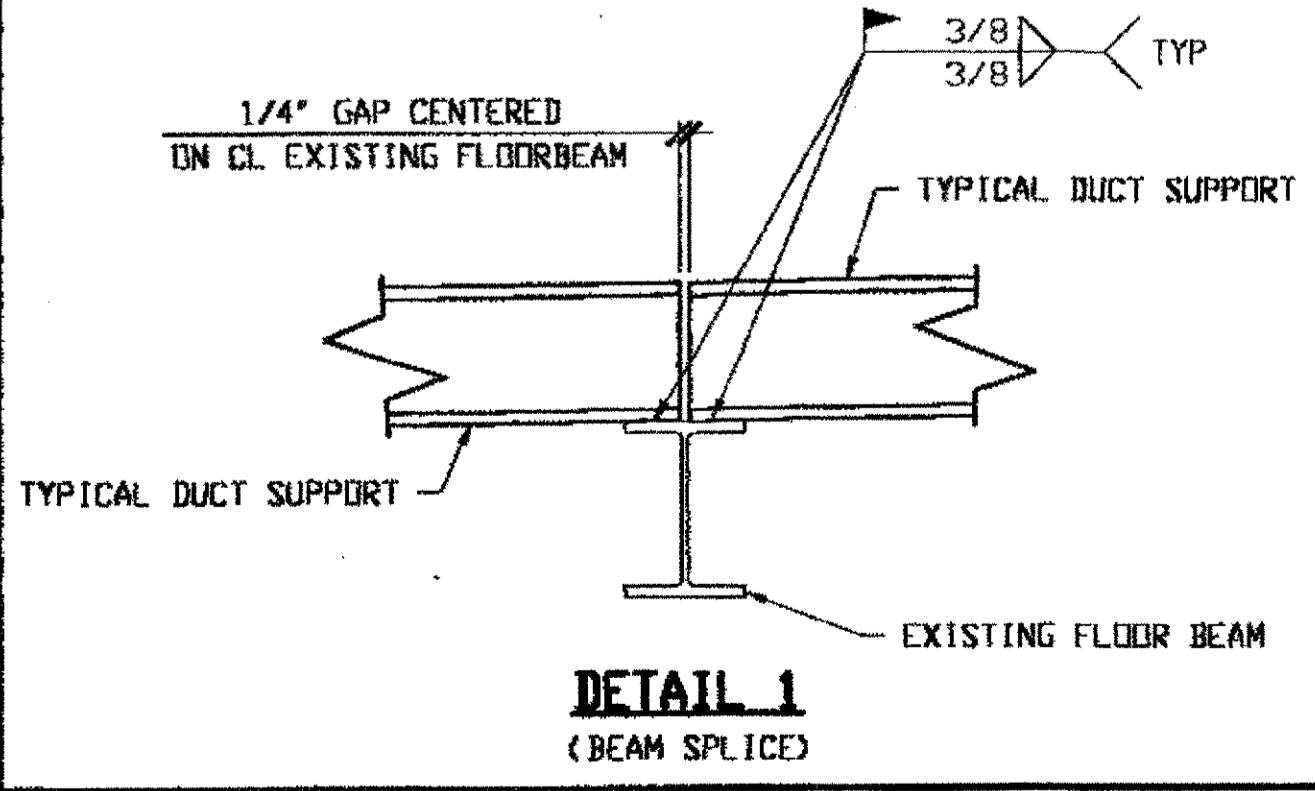


O.D.O.T. DIST. 12	
ACCEPTED	2/9/01 ASM
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

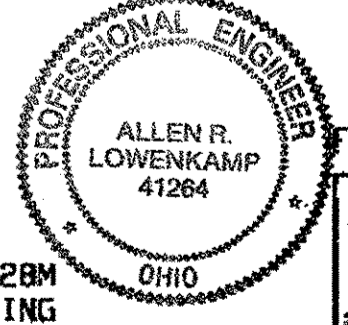
RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY cm

INSTALL RATES 128M & 128K AS PER  
DETAIL 3



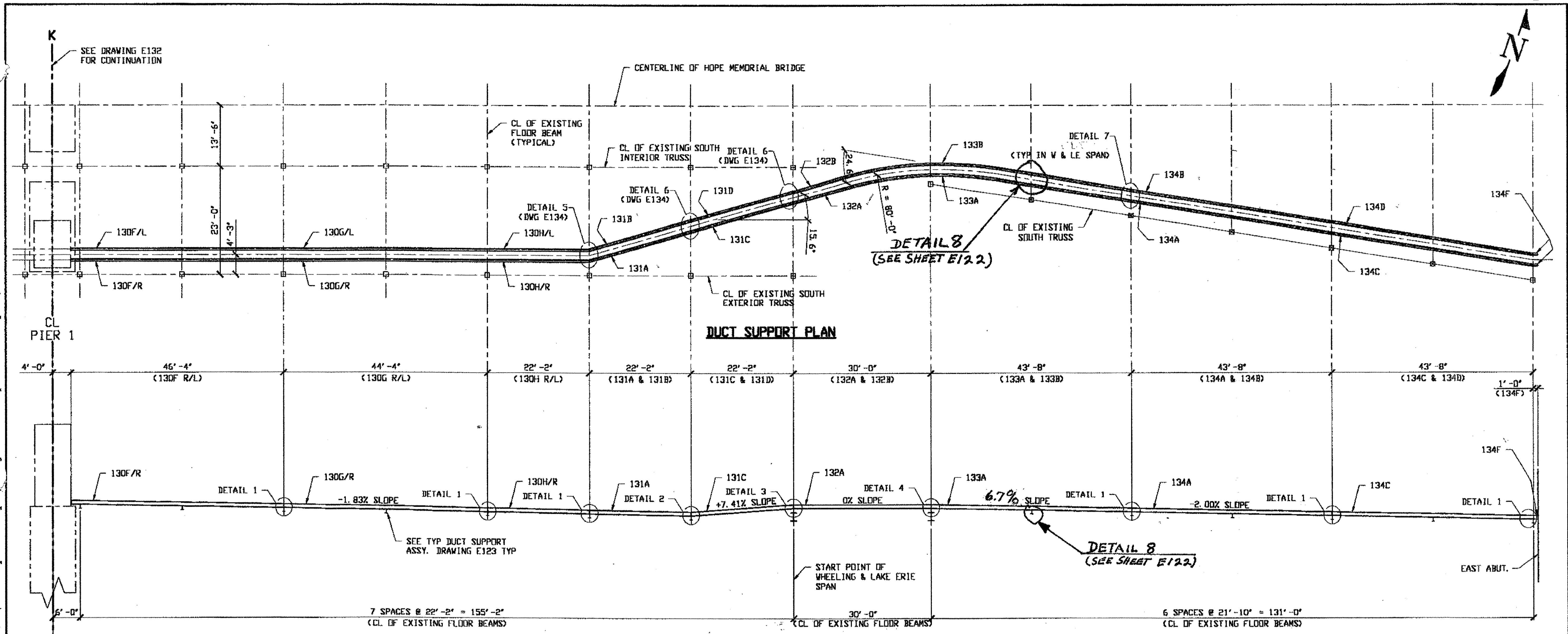
CHANNELS USED TO GET CORRECT HEIGHT SEE EX. 44 ON SHEET E122

NOTES:  
1. WORK THIS DRAWING WITH adache-CTWY-TYP ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.



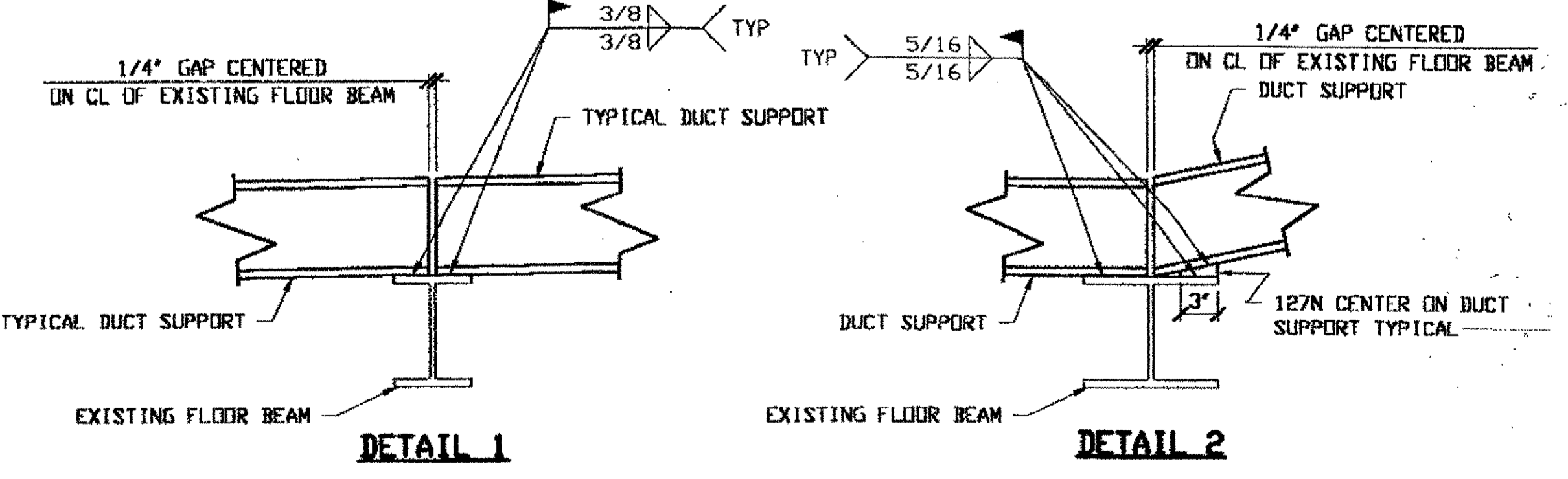
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

DOT ITEM LINE NO. 0168 DOT BID ITEM NO. 625E25920			
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT BEAM LAYOUT			
FABRICATOR AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CUMARAPOLIS, PA 15109 PHONE: (412) 631-3000 FAX: (412) 631-4001		IN CHARGE OF: L. SMITH	
DRAWN BY: DATE: RAS 9/11/00		SHEET NUMBER: E132	
CHECKED BY: DATE: GAF 9/26/00		ABN JOB NUMBER: 800010	

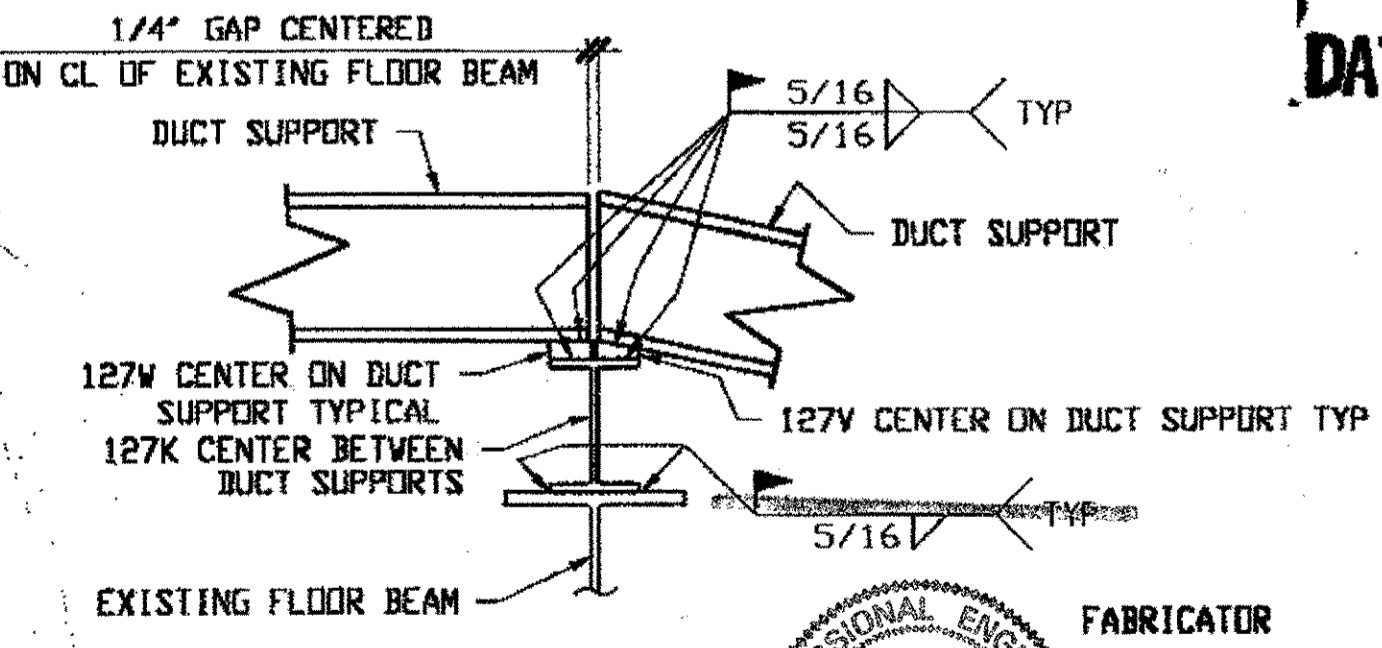
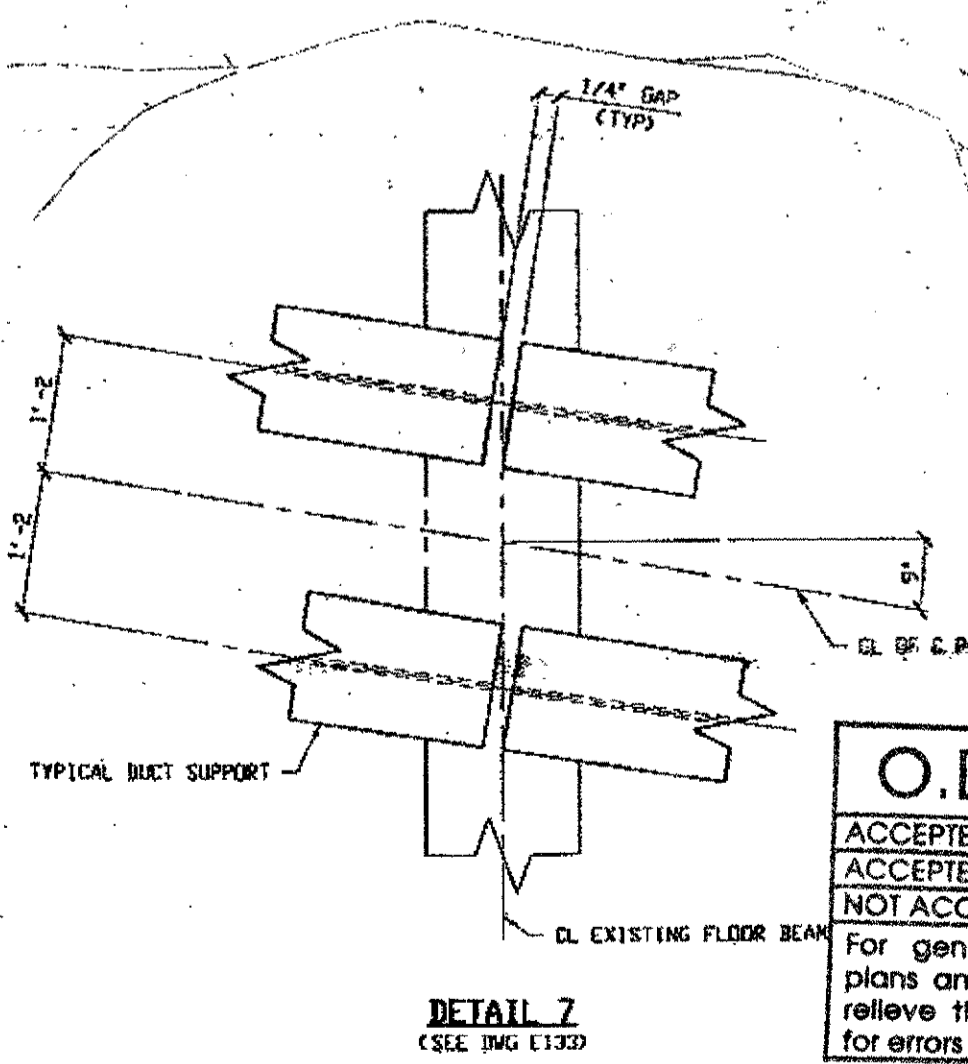


Last modified by Respringer at 02:03pm on Tue Sep 26, 2000 - Last plotted by Respringer at 02:13pm on Tue Sep 26, 2000

**NOTES:**  
 1. WORK THIS DRAWING WITH attached client-lynn ASSOCIATES DESIGN DRAWINGS 9/25 THRU 20/25.



**DUCT SUPPORT ELEVATION**



**O.D.O.T. DIST. 12**  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**PROFESSIONAL ENGINEER**  
 ALLEN R. LOWENKAMP  
 41284  
 OHIO

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORNERSVILLE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

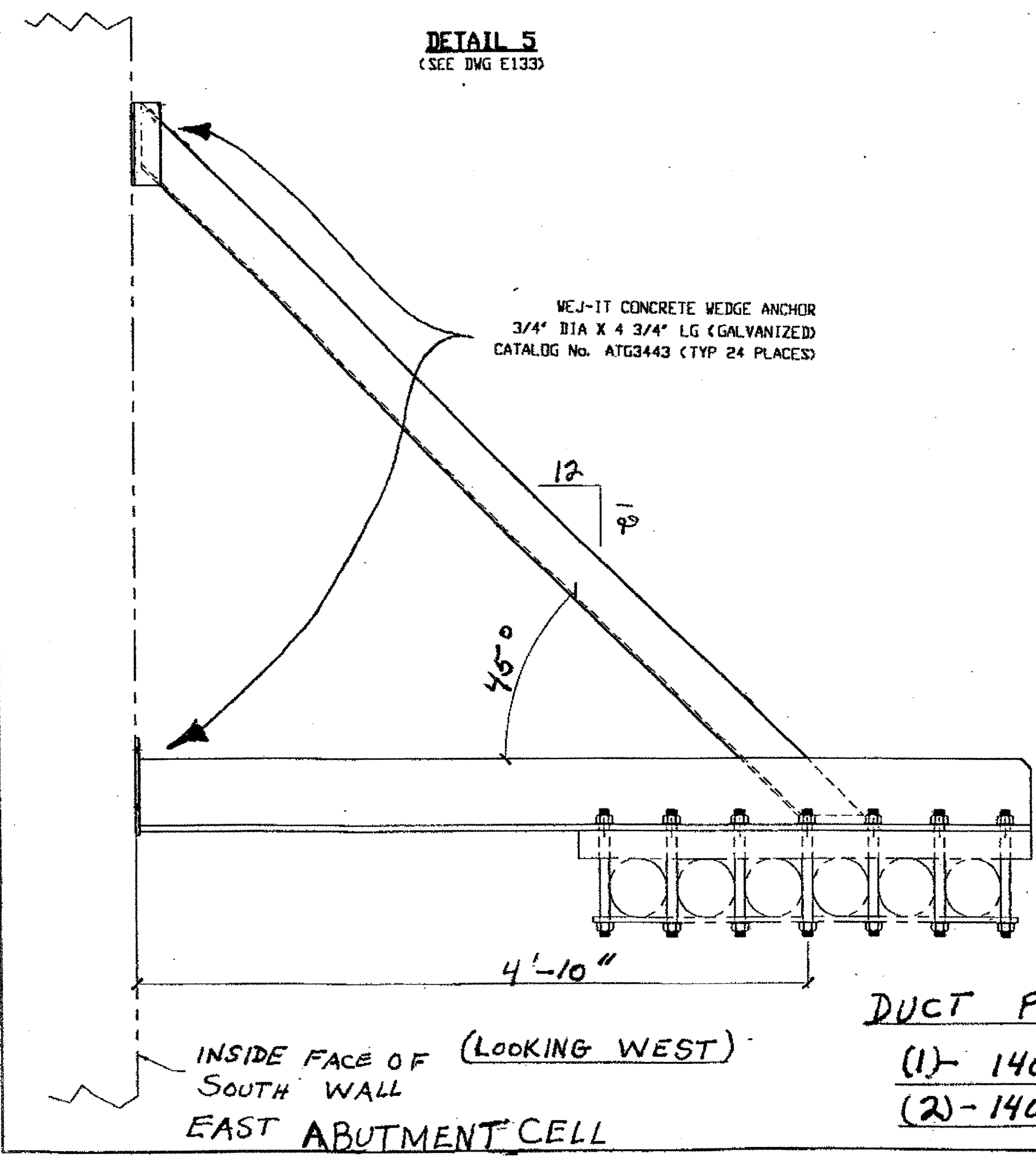
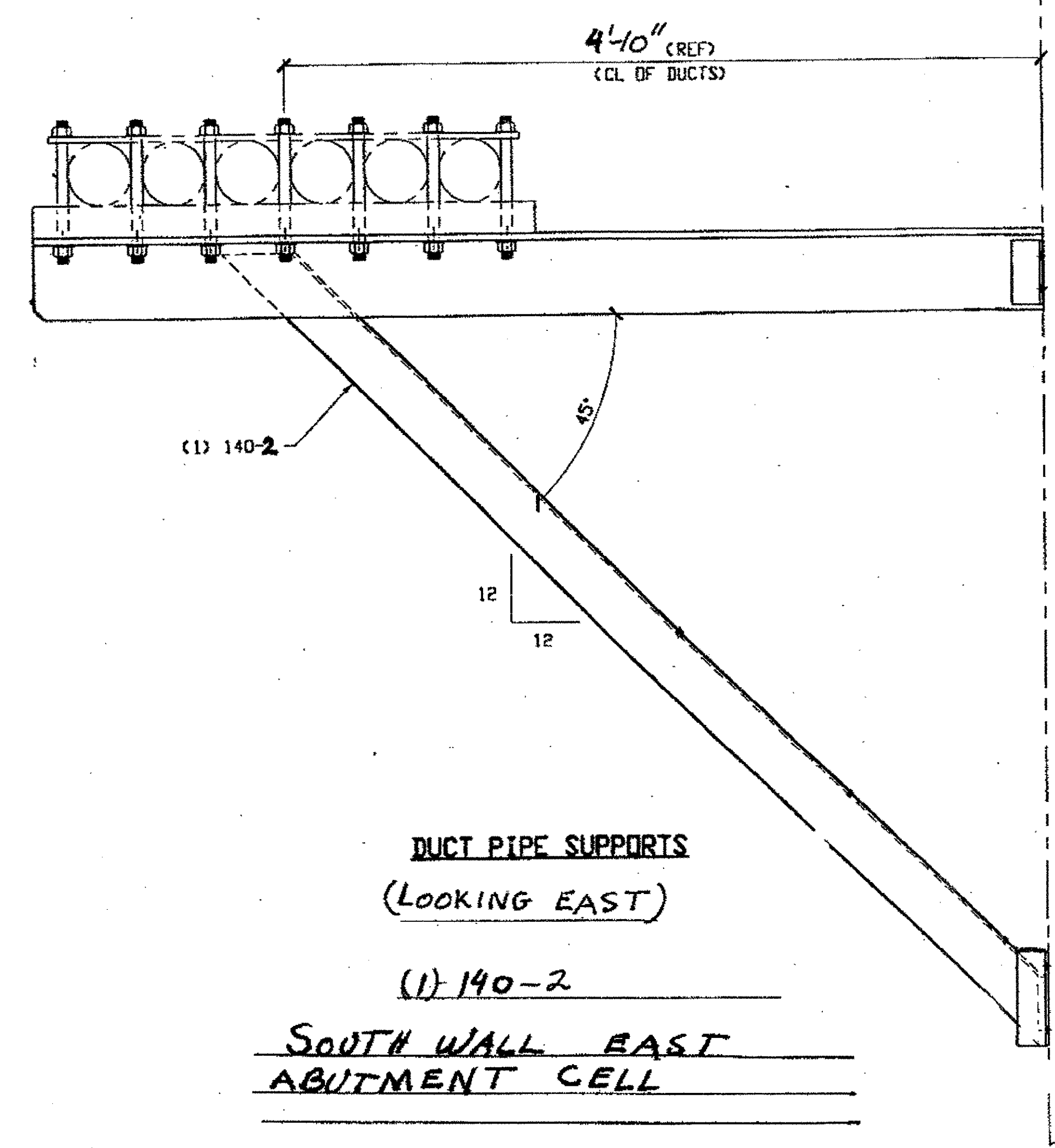
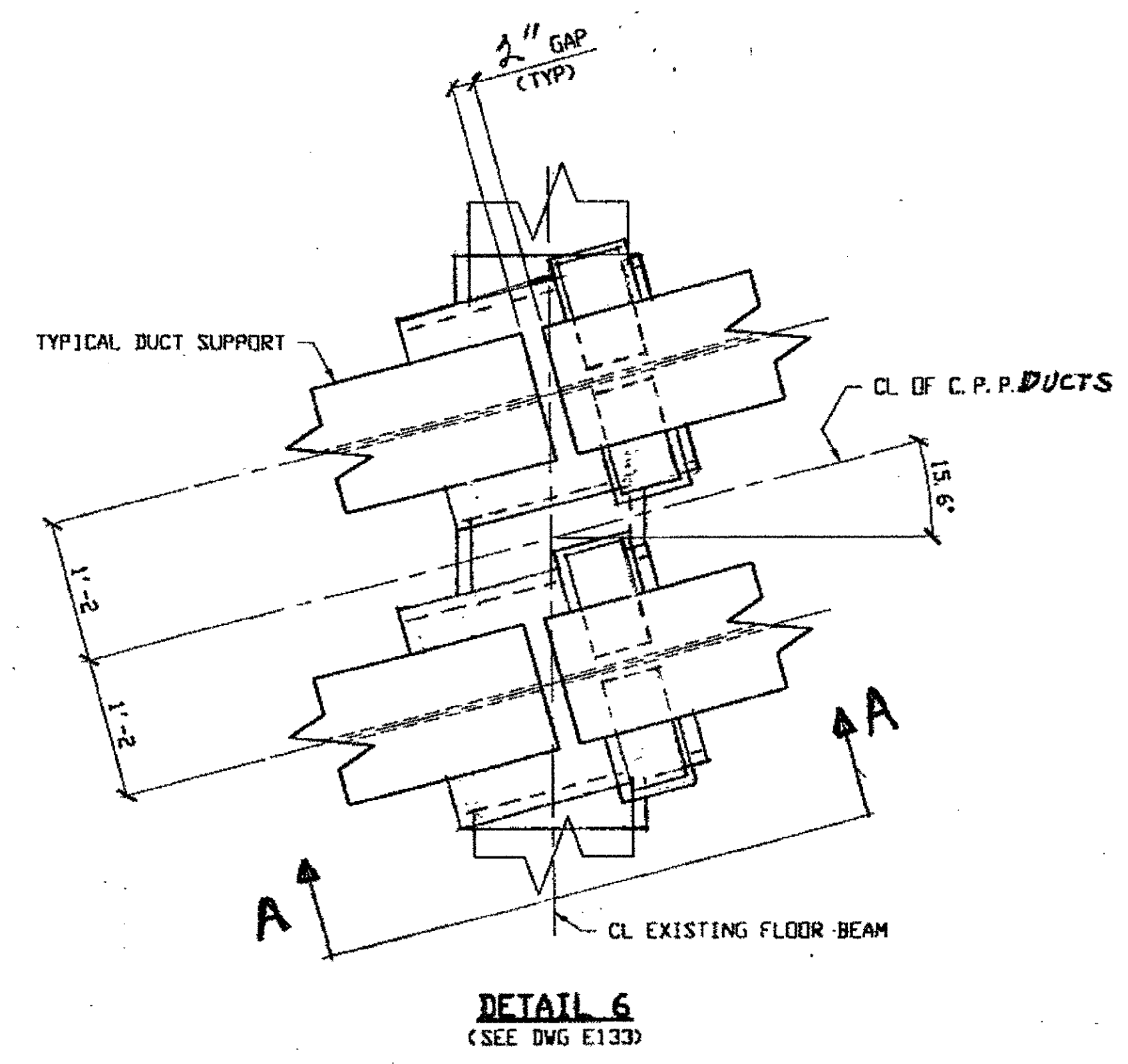
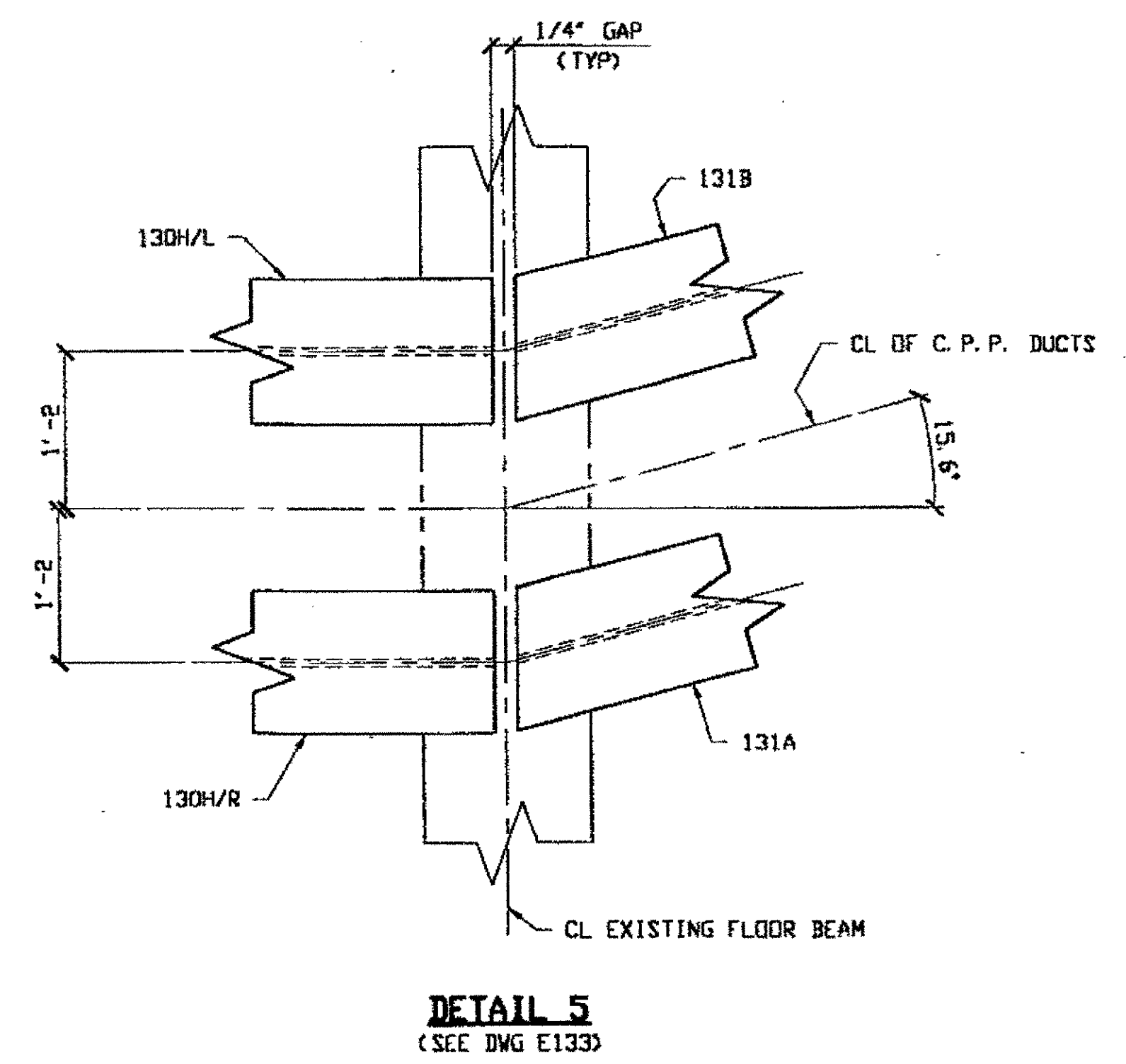
**RELEASED FOR CONSTRUCTION**  
 DATE 10/3/00 BY *cue*

DOT ITEM LINE NO. 0168  
 DOT BID ITEM NO. 625E25920

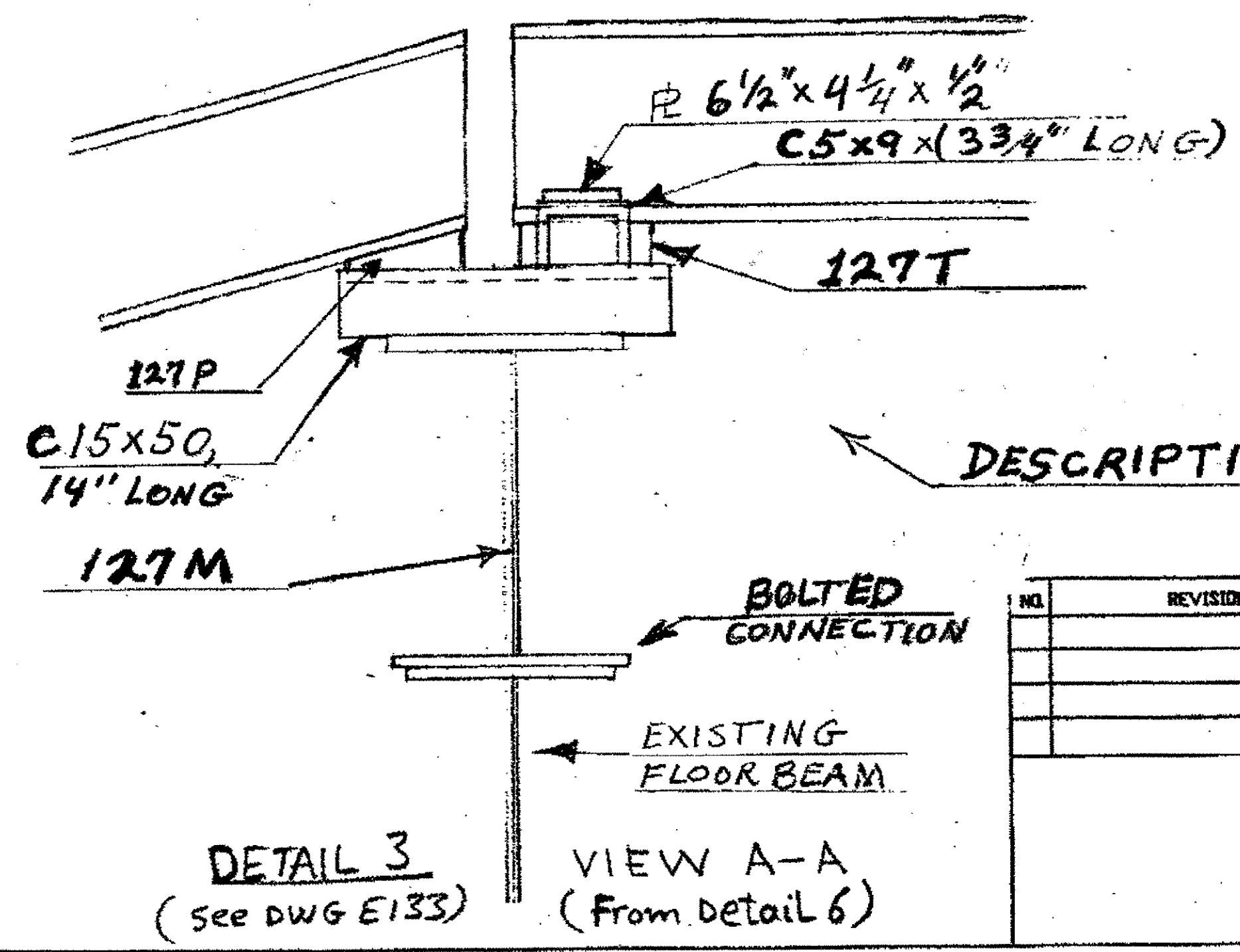
NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT BEAM LAYOUT**

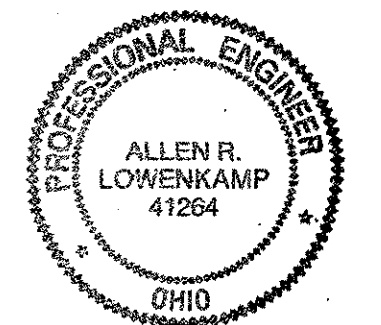
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 9/12/00  
 CHECKED BY: DATE: GAF 9/26/00  
 SHEET NUMBER: E133  
 ADM JOB NUMBER: 800010



**DUCT PIPE SUPPORTS**  
(1)-140-1  
(2)-140-2



O.D.O.T. DIST. 12		
ACCEPTED	2/9/07	PSYVA
ACCEPTED AS NOTED		
NOT ACCEPTED		
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.		



DESCRIPTION ON SHEET E122

NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215

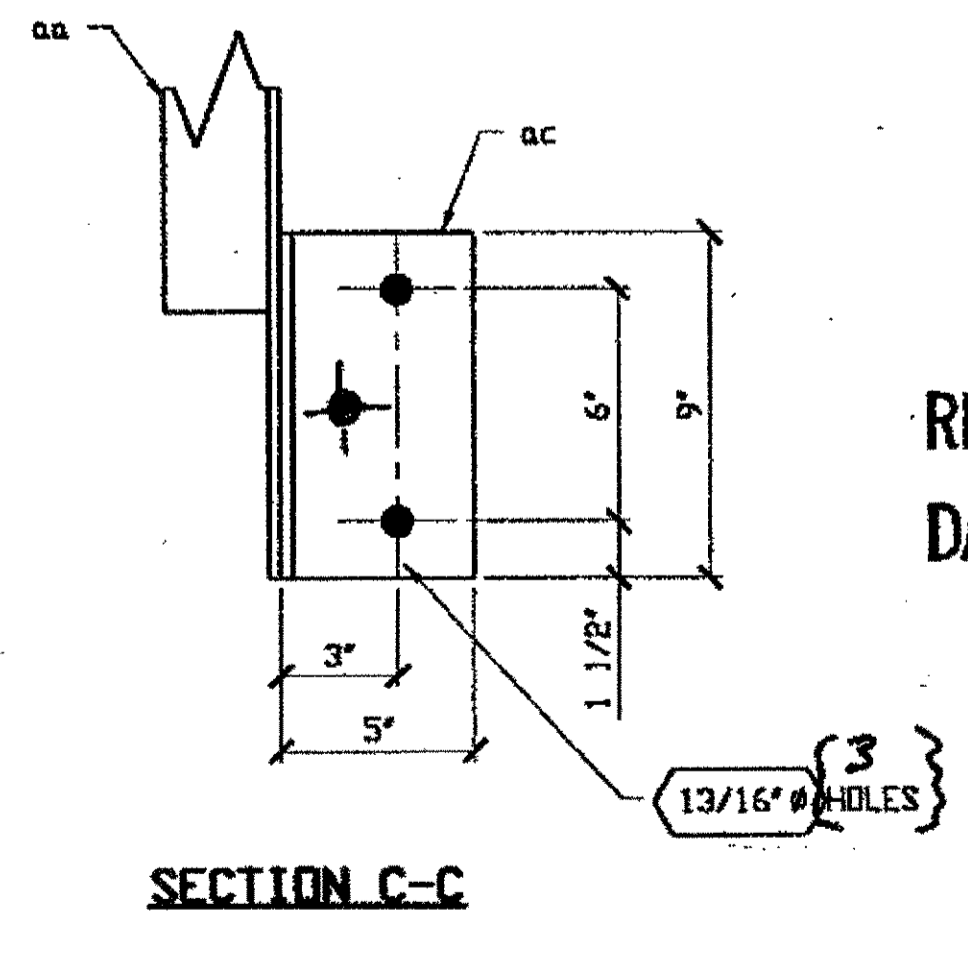
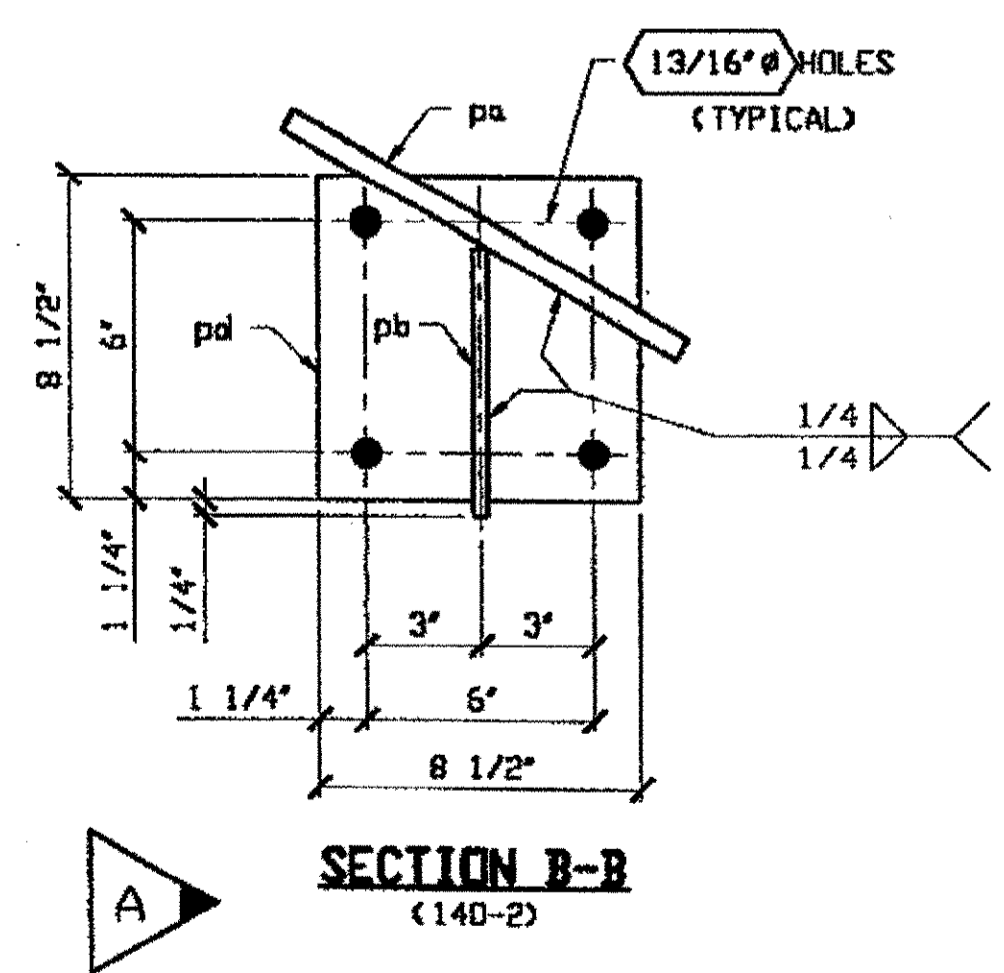
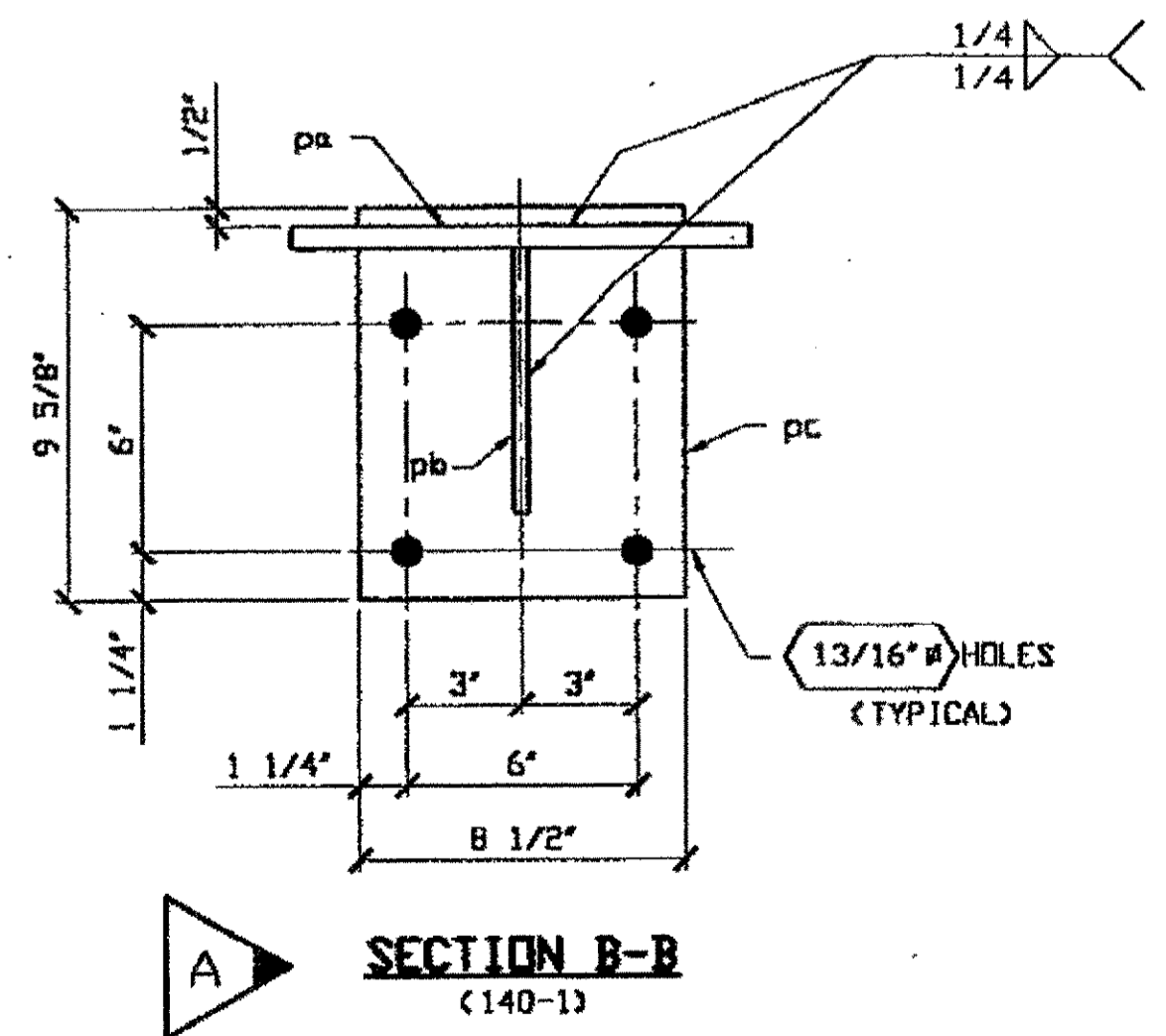
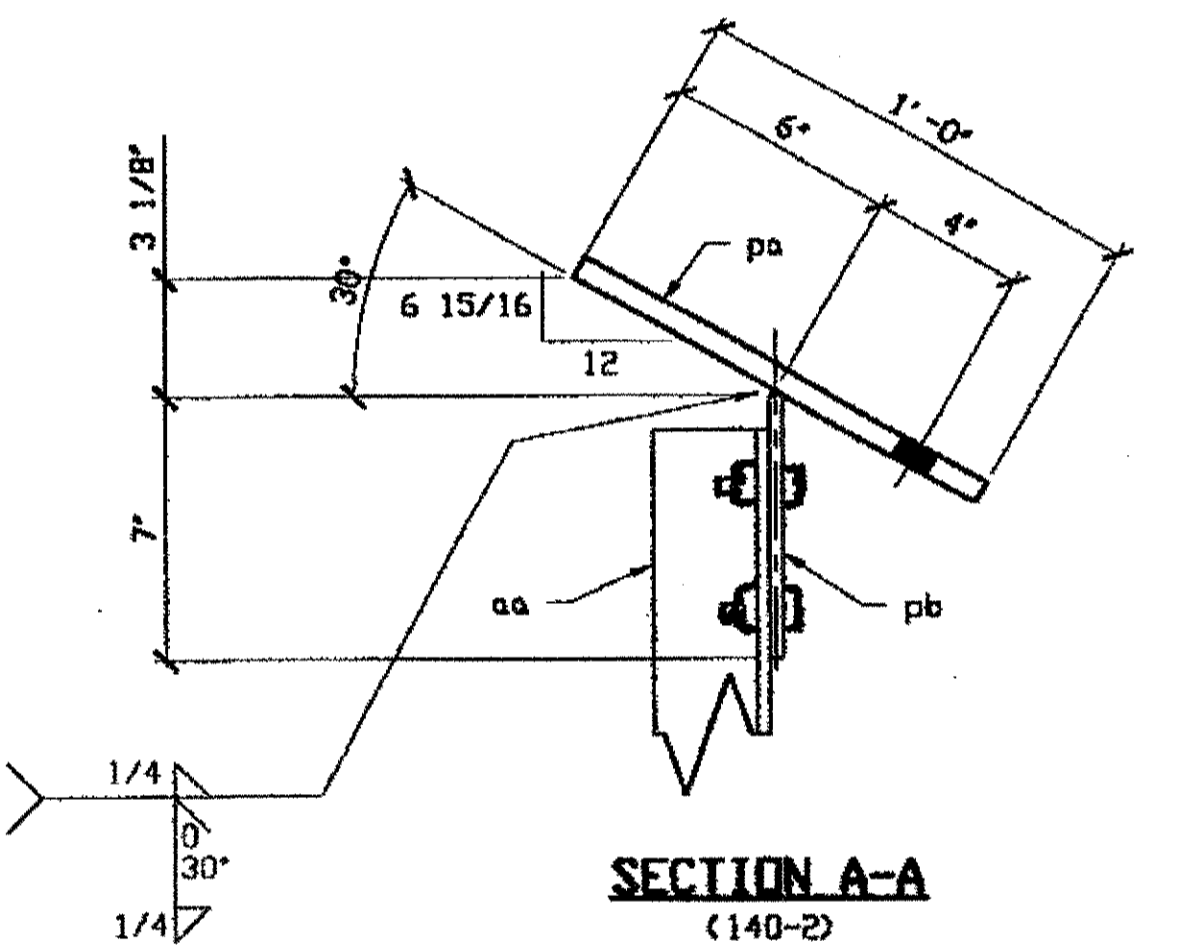
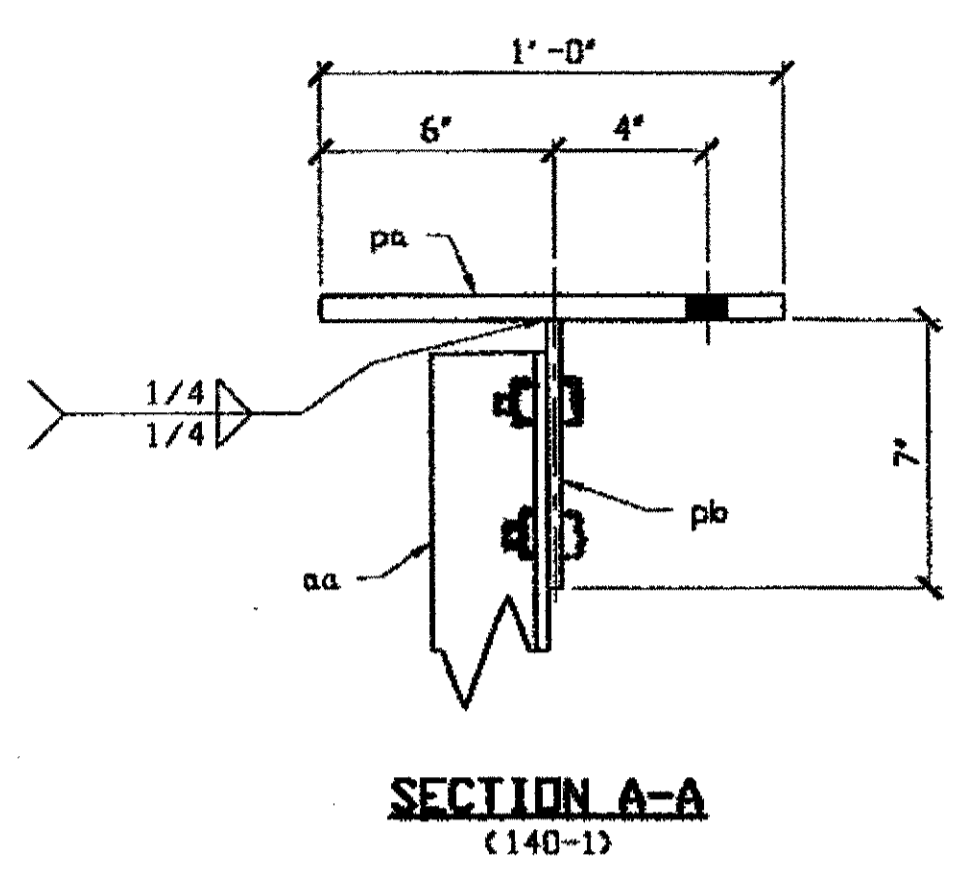
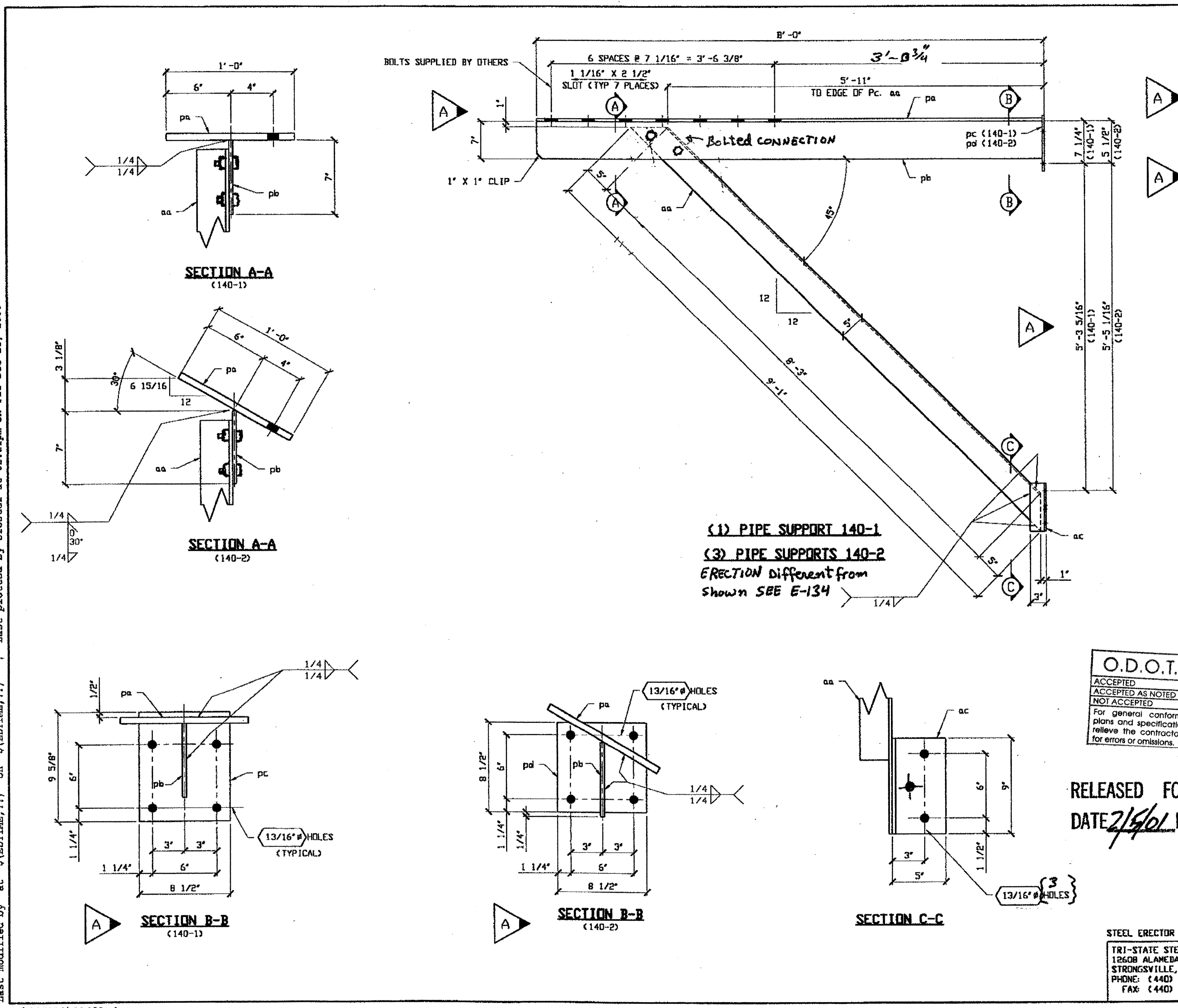
JOB NO. 2000212  
DRAWING NO. E-134

BROWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
SCALE: N/A DATE: \_\_\_\_\_

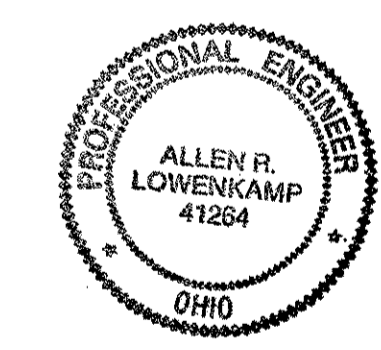
**BILL OF MATERIAL**

LINE NO.	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		140-1	1	PIPE SUPPORT				430
2		pa	1	PL 5/8 X 12	7	11 5/8		264
3		pb	1	PL 3/8 X 7	7	11 5/8		71
4		aa	1	L 5 X 3 X 5/16	9	1		74
5		pc	1	PL 3/8 X 8 1/2	0	9 5/8		9
6		ac	1	L 5 X 3 X 5/16	0	9		12
7								
8		140-2	3	PIPE SUPPORT				1109
9		pa	3	PL 5/8 X 12	7	11 5/8		612
10		pb	3	PL 3/8 X 7	7	11 5/8		214
11		aa	3	L 5 X 3 X 5/16	9	1		223
12		pd	3	PL 3/8 X 8 1/2	0	8 1/2		23
13		ac	3	L 5 X 3 X 5/16	0	9		37
14								
15								
16								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

**NOTES:**  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST,  
 FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



RELEASED FOR CONSTRUCTION  
 DATE 2/5/01 BY T.D.P.

DOT ITEM LINE NO. 0168  
 DOT BID ITEM NO. 625E25920

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	11/29/00	REVISE PER APPROVER NOTES		AS/GAF

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT DETAILS**

FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONNORVILLE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

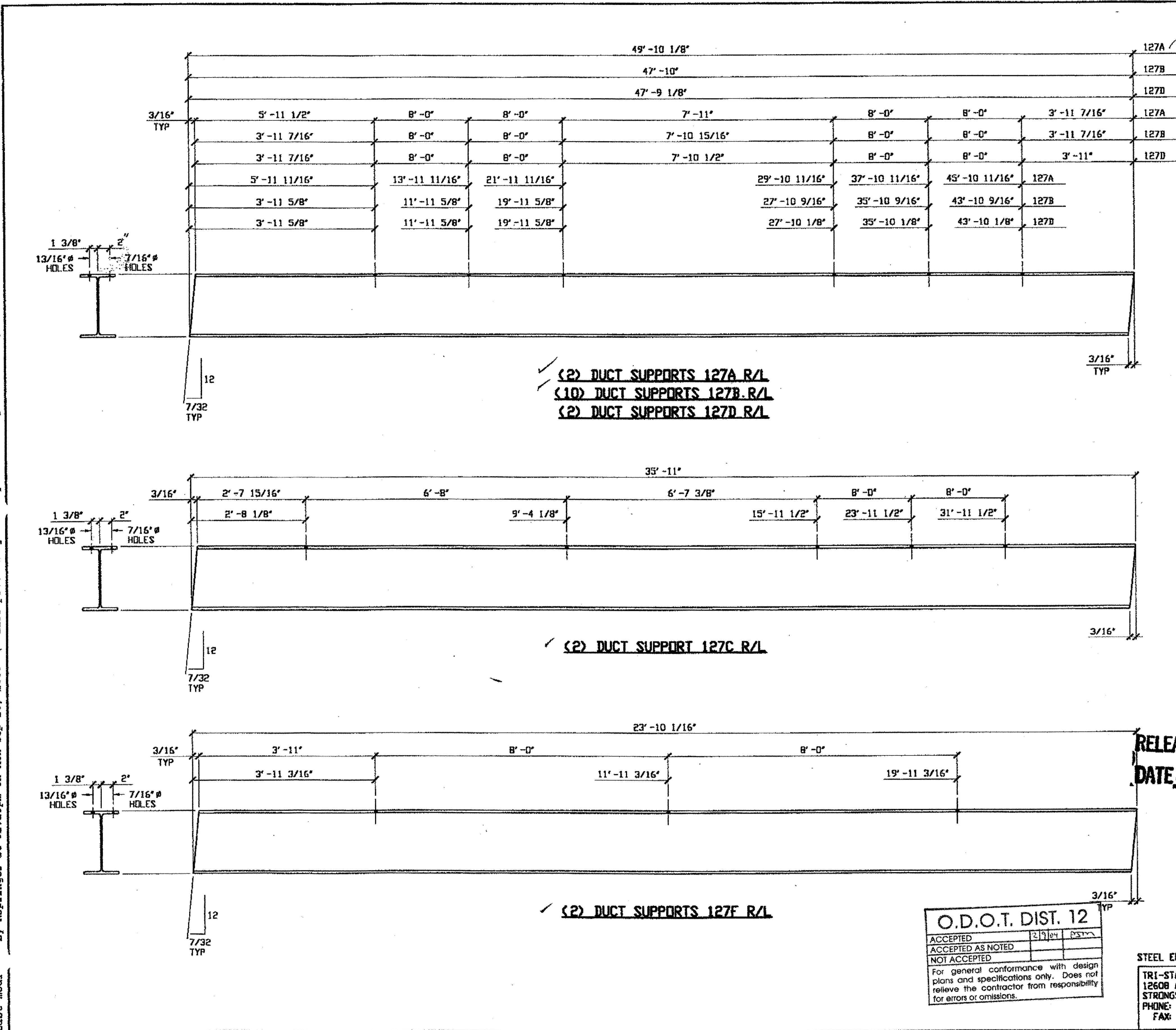
STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 9/25/00  
 CHECKED BY: DATE:  
 GAF 9/26/00

SHEET NUMBER: 126  
 JOB NUMBER: 800010

Last modified by at \$(BDTIME,??) on \$(EDTIME,??) - Last plotted by Gfooster at 02:21pm on Fri Dec 15, 2000

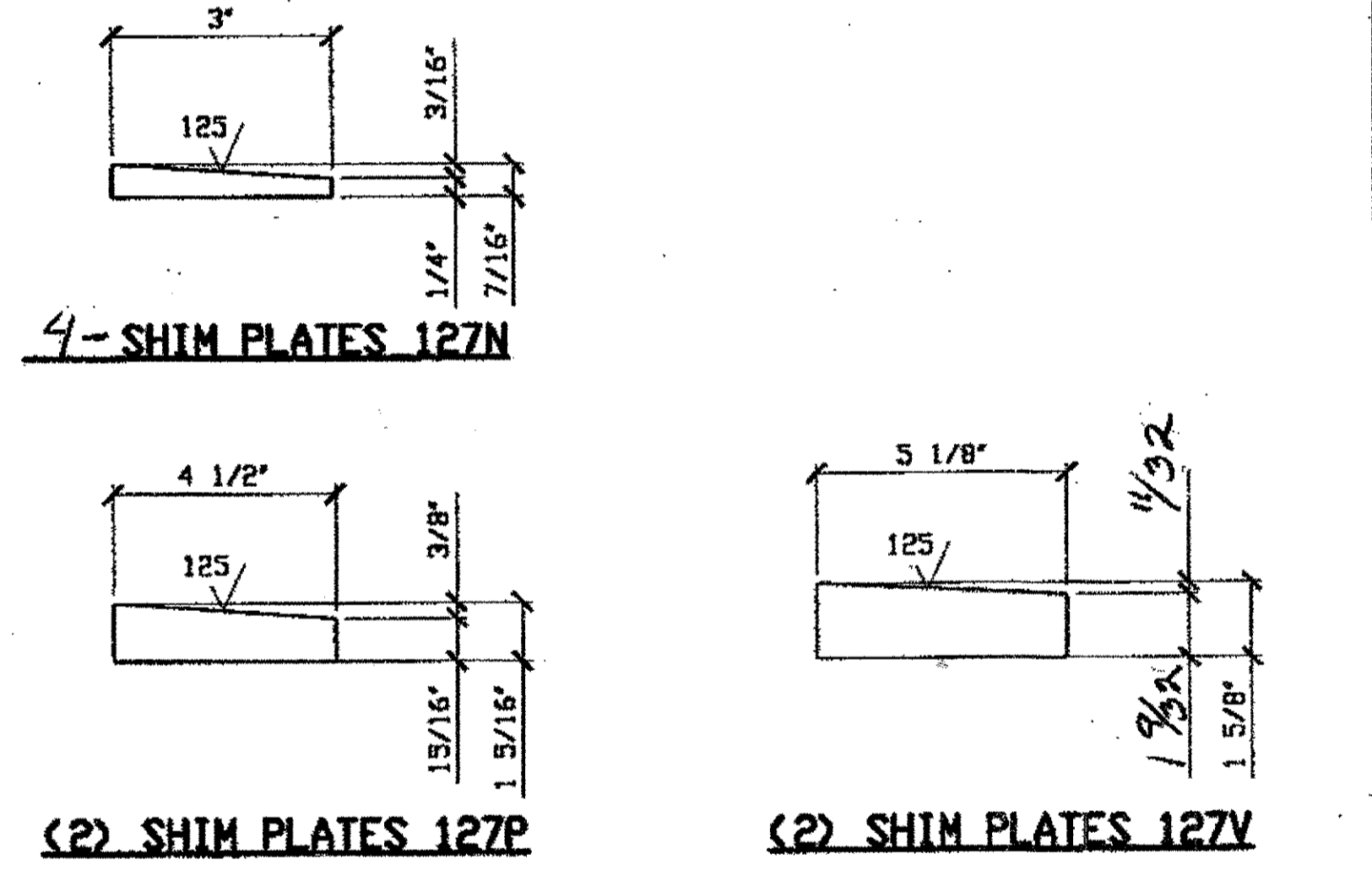
Last modified by Respringer at 02:29pm on Mon Sep 25, 2000 - 1 - Last plotted by R. Respringer at 03:06pm on Mon Sep 25, 2000



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		127A R/L	2	W10 X 26	49	10 1/8		2592
3		127B R/L	10	W10 X 26	47	10		12436
4		127C R/L	2	W10 X 26	35	11		1868
5		127D R/L	2	W10 X 26	47	9 1/8		2484
6		127F R/L	2	W10 X 26	23	10 1/16		1240
7								
8								
9				DUCT BEAM SUPPORTS				
10		127H	10	W6 X 20	3	6	PLN MATL	700
11		127K	1	W10 X 112	3	6	PLN MATL	392
12		127M	1	W24 X 94	3	6	PLN MATL	329
13								
14				SHIM PLATES				
15		127N	4	PL 7/16 X 3	0	6 1/2	MACHINE	5
16		127P	2	PL 1 5/16 X 4 1/2	0	6	MACHINE	20
17		127T	2	PL 1 5/16 X 4 1/2	0	6	PLN MATL	20
18		127V	2	PL 1 5/8 X 5 1/8	0	6	MACHINE	28
19		127W	2	PL 1 5/8 X 5 1/8	0	6	PLN MATL	28
20								
PLATE		A36	PIPE		FITTINGS			
SHAPES		A36	FLGS.		BOLTS			

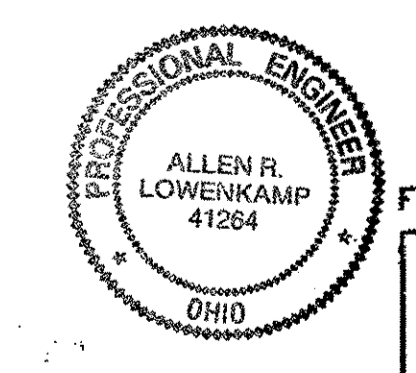
(2) DUCT SUPPORTS 127A R/L  
 (10) DUCT SUPPORTS 127B R/L  
 (2) DUCT SUPPORTS 127D R/L

NOTES:  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST,  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY *cu*

O.D.O.T. DIST. 12  
 ACCEPTED 2/9/04  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CINCINNATI, OH 45202  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

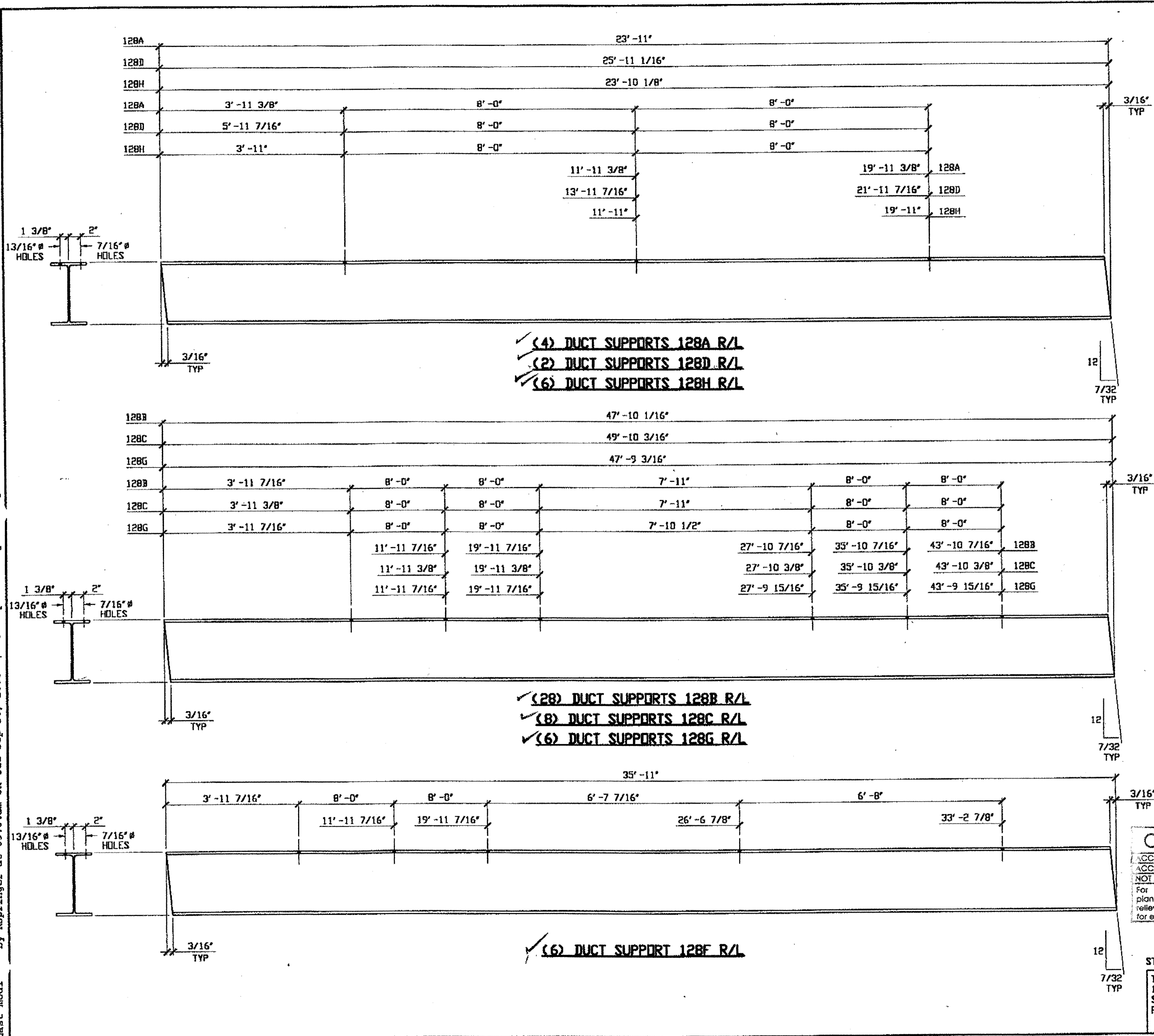
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 9/05/00  
 CHECKED BY: DATE:  
 GAF 9/25/00

DOT ITEM LINE NO. 0168	
DOT BID ITEM NO. 625E23920	
NO.	DATE
DESCRIPTION	
BY	
STATE OF OHIO	
DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT DETAILS	
SHEET NUMBER:	127
AWR JOB NUMBER:	800010



Last modified by Repringer at 09:04am on Tue Sep 26, 2000 -|- Last plotted by R...ger at 02:04pm on Tue Sep 26, 2000



BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		128A R/L	4	W10 X 26	23	11		2487
3		128B R/L	28	W10 X 26	47	10 1/16		34826
4		128C R/L	8	W10 X 26	49	10 3/16		10369
5		128D R/L	2	W10 X 26	25	11 1/16		1348
6		128F R/L	6	W10 X 26	35	11		5503
7		128G R/L	6	W10 X 26	47	9 3/16		7452
8		128H R/L	6	W10 X 26	23	10 1/8		3720
9								
10				FIXED JOINT PLATES				
11		128K	20	PL 1/2 X 6	0	7	PLN MATL	119
12		128M	20	PL 1/2 X 3 1/2	0	8	PLN MATL	79
PLATE A36				PIPE			FITTINGS	
SHAPES A36				FLGS.			BOLTS	

NOTES:  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST,  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY cm

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]



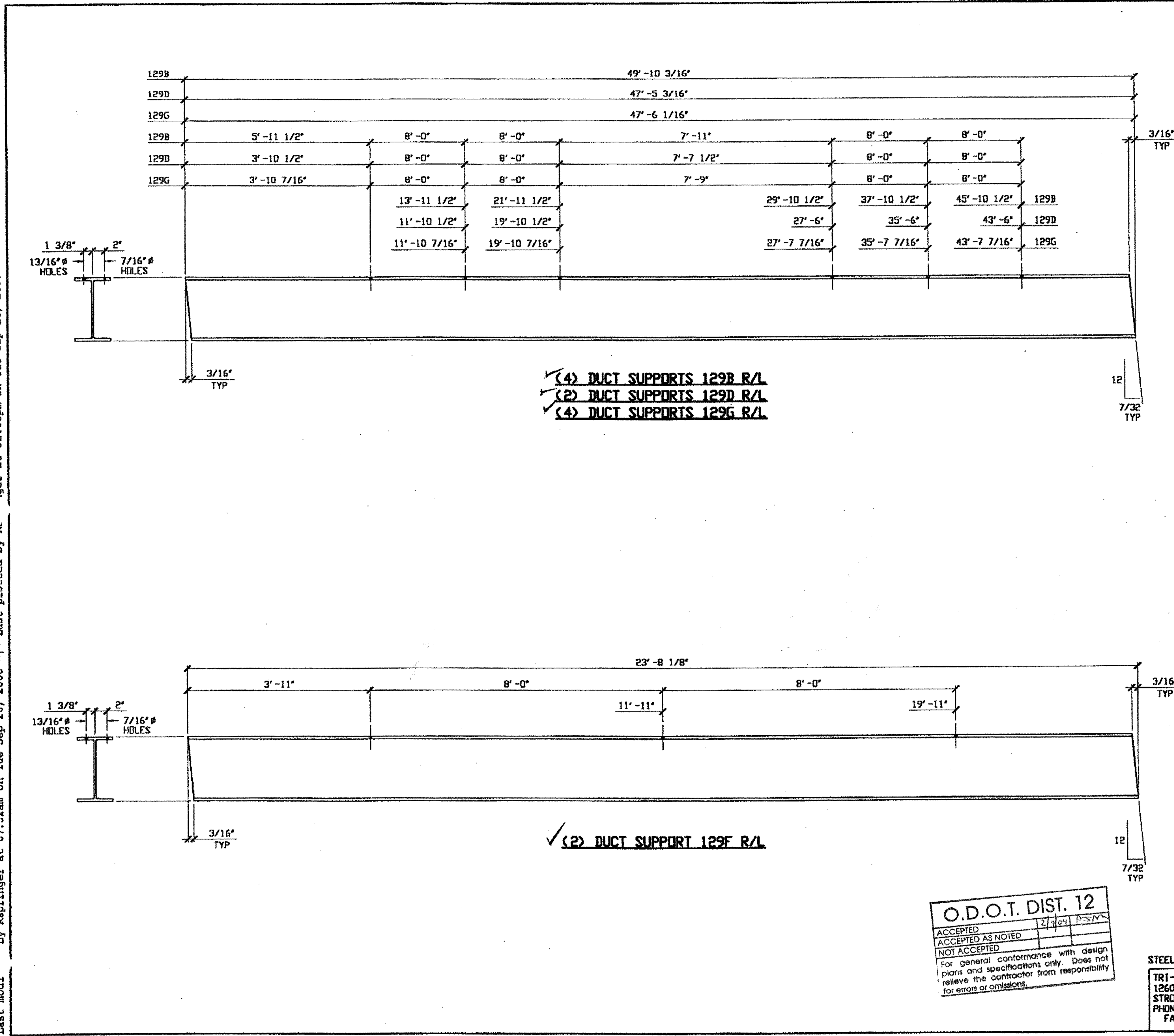
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONROPSVILLE, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 9/06/00  
 CHECKED BY: DATE:  
 GAF 9/25/00

DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 62SE25920	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 DUCT SUPPORT DETAILS			
		SHEET NUMBER:	128
		ABM JOB NUMBER:	800010

Last mod by Repringer at 07:52am on Tue Sep 26, 2000 - Last plotted by R. gar at 02:05pm on Tue Sep 26, 2000



### BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK	NLT	NLT REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
						FEET	INCHES		
1					DUCT SUPPORTS				
2		129B R/L	4		W10 X 26	49	10 3/16		5184
3		129D R/L	2		W10 X 26	47	5 3/16		2466
4		129F R/L	2		W10 X 26	23	8 1/8		1232
5		129G R/L	4		W10 X 26	47	6 1/16		4940
PLATE					PIPE	FITTINGS			
SHAPES A36					FLGS.	BOLTS			

NOTES:  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST.  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY Cue

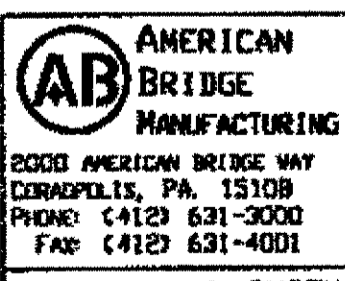


DOT ITEM LINE NO. 0168  
 DOT BID ITEM NO. 625E2592D

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT DETAILS**



FABRICATOR  
 AMERICAN BRIDGE  
 MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 COLUMBUS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

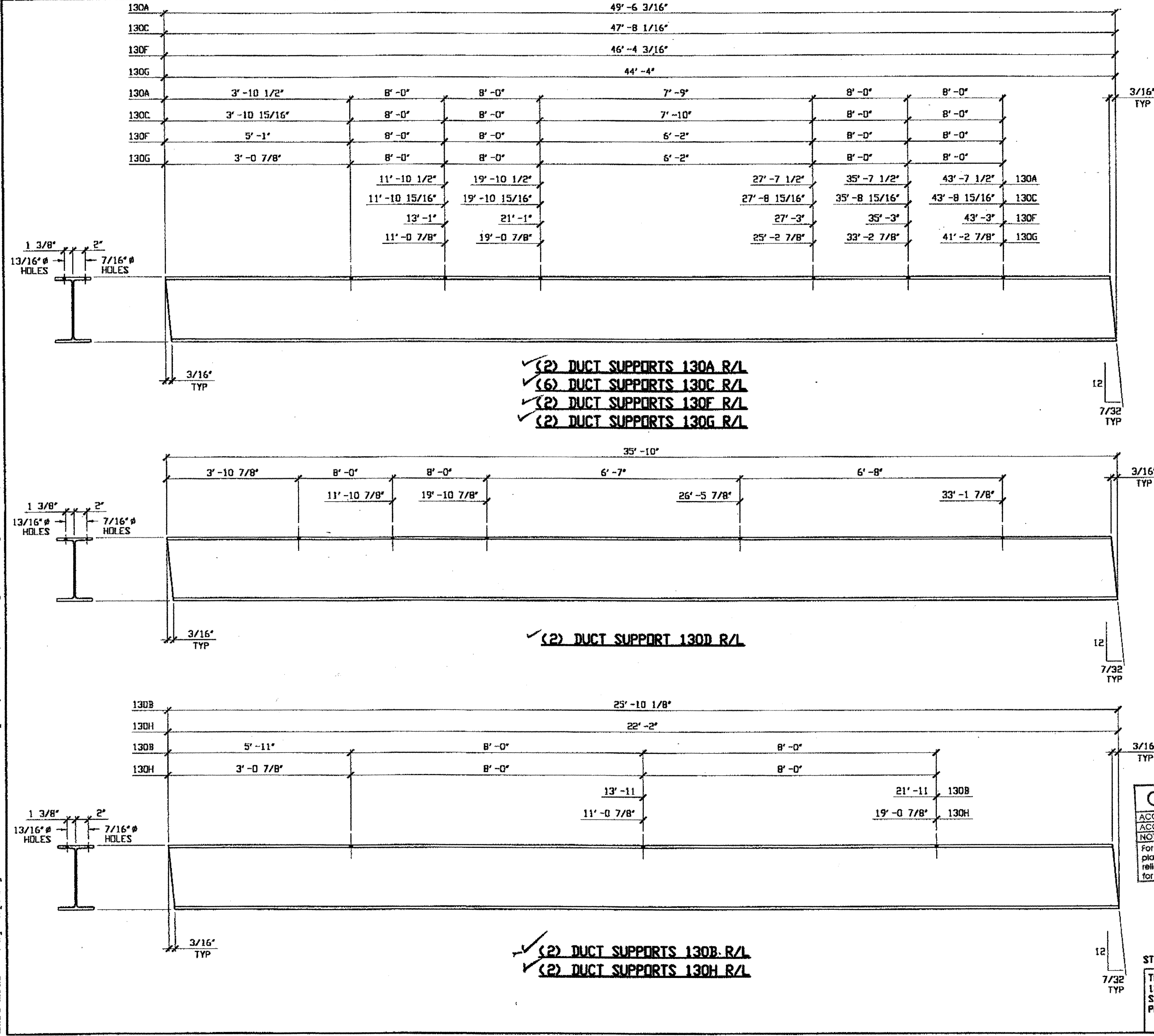
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 9/06/00  
 CHECKED BY: DATE:  
 GAF 9/26/00

SHEET NUMBER:  
 129  
 ABR JOB NUMBER:  
 800010

O.D.O.T. DIST. 12  
 ACCEPTED  2/9/04 D-S-M  
 ACCEPTED AS NOTED   
 NOT ACCEPTED   
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

Last modified by Repringer at 08:32am on Tue Sep 26, 2000 - Last plotted by R. Repringer at 08:55am on Tue Sep 26, 2000



✓ (2) DUCT SUPPORTS 130A R/L  
 ✓ (6) DUCT SUPPORTS 130C R/L  
 ✓ (2) DUCT SUPPORTS 130F R/L  
 ✓ (2) DUCT SUPPORTS 130G R/L

✓ (2) DUCT SUPPORT 130D R/L

✓ (2) DUCT SUPPORTS 130B R/L  
 ✓ (2) DUCT SUPPORTS 130H R/L

**BILL OF MATERIAL**

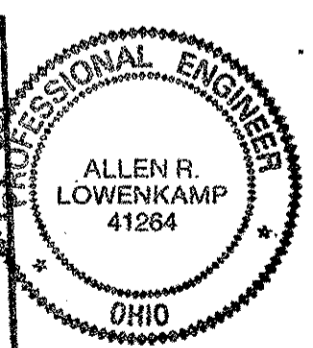
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		130A R/L	2	W10 X 26	49	6 3/16		2574
3		130B R/L	2	W10 X 26	25	10 1/8		1344
4		130C R/L	6	W10 X 26	47	8 1/16		7436
5		130D R/L	2	W10 X 26	35	10		1864
6		130F R/L	2	W10 X 26	46	4 3/16		2410
7		130G R/L	2	W10 X 26	44	4		2306
8		130H R/L	2	W10 X 26	22	2		1152

PLATE	PIPE	FITTINGS
SHAPES A36	FLGS.	BOLTS

**NOTES:**  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST,  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY *cm*

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. 0168  
 DOT BID ITEM NO. 625E25920

NO.	DATE	DESCRIPTION	BY

**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15100  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

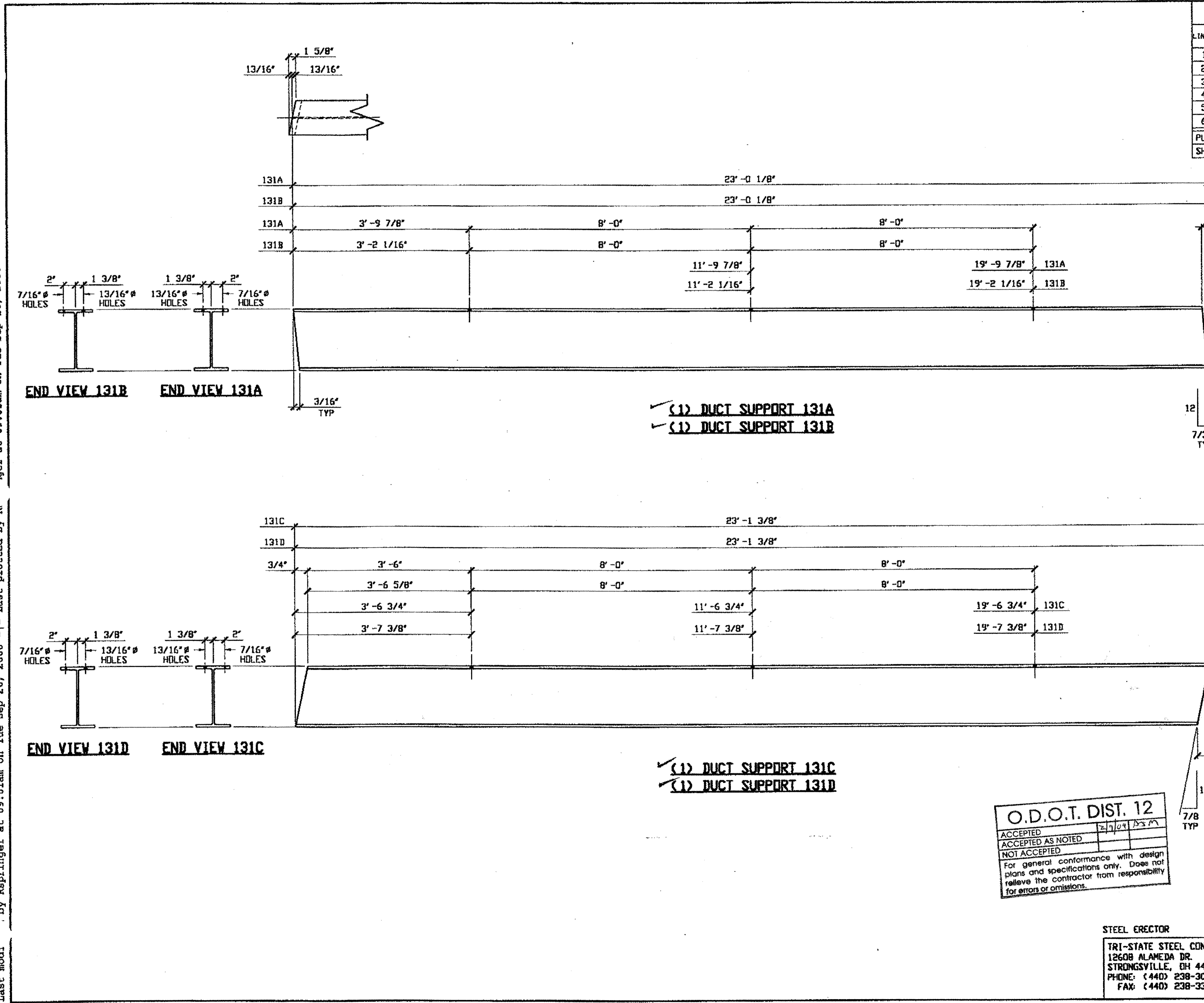
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT DETAILS**

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 9/06/00  
 CHECKED BY: GAF  
 DATE: 9/26/00

SHEET NUMBER:  
 130  
 A36 JOB NUMBER:  
 800010

Last modified by Repringer at 09:01am on Tue Sep 26, 2000 - Last plotted by R. Repringer at 09:01am on Tue Sep 26, 2000

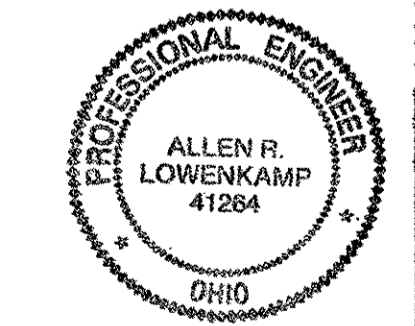


BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		131A	1	W10 X 26	23	0 15/16		600
3		131B	1	W10 X 26	23	0 15/16		600
4		131C	1	W10 X 26	23	1 3/8		601
5		131D	1	W10 X 26	23	1 3/8		601
6								
PLATE				PIPE	FITTINGS			
SHAPES A36				FLGS.	BOLTS			

**NOTES:**  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST.  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC  
 ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY cm

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



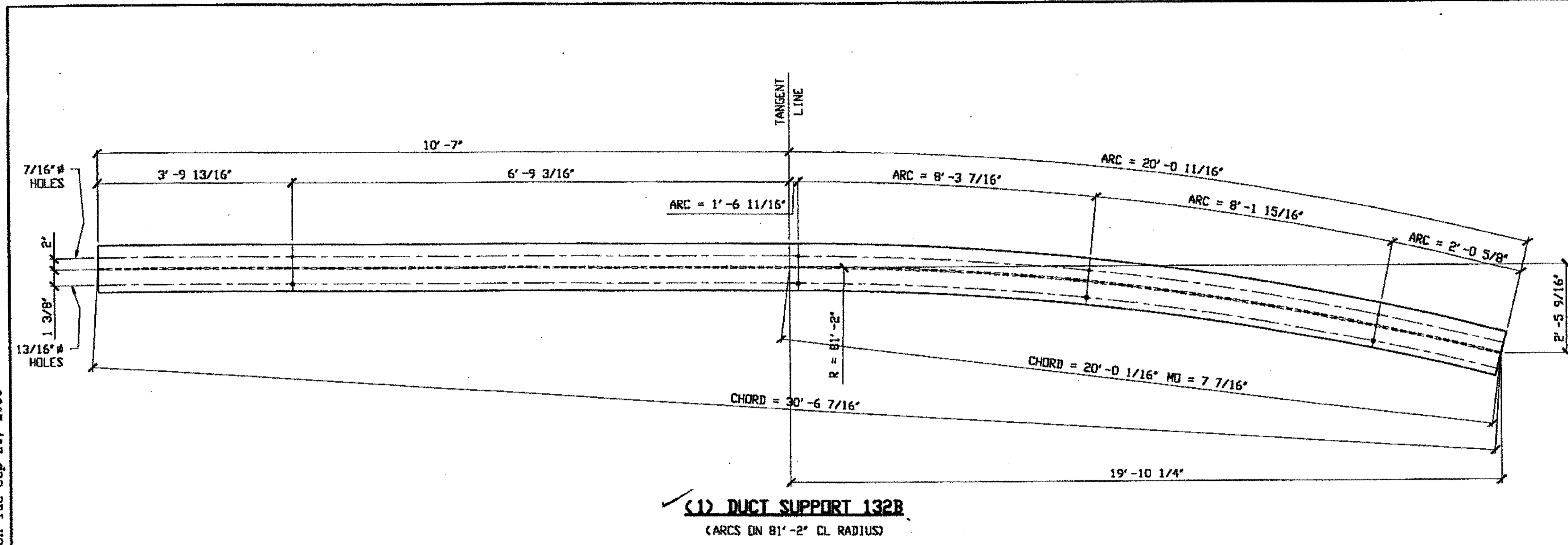
**FABRICATOR**  
**AB AMERICAN BRIDGE MANUFACTURING**  
 8000 AMERICAN BRIDGE WAY  
 EDWARDSVILLE, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

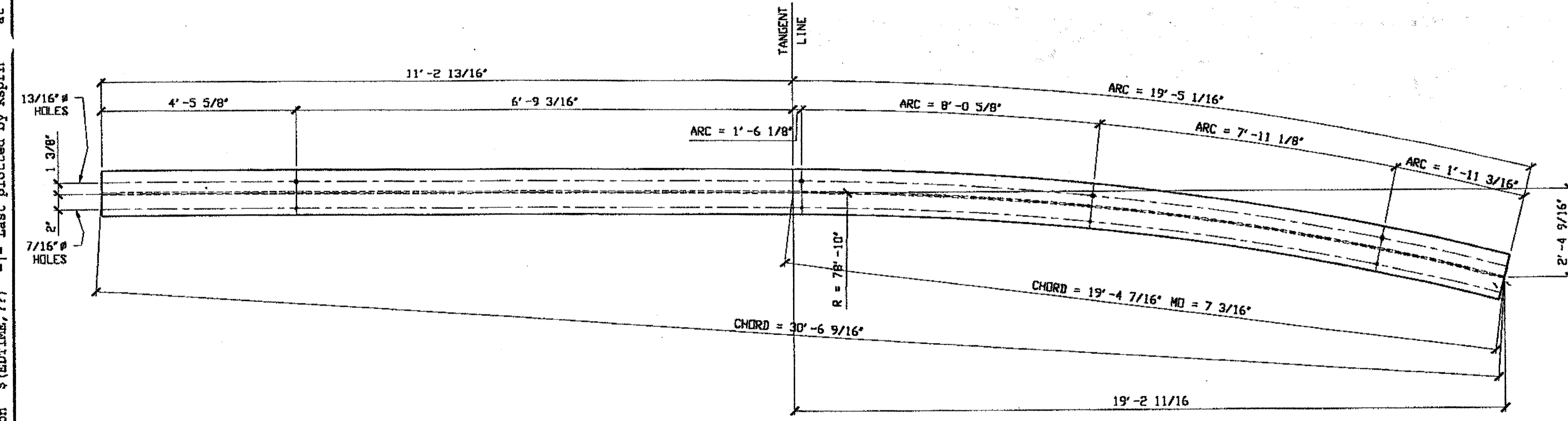
IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 9/07/00  
 CHECKED BY: GAF  
 DATE: 9/26/00

DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 62SE25920	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>DUCT SUPPORT DETAILS</b>			
SHEET NUMBER		131	
JOB NUMBER		800010	

Last modified by at \$(EDTIME,??) on \$(EDTIME,??) at 02:06pm on Tue Sep 26, 2000



**(1) DUCT SUPPORT 132B**  
(ARCS ON 81'-2" CL RADIUS)



**(1) DUCT SUPPORT 132A**  
(ARCS ON 78'-10" CL RADIUS)

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REP. D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		132A	1	W10 X 26	30	7 7/8	ROLL	797
3		132B	1	W10 X 26	30	7 11/16	ROLL	797
PLATE				PIPE	FITTINGS			
SHAPES A36				FLGS.	BOLTS			

RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY     

- NOTES:
- HOLES ARE THRU TOP FLANGE ONLY.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/9/04	D.S.Y.
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**

**AB AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE WAY  
EDWARDSVILLE, PA 15118  
PHONE (412) 631-3000  
FAX (412) 631-4001

**STEEL ERECTOR**

**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: RAS 9/06/00  
CHECKED BY: GAF 9/26/00

DOT ITEM LINE NO. 0168  
DOT BID ITEM NO. 625E25920

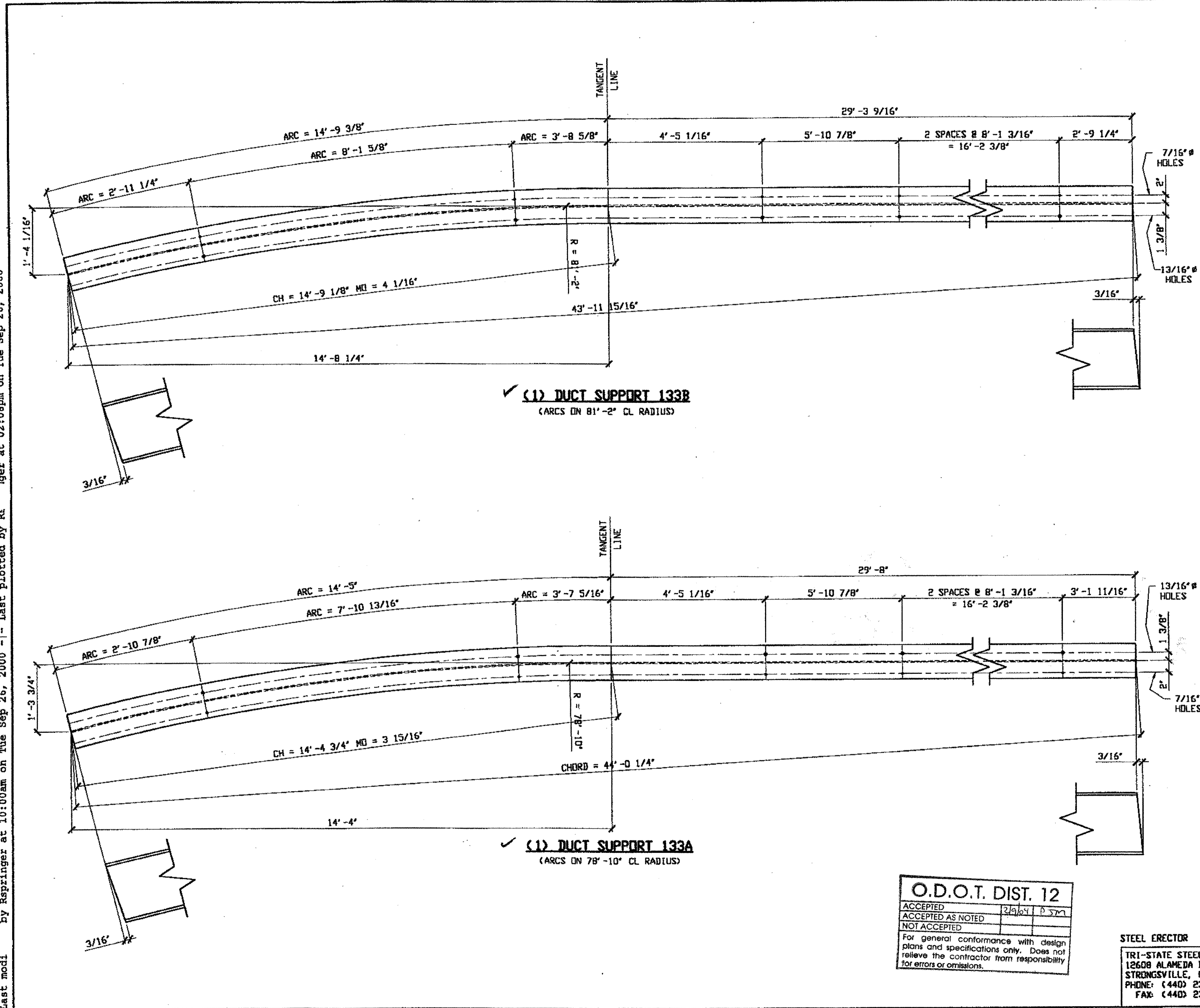
NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**DUCT SUPPORT DETAILS**

SHEET NUMBER	132
ABN JOB NUMBER	800010

Last modified by Rspriinger at 10:00am on Tue Sep 26, 2000 - Last plotted by Rspriinger at 02:08pm on Tue Sep 26, 2000



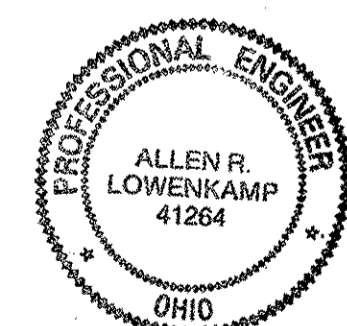
✓ (1) DUCT SUPPORT 133B  
(ARCS ON 81'-2" CL RADIUS)

✓ (1) DUCT SUPPORT 133A  
(ARCS ON 78'-10" CL RADIUS)

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		133A	1	W10 X 26	44	1 3/16	ROLL	1146
3		133B	1	W10 X 26	44	1 1/8	ROLL	1146
PLATE				PIPE	FITTINGS			
SHAPES A36				FLGS.	BOLTS			

RELEASED FOR CONSTRUCTION  
DATE 10/3/00 BY CML

- NOTES:
- HOLES ARE THRU TOP FLANGE ONLY.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



DOT ITEM LINE NO. 0168  
DOT BID ITEM NO. 625E2592D

NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
DUCT SUPPORT DETAILS			
SHEET NUMBER: 133			ADM JOB NUMBER: 800010

O.D.O.T. DIST. 12

ACCEPTED	2/9/04	D SM
ACCEPTED AS NOTED		
NOT ACCEPTED		

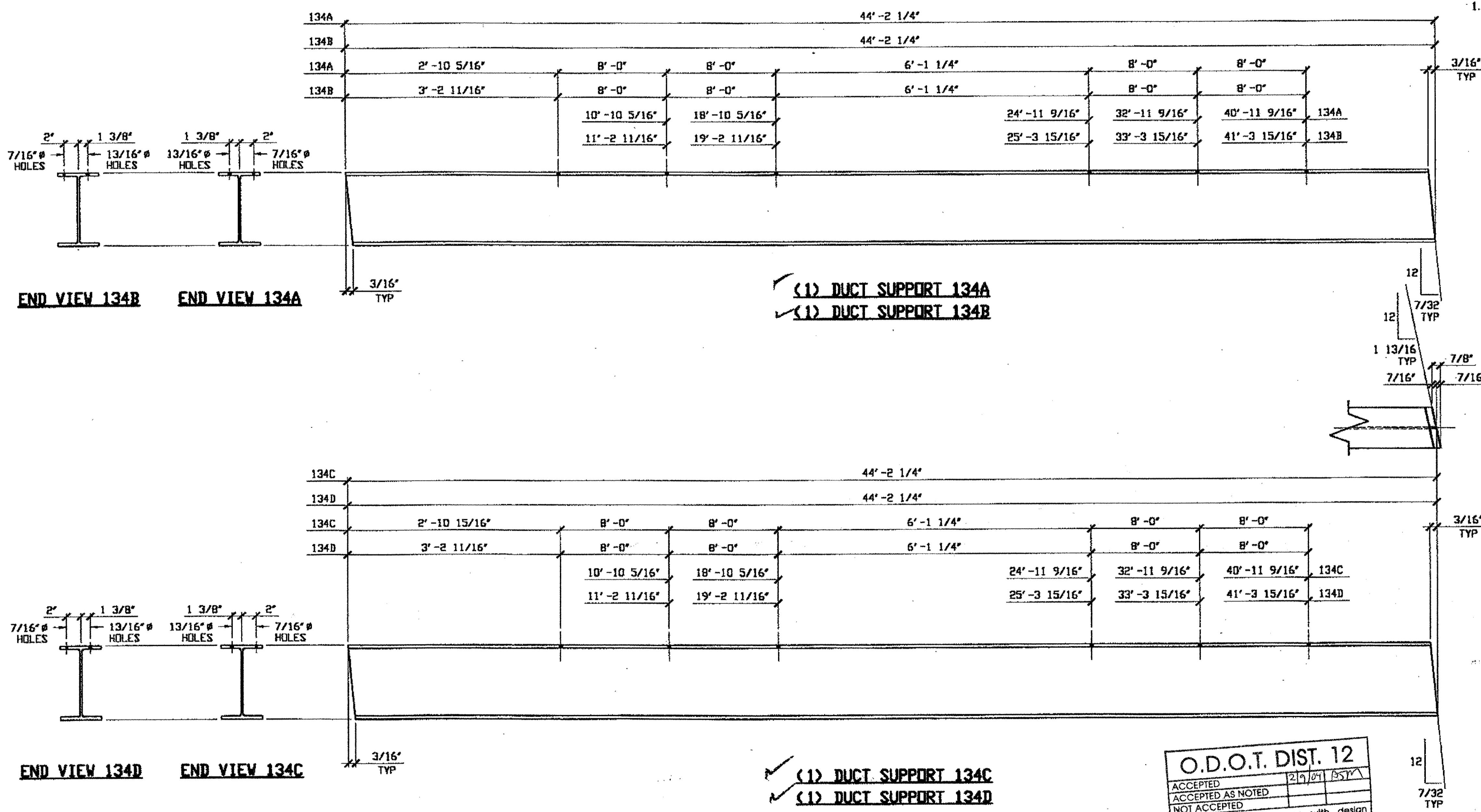
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 9/06/00  
CHECKED BY: DATE:  
GAF 9/26/00

Last mod. by Repringer at 10:24am on Tue Sep 26, 2000 - Last plotted by Repringer at 02:18pm on Tue Sep 26, 2000

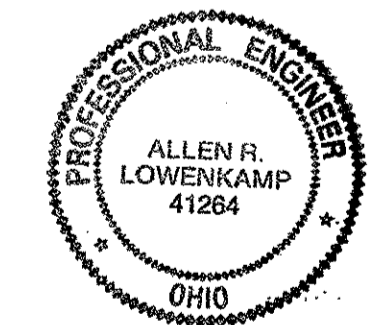


BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				DUCT SUPPORTS				
2		134A	1	W10 X 26	44	2 1/4		1149
3		134B	1	W10 X 26	44	2 1/4		1149
4		134C	1	W10 X 26	44	2 1/4		1150
5		134D	1	W10 X 26	44	2 1/4		1150
6		134F	2	W10 X 26	0	11 7/8	PLN MATL	52
PLATE				PIPE	FITTINGS			
SHAPES A36				FLGS.	BOLTS			

NOTES:  
 1. SHOP PAINT:  
 SURFACE PREPARATION SSPC-SP10 BLAST.  
 FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS. 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 10/3/00 BY *du*

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: RAS  
 DATE: 9/07/00  
 CHECKED BY: GAF  
 DATE: 9/26/00

DOT ITEM LINE NO. 0168		DOT BID ITEM NO. 625E25920	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>DUCT SUPPORT DETAILS</b>			
SHEET NUMBER: 134		ARN JOB NUMBER: 800010	

NOTE:

THE LISTED MATERIAL WAS INSTALLED ON THE NEW SPLICING CHAMBERS AT PIERS 1, 3, 5, 7, & 9 AND ALSO ON THE EXISTING SPLICING CHAMBER AT PIER 11

SPLICING CHAMBERS

- SC 67-86 @ PIER # 9
- SC 67-87 @ PIER # 7
- SC 67-88 @ PIER # 5
- SC 67-89 @ PIER # 3
- SC 67-90 @ PIER # 1

THE FOLLOWING MATERIAL WILL BE SUPPLIED BY: ELECTRICAL SALES COMPANY  
FOR FIELD INSTALLATION

1. FRP PANEL 7.2' X 1.5' X 46.8' W X 8'-6" LONG - STANDARD COLORS - WHITE, GRAY & BEIGE
2. FRP OUTSIDE CORNER FLASH 9" X 9"
3. FRP EAVE FLASH 5" X 5"
4. FRP JAMB FLASH 3.5" X 1.75" X 2"
5. FRP DRIP FLASH 3.5" X 2.125"
6. EDPM HORIZONTAL CLOSURE 7.2'
7. #300 SS TYPE B #14 X 1" SCREWS
8. #300 SS TYPE SB2 GRUMMET
9. #300 SS TYPE B #14 X 2.5" SCREWS
10. 3/4" BUTYL TAPE
11. FRP SHEET 1/2" X 1'-6" X 2'-0" DRILLED PER DETAIL #2 DWG # 23/25
12. FRP DOOR 2'-8" X 6'-8" X 1 3/4" - STANDARD COLORS - WHITE, GRAY & BEIGE
13. SS DOOR JAMBS WELDED 2'-8" X 6'-8" X 5 3/4" X 2"
14. SS BALL BEARING HINGES FULL MORTISE - 3 PER SET - SS HARDWARE INCLUDED
15. ALUMINUM SURFACE DOOR CLOSER
16. SS FLUSH RECESSED PULL HANDLE
17. SS DOUBLE CYLINDER DEAD BOLT
18. SS ANCHOR BOLT KIT FOR DOOR JAMBS

APPROVER TO VERIFY COLOR

O.D.O.T. DIST. 12		
ACCEPTED	2/7/13	psm
ACCEPTED AS NOTED		
NOT ACCEPTED		
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.		

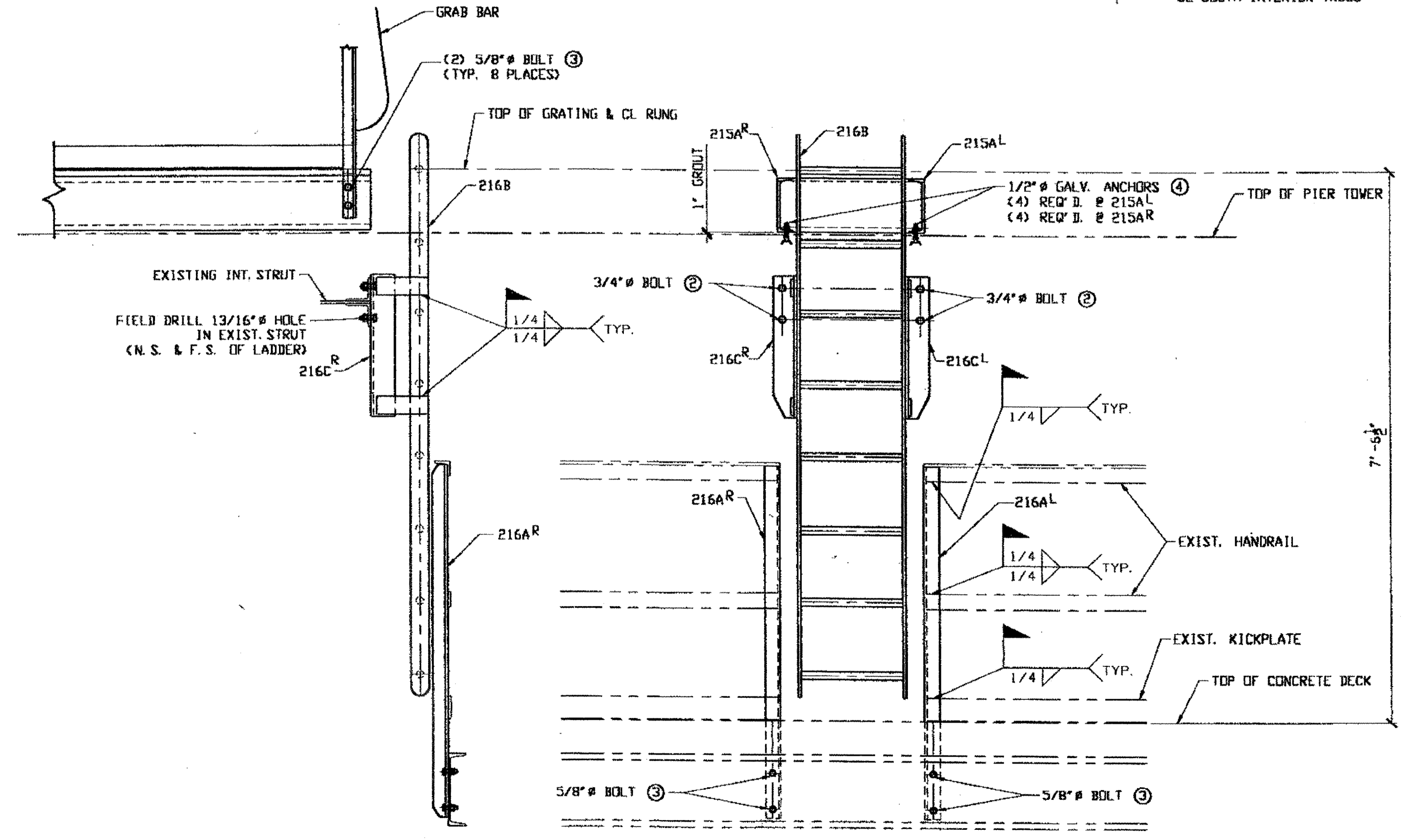
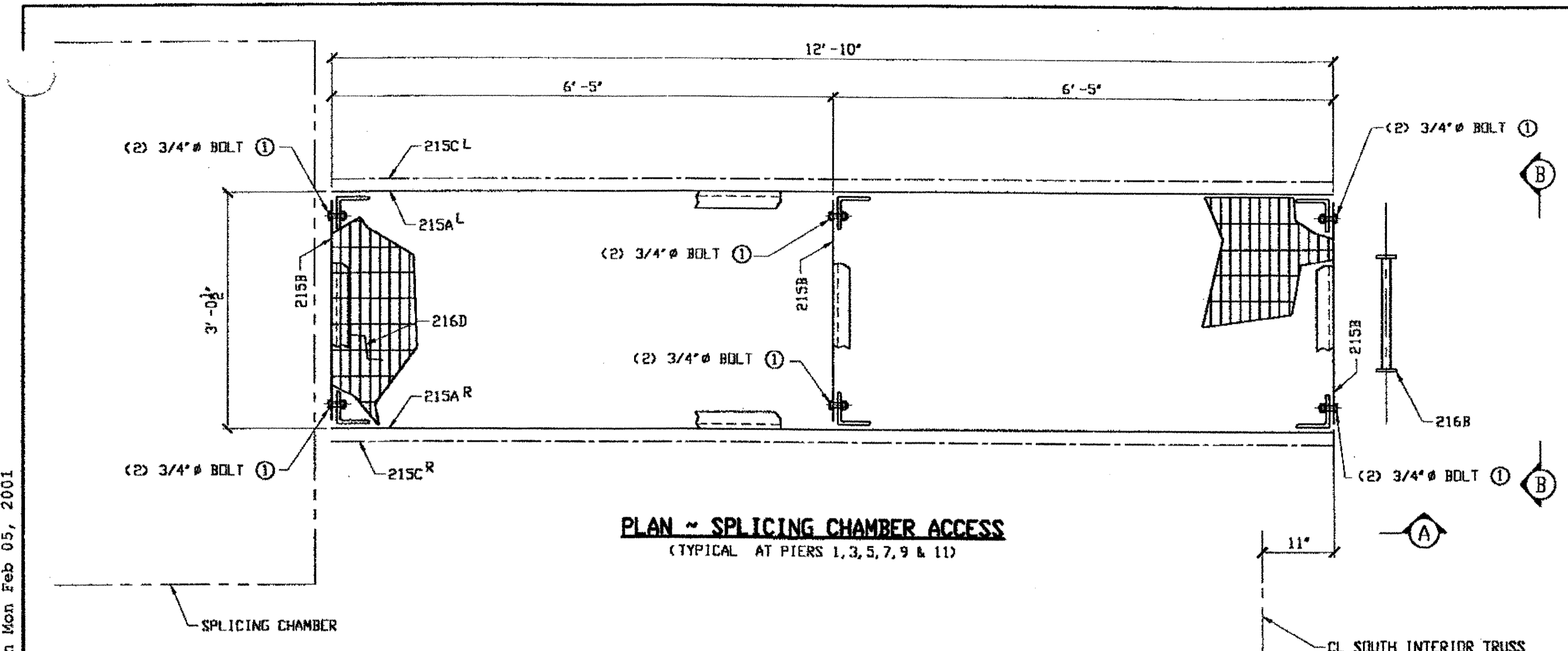


NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**(ELECTRIC) SPLICING CHAMBERS**  
BRIDGE No. CUY-10-16-13 JOB NO. 2000212  
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. **E111**  
SCALE: N/A DATE: \_\_\_\_\_





**FIELD BOLT LIST**

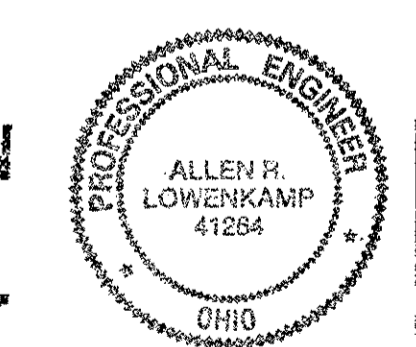
- ① 3/4" DIA. HVY. HEX BOLT x 0'-2 1/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (72 REQUIRED)
- ② 3/4" DIA. HVY. HEX BOLT x 0'-2" LG. W/HVY. HEX NUT & ONE WASHER EACH (24 REQUIRED)
- ③ 5/8" DIA. HVY. HEX BOLT x 0'-2 1/4" LG. W/HVY. HEX NUT & ONE WASHER EACH (120 REQUIRED)
- ④ WEJ-IT CONCRETE WEDGE ANCHOR 1/2" DIA. x 3 3/4" LG. (GALVANIZED) CATALOG NO. ATG 1233 (48 REQUIRED)

O.D.O.T. DIST. 12	
ACCEPTED	2/2/01 PDP
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NOTES:**
- ALL FIELD BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/ HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - WORK THIS DRAWING WITH adache-ciuni-lynn associates DRAWING 25/25.

RELEASED FOR CONSTRUCTION  
DATE 2/8/01 BY tdf

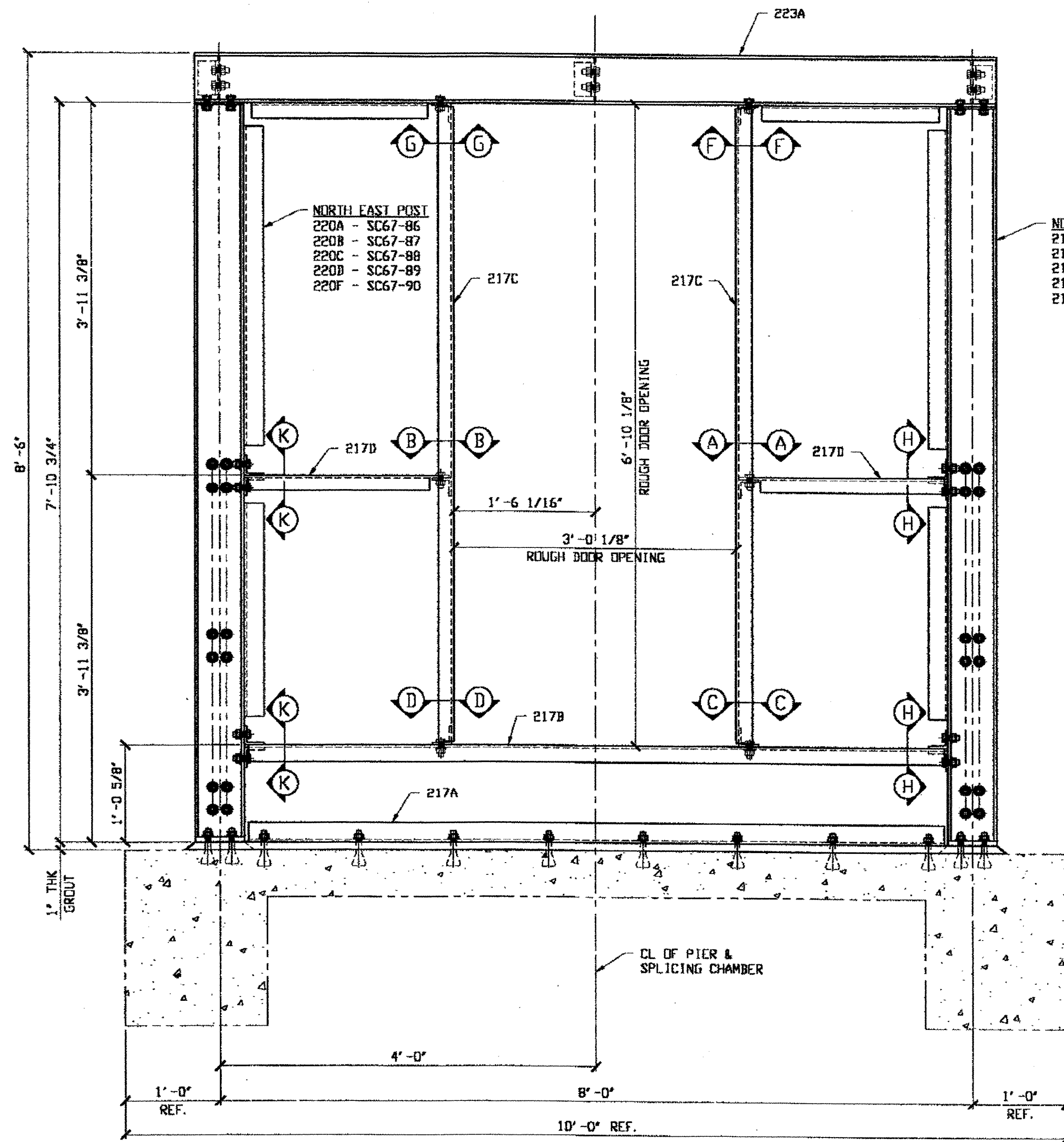


DOT ITEM LINE NO. 0173  
DOT BID ITEM NO. 863E95030

NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPLICING CHAMBER ACCESS</b>			
FABRICATOR <b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY CLEVELAND, OH 44115 PHONE: (440) 631-3000 FAX: (412) 631-4001			SHEET NUMBER E112
STEEL ERECTOR <b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMEDA DR. STRONGSVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335			IN CHARGE OF: L. SMITH DRAWN BY: DATE K.J.R. 01/23/01 CHECKED BY: DATE GAF 01/24/01
			ARN JOB NUMBER 800010

Last modified: krdolf at 04:49pm on Wed Jan 24, 2001 - Last plotted by Gcooper at 04:26pm on Mon Feb 05, 2001  
 H:\800010\E112.dwg

Last modified by gfooster at 02:23pm on Tue Feb 13, 2001 - Last plotted by gfooster at 02:23pm on Tue Feb 13, 2001



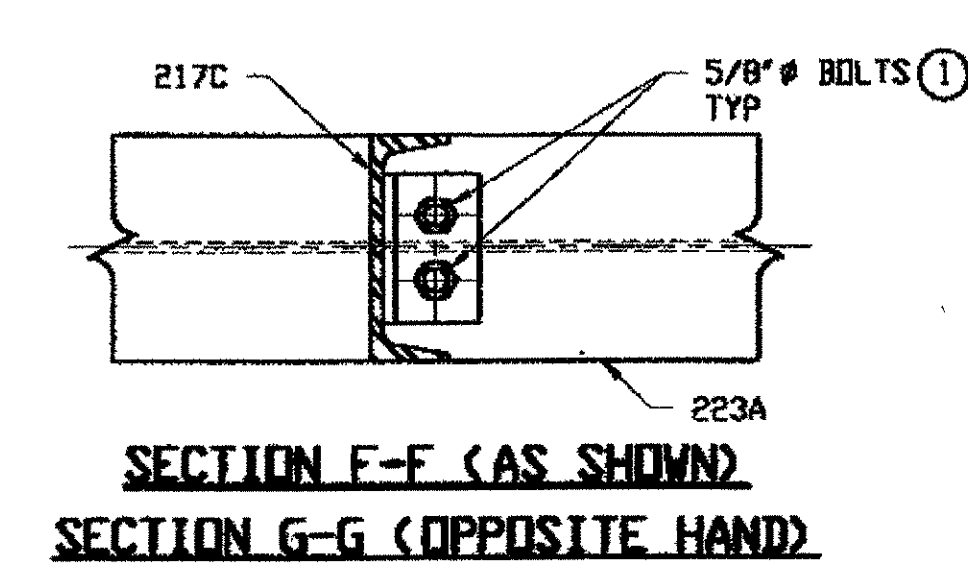
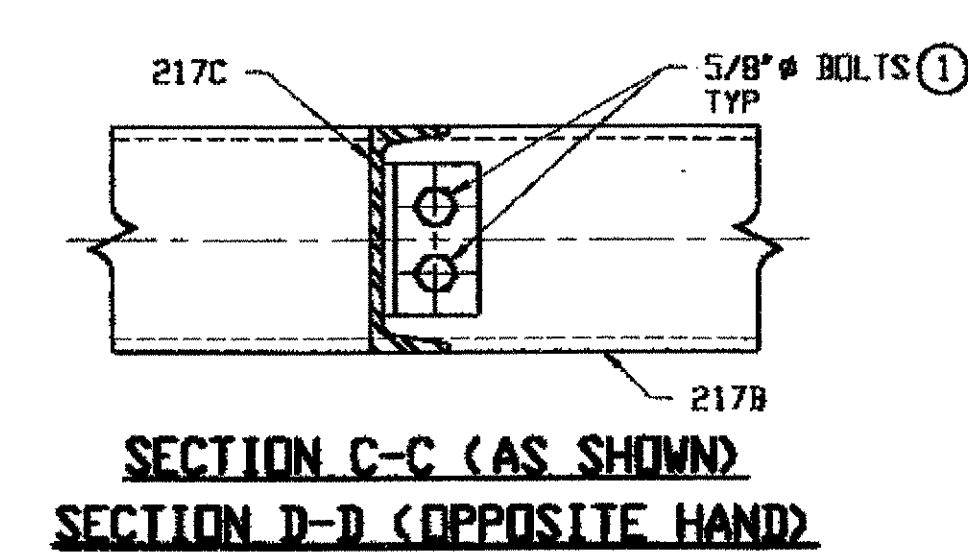
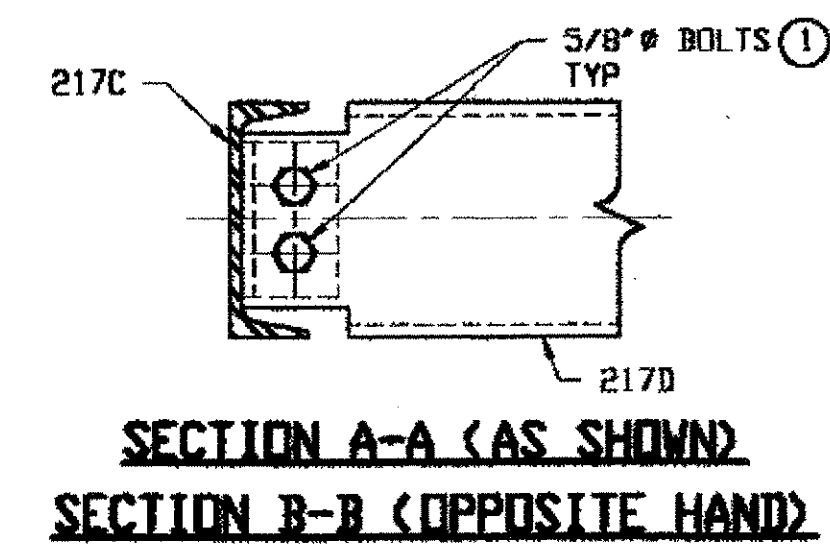
**SPLICING CHAMBERS SC67-86, SC67-87, SC67-88, SC67-89 & SC67-90  
NORTH ELEVATION**

**O.D.O.T. DIST. 12**

ACCEPTED	2/13/01	gsm
ACCEPTED AS NOTED		
NOT ACCEPTED		

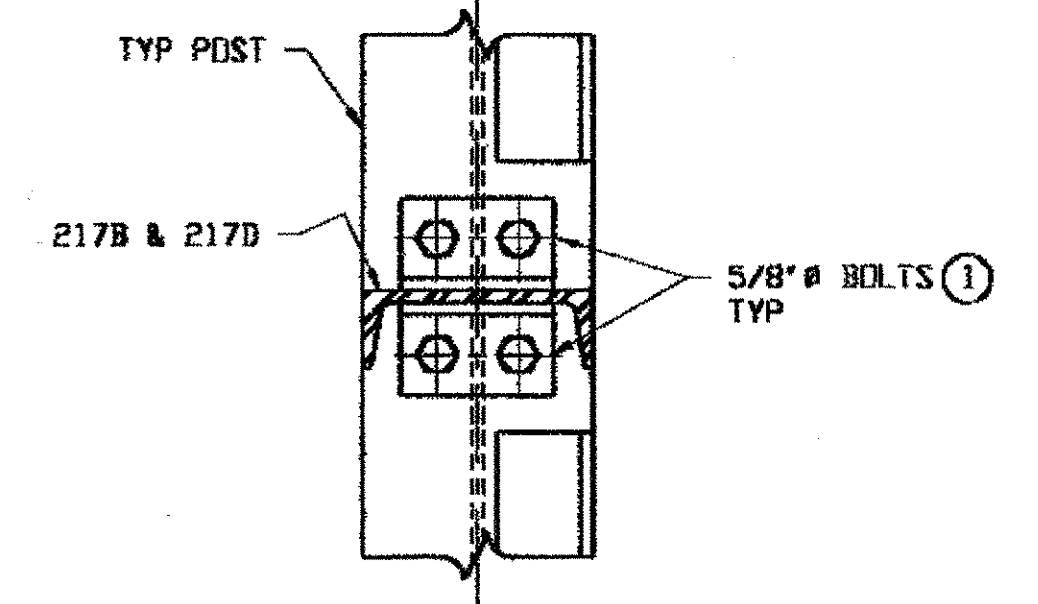
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

- NORTH WEST POST**  
 219A - SC67-86  
 219B - SC67-87  
 219C - SC67-88  
 219D - SC67-89  
 219E - SC67-90



- FIELD BOLT LIST**
- ① 5/8" DIA HWY HEX BOLT X 1 3/4" LG W/HVY HEX NUT & ONE WASHER EACH (140 REQUIRED)

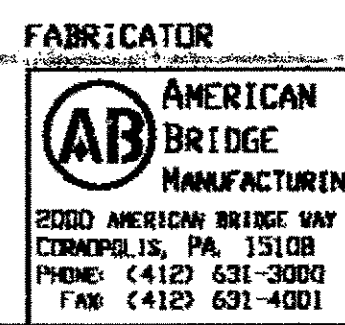
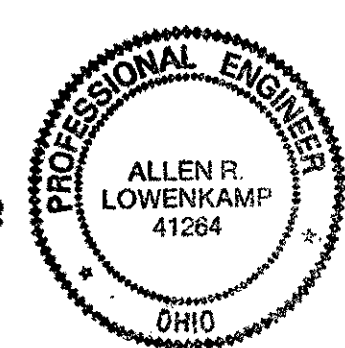
NATE ENGR. & CONTR. CO.  
 By Edp/ESS  
 FEB 13 2001



RELEASED FOR CONSTRUCTION  
 DATE 2/13/01 BY tdp

- THE FOLLOWING MATERIAL WILL BE SUPPLIED BY ELECTRICAL SALES COMPANY FOR FIELD INSTALLATION
- FRP PANEL 7.2' X 1.5' X 46.8' W X 8'-6" LONG - STANDARD COLORS - WHITE, GRAY, BEIGE
  - FRP OUTSIDE CORNER FLASH 9" X 9"
  - FRP EAVE FLASH 5" X 5"
  - FRP JAMB FLASH 3.5" X 1.75" X 2"
  - FRP DRIP FLASH 3.5" X 2.125"
  - EDPM HORIZONTAL CLOSURE 7.2'
  - #300 SS TYPE B #14 X 1" SCREWS
  - #300 SS TYPE B2 GROMMET
  - #300 SS TYPE B #14 X 2.5" SCREWS
  - 3/4" BUTYL TAPE
  - FRP SHEET 1/2" X 1'-6" X 2'-0" DRILLED PER DETAIL #2 DVG # 23/25
  - FRP DOOR 2'-8" X 6'-8" X 1 3/4" - STANDARD COLORS - WHITE, GRAY, BEIGE
  - SS DOOR JAMBS WELDED 2'-8" X 6'-8" X 5 3/4" X 2"
  - SS BALL BEARING HINGES FULL MORTISE - 3 PER SET - SS HARDWARE INCLUDED
  - ALUMINUM SURFACE DOOR CLOSER
  - SS FLUSH RECESSED PULL HANDLE
  - SS DOUBLE CYLINDER DEAD BOLT
  - SS ANCHOR BOLT KIT FOR DOOR JAMBS

- NOTES:**
- WORK THIS DRAWING WITH adache-cluni-lynn ASSOCIATES DESIGN DRAWINGS 15/25, 21/25 THRU 24/25.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.



**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

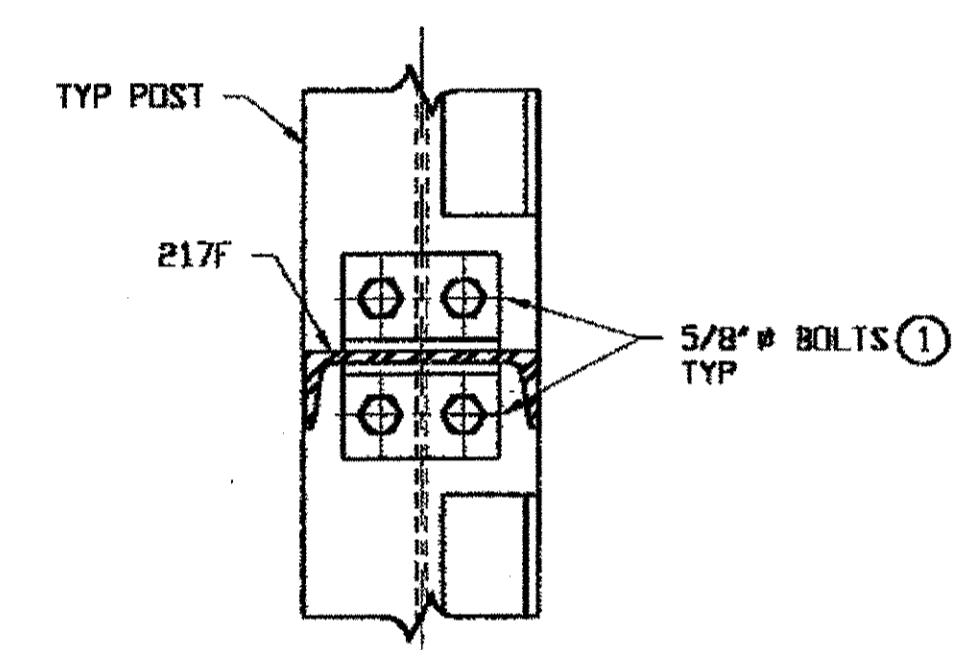
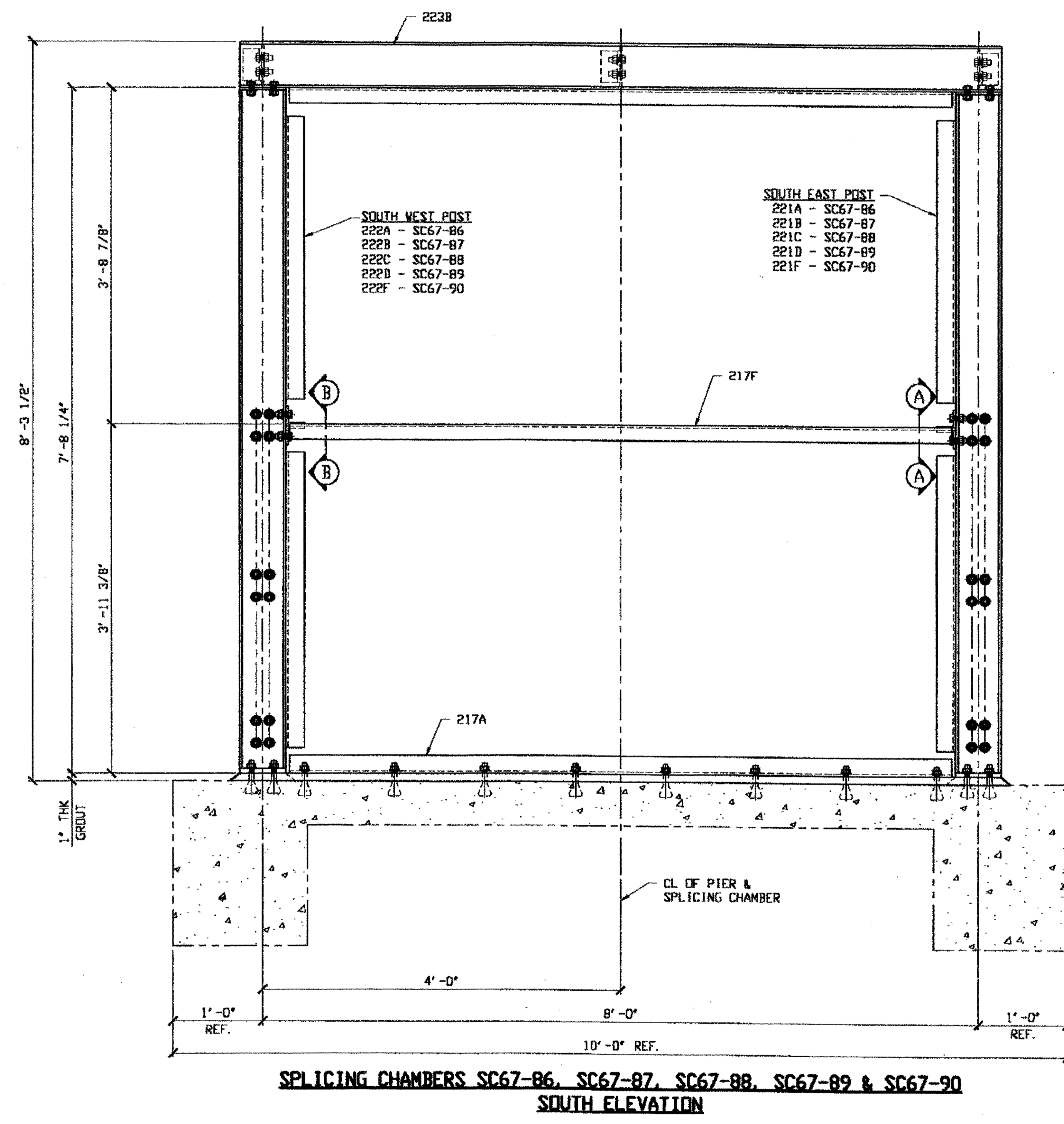
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 01/19/01  
 CHECKED BY: DATE:  
 GAF 01/31/01

DOT ITEM LINE NO. 0165		DOT BID ITEM NO. S3DE00400	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
<b>STATE OF OHIO</b>			
DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b>			
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)			
CITY OF CLEVELAND			
CUYAHOGA COUNTY OHIO			
<b>BRIDGE No. CUY-10-16.13</b>			
<b>SPLICING CHAMBERS</b>			
SHEET NUMBER: E113		ADM. JOB NUMBER: 800010	

**FIELD BOLT LIST**

① 5/8" DIA HVY HEX BOLT X 1 3/4" LG W/HVY HEX NUT & ONE WASHER EACH (40 REQUIRED)

Last modified by rspringer at 07:28am on Fri Jan 26, 2001 - Last plotted by rspringer at 11:40am on Wed Jan 31, 2001



**SECTION A-A (AS SHOWN)  
SECTION B-B (OPPOSITE HAND)**

NAT'L ENGR. & CONTR. CO.  
By *EdP/ESS*  
FEB 15 2001

- NOTES:**
- WORK THIS DRAWING WITH adache-cluni-lynn ASSOCIATES DESIGN DRAWINGS 15/25, 21/25 THRU 24/25.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE T8-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.

RELEASED FOR CONSTRUCTION  
DATE *2/19/01* BY *EdP*

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/9/01  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



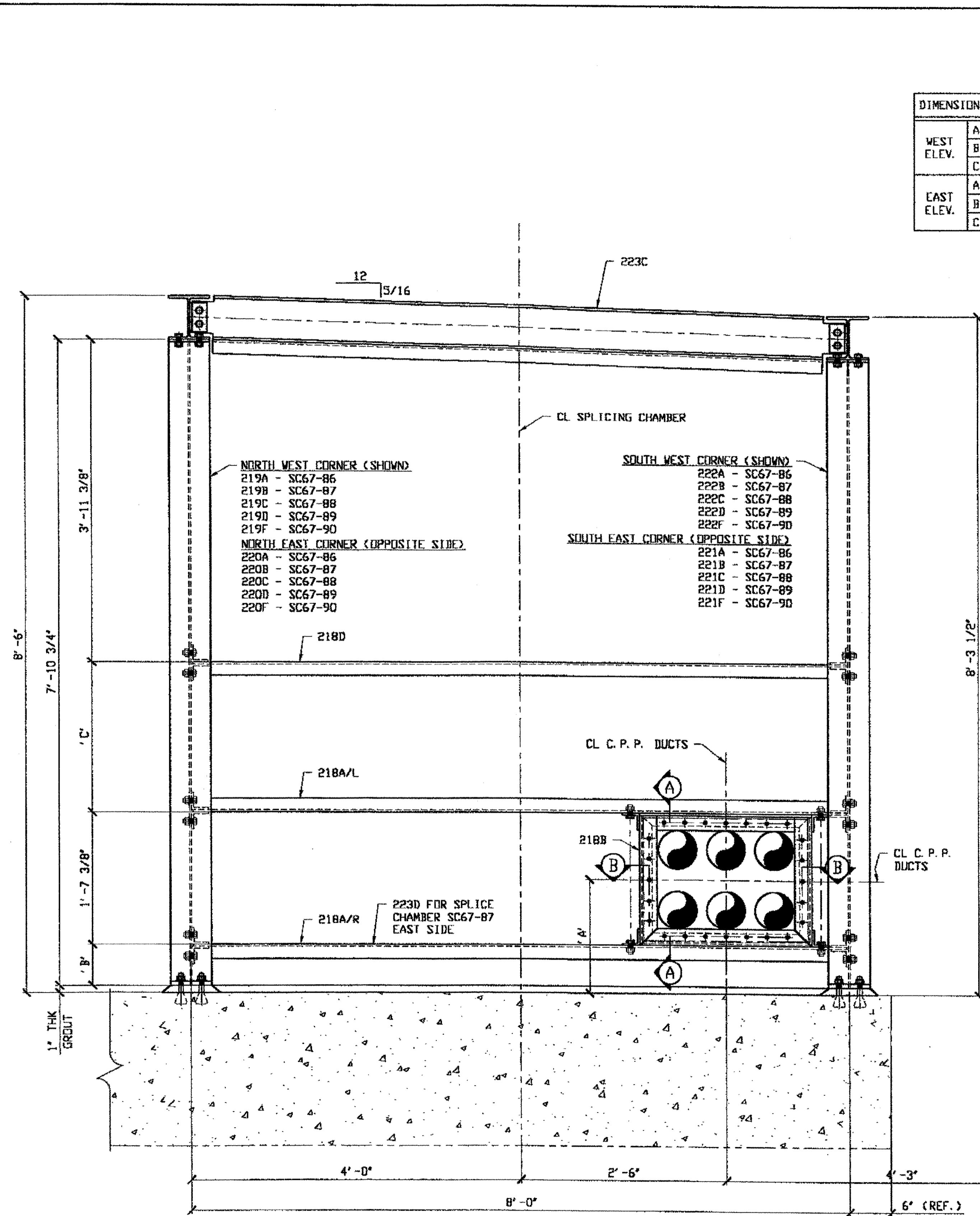
FABRICATOR  
**AB AMERICAN BRIDGE MANUFACTURING**  
8000 AMERICAN BRIDGE WAY  
CORAOPOLIS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION-ENG  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 01/16/01  
CHECKED BY: DATE:  
GAF 01/31/01

DOT ITEM LINE NO. 0165		DOT BID ITEM NO. 530E00400	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPLICING CHAMBERS			
SHEET NUMBER: E114			ABN JOB NUMBER: 800010

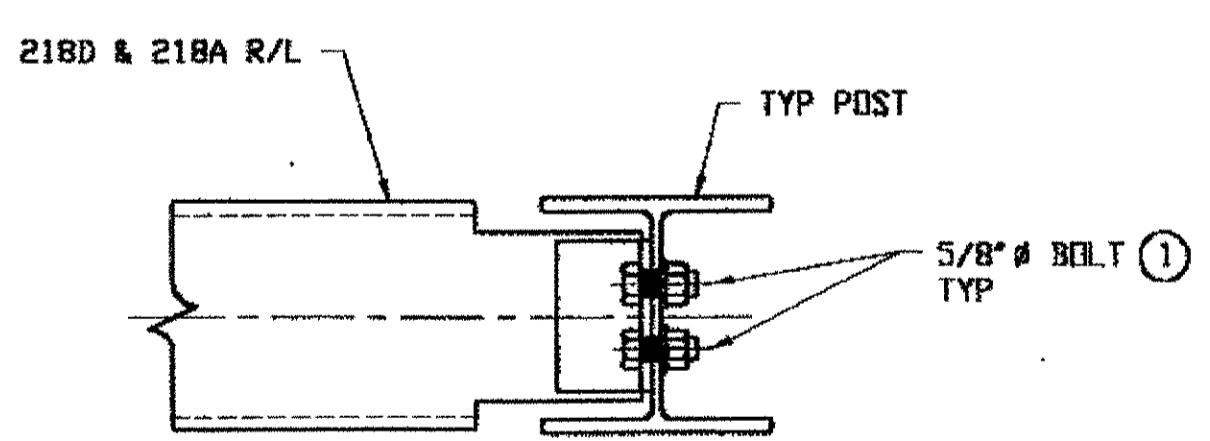
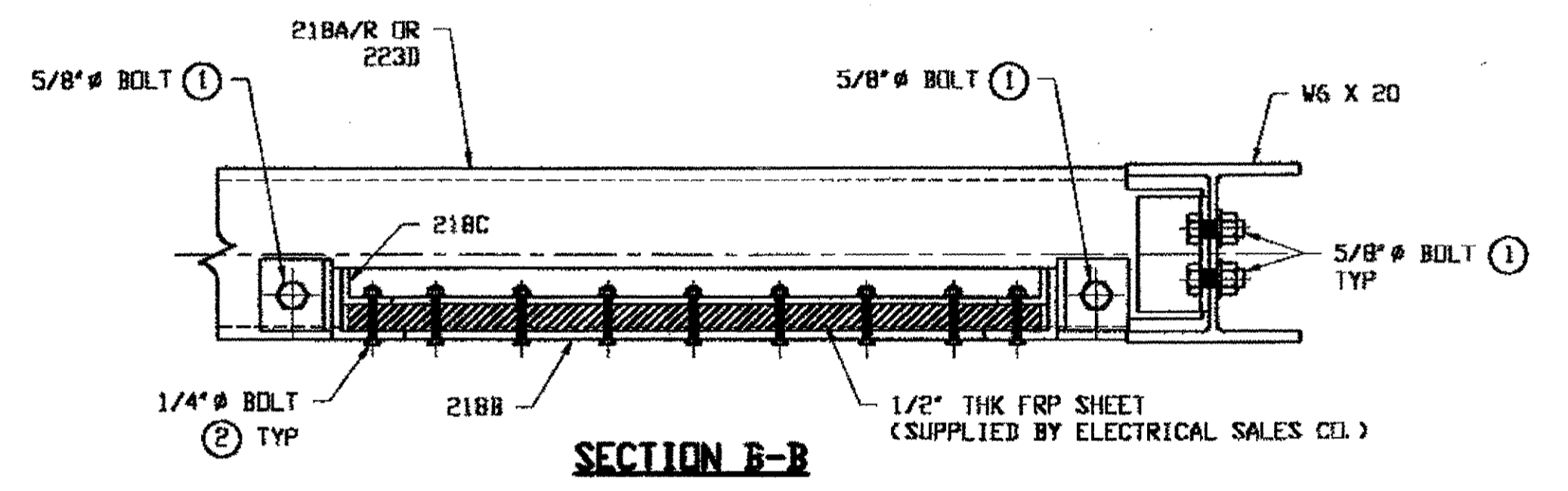
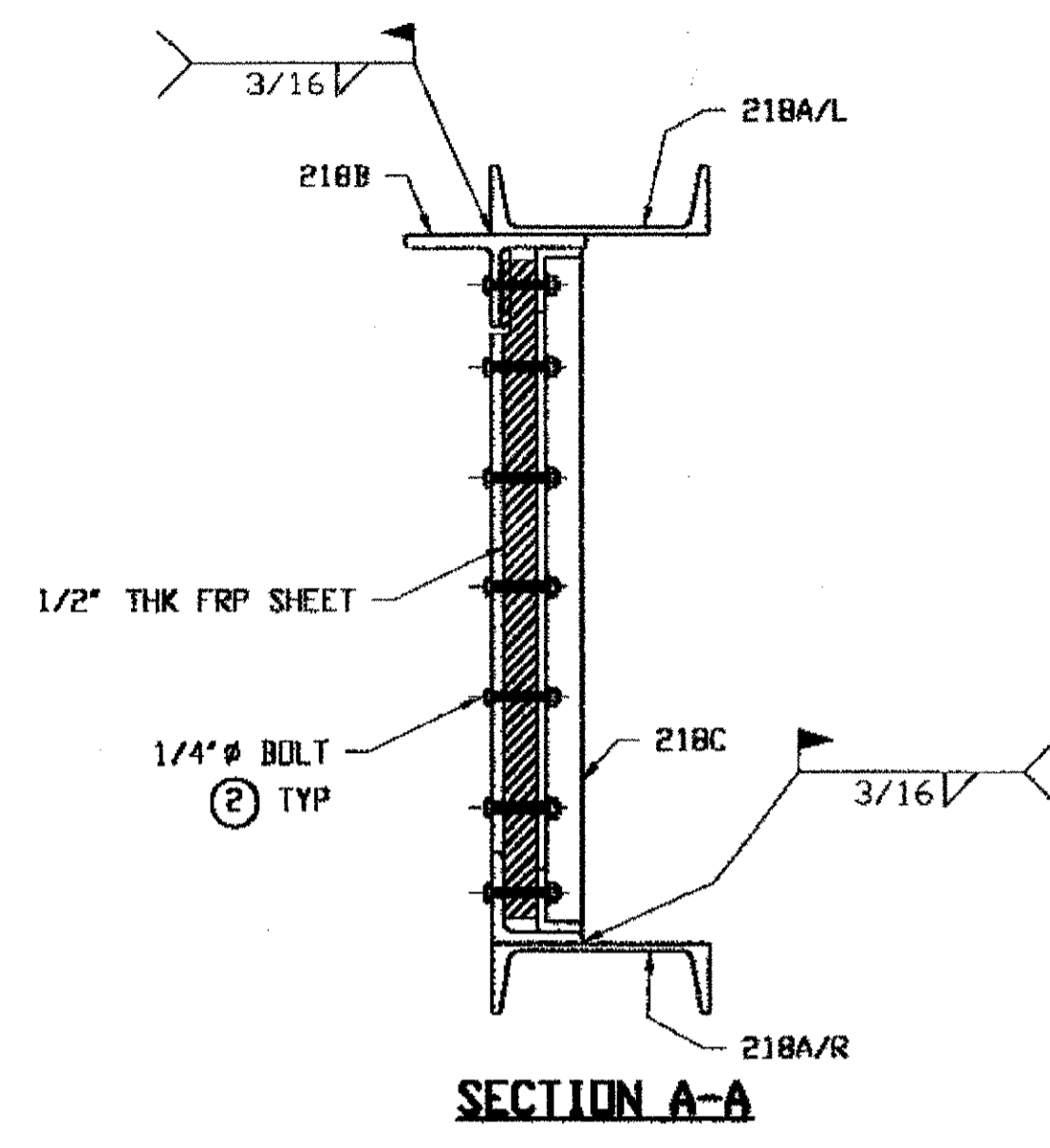
Last modified by rspringer at 12:01pm on Wed Jan 31, 2001 - Last plotted by cfooster at 09:51am on Wed Feb 14, 2001



DIMENSION		SC67-86	SC67-87	SC67-88	SC67-89	SC67-90
WEST ELEV.	A	1'-4 5/8"	1'-4 5/8"	1'-6 1/8"	1'-5 7/8"	1'-6 3/8"
	B	5 7/8"	5 7/8"	7 3/8"	7 1/4"	7 3/4"
	C	1'-10 1/8"	1'-10 1/8"	1'-8 5/8"	1'-8 3/4"	1'-8 1/4"
EAST ELEV.	A	1'-2 1/8"	1'-1 3/8"	1'-3 3/8"	1'-3 1/8"	1'-3 5/8"
	B	3 1/2"	2 3/4"	4 3/4"	4 1/2"	5"
	C	2'-0 1/2"	2'-1 1/4"	1'-11 1/4"	1'-11 1/2"	1'-11"

**FIELD BOLT LIST**

- ① 5/8" DIA HVY HEX BOLT X 1 3/4" LG W/HVY HEX NUT & ONE WASHER EACH (280 REQUIRED)
- ② 1/4" DIA MACH BOLT X 1 3/4" LG W/ HEX NUT & ONE WASHER EACH (240 REQUIRED)



- NOTES:**
1. WORK THIS DRAWING WITH adache-cuni-lynn ASSOCIATES DESIGN DRAWINGS 15/25, 21/25 THRU 24/25.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.

TYPICAL CROSS MEMBER CONNECTION

NATH ENGR. & ARCHT. CO.  
By *EdP/ESS*

FEB 15 2001

RELEASED FOR CONSTRUCTION  
DATE 2/19/01 BY *EdP*

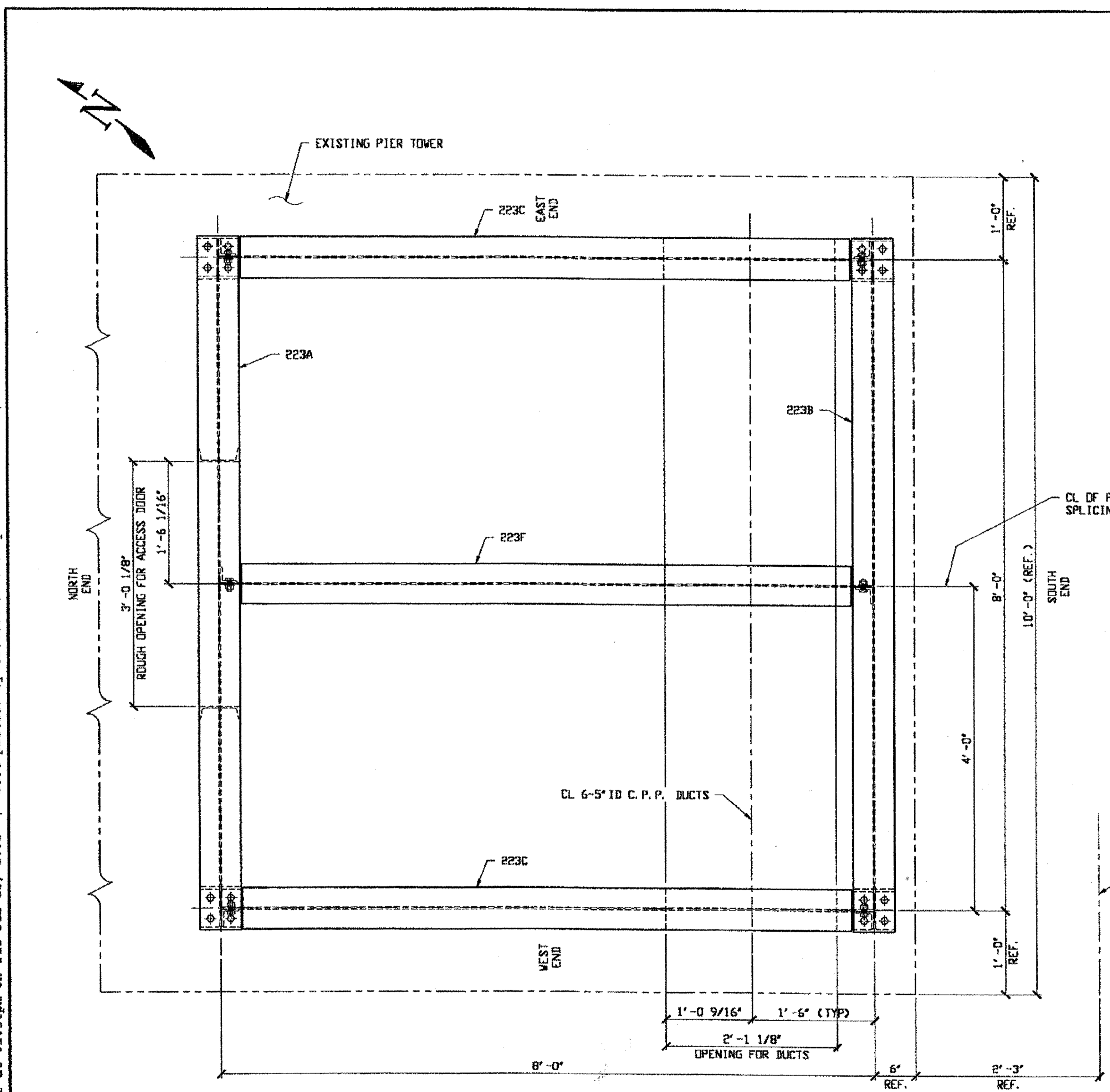
O.D.O.T. DIST. 12  
ACCEPTED [Signature] 2/19/01  
ACCEPTED AS NOTED [Signature] 2/20/01  
NOT ACCEPTED [Signature] [Date]

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264  
OHIO

DOT ITEM LINE NO. 0165		DOT BID ITEM NO. 530E00400	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPLICING CHAMBERS			
DRAWN BY: DATE: RAS 01/18/01			SHEET NUMBER: E115
CHECKED BY: DATE: GAF 01/31/01			ARM JOB NUMBER: 800010

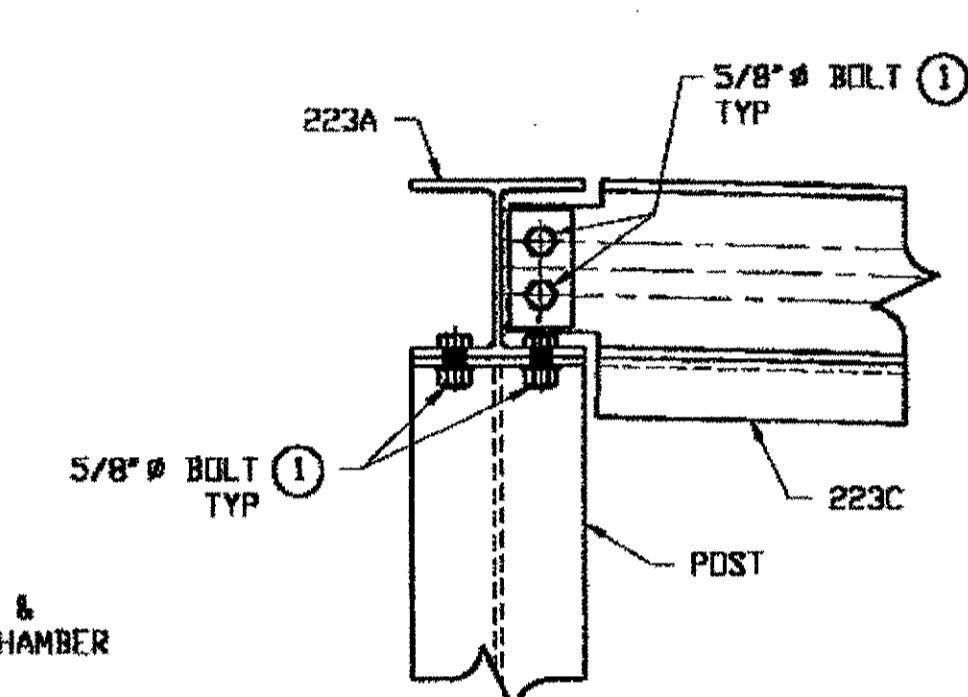
Last modified by reprinter at 01:36pm on Tue Feb 13, 2001 - Last plotted by Groster at 02:24pm on Tue Feb 13, 2001



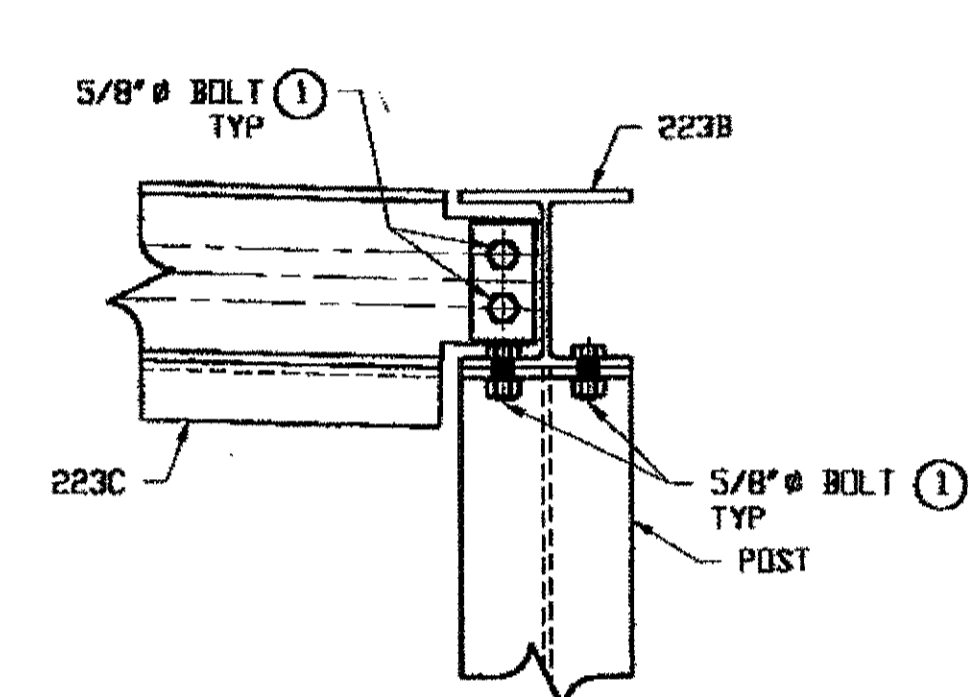
**SPLICING CHAMBERS SC67-86, SC67-87, SC67-88, SC67-89 & SC67-90**  
**ROOF BRACING PLAN**

**FIELD BOLT LIST**

- ① 5/8" DIA HVY HEX BOLT X 1 3/4" LG W/HVY HEX NUT & ONE WASHER EACH (140 REQUIRED)



**TYPICAL NORTH END ROOF BRACING CONNECTIONS**

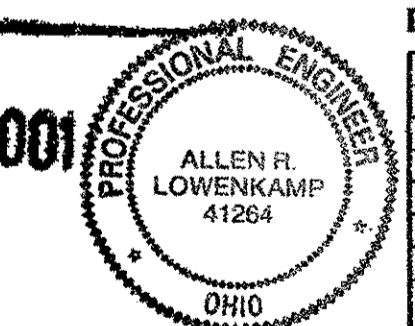


**TYPICAL SOUTH END ROOF BRACING CONNECTIONS**

- NOTES:**
1. WORK THIS DRAWING WITH adache-clunt-lynn ASSOCIATES DESIGN DRAWINGS 15/25, 21/25 THRU 24/25.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.

NAT'L ENGR' & CONTR' CO.  
 By *tdp/ess*

**RELEASED FOR CONSTRUCTION**  
 DATE *2/19/01* BY *tdp*



DOT ITEM LINE NO. 0165  
 DOT BID ITEM NO. 530E00400

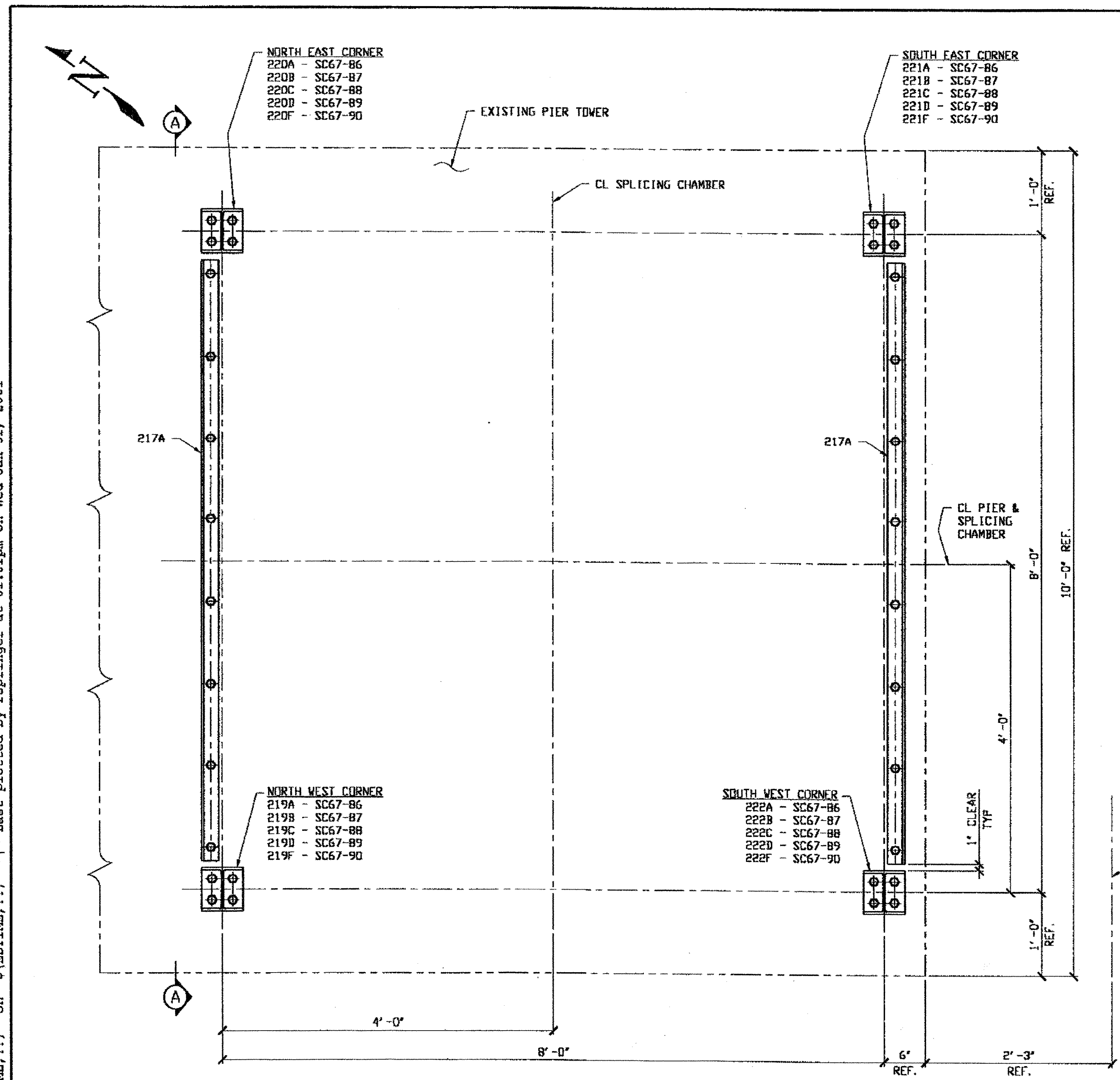
O.D. DIST. 12  
 2/19/01 *tdp*  
 For general contractors with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

**FABRICATOR**  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001  
 IN CHARGE: DR. L. SMITH  
 DRAWN BY: DATE: RAS 01/19/01  
 CHECKED BY: DATE: GAF 01/31/01

NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13			
SPLICING CHAMBERS			
			SHEET NUMBER: E116
			AEM JOB NUMBER: 800010

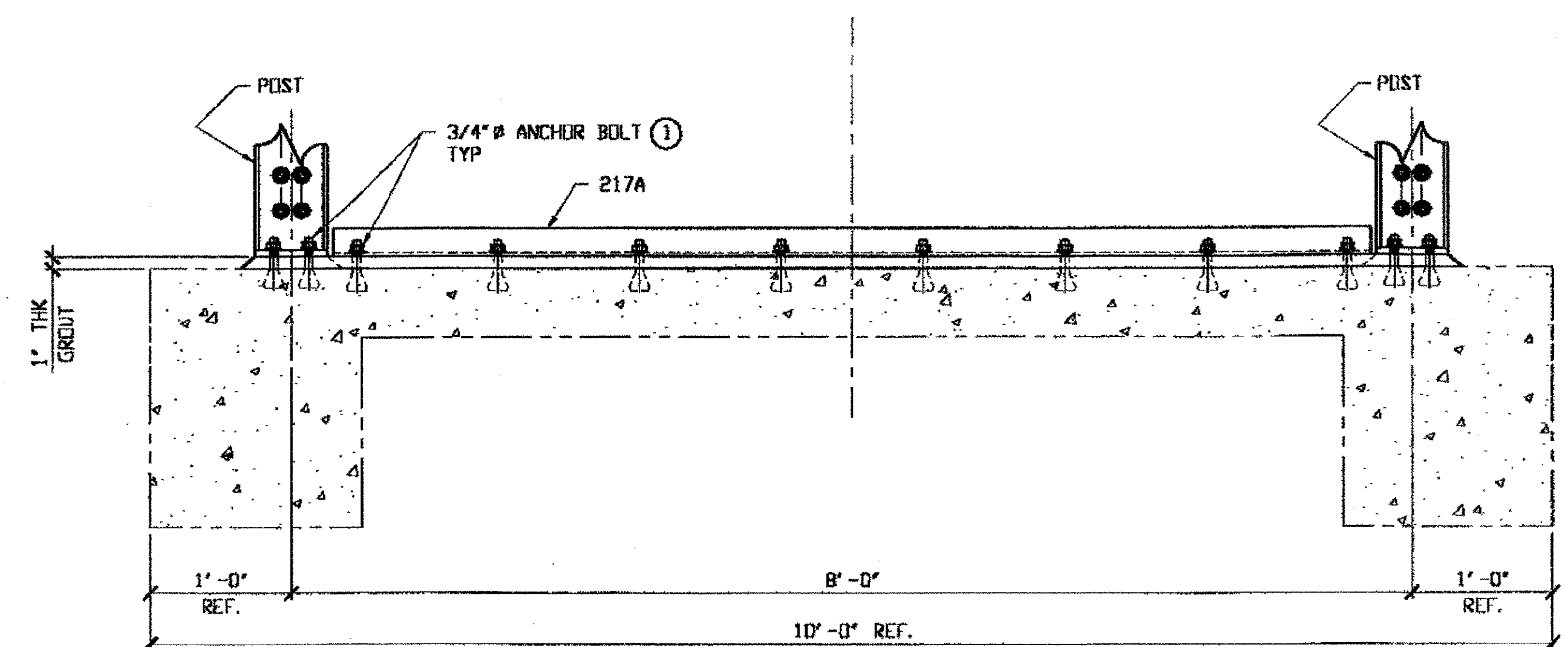
Last modified by at \$(EDTIME,??) on \$(EDTIME,??) - Last plotted by rpringer at 01:01pm on Wed Jan 31, 2001



**SPLICING CHAMBERS SC67-86, SC67-87, SC67-88, SC67-89 & SC67-90**  
**BOTTOM PLAN**

**FIELD BOLT LIST**

- ① 3/4" DIA X 4 3/4" LG (GALVANIZED)  
 WEJ-1T CONCRETE WEDGE ANCHOR  
 CATALOG No. ATG3443 (160 REQUIRED)



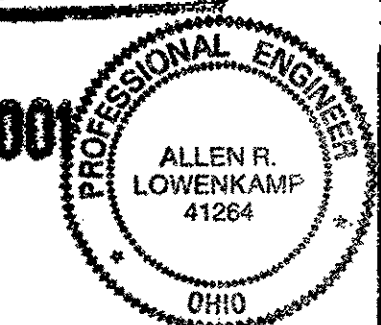
**SECTION A-A**

- NOTES:**
1. WORK THIS DRAWING WITH adache-cluni-lynn ASSOCIATES DESIGN DRAWINGS 15/25, 21/25 THRU 24/25.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TC-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.

NAT'L ENGR. & CONTR. CO.  
 By *EdP/tss*

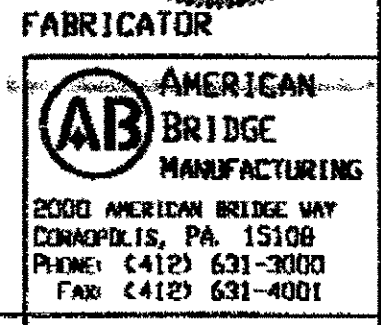
**FEB 15 2001**

RELEASED FOR CONSTRUCTION  
 DATE *2/19/01* BY *EdP*



DOT ITEM LINE NO. 0165  
 DOT BID ITEM NO. 530E00400

NO.	DATE	DESCRIPTION	BY
REVISIONS			



**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPLICING CHAMBERS**

**O.D.O.T. DIST. 12**

ACCEPTED	<i>2/19/01</i>	<i>DSM</i>
ACCEPTED AS NOTED		
NOT ACCEPTED		

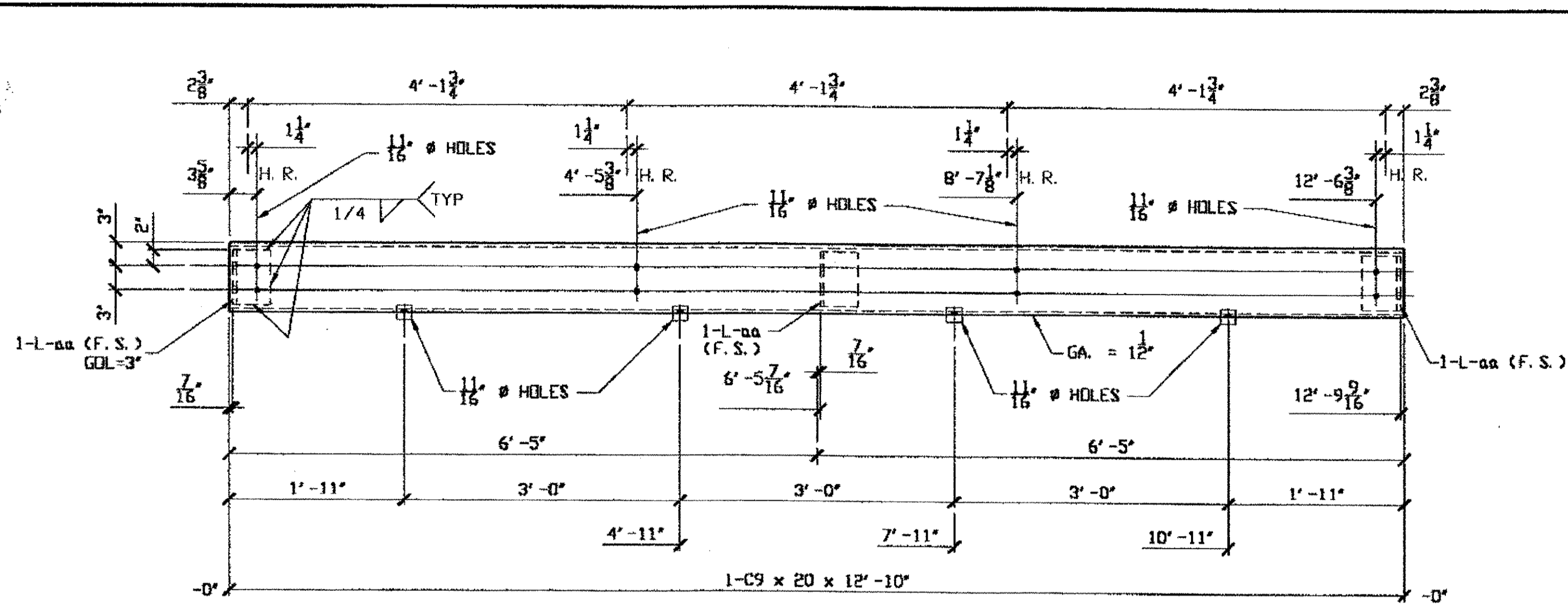
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

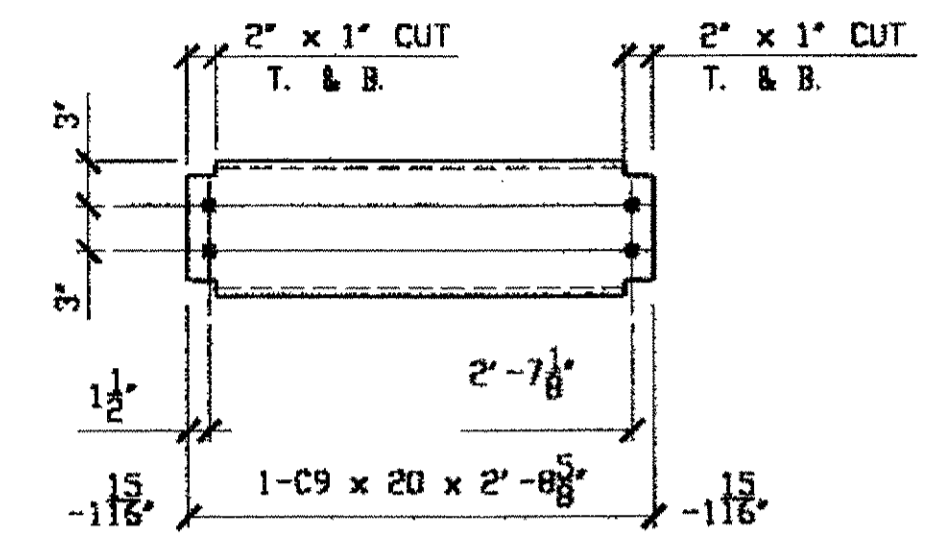
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 01/19/01  
 CHECKED BY: DATE:  
 GAF 01/31/01

SHEET NUMBER: **E117**  
 ABN JOB NUMBER: **800010**

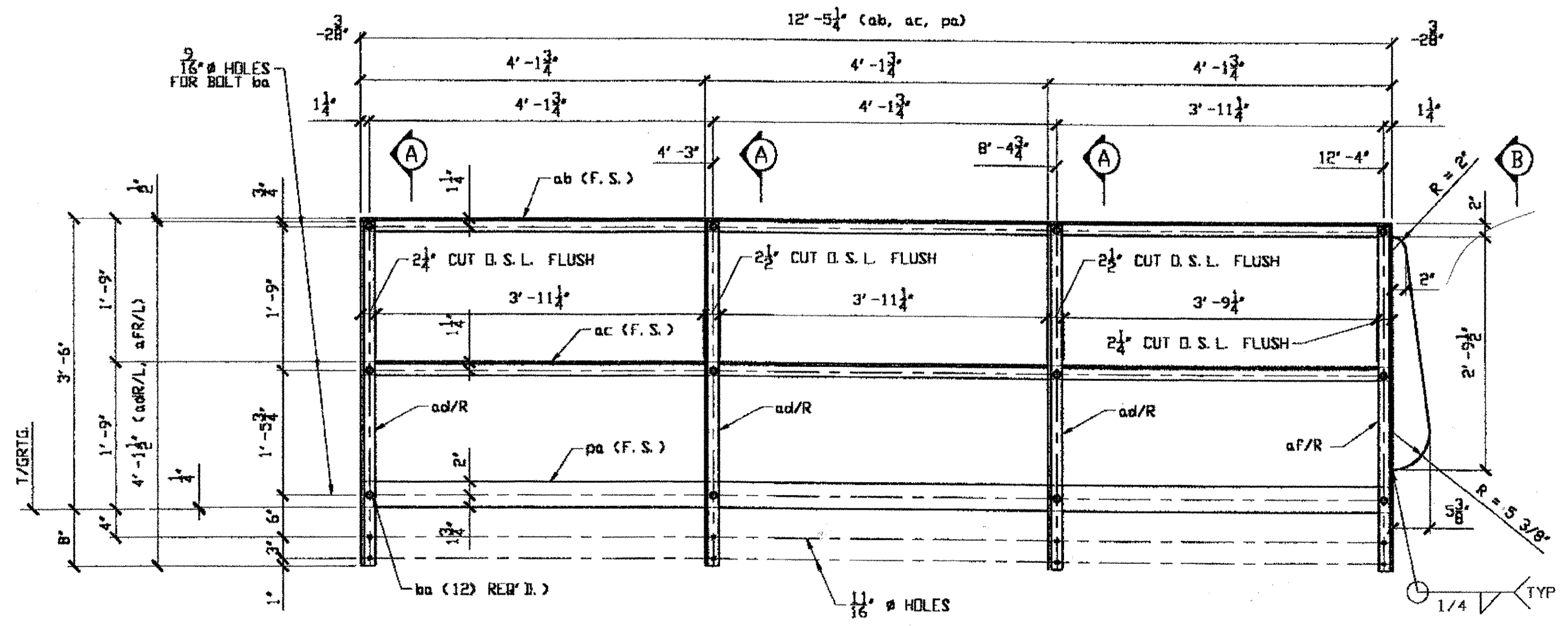
at 8 (EDTIME,??) on 5 (EDTIME,??) - 1- Last plotted by Gfoster 14:13pm on Mon Feb 05, 2001  
 Last modified by Gfoster



6 CHANNELS 215A<sup>R</sup> (AS SHOWN)  
 6 CHANNELS 215A<sup>L</sup> (OPP. HAND)

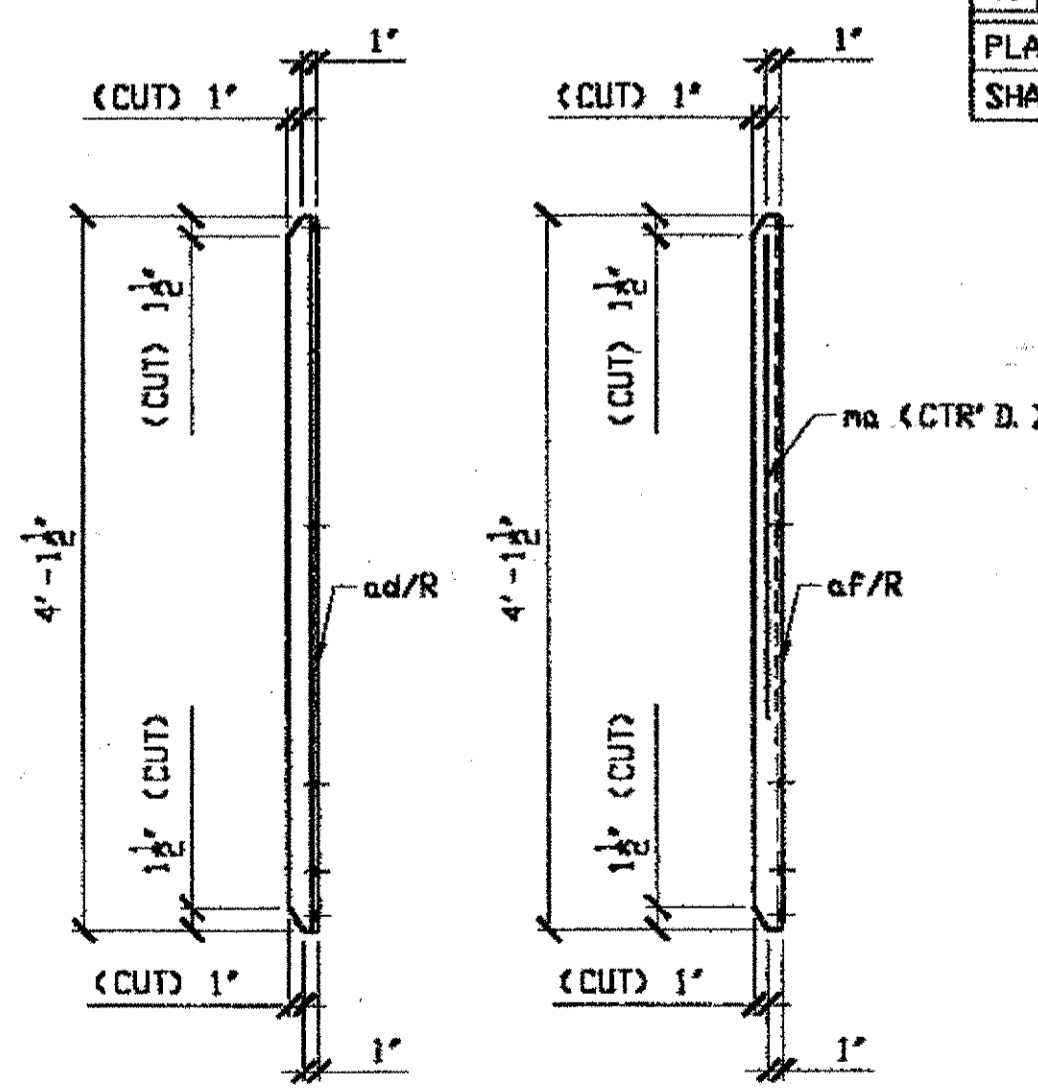


18 CHANNELS 215B



6 HANDRAIL 215C<sup>R</sup> (AS SHOWN)  
 6 HANDRAIL 215C<sup>L</sup> (OPP. HAND)  
 (HANDRAIL TO BE SHOP BOLTED)  
 (GRIND ALL BURRS AND SHARP EDGES SMOOTH)

**O.D.O.T. DIST. 12**  
 ACCEPTED 2/9/01  
 NOT ACCEPTED



SECTION 'A'

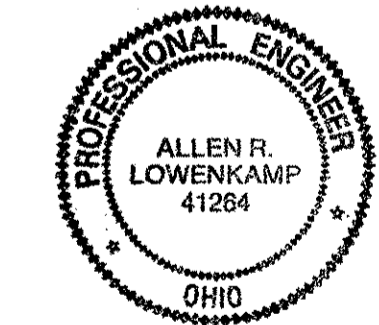
SECTION 'B'

**BILL OF MATERIAL**

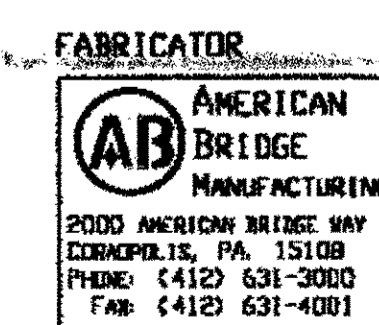
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		215A/R	6	C9 x 20	12	10	AS SHOWN	1542
2		aa	18	L 5 x 5 x 1/2	0	7		170
3								
4		215A/L	6	C9 x 20	12	10	OPP. HAND	1542
5		aa	18	L				170
6								
7		215B	18	C9 x 20	2	8 3/8		979
8								
9		215C/R	6	HANDRAIL			AS SHOWN	
10		ab	6	L 2 x 2 x 3/8	12	5 1/4		351
11		ac	6	L 2 x 2 x 3/8	12	5 1/4		351
12		ad/R	18	L 2 x 2 x 3/8	4	1 1/2		349
13		af/R	6	L 2 x 2 x 3/8	4	1 1/2		116
14		na	6	ROD 1 1/4 #	3	2	BENT	79
15		pa	6	BAR 3/4 x 1/4	12	5 1/4		238
16		ba	72	1/2 # HVY. HEX BOLT	0	1 1/2	NOTE 2	14
17				W/1 HVY. HEX NUT & WASHER EA.				
18								
19		215C/L	6	HANDRAIL			OPP. HAND	
20		ab	6	L				351
21		ac	6	L				351
22		ad/L	18	L 2 x 2 x 3/8	4	1 1/2		349
23		af/L	6	L 2 x 2 x 3/8	4	1 1/2		116
24		na	6	ROD				79
25		pa	6	BAR				238
26		ba	72	1/2 # HVY. HEX BOLT			NOTE 2	14
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

PLATE A36 PIPE FITTINGS  
 SHAPES A36 FLGS. BOLTS

- NOTES:
- OPEN HOLES ARE (3/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



DOT ITEM LINE NO. 0173  
 DOT BID ITEM NO. 863E95030



STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO

BRIDGE No. CUY-10-16.13  
 SPLICING CHAMBER ACCESS DETAILS

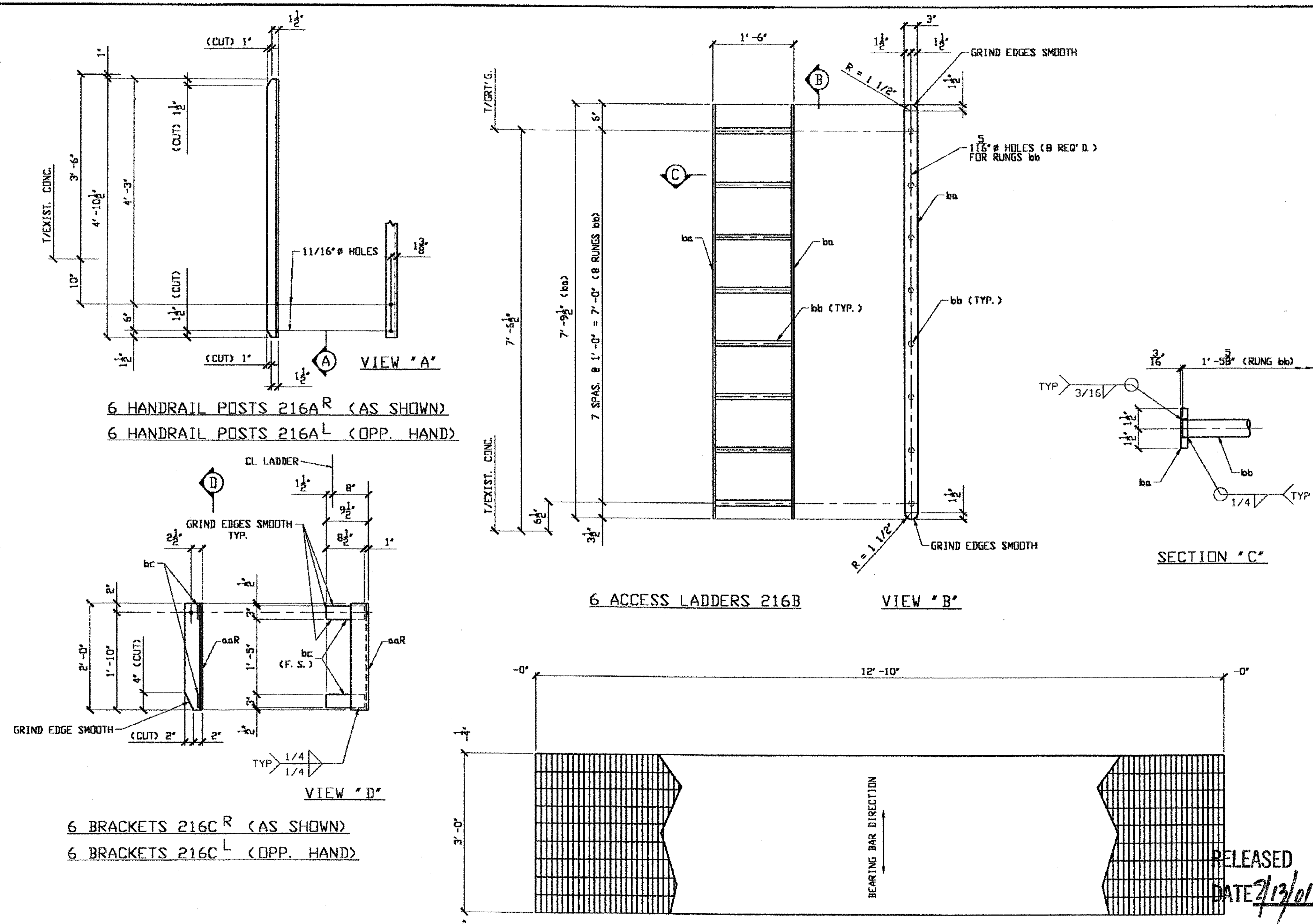
STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12609 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: KJR 01/11/01  
 CHECKED BY: DATE: GAF 01/18/01

SHEET NUMBER: 215  
 AWM JOB NUMBER: 800010

RELEASED FOR CONSTRUCTION  
 DATE 2/9/01 BY *tdp*

Last modified: krudolf at 04:10pm on Fri Feb 02, 2001 -|- last plotted by Gfost : 04:13pm on Mon Feb 05, 2001



6 HANDRAIL POSTS 216A R (AS SHOWN)  
6 HANDRAIL POSTS 216A L (OPP. HAND)

6 BRACKETS 216C R (AS SHOWN)  
6 BRACKETS 216C L (OPP. HAND)

6 ACCESS LADDERS 216B

6 GRATING PANELS 216D

GALVANIZED STEEL GRATING TO BE WELDED WITH 1" x 3/16" BEARING BARS AT 1 3/16" CENTERS AND TWISTED SQUARE CROSS BARS AT 4" CENTERS W-19-4 ASTM A-562 SUPPLIED WITH B GALVANIZED SADDLE CLIPS, BOLTS, NUTS, AND WASHERS EACH TO FIT 7/16" THICK FLANGE PER. PANEL

GRATING SHALL BE MANUFACTURED BY BORDO METAL COMPANY, RELIANCE STEEL PRODUCTS, AMETCO MANUFACTURING CORPORATION, I. K. G. INDUSTRIES, OR THE ALABAMA METAL INDUSTRIES CORPORATION.

O.D.O.T. DIST. 12

ACCEPTED	9/2/04	DM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264  
OHIO

FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
COLUMBIUS, PA. 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: KJR 01/22/01  
CHECKED BY: DATE: GAF 01/24/01

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		216A/R	6	HANDRAIL POSTS			AS SHOWN	
2			6	L 2 1/2 x 2 1/2 x 5/16	4	10 1/2		146
3								
4		216A/L	6	HANDRAIL POSTS			OPP. HAND	
5			6	L 2 1/2 x 2 1/2 x 5/16	4	10 1/2		146
6								
7		216B	6	ACCESS LADDERS				773
8		ba	12	BAR 3 x 1/2	7	9 1/2		477
9		bb	48	BAR 1 1/4	1	5 5/8		296
10								
11		216C/R	6	BRACKETS			AS SHOWN	197
12		aaR	6	L 4 x 4 x 1/2	2	0		154
13		bc	12	BAR 3 x 1/2	0	8 1/2		43
14								
15		216C/L	6	BRACKETS			OPP. HAND	197
16		aaL	6	L 4 x 4 x 1/2	2	0		154
17		bc	12	BAR				43
18								
19		216D	6	GRATING PANELS				
20			6	3'-0" SPAN	12	10	GALV.	283
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								

PLATE A36 PIPE FITTINGS  
SHAPES A36 FLGS. BOLTS

NOTES:  
1. OPEN HOLES ARE (3/16") UNLESS NOTED OTHERWISE.  
2. SHOP PAINT: (UNLESS NOTED) SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

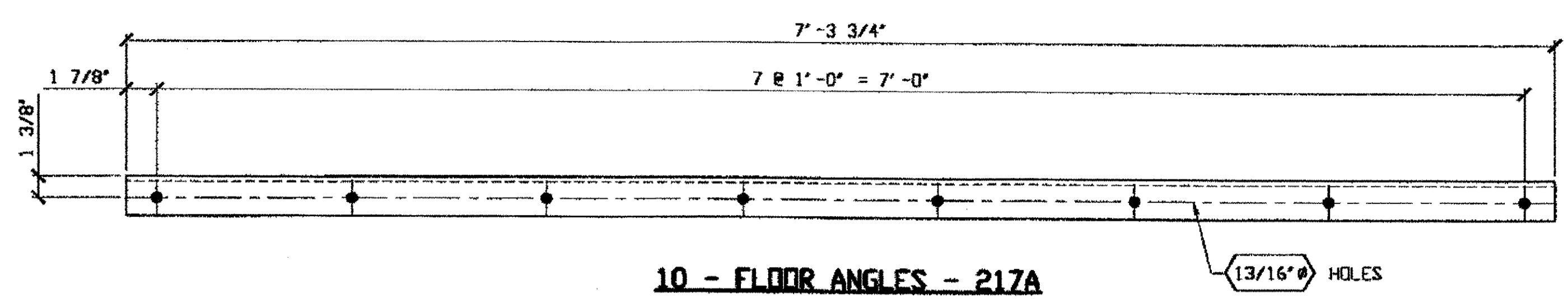
RELEASED FOR CONSTRUCTION  
DATE 7/13/01 BY *tdp*

DOT ITEM LINE NO. 0173  
DOT BID ITEM NO. B63E503D

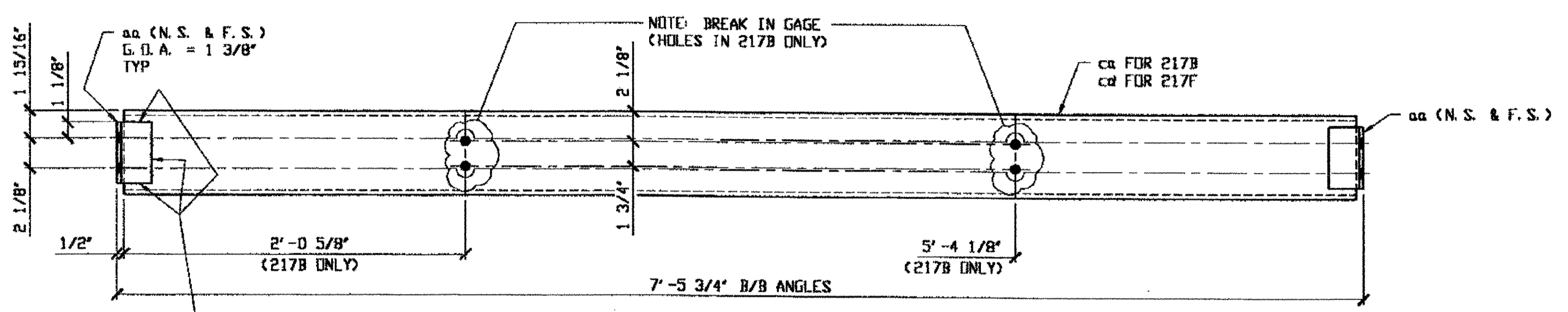
NO.	DATE	DESCRIPTION	BY
		STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
		BRIDGE No. CUY-10-16.13	
		SLICING CHAMBER ACCESS DETAILS	
		SHEET NUMBER: 216	
		ADM. JOB NUMBER: 800010	



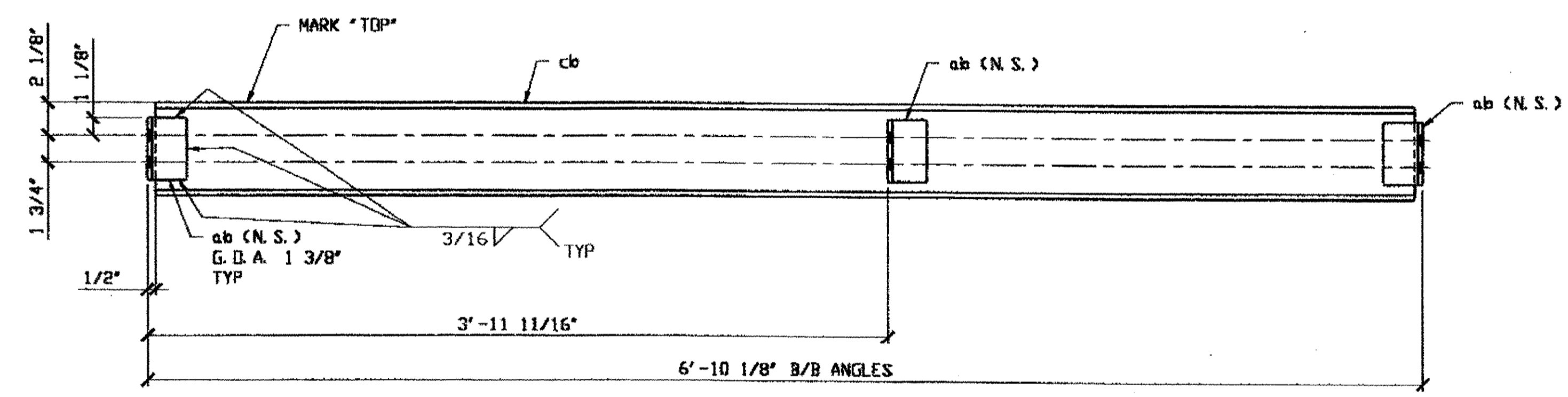
Last modified by rspringer at 10:20am on Tue Feb 06, 2001 - Last plotted by rspringer at 02:40pm on Tue Feb 06, 2001



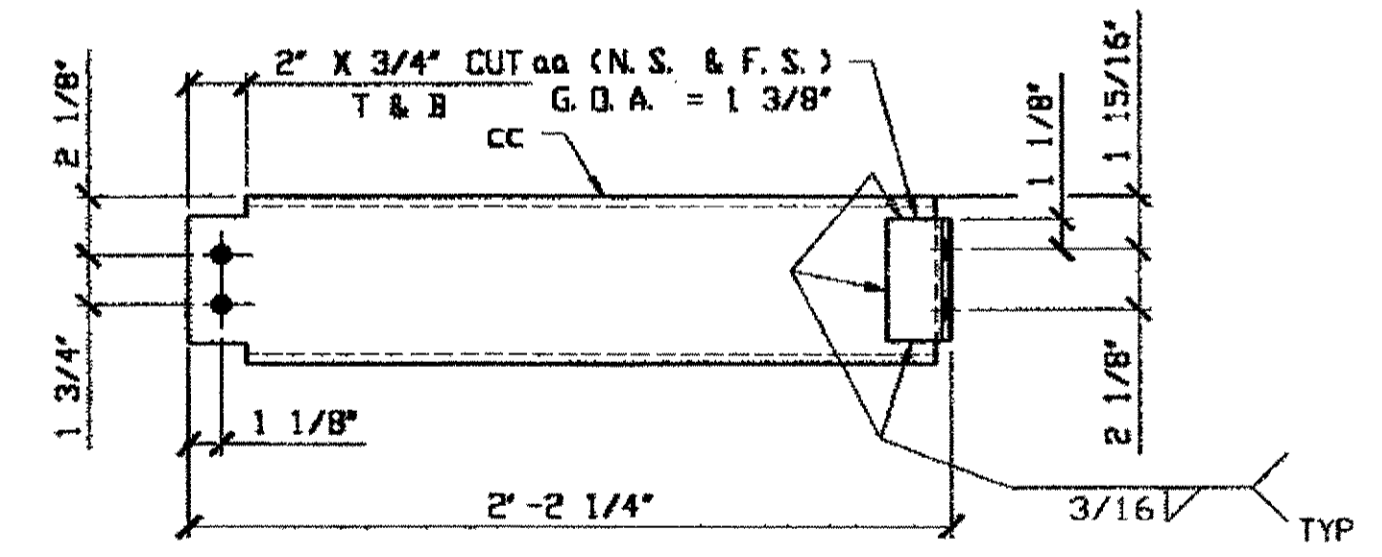
**10 - FLOOR ANGLES - 217A**



**5 - DOOR SUPPORTS - 217B**  
**5 - CROSS MEMBERS - 217E**



**10 - DOOR SUPPORTS - 217C**



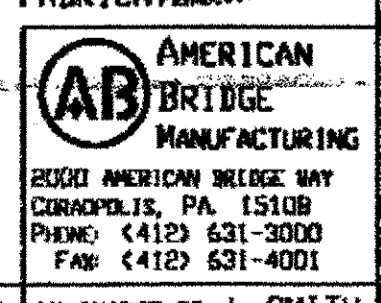
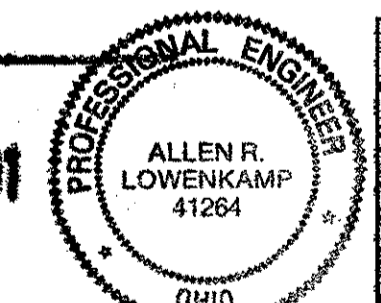
**10 - DOOR SUPPORTS - 217D**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				FLOOR ANGLES				
2		217A	10	L 2 1/2 X 2 1/2 X 5/16	7	3 3/4		366
3								
4		217B	5	DOOR SUPPORTS				424
5		ca	5	C6 X 10.5	7	4 3/4		388
6		aa	20	L 2 1/2 X 2 1/2 X 5/16	0	4 3/8		36
7								
8		217C	10	DOOR SUPPORT				760
9		cb	10	C6 X 10.5	6	9 1/8		710
10		ab	30	L 2 1/2 X 2 1/2 X 5/16	0	4		50
11								
12		217D	10	DOOR SUPPORT				261
13		cd	10	C6 X 10.5	2	1 3/4		225
14		aa	20	L 2 1/2 X 2 1/2 X 5/16	0	4 3/8		36
15								
16		217F	5	DOOR SUPPORTS				424
17		cd	5	C6 X 10.5	7	4 3/4		388
18		aa	20	L 2 1/2 X 2 1/2 X 5/16	0	4 3/8		36
19								
20				CABLE SUPPORTS (PLAIN MATERIAL)				
21		217G	30	UNISTRUT P-1000 CHANNEL	6	0	NOTE 3	133
22		217H	30	UNISTRUT P-1000 CHANNEL	7	0	NOTE 3	155
23								
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

- NOTES:
- OPEN HOLES ARE (11/16") UNLESS NOTED OTHERWISE.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - UNISTRUT CHANNELS SHALL BE #12 GAUGE ALUMINUM.

O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

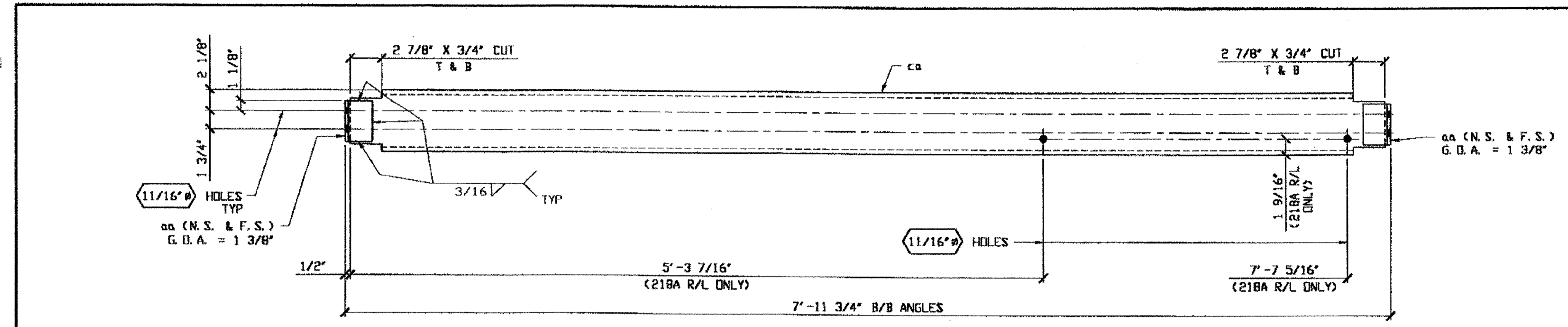
NAT'L ENGR. & CONTL. CO.  
By *tdp/tss*  
FEB 15 2001  
RELEASED FOR CONSTRUCTION  
DATE 2/19/01 BY *tdp*



STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 01/23/01  
CHECKED BY: DATE: GAF 01/31/01

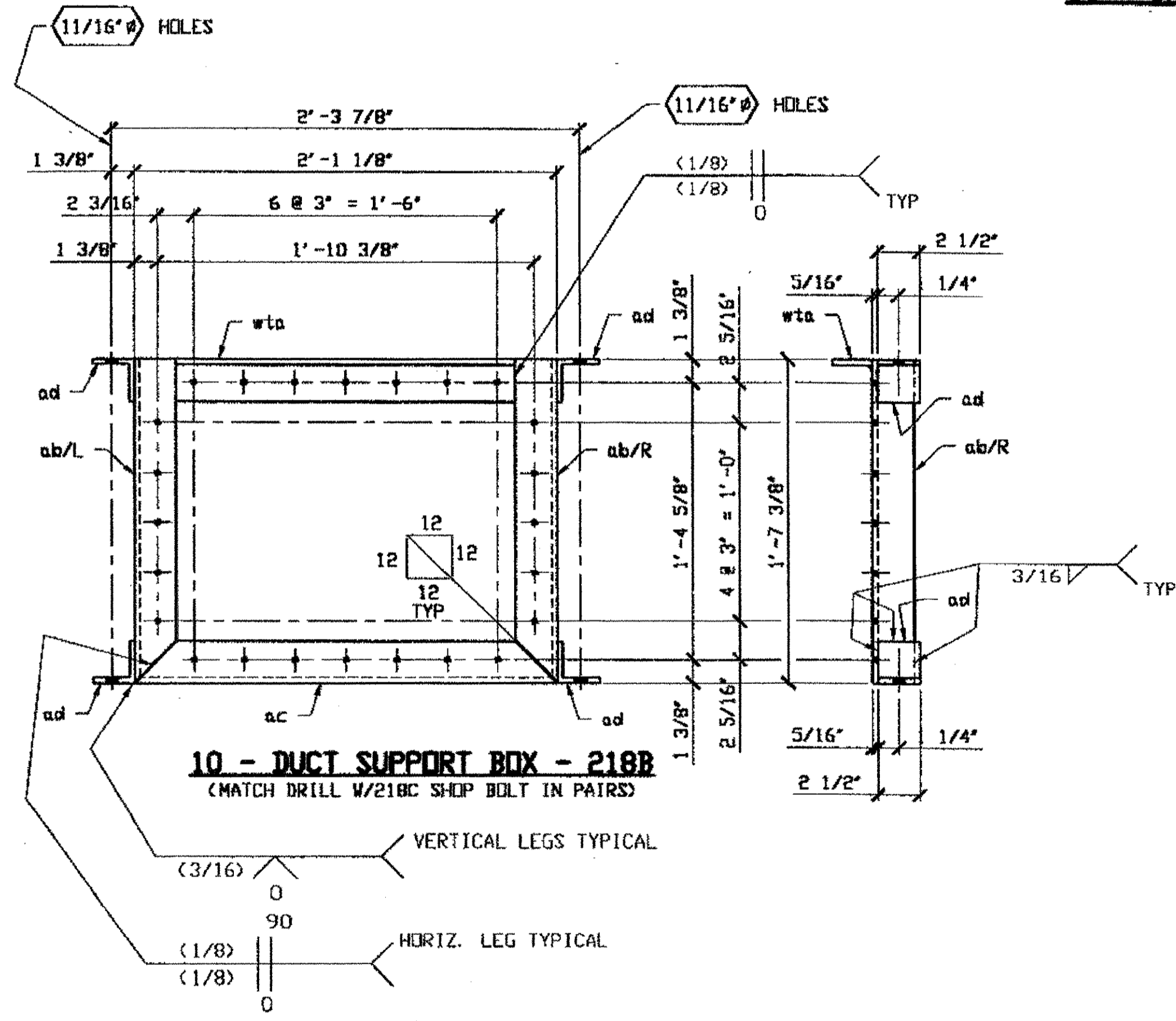
DOT ITEM LINE NO. 0165		DOT BID ITEM NO. 530E00400	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPlicing CHAMBERS			
SHEET NUMBER: 217			ABN JOB NUMBER: 900010



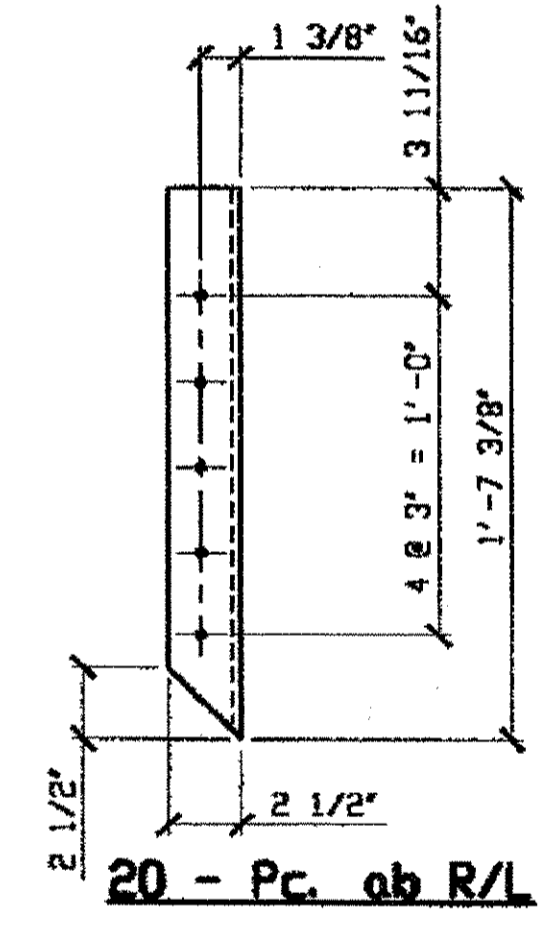
19 - CROSS MEMBERS - 218A R/L  
10 - CROSS MEMBERS - 218D

BILL OF MATERIAL							
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT	
1		218A R/L	19	CROSS MEMBER		10/R; 9/L 1702	
2		ca	19	C6 X 10.5	7 10 3/4	1575	
3		aa	76	L 2 1/2 X 2 1/2 X 5/16	0 4	127	
4		218B	10	DUCT SUPPORT BOX		435	
5		wta	10	WT 2.5 X 8	1 8 1/8	134	
6		ab R/L	20	L 2 1/2 X 2 1/2 X 5/16	1 7 3/8	161	
7		ac	10	L 2 1/2 X 2 1/2 X 5/16	2 1 1/8	100	
8		ad	40	L 2 1/2 X 2 1/2 X 5/16	0 2 1/2	40	
9							
10							
11		218C	10	DUCT SUPPORT BOX		198	
12		af R/L	20	L 1 3/4 X 1 3/4 X 1/4	1 6 11/16	86	
13		ag	10	L 1 3/4 X 1 3/4 X 1/4	2 0 1/2	56	
14		ah	10	L 1 3/4 X 1 3/4 X 1/4	2 0 1/2	56	
15							
16		218D	10	CROSS MEMBERS		894	
17		ca	10	C6 X 10.5	7 10 3/4	829	
18		aa	40	L 2 1/2 X 2 1/2 X 5/16	0 4	65	
19							
PLATE		N/A		PIPE	N/A	FITTINGS	N/A
SHAPES		A36		FLGS.	N/A	BOLTS	N/A

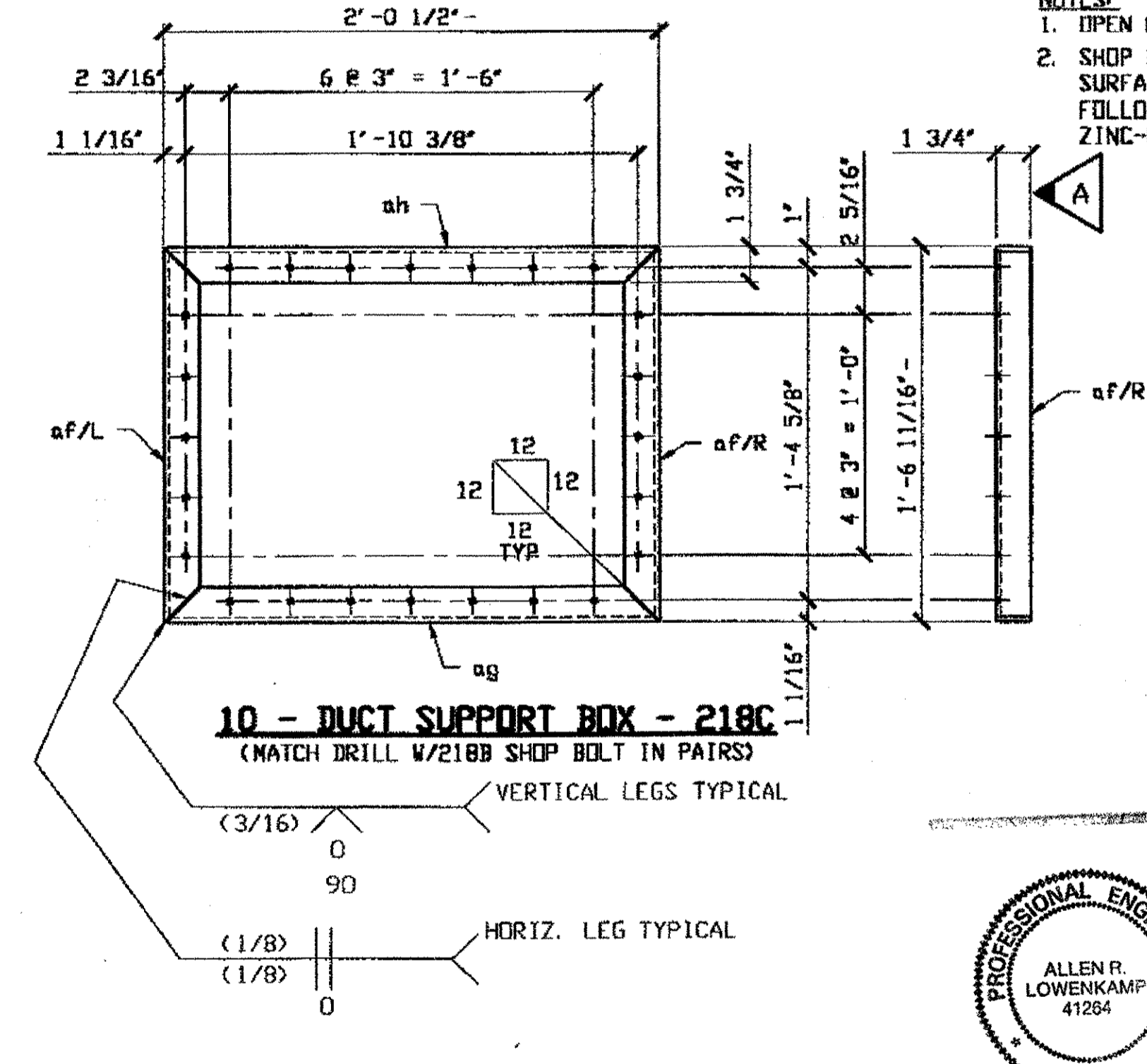
NOTES:  
1. OPEN HOLES ARE 5/16" UNLESS NOTED OTHERWISE.  
2. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



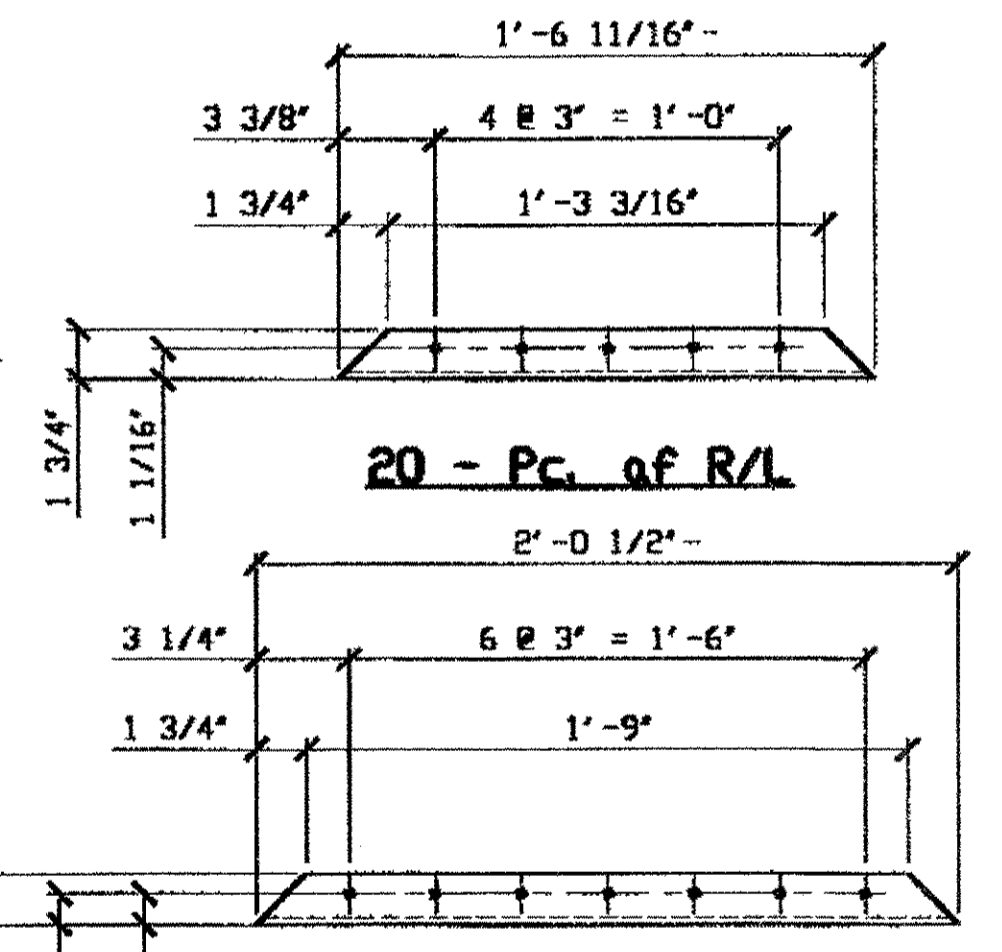
10 - DUCT SUPPORT BOX - 218B  
(MATCH DRILL W/218C SHOP BOLT IN PAIRS)



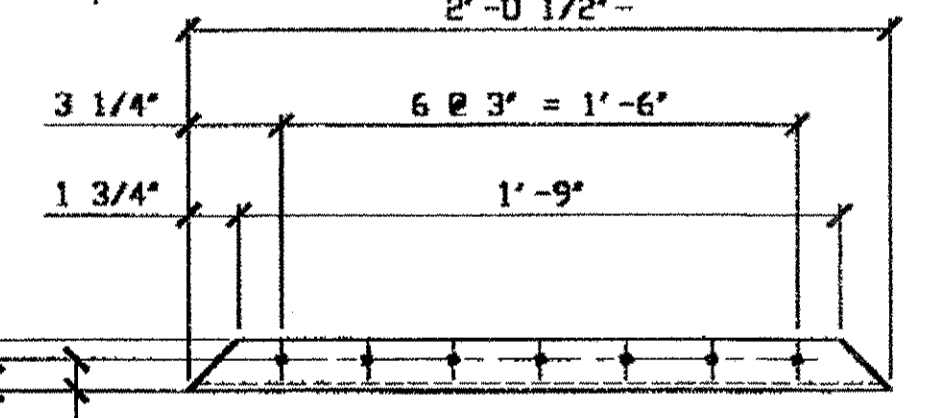
20 - Pc. ab R/L



10 - DUCT SUPPORT BOX - 218C  
(MATCH DRILL W/218B SHOP BOLT IN PAIRS)

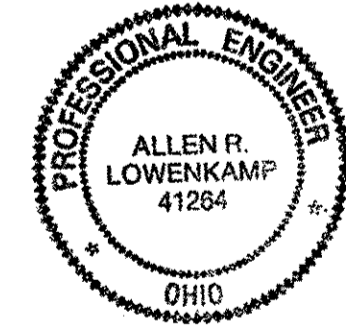


20 - Pc. af R/L



10 - Pc. ag  
10 - Pc. ah

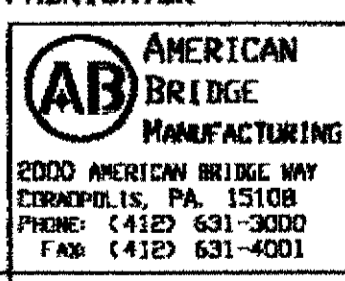
NAT'L ENGR. & CNTR. CO.  
By EP/ESS  
MAR 02 2001



REVISED Aug  
218 & SIZE CHG.  
was 1 1/2 x 1 1/4  
now 1 3/4 x 1 1/4  
Rev. A.

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED

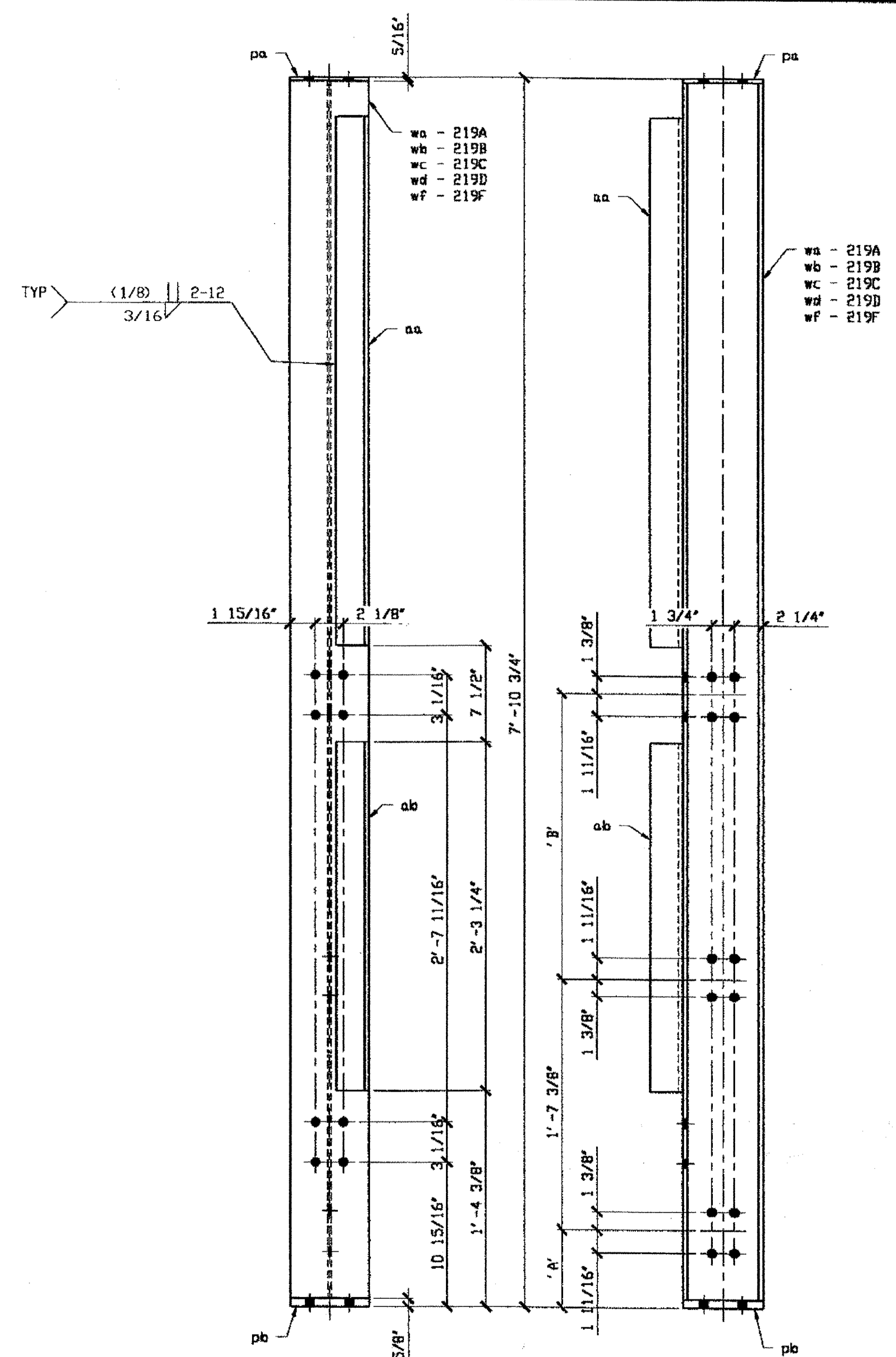
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



DOT ITEM LINE NO. 0165 DOT BID ITEM NO. 530E00400	
NO.	DATE
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPlicing CHAMBERS	
FABRICATOR	AMERICAN BRIDGE MANUFACTURING
IN CHARGE OF	L. SMITH
DRAWN BY	DATE
RAS	01/17/01
CHECKED BY	DATE
GAF	01/31/01
SHEET NUMBER	218
JOB NUMBER	800010

Last modified at 9:52:21am on Thu Mar 01, 2001

Last modified by rspringer at 10:08am on Wed Feb 07, 2001 -|- Last plotted by rspringer at 01:51pm on Tue Feb 13, 2001

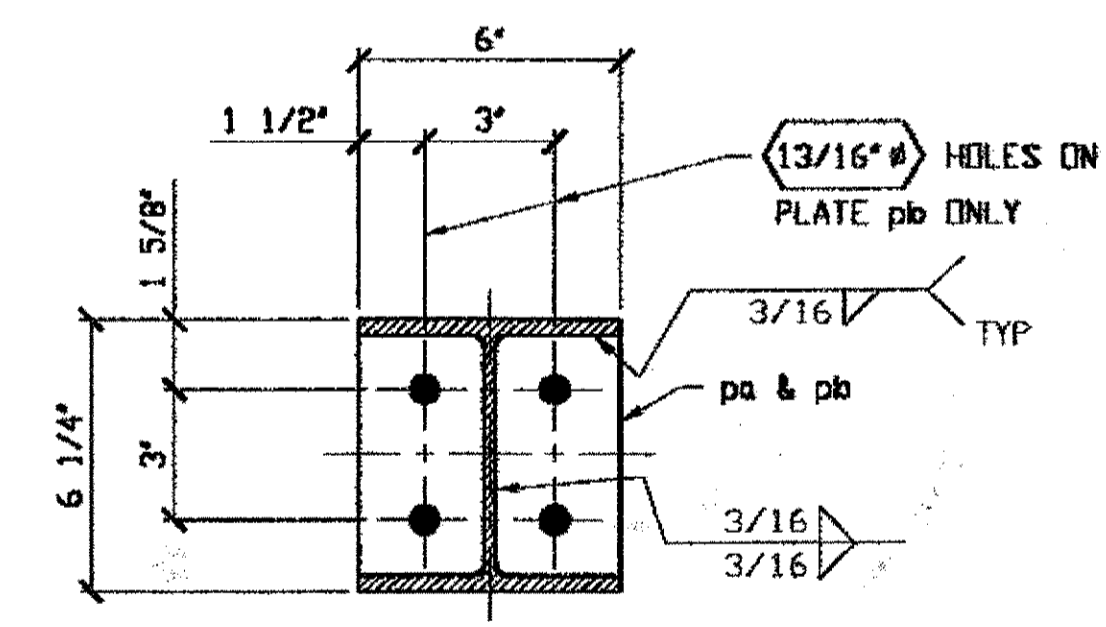


- 1 - NORTH WEST BUILDING POST SC67-86 - 219A
- 1 - NORTH WEST BUILDING POST SC67-87 - 219B
- 1 - NORTH WEST BUILDING POST SC67-88 - 219C
- 1 - NORTH WEST BUILDING POST SC67-89 - 219D
- 1 - NORTH WEST BUILDING POST SC67-90 - 219F

DIMENSION	219A	219B	219C	219D	219F
NORTH WEST	A 5 7/8"	5 7/8"	7 3/8"	7 1/4"	7 3/4"
ELEVATION	B 1'-10 1/8"	1'-10 1/8"	1'-8 5/8"	1'-8 3/4"	1'-8 1/4"

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		219A	1	NORTH WEST BLDG POST			SC67-86	194
2		wa	1	W6 X 20	7	9 13/16		156
3		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
4		ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
5		pa	1	PL 5/16 X 6	0	6 1/4		3
6		pb	1	PL 5/8 X 6	0	6 1/4		7
7								
8		219B	1	NORTH WEST BLDG POST			SC67-87	194
9		wb	1	W6 X 20	7	9 13/16		156
10		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
11		ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
12		pa	1	PL 5/16 X 6	0	6 1/4		3
13		pb	1	PL 5/8 X 6	0	6 1/4		7
14								
15		219C	1	NORTH WEST BLDG POST			SC67-88	194
16		wc	1	W6 X 20	7	9 13/16		156
17		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
18		ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
19		pa	1	PL 5/16 X 6	0	6 1/4		3
20		pb	1	PL 5/8 X 6	0	6 1/4		7
21								
22		219D	1	NORTH WEST BLDG POST			SC67-89	194
23		wd	1	W6 X 20	7	9 13/16		156
24		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
25		ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
26		pa	1	PL 5/16 X 6	0	6 1/4		3
27		pb	1	PL 5/8 X 6	0	6 1/4		7
28								
29		219F	1	NORTH WEST BLDG POST			SC67-90	194
30		wf	1	W6 X 20	7	9 13/16		156
31		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
32		ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
33		pa	1	PL 5/16 X 6	0	6 1/4		3
34		pb	1	PL 5/8 X 6	0	6 1/4		7
PLATE A36					PIPE N/A	FITTINGS N/A		
SHAPES A36					FLGS. N/A	BOLTS N/A		



TYPICAL SECTION @ TOP & BOTTOM

- NOTES:**
1. OPEN HOLES ARE (1 1/16\"
  2. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR' & CONTR. CO.  
By *tdp/lbs*

FEB 13 2001

RELEASED FOR CONSTRUCTION  
DATE 2/19/01 BY *tdp*

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED

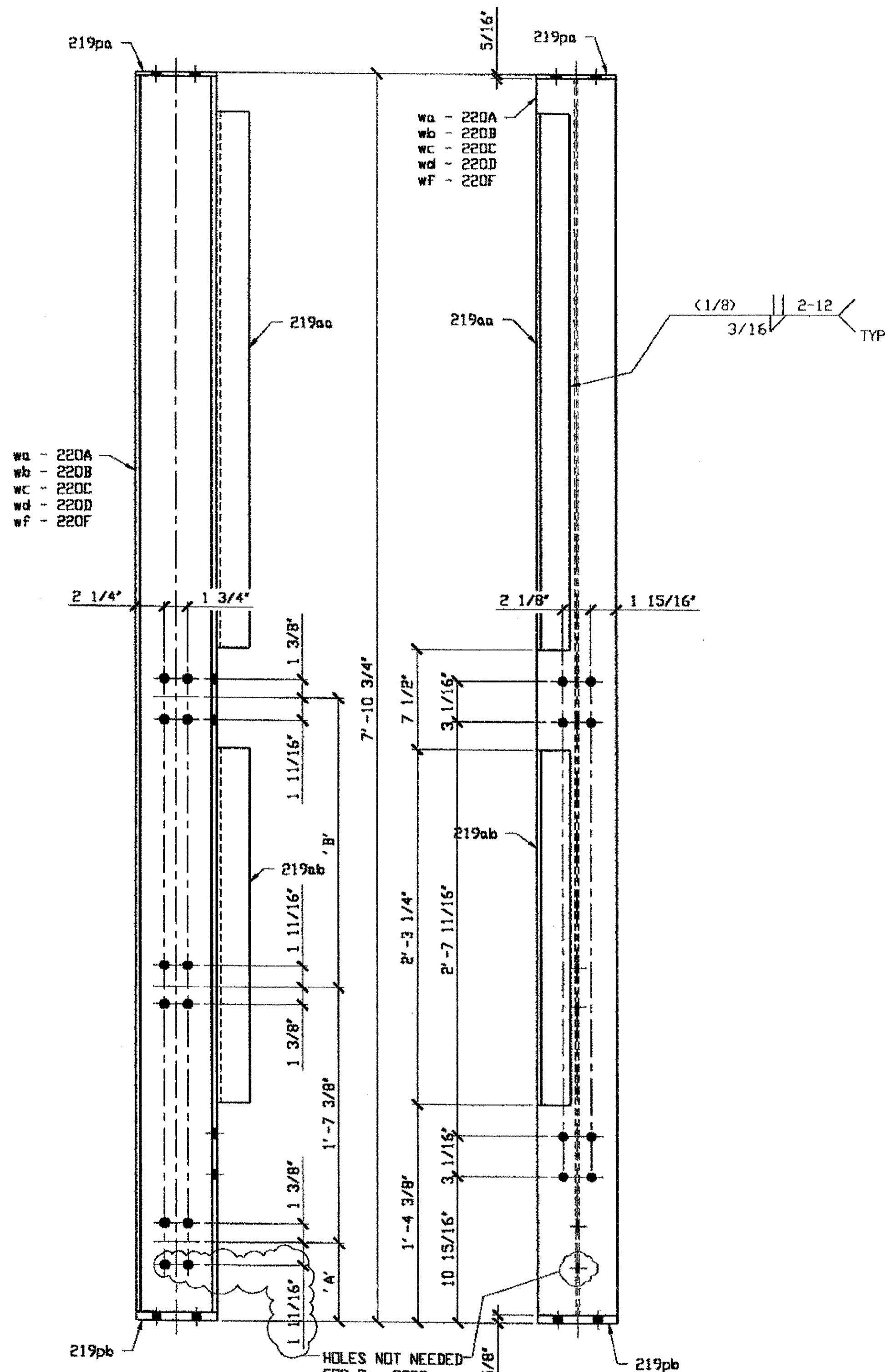
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
DOWNSVILLE, PA 15110  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. D165		DOT BID ITEM NO. 530E00400	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13 SPlicing CHAMBERS			
DRAWN BY: DATE: RAS 01/23/01		SHEET NUMBER: 219	
CHECKED BY: DATE: GAF 01/31/01		AEN JOB NUMBER: 800010	

Last modified by rspringer at 03:04pm on Tue Feb 06, 2001 - Last plotted by rspringer at 10:11am on Wed Feb 07, 2001

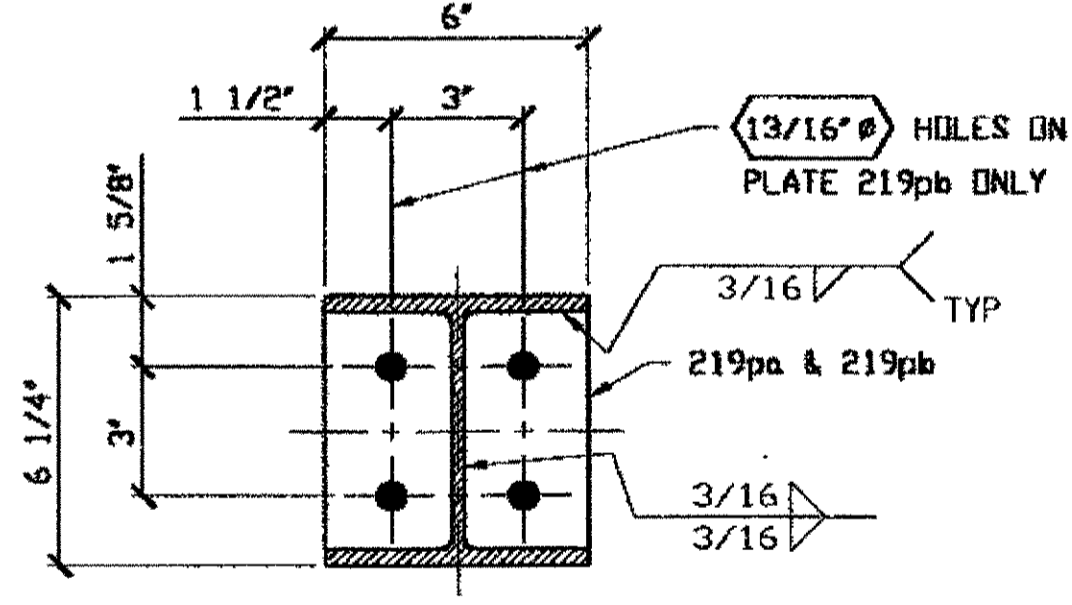


- 1 - NORTH EAST BUILDING POST SC67-86 - 220A
- 1 - NORTH EAST BUILDING POST SC67-87 - 220B
- 1 - NORTH EAST BUILDING POST SC67-88 - 220C
- 1 - NORTH EAST BUILDING POST SC67-89 - 220D
- 1 - NORTH EAST BUILDING POST SC67-90 - 220F

DIMENSION	220A	220B	220C	220D	220F
NORTH EAST ELEVATION	A 3 1/2"	2 3/4"	4 3/4"	4 1/2"	5"
	B 2'-0 1/2"	2'-1 1/4"	1'-11 1/4"	1'-11 1/2"	1'-11"

### BILL OF MATERIAL

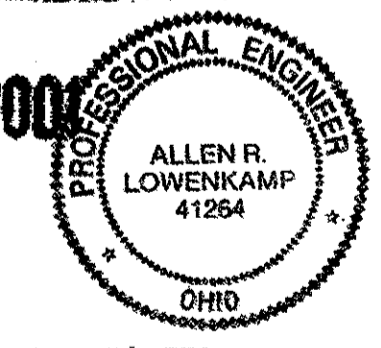
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		220A	1	NORTH EAST BLDG POST			SC67-86	194
2		wa	1	W6 X 20	7	9 13/16		156
3		219aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
4		219ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
5		219pa	1	PL 5/16 X 6	0	6 1/4		3
6		219pb	1	PL 5/8 X 6	0	6 1/4		7
7								
8		220B	1	NORTH EAST BLDG POST			SC67-87	194
9		wb	1	W6 X 20	7	9 13/16		156
10		219aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
11		219ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
12		219pa	1	PL 5/16 X 6	0	6 1/4		3
13		219pb	1	PL 5/8 X 6	0	6 1/4		7
14								
15		220C	1	NORTH EAST BLDG POST			SC67-88	194
16		wc	1	W6 X 20	7	9 13/16		156
17		219aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
18		219ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
19		219pa	1	PL 5/16 X 6	0	6 1/4		3
20		219pb	1	PL 5/8 X 6	0	6 1/4		7
21								
22		220D	1	NORTH EAST BLDG POST			SC67-89	194
23		wd	1	W6 X 20	7	9 13/16		156
24		219aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
25		219ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
26		219pa	1	PL 5/16 X 6	0	6 1/4		3
27		219pb	1	PL 5/8 X 6	0	6 1/4		7
28								
29		220F	1	NORTH EAST BLDG POST			SC67-90	194
30		wf	1	W6 X 20	7	9 13/16		156
31		219aa	1	L 2 1/2 X 2 1/2 X 5/16	3	4 5/8		17
32		219ab	1	L 2 1/2 X 2 1/2 X 5/16	2	3 1/4		11
33		219pa	1	PL 5/16 X 6	0	6 1/4		3
34		219pb	1	PL 5/8 X 6	0	6 1/4		7
PLATE A36				PIPE N/A	FITTINGS N/A			
SHAPES A36				FLGS. N/A	BOLTS N/A			



- NOTES:
- OPEN HOLES ARE (11/16") UNLESS NOTED OTHERWISE.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

TYPICAL SECTION @ TOP & BOTTOM  
 NAT'L ENGR. & CONTR. CO.  
 EDP/ES

FEB 15 2001



RELEASED FOR CONSTRUCTION  
 DATE 2/19/01 BY EDP

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CONROPSIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0165  
 DOT BID ITEM NO. S3DE00400

NO.	DATE	DESCRIPTION	BY

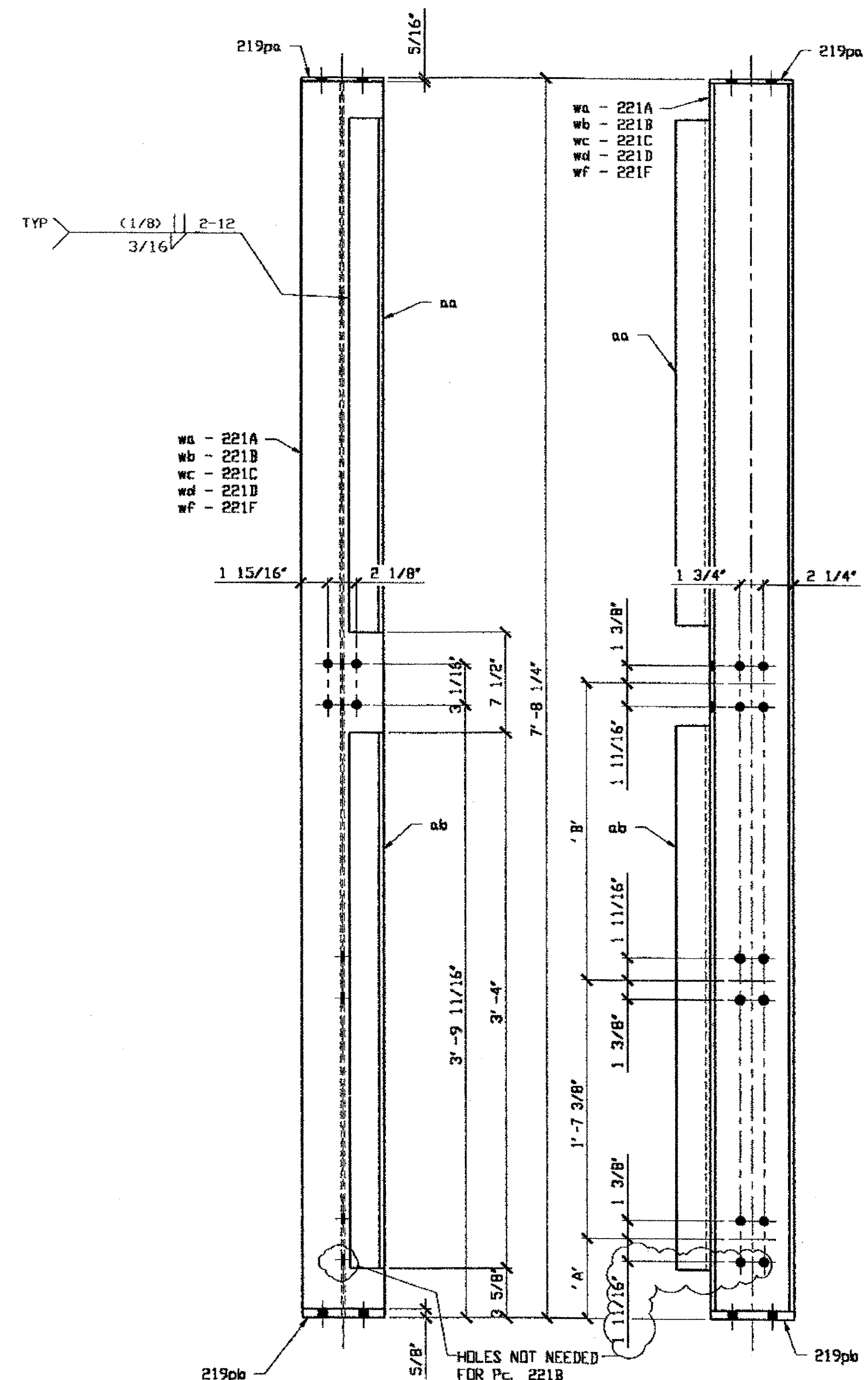
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPLICING CHAMBERS**

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE:  
 RAS 01/23/01  
 CHECKED BY: DATE:  
 GAF 01/31/01

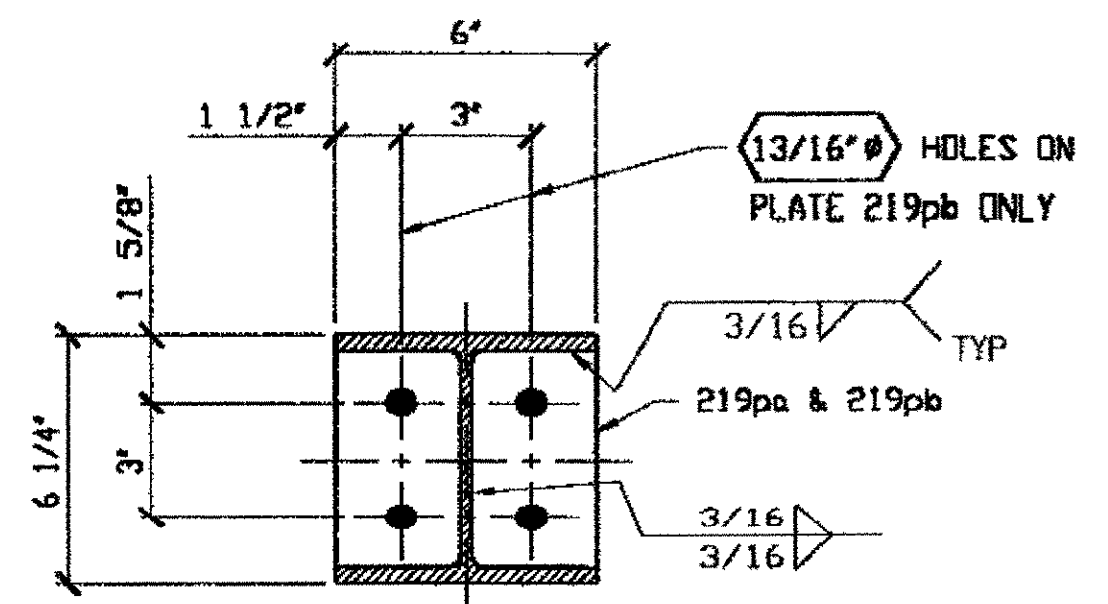
SHEET NUMBER: 220  
 ABN JOB NUMBER: 800010

Last modified by rspringer at 10:12am on Wed Feb 07, 2001 - Last plotted by rspringer at 01:52pm on Tue Feb 13, 2001



- 1 - SOUTH EAST BUILDING POST SC67-86 - 221A
- 1 - SOUTH EAST BUILDING POST SC67-87 - 221B
- 1 - SOUTH EAST BUILDING POST SC67-88 - 221C
- 1 - SOUTH EAST BUILDING POST SC67-89 - 221D
- 1 - SOUTH EAST BUILDING POST SC67-90 - 221F

DIMENSION	221A	221B	221C	221D	221F
SOUTH EAST ELEVATION A	3 1/2"	2 3/4"	4 3/4"	4 1/2"	5"
B	2'-0 1/2"	2'-1 1/4"	1'-11 1/4"	1'-11 1/2"	1'-11"



TYPICAL SECTION @ TOP & BOTTOM

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		221A	1	SOUTH EAST BLDG POST			SC67-86	195
2		wa	1	W6 X 20	7	7 5/16		152
3		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
4		ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
5		219pa	1	PL 5/16 X 6	0	6 1/4		3
6		219pb	1	PL 5/8 X 6	0	6 1/4		7
7								
8		221B	1	SOUTH EAST BLDG POST			SC67-87	195
9		wb	1	W6 X 20	7	7 5/16		152
10		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
11		ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
12		219pa	1	PL 5/16 X 6	0	6 1/4		3
13		219pb	1	PL 5/8 X 6	0	6 1/4		7
14								
15		221C	1	SOUTH EAST BLDG POST			SC67-88	195
16		wc	1	W6 X 20	7	7 5/16		152
17		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
18		ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
19		219pa	1	PL 5/16 X 6	0	6 1/4		3
20		219pb	1	PL 5/8 X 6	0	6 1/4		7
21								
22		221D	1	SOUTH EAST BLDG POST			SC67-89	195
23		wd	1	W6 X 20	7	7 5/16		152
24		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
25		ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
26		219pa	1	PL 5/16 X 6	0	6 1/4		3
27		219pb	1	PL 5/8 X 6	0	6 1/4		7
28								
29		221F	1	SOUTH EAST BLDG POST			SC67-90	195
30		wf	1	W6 X 20	7	7 5/16		152
31		aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
32		ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
33		219pa	1	PL 5/16 X 6	0	6 1/4		3
34		219pb	1	PL 5/8 X 6	0	6 1/4		7
35								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

- NOTES:
- OPEN HOLES ARE 11/16" UNLESS NOTED OTHERWISE.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR' & CONTR. CO.  
BY *tdp/ess*

FEB 15 2001

RELEASED FOR CONSTRUCTION  
DATE *2/19/01* BY *tdp*

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
NOT ACCEPTED

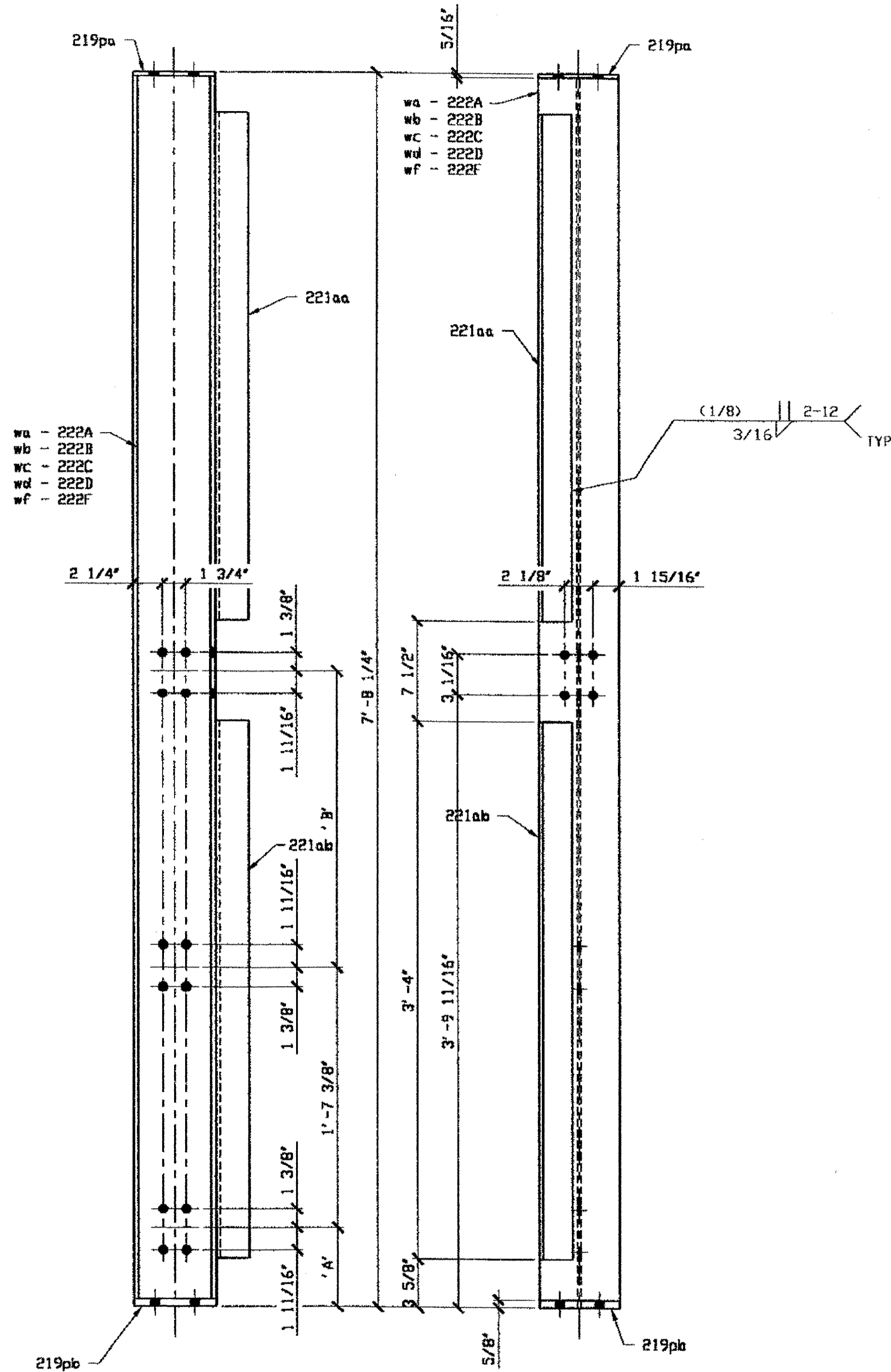
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264

AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CHAMBERS, PA. 15106  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0165	DOT BID ITEM NO. 530E00400		
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPlicing CHAMBERS			
SHEET NUMBER: 221		JOB NUMBER: 800010	

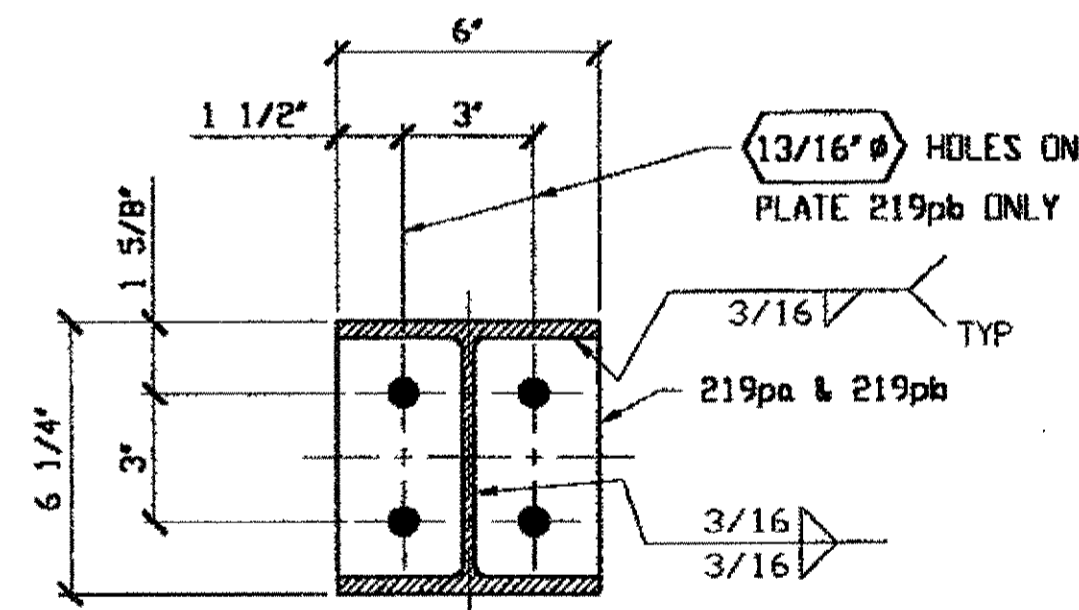
Last modified by at S(EDTIME,??) on S(EDTIME,??) -|- Last plotted by rspringer at 10:12am on Wed Feb 07, 2001



- 1 - SOUTH WEST BUILDING POST SC67-86 - 222A
- 1 - SOUTH WEST BUILDING POST SC67-87 - 222B
- 1 - SOUTH WEST BUILDING POST SC67-88 - 222C
- 1 - SOUTH WEST BUILDING POST SC67-89 - 222D
- 1 - SOUTH WEST BUILDING POST SC67-90 - 222F

DIMENSION	222A	222B	222C	222D	222F
SOUTH WEST ELEVATION	A 5 7/8"	5 7/8"	7 3/8"	7 1/4"	7 3/4"
	B 1'-10 1/8"	1'-10 1/8"	1'-8 5/8"	1'-8 3/4"	1'-8 1/4"

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		222A	1	SOUTH WEST BLDG POST			SC67-86	195
2		wa	1	W6 X 20	7	7 5/16		152
3		221aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
4		221ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
5		219pa	1	PL 5/16 X 6	0	6 1/4		3
6		219pb	1	PL 5/8 X 6	0	6 1/4		7
7								
8		222B	1	SOUTH WEST BLDG POST			SC67-87	195
9		wb	1	W6 X 20	7	7 5/16		152
10		221aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
11		221ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
12		219pa	1	PL 5/16 X 6	0	6 1/4		3
13		219pb	1	PL 5/8 X 6	0	6 1/4		7
14								
15		222C	1	SOUTH WEST BLDG POST			SC67-88	195
16		wc	1	W6 X 20	7	7 5/16		152
17		221aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
18		221ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
19		219pa	1	PL 5/16 X 6	0	6 1/4		3
20		219pb	1	PL 5/8 X 6	0	6 1/4		7
21								
22		222D	1	SOUTH WEST BLDG POST			SC67-89	195
23		wd	1	W6 X 20	7	7 5/16		152
24		221aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
25		221ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
26		219pa	1	PL 5/16 X 6	0	6 1/4		3
27		219pb	1	PL 5/8 X 6	0	6 1/4		7
28								
29		222F	1	SOUTH WEST BLDG POST			SC67-90	195
30		wf	1	W6 X 20	7	7 5/16		152
31		221aa	1	L 2 1/2 X 2 1/2 X 5/16	3	2 1/8		16
32		221ab	1	L 2 1/2 X 2 1/2 X 5/16	3	4		17
33		219pa	1	PL 5/16 X 6	0	6 1/4		3
34		219pb	1	PL 5/8 X 6	0	6 1/4		7
35								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

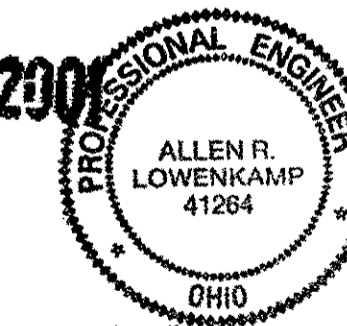


TYPICAL SECTION @ TOP & BOTTOM

- NOTES:
- OPEN HOLES ARE 13/16" UNLESS NOTED OTHERWISE.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

NAT'L ENGR. & CONTR. CO.  
By EdP/ecs

FEB 15 2001



RELEASED FOR CONSTRUCTION  
DATE 2/14/01 BY EdP

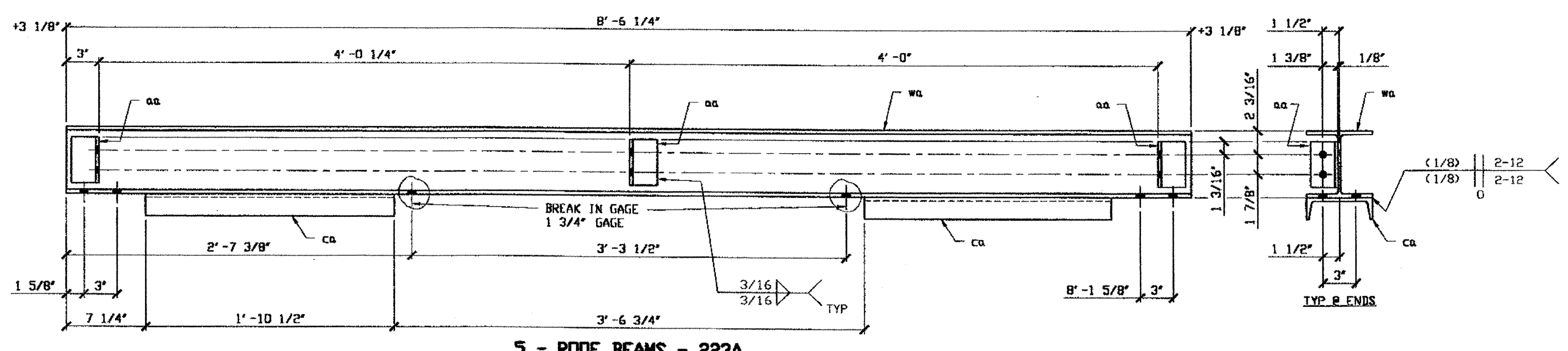
O.D.O.T. DIST. 12  
ACCEPTED [initials]  
ACCEPTED AS NOTED [initials]  
NOT ACCEPTED [initials]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

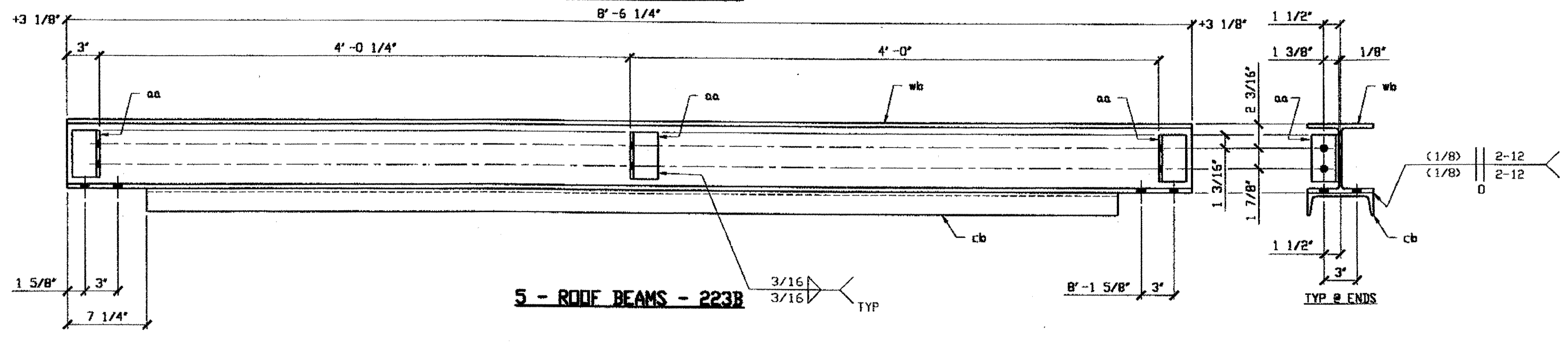
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 01/24/01  
CHECKED BY: DATE:  
GAF 01/31/01

DOT ITEM LINE NO. 0165		DOT BID ITEM NO. S3DE00400	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPlicing CHAMBERS			
FABRICATOR		SHEET NUMBER: 222	
AMERICAN BRIDGE MANUFACTURING 2000 AMERICAN BRIDGE WAY CINCINNATI, PA 15108 PHONE: (412) 631-3000 FAX: (412) 631-4001		ABR JOB NUMBER: 800010	

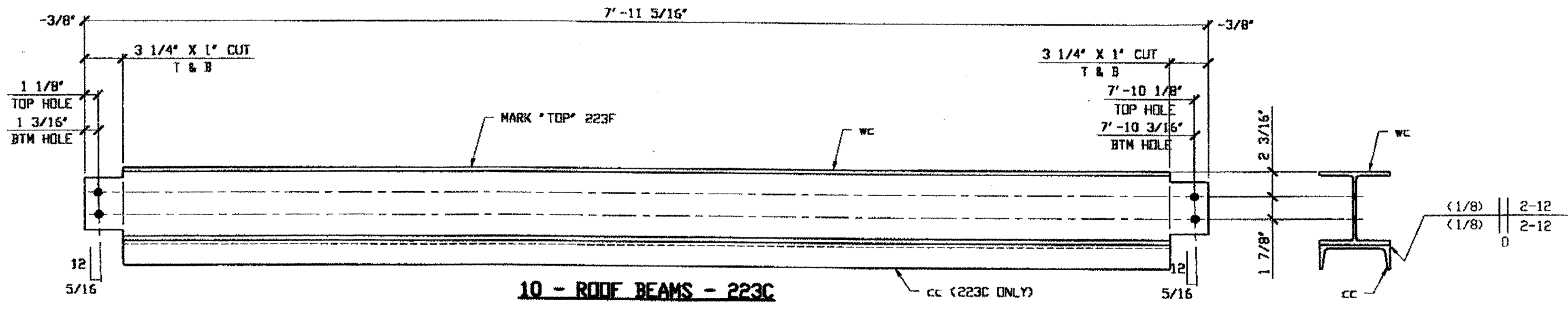
Last modified by at \$(EDTIME,??) on \$(EDTIME,??) - Last plotted by repringer at 02:01pm on Tue Feb 13, 2001



5 - ROOF BEAMS - 223A

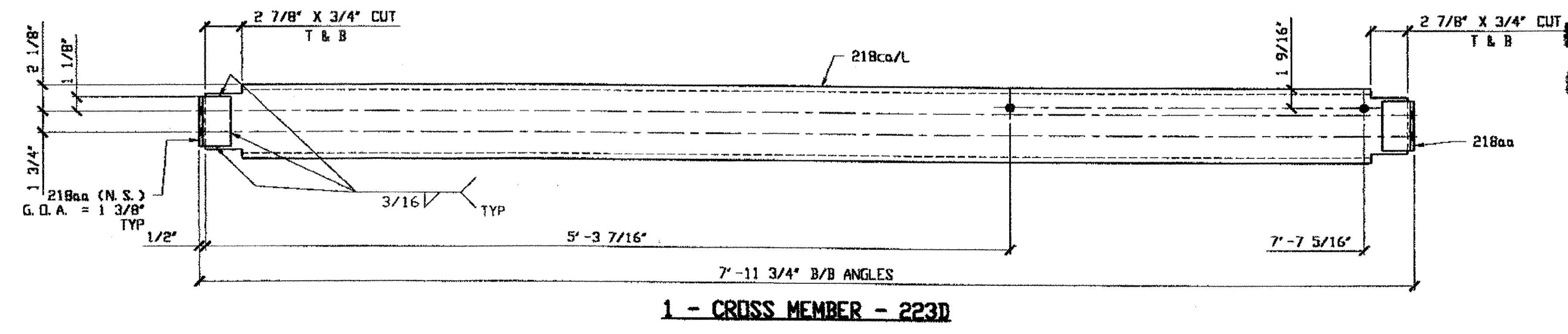


5 - ROOF BEAMS - 223B



10 - ROOF BEAMS - 223C

5 - ROOF BEAMS - 223F



1 - CROSS MEMBER - 223D

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		223A	5	ROOF BEAMS				1076
2		wa	5	W6 X 20	8	6 1/4		852
3		ca	10	C6 X 10.5	1	10 1/2		197
4		aa	15	L 2 1/2 X 2 1/2 X 5/16	0	4 1/4		27
5								
6		223B	5	ROOF BEAMS				1263
7		wa	5	W6 X 20	8	6 1/4		852
8		ca	5	C6 X 10.5	7	3 3/4		384
9		aa	15	L 2 1/2 X 2 1/2 X 5/16	0	4 1/4		27
10								
11		223C	10	ROOF BEAMS				2366
12		wc	10	W6 X 20	7	11 5/16		1589
13		cc	10	C6 X 10.5	7	4 13/16		777
14								
15		223D	1	CROSS MEMBER				86
16		218ca/L	1	C6 X 10.5	7	10 3/4		83
17		218aa	2	L 2 1/2 X 2 1/2 X 5/16	0	4		3
18				ROOF BEAMS				
19								
20		223F	5	W6 X 20	7	11 5/16		794
PLATE		N/A		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	N/A

- NOTES:
1. OPEN HOLES ARE (11/16"Ø) UNLESS NOTED OTHERWISE.
  2. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

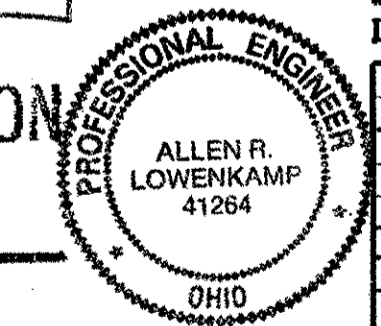
NAT'L ENGR. & CONTR. CO.  
 by *EdP/tss*  
 FEB 15 2001

O.D.O.T. DIST. 12

ACCEPTED	2/15/01	AS
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

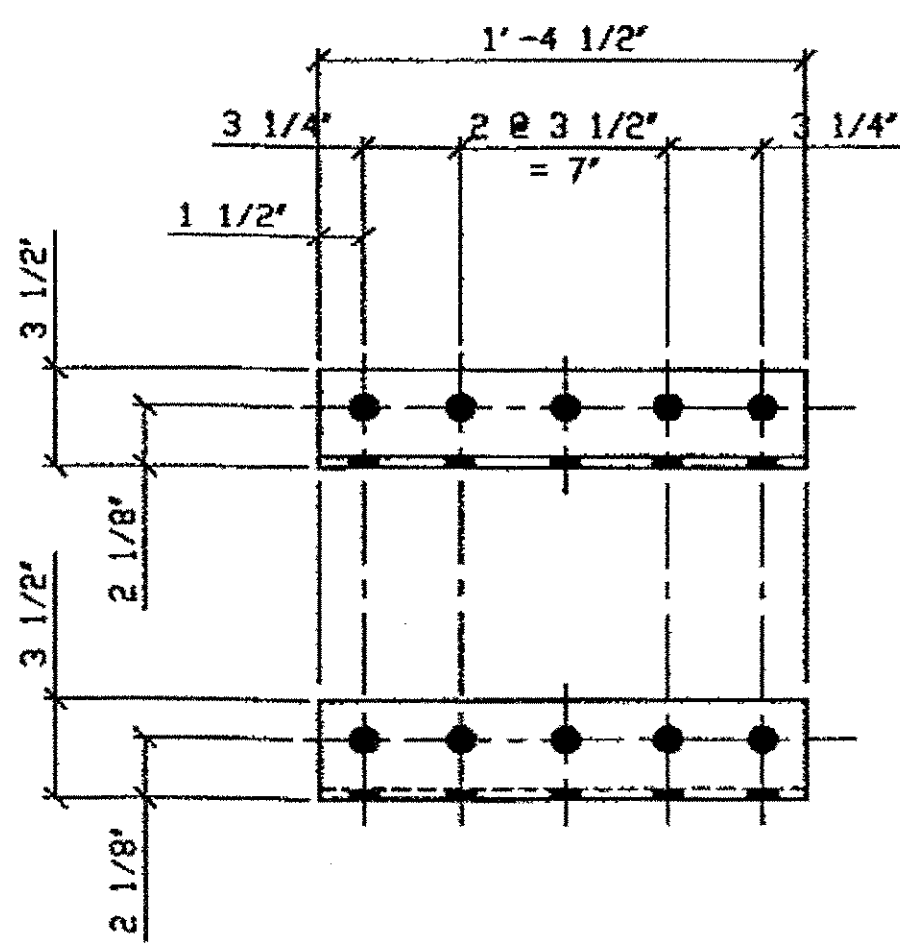
RELEASED FOR CONSTRUCTION  
 DATE 2/19/01 BY *EdP*



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

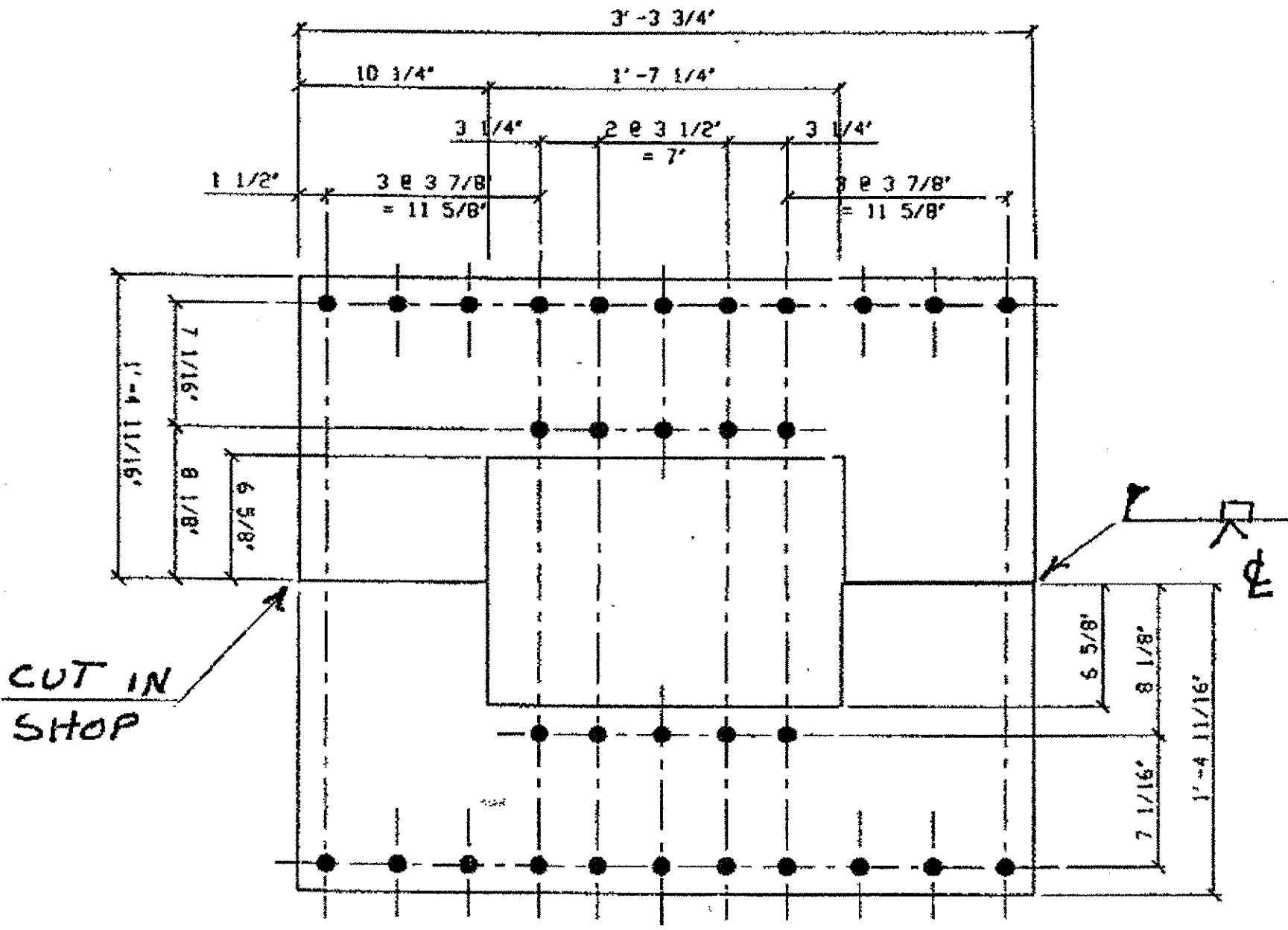
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. 0165		DOT BID ITEM NO. 530E00400	
NO.	DATE	DESCRIPTION	BY
REVISIONS			
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO			
BRIDGE No. CUY-10-16.13			
SPlicing CHAMBERS			
IN CHARGE OF: L. SMITH		SHEET NUMBER: 223	
DRAWN BY: RAS DATE: 01/24/01		JOB NUMBER: 800010	
CHECKED BY: GAF DATE: 01/31/01			



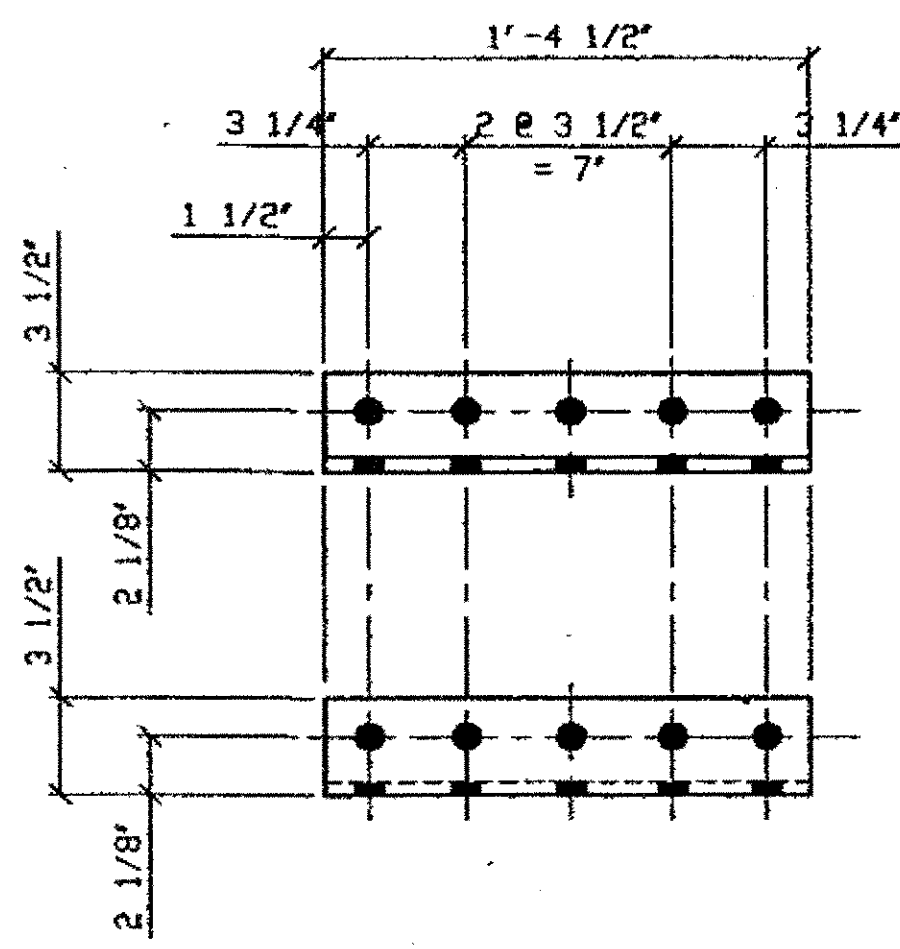
4 - CONNECTION ANGLE REPLACEMENT- WSB-102A

ORIG SHOP DWG 72-BS7 & 142-BS17  
 ORIG SHOP MARK A72d  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



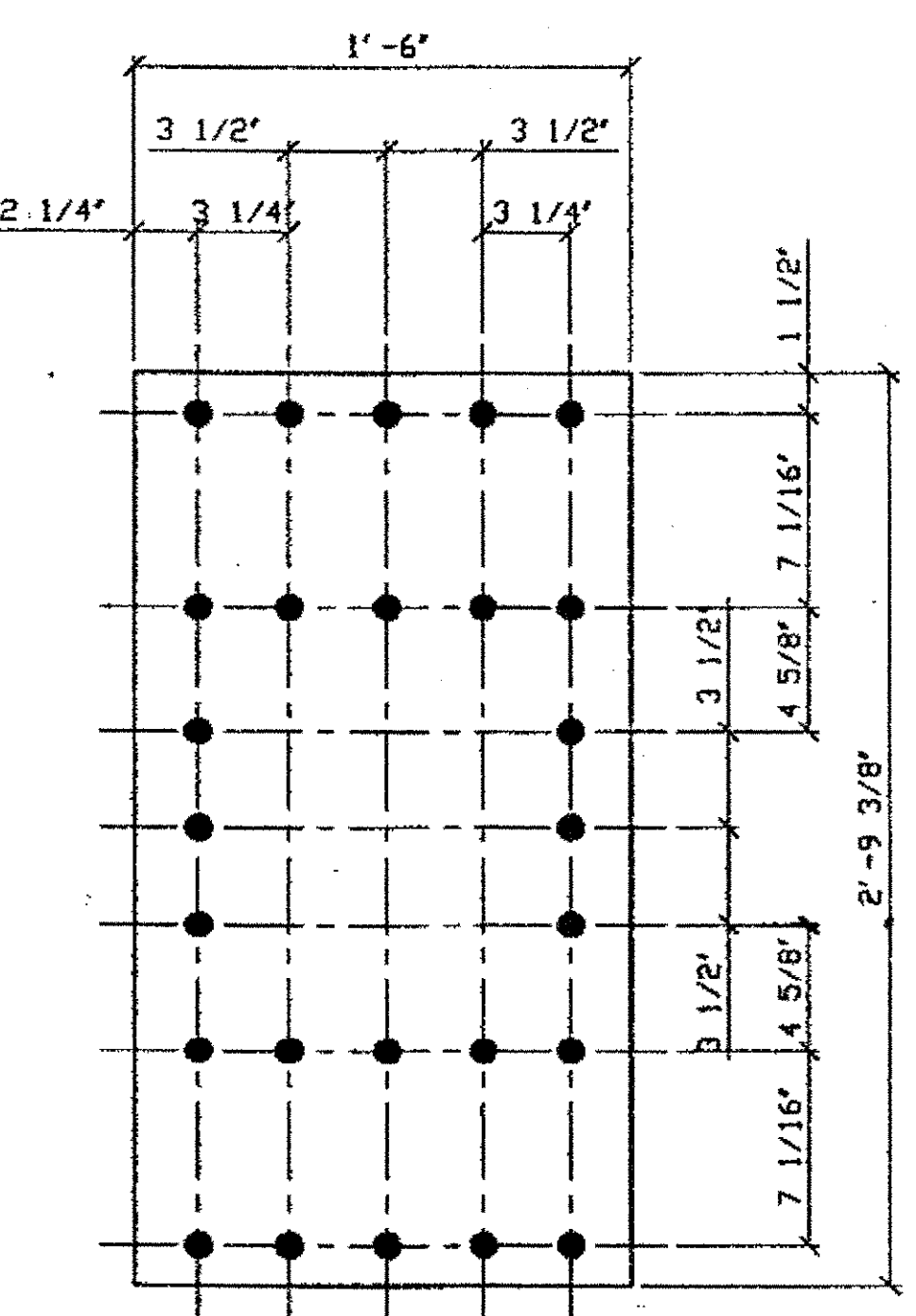
2 - BACK PLATE REPLACEMENT- WSB-102C

ORIG SHOP DWG 72-BS7  
 ORIG SHOP MARK P72b  
 LINE ITEM No. 0152



4 - CONNECTION ANGLE REPLACEMENT- WSB-102B

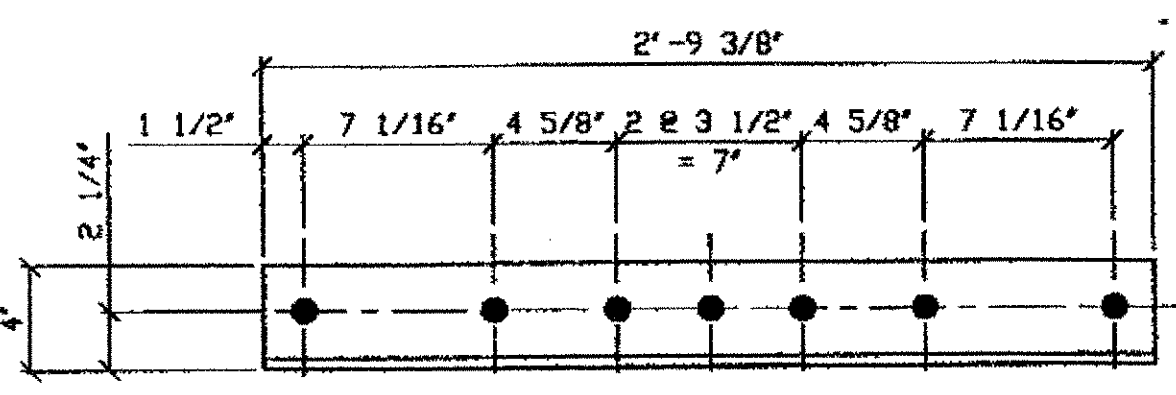
ORIG SHOP DWG 72-BS7 & 142-BS17  
 ORIG SHOP MARK A72e  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



2 - FRONT PLATE REPLACEMENT- WSB-102D

ORIG SHOP DWG 72-BS6  
 ORIG SHOP MARK P72c  
 LINE ITEM No. 0152  
 REPAIR SHEET WSB-2 & WSB-6

**SPAN 4**  
 NORTH @ D, EAST PLATE 102C  
 SOUTH @ D, EAST PLATE 102C  
 NORTH @ D, WEST PLATE 102D  
 SOUTH @ D, WEST PLATE 102D  
 NORTH @ D-(4) 2-E.P. & 2-W.P. 102A  
 SOUTH @ D-(4) 2-E.P. & 2-W.P. 102B  
 NORTH @ D, - (2) ON WEST P. 102E  
 SOUTH @ D, - (2) ON WEST P. 102E



4 - FRONT VERTICAL ANGLE REPLACEMENT- WSB-102E

ORIG SHOP DWG 72-BS6  
 ORIG SHOP MARK A72c  
 LINE ITEM No. 0153

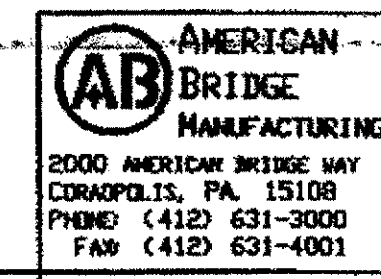
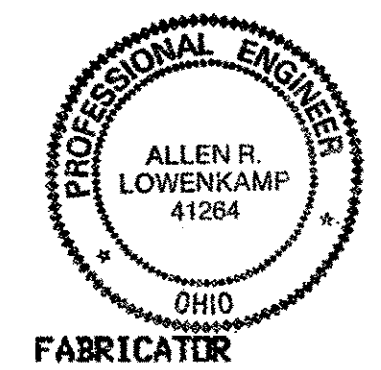
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				CONNECTION ANGLE REPLACEMENT				
2		WSB-102A	4	L 3 1/2 X 3 1/2 X 3/8	1	4 1/2		
3								
4				CONNECTION ANGLE REPLACEMENT				
5		WSB-102B	4	L 3 1/2 X 3 1/2 X 1/2	1	4 1/2		
6								
7				BACK PLATE REPLACEMENT				
8		WSB-102C	4	PL 1/2 x 16 11/16	3	3 3/4		
9								
10				BACK PLATE REPLACEMENT				
11		WSB-102D	2	PL 1/2 X 18" X	2	9 3/4		
12								
13								
14		WSB 102E	4	L 4 x 3 1/2 x 3/8	2	9 3/8		
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 15/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	2/9/01	AS/AM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E9000

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 WIND SHEAR KEY BOX REPAIRS

SPAN 4

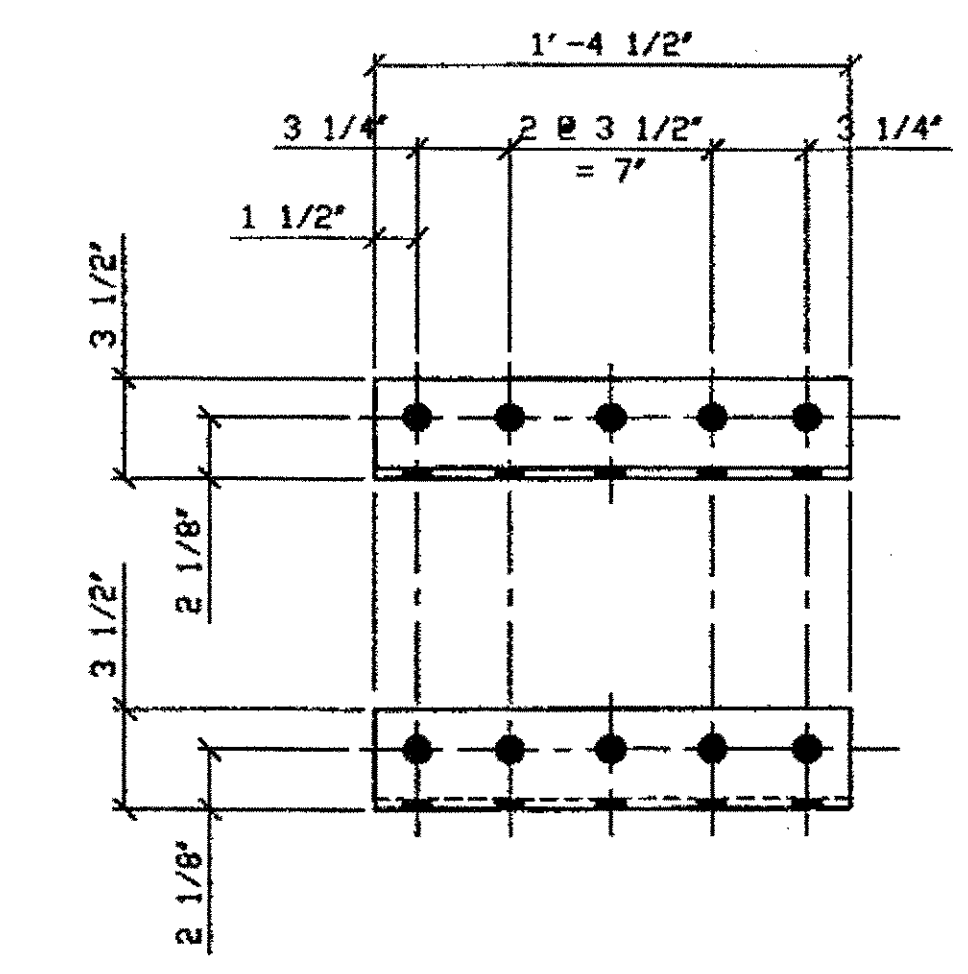
SHEET NUMBER: WSB-102  
 ASH JOB NUMBER: 800010

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JFL 9-25-01  
 CHECKED BY: DATE: GAF 10/8/01

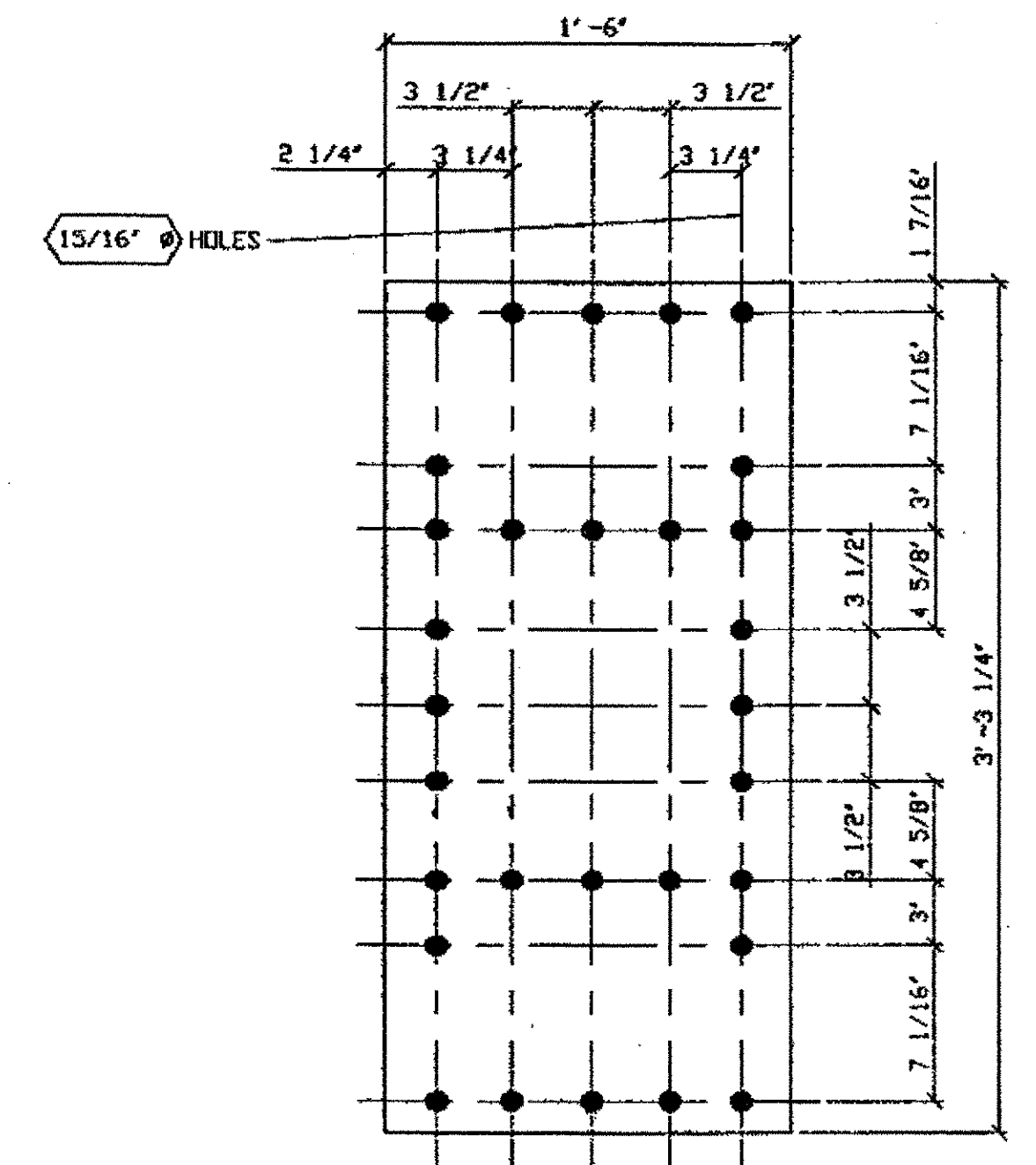
G:\Centre\300\A80001\01\Drawings\WSB102.dwg  
 Save by J.C. at 09:22am Oct 29, 2001  
 Plot by J.C. at 01:26pm Jan 15, 2002  
 Model space plot + Scale = 1/6





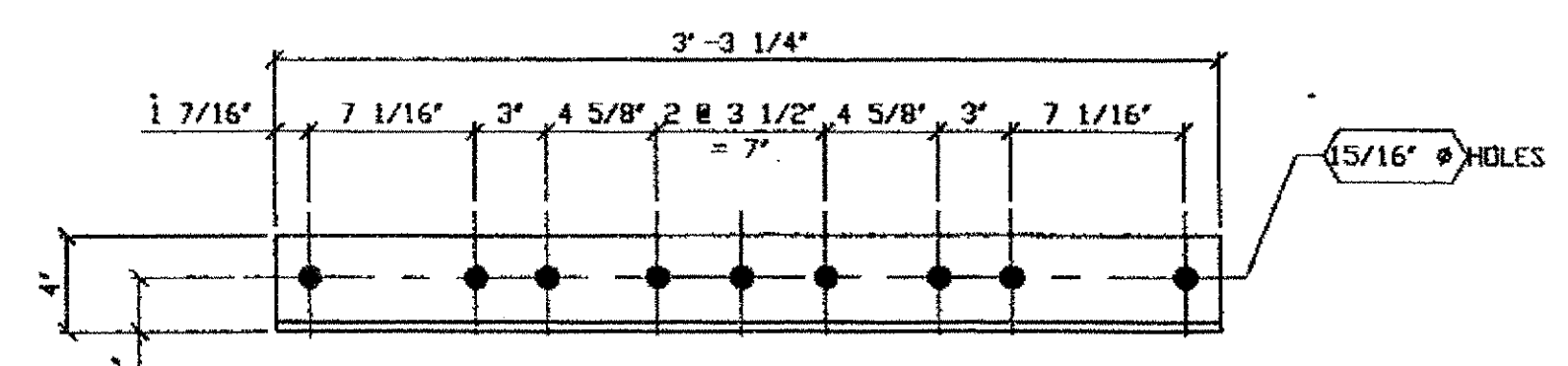
**8 - CONNECTION ANGLE REPLACEMENT- WSB-103A**

ORIG SHOP DWG 72-BS7 & 142-BS17  
 ORIG SHOP MARK A72d  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



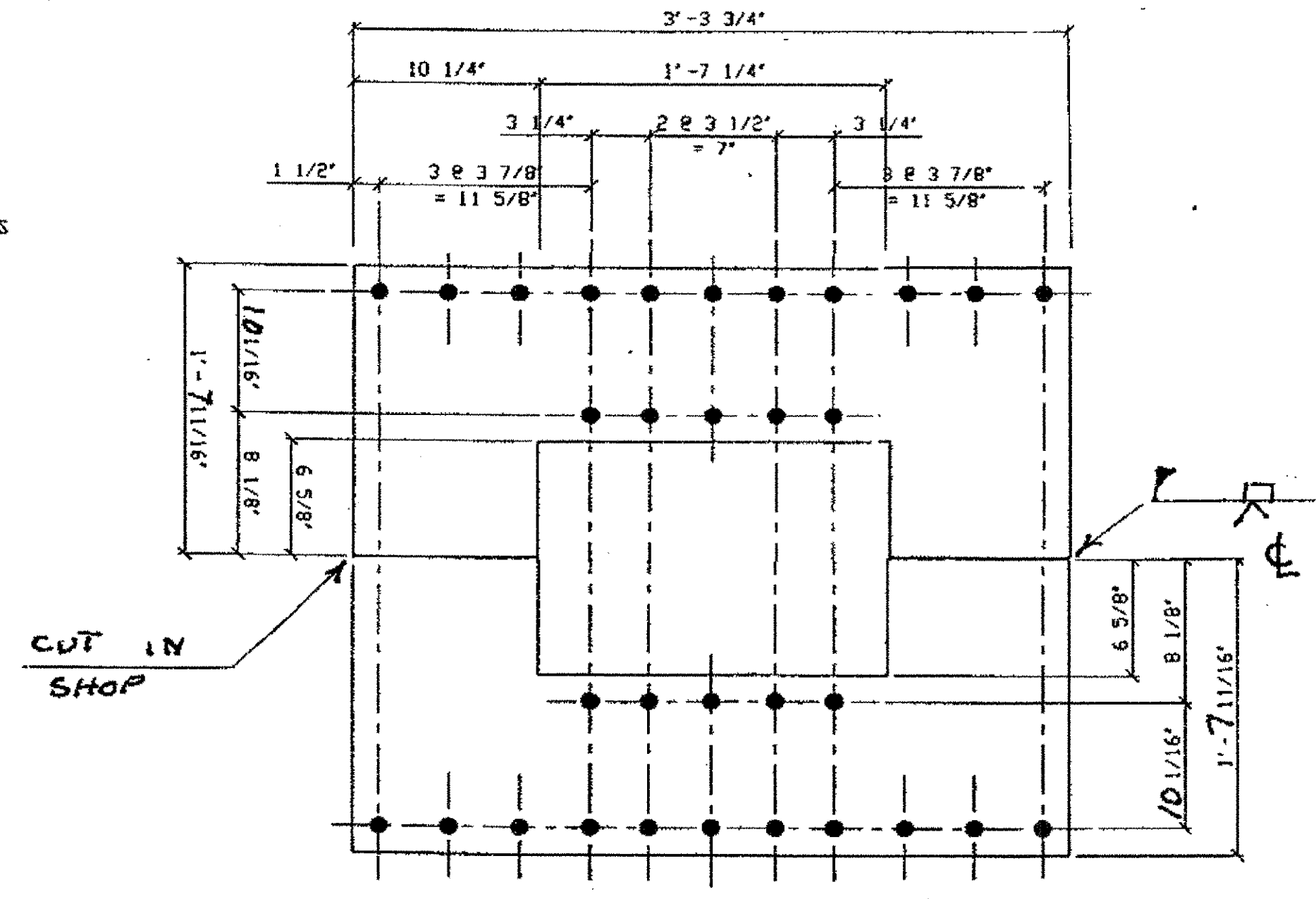
**2 - FRONT PLATE REPLACEMENT- WSB-103D**

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK P142d  
 LINE ITEM No. 0152



**4 - FRONT VERTICAL ANGLE REPLACEMENT- WSB-103B**

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK A142c  
 LINE ITEM No. 0155



**2 - BACK PLATE REPLACEMENT- WSB-103C**

ORIG SHOP DWG 72-BS7  
 ORIG SHOP MARK P72b  
 LINE ITEM No. 0152

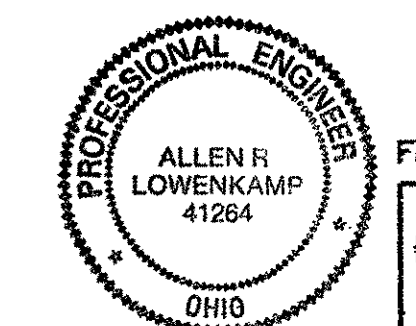
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				CONNECTION ANGLE REPLACEMENT				
2		WSB-102A	8	L 3 1/2 X 3 1/2 X 3/8	1	4 1/2		
3								
4				ANGLE REPLACEMENT				
5		WSB-102B	4	L 4 X 3 1/2 X 3/8	3	3 3/4		
6								
7				BACK PLATE REPLACEMENT				
8		WSB-102C	2	PL 1/2 X 1'-7 11/16"	3	3 3/4		
9								
10				BACK PLATE REPLACEMENT				
11		WSB-102D	2	PL 1/2 X 18"	3	3 3/4		
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE  $\phi 15/16$  UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC-CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**SPAN 6**

- NORTH @ F EAST P. 103C
- SOUTH @ F EAST P. 103C
- NORTH @ F WEST P. 103D
- SOUTH @ F WEST P. 103D
- NORTH @ F - 4 X 2-E.P., 2-W.P. 103A
- SOUTH @ F - 4 X 2-E.P., 2-W.P. 103A
- NORTH @ F 2 ON WEST P. 103B
- SOUTH @ F 2 ON WEST P. 103B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



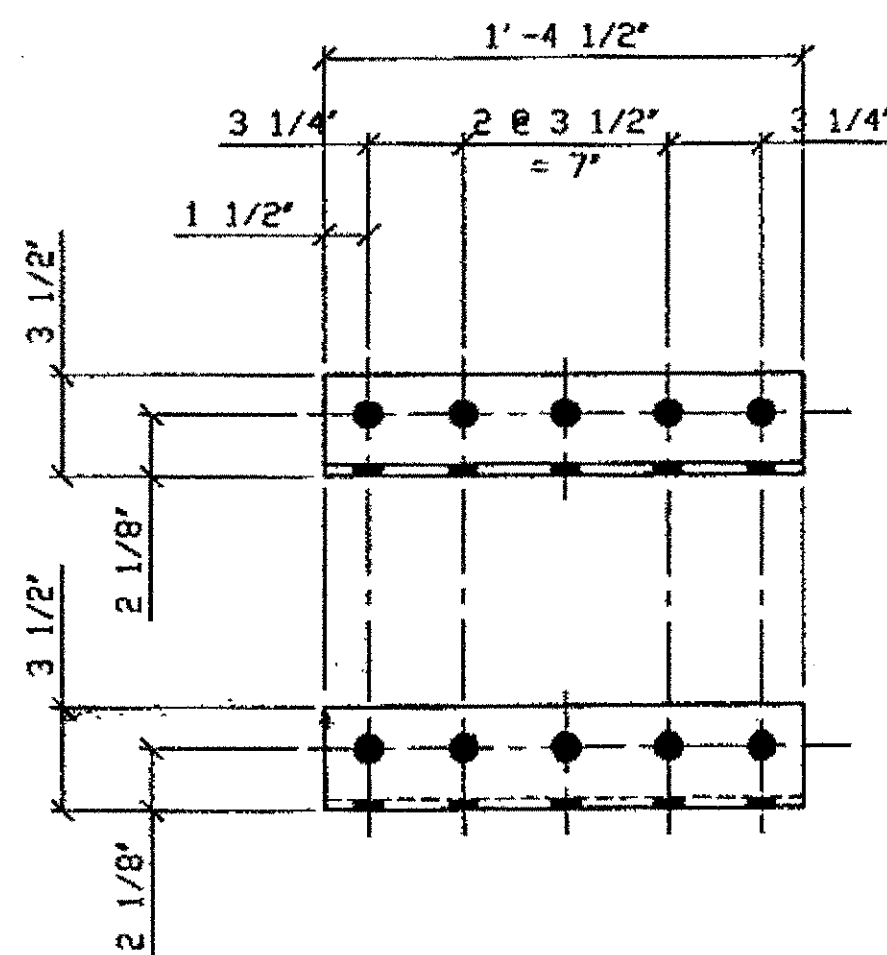
FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR:  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: JFL  
 DATE: 9-25-01  
 CHECKED BY: GAF  
 DATE: 10/8/01

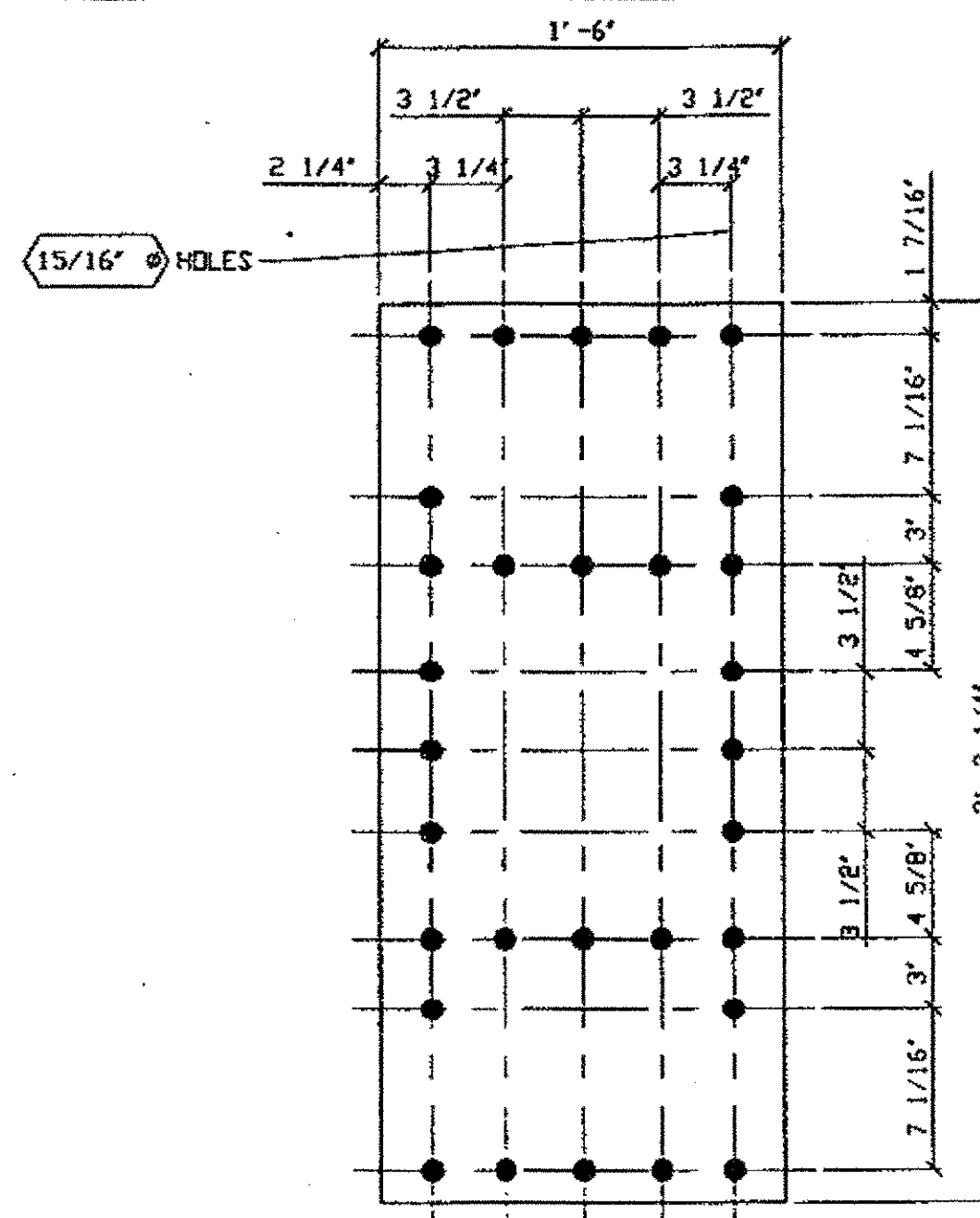
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13			
WIND SHEAR KEY BOX REPAIRS			
SPAN 6			SHEET NUMBER: WSB 103
			ARB JOB NUMBER: 80010

G:\Centre\000\8000\Drawings\WSB102.dwg  
 Save by j.c. at 09:22am Oct 09, 2001  
 Plot by gfos at 01:26pm Jan 15, 2002  
 Model space plot + Scale = 1/6



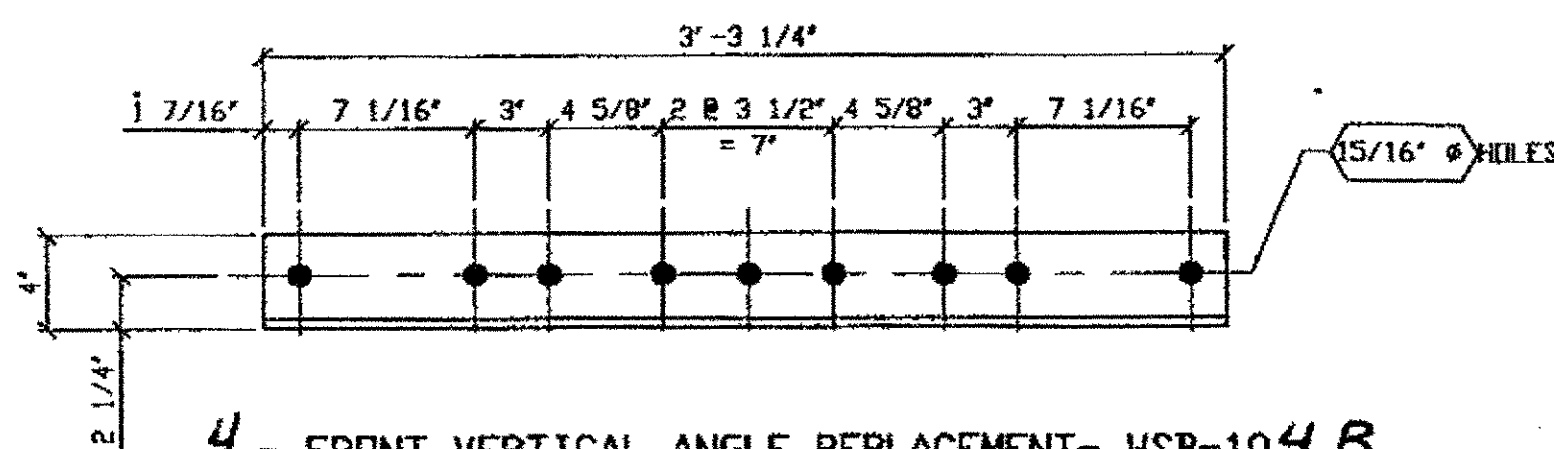
8 - CONNECTION ANGLE REPLACEMENT- WSB-104A

DRIG SHOP DWG 72-BS7 & 142-BS17  
 DRIG SHOP MARK A72d  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



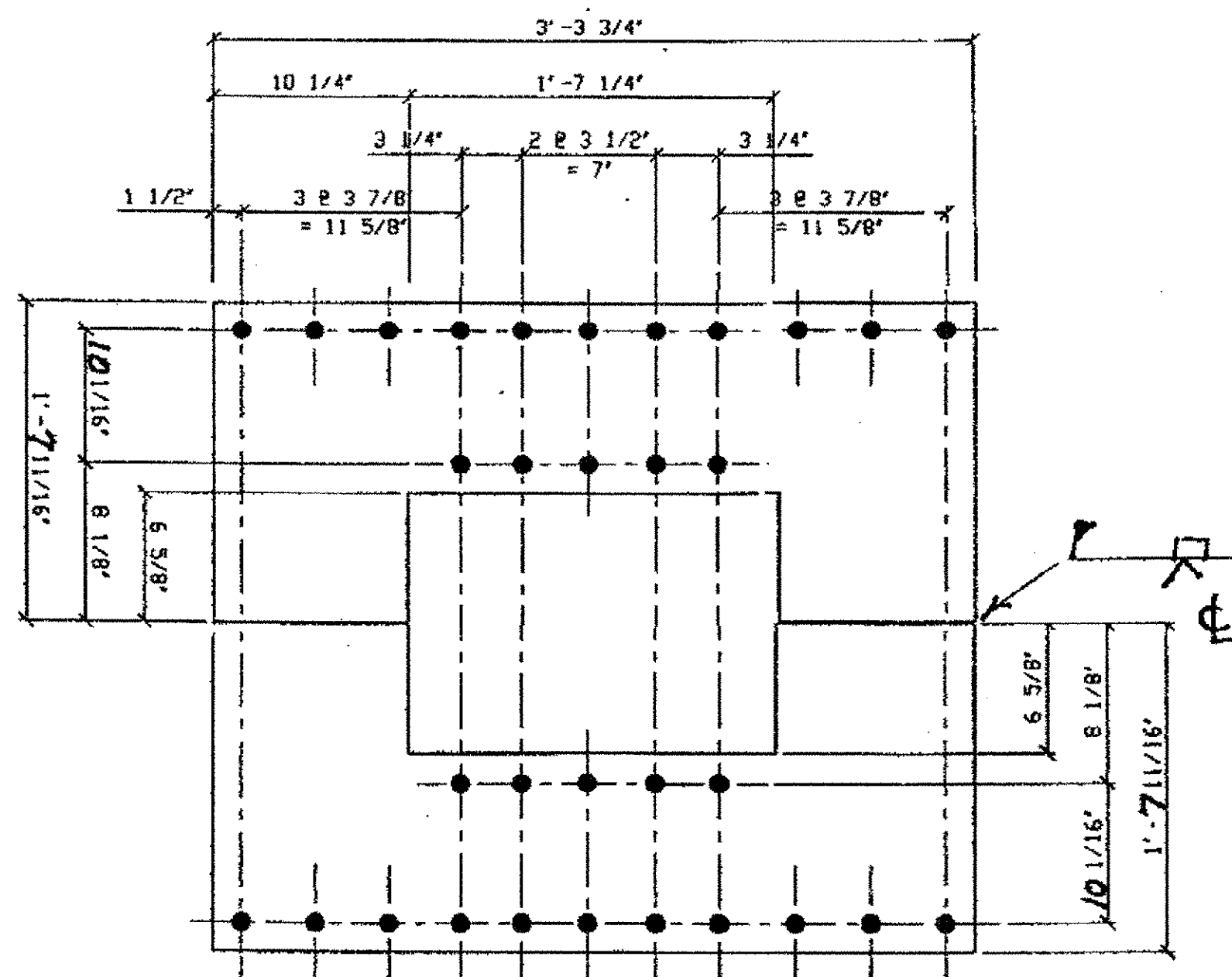
6 - FRONT PLATE REPLACEMENT- WSB-104C

DRIG SHOP DWG 142-BS17  
 DRIG SHOP MARK P142d  
 LINE ITEM No. 0152



4 - FRONT VERTICAL ANGLE REPLACEMENT- WSB-104B

DRIG SHOP DWG 142-BS17  
 DRIG SHOP MARK A142c  
 LINE ITEM No. 0153



2 - BACK PLATE REPLACEMENT- WSB-104D

DRIG SHOP DWG 72-BS7  
 DRIG SHOP MARK P72b  
 LINE ITEM No. 0152

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	MATERIAL	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				CONNECTION ANGLE REPLACEMENT				
2		WSB-104A	8	L 3 1/2 X 3 1/2 X 3/8	1	4 1/2		
3				ANGLE REPLACEMENT				
4		WSB-104B	4	L 4 X 3 1/2 X 3/8	3	3 1/4		
5				BACK PLATE REPLACEMENT				
6		WSB-104C	2	PL 1/2 X 18" X	3	3 1/4		
7				BACK PLATE REPLACEMENT				
8		WSB-104D	2	PL 1/2 X 19 11/16	3	3 3/4		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

- OPEN HOLES ARE 15/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 8

NORTH @ F EAST # 104D  
 SOUTH @ F EAST # 104D  
 NORTH @ F WEST # 104C  
 SOUTH @ F WEST # 104C  
 NORTH @ F - 4 @ 2-E.#, 2-W.# 104A  
 SOUTH @ F - 4 @ 2-E.#, 2-W.# 104A  
 NORTH @ F 2 @ ON WEST # 104B  
 SOUTH @ F 2 @ ON WEST # 104B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2200 AMERICAN BRIDGE WAY  
 CLEVELAND, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

NO.	DATE	DESCRIPTION	BY

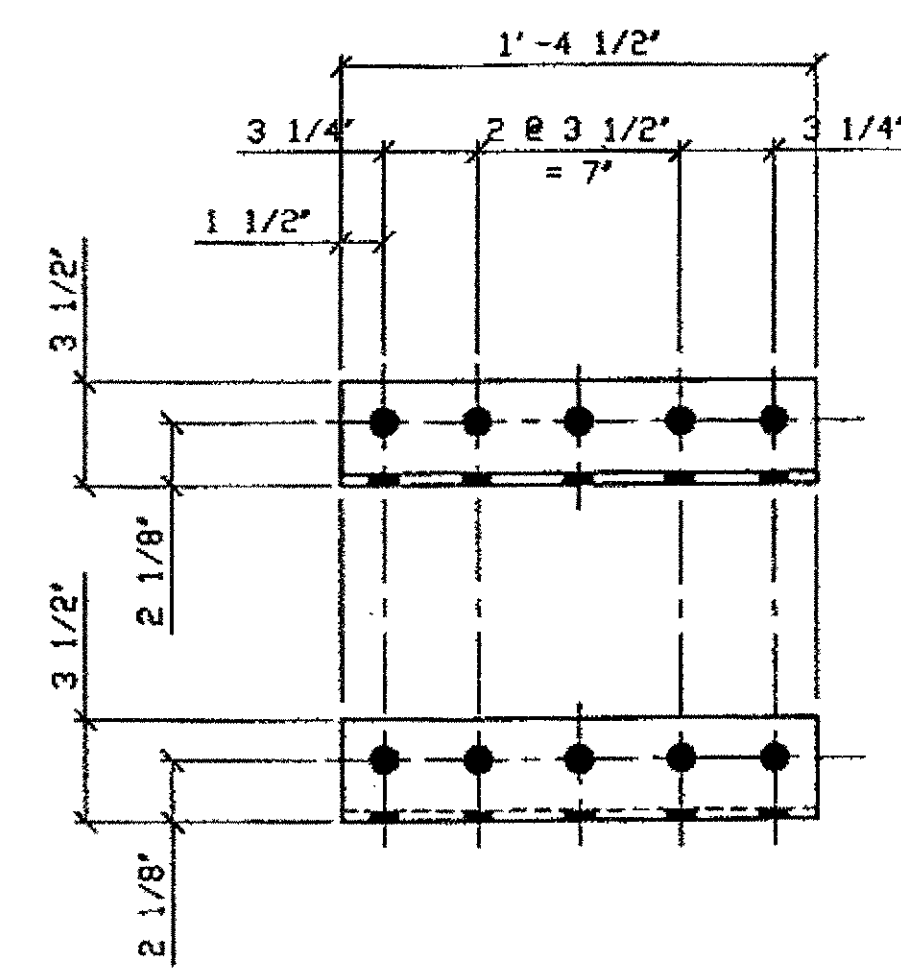
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 WIND SHEAR KEY BOX REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JFL 9-25-01  
 CHECK BY: DATE: GAF 10/8/01

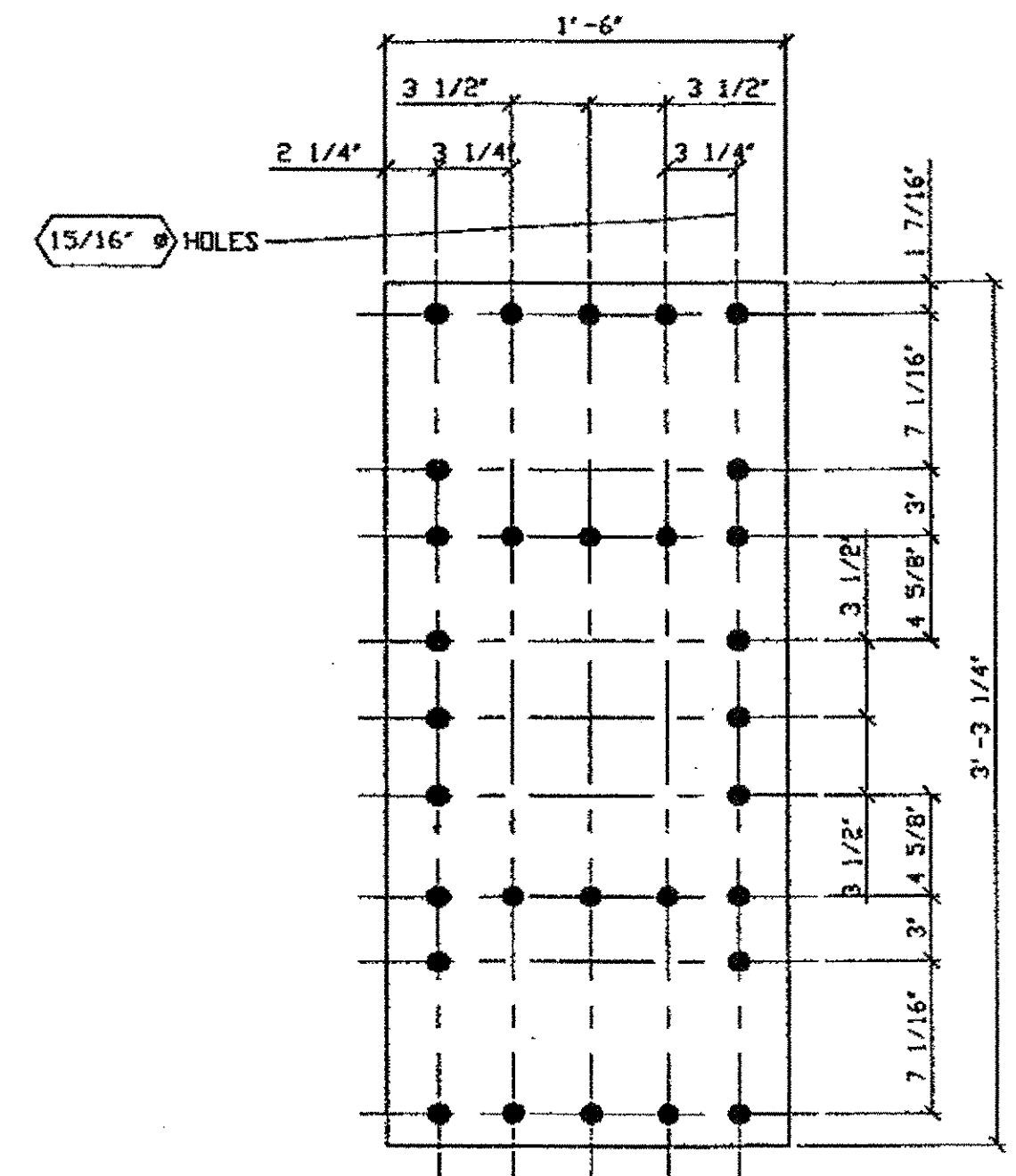
SHEET NUMBER: SPAN 8  
 VSB-104  
 AIR JOB NUMBER: 800010

G:\Contn\000\000010\Drawings\SS102.dwg  
 Save by j.c. at 09:22am Oct 29, 2001  
 Plot by gfos at 01:26pm Jan 15, 2002  
 Model Space Plot + Scale = 1/8



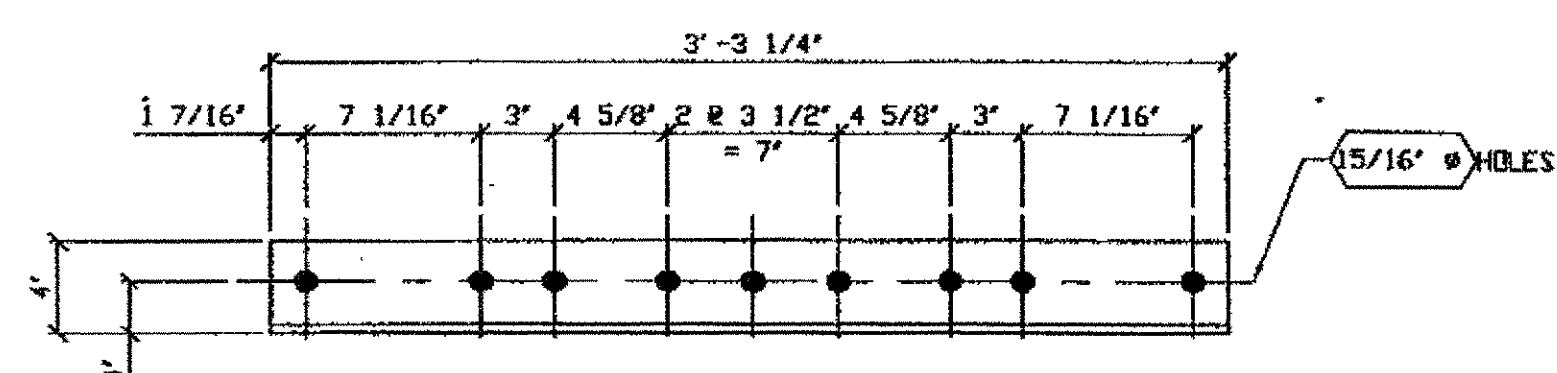
8 - CONNECTION ANGLE REPLACEMENT- WSB-105A

ORIG SHOP DWG 72-BS7 & 142-BS17  
 ORIG SHOP MARK A72d  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



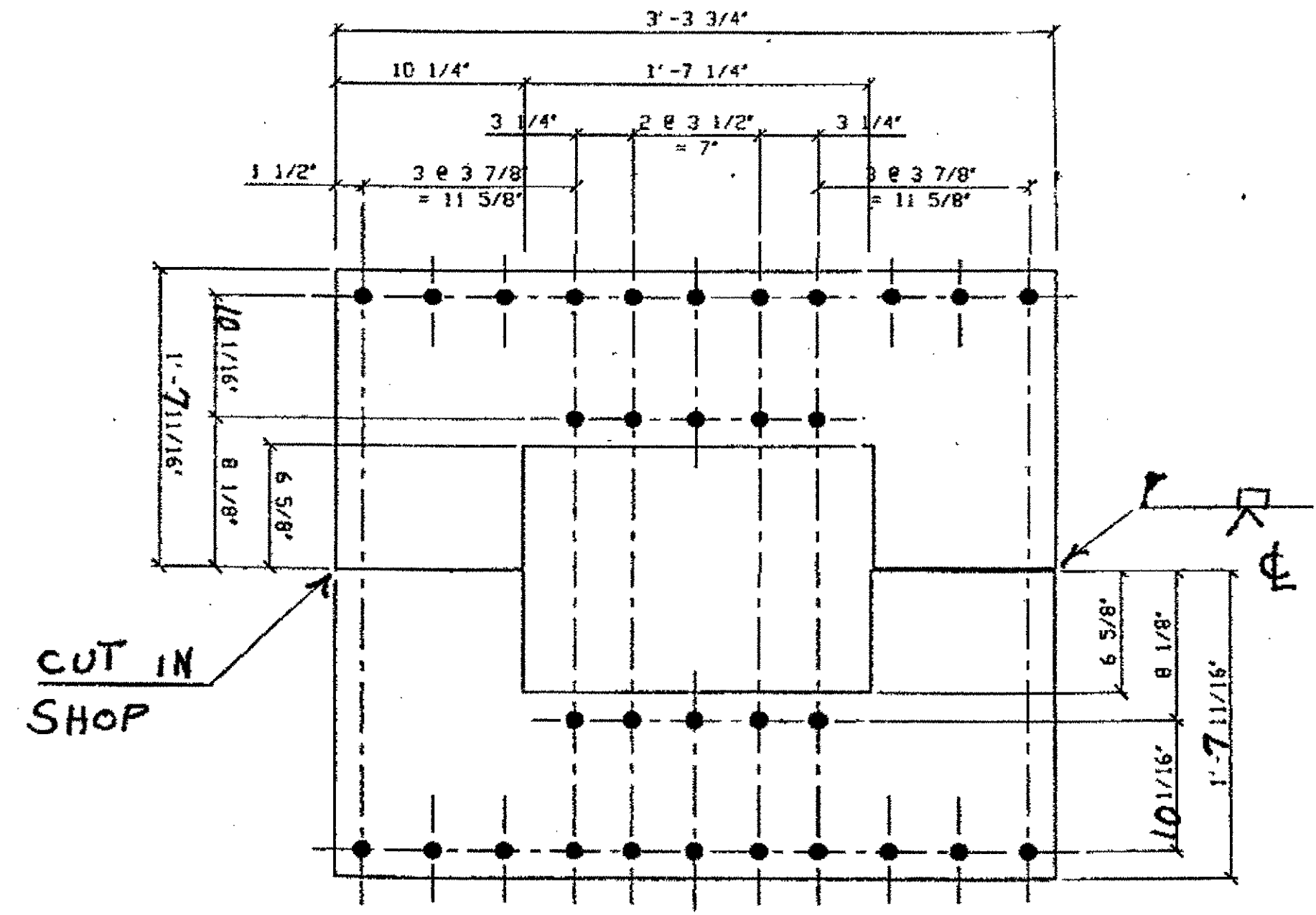
2 - FRONT PLATE REPLACEMENT- WSB-105C

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK P142d  
 LINE ITEM No. 0152



4 - FRONT VERTICAL ANGLE REPLACEMENT- WSB-105B

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK A142c  
 LINE ITEM No. 0153



2 - BACK PLATE REPLACEMENT- WSB-105D

ORIG SHOP DWG 72-BS7  
 ORIG SHOP MARK P72b  
 LINE ITEM No. 0152

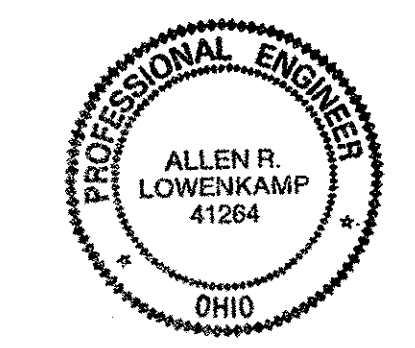
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				CONNECTION ANGLE REPLACEMENT				
2		WSB-105A	8	L 3 1/2 X 3 1/2 X 3/8	1	4 1/2		
3								
4				ANGLE REPLACEMENT				
5		WSB-105B	4	L 4 X 3 1/2 X 3/8	3	3 1/4		
6								
7				BACK PLATE REPLACEMENT				
8		WSB-105C	2	PL 1/2 X 1'-6"	3	3 1/4		
9								
10				BACK PLATE REPLACEMENT				
11		WSB-105D	2	PL 1/2 X 19 11/16	3	3 3/4		
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- NOTES:
- OPEN HOLES ARE 15/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325- TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 10

NORTH @ G EAST FR	105D
SOUTH @ G EAST FR	105D
NORTH @ G WEST FR	105C
SOUTH @ G WEST FR	105C
NORTH @ G - 4 X 2-E.FR, 2-W.FR	105A
SOUTH @ G - 4 X 2-E.FR, 2-W.FR	105A
NORTH @ G 2X ON WEST FR	105B
SOUTH @ G 2X ON WEST FR	105B

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CONROE, PA. 15106  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JFL 9-25-01  
 CHECKED BY: DATE: GAF 10/8/01

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000

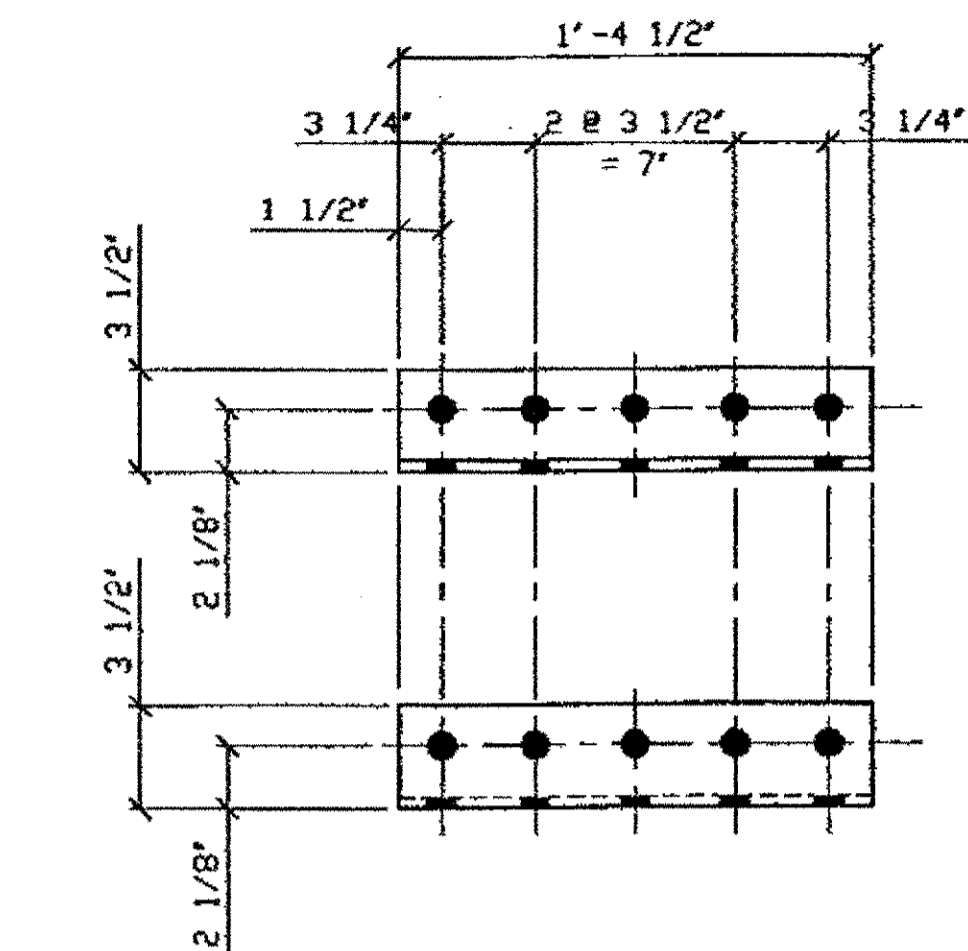
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 WIND SHEAR KEY BOX REPAIRS

SPAN 10

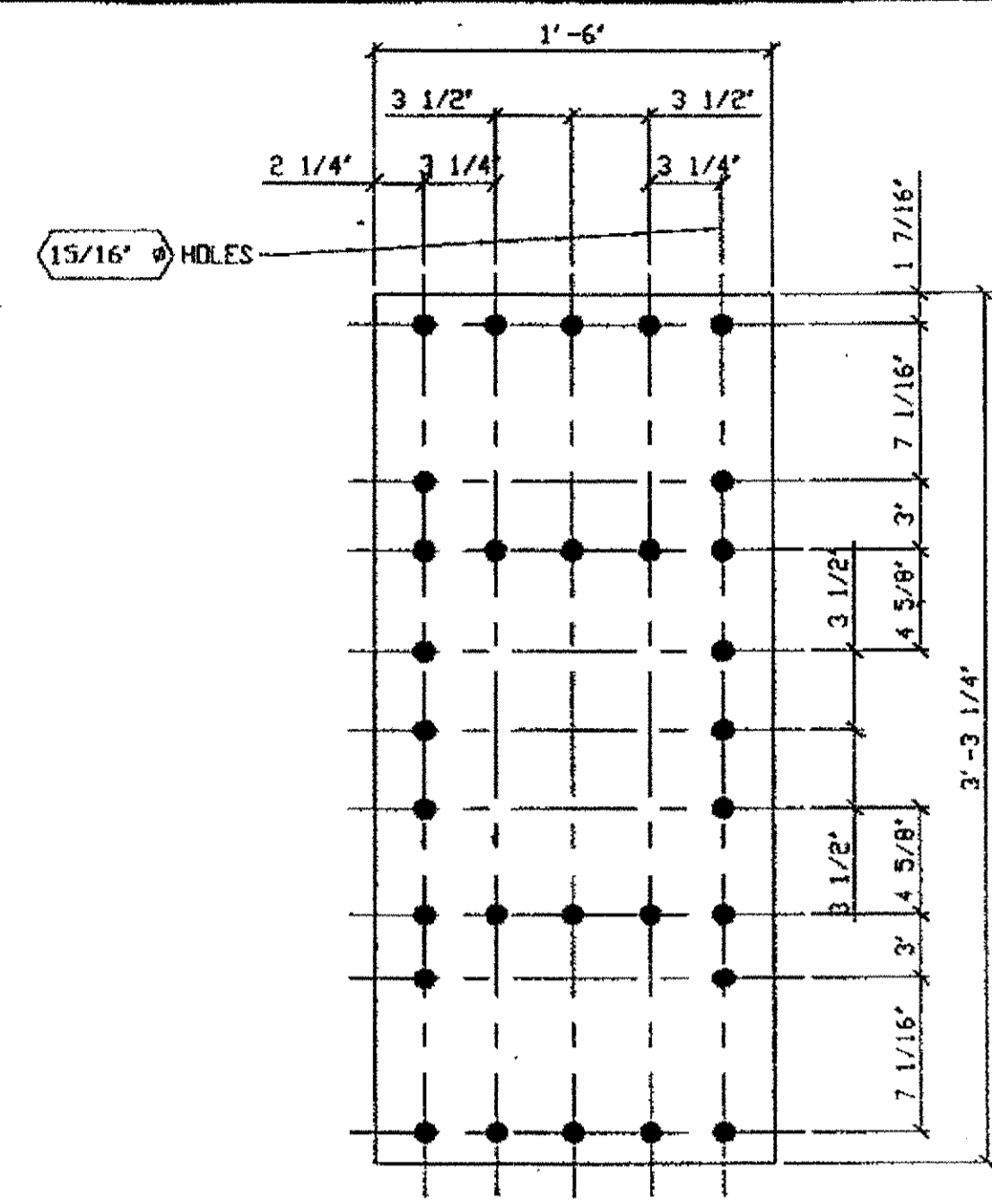
SHEET NUMBER: VSB-105  
 AIN JOB NUMBER: 800010

G:\Contra\000\800010\Drawings\VSB102.dwg  
 Save by Jc. at 09:22am Oct 29, 2001  
 Plot by gfos at 01:26pm Jan 15, 2002  
 Model space plot + Scale = 1/6



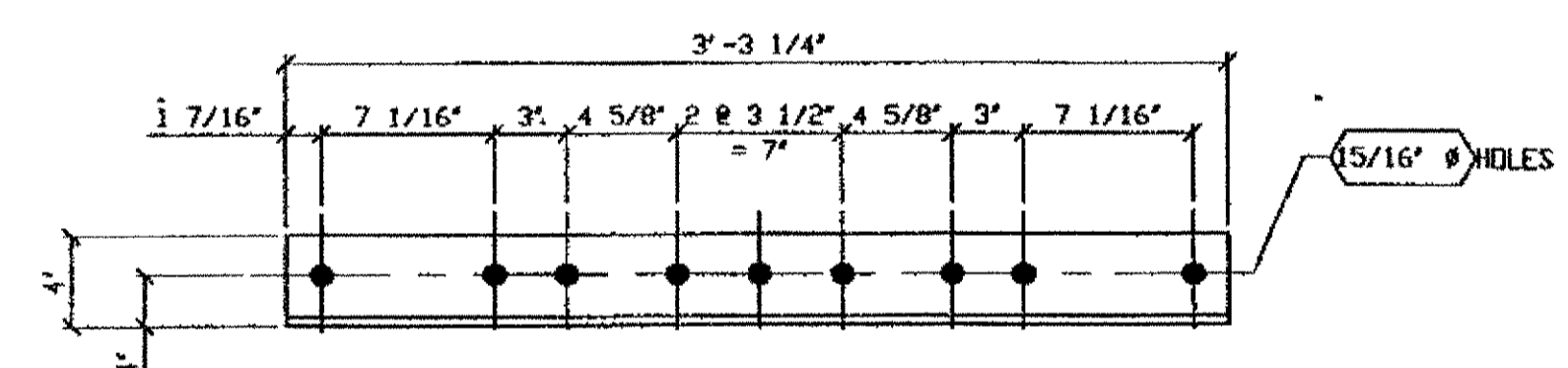
8- CONNECTION ANGLE REPLACEMENT- WSB-106A

ORIG SHOP DWG 72-BS7 & 142-BS17  
 ORIG SHOP MARK A72d  
 LINE ITEM No. 0153  
 REPAIR SHEET WSB-3, WSB-7, WSB-11, WSB-15, WSB-19,  
 WSB-23, WSB-25, WSB-27, WSB-30, & WSB-31



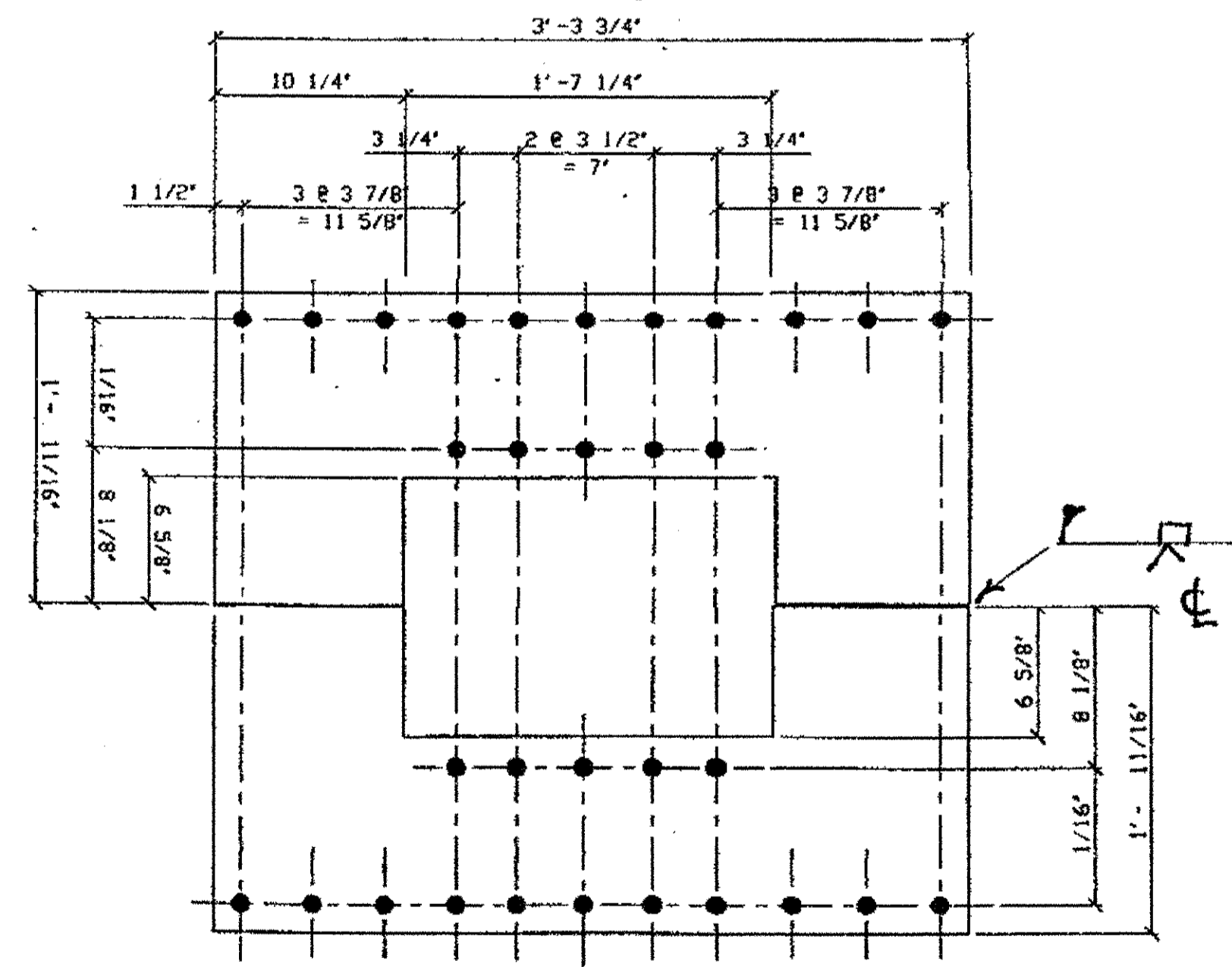
2- FRONT PLATE REPLACEMENT- WSB-106C

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK P142d  
 LINE ITEM No. 0152



4- FRONT VERTICAL ANGLE REPLACEMENT- WSB-106B

ORIG SHOP DWG 142-BS17  
 ORIG SHOP MARK A142c  
 LINE ITEM No. 0153



2- BACK PLATE REPLACEMENT- WSB-106D

ORIG SHOP DWG 72-BS7  
 ORIG SHOP MARK P72b  
 LINE ITEM No. 0152

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				CONNECTION ANGLE REPLACEMENT				
2		WSB-106A	8	L 3 1/2 X 3 1/2 X 3/8	1	4 1/2		
3								
4				ANGLE REPLACEMENT				
5		WSB-106B	4	L 4 X 3 1/2 X 3/8	3	3 1/4		
6								
7				BACK PLATE REPLACEMENT				
8		WSB-106C	2	PL 1/2 x	3	3 3/4		
9								
10				BACK PLATE REPLACEMENT				
11		WSB-106D	2	PL 1/2 X 19 11/16	3	3 3/4		
12								
13								
14								
15								
16								
17								
18								
19								
20								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

- OPEN HOLES ARE 15/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 12

NORTH @ F EAST R 106D  
 SOUTH @ F EAST R 106D  
 NORTH @ F WEST R 106C  
 SOUTH @ F WEST R 106C  
 NORTH @ F - 4 X 2-E.R, 2-W.R 106A  
 SOUTH @ F - 4 X 2-E.R, 2-W.R 106A  
 NORTH @ F 2 X ON WEST R 106B  
 SOUTH @ F 2 X ON WEST R 106B

G:\Centra\000\B00001\Drawings\WSB102.dwg  
 Save by J.C. at 09:22am Oct 29, 2001  
 Plot by J.C. at 01:26pm Jan 15, 2002  
 Model space plot + Scale = 1/6

O.D.O.T. DIST. 12  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORADELIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF L. SMITH  
 DRAWN BY DATE: JFL 9-25-01  
 CHECKED BY DATE: GAF 10/8/01

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000

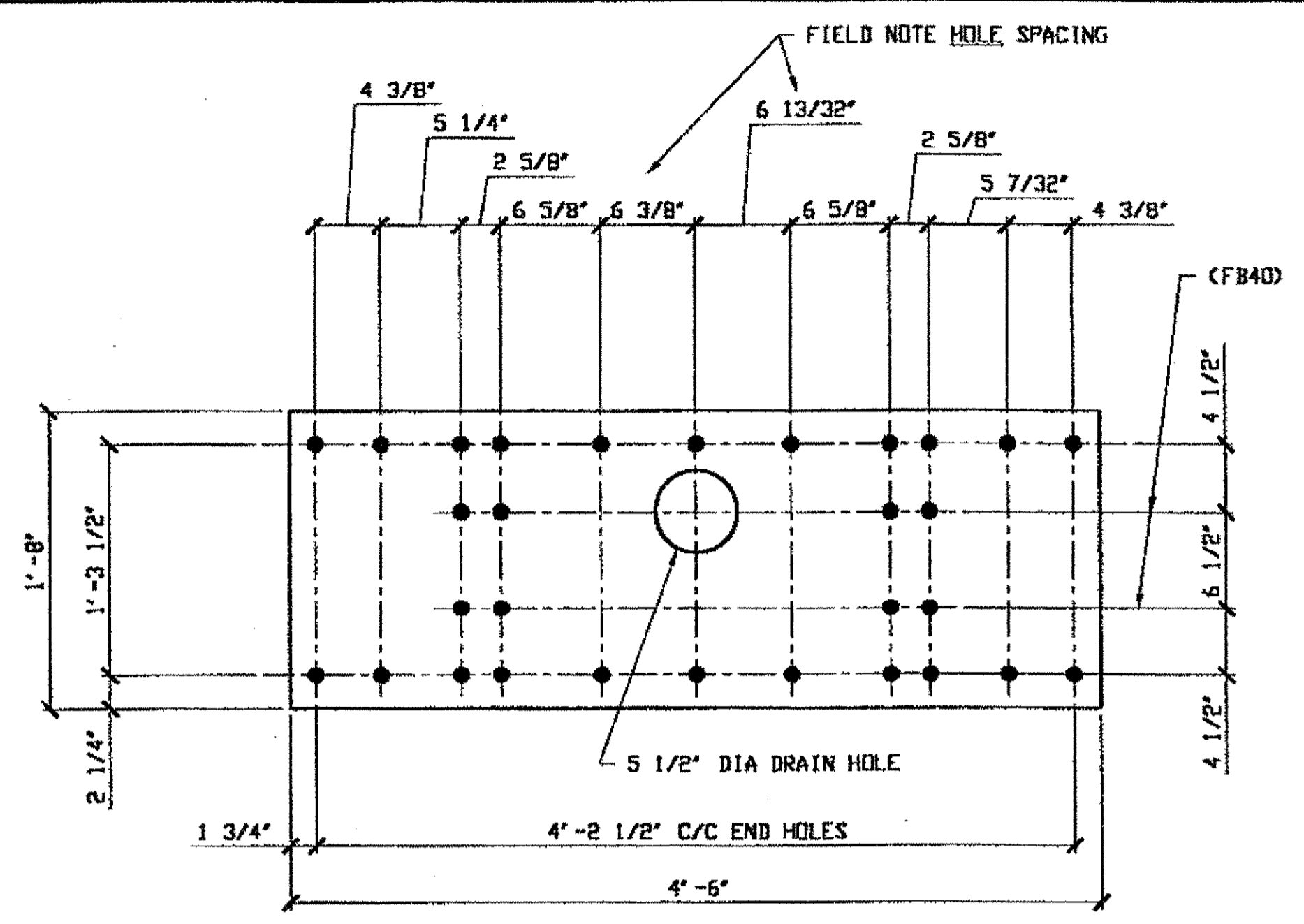
NO.	DATE	DESCRIPTION	BY
REVISIONS			

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 WIND SHEAR KEY BOX REPAIRS

SPAN 12

SHEET NUMBER: WSB-106  
 A36 JOB NUMBER: 800010

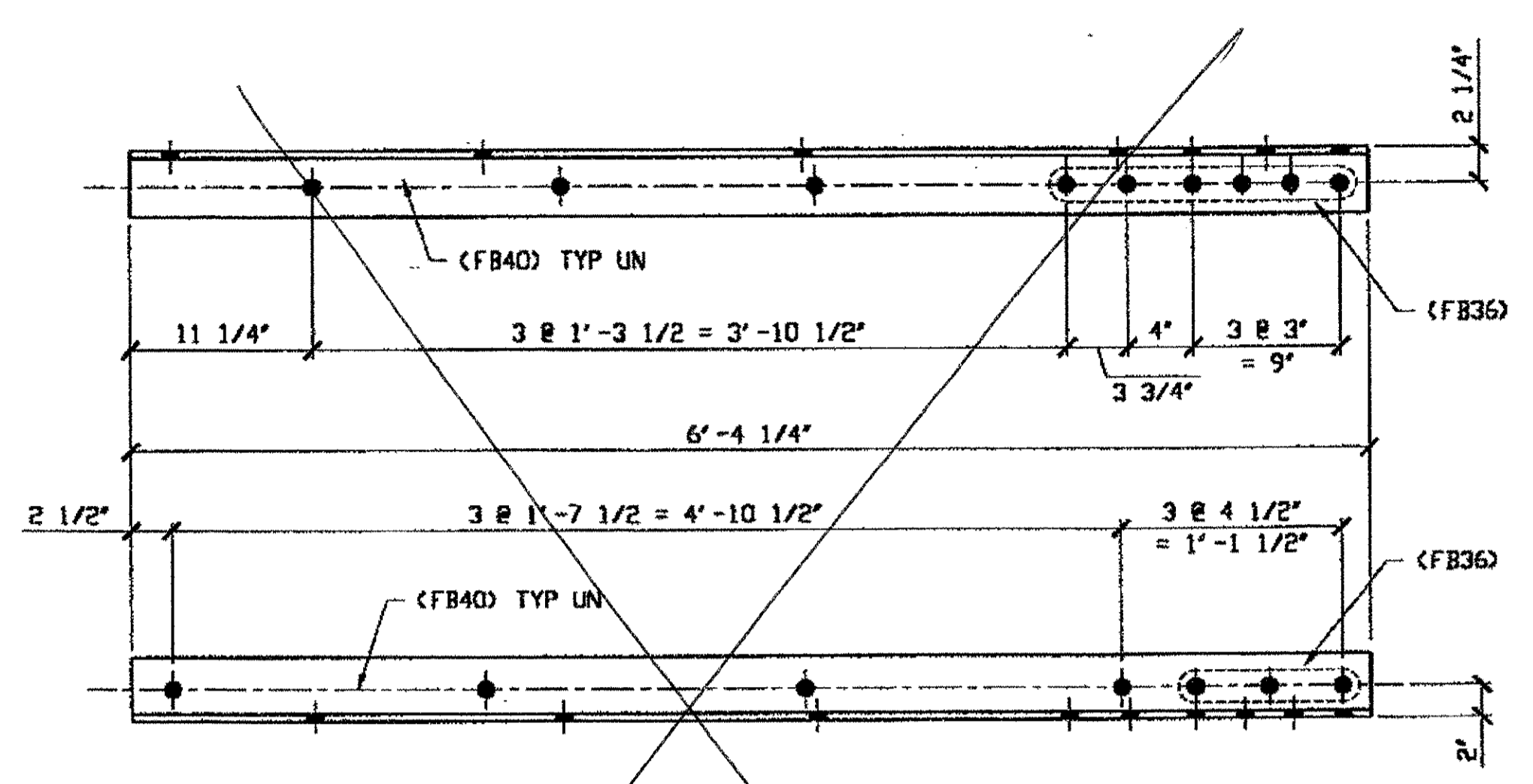
Last modified by: gfooster at 09:47am on Wed Dec 06, 2000 -1- Last plotted by gfooster at 02:21pm on Fri Dec 15, 2000



**(1) BOTTOM COVER PLATE 181A**

DRIG SHOP DWG 12-BS6  
DRIG SHOP MARK P18W  
ITEM LINE No. 0152

SPAN 1  
A-A' NORTH @ BOTTOM & 181A



**(1) TRUSS WIND SHEAR KEY TRANS REPAIR 181C**

DRIG SHOP DWG 12-BS6  
DRIG SHOP MARK A18A/R  
ITEM LINE No. 0152

SPAN 1  
A-A' NORTH, BOTTOM EAST @ N-EXT. 181C

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2		181A	1	BOTTOM COVER PLATE				
3			1	PL 1/2 X 20	4	6		153
4								
5	*	181B	1	PATCH PLATE				
6			1	PL 1/2 X 8	0	8	PLAIN MAT'L	9
7								
8		181C	1	TRUSS WIND SHEAR KEY REPAIR				
9			1	L 4 X 4 X 1/2	6	4 1/4		81
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB36	9	1" DIA	0	2 1/2	NOTE 2	13
19		FB40	15	1" DIA	0	3	NOTE 2	23
20								

PLATE	A36	PIPE	N/A	FITTINGS	N/A
SHAPES	N/A	FLGS.	N/A	BOLTS	NOTE 2

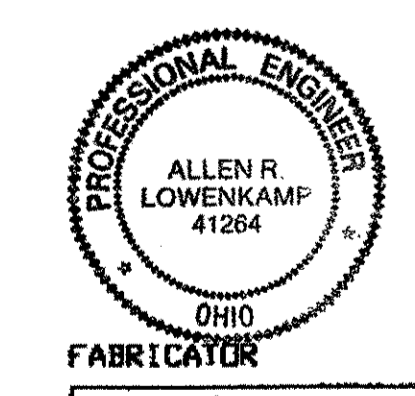
\* = DOT ITEM LINE NO. 0153

**NOTES:**

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HWY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
DATE 2/15/01 BY tdp

O.D.O.T. DIST. 12  
ACCEPTED [ ]  
ACCEPTED AS NOTED [ ]  
NOT ACCEPTED [ ]  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CUMBERLAND, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

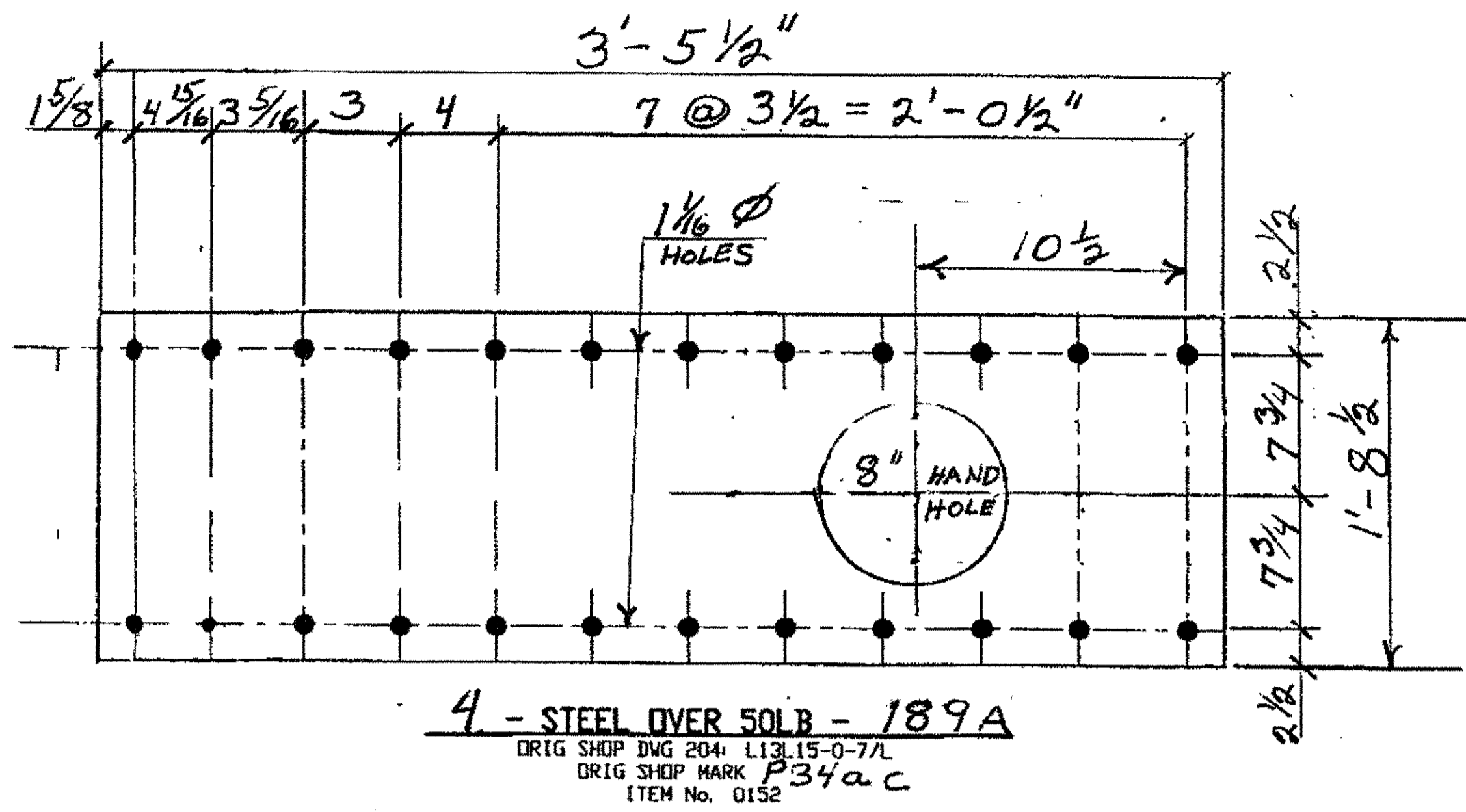
STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: GAF 11/30/00  
CHECKED BY: DATE: GWG 12/05/00

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E90000	
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION			
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 1 REPAIRS			
SHEET NUMBER		181	
JOB NUMBER		800010	

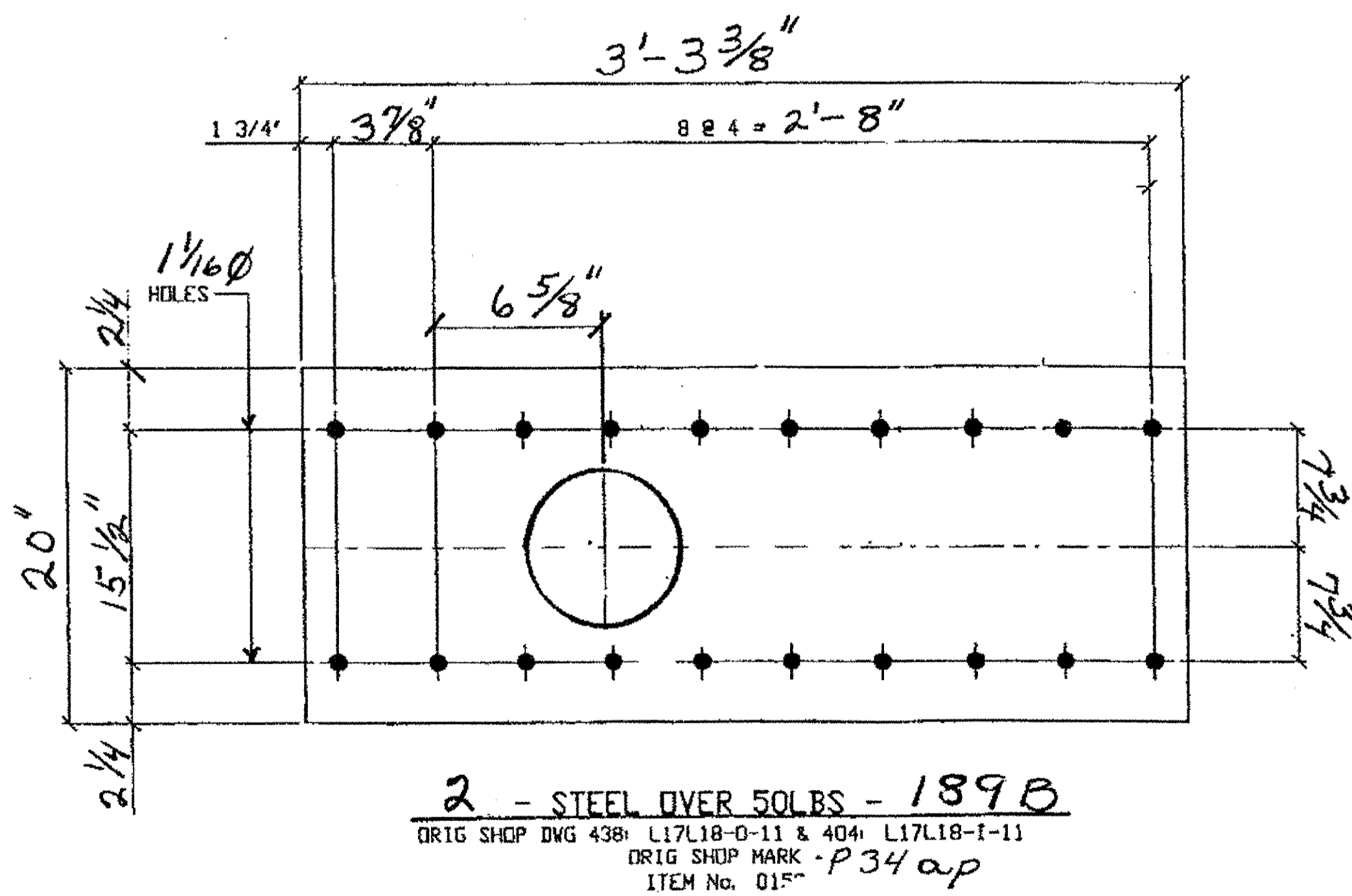
BILL OF MATERIALS

Piece No.	Qty.	Description
189A	4	# 20 1/2 x 1/2 x 3'-5 1/2"
189B	2	# 20 x 1/2 x 3'-3 3/8"
PLATE A36		



SPAN 3

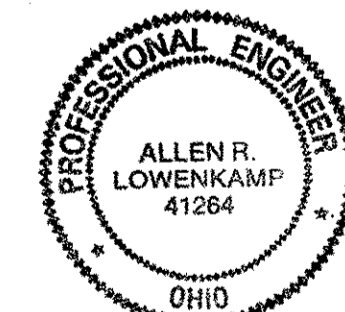
- L13 - S. EXT. Bot. 189A
- L13 - S. INT. Bot. 189A
- L13 - N. EXT. Top 189B
- L13 - N. INT. Top 189B
- L13 - N. INT. Bot 189A



O.D.O.T. DIST. 12

ACCEPTED	2/19/04	PSTN
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

**Tri Plate Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16.13**  
**SPAN 2**

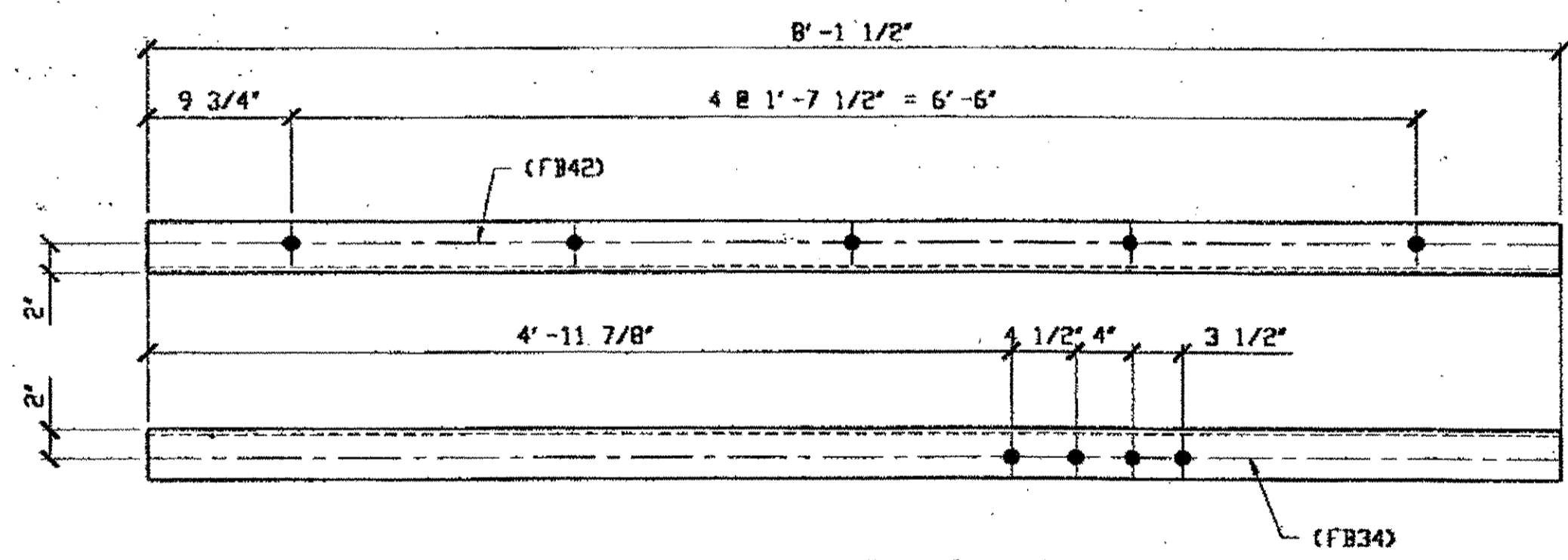
SCALE: NA      DRAWING NO. 189

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				SWAY FRAME VERTICAL GUSSET PLATE				
2								
3								
4								
5								
6								
7				STEEL OVER 50 LB				
8		213C		1 L 3 1/2 X 3 1/2 X 3/8	8	1 1/2		69
9		213D		1 L 3 1/2 X 3 1/2 X 3/8	9	9		83
10								
11								
12								
13								
14								
15								
16								
17				FIELD BOLTS				
18		FB34		1" DIA	0	2 1/4	NOTE 2	
19		FB36		1" DIA	0	2 1/2	NOTE 2	
20		FB42		1" DIA	0	3 1/4	NOTE 2	
PLATE A36		PIPE N/A		FITTINGS N/A				
SHAPES A36		FLGS. N/A		BOLTS N/A		WASHERS 2		

**SPAN 3**

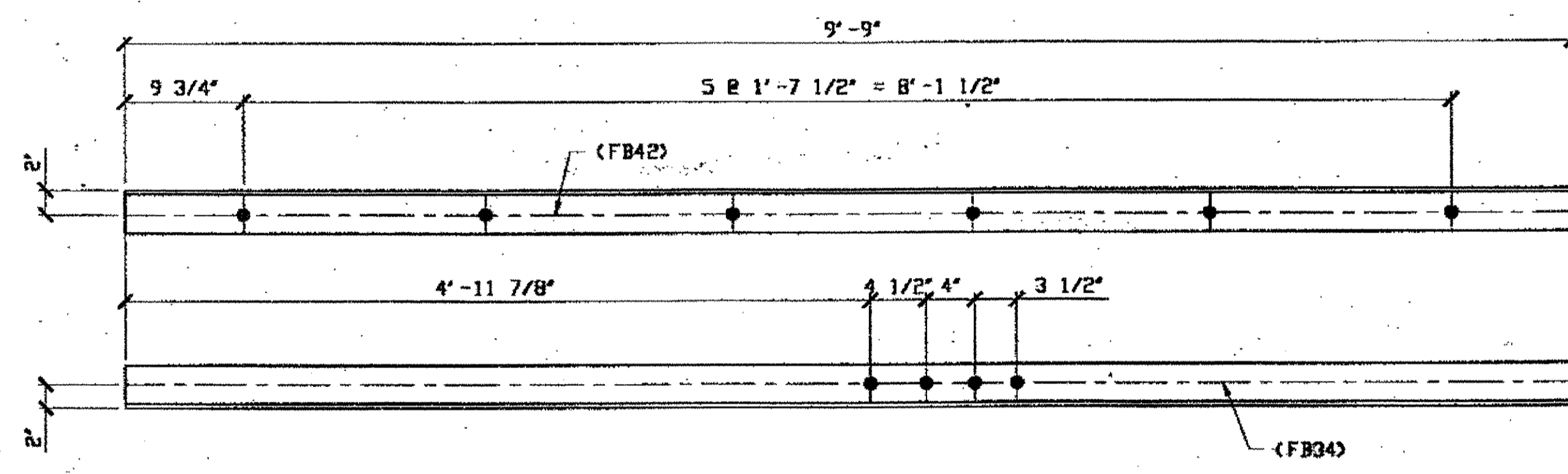
N-0' NORTH, BOTTOM NORTH BETWEEN 5<sup>th</sup> & 10<sup>th</sup>  
LACING SETS 213C



**1 - STEEL OVER 50 LB - 213C**  
ORIG SHOP DWG 16-BL26  
ORIG SHOP MARK A16ap R/L  
LINE ITEM No. D152  
BID ITEM No. 863E90000

**SPAN 3**

N-0' NORTH, TOP SOUTH BETWEEN 5<sup>th</sup> & 10<sup>th</sup>  
LACING SETS 213D



**1 - STEEL OVER 50 LB - 213D**  
ORIG SHOP DWG 16-BL26  
ORIG SHOP MARK A16ap R/L  
LINE ITEM No. D152  
BID ITEM No. 863E90000

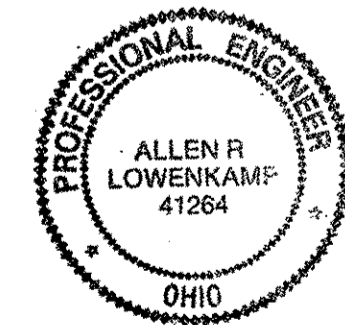
RELEASED FOR CONSTRUCTION  
DATE 2/19/01 BY tdp

- NOTES:**
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

**O.D.O.T. DIST. 12**

ACCEPTED	2/9/01	PJM
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
2000 AMERICAN BRIDGE HWY  
COLUMBIAS, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

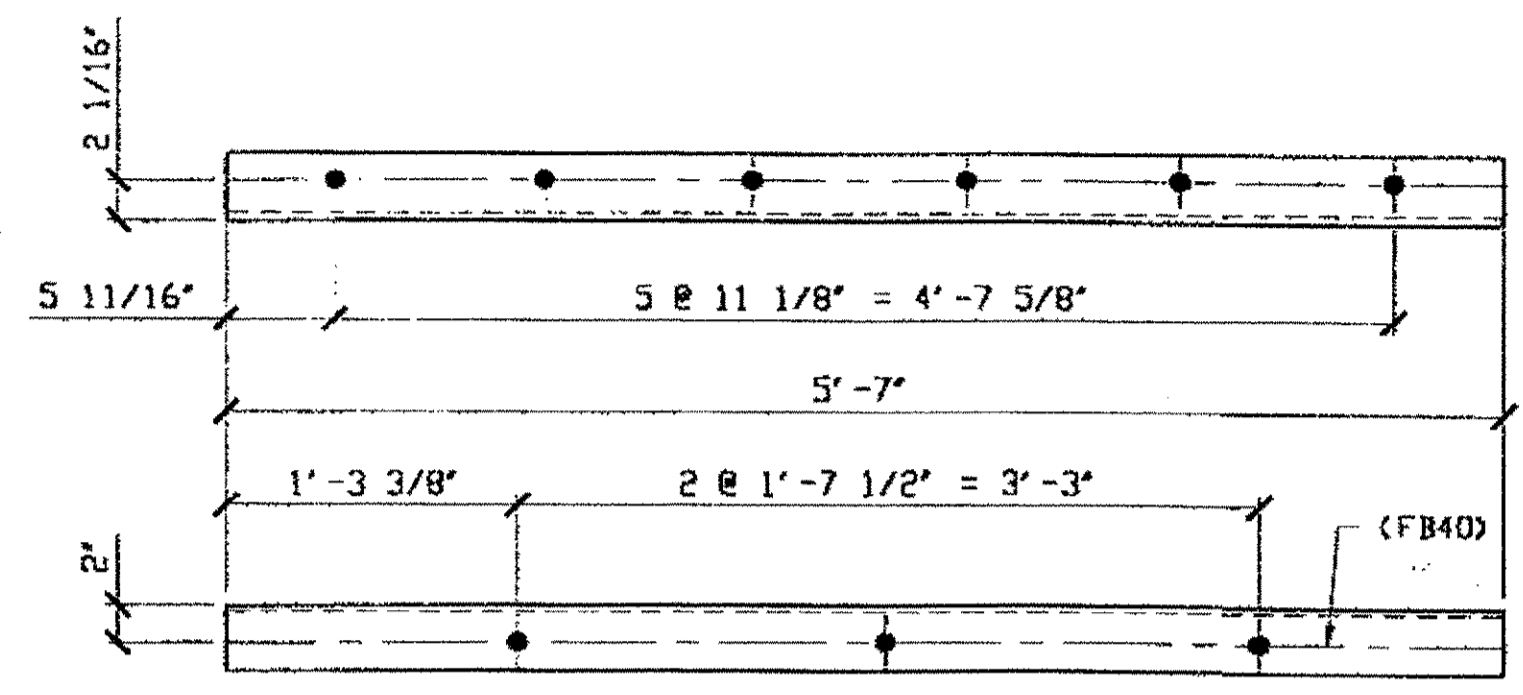
IN CHARGE OF: L. SMITH  
DRAWN BY: DATE: RAS 1/04/01  
CHECKED BY: DATE: GAF 01/09/01

DOT ITEM LINE NO. AS NOTED		DOT BID ITEM NO. 863E90000 U.N.O.	
NO.	DATE	DESCRIPTION	BY
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION			
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO <b>BRIDGE No. CUY-10-16.13</b> <b>SPAN 3 REPAIRS</b>			
SHEET NUMBER: 213		JOB NUMBER: 800010	

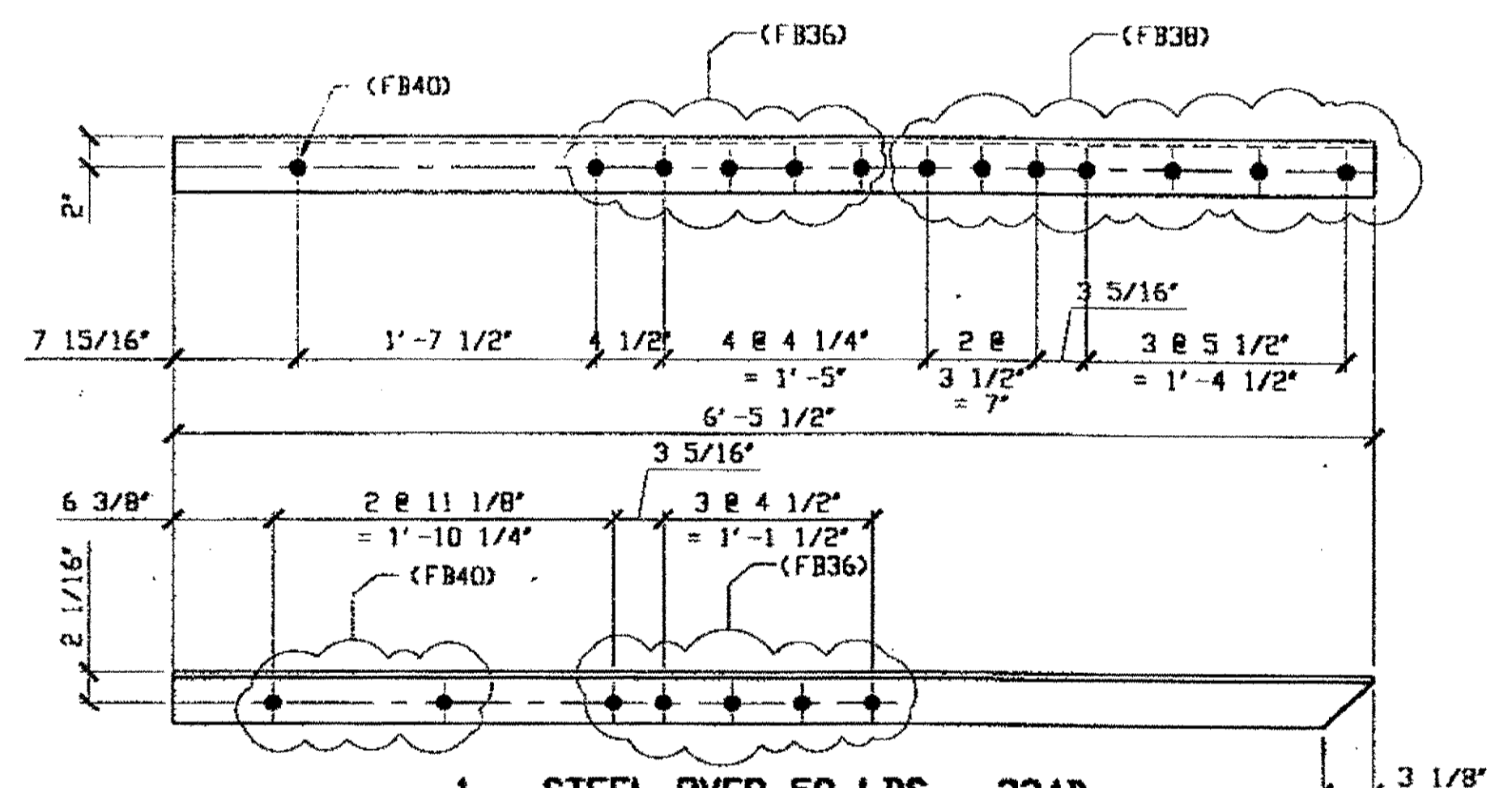
Last modified at \$(EDTIME,??) on \$(EDTIME,??) - last plotted by Gfoster 14:11:2pm on Mon Feb 05, 2001

440

Last modified by rspringer at 09:10am on Mon Feb 12, 2001. Last plotted by Gfoester at 09:18am on Mon Feb 12, 2001.



**2 - STEEL UNDER 50 LBS - 234A R/L**  
 ORIG SHOP MARK A72k/L & A72m/L  
 ORIG SHOP DWG 72-BL29/L  
 DOT ITEM NO. 0153  
 DOT BID ITEM NO. 863E90000  
 REPAIR SHEET 4-100



**1 - STEEL OVER 50 LBS - 234B**  
 ORIG SHOP MARK A72k/R  
 ORIG SHOP DWG 72-BL29/R  
 DOT ITEM NO. 0152  
 DOT BID ITEM NO. 863E90000  
 REPAIR SHEET 4-109

SPAN 4  
A-B' SOUTH, TOP N-1S & FROM B<sup>th</sup> 14<sup>th</sup> LACING SET 234A R/L  
C-D NORTH @ D BOT. NORTH & 234 B

**BILL OF MATERIAL**

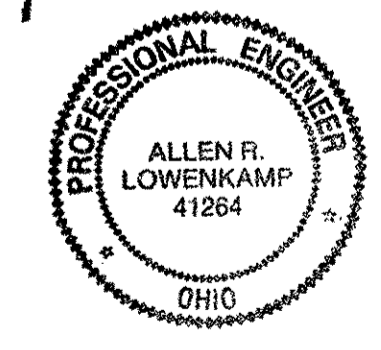
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL UNDER 50 LBS				
2		234A R/L	2	L 3 1/2 X 3 1/2 X 3/8	5	7		94
3								
4				STEEL OVER 50 LBS				
5		234B	1	L 3 1/2 X 3 1/2 X 3/8	6	5 1/2		55
6								
7				SPOT REPAIRS				
8		234C	1	BAR 3 X 1/2	10	0	PLAIN MATL	51
9								
10				SPLICE PLATES				
11		234D	10	BAR 3 X 1/2	0	6	PLAIN MATL	26
12								
13				FIELD BOLTS				
14		FB36	10	1" DIA	0	2 1/2	NOTE 2	14
15		FB3B	7	1" DIA	0	2 3/4	NOTE 2	10
16		FB40	9	1" DIA	0	3	NOTE 2	14
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

DOT ITEM NO. 0104  
 DOT ITEM NO. 0104

- NOTES:**
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD IV ORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 2/21/01 BY tdp/tss  
 FEB 13 2001

O.D.O.T. DIST. 12  
 ACCEPTED AS NOTED 2/21/01 PSM  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORNOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEIDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 02/01/01  
 CHECKED BY: DATE: GAF 02/09/01

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000 U.N.

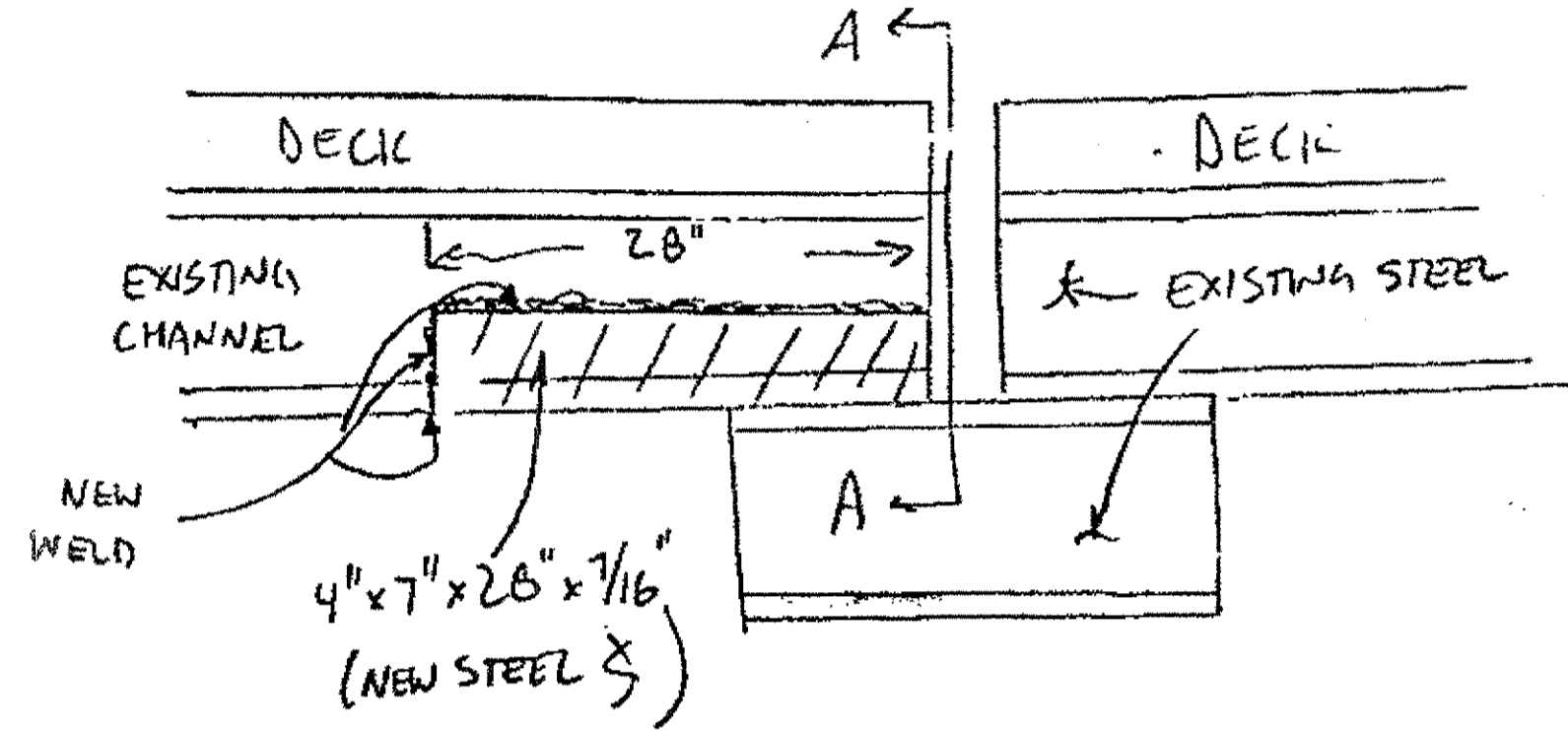
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 4 REPAIRS

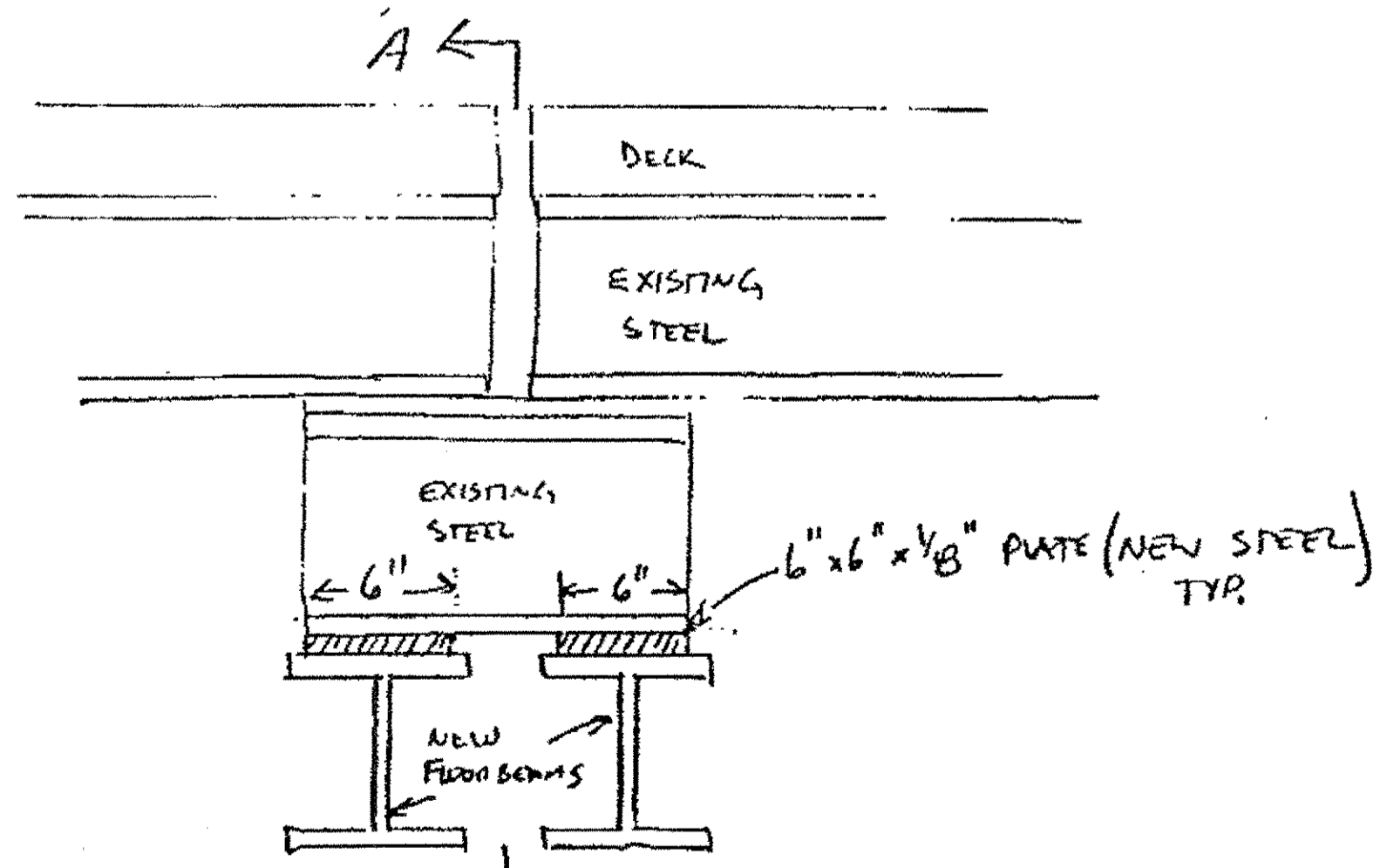
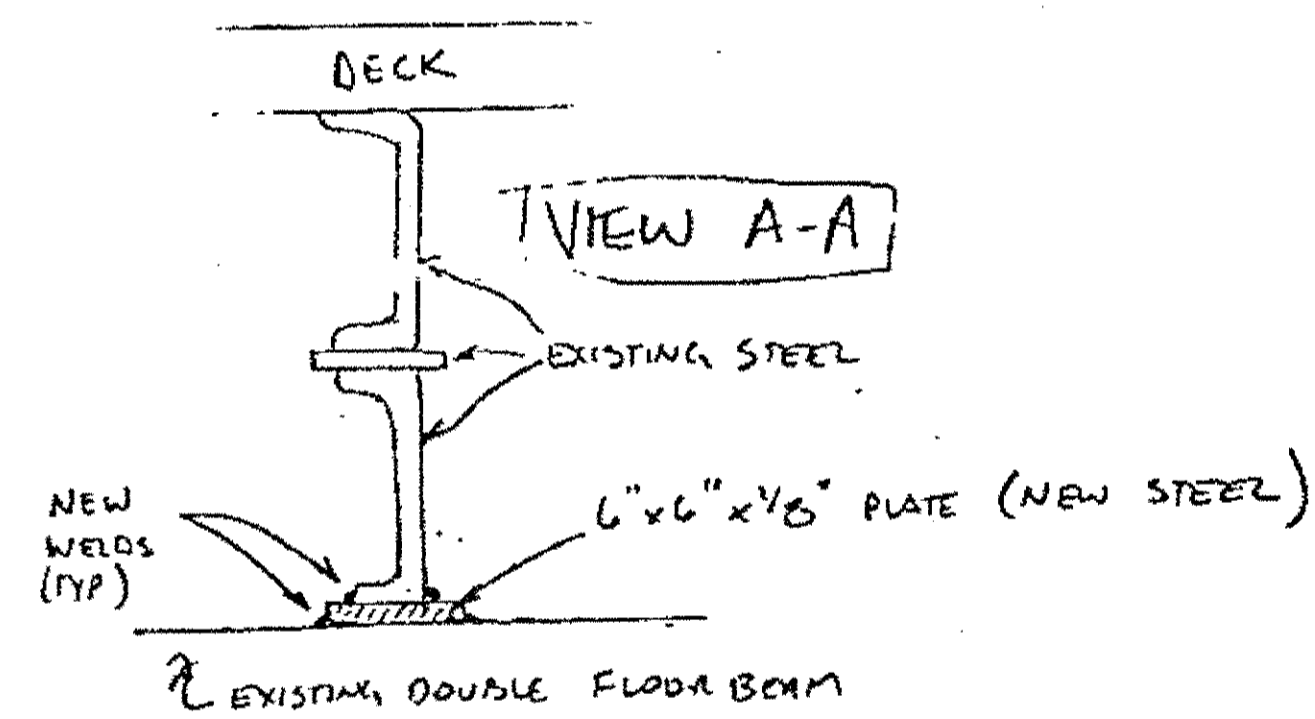
SHEET NUMBER: 234  
 JOB NUMBER: 800010



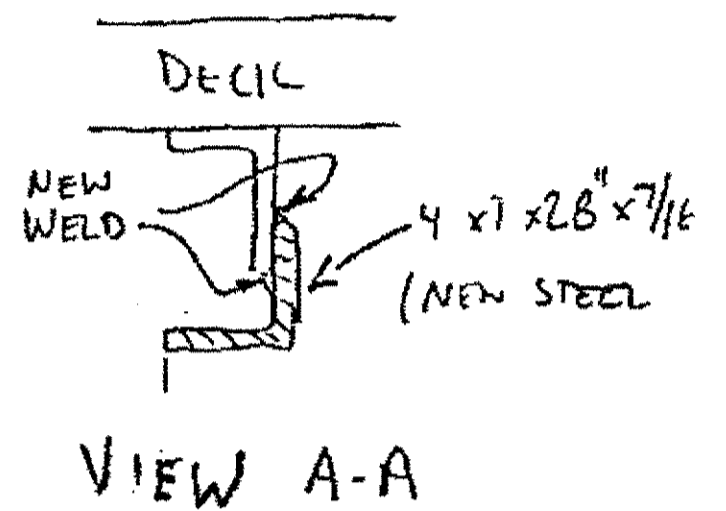
CUT THE LOWER 2'-3" OF THE NORTH UTILITY DECK FASCIA STRINGER (STRINGER A) (SEE ATTACHMENT FOR DETAILS)  
 REMOVE 28" OF THE STRINGER & REPLACE WITH A (38")  
 4" x 7" x 28" x 7/16", WELD THE ANGLE TO THE REMAINING STRINGER.



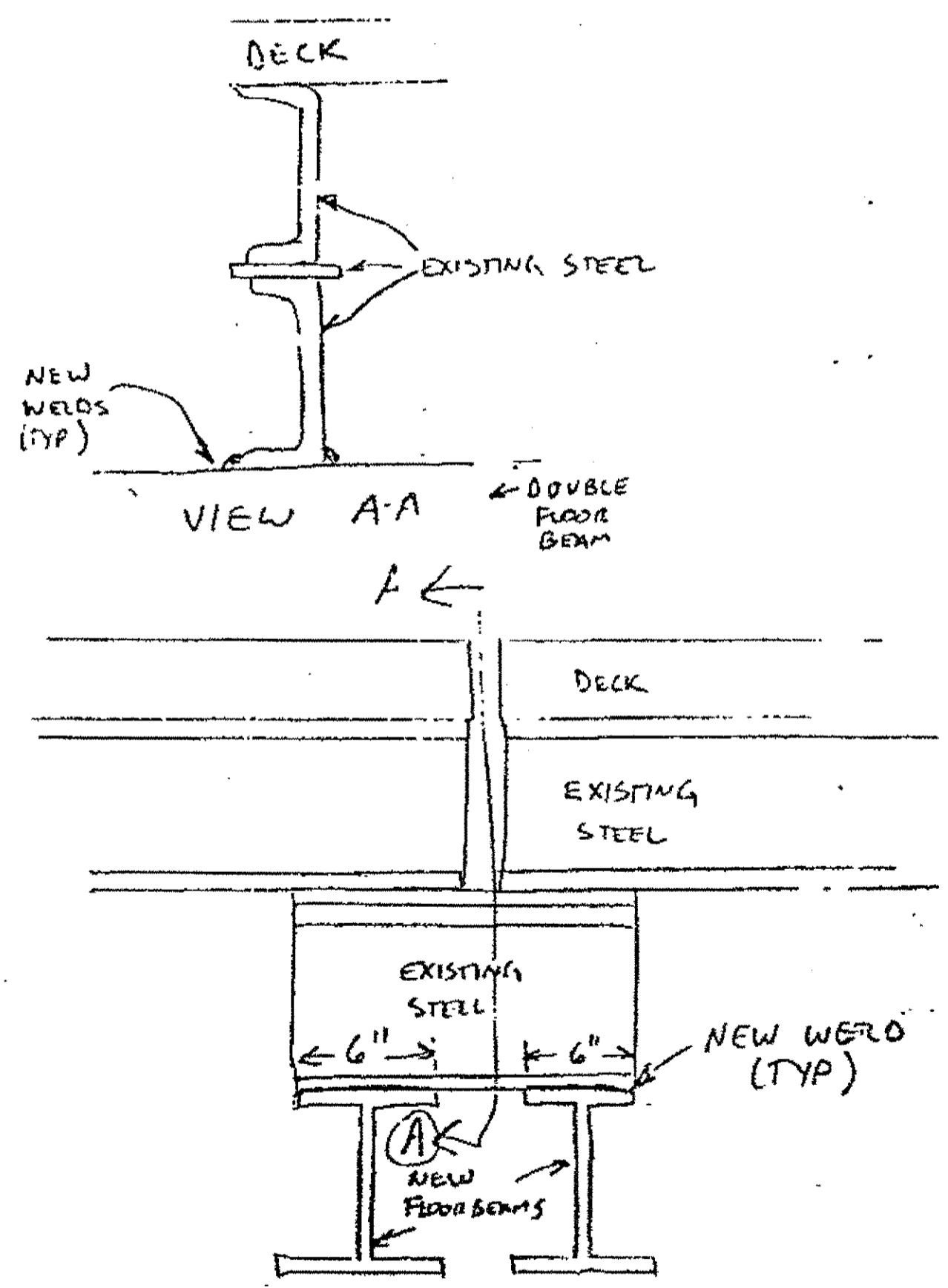
REPAIR 1A



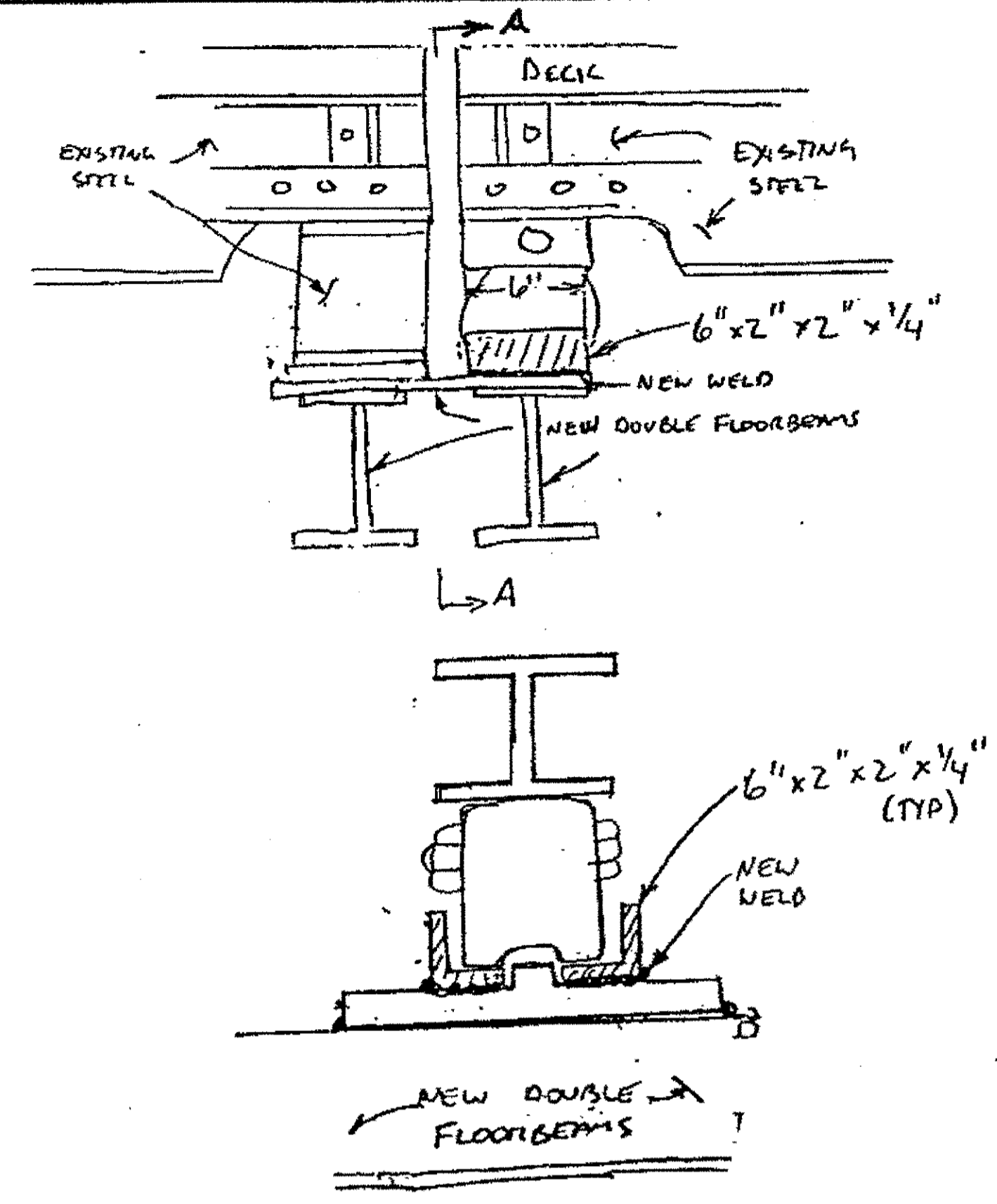
REPAIR 1



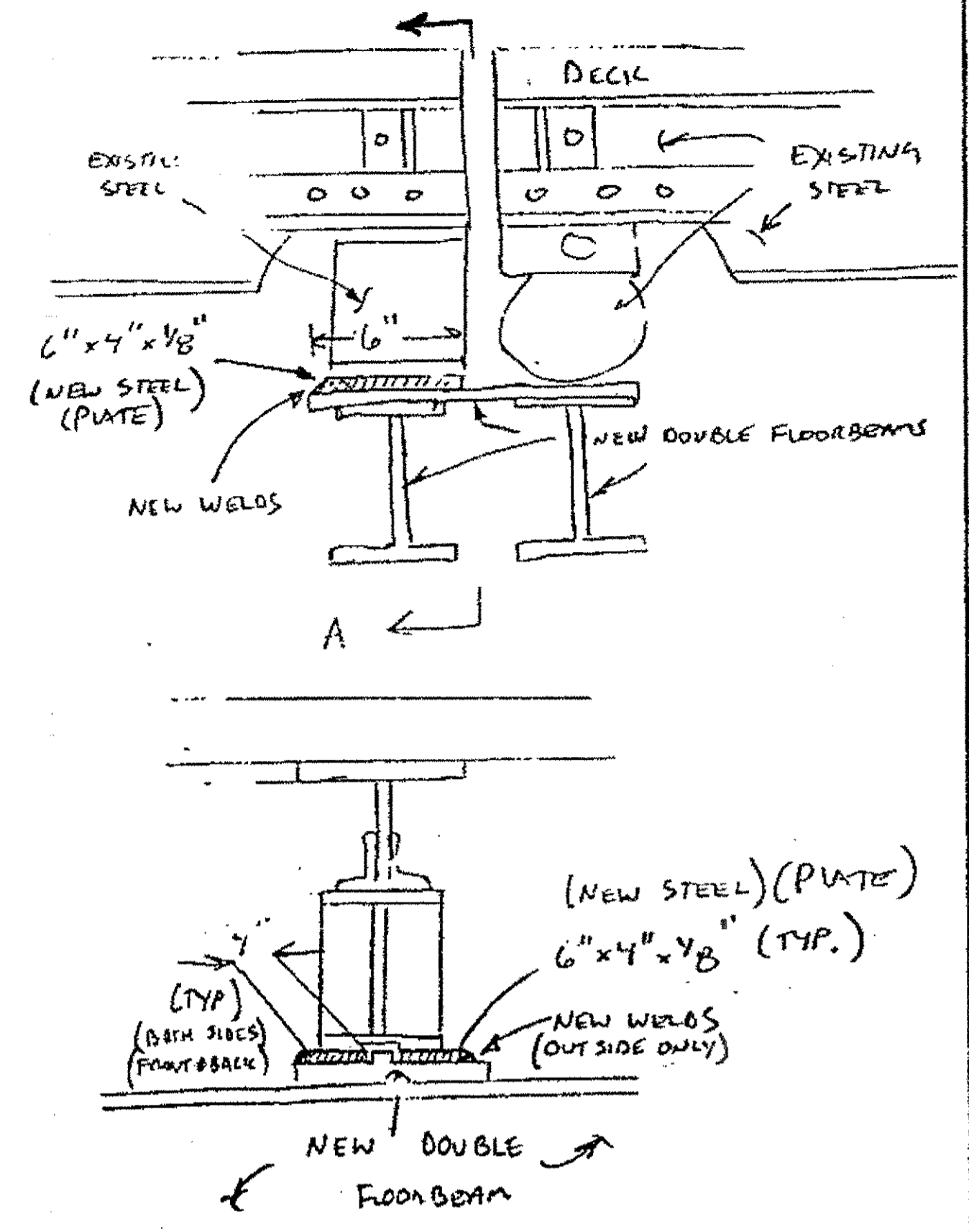
VIEW A-A



REPAIR 7

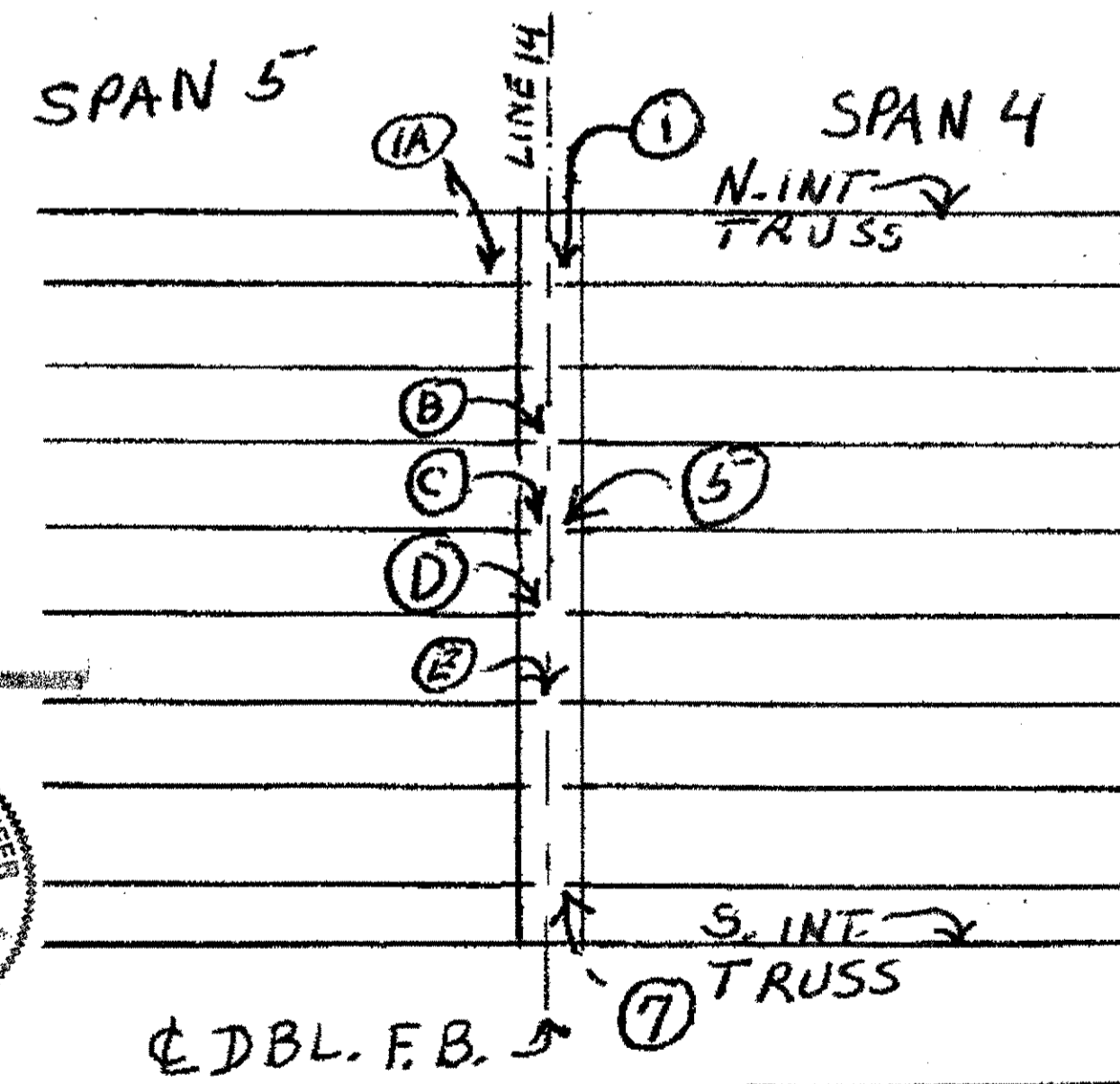


VIEW A-A  
REPAIR B, C, D & E



VIEW A-A  
REPAIR 5

REPAIRS UNDER MAINTENANCE DECK AT DOUBLE FLOOR BEAM SPAN 5, L14 N.INT - S.INT.



O.D.O.T. DIST. 12			
ACCEPTED			
ACCEPTED AS NOTED	2/9/01	DST	
NOT ACCEPTED			

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

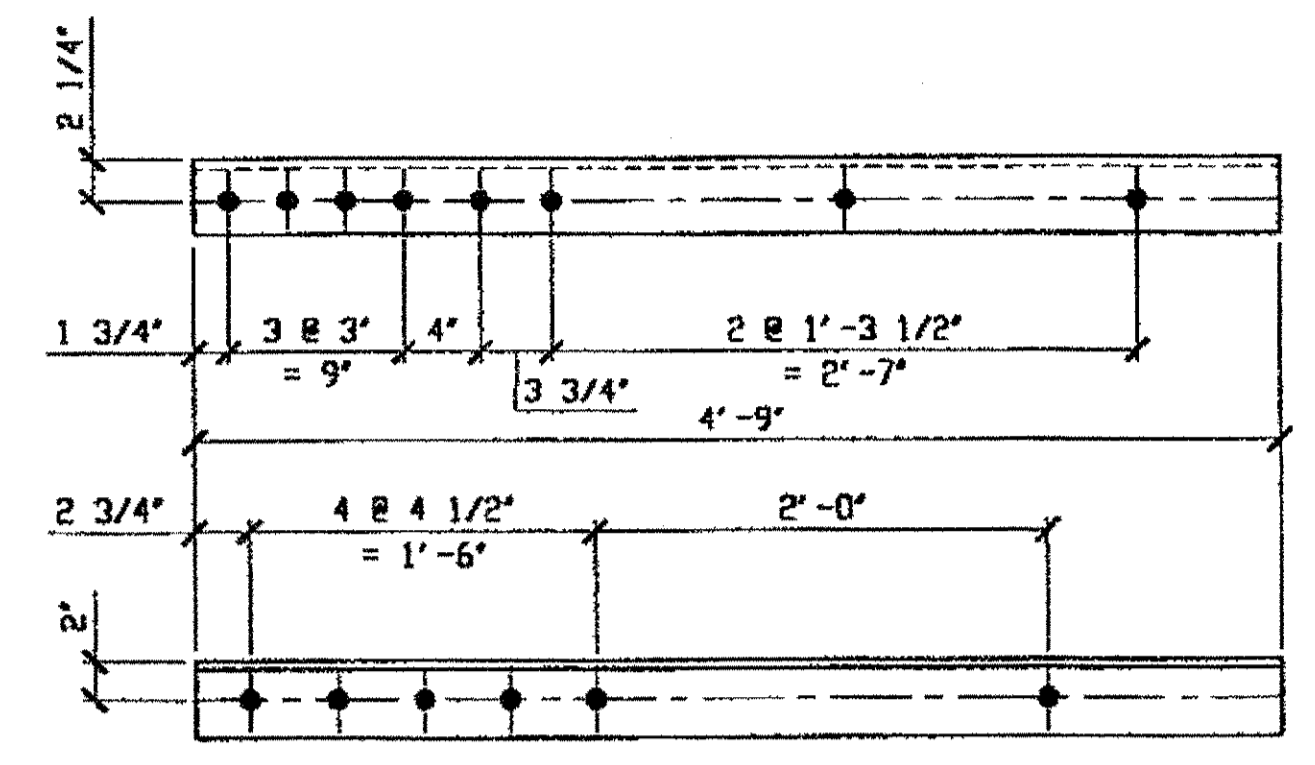
NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

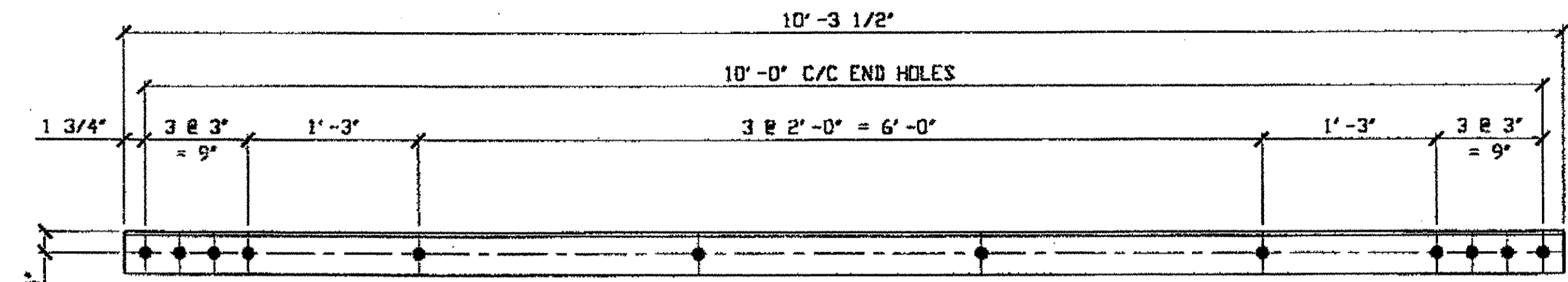
ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**

JOB NO. 2000212  
 DRAWING NO. 260

442

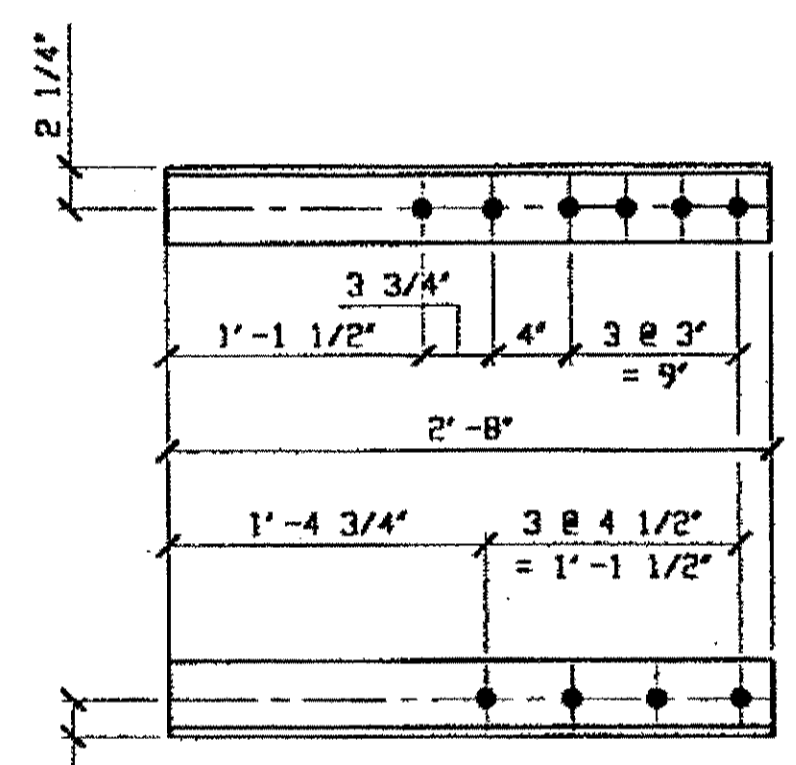


**1 - STEEL OVER SOLBS - 268A**  
 ORIG SHOP DWG 84-BS15  
 ORIG SHOP MARK AB4F  
 LINE ITEM No. 0152, BID ITEM No. 863E90000  
 REPAIR SHEET 5-103

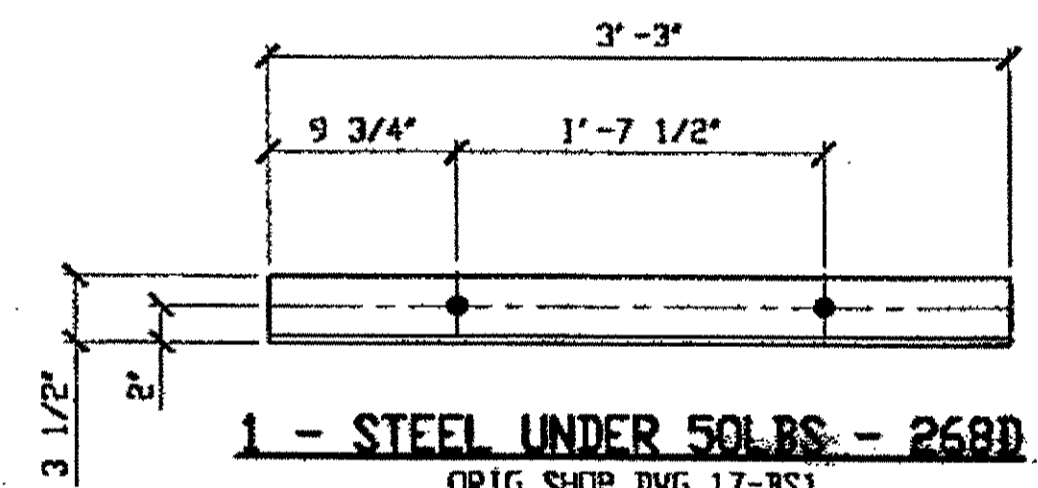


**2 - STEEL OVER SOLBS - 268B**  
 ORIG SHOP DWG 88-SB7B  
 ORIG SHOP MARK AB8W  
 LINE ITEM No. 0152, BID ITEM No. 863E90000  
 REPAIR SHEET 5-139

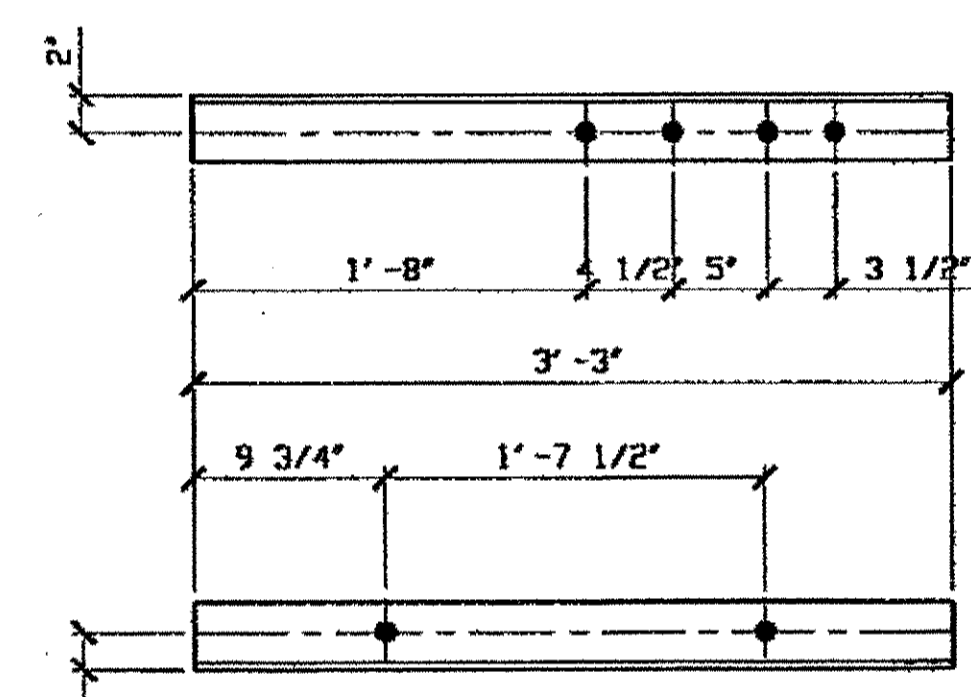
DOT ITEM No. 0104  
 DOT ITEM No. 0104  
 DOT ITEM No. 0104



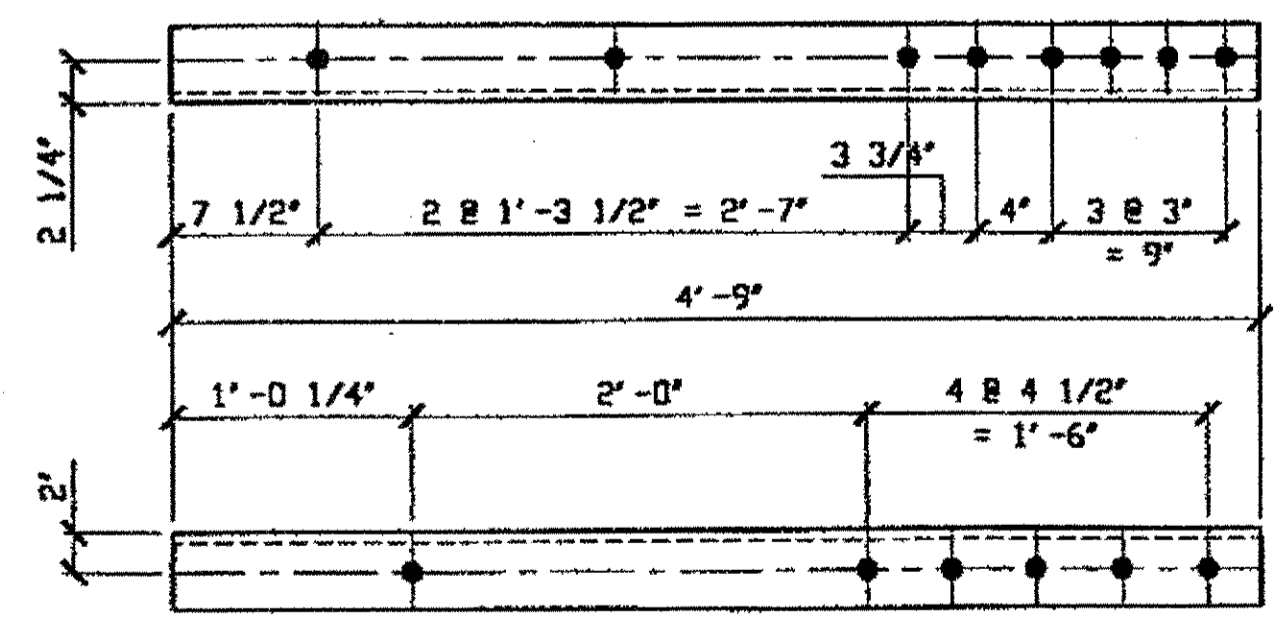
**1 - STEEL UNDER SOLBS - 268C**  
 ORIG SHOP DWG 16-BS14  
 ORIG SHOP MARK A18a  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
 REPAIR SHEET 5-162



**1 - STEEL UNDER SOLBS - 268D**  
 ORIG SHOP DWG 17-BS1  
 ORIG SHOP MARK A17g  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
 REPAIR SHEET 5-205



**1 - STEEL UNDER SOLBS - 268F**  
 ORIG SHOP DWG 85-BL42  
 ORIG SHOP MARK AB5w  
 LINE ITEM No. 0153, BID ITEM No. 863E90000  
 REPAIR SHEET 5-225



**1 - STEEL OVER SOLBS - 268M**  
 ORIG SHOP DWG 84-BS15  
 ORIG SHOP MARK AB4F  
 LINE ITEM No. 0152, BID ITEM No. 863E90000  
 REPAIR SHEET 5-169

**SPAN 5**

- A-A' NORTH, TOP EAST 268A
- LINE 9 N.SWAY FRAME - N.EXT. - 268B (2)
- Q-Q' NORTH Bot. WEST 268C
- K-K' SOUTH Bot. EAST @ 3<sup>RD</sup>-5<sup>TH</sup> LACING SET 268D
- Q-P' SOUTH Bot. SOUTH @ 8<sup>TH</sup>-10<sup>TH</sup> LACING SET 268F
- A-A' SOUTH, TOP WEST S. EXT. 268M

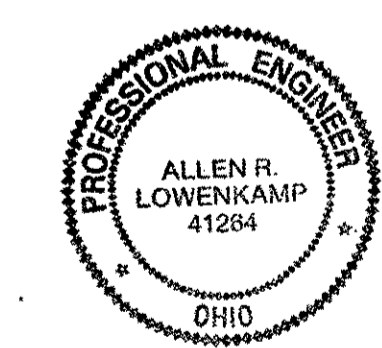
BILL OF MATERIAL									
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT	
					FEET	INCHES			
1				STEEL OVER SOLBS					
2		268A	1	L 4 X 4 X 1/2	4	9		61	
3		268B	2	L 3 1/2 X 3 1/2 X 3/8	10	3 1/2		175	
4		268M	1	L 4 X 4 X 1/2	4	9		61	
5									
6				STEEL UNDER SOLBS					
7		268C	1	L 4 X 4 X 1/2	2	8		34	
8		268D	1	L 4 X 3 1/2 X 3/8	3	3		30	
9		268F	1	L 3 1/2 X 3 1/2 X 3/8	3	3		28	
10									
11				SPLICE PLATES					
12		268G	30	BAR 3 X 1/2	0	6	PLAIN MATL	76	
13									
14				SPOT REPAIRS					
15		268H	3	BAR 3 X 1/2	10	0	PLAIN MATL	153	
16		268K	1	BAR 3 1/2 X 1/2	10	0	PLAIN MATL	59	
17									
18									
19									
20									
PLATE		A36		PIPE	N/A		FITTINGS	N/A	
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2	

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

RELEASED FOR CONSTRUCTION  
 DATE 4/4/01 BY EDP

NAT'L ENGR' & CONTR. CO.  
 BY EDP/SS  
 MAR 26 2001

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000 U. N. O.

NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 5 REPAIRS

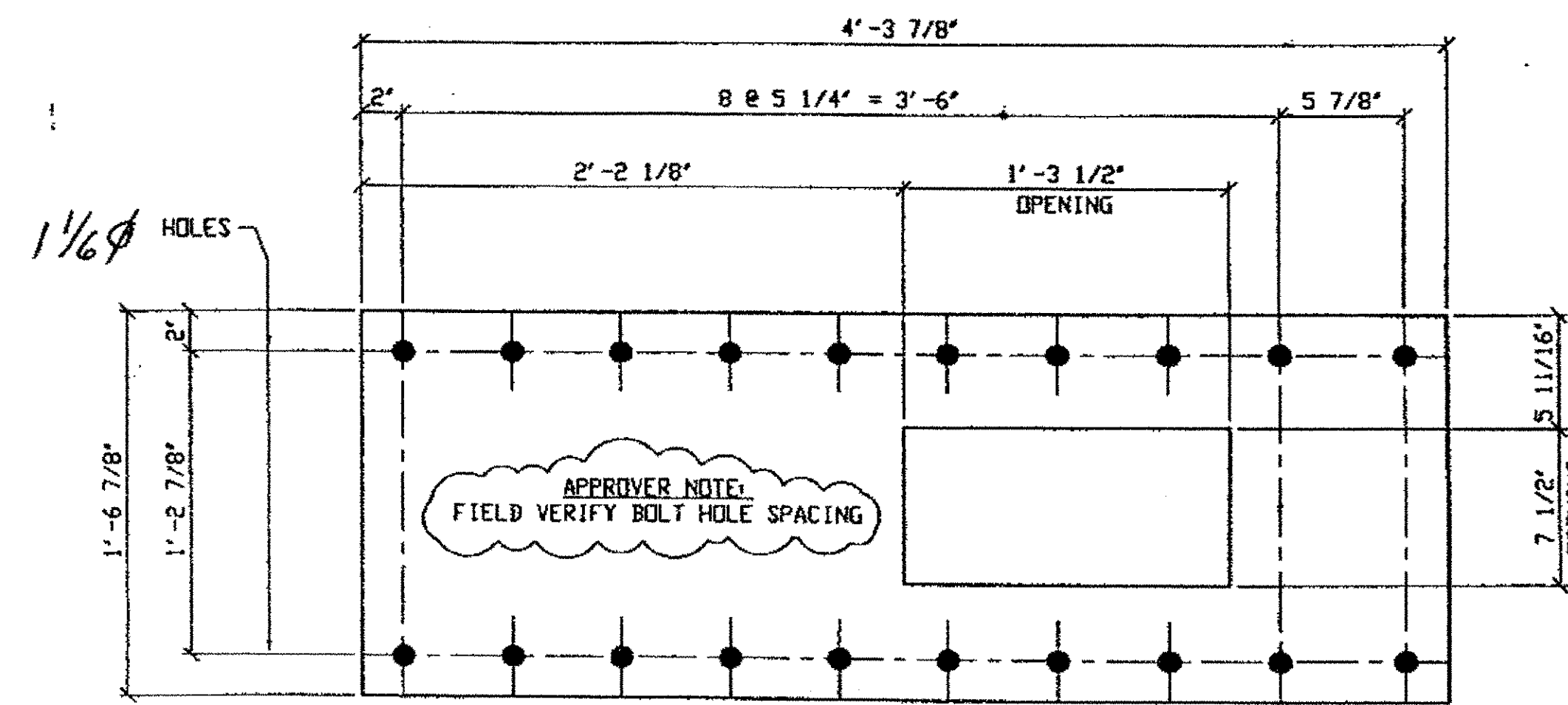
IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: RAS 03/07/01  
 CHECKED BY: DATE: GAF 03/16/01

SHEET NUMBER: 268  
 AM. JOB NUMBER: 800010

Last modified by: [unclear] on Wed Mar 21, 2001 11:09:07am on Fri Mar 23, 2001  
 H:\800010\D268A.dwg

BILL OF MATERIALS

Piece No.	Qty.	Description
272A	1	PL 18 7/8" x 1/2" x 4'-3 7/8"
272B	1	PL 18 1/2" x 1/2" x 3'-11"
		PL A36

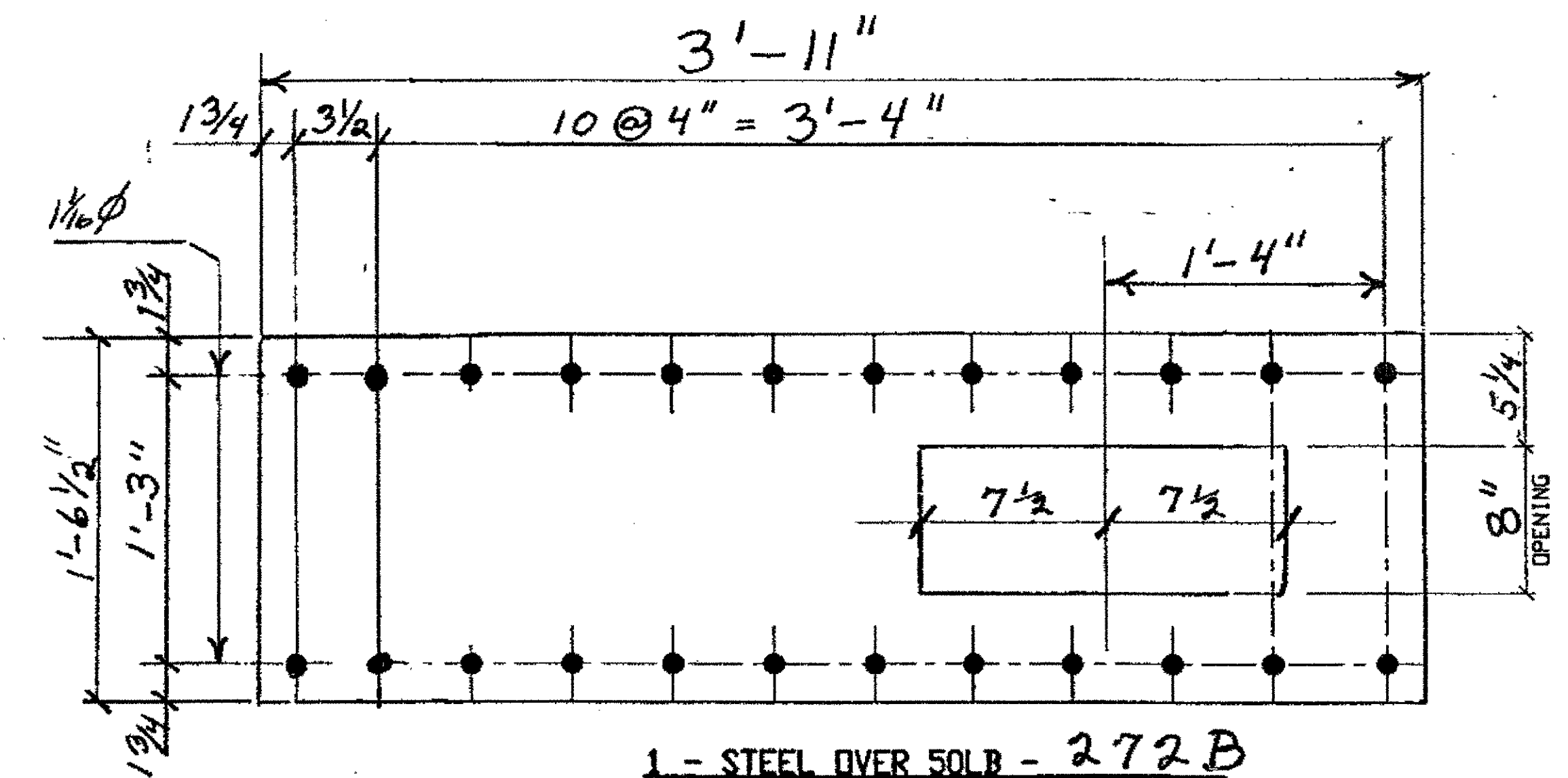


2 - STEEL OVER 50LB - 272A

ORIG SHOP DWG 204 L13L15-0-7/L  
 ORIG SHOP MARK P20499  
 ITEM No. 0152  
 BID ITEM No. 863E90000  
 REPAIR SHEET 7-141

SPAN 7

L15 S. EXT. TOP	272A
L15 N. INT. BOT.	272B



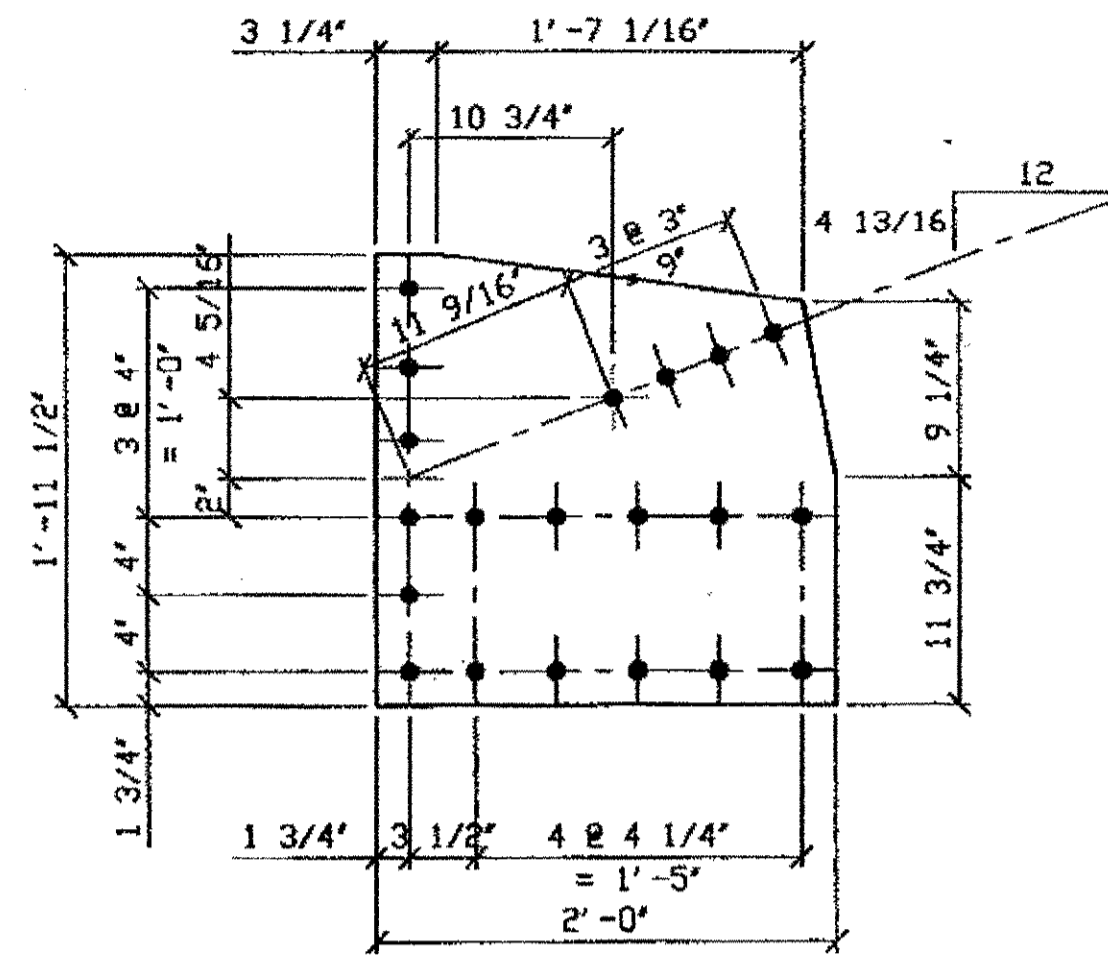
1 - STEEL OVER 50LB - 272B

ORIG SHOP DWG 204 L13L15-0-7/L  
 ORIG SHOP MARK P178ac  
 ITEM No. 0152

O.D.O.T. DIST. 12  
 ACCEPTED \_\_\_\_\_  
 ACCEPTED AS NOTED 2/9/04 PSM  
 NOT ACCEPTED \_\_\_\_\_  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY
Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215 BRIDGE No CUY-10-16-13 SPAN 7			
DRAWN BY		CHECKED BY	DRAWING NO.
SCALE NA		DATE	272



1 - STEEL OVER 50 LBS - 350A

ORIG SHOP DWG 163-SB103  
ORIG SHOP MARK P163d  
LINE ITEM No. 0152  
REPAIR SHEET 9-103

SPAN 9

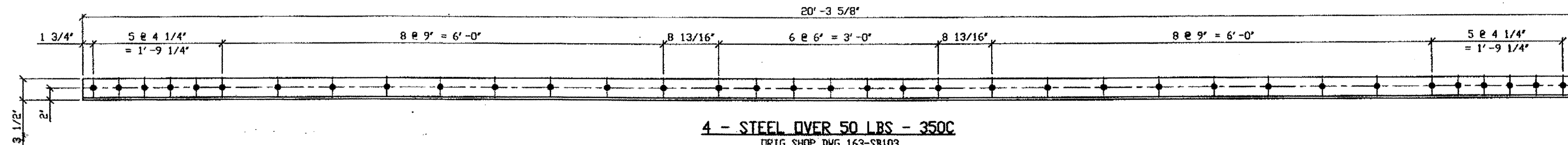
- SOUTH, LINE O, SWAY FRAME BOT. EAST 350C
- SOUTH, LINE O, SWAY FRAME BOT. WEST 350C
- NORTH, LINE O, SWAY FRAME BOT. EAST 350C
- NORTH, LINE O, SWAY FRAME BOT. WEST 350C
- NORTH, LINE O, SWAY FRAME TOP EAST 350D
- NORTH, LINE O, SWAY FRAME TOP WEST 350D
- NORTH, LINE O, @ N.EXT., VERTICAL GUSSET 350A
- NORTH, LINE O, N.EXT TO N.INT - SWAY FRAME 350F

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL OVER 50 LBS				
2		350A	1	PL 3/8 X 23 1/2	2	0		56
3								
4		350C	4	L 4 X 3 1/2 X 3/8	20	3 9/8		739
5		350D	2	L 4 X 3 1/2 X 3/8	20	3 9/8		369
6								
7				STEEL UNDER 50 LBS				
8		350F	34	PL 3/8 X 2 1/2	0	11 11/16		101
9								
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

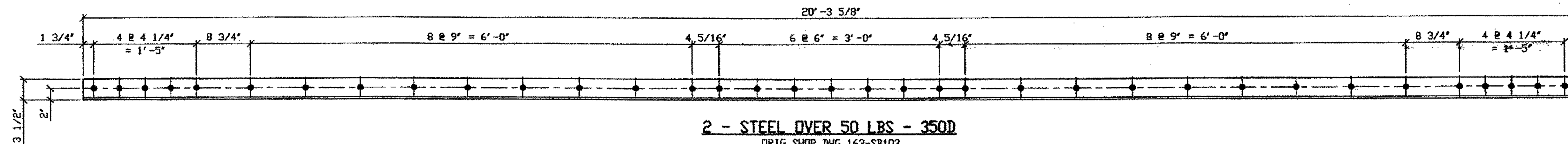
NOTES:

- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED, A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD 11 INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



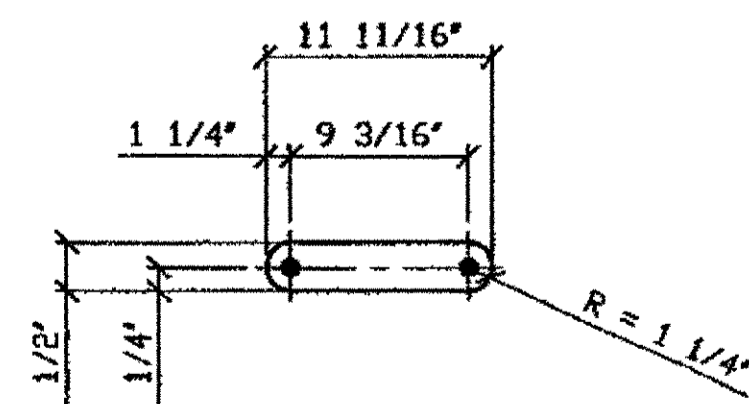
4 - STEEL OVER 50 LBS - 350C

ORIG SHOP DWG 163-SB103  
ORIG SHOP MARK A163w  
LINE ITEM No. 0152  
REPAIR SHEET 9-103 & 207



2 - STEEL OVER 50 LBS - 350D

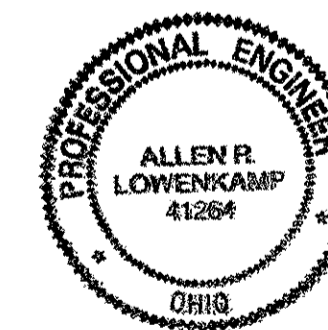
ORIG SHOP DWG 163-SB103  
ORIG SHOP MARK A163w  
LINE ITEM No. 0152  
REPAIR SHEET 9-103



34 - STEEL UNDER 50 LBS - 350F

ORIG SHOP DWG 163-SB103  
ORIG SHOP MARK P87d  
LINE ITEM No. 0153  
REPAIR SHEET 9-103

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONROE, PA. 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE  
RAS 07/19/01  
CHECKED BY: DATE  
GAF 10/15/01

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E90000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	11/29/01	REVISE PER APPROVAL COMMENTS		RAS

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

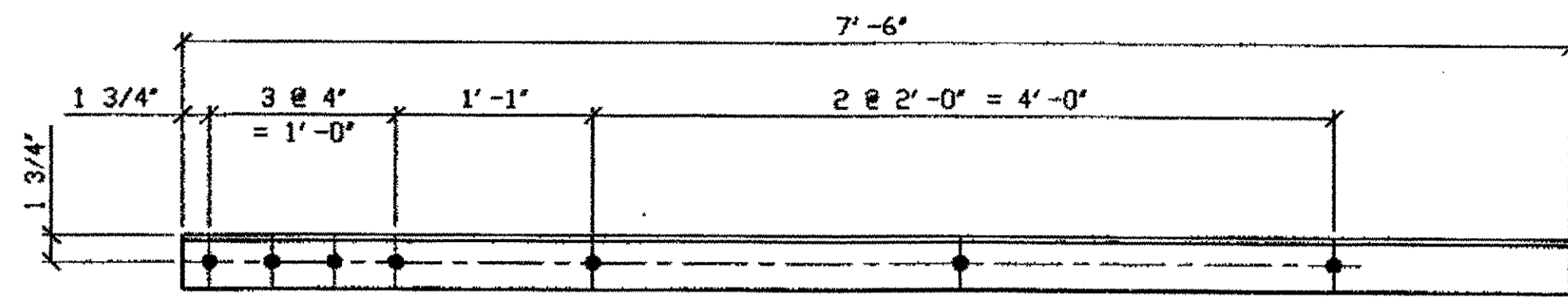
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13

SPAN 9 REPAIRS

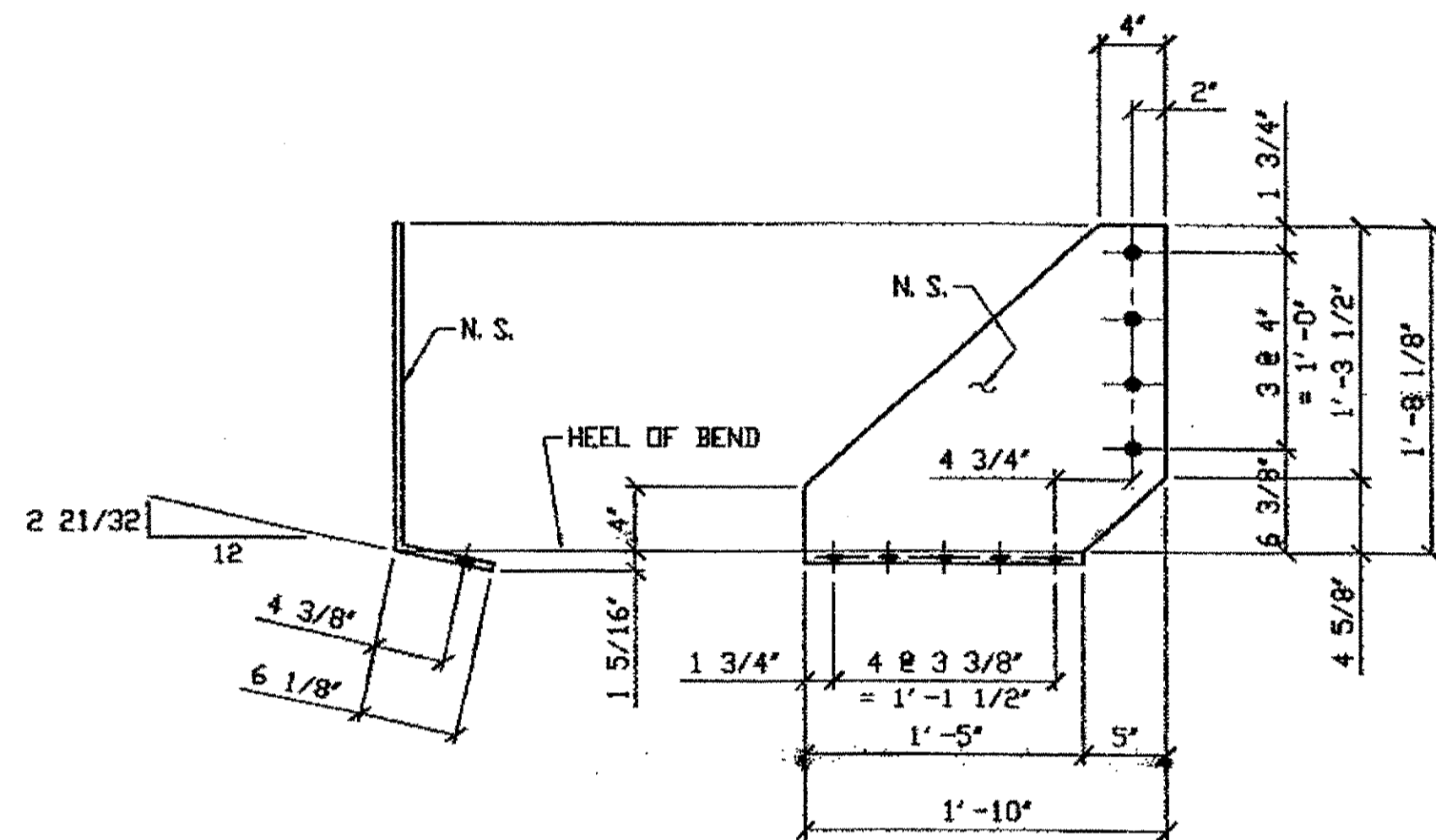
SHEET NUMBER: 350  
JOB NUMBER: 800010

G:\Contract\10\BUD010\Drawings\ASB00A.dwg  
 Save by rst. 08:04am Dec 17, 2001  
 Plot by gfos at 09:47am Dec 17, 2001  
 Model space plot + Scale = 1/9

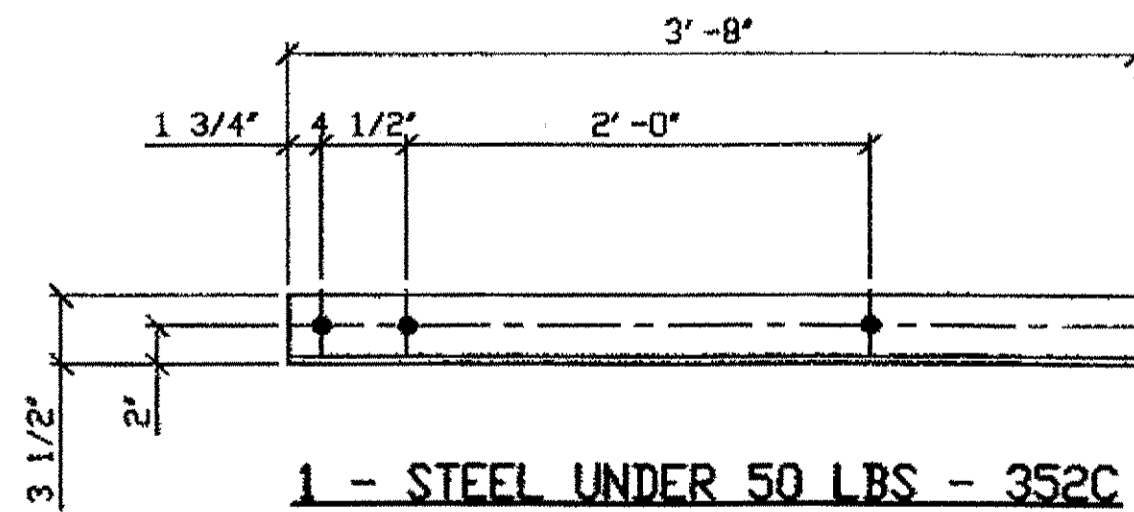




**2 - STEEL OVER 50 LBS - 352A R/L**  
 ORIG SHOP DWG 297-SB181  
 ORIG SHOP MARK A297h  
 LINE ITEM No. 0152  
 REPAIR SHEET 9-137



**1 - STEEL OVER 50 LBS - 352B**  
 ORIG SHOP DWG 339- L0L1-0-9/R  
 ORIG SHOP MARK P308v/L  
 LINE ITEM No. 0152  
 REPAIR SHEET 9-106



**1 - STEEL UNDER 50 LBS - 352C**  
 ORIG SHOP DWG 295-BS28  
 ORIG SHOP MARK A295d  
 LINE ITEM No. 0153  
 REPAIR SHEET 9-154

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL OVER 50 LBS				
2		352A R/L	2	L 3 1/2 X 3 1/2 X 3/8	7	6		128
3		352B	1	PL 1/2 X 22	2	2 1/4	BENT	56
4				STEEL UNDER 50 LBS				
5								
6		352C	1	L 4 X 3 1/2 X 3/8	3	8		33
7								
8				SPOT REPAIRS TO ANGLE				
9	*	352D	4	BAR 3 X 1/2	10	0	PLN MATL	204
10								
11				SPLICE PLATES				
12	*	352F	12	BAR 3 X 1/2	0	6	PLN MATL	31
13								
14				TYPE 1 CHORD ANGLE REPAIR				83
15	**	352G	1	BAR 3 1/2 X 1/2	10	0		60
16		FB68	12	1 1/8" DIA BOLT	0	2 3/4	NOTE 2	23
17								
18				TYPE 2 CHORD ANGLE REPAIR				396
15	***	352H	2	PL 5/8 X 5 1/4	10	0		223
16		FB68	90	1 1/8" DIA BOLT	0	2 3/4	NOTE 2	173
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- \* DOT ITEM LINE No. 0104  
DOT BID ITEM No. 863E50000
- \*\* DOT ITEM LINE No. 0148  
DOT BID ITEM No. 863E50000
- \*\*\* DOT ITEM LINE No. 0149  
DOT BID ITEM No. 863E50000

**NOTES:**

1. OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 9

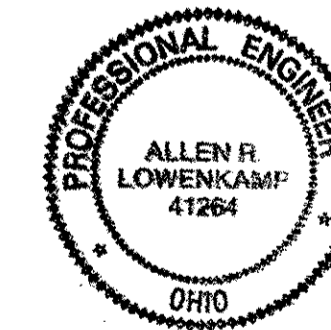
LINE 6 NORTH, BOT. N. 4'S ON SWAY FRAME 352A R/L  
L0 NORTH EXTERIOR EAST R 352B  
K-K' NORTH BOT. EAST 352C

G:\Contractor\10\800010\Drawings\0352EA.dwg  
 Save by rsi: 08:08am Dec 17, 2001  
 Plot by gfos at 09:48am Dec 17, 2001  
 Model space plot + Scale = 1/9

**O.D.O.T. DIST. 12**  
 RECEIVED [ ] [ ] [ ] [ ]  
 ACCEPTED AS NOTED [ ] [ ] [ ] [ ]  
 NOT ACCEPTED [ ] [ ] [ ] [ ]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

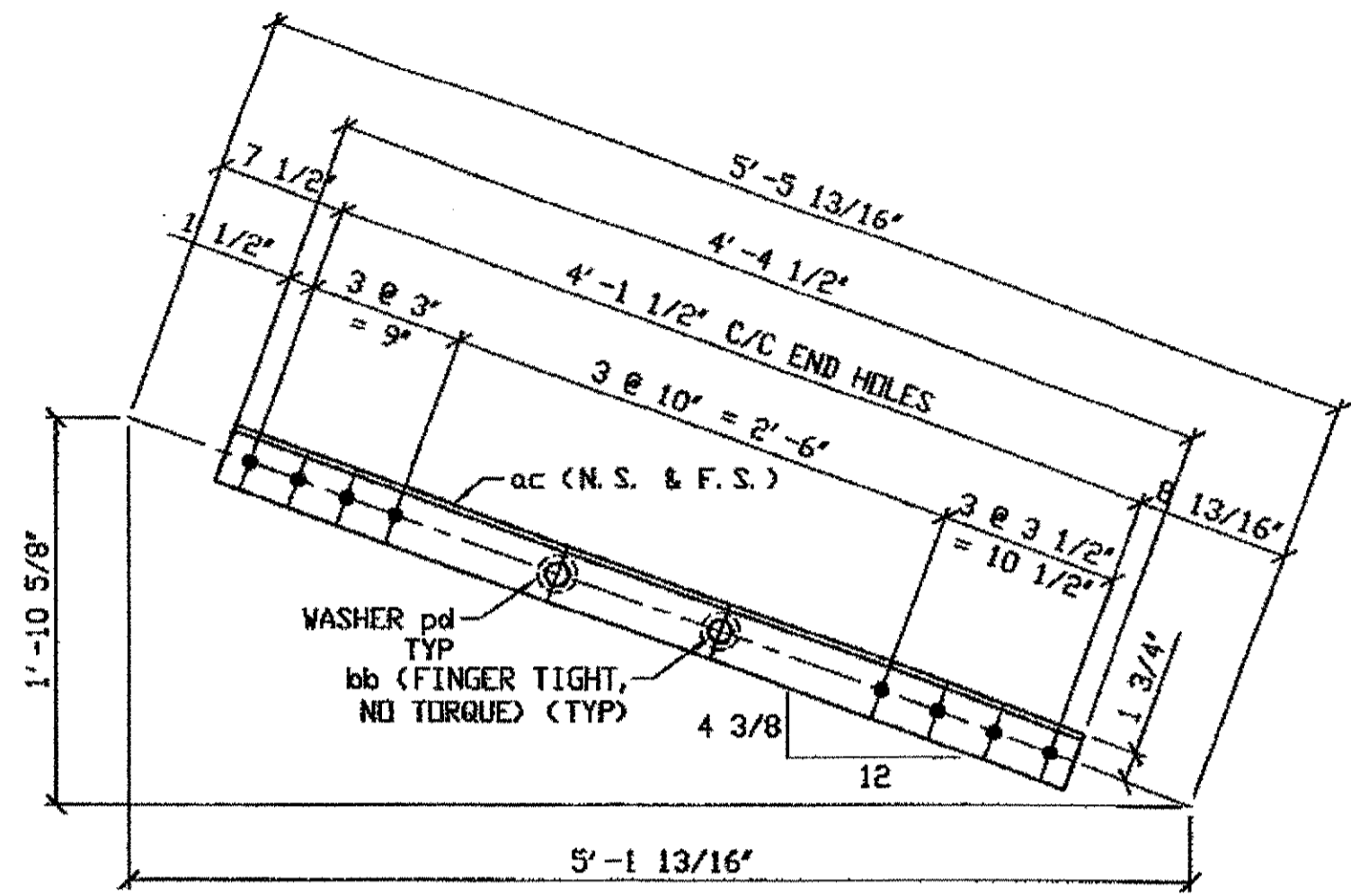


FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001  
 IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 07/19/01  
 CHECKED BY: DATE  
 GAF 10/15/01

DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000

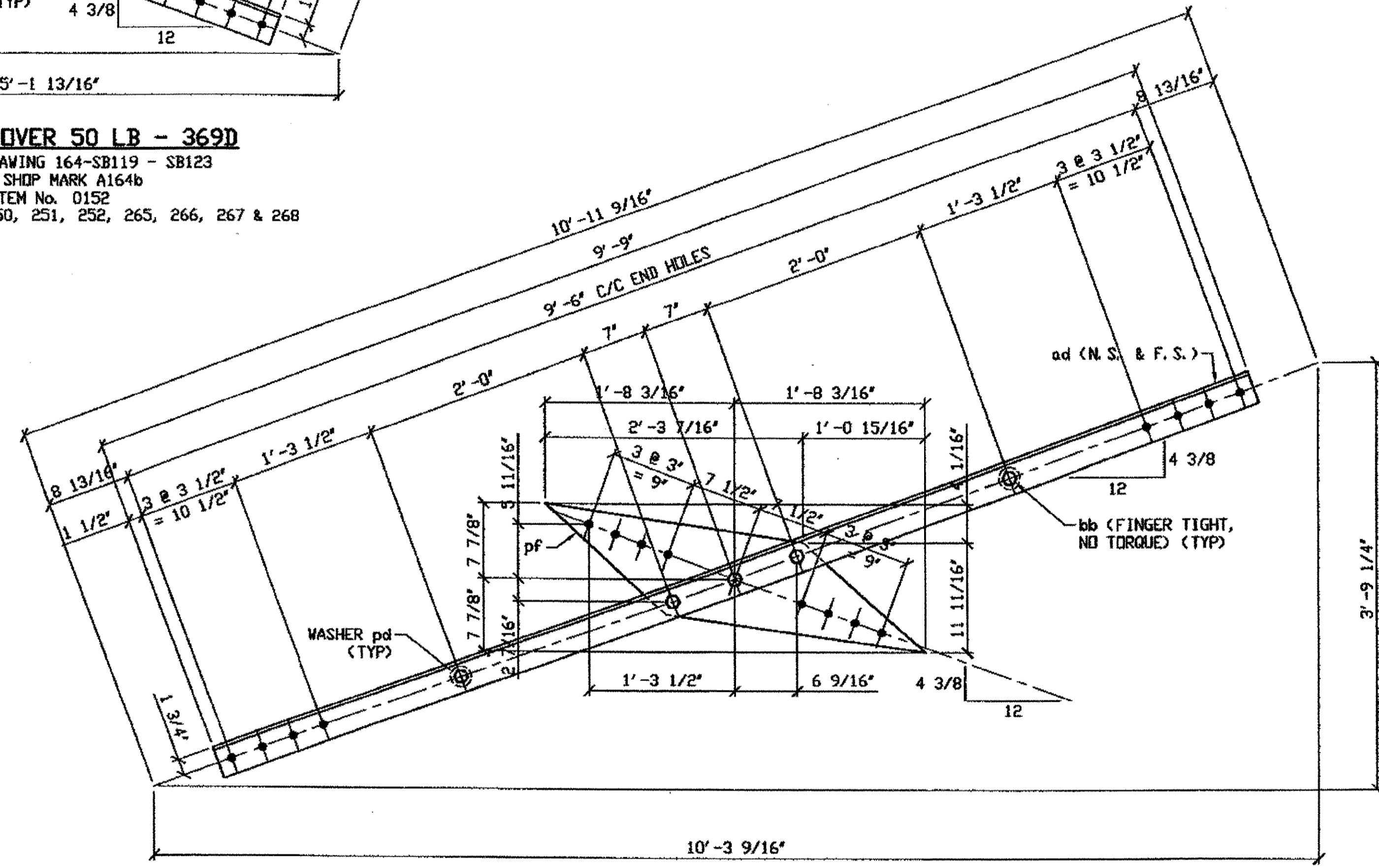
NO.	DATE	DESCRIPTION	BY
STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 9 REPAIRS			
			SHEET NUMBER: 352
			ADM JOB NUMBER: 800010





**8 - STEEL OVER 50 LB - 369D**

ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK A164b  
 ITEM No. 0152  
 REPAIR SHEET 9-249, 250, 251, 252, 265, 266, 267 & 268



**4 - STEEL OVER 50 LB - 369F**

ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK A164a & P164cx  
 ITEM No. 0152  
 REPAIR SHEET 9-249, 250, 251, 252, 265, 266, 267 & 268

**SPAN 9**  
**LINE 17 SOUTH (2) PART OF SWAY FRAME**  
**LINE 17 NORTH (2) PART OF SWAY FRAME**

**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH FEET INCHES	REMARKS	WEIGHT
1		369A	2	STEEL OVER 50LBS			2221
2		pa	4	PL 3/8 X 23 1/2	2 0		215
3		pb	2	PL 3/8 X 21 1/4	3 3		176
4		pc	68	PL 3/8 X 2 1/2	0 11 1/16		211
5		oa	4	L 4 X 3 1/2 X 3/8	20 3		737
6		ob	4	L 4 X 3 1/2 X 3/8	20 3		737
7		ba	72	7/8" DIA HVY HEX BOLT	0 2 3/4	NOTE 2	76
8				W/HVY HEX NUT & WASHER			
9		bb	68	7/8" DIA HVY HEX BOLT	0 2 1/2	NOTE 2	69
10				W/HVY HEX NUT & WASHER			
11							
12		369B	4	STEEL OVER 50 LB			487
13		af	8	L 5 X 3 1/2 X 3/8	1 7		132
14		pg	4	PL 3/8 X 20	2 0		161
15		pk	4	PL 3/8 X 19 1/2	1 9		174
16		bb	20	7/8" DIA HVY HEX BOLT	0 2 1/2	NOTE 2	20
17				W/HVY HEX NUT & WASHER			
18							
19		369C	2	STEEL OVER 50 LB			569
20		ag	4	L 3 1/2 X 3 1/2 X 3/8	3 8 1/4		125
21		ah	4	L 5 X 3 1/2 X 3/8	3 3		135
22		ph	2	PL 3/8 X 13 1/4	3 3		110
23		pd	2	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK			1
24		pn	2	PL 3/8 X 21	3 3 1/2		176
25		bb	22	7/8" DIA HVY HEX BOLT	0 2 1/2	NOTE 2	22
26				W/HVY HEX NUT & WASHER			
27							
28		369D	8	STEEL OVER 50 LB			617
29		ac	16	L 3 1/2 X 3 1/2 X 3/8	4 4 1/2		595
30		pd	16	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK			6
31		bb	16	7/8" DIA HVY HEX BOLT	0 2 1/2	NOTE 2	16
32				W/HVY HEX NUT & WASHER			
33							
34		369E	4	STEEL OVER 50 LB			800
35		ad	8	L 3 1/2 X 3 1/2 X 3/8	9 9		663
36		pd	8	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK			3
37		pf	4	PL 3/8 X 15 3/4	3 4 3/8		114
38		bb	20	7/8" DIA HVY HEX BOLT	0 2 1/2	NOTE 2	20
39				W/HVY HEX NUT & WASHER			
PLATE A36				PIPE N/A	FITTINGS N/A		
SHAPES A36				FLGS. N/A	BOLTS NOTE 2		

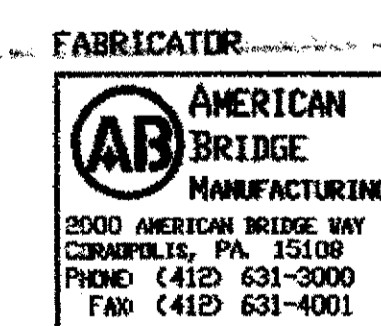
- NOTES:**
- OPEN HOLES ARE (15/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - WORK THIS DRAWING WITH 369AB.



**O.D.O.T. DIST. 12**

ACCEPTED [Signature] 12/9/04  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**STEEL ERECTOR**

TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: DATE  
 RAS 12/03/01

CHECKED BY: DATE  
 GAF 12/12/01

DOT ITEM LINE NO. 0152  
 DOT BID ITEM NO. 863E90000

NO.	DATE	DESCRIPTION REVISIONS	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 9 REPAIRS**

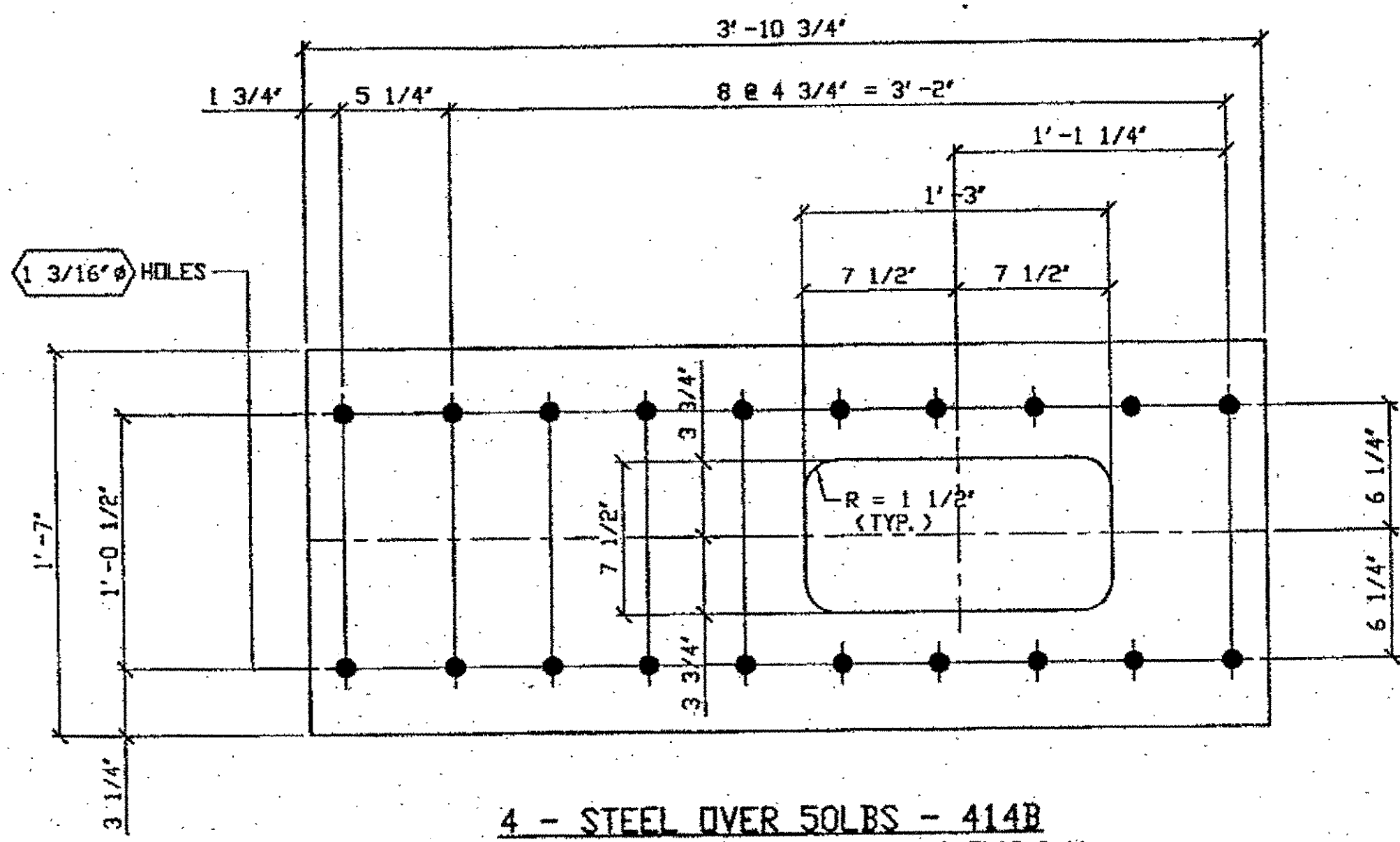
SHEET NUMBER: 369B  
 ABR JOB NUMBER: 800010

G:\Contract\00A800010\Drawings\369B.dwg  
 Save by ras 08 Dec 17, 2001  
 Plot by gfs ut 09 Jan Dec 17, 2001  
 Model space plot + State = 1/9

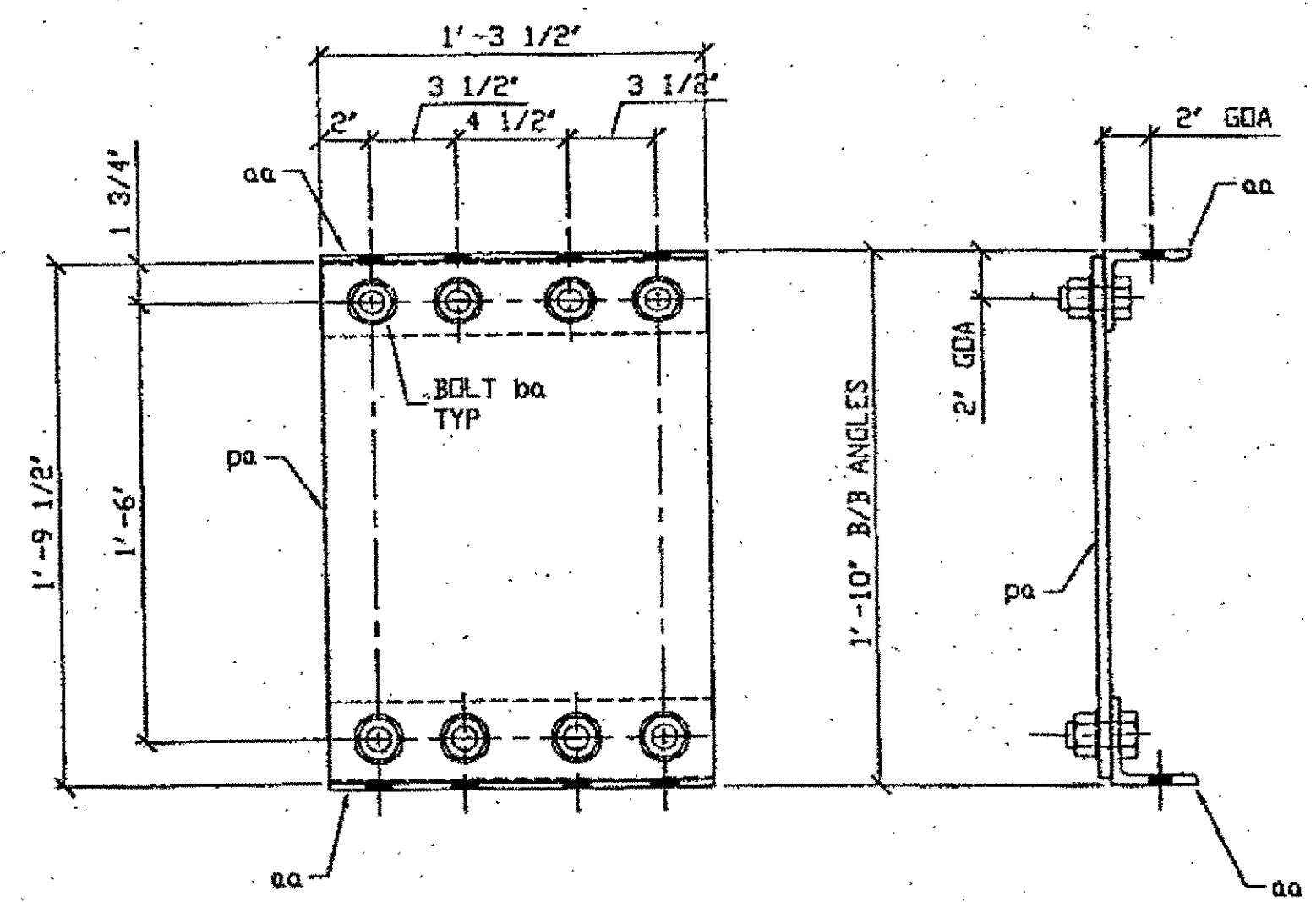


SPAN 11

- L18 N. EXT. BELOW EXPANSION PIN 414B
- L18 N. INT. BELOW EXPANSION PIN 44B
- L18 S. INT. BELOW EXPANSION PIN 44B
- L18 S. EXT. BELOW EXPANSION PIN 44B

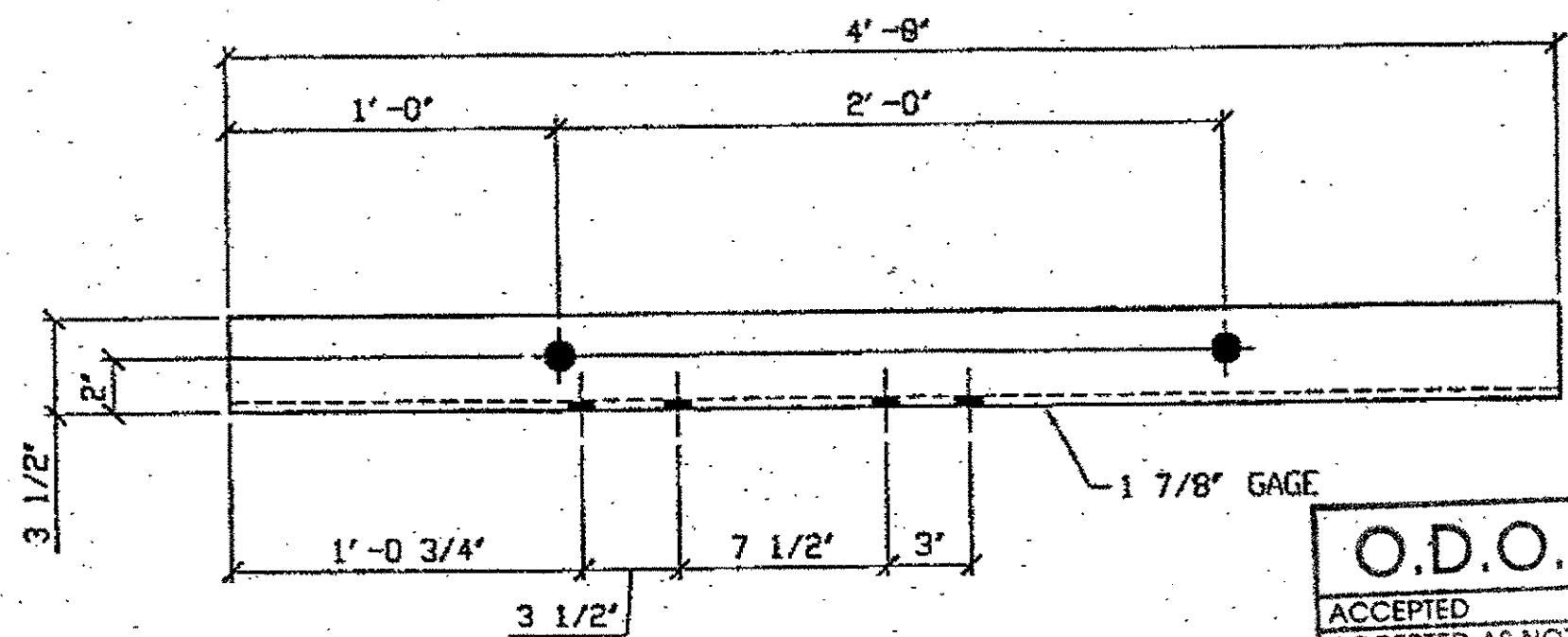


**4 - STEEL OVER 50 LBS - 414B**  
 ORIG SHOP DWG 438, L17L18-0-11 & 404; L17L18-1-11  
 ORIG SHOP MARK 404ab  
 ITEM No. 0152  
 REPAIR SHEETS 11-355, 11-356, 11-223, & 11-224



**2 - TYPE 2 STAY PLATE - 414C**  
 ORIG SHOP DWG 448; U3L3-0-11 & 449; U4L4-0-11  
 ORIG SHOP MARK PX12 & AX3  
 ITEM No. 0153  
 REPAIR SHEET 11-251 & 11-256

SPAN 11  
 L2-L3 @ L3 SOUTH EXT. 414C  
 L4-L5 @ L4 SOUTH EXT. 414C  
 REPAIRS DIRECTLY ABOVE BEARING'S



**ONE - STEEL UNDER 50 LBS - 414G**  
 ORIG SHOP DWG 380; BL14B  
 ORIG SHOP MARK A380x  
 ITEM No. 0153  
 REPAIR SHEETS 11-166

SPAN 11  
 K-L' NORTH & OF 6<sup>th</sup> TO 8<sup>th</sup> LACING SETS 414G

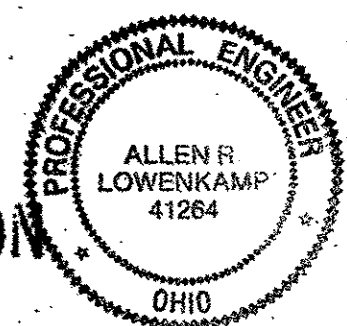
**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

RELEASED FOR CONSTRUCTION  
 DATE 3/1/02 BY [Signature]

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				L.C. ANGLE REPAIR				
2		414A	1	PL 1/2 x 5 1/4	1	2		10
3								
4				STEEL OVER 50 LBS				
5	*	414B	4	PL 1/2 x 19	3	10 3/4		440
6								
7		414C	2	STEEL UNDER 50 LBS.				159
8	*	aa	2	PL 1/2 x 15 1/2	1	9 1/2		94
9	*	aa	4	L 3 1/2 x 3 1/2 x 3/8	1	3 1/2		44
10		ba	16	1" DIA. HVY. HEX BOLT	0	2 1/4	NOTE 2	21
11				W/HVY. HEX NUT & WASHER				
12								
13				SPOT REPAIR				
14	***	414F	8	BAR 3 x 1/2"	10	0	PLAIN MAT'L	408
15								
16				STEEL UNDER 50 LBS.				
17	*	414G	1	L 3 1/2 x 3 1/2 x 3/8	4	0		34
18								
19				STEEL OVER 50 LBS				
20	**	414H	1	PL 3/8 x 8	5	9	PLAIN MAT'L	59
21	**	414K	1	PL 3/8 x 8	6	0	PLAIN MAT'L	61
22								
23				L.C. ANGLE REPAIR				
24		414M	1	BAR 5 X 5/8	8	0	NI	71
25								
26				L.C. ANGLE REPAIR				
27		414N	1	BAR 5 X 5/8	10	6	NI	94
28								
29								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

\* DOT BID ITEM NO. 863E9000  
 \*\* DOT ITEM LINE NO. 0152, DOT BID ITEM NO. 863E90000  
 \*\*\* DOT ITEM LINE NO. 0104  
 NI = PLAIN MATERIAL, NO PAINT  
 REPAIR SHEET 11-110 & 111, ITEM NO. 148

- NOTES:
- OPEN HOLES ARE (1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000 U.N.

NO.	DATE	DESCRIPTION	BY

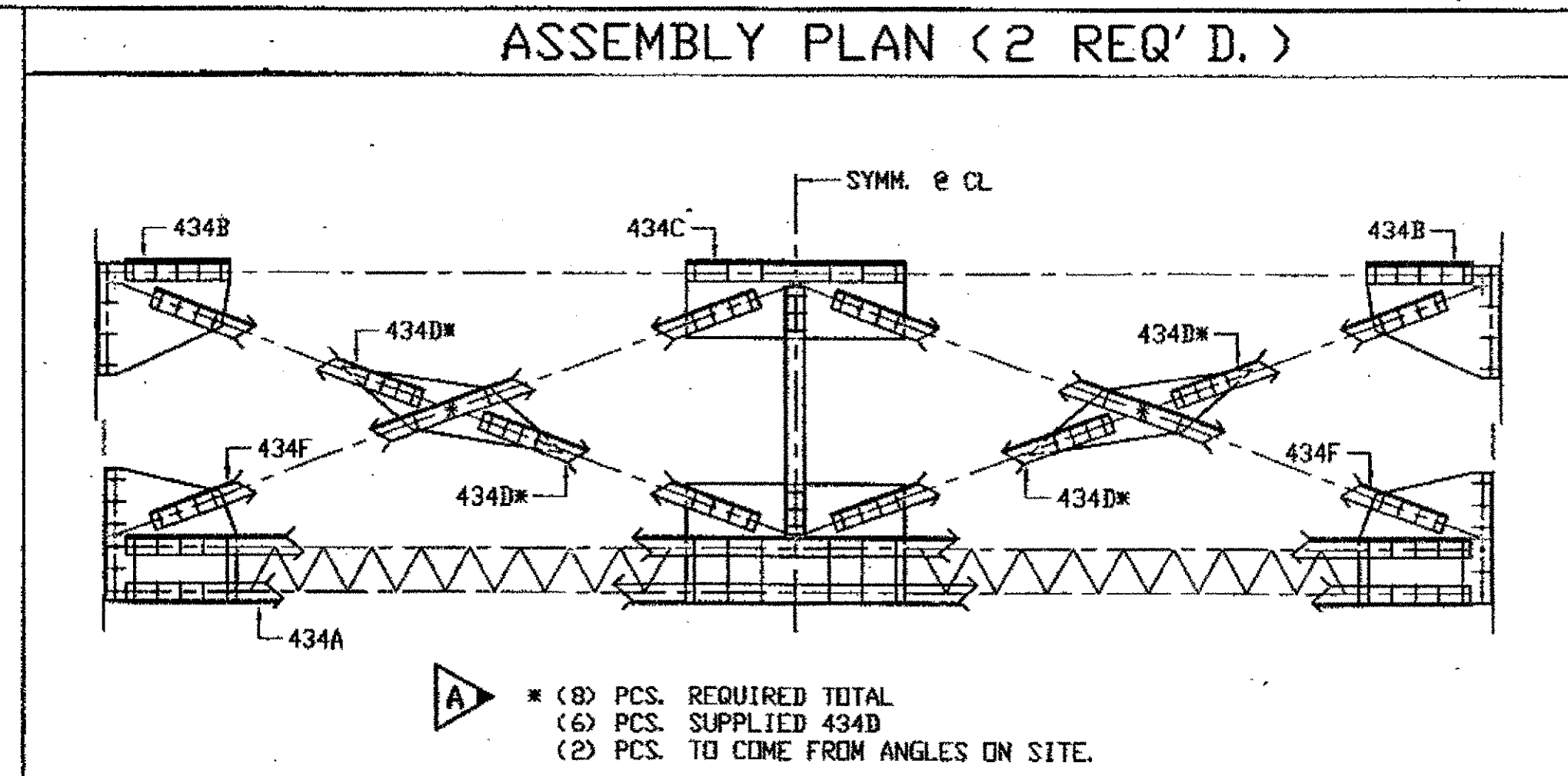
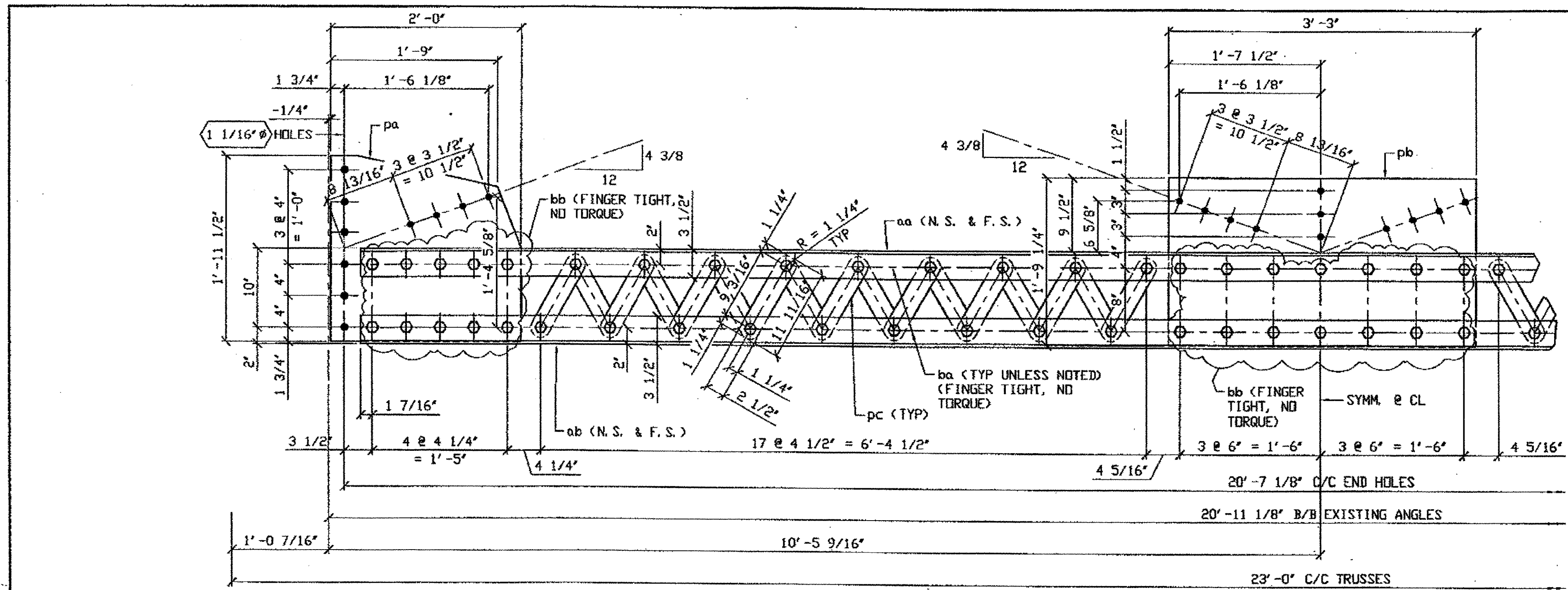
STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: JRC 01/17/02  
 CHECKED BY: DATE: GAF 02/20/02

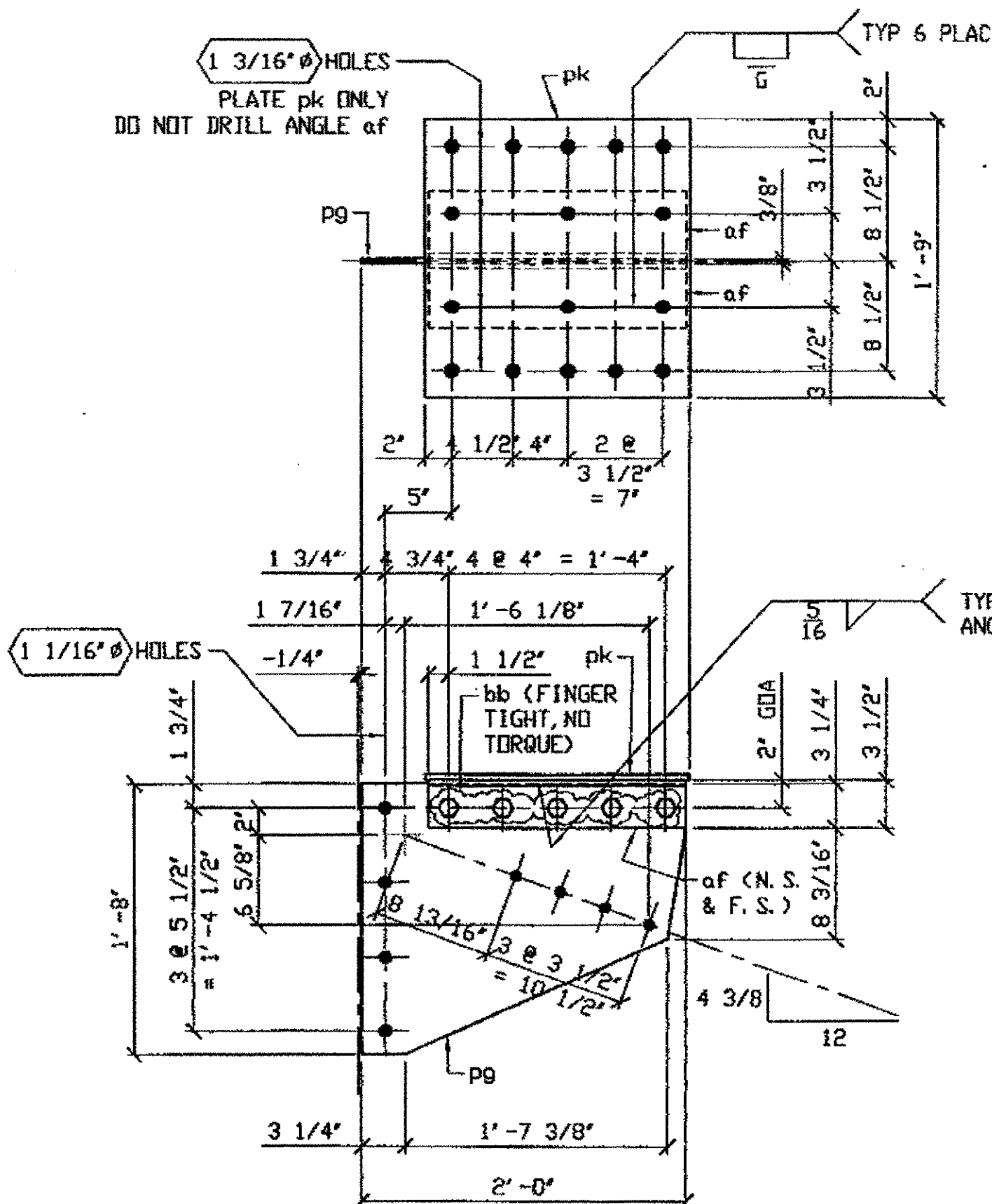
SHEET NUMBER: 414  
 JOB NUMBER: 800010

G:\Contract\00800010\Drawings\0414A.dwg  
 Save by rspr at 02:39pm Feb 25, 2002  
 Plot by gfos at 02:46pm Feb 25, 2002  
 Model space plot + Scale = 1/6

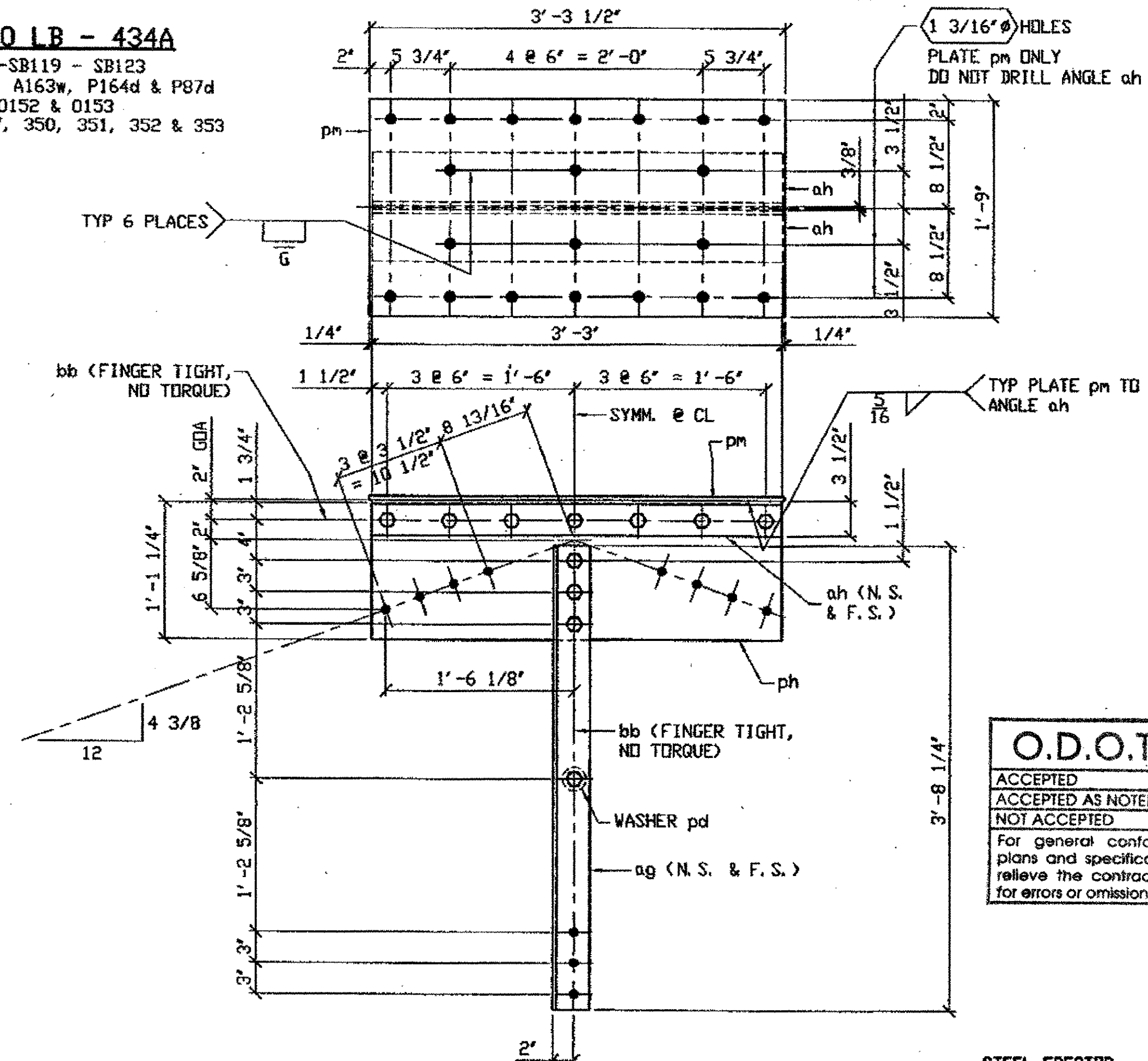


- NOTES:
- OPEN HOLES ARE  $\frac{1}{16}$ " UNLESS NOTED OTHERWISE.
  - WORK THIS DRAWING WITH 434B.

**2 - STEEL OVER 50 LB - 434A**  
 ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK P146c, A163a, A163w, P164d & P87d  
 DOT ITEM LINE No. 0152 & 0153  
 REPAIR SHEET 11-215, 216, 217, 350, 351, 352 & 353



**4 - STEEL OVER 50 LB - 434B**  
 ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK P164a & A21aa R/L  
 DOT ITEM LINE No. 0152 & 0153  
 REPAIR SHEET 11-215, 216, 217, 350, 351, 352 & 353

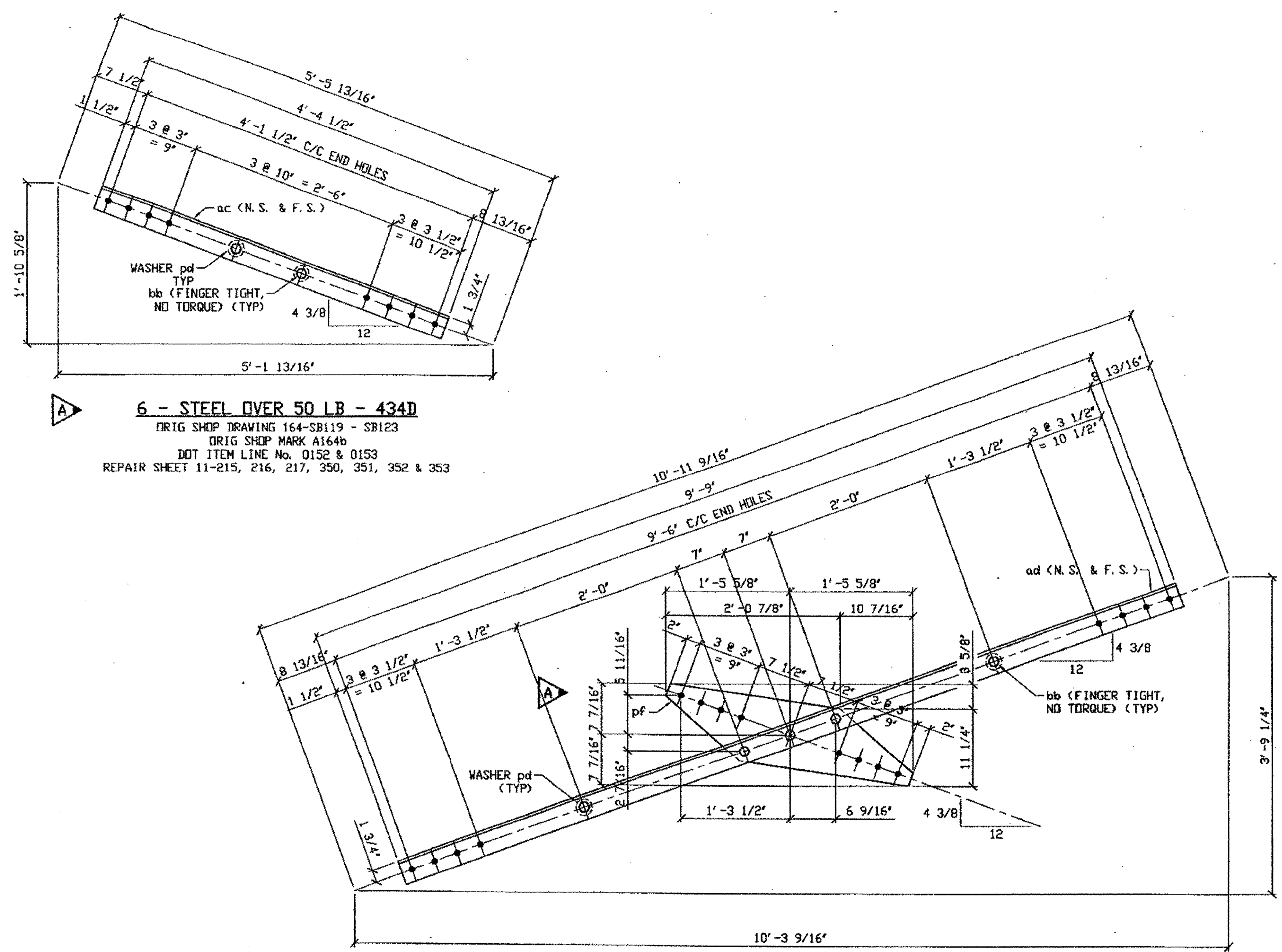


**2 - STEEL OVER 50 LB - 434C**  
 ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK A164c, P164b & A21ab  
 DOT ITEM LINE No. 0152 & 0153  
 REPAIR SHEET 11-215, 216, 217, 350, 351, 352 & 353

**SPAN II**  
 LINE 18, NORTH, SWAY FRAME  
 LINE 18, SOUTH, SWAY FRAME

G:\Control\300\800010\Drawings\1434AB.dwg  
 Save by rfp at 09:30pm Mar 22, 2002  
 Plot by gfas at 08:23am Mar 25, 2002  
 Model space plot + Scale = 1/9

<b>O.D.O.T. DIST. 12</b> ACCEPTED [Signature] 2/24/02 ACCEPTED AS NOTED [Signature] 2/24/02 NOT ACCEPTED [Signature] 2/24/02		PROFESSIONAL ENGINEER ALLEN R. LOWENKAMP 41284 OHIO	DOT ITEM LINE NO. 0152 & 0153 DOT BID ITEM NO. 863E90000
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.			A 3/22/02 REVISED PER APPROVAL COMMENTS GAF NO. DATE DESCRIPTION REVISIONS BY
FABRICATOR <b>AMERICAN BRIDGE MANUFACTURING</b> 2000 AMERICAN BRIDGE WAY CORNWALL, PA 15108 PHONE (412) 631-3000 FAX (412) 631-0001		STATE OF OHIO DEPARTMENT OF TRANSPORTATION <b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS	
STEEL ERECTOR <b>TRI-STATE STEEL CONSTRUCTION INC.</b> 12608 ALAMDA DR. STRENGTHVILLE, OH 44136 PHONE: (440) 238-3015 FAX: (440) 238-3335		IN CHARGE OF: L. SMITH DRAWN BY: DATE AMW 01/15/02 CHECKED BY: DATE GAF 02/26/02	SHEET NUMBER 434AB AWM JOB NUMBER 800010



**6 - STEEL OVER 50 LB - 434D**  
 ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK A164b  
 DOT ITEM LINE No. 0152 & 0153  
 REPAIR SHEET 11-215, 216, 217, 350, 351, 352 & 353

**4 - STEEL OVER 50 LB - 434F**  
 ORIG SHOP DRAWING 164-SB119 - SB123  
 ORIG SHOP MARK A164a & P164cx  
 DOT ITEM LINE No. 0152 & 0153  
 REPAIR SHEET 11-215, 216, 217, 350, 351, 352 & 353

**SPAN 11**  
**LINE 18 NORTH (2) PART OF SWAY FRAME**  
**LINE 18 SOUTH (2) PART OF SWAY FRAME**

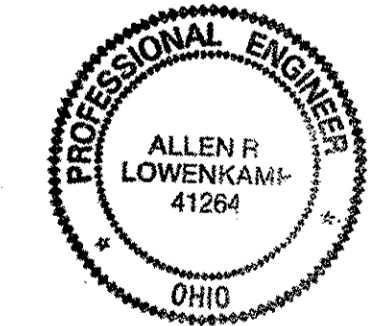
**BILL OF MATERIAL**

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		434A	2	STEEL OVER 50LBS				2221
2		pa	4	PL 3/8 X 23 1/2	2	0		215
3		pb	2	PL 3/8 X 21 1/4	3	3		176
4		pc	68	PL 3/8 X 2 1/2	0	11 11/16		211
5		aa	4	L 4 X 3 1/2 X 3/8	20	3		737
6		ab	4	L 4 X 3 1/2 X 3/8	20	3		737
7		ba	72	7/8" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	76
8				W/HVY HEX NUT & WASHER				
9		bb	68	7/8" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	69
10				W/HVY HEX NUT & WASHER				
11								
12		434B	4	STEEL OVER 50 LB				487
13		af	8	L 5 X 3 1/2 X 3/8	1	7		132
14		pg	4	PL 3/8 X 20	2	0		161
15		pk	4	PL 3/8 X 19 1/2	1	9		174
16		bb	20	7/8" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	20
17				W/HVY HEX NUT & WASHER				
18								
19		434C	2	STEEL OVER 50 LB				569
20		ag	4	L 3 1/2 X 3 1/2 X 3/8	3	8 1/4		125
21		ah	4	L 5 X 3 1/2 X 3/8	3	3		135
22		ph	2	PL 3/8 X 13 1/4	3	3		110
23		pd	2	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK				1
24		pm	2	PL 3/8 X 21	3	3 1/2		176
25		bb	22	7/8" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	22
26				W/HVY HEX NUT & WASHER				
27								
28		434D	6	STEEL OVER 50 LB				463
29		ac	12	L 3 1/2 X 3 1/2 X 3/8	4	4 1/2		446
30		pd	12	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK				5
31		bb	12	7/8" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	12
32				W/HVY HEX NUT & WASHER				
33								
34		434E	4	STEEL OVER 50 LB				797
35		ad	8	L 3 1/2 X 3 1/2 X 3/8	9	9		663
36		pd	8	WASHER 2 1/4" OD X 15/16" ID X 3/8 THK				3
37		pf	4	PL 3/8 X 14 7/8	2	11 1/4		111
38		bb	20	7/8" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	20
39				W/HVY HEX NUT & WASHER				

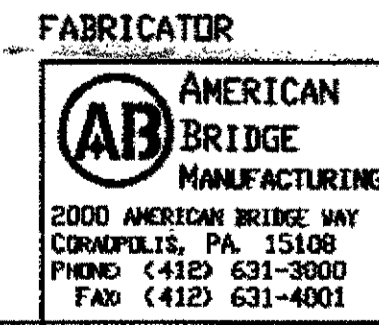
PLATE	A36	PIPE	N/A	FITTINGS	N/A
SHAPES	A36	FLGS.	N/A	BOLTS	NOTE 2

- NOTES:**
- OPEN HOLES ARE (15/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0
  - WORK THIS DRAWING WITH 434A.

DOT ITEM LINE NO. 0152 & 0153  
 DOT BID ITEM NO. 863E90000



**O.D.O.T. DIST. 12**  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



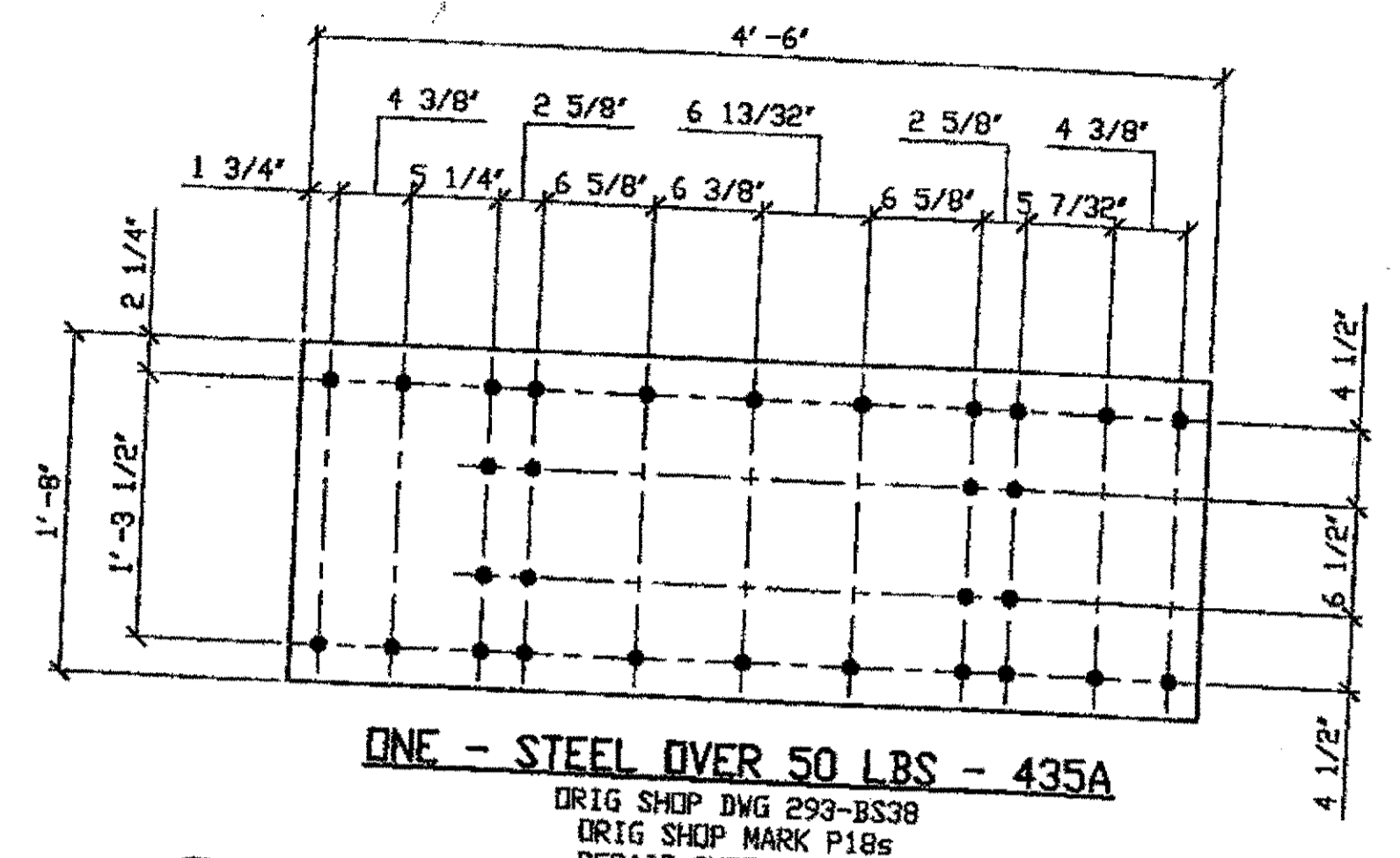
**STEEL ERECTOR**  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

REVISED PER APPROVAL COMMENTS		DATE	DESCRIPTION	BY
A	3/22/02			GAF

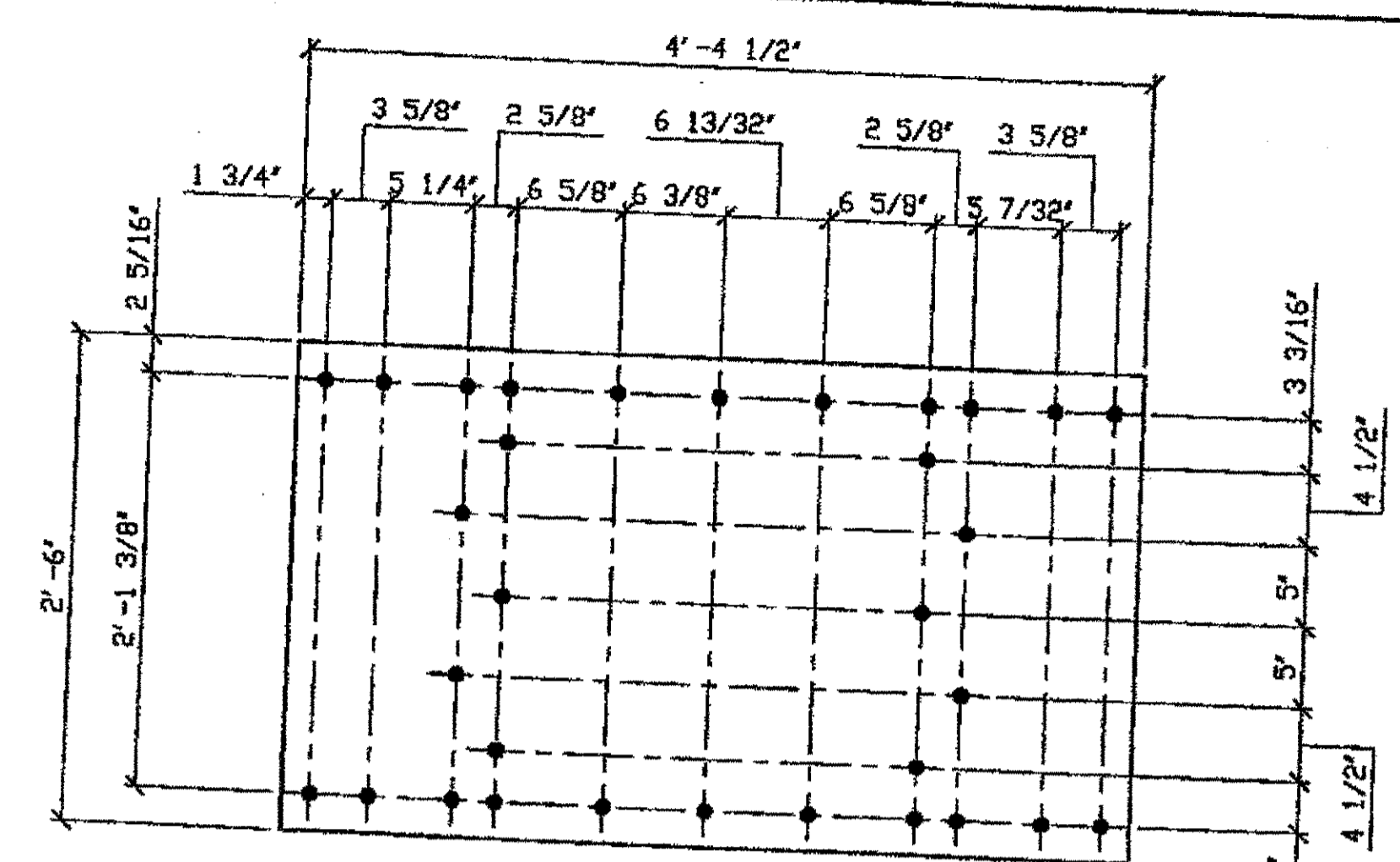
**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
**BRIDGE No. CUY-10-16.13**  
**SPAN 11 REPAIRS**

SHEET NUMBER: 434B  
 ABM JOB NUMBER: 800010

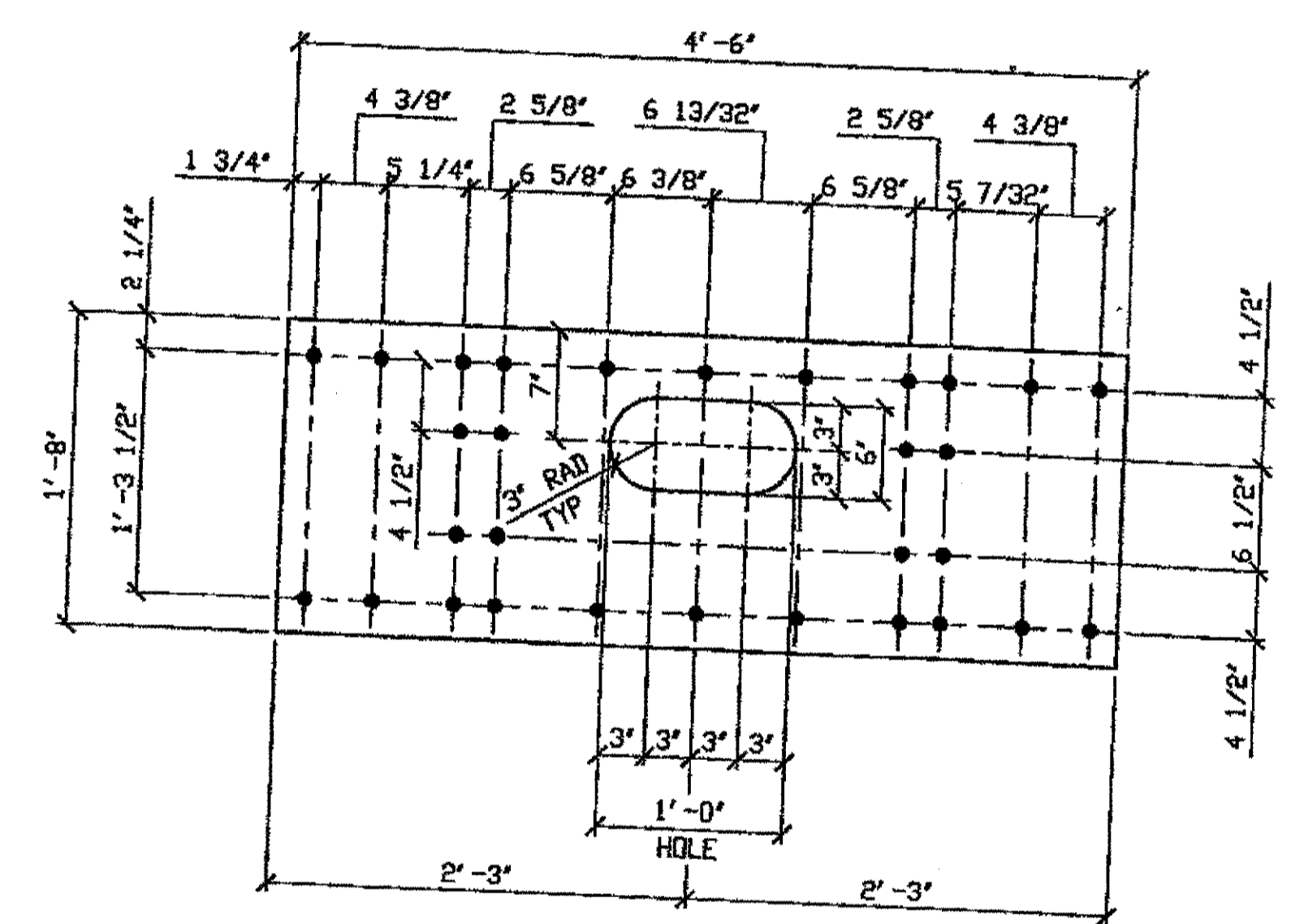
G:\Contract\J00N800010\Drawings\AD434B.dwg  
 Save by rspr at 03:30pm Mar 22, 2002  
 Plot by gfos at 08:23am Mar 25, 2002  
 Model space plot + Scale = 1/9



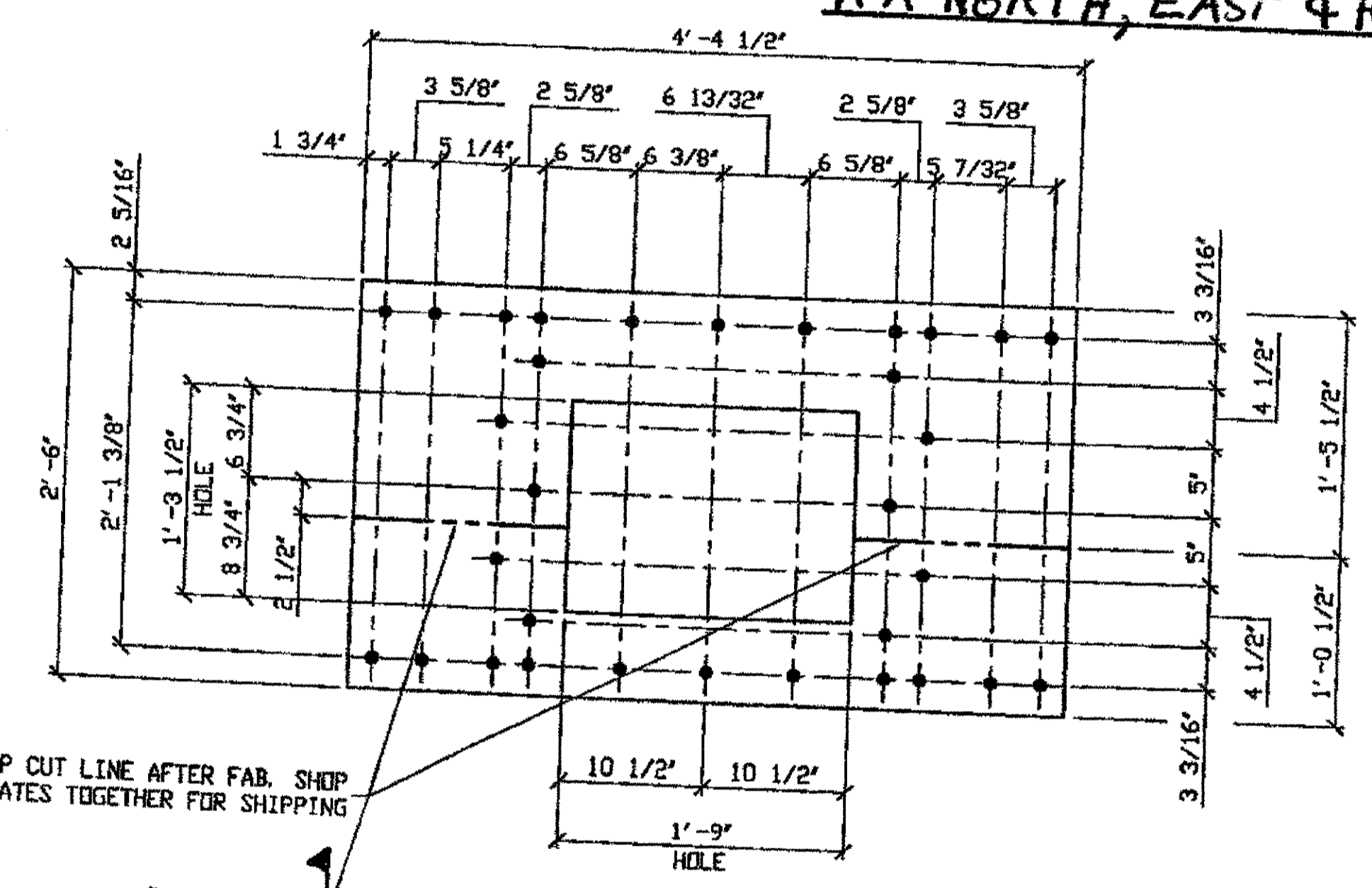
**SPAN II**  
**A-A' NORTH, TOP & R 435A**  
ONE - STEEL OVER 50 LBS - 435A  
ORIG SHOP DWG 293-BS38  
ORIG SHOP MARK P18e  
REPAIR SHEET 11-103



**SPAN II**  
**A-A' NORTH, EAST & R 435B**  
ONE - STEEL OVER 50 LBS - 435B  
ORIG SHOP DWG 293-BS38  
ORIG SHOP MARK P84e  
REPAIR SHEET 11-103



**SPAN II**  
**A-A' NORTH, BOTTOM, & R 435C**  
**A-A' SOUTH, BOTTOM, & R 435C**  
2 - STEEL OVER 50 LBS - 435C  
ORIG SHOP DWG 293-BS38  
ORIG SHOP MARK P18w  
REPAIR SHEET 11-103 & 227



**SPAN II**  
**A-A' NORTH, WEST, & R 435D**  
ONE - STEEL OVER 50 LBS - 435D  
ORIG SHOP DWG 293-BS38  
ORIG SHOP MARK P84b  
REPAIR SHEET 11-103

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL OVER 50 LBS				
2		435A	1	PL 1/2 X 20	4	6		153
3		435B	1	PL 1/2 X 30	4	4 1/2		223
4		435C	2	PL 1/2 X 20	4	6		288
5		435D	1	PL 1/2 X 30	4	4 1/2		180
6								
7								
8								
9								
10								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	N/A

- NOTES:
- OPEN HOLES ARE (1 1/16" Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SHOP CUT LINE AFTER FAB. SHOP BOLT PLATES TOGETHER FOR SHIPPING

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

STEEL ERECTOR  
TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335



FABRICATOR  
AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CONARVILLE, PA 15108  
PHONE: (412) 631-3000  
FAX: (412) 631-4001

DOT ITEM LINE NO. 0152 DOT BID ITEM NO. 863E90000	
DATE	DESCRIPTION
3/22/02	REVISED PER APPROVAL COMMENTS
STATE OF OHIO DEPARTMENT OF TRANSPORTATION HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 11 REPAIRS	
DRAWN BY: DATE AMW 01/16/02	SHEET NUMBER 435
CHECKED BY: DATE GAF 02/27/02	APP. JOB NUMBER 800010

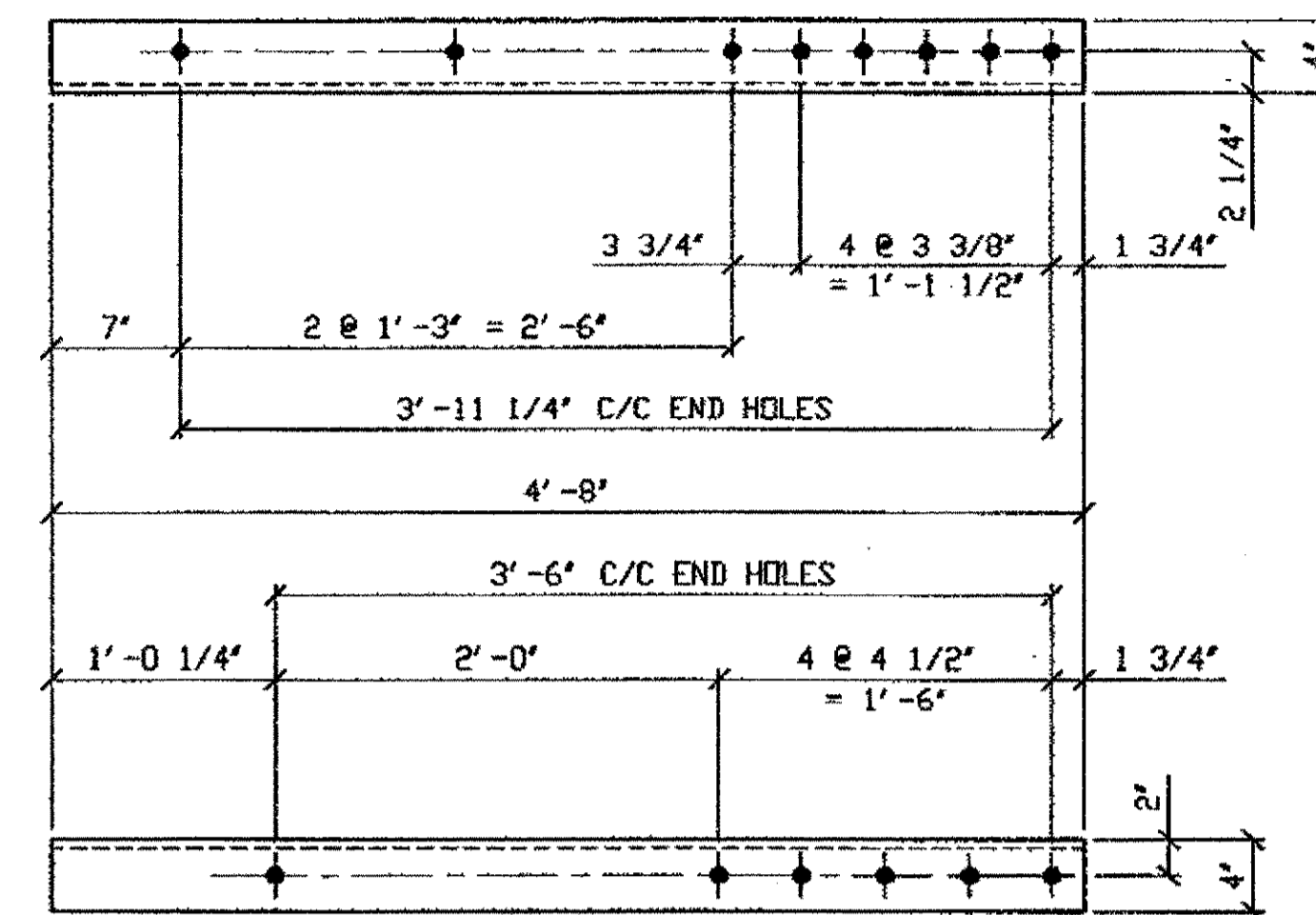
Contracts\2000\800010\Drawings\435A.dwg  
ve by nsp at 03:30pm Mar 22, 2002  
ot by gfos at 08:23am Mar 25, 2002  
Model space plot + Scale = 1/3

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1								
2								66
3								
4				STEEL OVER 50 LBS				
5		436B R/L	2	L4 x 4 x 1/2	9	0		230
6		436C	1	L3 1/2 x 3 1/2 x 3/8	8	8		74
7		436D	1	L4 x 4 x 1/2	4	8		60
8								182
9		436G	1	L3 1/2 x 3 1/2 x 3/8	6	0		51
10								
11				SPLICE PLATE				
12	*	436H	1	PL 1/2 x 3 1/2	0	6	PLAIN MAT'L	3
13								
14				FIELD BOLTS				
15		FB36	4	1" DIA	0	2 1/2	NOTE 2	6
16		FB44	6	1" DIA	0	3 1/2	NOTE 2	10
17								
18								

PLATE A36 PIPE N/A FITTINGS N/A  
 SHAPES A36 FLGS. N/A BOLTS NOTE 2

\* DOT ITEM LINE No. 0113

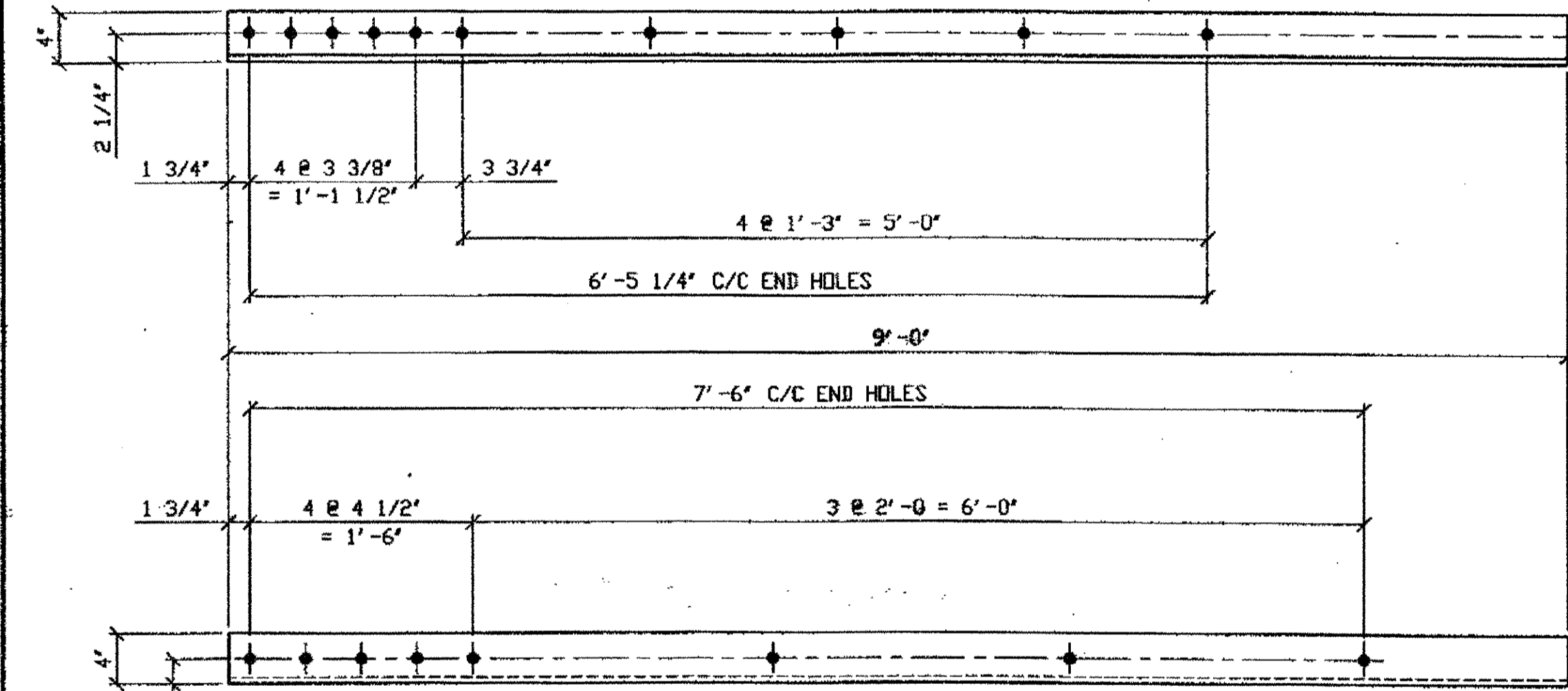


ONE - STEEL OVER 50 LBS. - 436D

ORIG SHOP DRAWING 293-BS39  
 ORIG SHOP MARK A293a R/L  
 DOT LINE ITEM No. 0152  
 REPAIR SHEET 11-212

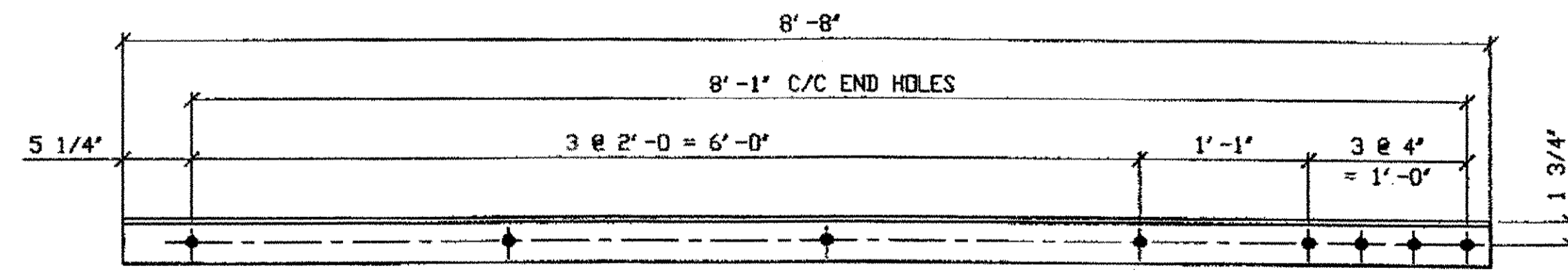
SPAN 11

- U-U' SOUTH BOT. EAST 436B/R
- U-U' SOUTH BOT. WEST 436B/L
- L1-N.EXT., SWAY FRAME BOT.EAST 436C
- U-U' NORTH TOP EAST 436D
- L12-N.EXT., SWAY FRAME BOT.EAST 436G/R
- L12-N.EXT., SWAY FRAME BOT.WEST 436G/L



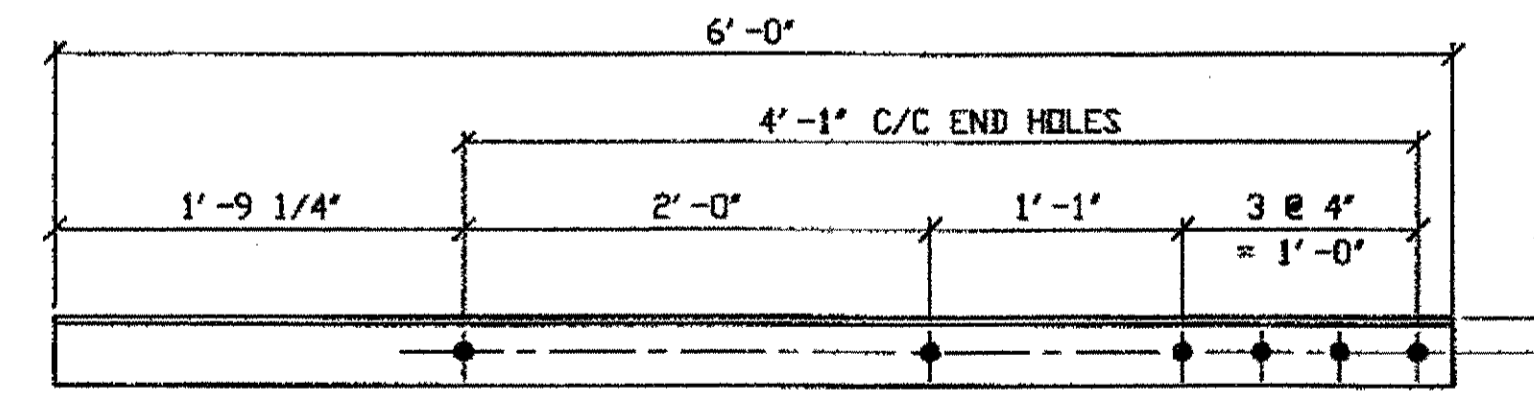
2 - STEEL OVER 50 LBS. - 436B R/L (R SHOWN)

ORIG SHOP DRAWING 293-BS39  
 ORIG SHOP MARK A293a R/L  
 DOT LINE ITEM No. 0152  
 REPAIR SHEET 11-347



ONE - STEEL OVER 50 LBS. - 436C

ORIG SHOP DRAWING 279-SB181  
 ORIG SHOP MARK A297n  
 DOT ITEM LINE No. 0152  
 REPAIR SHEET 11-122



ONE - STEEL OVER 50 LBS. - 436G R/L (R SHOWN)

ORIG SHOP DRAWING 279-SB181  
 ORIG SHOP MARK A297n  
 DOT ITEM LINE No. 0152  
 REPAIR SHEET 11-178

NOTES:

- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	
ACCEPTED AS NOTED	02/27/02
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 COLUMBIUS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

STEEL ERECTOR  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: AMW 01/14/02  
 CHECKED BY: DATE: GAF 02/27/02

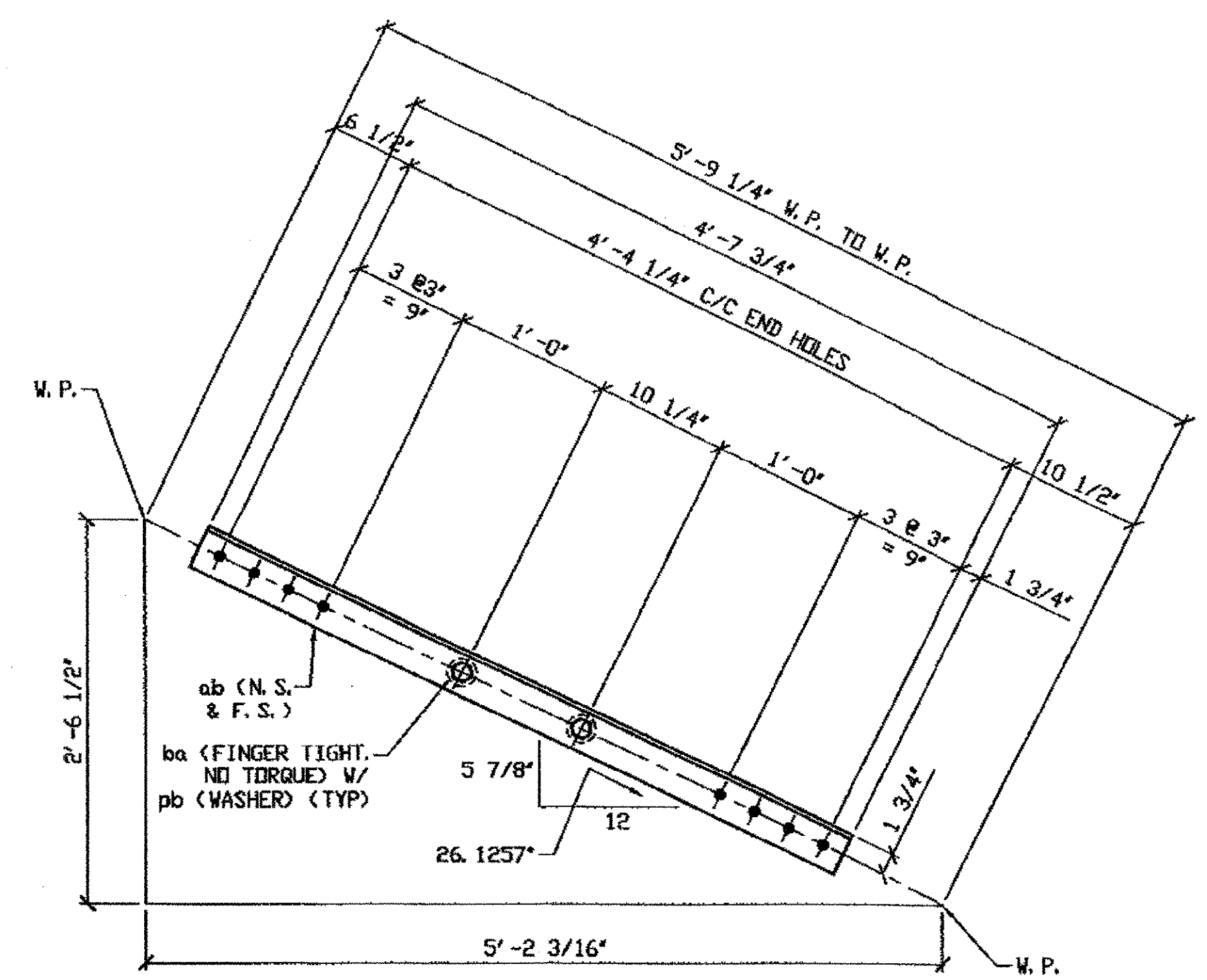
DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E50000 & 863E90000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	02/27/02	REVISED PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 11 REPAIRS

SHEET NUMBER: 436  
 ABR JOB NUMBER: 800010

G:\Control\300\800010\Drawings\0436A.dwg  
 Save by rsg at 03:30pm Mar 22 2002  
 Plot by cfas at 08:24am Mar 25 2002  
 Model space plot + Scale = 1/9

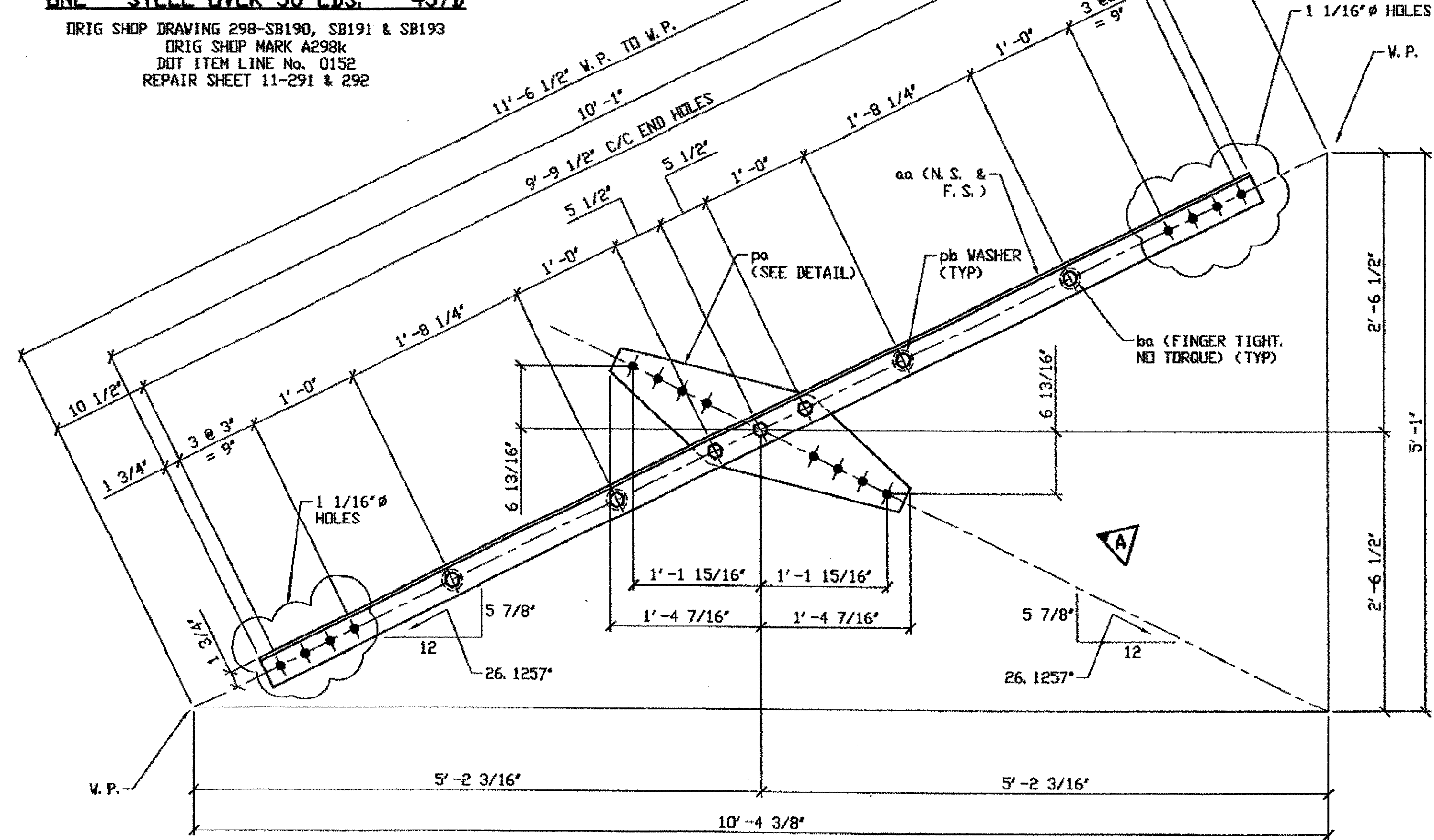


**SPAN 11**  
**LINE 10 SOUTH SWAY FRAME 437B**  
**LINE 10, SOUTH SWAY FRAME 437A**

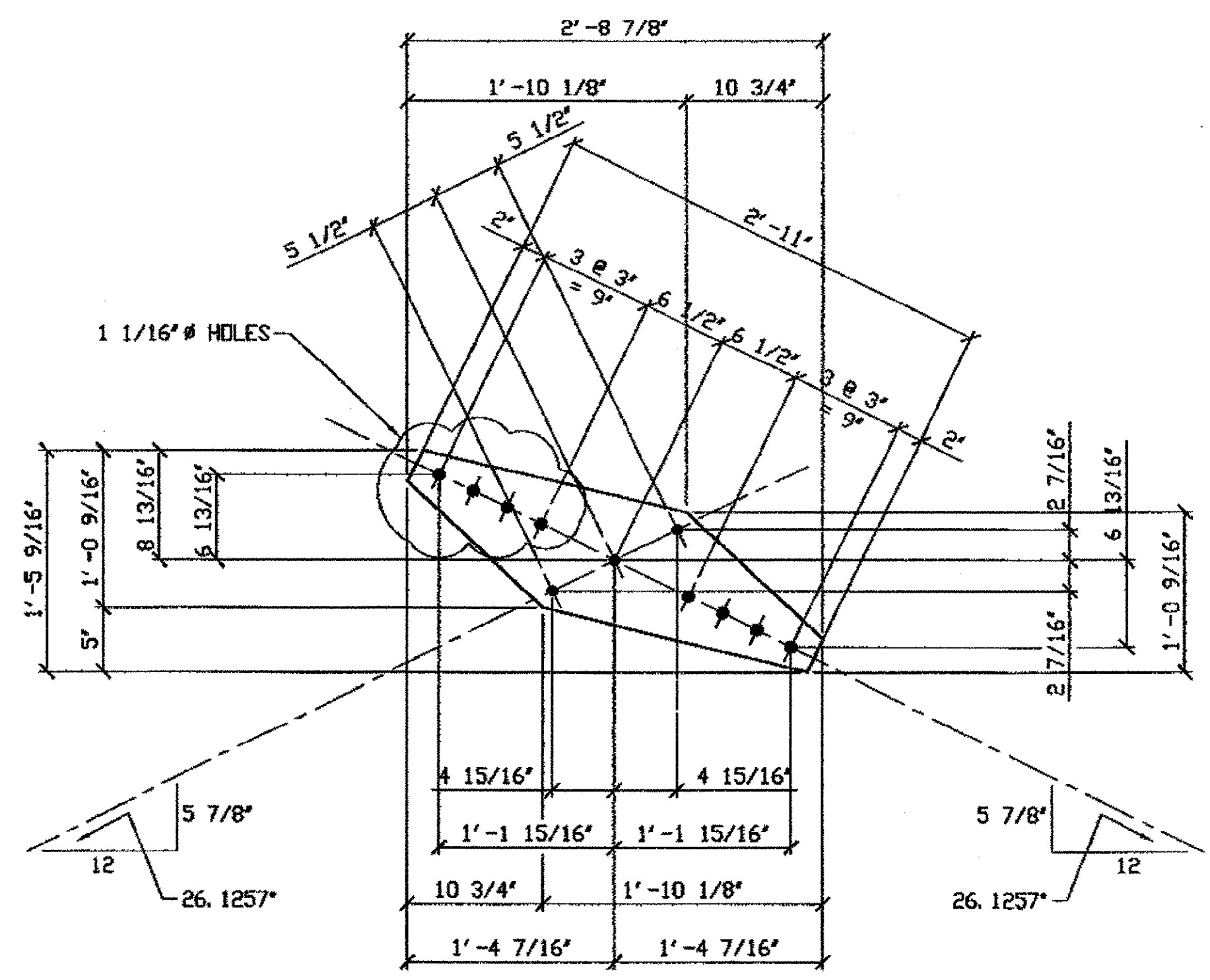
- NOTES:**
1. OPEN HOLES ARE  $(15/16)''$  UNLESS NOTED OTHERWISE.
  2. ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  3. SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		437A	ONE	STEEL OVER 50 LBS.				209
2		aa	2	L3 1/2 x 3 1/2 x 3/8	10	1		171
3		pa	1	PL 3/8 x 17 9/16		2 8 7/8		26
4		pb	4	WASHER 2 1/4\" OD x 15/16\" ID x 3/8\" THK				2
5		ba	7	7/8\" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	7
6				W/HVY HEX NUT & WASHER				
7								
8		437B	ONE	STEEL OVER 50 LBS.				82
9		ab	2	L3 1/2 x 3 1/2 x 3/8	4	7 3/4		79
10		pb	2	WASHER 2 1/4\" OD x 15/16\" ID x 3/8\" THK				1
11		ba	2	7/8\" DIA HVY HEX BOLT	0	2 1/2	NOTE 2	2
12				W/HVY HEX NUT & WASHER				
13								
14								
15								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

**ONE - STEEL OVER 50 LBS. - 437B**  
 ORIG SHOP DRAWING 298-SB190, SB191 & SB193  
 ORIG SHOP MARK A298k  
 DOT ITEM LINE No. 0152  
 REPAIR SHEET 11-291 & 292



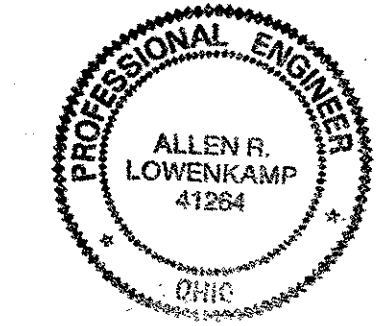
**ONE - STEEL OVER 50 LBS. - 437A**  
 ORIG SHOP DRAWING 298-SB190, SB191 & SB193  
 ORIG SHOP MARK A298f & P298h  
 DOT ITEM LINE No. 0152  
 REPAIR SHEET 11-291 & 292



**DETAIL - D0**

G:\Contract\J00\800010\Drawings\437A.dwg  
 Save by rsbr at 08:30pm Mar 22, 2002  
 Plot by rsbr at 08:34am Mar 25, 2002  
 Model Space Plot - Scale = 1/3

**O.D.O.T. DIST. 12**  
 ACCEPTED [Signature]  
 ACCEPTED AS NOTED [Signature]  
 NOT ACCEPTED [Signature]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

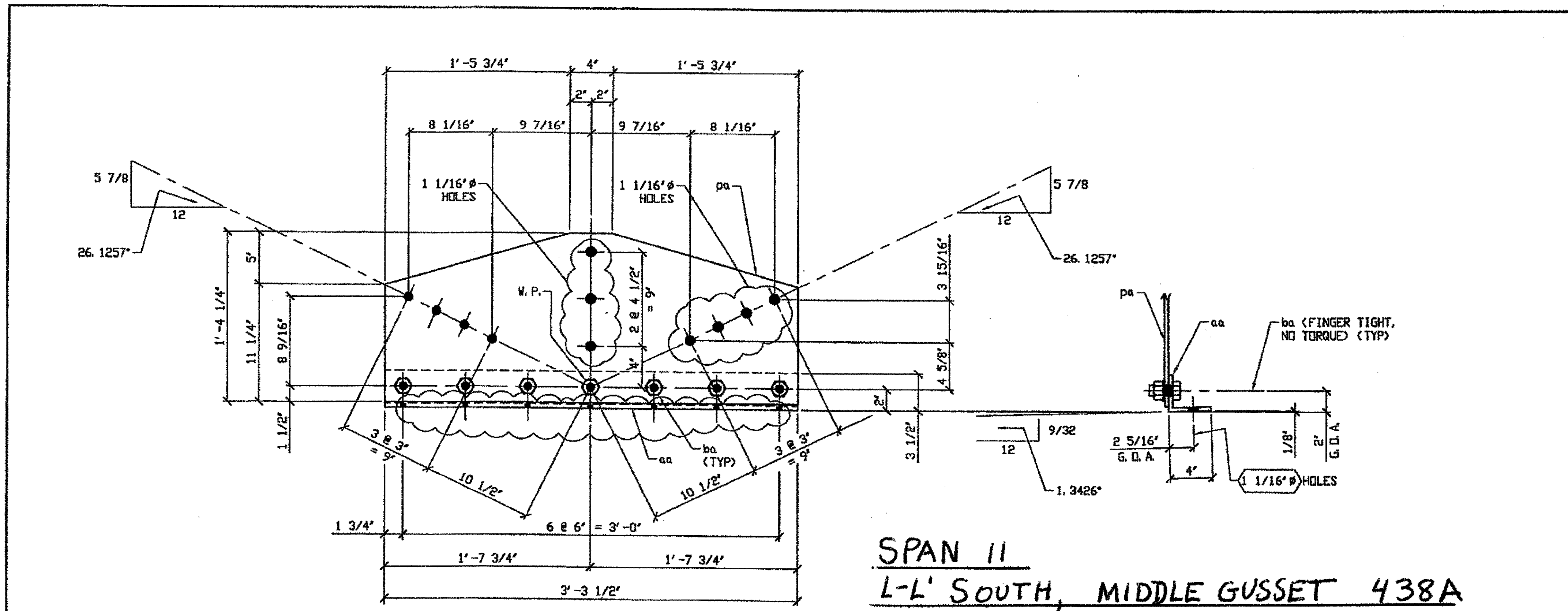


**FABRICATOR**  
**AMERICAN BRIDGE MANUFACTURING**  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA. 15108  
 PHONE: (412) 631-3000  
 FAX: (412) 631-4001

**STEEL ERECTOR**  
**TRI-STATE STEEL CONSTRUCTION INC.**  
 12608 ALAMEDA DR.  
 STRINGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE: AMW 01/16/02  
 CHECKED BY: DATE: GAF 02/27/02

DOT ITEM LINE NO. 0152 DOT BID ITEM NO. 863E90000	
NO. 1	DATE 3/22/02
DESCRIPTION	REVISED PER APPROVAL COMMENTS
BY	GAF
<b>STATE OF OHIO</b> DEPARTMENT OF TRANSPORTATION	
<b>HOPE MEMORIAL BRIDGE REHAB</b> (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13	
<b>SPAN 11 REPAIRS</b>	
SHEET NUMBER	437
ABR JOB NUMBER	800010

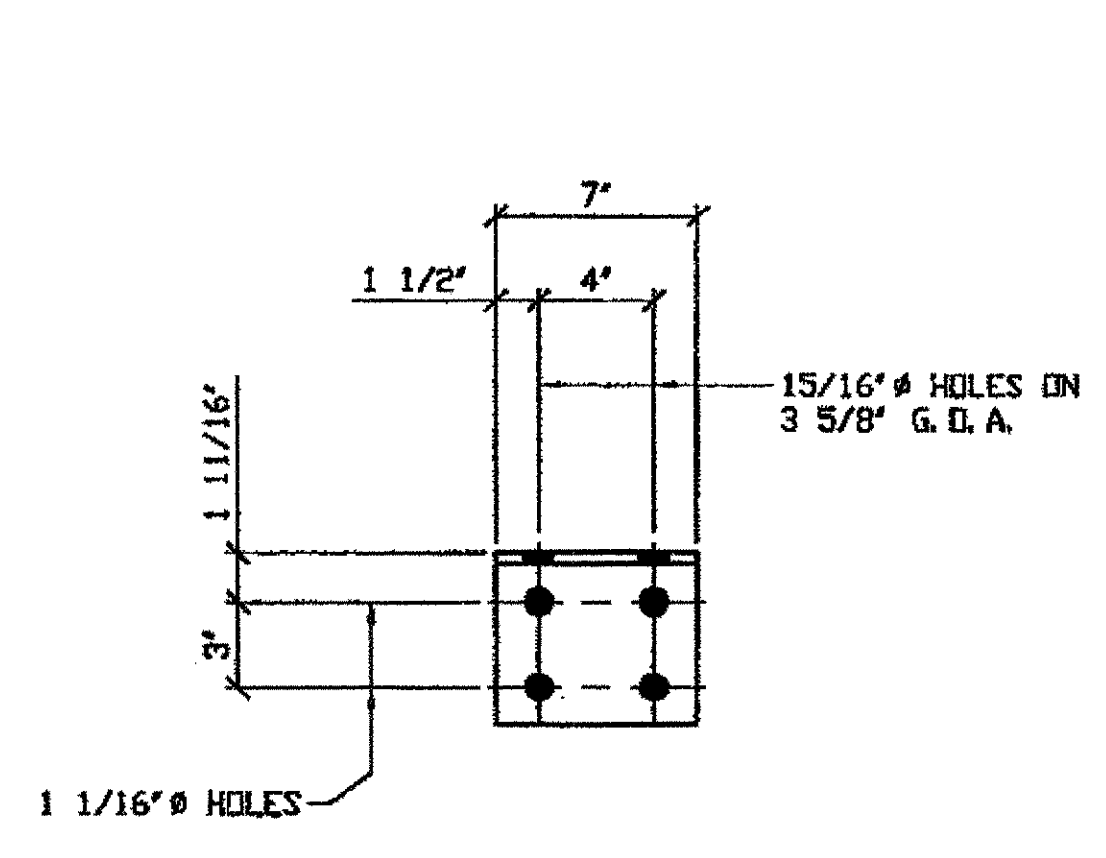


**ONE - STEEL OVER 50 LBS. - 438A**  
 ORIG SHOP DRAWING 298-SB190, SB191 & SB193  
 ORIG SHOP MARK P298g  
 DOT ITEM LINE No. 0152  
 REPAIR SHEET 11-291 & 292

**SPAN II**  
**L-L' SOUTH, MIDDLE GUSSET 438A**

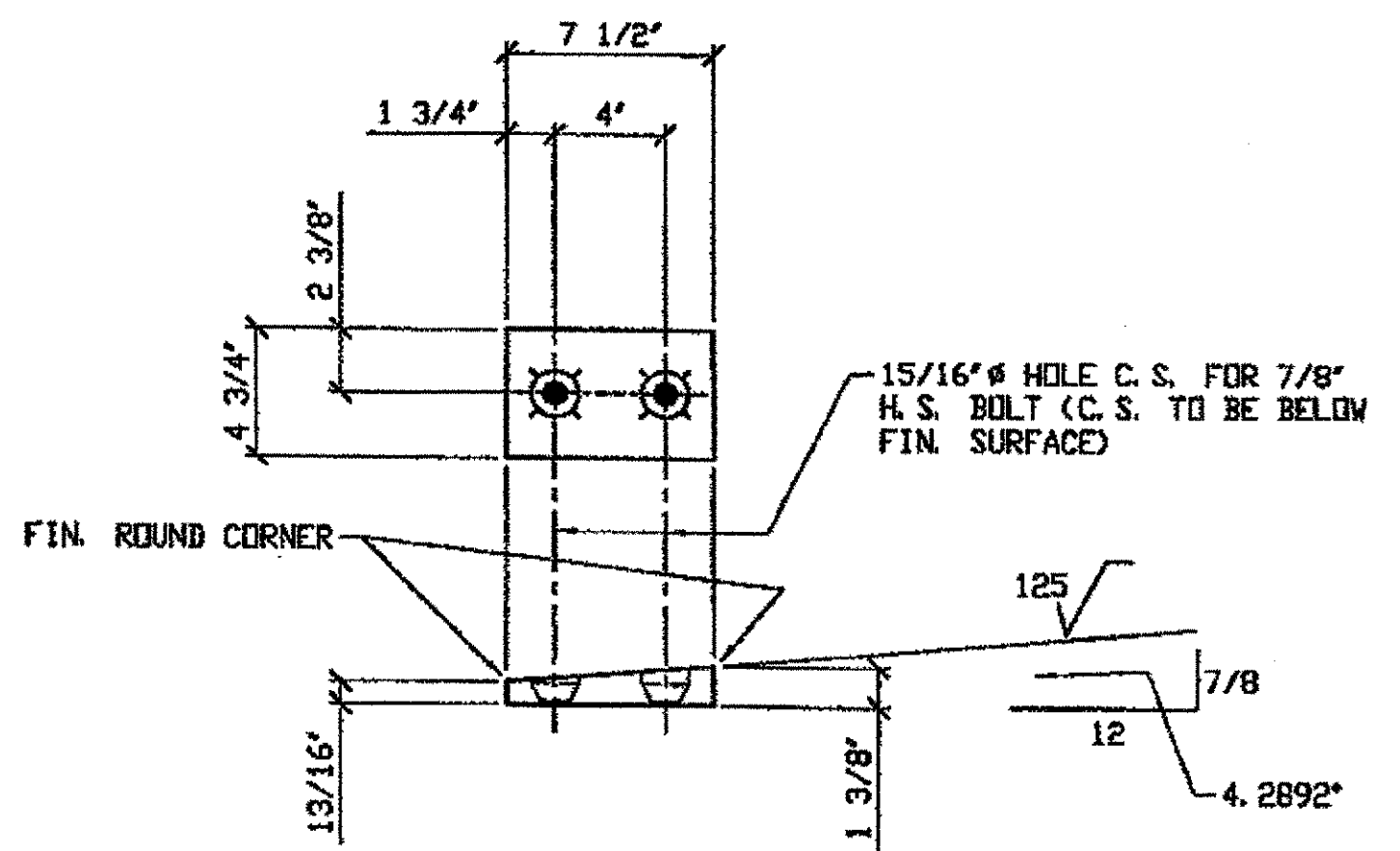
BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		438A	ONE	STEEL OVER 50 LBS.				96
2		aa	1	L4 x 3 1/2 x 3/8	3	3 1/2	BENT	30
3		pa	1	PL 3/8 x 16 1/4	3	3 1/2		59
4		ba	7	7/8" DIA HVY HEX BOLT	0	2	NOTE 2	7
5				W/HVY HEX NUT & WASHER				
6								
7								
8				STEEL UNDER 50 LBS.				
9		438B	4	L6 x 6 x 3/8	0	7		35
10		438C	4	PL 1 3/8F x 4 3/4	0	7 1/2	N1	60
11		438D	4	PL 1/2 x 5	0	5		7
12								
13								
14								
15								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

- N1 = MACHINE FROM 1 1/2" PLATE.
- NOTES:**
- OPEN HOLES ARE (15/16"Ø) UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



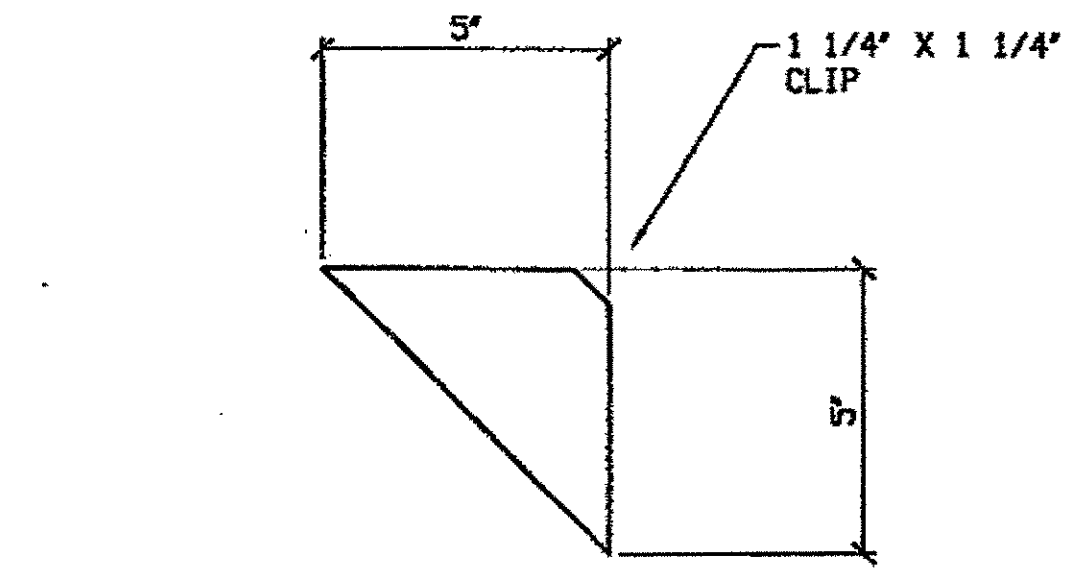
**4 - STEEL UNDER 50 LBS - 438B**  
 ORIG SHOP DRAWING 293-BS38  
 ORIG SHOP MARK A84d  
 DOT ITEM LINE No. 0153  
 REPAIR SHEET 11-104 & 228

**SPAN II**  
**A-A' NORTH @ ☐, (2) 438B**  
**A-A' SOUTH @ ☐, (2) 438B**



**4 - STEEL UNDER 50 LBS - 438C**  
 ORIG SHOP DRAWING 293-BS38  
 ORIG SHOP MARK P293k  
 DOT ITEM LINE No. 0153  
 REPAIR SHEET 11-104 & 228

**SPAN II**  
**A-A' NORTH @ ☐, (2) 348C**  
**A-A' SOUTH @ ☐, (2) 348C**



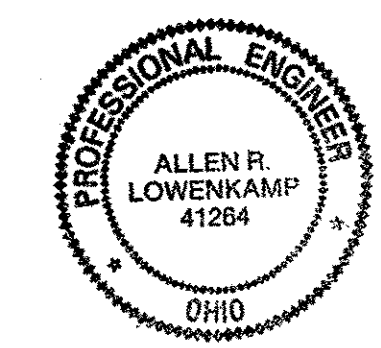
**4 - STEEL UNDER 50 LBS - 438D**  
 ORIG SHOP DRAWING 293-BS38  
 DOT ITEM LINE No. 0153  
 REPAIR SHEET 11-104 & 228

**SPAN II**  
**A-A' NORTH @ ☐, (2) 438D**  
**A-A' SOUTH @ ☐, (2) 438D**

**O.D.O.T. DIST. 12**

ACCEPTED	2/9/02	AS-M
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**FABRICATOR**

**AMERICAN BRIDGE MANUFACTURING**  
 8000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

IN CHARGE OF: L. SMITH  
 DRAWN BY: BATE  
 DATE: 01/19/02  
 CHECKED BY: BATE  
 DATE: 02/27/02

DOT ITEM LINE NO. 0152 & 0153  
 DOT BID ITEM NO. 863E90000

NO.	DATE	DESCRIPTION	BY

**STATE OF OHIO**  
 DEPARTMENT OF TRANSPORTATION

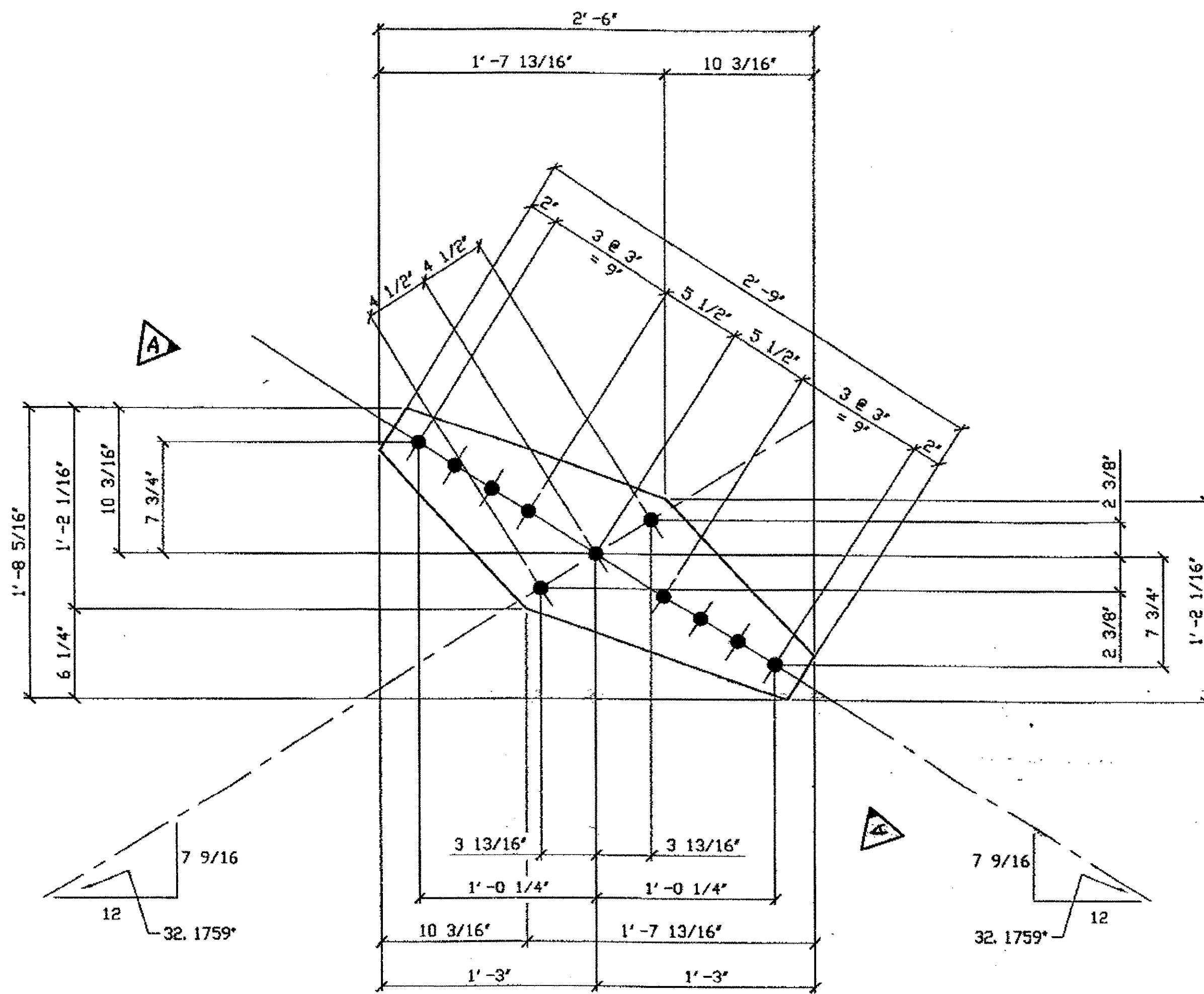
**HOPE MEMORIAL BRIDGE REHAB**  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13

**SPAN 11 REPAIRS**

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC., 12608 ALAMEDA DR., STRONGSVILLE, OH 44136, PHONE (440) 238-3015, FAX (440) 238-3335

SHEET NUMBER: 438  
 AM JOB NUMBER: 800010

G:\Contra...000\800010\Drawings\438A.dwg  
 Save by rshp at 02:42pm Feb 27, 2002  
 Plot by rshp at 02:50pm Feb 27, 2002  
 Model space plot + Scale = 1/6



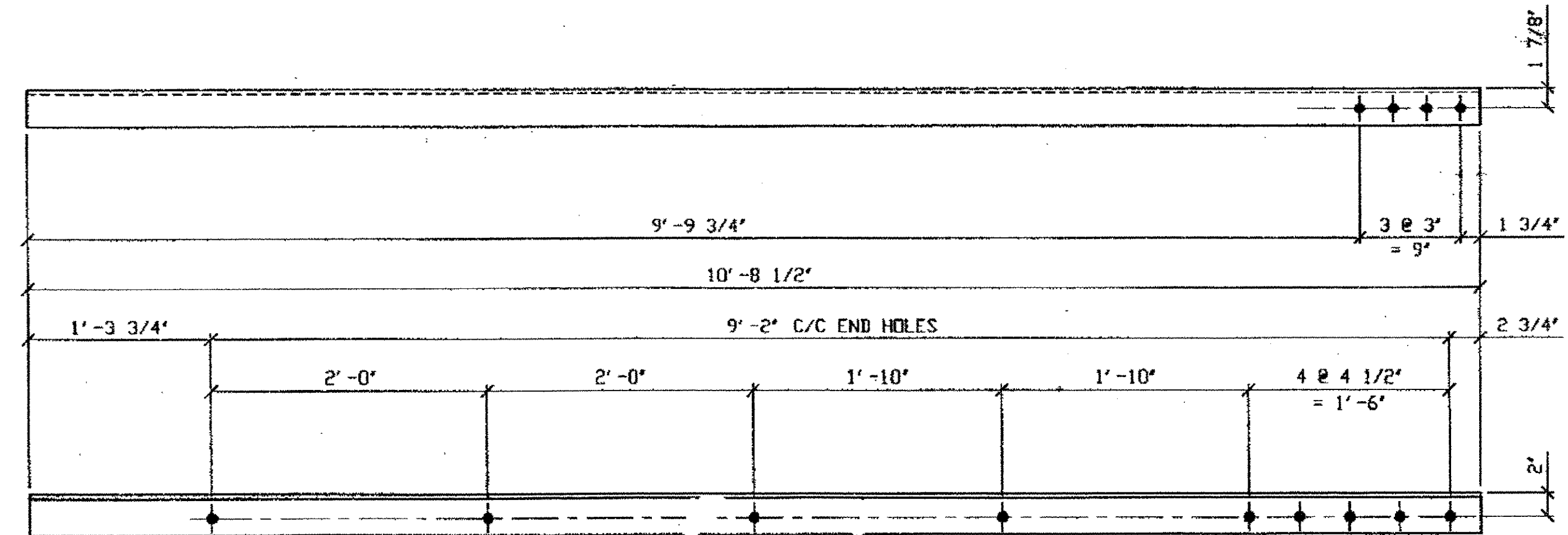
ONE - STEEL UNDER 50 LBS. - 439A

ORIG SHOP DRAWING 297-SB181  
ORIG SHOP MARK P297m  
DOT ITEM LINE No. 0153  
REPAIR SHEET 11-302

**SPAN 11**  
**LINE 12 SOUTH, SWAY FRAME 439A**

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REV'D.	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL UNDER 50 LBS.				
2		439A		1 PL 3/8 x 20 5/16	2	6		26
3								
4								
5		439B	2	2 L 3 1/2 x 3 1/2 x 3/8	10	8 1/2	R/L	182
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
PLATE		A36	PIPE		N/A	FITTINGS		N/A
SHAPES		N/A	FLGS.		N/A	BELTS		N/A

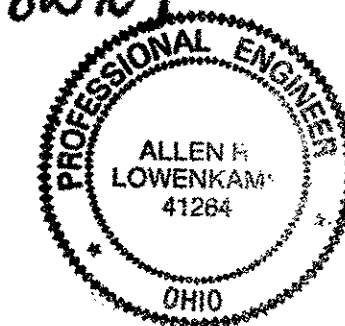
- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE I HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



2 - STEEL OVER 50 LBS. - 439B R/L

ORIG SHOP DRAWING 390-BL140 (R SHOWN)  
ORIG SHOP MARK A380K R/L  
DOT ITEM LINE No. 0152  
REPAIR SHEET 11-235

**SPAN 11**  
**B-A' SOUTH TOP NORTH 439B/L**  
**B-A' SOUTH TOP SOUTH 439B/R**



DOT ITEM LINE NO. 0153  
DOT BID ITEM NO. B63E90000

NO.	DATE	REVISIONS	DESCRIPTION	BY
A	3/22/02	REVISED PER APPROVAL COMMENTS		GAF

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 11 REPAIRS

FABRICATOR: AMERICAN BRIDGE MANUFACTURING  
2000 AMERICAN BRIDGE WAY  
CORANAPOLIS, PA 15108  
PHONE (412) 631-3000  
FAX (412) 631-4001

STEEL ERECTOR: TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE: (440) 238-3015  
FAX: (440) 238-3335

IN CHARGE OF: L. SMITH

DRAWN BY: DATE: AMW 01/21/02  
CHECKED BY: DATE: GAF 02/27/02

SHEET NUMBER: 439  
ABM JOB NUMBER: 800010

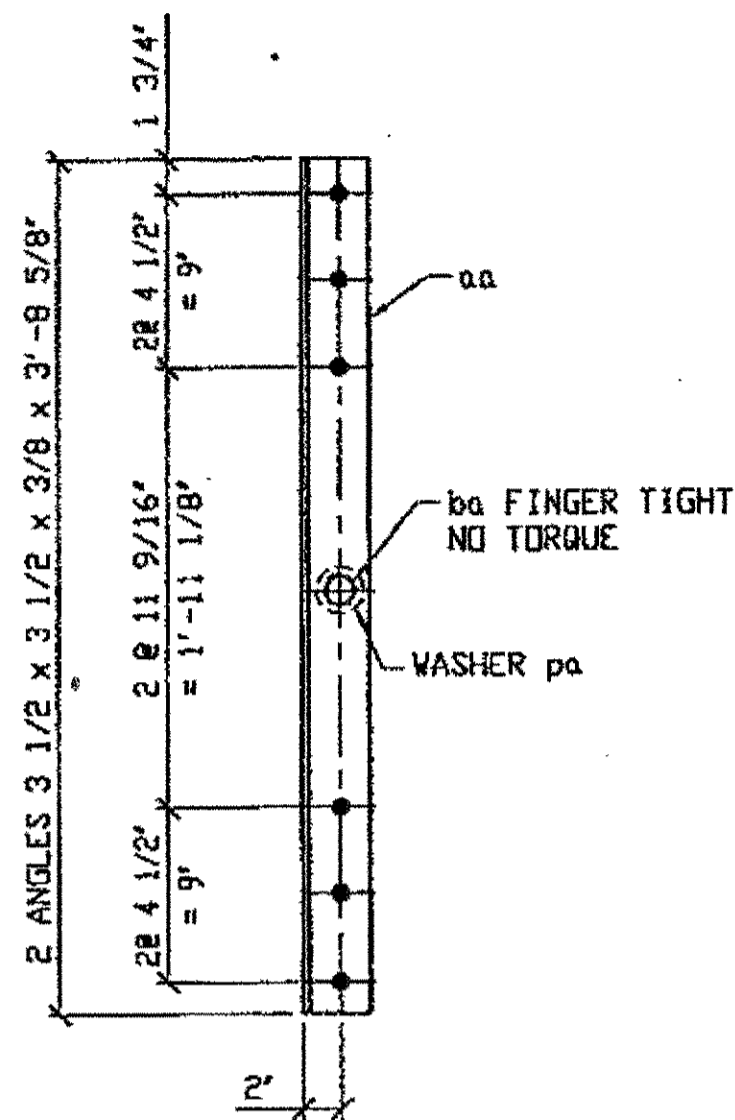
O.D.O.T. DIST. 12

ACCEPTED: [Signature] 2/5/04 PSM  
ACCEPTED AS NOTED: [Signature]  
NOT ACCEPTED: [Signature]

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

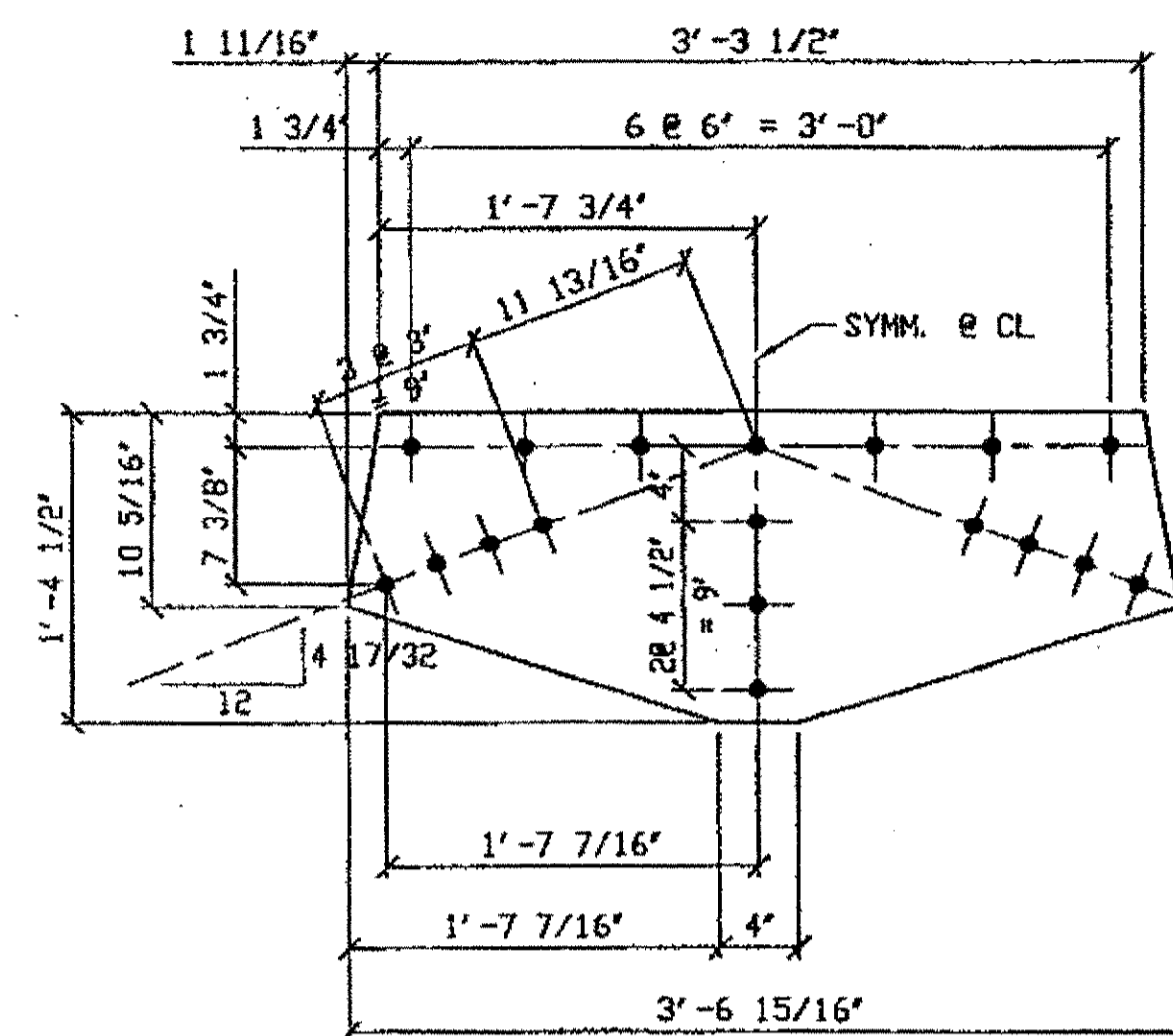
G:\Contract\008\800010\Drawings\0439A.dwg  
Save by rspir at 03:30pm Mar 22 2002  
Plot by gfos at 08:24am Mar 25 2002  
Model space plot + Scale = 1/8"





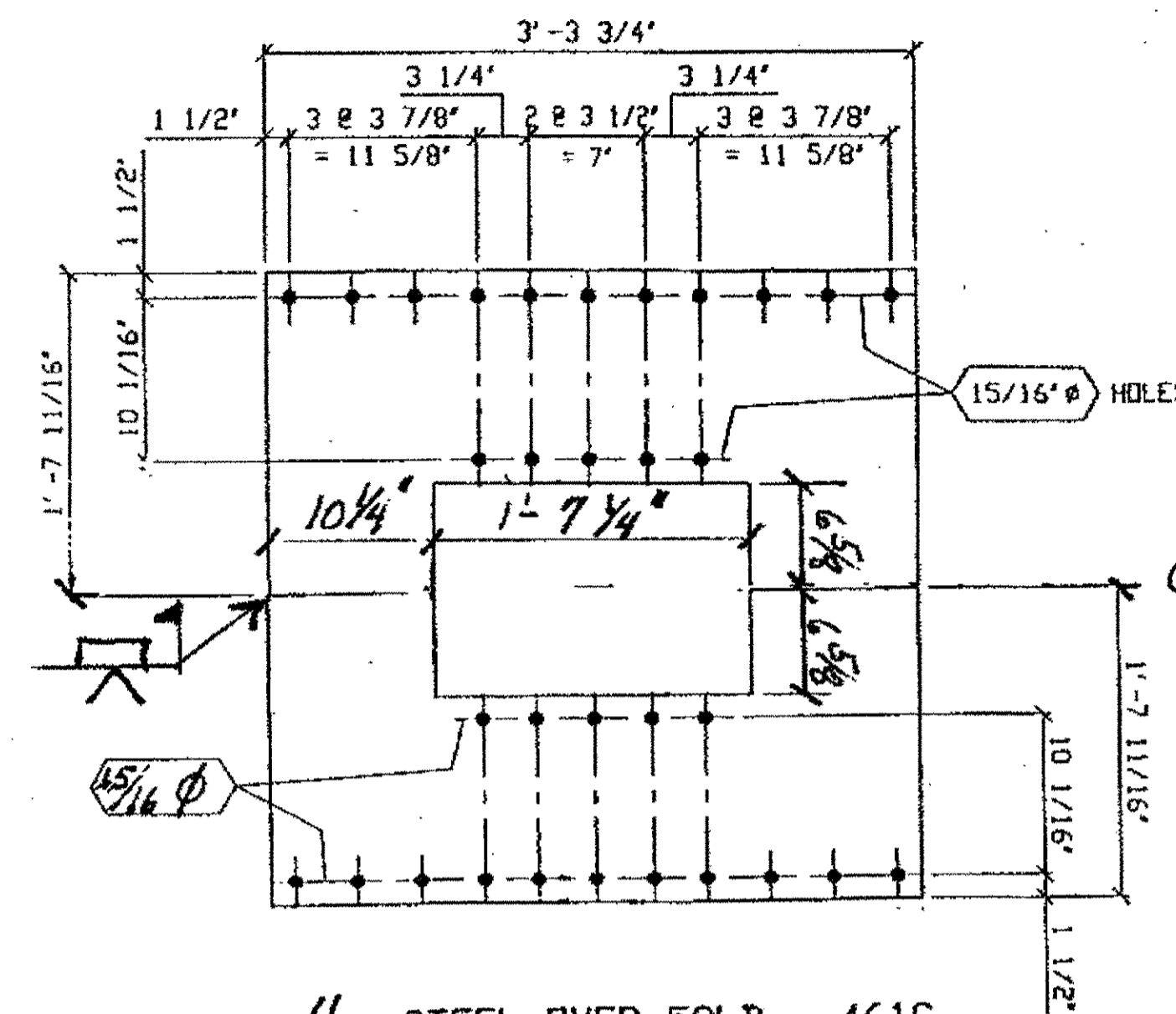
ONE - STEEL UNDER SOLB - 461A

DRIG SHOP DRAWING 453-SB271  
DRIG SHOP MARK A144h  
ITEM No. 0153  
REPAIR SHEET 12-121



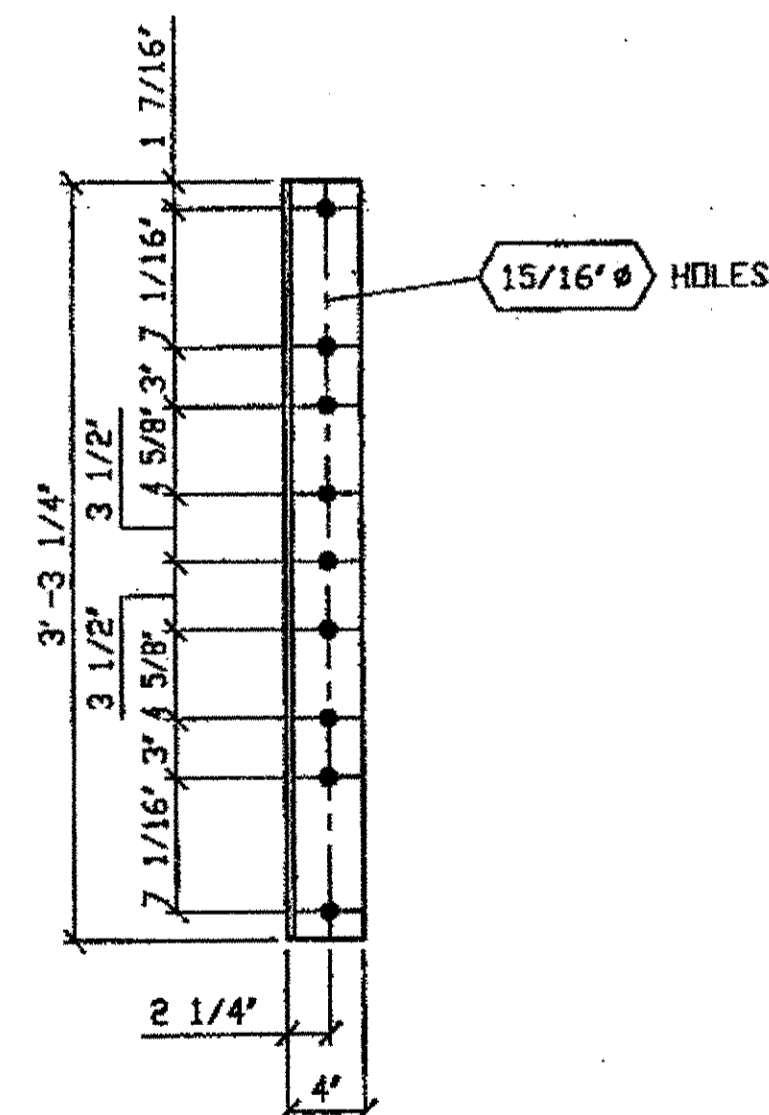
1 - STEEL OVER SOLB - 461B

DRIG SHOP DRAWING 453-SB271  
DRIG SHOP MARK P144h  
ITEM No. 0152  
REPAIR SHEET 12-121



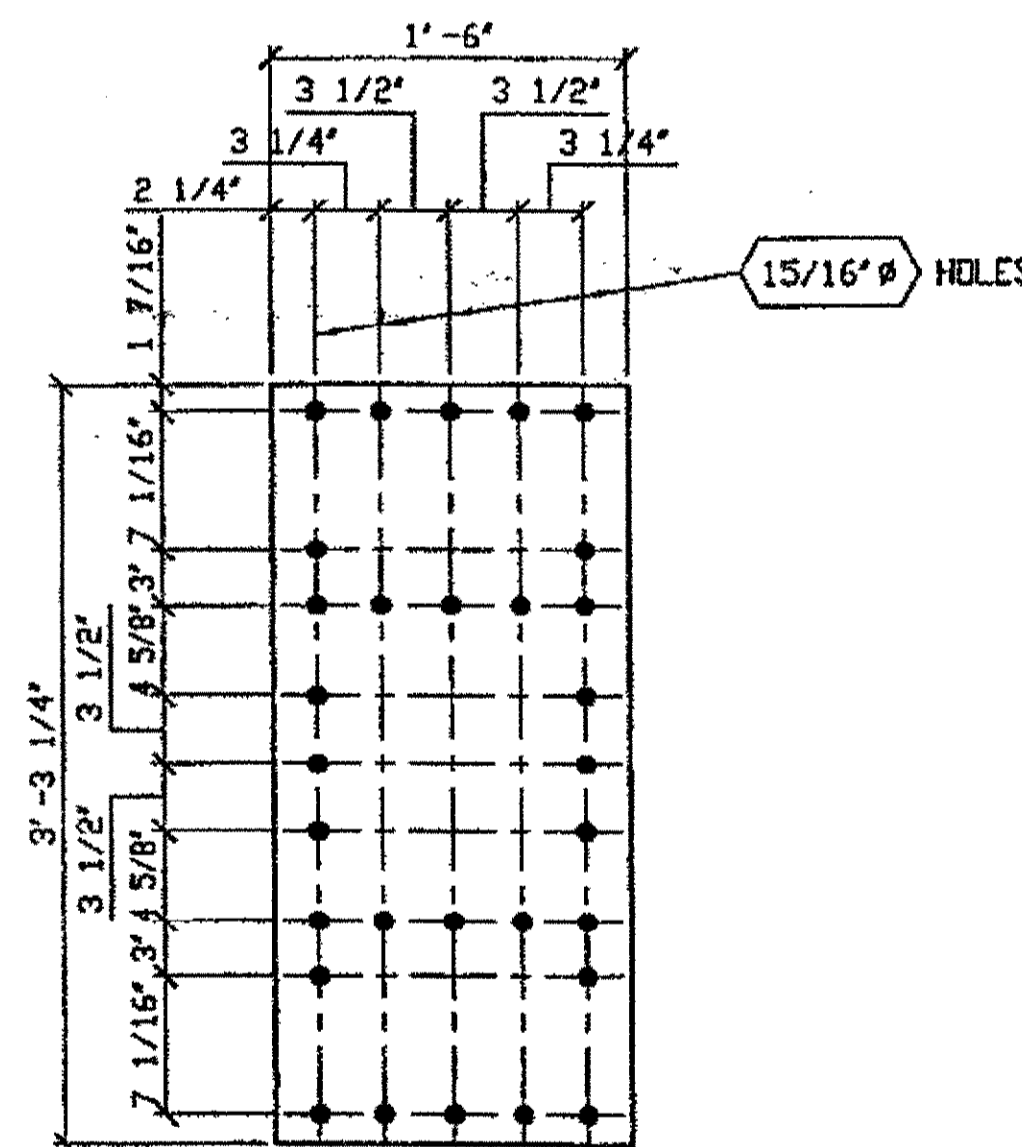
4 - STEEL OVER SOLB - 461C

DRIG SHOP DRAWING 142-BS17  
DRIG SHOP MARK P142c  
ITEM No. 0152  
REPAIR SHEET 12-138, 172  
IDENTICAL TO WSB-102D



4 - STEEL UNDER SOLB - 461D

DRIG SHOP DRAWING 142-BS17  
DRIG SHOP MARK A142c  
ITEM No. 0153  
REPAIR SHEET 12-139, 171  
IDENTICAL TO WSB-103D



2 - STEEL OVER SOLB - 461F

DRIG SHOP DRAWING 142-BS17  
DRIG SHOP MARK P142d  
ITEM No. 0152  
REPAIR SHEET 12-139, 171  
IDENTICAL TO WSB-103C

BILL OF MATERIAL

LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1		461A	1	STEEL UNDER SOLB				66
2		aa	2	L 3 1/2 X 3 1/2 X 3/8	3	8 5/8		64
3		pa	1	PL 3/8 X 1 1/2 X 1 1/2		161D		1
4		ba	1	1" DIA HVY HEX BOLT	0	2 3/4	NOTE 2	1
5				W/HVY HEX NUT & WASHER				
6								
7				STEEL UNDER SOLB				
8		461D	4	L 4 X 3 1/2 X 3/8	3	3 1/4		119
9								
10				STEEL OVER SOLB				
11		461B	1	PL 3/8 X 16 1/2	3	6 7/8		61
12		461C	4	PL 1/2 X 19 11/16	3	3 3/4		367
13		461F	2	PL 3/8 X 18	3	3 1/4		150
14								
15								
16								
17								
18								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		A36		FLGS.	N/A		BOLTS	NOTE 2

NOTES:

- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
- ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
- SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

SPAN 12

- LINE 2 NORTH SWAY FRAME 461A
- LINE 2 NORTH SWAY FRAME 461B
- NORTH @ F, EAST # OF W.S. KEY BOX 461C (2)
- SOUTH @ F, EAST # OF W.S. KEY BOX 461C (2)
- NORTH @ F, #S FOR WEST # OF W.S. KEY BOX 461D (2)
- SOUTH @ F, #S FOR WEST # OF W.S. KEY BOX 461D (2)
- NORTH @ F, WEST # OF W.S. KEY BOX 461F
- SOUTH @ F, WEST # OF W.S. KEY BOX 461F

B:\Contracts\2000\8000\Drawings\0461A.dwg  
Save by rsp at 10:34am Nov 05, 2001  
Plot by gfos at 01:08pm Dec 07, 2001  
Model space plot + Scale = 1/3

ENGR. & CONTR.

DEC 10 2001

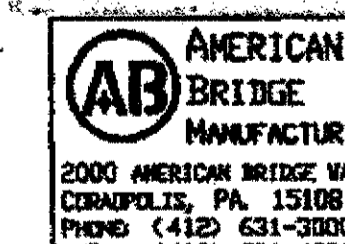
O.D.O.T. DIST. 12

ACCEPTED	2/2/04	RSY
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



FABRICATOR



STEEL ERECTOR

TRI-STATE STEEL CONSTRUCTION INC.  
12608 ALAMEDA DR.  
STRONGSVILLE, OH 44136  
PHONE (440) 238-3015  
FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
DRAWN BY: DATE:  
RAS 07/30/01  
CHECKED BY: DATE:  
GAF 10/23/01

DOT ITEM LINE NO. AS NOTED  
DOT BID ITEM NO. 863E90000

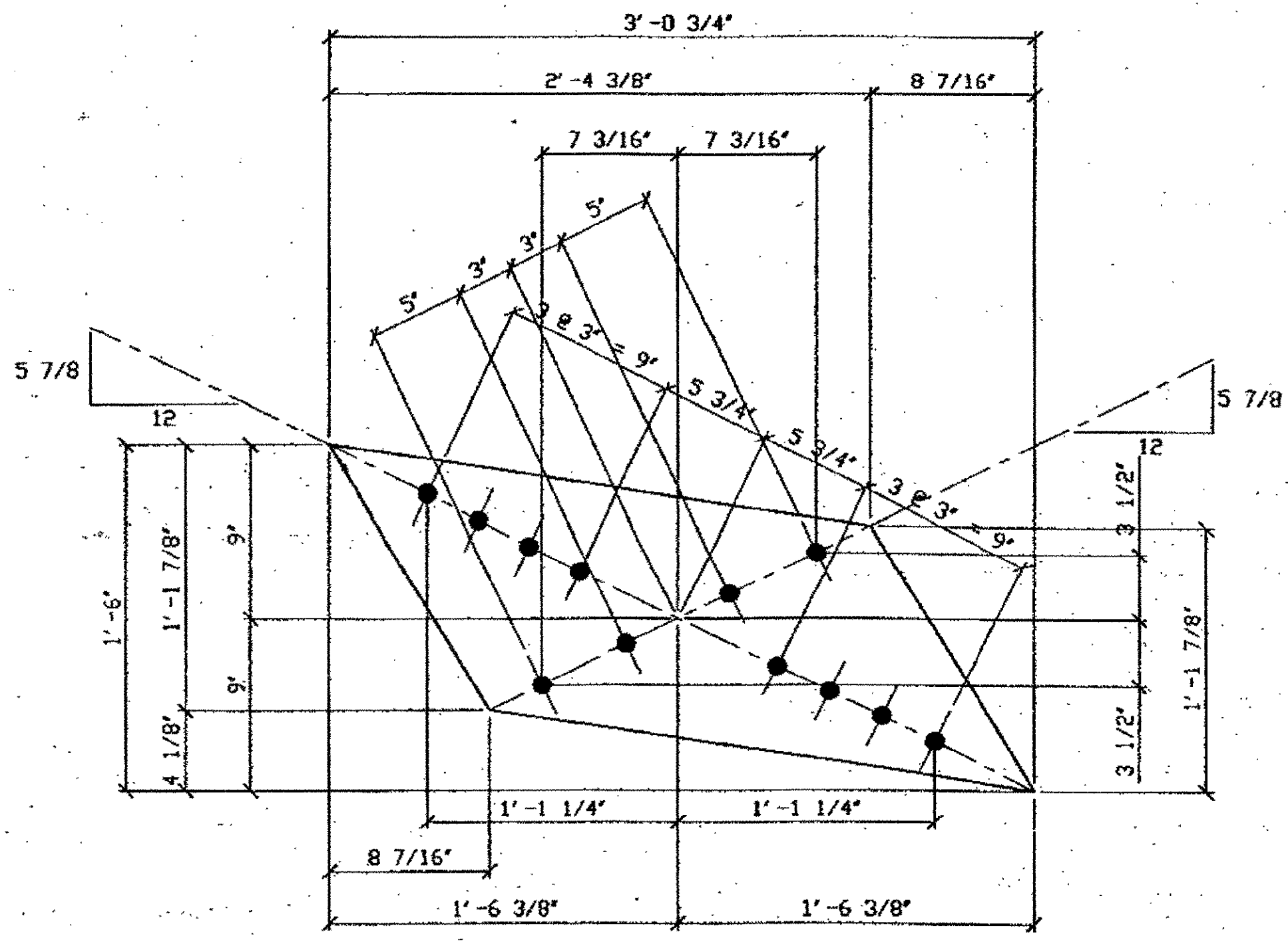
NO.	DATE	DESCRIPTION	BY

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
HOPE MEMORIAL BRIDGE REHAB  
(STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
CITY OF CLEVELAND  
CUYAHOGA COUNTY OHIO  
BRIDGE No. CUY-10-16.13  
SPAN 12 REPAIRS

SHEET NUMBER: 461  
A.M. JOB NUMBER: 800010

SPAN 13

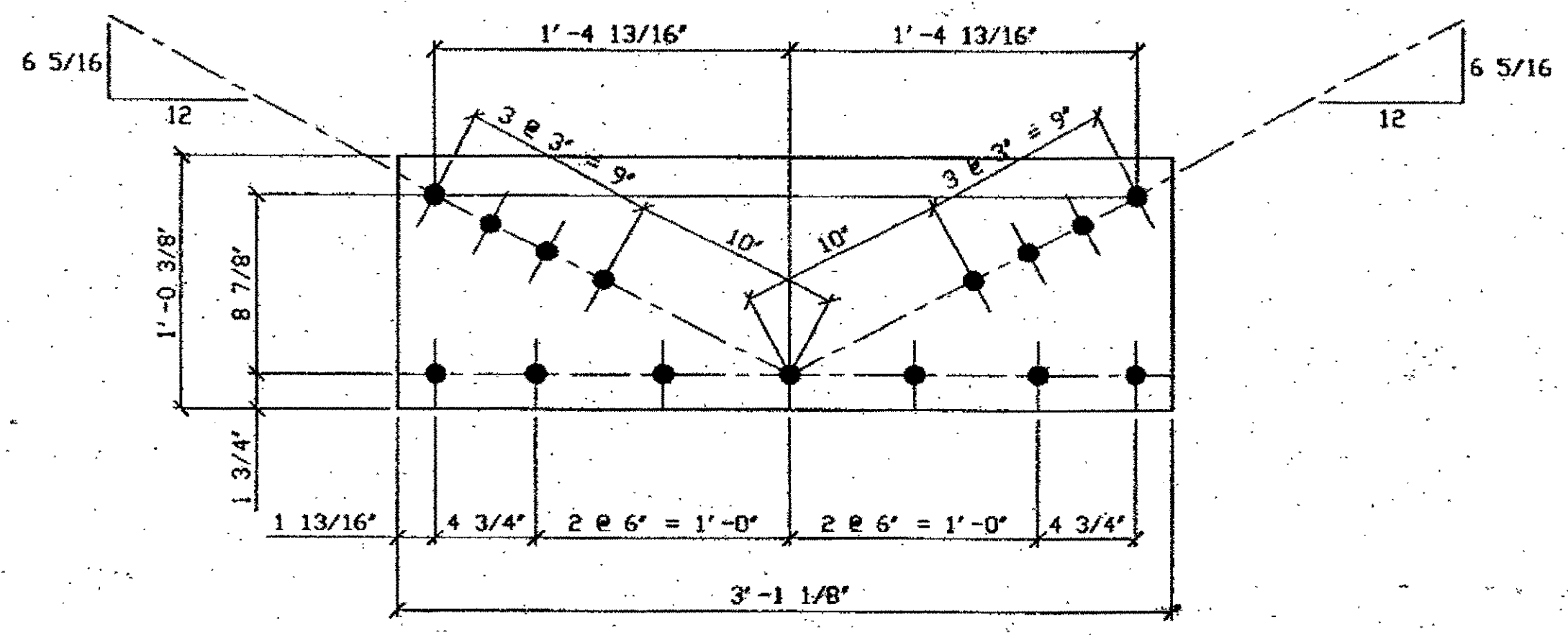
- L12 NORTH SWAY FRAME @ SOUTH OF  $\Phi$  510B
- L12 NORTH SWAY FRAME @ NORTH OF  $\Phi$  510B
- L12 SOUTH SWAY FRAME @ SOUTH OF  $\Phi$  510B
- L12 SOUTH SWAY FRAME @ NORTH OF  $\Phi$  510B



1 - STEEL UNDER 50LB - 510A

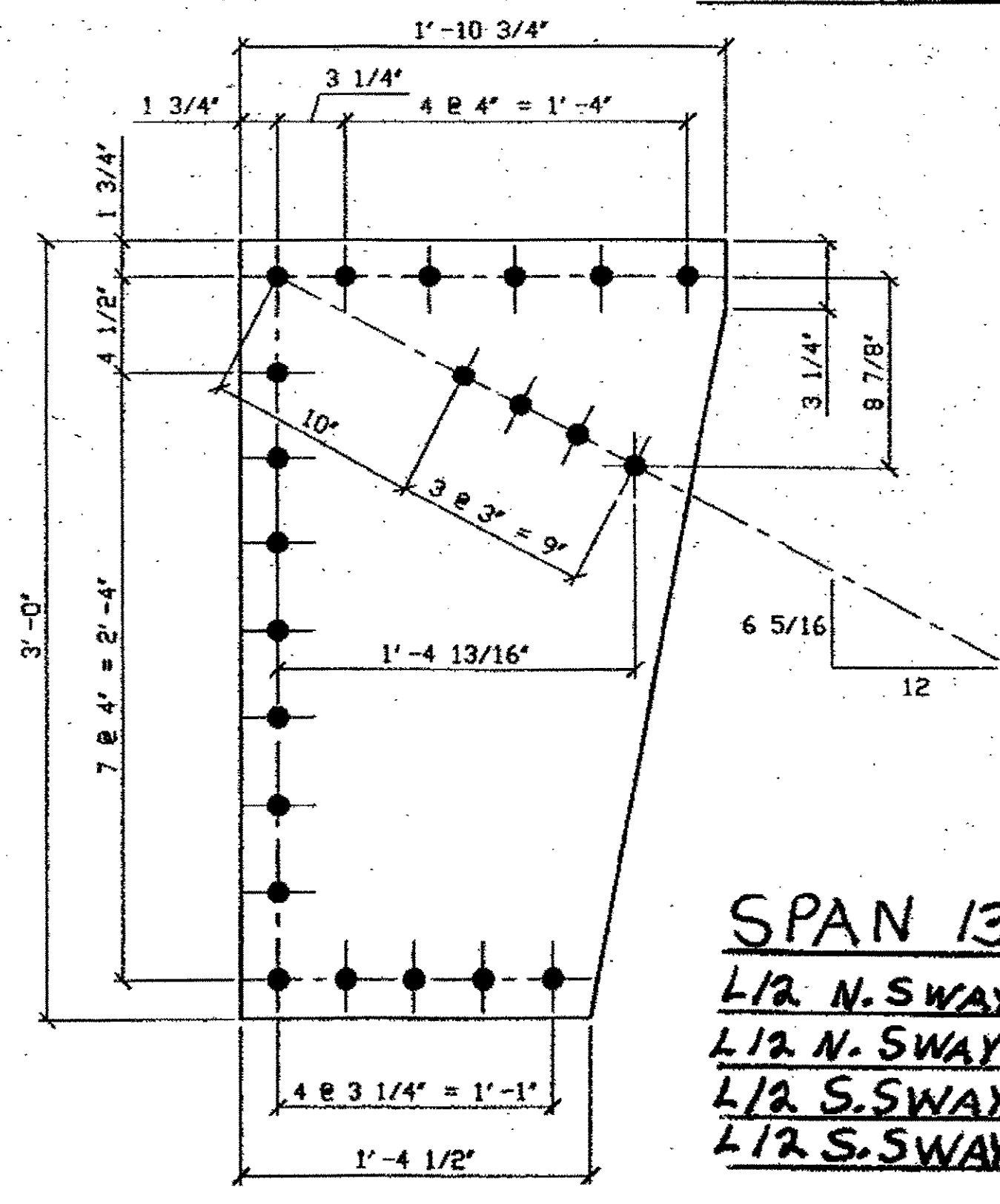
ORIG SHOP DWG 517-SB224  
 ORIG SHOP MARK P517m  
 REPAIR SHEETS 13-133  
 ITEM LINE No. 0153

SPAN 13  
 LINE 6 N. SWAY FRAME 510A



4 - STEEL UNDER 50LB - 510D

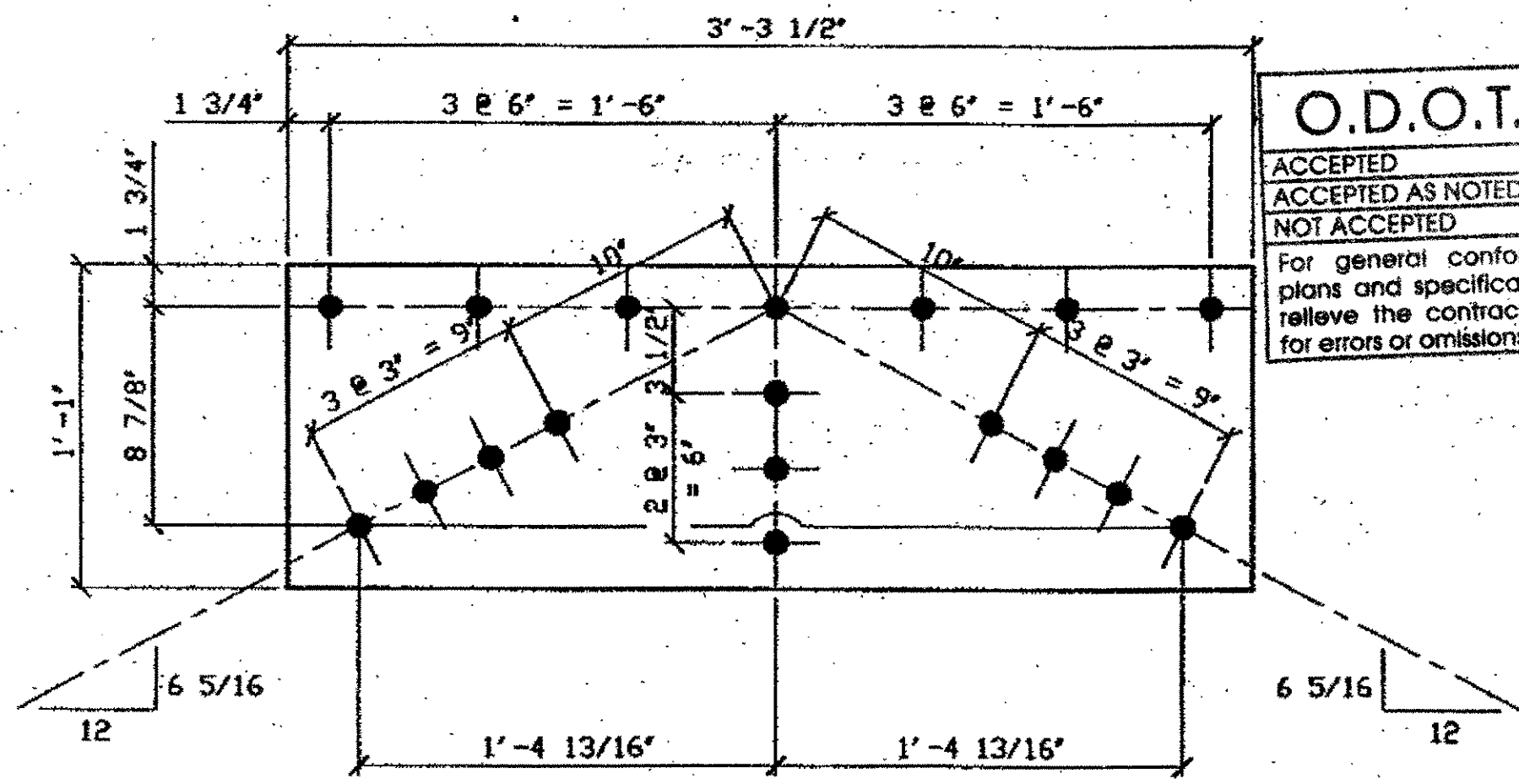
ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK P519b  
 REPAIR SHEETS 13-167 & 13-239  
 ITEM LINE No. 0153



2 - STEEL UNDER 50LB - 510C

ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK P519c  
 REPAIR SHEETS 13-167 & 13-239  
 ITEM LINE No. 0152

SPAN 13  
 L12 N. SWAY FRAME @ N. EXT. 510C  
 L12 N. SWAY FRAME @ S. EXT. 510C  
 L12 S. SWAY FRAME @ N. EXT. 510C  
 L12 S. SWAY FRAME @ S. EXT. 510C



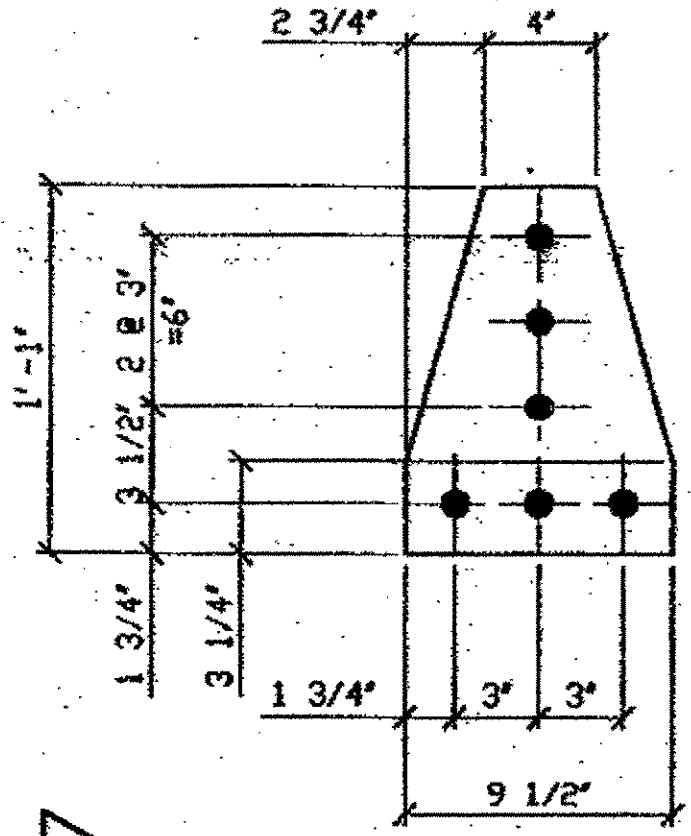
2 - STEEL UNDER 50LB - 510D

ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK P519c  
 REPAIR SHEETS 13-167 & 13-239  
 ITEM LINE No. 0152

SPAN 13  
 L12 N. SWAY FRAME @  $\Phi$  510D  
 L12 S. SWAY FRAME @  $\Phi$  510D

BILL OF MATERIAL								
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D	DESCRIPTION	LENGTH		REMARKS	WEIGHT
					FEET	INCHES		
1				STEEL UNDER 50LB				
2		510A	1	PL 3/8 X 18	3	0 3/4		38
3		510B	4	PL 3/8 X 12 3/8	3	1 1/8		195
4		510F	2	PL 3/8 X 9 1/2	1	1		20
5								
6				STEEL OVER 50LB				
7		510C	4	PL 3/8 X 22 3/4	3	0		304
8		510D	2	PL 3/8 X 13	3	3 1/2		109
9								
10								
11								
12								
13								
14								
15								
PLATE		A36		PIPE	N/A		FITTINGS	N/A
SHAPES		N/A		FLGS.	N/A		BOLTS	N/A

- NOTES:
- OPEN HOLES ARE 1 1/16" UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TE-24 (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST. FOLLOWED BY PRIME COAT SHERWIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0



2 - STEEL UNDER 50LB - 510E

ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK P519d  
 REPAIR SHEETS 13-167  
 ITEM LINE No. 0153

SPAN 13  
 L12 N. SWAY FRAME @  $\Phi$  510E  
 L12 S. SWAY FRAME @  $\Phi$  510E

G:\Contract\04800010\Drawings\0510a.dwg  
 Save by rsp: 11:24am, Feb 02, 2002  
 Plot by ofos at 09:02am, Feb 04, 2002  
 Model space plot + Scale = 1/6

O.D.O.T. DIST. 12  
 ACCEPTED  
 ACCEPTED AS NOTED  
 NOT ACCEPTED  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



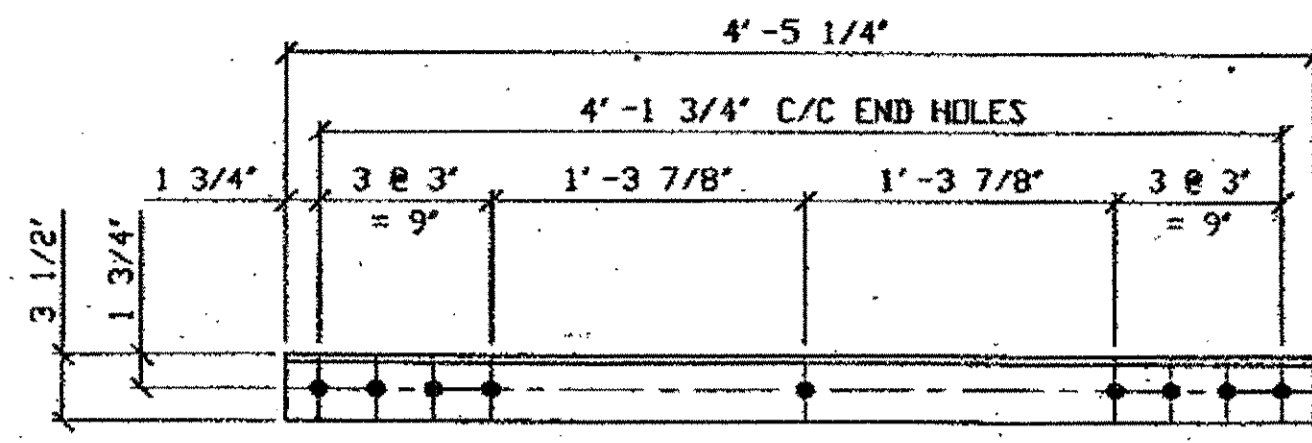
FABRICATOR  
 AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORADELIS, PA. 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE (440) 238-3015  
 FAX (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 03/22/01  
 CHECKED BY: DATE  
 GAF 12/07/01

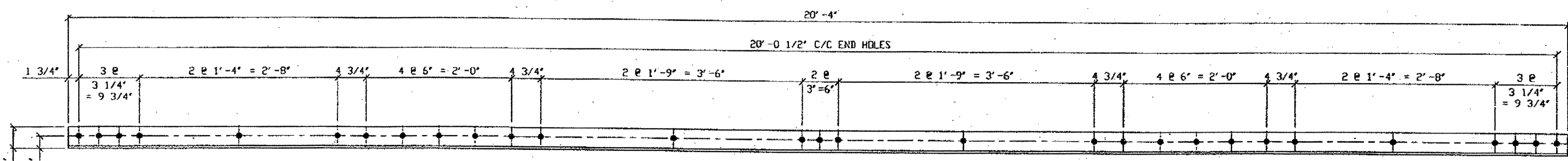
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	
HOPE MEMORIAL BRIDGE REHAB (STATE ROUTE 10 OVER THE CUYAHOGA RIVER) CITY OF CLEVELAND CUYAHOGA COUNTY OHIO BRIDGE No. CUY-10-16.13 SPAN 13 REPAIRS	
SHEET NUMBER 510	AWB JOB NUMBER 800010

BILL OF MATERIAL						
LINE	ADVANCE BILL & LINE	MARK NO.	NO. REQ'D.	DESCRIPTION	LENGTH FEET INCHES	REMARKS WEIGHT
1						
2				STEEL OVER SOLB		
3		525D	4	L 4 X 3 1/2 X 3/8	20 4	740
4						
5				STEEL UNDER SOLB		
6						
7		525C	16	L 3 1/2 X 3 1/2 X 3/8	4 5 1/4	
8		525F	4	L 3 1/2 X 3 1/2 X 3/8	2 5	82
9						
10						
11						
12						
13						
14						
15						
16						
17				FIELD BOLTS		
18		FB66		1 1/8" DIA	0 2 1/2	NOTE 2
19		FB68		1 1/8" DIA	0 2 3/4	NOTE 2
20		FB70		1 1/8" DIA	0 3	NOTE 2
PLATE		A36		PIPE	N/A	FITTINGS N/A
SHAPES		A36		FLGS.	N/A	BOLTS NOTE 2



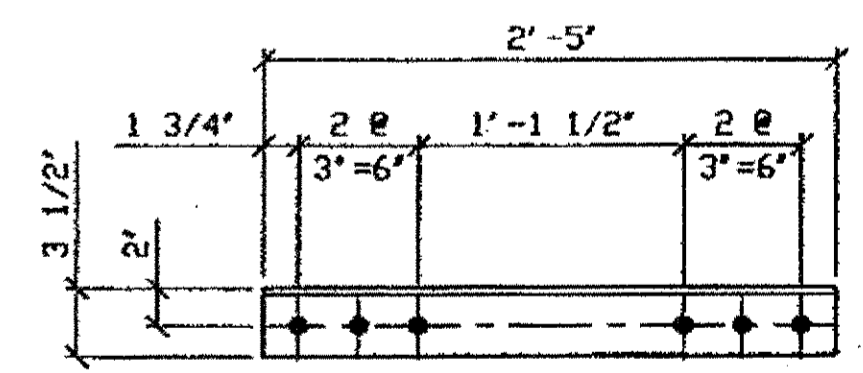
16 - STEEL UNDER SOLB - 525C  
 ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK A519c  
 LINE ITEM No. 0153  
 REPAIR SHEETS 13-167

**SPAN 13**  
 L12 N.SWAY FRAME (8) 525C  
 L12 S.SWAY FRAME (8) 525C



4 - STEEL OVER SOLB - 525D  
 ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK A519b  
 LINE ITEM No. 0152  
 REPAIR SHEETS 13-167 & 13-239

**SPAN 13**  
 L12 N.SWAY FRAME EAST ANGLE 525D  
 L12 N.SWAY FRAME WEST ANGLE 525D  
 L12 S.SWAY FRAME EAST ANGLE 525D  
 L12 S.SWAY FRAME WEST ANGLE 525D



4 - STEEL UNDER SOLB - 525F  
 ORIG SHOP DWG 519-SB243  
 ORIG SHOP MARK A519d  
 LINE ITEM No. 0153  
 REPAIR SHEETS 13-167

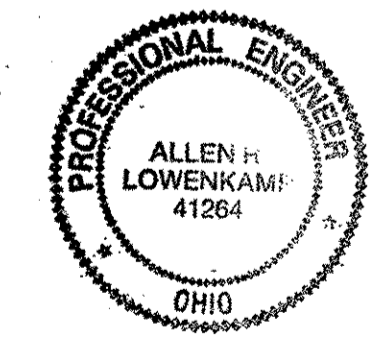
**SPAN 13**  
 L12 N.SWAY FRAME @ 4 (2) 525F  
 L12 S.SWAY FRAME @ 4 (2) 525F

- NOTES:
- OPEN HOLES ARE (1 1/16") UNLESS NOTED OTHERWISE.
  - ALL BOLTS (UNLESS NOTED OTHERWISE) ARE TO BE ASTM-A325-TYPE 1 HVY HEX HD W/HVY HEX NUT & ONE HARD FLAT WASHER. BOLT, NUT & WASHER TO BE GALVANIZED. ALL BOLTS TO HAVE TENSILE (PRE-INSPECTION CERTIFICATION FROM STATE) AND ROTATIONAL CAPACITY TEST FOR GALVANIZED A325 BOLTS, NUTS & WASHERS.
  - SHOP PAINT: SURFACE PREPARATION SSPC-SP10 BLAST, FOLLOWED BY ONE PRIME COAT SHERVIN WILLIAMS ZINC CLAD II INORGANIC ZINC-RICH PRIMER. RECOMMENDED COVERAGE RATE DRY MILS: 3.0 - 5.0

O.D.O.T. DIST. 12

ACCEPTED	7/24/04	DCP
ACCEPTED AS NOTED		
NOT ACCEPTED		

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



DOT ITEM LINE NO. AS NOTED  
 DOT BID ITEM NO. 863E90000 U.N.D.

NO.	DATE	REVISIONS	BY
A	02/01/02	REVISED PER CUSTOMER APPROVAL	GAF

FABRICATOR  
**AB** AMERICAN BRIDGE MANUFACTURING  
 2000 AMERICAN BRIDGE WAY  
 CORAOPOLIS, PA 15108  
 PHONE (412) 631-3000  
 FAX (412) 631-4001

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION  
 HOPE MEMORIAL BRIDGE REHAB  
 (STATE ROUTE 10 OVER THE CUYAHOGA RIVER)  
 CITY OF CLEVELAND  
 CUYAHOGA COUNTY OHIO  
 BRIDGE No. CUY-10-16.13  
 SPAN 13 REPAIRS

STEEL ERECTOR  
 TRI-STATE STEEL CONSTRUCTION INC.  
 12608 ALAMEDA DR.  
 STRONGSVILLE, OH 44136  
 PHONE: (440) 238-3015  
 FAX: (440) 238-3335

IN CHARGE OF: L. SMITH  
 DRAWN BY: DATE  
 RAS 04/04/01  
 CHECKED BY: DATE  
 GAF 12/26/01

SHEET NUMBER: 525  
 AM JOB NUMBER: 800010

G:\Contract\10\600010\Drawings\13\525A.dwg  
 Save by rspi... 11:31am Feb 02, 2002  
 Plot by gbas at 09:15am Feb 04, 2002  
 Model Space Plot \* Scale = 1/79



HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-22

SPAN: W & L.E. REF. NOS.: 149

LOCATION: North Lower Chord f-g, 2 of 3, south face DESCRIPTION: Type 2 Chord Angle Repair

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan Modified Extra

Repair Comments:

Repair made to Top Angle Leg, extended to attachment of top lateral Bracing Gussset Plate...

Plates used: 5/8 x 5" x 28.25" Full plate: 3/8 x 5" x 13.25"

By: Date: 3-20-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

F.M. 910

pd 11/29/02

SPAN: 9 REF. NOS.: 104 / 149

LOCATION: N. EXT. L2-L4 DESCRIPTION: SPOT Repair: 10 Type 2 Chord Angle Repair: 2

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan Modified Extra

Repair Comments:

Reinforce the BTM South Angle, before removing the Lower Cover Plate. the horizontal leg of the Angle had section loss. It is determined that reinforcement is needed where the remaining thickness is less than 5/16. Reinforce the Bottom S. Angle from the 1st rivet of the lower Gst R. at L3 to the 9th rivet of the lower Cover plate, total holes in plate are 10 follow Procedure as in EX-426

Ref. 104: 62" x 3 passes + 10" on sides = 196" 196 / 20" per spot = 10 SPOTS

Ref. 149: Type 2 Chord Angle repair: 2 By: NK Date: 1-30-02 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. 948

pd 2/25/02

SPAN: 9 REF. NOS.: 149 / 148

LOCATION: N. EXT. L6-L7 DESCRIPTION: Type 2 Chord Angle: 1 Repair Type 1 chord Angle Repair: 1

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan Modified Extra

Repair Comments:

Perform Type 1 chord Angle repair for the Top S. Angle

Perform Type 2 chord Angle repair for the Bottom S. Angle

By: NK Date: 2-22-02 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 9 REF. NOS.: 149

LOCATION: NE L2-L3 DESCRIPTION: Type 2 Lower Chord Angle Repair

ERECTOR DRWG: E13 SHOP MARK:

SHOP DRWG: 316: L2-L3-0-9" Plan Modified Extra

Repair Comments:

REPAIR THE TOP SOUTH FLANGE ANGLE BETWEEN THE TOP BLB GUSSET PLATE AT L2 & THE L2 L3 TOP STR PLATE

COORDINATE REPAIR IN FIELD.

By: WJV Date: April 24, 2001 Field Book Ref.: 49-8

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

5

SPAN: 9 REF. NOS.: 149 (2) 153 / 124

LOCATION: NE L1-L5 DESCRIPTION: Type 2 Lower Chord Angle Repair: 1 Repair under 50 x 21.2 SPOT Repair: 1

ERECTOR DRWG: E13 SHOP MARK:

SHOP DRWG: 310: L1-L5-0-9" Plan Modified Extra

Repair Comments:

REPAIR THE SOUTH FLANGE ANGLE, TOP AND BOTTOM, BETWEEN THE L1 GUSSET PLATES AND THE LOWER CHORD COVER PLATES.

Ref. 149: use 30"x5"x1/2" Plate with 6 holes 1 1/4" Place under horizontal leg of Flange Angle COORDINATE REPAIRS IN FIELD.

Ref. 153: use 30"x5"x1/2" Plate with 6 holes 1 1/4". Place Above Top Cover R & Top Gst R. weight: 30x5x1/2 x 490 / 12.2 = 21.2 lbs

Ref. 104: weld R 8"x5x1/2" Above horizontal leg of Flange Angle, between Gst & cover Plates (filler) 1 SPOT

By: WJV Date: May 3, 2001 Field Book Ref.: 50-7

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

6

SPAN: 9 REF. NOS.: 149 (2) 153 / 124

LOCATION: NE L1-L5 DESCRIPTION: Type 2 Lower Chord Angle: 1 Repair

ERECTOR DRWG: E13 SHOP MARK:

SHOP DRWG: 310: L1-L5-0-9" Plan Modified Extra

Repair Comments:

REPAIR THE TOP SOUTH AND THE BOTTOM SOUTH FLANGE ANGLES BETWEEN THE L5 GUSSET PLATE AND THE LOWER CHORD COVER PLATE.

COORDINATE REPAIRS IN FIELD.

delete, see EX-416 NK, 1-11-02

By: WJV Date: May 3, 2001 Field Book Ref.: 50-8

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. 917

pd 2/7/02

SPAN: 9 REF. NOS.: 149 / 104 / 125

LOCATION: N. EXT. L16-L17 DESCRIPTION: Type 2 Chord Angle: 2 repair

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: At L17 SPOT Repair: 2 Drilled hole: 1

Repair Comments:

Install Type 2 chord Angle repair for south Top Flange

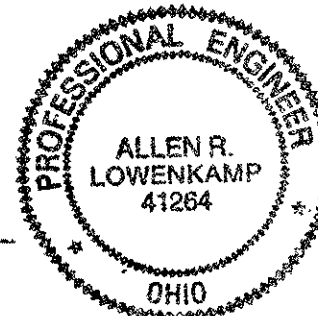
Install Type 2 chord Angle repair for south Bottom flange

Also weld 1 R: 12"x5x1/2" 2 SPOTS

Provide 1/8" Drilled hole in some Plate to clear for Bolt at Lacing Channel connection to south Bottom flange 1 hole

By: NK Date: 1-7-02 Field Book Ref.:

Table with 2 columns: ACCEPTED, ACCEPTED AS NOTED, NOT ACCEPTED. Includes date 2/9/04 and initials ASM.



Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015

ODOT Project # 00215 BRIDGE NO. CUY-10-16-13

SCALE: N/A DRAWING NO. 2000212

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-749 pd 7/2/02
SPAN: 9 REF. NOS.: 149/104/144
LOCATION: S. Ext. L200 DESCRIPTION: Type 1 Chord Angle Repair
SPOT Repair: Type 2 Chord Angle Repair

ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: The horizontal leg of the Bottom North Angle is deficient over all length of Bottom Gst Pl.
Weld a Beveled Pl, 5" x 1/2", length = 62", on Top of the deficient Leg.
The Beveled plate has 14 holes

148: pay 1 Repair of Type 1 Chord Angle Repair (max 6)
149: pay 1 Repair of Type 2 Chord Angle Repair (max 15)
104: length of weld: 62" x 3 passes + 5" x 1 pass = 191' of weld, 191/20 = 9.55 => pay 10 spot repairs

By: NK
Date: 2-25-02
Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 9 REF. NOS.: 149
LOCATION: SE L7L8 DESCRIPTION: Type 2 Lower Chord Repair
ERECTOR DRWG: E13 SHOP MARK:
SHOP DRWG.: 343:L6L8-0-9'

Plan Modified Extra

Repair Comments: PLACE 1- LOWER CHORD ANGLE REPAIR TO THE TOP NORTH FRAMING ANGLE, ADJACENT AND EAST OF THE L8 STAY PLATE

COORDINATE REPAIR IN FIELD DONE

NOTE TO NASH: HAVE TRI-STATE REPAIRS POLKRUST BETWEEN STAY PLATE & FRAMING ANGLE WHEN BOLTS ARE REMOVED
By: WJV
Date: May 15th 2001
Field Book Ref.: 52-10

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 9 REF. NOS.: 149/104
LOCATION: SE L14L15 DESCRIPTION: TYPE 2 LOWER CHORD ANGLE REPAIR
NK, 1-12-02 SPOT Repair: 6
ERECTOR DRWG: E13 SHOP MARK:
SHOP DRWG.: 341:L14L15-0-9'

Plan Modified Extra

Repair Comments: PLACE 1- LOWER CHORD ANGLE REPAIR TO THE TOP NORTH & BOTTOM NORTH FRAMING ANGLE BETWEEN THE LOWER CHORD COVER PLATES AND SE L15 GUSSET PLATES.

PLACE 1- LOWER CHORD ANGLE REPAIR TO THE BOTTOM NORTH FRAMING ANGLE AT THE SE L14 BOTTOM GUSSET PLATE.

At L15 BTM N. use Bevel Plate 5" x 1/2" x 33" long
Ref. 104: length of weld: 33 x 3 + 5 + 12 = 116" 116 / 20 = 6 SPOTS
By: WJV
Date: May 15th 2001
Field Book Ref.: 54-2

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-479 pd 12/5/02
SPAN: 9 REF. NOS.: 149/104
LOCATION: S. Ext. L15-L16 DESCRIPTION: Type 2 Chord Angle Repair
SPOT Repair: 9
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: install, Type 2 Chord Angle repair between the BTM Gst Pl and the Bottom stay Pl at L15 N. side using beveled plate 5" x 1/2" x 40" long

Ref. 104: weld plate all around
3 passes x 40 + 1 pass x 40 + 5" x 2 x 1 pass = 170"
170 / 20 = 9 SPOTS

By: NK
Date: 1-26-02
Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-706 pd 5/25/02
SPAN: 11 REF. NOS.: 149/104
LOCATION: N. Ext. L0-L1 DESCRIPTION: Type 2 L.C. Angle Repair
SPOT Repair:
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Beginning At N. Ext. L0, Perform a Type 2 Lower Chord Angle Repair to the lower South Flange Angle, for a length = 101.5 ft = 126"

Horizontal flange of Angle is deficient. Cut horizontal flange of Angle for a length = 126" Replace by welding a bar plate: 1/2" x 5", beveled plate will have 19 holes total (1 1/2" dia): 4 holes at Lacing Channel, 15 holes at Gusset Pl

Ref. 104: length of weld: 126" x 3 passes = 378" 378 / 20 spot = 19 SPOTS

Ref. 149: 19 holes / 10 holes/repair = 2 Repairs

By: NK
Date: 5-13-02
Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-721 pd 4/24/02
SPAN: 11 REF. NOS.: 149/104
LOCATION: North Int. L0-L1 DESCRIPTION: Type 2 L.C. Angle Repair
At L0 SPOT Repair: 15
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: Begining at L0 Perform a Type 2 Lower Chord Angle Repair to the Bottom North Flange, 8' Long

Ref. 149: use 1/2" x 5" bar, drill 15 holes in bar to match those of Bottom Gusset Pl. 15 holes / 10 holes/repair = 2 Repairs

horizontal leg of framing angle is deficient => cut it for the same length of the repair.

Ref. 104: weld plate length of weld: (8 x 2 + 5) x 3 passes = 303 inches 303 / 20 per spot = 15 SPOTS

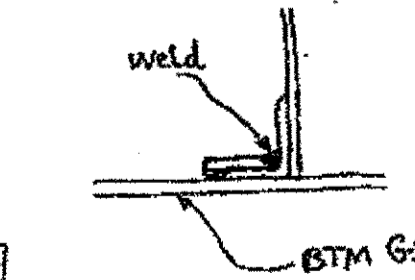
By: NK
Date: 5-13-02
Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-621 pd 4/24/02
SPAN: 11 REF. NOS.: 104/149
LOCATION: N.I. L0-L1 DESCRIPTION: SPOT Repair: 6
Type 2 Chord Angle Repair: 1
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

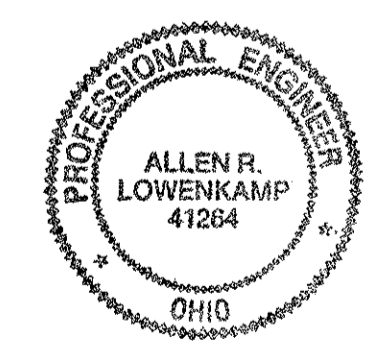
Repair Comments: The Bottom North flange of Chord Angle had heavy Section Loss, at the Bottom Gusset Pl Connection. use Bar plate: 5" x 1/2" x 40", beveled, with 9 holes, 1 1/2" drilled to match holes of Gusset. Weld as shown to reinforce Angle flange

Ref. 104: length of weld 40" x 3 passes = 120" 120 / 20 spot = 6 SPOTS



By: NK
Date: 4-12-02
Field Book Ref.:

Table with columns: ACCEPTED, ACCEPTED AS NOTED, NOT ACCEPTED. Includes date 2/3/07 and initials DSM.

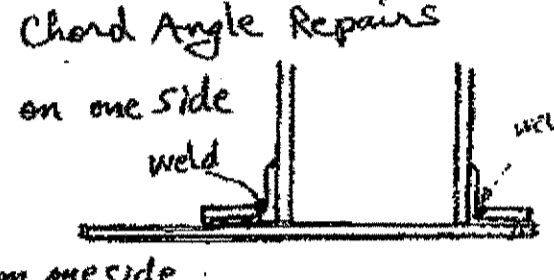


Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015
ODOT Project # 00215
BRIDGE No. CUY-10-16.13
JOB NO. 2000212
DRAWN BY: CHECKED BY: DATE: DRAWING NO.

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-919

SPAN: 11 North Int. REF. NOS.: 149/104 LOCATION: At L18 DESCRIPTION: Type 2 Chord Angle Repair: 3 Spot Repair: 13

The Bottom N. & S. flanges are deficient from East End of flanges over the BTM Gussset till 73' on the N. flange, and 78' on the S. flange on the flanges perform type 2 Chord Angle Repairs use plate: 68" x 5 1/2" x 5/8" weld on one side on the N. flange with 16 holes on the S. flange: 64" x 5 1/2" x 5/8" weld on one side with 12 holes Total holes: 16+12 = 28 holes = 3 Repairs Ref 104: length of weld: (68+64) x 2 passes = 264" 264 / 20 = 13 spots



HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-918

SPAN: 11 North Ext. REF. NOS.: 149/104/153 LOCATION: L17-L18 At L18 DESCRIPTION: Type 2 Chord Angle Repair: 2 SPOT Repair: 1 Repair under 50: 9.9

Perform Type 2 chord Angle Repairs Plan 1 to Top South flange: 8 Bolts Modified 1 to BTM South flange: 7 bolts Extra Repair Comments: Both Repairs Lap the Gussset plates At L18 Ref. 149: Bar used: 5 1/2" x 5/8" Total: 2 Repairs Ref 104: weld a patch to Top South flange Size of Patch: 14" x 5" x 1/2" length of weld: (13+5) = 18" 18 / 20 = 1 spot Ref 153: Repair under 50 14 x 5 x 0.5 x 490 / 12 = 19.9 lbs

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-746

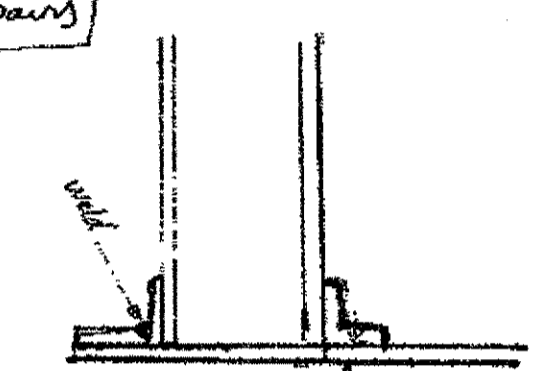
SPAN: 11 South Ext. REF. NOS.: 149 LOCATION: L17-L18 At L18 DESCRIPTION: Type 2 Lower Chord Angle repair

Repair Comments: Perform 1 Lower Chord Angle Repair to the Top North flange Angle 3 bolts into Gst R, 3 bolts into stay: 3 bolts Connection repair plate to flange Angle in between use plate: 5 1/2" x 5 1/2"

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-754

SPAN: 11 South Int. REF. NOS.: 148/149/104 LOCATION: L18-L17 At L18 DESCRIPTION: Type 1 Chord Angle repair: 2 Type 2 Chord Angle repair: 1 Spot Repair: 1

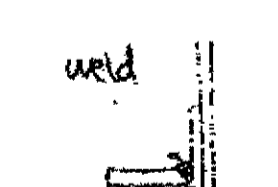
Reinforce the horizontal leg of BTM N. Angle Plan use 5" beveled plate, 1/2" thick, 72" Long Plate has 12 holes, repair is at BTM Gst R Ref. 148: 12 holes / 6 holes per repair = 2 Repairs Ref. 149: 10 holes / 10 holes per repair = 1 Repair Ref. 104: Length of weld: 72" + 5" + 41" + 5" = 246" 246 / 20 = 12 spots



HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-750

SPAN: 12 N. E. REF. NOS.: 104/148/149 LOCATION: L4-L0 At L0 DESCRIPTION: SPOT Repair: 1 Type 1 Chord Angle Repair: 1 Type 2 Chord Angle Repair: 1

Reinforce the Bottom South flange Angle from the End of the 1st Laying Channel Stay Plate to the End of the Smaller Stay Plate At N. Ext. L0 including the full lengths of the 2 Stay Plates use beveled Bar 5 1/2" x 90" Long weld full length The Plate has 11 holes for the bolts of the larger Stay Pl. 3 holes for the bolts of the smaller Stay Pl. Ref 104: length of weld: 90" x 2 passes = 180" 180 / 20 = 9 spots



HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-541

SPAN: 12 N. Ext. REF. NOS.: 149/153 LOCATION: L2-L4 DESCRIPTION: Type 2 Lower Chord Angle repair: 1 Repair under 50: 17.7

Repair Comments: To cover the holes in the horizontal leg of the flange angle use 17" x 5 1/2" x 1/2" fill Plate under the 1st channel. to level the laying channel, use 8" x 5 1/2" x 1/2" fill Plate at the other End of the L. Chnl. Ref. 153: (17 x 5 x 1/2 + 8 x 5 x 1/2) x 490 / 12 = 17.7 lbs

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-541

SPAN: 12 N. Ext. REF. NOS.: 149/153 LOCATION: L2-L4 DESCRIPTION: Type 2 Lower Chord Angle repair: 1 Repair under 50: 17.7

Repair Comments: To cover the holes in the horizontal leg of the flange angle use 17" x 5 1/2" x 1/2" fill Plate under the 1st channel. to level the laying channel, use 8" x 5 1/2" x 1/2" fill Plate at the other End of the L. Chnl. Ref. 153: (17 x 5 x 1/2 + 8 x 5 x 1/2) x 490 / 12 = 17.7 lbs



Table with O.D.O.T. DIST. 12, ACCEPTED, ACCEPTED AS NOTED, NOT ACCEPTED, and a date stamp 7/2/02.

Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015 ODOT Project # 00215 BRIDGE NO. CUY-10-16.13

pd 8/10/02 EX-931 (22)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 12 REF. NOS.: 148/149/104  
 LOCATION: South Ext. L4-L9  
 DESCRIPTION: Type 1 Chord Angle Repair: 1  
 Type 2 Chord Angle Repair: 1  
 At L4  
 ERECTION DRWG: SPOT Repair: 7  
 SHOP DRWG: SHOP MARK: Plan Modified Extra

the BTM N. flange at L4 S. Ext. at the connection to BTM G-st. is Deficient.  
 Repair Comments: Perform a welded Chord Angle Repair  
 Size of Bar: 64" x 5 1/2", 14 holes  
 Type 1 Repair has 6 holes + Type 2 Repair has 10 holes  
 Payment will be 1 Type 1 + 1 Type 2 (14 HOLES)  
 Ref. 104: length of weld: 64 x 2 passes = 128"  
 128 ÷ 20"/spot = 7 spots

By: NK  
 Date: 8-8-02  
 Field Book Ref.:

pd 8/10/02 EX-943 (23)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 149  
 LOCATION: North Ext. L1  
 DESCRIPTION: Type 2 Chord Angle Repair  
 At L1  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra

Repair Comments: Perform a Type 2 chord Angle Repair having a total of 10 Bolts with 3 bolts connection to BTM G-st R at L1 N. Ext.  
 bar used: 5 1/4" x 5 1/8"

By: NK  
 Date: 8-10-02  
 Field Book Ref.:

pd 4/17/02 EX-642 (25)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 148/149/104  
 LOCATION: N.I. L12-L11  
 DESCRIPTION: Type 1 Chord Angle: 1  
 Type 2 Chord Angle Repair: 1  
 At L12  
 ERECTION DRWG: SHOP MARK: SPOT Repair: 7  
 SHOP DRWG: SHOP MARK: Plan Modified Extra

The horizontal leg of the Bottom North Angle is deficient over the full length of the G-st R and extends to the 1st Lacing channel  
 Repair Comments: Use a beveled Plate 5" x 1/2" x 64" long, drill 14 holes in plate, to match those of G-st and 1st Lacing channel  
 Pay: 1 Type 1 Chord Angle repair (6 holes per Plan repair)  
 + 1 Type 2 Chord Angle repair (10 holes per Plan repair)  
 Ref. 104: length of weld: 64" x 2 passes = 128"  
 128 ÷ 20 = 7 SPOTS

By: NK  
 Date: 4-19-02  
 Field Book Ref.:

EX-557 (24)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 149/104  
 LOCATION: N. EXT L8-L9  
 DESCRIPTION: Type 2 Chord Angle Repair: 2+2=4  
 SPOT Repair: 18  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra

The horizontal legs of the Angles holding the Bottom cover plate are deficient (heavy section loss)  
 Repair Comments: deficient (heavy section loss)  
 Ref. 149: use Beveled Plate 5" x 1/2", 7'-5", with 19 holes, to perform 2 Type 2 Chord Angle Repairs on the Bottom North Angle, over the whole length of Cover plate  
 Ref. 149: use 10' Long Beveled Plate, 5" x 1/2", with 23 holes to perform 2 Type 2 Chord Angle Repairs on the BTM South Angle, it has 2 bolts connections to Bottom Gusset Plates at L8 and at L9 at ends of the Repair weld's passes  
 Ref. 104: To provide stability against buckling, keep the cover plate attached to Angle by 2 Rivets, #9 + #11 weld the 5" x 1/2" beveled plate  
 Weld Length: 10' x 12" x 3 passes = 360"  
 360 ÷ 20 = 18 spots

By: NK  
 Date: 2-26-02  
 Field Book Ref.:

pd 8/10/02 EX-950 (26)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 149/104  
 LOCATION: North Int L12  
 DESCRIPTION: Type 2 Chord Angle Repair: 2  
 SPOT Repair: 7  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra

Repair Angles connecting Plate above Pin of lower chord horizontal leg of Angle is Deficient  
 Repair Comments: Ref. 149: use Type 2 Chord Angle Repair At the horizontal leg of Each Angle  
 Bar used: 33" x 3 1/2" x 1/2", 8 holes per Angle  
 2 Repairs  
 Ref. 104: length of weld: 33 x 2 passes x 2 Angles = 132"  
 132 ÷ 20"/spot = 7 spots

By: NK  
 Date: 8-9-02  
 Field Book Ref.:

EX-558 (27)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 149/104  
 LOCATION: S. EXT. L8-L9  
 DESCRIPTION: Type 2 Chord Angle Repair: 2+2=4  
 SPOT Repair: 18  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra

Longitudinal cracks were observed at most rivet holes  
 The horizontal legs of the Angles holding the Bottom cover plate are deficient (heavy section loss)  
 Repair Comments: deficient (heavy section loss)  
 Ref. 149: use Beveled Plate 5" x 1/2", 7'-5", with 19 holes, to perform 2 Type 2 Chord Angle Repairs on the Bottom North Angle, over the whole length of Cover plate  
 Ref. 149: use 10' Long Beveled Plate, 5" x 1/2", with 23 holes to perform 2 Type 2 Chord Angle Repairs on the BTM South Angle, it has 2 bolts connections to Bottom Gusset Plates at L8 and at L9 at ends of the Repair weld's passes  
 Ref. 104: To provide stability against buckling, keep the cover plate attached to Angle by 2 Rivets, #9 + #11 weld the 5" x 1/2" beveled plate  
 Weld Length: 10' x 12" x 3 passes = 360"  
 360 ÷ 20 = 18 spots

By: NK  
 Date: 2-26-02  
 Field Book Ref.:

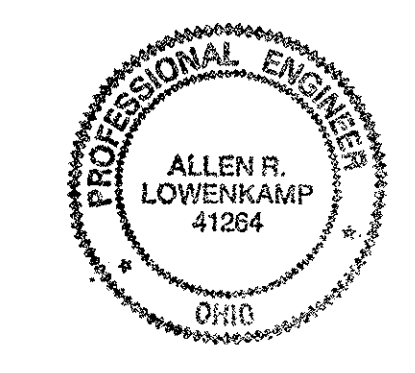
EX-751 (28)  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 104/148/149  
 LOCATION: S. EXT. L12-L11  
 DESCRIPTION: SPOT Repair: 8  
 Type 1 Chord Angle Repair: 1  
 Type 2 Chord Angle Repair: 1  
 At L12  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra

Reinforce the Bottom South flange by welding a beveled plate 5" x 1/2", 72" long  
 Repair Comments: 14 holes drilled into Plate  
 Remove 2 rivets connecting the 1st Lacing channel the other rivets removal are part of the Bottom G-st Plate replacement  
 #18: has 6 holes Max  
 #14: has 10 holes Max  
 6 #10 = 16 holes > 14 holes in plate => 1 Repair of each  
 length of weld 72" x 2 passes + 5" x 2 passes = 154"  
 154" ÷ 20" per spot = 8 spots

By: NK  
 Date: 2-26-02  
 Field Book Ref.:

O.D.O.T. DIST. 12  
 ACCEPTED [initials]  
 ACCEPTED AS NOTED [initials]  
 NOT ACCEPTED [initials]  
 For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16.13**

DATE: 2000212  
 DRAWING NO. [blank]  
 DRAWN BY: [blank] CHECKED BY: [blank] DATE: [blank]  
 SCALE: N/A



HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 13 REF. NOS.: 148/149/104  
LOCATION: SE L4L2 DESCRIPTION: Type 1 Chord Angle Repair  
Type 2 Chord Angle Repair Spot Repair

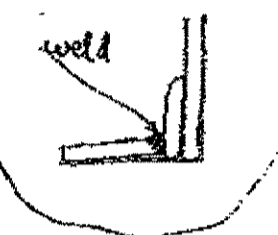
ERECTOR DRWG: E19 SHOP MARK: SA487d

SHOP DRWG: 487: L4L2-0-13

Plan Modified Extra

Repair Comments: The STM N. Angle has deficient horizontal leg over the full length of the G-st Pl. and extends to the 1st Lacing Channel. use a beveled Plate, 5 1/2 x 72" Long, Drill 14 holes in Plate to match 10 of G-st Pl. & 2 of 1st Lacing Channel

REPAIR THE NORTH BOTTOMS BEYOND THE L12 BOTTOM GUSSET PL.



COORDINATE LOCATION AND LENGTH OF REPAIR IN FIELD

Plan: 1 Type 1 Chord Angle Repair (6 holes per Plan repair) 1 Type 2 Chord Angle Repair (10 holes per Plan repair)

Ref. 104: Length of weld: 72" x 2 passes = 144" 144 / 20 = 7 spots

By: WTV Date: November 09, 2000

R: Revision by NK, 4-19-02 Field Book Ref.: 8022

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 1 REF. NOS.: 148  
LOCATION: L0L1 NE DESCRIPTION: Type 1 Chord Angle Repair

ERECTOR DRWG: E1 SHOP MARK: -

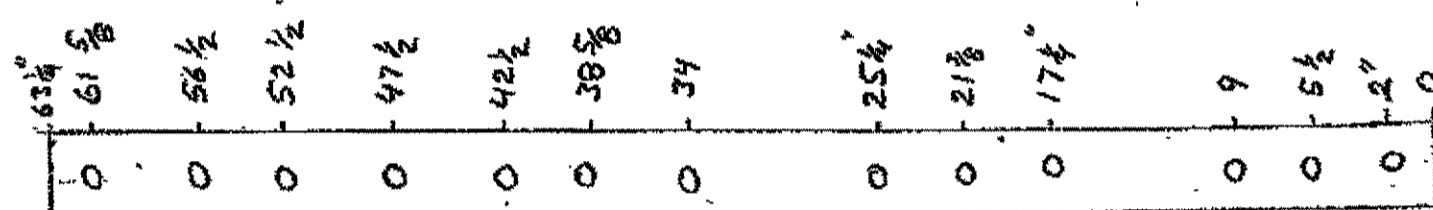
SHOP DRWG: 299: L0L2-0-1

Plan Modified Extra

Repair Comments: REPAIR BOTTOM JOINTS AND ANGLE LEG FOR 2' LENGTH WEST OF BOT GUSSET PL.

COORDINATE REPAIR IN FIELD

Plate used: 63.25" x 3.5" x 0.5", with 13 bolts



No of repairs: 13 bolts / 6 bolts per repair = 2.17 = 3 repairs

By: WTV Date: August 22, 2000

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 1 REF. NOS.: 148  
LOCATION: L3L4 NE DESCRIPTION: Type 1 Chord Angle Repair

ERECTOR DRWG: E1 SHOP MARK: -

SHOP DRWG: Plan Modified Extra

Repair Comments: BOTTOM JOINT L.C. & IS HIND BEYOND THE L4 GUSSET PL TO THE 1ST BOTTOM LACING CHANNEL

COORDINATE REPAIR IN FIELD

Plate used is 31.5 inches long with 7 holes 31.5 / 28 = 1.1 => 2 Repairs

By: WTV Date: August 23, 2000

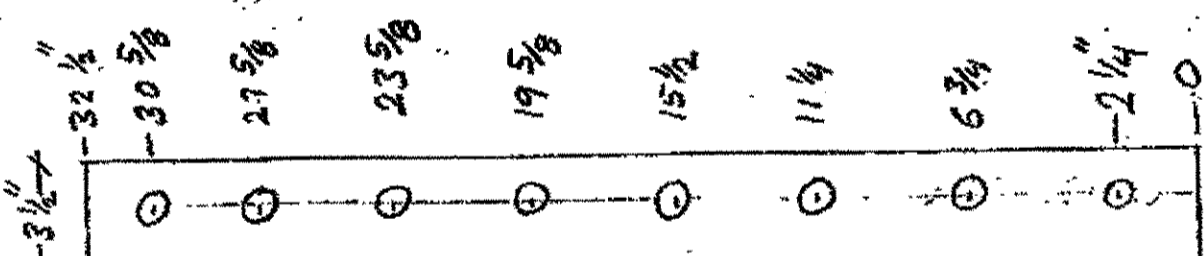


Plate for upper Angle repair: 32.5" x 3.5" x 0.5" on top of this plate, a filler plate: 8.625" x 3.5" x 0.5" and a top plate: 16.25" x 3.5" x 0.5" were used, the filler and top plates were paid for by weight on another sheet.

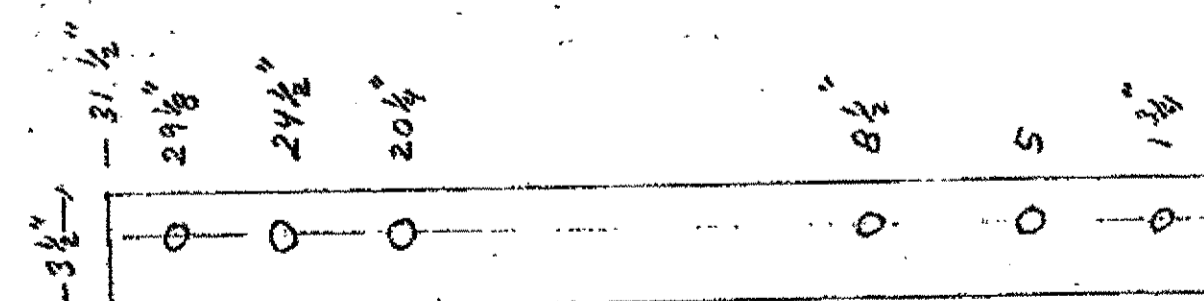


Plate for Bottom Angle Repair: 31.5" x 3.5" x 0.5"

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

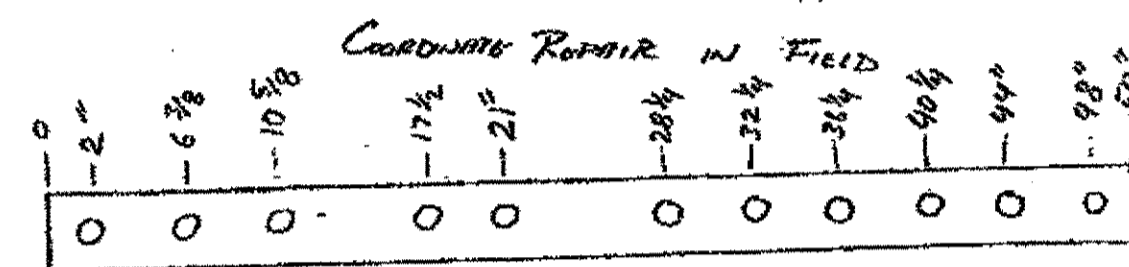
SPAN: 1 REF. NOS.: 148  
LOCATION: L0-L1 NE DESCRIPTION: Type 1 Chord Angle Repair

ERECTOR DRWG: E1 SHOP MARK: -

SHOP DRWG: 299: L0L2-0-1

Plan Modified Extra

Repair Comments: Repair Hole To Bot. Joint. Angle Leg 6" L. East of 1st Lacing Connection At L0.



the plate is 50" x 3.5" x 0.5", with 11 holes 1 3/8" dia 6 holes per repair => Total of repairs = 1 1/2 = 2

By: WTV Date: August 22, 2000

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 1 REF. NOS.: 148 (2a)  
LOCATION: L2-L3 NE DESCRIPTION: Type 1 Chord Angle Repair

ERECTOR DRWG: E1 SHOP MARK: -

SHOP DRWG: 251: L2L3-0-1

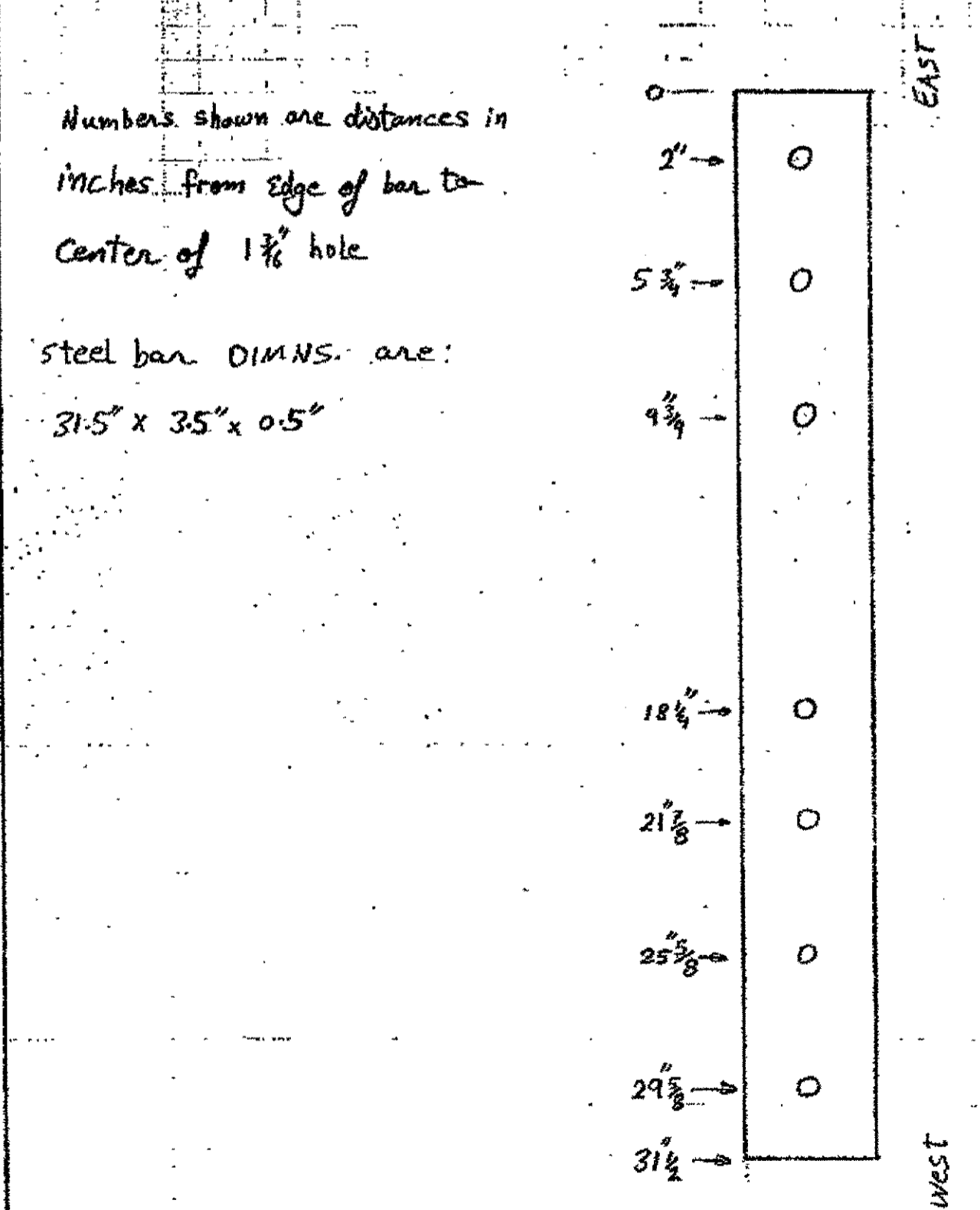
Plan Modified Extra

Repair Comments: Repair Holes To Top & Bottom Joints L.C. ANGLE BETWEEN L2L3 COVER PLATE AND L3 GUSSET PLATES.

COORDINATE IN FIELD

By: WTV Date: August 22, 2000

JOB NO. JOB NAME Cuy 10-1615 SHEET OF SHEETS  
SUBJECT SPAN 1 Lincy N. Ext. PREPARED BY NK DATE 4-27-01  
L.C. Angle Repair, STM West CHECKED BY DATE



Numbers shown are distances in inches from edge of bar to center of 1 3/8" hole

steel bar DIMNS. are: 31.5" x 3.5" x 0.5"

O.D.O.T. DIST. 12  
ACCEPTED 2/9/04 P.S.M.  
ACCEPTED AS NOTED  
NOT ACCEPTED  
for general conformance with design plans and specifications only. Does not relieve the contractor from responsibility or errors or omissions.



Tri State Steel Construction Inc.  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015  
ODOT Project # 00215  
BRIDGE NO. CUY-10-16-13  
JOB NO. 2000212  
DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
SCALE N/A DATE \_\_\_\_\_

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 1 REF. NOS.: 148(8) LOCATION: LALS NE DESCRIPTION: TYPE 1 CHORD ANGLE REPAIR at L4 East ERECTION DRWG: E1 SHOP MARK: SHOP DRWG: 250: L315-0-1

Plan [checked] Modified [X] Extra [ ]

Repair Comments:

Repair Top & Bottom Flange Angle Brwn.

Gusset TB & Top Start R/ Bottom Lains Channel

COORDINATE REPAIR IN FIELD top plate is 26" long with 6 holes => 1 repair BTM Plate is 74.5 inches long with 14 holes 74.5 / 28 = 2.7 => 3 repairs

Total 4 repairs

By: WJV Date: August 27, 2000

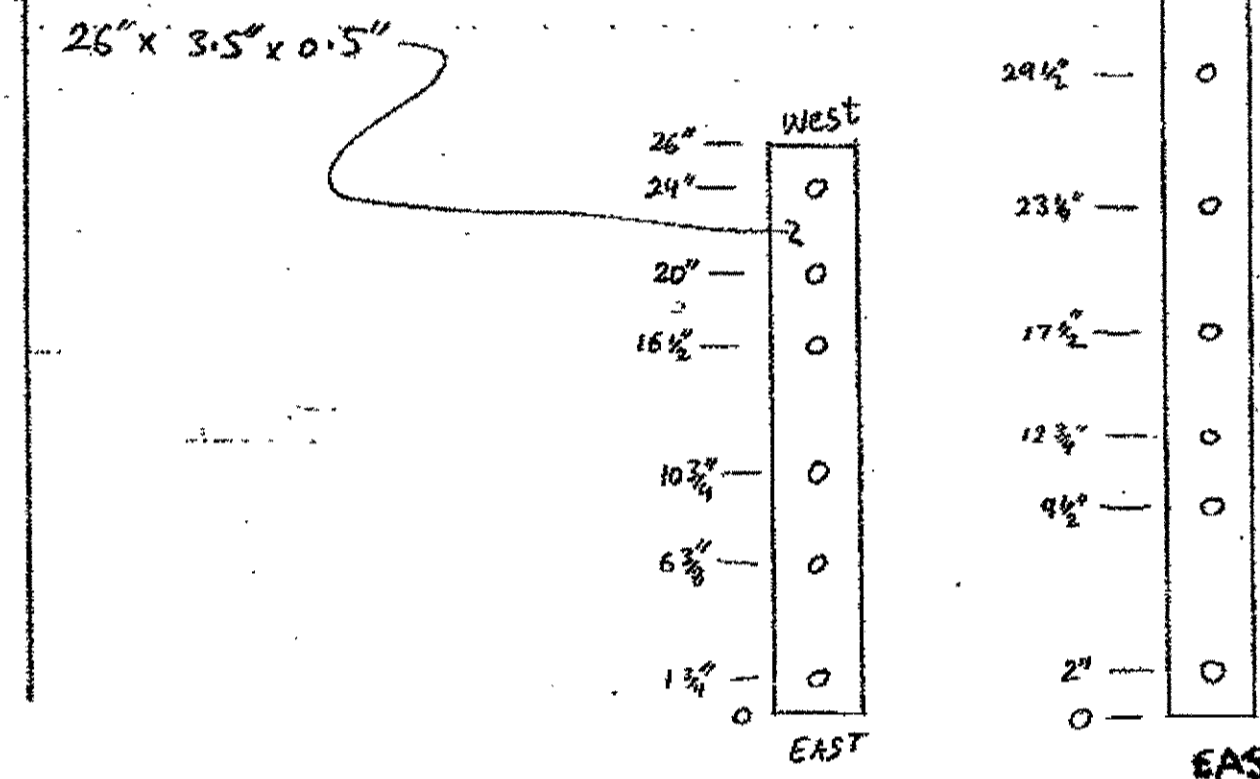
6-6

BURGESS & NIPLE, LIMITED - COMPUTATION SHEET 2 of 2 SHEETS JOB NO. CUY-10-16.13 SHEET OF DATE 4-27-01 SUBJECT SPAN 1, Line 4, N. Exp. PREPARED BY N/K CHECKED BY DATE

Numbers shown are distances in inches from edge of bar to center of 1 3/8" hole.

Bottom Steel bar DIMNS are: 74.5" x 3.5" x 0.5"

Top steel bar DIMNS are:



Repair Comments:

REPAIR THE OUTSTANDING LEG OF THE LOWER CHORD FLANGE ANGLES AT THE FOLLOWING LOCATIONS: 1. 32", 7 holes TOP FLANGE, BETWEEN L2 GUSSET TB & CHORD COVER TB 2. 32", 7 holes TOP FLANGE, BETWEEN CHORD COVER TB & L3 GUSSET TB 3. 32", 7 holes BOTTOM FLANGE, BETWEEN CHORD COVER TB & L3 GUSSET TB 4. 32", 7 holes North side Top Flange, BTM COVER R/L3 Gst R.

COORDINATE REPAIR IN FIELD Equivalent repair per location: 7 holes / 6 min = 2 repairs By: WJV Date: October 10, 2000 Total repairs: 4 locations = 8 repairs Field Book Ref.: 13-14

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 2 REF. NOS.: 148(2) LOCATION: L6L7 SE DESCRIPTION: TYPE 1 CHORD ANGLE REPAIR ERECTION DRWG: E2 SHOP MARK: SHOP DRWG: 252: L6L6-0-1

Plan [checked] Modified [ ] Extra [ ]

Repair Comments:

6" Long Hole To Horizontal Leg of Top Flange L.G. ANGLE EAST or L6 Gusset TB. DIMNS. shown are measured from east edge of Plate, and are in inches. holes' size is 1 3/8" Plate size is: 34.5" x 3.5" x 0.5"

No of repairs: 34.5 / 28 = 2 repairs

By: WJV Date: August 23, 2000

10-3

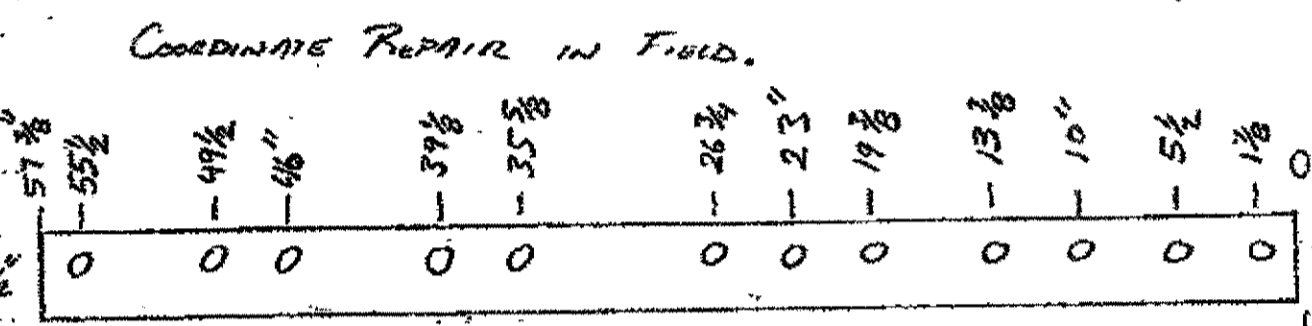
HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 2 REF. NOS.: 148(2) LOCATION: NE L1L2 DESCRIPTION: TYPE 1 CHORD ANGLE REPAIR ERECTION DRWG: E3 SHOP MARK: SHOP DRWG: 245: L1L6-0-2

Plan [checked] Modified [ ] Extra [ ]

Repair Comments:

Repair Bottom Flange (Turn) Flange. Angle, 2' Fr. Long, BETWEEN THE 1ST & 2ND LAINS CHANNELS FROM L2.



Total bolts = 12 No of repairs = 12 bolts / 6 bolts per repair = 2 repairs

By: WJV Date: Sept 20, 2000 Field Book Ref.: 11-B

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148(2) LOCATION: NE L6L1 DESCRIPTION: TYPE 1 CHORD ANGLE REPAIR ERECTION DRWG: E4 SHOP MARK: SHOP DRWG: 48-L6L2-0-3

Plan [checked] Modified [ ] Extra [ ]

Repair Comments:

1. REPAIR BOTTOM SOUTH ANGLE (TURN) FROM L6 BOTTOM GUSSET TB TO PART 6TH LAINS. APPROXIMATE LENGTH OF CONNECTION IS 8'-6" Refer to EX-204

2. REPAIR THE TOP SOUTH FLANGE ANGLE BETWEEN THE L6 TOP GUS R & THE L6 START TB

7 holes / 6 holes per repair = 2 repairs Refer to EX-206 for FILL & TOP PLATES COORDINATE REPAIRS IN FIELD. By: WJV Date: Sept 26, 2000 Field Book Ref.: 13-3

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148(2) LOCATION: NE L6L2 DESCRIPTION: TYPE 1 CHORD ANGLE REPAIR ERECTION DRWG: E4 SHOP MARK: SHOP DRWG:

Plan [ ] Modified [ ] Extra [ ]

Repair Comments:

REPAIR THE OUTSTANDING LEG OF THE LOWER CHORD FLANGE ANGLES AT THE FOLLOWING LOCATIONS: 1. 32", 7 holes TOP FLANGE, BETWEEN L2 GUSSET TB & CHORD COVER TB 2. 32", 7 holes TOP FLANGE, BETWEEN CHORD COVER TB & L3 GUSSET TB 3. 32", 7 holes BOTTOM FLANGE, BETWEEN CHORD COVER TB & L3 GUSSET TB 4. 32", 7 holes North side Top Flange, BTM COVER R/L3 Gst R.

COORDINATE REPAIR IN FIELD Equivalent repair per location: 7 holes / 6 min = 2 repairs By: WJV Date: October 10, 2000 Total repairs: 4 locations = 8 repairs Field Book Ref.: 13-14

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148(2) LOCATION: NE L6L6 DESCRIPTION: TYPE 2 CHORD ANGLE REPAIR 1+2 = 3 repairs ERECTION DRWG: E4 SHOP MARK: SAS1c / SAS1a SHOP DRWG: 51-L6L7-0-3

Plan [checked] Modified [ ] Extra [ ]

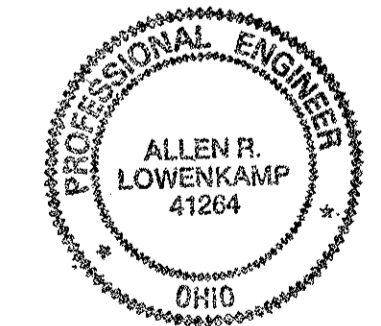
Repair Comments:

REPAIR THE OUTSTANDING LEG OF THE BOTTOM SOUTH FLANGE ANGLE FROM BOT GUS R TO BETWEEN 1ST & 2ND LAINS CHANNELS (APPROX. LENGTH: 2'-6")

REPAIR THE OUTSTANDING LEG OF THE TOP SOUTH FLANGE ANGLE BETWEEN THE GUSSET TB & START TB. Equivalent chord angle repairs: 9 holes / 6 = 2 repairs

COORDINATE REPAIR LENGTHS IN FIELD. Refer to EX-168 for fill plates and top plate info. By: WJV Date: Sept 27, 2000 Field Book Ref.: 14-9

O.D.O.T. DIST. 12 ACCEPTED [ ] ACCEPTED AS NOTED [ ] NOT ACCEPTED [ ] For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015 ODOT Project # 00215 BRIDGE NO. CUY-10-16.13 JOB NO. 2000212 DRAWING NO. SCALE: N/A

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148 LOCATION: NE L6L7 DESCRIPTION: Type 1 Chord Angle Repair ERECTION DRWG: E4 SHOP MARK: SA51e SHOP DRWG: 51-L6L7-03

Plan Modified Extra

Repair Comments:

REPAIR OUTSTANDING LOG OF THE TOP SOUTH FLANGE ANGLE BETWEEN L6 TOP GUSSET TO L6 STAY R.

COORDINATE REPAIR IN FIELD. Bar used: 3 1/2 x 1/2 x 3 1/2, 8 holes. Equivalent chord angle repairs: 8 holes + 6 = 12 repairs.

See Ex-167 for fill plates and Top plate info.

By: WJW Date: Sept 27, 2000 Field Book Ref.: 14-19

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148(2) LOCATION: NE L6L7 DESCRIPTION: Type 2 Chord Angle Repair ERECTION DRWG: E4 SHOP MARK: SHOP DRWG: 49-L6L7-03

Plan Modified Extra

Repair Comments:

REPAIR OUTSTANDING LOG OF THE TOP SOUTH FLANGE ANGLE ADJACENT TO L10 TO L11. 6 bolts, 1 repair.

Total repairs: 2+1=3

NK, 10-3-01

By: WJW Date: Sept 28, 2000 Field Book Ref.: 16-2

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148 LOCATION: NE L6L7 DESCRIPTION: Type 1 Chord Angle Repair ERECTION DRWG: E4 SHOP MARK: SA51e SHOP DRWG: 54-L6L7-03

Plan Modified Extra

Repair Comments:

REPAIR OUTSTANDING LOG OF THE BOTTOM SOUTH FLANGE ANGLE BETWEEN THE L11 GUSSET R & BOTTOM STAY R.

Plate size: 28 3/4 x 3 1/2 x 1/2 with 6 holes, 1 3/8 DIA.

By: WJW Date: Sept 28, 2000 Field Book Ref.: 16-5

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148 LOCATION: NE L6L7 DESCRIPTION: Type 3 Chord Angle Repair ERECTION DRWG: E4 SHOP MARK: SHOP DRWG: 39-L6L7-03

Plan Modified Extra

Repair Comments:

REPAIR TOP SOUTH FLANGE ANGLE AT PP NE L10. COORDINATE REPAIR IN FIELD.

Plate size: 26 3/4 x 3 1/2 x 1/2 with 6 holes, 1 3/8 DIA.

By: WJW Date: November 8, 2000 Field Book Ref.: 16-28

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3, North Exterior REF. NOS.: 148/149 LOCATION: L12-L13 Original DESCRIPTION: Type 1 Chord Angle Repair Lacing bars 2+9=11

ERECTON DRWG: SHOP MARK: SHOP DRWG: Plan Modified Extra

Repair Comments:

Bottom South: Bar size used: 1/2 x 3 1/2, l = 50. total bolts in bar: 10, 10/6 = 2 Repairs

Bottom North: Bar size: 1/2 x 3 1/2, l = 72. total bolts = 14, 14/6 = 3 Repairs

Top North: Bar size: 1/2 x 3 1/2, l = 120. total bolts in bar: 22, 22/6 = 4 Repairs

Ref 138: 2 Lacing on BOTM. 9 Lacing on TOP.

2 Lacing bars were paid for on sheet with field book Ref. 16-18.

By: NK Date: 7-11-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 148/153 LOCATION: L12-L13 DESCRIPTION: Type 1 Chord Angle repair Repair under 50: 10

ERECTON DRWG: SHOP MARK: SHOP DRWG: Plan Modified Extra

Repair Comments:

Type 1 chord angle repair for the top North flange next to L13 GUSSET

Plate used: 39 x 3 1/2 x 1/2, 7 holes. Equivalent repairs: 7 holes / 6 holes = 2 repairs

Top plate: 14 x 3 1/2 x 1/2, 3 holes

fill plate: 6 x 3 1/2 x 1/2, 1 hole

weight: (14+6) x 3 1/2 x 1/2 x 490 / 12^2 = 10 lbs

By: NK Date: 9-6-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

SPAN: 3 REF. NOS.: 149 LOCATION: SE L6L7 DESCRIPTION: Type 1 Chord Angle Repair

ERECTON DRWG: E4 SHOP MARK: SHOP DRWG: 48-L6L7-03 Plan Modified Extra

Repair Comments:

REPAIR OUTSTANDING LOG OF THE TOP NORTH FLANGE ANGLE BETWEEN THE L6 GUSSET R & L6L7 STAY R.

COORDINATE REPAIR IN FIELD.

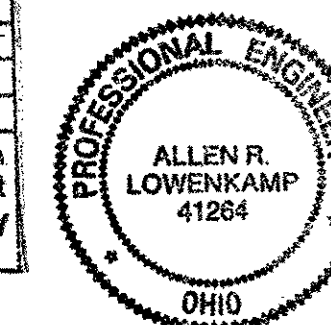
Bar plate used: 3 1/2 x 3 1/2 x 1/2, 7 holes / 6 repairs = 2 Repairs

Refer to EX-193 for fill plate and top plate.

NK, 9-11-01

By: WJW Date: Sept 29, 2000 Field Book Ref.: 17-4

O.D.O.T. DIST. 12 ACCEPTED AS NOTED NOT ACCEPTED



Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015

ODOT Project # 00215 BRIDGE NO. CUY-10-16-13

DRAWN BY: CHECKED BY: SCALE: N/A DATE: DRAWING NO. JOB NO. 2000212

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-112 (18)

SPAN: 3, S REF. NOS.: 104 / 148
LOCATION: L1, Exterior DESCRIPTION: SPOT Repair: 2
Type 1 Chord Angle Repair: 1
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: This sheet shows adjustment in quantity. the quantity paid on sheet EX-103 is incorrect.
Correction: Length of weld (three passes): 27x3 = 81 inches
20" of weld is considered a spot repair.
Equivalent spot repairs: 81 / 20 = 4 spots
Balance to be paid on this sheet: 4 - 2 (paid on EX-103) = 2 SPOTS
By: NK Date: 7-7-01 Field Book Ref:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

(19)

SPAN: 3 REF. NOS.: 148 / 104
LOCATION: ST L1xL1 DESCRIPTION: Type 1 Chord Angle Repair: 1
ERECTOR DRWG: E4 SHOP MARK: SA34c
SHOP DRWG.: 39-L1L13-I-3L Plan Modified Extra

Repair Comments: Repair the top North Flange Angle from L13 stay to East to the end of L12 L13.
Diagram showing coordinate length in field of 144 inches.
By: WJV Date: December 2, 2000 Field Book Ref.: 20-14

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-84 (19)

SPAN: 3, South REF. NOS.: 153 / 446
LOCATION: L4-L13 Exterior DESCRIPTION: Type 1 Chord Angle Repair
Repair under Sails: 43.17 Rivets Replaced: 10
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Ref 140: Rivets were removed to install struts for temporary bracing because 2 lacing channels or more were disconnected at a time. 5 struts were used at 5 locations. 2 Rivets per strut.
Repair for Top North Flange near L13: Bar used: 93" x 3.5" x 0.5" = 18 Bolts => 3 Repairs
Repair for Top North Flange near L12: Bar used: 84" x 3.5" x 0.5" = 17 Bolts => 3 Repairs
cf 153: Top bar near L13, Top North Flange: weight of bar: 48" x 3.5" x 0.5" x 490 / 123 = 23.82 lbs
Top bar near L13 at Top South Flange (Fill plate under 2nd channel): weight of bar: 13" x 3.5" x 0.5" x 490 / 123 = 6.45 lbs
Top bar near L12, Top North Flange: weight: 26" x 3.5" x 0.5" x 490 / 123 = 12.9 lbs
Total weight: 23.82 + 6.45 + 12.9 = 43.17 lbs
By: NK Date: 7-10-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

(21)

SPAN: 5 REF. NOS.: 148
LOCATION: N Ext. DESCRIPTION: Type 1 Chord Angle Repair
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: Provide Chord Angle Repairs to Top and bottom flanges 2 at L1 and 2 at L12. Provide 1 Chord Angle Repair to top North Flange at L2.
Total: 2+2+1 = 5 Repairs
By: NK Date: 10-1-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. 503 EX-274

SPAN: 5 REF. NOS.: 132 / 148
LOCATION: SE L1xL1 DESCRIPTION: Lower Chord Corner Plate
Type 1 Lower Chord Angle Repair
ERECTOR DRWG: E7 SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: Ref No 132: Repair the Top Cover Plate.
Ref No 148: Plate 1 Lower Chord Angle Repair to the Top North Angle, Between the Top Cover Plate and the SE L1 Top B1B Gusset Plate.
By: WJV Date: October 12, 2001 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

EX-341

SPAN: 5 REF. NOS.: 148
LOCATION: S Int. DESCRIPTION: Type 1 Chord Angle Repair
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: Perform Type 1 Chord Angle Repair to BTM South Flange at West End of BTM GST FR.
3 1/2 x 1/2 bar is to be used with 8 holes for bolts => 2 Repairs
By: NK Date: 11-2-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod.

SPAN: 7 REF. NOS.: 148 / 140
LOCATION: N. E. DESCRIPTION: Type 1 Chord Angle Repair
Rivets Replaced: 2
ERECTOR DRWG: SHOP MARK:
SHOP DRWG.: Plan Modified Extra

Repair Comments: (Top) At L2xL4, West face, install 2 Chord Angle repairs.
Plate used for North Repair has 6 holes, DIMS: 3 1/2 x 1/2 has 3 Bolts Common to stay FR => 1 Repair
Plate used for South Repair has 9 holes has 3 Bolts Common to stay FR. 6 holes + 3 1/2 x 1/2 FR make 1 Repair. The last 3 Bolts consist of 1 Bolt Common to Lacing bar replacement.
Ref 140: for the other 2 Bolts, Pay: 2 Rivets Replaced
By: NK Date: 1-22-01



O.D.O.T. DIST. 12 table with ACCEPTED, AS NOTED, NOT ACCEPTED rows and columns for date and initials.

Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015

ODOT Project # 00215 BRIDGE No. CUY-10-16-13 JOB NO. 2000212 DRAWING NO. SCALE: N/A

EX-434  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 Field Mod. 24  
 SPAN: 7 REF. NOS.: 148 / 140  
 LOCATION: N.E. U- L2ena Diagonal DESCRIPTION: type 1 Chord Angle Repair  
 Rivets Replaced: 2  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra  
 SHOP DRWG: Plan Modified Extra  
 Repair Comments: (Top)  
 At L2ena, West face, install 2, Chord Angle repairs  
 Plate used for North Repair has 6 holes, DIMS: 3 1/2 x 1/2 has 3 Bolts Common to stay R => 1 Repair  
 Plate used for south Repair has 9 holes has 3 Bolts Common to stay R. 6 holes + 3 1/2 x 1/2 R make 1 Repair the last 3 Bolts consist of 1 Bolt common to Lacing bar replacement.  
 Ref. 140: for the other 2 Bolts, Pay: 2 Rivets Replaced  
 By: NK  
 Date: 1-22-01  
 Field Book Ref:

EX-25  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 SPAN: 7 REF. NOS.: 148  
 LOCATION: NE L2L3 DESCRIPTION: TYPE 2 Lower Chord Angle Repair  
 ERECTION DRWG: E10 SHOP MARK: Plan Modified Extra  
 SHOP DRWG.: 197: L2L3-0-7R  
 Repair Comments: REPAIR THE BOTTOM SOUTH FLANGE ANGLE BETWEEN THE L2 BOTTOM GUSSET PLATE & THE L2L3 BOTTOM COVER PLATE.  
 COORDINATE REPAIR IN FIELD.  
 By: WTV  
 Date: April 9<sup>th</sup>, 2001  
 Field Book Ref.: 33-19

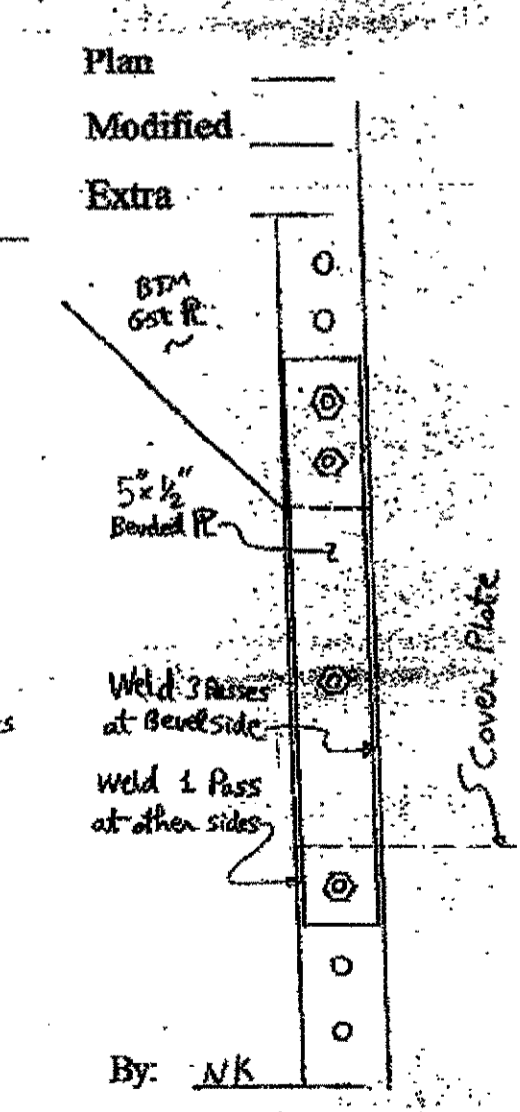
EX-26  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 SPAN: 7 REF. NOS.: 148  
 LOCATION: NE L1L2 DESCRIPTION: TYPE 2 Chord Angle Repair  
 ERECTION DRWG: E10 SHOP MARK: Plan Modified Extra  
 SHOP DRWG.: 201: L1L2-0-7R  
 Repair Comments: Plates 1- Lower Chord Angle Repair BETWEEN THE NE L2 TOP GUSSET PLATE AND THE TOP STAY R FOR L1L2.  
 COORDINATE REPAIR IN FIELD. 11 bolts  
 By: WTV  
 Date: April 2<sup>nd</sup>, 2001  
 Field Book Ref.: 35-10

EX-545  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 Field Mod. 948  
 SPAN: 9 REF. NOS.: 149 / 148  
 LOCATION: N. EXT. L2-L3 DESCRIPTION: Type 2 Chord Angle Repair  
 TOP S. Near L6 & BTM S. Near L6  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra  
 SHOP DRWG.: Plan Modified Extra  
 Repair Comments: Perform Type 1 Chord Angle repair for the Top S. Angle  
 Perform Type 2 Chord Angle repair for the Bottom S. Angle  
 By: NK  
 Date: 2-22-02  
 Field Book Ref:

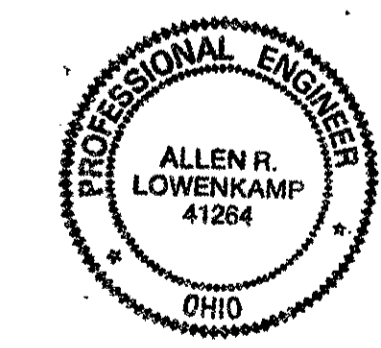
EX-28  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 SPAN: 9 REF. NOS.: 148 / 125 / 153  
 LOCATION: NE L2L3 DESCRIPTION: Type 1 Chord Angle Repair  
 NK 2-13-02 drilled hole: 1 Repair under 50: 8  
 ERECTION DRWG: E13 SHOP MARK: Plan Modified Extra  
 SHOP DRWG.: Plan Modified Extra  
 Repair Comments: Done  
 REPAIR THE TOP SOUTH FLANGE ANGLE BETWEEN THE L2 TOP GUSSET PLATE AND THE L2L3 TOP STAY PLATE.  
 Install a Cover Plate Above top Chord Angle between the 6st of Stay Plates  
 Plate DIMS: 5" x 10" x 1/2"  
 Ref. 153: 5 x 10 x 1/2 x 490 + 0.9 lbs for Bolt = 8 lbs  
 Ref. 125: drill 1 hole in the flange of the angle  
 By: WTV  
 Date: November 15, 2000  
 Field Book Ref.: 48-12

EX-837  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 SPAN: 9 REF. NOS.: 148 / 104  
 LOCATION: North Int. L4-L5 DESCRIPTION: Type 1 Chord Angle Repair  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra  
 SHOP DRWG.: SHOP MARK: Plan Modified Extra  
 Repair Comments: At L45 Btm North Perform Type 1 Chord Angle repair 29' Long, 4 1/2" wide, 1/2" thick, 4 Bolts 1 Repair  
 Ref. 104: weld All around Plate of Chord Angle Repair => length of weld: (29 + 4.5) x 2 x 2 passes = 134" 134 / 20% Spot = 7 spots  
 By: NK  
 Date: 7-30-02  
 Field Book Ref:

EX-496  
**HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS**  
 Field Mod. 915 30  
 SPAN: 9 REF. NOS.: 104 / 148  
 LOCATION: N. Int. L15 DESCRIPTION: SPOT Repair: 8  
 Type 1 Chord Angle repair: 1  
 ERECTION DRWG: SHOP MARK: Plan Modified Extra  
 SHOP DRWG.:  
 Ref. 104: weld a Patch to Bottom Gusset Plate: 1 spot  
 Repair Comments: Reinforce the Bottom North, Chord Angle use 5 1/2" x 1/2" backed Plate, 30" Long  
 Ref. 148: Type 1 Chord Angle repair  
 Ref. 104: length of weld: 30 x 3 passes if (30 + 5 + 5) x 1 pass = 130", 130 / 20% spot = 7 spots  
 Total Ref. 104: 1 + 7 = 8 SPOTS  
 Used 5" wide PLATE BUT ONLY 1/2" THICK per for 02/14/02 ANC  
 By: NK  
 Date: 1-11-02  
 Field Book Ref:



O.D.O.T. DIST. 12	
ACCEPTED	2/9/04
ACCEPTED AS NOTED	
NOT ACCEPTED	



**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015  
 ODOT Project # 00215  
**BRIDGE No. CVY-10-16-13**  
 JOB NO. 2000212  
 DRAWN BY: CHECKED BY: DRAWING NO.  
 SCALE: N/A DATE:

pu 2/7/02 EX-499  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS** (31)  
 Field Mod. 918

SPAN: 9 REF. NOS.: 148 / 138  
 LOCATION: North Ext. U16-L17 AT L17 DESCRIPTION: Type 1 Chord Angle Repair  
 ERECTION DRWG: SHOP MARK: Lacing bars: 7  
 SHOP DRWG.: Plan Modified Extra  
 At L17, part of the flange is at 1/8" thickness  
 Ref. 148: Repair Comments: Install Type 1 Chord Angle repair At East, South Corner Angle of Diagonal, having 1" hole at Top hole of Stay PL use Plate: 3 1/2" x 1/2" x 48" Long, 7 holes  
 Ref. 138: Replace 7 Lacing bars Starting from East Stay PL  
 By: NK Date: 2-7-02 Field Book Ref.:

pu 1/25/02 EX-438  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS** (32)  
 Field Mod. 918

SPAN: 9 REF. NOS.: 148 / 140  
 LOCATION: N.I. L7-U8 Diagonal DESCRIPTION: Type 1 Chord Angle Repair  
 Rivets Replaced: 4  
 ERECTION DRWG: SHOP MARK:  
 SHOP DRWG.: Plan Modified Extra  
 Repair Comments: AT L17, Top (East face), install 2 Chord Angle Repairs one at North Angle, one at South Angle.  
 Plate used: 3 1/2" x 1/2" Repair has a total of 9 bolts GA. with 3 bolts common to Stay PL.  
 6 holes make 1 Repair the last 3 bolts has 1 Bolt common to Lacing Bars replacement, the other Bolts are paid for as Rivets replaced  
 Ref. 140: 2 repairs x 2 Bolts = 4 Rivets Replaced  
 By: NK Date: 1-21-01 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX 749 (33)  
**SUPERSTRUCTURE REPAIRS**

SPAN: 9 REF. NOS.: 148 / 104 / 149  
 LOCATION: S. Ext. L200 DESCRIPTION: Type 1 Chord Angle repair  
 SPOT Repair: 10 Type 2 Chord Angle REPAIR: 1  
 ERECTION DRWG: SHOP MARK:  
 SHOP DRWG.: Plan Modified Extra  
 The horizontal leg of the Bottom North Angle is deficient over All length of Bottom Gst PL.  
 Repair Comments: Weld a beveled PL, 5" x 1/2", length = 62", on Top of the deficient leg. the beveled plate has 14 holes  
 Ref. 148: pay 1 Repair of Type 1 Chord Angle repair (MAX 6 HOLES)  
 Ref. 149: pay 1 Repair of Type 2 Chord Angle Repair (MAX 10 HOLES)  
 Ref. 104: length of weld: 62" x 3 passes + 5" x 1 pass = 191" of weld, 191 / 20 = 9.55 => pay 10 spot repairs  
 By: NK Date: 2-25-02 Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS (34)

SPAN: 9 REF. NOS.: 148  
 LOCATION: SE L200 DESCRIPTION: Type 1 Lower Chord ANGLE REPAIR  
 ERECTION DRWG: E13 SHOP MARK:  
 SHOP DRWG.: 34A-L200-0-9' Plan Modified Extra  
 Repair Comments: PLATE 1 - LOWER CHORD ANGLE REPAIR TO THE TOP NORTH ANGLE.  
 6 bolts  
 By: WJV Date: April 10, 2002 Field Book Ref. 53-3

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS (35)

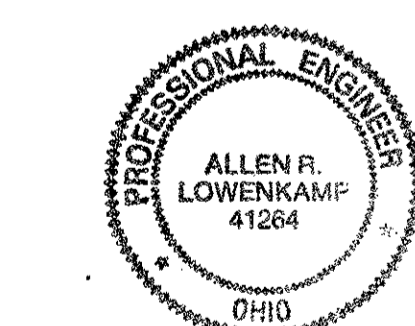
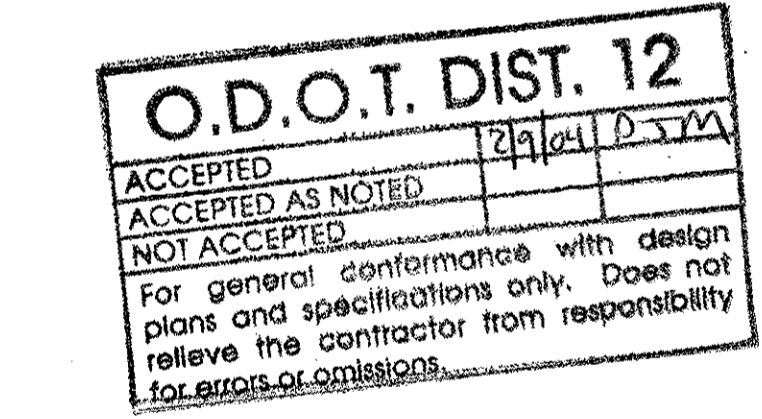
SPAN: 10 REF. NOS.: 148 / 149 / 148  
 LOCATION: SE L10 DESCRIPTION: Type 2 Lower Chord Angle Repair  
 ERECTION DRWG: E15 SHOP MARK:  
 SHOP DRWG.: 37A-L200-0-10' Plan Modified Extra  
 R: Revision by NK, 6-20-02  
 Repair Comments: PLATE 1 - Lower Chord ANGLE REPAIR TO THE TOP NORTH FLANGE ANGLE AT SE L2. (6 bolts total)  
 COORDINATE REPAIR IN FIELD.  
 By: WJV Date: June 19, 2002 Field Book Ref. 52-9

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-702 (36)

SPAN: 11 REF. NOS.: 139 / 153 / 140 / 148  
 LOCATION: S. Ext. U7-L8 Diagonal DESCRIPTION: Stay Plate: 1  
 Rivets under 50: 38.5 Rivets Replaced: 8 Type 1 Chord Angle Repair: 2  
 ERECTION DRWG: SHOP MARK: Px1, Ax1  
 SHOP DRWG.: Plan Modified Extra  
 Repair Comments: Ref. 139: Replace The Top, "East," Stay Plate  
 Ref. 153: Replace the 2 Angles connecting the Diagonal to the Vertical Gussets.  
 Angle DIMS: 17" x 5" x 3/4" x 1/2"  
 weight: 17" x 13.6 lbs/ft = 19.27 lbs per 1 Angle  
 2 Angles x 19.27 = 38.54 lbs  
 Ref. 140: Remove & replace 4 Rivets per Angle Connection to Vertical Gussets  
 2 x 4 = 8 R.R. By: NK Date: 5-17-02  
 Ref. 148: Install 1 Chord Angle Repair for the Top North Angle, same for the Top South Angle - Total: 1+1 = 2 Repairs  
 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-754 (37)  
**SUPERSTRUCTURE REPAIRS**

SPAN: 11 REF. NOS.: 148 / 149 / 109  
 LOCATION: South Ext. L18-L200 At L18 DESCRIPTION: Type 1 Chord Angle repair  
 Type 2 Chord Angle repair: 1 Spot Repair: 12  
 ERECTION DRWG: SHOP MARK:  
 SHOP DRWG.: SHOP MARK:  
 Reinforce the horizontal leg of STM N. Angle use 5" beveled plate, 1/2" thick, 72" Long Plate has 12 holes, repair is at STM Gst PL  
 Repair Comments: Ref. 148: pay: 12 holes / 6 holes per repair = 2 Repairs  
 Reinforce the horiz. leg of STM S. Angle use 5" x 1/2" beveled plate, 41" Long Plate has 10 holes, At STM Gst PL  
 Ref. 149: 10 holes / 10 h. per repair = 1 Repair  
 Ref. 104: Length of weld: 72" + 5" + 41" + 5" = 246" 246" / 20" / spot = 12 spots  
 By: NK Date: 5-31-02 Field Book Ref.:



Tri State Steel Construction Inc.  
 12808 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015  
 ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**  
 JOB NO. 2000212  
 DRAWN BY: CHECKED BY: DRAWING NO.  
 SCALE: N/A DATE:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

38

SPAN: 11 REF. NOS.: 138(16) / 148
LOCATION: SE L4 L2 DESCRIPTION: LACING BARS: 7
Type 1 chord angle repair

ERECTOR DRWG: E16 SHOP MARK: 6-LX1
SHOP DRWG: 442: L4 L2-0-11
R: Revision by NK, 5-29-02

Repair Comments:

At SE L10, REPLACE THE 1ST THREE TOP

LACING BARS (6-LX1)

Replace 1st Bottom (west) Lacing Bar

Total: 6+1=7 LB

Ref. 148: perform 1 chord angle repair to East North angle: 7 holes: 36" long
Plate used: 1/2" x 3 1/2"

By: WJV

Date: November 12th 2001

Field Book Ref.: 68-23

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-950

39

SPAN: 12 REF. NOS.: 104 / 148 / 149
LOCATION: N.E. L4-L2 DESCRIPTION: SPOT Repair: 9
Type 1 Chord Angle Repair

ERECTOR DRWG: SHOP MARK: Type 2 Chord Angle Repair: 1
SHOP DRWG: Plan

Reinforce the Bottom South Flange Angle, from the End of the 1st Lacing Channel, west of Stay Plate to the End of the smaller Stay Plate At N. Ext. L2 including the full lengths of the 2 Stay Plates + width of L CHANNEL use beveled bar 5"x 1/2" x 90" long Weld full length

Ref. 149: the Plate has 11 holes for the bolts of the larger Stay PL + L Channel

Ref. 148: 3 holes for the bolts of the smaller Stay PL

Ref. 104: length of weld: 90" x 2 passes = 180"
180 / 20 = 9 spots

By: NK

Date: 5-13-02

Field Book Ref.:

STV

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

40

SPAN: 12 REF. NOS.: 148 / 104
LOCATION: NE L4 L2 DESCRIPTION: Type 2 Lower Chord Angle Repair
SPOT Repair: 8

ERECTOR DRWG: E18 SHOP MARK:
SHOP DRWG: 467: L4 L2-0-12
Plan

Perform 1 Chord Angle repair to the Top South Angle (2 bolts into stay plate) At L4 x 2 bolts into Gusset Plate. Extra

PERFORM 1- LOWER CHORD ANGLE REPAIR TO THE BOTTOM SOUTH FLANGE ANGLE, ADJACENT TO THE NE L4 BOTTOM GUSSET PLATE. Plate used: 1/2" x 5" x 51" long with 12 holes 6 holes per repair -> 2 repairs The Plate is beveled and welded

Ref. 148: Total 1 + 2 = 3 Repairs

Ref. 104: length of weld: 51 x 3 passes = 153"
153 / 20 = 8 spots

By: WJV

Date: June 10th 2001

Field Book Ref.: 70-14

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

41

SPAN: 12 REF. NOS.: 148 / 153
LOCATION: SE L2 L3 DESCRIPTION: Type 1 Lower Chord Angle Repair

ERECTOR DRWG: E18 SHOP MARK:
SHOP DRWG: 466: L2 L3-0-12
Plan

PERFORM 1- LOWER CHORD ANGLE REPAIR TO THE NORTH FLANGE ANGLE, BETWEEN THE TOP L2 L3 STAY PLATE AND THE SE L2 TOP GUSSET PLATE. 6 holes total

REF. 153: Use 1- Full Plate & 1- ADDITIONAL SPLICE PLATE FOR THE LOWER CHORD ANGLE REPAIR.

NOTE: COORDINATE REPAIR IN FIELD

By: WJV

Date: June 12th 2001

Field Book Ref.: 71-12

HOPE MEMORIAL BRIDGE EX-931 SUPERSTRUCTURE REPAIRS

42

SPAN: 12 REF. NOS.: 148 / 149 / 104
LOCATION: South Ext. L4-L2 At L4 DESCRIPTION: Type 1 Chord Angle Repair: 1
Type 2 Chord Angle Repair: 1
SPOT Repair: 7

ERECTOR DRWG: SHOP MARK:
SHOP DRWG: SHOP MARK:

the BTM N. Flange at L4 S. EXT. at the Connection to BTM G-st. is Deficient. Perform a welded Chord Angle Repair

Size of Bar: 60" x 5 1/2" x 1/2", 14 holes
Type 2 Repair has 6 holes + Type 2 Repair has 10 holes
Payment will be 1 Type 1 + 1 Type 2 (14 HOLES)

Ref. 104: length of weld: 64 x 2 passes = 128"
128 / 20 = 7 spots

By: NK

Date: 8-8-02

Field Book Ref.:

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS EX-932

43

SPAN: 12 REF. NOS.: 148
LOCATION: South Ext. L4-L2 At L4 DESCRIPTION: Type 1 Chord Angle Repair: 1

ERECTOR DRWG: SHOP MARK:
SHOP DRWG: SHOP MARK:

Perform 1 Chord Angle Repair at Middle of BTM N. Flange

Repair Comments: Plate used: 33" x 5 1/2" x 1/2" (6 Bolts)

By: N.K.

Date: 8-8-02

Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-933 SUPERSTRUCTURE REPAIRS

44

SPAN: 12 REF. NOS.: 148 / 104
LOCATION: South Ext. L4-L2 At L4 DESCRIPTION: Type 1 Chord Angle Repair: 2
Spot Repair: 6

ERECTOR DRWG: SHOP MARK:
SHOP DRWG: SHOP MARK:

Next to L2 on the N. BTM Flange Connecting the Stay PL is Deficient. Perform a Chord Angle Repair. Welded on one side. Size of Bar: 60" x 5 1/2" x 1/2", beveled with 12 holes

Ref. 148: 12 holes / 6 holes per Repair = 2 Repairs

Ref. 104: length of weld: 60 x 2 passes = 120"
120 / 20 = 6 spots

By: NK

Date: 8-8-02

Field Book Ref.:

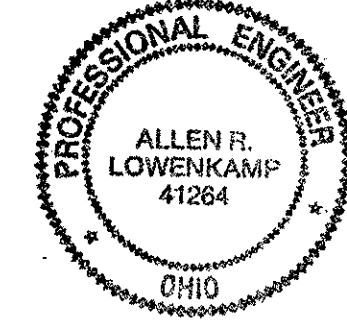
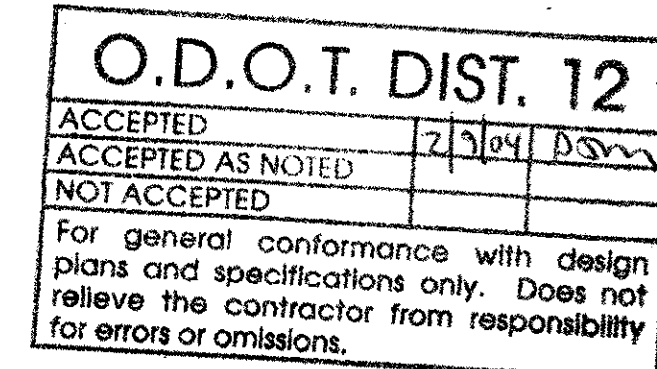


Table with columns for REVISION, DATE, BY. Includes project info: Tri State Steel Construction Inc., 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136, (440) 238-3015. Project # 00215, BRIDGE No. CUY-10-16-13, JOB NO. 2000212.

HOPE MEMORIAL BRIDGE EX-579 SUPERSTRUCTURE REPAIRS Field Mod. 1307 (45)

SPAN: 13 REF. NOS.: 148 LOCATION: NE L1, L1 DESCRIPTION: Type 1 Lower Guard Angle Repair ERUCTION DRWG: E19 SHOP MARK: SHOP DRWG: 188-L1L2-I-13R Plan Modified Extra [checked] Done

Repair Comments: PLACE 1- LOWER GUARD ANGLE REPAIR AT THE BOTTOM NORTH FLANGE FROM THE BOTTOM TO GUSSET PLATE TO THE MOUNTAIN BOTTOM STAY PLATE (1-R 5x3/8x1'-10"). THIS PLATE ENCOMPASSES THE FAR WEST RIVETS TO THE BOTTOM B/B GUSSET PLATE & IS PLACED ON TOP OF THE OUTSTANDING LEG OF THE FLANGE ANGLE. By: WJV Date: March 23rd, 2002 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-580 SUPERSTRUCTURE REPAIRS Field Mod. 1308 (46)

SPAN: 13 REF. NOS.: 148 LOCATION: NE L1, L1 DESCRIPTION: Type 1 Lower Guard Angle Repair ERUCTION DRWG: E19 SHOP MARK: SHOP DRWG: 188-L1L2-O-13R Plan Modified Extra [checked]

Repair Comments: PLACE 1- LOWER GUARD ANGLE REPAIR AT THE WEST END OF THE BOTTOM SOUTH FLANGE ANGLE. (1-R 2x5x1'-11"). CURVED ANGLE REPAIR IS PLACED ON TOP OF THE OUTSTANDING LEG OF THE FLANGE ANGLE, AND ENCOMPASSES 3- BOTTOM B/B GUSSET RIVETS & 2- STAY PLATE RIVETS. By: WJV Date: March 23rd, 2002 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-642 SUPERSTRUCTURE REPAIRS (47)

SPAN: 13 REF. NOS.: 148/149/104 LOCATION: N.I. L12-L11 At L12 DESCRIPTION: Type 1 Chord Angle: 1 Type 2 Chord Angle repair: 1 Spot Repair: 7 ERUCTION DRWG: SHOP MARK: SHOP DRWG: The horizontal leg of the bottom North Angle is deficient over the full length of the G&T fl and extends to the 1st Lacing channel Plan Modified Extra

Repair Comments: USE a beveled Plate 5x1/2 x 64" long, drill 14 holes in plate, to match those of G&T and 1st Lacing channel. Ref. 104: length of weld: 64" x 2 passes = 128" 128 / 20 = 7 SPOTS. By: NK Date: 4-19-02 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-104 SUPERSTRUCTURE REPAIRS (48)

SPAN: 13 REF. NOS.: 148/104 LOCATION: NE L1, L12 DESCRIPTION: Type 1 Curved Angle Repair Spot Repair: 1 ERUCTION DRWG: E19 SHOP MARK: SHOP DRWG: 187-L1L2-O-13 R: revision by NK, 4-17-02 Plan Modified Extra [checked] Done

Repair Comments: REPAIR THE OUTSTANDING LEG OF THE TOP SOUTH FLANGE ANGLE, BETWEEN THE L12 TOP GUS. PL & THE TOP STAY PL TO THE WEST. COORDINATE REPAIR IN FIELD. Plate used: 5x1/2. Place under chord angle horizontal leg. Ref. 104: Weld horizontal leg of angle to new plate where deficient material is removed: 1 SPOT. By: WJV Date: December 17th, 2000 Field Book Ref.: 76-19

HOPE MEMORIAL BRIDGE EX-15 SUPERSTRUCTURE REPAIRS (49)

SPAN: 13 REF. NOS.: 148 LOCATION: SE L1, L1 DESCRIPTION: Type 1 Curved Angle Repair ERUCTION DRWG: E19 SHOP MARK: SHOP DRWG: 188-L1L2-I-13R Plan Modified Extra [checked] Done

Repair Comments: At SE L1, REPAIR THE BOTTOM NORTH FLANGE ANGLE FROM THE BOTTOM STAY PLATE TO THE WEST END. Standard Repair with 6bolts is performed. COORDINATE REPAIR IN FIELD. Note: THIS SITUATION DOES NOT EXACTLY FIT THE LOWER GUARD ANGLE REPAIR AS SHOWN IN THE PLANS. By: WJV Date: March 20th, 2001 Field Book Ref.: 77-22

HOPE MEMORIAL BRIDGE EX-953 SUPERSTRUCTURE REPAIRS (50)

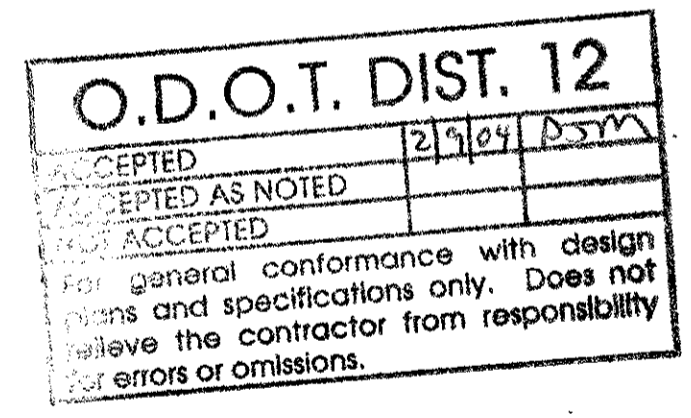
SPAN: 13 REF. NOS.: 148 LOCATION: South Ext. L1-L1 At L1 DESCRIPTION: Type 1 Chord Angle Repair ERUCTION DRWG: SHOP MARK: SHOP DRWG: Plan Modified Extra

Repair Comments: To the BTM North Flange Perform a type 1 Chord Angle Repair total 6 bolts, 3 common to BTM G&T PL. By: NK Date: 8-10-02 Field Book Ref.:

HOPE MEMORIAL BRIDGE EX-955 SUPERSTRUCTURE REPAIRS (51)

SPAN: 13 REF. NOS.: 148 LOCATION: South Ext. L2-L4 At L3 DESCRIPTION: Type 1 Chord Angle Repair ERUCTION DRWG: SHOP MARK: SHOP DRWG: Plan Modified Extra

Repair Comments: perform a Type 1 Chord Angle repair to the BTM North Flange (6 Bolts) 3 bolts common to btm G&T PL. By: NK Date: 8-10-02 Field Book Ref.:



Fri State Steel Construction Inc. 12808 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015 ODOT Project # 00215 BRIDGE No. CUY-10-16-13 DRAWN BY: CHECKED BY: DATE: DRAWING NO. SCALE: N/A



**HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS**

52

SPAN: 13 REF. NOS.: 148 / 149 / 104  
 LOCATION: SE L1-L2 DESCRIPTION: Type 1 Chord Angle: 1  
 Type 2 Chord Angle Repair: 1  
 Spot Repair: 7

ERECTOR DRWG: E19 SHOP MARK: SA487d

SHOP DRWG: 487-L1-L2-0-13 Plan  
 The 874 N. Angle has deficient horizontal leg over the full length of the G-st Pl. and extends to the 1st Lacing Channel.  
 Modified  
 Extra

Repair Comments: use a beveled Plate, 5" x 1/2" x 72" Long, drill 14 holes in Plate to match 10 of G-st Pl. & 2 of 1st Lacing Channel.  
 REPAIR THE NORTH BOTTOM BEYOND THE L12 BOTTOM GUSSET PL.

COORDINATE LOCATION AND LENGTH OF REPAIR IN FIELD

1 Type 1 Chord Angle Repair (6 holes per Plan repair)  
 + 1 Type 2 Chord Angle Repair (10 holes per Plan repair)  
 Ref 104: Length of weld: 72" x 2 passes = 144"  
 144 / 20 = 7 spots

By: WGV Date: November 29, 2000  
 R: Revision by NK, 4-19-02 Field Book Ref: 80-22



**HOPE MEMORIAL BRIDGE EX-751  
SUPERSTRUCTURE REPAIRS**

53

SPAN: 13 REF. NO.: 104 / 148 / 149  
 LOCATION: L12-L11 DESCRIPTION: Spot Repair: 8  
 Type 1 Chord Angle Repair: 1  
 Type 2 Chord Angle Repair: 1

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan  
 Reinforce the Bottom south flange by welding a beveled Plate 5 x 1/2", 72" long  
 Extra

Repair Comments: 14 holes drilled into Plate  
 Remove 2 rivets connecting the 1st Lacing Channel the other rivets removal are part of the Bottom G-st Plate replacement.

Ref. 148: has 6 holes Max  
 Ref. 149: has 10 holes Max  
 6 + 10 = 16 holes > 14 holes in plate  
 => 1 Repair of each  
 Length of weld: 72" x 2 passes + 5" x 2 passes = 154"  
 154" / 20" per spot = 8 spots



By: NK  
 Date: 2-26-02  
 Field Book Ref:

**HOPE MEMORIAL BRIDGE EX-676  
SUPERSTRUCTURE REPAIRS**

54

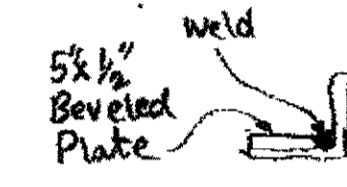
SPAN: 13 REF. NOS.: 148 / 104  
 LOCATION: S I DESCRIPTION: Type 1 Chord Angle Repair  
 SPOT Repair: 5

ERECTOR DRWG: SHOP MARK:

SHOP DRWG: Plan  
 Repair the Bottom North Flange of Chord Angle, at connection  
 Extra

Repair Comments: to 1st & 2nd Lacing Channels  
 USE Beveled Bar plate, 5" x 1/2" x 31" Long with 4 holes for channels Attachment, Cut deficient material and Weld as shown:

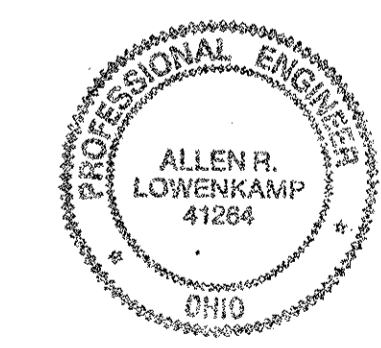
Ref 104: length of weld:  
 31 x 3 passes + 5 x 2 = 103" ≈ 5 spots



By: NK  
 Date: 5-6-02  
 Field Book Ref:

O.D.O.T. DIST. 12			
ACCEPTED	2/7/04	ASm	
ACCEPTED AS NOTED			
NOT ACCEPTED			

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015			
ODOT Project # 00215			
BRIDGE No. CUY-10-16-13			
JOB NO. 2000212		DRAWING NO.	
DRAWN BY	CHECKED BY	DATE	SCALE
			N/A

HOPE MEMORIAL BRIDGE EX-728 ①  
SUPERSTRUCTURE REPAIRS

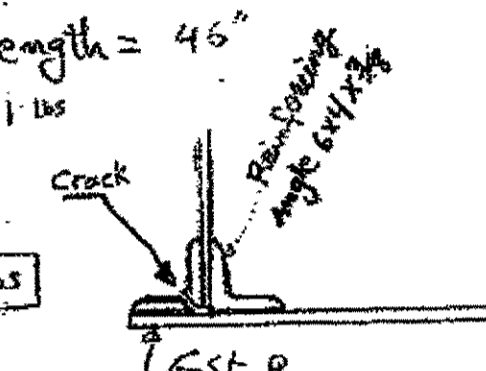
SPAN: 12 REF. NOS.: 153/140/125/124/128 13  
North Int.  
LOCATION: L2-L3 DESCRIPTION: Repair under 50 : 75  
Rivets Replaced : 10  
Drilled holes : 6  
Dye Penet. Test : 1  
At L3 Drilled End of Crack : 1  
ERECTOR DRWG: SHOP MARK: Lacing channel : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked Along the Modified heel for the length of the 1st BTM GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord

Ref. 153: Angle used: 6 x 4 x 3/8, Length = 46"  
Weight: 10.4 lbs x 46/12 = 47.1 lbs  
6 bolt extensions x 1 1/4 lbs/bolt = 6.6 lbs  
Spacer Plate: 5/8 x 6 x 20  
Weight: 21.3 lbs  
Total: 47.1 + 6.6 + 21.3 = 75 lbs



Ref. 140: 10 Rivets in vertical leg

Ref. 125: Drilled 6 holes into GSt R to tie horizontal leg of new angle

Ref. 128: Drilled hole at end of crack 1

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-3-02

Ref. 137: Replaced 1st BTM Lacing Channel Field Book Ref:

HOPE MEMORIAL BRIDGE EX-729 ②  
SUPERSTRUCTURE REPAIRS

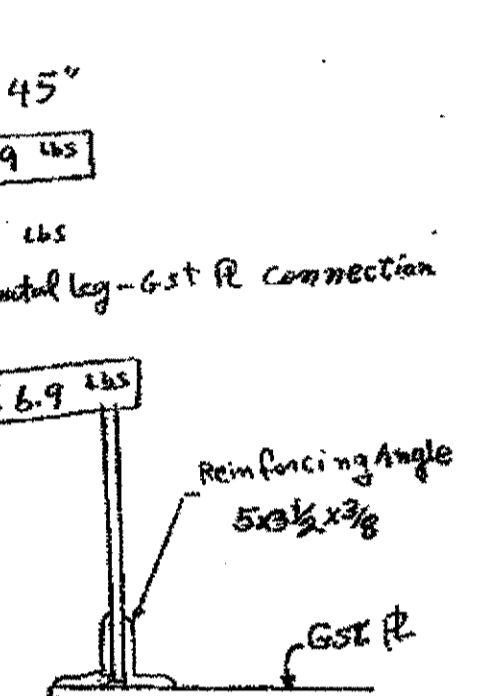
SPAN: 12 REF. NOS.: 153/140/125/124/128  
North Int.  
LOCATION: L2-L3 DESCRIPTION: Repair under 50 : 66.9  
Rivets Replaced : 10  
Drilled holes : 6  
At L3 Dye Penet. Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 45"  
Weight: 10.4 lbs x 45/12 = 39 lbs  
Spacer Plate: 5/8 x 6 x 20 => 21.3 lbs  
6 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 6.6 lbs  
Total: 39 + 21.3 + 6.6 = 66.9 lbs



Ref. 140: 10 Rivets in vertical leg

Ref. 125: Drilled 6 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

Ref. 137: Replaced 1st BTM Lacing Channel Field Book Ref:

HOPE MEMORIAL BRIDGE EX-730 ③  
SUPERSTRUCTURE REPAIRS

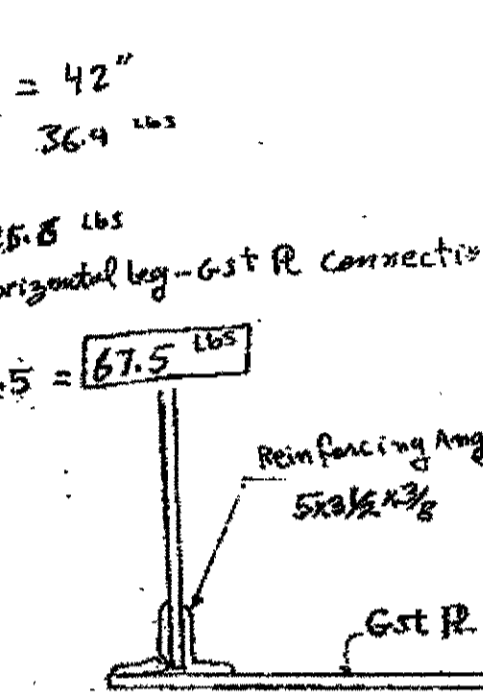
SPAN: 12 REF. NOS.: 153/140/125/124/128/137  
North Int.  
LOCATION: L2-L3 DESCRIPTION: Repair under 50 : 67.5  
Rivets Replaced : 9  
Drilled holes : 5  
At L2 Dye Penetration Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1  
Lacing Channel : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 42"  
Weight: 10.4 lbs x 42/12 = 36.4 lbs  
Spacer Plate: 5/8 x 5 x 20 => 25.8 lbs  
5 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 5.5 lbs  
Total: 36.4 + 25.8 + 5.5 = 67.5 lbs



Ref. 140: 9 Rivets in vertical leg

Ref. 125: Drilled 5 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

Ref. 137: Replaced 1st BTM Lacing Channel Field Book Ref:

HOPE MEMORIAL BRIDGE EX-731 ④  
SUPERSTRUCTURE REPAIRS

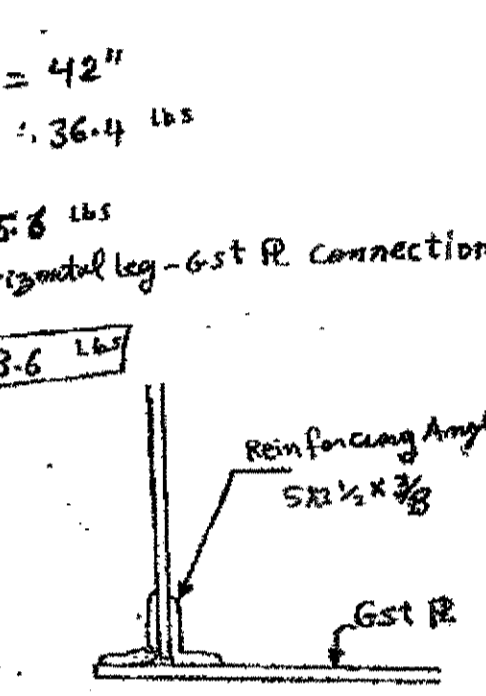
SPAN: 12 REF. NOS.: 153/140/125/124/128/137  
North Int.  
LOCATION: L2-L1 DESCRIPTION: Repair under 50 : 68.6  
Rivets Replaced : 9  
Drilled holes : 6  
At L2 Dye Penetration Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1  
Lacing channel : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 42"  
Weight: 10.4 lbs x 42/12 = 36.4 lbs  
Spacer Plate: 5/8 x 5 x 20 => 25.8 lbs  
6 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 6.6 lbs  
Total: 36.4 + 25.8 + 6.6 = 68.6 lbs



Ref. 140: 9 Rivets in vertical leg

Ref. 125: Drilled 6 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

Ref. 137: Replaced 1st BTM Lacing Channel Field Book Ref:

HOPE MEMORIAL BRIDGE EX-732 ⑤  
SUPERSTRUCTURE REPAIRS

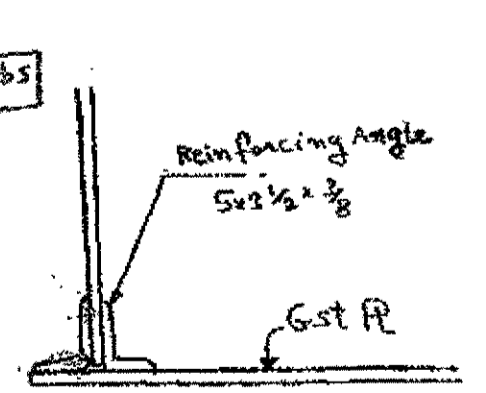
SPAN: 12 REF. NOS.: 153/140/125/126/128  
North Int.  
LOCATION: L2-L2 DESCRIPTION: Repair under 50 : 95.1  
Rivets Replaced : 12  
Drilled holes : 9  
At L2 Dye Penet. Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 53"  
Weight: 10.4 lbs x 53/12 = 45.9 lbs  
Spacer Plate: 5/8 x 6 x 37 => 39.3 lbs  
9 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 9.9 lbs  
Total: 45.9 + 39.3 + 9.9 = 95.1 lbs



Ref. 140: 12 Rivets in vertical leg

Ref. 125: Drilled 9 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

Ref. 128: Drilled hole at end of crack 1

HOPE MEMORIAL BRIDGE EX-739 ⑥  
SUPERSTRUCTURE REPAIRS

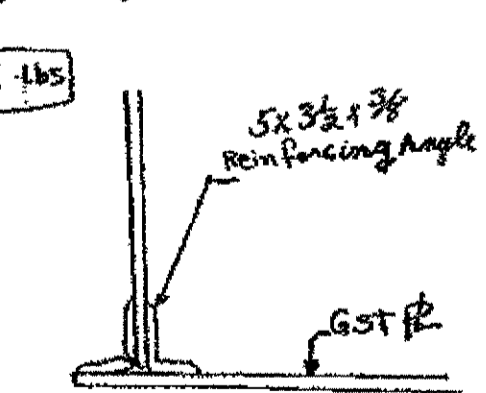
SPAN: 12 REF. NOS.: 153/140/125/128  
North Int.  
LOCATION: L2-L1 DESCRIPTION: Repair under 50 : 44.6  
Rivets Replaced : 10  
Drilled holes : 9  
At L1 Dye Penet. Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1

SHOP DRWG: Plan

The Bottom North Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 40"  
Weight: 10.4 lbs x 40/12 = 34.7 lbs  
Spacer Plate: None  
9 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 9.9 lbs  
Total: 34.7 + 9.9 = 44.6 lbs



Ref. 140: 10 Rivets in vertical leg

Ref. 125: Drilled 9 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

Ref. 128: Drilled hole at end of crack 1

HOPE MEMORIAL BRIDGE EX-740 ⑦  
SUPERSTRUCTURE REPAIRS

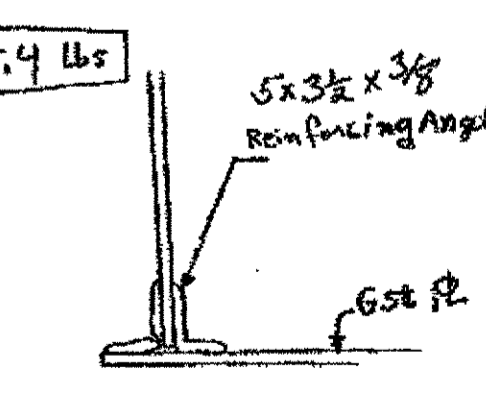
SPAN: 12 REF. NOS.: 153/140/125/128  
North Int.  
LOCATION: L2-L1 DESCRIPTION: Repair under 50 : 35.4  
Rivets Replaced : 8  
Drilled holes : 7  
At L1 Dye Penet. Test : 1  
ERECTOR DRWG: SHOP MARK: Drilled End of Crack : 1

SHOP DRWG: Plan

The Bottom South Angle is Cracked along the heel Modified for the length of the GSt R Extra

Repair Comments: Reinforce by installing an Angle on the inner side of the Lower Chord.

Ref. 153: Angle used: 5 x 3 1/2 x 3/8, Length = 32"  
Weight: 10.4 lbs x 32/12 = 27.7 lbs  
Spacer Plate: None  
7 bolt extensions x 1 1/4 lbs/bolt at horizontal leg - GSt R Connection = 7.7 lbs  
Total: 27.7 + 7.7 = 35.4 lbs



Ref. 140: 8 Rivets in vertical leg

Ref. 125: Drilled 7 holes into GSt R to tie to new Angle

Ref. 126: Dye Penetration Test 1 By: NK

Date: 6-4-02

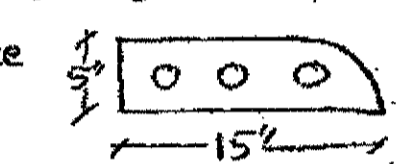
Ref. 128: Drilled hole at end of crack 1

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED 2/9/04 ASM  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

Tri State Steel Construction Inc.  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015  
ODOT Project # 00215  
BRIDGE No. CUY-10-16-13  
JOB NO. 2000212  
DRAWN BY: CHECKED BY: DATE: DRAWING NO.

**EX-640**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 104/125  
 LOCATION: L2-2 DESCRIPTION: SPOT Repair: 3  
Top South Flange Drill hole: 3  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 Cut deficient material and of horizontal leg of Angle at End of Angle on Top Gst R. fabricate a piece 

Ref. 104: weld New piece using ~~butt~~ groove weld to Existing Angle  
 length of weld:  $(15+5) \times 3 \text{ passes} = 60"$   
 $60 \div 20 = 3 \text{ spots}$

Ref. 125: Drill 3 holes

By: NK  
 Date: 3-23-02  
 Field Book Ref: \_\_\_\_\_

**EX-744**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 7 REF. NOS.: 152/153/125/140  
 LOCATION: North Ext DESCRIPTION: Repair over SO: 62  
44-45 DESCRIPTION: Repair under SO: 8.4  
Lower chord Drill holes: 4  
Angle Reinforcement Rivets replaced: 14  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 Starting at L15, Reinforce the Bottom South Angle (flange)  
 length of Angle: 72' @ 6 ft  
 weight per ft: 10.4 lbs/ft

Ref. 152:  $\frac{72}{12} \times 10.4 = \boxed{62 \text{ lbs}}$

Ref. 153: use 5 over size washers:  $(3 \times 1 \frac{1}{2})$   
 $5 \times 0.8 \text{ lbs/washer} = 4 \text{ lbs}$   
 4 x 1" bolts connecting angle to lacing channels  
 $4 \times 1.1 \text{ lbs/bolt} = 4.4 \text{ lbs} \Rightarrow \text{Total: } 4.4 + 4 = \boxed{8.4}$

Ref. 125: drill 2 holes per lacing channel x 2 = 4 holes

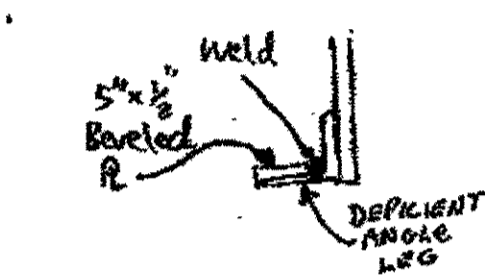
Ref. 140: Remove and replace 14 rivets at Vertical leg.

By: 14  
 Date: 6-27-02  
 Field Book Ref: \_\_\_\_\_

**EX-677**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 13 REF. NOS.: 153/125/104  
 LOCATION: S. Ext DESCRIPTION: Repair under SO: 8.5  
L1-L2 DESCRIPTION: Drill hole: 2  
Spot Repair: 3  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 Repair the Bottom South Flange of Chord Angle at Connection to the 1st lacing channel  
 use Beveled Plate:  $5 \times 1 \frac{1}{2}$ , 12" long with 2 holes for the lacing channel attachment.  
 cut Deficient material of weld:



Ref. 153: weight of Plate:  $5 \times 0.5 \times 12 \times \frac{490}{12} = \boxed{8.5 \text{ lbs}}$

Ref. 125: Drill 2 holes for Bolts of channel

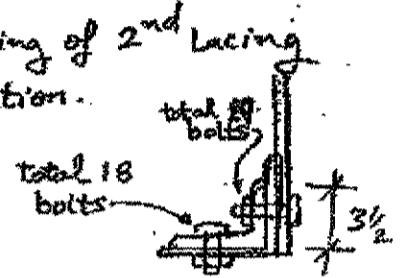
Ref. 104: length of weld:  $12 \times 3 \text{ passes} + 5 \times 2 = 46"$   
 $46 \div 20 = 3 \text{ spots}$

By: NK  
 Date: 5-6-02  
 Field Book Ref: \_\_\_\_\_

**EX-540**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 12 REF. NOS.: 125/140/152/153  
 LOCATION: N. Ext DESCRIPTION: Drilled holes: 10  
L3-L4 DESCRIPTION: Rivets Replaced: 23  
Reinforcing Angle of Lower Chord Repair over SO: 101.4  
Repair under SO: 17  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 Counting from L3 Reinforce the BTM South Angle from beginning of 2nd Lacing Channel to end of 5th Lacing channel connection.  
 Use Angle  $5 \times 3 \frac{1}{2} \times 3 \frac{3}{8}$ , 9'-9" long



Ref. 140: Rivets replaced in vertical leg: 19  
 Rivets Replaced in horizontal leg: 4 at existing L. chnl + 5" + to remain  
 Total:  $19 + 4 = \boxed{23 \text{ R.R.}}$

Ref. 125: Holes Drilled in horizontal leg of Existing Angle: 10 holes

Ref. 152:  $9.75' \times 10.4 \frac{\text{lbs}}{\text{ft}} = \boxed{101.4 \text{ lbs}}$  weight of Angle

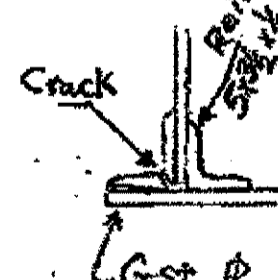
Ref. 153: use fill plate for the 3rd and 4th Lacing Channels (New, replaced)  
 $P: 4 \times 3 \frac{3}{8} \times 18' \times \frac{490}{12} = 8 \text{ lbs}$   
 weight of 10 Bolts used in the 10 drilled holes:  $0.9 \text{ lbs} \times 10 = 9 \text{ lbs}$   
 Total:  $8 + 9 = \boxed{17 \text{ lbs}}$

By: NK  
 Date: 2-21-02  
 Field Book Ref: \_\_\_\_\_

**EX-724**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 12 REF. NOS.: 153/140/125/126/128/137  
 LOCATION: North Int DESCRIPTION: Repair under SO: 74.4  
L3-L4 DESCRIPTION: Rivets Replaced: 10  
At L3 DESCRIPTION: Drilled holes: 5  
Dye Penet. Test: 1  
Drill end of Crack: 1  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: Lacing channel: 1  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 The Bottom South Angle is Cracked along the heel for the length of the Gst R.  
 Reinforce by installing an Angle on the inside of the lower chord



Ref. 153: 5 bolt Extensions x  $1 \frac{1}{2}$  bolt in Gst R-Angle-connection = 5.5 lbs  
 Angle used:  $5 \times 3 \frac{1}{2} \times 1 \frac{1}{2}$ , length = 42"  
 weight:  $13.6 \frac{\text{lbs}}{\text{ft}} \times 4 \frac{1}{2} = 47.6 \text{ lbs}$   
 spacer Plate:  $5 \frac{1}{8} \times 6 \times 20 \Rightarrow 21.3 \text{ lbs}$   
 Total:  $5.5 + 47.6 + 21.3 = \boxed{74.4}$

Ref. 140: 9 rivets in vertical leg  
 1 rivet in horizontal leg to remove  
 Pick rust and drill end of crack  
 Total:  $9 + 1 = \boxed{10 \text{ R.R.}}$

Ref. 125: drilled 5 holes into Gst Plate to tie horizontal leg of New Angle

Ref. 126: Dye Penetration Test: 1

Ref. 128: drilled hole at end of Crack: 1

Ref. 137: Replaced 1st Bottom Lacing channel

By: NK  
 Date: 6-4-02  
 Field Book Ref: \_\_\_\_\_

**EX-539**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 12 REF. NOS.: 104/125/153  
 LOCATION: South Ext DESCRIPTION: SPOT Repair: 2  
L2-2 DESCRIPTION: Drilling drainage hole: 2  
Repair under SO: 27.3  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 The BTM North flange has holes:  
 From L2-2:  
 install 1 fill plate between the 1st Lacing channel and the Angle of (Bottom Chord Angle)  
 Plate DIMS:  $10 \times 5 \times 1 \frac{1}{2}$  on N. end. of L. chnl  
 From L4: install 2 fill Rs BTM the 1st L. chnl and the BTM chord Angle  
 Plates DIMS:  $10 \times 5 \times 1 \frac{1}{2}$  on S. end. of L. chnl  
 $16 \times 5 \times 1 \frac{1}{2}$  on N. end. of long chnl

Ref. 153:  $(10 \times 5 \times \frac{1}{2} \times 2 + 16 \times 5 \times \frac{1}{2}) \times \frac{490}{12} = 25.5 \text{ lbs}$   
 weight of 2 Bolts:  $0.9 \text{ lbs} \times 2 = 1.8 \text{ lbs}$   
 Total:  $25.5 + 1.8 = \boxed{27.3 \text{ lbs}}$

Ref. 125: Drill 2 holes in the N. chord Angle

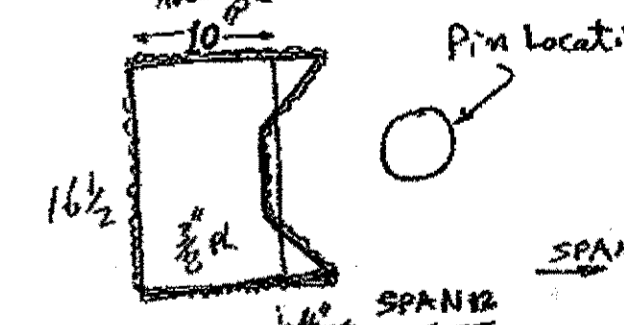
Ref. 104: seal and weld the perimeter of the holes in the BTM North Chord Angle Near the end  
 Lacing channels: weld to the fill plates: 2 SPOTS

By: NK  
 Date: 2-28-02  
 Field Book Ref: \_\_\_\_\_

**EX-969**  
**HOPE MEMORIAL BRIDGE**  
**SUPERSTRUCTURE REPAIRS**

SPAN: 2 REF. NOS.: 153/104  
 LOCATION: North interior DESCRIPTION: Repair under SO: 17.5  
L3-L4 DESCRIPTION: SPOT Repair: 6  
At L3  
 ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
 SHOP DRWG: \_\_\_\_\_ Plan \_\_\_\_\_  
 Modified \_\_\_\_\_  
 Extra \_\_\_\_\_

Repair Comments:  
 Patch the North face of lower chord



Ref. 153:  $16.5 \times 10 \times \frac{3}{8} \times \frac{490}{12} = \boxed{175 \text{ lbs}}$

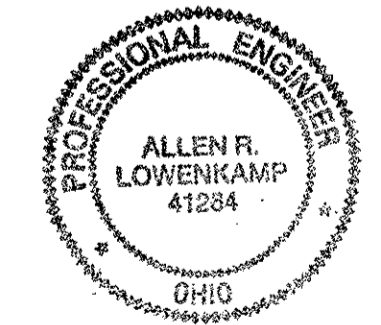
Ref. 104:  $(16.5 \times 2 + 14 \times 2) \times 2 \text{ passes} = 122"$   
 $122 \div 20 \frac{\text{spot}}{\text{spot}} = \boxed{6 \text{ SPOTS}}$

By: NK  
 Date: 7-31-02  
 Field Book Ref: 577

**O.D.O.T. DIST. 12**

ACCEPTED	2/20/02
ACCEPTED AS NOTED	
NOT ACCEPTED	

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16.13**

JOB NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 SCALE: N/A DATE: \_\_\_\_\_

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-437 (15)

SPAN: 9 N. I. REF. NOS.: 104 / 153 LOCATION: L16-L17 DESCRIPTION: SPOT Repair: 16 Repair under 50: 65.5

ERECTOR DRWG: SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: Starting from L17 weld Beveled plates to BTM South Angle to reinforce lower chord. Plates used: 32 1/2" x 9", Next to 3rd 4th L Channels: 21" x 9", had to use two plates per location because one Channel can be replaced or freed at a time.

Ref. 104: 3 passes of weld at bevel side, 1 pass other locations. Length of Plates: 32.5 + 9 + 21 + 9 = 71.5" Total length of weld: 71.5 x 3 + 71.5 + 5 x 2 sides x 4 Plates = 326 inch 326 / 20 = 16 SPOTS

Ref. 153: weight of Bevel Plates: (32.5 + 9 + 21 + 9) x 5 x 1/2 x 490 / 12^3 = 50.7 lbs. Weight of Shim Plate under Lacing channel: 8 x 4 x 1/2 x 490 / 12^3 = 4.8 lbs. Total: 50.7 + 4.8 = 55.5 lbs. By: NK Date: 1-21-02

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-426 (16)

SPAN: 9 N. EXT. REF. NOS.: 104 / 153 LOCATION: L17-18 DESCRIPTION: SPOT Repair: 18 Repair over 50: 83

ERECTOR DRWG: SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: Reinforce the BTM South Angle, before removing the lower cover plate, the horizontal leg of the 6th South Angle had lost section. It is determined that the remaining thickness of metal is less than 5/16". We will use the 3" x 1/2" (3" x 1/2" beveled) to reinforce the angle as shown. Step 1, remove the rivets marked by the Engineer in the field. 3 rivets to remain will be marked. Step 2, drill 1/2" holes in the plate at location of removed rivets, these locations are from west end: 2 3/8", 9 3/8", 23 3/8", 37 3/8", 41 3/8", 45 3/8", 54 3/8", 63 3/8", 68 3/8", 77 3/8", 81 3/8", 86 3/8", 90 3/8", 94 3/8", 106 3/8", 111 3/8". Step 3, drill 3/8" holes in the plate at location of temporary remaining rivets which are from west end: 50 3/8", 59 3/8", 72 3/8". Step 5, Weld Plate to Angle. Now the cover plate can be replaced.

Ref. 104: 117.25" x 3 passes = 351.75" 351.75" / 20 per spot = 18 SPOTS. Ref. 152: 5 3/4" x 17.25" x 490 / 12^3 = 83 lbs. By: NK Date: 1-11-02

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-342 (17)

SPAN: 5 S. Int. REF. NOS.: 153 / 140 / 104 LOCATION: L14 DESCRIPTION: Repair under 50: 31.5 Rivets Replaced: 2 Spot Repair: 12

ERECTOR DRWG: SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: The BTM flanges are very thin. A Bar 3" x 1/2" is to be used to supplement the horizontal legs of the Angles. North flange Repair: 37" Long. 1 Rivet replaced. 3 passes of weld on back full length. 1 pass on front: 18" long. South flange Repair: 37" Long x 9 holes to accommodate bolts of new G&T. 3 passes of weld on back, full length.

Ref. 153: 37" x 3" x 1/2" x 490 / 12^3 = 15.74 lbs, 2 bars: 15.74 x 2 = 31.5 lbs. Ref. 140: 1 Rivet Replaced. Ref. 104: 3 x 37 + 18 + 3 x 37 = 240 240 / 20 per spot = 12 SPOTS. By: NK Date: 11-2-01

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-654 (18)

SPAN: 11 REF. NOS.: 153 / 104 (3) LOCATION: SE Lch DESCRIPTION: Spot Repair

ERECTOR DRWG: E16 SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: PLATE 1 - MODIFIED LOWER CHORD ANGLE REPAIR TO THE OUTSTANDING LEG OF THE BOTTOM NORTH FLANGE ANGLE, AT THE 3rd BOTTOM LACING CHANNEL FROM SE Lch.

Ref. 153: 1-R 5" x 1/2" x 148" long, 14 lbs. Ref. 104: LENGTH OF WELD = (20" x 5") x 2 = 50" 50" / 20 = 2.5 SPOTS. By: WJV Date: April 25, 2002

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-240 (19)

SPAN: 3 N. EXT. REF. NOS.: 104 / 125 LOCATION: L12-L13 DESCRIPTION: SPOT Repair: 3+2=5 Drilling hole: 1

ERECTOR DRWG: SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: Weld 25" Long bar plate (3" x 1/2") to BTM S. flange: 3 spots. weld a plate (8" x 10" x 1/2") to the S. web near L13: 2 spots. some plate covers a rivet, drill 1/2" hole thru plate and bolt it to web using 1" bolt: 1 hole.

By: NK Date: 9-5-01

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-285 (20)

SPAN: 3 N. EXT. REF. NOS.: 153 / 104 LOCATION: L3 DESCRIPTION: Repair under 50: 30.8 SPOT Repair: 10

ERECTOR DRWG: SHOP MARK:

SHOP DRWG.: Plan Modified Extra

Repair Comments: The Bottom South flange of Angle, holding the BTM G&T fl is thin and holed, Weld a bar plate as shown.

Bar size: 62" long x 3 1/2" x 1/2" Bar weight: 62 x 3.5 x 0.5 x 490 / 12^3 = 30.8 lbs. Ref. 153: = 30.8 lbs. Length of weld: 62" x 3 passes = 186" Ref. 104: 186 / 20 per spot = 10 SPOTS

1 3/8" holes are drilled into bar to accommodate for bolts. By: NK Date: 9-5-01

HOPE MEMORIAL BRIDGE SUPERSTRUCTURE REPAIRS

Field Mod. EX-266 (21)

SPAN: 3 S. EXT. REF. NOS.: 104 / 153 LOCATION: L3 DESCRIPTION: SPOT REPAIR: 6 Repair under 50: 27.3 lbs

ERECTOR DRWG: SHOP MARK:

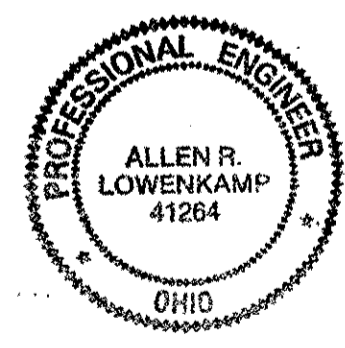
SHOP DRWG.: Plan Modified Extra

Repair Comments: The lower chord bottom flanges are very thin (heavy section loss). Repair Comments: use a bar 1/2" x 3 1/2" to supplement the horizontal leg of Angle, North side. weight of bar: 59.55 lbs/ft.

length of bar at W. end of G&T = 28" length of bar at E. end of G&T = 27" length of welds: (28 + 27) x 2 passes of weld = 110" Ref. 104: 110 / 20 per spot = 6 SPOTS Ref. 153: (28 + 27) = 12 x 5.955 lbs/ft = 27.3 lbs

By: NK Date: 10-8-01

O.D.O.T. DIST. 12 ACCEPTED 2/9/01 BSM



Fri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44138 (440) 238-3015

ODOT Project # 00215 JOB NO. 2000212 DRAWN BY: SCALE: N/A CHECKED BY: DATE: DRAWING NO.:

HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS EX-237

22

SPAN: 3, S, I REF. NOS.: 104 / 153  
LOCATION: L18 DESCRIPTION: SPOT REPAIR: 30  
Repair under 50: 96.7 lbs

ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
SHOP DRWG.: \_\_\_\_\_ Plan \_\_\_\_\_  
Modified \_\_\_\_\_  
Extra \_\_\_\_\_

Repair Comments:

The lower chord bottom flanges are very thin (heavy section loss).

a bar  $\frac{1}{2}'' \times 3\frac{1}{2}''$  is to be used to supplement the horizontal legs of the Angles North and South sides.  
weight of bar:  $5.955 \text{ lbs/ft}$

North Repair:  $54 \div 22''$  bars with 9 holes

South Repair:  $75 \div 44''$  bars with 13 holes

length of welds:  $(54 \div 22 + 75 \div 44) \times 3$  passes of weld  
 $= 585''$

Ref. 104:  $585 \div 20 \text{ per spot} = 30 \text{ Spots}$

Ref. 153:  $54 \div 12 \times 5.955 \text{ lbs} = 26.8 \text{ lbs}$   
 $22 \div 12 \times 5.955 = 10.9 \text{ lbs}$   
 $75 \div 12 \times 5.955 = 37.2 \text{ lbs}$   
 $44 \div 12 \times 5.955 = 21.8 \text{ lbs}$

Total:  $26.8 + 10.9 + 37.2 + 21.8 = 96.7 \text{ lbs}$

By: NK

Date: 8-6-01

Field Book Ref.: \_\_\_\_\_

HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS EX-238

23

SPAN: 3 REF. NOS.: 104 / 153  
LOCATION: L12 DESCRIPTION: SPOT REPAIR: 30  
Repair under 50: 39.9 lbs

ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
SHOP DRWG.: \_\_\_\_\_ Plan \_\_\_\_\_  
Modified \_\_\_\_\_  
Extra \_\_\_\_\_

Repair Comments:

The bottom flanges are very thin.

a bar  $3 \times \frac{1}{2}''$  is to be used to supplement the horizontal legs of the Angles.

North side repair:  $56\frac{1}{2}''$  long

South side repair:  $37\frac{1}{2}''$  long

weight of Bar:  $3 \times \frac{1}{2} \times 12 \times \frac{5.955}{12} = 5.104 \text{ lbs/ft}$

length of welds:  $[(56.5 \div 3) \times 2 + (37.5 \div 3) \times 2] \times 3$  passes  
 $= 599''$

Ref. 104:  $599 \div 20 \text{ per spot} = 30 \text{ Spots}$

Ref. 153:  $56.5 \div 12 \times 5.104 \text{ lbs} = 24. \text{ lbs}$   
 $37.5 \div 12 \times 5.104 = 15.9 \text{ lbs}$

Total:  $24 + 15.9 = 39.9 \text{ lbs}$

By: NK

Date: 9-12-01

Field Book Ref.: \_\_\_\_\_

HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS EX-219

24

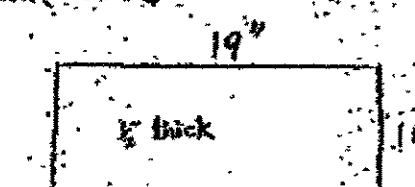
SPAN: 2 REF. NOS.: 104 / 153  
LOCATION: L13-L1 DESCRIPTION: SPOT REPAIR: 3  
Repair under 50: 26.9

ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
SHOP DRWG.: \_\_\_\_\_ Plan \_\_\_\_\_  
Modified \_\_\_\_\_  
Extra \_\_\_\_\_

Repair Comments:

weld a patch to the South web.

Size of Plate welded:



Length of weld:  $(19+10) \times 2 = 58$

Ref. 104:  $58 \div 20 \text{ per spot} = 3 \text{ Spots}$

weight of Plate:  $19 \times 10 \times \frac{5.955}{12} = 26.9 \text{ lbs}$

Ref. 153: 26.9 lbs

By: NK

Date: 9-5-01

Field Book Ref.: \_\_\_\_\_

HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS EX-103

25

SPAN: 3, S. REF. NOS.: 153 / 104  
LOCATION: L11 Extension DESCRIPTION: Steel under 50: 13.9  
Spot repairs: 3

ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
SHOP DRWG.: \_\_\_\_\_ Plan \_\_\_\_\_  
Modified \_\_\_\_\_  
Extra \_\_\_\_\_

Repair Comments:

Lower chord angle leg above bottom GSt R. is thin.

Weld Bar plate to vertical leg of Angle, full penetration

Bar size:  $27'' \times 3\frac{1}{2}'' \times \frac{1}{2}''$

Ref. 153: Bar weight:  $27 \times 3.5 \times 0.5 \times \frac{4.90}{12} = 13.9 \text{ lbs}$

Length of weld (double pass):  $27 \times 2 = 54''$

equivalent to 3 Spot repairs

6 holes were drilled into the Bar plate

By: NK

Date: 7-25-01

Field Book Ref.: \_\_\_\_\_

HOPE MEMORIAL BRIDGE  
SUPERSTRUCTURE REPAIRS EX-79

26

SPAN: 2, North REF. NOS.: 104 / 153  
LOCATION: L0 DESCRIPTION: SPOT REPAIR: 5  
Repair under 50 lbs: 15.38

ERECTION DRWG: \_\_\_\_\_ SHOP MARK: \_\_\_\_\_  
SHOP DRWG.: \_\_\_\_\_ Plan \_\_\_\_\_  
Modified \_\_\_\_\_  
Extra \_\_\_\_\_

Repair Comments:

horizontal leg of Angle was deteriorated for 31'' at the connection to the GSt Gusset Plate, inner side.

A plate was fabricated with 8 holes,  $1\frac{1}{8}''$  dia.

Plate DIMS:  $3.5'' \times 0.5'' \times 31''$   
weight:  $3.5 \times 0.5 \times 31 \times \frac{4.90}{12} = 15.38 \text{ lbs}$

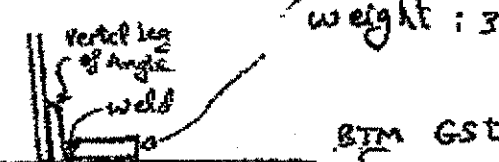


Plate was welded to vertical leg of Angle, 3 passes

total length of weld:  $31'' \times 3$  passes =  $93''$

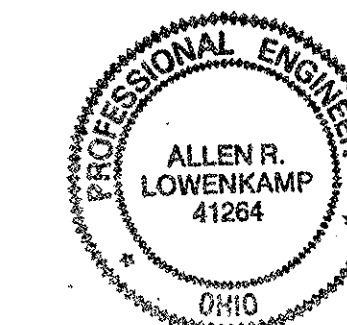
Spot Repairs equivalent:  $93 \div 20 = 5 \text{ Spots}$

By: NK

Date: 7-10-01

Field Book Ref.: \_\_\_\_\_

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED 12/19/04 PSM  
NOT ACCEPTED  
For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
(440) 238-3015

ODOT Project # 00215

JOB NO. 2000212

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
SCALE: N/A DATE: \_\_\_\_\_

**Ref# 117** TOTAL QUANTITY = 39  
STRUCTURAL STEEL MISC. PLAN QUANTITY - 29 EACH  
(ALL ARE TOP PLATES) - BLB TYPE 3 GUSSET PLATE REPLACEMENT

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
1	WBLE	center Truss	n-5, north	top	04/02/01	Kanj		1	108 B
2	WBLE	N. Truss	n-6	top	04/02/01	Kanj		1	108 B
3	WBLE	N. Truss	n-6	top	04/02/01	Kanj		1	108 B
WBLE TOTALS 3									
4	SPAN 1	N. EXT.	d-3	top	05/29/01	Kanj		1	192 A
5	SPAN 1	S. EXT.	joint k	L10	04/18/01	Kanj		1	198 A
SPAN 1 TOTALS 2									
SPAN 2 TOTALS 0									
6	SPAN 3	N. EXT.	c-2	top	07/19/01	Kanj		1	196 B
7	SPAN 3	N. EXT.	d-3	top	08/30/01	Kanj		1	197 A
8	SPAN 3	N. EXT.	n-10	top	05/29/01	Kanj		1	200 B
9	SPAN 3	S. EXT.	c-2	top	08/17/01	Kanj		1	196 A
SPAN 3 TOTALS 4									
SPAN 4 TOTALS 0									
10	SPAN 5	S. EXT.	n-12	top	10/30/01	Kanj		1	249 A
11	SPAN 5	N. EXT.	n-11	top	10/30/01	Kanj		1	249 B
12	SPAN 5	S. EXT.	n-11	top	10/30/01	Kanj		1	249 B
13	SPAN 5	N. EXT.	n-12	top	10/19/01	Kanj		1	249 A
SPAN 5 TOTALS 4									
SPAN 6 TOTALS 0									
14	SPAN 7	N. EXT.	c-2	top	01/22/02	Kanj		1	289 R
15	SPAN 7	N. EXT.	n-12	top	12/04/01	Kanj		1	289 A
SPAN 7 TOTALS 2									
SPAN 8 TOTALS 0									
16	SPAN 9	N. EXT.	d-3	top	02/21/02	Kanj		1	331 A
17	SPAN 9	N. EXT.	e-4	top	02/21/02	Kanj		1	370 A
18	SPAN 9	N. EXT.	n-14	top	02/21/02	Kanj		1	371 A
19	SPAN 9	N. INT.	n-2	top	03/02/02	Kanj		1	370 B
20	SPAN 9	S. EXT.	d-3	top	03/02/02	Kanj		1	331 A
SPAN 9 TOTALS 5									
SPAN 10 TOTALS 0									
span 10 N. EXT. L-5 ex-452 04/08 Kanj 1 listed with Type 3 Gussets									
SPAN 10 TOTALS 0									
22	SPAN 11	S. INT.	ex-922	05/06	Kanj	1			406 B
23	SPAN 11	N. EXT.	n-15	top	04/17	Kanj	1		408 B
24	SPAN 11	N. EXT.	L3	top	04/17	Kanj	1		406 A
25	SPAN 11	N. INT.	n-15	top	04/17	Kanj	1		408 B
26	SPAN 11	N. INT.	L3	top	04/17	Kanj	1		406 B
27	SPAN 11	S. EXT.	n-15	top	04/30	Kanj	1		408 B
28	SPAN 11	S. EXT.	L3	top	04/30	Kanj	1		406 B
29	SPAN 11	S. EXT.	L4	top	04/30	Kanj	1		410 B
30	SPAN 11	S. EXT.	L14	top	04/30	Kanj	1		409 B
31	SPAN 11	S. INT.	L4	top	04/30	Kanj	1		410 B
32	SPAN 11	S. INT.	L14	top	04/30	Kanj	1		410 B
SPAN 11 TOTALS 11									
SPAN 12 TOTALS 0									
33	SPAN 13	S. EXT.	ex-444	04/03	Kanj	1			502 A
34	SPAN 13	S. INT.	ex-454	04/03	Kanj	1			501 A
35	SPAN 13	N. EXT.	e-0	top	04/01	Kanj	1		501 A
36	SPAN 13	N. EXT.	L-8	top	04/02	Kanj	1		501 B
37	SPAN 13	N. EXT.	L-9	top	04/02	Kanj	1		502 A
38	SPAN 13	N. INT.	L-8	top	04/08	Kanj	1		501 B
39	SPAN 13	S. EXT.	L-8	top	04/03	Kanj	1		501 B
40	SPAN 13	S. EXT.	e-0	top	04/03	Kanj	1		501 A
SPAN 13 TOTALS 9									

PLAN VIEWS OF PLATES SHOWN, ARE BEFORE BENDING OF GUSSETS  
(APPLIES TO ALL TYPES OF GUSSETS)

N.S. = NEAR SIDE

**Ref# 118** TOTAL QUANTITY = 44  
STRUCTURAL STEEL MISC. PLAN QUANTITY - 30 EACH  
(ALL ARE BOTTOM PLATES) - BLB TYPE 2 GUSSET PLATE REPLACEMENT

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
1	WBLE	North	ex-20	04/02/01	Kanj	1			198 C Point F (R)
2	WBLE	N. Truss	n-6, south	bottom	04/02/01	Kanj	1		108 B
3	WBLE	N. Truss	n-6, north	bottom	04/02/01	Kanj	1		108 B
4	WBLE	N. Truss	n-6	bottom	04/02/01	Kanj	1		108 B
5	WBLE	S. Truss	n-6	bottom	04/02/01	Kanj	1		108 B
WBLE TOTALS 5									
6	SPAN 1	N. EXT.	d-3	bottom	05/29/01	Kanj	1		191 A
7	SPAN 1	N. EXT.	n-10	bottom	04/18/01	Kanj	1		195 A
SPAN 1 TOTALS 2									
SPAN 2 TOTALS 0									
8	SPAN 3	N. INT.	C-2	ex-69	07/31/01	Kanj	1		196 B
9	SPAN 3	N. EXT.	c-2	top	07/18/01	Kanj	1		196 B
10	SPAN 3	N. EXT.	d-3	top	08/30/01	Kanj	1		197 B
11	SPAN 3	N. EXT.	n-10	top	09/29/01	Kanj	1		200 A
12	SPAN 3	N. EXT.	n-11	top	07/11/01	Kanj	1		201 A
13	SPAN 3	N. INT.	n-10	top	09/29/01	Kanj	1		200 A
14	SPAN 3	S. EXT.	c-2	top	08/17/01	Kanj	1		196 B
15	SPAN 3	S. EXT.	n-11	top	08/02/01	Kanj	1		201 A
SPAN 3 TOTALS 8									
SPAN 4 TOTALS 0									
16	SPAN 5	S. EXT.	ex-230	10/18/01	Kanj	1			13 A
17	SPAN 5	N. EXT.	n-12	bottom	10/15/01	Kanj	1		248 B
18	SPAN 5	S. EXT.	n-12	bottom	10/29/01	Kanj	1		248 B
SPAN 5 TOTALS 3									
SPAN 6 TOTALS 0									
19	SPAN 7	N. EXT.	c-2	bottom	01/22/02	Kanj	1		289 A
SPAN 7 TOTALS 1									
SPAN 8 TOTALS 0									
20	SPAN 9	N. EXT.	n-14	bottom	02/21/02	Kanj	1		371 B
21	SPAN 9	N. EXT.	n-15	bottom	02/21/02	Kanj	1		372 A
22	SPAN 9	N. EXT.	d-3	bottom	02/21/02	Kanj	1		331 B
23	SPAN 9	N. INT.	d-3	bottom	03/02/02	Kanj	1		331 B
24	SPAN 9	S. EXT.	e-4	bottom	03/07/02	Kanj	1		372 A
25	SPAN 9	S. EXT.	n-15	bottom	03/02/02	Kanj	1		332 A
SPAN 9 TOTALS 6									
SPAN 10 TOTALS 0									
26	SPAN 11	N. EXT.	d-3	bottom	04/27	Kanj	1		407 A
27	SPAN 11	N. EXT.	L14	bottom	04/17	Kanj	1		407 B
28	SPAN 11	N. EXT.	L15	bottom	04/17	Kanj	1		408 B
29	SPAN 11	N. INT.	L3	bottom	04/17	Kanj	1		406 B
30	SPAN 11	N. INT.	n-15	bottom	04/17	Kanj	1		408 B
31	SPAN 11	S. EXT.	n-15	bottom	04/30	Kanj	1		406 B
32	SPAN 11	S. EXT.	L3	bottom	04/30	Kanj	1		407 B
33	SPAN 11	S. EXT.	L14	bottom	04/30	Kanj	1		407 B
34	SPAN 11	S. EXT.	n-15	bottom	04/30	Kanj	1		408 B
35	SPAN 11	S. INT.	L4	bottom	04/30	Kanj	1		407 A
SPAN 11 TOTALS 10									
SPAN 12 TOTALS 0									
36	SPAN 13	N. EXT.	e-0	bottom	04/01	Kanj	1		502 B
37	SPAN 13	N. EXT.	L-8	bottom	04/02	Kanj	1		503 A
38	SPAN 13	N. EXT.	L-9	bottom	04/02	Kanj	1		503 B
39	SPAN 13	N. INT.	e-0	bottom	04/01	Kanj	1		502 B
40	SPAN 13	N. INT.	L-8	bottom	04/08	Kanj	1		503 A
41	SPAN 13	S. EXT.	L-8	bottom	04/03	Kanj	1		502 A
42	SPAN 13	S. EXT.	L-9	bottom	04/03	Kanj	1		503 B
43	SPAN 13	S. EXT.	e-0	bottom	04/03	Kanj	1		503 B
44	SPAN 13	S. INT.	L-3	ex-454	04/03	Kanj	1		502 B
SPAN 13 TOTALS 9									

**Ref# 119** TOTAL QUANTITY = 58  
STRUCTURAL STEEL MISC. PLAN QUANTITY - 19 EACH  
(ALL ARE TOP PLATES) - BLB TYPE 3 GUSSET PLATE REPLACEMENT

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
1	WBLE	N. Truss	ex-29	04/02/01	Kanj	1			198 B
2	WBLE	CENTER TRUSS	ex-41	07/02/01	Kanj	1			198 D
3	SPAN 1	N. EXT.	ex-92	07/30/01	Kanj	1			194 B
4	SPAN 1	N. EXT.	e-4	top	04/18/01	Kanj	1		196 B
5	SPAN 1	S. EXT.	e-4	top	08/30/01	Kanj	1		196 B
6	SPAN 1	S. EXT.	n-6	top	04/30/01	Kanj	1		194 B
SPAN 1 TOTALS 6									
7	SPAN 2	S. EXT.	ex-91	08/21/01	Kanj	1			28 B
8	SPAN 2	S. EXT.	c-2	top	07/12/01	Kanj	1		186 A
SPAN 2 TOTALS 2									
9	SPAN 3	N. EXT.	n-6	top	08/30/01	Kanj	1		195 D
10	SPAN 3	N. EXT.	n-9	top	04/27	Kanj	1		199 A
11	SPAN 3	N. EXT.	n-12	top	08/18/01	Kanj	1		202 B
SPAN 3 TOTALS 3									
12	SPAN 4	N. EXT.	L-1	top	11/07/01	Kanj	1		233 A
SPAN 4 TOTALS 1									
15	SPAN 5	S. EXT.	ex-213	10/30/01	Kanj	1			245 A
14	SPAN 5	S. EXT.	ex-231	10/30/01	Kanj	1			249 B
15	SPAN 5	N. EXT.	L-15	top	11/01/01	Kanj	1		245 B
16	SPAN 5	N. EXT.	L-5	top	11/01/01	Kanj	1		244 B
17	SPAN 5	N. EXT.	L-4	top	10/18/01	Kanj	1		244 A
18	SPAN 5	S. EXT.	L-10	top	11/08/01	Kanj	1		245 B
19	SPAN 5	S. EXT.	L-9	top	11/03/01	Kanj	1		246 A
20	SPAN 5	S. EXT.	L-1	top	11/03/01	Kanj	1		245 B
SPAN 5 TOTALS 8									
21	SPAN 6	S. EXT.	ex-349	12/07/01	Kanj	1			14 A
22	SPAN 6	N. EXT.	ex-741	06/27	Kanj	1			14 A
SPAN 6 TOTALS 2									
23	SPAN 7	S. EXT.	L-6	top	01/12/02	Kanj	1		285 B
SPAN 7 TOTALS 1									
24	SPAN 8	N. EXT.	L-4	top	01/28/02	Kanj	1		320 A
25	SPAN 8	S. EXT.	L-1	top	01/28/02	Kanj	1		321 A
SPAN 8 TOTALS 2									
26	SPAN 9	N. EXT.	n-6	top	03/02/02	Kanj	1		333 B
27	SPAN 9	N. EXT.	n-12	top	02/21/02	Kanj	1		335 B
28	SPAN 9	N. EXT.	L-5	top	03/02/02	Kanj	1		334 A
29	SPAN 9	N. EXT.	L-2	top	03/02/02	Kanj	1		332 B
30	SPAN 9	N. EXT.	L-7	top	03/02/02	Kanj	1		334 B
31	SPAN 9	S. EXT.	L-8	top	02/21/02	Kanj	1		334 A
32	SPAN 9	N. EXT.	L-1	top	03/02/02	Kanj	1		332 B
SPAN 9 TOTALS 7									
33	SPAN 10	N. EXT.	L-4	top	03/18	Kanj	1		357 A
span 10 N. EXT. L-5 ex-452 04/08 Kanj 1 Page 21 in Ref 117									
SPAN 10 TOTALS 2									
34	SPAN 11	N. EXT.	ex-695	05/16	Kanj	1			529 B
35	SPAN 11	N. EXT.	b-1	top	04/27	Kanj	1		422 B
36	SPAN 11	N. EXT.	n-16	top	05/01	Kanj	1		409 A
37	SPAN 11	N. INT.	L-1	top	04/30	Kanj	1		412 A
38	SPAN 11	S. EXT.	L-1	top	05/08	Kanj	1		412 B
39	SPAN 11	S. EXT.	L-2	top	05/02	Kanj	1		413 A
40	SPAN 11	S. EXT.	L-7	top	05/23	Kanj	1		416 B
41	SPAN 11	S. EXT.	L-5	top	05/16	Kanj	1		410 A
42	SPAN 11	S. EXT.	L-8	top	05/14	Kanj	1		410 A
SPAN 11 TOTALS 8									
43	SPAN 12	N. EXT.	L-2	top	02/22/02	Kanj	1		457 B
44	SPAN 12	N. EXT.	L-4	top	05/10	Kanj	1		457 B
45	SPAN 12	S. EXT.	L-2	top	02/22/02	Kanj	1		457 A
46	SPAN 12	S. EXT.	L-4	top	05/05	Kanj	1		457 B
SPAN 12 TOTALS 4									
47	SPAN 13	N. EXT.	ex-473	04/01	Kanj	1			530 A
48	SPAN 13	N. EXT.	ex-474	04/08	Kanj	1			530 A
49	SPAN 13	N. EXT.	L-7	top	04/08	Kanj	1		504 A
50	SPAN 13	N. EXT.	L-10	top	04/09	Kanj	1		504 B
51	SPAN 13	S. EXT.	ex-448	04/03	Kanj	1			505 A
52	SPAN 13	S. EXT.	ex-455	04/03	Kanj	1			530 B
53	SPAN 13	S. EXT.	n-7	top	04/03	Kanj	1		504 A
SPAN 13 TOTALS 9									

O.D.O.T. DIST. 12  
ACCEPTED  
ACCEPTED AS NOTED  
NOT ACCEPTED



**Ref# 120** TOTAL QUANTITY = 12 PLAN QUANTITY - 10 EACH  
 (ALL ARE Bottom Plates) STRUCTURAL STEEL MISC.: BLB TYPE 4 GUSSET PLATE REPLACEMENT

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DATE SHOP DRAWINGS APPR.	MISC. NOTES
WBLE TOTALS 0									
SPAN 1 IN. EXT. a-4 1 147 B Billed by Shop 4									
SPAN 1 TOTALS 1									
SPAN 2 TOTALS 0									
1	SPAN 3	N. EXT.	a-8	08/20/01	Kant	1			198 B
2	SPAN 3	N. EXT.	a-12	08/10/01	Kant	1			202 B
SPAN 3 TOTALS 2									
SPAN 4 TOTALS 0									
3	SPAN 5	N. EXT.	L-6	bottom	11/01/01	Kant	1		248 A
4	SPAN 5	N. EXT.	a-13	bottom	11/01/01	Kant	1		252 A
5	SPAN 5	S. EXT.	h-7		10/06/01	Kant	1		257 A
SPAN 5 TOTALS 3									
SPAN 6 TOTALS 0									
SPAN 7 TOTALS 0									
SPAN 8 TOTALS 0									
6	SPAN 9	N. EXT.	a-6	03/02/02	Kant	1			325 B
SPAN 9 TOTALS 1									
SPAN 10 TOTALS 0									
7	SPAN 11	N. EXT.	ex-1095	05/16	Kant	1			29 A LB
SPAN 11 TOTALS 1									
8	SPAN 12	N. EXT.	ex-678	05/16	Kant	1			29 B L4
9	SPAN 12	N. INT.	ex-679	05/16	Kant	1			29 B L4
10	SPAN 12	S. EXT.	ex-680	05/16	Kant	1			29 B L4
11	SPAN 12	N. EXT.	bottom	02/22/02	Kant	1			458 A L2
SPAN 12 TOTALS 4									
SPAN 13 TOTALS 0									

**Ref# 121** TOTAL QUANTITY = 22 PLAN QUANTITY - 5 EACH  
 (ALL ARE TOP PLATES) STRUCTURAL STEEL MISC.: BLB TYPE 6 GUSSET PLATE REPLACEMENT

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DATE SHOP DRAWINGS APPR.	MISC. NOTES
WBLE TOTALS 0									
1	SPAN 1	S. EXT.	ex-117	08/17/01	Kant	1			118 A LD
2	SPAN 1	N. EXT.	LD	top	07/19/01	Kant	1		118 A
SPAN 1 TOTALS 2									
SPAN 2 TOTALS 0									
3	SPAN 3	N. EXT.	a-0	09/19/01	Kant	1			195 B
4	SPAN 3	N. EXT.	a-13	09/07/01	Kant	1			201 B
5	SPAN 3	N. INT.	a-13	08/11/01	Kant	1			201 B
6	SPAN 3	S. EXT.	a-0	10/06/01	Kant	1			195 B
SPAN 3 TOTALS 4									
SPAN 4 TOTALS 0									
7	SPAN 5	S. EXT.	ex-228	11/28	Kant	1			372 B LD
SPAN 5 TOTALS 1									
SPAN 6 TOTALS 0									
8	SPAN 7	N. Exterior	LD	top	01/16	Kant	1		286 B
9	SPAN 7	S. EXT.	L-15	top	12/04/01	Kant	1		286 B
10	SPAN 7	N. EXT.	L-15	top	12/04/01	Kant	1		286 A
	SPAN 7	S. EXT.	LD	top					non performed
SPAN 7 TOTALS 3									
SPAN 8 TOTALS 0									
11	SPAN 9	N. INT.	ex-362	08/01	Kant	1			336 A LD
12	SPAN 9	N. EXT.	a-0	top	03/09	Kant	1		336 B
13	SPAN 9	S. EXT.	a-0	top	03/09	Kant	1		336 A
SPAN 9 TOTALS 3									
SPAN 10 TOTALS 0									
14	SPAN 11	N. EXT.	LD	top	05/01	Kant	1		413 A
15	SPAN 11	N. EXT.	L-18	top	05/21	Kant	1		413 C
16	SPAN 11	N. INT.	LD	top	05/07	Kant	1		413 A
17	SPAN 11	S. EXT.	LD	top	05/22	Kant	1		413 A
18	SPAN 11	S. EXT.	L-18	top	05/22	Kant	1		413 C
19	SPAN 11	S. INT.	L-18	top	05/31	Kant	1		413 C
SPAN 11 TOTALS 6									
SPAN 12 TOTALS 0									
20	SPAN 13	S. INT.	ex-477	04/09	Kant	1			505 C L12
21	SPAN 13	N. INT.	ex-482	04/17	Kant	1			505 C L12
22	SPAN 13	N. EXT.	ex-451	08/06	Kant	1			505 C L12
SPAN 13 TOTALS 3									

**Ref# 122** TOTAL QUANTITY = 18 PLAN QUANTITY - 5 EACH  
 (ALL ARE Bottom Plates) STRUCTURAL STEEL MISC.: BLB TYPE 6 GUSSET PLATE REPLACEMENT

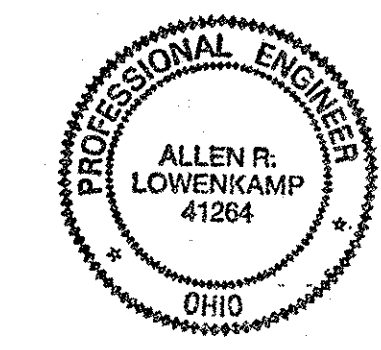
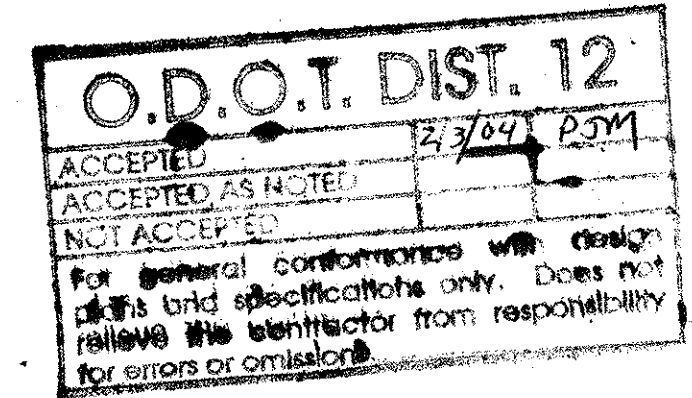
PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DATE SHOP DRAWINGS APPR.	MISC. NOTES
WBLE TOTALS 0									
1	SPAN 1	N. EXT.	a- Lo 1	bot	7/12/01	Kant	1		193 A
SPAN 1 TOTALS 1									
SPAN 2 TOTALS 0									
2	SPAN 3	N. EXT.	ex-141	08/20/01	Kant	1			195 A 0-L19
3	SPAN 3	N. EXT.	a-0	08/18/01	Kant	1			195 C
4	SPAN 3	N. INT.	a-13	08/11/01	Kant	1			195 A
5	SPAN 3	S. EXT.	a-0	10/06/01	Kant	1			195 C
6	SPAN 3	S. INT.	a-13	08/10/01	Kant	1			195 A
SPAN 3 TOTALS 5									
SPAN 4 TOTALS 0									
7	SPAN 5	S. EXT.	ex-228	11/28	Kant	1			247 A LD
8	SPAN 5	N. EXT.	a-0	bottom	10/20/01	Kant	1		247 A
9	SPAN 5	S. INT.	L-14	bottom	11/05/01	Kant	1		247 B
SPAN 5 TOTALS 3									
SPAN 6 TOTALS 0									
10	SPAN 7	N. Exterior	LD	bottom	01/16	Kant	1		286 C
SPAN 7 TOTALS 1									
SPAN 8 TOTALS 0									
11	SPAN 9	S. EXT.	ex-368	08/01	Kant	1			336 B LD
12	SPAN 9	N. EXT.	a-0	top	03/09	Kant	1		336 B
SPAN 9 TOTALS 2									
SPAN 10 TOTALS 0									
13	SPAN 11	S. EXT.	ex-320	08/08	Kant	1			395 A LD
14	SPAN 11	N. EXT.	LD	bottom	05/01	Kant	1		395 A
15	SPAN 11	N. INT.	L-18	bottom	05/31	Kant	1		395 B
16	SPAN 11	S. INT.	L-18	bottom	05/31	Kant	1		395 B
SPAN 11 TOTALS 4									
SPAN 12 TOTALS 0									
17	SPAN 13	N. INT.	ex-482	04/17	Kant	1			524 A L12
18	SPAN 13	S. INT.	ex-477	04/09	Kant	1			524 A L12
SPAN 13 TOTALS 2									

ON PAGES 1 - 66

ON PAGES 1 - 66

ON PAGES 1 - 66

ON PAGES 1 - 66



NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
**BRIDGE NO. CUY-10-16-13**  
**PAGES 1-66**

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DRAWING NO. \_\_\_\_\_  
 SCALE: NA DATE: \_\_\_\_\_

Ref# 142 TOTAL QUANTITY = 93

STRUCTURAL STEEL MISC. PLAN QUANTITY - 12 EACH

SWAY FRAME VERTICAL GUSSET PLATE REPLACEMENT

PAGE #	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DRAWINGS	RESC. NOTES
--------	------	------	----------	----------------	-----------	-----	------------------------------	----------	-------------

WASLE TOTALS 0

1	SPAN 1	NEL0		07/16/01	Kant	1		15A	
2	SPAN 1	NEL4	exc-31	06/08/01	Kant	1		23C	
3	SPAN 1	SEL0	exc-142	08/17/01	Kant	1		15A	PA ONLY
4	SPAN 1	SEL4	exc-32	06/08/01	Kant	1		23C	

SPAN 1 TOTALS 4

5	SPAN 2	SEL1	exc-91	09/21/01	Kant	1		P195	ALSO A195
6	SPAN 2	SEL2		9/7/20/01	Kant	1		P195	ALSO A195X

SPAN 2 TOTALS 2

7	SPAN 3	NEL0	exc-1542	03/07	Kant	1		24C	WEST
8	SPAN 3	NEL9	exc-191	09/04/01	Kant	1		P195	
9	SPAN 3	NEL9		04/27	Kant	1		24C	
10	SPAN 3	NEL12	vertical	08/10/01	Kant	1		24C	FBIR D
11	SPAN 3	SEL4	exc-286	03/07	Kant	1		24B	

SPAN 3 TOTALS 5

12	SPAN 4	NEL1		11/07/01	Kant	1		21C1 + 21C2	
13	SPAN 4	SEL1		11/07/01	Kant	1		21C1	

SPAN 4 TOTALS 2

14	SPAN 5	NEL4	vert.	10/18/01	Kant	1		257A	
15	SPAN 5	NEL5		11/01/01	Kant	1		257B	
16	SPAN 5	NEL9	vert.	11/06/01	Kant	1		258A	
17	SPAN 5	NEL13	vert.	11/06/01	Kant	1		258B	
18	SPAN 5	SEL1	vert.	10/29/01	Kant	1		257A	
19	SPAN 5	SEL4	vert.	11/05/01	Kant	1		257B	
20	SPAN 5	SEL5	vert.	11/01/01	Kant	1		258A	
21	SPAN 5	SEL9	vert.	11/05/01	Kant	1		258B	
22	SPAN 5	SEL10	vert.	11/08/01	Kant	1		258A	
23	SPAN 5	SEL13	vert.	10/29/01	Kant	1		258B	

SPAN 5 TOTALS 10

24	SPAN 6	NEL1		11/27/01	Kant	1		21D	
25	SPAN 6	SEL1	exc-349	12/07/01	Kant	1		21D	

SPAN 6 TOTALS 2

26	SPAN 7	NEL0	exc-432	01/18	Kant	1		21E	EAST
27	SPAN 7	NEL5	exc-403	04/26	Kant	1		21A	
28	SPAN 7	NEL10	exc-380	02/25/02	Kant	1		21A	
29	SPAN 7	NEL14		12/04/01	Kant	1		21B	
30	SPAN 7	SEL4	exc-375	04/26	Kant	1		21A	
31	SPAN 7	SEL9	exc-378	04/26	Kant	1		21A	
32	SPAN 7	SEL10		12/20/01	Kant	1		21A	
33	SPAN 7	SEL14		12/04/01	Kant	1		21B	

SPAN 7 TOTALS 8

34	SPAN 8	NEL4		01/25/02	Kant	1		312A	
35	SPAN 8	SEL1		01/23/02	Kant	1		312B	
36	SPAN 8	SEL4		01/23/02	Kant	1		312A	

SPAN 8 TOTALS 3

37	SPAN 9	NEL1		03/02/02	Kant	1		324A	
38	SPAN 9	NEL2		03/02/02	Kant	1		324B	
39	SPAN 9	NEL6		02/21/02	Kant	1		323C	
40	SPAN 9	NEL9		02/21/02	Kant	1		320A	
41	SPAN 9	NEL12		02/21/02	Kant	1		320B	
42	SPAN 9	NEL13		02/21/02	Kant	1		327D	
43	SPAN 9	NEL16		02/21/02	Kant	1		327D	
44	SPAN 9	SEL2	exc-890	06/01	Kant	1		327C	
45	SPAN 9	SEL5	exc-154	see exc-522	Kant	1		23D	voided
46	SPAN 9	SEL13	exc-597	04/26	Kant	1		329D	
47	SPAN 9	SEL13	exc-195	see exc-501	Kant	1		329D	voided

SPAN 9 TOTALS 10

47	SPAN 10	NEL3		03/13	Kant	1		358A	
48	SPAN 10	NEL4	exc-616	03/13	Kant	1		358C	
49	SPAN 10	NEL5	exc-552	04/26	Kant	1		358B + 358Ba	
50	SPAN 10	NEL5		03/13	Kant	1		358B + 358Ba	
51	SPAN 10	SEL2		03/14	Kant	1		358C	

SPAN 10 TOTALS 5

52	SPAN 11	NEL0		05/14	Kant	1		405A	WEST
53	SPAN 11	NEL1		04/30	Kant	1		403B	
54	SPAN 11	NEL1		04/27	Kant	1		403B	
55	SPAN 11	NEL2		05/21	Kant	1		404C	
56	SPAN 11	NEL6	exc-703	05/22	Kant	1		404D	
57	SPAN 11	NEL6		05/08	Kant	1		403D	
58	SPAN 11	NEL12		05/01	Kant	1		403B	
59	SPAN 11	NEL13		05/14	Kant	1		404A	
60	SPAN 11	NEL16		05/02	Kant	1		404B	
61	SPAN 11	NEL17		05/01	Kant	1		404B	
62	SPAN 11	SEL1		05/08	Kant	1		403B	
63	SPAN 11	SEL2		05/21	Kant	1		404C	
64	SPAN 11	SEL5		05/16	Kant	1		405A	
65	SPAN 11	SEL9		05/14	Kant	1		405A	
66	SPAN 11	SEL10		05/07	Kant	1		405A	
67	SPAN 11	SEL12		05/02	Kant	1		403B	
68	SPAN 11	SEL13		04/30	Kant	1		403C	
69	SPAN 11	SEL16		05/01	Kant	1		404A	
70	SPAN 11	SEL17		05/23	Kant	1		404B	

SPAN 11 TOTALS 19

71	SPAN 12	NEL2		02/22/02	Kant	1		429A	
72	SPAN 12	NEL4		05/10	Kant	1		429C	
73	SPAN 12	SEL2		02/22/02	Kant	1		429A	
74	SPAN 12	SEL3		02/22/02	Kant	1		429B	
75	SPAN 12	SEL4		03/03	Kant	1		429C	

76	SPAN 13	NEL1		04/08	Kant	1		508A	
77	SPAN 13	NEL5		04/01	Kant	1		508B	
78	SPAN 13	NEL6		04/01	Kant	1		508C	
79	SPAN 13	NEL7		04/06	Kant	1		509A	
80	SPAN 13	NEL10		04/09	Kant	1		509B	
81	SPAN 13	NEL11		04/04	Kant	1		509C	
82	SPAN 13	NEL12	exc-453	04/10	Kant	2		176/L*	509D/L WEST, *EAST
83	SPAN 13	SEL1		04/03	Kant	1		508A	
84	SPAN 13	SEL2	exc-610	04/08	Kant	1		24A	
85	SPAN 13	SEL4	exc-695	04/03	Kant	1		24A	
86	SPAN 13	SEL5		04/03	Kant	1		508C	
87	SPAN 13	SEL6		04/03	Kant	1		508C	
88	SPAN 13	SEL7		04/03	Kant	1		509A	
89	SPAN 13	SEL10		04/10	Kant	1		509B	
90	SPAN 13	SEL11		04/10	Kant	1		509C	
91	SPAN 13	SEL12	exc-478	04/04	Kant	2		178/R*	509D/R WEST, *EAST
92	SPAN 13	SEL12	see exc-478						voided
93	SPAN 13	SEL12	see exc-478						voided

SPAN 13 TOTALS 18

ON PAGES 67 - 85

ON PAGES 67 - 85

ON PAGES 67 - 85

ON PAGES 67 - 85

O.D.O.T. DIST. 12  
 ACCEPTED 12/3/04 PJM  
 ACCEPTED AS NOTED  
 NOT ACCEPTED

For general conformance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY

Tri State Steel Construction Inc.  
 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136  
 (440) 238-3015

ODOT Project # 00215  
 BRIDGE No. CUY-10-16-13  
 PAGES 67-85

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
 SCALE: NA DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_







Ref# 109 TOTAL QUANTITY = 32

PAGE #	SPAN	LINE	LOCATION	STRUCTURAL STEEL MISC.		PLAN QUANTITY - 9 EACH		DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
				BLB SYSTEM, TYPE 1, TRANSVERSE, QUARTER LENGTH	DATE OF REPAIR	INSPECTOR	QTY			

WHALE TOTALS 6										
----------------	--	--	--	--	--	--	--	--	--	--

1	SPAN 1	e-c, S	bottom, east	05K201	Kanj	1		138 A		
---	--------	--------	--------------	--------	------	---	--	-------	--	--

SPAN 1 TOTALS 1										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 2 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

2	SPAN 3	b-h, S	bottom, west	062001	Kanj	1		267 A		
3	SPAN 3	e-c, N	bottom, east	091001	Kanj	1		138 B		
4	SPAN 3	e-c, S	bottom, east	091301	Kanj	1		138 B		
5	SPAN 3	h-i, N	bottom, west							changed to ref # 208

SPAN 3 TOTALS 5										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 4 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

5	SPAN 5	b-h, S	bottom, west	110901	Kanj	1		267 B		
6	SPAN 5	b-h, S	bottom, east	110901	Kanj	1		267 C		
7	SPAN 5	h-i, N	top, west	110101	Kanj	1		267 A		
8	SPAN 5	h-i, S	bottom, east	110901	Kanj	1		267 F		top, east
9	SPAN 5	h-i, S	bottom, west	ex-345	120701	Kanj	1	267 A		bottom, west

SPAN 5 TOTALS 6										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 6 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

10	SPAN 7	e-c, S	bottom, east	103002	Kanj	1		307 B		
11	SPAN 7	h-i, N	bottom, west	102002	Kanj	1		307 C		
12	SPAN 7	h-i, N	top, east	102002	Kanj	1		307 D		
13	SPAN 7	h-i, S	bottom, east	010002	Kanj	1		307 B		
14	SPAN 7	h-i, N	bottom, west							changed to ref # 208
15	SPAN 7	h-i, S	bottom, east	ex-778	0721	Kanj	1	307 A		bottom, east used in ref #108

SPAN 7 TOTALS 7										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 8 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

16	SPAN 9	e-c, S	bottom, west	ex-523	022502	Kanj	1	138 D		changed to ref # 108
17	SPAN 9	h-i, N	top, east	0307	Kanj	1		346 A		bottom, east
18	SPAN 9	h-i, N	top, west	0307	Kanj	1		346 B		
19	SPAN 9	h-i, N	bottom, west	0307	Kanj	1		346 C		changed to ref # 113
20	SPAN 9	e-c, S	bottom, west	030502	Kanj	1		346 B		changed to ref # 108
21	SPAN 9	h-i, S	top, east	030502	Kanj	1		346 B		

SPAN 9 TOTALS 6										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 10 TOTALS 0										
------------------	--	--	--	--	--	--	--	--	--	--

19	SPAN 11	b-h, S	top, west	0506	Kanj	1		465 C		
20	SPAN 11	e-c, S	bottom, west	0501	Kanj	1		465 B		
21	SPAN 11	h-i, N	bottom, west	0502	Kanj	1		465 C		
22	SPAN 11	h-i, S	bottom, west	0506	Kanj	1		519 A		changed to ref # 208
23	SPAN 11	h-i, S	bottom, west							
24	SPAN 11	e-c, N	top, west	0514	Kanj	1		519 A		
25	SPAN 11	e-c, N	bottom, west	0502	Kanj	1		138 C		

SPAN 11 TOTALS 6										
------------------	--	--	--	--	--	--	--	--	--	--

SPAN 12 TOTALS 0										
------------------	--	--	--	--	--	--	--	--	--	--

25	SPAN 13	b-h, N	bottom, west							changed to ref #208
26	SPAN 13	b-h, S	bottom, west	ex-610	0408	Kanj	1	465 C		bottom, east
27	SPAN 13	e-c, S	bottom, west							voided
28	SPAN 13	h-i, S	bottom, west	0410	Kanj	1		519 B		
29	SPAN 13	h-i, S	top, east	0410	Kanj	1		519 B		
30	SPAN 13	h-i, S	top, west	0408	Kanj	1		465 C		

SPAN 13 TOTALS 4										
------------------	--	--	--	--	--	--	--	--	--	--

ON PAGE 112 -> 124

ON PAGE 112 -> 124

Ref# 113 TOTAL QUANTITY = 52

PAGE #	SPAN	LINE	LOCATION	STRUCTURAL STEEL MISC.		PLAN QUANTITY - 8 EACH		DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
				BLB SYSTEM, TYPE 2, TRANSVERSE, QUARTER LENGTH	DATE OF REPAIR	INSPECTOR	QTY			

WHALE TOTALS 0										
----------------	--	--	--	--	--	--	--	--	--	--

SPAN 1 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

1	SPAN 2	b-h, N	top, east	051901	Kanj	1		190 A		changed to ref #208
2	SPAN 2	b-h, S	top, west							changed to ref #208
3	SPAN 2	e-c, N	bottom, east	ex-111	080901	Kanj	1	190 C		bottom, east
4	SPAN 2	e-c, N	bottom, west							changed to ref #112

SPAN 2 TOTALS 2										
-----------------	--	--	--	--	--	--	--	--	--	--

5	SPAN 3	h-i, S	bottom, east	ex-201	102201	Kanj	1	190 B		bottom, east
6	SPAN 3	h-i, N	bottom, west	ex-201	091201	Kanj	1	190 B		bottom, west
7	SPAN 3	g-d, N	bottom, west	080001	Kanj	1		190 B		
8	SPAN 3	g-d, N	top, west	080001	Kanj	1		190 C		
9	SPAN 3	g-d, N	top, east	080001	Kanj	1		190 C		

SPAN 3 TOTALS 5										
-----------------	--	--	--	--	--	--	--	--	--	--

SPAN 4 TOTALS 0										
-----------------	--	--	--	--	--	--	--	--	--	--

6	SPAN 5	h-i, S	bottom, west	102901	Kanj	1		267 F		
7	SPAN 5	h-i, N	bottom, west	110901	Kanj	1		267 D		
8	SPAN 5	h-i, S	bottom, east	120701	Kanj	1		267 D		

SPAN 5 TOTALS 4										
-----------------	--	--	--	--	--	--	--	--	--	--

9	SPAN 6	b-h, S	bottom, east	ex-332	1128	Kanj	1	78 C		voided
10	SPAN 6	b-h, S	top, east	1128	Kanj	1		78 B		
11	SPAN 6	b-h, S	bottom, west	1128	Kanj	1		78 B		
12	SPAN 6	b-h, S	top, west	1128	Kanj	1		78 B		

SPAN 6 TOTALS 4										
-----------------	--	--	--	--	--	--	--	--	--	--

10	SPAN 7	h-i, S	bottom, West	021802	Kanj	1		308 A		
11	SPAN 7	h-i, S	top, west	021802	Kanj	1		308 A		
12	SPAN 7	h-i, N	bottom, W	102002	Kanj	1		308 B		
13	SPAN 7	h-i, S	bottom, W	ex-777	0721	Kanj	1	308 C		bottom, East

SPAN 7 TOTALS 5										
-----------------	--	--	--	--	--	--	--	--	--	--

ON PAGE 112 -> 124

14	SPAN 8	b-h, S	bottom, east	021902	Kanj	1		315 C		
15	SPAN 8	e-c, N	top, east	012302	Kanj	1		315 A		
16	SPAN 8	e-c, S	bottom, east	01A702	Kanj	1		315 B		

SPAN 8 TOTALS 3										
-----------------	--	--	--	--	--	--	--	--	--	--

17	SPAN 9	h-i, N	bottom, west	ex-544	030102	Kanj	1	346 B		bottom, west
18	SPAN 9	h-i, S	bottom, east	030502	Kanj	1		346 C		
19	SPAN 9	h-i, S	top, west	030502	Kanj	1		346 C		bottom, west
20	SPAN 9	h-i, N	top, east	ex-518	030102	Kanj	3	436 C		Top, West
21	SPAN 9	h-i, N	top, west					436 B		Top, East

SPAN 9 TOTALS 6										
-----------------	--	--	--	--	--	--	--	--	--	--

20	SPAN 10	b-h, N	bottom, west	ex-691	0601	Kanj	1	360 C		bottom, west
21	SPAN 10	b-h, N	bottom, east							changed to ref #112
22	SPAN 10	e-c, N	bottom, west	0313	Kanj	1		360 C		
23	SPAN 10	e-c, N	bottom, east	0313	Kanj	1		360 D		
24	SPAN 10	e-c, N	top, east	0313	Kanj	1		360 F		
25	SPAN 10	e-c, S	bottom, west	0314	Kanj	1		360 C		
26	SPAN 10	e-c, S	bottom, east	0314	Kanj	1		360 D		
27	SPAN 10	h-i, N	top, east	0314	Kanj	1		360 C		
28	SPAN 10	h-i, N	top, west	0315	Kanj	1		360 D		
29	SPAN 10	h-i, S	top, east	0314	Kanj	1		360 C		
30	SPAN 10	h-i, S	bottom, west	0314	Kanj	1		360 G		

SPAN 10 TOTALS 13										
-------------------	--	--	--	--	--	--	--	--	--	--

28	SPAN 11	h-i, N	top, east	0516	Kanj	1		436 A		
29	SPAN 11	h-i, S	top, east	ex-925	0902	Kanj	2	78 A		top & bottom east
30	SPAN 11	h-i, S	top, west							
31	SPAN 11	h-i, S	bottom, east							

SPAN 11 TOTALS 3										
------------------	--	--	--	--	--	--	--	--	--	--

30	SPAN 12	b-h, N	bottom, east	022102	Kanj	1		465 A		
31	SPAN 12	b-h, S	bottom, east	022202	Kanj	1		465 B		
32	SPAN 12	b-h, S	bottom, west	022202	Kanj	1		465 B		
33	SPAN 12	e-c, S	top, east							changed to ref 208
34	SPAN 12	e-c, S	top, west							changed to ref 208

SPAN 12 TOTALS 3										
------------------	--	--	--	--	--	--	--	--	--	--

32	SPAN 13	e-c, S	bottom, west	ex-452	0403	Kanj	2	519 D		both bottom
33	SPAN 13	e-c, S	top, west	0403	Kanj	1		519 C		
34	SPAN 13	e-c, S	top, east	0403	Kanj	1		519 C		
35	SPAN 13	h-i, S	top, west							voided
36	SPAN 13	h-i, S	top, east							voided
37	SPAN 13	h-i, S	bottom, east							voided

SPAN 13 TOTALS 4										
------------------	--	--	--	--	--	--	--	--	--	--

**O.D.O.T. DIST. 12**  
 ACCEPTED  
 ACCEPTED AS NOTED 2/3/04  
 NOT ACCEPTED  
 For general performance with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.



NO.	REVISION	DATE	BY
<p><b>Tri State Steel Construction Inc.</b>          12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136          (440) 238-3015</p>			
<p>ODOT Project # 00215  <b>BRIDGE NO. CUY-10-16-13</b>  <b>PAGES 112-124</b></p>			
DRAWN BY: _____		CHECKED BY: _____	
SCALE: NA		DATE: _____	

Ref# 108 TOTAL QUANTITY = 47

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DATE SHOP DRAWINGS APPR.	MISC. NOTES
1	WALE	1-a, S	bottom, west	04/02/01	Kanj	1			107A
<b>WALE TOTALS 1</b>									

2	SPAN 1	1-a, N	top, east	04/18/01	Kanj	1			135A
	SPAN 1	1-a, N	top, west	04/18/01	Kanj	1			135A
	SPAN 1	1-a, N	bottom, east	04/18/01	Kanj	1			135A
	SPAN 1	1-a, N	bottom, west	04/18/01	Kanj	1			135A
	SPAN 1	1-g, N	top, east	see ex-34					void
	SPAN 1	1-g, N	top, west	see ex-34					void
	SPAN 1	1-g, N	bottom, east	see ex-34					void
	SPAN 1	1-g, N	bottom, west	see ex-34					void
<b>SPAN 1 TOTALS 4</b>									

<b>SPAN 2 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

	SPAN 3	1-b, N	bottom, east						changed to ref #208
	SPAN 3	1-b, N	bottom, west						changed to ref #208
	SPAN 3	1-k, N	top, east						changed to ref #208
	SPAN 3	1-k, N	top, west						changed to ref #208
	SPAN 3	1-k, N	bottom, east						changed to ref #208
	SPAN 3	1-k, N	bottom, west						changed to ref #208
	SPAN 3	1-n, N	bottom, east						changed to ref #208
	SPAN 3	1-n, S	bottom, east	08/02/01	Kanj	1			239A
<b>SPAN 3 TOTALS 1</b>									

<b>SPAN 4 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

4	SPAN 5	1-b, N	bottom, west	11/05/01	Kanj	1			376
	SPAN 5	1-b, S	bottom, west						changed to ref #109
	SPAN 5	1-c, N	bottom, east						changed to ref #208
	SPAN 5	1-f, N	bottom, east						changed to ref #208
5	SPAN 5	1-k, N	bottom, east	11/01/01	Kanj	1			254A
	SPAN 5	1-k, N	bottom, west	11/01/01	Kanj	1			254A
6	SPAN 5	1-l, S	bottom, west	11/05/01	Kanj	1			254A
	SPAN 5	1-p, N	top, east						changed to ref #208
	SPAN 5	1-p, N	top, west						changed to ref #208
	SPAN 5	1-p, N	bottom, east						changed to ref #208
	SPAN 5	1-p, N	bottom, west						changed to ref #208
7	SPAN 6	1-p, S	bottom, east	10/10/01	Kanj	1			239A
<b>SPAN 5 TOTALS 6</b>									

<b>SPAN 6 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

8	SPAN 7	1-b, N	bottom, west	01/02/02	Kanj	1			296
9	SPAN 7	1-b, S	bottom, west	07/21	Kanj	1			296B
10	SPAN 7	1-e, N	bottom, east	01/02/02	Kanj	1			296B
11	SPAN 7	1-f, N	bottom, west	01/02/02	Kanj	1			296B
12	SPAN 7	1-h, N	bottom, west	12/20/01	Kanj	1			296A
	SPAN 7	1-h, N	top, east	12/20/01	Kanj	1			296A
13	SPAN 7	1-l, S	bottom, east	12/20/01	Kanj	1			296A
14	SPAN 7	1-m, S	bottom, west	12/20/01	Kanj	1			296B
15	SPAN 7	1-p, N	bottom, east	12/20/01	Kanj	1			296B
16	SPAN 7	1-p, S	bottom, east	12/24/01	Kanj	1			296B
<b>SPAN 7 TOTALS 10</b>									

<b>SPAN 8 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

	SPAN 9	1-b, N	top, east						changed to ref #208
	SPAN 9	1-b, N	top, west						changed to ref #208
	SPAN 9	1-b, N	bottom, east						changed to ref #208
	SPAN 9	1-b, N	bottom, west						changed to ref #208
17	SPAN 9	1-b, S	bottom, west	03/05/02	Kanj	1			340C
18	SPAN 9	1-c, S	bottom, west	03/05/02	Kanj	1			340B
	SPAN 9	1-g, N	top, east						changed to ref #208
	SPAN 9	1-g, N	top, west						changed to ref #208
	SPAN 9	1-g, N	bottom, east						changed to ref #208
	SPAN 9	1-g, N	bottom, west						changed to ref #208
19	SPAN 9	1-p, S	bottom, east	03/05/02	Kanj	1			340C
20	SPAN 9	1-r, N	bottom, east	03/07/02	Kanj	1			340A
21	SPAN 9	1-m, S	bottom, west	03/07/02	Kanj	1			340A
	SPAN 9	1-m, S	bottom, east	03/07/02	Kanj	1			340A
	SPAN 9	1-n, N	bottom, west						changed to ref #208
22	SPAN 9	1-n, S	bottom, west	03/07/02	Kanj	1			340C
23	SPAN 9	1-o, N	bottom, west	03/07/02	Kanj	1			340C
24	SPAN 9	1-o, S	bottom, west	03/05/02	Kanj	1			340C
	SPAN 9	1-r, N	top, east						changed to ref #208
	SPAN 9	1-r, N	top, west						changed to ref #208
	SPAN 9	1-r, N	bottom, east						changed to ref #208
	SPAN 9	1-r, N	bottom, west						changed to ref #208
	SPAN 9	1-r, S	top, east						changed to ref #109
	SPAN 9	1-r, S	top, west						non-performed
25	SPAN 9	1-r, S	bottom, east	03/05/02	Kanj	1			340C
	SPAN 9	1-r, S	bottom, west						changed to ref #109
<b>SPAN 9 TOTALS 10</b>									

<b>SPAN 10 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

Ref# 112 TOTAL QUANTITY = 28

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	DATE SHOP DRAWINGS APPR.	MISC. NOTES
1	WALE	1-a, N	bottom, west	04/02/01	Kanj	1			107B
	WALE	1-g, N	top, east	04/02/01	Kanj	1			113A
2	WALE	1-g, N	top, west	04/02/01	Kanj	1			113A
	WALE	1-g, N	bottom, east	04/02/01	Kanj	1			113A
	WALE	1-g, N	bottom, west	04/02/01	Kanj	1			113A
3	WALE	1-g, S	bottom, east	04/02/01	Kanj	1			110A
	WALE	1-g, S	bottom, west	04/02/01	Kanj	1			110A
<b>WALE TOTALS 7</b>									

4	SPAN 1	1-g, N	top, east	see ex-34					136A
5	SPAN 1	1-g, S	bottom, east	04/18/01	Kanj	1			137A
<b>SPAN 1 TOTALS 2</b>									

<b>SPAN 2 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

6	SPAN 2	1-b, N	bottom, west	06/18/01	Kanj	1			137B
	SPAN 2	1-c, N	bottom, west	06/18/01	Kanj	1			137A
<b>SPAN 2 TOTALS 2</b>									

<b>SPAN 3 TOTALS 0</b>									
------------------------	--	--	--	--	--	--	--	--	--

7	SPAN 4	1-b, S	bottom, west	see ex-218					1296B-4
<b>SPAN 4 TOTALS 2</b>									

8	SPAN 5	1-f, S	bottom, east	10/28/01	Kanj	1			254A
9	SPAN 5	1-k, S	bottom, west	11/05/01	Kanj	1			254A
<b>SPAN 5 TOTALS 2</b>									

10	SPAN 6	1-b, N	top, east	11/28	Kanj	1			276A
	SPAN 6	1-b, S	bottom, east						changed to ref #113
<b>SPAN 6 TOTALS 3</b>									

<b>SPAN 7 TOTALS 1</b>									
------------------------	--	--	--	--	--	--	--	--	--

11	SPAN 7	1-h, N	top, west	1/02/02	Kanj	1			292A
	SPAN 7	1-h, N	bottom, east						non-performed
	SPAN 7	1-h, N	bottom, west						changed to ref #113
<b>SPAN 7 TOTALS 1</b>									

12	SPAN 8	1-c, N	top, east	01/23/02	Kanj	1			317A
	SPAN 8	1-c, N	bottom, west	01/23/02	Kanj	1			317A
13	SPAN 8	1-e, S	bottom, east	01/17/02	Kanj	1			317A
	SPAN 8	1-e, S	bottom, west						changed to 104,140,155
<b>SPAN 8 TOTALS 4</b>									

14	SPAN 9	1-c, N	bottom, west	03/05/02	Kanj	1			340B
	SPAN 9	1-l, N	top, east						changed to ref #208
	SPAN 9	1-l, N	top, west						changed to ref #208
	SPAN 9	1-l, N	bottom, east						changed to ref #208
	SPAN 9	1-l, N	bottom, west						changed to ref #208
15	SPAN 9	1-l, S	bottom, west	03/05/02	Kanj	1			292B
<b>SPAN 9 TOTALS 6</b>									

<b>SPAN 10 TOTALS 2</b>									
-------------------------	--	--	--	--	--	--	--	--	--

16	SPAN 10	1-b, N	bottom, east	03/13	Kanj	1			292B
	SPAN 10	1-c, N	bottom, east						changed to ref #208
	SPAN 10	1-c, N	top, west						changed to ref #208
	SPAN 10	1-c, N	bottom, east						changed to ref #208
	SPAN 10	1-c, N	top, east						changed to ref #208
	SPAN 10	1-e, N	top, west						changed to ref #208
	SPAN 10	1-e, N	bottom, east						changed to ref #208
	SPAN 10	1-e, N	bottom, west						changed to ref #208
17	SPAN 10	1-f, N	bottom, west	03/13	Kanj	1			292B
<b>SPAN 10 TOTALS 2</b>									

<b>SPAN 11 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 12 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 13 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 14 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 15 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 16 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

<b>SPAN 17 TOTALS 0</b>									
-------------------------	--	--	--	--	--	--	--	--	--

PROFESSIONAL ENGINEER  
ALLEN R. LOWENKAMP  
41264  
OHIO

O.D.O.T. DIST. 12  
ACCEPTED AS NOTED  
ACCEPTED AS NOTED  
NOT ACCEPTED

For general conformances with design plans and specifications only. Does not relieve the contractor from responsibility for errors or omissions.

NO.	REVISION	DATE	BY

**Tri State Steel Construction Inc.**  
12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44138  
(440) 238-3015

ODOT Project # 00215  
**BRIDGE No. CUY-10-16-13**  
**PAGES 125-138**

SCALE: NA  
DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

JOB NO. \_\_\_\_\_  
DRAWING NO. \_\_\_\_\_

ON PAGES 125-138

ON PAGES 125-138

ON PAGES 125-138

ON PAGES 125-138

Reff# 208 TOTAL QUANTITY = 31

STRUCTURAL STEEL MISC.:  
BLB SYSTEM, TYPE 1, TRANSVERSE, COMPLETE REPLACEMENT

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

W&L TOTALS 0

SPAN 1 TOTALS 0

SPAN 2 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 3 TOTALS 4

SPAN 4 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 5 TOTALS 3

SPAN 6 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 7 TOTALS 2

SPAN 8 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 9 TOTALS 4

SPAN 10 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 11 TOTALS 11

SPAN 12 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 13 TOTALS 7

Reff# 209 TOTAL QUANTITY = 20

STRUCTURAL STEEL MISC.:  
BLB SYSTEM, TYPE 2, TRANSVERSE, COMPLETE REPLACEMENT

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

W&L TOTALS 0

SPAN 1 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 2 TOTALS 1

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 3 TOTALS 2

SPAN 4 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 5 TOTALS 2

SPAN 6 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 7 TOTALS 2

SPAN 8 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 9 TOTALS 1

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 10 TOTALS 2

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 11 TOTALS 4

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 12 TOTALS 4

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 13 TOTALS 2

Reff# 116 TOTAL QUANTITY = 41

STRUCTURAL STEEL MISC.:  
BLB SYSTEM, TYPE 3, TRANSVERSE, QUARTER LENGTH

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

W&L TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 1 TOTALS 1

SPAN 2 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 3 TOTALS 3

SPAN 4 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 5 TOTALS 4

SPAN 6 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 7 TOTALS 8

SPAN 8 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 9 TOTALS 11

SPAN 10 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 11 TOTALS 7

SPAN 12 TOTALS 0

Table with columns: PAGE #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, DATE SHOP DRAWINGS SUBMITTED, SHOP DRAWINGS, MISC. NOTES

SPAN 13 TOTALS 7

ON PAGES 139 - 146

ON PAGES 147 - 152

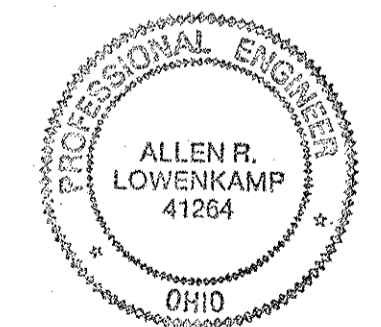
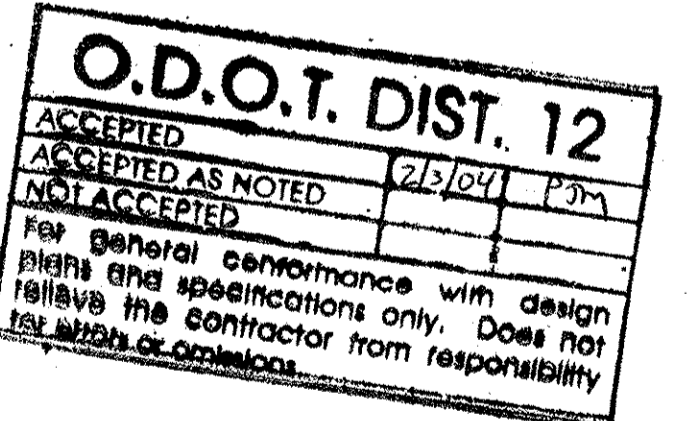
ON PAGES 139 - 146

ON PAGES 147 - 152

ON PAGES 153 - 156

ON PAGES 153 - 156

ON PAGES 153 - 156



Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44138 (440) 238-3015

ODOT Project # 00215 BRIDGE No. CUY-10-16-13 PAGES 139 - 156

DRAWN BY: SCALE: NA CHECKED BY: DATE: DRAWING NO.:

Ref# 115 TOTAL QUANTITY = 18

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
-------	------	------	----------	----------------	-----------	-----	------------------------------	---------------	-------------

TABLE TOTALS 0

1	SPAN 1	d-c, N	top, east	08/04	Kanj	1		167 B	
1	SPAN 1	d-c, N	top, west	08/04	Kanj	1		167 A	
2	SPAN 1	d-c, S	top, west	09/11/01	Kanj	1		167 A	
2	SPAN 1	d-c, S	top, east	09/11/01	Kanj	1		167 B	
	SPAN 1	d-c, N	top, east						changed to ref # 114
	SPAN 1	d-c, N	top, west						changed to ref # 114
	SPAN 1	d-c, N	bottom, east						changed to ref # 114
	SPAN 1	d-c, N	bottom, west						changed to ref # 114

SPAN 1 TOTALS 4

SPAN 2 TOTALS 0

	SPAN 3	d-c, S	bottom, east						changed to ref # 114
	SPAN 3	d-c, S	bottom, west						changed to ref # 114
	SPAN 3	d-c, S	bottom, east						non-performed
	SPAN 3	d-c, S	bottom, west						non-performed
3	SPAN 3	d-c, N	top, west	09/28/01	Kanj	1		153 B	
	SPAN 3	d-c, N	top, east						non-performed
	SPAN 3	d-c, N	top, west						non-performed
	SPAN 3	d-c, N	top, east						non-performed
4	SPAN 3	d-c, N	bottom, east	07/03/01	Kanj	1		153 C	
4	SPAN 3	d-c, N	bottom, west	07/03/01	Kanj	1		153 D	

SPAN 3 TOTALS 4

SPAN 4 TOTALS 0

5	SPAN 5	d-c, S	bottom, east	ex-273	10/18/01	Kanj	1	153 D	bottom, east
	SPAN 5	d-c, N	top, east						changed to ref # 114
	SPAN 5	d-c, N	top, west						changed to ref # 114
6	SPAN 5	d-c, S	top, east	02/07/02	Kanj	1		160 A	
7	SPAN 5	d-c, S	top, west	02/07/02	Kanj	1		153 G	
	SPAN 5	d-c, S	top, east	02/07/02	Kanj	1		153 A	
	SPAN 5	d-c, S	bottom, east	see ex-273					non-performed
	SPAN 5	d-c, S	bottom, west	see ex-273					non-performed
	SPAN 5	d-c, N	top, east						changed to ref # 114
	SPAN 5	d-c, N	top, west						changed to ref # 114
	SPAN 5	d-c, N	bottom, east						changed to ref # 114
	SPAN 5	d-c, N	bottom, west						changed to ref # 114

SPAN 5 TOTALS 4

SPAN 6 TOTALS 0

SPAN 7 TOTALS 0

SPAN 8 TOTALS 0

	SPAN 9	d-c, N	top, east						changed to ref # 114
	SPAN 9	d-c, N	top, west						changed to ref # 114
	SPAN 9	d-c, N	bottom, east						changed to ref # 114
	SPAN 9	d-c, N	bottom, west						changed to ref # 114
8	SPAN 9	d-c, N	bottom, west	03/07/02	Kanj	1		160 B	
9	SPAN 9	d-c, S	bottom, west	03/06/02	Kanj	1		160 B	

SPAN 9 TOTALS 2

SPAN 10 TOTALS 0

	SPAN 11	d-c, N	bottom, east						changed to ref # 114
	SPAN 11	d-c, N	bottom, west						changed to ref # 114
	SPAN 11	d-c, S	top, east						changed to ref # 114
	SPAN 11	d-c, S	top, west						changed to ref # 114
	SPAN 11	d-c, S	bottom, east						changed to ref # 114
	SPAN 11	d-c, S	bottom, west						changed to ref # 114
	SPAN 11	d-c, S	top, east						changed to ref # 114
	SPAN 11	d-c, S	top, west						changed to ref # 114
	SPAN 11	d-c, S	bottom, east						changed to ref # 114
	SPAN 11	d-c, S	bottom, west						changed to ref # 114
10	SPAN 11	d-c, N	bottom, east	05/16	Kanj	1		160 C	
	SPAN 11	d-c, N	bottom, west						changed to ref # 114
	SPAN 11	d-c, N	bottom, east						changed to ref # 114
	SPAN 11	d-c, N	bottom, west						changed to ref # 114
11	SPAN 11	d-c, S	bottom, west	05/16	Kanj	1		165 A	

SPAN 11 TOTALS 2

SPAN 12 TOTALS 0

12	SPAN 13	d-c, S	bottom, east	07/03	Kanj	2		165 C 165 B	
----	---------	--------	--------------	-------	------	---	--	-------------	--

SPAN 13 TOTALS 2

ON PAGES 157 - 160

ON PAGES 157 - 160

Ref# 114 TOTAL QUANTITY = 21

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
-------	------	------	----------	----------------	-----------	-----	------------------------------	---------------	-------------

TABLE TOTALS 0

1	SPAN 1	d-c, N	complete	05/17/01	Kanj	1		177 A	
2	SPAN 1	d-c, N	complete	05/11/01	Kanj	1		176 A	

SPAN 1 TOTALS 2

SPAN 2 TOTALS 0

3	SPAN 3	d-c, S	complete	08/17/01	Kanj	1		156 A	
4	SPAN 3	d-c, N	complete	09/04/01	Kanj	1		155 A	

SPAN 3 TOTALS 2

SPAN 4 TOTALS 0

5	SPAN 5	d-c, N	complete	01/18	Kanj	1		159 A	
6	SPAN 5	d-c, N	complete	01/18	Kanj	1		157 A	
7	SPAN 5	d-c, N	complete	01/18	Kanj	1		158 A	

SPAN 5 TOTALS 3

SPAN 6 TOTALS 0

8	SPAN 7	d-c, N	complete	02/18/02	Kanj	1		161 A	
9	SPAN 7	d-c, S	complete	02/18/02	Kanj	1		164 A	
10	SPAN 7	d-c, N	complete	02/18/02	Kanj	1		168 A	
11	SPAN 7	d-c, N	complete	02/18/02	Kanj	1		161 A	

SPAN 7 TOTALS 4

SPAN 8 TOTALS 0

12	SPAN 9	d-c, N	complete	03/03	Kanj	1		169 A	
13	SPAN 9	d-c, N	complete	03/07/02	Kanj	1		162 A	
	SPAN 9	d-c, S	complete						changed to ref # 115

SPAN 9 TOTALS 2

SPAN 10 TOTALS 0

14	SPAN 11	d-c, N	complete	05/16	Kanj	1		171 A	
15	SPAN 11	d-c, S	complete	05/16	Kanj	1		171 A	
16	SPAN 11	d-c, S	complete	05/16	Kanj	1		172 A	
17	SPAN 11	d-c, N	complete	05/16	Kanj	1		170 A	

SPAN 11 TOTALS 4

SPAN 12 TOTALS 0

18	SPAN 13	d-c, N	complete	ex-475	05/07	Kanj	1	531 B	Lower Deck Floor Beam
19	SPAN 13	d-c, N	complete	05/09	Kanj	1		175 A	non-performed
20	SPAN 13	d-c, S	complete	06/01	Kanj	1		173 A	
21	SPAN 13	d-c, N	complete	05/01	Kanj	1		174 A	

SPAN 13 TOTALS 4

ON PAGES 161 - 170

ON PAGES 161 - 170

Ref# 144 TOTAL QUANTITY = 7

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
-------	------	------	----------	----------------	-----------	-----	------------------------------	---------------	-------------

TABLE TOTALS 0

1	SPAN 7	N, EXT.	L2/L2-L3/L3	1/22/02	Kanj	1		320 A	
2	SPAN 7	N, EXT.	L12/L12-L13/L13	01/28/02	Kanj	1		320 A	

SPAN 7 TOTALS 2

SPAN 8 TOTALS 0

3	SPAN 9	NORTH	EXTER.	1/7/02-1/7/02	09/23	Kanj	1	326 A	
4	SPAN 9	NORTH	EXTER.	1/7/02-1/7/02	09/23	Kanj	1	326 A	

SPAN 9 TOTALS 2

SPAN 10 TOTALS 0

5	SPAN 11	N, EXT.	L3/L3-L4/L4	05/14	Kanj	1		477 A	
6	SPAN 11	N, EXT.	L14/L14-L15/L15	05/16	Kanj	1		477 A	
7	SPAN 11	N, EXT.	L3/L3-L4/L4	04/00	Kanj	1		477 A	

SPAN 11 TOTALS 3

SPAN 12 TOTALS 0

SPAN 13 TOTALS 0

ON PAGES 179 - 181

Ref# 132 TOTAL QUANTITY = 24

PAGE#	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	MISC. NOTES
-------	------	------	----------	----------------	-----------	-----	------------------------------	---------------	-------------

TABLE TOTALS 0

1	SPAN 1	L2/L3	N, EXT. bottom	05/07/01	Kanj	1		149 A	
2	SPAN 1	L2/L3	S, EXT. top	05/07/01	Kanj	1		149 B	

SPAN 1 TOTALS 2

SPAN 2 TOTALS 0

3	SPAN 3	L10/L11	N, EXT.	07/11/01	Kanj	1		149 A	
4	SPAN 3	L10/L11	S, EXT.	07/11/01	Kanj	1		149 A	
5	SPAN 3	L2/L3	N, EXT.	05/19/01	Kanj	1		149 B	
6	SPAN 3	L2/L3	N, EXT.	05/19/01	Kanj	1		149 A	
7	SPAN 3	L2/L3	S, EXT.	05/19/01	Kanj	1		149 A	

SPAN 3 TOTALS 5

SPAN 4 TOTALS 0

8	SPAN 5	S, EXT.	TOP	10/19/01	Kanj	1		150 A	L11-L12
9	SPAN 5	L11-L12	N, EXT.	10/29/01	Kanj	1		150 B	
10	SPAN 5	L11-L12	N, EXT.	10/29/01	Kanj	1		150 B	
11	SPAN 5	L11-L12	S, EXT.	11/01/01	Kanj	1		150 B	
12	SPAN 5	L2/L3	N, EXT.	10/29/01	Kanj	1		150 C	

SPAN 5 TOTALS 5

SPAN 6 TOTALS 0

13	SPAN 7	N, EXT.	BTM.	ex-385	12/21/01	Kanj	1	149 C	L12-L13
14	SPAN 7	L12-L13	S, EXT.	bottom	11/27/01	Kanj	1	149 C	
15	SPAN 7	L2/L3	N, EXT.	bottom	12/02/02	Kanj	1	149 C	
16	SPAN 7	L2/L3	S, EXT.	bottom	12/02/02	Kanj	1	149 C	

SPAN 7 TOTALS 4

SPAN 8 TOTALS 0

17	SPAN 9	S, EXT.	BTM.	ex-500	02/07/02	Kanj	1	151 B	L3-L4
18	SPAN 9	L4-L5	N, EXT.	bottom	02/23/02	Kanj	1	151 A	
19	SPAN 9	L4-L5	S, EXT.	bottom	02/23/02	Kanj	1	151 A	
20	SPAN 9	L3-L4	N, EXT.	bottom	02/23/02	Kanj	1	151 B	

SPAN 9 TOTALS 4

SPAN 10 TOTALS 0

21	SPAN 11	L14-L15	S, EXT.	bottom	05/14	Kanj	1	152 A	
22	SPAN 11	L3-L4	S, EXT.	bottom	05/08	Kanj	1	152 A	

SPAN 11 TOTALS 2

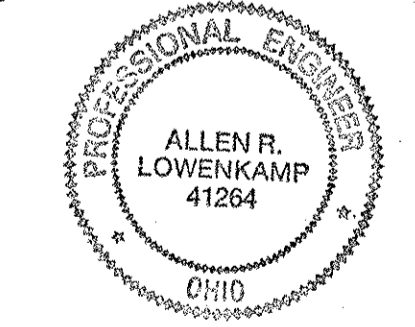
SPAN 12 TOTALS 0

23	SPAN 13	L8-L9	N, EXT.	bottom	04/03	Kanj	1	153 A	
24	SPAN 13	L8-L9	S, EXT.	bottom	04/02	Kanj	1	153 B	

SPAN 13 TOTALS 2

ON PAGES 182 - 185

ON PAGES 182 - 185



O.D.O.T. DIST. 12 ACCEPTED 2/3/04

Form with fields for NO., REVISION, DATE, BY, and company information for Tri State Steel Construction Inc.

Ref# 105 TOTAL QUANTITY = 123

STRUCTURAL STEEL MISC. SUB SYSTEM, TIE PLATE REPLACEMENT

Table with columns: PART #, SPAN, LINE, LOCATION, DATE OF REPAIR, INSPECTOR, QTY, SHOP DRAWINGS, STOP DRAWINGS, MISC. NOTES

Table for SPAN 1 TOTALS: 1 WALE, 16 A, top

Table for SPAN 2 TOTALS: 1 SPAN 2, 16 M, top

Table for SPAN 3 TOTALS: 5 SPAN 3, 16 H, bottom

Table for SPAN 4 TOTALS: 0

Table for SPAN 5 TOTALS: 8

Table for SPAN 6 TOTALS: 4

Table for SPAN 7 TOTALS: 26

Table for SPAN 8 TOTALS: 2

Table for SPAN 9 TOTALS: 14

Table for SPAN 10 TOTALS: 5

Table for SPAN 11 TOTALS: 32

Table for SPAN 12 TOTALS: 6

Table for SPAN 13 TOTALS: 25

Table for SPAN 14 TOTALS: 25

Table for SPAN 15 TOTALS: 25

Table for SPAN 16 TOTALS: 25

Table for SPAN 17 TOTALS: 25

Table for SPAN 18 TOTALS: 25

Table for SPAN 19 TOTALS: 25

Table for SPAN 20 TOTALS: 25

Table for SPAN 21 TOTALS: 25

Table for SPAN 22 TOTALS: 25

Table for SPAN 23 TOTALS: 25

Table for SPAN 24 TOTALS: 25

Table for SPAN 25 TOTALS: 25

Table for SPAN 26 TOTALS: 25

Table for SPAN 27 TOTALS: 25

Table for SPAN 28 TOTALS: 25

Table for SPAN 29 TOTALS: 25

Table for SPAN 30 TOTALS: 25

Table for SPAN 31 TOTALS: 25

Table for SPAN 32 TOTALS: 25

Table for SPAN 33 TOTALS: 25

Table for SPAN 34 TOTALS: 25

Table for SPAN 35 TOTALS: 25

Table for SPAN 36 TOTALS: 25

Table for SPAN 37 TOTALS: 25

Table for SPAN 7 TOTALS: 26

Table for SPAN 8 TOTALS: 2

Table for SPAN 9 TOTALS: 14

Table for SPAN 10 TOTALS: 5

Table for SPAN 11 TOTALS: 32

Table for SPAN 12 TOTALS: 6

Table for SPAN 13 TOTALS: 25

Table for SPAN 14 TOTALS: 25

Table for SPAN 15 TOTALS: 25

Table for SPAN 16 TOTALS: 25

Table for SPAN 17 TOTALS: 25

Table for SPAN 18 TOTALS: 25

Table for SPAN 19 TOTALS: 25

Table for SPAN 20 TOTALS: 25

Table for SPAN 21 TOTALS: 25

Table for SPAN 22 TOTALS: 25

Table for SPAN 23 TOTALS: 25

Table for SPAN 24 TOTALS: 25

Table for SPAN 25 TOTALS: 25

Table for SPAN 26 TOTALS: 25

Table for SPAN 27 TOTALS: 25

Table for SPAN 28 TOTALS: 25

Table for SPAN 29 TOTALS: 25

Table for SPAN 30 TOTALS: 25

Table for SPAN 31 TOTALS: 25

Table for SPAN 32 TOTALS: 25

Table for SPAN 33 TOTALS: 25

Table for SPAN 34 TOTALS: 25

Table for SPAN 35 TOTALS: 25

Table for SPAN 36 TOTALS: 25

Table for SPAN 37 TOTALS: 25

Table for SPAN 38 TOTALS: 25

Table for SPAN 39 TOTALS: 25

Table for SPAN 40 TOTALS: 25

Table for SPAN 41 TOTALS: 25

Table for SPAN 42 TOTALS: 25

Table for SPAN 43 TOTALS: 25

Table for SPAN 44 TOTALS: 25

Table for SPAN 11 TOTALS: 32

Table for SPAN 12 TOTALS: 6

Table for SPAN 13 TOTALS: 25

Table for SPAN 14 TOTALS: 25

Table for SPAN 15 TOTALS: 25

Table for SPAN 16 TOTALS: 25

Table for SPAN 17 TOTALS: 25

Table for SPAN 18 TOTALS: 25

Table for SPAN 19 TOTALS: 25

Table for SPAN 20 TOTALS: 25

Table for SPAN 21 TOTALS: 25

Table for SPAN 22 TOTALS: 25

Table for SPAN 23 TOTALS: 25

Table for SPAN 24 TOTALS: 25

Table for SPAN 25 TOTALS: 25

Table for SPAN 26 TOTALS: 25

Table for SPAN 27 TOTALS: 25

Table for SPAN 28 TOTALS: 25

Table for SPAN 29 TOTALS: 25

Table for SPAN 30 TOTALS: 25

Table for SPAN 31 TOTALS: 25

Table for SPAN 32 TOTALS: 25

Table for SPAN 33 TOTALS: 25

Table for SPAN 34 TOTALS: 25

Table for SPAN 35 TOTALS: 25

Table for SPAN 36 TOTALS: 25

Table for SPAN 37 TOTALS: 25

Table for SPAN 38 TOTALS: 25

Table for SPAN 39 TOTALS: 25

Table for SPAN 40 TOTALS: 25

Table for SPAN 41 TOTALS: 25

Table for SPAN 42 TOTALS: 25

Table for SPAN 43 TOTALS: 25

Table for SPAN 44 TOTALS: 25

Table for SPAN 45 TOTALS: 25

Table for SPAN 46 TOTALS: 25

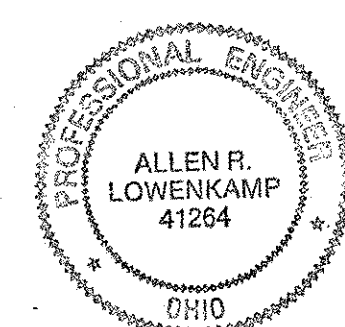
Table for SPAN 47 TOTALS: 25

Table for SPAN 48 TOTALS: 25

PAGE # 210 SHOWS 1 FULL LENGTH ANGLE REPLACEMENT ON A WIND SHEAR KEY DIAGONAL AT SPAN 8 E-F SOUTH & BOTTOM SOUTH ONLY REPAIR OF ITS KIND

ON PAGES 186-209

ON PAGES 186-209



O.D.O.T. DIST. 12 ACCEPTED 2/3/04 PJM

Tri State Steel Construction Inc. 12608 ALAMEDA DRIVE STRONGSVILLE, OHIO 44136 (440) 238-3015

ODOT Project # 00215 BRIDGE No. CUY-10-16.13 PAGES 186-210

DRAWN BY: CHECKED BY: DATE: DRAWING NO. SCALE: N/A







Ref# 110 TOTAL QUANTITY = 127

STRUCTURAL STEEL BRIDGE PLAN QUANTITY - 61 EACH

PAGE #	SPAN	LINE	LOCATION	DATE OF REPAIR	INSPECTOR	QTY	DATE SHOP DRAWINGS SUBMITTED	SHOP DRAWINGS	REMARKS
1	WAVE	10-1	exc-10	04/02/01	Kanj	2		1178/C	top, N & S
						WAVE TOTALS	2		

2	span 1	10-1	exc-14	04/18/01	Kanj	1		115 A	top, south
3	span 1	10-1	exc-13	04/18/01	Kanj	1		114 A	bottom, north
						SPAN 1 TOTALS	2		
						SPAN 2 TOTALS	0		

4	SPAN 3	10-1	bottom, north	09/11/01	Kanj	1		207 C	
5	SPAN 3	10-1	bottom, north	10/17/01	Kanj	1		205 C	
6	SPAN 3	10-1	bottom, north	10/17/01	Kanj	1		205 C	
7	SPAN 3	10-1	bottom, north	09/11/01	Kanj	1		205 F	non-performed
8	SPAN 3	10-1	bottom, north	10/16/01	Kanj	1		206 A	bottom, south
9	SPAN 3	10-1	top, north	09/11/01	Kanj	1		206 B	
10	SPAN 3	10-1	bottom, south	09/11/01	Kanj	1		206 B	
11	SPAN 3	10-1	top, north	09/11/01	Kanj	1		206 B	changed to ref #210
12	SPAN 3	10-1	bottom, south						changed to ref #210
13	SPAN 3	10-1	top, south						changed to ref #210
14	SPAN 3	10-1	bottom, south						changed to ref #210
15	SPAN 3	10-1	top, south	09/02/01	Kanj	1		209 A	
16	SPAN 3	10-1	top, south	09/02/01	Kanj	1		209 A	
17	SPAN 3	10-1	bottom, south	09/02/01	Kanj	1		209 A	
						SPAN 3 TOTALS	12		
						SPAN 4 TOTALS	0		

11	SPAN 5	10-1	bottom, north	11/27/01	Kanj	1		265 D	
12	SPAN 5	10-1	bottom, north	11/27/01	Kanj	1		265 D	
13	SPAN 5	10-1	bottom, north	11/08/01	Kanj	1		265 A	non-performed
14	SPAN 5	10-1	bottom, north	11/08/01	Kanj	1		265 F	
15	SPAN 5	10-1	bottom, north	10/18/01	Kanj	1		265 B	
16	SPAN 5	10-1	bottom, north	10/18/01	Kanj	1		265 G	
17	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
18	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
19	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
20	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
21	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
22	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
23	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
24	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
25	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
26	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
27	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
28	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
29	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
30	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
31	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
32	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
33	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
34	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
35	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
36	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
37	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
38	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
39	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
40	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
41	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
42	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
43	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
44	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
45	SPAN 5	10-1	top, north	10/18/01	Kanj	1		265 C	
						SPAN 5 TOTALS	26		

25	SPAN 6	10-1	top, north	11/27/01	Kanj	1		278 A	changed to ref #104
26	SPAN 6	10-1	top, north	11/27/01	Kanj	1		278 A	changed to ref #111
						SPAN 6 TOTALS	2		

27	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 C	changed to ref #111
28	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 C	changed to ref #111
29	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 C	changed to ref #111
30	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 C	top, N & S
31	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
32	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
33	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
34	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
35	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
36	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
37	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
38	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
39	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
40	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
41	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
42	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
43	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
44	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
45	SPAN 7	10-1	bottom, north	01/22/02	Kanj	1		306 A	
						SPAN 7 TOTALS	28		

46	SPAN 8	10-1	top, north	01/22/02	Kanj	2		319 A	
47	SPAN 8	10-1	top, north	01/22/02	Kanj	1		319 A	
48	SPAN 8	10-1	top, north	01/22/02	Kanj	1		319 A	
49	SPAN 8	10-1	top, north	01/22/02	Kanj	2		319 B	
50	SPAN 8	10-1	top, north	01/22/02	Kanj	1		319 B	
51	SPAN 8	10-1	top, north	01/22/02	Kanj	1		319 B	
						SPAN 8 TOTALS	9		

52	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 F	
53	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 F	non-performed
54	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 D	
55	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 D	
56	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
57	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 B	
58	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 C	
59	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
60	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
61	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
62	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
63	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
64	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
65	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
66	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
67	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
68	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
69	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
70	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
71	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
72	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
73	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
74	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
75	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
76	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
77	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
78	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
79	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
80	SPAN 9	10-1	bottom, north	03/07/02	Kanj	1		347 A	
						SPAN 9 TOTALS	23		

80	SPAN 10	10-1	top, north	03/14	Kanj	1		373 B	
81	SPAN 10	10-1	top, north	03/14	Kanj	1		373 B	
82	SPAN 10	10-1	top, north	03/14	Kanj	1		373 C	
83	SPAN 10	10-1	top, north	03/14	Kanj	1		373 C	
84	SPAN 10	10-1	top, north	03/14	Kanj	1		373 C	
85	SPAN 10	10-1	top, north	03/14	Kanj	1		373 C	
86	SPAN 10	10-1	top, north	03/14	Kanj	1		373 B	changed to ref #210
						SPAN 10 TOTALS	6		

87	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
88	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
89	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
90	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
91	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
92	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
93	SPAN 11	10-1	top, north	05/14	Kanj	1		398 B	changed to ref #210
94									