



**CUY-90-14.90**

**PID 77332/85531**

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**APPENDIX EX-54**

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**CUY-090-1524 PID 21563**

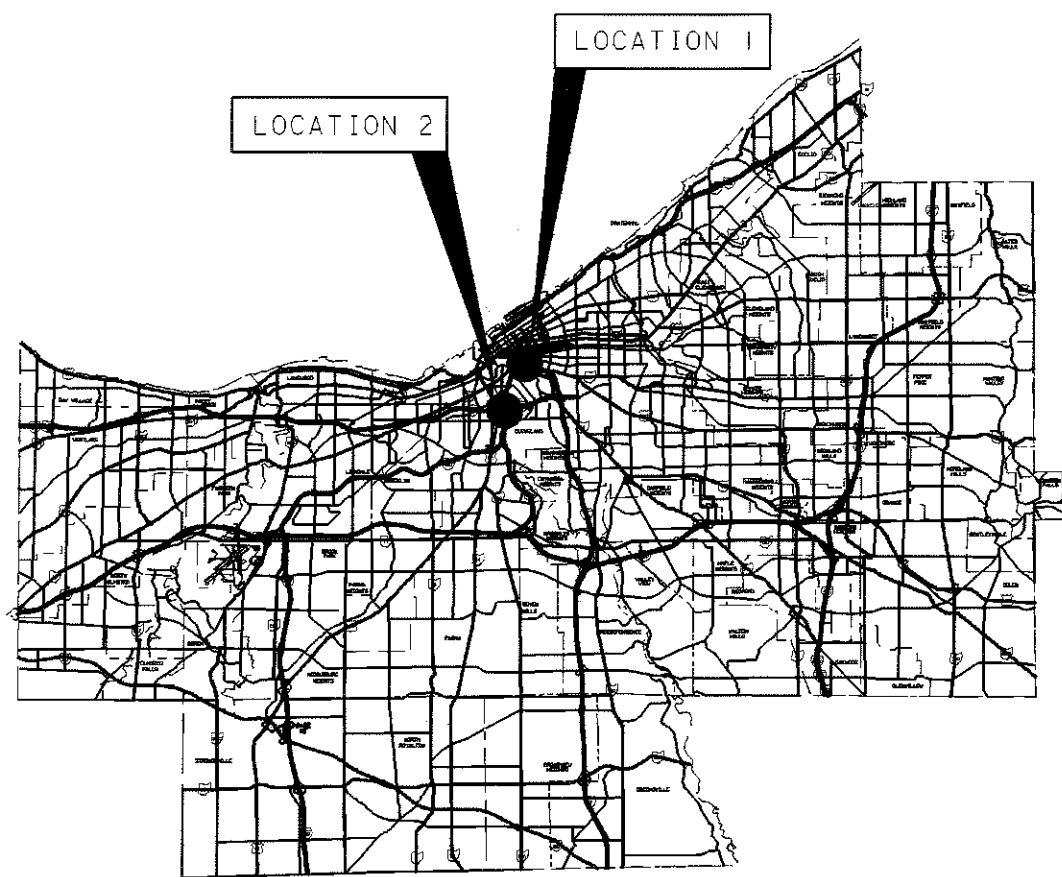
**(Reference Document)**

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

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

# OHIO DEPARTMENT OF TRANSPORTATION

PROJECT DESCRIPTION  
MISC. BRIDGE REPAIRS



CUYAHOGA COUNTY

SEE SHEET 2 FOR LOCATION MAP.

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY	TOWNSHIP
1	CUY-90-15.24	1809393	CLEVELAND	
2	CUY-71-1887	1805584	CLEVELAND	

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**1997 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 not require the closing to traffic of the highway and that provisions for the maintenance and safety will be as set forth on plans and estimates.

LATITUDE: N41°28'48"

LONGITUDE: W81°39'42"

**UNDERGROUND UTILITIES**

TWO WORKING DAYS

**BEFORE YOU DIG**

CALL 1-800-362-2764 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

**PLAN PREPARED BY:**  
 ODOT - DISTRICT TWELVE  
 PRODUCTION DEPARTMENT  
 5500 TRANSPORTATION BLVD.  
 GARFIELD HEIGHTS, OHIO 44125

STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS		P.E. STAMP
MT-35.10M	01/30/95	MT-98.12M	06/24/93	806 09/09/97
MT-35.11M	01/30/95	MT-98.13M	06/24/93	828 07/28/98
		MT-98.14M	06/24/93	842 01/06/99
MT-95.30M	04/25/94	MT-98.15M	06/24/93	848 06/30/98
		MT-98.16M	06/24/93	863 10/12/99
MT-97.10M	04/25/94	<i>EX-4-87</i>	<i>11/2/93</i>	864 07/11/00
<i>VPP-1-90</i>	<i>3/20/95</i>	MT-105.10M	04/25/94	899 10/21/98
		MT-105.11M	04/25/94	954 09/09/97

Approved *[Signature]*  
 Date *5/15/01* District Deputy Director of Transportation

Approved *[Signature]*  
 Date *5-30-01* Director, Department of Transportation

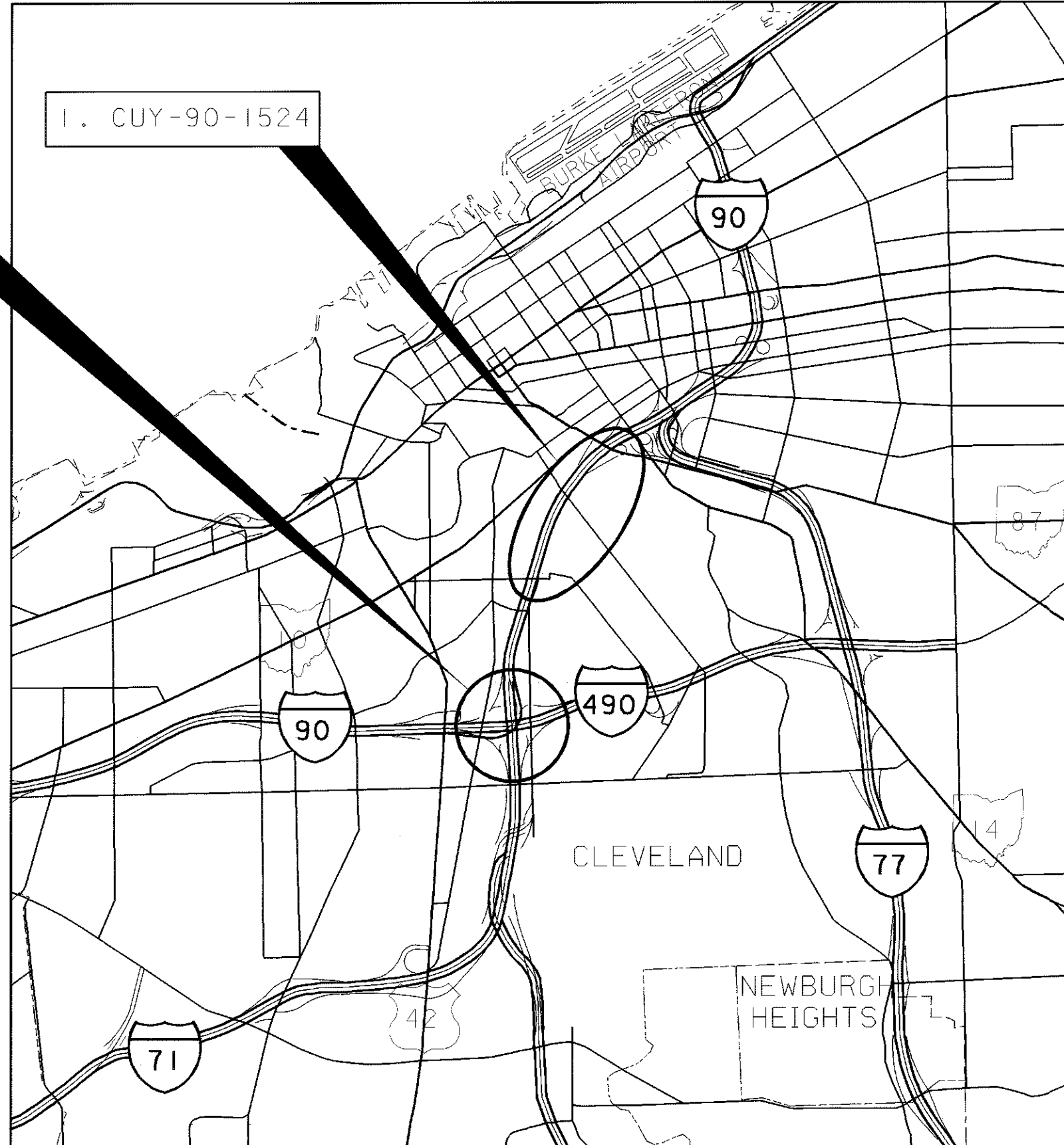


CUY - IR 90/71 - 15.24/Various  
 010394 PID - 21563  
 Dist 12 8/22/01

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FEDERAL PROJECT NO. 100% STATE  
 PID NO. 21563  
 CONSTRUCTION PROJECT NO.  
 RAILROAD INVOLVEMENT  
 CUY-90-15.24/VAR  
 28

# OHIO DEPARTMENT OF TRANSPORTATION



1. CUY-90-1524

2. CUY-71-1887

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LOCATION MAP

CUY-90-15.24/VAR

PL01 SUBMITTED: 14-MAY-2001 01:14  
PLOTTED BY: immd\lloy  
PLOTTED FROM: I:\PROJECTS\p1\21563\si\te.dgn

**REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:**

LISTED ON THE TITLE SHEET.

**AND TO SUPPLEMENTAL SPECIFICATIONS:**

LISTED ON THE TITLE SHEET.

**CONVERSION OF METRIC STANDARD DRAWINGS:**

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE CMS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROXIMATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

**EXISTING STRUCTURE VERIFICATION:**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C.M.S. SECTIONS 102.05 AND 105.02. THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGE ARE AVAILABLE UPON REQUEST AT THE DISTRICT 12 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, GARFIELD HEIGHTS, OHIO.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED ON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 INTERIM SPECIFICATIONS, AND THE ODOT BRIDGE DESIGN MANUAL.

**ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN:**

RAISED PAVEMENT MARKERS SHALL BE REMOVED FROM THE ROADWAY IN SUCH A MANNER THAT PREVENTS DAMAGE TO THE CASTINGS. REMOVED MARKERS SHALL BE COLLECTED, STORED IN 55 GALLON DRUMS (WITH THE AMOUNT CLEARLY MARKED) AND THEN DELIVERED TO THE ODOT WARRENSVILLE YARD, 25609 EMERY ROAD, WARRENSVILLE HEIGHTS, OHIO 44128 (SR 175 AT THE INTERSECTION OF I-271 AND EMERY RD), BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. THE PROJECT ENGINEER SHALL GIVE THE WARRENSVILLE TRAFFIC DEPARTMENT (216) (292-5801) FORTY-EIGHT (48) HOUR NOTICE PRIOR TO ANY DELIVERIES. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR FURNISHING ALL TRANSFER/RECEIVING DOCUMENTATION TO THE YARD. ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE, AND DELIVERY OF THESE MARKERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED THROUGHOUT THIS PROJECT.

ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN 18 EA

**WORK ON NAVIGABLE WATERS**

THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF SECTION 107.09 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS REGARDING WORK ON NAVIGABLE WATERS.

THE CONTRACTOR MUST MAINTAIN A VERTICAL CLEARANCE OF 96 FEET ABOVE THE CUYAHOGA RIVER WATER LEVEL AT ALL TIMES FOR THE ENTIRE WIDTH BETWEEN PIER NO. 1 AND PIER NO. 2.

THE CONTRACTOR SHALL NOTIFY THE COMMANDER, NINTH COAST GUARD DISTRICT, BRIDGE BRANCH, IN WRITING, THIRTY (30) DAYS PRIOR TO IMPLEMENTING ANY OPERATION IN OR ABOVE THE NAVIGABLE PORTION OF THE RIVER, SO THAT THEY MAY PROVIDE ADEQUATE NOTICE TO THE WATERWAY USERS.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN, ANY AND ALL NAVIGATION DEVICES REQUIRED BY THE UNITED STATES COAST GUARD.

**ITEM 202- LIGHT POLE REMOVAL, AS PER PLAN**

THIS ITEM SHALL INCLUDE ALL ITEMS NECESSARY TO REMOVE LIGHT POLES AS DETAILED IN THE PLANS AND SHALL INCLUDE THE COST OF ALL MATERIAL, LABOR, AND INCIDENTALS TO INSTALL 3/8" THICK GALVANIZED PLATE.

**625 LIGHT POLE MISC.: REPLACE LIGHT POLE DESIGN B B35.7, TYPE III LUMINAIR - 200W**

THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, AND INCIDENTAL NECESSARY TO REMOVE AND REPLACE WITH NEW LIGHT POLES, BRACKET ARMS, LUMINIRS, AND LAMPS IN WORKING ORDER ON THE RIGHT SIDE OF BRIDGE CUY-90-1547.

MATERIAL INCLUDE, BUT ARE NOT LIMITED TO TYPE II AND TYPE III CONNECTOR KITS LIGHT POLE DESIGN 8B35.7 LUMINAIR STYLE B 200 W HPS 713.11 480 VOLTS TYPE III POLE AND BRACKET CABLE 600 VOLTS # 10 AWG LAMPS SHALL BE HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC "LUCALOX", WESTINGHOUSE "CERAMALUX", SYLVANIA "LUMALUX", OR APPROVED EQUAL

**ITEM 625- LIGHTING, MISC.: SERVICE TO LIGHT TOWER T-4**

THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, AND INCIDENTALS NECESSARY TO PROVIDE SERVICE TO TOWER T-4 NEAR BRIDGE CUY-90-1599 FROM TOWER T-5.

MATERIAL INCLUDE, BUT ARE NOT LIMITED TO 1 1/2" DIAMETER CONDUIT WITH 2 #4 AWG CABLE, FLEXIBLE CONDUIT, PULL BOXES, JUNCTION BOXES CABLE SPLICING KIT, CONDUIT CLAMPS INCLUDING DRILLING HOLES AND EPOXY INJECTING ANCHORS AS PER CMS 510

**ITEM 621 - RAISED PAVEMENT MARKER, INSTALLATION ONLY:**

MATERIALS SUPPLIED BY THE DEPARTMENT:

CASTINGS SHALL BE SUPPLIED WITH REFLECTORS.

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM MATERIALS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE TYPE OF DEPARTMENT SUPPLIED MATERIAL SHALL BE RAISED PAVEMENT MARKER CASTINGS WITH PRISMATIC RETROREFLECTORS.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE WARRENSVILLE MAINTENANCE YARD.

THE CONTRACTOR SHALL PICK UP AND LOAD DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO SUPPLY THE CONTRACTOR WITH RECYCLED RAISED PAVEMENT MARKER WITH PRISMATIC REFLECTORS.

ITEM 621 - RAISED PAVEMENT MARKER INSTALLATION ONLY 11 EA

**ITEM 621 - PRISMATIC RETROREFLECTOR:**

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO REPLACE THE RETROREFLECTORS WHICH ARE BEYOND THE OVERLAY LIMITS.

THIS ITEM SHALL INCLUDE THE COST OF REMOVING THE RETROREFLECTOR AND REPLACING IT WITH A CONTRACTOR SUPPLIED REFLECTOR OF THE REQUIRED COLOR. THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY.

ITEM 621 - PRISMATIC RETROREFLECTOR 2 EA

**ITEM 853 - STRUCTURAL STEEL, MISCELLANEOUS (HAND HOLD BAR AND FOOTHOLD ANGLE SYSTEM), AS PER PLAN**

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING A SAFETY ACCESS SYSTEM CONSISTING OF ONE INCH DIAMETER BAR STOCK AND FOOTHOLD ANGLES BOLTED TO 16 GUSSET PLATES ON THE CENTRAL VIADUCT AS SHOWN ON THE PLANS.

ALL STRUCTURAL STEEL WORKS SHALL BE AS PER ITEM 513 - (AISC CERTIFICATION NOT REQUIRED) OF THE CMS. THE ANGLES AND BAR STOCK SHALL BE A-36 STEEL. THE AREA WHERE THE ANGLE IS BOLTED SHALL BE THOROUGHLY CLEANED OF ALL RUST AND DEBRIS, AND PRIMED IF BARE STEEL IS EXPOSED PRIOR TO CONNECTING THE ANGLES TO THE GUSSET PLATES TO ASSURE A SATISFACTORY CONNECTION.

THE HAND HOLD BAR AND FOOTHOLD ANGLE SYSTEM SHALL BE PAINTED WHEN ALL WELDING AND BOLTING HAS BEEN COMPLETED. COST FOR PAINTING THE HAND HOLD BAR AND FOOTHOLD ANGLE SYSTEM SHALL BE INCLUDED UNDER FIELD PAINTING OF NEW STEEL, SYSTEM IZEU.

THE UNIT TO BE PAID FOR UNDER THIS ITEM SHALL BE THE LINEAR FOOT OF HAND HOLD BAR AND FOOTHOLD ANGLES COMPLETE IN PLACE AND ACCEPTED. THE ACCEPTED QUANTITY OF HAND HOLD BAR AND FOOTHOLD ANGLE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING THE HAND HOLD BAR AND ALL MATERIAL (INCLUDING SUPPORT ANGLES), LABOR INCLUDING FIELD DRILLING, AND EQUIPMENT NECESSARY TO COMPLETE THIS WORK.

DESIGN AGENCY: O.D.O.T. DISTRICT: 12 PRODUCTION DEPARTMENT  
DATE: \_\_\_\_\_ REVIEWED: \_\_\_\_\_ DRAWN: MJM CHECKED: \_\_\_\_\_  
STRUCTURE FILE NUMBER: \_\_\_\_\_ VARIES: \_\_\_\_\_  
GENERAL NOTES  
CUYAHOGA COUNTY  
CUY-90-15.24/VAR  
3  
28

**ITEM 863- STRUCTURAL STEEL MISC.: STRINGER BOTTOM FLANGE RETROFIT**

THIS ITEM SHALL CONSIST OF FURNISHING ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO INSTALL THE DOUBLE ANGLES REQUIRED FOR THE STRINGER BOTTOM FLANGE RETROFIT AS SHOWN IN THE PLANS AND STATED HEREIN. THIS ITEM SHALL INCLUDE ALL PRE-DRILLED STRUCTURAL STEEL, BOLTS, NUTS AND WASHERS, FIELD DRILLING OF BOLT HOLES, AND ALL OTHER INCIDENTALS NECESSARY TO INSTALLATION OF THE DOUBLE ANGLES.

STRUCTURAL STEEL SHALL BE ASTM A36 CONFORMING TO 513 OF THE CMS AND SHALL NOT REQUIRE A SHOP APPLIED PRIME COAT. STRUCTURAL STEEL UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE THE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING THE STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.07. AFTER FABRICATION THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET OF SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. THE FABRICATOR SHALL FURNISH THE OFFICE OF STRUCTURAL ENGINEERING A 35 MILLIMETER MICROFILM COPY OF EACH APPROVED SHOP DRAWING. THE MICROFILM SHALL BE MOUNTED ON AN APERTURE CARD AS SPECIFIED IN 501.05.

ALL BOLTS SHALL BE 1-INCH DIAMETER, GALVANIZED, A325 UNLESS OTHERWISE NOTED. CONNECTIONS SHALL BE IN ACCORDANCE WITH 513.15 OF THE CMS.

THE COST FOR FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR NECESSARY TO INSTALL THE DOUBLE ANGLES AT ONE STRINGER BOTTOM FLANGE RETROFIT LOCATION SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR:

**ITEM 530 - STRUCTURE MISC.; ACCESS DOOR REPLACED**

PIERS NO. 1 THROUGH NO. 8 OF THE CENTRAL VIADUCT HAVE ACCESS HATCHES IN THE SHAFTS. THE WORK INCLUDED UNDER THIS ITEM IS THE INSTALLATION OF NEW DOORS ON THE ACCESS HATCHES. ANY EXISTING ACCESS DOORS AND HINGES SHALL BE CAREFULLY REMOVED SO AS TO LEAVE THE EXISTING DOOR JAMB INTACT. ANY 1" DIAMETER HANDRAIL PIPES LOCATED IN OR NEAR THE HATCH OPENING SHALL BE REMOVED FLUSH WITH THE FACE OF WALL. NEW DOORS SHALL BE VENTED USING 16 GAUGE MINIMUM INVERTED STEEL LOUVERS WITH HEMMED EDGES TO PROVIDE EXTRA STRENGTH AND ELIMINATE RAW METAL EDGES. LOUVER BLADES SHALL BE ON 1/4" CENTERS AND OFFER APPROXIMATELY 80% FREE AREA. LOUVERS SHALL BE INSTALLED SO AS ANY PROTRUSION FROM THE DOOR SHALL BE TO THE INSIDE AND UNSEEN WHEN THE DOOR IS IN THE CLOSED POSITION. NEW DOORS SHALL BE FABRICATED AND INSTALLED AS SHOWN ON THE PLANS.

THE EXISTING DOOR JAMBS SHALL BE REPAIRED IF NECESSARY, SANDBLASTED, PRIMED AND PAINTED WITH TWO COATS OF A TWO PART EPOXY PAINT WITH THE FINISH COAT TINTED TO MATCH THE EXISTING CONCRETE. THE NEW DOORS SHALL BE PAINTED IN A LIKE MANNER, EITHER SHOP OR FIELD PAINTED, ALL IN ACCORDANCE WITH APPLICABLE SECTIONS OF ITEM 514 - PAINTING. ALL WORK INCLUDING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO REPLACE THE ACCESS DOORS AS OUTLINED ABOVE SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL - "ACCESS DOOR REPLACED".

**ITEM 514 - FIELD PAINTING MISC.: FIELD PAINTING OF TESTED AND/OR RETROFITTED AREAS**

THIS ITEM SHALL CONSIST OF PREPARING AND COATING (1) THE ENDS THE STRINGER RETROFITTED AREAS FROM THE END OF THE STRINGER TO A DISTANCE OF 2'-6" FROM THE END OF THE STRINGER, (2) THE GIRDER BEND POINT WEB RETROFIT AREAS, AND (3) THE GIRDER FLANGE SPLICE PLATE AND BOLTS.

SURFACE PREPARATION SHALL CONSIST OF ABRASIVE BLASTING THE STEEL TO BE COATED TO AN SA 2 1/2 NEAR-WHITE CONDITION. BLASTING ABRASIVES CONTAINING MORE THAN 1% FREE SILICA SHALL NOT BE ALLOWED. THESE AREAS SHALL BE COATED THE SAME DAY THAT THEY ARE BLASTED.

THE PREPARED AREAS SHALL BE COATED WITH ONE COAT OF A HIGH SOLIDS EPOXY AT LEAST 5 MILS THICK. THE HIGH SOLIDS EPOXY SHALL BE APPLIED BY BRUSH. THE COLOR OF THE HIGH SOLIDS EPOXY SHALL CLOSELY MATCH THE COLOR OF THE EXISTING COATING.

THE HIGH SOLIDS EPOXY SHALL BE ONE OF THE FOLLOWING PRODUCTS:

- 1) AMERON AMERLOCK 400
- 2) VALSPAR HIGH SOLIDS EPOXY 76 SERIES
- 3) TNEPEC CHEMBUILD SERIES 135
- 4) SHERWIN WILLIAMS - EPOXY-MASTIC COATING

COST FOR FURNISHING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR THIS ITEM:

ITEM	UNIT	DESCRIPTION
514	LUMP	FIELD PAINTING MISC.: FIELD PAINTING OF TESTED AND/OR RETROFITTED AREAS

**ITEM STRUCTURAL JOINT OR JOINT SEALER MISC.: SEALING CONTRACTION JOINTS**

THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO REMOVE EXISTING COPPER WATER STOPS, INSTALL NEW PLATES, INSTALL PRECOMPRESSED SELF ADHESIVE JOINT SEALER, AND Poured POLYURETHANE JOINT SEALER. AT ALL CONTRACTION JOINTS IN THE NUMBER THREE AND FOUR LANES OF BRIDGE CUY-90-1547.

THE PRECOMPRESSED SELF ADHESIVE JOINT SEALER SHALL BE EMSEAL 20H SYSTEM OR APPROVED EQUAL FOR THE NOMINAL JOINT SIZE SPECIFIED, AND SHALL RUN THE ENTIRE LENGTH OF THE CONTRACTION JOINT FROM THE LANE LINE BETWEEN THE NUMBER 2 AND 3 LANES TO THE EDGE OF THE STEEL CURB.

EMSEAL 20H SYSTEM IS AVAILABLE FROM EMSEAL JOINT SYSTEMS LTD, 108 MILK STREET, SUIT 3, WESTBOROUGH, MA 01581, PHONE NUMBER IS (508) 836-0280

POURED POLYURETHAN JOINT SEAL SHALL BE A TWO PART, COLD APPLIED, CHEMICALLY CURING, SELF LEVELING, ELSTOMERIC POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E AND ASTM 0-920. ALL MATERIAL SHALL BE STORED AND INCORPORATED INTO THE WORK AS SPECIFIED BY THE MANUFACTURER

**ITEM STRUCTURAL JOINT OR JOINT SEALER MISC.: SEALING CURB AND SIDEWALK CONTRACTION JOINTS**

THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO REMOVE CURB WATERPROOFING AND, INSTALL NEW PRECOMPRESSED SELF ADHESIVE JOINT SEALER, AND Poured POLYURETHANE JOINT SEALER. AT ALL CONTRACTION JOINTS IN ON BOTH THE LEFT AND RIGHT SIDE OF BRIDGE CUY-90-1547.

THE PRECOMPRESSED SELF ADHESIVE JOINT SEALER SHALL BE EMSEAL 20H SYSTEM OR APPROVED EQUAL FOR THE NOMINAL JOINT SIZE SPECIFIED.

EMSEAL 20H SYSTEM IS AVAILABLE FROM EMSEAL JOINT SYSTEMS LTD, 108 MILK STREET, SUIT 3, WESTBOROUGH, MA 01581, PHONE NUMBER IS (508) 836-0280

POURED POLYURETHAN JOINT SEAL SHALL BE A TWO PART, COLD APPLIED, CHEMICALLY CURING, SELF LEVELING, ELSTOMERIC POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E AND ASTM 0-920. ALL MATERIAL SHALL BE STORED AND INCORPORATED INTO THE WORK AS SPECIFIED BY THE MANUFACTURER

**ITEM STRUCTURAL JOINT OR JOINT SEALER MISC.: FINGER TYPE EPANSION JOINT AT PIER 2E1**

THIS ITEM SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO INSTALL NEW 5" STRIP SEAL AND WELD TO THE BOTTOM OF THE FINGER JOINTS NEAR PIER 2E1.

**ITEM 848: MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRO-DEMOLITION (-----" THICK), AS PER PLAN**

**ITEM 848: SURFACE PREPARATION USING HYDRO-DEMOLITION, AS PER PLAN**

**ITEM 848: MICRO-SILICA MODIFIED CONCRETE OVERLAY USING (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN**

**ITEM 848: FULL DEPTH REPAIR, AS PER PLAN**

**ITEM 848: EXISTING CONCRETE OVERLAY REMOVED (-----" SDC), AS PER PLAN**

THESE ITEMS SHALL BE PERFORMED AS PER SUPPLEMENTAL SPECIFICATION: 848 "BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRODEMOLITION" WITH THE FOLLOWING REVISIONS.

(SEE 848.18) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

(SEE 848.21) THE FINAL SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

(SEE 848.23) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF THE OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

(SEE 848.29) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 36 HOURS AND UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 36 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR ID, AS PER CMS 511.14 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACE WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 848.29) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER THE COMPLETION OF THE 36 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI (4.2 MPa).

(SEE 848.30) THE OVERLAY SURFACE EVAPORTION RATE REQUIREMENTS ARE IN EFFECT FROM 11:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:PM TO 11:30 AM.

(SEE 848.31) FOR EACH PHASE, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS, AND THE MODULUSE OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPa). (TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.2 MPa).

ALL COST FOR MATERIAL, LABOR AND INCIDENTAL NECESSARY TO INSTALL #6 SPLICE BARS (NAIL END) SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "MICRO-SILICA CONCRETE OVERLAY USING HYDRO-DEMOTITION (5" THICK AS PER PLAN)"

ALL OTHER REQUIREMENTS OF SS 848 REMAIN IN EFFECT.

PLOT SUBMITTED: 14-MAY-2001 01:16

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si te.dgn

lo y  
PROJECTS  
FROM: i: #PROJ

DESIGN AGENCY: O.D.O.T., DISTRICT 12  
 PRODUCTION DEPARTMENT  
 DATE: VARIES  
 REVISION: M/JM  
 DRAWN: M/JM  
 CHECKED: M/JM  
 GENERAL NOTES  
 CUYAHOCA COUNTY  
 CUY-90-15.24 / VAR  
 4  
 28

\*\*PORTION OF STRUCTURE REMOVED, AS PER PLAN INCLUDES ALL LABOR, ACCESS, AND EQUIPMENT NECESSARY TO REMOVE LOOSE CONCRETE AND FORMING SPALLS FROM AREAS TO RECEIVE CONCRETE SEALING WITH EPOXY-URETHAN

# Estimated Quantities

\* ALL OR A PORTION OF THIS QUANTITY IS SUBJECT TO NON-PERFORMANCE WITHOUT PENALTY TO THE STATE OF OHIO

① CUY-90-1524 IR-90 OVER CUYAHOGA RIVER	② CUY-71-1887 IR-71 OVER I-490	GENERAL
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ITEM	ITEM EXT.	DISCRIPTION	TOTAL	UNIT			
202	54101	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN	18	EACH			18
202	11305	**PORTION OF STRUCTURE REMOVED, AS PER PLAN **	3455	SY	3455		
202	75401	LIGHT POLE REMOVED, AS PER PLAN	27	EACH	27		
625	10500	LIGHT POLE, MISC.:REPLACE LIGHT POLE DESIGN 8 B35.7, TYPE III LUMINAIRE- 200W	56	EACH	56		
625	98000	LIGHTING, MISC.: SERVICE TO TOWER LIGHT	1	EACH	1		
SPECIAL	51912300	*PATCHING CONCRETE BRIDGE DECK - TYPE B	220	S.Y.	200	20	
SPECIAL	51267510	SEALING CONCRETE SURFACES (EPOXY-URETHANE)	3455	S.Y.	3455		
SPECIAL	51273500	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	65,257	S.Y.	65,257		
SPECIAL	51912600	CONCRETE REPAIR BY EPOXY INJECTION	260	L.F.		260	
SPECIAL	53000400	STRUCTURE, MISC.: BACK WALL REPAIR	260	EACH		260	
SPECIAL	53001300	STRUCTURE, MISC.: REPAIR JOINT ARMOR	8	L.F.	8		
SPECIAL	53000400	STRUCTURE, MISC.: ACCESS DOOR REPLACE	16	EACH	16		
516	15000	STRUCTURAL JOINT OR JOINT SEALER, MISC.:SEALING CONTRACTION JOINTS	24	EACH	24		
516	15000	STRUCTURAL JOINT OR JOINT SEALER, MISC.:SEALING CURB AND SIDEWALK CONTRACTION JOINTS	48	EACH	48		
517	76300	RAILING MISC.: RETROFIT 42".	1870	L.F.	1870		
863	95030	STRUCTURAL STEEL, MISC.: CATWALK ACCESS LADDER	1	EACH	1		
863	95000	STRUCTURAL STEEL, MISC.: HANDHOLD BAR AND FOOTHOLD ANGLE	176	L.F.	176		
863	95030	STRUCTURAL STEEL, MISC.: STRINGER FLANGE RETROFIT	13	EACH	13		
516	15000	STRUCTURAL JOINT OR JOINT SEALER, MISC.: LONGITUDINAL TROUGH JOINT SEALER	112	EACH	112		
514	27704	FIELD PAINTING MISC.: FEILD PAINTING OF TESTED AND OR RETROFITTED AREAS		LUMP	LUMP		
514	27710	FIELD PAINTING MISC.: PACK RUST REPAIR AND CAULKING	22,885	L.F.	22,885		
516	15000	STRUCTURAL JOINT OR JOINT SEALER, MISC.: FINGER TYPE EXPANSION JOINT AT PIER 2E1	1	EACH	1		
SPECIAL	60739900	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	1830	L.F.	1830		
848	10001	MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (3/2" )THICK, AS PER PLAN	3965	S.Y.	3965		
848	10001	MICRO-SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (5 " )THICK, AS PER PLAN	629	S.Y.	629		
848	20001	SURFACE PREPERATION USING HYDRODEMOLITION (3/4" ) DEEP, AS PER PLAN	3965	S.Y.	3965		
848	20001	SURFACE PREPERATION USING HYDRODEMOLITION (1" ) DEEP, AS PER PLAN	629	S.Y.	629		
848	30001	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS) AMTERIAL ONLY, AS PER PLAN	45	C.Y.	45		
848	50000	HAND CHIPPING	35	S.Y.	35		
848	50100	TEST SLAB		LUMP	LUMP		
848	50201	FULL DEPTH REPAIR AS PER PLAN	1	C.Y.	1		
848	50321	EXISTING CONCRETE OVERLAY REMOVED (2 3/4" SDC) THICK, AS PER PLAN	3965	S.Y.	3965		
848	50321	EXISTING CONCRETE OVERLAY REMOVED (2 3/4" SDC AND 1 1/4" DECK CONCRETE) THICK, AS PER PLAN	629	S.Y.	629		
621	00200	RAISED PAVEMENT MARKERS INSTALLATION ONLY	11	EACH			11
621	00300	* PRISMATIC RETROFLECTORS	2	EACH			2
614	20200	*TEMPORARY LANE LINE, CLASS I, 740.06, TYPE I	.5	MILE			.5
614	22200	*TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I	.5	MILE			.5
828	10000	EDGE LINE	3.5	MILE			
828	10100	LANE LINE	5	MILE			3.5
828	10300	CHANNELIZING LINE	200	L.F.			5
828	10600	TRANSVERSE LINE	200	L.F.			200
							200
614	11000	MAINTAINING TRAFFIC		LUMP			LUMP
614	11100	LAW ENFORCEMENT OFFICER WITH PATROL CAR	216	HOURL			216
624	10000	MOBILIZATION		LUMP			LUMP
SPECIAL	10000300	PREMIUM ON RAILROADS' PROTECTIVE PUBGLIC LIABILITY AND PROPERTY DAMAGE LIABILITY		LUMP			

Estimated Quantities

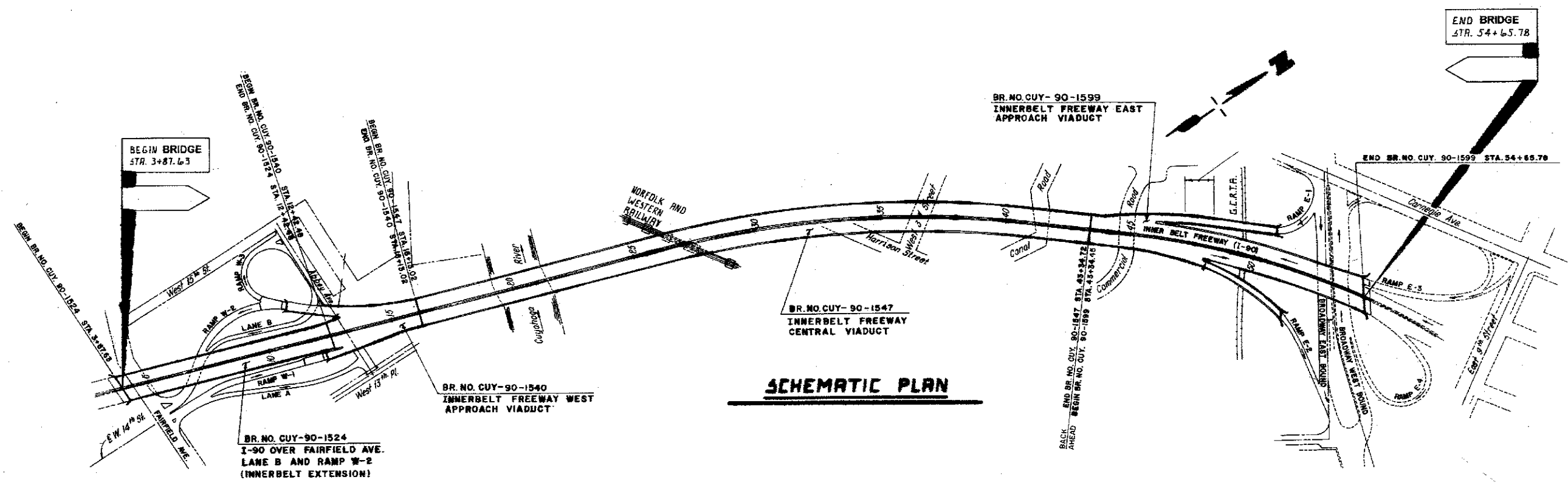
CUY - 90-15.24 / VAR

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EXISTING STRUCTURE
BRIDGE NO. CUY-90-1524
TYPE: CONTINUOUS WELDED STEEL GIRDER AND CONTINUOUS STEEL BEAM WITH REINFORCED DECK AND SUBSTRUCTURE.
SPANS: VARIES - SEE GENERAL PLAN
ROADWAY: TOE TO TOE DEFLECTOR BARRIERS 2 @ 53'-9" - EXISTING 2 @ 52'-9" - PROPOSED
LOADING: CF2000 (S7)
SKEW: VARIES
WEARING SURFACE: DENSE CONCRETE OVERLAY
APPROACH SLABS: AS-1-54 (25'-0" LONG)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE (NORMAL CROWN)

EXISTING STRUCTURE
BRIDGE NO. CUY-90-1540
TYPE: CONTINUOUS STEEL BEAMS AND GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: VARIES - SEE GENERAL PLAN
ROADWAY: TOE TO TOE DEFLECTOR BARRIERS 2 @ 52'-6" VARIES - EXISTING 2 @ 52'-6" VARIES - PROPOSED
LOADING: CF2000
SKEW: VARIES
WEARING SURFACE: DENSE CONCRETE OVERLAY
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
SUPERELEVATION: NONE (NORMAL CROWN)

EXISTING STRUCTURE
BRIDGE NO. CUY-90-1547
TYPE: STEEL DECK TRUSSES WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS: VARIES - SEE GENERAL PLAN
ROADWAY: 2 @ 52'-9" FACE OF CURB TO TOE OF DEFLECTOR BARRIER
LOADING: CF2000
SKEW: VARIES
WEARING SURFACE: LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS: NONE
ALIGNMENT: TANGENT, 1°30' CURVE RIGHT AND TANGENT
SUPERELEVATION: NONE (NORMAL CROWN), VARIES AND NONE (NORMAL CROWN)

EXISTING STRUCTURE
BRIDGE NO. CUY-90-1599
TYPE: CONTINUOUS STEEL BEAMS AND GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS: VARIES - SEE GENERAL PLAN
ROADWAY: 2 @ 52'-6" MINIMUM FACE OF CURB TO TOE OF DEFLECTOR BARRIER
LOADING: CF2000
SKEW: VARIES
WEARING SURFACE: DENSE CONCRETE OVERLAY
APPROACH SLABS: AS-1-54 (25'-0" LONG)
ALIGNMENT: 2° CURVE RIGHT
SUPERELEVATION: VARIES

DESIGN AGENCY  
 O.D.O.T.  
 DISTRICT 12  
 PRODUCTION DEPARTMENT

DATE  
 REVIEWED  
 STRUCTURE FILE NUMBER  
 1809393

DESIGNED  
 CHECKED  
 MUM

REVISIONS

CUY-90-1524  
 SITE PLAN

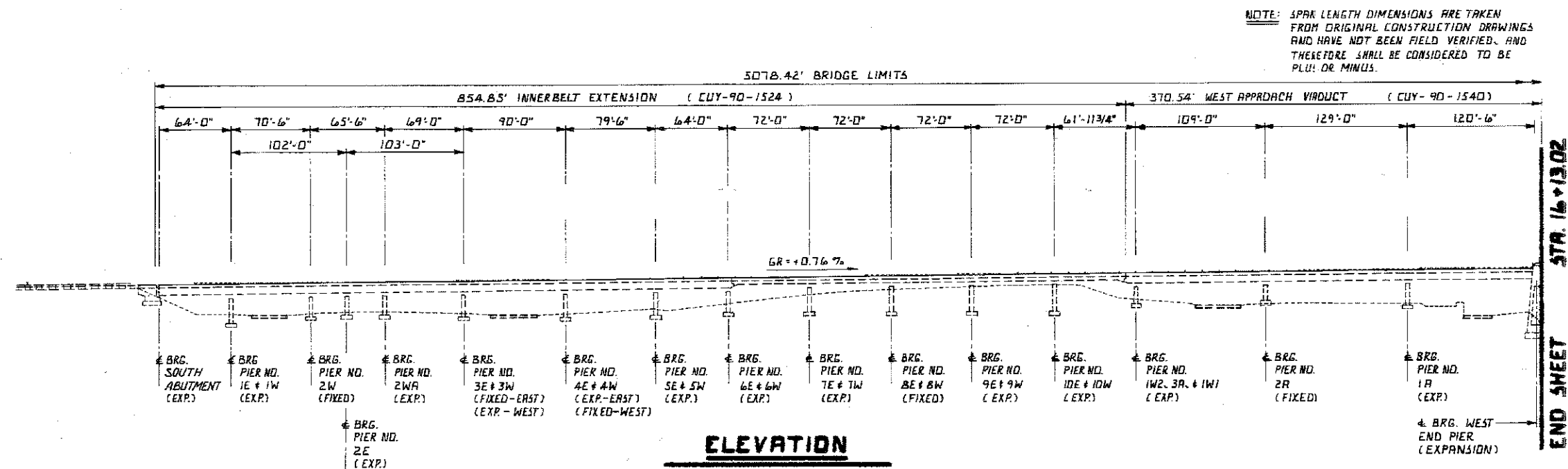
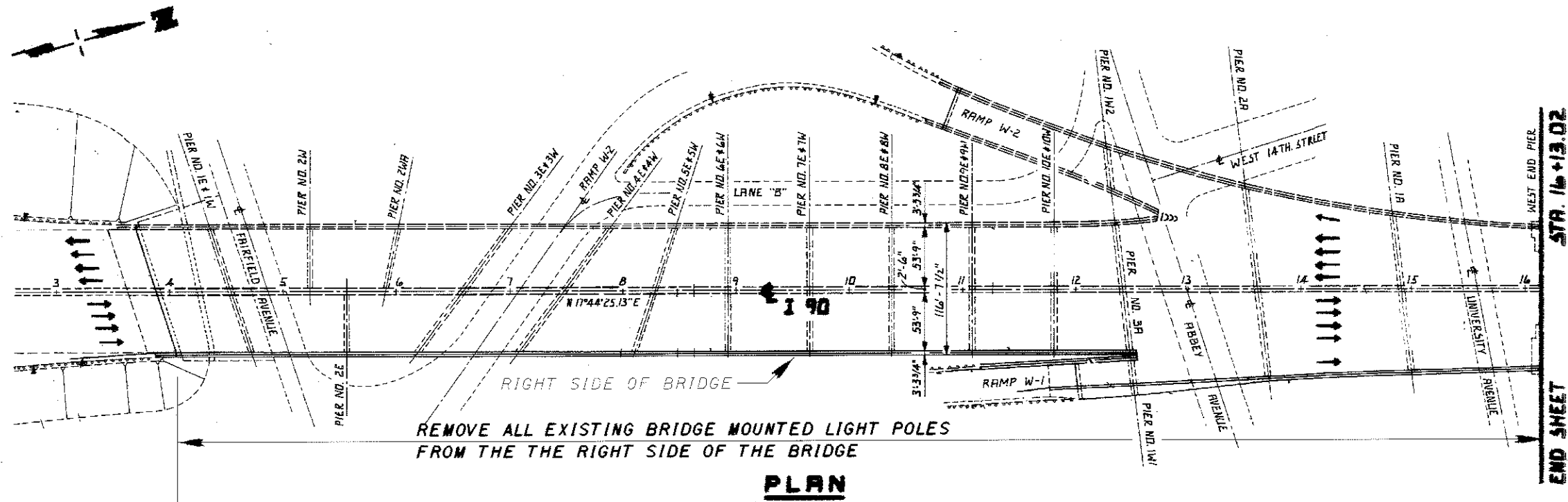
CUYAHOGA COUNTY  
 CUY-90-15-24/ VAR

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NOTE: SPAN LENGTH DIMENSIONS ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED, AND THEREFORE SHALL BE CONSIDERED TO BE PLUS OR MINUS.

- PROPOSED WORK**
- REMOVE ALL LIGHT POLES FROM THE RIGHT SIDE OF THE BRIDGE.
  - PATCH ALL POT HOLES AND ASPHALT PATCHES WITH CONCRETE, AS DIRECTED BY THE ENGINEER
  - AFTER ALL PATCHES ARE CURED, SEAL ENTIRE DECK WEARING SURFACE WITH GRAVITY FED RESIN
  - REPLACE EXISTING PAVEMENT MARKINGS

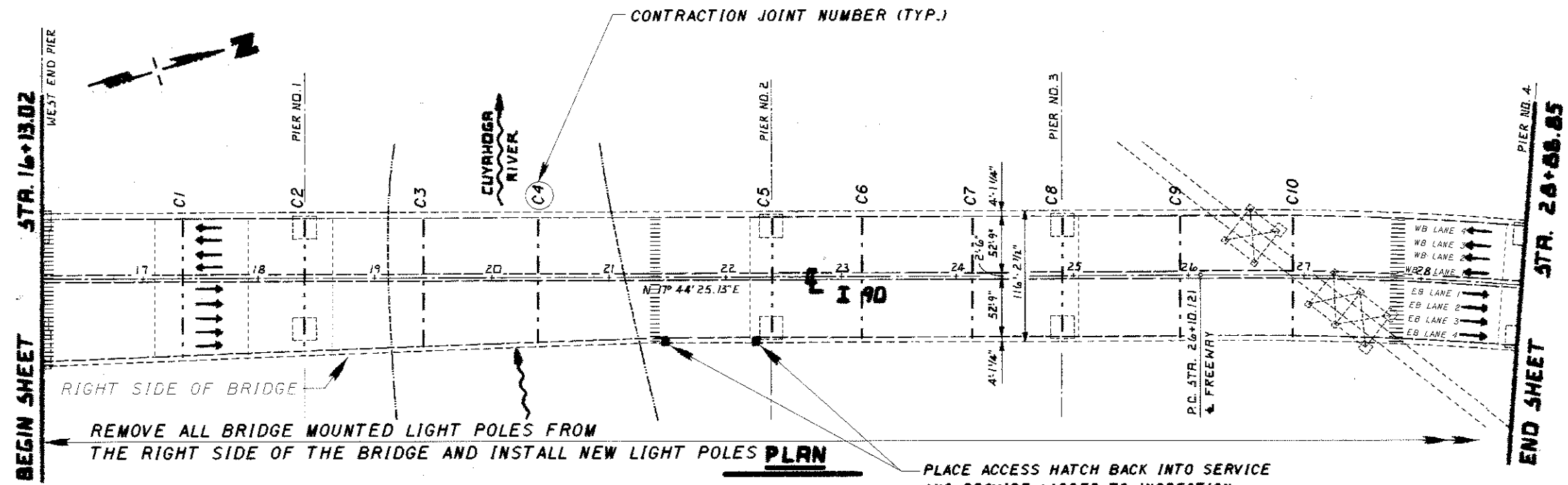


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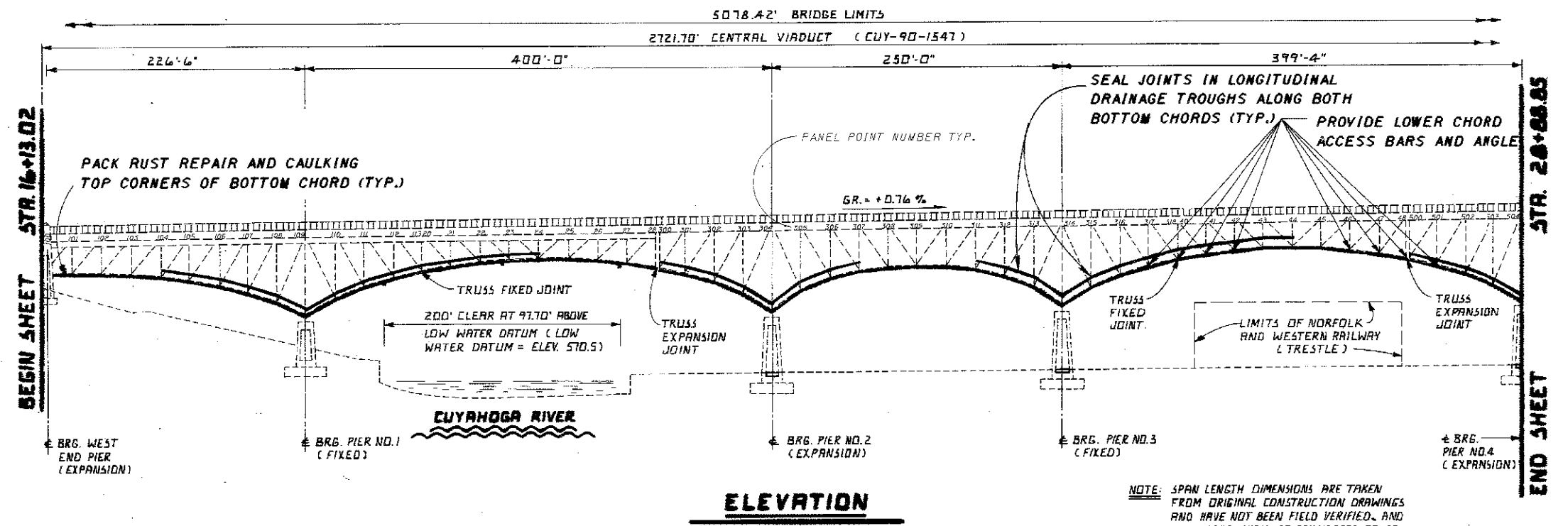
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- CONTRACTION JOINT
- CONTRACTION JOINT AT CROSS DRAIN
- CROSS DRAIN
- ||||| FINGER TYPE EXPANSION JOINT



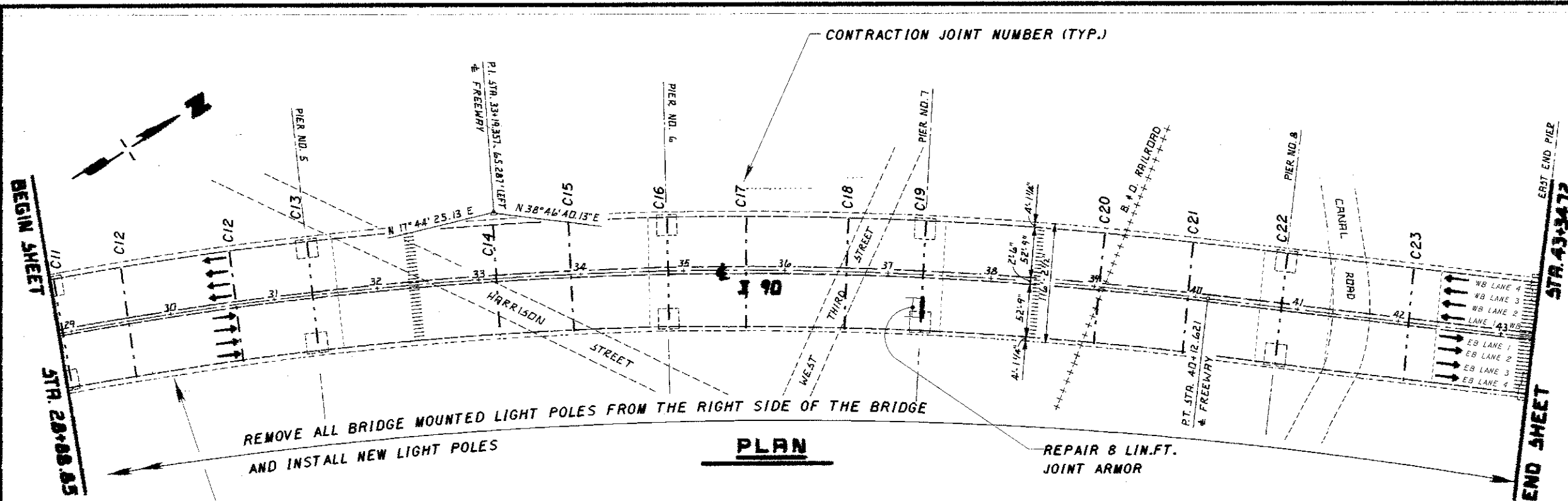
- PROPOSED WORK**
- REMOVE ALL LIGHT POLES FROM RIGHT SIDE OF BRIDGE AND INSTALL NEW LIGHT POLES.
  - PATCH ALL POT HOLES AND ASPHALT PATCHES WITH CONCRETE, AS DIRECTED BY THE ENGINEER.
  - AFTER PATCHING THE DECK, SEAL ENTIRE WEARING SURFACE WITH GRAVITY FED RESIN.
  - REPLACE EXISTING PAVEMENT MARKINGS.
  - SEAL ALL CURB JOINTS
  - REMOVE COPPER WATER STOPS AND SEAL JOINTS IN THE NUMBER 3 AND 4 LANES OF I-90 EAST BOUND ONLY.
  - REPAIR STRINGER CRACKS
  - INSTALL LADDER FOR CATWALK ACCESS AS INDICATED
  - PACK RUST REPAIR AND CAULKING OF TOP CORNERS OF BOTTOM CHORD
  - SEAL JOINTS IN LONGITUDINAL DRAINAGE TROUGHS ALONG BOTTOM CHORD
  - PROVIDE LOWER CHORD ACCESS BARS AND ANGLE AS INDICATED
  - INSTALL NEW PIER ACCESS DOORS

CUYAHOGA COUNTY CUY-90-15.24/VAR	CUY-90-1547 PART 1 SITE PLAN
O.D.O.T. DISTRICT 12 PRODUCTION DEPARTMENT	DATE REVIEWED DRAWN DESIGNED
M/JM M/JM	STRUCTURE FILE NUMBER REVISION CHECKED
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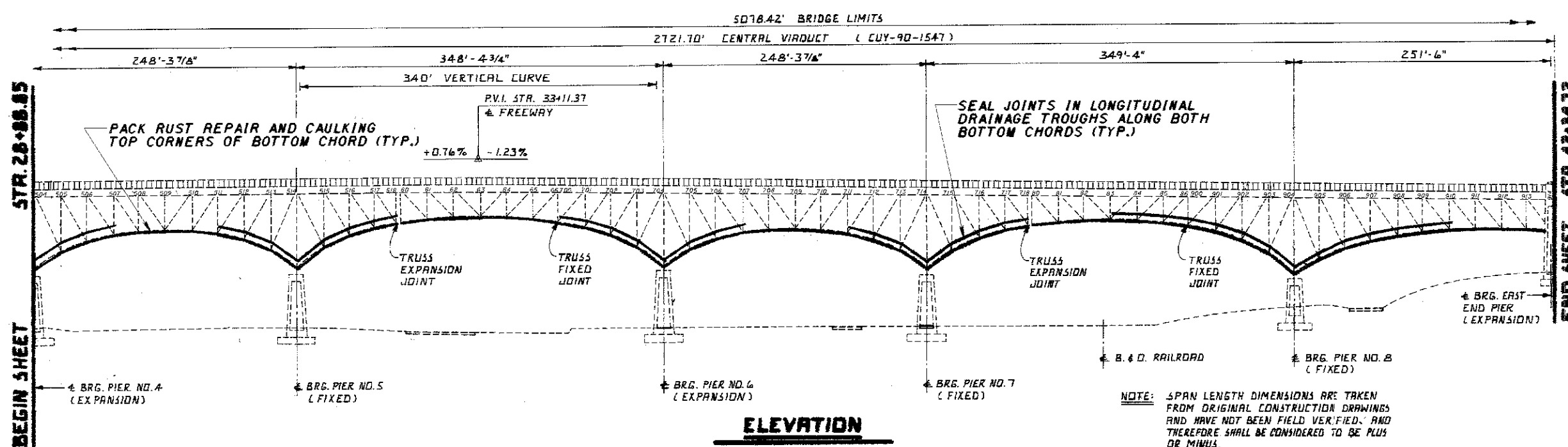
REMOVE ALL BRIDGE MOUNTED LIGHT POLES FROM THE RIGHT SIDE OF THE BRIDGE AND INSTALL NEW LIGHT POLES

**PLAN**

REPAIR 8 LIN.FT. JOINT ARMOR

RIGHT SIDE OF BRIDGE

- PROPOSED WORK**
- REMOVE ALL LIGHT POLES FROM RIGHT SIDE OF BRIDGE AND INSTALL NEW LIGHT POLES.
  - PATCH ALL POT HOLES AND ASPHALT PATCHES WITH CONCRETE, AS DIRECTED BY THE ENGINEER.
  - AFTER PATCHING THE DECK, SEAL ENTIRE WEARING SURFACE WITH GRAVITY FED RESIN.
  - REPLACE EXISTING PAVEMENT MARKINGS.
  - SEAL ALL CURB JOINTS
  - REMOVE COPPER WATER STOPS AND SEAL JOINTS IN THE NUMBER 3 AND 4 LANES OF I-90 WEST BOUND ONLY.
  - REPAIR 8 LIN. FT. OF JOINT ARMOR
  - REPAIR STRINGER CRACKS
  - PACK RUST REPAIR AND CAULKING OF TOP CORNERS OF BOTTOM CHORD
  - SEAL JOINTS IN LONGITUDINAL DRAINAGE TROUGHS ALONG BOTTOM CHORD
  - INSTALL NEW PIER ACCESS DOORS



**ELEVATION**

- CONTRACTION JOINT
- CONTRACTION JOINT AT CROSS DRAIN
- CROSS DRAIN
- ||||| FINGER TYPE EXPANSION JOINT

**NOTE:** SPAN LENGTH DIMENSIONS ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED; AND THEREFORE SHALL BE CONSIDERED TO BE PLUS OR MINUS.

DESIGN AGENCY O.D.O.T. DISTRICT 12 PRODUCTION DEPARTMENT	DATE	REVIEWED	DATE	REVIEWED
STRUCTURE FILE NUMBER 1809393		MJM		MJM
		CHECKED		

**CUY-90-1547 PART 2  
SITE PLAN**

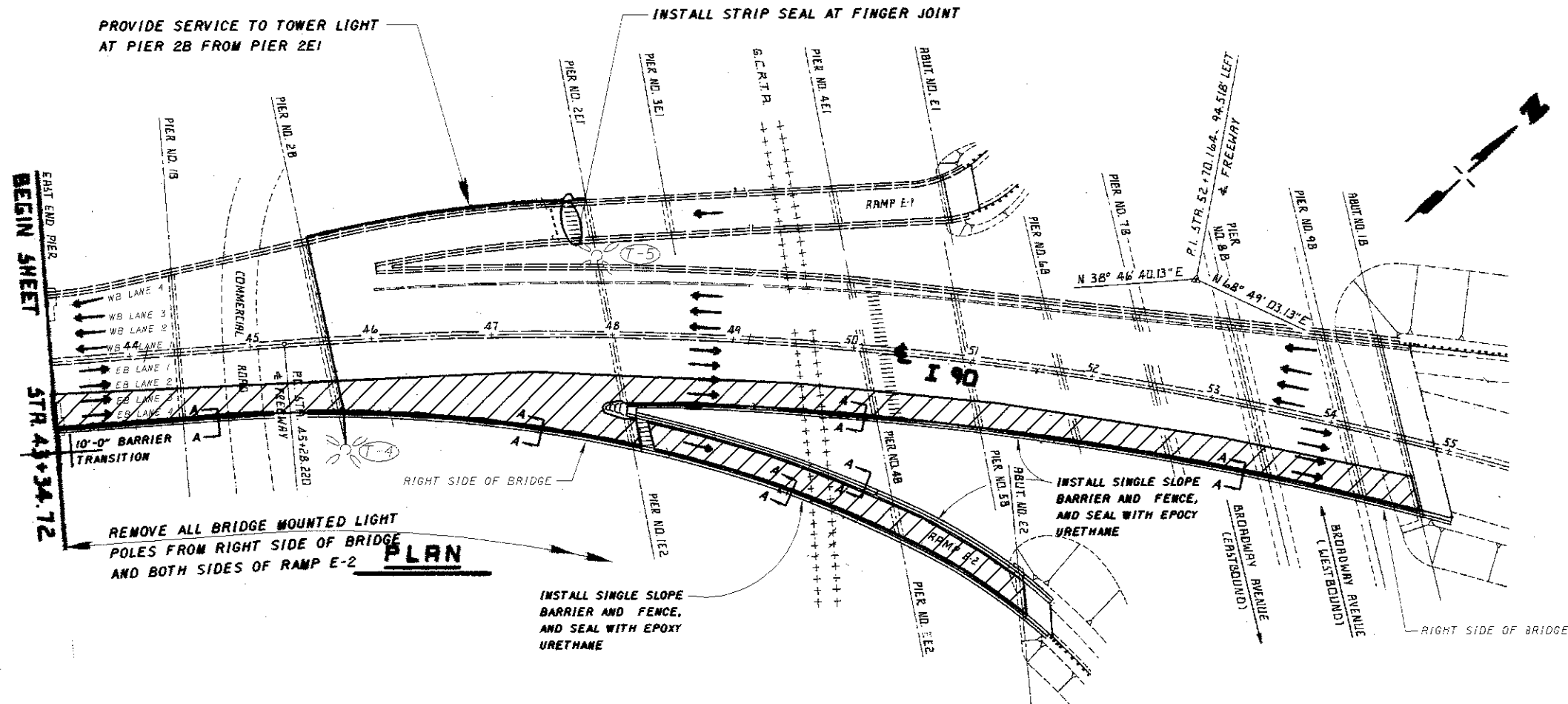
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CUY-90-15.24/VAR

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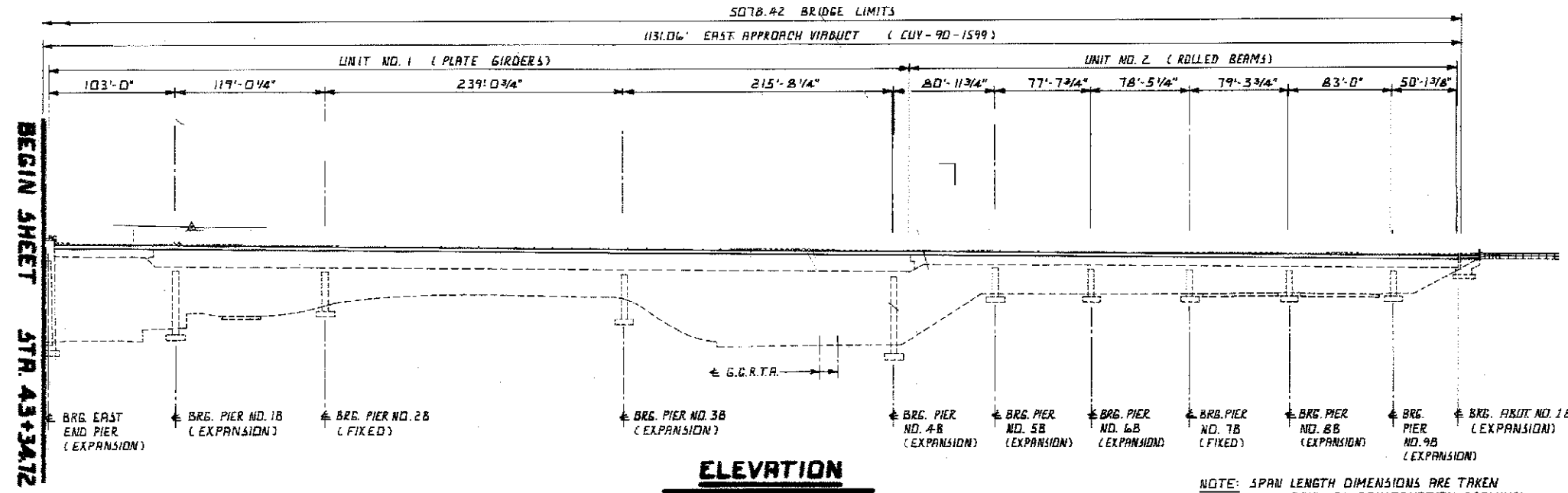
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----- CROSS DRAIN  
 ||||| FINGER TYPE EXPANSION JOINT

- PROPOSED WORK**
- REMOVE ALL BRIDGE MOUNTED LIGHT POLES FROM RIGHT SIDE OF BRIDGE
  - REMOVE EXISTING WEARING SURFACE FROM OLD PORTION OF THE DECK (PRIMARILY THE EB NUMBER 3 AND 4 LANES AND RAMP E-2), CONNECT TOP MATT OF DECK MECHANICAL CONNECTORS TO EXISTING NEWER DECK, AND OVERLAY WITH MICRO SILICA CONCRETE
  - INSTALL NEW SINGLE SLOPE BARRIER ON THE RIGHT SIDE OF THE BRIDGE
  - INSTALL NEW 6 FOOT TALL STRAIGHT VPF ON THE RIGHT SIDE OF THE BRIDGE.
  - REMOVE ALL LOOSE CONCRETE AND FORMING SPALLS (SHOWING AN EDGE) FROM THE CANTILEVER PORTION OF THE RIGHT SIDE OF THE BRIDGE.
  - SEAL WITH EPOXY-URETHANE THE NEW SINGLE SLOPE BARRIER, AND CANTILEVER PORTION OF THE OUTSIDE DECK EDGE ON THE RIGHT SIDE OF THE BRIDGE
  - PROVIDE SERVICE TO LIGHT TOWER AT PIER 2B FROM PIER 2E1
  - INSTALL STRIP SEAL AT FINGER TYPE EXPANSION JOINT ADJACENT TO PIER 2E1



NOTE: SPAN LENGTH DIMENSIONS ARE TAKEN FROM ORIGINAL CONSTRUCTION DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED, AND THEREFORE SHALL BE CONSIDERED TO BE PLUS OR MINUS.

▨ AREA TO RECEIVE NEW CONCRETE OVERLAY

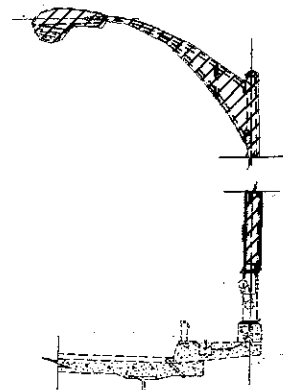
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 DISTRICT 12  
 PRODUCTION DEPARTMENT

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
CUY-90-1599  
 SITE PLAN

CUYAHOGA COUNTY  
 CUY-90-15.24/VAR

LIGHTING REMOVAL DETAILS  
 CUY-90-1524, 1540, AND 1599  
 (RIGHT SIDE ONLY)



TYPICAL SECTION AT LIGHTING UNIT ON APPROACH BRIDGES 1524, 1540 & 1599

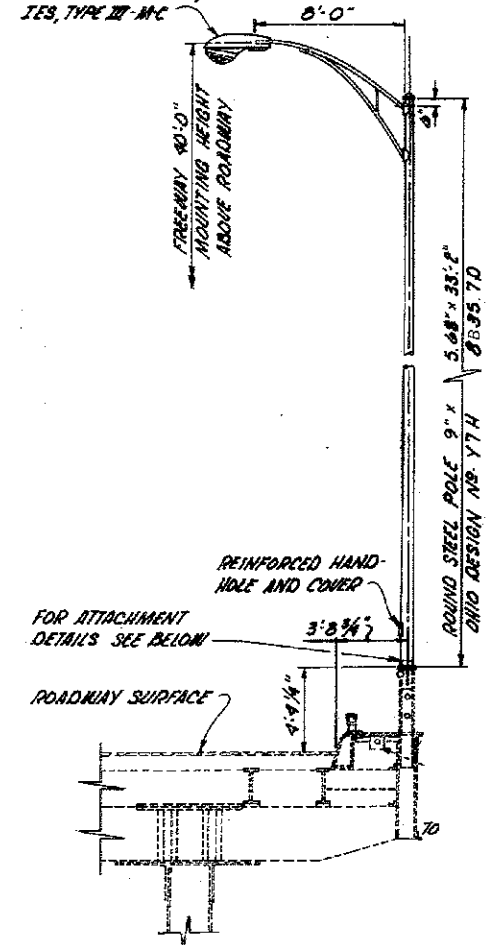
 AREA TO BE REMOVED

LIGHTING DETAILS CUY-90-1547  
 (RIGHT SIDE ONLY)

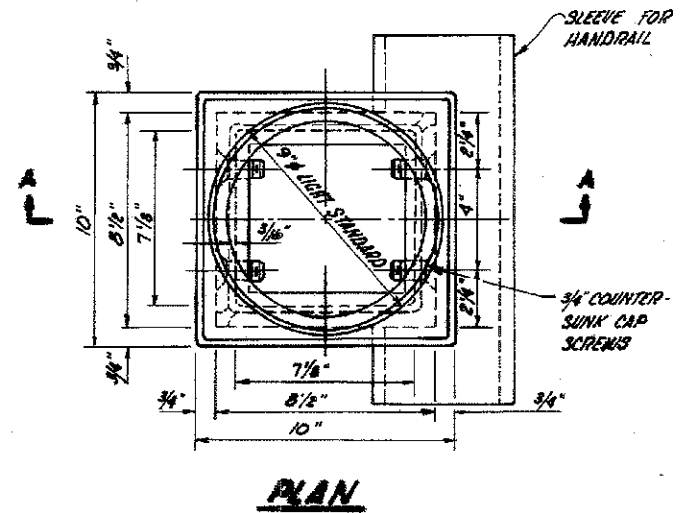
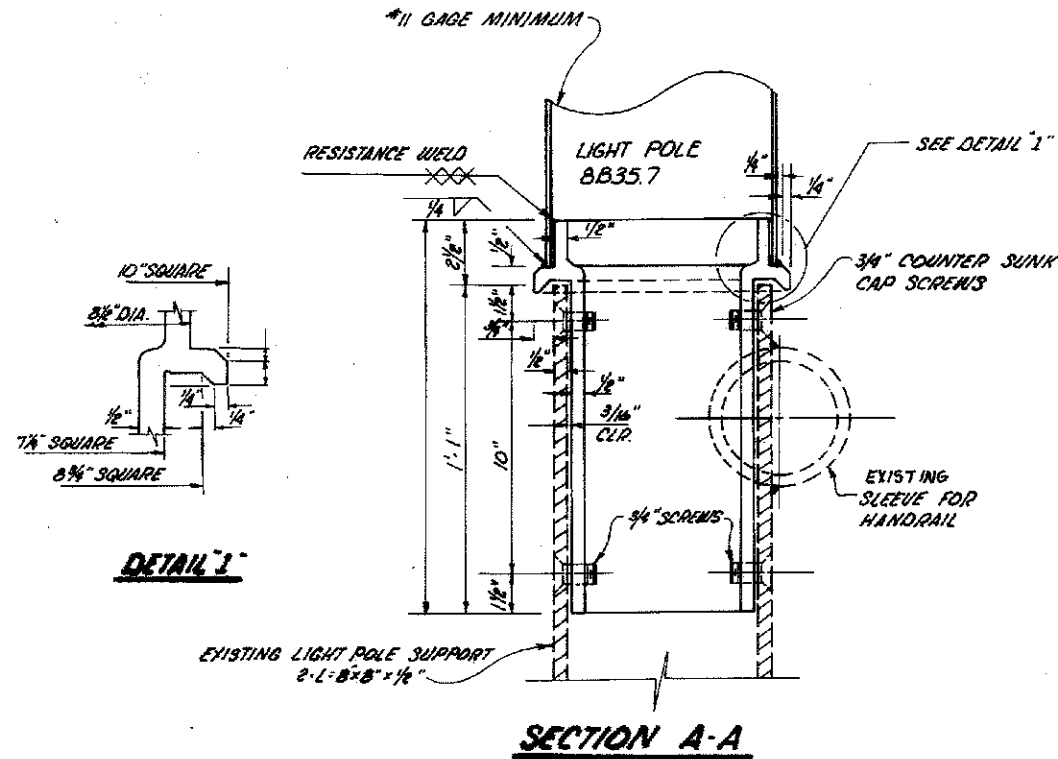
NOTES

- EXISTING POLE LOCATIONS WILL BE REUSED ON STRUCTURES.

TYPICAL 200 WATT HPS LUMINAIRE WITH INTEGRAL BALLAST FOR LAMP, ANSTIES, TYPE III-MFC



TYPICAL LIGHTING UNIT ON STR I-90-1547  
 (LIGHT POLE BB35.7)



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REGIONAL AGENCY  
 O.D.O.T.  
 DISTRICT 12  
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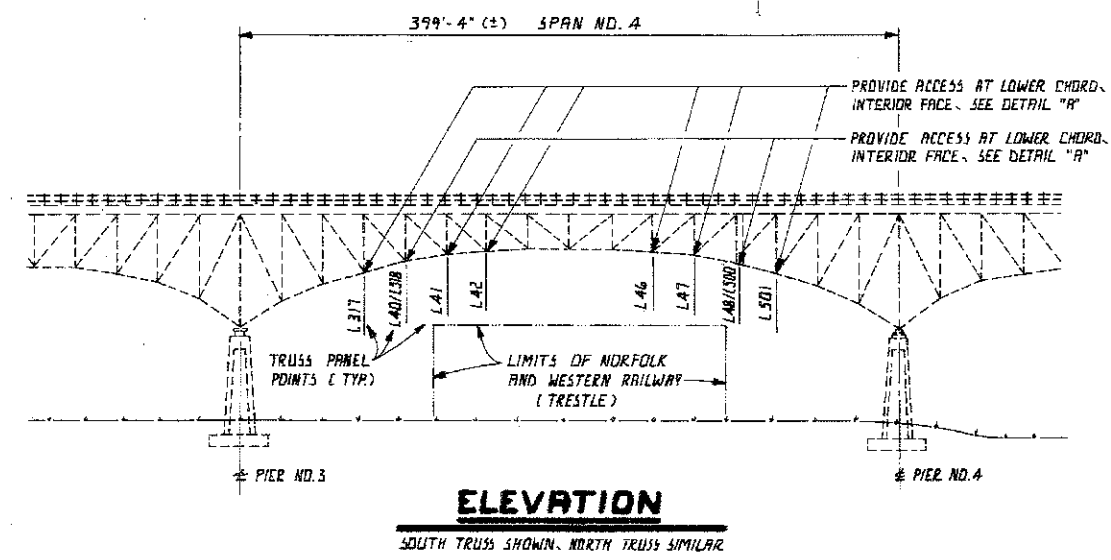
CUY-90-1524, 1540/1547/1599  
 LIGHTING DETAILS

CUYAHOGA COUNTY  
 CUY-90-15.24/VAR

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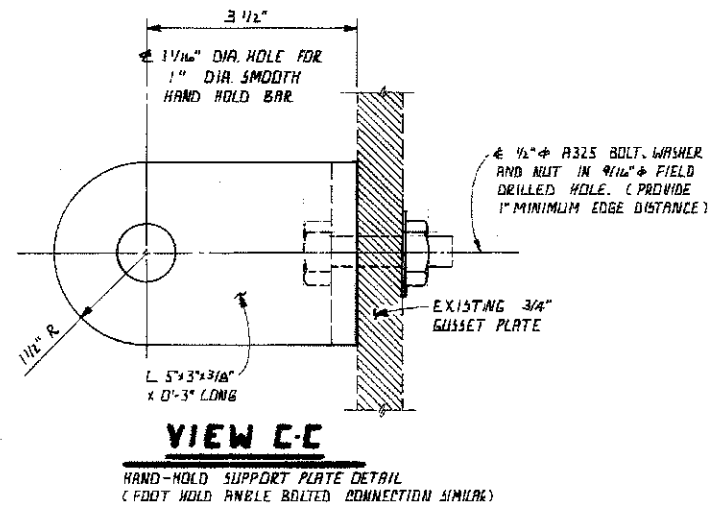
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**ELEVATION**

SOUTH TRUSS SHOWN, NORTH TRUSS SIMILAR



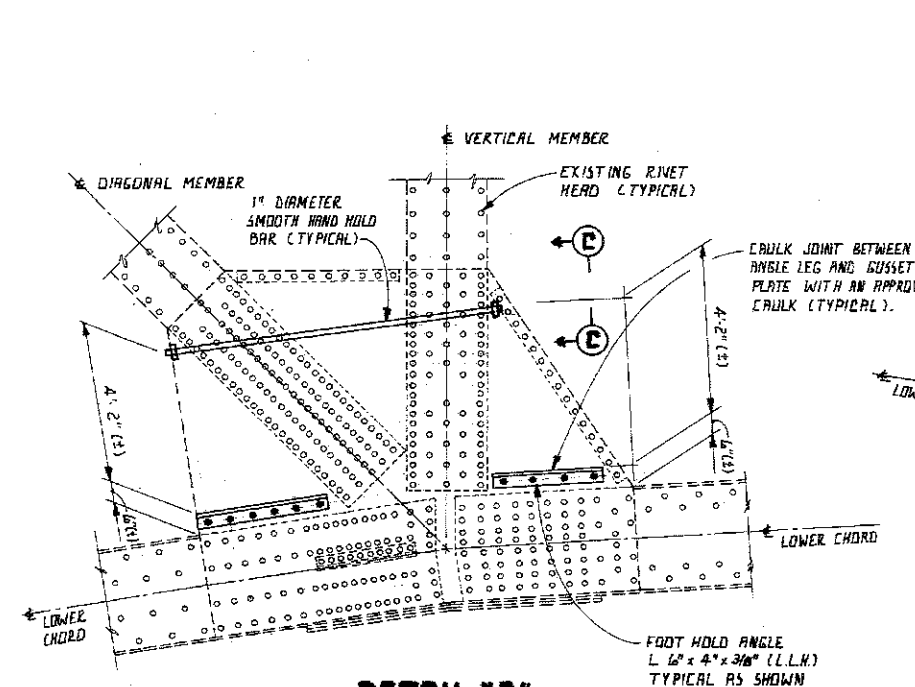
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HAND-HOLD SUPPORT PLATE DETAIL  
 (FOOT HOLD ANGLE BOLTED CONNECTION SIMILAR)

**NOTES:**

HAND HOLD BARS AND FOOT-HOLD ANGLES SHALL BE AS LONG AS PRACTICAL. EXACT LENGTHS SHALL BE DETERMINED BY FIELD CONDITIONS. EXACT LOCATIONS MAY BE ADJUSTED BY THE ENGINEER TO PROVIDE MAXIMUM EASE OF ACCESS FOR BRIDGE INSPECTION.

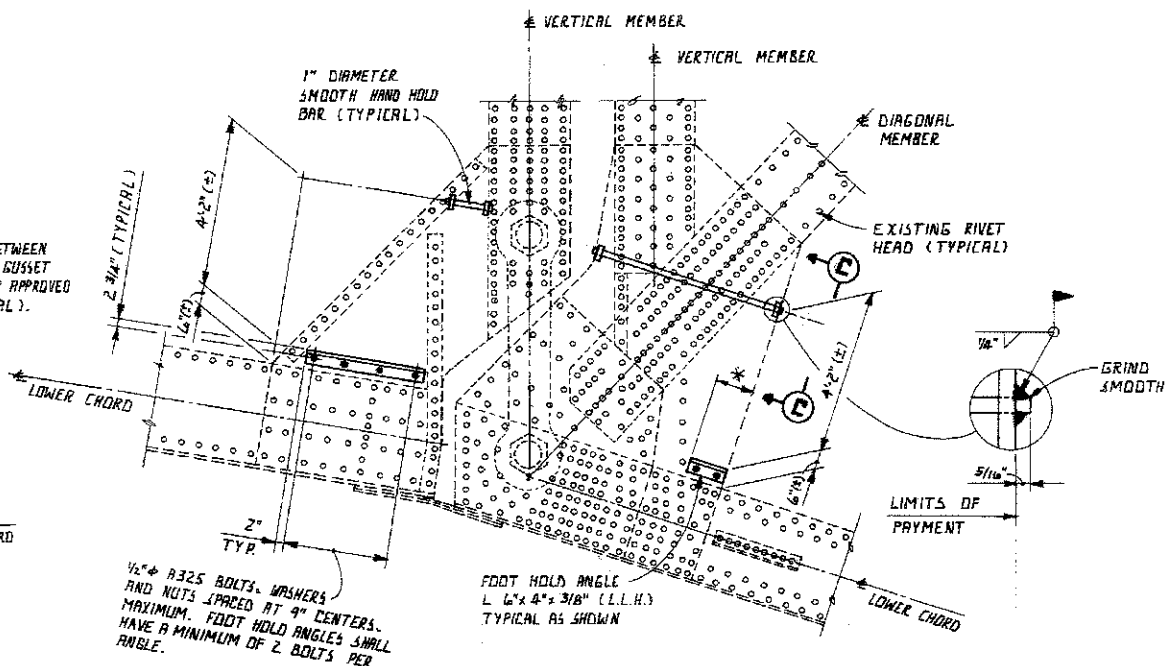
PAYMENT FOR ALL LABOR, MATERIAL (INCLUDING SUPPORT PLATES), EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETELY FURNISH AND INSTALL THE HAND HOLD BARS AND FOOT HOLD ANGLES, AS SHOWN ON THE PLANS, SHALL BE INCLUDED IN THE UNIT PRICE BID, PER LINEAL FOOT OF ITEM 863 "STRUCTURAL STEEL, MISCELLANEOUS: (HAND HOLD BARS AND FOOT-HOLD ANGLES) AS PER PLAN".



**DETAIL "A"**

L41, NORTH TRUSS, SHOWN. L41 SOUTH TRUSS, L317, L42, L46, L47 AND L501 NORTH AND SOUTH TRUSS SIMILAR.  
 FOR DETAILS AND CALL-OUTS NOT SHOWN, SEE DETAIL "B", THIS SHEET.

\* MINIMUM LENGTH OF FOOT HOLD ANGLE IS 1'-0", TYPICAL.



**DETAIL "B"**

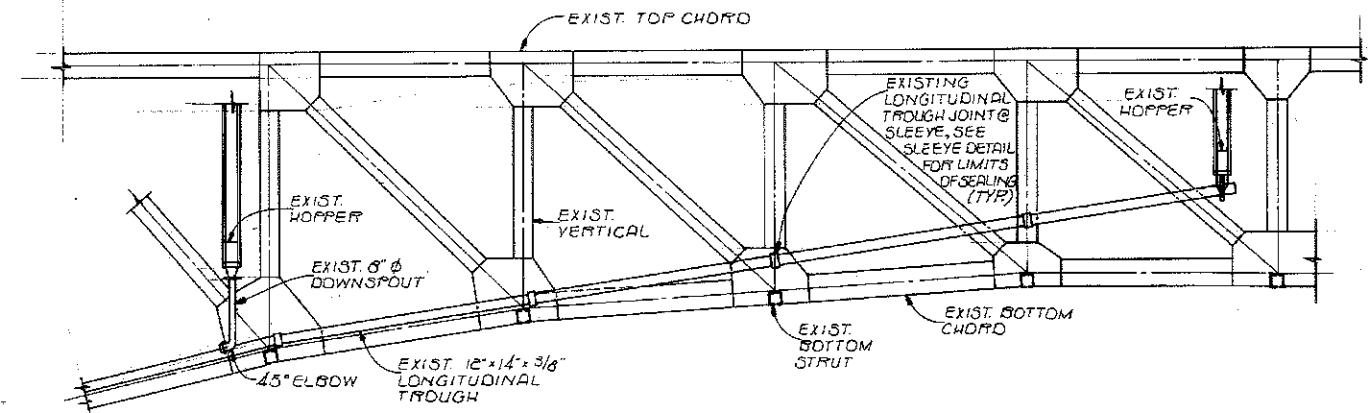
L48 / L500, NORTH TRUSS, SHOWN. L48 / L500, SOUTH TRUSS AND L318 / L40 NORTH AND SOUTH TRUSS SIMILAR.

RESUBMIT  
 O.D.O.T.  
 DISTRICT 12  
 PRODUCTION DEPARTMENT

DATE	REVIEWED	DRAWN	CHECKED
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		STRUCTURE FILE NUMBER	1809393

CUY-90-1547  
 HAND HOLD DETAILS

CUYAHOGA COUNTY  
 CUY-90-15.24/Vor



**TYPICAL LONGITUDINAL TROUGH ELEVATION**  
(NORTH TRUSS SHOWN, SOUTH TRUSS SIMILAR)

**NOTES:**

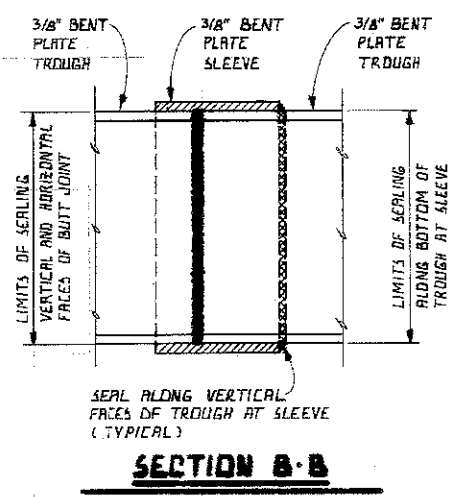
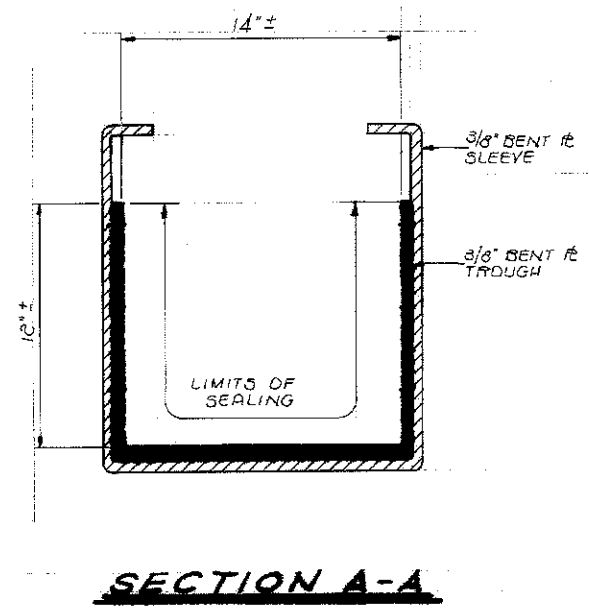
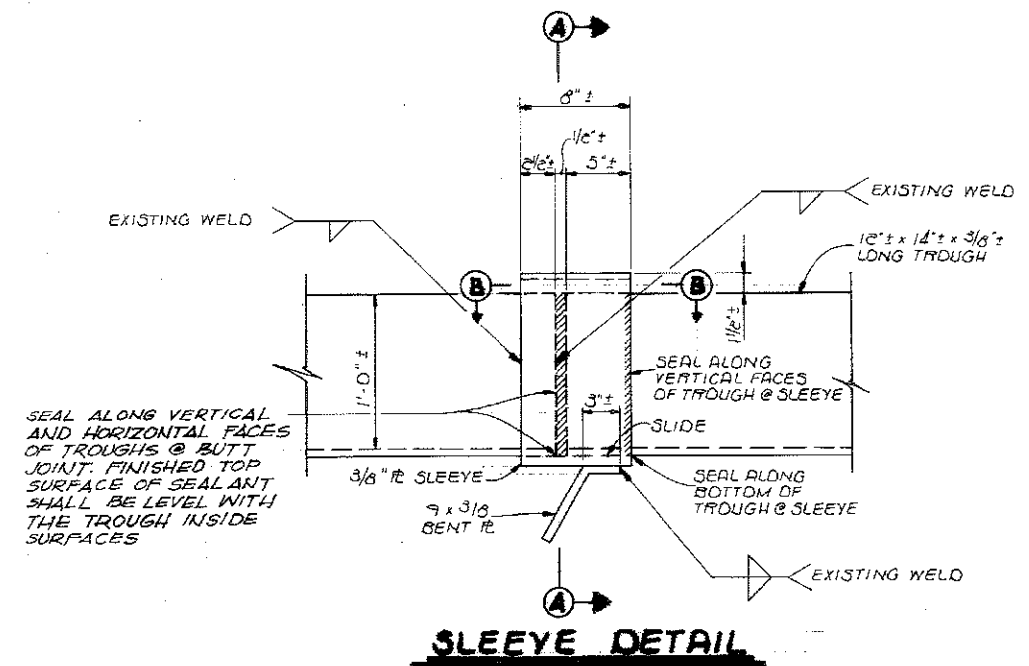
ALL LONGITUDINAL TROUGH JOINTS SHALL BE SEALED WITH A FLEXIBLE SEALANT TO STOP LEAKING. THE JOINTS ARE LOCATED AT EACH PANEL POINT.

IMMEDIATELY PRIOR TO SEALING, THE VERTICAL AND HORIZONTAL FACES OF THE TROUGH ENDS TO WHICH THE SEALER MUST BOND SHALL BE THOROUGHLY CLEANED OF ALL PAINT, RUST, AND DEBRIS BY VACUUM ABRASIVE BLASTING TO SURFACE PREPARATION GRADE SA 2 1/2, SSPC-SP10. THESE SURFACES SHALL BE CLEAN, DRY, SOUND AND ABOVE 40 DEGREES FAHRENHEIT WHEN THE SEALER AND/OR PRIMER ARE APPLIED.

THE MATERIAL FOR THIS ITEM IS A TWO-PART, COLD APPLIED, CHEMICALLY-CURING, NON-SAG, ELASTOMERIC, POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-5-0027E AND ASTM C920. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.

THE COST FOR ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM OF WORK INCLUDING CLEANING AND PAINTING SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH LONGITUDINAL TROUGH JOINT LOCATION UNDER ITEM 516 - "STRUCTURAL JOINT OR JOINT SEALER - MISC. - LONGITUDINAL TROUGH JOINT SEALER AS PER PLAN".

FOR SLEEVE DETAIL, SEE SHEET



**NOTES:**

**ITEM 514 -FIELD PAINTING MISC.: PACK RUST REPAIR AND CAULKING**

**DESCRIPTION**

THIS ITEM SHALL INCLUDE THE REPAIR OF PACK-RUSTED AREAS AND THE CAULKING OF JOINTS BETWEEN ADJACENT STEEL PIECES OF BUILT-UP MEMBERS AS SHOWN IN THE PLANS AND DIRECTED BY THE ENGINEER. PACK-RUSTED AREAS ARE WHERE THE ADJACENT STEEL PLATES ARE FORCED APART MORE THAN 1/8" (ONE-EIGHTH INCH).

PACK RUST REMOVAL, ABRASIVE BLASTING OF THE JOINT AND APPLICATION OF THE PRIME COAT ACCORDING TO THE OZEU SPECIFICATION SHALL BE COMPLETED BEFORE CAULKING OF THE JOINT IS PERFORMED. THE OZEU INTERMEDIATE COAT SHALL BE APPLIED AFTER THE CAULKING MATERIAL HAS INITIALLY CURED AND BEFORE IT IS FULLY CURED ACCORDING TO THE CAULKING SPECIFICATIONS.

**SURFACE PREPARATION**

PORTIONS OF JOINTS THAT HAVE PACK-RUST SHALL RECEIVE PREPARATION IN ADDITION TO THE ABRASIVE BLAST REQUIRED BY THE OZEU SPECIFICATION. PACK RUST SHALL BE REMOVED FROM JOINTS FORCED APART MORE THAN 1/4" (ONE-QUARTER INCH) BY CHIPPING, HAMMERS, PUNCHING, CHISELING OR BY OTHER SUITABLE MEANS TO A DEPTH AT LEAST EQUAL TO THE WIDTH OF THE GAP PRIOR TO ANY ABRASIVE BLASTING. ALL AREAS RECEIVING PACK RUST REPAIR SHALL BE CLEANED BY ABRASIVE BLASTING TO THE NEAR-WHITE SURFACE PREPARATION GRADE (SA 2 1/2, SSPC - SP10), MAKING SURE THAT THE AREAS WITH GAPS FROM 1/8" TO 1/4" ARE CLEANED TO A DEPTH AT LEAST EQUAL TO THE GAP WIDTH. THE JOINTS SHALL THEN BE CLEANED OF ALL DUST AND DEBRIS TO THE SATISFACTION OF THE ENGINEER. THE PRIME COAT SHALL BE APPLIED TO THE JOINT ACCORDING TO THE OZEU SPECIFICATION. THE PRIME COAT SHALL BE FREE OF SOLVENT BUT NOT FULLY CURED, ACCORDING TO THE COATING SPECIFICATIONS, WHEN THE CAULKING IS APPLIED.

**MATERIALS:**

THE CAULKING MATERIAL SHALL BE A TWO-COMPONENT, 100% SOLIDS, NON-SAG, NON-SHRINK, EPOXY BASED SYSTEM, CAPABLE OF FILLING THE GAPS CREATED BY THE PACK RUST REMOVAL. THE CAULKING MATERIAL SHALL HAVE A GEL OR PASTE CONSISTENCY, HAVE AN EXCELLENT ADHESION TO THE OZEU PRIME COAT, AND BE SUITABLE FOR APPLICATION TO VERTICAL AND OVERHEAD AREAS. THE EPOXY SYSTEM SHALL BE TESTED PRIOR TO USE.

WHEN MANUFACTURED, THE FORMULATIONS SHALL CONTAIN NO UNREACTIVE DILUENTS, SOLVENTS, OR OTHER FILLERS. THE CAULKING MATERIAL SHALL CONFORM TO THE FOLLOWING PERFORMANCE REQUIREMENTS:

- A. TENSILE PROPERTIES (ASTM D-638)
  - 1. TENSILE ULTIMATE STRENGTH (14 DAY)....4000 psi (min)
  - 2. TENSILE ELONGATION AT BREAK.....1.3% - 2.5%
  - 3. TENSILE MODULUS OF ELASTICITY.....250,000 psi (min)
- B. BOND STRENGTH (ASTM C-882)
  - 1. 2-DAY DRY CURE CAULKING TO STEEL...2600 psi (min)
- C. HEAT DEFLECTION TEMPERATURE (ASTM D-648)
  - 1. 7-DAY, FIBER STRESS LOADING = 264 psi.....120F
- D. WATER ABSORPTION (ASTM D-570)
  - 1. 7 DAY, 24 HOUR IMMERSION.....0.6% (max)
- E. FLEXURAL PROPERTIES (ASTM D-790)
  - 1. FLEXURAL STRENGTH (14 DAY).....6500 psi (min)
  - 2. TANGENT MODULUS OF ELASTICITY  
IN BENDING.....700,000 psi

THE CAULKING MATERIAL PROPOSED FOR USE SHALL BE PREQUALIFIED. PRIOR TO APPROVAL, COPIES OF THE MANUFACTURER'S CERTIFIED TEST DATA SHOWING THAT THE EPOXY SYSTEM COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF THIS SPECIFICATION SHALL BE SUBMITTED TO THE OFFICE OF MATERIAL MANAGEMENT, 160 W. BROAD ST., COLUMBUS, OHIO 44223. THE CERTIFIED TEST DATA SHALL ALSO STATE THE FOLLOWING PHYSICAL PROPERTIES FOR COMPONENT A, COMPONENT B, AND THE MIXTURE:

- 1. COLOR
- 2. PERCENT SOLIDS
- 3. SHELF LIFE
- 4. VISCOSITY (CPS)
- 5. MIXING RATIO
- 6. POT LIFE
- 7. GEL TIME
- 8. CONSISTENCY

THE TEST DATA SHALL BE DEVELOPED BY AN INDEPENDENT TESTING LABORATORY APPROVED BY THE OFFICE OF MATERIAL MANAGEMENT AND SHALL INCLUDE THE BRAND NAME OF MANUFACTURER, NUMBER OF LOTS TESTED, AND DATE OF MANUFACTURE.

THE FOLLOWING ITEMS SHALL ALSO BE SUBMITTED TO THE OFFICE OF MATERIAL MANAGEMENT PRIOR TO APPROVAL:

- 1. MANUFACTURER'S TECHNICAL DATA SHEET FOR EACH COMPONENT.
- 2. MATERIAL SAFETY DATA SHEET FOR EACH COMPONENT.
- 3. ENOUGH COMPONENTS TO PRODUCE A QUART SAMPLE OF CAULKING.
- 4. A ONE QUART SAMPLE OF THE SOLVENT TO BE USED FOR CLEANUP.

WHEN THE CAULKING MATERIAL HAS BEEN APPROVED BY THE OFFICE OF MATERIAL MANAGEMENT, FURTHER PERFORMANCE TESTING BY THE MANUFACTURER WILL NOT BE REQUIRED UNLESS THE FORMULATION OR MANUFACTURING PROCESS HAS BEEN CHANGED, IN WHICH CASE NEW CERTIFIED TEST RESULTS WILL BE REQUIRED. ACCEPTANCE VARIANCES SHALL BE ESTABLISHED BY THE OFFICE OF MATERIAL MANAGEMENT.

THE CONTRACTOR SHALL FURNISH THE ENGINEER A COPY OF THE MANUFACTURER'S COMPREHENSIVE JOB SPECIFIC PREPARATION, MIXING AND APPLICATION INSTRUCTIONS. ANY SIGNIFICANT CHANGES TO THESE INSTRUCTIONS WHICH ARE RECOMMENDED BY THE REPRESENTATIVE FOR AN UNANTICIPATED SITUATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE ADOPTION OF SUCH CHANGES.

**APPLICATION**

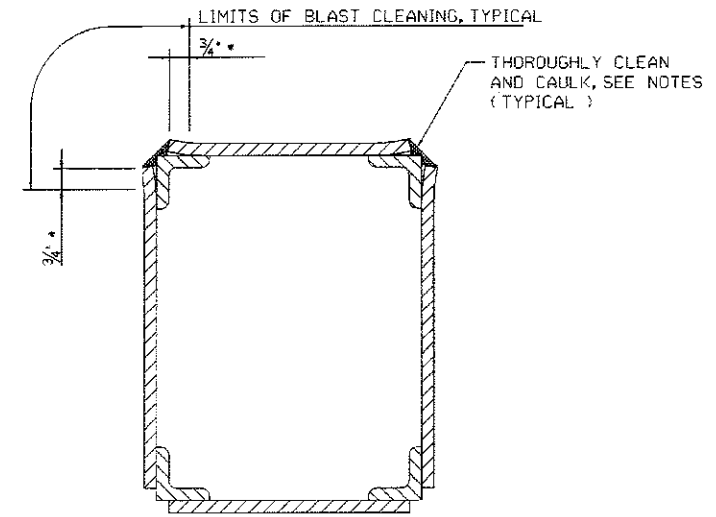
THE CAULKING SHALL BE APPLIED EVENLY TO THE JOINTS AND GAPS AS DEPICTED IN TYPICAL PLAN DETAILS. VOIDS SHALL BE COMPLETELY FILLED WITH CAULKING WHICH SHALL BE APPLIED BY TROWEL OR CAULKING GUN AND SHALL BE SPREAD SMOOTHLY USING PRESSURE SUFFICIENT TO DISPLACE AIR BUBBLES. EXCESS MATERIAL SHALL BE REMOVED IMMEDIATELY. ALL PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE CAULKING MANUFACTURER WHO SHALL PROVIDE A TECHNICAL REPRESENTATIVE AT THE SITE AS REQUIRED BY THE PROJECT ENGINEER.

**PAYMENT**

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE REMOVAL OF THE PACK RUST, SURFACE PREPARATION AND THE FURNISHING & INSTALLATION OF THE CAULKING SHALL BE INCLUDED FOR PAYMENT IN THE BID PRICE PER LINEAR FOOT FOR PACK RUST REPAIR AND CAULKING.

PAYMENT FOR COMPLETE IN PLACE & ACCEPTED QUANTITIES OF PACK RUST REPAIR & CAULKING SHALL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
514	LIN. FT.	FIELD PAINTING MISC.: PACK RUST REPAIR AND CAULKING, AS PER PLAN



**TYPICAL BOTTOM CHORD SECTION**

PLOT SUBMITTED: 14-MAY-2001 01:42

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PLOTTED FROM: i:\PROJECTS\pi\d21563\11.dgn

DESIGN AGENCY  
O.D.O.T.  
DISTRICT 12  
PRODUCTION DEPARTMENT

DATE  
REVIEWED  
DRAWN  
M.J.M.  
DESIGNED  
M.J.M.  
CHECKED

STRUCTURE FILE NUMBER  
1809393

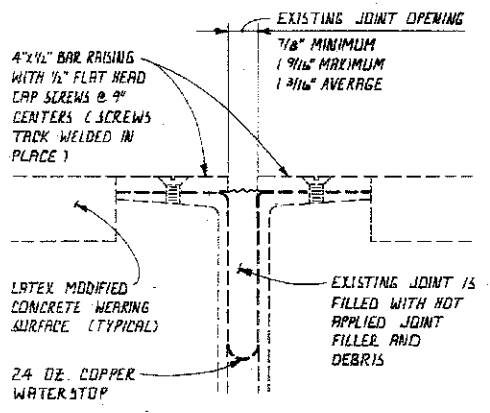
CUY-90-1547  
PACK RUST REPAIR DETAILS

CUYAHOGA COUNTY  
CUY-90-15.24/Vof

PLOT SUBMITTED: 14-MAY-2001 01:44

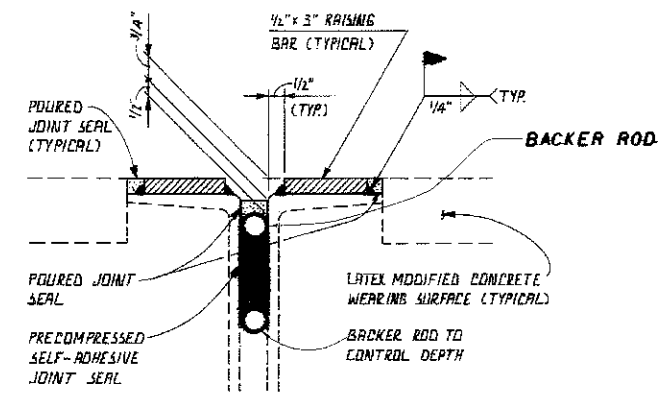
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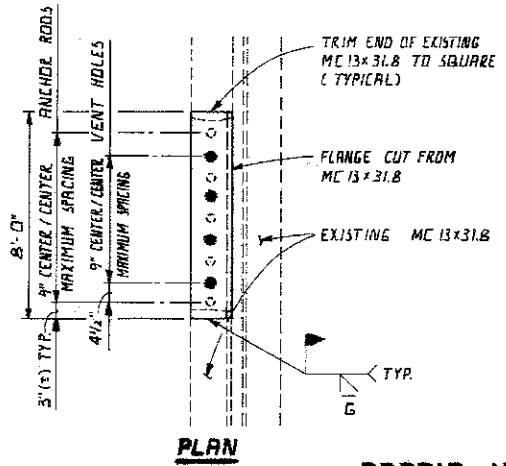
**EXISTING CONTRACTION JOINT**

REMOVE 4"x1/2" BAR RAISINGS, JOINT FILLER, DEBRIS, AND COPPER WATERSTOP.



**MODIFIED CONTRACTION JOINT**

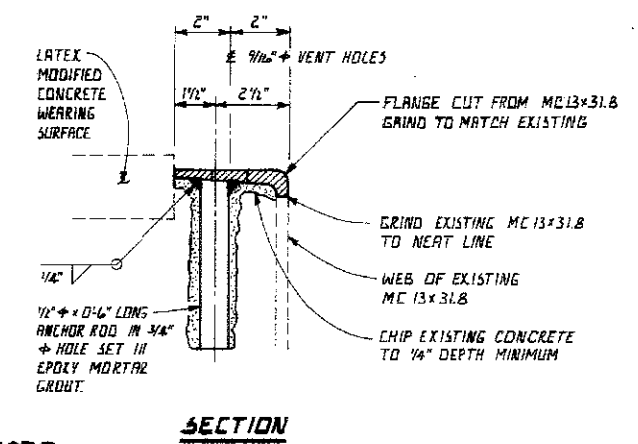
CLEAN JOINT BY SANDBLASTING, INSTALL BACKER ROD, PRECOMPRESSED SELF-ADHESIVE JOINT SEAL, RAISING BARS AND POURED JOINT SEAL. JOINTS IN PROPOSED BAR RAISING SHALL OVERLAP JOINTS IN MC13x31.8 FLANGE BY 6" MINIMUM.



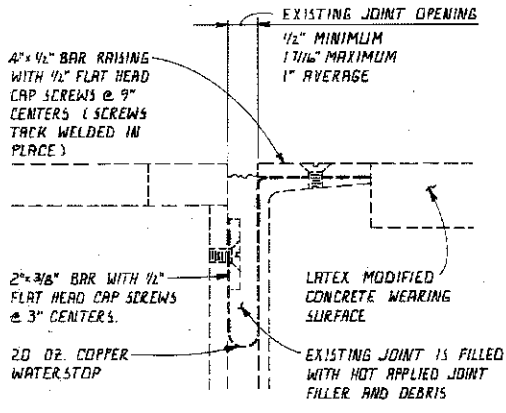
**PLAN**

**REPAIR JOINT ARMOR**

CONTRACTION JOINT AT STA. 37+30, EASTBOUND LANES.  
 EXISTING & PROPOSED BAR RAISINGS, NOT SHOWN.  
 JOINTS IN PROPOSED BAR RAISINGS SHALL OVERLAP JOINT IN MC13x31.8 FLANGE BY 6" MINIMUM.  
 PAYMENT FOR ALL NECESSARY EQUIPMENT, LABOR, MATERIAL AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM OF WORK AS SHOWN ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID, PER LINEAL FOOT OF ITEM SPECIAL - "REPAIR JOINT ARMOR".

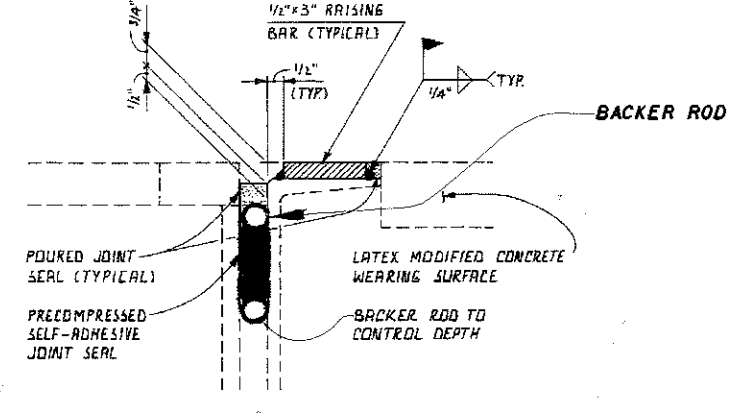


**SECTION**



**EXISTING CONTRACTION JOINT AT CROSS DRAIN**

REMOVE 2"x3/8" BAR WITH 1/2" FLAT HEAD CAP SCREWS @ 3" CENTERS, JOINT FILLER, DEBRIS AND COPPER WATERSTOP.

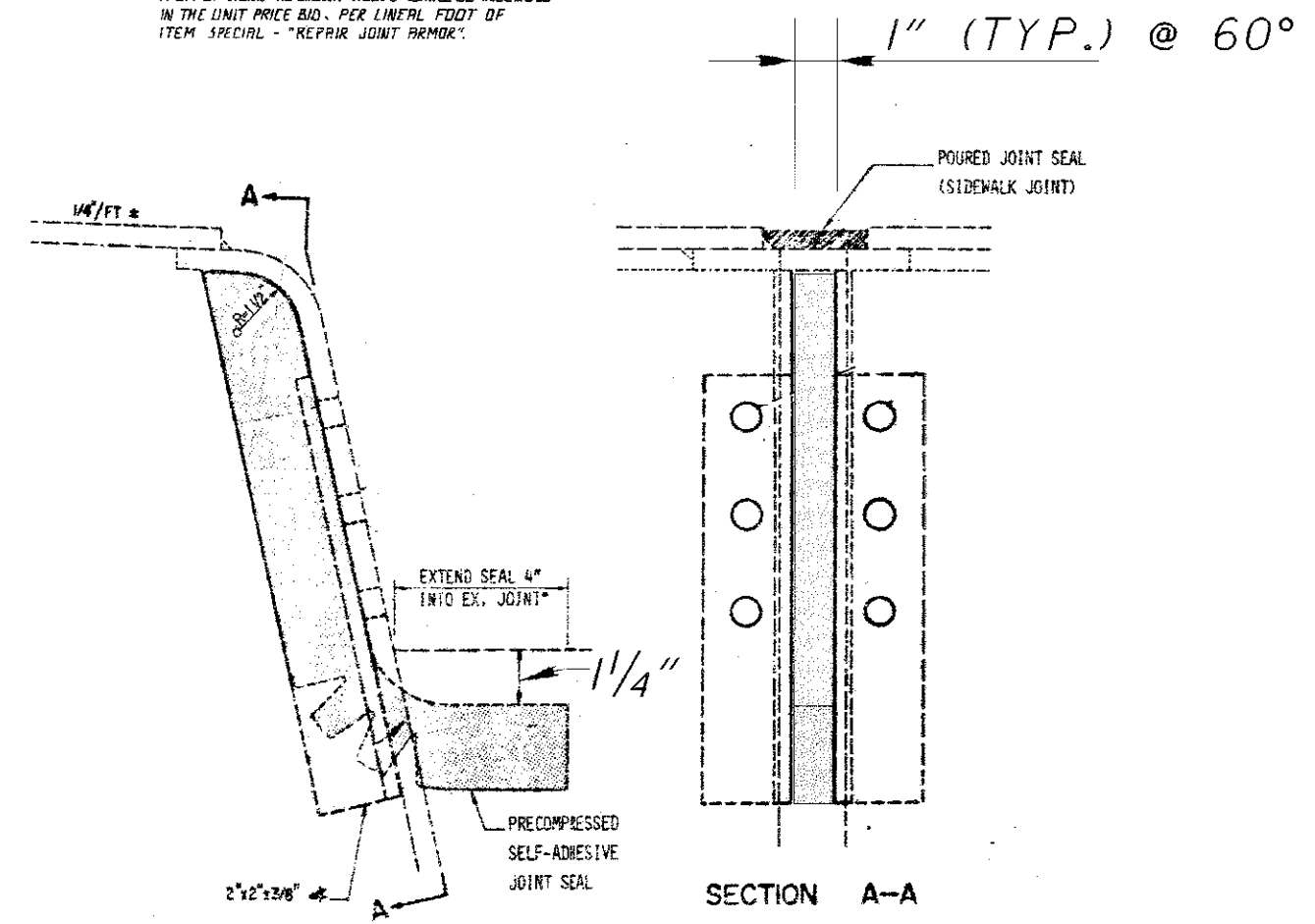


**MODIFIED CONTRACTION JOINT AT CROSS DRAIN**

CLEAN JOINT BY SANDBLASTING, INSTALL BACKER ROD, PRECOMPRESSED SELF-ADHESIVE JOINT SEAL, RAISING BAR AND POURED JOINT SEAL. JOINTS IN PROPOSED BAR RAISING SHALL OVERLAP JOINTS IN MC13x31.8 FLANGE BY 6" MINIMUM.

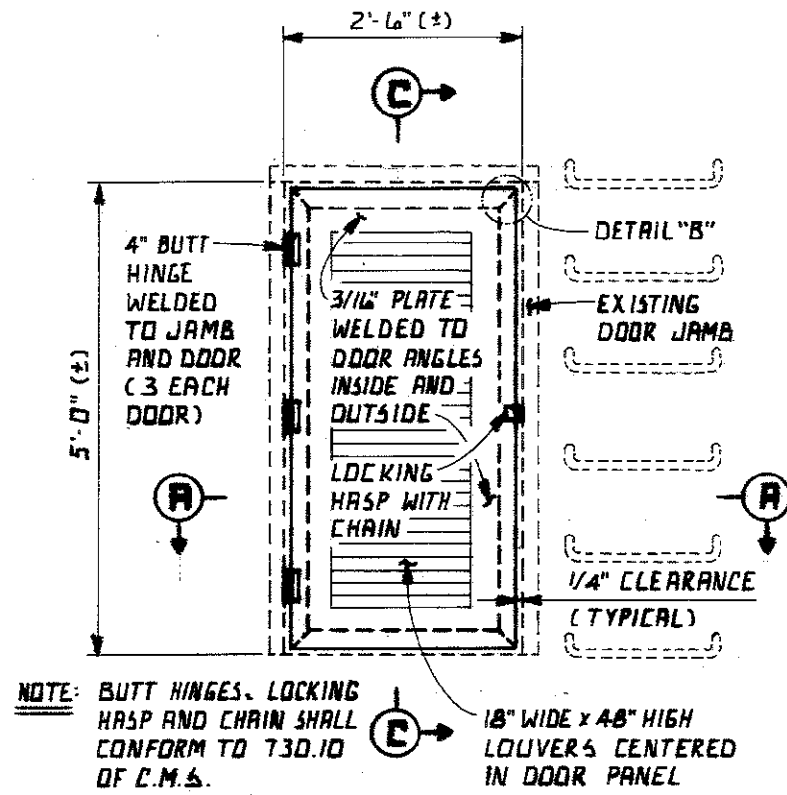
MODIFY ALL CONTRACTION JOINTS IN THE NUMBER 3 AND 4 LANES ONLY ON CUY-90-1547

PRECOMPRESSED JOINT SEAL ARE TO BE 1" NOMINAL WIDTH FOR ALL JOINTS. (NOMINAL WIDTH IS THE PRECOMPRESSED WIDTH)

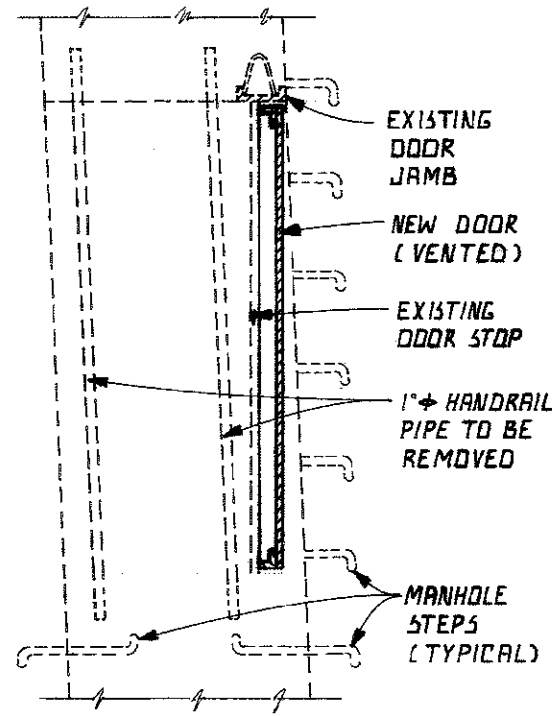


**CURB SEALING DETAIL**  
 (SEAL ALL CURB JOINTS ON CUY-90-1547  
 (BOTH THE LEFT AND RIGHT SIDES))

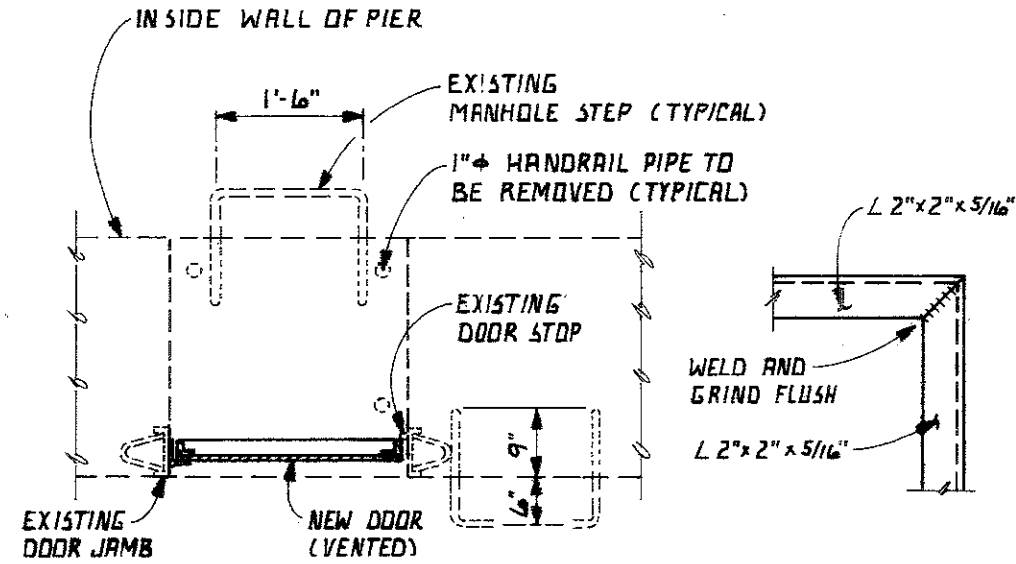




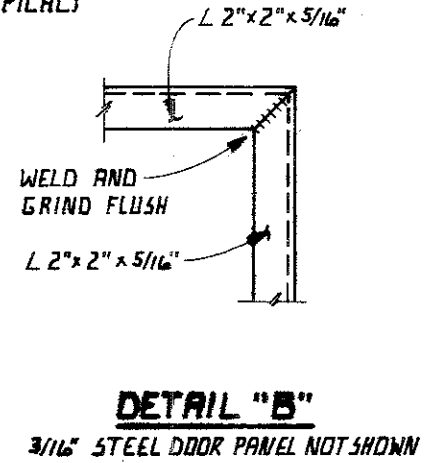
**ELEVATION**



**SECTION C-C**  
 DOOR LOUVER NOT SHOWN

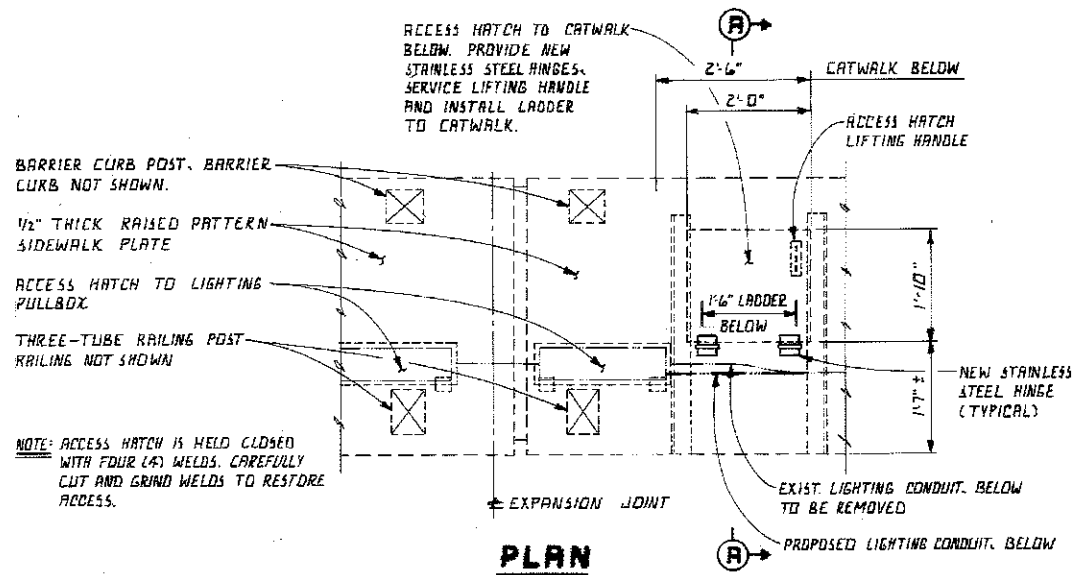


**SECTION A-A**  
 DOOR LOUVER NOT SHOWN

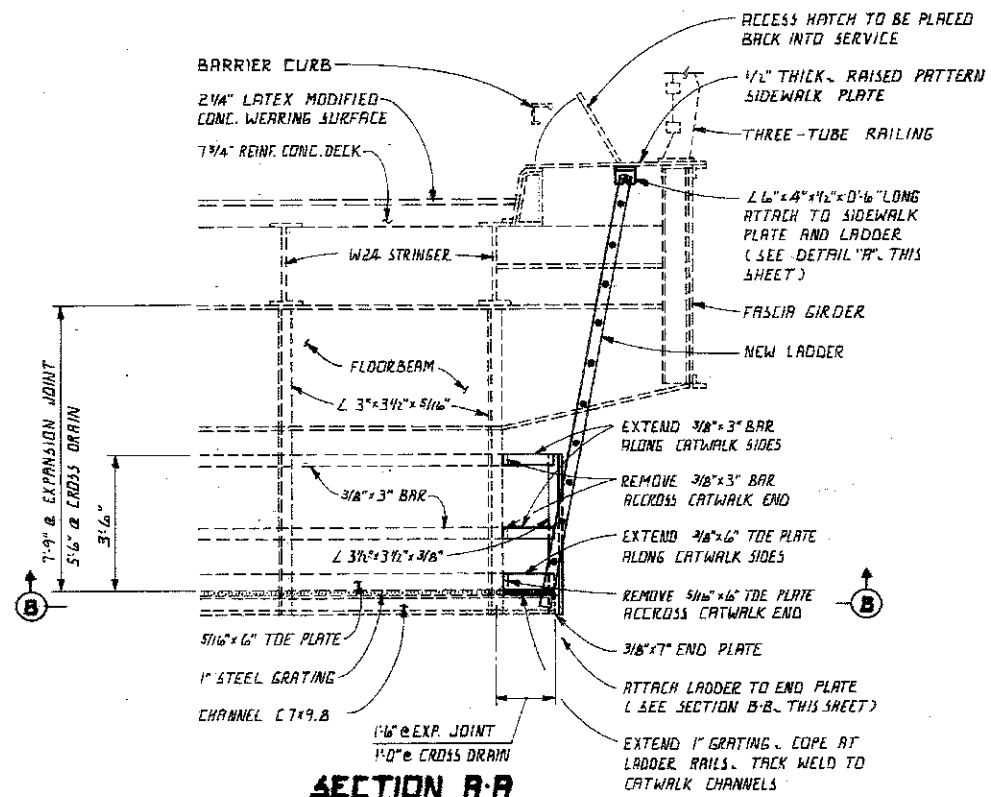


**ACCESS DOOR DETAILS**

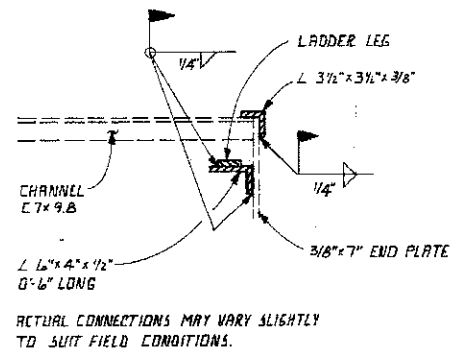
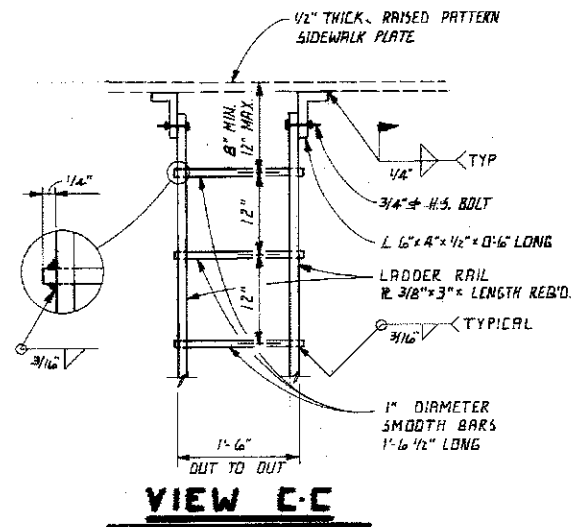
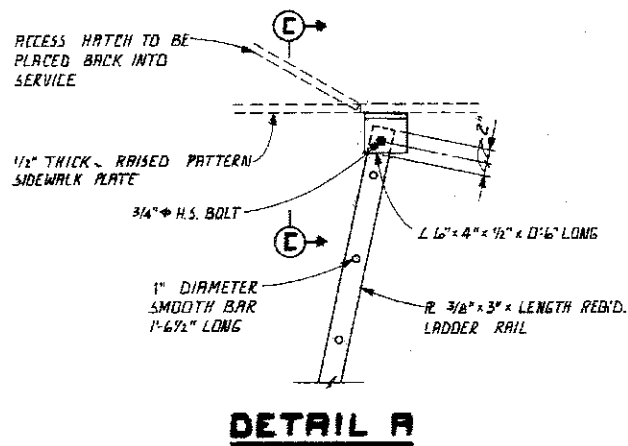
NOTE: CONTRACTOR SHALL VERIFY DIMENSIONS AND SQUARENESS OF EXISTING DOOR OPENING AND ADJUST SIZE OF NEW DOOR ACCORDINGLY.



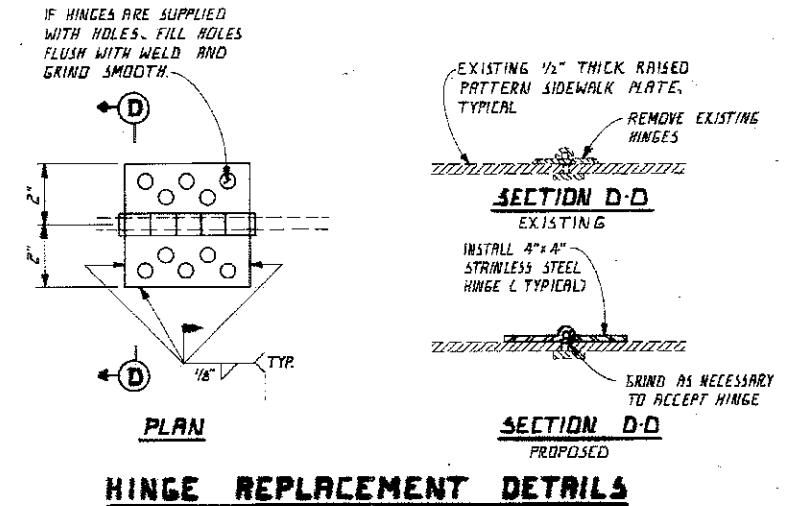
AT ACCESS HATCH TO BE PLACED BACK INTO SERVICE. HATCH AT EXPANSION JOINT SHOWN. HATCH AT CROSS DRAIN SIMILAR.



SECTION A-A  
CATWALK AT EXPANSION JOINT SHOWN.  
CATWALK AT CROSS DRAIN SIMILAR.  
CONSULTOR TO VERIFY DIMENSIONS SHOWN  
PRIOR TO FABRICATION  
LIGHTING CONDUIT NOT SHOWN.



SECTION B-B



**NOTES:**

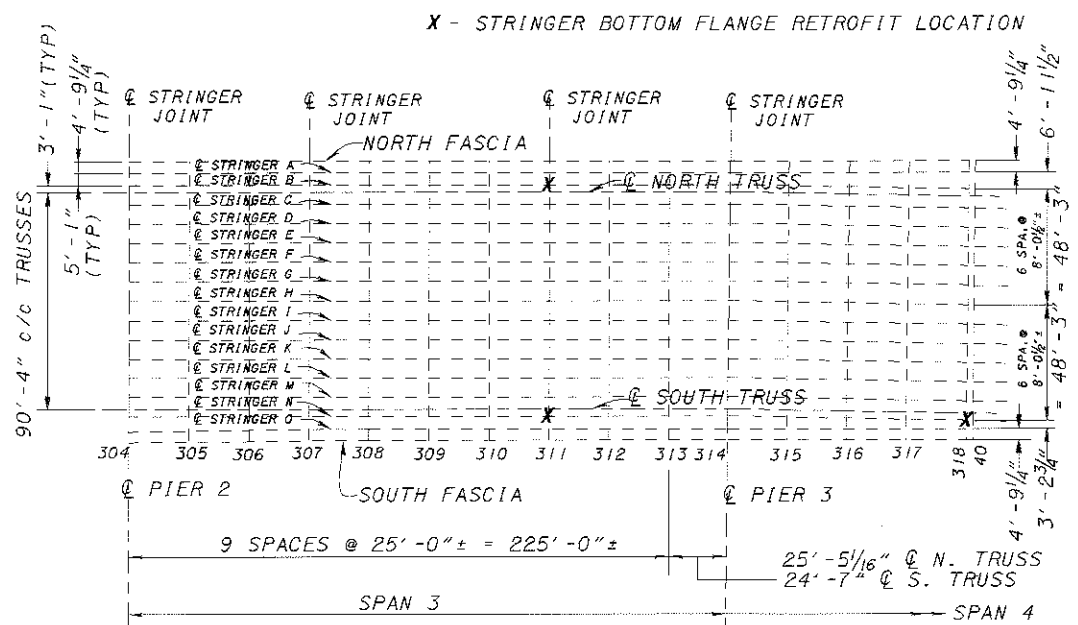
ALL NECESSARY WELDS NOT SHOWN ON THESE DETAILS, SHALL BE 1/4" FILLET WELDS OR AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND OTHER RELATED ITEMS REQUIRED TO PROVIDE ACCESS AS SHOWN, OR AS DIRECTED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICE BID, PER EACH, OF ITEM 065 - "STRUCTURAL STEEL, MISCELLANEOUS (CATWALK ACCESS LADDER), AS PER PLAN.

PLOT SUBMITTED: 14-MAY-2001 01:51

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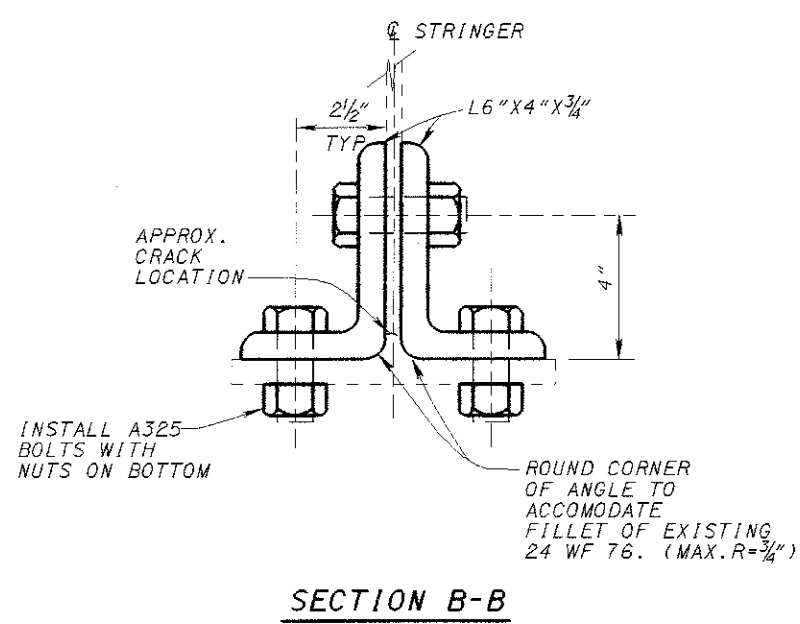
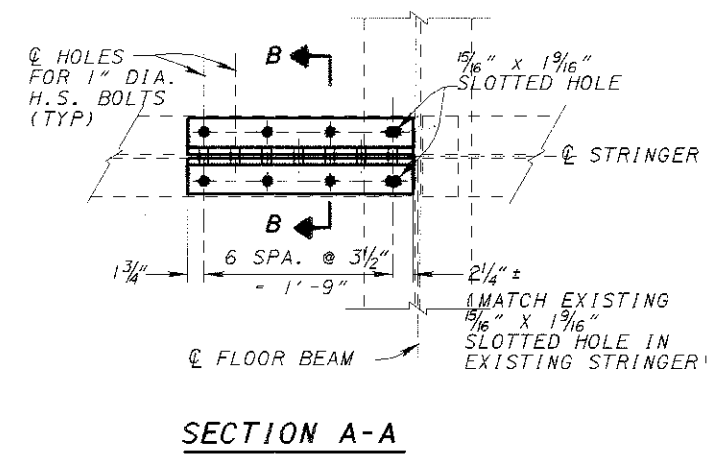
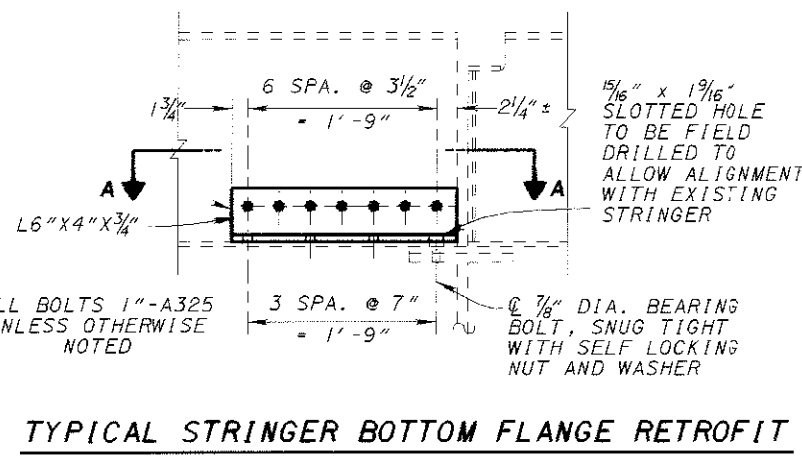
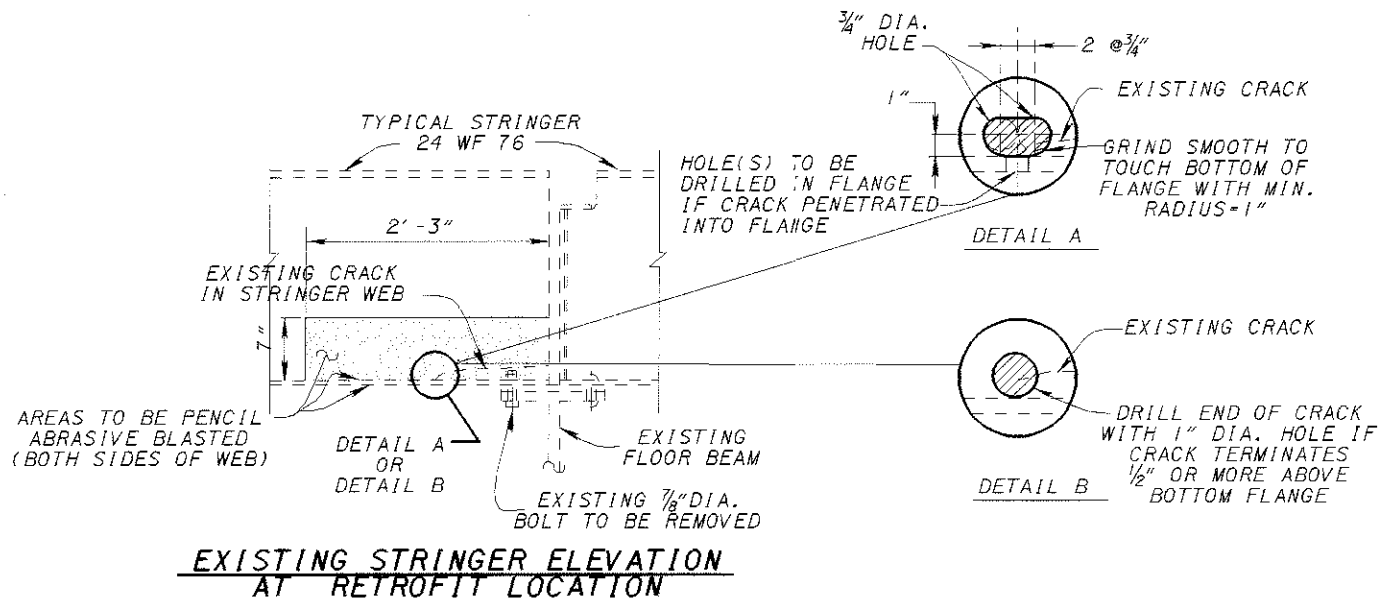
**PARTIAL FRAMING PLAN TRUSS SPAN 3 & 4**

(EXAMPLE OF STINGER NOMENCLATURE)

(STRINGER CRACKS LOCATED AT PANEL POINT 311 STRINGERS B AND N, AND PANELPOINT 318 STRINGER N)

**STRINGER CRACK LOCATIONS**

PANEL POINT	STRINGER	LOCATION
311	B	BOTTOM
311	B	TOP
311	N	BOTTOM
318	N	BOTTOM
44	H	BOTTOM
507	H	BOTTOM
508	G	BOTTOM
511	K	BOTTOM
514	I	BOTTOM
700	J	BOTTOM
711	E	BOTTOM
83	M	BOTTOM
900	L	BOTTOM



**SEQUENCE OF OPERATIONS FOR STRINGER BOTTOM FLANGE RETROFIT**

- CLEAN STRINGER WEB AND TOP AND BOTTOM OF BOTTOM FLANGE BY PENCIL ABRASIVE BLASTING TO THE LIMITS SHOWN IN THE PLANS
- NON-DESTRUCTIVELY TEST (NDT) CRACK AREA TO EXPOSE END OF CRACK.
- FIELD DRILL HOLES IN CRACK ENDS IN STRINGER WEB AND FLANGE AS REQUIRED. CUT AND GRIND COPE PER DETAIL A IF REQUIRED.
- REPEAT NDT TO ENSURE INTERCEPTION OF CRACK ENDS OR CRACK REMOVAL.
- REMOVE EXISTING 7/8" DIA. BEARING BOLTS AT FLOOR BEAM CONNECTION.
- PLACE MATCHED, PREDRILLED ANGLES IN PLACE AND MARK HOLES ON STRINGER.
- FIELD DRILL SLOTTED BEARING BOLT HOLE IN ANGLES TO MATCH EXISTING SLOTTED HOLES IN STRINGER.
- BOLT ANGLES TO STRINGER .
- BOLT ANGLES AND STRINGER TO FLOOR BEAM.
- PREPARE AND PAINT RETROFITTED AREA.

DISTRICT TWELVE  
 PRODUCTION DEPARTMENT  
 O.D.O.T.  
 05/96  
 DWL  
 1809393  
 18  
 28  
 CUYAHOGA COUNTY  
 BRIDGE NO. CUY-90-1547  
 STRINGER RETROFIT DETAILS  
 CUY-90-15.24/VAR

ITEM 517 - RAILING MISC.;(RETROFIT, 42"), AS PER PLAN

THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, DRILLING, EPOXY GROUTING, REMOVING UNSOUND CURB CONCRETE AND EXISTING STEEL CURB, CAULKING, CUTTING CRACK CONTRAOJL JOINTS, INSTALLING DRAINAGE SLOTS, INSTALLING OF TANSITIONS, AND ALL LABOR NECESSARY TO CONSTRUCT AND ERECT THE RAILING AS SHOWN IN THE PLANS AND AS SPECIFIED HEREIN.

ALL CONCRETE SHALL BE CLASS S CONCRETE, AS PER SS 842

ALL REINFORCING STEEL SHALL BE EPOXY COATED AND SHALL BE INCLUDED IN THE COST OF THIS ITEM. THE CONTRACTOR MAY FIELD BEND REINFORCING STEEL TO MAINTAIN MINIMUM CLEARANCES AND COVER.

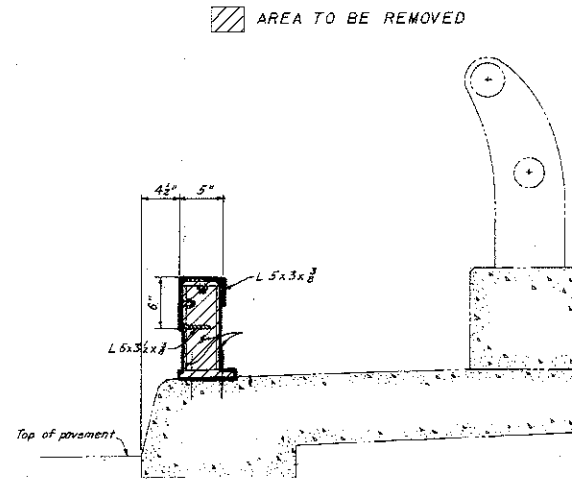
ALL DRILLING AND EPOXY GROUTING REQUIRED FOR INSTALLATION OF RAILING SHALL CONFORM TO C.M.S. 510 (GROUT ANCHORING) AND SHALL BE INCLUDED IN THE COST OF THIS ITEM.

BEFORE ANY DRILLING, THE CONTRACTOR SHALL USE A REBAR LOCATOR TO IDENTIFY LOCATIONS OF EXISTING REINFORCING STEEL. THE CONTRACTOR SHALL DRILL ONLY WHERE EXISTING REINFORCING STEEL IS NOT LOCATED.

CAULK EDGES OF ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE AND ALL CRACK CONTROL JOINTS WITH CAULK WHICH MEETS FEDERAL SPECIFICATION TT-S-00227E. ALL CAULKING COSTS SHALL BE INCLUDED UNDER THIS ITEM.

PAYMENT FOR THE ABOVE WORK WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR:

ITEM	UNIT	DESCRIPTION
517	LIN. FT.	RAILING MISC.;(RETROFIT, 42"), AS PER PLAN



EXISTING STEEL CURB TO BE REMOVED

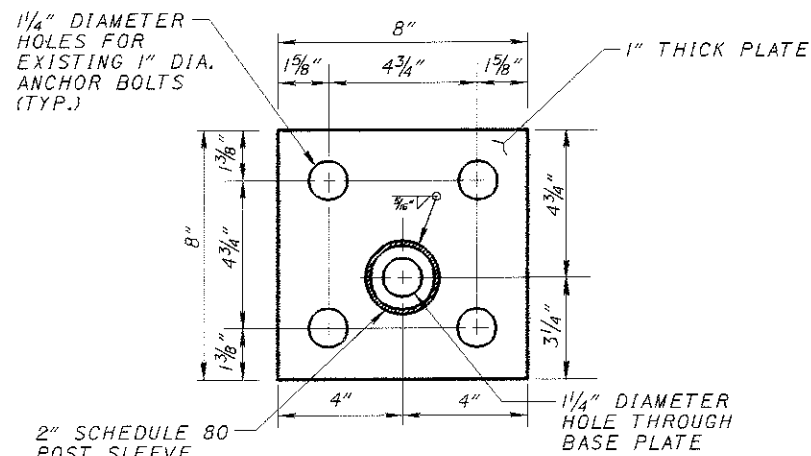
MARK	LENGTH	TYPE	DIM A	DIM B	DIM C	INCREMENT
● RR501	30'-0"	STR.				
▲ RR502	3'-6 3/4"	STR.				
▲ RR503	3'-0"	STR.				
▲ RR506	1'-9 1/2"	STR.				2 1/8"
	3'-6 1/2"					1 SER. OF 10 BARS
▲ RR507	1'-3 1/2"	STR.				2 1/8"
	3'-1/2"					1 SER. OF 10 BARS
● RR508	11'-11"	15	1'-11 1/8"	9'-10"	1'-6 5/8"	

● ALL LONGITUDINAL REINFORCING STEEL SHALL BE CONTINUOUS. NO.5 BARS SHALL HAVE A MINIMUM LAP LENGTH OF 23"

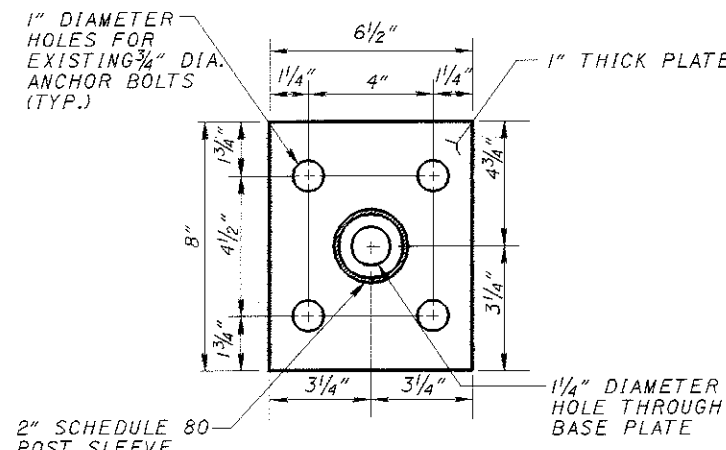
▲ ALL VERTICAL NO.5 BARS SHALL BE SPACED AT 8" INTERVALS LONGITUDINALLY.

NOTE: ALL VERTICAL NO.5 BARS MAY BE FIELD BENT TO MAINTAIN MINIMUM COVER.

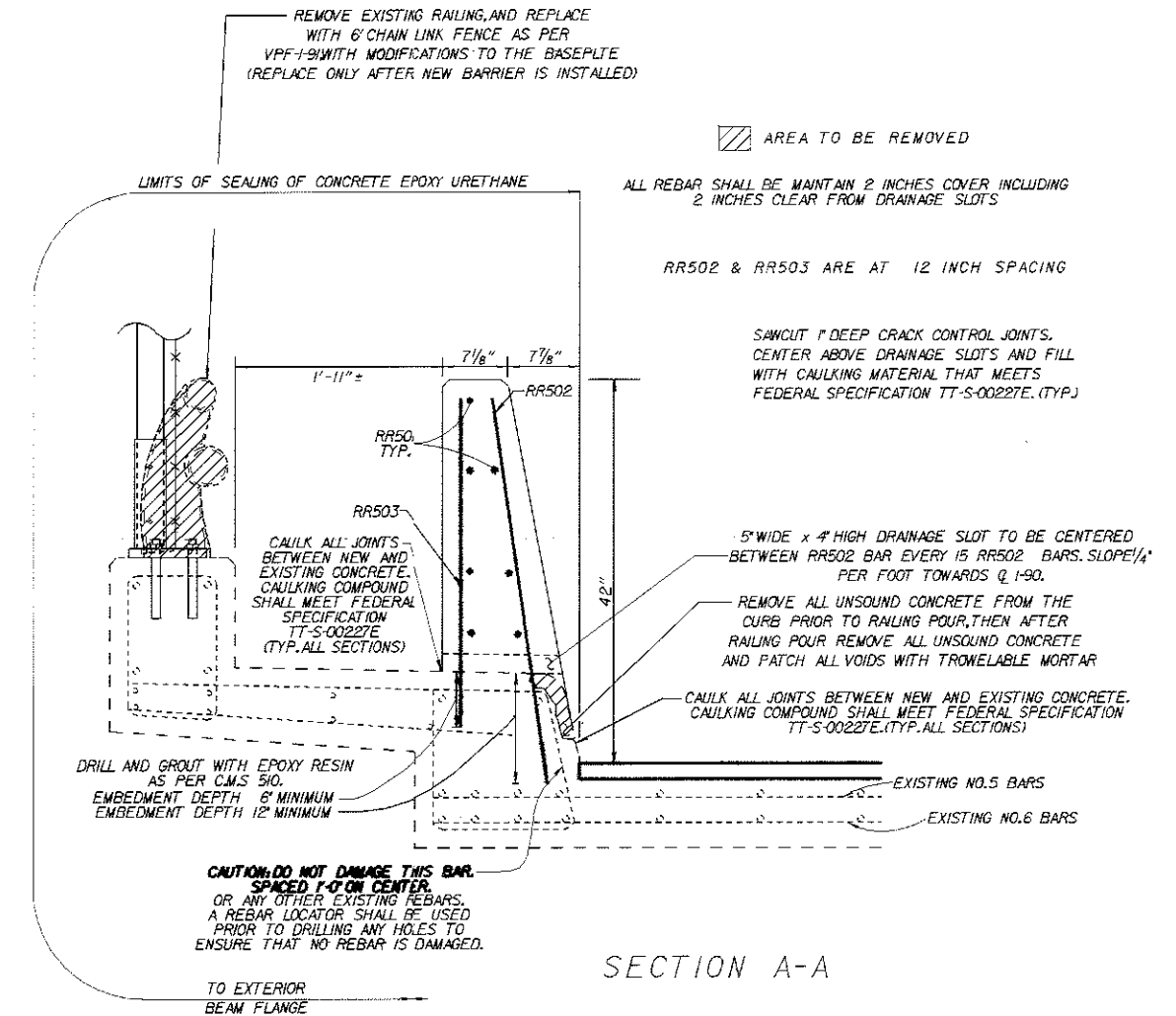
ALL REINFORCING STEEL SHALL BE GRADE 60, EPOXY COATED.



FENCE BASE PLATE TO BE USED AT EXISTING LIGHT POLE LOCATIONS

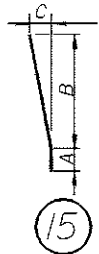


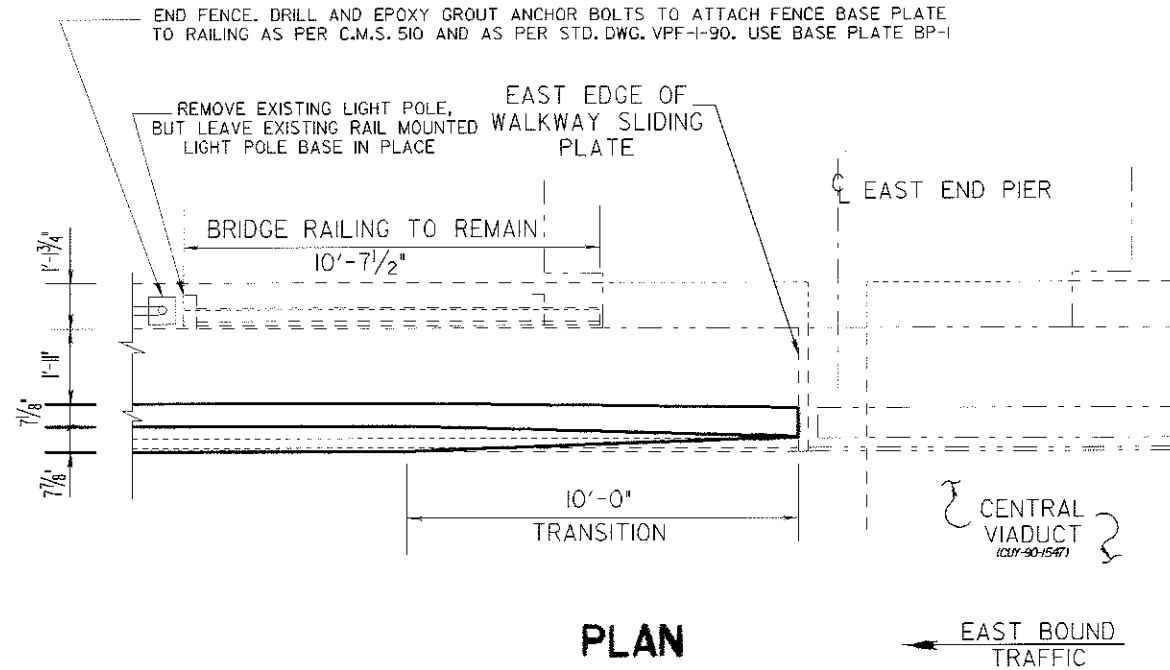
FENCE BASE PLATE TO BE USED AT EXISTING RAILING POST LOCATIONS



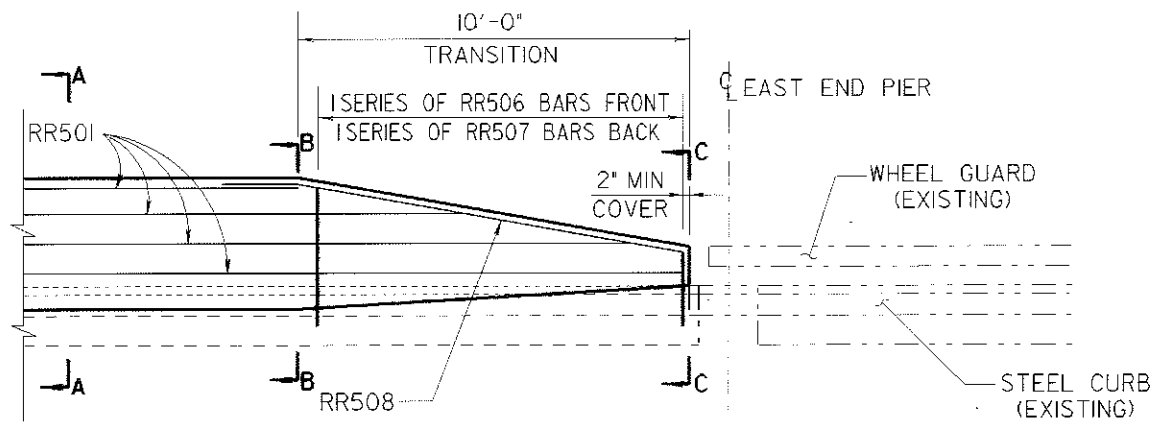
CAUTION: DO NOT DAMAGE THIS BAR, SPACED 1'-0" ON CENTER, OR ANY OTHER EXISTING REBARS. A REBAR LOCATOR SHALL BE USED PRIOR TO DRILLING ANY HOLES TO ENSURE THAT NO REBAR IS DAMAGED.

SECTION A-A





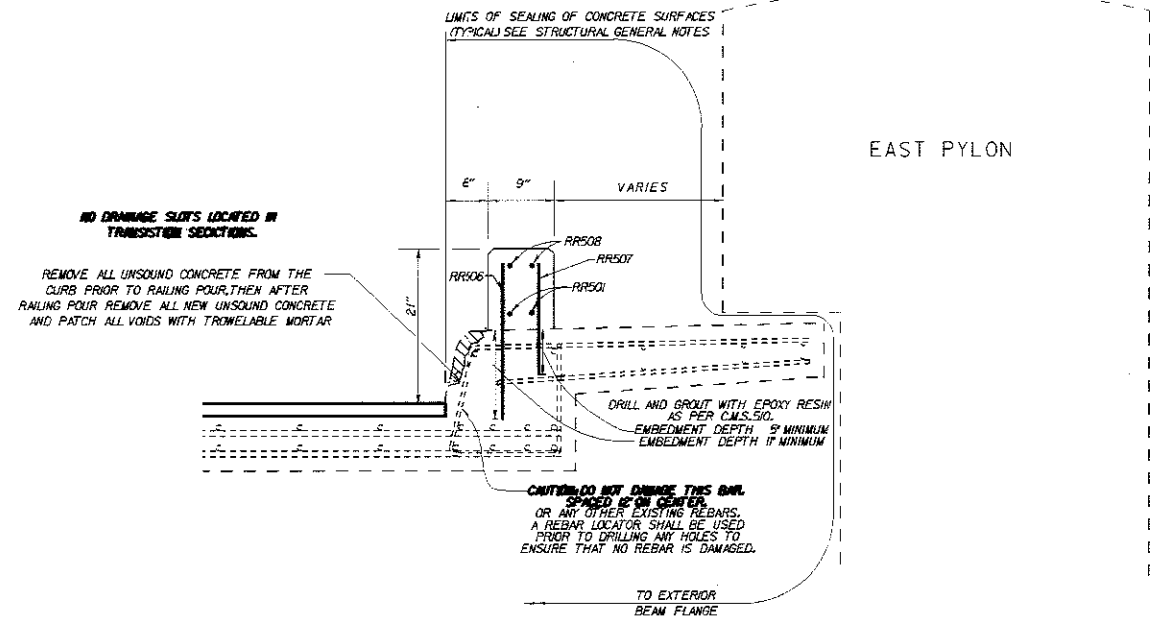
PLAN



ELEVATION

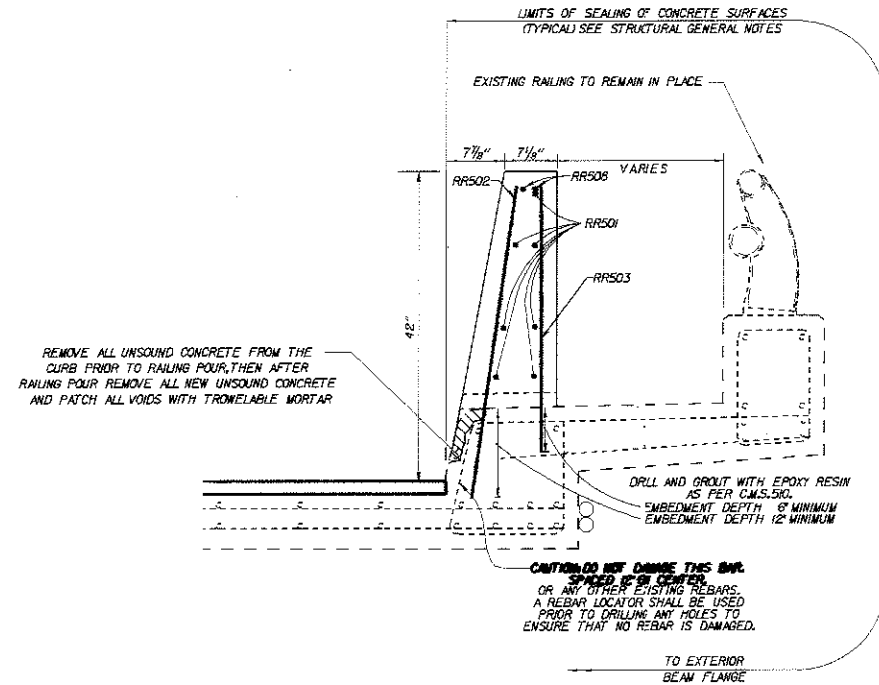
BARRIER TRANSITION AT EAST END PIER

AREA TO BE REMOVED [hatched symbol]  
 ALL REBAR SHALL BE MAINTAIN 2 INCHES COVER  
 RR506 AND RR507 BARS SHALL BE SPACED AT 8 INCH INTERVALS LONGITUDINALLY



SECTION C-C

ALL REBAR SHALL BE MAINTAIN 2 INCHES COVER INCLUDING 2 INCHES CLEAR FROM DRAINAGE SLOTS  
 RR502 AND RR503 BARS SHALL BE SPACED AT 12 IN INTERVALS LONGITUDINALLY  
 RR506 AND RR507 BARS SHALL BE SPACED AT 12 IN INTERVALS LONGITUDINALLY

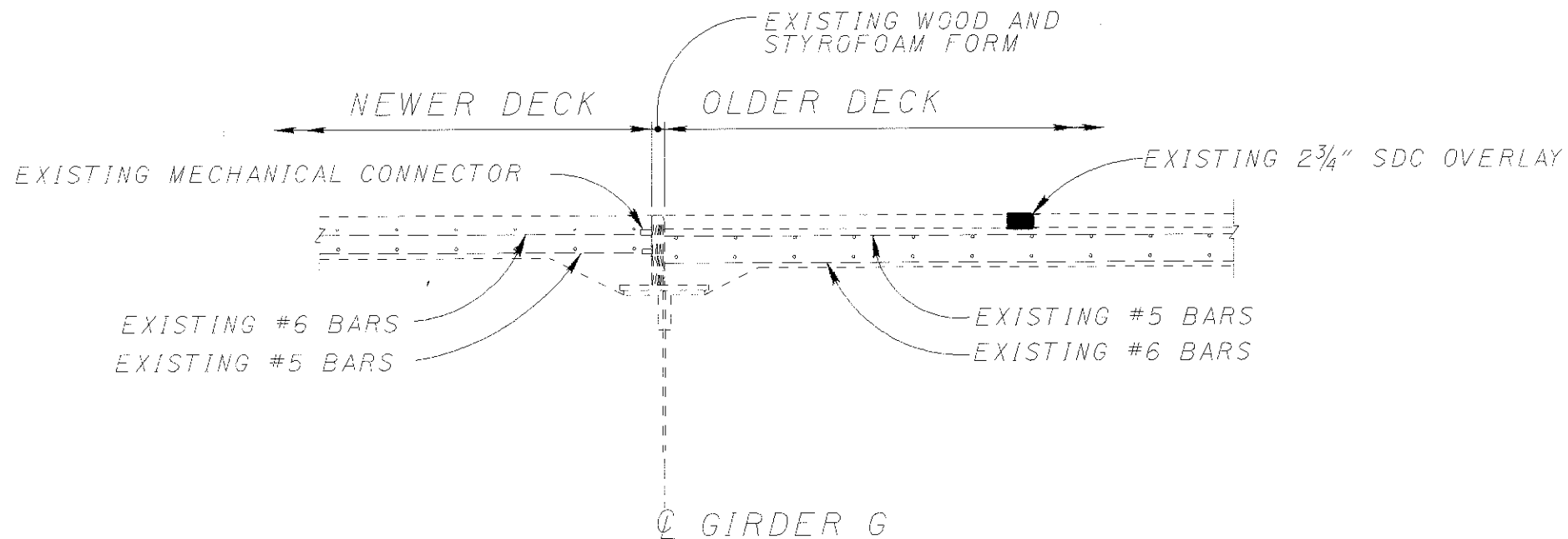


SECTION B-B

PLOT SUBMITTED: 14-MAY-2001 02:10Z

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EXISTING DECK AT GIRDER G

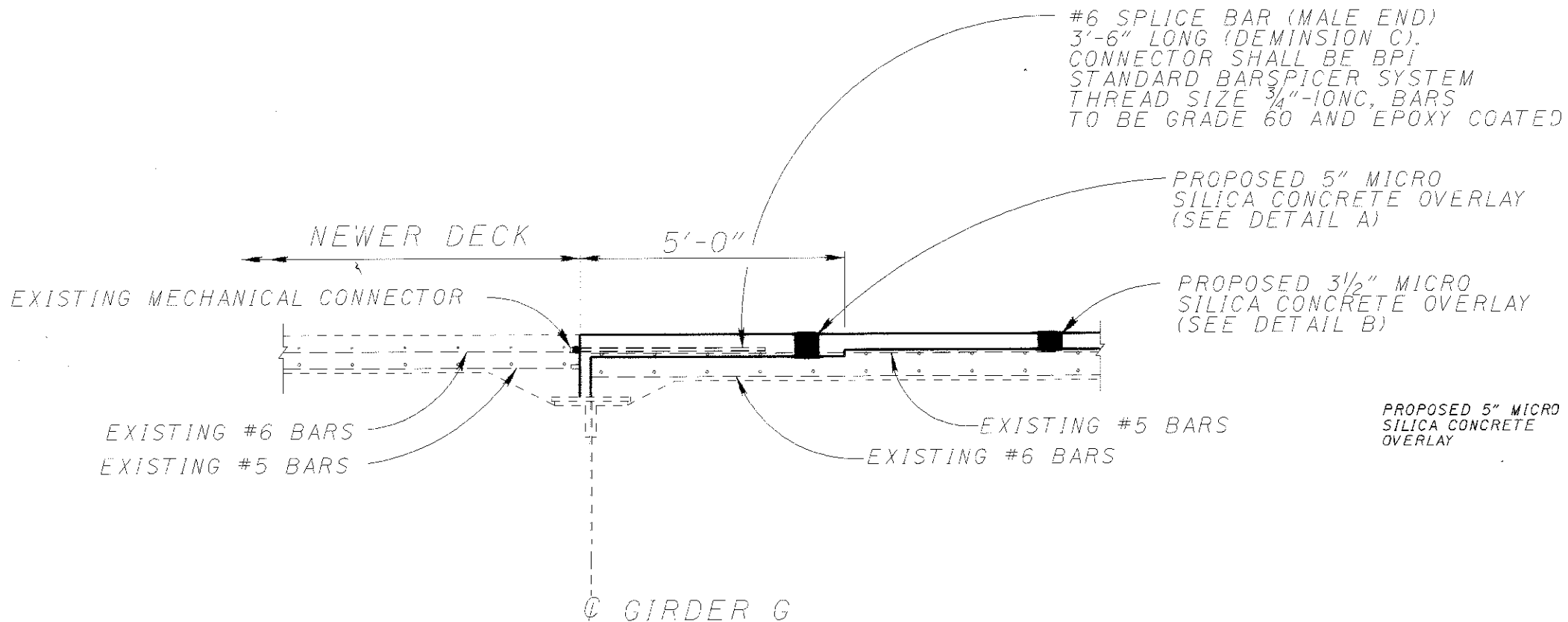
NOTES:

REMOVE AS MUCH OF THE WOOD AND STYROFOAM FORM MATERIAL AS POSSIBLE

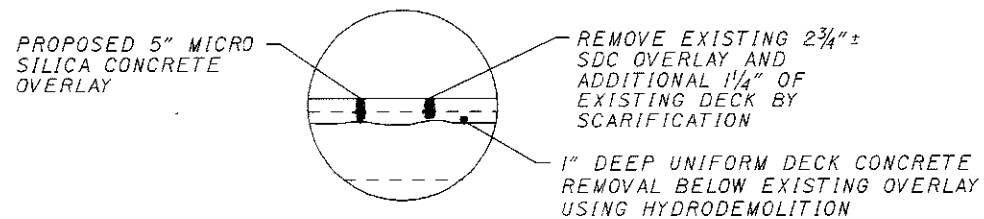
NEED 1202 #6 SPLICE BARS (MALE END) OF THE MECHANICAL CONNECTORS

SPLICE BARS ARE AVAILABLE FROM BARSPLICE PRODUCTS INC. 1300 GRANGE HALL RD BEAVERCREEK, OHIO 45430 PHONE (937) 427-6466

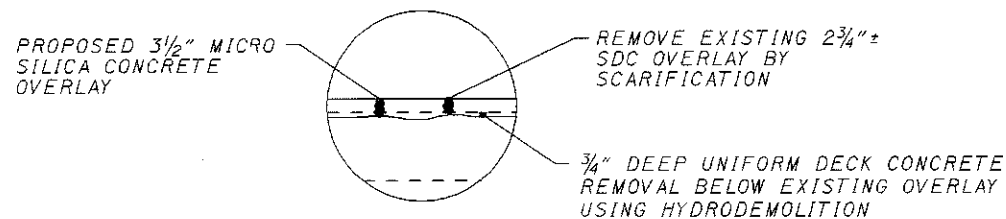
AT EXIT GORE FOR RAMP E-2 KEEP NEW OVERLAY 1'-0" CLEAR OF IMPACT ATTENUATOR.



PROPOSED DECK SECTION AT GIRDER G



DETAIL A

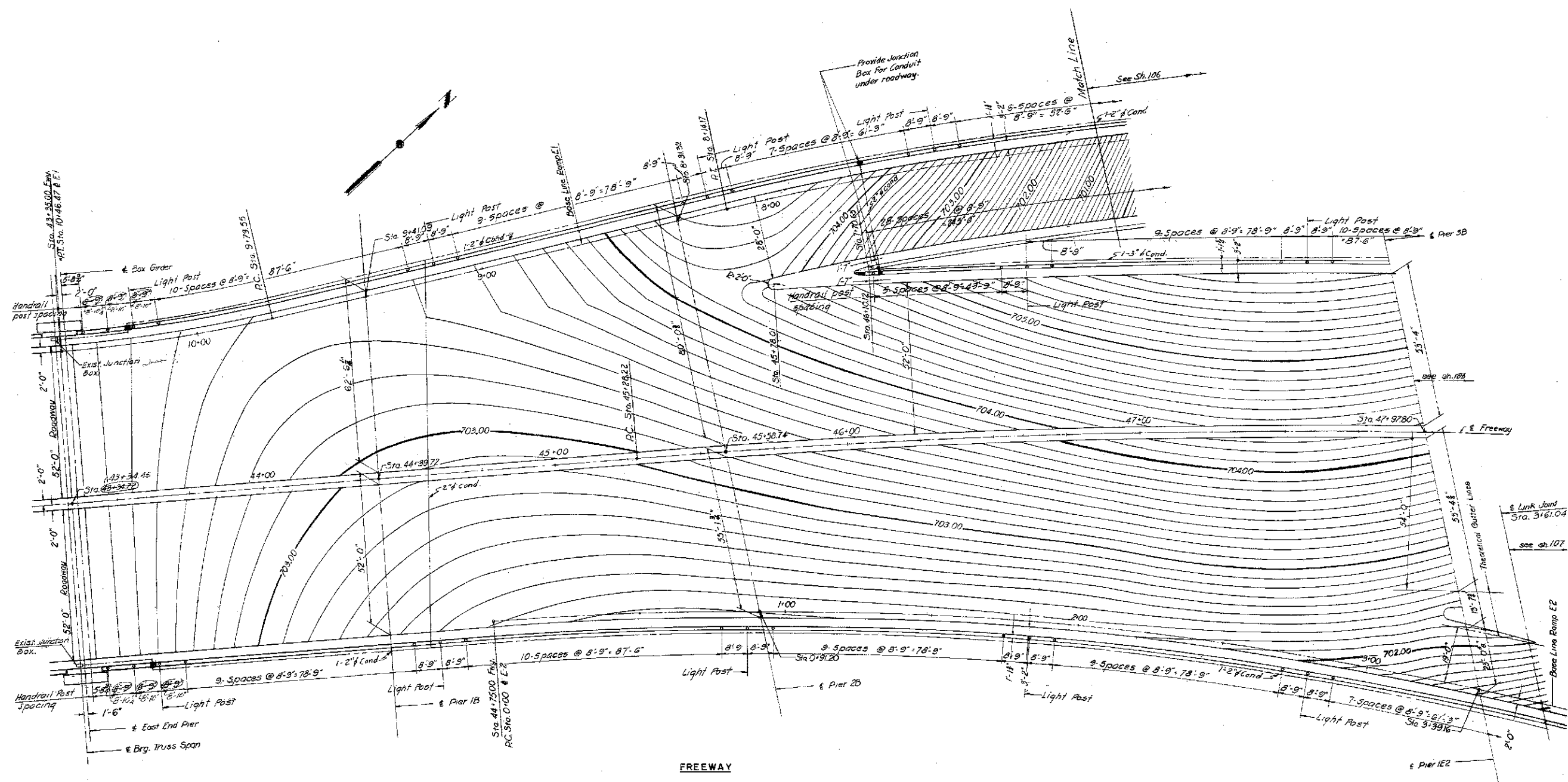


DETAIL B

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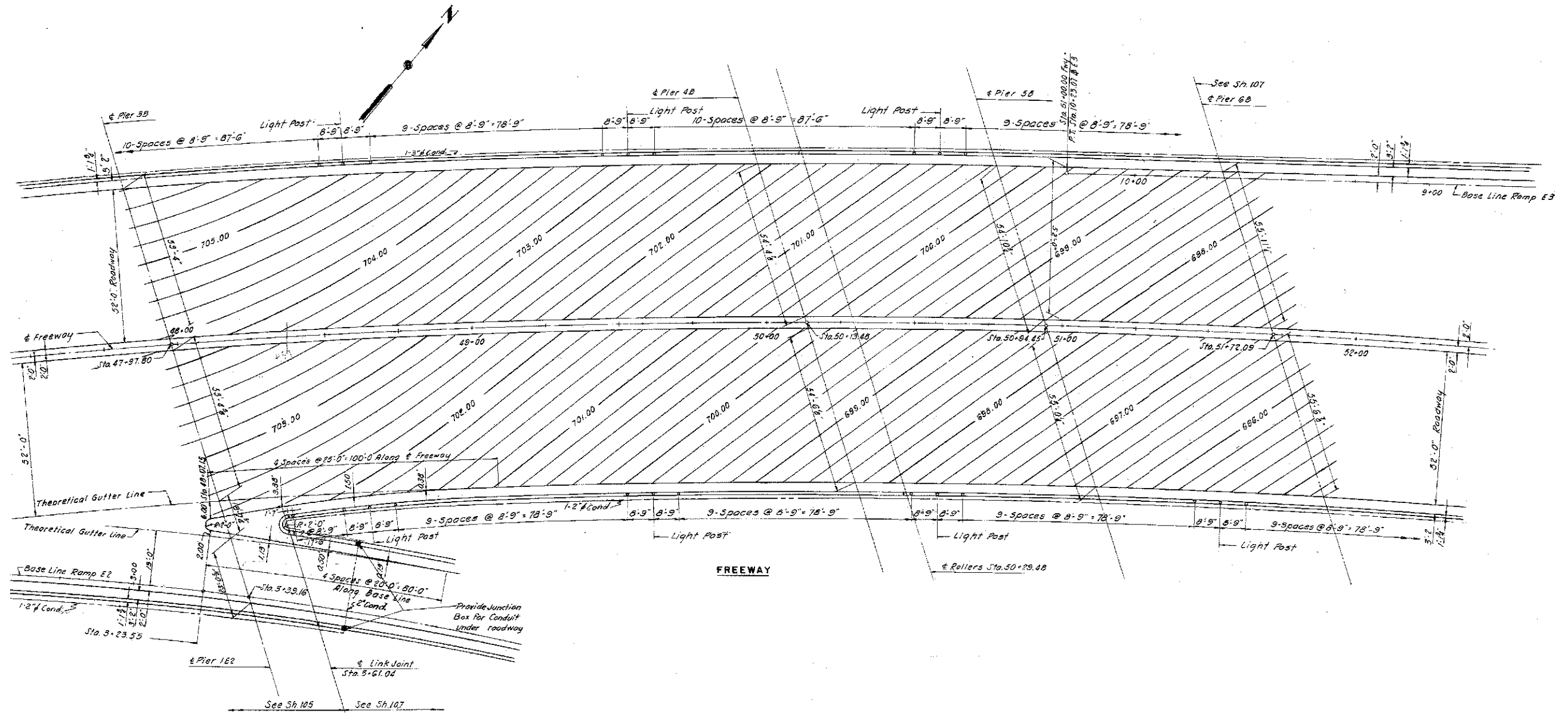
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		STRUCTURE FILE NUMBER 1809393	PRODUCTION DEPARTMENT	DISTRICT 12	
CUYAHOGA COUNTY CUY-90-15.24/Vor			CROSS SLOPE INFORMATION CUY-90-1599		
21A 28					

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CUYAHOGA COUNTY  
CUY-90-15.24/Var

CROSS SLOPE INFORMATION  
CUY-90-1599

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REVISION	DATE	STRUCTURE FILE NUMBER	1809393

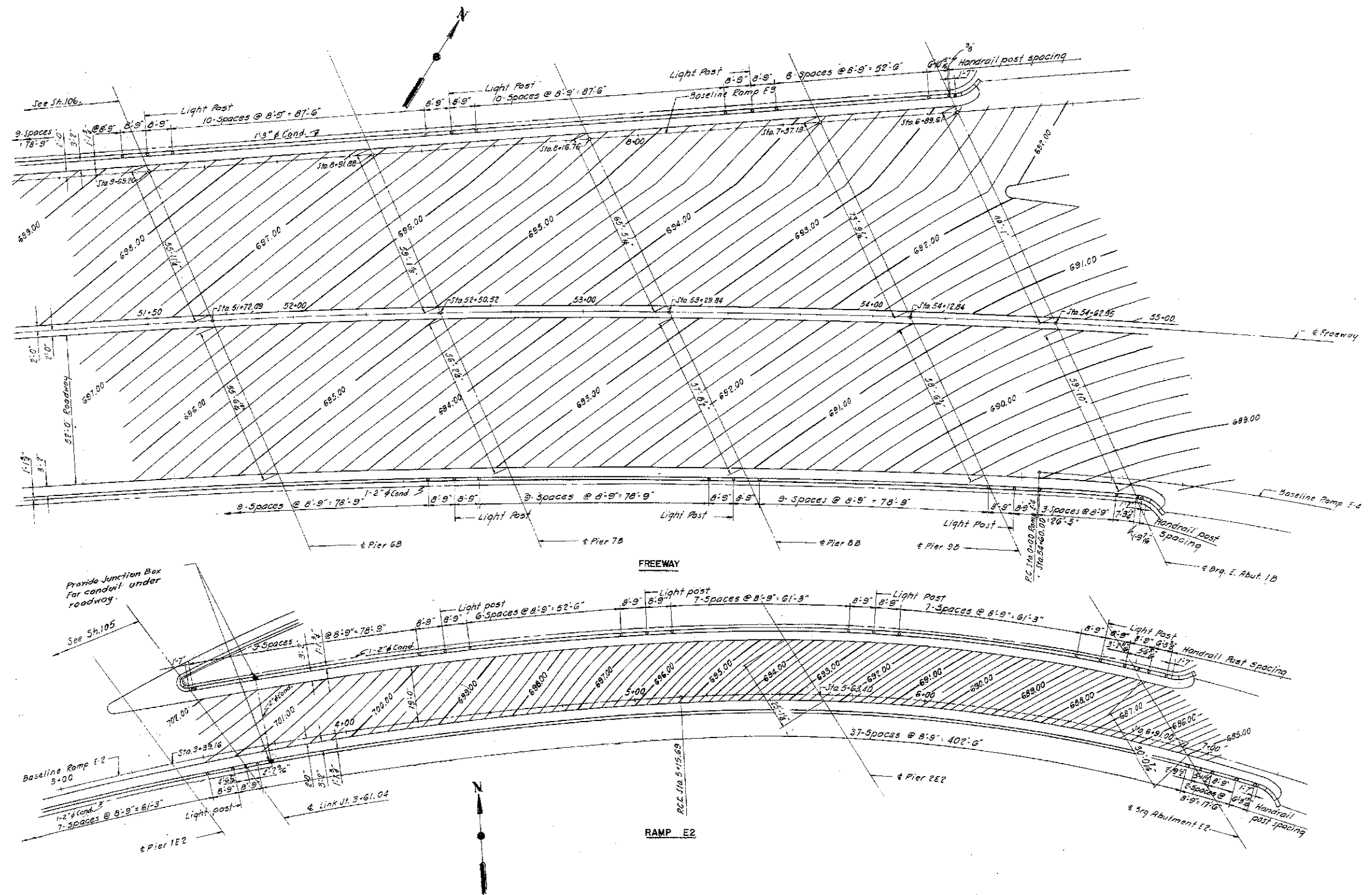
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O.D.O.T.  
DISTRICT 12  
PRODUCTION DEPARTMENT



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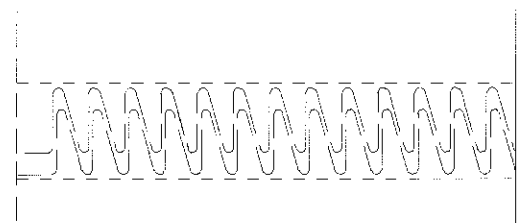
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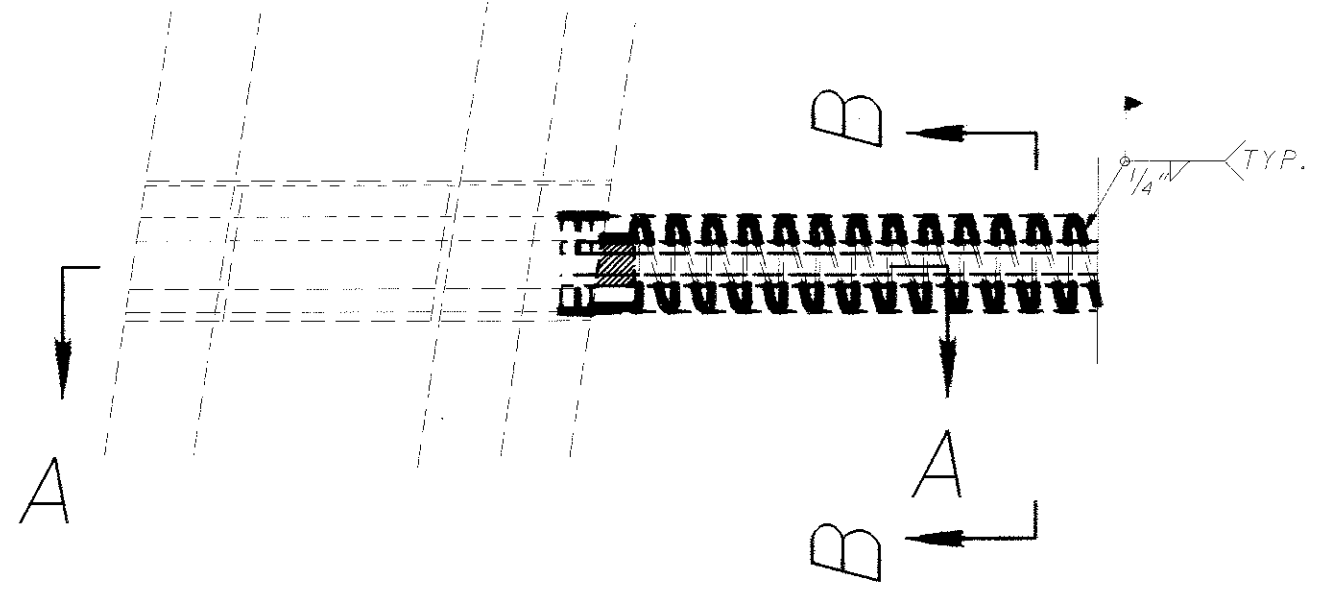
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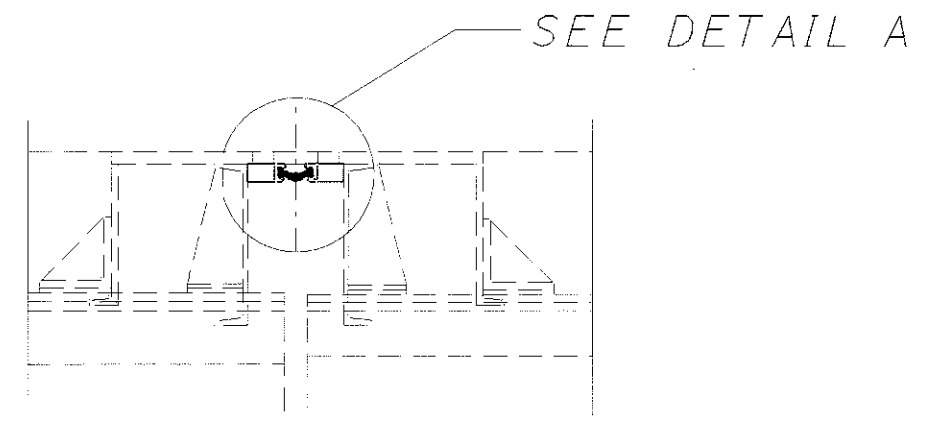


PLAN VIEW OF EXISTING JOINT

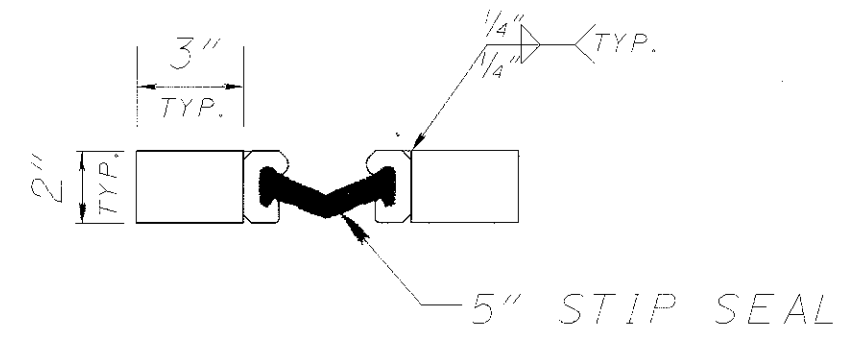
AREA TO BE REMOVED



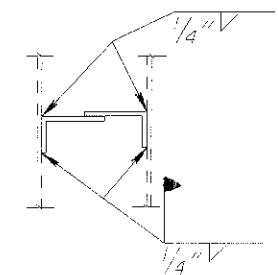
PLAN VIEW OF MODIFIED JOINT



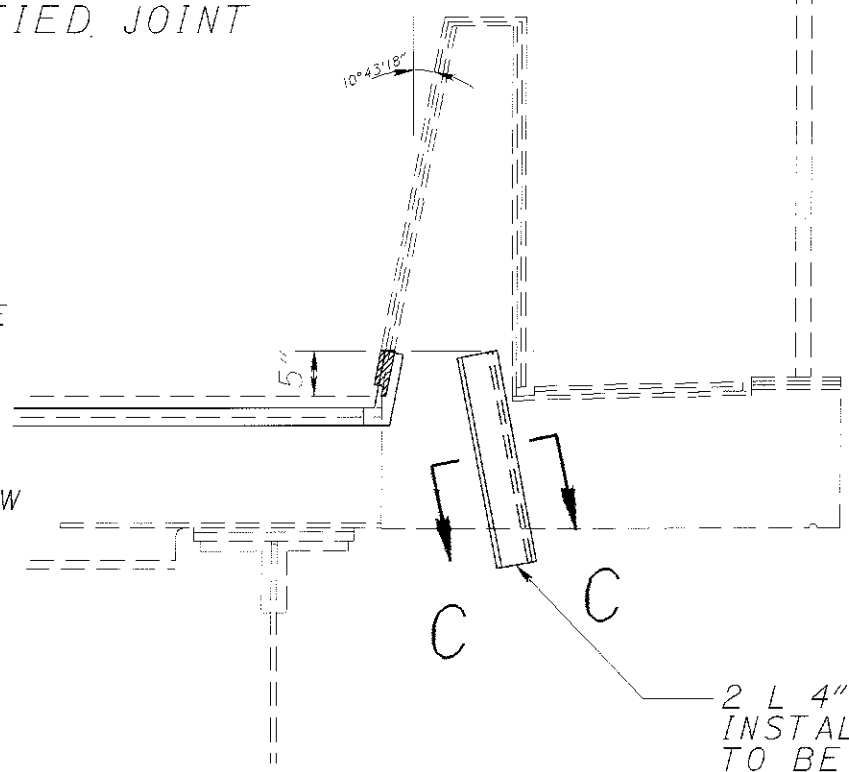
SECTION B-B



DETAIL A



SECTION C-C



SECTION A-A  
(TYPICAL BOTH SIDES)

2 L 4" x 7" x 1/2" x 2'-0"  
INSTALLATION OF THESE ANGLE  
TO BE INCLUDED WITH THE COST  
OF THE STRIP SEAL INSTALLATION

NOTES:

STRIP SEAL TO BE INSTALLED BEFORE  
RETAINERS ARE WELDED TO FINGER  
JOINTS.

ENTIRE ASSEMBLY TO INSTALL FROM  
BELOW AND WELDED FROM THE TOP.

FOR ADDITIONAL DETAILS SEE STD DGW  
EXJ-4-87.

LENGTH IS 28'-3 3/4" TOE TO TOE,  
CONTRACTOR TO FIELD VERIFY  
PRIOR TO FABRICATION. BENDS  
TO START 1" BEYOND BARRIER  
TOES, AND SLOPE TO MATCH SLOPE  
OF BARRIER

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O.D.O.T.  
DISTRICT 12  
PRODUCTION DEPARTMENT

REVIEWED DATE  
STRUCTURE FILE NUMBER  
1805584

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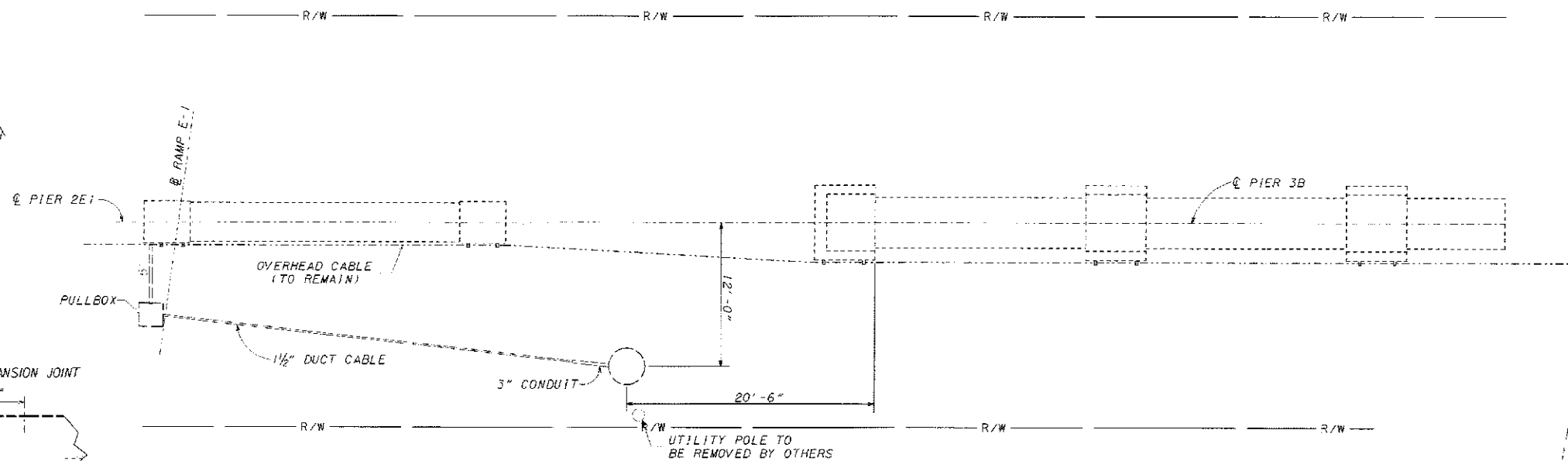
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REVISED

CUYAHOGA COUNTY  
CUY-90-15.24/VGR  
RAMP E-1 EXPANSION JOINT DETAIL

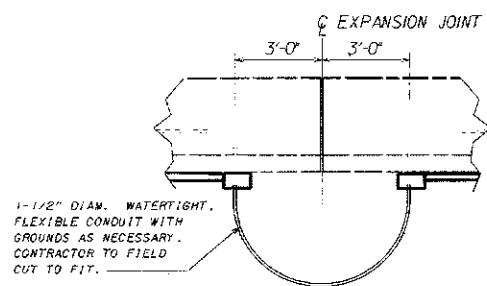
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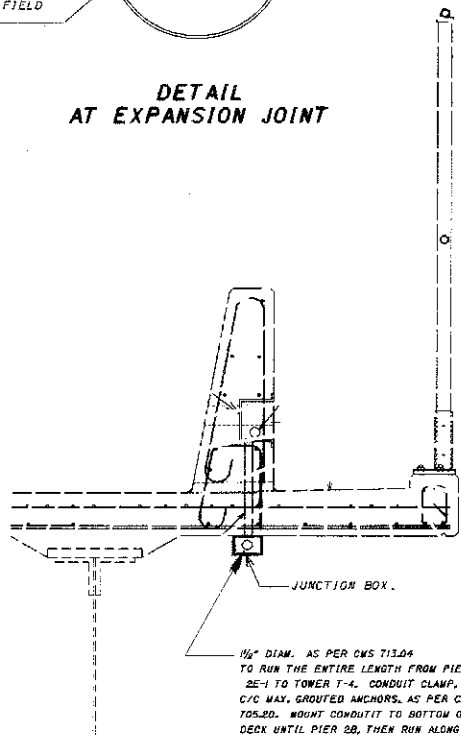
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PLOTTED FROM: @PROJECTS@pi21563@SITE1524b.dgn



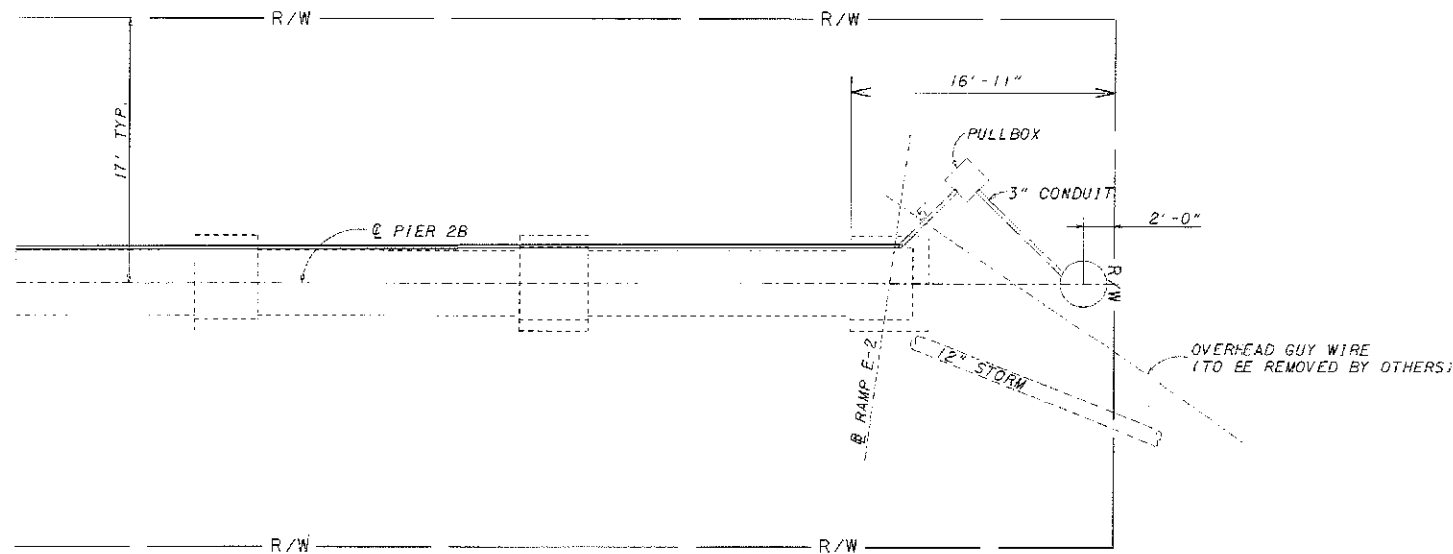
LOCATION DETAIL - TOWER LIGHT T-5



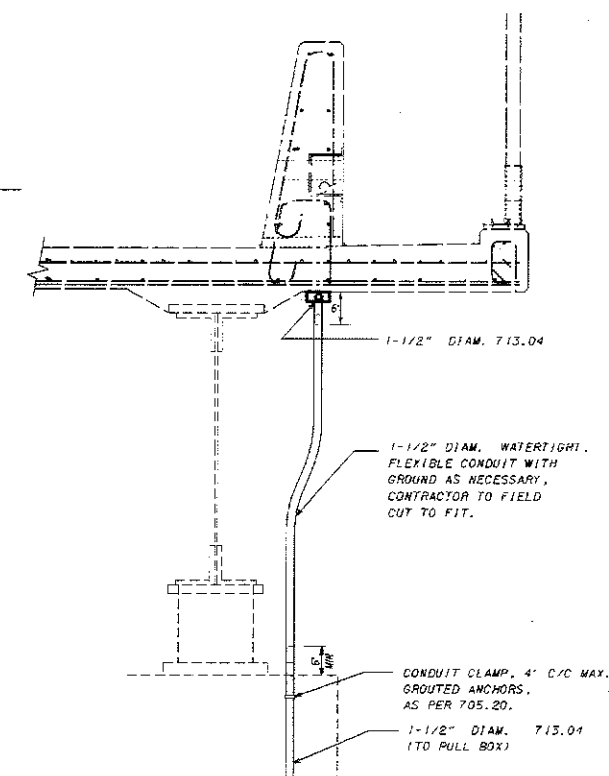
DETAIL AT EXPANSION JOINT



TYPICAL DETAIL AT DECK BOTTOM



LOCATION DETAIL - TOWER LIGHT T-4



DETAIL AT PIER 2B

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DISTRICT 12		
PRODUCTION DEPARTMENT		

**CUYAHOGA COUNTY**  
**CUY-90-1599**  
**TOWER LIGHTING SERVICE DETAILS**

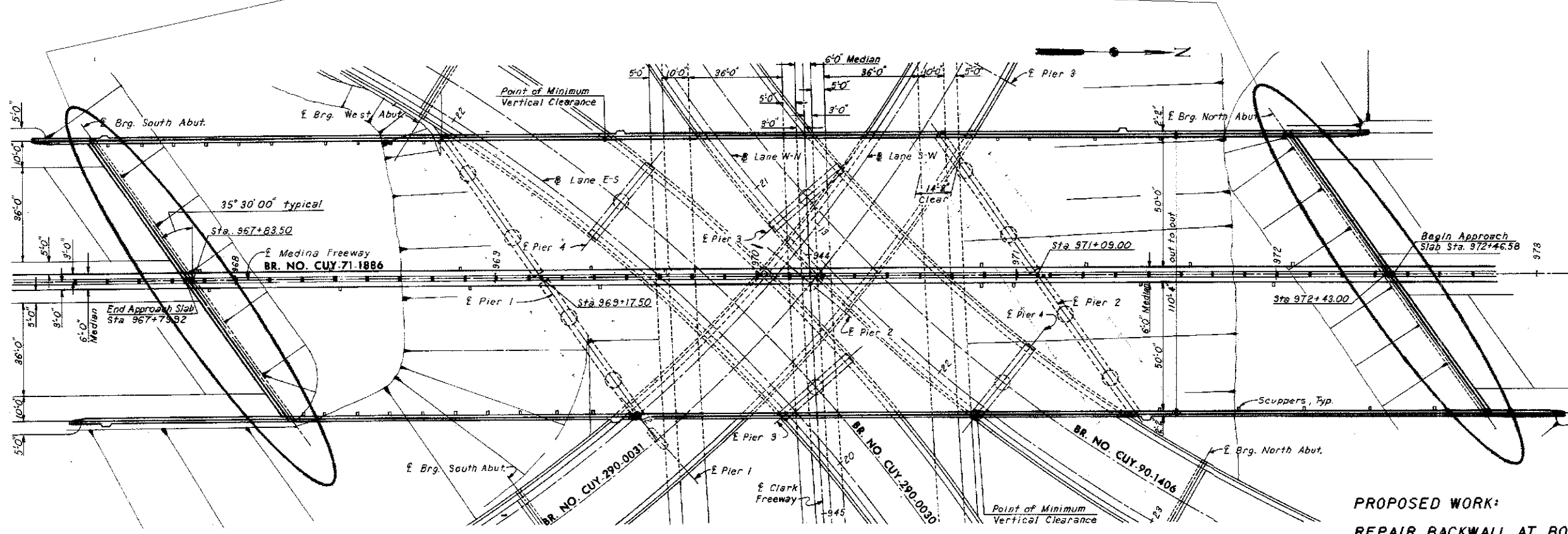
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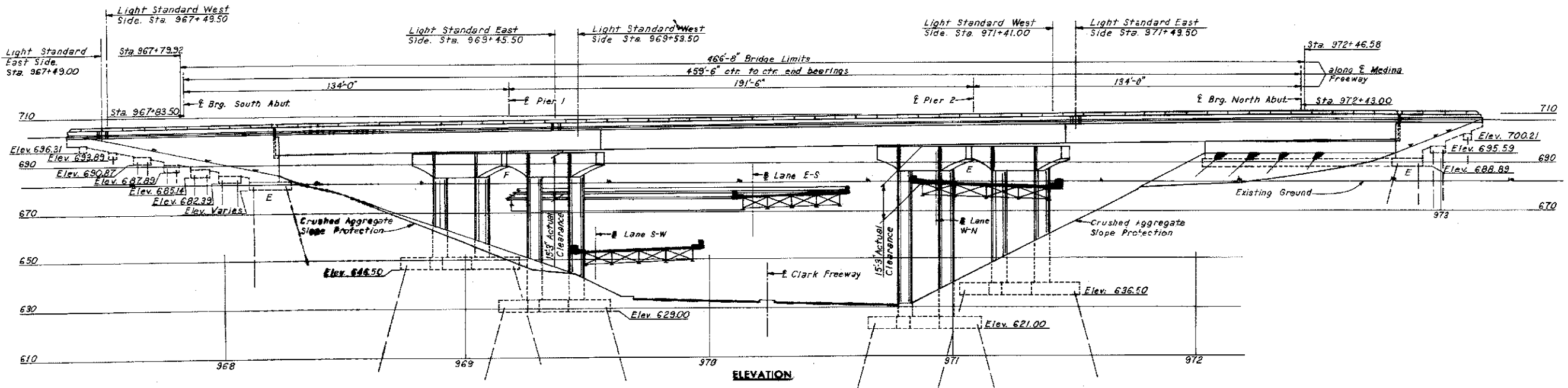
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### AREA OF BACK WALL REPAIR



PLAN

**PROPOSED WORK:**  
**REPAIR BACKWALL AT BOTH ABUTMENTS**  
**EPOXY INJECT CRACK AT BACKWALL**  
 \* DETAILS ON THIS SHEET ARE FROM ANOTHER PROJECT. ONLY PERFORM WORK LISTED UNDER PROPOSED WORK



ELEVATION

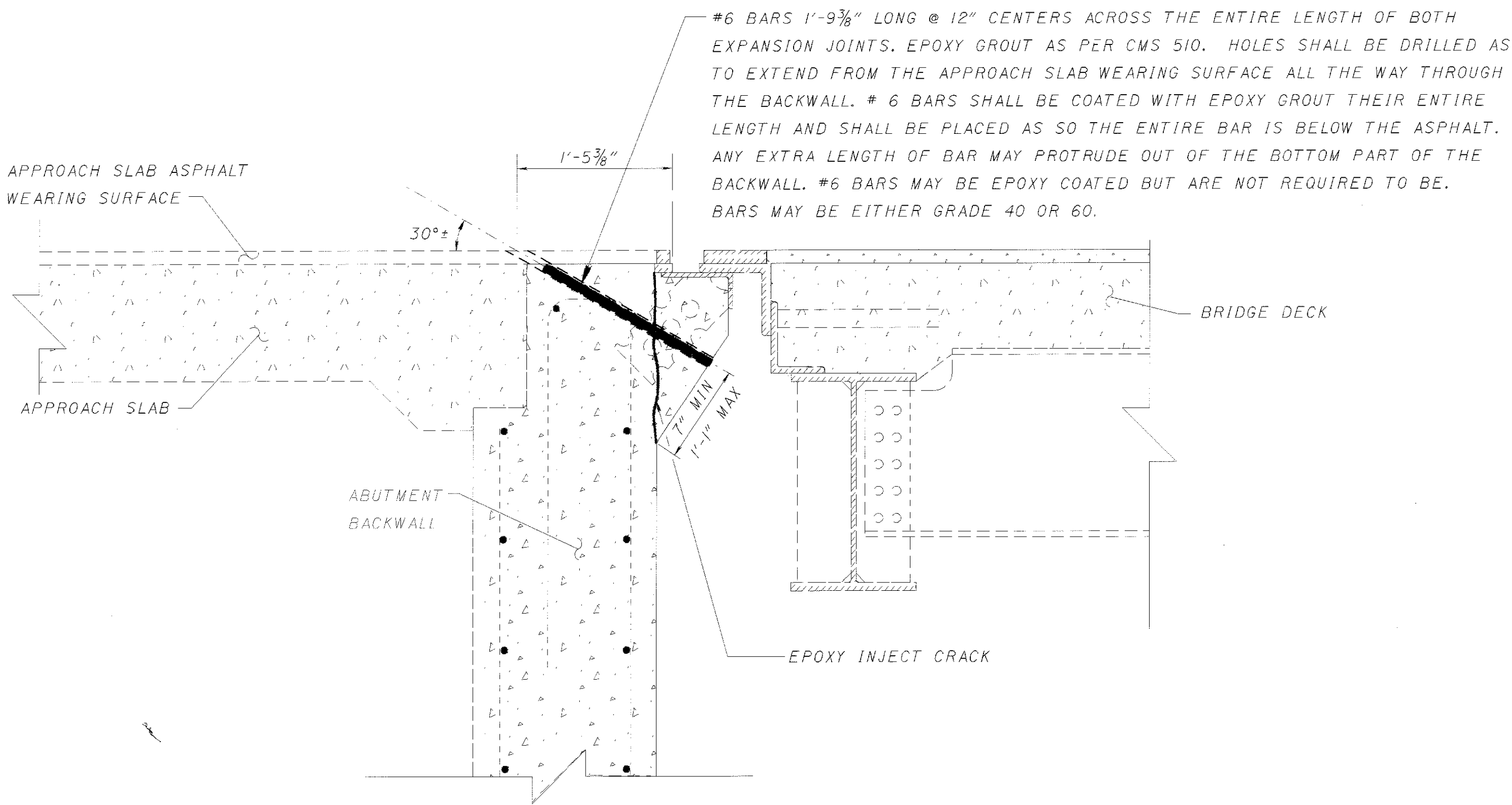
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O.D.O.T.  
DISTRICT 12  
PRODUCTION DEPARTMENT

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DRAWN	MJM	REVISOR
REVIEWED		STRUCTURE FILE NUMBER
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CUY-71-1887  
SITE PLAN

CUYAHOGA COUNTY  
CUY-90-15.24/Vor

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CUYAHOGA COUNTY CUY-90-15.24/Var CUY-71-1887 BACKWALL REPAIR DETAIL	
25 28	

ITEM 614 - MAINTAINING TRAFFIC:

GENERAL

GENERALLY THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED REPAIR WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. FURTHERMORE, IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED ON FUTURE LANE CLOSURES AND TRAFFIC CONSTRUCTIONS. THEREFORE, THE CONTRACTOR SHALL SUBMIT A SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. THE CONTRACTOR SHALL ALSO NOTIFY THE LOCAL LAW ENFORCEMENT AGENCIES OF LANE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO IMPLEMENTATION.

RESTRICTIONS

LANES CLOSURES MAY ONLY BE IMPLIMETED AT THE TIMES PERMITTED BY "THE DISTRICT 12, PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON ODOT'S WEB SITE AT

WWW.DOT.STATE.OH.US/DIST12/WORKZONE/LANECLO.HTM

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, WILL BE IN EFFECT FOR THIS JOB.

WITH THE FOLLOING EXCEPTION.

TWO LANE CLOSURES, ON I-90 EB, ARE PERMITTED FROM 10 AM FRIDAYS TO 5 AM MONDAYS ON THREE WEEKENDS ONLY. ON TWO OF THESE WEEKENDS, THREE LANES CLOSURES ARE PERMITTED ON I-90 EB FROM 10 AM FRIDAY TO 5 PM SATERDAY

IF A ROAD IS NOT ADRESSED ON THE WEB SITE OR IN THESE RESTRICTIONS, NO LANES CLOSURES SHALL BE PERMITTED WEEKDAYS 6 AM TO 9 AM AND 3 PM TO 7 PM. ONE LANE, IN EACH DIRECTION PROVIDED, SHALL BE OPEN AT ALL TIMES.

DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 ROAD CONSTRUCTION AHEAD SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SETUP TIME.

EXIT AND ENTRANCE RAMPS SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM LANE WIDTH OF TEN (10) FEET. WITH THE FOLLOWING EXCEPTIONS, PROVIDED APPROPRIATE DETOUR SIGNS ARE PLACED .

ONTERIO STREET EXIT RAMP FROM I-90 EB. MAY BE CLOSED THREE WEEKENDS FROM 8PM FRIDAY TO 5 AM MONDAY.

ONTERIO STREET ENTRANCE RAMP TO I-90 WB. MAY BE CLOSED TWO WEEKENDS FROM 8PM FRIDAY TO 5 AM MONDAY.

CONSTRUCTION EQUIPMENT, PRIVATE VEHICLES AND MATERIALS SHALL NOT BE PARKED OR STORED ON THE ROADWAY ADJACENT TO THE ROADWAY WITHIN THE 30' CLEAR ZONE OF THE TRAVELED LANES.

NOTWITHSTANDING THE ABOVE, NO RAMP, LANE OR SHOULDER CLOSURES SHALL OCCUR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL NOON ON THE DAY FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS SUCH AS MEMORIAL DAY, FOURTH OF JULY, AND LABOR DAY.

NO RAMP, LANE OR SHOULDER CLOSURES SHALL BE IMPLEMENTED OR IN PLACE DURING INCREASED TRAFFIC VOLUMES CAUSED BY SPECIAL EVENTS WITH A SEATING CAPACITY OVER 40,000\*, OR WHEN THE ENGINEER DEEMS THE CLIMATOLOGICAL CONDITIONS TOO HAZARDOUS.

MOT PLANS

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORKZONE TRAFFIC CONTROL ENGINEER AND PROJECT ENGINEER FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. THE MAINTENANCE OF TRAFFIC SCHEME SHALL PRESENT, IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER, SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN APPROVED.

ALL WORK SHALL BE CONDUCTED FROM WITHIN A ONE OR TWO (1, 2, OR 3) LANE CLOSURE USING DRUMS (42" TALL NIGHT CONES ARE PERMITTED ON THE STRUCTURES ONLY), ACCORDING TO THE RESTRICTIONS AND THE CONCEPTS PRESENTED IN MT-95.30M AND ASSOCIATED STANDARD CONSTRUCTION DRAWINGS, MT-98.12M THRU MT-98.16M (SEE LIST ON TITLE SHEET). A MINIMUM OF ONE 11' LANE IN EACH DIRECTION SHALL BE OPEN TO TRAFFIC AT ALL TIMES DURING THE HOURS PERMITTED.

IF, DURING THE PROJECT, THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEMS ARE RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE APPROVED MAINTENANCE OF TRAFFIC PLAN TO PERFORM TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.

FOLLOW STANDARD DRAWING MT-95.30M FOR MOST LOCATIONS. SINCE THE CLOSURE ZONE WILL BE IN PLACE OVER A WEEKEND, THE CONTRACTOR SHALL NOT REMOVE CONFLICTING PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS. TEMPORARY PAVEMENT MARKINGS DO NOT HAVE TO BE USED TO CONTRADICT EXISTING PAVEMENT MARKINGS. OC-8 SIGNS MAY BE OMITTED.

IF, IN THE OPINION OF THE ENGINEER, THE CONTRACTOR FAILS TO COMPLY WITH THESE REQUIREMENTS OR THE PROVISIONS OF THE APPROVED MAINTENANCE OF TRAFFIC PLAN, THE ENGINEER SHALL SUSPEND WORK UNTIL ALL REQUIREMENTS ARE COMPLIED WITH. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.

PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC SYSTEMS

A. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (HEREINAFTER REFERRED TO AS THE "MANUAL"). THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITIONS EXIST, HE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

B. CONDITIONS

DUPING ALL PARTS OF THIS PROJECT, SIGNING, BARRICADES, FLASHING AROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE MANUAL, AS SHOWN ON THE MAINTENANCE OF TRAFFIC SHEETS OR AS SHOWN ON STANDARD DRAWING MT-97.10M AND MT-95.30M.

C. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

D. FLASHING ARROW REQUIREMENT

FLASHING ARROWS SHALL BE FURNISHED AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS OR ON STANDARD DRAWING MT-95.30M.

E. PROTECTION OF PUBLIC

WHENEVER ANY WORK IS BEING DONE OVER A TRAVELED LANE OR SHOULDER, THE CONTRACTOR SHALL SUPPLY SUFFICIENT SAFETY EQUIPMENT AS APPROVED BY THE DIRECTOR TO PROTECT THE TRAVELING PUBLIC FROM ANY CONSTRUCTION DEBRIS. IF TRAVELED LANES UNDER STRUCTURES ARE TO BE CLOSED FOR REASONS OF SAFETY, METHOD AND TIME OF CLOSURE MUST BE APPROVED PRIOR TO IMPLEMENTATION. PERSONAL CARS SHALL NOT BE PARKED WITHIN THE L/A.

F. FLAGGERS

FLAGGERS SHALL BE IN ACCORDANCE WITH MT-97.10M. THE MAINTENANCE OF TRAFFIC PLANS REQUIRE THE USE OF TWO (2) FLAGGERS. ADDITIONAL FLAGGERS SHALL BE USED AS DIRECTED BY THE ENGINEER.

G. LAW ENFORCEMENT OFFICER WITH PATROL CAR

THE CONTRACTOR SHALL PROVIDE AND PAY ALL COST FOR THE SERVICES OF LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR THE EXCLUSIVE PURPOSE OF CONTROLLING TRAFFIC AS DETERMINED BY THE ENGINEER. THE NUMBER OF OFFICERS AND CARS REQUIRED FOR THIS PURPOSE SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE OFFICERS SHALL MOVE THEIR PATROL CARS AS NECESSARY TO INSURE THEIR CONSTANT PRESENCE AT THE POINT(S) OF SLOWDOWN, STOPPAGE OR BACK-UP. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ARRANGEMENTS FOR SCHEDULING AND PAYMENT OF LAW ENFORCEMENT OFFICER WITH PATROL CAR.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE MAN HOUR PRICE BID FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR.

PL01 SUBMITTED:14-MAY-2001 02:26

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PLOTTED BY: mmoloy FROM: I:\PROJECTS\BID21563\MOT.dgn

MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY CUY-90-15.24/VAR

H. WORKSITE TRAFFIC SUPERVISOR

THE CONTRACTOR SHALL EMPLOY (OTHER THAN THE SUPERINTENDENT) AND SUBJECT TO THE APPROVAL OF THE ENGINEER, A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS). THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

- 1) AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION A.T.S.S.A. PHONE NUMBER 1-800-272-8772) CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS)
- 2) THE NATIONAL SAFETY COUNCIL, TRAFFIC CONTROL ZONES SUPERVISORS COURSE, PHONE NO. 1-800-441-5103
- 3) NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NO. 1-703-235-0528

THE WTS POSITION IS ESTABLISHED FOR THE PURPOSE OF MONITORING AND CORRECTING ANY TRAFFIC CONTROL DEFICIENCIES IN THE WORK ZONE. THE WTS SHALL OVERSEE ALL OPERATIONS THAT AFFECT THE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE.

THE WTS SHALL BE PRESENT WHEN THE CONTRACTOR OR SUBCONTRACTOR INSTALLS A TRAFFIC RESTRICTION, LANE CLOSURE, ETC. IN LIEU OF THE WTS BEING PRESENT WHEN A SUBCONTRACTOR HAS A WORKZONE IN PLACE, THE CONTRACTOR MAY USE HIS OWN PERSONNEL THAT IS A CERTIFIED WTS. THE CONTRACTOR OR SUBCONTRACTOR MUST PRESENT A COPY OF HIS WTS CERTIFICATE TO THE PROJECT ENGINEER. A WTS MUST BE PRESENT WHEN THE WORK ZONE IS BEING SET UP. HE MUST APPROVE THE WORK ZONE BEFORE HE LEAVES OR PERFORMS OTHER DUTIES.

THE RESTRICTIONS ARE SHORT TERM, THE WTS SHALL MONITOR THE ZONE FOR COMPLIANCE. DURING THE LANE CLOSURE HE SHALL MAKE SURE ALL TRAFFIC CONTROL ITEMS ARE FUNCTIONING PROPERLY. TRAFFIC CONTROL WILL BE THE WTS' MAIN DUTY DURING IMPLEMENTATION OF ZONES OR SHORT TERM ZONES. THE WTS SHALL HAVE THE AUTHORITY TO HAVE DEFICIENCIES CORRECTED AS SOON AS POSSIBLE. THE WTS SHALL PROVIDE THE DISTRICT WORK ZONE TRAFFIC CONTROL ENGINEER A SKETCH OF THE TRAFFIC CONTROL PLAN (TCP) EVERYDAY THERE IS TO BE A SHORT TERM TRAFFIC RESTRICTION, LANE CLOSURE, ETC. THIS TCP SHALL SHOW HOW THE WORK ZONES ARE TO BE IMPLEMENTED.

THE WTS SHALL BE AVAILABLE ON A 24-HOUR BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. A 24-HOUR PHONE NUMBER SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER IN ORDER TO CONTACT THE WTS. THE WTS SHALL HAVE A PAGER AND THE PHONE NUMBER PROVIDED TO THE PROJECT ENGINEER.

FAILURE OF THE CONTRACTOR TO COMPLY WITH ANY OF THE ABOVE, SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER TO DEDUCT \$500.00 PER DAY FROM MONEY DUE TO THE CONTRACTOR NOT AS A PENALTY, BUT AS A LIQUIDATED DAMAGE.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE LUMP SUM ITEM 614 - MAINTAINING TRAFFIC.

I. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISION FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISION OF THE AFOREMENTIONED ITEMS.

TRAFFIC CONTROL MATERIAL

A. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES SHALL BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THIS PROJECT.

B. SIGN SUPPORTS

SIGN SUPPORTS SHALL BE AS SHOWN ON STANDARD DRAWINGS MT-105.10M AND MT-105.11M.

C. FLASHING ARROWS

THE ELECTRIC FLASHING ARROW SHALL BE AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-35.10M AND MT-35.11M.

D. CONES

CONES SHALL BE LOCATED AS SHOWN IN THE "MANUAL" AND THE TRAFFIC CONTROL PLANS.

E. DRUMS

DRUMS SHALL BE LOCATED AS SHOWN ON THE TRAFFIC CONTROL PLANS AND ARE REQUIRED FOR NIGHTTIME CLOSURES.

F. FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

G. PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE WHEN NO LONGER NEEDED, UP TO FOUR PORTABLE CHANGEABLE MESSAGE SIGN(S). THE PCMS SHALL BE OF THE TYPE SHOWN ON THE LIST OF APPROVED PCMS MAINTAINED BY THE DIRECTOR. THE PCMS SHALL BE A CLASS I OR II TYPE UNIT.

THE PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE MOUNTED ON A TRAILER. NO FLIP DISC SIGNS ARE PERMITTED. THE LOCATION OF THE PCMS SHALL BE AS DIRECTED BY THE ENGINEER. THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE LINK WHICH WILL ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER THE SOFTWARE NECESSARY TO CONTROL THE PCMS REMOTELY.

THE PCMS SHALL BE EQUIPPED WITH A MYRIAD SAFETY BEAM OR AN APPROVED EQUAL AS DETERMINED BY THE ENGINEER. THE MYRIAD SAFETY BEAM SENDS OUT A SIGNAL THAT ACTIVATES RADAR DETECTORS. THE BEAM IS APPROVED BY THE F.C.C. THE MYRIAD SAFETY BEAM SHALL USE THE SAME POWER SUPPLY AS THE PCMS. THE MYRIAD SAFETY BEAM SHALL BE ABLE TO BE ACTIVATED WITH THE PCMS RUNNING OR NOT. THE MYRIAD SAFETY BEAM IS DISTRIBUTED BY THE TRIPLEX GROUP, INC., P.O. BOX 428, NEW HOPE, PA 18938, PHONE (215) 262-5077.

AT THE DIRECTION OF THE ENGINEER THE PCMS MAY BE REMOVED FOR PERIODS OR TIMES WHEN NOT IN USE. NO PAYMENT WILL BE MADE FOR THESE TIMES (EX. WINTER MONTHS).

THERE SHALL BE ONE CLASS I OR II CHANGEABLE MESSAGE SIGN AT EACH TWO (2) LANECLOSURE IN EACH DIRECTION.

PAYMENT FOR THE PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE AT THE LUMP SUM UNIT PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

H. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, INCLUDING TRUCKS, SHALL BE EQUIPPED WITH A FLASHING, ROTATING OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-HALF KILOMETER IN BRIGHT SUKLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW 55 MPH. VEHICLE HAZARD LAMPS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING OR OSCILLATING AMBER LIGHT VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-HALF KILOMETER IN BRIGHT SUKLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

PAYMENT

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

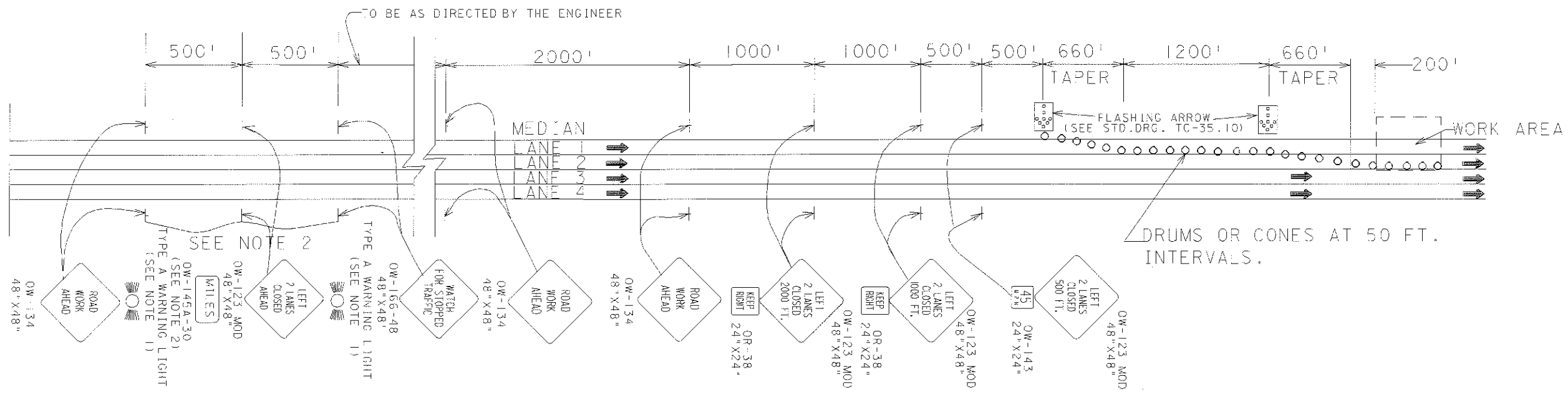
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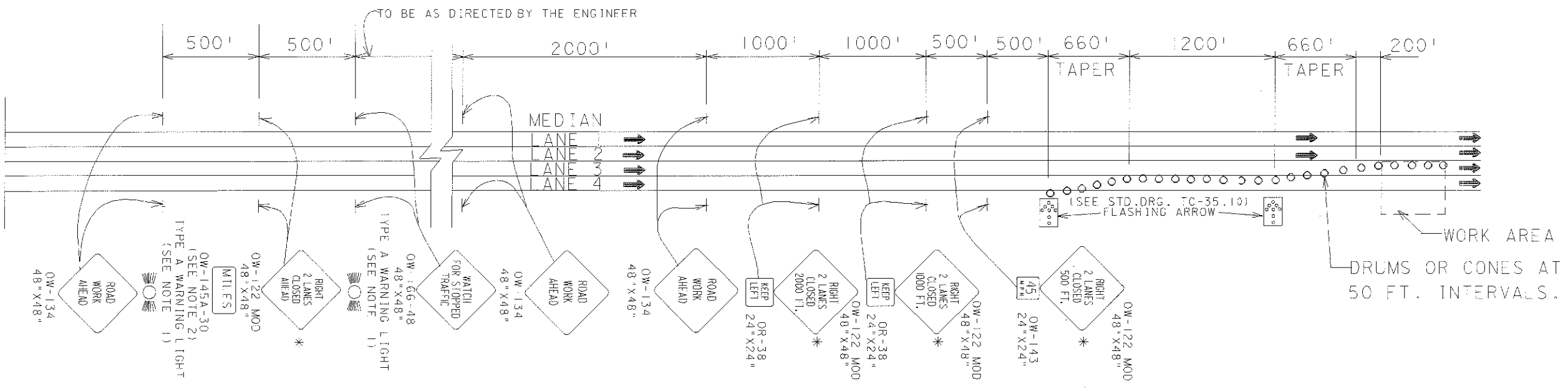
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MAINTENANCE OF TRAFFIC NOTES

CUYAHOGA COUNTY CUY-90-16.24/VAR



**LEFT 2 LANES CLOSED FOR 3 OR 4 LANES SAME DIRECTION**



**RIGHT 2 LANES CLOSED FOR 3 OR 4 LANES SAME DIRECTION \***

**GENERAL NOTES:**

1. TYPE A FLASHING WARNING LIGHTS SHOWN ON THE "ROAD WORK AHEAD" AND "RIGHT(OR LEFT) 2 LANES CLOSED AHEAD" SIGNS ARE REQUIRED WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.
2. EXTRA ADVANCE WARNING SIGN GROUPS CONSISTING OF OW-128, OW-122 MOD, OR OW 123 MOD AND OW-166 SIGNS PLUS DISTANCE PLATES MAY BE SPECIFIED IN THE PLANS OR REQUIRED TO BE ERECTED AT THE DIRECTION OF THE ENGINEER.

\* FOR RIGHT 3 LANE CLOSURE ADD 1200' BETWEEN TAPERS, A 660' TAPER AND AN ADDITIONAL ARROW BOARD. (SUBSTITUTE RIGHT 3 LANES CLOSED...SIGNS FOR RIGHT 2 LANES CLOSED...SIGNS)

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