I-680-9(11)238
U-524 (9)

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U 524 (9)	

1
206

MAH-7-14.95

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
YOUNGSTOWN EXPRESSWAY
MAH-7-14.95
MAHONING COUNTY
CITY OF YOUNGSTOWN

CONVENTIONAL SIGNS

Center line
Corporation line
Fence line
Guard rail (proposed)
Railroad
Power poles
Telephone poles
Trees & stumps (existing)
Limited Access Line — LA —
Proposed & Existing Street R/W

INDEX OF SHEETS

* SHEETS 14A, & 14B HAVE BEEN ADDED TO REVISE THE PLAN TO 1969 SPECIFICATIONS.

Sht. No. 1 revised 7-14-69 H.E.D.
Sht. No. 1 revised 6-4-69 H.E.D.
Sht. No. 106 revised 6-12-69 H.E.D.
Sht. No. 144 & 149 revised 11-5-69 EBL
Sht. No. 163 & 173 revised 12-5-69 EBL

LINE DATA

I-680-9(11)238
BEGIN PROJECT STA. 780+13.60 SOUTHBOUND S.R. 7
END PROJECT STA. 803+99.95 SOUTHBOUND S.R. 7
NET LENGTH I-680-9(11)238 - 2,386.35 L.F. OR 0.45 MI.
LENGTH OF WORK (FROM SH. 7) = 7,202.13 L.F. OR 1.364 MILES

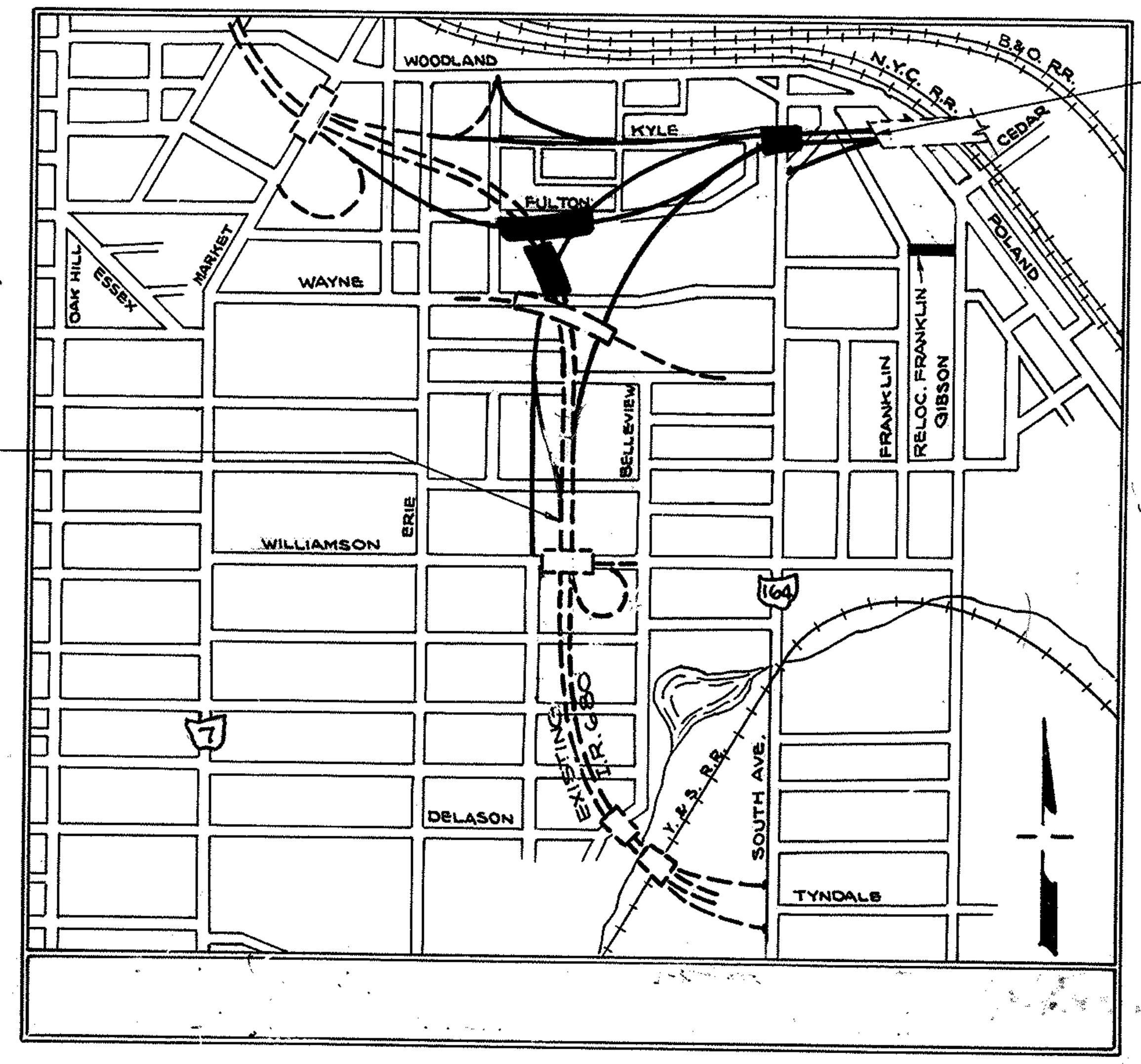
U-524(9)
BEGIN PROJECT STA. 803+99.95 SOUTHBOUND S.R. 7
END PROJECT STA. 813+94.23 N & S BOUND S.R. 7
NET LENGTH U-524(9) 994.28 L.F. OR 0.188 MILE
LENGTH OF WORK (FROM SHEET 7) = 1531.25 L.F. OR 0.290 MILE
LENGTH OF WORK (FRANKLIN AVE. 100% CITY - FROM SH. 7) = 333.06 L.F. OR 0.063 MILE
TOTAL NET LENGTH OF PROJECT = 3380.63 L.F. OR 0.640 MILE
TOTAL NET LENGTH OF WORK = 9066.44 L.F. OR 1.717 MILES

SPECIFICATIONS
ALL ITEMS APPEARING THROUGHOUT THE PLANS REFERRING TO THE 1963 CONSTRUCTION AND MATERIAL SPECIFICATIONS ARE TO BE USED FOR REFERENCE PURPOSES ONLY. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 1969 CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE CROSS REFERENCE TO THE 1969 SPECIFICATIONS ARE SHOWN ON THE GENERAL SUMMARY SHEETS NOS. 14A & 14B.

DESIGN DESIGNATION

CURRENT ADT	44,000
DESIGN ADT - 1985	80,000
DHV	1,050
D	40%-60%
T	5%
V	50 MPH

BEGIN PROJECT
MAH. 7-14.95
S.B. STA. 780+13.60



END PROJECT
MAH. 7-14.95
STA. 813+94.23

LOCATION MAP

GRAPHIC SCALE
0 800' 1600' 2400'

Portion to be improved
Existing I.R. 680

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

1969 SPECIFICATIONS

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

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO

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 OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES

Approved *Clifton M. [illegible]*
Date *8-23-68* Division Deputy Director
Approved *C. H. [illegible]*
Date *12-18-68* Engineer of Bridges
Approved *R. E. Catlin*
Date *12-19-68* Engineer of Location and Design
Approved *George J. [illegible]*
Date *12-19-68* Deputy Director of Design and Construction
Approved *[illegible]*
Date *1-13-69* Deputy Director of Right of Way
Approved *Thomas M Major*
Date *1-13-69* Deputy Director of Planning and Programming
Approved *R. W. Wilson*
Date *1-13-69* First Assistant Director
Approved *P. E. Masheter*
Date *1-13-69* Director of Highways
Approved *Albert R. [illegible]*
Date *8-19-63* Commissioner of Engineering, City of Youngstown

KRR HBV7 10-9-68

SCALE

PLAN	1" = 50'
PROFILE: HORIZONTAL	1" = 50'
PROFILE: VERTICAL	1" = 5'
CROSS SECTIONS: HORIZONTAL	1" = 10'
CROSS SECTIONS: VERTICAL	1" = 10'

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
AKRON, OHIO — YOUNGSTOWN, OHIO
File No MAH-7-14.95
Date of Letting ______ 19__
Contract No ______

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-1	6-1-65	BP-5	6-1-65	SD-1-65	11-8-65	BP-6	6-1-65
BP-2	1-17-68	BP-7	1-1-66	FSB-1-62	1-15-63	HW-E	6-1-65
F-1	6-1-65	MC-5	6-1-65	BP-4	12-1-68	F-5	2-20-68
F-3	2-20-68	CR-1	1-1-67	AS-1-67	1-11-68	CB-6	6-1-65
MC-3	11-1-68	GR-2A	1-1-67			GR-5	~~1-15-69~~ 68
MC-4	6-1-65	MC-6	6-1-65	RB-1-55	2-2-59	~~GR-5A~~	~~6-1-65~~
L-1	6-1-65	F-2	6-1-65	BR-1-65	11-24-65	GR-6	7-15-68
C.B 2-3 & 2-4	6-1-65	GR-2B	2-15-68	FACI-1	9-15-67	HL-1	11-1-65
C.B.-5	6-6-68	MH 1A	10-1-68	FACI 2	6-1-65	HL-2	11-1-65
I 2	10-1-68	BP-3	12-1-68			HL-3	11-1-65
I 2A	10-1-68	MC-1	10-1-67	CSB-2-63	12-1-65	HL-4	1-1-66
M.H. 1	10-1-68	MC-7	10-1-68				

SUPPLEMENTAL SPECIFICATIONS

811	1-1-69
814	1-1-69
808	1-1-69
816	1-1-69
815	1-1-69
1001	1-1-69
825	1-1-69
801	1-1-69

Rev. 7-14-69 H.E.D.
Rev. 6-4-69 H.E.D.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

APPROVED

Division Engineer ______ Date ______

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

2
206

MAH 7-14.95

◎ DENOTES & REFERENCE MONUMENTS SET IN PROJECT MAH 7-14.80

CURVE & SPIRAL DATA

CODE	LOCATION	Δ	Dc	R	T	L	E	Θs	Ls	L.T.	S.T.	P	K	Xc	Yc	L.C.	Ts	Es	Lc	Δ1+Δ2	T1	T2	La	Pa
1	N.B. S.R.7	8°00'00"	1°30'	3819.72	267.10	533.33	9.33																	
2	N.B. S.R.7	78°54'52"	5°00'	1145.92				7°30'	300'	200.18	100.16	3.27	149.91	299.49	13.07	299.77	1095.79	342.48	1278.29					
3	S.B. S.R.7	6°32'02"	3°00'	1909.86	109.02	217.80																		
4	S.B. S.R.7							3°00	200'	133.35	66.68	0.87	99.99	199.95	3.49	199.98								
5	S.B. S.R.7	96°26'54"	5°00'	1145.92				7°30'	300'	200.18	100.16	3.27	149.91	299.49	13.07	299.77	1436.30	579.03	1628.97					
6	MAH-7-14.80	68°53'50"	7°30'	763.94				15°00'	400'	267.63	134.21	8.70	199.54	397.27	34.74	398.78	729.54	173.01	518.63					
7	RAMP "BX"	21°55'20"	2°30'	2291.83	443.87	876.89	42.49																	
8	RAMP "BX"																			8°30'	113.92	86.45	200'	1.02
9	RAMP "BX"	32°15'53	6°00'	954.93	276.21	537.75	39.14																	
10	RAMP "BX"							12°00'	400'	267.28	133.89	6.97	199.71	398.25	27.84	399.22								
11	RAMP "BV"	13°57'42"	2°00'	2864.79	350.64	698.08	21.38																	
12	RAMP "CA"	7°50'28"	2°00'	2864.79	196.33	392.06	6.72																	
13	RAMP "CA"							38°11'50"	200'	136.58	69.62													
14	RAMP "CA"	47°02'55"	38°11'50"	150'	65.30	123.17	13.60																	
15	RAMP "N"							28°38'52	150'	101.34	51.22													
16	RAMP "N"	36°11'18"	38°11'50"	150'	49.01	94.74																		
17	RAMP "N"							28°38'52"	150'	101.34	51.22													
18	RAMP "N"							7°00'	200'	133.44	66.76													
19	RAMP "N"	24°30'	7°00'	818.51	177.72	350'																		
20	RAMP "BY"	6°34'15"	3°00	1909.86	109.63	219.03	3.14																	
21	RAMP "BZ"	11°07'51"	4°00	1432.40	139.58	287.27	6.78																	
22	WAYNE-PYATT	26°43'49"	6°00'	954.93	226.88	445.50																		
23	WAYNE-PYATT	26°25'52"	6°30'	881.47	207.00	406.63																		

COORDINATE LAYOUT

FED. RD. | STATE | PROJECT
2 | OHIO | I-680-9(11) 238 U-524(9)
2-A
206
MAH 7-14.95
MICROFILMED JUN 26 1979 REPRODUCTION
MATCH LINE "A"
HAYES
ERIE
MARLIN
PLYMOUTH
HEASLEY ALLEY
WYMER ALLEY
WILLIAMSON
MYRTLE
PYATT
OKLAHOMA
WAYNE
WAYNE-PYATT
BELLEVIEW
FULTON
CHERRY ALLEY
KYLE
FULTON COURT
WOODLAND
HENRY
MARKET
℄ RAMP "BV"
℄ RAMP "BX"
℄ RAMP "CA"
℄ MAH-7-14.80
I-680-9(14)240
I-680-9(11)238
℄ TEMPORARY ROAD
℄ N. BOUND S.R.7
℄ S. BOUND S.R.7
STRUCTURE No MAH 7-1508
STRUCTURE No MAH 7-1514
STRUCTURE NO. MAH.7-1514
STRUCTURE No MAH 7-1528
STRUCTURE No MAH 7-1523
℄ MAH.15.17.20
NOTE: PLACE F.A.C.I. SIGN RT. OF I.R.680 STA. 785+00
NOTE: PLACE F.A.C.I. SIGN LT. OF I.R.680 STA. 805+00
P.C. STA. 5+50.46 8' LT. ℄
STA. 803+39.95 ℄ S.B. S.R. 7
STA. 802+50 ℄ N.B. S.R. 7
I-680-9(11)238
U-524(9)
SOUTH AVE - MATCH LINE
SOUTH AVE. - MATCH LINE
FLINT
HILL
FRANKLIN
HADNETT
E. WOODLAND
813+94.23
LA
URBAN FUNDS U-524(9)
INTERSTATE FUNDS I-680-9(11)238
EXISTING IR 680
GENERAL PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2-8
206

MAH-7-14.95

GENERAL PLAN

FED. RD.	STATE	PROJECT
2	OHIO	I-680-3(11) 238 U-524(3)

TYPICAL SECTIONS

SCALE: 3/16" = 1 FT.

MAH. 7-14.95

TYPE T-71

In lieu of spacing requirements of Standard Drawing MC-6, expansion and contraction joints shall be provided in Item 612 Concrete Median, as detailed hereon, whenever guard rail is called for.

1. T-71 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
2. I-22 6" SUBBASE GRADING "A" OR "B" AS PER PLAN. (See General Notes)
3. B-112 POROUS BASE COURSE. (VARIABLE DEPTH)
4. T-31 BITUMINOUS SURFACE TREATMENT { ONE APPLICATION - BITUMINOUS MATERIAL AT THE RATE OF .030 GAL'S./SQ.YD. ONE APPLICATION - #6 AGGREGATE AT THE RATE OF 0.008 CU.YDS./SQ.YD SEE NOTE IN PROPOSAL
5. B-21 3" WATERPROOFED AGGREGATE BASE COURSE { TYPE "A" T-35 MATERIAL MAY BE USED IN CONSTRUCTION OF THIS COURSE. ~ SEE NOTE IN PROPOSAL.
6. STANDARD LONGITUDINAL JOINT
7. I-1 6" PIPE UNDERDRAIN
8. I-15 STANDARD GUARD RAIL, STEEL BEAM (DEEP)
9. I-21 STANDARD TYPE 2 PORTLAND CEMENT CONCRETE TRAFFIC DIVIDER
10. I-15 STD. BARRIER GUARD RAIL, STEEL BEAM (DEEP)
11. INSTALL PIPE UNDERDRAIN ON OUTSIDE SHOULDER, WHERE REQUIRED. INSTALLATION OF SHALLOW UNDERDRAIN IN MEDIAN MAY BE DEFERRED UNTIL PAVEMENT IS PLACED. PLACE SUBBASE OUT TO OUTSIDE EDGE OF UNDERDRAIN OR TO ONE FOOT BEYOND EDGE OF PAVEMENT WHERE NO UNDERDRAIN IS PRESENT. PAYMENT SHALL BE MADE FOR ALL SUBBASE PLACED IN THIS OPERATION. CONSTRUCT PAVEMENT. REMOVE SUBBASE AND ANY CONTAMINATED BACKFILL OVER DRAIN AND REPLACE WITH No.8 OR No.9 AGGREGATE AS SHOWN. COMPLETE SHOULDER CONSTRUCTION.
19. SEEDING & MULCHING (SEE GENERAL NOTES)
20. Sealed Joint (See Note in Proposal)

TYPICAL SECTIONS

TYPICAL SECTIONS

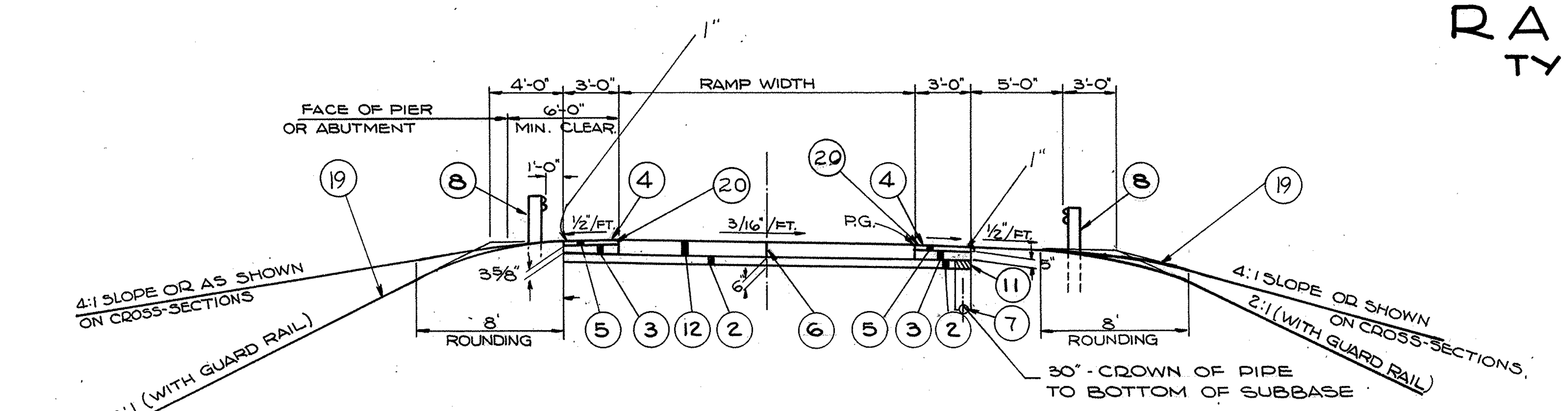
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

4/206

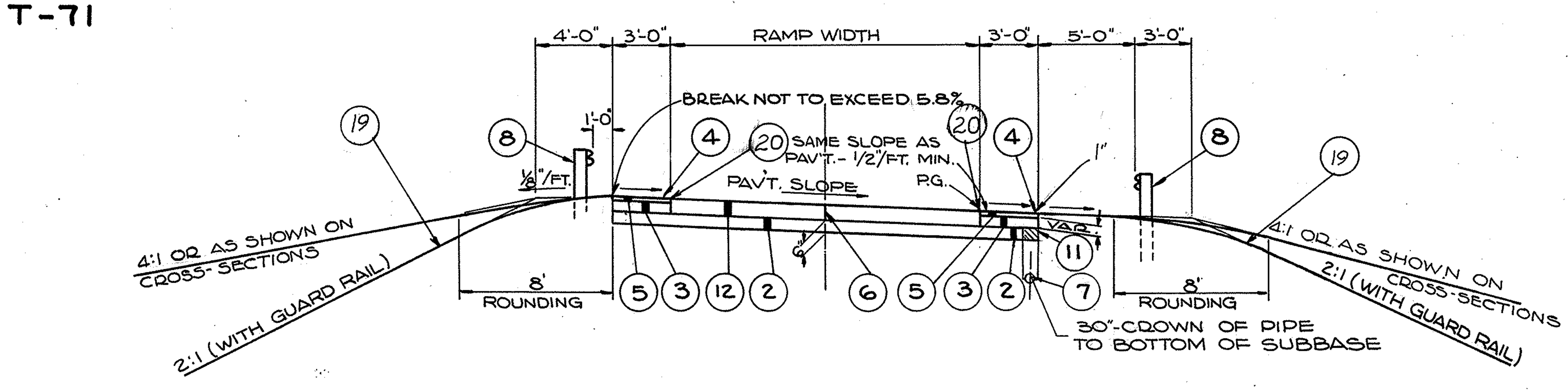
MAH. 7-14.95

SCALE: 3/16" = 1 FT.

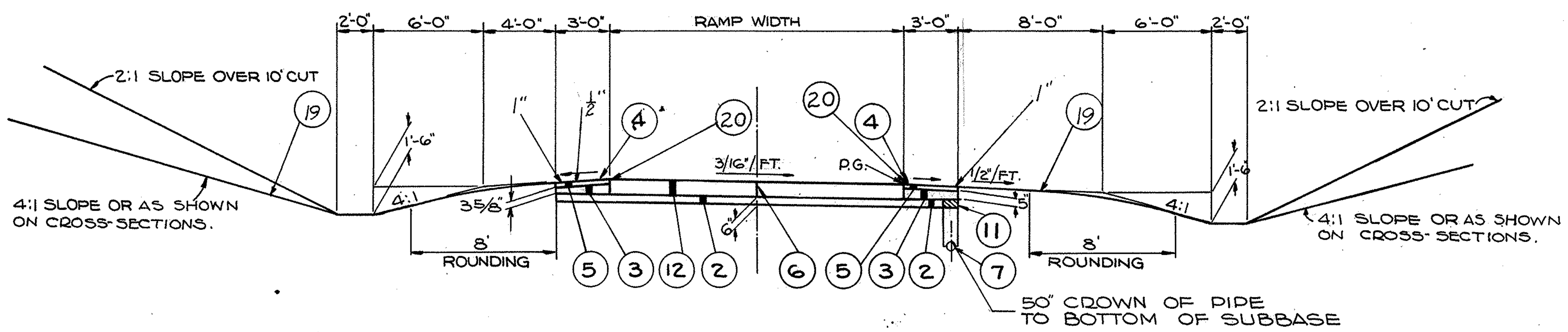
RAMPS
TYPE T-71



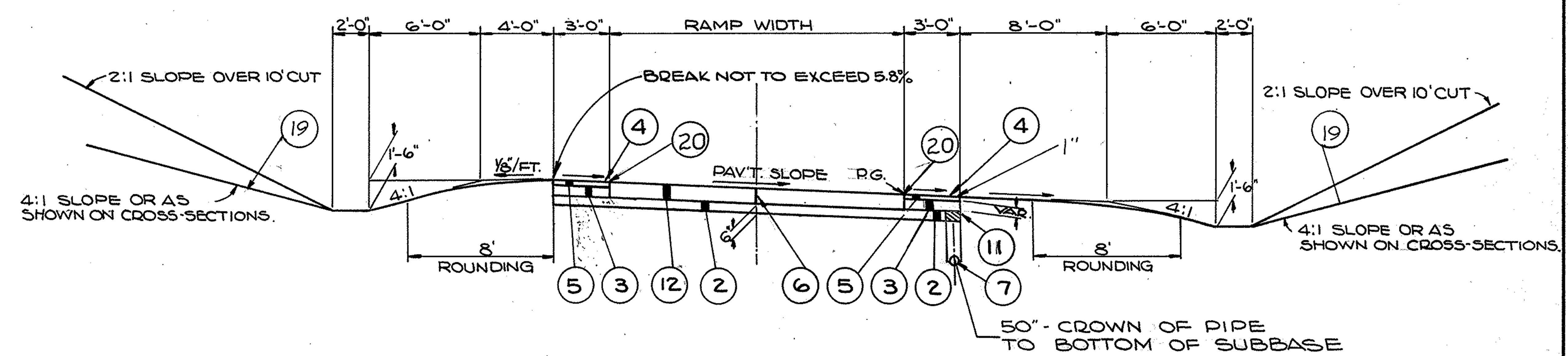
NORMAL FILL SECTION



SUPERELEVATED FILL SECTION



NORMAL CUT SECTION



SUPERELEVATED CUT SECTION

(2) I-22 6" SUBBASE GRADING "A" OR "B" AS PER PLAN.

(3) B-112 POROUS BASE COURSE. (VARIABLE DEPTH)

(4) T-31 BITUMINOUS SURFACE TREATMENT { ONE APPLICATION - BITUMINOUS MATERIAL AT THE RATE OF 0.30 GALS./SQ.YD. ONE APPLICATION - #6 AGGREGATE AT THE RATE OF 0.008 CU.YDS./SQ.YD. SEE NOTE IN PROPOSAL

(5) B-21 3" WATERPROOFED AGGREGATE BASE COURSE { ~~TYPE "A" T-35 MATERIAL MAY BE USED IN CONSTRUCTION OF THIS COURSE.~~

(6) STANDARD LONGITUDINAL JOINT

(20) *Sealed Joint (See Note in Proposal)*

(7) I-1 6" PIPE UNDERDRAIN

(8) I-15 STANDARD GUARD RAIL, STEEL BEAM (DEEP)

(11) *INSTALL PIPE UNDERDRAIN ON OUTSIDE SHOULDER, WHERE REQUIRED. INSTALLATION OF SHALLOW UNDERDRAIN IN MEDIAN MAY BE DEFERRED UNTIL PAVEMENT IS PLACED. PLACE SUBBASE OUT TO OUTSIDE EDGE OF UNDERDRAIN OR TO ONE FOOT BEYOND EDGE OF PAVEMENT WHERE NO UNDERDRAIN IS PRESENT. PAYMENT SHALL BE MADE FOR ALL SUBBASE PLACED IN OPERATION. CONSTRUCT PAVMENT. REMOVE SUBBASE AND ANY CONTAMINATED BACKFILL OVERDRAIN AND REPLACE WITH No.8 or 9 AGGREGATE AS SHOWN. COMPLETE SHOULDER CONSTRUCTION.*

(12) T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

(19) SEEDING & PROTECTION.

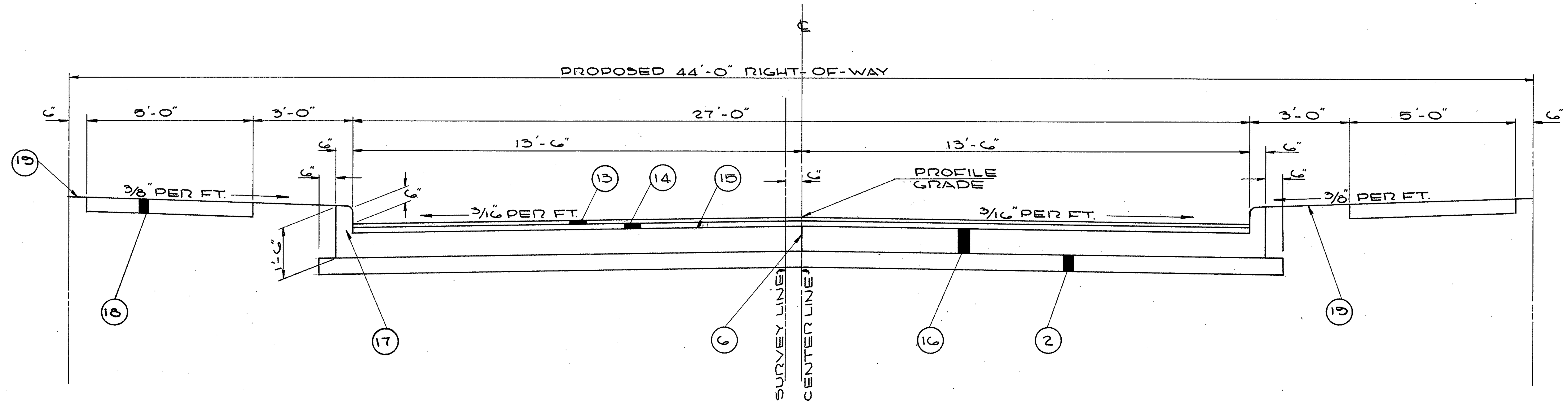
TYPICAL SECTIONS

TYPICAL SECTIONS

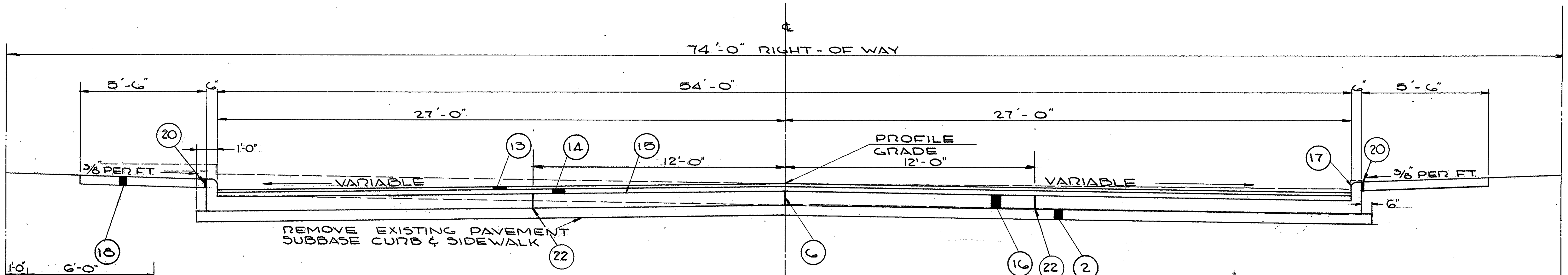
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-5(11) 238 U-524(5)	

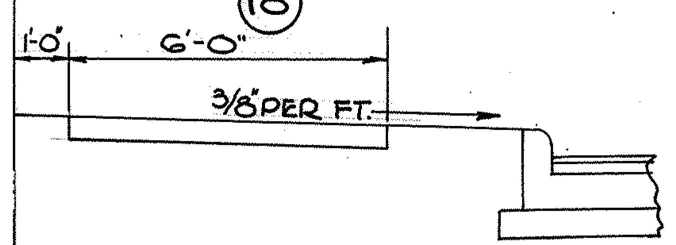
5
206

MAH. 7-14.95



RELOCATED FRANKLIN
LIMITING STATIONS
STA. 0+40.15 TO STA. 2+84.26
LIN. FT. = 244.11





DETAIL
SIDEWALK TRANSITION

IMPROVED SOUTH AVE.
LIMITING STATIONS
STA. 47+72.80 TO STA. 48+26
STA. 48+36 TO STA. 51+00
LIN. FT. 3072

(2) I-22 6" SUBBASE GRADING "A" OR "B" AS PER PLAN.

(6) STANDARD LONGITUDINAL JOINT WITHOUT TIE BARS

(13) 1 1/4" T-35 ASPHALTIC CONCRETE SURFACE COURSE ~ TYPE C (60-70)

(14) 1 3/4" B-35 ASPHALTIC CONCRETE LEVELING COURSE ~ (70-85)

(15) T-30 BITUMINOUS TACK COAT ~ .10 GAL. PER SQ. YD.
SEC. M-5.5, MS-2, RS-1 OR
SEC. M-5.2, RC-1, RC-2 OR
AS PER T-30.02

(16) 5" B-70 PORTLAND CEMENT CONCRETE BASE COURSE

(17) I-12 STANDARD TYPE 2B CONCRETE CURB

(18) 5" I-13 CONCRETE SIDEWALK

(19) L-5 SEEDING & PROTECTING

(20) 1/2" EXPANSION JOINT MATERIAL AS PER PLAN.

(22) STANDARD LONGITUDINAL JOINT

TYPICAL SECTIONS
CITY STREETS

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524 (9)	

MAH-7-14.95

ROAD NAME SIGNS

ALL COUNTY, TOWNSHIP, CITY OR VILLAGE ROAD OR STREET NAME SIGNS THAT WILL BE DISTURBED BY THE CONSTRUCTION SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR FOR DISPOSAL BY THEIR RESPECTIVE OWNERS. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 203 EXCAVATION, INCLUDING EMBANKMENT CONSTRUCTION.

FIELD OFFICE

SEE NOTE THIS SHEET

~~THE CONTRACTOR SHALL, IN ACCORDANCE WITH SEC. 105.15-2 PROVIDE, FOR THE EXCLUSIVE USE OF THE STATES EMPLOYEES, A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. (THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING ELECTRIC LIGHTS AND OFFICE EQUIPMENT IN THE FIELD OFFICE AND PROVIDE 110 VOLT ALTERNATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION OF THIS PROJECT.) THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM BID FOR FIELD OFFICE.~~

~~R/W MONUMENTS, FEDERAL PROJECTS MARKERS, AND SECTION MARKERS~~

~~EXISTING R/W MONUMENTS, BENCH MARKS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AS PER SECTION 107.12 UNTIL THEY CAN BE WITNESSED, REFERENCED AND RESET BY THE CONSTRUCTION CREWS.~~

ELEVATION DATA

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

~~SALVAGE OF MANHOLES AND CATCH BASIN CASTINGS~~

~~THE CASTINGS FROM MANHOLES AND CATCH BASINS REMOVED UNDER ITEMS 203 OR 202 SHALL BE SALVAGED AND STORED WITHIN THE RIGHT-OF-WAY LIMITS. THE CASTINGS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.~~

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 MAKES NO GUARANTEES AS TO THEIR ACCURACY OR COMPLETENESS.

CURB DRAINS

EXISTING DOWNSPOUT DRAIN PIPES ENCOUNTERED DURING CONSTRUCTION ARE TO BE REPLACED, AS DIRECTED BY THE ENGINEER, PAYMENT FOR THE REPLACEMENT OF THE EXISTING PIPES WILL BE AS NOTED BELOW:

603-4" CONDUIT TYPE "C" ~~WITH CLASS "B" BEDDING 706.08 SS.~~ 200 LIN. FT.

THE ABOVE QUANTITY IS PROVIDED FOR NEW DRAIN PIPES AND CURB OPENINGS AT LOCATIONS DESIGNATED BY THE ENGINEER. IT SHALL INCLUDE THE CURB OPENING, FURNISHING AND INSTALLING THE PIPE AND OTHER INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THIS ITEM.

DESIGN SPEED

THE GEOMETRICS OF THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 50 M.P.H.

ITEM 619, FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 800 SQ. FT. OF FLOOR SPACE FOR THE FIELD OFFICE AND IN ADDITION TO THE REQUIREMENTS OF ITEM 619, SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

SPECIAL SEEDING PREPARATION AREAS

THE REFERENCES IN THE FIRST PARAGRAPH OF .659.09 TO PREPARATION OF THE SEED BED IN FRONT OF RESIDENCES, ETC., SHALL, ON THIS PROJECT, BE CONSIDERED TO BE PARTICULARLY APPLICABLE IN THE FOLLOWING AREAS:

S. R. 7 SOUTH BOUND - STATION 790+50 TO 799+00 RIGHT BASE LINE
FRANKLIN AVENUE - STATION 0+13.20 TO 3+11 LT & RT.

~~CURBS ON APPROACH SLABS~~

~~THE HEIGHT AND FACE OF CURBS ON APPROACH SLABS SHALL BE TRANSITIONED FROM THE STANDARD SECTION USED ON THE APPROACH PAVEMENT TO THE SECTION USED ON THE BRIDGE CURBING WITHIN THE LIMITS OF THE APPROACH SLAB.~~

~~REPLACEMENT~~

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

310 UNDER APPROACH SLABS

THE AREA BETWEEN THE BOTTOM SURFACE OF THE APPROACH SLAB AND THE SUBGRADE SHALL BE BACKFILLED WITH ITEM 310, SUBBASE, ~~"A" OR "B" AS PER PLAN.~~ GRADING A, AS PER PLAN.

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND SPECIFICATIONS.

~~PERMITS, LAWS, REGULATIONS~~

~~THE CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FROM THE MUNICIPAL OR OTHER PUBLIC AUTHORITIES AND SHALL GIVE ALL NOTICES REQUIRED BY LAW OR MUNICIPAL ORDINANCES.~~

UTILITIES

THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING GROUND ALL PUBLIC SERVICE CORPORATIONS HAVING WIRE, POLES, PIPE CONDUITS, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. ANY AND ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THESE PLANS.

FOLLOWING IS A LIST OF THE UTILITIES WITHIN THE LIMITS OF THIS PROJECT:

EAST OHIO GAS COMPANY, 101 E. BOARDMAN ST.
OHIO EDISON COMPANY, 730 SOUTH AVE.
OHIO BELL TELEPHONE COMPANY AND A.T. & T., 2405 MARKET ST.
CITY OF YOUNGSTOWN WATER DEPARTMENT, CITY HALL, BOARDMAN & PHELPS ST.
CITY OF YOUNGSTOWN SEWER DEPARTMENT, CITY HALL, BOARDMAN & PHELPS ST.

~~NON-RIGID PAVEMENT REMOVAL~~

~~REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTHERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM 203 EXCAVATION, INCLUDING EMBANKMENT CONSTRUCTION.~~

REVISED GRADING SECTIONS:

~~SUBSEQUENT TO THE COMPLETION OF THE GRADING PLANS FOR THIS PROJECT, NEW SAFETY STANDARDS HAVE BEEN ADOPTED WHICH WILL IN PART BE APPLIED TO THIS PLAN. THE CHANGES WILL CONSIST IN GENERAL OF REVISING THE 4:1 FILL SLOPES TO CARRY AN 8:1 SLOPE FROM THE EDGE OF PAVED BERM TO A POINT 30' FROM THE EDGE OF PAVEMENT. FROM THIS POINT THE FILL SLOPE WILL BE EXTENDED TO THE TOE OF SLOPE DITCH. THE RESULTANT FILL SLOPE WILL APPROXIMATE 3:1. NO CHANGE IS CONTEMPLATED IN THE DITCH GRADE OR DRAINAGE STRUCTURES LOCATED IN THE DITCH. PLANS WILL BE AVAILABLE AT TIME OF CONSTRUCTION SHOWING THE REVISED GRADING.~~

~~OVERHEAD SIGNS~~

~~THE EXACT STATIONING OF BRIDGE TYPE OVERHEAD SIGN ASSEMBLIES IN GUARD RAIL SECTIONS MAY BE ADJUSTED AT THE TIME OF CONSTRUCTION AS DIRECTED BY THE ENGINEER, TO AVOID INTERFERENCE WITH GUARD RAIL POSTS.~~

~~ITEM 410 AS PER PLAN~~

~~THE WEIGHTS TO BE USED IN CALCULATING THE YARDAGE TO BE PAID FOR, UNDER THIS ITEM SHALL, IF A STANDARD SIZE COARSE AGGREGATE IS SPECIFIED, BE THE SAME AS THOSE INDICATED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR CRUSHER RUN OR BANK RUN MATERIALS.~~

~~SEQUENCE OF CONSTRUCTION OPERATIONS (PAVING)~~

~~UNDERDRAINS SHALL BE INSTALLED AND BACKFILLED TO SUBGRADE ELEVATION, IMMEDIATELY PRIOR TO CONSTRUCTION OF THE SUBBASE, EXCEPT THAT, WHERE SUBSURFACE CONDITIONS ARE SUCH THAT IMPROVEMENT OF AN UNSTABLE SUBGRADE CAN BE ACCOMPLISHED THROUGH THE DRYING ACTION OF DEEP UNDERDRAINS, THE PROJECT ENGINEER MAY AUTHORIZE OR REQUIRE THE CONTRACTOR TO DELAY THE CONSTRUCTION OF THE SUBBASE AS NECESSARY.~~

~~THE SUBBASE SHALL THEN BE CONSTRUCTED UNDER THE CONCRETE PAVEMENT AREA AND EXTENDED OUT TO COVER THE POROUS BACKFILL FOR THE UNDERDRAIN.~~

~~PAVEMENT SHALL THEN BE CONSTRUCTED.~~

~~AFTER THE SUBBASE IN THE SHOULDER AREA IS IN PLACE AND COMPACTED AS SPECIFIED, AND IMMEDIATELY PRIOR TO PLACING THE POROUS BASE COURSE, THE MATERIAL LOCATED ABOVE AND WITHIN THE UNDERDRAIN TRENCH SHALL BE REMOVED TO THE DEPTH NECESSARY TO EXPOSE CLEAN BACKFILL. THE TRENCH SO EXCAVATED SHALL BE BACKFILLED WITH BACKFILL MATERIAL OF №8 or №9 AGGREGATE, 703.02 SAND or 703.08 GRANULATED SLAG.~~

~~IF, AFTER TESTING THE SUBBASE MATERIAL FOR COMPOSITION IN THE SHOULDER AREA, IT IS FOUND THAT REMOVAL OF CONTAMINATED MATERIAL FROM THE SURFACE IS NECESSARY, SUCH MATERIAL SHALL BE REPLACED WITH MATERIAL MEETING THE REQUIREMENTS OF "ITEM 8-17 POROUS BASE COURSE" AT THE EXPENSE OF THE CONTRACTOR.~~

AGGREGATE
~~POROUS BASE COURSE SHALL THEN BE CONSTRUCTED AND CONSTRUCTION OF THE WATERPROOFED AGGREGATE COURSE SHALL FOLLOW IMMEDIATELY.~~

~~PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE PERTINENT ITEMS AFFECTED.~~

607 FENCE TYPE "CL"

FOR ITEM 607, CHAIN LINK FENCE REBUILT SEE NOTE IN PROPOSAL.

THE EXISTING FENCE TYPE "CL" SHALL BE CAREFULLY REMOVED AND STORED FOR REUSE ON THE SITE AS DIRECTED BY THE ENGINEER.

ALL EXISTING TYPE "CL" FENCE REMOVED UNDER ITEM 202 AND APPROVED BY THE ENGINEER SHALL BE ERECTED AT THE LOCATIONS SHOWN ON SHEETS 115-123 BEFORE ANY NEW 607 FENCE TYPE "CL" IS INCORPORATED INTO THE PROJECT.

THE QUANTITY OF 607 FENCE TYPE "CL" USED ON THIS PROJECT SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT

PIPE UNDERDRAINS

WHERE 8" OUTLET PIPE IS SPECIFIED IN THE PLANS, 6" OUTLET PIPE WILL BE USED IN ITS PLACE.

ALL REFERENCES TO CLASS "E" CONCRETE IS INTENDED TO READ CLASS "C" CONCRETE.

ADJUSTING GUARD RAIL LOCATIONS

PRIOR TO STAKING THE GUARD RAIL, THE ENGINEER SHALL MAKE A FIELD INSPECTION AND IF NECESSARY, ADJUST THE STATIONS OF THE END POSTS TO ACCOMMODATE FIELD CONDITIONS AND TO PROVIDE BETTER PROTECTION FOR TRAFFIC.

GENERAL NOTES

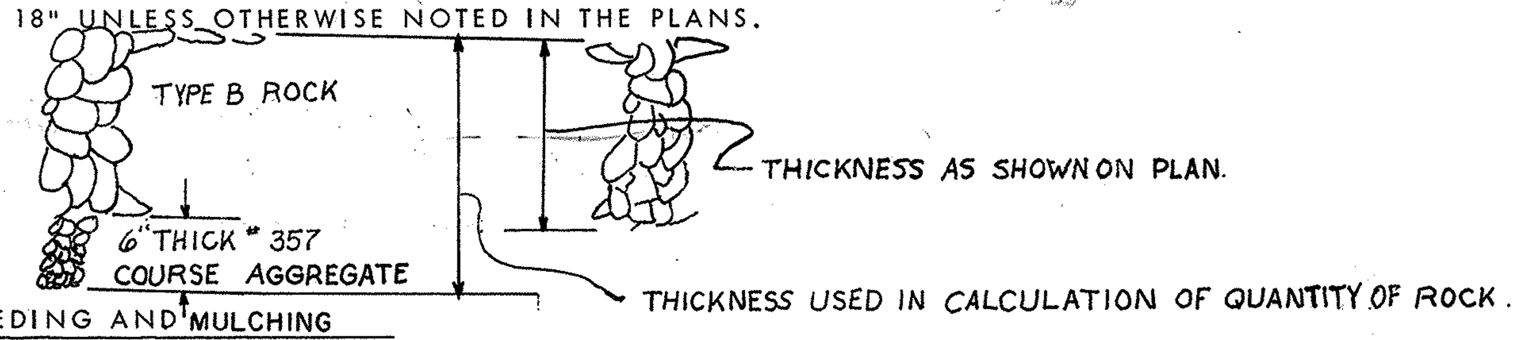
ITEMS 660 SODDING, 601 ROCK CHANNEL PROTECTION, 601 PAVED GUTTER, 667 JUTE MATTING

THESE ITEMS ARE PROVIDED ON THE PLANS FOR EROSION CONTROL. THE ENGINEER SHALL CHECK AND MAKE ADJUSTMENTS IN LOCATION AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS.

DETAIL OF ROCK CHANNEL PROTECTION

601 ROCK CHANNEL PROTECTION SHALL HAVE A DEPTH OF 18" UNLESS OTHERWISE NOTED IN THE PLANS.



SEEDING AND MULCHING

QUANTITIES FOR SEEDING ITEM 659 ARE CALCULATED FOR ALL AREAS WITHIN RIGHT OF WAY LIMITS. SEED SHALL BE SOWN AT THE RATE OF 5 POUNDS PER 1,000 SQUARE FEET EXCEPT AS OTHERWISE NOTED IN THE PLANS. SEEDING FORMULA FOR ALL SEEDED AREAS SHALL BE IN ACCORDANCE WITH 659.09.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS LYING WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES URBAN	NO. TREES INTERSTATE	NO. STUMPS URBAN	NO. STUMPS INTERSTATE
12" - 18"	31	49	0	0
18" - 24"	18	15	0	0
24" - 30"	7	3	0	0
30" - 36"	5	5	0	0
36" - 42"	0	0	0	0
42" - 48"	0	0	0	0
OVER 48"	0	0	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT OF WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1 AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

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.

PIPE FOR SUBGRADE DRAINAGE

SIX (6) INCH DRAIN TILE, 706.07 OR 706.09 SHALL BE FURNISHED AND PLACED BY THE CONTRACTOR IN MANHOLES, CATCH BASINS AND INLETS FOR SUBGRADE DRAINAGE, WHERE AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH WORK SHALL BE INCLUED IN THE UNIT PRICE BID PER " EACH " FOR MANHOLES, CATCH BASINS AND INLETS.

~~SEALING OF PIPE JOINTS~~

~~WHERE CONNECTIONS ARE MADE BETWEEN RIGID AND FLEXIBLE PIPE SECTIONS OR BETWEEN PIPE SECTIONS OF DIFFERENT KIND OR TYPE OF END FABRICATION, WHETHER REQUIRED BY THE PLANS, ARISING FROM PERMISSIBLE USE OF OPTIONAL MATERIALS, OR ENCOUNTERED IN CONNECTION TO EXISTING FACILITIES, THE JOINT SHALL BE SEALED, IF SEALING IS REQUIRED BY THE SPECIFICATIONS, BY MEANS OF A CONCRETE COLLAR MEETING THE REQUIREMENTS OF STANDARD DRAWING MC-4.~~

PAVEMENT REMOVAL OUTSIDE NORMAL CONSTRUCTION LIMITS

AFTER THE EXISTING PAVEMENT HAS BEEN REMOVED, THE OLD ROADWAY SHALL BE PLOWED, HARROWED, AND DRAGGED TO A SMOOTH GRADE, AND THE ENTIRE AREA SLOPED TO DRAIN AND LEFT IN A NEAT CONDITION READY FOR SEEDING. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 203 EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION. SEEDING SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 659.

FLAP VALVES

WHEREVER IT BECOMES NECESSARY TO DISCHARGE THE DRAINAGE FROM A CATCH BASIN, INLET OR STORM SEWER INTO AN EXISTING COMBINATION SEWER, THE CONTRACTOR SHALL INSTALL APPROVED FLAP VALVE: " NEENAH #R-5040, CLOW-NATIONAL #F-1450 OR APPROVED EQUAL", AT THE OUTLET END OF THE STORM SEWER. PAYMENT FOR MATERIALS AND LABOR REQUIRED TO INSTALL THE FLAP VALVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 604, FLAP VALVE, AS PER PLAN.

ITEM 310 SUBBASE, GRADING A, AS PER PLAN

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OF 310.02 EXCEPT THAT NO MORE THAN 10% OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AT EACH OF THE FOLLOWING LOCATIONS:

1. RT. OF I.R. 680 STA. 785+00
2. LT. OF I.R. 680 STA. 805+00

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, CODE ~~N-43 (3) - 144~~ N-54(1)-96(3)

THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

~~REINFORCED ENDS ON CORRUGATED METAL PIPE.~~

~~REINFORCED ENDS SHALL BE PROVIDED FOR ALL CORRUGATED METAL CONDUIT TYPE "F" 707.01 FOR DRIVEWAYS, IF THE PIPE ENDS ARE UNPROTECTED BY HEADWALLS, CATCH BASINS OR MANHOLES.~~

ROUTE DESIGNATION

ROUTE DESIGNATION I-80 APPEARING THROUGHOUT THIS PLAN SHALL BE CONSIDERED TO READ I-680.

ITEM 203 PROOF ROLLING

AN ESTIMATED QUANTITY OF 17 HOURS HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE, AS DIRECTED BY THE ENGINEER, IN PROOF ROLLING OF ALL SUBGRADE FOR THE MAINLINE AND RAMP PAVEMENTS AND FOR PAVED SHOULDERS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801.

MEDIAN RETAINING WALL @ SOUTH AVENUE

AFTER PLACING MAIN-LINE EMBANKMENT, A 90 DAY WAITING PERIOD SHALL BE OBSERVED PRIOR TO CONSTRUCTION OF MEDIAN RETAINING WALL. LIMITING STATIONS - STA. 808+45 TO STA. 812+00.

LINE DATA CALCULATIONS

MAINLINE – INTERSTATE FUNDS I-680-9(11) 238

BEGIN PROJECT STA. 780+13.60 SOUTHBOUND S.R. 7
END PROJECT STA. 803+99.95 SOUTHBOUND S.R. 7
NET LENGTH PROJECT INTERSTATE FUNDS 2,386.35 LIN. FT. or 0.451 MILES

MAIN LINE – URBAN FUNDS U-524(9)

BEGIN PROJECT STA. 803+99.95 SOUTHBOUND S.R. 7
END PROJECT ~~STA. 813+94.23 NORTHBOUND & SOUTHBOUND S.R. 7~~
NET LENGTH PROJECT URBAN FUNDS ~~994.28 LIN. FT.~~ or 0.188 MILES
NET LENGTH PROJECT URBAN & INTERSTATE ~~3380.63 LIN. FT.~~ or ~~0.65~~ 0.640 MILES

APPROACH LENGTHS
MAIN LINE - I-680-9 (11) 238
760+00 TO 782+83 = 2283 L.F. + 1021+00 TO 1034+91.44 = 1391.44 + 796+47 TO 806+88.34 = 1041.34
= 4715.78 LIN. FT.
ADD FOR SIGNS = 100.00 LIN. FT. = 4815.78 LIN FT.

MAINLINE – URBAN FUNDS U-524(9)

END PROJECT STA. 813+94.23 NORTH & SOUTHBOUND S.R. 7
END WORK STA. 816+14 NORTH & SOUTH BOUND S.R. 7
LENGTH MAIN LINE APPROACH URBAN FUNDS - 219.77 LIN. FT.

CITY STREETS URBAN FUNDS U-524(9)

SOUTH AVE.

BEGIN WORK ~~& PROJECT~~ STA. 47+72.80 - SUSPEND WORK STA 48+26 - RESUME WORK 48+36
END ~~PROJECT &~~ WORK STA. 51+00.00
NET LENGTH WORK SOUTH AVE. ~~327.20~~ 317.20
NET LENGTH APPROACH URBAN FUNDS ~~327.20~~ 317.20

FRANKLIN AVE. – 100% CITY FUNDS

BEGIN WORK ~~& PROJECT STA. 0+13.20~~ STA -0+10
END WORK ~~& PROJECT STA. 3+11.31~~ 3+23.06
NET LENGTH APPROACH 100% CITY FUNDS ~~298.11~~ LIN. FT. STA 333.06

LENGTH OF WORK ~ I-680 ~ 2386.35 + 4815.78 = 7202.13 L.F. OR 1.364 MILES
LENGTH OF WORK ~ U-524(9) ~ 994.28 + 219.77 + 317.20 = 1531.25 L.F. OR 0.290 MILE
LENGTH OF WORK (100% CITY - FRANKLIN AVE.) = 333.06 L.F. OR 0.063 MILE

GENERAL NOTES- UTILITY RELOCATIONS

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-3(11)238 U 524 (9)	

8 / 206

MAH-7-14.95

CITY OF YOUNGSTOWN WATER MAIN RELOCATION

ALL CAST IRON PIPE AND APPURTENANCES USED IN WATER MAIN CONSTRUCTION WILL CONFORM TO OHIO SUPPLEMENTAL SPECIFICATION 814 AND SHALL BE OF MECHANICAL JOINT TYPE AND FITTED WITH LUGS OR TIED OR HARNESSED JOINTS AT ALL BENDS WITH DEFLECTION GREATER THAN 5°.

GATE VALVES: TO CONFORM TO A. W. W. A. SPECIFICATION C-500 WITH THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS. VALVE WILL BE OF MECHANICAL JOINT; DOUBLE DISC; PARALLEL SEATS; NON-RISING STEM; CAST IRON STUFFING BOX AND SOLID BRASS GLAND. DISC TO BE CAST IRON WITH BRASS FACES.

VALVES ARRANGED TO OPEN BY TURNING TO RIGHT, CLOCKWISE, AND AN ARROW ON WRENCH NUT WILL SHOW DIRECTION OF TURN TO OPEN WITH VALVE STEMS OF HIGH GRADE MANGANESE BRONZE.

VALVE BOXES WILL BE SIZE "B" WITH NO. 6 ROUND BASE, ADJUSTABLE SCREW TYPE, SHAFT NOT LESS THAN 5-1/4 INCH DIAMETER. DROP COVER TO HAVE " WATER " CAST THEREON RECESSED FOR EASE OF REMOVAL.

WATER METER BOXES

THE CITY WATER WORKS DEPARTMENT WILL RELOCATE ALL PRIVATELY OWNED WATER METER BOXES AND THIS ITEM WILL NOT BE INCLUDED AS PART OF THE WORK TO BE PERFORMED BY THE STATE CONTRACTOR.

EXISTING WATER MAIN CUT AND PLUGGED OUTSIDE ROADWAY CONSTRUCTION LIMITS SHALL BE PAID FOR UNDER ITEM 814 NEW WATER MAIN AT CONTRACT UNIT PRICE BID PER EACH " CUT AND PLUG".

~~REMOVAL OF EXISTING WATER LINE APPURTENANCES~~

~~THE REMOVAL OF EXISTING FIRE HYDRANTS, VALVES AND BOXES, AND ALL OTHER APPURTENANCES SHALL BE PERFORMED BY THE CITY OF YOUNGSTOWN IF THEY SO DESIRE. THE CONTRACTOR SHALL NOTIFY THE CITY OF YOUNGSTOWN WATER DEPARTMENT 48 HOURS PRIOR TO THE REMOVAL OF ANY WATER LINE OR APPURTENANCES.~~

WATER MAIN SPECIFICATIONS

ALL CONSTRUCTION ON WATER MAINS SHALL CONFORM TO STATE OF OHIO DEPARTMENT OF HIGHWAYS SUPPLEMENTAL SPECIFICATION 814 AS AMENDED HEREIN.

NO SEPARATE PAYMENT WILL BE MADE FOR CONCRETE ANCHORAGES OR CONCRETE THRUST BLOCKS REQUIRED IN LAYING WATER LINES. THE COST FOR SUCH CONCRETE SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM 814 NEW WATER MAINS.

ITEM 814 CUT AND PLUG EXISTING LINE

THIS ITEM SHALL CONSIST OF PLUGGING OR CAPPING EXISTING WATER MAINS AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER INCLUDING THE FURNISHING OF ALL MATERIALS INCLUDING THE CAP OR PLUG, EXCAVATING AND BACKFILLING, CONSTRUCTING ALL NECESSARY JOINTS AND CONNECTIONS, HYDROSTATIC TESTING, DISINFECTION, AND DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL WHICH MAY BE REQUIRED TO COMPLETE THIS ITEM. THIS ITEM SHALL ALSO PROVIDE FOR REACTION BACKING AS OUTLINED UNDER 814 NEW WATER MAIN AND AS AMENDED ABOVE.

(a) EXCAVATION: NO EXCAVATION SHALL BE MADE UNTIL THE VALVE ON THE BRANCH HAS BEEN CLOSED TO RELIEVE PRESSURE ON THE BRANCH TO BE CUT AND PLUGGED. EXCAVATION SHALL BE PERFORMED AS REQUIRED UNDER 814 NEW WATER MAIN.

(b) INSTALLATION: THE PLUG OR CAP SHALL BE INSTALLED AND REACTION BACKING PROVIDED AS OUTLINED UNDER 814 NEW WATER MAIN.

(c) TESTING: PRIOR TO BACKFILLING, TESTING SHALL BE PERFORMED BY SUBJECTING ALL JOINTS TO THE WORKING PRESSURE OF THE MAIN FOR A SUFFICIENT LENGTH OF TIME TO ALLOW FOR A THOROUGH EXAMINATION OF THE JOINTS WHICH HAVE BEEN EXPOSED AS WELL AS ALL NEW JOINTS. ANY JOINTS FOUND TO BE LEAKING SHALL BE MADE GOOD BY THE CONTRACTOR AT NO ADDITIONAL COST.

(d) BACKFILLING: BACKFILLING SHALL BE PERFORMED AS REQUIRED UNDER 814 NEW WATER MAIN.

(e) DISINFECTION: DISINFECTION SHALL BE PERFORMED AS REQUIRED UNDER 814 NEW WATER MAIN.

METHOD OF MEASUREMENT: THE QUANTITIES TO BE PAID FOR SHALL BE THE ACTUAL QUANTITY, MEASURED IN PLACE, COMPLETE AND ACCEPTED. THE QUANTITY SHALL BE MEASURED PER EACH FOR THE NUMBER OF EXISTING WATER MAINS CUT AND PLUGGED.

BASIS OF PAYMENT: THE QUANTITY MEASURED ABOVE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER EACH FOR " ITEM 814 CUT AND PLUG EXISTING LINE". THIS PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR NECESSARY EXCAVATION AND BACKFILL, THE DISPOSAL OF ALL SURPLUS EXCAVATION AND DISCARDED MATERIAL, THE FURNISHING, PREPARING AND PLACING OF ALL MATERIAL INCLUDING SEALING JOINTS AND REACTION BACKING, HYDROSTATIC TESTING, AND DISINFECTING, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

REACTION BACKING: REACTION BACKING AS PROVIDED UNDER 814 SHALL BE AMENDED AS FOLLOWS:

REACTION BACKING SHALL BE PROVIDED FOR ALL TEES AND BENDS DEFLECTING 22-1/2 DEGREES OR MORE ON MAINS 8 INCHES IN DIAMETER AND LARGER AND FOR ALL PLUGS AND CAPS AND FOR THE BOWL OF EACH FIRE HYDRANT.

PROPOSED SEWERS AND WATER MAINS UNDER EXISTING PAVEMENTS

REPLACEMENT OF EXISTING PAVEMENT FOR CONSTRUCTION OF PROPOSED SEWERS AND WATER MAINS SHALL BE AS SHOWN ON SHEET 66. REPLACEMENT OF EXISTING PAVEMENT SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM 305 " PORTLAND CEMENT CONCRETE BASE ~~FOR PAVEMENT REPLACEMENT"~~, AND ITEM 404 " ASPHALT CONCRETE ~~FOR PAVEMENT REPLACEMENT"~~.

10 CU. YDS. 404 ASPHALT CONCRETE ~~FOR PAVEMENT REPLACEMENT~~

10 SQ. YDS. 305 PORTLAND CEMENT CONCRETE BASE ~~FOR PAVEMENT REPLACEMENT~~

GENERAL UTILITIES

CONSTRUCTION PLANS INCLUDE RELOCATING CITY OWNED SEWER AND WATER LINES DISRUPTED BY CONSTRUCTION OF EXPRESSWAY. THIS RELOCATION WORK TO BE PERFORMED IN CONNECTION WITH AND BY THE CONTRACTOR OF YOUNGSTOWN EXPRESSWAY WORK IN ORDER THAT UTILITIES RELOCATIONS CAN BE CLOSELY COORDINATED WITH EXPRESSWAY WORK AND WITH EACH OTHER.

THE FACILITIES ARE:

CITY OF YOUNGSTOWN SEWER DEPARTMENT: (C. O. Y. SEWER DEPT.) RELOCATION OF VARIOUS LATERIAL AND INTERCEPTOR SEWERS.

CITY OF YOUNGSTOWN WATER DEPARTMENT: (C. O. Y. WATER DEPT.) RELOCATION OF VARIOUS SERVICE MAINS.

THE LOCATIONS OF THESE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. THE LOCATION, TYPE, DEPTH, AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEAR EXACT AS THE AVAILABLE INFORMATION WILL PERMIT. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT. BUT THE STATE OF OHIO MAKES NO GUARANTEES AS TO THEIR ACCURACY, OR COMPLETENESS. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

THERE WILL BE NO SEPARATE PAYMENT FOR EXCAVATION FOR WATER AND SEWER LINES. REQUIRED EXCAVATION OVER AND ABOVE THAT INDICATED FOR ROADWAY EXCAVATION SHALL BE INCLUDED IN THE APPROPRIATE UNIT PRICE FOR SEWERS, ETC.

WHERE CONCRETE ENCASED WATER PIPES ARE REQUIRED SUCH ENCASEMENT SHALL BE INCLUDED IN UNIT PRICE BID FOR FURNISHING AND LAYING PIPE, ITEM 814 NEW WATER MAINS, ~~CONCRETE ENCASED. SEE SHEET 66 FOR DETAILS.~~

THE CONSTRUCTION OF RELOCATED WATER MAINS OWNED BY THE CITY OF YOUNGSTOWN WILL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE CITY OF YOUNGSTOWN. THE CONTRACTOR SHALL NOTIFY THE CITY OF YOUNGSTOWN WATER DEPARTMENT 48 HOURS IN ADVANCE OF BREAKING GROUND ON EACH WATER MAIN RELOCATION. HE WILL OBTAIN PERMISSION BEFORE TAKING ANY WATER MAIN OUT OF SERVICE. HE WILL ARRANGE WORK AND MATERIALS IN ADVANCE SO THAT ANY WATER MAIN WILL BE OUT OF SERVICE A MINIMUM PERIOD OF TIME.

ALL PROPOSED MODIFICATIONS FROM THE PIPE PROFILE SHOWN ON THE DRAWINGS SHALL BE SUBMITTED IN DETAIL TO THE ENGINEER FOR APPROVAL BEFORE ANY MATERIAL IS ORDERED.

WHERE ABANDONED SEWER PIPES ARE ENCOUNTERED DURING CONSTRUCTION, THE PIPES SHALL BE CUT AND PLUGGED IN ACCORDANCE WITH METHODS OUTLINED IN 202.08 PAYMENT FOR CUTTING AND PLUGGING AND REMOVAL OF THE PIPE WITHIN THE LIMITS OF CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 " ROADWAY EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION.

WHERE ABANDONED WATER MAINS ARE ENCOUNTERED DURING CONSTRUCTION THE MAINS SHALL BE CUT AND PLUGGED IN ACCORDANCE WITH ITEM 814. AS AMENDED HEREIN.

THE DRAWINGS SHOW THE LOCATION AND PROFILE OF THE LINE TO BE LAID, AND TYPICAL DETAILS OF THE PIPING AND STRUCTURES DEPENDING UPON THE TYPE OF PIPE TO BE USED. THE LINE AND GRADE OF THE WATER PIPE MAY BE MODIFIED SLIGHTLY SO THAT CURVATURE MAY BE MADE INSOFARAS PROPER AT THE JOINTS WITHOUT USE OF SPECIAL FITTINGS.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED INTO USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAIN THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE PIPE ITEMS.

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE CONNECTED TO EXISTING PIPES, 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 PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

PAYMENT FOR REMOVAL AND/OR ABANDONING OF PIPE OUTLETS NECESSITATED BY THE REMOVING OR ABANDONING OF EXISTING CATCH BASINS OR MANHOLES, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202 "MANHOLES, CATCH BASINS, OR INLETS REMOVED OR ABANDONED UNLESS PAYMENT IS OTHERWISE AUTHORIZED SPECIFICALLY UNDER OTHER ITEMS IN THE PLANS.

~~WHERE IT IS NECESSARY UNDER ITEM 604 " MANHOLES ADJUSTED TO GRADE", TO REPLACE UNSATISFACTORY MANHOLE FRAME AND COVER CASTINGS, PAYMENT FOR THE NEW CASTINGS SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH FOR ITEM 604 " MANHOLE FRAME AND COVER FURNISHED AND PLACED". PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING AND PLACING ALL CASTINGS AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM TO THE SATISFACTION OF THE ENGINEER. THE ARBITRARY QUANTITY OF TEN (10) SHALL BE INCORPORATED IN THE QUANTITIES OF THIS CONTRACT FOR THE PURPOSE OF ESTABLISHING A UNIT BID PRICE FOR ITEM 604 " MANHOLE FRAME & COVER FURNISHED & PLACED".~~

REINFORCED CONCRETE PIPE, USED IN COMBINATION SEWERS SHALL BE FACTORY LINED WITH TWO (2) COATS OF " BITUMINOUS SUPER BLACK" AS MANUFACTURED BY THE TAR PRODUCTS DIVISION OF KOPPERS COMPANY, INC. PITTSBURGH 12, PA., OR REXON COATING NO. 2 AS MANUFACTURED BY THE HAMILTON-KENT MANUFACTURING CO., KENT, OHIO OR AN APPROVED EQUAL.

THE ENTIRE INTERIOR OF THE PIPE, THE INTERIOR AND END OF THE BELL AND OUTSIDE AND END OF THE TONGUE SHALL BE COATED.

PAYMENT FOR WORK SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT BID FOR ITEM 603 ~~"REINFORCED CONCRETE PIPE FOR COMBINATION SEWER"~~ CONDUIT , AS PER PLAN

NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PERFORMANCE OF THIS WORK.

REMOVAL OF EXISTING HOUSE DRAINS:

NO SEPARATE PAYMENT WILL BE MADE FOR THE REMOVAL, FROM ABANDONED SITES, OF HOUSE CONNECTIONS, INCLUDING SANITARY, YARD, ROOF BASEMENT OR OTHER SIMILAR PIPE DRAINS WITHIN THE ROADWAY CONSTRUCTION LIMITS, UNLESS SPECIFICALLY OTHERWISE ITEMIZED FOR PAYMENT ON THE PLANS.

RESTORING SERVICE CONNECTIONS

IT SHALL BE THE RESPONSIBLITY OF THE CITY OF YOUNGSTOWN WATER DEPARTMENT TO RESTORE ALL WATER SERVICE CONNECTIONS TO EXISTING HOUSE SERVICE LINES, DISRUPTED IN THE CONSTRUCTION OF THE EXPRESSWAYS.

814 FIRE HYDRANT, AS PER PLAN

Fire hydrants removed under Item 814" Fire Hydrant Removal and Desposed" shall be carefully removed so that damage is held to an absolute minimum. After removal, five hydrants shall be selected by the Engineer for delivery by the contractor to the city storage yard and exchanged for five new or rebuilt hydrants. The new or rebuilt hydrants will be provided by the city at no cost to the Contractor. The remaining hydrants removed under Item 814" Removal and Desposed" shall become the property of the Contractor for his disposal.

MAINTENANCE OF TRAFFIC

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U 524 (9)	

9
206

MAH 7-14.95

VACATED CITY STREETS

STREET	LIMITS
HEASLEY ALLEY	FROM NORTHERLY RIGHT-OF-WAY LINE OF WILLIAMSON TO SOUTHERLY RIGHT-OF-WAY LINE ON MYRTLE AVENUE.
WYMER ALLEY	FROM EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 71.6 FEET WEST OF PROPOSED BASE LINE OF RAMP "BV".
MYRTLE AVENUE	FROM THE EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 72.2 FEET WEST OF THE PROPOSED BASE LINE OF RAMP "BV".
PYATT STREET	1. FROM THE EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 45.5 FEET WEST OF PROPOSED BASE LINE OF RAMP "BV". 2. FROM THE EXISTING EASTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 71.2 FEET EAST OF PROPOSED BASE LINE OF NORTHBOUND S. R. 7.
OKLAHOMA	FROM THE EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 111.2 FEET WEST OF PROPOSED BASE LINE OF RAMP "BV".
CHERRY ALLEY	FROM THE SOUTHERLY RIGHT-OF-WAY LINE OF KYLE ST SOUTH AND EAST TO THE WESTERLY RIGHT-OF-WAY OF FULTON COURT.
FULTON COURT	FROM THE NORTHERLY RIGHT-OF-WAY OF FULTON STREET TO THE SOUTHERLY RIGHT-OF WAY LINE OF KYLE STREET.
MARLIN STREET	FROM THE EXISTING NORTHERLY LA LINE OF PROJECT MAH 7-14.80 TO THE SOUTH RIGHT-OF-WAY LINE OF EAST WOODLAND AVENUE
FLINT HILL	FROM THE EXISTING EASTERLY RIGHT-OF-WAY LINE OF SOUTH AVENUE TO THE EXISTING SOUTHERLY LINE OF HADNETT ST.
FRANKLIN AVENUE	FROM THE EXISTING SOUTHERLY RIGHT-OF-WAY LINE OF FLINT HILL STREET TO A POINT ON THE ℄ OF FRANKLIN AVENUE 330.0 FEET SOUTHEAST OF THE ℄ OF FLINT HILL AVENUE
POLAND AVENUE	FROM THE SOUTHERLY RIGHT-OF-WAY LINE ON HADNETT STREET TO A POINT ON THE ℄ OF POLAND AVENUE 170.00 FEET NORTHWEST OF THE ℄ OF CEDAR STREET.
ERIE STREET	FROM THE EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 38.0 FEET NORTH OF THE CENTER LINE OF FULTON STREET.
WAYNE AVENUE	FROM THE EXISTING EASTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 61.4 FEET EAST OF THE PROPOSED BASELINE OF N. B. S. R. 7.
FULTON STREET	1. FROM THE EXISTING WESTERLY LA LINE OF PROJECT MAH 7-14.80 TO A POINT 132.0 FEET EAST OF THE CENTER LINE OF ERIE ST. 2. FROM THE EXISTING EASTERLY LA LINE OF PROJECT 7-14.80 TO THE SOUTHERLY RIGHT-OF-WAY LINE ON KYLE STREET.
KYLE STREET	FROM THE EASTERLY RIGHT-OF-WAY LINE ON MARLIN AVENUE TO THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH AVENUE.

LIGHTS, SIGNS, AND BARRICADES

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF 107.10 ON THIS PROJECT, PERFORM THE FOLLOWING:

A) PROVIDE, ERECT, AND MAINTAIN MOVABLE GATES ON INTERSECTING ROADS CLOSED TO TRAFFIC AT ALL POINTS WHERE LOCAL TRAFFIC MOVEMENT TERMINATES.

B) PROVIDE, ERECT, AND MAINTAIN STANDARD 48" x 30" SIZE " ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

LIGHTS, BARRICADES, AND DANGER AND WARNING SIGNS SHALL BE PROVIDED AT LOCATIONS SHOWN ABOVE IN ACCORDANCE WITH 107.10 BARRICADES AND GATES SHALL BE AS DETAILED ON STANDARD CONSTRUCTION DRAWING NO. MC-3 SIGN SUPPORTS AND LIGHTS FOR " ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE " OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

PAYMENT FOR PROVIDING , ERECTING, MAINTAINING, AND REMOVING BARRICADES, GATES, LIGHTS AND SIGNS, AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "614 MAINTAINING TRAFFIC. THE ADDITIONAL TRAFFIC CONTROL ITEMS REQUIRED FOR MAINTENANCE OF TRAFFIC SHALL BE PAID FOR AS SEPARATE ITEMS.

"SAFE PEDESTRIAN TRAFFIC"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN LIGHTS, SIGNS AND PROPER BARRICADES TO SEPARATE PEDESTRIAN AND VEHICULAR TRAFFIC AND PEDESTRIANS AND CONSTRUCTION AREAS.

THE CONTRACTOR SHALL BE REQUIRED TO SUPPLY A FLAG MAN AT ANY TIME CONSTRUCTION EQUIPMENT SHALL BE MOVING ACROSS A PEDESTRIAN AREA OR AN EXISTING CITY STREET.

THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE GRADING AND PROVIDE GRAVEL, PLANKING OR SOME OTHER APPROVED FORM OF TEMPORARY WALKWAYS IN THE AREA DESIGNATED AS PEDESTRIAN WALKWAYS. THE COST OF ALL MATERIALS AND LABOR REQUIRED TO CONSTRUCT MAINTAIN & REMOVE ALL TEMPORARY WALKWAYS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

SEQUENCE OF CONSTRUCTION

1. PRIOR TO THE CLOSING OF ANY STREET, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE OF CONSTRUCTION OPERATIONS. UPON RECEIPT OF APPROVAL OF CONSTRUCTION OPERATIONS FROM THE ENGINEER AND THE CITY OF YOUNGSTOWN, THE STREETS MAY BE CLOSED.

2. EXISTING I. R.680 TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EITHER ON I. R. 680 OR ON TEMPORARY ROAD AS DETAILED ON SHEETS NO. 9A & 9B.

THE COST OF THE ABOVE SHALL BE INCLUDED IN:

ITEM 615 LUMP SUM, TEMPORARY ROADS.
ITEM 615 3531 S.Y. CLASS "A", TEMPORARY PAVEMENT.

TEMPORARY BARRIER BEAM RAIL, AS PER PLAN

TEMPORARY BARRIER BEAM RAIL AS SHOWN ON SHEET 14 B, SHALL BE AS PER 606.06 TEMPORARY BEAM RAIL EXCEPT THAT RAIL ELEMENTS SHALL BE ATTACHED TO OPPOSITE SIDES OF THE STEEL DRUM. PAYMENT FOR THE DOUBLE RAIL ELEMENT WILL BE INCLUDED IN THE UNIT PRICE BID PER LIN. FT. OF 606 TEMPORARY BARRIER BEAM RAIL AS PER PLAN.

SOUTH AVE

TWO WAY TRAFFIC SHALL BE MAINTAINED ON SOUTH AVE. AT ALL TIMES. BY THE USE OF THE EXISTING PAVEMENT.

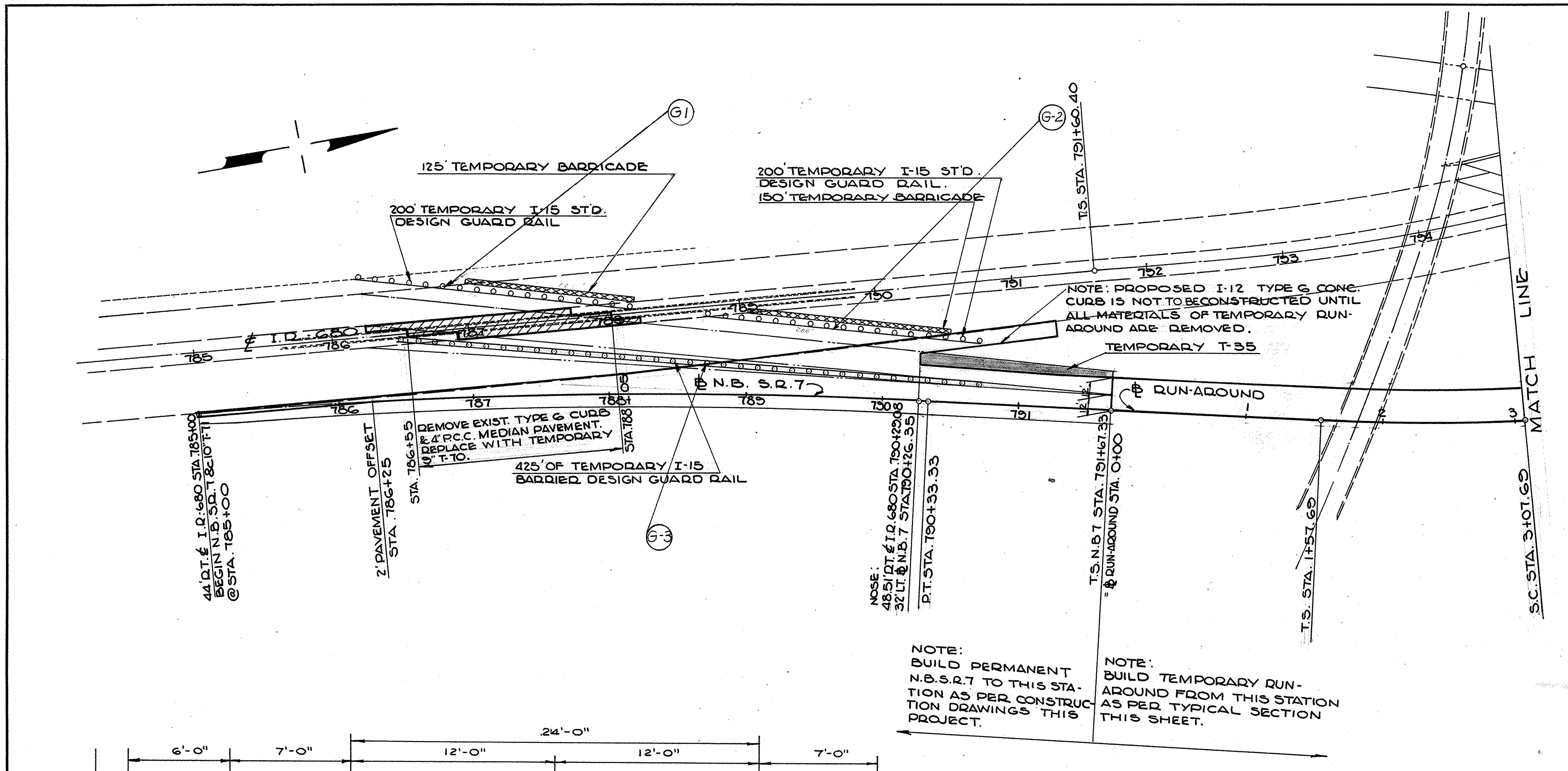
THE FOLLOWING QUANTITIES ARE INCLUDED FOR MAINTAINING TRAFFIC.

1. 100 Cu. Yds. - 410 TRAFFIC COMPACTED SURFACE, TYPE "A" or "B"
2. 10 TONS 616 CALCLUM CHLORIDE
3. 100 M/GALS 616 WATER
4. 50 Cu. Yds. 404 ASPHALT CONCRETE or APPROVED BITUMINOUS PREMIXED SURFACE COURSE FOR MAINTAINING TRAFFIC.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-5(11) 238 U-524(5)	

9-A
206

MAH. 7-14.95



~~ITEM I-15 TEMPORARY GUARD RAIL~~

~~STEEL 55 GAL. DRUMS SHALL BE USED IN LIEU OF POSTS FOR THIS ITEM. THE DRUMS SHALL BE PAINTED YELLOW AND SHALL BE HALF FILLED WITH SAND IN ORDER TO HOLD THEM IN POSITION. THE RAIL ELEMENTS SHALL BE STEEL BEAM TYPE MEETING THE REQUIREMENTS OF EITHER SECTION I-15.13 (DEEP) OR SECTION I-15.14 (SHALLOW), EXCEPT THAT IN LIEU OF FURNISHING NEW RAIL, USED RAIL WHICH IS IN GOOD CONDITION AND APPROVED BY THE ENGINEER MAY BE FURNISHED. THE RAIL SHALL BE SECURELY BOLTED TO THE TRAFFIC SIDE OF THE DRUMS IN A MANNER SATISFACTORY TO THE ENGINEER AND THE CENTER OF THE RAIL ELEMENT SHALL BE APPROXIMATELY 2 FEET ABOVE THE SURFACE OF PAVEMENT OR GROUND.~~

~~LIGHTS, SIGNS AND BARRICADES~~

~~THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF ITEM I-3 ON THIS PROJECT PERFORM THE FOLLOWING:~~

~~PROVIDE, ERECT, AND MAINTAIN STANDARD 48 x 30 SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS AND BARRICADES AND LIGHTS AT THE LOCATIONS SHOWN ON THIS SHEET DURING PERIODS IN WHICH THE I.R. 680 IS CLOSED TO TRAFFIC.~~

~~SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".~~

~~PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING LIGHTS, SIGNS, BARRICADES AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM I-3 MAINTAINING TRAFFIC."~~

~~TEMPORARY GUARD RAIL SHALL BE PAID FOR AS 606 TEMPORARY BEAM RAIL, AS PER PLAN~~
~~606 TEMPORARY BARRIER BEAM RAIL AS PER PLAN~~

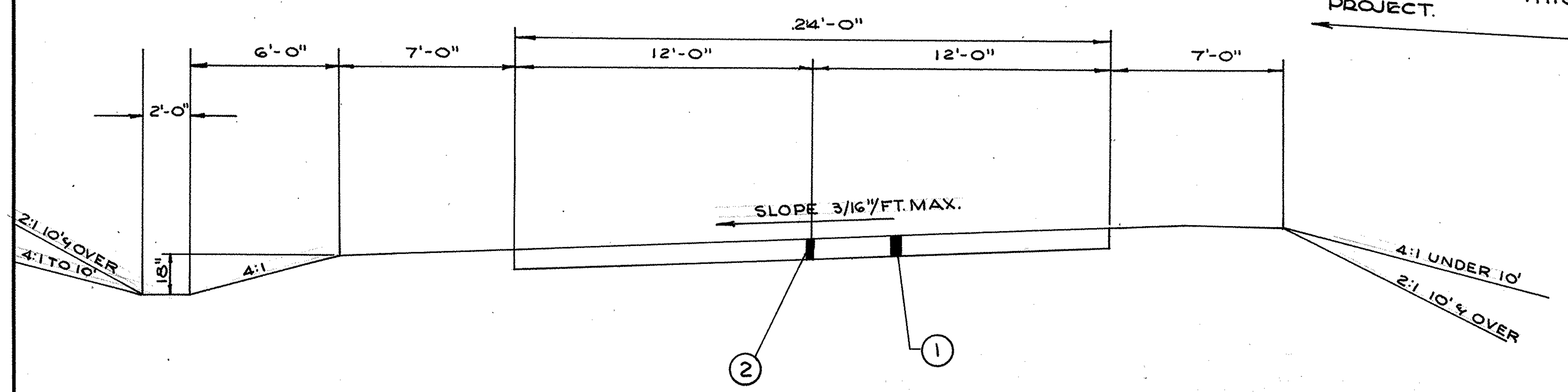
~~606 TEMPORARY BEAM RAIL, AS PER PLAN~~

	~~SH~~	~~L.F.~~
~~G1~~	~~9A~~	~~200~~
~~G2~~	~~9A~~	~~200~~
~~G4~~	~~9B~~	~~100~~
~~G5~~	~~9B~~	~~275~~
		~~775 L.F. TO SHEET 14A~~

~~606 TEMPORARY BARRIER BEAM RAIL AS PER PLAN.~~

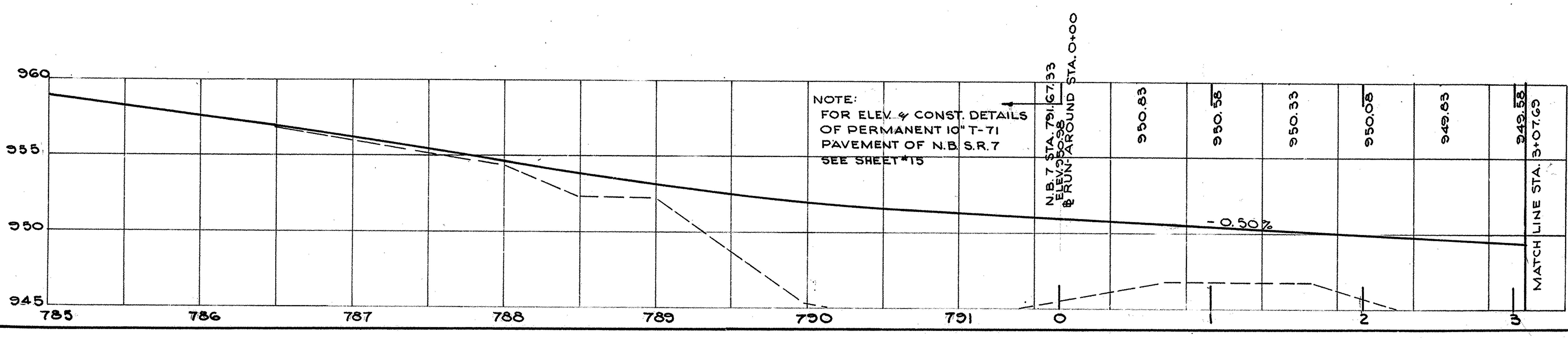
	~~SH~~	~~L.F.~~
~~G3~~	~~9A~~	~~425~~
~~G6~~	~~9B~~	~~250~~
		~~675 L.F. TOTAL TO SHEET 14A~~

NOTE: TEMPORARY BEAM RAIL INDICATED ON THIS SHEET SHALL BE DISREGARDED. FOR ESTIMATED QUANTITIES SEE SHEET № 110D. DETAILS WILL BE FURNISHED AFTER AWARD OF CONTRACT.



TYPICAL SECTION RUNAROUND

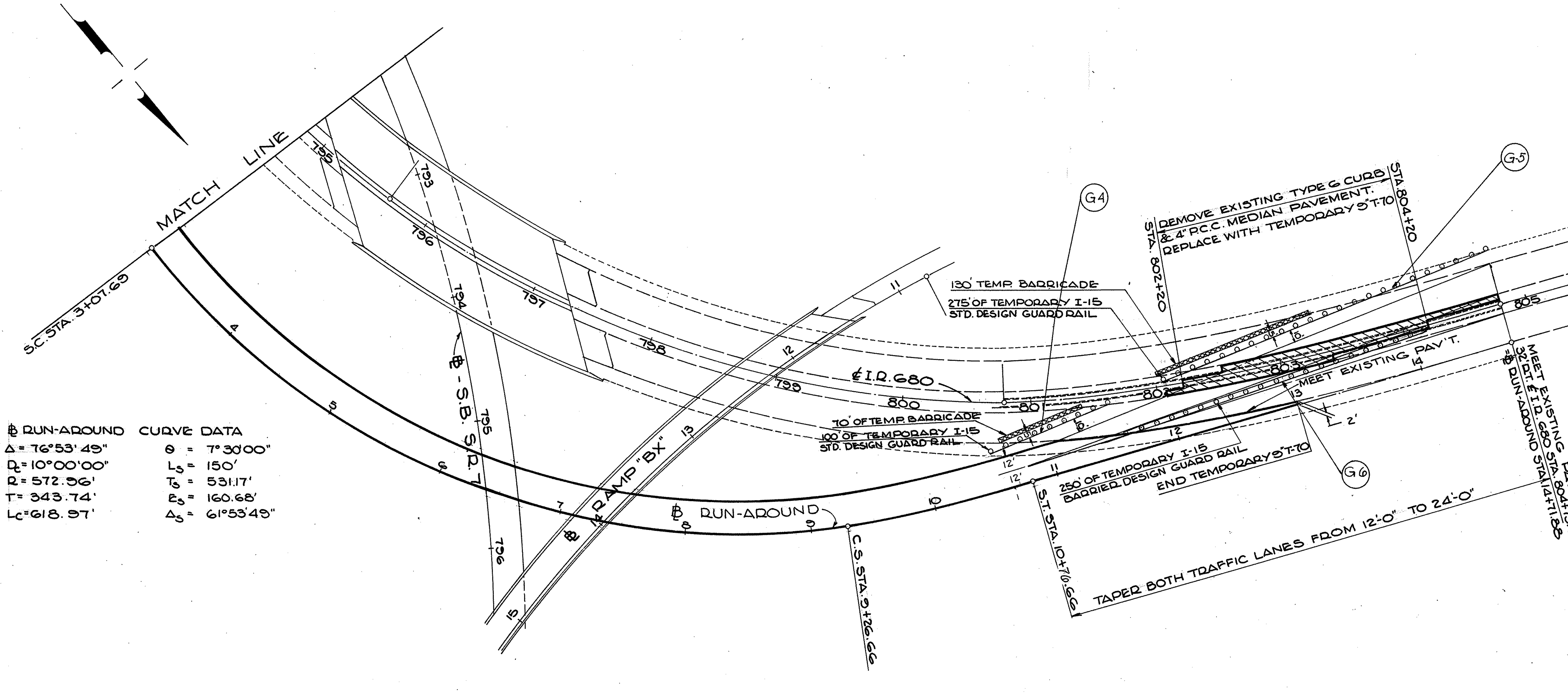
1. 9" T-70 PORTLAND CEMENT CONCRETE PAVEMENT
2. STANDARD LONGITUDINAL JOINT



FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524 (9)	

9-B
206

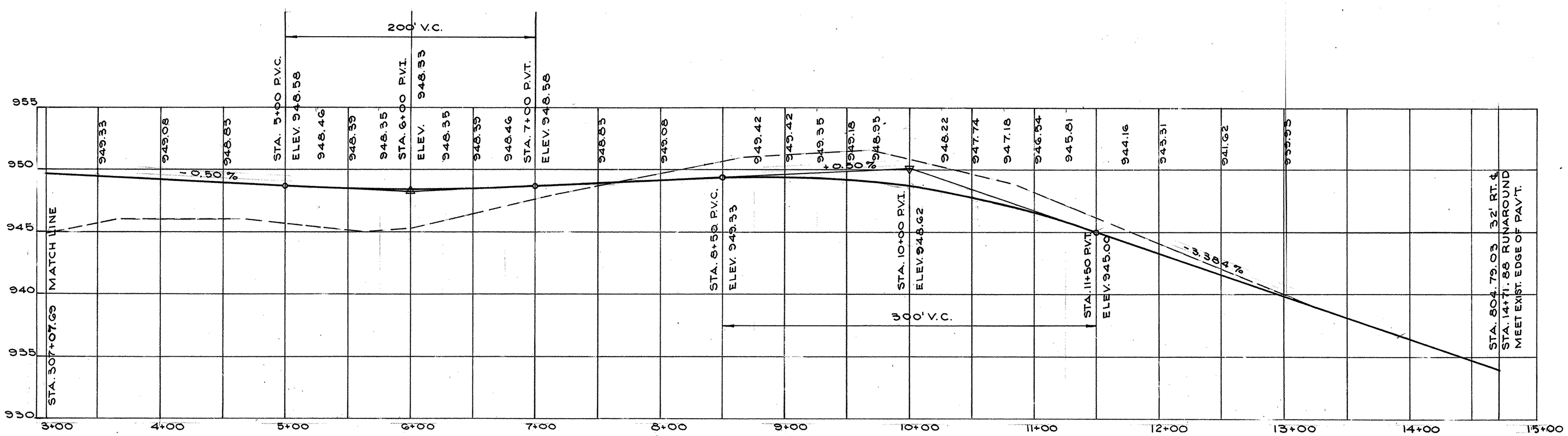
MAH. 7-14.95



Ⓑ RUN-AROUND CURVE DATA

Δ = 76°53'49"	θ = 7°30'00"
D = 10°00'00"	Ls = 150'
R = 572.96'	Ts = 531.17'
T = 343.74'	Es = 160.68'
Lc = 618.97'	Δs = 61°53'49"

NOTE: TEMPORARY BEAM RAIL INDICATED ON THIS SHEET SHALL BE DISREGARDED. FOR ESTIMATED QUANTITIES SEE SHEET Nº 110 D
DETAILS WILL BE FURNISHED AFTER AWARD OF CONTRACT



COMPUTATIONS

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	10 / 206

MAH. 7 - 14.95

PAVEMENT & BASE

SHEET Nº	STATION FROM	STATION TO	T-71 10" REINF. P.C.C. PAV'T. SQ. YDS.		T-71 9" REINF. P.C.C. PAV'T. SQ. YDS.		B-112 POROUS BASE COURSE (VAR. DEPTH) CU. YDS.		B-21 3" WATERPROOFED AGGREGATE BASE COURSE CU. YDS.		T-31 BITUMINOUS SURFACE TREATMENT #6 AGGREGATE CU. YDS.		T-31 BITUMINOUS SURFACE TREATMENT BITUMINOUS MATERIAL GALS.		I-22 SUBBASE CU. YDS. "A" OR "B"		T-35 1¼" ASPH. CONC. SURFACE COURSE CU. YDS.		B-35 1¾" ASPH. CONC. LEVELING COURSE CU. YDS.		B-70 9" P.C.C. BASE COURSE SQ. YDS.		T-30 BITUMINOUS TACK COAT GALS.	
	TYPE OF FUNDS		INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN
15	NORTH BOUND S.R.7 785+00	795+00	1573	—			47	—	27	—	3	—	96	-	478	—								
16	NORTH BOUND S.R.7 795+00	805+00	2000	1250			168	104	97	38	8	3	317	116	528	272								
17	NORTH BOUND S.R.7 805+00	810+45.62		1243			—	83	—	47	—	5	—	17	—	321								
18	SOUTH BOUND S.R.7 780+13.60	790+00	2076	—			120	—	43	—	4	—	154	—	250	—								
19	SOUTH BOUND S.R.7 790+00	800+00	2746	—			1444	—	461	—	12	—	460	391	713	—								
20	SOUTH BOUND S.R.7 800+00	810+45.62	1178	1,091			75	435	43	40	4	10	154	—	448	287								
21	N.& S. BOUND S.R.7 810+00	813+94.23	—	2366			—	39	—	73	—	7	—	259	—	577					58			
22	RAMP 0+00	"BV" 13+04.36	—	377	—	2411	—	106	—	98	—	3	—	95	—	822		1		1				
23	RAMP 4+08.92	"CA" 12+08.46			749	536	—	16	—	26	—	2	—	59	125	122								
24	RAMP 12+08.6	"CA" WOODLAND AVE.			—	725	—	28	—	18	—	2	—	64	—	158								
24	RAMP 3+55.78	"BY" 10+23.04			1412	—	53	—	504	—	3	—	120	—	1238	—								
25	RAMP 0+00	"BZ" 4+89.15			—	861	—	36	—	17	—	2	—	64	—	169								
26 27	RAMP "BX" 0+00 TO 10+00 10+00	20+00			1999	—	66	—	104	—	6	—	234	—	307	—					7			
28	FRANKLIN AVE. 0+13.20	3+11.31													*160	—	*30	—	*42	—	*927	—	*30	—
29	SOUTH AVE. 48+50	51+00													—	330	—	68	—	95	—	1945	—	195
	100% CITY FUNDS														*160		*30		*42		*927		*30	
	TOTAL URBAN			6,327	—	4533		847		357		34		1065		3,202		69		96		1,945		195
	TOTAL INTERSTATE		9573	—	4160	—	1,973		1279		40		1535		4087		—		—		65		—	
	BID TOTAL		15,900		8693		2820		1636		74		2600		7,449		99		138		2,937		225	

* DENOTES 100% CITY FUNDS

ROADWAY ITEMS

SHEET Nº	LOCATIONS FROM	LOCATIONS TO	L-9 SEEDING SQ. YDS.		L-9 FERTILIZER 20#/1000 S TONS		E-1 COMPACTED SUBGRADE SQ. YDS.		E-11 WATER .005X(EMB+20% +I-22+B-21+B-112) M.GAL.		L-9 AGRI LIME MATERIAL 100#/1000 S.F.	
	TYPE OF FUNDS		INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN
15	NORTH BOUND S.R.7 785+00	795+00	7328	—	.07	—	1866	—	40	—	0.37	—
16	NORTH BOUND S.R.7 795+00	805+00	5745	2684	.06	.03	3,056	1639	83	6	0.28	0.13
17	NORTH BOUND S.R.7 805+00	810+45.62	—	2457	—	.02	—	1782	—	125	-	0.12
18	SOUTH BOUND S.R.7 780+13.60	790+00	4203	—	.04	—	2586	—	7	—	0.21	—
19	SOUTHBOUND S.R.7 790+00	800+00	11,990	—	.12	—	4277	—	12	—	0.60	
20	SOUTHBOUND S.R.7 800+00	810+45.62	2208	1978	.02	.02	1689		3	154	0.11	0.09
21	N.& S. BOUND S.R.7 810+00	815+38	—	7355	—	.07	—	3573	—	740	-	0.33
22	RAMP 0+00	"BV" 13+04.36	3104	11,359	.03	.11	—	2710	—	17	1.02	0.39
23	RAMP 0+00	"CA" 12+08.46	1257	6,801	.01	.07	—	2646	—	4	0.06	0.34
24	RAMP 12+08.46	"CA" WOODLAND AVE.	—	2,707	—	.03	—	936		2	—	0.14
24	RAMP 3+55.78	"BY" 10+23.04	6539	—	.07	—	1786	—	10	—	0.33	—
25	RAMP 0+00	"BZ" 4+89.15	—	3580	—	.04	—	1071	—	38	-	0.18
26	RAMP 0+00	"BX" 10+00	9,998	—	.10	—	1875	—	87	—	0.50	—
27	RAMP 10+00	"BX" 20+00	7427	—	.07	—	896	—	—	—	0.37	0.18
28	FRANKLIN AVE. 0.13.20	3+11.31	430	—	.01	—	927	—	1	—	0.02	
29	SOUTH AVE. 48+50	51+00	—	—	—	—	—	7,130	—	2		
10	ITEM L-10	& L-120			0.03	0.02					0.15	0.10
	TOTAL	URBAN	—	** 38921	—	0.41	—	21,487	—	1,088		2.00
	TOTAL INTERSTATE		** 60,229	—	0.63	—	18,958	—	243	—	4.02	
	BID	TOTAL	** 99,150		1.04		40,445		1,331		6.02	

** INCLUDES SEEDING FOR ITEM 667 SEEDING & MATTING

EARTHWORK ANALYSIS

SHEET Nº	STATION FROM	STATION TO	EXCAVATION CUBIC YARDS		EMBANKMENT CUBIC YARDS		EMBANKMENT +20%	
	TYPE OF FUNDS		INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN
15	NORTH BOUND S.R.7 785+00	795+00	3,056		6,294		7,533	
16	NORTH BOUND S.R.7 795+00	805+00	17,715	7,761	13,175	640	15,810	768
17	NORTH BOUND S.R.7 805+00	810+45.62	—	67	—	20,465	—	24,558
18	SOUTH BOUND S.R.7 780+13.60	790+00	30,518	—	890	—	1,068	—
19	SOUTH BOUND S.R.7 790+00	800+00	99,923	—	22	—	26	—
20	SOUTH BOUND S.R.7 800+00	810+45.62	20,586	1,043	52	25,057	62	30,068
21	N.& S. BOUND S.R.7 810+45.62	816+14.00	—	225	—	128,030	—	153,636
22	RAMP	"BV"	—	43,702	—	1,988	—	2,386
23	RAMP	"CA"	2,878	14,795	—	584	—	701
24	RAMP	"BY"	17,423	—	131	—	157	—
25	RAMP	"BZ"	—	103	—	6,085	—	7,302
26	RAMP	"BX"	19,807	—	14,345	—	17,214	—
28	FRANKLIN AVE.		1,073	—				
29	SOUTH AVE.		—	966	—	14	—	7
	TOTAL URBAN		—	68,682	—	182,863	—	219,426
	TOTAL INTERSTATE		212,979	—	34,909	—	41,870	—
	BID TOTAL		281,641		217,772		261,296	

E-8 REMOVAL & DISPOSAL OF EXISTING

LOCATION	FROM	TO	RIGID PAVEMENT SQ. YDS.		SIDEWALK SQ. FT.		CURB, CURB & GUTTER LIN. FT.	
TYPE OF FUNDS			INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN
~~HADNETT~~	~~FLINT HILL~~	~~POLAND~~	=	40	=	1800	—	360
OLD POLAND	GIBSON	CUL DE SAC 1+75		101		200		82
WILLIAMSON	EXIST. WEST L/A LINE	70.0' WEST ℄ "BV"	—	3			—	78
OKLAHOMA ST.	EXIST. WEST L/A LINE	113.0' WEST ℄ S.B. S.R.7	320	—	1280	—	320	—
FULTON CT.	NORTH EDGE PAVEMENT FULTON ST.	PROP. NORTH L/A LINE	711	—				
MARLIN ST.	SOUTH EDGE PAVEMENT ON WOODLAND AVE	EXIST. SOUTH TERMINUS PAV'T ON MARLIN	—	956	—	1568	—	609
FLINT HILL	EAST EDGE PAVEMENT SOUTH AVE.	SOUTH EDGE PAVEMENT HADNETT			—	1758		
FRANKLIN AVE.	SOUTH EDGE PAVEMENT FLINT HILL	TO PROP. SOUTH L/A LINE	—	833	—	3168	—	528
POLAND AVE.	PROP. NORTH L/A LINE	NORTH R/W CEDAR ST.	—	731	—	3515	—	686
ERIE ST.	EXIST. NORTH L/A LINE	54.5' SOUTH ℄ "BX"	138	—	496	—	122	—
WAYNE AVE.	EXIST. SOUTH L/A LINE	60.0 EAST ℄ N.B. S.R.7	451	—	1400	—	337	—
FULTON ST.	EXIST. EAST L/A LINE	132' EAST ℄ ERIE	527	—				
KYLE ST.	EAST EDGE PAVEMENT ON MARLIN	WEST EDGE PAVEMENT ON SOUTH	2677	1078	6989	2815	1969	794
MYRTLE ST.	EXIST. WEST L/A LINE	70.0' WEST ℄ "BV"	—	303			—	185
SOUTH AVE.	47+74	51+00	—	1945	—	3600	—	588
~~PYATT ST.~~	EXIST. WEST L/A LINE	47.5' WEST ℄ "BV"	160	118			120	114
	EXIST. EAST L/A LINE	72.0' EAST ℄ N.B. S.R.7	176	—			132	—
HADNETT ST	M.L. STA 810+20 ALONG SOUTH	M.L. STA 815+36 CURB LINE		58				
TOTAL URBAN FUNDS			—	6,193	—	16,624	—	4024
TOTAL INTERSTATE FUNDS			5160	—	10,165	—	3,000	—
BID TOTAL			11,353		26,789		7,024	

ROADWAY ITEMS - EROSION CONTROL

SHEET Nº	STATION FROM	STATION TO	L-10 SOD SQ. YDS.		L-120 JUTE MATTING SQ. YDS.		L-10 SPEC BERM PROT. SQ. YDS.	
	TYPE OF FUNDS		INTERSTATE	URBAN	INTERSTATE	URBAN	INTERSTATE	URBAN
43	NORTHBOUND S.R.7 785+00	795+00	964	—				
44	NORTHBOUND S.R.7 795+00	805+00	42	139	222	—		
45	NORTHBOUND S.R.7 805+00	810+45.62	—	107	—	133	-	43
46	SOUTHBOUND S.R.7 780+13.60	790+00	691	—				
47	SOUTHBOUND S.R.7 790+00	800+00	384	—	133	—		
48	SOUTHBOUND S.R.7 800+00	810+45.62	287	340				
49	N.& S. BOUND S.R.7 810+00	815+38	321	—				
50	RAMP 0+00	"BV" 13+04.36	—	765				
51	RAMP 4+08.92	"CA" 12+08.46	—	474				
52	RAMP 12+08.46	"CA" WOODLAND AVE	—	—	—	266		
52	RAMP 3+55.78	"BY" 10+23.04	136	—	133	—		
53	RAMP 0+00	"BZ" 4+89.15	—	161				
54	RAMP 0+00	"BX" 10+00	82	—				
55	RAMP 10+00	"BX" 20+00	46	—	133	—		
	TOTAL	URBAN	—	1,986	—	399		43
	TOTAL INTERSTATE		2,953	—	621	—	-	
	BID	TOTAL	4,939		1,020			43

COMPUTATION SHEET

GENERAL QUANTITY SUMMARY
ROADWAY

✻ 100% CITY

FED.RD.	STATE	PROJECT	
2	OHIO		

11
206

MAH-7-14.95

SHEET NUMBERS

TYPE CODE 7221

ITEM 1963	7	9	10		15	16	17	18	19	20	21	22	23	43	25	26	27	28	29	30	109	115	116	117	118	119	120	121	122	123	100% CITY	INTERSTATE	URBAN	1963 ITEM	BID QUANTITY	UNIT	1963 SPECIFICATIONS DESCRIPTION	Reference Nº (1969)
E-1			212,979																													212,979	–	E-1	281,661	CU.YDS.	ROADWAY EXCAVATION - METHOD "B" AS PER PLAN	1
			68,682																													–	68,682					
E-1			18,958																													18,958	–	E-1	40,445	SQ.YDS.	COMPACTED SUBGRADE	2
			21,487																													–	21,487					
E-8			5,160																	1915												7075	–	E-8	13,268	SQ.YDS.	REMOVAL & DISPOSAL OF EXISTING RIGID PAVEMENT	3
			6,193																													–	6193					
T-10		100																														100		T-10	100	CU.YDS.	TRAFFIC COMPACTED SURFACE COURSE	4
E-8			10,165																													10,165	–	E-8	26,789	SQ. FT.	REMOVAL & DISPOSAL OF EXISTING SIDEWALK - CONCRETE	5
			16,624																													–	16,624					
E-8			3,000																	460												3,460	–	E-8	7484	LIN.FT.	REMOVAL & DISPOSAL OF EXISTING CURB, CURB & GUTTER OR HEADER CURB	6
			4024																													–	4,024					
E-8																						1,052	1,341	845	279	982						4,499		E-8	4,499	LIN. FT.	REMOVED FOR REUSE OF EXISTING CHAIN LINK FENCE	7
E-9	LUMP																															LUMP		E-9	LUMP	LUMP	REMOVAL OF TREES & STUMPS	8
E-11			243																													243		E-11	1,331	M.GALS.	WATER	9
			1,088																														1,088					
I-8					3	1		1	1																							6		I-8	10	EACH	MONUMENT ASSEMBLIES - STANDARD	10
							2			1	1																						4					
I-13																		*3,414													3,414			I-13	9,447	SQ. FT.	5" PORTLAND CEMENT CONC. SIDEWALKS	11
											2,745								3,288														6,033					
I-15					50			25									25			650												750		I-15	825	LIN. FT.	GUARD RAIL - REMOVED & REBUILT	12
												75																					75					
I-15					497.5	650			1274.5	50						727.5	782.5			300												4282		I-15	6358	LIN.FT.	GUARD RAIL - STEEL BEAM STANDARD TYPE (DEEP)	13
						113	512			575.5	438.5		58		379																		2076					
I-15																				325												325		I-15	547	LIN. FT.	GUARD RAIL - STEEL BEAM BARRIER TYPE (DEEP) USING 6"x8" WOOD POST	14
											222																						222					
L-9			60,229																													60,229		L-9	99,150	SQ.YDS.	SEEDING & PROTECTING - AS PER PLAN	15
			38,921																														38,921					
L-9			0.63																													0.63		L-9	1.04	TONS	COMMERCIAL FERTILIZER (12-12-12)	16
			0.41																														0.41					
L-10			2,953																													2,953		L-10	4,939	SQ.YDS.	SODDING - AS PER PLAN	17
			1,986																														1,986					
L-10			–																													–		L-10	43	SQ.YDS.	SODDING FOR SPECIAL BERM & SLOPE PROTECTION - AS PER PLAN	18
			43																														43					
L-120			621																													621		L-120	1,020	SQ.YDS.	JUTE MATTING - AS PER PLAN	19
			399																														399					
I-4		100																														100		I-4	100	M.GALS.	WATER FOR DUST CONTROL SPECS	20
I-4		10																														10		I-4	10	TONS	CALCIUM CHLORIDE, FURNISHED & APPLIED - FOR DUST CONTROL	21
~~E-24~~														~~LUMP~~																		~~LUMP~~		~~S-24~~	~~LUMP~~	~~LUMP~~	~~REMOVAL OF EXISTING STRUCTURES~~	22
~~I-129~~																																		~~I-129~~		~~EACH~~	~~OVERHEAD SIGN SUPPORTS Nº 8,4 - DESIGN 1 AS PER PLAN~~	23
~~I-129~~																																		~~I-129~~		~~EACH~~	~~OVERHEAD SIGN SUPPORTS Nº 2,14 - AS PER PLAN~~	24
~~I-129~~																																		~~I-129~~		~~CU.YDS.~~	~~CONCRETE FOR SIGN SUPPORT FOUNDATIONS - CLASS "B"~~	25
I-26																						1,002	1,059	618	446	446	400	490				4,461		I-26	7,187	LIN. FT.	CHAIN LINK FENCE (SEE GENERAL NOTE SHEET 7	26
																												500	1,040	186			2726					
L-9			4.02																													4.02		L-9	6.02	TONS	AGRICULTURAL LIMING MATERIAL	27
			2.00																														2.00					
S-15		LUMP																														LUMP		S-15	LUMP	LUMP	TEMPORARY RUN-AROUND USING CLASS "A" PAVEMENT (AS PER PLAN)	28
SPECIAL	17																															9		SS	17	HOURS	COMPACTION - USING HEAVY PNEUMATIC TIRED ROLLER	29
																																	8					
T-35		50																														50		T-35	50	CU. YDS.	ASPHALTIC CONCRETE SURFACE COURSE OR APPROVED BITUMINOUS PREMIXED SURFACE COURSE FOR MAINTAINING TRAFFIC.	30
																					~~15~~											~~13~~		~~S-25~~	~~23~~	~~EACH~~	~~LUMINAIRE 20,500 LUMEN TYPE III~~	31
																					~~10~~												~~10~~					
																					~~11~~											~~11~~		~~S-25~~	~~20~~	~~EACH~~	~~LUMINAIRE 20,500 LUMEN TYPE II~~	32
																					~~9~~												~~9~~					
																					~~10,255~~											~~10,255~~		~~S-25~~	~~18,050~~	~~LIN. FT.~~	~~LIGHTING CABLE Nº 6 1/C 5KV~~	33
																					~~7,795~~												~~7,795~~					
																					~~6,425~~											~~6,425~~		~~S-25~~	~~11,250~~	~~LIN. FT.~~	~~GROUND GRID CABLE Nº 2 1/C BARE~~	34
																					~~4,825~~												~~4,825~~					
																					~~13~~											~~13~~		~~S-25~~	~~23~~	~~EACH~~	~~8"X4.87"x29'6" POLE W/15' BRACKET 32'6" MTG. HGT. (ON ROADWAY LANES)~~	35
																					~~10~~												~~10~~					
																					~~11~~											~~11~~		~~S-25~~	~~20~~	~~EACH~~	~~8"x3.87"x29'6" POLE W/10' BRACKET 32'6" MTG. HGT. (ON RAMPS)~~	36
																					~~9~~												~~9~~					
																					~~3~~											~~3~~		~~S-25~~	~~5~~	~~EACH~~	~~CONCRETE MARKERS~~	37
																					~~2~~												~~2~~					
																					~~24~~											~~24~~		~~S-25~~	~~43~~	~~EACH~~	~~POLE FOUNDATIONS-CONCRETE~~	38
																					~~19~~												~~19~~					
																					~~6~~											~~6~~		~~S-25~~	~~11~~	~~EACH~~	~~CONCRETE PULL BOXES~~	39
																					~~5~~												~~5~~					
																					~~230~~											~~230~~		~~S-25~~	~~330~~	~~LIN. FT.~~	~~CONCRETE ENCASED 3" CONDUIT (DUCT)~~	40
																					~~100~~												~~100~~					
																					–											–		~~S-25~~	~~2~~	~~EACH~~	~~20 KW CONSTANT CURRENT STATION COMPLETE WITH ALL ACCESSORIES~~	41
																					~~2~~												~~2~~					
																					~~5~~											~~5~~		~~S-25~~	~~5~~	~~EACH~~	~~RELOCATION OF EXISTING LIGHT STANDARDS & RE-CONNECTING TO CKTS.~~	42
																					–												–					

BID TOTAL

GENERAL SUMMARY - ROADWAY

GENERAL QUANTITY SUMMARY
PAVEMENT

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	12 206

MAH-7-14.95

* 100% CITY

TYPE CODE 7221

ITEM 1963	8	10	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	129	126	128	132	100% CITY	INTERSTATE	URBAN	1963 ITEM	BID QUANTITY	UNIT	DESCRIPTION (1963 SPECIFICATIONS)	Reference No. (1969)
I-7															89									89		I-7	769.68	SQ.YDS.	REINFORCED CONCRETE APPROACH SLABS (T=13") AS PER PLAN	43
					183			231										266.68							680.68					
I-12				210											247									457		I-12	457	LIN.FT.	STANDARD TYPE 7 CONCRETE CURB	44
I-12																										I-12	574	LIN.FT.	STANDARD TYPE 2-A CONCRETE CURB	45
										79		397	98												574					
I-12																*633							*633			I-12	1146	LIN.FT.	STANDARD TYPE 2-B CONCRETE CURB	46
																	513								513					
I-12			225			129	735	105			100			276	253	*13		294					*13	2,117		I-12	4,053	LIN.FT.	STANDARD TYPE 6 CONCRETE CURB	47
					325			252	748	152	105	306	35												1923					
I-21			27	117		21		20						10				196						391		I-21	630	SQ.YDS.	4" PORTLAND CEMENT CONC. MEDIAN PAVEMENT, STANDARD TYPE 1 - AS PER PLAN	48
					63			39	48			89													239					
I-21																										I-21	149	SQ.YDS.	PORTLAND CEMENT CONC. MEDIAN PAVEMENT, STANDARD TYPE 2 - AS PER PLAN	49
									149																149					
I-22		*160 / 4087																					*160	4,087		I-22	7,449	CU.YDS.	SUBBASE, GRADING "A" OR "B", AS PER PLAN	50
		3202																							3202					
B-112		1,973																						1,973		B-112	2,820	CU.YDS.	POROUS BASE COURSE	51
		847																							847					
B-21		1,279																						1,279		B-21	1,636	CU.YDS.	WATERPROOFED AGGREGATE BASE COURSE	52
		357																							357					
																	50							50		T-70	50	SQ YDS	8" P.C.C. T-70 DRIVEWAY APPROACH	
T-71		9,573																						9,573		T-71	15,900	SQ.YDS.	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	53
		6,327																							6,327					
T-71		4,160																						4,160		T-71	8,693	SQ.YDS.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	54
		4,533																							4,533					
B-70		*927 / 65																					*927	65		B-70	2937	SQ.YDS.	9" PORTLAND CEMENT CONC. BASE COURSE	55
		1945																							1945					
T-30		*30																					*30			T-30	225	GALS.	BITUM. TACK COAT; SEC. M-5.5, MS-2 OR RS-1, OR M-5.2, RC-1, RC-2 OR RC-3 AS PER SEC. T-30.02	56
		195																							195					
T-31		40																						40		T-31	74	CU.YDS.	BITUMINOUS SURFACE TREATMENT - № 6 AGGREGATE	57
		34																							34					
T-31		1535																						1535		T-31	2,600	GALS.	BITUMINOUS SURFACE TREATMENT - BITUMINOUS MATERIAL - AS PER PLAN	58
		1065																							1065					
T-35	10																							10		T-35	10	CU.YDS.	ASPHALTIC CONCRETE SURFACE COURSE FOR PAVEMENT REPLACEMENT	59
B-70	10																							10		B-70	10	SQ.YDS.	9" PORTLAND CEMENT CONCRETE BASE COURSE FOR PAVEMENT REPLACEMENT	60
		*30																					*30							
T-35		69																							69	T-35	99	CU.YDS.	ASPHALTIC CONCRETE SURFACE COURSE - TYPE "C" (70-85)	61
		*42																					*42							
B-35		96																							96	B-35	138	CU. YDS.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)	62
I-12																										I-12	110	LIN. FT.	SPECIAL HEADER CURB - AS PER PLAN	63
																	110								110					
I-12						250																		250		I-12	450	LIN. FT.	STANDARD TYPE 8 CONCRETE CURB	64
													200												200					
SPECIAL			126			45																		171		SPECIAL	277	EACH	SPECIAL 1¼" EXPANSION BOLTS - AS PER PLAN	65
												78		28											106					
1969 ITEM																													RETAINING WALLS	
503																				154	45			199		1969 ITEM 503	1,677	CU.YDS.	UNCLASSIFIED EXCAVATION	66
																			485			993			1478					
511																				85	16.6			105.6		511	696.8	CU.YDS.	CLASS "C" CONCRETE FOOTINGS	67
																			147			444.2			591.2					
511																				65	15.8			80.8		511	708.2	CU.YDS.	CLASS "C" CONCRETE WALLS	68
																			135			492.4			627.4					
512																				27	6			33		512	327	LIN. FT.	WATERPROOFING 12"x½" PREMOLDED SEALING STRIP	69
																			54			240			294					
509																				6961	833			7794		509	68,403	LBS.	REINFORCING STEEL	70
																			12099			48510			60609					
516																			110			270			380	516	380	SQ.FT.	STRUCTURAL EXPANSION JOINT	71
518																				47	7			54		518	357	CU.YDS.	POROUS BACKFILL	72
																						303			303					
518																						368			368	518	368	LIN.FT.	6" PERFORATED BITUMINOUS COVERED C.M.P. W/SPECIALS, 707.01 TYPE 3 CLASS 1 OR 2	73

BID TOTAL

GENERAL SUMMARY - PAVEMENT

GENERAL QUANTITY SUMMARY
DRAINAGE

TYPE CODE 7221

ITEM 1963	6	29	30	43	44	45	46	47	48	49	50	51	52	53	54	55	57	INTERSTATE	URBAN	1963 GRAND TOTAL ITEM	QUANTITY	UNIT	(1963 SPECIFICATIONS) DESCRIPTION	Reference No (1963)
S-24				LUMP														LUMP		S-24	LUMP	LUMP	REMOVAL OF EXISTING STRUCTURES	74
I-1														25					25	I-1	25	LIN. FT.	6" CLASS A-1 PIPE M-6.6(b) M-6.8(b)	75
I-1			90	31		100				52			132 88	43	30	29	191	503	283	I-1	786	LIN. FT.	12" CLASS J-1 PIPE	76
I-1				180														180		I-1	180	LIN. FT.	12" CLASS A-1 PIPE M-6.6(c),	77
I-1									65										65	I-1	65	LIN. FT.	15" CLASS J-1 PIPE	78
I-1								76	122									76	122	I-1	198	LIN. FT.	18" CLASS J-1 PIPE	79
I-1									76										76	I-1	76	LIN. FT.	21" CLASS J-1 PIPE	80
I-1					390													390		I-1	390	LIN. FT.	24" CLASS A-1 PIPE M-6.6(d)	81
I-1										128			102					102	128	I-1	230	LIN. FT.	12" CLASS B-1 PIPE	82
I-1																178		178		I-1	178	LIN. FT.	15" CLASS B-1 PIPE	83
I-1	200																	200		I-1	200	LIN. FT.	4" CLASS E-1 M-6.8(b)	84
I-1				43	91	33			40	20	55							134	148	I-1	282	LIN. FT.	12" CLASS E-1 PIPE	85
I-1								271										271		I-1	271	LIN. FT.	15" CLASS E-1 PIPE	86
I-1			10				10	10	4	50	10		20 10					50	74	I-1	124	LIN. FT.	6" CLASS F-4 PIPE	87
I-1			20	10	10	10				10		10		10	10	10		60	40	I-1	100	LIN. FT.	8" CLASS F-4 PIPE M-6.4(c)	88
I-1										82						69		69	82	I-1	151	LIN. FT.	12" CLASS F-4 PIPE M-6.4(c)	89
I-1									58										58	I-1	58	LIN. FT.	15" CLASS F-4 PIPE M-6.4(c)	90
I-1			92 415	1006	755 250	605	1200	1009	400 667	1432	940	815	636 360	510	808	579		6485	5994	I-1	12,479	LIN. FT.	6" CLASS I-3 PIPE	91
I-2				0.2				0.3	0.3				0.5			0.2		1.5		I-2	1.5	CU. YDS.	MASONRY	92
I-5			1	1	1	1	1	1	1	2		1	1	2	1	1		10	8	I-5	18	EACH	6" PIPE SPECIALS (CLASS I-3)	93
I-5										4						2		2	4	I-5	6	EACH	12" PIPE SPECIALS (CLASS F-4)	94
I-5									2										2	I-5	2	EACH	15" PIPE SPECIALS (CLASS F-4)	95
I-5					1					2			2	1	1			4	3	I-5	7	EACH	12" FLAP VALVES (AS PER PLAN)	96
I-5																1		1		I-5	1	EACH	15" FLAP VALVES (AS PER PLAN)	97
															1			1		I-8	1	EACH	STANDARD No. 6 CATCH-BASIN	98
I-8		1																1		I-8	1	EACH	INLET ADJUST TO GRADE	99
I-8		2															1	1	2	I-8	3	EACH	CITY OF YOUNGSTOWN TYPE I INLET	100
I-8		1															3	3	1	I-8	4	EACH	CITY OF YOUNGSTOWN TYPE II INLET	101
I-8							1											1		I-8	1	EACH	REBUILD CATCH BASINS (AS PER PLAN)	102
I-8			1								1		2			1		4	1	I-8	5	EACH	STANDARD No 2-6 MEDIAN INLET	103
I-8																				I-8				104
I-8										1									1	I-8	1	EACH	STANDARD No 2-8 MEDIAN INLET MODIFIED (AS PER PLAN)	105
I-8									1										1	I-8	1	EACH	STANDARD No 2A-6 PAVED SHOULDER INLET	106
I-8							1											1		I-8	1	EACH	STANDARD No 2-4 CATCH BASIN	107
I-8				1	2	2		3	1 2	2			1 1	1		1		9	8	I-8	17	EACH	STANDARD No 5 CATCH BASIN	108
I-8										1							1	1	1	I-8	2	EACH	STANDARD No 1 MANHOLE	109
I-10				1	2		1	6	4		3		3	2	1	1		19	5	I-10	24	CU. YDS.	DUMPED ROCK CHANNEL PROTECTION	110
I-14								160	304	566						85		245	870	I-14	1115	LIN. FT.	STANDARD PAVED GUTTER (TYPE 1)	111
I-14					103										72			175		I-14	175	LIN. FT.	STANDARD PAVED GUTTER TYPE 1 MODIFIED (AS PER PLAN)	112
I-14							95				75			27	25			120	102	I-14	222	LIN. FT.	STANDARD PAVED GUTTER TYPE 3 MODIFIED (AS PER PLAN)	113
																				BID TOTAL				

GENERAL QUANTITY SUMMARY
UTILITY RELOCATIONS

FED.RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		14/206

MAH-7-14.95

TYPE CODE 7221

ITEM 1963	SHEET NUMBERS 58	59	60	61	62	63	INTERSTATE	URBAN	1963 GRAND TOTAL ITEM	QUANTITY	UNIT	DESCRIPTION (1963 SPECIFICATIONS)	Reference Nº (1963)
E-12									E-12	305	LIN. FT.	PIPE REMOVED (OVER 24")	114
					305			305					
			103				103		I-1	103	LIN. FT.	24" CLASS A-1 PIPE M-6.6 (d) (COMBINATION SEWER)	115
I-1									I-1	41	LIN. FT.	27" CLASS A-1 PIPE M-6.6 (d) (COMBINATION SEWER)	116
						41		41					
I-1									I-1	306	LIN. FT.	27" CLASS A-1 PIPE M-6.6 (d) (CONC. ENCASED) (COMB.SEWER)	117
						306		306					
I-1													
I-1													
I-1									I-1	27	LIN. FT.	12" CLASS B-1 PIPE M-6.8 (b) (COMBINATION SEWER)	118
						27		27					
I-1		209					209		I-1	209	LIN. FT.	15" CLASS B-1 PIPE M-6.8 (b) (COMBINATION SEWER)	119
I-1			270				270		I-1	270	LIN. FT.	21" CLASS B-1 PIPE M-6.6 (c) (COMBINATION SEWER)	120
I-1									I-1	143	LIN. FT.	42" CLASS B-1 PIPE M-6.6 (a)	121
					143			143					
I-1									I-1	168	LIN. FT.	42" CLASS B-1 PIPE M-6.6 (b)	122
					168			168					
										3 11			
I-2													
I-8									I-8	1	EACH	STANDARD Nº 1-A MANHOLE (MODIFIED)	123
					1			1					
I-8		2					2		I-8	3	EACH	STANDARD Nº 1 MANHOLE (MODIFIED)	124
	1							1					
I-8			1				1		I-8	2	EACH	STANDARD Nº 2 MANHOLE (MODIFIED)	125
						1		1					
I-8			2				2		I-8	5	EACH	STANDARD Nº 2 MANHOLE WITHOUT DROP PIPE (MODIFIED)	126
					1	2		3					
I-16		4	3	6			13		I-16	19	EACH	MANHOLES ABANDONED	127
					2	4		6					
I-16		2	3	11			16		I-16	33	EACH	CATCH BASIN ABANDONED	128
				3	6	8		17					
SPECIAL													

WATER MAINS

TYPE CODE YOGO

ITEM	58	59	60	61	62	63	INTERSTATE	URBAN	ITEM	QUANTITY	UNIT	DESCRIPTION	Reference Nº
I-124		1	2	6	1		10	~~2~~	I-124	14	EACH	HYDRANTS REMOVED AND DISPOSED	129
	1				1	2		4					
I-124			1				1		I-124	6	EACH	CUT & PLUG EXISTING WATER LINE	130
	1			1	1	2		5					
I-124		7	18		9		34		I-124	401	LIN. FT.	6" NEW WATER MAIN - CLASS 22	131
						367		367					
I-124		1	2		1		4		I-124	10	EACH	6" FITTINGS - CLASS 250	132
						6		6					
I-124									I-124	1	EACH	8" FITTINGS - CLASS 250	133
						1		1					
I-124		1	2		1		4		I-124	8	EACH	6" VALVE & VALVE BOX - CLASS 150	134
						4		4					
I-124		1	1		1		3		I-124	5	EACH	FIRE HYDRANTS, AS PER PLAN	135
						2		2					

BID TOTAL

GENERAL SUMMARY - UTILITY & WATER

1969 GENERAL SUMMARY

CROSS REFERENCE NUMBER	GENERAL SUMMARY SHEET NO	I-680-9(11)238	U524-9	SUB TOTAL	TOTAL	UNIT	ITEM 1969 SPEC.	COMMENTS	DESCRIPTION - 1969 SPECIFICATIONS TYPE CODE 7221 UNLESS SHOWN OTHERWISE	CROSS REFERENCE NUMBER
									ROADWAY	
1	11	212,979	68,682		281,661	CU. YDS.	203		EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION AS PER PLAN	1
2		18958	21,487		40,445	SQ. YDS.	203		SUBGRADE COMPACTION	2
3		7075	6,193		13,268	SQ. YDS.	202		EXISTING PAVEMENT REMOVED AND DISPOSED OF	3
4		100			100	CU. YDS.	410		TRAFFIC COMPACTED SURFACE, TYPE A OR B	4
5		10,165	16,624		26,789	SQ. FT.	202		EXISTING SIDEWALK REMOVED AND DISPOSED OF	5
6		3,460	4,024		7,484	LIN. FT.	202		EXISTING CURB, CURB AND GUTTER AND HEADER CURB REMOVED AND DISPOSED OF, AS PER PLAN	6
7		4,499			4,499	LIN. FT.	202		FENCE, TYPE CL REMOVED FOR REUSE	7
8		LUMP	LUMP		LUMP	LUMP	201		CLEARING AND GRUBBING	8
9						M -GALS.	203	COST INCLUDED WITH CROSS REF. 1	WATER	9
10		6	4		10	EACH	604		STANDARD MONUMENT ASSEMBLY	10
11			6,033	* 3414	9,447	SQ. FT.	608		5" CONCRETE WALK	11
12		750	75		825	LIN. FT.	202	TWO SEPARATE ITEMS UNDER	GUARD RAIL REMOVED FOR RE-USE	12
12		★1,075	75		1,150	LIN. FT.	606	1969 SPECIFICATIONS	GUARD RAIL REBUILT	12
13		★5,032	2076		7,108	LIN. FT.	606		GUARD RAIL, TYPE 5	13
14		325	222		547	LIN. FT.	606		GUARD RAIL, TYPE 5 BARRIER DESIGN	14
		★25	12		37	EACH	606		ANCHOR ASSEMBLY	
		★12	3		15	EACH	606		APPROACH END ASSEMBLY	
		9	8		17	EACH	606		BRIDGE TERMINAL ASSEMBLY	
		★3900			3,900	LIN. FT	606		TEMPORARY BEAM RAIL AS PER PLAN	
		★400			400	LIN. FT	606		TEMPORARY BARRIER BEAM RAIL, AS PER PLAN	
20		★162.5			162.5	LIN. FT.	606		BARRIER GUARD RAIL REMOVED FOR REUSE	
21		10			10	TONS	616		CALCIUM CHLORIDE	21
			LUMP		LUMP	LUMP	202		Parcel No 745-WL-1 REMOVAL OF ONE 2 STORY FRAME CLUB HOUSE	
~~22~~		~~LUMP~~			~~LUMP~~	~~LUMP~~	~~202~~		~~EXISTING STRUCTURES REMOVED~~	~~22~~
		★160			160	EACH	606		TEMPORARY BARREL, AS PER PLAN	
20		100			100	M.Gals	616		WATER	20
26			2,688		2688	LIN. FT.	607		FENCE, TYPE "CL"	26
26		4461	38		4499	LIN. FT.	607		CHAIN LINK FENCE, REBUILT	26
28		LUMP			LUMP	LUMP	615	TWO SEPARATE ITEMS UNDER	TEMPORARY ROADS	28
28		3531			3531	SQ. YDS	615	1969 SPECIFICATIONS	CLASS "A", TEMPORARY PAVEMENT	28
29		9	8		17	HOURS	203		PROOF ROLLING	29
30		50			50	CU. YDS.	404		ASPHALT CONCRETE OR AN APPROVED BITUMINOUS PREMIXED SURFACE FOR MAINTAINING TRAFFIC	30
31										31
32										32
33										33
34										34
35										35
36										36
37										37
38										38
39										39
40										40
41										41
42										42
									PAVEMENT	
43	12	89	681		770	SQ. YDS.	611		REINFORCED CONCRETE APPROACH SLABS (T = 13")	43
44		457			457	LIN. FT.	609		CONCRETE CURB, STANDARD TYPE 7	44
45			574		574	LIN. FT.	609		CONCRETE CURB STANDARD TYPE 2-A	45
46			513	*633	1,146	LIN. FT.	609		CONCRETE CURB STANDARD TYPE 2-B	46
47		2,117	1,923	* 13	4,053	LIN. FT.	609		CONCRETE CURB STANDARD TYPE 6	47
48		391	239		630	SQ. YDS.	612		CONCRETE TRAFFIC ISLAND	48
49			149		149	SQ. YDS.	612		CONCRETE MEDIAN	49
50		4,087	3,202	*160	7,449	CU. YDS.	310		SUBBASE, GRADING A, AS PER PLAN	50
51		1,973	847		2,820	CU. YDS.	304		AGGREGATE BASE	51
52		1,279	357		1,636	CU. YDS.	301		BITUMINOUS AGGREGATE BASE, 702.01(85-100) OR 702.09 RT-10	52
53		9,573	6,327		15,900	SQ. YDS.	451		10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	53
54		4,160	4,533		8,693	SQ. YDS.	451		9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	54
55		65	1,945	*927	2,937	SQ. YDS.	305	INCLUDES REF. #60 IN TOTAL	9" PORTLAND CEMENT CONCRETE BASE	55
56			195	* 30	225	GALS.	407		TACK COAT, 702.04 MS-2 OR RS-1, OR 702.02 RC-70 OR RC-250	56
57		40	34		74	CU. YDS.	409		SEAL COAT COVER AGGREGATE, NO. 8	57
58		1535	1065		2,600	GALS.	409		SEAL COAT BITUMINOUS MATERIAL, AS PER PLAN	58
59		10				CU. YDS.	404	INCLUDED IN REF. #61	ASPHALT CONCRETE FOR PAVEMENT REPLACEMENT	59
60		10				SQ. YDS.	305	INCLUDED IN REF #55	9" PORTLAND CEMENT CONCRETE BASE FOR PAVEMENT REPLACEMENT	60
61			69	*30	99	CU. YDS.	404	INCLUDES REF. #59 IN TOTAL	ASPHALT CONCRETE (70-85)	61
62			96	*42	138	CU. YDS.	402		ASPHALT CONCRETE (70-85)	62
63			110		110	LIN. FT.	609		CONCRETE CURB, AS PER PLAN	63
64		250	200		450	LIN. FT.	609		CONCRETE CURB, STANDARD TYPE 8	64
65		171	106		277	EACH	SPECIAL		1 1/4" EXPANSION BOLT, AS PER PLAN	65
			50		50	SQ YDS	452		8" PORTLAND CEMENT CONCRETE PAVEMENT	
									EROSION CONTROL TYPE CODE Y-005	
111	13	245	870		1115	LIN FT	601		PAVED GUTTER STANDARD TYPE 1-2	111
112		175			175	LIN FT	601		PAVED GUTTER STANDARD TYPE 1-2 MODIFIED AS PER PLAN	112
113		120	102		222	LIN FT	601		PAVED GUTTER STANDARD TYPE 3 MODIFIED AS PEP PLAN	113
15		59,608	38,522		98,130	SQ. YDS.	659		SEEDING AND MULCHING	15
16		0.63	0.41		1.04	TONS	659		COMMERCIAL FERTILIZER (12-12-12)	16
17		2,953	1,986		4,939	SQ. YDS.	660		SODDING	17
18			43		43	SQ. YDS.	660		SODDING FOR SPECIAL BERM AND SLOPE PROTECTION AS PER PLAN	18
19		621	399		1,020	SQ. YDS.	667		SEEDING AND JUTE MATTING	19
27		4.02	2.00		6.02	TONS	659		AGRICULTURAL LIMING	27
110	13	**24	**6		** 30	CU YDS	601		ROCK CHANNEL PROTECTION	110
									RETAINING WALLS	
66	12	199	1,478		1677	CU. YDS.	503		Unclassified Excavation	66
67		105.6	591.2		696.8	CU. YDS	511		CLASS C CONCRETE (FOOTINGS)	67
68		80.8	627.4		708.2	CU YDS	511		CLASS C CONCRETE (WALLS)	68
69		33	294		327	LIN FT	512		PREMOLDED SEALING STRIP	69
70		7,794	60,609		68,403	LBS	509		REINFORCING STEEL	70
71			380		380	SQ FT	516		STRUCTURAL EXPANSION JOINT	71
72		54	303		357	CU. YDS.	518		POROUS BACKFILL	72
73	12		368		368	LIN FT	518		6" PERFORATED C.M.P. INCLUDING SPECIALS, 707.01 BITUM. COATED AS PER 707.04	73

★ Includes quantity from Sheet 110 D.

* INDICATES 100% CITY PARTICIPATION
** 6" THICK BED OF #357 COARSE AGGREGATE INCLUDED IN THIS QUANTITY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MAH-7-14.95

1969 GENERAL SUMMARY

CROSS REFERENCE NO.	GENERAL SUMMARY SH. NO.	I-680-9 (11) 238	U 524-9	SUB TOTAL	TOTAL	UNIT	ITEM 1969 SPEC.	COMMENTS	DESCRIPTION - 1969 SPECIFICATIONS	CROSS REFERENCE NUMBER
									DRAINAGE	
91	13	922	2112		3034	LIN. FT.	605		6" UNCLASSIFIED PIPE UNDERDRAINS	
91	13	1592	1271		2863	LIN. FT.	605		6" SHALLOW PIPE UNDERDRAINS	
91	13	4386	2196		6582	LIN. FT.	605		6" DEEP PIPE UNDERDRAINS	
74	13	LUMP			LUMP	LUMP	202		EXISTING STRUCTURES REMOVED	74
75	13		25		25	LIN. FT.	603		6" CONDUIT, TYPE B	75
76	13	503	283		786	LIN. FT.	603		12" CONDUIT, TYPE B	76
77	13	180			180	LIN. FT.	603		12" CONDUIT, TYPE B 706.02 CLASS IV	77
78	13		65		65	LIN. FT.	603		15" CONDUIT, TYPE B	78
79	13	76	122		198	LIN. FT.	603		18" CONDUIT, TYPE B	79
80	13		76		76	LIN. FT.	603		21" CONDUIT, TYPE B	80
81	13	390			390	LIN. FT.	603		24" CONDUIT, TYPE B 706.02 CLASS V	81
82	13	102	128		230	LIN. FT.	603		12" CONDUIT, TYPE B 706.01, 706.02 CLASS III or 706.08	82
83	13	178			178	LIN. FT.	603		15" CONDUIT, TYPE B 706.02 CLASS IV	83
84	13	200			200	LIN. FT.	603		4" CONDUIT, TYPE C	84
85	13	134	148		282	LIN. FT.	603		12" CONDUIT, TYPE C	85
86	13	271			271	LIN. FT.	603		15" CONDUIT, TYPE C 706.01 E.S., 706.02, or 706.08 E.S.	86
87	13	50	74		124	LIN. FT.	603		6" CONDUIT, TYPE F 707.01 TYPE 1 or 707.12	87
88	13	60	40		100	LIN. FT.	603		8" CONDUIT, TYPE F 707.01 TYPE 1 or 707.12	88
89	13	69	82		151	LIN. FT.	603		12" CONDUIT, TYPE F, 707.01 TYPE 1 or 707.12	89
90	13		58		58	LIN. FT.	603		15" CONDUIT, TYPE F, 707.01 TYPE 1 or 707.12	90
92	13	1.5			1.5	CU. YDS.	602		CONCRETE MASONRY	92
93	13	10	8			EACH	605	DISCONTINUED- INCLUDED IN 605	6" PIPE UNDERDRAIN SPECIALS	93
94	13	2	4			EACH	603	DISCONTINUED- INCLUDED IN 603	12" CONDUIT SPECIALS, TYPE "F"	94
95	13		2			EACH	603	DISCONTINUED- INCLUDED IN 603	15" CONDUIT SPECIALS, TYPE "F"	95
96	13	4	3		7	EACH	604		12" FLAP VALVE, AS PER PLAN	96
97	13	1			1	EACH	604		15" FLAP VALVE, AS PER PLAN	97
98	13	1			1	EACH	604		STANDARD NO. 6 CATCH BASIN	98
99	13	1			1	EACH	604		INLET ADJUSTED TO GRADE	99
100	13	1	2		3	EACH	604		CITY OF YOUNGSTOWN, TYPE I INLET AS PER PLAN	100
101	13	3	1		4	EACH	604		CITY OF YOUNGSTOWN, TYPE II INLET AS PER PLAN	101
102	13	1			1	EACH	604		CATCH BASIN REBUILT AS PER PLAN	102
103	13	4	1		5	EACH	604		STANDARD NO. 2-6 MEDIAN INLET	103
104										104
105	13		1		1	EACH	604		STANDARD NO. 2-8 MEDIAN INLET MODIFIED AS PER PLAN	105
106	13		1		1	EACH	604		STANDARD NO. 2A-6 PAVED SHOULDER INLET	106
107	13	1			1	EACH	604		STANDARD NO. 2-4 CATCH BASIN	107
108	13	9	8		17	EACH	604		STANDARD NO. 5 CATCH BASIN	108
109	13	1	1		2	EACH	604		STANDARD NO. 1 MANHOLE	109
										111
										112
										113
114	14		305		305	LIN. FT.	202		PIPE REMOVED OVER 24"	114
115	14	103			103	LIN. FT.	603	(*)	24" CONDUIT, TYPE B 706.02 CLASS V AS PER PLAN	115
116	14		41		41	LIN. FT.	603	(*)	27" CONDUIT, TYPE B 706.02 CLASS V AS PER PLAN	116
117	14		306		306	LIN. FT.	603	(-)	27" CONDUIT, TYPE B, ENCASED 706.02 CLASS V AS PER PLAN	117
		89			89	LIN. FT.	603	(*)	15" CONDUIT, TYPE B 706.01, 706.08 or 706.02 CLASS III, AS PER PLAN	
118	14		27		27	LIN. FT.	603	(*)	12" CONDUIT, TYPE C 706.01 E.S., 706.08 E.S. or 706.02 CLASS III AS PER PLAN	118
119	14	120			120	LIN. FT.	603	(*)	15" CONDUIT, TYPE C 706.01 E.S., 706.08 E.S. or 706.02 CLASS III AS PER PLAN	119
120	14	270			270	LIN. FT.	603	(*)	21" CONDUIT, TYPE B 706.02 CLASS IV AS PER PLAN	120
121	14		143		143	LIN. FT.	603		42" CONDUIT, TYPE B	121
122	14		168		168	LIN. FT.	603		42" CONDUIT, TYPE B 706.02 CLASS III	122
123	14		1		1	EACH	604		STANDARD NO. 1-A MANHOLE, MODIFIED AS PER PLAN	123
124	14	2	1		3	EACH	604		STANDARD NO. 1 MANHOLE, MODIFIED AS PER PLAN	124
125	14	1	1		2	EACH	604		STANDARD NO. 2 MANHOLE, MODIFIED AS PER PLAN	125
126	14	2	3		5	EACH	604		STANDARD NO. 2 MANHOLE WITHOUT DROP PIPE, MODIFIED AS PER PLAN	126
127	14	13	6		19	EACH	202		MANHOLE REMOVED OR ABANDONED	127
128	14	16	17		33	EACH	202		CATCH BASINS REMOVED OR ABANDONED	128
									WATER WORK TYPE CODE Y-060	
129	14	10	4		7 14	EACH	-814		FIRE HYDRANT REMOVED AND DISPOSED OF	129
130	14	1	5		6	EACH	-814		CUT AND PLUG EXISTING WATER MAIN	130
131	14	34	367		401	LIN. FT.	-814		FURNISHING AND INSTALLING 6" WATER MAIN, VALVES AND SPECIALS, CLASS 22	131
132	14	4	6			EACH	-814	INCLUDED IN LINE 131	6" NEW WATER MAIN FITTINGS - CLASS 250	132
133	14		1			EACH	-814	INCLUDED IN LINE 130	8" NEW WATER MAIN FITTINGS - CLASS 250	133
134	14	4	4		8	EACH	-814		6" WATER VALVE AND VALVE BOX - CLASS 150	134
135	14	3	2		5	EACH	-814		FIRE HYDRANT AS PER PLAN	135
								(*)	COMBINATION SEWER	
								(-)	COMBINATION SEWER, CONCRETE ENCASED	
					LUMP		619		FIELD OFFICE	
					LUMP				CONSTRUCTION LAYOUT STAKES	
					LUMP		614		MAINTAINING TRAFFIC	

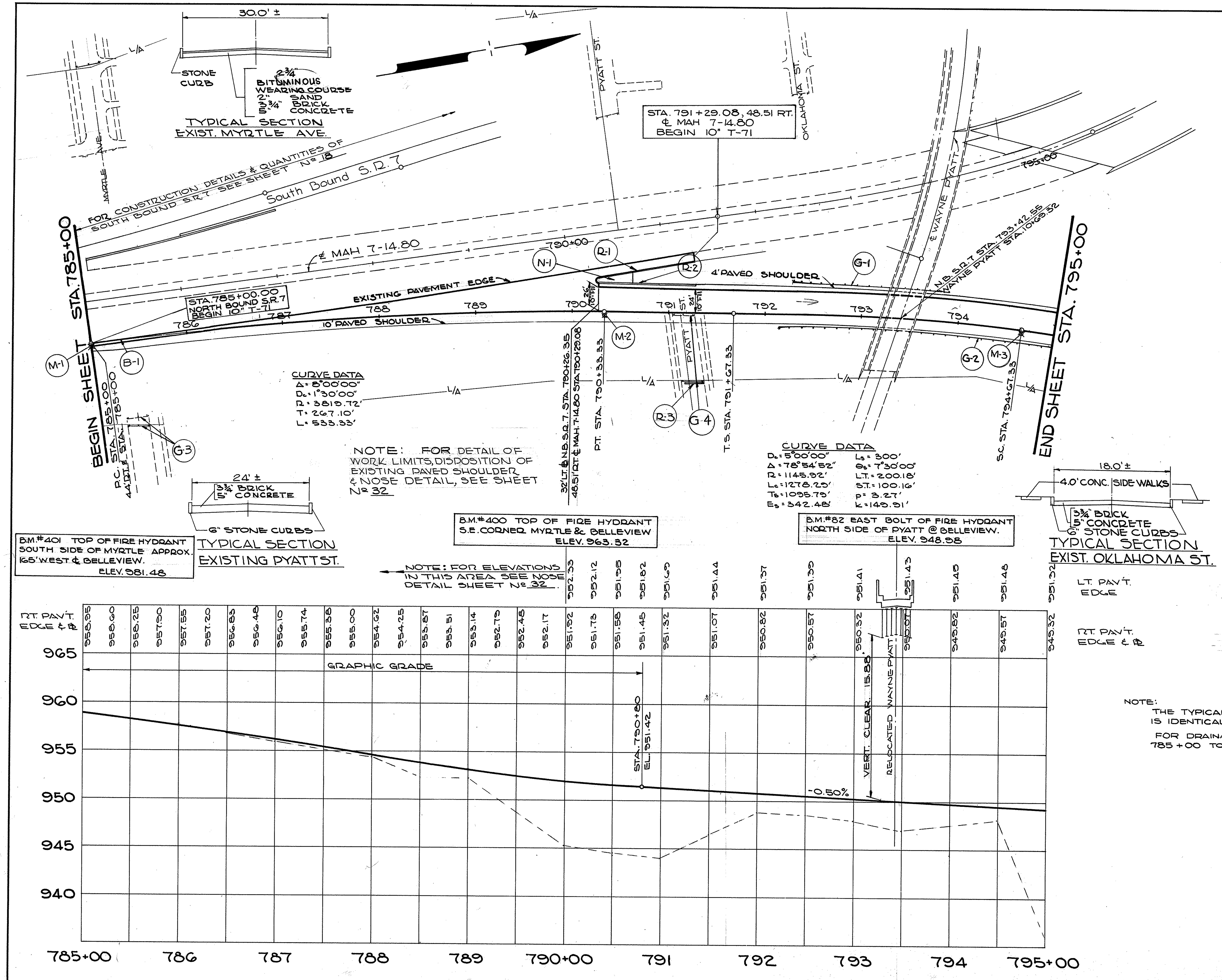
FOR LIGHTING QUANTITIES SHEET 109
FOR TRAFFIC CONTROL QUANTITIES SEE SHEET 110D

FOR BRIDGE NO. MAH 7-1508 SEE SHEET 142
FOR BRIDGE NO. MAH 7-1514 SEE SHEET 161
FOR BRIDGE NO. MAH 7-1528 R SEE SHEET 182
FOR BRIDGE NO. MAH 7-1528 L SEE SHEET 194

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	MAH-7-14.95

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U 524(9)	

MAH. 7-14.95



I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)						Anchor Assembly	Approach End Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	REMOVE & REBUILD	Ea	Ea
G-1	792+25	793+87.5	LT.	162.5			1
G-2	792+15	795+00	RT.	285			1
G-3	785+25	785+50	RT.		25	2	
G-4	791+13	791+38	RT.		25	2	
SHEET TOTAL				497.5	50	4	2

I-12 CONCRETE CURB (LIN.FT.)					
CODE	FROM	TO	LOCA.	TYPE 6	
R-1	MAH. 7-14.80 790+29.08	791+29.08	RT.	100	
R-2	790+26.35	791+26.35	LT.	105	
R-3	791+18	791+38	RT.	20	
SHEET TOTAL				225	

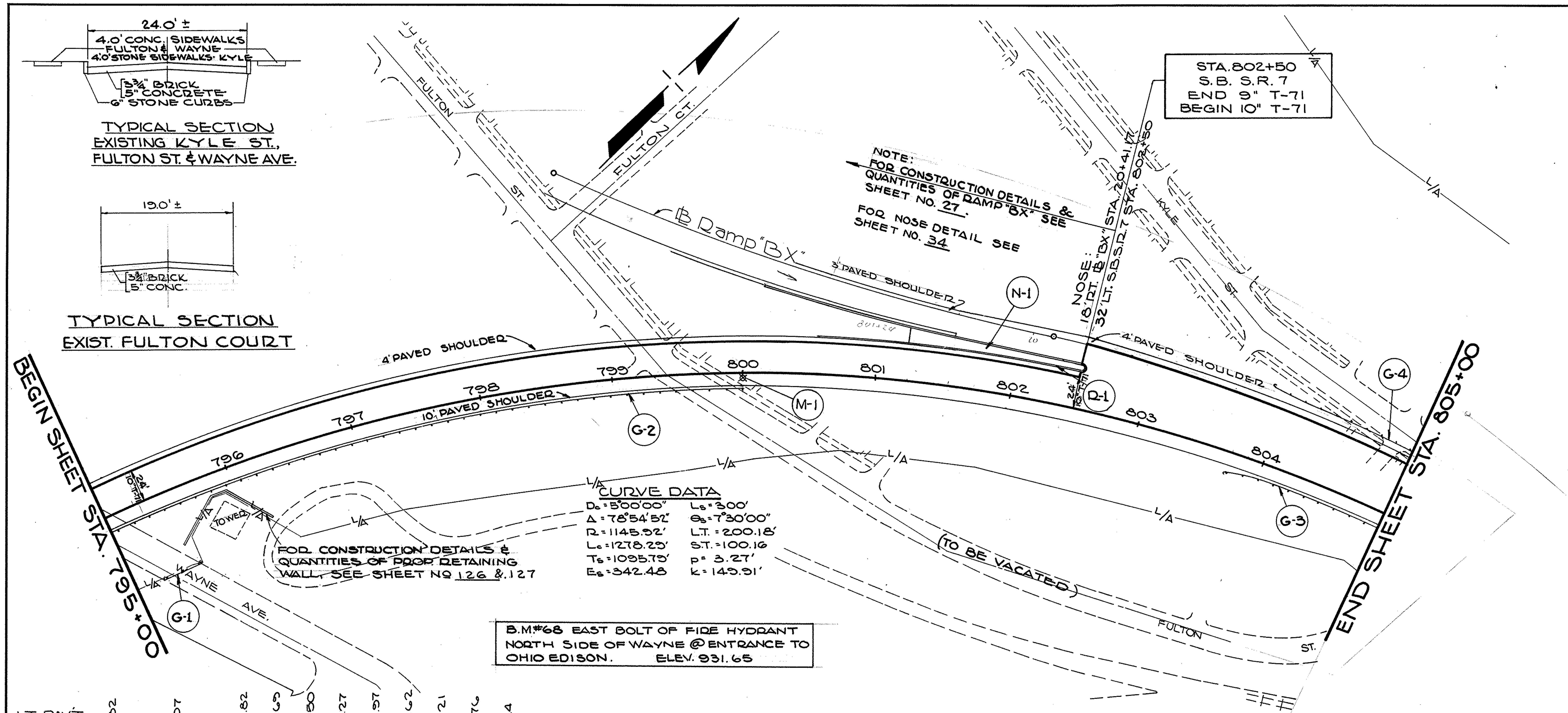
I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE 1 SQ.YDS.
N-1	790+26.35	790+61	27
SHEET TOTAL			27

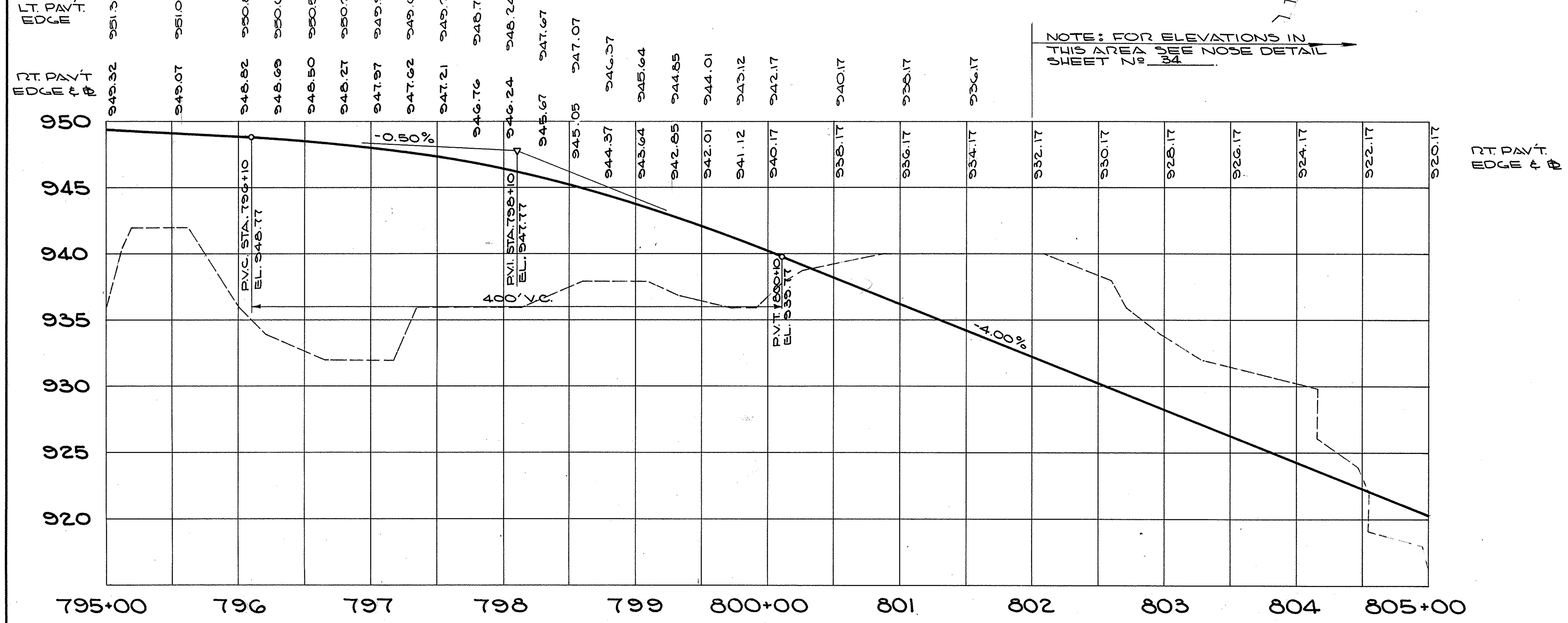
S.S. – SPECIAL 1¼" "EXPANSION BOLTS"			
CODE	FROM	TO	EACH
B-1	785+00	791+29.09 MAH 7-14.80	126
SHEET TOTAL			126

I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	785+00 - 2' RT. ℄	1
M-2	790+33.33 - 2' RT. ℄	1
M-3	794+67.33 - 2' RT. ℄	1
SHEET TOTAL		3

NOTE:
THE TYPICAL SECTION FOR THE ADJOINING PROJECT IS IDENTICAL TO THE TYPICAL SECTION OF THIS PROJECT.
FOR DRAINAGE DETAILS & QUANTITIES FROM STA. 785+00 TO STA. 795+00 N.B. S.R.7 SEE SHEET № 43

NORTH BOUND S.R.7
STA. 785+00 to STA. 795+00





I-15 STEELBEAM DEEP GUARDRAIL (LIN. FT.)					Anchor Assembly	Approach End Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	Each	Each
G-1	795+23	795+48	RT.	25	2	
G-2	795+00	800+00	RT.	500	1	
G-3	803+75	805+00	RT.	125		1
G-4	803+87	805+00	LT.	113		1
SHEET TOTAL				763	3	2

I-12 CONCRETE CURB (LIN. FT.)				
CODE	FROM	TO	LOCA.	TYPE 7
R-1	800+50	802+50	LT.	210
SHEET TOTAL				210

I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE I SQ. YDS.
N-1	801+24	802+50	117
SHEET TOTALS			117

I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	800+00-2' RT. ℄ P.O.C.	1
SHEET TOTAL		1

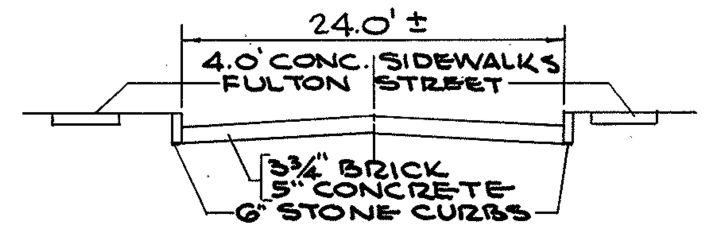
NOTE:
FOR DRAINAGE DETAILS & QUANTITIES FROM STA. 795+00 TO STA. 805+00 N.B. S.R. 7 SEE SHEET No 44

NORTH BOUND S.R. 7
STA. 795+00 to STA. 805+00

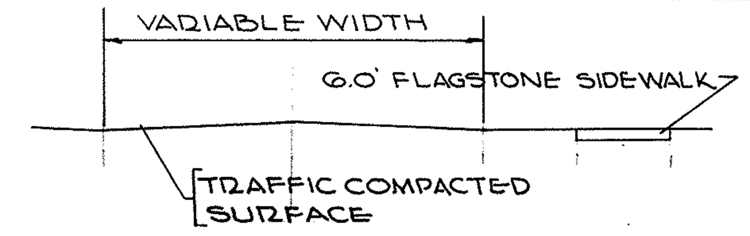
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

17
206

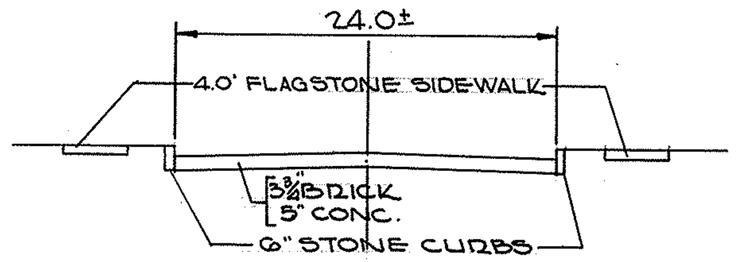
MAH. 7-14.95



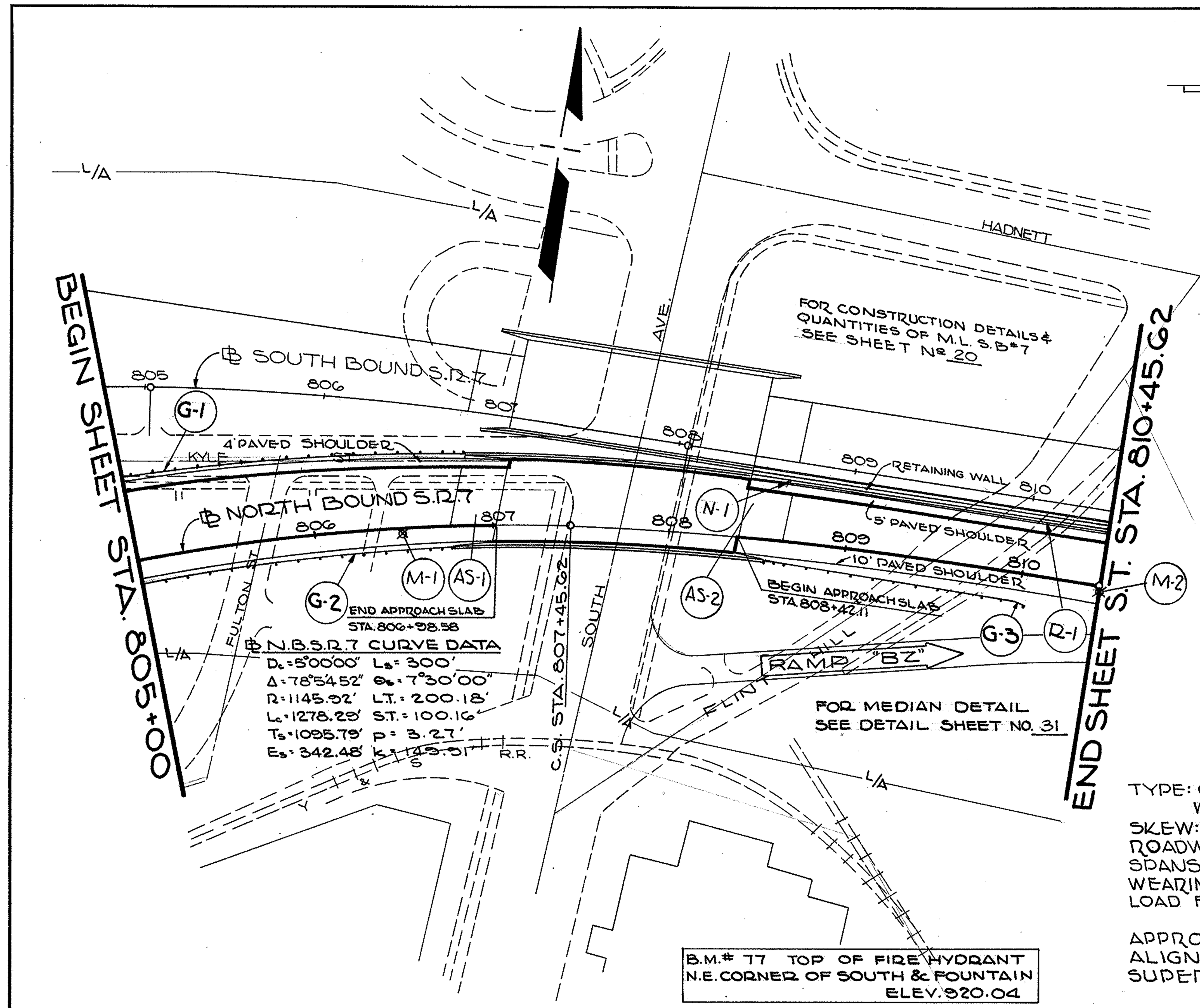
TYPICAL SECTION
EXISTING FULTON ST.



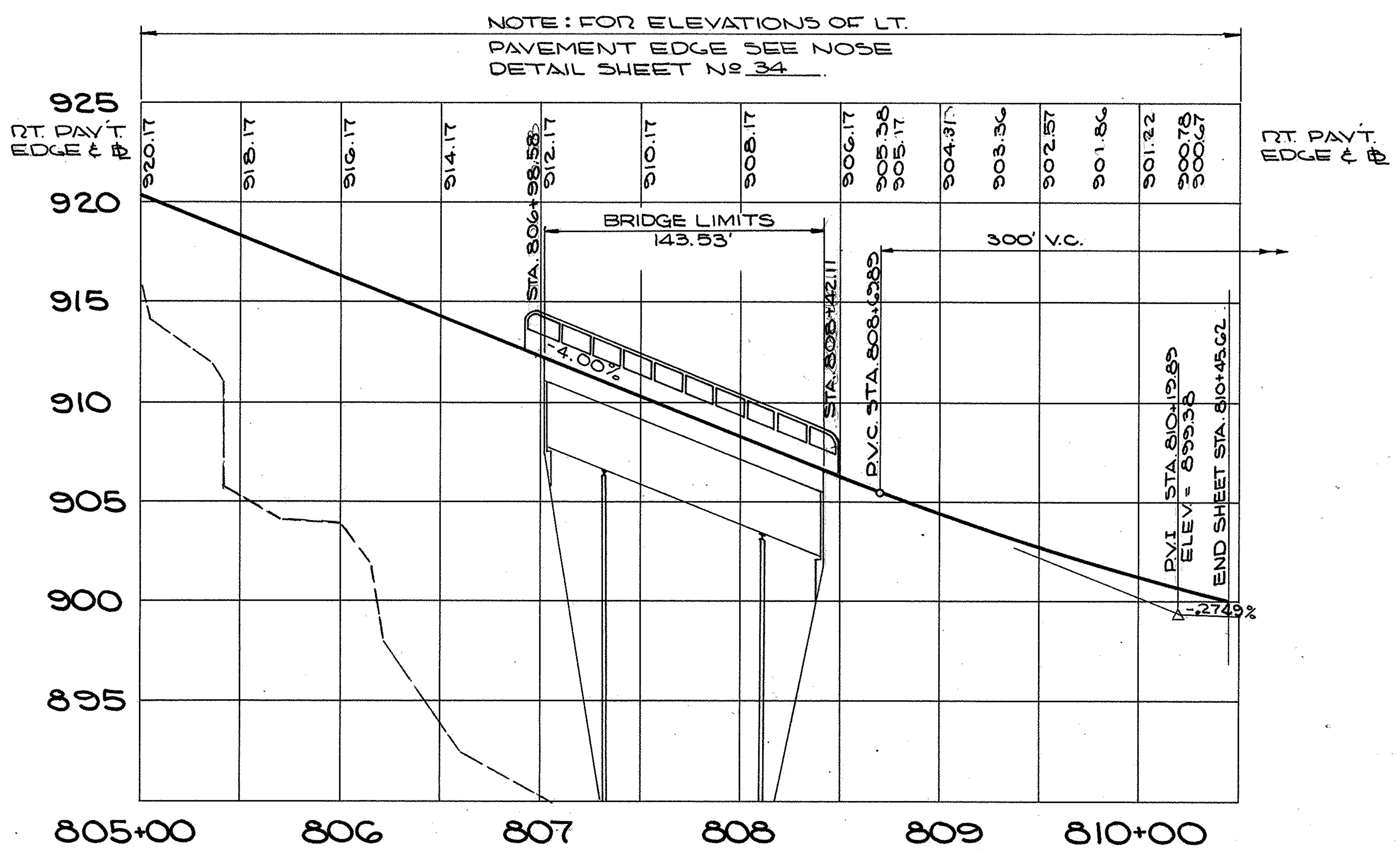
TYPICAL SECTION
FLINT HILL



TYPICAL SECTION
KYLE STREET



PROPOSED STRUCTURE
BRIDGE Nº MAH 7-15 28
TYPE: CANTILEVER STEEL BEAMS W/SUSPENDED SPAN, WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE
SKEW: N.B. 9°50'54" R.F. (TO LOCAL TANGENTS)
ROADWAY: VARIES SEE PLAN (WITH 1'-2" SAFETY CURBS)
SPANS: N.B. 37'-10", 70'-11", 30'-3" C/C BEARINGS
WEARING SURFACE: 1" MONOLITHIC
LOAD FREQUENCY: CF 2000(57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
APPROACH SLAB: 25'-0" (AS-1-67)
ALIGNMENT: TRANSITION SPIRALS
SUPERELEVATION: TRANSITION



NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF THE FOLLOWING SEE THE RESPECTIVE SHEETS:-
① DRAINAGE STA. 805+00 TO STA. 810+45.62, SHEET Nº 45
② ROADWAY RAMP "BZ", SHEET Nº 25

I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Bridge Terminal Assembly	Anchor Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	Each	Each
G-1	805+00	806+87	LT.	187	1	
G-2	805+00	806+75	RT.	175	1	
G-3	808+55	810+05	RT.	150	1	1
SHEET TOTAL				512	3	1

I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 6	
R-1	808+45.02	811+69.89	LT.	325	
SHEET TOTAL				325	

I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE I SQ. YDS.
N-1	808+45.02	811+69.89	63
SHEET TOTAL			63

I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	806+50 - 2' RT ℄ P.O.C.	1
M-2	810+45.62 - 2' RT. ℄	1
SHEET TOTAL		2

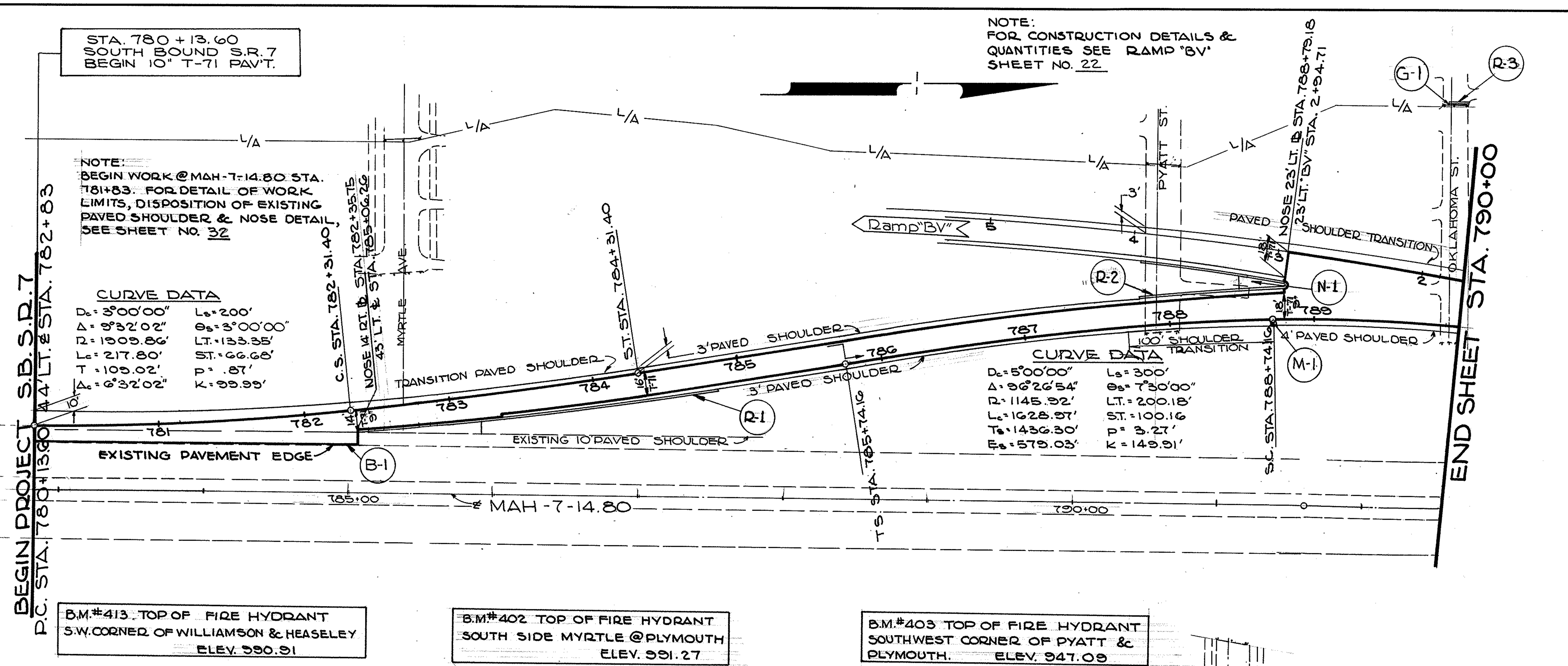
I-7 REINFORCED CONCRETE APPROACH SLABS			
CODE	LOCATION FROM	LOCATION TO	CLASS "C" SQ. YDS.
AS-1	806+73.58	806+98.58	91.67
AS-2	808+42.11	808+67.11	91.67
SHEET TOTAL			183.34

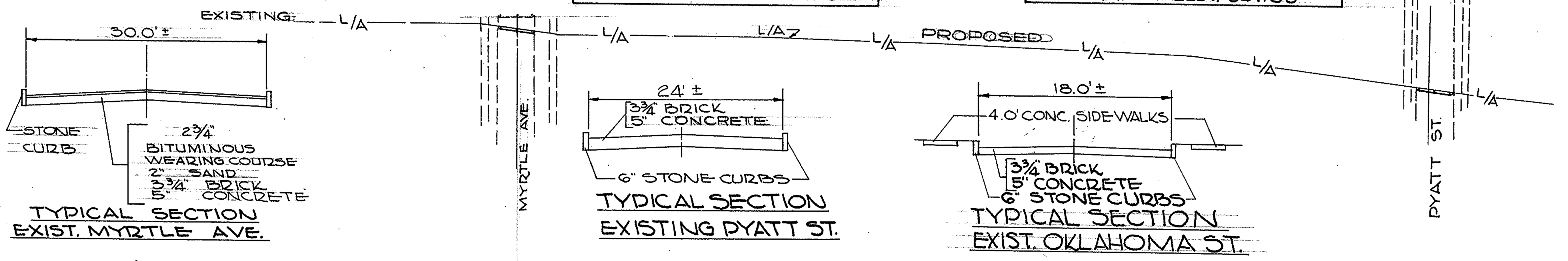
NORTH BOUND S.R. 7
STA. 805+00 to STA. 810+45.62

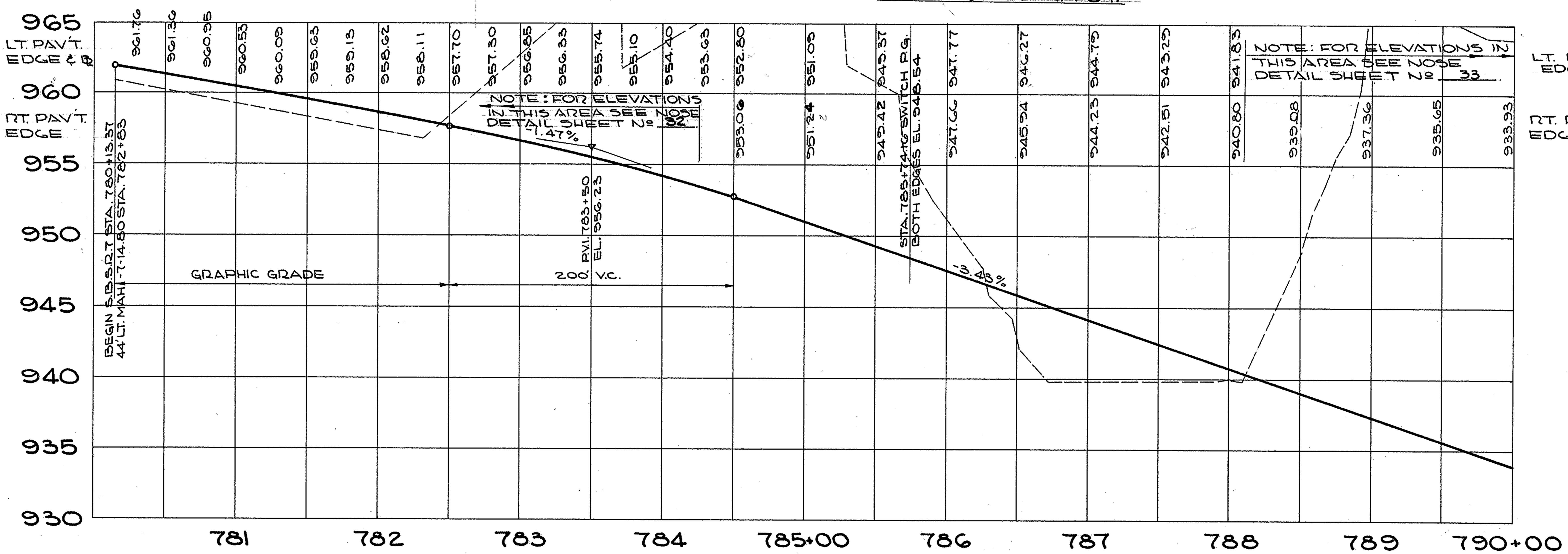
FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

18 / 206

MAH. 7-14.95







I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Anchor Assembly
CODE	FROM	TO	LOCA.	REMOVE & REBUILD	Each
G-1	785+50	790+15	LT.	25	2
SHEET TOTAL				25	2

I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 8	TYPE 6
R-1	782+35.75	784+85.75	RT.	250	
R-2	787+79.18	788+79.18	LT.		105
R-3	789+50	790+04	LT.		14
SHEET TOTAL				250	129

I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE I SQ.YDS.
N-1	788+48	788+79.18	21
SHEET TOTAL			21

I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	788+74.16 2' RT. ℄	1
SHEET TOTAL		1

NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF SOUTHBOUND S.R. 7 STA. 780 + 13.60 TO STA. 790 + 00 SEE SHEET No 46

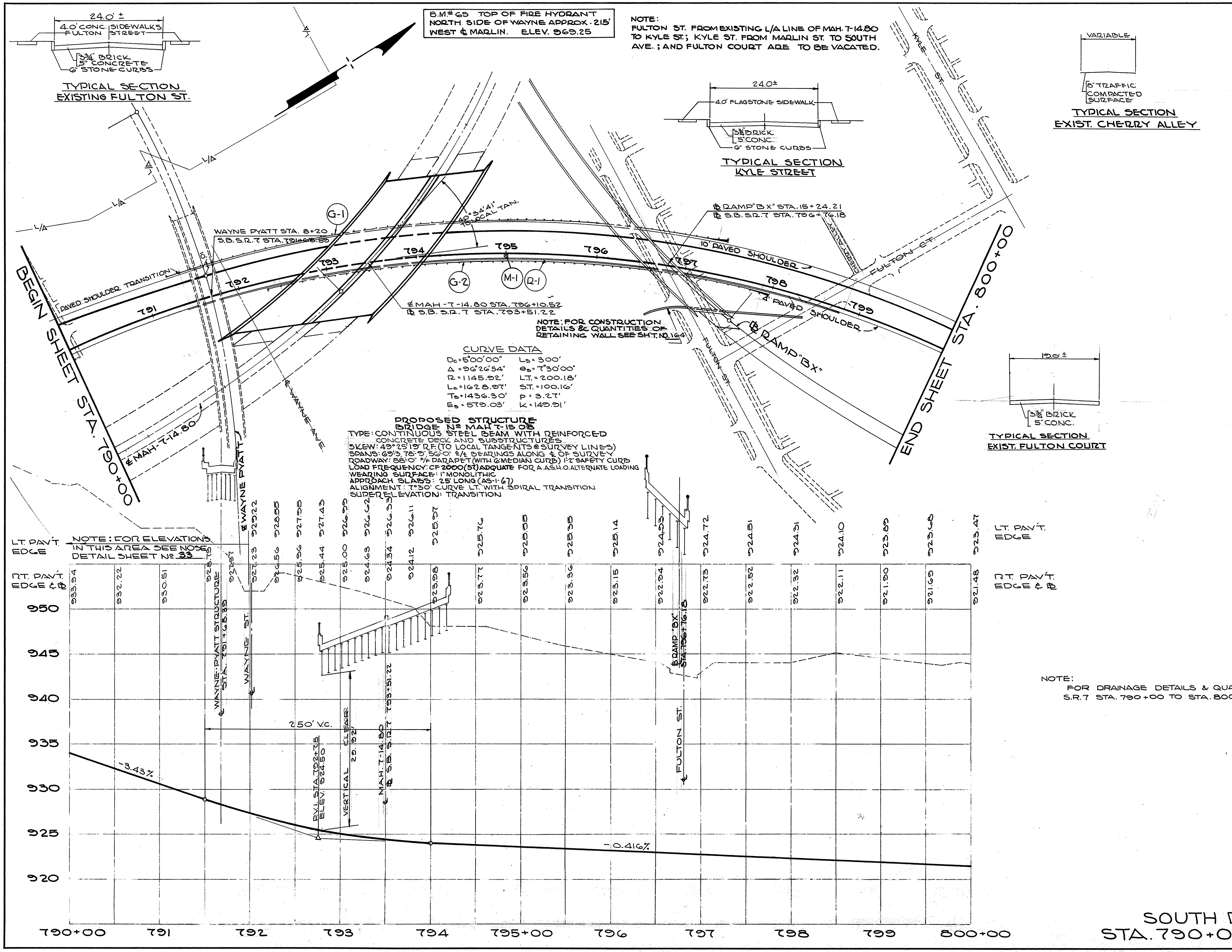
S.S. — SPECIAL 1¼" "EXPANSION BOLTS"			
CODE	FROM	TO	EACH
B-1	782+83	785+06.26 MAH 7-14.80	45
SHEET TOTAL			45

SOUTH BOUND S.R. 7
STA. 780+13.60 to STA. 790+00

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

19 / 206

MAH. 7-14.95



I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Approach End Assembly	Anchor Assembly
CODE	FROM	TO	LOCA	STAND. DESIGN	Each	Each
G-1	791+27.5	797+40	LT.	612.5	1	1
G-2	791+31	797+93	RT.	662.0	1	1
SHEET TOTAL				1274.5	2	2

I-12 CONCRETE CURB (LIN. FT.)				
CODE	FROM	TO	LOCA.	TYPE 6
R-1	791+40	798+75	RT.	735
SHEET TOTAL				735

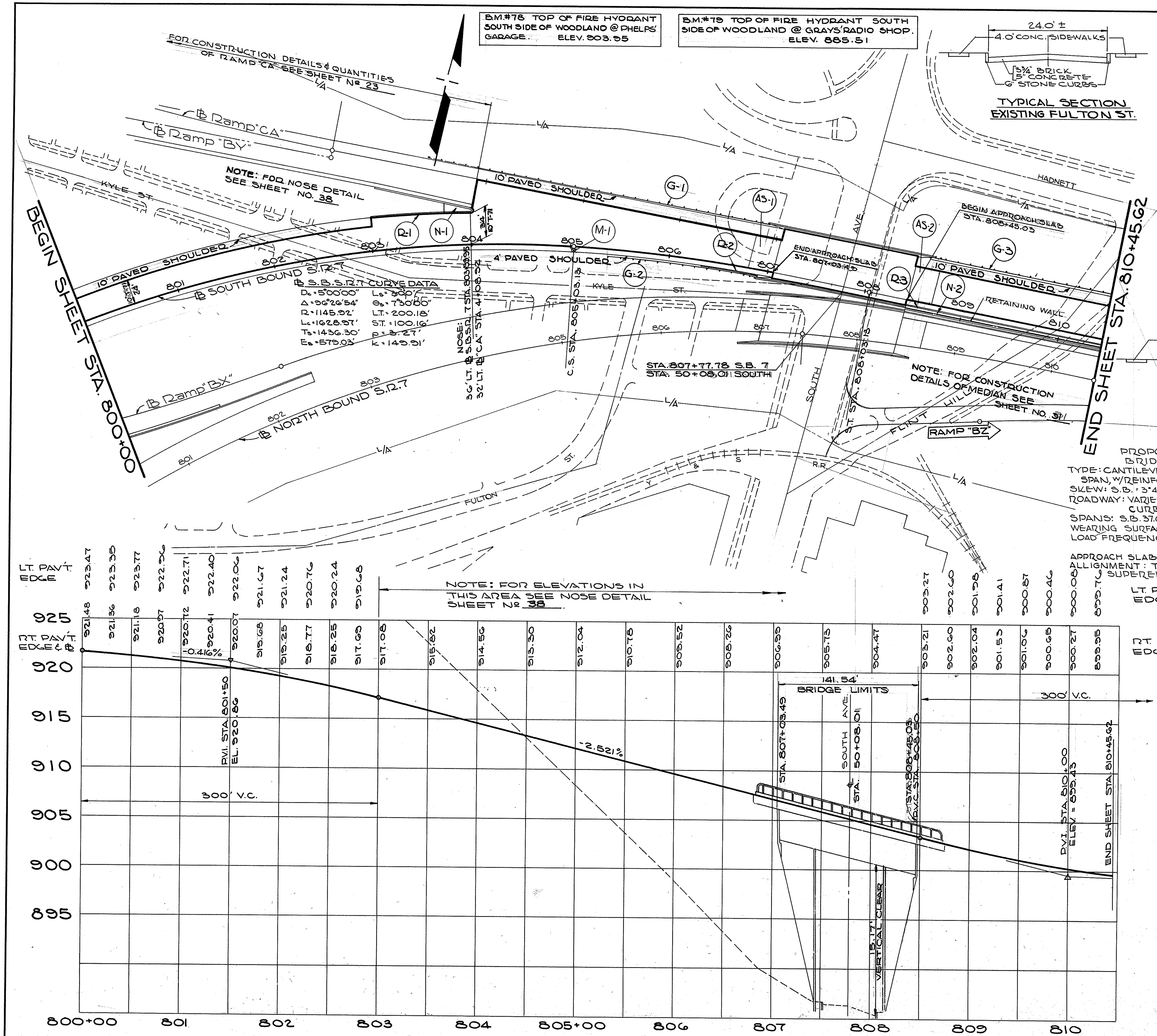
I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	795+00-2' RT. ℄ P.O.C.	1
SHEET TOTAL		1

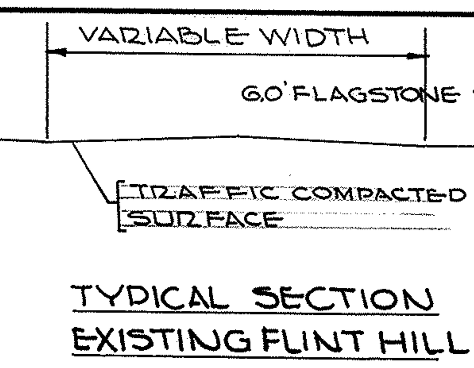
NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF SOUTHBOUND S.R. 7 STA. 790+00 TO STA. 800+00 SEE SHEET No 47

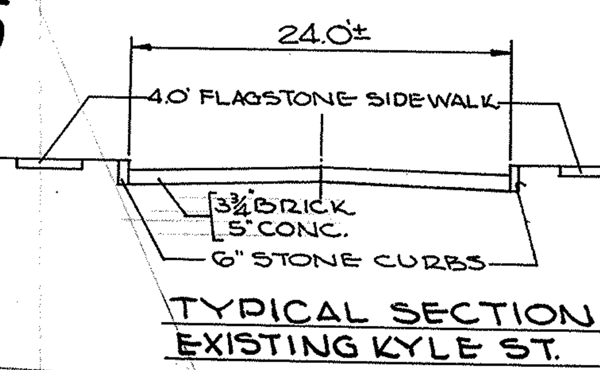
SOUTH BOUND S.R.-7
STA. 790+00 to STA. 800+00

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-924(9)	20 206

MAH. 7-14.95







PROPOSED STRUCTURE
BRIDGE Nº MAH. 7-1528
TYPE: CANTILEVER STEEL BEAMS W/SUSPENDED SPAN, W/REINFORCED CONC. DECK & SUBSTR.
SKEW: S.B. = 3°45'51" R.F. (TO LOCAL TANG.)
ROADWAY: VARIES - SEE PLAN (WITH 1'-2" SAFETY CURB).
SPANS: S.B. 37.0', 70.0', 30.0' C/C BRG.
WEARING SURFACE: 1" MONOLITHIC
LOAD FREQUENCY: CF 2000(57) ADQUATE FOR A.A.S.H.O. ALTERNATE LOADING
APPROACH SLAB: 25' (AS-1-67)
ALLIGNMENT: TRANSITION SPIRAL
& SUPERELEVATION: TRANSITION

I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)

CODE	FROM	TO	LOCA.	STAND. DESIGN	Bridge Terminal Assembly Each	Anchor Assembly Each
G-1	803+99.95	806+92	LT.	292	1	
G-2	805+41	806+91	RT.	150	1	1
G-3	808+62	810+45.62	LT.	183.5	1	
SHEET TOTAL				625.5	3	1

I-12 CONCRETE CURB (LIN. FT.)

CODE	FROM	TO	LOCA.	TYPE 6
R-1	802+55.95	803+99.95	LT.	105
R-2	806+33	806+91	RT.	51
R-3	808+45.02	810+45.62	RT.	201
SHEET TOTAL				357

I-21 P.C.C. MEDIAN PAVEMENT

CODE	FROM	TO	TYPE I SQ. YDS.
N-1	803+72	804+00	20
N-2	808+45.02	810+45.62	39
SHEET TOTAL			59

I-8 MONUMENT ASSEMBLIES

CODE	LOCATION	EACH
M-1	805+03.13 2' RT. ℄	1
SHEET TOTAL		1

I-7 REINFORCED CONCRETE APPROACH SLABS

CODE	LOCATION FROM	LOCATION TO	CLASS "C" SQ. YDS.
AS-1	806+78.49	807+03.49	116.67
AS-2	808+45.03	808+70.03	113.89
SHEET TOTAL			230.56

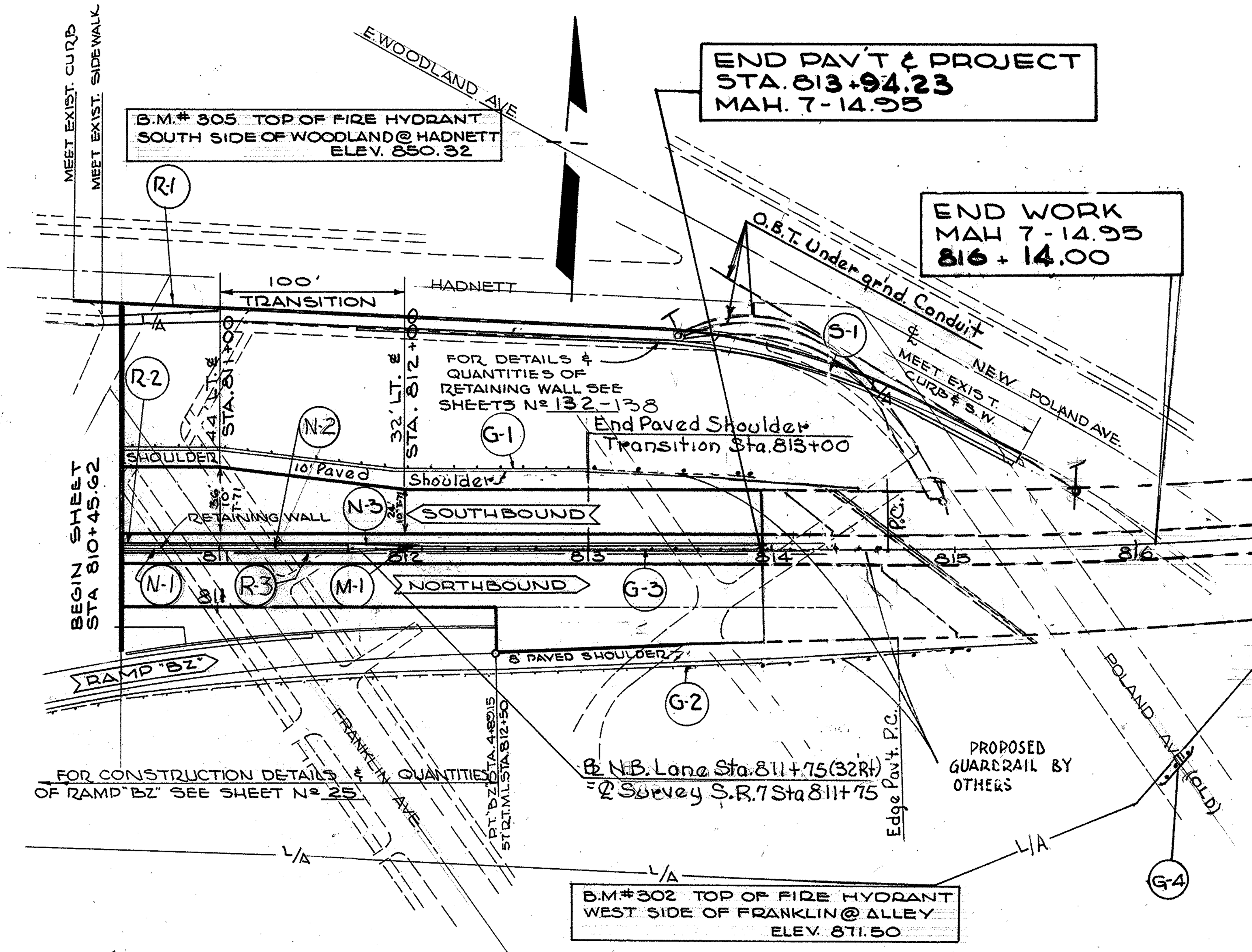
NOTE:
FOR DETAILS & QUANTITIES OF THE FOLLOWING SEE THE RESPECTIVE SHEETS.
① ROADWAY NORTHBOUND S.R.7 801+00 TO 810+45.62 SHEETS Nº 16 & 17
② DRAINAGE SOUTHBOUND S.R.7 800+00 TO 810+45.62 SHEET Nº 48

SOUTH BOUND S.R.7
STA. 800+00 to STA. 810 +45.62

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

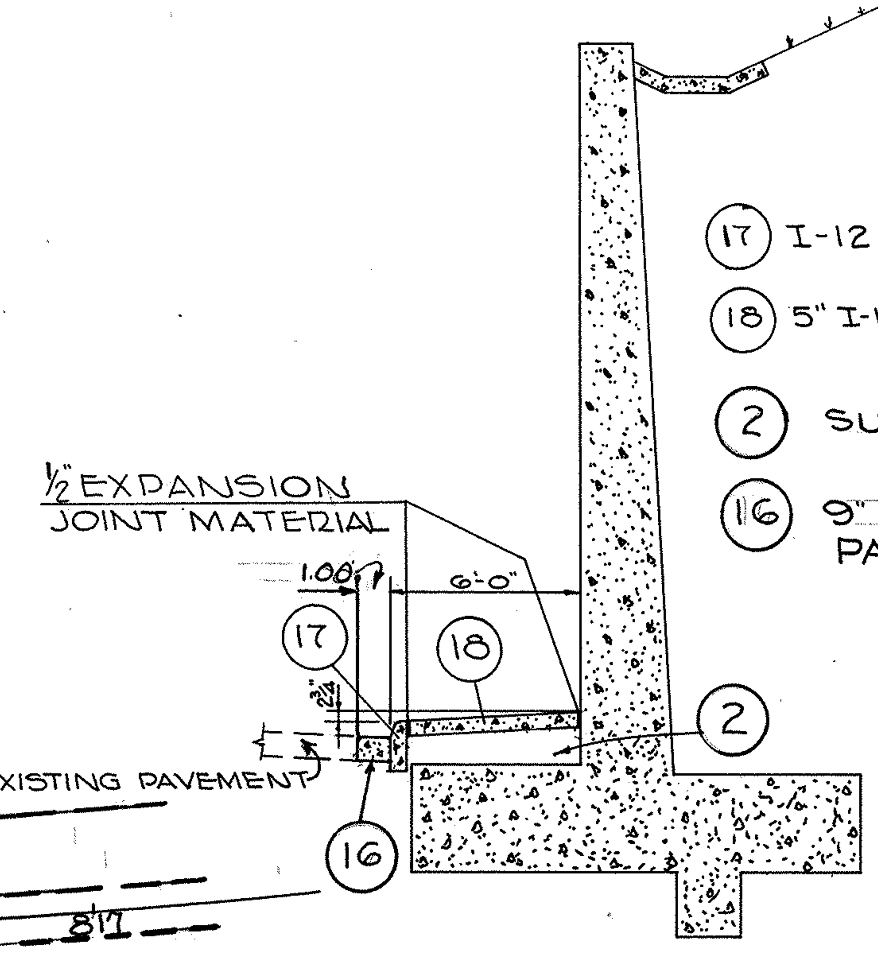
21 / 206

MAH. 7-14.95



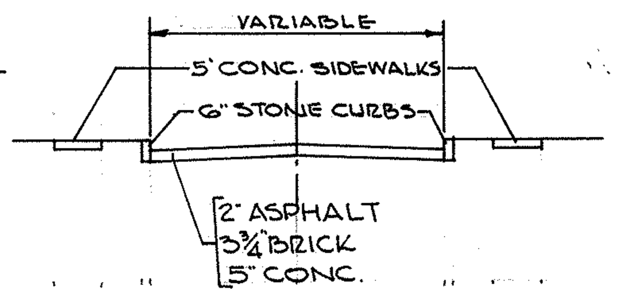
℄ CURVE DATA
Δ = 34°-50'-02"
R = 2864.79'
D_c = 2°-00'-00"
T = 898.70'
L_c = 1741.69'
P.C. = STA 814+64.15

EDGE OF PAV'T. CURVE DATA
Δ = 10°-15'-35"
R = 2864.79'
D_c = 2°-00'-00"
T = 257.18'
L_c = 512.99'
P.C. = 49.43' Rt. of STA. 814+69.51

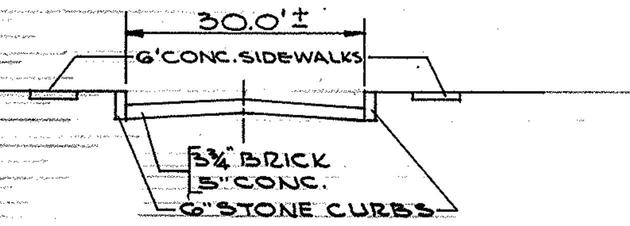


(17) I-12 STANDARD TYPE 6 CONCRETE CURB
(18) 5" I-13 CONCRETE SIDEWALK
(2) SUBBASE
(16) 9" B-70 PORTLAND CEMENT CONCRETE PAVEMENT

TYPICAL SECTION HADNETT STREET RETAINING WALL AND SIDEWALK



TYPICAL SECTION EXIST. POLAND AVE.



TYPICAL SECTION EXIST. FRANKLIN AVE.

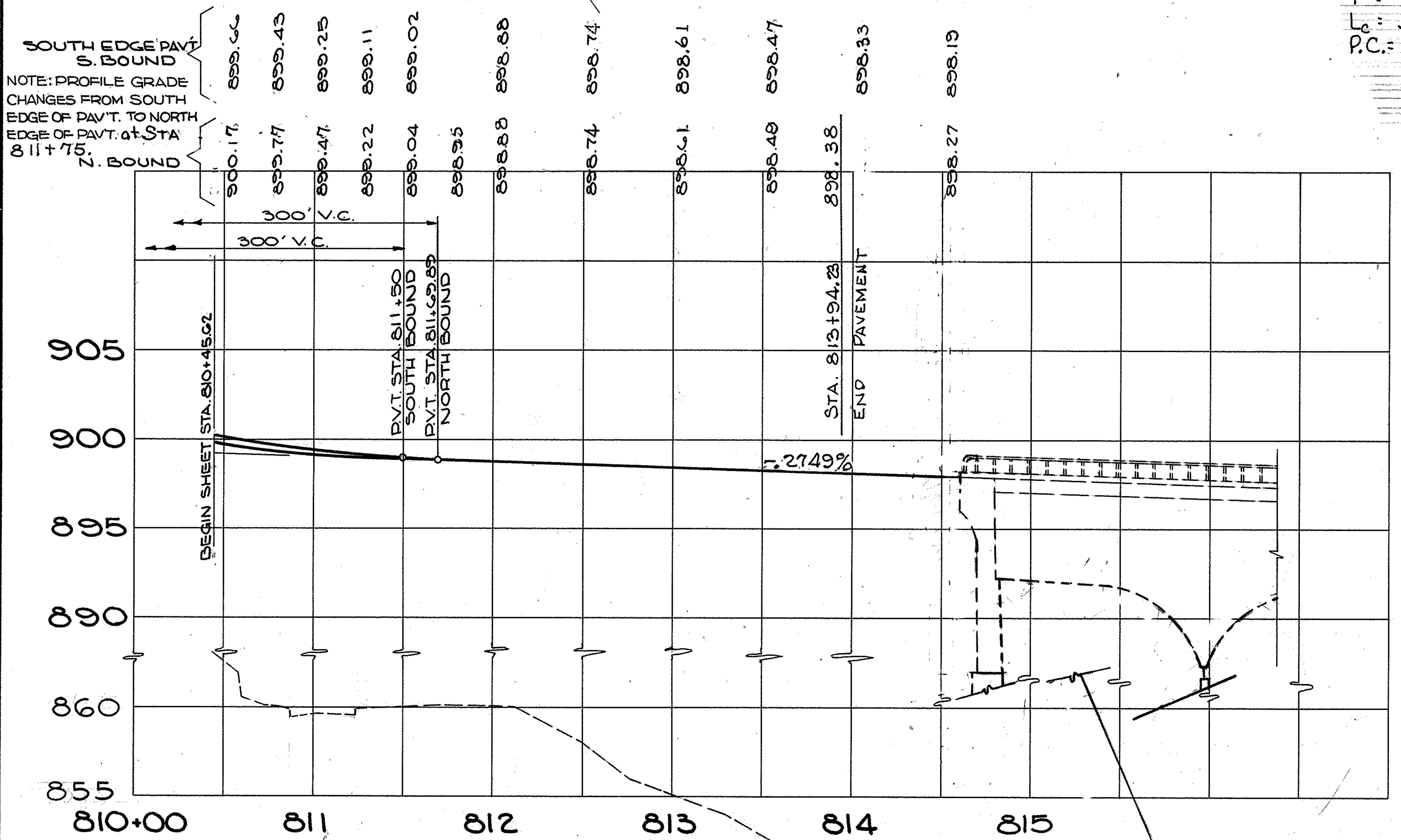
I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)						Bridge Terminal Assembly	Anchor Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	BARRIER DESIGN	Each	Each
G-1	810+45.5	813+15.	LT.	269.5			
G-2	812+50	813+94	RT.	144.0			
G-3	811+72	813+94	℄		222	2	
G-4	OLD POLAND AVE. 816+08 (127' Rt)		RT.	25.0			2
SHEET TOTAL				438.5	222	2	2

I-12 CONCRETE CURB (LIN. FT.)						
CODE	FROM	TO	LOCA.	TYPE 6		
R-1	810+20	815+36	LT.	500		
R-2	810+45.62	811+69.89	3'LT ℄	124		
R-3	810+45.62	811+69.89	3'RT ℄	124		
SHEET TOTAL				748		

I-13 CONCRETE SIDEWALK				
CODE	FROM	TO	LOCA.	SQ. FT.
S-1	810+35	815+35	LT	2745
SHEET TOTAL				2745

I-21 P.C.C. MEDIAN PAVEMENT (SQ. YDS.)				
CODE	FROM	TO	TYPE 1	TYPE 2
N-1	810+45.62	811+69.89	24	
N-2	810+45.62	811+69.89	24	
N-3	811+69.89	813+94.23		149
SHEET TOTAL			48	149

I-8 MONUMENT ASSEMBLIES		
CODE	LOCATION	EACH
M-1	812+00 ℄ P.O.T.	1
SHEET TOTAL		1



SUPERELEVATION TABLE			
STATION	SOUTH BOUND LANES		
	32.00' LT. EDGE	℄	RT. EDGE
812+00	898.88	899.07	898.88
812+50	898.69	898.84	898.74
812+75	898.56	898.73	898.67
813+00	898.43	898.62	898.61
813+25	898.29	898.48	898.53
813+50	898.14	898.36	898.47
813+75	897.98	898.24	898.41
813+94.23	898.85	898.17	898.39
814+25	897.63	897.96	898.26
814+50	897.48	897.83	898.19

For North Bound Pavement Elevations See Detail Sheet No. 34 and 39.

NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF N. & S. BOUND S.R. 7 STA. 810+00 TO STA. 815+38 SEE SHEET Nº 49

N & S BOUND S.R. 7
STA. 810+45.62 to STA. 816+14

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	22 / 206

MAH. 7-14.95

I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Anchor Assembly
CODE	FROM	TO	LOCA.	REMOVE & REBUILD	Each
G-1	10+87	11+12	RT.	25	2
G-2	9+00	9+25	RT.	25	2
G-3	3+78	4+03	RT.	25	2
SHEET TOTAL				75	6

I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 6	TYPE 2A
R-1	10+92	11+06	RT.	14	
R-2	8+98	9+23	RT.	25	
R-3	3+78	3+98	RT.	20	
R-4	2+94.71	3+94.71	LT.	93	
R-5	12+32.85	47+68.67	RT.		79
SHEET TOTAL				152	79

B.M.#413 TOP OF FIRE HYDRANT S.W. CORNER OF WILLIAMSON & HEASELEY ELEV. 990.91

B.M.#402 TOP OF FIRE HYDRANT SOUTH SIDE MYRTLE @ PLYMOUTH ELEV. 991.27

B.M.#403 TOP OF FIRE HYDRANT SOUTHWEST CORNER OF PYATT & PLYMOUTH. ELEV. 947.09

RAMP "BV"
STA. 0+00 to STA. 13+04.36

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		

MAH. 7-14.95

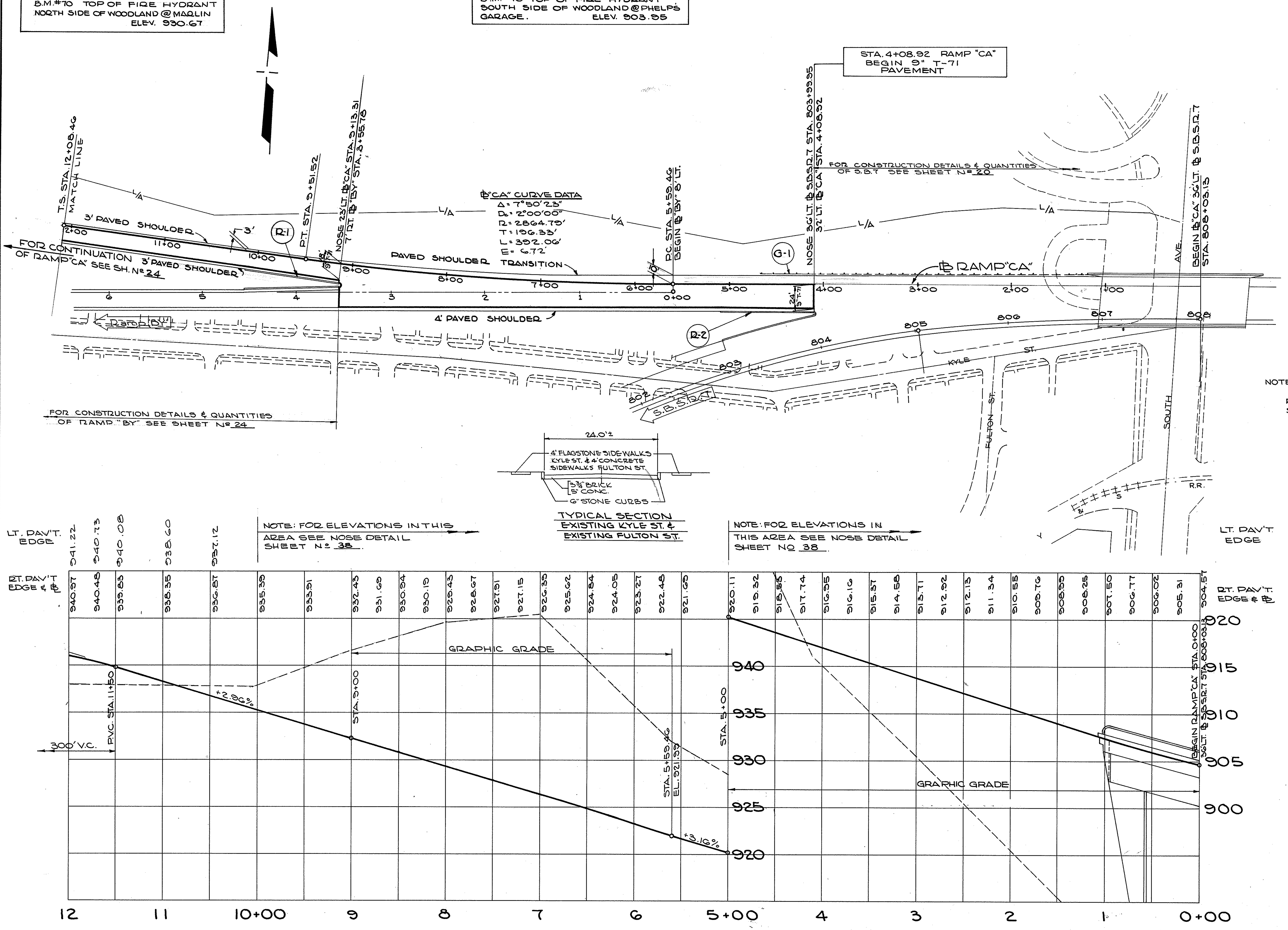
B.M.#70 TOP OF FIRE HYDRANT NORTH SIDE OF WOODLAND @ MARLIN ELEV. 930.67

B.M.#78 TOP OF FIRE HYDRANT SOUTH SIDE OF WOODLAND @ PHELPS GARAGE. ELEV. 903.85

I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Anchor Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	Each
G-1	4+08.92	4+66.87	RT.	58	1
SHEET TOTAL				58	1

I-12 CONCRETE CURB (LIN. FT.)				
CODE	FROM	TO	LOCA.	TYPE 6
R-1	9+13.31	10+13.31	LT.	105
R-2	4+08.92	5+08.92	LT.	100
SHEET TOTAL				205

NOTE:
FOR DRAINAGE DETAIL & QUANTITIES OF RAMP "CA" FROM STA. 4+08.9 TO STA. 12+08.46 SEE SHEET Nº 51



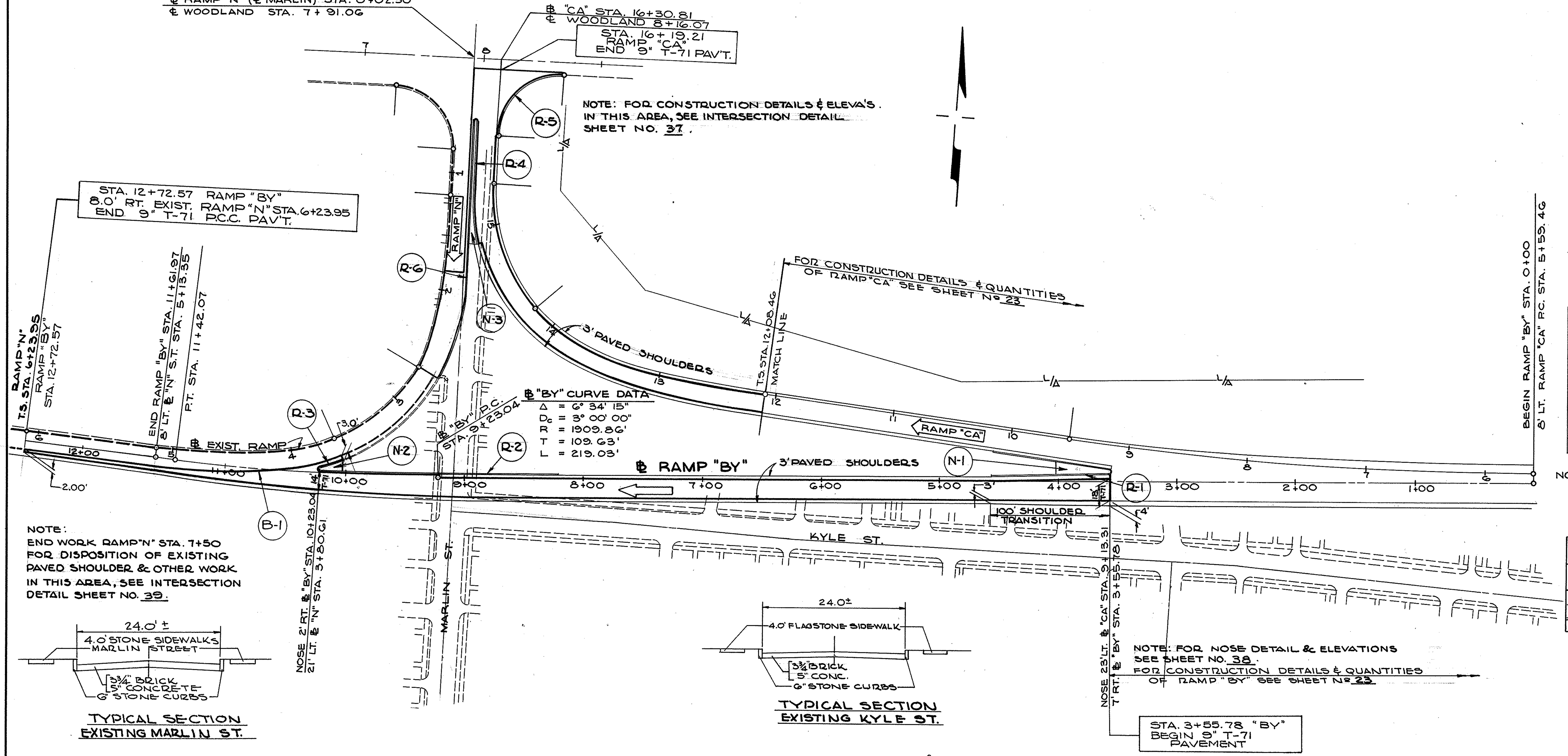
RAMP "CA"
STA. 0+00 to STA. 12+08.46

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH. 7-14.95

B.M.#63 WEST BOLT ON FIRE HYDRANT NORTH SIDE WOODLAND @ ERIE. ELEV. 943.30

B.M.#70 TOP OF FIRE HYDRANT NORTH SIDE OF WOODLAND @ MARLIN ELEV. 930.67

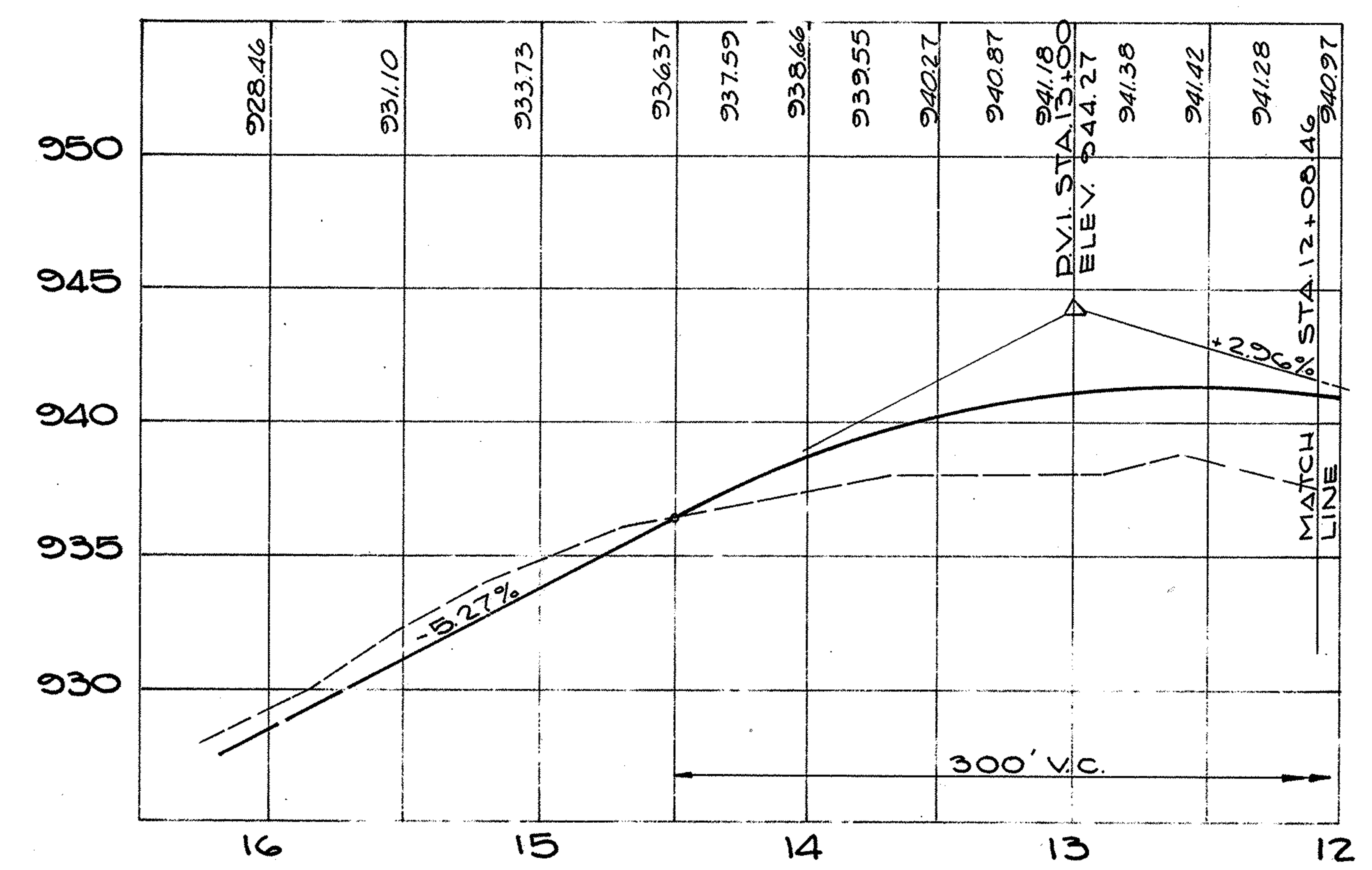


I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 6	TYPE 2-A
R-1	3+55.78	4+55.78	RT.	93	
R-2	8+23.04	10+23.04	RT.	193	
R-3	"N" 3+65.35	"N" 3+80.61	LT.	20	
R-4	14+79	15+78.71	LT.		105
R-5	"CA" 15+71.26	WOODLAND 8+67.57	RT.		77
R-6	"N" 0+54	"N" EXIST. CURB	LT.		215
SHEET TOTAL				306	397

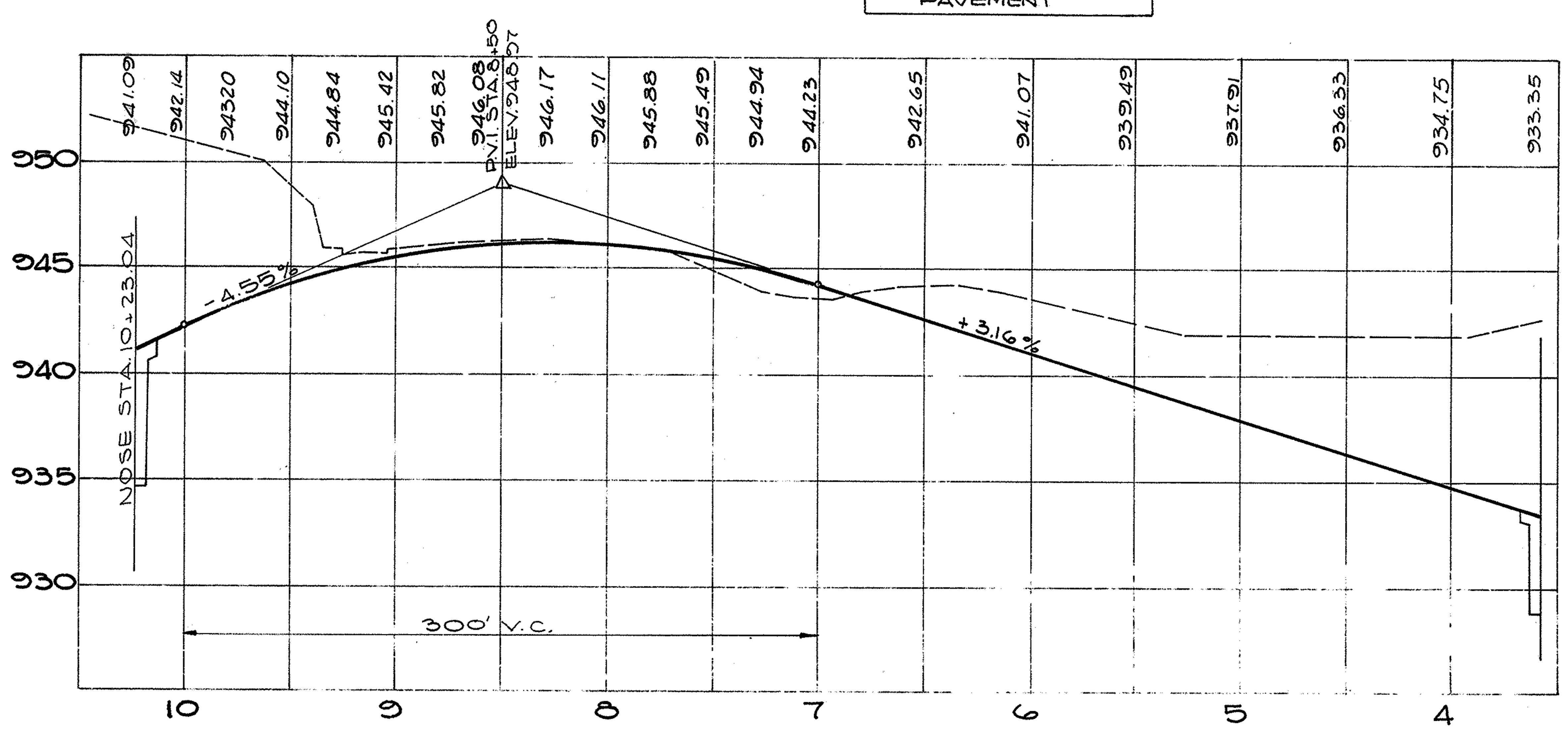
I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE I SQ.YDS.
N-1	3+55.78	4+01.78	32
N-2	10+03.04	10+23.04	13
N-3	14+79	15+78.71	44
SHEET TOTAL			89

NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF RAMP "CA" STA. 12+08.46 TO WOODLAND AVE. & RAMP "BY" STA. 3+55.78 TO STA. 10+23.04 SEE SHEET NO 52

S.S. — SPECIAL 1¼" "EXPANSION BOLTS"			
CODE	FROM	TO	EACH
B-1	"N" 3+60	"N" 7+50	78
SHEET TOTAL			78



PROFILE RAMP "CA"



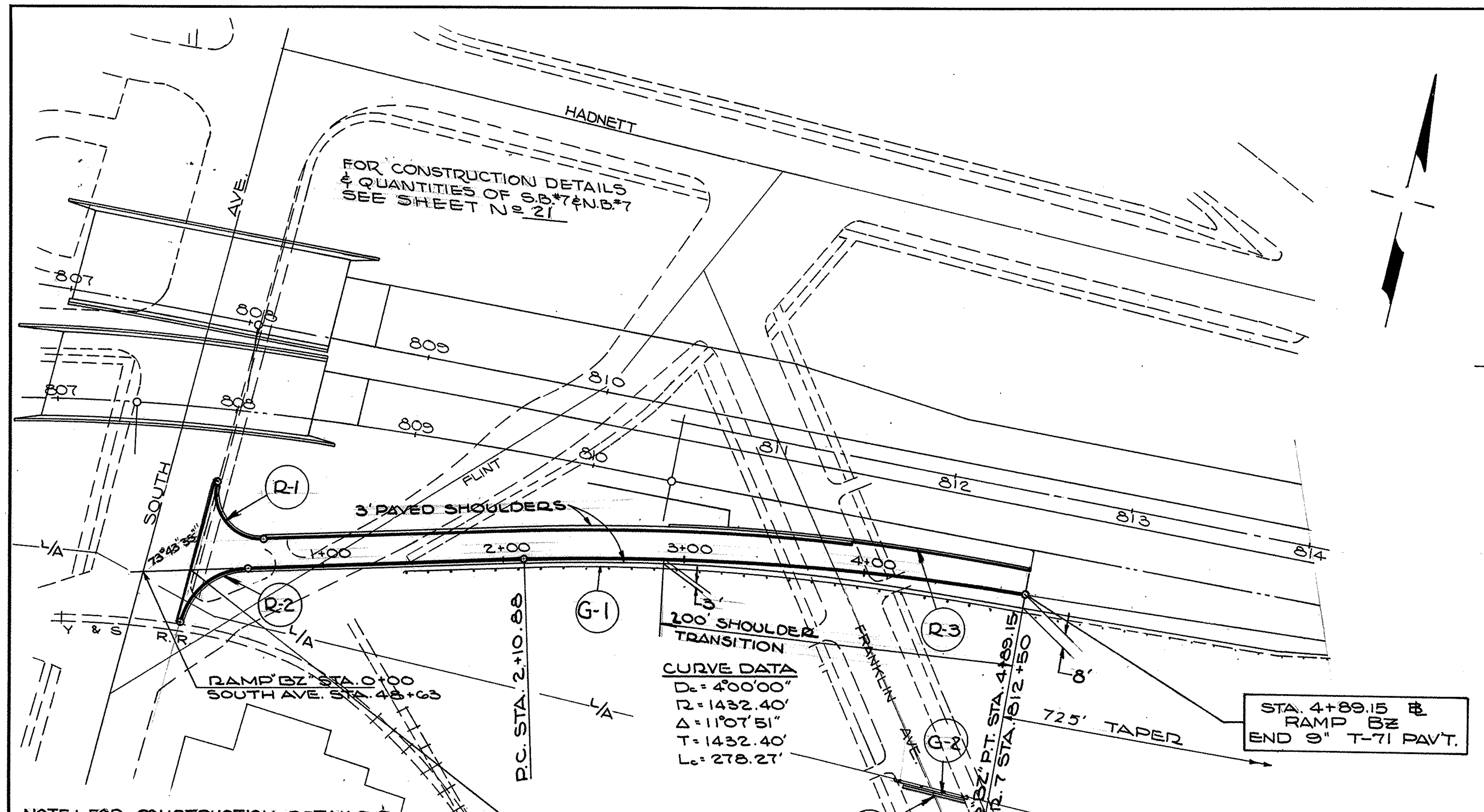
PROFILE RAMP "BY"

RAMP "CA"
STA. 12+08.46 - WOODLAND
RAMP "BY"
STA. 3+55.78 - STA. 10+23.04

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

25
206

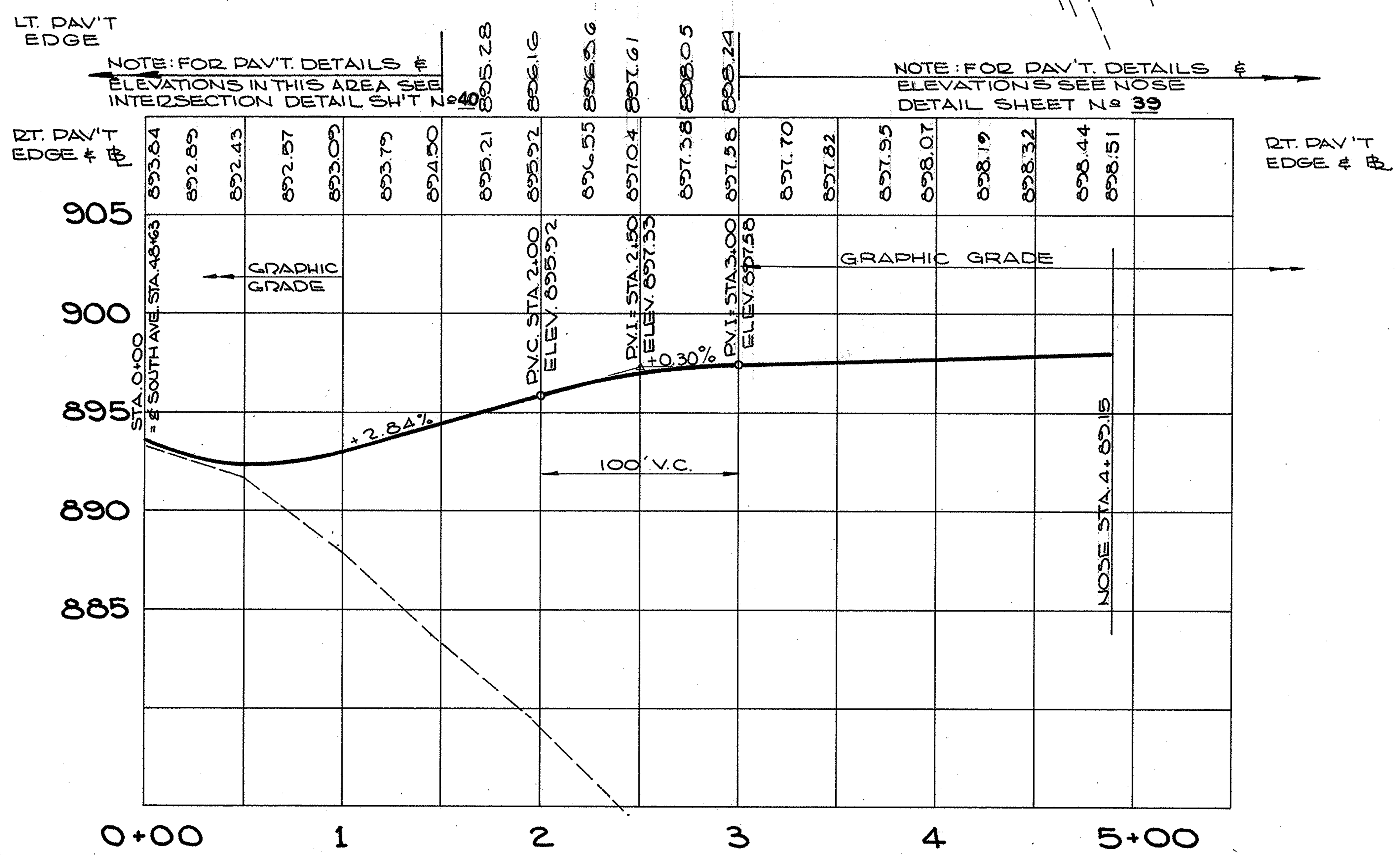
MAH. 7-14.95

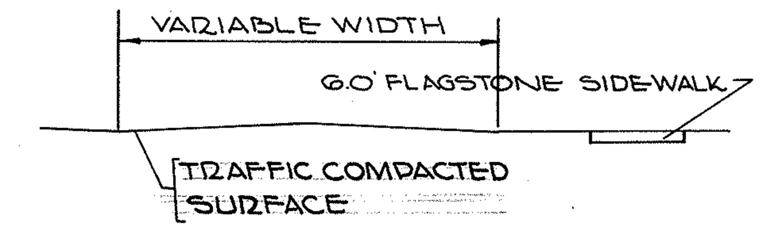


NOTE: FOR CONSTRUCTION DETAILS & ELEVATIONS OF INTERSECTION SEE DETAIL SHEET NO. 40

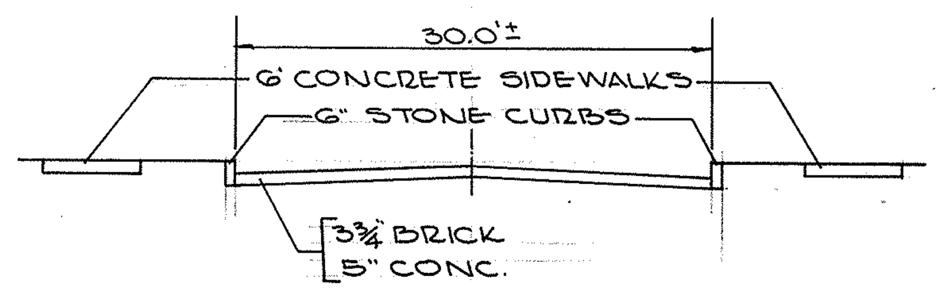
B.M. #77 TOP OF FIRE HYDRANT
N.E. CORNER OF SOUTH & FOUNTAIN
ELEV. 920.04

B.M. #302 TOP OF FIRE HYDRANT
WEST SIDE OF FRANKLIN @ ALLEY
ELEV. 871.50





TYPICAL SECTION
EXIST. FLINT HILL



TYPICAL SECTION
EXISTING FRANKLIN AVE

I-15 STEEL BEAM DEEP GUARDRAIL (LIN. FT.)					Approach End Assembly	Anchor Assembly -14
CODE	FROM	TO	LOCA.	STAND. DESIGN		
G-1	1+47.65	4+89.15	RT.	341.5	1	
G-2	4+38.5	4+76	RT.	37.5		2
SHEET TOTAL				379	1	2

I-12 CONCRETE CURB (LIN. FT.)						
CODE	FROM	TO	LOCA.	TYPE 2-A	TYPE 8	TYPE 6
R-1	SOUTH 49+20.89	"BZ" 0+66.14	LT.	46		
R-2	SOUTH 48+40.89	"BZ" 0+58.12	℄	52		
R-3	2+89.15	4+89.15	LT.		200	
R-4	4+41	4+76				35
SHEET TOTAL				98	200	35

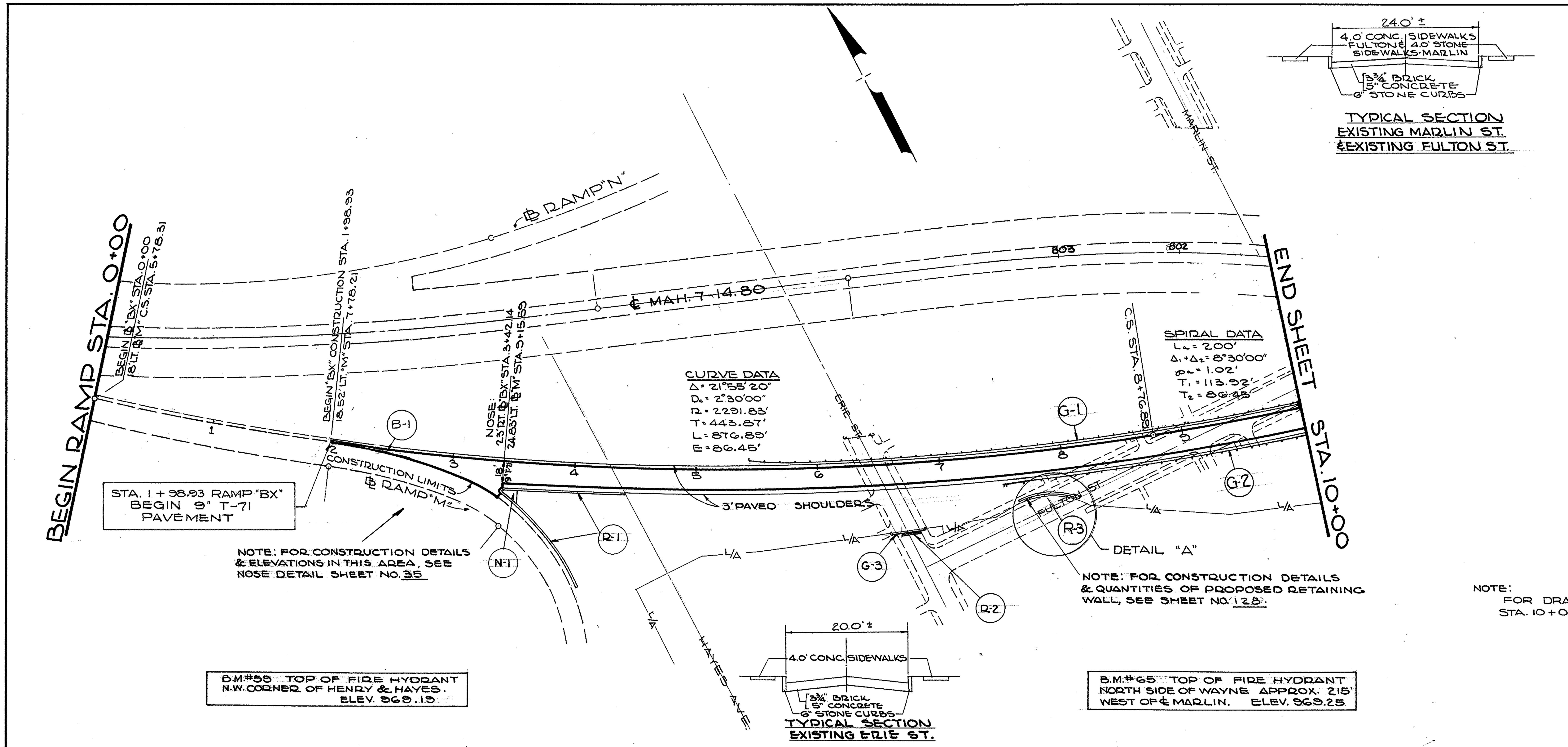
NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF RAMP "BZ" SEE SHEET No 53

341.5
37.5
379

RAMP "BZ"
STA. 0+00 to STA. 4+89.15

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524 (9)	

MAH. 7-14.95



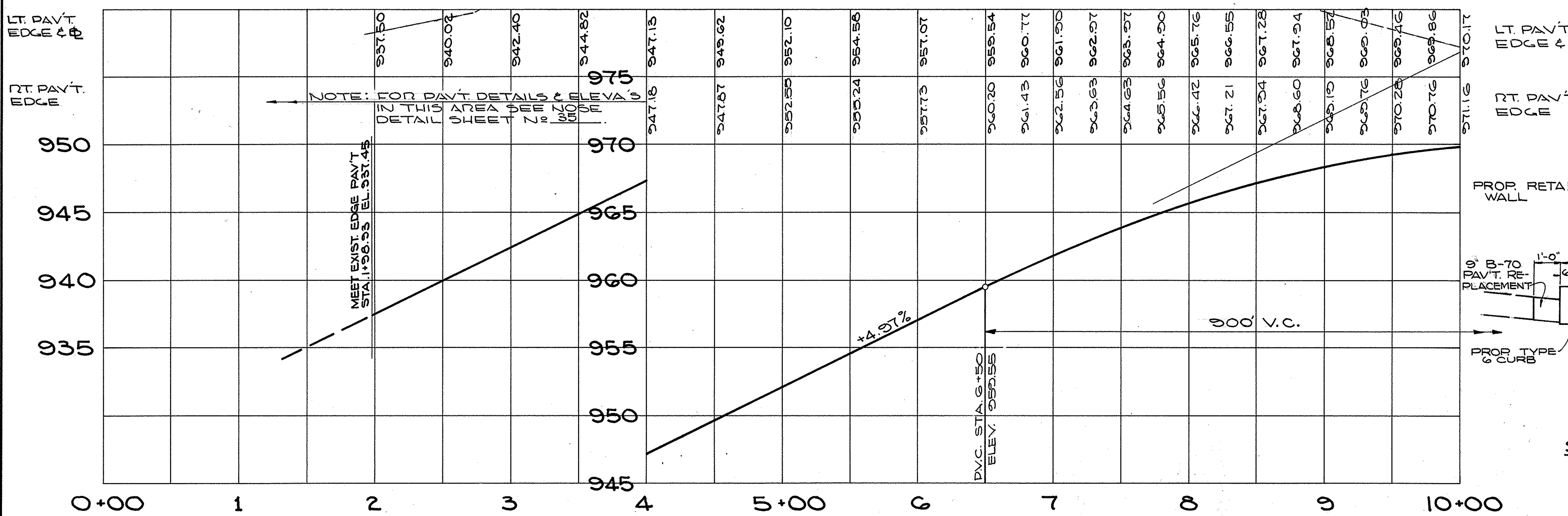
I-15 STEELBEAM DEEP GUARDRAIL (LIN. FT.)					Anchor Assembly	Approach End Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN		
G-1	5+47.50	10+00	LT.	452.50		1
G-2	7+50	10+00	RT.	250.0		1
G-3	6+57	6+82	RT.	25	2	
SHEET TOTAL				727.50	2	2

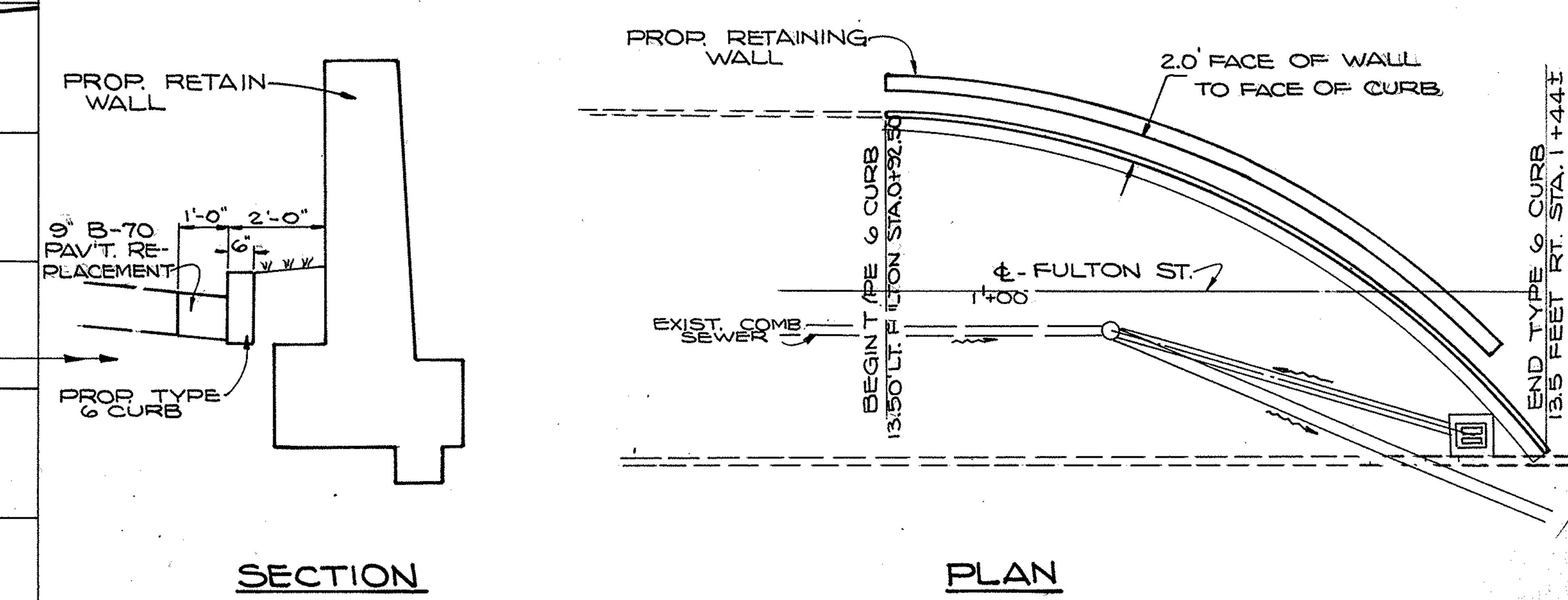
I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 6	
R-1	3+42.14	4+42.14	RT.	200	
R-2	6+65	6+81	RT.	16	
R-3	FULTON ST. 0+92.5	1+44	RT.	60	
				276	

I-21 P.C.C. MEDIAN PAVEMENT			
CODE	FROM	TO	TYPE I SQ. YDS.
N-1	3+42	3+54	10
SHEET TOTAL			10

NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF RAMP "BX" STA. 10+00 TO STA. 20+41.17 SEE SHEET № 54

S.S. — SPECIAL 1¼" EXPANSION BOLTS			
CODE	FROM	TO	EACH
B-1	"M" 7+78.31	"M" 9+15.59	28
SHEET TOTAL			28



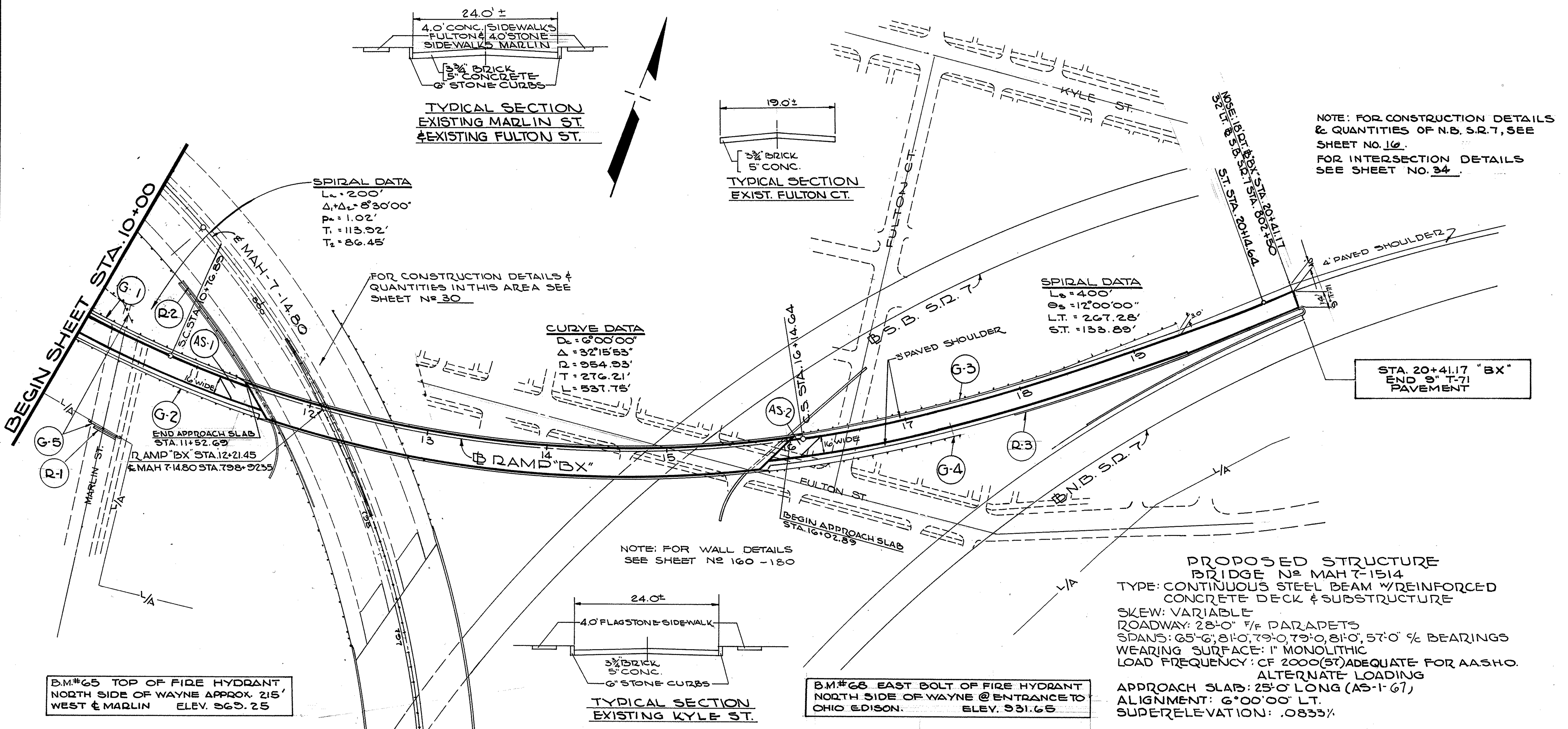


DETAIL "A"

RAMP "BX"
STA. 0+00 to STA. 10+00

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

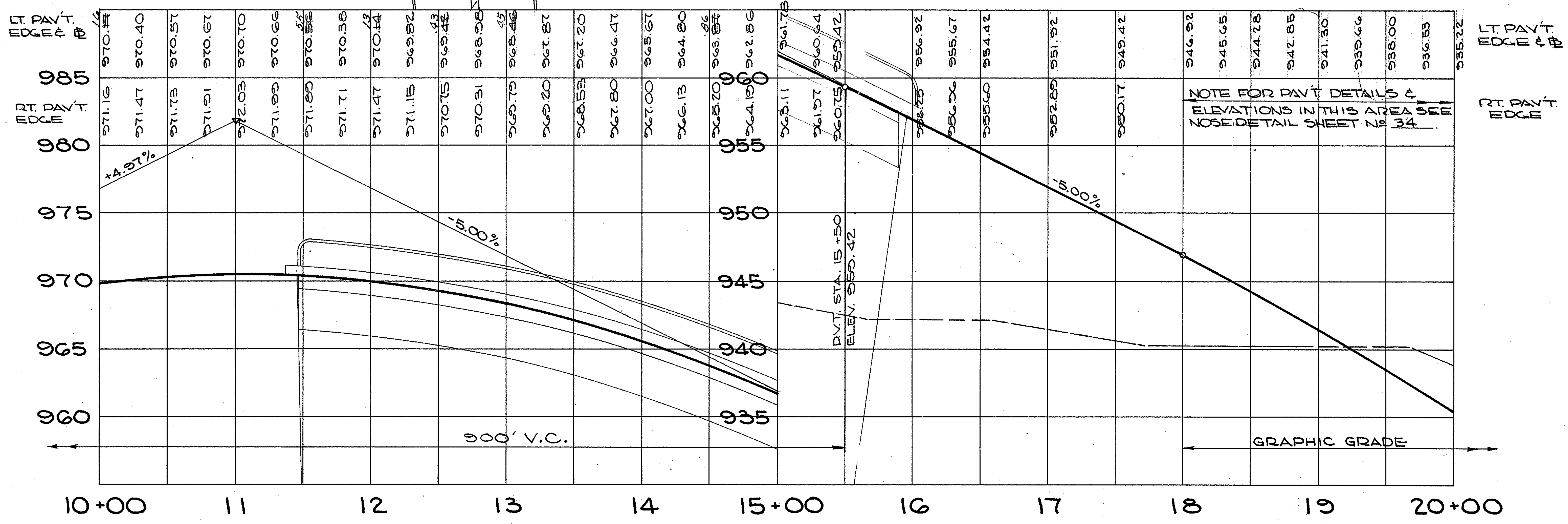
MAH. 7-14.95



I-15 STEELBEAM DEEP GUARDRAIL (LIN. FT.)						Bridge Terminal Assembly	Anchor Assembly
CODE	FROM	TO	LOCA.	STAND. DESIGN	REMOVE & REBUILD	Each	Each
G-1	10+00	11+35	LT.	135		1	
G-2	10+00	11+60	RT.	160		1	
G-3	16+15	19+40	LT.	325		1	1
G-4	15+81	17+43.50	RT.	162.5		1	1
G-5	10+40	10+65	RT.		25		2
SHEET TOTAL				782.5	25	4	4

I-12 CONCRETE CURB (LIN. FT.)						
CODE	FROM	TO	LOCA.	TYPE 6	TYPE 7	
R-1	10+45	10+65	RT.	20		
R-2	MAH.7-14.80 798+25	800+58	LT.	233		
R-3	17+91.17	20+41.17	RT.		247	
SHEET TOTAL				253	247	

I-7 REINFORCED CONCRETE APPROACH SLABS			
CODE	LOCATION FROM	TO	CLASS "C" SQ.YDS.
AS-1	11+27.69	11+52.69	44.44
AS-2	16+02.89	16+27.89	44.44
SHEET TOTAL			88.88

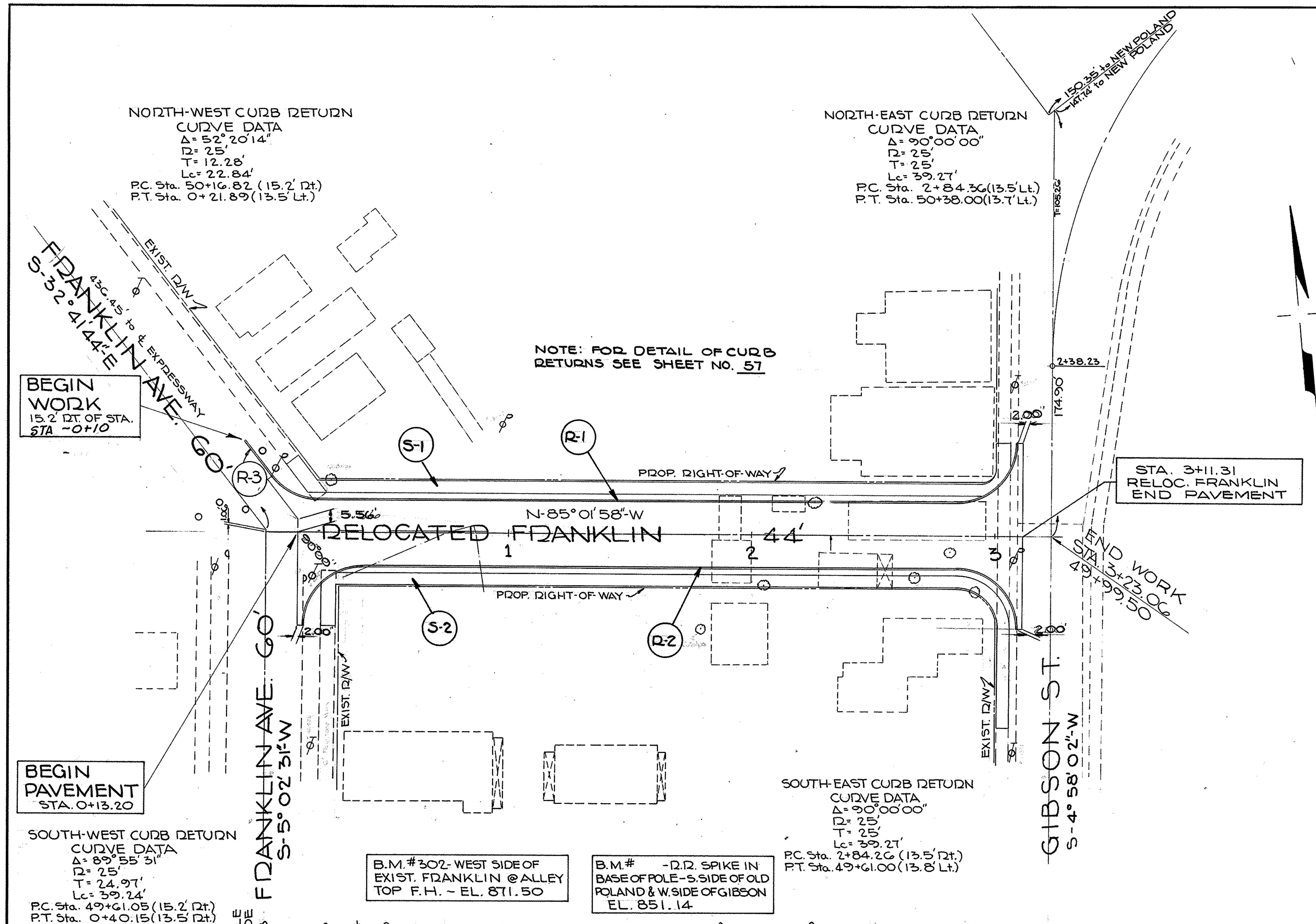


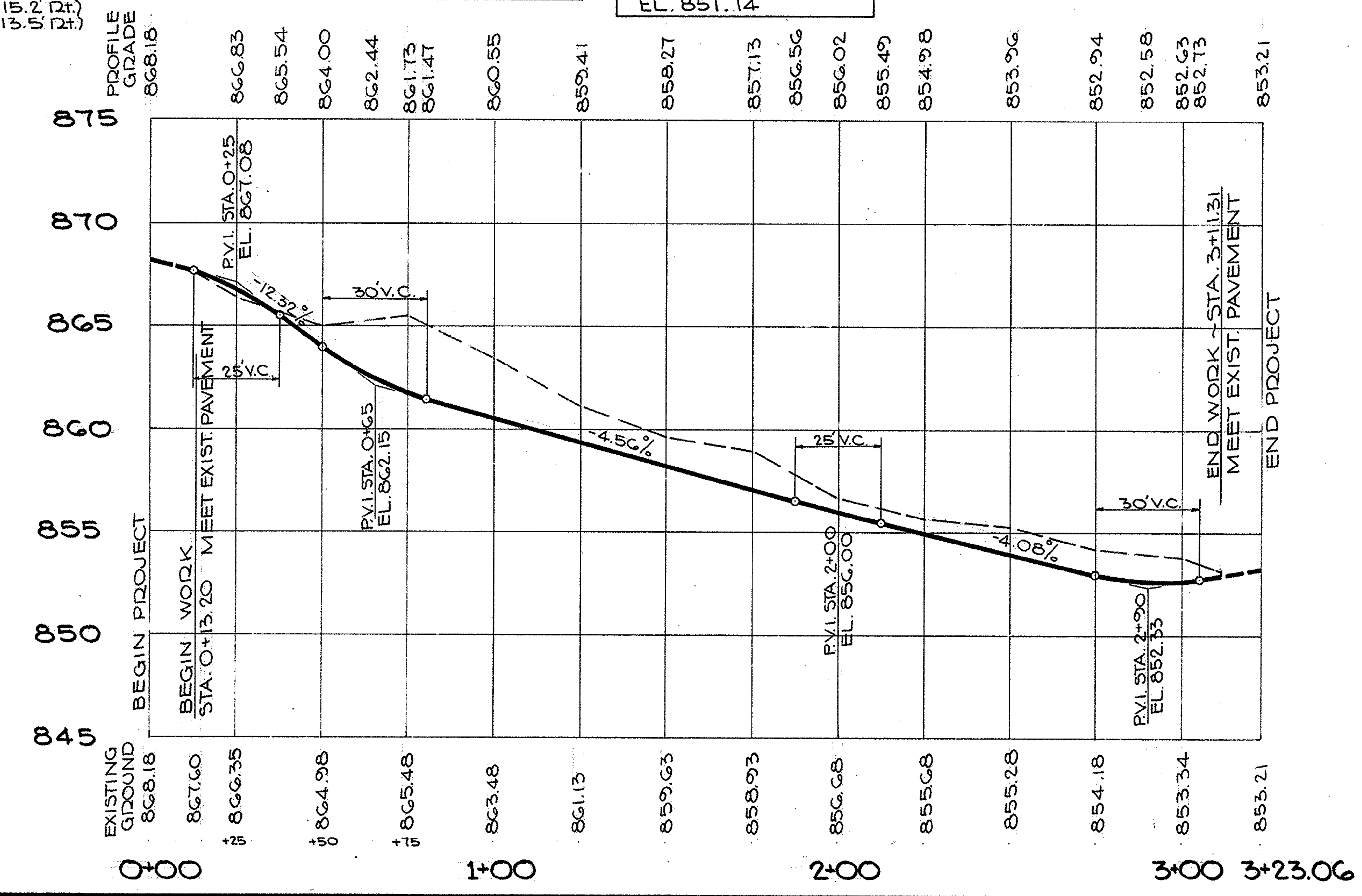
NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF RAMP "BX" STA. 10+00 TO STA. 20+41.17 SEE SHEET No 55

RAMP "BX"
STA. 10+00 to STA. 20+41.17

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7-14.95





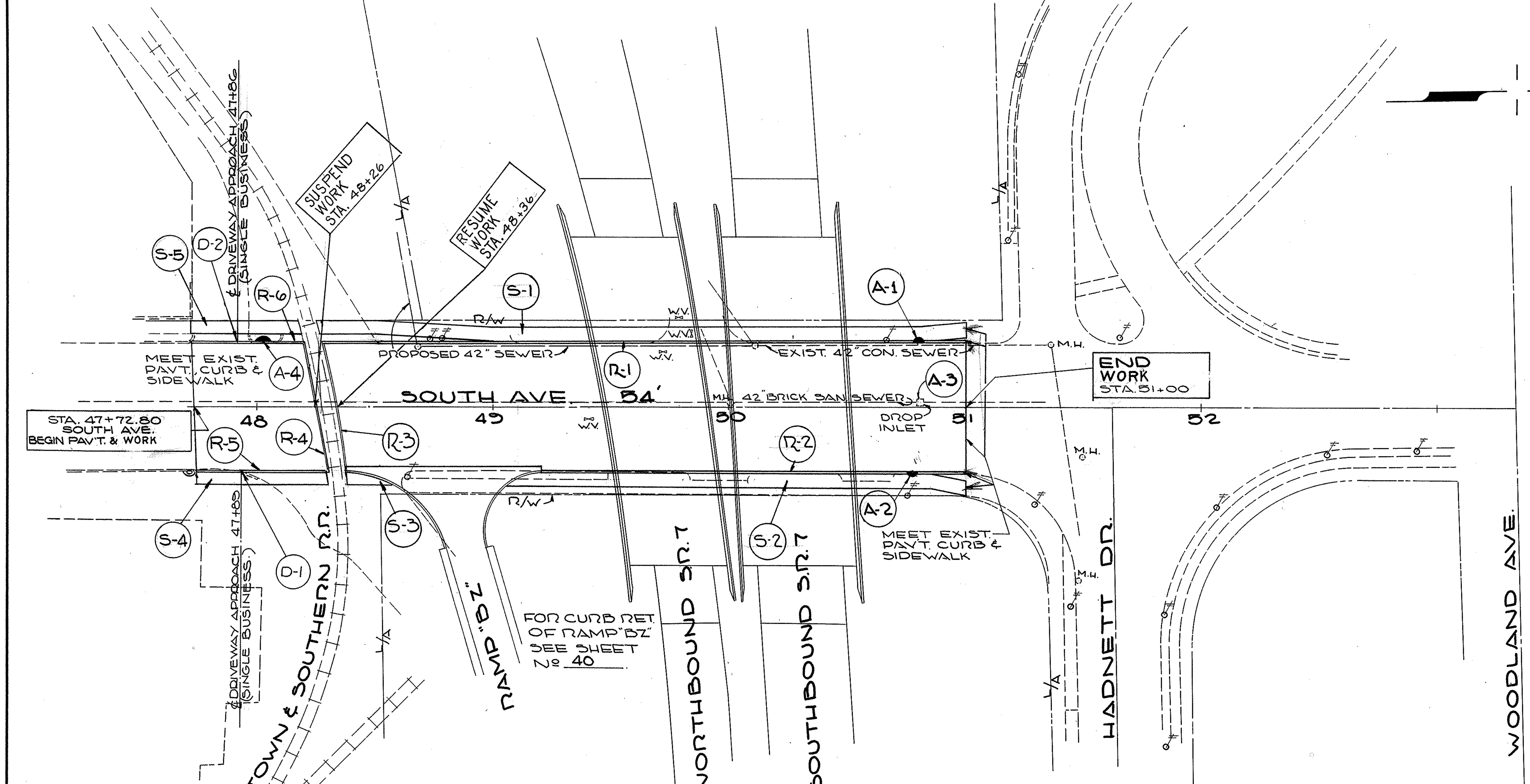
I-12 CONCRETE CURB (LIN. FT.)					
CODE	FROM	TO	LOCA.	TYPE 2B	TYPE 6
R-1	FRANKLIN 50+16	GIBSON 50+38	LT.	324	
R-2	FRANKLIN 49+61.05	GIBSON 49+61	RT.	309	
R-3	FRANKLIN 50+30	FRANKLIN 50+16.82	LT.		13
SHEET TOTAL				* 633	* 13

I-13 CONCRETE SIDEWALK					
CODE	FROM	TO	LOCA.	SQ. FT.	
S-1	FRANKLIN 50+16.82	GIBSON 50+38	LT.	1540	
S-2	FRANKLIN 49+61.05	GIBSON 49+20	RT.	1874	
SHEET TOTAL				*3414	

* DENOTES 100% CITY FUNDS

NOTE:
FOR DRAINAGE DETAILS & QUANTITIES OF RELOCATED FRANKLIN AVE. SEE SHEET No. 57

RELOCATED FRANKLIN AVE.
SCALE: HORIZ. 1"=30'
VERT. 1"=5'



(A-1)
STA.50+80 (27' LT. ℄)
I-8 YOUNGSTOWN TYPE I INLET
WINDOW ELEV. 883.58
TOP OF CURB 884.65
℄ INLET 878.50

(A-2)
STA.50+78 (27' RT. ℄)
I-8 YOUNGSTOWN TYPE I INLET
WINDOW ELEV. 883.51
TOP OF CURB 884.18
℄ INLET 877.93

(A-4)
STA. 48+03 (27' LT. ℄)
I-8 YOUNGSTOWN TYPE II INLET
WINDOW ELEV. = 895.90
TOP OF CURB = 896.65
INLET INV. = 890.90

NOTE:
INLETS A-1 & A-2 USE EXISTING LEADS TO EXISTING 42" STORM SEWER.

I-8 INLETS (EACH)

CODE	LOCATION	YOUNG'N TYPE I INLET	ADJUST TO GRADE	YOUNGS'N TYPE II INLET
A-1	27' LT. & SOUTH AVE. STA.50+80	1		
A-2	27' RT. & SOUTH AVE. STA.50+78	1		
A-3	2' LT. & SOUTH AVE. STA.50+81.5		1	
A-4	27' LT. & SOUTH AVE. STA. 48+03			1
	SHEET TOTAL	2	1	1

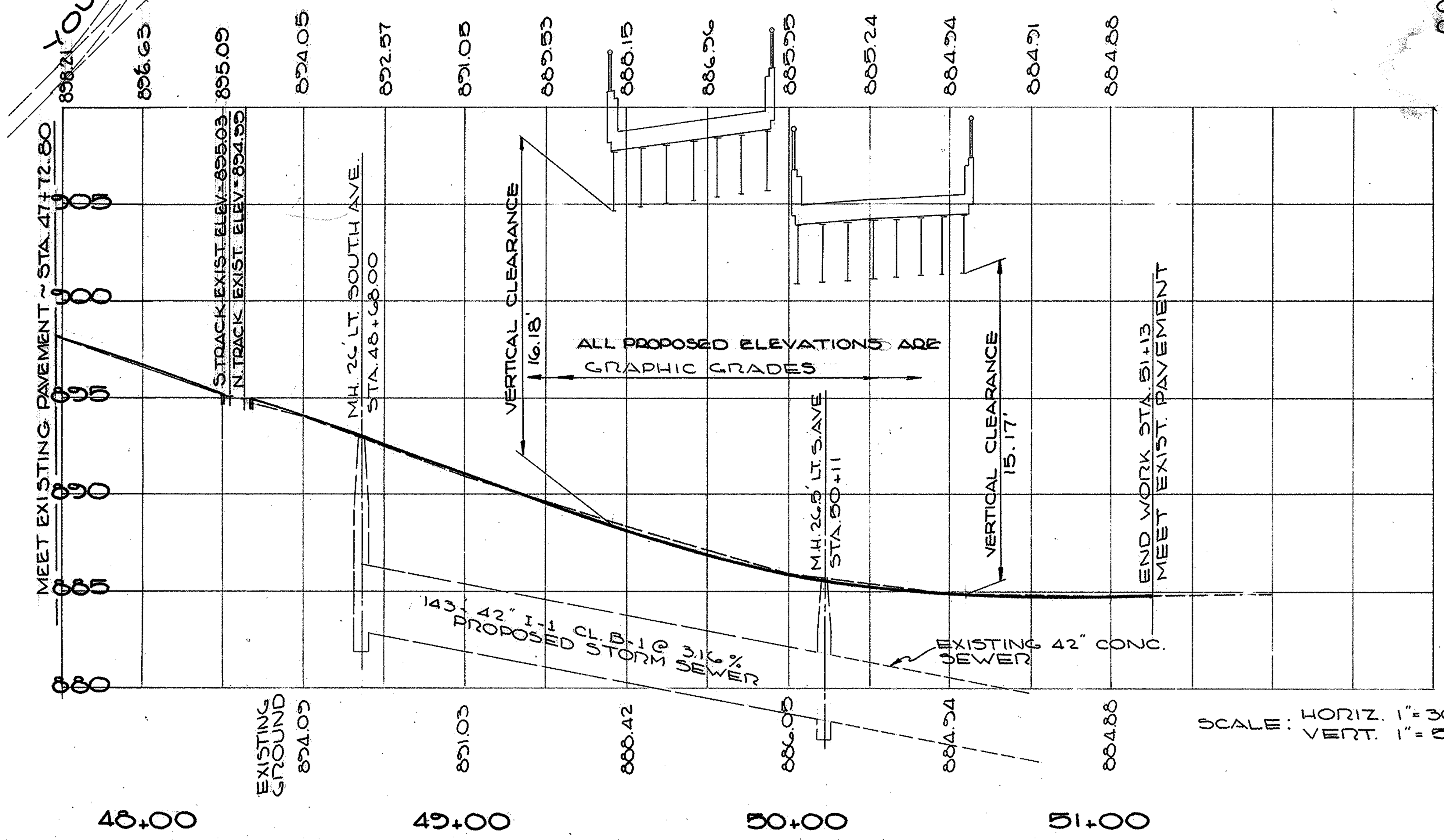
I-13 CONCRETE SIDEWALK

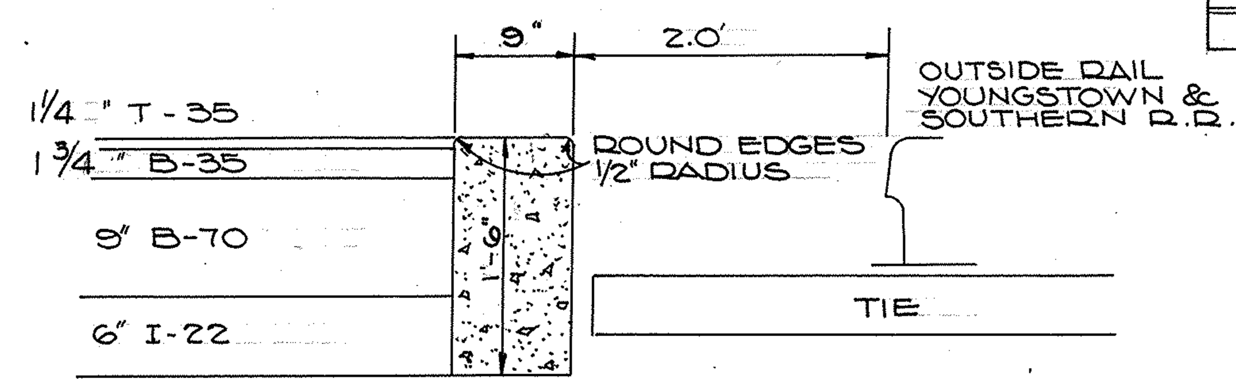
CODE	FROM	TO	LOCA.	SQ. FT.
S-1	48+30	51+00	LT.	1620
S-2	49+07	51+00	RT.	1158
S-3	48+40.89	48+62.89	RT.	66
S-4	47+93	48+30	RT.	222
S-5	47+92	48+29	LT.	222
SHEET TOTAL				3288

NOTE:
THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT ON EACH SIDE OF THE RAILROAD CROSSING AS SHOWN ON SHEET 40.

I-12 CONCRETE CURB (LIN. FT.)

CODE	FROM	TO	LOCA.	TYPE 2B		SPEC. HEADER CURB
R-1	48+30	51+00	LT.	256		
R-2	49+20.89	51+00	RT.	165		
R-3	48+34	—	LT.&RT.			55
R-4	48+25	—	LT.&RT.			55
R-5	47+93	48+30	RT.	58		
R-6	47+92	48+29	LT.	34		
	SHEET TOTAL			513		110





SPECIAL PORTLAND CEMENT HEADER CURB DETAIL
SCALE: 1" = 1'-0"

8" R.C.C. T-70 DRIVEWAY APPROACHES

CODE	LOCATION	SQ. YDS.	REMARKS
D-1	47+89 RT.	20	SINGLE BUS.
D-2	47+86 LT.	30	SINGLE BUS.
SHEET TOTAL		50	

NOTE:
FOR PROPOSED 42" STORM SEWER QUANTITIES & INVERT ELEVATIONS SEE RELOCATED UTILITIES SHEET No. 60.

SCALE: HORIZ. 1" = 30'
VERT. 1" = 8'

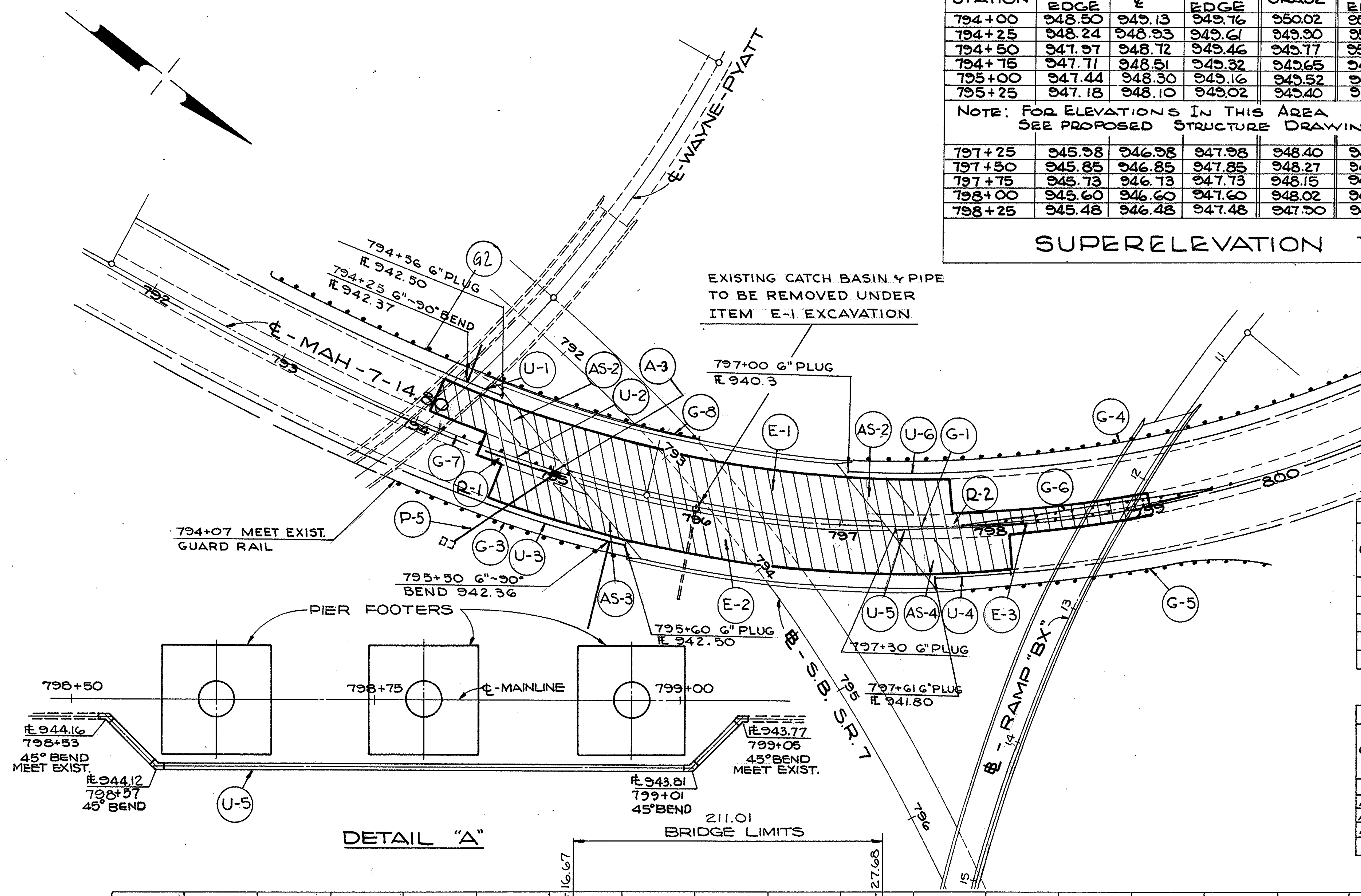
PLAN & PROFILE
SOUTH AVE. IMPROVEMENT

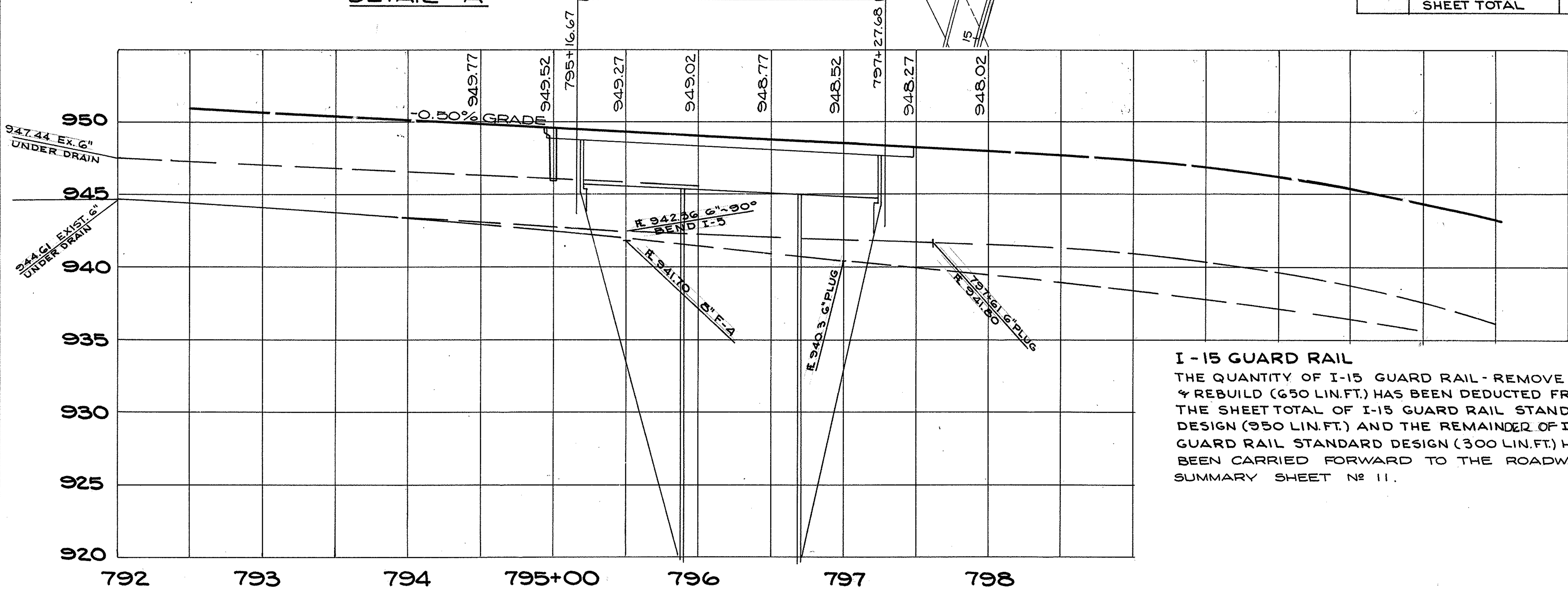
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7-14.95

℄ STATION	LEFT LANE LEFT EDGE	LEFT LANE ℄	LEFT LANE RIGHT EDGE	PROFILE GRADE	RIGHT LANE LEFT EDGE	RIGHT LANE ℄	RIGHT LANE RIGHT EDGE
794+00	948.50	949.13	949.76	950.02	950.30	950.96	951.63
794+25	948.24	948.93	949.61	949.90	950.20	950.92	951.64
794+50	947.97	948.72	949.46	949.77	950.09	950.86	951.63
794+75	947.71	948.51	949.32	949.65	949.99	950.82	951.64
795+00	947.44	948.30	949.16	949.52	949.88	950.76	951.63
795+25	947.18	948.10	949.02	949.40	949.79	950.71	951.64
NOTE: FOR ELEVATIONS IN THIS AREA SEE PROPOSED STRUCTURE DRAWINGS.							
797+25	945.98	946.98	947.98	948.40	948.82	949.82	950.82
797+50	945.85	946.85	947.85	948.27	948.69	949.69	950.69
797+75	945.73	946.73	947.73	948.15	948.57	949.57	950.57
798+00	945.60	946.60	947.60	948.02	948.44	949.44	950.44
798+25	945.48	946.48	947.48	947.90	948.32	949.32	950.32

SUPERELEVATION TABLE





I-15 GUARD RAIL L.F.						Each		
CODE	FROM TO	LOCA.	STAND DESIGN	REMOVE & REBUILD	BARRIER RAIL	Bridge Terminal Assembly	Approach End Assembly	Anchor Assembly
G-1	794+10 - 799+10	℄		500				
G-2	792+66 - 794+16	LT.	150			1	1	1
G-3	794+07 - 995+57	RT.	150			1		
G-4	797+06.3 - 801+56.3	LT.	450			1	1	
G-5	797+74 - 799+74	RT.	200			1	1	1
G-6	797+27.68 - 799+52.68	℄			225			
G-7	794+16.67 - 795+16.67	℄			100			
G-8	794+16 - 795+66	LT.		150		1	1	
	SHEET TOTAL		*950	*650	325	5	1	2

* SEE GUARD RAIL NOTE THIS SHEET

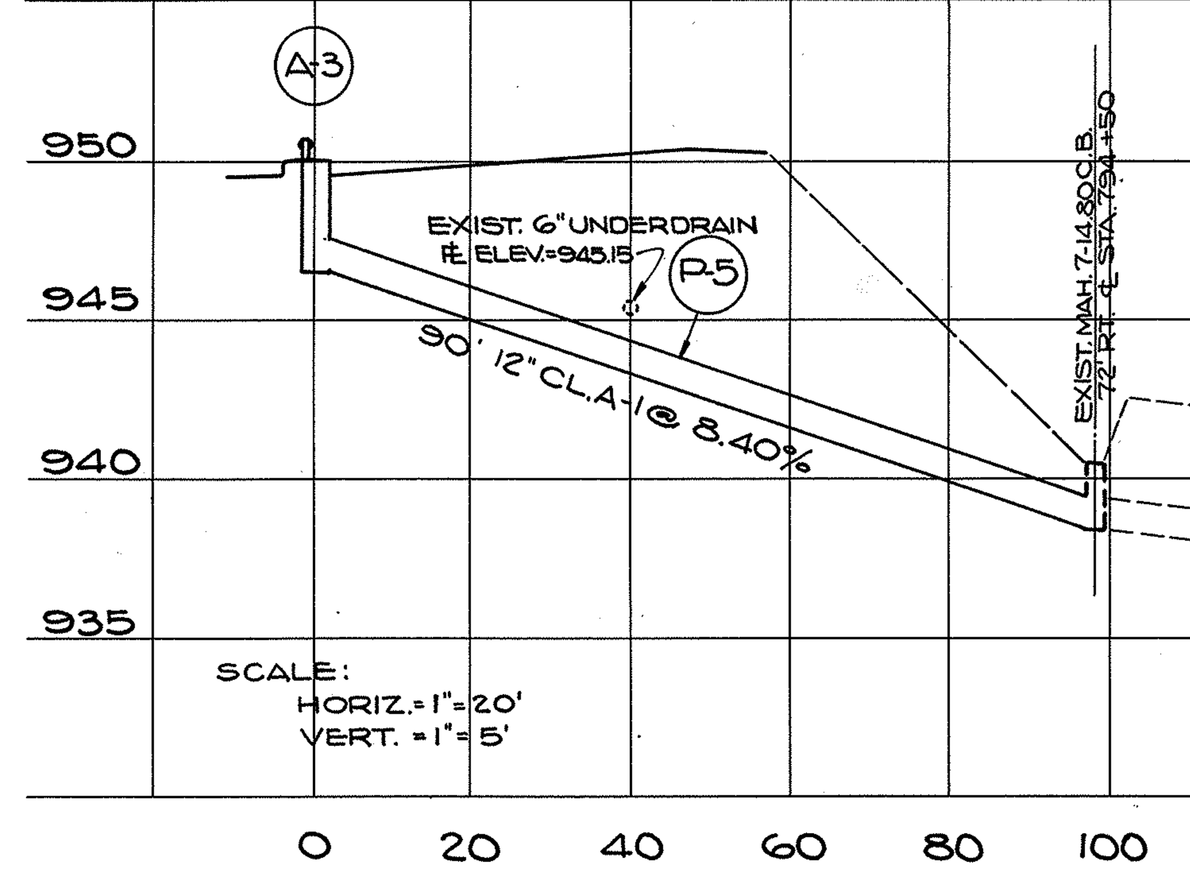
I-1 PIPE LIN. FT.								I-5 PIPE SPEC.	
CODE	FROM TO	LOCA.	CLASS I-3 6" SHAL'W	CLASS I-3 6" DEEP	CLASS F-4 6"	CLASS F-4 8" M-6-4C	CLASS J-1 12" PIPE	6"-90°	6"-45°
U-1	794+10 - 794+56	LT.		51		10		1	
U-2	794+50 - 795+00	℄	50		10				
U-3	794+72 - 795+60	RT.		87		10		1	
U-4	797+61 - 798+20	RT.		59					
U-5	797+30 - 799+05	℄	180						2
U-6	797+00 - 797+80	LT.		80					
P-5	795+00 - RT. DITCH						90		
	SHEET TOTAL		230	277	10	20	90		

E-8 REMOVAL				
CODE	LOCATION	EXIST. RIGID PAV'T. SQ. YD.	EXIST. CONC. CURB & MEDIAN PAVT LIN. FT	
E-1	794+10 - 797+80 LT. ℄	987		
E-2	794+72 - 798+20 RT. ℄	928		
E-3	794+50 - 799+10 L&R		460	
	SHEET TOTAL	1915	460	

I-7 APPROACH SLABS T-13"			
CODE	FROM TO	LOCA.	REINF. CONC. CLASS 'C' SQ. YDS.
AS-1	794+91.67 - 795+16.67	LT.	66.67
AS-2	797+27.68 - 797+52.68	LT.	66.67
AS-3	794+91.67 - 795+16.67	RT.	66.67
AS-4	797+27.68 - 797+52.68	RT.	66.67
	SHEET TOTAL		266.68

I-8 CATCH BASINS			ROADWAY ITEMS			
CODE	LOCATION	~~Nº 2A-8~~ 2-6 INLET EACH	CODE	LOCATION	I-12 TYPE 6 CURB L.F.	I-21 P.C.C. MEDIAN TYPE I SQ. YDS.
A-1	795+00 1.25 LT. ℄	1	R-1	794+50 - 795+16	132	88
			R-2	797+27.68 - 799+10	162	108
	SHEET TOTAL	1		SHEET TOTAL	294	196

STA. 795+00 MAH. 7-14.80 (1.25' RT ℄)
I-8 Nº ~~2A-8~~ 2-6 INLET
WINDOW ELEV. = 949.35
FL-12" I-1 = 945.94
FL-6" I-3 = 946.37



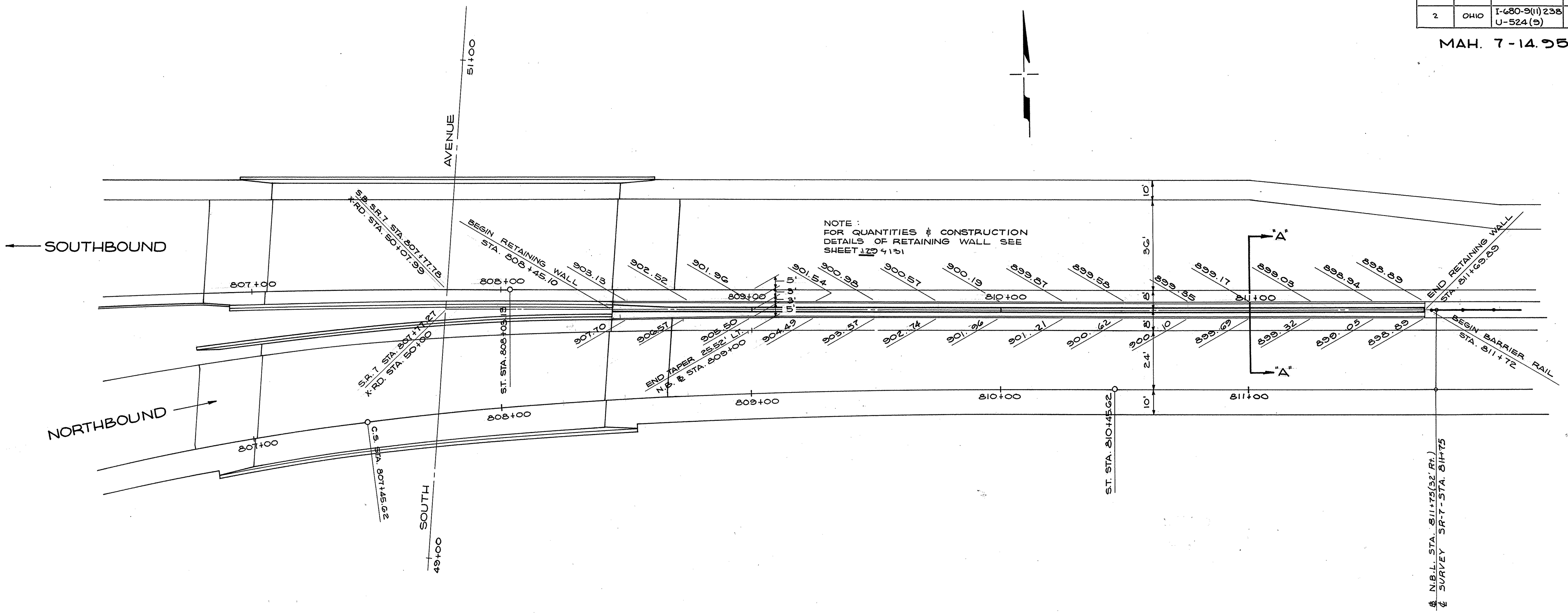
SCALE:
HORIZ. = 1" = 20'
VERT. = 1" = 5'

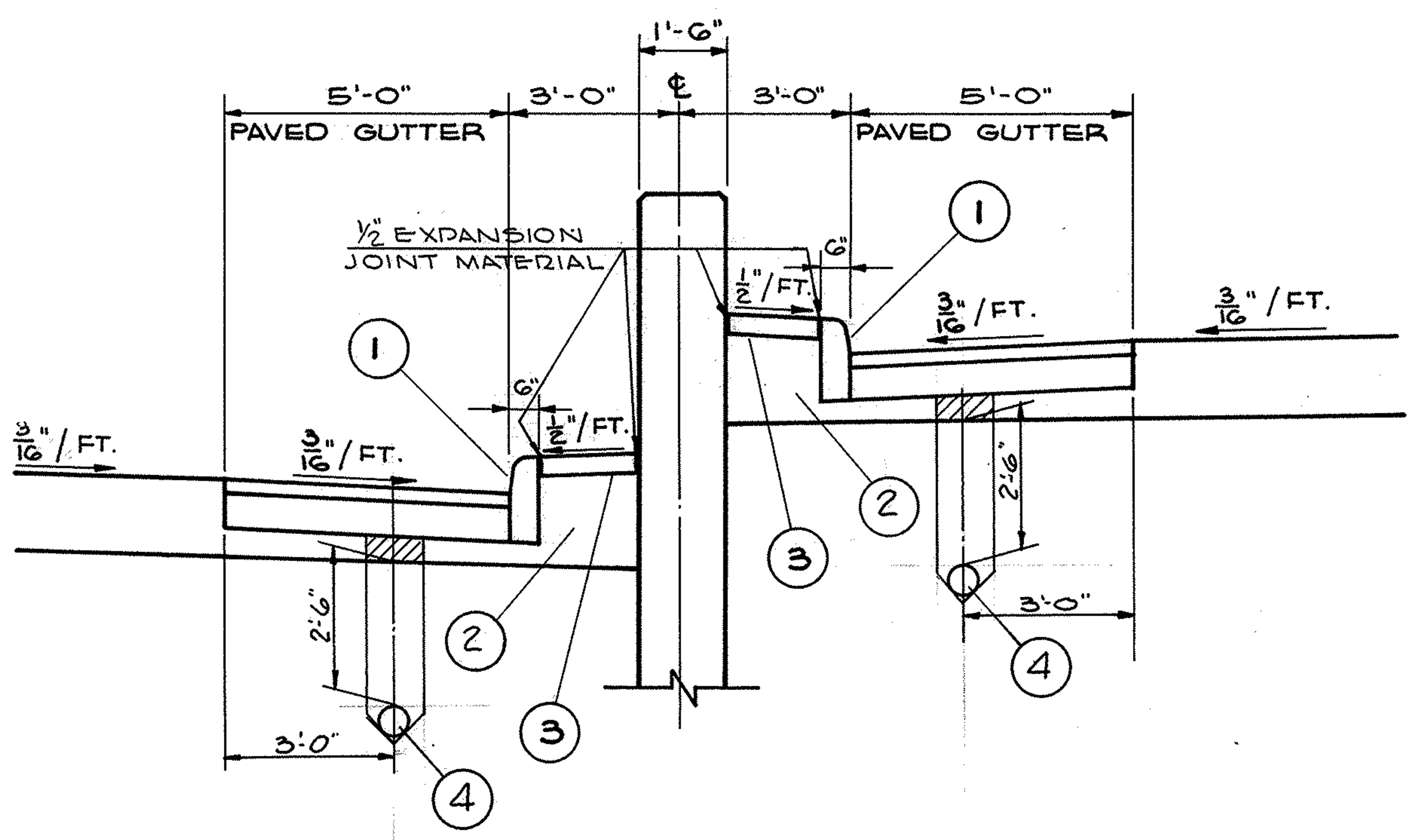
I-15 GUARD RAIL

THE QUANTITY OF I-15 GUARD RAIL - REMOVE & REBUILD (650 LIN. FT.) HAS BEEN DEDUCTED FROM THE SHEET TOTAL OF I-15 GUARD RAIL STANDARD DESIGN (950 LIN. FT.) AND THE REMAINDER OF I-15 GUARD RAIL STANDARD DESIGN (300 LIN. FT.) HAS BEEN CARRIED FORWARD TO THE ROADWAY SUMMARY SHEET Nº 11.

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		31 / 206

MAH. 7-14.95





SECTION "A"-"A"

(1) I-12 STANDARD TYPE 6 CONCRETE CURB

(2) I-22 SUBBASE (VARIABLE DEPTH) GRADING "A" OR "B"

(3) I-21 TYPE I PORTLAND CEMENT CONCRETE MEDIAN

(4) I-1 6" PIPE UNDERDRAIN

MEDIAN TRANSITION DETAIL

FROM SEPARATED ROADWAYS TO RAISED MEDIAN

FED. RD.	STATE	PROJECT
2	OHIO	I-680-5(11)238 U-524(8)

MAH. 7-14.95

NOSE DETAIL
SOUTH BOUND S.R.7 @ MAH-7-14.80
SCALE 1" = 20'

LEGEND

- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- (D) STANDARD EXPANSION JOINT
- (E) STANDARD CONTRACTION JOINT
- (G) SEE JOINT DETAIL SHEET NO. 35

LEGEND

- EXISTING
- STABILIZED SHOULDER TO BE REMOVED
- SHOULDER TO BE RETAINED
- THE SHADED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACED WITH 409 USING Nº 8 AGGREGATE AS THE MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS 409.

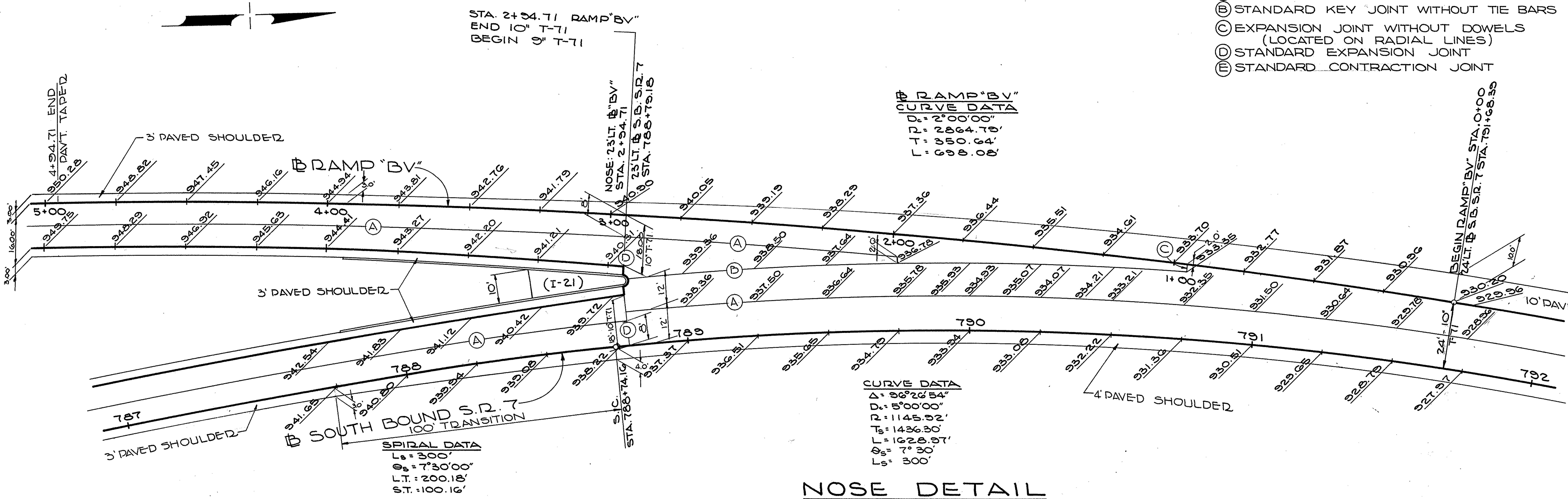
NOSE DETAIL
NORTH BOUND S.R.7 @ MAH-7-14.80
SCALE 1" = 20'

NOSE DETAILS
N. & S. BOUND S.R.7 @ MAH-7-14.80

MAH. 7-14.95

LEGEND

(A) STANDARD LONGITUDINAL JOINT
(B) STANDARD KEY JOINT WITHOUT TIE BARS
(C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
(D) STANDARD EXPANSION JOINT
(E) STANDARD CONTRACTION JOINT



NOSE DETAIL
RAMP "BV" @ SOUTH BOUND S.R. 7

SCALE 1" = 20'

PAVING DETAILS

RAMP "BV" NOSE @ SOUTH BOUND S.R. 7

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

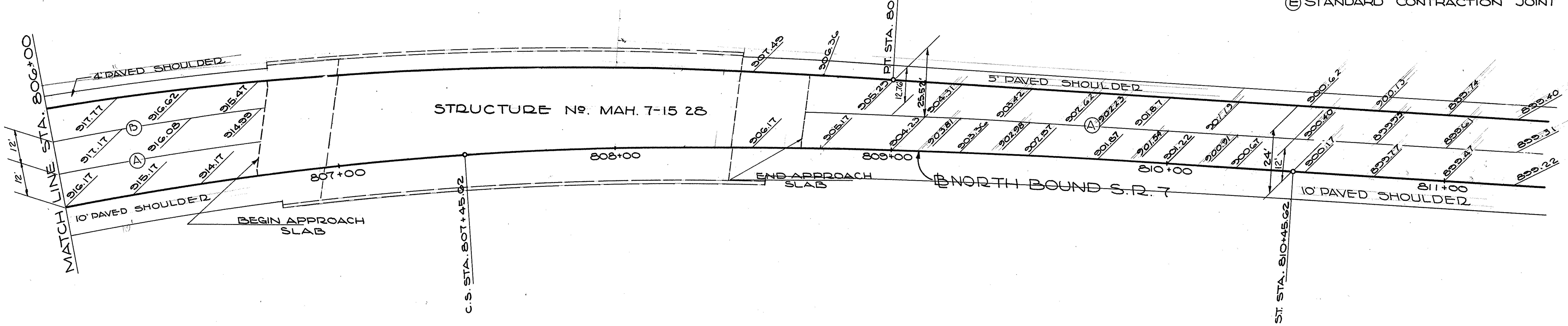
34
206

MAH. 7-14.95

LEGEND

- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- (D) STANDARD EXPANSION JOINT
- (E) STANDARD CONTRACTION JOINT

TAPER OFFSETS LT. OF ℄ N.B.S.R.7	
STATION	DISTANCE
802+50	49.00
+75	48.10
803+00	47.19
+25	46.29
+50	45.39
+75	44.48
804+00	43.58
+25	42.68
+50	41.78
+75	40.87
805+00	39.97
+25	39.07
+50	38.16
+75	37.26
806+00	36.36
+25	35.45
+50	34.55
+75	33.65
807+00	32.75
+25	31.84
+50	30.94
+75	30.04
808+00	29.13
+25	28.23
+50	27.33
+75	26.42
809+00	25.52



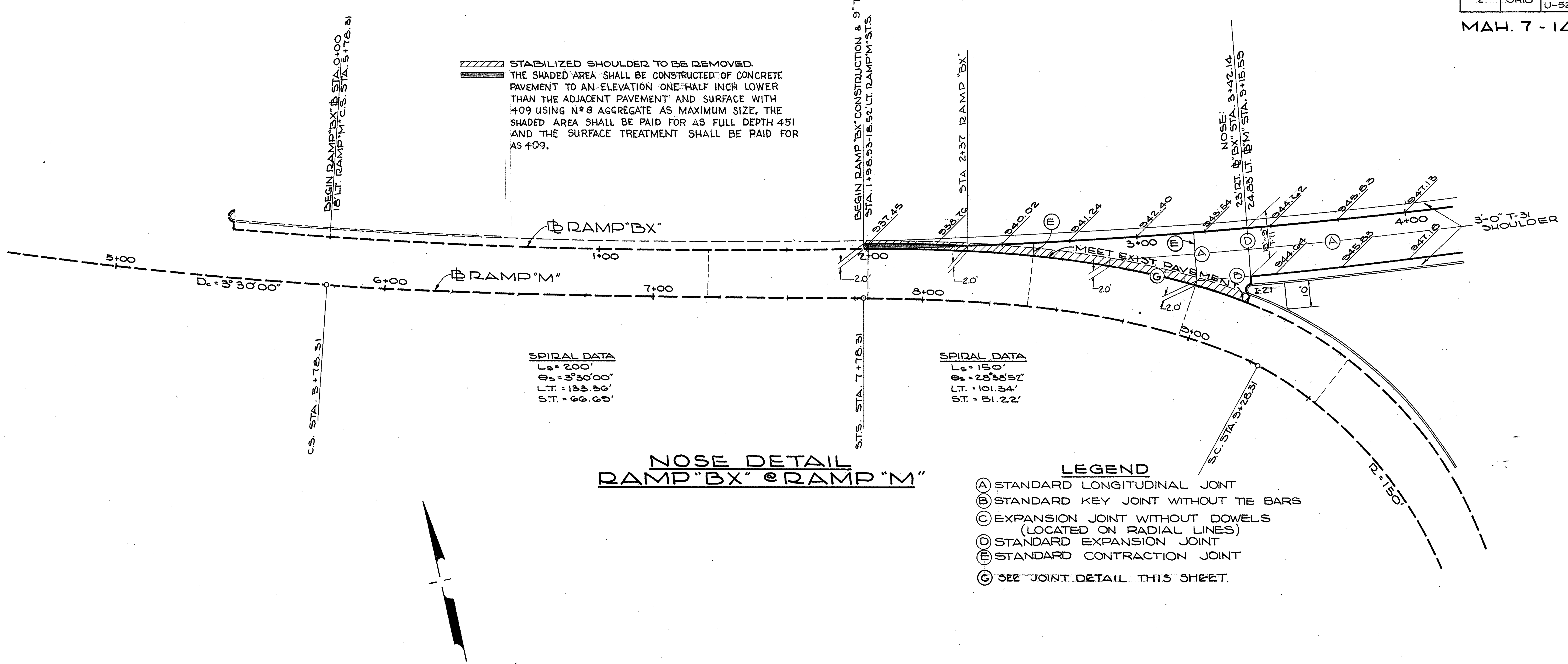
RAMP "BX" NOSE DETAIL & TAPER @ NORTHBOUND S.R.7

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524 (9)	

35
206

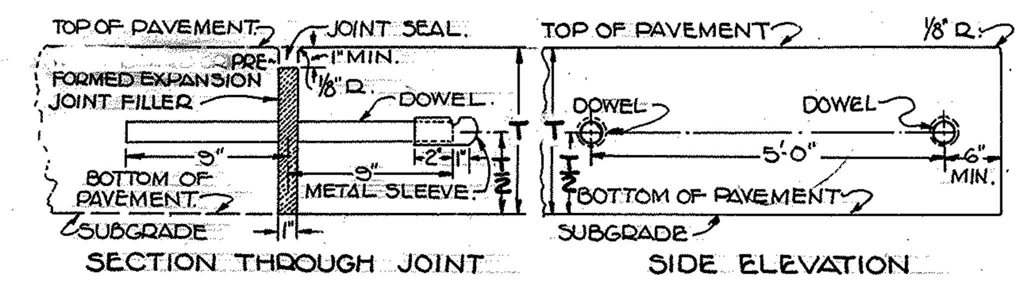
MAH. 7 - 14.95

STABILIZED SHOULDER TO BE REMOVED.
THE SHADED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE-HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACE WITH 409 USING Nº 8 AGGREGATE AS MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS 409.



NOSE DETAIL
RAMP "BX" @ RAMP "M"

LEGEND
- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- (D) STANDARD EXPANSION JOINT
- (E) STANDARD CONTRACTION JOINT
- (G) SEE JOINT DETAIL THIS SHEET.



NOTE:
T = PAVEMENT THICKNESS

(G) JOINT DETAIL "SPECIAL"

NOTE:
THE PAY ITEM OF "EXPANSION JOINT BOLT" PER EACH SHALL INCLUDE THE COST OF ALL LABOR & MATERIALS REQUIRED TO DRILL INTO EXISTING PAVEMENT AND PLACE DOWELS AS DETAILED ABOVE. THE REQUIREMENTS OF STANDARD DRAWING Nº T.J. (REV. 9/12/60) SHALL GOVERN THE CONSTRUCTION OPERATION EXCEPT AS SHOWN ABOVE.

NOSE DETAILS
RAMP "BX" @ RAMP "M"

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

36/206

MAH. 7-14-55

LEGEND

(A) STANDARD LONGITUDINAL JOINT
(B) STANDARD KEY JOINT WITHOUT TIE BARS
(C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
(D) STANDARD EXPANSION JOINT
(E) STANDARD CONTRACTION JOINT
(F) TYPE "F" JOINT - SEE DETAIL

NOTE:
ALL CURB RETURN ELEVATIONS AT BASE OF CURB ON PAV'T

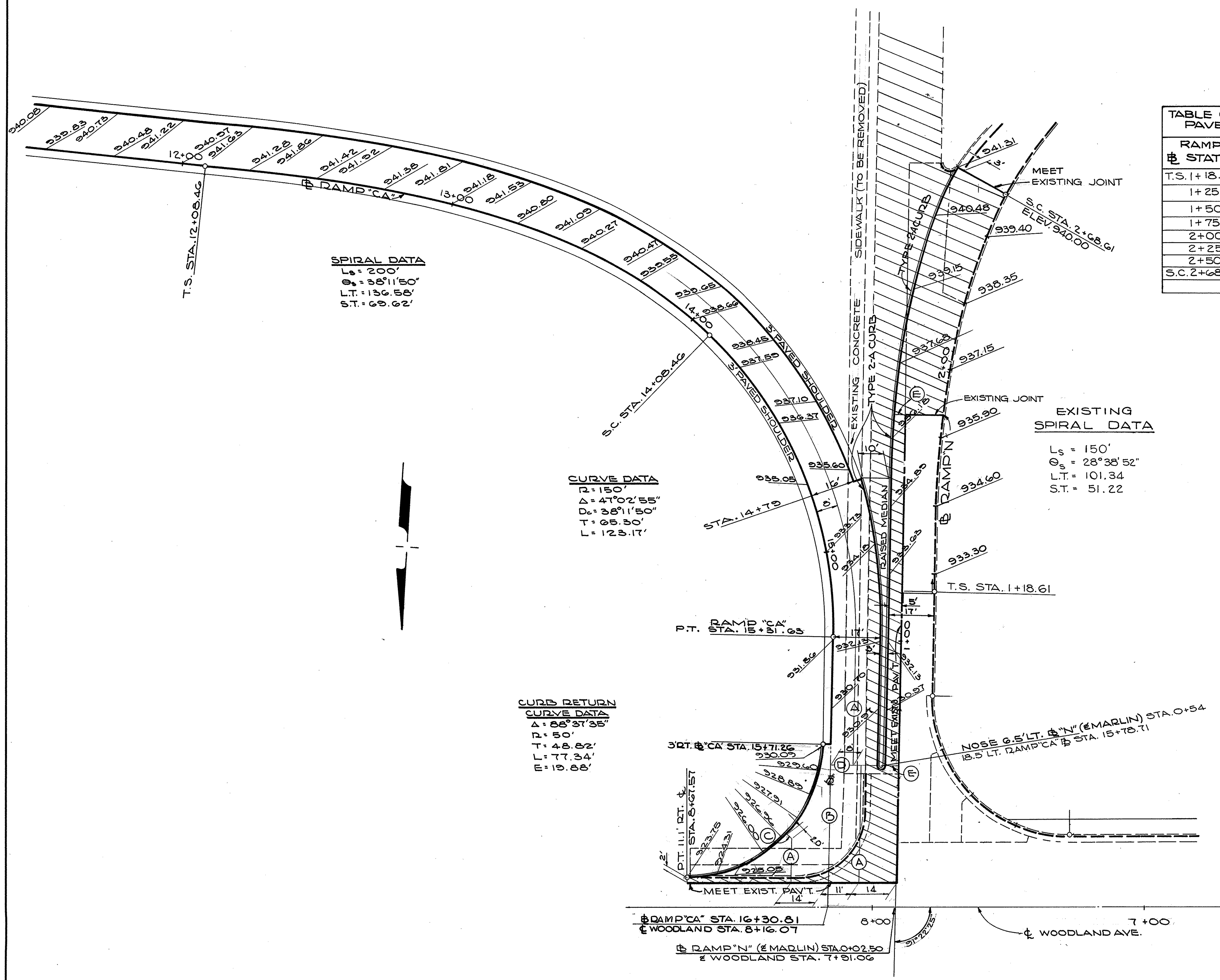
"F" JOINT - DETAIL

INTERSECTION DETAIL
RAMP "BV" & WILLIAMSON AVE.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7 - 14.95

TABLE OF OFFSETS FOR PAVEMENT REPLACEMENT	
RAMP "N" ℄ STATION	OFFSET LEFT
T.S. 1+18.61	17.00'
1+25	17.17'
1+50	17.84'
1+75	18.51'
2+00	19.18'
2+25	19.85'
2+50	20.51'
S.C. 2+68.61	21.00'



LEGEND

- Ⓐ STANDARD LONGITUDINAL JOINT
- Ⓑ STANDARD KEY JOINT WITHOUT TIE BARS
- Ⓒ EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- Ⓓ STANDARD EXPANSION JOINT
- Ⓔ STANDARD CONTRACTION JOINT

EXISTING PAVEMENT TO BE REMOVED

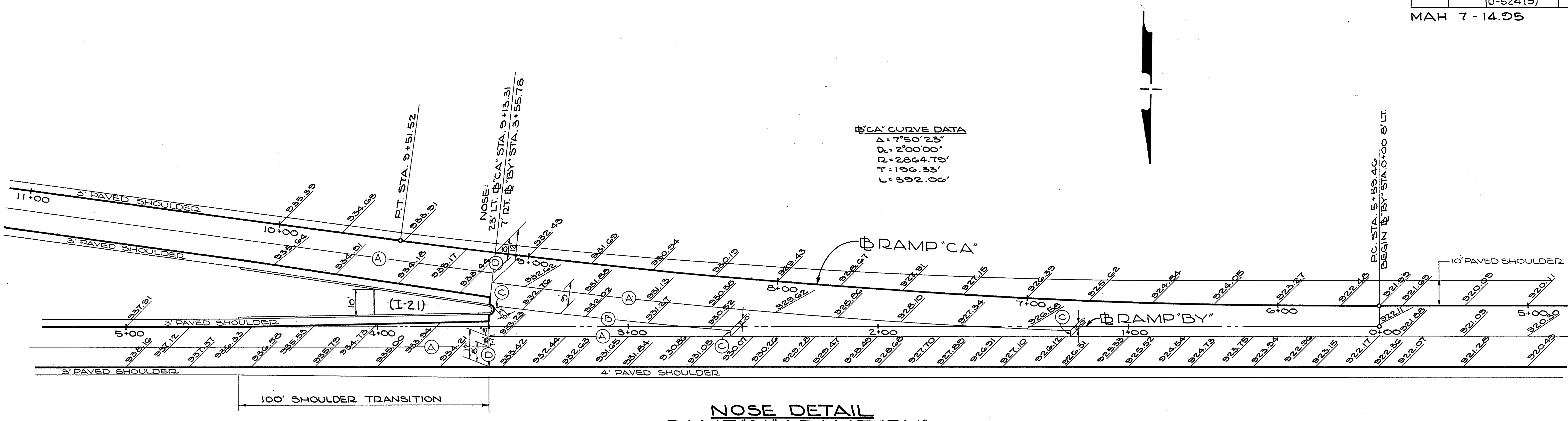
NOTE: ALL ELEVATIONS ARE ON PAVEMENT UNLESS OTHERWISE NOTED

INTERSECTION DETAIL
RAMP "CA" & RAMP "N" @ WOODLAND AVE.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

38
206

MAH 7-14.95



NOSE DETAIL
RAMP "CA" @ RAMP "BY"

SCALE 1" = 20'

LEGEND

- Ⓐ STANDARD LONGITUDINAL JOINT
- Ⓑ STANDARD KEY JOINT WITHOUT TIE BARS
- Ⓒ EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- Ⓓ STANDARD EXPANSION JOINT
- Ⓔ STANDARD CONTRACTION JOINT

NOSE DETAIL
RAMP "CA" @ SOUTH BOUND S.R. 7

SCALE 1" = 20'

NOSE DETAILS
RAMP "CA" @ RAMP "BY" & RAMP "CA" @ SOUTH BOUND S.R. 7

STABILIZED SHOULDER TO BE REMOVED

= THE SHADED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION ONE HALF INCH LOWER THAN THE ADJACENT PAVEMENT AND SURFACED WITH 409 USING No. 8 AGGREGATE AS THE MAXIMUM SIZE. THE SHADED AREA SHALL BE PAID FOR AS FULL DEPTH 451 AND THE SURFACE TREATMENT SHALL BE PAID FOR AS 409.

℄ "N" SPIRAL DATA
Ls = 200'
θs = 7°00'00"
L.T. = 133.44'
S.T. = 66.76'

℄ "BY" CURVE DATA
Δ = 6°34'15"
Dc = 3°00'00"
R = 1909.86'
T = 109.63'
L = 219.03'

EXISTING RAMP
℄ "N" SPIRAL DATA
Ls = 150'
θs = 28°38'52"
L.T. = 101.34'
S.T. = 51.22'

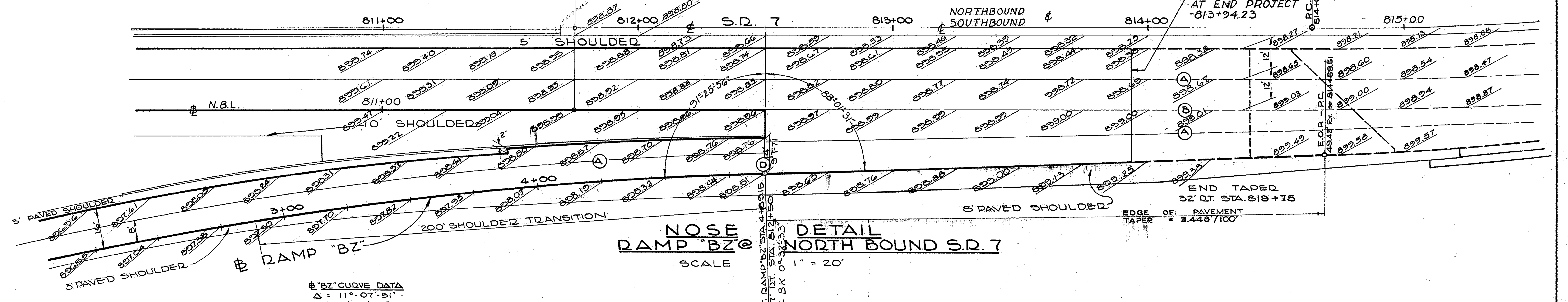
℄ "N" CURVE DATA
Δ = 36°11'18"
R = 150'
Dc = 38°11'50"
T = 49.01'
L = 94.74'

NOTE:
MATCH "E" JOINT TO EXISTING JOINTS IN THIS AREA

NOSE DETAIL
RAMP "BY" @ RAMP "N"
SCALE 1" = 20'

LEGEND

- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- (D) STANDARD EXPANSION JOINT
- (E) STANDARD CONTRACTION JOINT
- (G) SEE JOINT DETAIL SHEET NO. 35



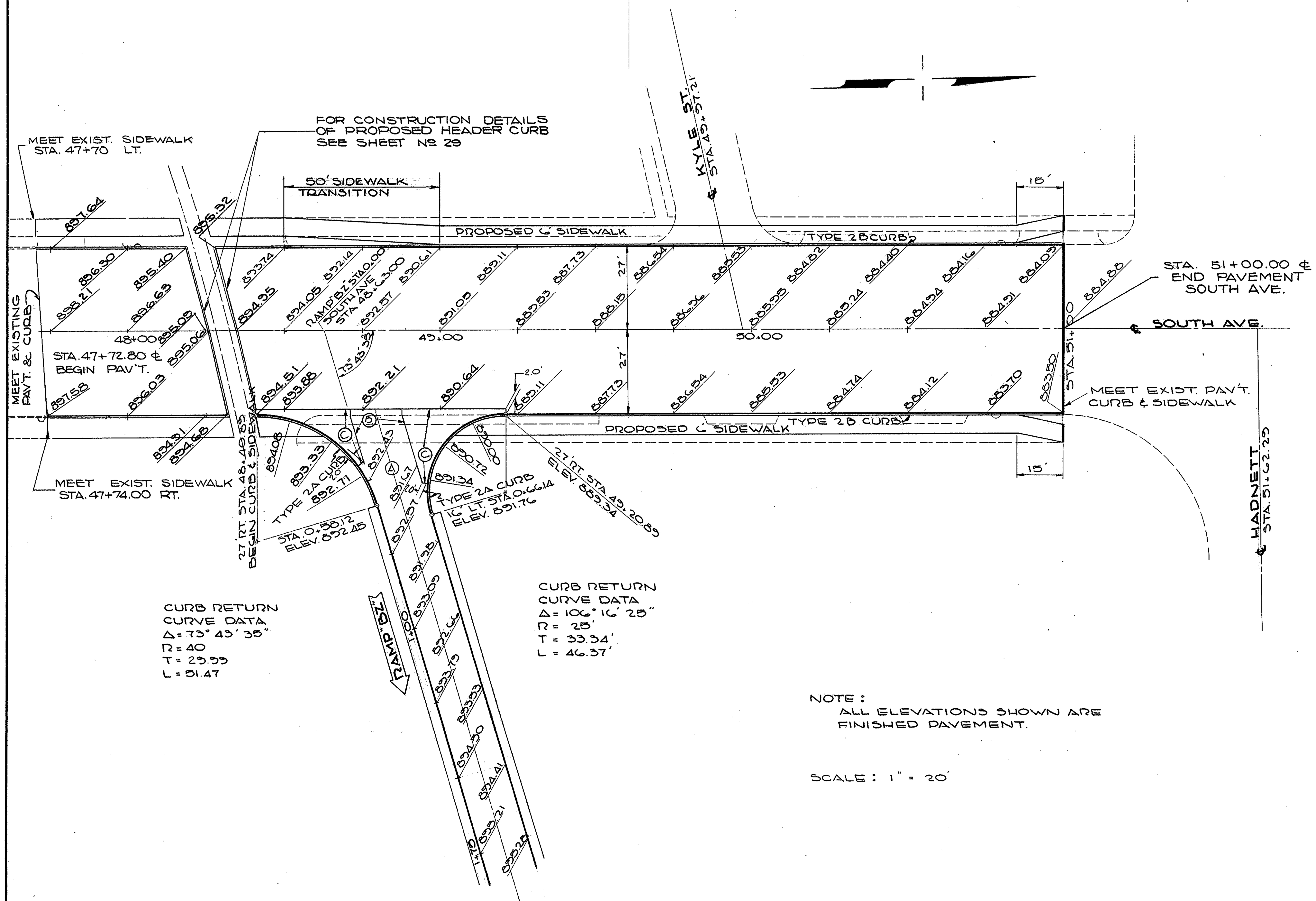
NOSE DETAIL
RAMP "BZ" @ NORTH BOUND S.R. 7
SCALE 1" = 20'

℄ "BZ" CURVE DATA
Δ = 11°-07'-51"
Dc = 4°00'00"
R = 1432.40
T = 139.58'
L = 287.27'

NOSE DETAILS
RAMP "BY" @ RAMP "N" &
RAMP "BZ" @ NORTH BOUND S.R. 7

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH. 7 - 14.95



NOTE:
ALL ELEVATIONS SHOWN ARE
FINISHED PAVEMENT.

SCALE: 1" = 20'

LEGEND

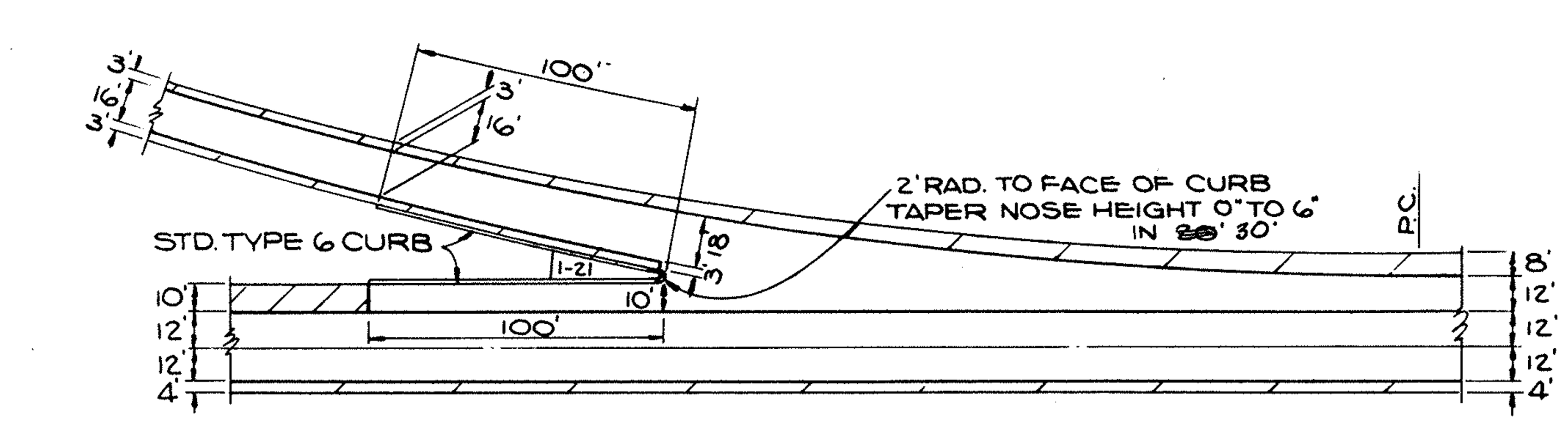
- (A) STANDARD LONGITUDINAL JOINT
- (B) STANDARD KEY JOINT WITHOUT TIE BARS
- (C) EXPANSION JOINT WITHOUT DOWELS (LOCATED ON RADIAL LINES)
- (D) STANDARD EXPANSION JOINT
- (E) STANDARD CONTRACTION JOINT

INTERSECTION DETAIL
SOUTH AVE. @ RAMP "BZ"

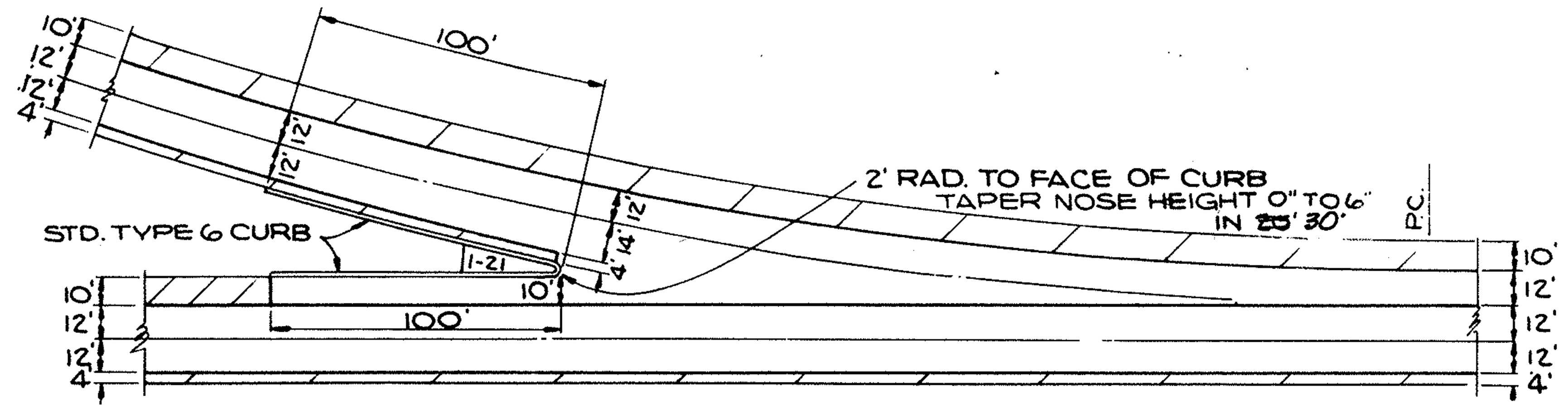
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

41
206

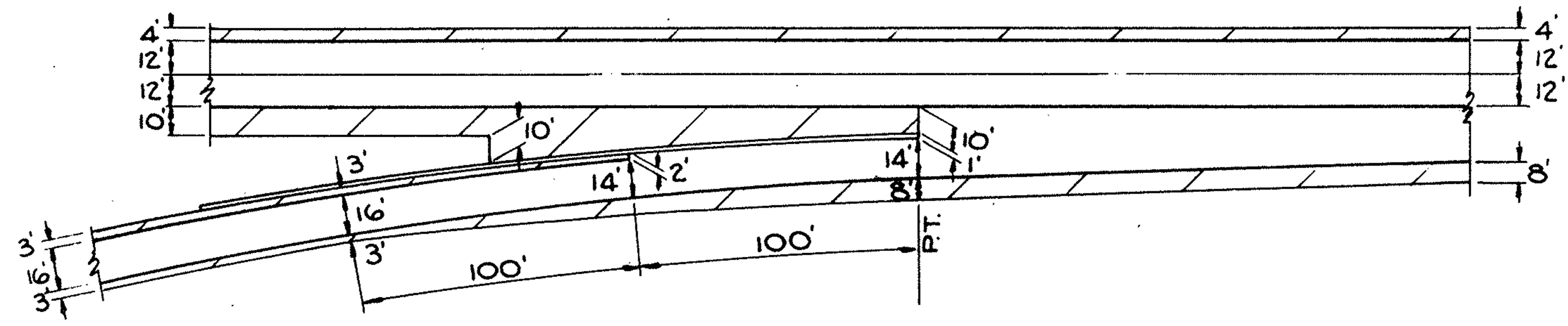
MAH. 7 - 14.95



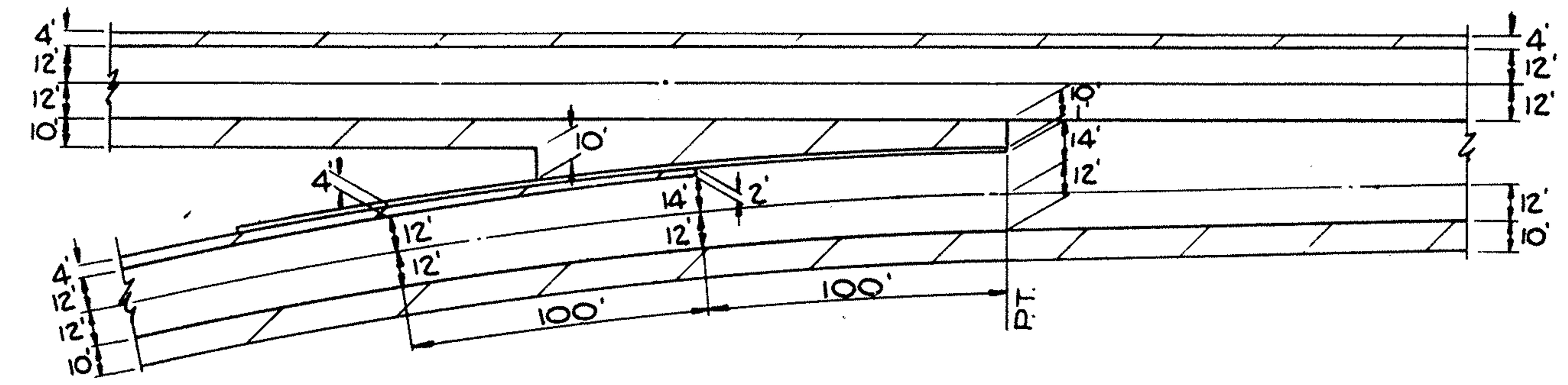
ONE LANE EXIT DETAIL



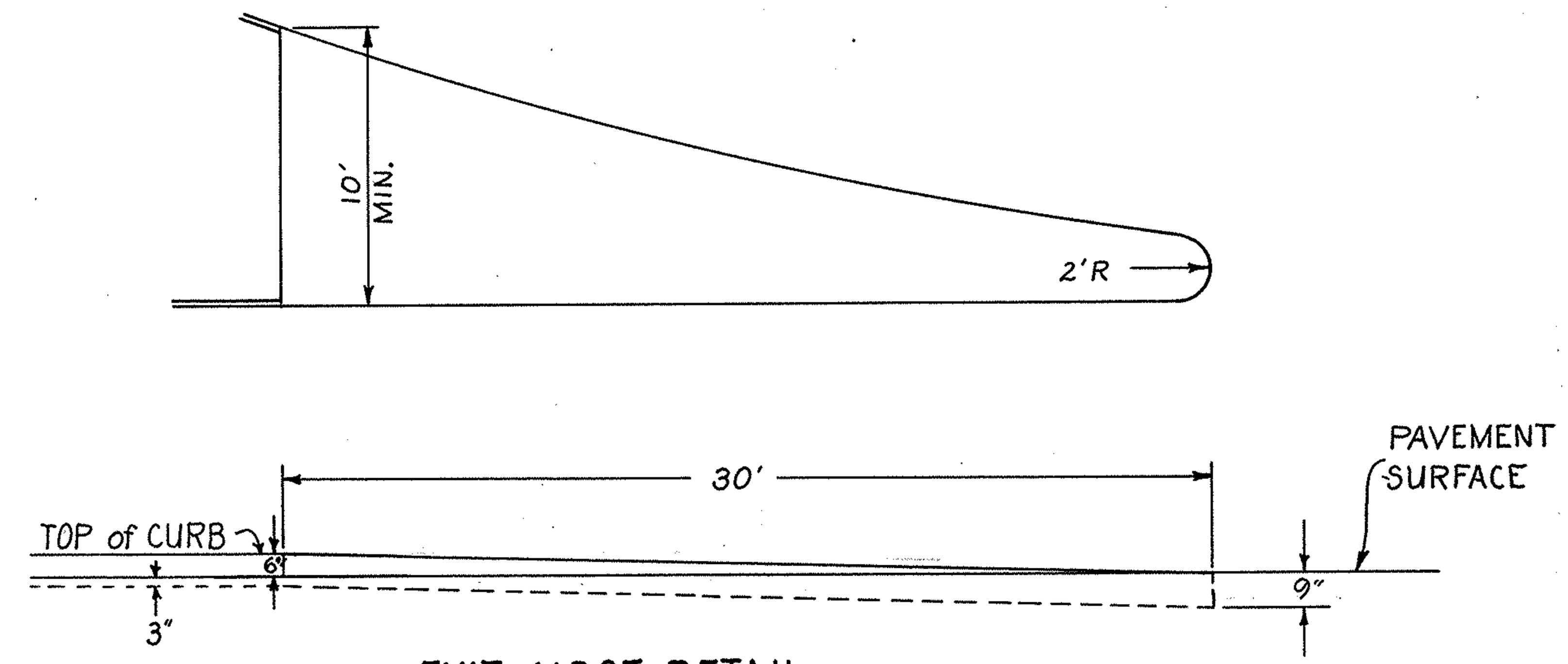
TWO LANE EXIT DETAIL



ONE LANE ENTRANCE DETAIL

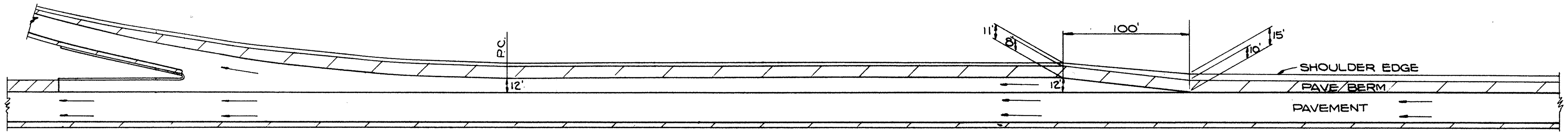


TWO LANE ENTRANCE DETAIL
(FOR ONE ADDED LANE & ONE ACCELERATION LANE OR TWO ADDED LANES)

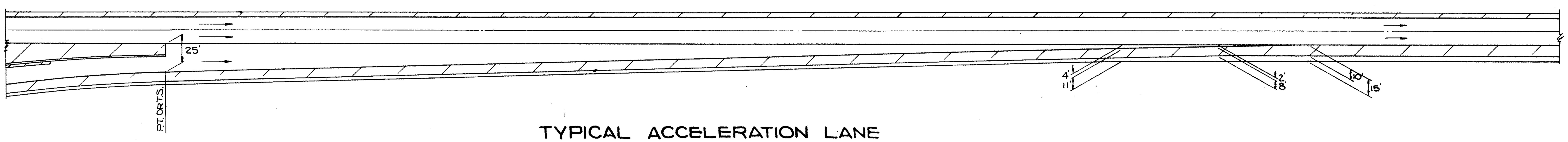


EXIT NOSE DETAIL

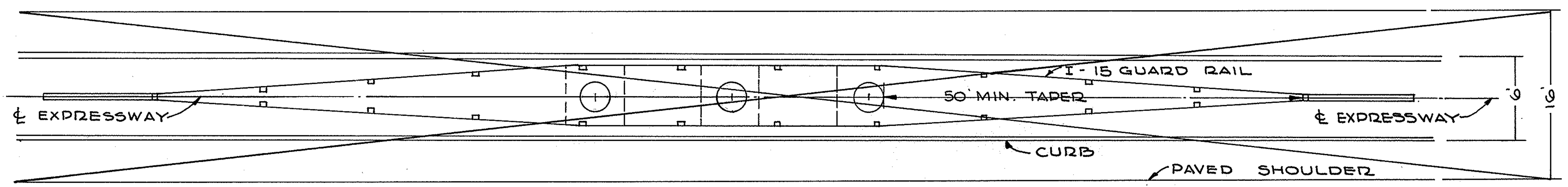
NOTE: TAPER CURB HEIGHTS ON APPROACH ENDS OF CURB FROM 0" TO 6" IN 30'-0".



TYPICAL DECELERATION LANE



TYPICAL ACCELERATION LANE



SEE GR-6

DETAIL PIER PROTECTION

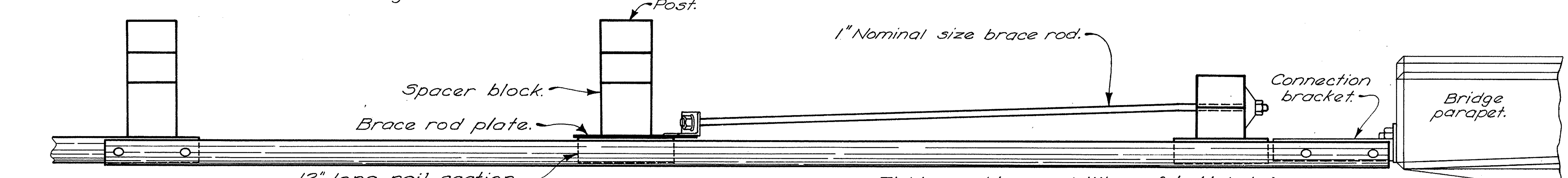
~~PIER PROTECTION,~~
SPEED CHANGE LANES
& RAMP NOSE DETAILS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

41A

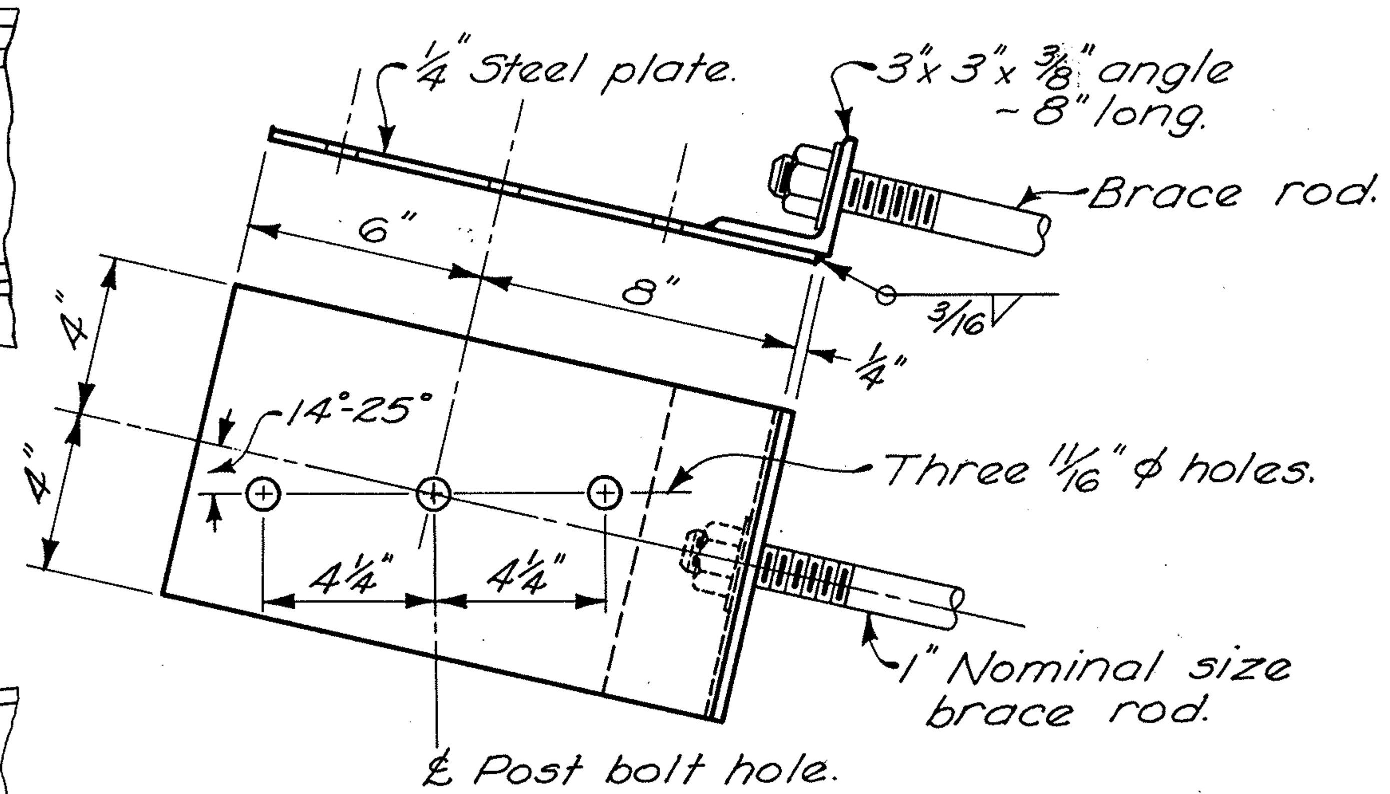
MAH 7- 14.95

Posts may be round or square-sawed wood, or 6B8.5 steel. See Standard Drawing GR-2B.

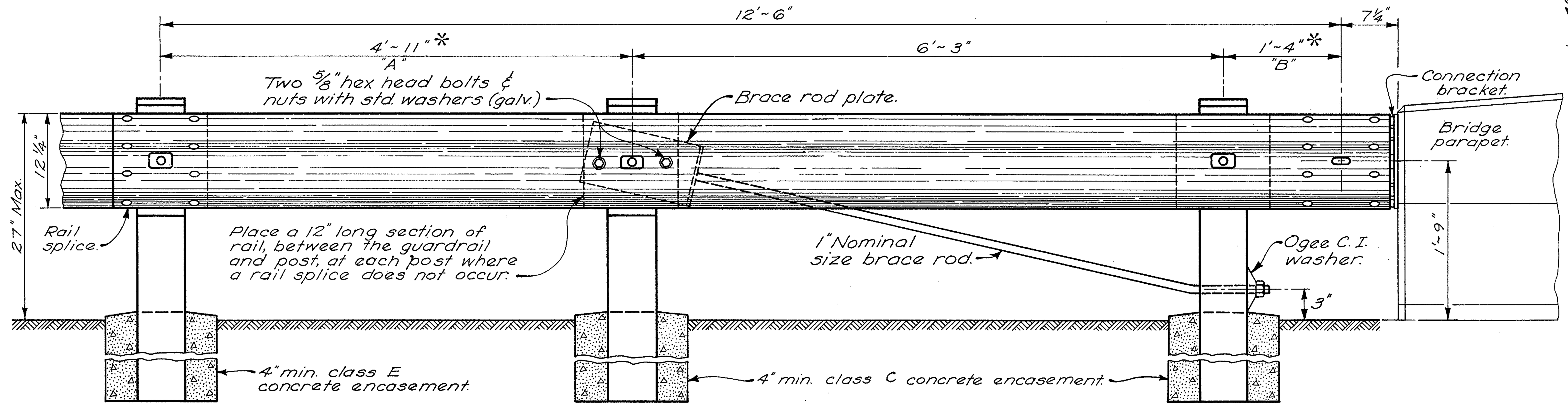


PLAN VIEW

Field punching or drilling of bolt holes for the brace rod assembly shall be accomplished as provided for in 606.04.



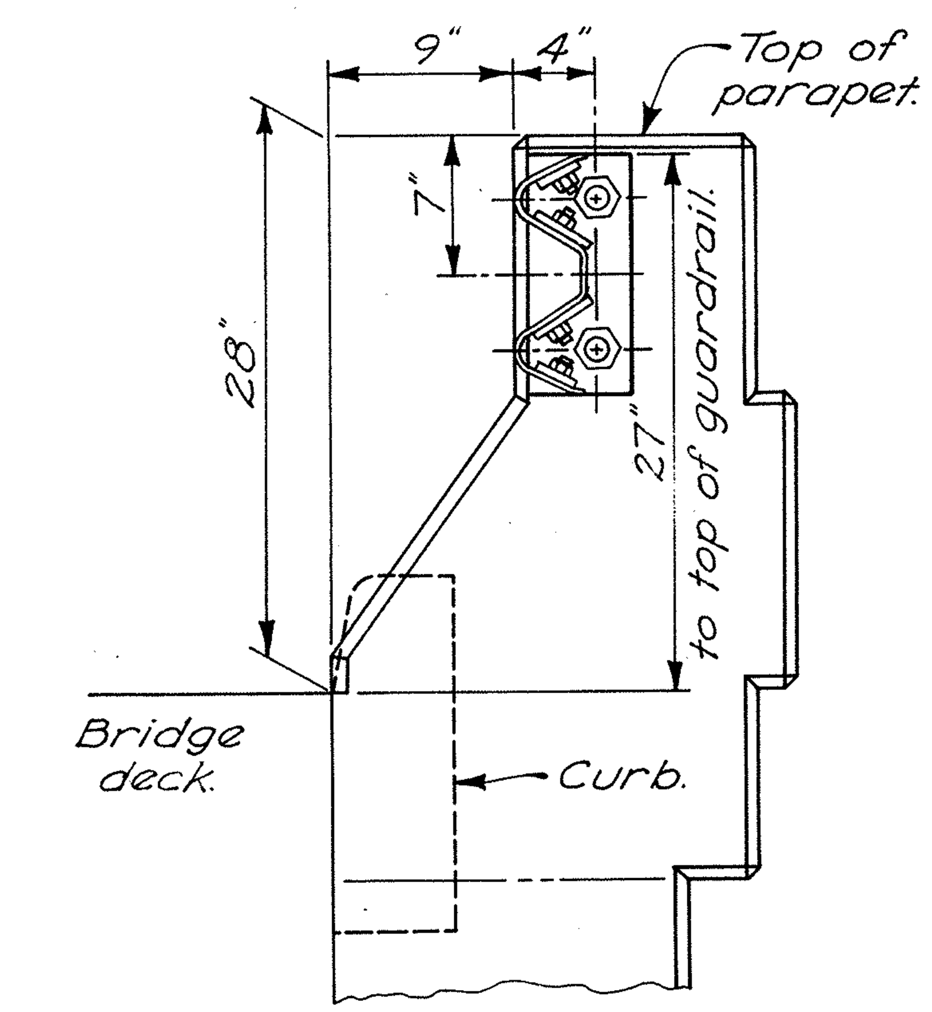
BRACE ROD PLATE



ELEVATION

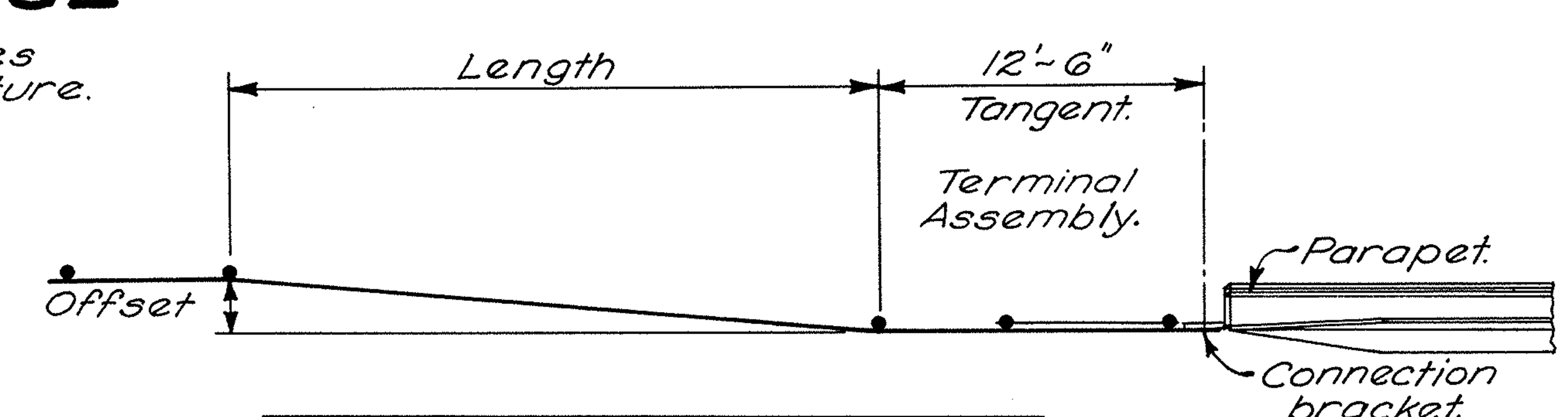
GUARDRAIL TERMINAL AT BRIDGE

* Dimension "A" shall decrease as dimension "B" increases to accommodate interference by the bridge substructure.



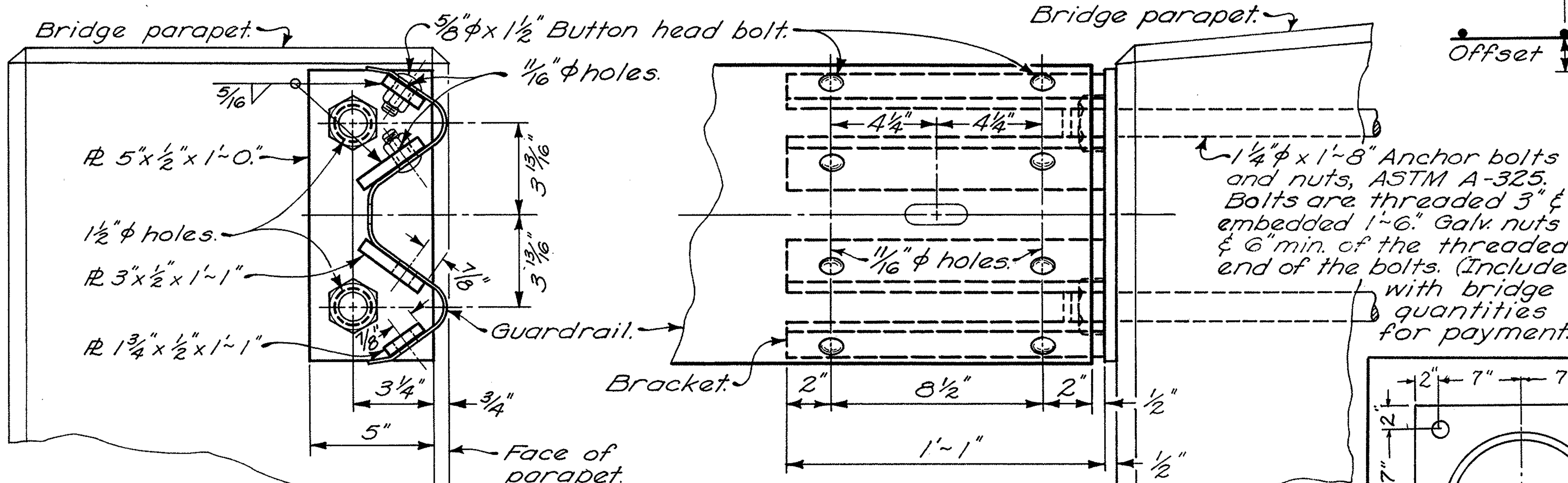
PARAPET APPROACH

For uncurbed approaches, guardrail shall be set 27" above ground line at face of rail. For curbed approaches guardrail shall be located 27" above gutter line and 9" behind the face of curb.



Offset	Length	Offset	Length
1'~0"	25.00'	5'~0"	100.00'
2'~0"	50.00'	6'~0"	100.00'
4'~0"	100.00'	7'~0"	100.00'

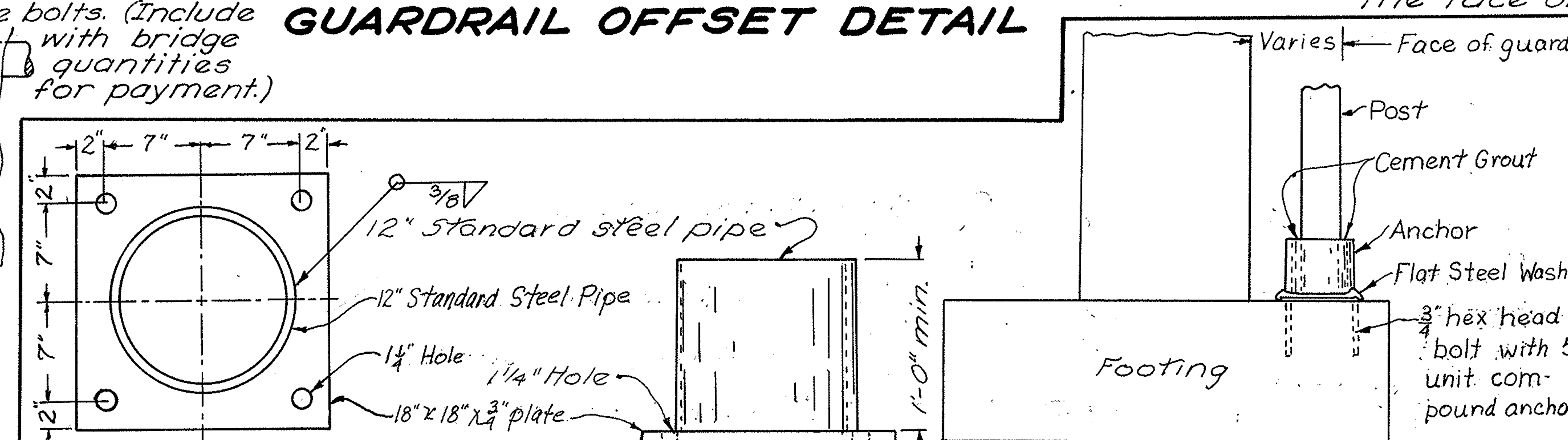
GUARDRAIL OFFSET DETAIL



CONNECTION BRACKET DETAIL

GUARDRAIL ~ BRIDGE CONNECTION

The connection bracket shall be galvanized after welding and shall be included with guardrail for payment.



NOTES

GENERAL — Design details shown hereon shall govern the construction of guard rail at structures and piers unless otherwise shown on the plans.

FOOTING ANCHOR to be used where posts are over footings and less than 3 feet of earth is provided above the top of footing. Cost of anchor bolts, cement grout, etc. is included in cost of guard rail.

Rev. 7-10-68

FOOTING ANCHOR AND BRIDGE TERMINAL ASSEMBLY

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

41 B

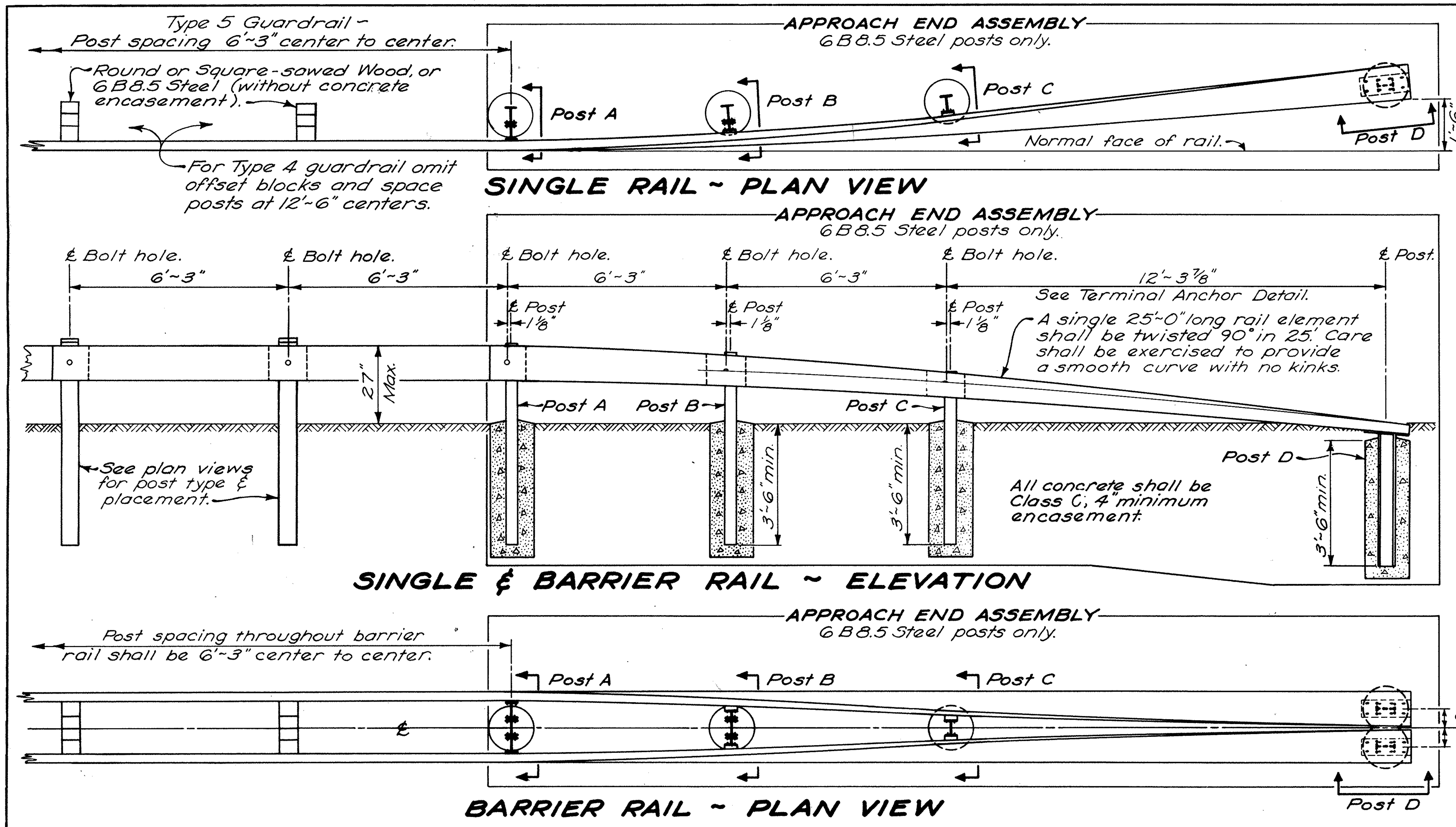
MAH 7-14.95

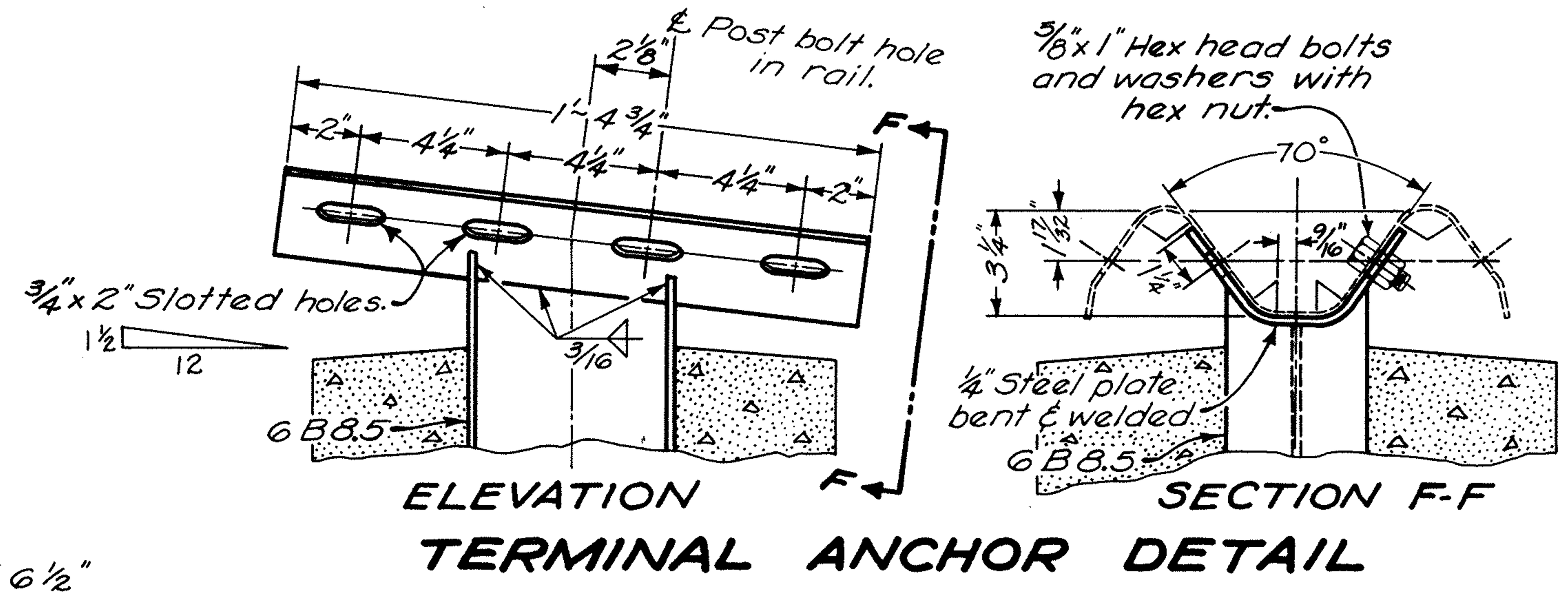
NOTES

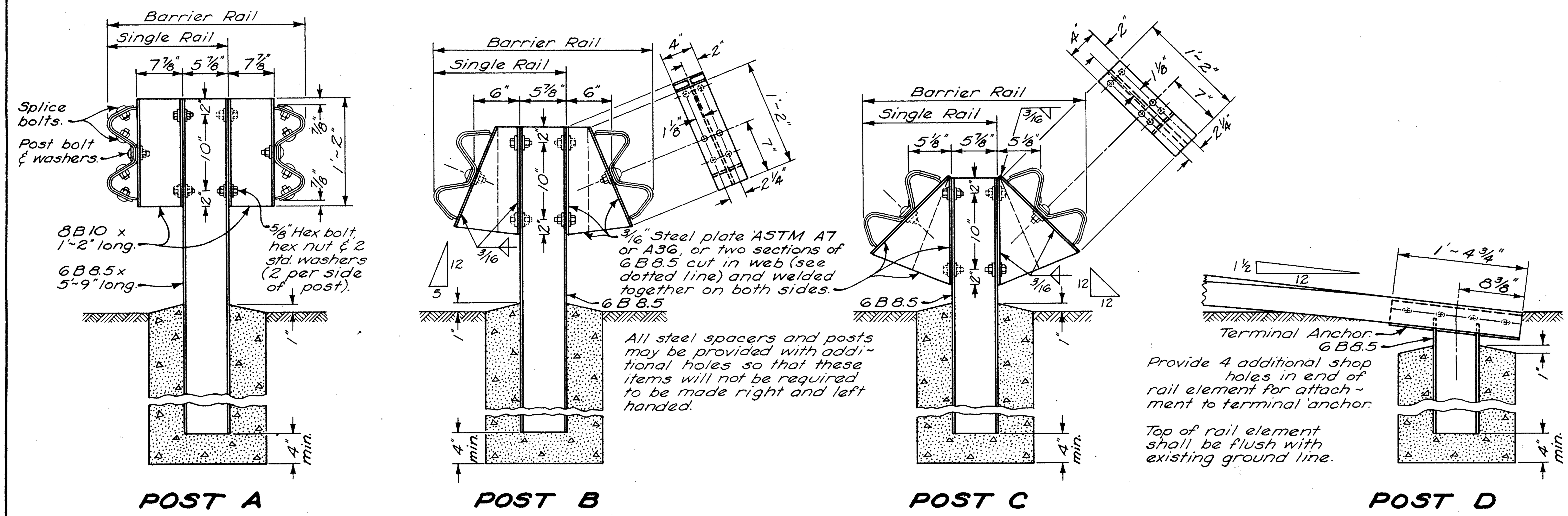
For details not shown, see Standard Drawings GR-2A and GR-2B.

All steel parts shall be galvanized in accordance with ASTM A123, A153 or A525, whichever may apply.

This drawing shall govern where a conflict arises.







GR-4: GUARD RAIL ~ APPROACH END ASSEMBLY

Rev. 2-15-68

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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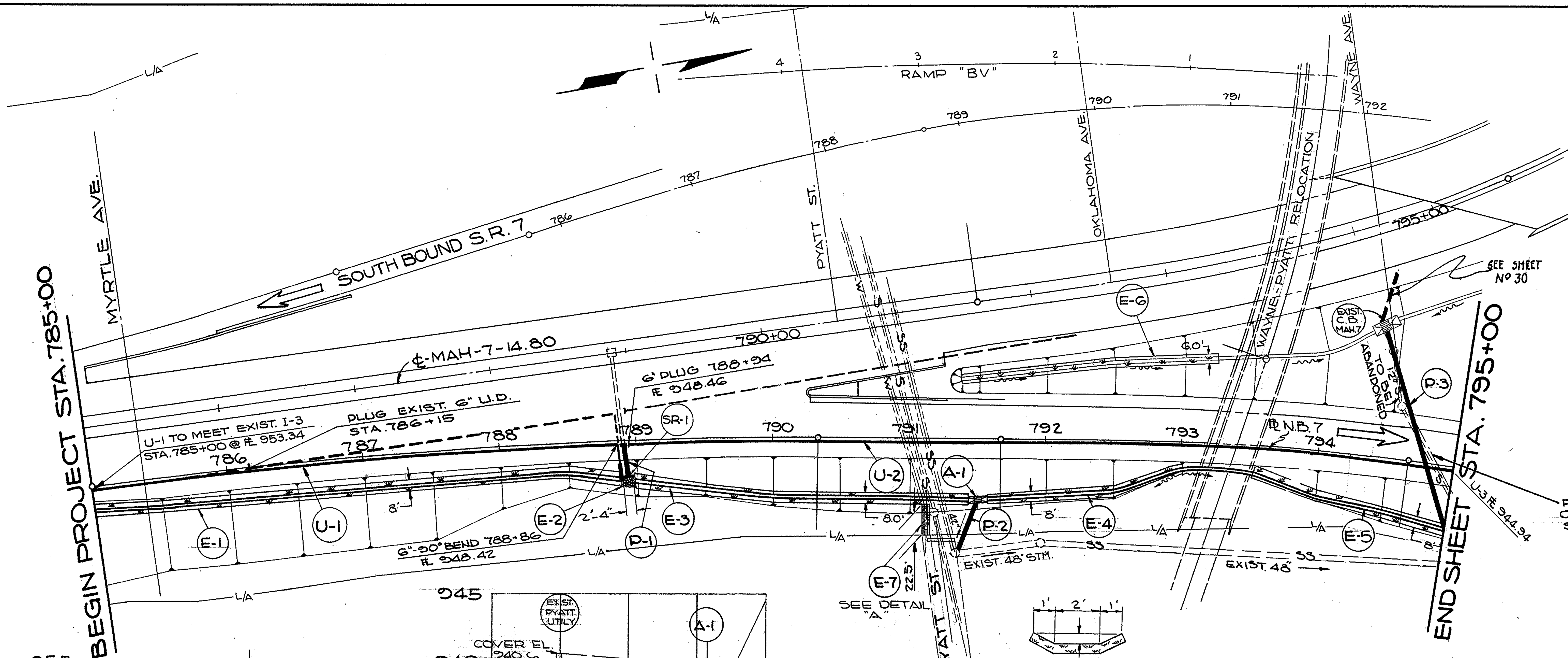
MAH. 7 - 14.95

GENERAL PLAN
DRAINAGE

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U 524 (9)	

MAH. 7-14.95



FOR DISPOSTION & QUANTITIES
OF EXIST. 12" COMB. SEWER
SEE SHEET Nº 59

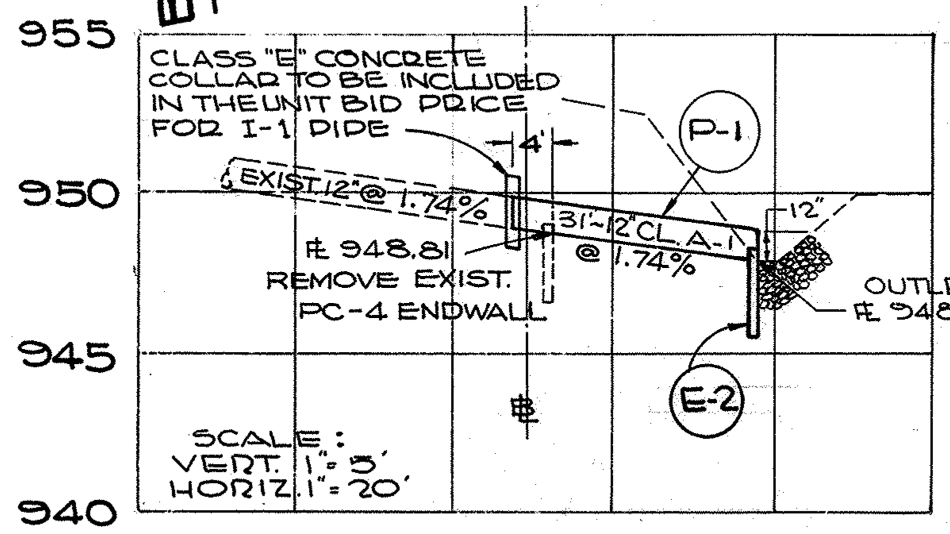
NOTE:
FOR ROADWAY DETAILS & QUANTITIES, NORTHBOUND S.R.7
STA. 785+00 TO STA. 795+00 SEE SHEET Nº 15

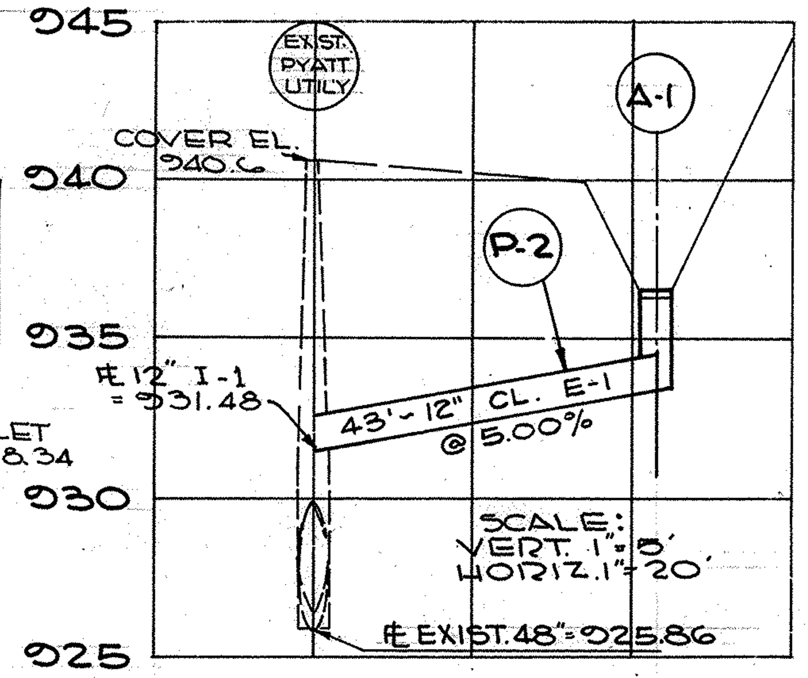
I-1 PIPE (LIN. FT.)											I-5 PIPE SPEC'L
CODE	LOCATION FROM TO	SIDE ℄	CLASS I-3 6" PIPE SHALLOW	CLASS I-3 6" PIPE DEEP	CLASS I-3 6" PIPE UNC.	CLASS F4 OUTLET 8" PIPE M-6.4(c)	CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)	CLASS A-1 12" PIPE M-6.6(c)	CLASS E-1 12" PIPE		CLASS I-3 6"~90° BEND
P-1	788+90 (3' RT. ℄)	RT.					31				
P-2	A-1 EXIST. PYATT UTY	RT.							43		
P-3	794+80 (EXIST. C.B. TO M.H.)	R&L						180			
U-1	785+00 - 788+86			250	150	10					1
U-2	788+94 - 789+50		420		186						
SHEET TOTALS			420	250	336	10	31	180	43		

I-8 CATCH BASINS (EACH)			
CODE	LOCATION	Nº 5 CATCH BASIN	
A-1	791+50 44' RT. ℄ N.B.7	1	
	SHEET TOTALS	1	

S-24 REMOVAL OF EXIST. STRUCTURES			
CODE	LOCATION	HW-E END-WALL	
SR-1	788+92 (3' RT. ℄)	LUMP	
SHEET TOTAL		LUMP	

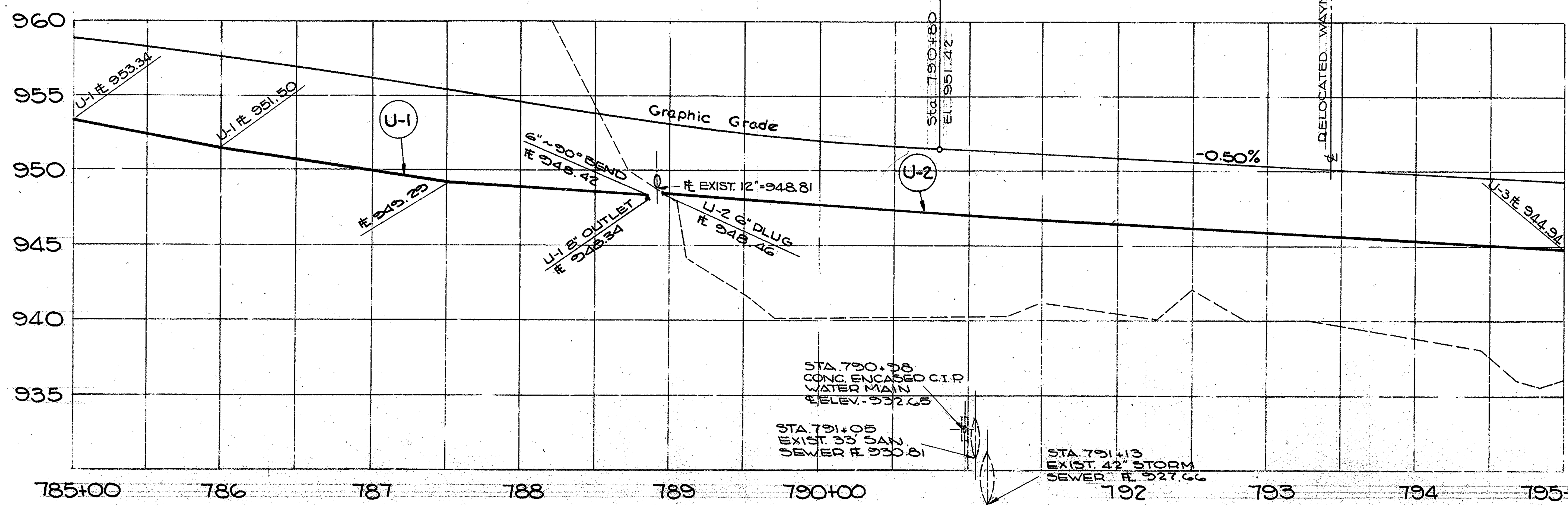
EROSION CONTROL					I-2 MASONRY CU. YDS.	
CODE	LOCATION	L-10 SODDING SQ. YDS.		I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	HEADWALL HW-E 12" PIPE	
E-1	785+00 788+94	349				
E-2	788+94 RT. DITCH			0.78	0.23	
E-3	788+94 791+50	221				
E-4	791+50 793+00	127				
E-5	793+50 795+00	133				
E-6	791+38 793+25	124				
E-7	791+12 RT. ℄	10				
SHEET TOTALS		964		0.78	0.23	

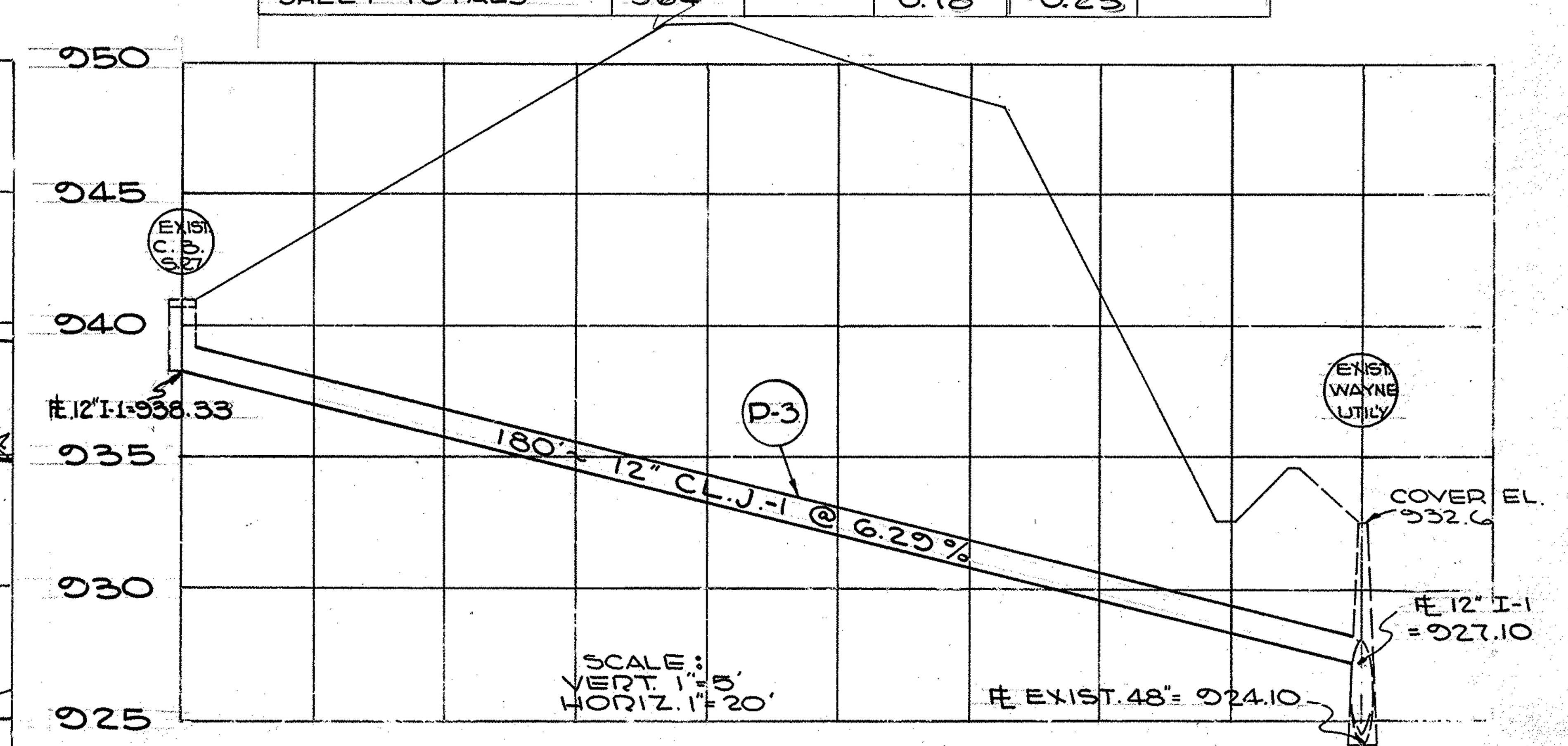




DETAIL "A"

STA. 791+50 (44' RT. ℄ N.B.7)
I-8 Nº 5 CATCH BASIN (MOD.)
GRATE ELEV. = 936.30
℄ 12" I-1 = 933.63

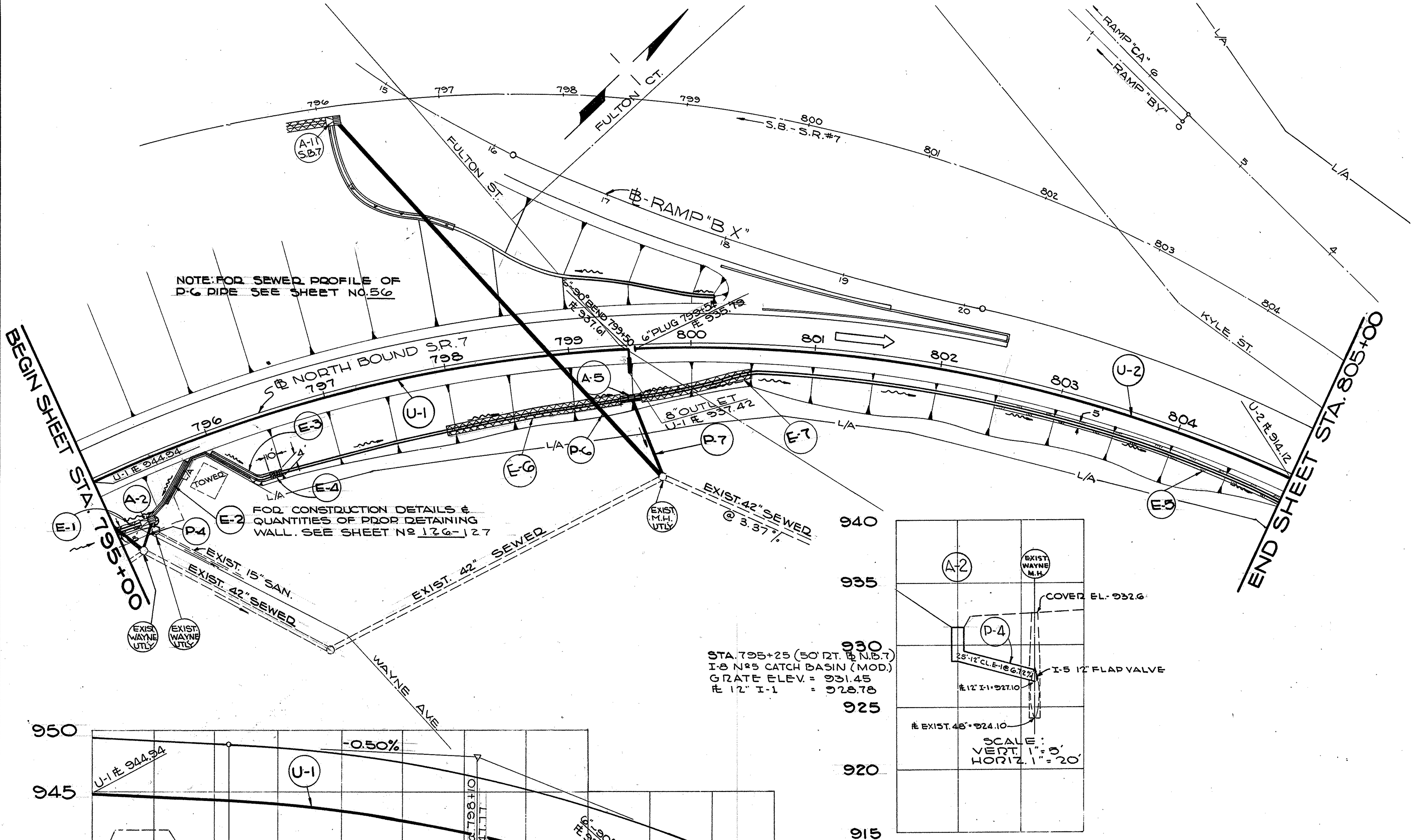


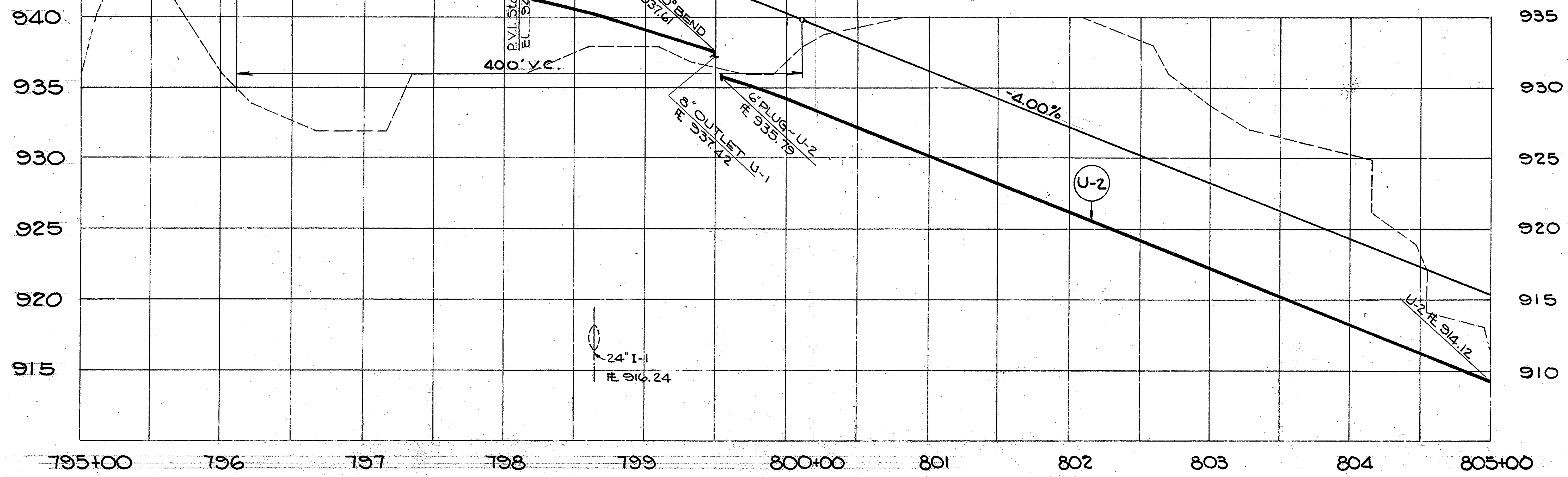


DRAINAGE PLAN
NORTH BOUND S.R. 7
STA. 785+00 TO STA. 795+00

FED. RD.	STATE	PROJECT
2	OHIO	I680-9(11) 238 U-524(9)

MAH. 7-14.95





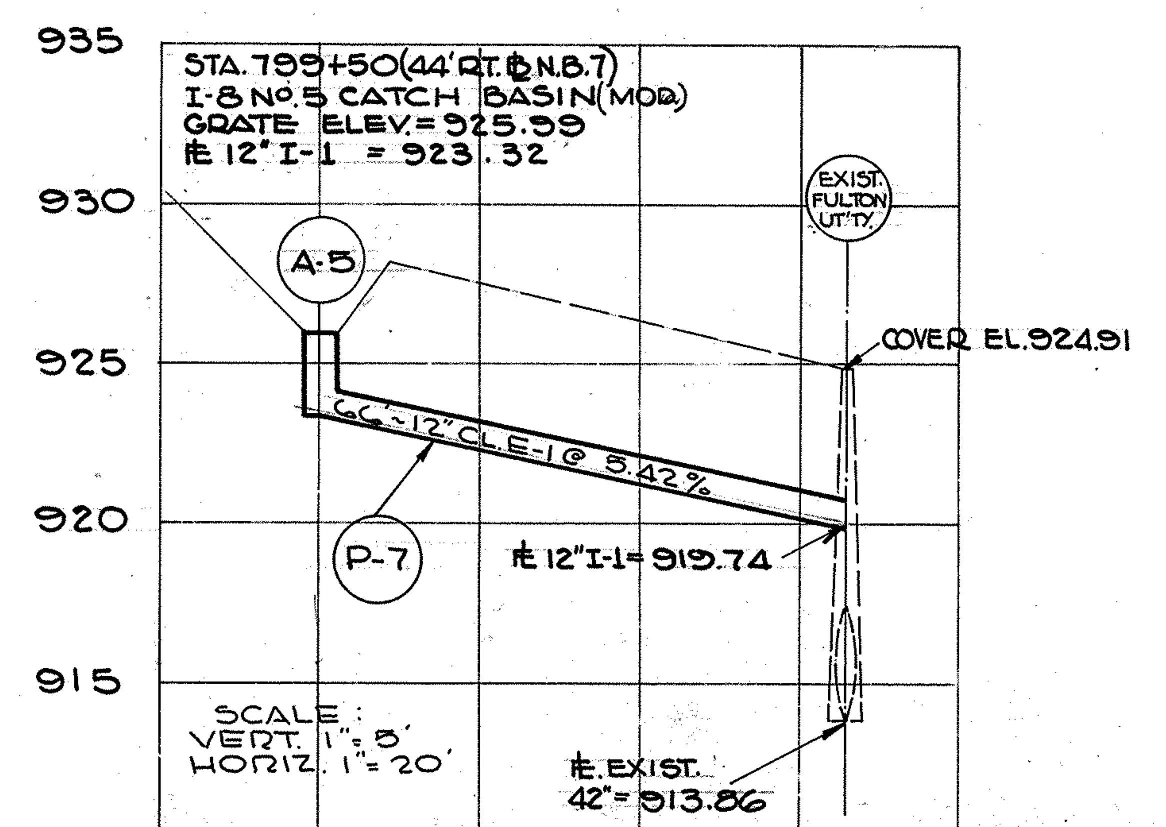
I-1 PIPE (LIN. FT.)									I-5 PIPE SPEC'L	
CODE	LOCATION FROM TO	SIDE ℄	CLASS I-3 6" PIPE SHALLOW	CLASS I-3 6" PIPE DEEP	CLASS F4 8" PIPE OUTLET M-64(c)	CLASS A-1 24" PIPE M-66(d)	CLASS E-1 12" PIPE		CLASS I-3 6"~90° BEND	12" FLAP VALVE EACH
P-4	A-2 - EXIST. M.H.	RT.					25			1
P-6	A-11 - EXIST. M.H.	LT.&RT.				390				
P-7	A-5 - EXIST. M.H.	RT.					66			
U-1	795+00-799+50	RT.	459		10				1	
U-2	799+54-805+00	RT.		546						
SHEET TOTALS			459	546	10	390	91			1

I-8 MANHOLE & CATCH BASIN (EACH)

CODE	LOCATION		Nº5 CATCH BASIN	
A-2	795+50 (50' RT. ℄ N.B.7)		1	
A-5	799+50 (44' RT. ℄ N.B.7)		1	
SHEET TOTALS			2	

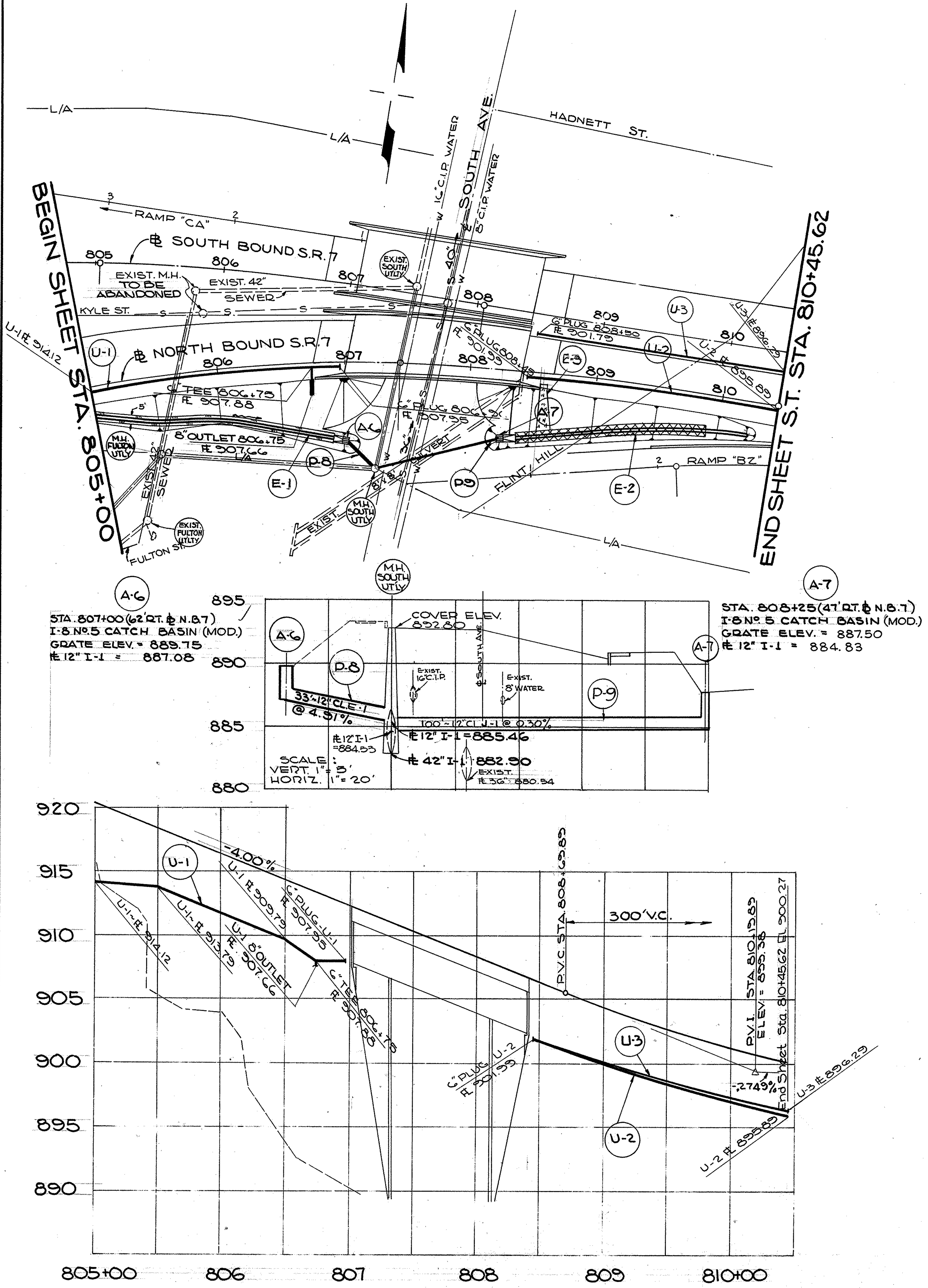
EROSION CONTROL

CODE	LOCATION	L-10 SODDING SQ. YDS.	L-120 JUTE MATTING SQ. YDS.	I-14 PAVED GUTTER TYPE 1 (MODIFIED) LIN. FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	
E-1	795+00 A-2	16				
E-2	A-2 795+78	12		45		
E-3	795+98 796+40	14		58		
E-4	796+40 796+50				2.22	
E-5	802+50 805+00	139				
E-6	797+93 A-5		133			
E-7	A-5 800+50		89			
SHEET TOTALS		181	222	103	2.22	



NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF NORTHBOUND S.R. 7 STA. 795+00 TO STA. 805+00 SEE SHEET Nº 16

DRAINAGE PLAN
NORTH BOUND S.R. 7
STA. 795+00 TO STA. 805+00



I-1 PIPE (LIN. FT.)									I-5 PIPE SPECIAL	
CODE	LOCATION FROM	TO	SIDE ℄	CLASS I-3 6" PIPE SHALLOW	CLASS I-3 6" PIPE UNC.	CLASS F4 8" PIPE OUTLET M-6.4(c)	CLASS E-1 12" PIPE	CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)	CLASS I-3 6" TEE	
P-8	A-6	M.H. SOUTH UTY	RT.				33			
P-9	A-7	M.H. SOUTH UTY	RT.					100		
U-1	805+00	806+96	RT.	100	108	10			1	
U-2	808+45	810+45.62	RT.	201						
U-3	808+50	810+45.62	LT	196						
SHEET TOTALS				497	108	10	33	100		

I-8 CATCH BASINS (EACH)					
CODE	LOCATION	Nº 5 CATCH BASIN			
A-6	807+00 N.B. ℄ 62' RT.	1			
A-7	808+25 47' RT. ℄ N.B. 7	1			
SHEET TOTALS		2			

EROSION CONTROL				
CODE	LOCATION	L-10 SODDING SQ. YDS.	L-120 JUTE MATTING SQ. YDS.	L-10 SODDING FOR SPEC. SLOPE & BERM PROT. SQ. YDS.
E-1	805+00 A-6	107		
E-2	808+32-809+90		133	
E-3	808+70			43
SHEET TOTALS		107	133	43

FOR CONSTRUCTION DETAILS OF L-10 SOD SPECIAL BERM PROTECTION.
SEE ~~SHEET Nº [illegible]~~ Std Dwg MC-7

NOTE:
FOR ROADWAY QUANTITIES & DETAILS OF NORTHBOUND S.R. 7 STA. 805+00 TO STA. 810+45.62 SEE SHEET Nº 17

DRAINAGE PLAN
NORTH BOUND S.R. 7
STA. 805+00 TO STA. 810+45.62

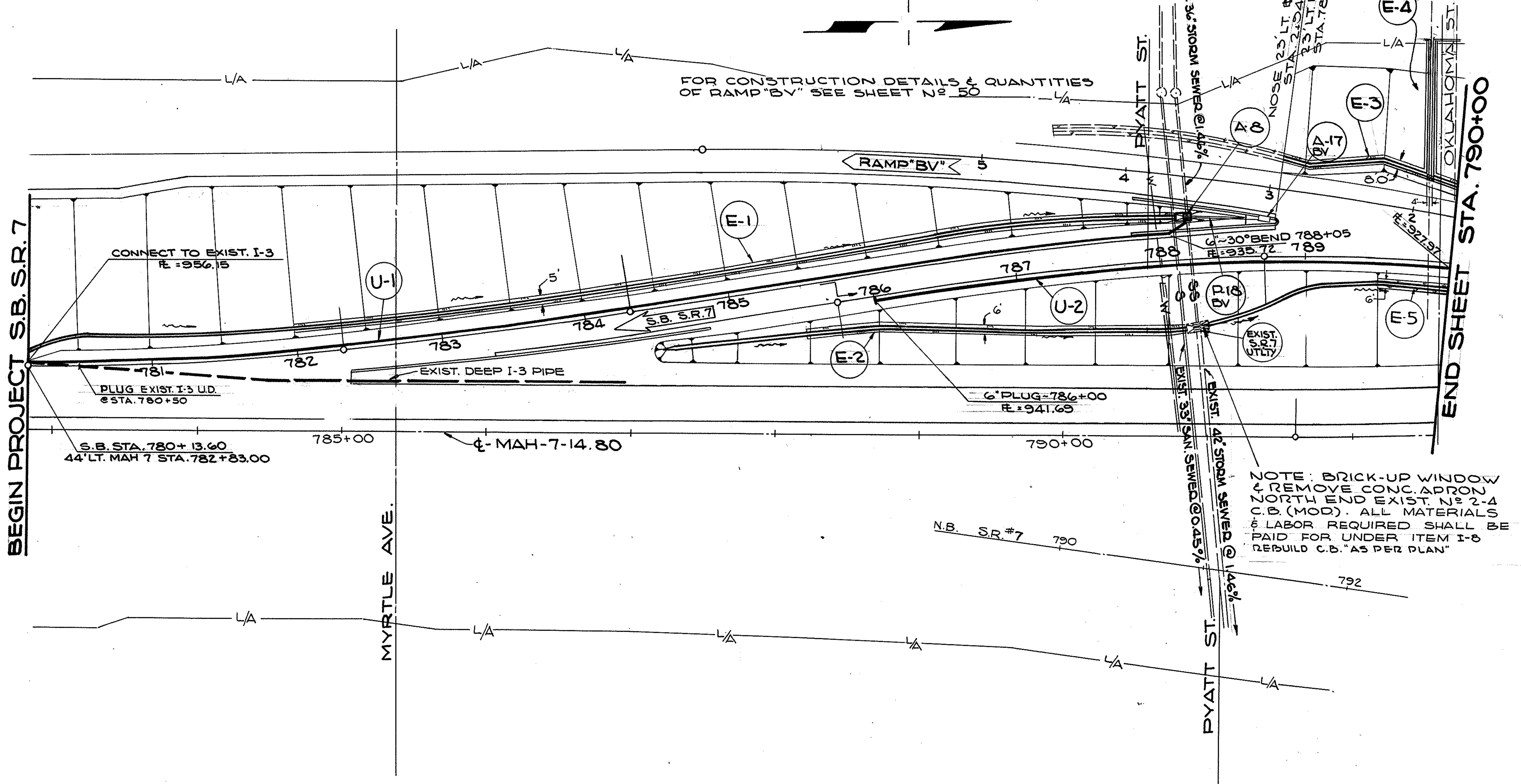
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

NOTE: FOR QUANTITIES & CONSTRUCTION DETAILS OF ITEMS MARKED THUS (A-17 BV) (P-18 BV) SEE SHEET Nº 50

MAH. 7-14.95

NOTE: FOR BACK SLOPE CONSTRUCTION DETAIL SEE SHEET Nº 66

FOR CONSTRUCTION DETAILS & QUANTITIES OF RAMP "BV" SEE SHEET Nº 50

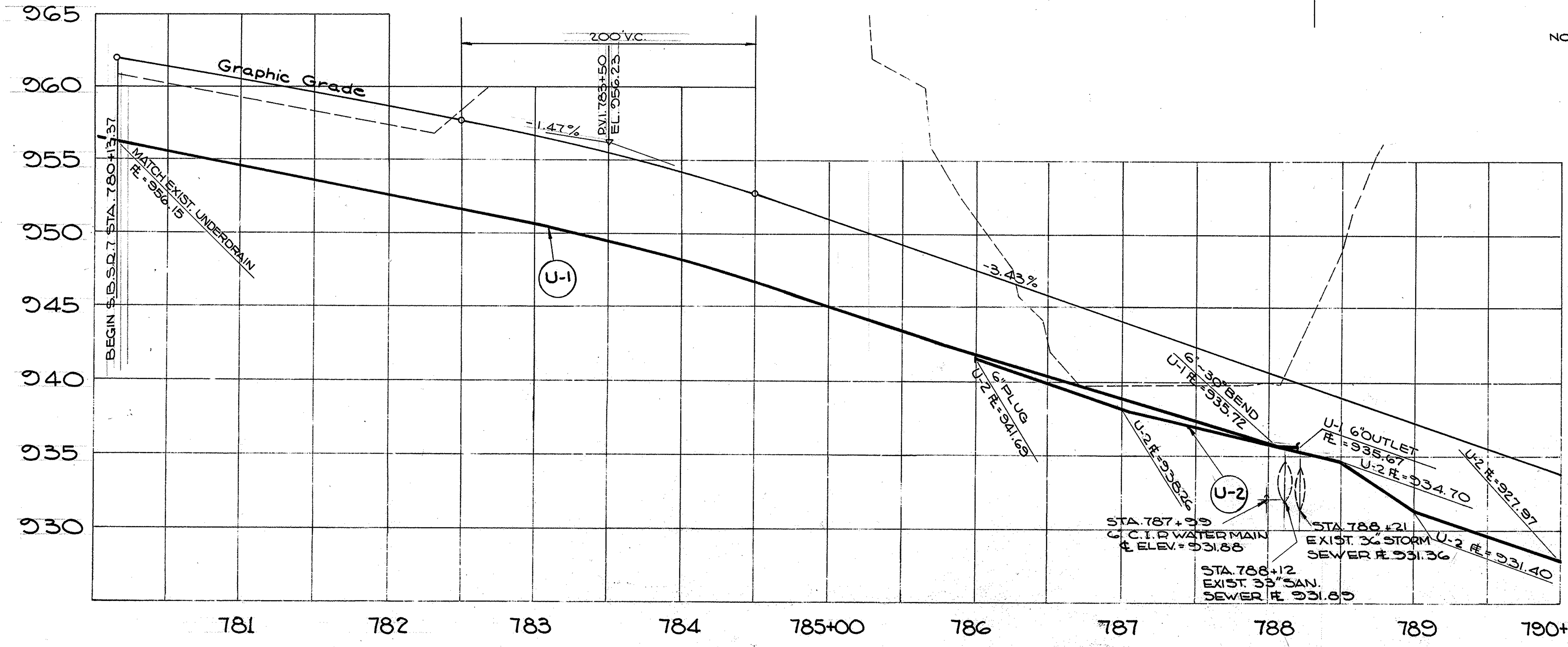


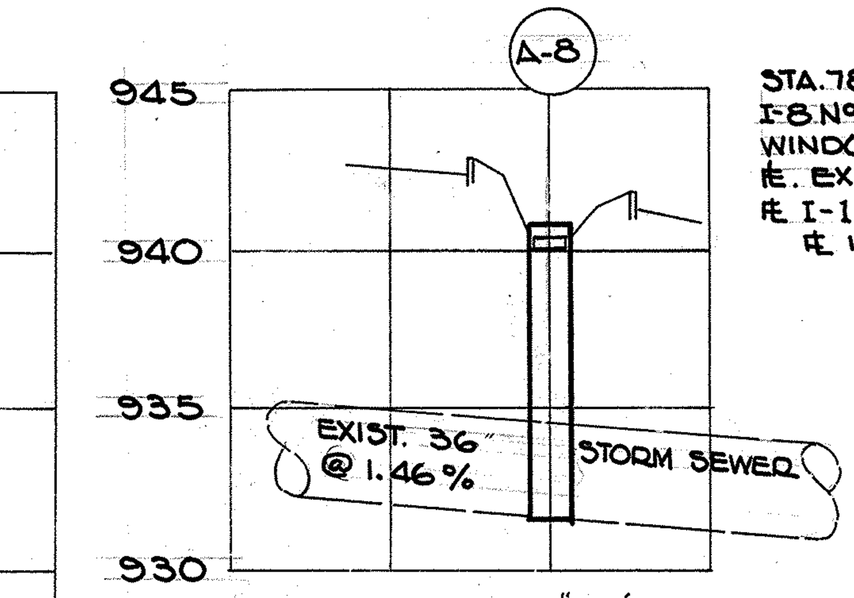
CODE	I-1 PIPE (LIN. FT.) LOCATION FROM	TO	SIDE ℄	CLASS I-3 6" PIPE UNC.	CLASS I-3 6" PIPE DEEP	CLASS F-4 OUTLET 6" PIPE	I-5 PIPE SPEC. CLASS I-3 6"-30° BEND	
U-1	780+13.60	788+20	LT.	8	792	10	1	
U-2	786+00	790+00	RT.	200	200			
	SHEET TOTALS			208	992	10		

CODE	I-8 CATCH-BASINS (EACH) LOCATION	Nº 2-4 CATCH-BASIN (MODIFIED)	REBUILD CATCH-BASIN "AS PER PLAN"
A-8	788+20 (28' LT. ℄)	1	
EXIST. S.R. 7 UTILITY	788+25 (47' RT. ℄)		1
	SHEET TOTALS	1	1

CODE	EROSION CONTROL LOCATION	L-10 SODDING SQ. YDS.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	I-14 TYPE 3 (MOD.) PAVED GUTTER LIN. FT.
E-1	782+00 A-8	341		
E-2	785+50 EXIST. C.B.	177		
E-3	788+79.18 790+00	108		
E-4	789+85 LT. ℄	32	1.33	95
E-5	789+50 790+00	33		
	SHEET TOTALS	691	1.33	95

NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF SOUTHBOUND S.R. 7 STA. 780 + 13.60 TO STA. 790 + 00 SEE SHEET Nº 18





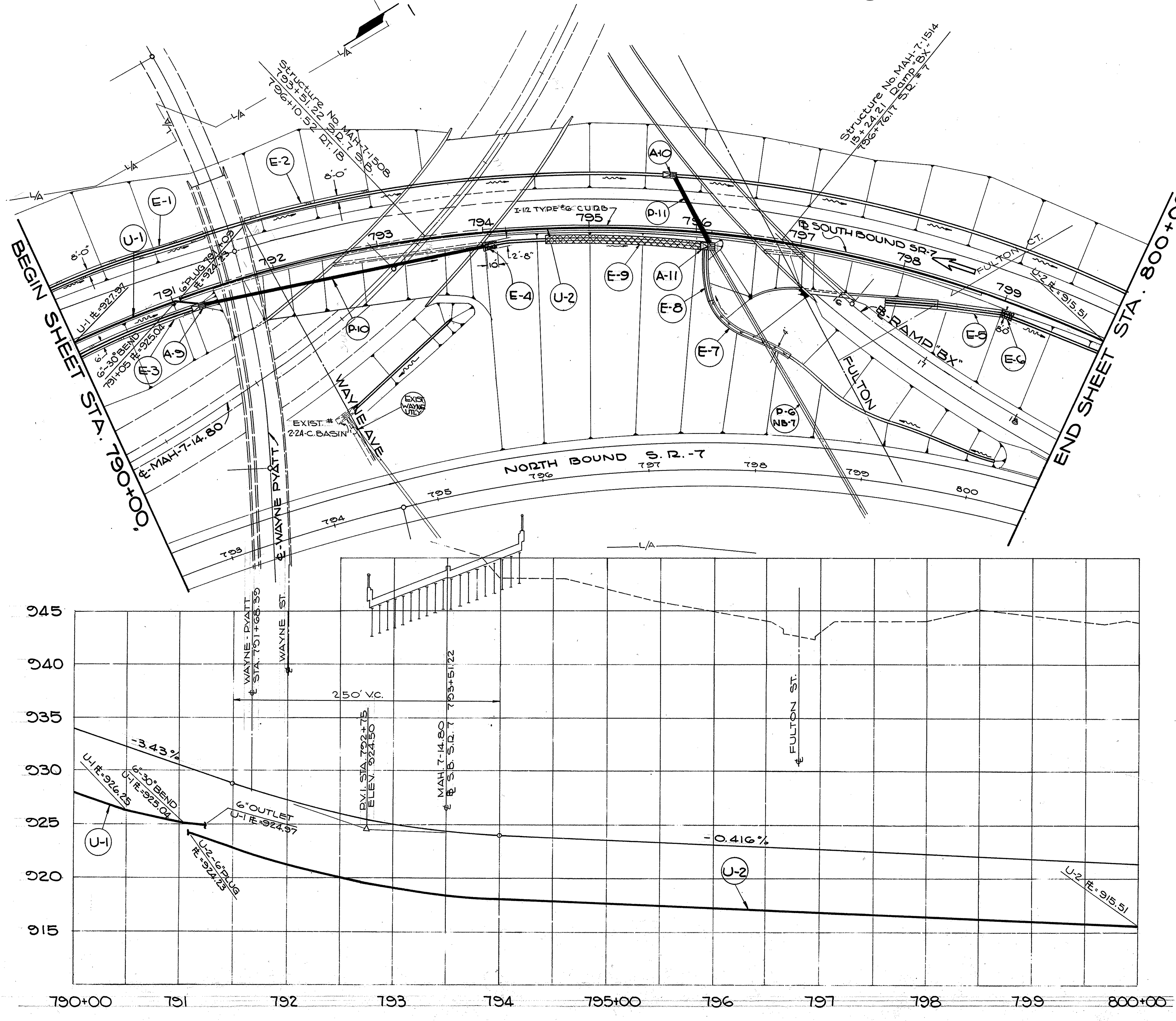
STA. 788+20 (28' LT. ℄ S.R. 7)
I-8 Nº 2-4 C.B. (MODIFIED)
WINDOW ELEV. = 940.46
FL EXIST. 36" = 931.76
FL I-1 6" = 935.67
FL 12" I-1 = 934.26

SCALE: VERT. 1" = 5'
HORIZ. 1" = 20'

DRAINAGE PLAN
SOUTH BOUND S.R. 7
STA. 780+13.60 TO STA. 790+00

NOTE:
FOR PROFILES & CONSTRUCTION DETAILS P-10, & P-11. SEE SHEET Nº 56

FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (P-6 NB-7) SEE SHEET Nº 44.



I-1 PIPE			(LIN. FT.)						I-5 PIPE SPEC.	
CODE	LOCATION FROM TO	SIDE ℄	CLASS I-3 6" PIPE UNC.	CLASS I-3 6" PIPE DEEP	CLASS F4 OUTLET 6" PIPE	CLASS E-1 15" PIPE	CLASS J-1 18" PIPE M-6.6(a) M-6.8(b)		CLASS I-3 6"-30° BEND	
P-10	A-9 794+00	RT.				271				
P-11	A-10 A-11	LT.&RT.					76			
U-1	790+00 A-9	RT.	68	50	10				1	
U-2	791+09 800+00	RT.		891						
SHEET TOTALS			68	941	10	271	76			

I-8 CATCH BASINS (EACH)			
CODE	LOCATION	Nº 5 CATCH BASIN	
A-9	791+25 (16' RT. ℄)	1	
A-10	795+75 (46' LT. ℄)	1	
A-11	796+15 (15' RT. ℄)	1	
SHEET TOTALS		3	

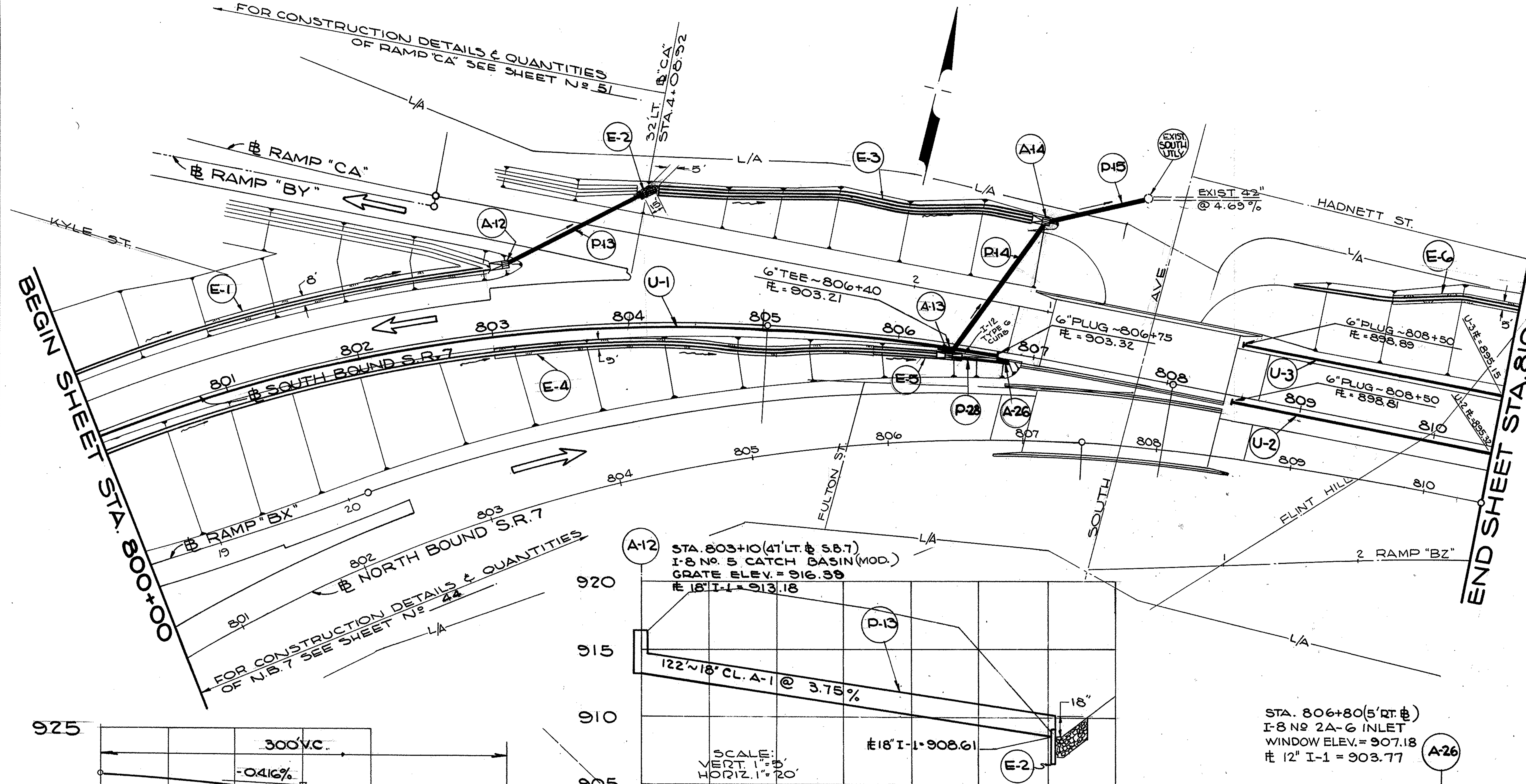
EROSION CONTROL							I-2 MASONRY CU. YDS.	
CODE	LOCATION	L-10 SODDING SQ. YDS.	I-14 PAVED GUTTER LIN. FT. TYPE 1		I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	L-120 JUTE MATTING SQ. YDS.	HEADWALL HW-E 15" PIPE	
E-1	790+00 791+46	130						
E-2	791+85 793+00	102						
E-3	790+00 A-9	79						
E-4	794+00 794+10				1.48		0.26	
E-5	797+90 799+00	18	110					
E-6	799+00 799+10				4.4			
E-7	BX STA. 15+15 - 16+00	38						
E-8	A-11 - BX STA. 15+15	17	50					
E-9	794+58 - A-11					133		
SHEET TOTALS		384	160		5.88	133	0.26	

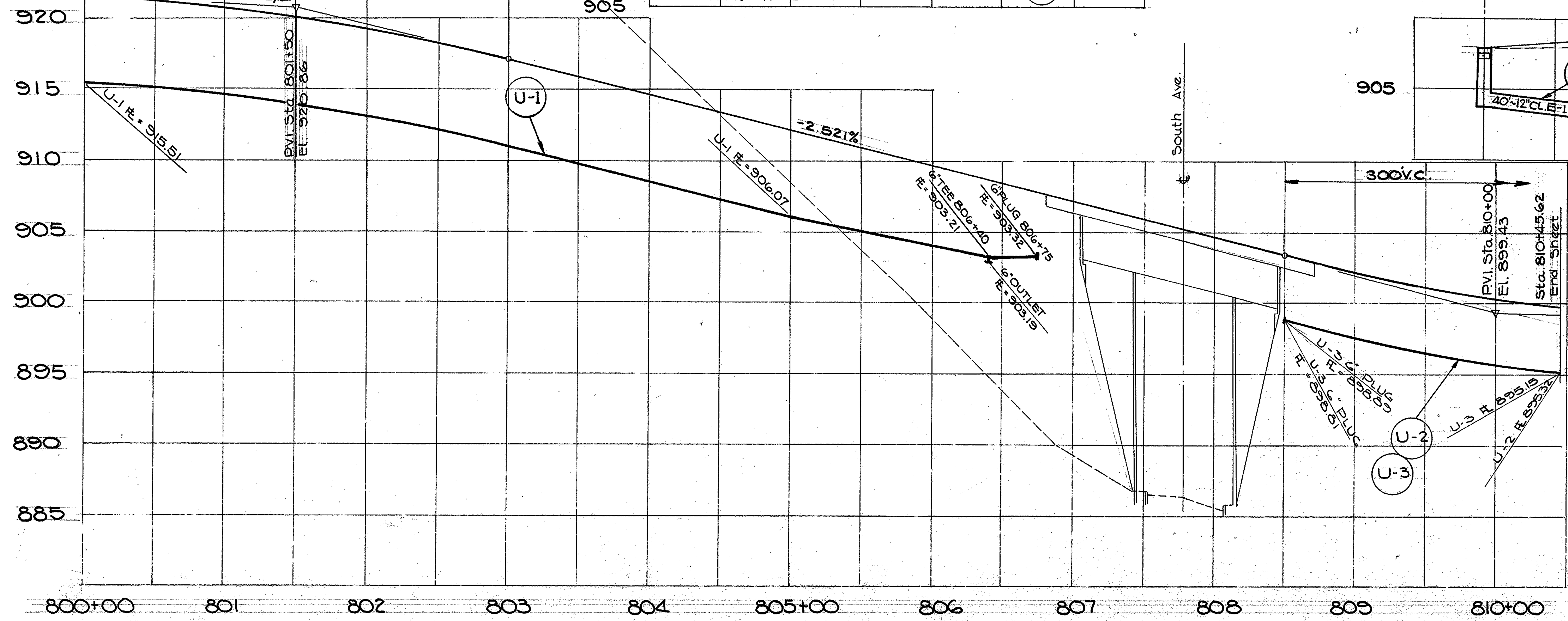
NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF SOUTHBOUND S.R. 7 STA. 790+00 TO STA. 800+00 SEE SHEET Nº 19

DRAINAGE PLAN
SOUTH BOUND S.R. 7
STA. 790+00 TO STA. 800+00

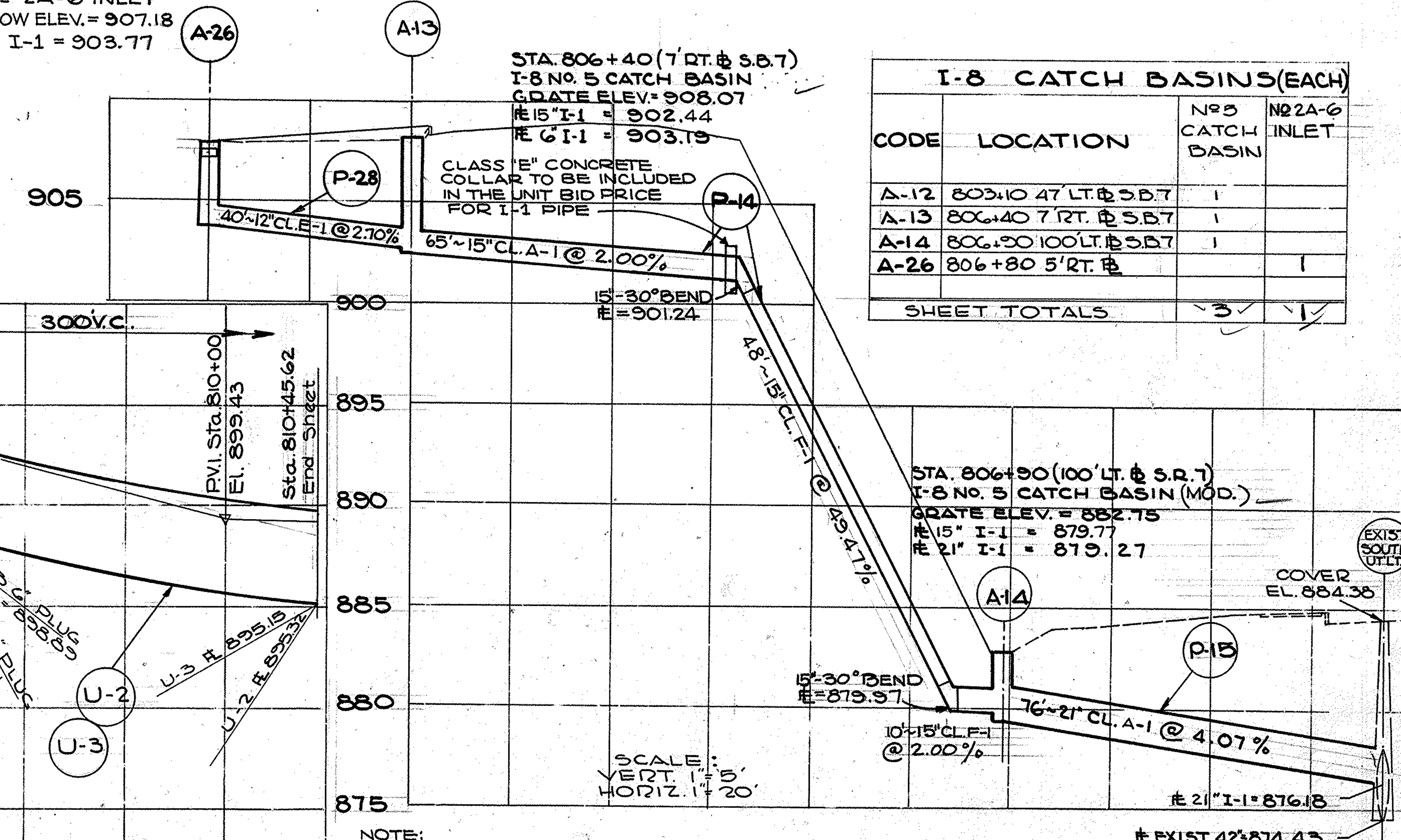
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7-14.95





STA. 806+80 (5' RT. ℄)
I-8 No 2A-6 INLET
WINDOW ELEV. = 907.18
℄ 12" I-1 = 903.77



CODE	LOCATION FROM	LOCATION TO	SIDE ℄	I-1 PIPE (LIN. FT.) CLASS I-3 6" PIPE LIN. FT. UNC.	CLASS I-3 6" PIPE LIN. FT. DEEP	CLASS F4 OUTLET 6" PIPE	CLASS F4 15" PIPE M-6.4(c)	CLASS J-1 M-6.6(a), M-6.8(b) 15" PIPE	CLASS J-1 18" PIPE	CLASS J-1 21" PIPE		CLASS E-1 12" PIPE	I-5 PIPE SPEC. CLASS I-3 6" TEE	I-5 PIPE SPEC. CLASS F4 15"~30° BEND
P-13	A-12	LT. SIDE DITCH	LT.						122					
P-14	A-13	A-14	LT.&RT.				58	65						2
P-15	A-14	EXIST. M.H.	LT.							76				
P-28	A-26	A-13	RT.									40		
U-1	800+00	806+75	RT.	175	500	4							1	
U-2	808+50	810+45.62	RT.	196										
U-3	808+50	810+45.62	LT.	196										
SHEET TOTALS				567	500	4	58	65	122	76		40		

CODE	LOCATION		EROSION CONTROL L-10 SODDING SQ. YDS.	I-14 PAVED GUTTER TYPE 1 LIN. FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	I-2 MASONRY CU. YDS. HEADWALL HW-E 18" PIPE	
E-1	801+00	A-12	187				
E-2	804+12	804+27			4.17	0.30	
E-3	804+27	A-14	85	256			
E-4	803+00	805+85	285				
E-5	805+85	A-13	16	48			
E-6	809+50	810+45.62	54				
SHEET TOTALS			627	304	4.17	0.30	

CODE	LOCATION	I-8 CATCH BASINS (EACH) No 5 CATCH BASIN	No 2A-6 INLET
A-12	803+10 47' LT. ℄ S.R. 7	1	
A-13	806+40 7' RT. ℄ S.R. 7	1	
A-14	806+90 100' LT. ℄ S.R. 7	1	
A-26	806+80 5' RT. ℄		1
SHEET TOTALS		3	1

NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF SOUTHBOUND S.R. 7 STA. 800+00 TO STA. 810+45.62 SEE SHEET No 20

DRAINAGE PLAN
SOUTH BOUND S.R. 7
STA. 800+00 TO STA. 810+45.62

MAH. 7-14.95

EROSION CONTROL

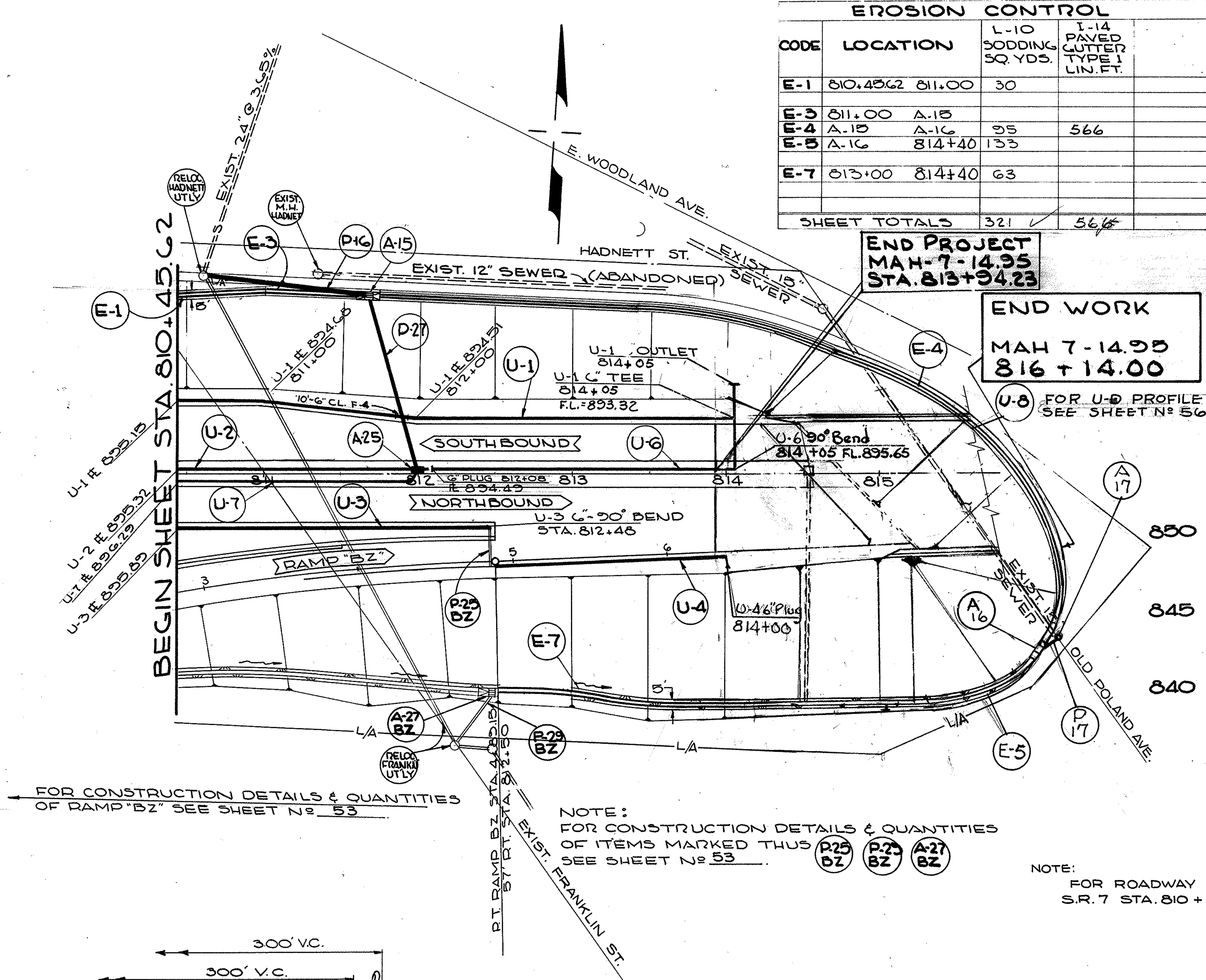
CODE	LOCATION		L-10 SODDING SQ. YDS.	I-14 PAVED GUTTER TYPE 1 LIN. FT.			
E-1	810+45.62	811+00	30				
E-3	811+00	A-15					
E-4	A-15	A-16	95	566			
E-5	A-16	814+40	133				
E-7	813+00	814+40	63				
SHEET TOTALS			321	566			

I-8 CATCH BASINS & INLETS (EACH)

CODE	LOCATION	Nº 5 CATCH BASIN		Nº 2-8 INLET MODIFIED	STD. NO 1 M.H.
A-15	811+68 (117.46' LT. ℄)	1			
A-16	815+ (33' RT. ℄)	1			
A-25	812+00 (℄ N.B. & S.B. 7)			1	
A-17	SEE DETAIL BELOW				1
SHEET TOTALS		2		1	1

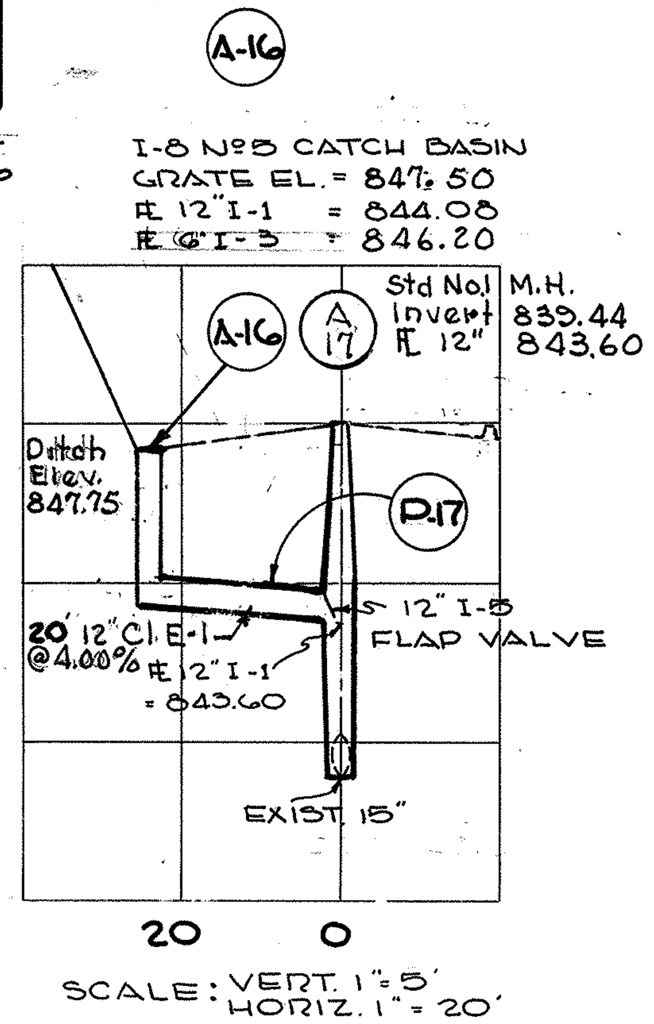
I-1 PIPE SEWER (LIN. FT.) / I-5 PIPE SPECIALS ( )

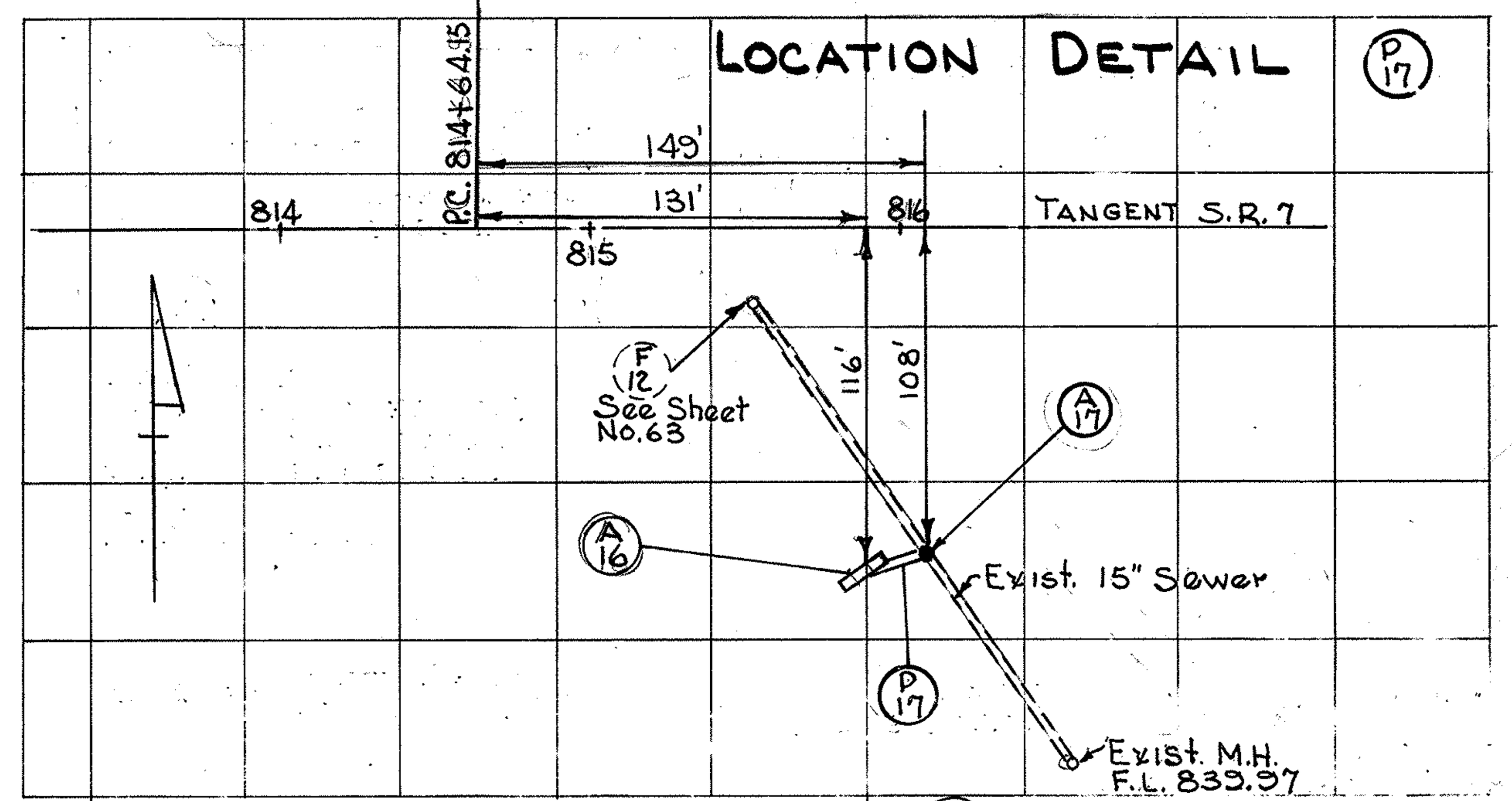
CODE	LOCATION FROM	TO	SIDE ℄	CLASS I-3 6" PIPE SHALLOW	CLASS I-3 6" PIPE UNC.	CLASS F-4 OUTLET PIPE 6"	CLASS F-4 OUTLET PIPE 8" M-6.4(c)	CLASS F-4 12" PIPE (M-6.4(c))	CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)	CLASS E-1 12" PIPE	CLASS E-1 12" PIPE M-6.6(b) M-6.8(b)	CLASS I-3 6" TEE	CLASS I-3 6"-90° BEND	CLASS F4 12" BEND 35°	FLAP VALVE 12"
P-16	A-15	M.H. HADNETT UTY	LT.								128				1
P-17	A-16	A-17	RT.							20					1
P-27	A-25	A-15	LT.					82	52					.2	
U-1	810+45.62	814+05	LT.	150	232	10	10					1			
U-2	810+45.62	A-25	℄	144		10									
U-3	810+45.62	812+48	RT.		202								1		
U-4	812+50	814+00	RT.		150	10									
U-6	812+08	814+05	℄	230											
U-7	810+45.62	A-25	℄		144	10									
U-8	815+30	A-16	L&R		180	10									
SHEET TOTALS				524	908	50	10	82	52	20	128				2

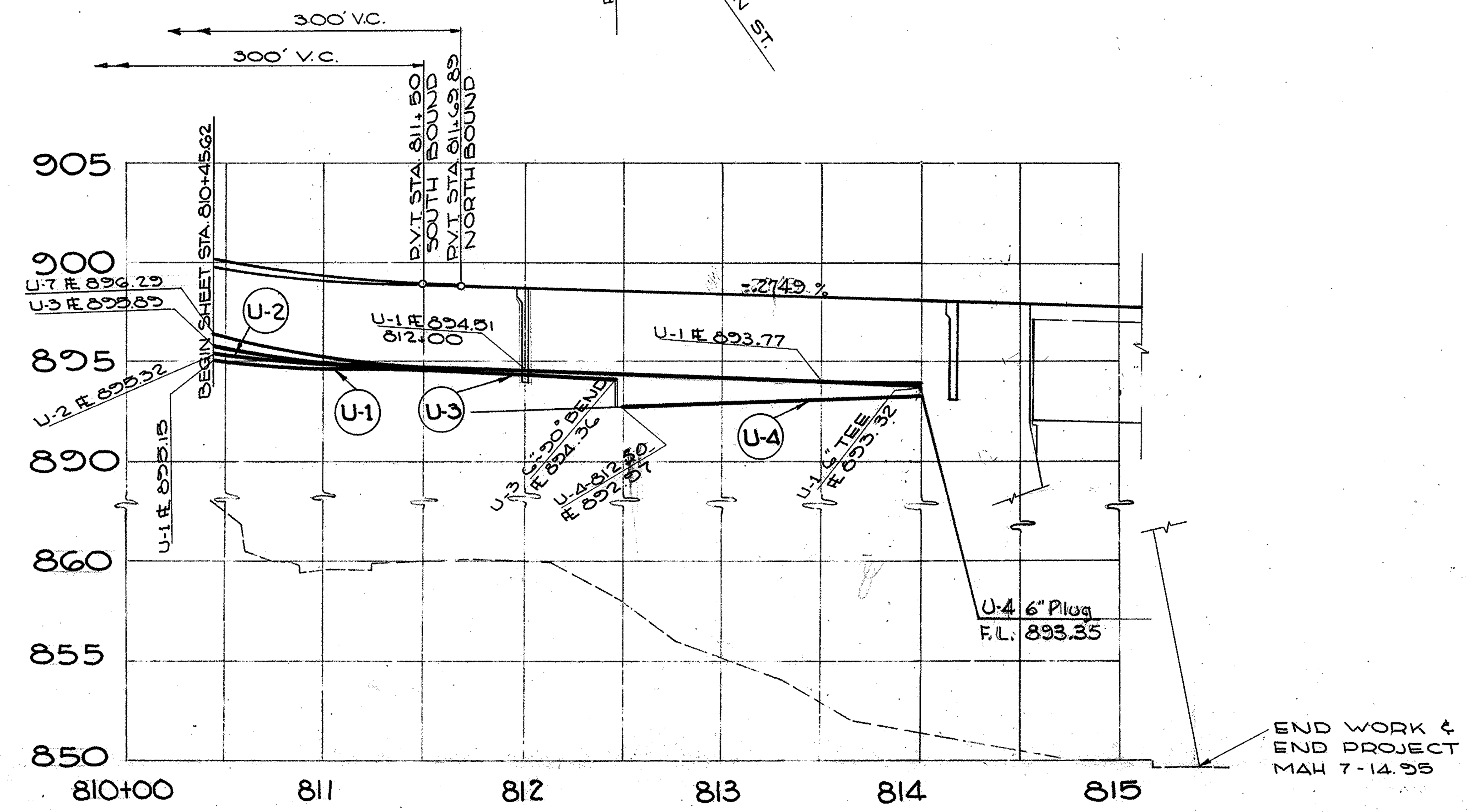


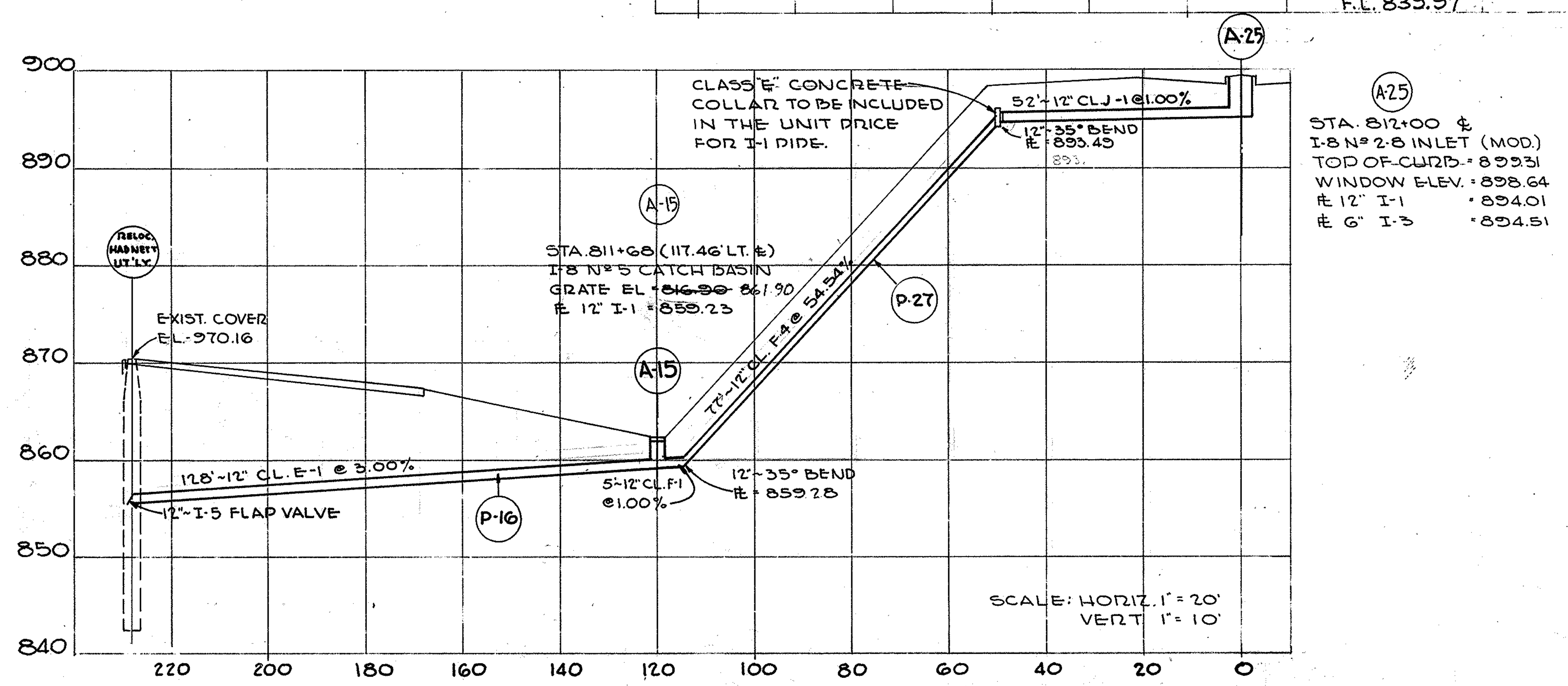
NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (P-25 BZ) (P-29 BZ) (A-27 BZ) SEE SHEET Nº 53

NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF N. & S. BOUND S.R. 7 STA. 810+45.62 TO STA 815+38.00 SEE SHEET Nº 21







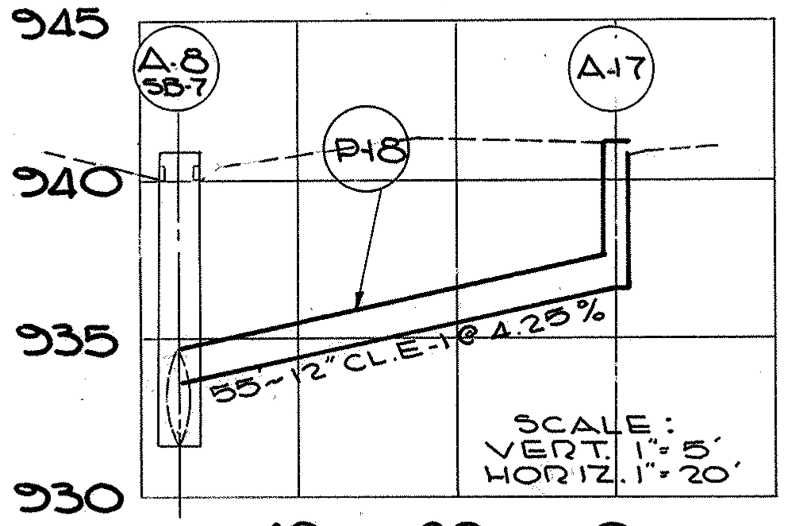


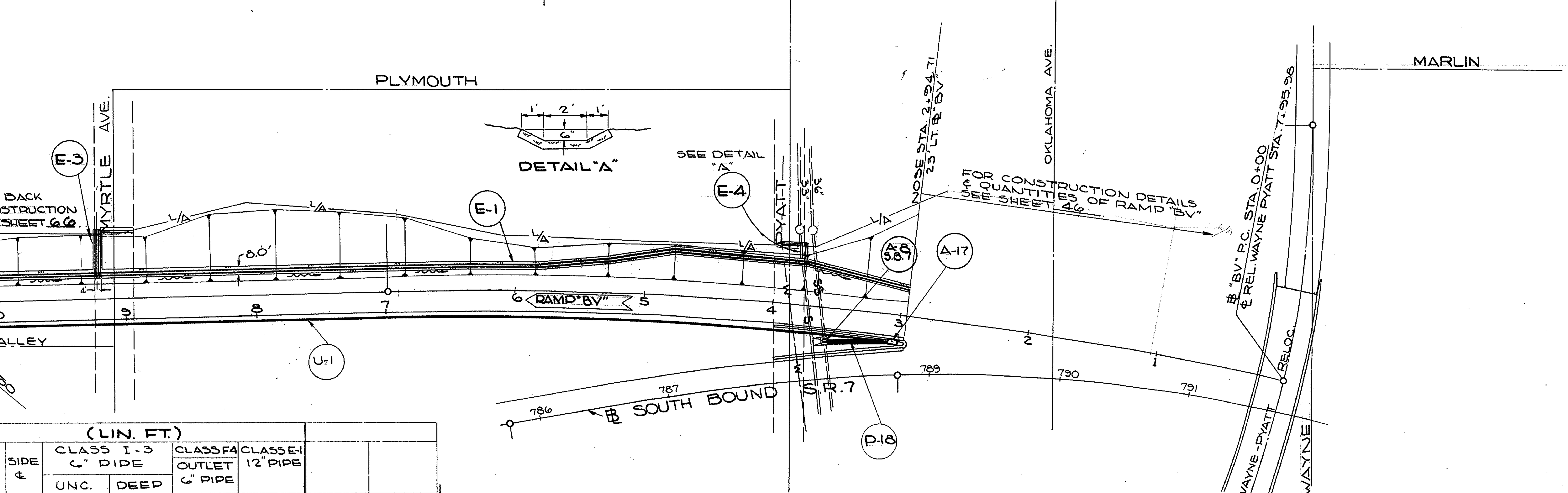
DRAINAGE PLAN
N. & S. BOUND S.R. 7
STA. 810+45.62 TO STA. 816+14.00

MAH. 7-14.95

NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (A-8 / S.8.7) SEE SHEET NO. 46

STA. 3+00 (23' LT. ℄)
I-8 No 2-6 INLET
WINDOW ELEV. 940.02
FL 12" I-1 = 936.60
FL 6" I-1 = 937.10



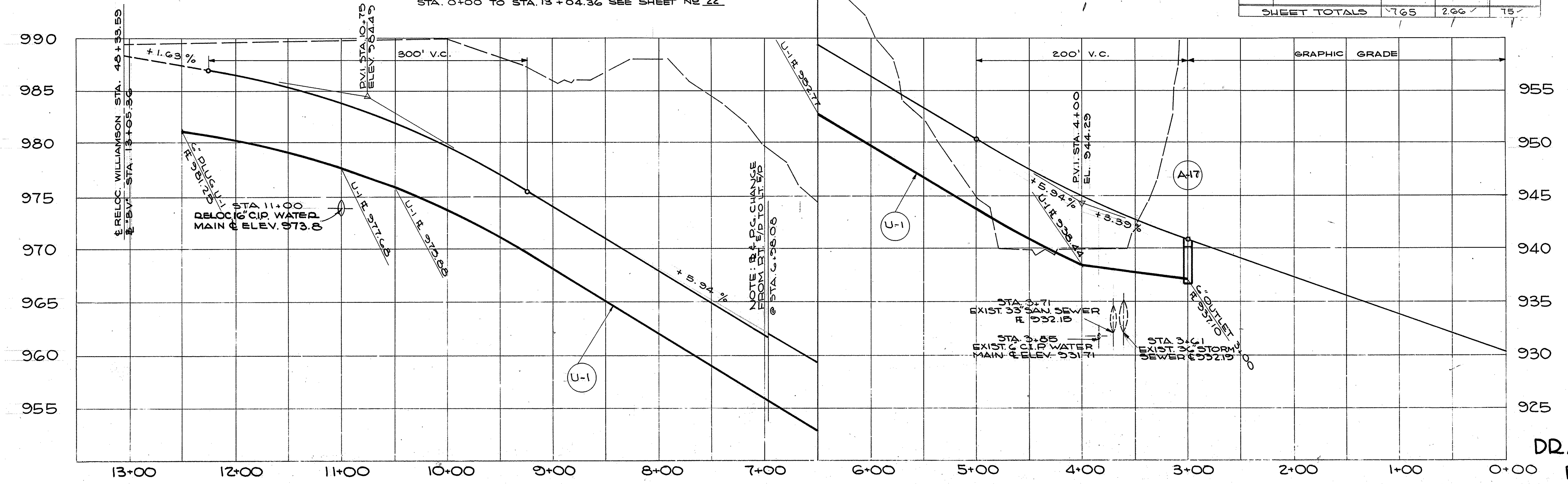


I-1 PIPE				(LIN. FT.)					
CODE	LOCATION FROM	TO	SIDE ℄	CLASS I-3 6" PIPE UNC.	DEEP	CLASS F4 OUTLET 6" PIPE	CLASS E-1 12" PIPE		
P-18	A-8	A-17	RT.				55		
U-1	12+50	A-17	RT.	90	850	10			
SHEET TOTALS				90	850	10	55		

NOTE:
FOR ROADWAY DETAILS & QUANTITIES FOR RAMP "BV" STA. 0+00 TO STA. 13+04.36 SEE SHEET No 22

I-8 INLETS (EACH)			
CODE	LOCATION	No 2-6 INLET	
A-17	3+00(23' LT ℄)	1	
SHEET TOTALS		1	

EROSION CONTROL				
CODE	LOCATION	L-10 SODDING SQ.YDS.	I-10 DUMPED ROCK CHANNEL PROTECTION CU.YDS.	I-14 TYPE 3 (MOD) PAVED GUTTER LIN. FT.
E-1	2+54.71-11+50	760		
E-2	10+95 RT. ℄		1.33	40
E-3	9+22 RT. ℄		1.33	35
E-4	3+65 RT. ℄	5		
SHEET TOTALS		765	2.66	75

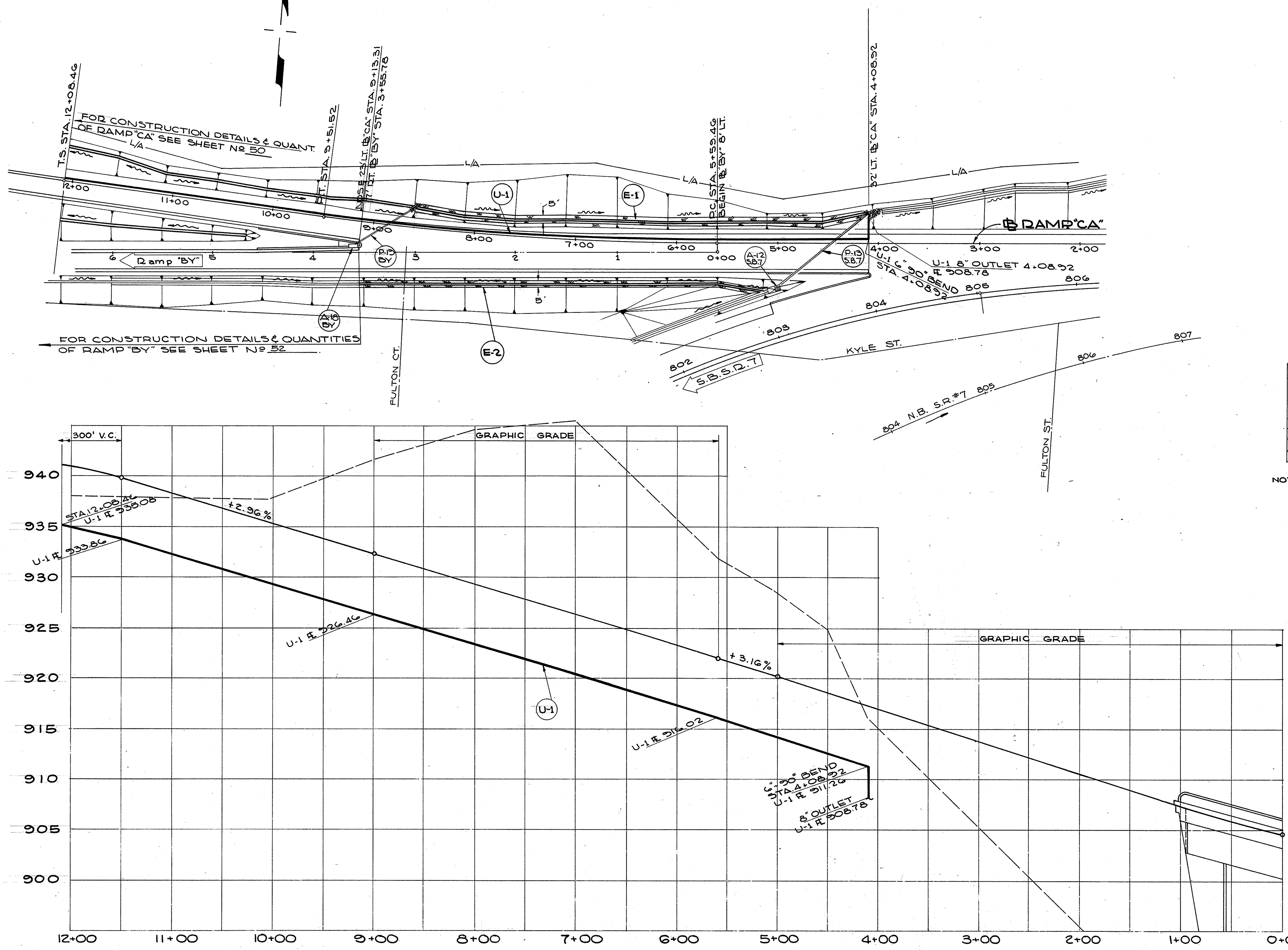


DRAINAGE PLAN RAMP "BV"

STA. 0+00 TO STA. 13+04.36

MAH. 7-14.95

NOTE:
FOR QUANTITIES & CONSTRUCTION DETAILS OF ITEMS MARKED THUS (A-12 58.7) (P-13 58.7) SEE SHEET NO 48
FOR QUANTITIES & CONSTRUCTION DETAILS OF ITEMS MARKED THUS (A-16 BY) (P-15 BY) SEE SHEET NO 52

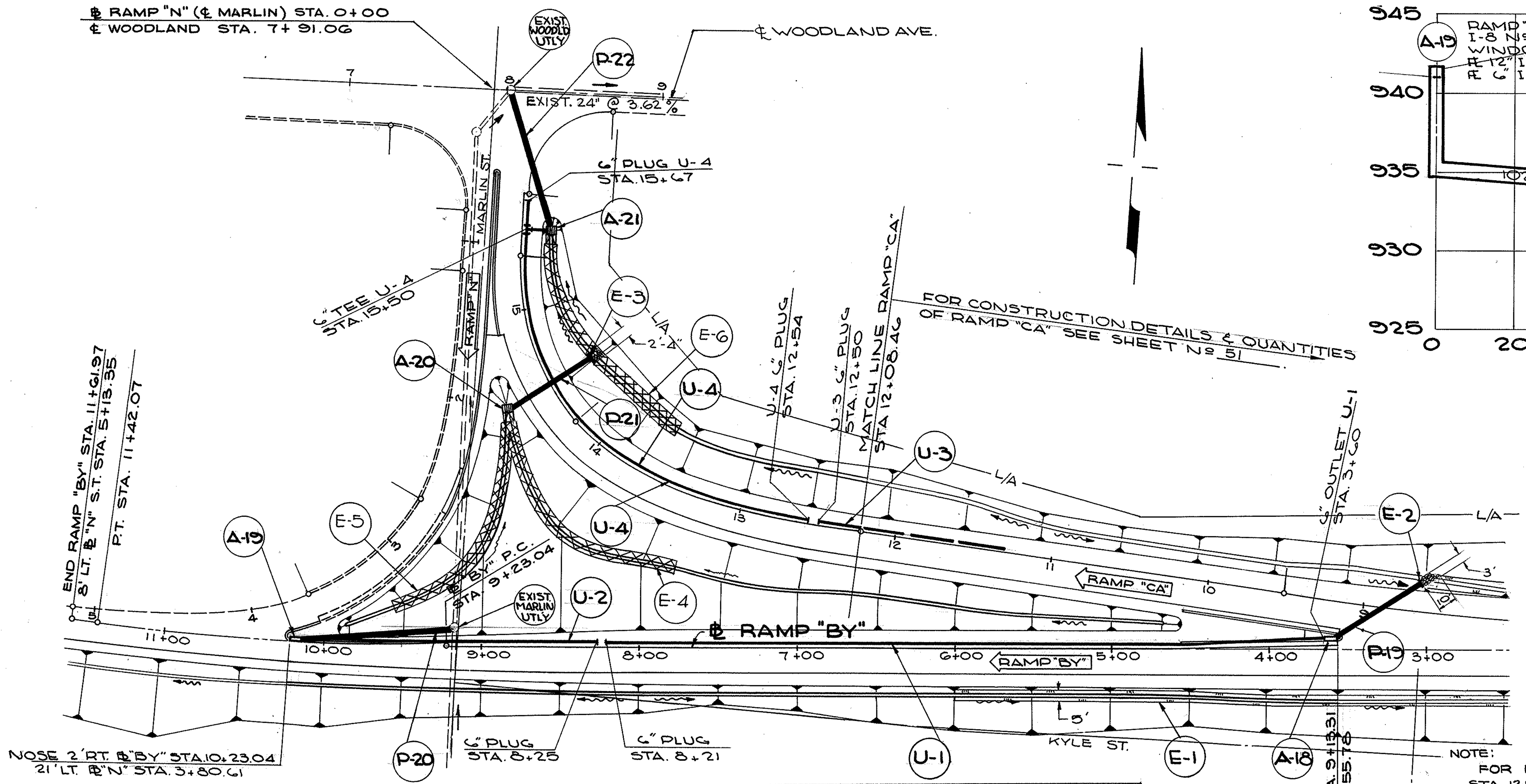


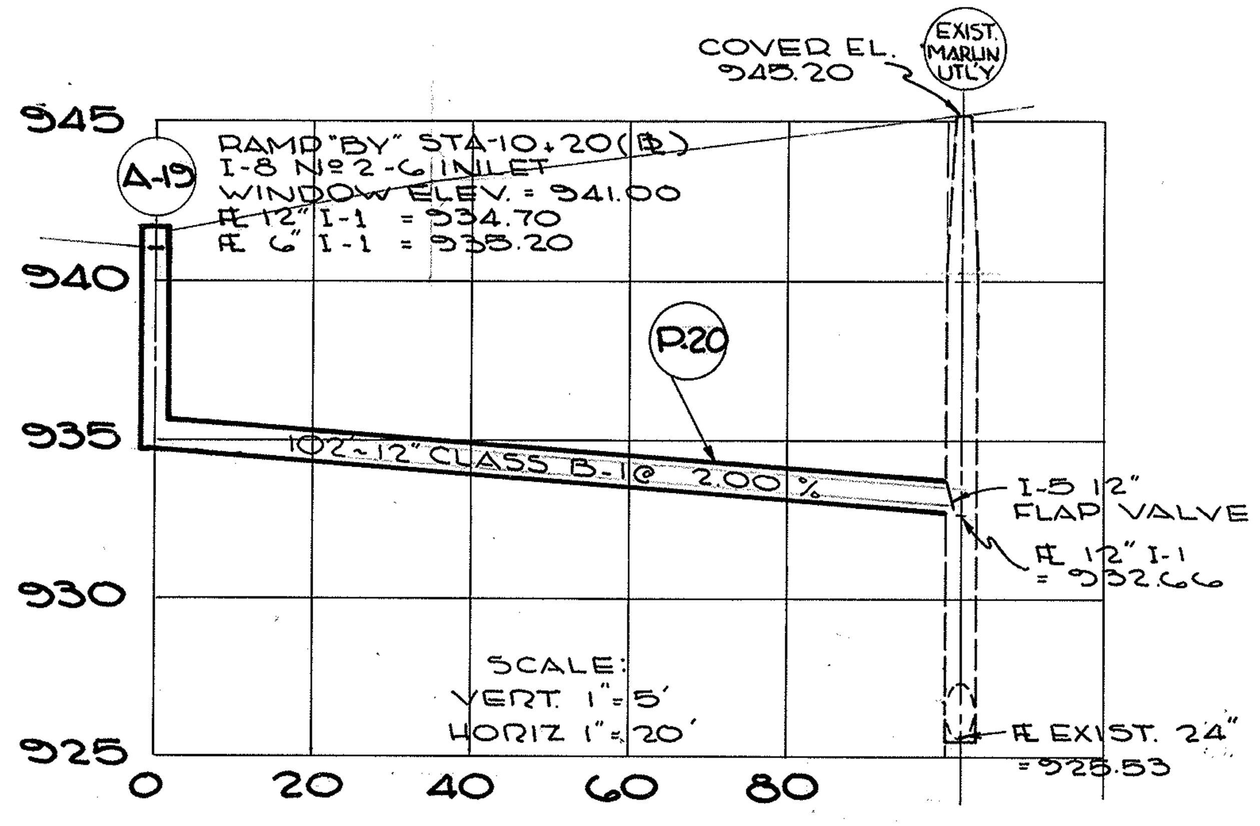
EROSION CONTROL				
CODE	LOCATION		L-10 SODDING SQ. YDS.	
E-1	4+05	8+55	248	
E-2	5+07	9+13.31	226	
SHEET TOTALS			474	

I-1 PIPE (LIN. FT.)								I-5 PIPE SPEC.	
CODE	LOCATION	SIDE ℄	CLASS I-3 6" PIPE LIN. FT.		CLASS F4 OUTLET 8" PIPE M-6.4(C)			CLASS I-3 6"~90° BEND	
	FROM TO		UNC.	DEEP					
U-1	12+08.46-4+08.92	LT.	15	800	10			1	
SHEET TOTALS			15	800	10				

NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF RAMP "CA" STA. 4+08.92 TO STA. 12+08.46 SEE SHEET No 23

DRAINAGE PLAN
RAMP "CA"
STA. 4+08.92 to STA. 12+08.46



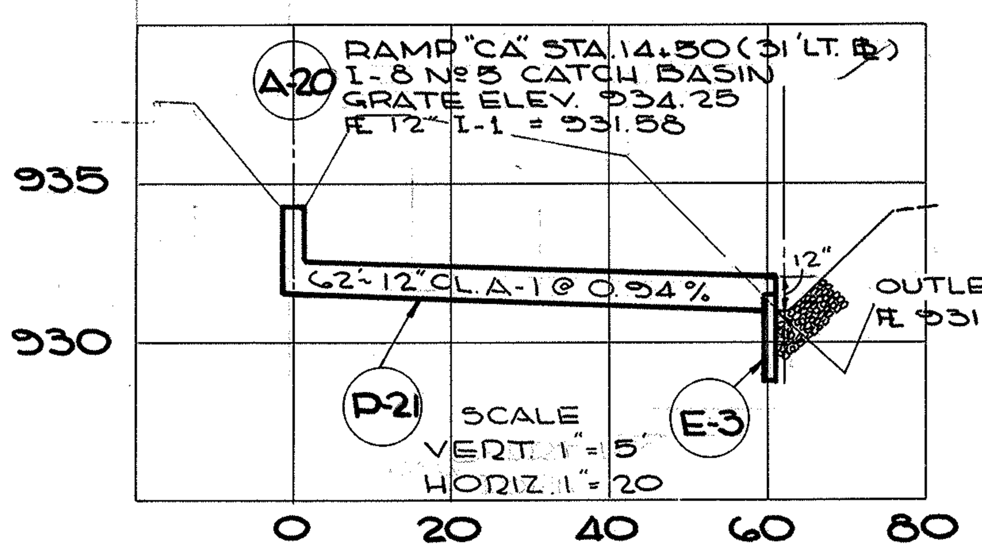


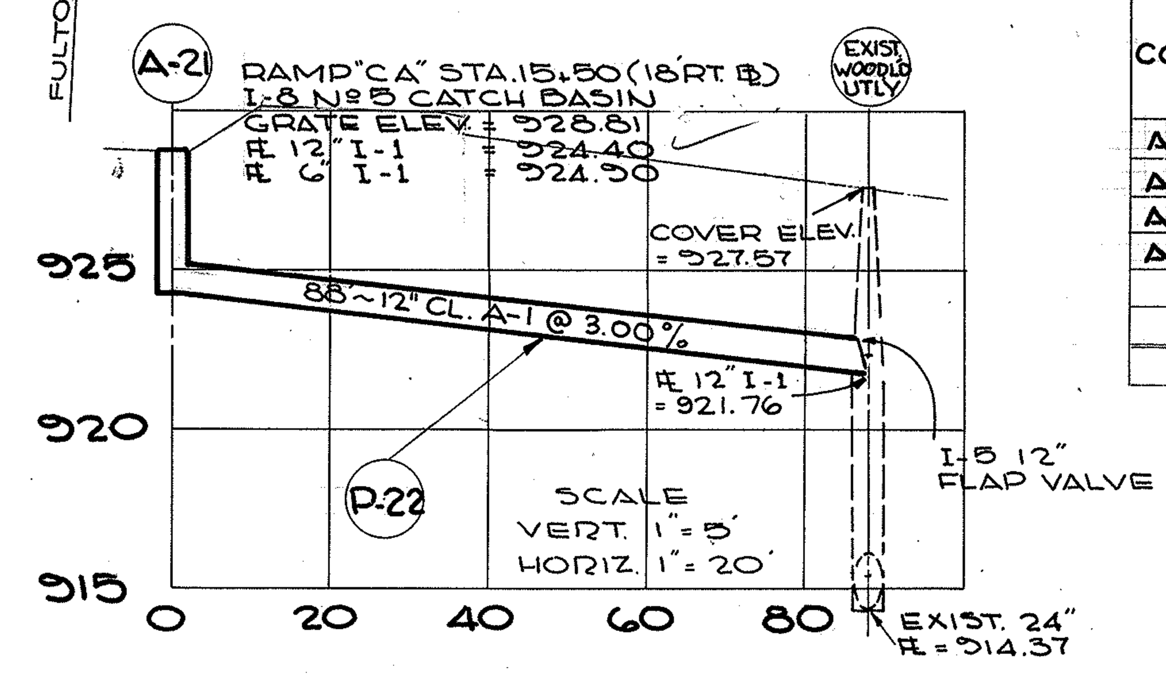
NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF RAMP "CA" STA. 12+08.46 TO WOODLAND AVE. AND RAMP "BY" STA. 3+55.78 TO STA. 10+23.04 SEE SHEET № 28

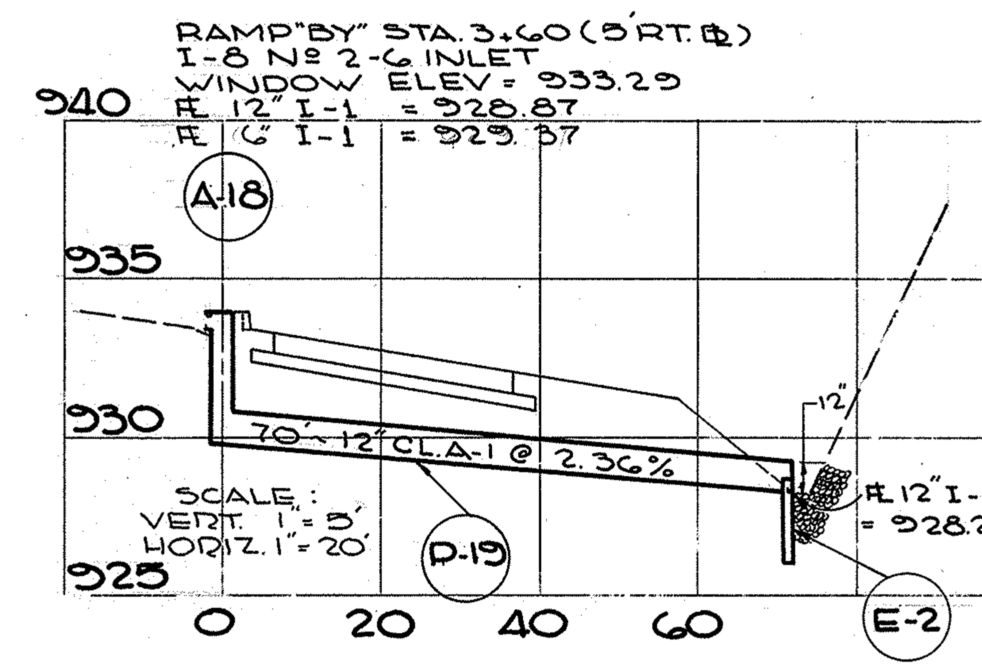
I-1 PIPE (LIN. FT.)									I-5 PIPE SPECIAL
CODE	LOCATION FROM TO	SIDE ℄	CLASS I-3 6" PIPE UNC.	CLASS I-3 6" PIPE DEEP	CLASS F-4 OUTLET 6" PIPE	CLASS J-1 12" PIPE M-6.6 (a) M-6.8 (b)	CLASS B-1 12" PIPE M-6.5 (b) M-6.6 (b) M-6.8 (b)	CLASS I-3 6" TEE	12" FLAP VALVE EACH
P-19	A-18 RT. SIDE DITCH	RT.				70			
P-20	A-19 EXIST. M.H.	RT.					102		1
P-21	A-20 RT. SIDE DITCH	LT.&RT.				62			
P-22	A-21 EXIST. M.H.	LT&RT.				88			1
U-1	A-18 8+21	RT.	201	250	10				
U-2	8+25 A-19	RT.	185		10				
U-3	12+08.46 12+50	RT.		42					
U-4	12+54 15+67	RT.	22	296	10			1	
SHEET TOTALS			408	588	30	220	102		2

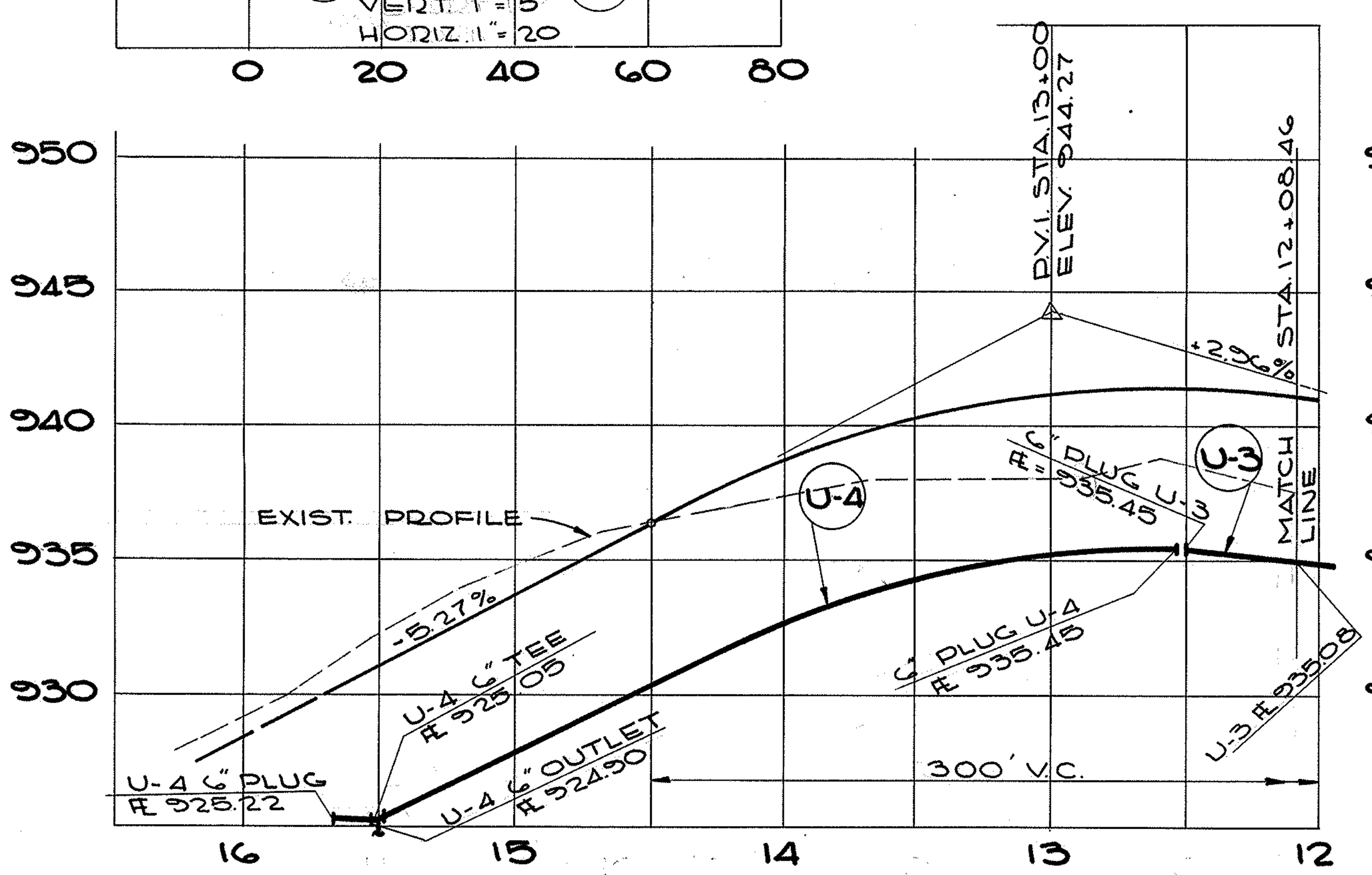
EROSION CONTROL					I-2 MASONRY CU.YDS.
CODE	LOCATION	L-10 SODDING SQ.YDS.	I-10 DUMPED ROCK CHANNEL PROTECTION CU.YDS.	L-120 JUTE MATTING SQ.YDS.	HEADWALL HW-E 12" PIPE
E-1	3+55.78 6+00	136			
E-2	3+00 RT. DITCH		1.67		0.23
E-3	"CA" 14+50 RT. DITCH		0.78		0.23
E-4	13+27 "CA" - A-20			133	
E-5	9+55 "BY" - A-20			133	
E-6	13+58 "CA" - A-21			133	
SHEET TOTAL		136	2.45	399	0.46

I-8 CATCH BASINS & INLETS (EACH)			
CODE	LOCATION	№ 2-6 INLET	№ 5 CATCH BASIN
A-18	"BY" 3+60 (5' RT. ℄)	1	
A-19	"BY" 10+20 (℄)	1	
A-20	"CA" 14+50 (31' LT. ℄)		1
A-21	"CA" 15+50 (18' RT. ℄)		1
SHEET TOTAL		2	2

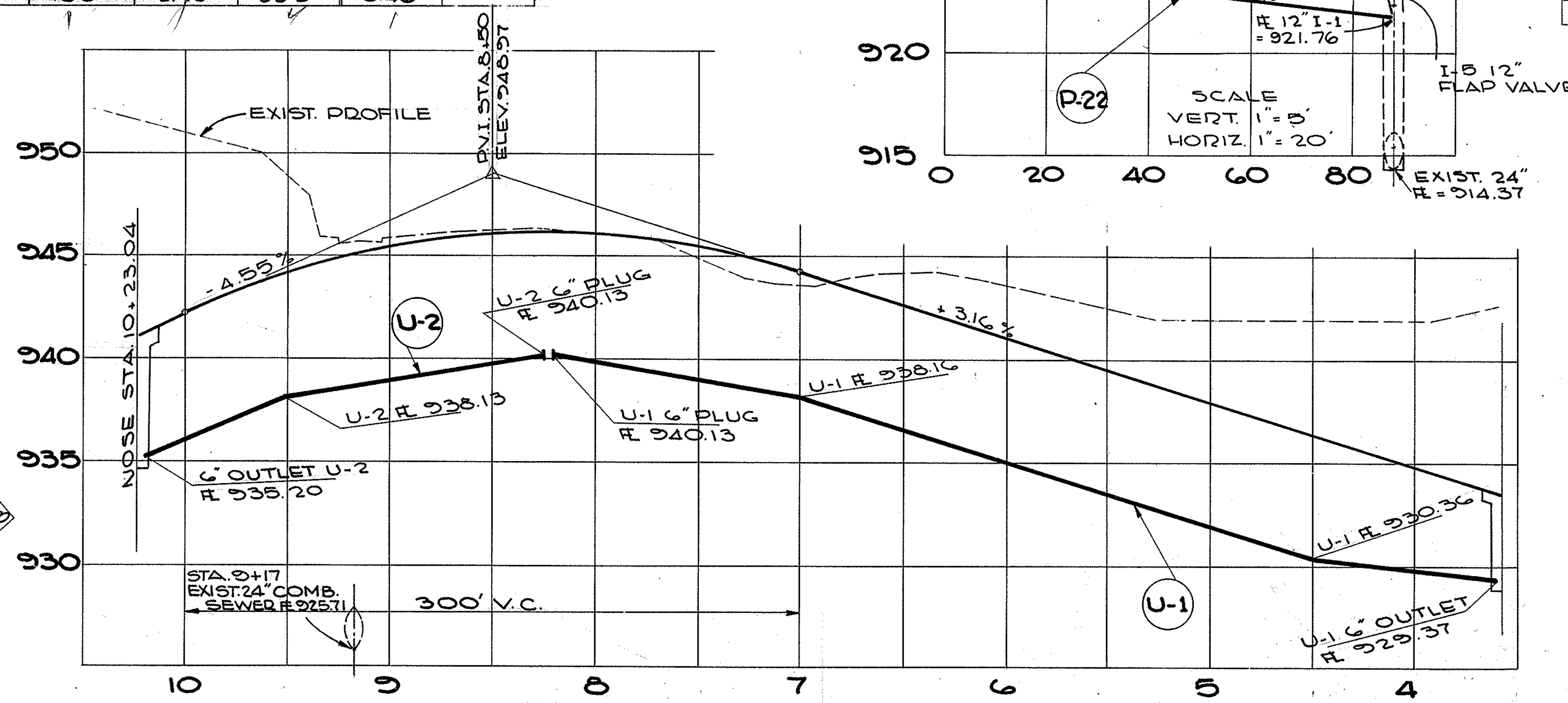








PROFILE RAMP "CA"



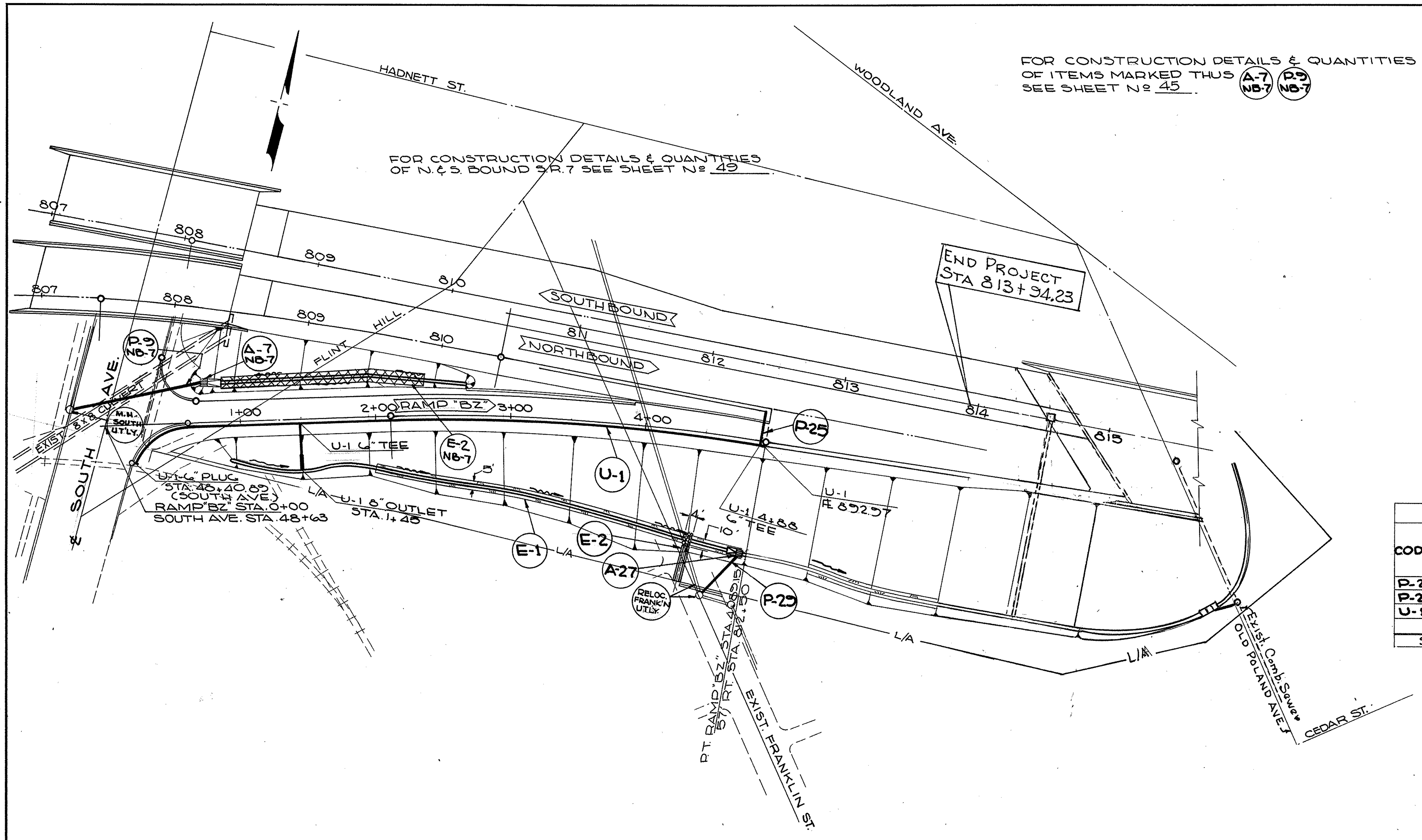
PROFILE RAMP "BY"

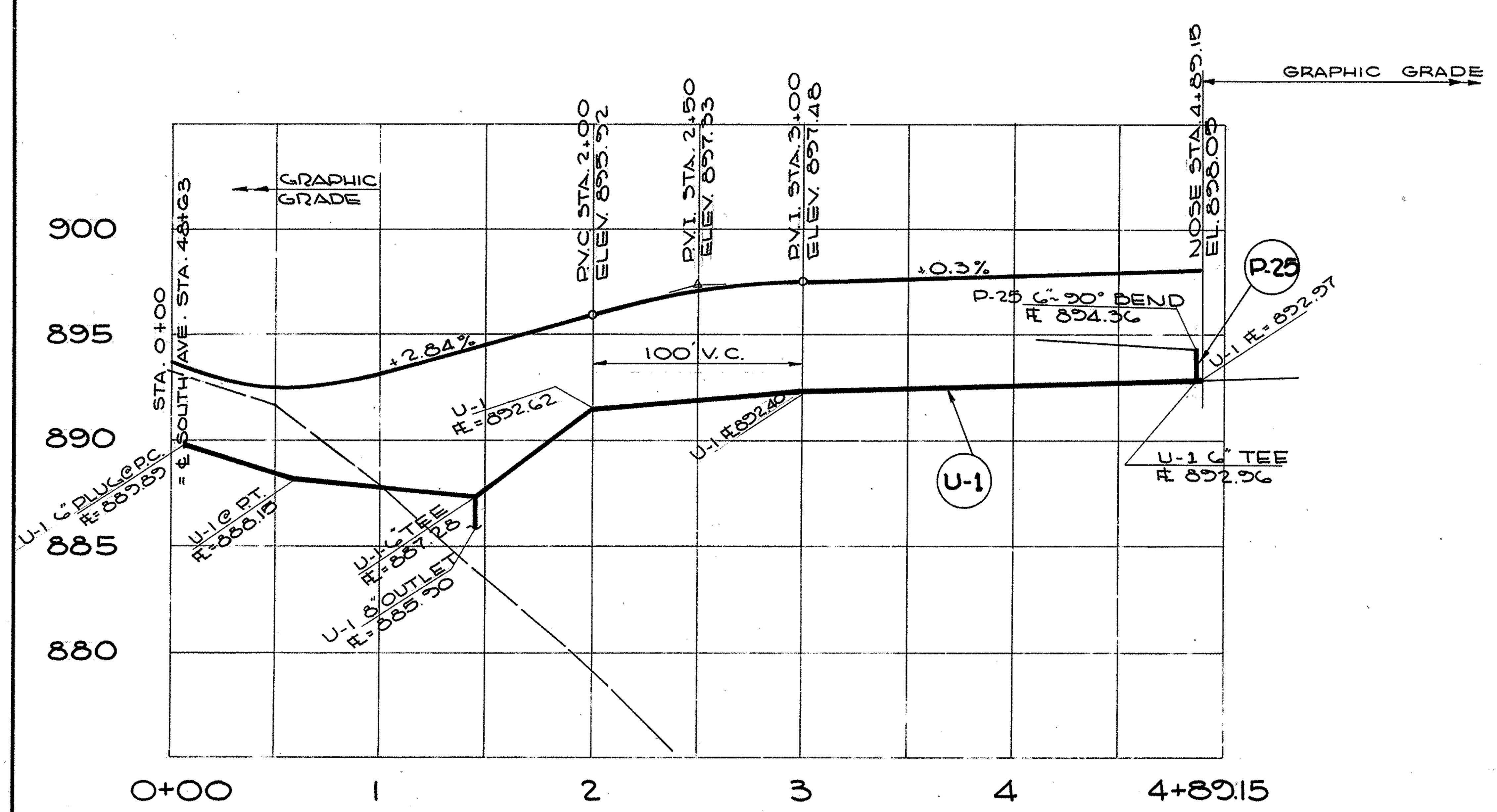
DRAINAGE PLAN
RAMP "CA"
STA. 12+08.46 - WOODLAND
RAMP "BY"
STA. 3+55.78 STA. 10+23.04

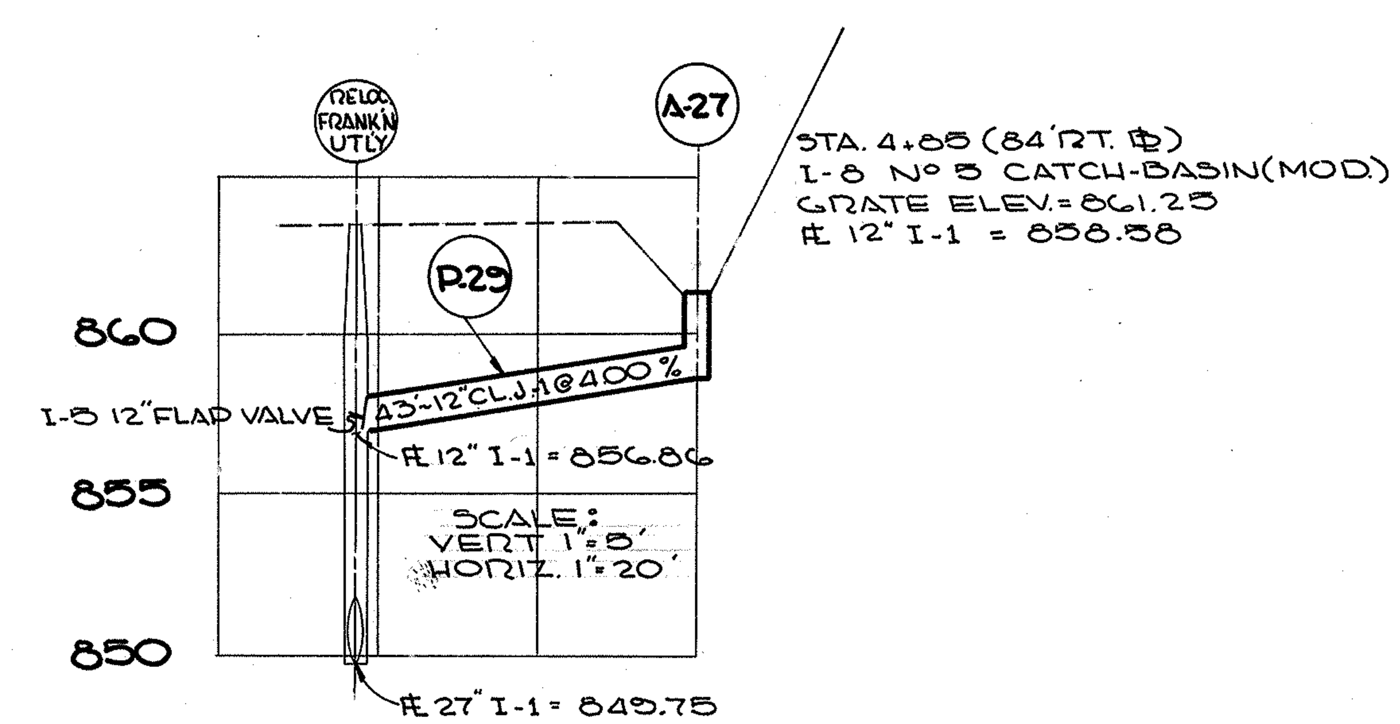
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

53/206

MAH. 7-14.95







EROSION CONTROL				
CODE	LOCATION	L-10 SODDING SQ.YDS.	I-10 DUMPED ROCK CHANNEL PROTECTION CU.YDS.	I-14 TYPE 3 MOD. PAVED GUTTER LIN.FT.
E-1	2+00 4+89.15 (RT. ℄)	161		
E-2	4+40 RT. ℄		2.22	27
SHEET TOTAL		161	2.22	27

I-1 PIPE (LIN. FT.)								I-5 PIPE SPECIALS	
CODE	LOCATION FROM	TO	SIDE ℄	CLASS I-3 6" PIPE UNCLASSIFIED	CLASS F-4 8" PIPE OUTLET M-6.4(c)	CLASS A-1 6" PIPE M-6.6(b) M-6.8(b)	CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)	CLASS I-3 6" TEE	12" FLAP VALVE EACH
P-25	4+88 "BZ"		LT.&RT.			25		2	
P-29	RELOC. FRANK'N UTLY	A-27	RT.				43		1
U-1	(SOUTH) 48+40.89	"BZ" 4+48.15	RT.	510	10				
SHEET TOTALS				510	10	25	43		1

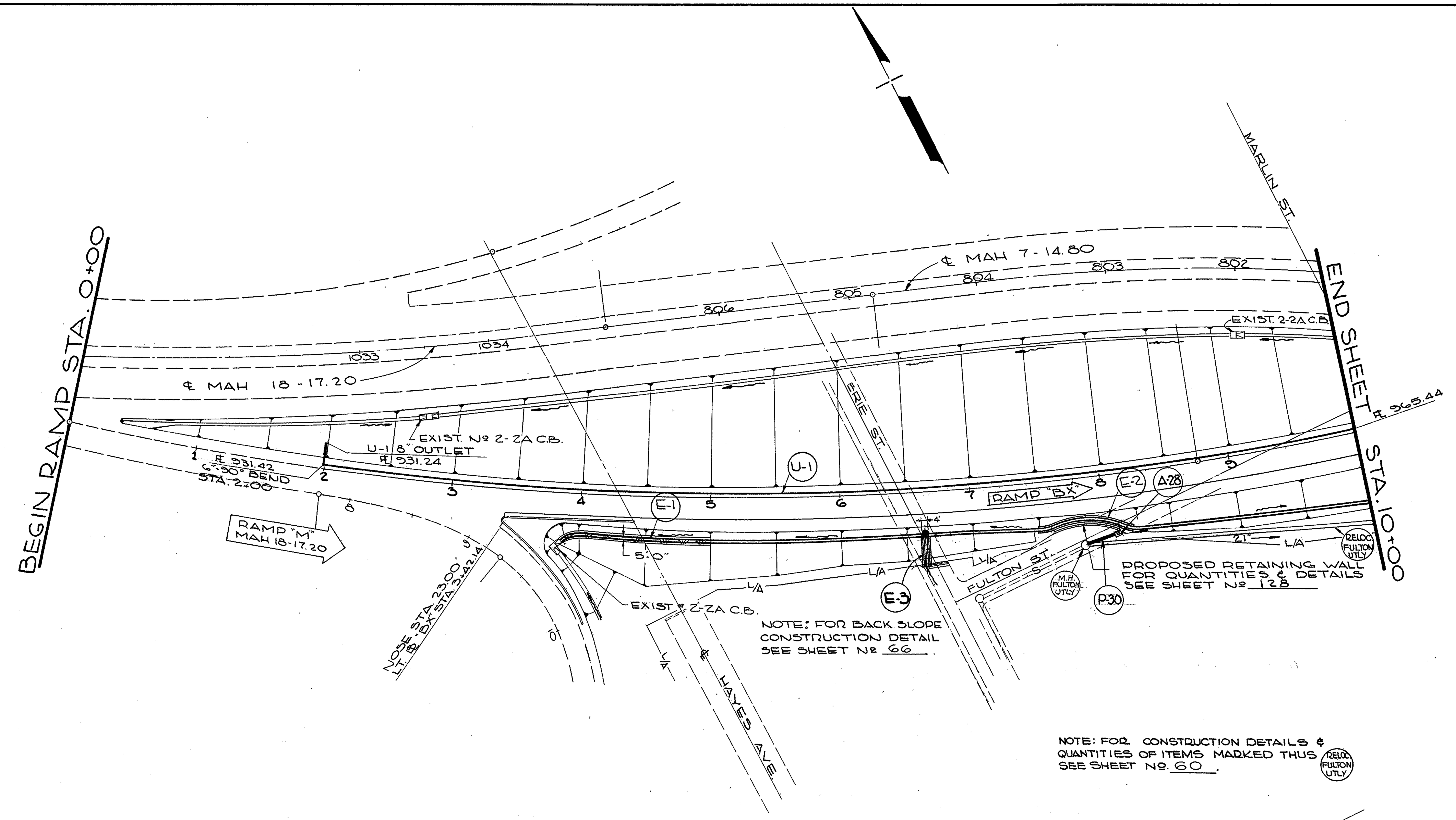
I-8 CATCH-BASINS (EACH)			
CODE	LOCATION	Nº 5 CATCH-BASIN	
A-27	4+85 (84' RT. ℄)	1	
SHEET TOTALS		1	

NOTE:
FOR ROADWAY QUANTITIES & DETAILS OF RAMP "BZ" STA. 0+00 TO STA. 4+89.15 SEE SHEET Nº 25

DRAINAGE PLAN RAMP "BZ"
STA. 0+00 TO STA. 4+89.15

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(1) 238 U-524(9)

MAH. 7-14.95

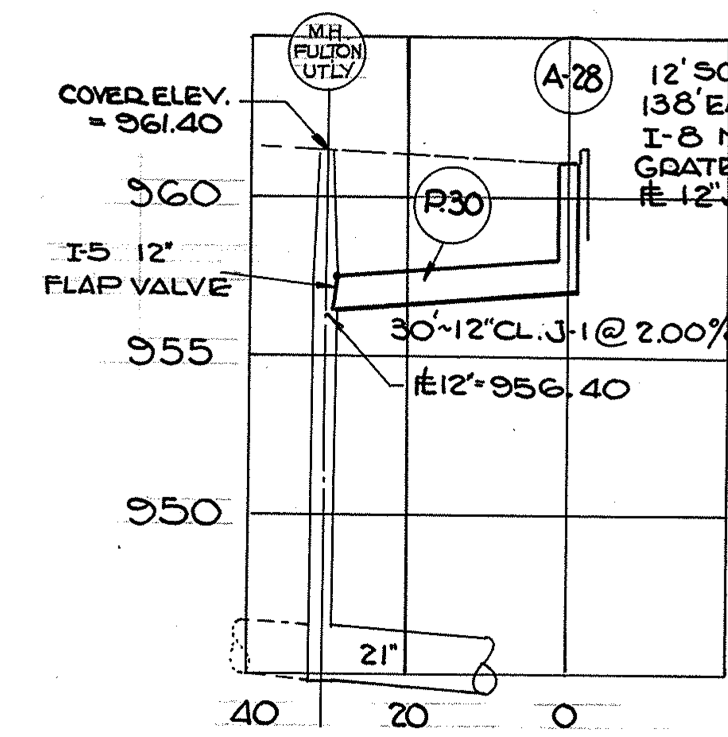


EROSION CONTROL					
CODE	LOCATION	L-10 SOD SQ. YDS	I-14 PAVED GUTTER TYPE I (MOD) LIN. FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	I-14 TYPE 3 (MOD) PAVED GUTTER LIN. FT.
E-1	EXIST. C.B. TO 5+00 RT ℄	64			
E-2	7+51 TO 8+23 RT ℄	15	72		
E-3	6+64 RT. ℄	3		1.33	25
	SHEET TOTAL	82	72	1.33	25

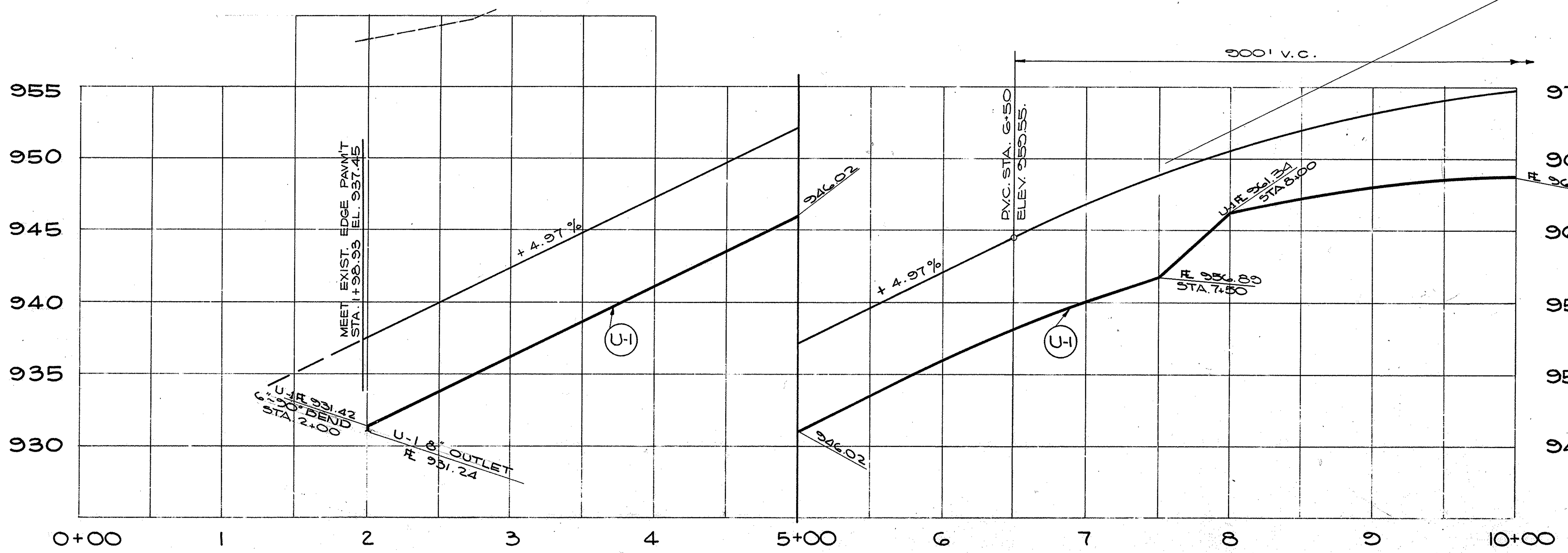
I-1 PIPE (LIN. FT.)							I-5 PIPE SPEC.	
CODE	LOCATION	CLASS I-3 6" UNC.	CLASS I-3 6" DEEP	CLASS I-3 6" SHLLW	CLASS F4 8" OUTLET M-64(c)	CLASS J-1 12" PIPE	CLASS I-3 BEND 6"-90°	12" FLAP VALVE EACH
U-1	2+0 TO 10+0 LT ℄	58	550	200	10		1	
P-1	M.H. FULTON TO A-28					30		1
	SHEET TOTAL	58	550	200	10	30		1

I-8 CATCH-BASINS (EACH)		
CODE	LOCATION	NO. 6 CATCH-BASIN
A-28	12' S. ℄ FULTON, 138' E. ℄ ERIE	1
	SHEET TOTAL	1

A-28



12' SOUTH ℄ FULTON ST.
138' EAST ℄ ERIE ST.
I-8 NO. 6 C.B.
GRATE ELEV. = 961.00
℄ 12" J-1 = 957.00

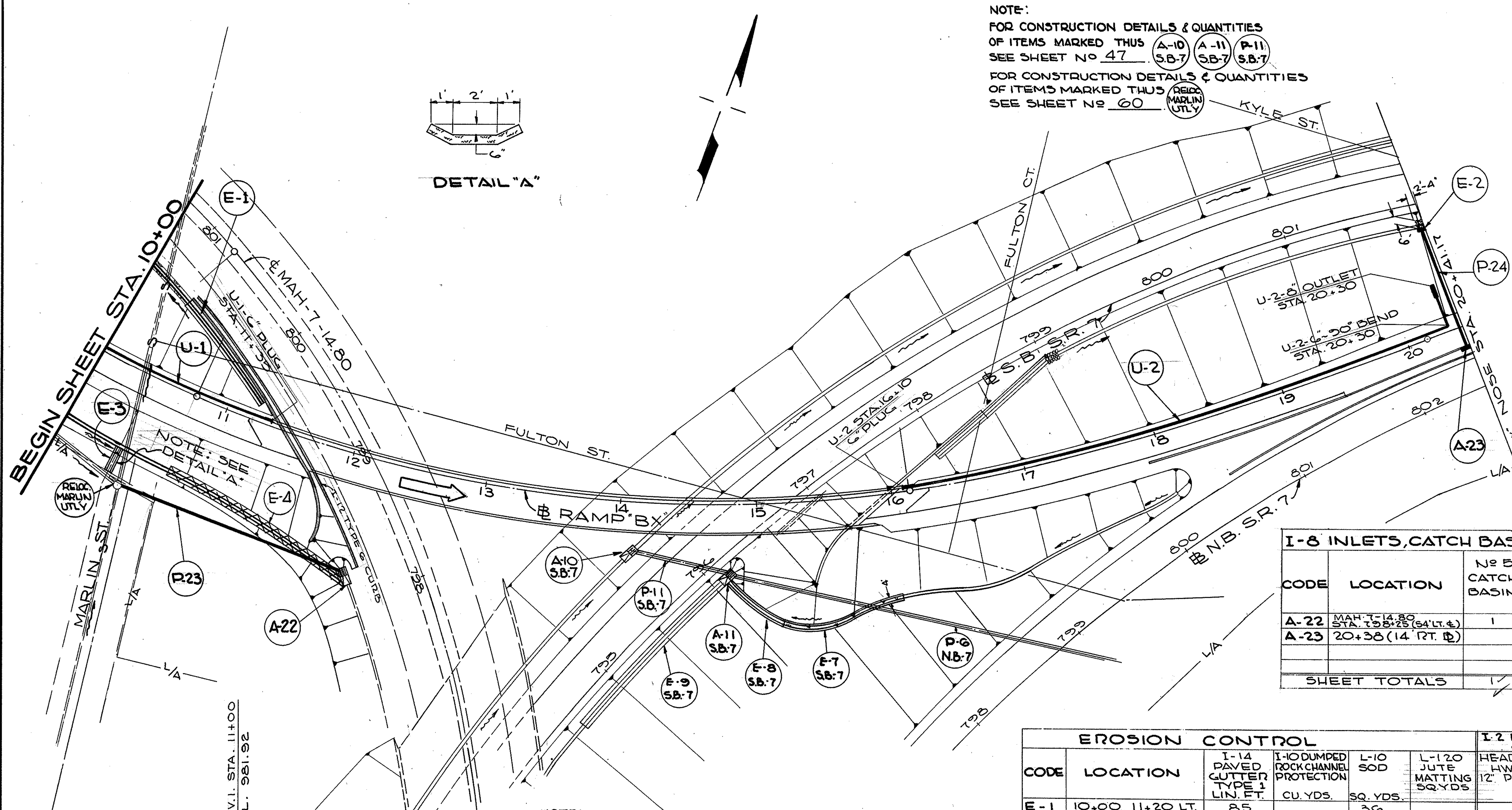


NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF RAMP "BX" STA. 0+00 TO STA. 10+00 SEE SHEET № 26

DRAINAGE PLAN
RAMP "BX"
STA. 0+00 to STA. 10+00

MAH. 7-14.95

NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (A-10 SB-7) (A-11 SB-7) (P-11 SB-7) SEE SHEET Nº 47
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (RELOC. MARLIN UTLY) SEE SHEET Nº 60

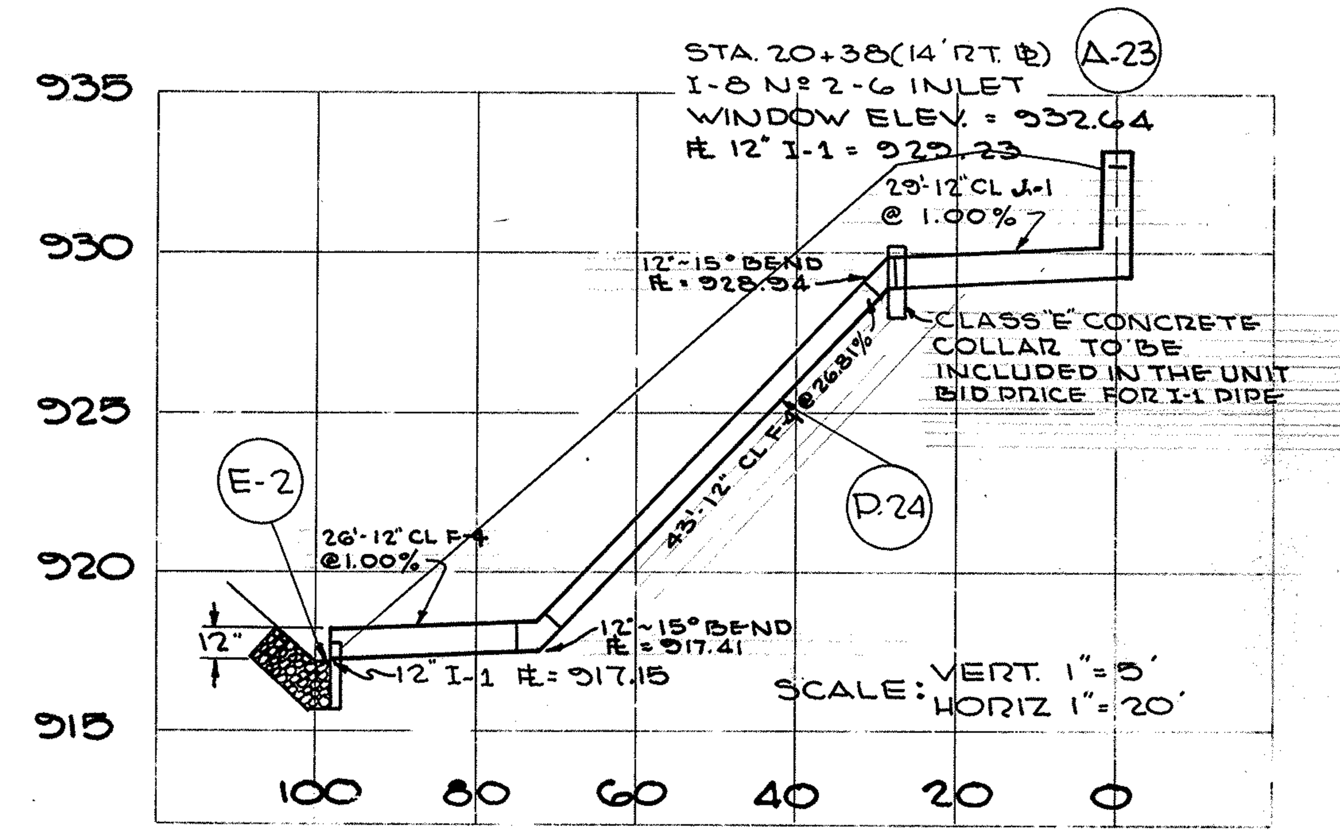


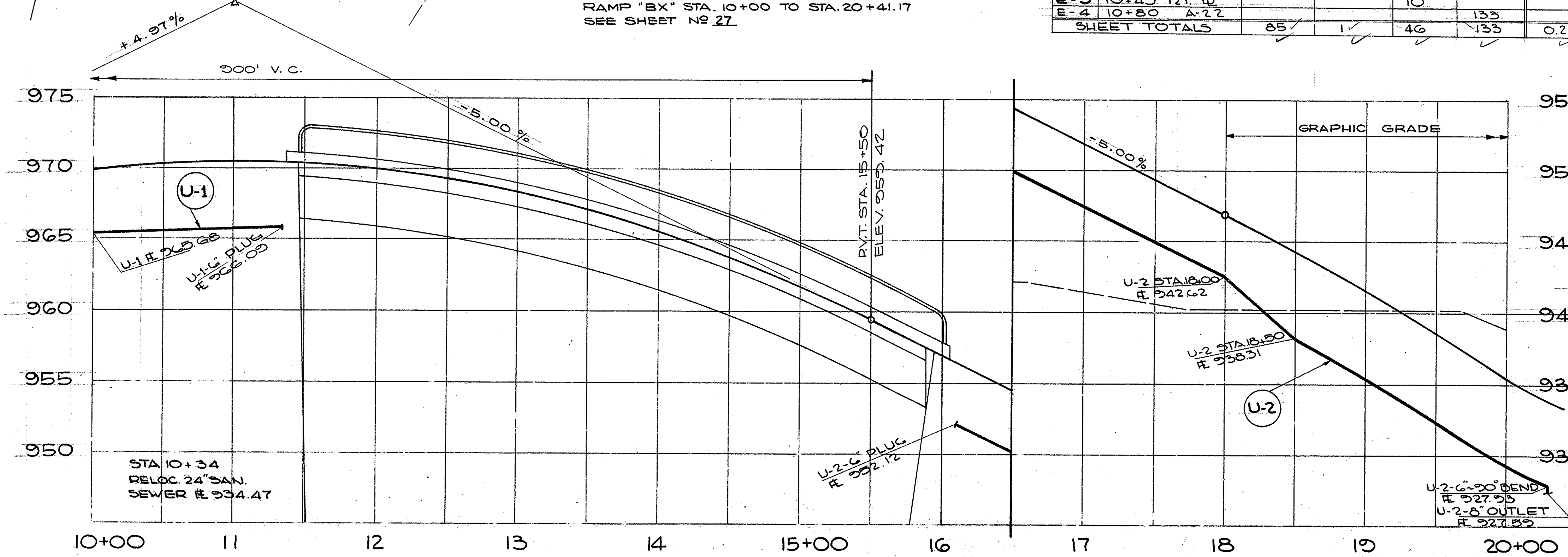
NOTE:
FOR ROADWAY DETAILS & QUANTITIES OF RAMP "BX" STA. 10+00 TO STA. 20+41.17 SEE SHEET Nº 27

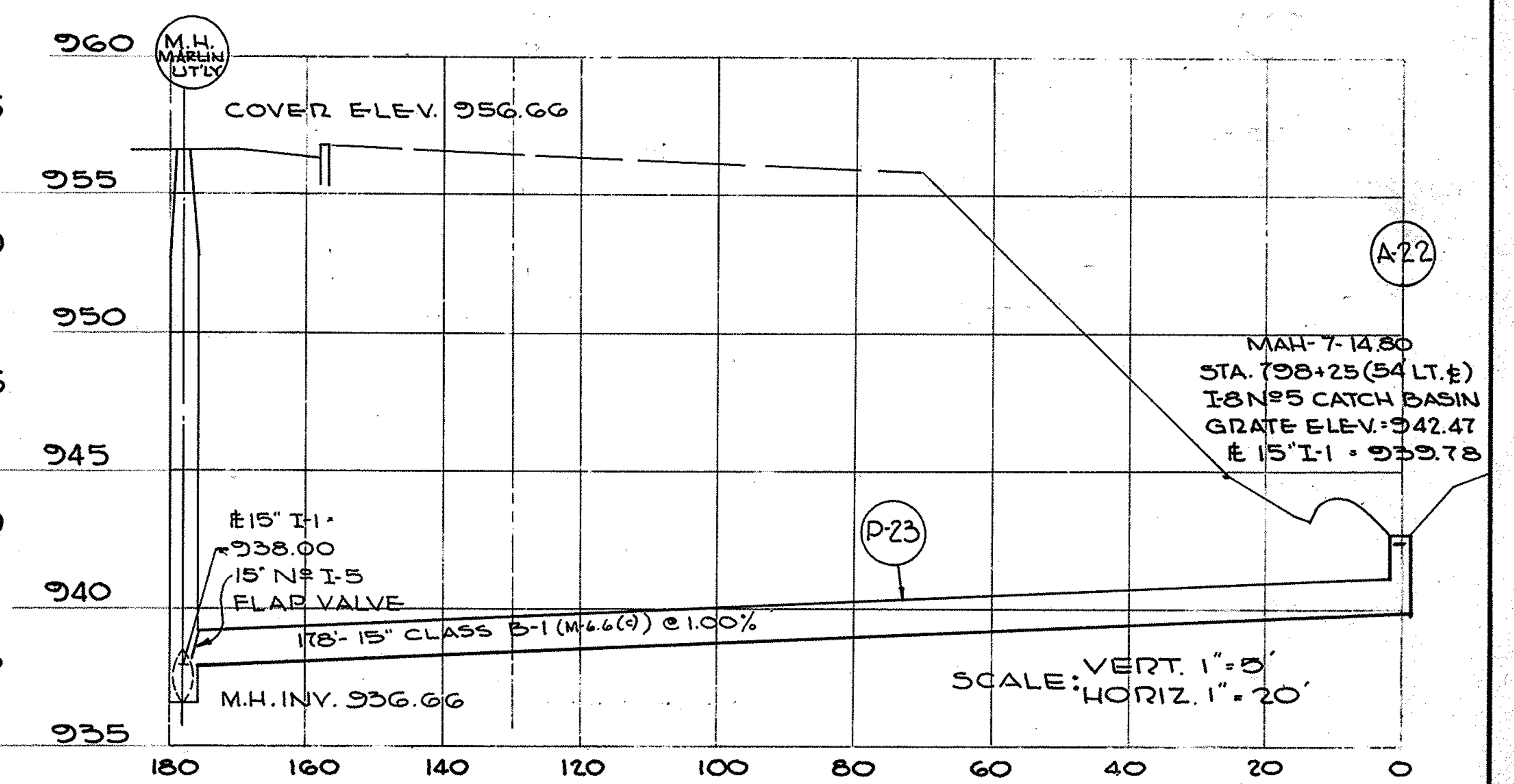
I-1 PIPE			(LIN. FT.)							I-5 PIPE SPEC. (EA)		
CODE	LOCATION FROM TO	SIDE ℄	CLASS I-3 6" PIPE SHALLOW	UNC.	DEEP	CLASS F-4 OUTLET M-6.4(c) 8"	12"	CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)	CLASS B-1 15" PIPE M-6.6(c)	6"-90° BEND CL. I-3	15" FLAP VALVE	12"-15° BEND M-6.4(c)
P-23	MARLIN UTLY M.H. A-22	RT.							178		1	
P-24	20+38 LT. DITCH	LT.&RT.					69	29				2
U-1	10+00 11+35	LT.	135									
U-2	16+10 20+30	LT.	190	74	180	10				1		
SHEET TOTALS			325	74	180	10	69	29	178		1	

I-8 INLETS, CATCH BASINS		(EACH)		
CODE	LOCATION	Nº 5 CATCH BASIN	Nº 2-6 INLET	
A-22	MAH-7-14.80 STA. 798+25 (54' LT. ℄)	1		
A-23	20+38 (14' RT. ℄)		1	
SHEET TOTALS		1	1	

EROSION CONTROL						I-2 MASONRY CU. YDS.	
CODE	LOCATION	I-14 PAVED GUTTER TYPE 1 LIN. FT.	I-10 DUMPED ROCK CHANNEL PROTECTION CU. YDS.	L-10 SOD SQ. YDS.	L-120 JUTE MATTING SQ. YDS.	HEADWALL HW-E 12" PIPE	
E-1	10+00 11+20 LT.	85		36			
E-2	20+38 LT. DITCH		1			0.23	
E-3	10+43 RT. ℄			10			
E-4	10+80 A-22				133		
SHEET TOTALS		85	1	46	133	0.23	



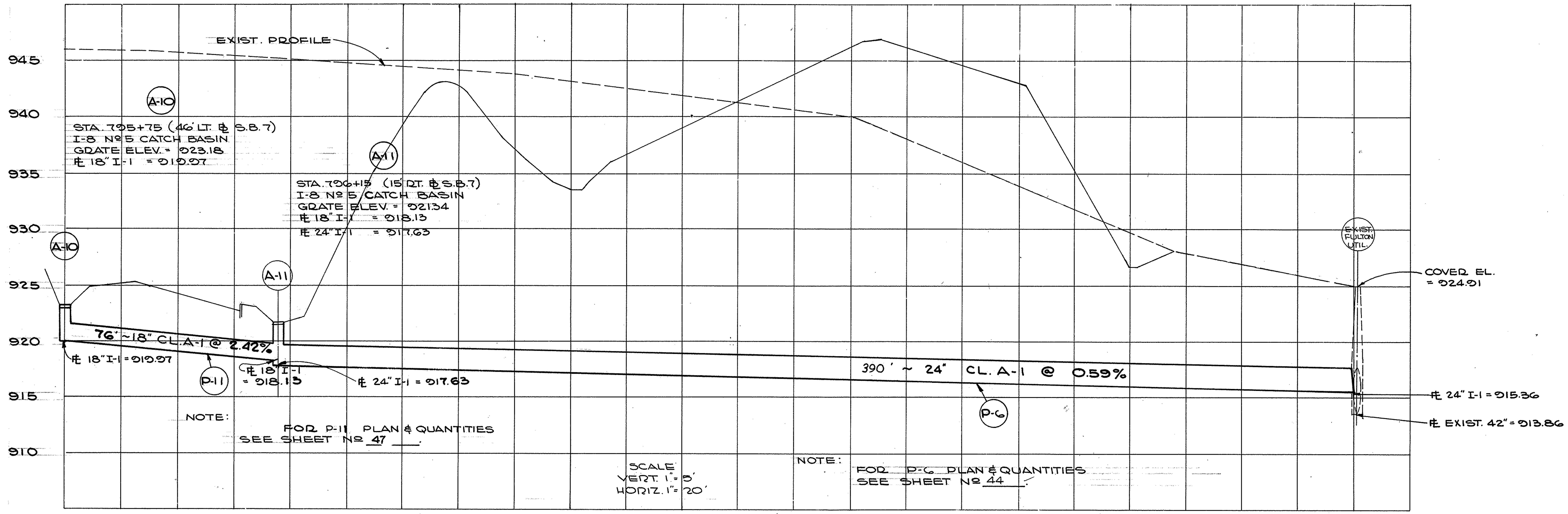


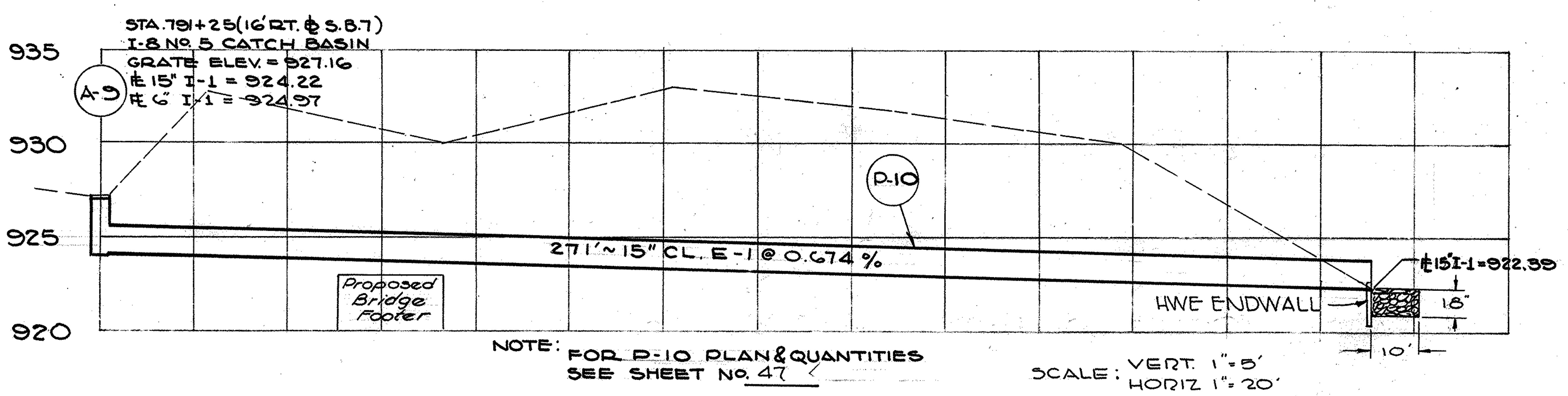


DRAINAGE PLAN
RAMP "BX"
STA. 10+00 TO STA. 20+41.17

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7-14.95

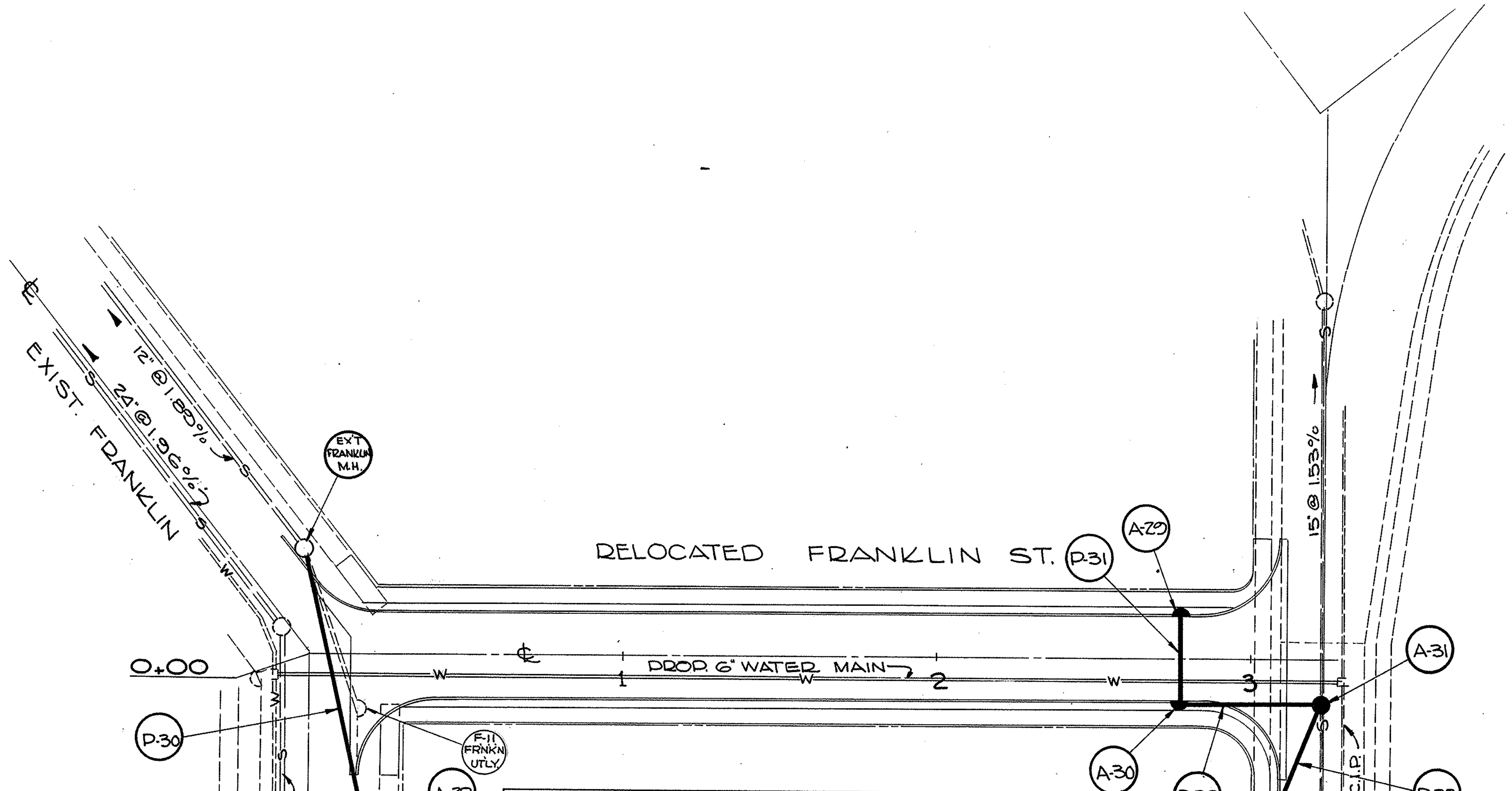




SIDE DITCH & SEWER PROFILES

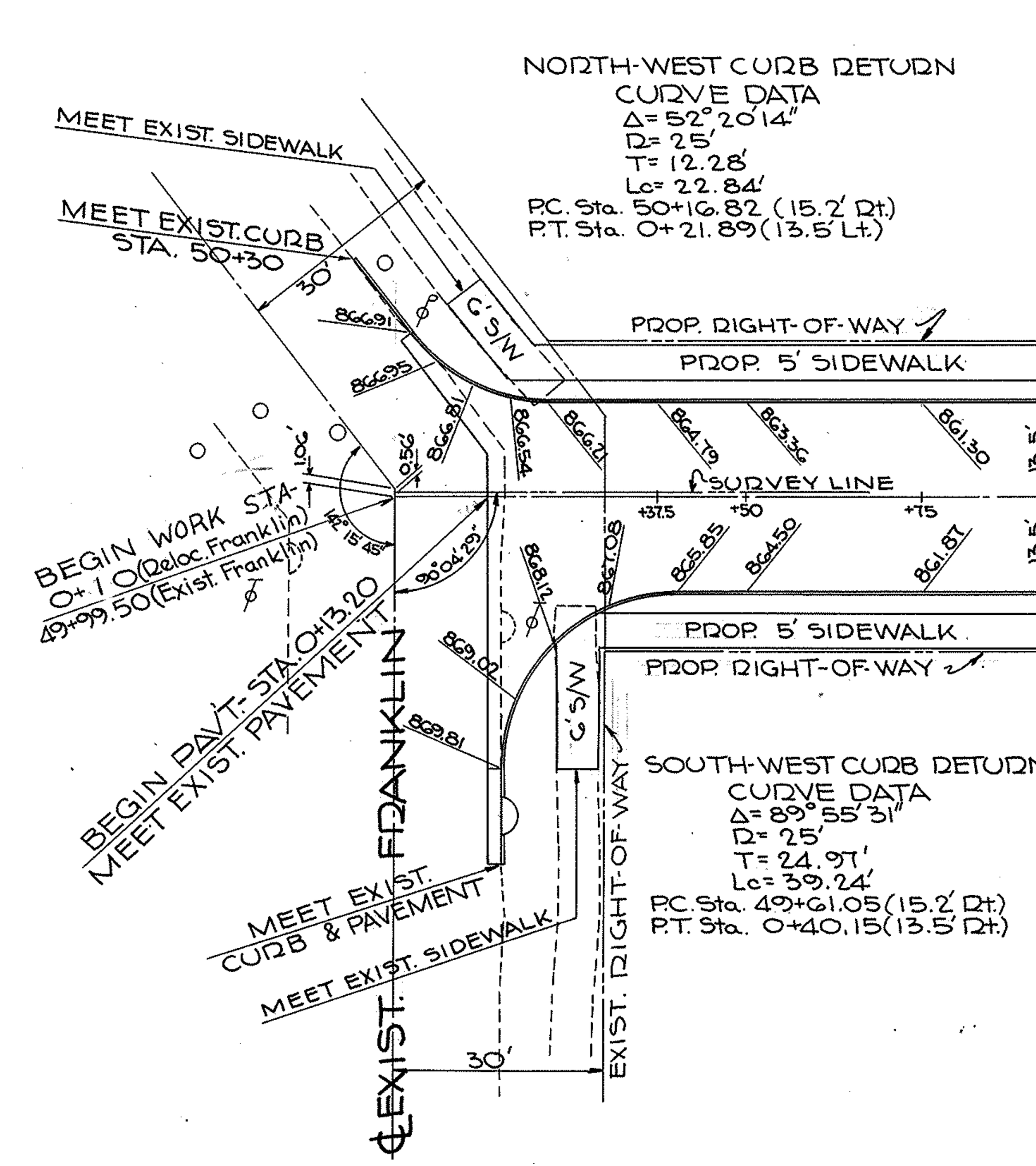
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH. 7-14.95

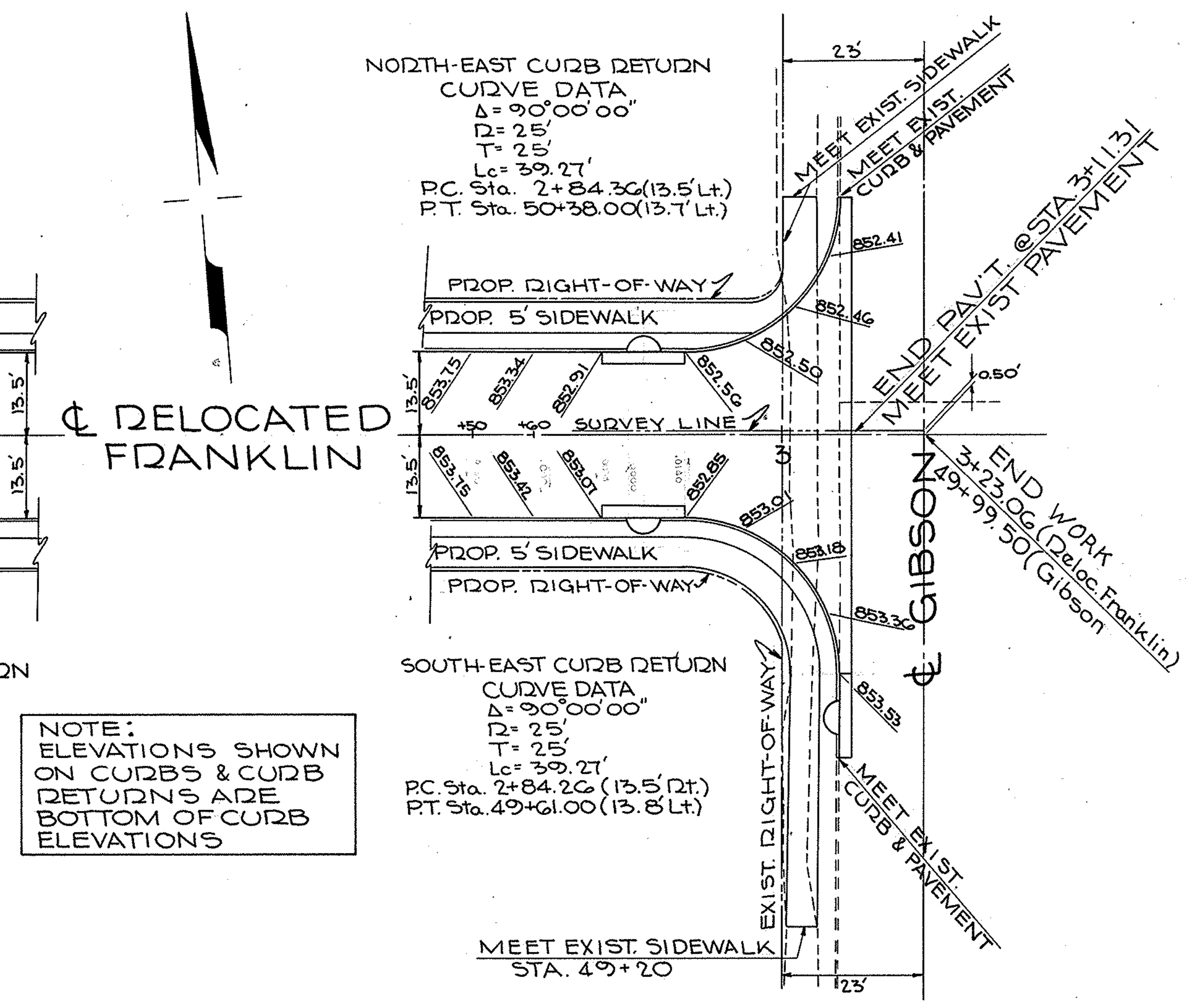


I-8 INLETS & MANHOLES (EACH)				
CODE	LOCATION	YOUNG'N TYPE I INLET	YOUNG'N TYPE II INLET	Nº1 MANHOLE
A-28	49+54.22 - 15.2 LT. ℄ EXIST. FRANKLIN		1	
A-29	2+77.53 - 13.5 LT. ℄ RELOC. FRANKLIN	1		
A-30	2+77.53 - 13.5 RT. ℄ RELOC. FRANKLIN		1	
A-31	49+85 ℄ GIBSON			1
A-32	49+54.17 - 13.8' LT ℄ GIBSON		1	
SHEET TOTALS		1	3	1

I-1 PIPE (LIN. FT.)			
CODE	LOCATION		CLASS J-1 12" PIPE M-6.6(a) M-6.8(b)
P-30	EXISTING FRANKLIN M.H.	A-28	82
P-31	A-29	A-30	28
P-32	A-30	A-31	46
P-33	A-32	A-31	35
SHEET TOTAL			191



INTERSECTION– EXIST. & RELOC. FRANKLIN



NOTE:
ELEVATIONS SHOWN ON CURBS & CURB RETURNS ARE BOTTOM OF CURB ELEVATIONS

INTERSECTION–FRANKLIN & GIBSON

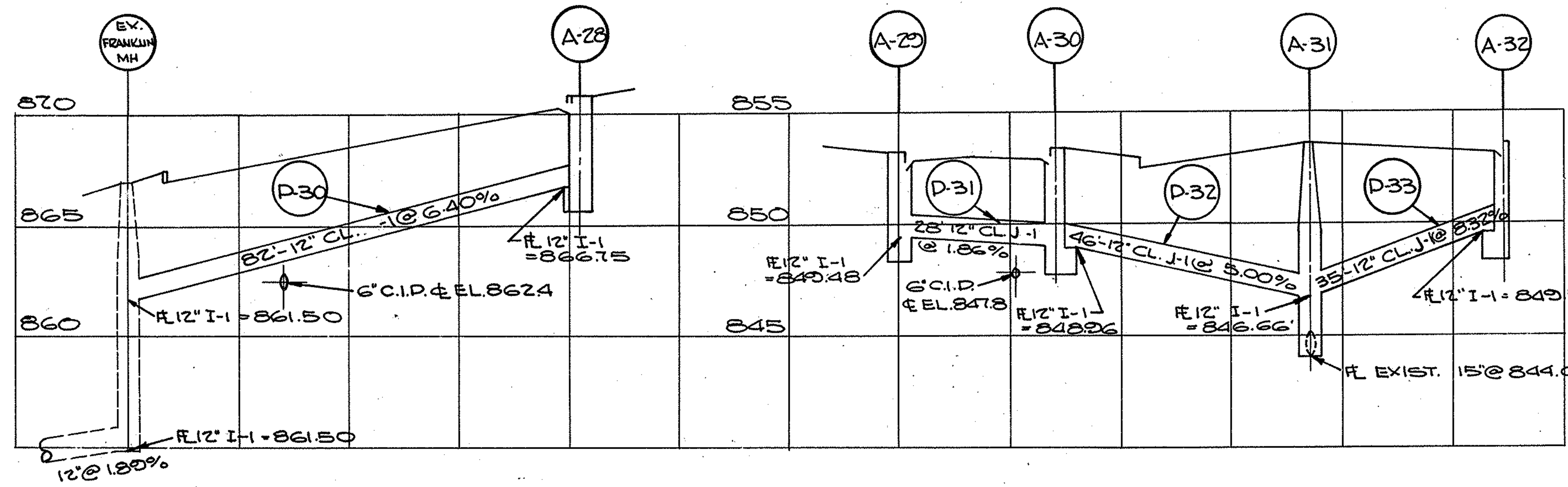
A-28
STA. 49+54.22 (15.2 RT ℄)
I-8 YOUNGSTOWN TYPE II INLET
WINDOW ELEV = 870.06
FL 12" I-1 = 866.75

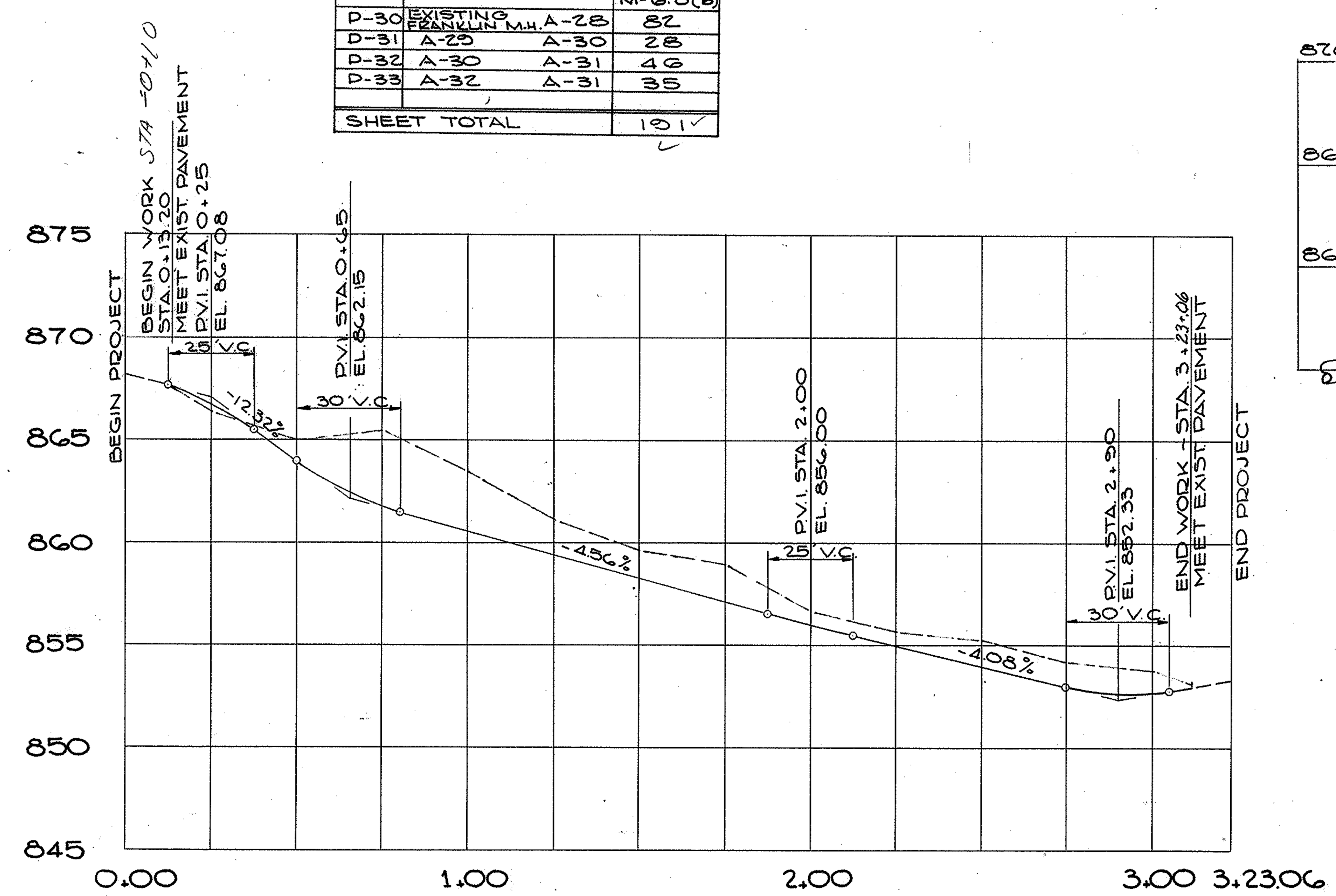
A-29
STA. 2+77.53 (13.5' LT ℄)
I-8 YOUNGSTOWN TYPE I INLET
WINDOW ELEV. = 852.48
FL 12" I-1 = 849.48

A-30
STA. 2+77.53 (13.5' RT. ℄)
I-8 YOUNGSTOWN TYPE II INLET
WINDOW ELEV. = 852.71
FL 12" I-1 = 848.06

A-31
STA. 49+85 ℄
I-8 Nº1 MANHOLE
TOP OF M.H. – 853.53
FL 12" I-1 = 846.66
FL 15" EX. = 844.04

A-32
STA. 49+54.17 (13.8' LT ℄)
I-8 YOUNGSTOWN TYPE II INLET
WINDOW ELEV. = 852.90
FL 12" I-1 = 849.59

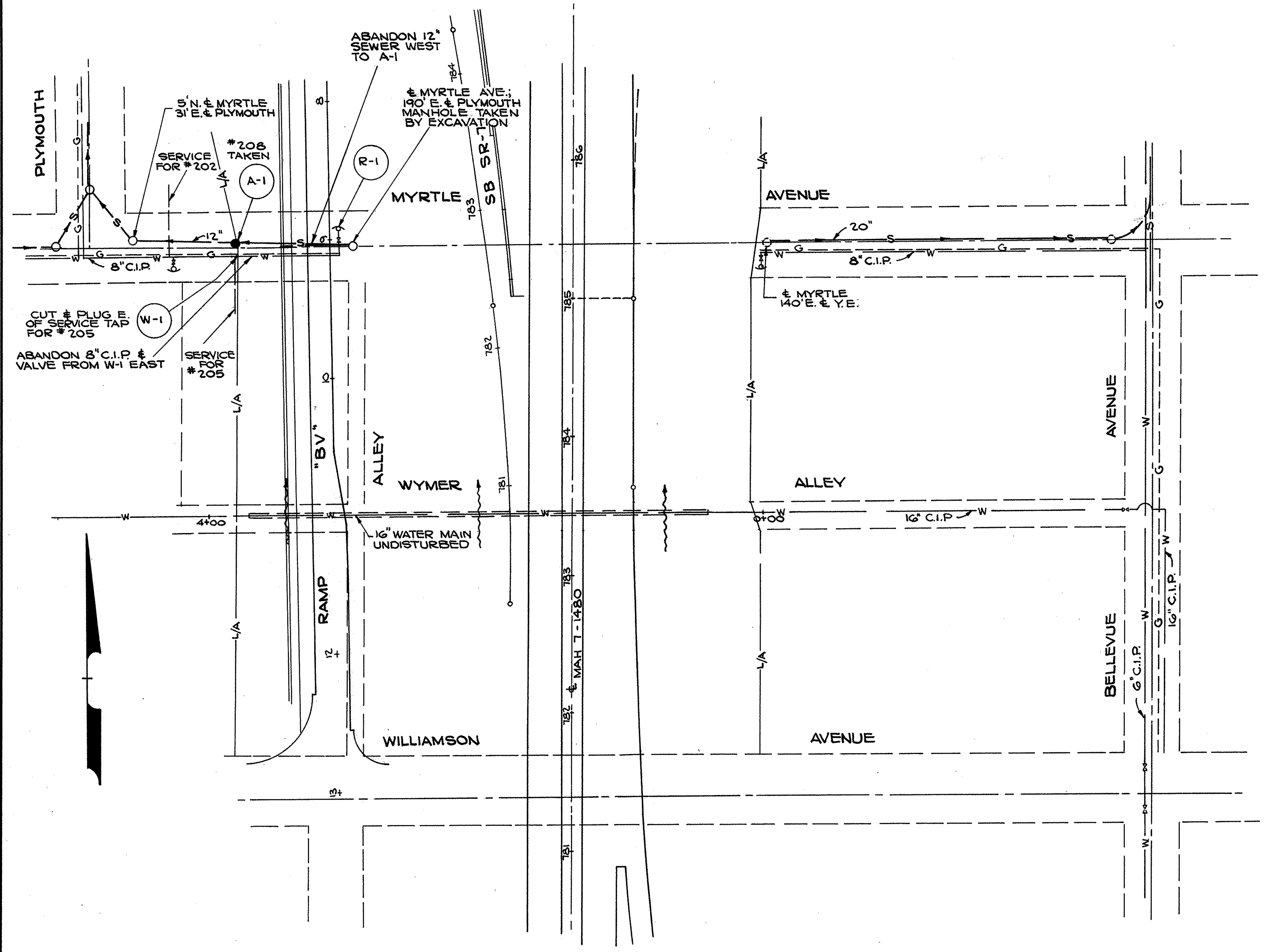




FOR ROADWAY DETAILS & QUANTITIES OF RELOCATED FRANKLIN AVE. SEE SHEET 28

FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS (F-11 FRNKN UTLY) SEE SHEET 63

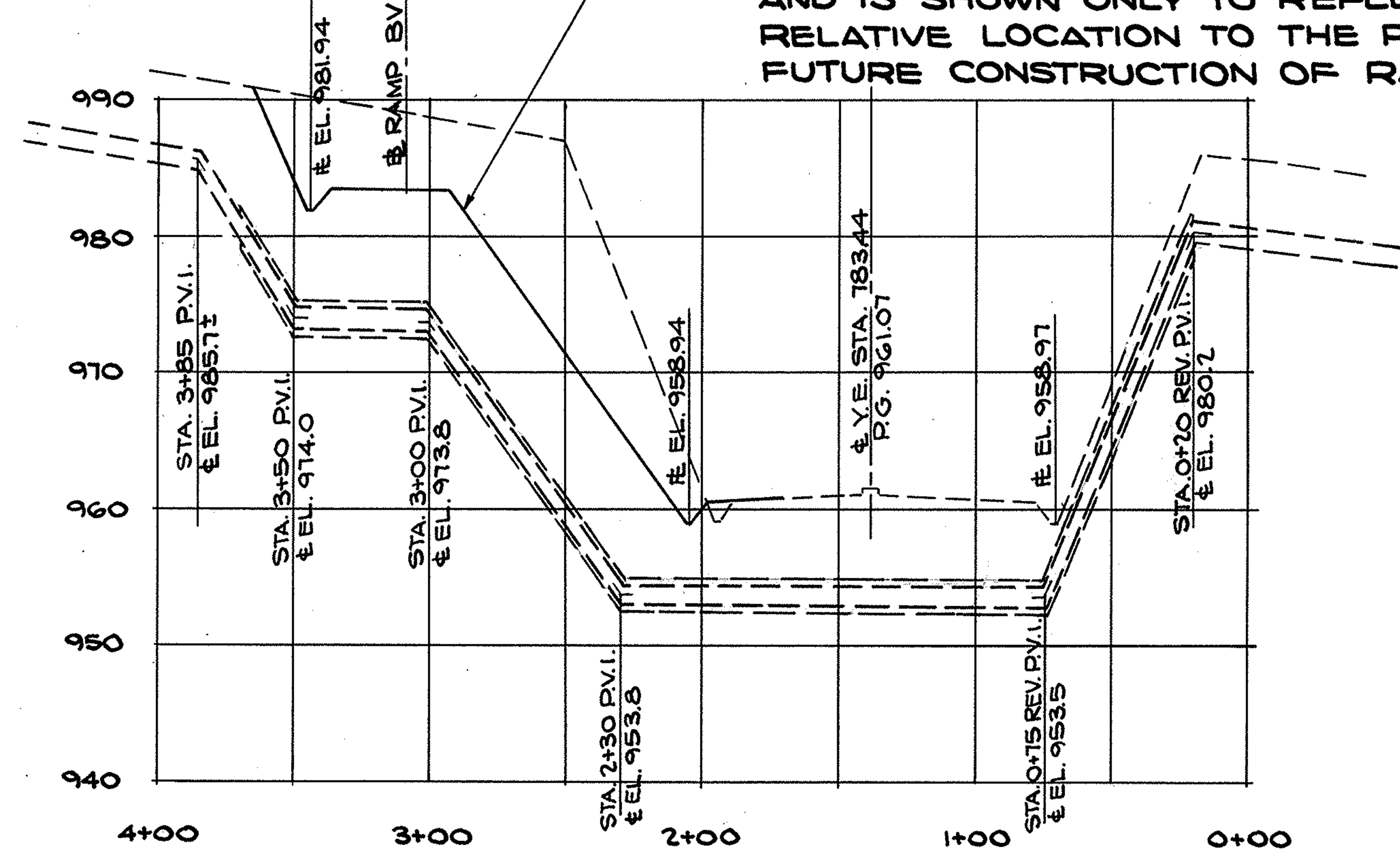
DRAINAGE PLAN
RELOCATED FRANKLIN AVE.



RELOCATED UTILITIES PLAN
SCALE 1"=50'

PROPOSED GRADE LINE FOR MAH. 7-14.95

NOTE: THIS WATER LINE WORK IS COMPLETED AND IS SHOWN ONLY TO REFLECT ITS RELATIVE LOCATION TO THE PROPOSED FUTURE CONSTRUCTION OF RAMP "BV"



16" C.I.P. WATER MAIN
WYMER ALLEY
AS RELOCATED FOR MAH 7-14.80
SCALE HORIZ. 1"=50'
VERT. 1"=10'

I-8 MANHOLES EACH				
CODE	LOCATION	DEPTH	INVERT ELEV.	Nº 1 MOD. MANHOLE
A-1	2.7' N. ℄ MYRTLE AVE., 105' E. ℄ PLYMOUTH	11.8'	12"-975.8	1
TOTAL				1

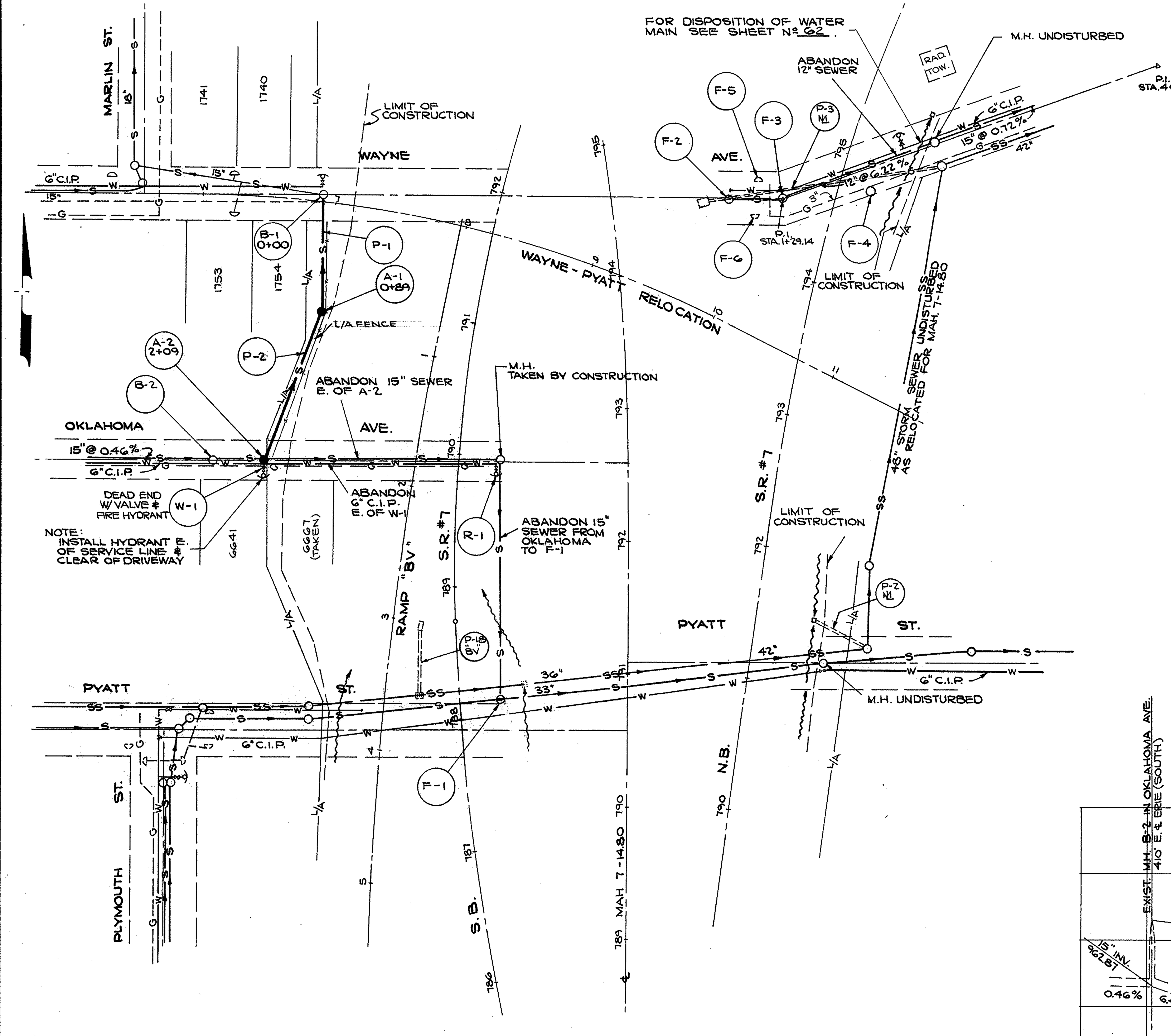
I-124 NEW WATER MAIN		
		PLUG EACH
CODE	LOCATION	8"
W-1	7' S. ℄ MYRTLE AVE., 106' E. ℄ PLYMOUTH	1
TOTAL		1

I-124 FIRE HYDRANTS REMOVED & DISPOSED		
CODE	LOCATION	EACH
R-1	181' E. ℄ PLYMOUTH ST.	1
TOTAL		1

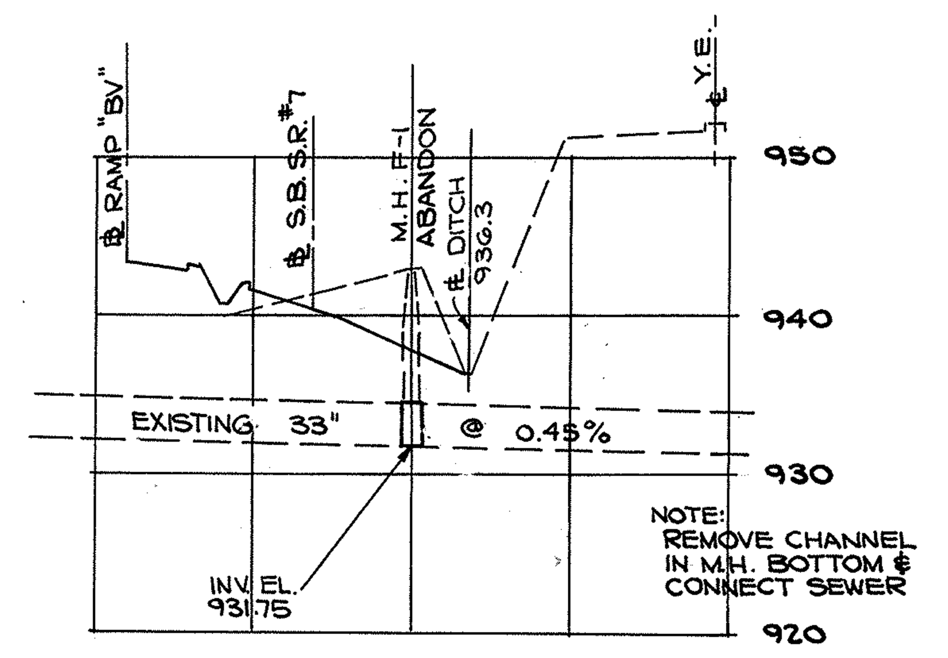
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH 7-14.95

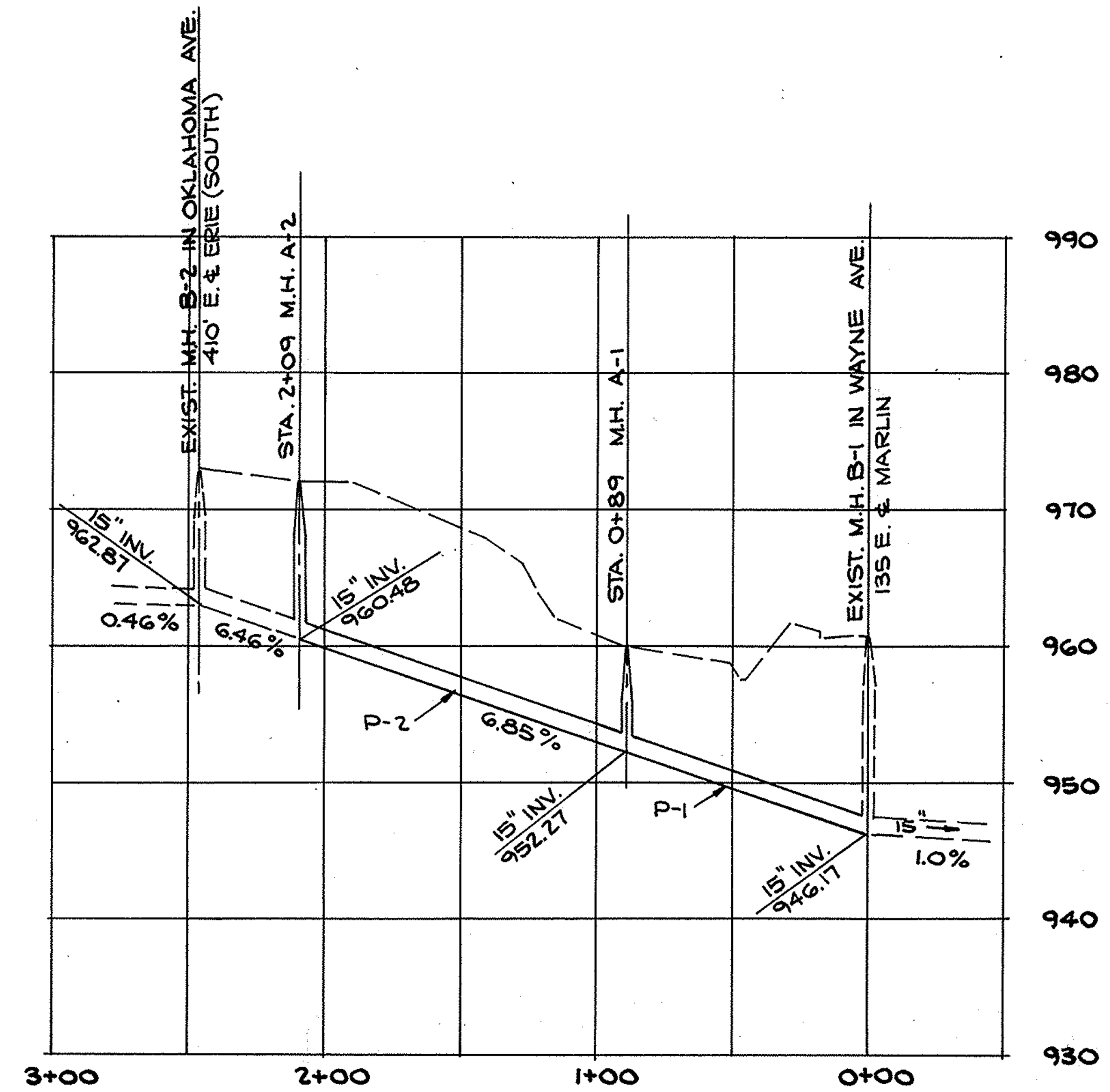
NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS
SEE SHEET Nº 43. (P-2 N1) (P-3 N1)
SEE SHEET Nº 46. (P-18 BV)



RELOCATED UTILITIES PLAN
SCALE 1"=50'



33" PYATT ST. SAN. SEWER
SCALE: HORIZ. 1"=50' VERT. 1"=10'



15" SEWER RELOCATION OKLAHOMA TO WAYNE
SCALE: HORIZ. 1"=50' VERT. 1"=10'

I-16 MANHOLES & CATCH BASINS ABANDONED -EACH			
CODE	LOCATION	M.H.	C.B.
F-1	23' N. ℄ PYATT ST, 254' E. ℄ PLYMOUTH ST.	1	
F-2	1' S. ℄ WAYNE AVE. STA. 0+89	1	
F-3	1' S. ℄ WAYNE AVE. STA. 1+29.4	1	
F-4	17' S. ℄ WAYNE AVE. STA. 1+96	1	
F-5	12.2' N. ℄ WAYNE AVE. STA. 1+18.6		1
F-6	12' S. ℄ WAYNE AVE. STA. 1+16		1
TOTAL		4	2

I-124 FIRE HYDRANTS REMOVED & DISPOSED		
CODE	LOCATION	EACH
R-1	100' W. ℄ STA. 792+60 MAH. 7-14.80	1
TOTAL		1

I-8 MANHOLES -EACH				
CODE	LOCATION	DEPTH	INVERT ELEV.	Nº 1 MOD. MANHOLE
A-1	89' S. M.H. B-1, 13' E. E. ℄ LOT # 1754	11.5'	952.26	1
A-2	℄ OKLAHOMA AVE. 447' E. ℄ ERIE ST. (SOUTH)	7.7'	960.48	1
TOTAL				2

I-1 PIPE LIN. FT. (COMB. SEWER)				
CODE	LOCATION FROM	LOCATION TO	MAX. COVER	CL. 8-1 15" DIA. MG.8b
P-1	B-1	A-1	13'	89
P-2	A-1	A-2	11.5'	120
TOTAL				209'

I-124 NEW WATER MAIN					
CODE	LOCATION	C.I.P. LINEAL FT. CL. 22 6"	CL. 250 FITTINGS EACH 6"-90° BEND	VALVE & VALVEBOX EACH 6"	FIRE HYDRANT EACH
W-1	447' E. ℄ ERIE ST. (S.), 11' S. ℄ OKLAHOMA AVE.	7'	1	1	1
TOTAL		7'	1	1	1

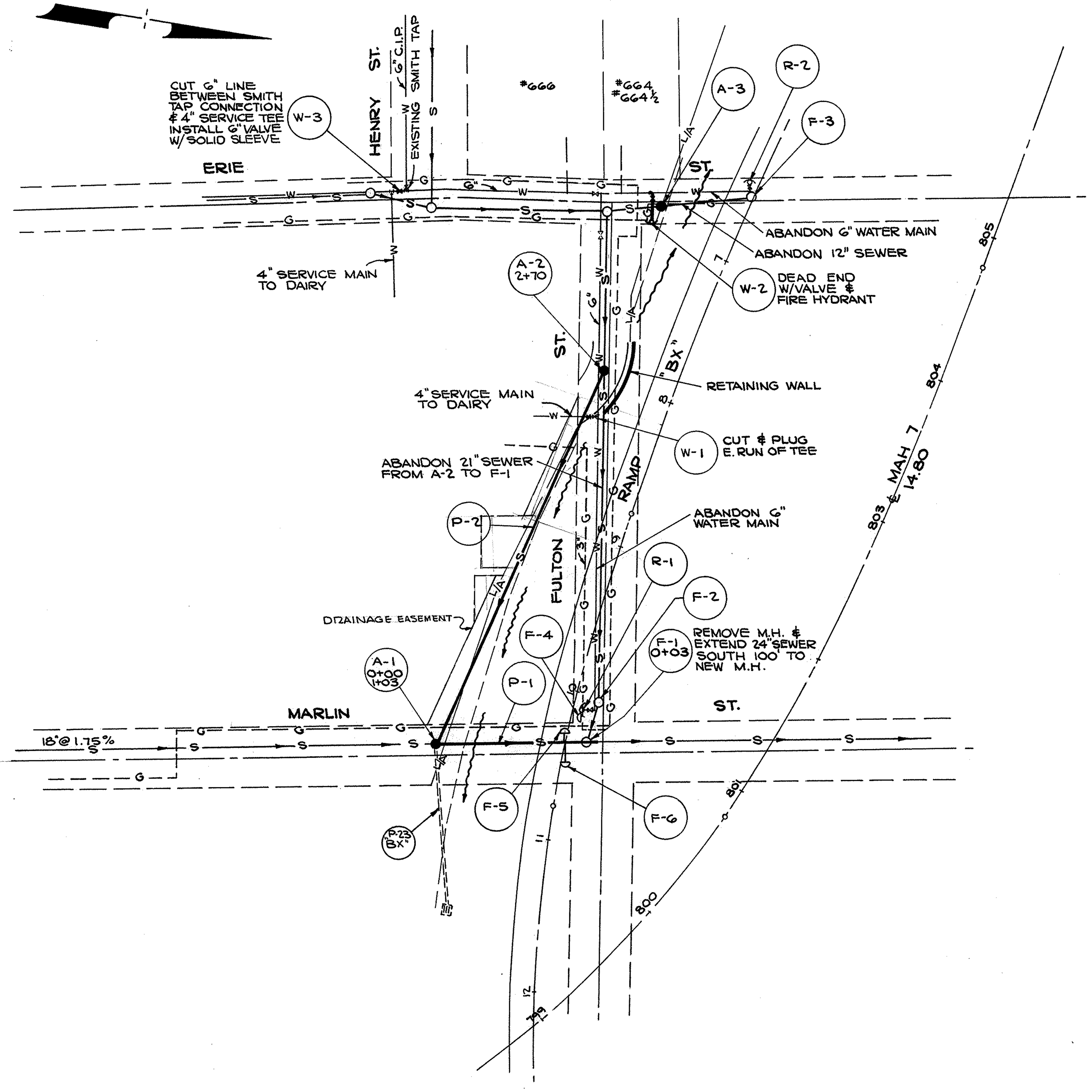
RELOCATED UTILITIES

FED. RD.	STATE	PROJECT	
2	OHIO		

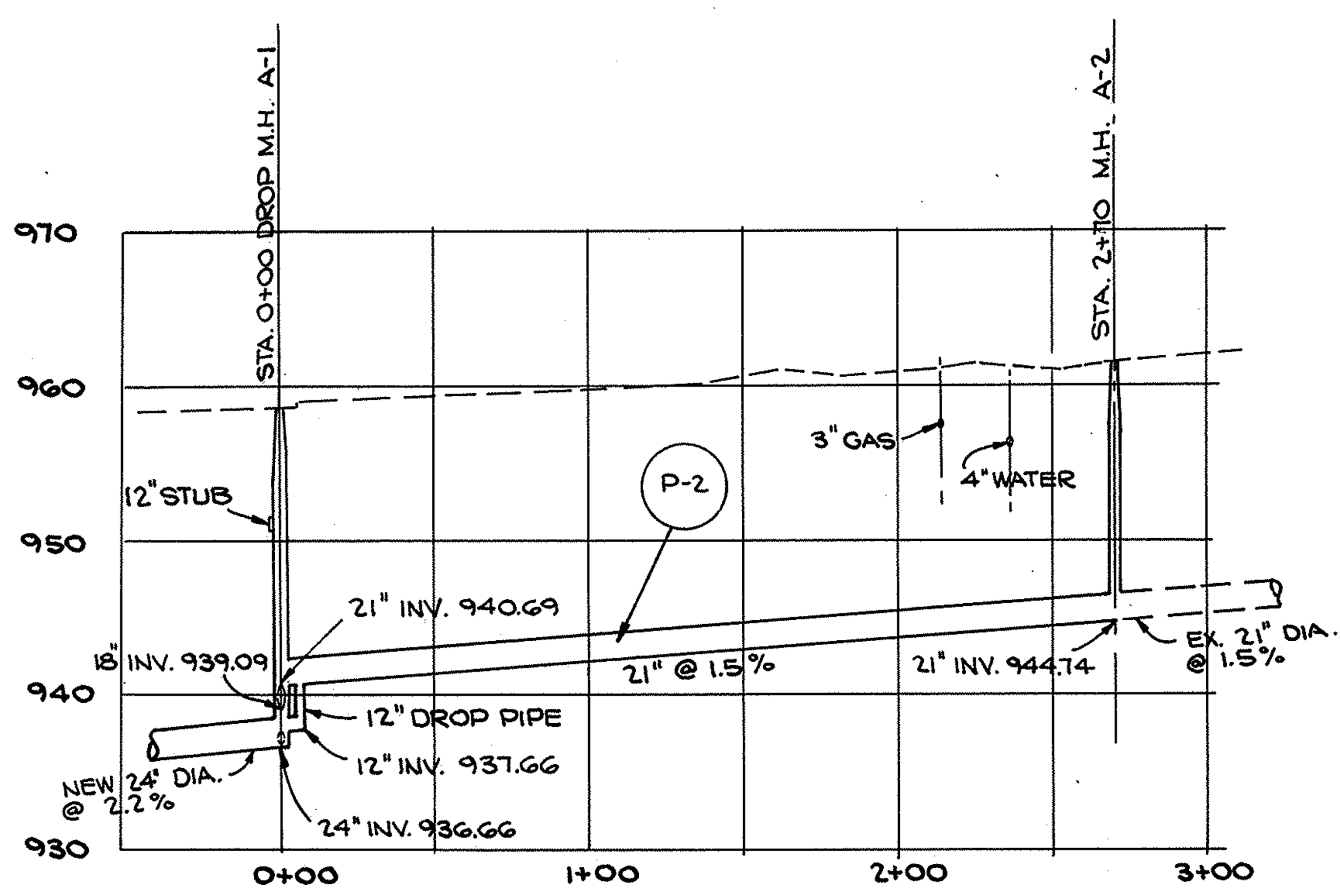
MAH 7-14.95

NOTE:
IF SERVICE TO #664, 664½ ERIE ST. SHOULD BE DISTURBED IT SHALL BE RECONSTRUCTED AND COST SHALL BE INCLUDED WITH A-3, I-8 MANHOLE.

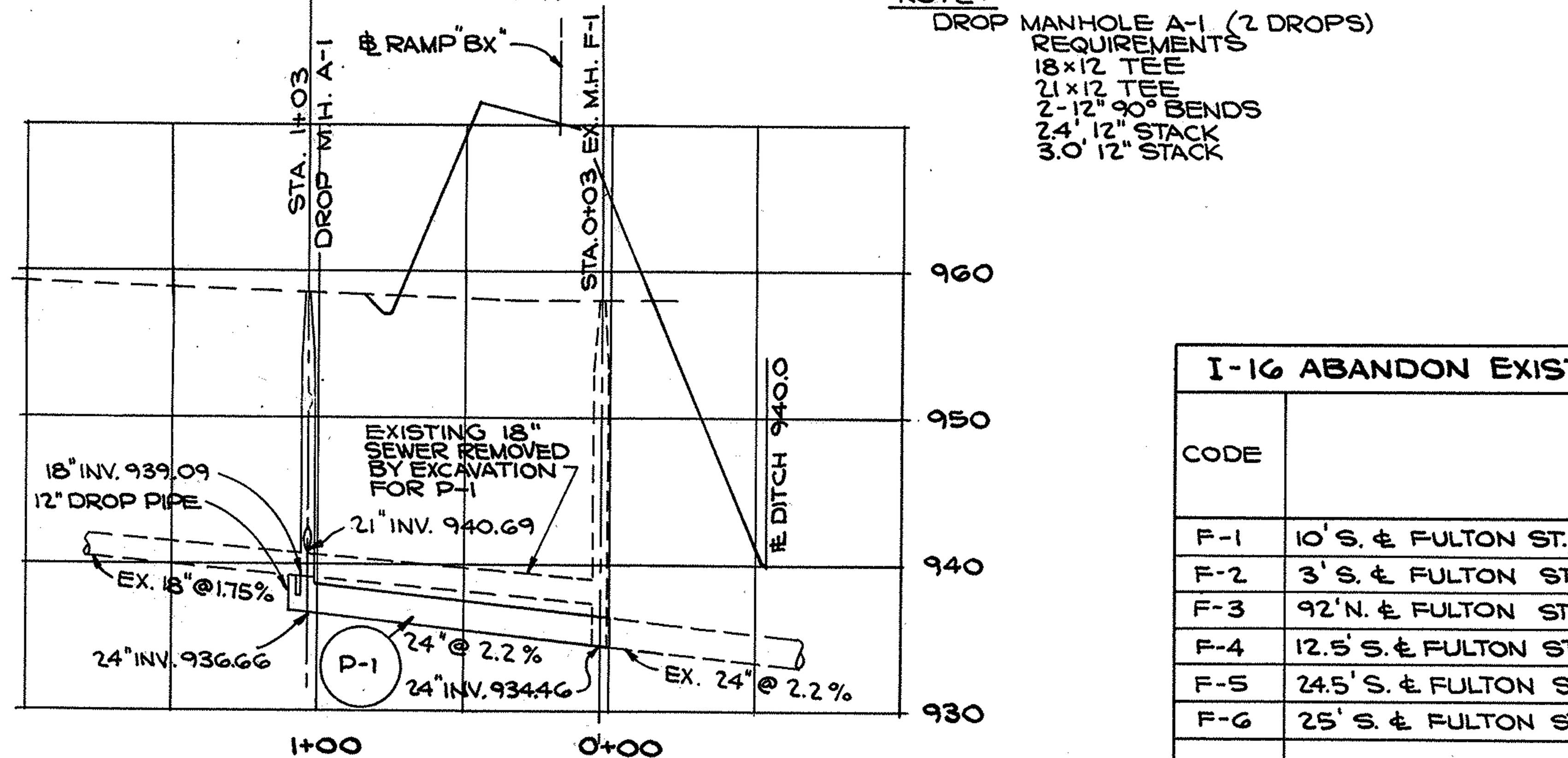
NOTE:
FOR CONSTRUCTION DETAILS AND QUANTITIES OF ITEMS MARKED THUS (P-23 "BX") SEE SHEET No 55.



RELOCATED UTILITIES PLAN
SCALE 1"=50'



21" SEWER RELOCATION
FULTON TO MARLIN
SCALE: HORIZ: 1"=50' VERT: 1"=10'



24" SEWER RELOCATION
MARLIN ST.
SCALE: HORIZ. 1"=50 VERT. 1"=10

NOTE:
DROP MANHOLE A-1 (2 DROPS)
REQUIREMENTS
18×12 TEE
21×12 TEE
2-12" 90° BENDS
2.4' 12" STACK
3.0' 12" STACK

I-16 ABANDON EXISTING MANHOLES & CATCH BASINS -EACH

CODE	LOCATION	M.H.	C.B.
F-1	10' S. ℄ FULTON ST., 7' W. ℄ MARLIN ST.	1	
F-2	3' S. ℄ FULTON ST., 33' W. ℄ MARLIN ST.	1	
F-3	92' N. ℄ FULTON ST., 2' W. ℄ ERIE ST.	1	
F-4	12.5' S. ℄ FULTON ST., 21.5' W. ℄ MARLIN ST.		1
F-5	24.5' S. ℄ FULTON ST., 12' W. ℄ MARLIN ST.		1
F-6	25' S. ℄ FULTON ST., 11' E. ℄ MARLIN ST.		1
TOTAL		3	3

I-124 FIRE HYDRANTS REMOVED & DISPOSED

CODE	LOCATION	EACH
R-1	14.5' S. ℄ FULTON ST., 24.5' W. ℄ MARLIN ST.	1
R-2	90' N. ℄ FULTON ST, 13' W. ℄ ERIE ST.	1
TOTAL		2

I-124 NEW WATER MAIN

CODE	LOCATION	C.I.P. LINEAL FT CL22 6"	CL. 250 FITTINGS EACH BEND 6"-90°	CL. 250 FITTINGS EACH SOLID SLEEVE 6"	VALVE & VALVEBOX 6"	FIRE HYDRANT EACH	PLUG EACH 6"
W-1	6'S. ℄ FULTON ST., 142'E. ℄ ERIE ST.						1
W-2	26'N. ℄ FULTON ST, 5'W. TO 13'E. ℄ ERIE ST.	18	1		1	1	
W-3	140'S. ℄ FULTON ST, 5'W. ℄ ERIE ST.			1	1		
TOTAL		18	1	1	2	1	1

I-8 MANHOLES EACH

CODE	LOCATION	DEPTH	INVERT ELEV.	No 2 MOD. DROP MANHOLE	No 2 MOD. MANHOLE WITHOUT DROP
A-1	110'S. ℄ FULTON ST., 7'W. ℄ MARLIN ST.	22'	936.66	1	
A-2	3'S. ℄ FULTON ST., 110'E. ℄ ERIE ST.	16.66'	944.74		1
A-3	31'N. ℄ FULTON ST, 3.5'E. ℄ ERIE ST.	15.38	947.32		1
TOTAL				1	2

I-1 PIPE LIN. FT. (COMB. SEWER)

CODE	LOCATION FROM	LOCATION TO	MAX. COVER	CL. A-1 MG.6d 24"	CL. B-1 MG.6c 21"
P-1	7'S. ℄ FULTON, 7'W. ℄ MARLIN	A-1	34'	103	
P-2	A-1	A-2	16.5'		270
TOTAL				103	270

RELOCATED UTILITIES

FED. RD.	STATE	PROJECT
2	0410	I-680-9(11)238 U-524(9)

61
206

MAH. 7-14.95

NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS
SEE SHEET Nº 52 (P.22 "CA") (P.20 "BY")
SEE SHEET Nº 53 (P.23 "BX")
SEE SHEET Nº 44 & 56 (P.6 SR#7)

RELOCATED UTILITIES PLAN
SCALE 1"=50'

I-124 NEW WATER MAIN		
		PLUG EACH
CODE	LOCATION	6"
W-1	62'S. ℄ WOODLAND AVE., 6'E. ℄ MARLIN ST.	1
TOTAL		1

I-124 FIRE HYDRANTS REMOVED & DISPOSED		
CODE	LOCATION	EACH
R-1	45'N. ℄ KYLE ST., 14'E. ℄ MARLIN ST.	1
R-2	136'S. ℄ KYLE ST., 14'E. ℄ MARLIN ST.	1
R-3	14.5'S. ℄ KYLE ST. STA. 5+08.5	1
R-4	14'S. ℄ KYLE ST. STA. 9+22.5	1
R-5	13'S. ℄ FULTON ST. STA. 7+40	1
R-6	13'S. ℄ FULTON ST. STA. 10+99.5	1
TOTAL		6

I-16 MANHOLES & CATCH BASINS ABANDONED			
CODE	LOCATION	M.H.	C.B.
F-1	45'S. ℄ WOODLAND AVE., 12'E. ℄ MARLIN ST.		1
F-2	104'N. ℄ KYLE ST., 12'W. ℄ MARLIN ST.		1
F-3	26'S. ℄ KYLE ST., 12'W. ℄ MARLIN ST.		1
F-4	42'S. ℄ KYLE ST., 12'E. ℄ MARLIN ST.		1
F-5	℄ KYLE ST., 124'E. ℄ MARLIN ST.	1	
F-6	5'S. ℄ KYLE ST. STA. 3+94.5	1	
F-7	℄ KYLE ST. STA. 4+65	1	
F-8	12'S. ℄ KYLE ST. STA. 4+62.5		1
F-9	12'N. ℄ KYLE ST. STA. 4+81.5		1
F-10	℄ KYLE ST. STA. 6+70.4	1	
F-11	12'S. ℄ KYLE ST. STA. 11+05.79		1
F-12	2'S. ℄ FULTON ST. STA. 6+15	1	
F-13	12'N. ℄ FULTON ST. STA. 7+23		1
F-14	℄ FULTON ST. STA. 11+04	1	
F-15	12'N. ℄ FULTON ST. STA. 11+08		1
F-16	12'S. ℄ FULTON ST. STA. 11+02		1
F-17	12'S. ℄ FULTON ST. STA. 11+55.5		1
F-18	13.2'N. ℄ FULTON ST. STA. 11+61		1
F-19	1.5'N. ℄ FULTON ST. STA. 13+74.5	1	
F-20	17'S. ℄ FULTON ST. STA. 15+47		1
TOTAL		6	14

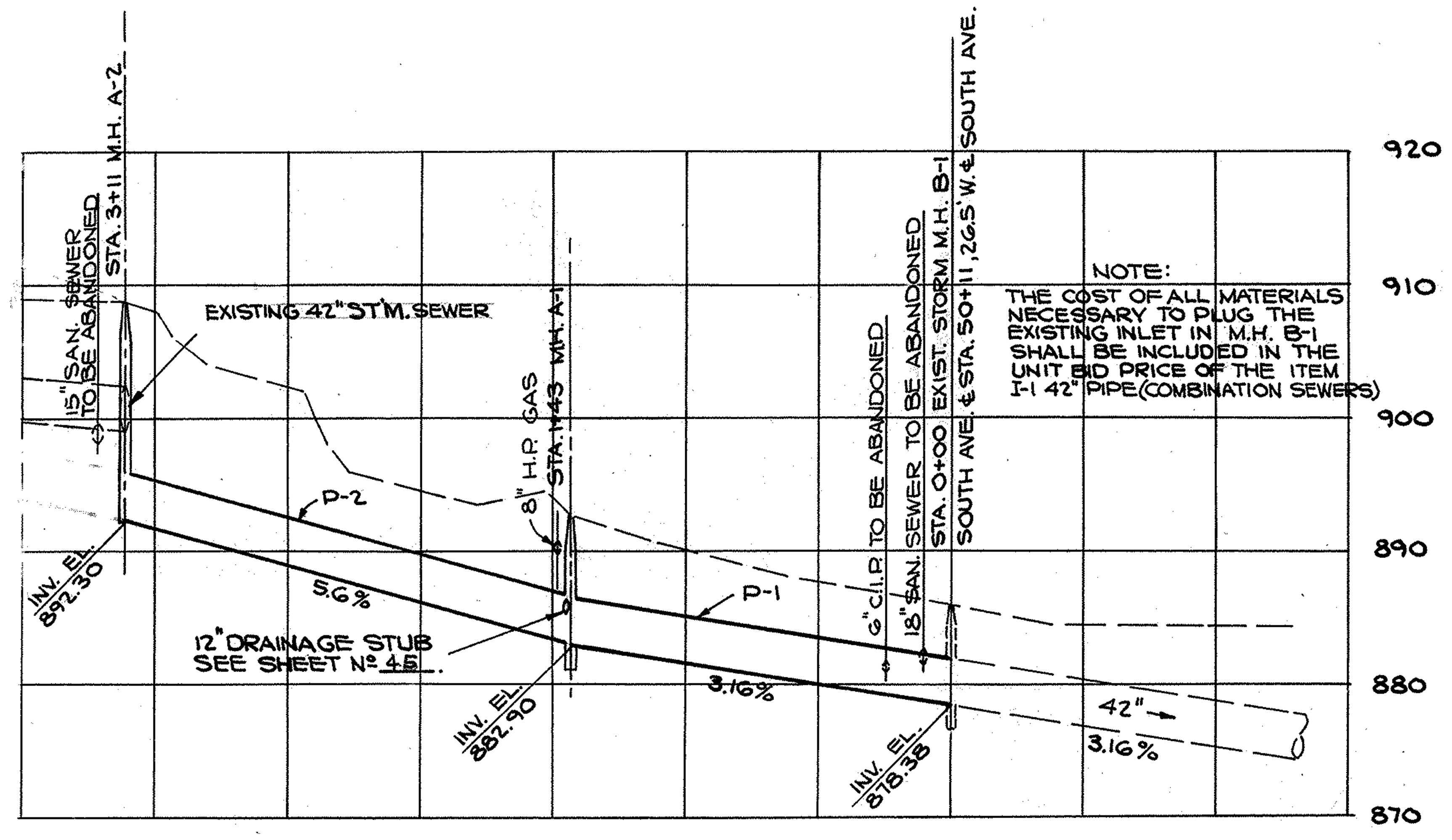
RELOCATED UTILITIES

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(1)238 U-524(9)	62/206

MAH. 7-14.95

RELOCATED UTILITIES PLAN

SCALE 1" = 50'



42" STORM SEWER RELOCATION FULTON TO SOUTH

SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

I-124 NEW WATER MAIN						
CODE	LOCATION	C.I.P. LINEAL FT. CL. 22 6"	FITTINGS CL. 250 EACH 6"-90° BEND	VALVE & VALVEBOX EACH 6"	FIRE HYDRANT EACH	PLUG EACH 6"
W-1	15' N. ℄ WAYNE AVE. STA. 2+70	9	1	1	1	
W-2	22' W. ℄ SOUTH AVE. STA. 49+88					1
TOTAL		9	1	1	1	1

I-8 MANHOLES -EACH					
CODE	LOCATION	DEPTH	INVERT ELEV.	Nº 1-A MOD. MANHOLE	Nº 2 MOD. MANHOLE WITHOUT DROP
A-1	26' W. ℄ SOUTH AVE. STA. 48+68	10'	882.90	1	
A-2	71' N. P.I. 16+58.73 FULTON ST., 2.5' E. ℄ FULTON ST.	16.4	898.91		1
TOTAL				1	1

I-1 PIPE - LIN. FT.					
CODE	LOCATION FROM	LOCATION TO	MAX. COVER	CL. B-1 42" DIA. M-6.6(a)	CL. B-1 42" DIA. M-6.6(b)
P-1	B-1	A-1	6.0	143	
P-2	A-1	A-2	12.5		168
TOTAL				143	168

I-16 MANHOLES & CATCH BASINS ABANDONED -EACH			
CODE	LOCATION	M.H	C.B.
F-1	20' N. ℄ KYLE ST. STA. 12+57.5	1	
F-2	10' N. ℄ KYLE ST. STA. 12+63	1	
F-3	11' E. ℄ FULTON ST. STA. 18+20.5		1
F-4	13.5' W. ℄ FULTON ST. STA. 18+14		1
F-5	12' S. ℄ KYLE ST. STA. 12+24		1
F-6	12' N. ℄ KYLE ST. STA. 12+52.5		1
F-7	12' N. ℄ KYLE ST. STA. 14+12.5		1
F-8	12' S. ℄ KYLE ST. STA. 14+06.5		1
TOTAL		2	6

E-12 PIPE REMOVED		
CODE	LOCATION	42" DIA. LIN. FT.
RP-1	FROM A-2 TO F-1	132
RP-2	FROM F-1 TO B-1	173
TOTAL		305

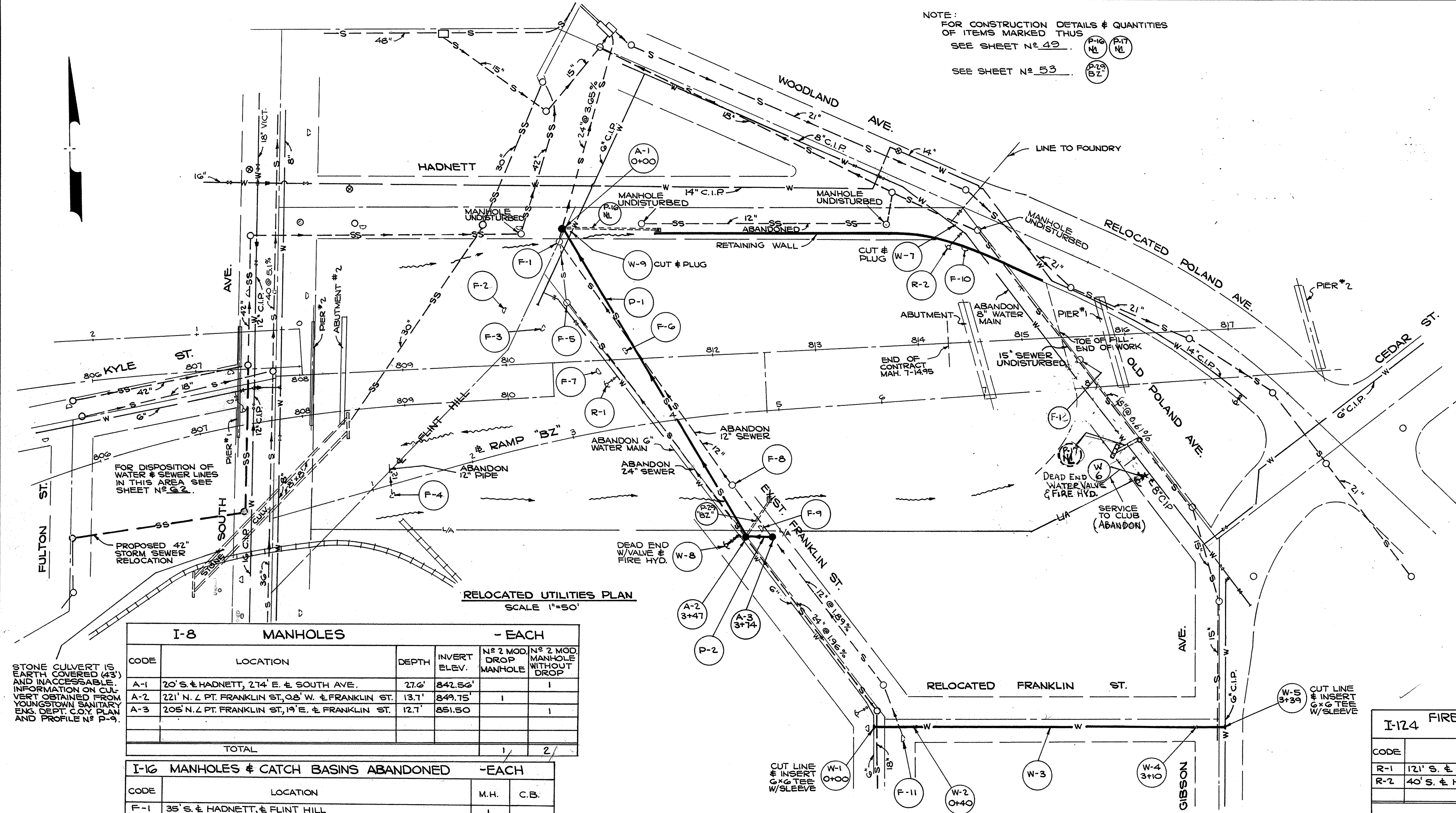
I-124 FIRE HYDRANTS REMOVED & DISPOSED		
CODE	LOCATION	EACH
R-1	15' N. ℄ WAYNE AVE. STA. 2+28	1
R-2	29.9' W. ℄ SOUTH AVE. STA. 49+67	1
TOTAL		2

RELOCATED UTILITIES

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH 7-14.95

NOTE:
FOR CONSTRUCTION DETAILS & QUANTITIES OF ITEMS MARKED THUS
SEE SHEET Nº 49. (P-16 NL) (P-17 NL)
SEE SHEET Nº 53. (P-29 BZ)



RELOCATED UTILITIES PLAN
SCALE 1"=50'

I-8 MANHOLES - EACH					
CODE	LOCATION	DEPTH	INVERT ELEV.	Nº 2 MOD. DROP MANHOLE	Nº 2 MOD. MANHOLE WITHOUT DROP
A-1	20' S. ℄ HADNETT, 274' E. ℄ SOUTH AVE.	27.6'	842.56'		1
A-2	221' N. ∠ PT. FRANKLIN ST., 0.8' W. ℄ FRANKLIN ST.	13.7'	849.75'	1	
A-3	205' N. ∠ PT. FRANKLIN ST., 19' E. ℄ FRANKLIN ST.	12.7'	851.50		1
TOTAL				1	2

I-16 MANHOLES & CATCH BASINS ABANDONED -EACH		
CODE	LOCATION	M.H.	C.B.
F-1	35' S. ℄ HADNETT, ℄ FLINT HILL	1	
F-2	118' S. ℄ HADNETT, 19' N.W. ℄ FLINT HILL		1
F-3	118' S. ℄ HADNETT, 20' S.E. ℄ FLINT HILL		1
F-4	328' S. ℄ HADNETT, 17' S.E. ℄ FLINT HILL		1
F-5	36' S. ℄ FLINT HILL, ℄ FRANKLIN ST.	1	
F-6	107' S. ℄ FLINT HILL, 15' E. ℄ FRANKLIN ST.		1
F-7	107' S. ℄ FLINT HILL, 15' W. ℄ FRANKLIN ST.		1
F-8	273' S. ℄ FLINT HILL, 20' E. ℄ FRANKLIN ST.	1	
F-9	323' S. ℄ FLINT HILL, 15' E. ℄ FRANKLIN ST.		1
F-10	39' S. ℄ HADNETT, 21' S.W. ℄ POLAND AVE.		1
F-11	19' S. RELOC. FRANKLIN ST., 16' E. ℄ FRANKLIN ST.		1
F-12	23' RT. STA. 815+53	1	
	TOTALS	4	8

I-1 PIPE LIN. FT.							
CODE	LOCATION	MAX. COVER	CL. B-1 12" DIA. M6.8b	CL. B-1	CL. A-1 27" DIA. M6.6d	CL. A-1 27" DIA. M6.6d CONCR. ENCASED	
P-1	A-1 TO A-2	52'			41	306	
P-2	A-2 TO A-3	11.5'	27				
P-4	A-4 TO A-5	47.8'					
TOTAL			27		41	306	

I-124 FIRE HYDRANTS REMOVED & DISPOSED		
CODE	LOCATION	EACH
R-1	121' S. ℄ FLINT HILL, 18' W. ℄ FRANKLIN ST.	1
R-2	40' S. ℄ HADNETT, 42' S.W. ℄ RELOC. POLAND AVE.	1
TOTAL		2

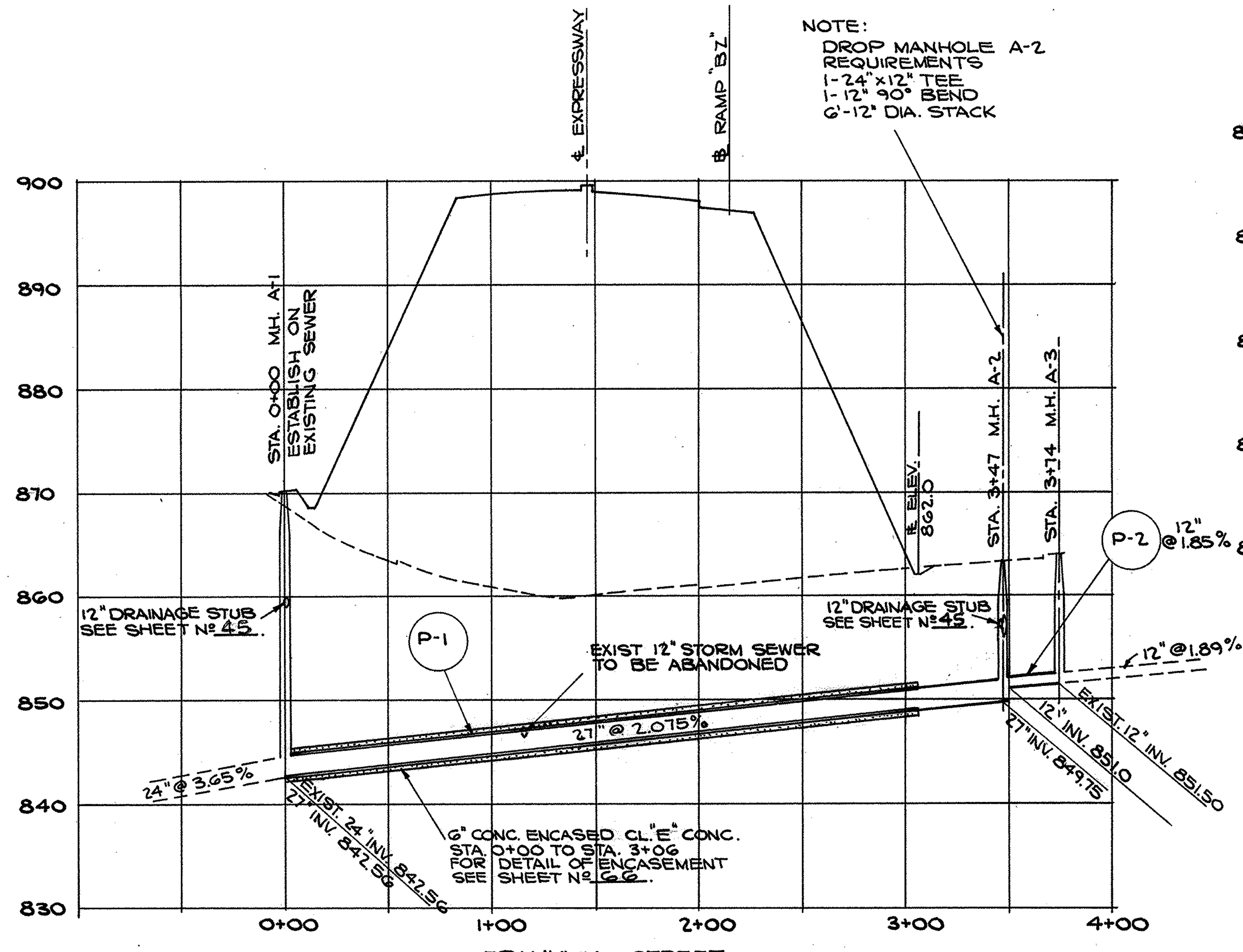
I-124 NEW WATER MAIN										
		C.I.P. LINEAL FT. CL. 22	CL. 250 FITTINGS EACH BEND	TEE	SOLID SLEEVE	REDUCER	VALVE & VALVEBOX EACH	FIRE HYDRANT	PLUG EACH	
CODE	LOCATION	6"	6"-90°	6x6x6	6"	8x6	6"	EACH	6"	8"
W-1	7'S. ℄ RELOC. FRANKLIN ST., 10' W. ℄ FRANKLIN ST.			1	1					
W-2	7'S. ℄ RELOC. FRANKLIN ST., 30' E. ℄ FRANKLIN ST.						1			
W-3	FROM W-1 TO W-5	339								
W-4	7'S. ℄ RELOC. FRANKLIN ST., 23' W. ℄ GIBSON AVE.						1			
W-5	7'S. ℄ RELOC. FRANKLIN ST., 6' E. ℄ GIBSON AVE.			1	1					
W-6	90' N. ℄ CEDAR ST., 13' W. ℄ POLAND AVE.	13	1			1	1	1		
W-7	1'± E. FOUNDRY LINE TEE (HADNETT @ POLAND AVE.)									1
W-8	225' N. ∠ PT. FRANKLIN ST., 20' W. ℄ FRANKLIN ST.	15	1				1	1		
W-9	22'S. ℄ HADNETT, 7' E. ℄ FLINT HILL								1	
TOTAL		367	2	2	2	1	4	2	1	1

PLAN

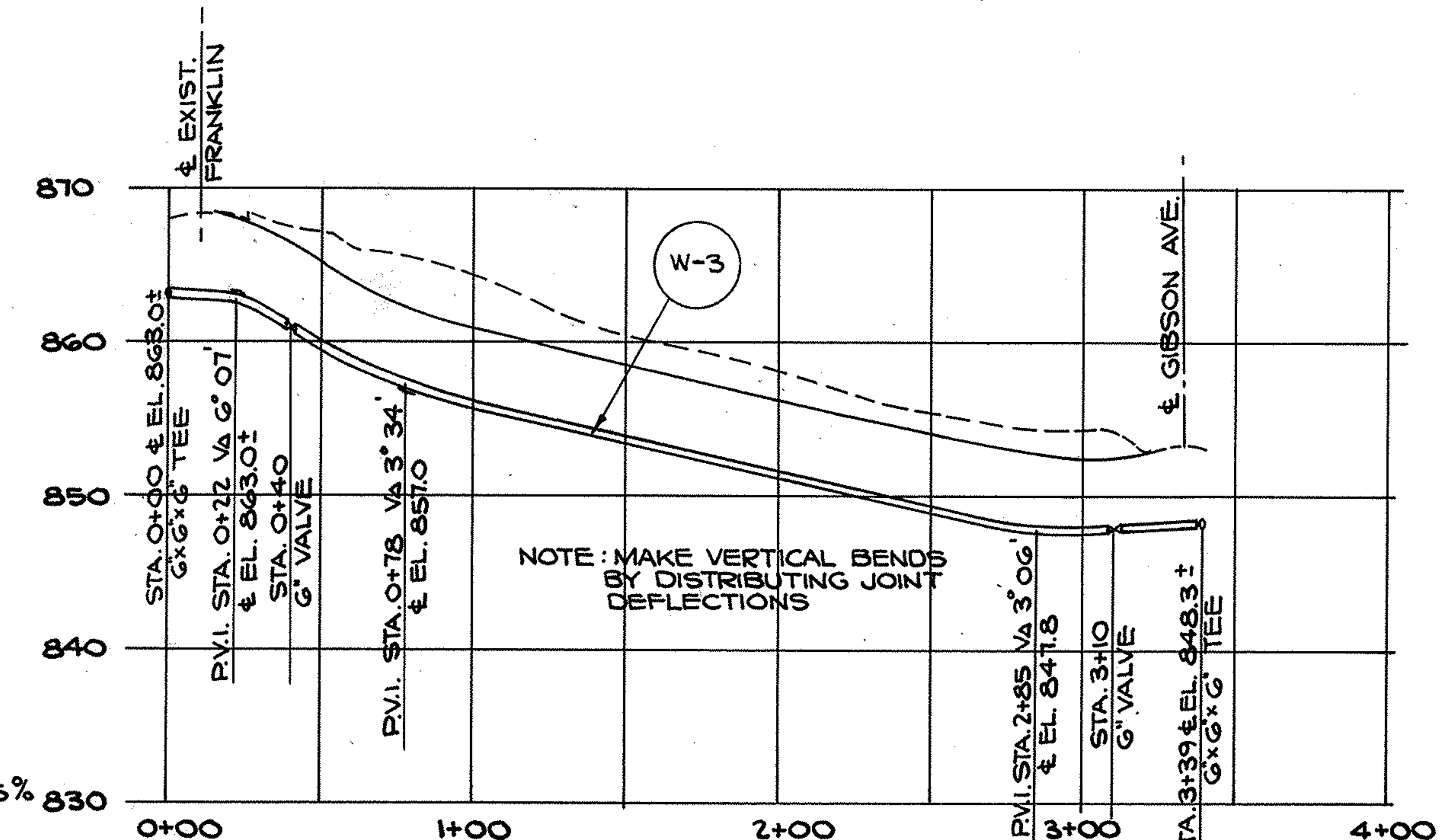
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

64/206

MAH 7-14.95

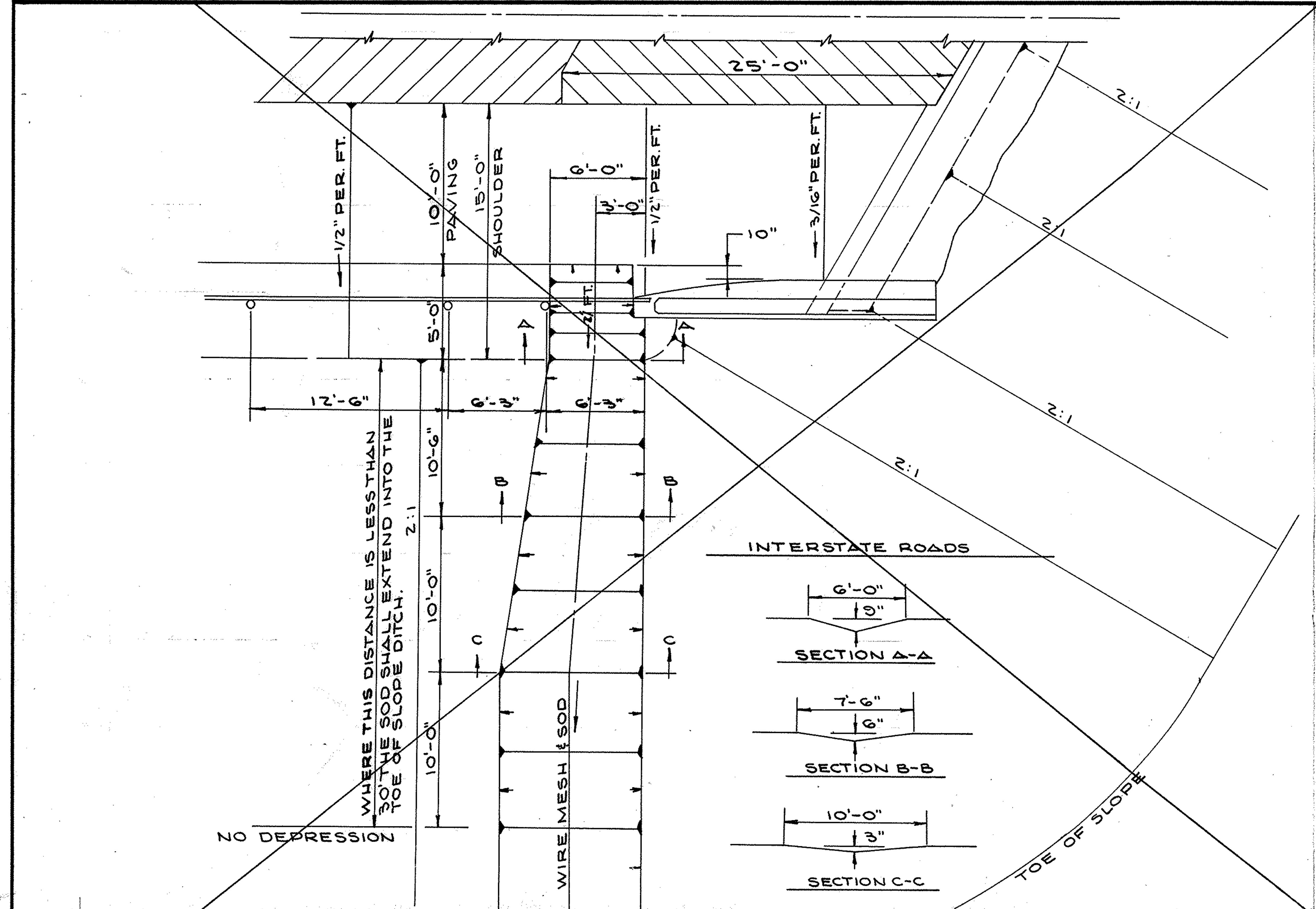


FRANKLIN STREET
SEWER RELOCATION
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'



NEW WATER MAIN
RELOCATED FRANKLIN
SCALE: HORIZ. 1" = 50' VERT. 1" = 10'

PROFILES



~~SPECIAL BERM & SLOPE PROTECTION~~

~~PRIOR TO PLACEMENT OF SOD IN THE BERM & SLOPE, GALVANIZED POULTRY FENCE SHALL BE PLACED ON THE FINISHED GRADE IN STRANDS WHICH SHALL BE AT RIGHT ANGLES TO THE DIRECTION OF FLOW. EACH STRAND SHALL BE STAKED SECURLY ON TOP & BOTTOM WITH STAKES AT FOUR (4') FOOT INTERVALS & ALTERNATED IN ROWS FOUR (4') FOOT APART.~~

~~STAKES SHALL BE 1"x1"x8" WOOD STAKES AND SHALL BE PREPENDICULAR TO THE GROUND & FLUSH WITH THE FINISH GRADE.~~

~~THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET. HAVING A TWO INCH MESH & ALL WIRES Nº 2 GAUGE.~~

~~EACH STRAND OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.~~

~~THE FENCE SHALL BE SECURED TO THE WOOD FENCE BY METAL STAPLES.~~

~~SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION & MATERIALS SPECIFICATIONS SECTION L 10.07.~~

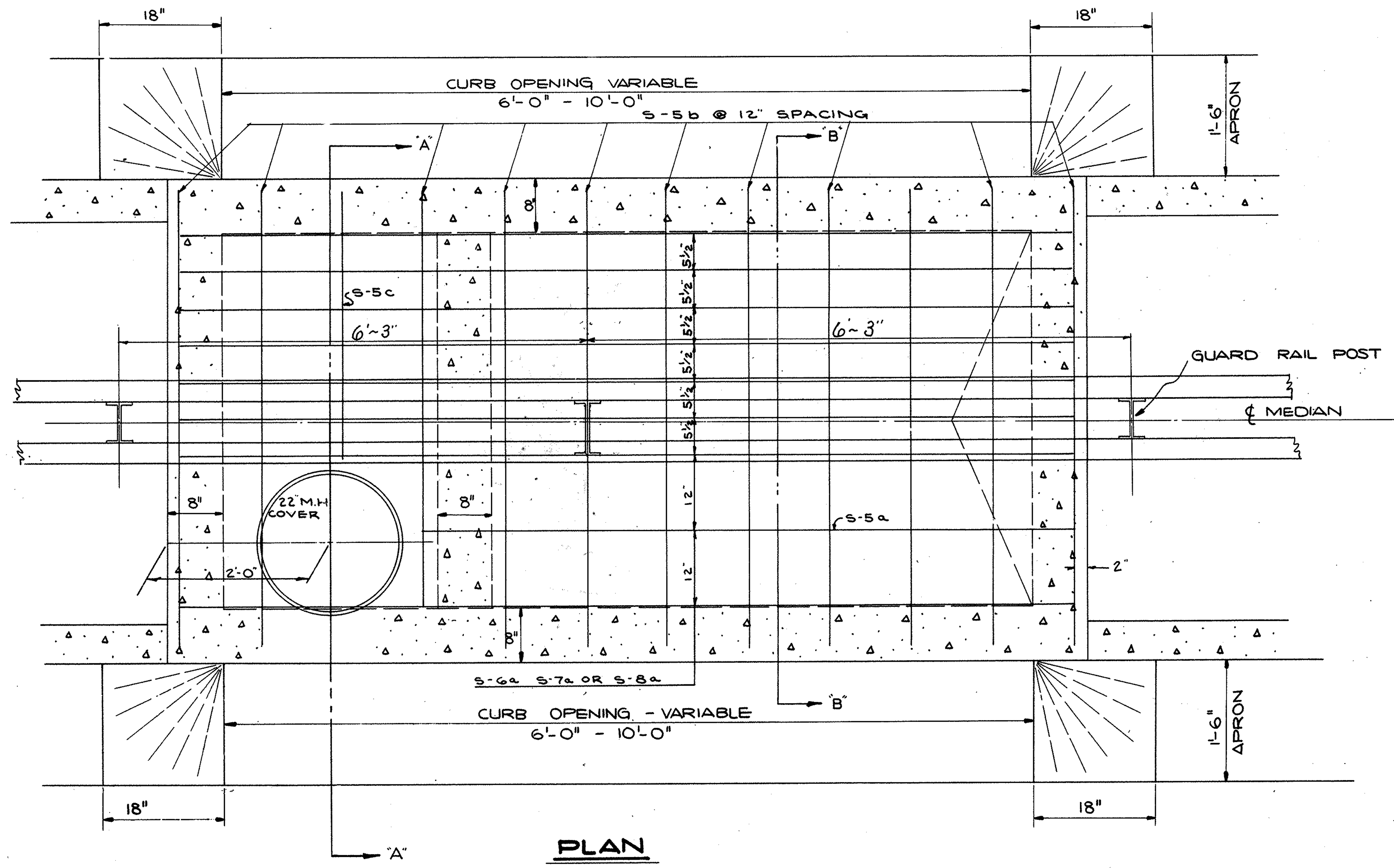
See Std Drwg MC-7

SPECIAL BERM PROTECTION

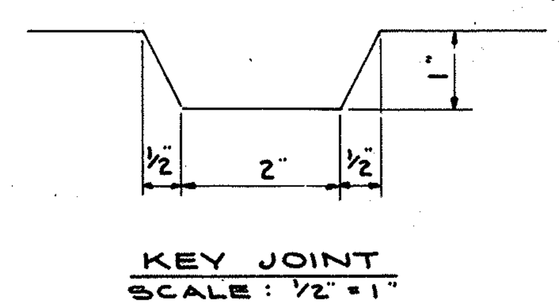
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

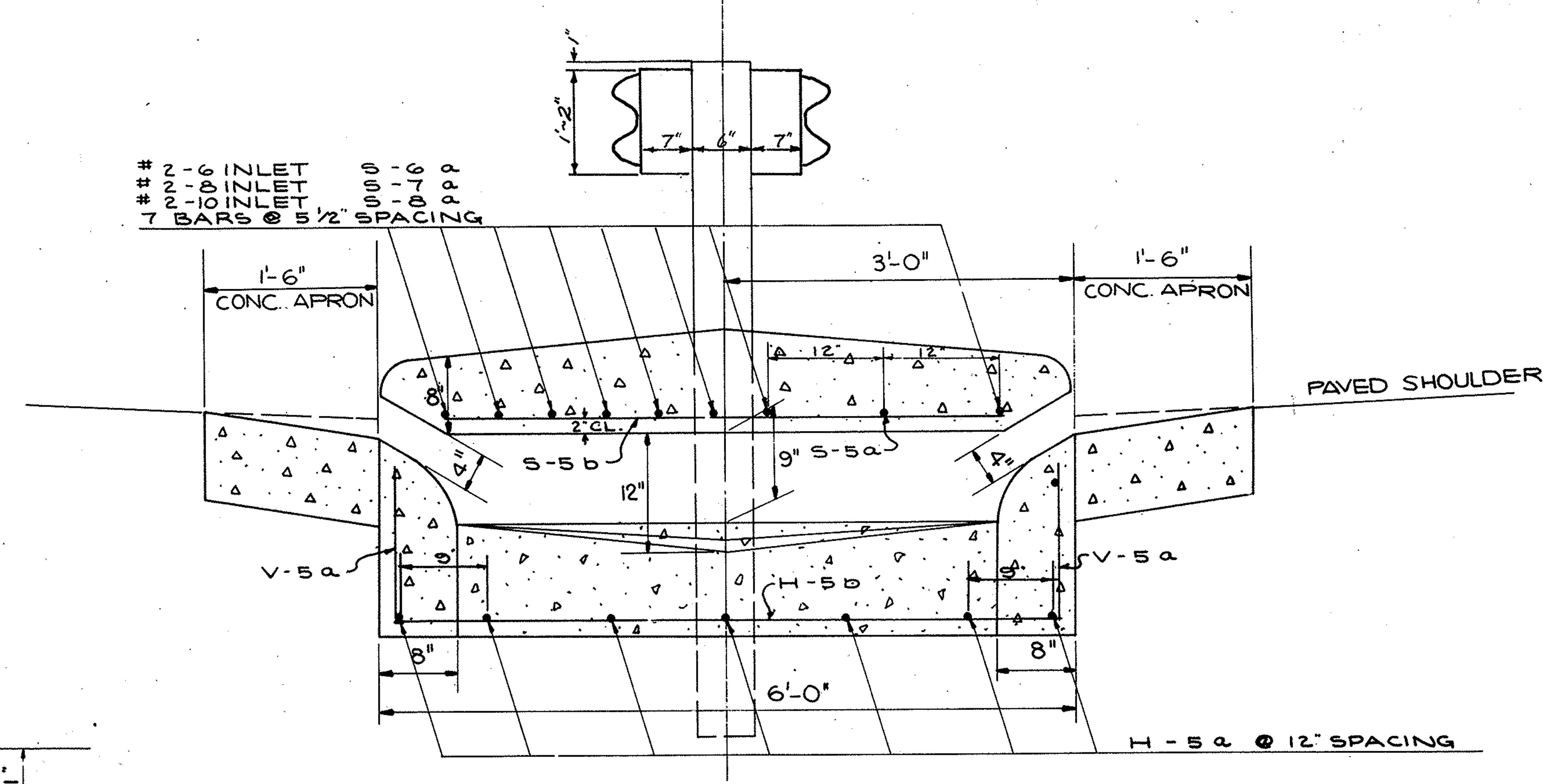
65 / 206

MAH. 7-14.95



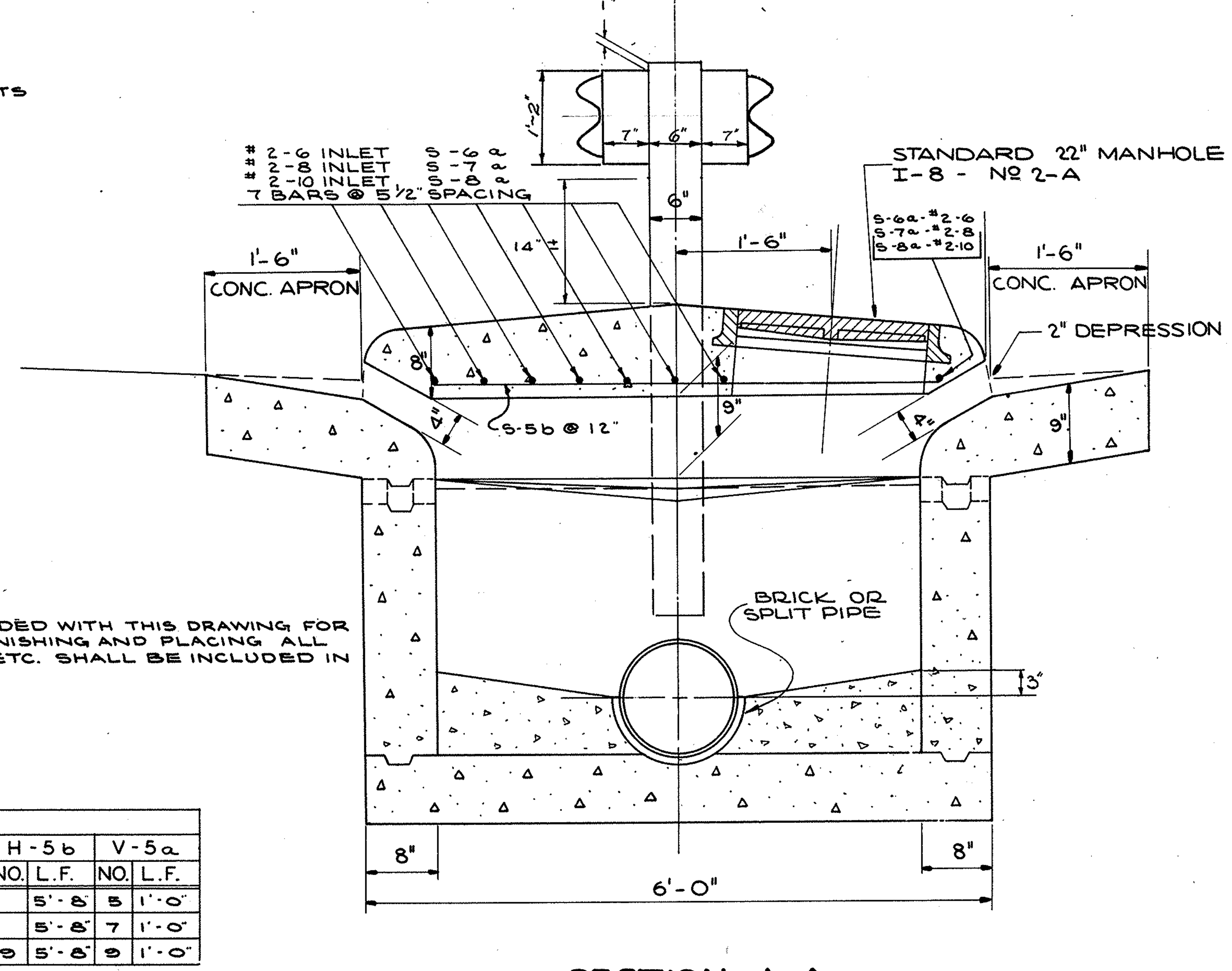
PLAN



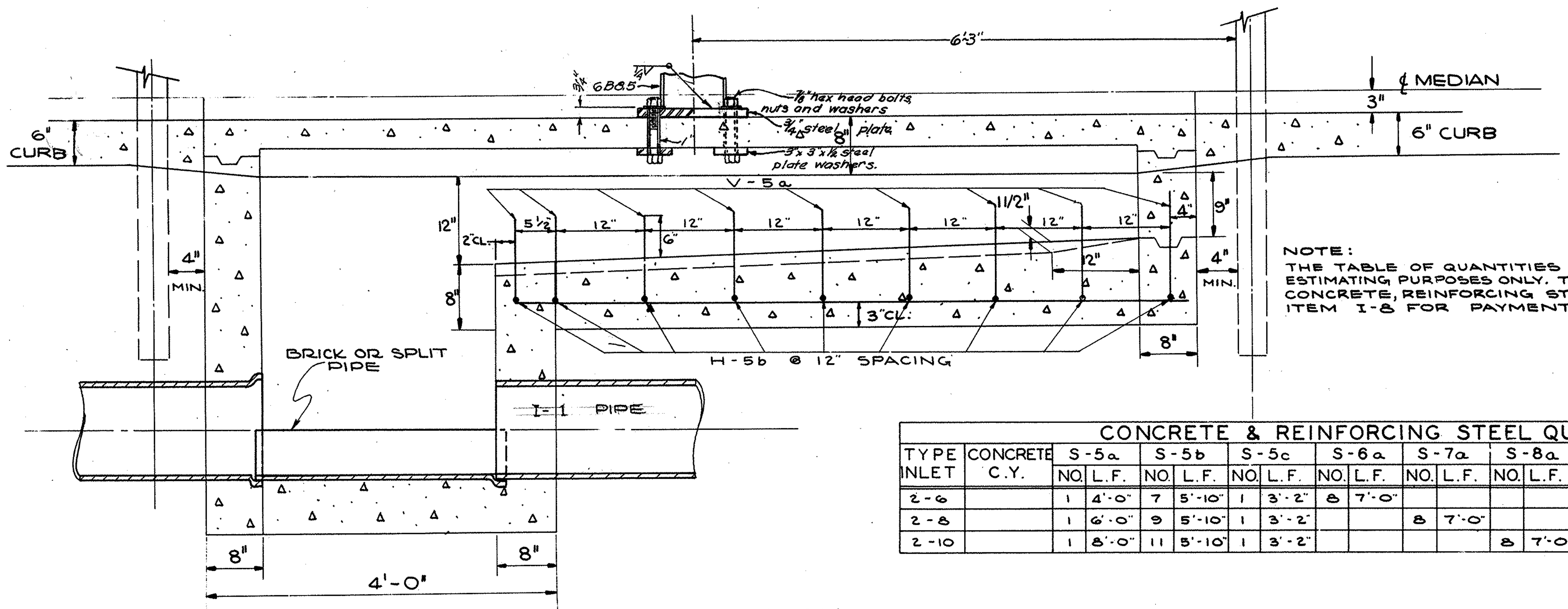


SECTION B-B

QUANTITIES OF CURB WITHIN THE LIMITS OF THE INLET SHALL BE DEDUCTED FROM THE PROJECT QUANTITIES



SECTION A-A



ELEVATION

NOTE:
THE TABLE OF QUANTITIES BELOW IS INCLUDED WITH THIS DRAWING FOR ESTIMATING PURPOSES ONLY. THE COST OF FURNISHING AND PLACING ALL CONCRETE, REINFORCING STEEL, CASTING, ETC. SHALL BE INCLUDED IN ITEM I-8 FOR PAYMENT.

CONCRETE & REINFORCING STEEL QUANTITIES

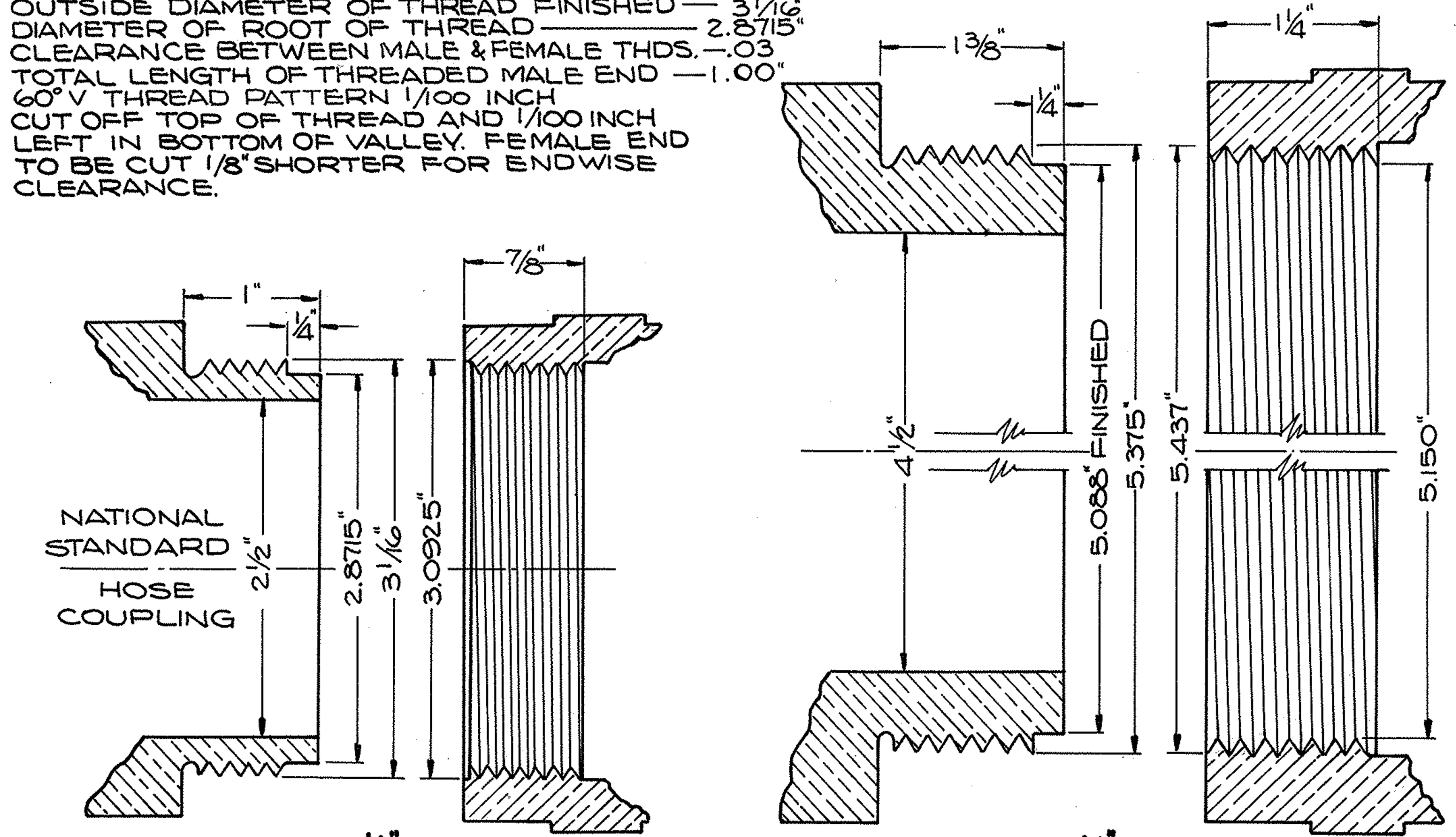
TYPE INLET	CONCRETE C.Y.	S-5a NO.	S-5a L.F.	S-5b NO.	S-5b L.F.	S-5c NO.	S-5c L.F.	S-6a NO.	S-6a L.F.	S-7a NO.	S-7a L.F.	S-8a NO.	S-8a L.F.	TYPE	H-5a NO.	H-5a L.F.	H-5b NO.	H-5b L.F.	V-5a NO.	V-5a L.F.
2-6		1	4'-0"	7	5'-10"	1	3'-2"	8	7'-0"					#2-6	7	3'-8		5'-8"	5	1'-0"
2-8		1	6'-0"	9	5'-10"	1	3'-2"			8	7'-0"			#2-8	7	5'-8"		5'-8"	7	1'-0"
2-10		1	8'-0"	11	5'-10"	1	3'-2"					8	7'-0"	#2-10	7	7'-8"	9	5'-8"	9	1'-0"

STANDARD Nº 2-6 , 2-8 INLETS - MODIFIED

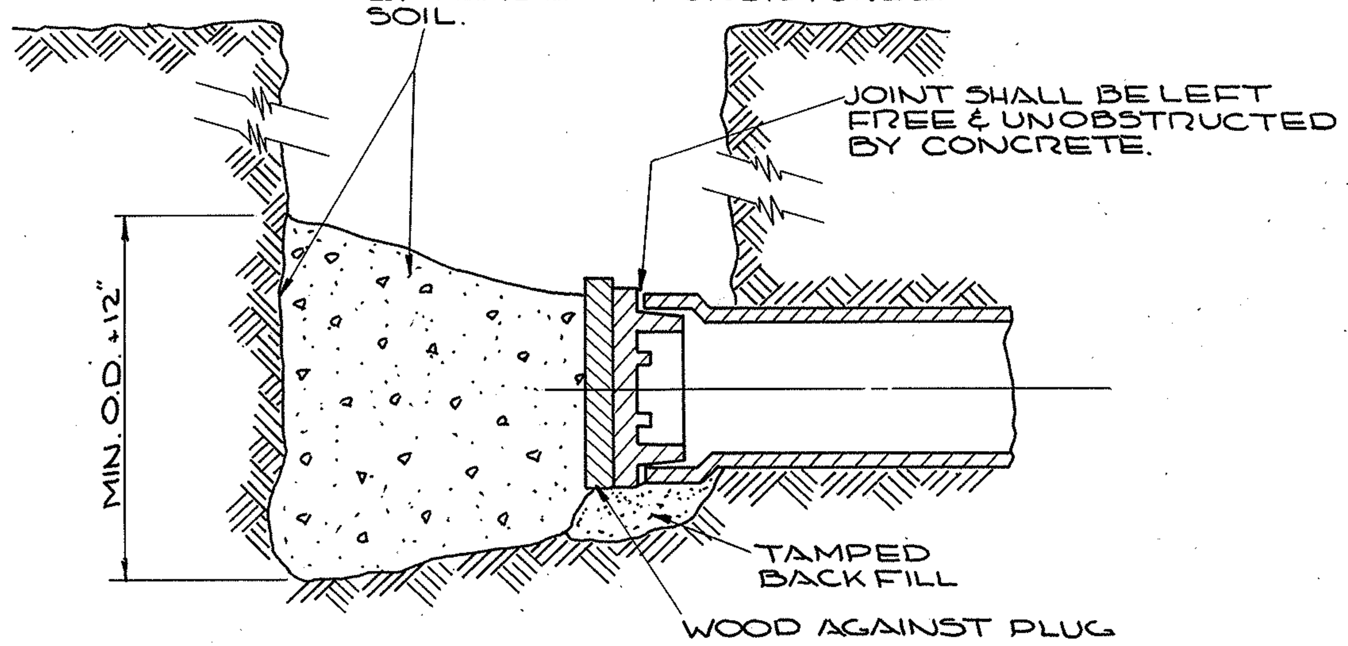
MAH. 7 - 14.95

INSIDE DIAMETER OF HOSE COUPLING — 4½"
NUMBER OF THREADS PER INCH — 6"
BLANK END ON MALE PART — ¼"
OUTSIDE DIAMETER OF THREAD FINISHED — 5 3/8"
DIAMETER OF ROOT OF THREAD — 5.088"
CLEARANCE BETWEEN MALE & FEMALE THDS. — .062"
TOTAL LENGTH OF THREADED MALE END — 1 3/8"
60° V THREAD PATTERN
FEMALE END TO BE CUT 1/8" SHORTER FOR ENDWISE CLEARANCE.

INSIDE DIAMETER OF HOSE COUPLING — 2½"
NUMBER OF THREADS PER INCH — 7½"
BLANK END ON MALE PART — ¼
OUTSIDE DIAMETER OF THREAD FINISHED — 3 1/16
DIAMETER OF ROOT OF THREAD — 2.8715"
CLEARANCE BETWEEN MALE & FEMALE THDS. — .03
TOTAL LENGTH OF THREADED MALE END — 1.00"
60° V THREAD PATTERN 1/100 INCH
CUT OFF TOP OF THREAD AND 1/100 INCH LEFT IN BOTTOM OF VALLEY. FEMALE END TO BE CUT 1/8" SHORTER FOR ENDWISE CLEARANCE.



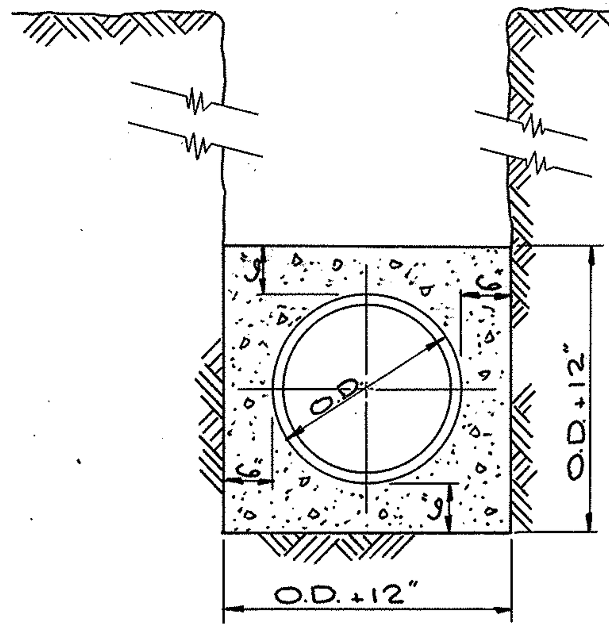
2½" SIZE 4½" SIZE
YOUNGSTOWN STANDARD FIRE HYDRANT
COUPLINGS FOR 2½" & 4½" HOSE



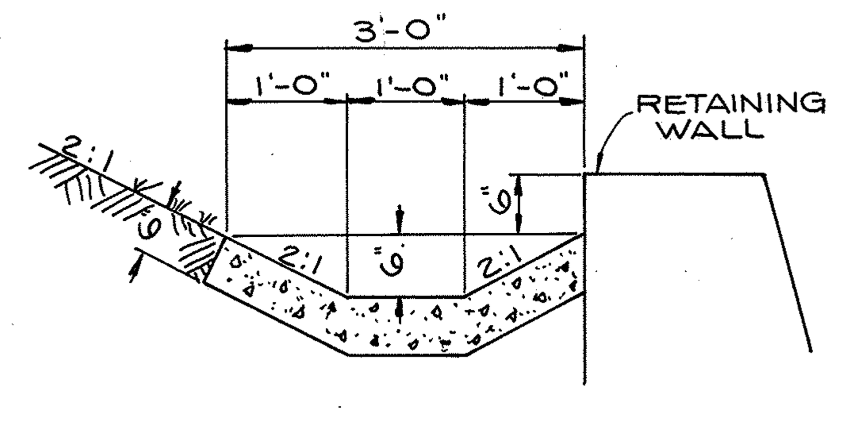
CLASS "E" CONCRETE TO BE INCLUDED IN UNIT BID PRICE BID FOR ITEM I-124 "NEW WATER MAIN, CUT & PLUG" PER EACH.

DETAIL
REACTION BACKING AT PLUG OR CAP

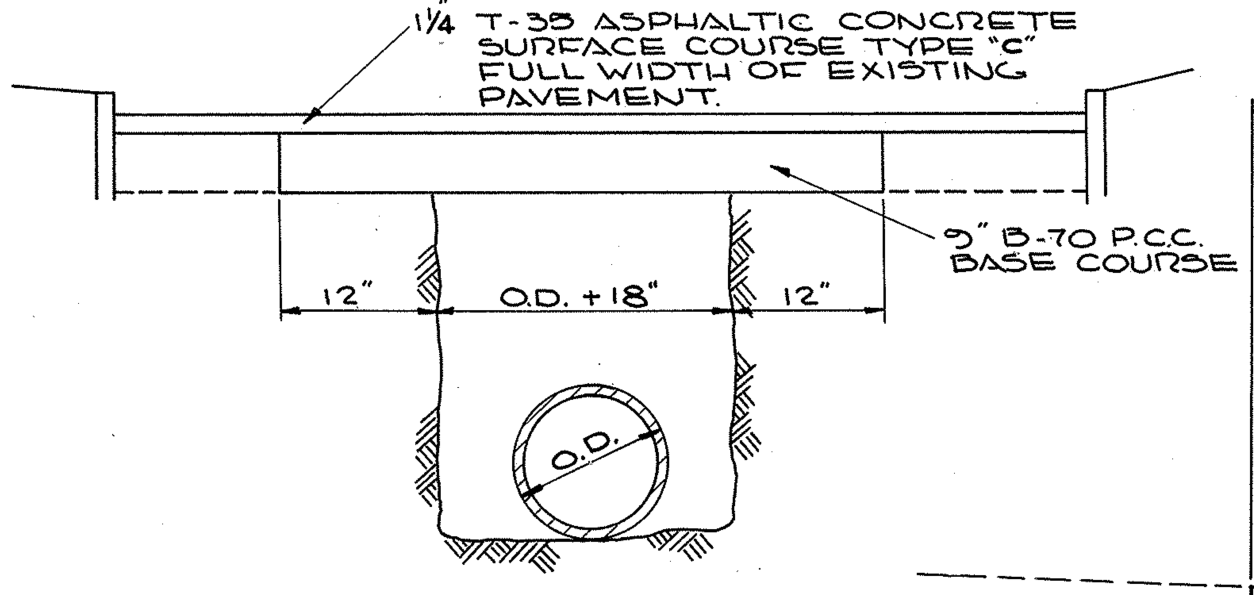
NOTE: CONCRETE ENCASEMENT TO BE INCLUDED IN THE CONTRACT PRICE BID PER LINIAL FOOT UNDER ITEM I-1 COMBINATION SEWER.



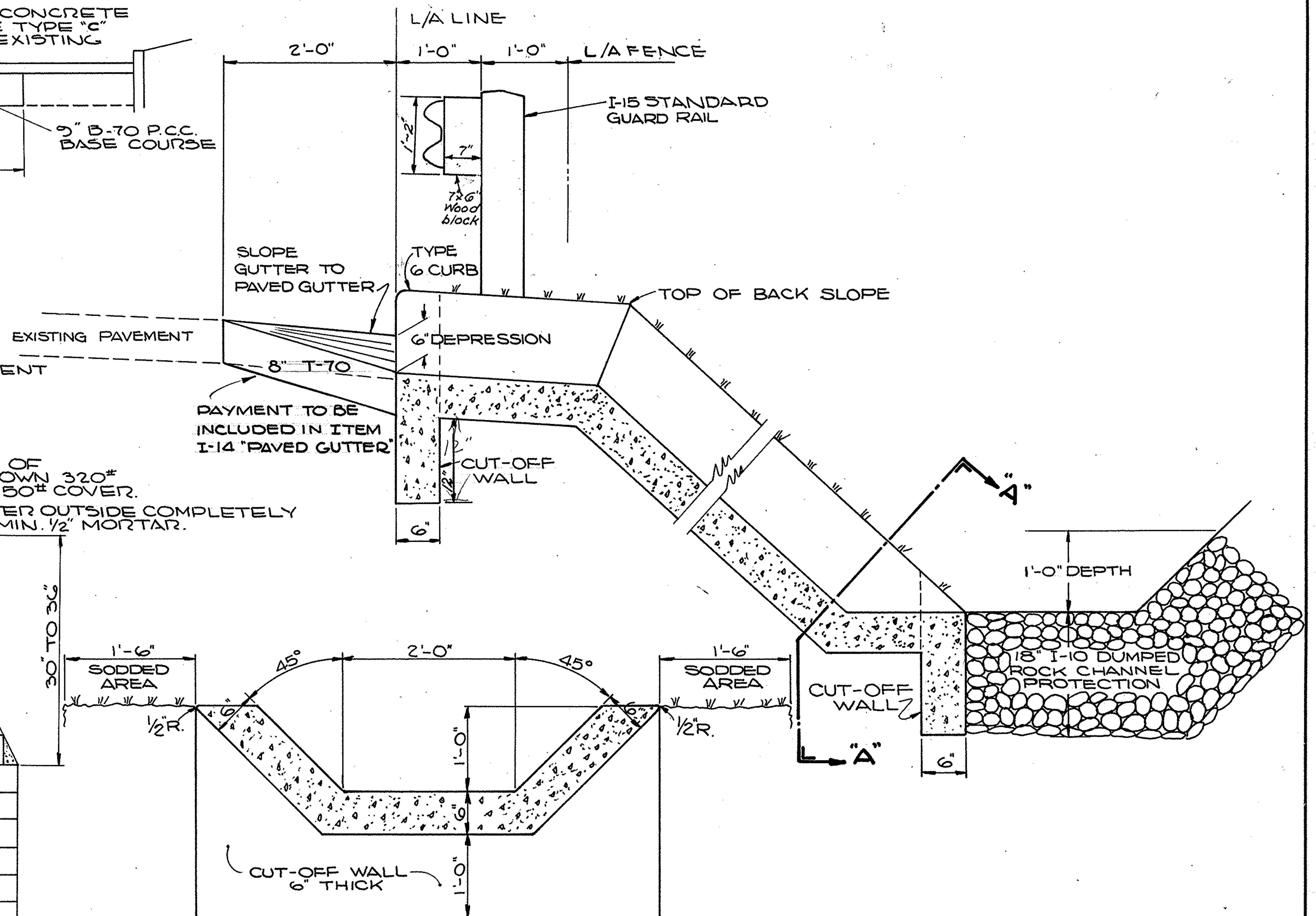
DETAIL
TYPICAL SECTION OF S-1 CLASS "E" CONC. ENCASEMENT OF YOUNGSTOWN COMB. SEWERS



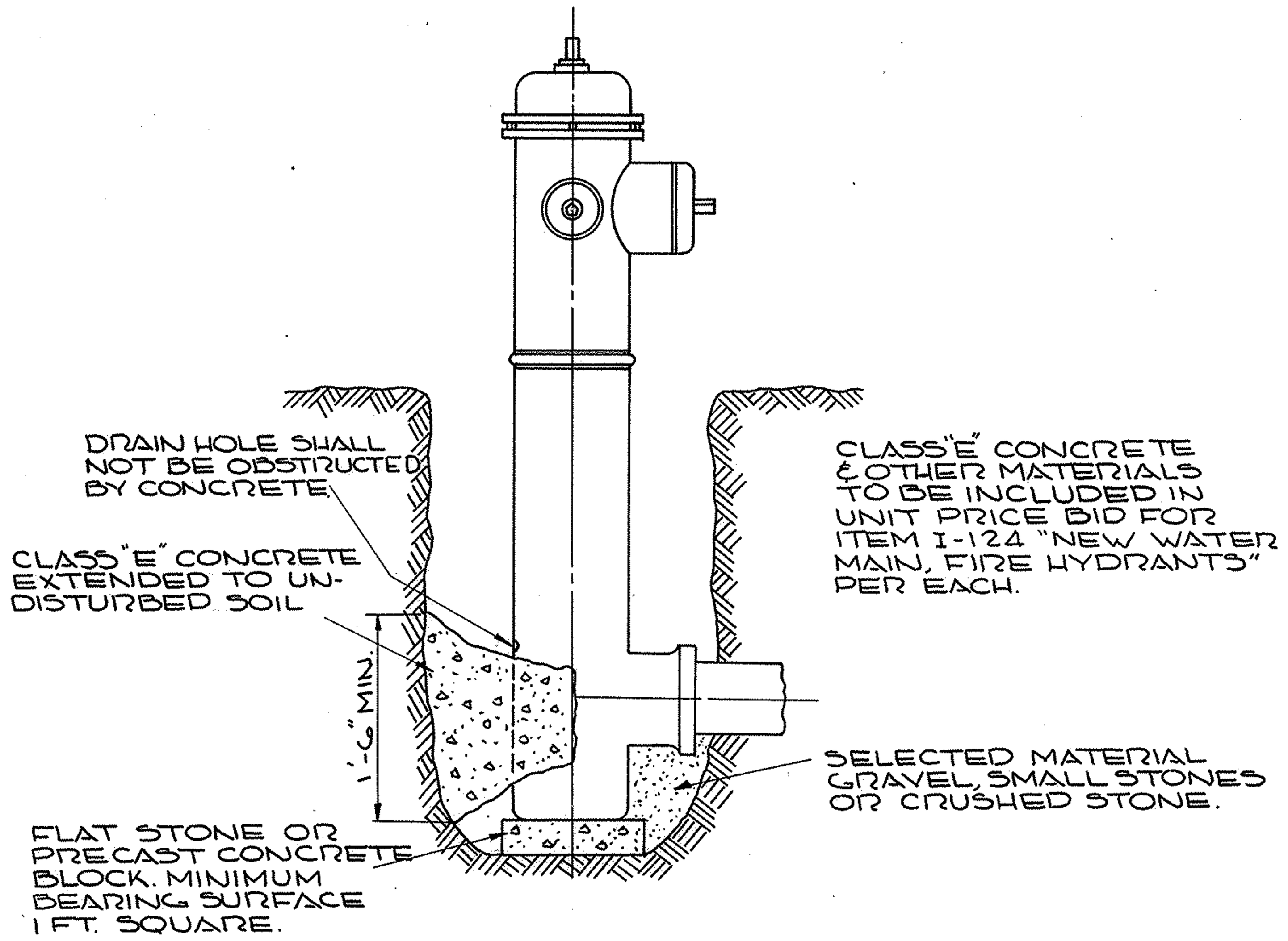
TYPICAL SECTION
STANDARD PAVED GUTTER TYPE I MODIFIED



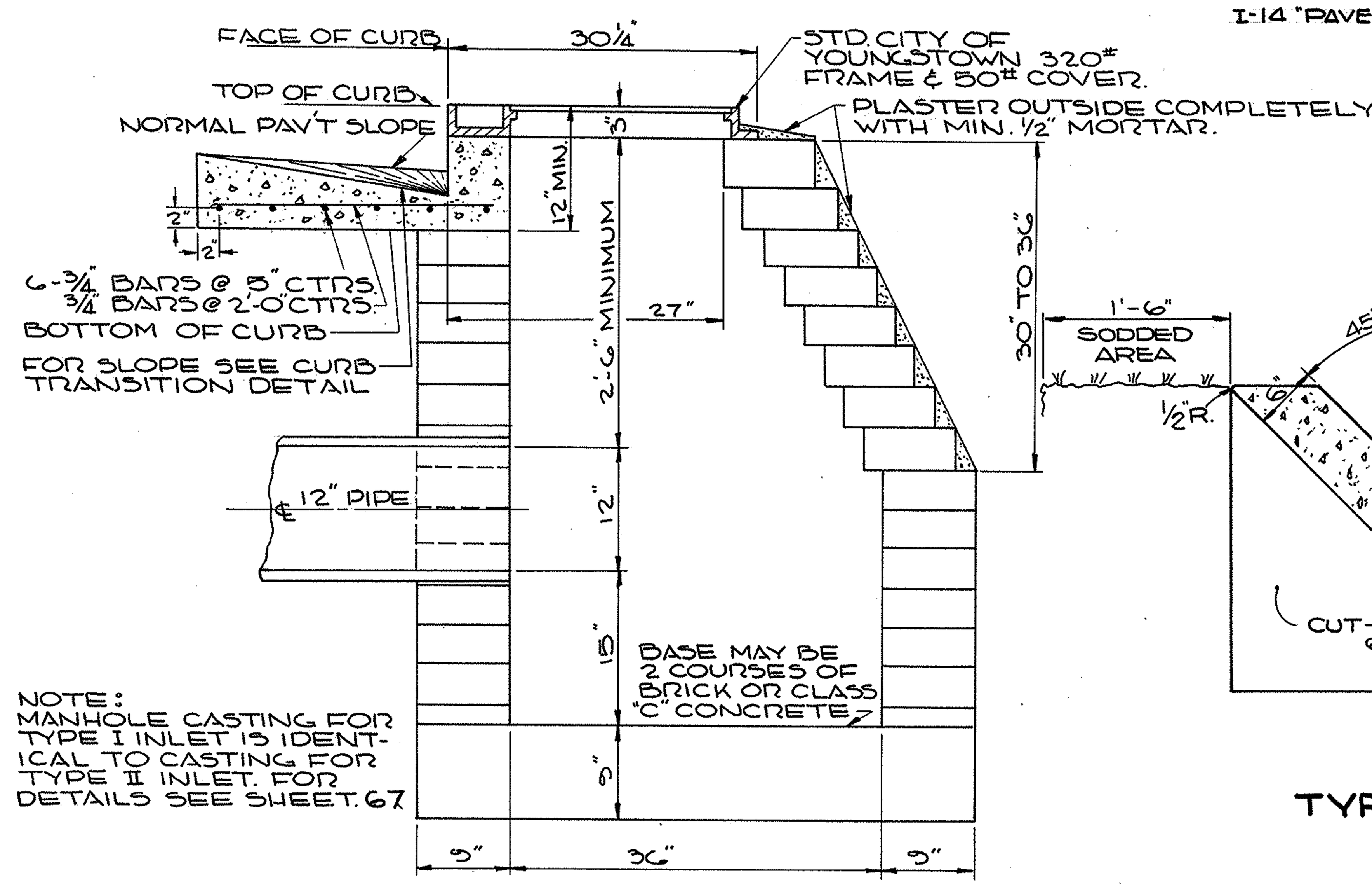
DETAIL
PAVEMENT REPLACEMENT



SECTION "A"-"A"
TYPICAL DETAIL ~ I-14 PAVED GUTTER (TYPE 3 MOD.) BACK SLOPE PROTECTION
SCALE: 1" = 1'-0"



DETAIL
FIRE HYDRANT SETTING



NOTE: MANHOLE CASTING FOR TYPE I INLET IS IDENTICAL TO CASTING FOR TYPE II INLET. FOR DETAILS SEE SHEET 67

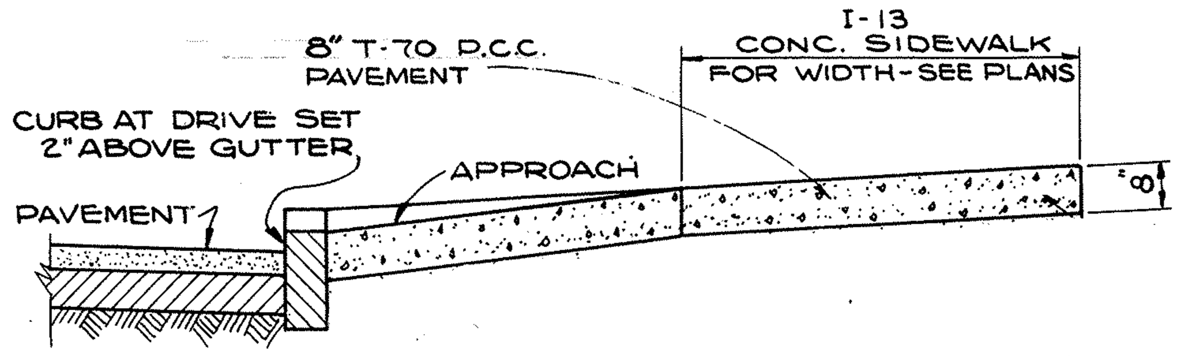
SECTIONAL ELEVATION
TYPE I ~~STORM~~ INLET
SCALE: 1" = 1'-0"

DETAILS
UTILITIES, WATER & DRAINAGE

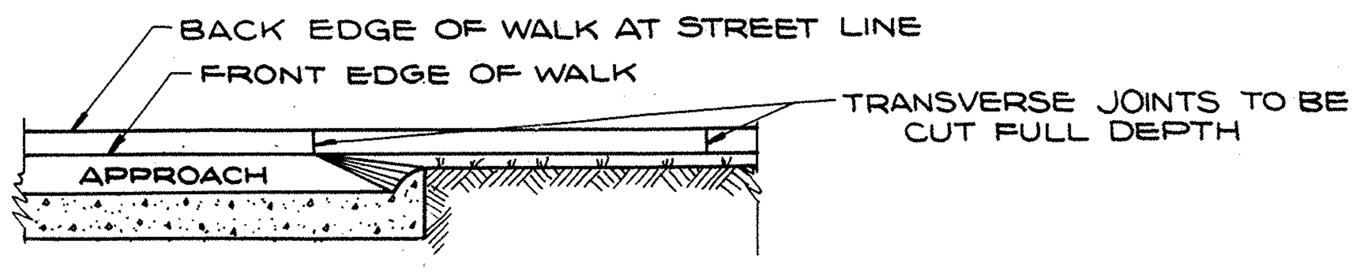
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

67/206

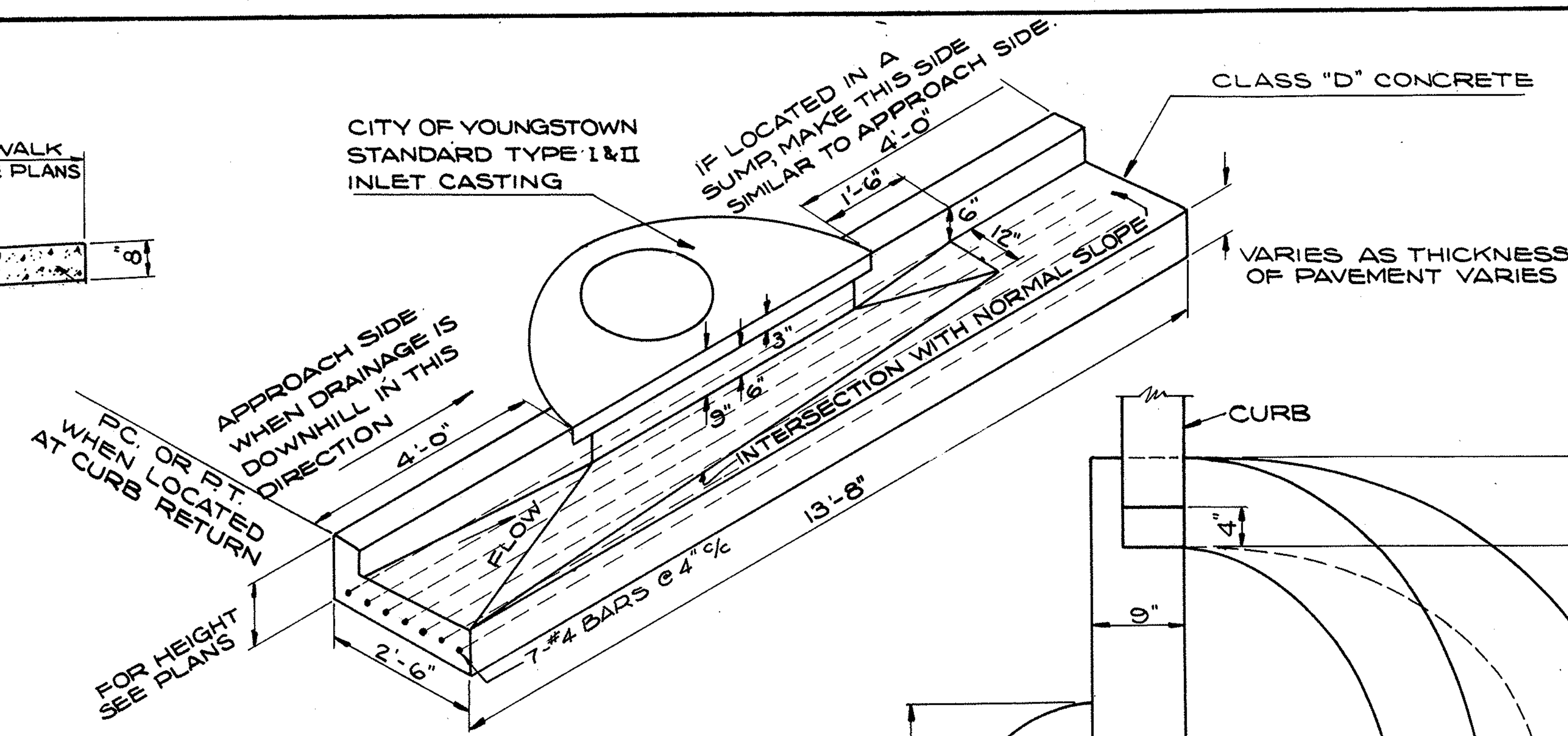
MAH. 7 - 14.95



SECTION B-B

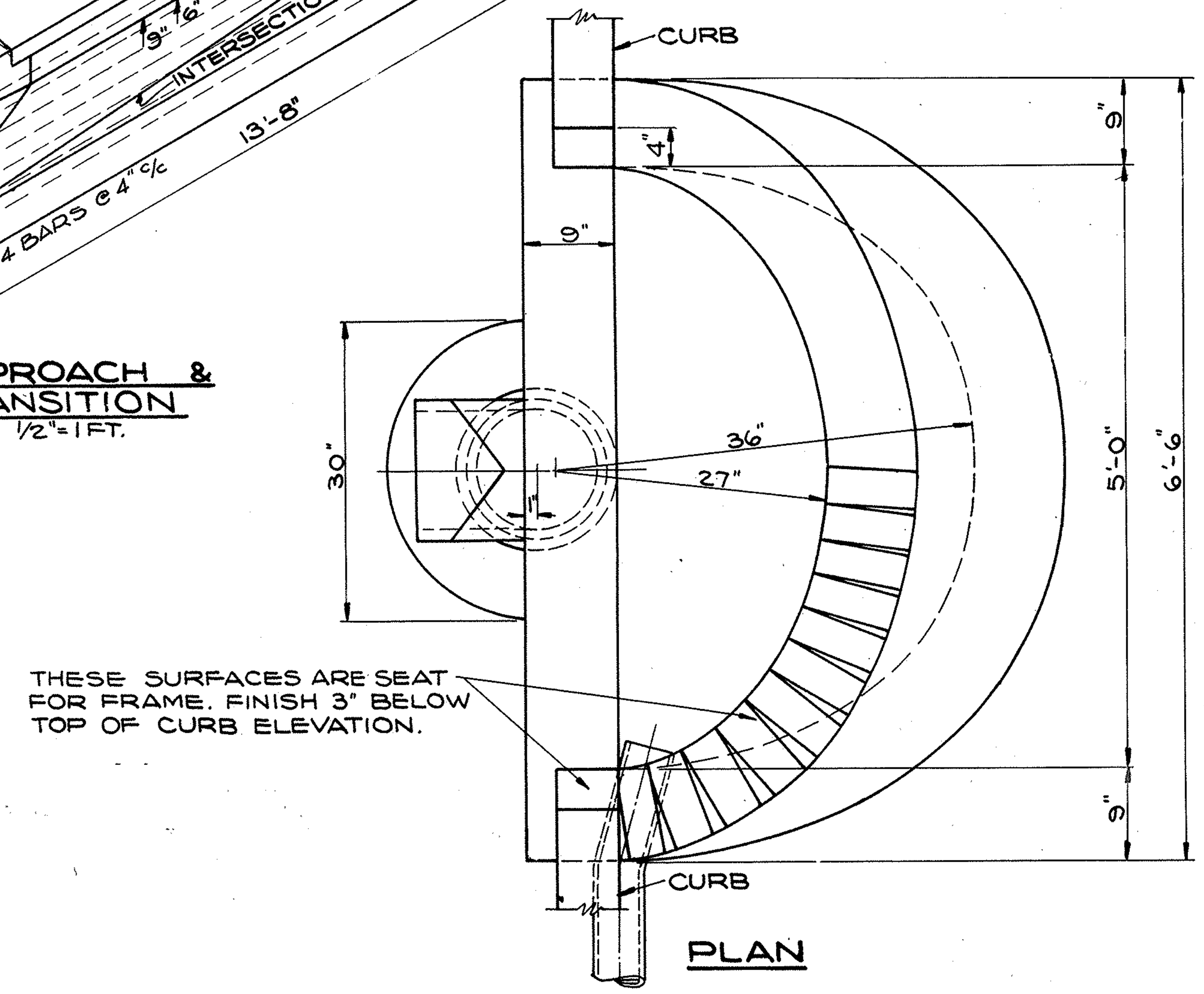


SECTION A-A



INLET APPROACH & CURB TRANSITION

SCALE: 1/2" = 1 FT.



PLAN

NOTES

FRAME & COVER SHALL BE OF CAST IRON IN ACCORDANCE WITH MATERIAL DETAILS FOR STANDARD TYPE I & II 320 # INLET CASTING & 50 # COVER.

BRICK SHALL BE EIGHT INCHES IN SIZE LAID IN MORTAR AND INTERIOR SURFACE SHALL BE PLASTERED WITH A SMOOTH COATING OF PORTLAND CEMENT MORTAR AT LEAST ONE HALF INCH THICK TO THE HEIGHT DIRECTED. THE BRICK SHALL BE LAID IN A FULL BED OF MORTAR WITH NO JOINTS APPEARING ON EITHER SURFACE OF MORE THAN THREE EIGHTS INCHES IN THICKNESS. JOINTS SHALL BE NEATLY POINTED AND STRUCK ON THE INSIDE OF THE INLET. THE MORTAR SHALL BE COMPOSED OF ONE PART OF PORTLAND CEMENT TO TWO PARTS OF SAND BY VOLUME.

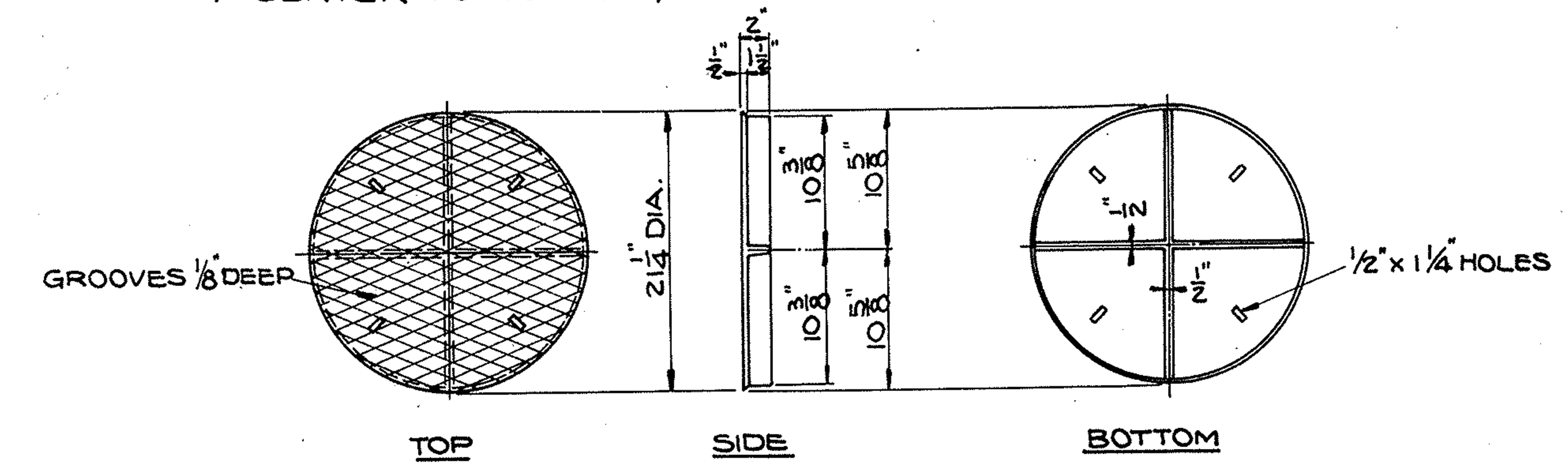
THE TOP OF THE WALLS OF THE STANDARD INLETS SHALL BE PROPERLY LEVELED OFF SO AS TO FORM A FLAT SURFACE UPON WHICH THE INLET CASTING IS TO REST.

THE TOP OF THE CASTING SHALL BE FILLED WITH CLASS "B" CONCRETE AND TROWELLED TO A SMOOTH EVEN FINISH.

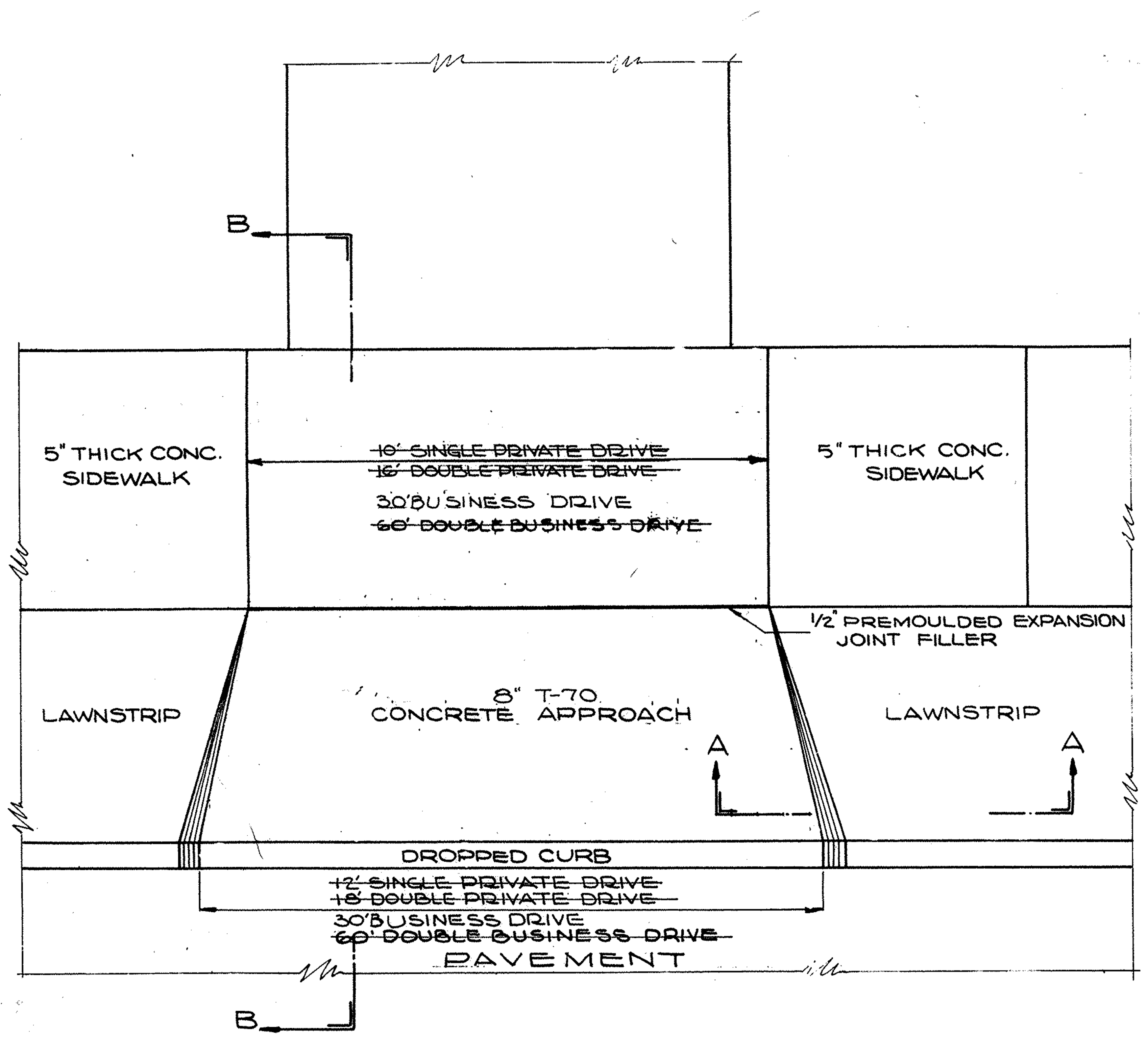
WHENEVER THE STREET GRADE IS FOUR PER-CENT OR GREATER THE STORM INLET SHALL BE SET AT SUCH AN ANGLE ALONG THE CURB SO AS TO COLLECT MAXIMUM GUTTER FLOW AS MAY BE SPECIFIED ON THE CONTRACT DRAWINGS.

THE BOTTOM OF THE STORM INLET SHALL BE CONSTRUCTED OF TWO COURSES OF BRICK LAID IN MORTAR. A CONCRETE BOTTOM MAY BE USED IN THE PLACE OF BRICK. THE PAD SHALL BE 9 INCHES IN THICKNESS, CLASS "C" CONCRETE AND LEVELED OFF TO A FLAT SURFACE.

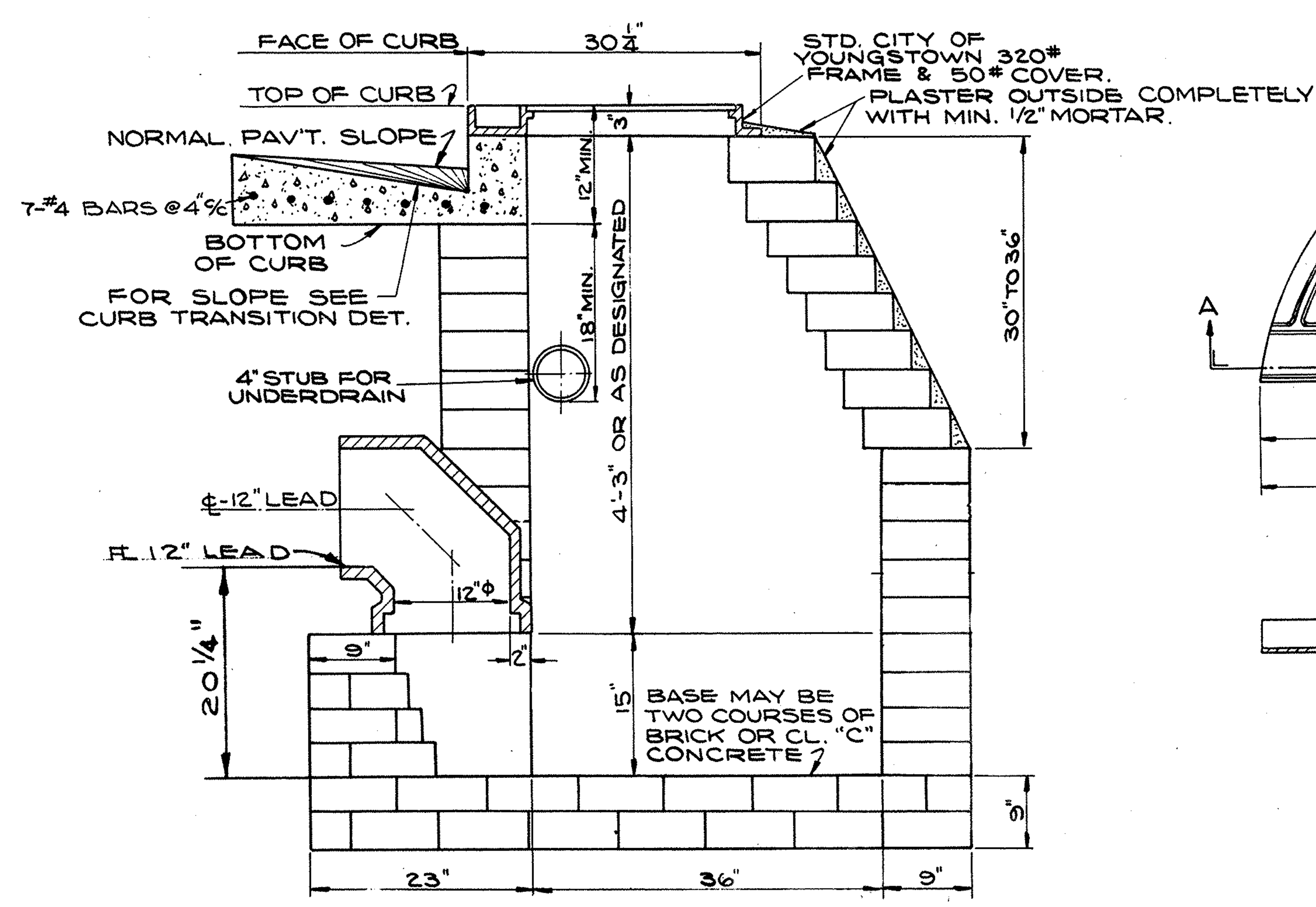
INTEGRAL CURB AND GUTTER SHOWN WILL BE CONSTRUCTED AND PAID FOR AS ITEM I-8, "CATCH BASIN". REINFORCE SLAB WITH #4 BARS @ 4" CENTER TO CENTER, 8 FT. LONG CENTERED ON OPENING.



50# INLET COVER



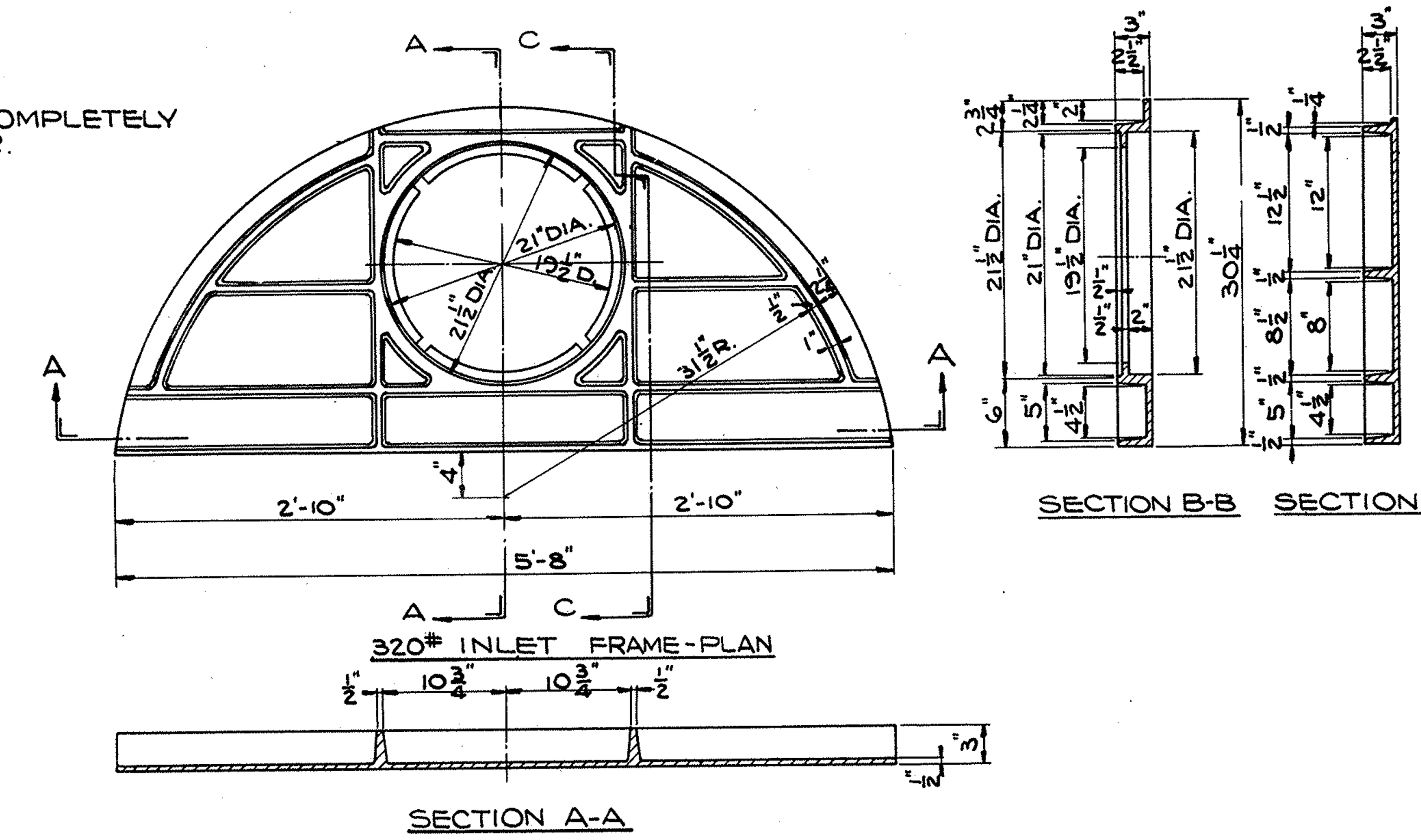
TYPICAL PLAN OF DRIVEWAY APPROACH



SECTIONAL ELEVATION

TYPE II - ~~COMBINATION~~ INLET

SCALE: 1" = 1 FT.



DETAILS OF INLET FRAME & COVER

SCALE: 1" = 1 FT.

CITY OF YOUNGSTOWN

DRIVEWAY APPROACH & COMBINATION INLET DETAILS

ARTERIAL HIGHWAY SYSTEM

SCALE AS SHOWN | MARCH, 1959

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

68
206

MAH 7 - 14.95

CROSS SECTION LAYOUT

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	69 206

MAH 7 - 14.95

SEEDING
END SQ
WIDTH YDS.

FINAL SURVEY	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE
NOTE BOOK NO.							

ORIGINAL SURVEY	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE
NOTE BOOK NO.							

66

372

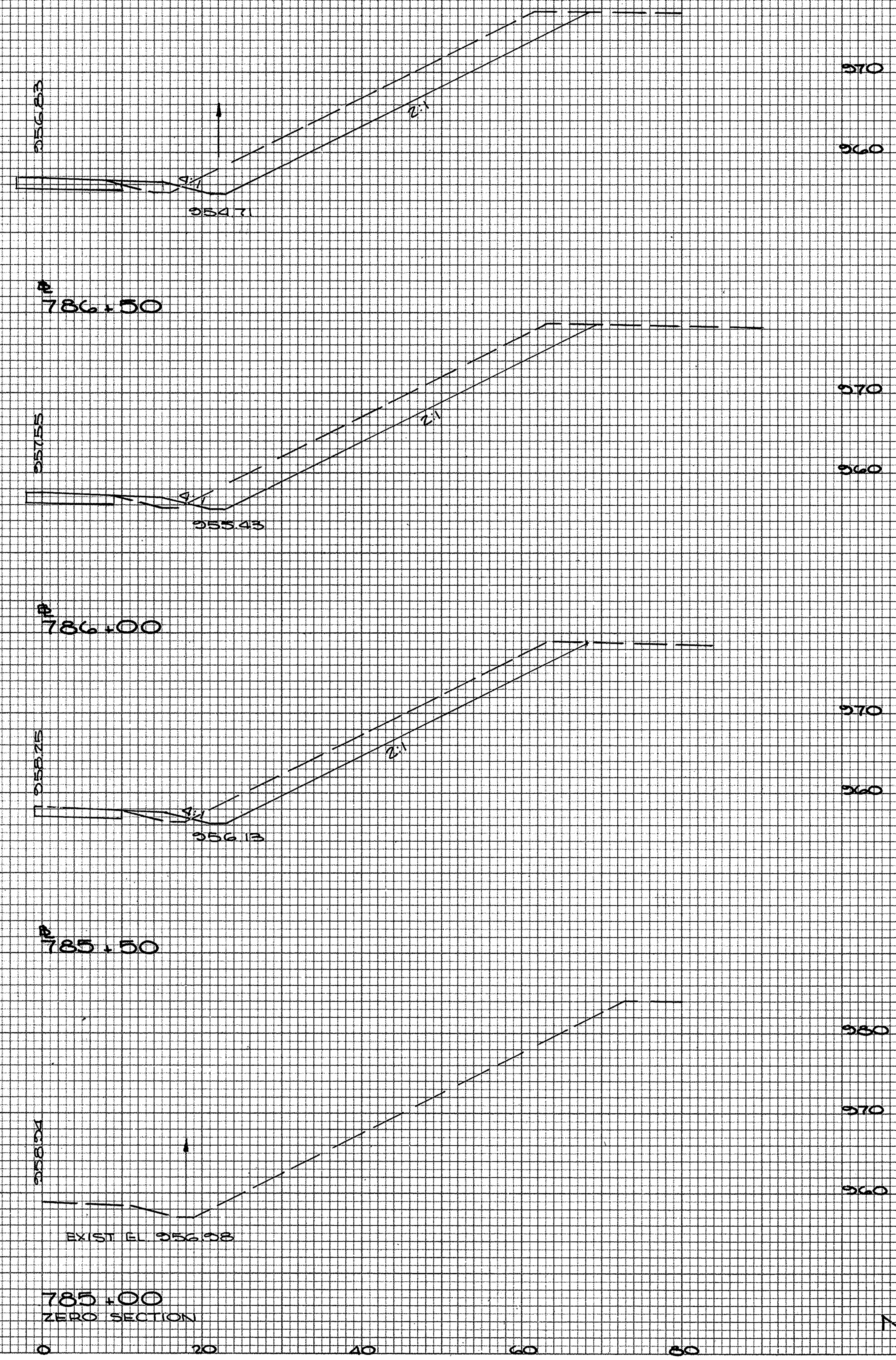
68

370

65

370

68



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
159	9		
		272	16
135	8		
		240	11
124	4		
		115	4
0	0		

N.B. 785+00 TO 786+50

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	70 / 206

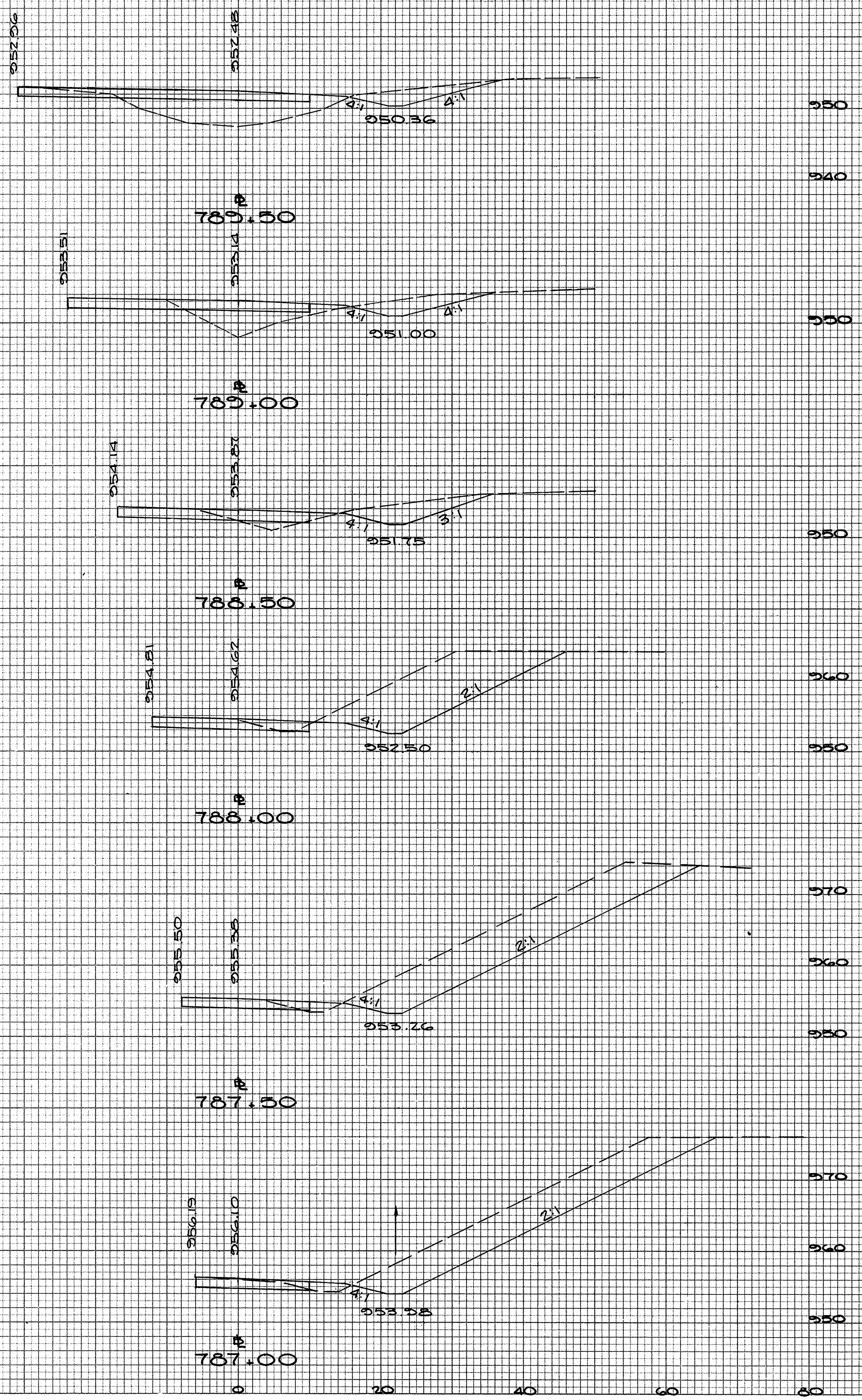
MAH 7-14.95

SEEDING END SQ.	WIDTH YDS.
30	164
29	158
28	192
41	286
62	350
64	361

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
23	77		
		49	109
30	40		
		60	44
35	7		
		182	7
162	—		
		357	5
224	5		
		399	10
207	6		
		339	14

FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE



N.B. 787.00 TO 789.50

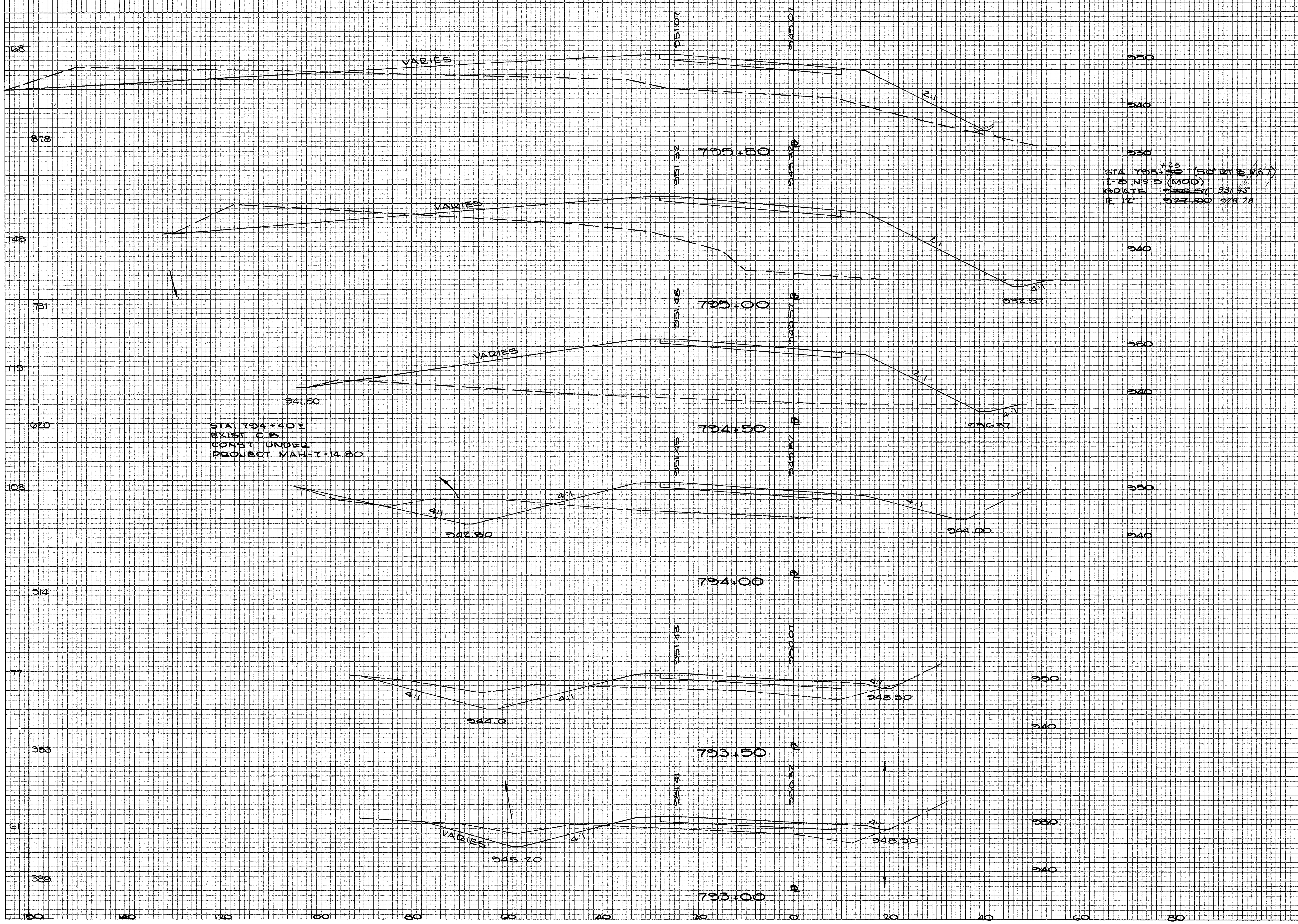
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

72
206

MAH 7 - 14.95

SEEDING
END 50
WIDTH YDS.



168
878
148
731
115
620
108
514
77
383
61
389

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
N.B. 150	N.B. 564		
		N.B. 267	N.B. 1328
N.B. 138	N.B. 870		
		N.B. 137	N.B. 1694
N.B. 10	N.B. 960		
		N.B. 102	N.B. 1193
N.B. 100	N.B. 328		
		N.B. 187	N.B. 415
N.B. 102	N.B. 120		
		N.B. 157	N.B. 204
N.B. 68	N.B. 100		
		83	185

N.B. 793.00 TO 795.50

FINAL SURVEY — NOTE BOOK, NO., SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, BY, D.

ORIGINAL SURVEY — NOTE BOOK, NO., SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED, BY, DATE

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(1)238 U-524(9)		73/206

MAH 7 - 14.95

N.B. 796+00 TO 798+50

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

74/206

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

MAH 7-14.95


FED. RD. | STATE | PROJECT
2 | OHIO | I-680-9(11)238 U-524(9)
77
206
MAH 7 - 14.95
END AREA | CU. YDS.
CUT | FILL | CUT | FILL
SEEDING
END SQ.
WIDTH YDS.
STA. 810+45.62
SB. S.R. 7
810+00
N.B. S.R. 7
STA. 2+45
RAMP "B Z"
900.08
S.B. S.R.7 900.27
901.87
901.54
901.22
897.47
RAMP "BZ" 2+45 896.94
896.60
870.50
876.96
SB. S.R. 7
809+50
N.B. S.R. 7
STA. 1+95
RAMP "B Z"
900.87
S.B. S.R.7 901.06
903.42
902.98
902.57
895.98
RAMP "BZ" 1+95 895.78
893.95
877.0
883.32
SB. S.R. 7
809+00
N.B. S.R. 7
STA. 1+45
RAMP "B Z"
901.98
902.10
902.23
S.B. S.R.7 902.04
905.29
904.76
904.23
RAMP "BZ" 1+45 894.36
892.00
879.4
885.90
N.B. 809+00 TO 810+00
S.B. 809+00 TO 810+00
RAMP "BZ" 1+45 TO 2+45
2:1
4:1
900
890
880
870
860
160
140
120
100
80
60
40
20
0
20
40
60
80
100
120
ORIGINAL SURVEY
FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED DATE BY

ORIGINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED DATE BY

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.


FED.RD. STATE PROJECT
2 OHIO I-680-9(11) 238 U-524(9)
80
206
MAH 7-14-95
END AREA CU. YDS.
SEEDING
END WIDTH
SQ. YDS.
898.53
2:1
874.00
C-7
F-8671
4:1
855.00
SB. SR. 7
814+00
N.B. S.R. 7
END PROTECT
813+94.23
C-32
F-15,753
898.14
898.36
898.47
898.49
866.60
C-7
F-8342
857.00
C-12
F-15074
SB. S.R. 7
813+50
855.8
N.B. S.R. 7
S.R. 7 813+50 TO 814+00
900
890
880
870
860

℄
PLATE 3 CROSS SECTION B P R STANDARD
EUGENE DIETZGEN CO. CHICAGO - NEW YORK

FED. RD. | STATE | PROJECT
2 | OHIO | I-680-9(1) 238 U-524(9)
82 / 206
MAH 7-14-55
SEEDING END SQ. WIDTH YDS.
"BV" 151 M.L. 13
"BV" 818 M.L. 67
"BV" 150 M.L. 11
"BV" 802 M.L. 58
"BV" 145 M.L. 10
"BV" 776 M.L. 58
"BV" 140 M.L. 11
"BV" 544 M.L. 46
"BV" 132 M.L. 12
STA 9+83 RAMP "BV"
2:1
4:1
977.03
978.51
978.12
VARIES
956.66
958.62
959.53
960
782+00
STA 10+32 RAMP "BV"
979.35
981.31
981.06
957.67
959.63
960.23
781+50
STA 10+81 RAMP "BV"
981.36
983.32
983.00
958.57
960.53
781+00
STA 11+30 RAMP "BV"
3:1
983.00
984.96
984.61
959.32
961.36
961.62
780+50
STA 11+66 RAMP "BV"
984.00
985.96
985.62
961.63
EXIST. EL. 959.81
780+13.60
END AREA CUT FILL
CU. YDS. CUT FILL
SB 68 SB 5 "BV" 2150 —
SB 91 SB 10 "BV" "BV" 3625 0
SB 30 SB 6 "BV" "BV" 1765 —
SB 39 SB 12 "BV" "BV" 2991 0
SB 12 SB 7 BV BV 1465 —
SB 32 SB 13 "BV" "BV" 2474 0
SB 23 SB 7 "BV" "BV" 1207 —
SB 2 SB 7 "BV" "BV" 1831 0
"BV" 770 —
200 180 160 140 120 100 80 60 40 20 EXIST. ℄
RAMP "BV" 11+66 TO 9+83
SB STA 780+13.37 TO 782+00
FINAL SURVEY
ORIGINAL SURVEY

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

83
206

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

84
206

MAH 7-14-95

RAMP "BV" 6+85 TO 4+25
SB STA. 785+00 TO 787+50

FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE


FED. RD. | STATE | PROJECT
2 | OHIO | I-680-9(11)238 U-524(9)
85
206
MAH 7-14-95
SEEDING END SQ WIDTH YDS.
END AREA CU. YDS.
CUT FILL CUT FILL
"BV" 95 M.L. 74
"BV" 517 M.L. 411
938.25
937.62
935.65
933.48
933.41
VAR.
STA. 2+24 ±
RAMP "BV"
789+50
SB SB 4692 —
SB SB 8150 0
"BV" 91 M.L. 74
"BV" 417 M.L. 364
940.01
939.34
937.37
938.24
934.20
STA. 2+74 ±
RAMP "BV"
789+00
STA. 3+00 23' LT. ℄ "BV"
I-8 Nº 2-6 INLET
WINDOW EL. 940.02
℄ 12" I-1 936.60
SB SB 4110 —
SB SB 4518 0
BV BV 503 0
"BV" 56 M.L. 57
"BV" 261 M.L. 281
941.75
941.21
940.42
939.08
938.44
934.50
VAR.
STA. 3+25
RAMP "BV"
788+50
788+20 28' LT. ℄ "SB"
I-8 Nº 2-4 C.B. (MOD.)
WINDOW 940.46
℄ EXIST. 36" 931.76
STA. 788+25 ±
EXIST. Nº 5 C.B.
CONSTRUCTED UNDER PROJECT
MAH. 7-14-80
SB SB 770 0
BV BV 543 0
SB SB 7.9 85
BV BV 514 170
"BV" 38 M.L. 44
"BV" 261 M.L. 269
943.81
943.27
941.80
940.80
938.64
941.20
936.80
VAR.
STA. 3+75
RAMP "BV"
788+00
SB SB 6 97
BV BV 12 184
SB SB 10 230
BV BV 6 421
960
950
940
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120
RAMP "BV" 3+75 TO 2+24
SB STA. 788+00 TO 789+50
FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE
ORIGINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED BY DATE

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
253 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

87
206

MAH 7 - 14.95

SB 792+00 TO 794+00

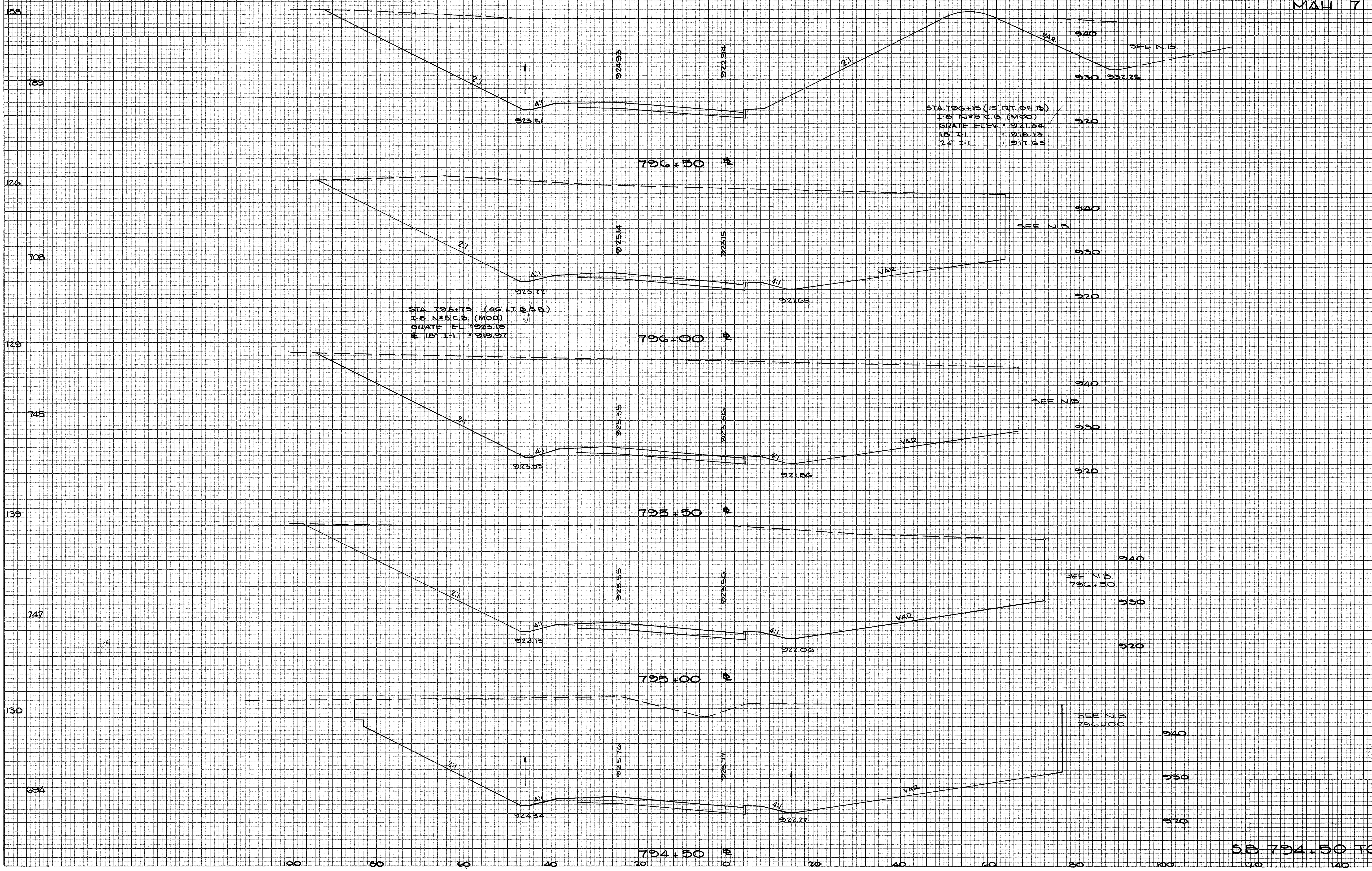
FINAL SURVEY NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

ORIGINAL SURVEY NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

FED. RD.	STATE	PROJECT		88/206
2	OHIO	I-680-9(11)238 U-524(9)		

MAH 7 - 14.95

SEEDING
END SQ
WIDTH YDS



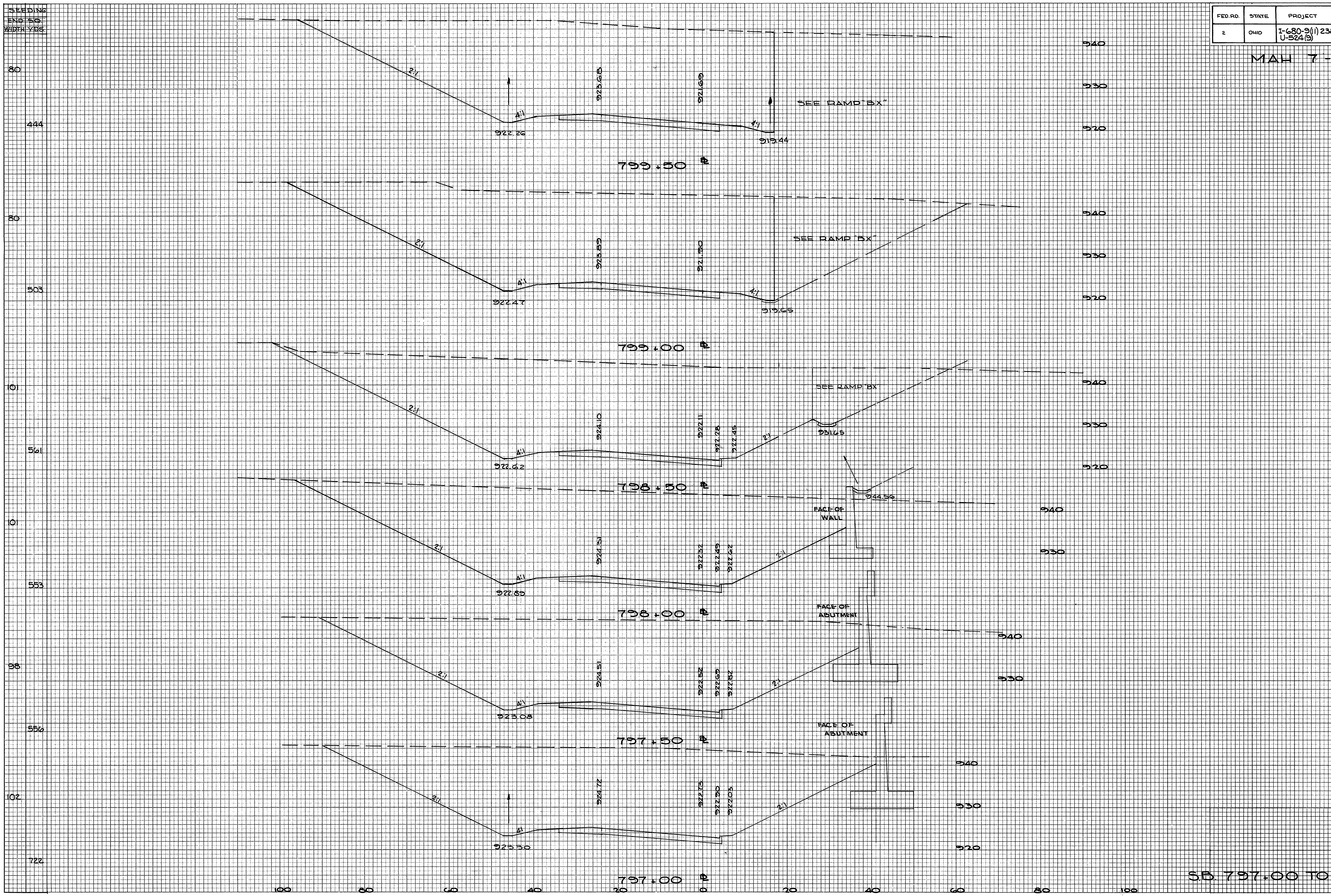
END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
2070	12		
		4514	11
2805	—		
		5253	—
2868	—		
		5609	—
3190	—		
		5968	—
3255	—		
		5553	—

S.B. 794+50 TO 796+50

ORIGINAL SURVEY	FINAL SURVEY
NOTE BOOK	NOTE BOOK
NO.	NO.
SURVEYED	SURVEYED
PLOTTED	PLOTTED
TEMPLATE	TEMPLATE
AREAS	AREAS
AREAS CHECKED	AREAS CHECKED
BY	BY
DATE	DATE

FED. RD.	STATE	PROJECT		89/206
2	OHIO	I-680-9(11) 238 U-524(9)		

MAH 7 - 14.95



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
2022	—		
		3810	—
2095	—		
		3908	—
2126	—		
		3878	—
2062	—		
		3766	—
2005	—		
		3623	—
1908	—		
		3683	11

S.B. 797+00 TO 799+50

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11)238 U-524(8)		90/206

MAH 7 - 14.95

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

91
206

MAH 7 - 14.95

SEEDING	
END	SQ
WIDTH	YDS

END AREA		CU. YDS	
CUT	FILL	CUT	FILL

S.B. 803+00 TO 805+00
RAMP "CA" 5+15 TO 3+06

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		
NOTE BOOK NO.		

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		92 206

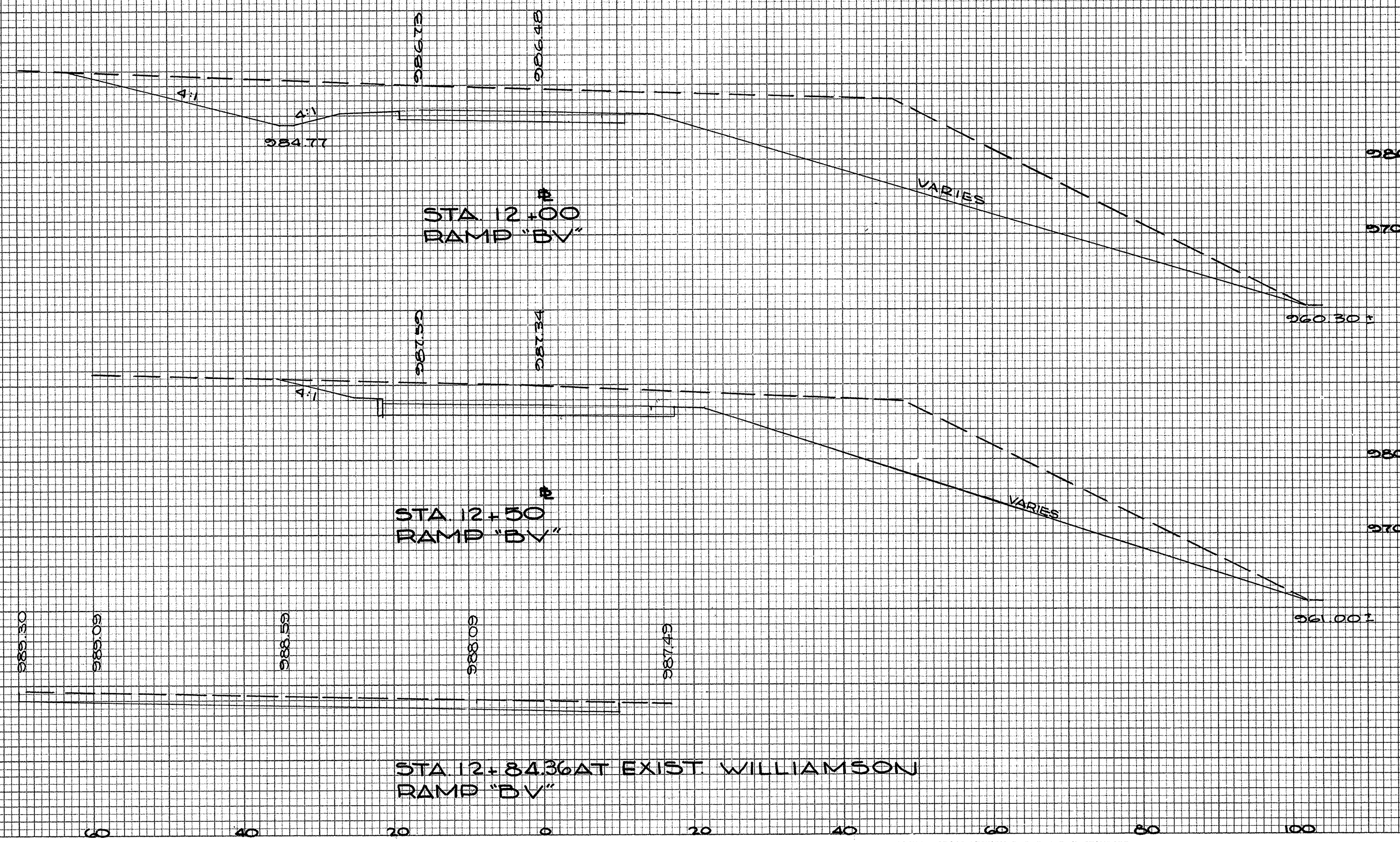
MAH 7 - 14.95

FINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NOTE BOOK	AREAS CHECKED		
NO.			

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NOTE BOOK	AREAS CHECKED		
NO.			

SEEDING	
END WIDTH	50 YDS.
	143
	688
	105
	214

	END AREA		CU.YDS	
	CUT	FILL	CUT	FILL
STA. 11+66	770	0		
			1011	0
STA. 12+00	837	—		
			1385	—
STA. 12+50	659	—		
			504	0
STA. 12+84.36	80	—		



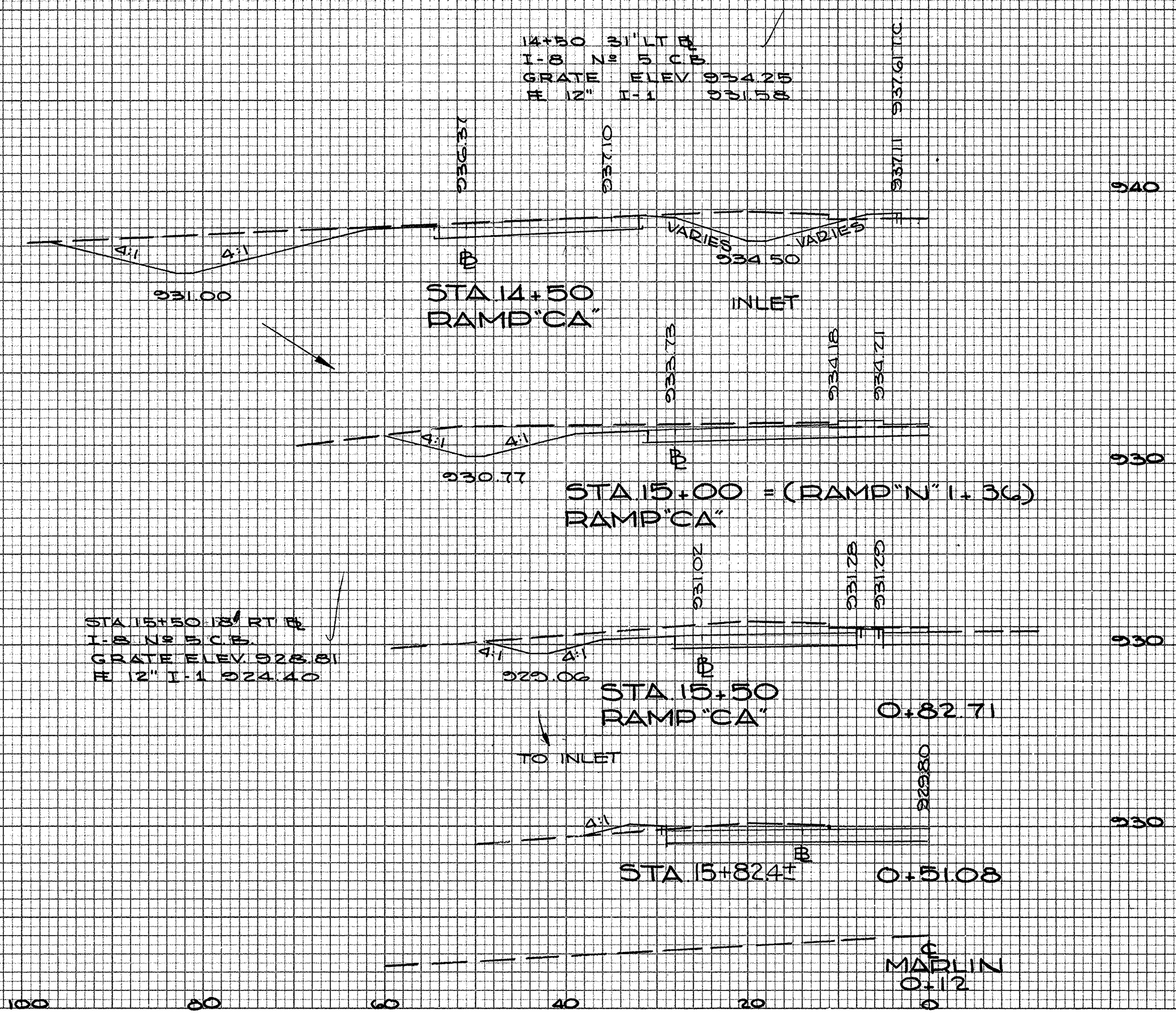
RAMP "BV" 12+84 TO 12+00

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)235 U-524(9)	

93
206

MAH 7 - 14.95

SEEDING	
END WIDTH	SQ. YDS.
75	
	297
32	
	153
73	
	94
11	
	41



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		437	11
150	3		
		227	8
95	6		
		169	6
87	1		
		81	4
48	6		
		35	4
0	0		

RAMP "CA" 14+50 TO WOODLAND ST. INTERSECTION

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
253 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	94/206

MAH 7 - 14.95

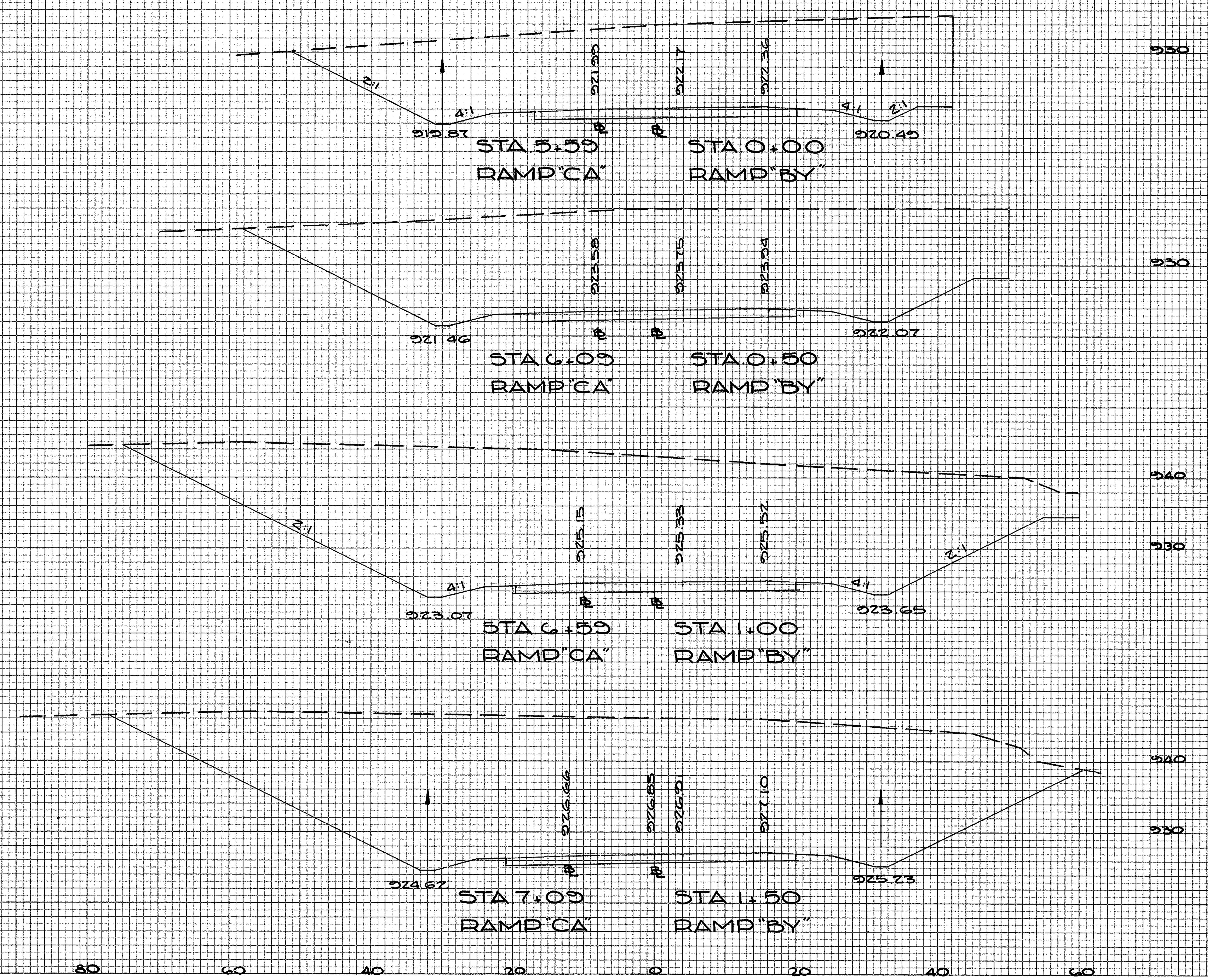
PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

96
206

MAH 7 - 14.95



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
BY 542		BY 1144	
CA 493		CA 1086	
BY 693		BY 1401	
CA 681		CA 1675	
BY 820		BY 1607	
CA 1128		CA 2125	
BY 916		BY 1626	BY
CA 1177		CA 1868	CA

SEEDING	
END	SQ
WIDTH	YDS.
CA 32 BY 23	CA 208 BY 153
CA 43 BY 32	CA 289 BY 211
CA 61 BY 44	CA 342 BY 244
CA 62 BY 44	"CA" 345 "BY" 294

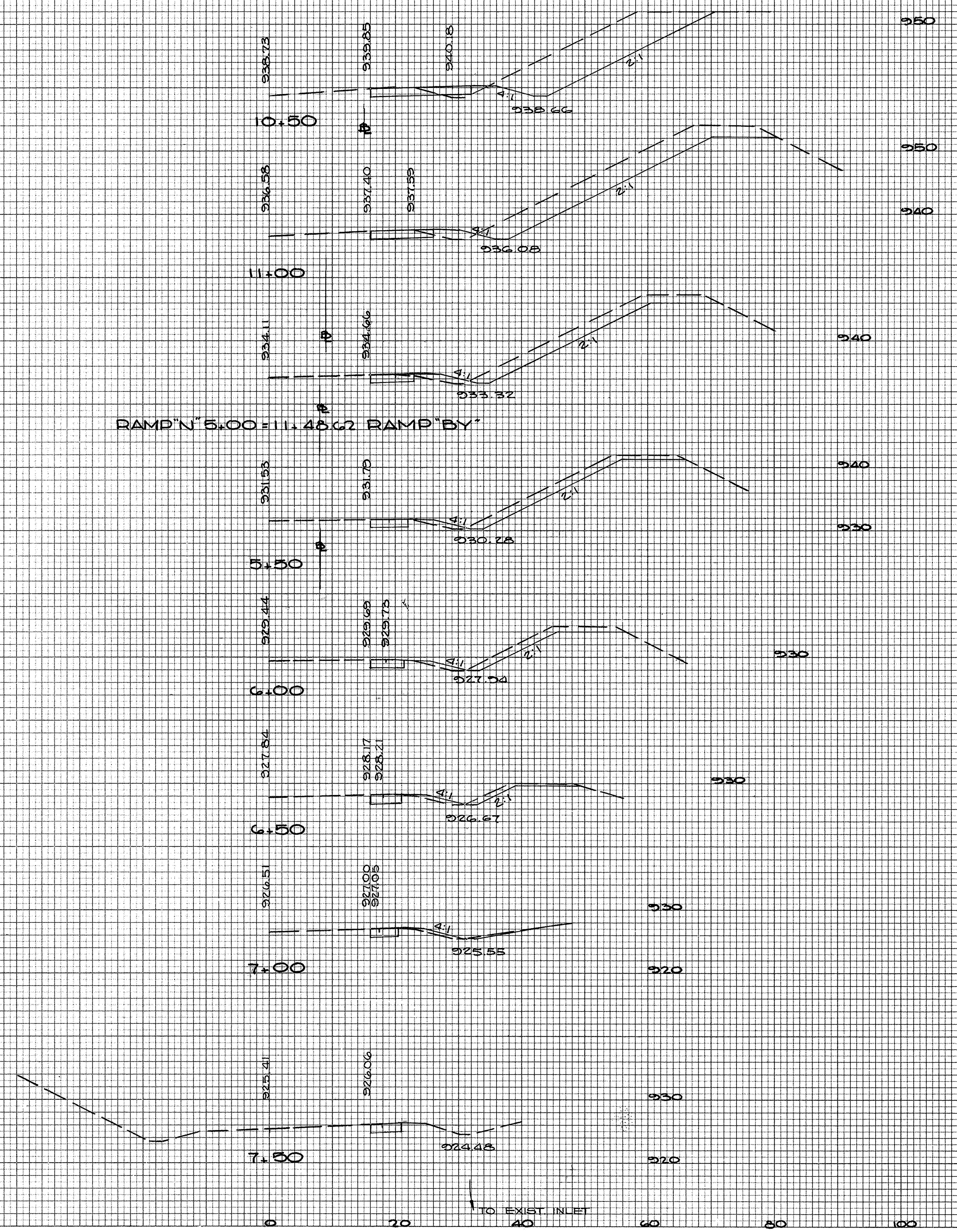
RAMP "CA" 7+09 TO 5+59
RAMP "BY" 1+50 TO 0+00

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

97
206

MAH 7-14.95

SEEDING	
END	49
WIDTH	YDS.



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
62	3		
		96	12
42	10		
		109	14
79	6		
		108	11
38	6		
		61	9
28	4		
		41	10
16	7		
		22	12
8	6		
		14	6
7	0		

42	278
58	297
52	275
47	233
37	186
30	156
28	89
4	

FINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

ORIGINAL SURVEY	NOTE BOOK	NO.	SURVEYED	PLOTTED	TEMPLATE	AREAS	AREAS CHECKED	BY	DATE

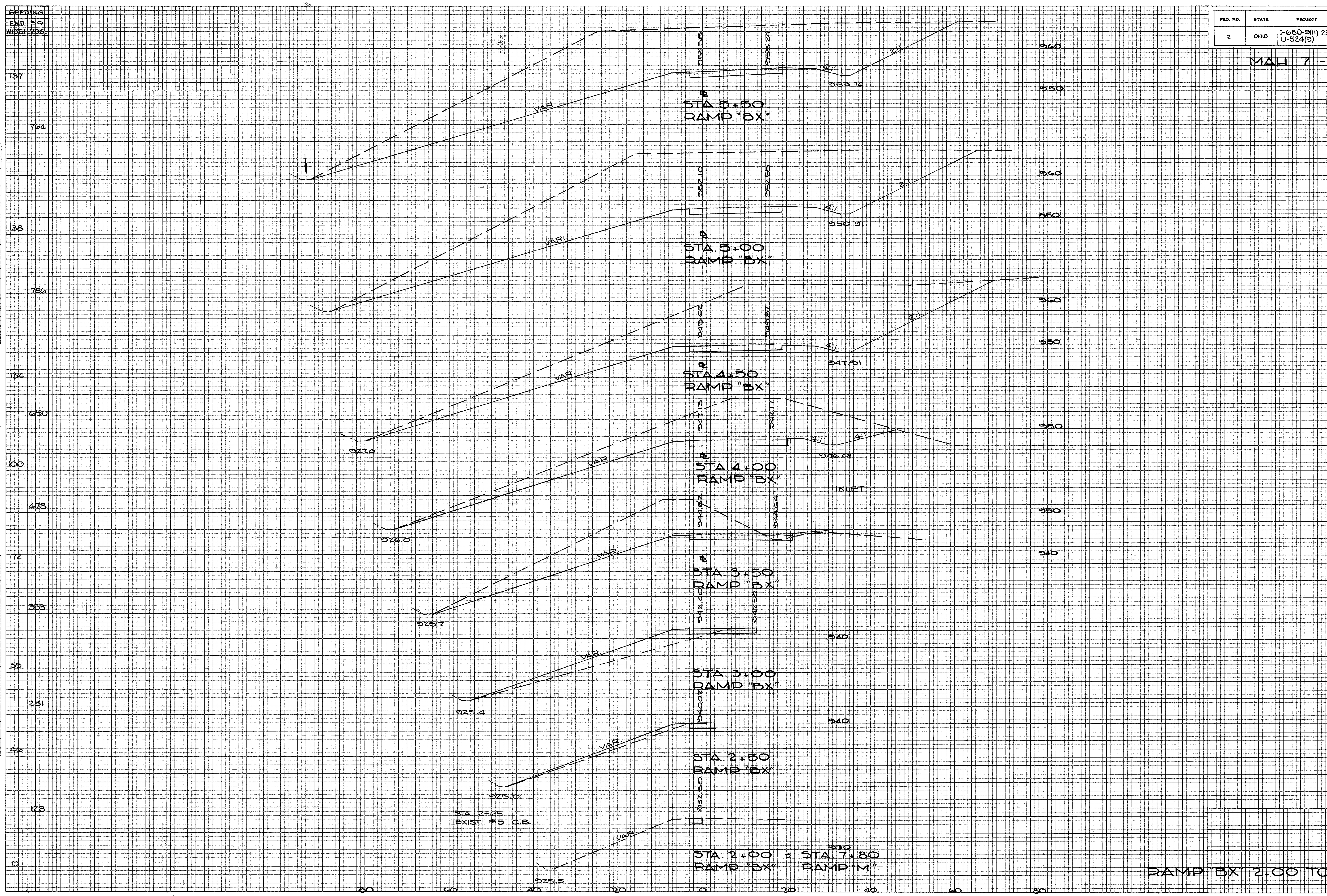
RAMP "BY" 11+48.62 TO 10+50
RAMP "N" STATIONING
7+50 TO 5+00

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

98
206

MAH 7-14-95



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1369	—		
		2685	0
1531	—		
		2439	0
1103	—		
		1541	0
561	—		
		894	6
404	6		
		385	98
12	100		
		17	119
6	28		
		8	26
3	—		

FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NOTE BOOK NO.	
BY	
DATE	

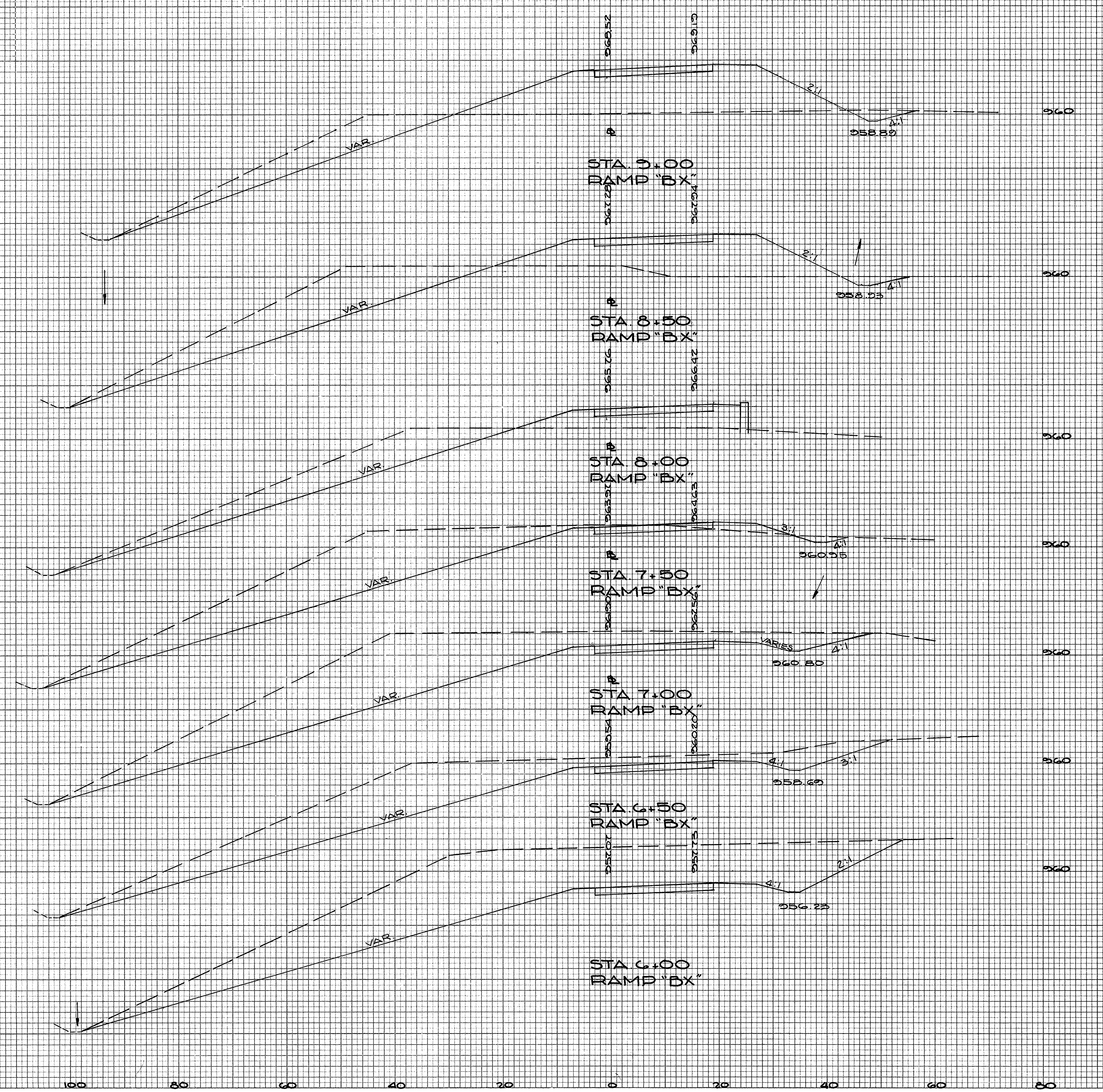
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
NOTE BOOK NO.	
BY	
DATE	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

99
206

MAH 7 - 14.95

SEEDING WIDTH	END SQ. YDS.
135	767
141	697
110	678
134	747
135	758
138	761
136	758



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
198	410		
		525	660
369	303		
		584	385
262	113		
		768	119
567	16		
		1269	15
803	–		
		1308	0
610	–		
		1582	0
1098	–		
		2284	0

RAMP "BX" 6+00 TO 9+00

FINAL SURVEY		
NOTE BOOK	NO.	
SURVEYED	BY	DATE
PLOTTED		
TEMPLATE		
AREAS CHECKED		

ORIGINAL SURVEY		
NOTE BOOK	NO.	
SURVEYED	BY	DATE
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		

PLATE 3 CROSS SECTION O. P. R. & R. E. STANDARD
263 FM-3 AGEPROOF FILM—MADE AND PRINTED IN U. S. A.
EUGENE DIETZGEN CO.

FINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		101 206

MAH 7 - 14.95

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH. 7-14.95

X-SECTIONS RELOCATED FRANKLIN STA. 0+00 - STA. 1+50

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

103
206

MAH. 7-14.95

PLATE 3 · CROSS SECTION O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

X-SECTIONS DELOCATED FRANKLIN STA. 1+75 - STA. 3+11.31

FED RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

104
206

MAH. 7-14.95

SOUTH AVE. IMPROVEMENT
X-SECTIONS STA. 48+00 - STA. 51+50

LIGHTING NOTES

MAH-7- 14.95

625.03 GENERAL

These notes supplement the State of Ohio's Construction and Material Specifications dated January 1, 1969.

Power will be furnished by the Ohio Edison Company, 730 South Ave., Youngstown, Ohio, 44501.

625.04 WORKING PLANS

The Contractor shall furnish to the Department of Highways, Lighting Section, Central Office, at least three (3) prints of the electrical system showing the exact location of cable, connections, and other pertinent information.

625.05 LIGHT POLES

MECHANICAL PROPERTIES FOR LIGHT POLES

Shaft Size	Taper	Type Base	GA.	DIAM. OF BOLT CIRCLE	PROJ. ABOVE FOUNDATION	ARM. LGTH.	MTG. HT.	ELAST. DEFL. RATE INCHES PER 100 LBS.	AT 2/3 YIELD STR. LOAD (LBS.)	AT 2/3 YIELD STR. TOTAL DEFL. (IN.)	AT 2/3 YIELD STR. PERMANENT SET (IN.)	AT YIELD STR. LOAD (LBS.)	AT YIELD STR. TOTAL DEFL. (IN.)	AT YIELD STR. PERMANENT SET (IN.)
11 A 10 B 32.5 8" x 3.87" x 29'-6"	.14	Anch.	11	11.0"	2 5/8"	10	32.5'	3.32	517	17.66	.50	776	28.84	3.08
11 AT 10 B 34.2 8" x 3.87" x 29'-6"	.14	AT-A	11	15.0"	3 1/2"	10	34.2'	3.32	517	17.66	.50	776	28.84	3.08
11 A 15 B 32.5 9" x 4.87" x 29'-6"	.14	Anch.	11	12.5"	3"	15	32.5'	2.16	659	14.73	.50	989	24.00	2.64
11 AT 15 B 34.2 9" x 4.87" x 29'-6"	.14	AT-A	11	15.0"	3 1/2"	15	34.2'	2.16	659	14.73	.50	989	24.00	2.64

625.06 LIGHT POLE FOUNDATIONS

Projection of foundation shall be 1" maximum above finished grade at the edge facing the roadway in lieu of details shown on Standard Construction Drawing HL-1.

625.07 LUMINAIRES

400 watt luminaires shall be General Electric, M400; Westinghouse, OV-25; or McGraw-Edison "Unistyle" or other approved equal.

Integral regulator ballasts shall be dual rated 240/480 volts for 400 watt luminaires.

625.08 LAMPS

Mercury vapor lamps shall be General Electric "Bonus Line", Westinghouse "Life Guard", Sylvania "Rough Service" or other approved equal.

625.11 & 713.0 PULL BOXES AND COVERS

Pull boxes shall be circular corrugated metal, 18" inch diameter.

The top of the cover of each pull box shall project a maximum of 1 inch above finished grade.

625.12 TRENCH

Without prior approval of the Engineer excavations for trenches shall not exceed 12 inches in width.

625.13 Conduit

The conduit shown on the plans, crossing the existing pavement, shall be placed in an approved manner, such as "drilling" or "jacking".

The Contractor shall place the conduit with the least amount of distrubance to the existing pavement, subbase, berm or shoulders of the roadway.

All pushpits or necessary excavations shall be backfilled in accordance with the Construction and Material Specifications required for deep excavations. All sod and seeded areas distrubed shall be replaced in accordance with the standard provisions. Grading, cleaning, seeding and all other work necessary to replace the existing grade shall be done to the satisfaction of the Project Engineer.

Measurement of the crossover conduit shall be per lineal foot in place as accepted by the Engineer. Payment for crossover conduit shall be per lineal foot in place: "Crossover conduit, 3" rigid ferrous metal, Type II or III as per plan.

Payment shall be full compensation for conduit, excavation, drilling or jacking, backfilling, compaction, seeding, labor, material, equipment, and incidentials necessary to complete this item.

625.14 & 625.15 CABLE AND DUCT-CABLE IDENTIFICATION

All cables, except structure grounding system cable, entering an accessible enclosure such as a pull box, junction box, light pole base, device housing, etc., for the purpose of being terminated or connected to another cable shall be identified in such enclosure with the materials or devices specified in 713.18. Payment for cable identification shall be included in the unit price bid for cable.

All cables shall be without splices between terminations except that exothermically welded joints in structure grounding cable shall not be considered as splices for this purpose.

The No. 6 AWG cable, shall be 5000 volt, 7-strand copper, non-shielded series cable, with 10/64" rubber insulation, 3/64" neoprene jacket, G.E. Company super coronal geoprene Type No. S 158008, or approved equal.

The No. 2 AWG ground cable shall be seven strand bare copper.

Direct Burial Cable Installation (Series circuits only)

The No. 6, 5000 volt lighting cables and No. 2 ground wire (also used to complete the series loops) shall be continuous from base to base of standards and except for that part in conduit in bridges and conduit crossing under paved ramps and shoulders shall be direct burial, laid not less than 24" below grade. No splices in cables will be permitted except in lighting standard bases and in concrete pull boxes. Cables shall be unreeled in place alongside, or in the cable trench, and shall be carefully placed along the bottom of the trench. Under no circumstances shall the cable be unreeled and pulled into the trench from one end.

The cable termination and splices shall be made in accordance with the latest manufacturer's recommendations and under the direction of Ohio Edison Company's inspector.

625.20 GROUNDING (For Series Circuits)

The No. 2 cable shall be grounded to the lighting standard groundnut at each standard, at the midpoint, and at each end of the circuit. The No. 2 ground conductor shall be connected to the Ohio Edison Company neutral ground grid locations of these ground points and method of installation shall be obtained from the Ohio Edison Company.

UNDERDECK LIGHTING

This item shall consist of underdeck lighting complete with the exception of luminaires, lamps, and grounding systems for South Avenue bridge. Included shall be necessary conduits, mountings, fittings, all No. 10 wiring, junction boxes, and all necessary items to complete the job as shown on sheet 110. This also applies to the underdeck lighting system under Bridge No. MAH-7-1508. Above included in lump sum bid for "Service to Underdeck Lighting" for each bridge.

SEALING

Conduit terminals must be sealed, as called for under Sect. 625.13, immediately upon completion of duct cable installation. Empty conduits shall be immediately capped until pull wire or cable is installed. Light pole hand holes and base doors shall have covers installed immediately upon erection of pole. All cable connector kits and exposed cable ends shall be adequately protected by enclosing in plastic bags, tapping or other approved means until cable connections have been completed. Payment for this work shall be included in the bid price for the respective item.

TEMPORARY LIGHTING

The contractor shall provide temporary lighting on the temporary runaround which will carry traffic while Bridge No. MAH-7-1508 is under construction.

Wood poles approximately 200 feet apart, with suitable bracket arms, and with overhead wiring, may be used. 400 watt luminaires may be "borrowed" from portions of the main roadway that will be closed to traffic. Temporary lighting shall be fed from existing series circuit, with connections to be made to the underground circuit with risers on wood poles placed near lighting units at 784+70 and 803+40, northbound side of existing MAH-7-14.80. Contractor shall make certain that temporary lighting will not interfere with permanent lighting to be installed along northbound MAH-7-14.95

Nine wood pole lighting units should be required in addition to the two wood poles, used for risers, which do not have luminaires.

Necessary material to complete the temporary lighting, other than the luminaires, shall be furnished by the contractor. Reconditioned equipment may be used.

When the temporary runaround is no longer needed, the contractor shall reinstall the luminaires in their proper locations, and remove all other material used in temporary lighting from the project.

Payment for all work in connection with temporary lighting shall be made at the contract lump sum price bid for item 625 "Temporary Lighting".

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		

106
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LEGEND

Cast Al. Transformer Base Pole	Anchor Base Pole	
		RAMP LIGHTING UNITS.
		NEW ROADWAY LIGHTING UNITS.
		EXISTING LIGHTING UNITS. (SOME RELOCATED - SEE NOTE AT LOCATION)
		BRIDGE LIGHT
		250 W. MERCURY UNDERSTRUCTURE LIGHT. FOR LOCATION SEE BRIDGE DWG. Nos 44 To 66
III-15-3 (9)		DESIGNATION OF LIGHTING UNITS; III INDICATES IES TYPE III DISTRIBUTION, THE NUMBER 15 INDICATES THE BRACKET ARM LENGTH; THE NUMBER 3 INDICATES THE SERIES CIRCUIT NUMBER; (9) INDICATES THE LIGHT POLE NUMBER.
8+90"B"		DESIGNATION OF LIGHTING UNITS STATIONING; THE STATIONING SHOWN IS APPROXIMATE AND IN THE EVENT OF INTERFERENCE WITH OTHER PARTS OF THE WORK, LIGHTING UNITS SHALL BE RE-LOCATED AS DIRECTED BY THE ENGINEER. SPACING OF LIGHTS IS DESIGNED FOR .6 TO .8 MAINTAINED F.C.
		18" ROUND, CORRUGATED METAL PULL BOX. LOCATE TO SUIT CONDITIONS & TO FACILITATE WIRING.
		EXISTING 24" SQUARE CONCRETE PULL BOX.
		CONTROL CENTER, SEE DETAIL ON SHEET 109
—D—		Duct Cable, 2 No.4 600 V. in 1½" Duct.
DUCT 3"		STYLE RR. COPPER CABLE, DIRECT BURIAL, OR IN DUCT UNDER PAVED AREAS — SLASH MARKS INDICATE NUMBER OF CABLES INCLUDING ONE (1) GRD. CABLE. NUMBER INDICATES SIZE OF DUCT.

NOTE *
Conduit, Cable, Duct Cable and Trenching from Control Center to Sta. 802+50 is Interstate. Control Center and Service Pole Lump Sum is 60% I, 40% U.

NOTE **
Conduit, Cable, Duct Cable and Trenching from Control Center to Sta. 4+09 "CA" is Interstate. Control Center and Service Pole Lump Sum is 60% I, 40% U.

Rev. 6-12-69 H.E.D.

LIGHTING PLAN

—D— DUCT CABLE 2 No. 4 600 V. in 1½" Duct

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		107 / 206

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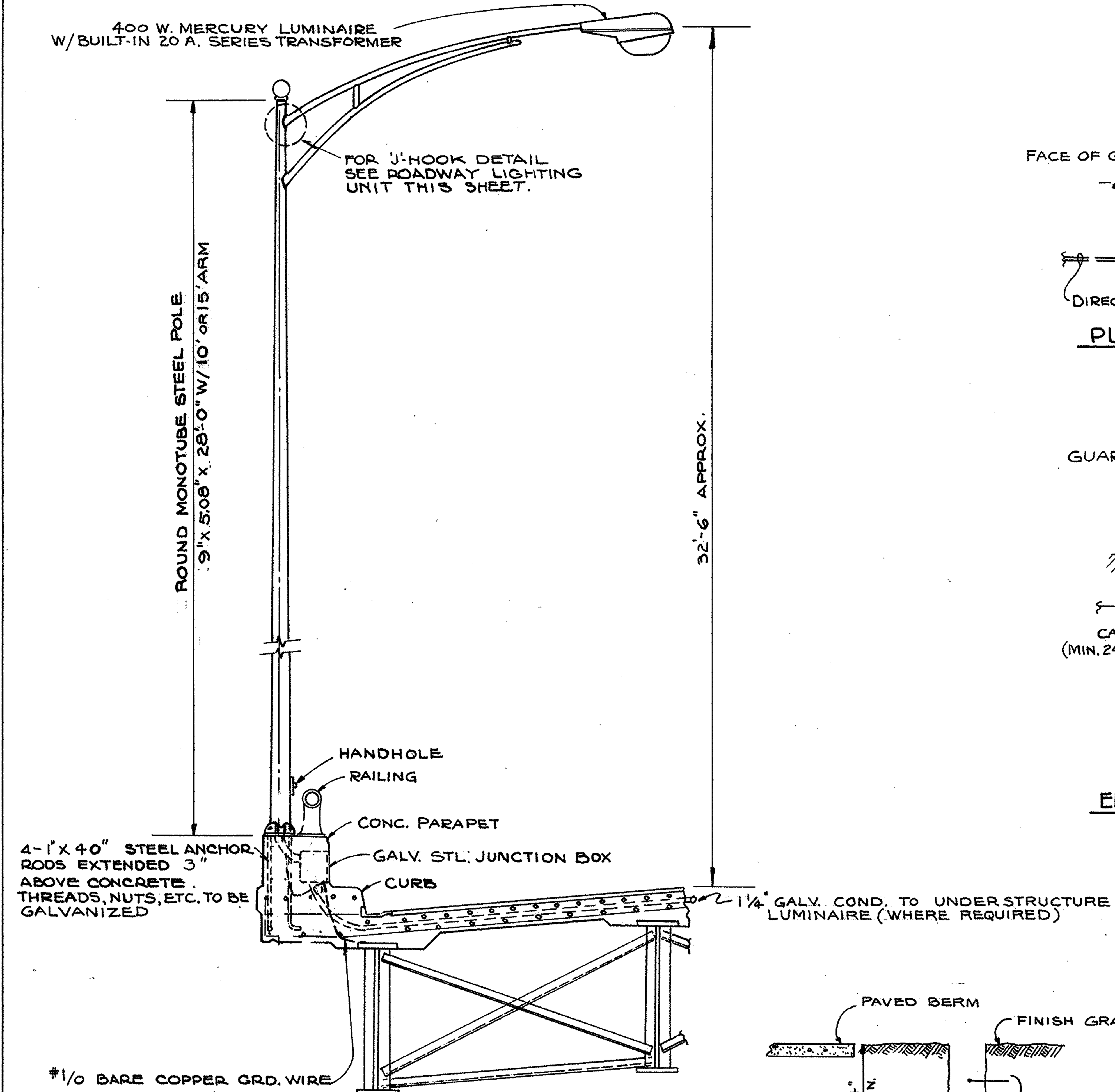
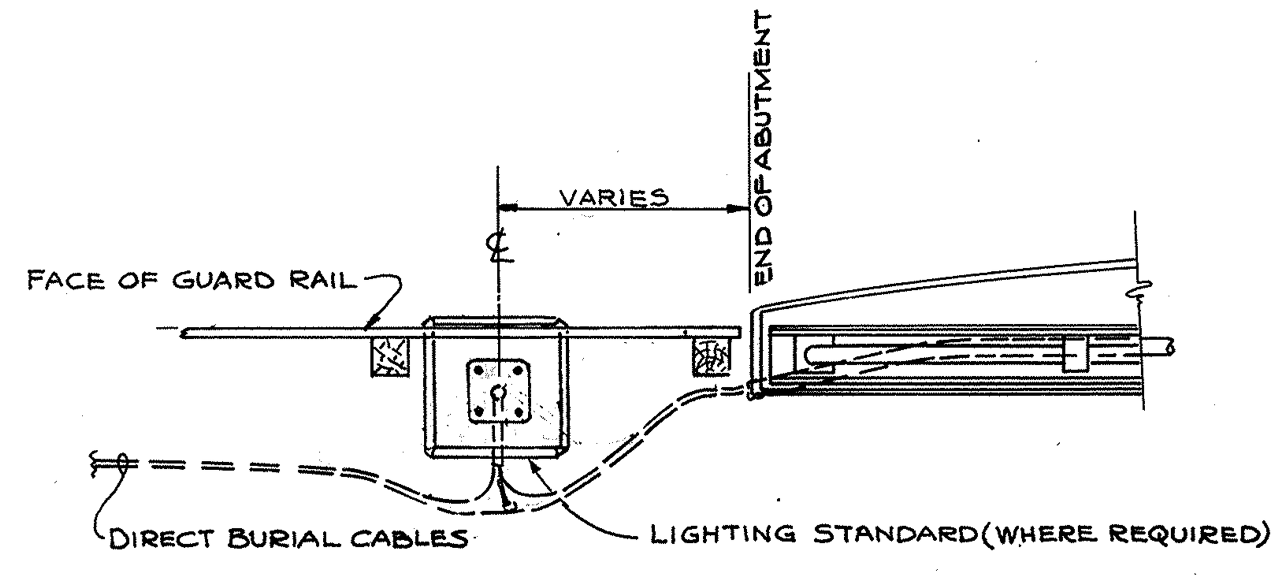
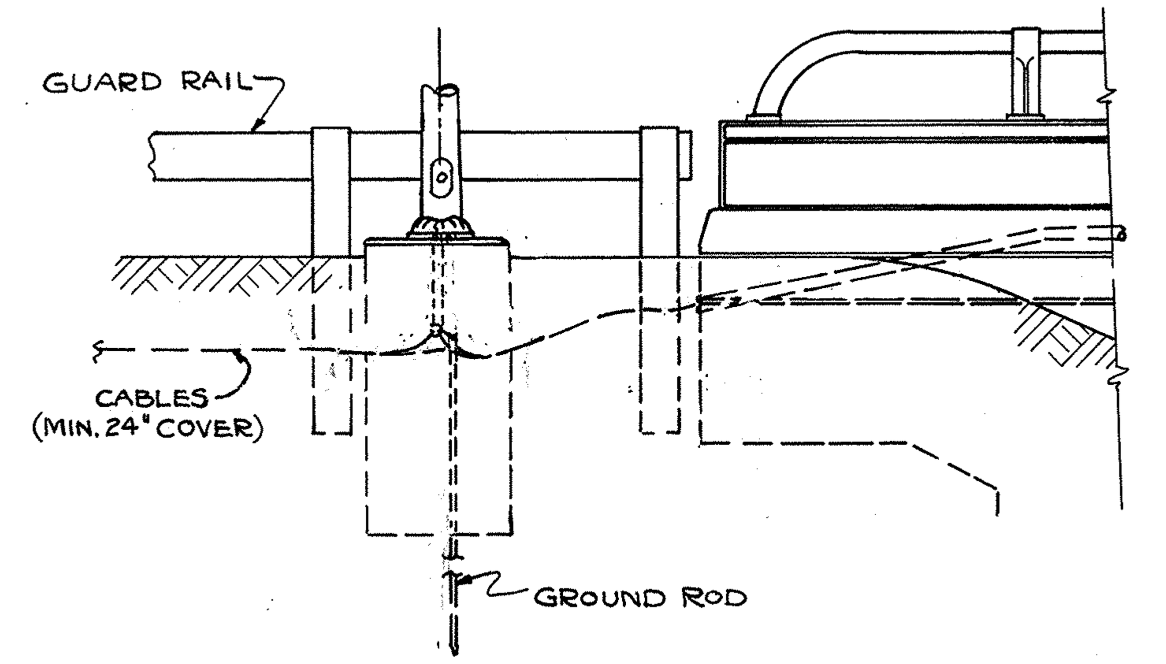
All details on this sheet with the exception of circuit diagrams, are for series circuits.



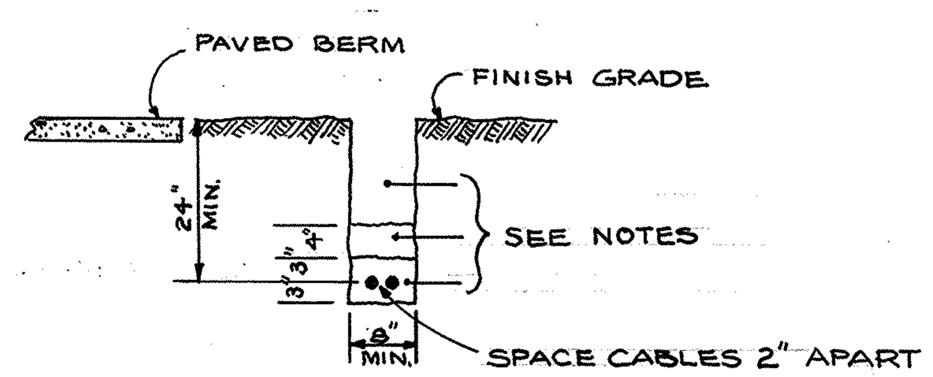
BRIDGE LIGHTING UNIT
SCALE 3/8 = 1'-0"



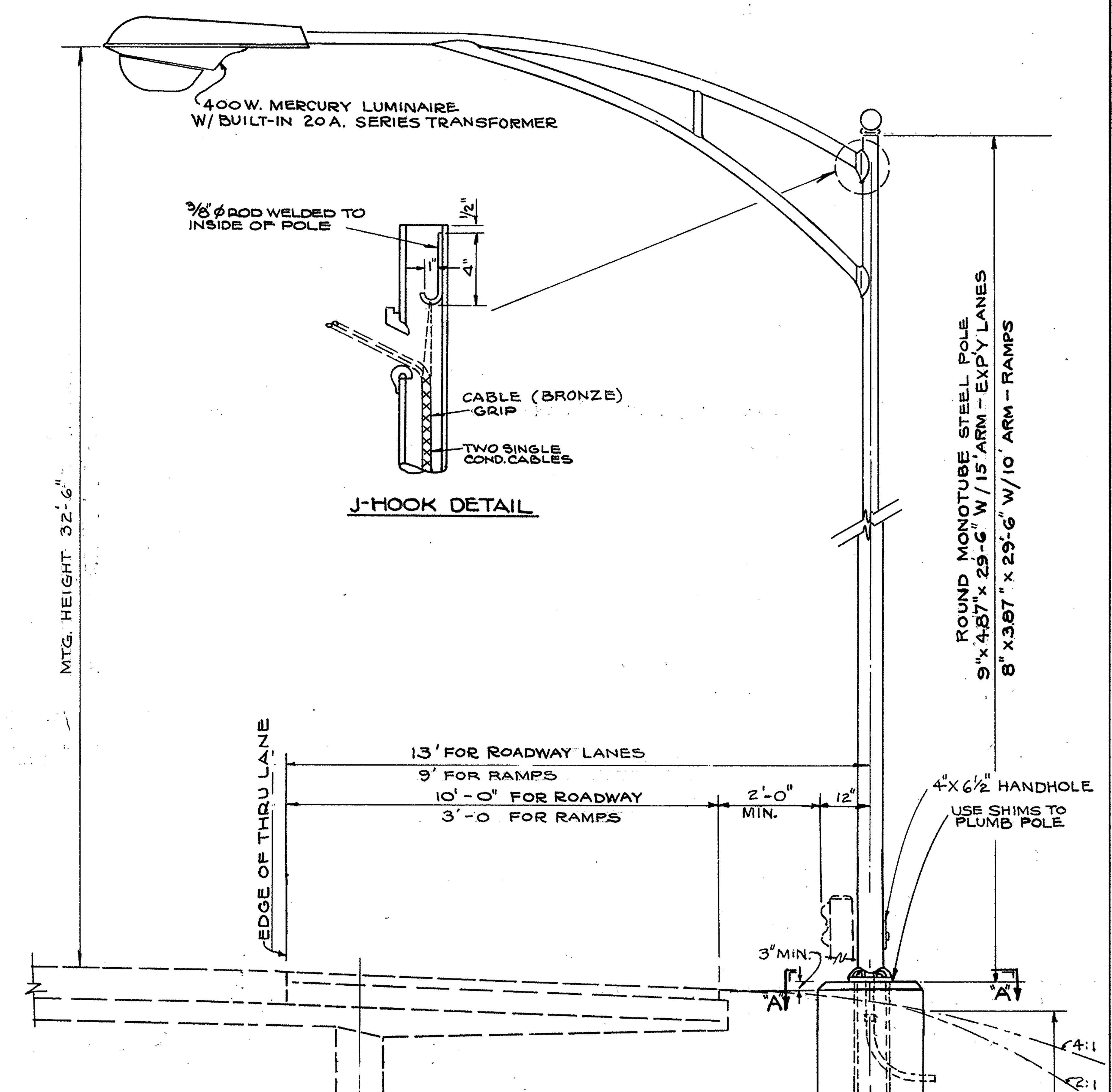
PLAN - BASE AND CONDUIT TREATMENT AT BRIDGES
SCALE 3/8" = 1'-0"



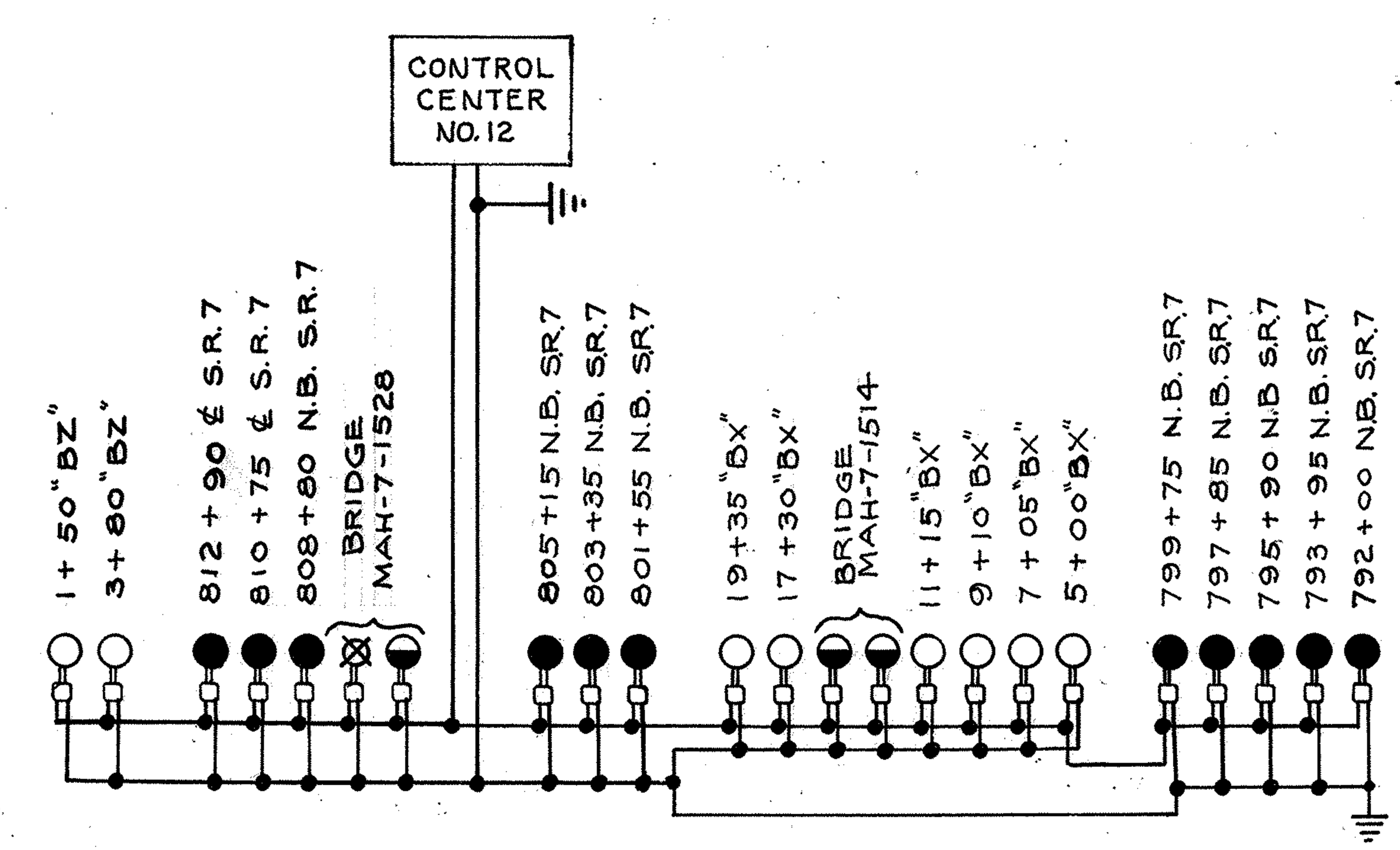
ELEVATION - BASE AND CONDUIT TREATMENT AT BRIDGES
SCALE 3/8" = 1'-0"



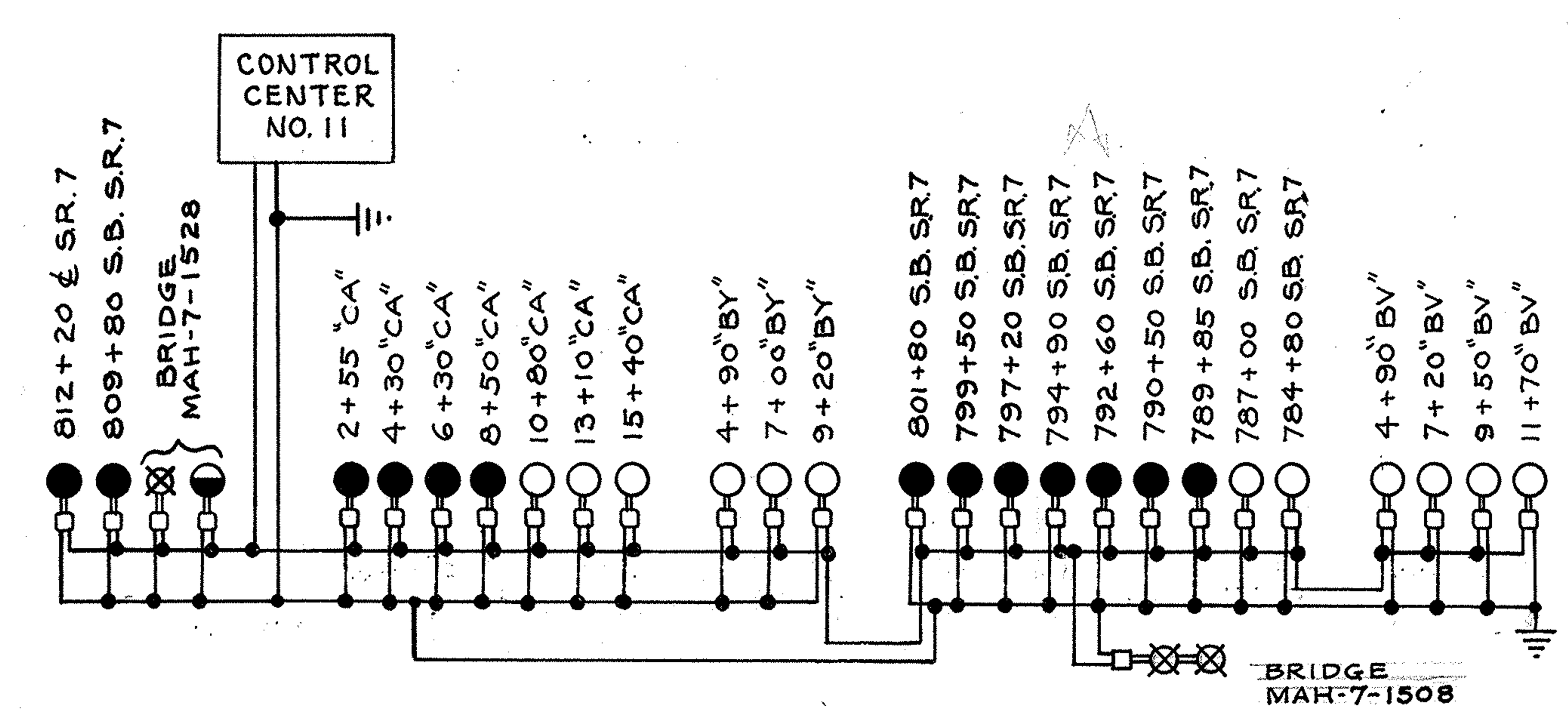
CABLE TRENCH DETAIL



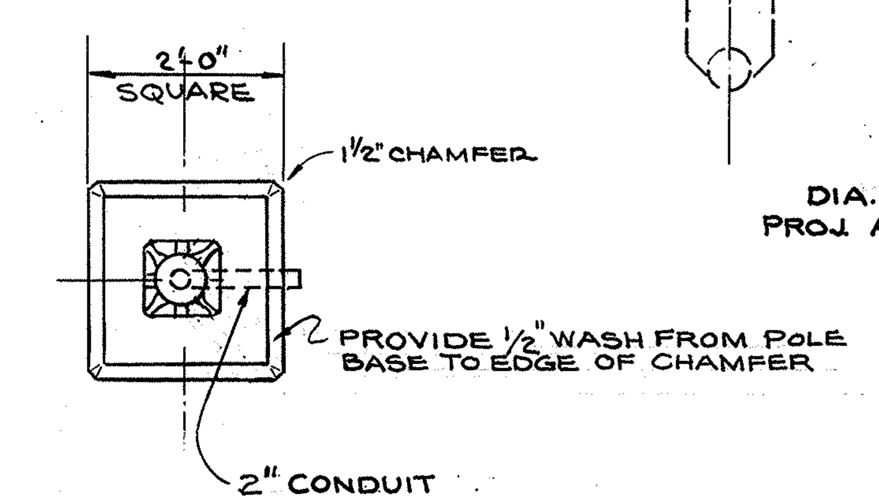
TYPICAL ROADWAY LIGHTING UNIT



LIGHTING CIRCUIT № 12



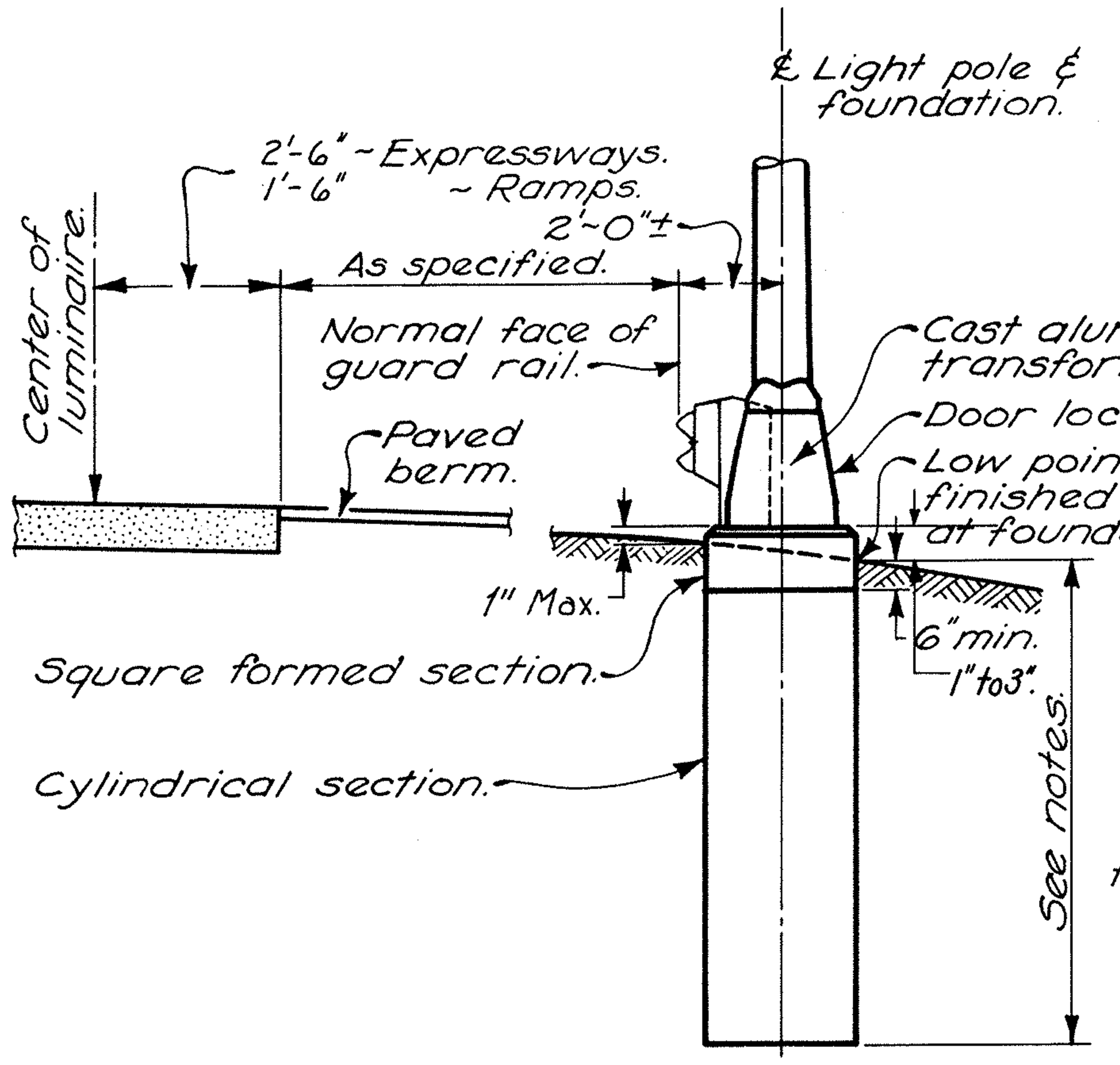
LIGHTING CIRCUIT № 11



SECTION "A"-"A"

ROADWAY LIGHTING DETAILS

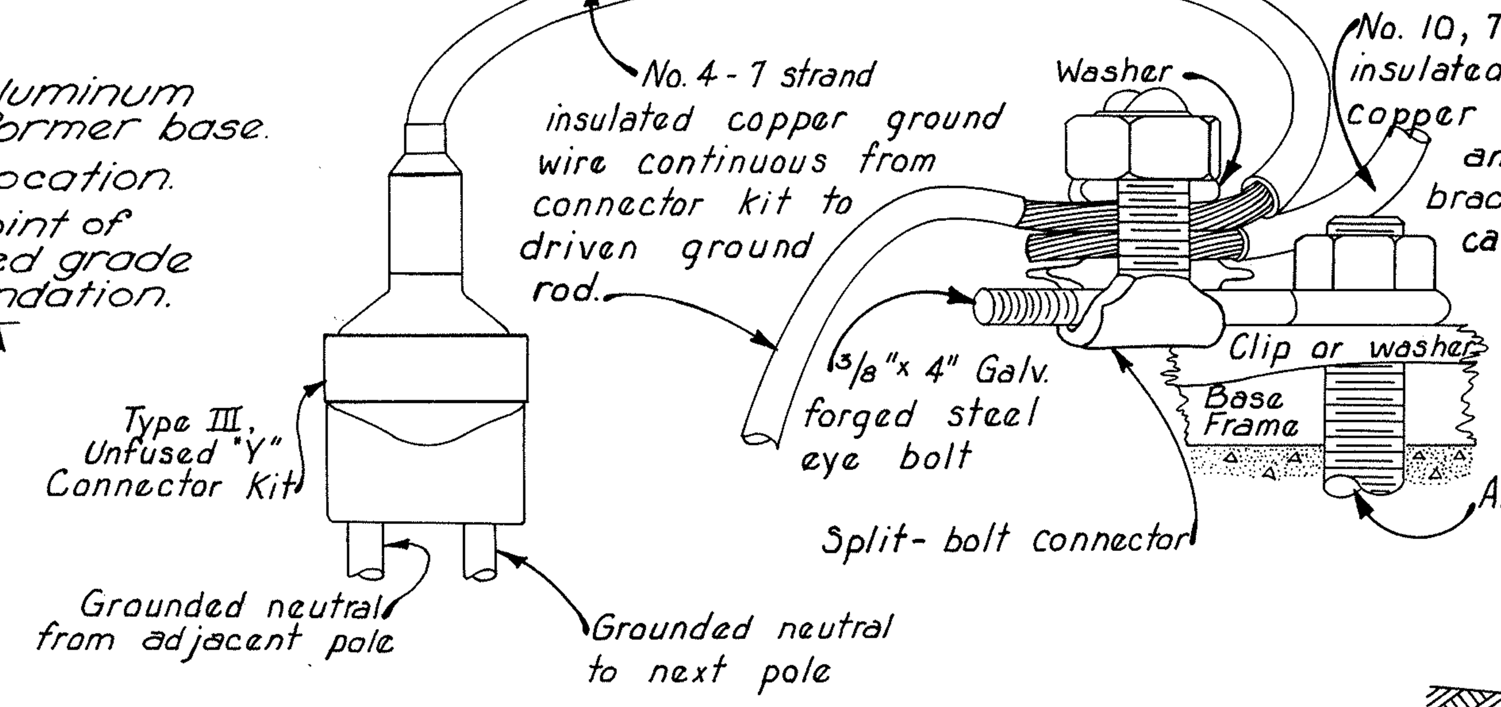
MAH-7-14.95



LOCATION OF POLE WITH OR WITHOUT ALUMINUM TRANSFORMER BASES

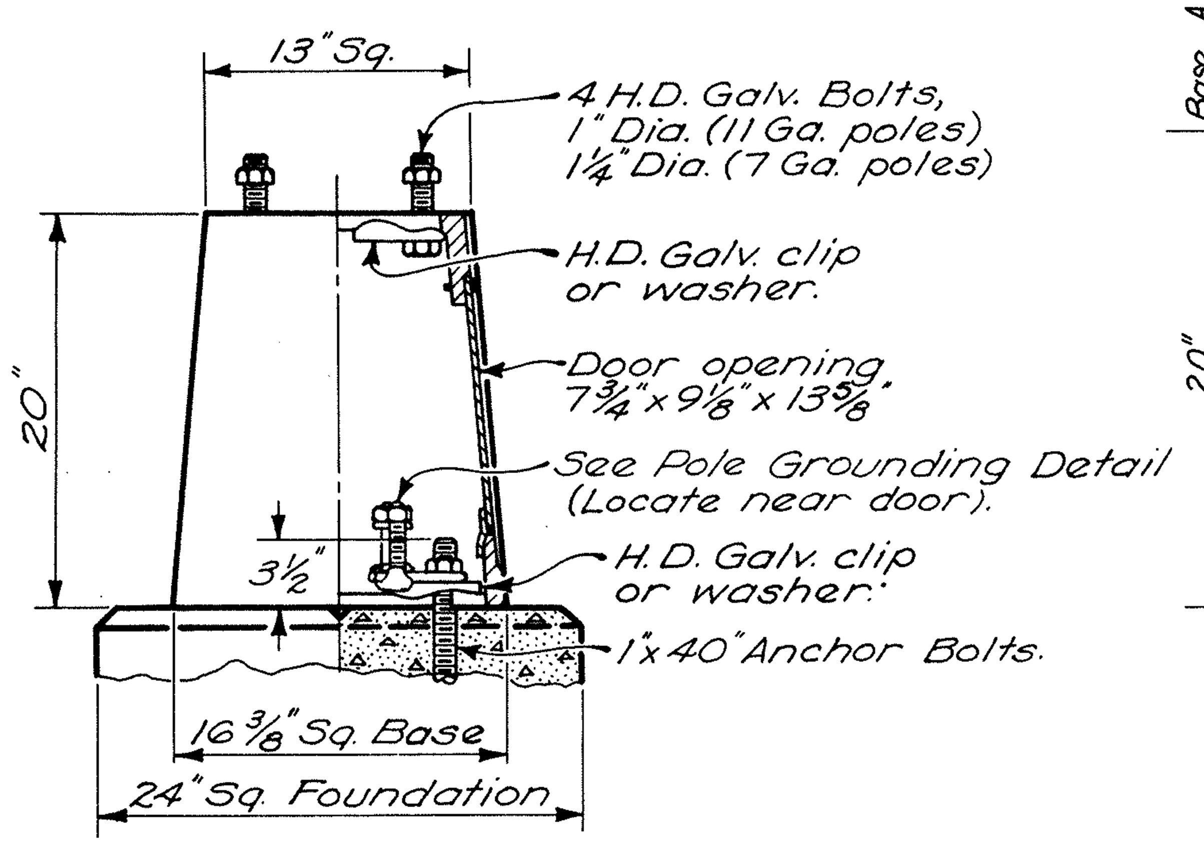
(Supersedes "Location of Light Pole Foundation" shown on Standard Drawing HL-1).

NOTE: Split-bolt Connector shall be made of tin plated copper alloy with tin plated spacer. Acceptable models are: Blackburn #10HPS, Burndy #KSU-25, Line Material #DK-5B-10, Kearney #118109-02 or an approved equal.

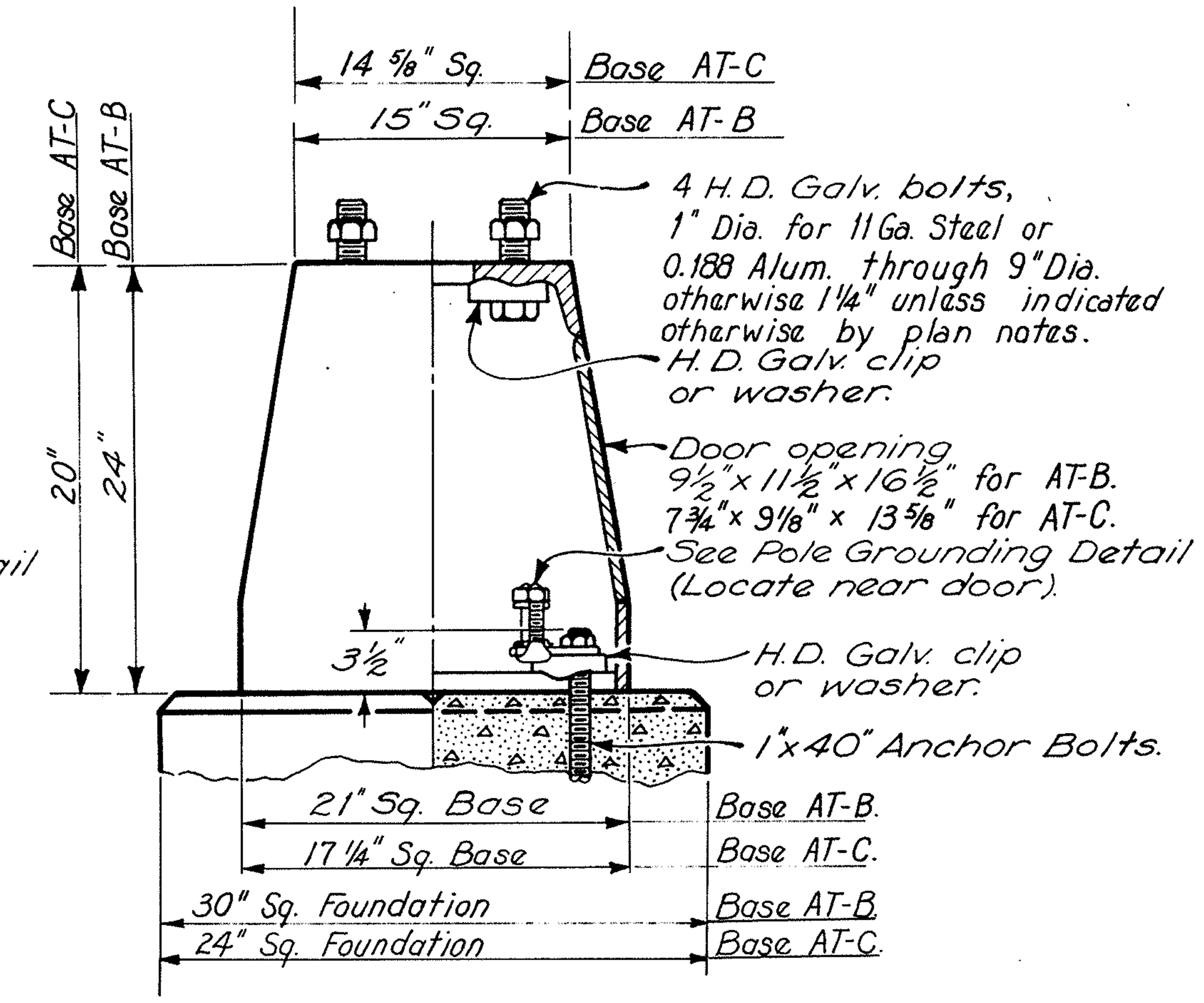


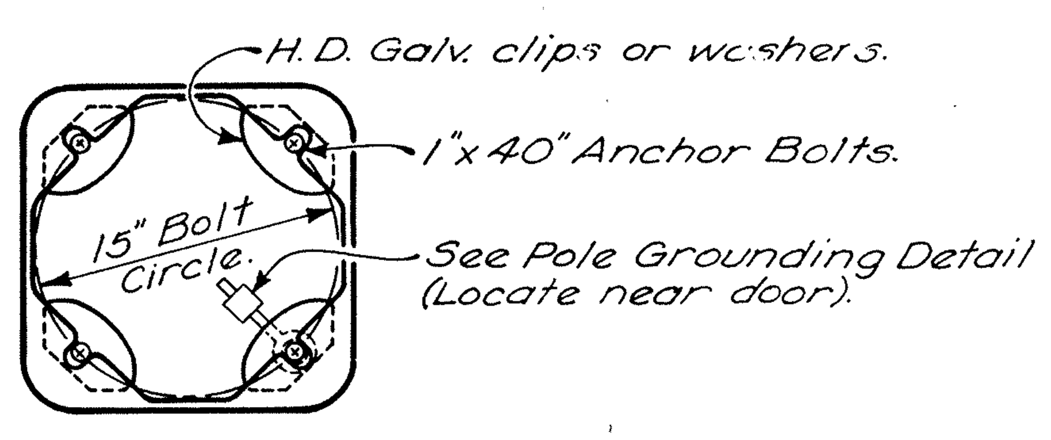
POLE GROUNDING DETAIL

(2-Wire Grounded Neutral System Only)



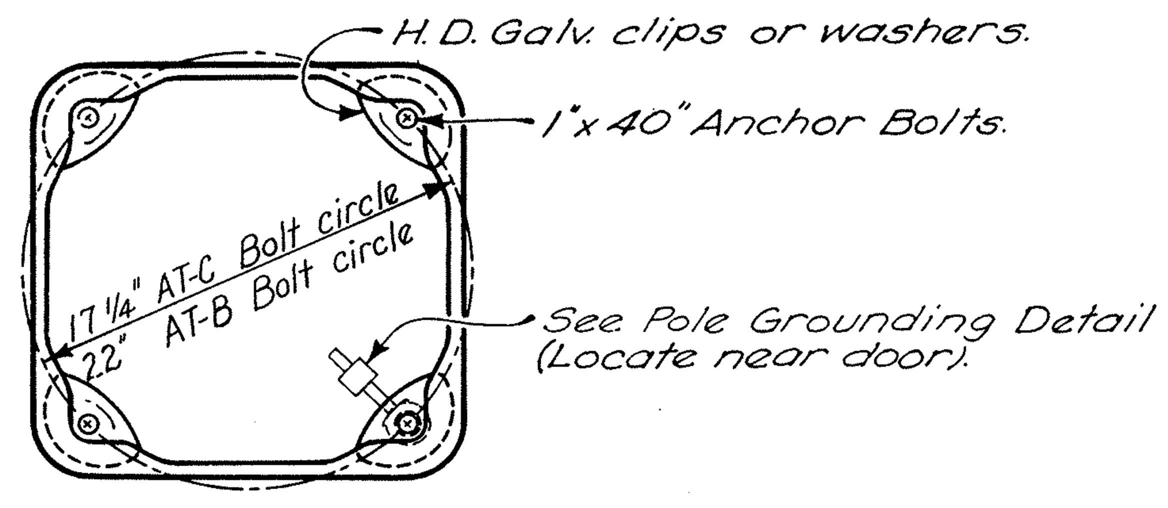
ELEVATION





BASE FRAME

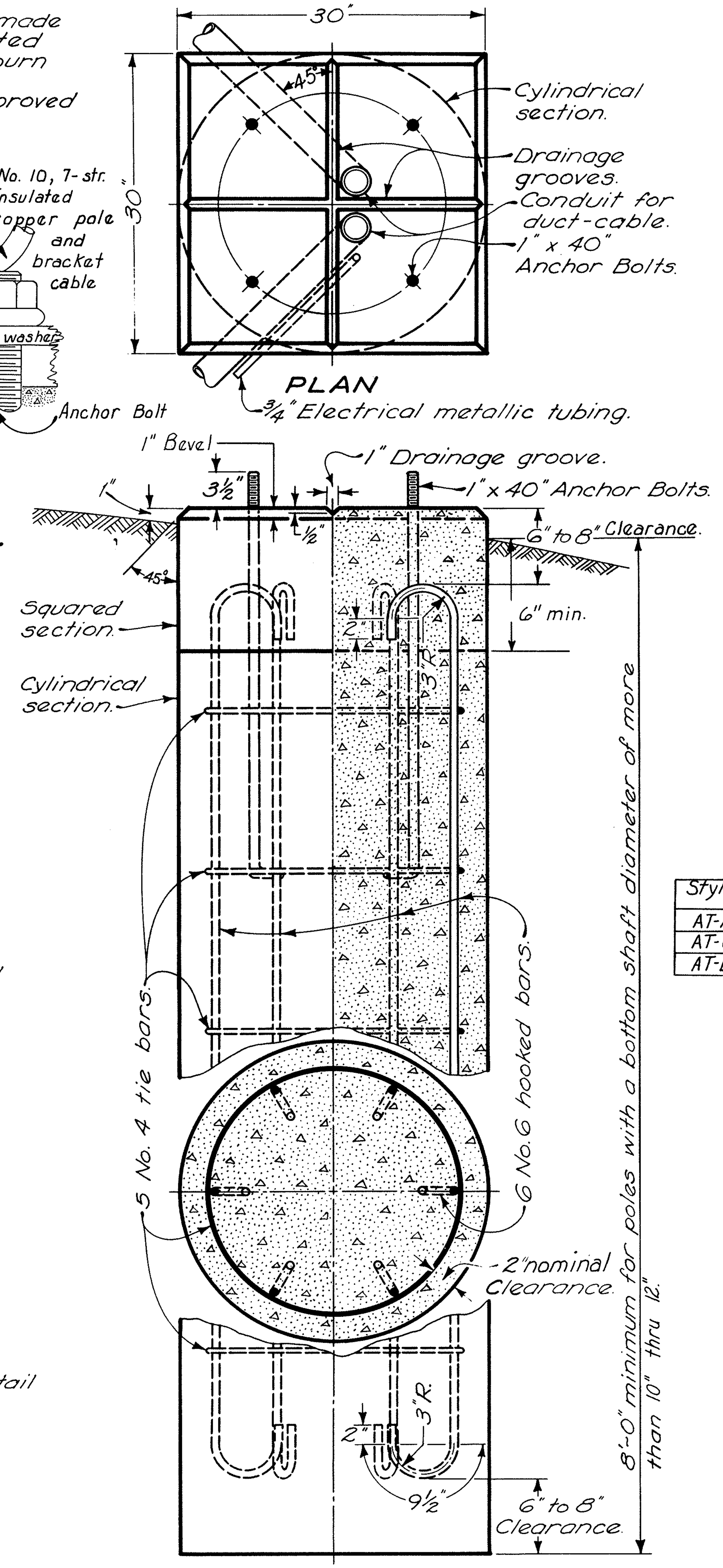
BASE AT-A



BASE FRAME

BASES AT-B AND AT-C

CAST ALUMINUM TRANSFORMER BASES



ELEVATION

30" FOUNDATION

NOTES

FOUNDATION: Foundations for light poles shall be poured-in-place concrete (vibrated and spaded 511.09). Each foundation must meet minimum depths as specified, but additional depth may be required by the Engineer because of existing soil conditions. The 30" foundation (detailed hereon) shall be used for light poles having a bottom shaft diameter of more than 10" through 12". The 24" foundation (detailed on Standard Drawing HL-1) shall be used for all light poles having a bottom shaft diameter of 6.0" through 10". See HL-1 for Foundation depth. Rotate reinforcing bars to clear conduit.

Drainage grooves on foundation top, as detailed hereon, shall be required on all foundations even though they do not appear on Standard Drawing HL-1.

ALUMINUM TRANSFORMER BASES: All bases shall be cast from ASTM B-26 or B-108 Alloy SG 70A-T6.

Base AT-A shall be used with anchor base poles of 6" through 9.2" dia. inclusive, thru 34'-6" Mtg. Hgt. Base AT-B shall be used for anchor base poles above 10" through 12" diameter. Base AT-C shall be used for anchor base poles with bottom diameter 9" through 10" *

The transformer bases shall be capable of resisting the following moments in foot pounds with load applied at a distance of 20' above the top of the base without collapsing or rupturing.

Style	Bolt Circle	Base Height	Moment-Foot Pounds	Arm Length
AT-A	15"	20"	37,000	15' Max.
AT-C	17¼"	20"	56,000	10' to 25'
AT-B	22"	24"	52,000	10' to 25'

Both the bottom of the cast steel pole base and the top of the aluminum transformer base shall be coated or painted with a heavy film of zinc rich paint (Federal Specification TT-P-641-Type II) to reduce galvanic action between the two dissimilar metals.

PAYMENT: 30" Light Pole Foundations shall be paid for at the unit price bid per each foundation.

Aluminum base complete with hardware, eye bolt and connector, zinc rich paint, and installation shall be included with ground-mounted poles for payment.

* AT-C Base can be used with 8" or 8½" dia. base poles, if desired, in order to reduce maintenance items.

Revised: 5-16-68
Issued: 11-6-67

Design Services Sketch No. RL-SK-186

ALUMINUM TRANSFORMER BASE DETAILS

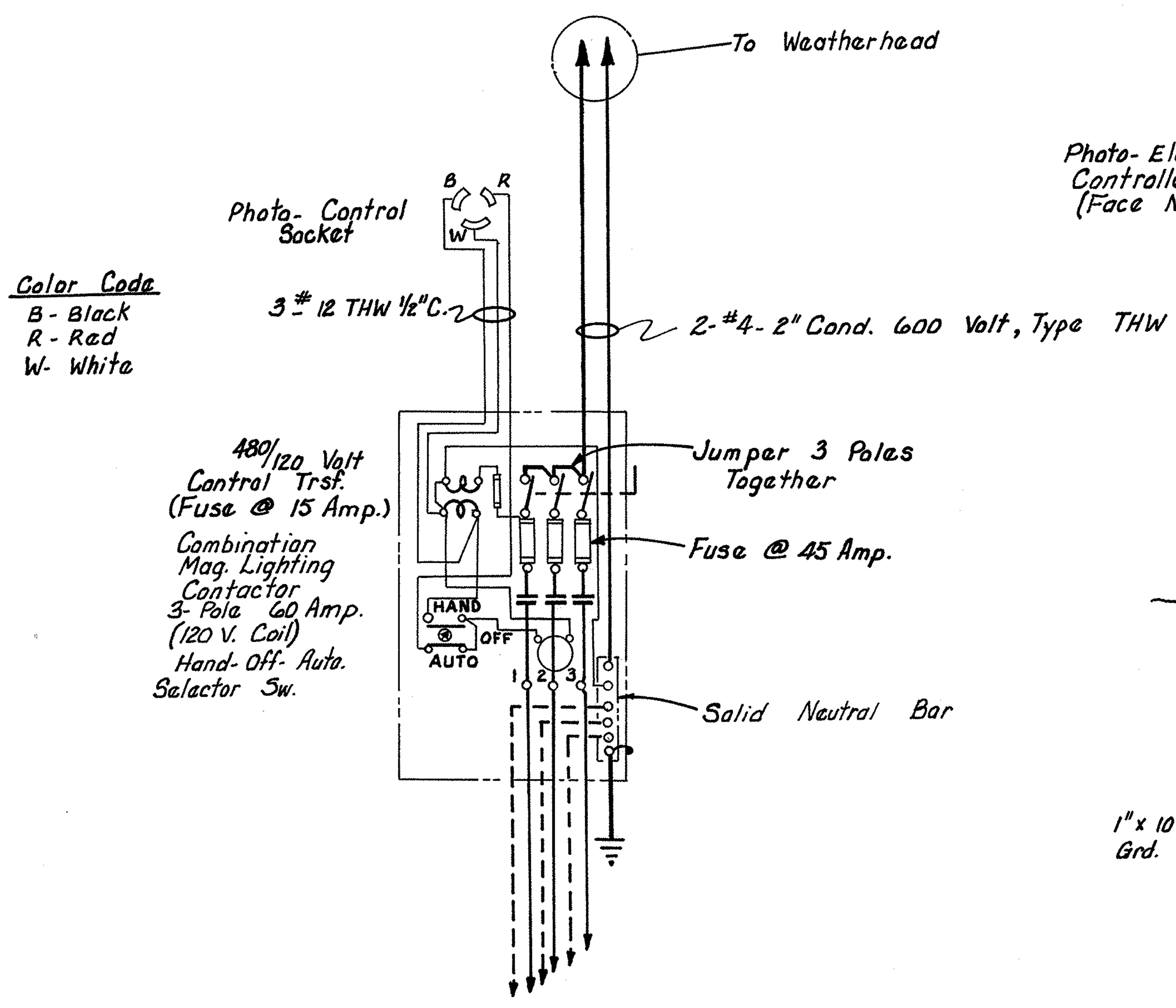
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH-7-14.95

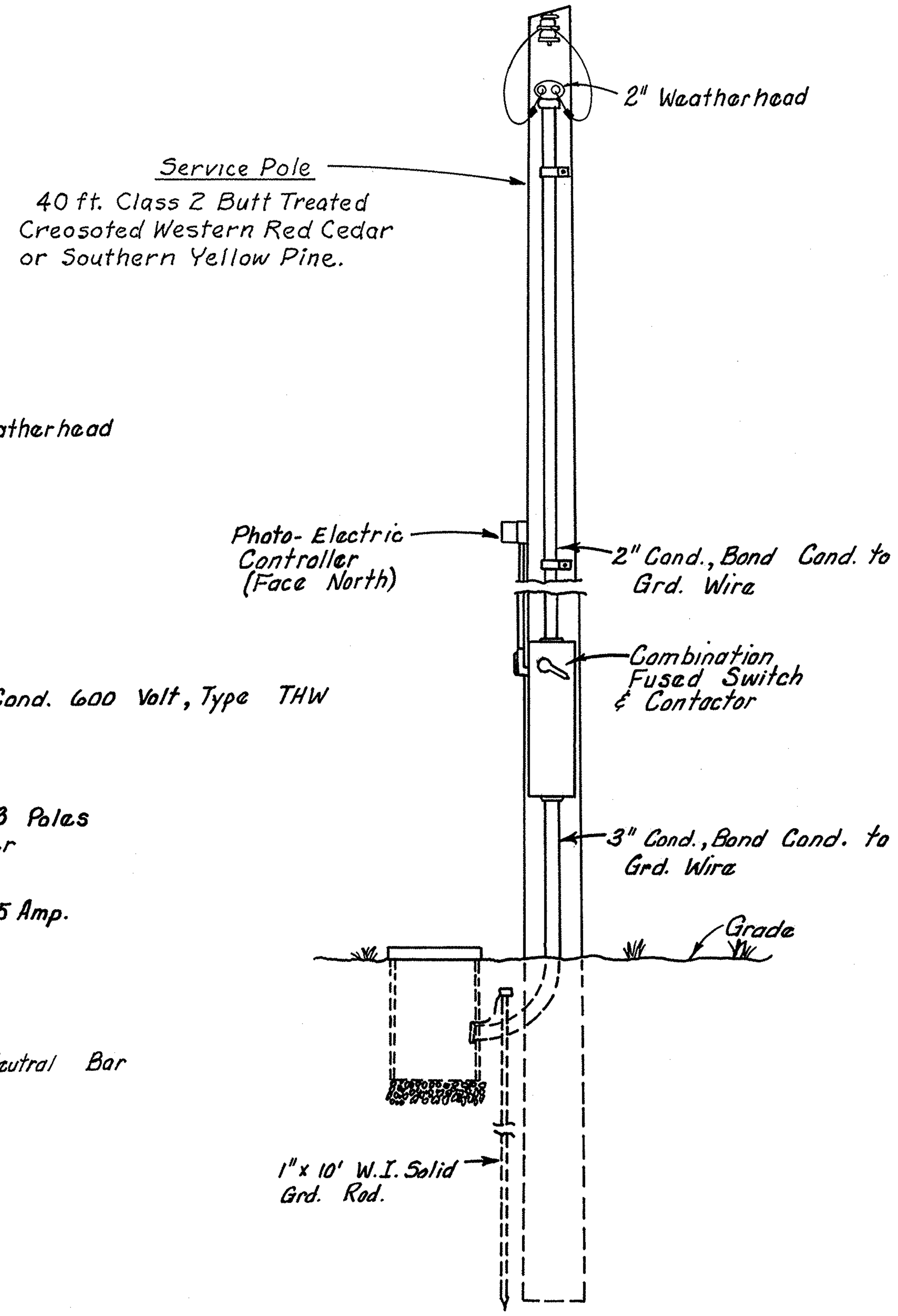
TYPE CODE 7221

Interstate MAH-7-1514	Interstate MAH-7-1508	Interstate Roadway	Urban MAH-7-1528	Urban Roadway	TOTAL	Item	Unit	Description	TOTAL I-680	TOTAL URBAN
		8		8	16	625	Each	Light Pole, Cast Aluminum Base, 10' Bracket Arm, 11AT10B34.2	8	8
2		3			5	625	Each	Light Pole, Anchor Base, 10' Bracket Arm, 11A10B32.5	5	—
	1	7	2	4	14	625	Each	Light Pole, Anchor Base, 15' Bracket Arm, 11A15B32.5	8	6
		9		5	14	625	Each	Light Pole, Cast Aluminum Base, 15' Bracket Arm, 11AT15B34.2	9	5
		31		17	48	625	Each	Light Pole Foundation, 24"x 24"x 6'-0" Deep	31	17
2		27	2	17	48	625	Each	Luminaire, Type II 400w. Mercury w/ 400w. ballast	29	19
	2		2		4	625	Each	Luminaire, Type V 250w., Underpass	2	2
2	1	27	2	17	49	625	Each	Mercury Vapor Lamp, 400 watt (H-33-1CD)	30	19
	2		2		4	625	Each	Mercury Vapor Lamp, 250 watt (H-37-5KB-E)	2	2
		31		17	48	625	Each	Ground Rod	31	17
		24		10	34	625	Each	Pull Box, Corrugated Metal, 18" I.D.	24	10
		2		2	4	625	Each	Marker	2	2
		7190		3255	10,445	625	Lin. ft.	Trench, 24" deep	7190	3255
2	1		2		5	625	Each	Structure Junction Box, 24"x 12"x 10"	3	2
		400		50	450	625	Lin. ft.	Conduit, 3" Rigid ferrous metal, Type II or III.	400	50
440	470		400		1310	625	Lin. ft.	Conduit, 2" Rigid ferrous metal Type II or III.	910	400
170		2477	190	1560	4397	625	Lin. ft.	Pole and bracket cable, 600 Volt, 1/c No. 10	2647	1750
		5840		2825	8665	625	Lin. ft.	Duct-Cable, 600 Volt, two insulated, 1/c No. 4	5840	2825
	480	2465			2945	625	Lin. ft.	Insulated Conductor, 5 KV, 1/c No. 6	2945	—
920		240	840	480	2480	625	Lin. ft.	Circuit Cable, 600 Volt, 1/c No. 4	1160	1320
	480	1805			2285	625	Lin. ft.	Bare Ground Conductor, 5KV, 1/c No. 2	2285	—
		4		2	6	625	Each	Connector Kit, Type I	4	2
2		27	2	17	48	625	Each	Connector Kit, Type II	29	19
2		27	2	17	48	625	Each	Connector Kit, Type III	29	19
		26		16	42	625	Each	Connector Kit, Type IV	26	16
2	1		2		5	625	Set	Anchor Bolts "L" (Set of 4)	3	2
		Lump		Lump	Lump	625	Lump	Service Pole	Lump	Lump
		Lump		Lump	Lump	625	Lump	Control Center	Lump	Lump
Lump					Lump	625	Each	Structure grounding system, Bridge no. MAH-7-1514	Lump	—
			Lump		Lump	625	Lump	Service for Underdeck Lighting, Bridge no. MAH-7-1528	~~Lump~~	Lump
	Lump				Lump	625	Lump	Service for Underdeck Lighting, Bridge no. MAH-7-1508	Lump	—
	Lump				Lump	625	Lump	Structure Grounding System, Bridge no. MAH-7-1508	Lump	—
			Lump		Lump	625	Lump	Structure Grounding System, Bridge no. MAH-7-1528	—	Lump
		Lump			Lump	625	Lump	Relocation of Existing Lighting	Lump	—
		Lump			Lump	625	Lump	Temporary Lighting	Lump	—

SEE NOTE



WIRING DIAGRAM
1φ 480 V. Multiple Lighting Circuits



POLE MOUNTED CONTROL CENTER

RELOCATION OF EXISTING LIGHTING

New Foundations, Pullboxes, Cable, etc., Necessary for This Item, are Included in Estimated Quantities in Proper Item Above. Included are a New Light Pole for Bridge no. MAH-7-1508, and a New Lamp, but the old Luminaire Should be Used. This Item covers Relocation and Reconnection of Series Lighting into Existing Circuits as Called For on Sheet 106.

12-16-68

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-324(9)	

110
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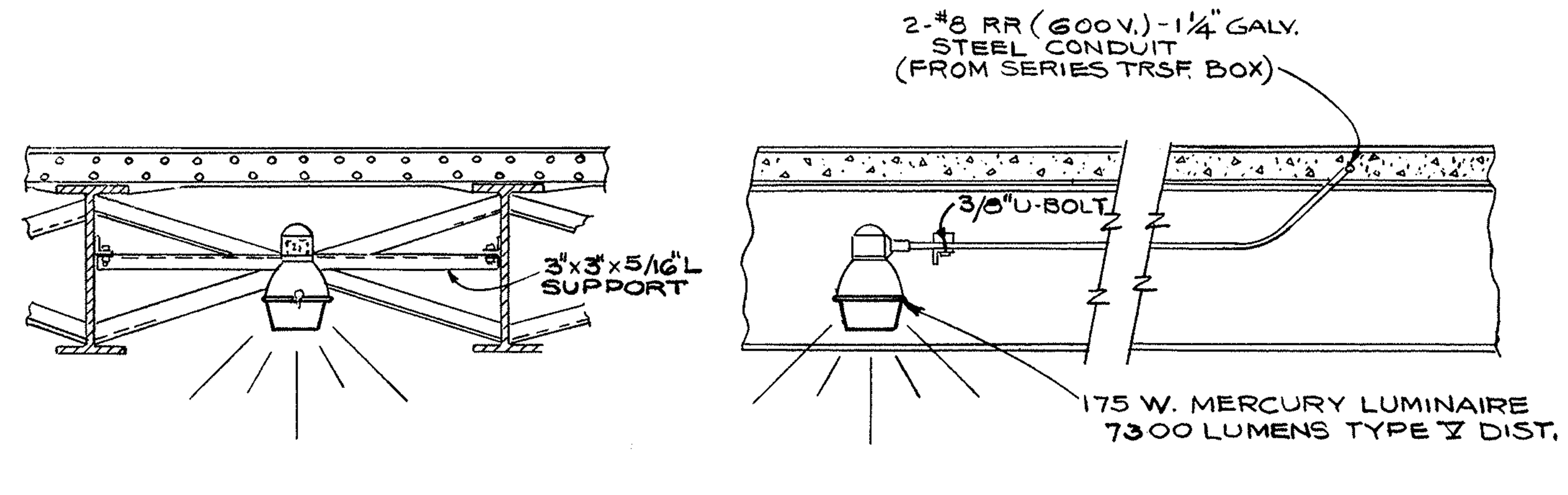
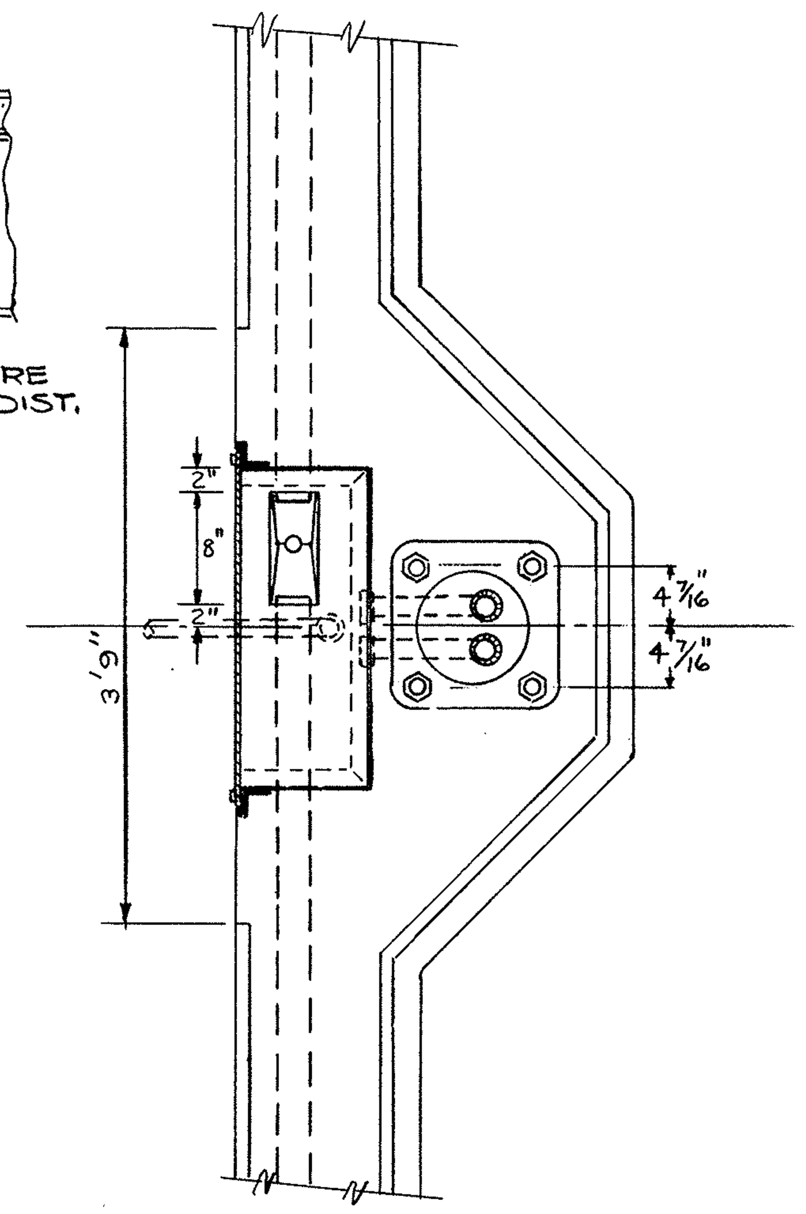
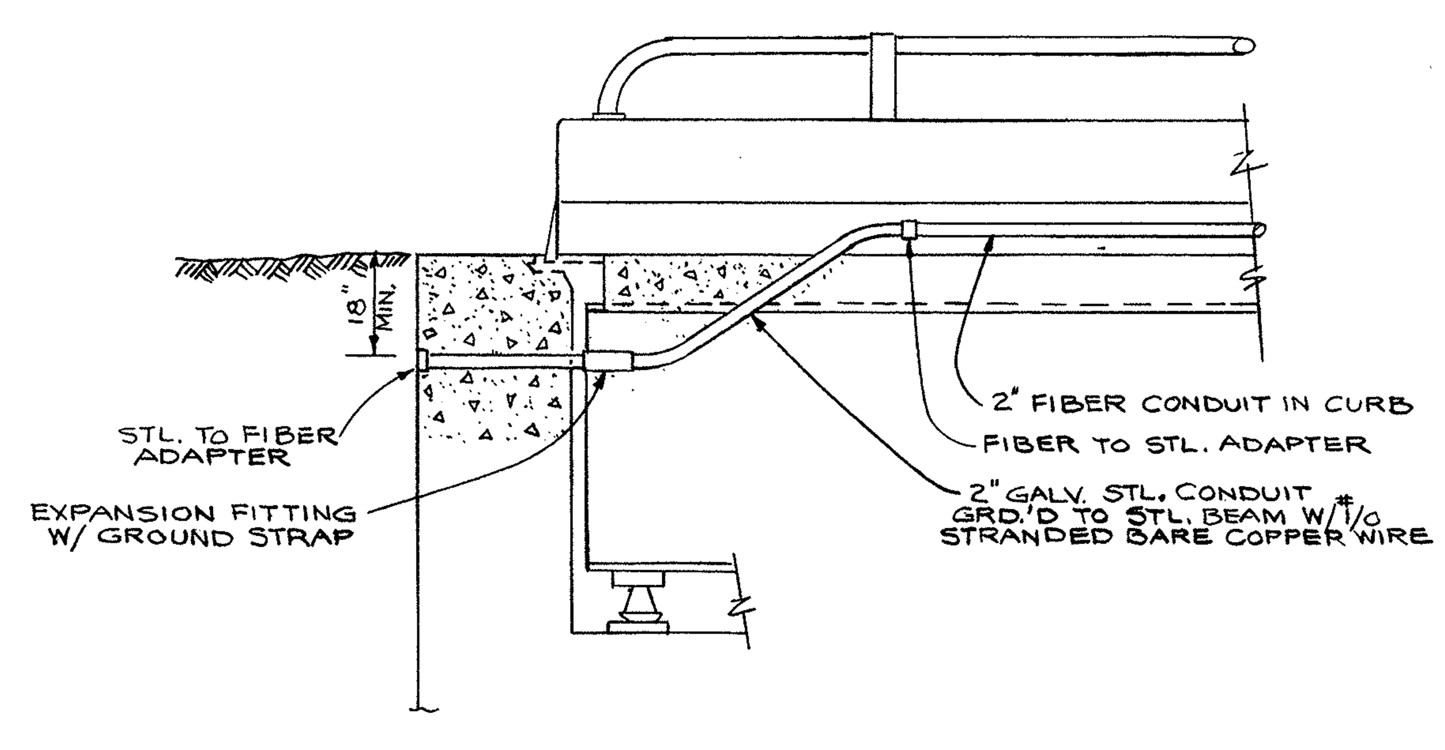


DETAIL - LUMINARE MTG. UNDER STRUCTURE

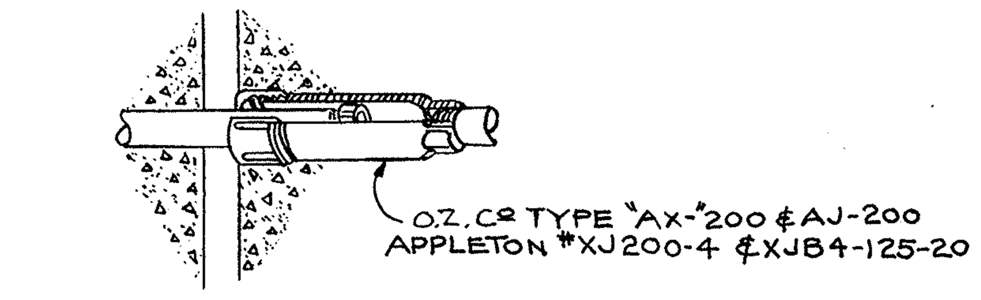
OBSOLETE: NEW DETAIL FOR UNDER DECK LIGHTS TO BE SUPPLIED LATER.



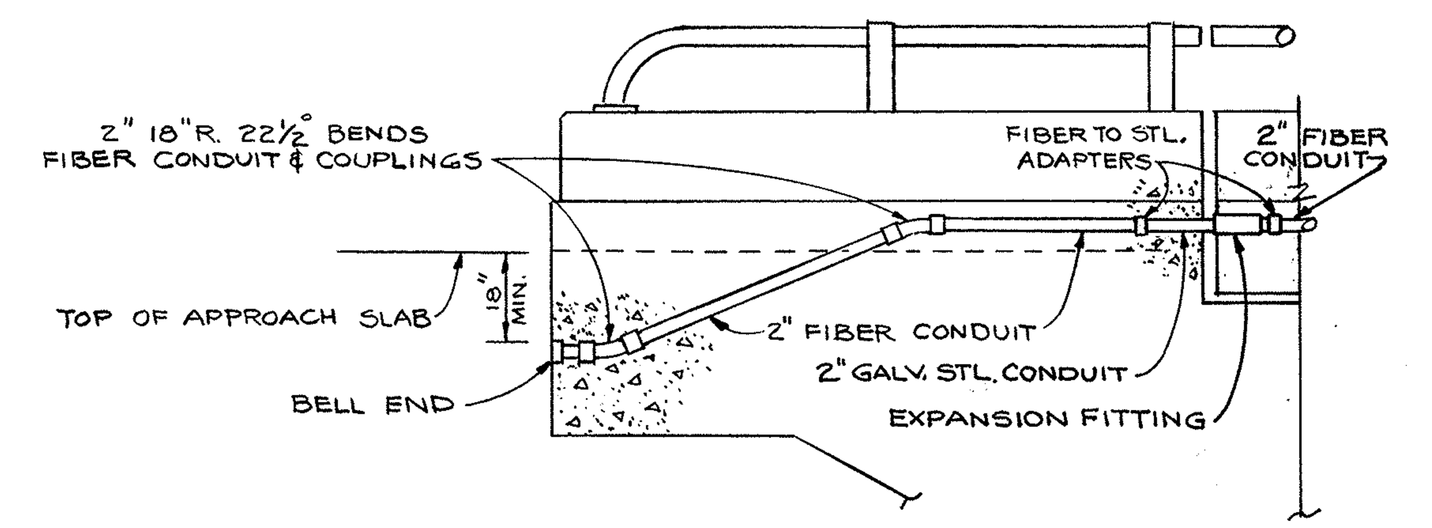
PLAN



ELEVATION - WITHOUT WING WALL



DETAIL - CONDUIT EXPANSION JOINT

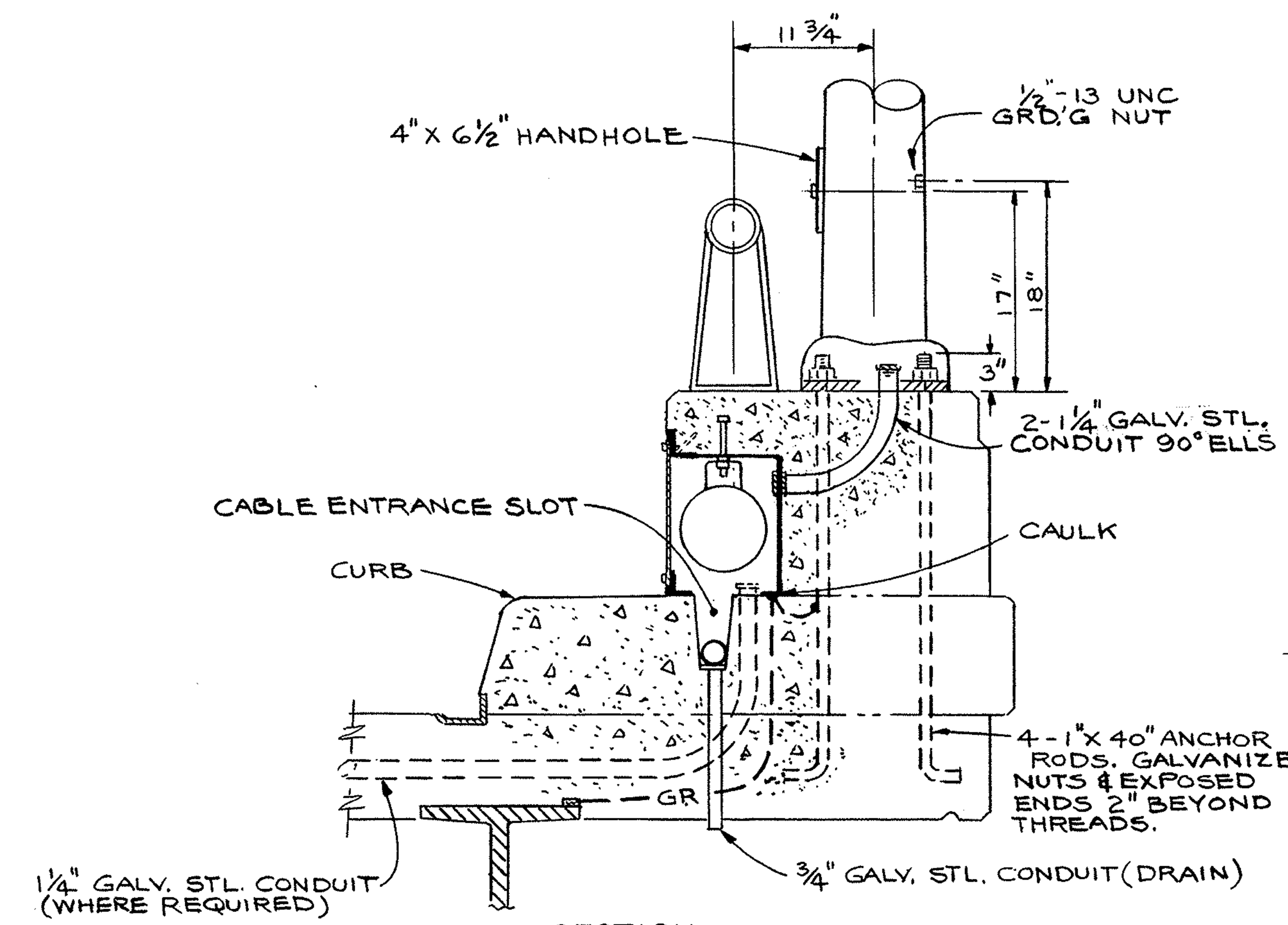


ELEVATION - WITH WING WALL

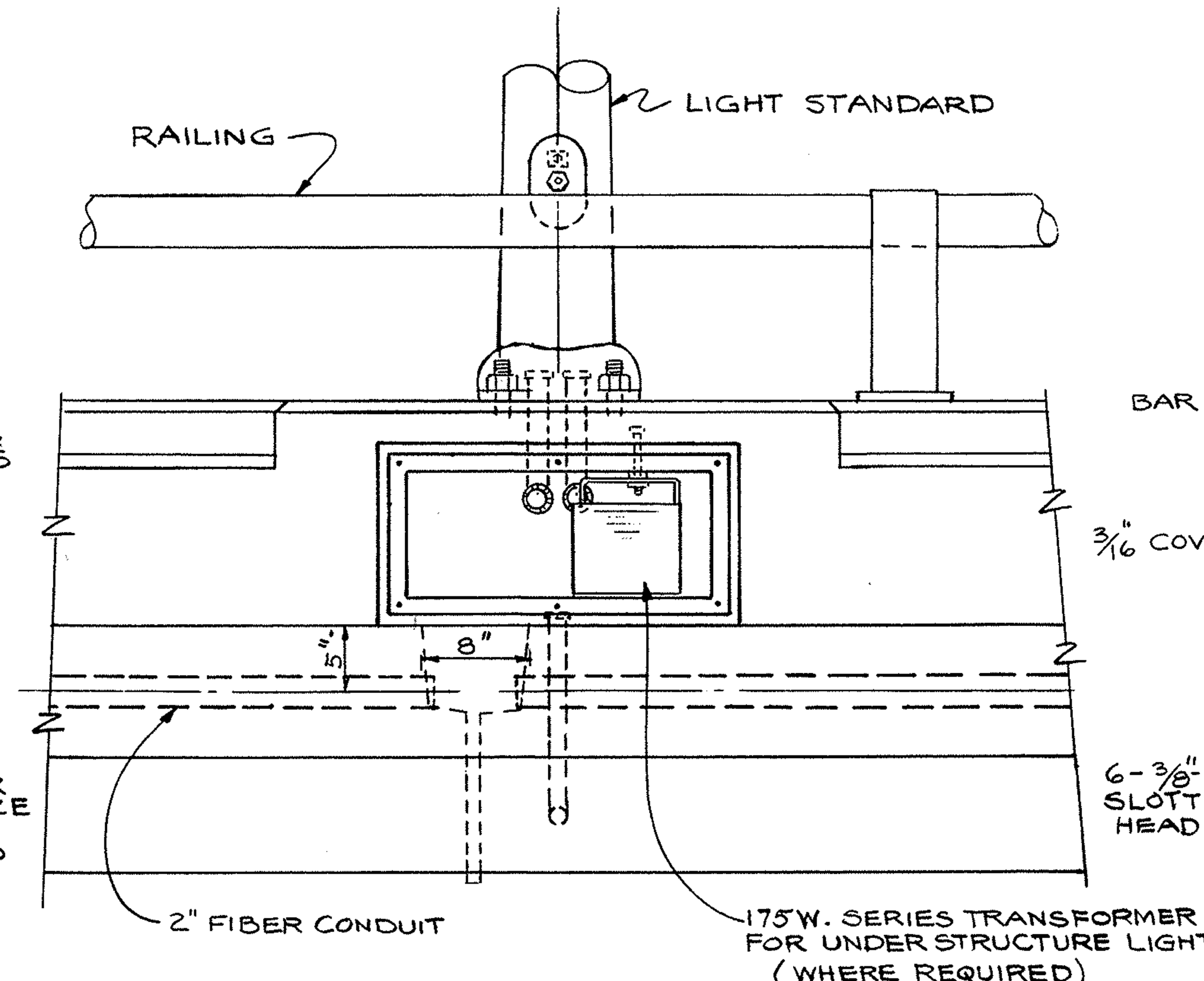
SUPER-STRUCTURE ABUTMENT CONDUIT

NOTE:
THESE DETAILS APPLY TO SERIES CIRCUIT ON BRIDGE No. MAH-7-1508 ONLY.

TABLE-STRUCTURE GROUNDING		
BRIDGE No.	TYPE STRUCTURE	DETAILS OF GROUNDING
MAH-7-1508	STEEL BEAM	COILED SPIRAL CABLE UNDER SPRED FOOTER @ PIER No. 1 TWO (2) GRD.'G SYSTEMS REQUIRED
MAH-7-1514	STEEL BEAM	WELD TO H-BEAM BEARING PILE @ PIER No. 3
MAH-7-1528	STEEL BEAM	WELD TO H-BEAM BEARING PILE @ PIER No. 2 TWO (2) GRD.'G SYSTEMS REQUIRED

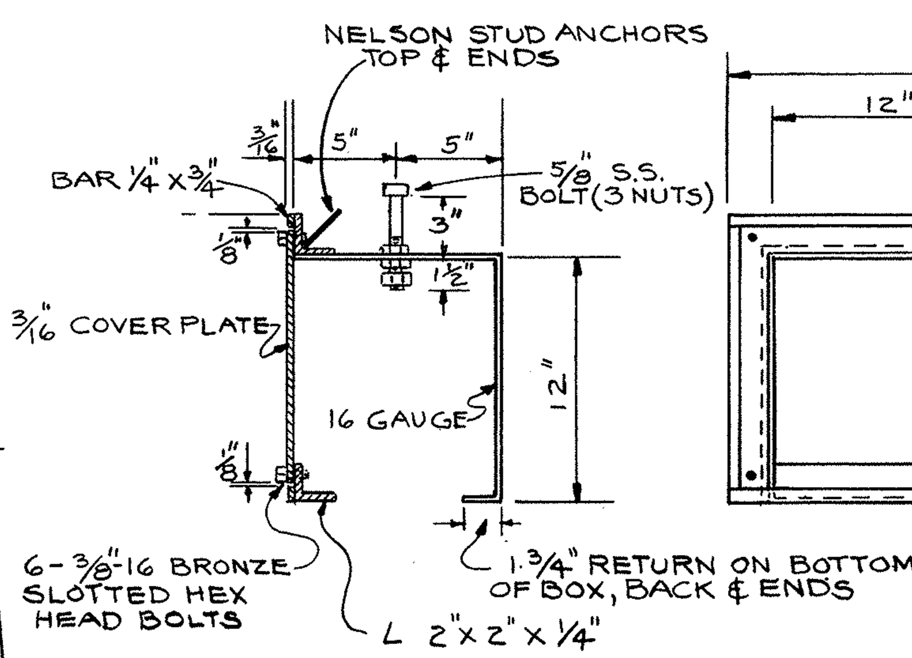


SECTION

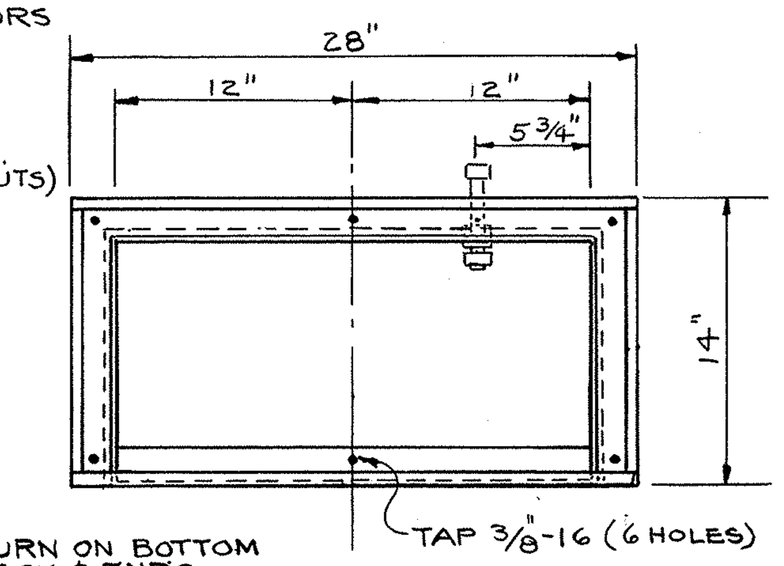


ELEVATION

DETAIL - MTG. OF LIGHT STANDARD & PULL BOX - BRIDGE PARAPET
SCALE 1" = 1'-0"



END



FRONT

DETAILS - STEEL PULL BOX
SCALE 1½" = 1'-0"

WELDED CONSTRUCTION, HOT DIPPED GALVANIZED AFTER FABRICATION

LIGHTING DETAILS - STRUCTURES

GENERAL NOTES

(TRAFFIC CONTROL)

ESTIMATED QUANTITIES

The estimated quantities for traffic control items shown on sheet 110D are for bidding purposes only.

The necessary details for exact sign support locations and elevation views, and tabulations for delineators and pavement marking limits, required for construction of traffic control items in the plan are not available at this time.

These details, and the details for traffic control needed to supplement maintenance of traffic requirements outlined on sheet 9 will be provided by the Engineer during construction.

Pay quantities for all traffic Control Items will be determined by final measurement.

MATERIALS - GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLANS BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. THIS IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR MAY ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

816 STRUCTURAL SUPPORTS, STEEL BEAM (TYPE)

THE STRUCTURAL STEEL BEAM SUPPORTS INCLUDING 8 AND 6 POUND BEAMS, 4 POUND DRIVE POST AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 RESPECTIVELY.

QUANTITIES FOR ITEM 816 "STRUCTURAL SUPPORTS, STEEL BEAM (TYPE)", APPEARING IN THE QUANTITY TABLES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVANIZING OF SUPPORTS. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER LIN. FT. WHICH PRICE AND PAYMENT SHALL INCLUDE ALL COSTS IN CONNECTION WITH THE EMBEDMENT OF THE SUPPORTS.

THE COST OF THE CONCRETE USED FOR EMBEDMENT WILL BE A SEPARATE PAY ITEM.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS, BY TYPE

FOUNDATIONS SHALL BE CONSTRUCTED IN THE MANNER CALLED FOR UNDER SUPPLEMENTAL SPECIFICATION 816. CONCRETE SHALL BE CLASS "C".

PAYMENT FOR INSTALLATION ONLY OF THE 2 INCH GALVANIZED STEEL AND THE 3/4 INCH EMT CONDUIT ELLS WILL BE INCLUDED IN THIS ITEM. PAYMENT FOR FURNISHING THIS CONDUIT IS INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

PAYMENT FOR THIS ITEM SHALL BE PER CUBIC YARD BASED ON APPROVED PLAN DIMENSIONS OR DIMENSIONS AS MODIFIED BY THE ENGINEER IN LIEU OF PLAN QUANTITIES AS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 816.

816 OVERHEAD SIGN SUPPORT, BY TYPE

ALL COMPONENT PARTS OF THE OVERHEAD SIGN SUPPORTS SHALL BE STEEL, EXCEPT FOR THE TRUSS AND COMPONENTS FOR THE NUMBER 7 SERIES WHICH SHALL BE ALUMINUM. FOR SPECIFIC DETAILS AND MATERIALS, SEE SHEET NUMBERS 110F THROUGH 110H.

COST OF FURNISHING AND INSTALLING THE SIGN BRACKETS AND THE FIXTURE SUPPORT ARM, LENGTH "G", WITH MOUNTING HOLES AND HARDWARE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

MODIFYING SUPPLEMENTAL SPECIFICATION 816 SWITCH ENCLOSURE MOUNTING BRACKETS INCLUDING MOUNTING BOLTS AND DRILLED HOLES SHALL BE FURNISHED AND INSTALLED UNDER PAYMENT FOR 816 OVERHEAD SIGN SUPPORT STRUCTURES AT THE CONTRACT PRICE PER OVERHEAD SIGN SUPPORT, BY TYPE.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH OVERHEAD SIGN SUPPORT, BY TYPE, INSTALLED IN PLACE AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL ANCHOR BOLTS AND 2" AND 3/4" EMT CONDUIT ELLS (FOR INSTALLATION UNDER 816 CONCRETE FOR OVERHEAD SIGN SUPPORT FOUNDATIONS), AND FOR FURNISHING AND INSTALLING EACH OVERHEAD SIGN SUPPORT STRUCTURE SHOWN ON SHEETS 110F THROUGH 110H INCLUDING FIXTURE SUPPORT ARMS, SWITCH ENCLOSURE MOUNTING BRACKET, SIGN BRACKETS AND ALL COMPONENT PARTS NECESSARY TO MAKE A COMPLETE WORKABLE INSTALLATION READY FOR SIGN ERECTION, INSTALLATION OF DISCONNECT SWITCH AND ENCLOSURE, GROUND ROD AND WIRE CONNECTIONS AND SIGN WIRING.

ERECTION OF THESE SUPPORTS SHALL BE ACCOMPLISHED IN A MANNER MEETING THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 816.

CERTIFICATION AND APPROVAL OF SIGN SUPPORT & SIGN LIGHTING ITEMS

THE CONTRACTOR SHALL SUBMIT THROUGH PROPER CHANNELS THE DRAWINGS, INFORMATION, & SAMPLES AS REQUIRED BELOW:

A. 6 COPIES OF SHOP DRAWINGS & MATERIAL LISTS FOR APPROVAL:
   1. OVERHEAD SIGN SUPPORTS
   2. SIGN LIGHTING LAYOUT PLAN & DETAILS FOR WIRING, CONDUIT SIZE AND PLACEMENT FROM SIGN DISCONNECT SWITCH TO FIXTURE.

B. 10 COPIES OF CATALOG CUTS DESCRIPTIONS OF SAMPLES OF FABRICATORS STANDARD ITEMS AS SHOWN IN THE PLANS OR THEIR EQUALS FOR APPROVAL OF THEIR USE.

C. CERTIFICATION AND/OR SAMPLES FOR ALL MATERIAL WHICH HAVE BEEN APPROVED ABOVE UNDER "A" AND "B".

D. APPROVAL OF ITEMS UNDER "A" AND "B" SHALL BE IN THE HAND OF THE CONTRACTOR PRIOR TO ANY PURCHASE OR INSTALLATION.

E. CERTIFICATIONS OF SAMPLES UNDER "C" MUST BE IN HAND AND APPROVED PRIOR TO CONTRACT COMPLETION.

816 ALTERNATE DESIGNS FOR OVERHEAD SIGN SUPPORTS

IF THE CONTRACTOR DESIRES TO FURNISH AN ALTERNATE DESIGN FOR OVERHEAD SIGN SUPPORTS, THE ALTERNATE DESIGNS MUST BE SUBMITTED TO THE STATE AT LEAST 21 DAYS PRIOR TO OPENING OF BIDS. THE BIDDER WILL BE NOTIFIED AS TO ACCEPTANCE OR REJECTION OF ALTERNATE DESIGN AT LEAST 7 DAYS BEFORE BIDS ARE TO BE OPENED. ALTERNATE DESIGNS MUST UTILIZE TUBULAR STRUCTURAL MEMBERS. SUBMISSIONS SHALL BE MADE TO OHIO DEPARTMENT OF HIGHWAYS, BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO 43216.

815 SIGN ERECTION, BY TYPE

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED
THE PANELS SHALL BE MOUNTED ON THE BRACKETS OR BEAM SUPPORTS PROVIDED IN THE PLANS.

A SCHEDULE FOR SIGN ERECTION SHALL BE SUBMITTED TO THE DIVISION TRAFFIC ENGINEER, AND THE ENGINEER, BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, 120 CALENDAR DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE SHALL INCLUDE PROPOSED DATES, TIME, SIGN NUMBERS AND DELIVERY POINT.

THE PRICE BID PER SQUARE FOOT FOR, "ITEM 815, SIGN ERECTION, BY TYPE", SHALL INCLUDE ALL NECESSARY EQUIPMENT, MANPOWER AND TOOLS TO ERECT THE SIGNS NOTED. ALL SIGN MATERIAL AND ACCESSORIES WILL BE FURNISHED AND TRANSPORTED TO A DESIGNATED DELIVERY POINT, ON OR NEAR THE SUBJECT PROJECT BY OTHERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF THE SIGN PANELS AND ACCESSORIES FROM THE TIME OF ARRIVAL AT THE DELIVERY POINT.

815 INTERIM COVERING FOR SIGNS

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING AN INTERIM COVER AND ATTACHMENT MATERIALS FOR SIGNS REFERRED TO IN THE PLANS AS "BAGGED" OR AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL ALSO INCLUDE THE SUBSEQUENT REMOVAL OF COVERS WHEN DIRECTED BY THE ENGINEER.

MATERIAL FOR COVERING SHALL BE PLASTIC COATED BURLAP BLANKETS IN CONFORMANCE WITH 705.09.

THE ENGINEER SHALL APPROVE THE METHOD PROPOSED FOR ATTACHING INTERIM COVERS TO SIGNS PRIOR TO INSTALLATION OF COVERS.

WORK SHALL INCLUDE ALL NECESSARY MATERIAL, HARDWARE, LABOR AND EQUIPMENT REQUIRED TO PERFORM THE REQUIRED ITEM OF WORK.

BASIS OF PAYMENT SHALL BE INTERIM COVERING FOR SIGNS, PER SQUARE FOOT.

A QUANTITY OF 300 SQ. FT. FOR ITEM 815, INTERIM COVERING FOR SIGNS, HAS BEEN INCLUDED TO COVER SIGNS AS DIRECTED BY THE ENGINEER.

ELECTRICAL - GENERAL

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY MATERIAL, LABOR AND FACILITIES REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE DESIGNS, DIMENSIONS AND DETAILS SHOWN IN THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

ALL MATERIAL, WORKMANSHIP AND CONSTRUCTION METHODS, EXCEPT AS MODIFIED HEREIN, SHALL CONFORM TO THE GENERAL REQUIREMENTS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIALS SPECIFICATIONS, JANUARY 1, 1969.

625 SIGN SERVICE

THIS ITEM SHALL CONSIST OF THE COMPLETION OF THE ELECTRICAL SYSTEM AND COMPONENTS CONNECTING THE CONNECTORS IN THE PULL BOX (INCLUDED WITHIN THE ROADWAY LIGHTING QUANTITIES) WITH THE PRIMARY SIDE OF THE DISCONNECT SWITCH.

WORK WILL INCLUDE THE FURNISHING AND INSTALLING (INCLUDING TRENCHING AND BACKFILLING) OF THE 2 INCH GALVANIZED STEEL CONDUIT AND COUPLINGS FROM THE PULL BOX TO THE CONDUIT ELL IN THE SIGN SUPPORT FOUNDATION.

THIS ITEM WILL ALSO INCLUDE THE FURNISHING AND INSTALLING OF THE 1/C 600 VOLT SERVICD WIRE FROM THE CONNECTORS TO THE DISCONNECT SWITCH.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

625 DISCONNECT SWITCH WITH TYPE "Y" OR "Z" ENCLOSURE

THIS ITEM SHALL INCLUDE FURNISHING OF A 30 AMP. 600 VOLT FUSED DISCONNECT SWITCH OF TYPE AND MAKE AS INDICATED ON SHEET 110K AND SHALL BE MOUNTED IN A NEMA 4 STAINLESS STEEL ENCLOSURE TYPE "Y" OR "Z" AND ATTACHED TO EACH SIGN SUPPORT BY MEANS OF A MOUNTING BRACKET AS DESCRIBED IN DETAIL ON THE ABOVE SHEET.

EACH SWITCH ENCLOSURE SHALL BE FURNISHED WITH ONE PADLOCK. PADLOCKS SHALL HAVE A BRASS BODY AND WROUGHT IRON SHACKLE EQUAL TO RUSSWIN NO. 2882 KA OR MASTER NO. 4 KA OR APPROVED EQUAL.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE PER EACH AT CONTRACT UNIT PRICE, WHICH SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT TO COMPLETE THIS ITEM AT WORK.

625 TRANSFORMER, BY TYPE

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING TRANSFORMERS AS DETAILED AND SPECIFIED ON SHEET 110K.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THIS COMPLETE ITEM OF WORK.

625 BALLAST, BY TYPE

BALLAST FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20 DEGREES F.

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING ALL BALLAST TYPES A THROUGH D AS DETAILED AND SPECIFIED ON SHEET 110K.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, FURNISHED TO THE JOB FOR INSTALLATION UNDER ITEM 625, "SIGNS WIRED, COMPLETE".

GENERAL NOTES
(TRAFFIC CONTROL)

625 LIGHT FIXTURE WITH LAMP, BY TYPE AND SIZE

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING ALL LIGHT FIXTURES AND LAMPS, TYPES AND SIZES AS SPECIFIED ON SHEET 110J.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, FURNISHED TO THE JOB FOR INSTALLATION UNDER ITEM 625 "SIGNS WIRED, COMPLETE".

625 GROUND ROD UNITS

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING GROUND ROD AND CABLE AS DETAILED AND SPECIFIED ON SHEET 110L.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

625 SIGNS WIRED, COMPLETE

THIS ITEM SHALL CONSIST OF THE COMPLETION OF THE ELECTRICAL SIGN LIGHTING SYSTEM FOR EACH ILLUMINATED SIGN.

WORK SHALL INCLUDE INSTALLATION OF LIGHT FIXTURES AND BALLASTS, AND FURNISHING AND INSTALLATION OF ALL RIGID AND FLEXIBLE CONDUIT, CONDULETS, JUNCTION BOXES, CABLE, FASTENERS, HARDWARE, AND ALL OTHER ITEMS REQUIRED TO ENERGIZE THE SIGN LIGHTING SYSTEM. SEE DETAILS ON SHEETS 110L.

THE COST OF FURNISHING AND INSTALLING CABLE, CABLE GRIPS, CABLE SPLICE UNITS, AND NECESSARY FASTENERS FROM THE DISCONNECT SWITCH TO THE SIGNS (OR BETWEEN SIGNS) WITHIN SIGN SUPPORT MEMBERS SHALL BE INCLUDED IN THIS ITEM OF WORK.

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH SIGN WIRED WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS TO PROVIDE A COMPLETE AND ACCEPTED ITEM OF WORK.

ILLUMINATED SIGNS REQUIRING TWO (2) BALLASTS SHALL BE CONSIDERED AS AN EQUIVALENT OF TWO (2) SEPARATE SIGNS FOR DETERMINATION OF PAYMENT QUANTITIES.

INSPECTION AND TESTING OF SIGN LIGHTING

THE CONTRACTOR SHALL FURNISH ALL LABOR, ELECTRICAL POWER, AND EQUIPMENT NECESSARY TO DEMONSTRATE TO THE ENGINEER THAT ALL CIRCUITS ARE FREE FROM SHORT CIRCUITS AND UNSPECIFIED GROUNDS, AND ARE PROPERLY CONNECTED AND OPERABLE BEFORE ACCEPTANCE. THIS DEMONSTRATION SHALL INCLUDE A MEGGARING TEST TO SHOW THAT ALL CONDUCTORS ARE CLEAR OF GROUNDS AND THAT THE RESISTANCE AT THE GROUND IS NOT MORE THAN 25 OHMS. WHERE RESISTANCE EXCEEDS 25 OHMS, ADDITIONAL LENGTH AND/OR NUMBERS OF RODS SHALL BE INSTALLED PER REQUIREMENTS OF 625.10.

PAYMENT FOR THESE TESTS SHALL BE CONSIDERED A SUBSIDIARY WORK ITEM, INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE ITEMS TESTED.

AFTER THE SIGN LIGHTING SYSTEM IS COMPLETED, THE ENTIRE SYSTEM SHALL BE OPERATED CONTINUOUSLY EACH NIGHT UNTIL SEVEN (7) CONSECUTIVE DAYS ELAPSE WITHOUT FAILURE OR DEFECT. THE CONTRACTOR SHALL CORRECT ANY DEFECTS WHICH MAY DEVELOP AT NO EXTRA COST TO THE STATE.

DURING THE TEST PERIOD, ADJUSTMENTS TO FIXTURE AIMING ANGLES SHALL BE MADE AS DIRECTED BY THE ENGINEER TO OBTAIN MAXIMUM UNIFORMITY IN SIGN ILLUMINATION.

A VOLTAGE AND AMPERAGE MEASUREMENT SHALL BE MADE AT THE SIGN SUPPORT SWITCH.

WHERE A LOW VOLTAGE TAP TRASFORMER IS TO BE USED THE VOLTAGE MEASUREMENT SHALL BE USED TO DETERMINE THE APPLICABLE TAP.

THE ABOVE MEASURMENTS, VOLTAGE TAP SELECTION NOTATIONS, AND METHODS OF DEFECT CORRECTION SHALL BE RECORDED AND DELIVERED TO THE ENGINEER FOR INCLUSION IN THE PROJECT RECORDS.

816 ERECTION OF OVERHEAD SPAN TYPE SIGN SUPPORTS (7 SERIES)

IN ALL CASES, SPAN TYPE OVERHEAD SIGN SUPPORTS AND SIGNS SHALL BE ERECTED CONCURRENTLY. AT NO TIME SHALL THE BOX TRUSSES BE ERECTED WITHOUT THE SIGN BEING IN PLACE WITHIN EIGHT (8) HOURS.

816 STRUCTURAL SUPPORTS, 6 OR 8 LB. BEAM, AS PER PLAN

This item shall consist of the furnishing, assembly, and installation of two (2) 3 or 4 lb. per foot drive post (6 or 8 lb. beam) in combination with a square seamless tubular post extension spliced to the top of the 6 or 8 LB. beam. Details are shown on sheet 110V.

Square seamless tubular post material shall be mild steel conforming to ASA 1020 steel, minimum yield strength 35,000 PSI, Ultimate yield 55,000 PSI.

Work shall include all labor, materials, equipment, tools, and hardware necessary to perform the required item of work.

Basis of payment shall be for STRUCTURAL SUPPORTS, 6 LB. BEAM, AS PER PLAN per linear foot measured by total length of combination beam from end to end.

816 CONSTRUCTION LAYOUT STAKES FOR SIGNS AND TRAFFIC SIGNALS

THE CONTRACTOR SHALL STAKE OUT ALL SIGN AND TRAFFIC SIGNAL SUPPORTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 PRIOR TO INSTALLATION OF ANY FOUNDATIONS OR SUPPORTS.

AFTER STAKEOUT THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF SCHEDULED WORK. SUPPORT LOCATIONS FOR EACH SUPPORT WILL BE FIELD CHECKED AND APPROVED BY THE ENGINEER AND DIVISION TRAFFIC ENGINEER AND/OR CITY TRAFFIC ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION WORK REQUIRED.

IF BOTH MAJOR AND MINOR TYPE SUPPORTS ARE INCLUDED WITHIN THE PROJECT IT WILL BE PERMISSABLE TO PERFORM THE CONSTRUCTION STAKEOUT AND FIELD INSPECTION IN TWO (2) STAGES, ONE FOR MAJOR SUPPORTS AND ONE FOR MINOR SUPPORTS.

COST FOR THIS ITEM OF WORK WILL BE INCIDENTAL TO THE VARIOUS 816 ITEMS OF WORK CONTAINED IN THE PROJECT.

620 INTERIM DELINEATORS, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING INTERIM DELINEATORS AS SPECIFIED ON PLAN SHEETS.

THIS ITEM SHALL INCLUDE 2 POUNDS PER FOOT STEEL DRIVE POSTS 4'-0" LONG BOLTED TO INSIDE OF ITERIM BARRELS FURNISHED UNDER 606 USING A MINIMUM OF THREE 5/16" STEEL BOLTS SPACED ON 12" CENTERS. POST FLANGES SHALL BE 90 DEGREES TO INTERIM EDGE LINES FACING APPROACHING TRAFFIC. TYPE C2 DELINEATORS SHALL BE MOUNTED ON THE DRIVE POST FLANGES WITH THE TOP OF THE DELINEATOR 4' ABOVE THE PAVEMENT.

THE QUANTITY FURNISHED AND INSTALLED WILL BE PAID FOR AT THE PRICE BID PER EACH WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING DRIVE POSTS AND DELINEATORS INCLUDING NECESSARY HARDWARE, LABOR AND EQUIPMENT.

816 INTERIM STEEL DRIVE POSTS 4 LBS. PER FOOT, AS PER PLAN

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING 4 POUND PER LINEAR FOOT STEEL DRIVE POSTS AS SPECIFIED FOR INTERIM LANE WIDTH TRANSITIONS.

THIS ITEM SHALL INCLUDE 4 POUNDS PER FOOT STEEL DRIVE POSTS 11'-0" LONG BOLTED TO THE INSIDE OF INTERIM BARRELS FURNISHED UNDER 606 USING A MINIMUM OF THREE 5/16" STEEL BOLTS SPACED ON 12" CENTERS.

POST FLANGES SHALL BE 90 DEGREES TO INTERIM EDGE LINES FACING APPROACHING TRAFFIC. STEEL BEARING PLATES 3" X 2" SHALL BE USED AT EACH BOLT OUTSIDE THE BARREL TO PREVENT PULL THROUGH. MOUNTING OF SIGNS ON THE DRIVE POSTS WITH THE BOTTOM OF THE SIGNS 7' ABOVE THE PAVEMENT SHALL BE INCLUDED IN ITEM 815.

THE QUANTITY FURNISHED AND INSTALLED WILL BE PAID FOR AT THE PRICE BID PER LINEAR FOOT WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING AND INSTALLING DRIVE POSTS INCLUDING NECESSARY HARDWARE, LABOR AND EQUIPMENT.

606 TEMPORARY BARRELS, AS PER PLAN

This work shall consist of furnishing and placement of 55 gallon barrels (painted yellow and half filled with granular material) as specified on plan sheets.

The quantity furnished and installed will be paid for at the price bid per each which price shall be full compensation for furnishing and installing barrels, including painting, granular materials, and necessary labor and equipment.

621 EXISTING PAVEMENT MARKING REMOVED

This item shall consist of the removal or obliteration of painted pavement markings from the pavement.

This marking may be removed either mechanically, or by any other method approved by the engineer except that the method shall not be injurious to the appearance, smoothness or strength of the pavement.

Payment for item special Existing Pavement Markings Removed shall be made at the contract unit price per linear foot and shall constitute full compensation for all work, including materials, equipment, labor, incidentals and disposal of suplus materials.

INTERIM PAVEMENT MARKING, BY TYPE

This work shall consist of the furnishing, installing and removal of interim removable markings as specified herein and show on the plans.

1. Materials

Materials shall consist of a backing coated with a pressure sensitive adhesive and a weather and traffic resistance reflective white colored surface and additional requirements as follows:

A. Reflection - The white striping material shall be reflex-reflective, reflecting white and shall be readily visible when viewed with automobile headlights at night.

B. Adhesive - The striping material shall have a precoated pressure-sensitive adhesive which shall not require a liner for protection from contamination, preadhesion, or blocking within the roll as delivered.

C. Conformability - The striping shall be thin, flexible, formable, and following application, shall remain conformed to the the texture of the pavement surface.

D. Removability - The striping material backing shall permit removal without requireing sandblast, solvent, or grinding methods.

E. Durability - The striping material applied in accordance with recommended procedures shall be weather resistant and show no appreciable fading, lifting or shrinkage, prior to completion of this project.

F. General - The striping materail as supplied shall be of good appearance, free from cracks, and edges shall be true, straight, and unbroken. The striping material shall be supplied in rolls and there shall be no more than 3 splices per 60 yards of lengths.

The striping material shall be prepared for delivery in standard commercial containers so constructed as to insure acceptance by the carrier and prevent damage during proper shipment and storage.

The Contractor shall store the material in a cool, dry location where temperature will not exceed 100 degrees F. prior to application of marking on roadway surfaces.

2. Road Surface Preparation

The road surface must be clean and dry, free of oils and grease, dust or dirt. All surfaces must be primed.

Concrete pavement shall be surface treated in accordance with Section 621.04. Surface shall then be generously flushed with clean water and to dry thoroughly prior to application of primer and interim markings.

3. Priming

Methods of priming shall be as approved by the Engineer. The Contractor shall submit a proposal for type of priming to be used. Cost for priming surfaces shall be incidental to the cost of various items included in item 615, Temporary Roads, as per plan.

GENERAL NOTES
(TRAFFIC CONTROL)

INTERIM PAVEMENT MARKING (Continued)

4. Application

Interim lines shall be applied to the road surface with a roller type applicator and rolled immediately afterwards by rubber-tired roller with approximate single wheel load between one thousand (1000) and two thousand (2000) pounds.

5. Special Plan Details

Details for location of interim markings are shown on Sign location plan sheets.

6. Basis of Payment

Cost of furnishing, installing and removal of interim pavement marking shall be included at the contract unit price per linear foot.

815 TEMPORARY SIGN ERECTION, BY TYPE

The Contractor shall assemble, erect, maintain and subsequently remove temporary signs furnished by others. The signs shall be mounted on the temporary sign brackets or interim drive post supports provided in the plans.

The Contractor shall submit a schedule for temporary sign erection to the Division Traffic Engineer, and the Engineer, Bureau of Traffic, 450 East Town Street, Columbus, Ohio, 43215, 60 calendar days prior to the start of any scheduled erection work. The schedule shall include proposed dates, time and delivery point.

The price bid per square foot for "Item 815 Temporary Sign Erection, By Type", shall include all necessary equipment, man power and tools to assemble, erect, maintain and remove the signs noted. All sign materials and accessories will be furnished and transported to a designated delivery point, on or near the subject project by others and returned by the contractor after removal.

816 TEMPORARY SIGN BRACKETS

This work shall consist of furnishing, installing and subsequent removal of the temporary sign brackets as detailed on sheet 110U.

This item shall include the 4 lb. per foot steel drive posts and the square seamless tubular post, bolts, nuts, and lockwashers assembled and attached to bridge parapets.

The quantity furnished and installed will be paid for at the price bid per each, which will be full compensation for furnishing installing and removing each Temporary Sign Bracket, including all necessary hardware, labor and equipment, in place, complete for the erection of the temporary extru-sheet signs. Upon removal, all sign bracket material (excluding signs) shall become the property of the contractor.

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GENERAL SUMMARY
(TRAFFIC CONTROL)

ITEM	SHEET NUMBER	Participation Interstate	Participation Urban	ITEM	GRAND TOTAL	UNIT	DESCRIPTION TYPE CODE 7221
		1	1	816	2	Each	Overhead Sign Support, No. 7.3 Des. 2, 60' Span
		1		816	1	Each	Overhead Sign Support, No. 7.4 Des. 1, 56' Span
		1		816	1	Each	Overhead Sign Support, No. 7.3 Des. 1, 48' Span
		2		816	2	Each	Overhead Sign Support, No. 7.4 Des. 1, 74' Span
			1	816	1	Each	Overhead Sign Support, No. 9.12 Des. 1 Mod., 6' Arms
			2	816	2	Each	Overhead Sign Support, No. 12.24 Des. 4, 22' Arms
			1	816	1	Each	Overhead Sign Support, No. 12.24 Des. 4, 20' Arms
		1		816	1	Each	Overhead Sign Support, No 12.24 Des. 1, 12' Arms
		48	22	816	70	CY	Concrete for Overhead Sign Support Foundations
		1.0	4.0	816	5	CY	Concrete for Ground Mounted Sign Support Foundations
		1400	780	815	2180	SF	Sign Erection, Extru Sheet Type
		72	48	815	120	SF	Sign Erection, Flat Sheet Type
			35	816	35	LF	Structural Support, Steel Beam 10WF21
		105	75	816	180	LF	Structural Support, 8# Beam
		95	115	816	210	LF	Structural Support, 6# Beam
			60	816	60	LF	Structural Support, 4# Drive Post
			70	816	70	L.F.	Structural Support, 8# Beam, As Per Plan
		6	5	625	11	Each	Sign Service
		2	4	625	6	Each	Disconnect Switch with Type "Y" Enclosures
		4	1	625	5	Each	Disconnect Switch with Type "Z" Enclosures
		1	1	625	2	Each	Transformer, Type II
		1	3	625	4	Each	Transformer, Type III
			1	625	1	Each	Transformer, Type IV
		4		625	4	Each	Transformer, Type V
		3	2	625	5	Each	Ballast, Type A
		1		625	1	Each	Ballast, Type B
		1	1	625	2	Each	Ballast, Type C
		8	4	625	12	Each	Ballast, Type D
		4	2	625	6	Each	72" Fixture with HO Lamp
		1		625	1	Each	96" Fixture with HO Lamp
		13	8	625	21	Each	72" Fixture with SHO Lamp
		4	1	625	5	Each	96" Fixture with SHO Lamp
		6	5	625	11	Each	Ground Rod
		13	7	625	20	Each	Signs Wired, Complete
		6		620	6	Each	Delineator, Type C-2, Bracket Mounted
		40	35	620	75	Each	Delineator, Type C-2, Post Mounted
			140	621	140	LF	24" Stop Lines
		2.6	1.7	621	4.3	Mi	4" Edge Lines
		1.2	0.3	621	1.5	Mi	4" Lane Lines
		.5	.5	621	1	Mi	6" Lane Lines
		1075	950	621	2025	LF	8" Channelizing Lines
		850	330	621	1180	LF	Broad Trancverse Stripes
		1575	555	621	2130	LF	Curb Marking
		.50		621	.50	Mi.	Barrier Line
			2	816	2	Each	Breakaway Sign Support Connection
			1900	621	1900	L.F.	Existing Pavement Marking Removed
		750		606	750	LF	Guard Rail, TYPE 5 *
		5			5	Each	Anchor Assembly *
		5			5	Each	Approach End Assembly *
		210		815	210	Sq.Ft.	Temporary Sign Erection, Extru sheet, Type
		250		815	250	Sq.Ft	Temporary Sign Erection, Flat sheet Type
		3900		606	3900	LF	Temporary Beam Rail, As Per Plan *
		400		606	400	LF	Temporary Barrier ~~Beam~~ Rail, As Per Plan *
		1.12		621	1.12	Mi	Interim 4" Edge Line
		1520		816	1520	LF	Interim Steel Drive Post, 4# as per plan
		29		620	29	Each	Interim Delineator, Type C-2, Post Mounted
		6		816	6	Each	Temporary Sign Bracket
		90		202	90	Sq.Yds	Removal and Disposal of Existing Median Pavement
		90		612	90	Sq.Yds	4" Concrete Median
		162.5		606	162.5	Lin. Ft	Barrier Guardrail, Removed for Reuse *
		325		606	325	Lin.Ft.	Guardrail Rebuilt, Type 5 *
		160		606	160	Each	Temporary Barrel, As Per Plan *
		228	72	815	300	Sq.Ft.	Interim Covering For Signs

*Carried to General Roadway Summary, Sheet 14A.

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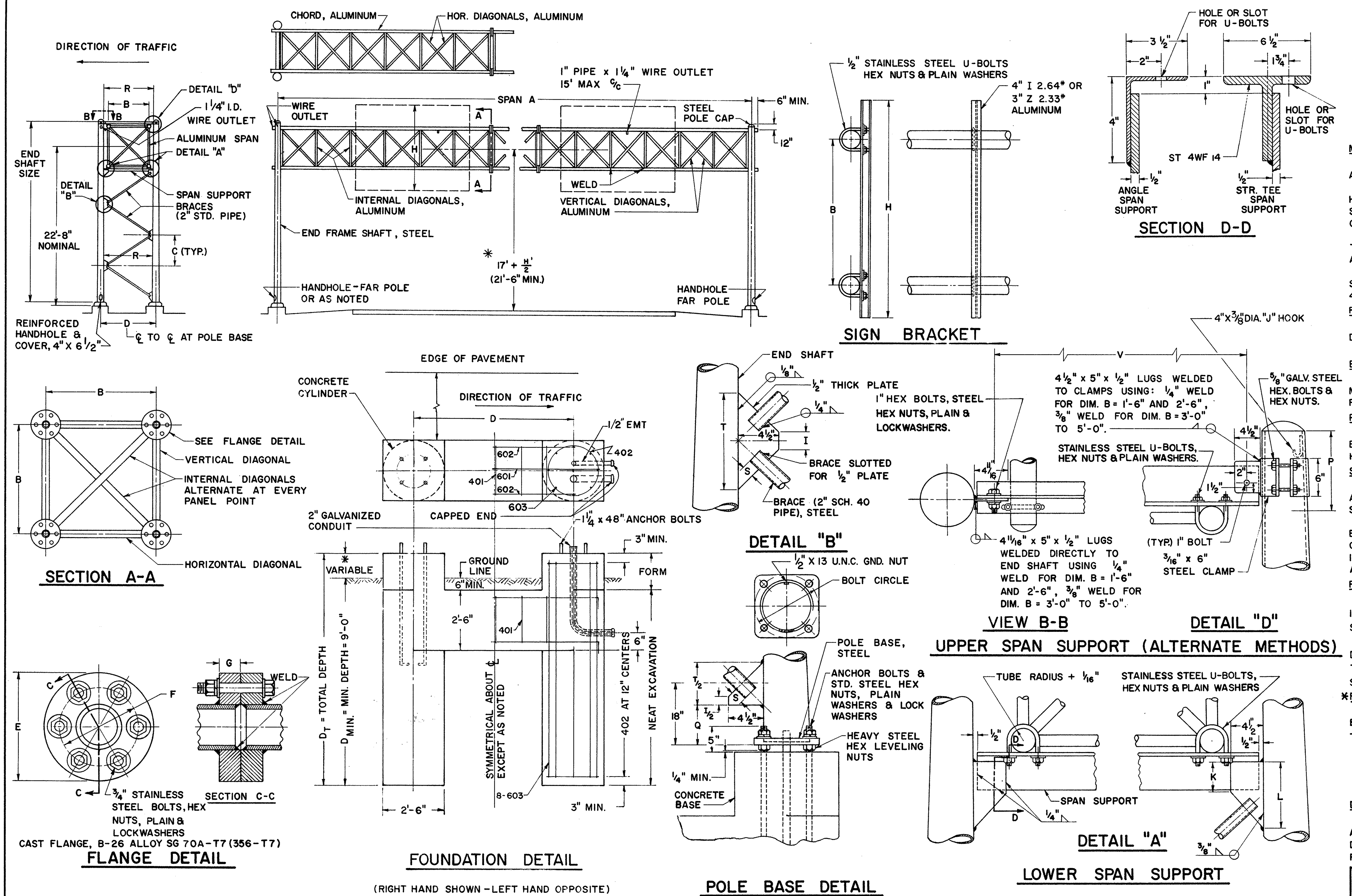
110E.



NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

***FOUNDATION ELEVATION**

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

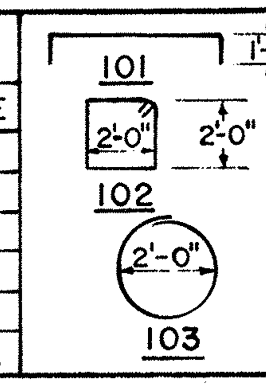
DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' Thru 55'	3'-0"	4'-11 3/4"	4'-5"	7"	8" x 4.5" x 25'-0", 3GA	5'-10 13/16"	5 1/2"	1 1/4"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	3 1/2" x .188"	1.660" x .140"	1.660" x .140"
2	56' Thru 80'	3'-0"	4'-11 3/4"	4'-5"	9 1/4"	8" x 4.5" x 25'-0", 3GA	5'-10 13/16"	7 7/16"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	4 3/4" x .188"	1.900" x .145"	1.660" x .140"
3	81' Thru 90'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8" x 6.22" x 25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" x .188"	1.900" x .145"	1.900" x .145"
4	91' Thru 105'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8" x 6.22" x 25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" x .188"	2" x .188"	1.900" x .145"

REINFORCEMENT SCHEDULE

MARK	NO.	LENGTH	TYPE
401	12" C/C	8'-6"	102
402	12" C/C	7'-6"	103
601	4	D+ 4'-0"	101
602	8	D+ 2'-0"	101
603	32	D_T - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS	816 No. 7.3	DATE 7-25-62 5-5-64

APPROVED Robert E. [illegible]
ENGINEER OF TRAFFIC

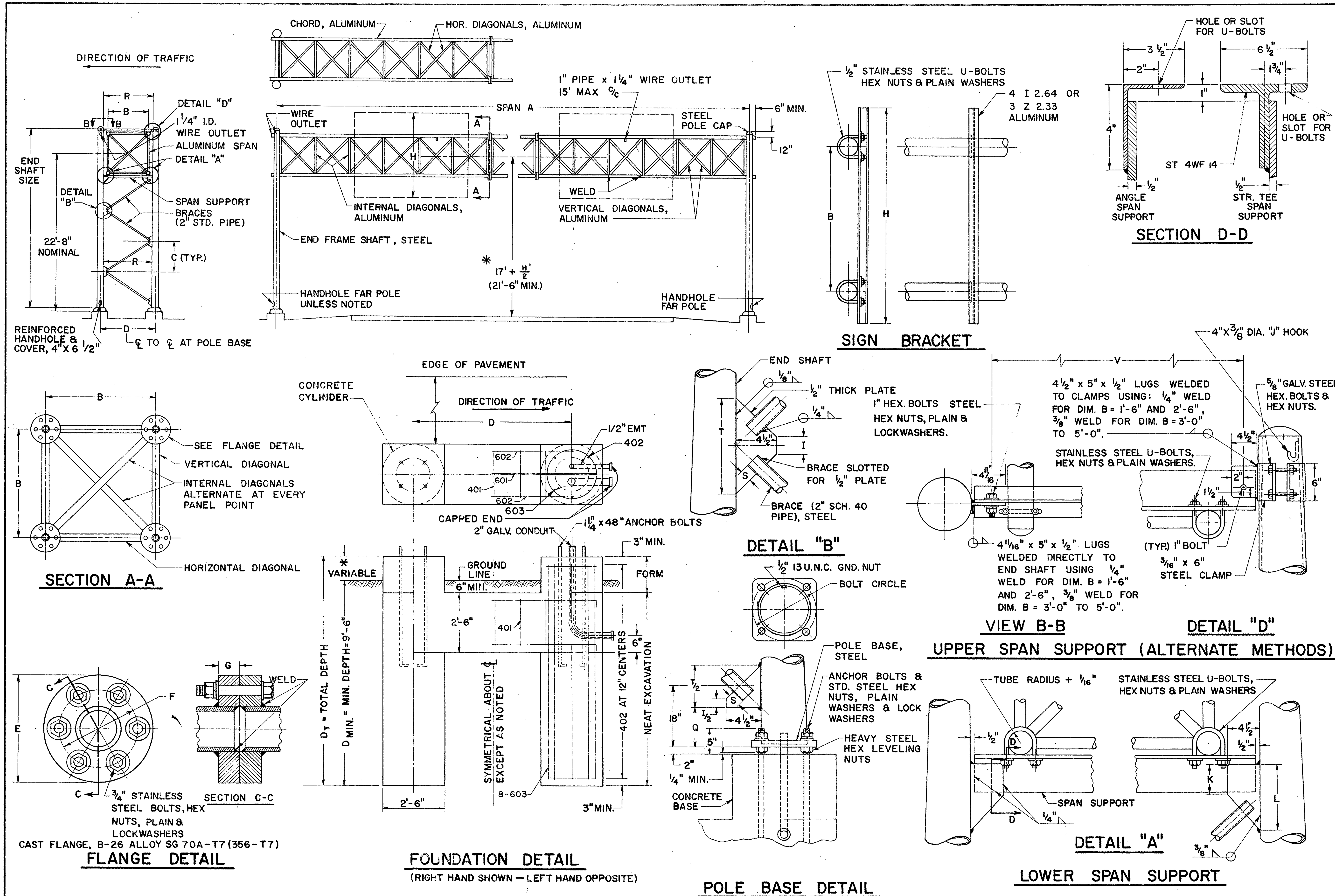
300 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, 816 NO. 7.3

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110F.

MAH-7-14.95



NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02.

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

SOILS

THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY).

FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL

COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' thru 75'	3'-0"	4'-11 3/4"	4'-5"	9 1/4"	8"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5/8"	3'-3 5/8	11"	SPLIT TEE 3'-8"	4 3/4 x .188"	1.900" x .145"	1.660" x .140"
2	76' thru 85'	4'-0"	4'-10 1/4"	5'-7"	9 1/4	8"X6.22"x25'-6" 3 GA.	6'-7 1/8	7 7/16	1 3/8"	5/8	4 3/8"	7 3/4"	12"	6 1/4"	4'-10"	1 1/2"	9 1/2	5/8"	4'-4 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" x .188"	2" x .188"	1.900" x .145"
3	86' thru 90'	4'-0"	4'-10 1/4"	5'-7"	11"	8"X6.22"x25'-6", 3 GA.	6'-7 1/8"	8 1/2"	1 1/2"	5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-10"	1 1/2"	9 1/2"	5/8"	4'-4 5/8"	11"	SPLIT TEE 4'-10"	5 1/2" x .250"	2" x .188"	1.900" x .145"
4	91' thru 110'	5'-0"	4'-8 1/2"	6'-7"	11"	8"X6.18"x26'-0", 3 GA.	7'-3 1/4"	8 1/2"	1 1/2"	—	3 1/2"	7 3/4"	12"	7 1/4"	5'-10"	1 3/4"	11 1/4"	3/4"	5'-4 5/8"	11"	SPLIT TEE 5'-10"	5 1/2" x .250"	2 1/2" x .188"	2 1/2" x .188"

REINFORCEMENT SCHEDULE

MARK	NO.	LENGTH	TYPE
401	12" C/C	8'-6"	102
402	12" C/C	7'-6"	103
601	4	D+4'-0"	101
602	8	D+2'-0"	101
603	32	D_T - 6"	STR.

101 1'-0"
2'-0" 102 2'-0"
2'-0" 103

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No. 7.4

DATE
5-2-62
7-25-62
5-6-64
6-20-66

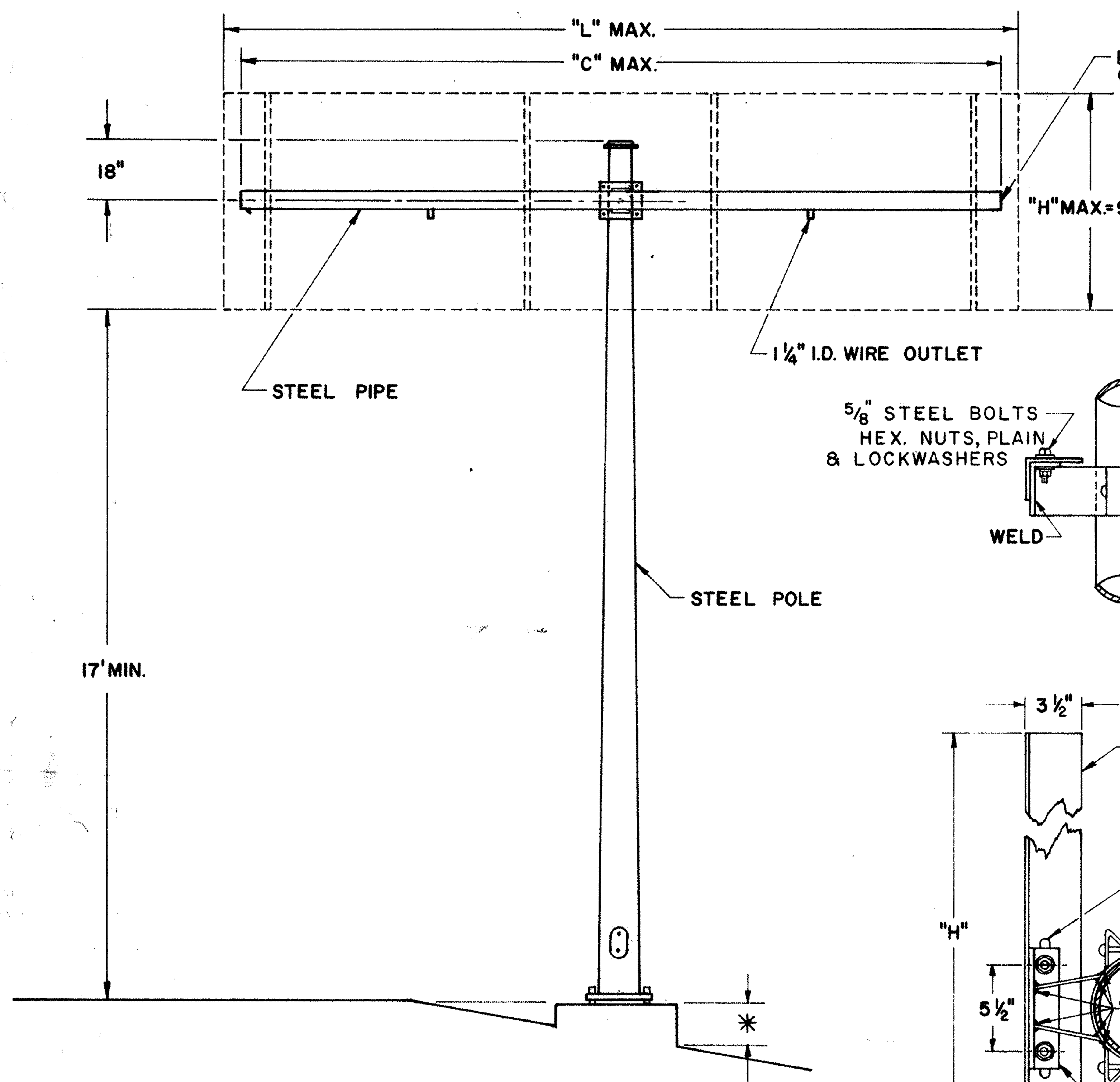
APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

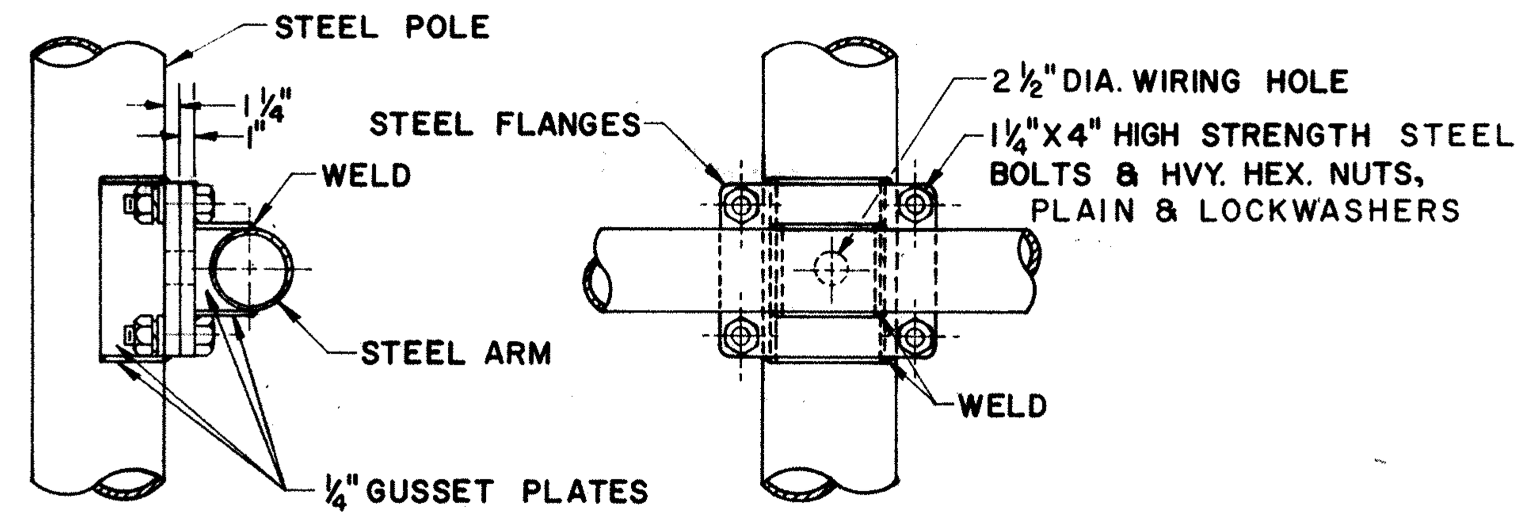
400 SQ. FT. SIGN AREA   OVERHEAD SIGN SUPPORT. 816 NO. 7.4

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

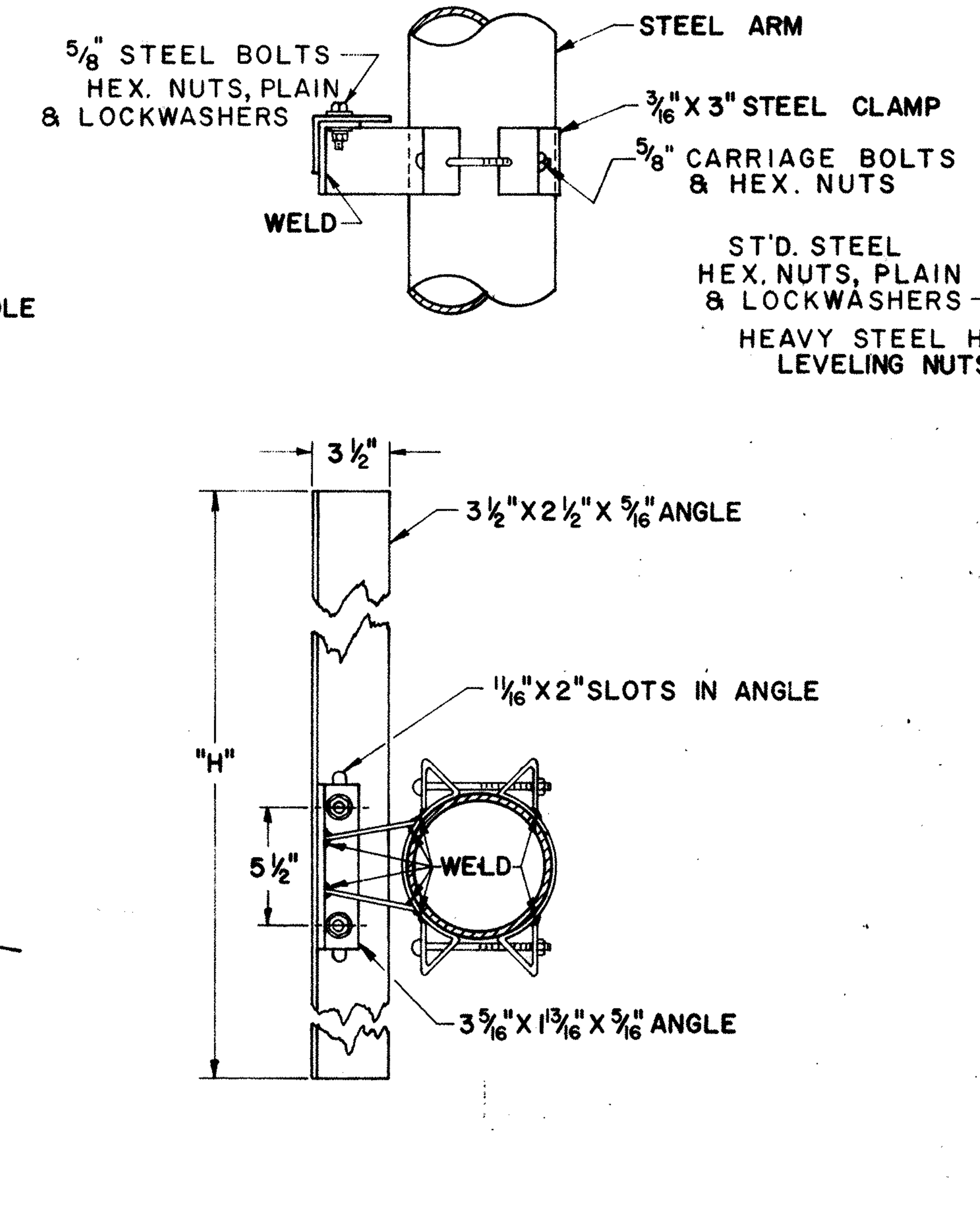
1106.

MAH-7-14.95

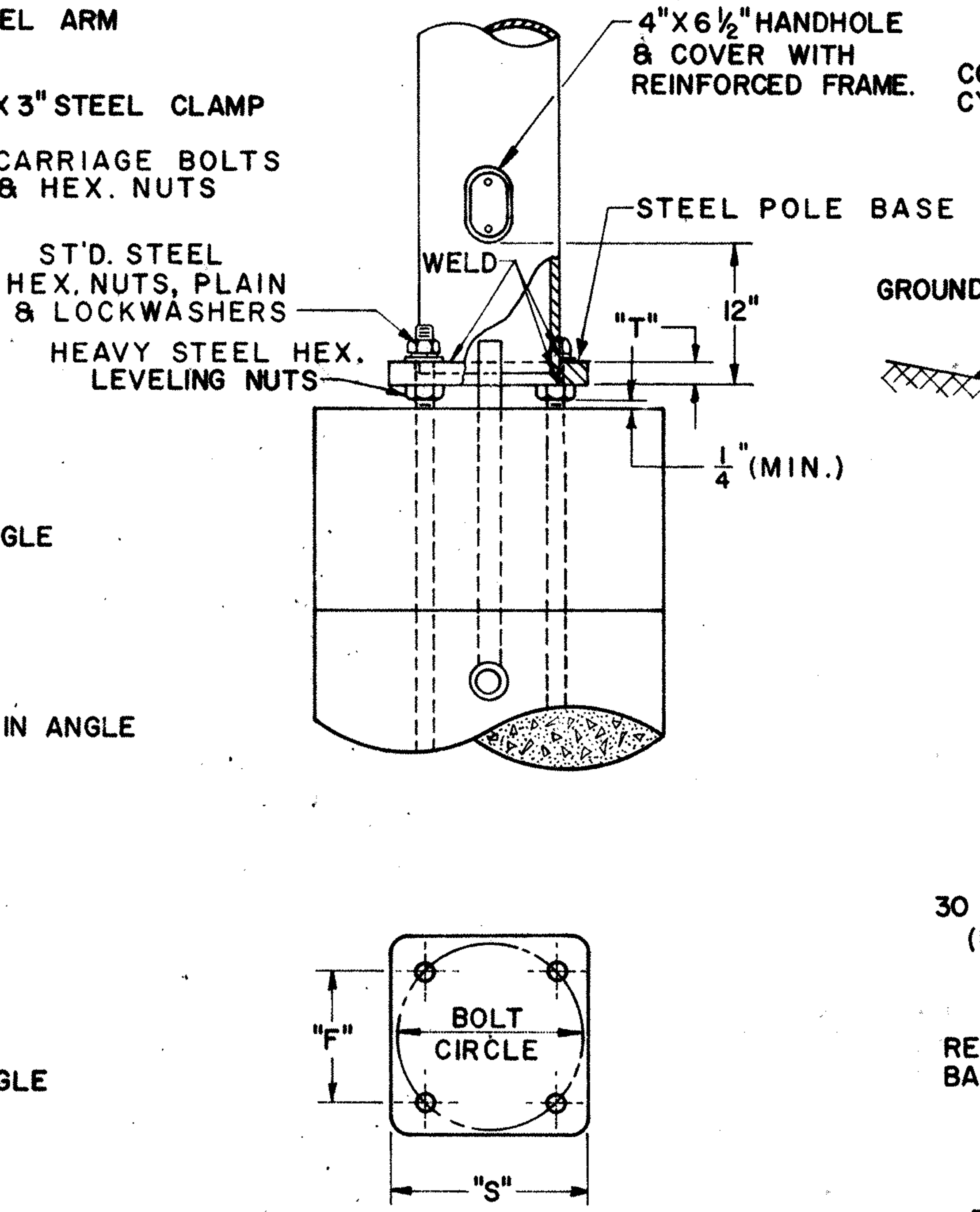




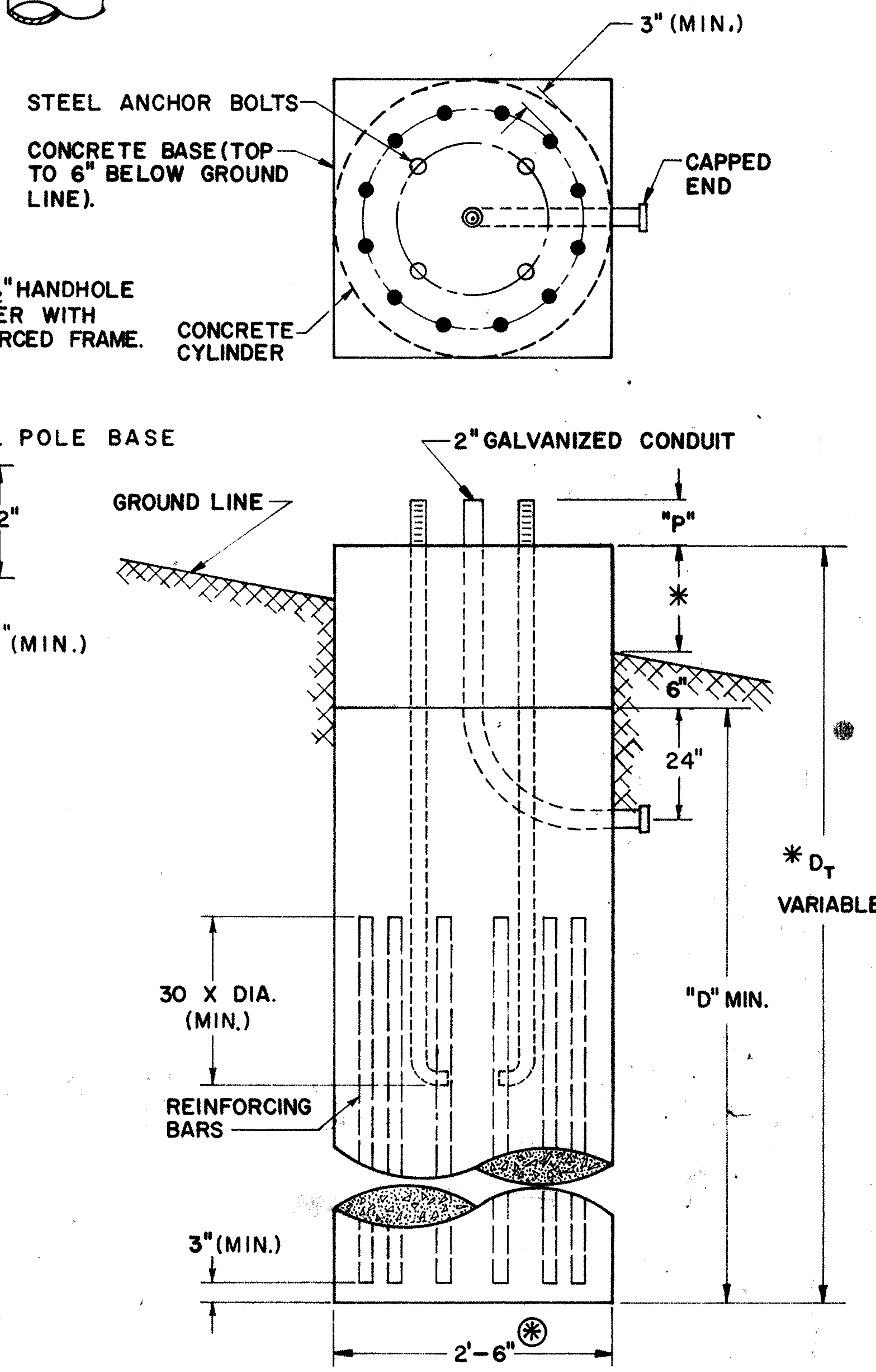
ARM ATTACHMENT



SIGN ATTACHMENT DETAIL



POLE DETAIL



FOUNDATION DETAIL

⊛ 2'-0" for Design 1, Modified Foundation.

NOTES

FABRICATION—ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. 625.13 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

* FOUNDATION—THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

MATERIAL—STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B.
HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7.
AFTER FABRICATION TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS—THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL—REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR 816 CONCRETE FOR SIGN SUPPORT FOUNDATION.

	DESIGN NO.	POLE SIZE	PIPE SIZE	DIM C	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	MAX. "L" WITH MAX. SIGN AREA	"D" MIN.	REINF. BARS TYPE	REINF. BARS NO.	
	1	7ga, 11"X 7.99 X 21'—6"	4" SCH.40 GRADE A	18'	10⅝"	6½"	15⅝"	1½"	15"	1½"X60"	60	24'—9"	7'-0"	#6	8	
	2	3ga, 13"X 9.99 X 21'—6"	4" SCH.80 GRADE A	14'	12¾"	7¾"	18½"	2"	18"	1¾"X90"	120	16'—9"	8'-6"	#7	12	
	3	3ga, 13"X 9.99 X 21'—6"	6" SCH.40 GRADE A	20'	12¾"	7¾"	18½"	2"	18"	1¾"X90"	120	24'—0"	9'-0"	#7	12	
Semi-Ohd.	1. Mod.	7ga, 8"×5.90"×15'-0"	4" SCH. 40 Grade A.	18'	7¾"	5¼"	11½"	1½"	11"	1¼"×48"	60	20'-0"	8'-0"	#4	8	⊛

DESIGN
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORT	816 No. 912	DATE 1-19-62 3-30-62 12-2-68

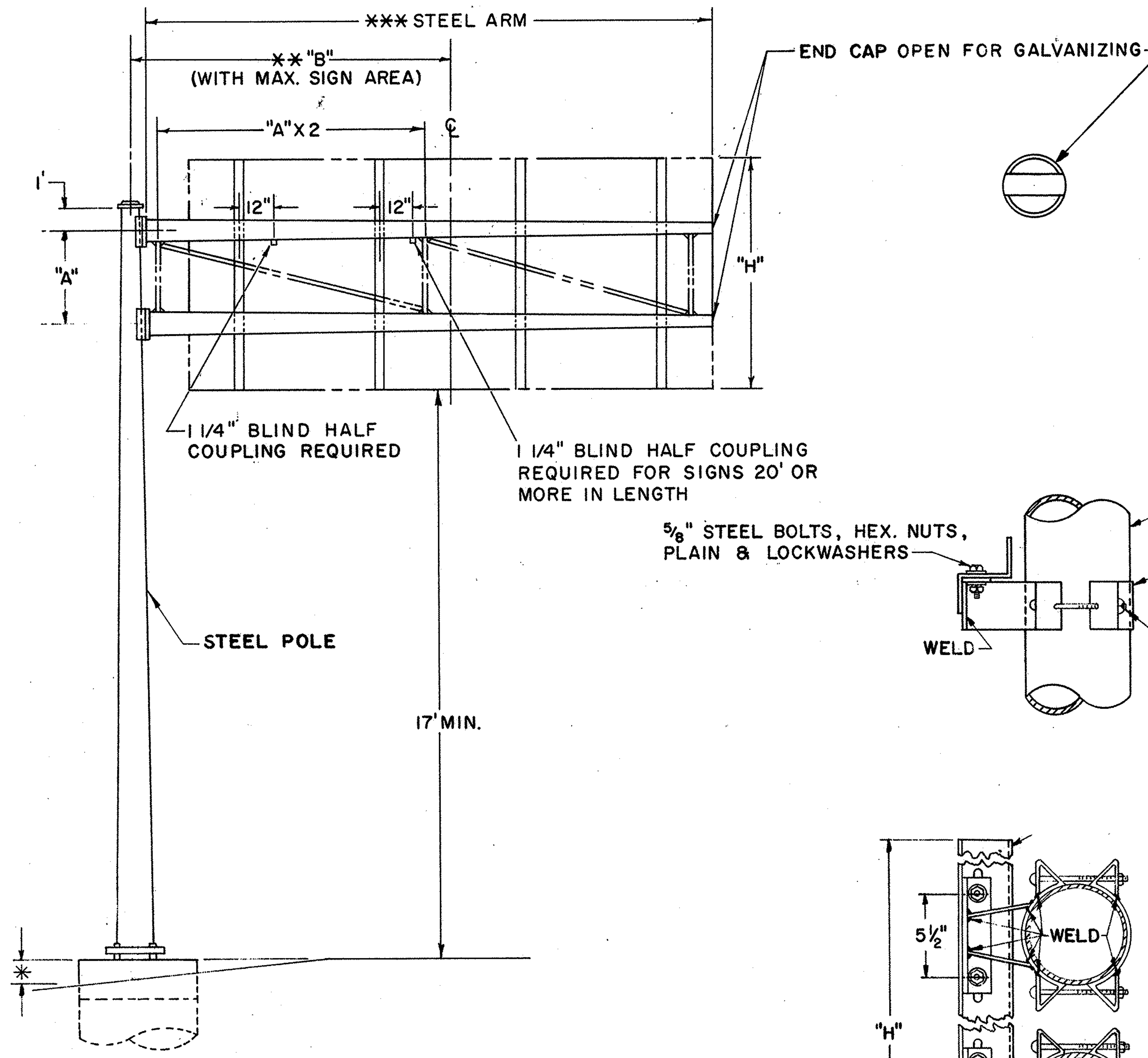
APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

OVERHEAD SIGN SUPPORT, 816 No. 9.12

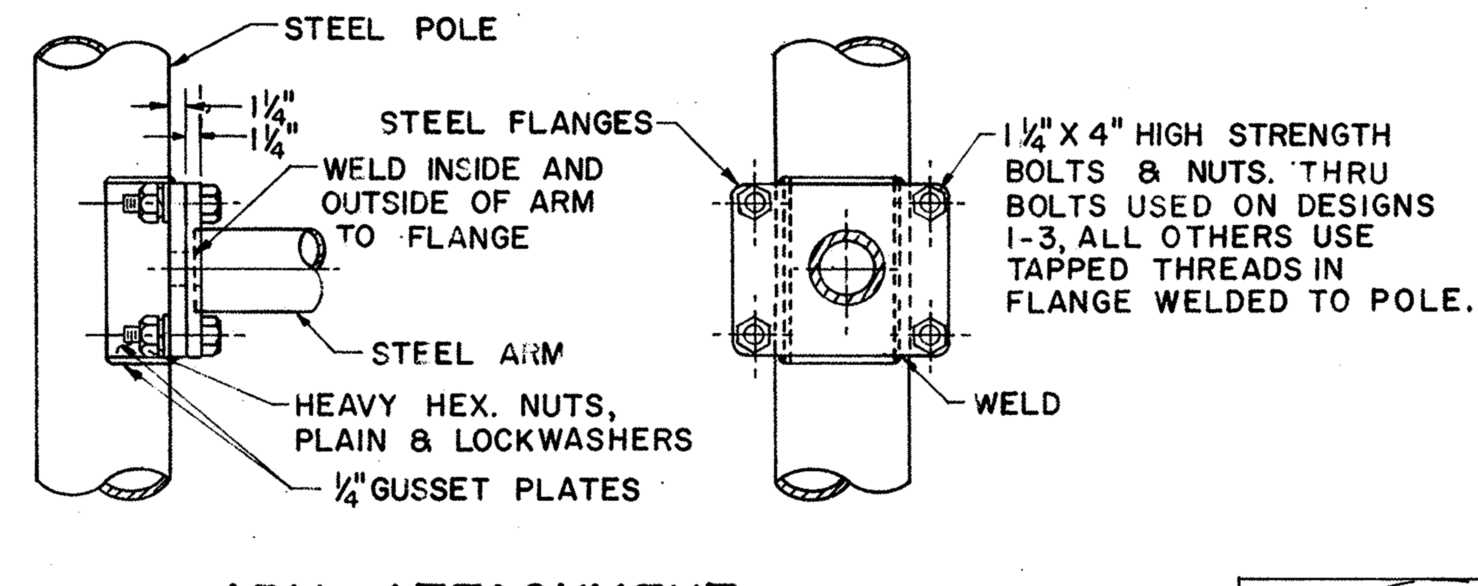
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110H.

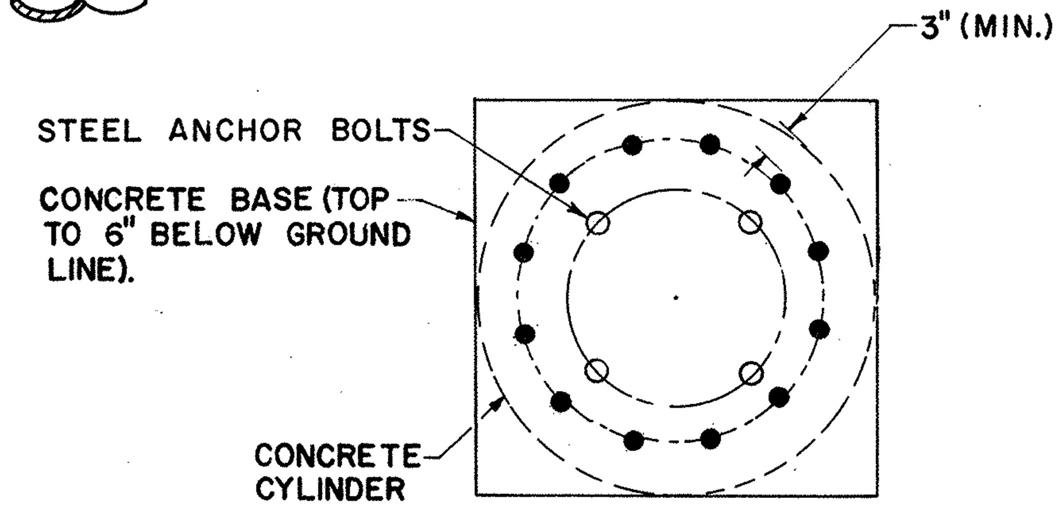
MAH-7-14.95

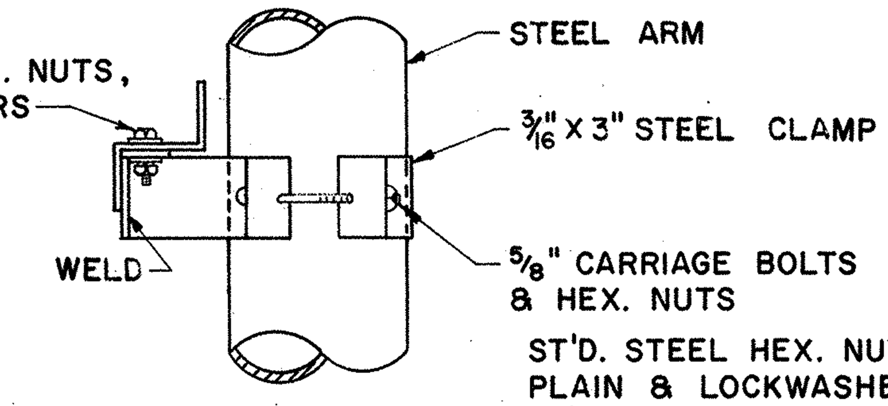


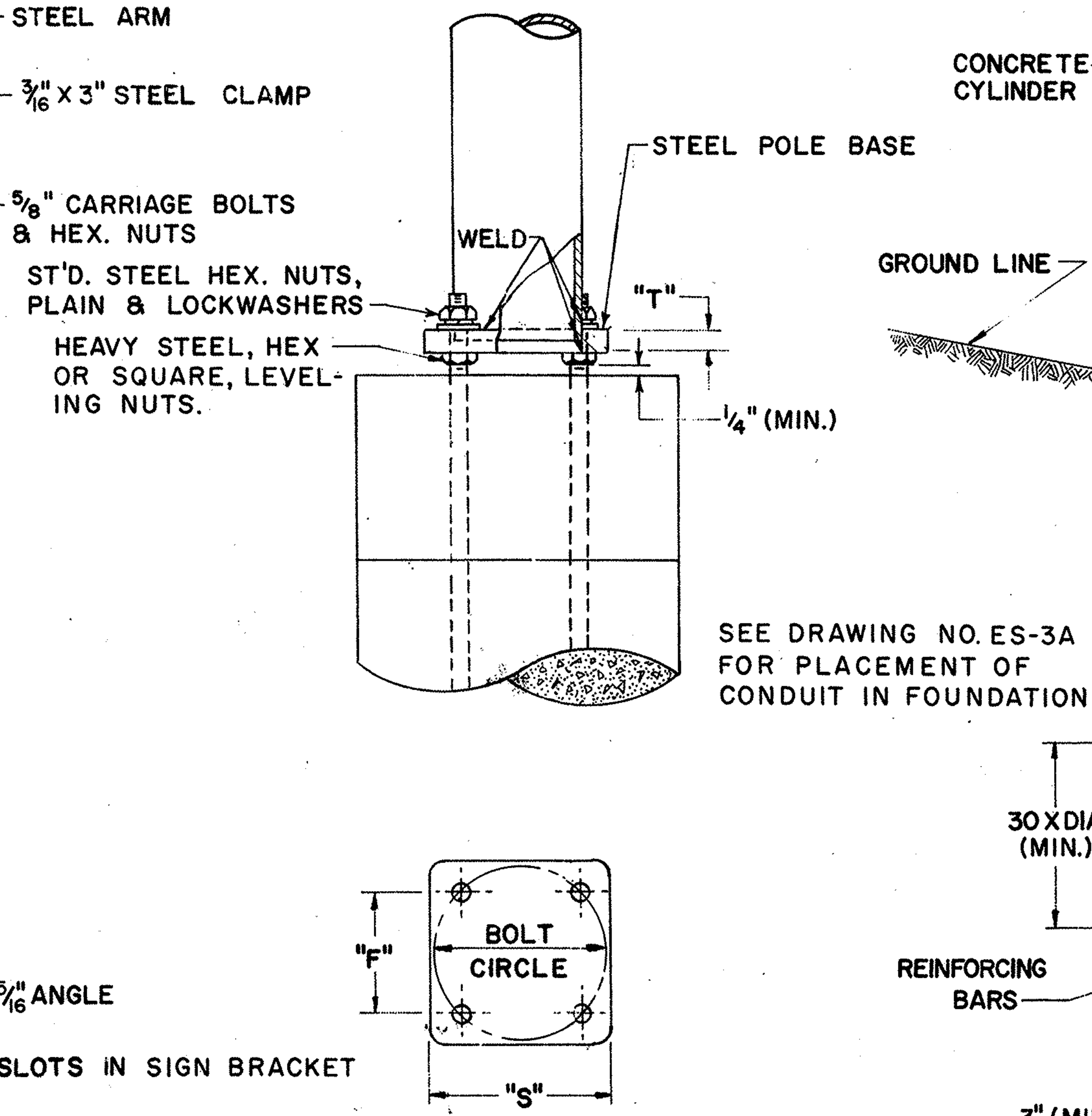
NOTE:
THE 12" DIMENSION SHOWN FOR BLIND HALF COUPLINGS MAY BE INCREASED OR DECREASED WHEN NECESSARY TO TO PREVENT INTERFERENCE WITH OTHER MEMBERS.



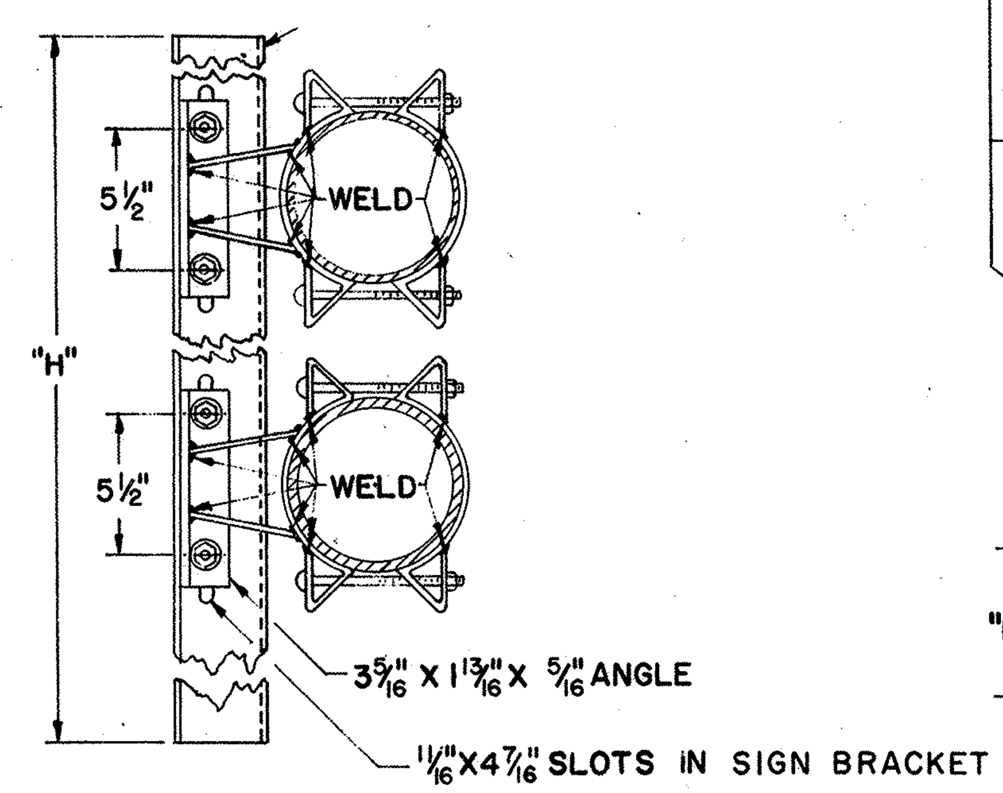
ARM ATTACHMENT

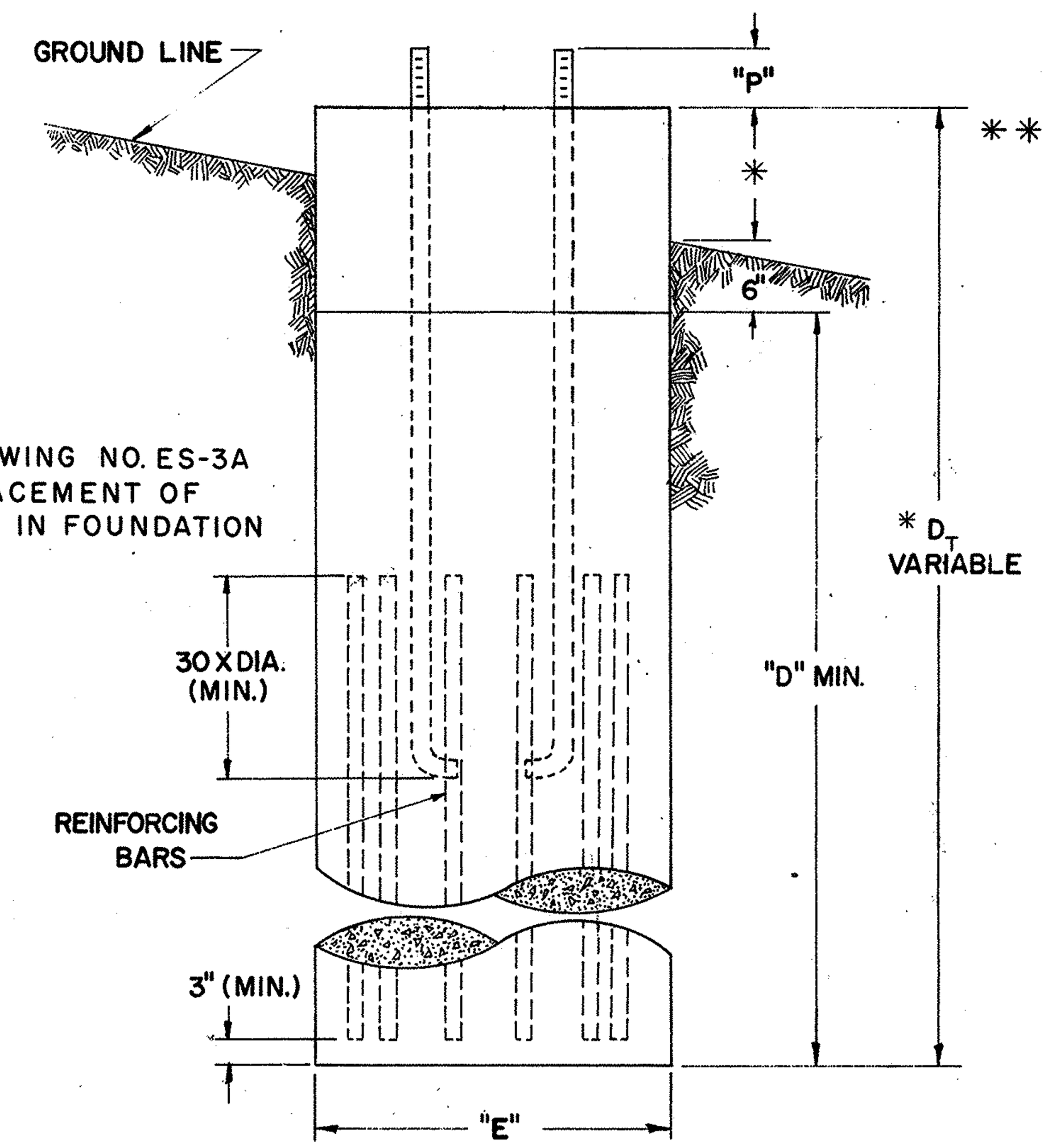






POLE BASE DETAIL





FOUNDATION DETAIL

SIGN ATTACHMENT DETAIL

DESIGN NO.	POLE SIZE	*** ARM SIZE	DIM A	DIM ** B	DIM "D" MIN.	DIM E	DIM F	DIM P	DIM *S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS # REQ'D
1	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 6.9" X 4.66" X 16'-0"	4'	12'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
2	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 8" X 5.2" X 20'-0"	4'	16'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
3	3 Ga, 15" X 11.5" X 25'-0"	7 Ga, 8.3" X 6.06" X 16'-0"	4'	12'	11'	3'-0"	15 1/2"	8 3/8"	23"	2"	22"	2" X 96"	120	1"	12
4	3 Ga, 16" X 12.5" X 25'-0"	3 Ga, 9.2" X 6.40" X 20'-0"	4'	16'	11'	3'-0"	16 5/8"	8 3/8"	24 1/2"	2"	23 1/2"	2" X 96"	120	1"	12
5	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 11" X 7.92" X 22'-0"	6'	14'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
6	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 8.86" X 26'-0"	6'	18'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
7	2 PLY 7 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 9.14" X 24'-0"	6'	14'	15'	3'-0"	18"	9 3/4"	26 1/2"	2 1/2"	25 1/2"	2 1/2" X 144"	240	1 1/4"	12
8	2 PLY 1/4", 18" X 14.36" X 26'-0"	3 Ga, 12.5" X 8.58" X 28'-0"	6'	18'	15'	3'-0"	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 144"	240	1 1/4"	12

NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. 625.13 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

* FOUNDATION - THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

** ERECTION - VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM ℄ OF POLE TO ℄ OF SIGN DOES NOT EXCEED THE MAX. SIGN AREA TIMES "B".

*** ARMS 20' LONG OR LONGER ARE TO BE TRUSS TYPE WITH 3" X 3" X 3/8" ANGLES WELDED TO GUSSET PLATES.

MATERIAL - STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A 193 GRADE B7. AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN

THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

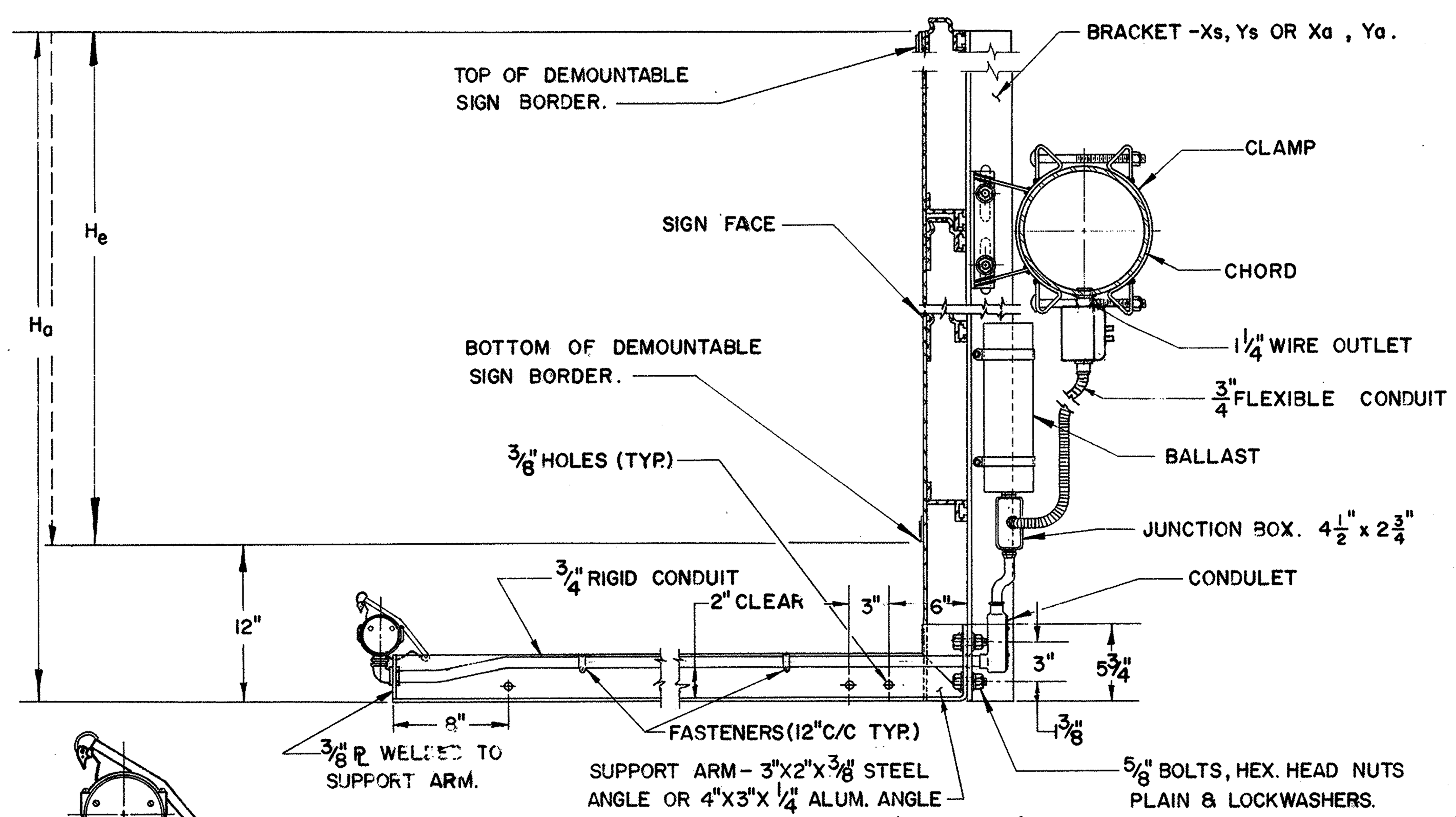
OVERHEAD SIGN SUPPORT	816 No. 12.24	DATE 8-18-61 4-11-62 4-18-67

APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

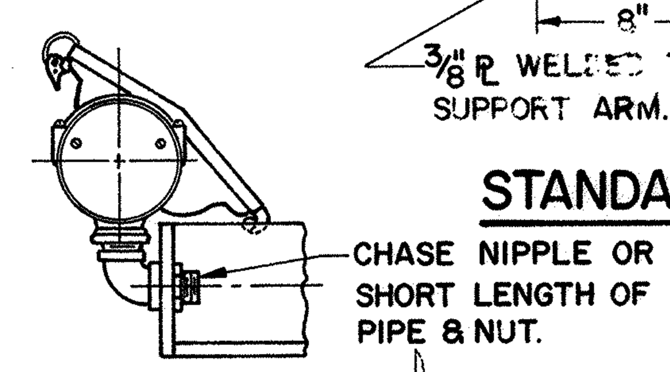
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MAH-7-14.95

110J



STANDARD FIXTURE LOCATION (BELOW)



FIXTURE CONNECTION WHERE WIRING CONDUIT IS NOT NEEDED.

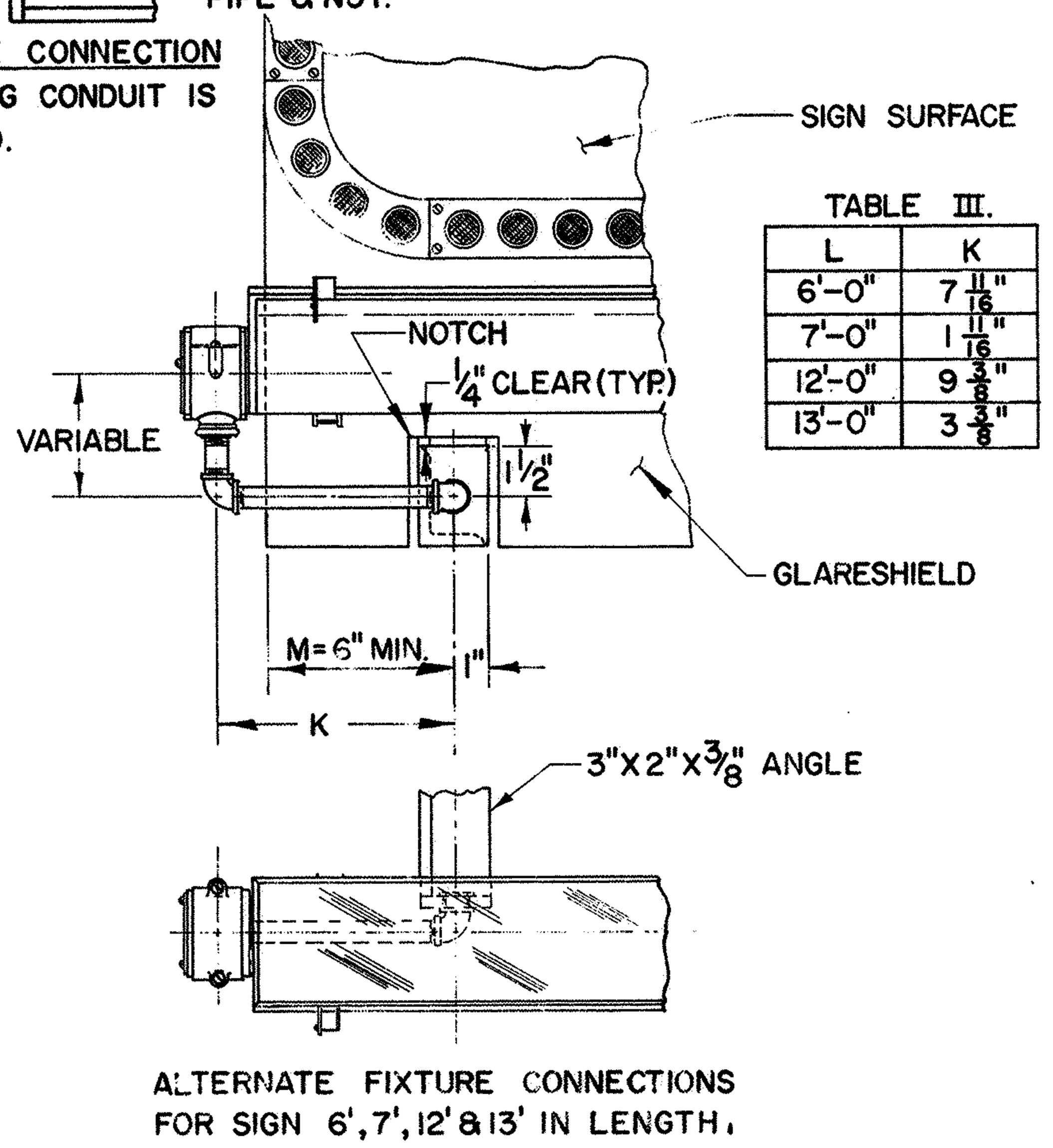
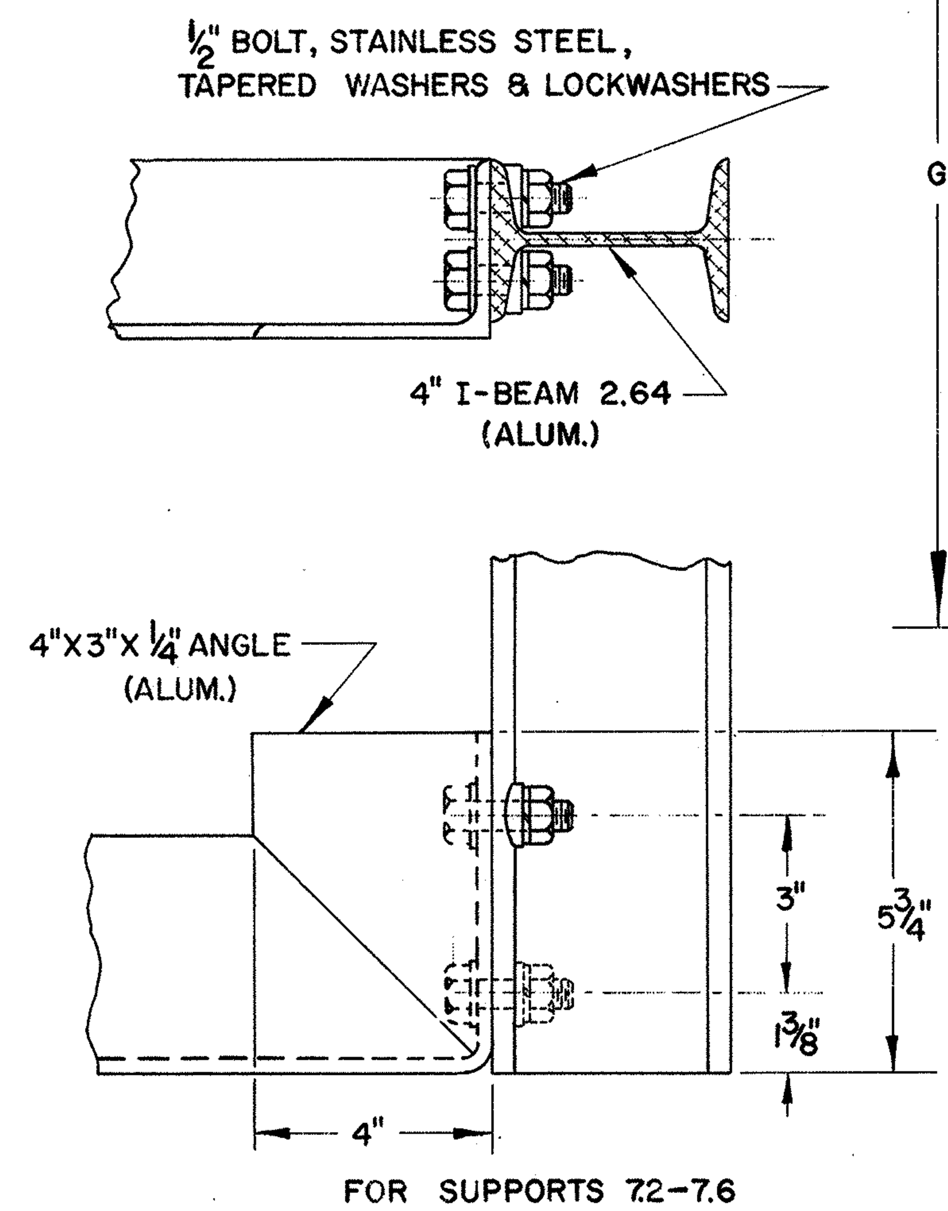


TABLE III.

L	K
6'-0"	7 11/16"
7'-0"	1 11/16"
12'-0"	9 3/8"
13'-0"	3 3/8"

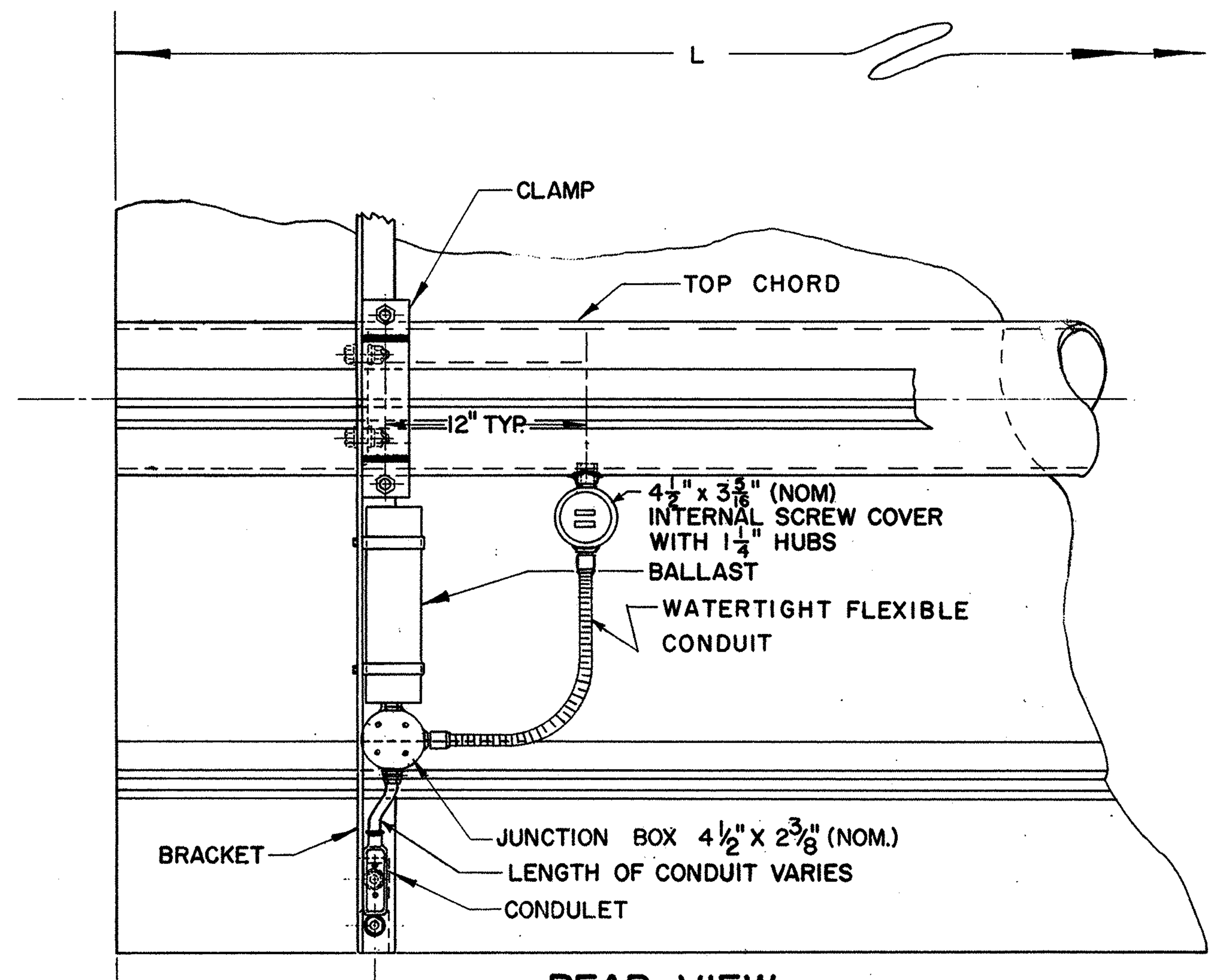
ALTERNATE FIXTURE CONNECTIONS FOR SIGN 6', 7', 12' & 13' IN LENGTH.

DETAIL A.

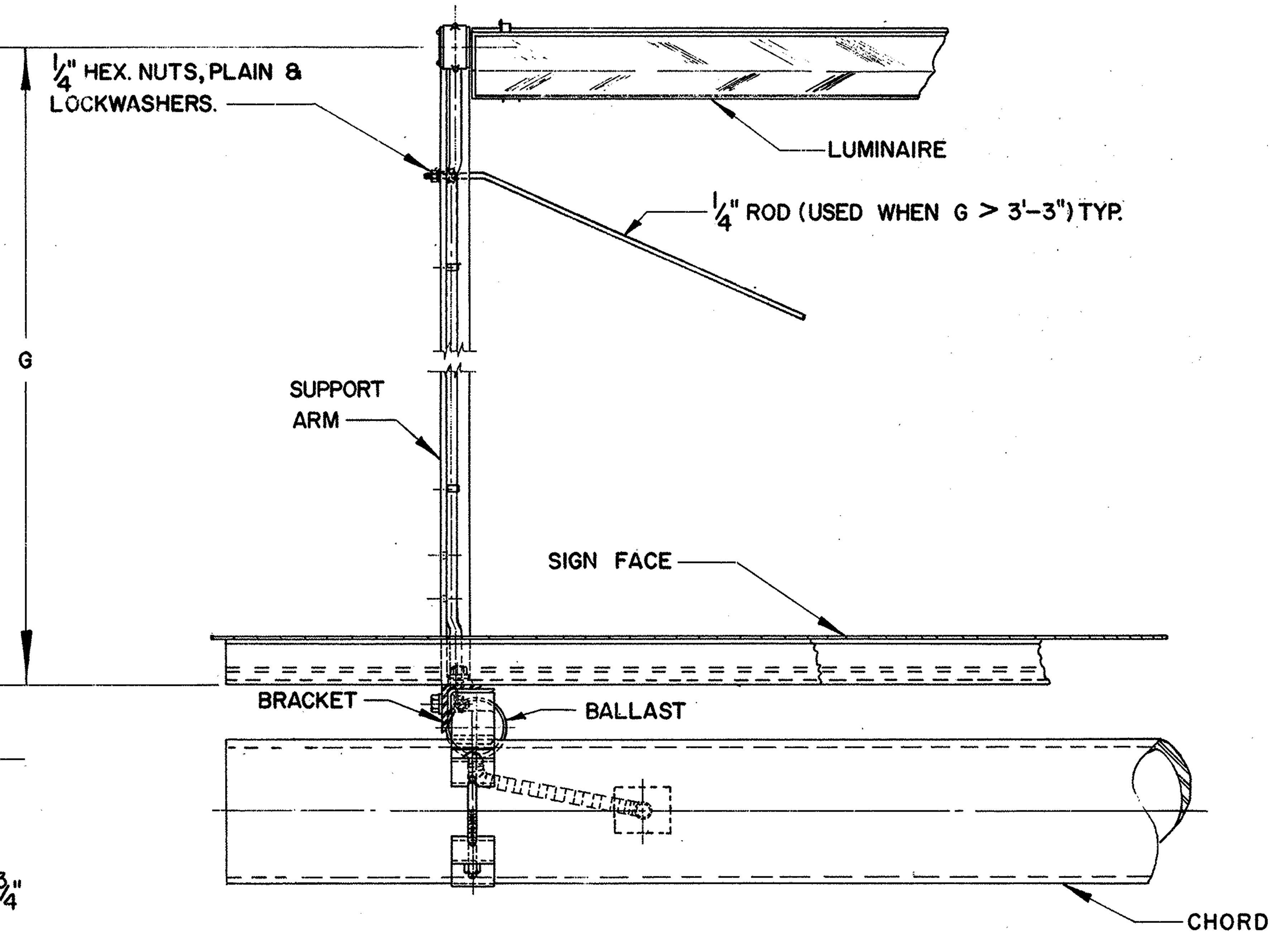


FOR SUPPORTS 7.2-7.6

DETAIL B.



REAR VIEW



TOP VIEW

FABRICATION — ALL STRUCTURAL COMPONENTS SHOWN ON THIS SHEET SHALL CONFORM TO SUPPLEMENT SPECIFICATIONS 816.

MATERIALS — THE MATERIALS USED IN THE COMPONENTS SHOWN ON THIS SHEET SHALL BE IN CONFORMANCE WITH THE MATERIALS USED IN THE SIGN SUPPORT

TABLE I.

"L" SIGN LENGTH A	"L" SIGN LENGTH B	NUMBER OF FIXTURES 75⅜	NUMBER OF FIXTURES 99⅜	"M" EDGE DISTANCE A LT.	"M" EDGE DISTANCE A RT.	"M" EDGE DISTANCE B LT.	"M" EDGE DISTANCE B RT.	NO. BALLAST
6'-0"	7'-0"	1		6"	6"	6"	6"	1
8'-0"	9'-0"	1		10⅜	10¼	16⅜	16¼	1
10'-0"	11'-0"		1	10⅜	10¼	16⅜	16¼	1
12'-0"	13'-0"	2		6"	6	6	6	1
14'-0"	15'-0"	2		8⅝	8⅝	14⅝	14⅝	1
16'-0"	17'-0"	1	1	8⅝	8⅝	14⅝	14⅝	1
18'-0"	19'-0"		2	8⅝	8⅝	14⅝	14⅝	1
20'-0"	21'-0"	3		7"	6⅞	13	12⅞	2
22'-0"	23'-0"	2	1	7"	6⅞	13	12⅞	2
24'-0"	25'-0"	1	2	7"	6⅞	13	12⅞	2
26'-0"	27'-0"		3	7"	6⅞	13	12⅞	2

Sn= Nominal Fixture Length, 72" & 96" respectively.
Sa= Actual Fixture Length, for mounting purposes, 75⅜" and 99⅜" respectively. (Slight variation for different manufacturers.)
M= Distance from edge of sign to ℄ of notch, min. 6". When the length of the sign minus 1'-0" is less than the sum of the actual fixture lengths, an offset "K" is used. For additional details see detail A and table III.

TABLE II

MAX. BRACKET SPACING FOR EXTERNALLY ILLUMINATED SIGNS

ACTUAL SIGN HEIGHT "Ha"	SUPPORT TYPES 9.12, 11.08, 13.2, 7.2 — SINGLE TUBE DOUBLE TUBE LESS 36" C/C	SUPPORT TYPES 9.24, 10.48, 12.24, 14.5, 15.8, 7.2 to 7.6 — DOUBLE TUBE C/C 36"-42"	DOUBLE TUBE C/C 48"-54"	DOUBLE TUBE C/C 60"-72"
	MAXIMUM BRACKET SPACING			
to 5'-0"	6'-4" with X 8'-4" with Y	8'-4" with X	8'-4" with X	8'-4" with X
5'-6" to 8'-0"	6'-4" with Y	4'-2" with X 6'-4" with Y	6'-4" with X 8'-4" with Y	8'-4" with X
8'-6" to 10'-0"	3'-2" with X 4'-2" with Y	6'-4" with Y	6'-4" with Y	8'-4" with Y
10'-6" to 12'-0"	———	4'-2" with Y	6'-4" with Y	6'-4" with Y
12'-6" to 14'-0"	———	3'-2" with Y	3'-2" with Y	4'-2" with Y

Ha= ACTUAL SIGN HEIGHT

He= EFFECTIVE SIGN HEIGHT

BRACKET SIZE: Xs = 3½" X 2½" X 5/16" — L @ 6.1 LB. STEEL, Ys = 4" X 3 1/16" X ¼" — Z @ 8.2 LB. STEEL } 9.12, 10.48, 11.08, 12.24, 14.5 & 15.8

Xa = 3" X 2 11/16" X ¼" — Z @ 2.33 LB. ALUM., Ya = 4" X 2 21/32" X 3/16" — I @ 2.64 LB. ALUM. } 7.2 Thru 7.6

WHEN MAX. ALLOWABLE SPACING IS LESS THAN ACTUAL FIXTURE LENGTHS, Sa, ADDITIONAL STANDARD BRACKETS MUST BE FURNISHED, EQUAL IN HEIGHT TO "Ha".

SUPPORTS 7.2 THROUGH 7.6 SHALL HAVE AN ALUMINUM FIXTURE ARM, 4"X3"X¼" ANGLE. SEE DETAIL B. BOLTS AND ACCESSORIES SHALL BE STAINLESS STEEL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-1

DATE 10-16-63

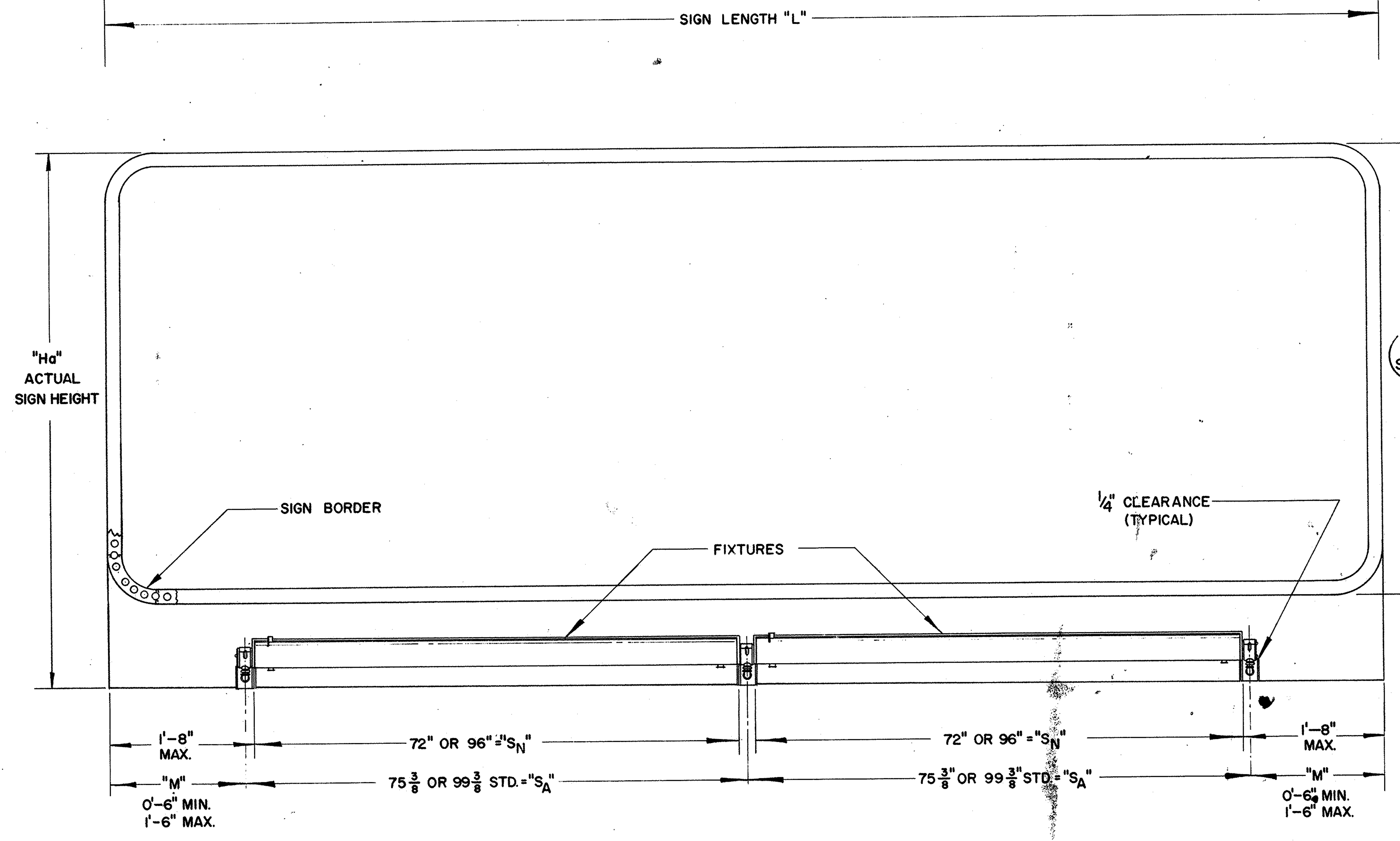
APPROVED Fred C. Tarbox
ENGINEER OF TRAFFIC

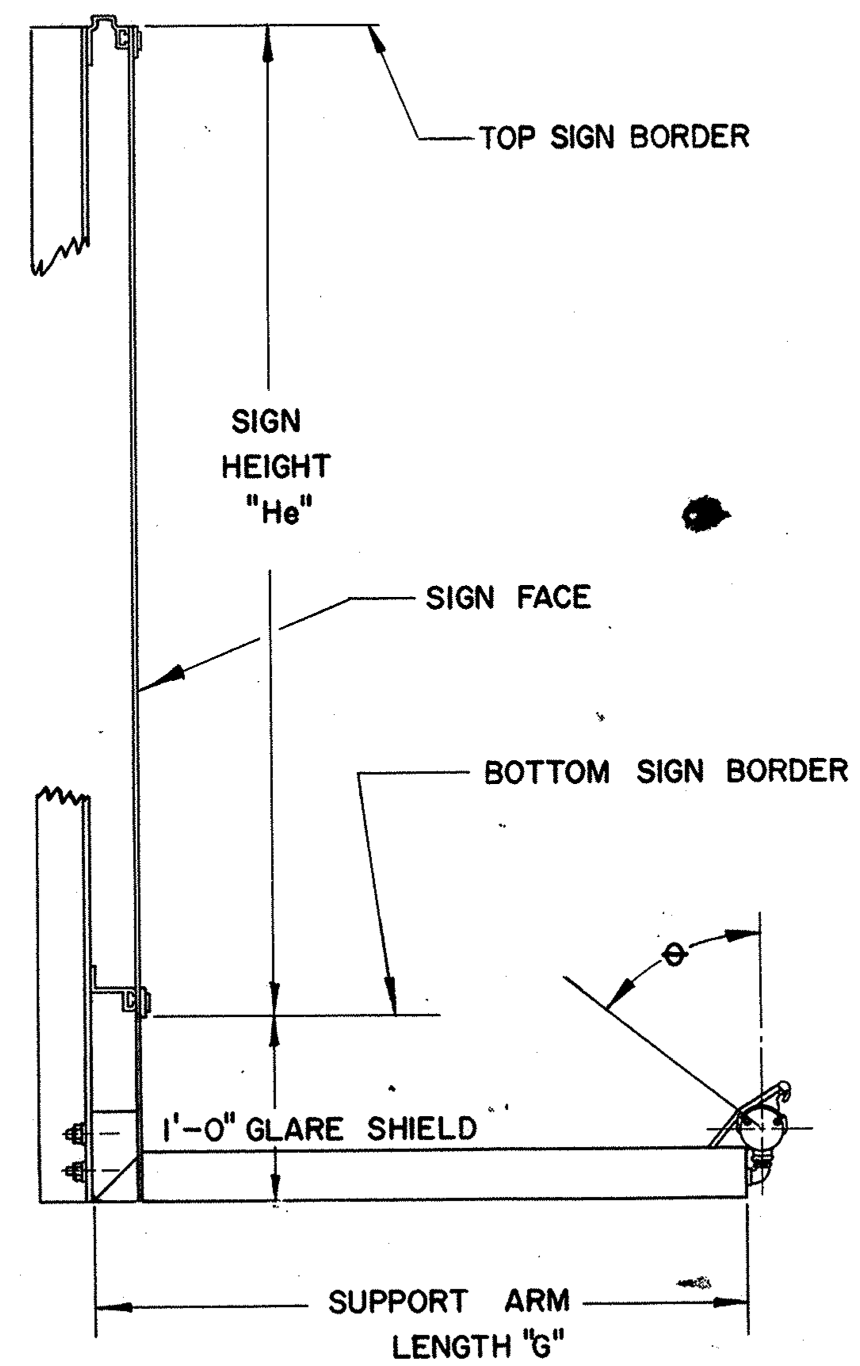
STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110K

MAH-7-14.95





SIGN LIGHTING NOTES

SIGN ILLUMINATION

SIGN ILLUMINATION SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS.

LAMPS

LAMPS SHALL BE TYPE F72 OR F96-T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96-T12/CW/SHO AS MANUFACTURED BY WESTINGHOUSE, F72 OR F96-PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC, OR APPROVED EQUAL FOR SIGNS THAT ARE 7'-0" OR GREATER IN HEIGHT.

LAMP FIXTURES

LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURES AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

THE BODY DESIGN OF THE FIXTURE SHALL PROVIDE AN ASYMMETRIC SPECULAR ALZAK REFLECTOR TO GIVE A HIGH LEVEL OF UNIFORM ILLUMINATION AND SHALL PROVIDE A WIREWAY FROM END TO END. WHEN ADJACENT FIXTURES ARE WIRED TOGETHER THROUGH THE WIREWAY, WIRE BETWEEN FIXTURES SHALL BE ENTIRELY ENCLOSED.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT BAKED ENAMEL AS #8950 UNIVERSAL PAINT AND VARNISH INC., OR MIDWESTERN COLOR WORKS, OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKETING.

BALLASTS

BALLASTS FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20°F. BALLASTS SHALL BE MOUNTED ON SIGN BRACKET ONLY. WIRING SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE SIGN MAY BE REMOVED WITHOUT DISTURBING THE ELECTRICAL WIRING.

EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE θ
3'-0" to 5'-0"	2'-9"	25°
5'-0" to 6'-6"	3'-3"	25°
7'-0" to 10'-0"	4'-3"	17°
10'-6" to 13'-0"	5'-9"	23°

"L" SIGN LENGTH	NO. OF FIXTURES			He=3'-0" to 6'-6" LAMP=T12/cw/ho			He=7'-0" to 13'-0" LAMP=T12/cw/sho		
		72	96	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN	BALLAST NO.	BALLAST TYPE	WATTAGE PER SIGN
6'-0" to 7'-0"		1		1	A	190	1	C	250
8'-0" to 9'-0"		1		1	A	190	1	C	250
10'-0" to 11'-0"			1	1	A	190	1	C	250
12'-0" to 13'-0"		2		1	B	250	1	D	425
14'-0" to 15'-0"		2		1	B	250	1	D	425
16'-0" to 17'-0"		1	1	1	B	250	1	D	425
18'-0" to 19'-0"			2	1	B	250	1	D	425
20'-0" to 21'-0"		3		2	A & B	440	2	C & D	675
22'-0" to 23'-0"		2	1	2	A & B	440	2	C & D	675
24'-0" to 25'-0"		1	2	2	A & B	440	2	C & D	675
26'-0" to 27'-0"			3	2	A & B	440	2	C & D	675

BALLASTS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	WATTAGE
A	GG 3583	257-321	190
B	GG 3535	257-331	250
C	GG 3585	257-361	250
D	GG 3588	257-371	425

BALLASTS SHALL BE GENERAL ELECTRIC, JEFFERSON AS SPECIFIED ABOVE OR EQUAL.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	220-241	.25	Y
II	9T51Y8	220-251	.50	Y
III	9T51Y9	220-261	.75	Y
IV	9T51Y10	220-071-100	1.00	Z
V	9T51Y11	220-081-100	1.50	Z
VI	9T51Y12	220-091-100	2.00	Z
VII	9T51Y13	221-102	3.00	Z

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

EI-2

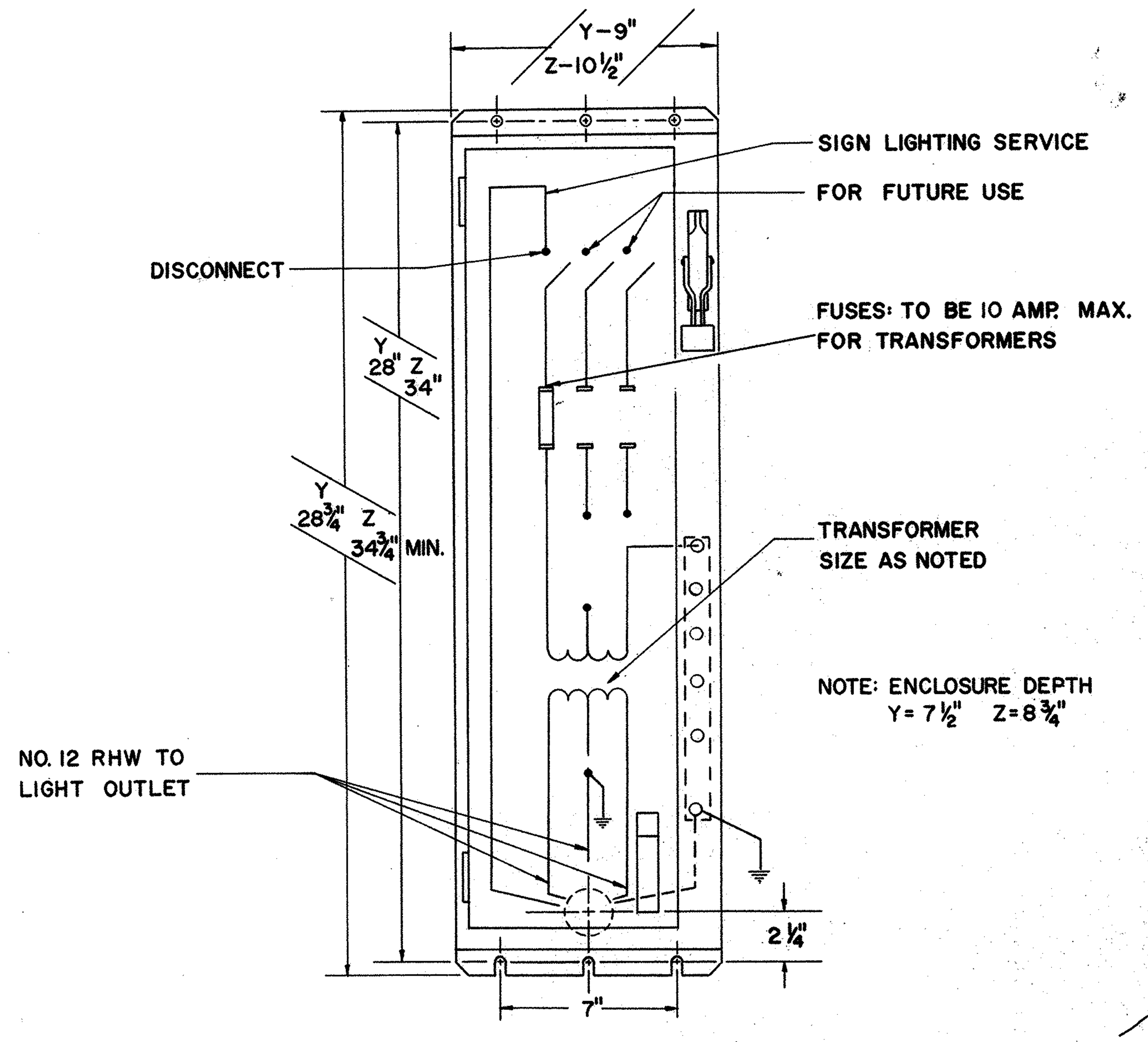
DATE
10-31-63
5-6-64
10-29-64
03-29-67

APPROVED Fred C. [signature]
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

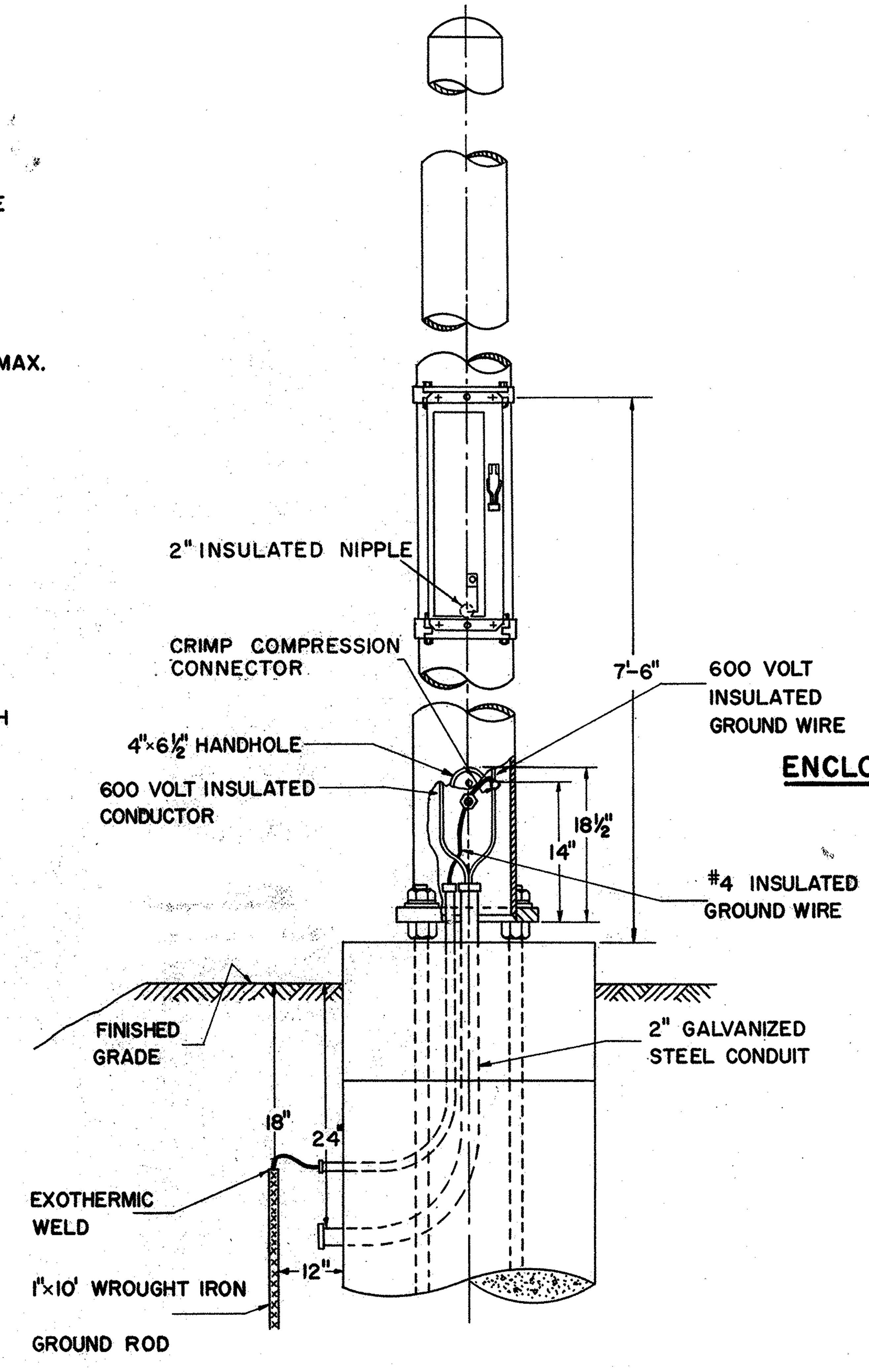
MAH-7-14.95

110L

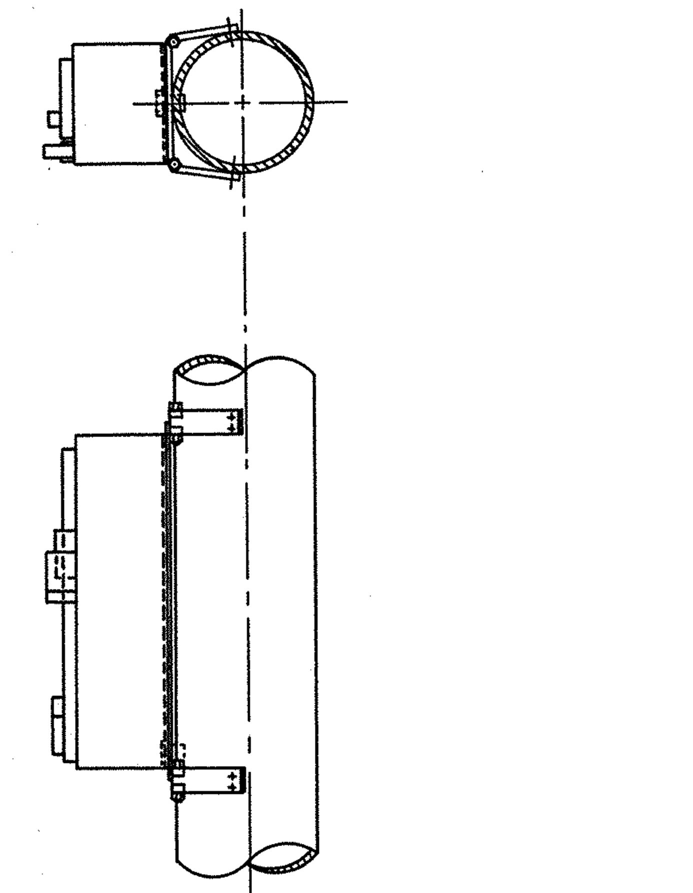


TYPICAL ENCLOSURE DETAIL

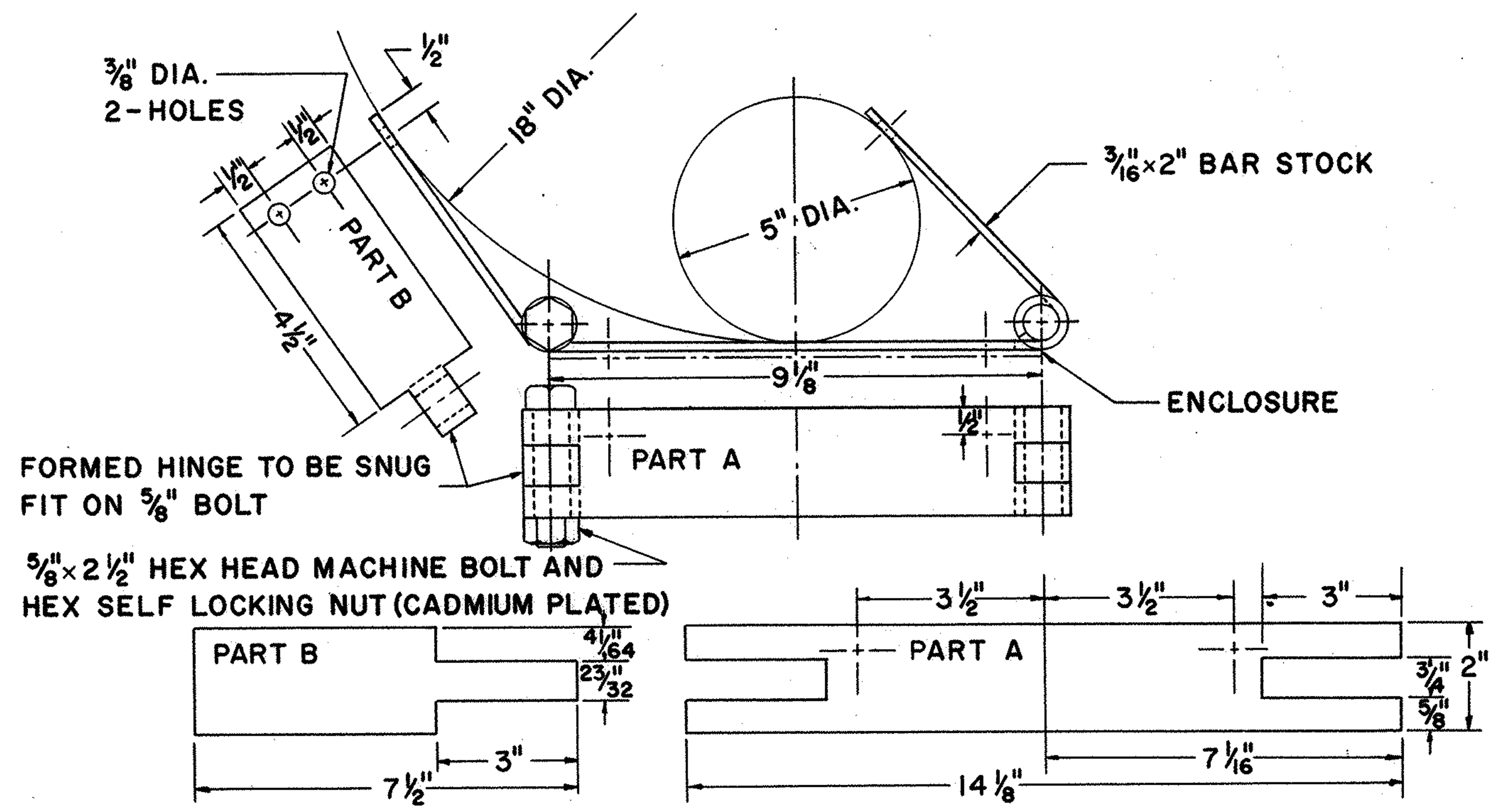
480 VOLT SIGN LIGHTING SERVICE



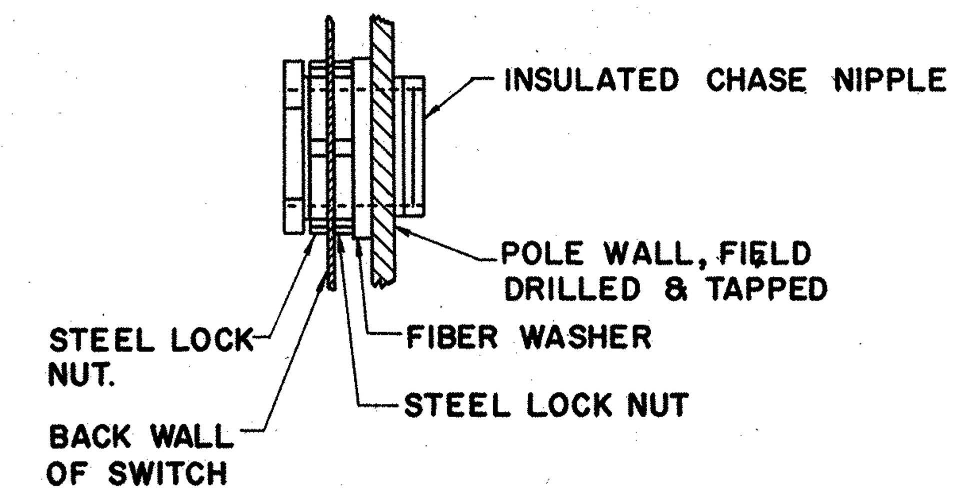
SIGN SUPPORT DETAIL FOR ILLUMINATED SIGNS



ENCLOSURE MOUNTING DETAIL



ENCLOSURE MOUNTING BRACKET



INSULATED CHASE NIPPLE ASSEMBLY

AS MANUFACTURED BY THOMAS BETTS,
APPELTON, STEEL CITY OR EQUAL

NOTES

GENERAL

DETAILS OF THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT EXTERNALLY ILLUMINATED SIGNS.

SERVICE

ELECTRIC SERVICE SHALL ENTER THROUGH A 2" GALVANIZED RIGID STEEL CONDUIT INSTALLED IN STRUCTURE FOUNDATION AS PER DETAIL. SIGN SERVICE OR CIRCUITRY SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN AT THE PRIMARY SOURCE.

SERVICE CONDUCTORS SHALL BE THE SIZE AND TYPE AS SPECIFIED.

COMBINATION SWITCH AND TRANSFORMER

(TYPE Y OR Z ENCLOSURE REQUIRED AS PER SCHEDULE ON THIS SHEET)

THIS COMBINATION SHALL BE A 30 OR 60 AMPERE 600 VOLT SWITCH WITH A .25 TO 3.0 KVA TRANSFORMER. THE COMBINATION AND ENCLOSURE SHALL BE AS SQUARE D CLASS 9421, COLUMBUS ELECTRIC WORKS CLASS 101, PANALS INCORPORATED-CLASS 9400, OR APPROVED EQUAL.

TRANSFORMER

THE TRANSFORMER SHALL BE DRY TYPE SINGLE PHASE 240/480 VOLT PRIMARY 120/240 VOLT SECONDARY, THE TYPE AND CAPACITY AS SPECIFIED IN DETAILED SCHEDULE ON THIS SHEET.

ENCLOSURE

THE ENCLOSURE SHALL BE NEMA #4 WATER TIGHT .063 GAGE STAINLESS STEEL ASTA 302-303. A DISCONNECT HANDLE SHALL BE FLANGE MOUNTED AND CAPABLE OF BEING LOCKED IN EITHER POSITION. THE ENCLOSURE SHALL BE EQUIPPED WITH A DOOR LOCKING MECHANISM WITH A DEFEATER THAT NECESSITATES TWO HANDS TO OPERATE MECHANISM WITH THE SWITCH IN OFF POSITION. SPACE FOR A 2" INSULATED CHASE NIPPLE SHALL BE PROVIDED APPROXIMATELY 2¼" ABOVE THE CENTER LINE OF THE LOWER MOUNTING SLOT. THIS ENCLOSURE AND STRUCTURE SHALL BE FIELD DRILLED AND TAPPED FOR THE REQUIRED NIPPLE AS SHOWN ON THE DETAIL ON THIS SHEET.

THIS ENCLOSURE SHALL BE FLANGE MOUNTED ON BRACKETS WITH 5/16-18×¾" HEX HEAD CADMIUM PLATED MACHINE BOLTS. ENCLOSURES SHALL BE TYPE Y OR Z AS SPECIFIED AND DIMENSIONED ON THIS SHEET.

ENCLOSURE MOUNTING BRACKET

THE ENCLOSURE MOUNTING BRACKET SHALL BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY. THE BRACKET SHALL BE FIELD MOUNTED WITH 5/16 HEX HEAD SELF TAPPING CADMIUM PLATED SCREWS. THE SIGN SUPPORT SHALL BE FIELD DRILLED, AS PER DETAIL.

WIRE AND CABLE

ALL WIRE AND CABLE UP TO AND INCLUDING #4 SHALL COMPLY WITH FAA TYPE A SPECIFICATIONS. #2 OR LARGER WIRE OR CABLE SHALL BE G.E. 58006 OR ANACONDA AP-10711, OR EQUAL. ALL WIRE AND CABLE SHALL BE 600 VOLT.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 RUBBER INSULATION AND NEOPRENE JACKETED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1"×10' SOLID WROUGHT IRON GROUND ROD. GROUND CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO GROUND ROD AND THEN TAPED WITH PLASTIC ELECTRICAL TAPE AT EACH EXPOSED PORTION OF CONDUCTOR. THE WELDED CONNECTION AND TAPED PORTION SHALL BE PAINTED 2 COATS OF INSULATING ENAMEL.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	MANUFACTURERS JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	220-241	.25	Y
II	9T51Y8	220-251	.50	Y
III	9T51Y9	220-261	.75	Y
IV	9T51Y10	220-071-100	1.00	Z
V	9T51Y11	220-081-100	1.50	Z
VI	9T51Y12	220-091-100	2.00	Z
VII	9T51Y13	221-102	3.00	Z

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ELECTRICAL SIGN SERVICE DETAILS 480 VOLT SYSTEM

ES-3A

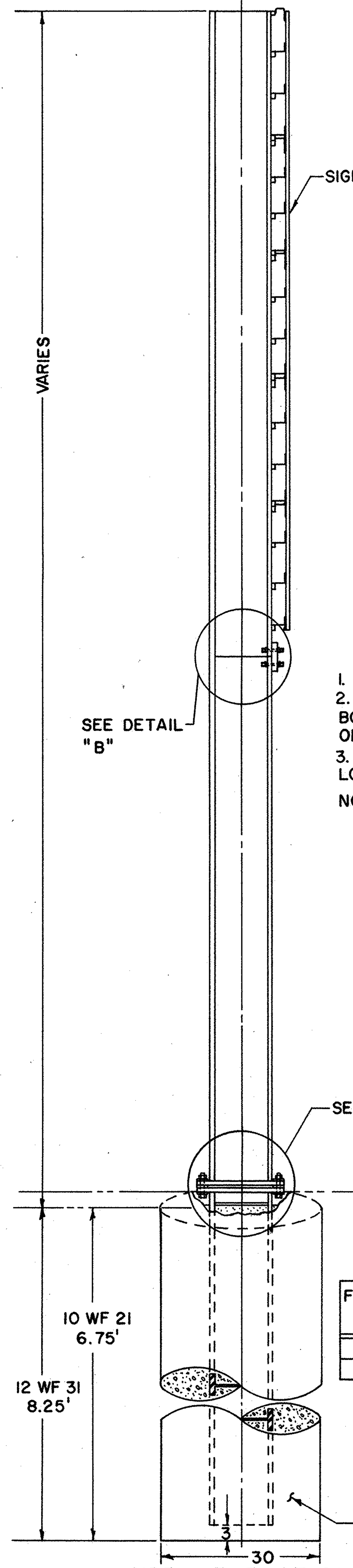
DATE 6-18-64 9-15

APPROVED ____________ ENGINEER OF TRAFFIC

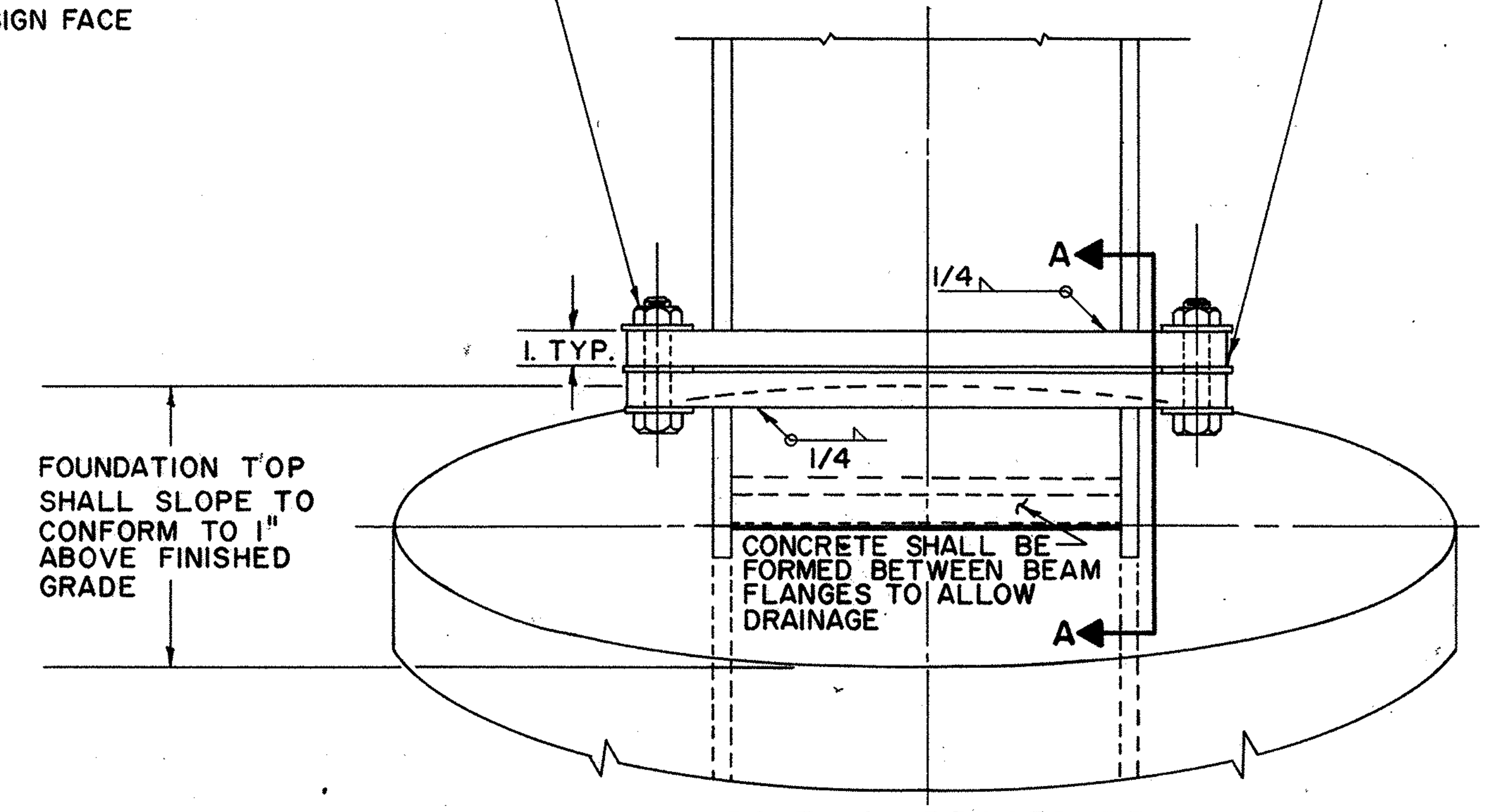
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

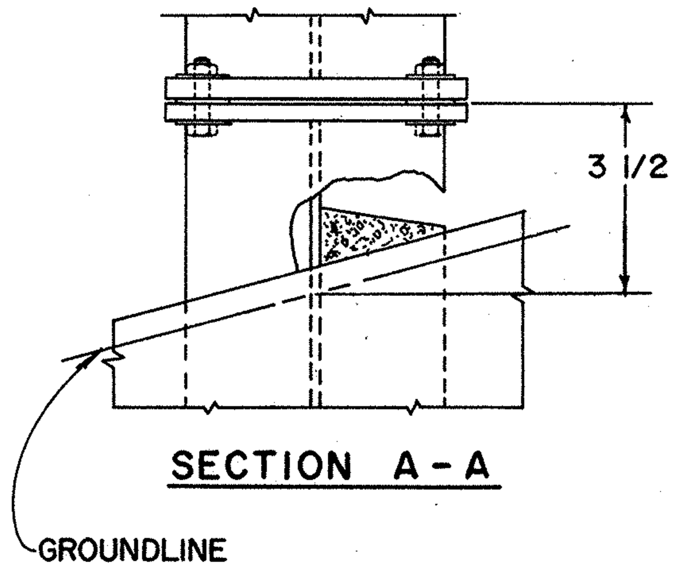
MAH-7-14.95

110M



SIDE ELEVATION





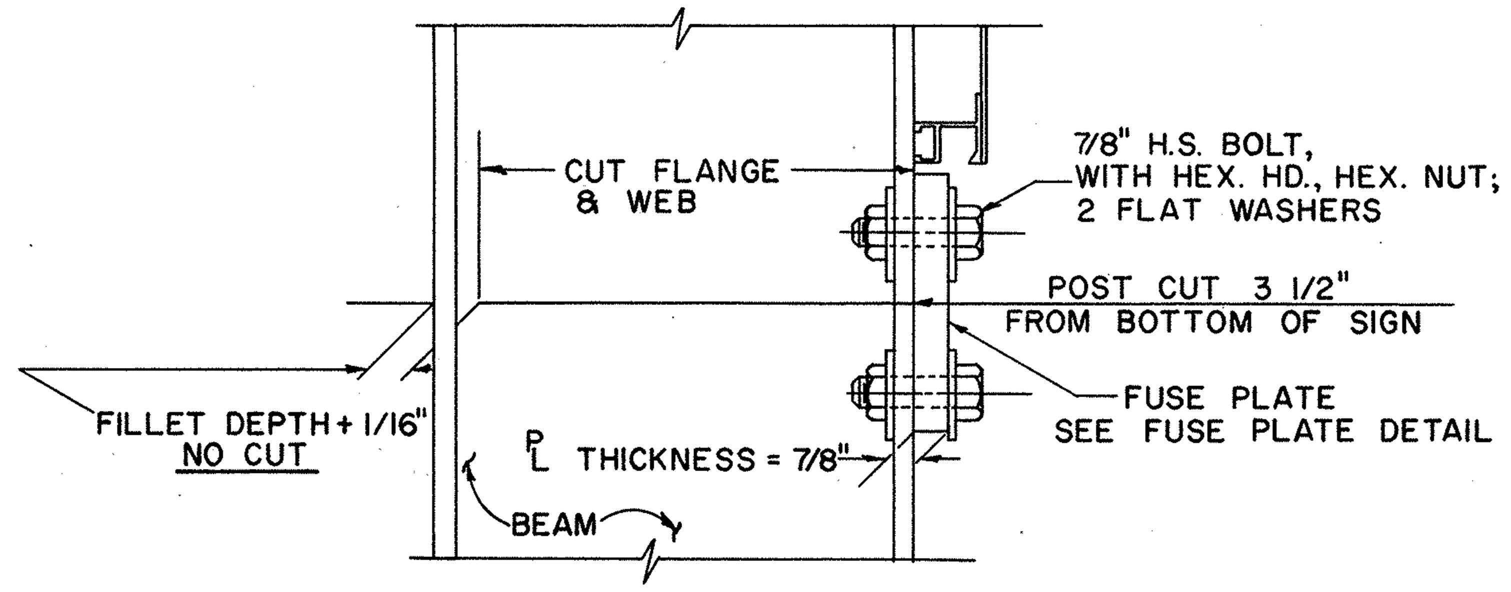
SECTION A-A

BOLTING PROCEDURE

1. ASSEMBLE POST TO STUB W/BOLTS & ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE W/12" TO 15" WRENCH TO BED & TO CLEAN BOLT THREADS. LOOSEN EACH BOLT IN TURN & RETIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE OF 750 IN. LBS.
3. BURR THREADS AT JUNCTION W/NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE: TIGHTEN THE H.S. BOLTS IN THE BASE CONNECTION ONLY TO GIVEN TORQUE DO NOT OVER TIGHTEN

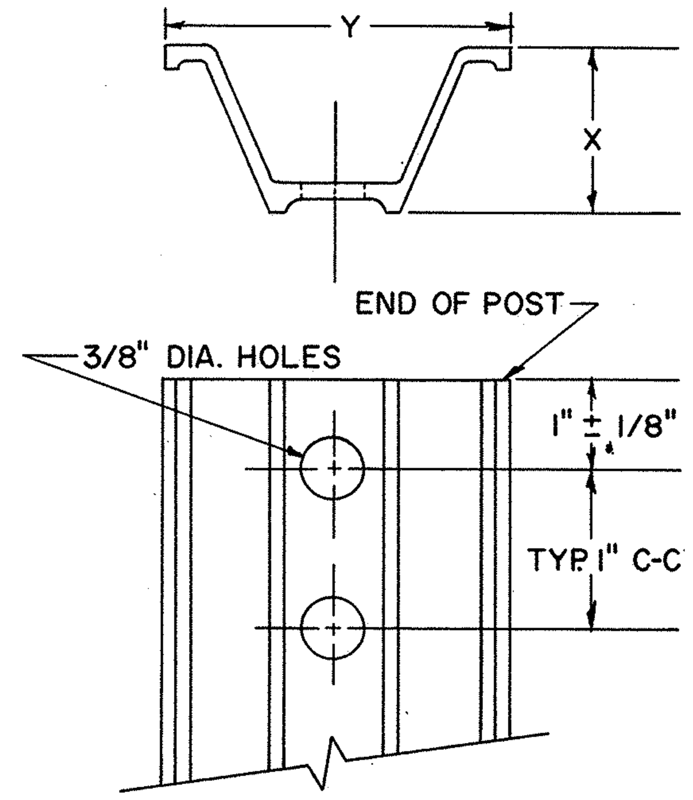
VIEW "A" ROTATED 180°



FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

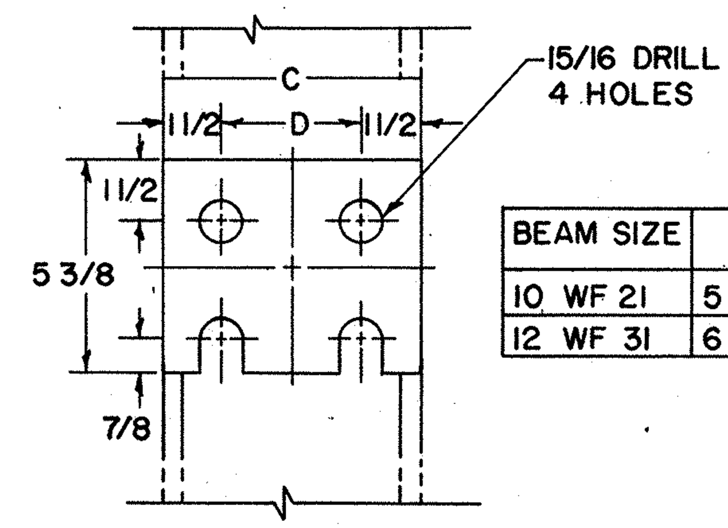
DETAIL "B"



WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

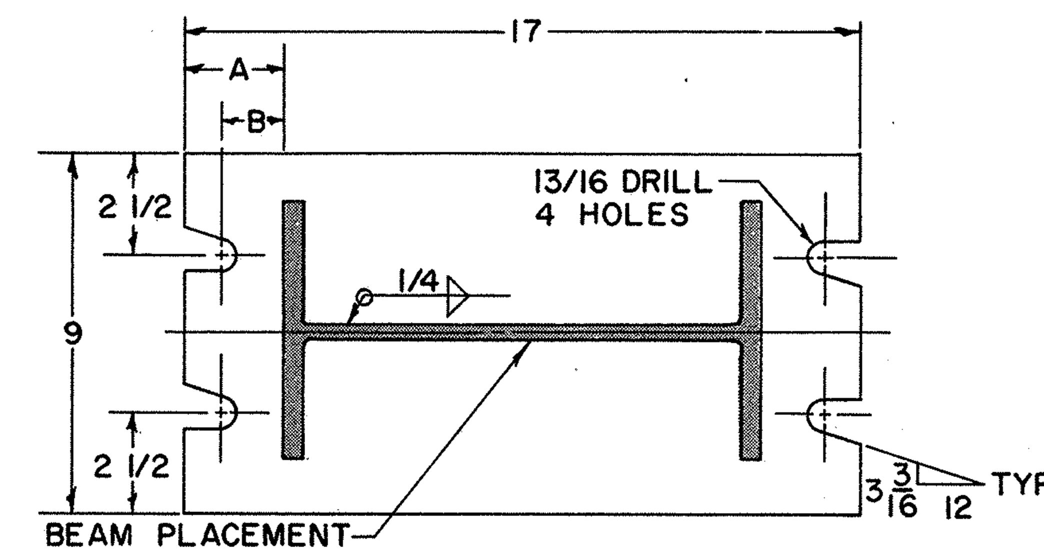
DRIVE POST DETAIL

NOTE: THE FOUNDATION FOR 4 # DRIVE POST IS SIMILAR TO THE FOUNDATION SHOWN FOR 6 # & 8 # BEAM



BEAM SIZE	C	D
10 WF 21	5 3/4	2 3/4
12 WF 31	6 1/2	3 1/2

FUSE PLATE DETAIL



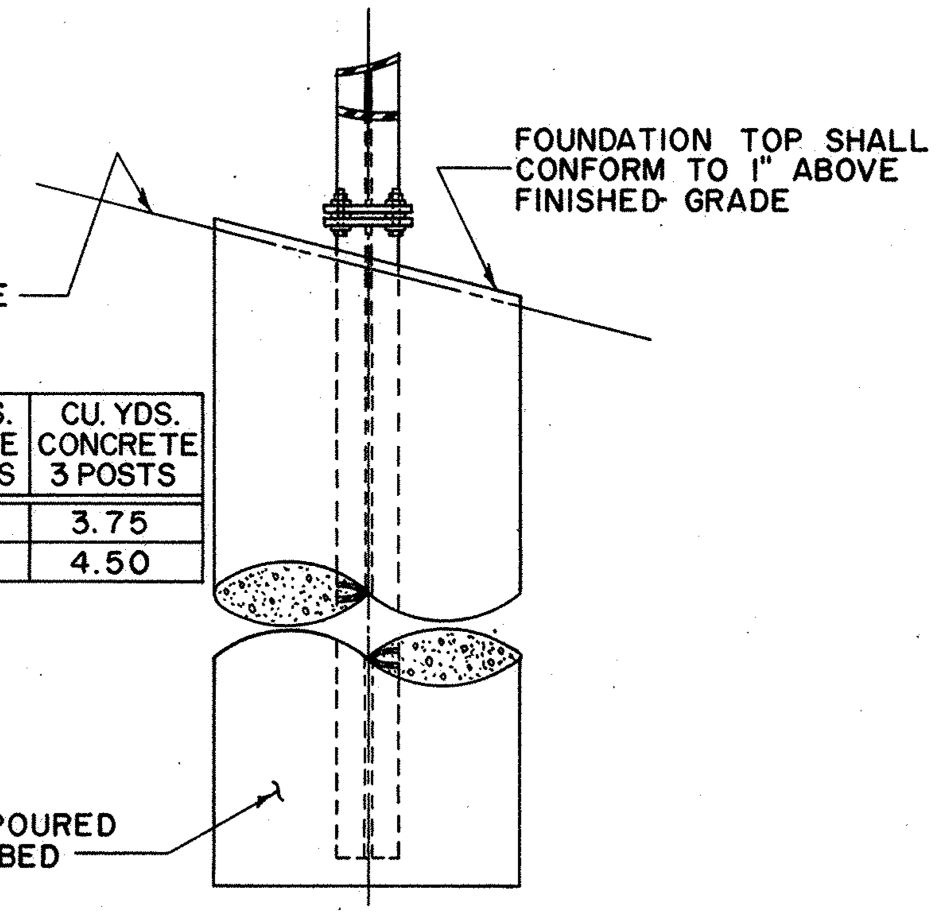
BEAM SIZE	A	B
10 WF 21	3 1/2	2 5/8
12 WF 31	2 1/2	1 5/8

BASE PLATE DETAIL

NOTES: ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTION & MATERIALS SPECIFICATIONS OR AS OTHERWISE SPECIFIED

1.) 511 FOUNDATIONS
2.) 711.01 STRUCTURAL STEEL SHAPES & PLATES
3.) 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

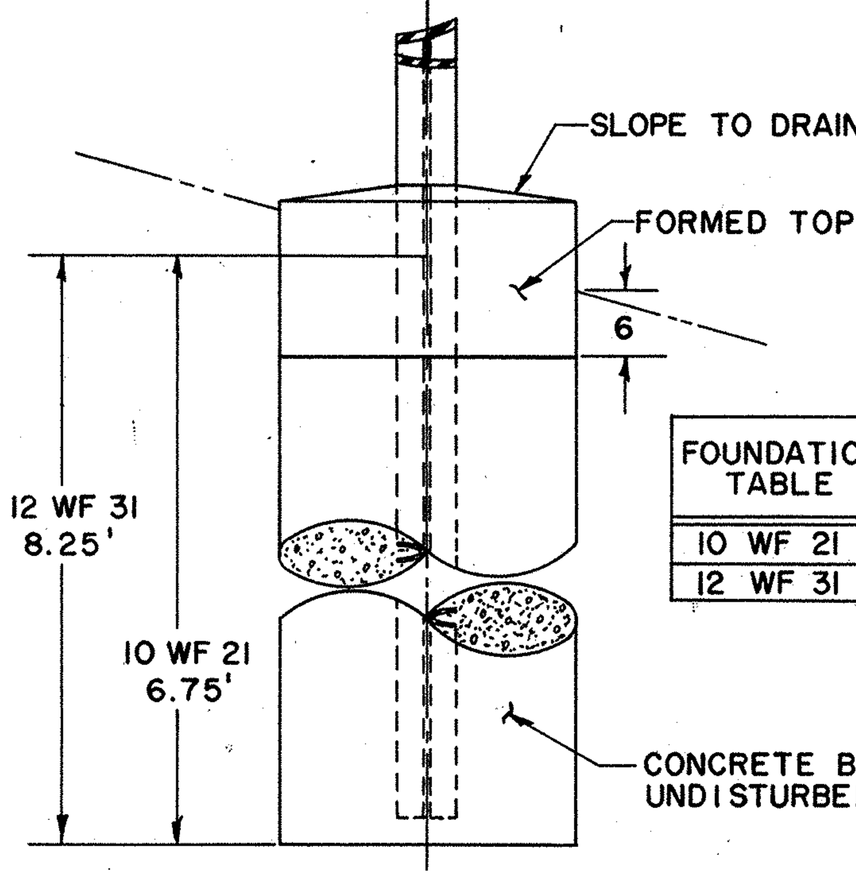
ALL DIMENSIONS IN INCHES UNLESS OTERWISE SHOWN



FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50

FRONT ELEVATION

BREAK-AWAY SUPPORT

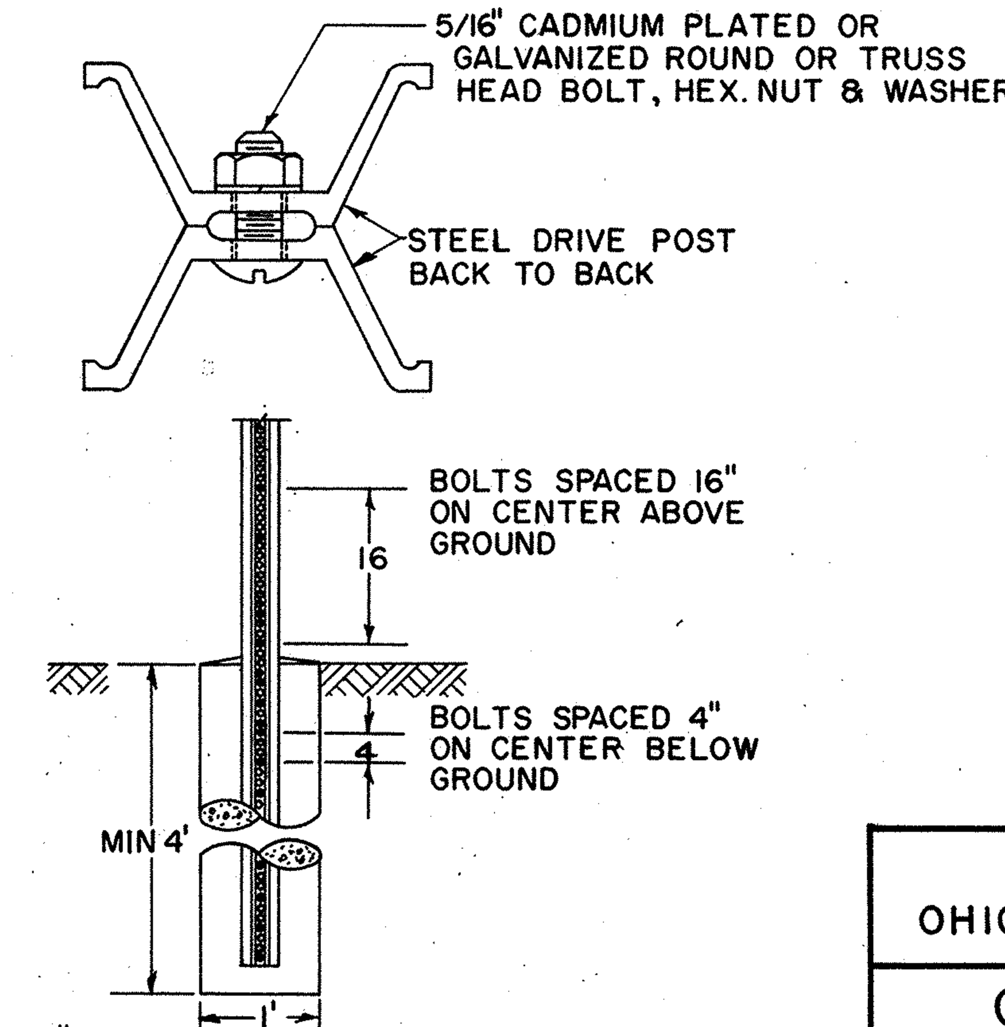


FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50

FRONT ELEVATION

STANDARD SUPPORT

STRUCTURAL SUPPORTS



6# & 8# BEAM DETAIL

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

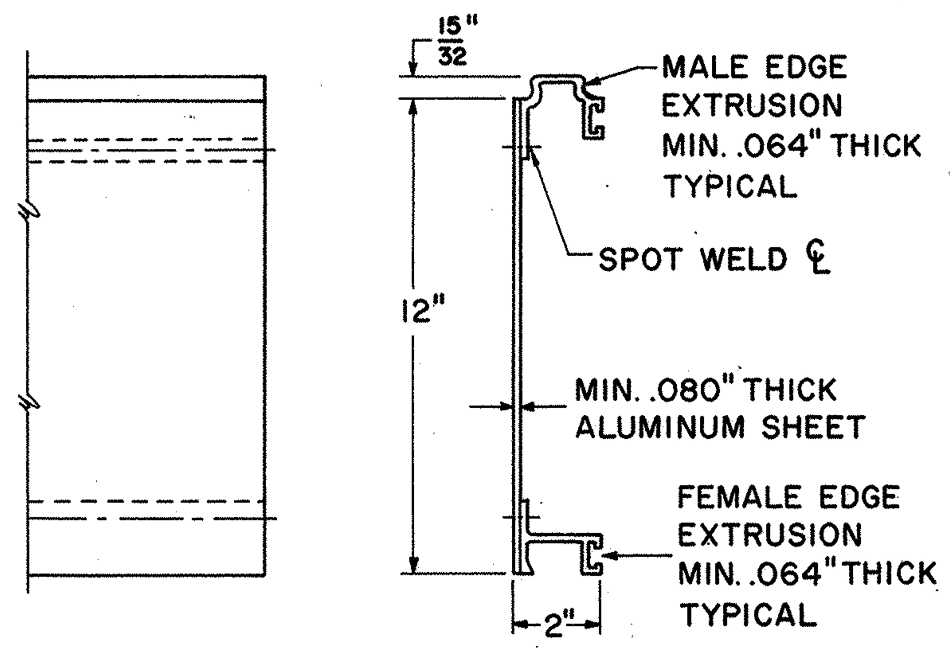
GROUND MOUNTED SIGN SUPPORTS

DATE
5-10-68
7-12-68

GMSS

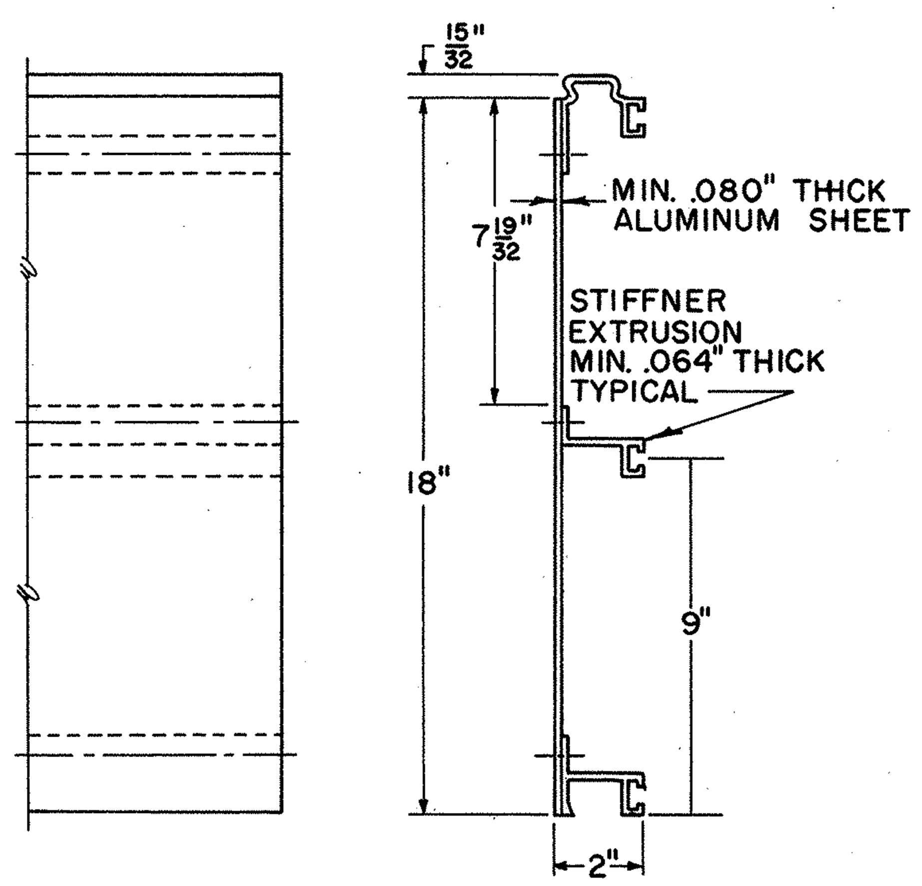
APPROVED ______________
ENGINEER OF TRAFFIC

12" EXTRUSHEET PANEL



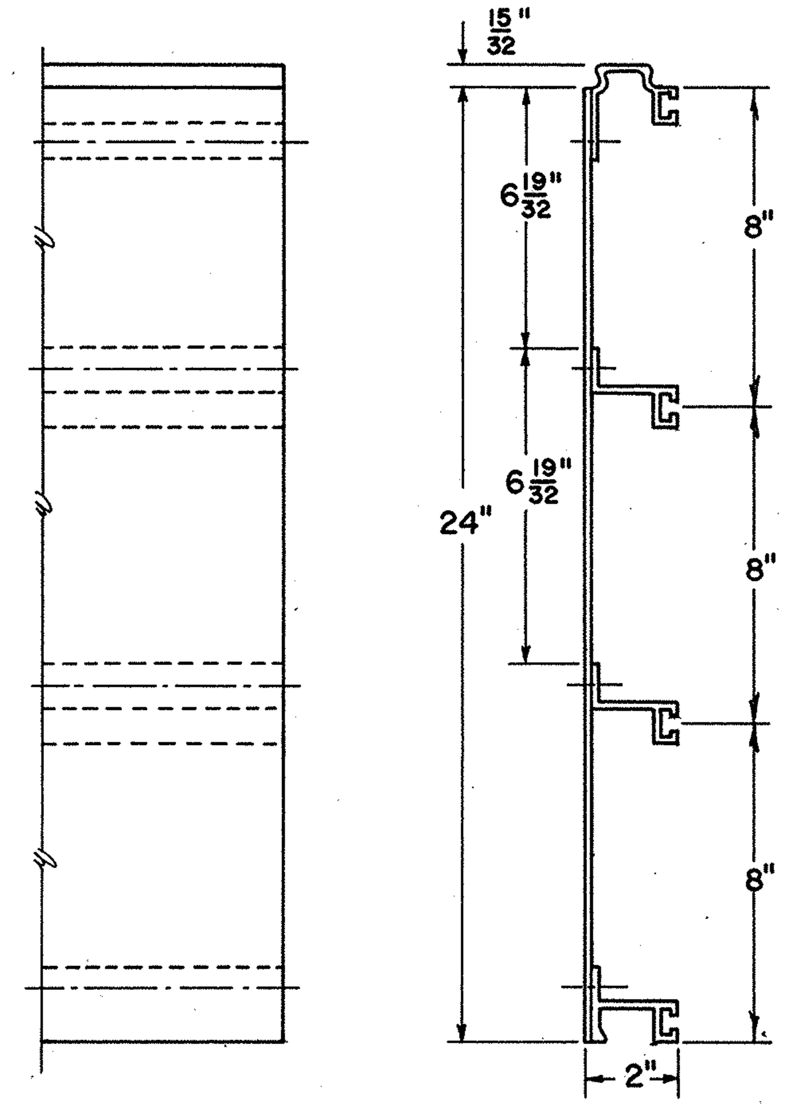
FRONT VIEW SIDE VIEW

18" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

24" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

NOTES:

EXTRUSHEET PANELS SHALL BE ALUMINUM; SPOT WELDING AND ALL MATERIALS SHALL CONFORM WITH SUPPLEMENTAL SPECIFICATION

COMBINATIONS OF 12", 18", AND 24" PANELS ARE USED TO ATTAIN REQUIRED SIGN HEIGHT.

INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN WITH NO SPLICES.

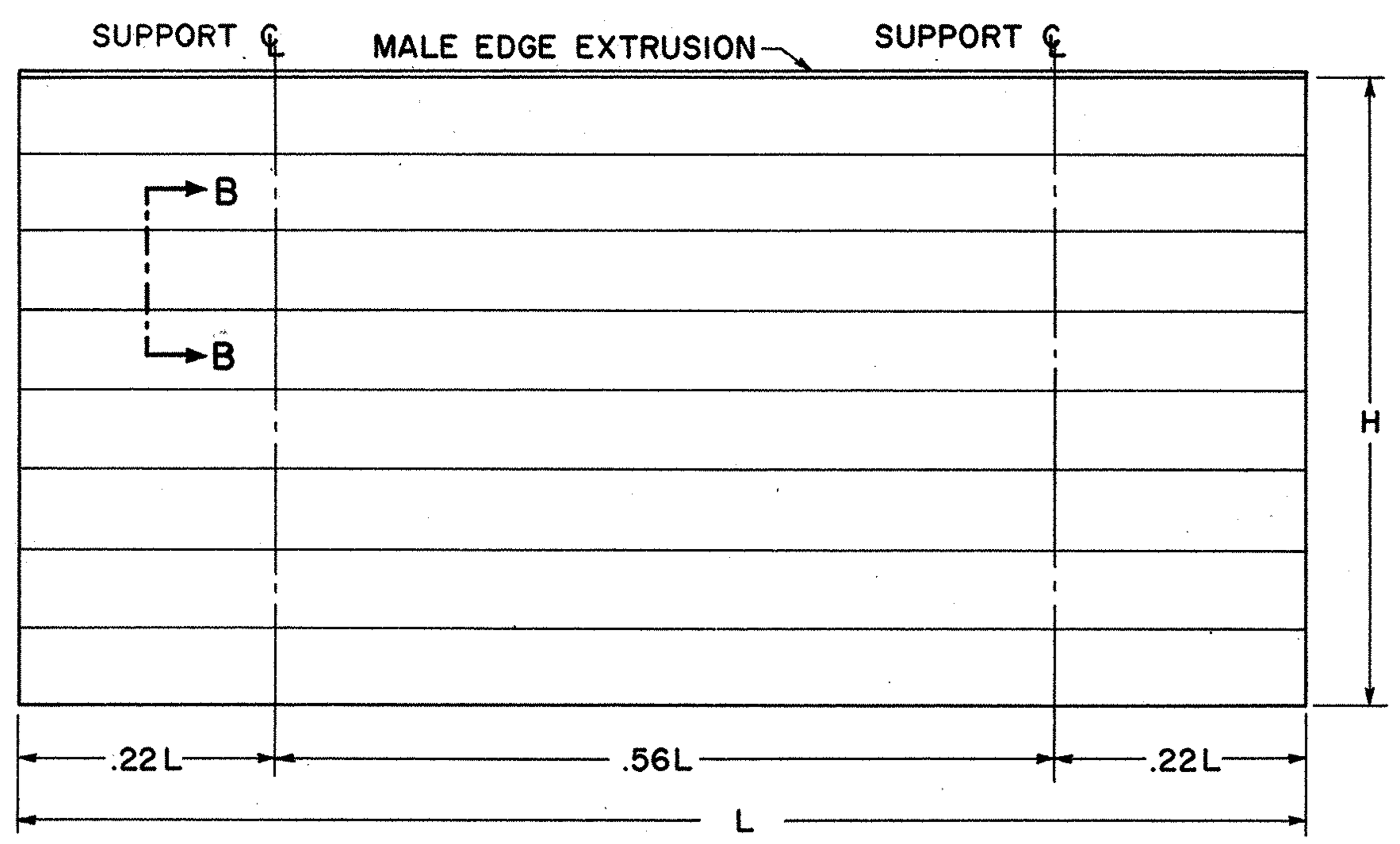
PANELS SHALL BE INTERLOCKED AND ERECTED WITH THE MALE EXTRUSION LOCATED AT THE TOP EDGE OF THE SIGN.

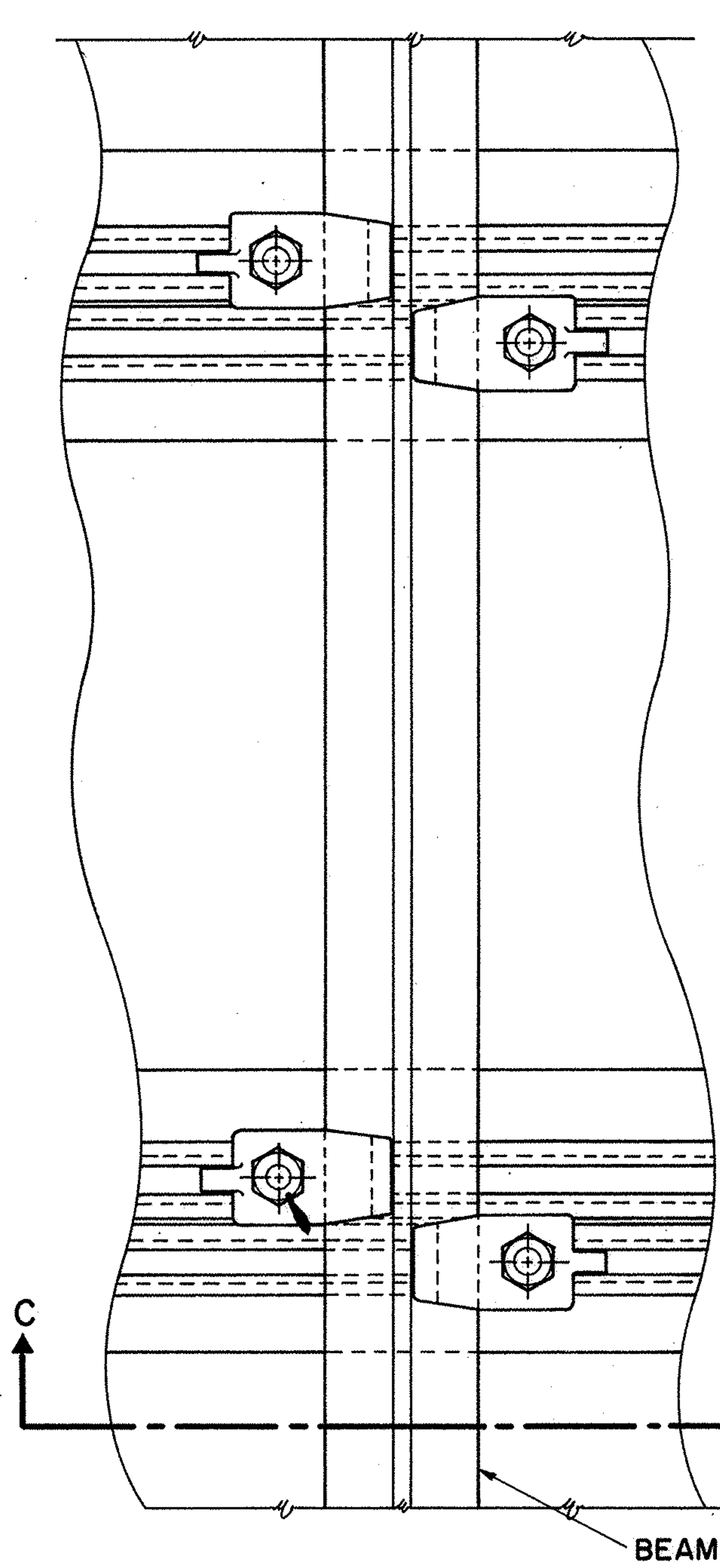
EXTRUSHEET PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND ON BOTH SIDES AT TOP AND BOTTOM EDGE OF SIGN.

THE PANELS SHALL BE DESIGNED TO WITHSTAND A WIND LOAD OF 35 POUNDS PER SQUARE FOOT, IN ACCORDANCE WITH THE A.A.S.H.O. SPECIFICATION FOR DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS.

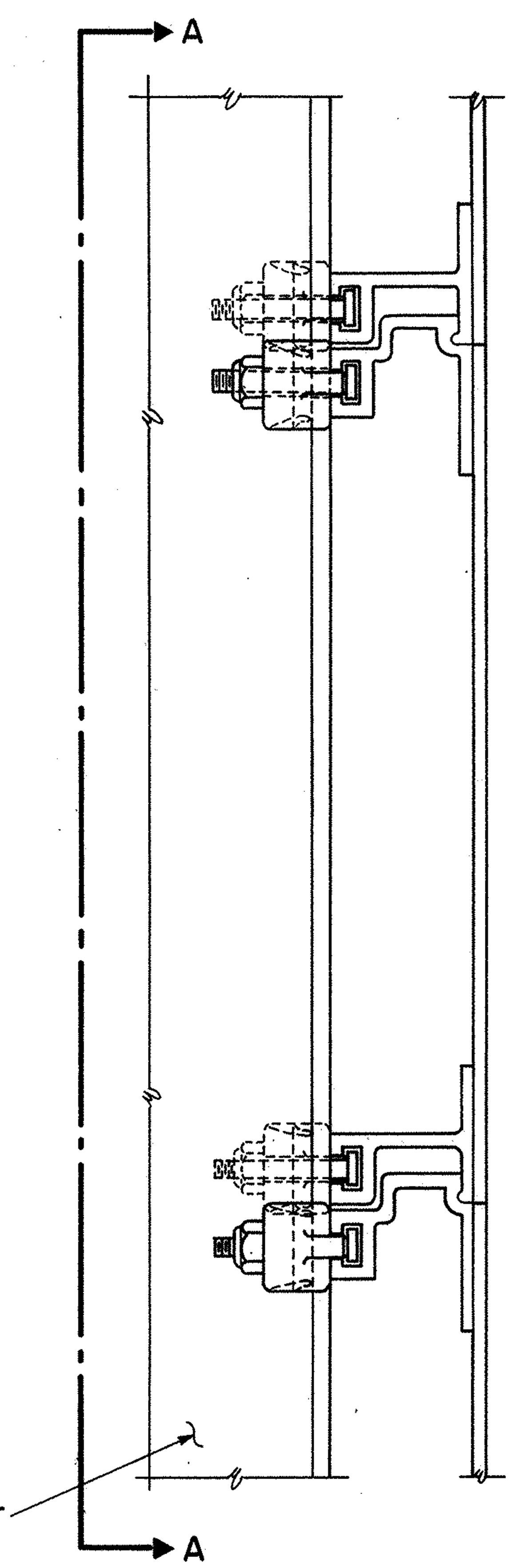
THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0".
THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".

GENERAL ARRANGEMENT

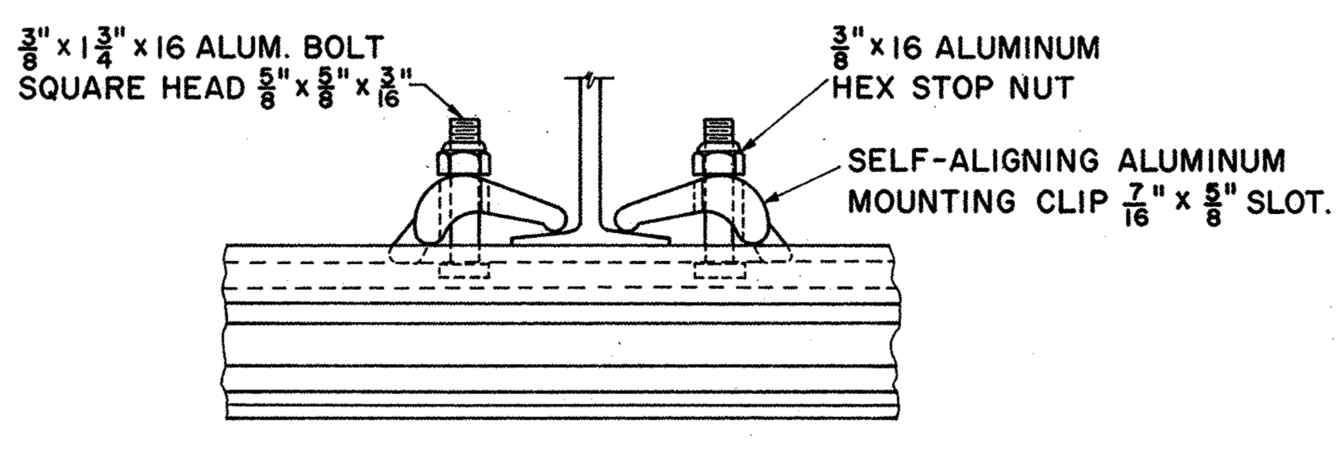




SECTION A-A

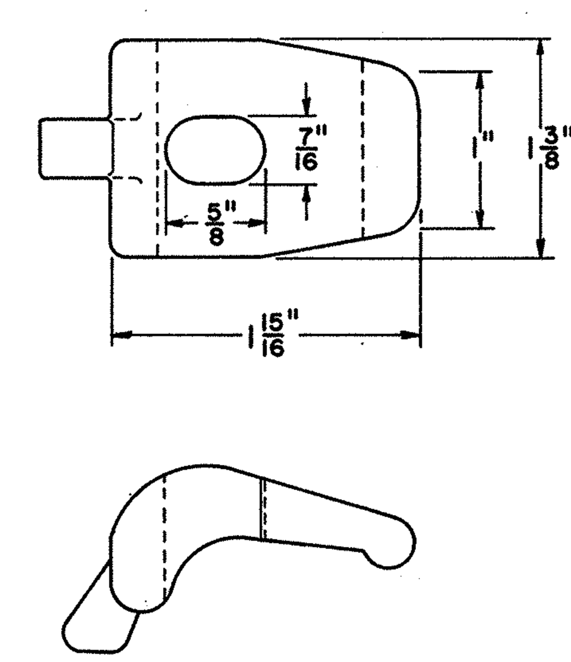


SECTION B-B



SECTION C-C

CLIP DETAIL



SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING	
	CENTER TO CENTER	BETWN ROWS
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH

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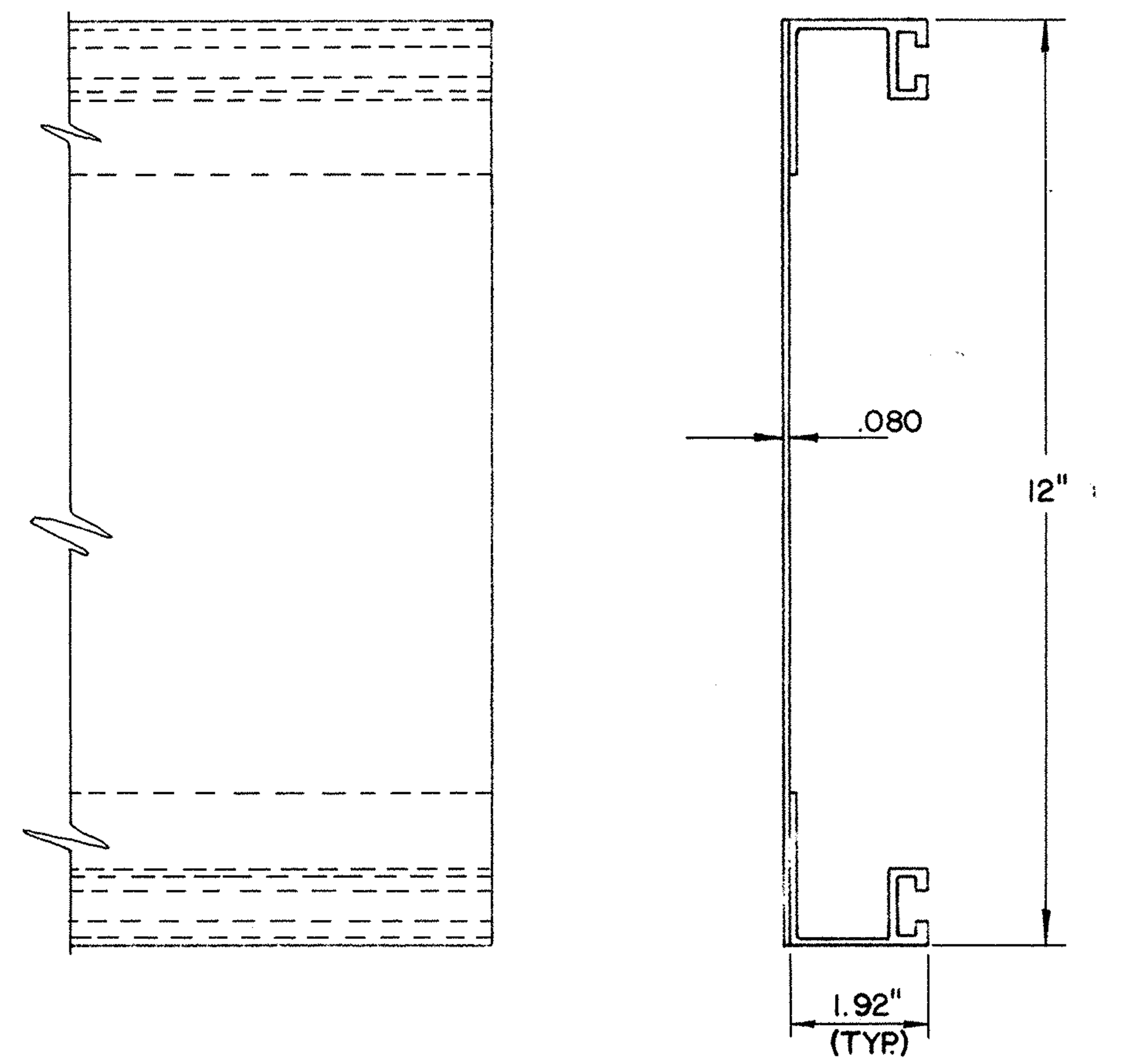
ALUMINUM EXTRUSHEET PANEL SIGN

ECD 1

DATE
9-25-63
5-19-64
10-21-65

APPROVED Fred C. Jarboe
ENGINEER OF TRAFFIC

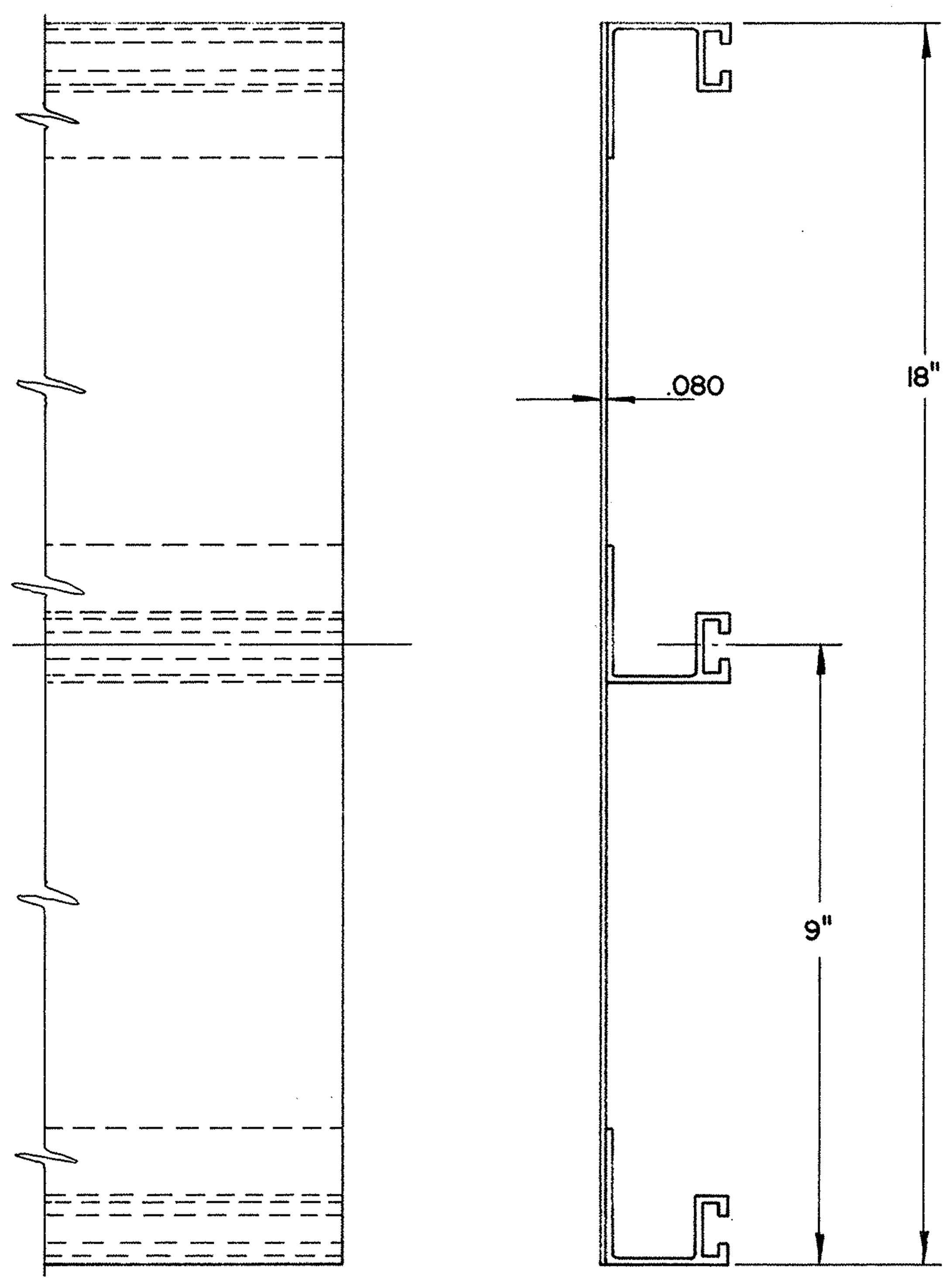
12" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

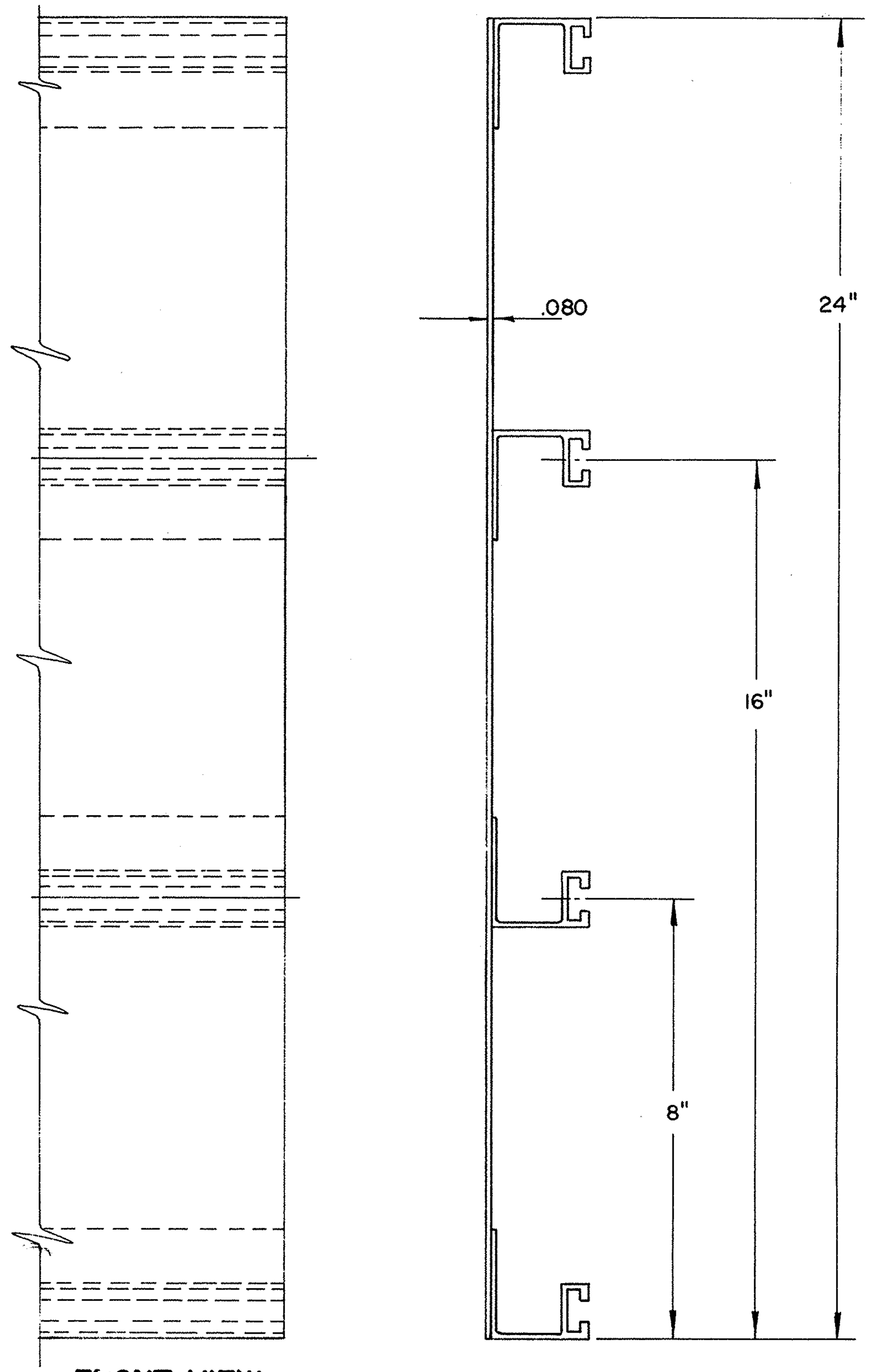
18" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

24" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

NOTES

EXTRU-SHEET PANELS SHALL BE ALUMINUM; SPOT WELDING, MATERIALS AND HARDWARE SHALL CONFORM WITH SPECIFICATION NO. 815

COMBINATIONS OF 12", 18" AND 24" PANELS ARE TO BE USED TO ATTAIN REQUIRED SIGN HEIGHT.

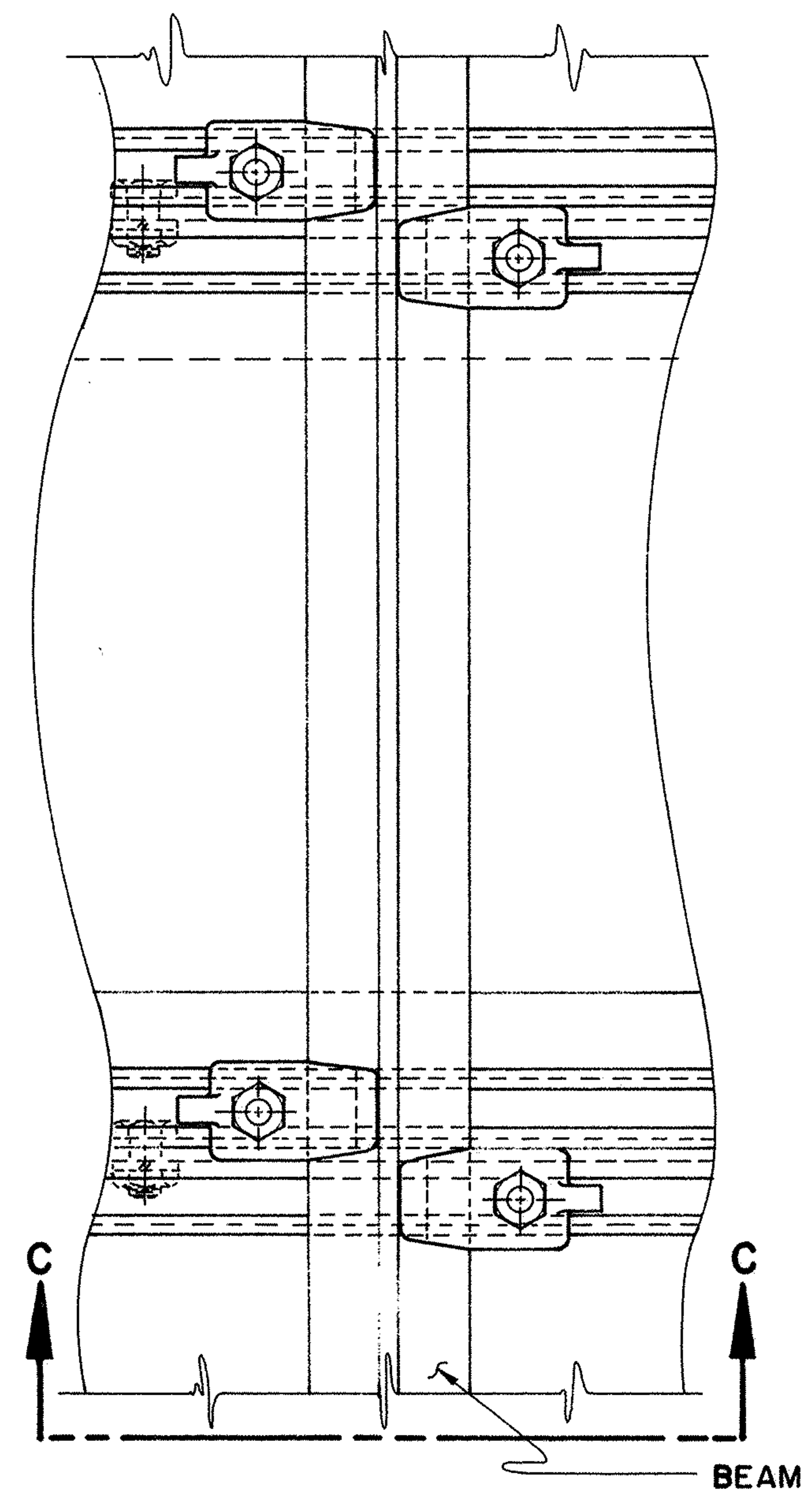
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN, WITH NO SPLICES.

THE PANELS SHALL BE ERECTED HORIZONTALLY AND BOLTED ON 24" CENTERS.

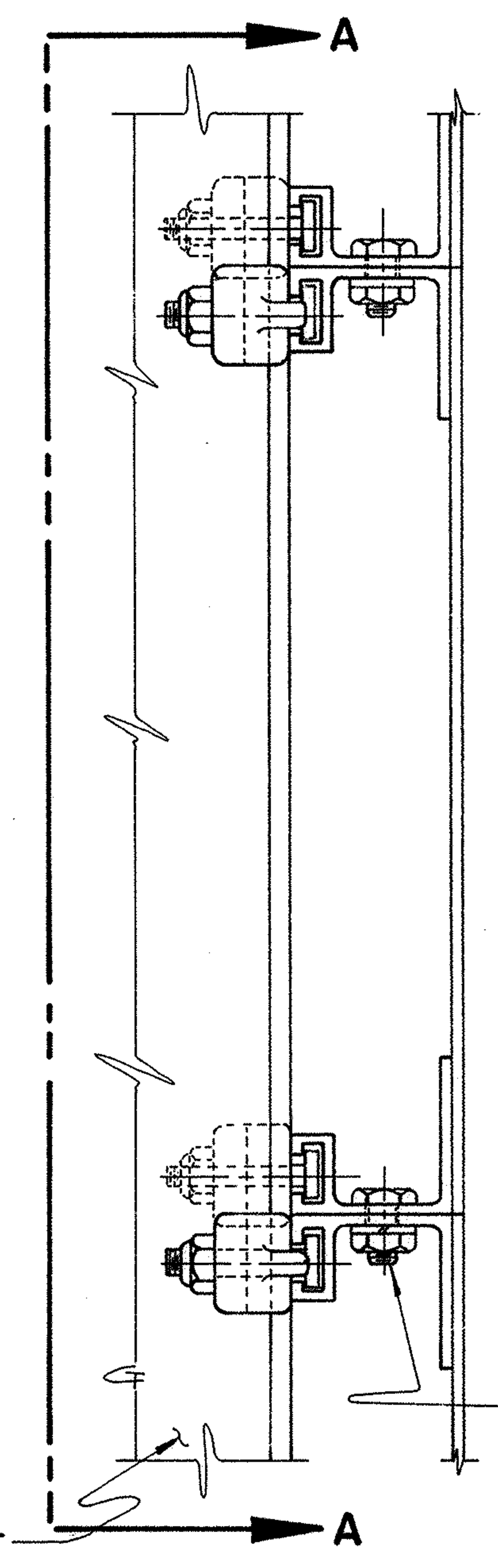
THE PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND BOTH SIDES AT TOP AND BOTTOM EDGES OF SIGN.

THE PANELS SHALL BE DESIGNED IN ACCORDANCE WITH THE A.A.S.H.O SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, BASE ON A WIND LOAD OF 35#/SQ.FT.

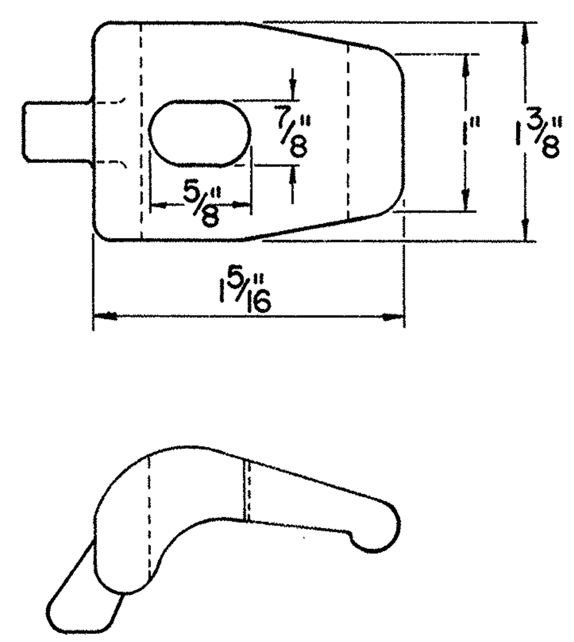
THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0". THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".



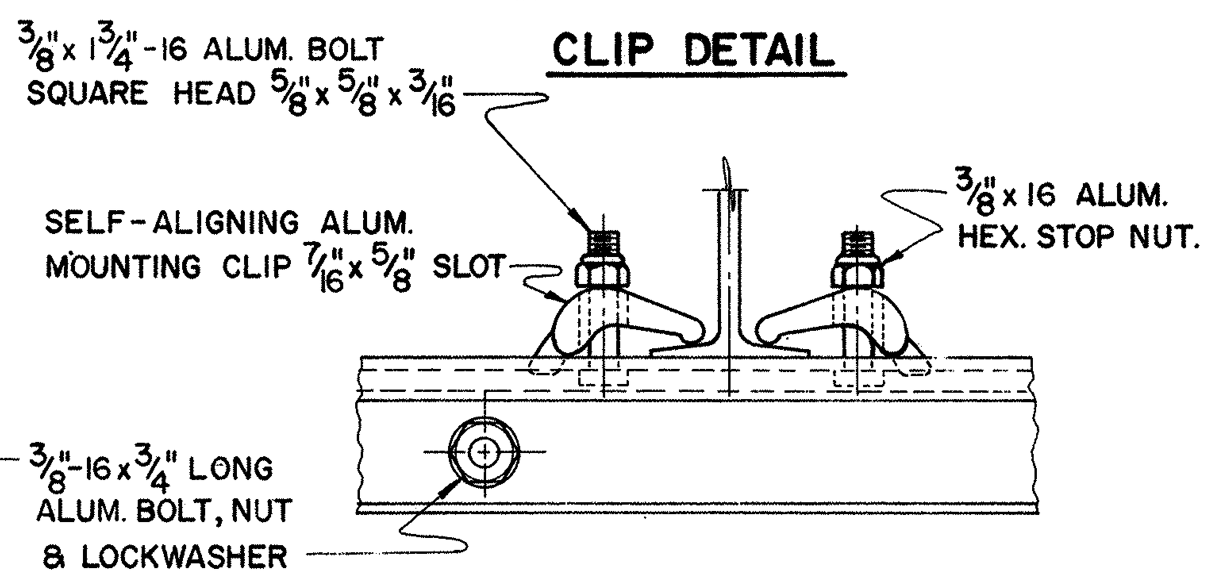
SECTION A-A



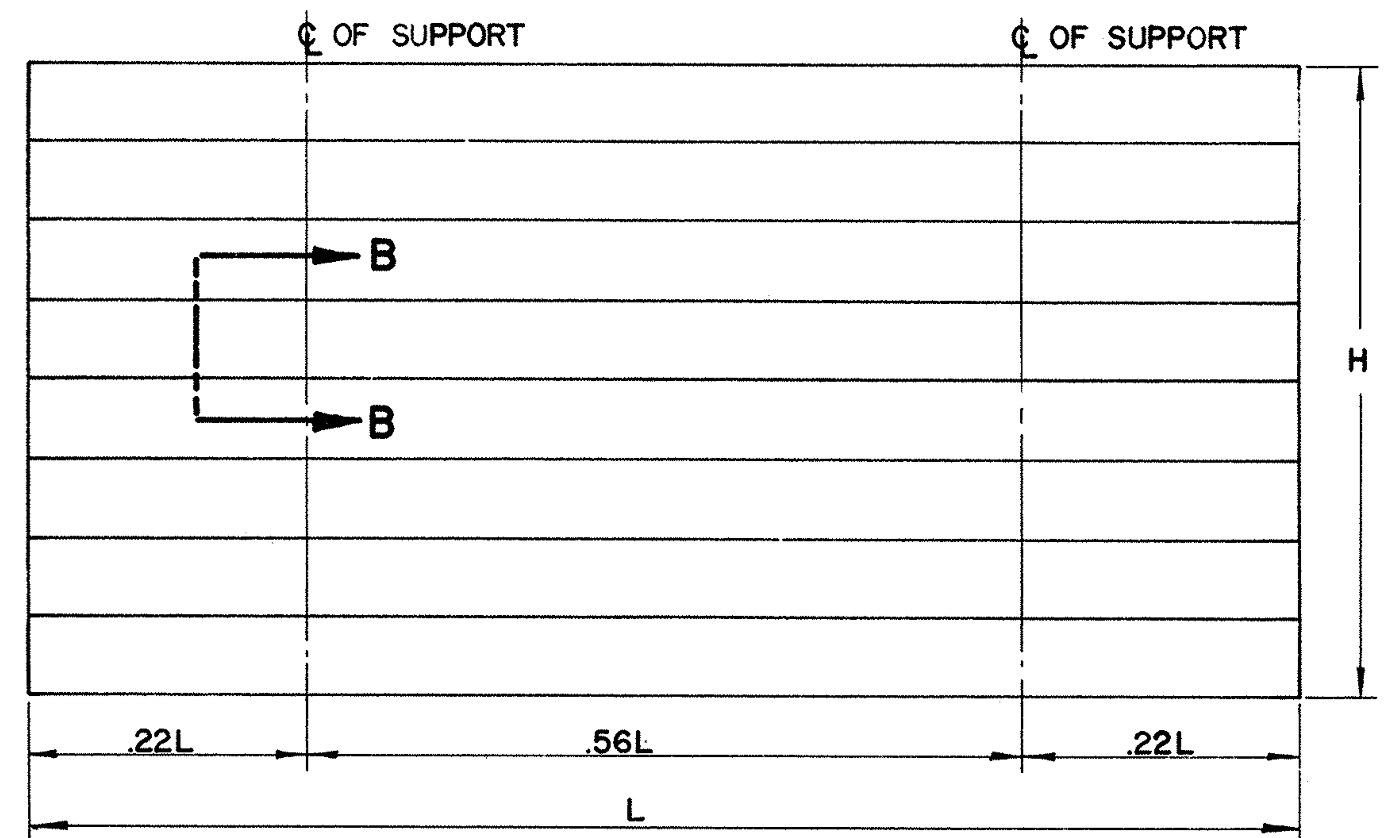
SECTION B-B



CLIP DETAIL



SECTION C-C



GENERAL ARRANGEMENT

SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING CENTER TO CENTER	BETWN ROWS
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH

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OHIO DEPARTMENT OF HIGHWAYS

ALUMINUM BOLTED EXTRUSHEET PANEL SIGN	ECD 2	DATE 10-14-65

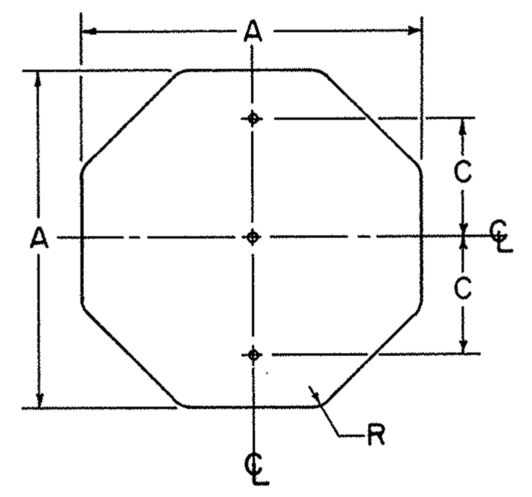
APPROVED Fred C. Talbot
ENGINEER OF TRAFFIC

ALUMINUM BOLTED-EXTRUSHEET PANEL SIGN

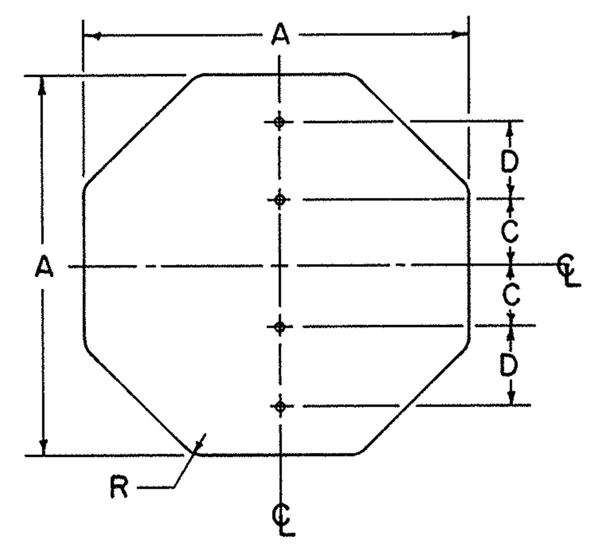
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MAH-7-14.95

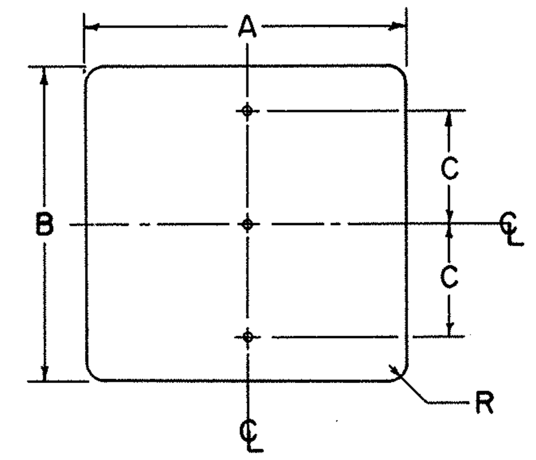
110Q



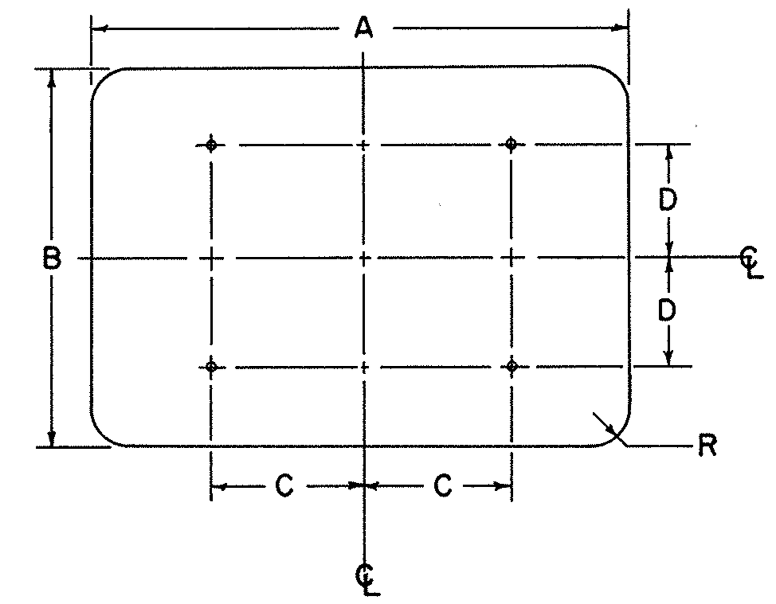
A	C	R	GAUGE
30	8	1 1/2	.080
36	8	1 1/2	.080



A	C	D	R	GAUGE
48	8	10	1 1/2	.100

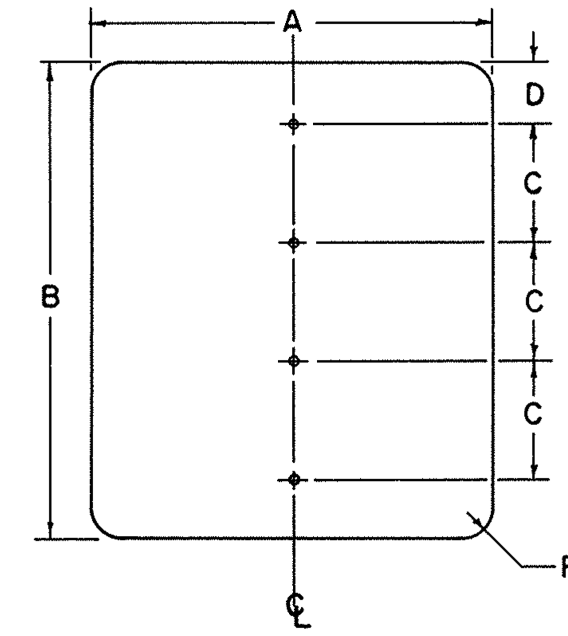


A	B	C	R	GAUGE
30	42	12	1 1/2	.080
36	36	11	1 1/2	.080
36	42	15	1 1/2	.080
36	48	15	1 1/2	.080
48	24	10	3	.100
48	36	13	3	.100

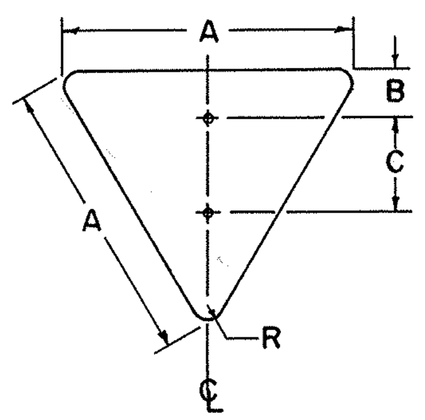


A	B	C	D	R	GAUGE
48	48	22	16	3	.100
48	60	22	22	3	.100

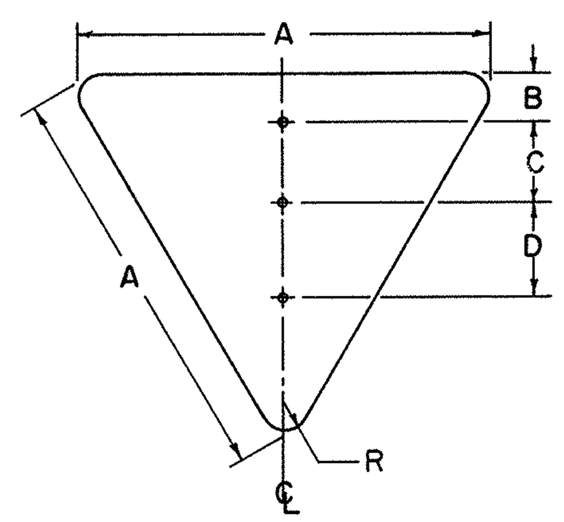
SPEED LIMIT SIGNS ON TWO SUPPORTS



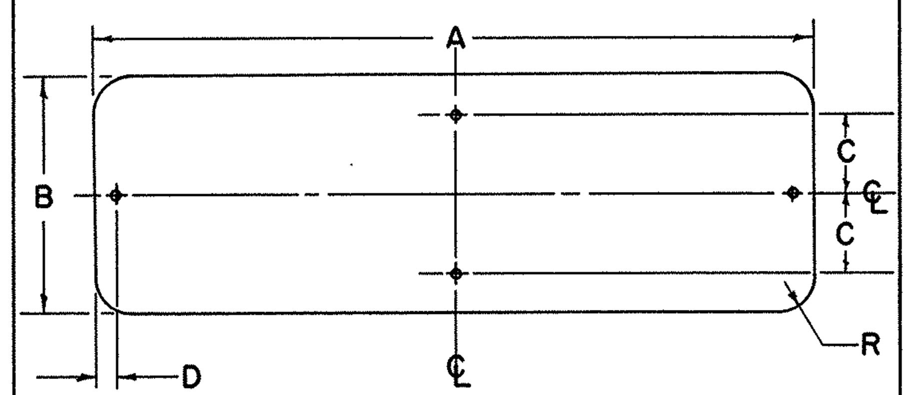
A	B	C	D	R	GAUGE
48	48	12	6	3	.100
48	60	15	7 1/2	3	.100



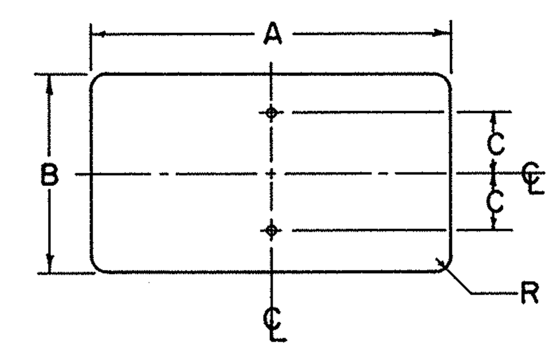
A	B	C	R	GAUGE
36	3	16	2 1/2	.080



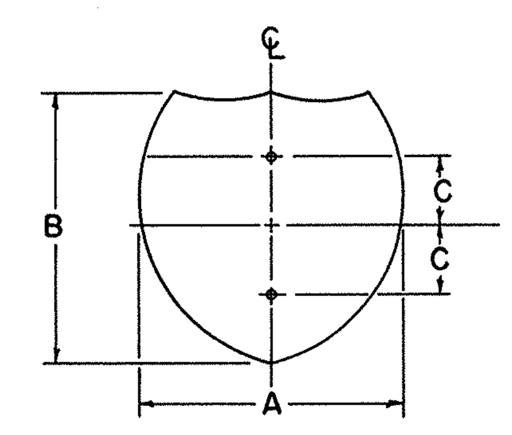
A	B	C	D	R	GAUGE
48	4	10	15	3	.100
60	5	10	15	4	.100



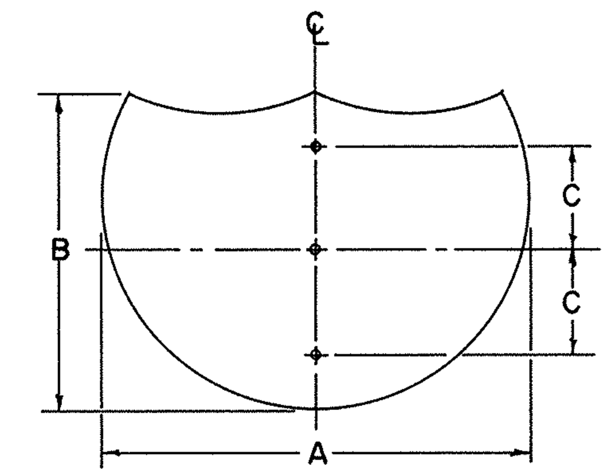
A	B	C	D	R	GAUGE
36	12	4	1	1 1/2	.080



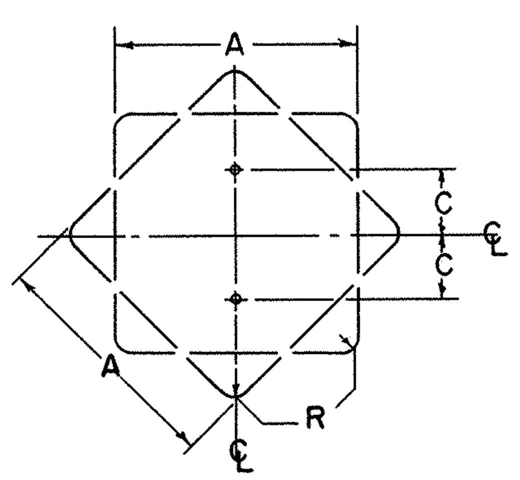
A	B	C	R	GAUGE
12	6	3	1 1/2	.063
20	15	6	1 1/2	.063
24	12	4 1/2	1 1/2	.063
24	18	15	1 1/2	.063
24	30	8	1 1/2	.063
24	48	10	1 1/2	.100
30	36	10 1/2	1 1/2	.080
36	18	7 1/2	1 1/2	.080



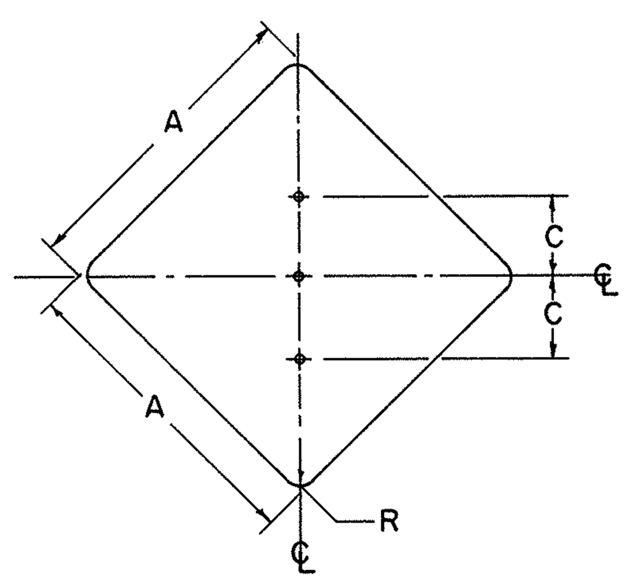
A	B	C	GAUGE
24	24	8	.063
30	24	8	.080



A	B	C	GAUGE
36	36	11	.080
48	36	11	.100

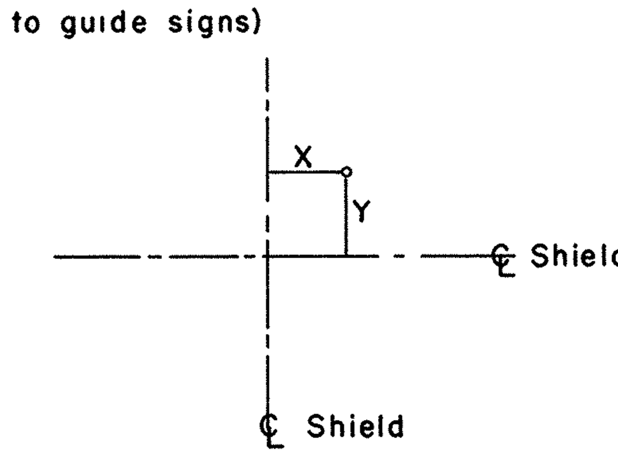


A	C	R	GAUGE
18	7 1/2	1 1/2	.063
24	8	1 1/2	.063
30	8	1 1/2	.080



A	C	R	GAUGE
36	12	3	.080
48	14	3	.100

Location of holes on "Demountable Shields" (attached to guide signs)



SIZE	NO. HOLES	X	Y
(26) 24X24	4	7	7
30X24	4	8	8
(39) 36X36	4	10	10
		0	10
48X36	6	15	10

For notes on fastening see drawing for miscellaneous "Signing Items" sheet.

NOTES:

ALL DEMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MATERIAL

FLAT SIGN BLANKS SHALL BE FURNISHED IN ALUMINUM ALLOY 6061-T6, (ASTM-B209, GS11A-T6) WITH MILL FINISH.

BOLT HOLES

THE BOLT HOLES SHALL BE 3/8" IN DIAMETER, AND MAY BE DRILLED, BLANKED OR PUNCHED TO FINISHED SIZE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SIGN BLANK DETAILS

SBD

DATE 4-14-67

APPROVED ____________
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

110R

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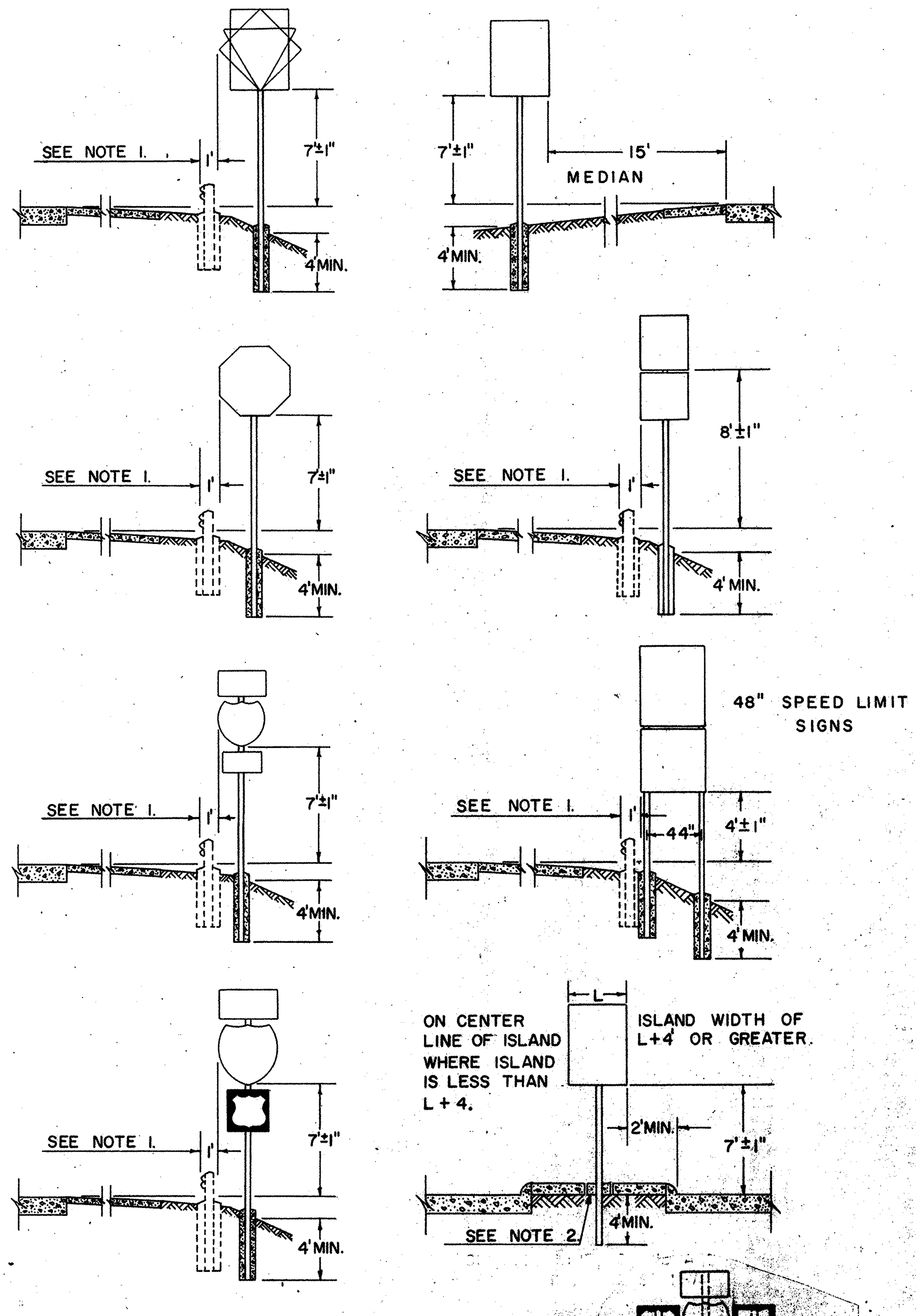
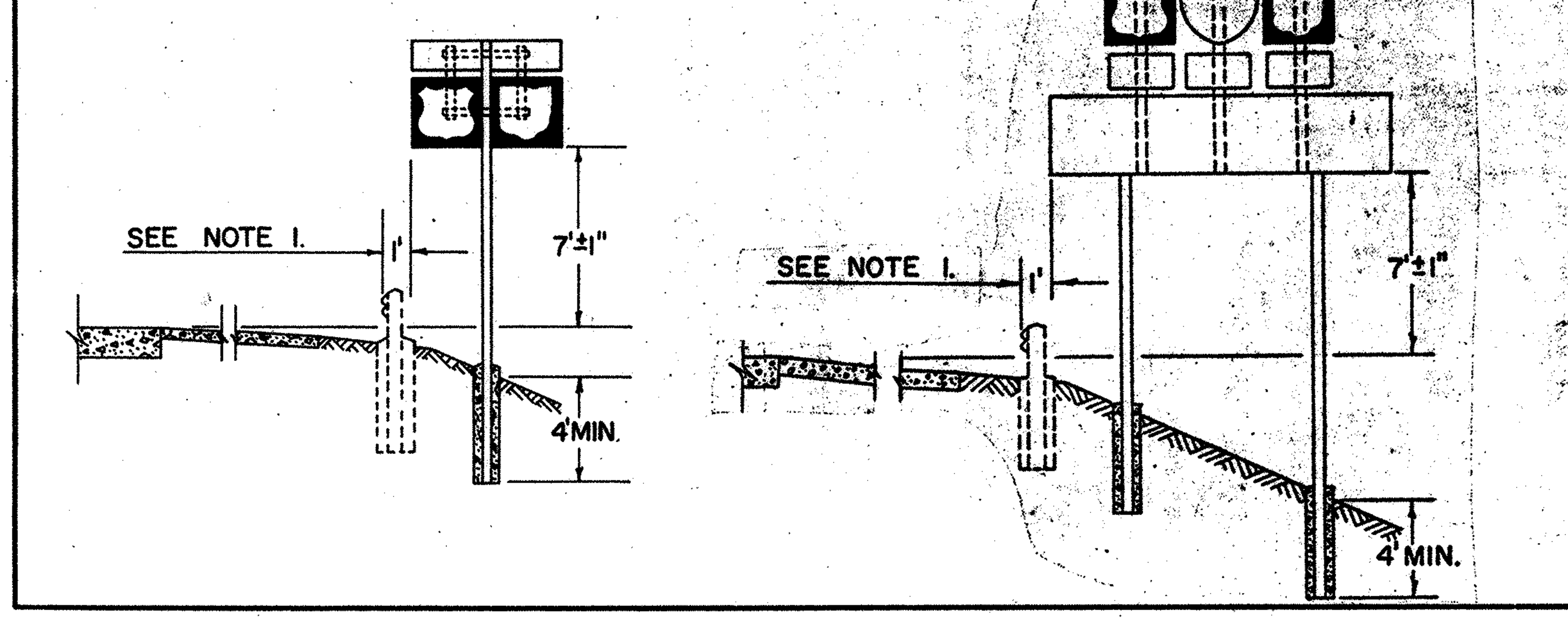
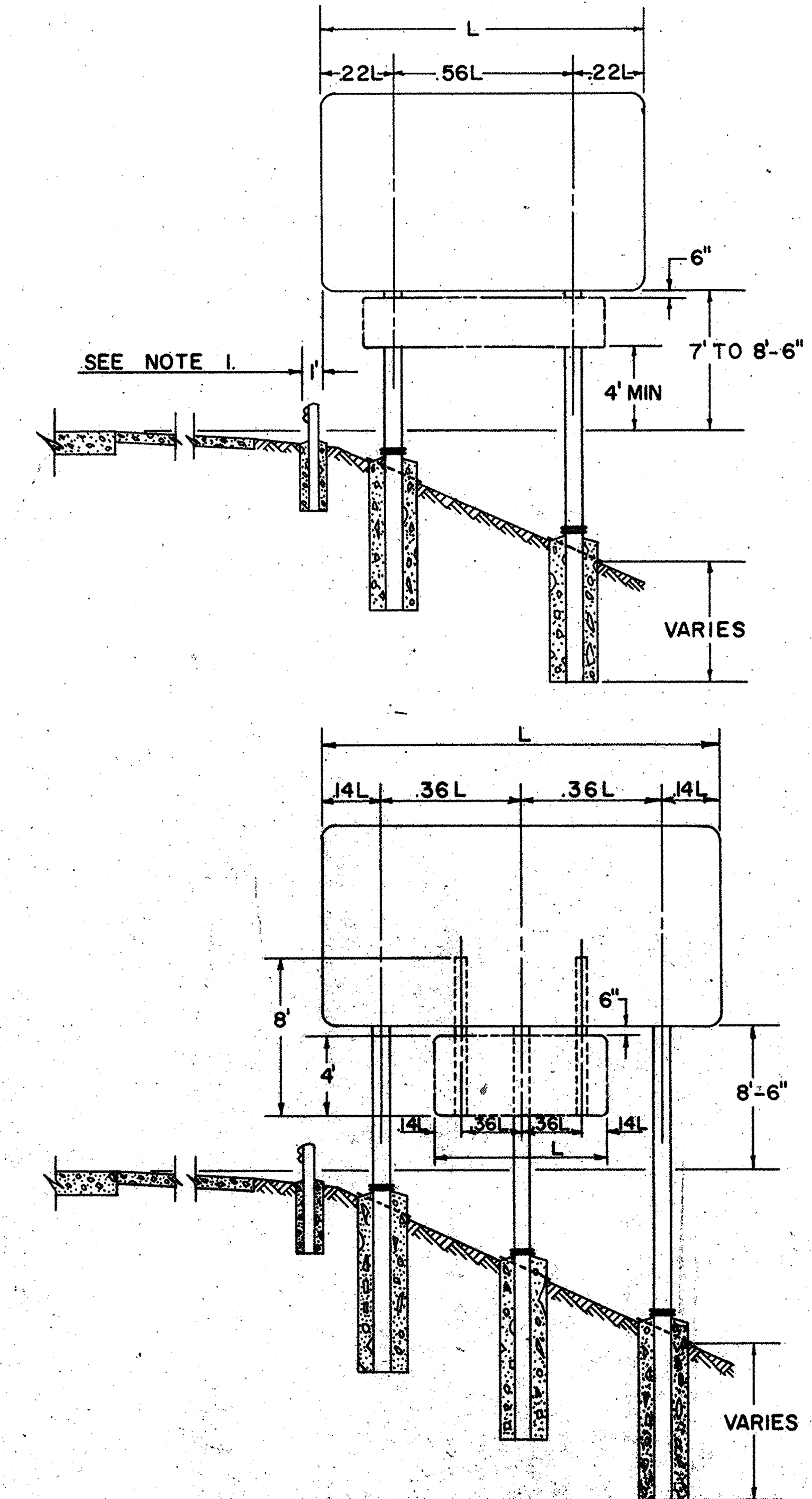
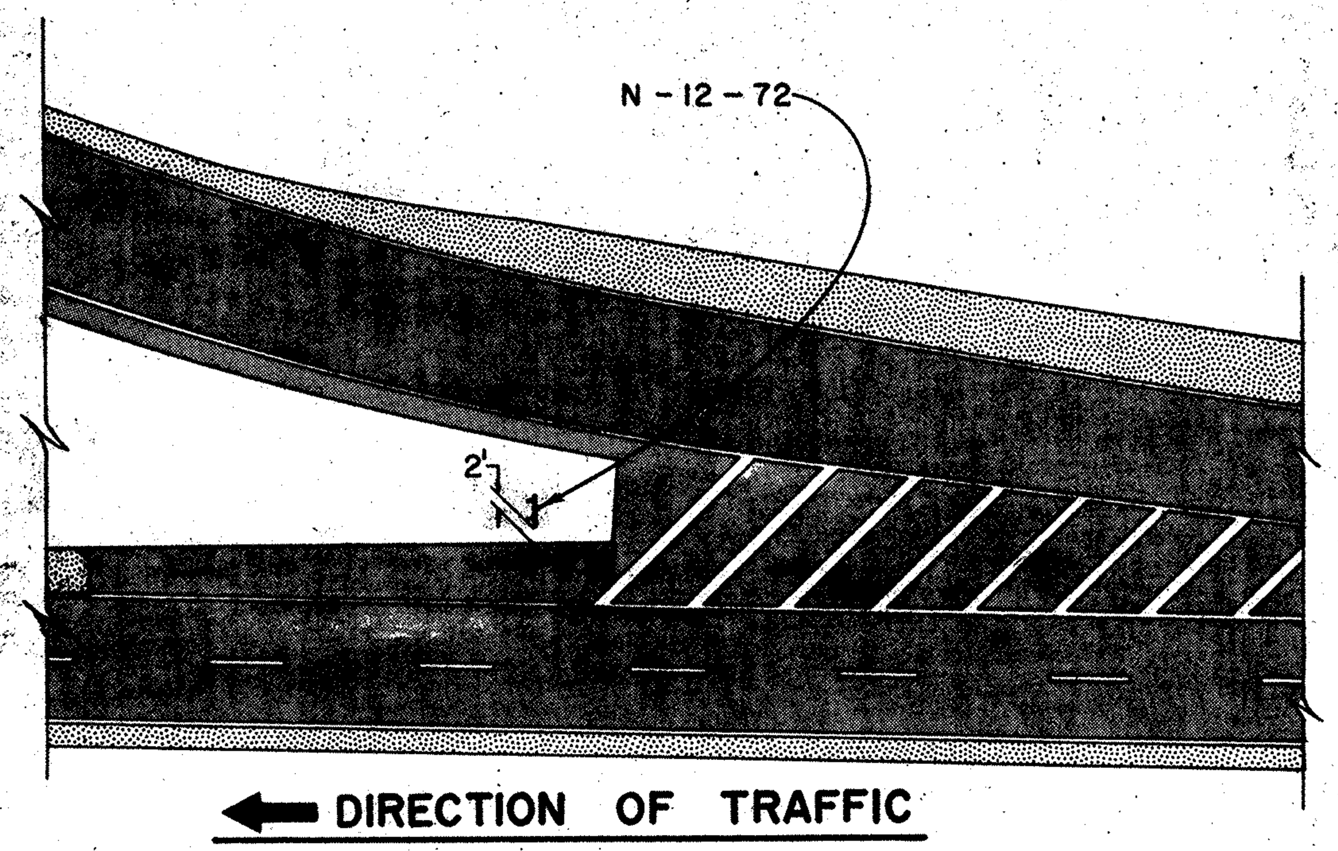
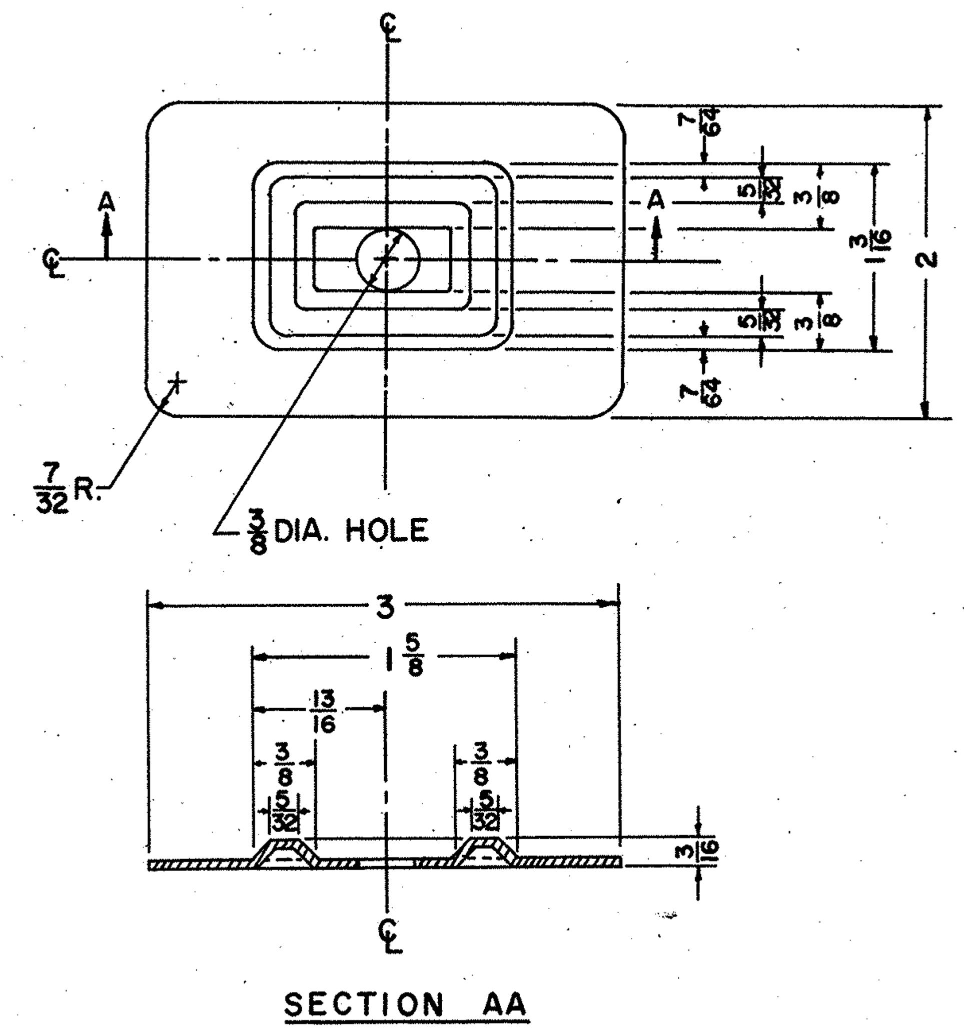




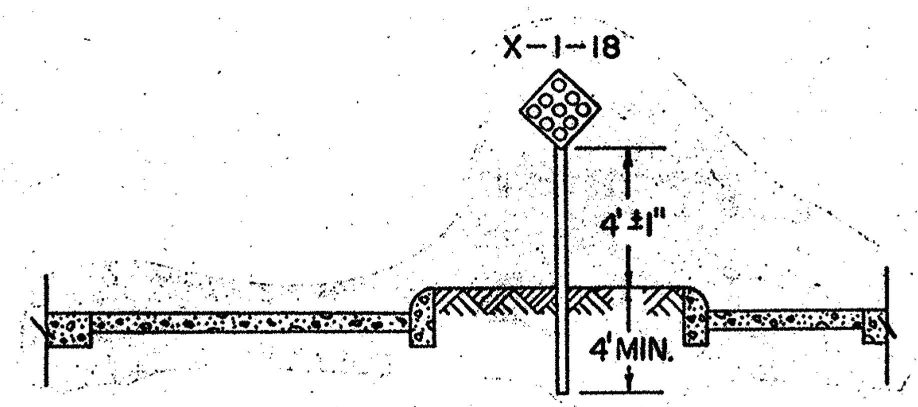






NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



SIGN SUPPORT SPACING

L=FT	2 SUPPORTS		3 SUPPORTS		L=FT	2 SUPPORTS		3 SUPPORTS	
	.22	.56	.14	.36		.22	.56	.14	.36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	19.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	20.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	21.0			2.94	7.56
10.0	2.20	5.60	1.40	3.60	22.0			3.08	7.92
11.0	2.42	6.16	1.54	3.96	23.0			3.22	8.28
12.0	2.64	6.72	1.68	4.32	24.0			3.36	8.64
13.0	2.86	7.28	1.82	4.68	25.0			3.50	9.00
14.0	3.08	7.84	1.96	5.04	26.0			3.64	9.36
15.0	3.30	8.40	2.10	5.40	27.0			3.78	9.72
16.0	3.52	8.96	2.24	5.76	28.0			3.92	10.08

NOTES

1. THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION & USED WHETHER OR NOT GUARD RAIL IS PRESENT.
ON RAMPS THE NEAR EDGE OF SIGNS SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.
ON APPROACHES THE NEAR EDGE OF SIGNS SHALL BE
(A) ONE FOOT (1') BEHIND EXISTING GUARD RAIL
(B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

2. POSTS PLACED IN CONCRETE MEDIANS SHALL BE INSTALLED BY DRIVING THROUGH A 6" SLEEVE OR CORE DRILLED HOLE. THE HOLE SHALL BE FILLED WITH ASPHALT OR PORTLAND CONCRETE AFTER THE POST IS IN THE PROPER POSITION.

3. HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO BACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.

4. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" "WIDE", USED ON SIGN FACE ONLY.

5. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.

6. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

7. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".

8. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

TYPICAL PLACEMENT OF SIGNS

TPS-1

DATE
9-27-67
7-12-68

APPROVED ____________
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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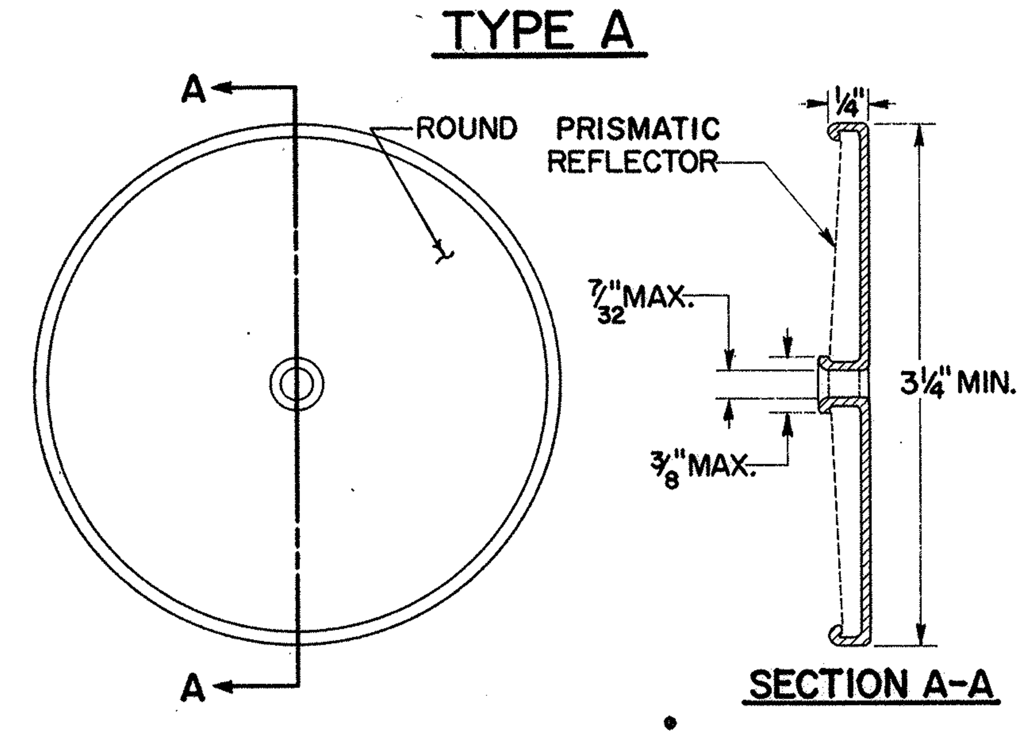
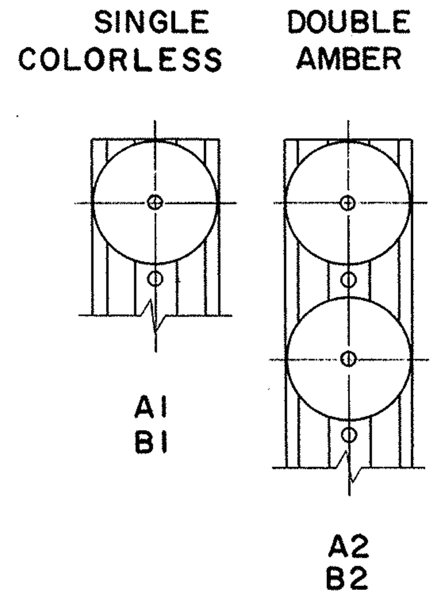
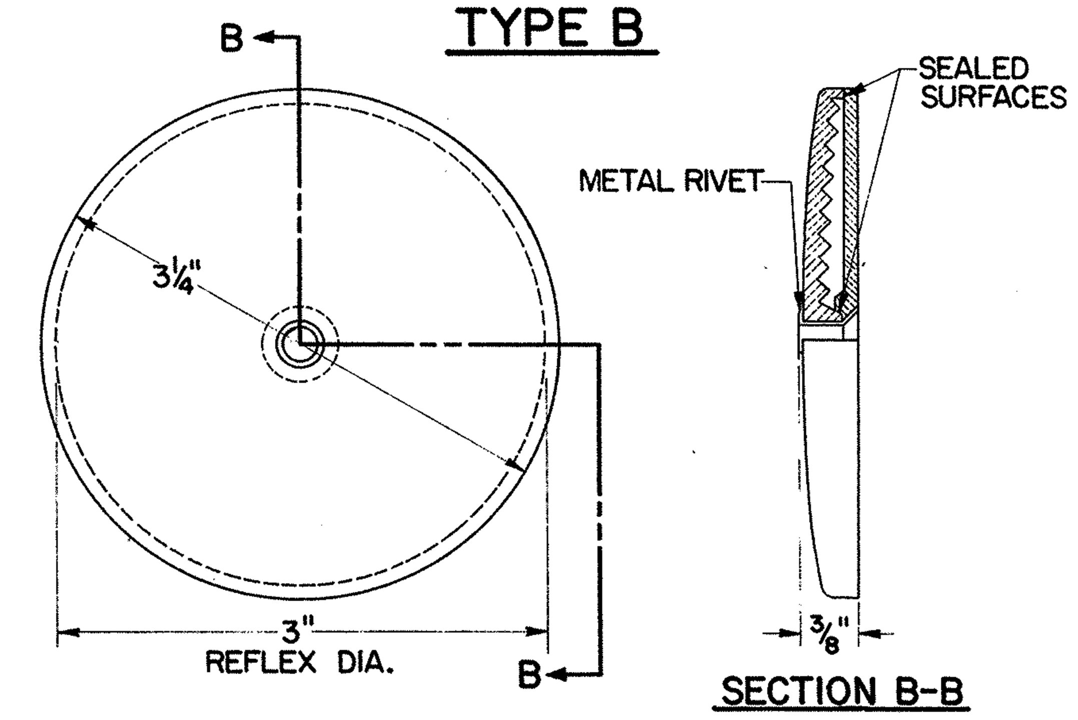
TYPE A





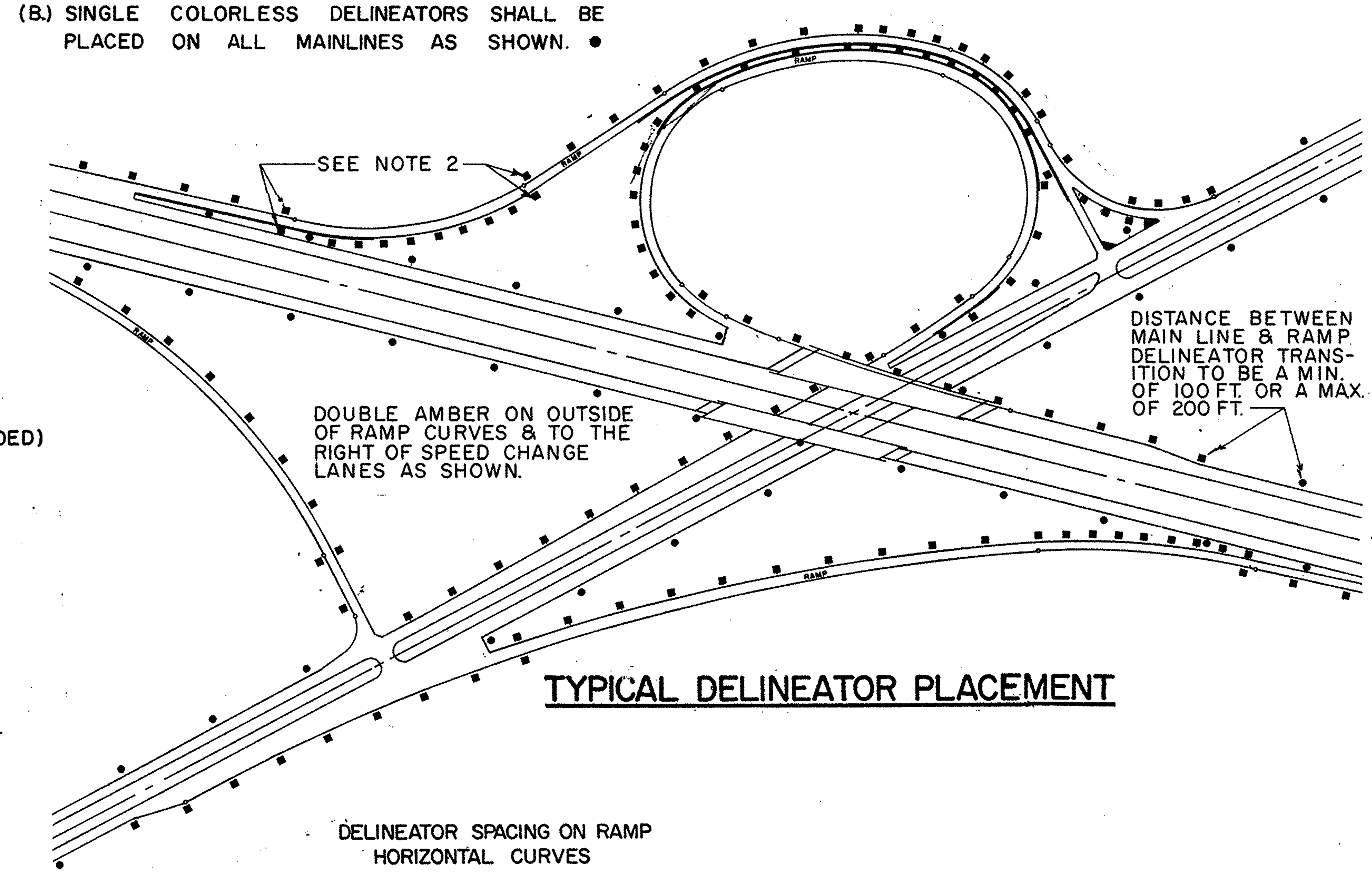
TYPE B



NOTE:

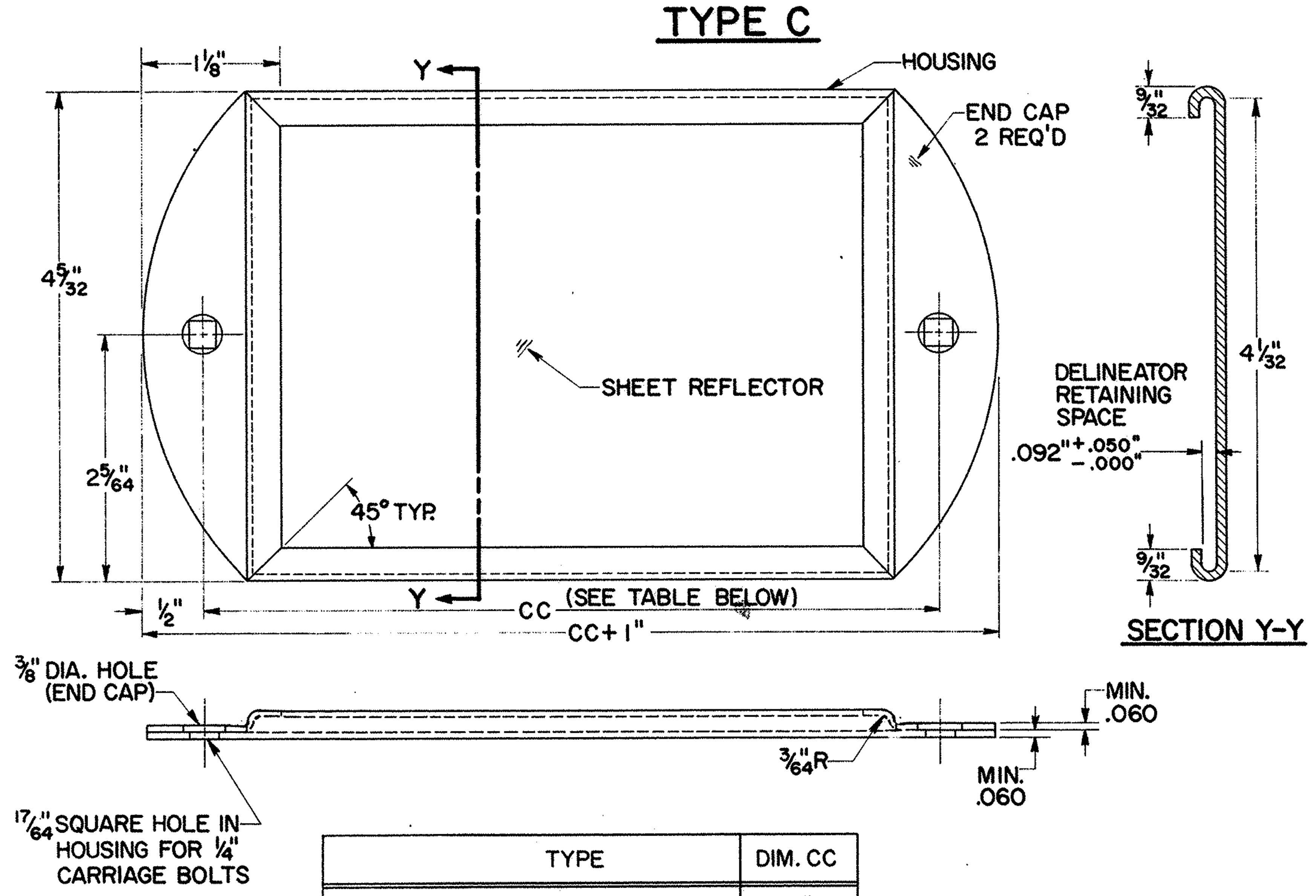
(A.) DOUBLE AMBER DELINEATORS SHALL BE PLACED ON ALL RAMPS AS SHOWN. ■

(B.) SINGLE COLORLESS DELINEATORS SHALL BE PLACED ON ALL MAINLINES AS SHOWN. ●

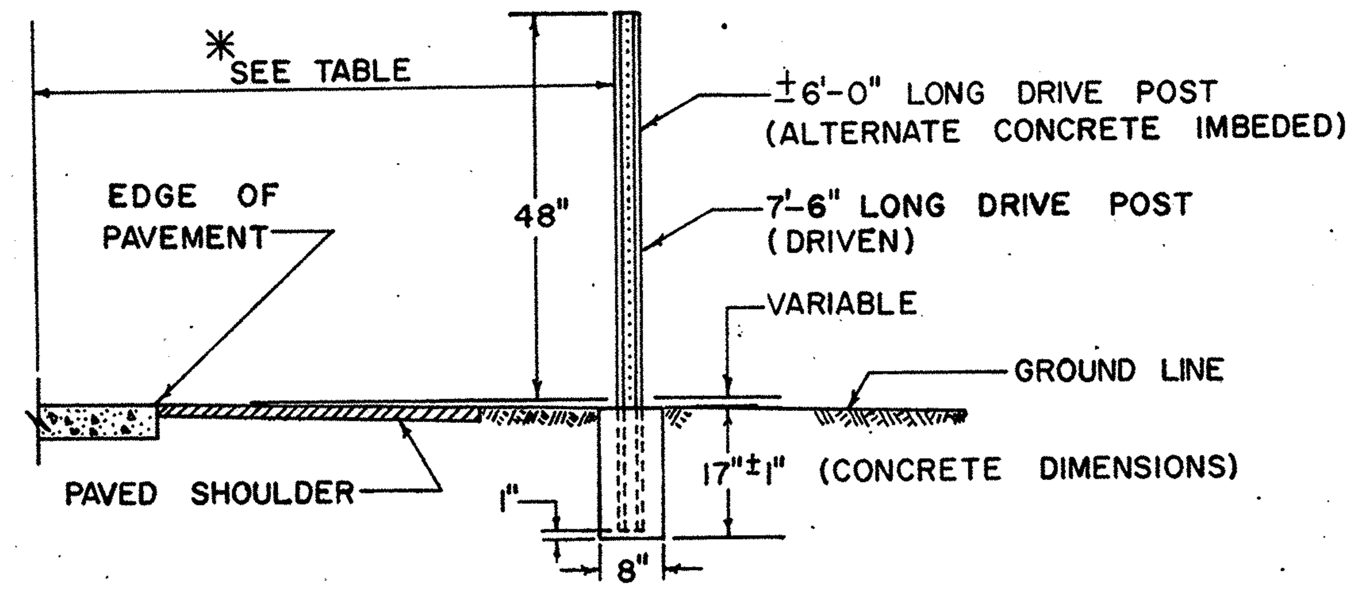


TYPICAL DELINEATOR PLACEMENT

TYPE C



TYPE	DIM. CC
C1 - SINGLE COLORLESS	6"
C2 - DOUBLE AMBER	11"



LATERAL PLACEMENT OF DELINEATORS

* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE COLORLESS	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.

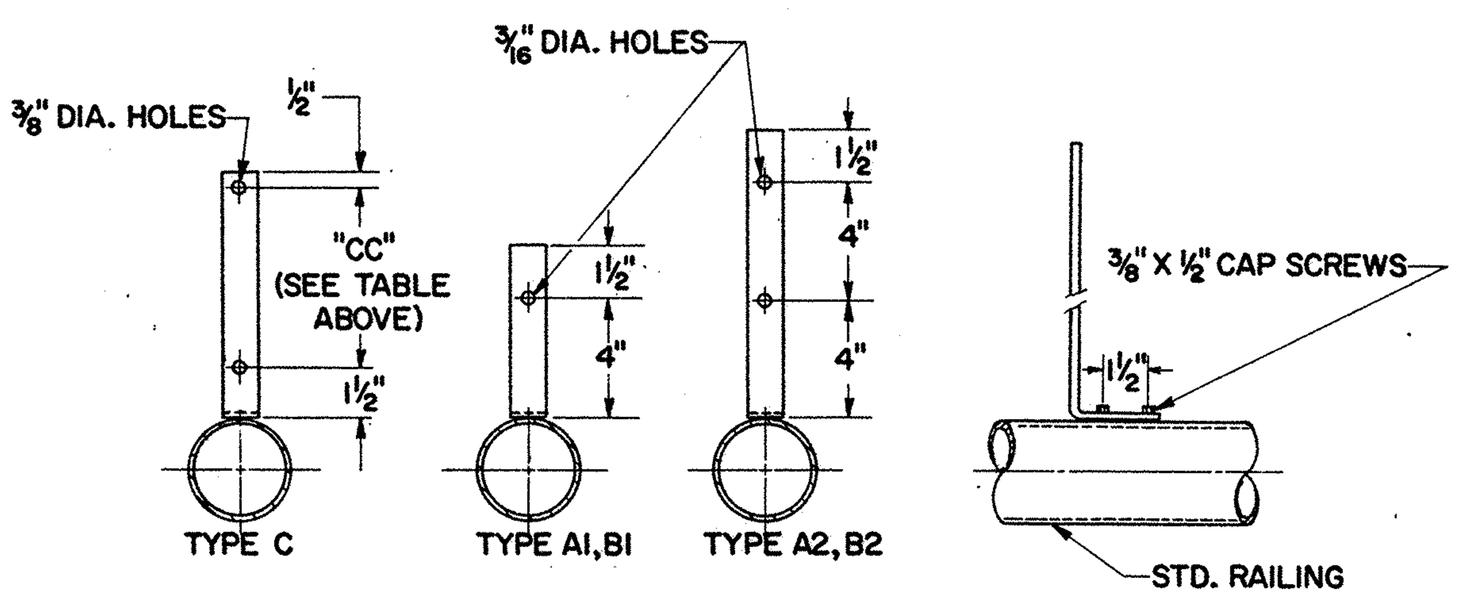
DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	——	30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

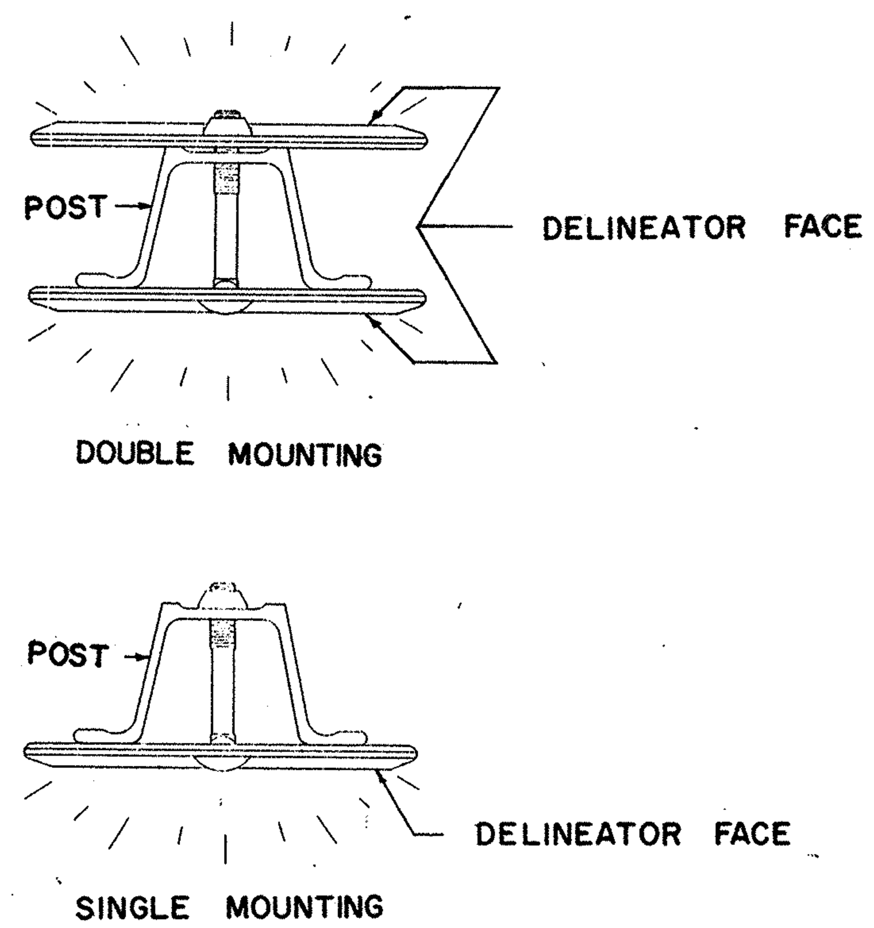
NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES.
2. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS, THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
3. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM
4. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.

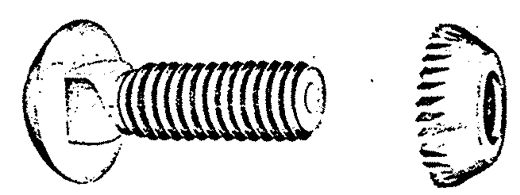


ALL BRACKETS 1/4" x 1 1/4" STAINLESS STEEL

BRIDGE RAIL BRACKET

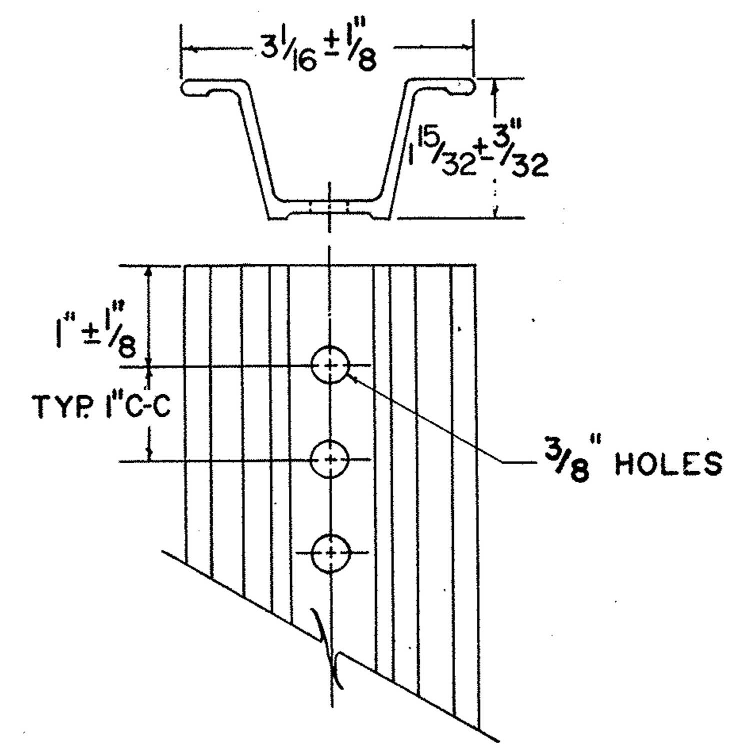


DELINEATOR MOUNTING



TAMPER RESISTANT FASTENERS SHALL BE USED TO FASTEN DELINEATORS TO POST AS/OR SIMILAR TO ONE SHOWN ABOVE.

TAMPER RESISTANT FASTENERS



2 LB./FT.
DELINEATOR DRIVE POST

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

620

DATE
9-25-62
5-24-65
9-12-67

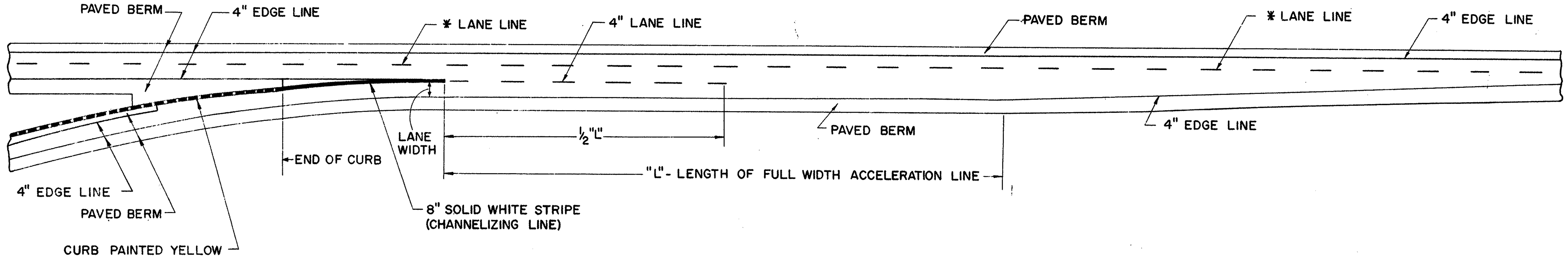
APPROVED Robert E. Lomer
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

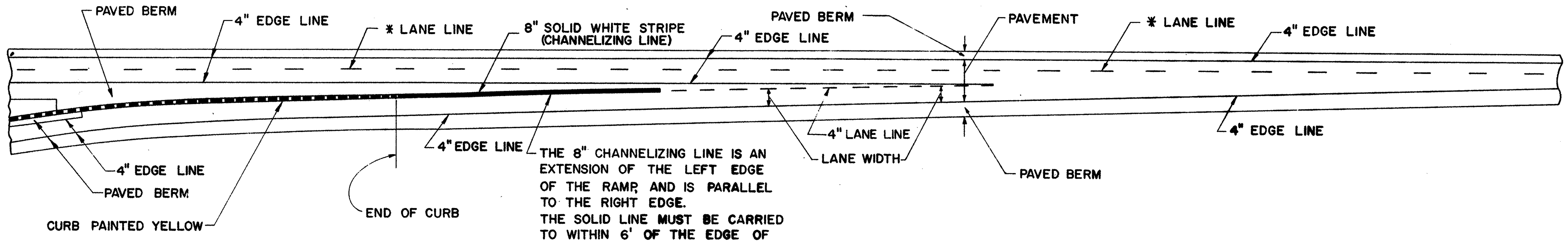
110T

MAH-7-14.95

ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE

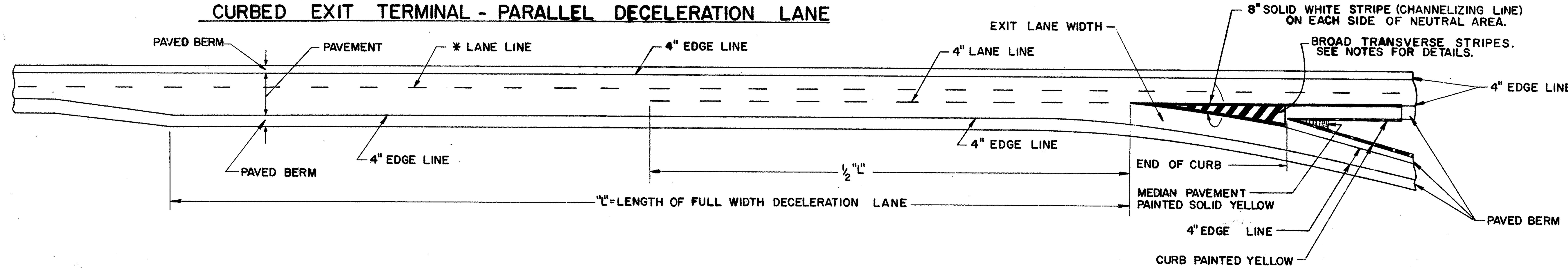


ENTRANCE TERMINAL - TAPERED ACCELERATION LANE

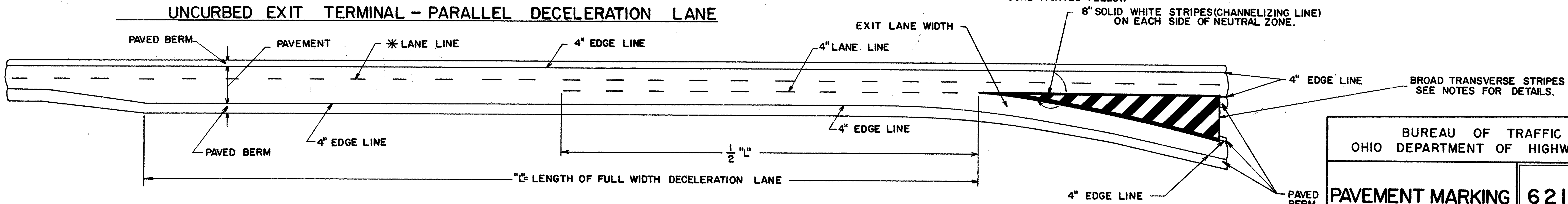


THE 8" CHANNELIZING LINE IS AN EXTENSION OF THE LEFT EDGE OF THE RAMP, AND IS PARALLEL TO THE RIGHT EDGE. THE SOLID LINE MUST BE CARRIED TO WITHIN 6' OF THE EDGE OF THE THROUGH LANE, OR TO THE END OF THE RAMP CURVE IF CLOSER. THE 4" DASHED LINE SHOULD CONTINUE TO THE EDGE OF THE THROUGH LANE.

CURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



UNCURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



NOTES

DIAGONAL STRIPES AT EXIT RAMPS SHALL BE 24" BROAD TRANSVERSE STRIPES, 621.11, WITH A 6' SPACE BETWEEN STRIPES.

* 6" LANE LINE ON INTERSTATE HIGHWAYS ONLY.
4" LANE LINE ON ALL OTHER HIGHWAYS.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

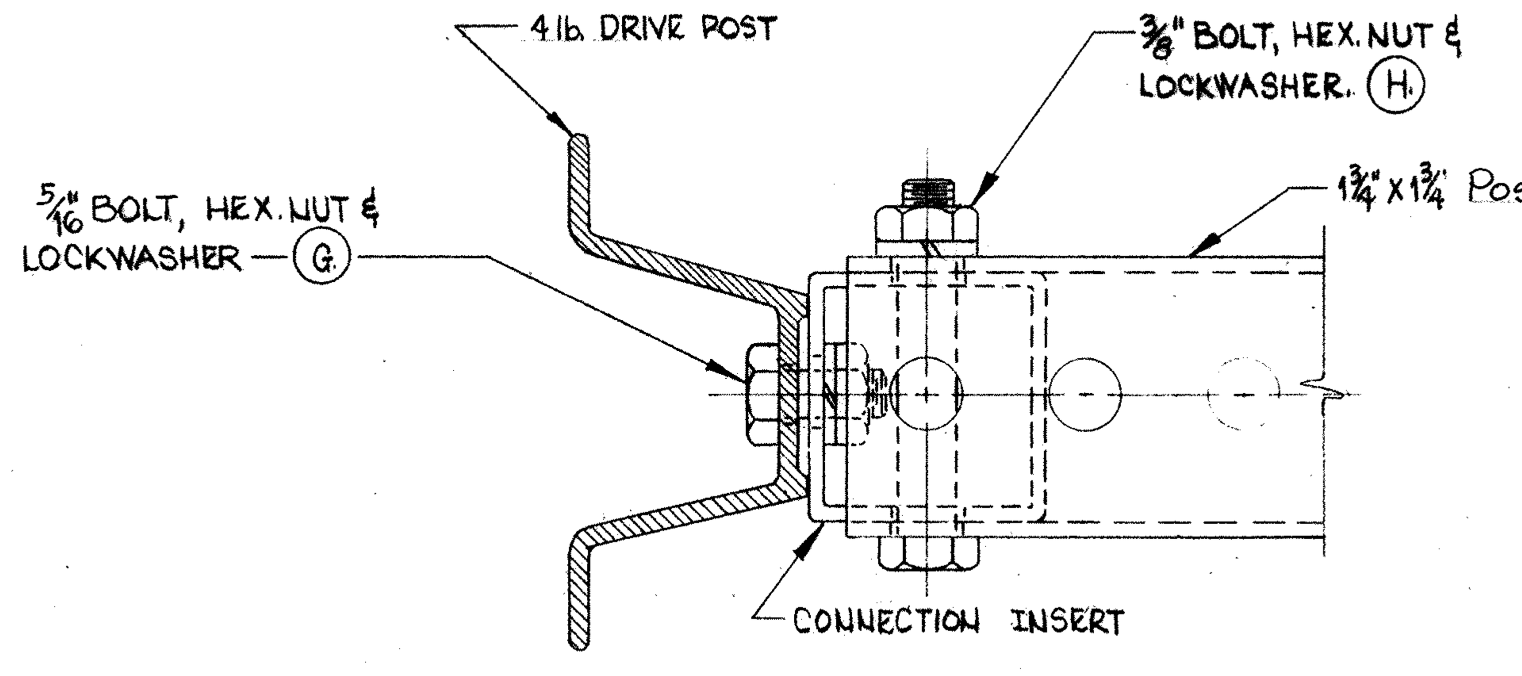
PAVEMENT MARKING 621

DATE
7-17-61
4-6-62
5-24-65
9-2?-67
4-17-68

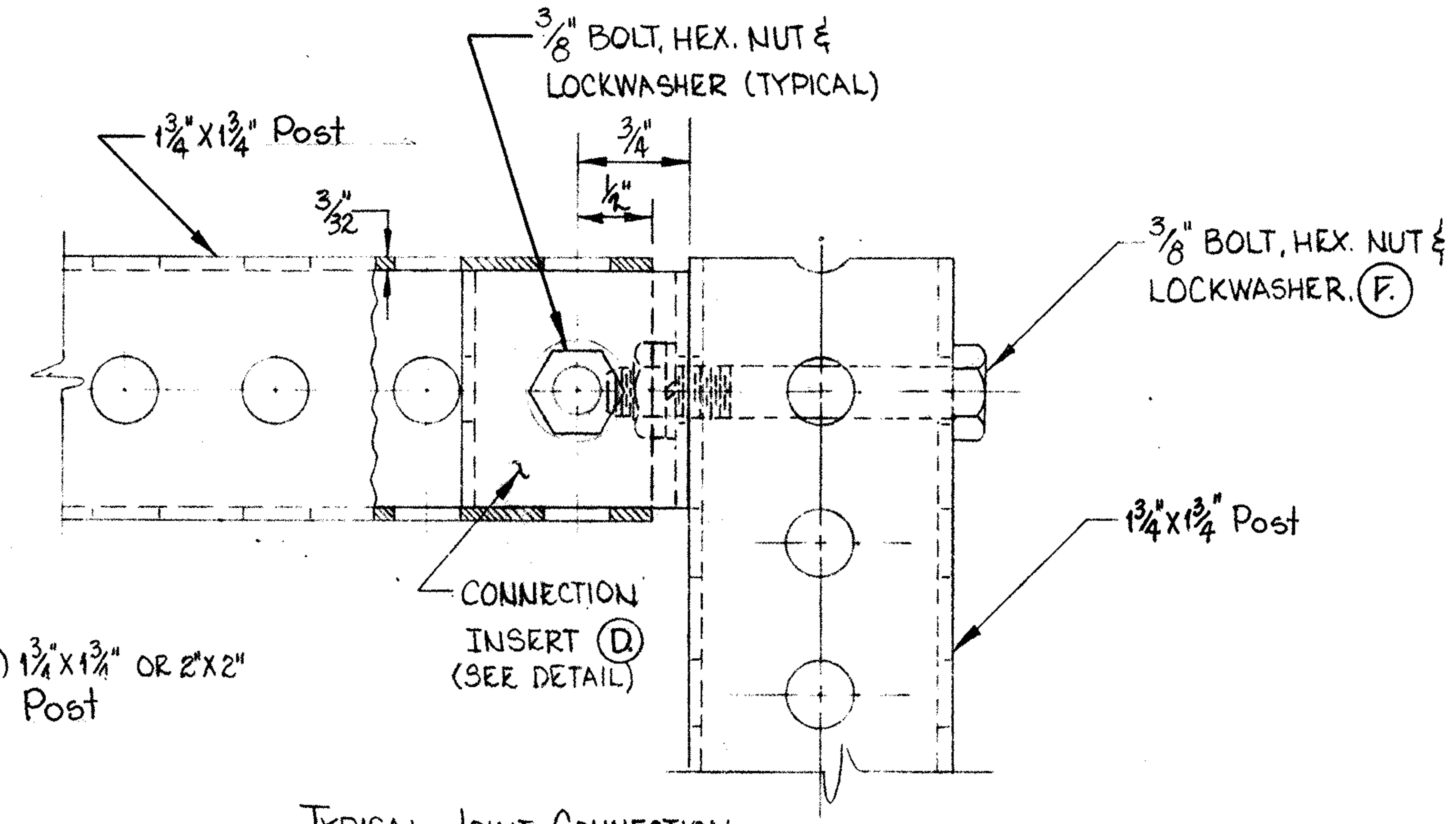
APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

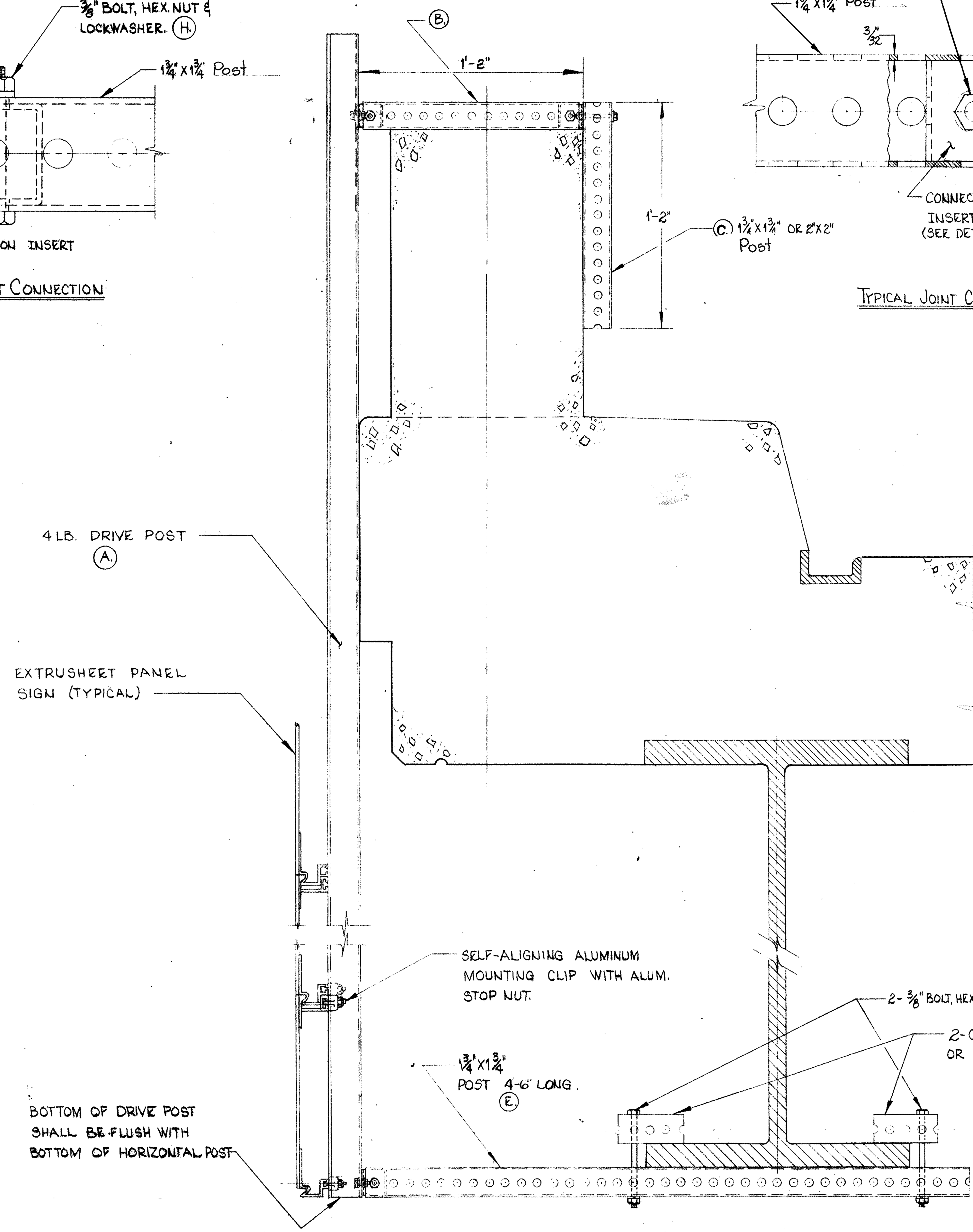
110U

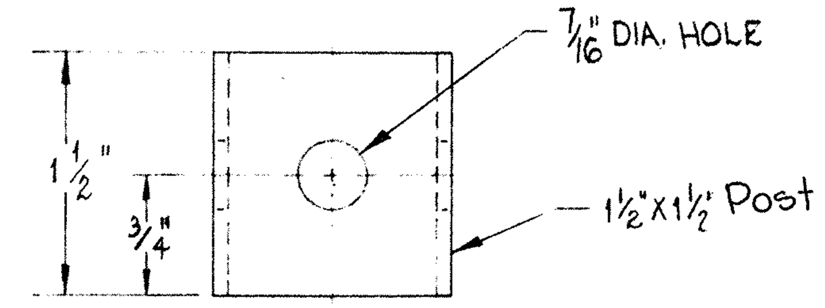


DRIVE POST CONNECTION

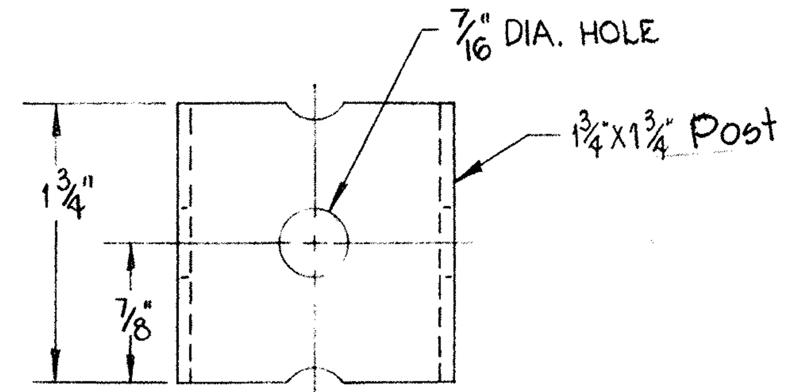


TYPICAL JOINT CONNECTION





CONNECTION INSERT
(FOR 1 3/4" x 1 3/4" Post)



CONNECTION INSERT
(FOR 2"x2" Post)

NOTE:
FOR SIGN CONNECTION DETAILS SEE SHEET E.C.D.

BILL OF MATERIALS PER EACH BRACKET

NO.	DESCRIPTION	LENGTH	NO.	WEIGHT
A.	4 lb. DRIVE POST	7'-6" *	1	
B.	1 3/4" x 1 3/4" Square POST	1'-2"	1	
C.	1 3/4" x 1 3/4" Square POST	1'-2"	1	
D.	1 1/2" x 1 1/2" Square POST (INSERT)	0'-1 7/32"	3	
E.	1 3/4" x 1 3/4" Square POST	4'-6"	1	
F.	3/8" BOLT HEX. NUT & LOCKWASHER	0'-2 1/2"	1	
G.	5/16" BOLT, HEX. NUT & LOCKWASHER	0'-3/4"	2	
H.	3/8" BOLT, HEX. NUT & LOCKWASHER	0'-3"	3	
J.	3/8" BOLT, HEX. NUT & LOCKWASHER	0'-6"	2	
	TOTAL			

Post shall be square seamless tubular post, material shall Be mild steel conforming to ASA 1020 steel, minimum yield strengh 35,000 P.S.I. Ultimate yeild 55,000 P.S.I.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

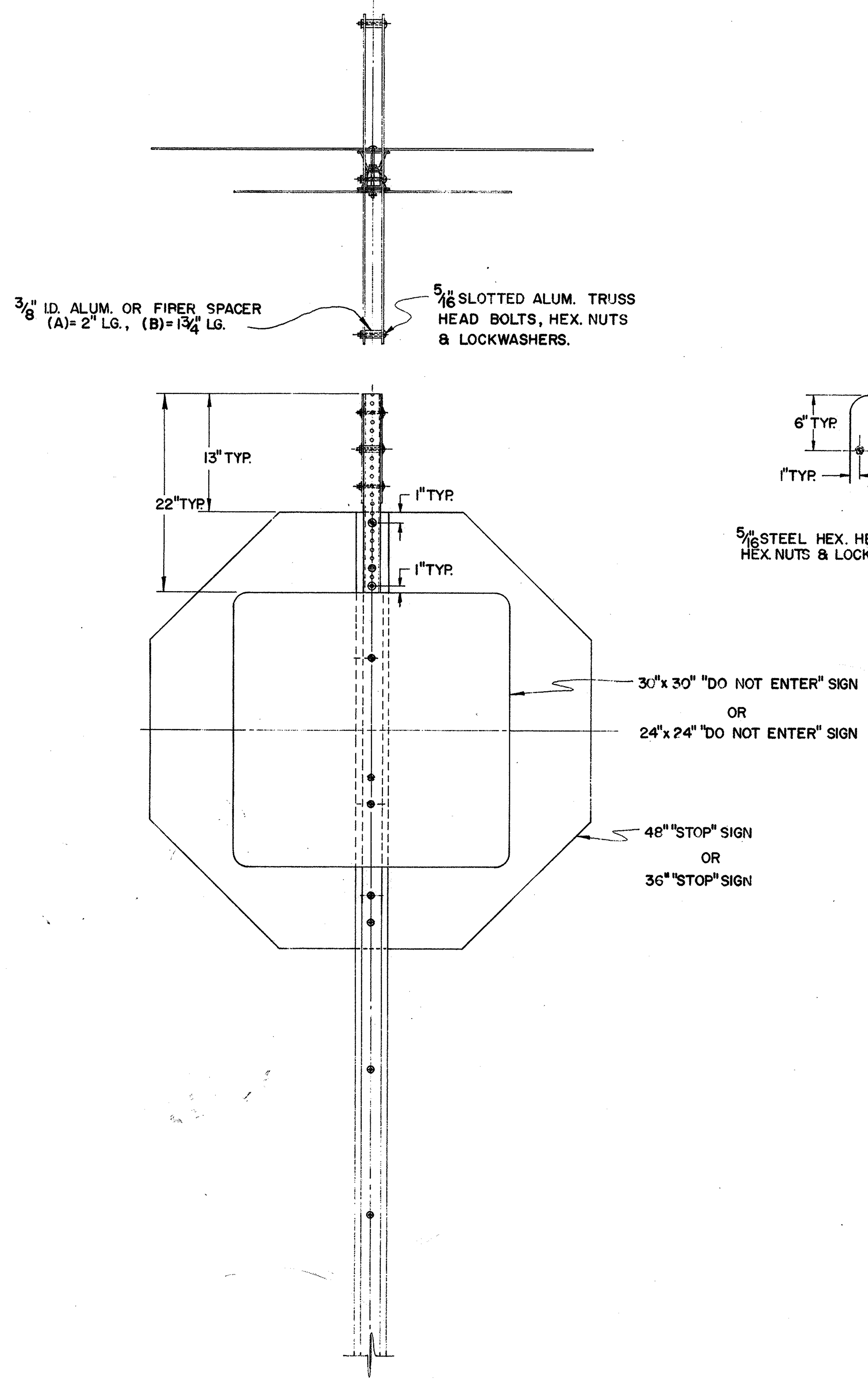
TEMPORARY SIGN BRACKETS FOR SIGNS MOUNTED ON BRIDGES

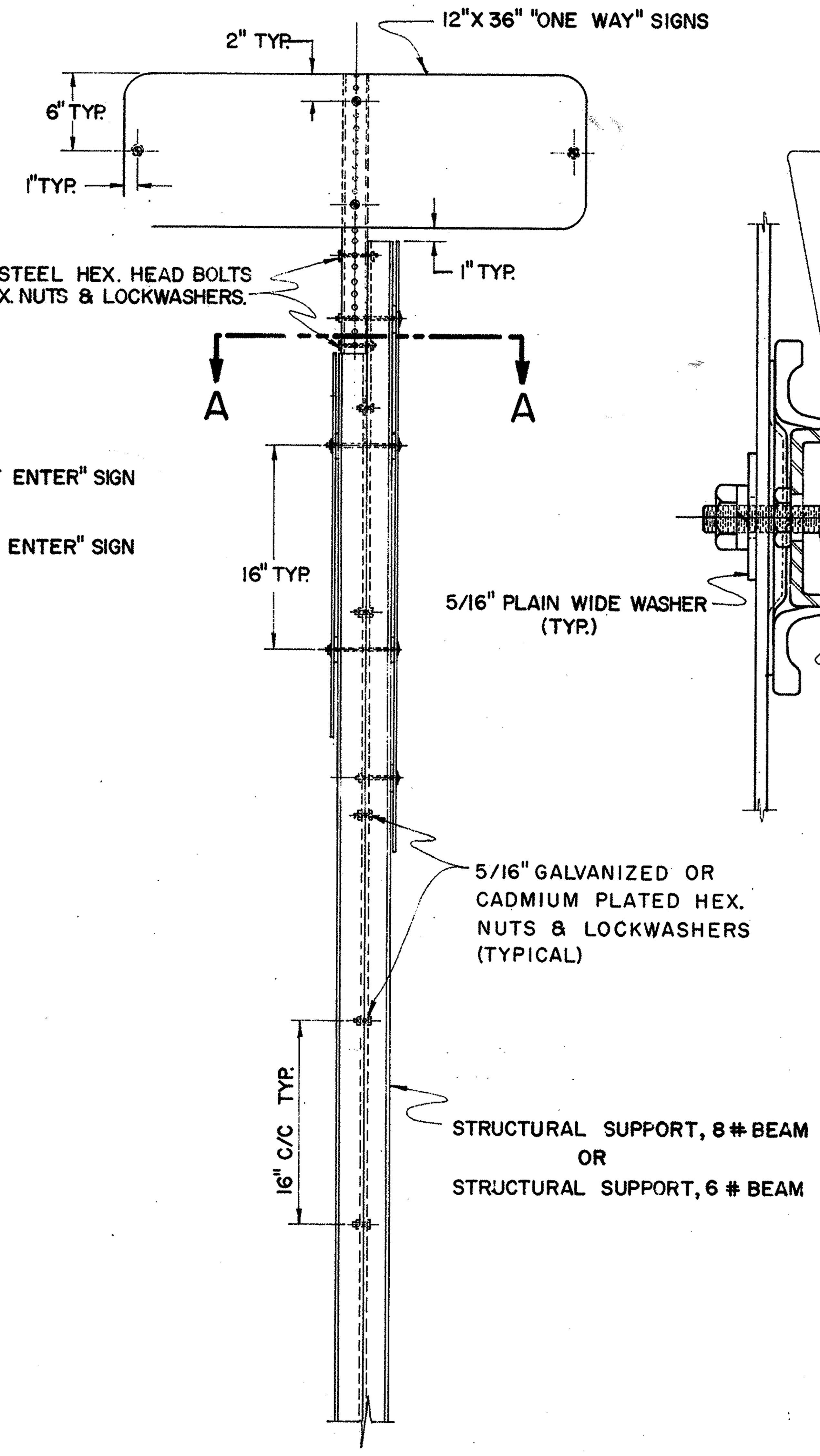
T.S.B.

DATE 12/14/64 12/6/68

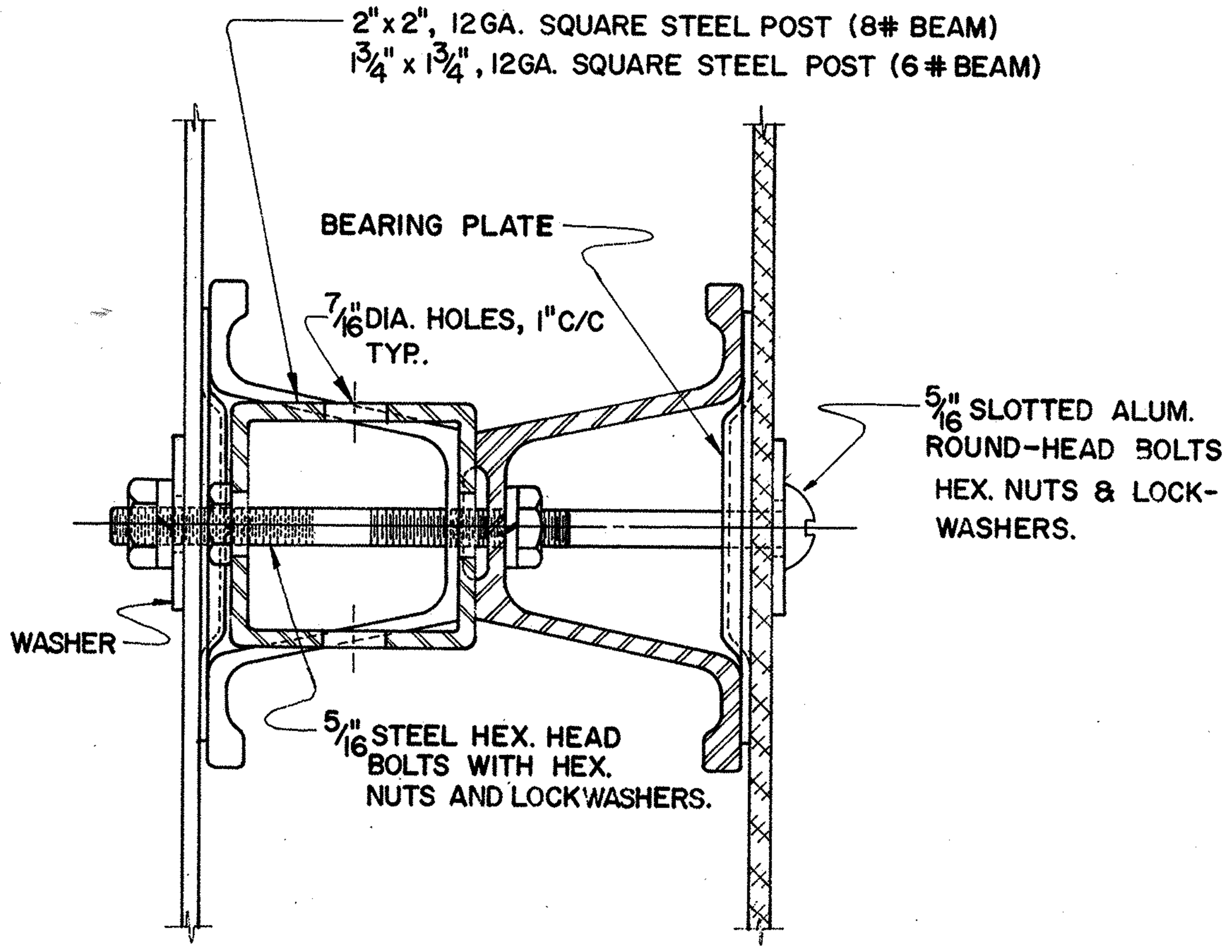
APPROVED Alf H. Hansen
STRUCTURAL ENGINEER

TEMPORARY SIGN BRACKET DETAILS





"ONE WAY", "STOP", "DO NOT ENTER", SIGN INSTALLATION.



SECTION A-A

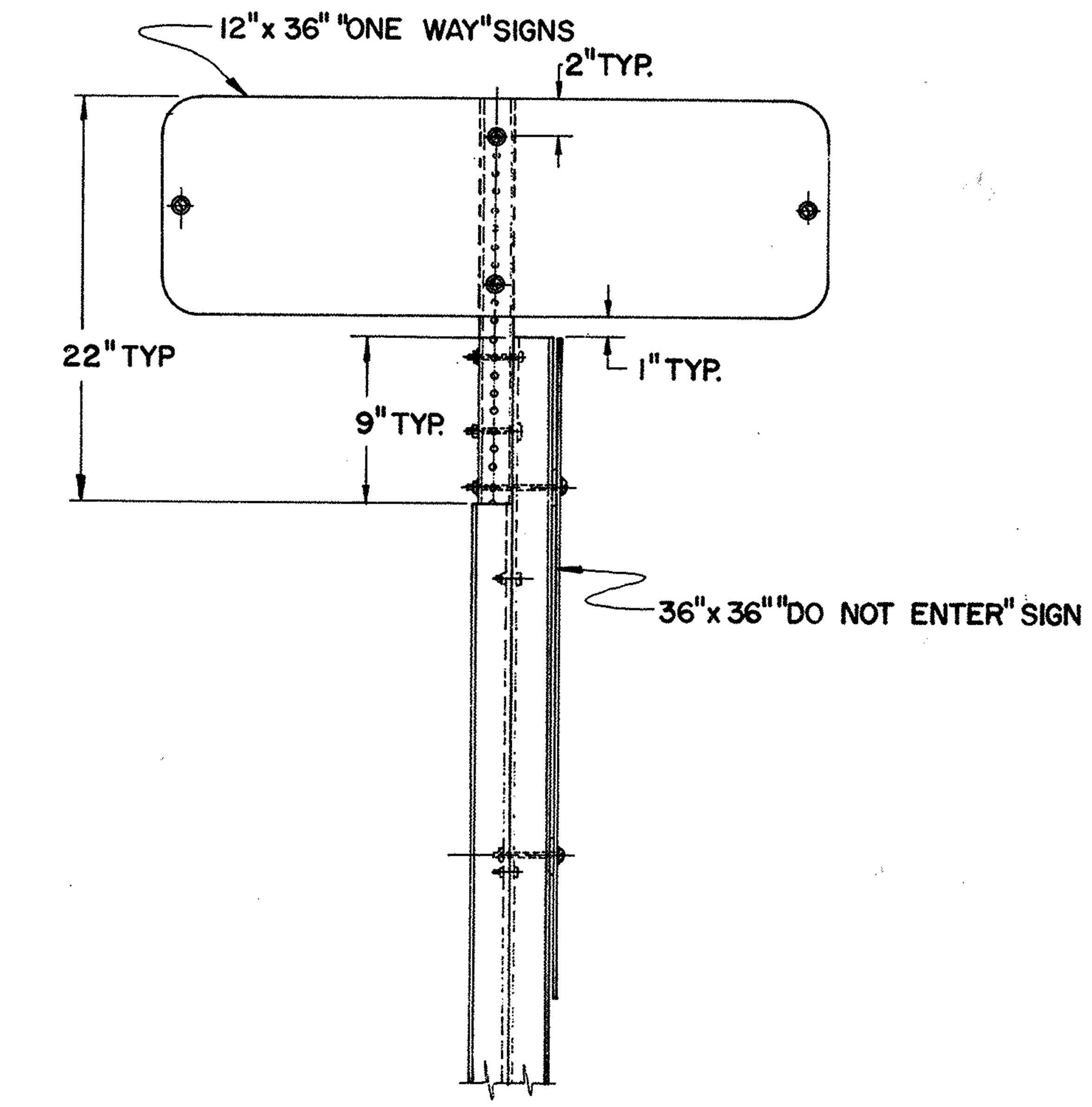
NOTES

MATERIALS

ALL SIGN MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 815.

ALL STRUCTURAL MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 816.

FOR SPECIFICATIONS FOR THE 2" & 1 3/4" SQUARE STEEL POST SEE GENERAL NOTES, SHEET NO.____.

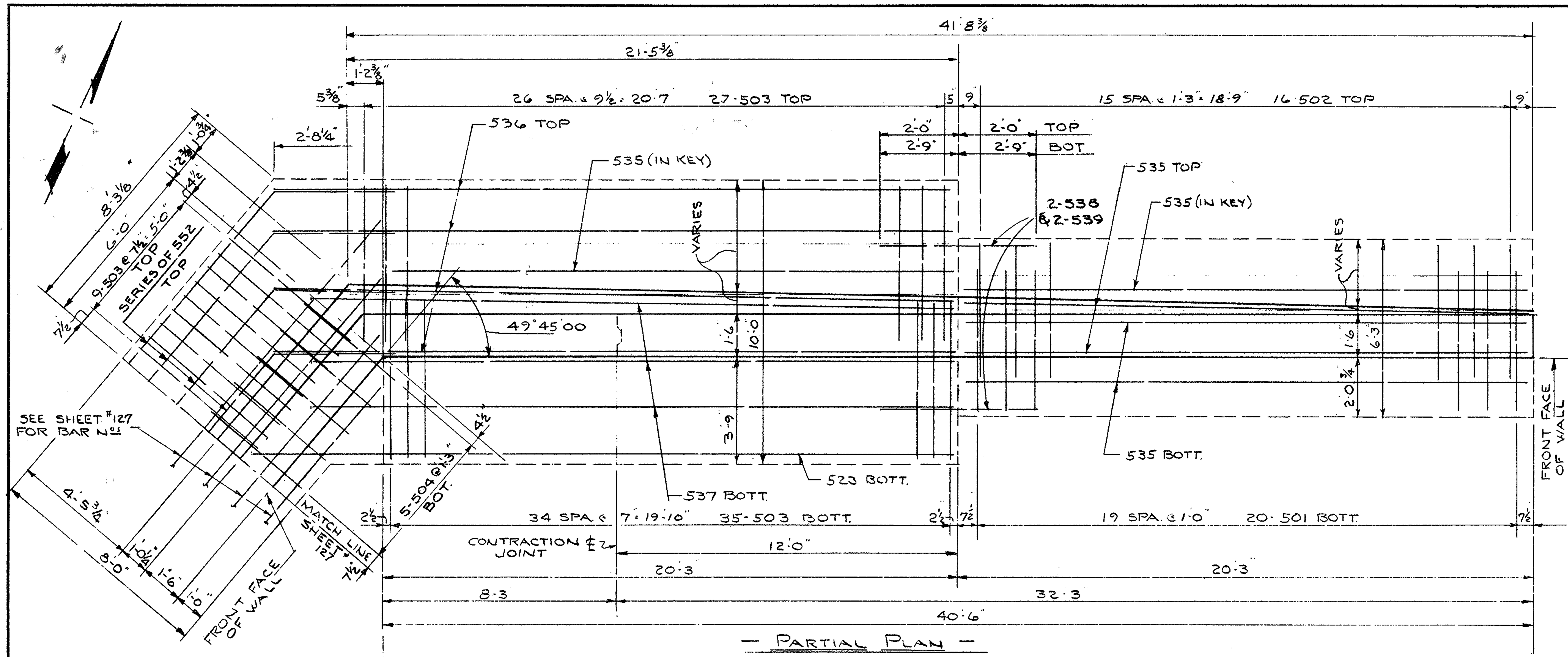


"ONE WAY", "DO NOT ENTER" SIGN INSTALLATION

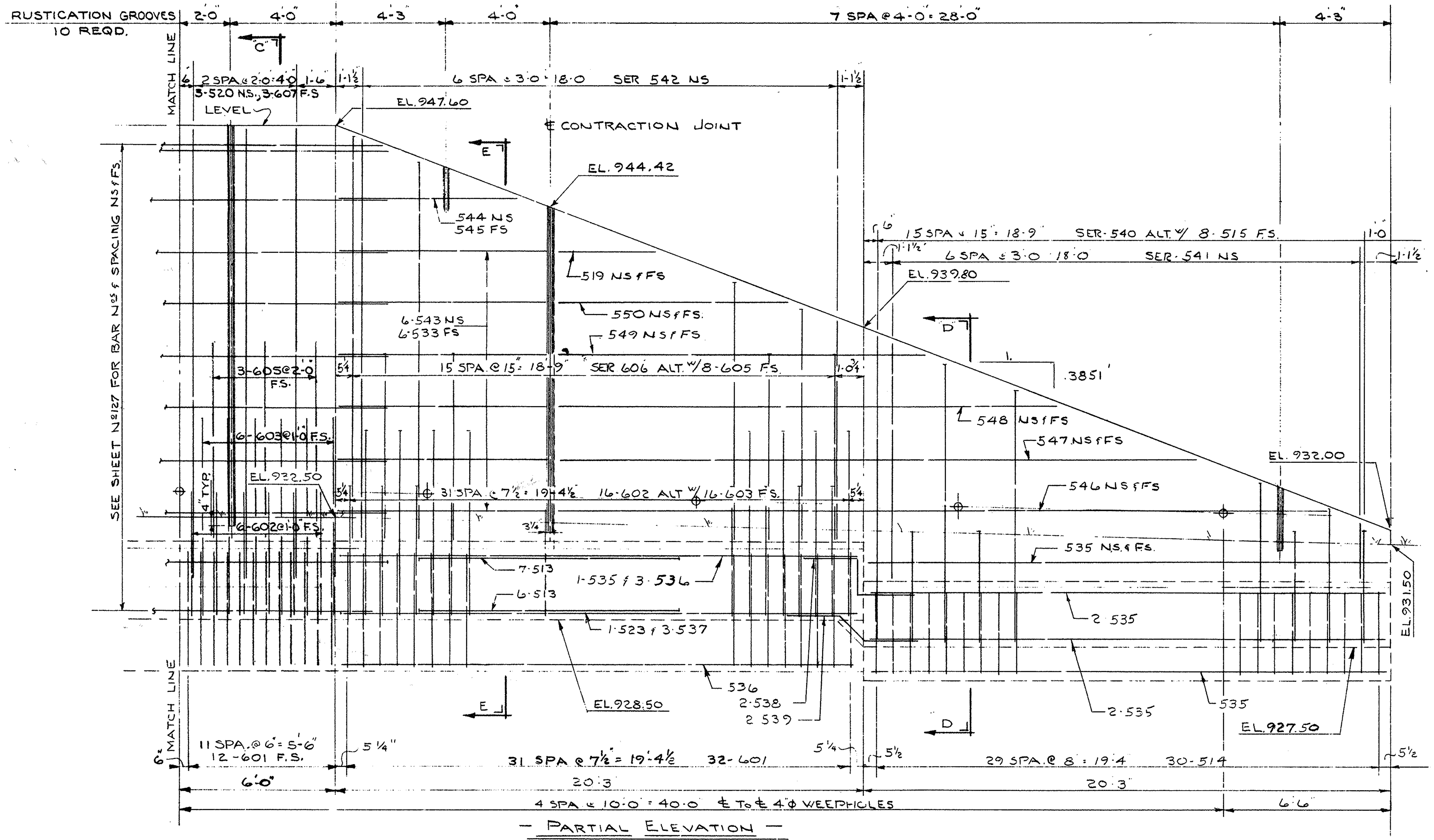
BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		
SPECIAL "ONE WAY" SIGN SUPPORT DETAILS	SOW	DATE 2-7-66 4-18-67
APPROVED ____ ENGINEER OF TRAFFIC		

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(1) 238 U-524(3)

MAH.-7-14.95



— PARTIAL PLAN —

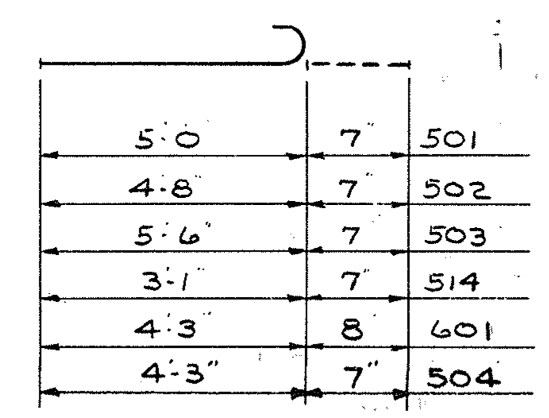


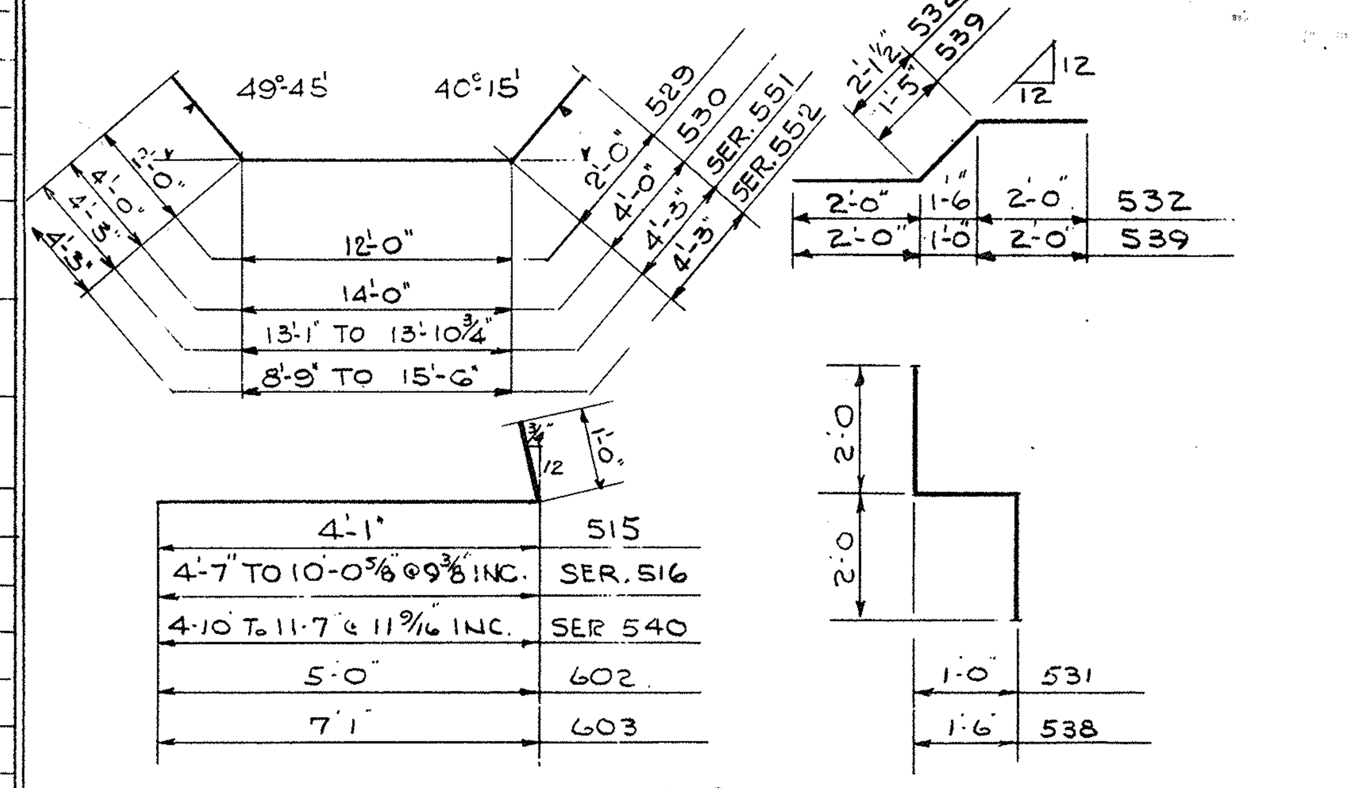
— PARTIAL ELEVATION —

— REINFORCING SCHEDULE —

MARK	Nº REQD.	LENGTH	WEIGHT	SHAPE
501	41	5'-7"	239	BT.
502	33	5'-3"	181	BT.
503	144	6'-1"	913	BT.
504	10	4'-10"	50	BT
505	6	20'-8"	129	ST.
506	4	24'-0"	100	ST.
507	3	23'-4"	73	ST
508	1	25'-6"	27	ST.
509	1	12'-0"	13	ST
510	1	13'-6"	14	ST
511	1	15'-0"	16	ST
512	1	17'-0"	18	ST
513	26	10'-0"	271	ST.
514	61	3'-8"	233	BT.
515	17	5'-0"	89	BT.
SER. OF 516	1 SET OF 8 BARS	VARIES 5'-6" TO 10'-11 5/8" @ 9 3/8" INC.	69	BT.
SER. OF 517	1 SET OF 7 BARS	VARIES 2'-3" TO 7'-10½" @ 11¼" INC.	37	ST.
SER OF 518	1 SET OF 7 BARS	VARIES 9'-10" TO 15'-5½" @ 11¼" INC.	92	ST.
519	2	3'-10"	8	ST
520	6	17'-5"	109	ST
521	2	31'-11"	67	ST.
522	2	31'-0"	65	ST
523	3	24'-7"	77	ST
524	2	18'-2"	38	ST
525	2	11'-9"	25	ST
526	2	5'-4"	11	ST
527	6	9'-9"	61	ST.
528	6	10'-4"	65	ST.
529	13	15'-11"	216	BT.
530	1	21'-10"	23	BT
531	2	4'-10"	10	BT.
532	2	6'-0"	13	BT.
533	7	8'-9"	64	ST
534	1	9'-4"	10	ST.
535	8	19'-10"	165	ST.
536	4	23'-9"	99	ST.
537	3	22'-6"	70	ST.
538	2	5'-4"	11	BT.
539	2	5'-4"	11	BT.
SER. OF 540	1 SET OF 8 BARS	VARIES 5'-9" TO 12'-6" @ 11 9/16" INC.	76	BT
SER OF 541	1 SET OF 7 BARS	VARIES 2'-3¾" TO 9'-3" @ 1'-1 7/8" INC.	42	ST.
SER OF 542	1 SET OF 7 BARS	VARIES 8'-7" TO 15'-6" @ 1'-1 7/8" INC.	88	ST.
543	6	8'-0"	50	ST
544	1	6'-9"	7	ST.
545	1	7'-6"	8	ST.
546	2	29'-8"	62	ST.
547	2	24'-6"	51	ST
548	2	19'-4"	40	ST.
549	2	14'-2"	30	ST.
550	2	9'-0"	19	ST.
SER OF 551	1 SET OF 13 BARS	VARIES 21'-6" TO 22'-3¾" @ 13/16" INC.	297	BT
SER OF 552	1 SET OF 4 BARS	VARIES 24'-0" TO 17'-3" @ 2'-3" INC.	86	BT
601	90	4'-11"	664	BT
602	45	5'-11"	400	BT
603	45	8'-0"	540	BT
SER OF 604	1 SET OF 9 BARS	VARIES 9'-9" TO 16'-0" @ 9 3/8" INC.	174	ST
605	22	7'-3	240	ST
SER OF 606	1 SET OF 8 BARS	VARIES 8'-11" TO 15'-8" @ 11 9/16" INC	148	ST
607	6	17'-5"	157	ST
REPLACEMENT BARS				
RE-501	1	6'-7"		ST.
RE-601	1	6'-11"		ST.
TOTAL			6,961	LBS.

FOR SECTIONS C-C, D-D & E-E SEE SHEET Nº 127





NOTES:

1. DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9-1-57 TOGETHER WITH CURRENT REVISIONS THEREOF.
2. EXCAVATION QUANTITIES: INCLUDES THE REMOVAL OF MATERIAL BETWEEN THE EXISTING GROUND LEVEL AND THE BOTTOM OF THE FOOTING.
3. POROUS BACKFILL: 2 FEET THICK, FULL LENGTH OF THE RETAINING WALL SHALL EXTEND UP TO THE UNDERSIDE OF THE IMPERVIOUS MATERIAL.
4. THE KEY: UNDER THE FOOTING SHALL BE PLACED ON UNDISTURBED EARTH
5. SURFACE FINISH OF THE CONCRETE: THE REQUIREMENTS OF SEC. 511.16, RUBBED FINISH, SHALL APPLY TO ALL EXPOSED SURFACES.
6. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE 601 IS A NO. 6 SIZE BAR.

— ESTIMATED QUANTITIES —

ITEM Nº	UNIT	DESCRIPTION	QUAN.		
503	CU. YDS.	UNCLASSIFIED EXCAVATION	154.0		
511	CU. YDS.	CLASS C CONCRETE - FOOTINGS	89.0		
511	CU. YDS.	CLASS C CONCRETE - WALLS	65.0		
512	LIN. FT.	WATERPROOFING - PREMOLDED SEALING STRIP - 12" x ½"	26.5		
509	LBS.	REINFORCING STEEL	6,961		
518	CU. YDS.	POROUS BACKFILL	47		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RETAINING WALL AT RADIO TOWER

YOUNGSTOWN
MAHONING COUNTY
STA. 795+49.43 TO STA. 796+22.56
NORTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SRS	JNP		ONG	[illegible]	10/-/62	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(8)	

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RETAINING WALL AT RADIO TOWER

YOUNGSTOWN
MAHONING COUNTY
STA. 795+49.43 TO STA. 796+22.56
NORTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SRS	JJP		ONG	R.D.H.	11/12/62	

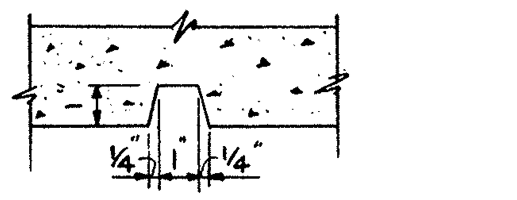
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

128
206

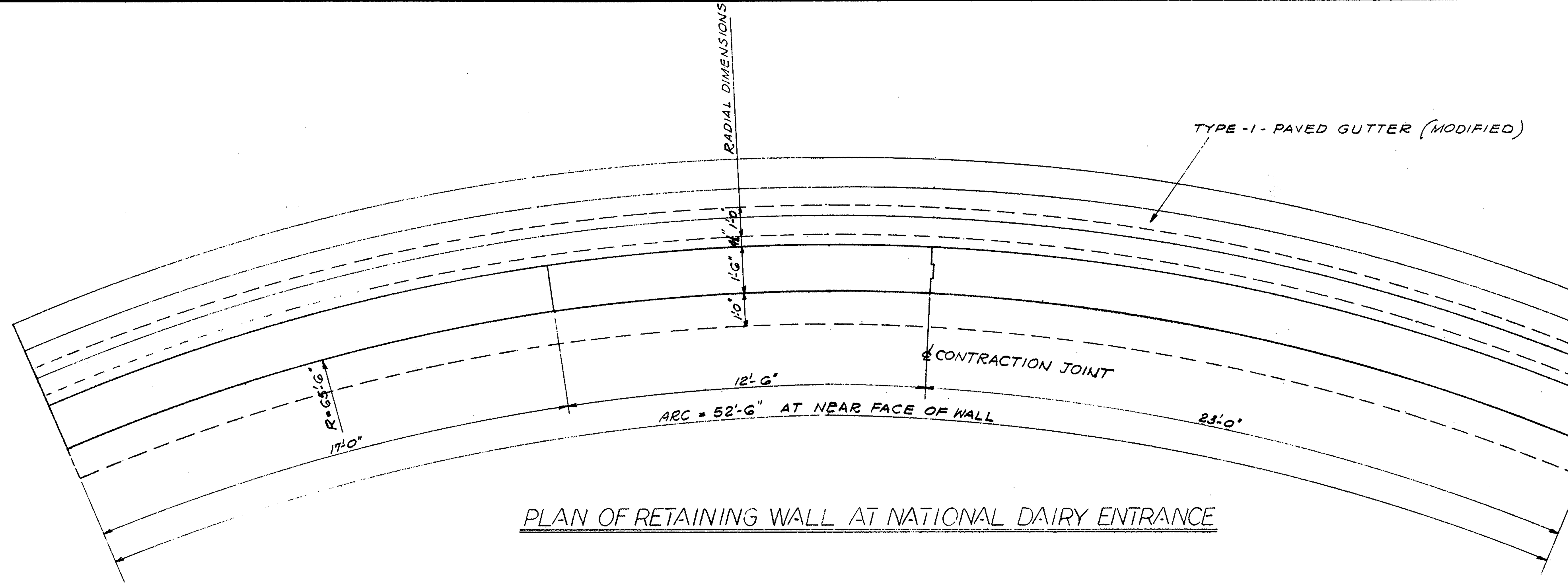
MAH.-7-14.95

FACE OF WALL CURVE DATA

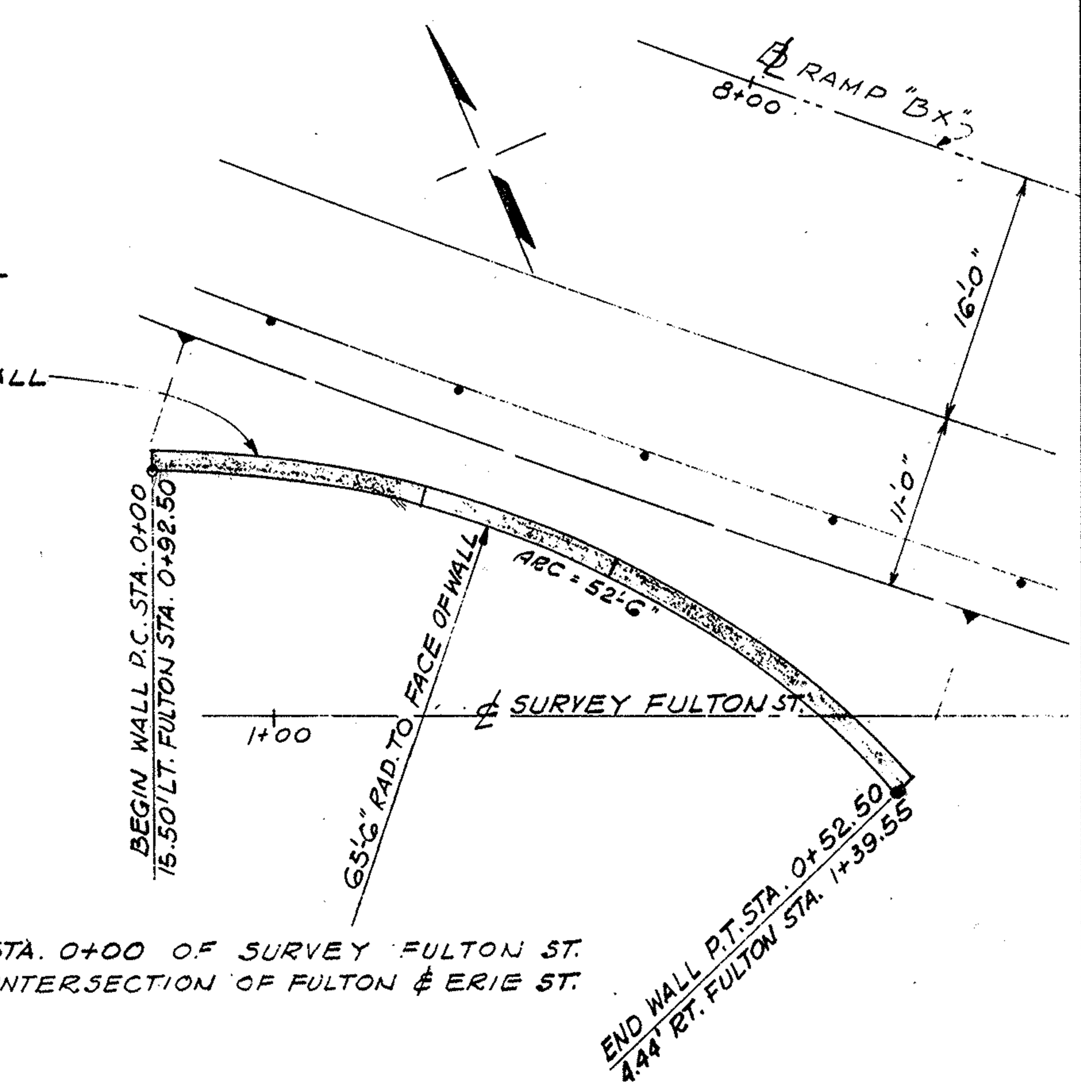
Δ = 45°-55'-27"
R = 65.50'
T = 27.75'
L = 52.50'



DETAIL OF RUSTICATION GROOVE

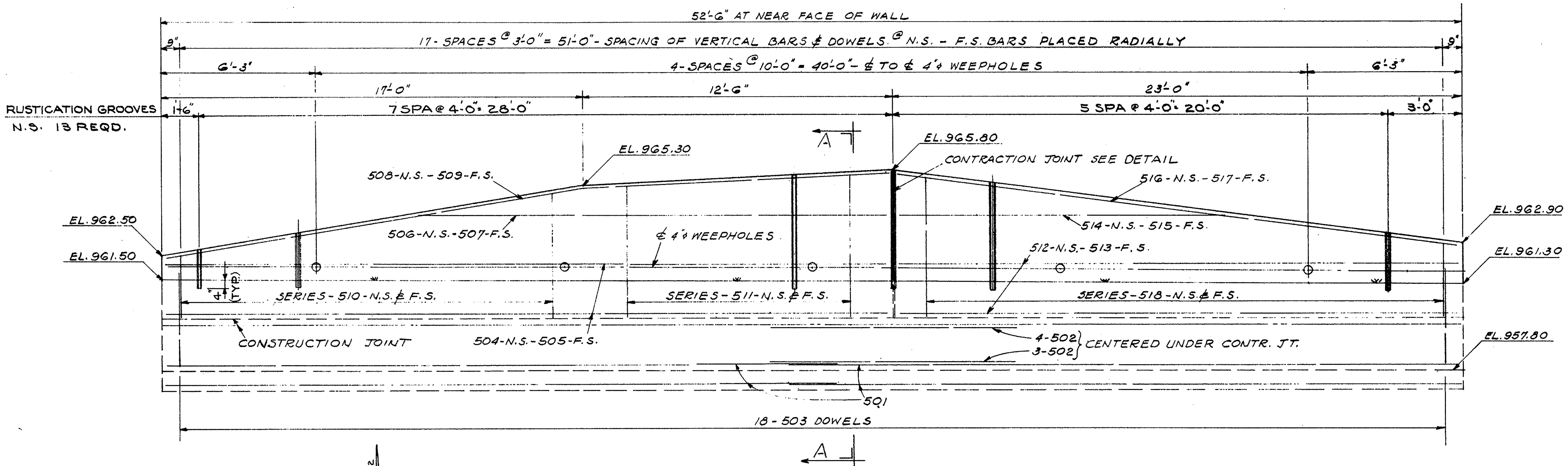


PLAN OF RETAINING WALL AT NATIONAL DAIRY ENTRANCE



NOTE: STA. 0+00 OF SURVEY FULTON ST. @ INTERSECTION OF FULTON & ERIE ST.

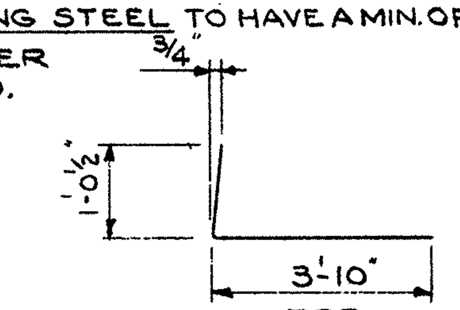
LOCATION PLAN



DEVELOPED ELEVATION

NOTES:

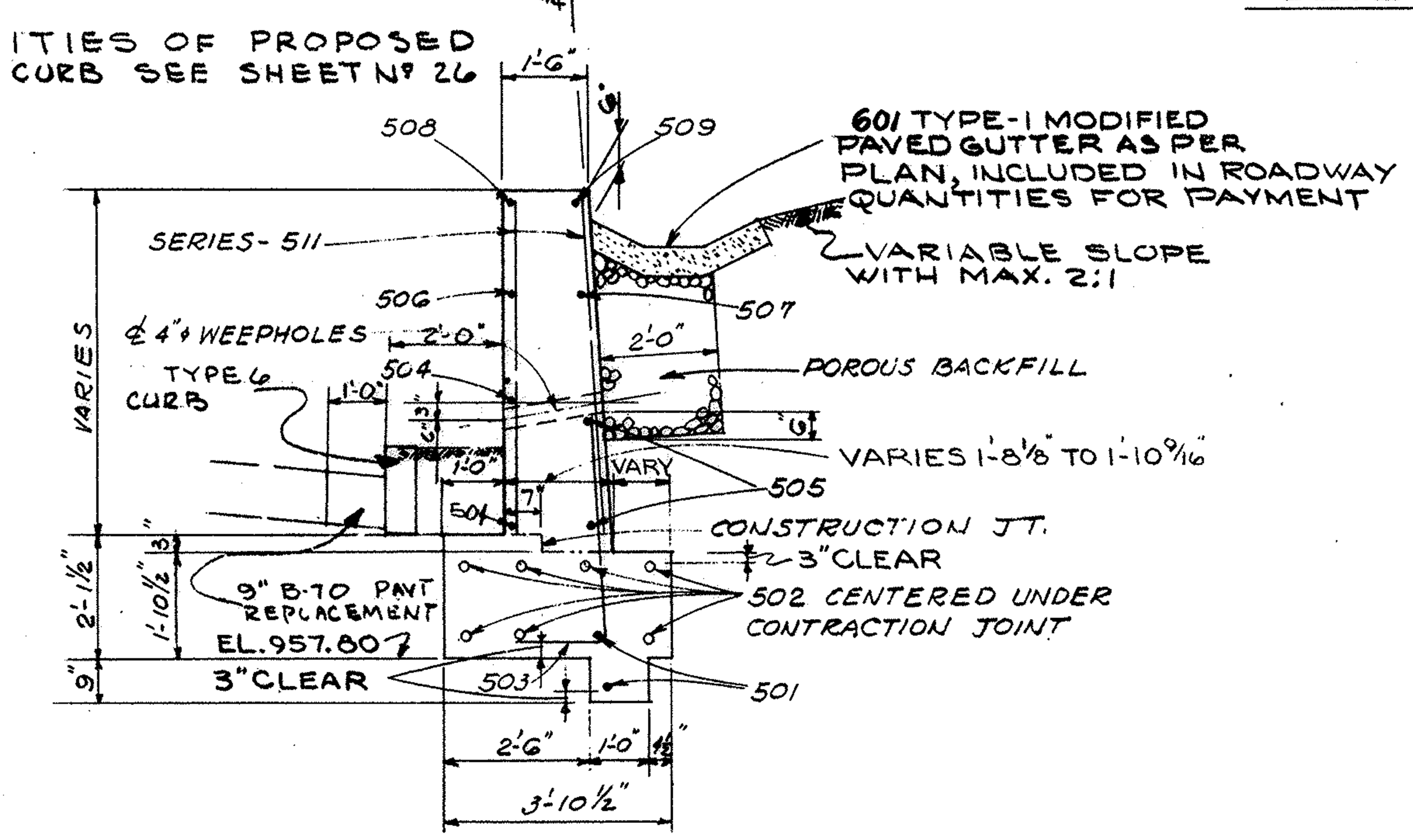
1. DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9-1-57 TOGETHER WITH CURRENT REVISIONS THEREOF.
2. EXCAVATION QUANTITIES: INCLUDES THE REMOVAL OF MATERIAL BETWEEN THE EXISTING GROUND LEVEL AND THE BOTTOM OF THE FOOTING.
3. POROUS BACKFILL: 2 FEET THICK FULL LENGTH OF THE RETAINING WALL SHALL EXTEND UP TO THE UNDERSIDE OF THE PAVED GUTTER.
4. THE KEY UNDER THE FOOTING SHALL BE PLACED ON UNDISTURBED EARTH.
5. SURFACE FINISH OF CONCRETE: THE REQUIREMENTS OF SEC. 511.16, RUBBED FINISH, SHALL APPLY TO ALL EXPOSED SURFACES.
6. ALL REINFORCING STEEL TO HAVE A MIN. OF 2" CONCRETE COVER UNLESS NOTED.



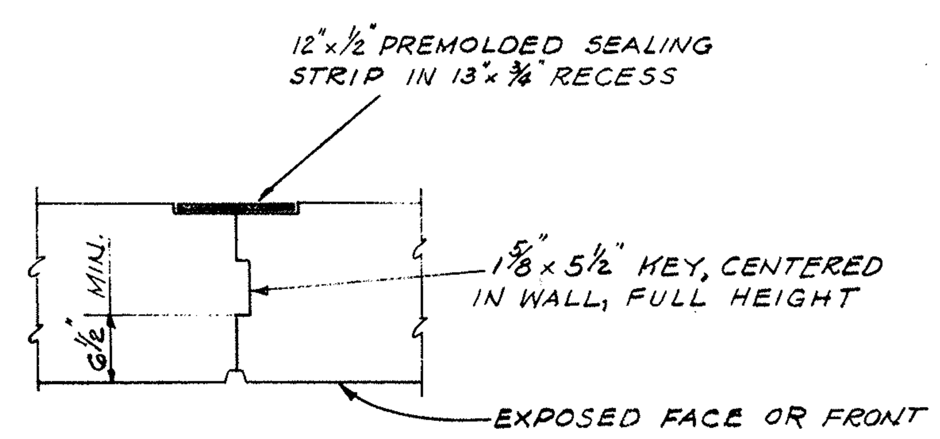
REINFORCING STEEL SCHEDULE

MARK	NO. REQ'D	LENGTH	WEIGHT	SHAPE	RADIUS
501	4	29'-0"	121	BT.	67'-3"
502	7	10'-0"	73	BT.	66'-5"
503	18	4'-9"	89	BT.	
504	2	29'-4"	61	BT.	65'-8"
505	2	30'-0"	63	BT.	66'-10"
506	1	19'-0"	20	BT.	65'-8"
507	1	19'-3"	20	BT.	66'-10"
508	1	29'-6"	31	BT.	65'-8"
509	1	30'-1"	31	BT.	66'-10"
SERIES OF 510	2-SETS OF 6 = 12	VARIES 2'-4"-4'-7 1/2" @ 5 1/2"	43	ST.	
SERIES OF 511	2-SETS OF 4 = 8	VARIES 5'-3"-5'-9" @ 2"	46	ST.	
512	2	22'-8"	47	BT.	65'-8"
513	2	23'-1"	48	BT.	66'-10"
514	1	11'-3"	12	BT	65'-8"
515	1	11'-6"	12	BT.	66'-10"
516	1	23'-10"	25	BT.	65'-8"
517	1	24'-4"	25	BT	66'-10"
SERIES OF 518	2-SETS OF 8 = 16	VARIES 2'-8"-5'-3 1/2" @ 4 1/2"	66	ST.	
TOTAL			833	LBS.	

NOTE
FOR QUANTITIES OF PROPOSED TYPE 6 CURB SEE SHEET Nº 26



SECTION A-A



DETAIL OF CONTRACTION JOINT

ESTIMATED QUANTITIES

ITEM NO.	UNIT	DESCRIPTION	QUANTITY		
503	CU. YDS.	UNCLASSIFIED EXCAVATION	44.8		
511	CU. YDS.	CLASS-C CONCRETE FOOTING	16.6		
511	CU. YDS.	CLASS-C CONCRETE WALL	15.75		
512	LIN. FT.	WATERPROOFING PREMOLDED SEALING STRIP 12"	6		
509	LBS.	REINFORCING STEEL	833		
518	CU. YDS.	POROUS BACKFILL	7.2		

MAXIMUM SOIL PRESSURE UNDER FOOTER = 1930 #/□'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

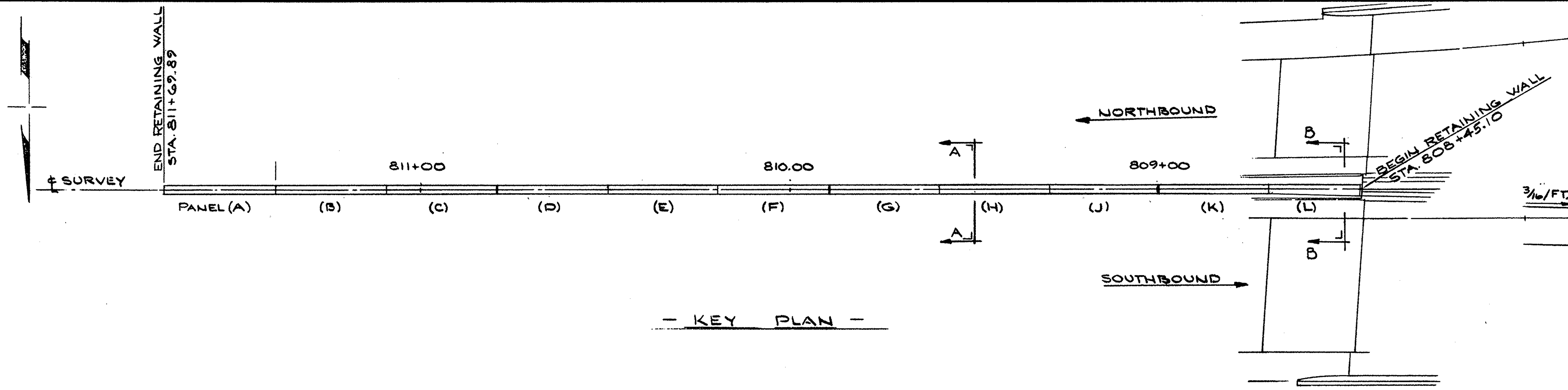
RETAINING WALL
AT NATIONAL DAIRY ENTRANCE
YOUNGSTOWN MAHONING COUNTY
FULTON ST. STA. 0+92.50 - 1+39.55

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SRS	JK		SRS & C.W.	RDH	8/24/62	

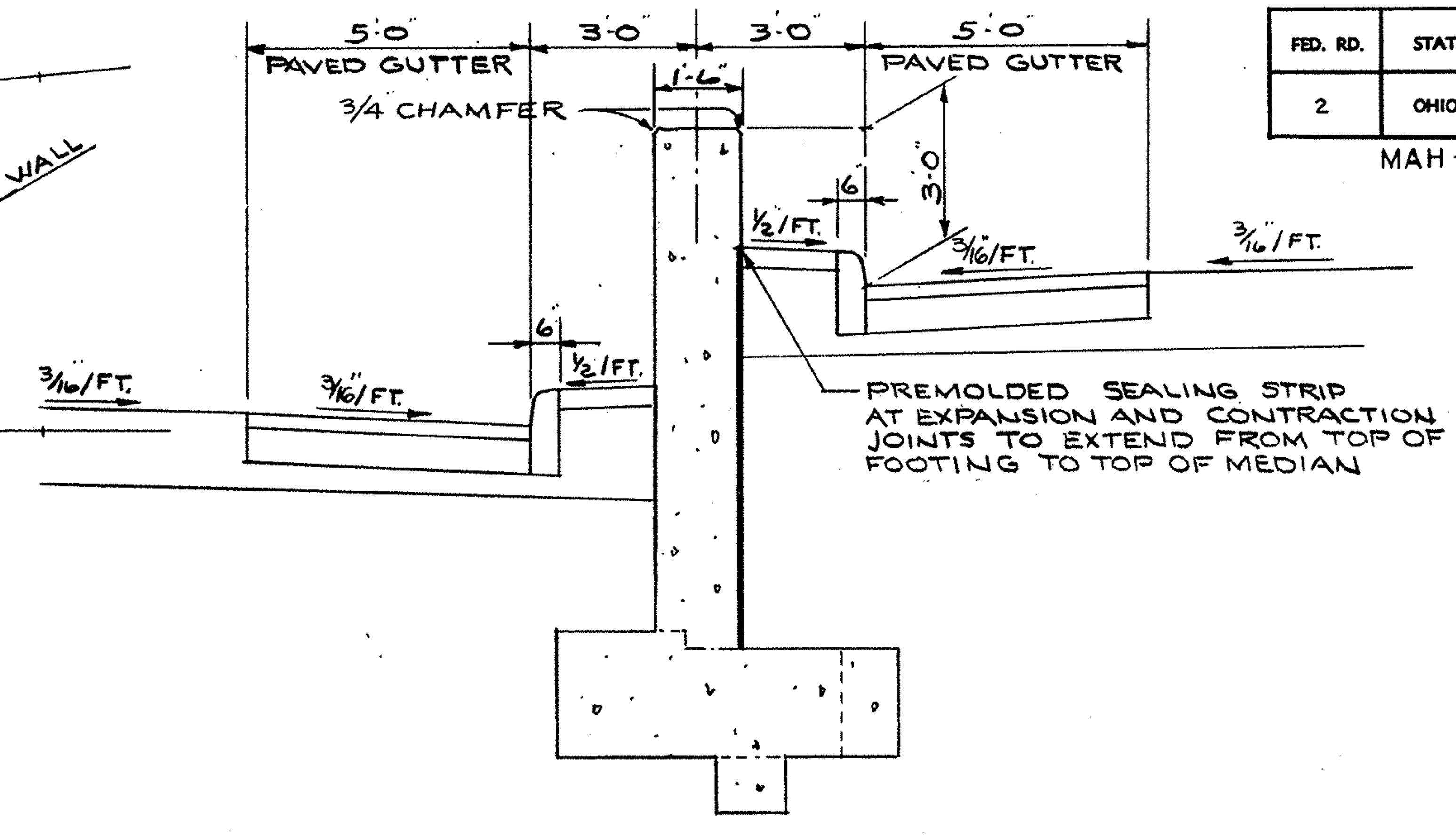
FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

MAH-7-14.95

129
206



— KEY PLAN —



— SECTION A-A —

— GENERAL NOTES —

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9-1-57, TOGETHER WITH CURRENT REVISIONS THEREOF.

EXCAVATION QUANTITIES: INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE WALL FOOTINGS.

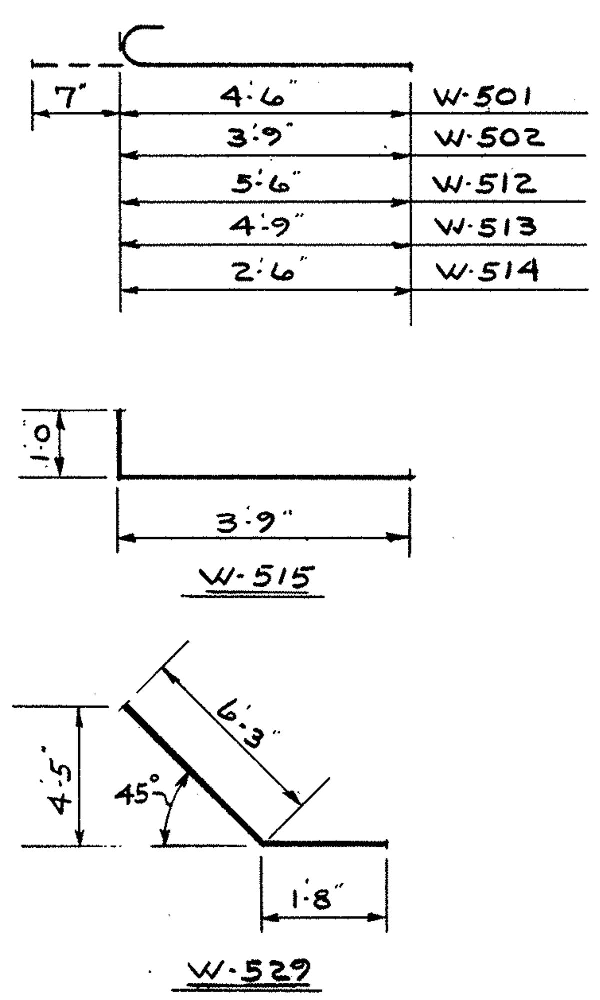
FOUNDATION BEARING PRESSURE: WALL FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 2 TONS PER SQ. FT.

ALL REINFORCING STEEL SHALL HAVE A 2" MINIMUM COVER EXCEPT WHERE OTHERWISE NOTED.

FOOTING KEYS TO BE PLACED AGAINST UNDISTURBED EARTH.

— REINFORCING SCHEDULE —

MARK	Nº REQ'D.	LENGTH	WEIGHT	SHAPE
W-501	90	5'-1"	477	BT.
W-502	90	4'-4"	407	BT.
W-503	96	23'-9"	2,378	ST.
W-504	24	10'-0"	250	ST.
W-505	96	29'-7"	2,962	ST.
SERIES OF W-506	2 SETS OF 10: 20 BARS	VARIES 6'-4 To 6'-6¼ @ ¼" INC.	134	ST.
SERIES OF W-507	2 SETS OF 10: 20 BARS	VARIES 6'-6⅜ To 6'-9⅝ @ ⅜" INC.	139	ST.
SERIES OF W-508	2 SETS OF 10: 20 BARS	VARIES 6'-10 To 7'-4¾ @ ¾" INC.	148	ST.
SERIES OF W-509	2 SETS OF 10: 20 BARS	VARIES 6'-9 To 7'-2⅝ @ ⅝" INC.	146	ST.
SERIES OF W-510	2 SETS OF 10: 20 BARS	VARIES 7'-4 To 7'-11⅞ @ ⅞" INC.	160	ST.
SERIES OF W-511	2 SETS OF 10: 20 BARS	VARIES 8'-1 To 9'-0¼ @ 1¼" INC.	178	ST.
W-512	97	6'-1"	616	BT.
W-513	97	5'-4"	540	BT.
W-514	116	3'-1"	373	BT.
W-515	116	4'-8"	565	BT.
SERIES OF W-516	1 SET OF 24 BARS	VARIES 6'-7 To 7'-6½ @ ½" INC.	177	ST.
SERIES OF W-517	1 SET OF 24 BARS	VARIES 7'-7 To 8'-9⅜ @ ⅝" INC.	205	ST.
SERIES OF W-518	1 SET OF 24 BARS	VARIES 8'-9⅝ To 10'-0 @ ⅝" INC.	235	ST.
W-519	49	4'-0"	205	ST.
SERIES OF W-520	1 SET OF 10 BARS	VARIES 6'-4 To 7'-3¾ @ 1¼" INC.	71	ST.
SERIES OF W-521	1 SET OF 10 BARS	VARIES 7'-4 To 8'-5½ @ 1½" INC.	83	ST.
SERIES OF W-522	1 SET OF 10 BARS	VARIES 8'-6 To 9'-7½ @ 1½" INC.	95	ST.
W-523	20	28'-2	588	ST.
SERIES OF W-524	1 SET OF 24 BARS	VARIES 8'-3 To 9'-5⅛ @ ⅝" INC.	222	ST.
SERIES OF W-525	1 SET OF 20 BARS	VARIES 9'-4 To 10'-3⅝ @ ⅜" INC.	205	ST.
SERIES OF W-526	1 SET OF 10 BARS	VARIES 8'-0 To 9'-3¾ @ 1¾" INC.	91	ST.
SERIES OF W-527	1 SET OF 9 BARS	VARIES 9'-1 To 10'-1 @ 1½" INC.	90	ST.
W-528	12	24'-5"	306	ST.
W-529	5	7'-10"	41	BT.
W-530	2	5'-8"	12	ST.
TOTAL		12,099 LBS.		



REPLACEMENT BARS

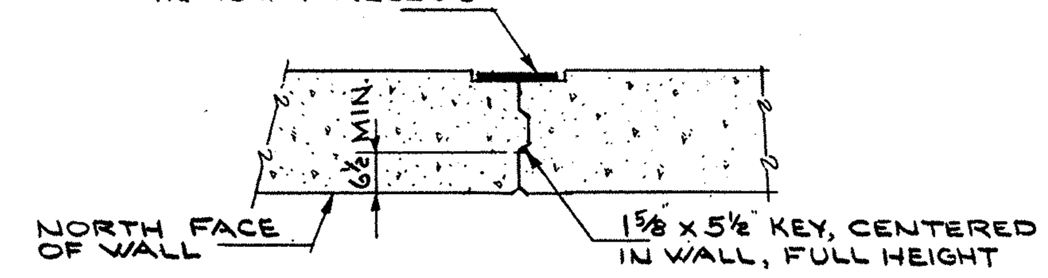
MARK	Nº REQ'D.	LENGTH	WEIGHT	SHAPE
RE-501	1	6'-7"	—	ST.

BAR SIZE: IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A-700 IS A No. 7 SIZE BAR AND A1014 IS A No. 10 SIZE.

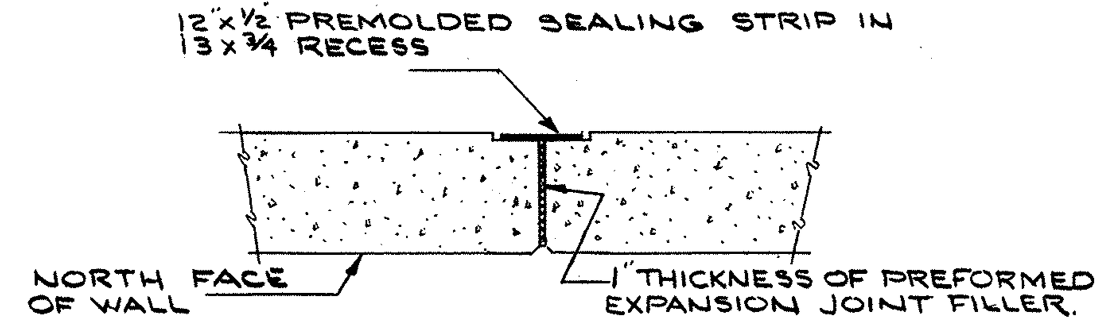
— ESTIMATED QUANTITIES —

ITEM Nº	UNIT	DESCRIPTION	QUANTITY		
503	CU. YDS.	UNCLASSIFIED EXCAVATION	485		
511	CU. YDS.	CLASS "C" CONCRETE, FOOTERS	147		
511	CU. YDS.	CLASS "C" CONCRETE, WALL	135		
512	LIN. FT.	WATERPROOFING, PREMOLDED SEALING STRIP 12"x½"	54		
509	LBS.	REINFORCING STEEL	12,099		
516	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER	110		

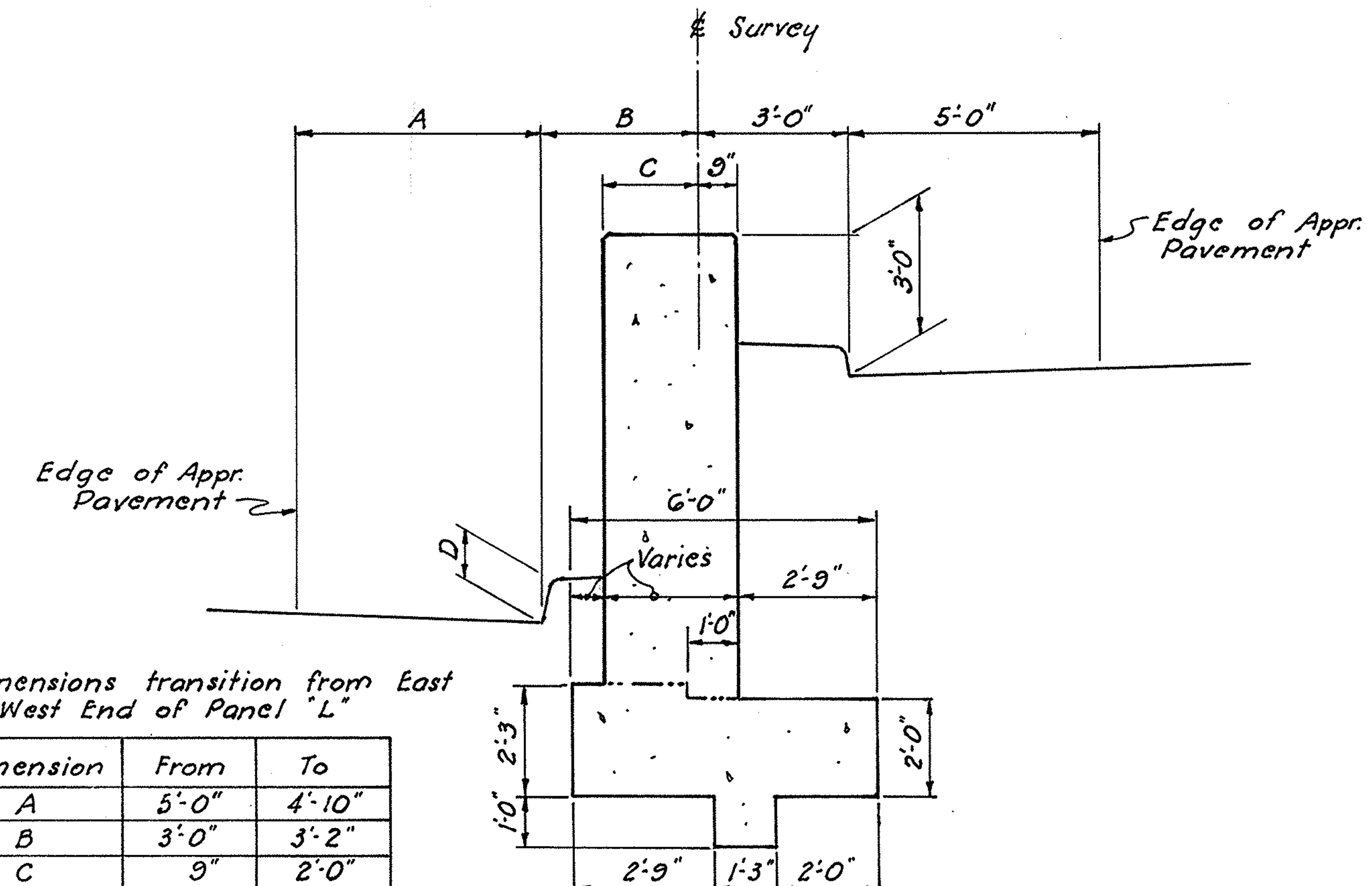
Changed from 128
Changed from 81



— CONTRACTION JOINT DETAIL —



— EXPANSION JOINT DETAIL —



Dimensions transition from East to West End of Panel "L"

Dimension	From	To
A	5'-0"	4'-10"
B	3'-0"	3'-2"
C	9"	2'-0"
D	6"	10"

SECTION B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

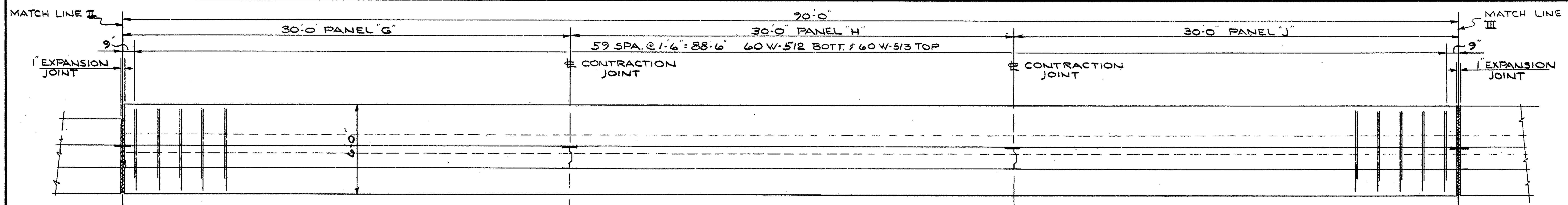
MEDIAN RETAINING WALL
AT
BRIDGE Nº MAH-7-1528 L.& R.
STA. 808+45.10 To STA. 811+69.89
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JP		HGH	RDH	2/13/63	

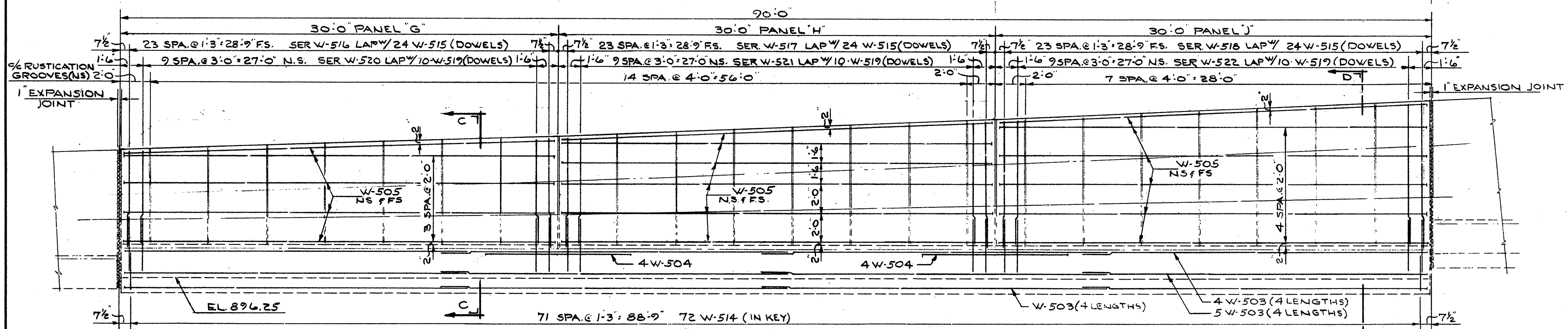
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

130
206

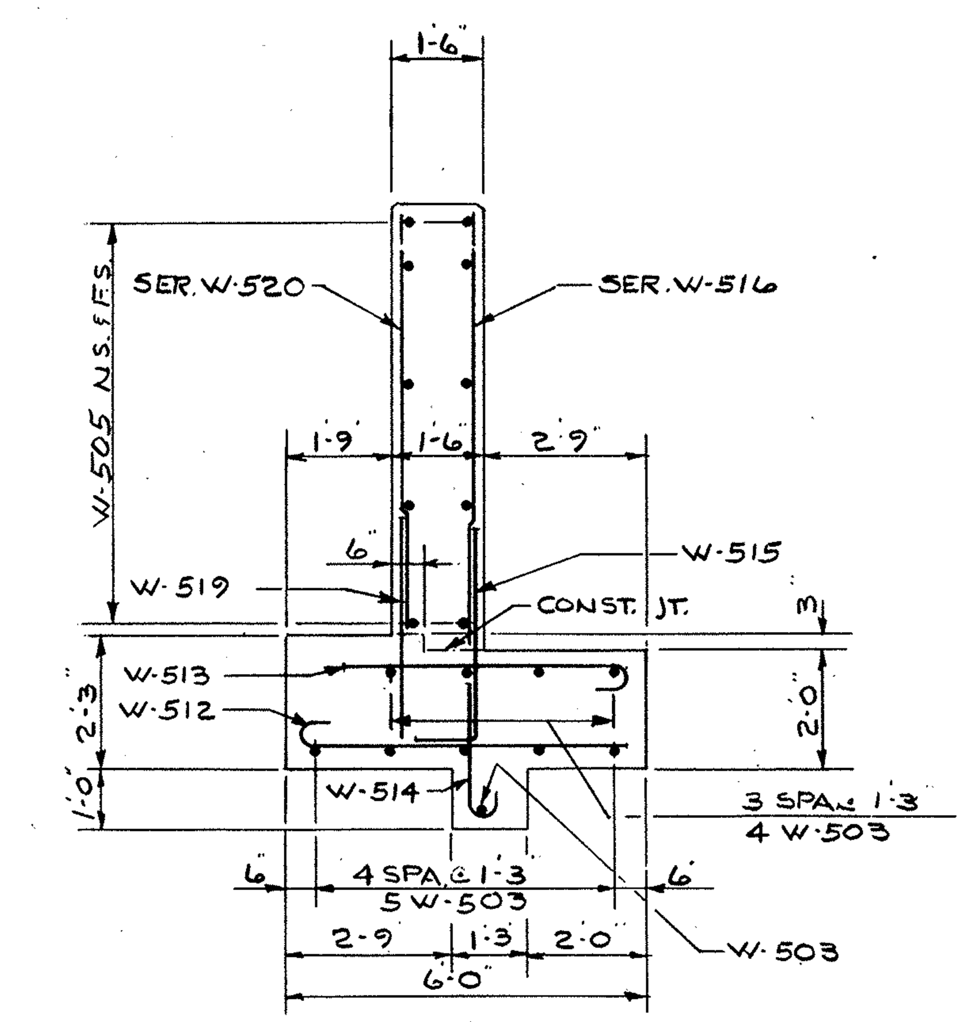
MAH-7-1495



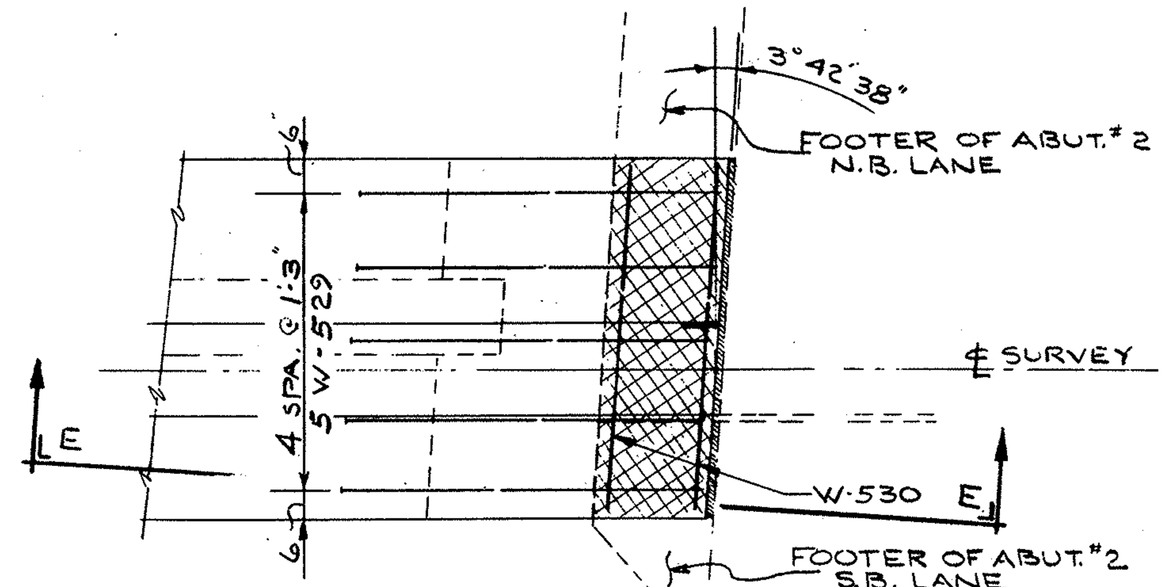
- PARTIAL PLAN -



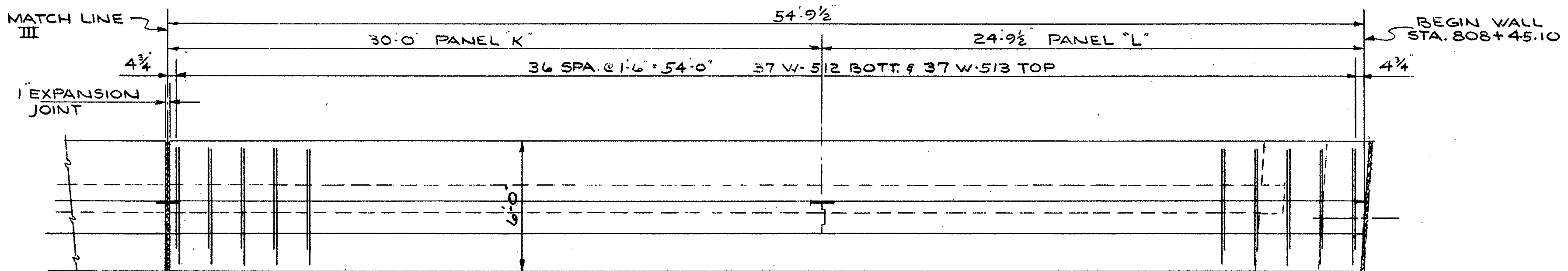
- PARTIAL ELEVATION -



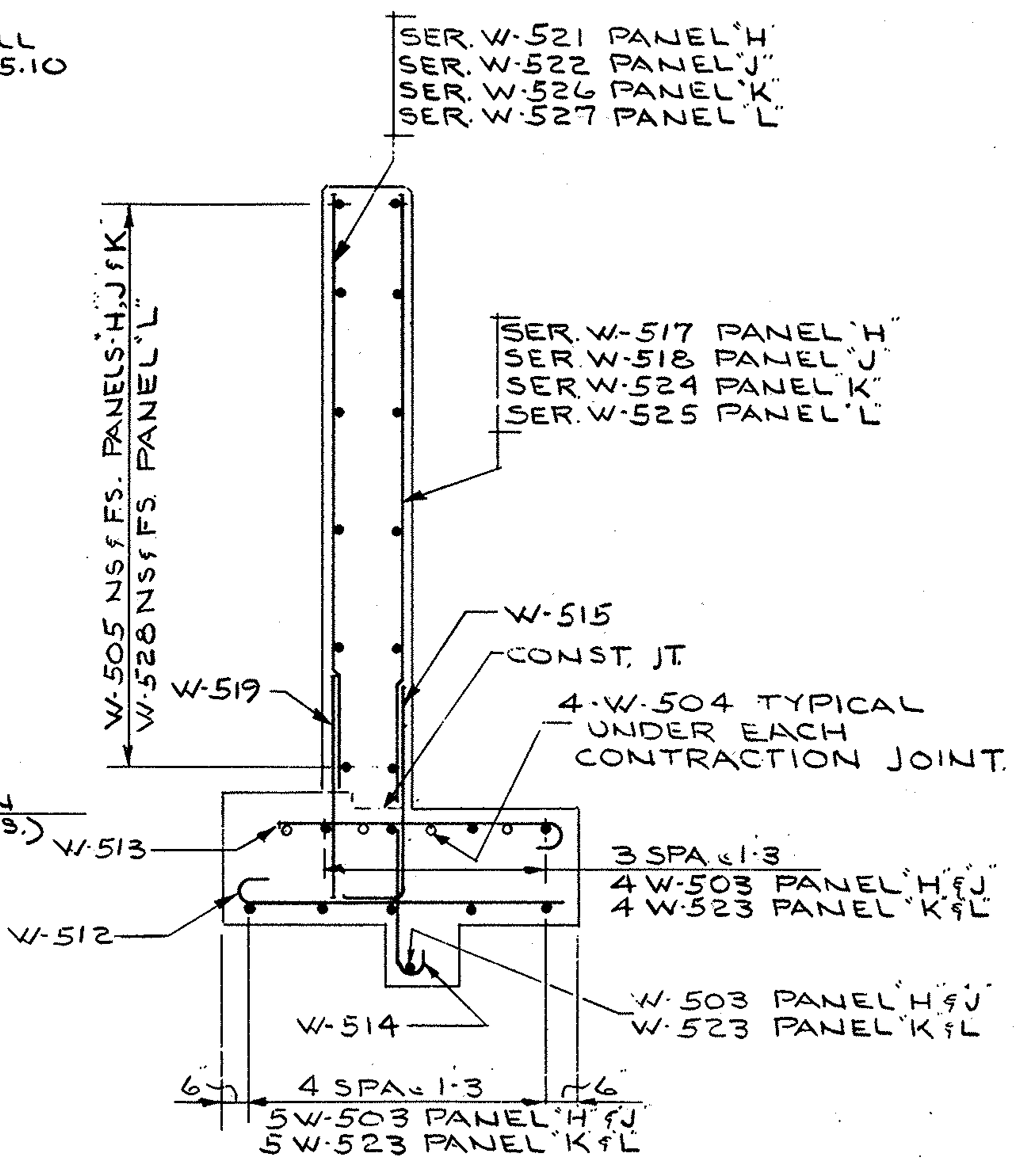
- SECTION C-C -



- PLAN - DETAIL X -



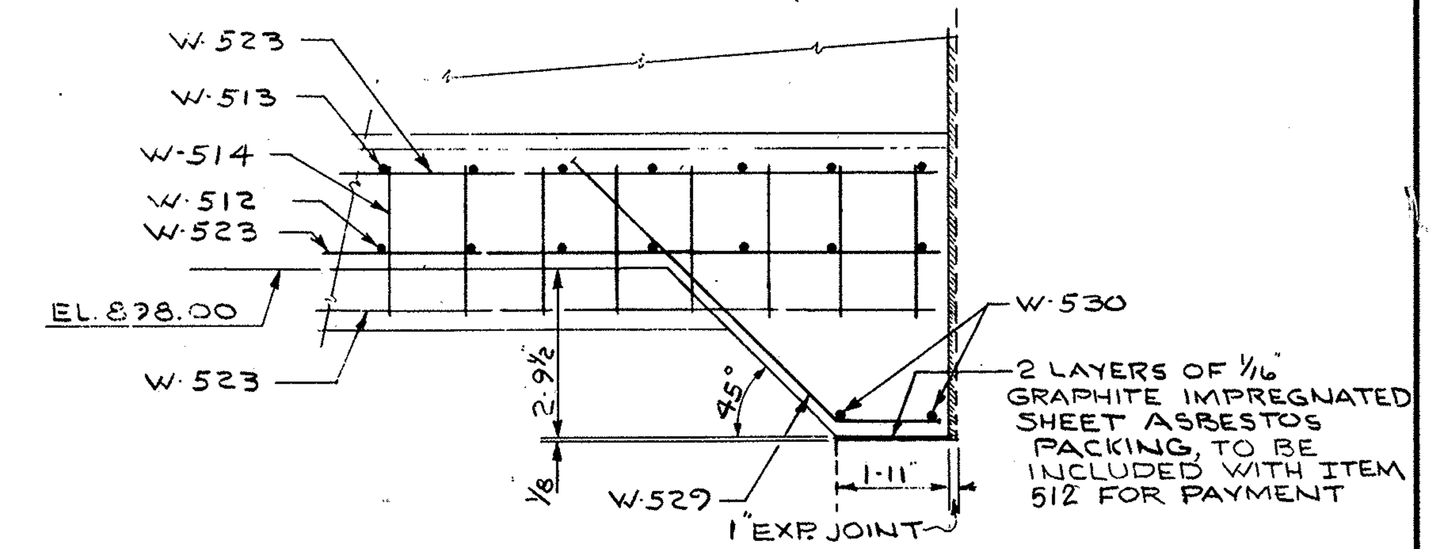
- PARTIAL PLAN -



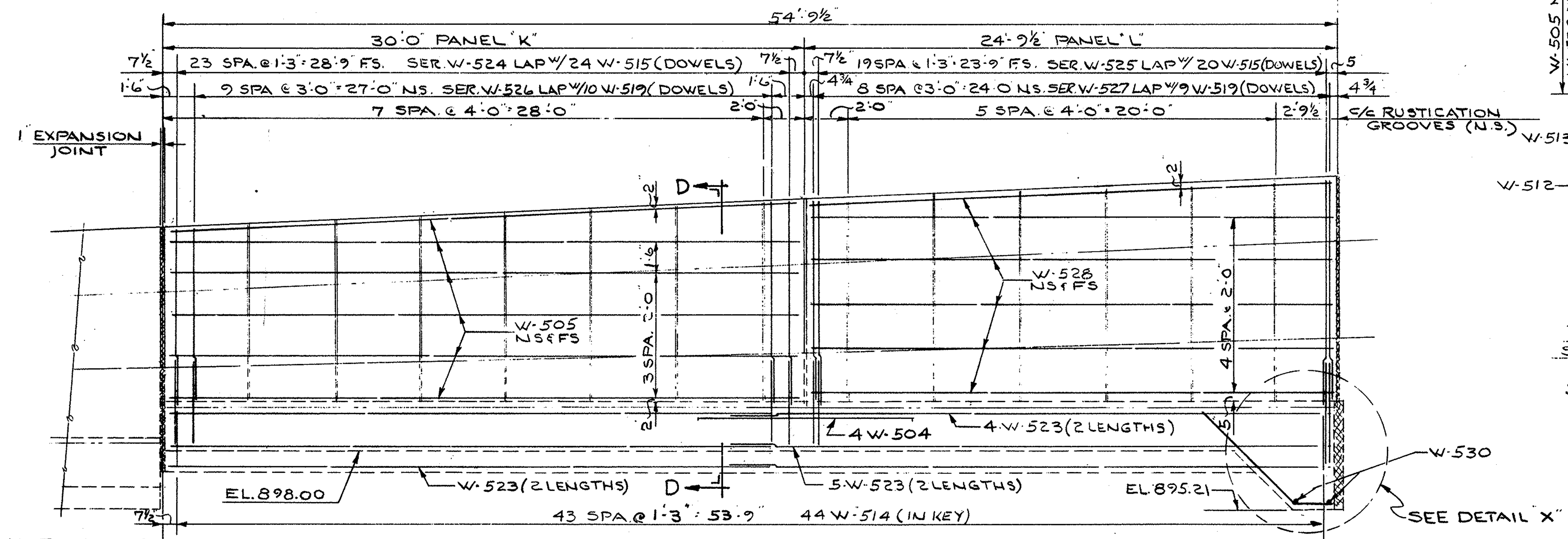
- SECTION -D-D -

SEE SECTION -C-C- FOR DIMENSIONS NOT SHOWN.

SEE SECTION B-B, SHEET 129, FOR DIMENSIONS OF PANEL "L"



- SECTION E-E -



- PARTIAL ELEVATION -

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

MEDIAN RETAINING WALL
AT
BRIDGE Nº MAH-7-1528 L. & R.
STA. 808+45.10 To STA. 611+69.89
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DNG	JP		HGH	RGH	3/15/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

MAH-7-14.95

131
206

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

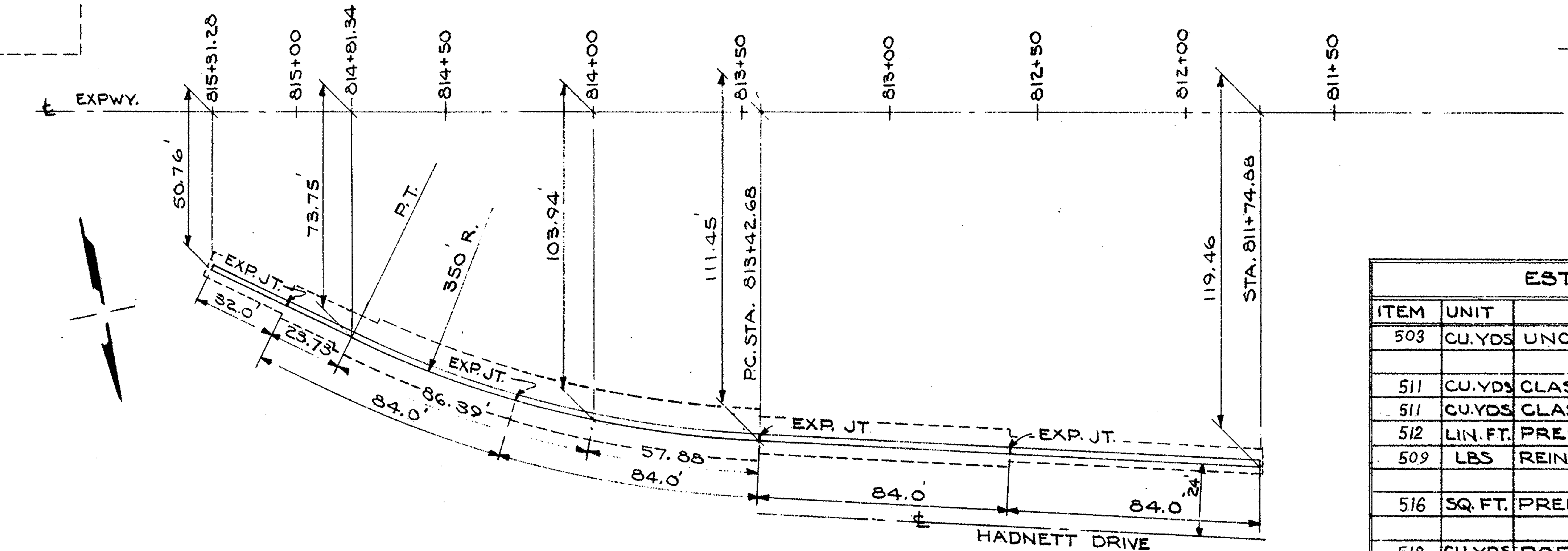
MEDIAN RETAINING WALL
AT

BRIDGE Nº MAH-7-1528 L. & R.
STA. 808+45.10 To STA. 811+60.89
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JNP		HGH	RBH	2/13/63	

SECTION 1-1

ELEVATION



LOCATION PLAN

ESTIMATED QUANTITIES

ITEM	UNIT	DESCRIPTION	QUANT.		
503	CU.YDS.	UNCLASSIFIED EXCAVATION	993		
511	CU.YDS.	CLASS C CONCRETE WALLS	492.4		
511	CU.YDS.	CLASS C CONCRETE FOOTINGS	444.2		
512	LIN.FT.	PREMOLDED SEALING STRIP	240		
509	LBS.	REINFORCING STEEL	48,510		
516	SQ.FT.	PREFORMED EXP. JT. FILLER	270		
518	CU.YDS.	POROUS BACKFILL	303		
518	LIN.FT.	6" ϕ PERFORATED BITUMINOUS COVERED C.M.P. W/ SPECIALS	368		

NOTES:

1. DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS DATED 9-1-57 TOGETHER WITH CURRENT REVISIONS THEREOF.

2. EXCAVATION QUANTITIES: INCLUDES THE REMOVAL OF MATERIAL BETWEEN THE EXISTING GROUND LEVEL AND BOTTOM OF THE FOOTING.

3. POROUS BACKFILL: 2 FT. THICK FULL LENGTH OF THE RETAINING WALL SHALL EXTEND UP TO THE UNDERSIDE OF THE IMPERVIOUS MATERIAL.

4. THE KEY: UNDER THE FOOTING SHALL BE PLACED ON UNDISTURBED EARTH.

5. SURFACE FINISH OF THE CONCRETE: THE REQUIREMENTS OF SEC. 511.16, RUBBED FINISH, SHALL APPLY TO ALL EXPOSED SURFACES.

6. SEE SHEET #140 FOR DETAILS 12, 13 & 14

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RETAINING WALL AT HADNETT DRIVE

YOUNGSTOWN
MAHONING COUNTY
STA. 811+74.88 TO STA. 815+31.28
SOUTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.C.	JLH		G.O.W. 3/8/63	RDH	3/8/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

133
206

MAH.-7-14.95

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RETAINING WALL AT HADNETT DRIVE

YOUNGSTOWN

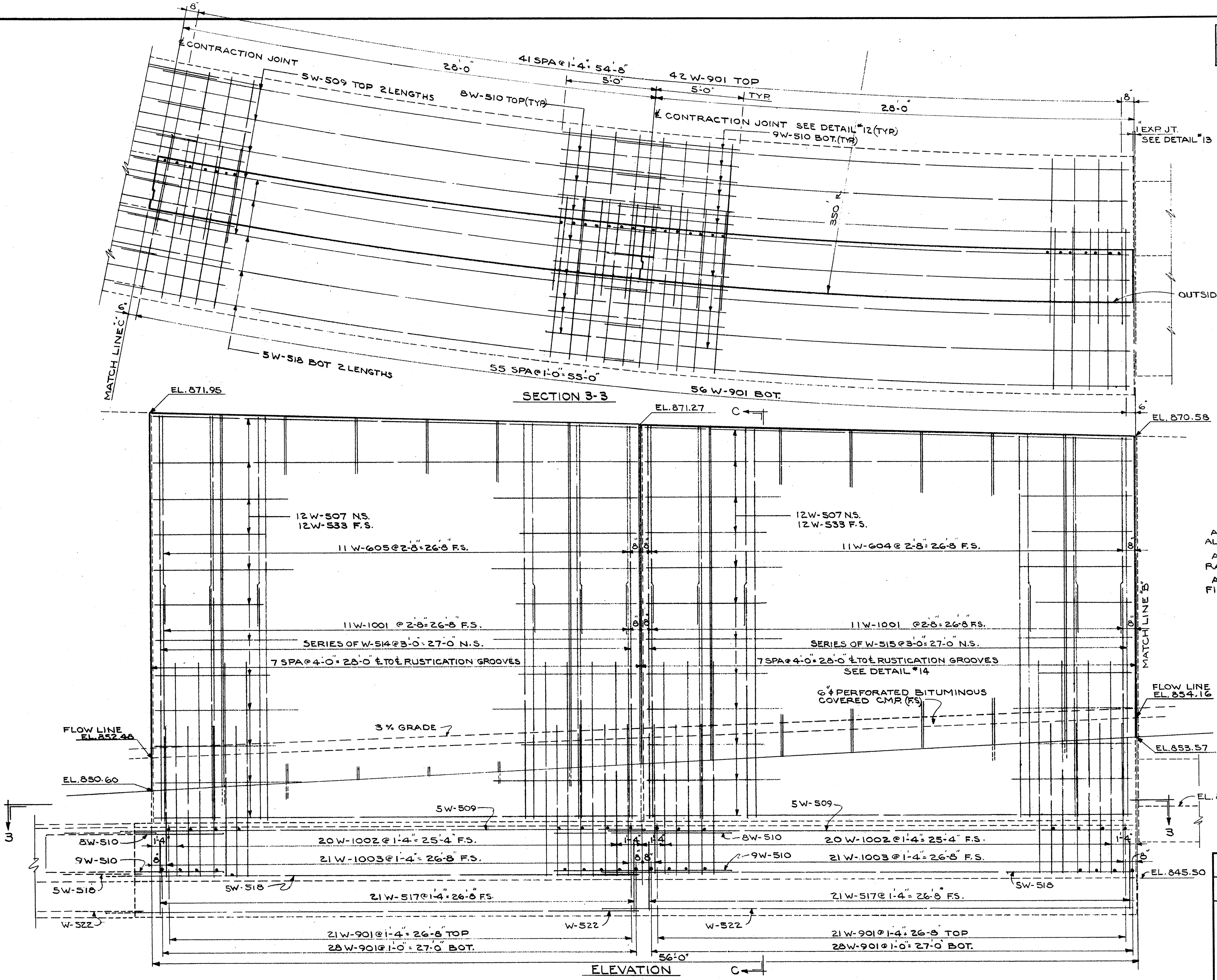
MAHONING COUNTY
STA. 811+74.85 TO STA. 815+31.28
SOUTH BOUND LANE S.R. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH		C.O.W. 3/1/63	R.B.H.	3/8/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

134
206

MAH.-7-14.95



NOTES:

ALL HORIZONTAL DIMENSIONS TAKEN ALONG OUTSIDE FACE OF WALL.

ALL TRANSVERSE BARS TO BE PLACED RADIALLY.

ALL LONGITUDINAL BARS TO BE BENT IN FIELD TO FIT CURVATURE OF WALL.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

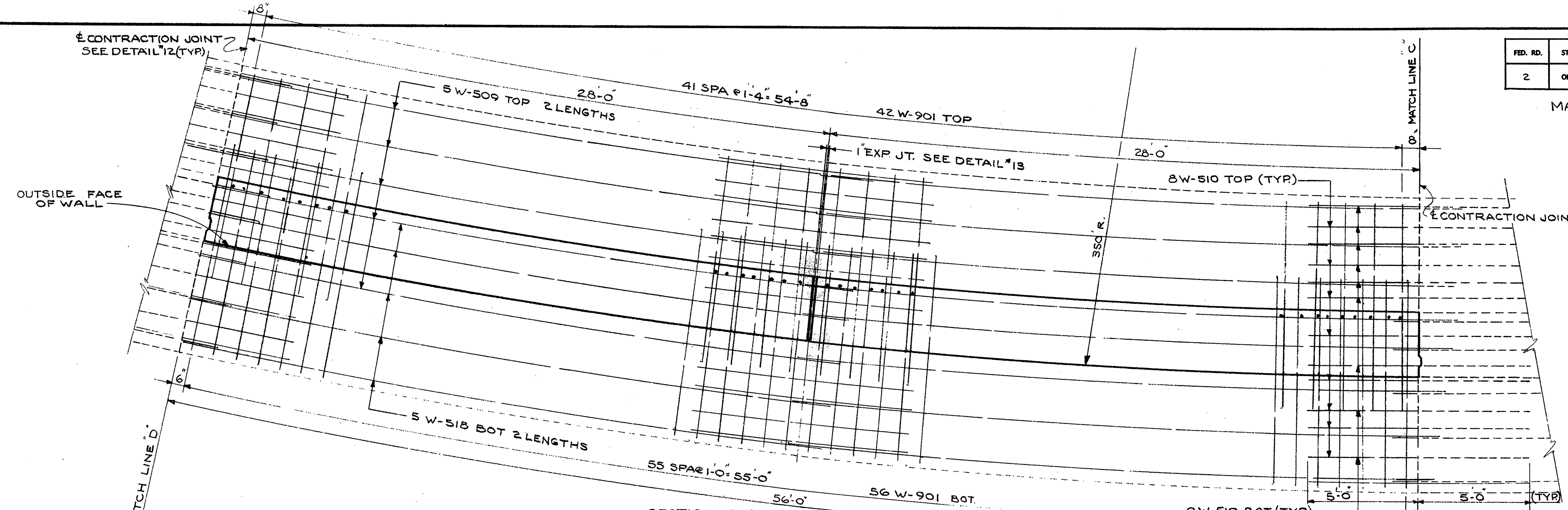
RETAINING WALL
AT HADNETT DRIVE
YOUNGSTOWN
MAHONING COUNTY
STA. 811+74.88 TO STA. 815+31.28
SOUTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH		EWW 3/9/63	RBH	3/9/63	

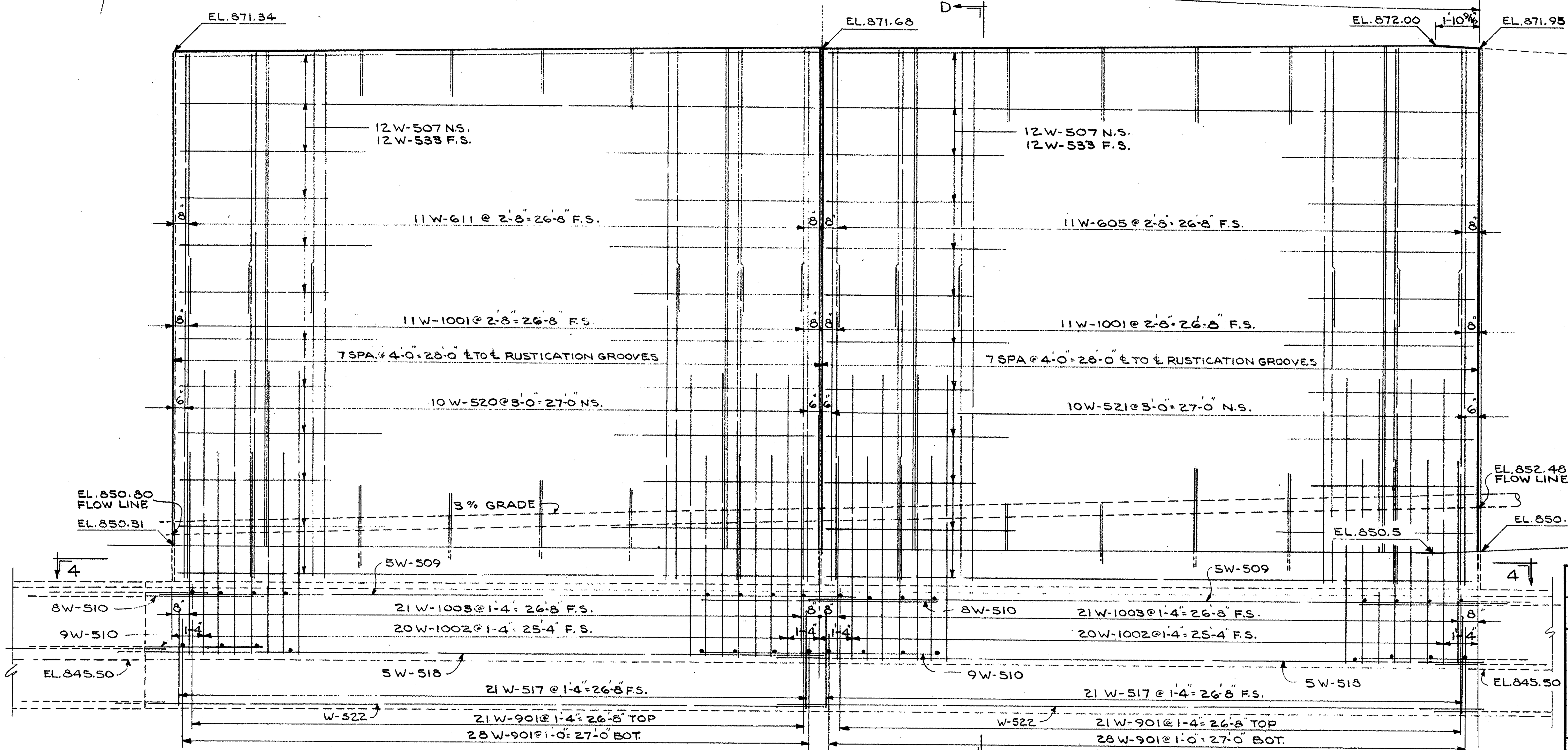
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

135
206

MAH.-7-14.95



SECTION 4-4



ELEVATION

NOTES: SEE SHEETS # 132 & 134

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

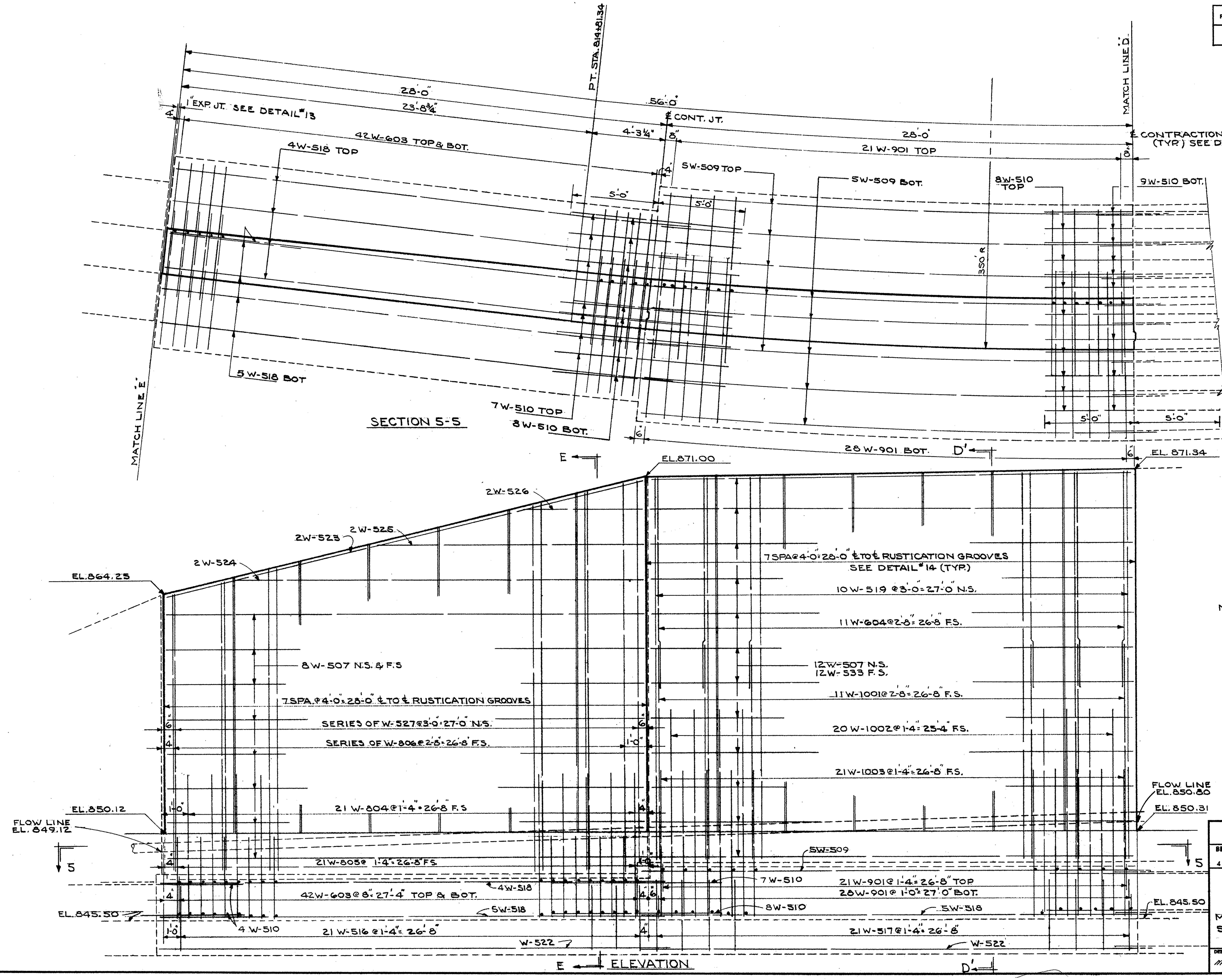
RETAINING WALL
AT HADNETT DRIVE
YOUNGSTOWN

MAHONING COUNTY
STA. 811+74.88 TO STA. 815+31.28
SOUTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH.		3/8/63	RBH	3/8/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-14.95



NOTES: SEE SHEETS # 132 & 134

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

RETAINING WALL AT HADNETT DRIVE

YOUNGSTOWN
MAHONING COUNTY
STA. 811+74.88 TO STA. 815+31.28
SOUTH BOUND LANE S.R. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH		CW 3/8/63	RDH	3/8/63	

REINFORCING STEEL SCHEDULE

MARK	Nº REQD.	LENGTH	WEIGHT	SHP.
SERIES OF W-501	1 SET OF 10 = 10 BARS	VARIES 8'-3" TO 6'-6 3/4" @ 2 1/4" INC.	77	ST
SERIES OF W-502	1 SET OF 11 = 11 BARS	VARIES 8'-5" TO 6'-9" @ 2" INC.	87	ST
SERIES OF W-503	1 SET OF 10 = 10 BARS	VARIES 10'-0 1/4" TO 8'-4" @ 2 1/4" INC.	96	ST
SERIES OF W-504	1 SET OF 11 = 11 BARS	VARIES 10'-3" TO 8'-7" @ 2" INC.	108	ST
SERIES OF W-505	1 SET OF 10 = 10 BARS	VARIES 11'-10" TO 10'-1 3/4" @ 2 1/4" INC.	115	ST
SERIES OF W-506	1 SET OF 11 = 11 BARS	VARIES 12'-1" TO 10'-5" @ 2" INC.	129	ST
W-507	170	27'-8"	4906	ST
W-508	63	5'-4"	350	BT
W-509	76	29'-0"	2299	ST
W-510	139	10'-0"	1450	ST
SERIES OF W-511	1 SET OF 10 = 10 BARS	VARIES 16'-7 7/8" TO 16'-0" @ 7/8" INC.	170	ST
SERIES OF W-512	1 SET OF 10 = 10 BARS	VARIES 17'-4 7/8" TO 16'-9" @ 7/8" INC.	178	ST
SERIES OF W-513	1 SET OF 10 = 10 BARS	VARIES 18'-0 7/8" TO 17'-5" @ 7/8" INC.	185	ST
SERIES OF W-514	1 SET OF 10 = 10 BARS	VARIES 22'-11" TO 22'-2" @ 1" INC.	235	ST
SERIES OF W-515	1 SET OF 10 = 10 BARS	VARIES 22'-3" TO 21'-6" @ 1" INC.	228	ST
W-516	84	4'-7"	402	BT
W-517	105	5'-3"	575	BT
W-518	34	29'-8"	1052	ST
W-519	10	22'-0"	229	ST
W-520	10	22'-4"	233	ST
W-521	10	22'-8"	236	ST
W-522	6	29'-0"	181	ST

MARK	Nº REQD.	LENGTH	WEIGHT	SHP.
W-523	2	28'-5"	59	ST
W-524	2	23'-10"	50	ST
W-525	2	15'-7"	33	ST
W-526	2	7'-2"	15	ST
SERIES OF W-527	1 SET OF 10 = 10 BARS	VARIES 22'-6" TO 15'-1 1/4" @ 8 3/4" INC.	200	ST
SERIES OF W-528	1 SET OF 11 = 11 BARS	VARIES 15'-10" TO 3'-7 3/4" @ 1'-2 5/8" INC.	112	ST
W-529	4	31'-8"	132	ST
SERIES OF W-530	2 SETS OF 6 = 12 BARS	VARIES 29'-3" TO 4'-8" @ 4'-11" INC.	212	ST
W-531	2	34'-2"	71	ST
W-532	7	33'-6"	245	ST
W-533	60	27'-5"	1716	ST
W-534	24	3'-6"	88	BT
W-535	1	31'-8"	33	ST
W-601	63	3'-7"	339	BT
W-602	66	4'-4"	429	BT
W-603	200	7'-6"	2253	BT
W-604	22	11'-0"	363	ST
W-605	22	11'-9"	388	ST
W-606	48	5'-5"	376	BT
W-607	24	4'-11"	177	BT
W-608	19	9'-0"	257	BT
SERIES OF W-609	1 SET OF 5 = 5 BARS	VARIES 9'-0" TO 6'-10" @ 6 1/2" INC.	59	BT
SERIES OF W-610	1 SET OF 12 = 12 BARS	VARIES 16'-1" TO 4'-2" @ 1'-1" INC.	182	ST
W-611	11	11'-4"	187	ST

MARK	Nº REQD.	LENGTH	WEIGHT	SHP.
SERIES OF W-801	1 SET OF 11 = 11 BARS	VARIES 16'-11 1/2" TO 16'-4" @ 3/4" INC.	489	ST
SERIES OF W-802	1 SET OF 11 = 11 BARS	VARIES 17'-7 1/2" TO 17'-0" @ 3/4" INC.	508	ST
SERIES OF W-803	1 SET OF 11 = 11 BARS	VARIES 18'-4" TO 17'-8 1/2" @ 3/4" INC.	529	ST
W-804	84	9'-8"	2168	BT
W-805	84	6'-2"	1383	BT
SERIES OF W-806	1 SET OF 11 = 11 BARS	VARIES 22'-5" TO 15'-11 1/2" @ 7 3/4" INC.	564	ST
W-901	245	9'-3"	7705	BT
W-1001	55	13'-6"	3195	ST
W-1002	100	13'-8"	5881	BT
W-1003	105	10'-2"	4591	BT

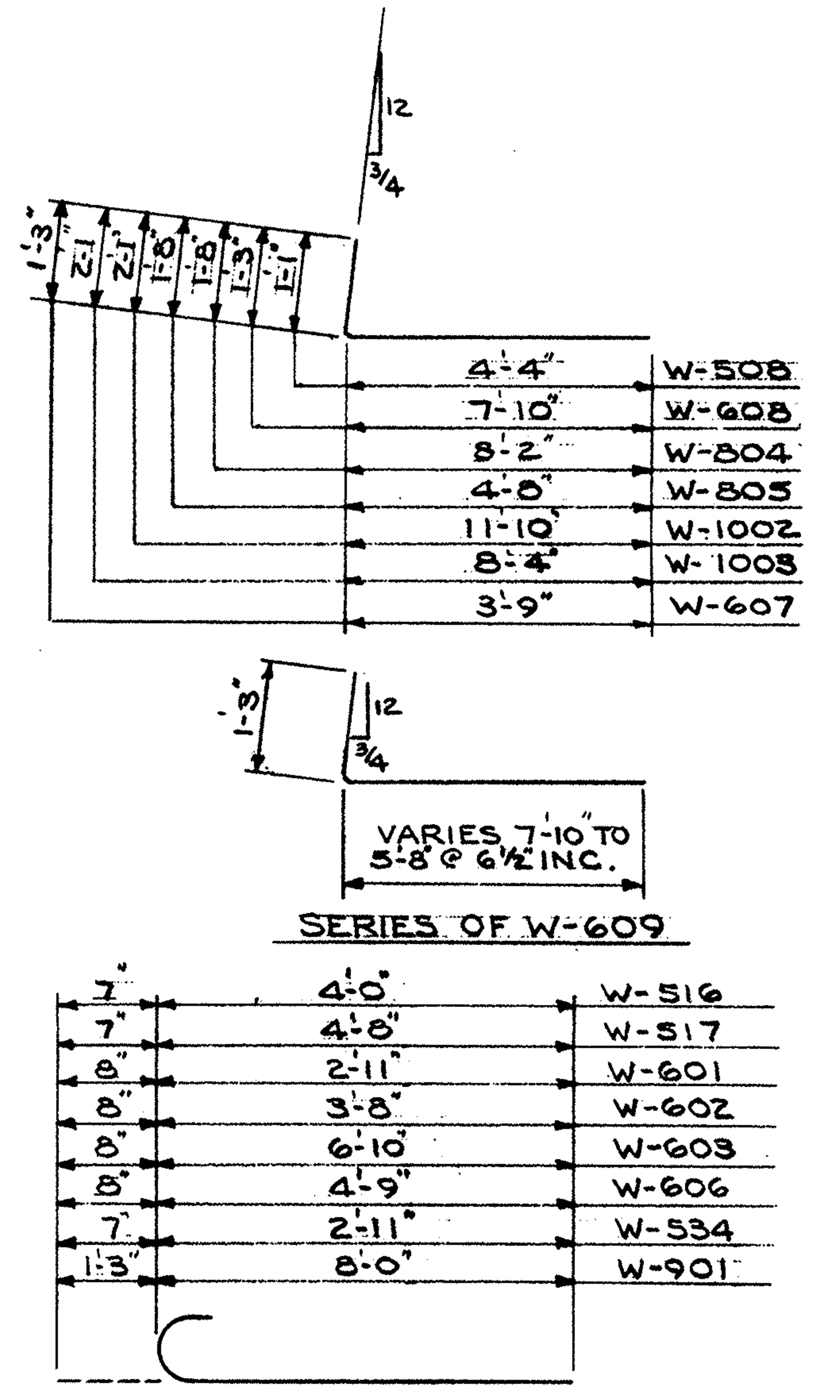
GRAND TOTAL = 48,510 LBS.

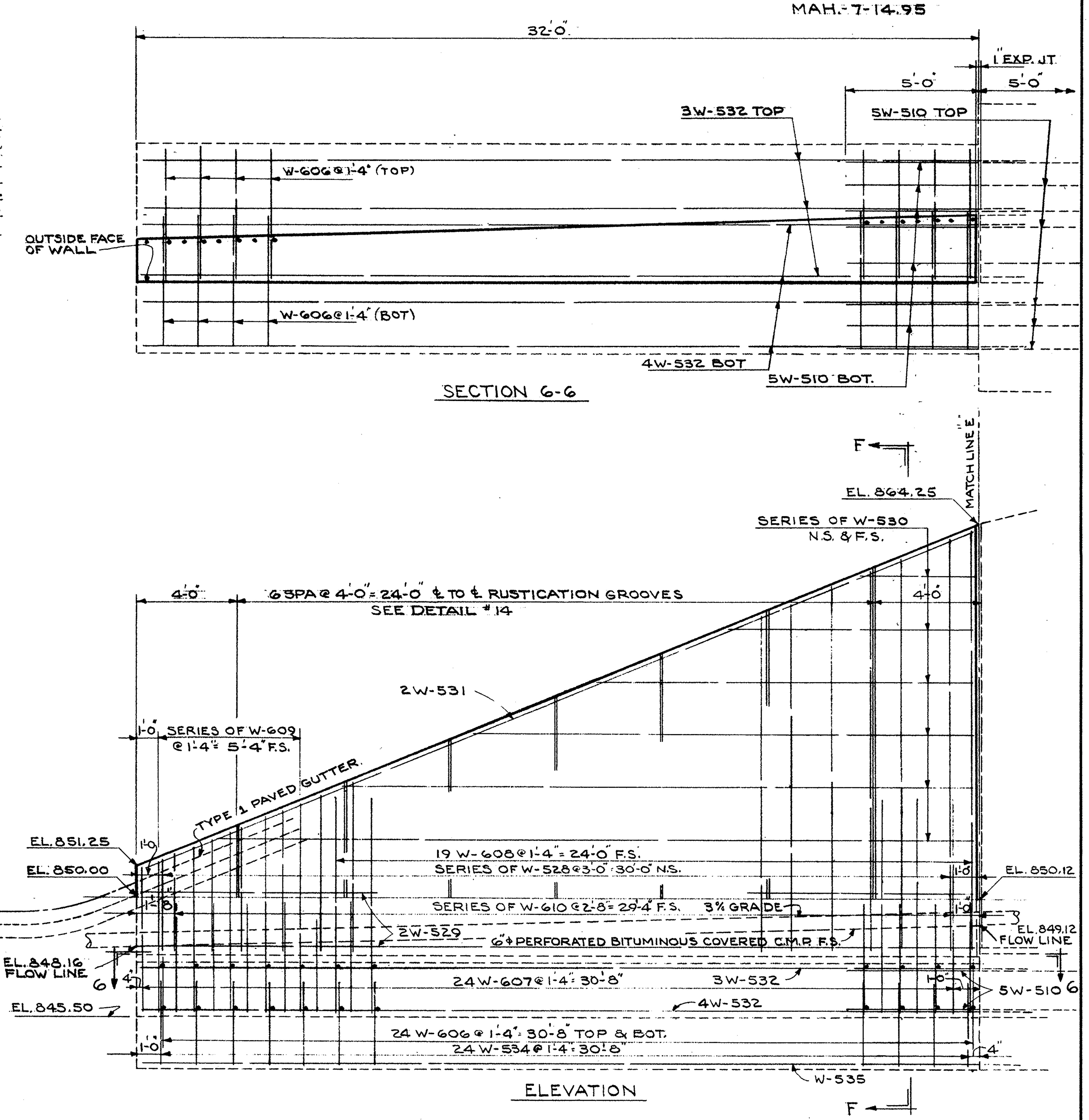
REPLACEMENT BARS

MARK	Nº REQD.	LENGTH		SHP.
RE-501	1	6'-7"		ST
RE-601	1	6'-11"		ST
RE-801	1	7'-6"		ST
RE-901	1	7'-10"		ST
RE-1001	1	8'-2"		ST

NOTES:

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE; W-601 IS A Nº 6 SIZE BAR W-1001 IS A Nº 10 SIZE BAR.





FOR CONTINUATION OF 6" ∅ DRAIN SEE DRAINAGE PLANS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RETAINING WALL AT HADNETT DRIVE
YOUNGSTOWN
MAHONING COUNTY
STA. 811+74.88 TO STA. 815+31.28
SOUTH BOUND LANE SR. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH		C.O.W 3/1/63	RDH	3/8/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH.-7-14.95

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

RETAINING WALL AT HADNETT DRIVE

YOUNGSTOWN

MAHONING COUNTY

STA. 811+74.88 TO STA. 815+31.28

SOUTH BOUND LANE S.R. #7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MC	JLH		aw. 3-8-63	RDH	3/1/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

135
206

MAH-7-14.95

STRUCTURAL GENERAL NOTES

1 - DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF " DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9/1/57, TOGETHER WITH CURRENT REVISIONS THEREOF.

3 - EXCAVATION QUANTITY

EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS (MAH-7-1514 AND MAH-7-1528).

5 - REFERENCE

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

BR-1-65, dated 11-24-65.
CSB-2-63, sheet No. 1, revised 12-8-65;
RB-1-55, REVISED 2/2/59; SD-1-65 dated 11-8-65;
FSB-1-62, REVISED 1/15/63;
AS-1-67, REVISED 1/11/68.
SUPPLEMENTAL SPECIFICATIONS 808 DATED 1/1/69
811 Dated 1/1/69
825 Dated 1/1/69

On Standard Drawing FSB-1-62 specification reference M-7.11 shall be changed to read 711.17.

6 - Shop Splices of Beams over Piers

IF BEAM HAVING DEPTHS DIFFERING BY MORE THAN 1/8" ARE TO BE SPLICED BY BUTT WELDING, THE DEPTH OF THE SMALLER-DEPTH BEAM SHALL BE INCREASED BY SPLITTING THE WEB LONGITUDINALLY AT A DISTANCE OF 1-1/2" BELOW THE BOTTOM OF THE TOP FLANGE AND FOR A DISTANCE SUFFICIENT TO ALLOW THE FLANGE TO BE BENT UP AT A SLOPE OF NOT MORE THAN 3/8" PER FOOT, AFTER WHICH THE SPLIT IN THE WEB SHALL BE COMPLETELY WELDED WITH FULL DEPTH PENETRATION AND GROUND FLUSH.

7 - JOINT SEALER: Item 828 joint sealer including bond breaker, shown in Section A-A of Std. Drwg. SD-1-65, sheet No. 1, shall be omitted.

8 - UTILITY LINES

ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

12 - BRIDGE SEAT REINFORCING

SPECIAL CARE SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SO AS TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR BAR HOLES.

13 - DECK SLAB HAUNCH (Superelevated Structures)

THE HAUNCH IN THE SUPERELEVATED DECK SLAB ADJACENT TO THE TOP OF STEEL BEAMS, WHICH IS SHOWN AS 9" WIDE, MAY VARY FROM THIS DIMENSION BETWEEN THE LIMITS OF 6" AND 12" ON THE LOW SIDE AND BETWEEN 9" AND 12" ON THE HIGH SIDE. EXCEPT ON THE HIGH SIDE, THE MAXIMUM SLOPE SHALL NOT EXCEED 3 INCHES PER FOOT. PAYMENT FOR DECK SLAB CONCRETE SHALL BE BASED ON THE 9" WIDTH.

14 - SLAB THICKNESS

THIS IS THE NOMINAL DIMENSION INCLUDING 1" MONOLITHIC WEARING SURFACE. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.

15 - INTERMEDIATE CROSSFRAME ANGLES

INTERMEDIATE CROSSFRAME ANGLES, 3 X 3 X 5/16 WELD BOTH SIDES OF VERTICAL LEG AND TOP SIDE OF HORIZONTAL LEG TO BEAM WITH 1/4" CONTINUOUS FILLET WELD.

16 - PARAPET WALL

1/4" GRAY SPONGE RUBBER PREFORMED EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF SECTION 516 . (INCLUDE WITH ITEM 517 FOR PAYMENT).

17 - BRIDGE LIGHTING

SEE LIGHTING DETAILS, SHEETS 105-110

18 - END DAM

BACKWALL ANGLE OF END DAM SHALL HAVE AN UNWELDED, BUTT JOINT AT EACH CONTRACTION JOINT.

19 - THE CONCRETE

THE CONCRETE IN THE ABUTMENT BACKWALL SHALL NOT BE PLACED UNTIL AFTER THE STEEL WORK IS ERECTED BUT SHALL BE PLACED BEFORE THE DECK SLAB IS POURED.

20 - PIER FOOTINGS

PIER FOOTINGS SHALL EXTEND A MINIMUM OF 3" INTO UNDISTURBED ROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

21 - FOUNDATION BEARING PRESSURE

PIER FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 4 TONS PER SQ. FT. FOR BRIDGE # MAH 7-1508 & 3 TONS PER SQ. FT. FOR BRIDGES # MAH 7-1514 AND # MAH 7-1528.

22 - PILES

PILES SHALL BE DRIVEN TO FIRM CONTACT WITH ROCK. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT. THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN SEC. 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING.

"A" - TONS PER PILE USING A 7,000 FT. LB. HAMMER
"B" - TONS PER PILE USING A 11,000 FT. LB. HAMMER
"C" - TONS PER PILE USING A 15,000 FT. LB. HAMMER

IF THE ENERGY RATING OF THE HAMMER IS BETWEEN THE RATINGS AS SHOWN ABOVE, THE REQUIRED FORMULA CAPACITY SHALL BE DETERMINED BY INTERPOLATION.
THE DESIGN LOAD IS "D" TONS PER PILE.

BRIDGE NO.		MAH-7-1508	MAH-7-1514		MAH-7-1528
			10BP42	12BP53	
	"A"	47	45	50	SEE PILING PLAN FOR VALUES
	"B"	39	40	45	
	"C"	37	35	40	
	"D"	35			
ABUT. #2, & W.W.	"D"			40	
PIER #1, 2, 4, 5	"D"		25		
PIER #3	"D"		30		

24 - DECK SLAB HAUNCH

THE HAUNCH IN THE DECK SLAB ADJACENT TO THE TOP OF STEEL BEAMS, WHICH IS SHOWN AS 9" WIDE, MAY VARY FROM THIS DIMENSION BETWEEN THE LIMITS OF 6" AND 12", EXCEPT THAT THE MAXIMUM SLOPE SHALL NOT EXCEED 3 INCHES PER FOOT. PAYMENT FOR DECK SLAB CONCRETE SHALL BE BASED ON THE 9" WIDTH.

26 - DOWNSPOUTS

DOWNSPOUTS SHALL BE 6" STANDARD WROUGHT IRON PIPE OR HOT-DIP GALVANIZED STEEL PIPE. JOINTS SHALL BE MADE BY WELDING OR BY THE USE OF A CLAMP-TYPE COUPLING WITH A RING GASKET. ALL WELDING SHALL BE DONE BEFORE GALVANIZING. STRAPS OR CLAMPS FOR ATTACHING DOWNSPOUTS SHALL BE WROUGHT IRON OR HOT-DIP GALVANIZED STEEL.

28 - POROUS BACKFILL

POROUS BACKFILL, 2 FEET THICK, FULL LENGTH OF ABUTMENTS AND WINGS SHALL EXTEND UP TO THE UNDERSIDE OF THE APPROACH SLAB, OR TO THE FINISHED GROUND SURFACE UNLESS OTHERWISE SHOWN.

30 - WELDED ATTACHMENTS

No attachments shall be made by field welding to the top flanges or flange plates of continuous beams within a distance of .10 of the span length on either side of the interior supports. Welding for attachments to the top flanges at other parts of the spans shall be kept at least 2" from edge of flange.

31 - DESIGN DATA

Design Loading - CF 2000 (57)
Concrete Class - C Unit stress 1333 p.s.i. superstructure
Unit stress 1133 p.s.i. substructure
Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.
Reinforcing Steel - ASTM A615, A616, A617, Deformed, Intermediate or Hard Grade. Unit Stress 20,000 p.s.i. except that spiral reinforcement shall be plain bars, A306 or A499 with a minimum ultimate strength of 58,000 p.s.i.

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STRUCTURAL GENERAL NOTES
PROJECT MAH-7-14.95
YOUNGSTOWN MAHONING COUNTY

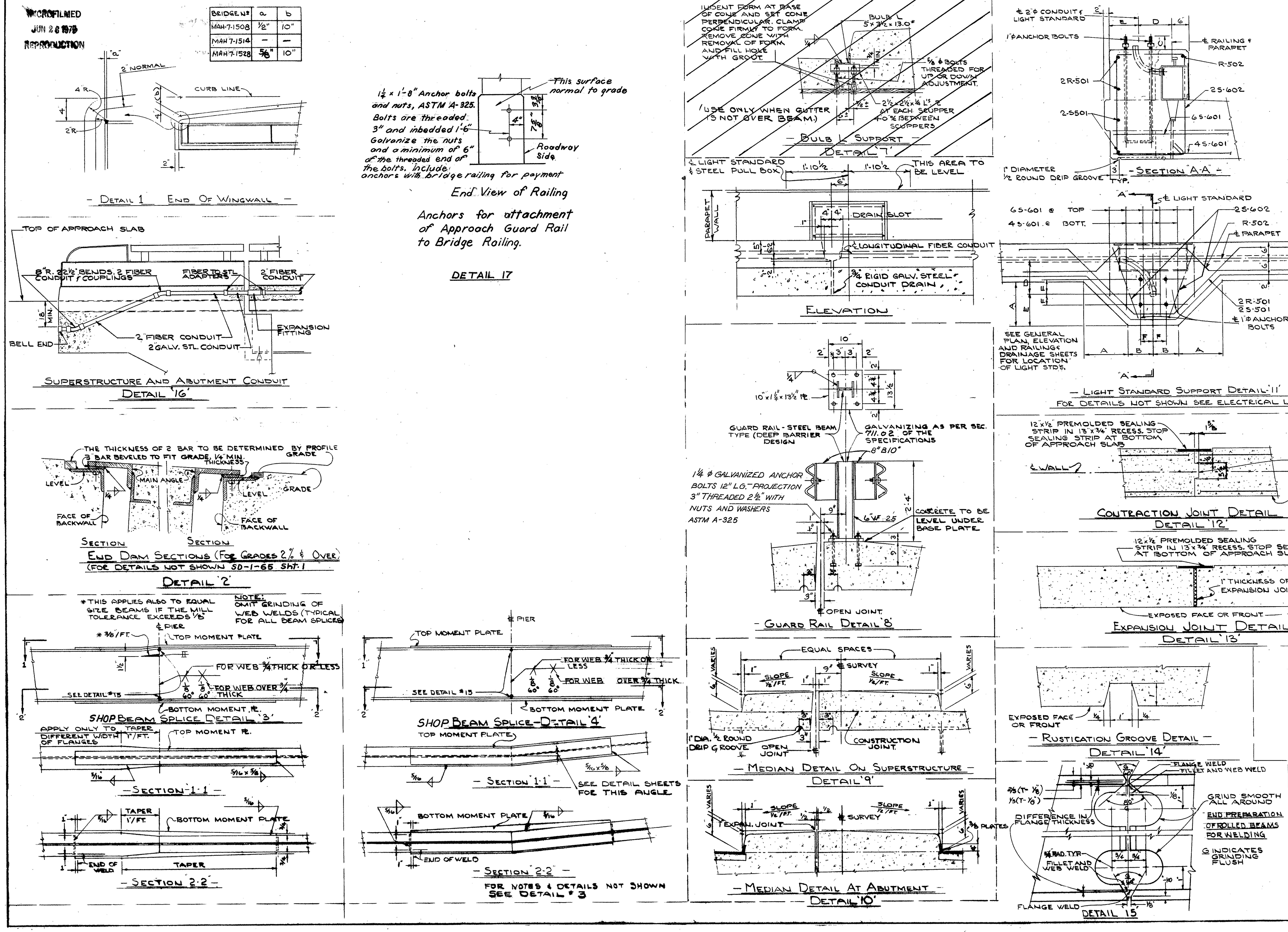
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-14.95

BRIDGE №	a	b
MAH-7-1508	1/2"	10"
MAH-7-1514	—	—
MAH-7-1528	5/8"	10"

	TYPE I	II	III
A	1'-4"		
B	7¼"		
C	3"		
D	11¾"		
E	10¼	-	
F	4 3/16		



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TYPICAL BRIDGE DETAILS
PROJECT MAH-7-14.95

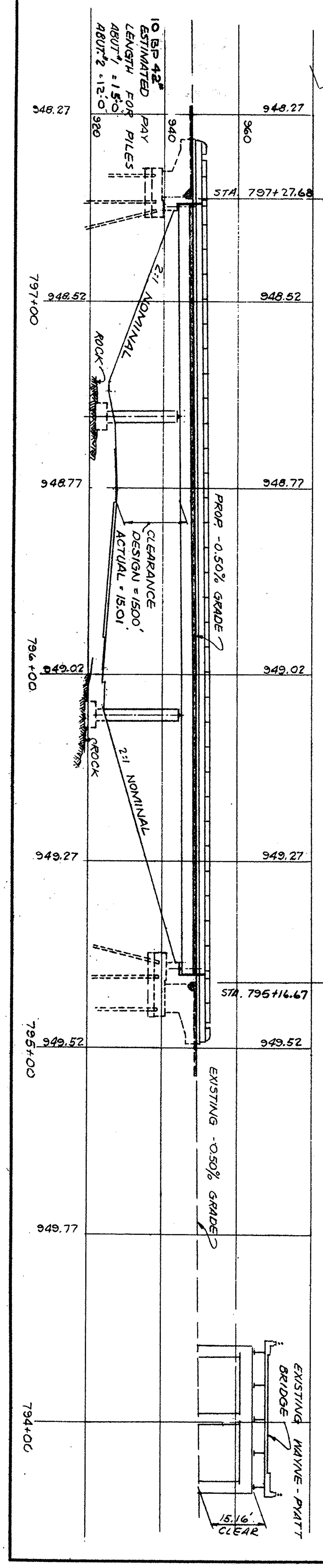
YOUNGSTOWN — MAHONING COUNTY

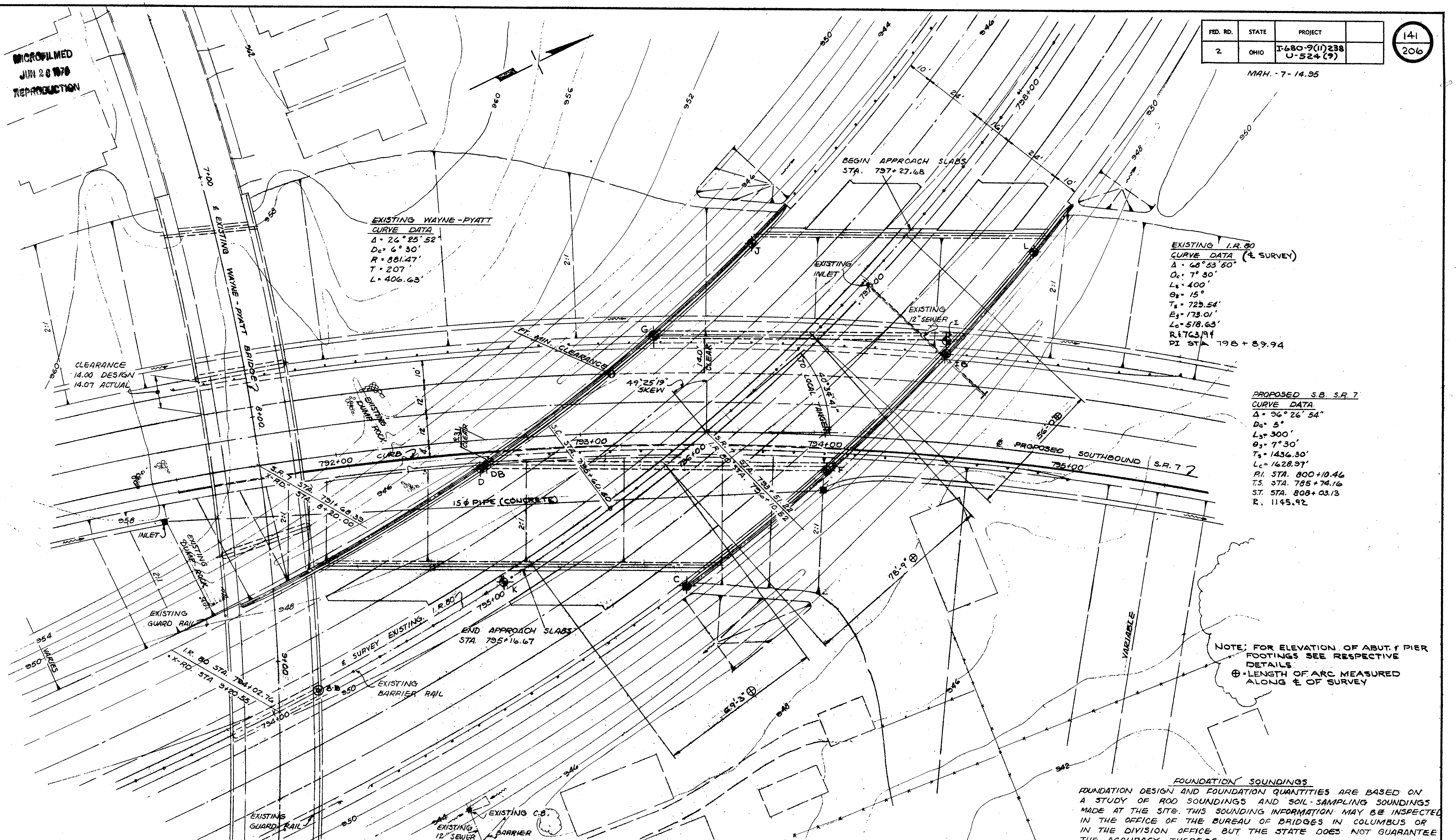
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	JNP		ew	REH	2/2/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

141 / 206

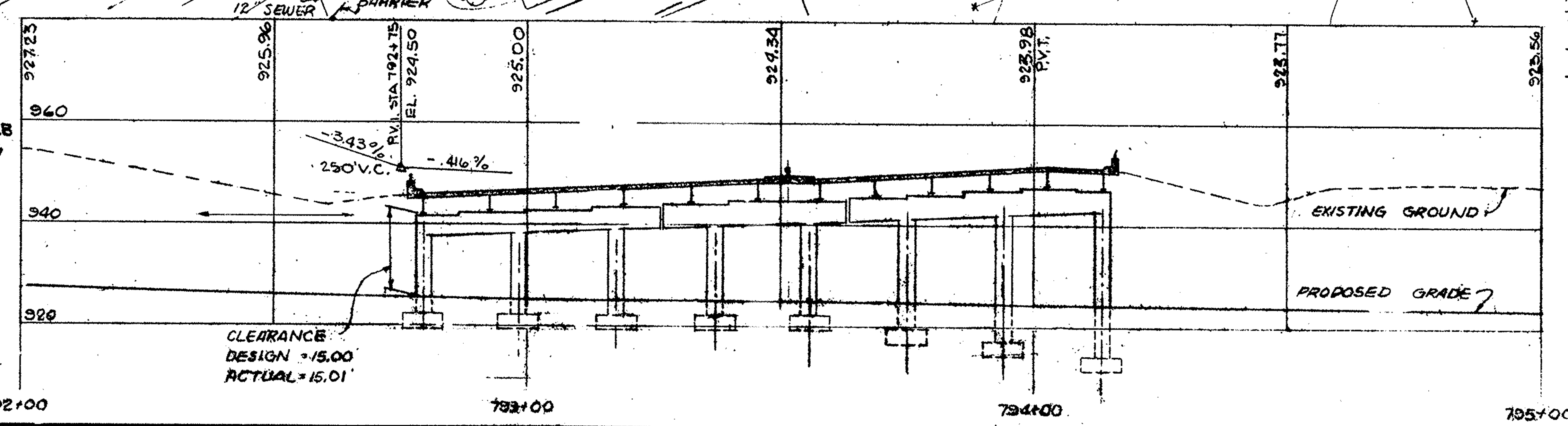
MAH.-7-14.95





PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES.
SKEW: 49°25'19" R.F. (TO LOCAL TANGENTS @ SURVEY LINES)
SPANS: 69'-3" 78'-9" 56'-0" ℄/℄ BEARINGS ALONG ℄ OF SURVEY
ROADWAY: 88'-0" F/F PARAPETS (WITH 6' MEDIAN CURB) 1'-2" SAFETY CURB
LOAD FREQUENCY: CF 2000 (57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLABS: 25' LONG (AS-1-67)
ALIGNMENT: 7°30' CURVE LT. WITH SPIRAL TRANSITION
SUPERELEVATION: TRANSITION



FOUNDATION SOUNDINGS

FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF ROD SOUNDINGS AND SOIL-SAMPLING SOUNDINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS OR IN THE DIVISION OFFICE BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.

⊕ INDICATES DRIVE SAMPLE BORING
⊕ INDICATES DRIVE ROD PENETRATION RESISTANCE SOUNDINGS

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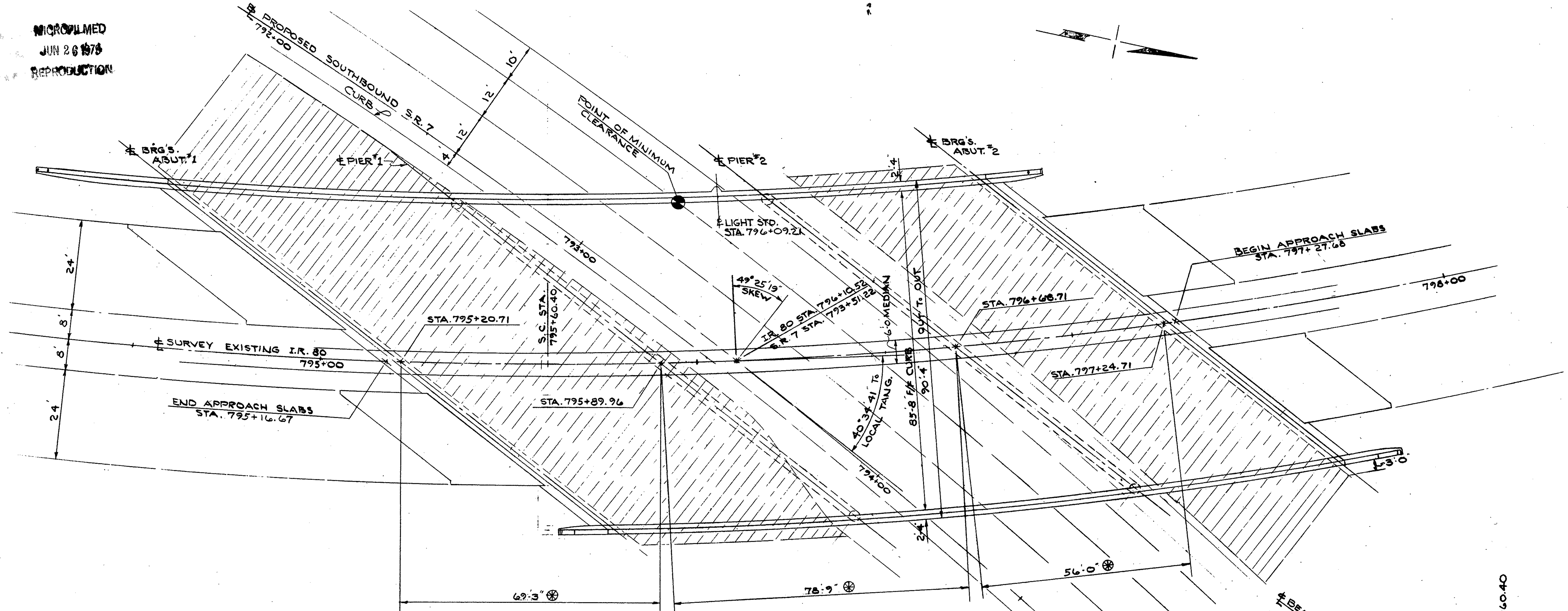
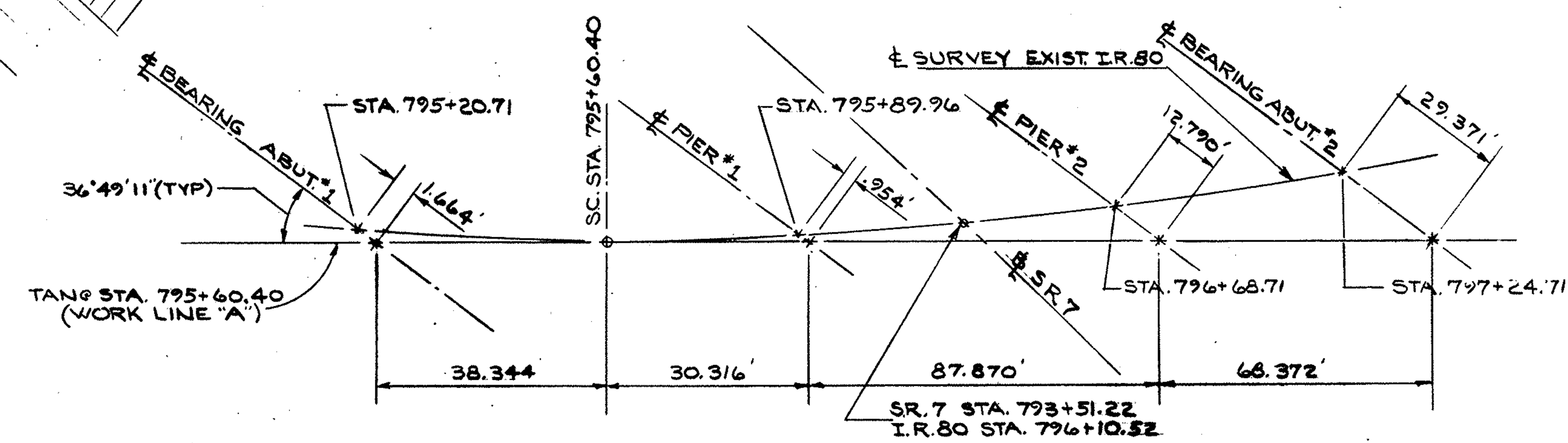
SITE PLAN

BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

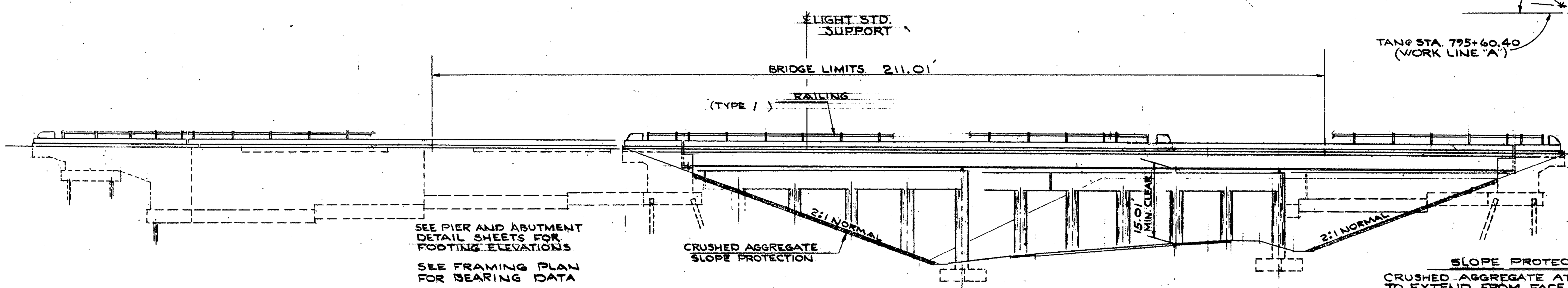
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	GASKILL		CW	RDH	2/21/63	



- PLAN -



- GEOMETRIC LAYOUT -



- ELEVATION -

SLOPE PROTECTION

CRUSHED AGGREGATE AT EACH ABUTMENT TO EXTEND FROM FACE OF ABUTMENT TO TOE OF SLOPE FOR FULL WIDTH OF BRIDGE PLUS THREE FEET AND PARALLEL TO ℄ OF BRIDGE, EXCEPT THAT AT THE ACUTE CORNERS THE OUTSIDE EDGE OF THE SLOPE PROTECTION SHALL INTERSECT THE ACTUAL OR PROJECTED FACE OF THE ABUTMENT 3 FEET BEYOND THE OUTER EDGE OF THE SUPERSTRUCTURE AND SHALL EXTEND DOWN THE SLOPE, NORMAL TO THE FACE OF THE ABUTMENT, TO THE TOE OF SLOPE.

See Detail 17 for attachment of approach guard rail to bridge railing.

⊛ = LENGTH OF ARC MEASURED ALONG ℄ OF SURVEY

SEE SHEET No. 139 FOR NOTES #1, 2, 3, 5, 8, 10, 11, 17, & 22

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
503	1068.	CU.YDS.	UNCLASSIFIED EXCAVATION		753	315	
503	69.	CU.YDS.	SHALE EXCAVATION			69	
511	625	CU.YDS.	CLASS C CONC. SUPERSTRUCTURE	625			
511	325	CU.YDS.	CLASS C CONC. ABUT'S ABOVE FOOTINGS		325		
511	192	CU.YDS.	CLASS C CONC. PIERS ABOVE FOOTINGS.			192	
511	404	CU.YDS.	CLASS C CONC. PIER & ABUT. FOOTINGS.		226	178	
512	87	LIN.FT.	WATERPROOFING PREMOLDED SEALING STRIP		87		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
509	254,913	LBS.	REINFORCING STEEL	167,229	33,614	54,070	
513	657,445	LBS.	STRUCTURAL STEEL	657,445			
514	657,445	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	657,445			
516	88	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER		88		
517	508.67	LIN.FT.	RAILING TYPE 1	419.06	89.61		
517	211.01	LIN.FT.	Barrier Guard Rail as per plan	211.01			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	1130	LIN.FT.	STEEL PILES (10 BP 42#)		1130		
625			SEE NOTE #17				
518	124	CU.YDS.	POROUS BACKFILL		124		
518	15	EACH	SCUPPERS, including supports	15			
825	2363	SQ.YDS.	CONCRETE SURFACE TREATMENT	2251	112		
601	1683	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		1683		
808	625	UNITS	WATER REDUCING, SET RETARDING ADMIXTURE	625			

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GENERAL PLAN & ELEVATION

BRIDGE No. MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	JJP		CW	RBH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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MAH-7-1495

—PILE PLAN—

ALL PILES 10 BP42 STEEL H PILES
SEE SHEET #139 FOR NOTE #22

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PILING PLAN
BRIDGE N° MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED - DATE	REVISED
BHK	JWW		CW	RBH 2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

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206

MAH-7-1495

SEE SHEET #140 FOR DETAILS #1, 12, 10, 13 & 16
SEE SHEET #139 FOR NOTES #18 & #19, 10

⊚ELEVATION GIVEN TO HEEL OF ANGLE
ALL PILES TO 10" BP 42

SEE SHEET # 147 FOR SECTION 2-2
SEE SHEET # 148 FOR SECTIONS 7-7, 8-8, 12-12 & 13-13

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT Nº 1

BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FAH	J.K.		aw	RDH	2/21/63	11-5-69

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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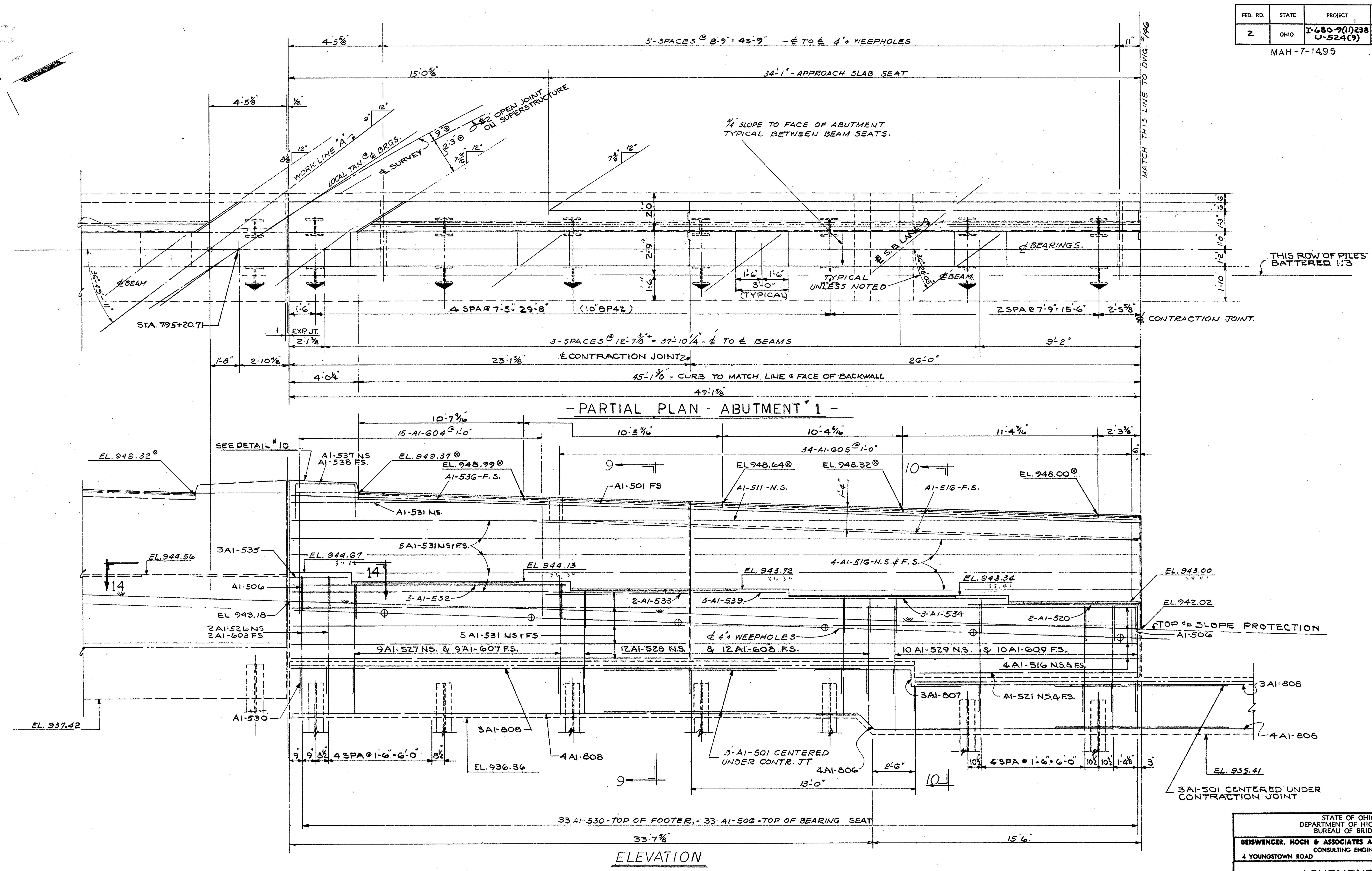
MAH-7-14,95



⊗ ELEVATION GIVEN TO HEEL OF ANGLE

SEE SHEET # 148 FOR SECTIONS # 9-9 & 10-10

SEE SHEET # 144 FOR NOTES AND DETAILS NOT SHOWN

STATE OF OHIO
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BUREAU OF BRIDGES

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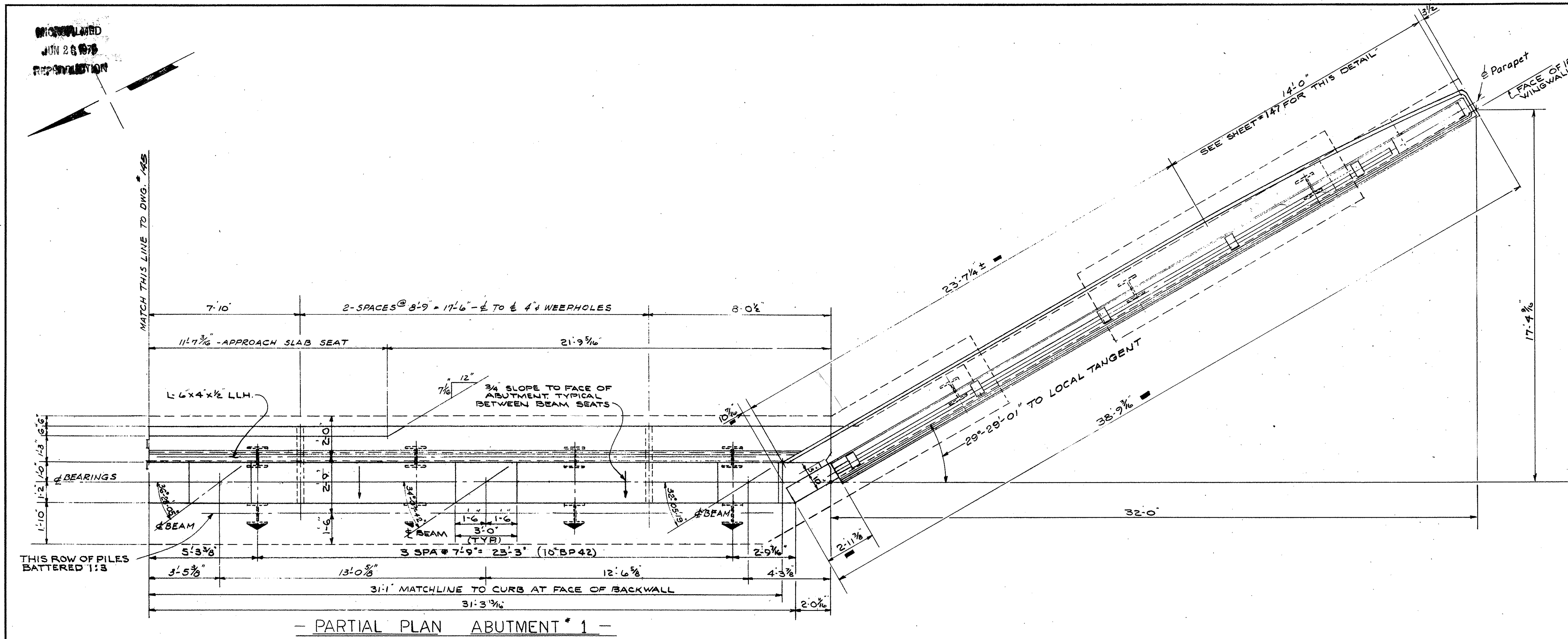
ABUTMENT Nº 1
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 796+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAH	J.K		cw	RBH	2/21/63	

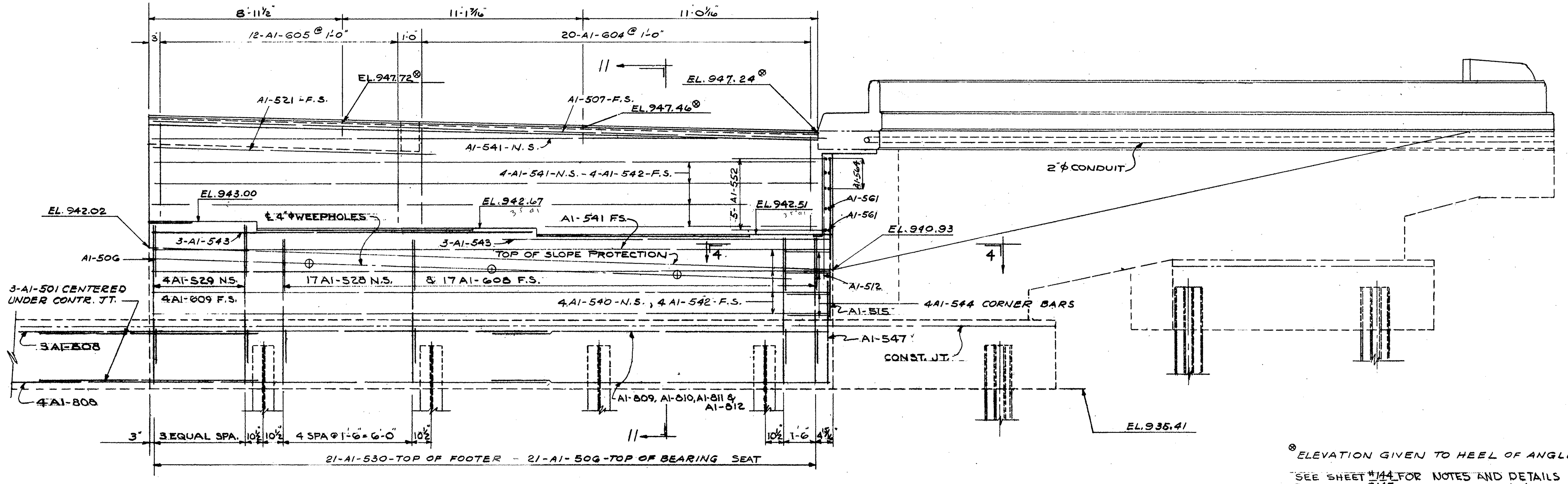
FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11)288 U-524(9)		

146
206

MAH-7-14.95



– PARTIAL PLAN ABUTMENT # 1 –



ELEVATION

⊗ ELEVATION GIVEN TO HEEL OF ANGLE

SEE SHEET # 144 FOR NOTES AND DETAILS NOT SHOWN
SEE SHEET # 147 FOR SECTION 4-4
SEE SHEET # 148 FOR SECTION 11-11

STATE OF OHIO
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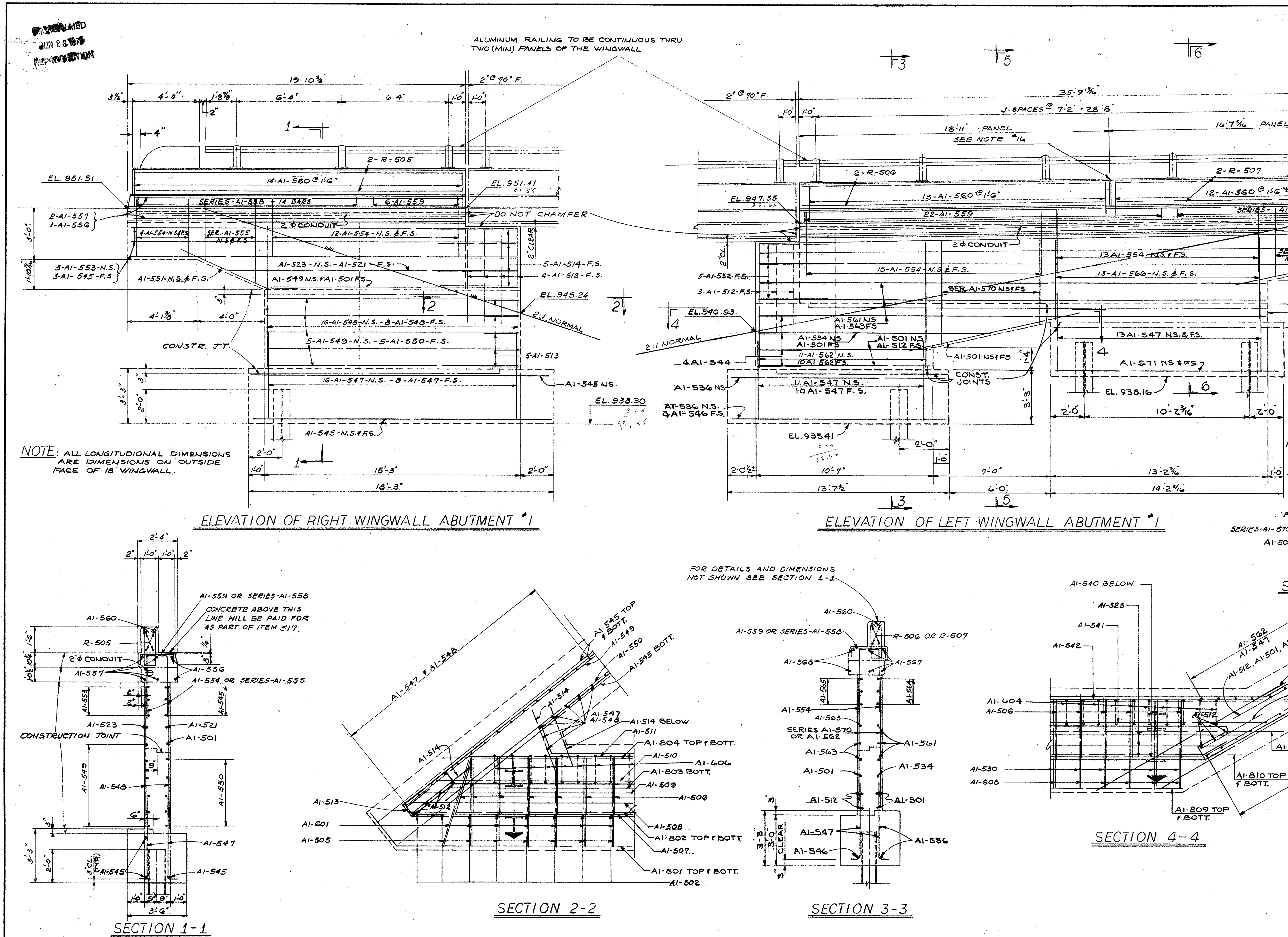
ABUTMENT Nº 1

BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	JK			RDH	3/21/63	



FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

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STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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ABUTMENT No 1 DETAILS

BRIDGE No MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FNL	JK			RAW	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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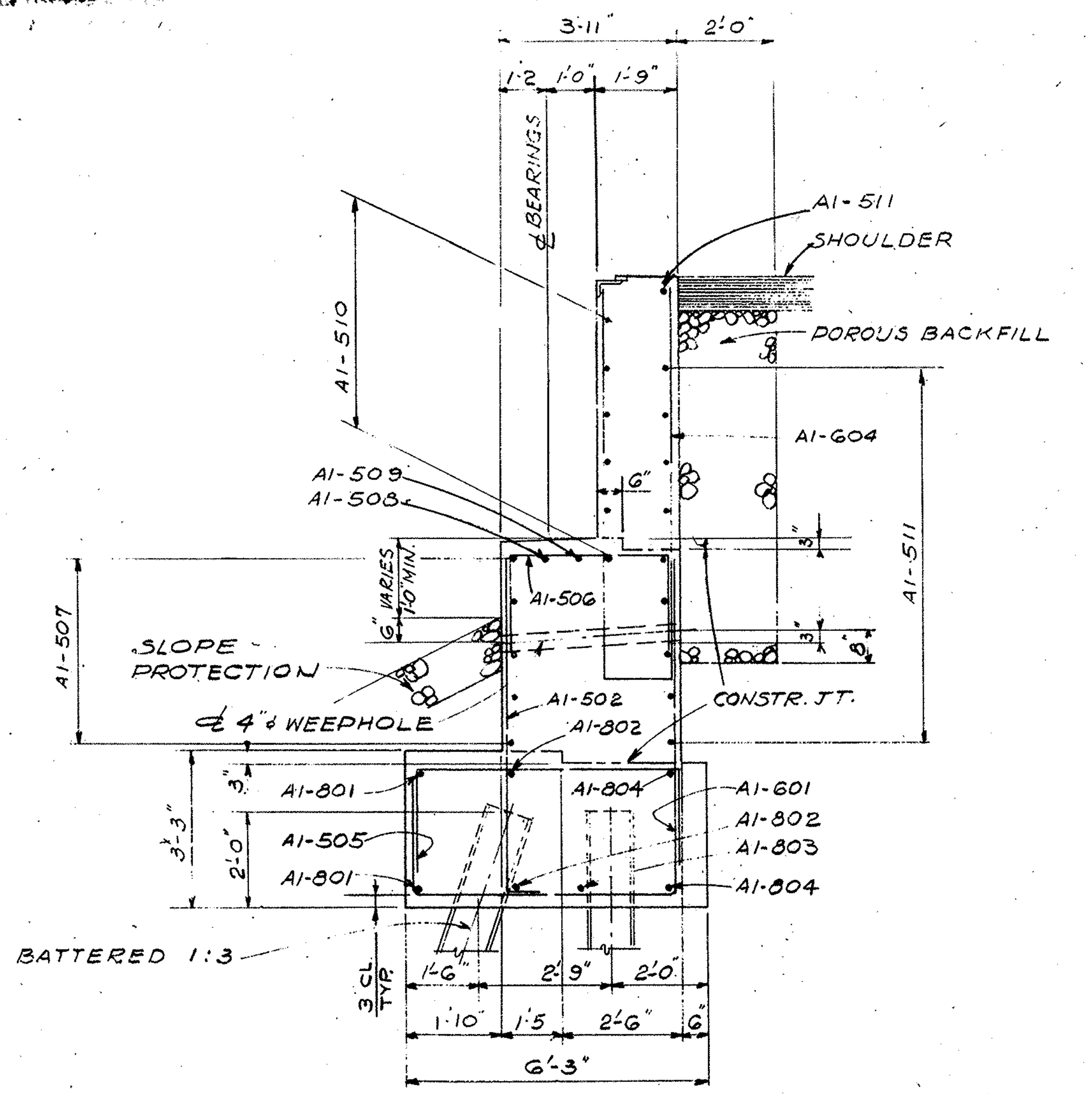
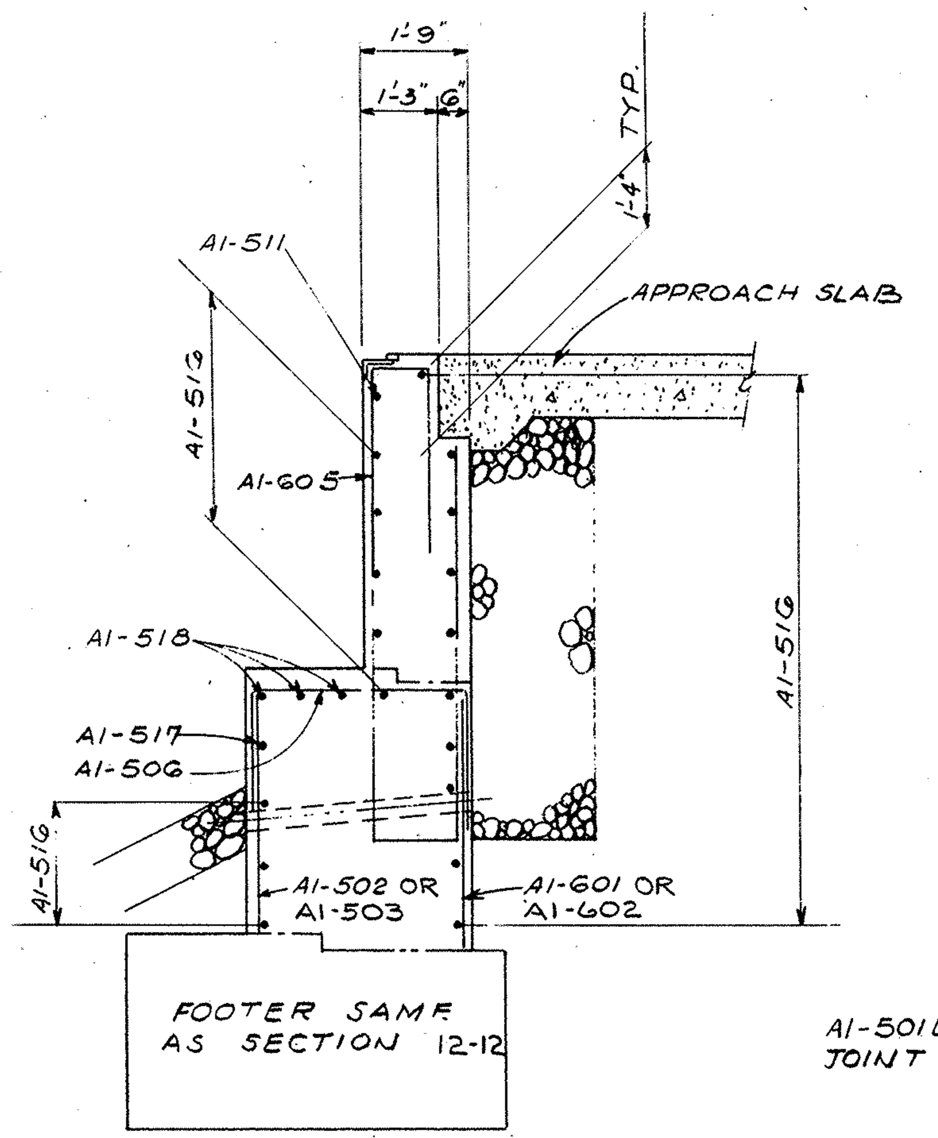
206

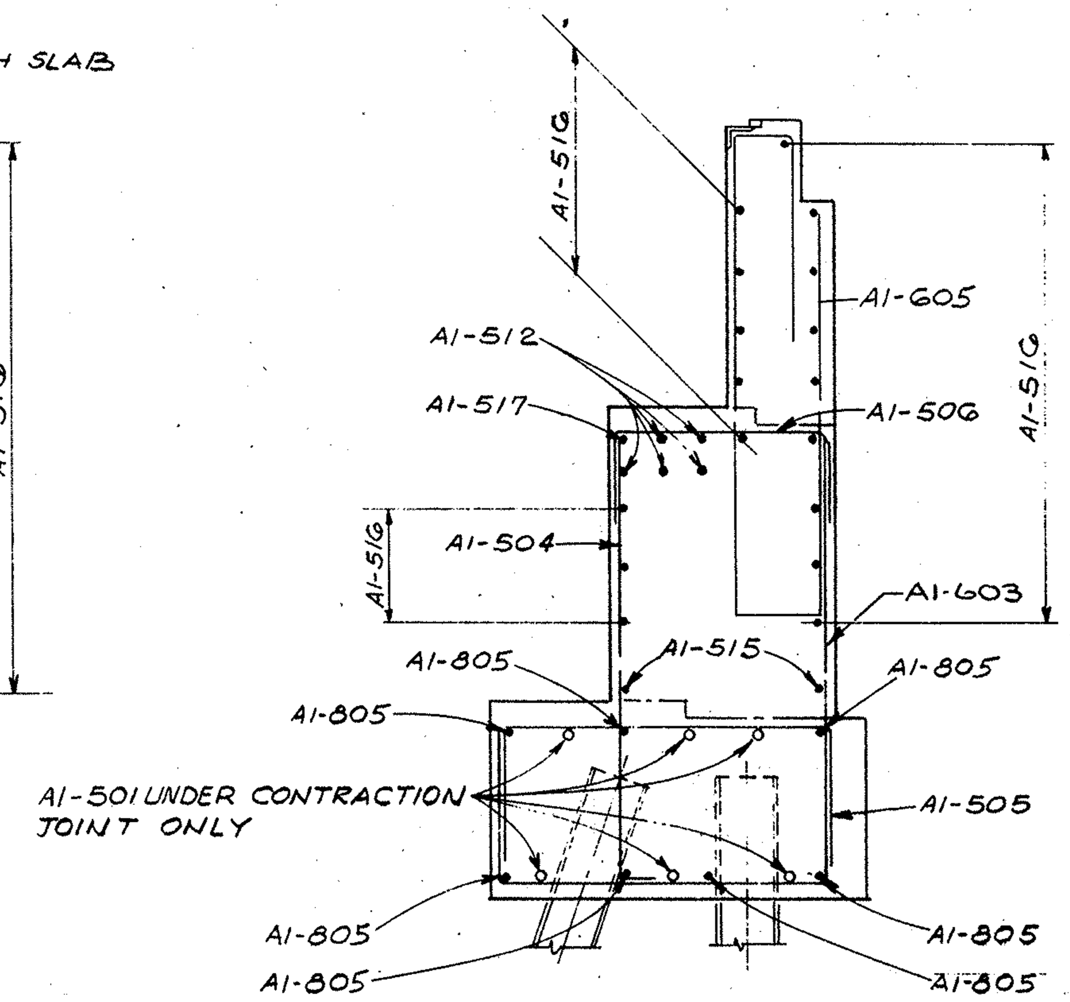
MAH-7-1495



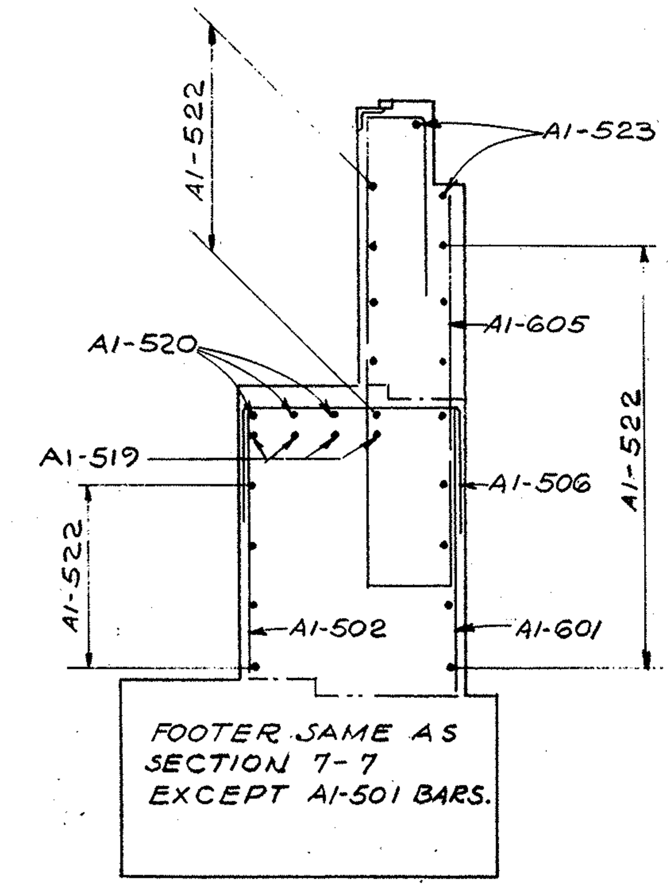
SECTION 12-12



SECTION 13-13

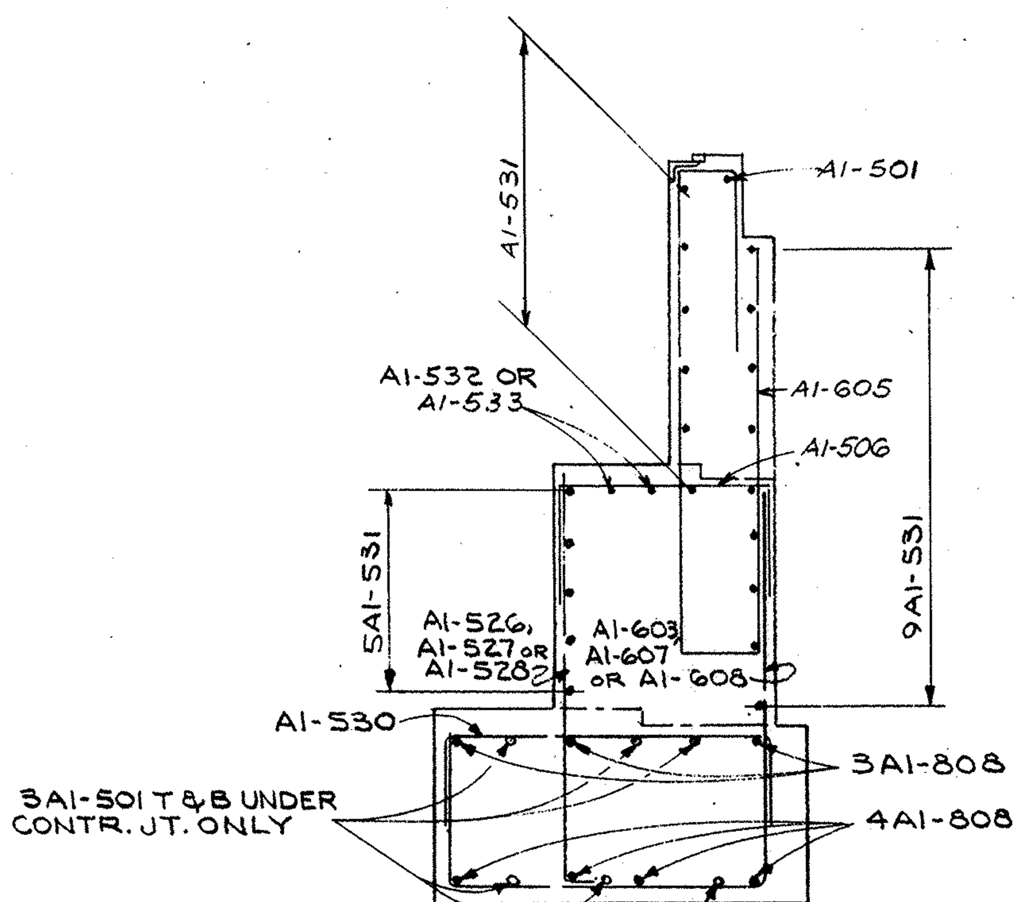


SECTION 7-7

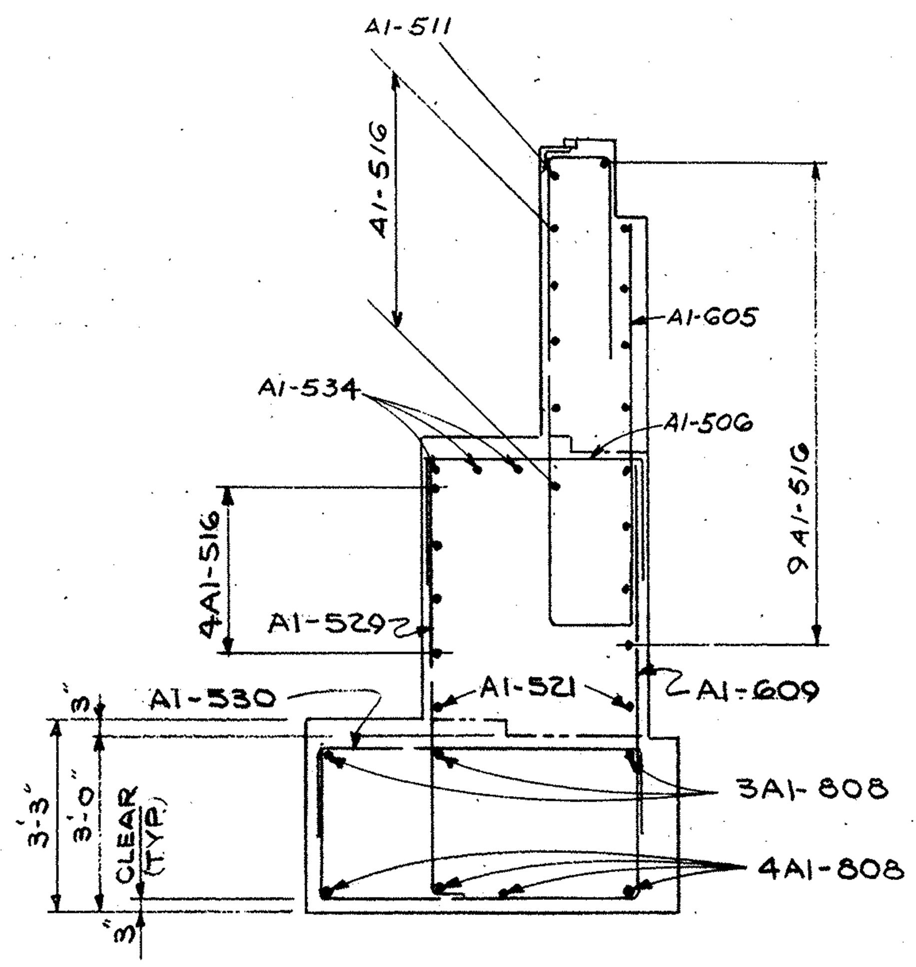


SECTION 8-8

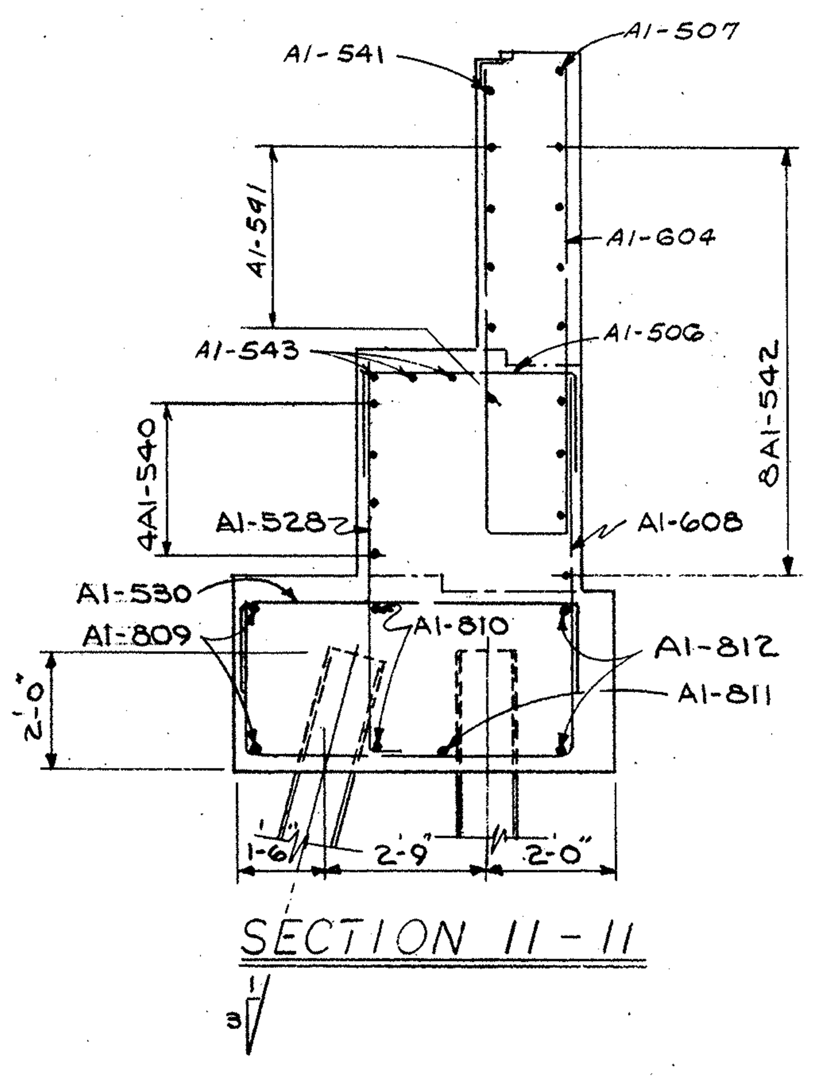
NOTE: FOR DIMENSIONS AND DETAILS NOT SHOWN SEE SECTION 12-12 AND 13-13



SECTION 9-9



SECTION 10-10



SECTION 11-11

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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ABUTMENT Nº 1 DETAILS

BRIDGE Nº MAH-7-1508
UNDER EXISTING IR 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	J.K.		ww	RBH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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206

MAH-7-1495

SEE SHEET 139 FOR NOTES # 18, 19
SEE SHEET 140 FOR DETAIL #1, 12, 10, 13, & 16

® ELEVATION GIVE TO HEEL OF ANGLE
ALL PILES 10" BP 42
SEE SHEET # 151 FOR SECTIONS B-B, C-C, & D-D

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT Nº 2

BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	J.K.			RDH	2/21/63	11-5-63

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

150
206

MAH-7-1495

*ELEVATION GIVEN TO HEEL OF ANGLE
SEE SHEET # 151 FOR SECTIONS E-E, F-F & G-G

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT №2
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAH	J.K.			RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-14.95

ELEVATION OF LEFT WINGWALL ABUTMENT #2

ELEVATION OF RIGHT WINGWALL ABUTMENT #2

SECTION A-A

SECTION H-H

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION B-B

SECTION G-G

FOR DIMENSION AND DETAILS NOT SHOWN SEE SECTION C-C

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

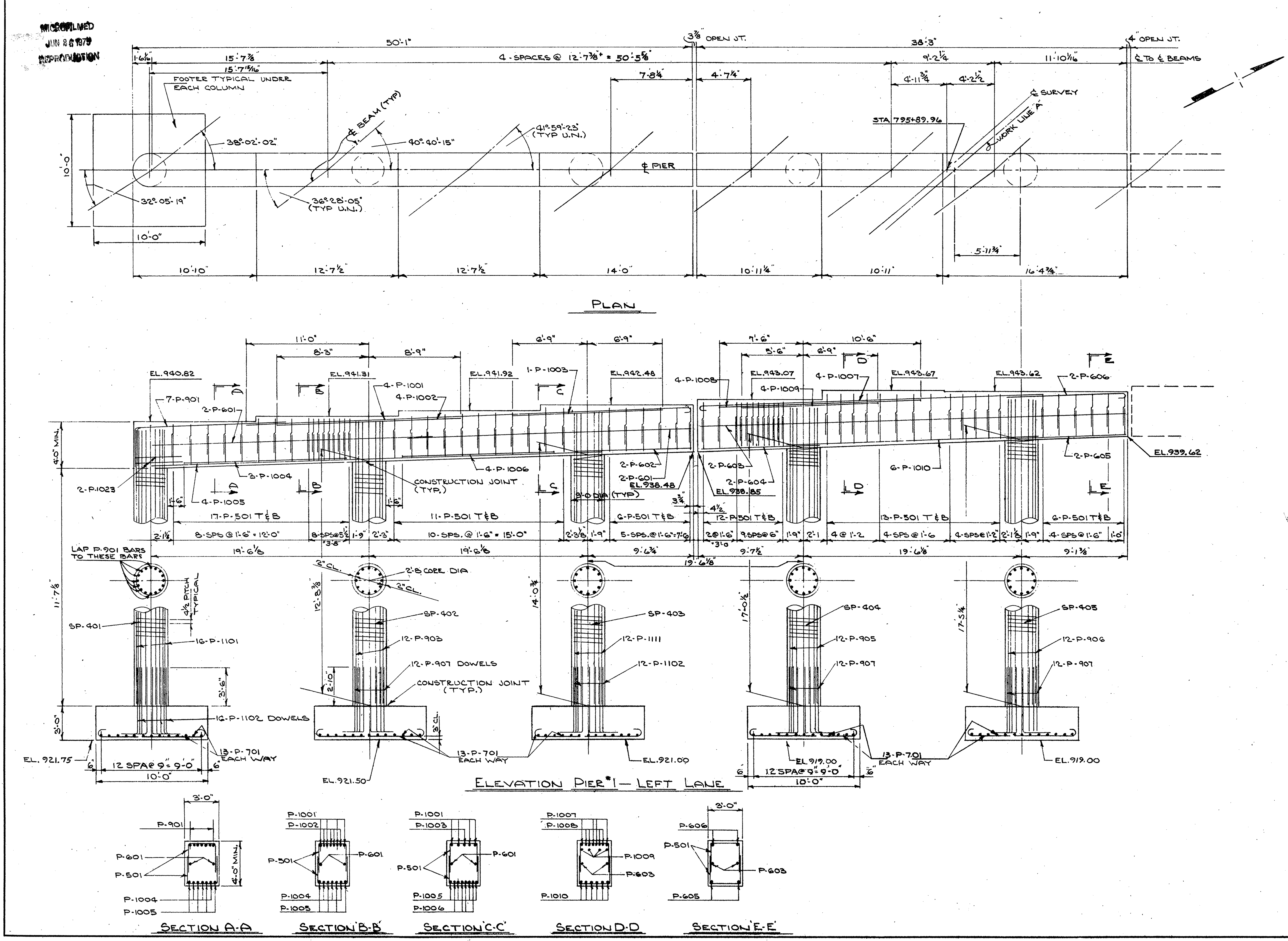
ABUTMENT Nº2 DETAILS
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAH	J.K.		cw	RAH	2/21/63	

FED. RD.	STATE	PROJECT		
2	OHIO	I-680-9(11) 238 U-524(9)		

152
206

MAH-7-1495



FOR BALANCE OF PIER #1
SEE SHT. #154

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

PIER Nº 1 — LEFT LANE

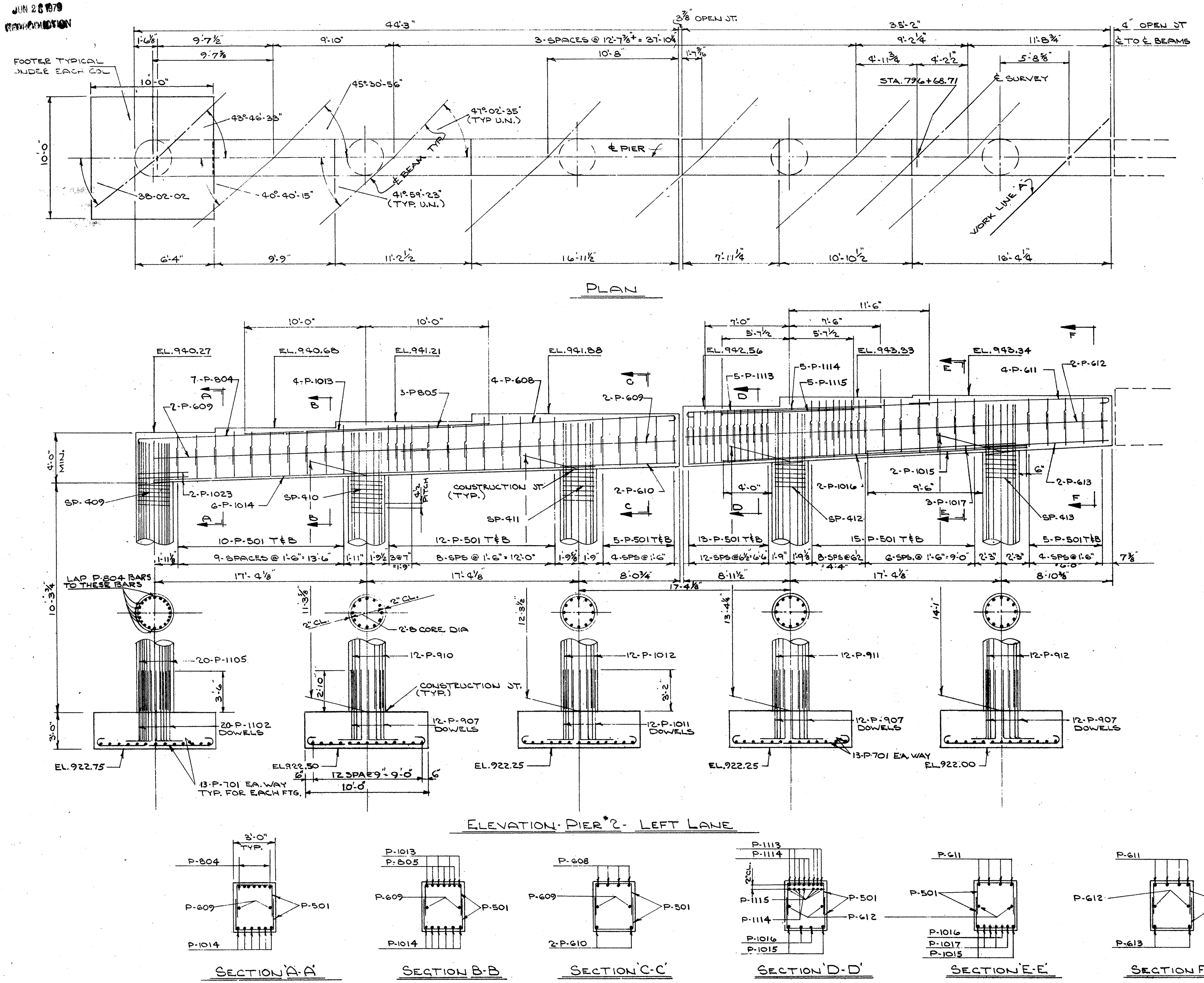
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	JWW		CW.	RGH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

153
206

MAH-7-1495



FOR BALANCE OF PIER #2
SEE SHT. #154

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

PIER Nº2 LEFT LANE
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	JWW		AW	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

154
206

MAH-7-1495

FOR BALANCE OF PIERS #1 & #2
SEE SHTS. 152 & 153

SEE SHT. 139 FOR NOTES # 12, 20 & 21

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

PIER Nº 1 & 2 RIGHT LANE
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	JWW			RGH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(1)238 U-524(9)	

155
206

MAH-7-1495

- Framing Plan -

DIMENSIONS MARKED (63'-5 5/16") ARE ℄ TO ℄ OF BEARINGS

Shop Splice Data. (See Detail #3 & 4)

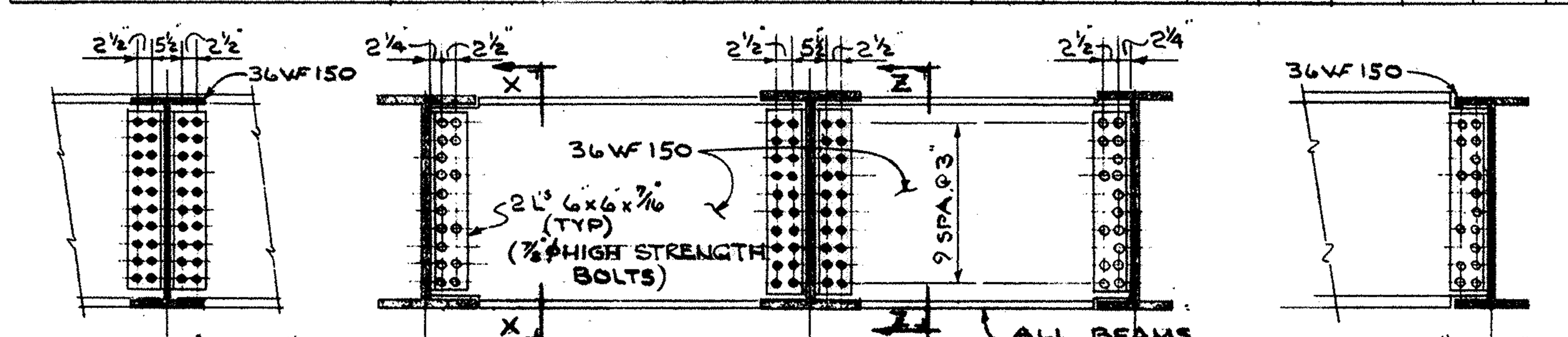
BEAM	PIER #1			PIER #2		
	α	TOP PL.	BOTT. PL.	α	TOP PL.	BOTT. PL.
F	5°-56'-43"	15" x 5/8"	18" x 11/16"	5°-44'-31"	10½ x 15/16	18" x 15/16"
C	4°-12'-10"	10½" x 13/16	18" x 7/8"	4°-50'-41"	10½" x 15/16"	18" x 15/16
A	5°-31'-18"	15" x 5/8"	18" x 11/16"	5°-03'-12"	10½ x 11/16	18" x 11/16"
G-7	"DO"	15" x 5/8"	18 x 11/16"	"DO"	10½" x 11/16	18" x 11/16"
G-8	"DO"	15 x 5/8"	18" x 11/16"	"DO"	15 x 5/8"	18" x 11/16"
B & B'	"DO"	15" x 5/8"	18 x 11/16"	"DO"	15 x 5/8"	18 x 11/16"
D	5°-21'-33"	10½" x 5/8"	13½" x 11/16	—	—	—
H	4°-53'-15"	10½ x 5/8	13½" x 11/16	4°-32'-14"	10½ x 5/8"	18" x 11/16"

- Deflection & Camber -

BEAM	F	E	C	A	G-7	G-8	B	B'	D	H	F	C	A	G-7	G-8	B	B'	D	H	F	C	A	G-7	G-8	B	B'	H
SPAN	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3
DEFLECTION DUE TO WEIGHT OF STEEL	.169"	.274"	.102"	.113"	.124"	.124"	.112"	.112"	.056"	.075"	.144"	.124"	.113"	.121"	.121"	.114"	.114"	.224"	.071"	.033"	.029"	.048"	.045"	.043"	.043"	.043"	.027"
DEFLECTION DUE TO REMAINING DEAD LOAD	1.030"	1.076"	.534"	.525"	.788"	.788"	.584"	.584	.202"	.477	1.008"	.632"	.607"	.815"	.815"	.690"	.690"	1.288"	.517"	.327"	.199"	.354"	.378"	.299"	.282"	.282"	.175"
CONVEXITY REQUIRED FOR VERTICAL CURVE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM OF DEFLECTION AND CONVEXITY	1.20"	1.35"	.636"	.638"	.912"	.912"	.696"	.696	.258"	.552"	1.152"	.756"	.720"	.936"	.936"	.804"	.804"	1.512"	.588"	.360"	.228"	.402"	.423"	.342"	.325"	.325"	.202"
REQUIRED CAMBER	1¼"	1⅜"	0	0	1"	1"	0	0	0	0	1¼"	1"	0	1"	1"	1"	1"	1⅝"	0	0	0	0	0	0	0	0	0

- Bearing Data -

BEARING LOCATIONS	ABUT. #1	PIER #1	PIER #2	ABUT. #2
BEAM "F"	R-75	B-225	R-175	R-75
BEAM "E"	R-100	—	—	—
BEAM "C"	R-100	B-250	R-200	R-75
BEAMS "A"	R-100	B-200	R-200	R-100
BEAM "G-7"	R-75	B-200	R-175	R-75
BEAM "G-8"	R-75	B-200	R-175	R-75
BEAMS "B"	R-100	B-225	R-225	R-100
BEAM "B'"	R-100	B-225	R-275	R-100
BEAM "D"	R-100	B-175	—	
BEAM "H"	R-75	B-175	R-175	R-75



- SECTION "X-X" - - SECTION "A-A" - - SECTION "Z-Z" -

Slab Thickness Table

BEAM	36WF150	36WF182	36WF194		36WF230			36WF300
SPAN	3	2	1	3	1	2	3	1
SLAB THICKNESS AT ℄ SPAN & ℄ BEAM	11¼	10½	10½	10¾	10¾	10½	11⅜	10¼
SLAB THICKNESS AT ℄ BRGS & ℄ BEAM	11 13/16 ✓	11 5/16	11 3/16	11 3/16	11 13/16	11 13/16	11 13/16	11 3/16

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

FRAMING PLAN

BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	WP		ew	RDH	2/21/63	

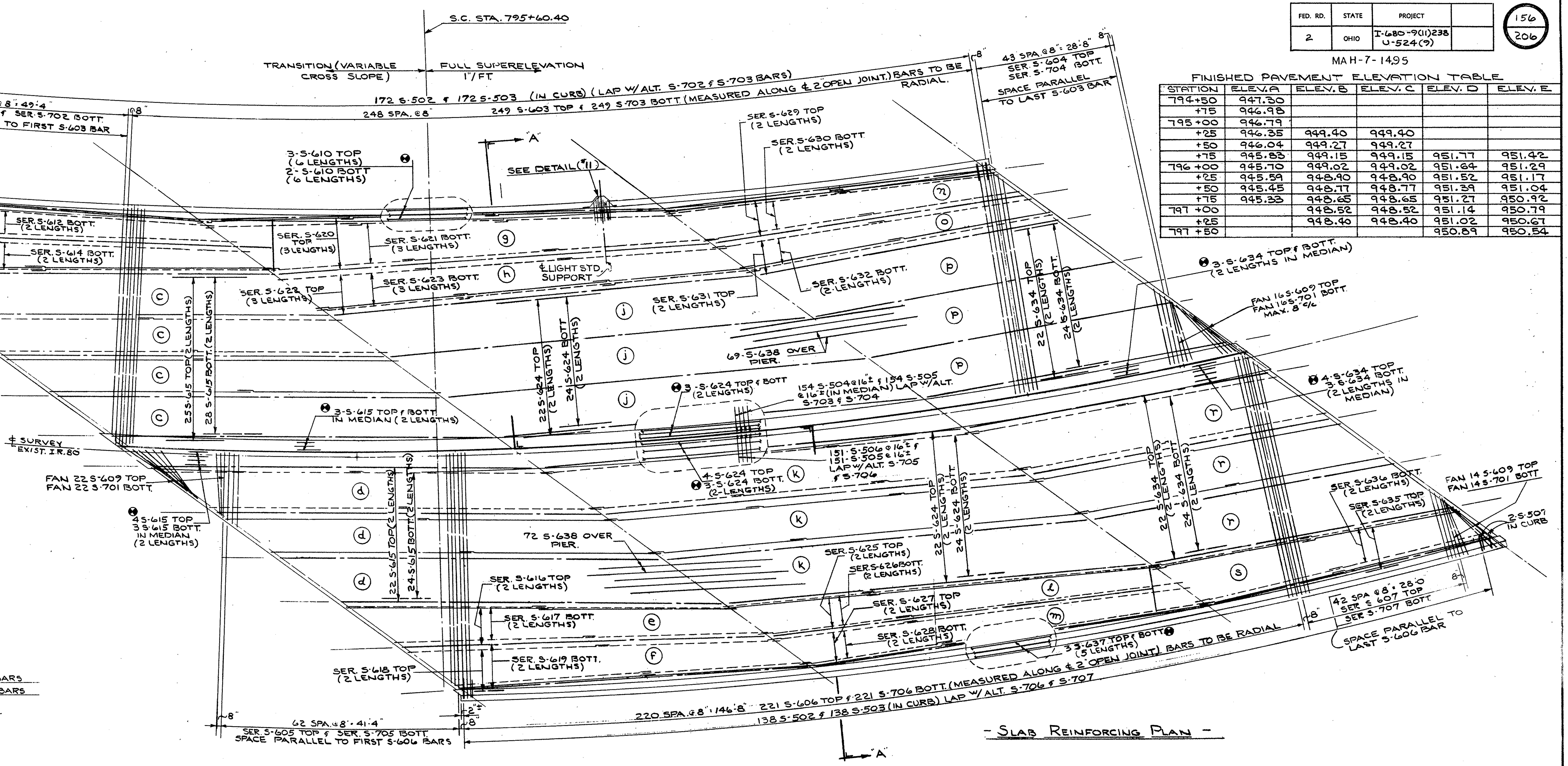
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

156 / 206

MAH-7-14.95

FINISHED PAVEMENT ELEVATION TABLE

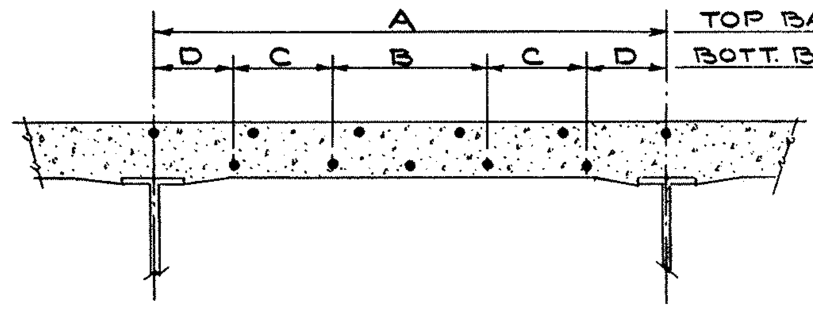
STATION	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E
794+50	947.30				
+75	946.98				
795+00	946.79				
+25	946.35	949.40	949.40		
+50	946.04	949.27	949.27		
+75	945.83	949.15	949.15	951.77	951.42
796+00	945.70	949.02	949.02	951.64	951.29
+25	945.59	948.90	948.90	951.52	951.17
+50	945.45	948.77	948.77	951.39	951.04
+75	945.33	948.65	948.65	951.27	950.92
797+00		948.52	948.52	951.14	950.79
+25		948.40	948.40	951.02	950.67
797+50				950.89	950.54

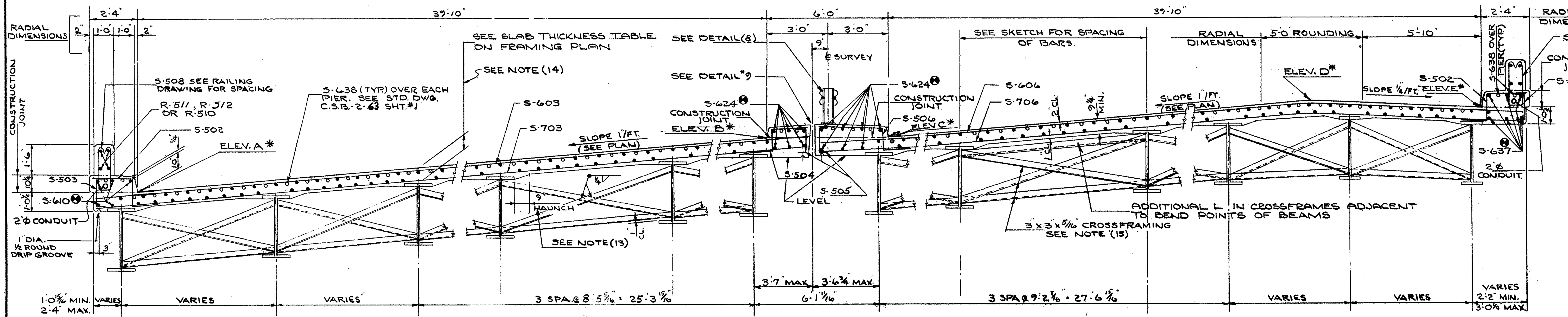


- SLAB REINFORCING PLAN -

- BAR SPACING SCHEDULE -

PANEL MARK	A	B	C	D
a	5 EQ. SPA. = VARY	3 EQ. SPA.	8¾	1'-2¾"
b	6 EQ. SPA. = VARY	4 EQ. SPA.	7⅝	1'-3⅞"
c	6 EQ. SPA. = 7'-6"	4 SPA. @ 8"	10"	1'-7"
d	7 EQ. SPA. = 8'-2"	5 SPA. @ 7¾"	10¾	1'-6⅜
e	6 EQ. SPA. = VARY	4 EQ. SPA.	10½	1'-4½
f	7 EQ. SPA. = VARY	5 EQ. SPA.	11	1'-5"
g	7 EQ. SPA. = VARY	6 EQ. SPA.	9½	1'-5¾
h	6 EQ. SPA. = VARY	4 EQ. SPA.	10	1'-6"
j	7 EQ. SPA. = 8'-5 5/16"	5 SPA. @ 9½"	9	1'-11⅜+
k	7 EQ. SPA. = 9'-2 5/16"	5 SPA @ 10½"	10	1'-6⅞-
l	5 EQ. SPA. = VARY	3 EQ. SPA.	8¾	1'-2¾
m	6 EQ. SPA. = VARY	3 EQ. SPA.	9⅞	1'-3⅜"
n	5 EQ. SPA. = VARY	3 EQ. SPA.	9	1'-3"
o	6 EQ. SPA. = VARY	3 EQ. SPA.	10	1'-4"
p	7 EQ. SPA. = 9'-2 13/16	5 SPA. @ 10½"	11¾"	1'-5⅜+
r	7 EQ. SPA. = 10'-0 11/16	5 SPA. @ 11¼"	1'-1"	1'-7¼-
s	8 EQ. SPA. = VARY	5 EQ. SPA.	11¼"	1'-5¼"





- SECTION "A-A" -

SEE SCHEDULE FOR SPACING OF BARS.
* SEE FINISHED PAVEMENT ELEVATION TABLE.

BARS MARKED ⊗ TO FOLLOW CURVE OF BRIDGE, ALL OTHERS ARE PARALLEL TO ADJACENT BEAMS.
SEE SHEET #140 FOR DETAIL #8 & #9, 11
SEE SHEET #139 FOR NOTES # 13, 14 & 15, 17

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS

BRIDGE No MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FAK	LNP		CW	EBH	3/21/63	

FED. RD. 2 | STATE OHIO | PROJECT I-680-7(11)238 U-524(7)
157
206
MAH-7-1495
2"@70°
1'-0"
11'-11 3/8" ±
7'-0 7/8" ±
225'-4 3/4" ±
13 SPACES @ 15'-6" = 201'-6" ℄ TO ℄ EXPANSION JTS.
27 SPACES @ 7'-9" = 209'-3" ℄ TO ℄ RAIL POSTS
142'-5"
43'-7"
15'-6"
℄ BRG. ABUT. #2
2'-6"
10'-0"
9'-0"
11'-0"
FACE OF CURB
FACE OF PARAPET
℄ LIGHT STD. SUPPORT SEE DETAIL #11 TYPE I
MICROFILMED JUN 26 1979
32 SPACES @ 6'-3" = 200'-0" - 17 GUARD RAIL POSTS (DETAIL #8)
FACE OF MEDIAN
℄ SURVEY EXISTING I.R. 80
FACE OF PARAPET
FACE OF CURB
7'-8" ±
12'-6" ±
23 - SPACE @ 7'-8" = 176'-4" ℄ TO ℄ RAIL POSTS
11 - SPACES @ 15'-4" = 168'-8" ℄ TO ℄ EXPANSION JTS.
15'-4"
193'-8" ±
℄ BRG. ABUT. #1
EXPANSION JOINT FILLER SEE NOTE #16
—PLAN—
TYPE 1 RAILING
8 SPA. @ 1'-6" = 12'-0", 9-S-508 (EAST RAIL)
8 SPA. @ 1'-5" = 11'-4", 9-S-508 (WEST RAIL)
2 R-512 EAST RAIL
2 R-510 WEST RAIL
121 S-508 (EAST RAIL) 11 PANELS
143 S-508 (WEST RAIL) 13 PANELS
10-SPACES @ 1'-6 3/4" = 15'-0" 11 S-508 TYP. EAST & WEST RAILS
2-R-511 E. & W. RAIL
2" ø CONDUIT
SCUPPERS
2" TYP.
2" ø STD. STL. PIPE (NOTE #25)
ELEVATION
EAST RAIL SHOWN
FOR NOTE #16, SEE COMMON NOTE SHT. #139
FOR DETAIL #11, 7 & 5, 8 SEE DETAIL SHT. #140
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO
RAILING & DRAINAGE
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R. 80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22
DESIGNED EAK | DRAWN JWW | TRACED | CHECKED EW | REVIEWED RDH | DATE 2/21/63 | REVISED

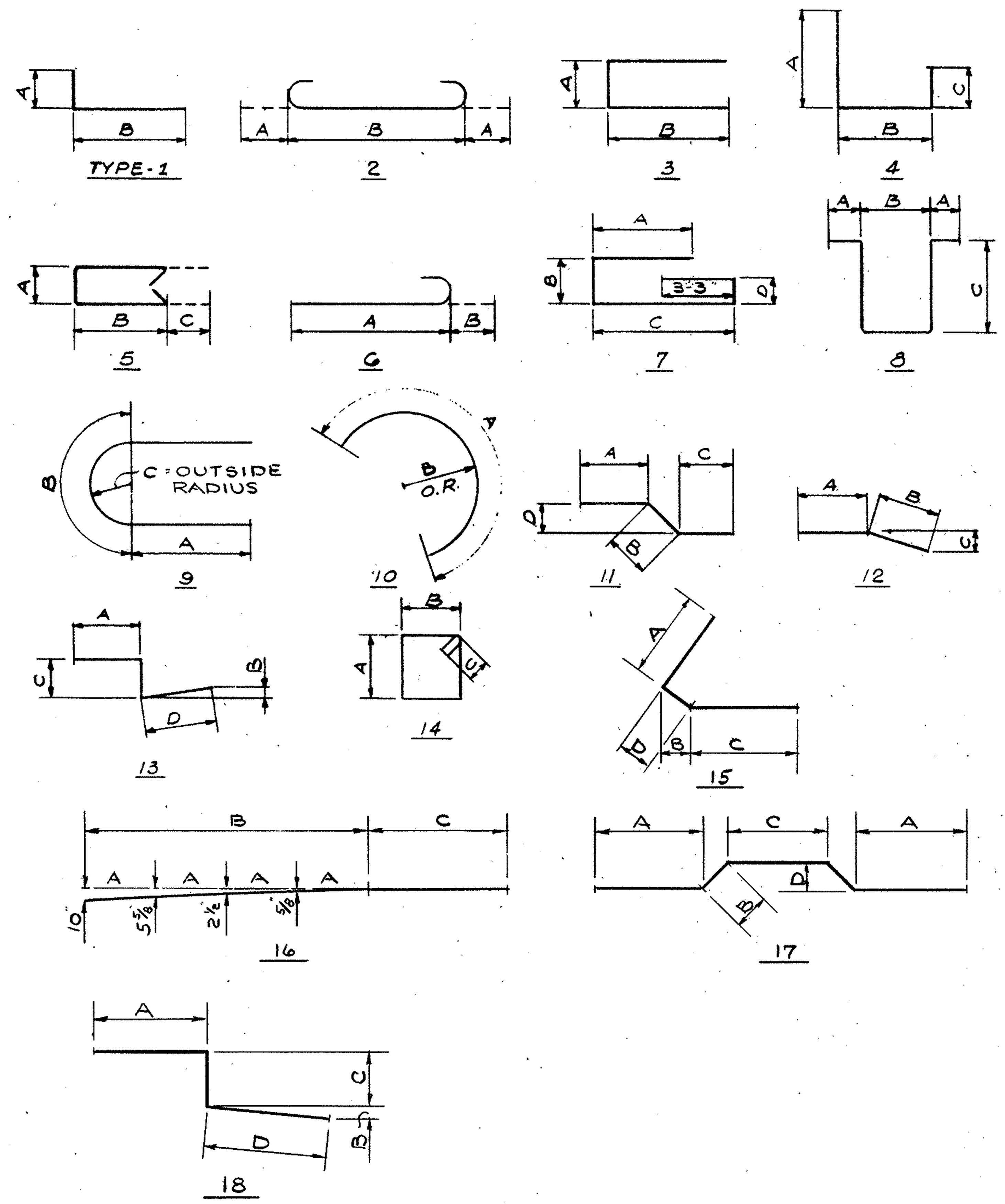
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495

158 / 206

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCRE-MENT	WEIGHT LBS.
— ABUTMENT #1 —									
A1-501	29	10'-0"	ST.						302
A1-502	29	7'-5"	1	6"	7'-0"				224
A1-503	17	6'-9"	1	6"	6'-4"				120
A1-504	5	8'-0"	1	6"	7'-7"				42
A1-505	50	8'-4"	3	5'-5"	1'-7"				434
A1-506	104	7'-4"	3	3'-7"	2'-0"				795
A1-507	6	23'-5"	ST.						147
A1-508	1	22'-0"	ST.						23
A1-509	1	21'-1"	ST.						22
A1-510	6	21'-3"	ST.						133
A1-511	12	18'-8"	ST.						234
A1-512	14	5'-6"	ST.						80
A1-513	5	4'-4"	15	2'-0"	3¾"	2'-0"	6"		23
A1-514	15	4'-0"	ST.						63
A1-515	2	9'-1"	ST.						19
A1-516	36	25'-8"	ST.						964
A1-517	1	21'-7"	ST.						22
A1-518	5	8'-2"	ST.						43
A1-519	4	20'-8"	ST.						86
A1-520	5	9'-8"	ST.						50
A1-521	6	12'-8"	ST.						79
A1-522	17	28'-11"	ST.						513
A1-523	3	17'-0"	ST.						53
A1-524	1	7'-9"	3	5'-0"	1'-6"				8
A1-525	1	8'-8"	3	5'-11"	1'-6"				9
A1-526	2	8'-3"	1	6"	7'-10"				17
A1-527	9	7'-9"	1	6"	7'-4"				71
A1-528	29	6'-10"	1	6"	6'-5"				207
A1-529	14	7'-7"	1	6"	7'-2"				111
A1-530	54	8'-2"	3	5'-5"	1'-6"				460
A1-531	20	22'-9"	ST.						475
A1-532	3	15'-10"	ST.						50
A1-533	2	8'-10"	ST.						18
A1-534	4	14'-6"	ST.						60
A1-535	3	3'-3"	ST.						10
A1-536	3	15'-0"	ST.						47
A1-537	1	6'-4"	3	3'-7"	1'-6"				7
A1-538	1	7'-6"	3	4'-9"	1'-6"				8
A1-539	3	5'-4"	ST.						17
A1-540	4	30'-10"	ST.						129
A1-541	6	35'-0"	ST.						219
A1-542	8	37'-2"	ST.						310
A1-543	6	17'-8"	ST.						110
A1-544	4	4'-0"	12	2'-0"	2'-0"	11¾"			17
A1-545	6	17'-11"	ST.						112
A1-546	1	17'-1"	ST.						18
A1-547	71	5'-2"	1	6"	4'-9"				383
A1-548	24	8'-4"	ST.						209
A1-549	6	14'-11"	ST.						93
A1-550	5	14'-1"	ST.						73
A1-551	2	7'-6"	12	5'-6"	2'-0"	10¼"			16
A1-552	5	4'-6"	ST.						23
A1-553	3	23'-0"	ST.						72
A1-554	96	3'-11"	1	6"	3'-6"				393
A1-555	2 SETS OF 4	4'-0" To 5'-6"	1	6"	3'-7" To 5'-1"			6"	40
A1-556	2	18'-4"	16	3'-6"	14'-0"	4'-3"			38
A1-557	4	19'-6"	ST.						81
A1-558	2 SETS OF 14	1'-10" To 2'-7¾"	3	1'-1" To 1'-10¾"	6"			¾"	65
A1-559	28	2'-7"	3	1'-10"	6"				75
A1-560	39	5'-8"	5	8"	2'-2"	7"			231
A1-561	3	30'-4"	ST.						95
A1-562	21	7'-1	ST						155
A1-563	3	26'-0"	ST.						81
A1-564	3	38'-4"	ST.						120
A1-565	3	34'-0"	ST.						106
A1-566	26	4'-10"	ST.						131
A1-567	4	35'-5"	ST.						148
A1-568	2	36'-7"	16	3'-6"	14'-0"	22'-6"			76
A1-569	2 SETS OF 4	3'-11" To 4'-6½"	1	6"	3'-6½" To 4'-2"			2½"	35
A1-570	2 SETS OF 7	4'-6" To 5'-9"	ST.					2½"	75
A1-571	2	13'-10"	ST.						29
A1-601	28	14'-9"	4	7'-0"	5'-5"	2'-7"			620
A1-602	17	14'-1"	4	6'-4"	5'-5"	2'-7"			360
A1-603	7	15'-4"	4	7'-7"	5'-5"	2'-7"			161
A1-604	68	15'-2"	3	1'-5"	7'-0"				1549
A1-605	88	17'-9"	7	5'-8"	1'-5"	7'-0"	11"		2346
A1-606		OPEN							
A1-607	9	14'-10"	4	7'-1"	5'-5"	2'-7"			201
A1-608	29	14'-0"	4	6'-3"	5'-5"	2'-7"			610
A1-609	14	14'-8"	4	6'-11"	5'-5"	2'-7"			308
A1-801	2	39'-5"	12	37'-7"	2'-0"	1'-7"			211
A1-802	2	38'-1"	ST.						203
A1-803	1	36'-2"	ST.						97
A1-804	2	33'-10"	ST						181
A1-805	7	38'-5"	ST.						718
A1-806	8	8'-9"	11	2'-8"	1'-3"	5'-3"	11"		187
A1-807	6	9'-4"	13	5'-10"	0	11"	3'-0"		149
A1-808	14	32'-6"	ST.						1215
A1-809	2	13'-0"	ST.						69
A1-810	2	16'-3"	ST.						87
A1-811	1	19'-3"	ST.						51
A1-812	2	22'-4"	ST.						119
ABUTMENT #1 TOTAL = 19,246#									
— ABUTMENT #2 —									
A2-501	30	10'-0"	ST.						313
A2-502	25	7'-5"	1	6"	7'-0"				196
A2-503	18	8'-4"	1	6"	7'-11"				156
A2-504	12	9'-0"	1	6"	8'-7"				113
A2-505	23	8'-0"	1	6"	7'-7"				192
A2-506	75	8'-4"	3	5'-5"	1'-7"				652
A2-507	3	11'-10"	3	5'-5"	3'-4"				37
A2-508	78	7'-4"	3	3'-7"	2'-0"				596
A2-509	17	28'-5"	ST.						504
A2-510	3	27'-4"	ST.						86
A2-511	8	26'-2"	ST.						218
A2-512	5	9'-4"	ST.						49
A2-513	7	12'-3"	ST.						89
A2-514	2	20'-0"	ST.						42
A2-515	5	17'-3"	ST.						90
A2-516	5	4'-4"	15	2'-0"	4⅜"	2'-0"	6"		23
A2-517	22	5'-11"	ST.						136
A2-518	14	4'-0"	ST.						58
A2-519	16	31'-2"	ST.						520
A2-520	6	24'-10"	ST.						155
A2-521	2	3'-5"	ST.						7
A2-522	12	14'-2"	ST.						177
A2-523	4	7'-10"	ST.						33
A2-524	10	18'-7"	ST.						194
A2-525	16	29'-11"	ST.						499
A2-526	7	16'-6"	ST.						120
A2-527	6	13'-4"	ST.						83
A2-528	1	13'-0"	ST.						14
A2-529	2	13'-7"	ST.						28
A2-530	5	14'-9"	ST.						77
A2-531	7	15'-7"	ST.						114
A2-532	5	26'-6"	ST.						138
A2-533	1	5'-0"	3	2'-3"	1'-6"				5
A2-534	1	3'-9"	3	1'-0"	1'-6"				4
A2-535	5	4'-0"	12	2'-0"	2'-0"	1'-2½"			21
A2-536	1	7'-4"	3	4'-7"	1'-6"				8
A2-537	1	8'-6"	3	5'-9"	1'-6"				9
A2-538	42	5'-2"	1	6"	4'-9"				226
A2-539	48	8'-2"	ST.						409
A2-540	2	7'-5"	12	5'-6"	2'-0"	9			15
A2-541	3	22'-3"	ST.						70
A2-542	56	3'-9"	1	6"	3'-5"				219
A2-543	2 SETS OF 4	4'-1" To 5'-4"	1	6"	3'-8" To 4'-11"			5"	39
A2-544	2 SETS OF 14	1'-10" To 2'-7¾"	3	1'-1" To 1'-10¾"	6"			¾"	65
A2-545	7	2'-7"	3	1'-10"	6"				19
A2-546	4	19'-0"	ST.						79
A2-547	2	18'-4"	16	3'-6"	14'-0"	4'-3"			38
A2-548	25	5'-8"	5	8"	2'-2"	7"			148
A2-549	2	15'-9"	16	3'-6"	14'-0"	1'-8"			33
A2-550	1	11'-10"	ST.						12
A2-551	2	7'-5"	12	5'-6"	2'-0"	10"			15
A2-552	2 SETS OF 4	4'-4" To 5'-7"	1	6"	3'-11" To 5'-2"			5"	41
A2-553	4	14'-10"	ST.						62
A2-601	25	14'-9"	4	7'-0"	5'-5"	2'-7"			554
A2-602	18	15'-8"	4	7'-11"	5'-5"	2'-7"			424
A2-603	12	16'-4"	4	8'-7"	5'-5"	2'-7"			294
A2-604	23	15'-3"	4	7'-8"	5'-5"	2'-7"			527
A2-605	50	15'-2"	3	1'-5"	7'-0"				1139
A2-606	65	17'-9"	7	5'-8"	1'-5"	7'-0"	11"		1733
A2-801	2	35'-3"	12	33'-4"	2'-0"	1'-4½"			188
A2-802	2	33'-10"	ST.						181
A2-803	1	32'-4"	ST.						86
A2-804	2	30'-7"	ST.						163
A2-805	3	11'-0"	13	2'-8"	0	1'-10"	6'-9"		88
A2-806	4	10'-1"	11	5'-2"	2'-6"	2'-8"	1'-10"		108
A2-807	9	23'-4"	ST.						561
A2-808	OPEN								
A2-809	7	34'-3"	ST.						640
A2-810	2	19'-5"	ST.						104
A2-811	2	20'-3"	ST.						108
A2-812	1	21'-9"	ST.						58
A2-813	3	9'-5"	13	2'-8"	0	1'-11"	5'-3"		75
A2-814	4	8'-6"	11	3'-6"	2'-7"	2'-8"	1'-11"		91
ABUTMENT #2 TOTAL 14,368#									

TOTAL THIS SHEET 33,614 LBS.



BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT AFTER THE HYPHEN WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS AFTER THE HYPHEN WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A1-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

REINFORCING SCHEDULE

BRIDGE Nº MAH-7-1508
UNDER EXISTING IP 80
YOUNGSTOWN — MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAK	JNP		Cw	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCRE-MENTS	WEIGHT LBS.
– PIERS #1 & #2									
P-501	356	8'-5"	3	2'-8"	3'-0"				3126
P-502	98	9'-1"	3	2'-8"	3'-4"				928
P-601	8	25'-5"	ST.						305
P-602	2	11'-6"	ST.						35
P-603	2	37'-11"	ST.						114
P-604	2	11'-1"	ST.						33
P-605	2	10'-6"	ST.						32
P-606	2	11'-2"	6	10'-6"	8"				34
P-607		OPEN							
P-608	4	18'-11"	6	18'-3"	8"				114
P-609	8	22'-4"	ST.						268
P-610	2	9'-4"	ST.						28
P-611	4	18'-2"	6	17'-6"	8"				109
P-612	2	34'-10"	ST.						105
P-613	2	10'-2"	ST.						31
P-701	416	11'-2"	2	10"	9'-6"				9495
P-801		OPEN							
P-802	7	18'-4"	1	4'-2"	14'-4"				343
P-803	4	31'-0"	ST.						331
P-804	7	15'-1"	1	3'-8"	11'-8"				282
P-805	3	14'-0"	ST.						112
P-806	7	17'-8"	1	3'-8"	14'-2"				330
P-901	7	16'-9"	1	3'-8"	13'-4"				399
P-902	OPEN								
P-903	12	16'-3"	ST.						663
P-904	12	22'-5"	ST.						718
P-905	12	20'-6"	ST.						836
P-906	12	20'-11"	ST.						853
P-907	132	6'-4"	1	1'-0"	5'-7"				2841
P-908	12	21'-9"	ST.						887
P-909	12	22'-7"	ST.						921
P-910	12	14'-3"	ST.						581
P-911	12	16'-10"	ST.						687
P-912	12	17'-5"	ST.						711
P-913	12	18'-6"	ST.						755
P-914	12	21'-3"	ST.						867
P-1001	4	41'-3"	6	39'-10"	1'-5"				710
P-1002	4	17'-0"	ST.						293
P-1003	1	13'-6"	ST.						58
P-1004	3	14'-6"	ST.						187
P-1005	4	40'-6"	ST.						697
P-1006	4	13'-6"	ST.						232
P-1007	4	31'-11"	6	30'-6"	1'-5"				549
P-1008	4	18'-0"	ST.						310
P-1009	4	12'-3"	ST.						211
P-1010	6	22'-6"	ST.						581
P-1011	12	6'-8"	1	1'-0"	5'-11"				344
P-1012	12	15'-6"	ST.						800
P-1013	4	20'-0"	ST.						344
P-1014	6	36'-3"	ST.						936
P-1015	2	28'-1"	ST.						242
P-1016	2	24'-4"	ST.						209
P-1017	6	12'-6"	ST.						323
P-1018	7	34'-3"	6	32'-10"	1'-5"				1032

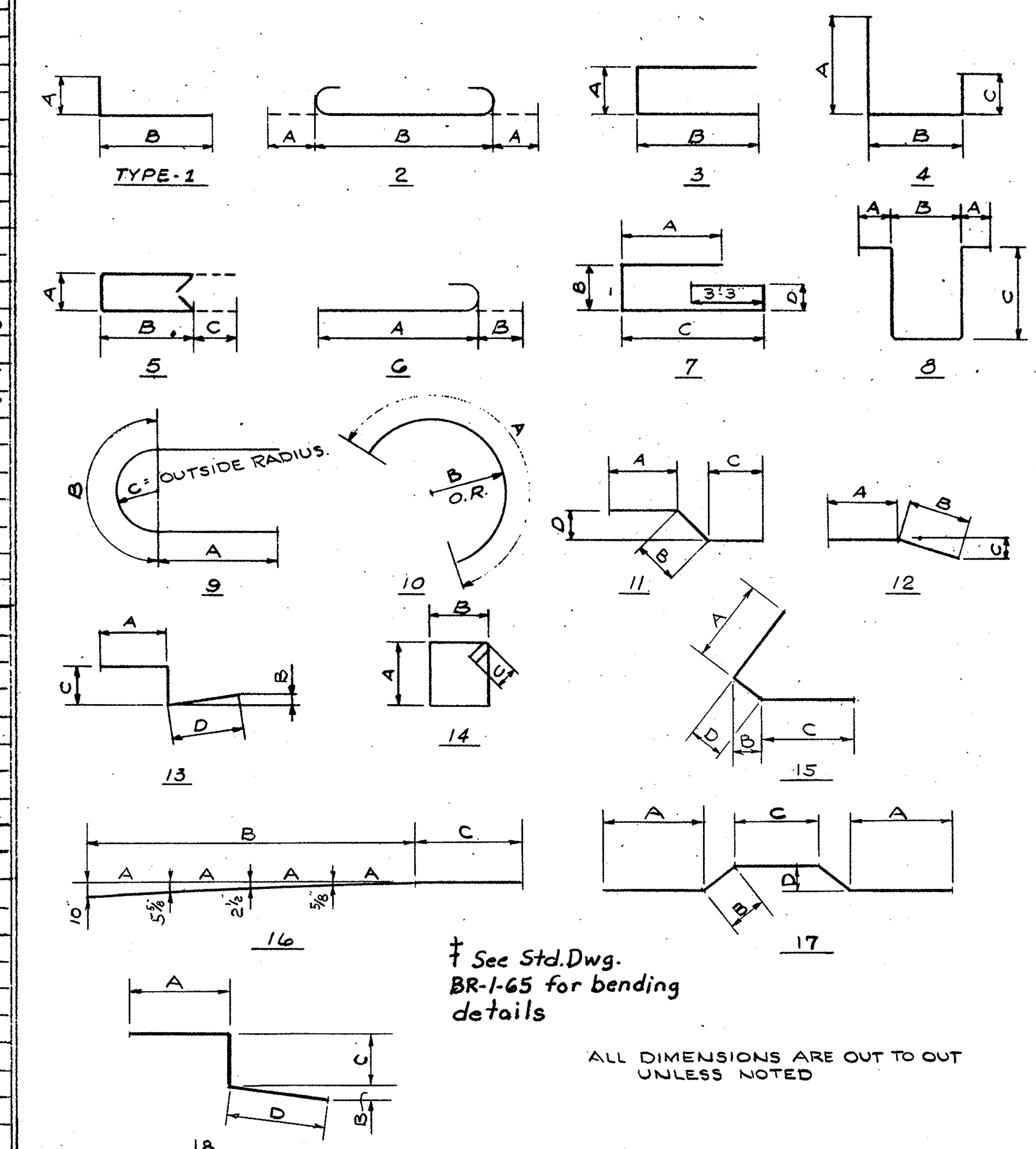
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCRE-MENTS	WEIGHT LBS.
P-1019	7	14'-0"	ST.						422
P-1020	3	26'-10"	ST.						346
P-1021	3	10'-6"	ST.						136
P-1022	4	18'-10"	ST.						324
P-1023	6	9'-10"	9	3'-2"	3'-6"	1'-2⅛"			254
P-1101	16	15'-1"	ST.						1282
P-1102	60	7'-0"	1	1'-0"	6'-3"				2231
P-1103	4	40'-0"	6	38'-5"	1'-7"				850
P-1104	4	21'-6"	6	19'-11"	1'-7"				457
P-1105	28	14'-0"	ST.						2083
P-1106	3	11'-0"	ST.						175
P-1107	2	8'-6"	ST.						90
P-1108	2	18'-6"	ST.						197
P-1109	5	12'-0"	ST.						319
P-1110	3	21'-0"	ST.						335
P-1111	12	17'-6	ST.						1116
P-1112	2	10'-6"	9	3'-6"	3'-6"	1'-1⅜"			112
P-1113	5	21'-10"	6	20'-3"	1'-7"				580
P-1114	5	14'-6"	ST.						385
P-1115	5	11'-3"	ST.						299
P-1116	12	23'-11"	ST.						1525
P-1117	2	10'-0"	ST.						106
						SPIRALS			4514
PIERS #1 & #2 TOTAL 54070									
– SLAB –									
S-501	2	9'-3"	17	1'-7"	2'-7½"	1'-0"	1'-10"		19
S-502	310	4'-9"	13	1'-10"	2"	1'-3"	1'-10"		1536
S-503	310	2'-4"	3	1'-6"	6"				754
S-504	154	4'-1"	18	1'-9"	1¾"	11"	1'-7"		656
S-505	305	1'-10"	3	1'-0"	6"				583
S-506	151	5'-8"	13	3'-3"	2"	1'-0"	1'-7"		892
S-507	5	6'-7"	14	1'-6"	1'-8"	4"			34
S-508	300	5'-8"	5	8"	2'-2"	7"			1773
S-601	10	4'-0"	ST.						60
S-602	2	10'-5"	14	3'-0"	2'-2"	4"			32
S-603	249	43'-11"	ST.						16,425
S-604	1 SET OF 44	11'-8" To 42'-1½	ST.					8½"	1779
S-605	1 SET OF 63	12'-6" To 43'-6"	ST.					6"	2650
S-606	221	45'-4"	ST.						15048
S-607	1 SET OF 43	11'-8" To 44'-0½	ST.					9¼"	1799
S-608	1 SET OF 75	11'-7¾" To 43'-3"	ST.					5⅛"	3092
S-609	77	11'-0"	ST.						1272
S-610	30	39'-4"	ST						1772
S-611	2 SETS OF 6	38'-7" To 40'-8"	ST.					5"	714
S-612	2 SETS OF 6	38'-10½" To 40'-6"	ST.					3½"	715
S-613	2 SETS OF 6	36'-7" To 38'-3"	ST.					4"	674
S-614	2 SETS OF 7	36'-10" To 38'-4"	ST.					3"	790
S-615	224	36'-6"	ST.						12280
S-616	2 SETS OF 6	35'-1" To 36'-4"	ST.					3"	643
S-617	2 SETS OF 7	35'-4" To 36'-4"	ST.					2"	754
S-618	2 SETS OF 8	33'-4" To 35'-1½	ST.					2½"	823
S-619	2 SETS OF 8	33'-10" To 35'-0"	ST.					2"	827
S-620	3 SETS OF 8	28'-11" To 30'-8"	ST					3"	1074
S-621	3 SETS OF 9	29'-1" To 30'-5"	ST.					2"	1206
S-622	3 SETS OF 6	28'-4" To 28'-9"	ST.					1"	772
S-623	3 SETS OF 7	28'-4" To 28'-10"	ST.					1"	901
S-624	210	41'-4"	ST.						13,036
S-625	2 SETS OF 5	40'-2" To 41'-2"	ST.					3"	611
S-626	2 SETS OF 6	40'-4" To 41'-2"	ST.					2"	734
S-627	2 SETS OF 7	39'-1" To 40'-1"	ST.					2"	832
S-628	2 SETS OF 6	39'-3" To 40'-1"	ST.					2"	715
S-629	2 SETS OF 6	30'-7" To 31'-5"	ST.					2"	559
S-630	2 SETS OF 6	30'-8" To 31'-6"	ST					2"	560

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCRE-MENTS	WEIGHT LBS.
S-631	2 SETS OF 6	29'-10" To 30'-5½	ST.					1½"	543
S-632	2 SETS OF 6	29'-11" To 30'-5¼	ST.					1¼"	544
S-633	OPEN								
S-634	210	29'-10"	ST.						9410
S-635	2 SETS OF 9	28'-7" To 29'-9"	ST.					1¾"	789
S-636	2 SETS OF 8	28'-9½" To 29'-8	ST.					1½"	702
S-637	30	40'-3"	ST.						1814
S-638	141	32'-0"	ST.						6777
S-701	77	11'-0"	ST.						1731
S-702	1 SET OF 75	11'-7¾" To 43'-5"	ST.					5⅛"	4221
S-703	249	43'-11"	ST.						22,353
S-704	1 SET OF 44	11'-8" To 42'-1½	ST.					8½"	2419
S-705	1 SET OF 63	12'-6" To 43'-6	ST.					6"	3605
S-706	221	45'-4"	ST.						20,477
S-707	1 SET OF 43	11'-8" To 44'-0½	ST.					9¼"	2448
SLAB TOTAL: 167,229 LBS.									
⊗ RAILING									
R 512	8	12'-0"	St						
R 511	96	15'-0"	St.						
R-501	2	9'-3"	17	1'-7"	2'-7½"	1'-0"	1'-10"		
R-502	1	7'-4"	17	1'-7"	9"	2'-8"	6¾"		
R-503	12	4'-2"	Bt‡						
R-504	8	5'-4"	Bt‡						
R-505	4	19'-2"	ST.						
R-506	4	18'-7"	ST.						
R-507	4	16'-3"	ST.						
R-508	4	18'-11"	ST.						
R-509	4	14'-2"	ST.						
R-510	8	11'-6"	ST.						
REPLACEMENT BARS									
RE-401	1	6'-3"	10	5'-3"	1'-4"				
RE-501	2	6'-7"	ST.						
RE-601	6	6'-11"	ST.						
RE-701	4	7'-2"	ST.						
RE-801	1	7'-6"	ST.						
RE-901	1	7'-10"	ST.						
RE-1001	1	8'-2"	ST.						
RE-1101	1	8'-6"	ST.						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	11'-7⅞"	4½"	34	187
SP-402	1	2'-8"	12'-8⅜"	4½"	37	204
SP-403	1	2'-8"	14'-0¾"	4½"	40	220
SP-404	1	2'-8"	17'-0½"	4½"	48	264
SP-405	1	2'-8"	17'-5¼"	4½"	49	270
SP-406	1	2'-8"	17'-9⅞"	4½"	51	281
SP-407	1	2'-8"	18'-7⅛"	4½"	53	292
SP-408	1	2'-8"	19'-4⅜"	4½"	54	297
SP-409	1	2'-8"	10'-3¾"	4½"	31	171
SP-410	1	2'-8"	11'-3⅝"	4½"	33	182
SP-411	1	2'-8"	12'-3½"	4½"	36	198
SP-412	1	2'-8"	13'-4¼"	4½"	39	215
SP-413	1	2'-8"	14'-1"	4½"	41	226
SP-414	1	2'-8"	15'-3⅝"	4½"	44	242
SP-415	1	2'-8"	18'-0⅜"	4½"	51	281
SP-416	1	2'-8"	20'-8⅜"	4½"	58	320
	64	SPACERS				664

SPIRAL TOTAL- 4514#



‡ See Std.Dwg. BR-1-65 for bending details

ALL DIMENSIONS ARE OUT TO OUT UNLESS NOTED

REINFORCING NOTES

THE "LENGTH" SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.
THE "NUMBER OF TURNS" SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH, PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509
ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.
FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT AFTER THE HYPHEN WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS AFTER THE HYPHEN WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE S-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO 10 SIZE BAR

⊗ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

GRAND TOTAL: 254,913 LBS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

REINFORCING SCHEDULE
BRIDGE Nº MAH-7-1508
UNDER EXISTING I.R.80
YOUNGSTOWN MAHONING COUNTY
STA 793+51.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EAR	JNP		aw	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-3(11) 238 U-524(9)

160/206

MAH-7-14.95

TYPICAL SECTION RAMP "BX"

FOUNDATION SOUNDINGS

FOUNDATION DESIGN & FOUNDATION QUANTITIES ARE BASED ON A STUDY OF SOIL SAMPLINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS, OR IN THE DIVISION OFFICE, BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.

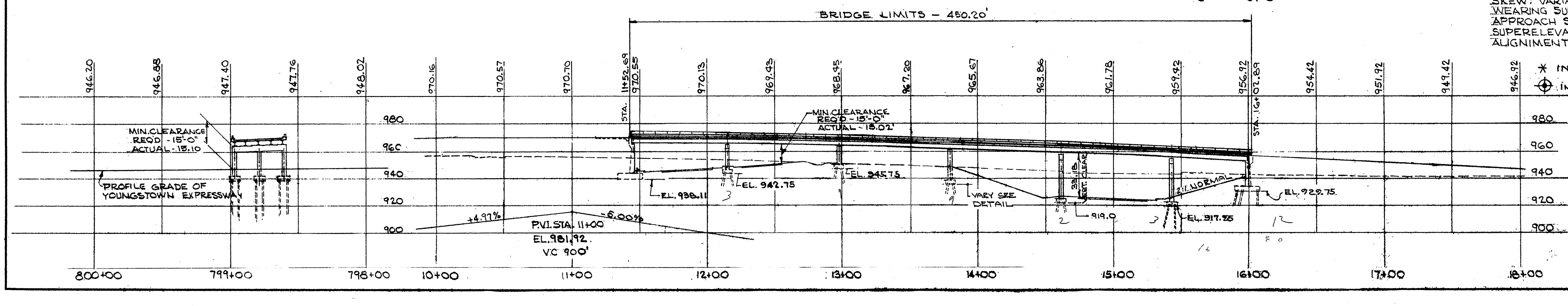
ESTIMATED AVERAGE PAY LENGTH OF PILES;
ABUTMENT: #2 - 30'-0
PIERS: #1 & 4 - 10'-0
#2 - 25'-0
#3 - 27'-0
#5 - 31'-0

PROPOSED RAMP "BX" STRUCTURE

TYPE: CONTINOUS STEEL BEAM BRIDGE WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 65'-6", 81'-0"-79'-0"-79'-0"-81'-0"-57'-0" c/c BEARINGS
ROADWAY: 28'-0" F/F PARAPETS
LOAD FREQUENCY: CF 2000 (57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
SKEW: VARIABLE
WEARING SURFACE: 1" MONOLITHIC
APPROACH SLAB: 25'-0" LONG AS-1-67
SUPERELEVATION: .0833'/'
ALIGNMENT: 6° 00' 00" LT.

* INDICATES CHORD DISTANCES.
INDICATES DRIVE SAMPLE BORING.

SCALE: 1" = 40'-0"

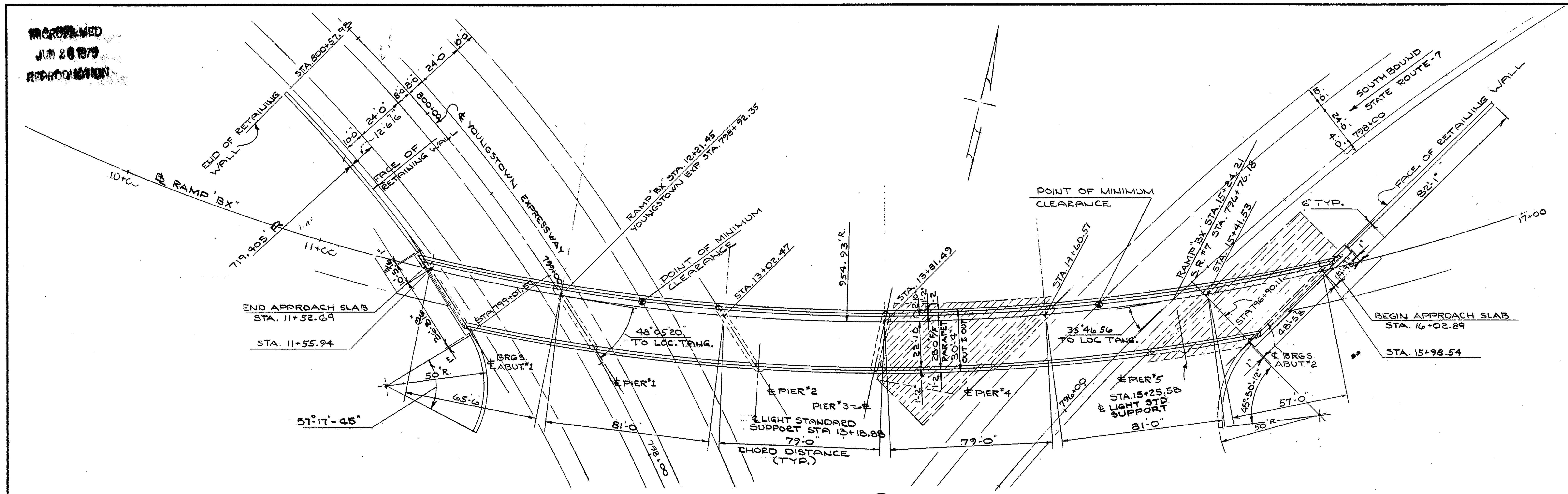


STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

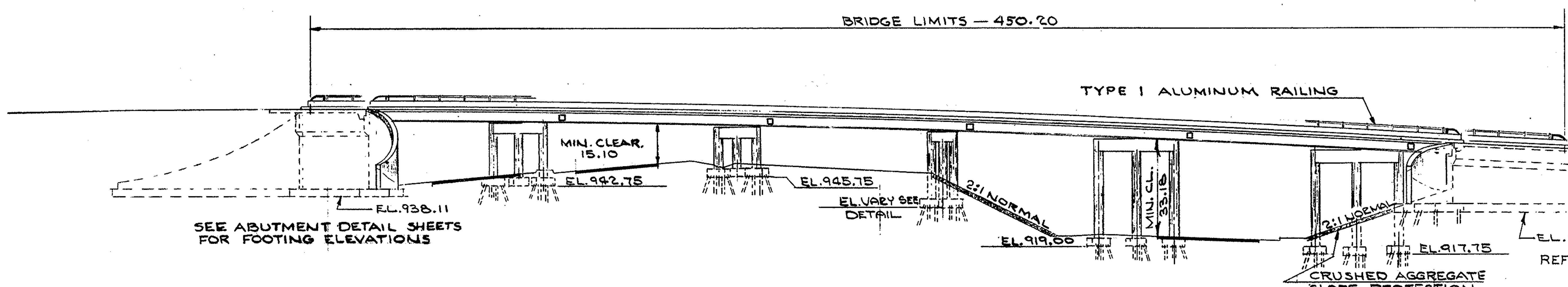
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SITE PLAN
BRIDGE Nº MAH-7-1514 UNDER
RAMP 'BX'
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CTD JES MHC	GASKILL D.S.			RDH	9/21/63	



— PLAN —

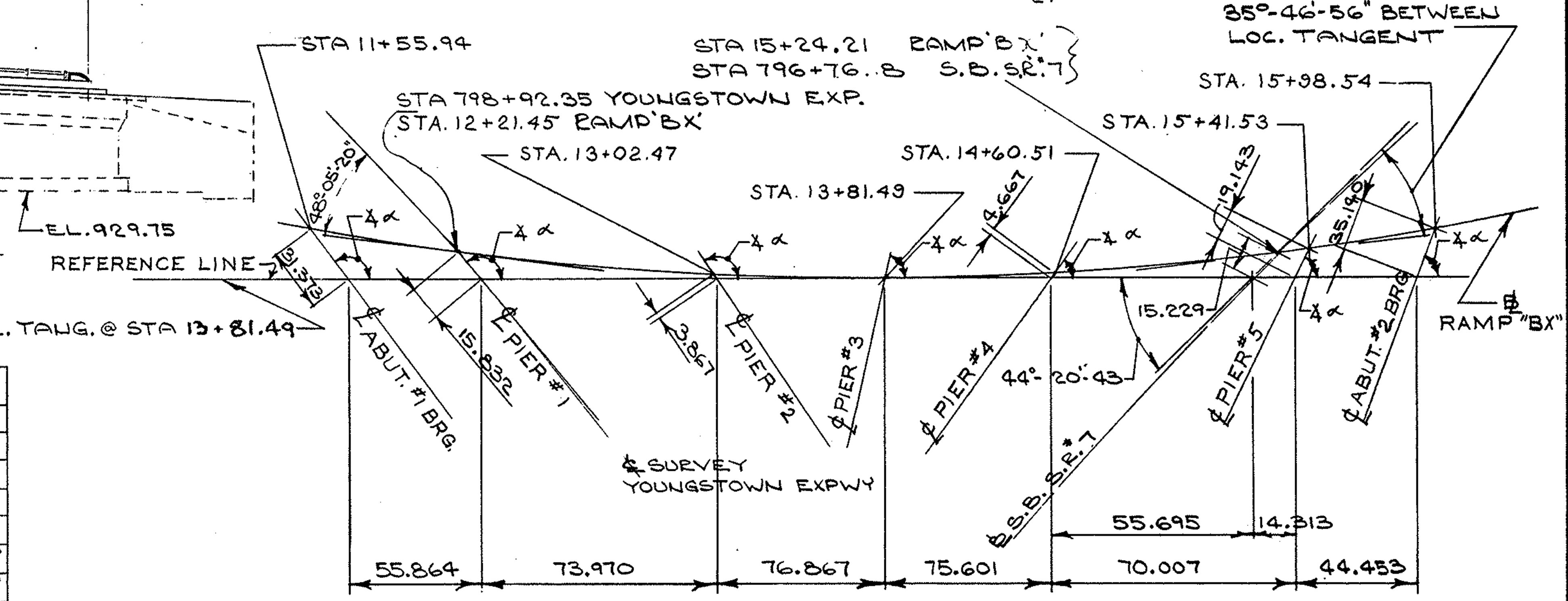


— ELEVATION —

CRUSHED AGGREGATE SLOPE PROTECTION

601 - CRUSHED AGGREGATE AT ABUTMENT #2 TO EXTEND FROM FACE OF ABUTMENT TO TOE OF SLOPE FOR FULL WIDTH OF BRIDGE PLUS THREE FEET AND PARALLEL TO ℄ OF BRIDGE, EXCEPT THAT AT THE ACUTE CORNER THE OUTSIDE EDGE OF THE SLOPE PROTECTION SHALL INTERSECT THE ACUTE OR PROJECTED FACE OF THE ABUTMENT 3 FEET BEYOND THE OUTER EDGE OF THE SUPERSTRUCTURE AND SHALL EXTEND DOWN THE SLOPE, NORMAL TO THE FACE OF THE ABUTMENT, TO THE TOE OF SLOPE.

601 - CRUSHED AGGREGATE ON SLOPE BETWEEN PIERS #3 AND #4 SHALL EXTEND FROM THE TOP OF SLOPE TO TOE OF SLOPE WITHIN LIMITS AS DESCRIBED ABOVE FOR ABUT. #2.



POSITION	ANGLE α
ABUT. #1	122°-18'-30"
PIER #1	122°-18'-30"
PIER #2	122°-18'-30"
PIER #3	77°-38'-04"
PIER #4	44°-26'-41"
PIER #5	44°-20'-44"
ABUT. #2	44°-20'-44"

— GEOMETRIC LAYOUT —

SEE SHT #139 FOR NOTES 1, 2, 3, 5, 17, 21

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUC	ABUT.	RET. WALLS	PIERS	GEN.		
503	Lump	Sum	Cofferdams, Cribs and Sheeting					Lump		
503	1496	CU.YDS	UNCLASSIFIED EXCAVATION		599	897				
503	183	CU.YDS.	SHALE EXCAVATION		67	116				
511	370	CU.YDS	CLASS C CONC.-RETAINING WALL ABOVE FTG.			370				
511	456	CU.YDS	CLASS C CONC. SUPERSTRUCTURE	456						
511	286	CU.YDS.	CLASS C CONC. ABUT'S. ABOVE FOOTINGS.		286					
511	162	CU.YDS	CLASS C CONC. PIERS ABOVE FOOTINGS.				162			
511	477	CU.YDS	CLASS C CONC. PIER & ABUT. FOOTINGS.		279		198			
511	401	CU.YDS	CLASS C CONC. RET. WALL FOOTINGS			401				
512	36	SQ.YDS	TYPE B WATER PROOFING		36					
512	143	LIN.FT.	WATERPROOFING PREMOLDED SEALING STRIP		25	118				

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUC.	ABUTS.	RET WALLS	PIERS	GEN.		
509	295,710	LBS.	REINFORCING STEEL	119,979	53,738	63,073	58,920			
513	430,100	LBS.	STRUCTURAL STEEL	430,100						
514	430,100	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	430,100						
516	263	SQ.FT.	1" PREFORMED EXPANSION JOINT FILLER		263					
517	846.58	LIN.FT.	RAILING, Type I	846.58						

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER STRUC	ABUTS	RET. WALLS	PIERS	GEN.		
505	LUMP	SUM	FIRST TEST PILE					LUMP		
507	6400	LIN.FT.	STEEL PILES 12" BP 53 #		1500	2130	2770			
625			SEE NOTE # 17							
518	421	CU.YDS.	POROUS BACKFILL		177	244				
518	11	EACH	SCUPPERS, including supports	11						
518	60	LIN.FT.	8" ϕ PERFORATED BITUMINOUS COATED C.M. PIPE		60					
601	643	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION					643		
825	1,658	SQ.YDS.	Concrete Surface Treatment	1636	22					
808	456	Units	WATER REDUCING, SET RETARDING ADMIXTURE	456						

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GENERAL PLAN & ELEVATION

BRIDGE Nº MAH 7-1514 UNDER

RAMP "BX"

YOUNGSTOWN MAHONING COUNTY

STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CTP MHC SRS	WP		GW	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

PILING PLAN

ALL ABUTMENT PILES SHALL BE 12 BP 53 STEEL PILES
ALL PIER PILES SHALL BE 10 BP 42 STEEL PILES

↤ INDICATES BATTERED PILES
BATTER ON PILES: PIERS & WINGWALLS 1:4
ABUTMENT #2 1:3

SEE SHT# 139 FOR NOTE #22.

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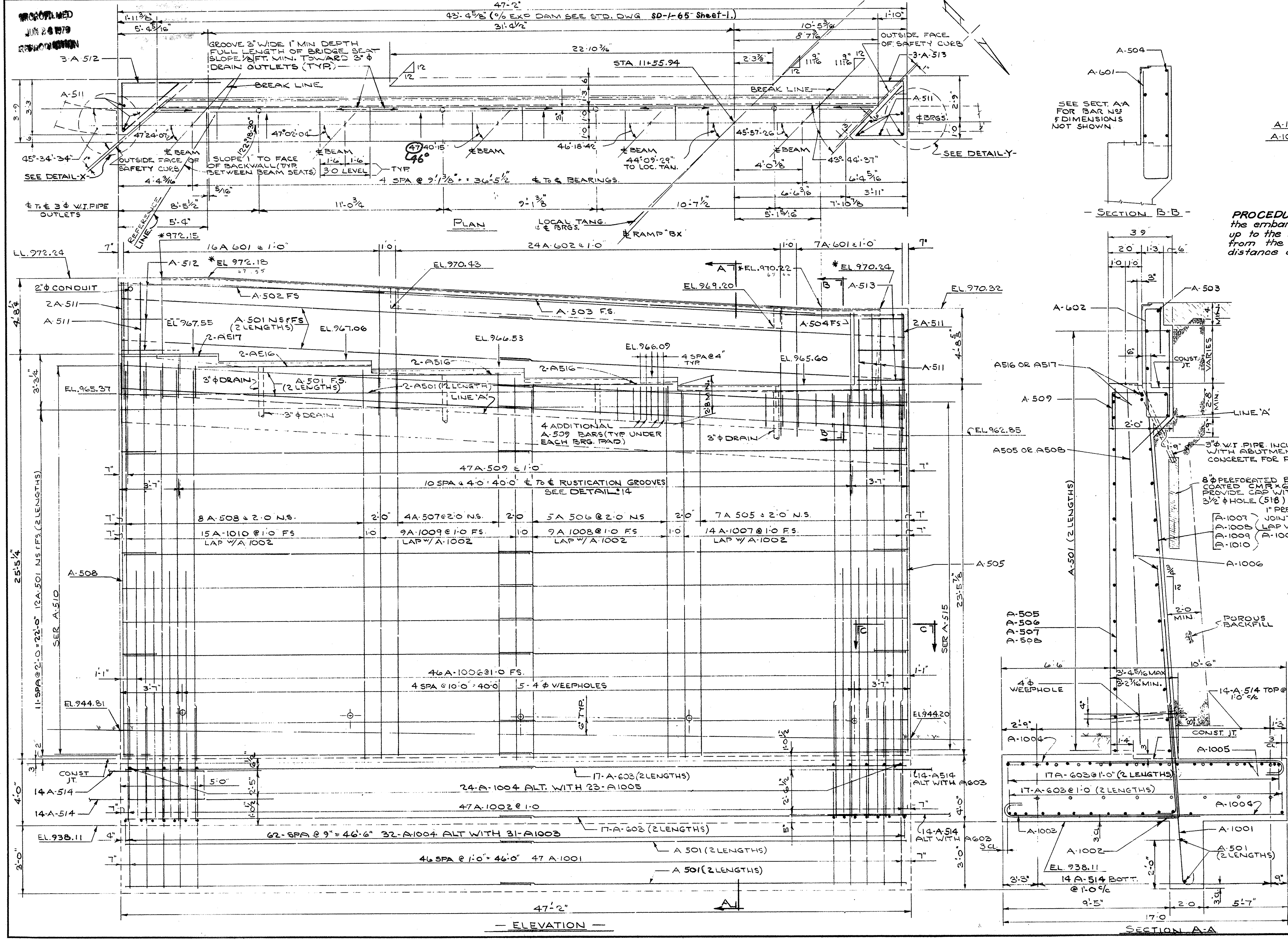
PILING PLAN
BRIDGE NO MAH-7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
STA. 796+76.18

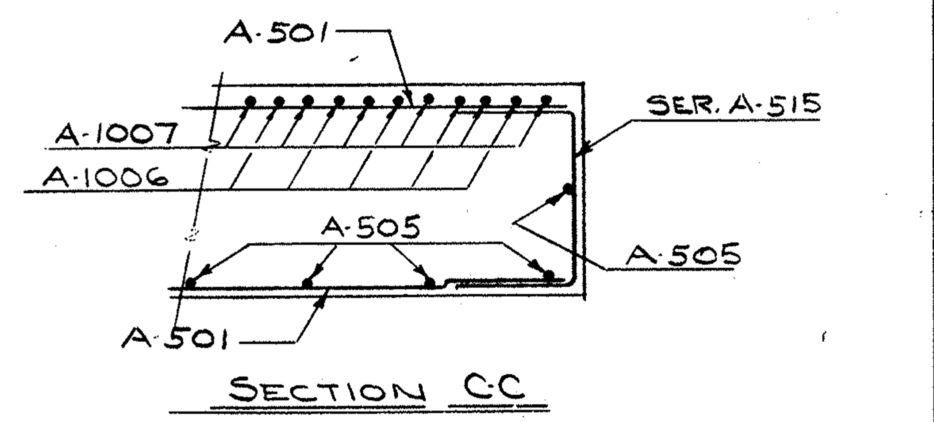
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC	JK		aw	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

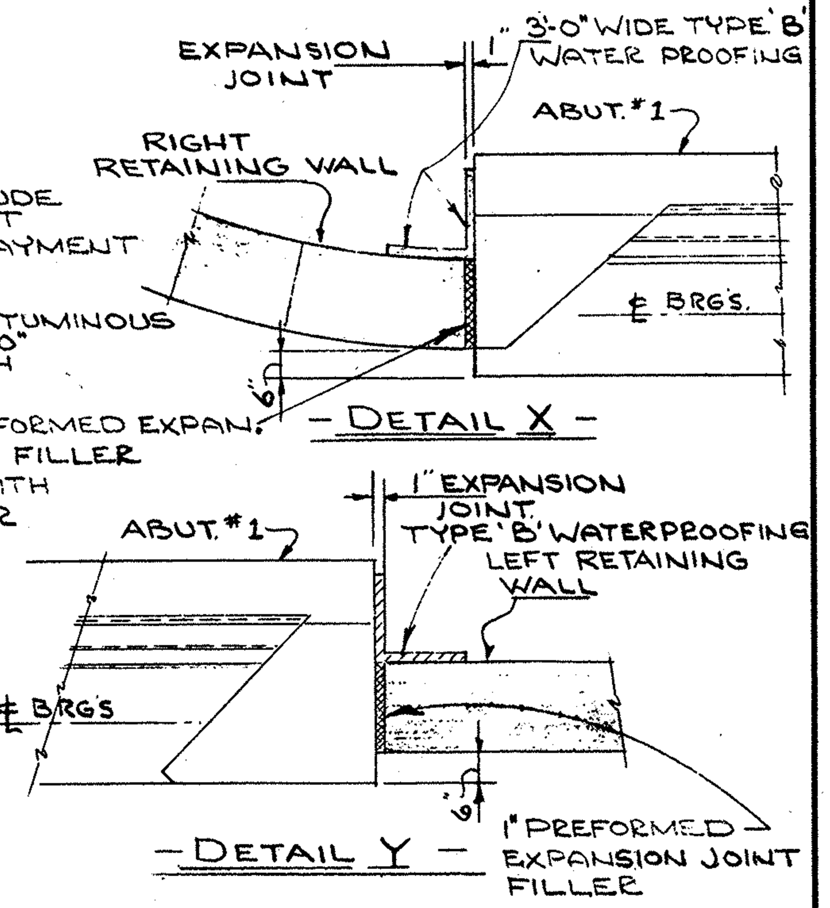
163
206

MAH-7-1495





PROCEDURE: *Before the backwall is constructed the embankment shall be placed and compacted up to the level of the subgrade, with a 1:1 slope from the bridge seat to the subgrade, for a distance of 200 feet back of the abutment.*



FOOTING KEYS TO BE PLACED AGAINST UNDISTURBED EARTH.

SEE SHEET # 165 FOR LOCATION OF GUARDRAIL POST ANCHOR SLEEVES IN ABUT. FOOTING.

SEE SHEET # 140 FOR DETAIL # 14

SEE SHEET # 139 FOR NOTES 18, 19, 21

* INDICATES ELEVATIONS GIVEN TO HEEL OF ANGLE

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ABUTMENT 1

BRIDGE No MAH 7-1514 UNDER

RAMP "BX"

YOUNGSTOWN — MAHONING COUNTY

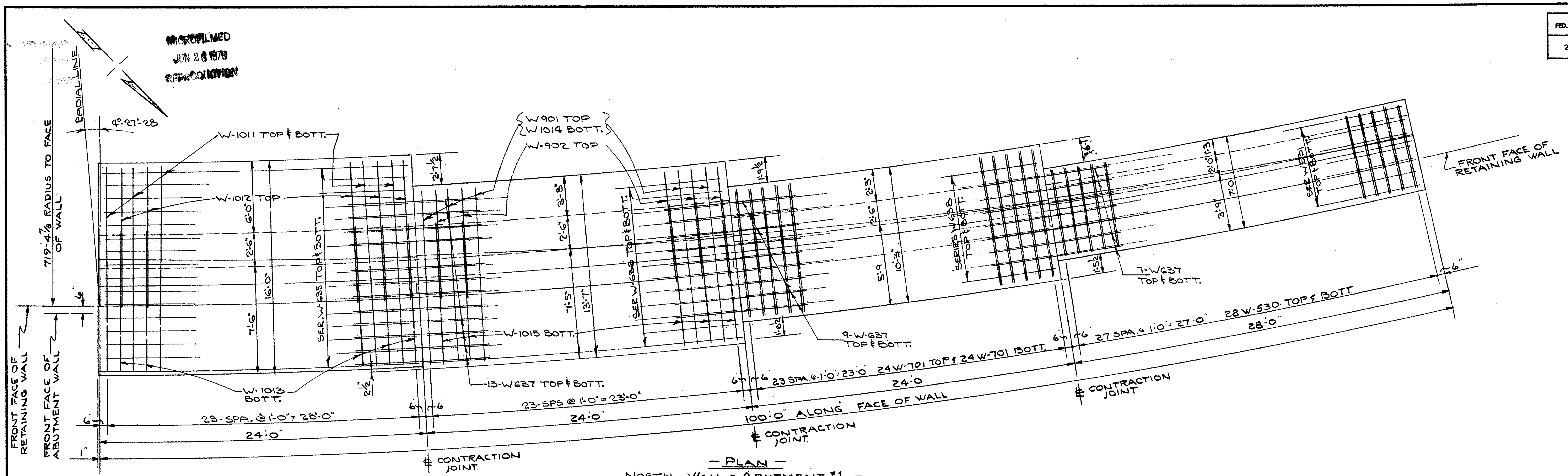
STA 796 + 76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.H.C.	JNP		JJW	RDH	2/21/63	12-5-69

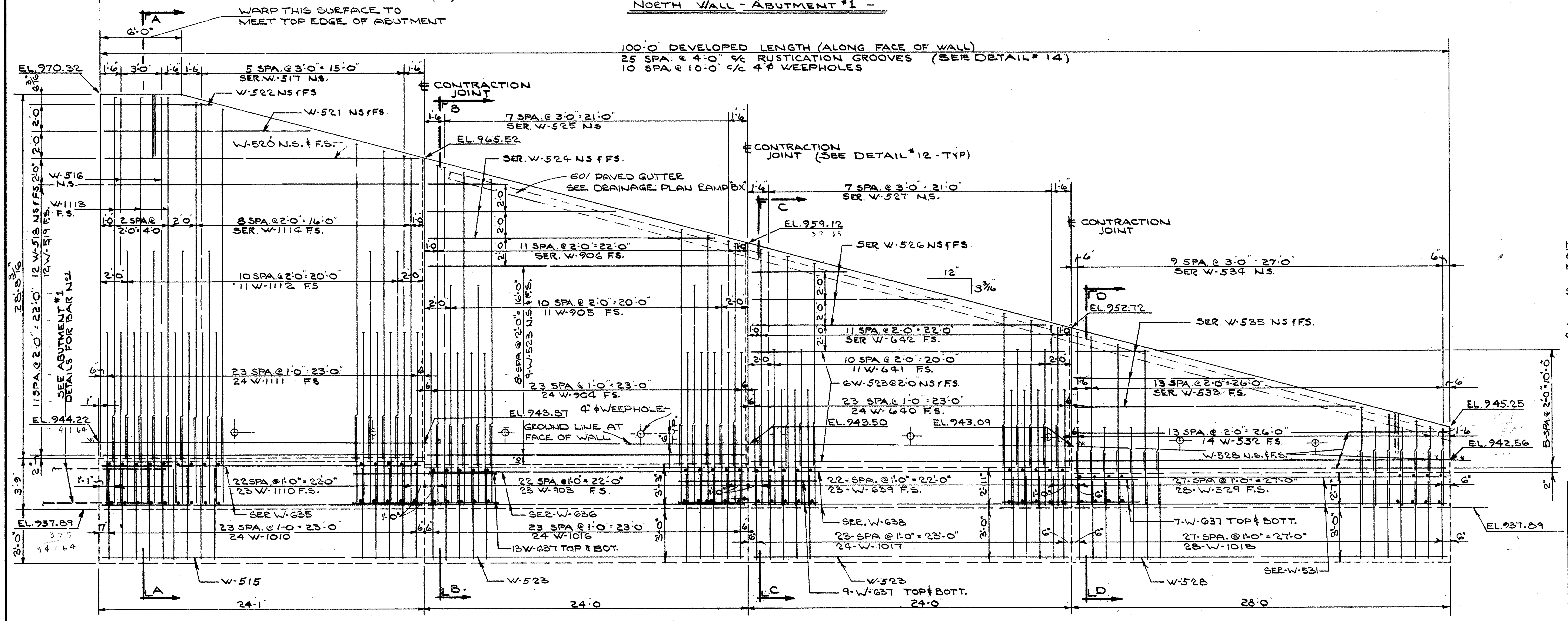
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(5)	

164/206

MAH-7-1495



— PLAN —
NORTH WALL - ABUTMENT #1 -



— ELEVATION —

NOTE
ALL LONGITUDINAL DIMENSIONS MEASURED ALONG FACE OF WALL

SEE SHEET No 139 FOR NOTE 21
SEE SHEET No 140 FOR DETAILS 12 & 14

SEE SHEET No 165 FOR LOCATION OF GUARDRAIL POST ANCHOR SLEEVES IN WALL FOOTING.

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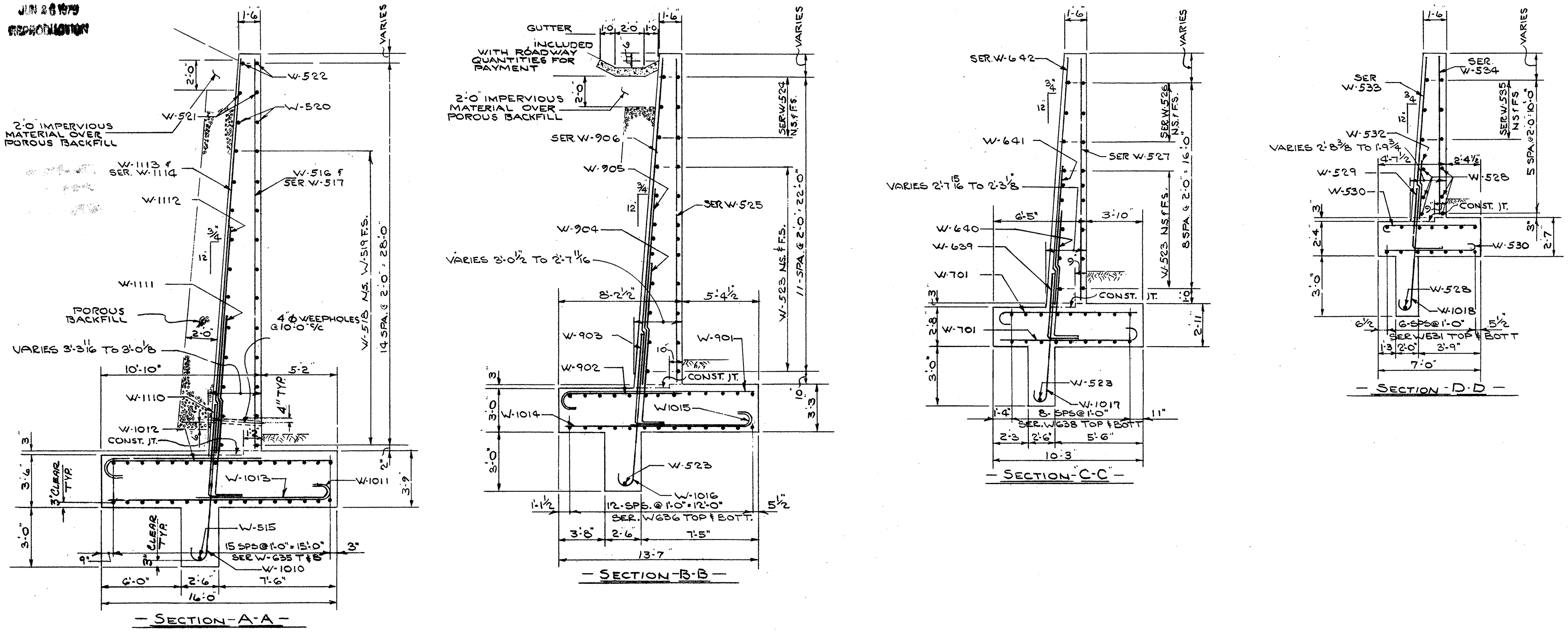
NORTH WALL AT ABUT. 1
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

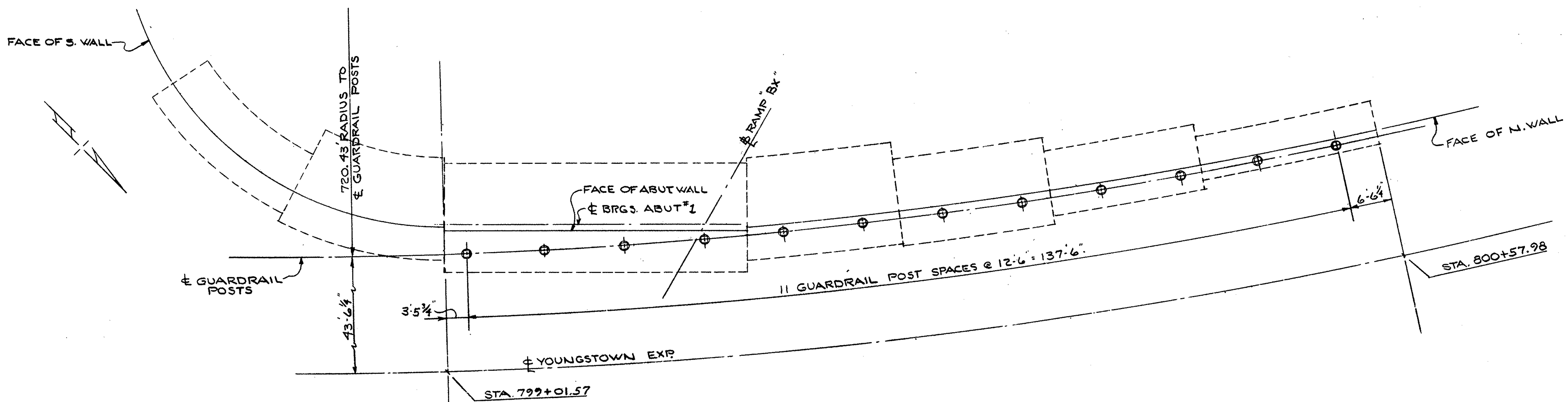
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.H.C.	JWW.			RDH	9/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

165
206

MAH-7-14.95





– Guardrail Post Spacing At Abutment #1 –

Guard-post anchor details are included with the roadway (Youngstown Expressway) for payment.

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NORTH WALL DETAILS AT ABUT. 1

BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC.	JP		aw	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

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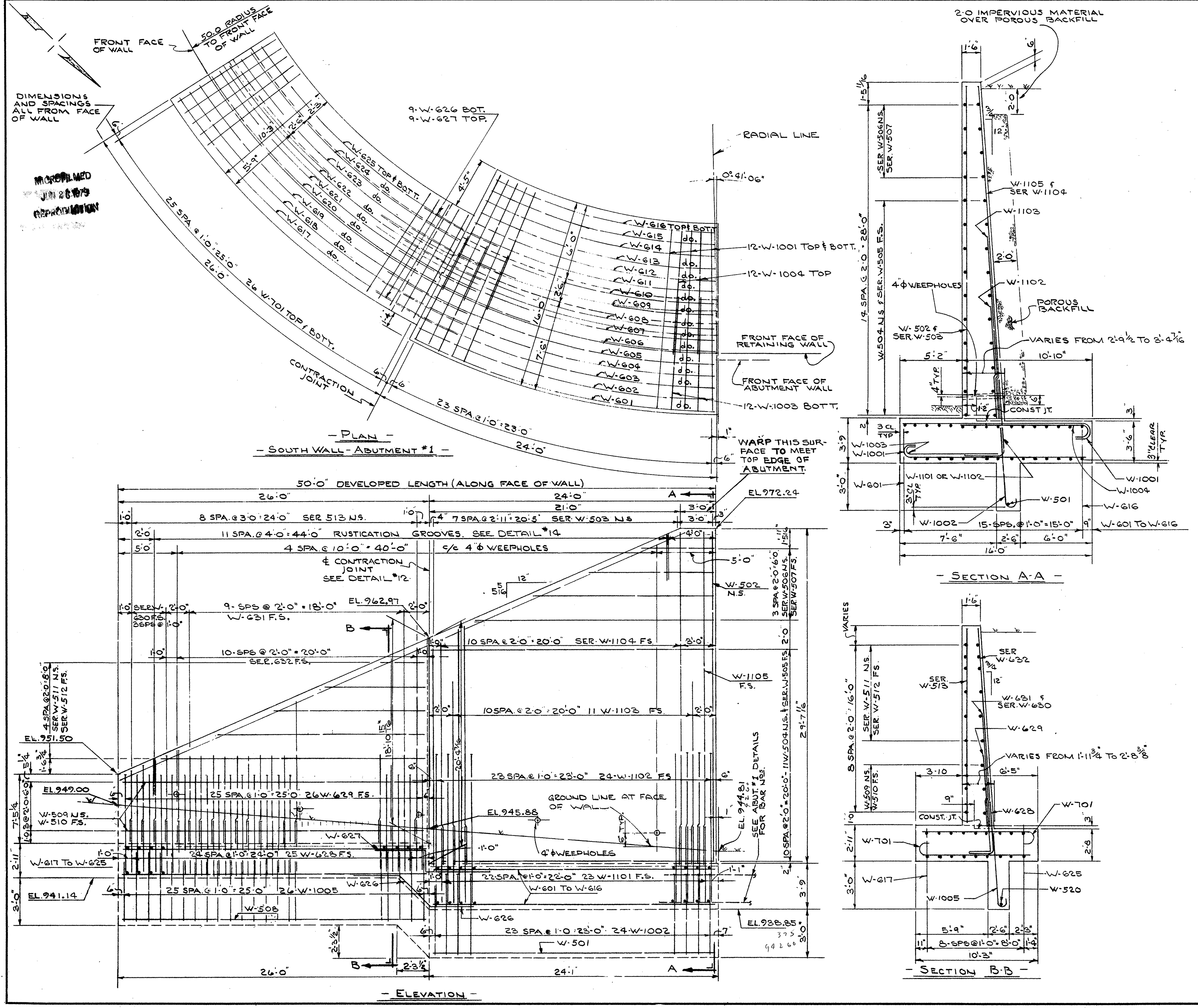
MAH-7-14.95



NOTE
ALL LONGITUDINAL DIMENSIONS MEASURED ALONG FRONT FACE OF WALL

SEE SHEET # 132 FOR NOTE 21
SEE SHEET # 140 FOR DETAILS 12 & 14

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SOUTH WALL AT ABUT. 1
BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
STA 796+76.18

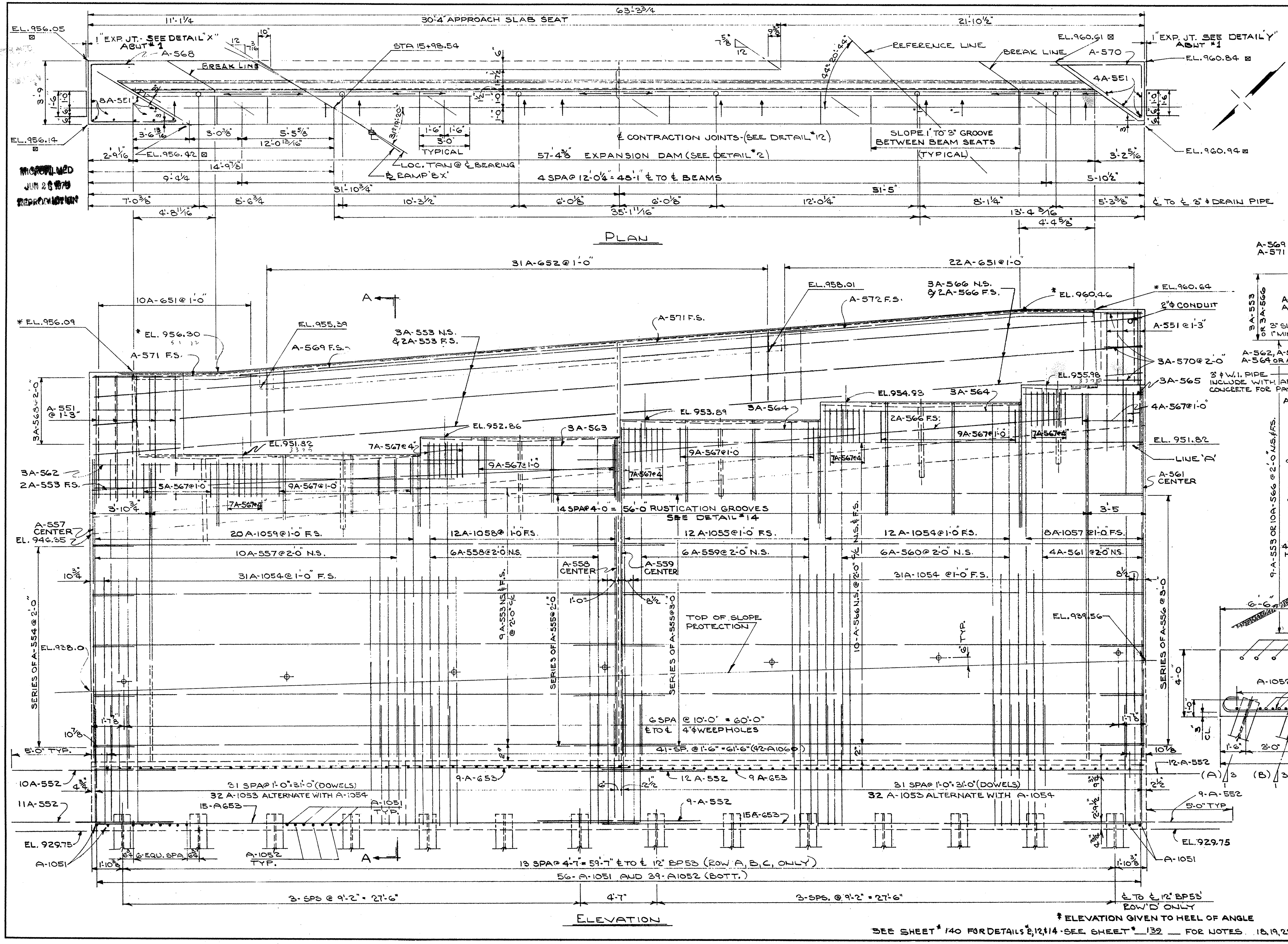
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHF.	LNP		ew	RDH	2/21/63	

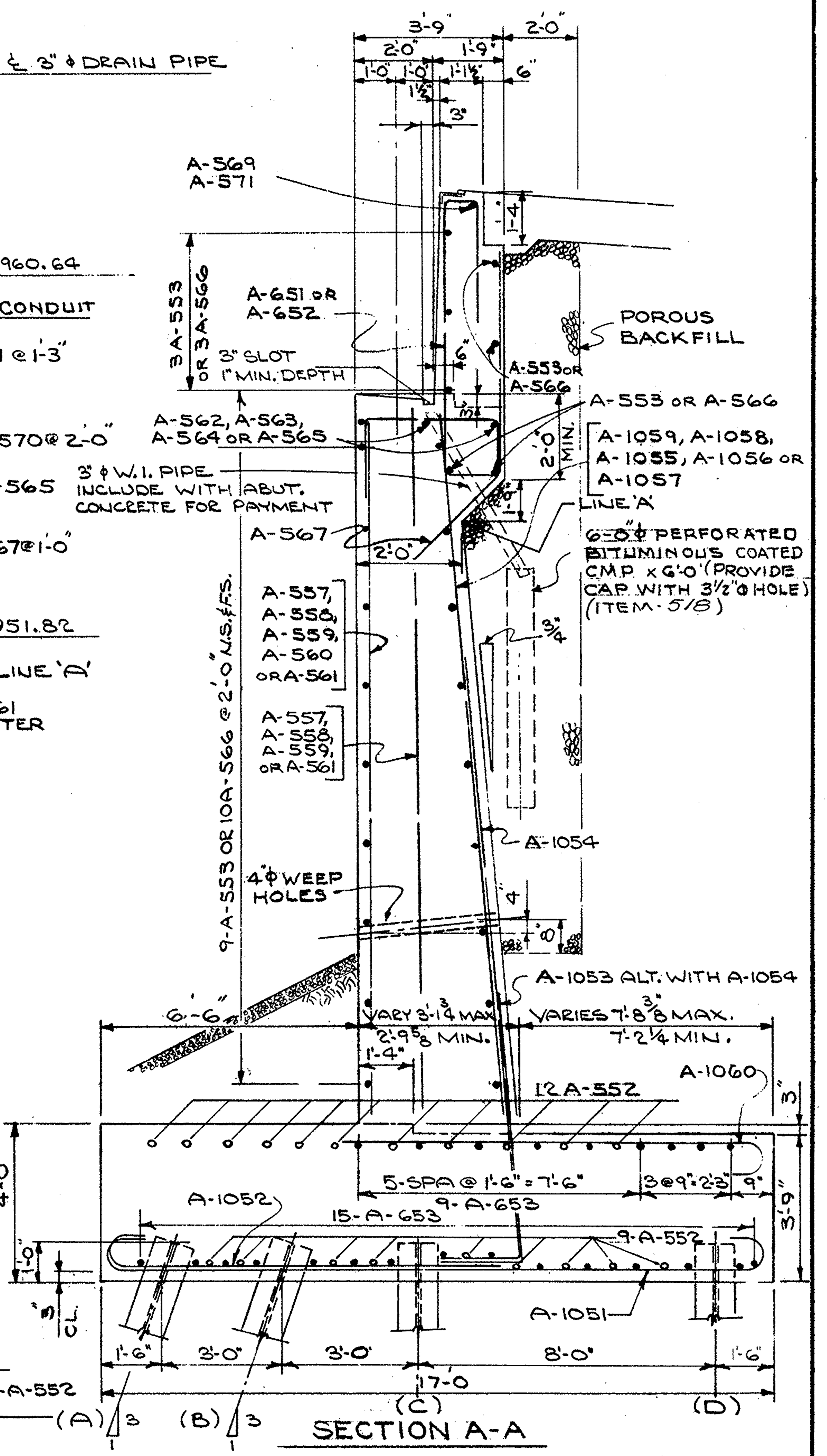
FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-574 (9)

MAH-7-1495

NOTE: ⊠ DENOTES ELEVATION AT TOP OF CONCRETE

NOTE: See Procedure Note on sheet #163





* ELEVATION GIVEN TO HEEL OF ANGLE

SEE SHEET # 140 FOR DETAILS #2, 12, & 14 - SEE SHEET # 139 FOR NOTES 18, 19, 22

STATE OF OHIO
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ABUTMENT 2
BRIDGE № MAH-7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M+C	JLH		ωω	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

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STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

NORTH WALL AT ABUT. 2
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC	JLH		aw.	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-14.95

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NOTE:- ALL LONGITUDINAL DIMENSIONS ARE MEASURED ALONG FRONT FACE OF WALL.
ALL TRANSVERSE BARS TO BE PLACED RADIALLY.

SEE SHEET# 140 FOR DETAILS 12 & 14

STATE OF OHIO
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SOUTH WALL AT ABUT. 2
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
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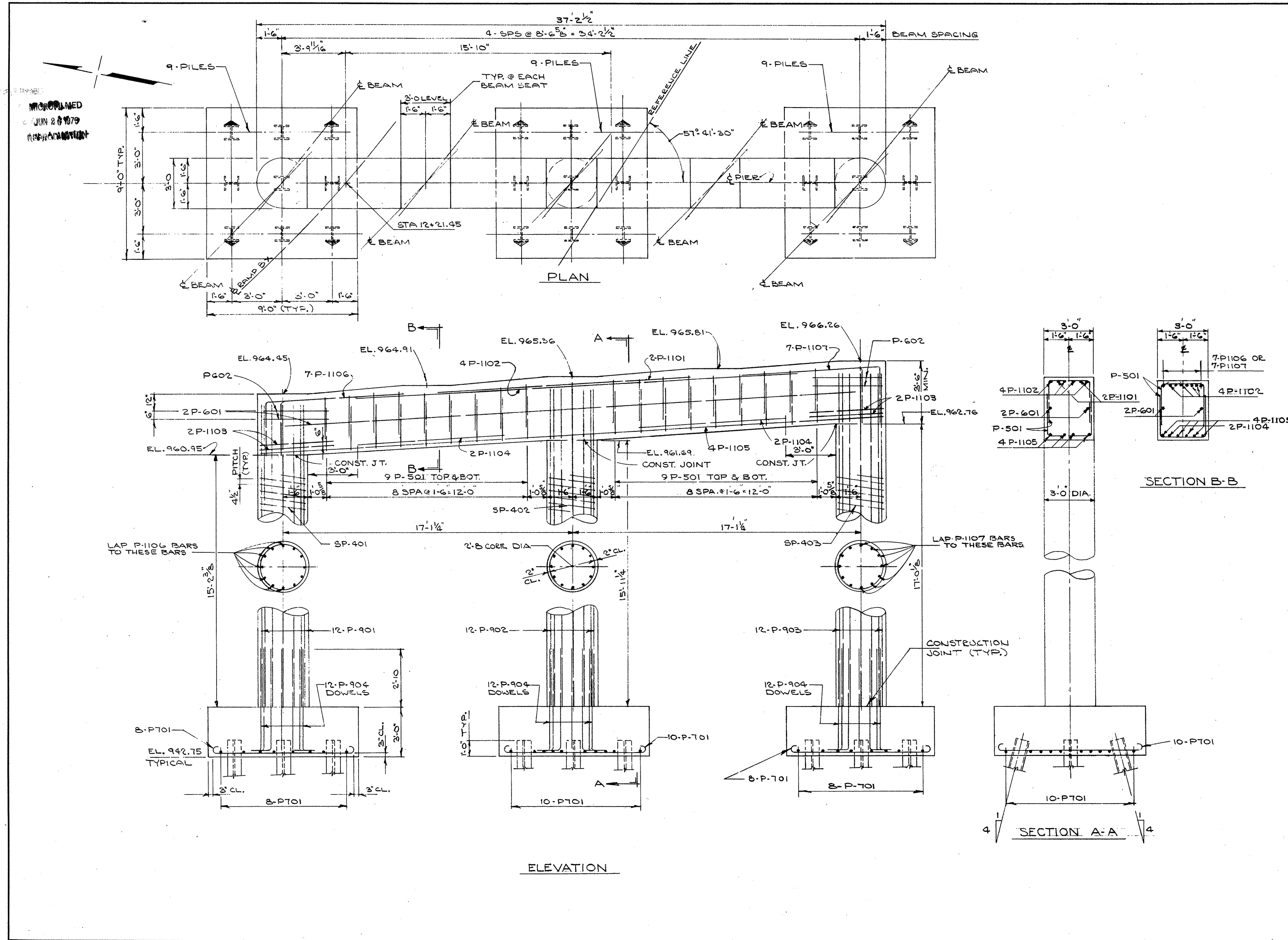
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC	JLH		CW	RGH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

170
206

MAH - 7 - 1495



NOTES

ALL PILES 10BP42 W/ 25 TON CAPACITY

SEE FRAMING PLAN FOR SKEW ANGLES OF BEAMS

SEE SHEET #139 FOR NOTES 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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PIER No 1
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.S.	JLH		aw	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	~~I-680-9(11)238~~ ~~U-524 (9)~~

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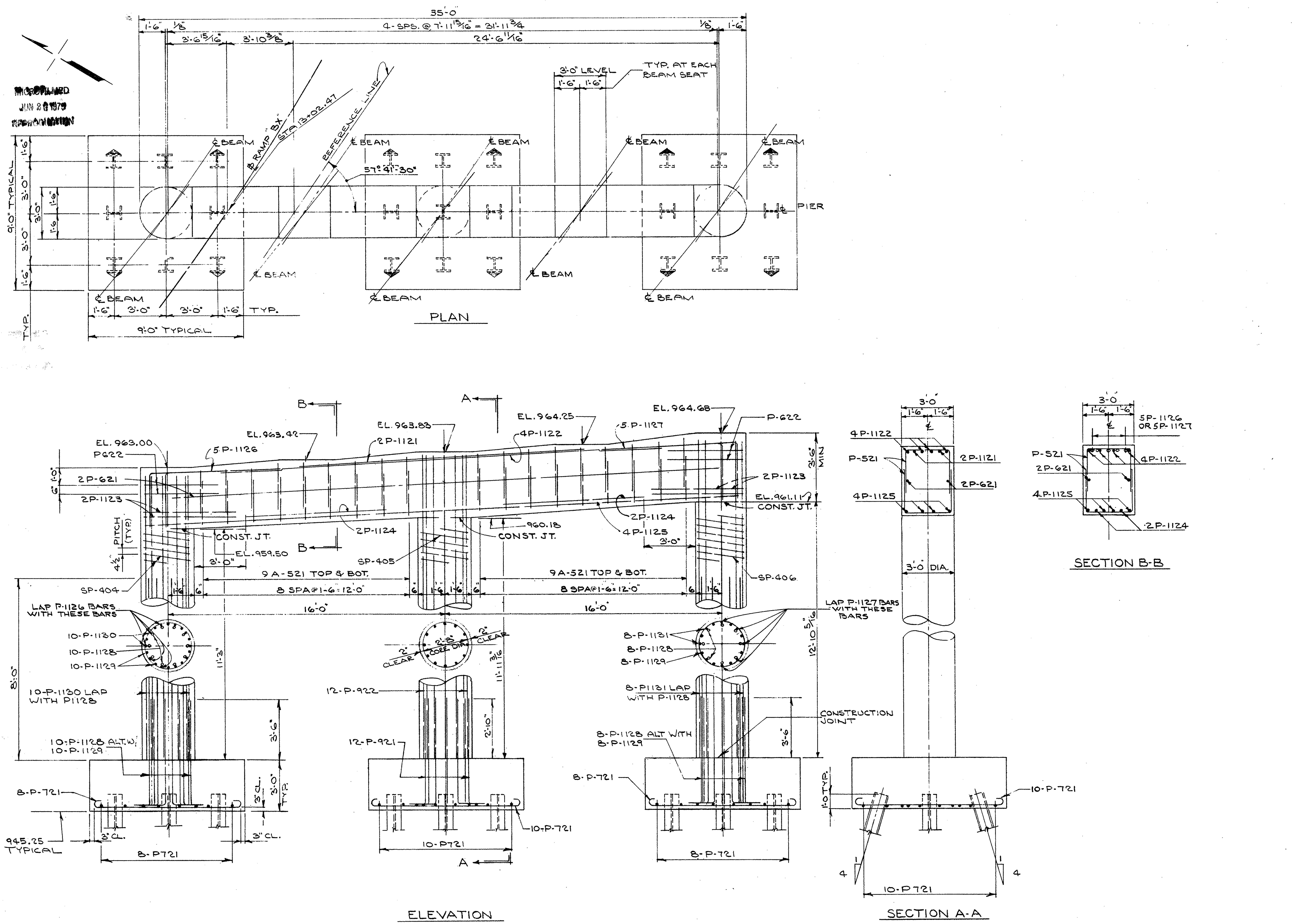
MAH-7-1495



NOTES:
ALL PILES TO BE 10BP42 WITH 25 TON CAPACITY.
SEE FRAMING PLAN FOR SKEW ANGLES OF BEAMS

SEE SHEET #139 FOR NOTE 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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PIER No 2
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.D.	JLH		aw	RDN	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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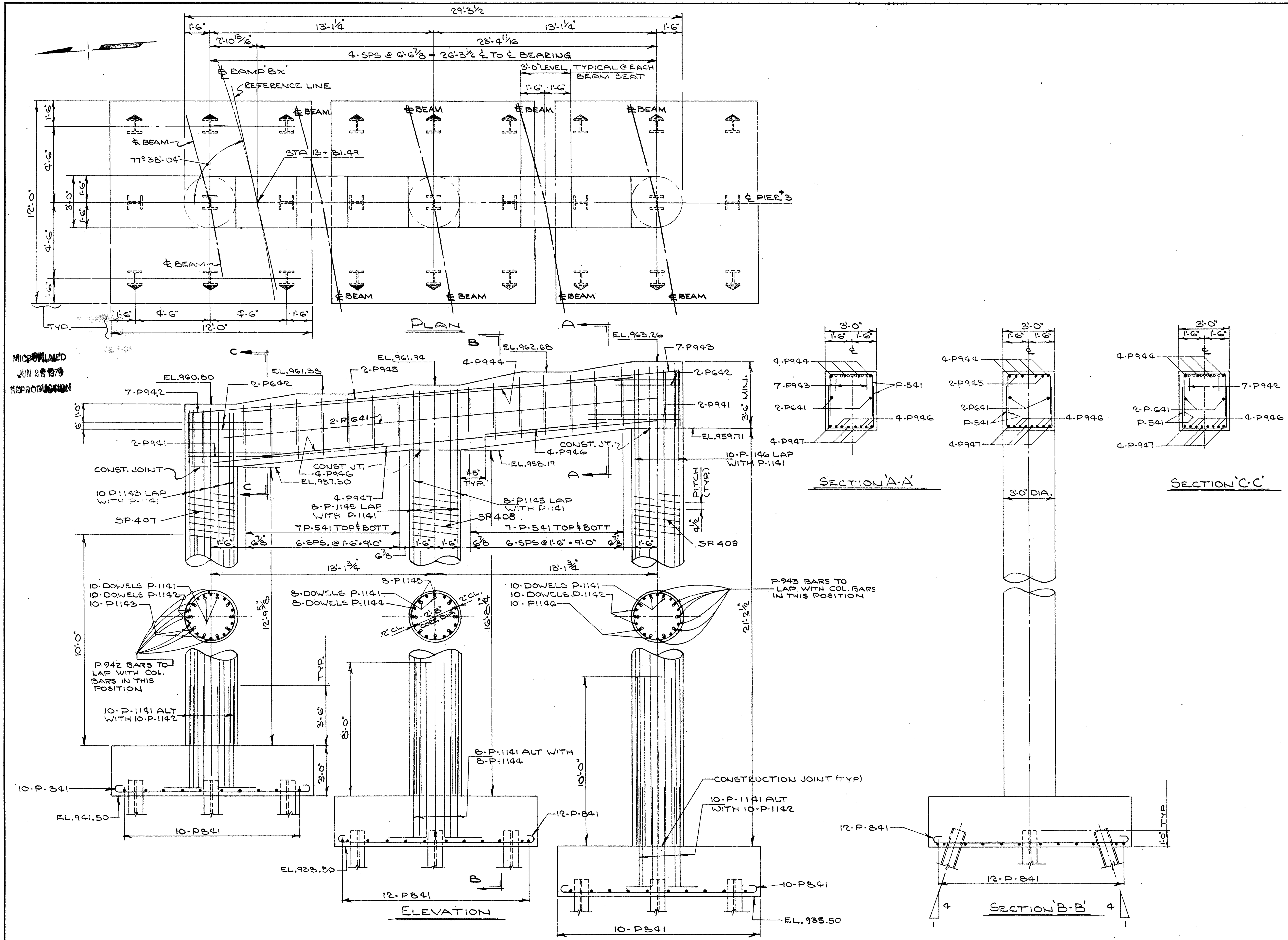
206

MAH-7-1495



NOTES
ALL PILES TO BE 10BP42 WITH 30 TON CAPACITY
SEE FRAMING PLAN FOR SKEW ANGLE OF BEAMS

SEE SHEET #139 FOR NOTES 12, 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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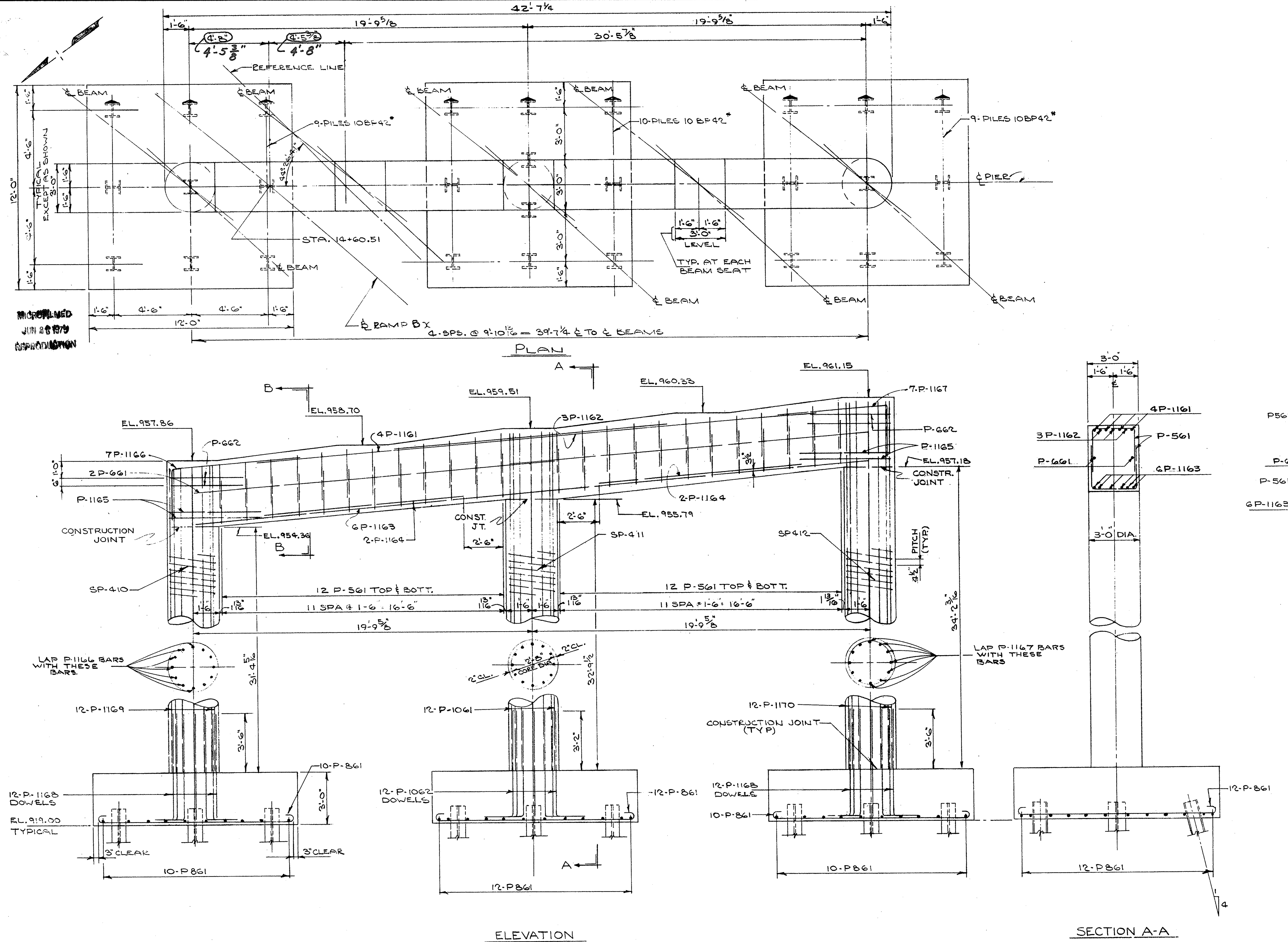
PIER No 3
BRIDGE No MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

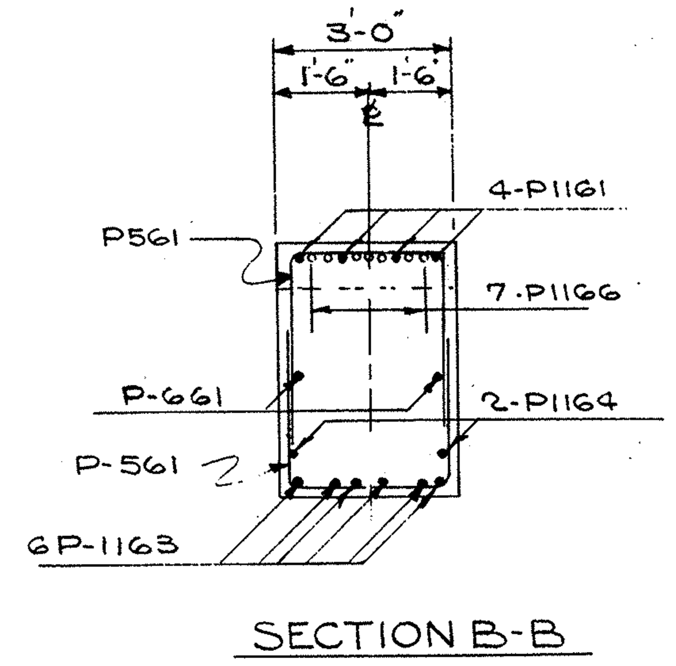
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.S.	JLH		CW	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524 (9)	

173
206

MAH-7-1495





NOTE:
ALL PILES - 10" BP42 - W/25 TON CAPACITY
SEE FRAMING PLAN FOR SKEW ANGLES OF BEAMS

SEE SHEET* 139 FOR NOTE 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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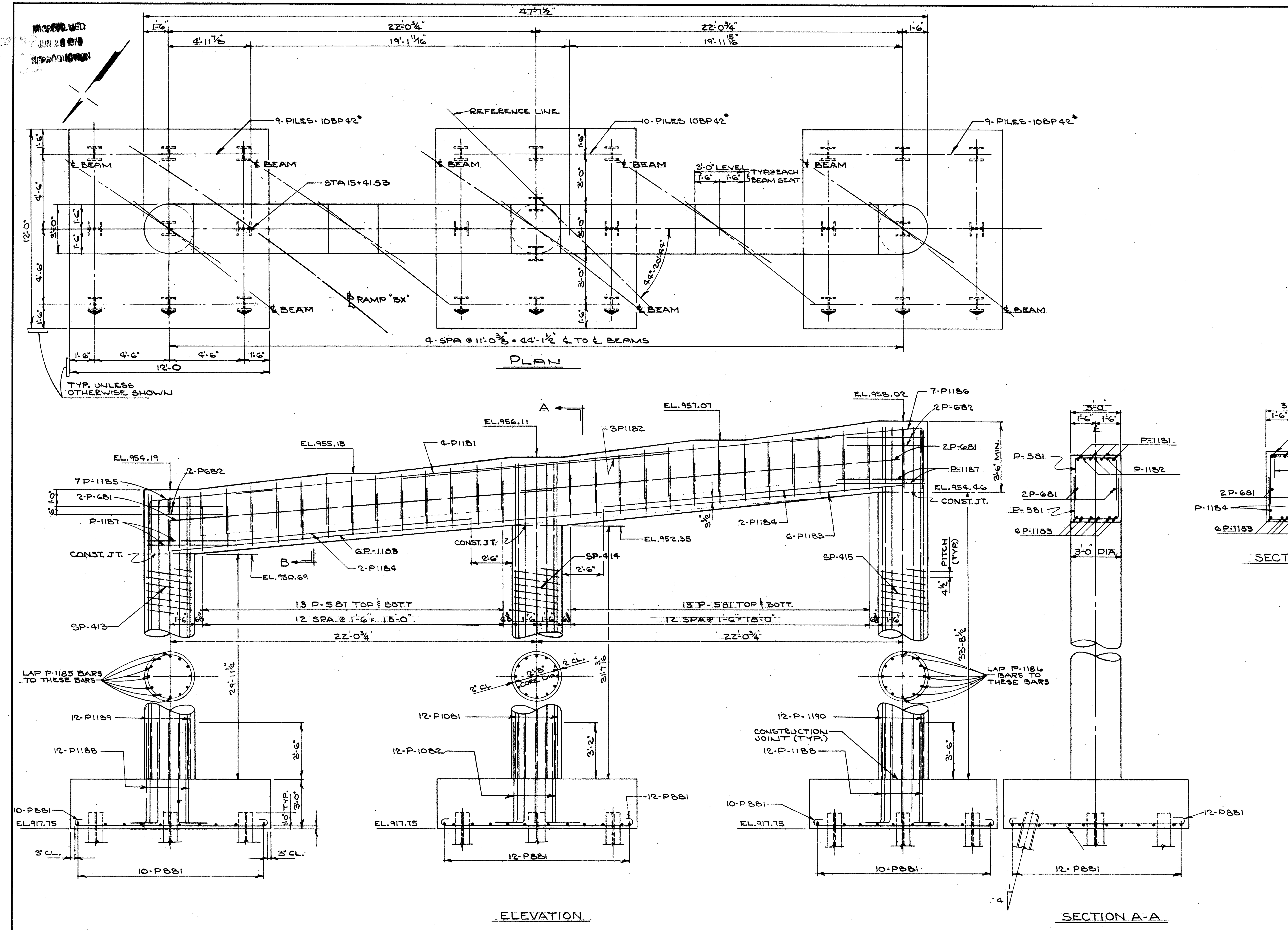
PIER Nº 4
BRIDGE Nº MAH. 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SS	JLH		aw	RDH	2/21/63	12-5-63

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

174
206

MAH-7-1495



NOTES
ALL PILES 10 BP 42# W/25 TON CAPACITY

SEE FRAMING PLAN FOR SKEW ANGLES OF BEAMS

SEE SHEET # 139 FOR NOTE 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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PIER Nº5
BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SS	JLH				7/2/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

BEAM INTERSECTION ANGLES											
BEAM	ABUT. #1	PIER #1		PIER #2		PIER #3		PIER #4		PIER #5	ABUT. #2
	β	α	β	α	β	α	β	α	β	α	α
A	45°57'26"	45°57'26"	50°22'49	50°22'49"	55°16'31"	80°03'03	75°08.35	41°57'12"	37°02'49"	36°56'52"	32°46'13"	32°46'13"
B	46°18'42"	46°18'42"	50°41'04	50°41'04"	55°20'55"	79°58'39	75°20.38	42°09'15"	37°31'14"	37°25'17"	33°18'46"	33°18'46"
C	46°40'15"	46°40'15"	50°59'30	50°59'30"	55°26'00"	79°53'34"	75°34.37	42°23'14"	38°00'18"	37°54'21"	33°52'17"	33°52'17"
D	47°02'04	47°02'04	51°18'05	51°18'05"	55°32'01"	79°47'33"	75°51.05	42°39'42"	38°30'02"	38°24'05	34°26'48	34°26'48
E	47°24'07	47°24'07	51°36'49"	51°36'49"	55°39'11"	79°40.23"	76°10.43"	42°59'20"	39°00'27"	38°54'30	35°02'21"	35°02'21

SHOP BEAM SPLICE DATA FOR PIERS #1, #2, #3, #4 & #5 (FOR SPLICE DETAILS SEE COMMON DETAILS SHEET)

BEAM	PIER #1					PIER #2				
	L_1	L_2	γ	SIZE TOP ℞	SIZE BOT ℞	L_1	L_2	γ	SIZE TOP ℞	SIZE BOT. ℞
A	9'-0"	8'-0"	4°25'.23"	10½×9/16"	13½"×5/8"	7'-11	9'-6	4°53'42"	10½"×5/8"	13½"×11/16"
B	9'-0"	8'-0"	4°22'.22	10½×9/16"	13½"×5/8"	7'-11	9'-6	4°39'51"	10½"×5/8"	13½"×11/16
C	8'-6"	8'-9"	4°19'.15	10½×9/16	13½"×5/8"	8'-5	10'-6	4°26'30"	10½"×13/16	13½"×7/8"
D	8'-10½	8'-10½	4°16'.01	10½×5/8"	13½×11/16"	7'-3"	10'-9	4°13.56	10½"×13/16	13½"×7/8"
E	8'-10½	8'-10½	4°12'.42	10½×5/8"	13½×11/16	7'-3"	10'-9	4°02.22	10½"×13/16	13½"×7/8"

BEAM	PIER #3					PIER #4					PIER #5				
	L_1	L_2	γ	SIZE TOP ℞	SIZE BOT. ℞	L_1	L_2	γ	SIZE TOP ℞	SIZE BOT. ℞	L_1	L_2	γ	SIZE TOP ℞	SIZE BOT. ℞
A	9'-0	9'-0	4°54'28	10½"×5/8"	13½"×11/16"	9'-0	7'-9"	4°54'.23	10½"×5/8"	13½"×11/16"	6'-9	9'-5"	4°10'39"	10½"×5/8"	13½"×11/16"
B	9'-0	9'-0	4°38'01	10½"×5/8"	13½"×11/16	9'-0	7'-9"	4°38'.01	10½"×9/16	13½"×5/8"	6'-9"	9'-5"	4°06'31"	10½"×5/8"	13½"×11/16"
C	10'-6	10'-6	4°18'57"	10½"×13/16"	13½"×7/8"	10'-3	7'-6	4°22'56	10½"×3/4"	13½"×13/16	6'-7½	9'-3	4°02'04"	10½"×5/8"	13½"×11/16
D	8'-6	9'-0"	3°56'28"	10½"×9/16	13½"×5/8"	10'-0	6'-6"	4°09'40"	10½"×3/4"	13½×13/16	6'-7½	9'-0	3°57'17"	10½"×5/8"	13½"×11/16
E	8'-6	9'-0"	3°31'.40"	10½"×9/16	13½"×5/8"	10'-0	6'-6"	3°58'53"	10½"×3/4"	13½×13/16	6'-7½	9'-0	3°52'09"	10½×5/8"	13½"×11/16

FRAMING PLAN

NOTE:
SEE SHEET # 176 (SLAB REINFORCING PLAN) FOR DEFLECTION AND CAMBER TABLE

SEE SHEET # 139 FOR NOTES 6, 8,
SEE SHEET # 140 FOR DETAILS-4

BEARING DATA							
BEARING LOCATION	ABUT. #1	PIER #1	PIER #2	PIER #3	PIER #4	PIER #5	ABUT. #2
BEAM "A"	R-75	R-175	R-175	B-175	R-175	R-175	R-75
BEAM "B"	R-75	R-175	R-175	B-175	R-175	R-175	R-75
BEAM "C"	R-75	R-175	R-175	B-175	R-175	R-175	R-75
BEAM "D"	R-75	R-175	R-175	B-150	R-175	R-175	R-75
BEAM "E"	R-75	R-175	R-175	B-150	R-175	R-175	R-75

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

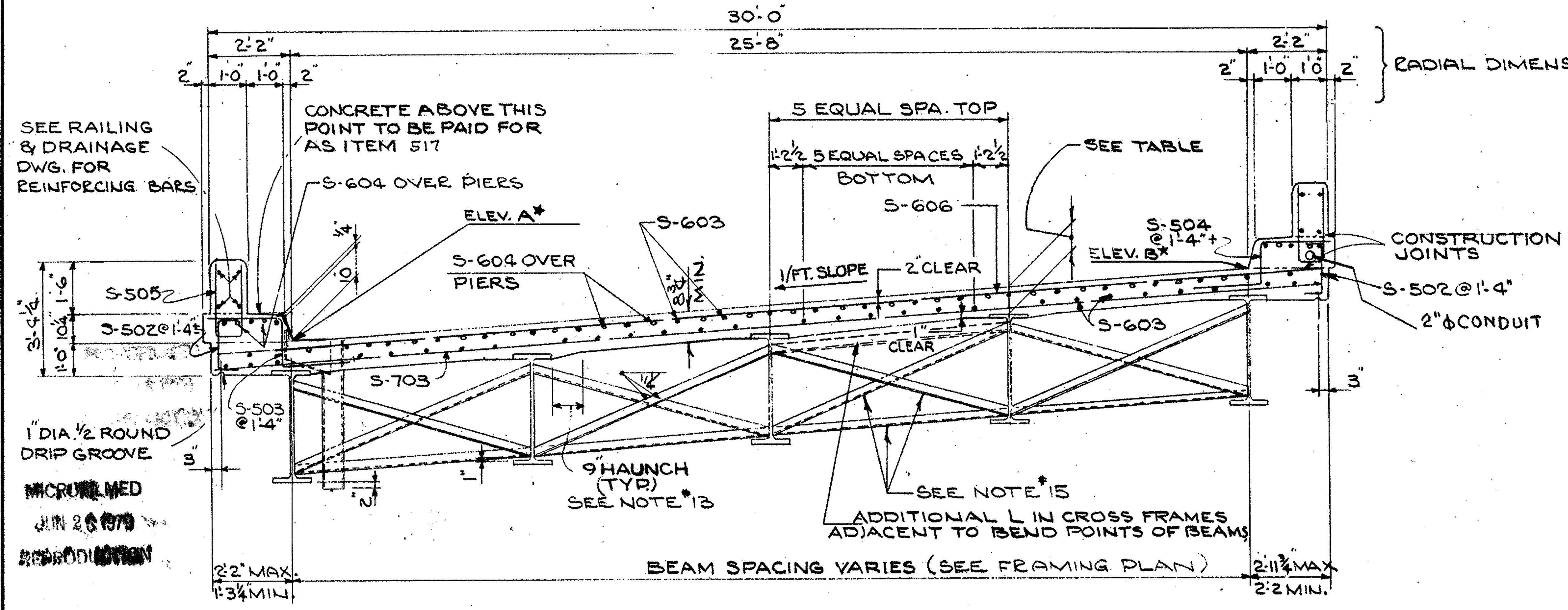
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

FRAMING PLAN
BRIDGE Nº MAH-7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CTD	JLH		ow	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(1)238 U-524(9)	

MAH-7-14.95



TRANSVERSE SECTION
*SEE FINISHED PAVEMENT ELEVATION TABLE BELOW

SPAN*1 = SP-1 ETC.

DEFLECTION AND CAMBER TABLE

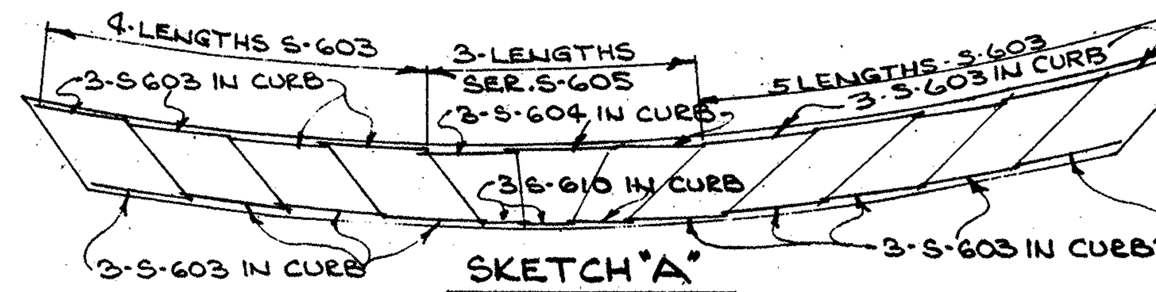
LOCATION	BEAM "A" SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	BEAM "B" SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	BEAM "C" SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
DEFLECTION DUE TO WEIGHT OF STEEL	.091"	.125"	.067"	.061"	.146"	.037"	.086"	.128"	.035"	.032"	.148"	.032"	.085"	.130"	.006"	.006"	.143"	.032"
DEFLECTION DUE TO REMAINING DEAD LOAD	.470"	.599"	.373"	.337"	.707"	.229"	.341"	.477"	.146"	.136"	.548"	.152"	.328"	.501"	.032"	.032"	.512"	.159"
CONVEXITY REQUIRED FOR VERTICAL CURVE	.701"	1.07"	1.08"	1.08"	1.08"	.024"	.694"	1.06"	.935"	.938"	1.05"	.122"	.685"	1.05"	.802"	.802"	1.03"	.222"
SUM OF DEFLECTION AND CONVEXITY	1.262"	1.794"	1.520"	1.478"	1.933"	0.290"	1.121"	1.665"	1.116"	1.106"	1.746"	.306"	1.098"	1.681"	.840"	.840"	1.685"	.413"
REQUIRED CAMBER	1¼"	1¾"	1½"	1½"	1⅞"	0"	1⅛"	1⅝"	1⅛"	1⅛"	1¾"	0"	1⅛"	1⅝"	⅞"	⅞"	1⅝"	0"

LOCATION	BEAM "D" SP-1	SP-2	SP-3	SP-4	SP-5	SP-6	BEAM "E" SP-1	SP-2	SP-3	SP-4	SP-5	SP-6
DEFLECTION DUE TO WEIGHT OF STEEL	.081"	.139"	.011"	.013"	.150"	.029"	.075"	.136"	-.005"	-.003"	.143"	.026"
DEFLECTION DUE TO REMAINING DEAD LOAD	.337"	.531"	.055"	.071"	.576"	.137"	.436"	.722"	-.039"	-.021"	.756"	.171"
CONVEXITY REQUIRED FOR VERTICAL CURVE	.675"	1.04"	.675"	.675"	1.005"	.320"	.668"	1.03"	.561"	.561"	.984"	.420"
SUM OF DEFLECTION AND CONVEXITY	1.093"	1.710"	.741"	.759"	1.731"	.486"	1.179"	1.888"	.517"	.537"	1.883"	.617"
REQUIRED CAMBER	1⅛"	1¾"	⅞"	¾"	¾"	0"	1⅛"	1⅞"	0"	¾"	1⅞"	0"

SLAB THICKNESS TABLE (SEE NOTE *14)

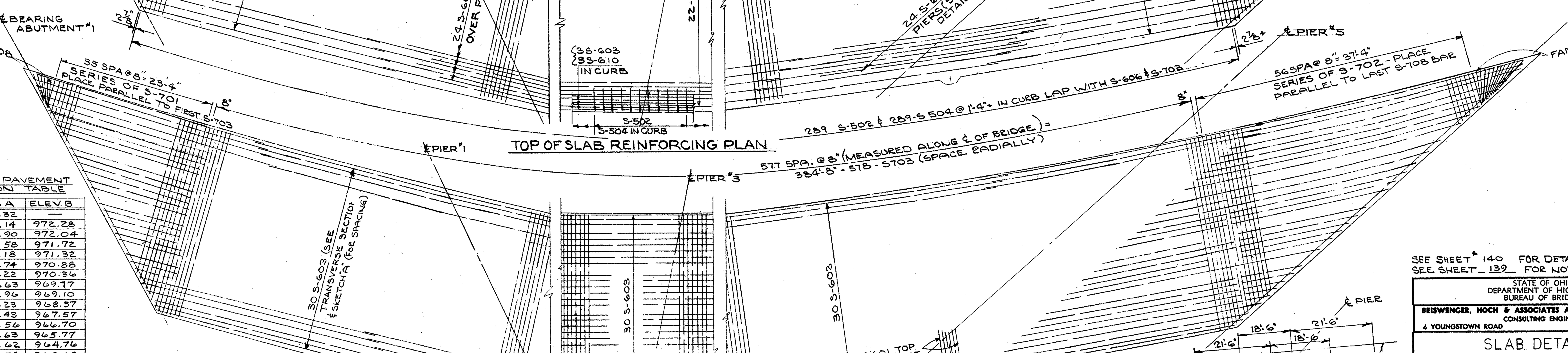
BEAM	A						B					
SPAN	1	2	3	4	5	6	1	2	3	4	5	6
SLAB THICKNESS AT ℄ SPAN & ℄ BEAMS	9¾"	9¼"	9⅝"	9⅝"	9¼"	10⅜"	9¾"	9¼"	9¾"	9¾"	9¼"	10⅜"
SLAB THICKNESS AT ℄ BRG'S & ℄ BEAMS	10¼"	10⅛"	10½"	10½"	10⅛"	10¾"	10¼"	10⅛"	10½"	10½"	10⅛"	10¾"

BEAM	C						D						E					
SPAN	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
SLAB THICKNESS AT ℄ SPAN & ℄ BEAMS	9¾"	9⅜"	10⅛"	10⅛"	9¼"	10⅜"	10"	9⅜"	10⅝"	10⅝"	9⅜"	10⅜"	10"	9⅜"	10¾"	10¾"	9⅜"	10⅜"
SLAB THICKNESS AT ℄ BRG'S & ℄ BEAMS	10¼"	10¼"	10¾"	10¾"	10⅛"	10¾"	10½"	10¼"	11⅛"	11⅛"	10¼"	10¾"	10½"	10¼"	11⅛"	11⅛"	10¼"	10¾"



SKETCH "A"
SHOWING SPACING OF LONGITUDINAL BARS TOP & BOTT.

TOP OF SLAB REINFORCING PLAN



BOTTOM SLAB REINFORCING PLAN

FINISHED PAVEMENT ELEVATION TABLE

STATION	ELEV. A	ELEV. B
11+50	970.32	—
+75	970.14	972.28
12+00	969.90	972.04
+25	969.58	971.72
+50	969.18	971.32
+75	968.74	970.88
13+00	968.22	970.36
+25	967.63	969.77
+50	966.96	969.10
+75	966.23	968.37
14+00	965.43	967.57
+25	964.56	966.70
+50	963.63	965.77
+75	962.62	964.76
15+00	961.54	963.68
+25	960.40	962.54
+50	959.18	961.32
+75	957.93	—
16+00	956.18	—

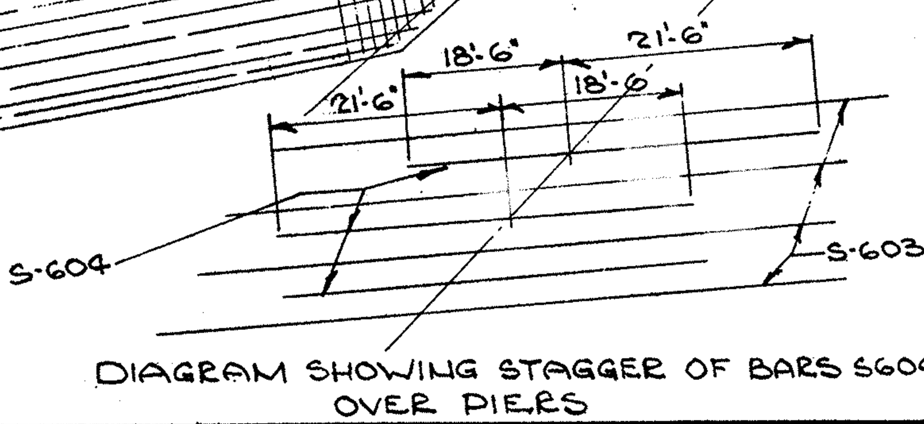


DIAGRAM SHOWING STAGGER OF BARS S604 OVER PIERS

SEE SHEET* 140 FOR DETAILS 11
SEE SHEET 139 FOR NOTES 11, 13, 14, 15,

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS
BRIDGE Nº MAH-7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA-796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CTD	JLH		cw	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495

177 / 206

NOTE:
* DENOTE DIMENSIONS TAKEN ON ℄ OF PARAPET.

SEE SHEET # 139 FOR NOTES 16, 25

See Detail 17 approach guardrail attachment to bridge railing.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

RAILING & DRAINAGE
BRIDGE Nº MAH-7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CFD	JLH		CW	RBH	4/2/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

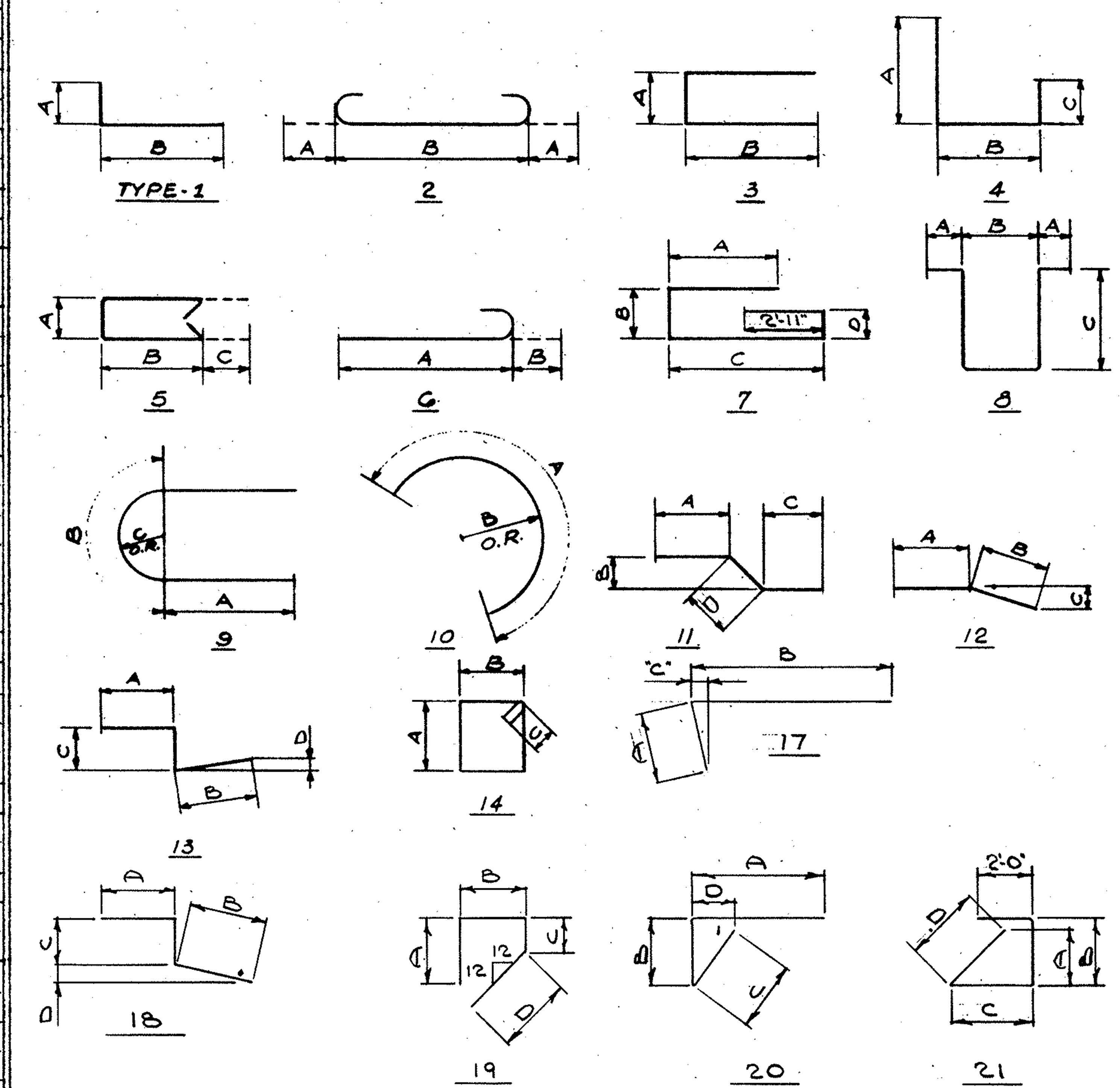
MAH-7-1495

178
206

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
SUPERSTRUCTURE									
S-501	4	9'-3"	17						39
S-502	634	2'-3"	3	1'-6"	6"				1488
S-503	345	4'-11"	13	1'-9"	2'-0"	1'-5"	2"		1770
S-504	289	4'-11"	18	1'-9"	2'-0"	1'-5"	2"		1483
S-505	544	5'-9"	5	8"	2'-2"	7"			3263
S-601	20	4'-0"	ST.						120
S-602	4	10'-5"	14	3'-0"	2'-2"	4"			63
S-603	522	39'-8"	ST.						31,103
S-604	129	40'-0"	ST.						7,750
S-605	6-SER.OF22	40'-0 To 18'-6¾	ST.					12¼"	5805
S-606	578	29'-8"	ST.						25,758
S-607	1SER.OF36	29'-0" To 5'-8	ST.					8"	937
S-608	19	5'-0"	ST.						143
S-609	1SER.OF57	29'-2 To 5'-3"	ST.					5⅛"	1473
S-610	9	19'-0"	ST.						257
S-701	1SER.OF36	29'-0" To 5'-8"	ST.					8"	1275
S-702	1SER.OF57	29'-2" To 5'-3"	ST.					5⅛"	2005
S-703	578	29'-8"	ST.						35,053
S-704	19	5'-0"	ST.						194
TOTAL SUPERSTRUCTURE = 119,979									
ABUTMENT #1									
A-501	68	24'-2"	ST.						1714
A-502	1	16'-0"	ST.						17
A-503	1	26'-0"	ST.						27
A-504	1	7'-5"	ST.						8
A-505	8	23'-3"	ST.						194
A-506	5	23'-9"	ST.						124
A-507	4	24'-3"	ST.						101
A-508	9	24'-9"	ST.						232
A-509	67	10'-6"	19	2'-0"	3'-4"	1'-6"	4'-0"		734
A-510	1-SER OF 13	4'-4 To 5'-10	3	1'-5 To 2'-11	1'-7"			1½	69
A-511	8	6'-4"	ST.						53
A-512	3	11'-0"	20	4'-7"	2'-9"	3'-10"	2'-11"		34
A-513	3	11'-11"	21	3'-0	3'-4"	3'-0"	4'-0"		37
A-514	56	10'-0"	ST.						584
A-515	1-SER OF 12	4'-4" To 5'-8½	3	1'-5 To 2'-9½	1'-7"			1½	63
A-516	6	10'-8"	ST.						67
A-517	2	5'-6"	ST.						11
A-601	23	14'-2"	3	1'-5"	6'-6"				490
A-602	24	16'-5	7	5'-2"	1'-5"	6'-6"	11"		592
A-603	68	24'-5"	ST.						2494
A-1001	47	7'-7"	6	6'-2"	1'-5"				1533
A-1002	47	7'-7"	17	1'-0"	6'-10"	¾"			1533
A-1003	31	11'-2"	6	9'-9"	1'-5"				1490
A-1004	56	17'-11"	6	16'-6"	1'-5"				4318
A-1005	23	11'-8	6	10'-3"	1'-5"				1155
A-1006	46	14'-9"	17	1'-0"	14'-0"	¾"			2920
A-1007	14	23'-6"	ST.						1416
A-1008	9	24'-0"	ST.						929
A-1009	9	24'-6"	ST.						949
A-1010	15	25'-0"	ST.						1614
ABUTMENT #2									
A-551	12	6'-4"	ST.						79
A-552	42	10'-0"	ST.						438
A-553	25	31'-6"	ST.						821
A-554	1-SER.OF 7	5'-3 To 4'-6"	3	2'-4 To 1'-7	1'-7"			1½	36
A-555	2-SER.OF 8	5'-4½ To 4'-6"	3	2'-5½ To 1'-7	1'-7"			1½	82
A-556	1-SER.OF 10	5'-7½" To 4'-6"	3	2'-8½ To 1'-7	1'-7"			1½	53
A-557	11	17'-8"	ST.						203
A-558	7	18'-9"	ST.						137
A-559	6	19'-9"	ST.						124
A-560	6	20'-10"	ST.						130
A-561	5	21'-10"	ST.						114
A-562	3	21'-4"	ST.						67
A-563	3	11'-8"	ST.						37
A-564	6	13'-5"	ST.						84
A-565	3	7'-0"	ST.						22
A-566	27	31'-1"	ST.						875
A-567	80	10'-6"	19	2'-0"	3'-4"	1'-6"	4'-0"		876
A-568	3	14'-10	21	2'-10"	3'-4"	4'-11"	5'-0"		46
A-569	1	22'-4"	ST.						23
A-570	3	12'-8"	20	5'-0"	3'-0"	5'-0"	4'-3"		40
A-571	2	11'-0"	ST.						23
A-572	1	21'-8"	ST.						23
A-651	32	13'-11"	3	1'-4"	6'-5"				669
A-652	31	16'-1"	7	5'-1"	1'-4"	6'-5	10"		749
A-653	48	32'-6"	ST.						2343
A-1051	56	19'-4"	2	1'-5"	16'-6"				4658
A-1052	39	11'-2"	6	9'-9"	1'-5"				1875
A-1053	64	7'-7"	17	1'-0"	6'-10"	¾"			2087
A-1054	62	14'-9"	17	1'-0"	14'-0"	¾"			3935
A-1055	12	20'-0"	ST.						1033
A-1056	12	21'-1"	ST.						1088
A-1057	8	22'-1"	ST.						760
A-1058	12	19'-0"	ST.						981
A-1059	20	17'-11"	ST.						1542
A-1060	42	12'-1"	6	10'-8"	1'-5"				2183
TOTAL ABUTMENTS = 53,738									

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.

TOTAL THIS SHEET = 173,717 LBS.



BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO 10 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

REINFORCING SCHEDULE
BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC	JP		OW	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

179 / 206

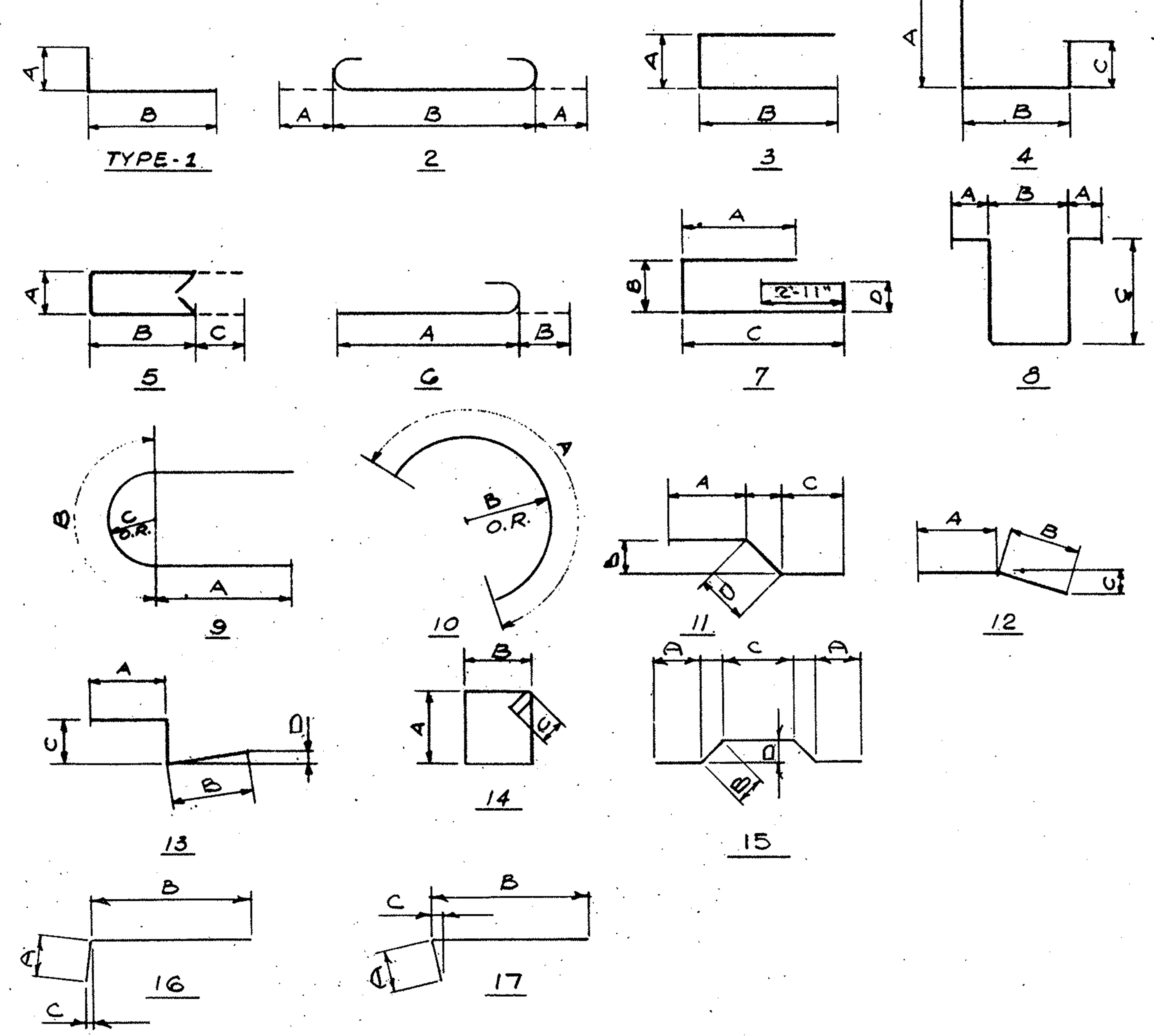
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
PIER #1									
P-501	36	7'-5	3	2'-8"	2'-6"				278
P-601	2	34'-3"	ST.						
P-602	4	7'-8"	9	2'-0"	3'-8	1'-2 3/8"			103
									46
P-701	52	10'-2"	2	10	8'-6"				1081
P-901	12	18'-1"	ST.						738
P-902	12	18'-10"	ST.						768
P-903	12	19'-11	ST.						812
P-904	36	6'-4"	1	1'-0"	5'-7"				775
P-1101	2	16'-0"	ST.						170
P-1102	4	27'-9"	ST.						590
P-1103	4	10'-7"	9	3'-6	3'-7"	1'-2 3/8"			225
P-1104	4	8'-7"	ST.						182
P-1105	4	34'-3"	ST.						728
P-1106	7	11'-0"	16	3'-3"	8'-0"	2"			409
P-1107	7	11'-0	17	3'-3"	8'-0"	2"			409
PIER #2									
P-521	36	7'-5"	3"	2'-8"	2'-6"				279
P-621	2	32'-0"	ST.						96
P-622	4	7'-7"	9	2'-0"	3'-7"	1'-2 1/8			46
P-721	52	10'-2"	2	10	8'-6"				1080
P-921	12	6'-4"	1	1'-0"	5'-7"				258
P-922	12	14'-10"	ST.						605
P-1121	2	17'-0"	ST.						181
P-1122	4	25'-6"	ST.						542
P-1123	4	10'-6	9	3'-6'	3'-6"	1'-2 1/8			223
P-1124	4	7'-6"	ST.						159
P-1125	4	32'-0"	ST.						680
P-1126	5	11'-0"	16	3'-3"	8'-0"	2"			292
P-1127	5	11'-0"	17	3'-3"	8'-0"	2"			292
P-1128	18	7'-0"	1	1'-0"	6'-3"				669
P-1129	18	11'-6"	1	1'-0"	10'-9"				1100
P-1130	10	14'-3"	ST.						757
P-1131	8	15'-10"	ST.						673
PIER #3									
P-541	28	7'-5	3	2'-8"	2'-6"				217
P-641	2	26'-3"	ST.						79
P-642	4	7'-7"	9	2'-0"	3'-7"	1'-2 1/8"			46
P-841	44	13'-8"	2	1'-1"	11'-6"				1606
P-941	4	9'-2"	9	2'-10"	3'-6"	1'-2 1/8"			125
P-942	7	8'-3"	16	3'-2"	5'-4"	3 1/4"			196
P-943	7	8'-3"	17	3'-2"	5'-4"	3 1/4"			196
P-944	4	23'-9"	ST.						323
P-945	2	14'-0"	ST.						95
P-946	8	7'-4	ST.						199
P-947	4	26'-3"	ST.						357
P-1141	28	7'-0"	1	1'-0"	6'-3"				1041
P-1142	22	13'-6"	1	1'-0"	12'-9"				1578
P-1143	10	15'-8	ST.						841
P-1144	8	11'-6"	1	1'-0"	10'-9"				489
P-1145	8	19'-7"	ST.						832
P-1146	10	24'-1"	ST.						1279
PIER #4									
P-561	48	7'-9"	3	2'-8"	2'-8"				388
P-661	2	39'-8	ST.						119
P-662	4	7'-7"	9	2'-0"	3'-7"	1'-2 1/8"			34
P-861	64	13'-8"	2	1'-1"	11'-6"				2336
P-1061	12	35'-9"	ST.						1846
P-1062	12	6'-8"	1	1'-0"	5'-11"				344
P-1161	4	34'-6"	ST.						733
P-1162	3	14'-0"	ST.						223
P-1163	6	39'-8"	ST.						1265
P-1164	4	11'-4"	ST.						241
P-1165	4	10'-6"	9	3'-6	3'-6"	1'-2 1/8"			223
P-1166	7	10'-3"	16	3'-3"	7'-3"	3 1/4"			381
P-1167	7	10'-3"	17	3'-3"	7'-3"	3 1/4"			381
P-1168	24	7'-0"	1	1'-0"	6'-3"				893
P-1169	12	34'-7"	ST.						2205
P-1170	12	37'-5"	ST.						2386
PIER #5									
P-581	52	7'-5"	3	2'-8"	2'-6"				402
P-681	4	23'-2"	ST.						139
P-682	4	7'-7"	9	2'-0"	3'-7"	1'-2 1/8"			46
P-881	64	13'-8"	2	1'-1"	11'-6"				2336
P-1081	12	34'-9"	ST.						1794
P-1082	12	6'-8"	1	1'-0"	5'-11"				344
P-1181	4	38'-0"	ST.						808
P-1182	3	14'-0"	ST.						223
P-1183	12	23'-11"	ST.						1525
P-1184	4	13'-8"	ST.						291
P-1185	7	10'-3"	16	3'-3"	7'-11"	3 3/8"			381
P-1186	7	10'-3"	17	3'-3"	7'-11"	3 3/8"			381
P-1187	4	10'-6"	9	3'-6"	3'-6"	1'-2 1/8"			223
P-1188	24	7'-0"	1	1'-0"	6'-3"				893
P-1189	12	32'-9"	ST.						2088
P-1190	12	36'-6"	ST.						2327
SPIRALS									5976
TOTAL PIERS - 58,920									
RAILING ⊗									
R-501	4	9'-3"	15	1'-7"	2'-7 1/2"	1'-0"	1'-10"		
R-502	2	7'-4"	15	1'-7"	9"	2'-8"	6 3/4"		
R-503	12	4'-2"	BT.‡						
R-504	8	5'-4"	BT.‡						
R-505	16	8'-7"	ST.						
R-506	208	15'-2"	ST.						

REPLACEMENT BARS

RE-401	1	6'-3"
RE-501	2	6'-7"
RE-601	5	6'-11"
RE-701	3	7'-2"
RE-801	1	7'-6"
RE-901	1	7'-10"
RE-1001	3	8'-2"
RE-1101	3	8'-6"

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP401	1	2'-8"	15'-2 3/8"	4 1/2"	44	242
SP402	1	2'-8"	15'-11 1/4"	4 1/2"	46	253
SP403	1	2'-8"	17'-0 1/8"	4 1/2	49	270
SP404	1	2'-8"	11'-3"	4 1/2	33	182
SP405	1	2'-8"	11'-11 3/16	4 1/2	35	193
SP406	1	2'-8"	12'-10 5/16	4 1/2	37	204
SP407	1	2'-8"	12'-9 5/8	4 1/2	37	204
SP408	1	2'-8"	16'-8 1/4	4 1/2	48	264
SP409	1	2'-8"	21'-2 1/2	4 1/2	60	330
SP410	1	2'-8"	31'-4 5/16	4 1/2	87	479
SP411	1	2'-8"	32'-9 1/2	4 1/2	90	496
SP412	1	2'-8"	34'-2 3/16	4 1/2	94	518
SP413	1	2'-8	29'-11 1/4	4 1/2	83	457
SP414	1	2'-8"	31'-7 3/16	4 1/2	87	479
SP415	1	2'-8"	33'-8 1/2	4 1/2	93	512
60-SPACERS -						893
TOTAL SPIRALS -						5,976 lbs



‡ See Std. Dwg. BR-1-65 for bending diagram.

REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.
THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

TOTAL THIS SHEET - 58,920 LBS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHONER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

REINFORCING SCHEDULE

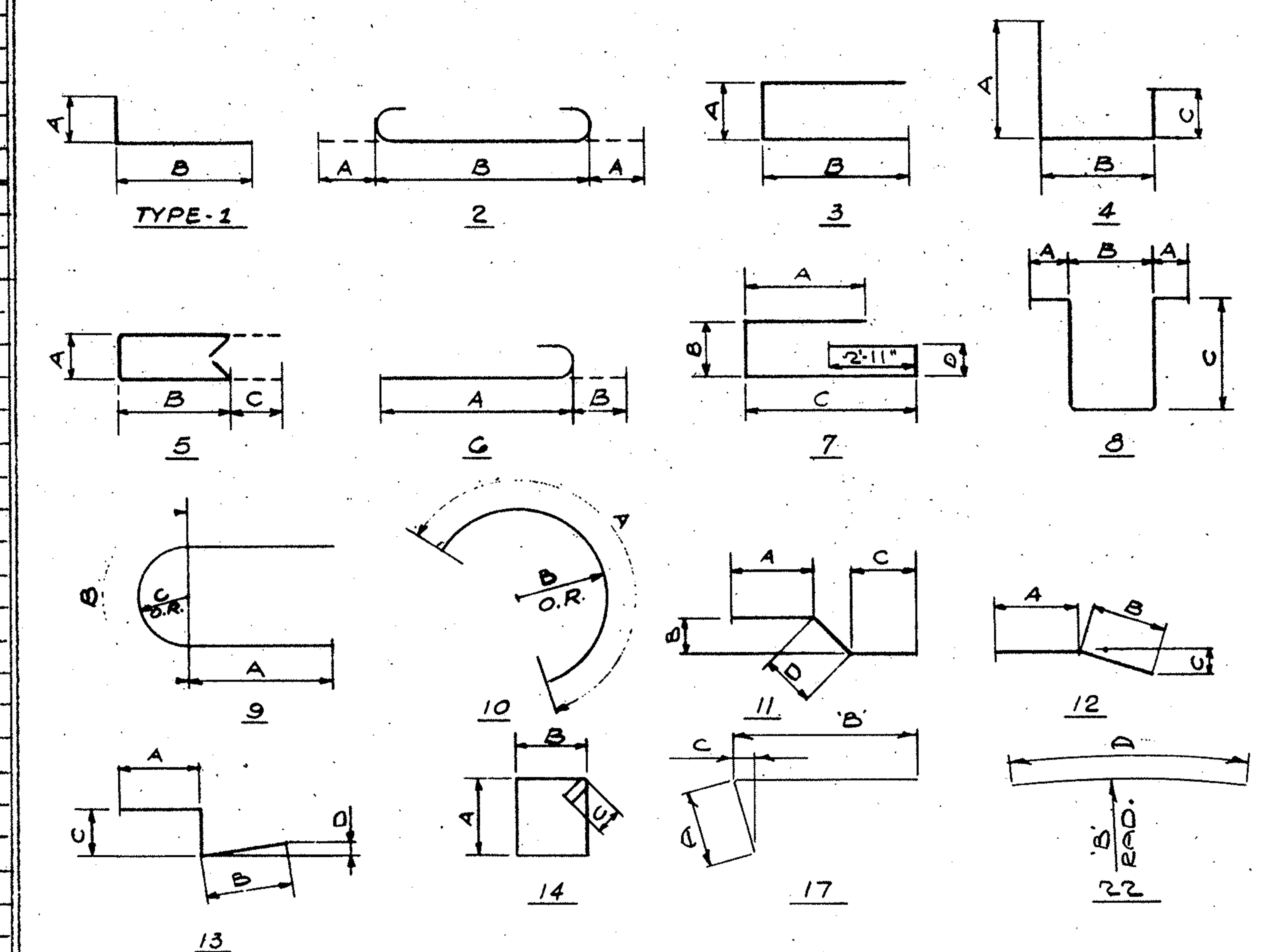
BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MHC	JP		aw	RDH	2/21/63	

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
SOUTH WINGWALL ABUTMENT #1									
W-501	2	21'-5"	22	21'-5"	45'-11"				45
W-502	1	29'-5"	ST.						31
W-503	1-SER OF 8	20'-4½ To 29'-5	ST.					1'-3½	208
W-504	11	23'-7"	22	23'-7"	49'-10"				271
W-505	1-SER OF 11	22'-4 To 22'-11½	22	22'-4 To 22'-11½	47'-10"			¾"	260
W-506	1 SER OF 4	5'-7⅞ To 19'-3"	22	5'-7⅞ To 19'-3	49'-10"			4'-6⅜	52
W-507	1-SER OF 4	5'-0" To 13'-6"	22	5'-0 To 13'-6	48'-6"			4'-6"	39
W-508	1	24'-1"	22	24'-1"	46'-11"				25
W-509	4	25'-6"	22	25'-6"	49'-10"				106
W-510	4	24'-7" To 24'-9¼	22	24'-7" To 24'-9¼	48'-2"			¾"	103
W-511	1-SER. OF 5	3'-10 To 21'-10"	22	3'-10" To 21'-10	49'-10"			4'-6"	67
W-512	1-SER OF 5	3'-8" To 21'-4"	22	3'-8" To 21'-4	48'-5"			4'-5"	65
W-513	1-SER OF 9	7'-7" To 18'-3"	ST.					1'-4"	121
W-601	2	25'-1"	22	25'-1"	54'-11"				75
W-602	2	24'-8"	22	24'-8"	53'-11"				74
W-603	2	24'-3"	22	24'-3"	52'-11"				73
W-604	2	23'-10"	22	23'-10"	51'-11"				72
W-605	2	23'-5"	22	23'-5"	50'-11"				70
W-606	2	23'-0"	22	23'-0"	49'-11"				69
W-607	2	22'-8"	22	22'-8"	48'-11"				68
W-608	2	22'-3"	22	22'-3"	47'-11"				67
W-609	2	21'-10"	22	21'-10"	46'-11"				66
W-610	2	21'-5"	22	21'-5"	45'-11"				64
W-611	2	21'-0"	22	21'-0"	44'-11"				63
W-612	2	20'-7"	22	20'-7"	43'-11"				62
W-613	2	20'-2"	22	20'-2"	42'-11"				61
W-614	2	19'-9"	22	19'-9"	41'-11"				59
W-615	2	19'-4"	22	19'-4"	40'-11"				58
W-616	2	18'-11"	22	18'-11"	39'-11"				57
W-617	2	27'-2"	22	27'-2"	52'-11"				82
W-618	2	26'-8"	22	26'-8"	51'-11"				79
W-619	2	26'-1"	22	26'-1"	50'-11"				78
W-620	2	25'-7"	22	25'-7"	49'-11"				77
W-621	2	25'-1"	22	25'-1"	48'-11"				75
W-622	2	24'-7"	22	24'-7"	47'-11"				74
W-623	2	24'-1"	22	24'-1"	46'-11"				72
W-624	2	23'-6"	22	23'-6"	45'-11"				71
W-625	2	23'-0"	22	23'-0"	44'-11"				69
W-626	9	7'-1"	11	2'-0"	2'-4"	2'-0"	3'-3"		96
W-627	9	6'-1"	13	2'-0"	2'-0"	2'-4"	0"		82
W-628	25	5'-3"	17	1'-0"	4'-4	¾"			197
W-629	26	9'-9"	17	1'-0"	8'-11"				381
W-630	1-SER OF 4	7'-11" To 9'-2"	ST.					5"	51
W-631	11	9'-6"	ST.						157
W-632	1-SER OF 11	9'-7" To 18'-4"	ST.					10½"	231
W-701	52	10'-7"	6	9'-9"	10"				1125
W-1001	24	16'-11"	6	15'-6"	1'-5"				1747
W-1002	24	7'-5"	6	6'-0"	1'-5"				766
W-1003	12	9'-4"	6	7'-11"	1'-5"				482
W-1004	12	12'-0"	6	10'-7"	1'-5"				620
W-1005	26	5'-8"	6	4'-3"	1'-5"				634
W-1101	23	7'-6"	17	1'-0"	6'-9	¾"			916
W-1102	24	13'-6"	17	1'-0"	12'-9"	¾"			1721
W-1103	11	15'-6"	ST.						906
W-1104	1-SER OF 11	20'-10 To 29'-7"	ST.					10½"	1473
W-1105	1	29'-7	ST.						157
TOTAL SOUTH WINGWALL ABUTMENT #1 : 14,870									
NORTH WINGWALL ABUTMENT #1									
W-515	1	23'-2"	ST.						24
W-516	2	28'-6"	ST.						59
W-517	1 SER OF 6	24'-1 To 28'-0½	ST.					9½	163
W-518	12	23'-8"	ST.						296
W-519	12	23'-4"	ST.						292
W-520	2	22'-0"	ST.						46
W-521	2	14'-6"	ST.						30
W-522	2	7'-0	ST.						15
W-523	32	23'-7"	ST.						787
W-524	2-SER OF 3	4'-11 To 19'-11	ST.					7'-6"	78
W-525	1-SER. OF 8	18'-2½ To 23'-9	ST.					9½	175
W-526	2-SER OF 3	4'-1 To 19'-1"	ST.					7'-6"	72
W-527	1-SER OF 8	12'-1" To 17'-7½	ST.					9½	124
W-528	7	27'-6"	ST.						201

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
W-529	28	4'-7	17	1'-0"	3'-8"	¾"			134
W-530	56	7'-1"	6	6'-6"	7"				414
W-531	2-SER. OF 7	27'-6" To 27'-8¼	ST.					⅜"	403
W-532	14	4'-0"	ST.						58
W-533	1-SER OF 14	5'-0⅛ To 11'-11"	ST.					6⅜"	124
W-534	1-SER OF 10	4'-9" To 11'-10½	ST.					9½"	87
W-535	2-SER. OF 3	7'-7" To 22'-7	ST.					7'-6"	94
W-635	2-SER. OF 16	22'-6" To 24'-2⅝	ST.					1⅜"	1123
W-636	2-SER OF 13	23'-5" To 23'-9½	ST.					⅜"	922
W-637	58	10'-0"	ST.						871
W-638	2-SER OF 9	23'-5 To 23'-8"	ST.					⅜"	636
W-639	23	5'-3"	17	1'-0"	4'-4"	¾"			181
W-640	24	9'-10"	17	1'-0"	8'-11"	¾"			354
W-641	11	9'-6"	ST.						157
W-642	1-SER. OF 12	12'-2⅞ To 18'-1"	ST					6⅜"	273
W-701	48	10'-7"	6	9'-9"	10"				1038
W-901	12	14'-4"	6	13'-1"	1'-3"				585
W-902	12	9'-3"	6	8'-0"	1'-3"				377
W-903	23	6'-4"	17	1'-0"	5'-7"	¾"			495
W-904	24	12'-0"	17	1'-0"	11'-3"	¾"			979
W-905	11	13'-6"	ST.						505
W-906	1-SER. OF 12	18'-3⅞ To 24'-2	ST.					6⅜	867
W-1010	24	7'-5"	6	6'-0"	1'-5"				766
W-1011	24	16'-11"	6	15'-6"	1'-5"				1747
W-1012	12	12'-0"	6	10'-7"	1'-5"				620
W-1013	12	9'-4	6	7'-11"	1'-5"				482
W-1014	12	14'-6"	6	13'-1"	1'-5"				749
W-1015	12	9'-7"	6	8'-2"	1'-5"				495
W-1016	24	6'-11"	6	5'-6"	1'-5"				715
W-1017	24	6'-7"	6	5'-2"	1'-5"				680
W-1018	28	6'-3"	6	4'-10"	1'-5"				753
W-1110	23	7'-6"	17	1'-0"	6'-9"	¾"			916
W-1111	24	13'-6"	17	1'-0"	12'-9	¾"			1721
W-1112	11	15'-6"	ST.						906
W-1113	3	28'-8"	ST.						457
W-1114	1 SER. OF 9	24'-2" To 28'-5	ST					6⅜	1257
TOTAL NORTH WINGWALL ABUT #1 25,303									
NORTH WINGWALL ABUTMENT #2									
W-550	13	4'-7"	17	1'-0"	3'-8"	¾"			62
W-551	13	7'-0"	17	1'-0"	6'-1"	¾"			95
W-552	1-SER OF 9	3'-11" To 10'-7"	ST.					10"	68
W-553	1-SER OF 13	4'-4" To 10'-11½	ST.					6⅝"	104
W-554	4	25'-8"	ST.						107
W-555	4	24'-1"	ST.						100
W-556	2	16'-9"	ST.						35
W-557	2	9'-6"	ST.						20
W-558	2	2'-3"	ST.						5
W-559	1-SER. OF 10	10'-7" To 18'-1"	ST.					10"	149
W-560	30	27'-8"	ST.						866
W-561	2	20'-7"	ST.						43
W-562	2	13'-4"	ST.						28
W-563	2	6'-0"	ST.						13
W-564	1-SER OF 8	17'-11 To 23'-9"	ST.					10"	174
W-565	2	26'-9"	ST.						56
W-566	2	19'-5"	ST.						41
W-567	2	12'-2"	ST.						25
W-568	2	5'-2"	ST.						11
W-650	24	7'-10"	2	8"	6'-6"				282
W-651	26	5'-1"	6	4'-5"	8"				198
W-652	7	25'-8"	ST.						270
W-653	25	27'-8"	ST.						1039
W-654	27	5'-3"	17	1'-0"	4'-4"	¾"			213
W-655	28	9'-10"	17	1'-0"	8'-11"	¾"			413
W-656	13	9'-6"	ST.						185
W-657	1-SER OF 14	11'-0" To 18'-2⅞	ST.					6⅝"	307
W-658	24	10'-0"	ST.						360
W-750	27	11'-5	2	10"	9'-9"				630
W-751	28	6'-10"	6	6'-0"	10"				391

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
W-950	28	9'-3"	6	8'-0"	1'-3"				881
W-951	27	6'-4"	17	1'-0"	5'-7"	¾"			581
W-952	28	12'-0"	17	1'-0"	11'-3"	¾"			1142
W-953	13	13'-6"	ST.						597
W-954	3	24'-4"	ST.						248
W-955	1-SET OF 11	18'-4" To 23'-10¼	ST					6⅝"	789
W-1050	34	15'-11"	2	1'-5"	13'-1"				2329
TOTAL NORTH WINGWALL ABUT #2 = 12,857									
SOUTH WINGWALL ABUTMENT #2									
W-570	1	5'-4"	22	5'-4"	49'-10"				6
W-571	1	5'-1"	22	5'-1"	47'-1"				5
W-572	9	19'-7"	22	19'-7"	49'-10"				184
W-573	1-SET OF 9	18'-7" To 18'-11"	22	18'-7" To 18'-11	47'-11"			½	176
W-574	1	18'-7"	22	18'-7"	49'-10"				19
W-575	1	18'-1"	22	18'-1"	48'-7"				19
W-576	1	14'-4"	22	14'-4	49'-10"				15
W-577	1	14'-0	22	14'-0"	48'-8				14
W-578	1	10'-3"	22	10'-3"	49'-10"				11
W-579	1	10'-0"	22	10'-0"	48'-8"				10
W-580	1	6'-9"	22	6'-9"	49'-10"				7
W-581	1	6'-7"	22	6'-7"	48'-9"				7
W-582	2	27'-1"	ST.						56
W-583	1-SER. OF 5	17'-9" To 23'-11"	ST.					1'-6½	109
W-584	1-SER. OF 7	8'-7 To 13'-4"	ST.					9½	80
W-585	1-SER. OF 5	18'-4" To 18'-6"	22	18'-4 To 18'-6	48'-3			½	96
W-586	1	13'-10"	22	13'-10"	49'-10"				14
W-587	1	13'-6"	22	13'-6"	48'-7"				14
W-588	1	7'-10"	22	7'-10"	49'-10"				8
W-589	1	7'-6"	22	7'-6	48'-8"				8
W-660	1	6'-0"	22	6'-0"	55'-8"				9
W-661	1	5'-10"	22	5'-10"	54'-2"				9
W-662	1	5'-8"	22	5'-8"	52'-8"				8
W-663	1	5'-6	22	5'-6"	51'-2"				8
W-664	1	5'-4"	22	5'-4"	49'-8				8
W-665	1	5'-2"	22	5'-2"	48'-2"				8
W-666	7	5'-0"	22	5'-0"	46'-8"				53
W-667	1	4'-10"	22	4'-10"	45'-2"				7
W-668	1	4'-8"	22	4'-8"	43'-8"				7
W-669	1	4'-6	22	4'-6"	42'-2"				7
W-670	1	4'-4"	22	4'-4"	40'-8"				7
W-671	11	7'-2"	12	2'-0"	5'-3"	3'-8"			118
W-672	6	6'-5"	13	2'-2"	2'-2"	2'-4"	0"		58
W-673	1	15'-6"	22	15'-6"	55'-8"				23
W-674	1	15'-1"	22	15'-1"	54'-2"				23
W-675	1	14'-8"	22	14'-8"	52'-8"				22
W-676	1	14'-3"	22	14'-3"	51'-2"				21
W-677	1	13'-10"	22	13'-10"	49'-8"				21
W-678	2	13'-5"	22	13'-5"	48'-2"				40
W-679	2	13'-0"	22	13'-0"	46'-8				39
W-680	2	12'-7"	22	12'-7"	45'-2"				38
W-681	2	12'-2"	22	12'-2"	43'-8"				37
W-682	2	11'-9"	22	11'-9"	42'-2"				35
W-683	2	11'-4"	22	11'-4"	40'-8"				34
W-684	1	20'-10"	22	20'-10"	53'-0"				33
W-685	1	20'-3"	22	20'-3"	51'-7"				30
W-686	1	19'-8"	22	19'-8"	50'-2"				30
W-687	2	19'-1	22	19'-1"	48'-9"				57
W-688	2	18'-6"	22	18'-6"	47'-3				56
W-689	2	17'-11"	22	17'-11"	45'-10"				54
W-690	2	17'-5"	22	17'-5"	44'-5"				52
W-691	20	6'-0"	17	1'-0"	5'-1	¾"			180
W-692	10	9'-10"	17	1'-0"	8'-11"	¾"			148
W-693	10	9'-6"	ST						143
W-694	1-SER OF 10	8'-11 To 13'-7¼	ST					6¼	169
W-755	18	11'-5"	2	10"	9'-9"				420
W-756	20	7'-0"	6	6'-2"	10				286
W-1055	25	18'-4"	2	1'-5"	15'-6"				1971
W-1056	14	10'-10"	6	9'-5"	1'-5"				652



MARK	Nº REQD	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
W-1150	20	8'-0"	17	1'-0"	7'-3"	¾"			850
W-1151	19	13'-6"	17	1'-0"	12'-9"	¾"			1363
W-1152	10	15'-6"	ST.						824
W-1153	3	27'-2"	ST.						433
W-1154	1-SET OF 7	18'-3½ To 24'-5"	ST.					1'-0¼"	794
TOTAL SOUTH WINGWALL ABUT. #2 = 10,043									

TOTAL THIS SHEET: 63,073 LBS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO 10 SIZE BAR.

GRAND TOTAL: 295,710 LBS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

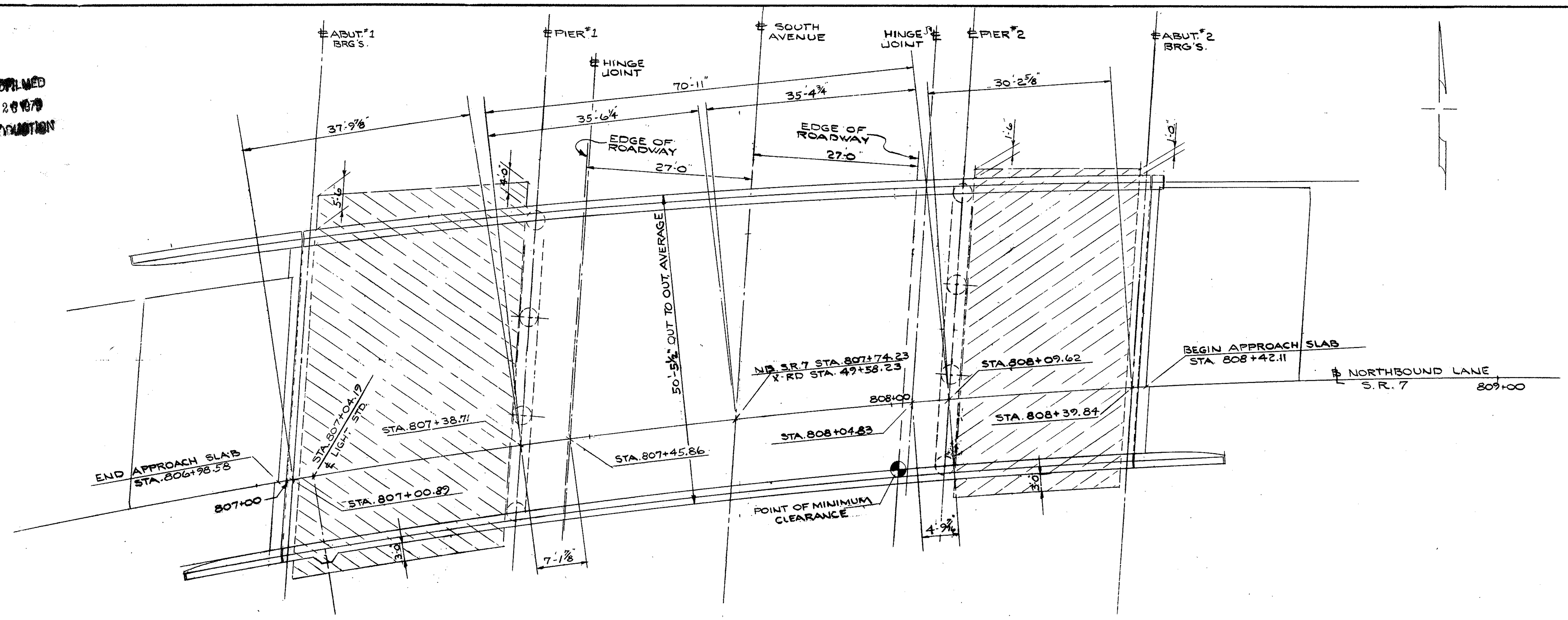
REINFORCING SCHEDULE
BRIDGE Nº MAH 7-1514 UNDER
RAMP "BX"
YOUNGSTOWN — MAHONING COUNTY
STA 796+76.18

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.H.C.	JP		cw	RDH	2/21/63	

FED. RD. | 2
STATE | OHIO
PROJECT | I-680-9(11)238 U-524(9)
181/206
MAH.-7-14.95
MICROFILMED JUN 26 1978 REPRODUCTION
TYPICAL SECTION PROPOSED SOUTH AVENUE
66'-0" B/B S.WALKS
54'-0" F/F CURBS
PROFILE PROP. SOUTH AVE.
EXIST. PROFILE SOUTH AVE.
CLEARANCE: DESIGN = 15.00' ACTUAL = 15.17'
CLEARANCE: DESIGN = 15.00 ACTUAL = 16.18'
℄ EXISTING HADNETT ST.
HADNETT ST.
40" BRICK RING @ 5.1%
42" CONC. PIPE S.S.
GAS PUMP ISLAND
RAMP "CA"
SOUTH AVENUE
BEGIN RAMP "CA" STA. 0+00 44' LT. S.R. 7 STA. 808+03.13
3°45'51" SKEW
END APPROACH SLAB S.B. LANE STA. 807+03.49
BEGIN APPROACH SLAB S.B. LANE STA. 808+45.03
℄ SOUTHBOUND LANE S.R. 7
℄ SURVEY - PROPOSED ℄ S.R. 7
RETAINING WALL
END TAPER N.B. ℄ STA. 809+00
BEGIN APPROACH SLAB N.B. LANE STA. 808+42.11
END APPROACH SLAB N.B. LANE STA. 806+98.58
℄ NORTHBOUND LANE S.R. 7
KYLE ST.
STORM SEW.
18" PIPE @ 6.4%
16" TO 12" REDUCER
RAMP "BZ" P.C. STA 2+10.88
FLINT ST.
36" BRICK RING S.S. @ 5.6%
RAMP "BZ" STA. 0+00
YOUNGSTOWN - SOUTHERN R.R. SPUR
℄ SOUTHBOUND S.R. 7 CURVE DATA
P.I. STA. 805+10.46
Δ = 96°26'54"
Dc = 5°00'
θs = 7°30'
Ls = 300'
Ts = 1436.30
Lc = 1628.97'
LEFT EDGE PAVEMENT OF NORTHBOUND S.R. 7 TAPER 0.036122%
℄ NORTHBOUND S.R. 7 CURVE DATA
P.I. STA. 802+63.12
Δ = 78°54'52"
Dc = 5°00'
θs = 7°30'
Ls = 300'
Ts = 1095.79
Lc = 1278.29'
FOUNDATION SOUNDINGS
FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF ROD SOUNDINGS AND SOIL-SAMPLINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS, OR IN THE DIVISION OFFICE BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.
PROPOSED STRUCTURE
TYPE: CANTILEVER STEEL BEAMS W/SUSPENDED SPAN, WITH REINFORCED CONC. DECK & SUBSTR.
SKEW: N.B. 3°42'38" L.F. WITH REFERENCE LINE.
ROADWAY: VARIES SEE PLAN (WITH 1'-2" SAFETY CURBS)
SPANS: N.B. 37'-10" 70'-11" 30'-5"; S.B. 37'-0" 70'-0" 30'-0" ℄ BRG.
WEARING SURFACE: 1" MONOLITHIC
LOAD FREQUENCY: CF 2000 (37) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING
APPROACH SLAB: 25'-0" (AS-1-67)
ALIGNMENT: TRANSITION SPIRALS
SUPERELEVATION: TRANSITION
SLOPE PROTECTION
CONCRETE PAV'M'T TO EXTEND FROM FACE OF ABUTMENT TO BACK OF SIDEWALK FOR FULL WIDTH OF BRIDGE PLUS 3 FT AND PARALLEL TO FACIA OF BRIDGE.
INDICATES DRIVE SAMPLE BORING
S.B. VERTICAL CURVE
N.B. VERTICAL CURVE
BRIDGE LIMITS = 141.54
BRIDGE LIMITS = 143.53'
HINGE
2:1 NORMAL
EXIST. GROUND
ELEVATION ON ℄ SOUTHBOUND LANE
ELEVATION ON ℄ NORTHBOUND LANE
PROP. 4.00% GRADE
APPR. SLAB STA. 806+98.58
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO
SITE PLAN
BRIDGE Nº MAH-7-1528 L. & R.
OVER SOUTH AVENUE
N.B. STA. 806+98.58 To STA. 808+42.11
S.B. STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN. MAHONING COUNTY
DESIGNED ELG ONG
DRAWN ELG
CHECKED HGH
REVIEWED RDH
DATE 2/21/63

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524-(9)

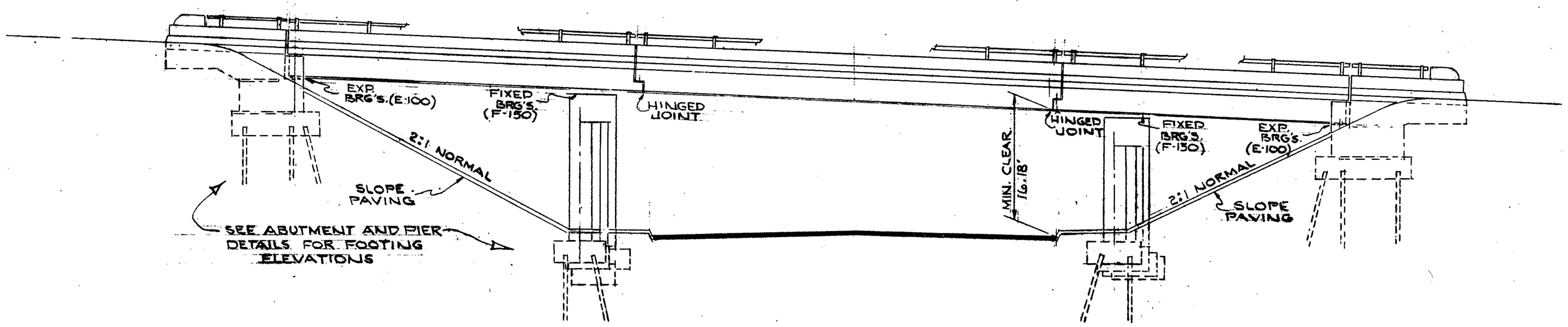
MAH-7-1495



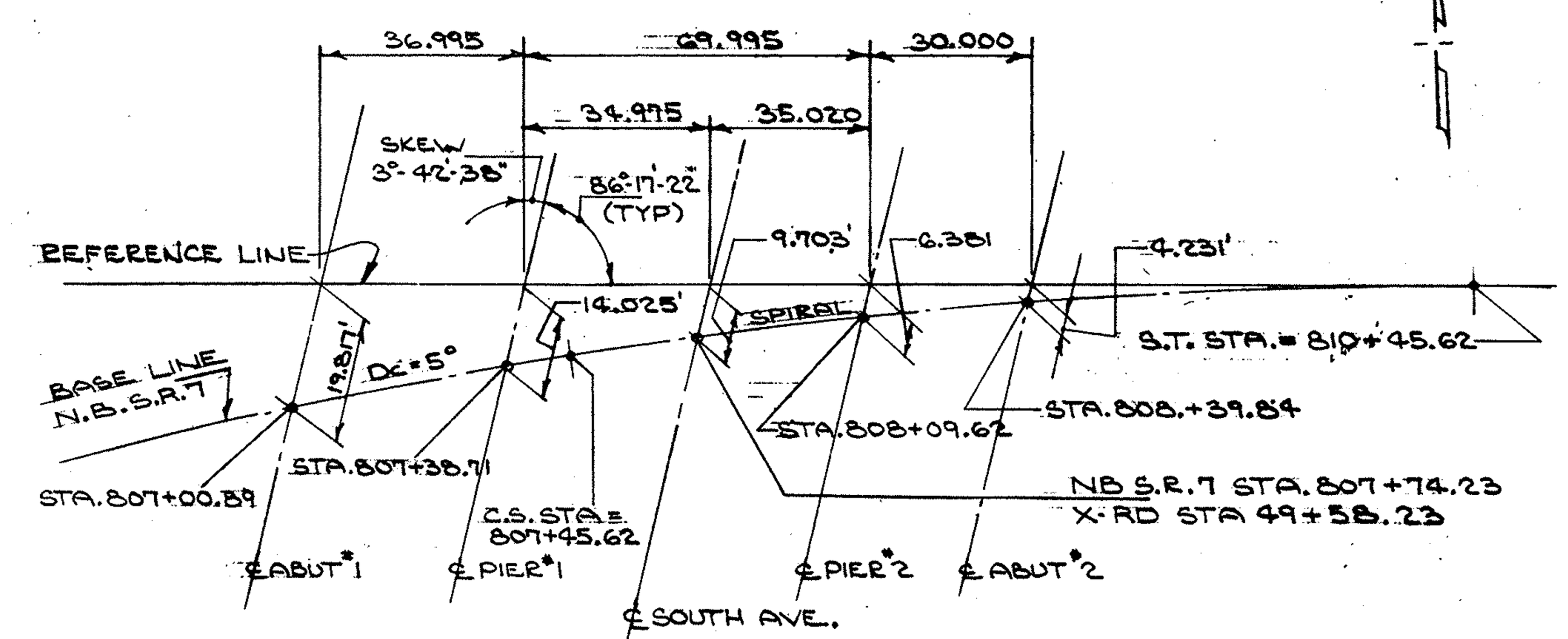
PLAN

SEE SHEET #139 FOR GENERAL NOTES, INCLUDING NOTE ON UTILITY LINES

see Detail 17 for attachment of approach guard rail to bridge railing.



ELEVATION



GEOMETRIC LAYOUT
RIGHT STRUCTURE
(N.B. LANE S.R.7 OVER SOUTH AVE)

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
503	631	CU.YDS.	UNCLASSIFIED EXCAVATION		358	273	
511	212	CU.YDS.	CLASS C CONC. SUPERSTRUCTURE	212			
511	159	CU.YDS.	CLASS C CONC. ABUT'S ABOVE FOOTINGS.		159		
511	74	CU.YDS.	CLASS C CONC. PIERS ABOVE FOOTINGS.			74	
511	204	CU.YDS.	CLASS C CONC. PIER & ABUT. FOOTINGS.		101	103	
512	23	LIN.FT.	WATERPROOFING PREMOLDED SEALING STRIP		23		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
509	102,601	LBS.	REINFORCING STEEL	63,042	16,542	23,017	
513	233,230	LBS.	STRUCTURAL STEEL	233,230			
514	233,230	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	233,230			
517	333.16	LIN.FT.	RAILING TYPE 1	279.58	53.58		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN.
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	1130	LIN.FT.	STEEL PILES ~ 12 BP-53		1130		
507	990	LIN.FT.	STEEL PILES ~ 10 BP-42			990	
625	LUMP	SUM	ELECTRICAL ~ SEE NOTE #17				
825	903	SQ.YD.	CONCRETE SURFACE TREATMENT	856	47		
518	51	CU.YDS.	POROUS BACKFILL		51		
518	5	EACH	SCUPPERS, including supports	5			
518	68	LIN.FT.	6" STD. PIPE DOWNSPOUTS, WROUGHT IRON OR HOT-DIP GALV. STL., INCLUDING SPECIALS				68
601	444	SQ.YDS.	CONCRETE SLOPE PROTECTION				444
808	212	Units	WATER REDUCING, SET RETARDING ADMIXTURE	212			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

GENERAL PLAN & ELEVATION

BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CML	JNP		[signature]	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

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MAH-7-1495

VALUES FOR TABLE IN GENERAL NOTE № 22												
ITEM		ABUT. #1	PIER #1				PIER #2				ABUT. #2
			FTG. #1	FTG. #2	FTG. #3	FTG. #4	FTG. #1	FTG. #2	FTG. #3	FTG. #4	
FORMULA CAPACITY (TONS PER PILE)	A = 7,000 FT. LB. HAMMER	50	SPREAD FOOTINGS	SPREAD FOOTINGS	40	40	45	45	45	45	50
	B = 11,000 FT. LB. HAMMER	45			35	35	40	40	40	40	45
	C = 15,000 FT. LB. HAMMER	40			30	30	35	35	35	35	40
DESIGN LOAD (TONS PER PILE)	D	40			30	30	30	35	35	35	40
PILE LENGTH (PER PILE)		18'			10'	15'	25'	30'	35'	40'	48'
PILE SIZE		12 BP-53			10 BP-42		10 BP-42				12 BP-53

ALL ABUTMENT PILES TO BE 12-BP-53 STEEL PILES.

ALL PIER PILES TO BE 10BP42 STEEL PILES.

INDICATES BATTERED PILES
ABUTMENT #1 & #2 — 1:3 BATTER
PIER #1 & #2 ----- 1:4 BATTER

SEE SHEET #139 FOR NOTES # 21 & 22.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

PILING PLAN

BRIDGE № MAH-7-1528 R.

OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JNP		[signature]	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

184
206

MAH-7-1495

NOTE –
ABUTMENT PILES TO BE 12 BP-53
SEE SHEET #139 FOR NOTES #3, 12, 18, 19 & 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

ABUTMENT Nº 1

BRIDGE Nº MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	J.N.P. J.K.		HGH	RDH	3/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-14.95

NOTE: * ELEVATION GIVEN TO HEEL OF ANGLE.
FOR SECTIONS NOT SHOWN SEE SHT #184

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD, YOUNGSTOWN 14, OHIO

ABUTMENT № 1

BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN, MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JNP JK		HGH	RDH	9/21/63	

NOTE: See Procedure Note on sheet #184

NOTE:
FOR SECTIONS NOT SHOWN SEE SHEET # 187
® ELEVATION GIVEN TO HEEL OF ANGLE

ABUTMENT PILES TO BE 12 BP-53
SEE SHEET #139 FOR NOTES #3, 12, 18, 19 & 22.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

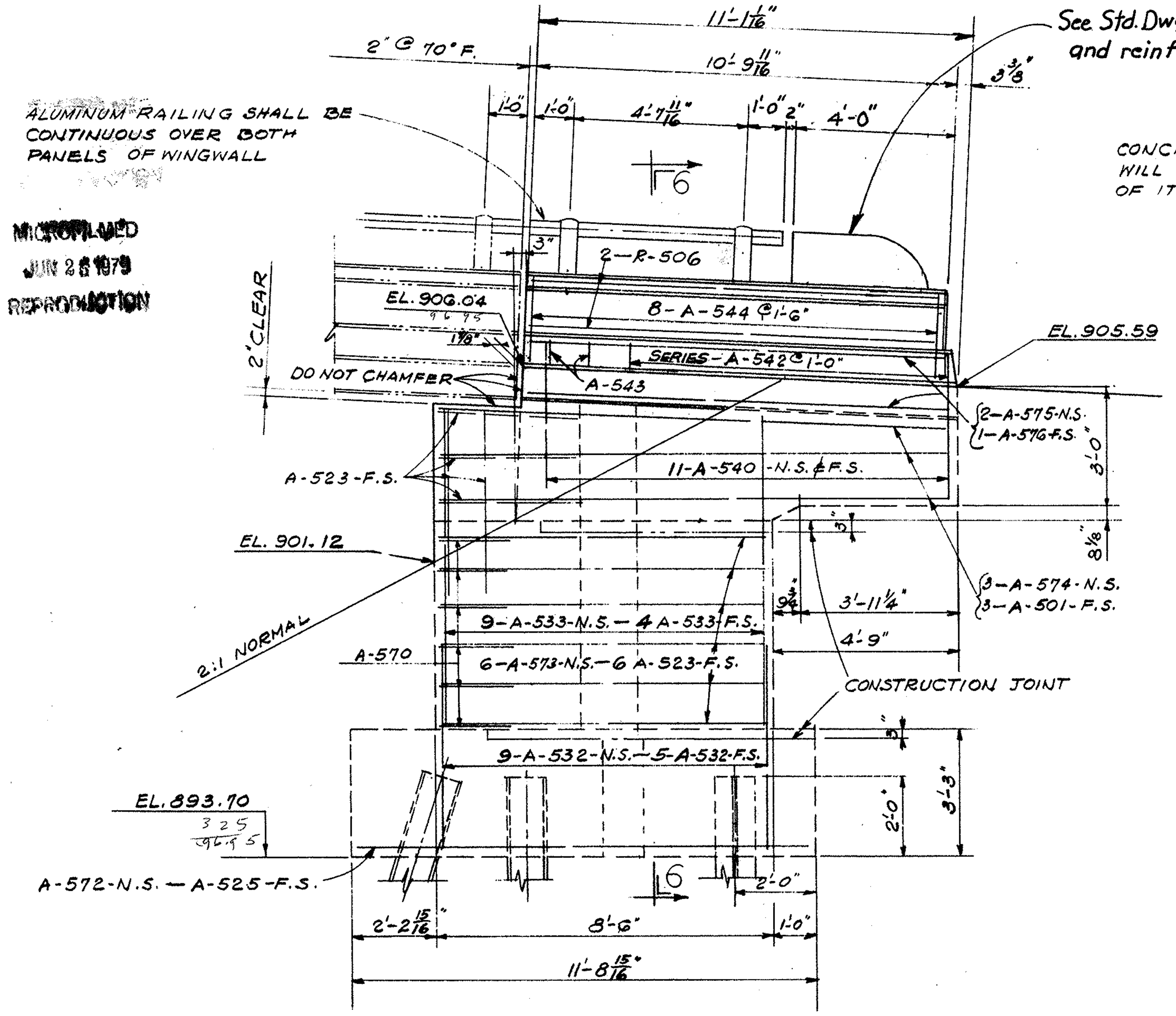
ABUTMENT № 2

BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

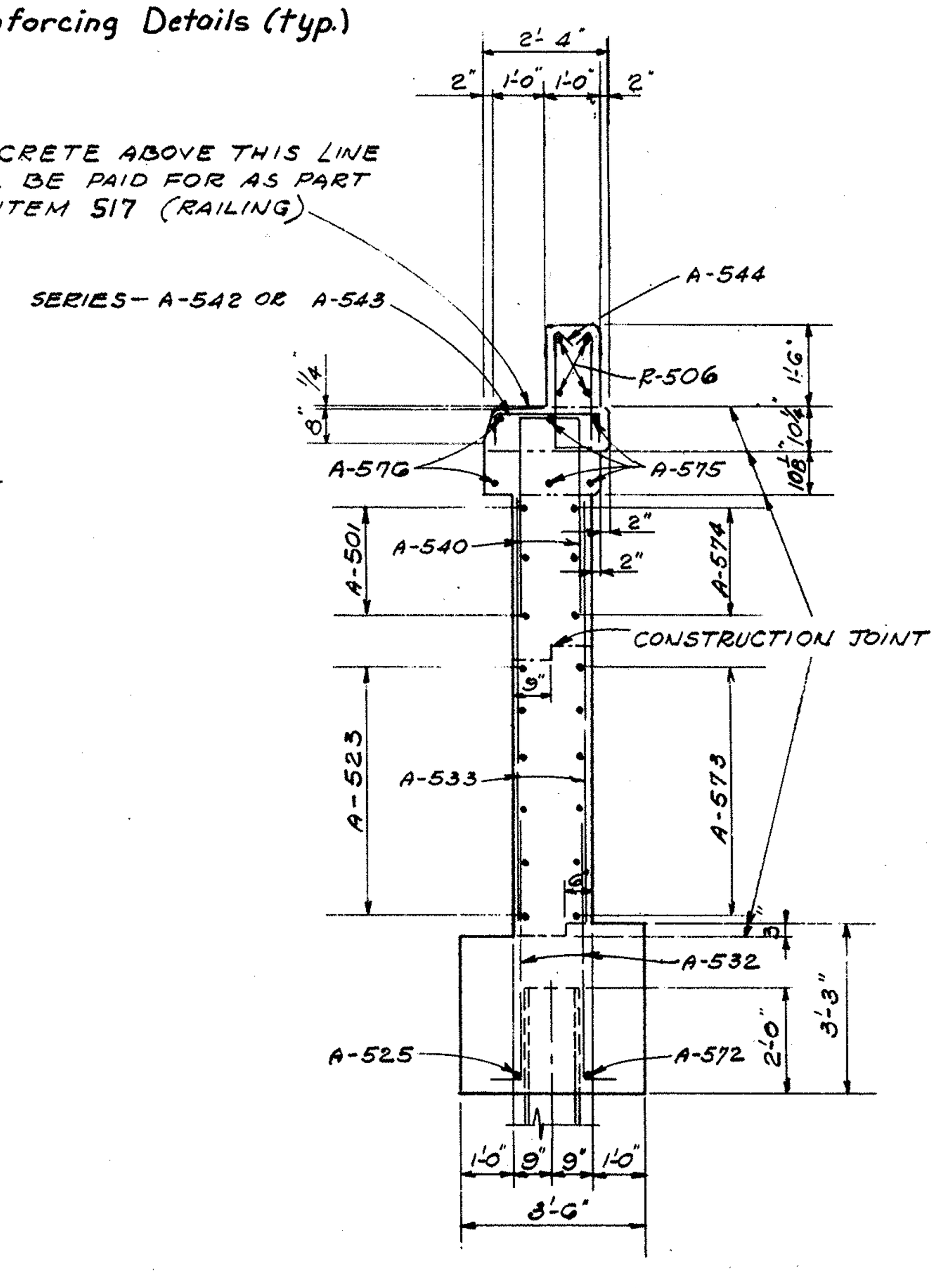
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JK		HGH	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-574(9)

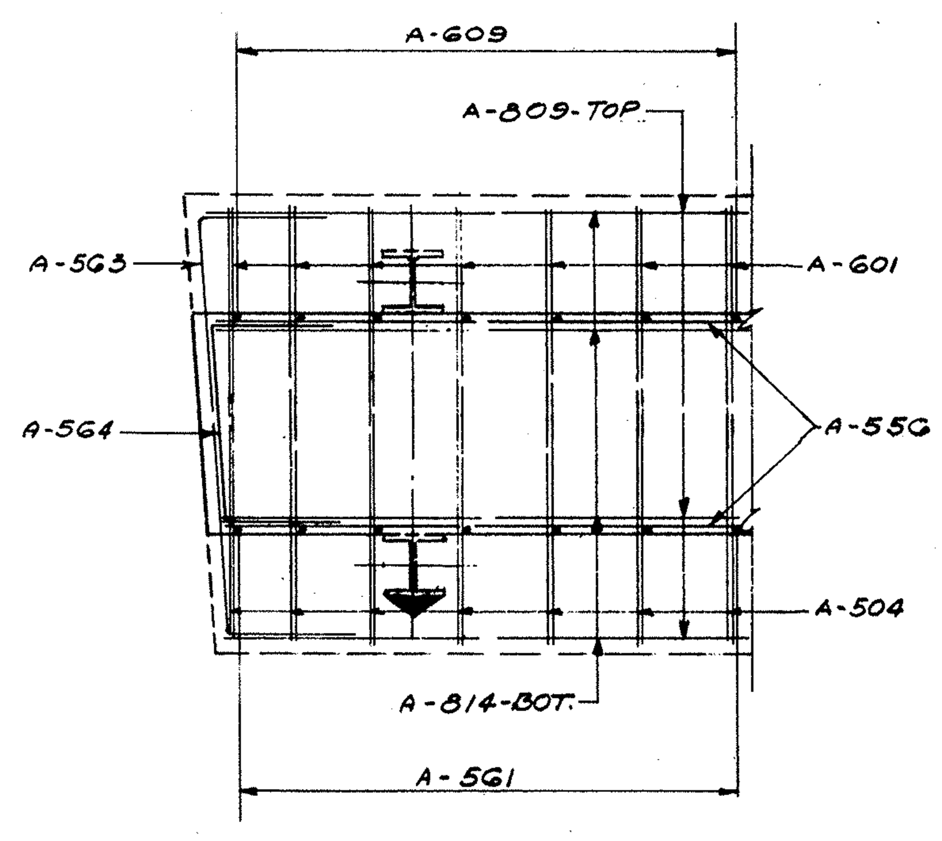
MAH-7-14.95



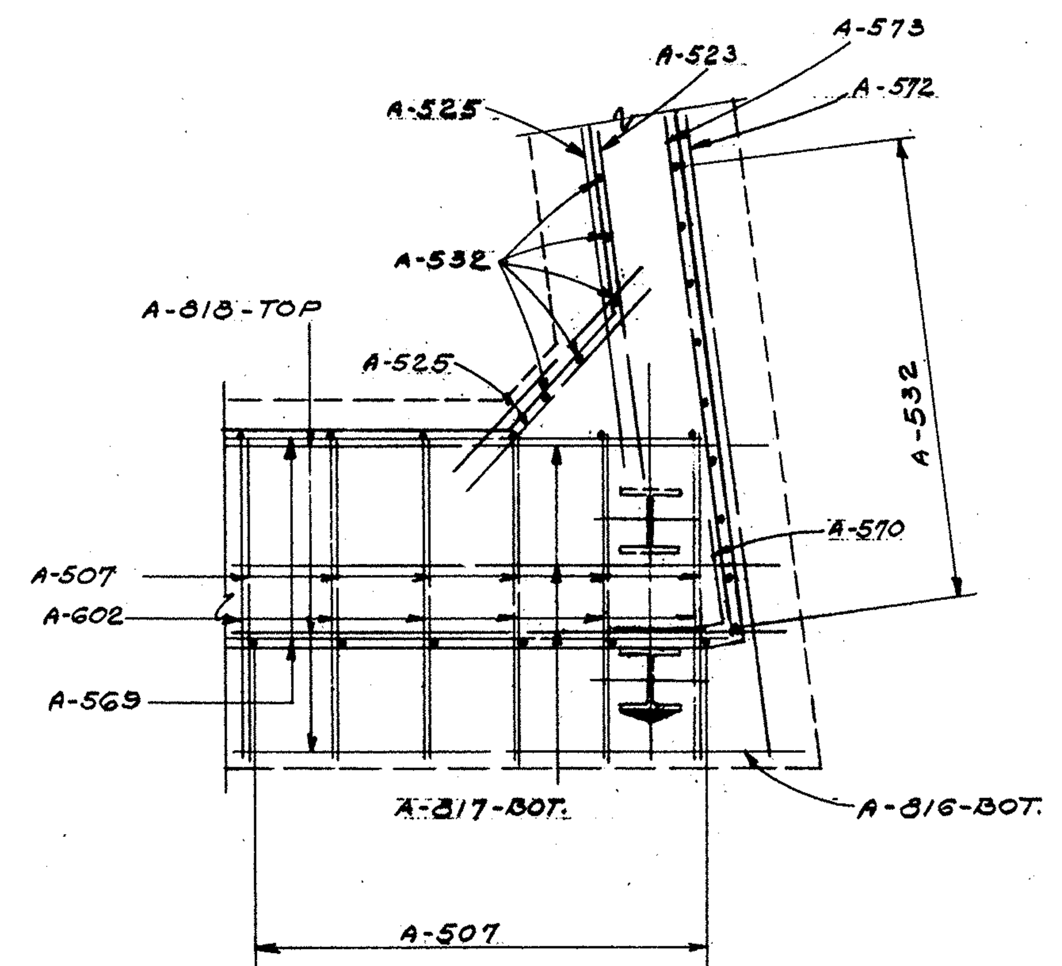
ELEVATION OF SOUTH WINGWALL ABUTMENT #2



SECTION 6-6



SECTION- 4



SECTION-5

ABUTMENT PILES TO BE 12 BP-53.

SEE SHEET #139 FOR NOTES #3, 12, 18, 19 & 22
SEE SHEET #186 FOR SECTIONS 4 & 5

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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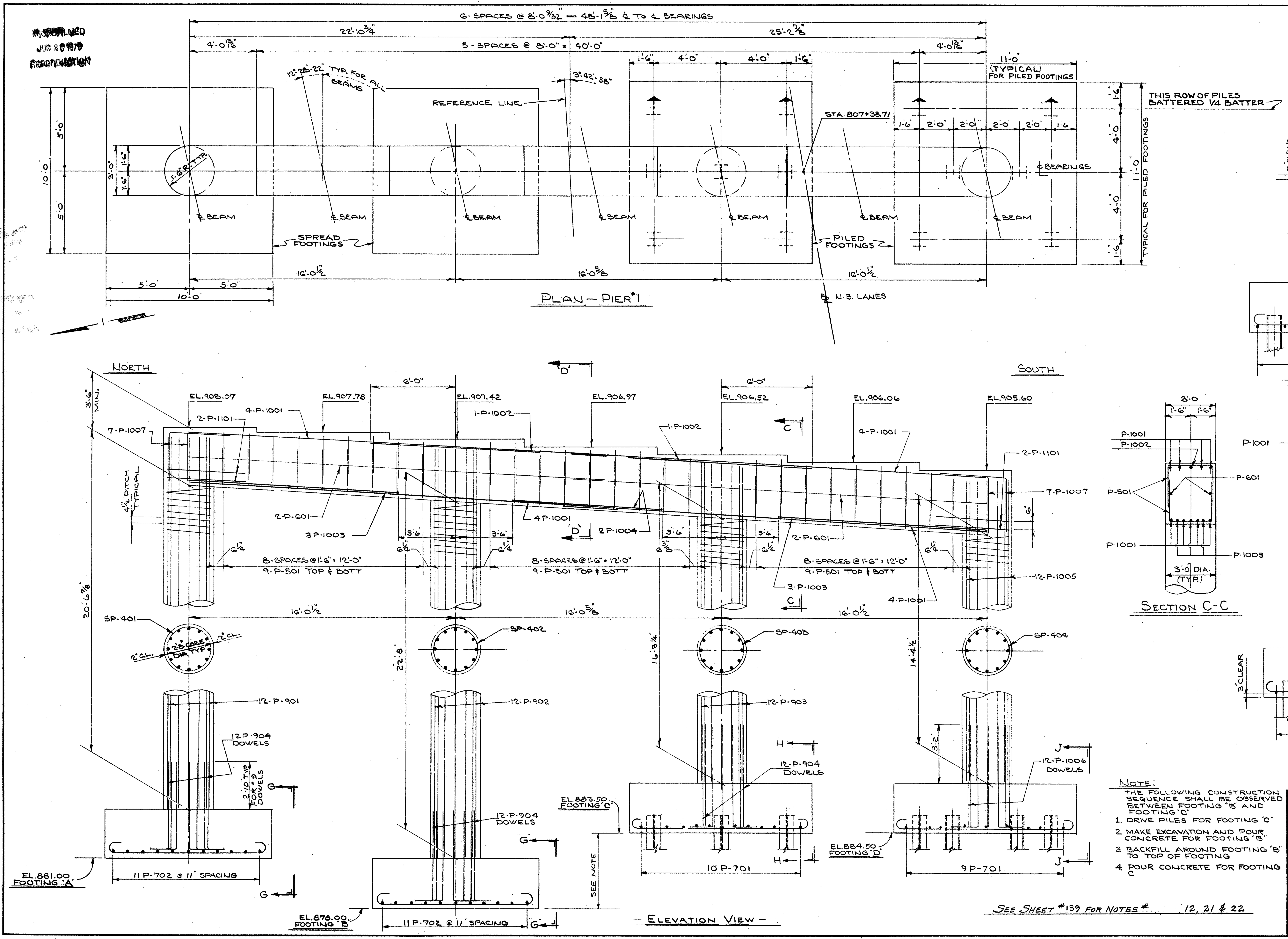
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

ABUTMENT № 2 DETAILS

BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 807+74.23
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
OWG	JK		HGH.	RDH	3/21/63	



NOTE:
THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE OBSERVED BETWEEN FOOTING "B" AND FOOTING "C"

1. DRIVE PILES FOR FOOTING "C"
2. MAKE EXCAVATION AND POUR CONCRETE FOR FOOTING "B"
3. BACKFILL AROUND FOOTING "B" TO TOP OF FOOTING.
4. POUR CONCRETE FOR FOOTING "C"

SEE SHEET #139 FOR NOTES # 12, 21 & 22

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

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STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

PIER № 1
BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+08.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JWW		HGH.	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

MAH-7-1495

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SEE SHEET #139 FOR NOTES # 12 & 22

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

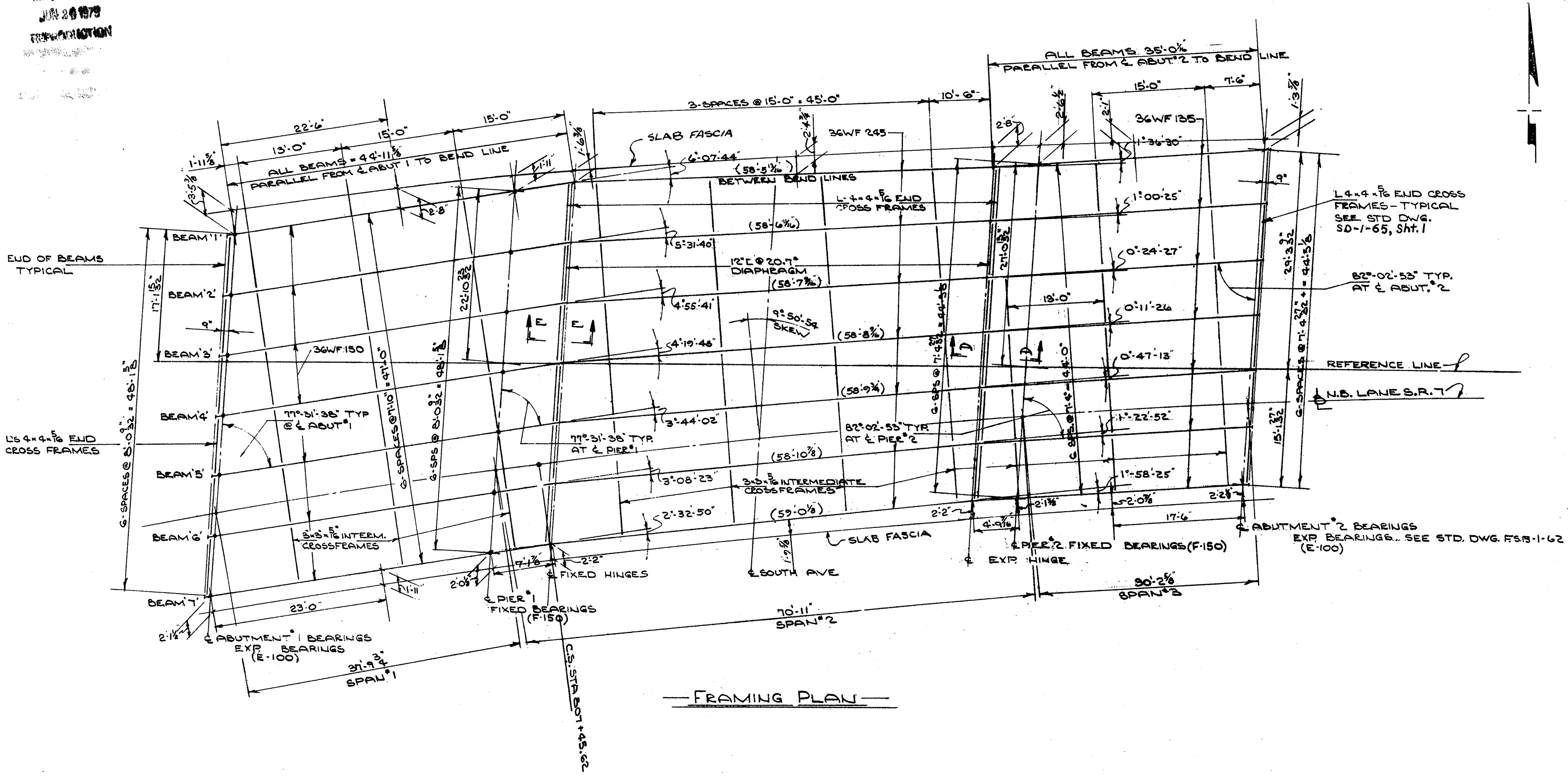
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

PIER № 2
BRIDGE № MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JWW		HGH	RDH	2/4/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495



—FRAMING PLAN—

DEFLECTION & CAMBER

LOADING	SPAN 1	SPAN 2	SPAN 3
DEFLECTION DUE TO WEIGHT OF STEEL	0.00594"	0.159	0.00128"
DEFLECTION DUE TO REMAINING DEAD LOAD	0.03606"	0.591"	0.00982"
CONVEXITY REQUIRED FOR VERTICAL CURVE	—	—	—
SUM OF DEFLECTION AND CONVEXITY	0.042"	0.75"	0.011"
REQUIRED CAMBER	0"	¾"	0"

NOTE:
FOR SECTIONS 'A-A' AND 'E-E' SEE SHT. # 201
(FRAMING PLAN - S.B. LANE)

SEE SHEET # 139 FOR NOTES # 5, 8, , 15 & 18

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

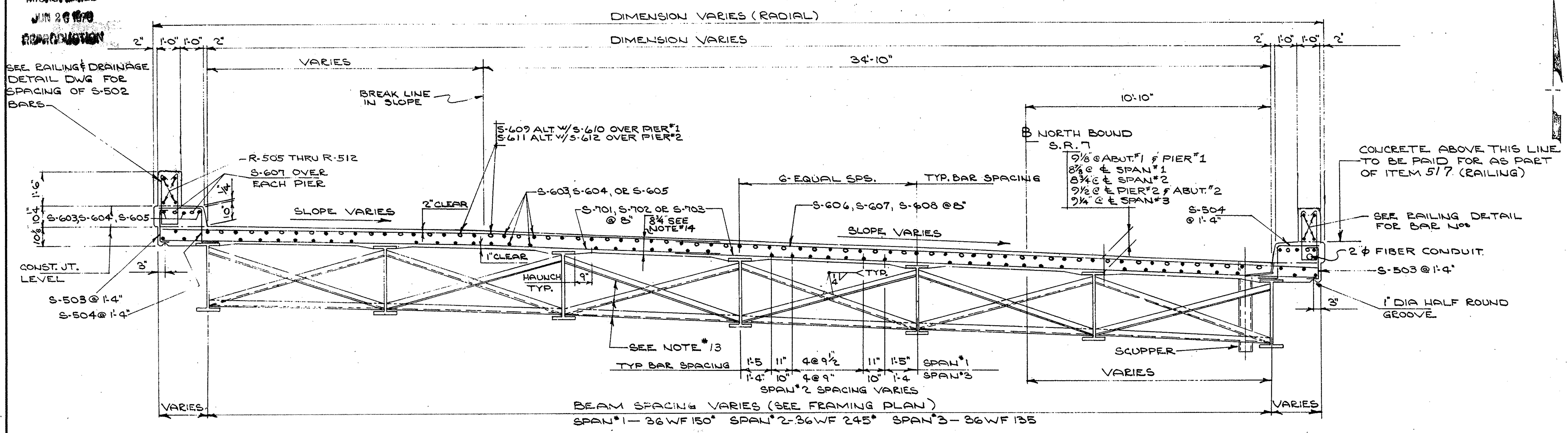
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

FRAMING PLAN
BRIDGE No MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN MAHONING COUNTY

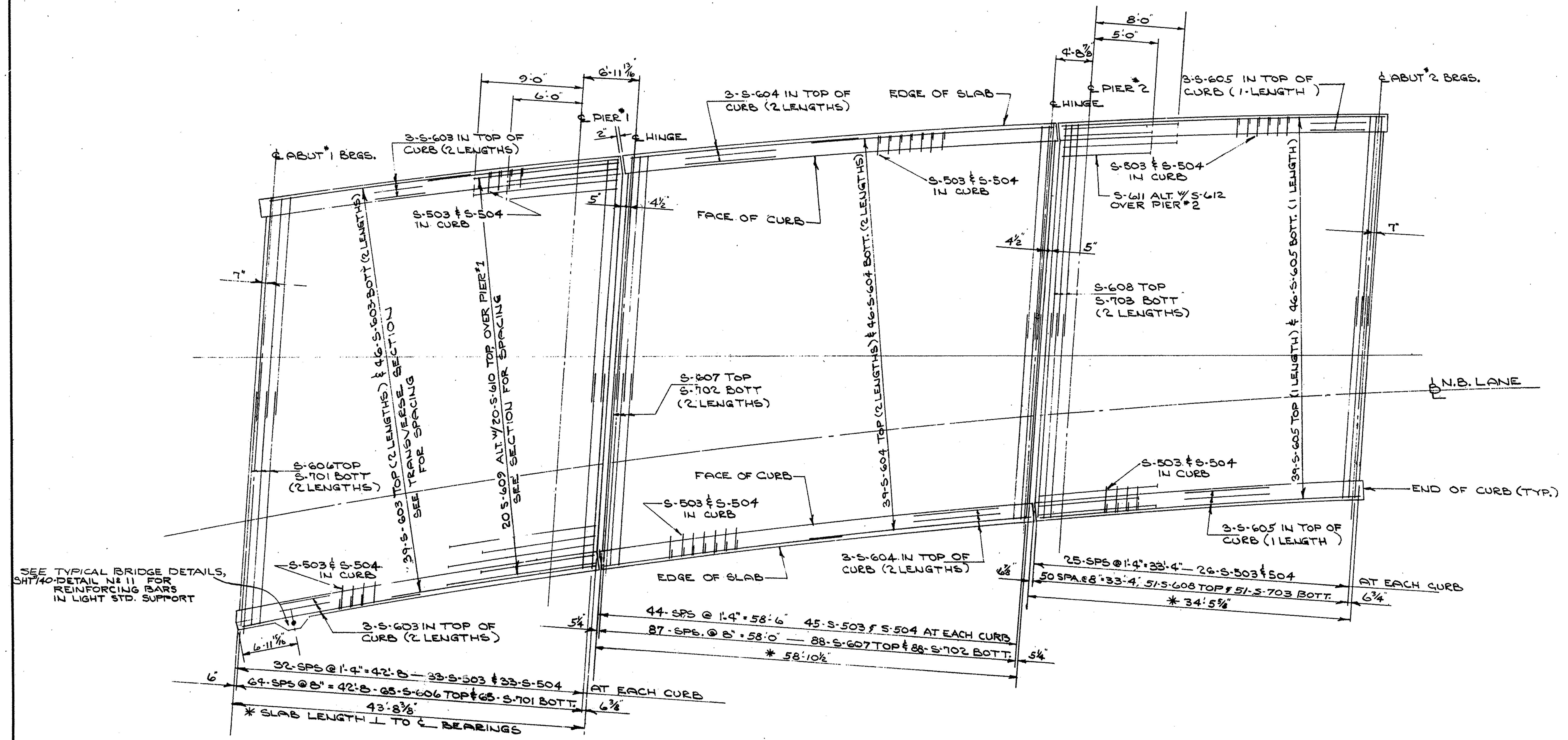
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DNG	JWW		HGH	RDH	2/2/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495

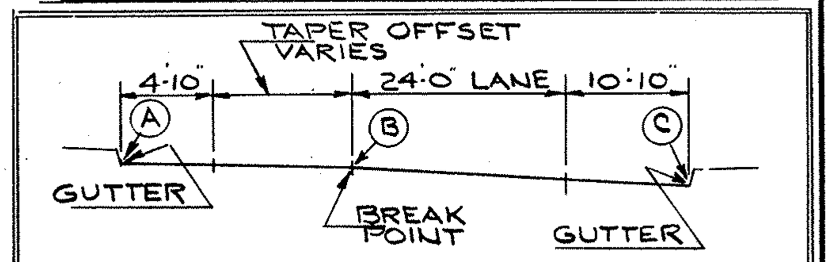


—TRANSVERSE SECTION—



—SLAB REINFORCING PLAN—
—NORTH BOUND LANE—

—FINISHED PAVEMENT ELEVATIONS—



LOCATION	ELEVATIONS A	B	C
STA. 807 + 00	914.57	913.90	911.39
STA. 807 + 25	913.42	912.81	910.43
STA. 807 + 50	912.26	911.72	909.47
STA. 807 + 75	911.12	910.62	908.52
STA. 808 + 00	909.98	909.53	907.56
STA. 808 + 25	908.83	908.44	906.60
STA. 808 + 50	907.67	907.35	905.64
ON ℄ BRG. ABUT. #1	914.12	913.60	911.51
ON ℄ PIER #1	912.46	912.00	909.99
ON ℄ PIER #2	909.31	908.96	907.25
ON ℄ BRG. ABUT. #2	907.95	907.67	906.07

SEE SHEET #132 FOR NOTES #2, 11, 13, 14 & 15

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS
BRIDGE No MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA 808+42.11
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JWW		HGH	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-1495

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FOR NOTES # 16, 25 & 26 SEE STANDARD NOTE SHEET # 139

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

RAILING & DRAINAGE DETAILS

BRIDGE Nº MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DNG	JNP		HGH	RDH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-1495

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
ABUTMENT #1 & #2									
A-501	18	10'-0"	ST.						188
A-502	30	10'-2"	3	5'-5"	2'-6"				318
A-503	4	14'-10	3	7'-5"	3'-10"				62
A-504	24	12'-2"	3	7'-5"	2'-6"				305
A-505	2	16'-1"	3	8'-8"	3'-10"				34
A-506	17	13'-5"	3	8'-8"	2'-6"				238
A-507	28	8'-1"	1	6"	7'-8"				236
A-508	14	8'-7"	1	6"	8'-2"				125
A-509	13	10'-9"	1	6"	10'-4"				146
A-510	6	11'-3"	1	6"	10'-10"				70
A-511	7	13'-4"	1	6"	12'-11"				97
A-512	8	13'-9"	1	6"	13'-4"				115
A-513	4	14'-1"	1	6"	13'-8"				58
A-514	71	8'-2"	3	3'-5"	2'-6"				605
A-515	7	9'-6"	ST.						69
A-516	6	28'-8"	ST.						179
A-517	3	29'-1"	ST.						91
A-518	9	29'-5"	ST.						276
A-519	6	11'-0"	ST.						69
A-520	12	11'-10"	ST.						148
A-521	3	3'-9"	ST.						12
A-522	9	18'-0"	ST.						169
A-523	39	5'-0"	ST.						203
A-524	6	3'-11"	20	2'-0"	2'-0"	6"			25
A-525	40	6'-0"	ST.						250
A-526	4	17'-6"	ST.						73
A-527	8	23'-6"	ST.						196
A-528	3	23'-9"	ST.						74
A-529	11	23'-3"	ST.						267
A-530	11	4'-6"	17	2'-0"	8"	2'-0"	1⅝"		52
A-531	4	12'-0"	ST.						50
A-532	48	5'-5"	1	6"	5'-0"				271
A-533	30	8'-0"	ST.						250
A-534	7	9'-2"	ST.						67
A-535	2	6'-6"	12	2'-0"	4'-6"	2'-0 5/16"			14
A-536	3	16'-8"	ST.						52
A-537	3	12'-6"	ST.						39
A-538	4	15'-0"	ST.						63
A-539	2	15'-0"	15	10'-4"	4'-8"	2'-7"			31
A-540	60	3'-9"	1	6"	3'-4"				235
A-541	48	4'-7"	1	6"	4'-2"				229
A-542	3 SETS OF 9	1'-8" To 2'-7"	3	1'-1" To 1'-10"	6"			1⅛"	60
A-543	27	2'-9"	3	2'-0"	6"				77
A-544	40	5'-4"	5	8"	2'-2"	5"			222
A-545	19	13'-6"	ST.						268
A-546	9	10'-2"	ST.						96
A-547	1 SET OF 3	12'-0" To 16'-0"	ST.					2'-0"	44
A-548	1 SET OF 3	7'-9" To 11'-9"	ST.					2'-0"	31
A-549	3	16'-2"	ST.						51
A-550	2	22'-2"	ST.						46
A-551	10	4'-6"	ST.						47
A-552	6	6'-8"	2	7"	5'-6"				42
A-553	2 SETS OF 6	8'-0" To 10'-6"	ST.					6"	116
A-554	2	7'-7"	12	2'-0"	5'-7"	2'-6"			16
A-555	1	24'-0"	ST.						25
A-556	5	20'-0"	ST.						104
A-557	3	29'-8"	ST.						93
A-558	3	25'-8"	ST.						80
A-559	5	27'-6"	ST.						143
A-560	2	27'-3"	15	10'-4"	16'-11"	2'-7"			57
A-561	9	11'-4"	1	6"	10'-11"				106
A-562	18	30'-8"	ST.						576
A-563	1	11'-0"	18	7'-3"	2'-0"	1½"			11
A-564	9	7'-2"	18	3'-5"	2'-0"	1½"			67
A-565	2	3'-3"	ST.						7
A-566	6	3'-11"	1	6"	3'-6"				25
A-567	2	7'-10"	19	1'-2"	2'-8"	4"			16
A-568	2	7'-3"	13	4'-0"	—	1'-6"	2'-0"		15
A-569	16	18'-4"	ST.						306
A-570	6	4'-11"	17	2'-0"	8"	2'-0"	1"		31
A-571	3	5'-9"	3	6"	2'-9"				18
A-572	1	11'-4"	ST.						12
A-573	6	8'-2"	ST.						51
A-574	3	12'-11"	ST.						40
A-575	4	10'-8"	ST.						44
A-576	2	10'-6"	15	10'-4"	2"	2'-7"			22

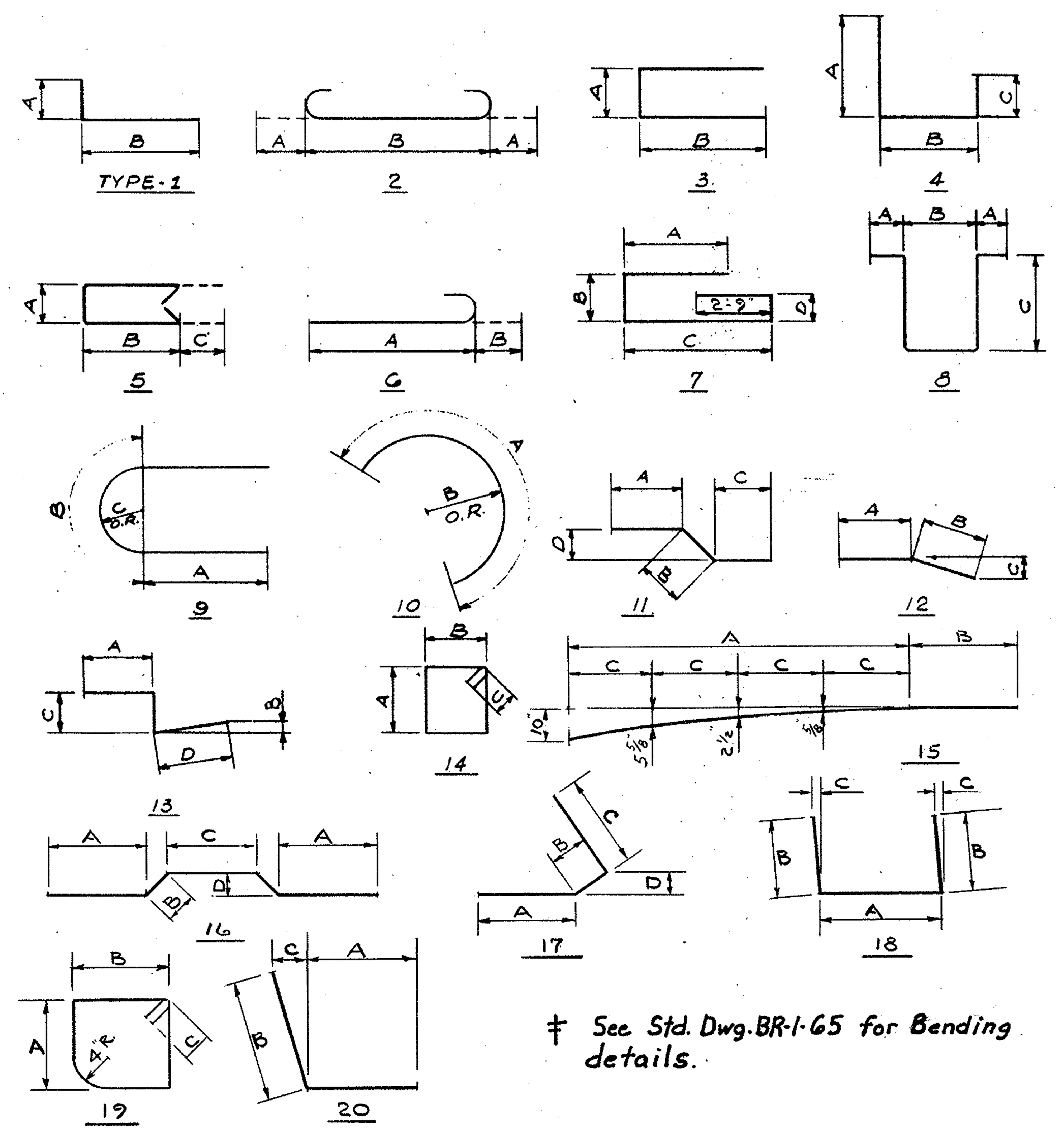
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
A-601	28	12'-2"	3	7'-5"	2'-6"				512
A-602	16	15'-1"	4	7'-5"	5'-5"	2'-6"			362
A-603	14	15'-7"	4	7'-11"	5'-5"	2'-6"			328
A-604	13	10'-6"	1	6"	10'-1"				205
A-605	6	11'-0"	1	6"	10'-7"				99
A-606	33	13'-2"	3	1'-5"	6'-0"				653
A-607	67	15'-3"	7	4'-6"	1'-5"	6'-0"	11"		1535
A-608	6	6'-10"	2	8"	5'-6"				62
A-609	9	11'-3"	1	6"	10'-8"				152
A-701	19	13'-4"	3	8'-8"	2'-6"				518
A-702	7	13'-0"	1	6"	12'-8"				186
A-703	8	13'-5"	1	6"	13'-1"				220
A-704	4	13'-9"	1	6"	13'-5"				112
A-705	4	15'-0"	ST.						123
A-706	2	10'-4"	1	1'-0"	9'-6"				42
A-801	2	19'-2"	ST.						102
A-802	2	19'-7"	ST.						105
A-803	2	20'-0"	ST.						107
A-804	3	20'-5"	ST.						164
A-805	3	7'-10"	12	3'-0"	5'-0"	4'-0"			63
A-806	4	18'-8"	ST.						199
A-807	3	16'-4"	ST.						131
A-808	1	21'-9"	12	20'-3"	1'-6"	3¾"			58
A-809	4	21'-5"	ST.						229
A-810	1	21'-1"	ST.						56
A-811	1	9'-6"	12	18'-0"	1'-6"	3¾"			52
A-812	1	17'-8"	ST.						47
A-813	13	8'-0"	11	3'-0"	2'-4¼"	3'-0"	1'-8"		278
A-814	3	22'-8"	ST.						182
A-815	6	8'-1½"	11	3'-0"	2'-1½"	3'-0"	1'-6"		130
A-816	1	26'-6"	ST.						71
A-817	3	25'-10"	ST.						207
A-818	3	29'-6"	ST.						236
ABUTMENT #1 & #2 TOTAL									16,542
SLAB									
S-501	2	9'-3"	20	1'-7"	2'-7½"	1'-0"	1'-10"		19
S-502	6	5'-2"	5	8"	2'-0"	5"			1002
S-503	208	2'-2"	3	1'-4"	6"				470
S-504	208	5'-2"	13	2'-0"	—	1'-4"	2'-0"		1121
S-601	10	4'-0"	ST.						60
S-602	2	10'-5"	14	3'-0"	2'-2"	4"			31
S-603	182	23'-4"	ST.						6378
S-604	182	31'-0"	ST.						8474
S-605	91	34'-3"	ST.						4681
S-606	130	28'-0"	ST.						5467
S-607	176	27'-0"	ST.						7137
S-608	102	26'-0"	ST.						3983
S-609	20	15'-8"	6	15'-0"	8				471
S-610	20	12'-8"	6	12'-0"	8				380
S-611	20	12'-5"	6	11'-9"	8				373
S-612	20	9'-5"	6	8'-9"	8				283
S-701	130	28'-2"	ST						7484
S-702	176	27'-2"	ST						9773
S-703	102	26'-2"	ST.						5455
SLAB TOTAL									63,042
PIER #1 & #2									
P-501	102	7'-10"	3	2'-8"	2'-8"				833
P-601	4	25'-1"	ST.						151
P-602	4	23'-2"	ST.						139
P-701	131	12'-4"	2	10"	10'-8"				3302

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	B	C	D	SERIES INCREMENTS	WEIGHT LBS.
P-702	44	11'-4"	2	10"	9'-8"				1019
P-901	12	23'-6"	ST.						959
P-902	12	25'-6"	ST.						1040
P-903	12	19'-2"	ST.						782
P-904	72	6'-4"	1	1'-0"	5'-7"				1550
P-905	12	19'-4"	ST.						789
P-906	12	18'-0"	ST.						735
P-907	12	16'-10"	ST.						687
P-1001	16	27'-0"	ST.						1859
P-1002	4	12'-0"	ST.						207
P-1003	6	12'-6"	ST.						323
P-1004	2	9'-0"	ST.						77
P-1005	12	17'-6"	ST.						904
P-1006	24	6'-8"	1	1'-0"	5'-11"				688
P-1007	28	8'-0"	1	3'-3"	5'-0"				964
P-1008	16	25'-1"	ST.						1727
P-1009	6	11'-10"	ST.						306
P-1010	2	8'-10"	ST.						76
P-1011	12	15'-6"	ST.						800
P-1101	8	15'-7"	9	3'-7¼"	8'-4½"				662
PIER #1 & #2 TOTAL (INCLUDING SPIRALS)									23,017
RAILING ⊗									
R-501	2	9'-3"	16	1'-7"	2'-7½"	1'-0"	1'-10"		
R-502	1	7'-4"	16	1'-7"	9"	2'-8"	6¾"		
R-503	9	4'-2"	BT.†						
R-504	6	5'-4"	BT.†						
R-505	4	15'-10"	ST.						
R-506	4	10'-5"	ST.						
R-507	8	13'-5"	ST.						
R-508	8	13'-7"	ST.						
R-509	8	16'-8"	ST.						
R-510	24	16'-2"	ST.						
R-511	16	13'-0"	ST.						
R-512	8	13'-3"	ST.						
R-513	4	4'-8"	ST.						
R-514	4	4'-10"	ST.						
R 515	4	14'-8"	ST						
R 516	4	11'-2"	ST						
REPLACEMENT BARS									
RE-401	1	6'-3"	10	5'-3"					
RE-501	1	6'-7"	ST.						
RE-601	3	6'-11"	ST.						
RE-701	2	7'-2"	ST.						
RE-801	1	7'-6"	ST.						
RE-901	1	7'-10"	ST.						
RE-1001	1	8'-2"	ST.						
RE-1101	1	8'-6"	ST.						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	1	2'-8"	20'-6⅞"	4½"	58	320
SP-402	1	2'-8"	22'-8"	4½"	64	353
SP-403	1	2'-8"	16'-3¼"	4½"	46	254
SP-404	1	2'-8"	14'-4½"	4½"	42	232
SP-405	1	2'-8"	16'-4⅞"	4½"	47	259
SP-406	1	2'-8"	15'-1⅞"	4½"	44	243
SP-407	1	2'-8"	13'-11"	4½"	40	220
SP-408	1	2'-8"	12'-4⅛"	4½"	36	198
SPACERS	32					358
TOTAL SPIRALS						2448

GRAND TOTAL 102,601 LBS



† See Std. Dwg. BR-1-65 for Bending details.

REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.
THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

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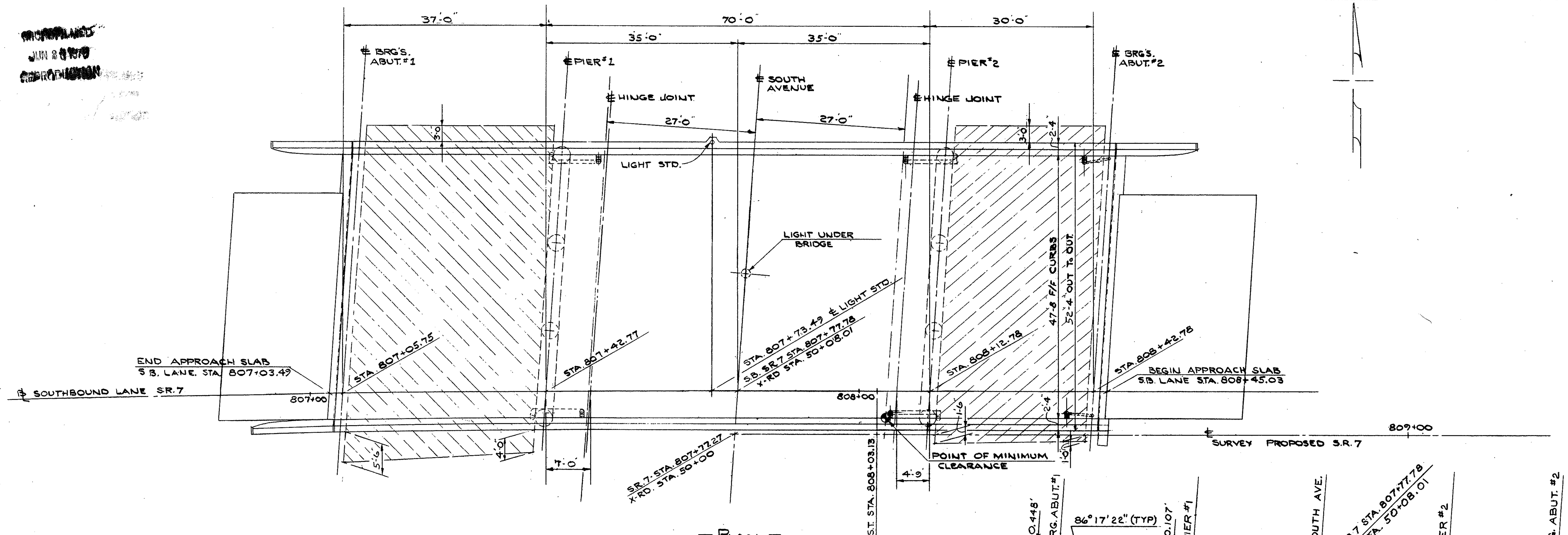
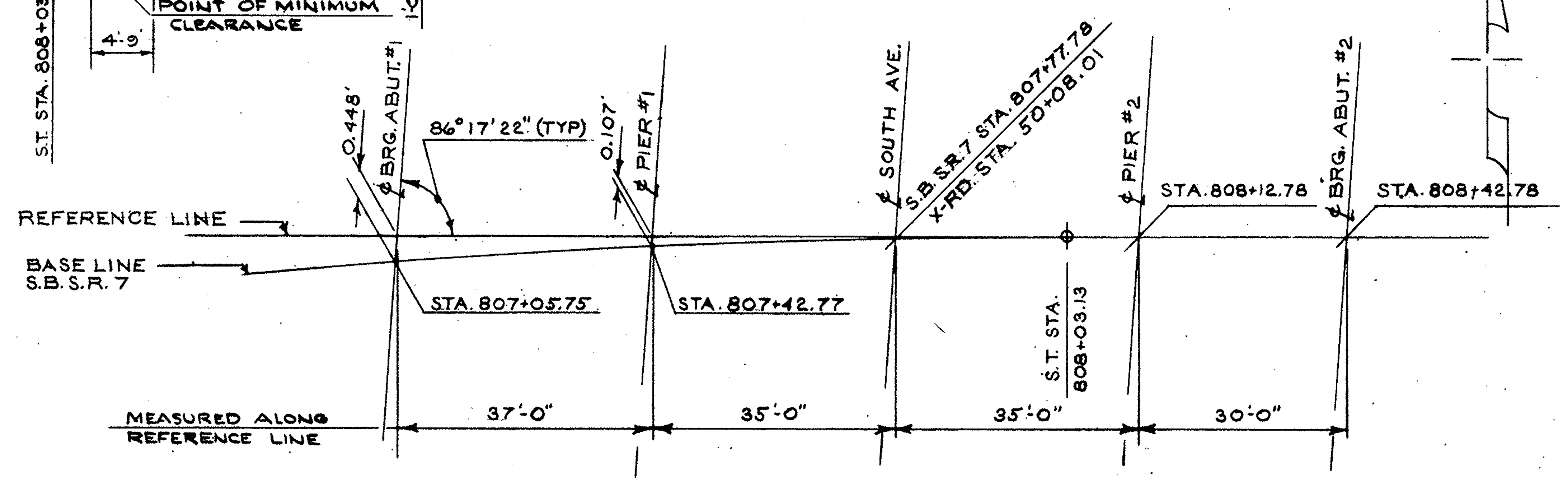
REINFORCING SCHEDULE

BRIDGE Nº MAH-7-1528 R.
OVER SOUTH AVENUE
STA. 806+98.58 To STA. 808+42.11
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG			Hager	RDH	2/21/63	



— PLAN —



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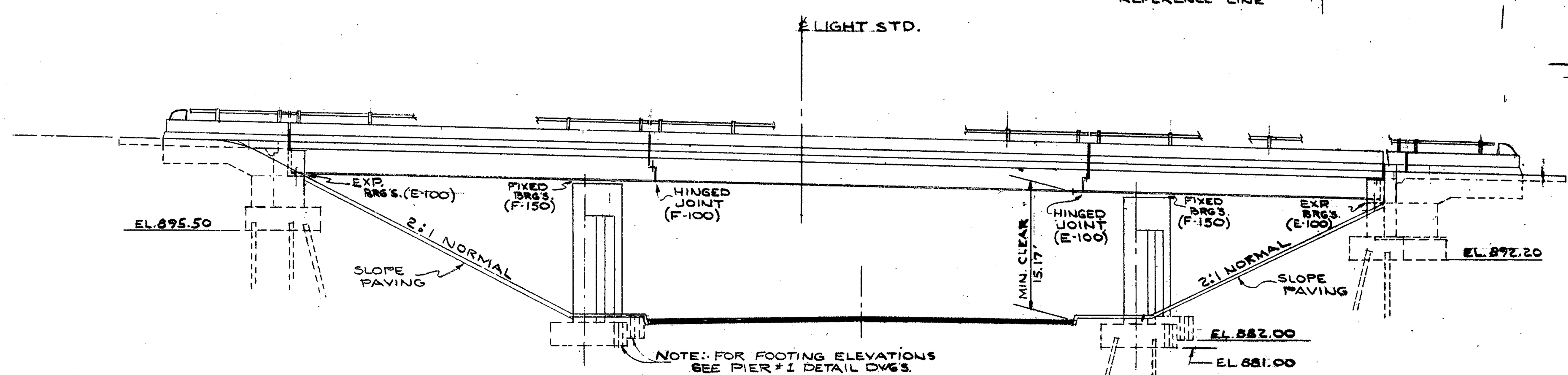

— ELEVATION —

SEE SHEET Nº 139 FOR GENERAL NOTES, INCLUDING NOTE ON UTILITY LINES

See Detiol 17 for attachment of approach guard rail to bridge railing.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
503	565	CU.YDS.	UNCLASSIFIED EXCAVATION		280	285	
511	223	CU.YDS.	CLASS C CONC. SUPERSTRUCTURE	223			
511	125	CU.YDS.	CLASS C CONC. ABUT'S ABOVE FOOTINGS.		125		
511	72	CU.YDS.	CLASS C CONC. PIERS ABOVE FOOTINGS.			72	
511	185	CU.YDS.	CLASS C CONC. PIER & ABUT. FOOTINGS.		87	98	
512	17	LIN.FT.	WATERPROOFING PREMOLDED SEALING STRIP		17		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
509	99,001	LBS.	REINFORCING STEEL	63,001	12,110	23,890	
513	233,200	LBS.	STRUCTURAL STEEL	233,200			
514	233,200	LBS.	FIELD PAINTING OF STRUCTURAL STEEL	233,200			
517	318.01	LIN.FT.	RAILING Type I	276.66	41.35		

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S	PIERS	GEN.
505	LUMP	SUM	FIRST TEST PILE				LUMP
507	750	LIN.FT.	STEEL PILES - 12-BP-53		750		
507	480	LIN.FT.	STEEL PILES - 10 BP-42			480	
625			SEE NOTE #17				
825	912	Sq.Yds.	Concrete Surface Protection	869	43		
518	37	CU.YDS.	POROUS BACKFILL		37		
518	6	EACH	SCUPPERS, including supports	6			
518	88	LIN.FT.	6" STD. PIPE DOWNSPOUTS (WROUGHT IRON OR HOT-DIP GALV. STL., INCL. SPECIALS.)				88
601	453	SQ.YDS.	CONCRETE SLOPE PROTECTION				453
808	228	Units	WATER REDUCING, SET RETARDING ADMIXTURE	223			

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GENERAL PLAN & ELEVATION

BRIDGE Nº MAH-7-1528 L.

OVER SOUTH AVENUE

STA. 807+03.49 To STA. 808+45.03

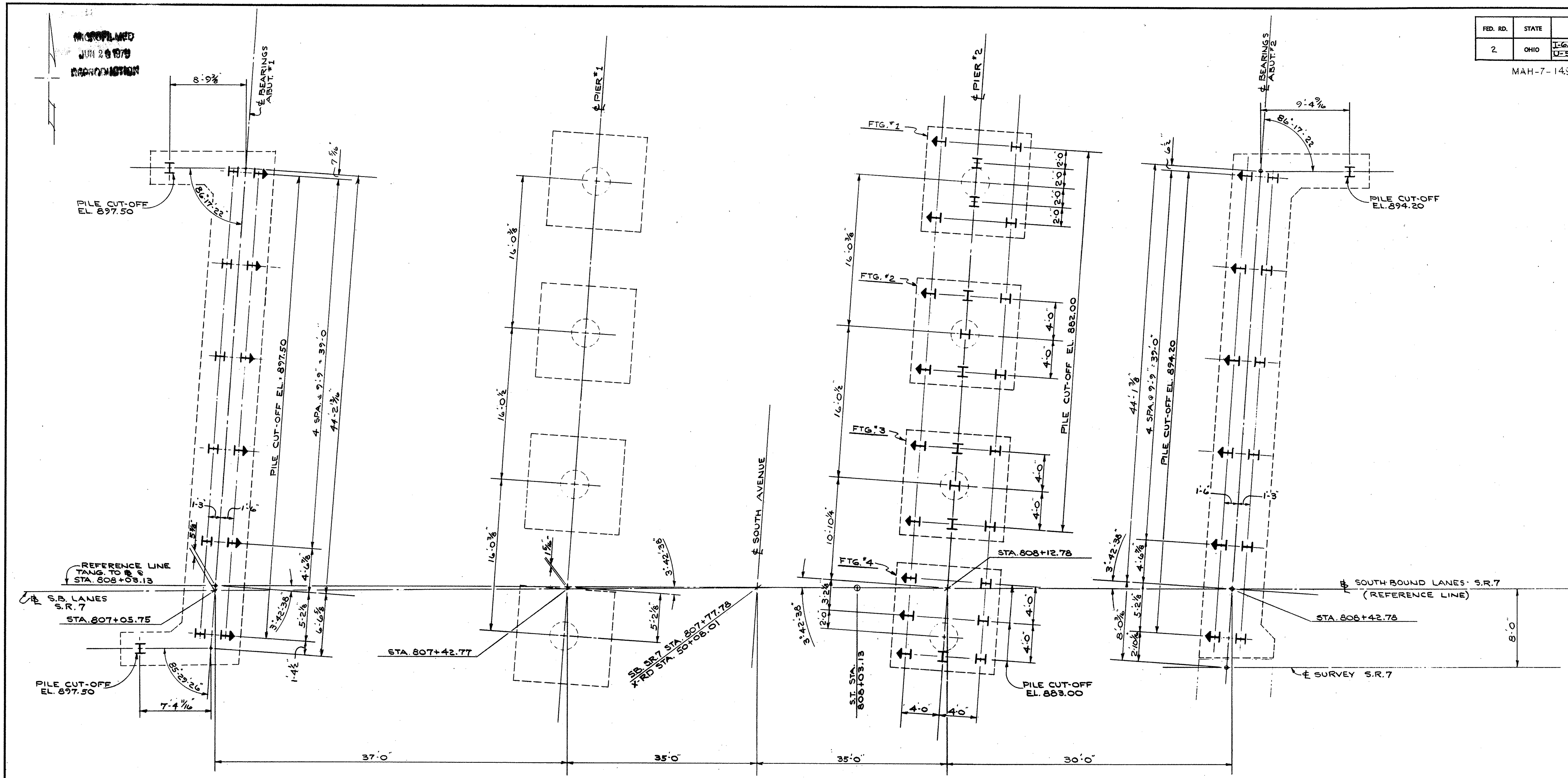
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	LNP		HGH	RDH	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

195
206

MAH-7-1495



– Values for Table in General Note № 22								
Item		Abut. #1	Pier #1 All Ftg's.	Pier #2 Ftg. #1	Ftg. #2	Ftg. #3	Ftg. #4	Abut. #2
Formula Capacity (Tons per Pile)	A = 7,000 Ft. Lb. Hammer	40	Spread Footings	40	40	35	35	40
	B = 11,000 Ft. Lb. Hammer	40		35	35	30	30	40
	C = 15,000 Ft. Lb. Hammer	40		30	30	30	30	40
Design Load (Tons per Pile)	D	40		30	30	30	30	40
Pile Length (per Pile)		18		10'	15'	20'	25'	32' to 48'
Pile Size		12-BP-53		10-BP-42				12-BP-53

ALL ABUTMENT PILES TO BE 12 BP 53 STEEL PILES
ALL PIER PILES TO BE 10 BP 42 STEEL PILES
⟵ INDICATES PILES BATTERED 1:4

See Sheet # 139 for Notes # 21 & 22.

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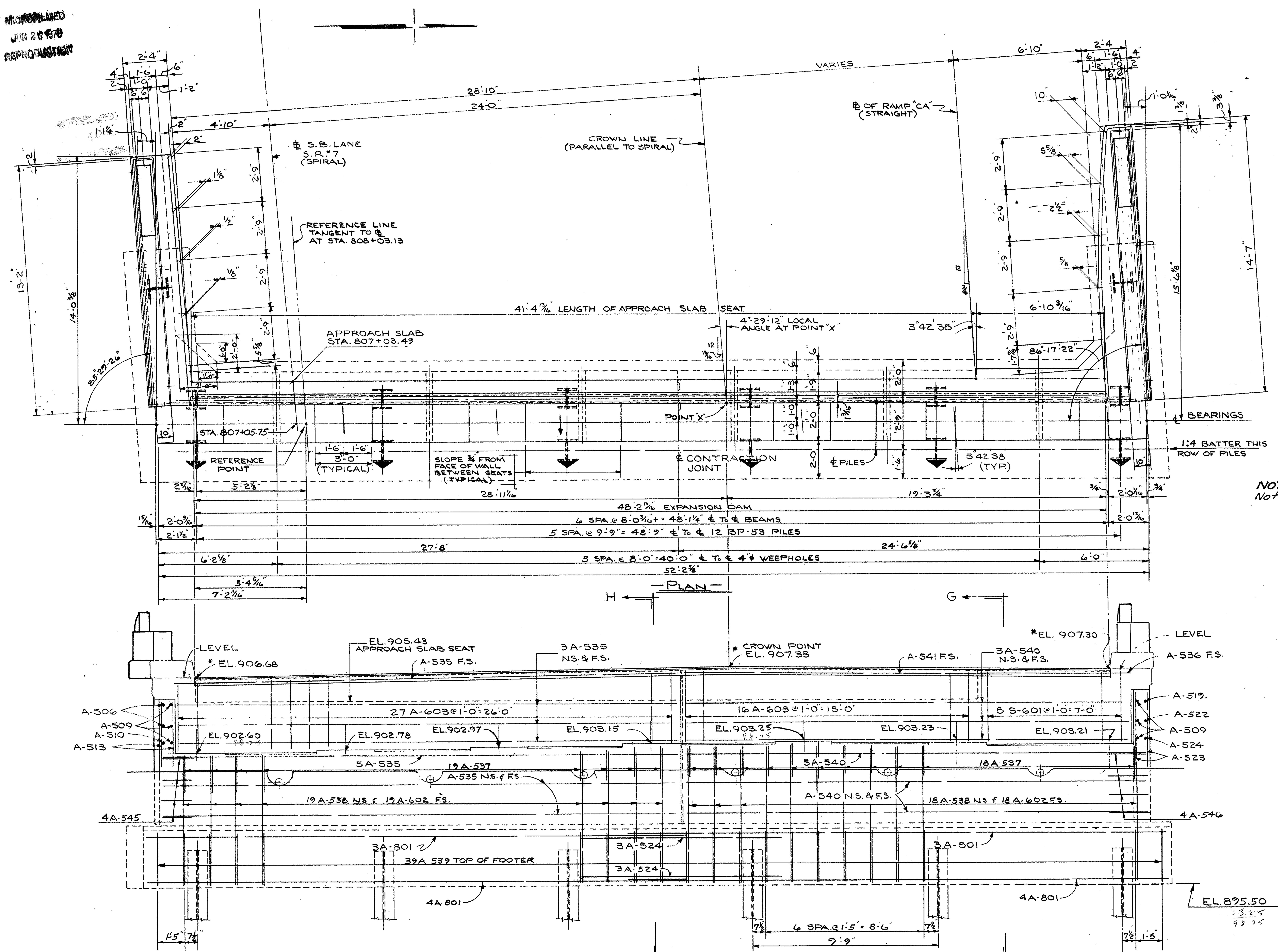
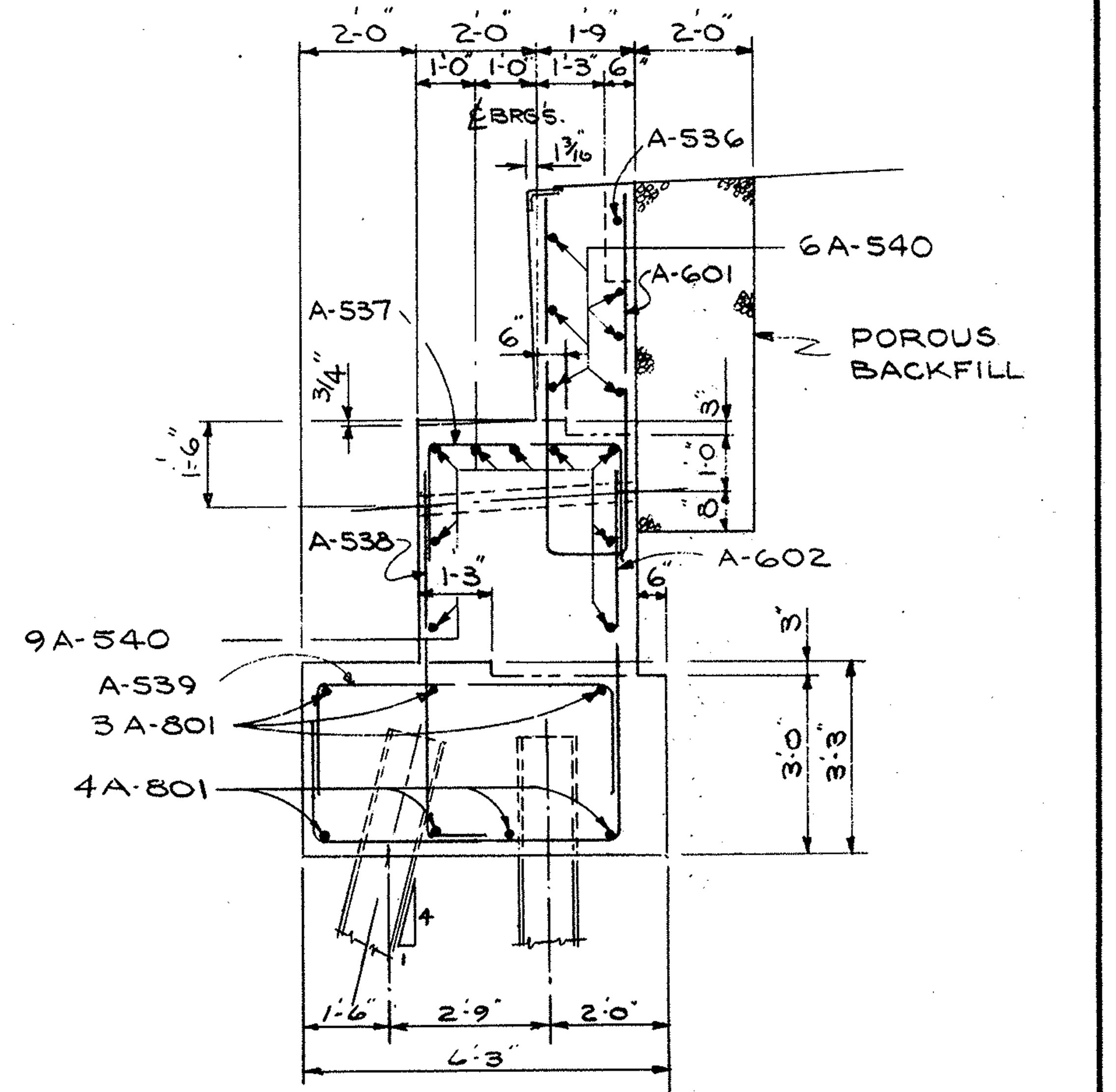
PILING PLAN

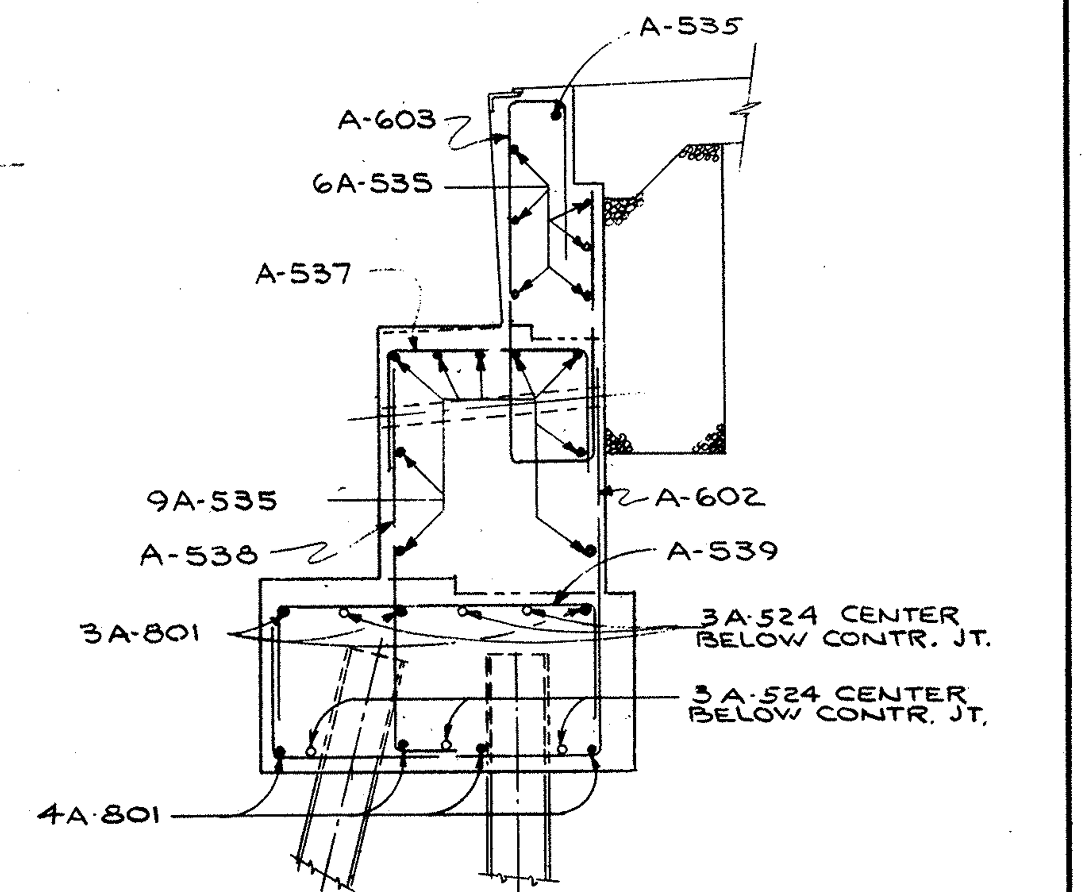
BRIDGE № MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JP		[illegible]	RGH	3/21/63	





SECTION G-G



-SECTION-H-H-

NOTE: See Procedure Note on Sheet #184

ALL ABUTMENT PILES TO BE 12BP53 STEEL PILES
⊣ - INDICATES PILES BATTERED 1:4

WARP SLOPE PAVING AT WEEPHOLES.
SEE SHEET #137 FOR NOTES #3, 12, 18, 19 & 22.
SEE TYPICAL BRIDGE DETAILS #1, 12 & 13 SHT. #140

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ABUTMENT Nº 1

BRIDGE Nº MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JLH		H.G.H.	RDH	2/21/63	

ALL ABUTMENT PILES TO BE 12 BP 53 STEEL PILES
⟷ = INDICATES PILES BATTERED 1:4

SEE SECT. D-D FOR DIMENSIONS AND BAR NOS NOT SHOWN.

SEE SHEET #139 FOR NOTES #3, 12, 18, 19 & 22.
SEE TYPICAL BRIDGE DETAILS #1, 12 & 13, SHT. #140

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ABUTMENT № 2

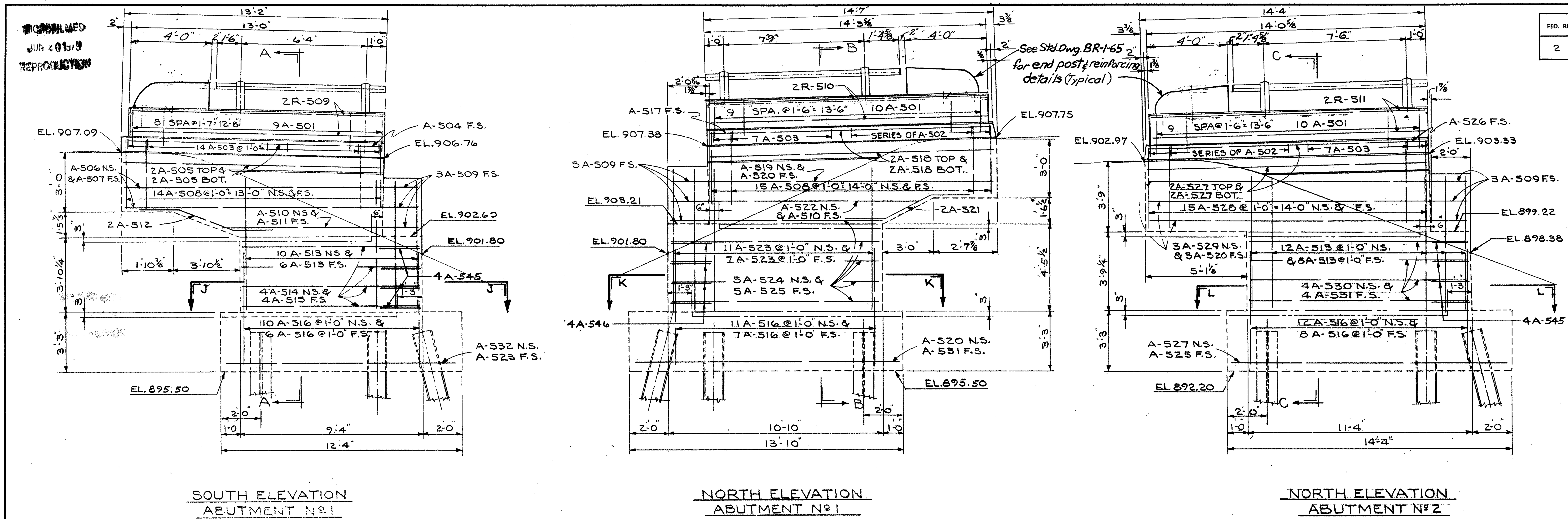
BRIDGE № MAH-7-1528 L
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DNG	JLH		HGH	RLH	2/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

198/206

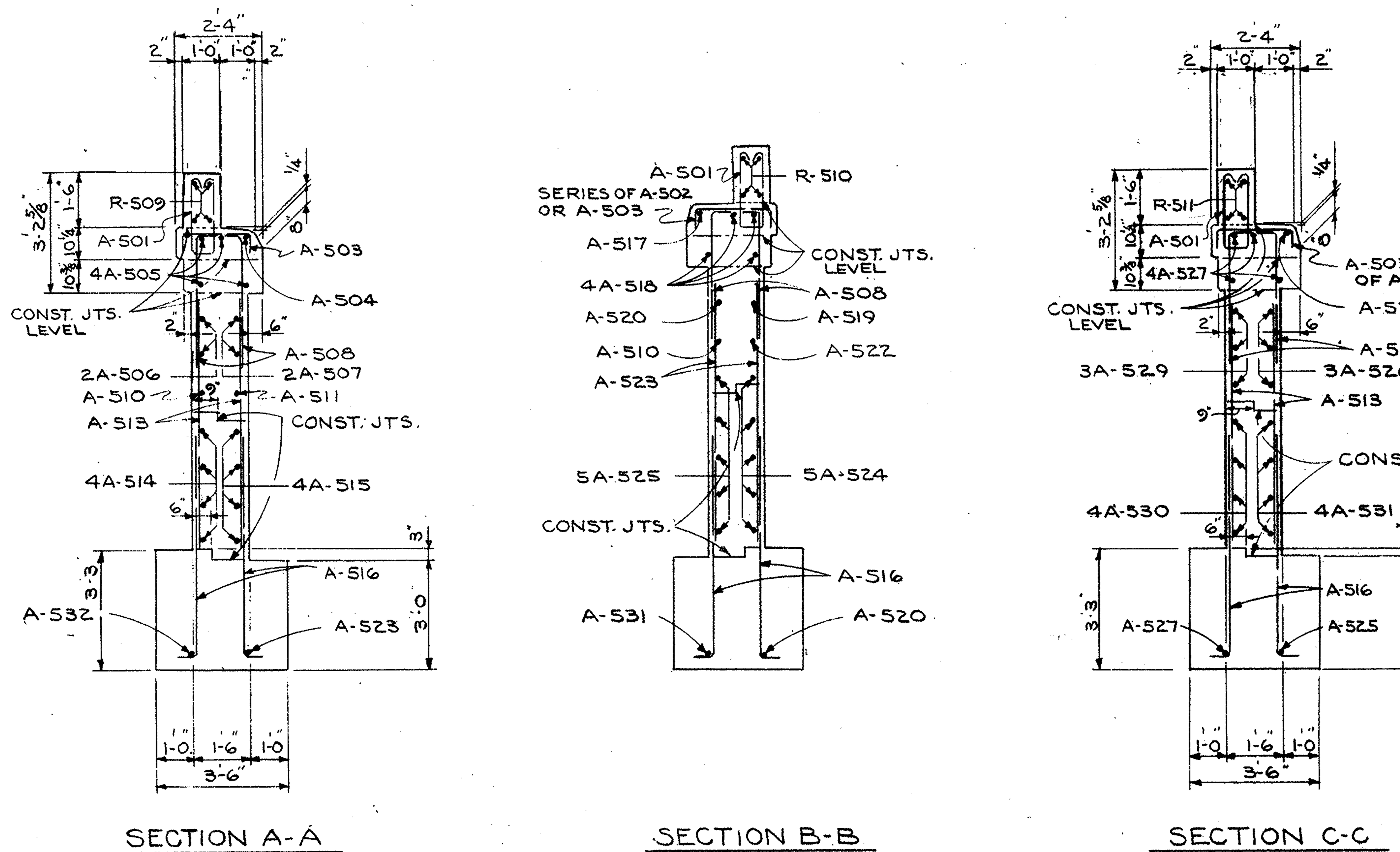
MAH-7-1495



SOUTH ELEVATION
ABUTMENT No 1

NORTH ELEVATION
ABUTMENT No 1

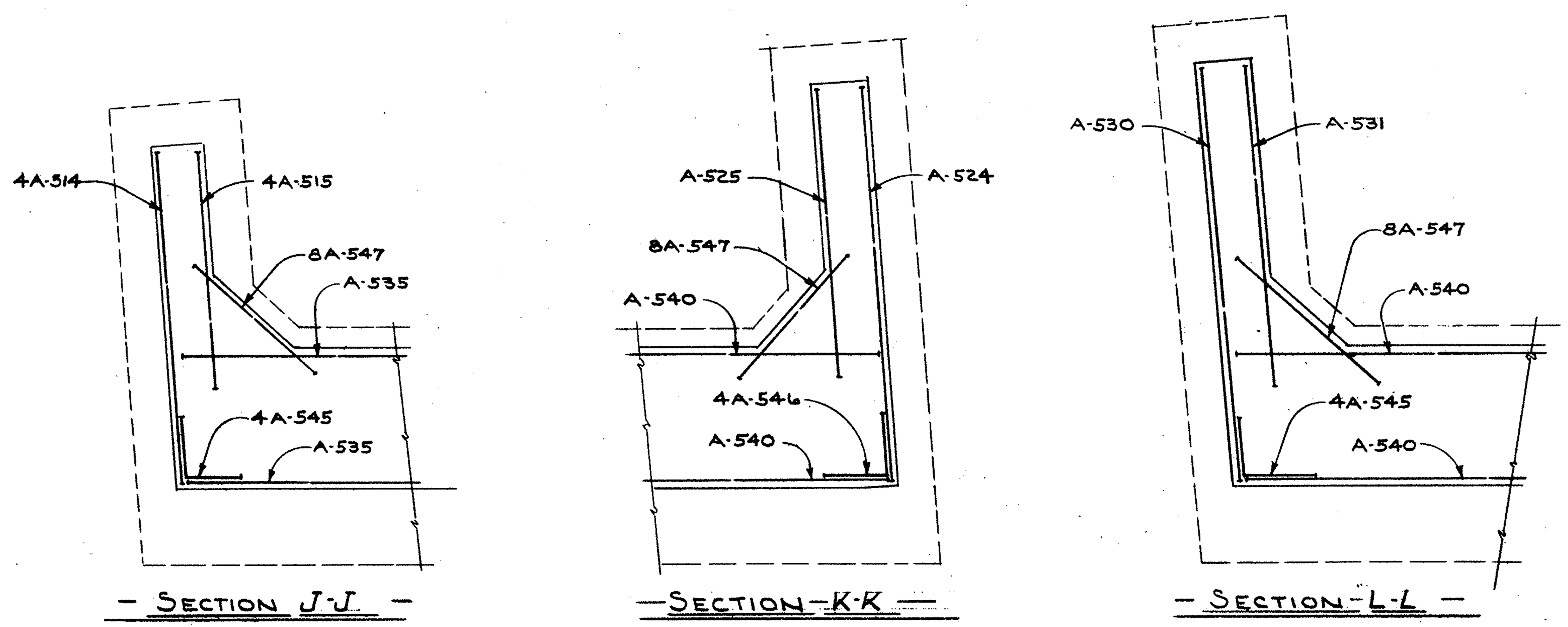
NORTH ELEVATION
ABUTMENT No 2



SECTION A-A

SECTION B-B

SECTION C-C



- SECTION J-J -

- SECTION K-K -

- SECTION L-L -

SEE SHEET #139 FOR NOTES #3, 12, 18, 19 & 22
SEE TYPICAL BRIDGE DETAILS #1, 12 & 13 - SHEET #140

STATE OF OHIO
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ABUTMENT No 1 & 2 DETAILS

BRIDGE No MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JLH		HGH	RDH	3/21/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-14.95

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PIER Nº 1

BRIDGE Nº MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JNP		Hager	RDH	2/21/63	

SEE SHEET #139 FOR NOTES # , 12 & 21

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

200
206

MAH-7-1495

ALL PIER PILES TO BE 10 BP-42

SEE SHEET #139 FOR NOTES # 12 & 22

STATE OF OHIO
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BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
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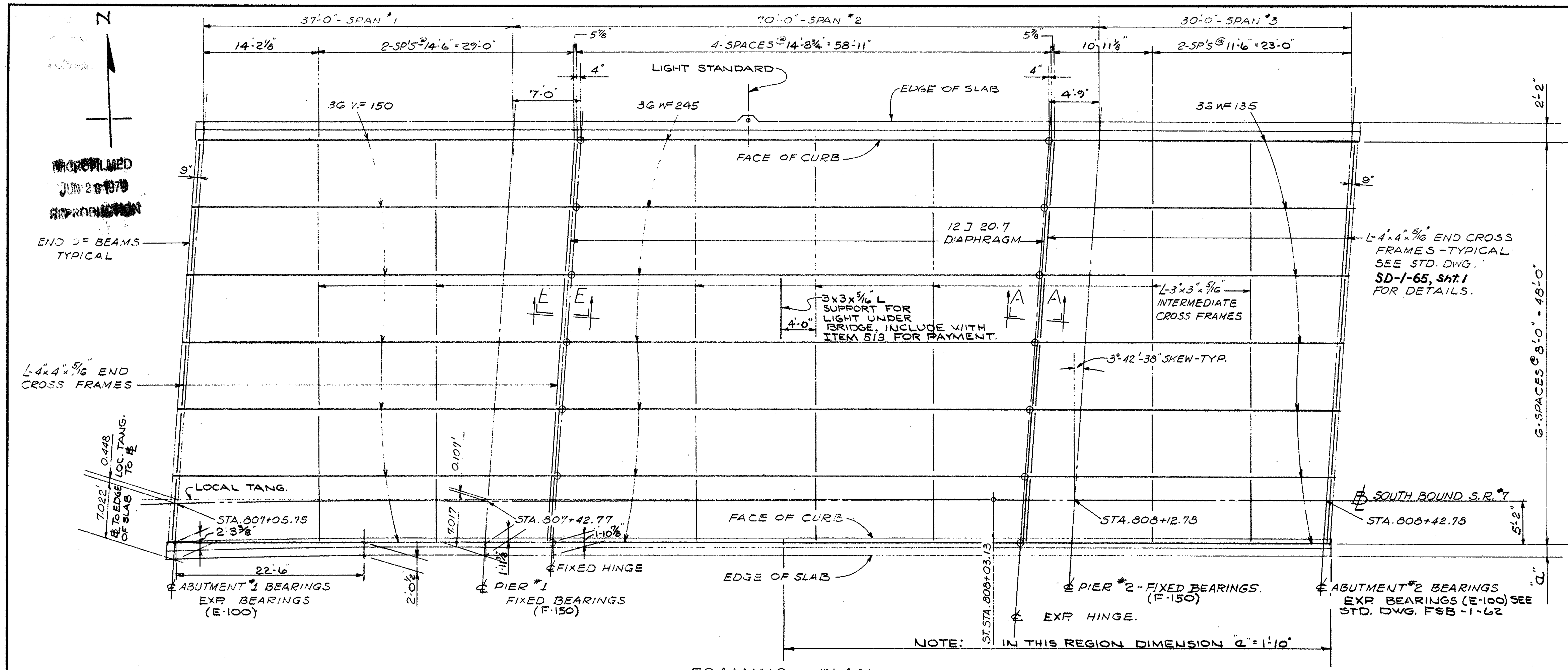
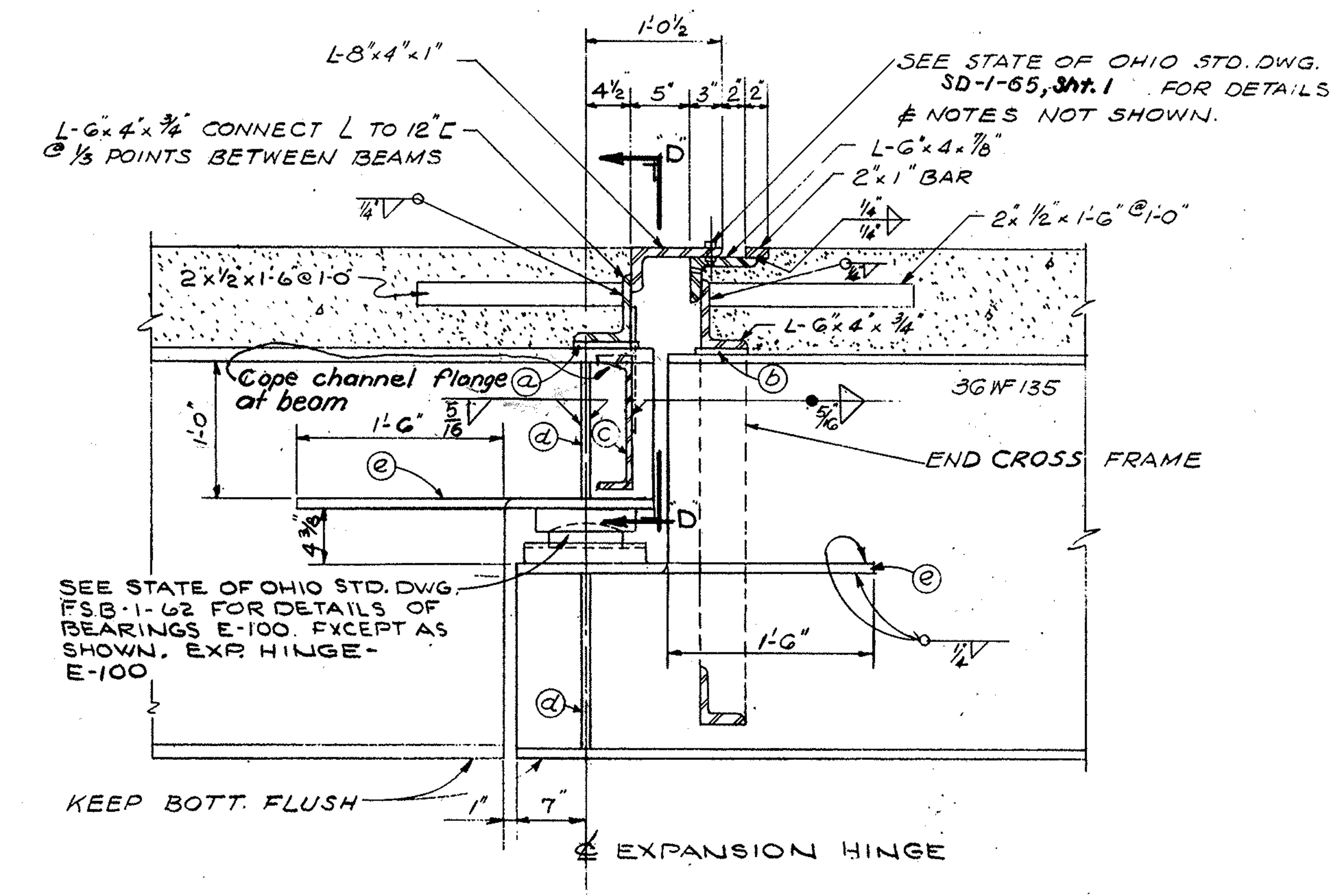
PIER № 2
BRIDGE № MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 TO STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JNP		HGH	RDH	2/21/63	

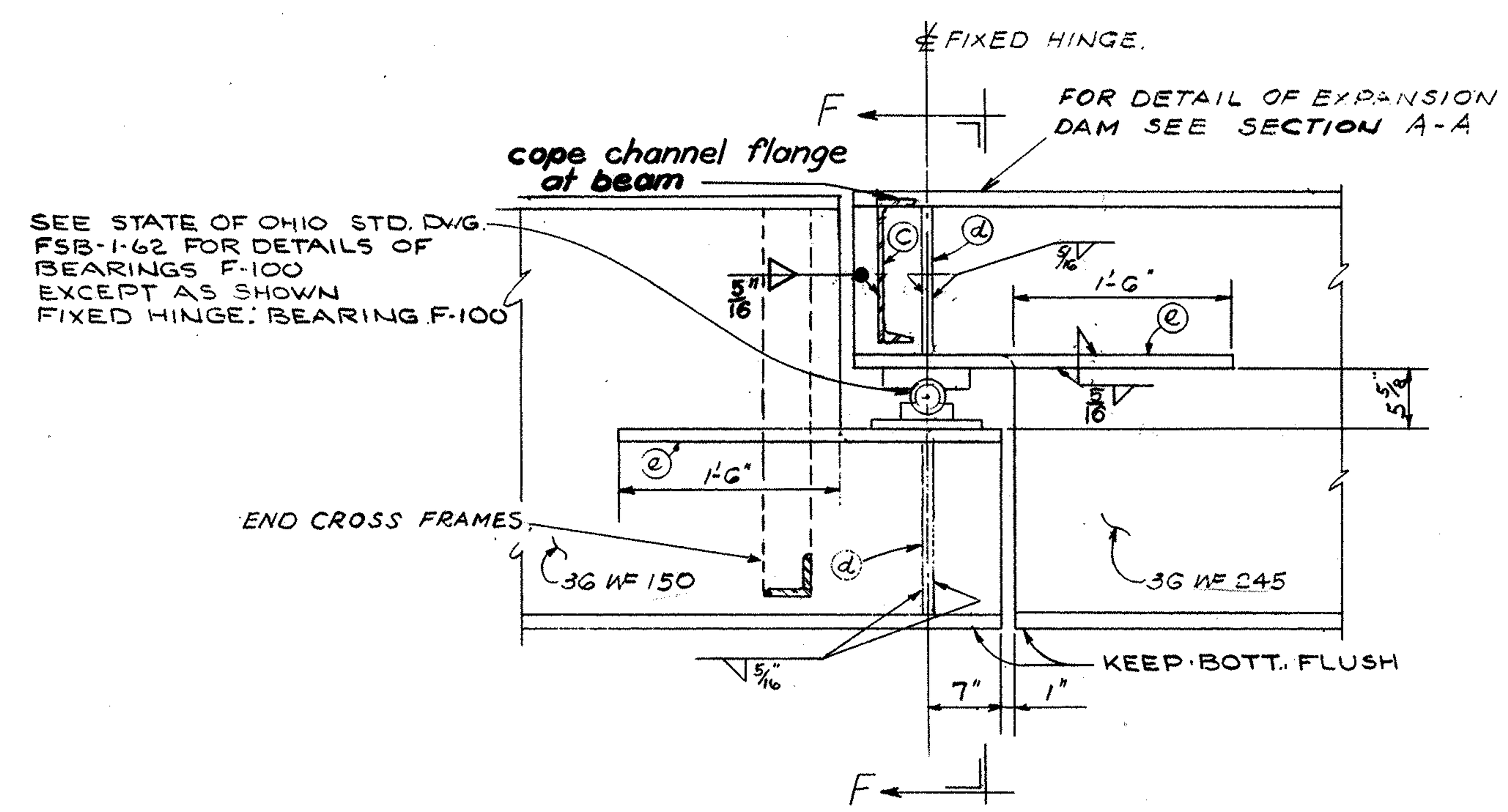


FRAMING PLAN

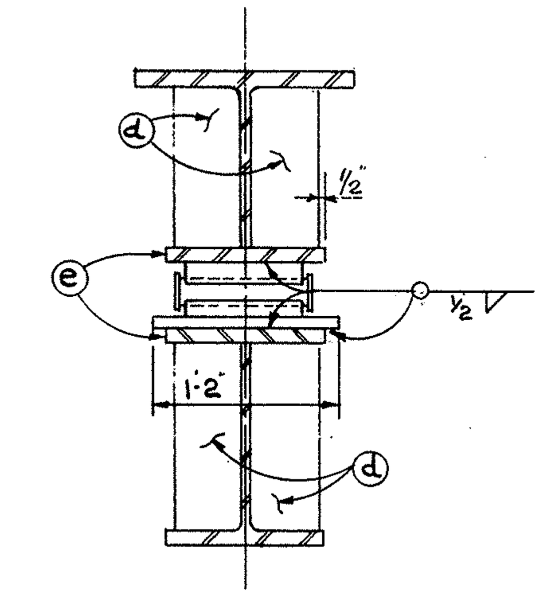


ⓐ BEVEL FILL VARY THICKNESS
ⓑ BEVEL FILL ½" THICK @ ℄ BEAM
ⓒ 12 E @ 35.0#
ⓓ ⅞" PLATE
ⓔ 12"x1" SLOTTED PLATE (SEE DETAIL BELOW)

— SECTION "A-A" —



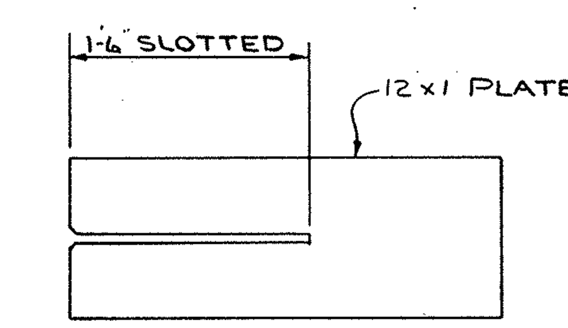
SECTION E-E



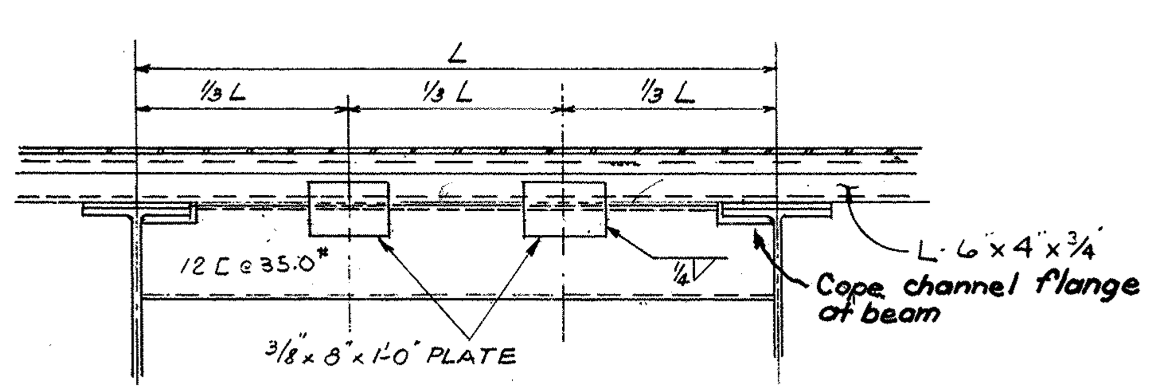
SECTION F-F

— DEFLECTION AND CAMBER —

SPAN	#1	#2	#3
DEFLECTION DUE TO WEIGHT OF STEEL	.004"	.146"	.002"
DEFLECTION DUE TO REMAINING DEAD LOAD	.022"	.529"	.010"
CONVEXITY REQUIRED FOR VERTICAL CURVE	—	—	—
SUM OF DEFLECTION AND CONVEXITY	.026"	.675"	.012"
REQUIRED CAMBER	0	0	0



— DETAIL OF PLATE ⓔ —



SECTION D-D

Specification reference M-7.11 on Std. Dwg. FSB-1-62 shall be changed to 711.17

SEE SHEET #139 FOR NOTES #5, 8, 15 & 18.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

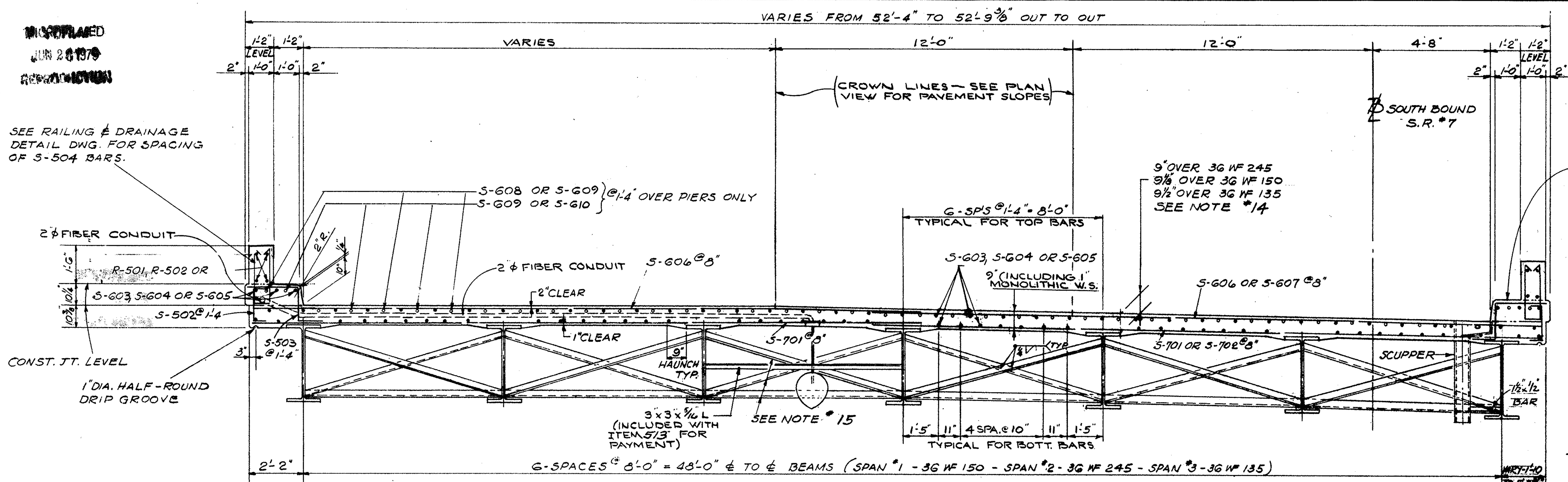
BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

FRAMING PLAN
BRIDGE No MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN — MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	J.K.		HGH.	RDH	2/21/63	

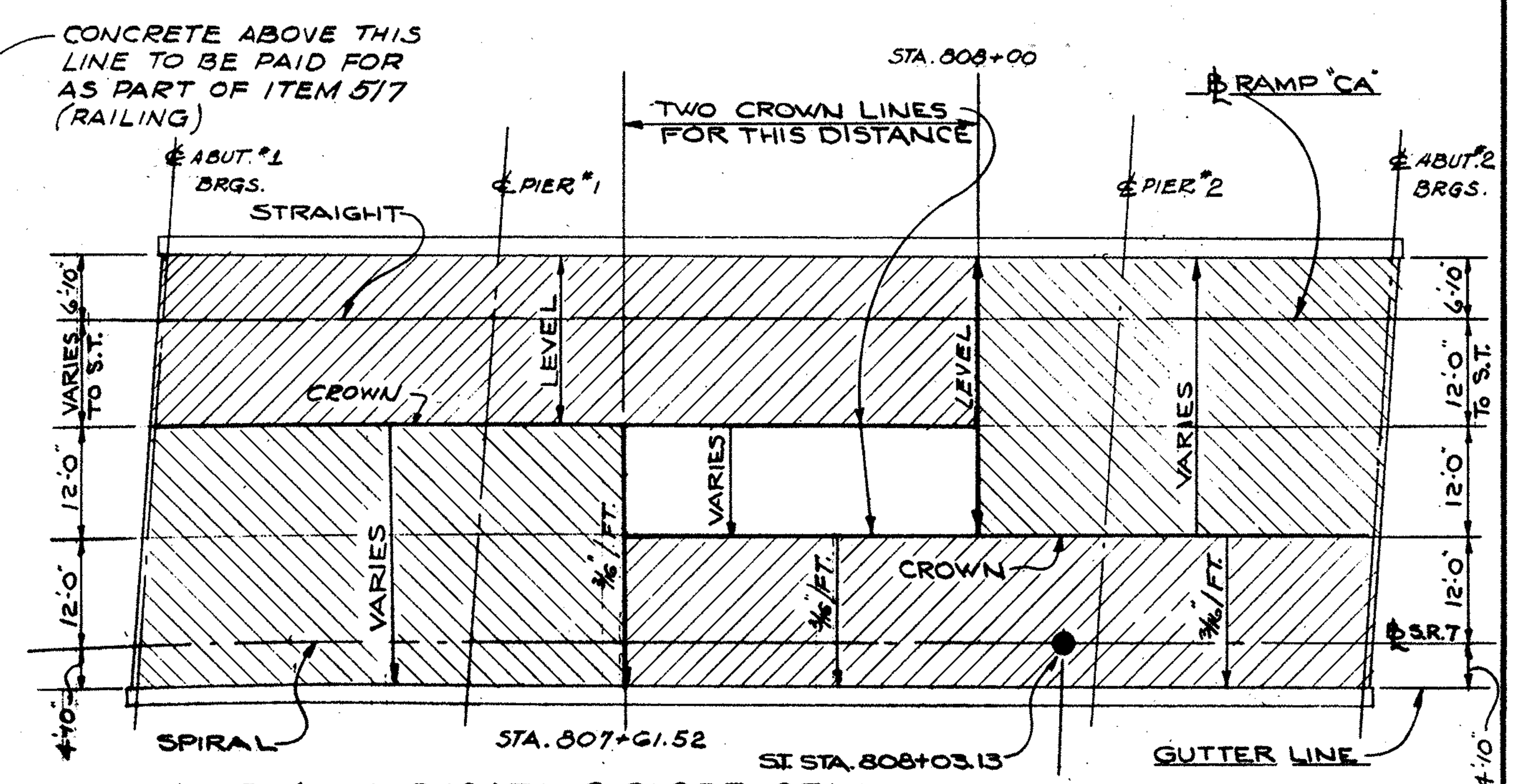
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

MAH-7-14.95

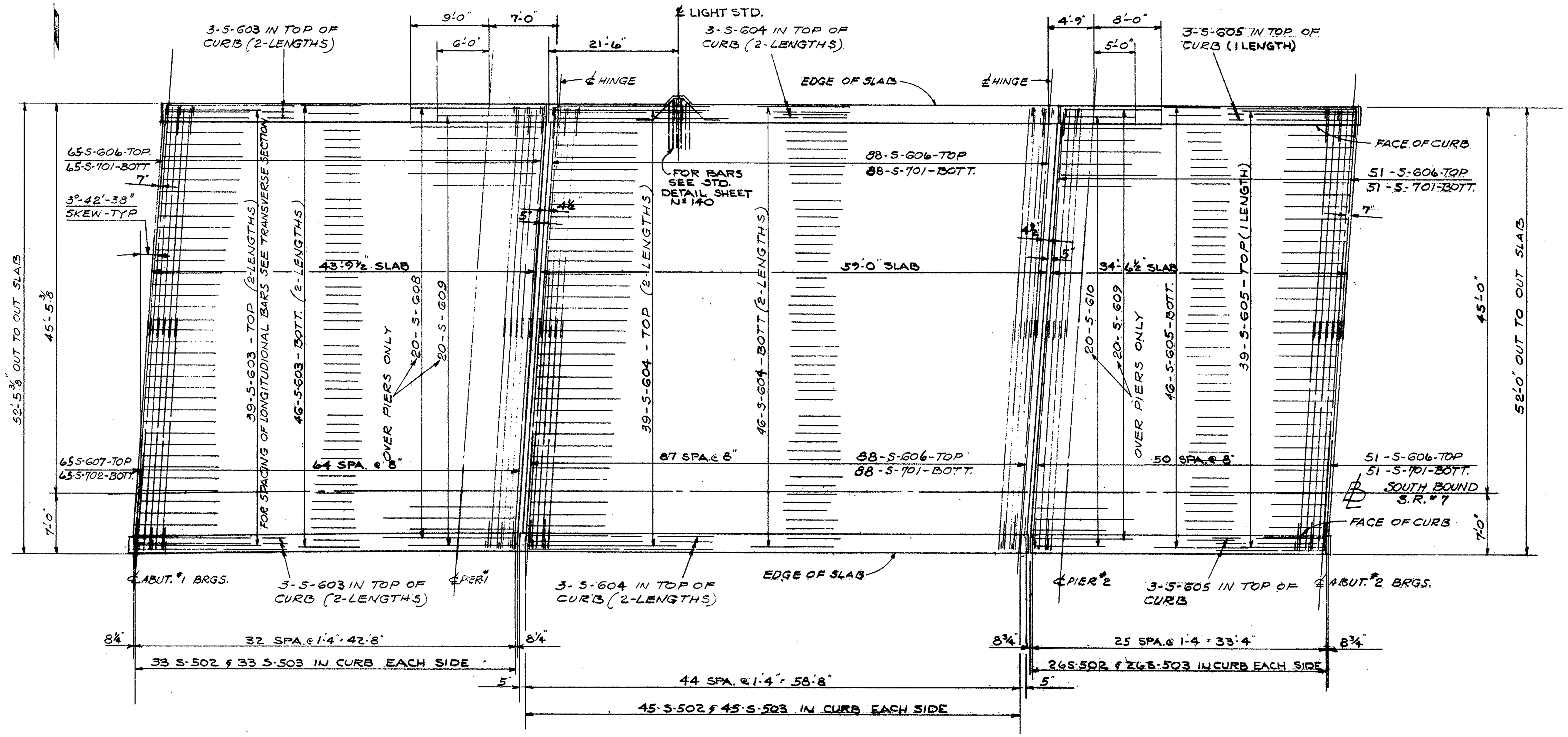


TRANSVERSE SECTION

(DIMENSIONS SHOWN ARE NORMAL TO BEAMS)



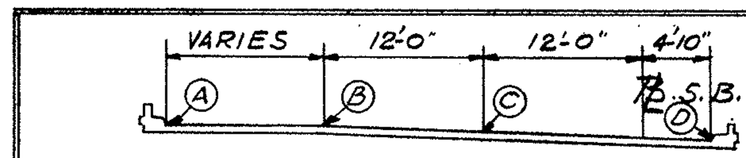
PLAN INDICATING SLOPE OF FINISHED SLAB



SLAB REINFORCING PLAN

— SOUTH BOUND LANE —

FINISHED PAVEMENT ELEVATIONS



SEE PLAN INDICATING SLOPE OF FINISHED SLAB

LOCATION	ELEVATIONS A	B	C	D
STA 807+00	907.62	907.62	907.31	906.86
STA. 807+25	906.88	906.88	906.62	906.26
STA. 807+50	906.15	906.15	905.94	905.65
STA. 807+75	905.42	905.42	905.29	905.02
STA. 808+00	904.66	904.66	904.66	904.39
STA. 808+25	903.94	903.99	904.03	903.76
STA. 808+50	903.23	903.33	903.40	903.13
ON ⊄ BRG. ABUT #1	907.35	907.39	907.13	906.74
ON ⊄ PIER #1	906.27	906.31	905.91	905.83
ON ⊄ PIER #2	904.21	904.28	904.32	904.07
ON ⊄ BRG. ABUT #2	903.36	903.48	903.56	903.32

SEE SHEET #139 FOR NOTES #2, 11, 13, 14 & 15
SEE TYPICAL BRIDGE DETAIL #11 SHEET #140

STATE OF OHIO
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BUREAU OF BRIDGES

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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SLAB DETAILS

BRIDGE Nº MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

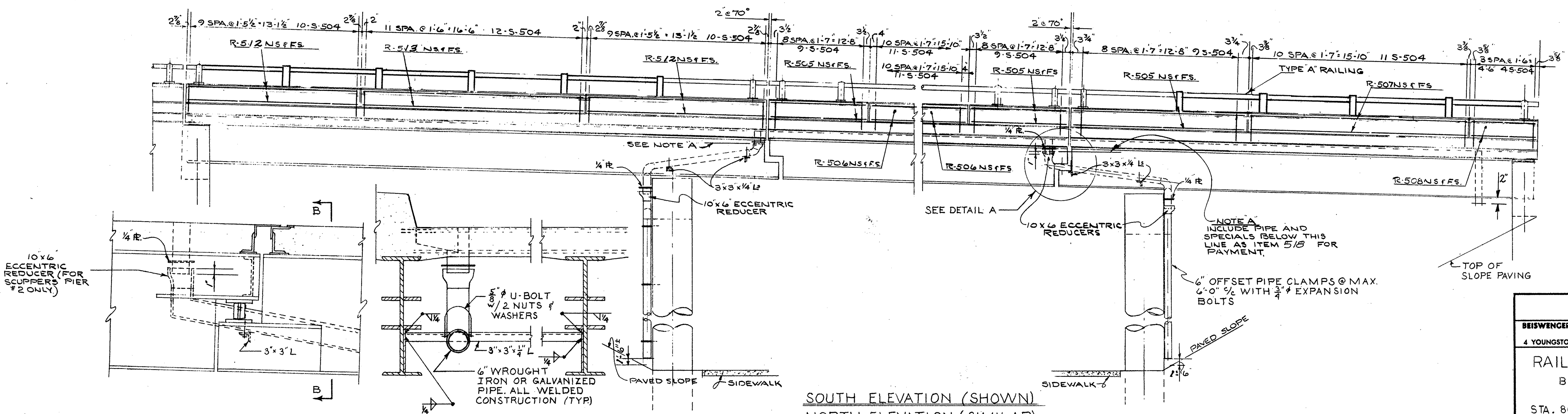
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	J.K		HGH	RBM	2/21/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

MAH-7-14.95

203/206

— PARTIAL DECK PLAN —



SOUTH ELEVATION (SHOWN)
NORTH ELEVATION (SIMILAR)

— DETAIL "A" —

— SECTION B-B —

SEE SHEET #139 FOR NOTES #5, 16, 25, 26 & 27

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD — YOUNGSTOWN 14, OHIO

RAILING & DRAINAGE DETAILS

BRIDGE Nº MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN , MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	EFV		HGH	RBH	4/2/63	

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

204 / 206

MAH-7-1495

ABUTMENT #1 & #2

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	SERIES INCREMENTS	WEIGHT LBS.
A-501	29	5'-10"	5	8"	2'-2"	5"			176
A-502	2 SETS OF 8	1'-9⅜" TO 2'-7"	3	1'-0⅜" TO 1'-10"	6"			1⅜"	36
A-503	28	2'-7"	3	1'-10"	6"				75
A-504	1	12'-10"	16	11'-0"	1'-10"	2'-9"			13
A-505	4	12'-10"	ST.						54
A-506	2	14'-7"	ST.						30
A-507	2	12'-0"	ST.						25
A-508	58	3'-11"	1	6"	3'-6"				237
A-509	9	3'-0"	ST.						28
A-510	2	9'-9"	ST.						20
A-511	1	6'-0"	ST.						6
A-512	2	8'-0"	11	2'-0"	4'-0"	2'-0"	1'-3½"		17
A-513	36	6'-6"	ST.						244
A-514	4	8'-10"	ST.						37
A-515	4	6'-4"	ST.						26
A-516	54	6'-11"	1	6"	6'-6"				390
A-517	1	14'-0"	16	11'-0"	3'-0"	2'-9"			15
A-518	4	14'-2"	ST.						59
A-519	1	16'-3	ST.						17
A-520	5	13'-2"	ST.						69
A-521	2	7'-3"	11	2'-0"	3'-3"	2'-0"	1'-4"		15
A-522	1	12'-6"	ST.						13
A-523	20	7'-0"	ST.						146
A-524	17	10'-6"	ST.						186
A-525	6	7'-9"	ST.						49
A-526	1	13'-10"	16	11'-0"	2'-10"	2'-9"			14
A-527	5	13'-10"	ST.						72
A-528	30	4'-5"	1	6"	4'-0"				138
A-529	3	16'-0"	ST.						50
A-530	4	11'-0"	ST.						46
A-531	5	8'-3"	ST.						43
A-532	1	11'-10"	ST.						12
A-533	3	8'-2"	3	3'-5"	2'-6"				26
A-534	16	27'-0"	ST.						451
A-535	16	27'-3"	ST.						455
A-536	2	7'-6"	ST.						16
A-537	74	7'-2"	3	3'-5"	2'-0"				553
A-538	74	7'-7"	1	1'-0"	6'-8"				586
A-539	75	9'-2"	3	5'-5"	2'-0"				717
A-540	30	24'-0"	ST.						751
A-541	1	17'-6"	ST.						18
A-542	2	4'-3"	13	1'-6"	—	1'-2"	1'-10"		9
A-543	2	4'-4"	18	1'-5"	10"	11½"	11½"		9
A-544	4	3'-3"	1	6"	2'-10"				14
A-545	8	3'-11"	19	2'-0"	2'-0"	1 9/16"			33
A-546	4"	3'-11"	20	2'-0"	2'-0"	1 9/16"			16
A-547	24	4'-0"	ST.						100
A-548	3	12'-2"	3	7'-5"	2'-6"				38
A-549	2	10'-6"	21	7'-3"	1'-9"	1⅜"			22
A-601	16	13'-2"	3	1'-5"	6'-0"				316
A-602	74	13'-8"	4	6'-3"	5'-5"	2'-3"			1519
A-603	84	14'-10"	7	4'-6"	1'-5"	6'-0"	11"		1871
A-604	3	14'-0"	3	11"	6'-8"				63
A-605	3	12'-2"	3	7'-5"	2'-6"				55
A-801	14	28'-2"	ST.						1053
A-802	14	27'-7"	ST.						1031
A-803	2	6'-1"	11	1'-9"	2'-1½"	2'-6"	1'-6"		32
ABUTMENT #1 & #2 TOTAL								12,110	LBS

PIER #1 & #2

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	SERIES INCREMENTS	WEIGHT LBS.
P-501	108	7'-10"	3	2'-8"	2'-8"				882
P-601	8	25'-1"	ST.						301
P-701	89	13'-4"	2	1'-5"	10'-6"				2425
P-702	88	12'-6"	2	1'-5"	9'-8"				2248
P-901	24	15'-2"	ST.						1238
P-902	48	6'-4"	1	1'-0"	5'-7"				1034
P-903	12	20'-0"	ST.						816
P-904	12	18'-0"	ST.						734
P-1001	8	12'-2¼"	9	4'-0"	4'-2¼"				420
P-1002	28	8'-0"	1	3'-3"	5'-0"				964
P-1003	32	25'-8"	ST.						3534
P-1004	3	28'-1"	ST.						363
P-1005	2	9'-0"	ST.						77
P-1006	8	12'-6"	ST.						430
P-1101	12	15'-8"	ST.						999
P-1102	12	14'-6"	ST.						924
P-1103	48	7'-0"	1	1'-0"	6'-3"				1785
P-1104	12	23'-5"	ST.						1493
P-1105	12	17'-3"	ST.						1105

PIER #1 & #2 TOTAL = 23,890 LBS. (INCLUDING SPIRALS)

SUPERSTRUCTURE

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	SERIES INCREMENTS	WEIGHT LBS.
S-501	2	9'-3"	15	1'-7"	2'-7½"	1'-0"	1'-10"		19
S-502	208	2'-2"	3	1'-4"	6"				470
S-503	208	5'-2"	13	2'-0"	—	1'-4"	2'-0"		1121
S-504	192	5'-2"	5	8"	2'-0"	5"			1035
S-601	10	4'-0"	ST.						60
S-602	2	10'-5"	14	3'-0"	2'-2"	4"			31
S-603	182	23'-0"	ST.						6287
S-604	182	30'-6"	ST.						8338
S-605	91	36'-0"	ST.						4921
S-606	343	26'-11"	ST.						13,867
S-607	65	27'-5"	ST.						2677
S-608	20	15'-8"	6	15'-0"	8"				471
S-609	40	12'-8"	6	12'-0"	8"				761
S-610	20	9'-8"	6	9'-0"	8"				290
S-701	343	27'-1"	ST.						18988
S-702	65	27'-7"	ST.						3665

SUPERSTRUCTURE TOTAL = 63,001 LBS.

RAILING ⊗

MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	SERIES INCREMENTS	WEIGHT LBS.
R-501	2	9'-3"	15	1'-7"	2'-7½"	1'-0"	1'-10"		
R-502	1	7'-4"	15	1'-7"	9"	2'-8"	6¾"		
R-503	9	4'-2"	BT.‡						
R-504	6	5'-4"	BT.‡						
R-505	24	12'-11"	ST.						
R-506	16	16'-2"	ST.						
R-507	8	16'-0"	ST.						
R-508	8	4'-9"	ST.						
R-509	4	12'-8"	ST.						
R-510	4	13'-11"	ST.						
R-511	4	13'-8"	ST.						
R-512	16	13'-3"	ST.						
R-513	8	16'-6"	ST.						

REPLACEMENT BARS

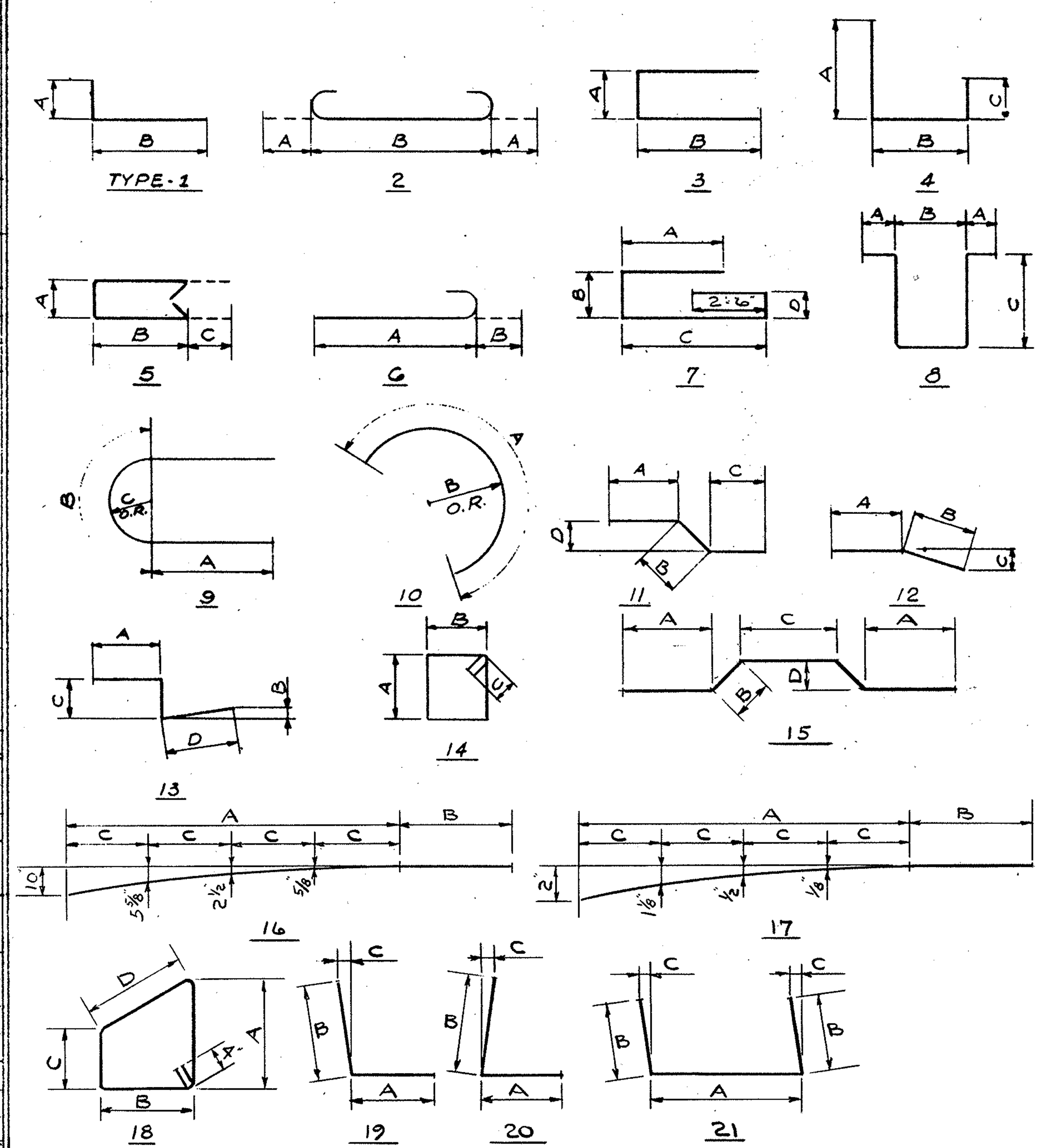
MARK	NO. REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B	DIMENSIONS C	DIMENSIONS D	SERIES INCREMENTS	WEIGHT LBS.
RE-401	1	6'-3"	10	5'-3"	1'-4"				
RE-501	1	6'-7"	ST.						
RE-601	3	6'-11"	ST.						
RE-701	2	7'-2"	ST.						
RE-801	1	7'-6"	ST.						
RE-901	1	7'-10"	ST.						
RE-1001	1	8'-2"	ST.						
RE-1101	1	8'-6"	ST.						

SPIRAL REINFORCING SCHEDULE

MARK	NO. REQ'D	CORE DIA. OF SPIRAL	LENGTH OF SPIRAL	PITCH	NO. OF TURNS	WEIGHT LBS.
SP-401	3	2'-8"	12'-2⅝"	4½"	36	594
SP-402	1	2'-8"	11'-2⅝"	4½"	33	182
SP-403	1	2'-8"	19'-11¾"	4½"	56	308
SP-404	1	2'-8"	16'-11¾"	4½"	48	264
SP-405	1	2'-8"	14'-11¾"	4½"	43	237
SP-406	1	2'-8"	13'-11¾"	4½"	40	221
SPACERS	32					310
			TOTAL SPIRALS			2116

GRAND TOTAL 99001 LBS

‡ See Std Dwg. BR-1-65 for bending details



REINFORCING NOTES

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.
THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE TURNS (TOTAL NUMBER OF CLOSED COILS) EXPRESSED AS THE NEAREST WHOLE NUMBER.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS, BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509
ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.
FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS WEIGHING APPOX. 0.68 LBS. PER LINEAL FT. OF SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A NO. 6 SIZE BAR AND P-1001 IS A NO. 10 SIZE BAR.

⊗ RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

STATE OF OHIO
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BUREAU OF BRIDGES

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4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

REINFORCING SCHEDULE

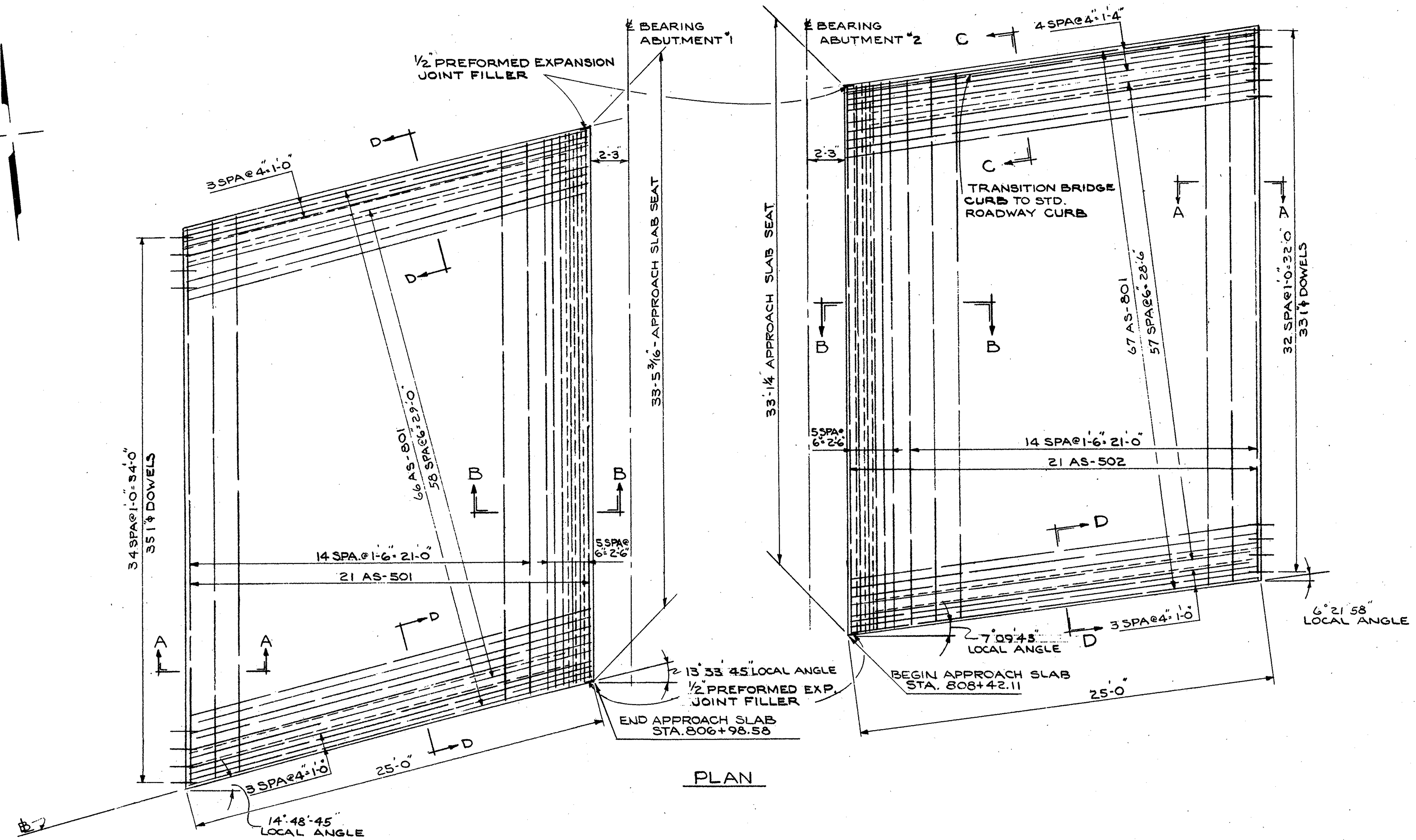
BRIDGE Nº MAH-7-1528 L.
OVER SOUTH AVENUE
STA. 807+03.49 To STA. 808+45.03
YOUNGSTOWN MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	LNP		Hager	RDH	2/21/63	

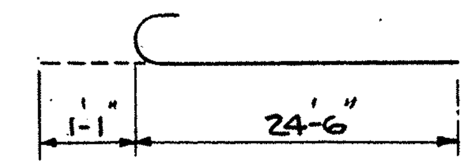
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

205
206

MAH-7-1495



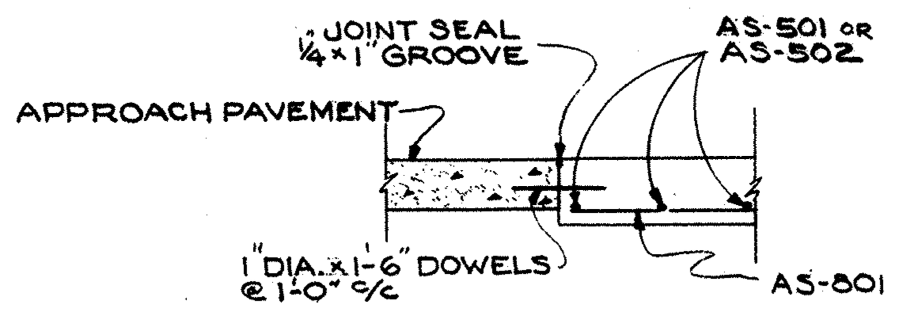
PLAN



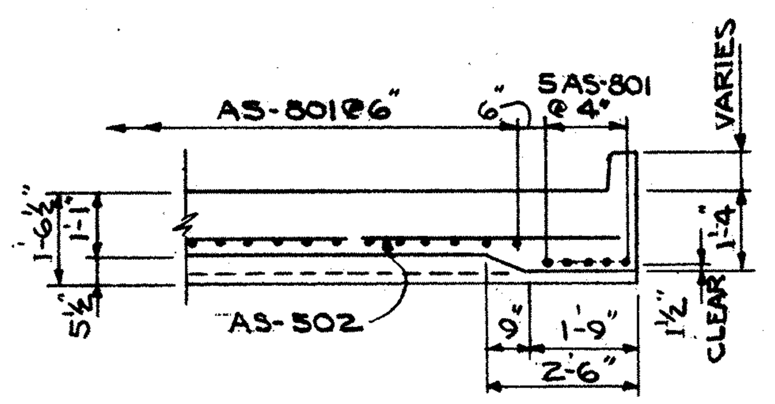
AS-801

REINFORCING STEEL SCHEDULE				
MARK	No. REQD	LENGTH	WEIGHT	SHP
AS-501	21	33'-1"	725	ST
AS-502	21	32'-8"	716	ST
AS-801	133	25'-7"	9085	BT
TOTAL =			10,526 #	

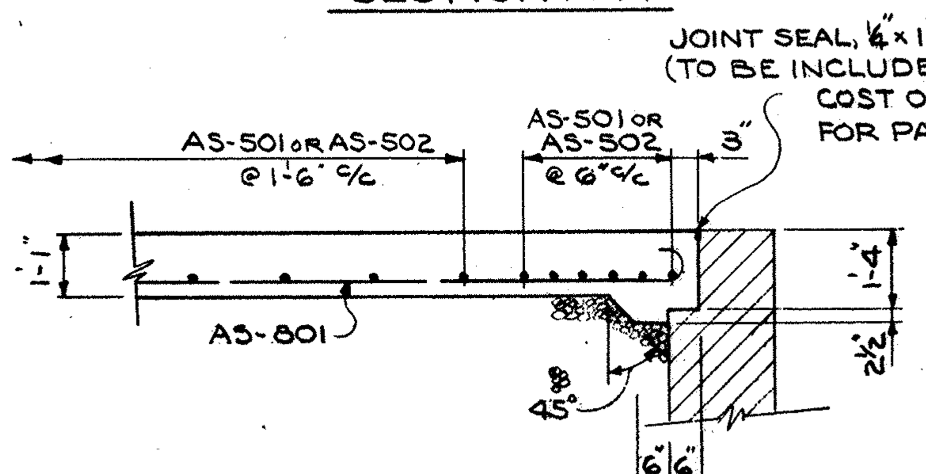
183 SQ. YDS CLASS C CONCRETE
68-1" DIA.×1'-6" DOWELS = 273#
2 SQ.FT. ½" PREFORMED EXPANSION JOINT FILLER.
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER FOR EXAMPLE AS-801 IS A No. 8 SIZE BAR.



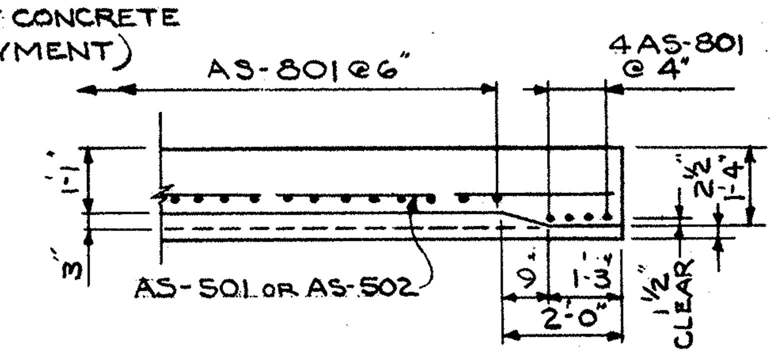
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

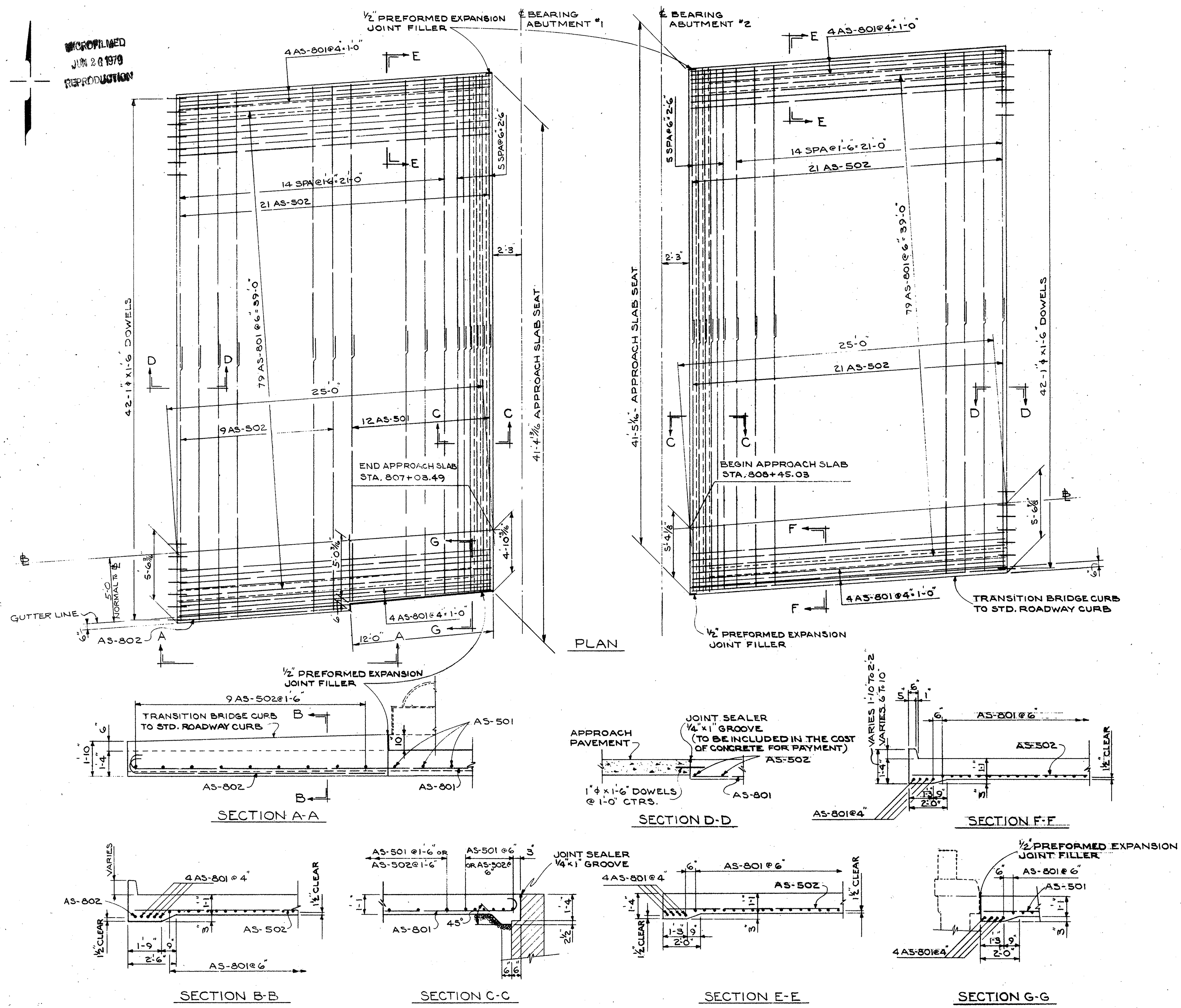
SOUTH AVENUE N.B. LANES
No. MAH-7-1528
APPROACH SLAB
YOUNGSTOWN
MAHONING COUNTY

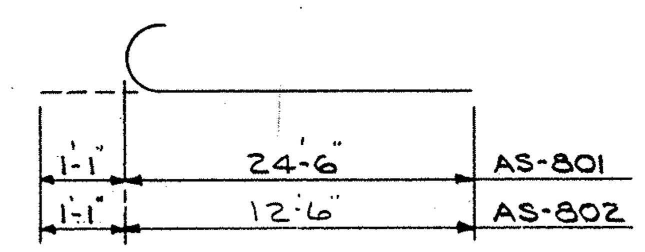
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JLH		HGH	RDH.	7/15/63	

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11)238 U-524(9)

206/206

MAH-7-1495





REINFORCING STEEL SCHEDULE

MARK	Nº REQD.	LENGTH	WEIGHT	SHP
AS-501	12	21'-6"	269	ST
AS-502	72	22'-0"	1652	ST
AS-801	174	25'-7"	11,884	BT
AS-802	1	13'-7"	37	BT
TOTAL:			13,842	

230 SQ. YDS CLASS C CONCRETE
84-1"ϕ x 1'-6" DOWELS = 336#
12 SQ. FT. 1/2" PREFORMED EXPANSION JOINT FILLER.

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER FOR EXAMPLE; AS-801 IS A Nº8 SIZE BAR.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ASSOCIATES AND ROBERT J. SCHOMER
CONSULTING ENGINEERS
4 YOUNGSTOWN ROAD YOUNGSTOWN 14, OHIO

SOUTH AVENUE S.B. LANES
Nº MAH-7-1528
APPROACH SLAB
YOUNGSTOWN
MAHONING COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ONG	JLH		HGH	RDH	2/15/63	

CENTERLINE PLAT

MAH.~7~14.95

MAHONING COUNTY

CITY OF YOUNGSTOWN

FED. RD.	STATE	PROJECT	

111
206

YOUNGSTOWN EXPRESSWAY

LIMITED ACCESS HIGHWAY

I HEREBY CERTIFY THIS PLAT TO BE CORRECT.
SIGNED BY [signature] ,713
ROBERT J. SCHOMER~REG. LAND SURVEYOR

RECEIVED FOR RECORD ________ 1962
RECORDED: VOL. ____, PAGE ____, OF THE MAHONING COUNTY RECORDS

________ RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY [signature]
CITY ENGINEER
SIGNED BY ____________
DIVISION ENGINEER

①
CURVE DATA
Δ = 8°00'
R = 3819.72'
Dc = 1°30'
T = 267.10'
Lc = 533.33'
E = 9.33'

②
SPIRAL DATA
θs = 7°30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
Xc = 299.49'
Yc = 13.07'
K = 149.91'
p = 3.27'

③
CURVE DATA
Δ = 78°54'52"
Δc = 63°54'52"
R = 1145.92'
Dc = 5°00'
Ts = 1095.79'
Es = 342.48'
Lc = 1278.29'

④
SPIRAL DATA
θs = 7°30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
Xc = 299.49'
Yc = 13.07'
K = 149.91'
p = 3.27'

⑤
SPIRAL DATA
θs = 7°30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
Xc = 299.49'
Yc = 13.07'
K = 149.91'
p = 3.27'

⑥
CURVE DATA
Δ = 96°26'54"
Δc = 81°26'54"
R = 1145.92'
Dc = 5°00'
Ts = 1436.30'
Es = 519.03'
Lc = 1628.97'

⑦
SPIRAL DATA
θs = 7°30'
Ls = 300'
L.T. = 200.18'
S.T. = 100.16'
Xc = 299.49'
Yc = 13.07'
K = 149.91'
p = 3.27'

⑧
SPIRAL DATA
θs = 3°00'
Ls = 200'
L.T. = 133.35'
S.T. = 66.68'
Xc = 199.95'
Yc = 3.49'
p = 0.87'

⑨
CURVE DATA
Δ = 6°32'02"
R = 1909.86'
Dc = 3°00'
T = 109.02'
Lc = 217.80'

⑩
CURVE DATA
Δ = 13°57'42"
R = 2864.79'
Dc = 2°00'
T = 350.64'
Lc = 698.08'
E = 21.38'

⑪
CURVE DATA
Δ = 21°55'20"
R = 2291.83'
Dc = 2°30'
T = 443.87'
Lc = 876.89'
E = 42.49'

⑫
SPIRAL DATA
Δ1+Δ2 = 8°30'
Ls = 200'
T1 = 113.92'
T2 = 86.45'
Δ1 = 2°30'
Δ2 = 6°00'
p0 = 1.02'

⑬
CURVE DATA
Δ = 32°15'53"
R = 954.93'
Dc = 6°00'
T = 276.21'
Lc = 537.75'
E = 39.14'

⑭
SPIRAL DATA
θs = 12°00'
Ls = 400'
L.T. = 267.28'
S.T. = 133.89'
Xc = 398.25'
Yc = 27.84'
K = 199.71'
p = 6.97'

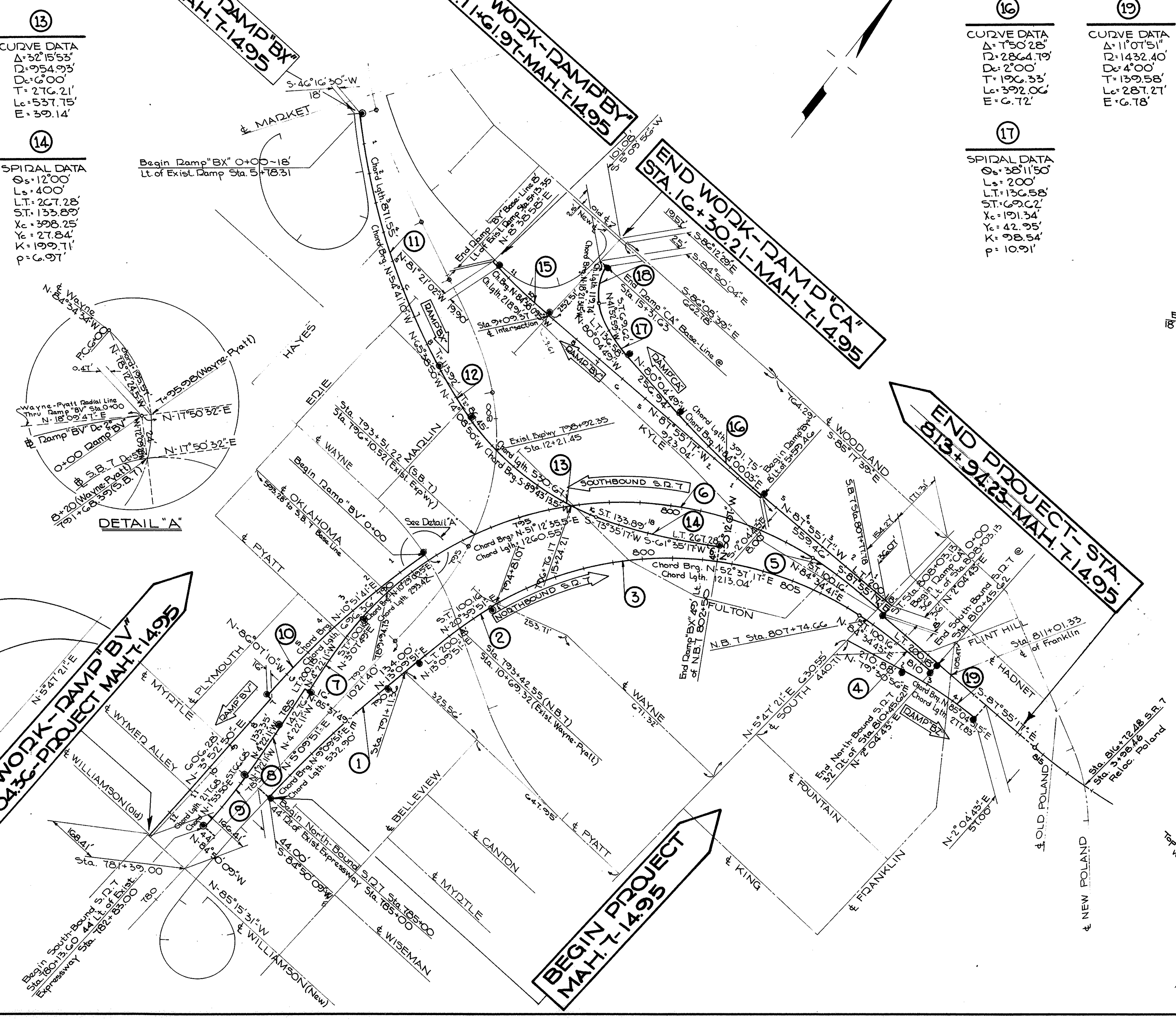
⑮
CURVE DATA
Δ = 6°34'15"
R = 1909.86'
Dc = 3°00'
T = 109.63'
Lc = 219.03'
E = 3.14'

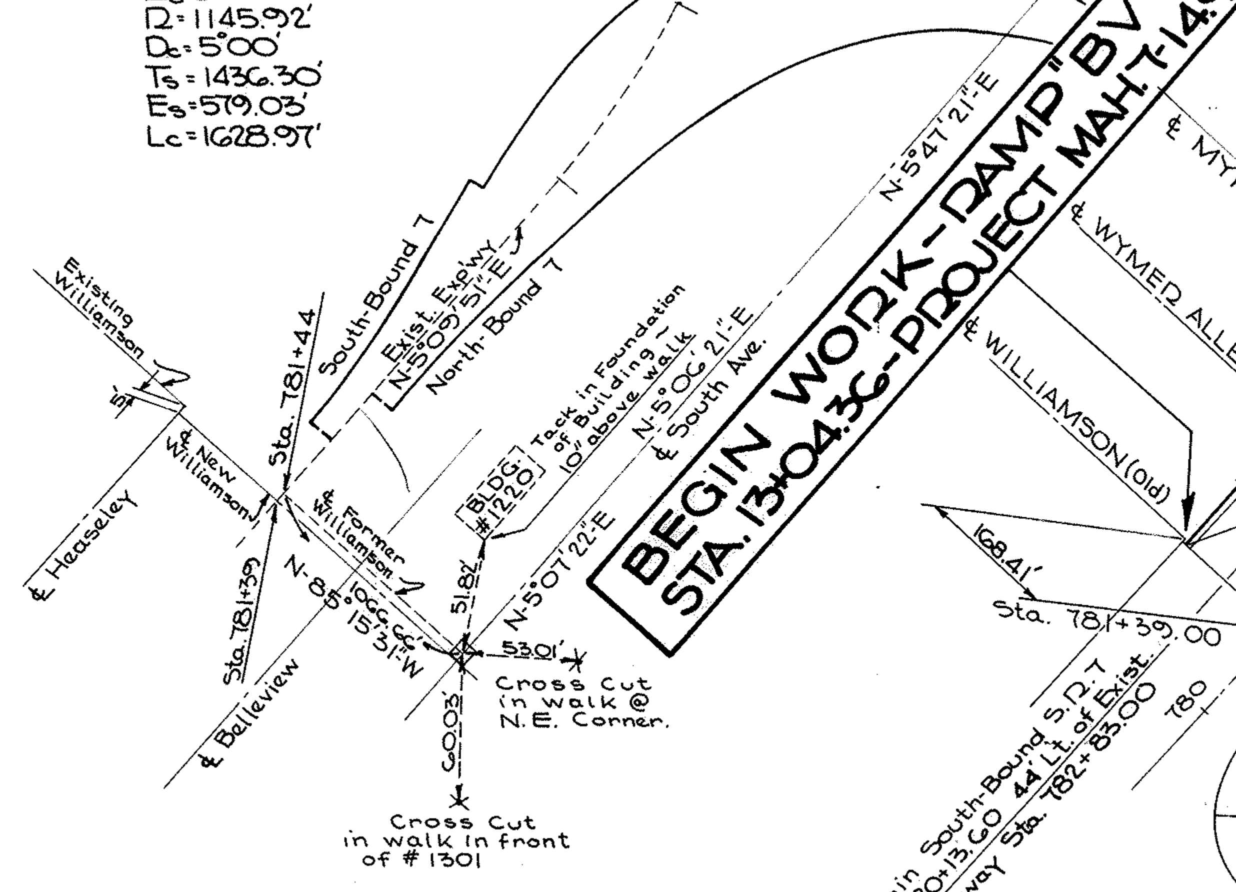
⑯
CURVE DATA
Δ = 7°50'28"
R = 2864.79'
Dc = 2°00'
T = 196.33'
Lc = 392.06'
E = 6.72'

⑰
SPIRAL DATA
θs = 38°11'50"
Ls = 200'
L.T. = 136.58'
S.T. = 69.62'
Xc = 191.34'
Yc = 42.95'
K = 98.54'
p = 10.91'

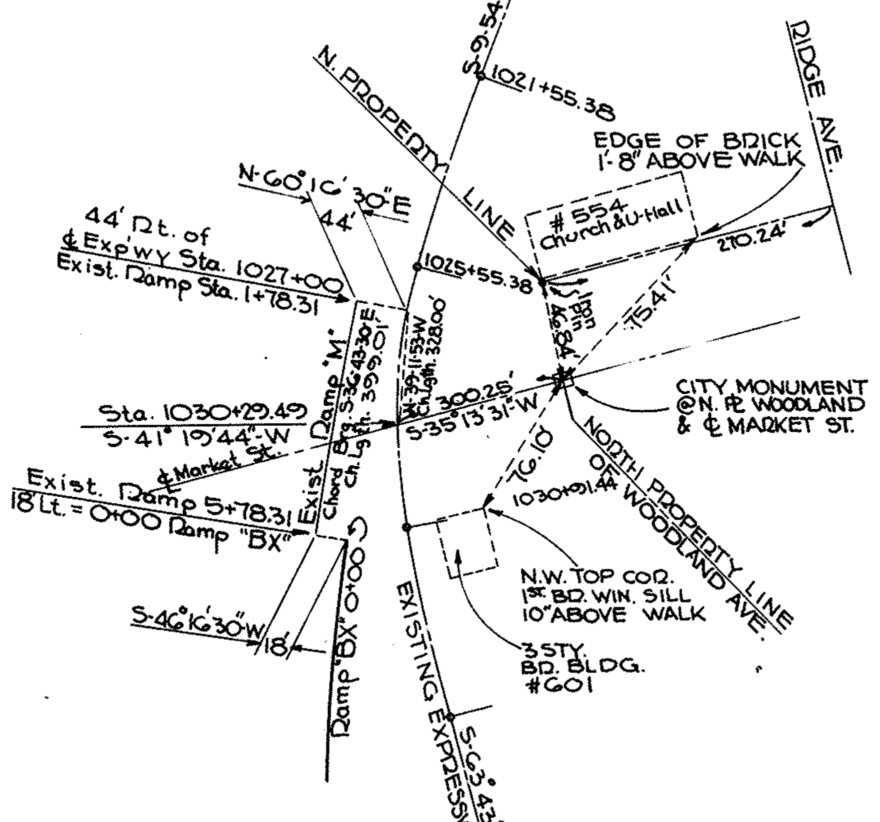
⑱
CURVE DATA
Δ = 47°02'55"
R = 150'
Dc = 38°11'50"
T = 65.30'
Lc = 123.17'
E = 13.60'

⑲
CURVE DATA
Δ = 11°07'51"
R = 1432.40'
Dc = 4°00'
T = 139.58'
Lc = 287.27'
E = 6.78'





CITY MONUMENT



SURVEYORS SEAL

CITY MONUMENTS

MONUMENTS TO BE SET AS INDICATED

NORTH-BOUND 7
P.C. 785+00 (2' Rt. of ℄)
P.T. 790+33.33 (2' Rt. of ℄)
T.S. 791+67.33 (2' Rt. of ℄)
S.C. 794+67.33 (2' Rt. of ℄)
S.T. 810+45.62 (2' Rt. of ℄)

SOUTH-BOUND
P.C. 780+13.60 (2' Lt. of ℄)
C.S. 782+31.40 (2' Lt. of ℄)
S.T. 784+31.40 (2' Lt. of ℄)
T.S. 785+74.16 (2' Rt. of ℄)
S.C. 788+74.16 (2' Rt. of ℄)
C.S. 805+03.13 (2' Rt. of ℄)

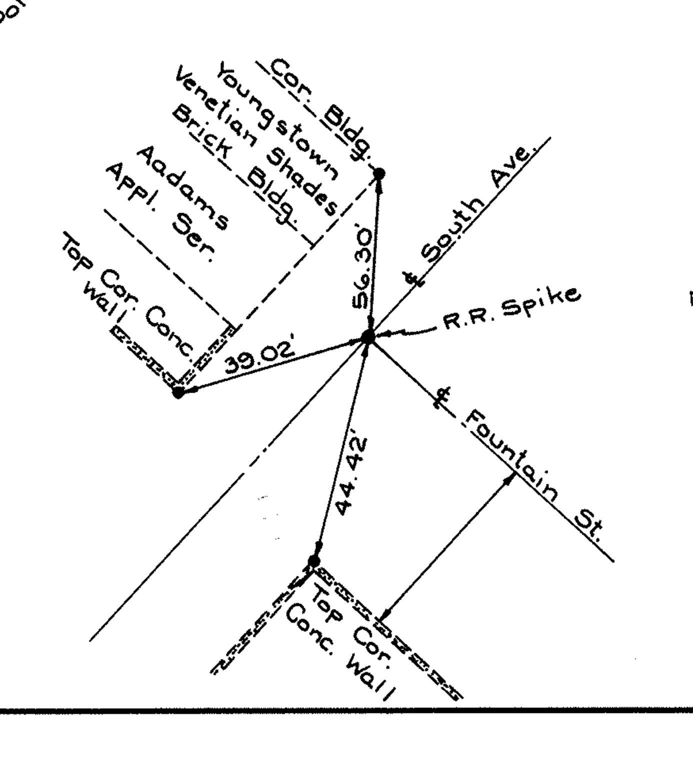
RAMP "BZ"
P.C. 2+10.88 (2' Rt. of ℄)
P.T. 4+98.15 (2' Rt. of ℄)

RAMP "BX"
P.C. 0+00 (2' Lt. of ℄)
C.S. 8+76.89 (2' Lt. of ℄)
S.C. 10+76.89 (2' Lt. of ℄)
S.T. 20+14.64 (2' Lt. of ℄)

RAMP "BY"
P.O.T. 0+00 (10' Rt. of ℄)
P.C. 9+23.04 (2' Rt. of ℄)
P.T. 11+42.07 (2' Lt. of ℄)

RAMP "CA"
P.C. 5+59.46 (Same as P.O.T. "BY")
P.T. 9+51.52 (2' Rt. of ℄)
T.S. 12+08.46 (2' Rt. of ℄)
P.T. 15+31.63 (2' Rt. of ℄)

RAMP "BV"
P.C. 0+00 (2' Rt. of ℄)
P.T. 6+98.08 (2' Rt. of ℄)



NOTE:
SPIRAL CURVES INDICATED ON THIS PLAN ARE DEVELOPED AS OUTLINED IN "TRANSITION CURVES FOR HIGHWAYS" BY JOSEPH BARNETT, PUBLISHED IN 1940 BY THE U.S. GOVERNMENT PRINTING OFFICE.

GRAPHIC SCALE
0 100 200 400 600

R/W SHEET No 1 OF 15

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

112/206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

SUMMARY OF RIGHT-OF-WAY REQUIRED

PARCEL NO.	OWNER	SHEET NO.	EXIST. BLDG'S.	SQ.FT. TO BE ACQUIRED LA "T"	SQ.FT. REMAINING "R"	SEVERANCE SQ.FT. LEFT	SEVERANCE SQ.FT. RIGHT	SQ.FT. ISOLATED "I"	SQ.FT. TO BE ACQUIRED NOT "LA" LEFT	SQ.FT. TO BE ACQUIRED NOT "LA" RIGHT	TOTAL SQ.FT.	REMARKS
460 A LA	CITY OF YOUNGSTOWN	6	NO	246	0	—	—	0	0	0	246	THIS AREA OF LOT 6588 WAS PURCHASED ALONG WITH THE REQUIRED TAKING UNDER PARCEL 460-LA CONTRACT MAH. 7-14.80.
465 A LA		6	NO	256	0	—	—	0	0	0	256	THIS AREA OF LOT 6588 WAS PURCHASED ALONG WITH THE REQUIRED TAKING UNDER PARCEL 465-LA CONTRACT MAH. 7-14.80.
463 B-LA	CITY OF YOUNGSTOWN	6	NO	916	36	—	—	36	0	0	952	LOT 6590 WAS PURCHASED IN TOTAL UNDER MAH. 7-14.80, 464A-LA. AREA NEEDED UNDER MAH. 7-14.95 IS DESIGNATED BY 464A-A-LA.
464A-A-LA		6	NO	963	252	—	—	0	0	0	1,215	
464 B-LA		6	NO	2,549	548	—	—	548	0	0	3,097	
465A-LA	CITY OF YOUNGSTOWN	6	—	—	—	—	—	—	—	—	—	LISTED WITH 460A-LA.
470 A-LA	STATE OF OHIO	6	YES	2,520	0	—	—	0	0	0	2,520	PARCEL 470A-S IS INCORPORATED AND INCLUDED WITHIN PARCEL 470A-LA.
470A-S		6	SEE 470A LA	—	—	—	—	—	—	—	—	
470 B-LA		6	YES	2,520	0	—	—	0	0	0	2,520	PARCEL 470B-S IS INCORPORATED AND INCLUDED WITHIN PARCEL 470B-LA.
470 B-S		6	SEE 470B LA	—	—	—	—	—	—	—	—	
470 C-LA	JOHN & ANNA DWULIT	6	YES	4,200	0	—	—	0	0	0	4,200	PARCEL 470C-S IS INCORPORATED AND INCLUDED WITHIN PARCEL 470C-LA.
470 C-S		6	SEE 470C LA	—	—	—	—	—	—	—		
470 CA LA	STATE OF OHIO (Formerly, Esposito)	6	YES	4,200	0	—	—	0	0	0	4,200	PARCEL 470 CA-S IS INCORPORATED AND INCLUDED WITIN PARCEL 470CA-LA. ADDITIONAL PROPERTY LISTED UNDER SINGLE OWNERSHIP – PARCEL 610-LA.
470 CA S		6	SEE 470CA LA	—	—	—	—	—	—	—	—	
470D-LA	LETTERINA CONIGLIO	6	YES	6,142	2,258	—	—	0	0	0	8,400	PARCEL 470 D-S IS INCORPORATED AND INCLUDED WITHIN PARCEL 470D-LA.
470D-S		6	SEE 470D S	—	—	—	—	—	—	—	—	
473 A-LA	ABRAHAM HAYNIE	6	NO	480	0	—	—	0	0	0	480	
474 A-LA		6	NO	534	0	—	—	0	0	0	534	
475 A-LA		6		3,773	2,472	—	—	2,472	0	0	6,245	LOT 6586 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
476A-LA	CITY OF YOUNGSTOWN	6	NO	1,993	1,720	—	—	1,720	0	0	3,713	LOT 6585 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
477A-LA		6	NO	1,920	1,760	—	—	1,760	0	0	3,680	LOT 6585 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
478A-LA	CATHERINE KELLY	5	NO	3,093	3,770	—	—	3,770	0	0	6,863	
480A-LA	CITY OF YOUNGSTOWN	5	NO	860	2,000			2,000	0	0	2,860	LOT 6581 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
483-LA		5	NO	1,764	0	—	—	1,764	0	0	1,764	LOT 6579 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
492-LA	MARIO GARRITANO	5	YES	6,413	0	—	—	0	0	0	6,413	
493-LA	JAMES PRENDERGAST	5	YES	6,480	0	—	—	0	0	0	6,480	
493A-LA	VASSEL & MARY A. JONESCO	5	YES	6,480	0	—	—	0	0	0	6,480	
510 LA	CITY OF YOUNGSTOWN	5	NO	6,480	0	—	—	0	0	0	6,480	LOT 13841 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
511 LA		5	NO	6,480	0	—	—	0	0	0	6,480	LOT 13840 WAS PURCHASED IN TOTAL UNDER CONTRACT MAH. 7-14.80.
600 LA	CAROLINE PACHUT	5	YES	6,413	0	—	—	0	0	0	6,413	
601 LA	ANNA FECKO, ET. AL.	5	YES	2,708	3,705	—	—	0	0	0	6,413	
601 WA		5	SEE 601 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
602 LA	MARY C. YARWICK	5	YES	3,200	0	—	—	0	0	0	3,200	
602 A-LA	ALEX & LOUISE YARWICK	5	NO	70	2,730	—	—	0	0	0	2,800	
603 LA	WILLIAM P. & CECELIA DELORES GRIFFITHS	5	YES	3,016	2,984	—	—	0	0	0	6,000	
604 LA	JOE & MARIA ZAPPAVIGNA	5	NO	2,712	3,288	—	—	0	0	0	6,000	
605 LA	GUISEPPE & MARY ZAPPOVIGNA	6	YES	2,536	3,464	—	—	0	0	0	6,000	
606 LA		6	YES	2,484	3,516	—	—	0	0	0	6,000	
606 WA		6	SEE 606 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
607 LA	ALBERT L. & ALMA F. WILLIAMS	6	NO	2,428	3,572	—	—	0	0	0	6,000	
608 LA	DENNIS TROLL, SR.	6	YES	2,976	4,662	—	—	0	0	0	7,638	
609 LA	ANTHONY LEOMBRUNO	6	YES	2,012	3,238	—	—	0	0	0	5,250	
610 LA	JOHN ESPOSITO	6	YES	2,520	0	—	—	0	0	0	2,520	
611 LA	ROSE ANZIVINO	6	YES	2,520	0	—	—	0	0	0	2,520	
611 A-LA	GAETANO & MARIA A. PARRETTI	6	YES	1,178	1,984	—	—	0	0	0	3,162	
611 A-WA		6	SEE 611A LA	—	—	—	—	—	—	—	—	
612 LA	ANTONIO GEMMA	6	NO	5,016	0	—	—	0	0	0	5,016	
612A-LA		6	NO	1,004	4,016			0	0	0	5,020	

SUMMARY OF RIGHT-OF-WAY REQUIRED

PARCEL NO.	OWNER	SHEET NO.	EXIST. BLDG'S.	SQ.FT. TO BE ACQUIRED LA "T"	SQ.FT. REMAINING "R"	SEVERANCE SQ.FT. LEFT	SEVERANCE SQ.FT. RIGHT	SQ.FT. ISOLATED "I"	SQ.FT. TO BE ACQUIRED NOT "LA" LEFT	SQ.FT. TO BE ACQUIRED NOT "LA" RIGHT	TOTAL SQ.FT.	REMARKS
613 LA	OHIO EDISON COMPANY	9	NO	9,911	70,239	—	—	0	0	0	80,150	ADDITIONAL PROPERTIES LISTED UNDER THIS CONTRACT ARE AS FOLLOWS: 634 LA; 678 LA, 679 LA & 680 LA; 713 LA.
614 LA	JOSEPH GUERRIERO	9	YES	6,664	0	—	—	0	0	0	6,664	
615 LA	JOHN E. & ANNE MARIE JAVORSKY	9	YES	7,230	0	—	—	0	0	0	7,230	
616 LA	JOHN JR. & CATHERINE BURNICH	9	YES	4,708	0	—	—	0	0	0	4,708	
616A-LA	MYRTLE B. MAKINSON	9	YES	4,708	0	—	—	0	0	0	4,708	
617 LA 617 WA	EDWARD & JUNE A. WELLS	7	YES	1,132	708	—	—	708	0	0	1,840	
618 LA	MARY L. DEL BENE	7	YES	2,160	0	—	—	0	0	0	2,160	
619 LA	LILLIAN LIAMIS	7	YES	1,013	2,737	—	—	0	0	0	3,750	
619 WA		7	SEE 619 LA	—	—	—	—	—	—	—	—	
620 LA	GEORGE SKEBE	7	NO	65	3,810	—	—	0	0	0	3,875	
621 LA	NATIONAL DAIRY PRODUCTS	7	NO	25	2,762	—	—	0	0	0	3,057	SEWER RELOCATION
621 S		6	NO	0	0	—	—	0	0	270		
622 LA		7	NO	882	3,893	—	—	0	0	0	4,775	
623A-LA	VASILE & MARIE MORAR	7	YES	1,602	6,918	—	—	6,918	0	0	8,520	
623A-WA		7	SEE 623A LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
624 LA	HENRY F. DUSEK	7	YES	1,431	3,740	—	—	3,740	0	0	5,846	
624 WA		7	SEE 624 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
624 S		7		—	—	—	—	—	0	675	—	SEWER RELOCATION
625 LA				847	2,241	—	—	2,241	0	0	3,088	
626 LA	ISADORE & MARIA BRUSA	7	YES	3,697	1,812	—	—	0	0	0	5,834	
626 S		6	YES	0	0	—	—	0	0	325		SEWER RELOCATION
627 LA	ANNIE SHATER AKA ANNIE SHATTER	9	YES	9,996	0	—	—	0	0	0	9,996	
628 LA	SISTO & NELLIE SANDORO	9	YES	9,928	0	—	—	0	0	0	9,928	
629 LA	EMIL & RAFIRA CISMAS	9	YES	9,860	0	—	—	0	0	0	9,860	
630 LA	ANNA M. KUBALA	9	YES	9,800	0	—	—	0	0	0	9,800	
631 LA	STANISLAW & MARY SWIDER	9	YES	9,724	0	—	—	0	0	0	9,724	
632 LA	ALI ARAZ	9	YES	9,655	0	—	—	0	0	0	9,655	
633 LA	MARIA CARKIDO	9	YES	7,760	1,442	—	—	1,442	0	0	9,202	
634 LA	OHIO EDISON COMPANY	9	NO	5,314	4,692	—	—	0	0	0	10,006	ALSO SEE 613 LA
697 LA		11	NO	896	79,254	—	—	0	0	0	80,150	
635 LA	ABE SIMON, DECEASED - 1/2 INT. SARAH SIMON - 1/2 INTEREST	8	YES	6,447	0	—	—	0	0	0	6,447	
636 LA	ARVIDS & MILDA BRASTINS	8	YES	7,754	0	—	—	0	0	0	7,754	
637 LA	WALTER J. & ANNA K. KOWARDY	8	YES	6,535	0	—	—	0	0	0	6,535	
638 LA	FLORENCE POPE	9	YES	6,298	0	—	—	0	0	0	6,298	
638 A-LA	ELI & KATHERINE NADRICH	9	YES	5,425	0	—	—	0	0	0	5,425	
639 LA	MARY STAS	9	YES	2,875	0	—	—	0	0	0	2,875	
640 LA	DAN BRETFELIAN, JR.	9	YES	8,033	0	—	—	0	0	0	8,033	
641 LA	BELLA IROFF 1/2 INTEREST LILLIAN WALDMAN 1/2 INTEREST	9	YES	6,923	0	—	—	0	0	0	6,923	
642 LA	MARY DEVAN	9	YES	4,917	0	—	—	0	0	0	4,917	
642A-LA	ANDREW & SARAH GIERSCHER	9	YES	3,316	0	—	—	0	0	0	3,316	
643 LA	STANLEY MASZCZAK	10	YES	6,750	0	—	—	0	0	0	6,730	
644 LA	CECELIA CATONE	10	YES	6,900	0	—	—	0	0	0	6,900	
645 LA	ROSE ROUSHIN	10	YES	7,053	0	—	—	0	0	0	7,053	
646 LA	ANNA & JOHN J. TOKASH	10	YES	7,978	0	—	—	0	0	0	7,978	
647 LA	ROBERT S. TUROWSKI	8	NO	10,263	0	—	—	0	0	0	10,263	
648 LA	CATHERINE QUINLAN	8	YES	5,132	0	—	—	0	0	0	5,132	
649 LA	CHARLIE NULL	8	YES	5,132	0	—	—	0	0	0	5,280	ACREAGE CORRECTED
650 LA	ALBERT & FLORENCE COSEY	8	YES	4,350	0	—	—	0	0	0	4,350	
650A-LA	LUTHER WHOEY	8	YES	4,075	0	—	—	0	0	0	4,075	
651 LA	ESTHER CARLSON	8	YES	4,713	0	—	—	0	0	0	4,713	
652 LA	ROLAND ALEXANDER, ET. AL.	8	YES	6,000	0	—	—	0	0	0	6,000	
653 LA	KING D. MIXON	8	YES	7,500	0	—	—	0	0	0	7,500	
654 LA	SYLVIA FULLER	8	YES	6,750	0	—	—	0	0	0	6,750	
654 A-LA	RACHEL ROZIER	10	YES	3,668	0	—	—	0	0	0	3,668	
655 LA	MODESTINA CERCONE	10	YES	3,083	0	—	—	0	0	0	3,083	
656 LA	TUFIC SAADI	10	YES	7,250	0	—	—	0	0	0	7,250	ALSO SEE 694A-LA

Submitted January 31, 1962

Mega-Flex Tracing

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	113 206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

SUMMARY OF RIGHT-OF-WAY REQUIRED

PARCEL NO.	OWNER	SHEET NO.	EXIST. BLDG'S.	SQ.FT. TO BE ACQUIRED LA "T"	SQ.FT. REMAINING "R"	SEVERANCE SQ.FT. LEFT	SEVERANCE SQ.FT. RIGHT	SQ.FT. ISOLATED "I"	SQ.FT. TO BE ACQUIRED NOT "LA" LEFT	SQ.FT. TO BE ACQUIRED NOT "LA" RIGHT	TOTAL SQ.FT.	REMARKS
657 LA	PATRICK BROWN	10	YES	6,815	0	—	—	0	0	0	6,815	
658 LA	CELIA CHELOFF	10	YES	2,680	0	—	—	0	0	0	2,680	
659 LA	ANIELA KWIECINSKI	10	YES	3,320	0	—	—	0	0	0	3,320	
660 LA	JAMES C. & ADA COLLINS	10	YES	7,438	0	—	—	0	0	0	7,438	
660A-LA	ANNA NICKEL	10	YES	7,347	0	—	—	0	0	0	7,347	
661 LA	ABDUL AZIZ	10	YES	6,574	0	—	—	0	0	0	6,574	
662 LA	FANNIE B. & FRANK JONES	10	YES	6,982	0	—	—	0	0	0	6,982	
663 LA	ELLA IRENE UNDERWOOD, Etal	8	YES	3,360	0	—	—	0	0	0	3,360	
664 LA	CHARLIE JR. & BEATRICE JONES	8	YES	1,358	0	—	—	0	0	0	1,358	
665 LA	STANFORD ROTH	8	YES	6,302	75	—	—	75	0	0	6,377	
666 LA		8	SEE 665 LA	3,583	3,236	—	—	3,236	0	0	6,819	
666A-LA	ABLON MIKE	8	NO	429	16,158	—	—	0	0	0	16,158	
667 LA	ELIZABETH HODEL	8	YES	5,132	0	—	—	0	0	0	5,132	
668 LA	PAUL & NANCY EPPS	8	YES	5,115	0	—	—	0	0	0	5,115	
669 LA	VILA J. BENISTON	8	YES	6,220	0	—	—	0	0	0	6,220	
670 LA	JAMES & JETTIE IZZARE	8	YES	4,043	0	—	—	0	0	0	4,043	
671 LA	FRANCESCA PETRELLA	8	YES	4,043	0	—	—	0	0	0	4,290	ACREAGE CORRECTED
672 LA 672 WA	JULIUS TARESHAWTY, JR.	8	YES	11,585	525	—	—	525	0	0	12,110	
673 LA		8	YES	7,630	1,020	—	—	1,020	0	0	8,650	
673 WA		8	SEE 673 LA	—	—	—	—					FILL & GRADE AREA WHERE NECESSARY
674 LA	ROBERT PIERCE	8	YES	6,412	1,373	—	—	1,373	0	0	7,785	
675 LA	ERNEST & DOLLIE JACKSON	8	YES	6,620	2,030	—	—	2,030	0	0	8,650	
676 LA	FRANK BAKER	10	YES	5,661	2,297	—	—	2,297	0	0	8,088	ACREAGE CORRECTED
677 LA	HENRY A. & MARIE REED	10	YES	4,920	2,000	—	—	2,000	0	0	6,920	
677 WA		10	SEE 677 LA	—	—	—	—	—	—	—	—	
678 LA	OHIO EDISON COMPANY	10	NO	5,028	1,892	—	—	0	0	0	6,920	
679 LA		10	NO	5,131	1,789	—	—	0	0	0	6,920	ALSO SEE 613 LA
680 LA		10	NO	4,970	1,604	—	—	0	0	0	6,574	
681 LA	BEECHER & ORA HODGE	10	YES	6,057	1,355	—	—	0	0	0	7,412	
682 LA	PAULINE GATTO	10	YES	6,239	1,237	—	—	0	0	0	7,476	
683 LA	CHARLES & BERTHA EIDELMAN	10	YES	12,086	1,900	—	—	0	0	0	13,986	
684 LA	IRVING MENDELSSOHN AKA IRVING MANSON	11	NO	6,817	1,049	—	—	0	0	0	7,866	
685 LA	ROBERT BELL & AZEEZA DUKE	11	YES	3,352	632	—	—	0	0	0	3,984	
685A-LA	SARAH FRANCES ALEXANDER	11	YES	3,348	715	—	—	0	0	0	4,063	
686 LA	ALFRED KARLSON AKA ALFRED C. CARLSON	11	YES	6,495	1,633	—	—	0	0	0	8,128	
687 LA	WILLIAM P. FLANAGAN	11	YES	6,343	1,903	—	—	0	0	0	8,246	
688 LA	HERBERT WILLIAMS	11	YES	6,533	3,898	—	—	0	0	0	10,431	
689 LA	VIOLA ROBINSON	11	YES	5,144	3,367	—	—	3,367	0	0	8,511	
690 LA	NATHANIEL & ELIZABETH DUNN	11	YES	4,876	2,061	—	—	2,061	0	0	6,937	
691 LA 691 WA	MARGIT VASU	11	YES	4,889	1,855	—	—	1,855	0	0	6,746	SEE 707 LA FOR ADDITIONAL PROPERTY
692 LA	DAVID Mc COY	11	YES	4,880	1,663	—	—	1,663	0	0	6,543	
693 LA	ISAIAH S. DISMUKES	11	YES	4,886	1,432	—	—	1,432	0	0	6,318	
694 LA	LOUISE DUGANNE	11	YES	4,294	0	—	—	0	0	0	4,294	
694A-LA	TUFIC S. SAADI	11	YES	5,147	0	—	—	0	0	0	5,147	ALSO SEE 656 LA
694B-LA	GENERAL OUTDOOR ADVERTISING	11	NO	226	2,424	—	—	0	0	0	2,650	
695 LA	JOHN F. & ALICE ANN BOOS	12	YES	10,448	0	—	—	0	0	0	10,546	ACREAGE CORRECTED
696 LA		12	SEE 695 LA	8,773	0	—	—	0	0	0	8,628	ACREAGE CORRECTED
697 LA	OHIO EDISON COMPANY	11	NO	896	79,254	—	—	0	0	0	80,150	ALSO SEE 613 LA
698 LA	ROSE STILLERMAN	11	YES	6,557	0	—	—	0	0	0	6,557	
699 LA	DAN & MARY BRETFELIAN	11	YES	6,940	0	—	—	0	0	0	6,940	
700 LA	NATHANIEL & LOIS MATTISON	11	YES	6,383	0	—	—	0	0	0	6,383	
701 LA	FAY KIRKORSKY	11	YES	6,666	0	—	—	0	0	0	6,666	SEE 709 LA FOR ADDITIONAL PROPERTY
702 LA	STEVE & ANNA KOLCHAK	11	YES	5,343	441	—	—	441	0	0	5,784	
703 LA	DORTHY DYER	11	NO	4,144	1,286	—	—	1,286	0	0	5,430	
706 LA		11	NO	3,256	2,494	—	—	2,494	0	0	5,750	
704 LA	ESTHER M. HEYMAN	11	YES	6,094	0	—	—	0	0	0	6,094	

SUMMARY OF RIGHT-OF-WAY REQUIRED

PARCEL No	OWNER	SHEET NO.	EXIST. BLDG'S	SQ.FT. TO BE ACQUIRED "LA"T"	SQ.FT. REMAINING "R"	SEVERANCE SQ.FT. LEFT	SEVERANCE SQ.FT. RIGHT	SQ.FT. ISOLATED "I"	SQ.FT. TO BE ACQUIRED NOT "LA" LEFT	SQ.FT. TO BE ACQUIRED NOT "LA" RIGHT	TOTAL SQ.FT.	REMARKS
705 LA	MARY DILL	11	YES	6,139	0	—	—	0	0	0	6,139	
706 LA	DORTHY DYER	11	SEE 703 LA	—	—	—	—	—	—	—	—	LISTED WITH 703 LA
707 LA	MARGIT VASU, DECEASED R.G. VASU, EXECUTOR	11	YES	6,670	2,449	—	—	2,449	0	0	9,119	ALSO SEE 691 LA
708 LA	MARY BOBOLA	11	YES	11,462	5,095	—	—	5,095	0	0	16,557	
708 WA		11	SEE 708 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
709 LA 709 WA	FAYE KIRKORSKY	11	YES	4,386	2,776	—	—	2,776	0	0	7,162	ALSO SEE 701 LA
710 LA	EMERY G. & EDNA JACKSON	11	YES	3,775	2,833	—	—	2,833	0	0	6,608	
711 LA	ALMA HAREN	11	YES	3,427	2,635	—	—	2,635	0	0	6,062	
712 LA	SARAH MONUS	12	YES	4,469	2,630	—	—	2,630	0	0	7,099	
712 WA		12	SEE 712 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
713 LA	OHIO EDISON COMPANY	12	NO	693	5,780	—	—	0	0	0	6,473	ALSO SEE 613 LA
714 LA	DORTHY KOPCASH	12	YES	4,478	0	—	—	0	0	0	4,478	
715 LA		12	SEE 714 LA	3,436	0	—	—	0	0	0	3,436	
716 LA	YOUNGSTOWN & SOUTHERN R.R.	12 & 14	NO	2,363	0	—	—	0	0	0	2,363	ALSO OWNER OF PARCEL 725A-LA
717 LA	LACKEY REALTY COMPANY	12	YES	781	0	—	—	0	0	0	781	
718 LA		12	YES	2,227	0	—	—	0	0	0	2,227	
719 LA		12	SEE 718 LA	2,960	0	—	—	0	0	0	2,960	ALSO OWNER OF PARCEL 725 LA
723 LA		12	SEE 718 LA	6,752	0	—	—	0	0	0	6,752	
724 LA		12	YES	3,746	0	—	—	0	0	0	3,746	
720 LA	ATHENS NASSE	12	YES	2,091	0	—	—	0	0	0	2,091	
721 LA		12	SEE 720 LA	1,827	0	—	—	0	0	0	1,827	
722 LA		12	SEE 720 LA	7,700	0	—	—	0	0	0	7,700	
723 LA	LACKEY REALTY COMPANY	12	SEE 718 LA	—	—	—	—	—	—	—	—	LISTED WITH 717 LA
724 LA		12	SEE 718 LA	—	—	—	—	—	—	—	—	
725 LA	LACKEY REALTY COMPANY	12 & 13	NO	3,570	3,923	—	—	3,923	0	0	7,493	ALSO SEE 717 LA
725A-LA	YOUNGSTOWN & SOUTHERN R.R.	12, 13 & 14	NO	811	—	—	—	0	0	0	—	TOTAL AREA CANNOT BE DETERMINED FROM AVAILABLE INFORMATION
726 LA	THE ERSTER SIEBENBURGER SACHSEN KRANKEN UNTERSTUTZUNG VEREIN	12 & 13	YES	12,035	0	—	—	0	0	0	12,035	
727 LA	THE SAXON CLUB OF YOUNGSTOWN	12 & 13	SEE 726 LA	6,945	555	—	—	555	0	0	7,500	
728 LA	H.K.R. REALTY COMPANY	12 & 13	YES	4,005	3,495	—	—	3,495	0	0	7,500	
728 WA		12 & 13	SEE 728 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
729 LA	UNITED REALTY COMPANY	13	YES	895	6,605	—	—	0	0	0	7,500	
729 WA		13	SEE 729 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
730 LA	JOHN A. MAJERNIK	13	YES	4,103	0	—	—	0	0	0	4,103	
731 LA		13	YES	2,278	0	—	—	0	0	0	2,278	
732 LA		13	NO	1,614	0	—	—	0	0	0	1,614	
732A-LA		13	NO	277	0	—	—	0	0	0	277	
733 LA	OMIT PARCEL	—	—	—	—	—	—	—	—	—	—	
734 LA	EILEEN SULLIVAN & JAMES M. TRAHEY, SR.	13	YES	7,500	0	—	—	0	0	0	7,500	
735 LA	ALBERT GOODMAN	13	NO	2,146	0	—	—	0	0	0	2,146	
735A-LA		13	NO	47	0	—	—	0	0	0	47	
739 LA		13	YES	3,750	0	—	—	0	0	0	3,750	
740 LA		13	NO	3,750	0	—	—	0	0	0	3,750	
741 LA		13	NO	3,750	0	—	—	0	0	0	3,750	
742 LA		13	YES	7,334	166	—	—	0	0	0	7,500	
743 LA		13	SEE 742 LA	4,860	2,640	—	—	0	0	0	7,500	
743 WA		13	SEE 742 LA	—	—	—	—	—	—	—	7,500	FILL & GRADE AREA WHERE NECESSARY
746 LA		13	NO	7,500	0	—	—	0	0	0	7,500	
747 LA		13	NO	7,500	0	—	—	0	0	0	7,500	
748 LA		13	YES	7,500	0	—	—	0	0	0	7,500	
749 LA		13	SEE 748 LA	3,750	0	—	—	0	0	0	3,750	
750 LA		13	NO	3,375	0	—	—	0	0	0	3,375	
751 LA		13	NO	5,054	0	—	—	0	0	0	5,054	
736 LA	WAWRZYNICE & KATHERINE JEDRZEJCZYK	13	NO	3,600	0	—	—	0	0	0	3,600	
737 LA		13	NO	3,900	0	—	—	0	0	0	3,900	
738 LA	WAWRZYNICE & KEJDY YENDRZCJCZYK	13	YES	3,750	0	—	—	0	0	0	3,750	
744 LA	ABE FEIBUS, DECEASED JULIA STEWART FEIBUS, EXECUTRIX	13	YES	1,625	5,875	—	—	0	0	0	7,500	
744 WA		13	SEE 744 LA	—	—	—	—	—	—	—	—	FILL & GRADE AREA WHERE NECESSARY
745 LA		13	YES	7,500	0	—	—	0	0	0	7,500	
745A-LA	OMIT PARCEL	—	—	—	—	—	—	—	—	—	—	

NOTE:
ADDITIONAL RIGHT-OF-WAY SUMMARY FOR RELOCATED FRANKLIN AVENUE IS TO BE FOUND ON R/W SHEET 15 OF 15.

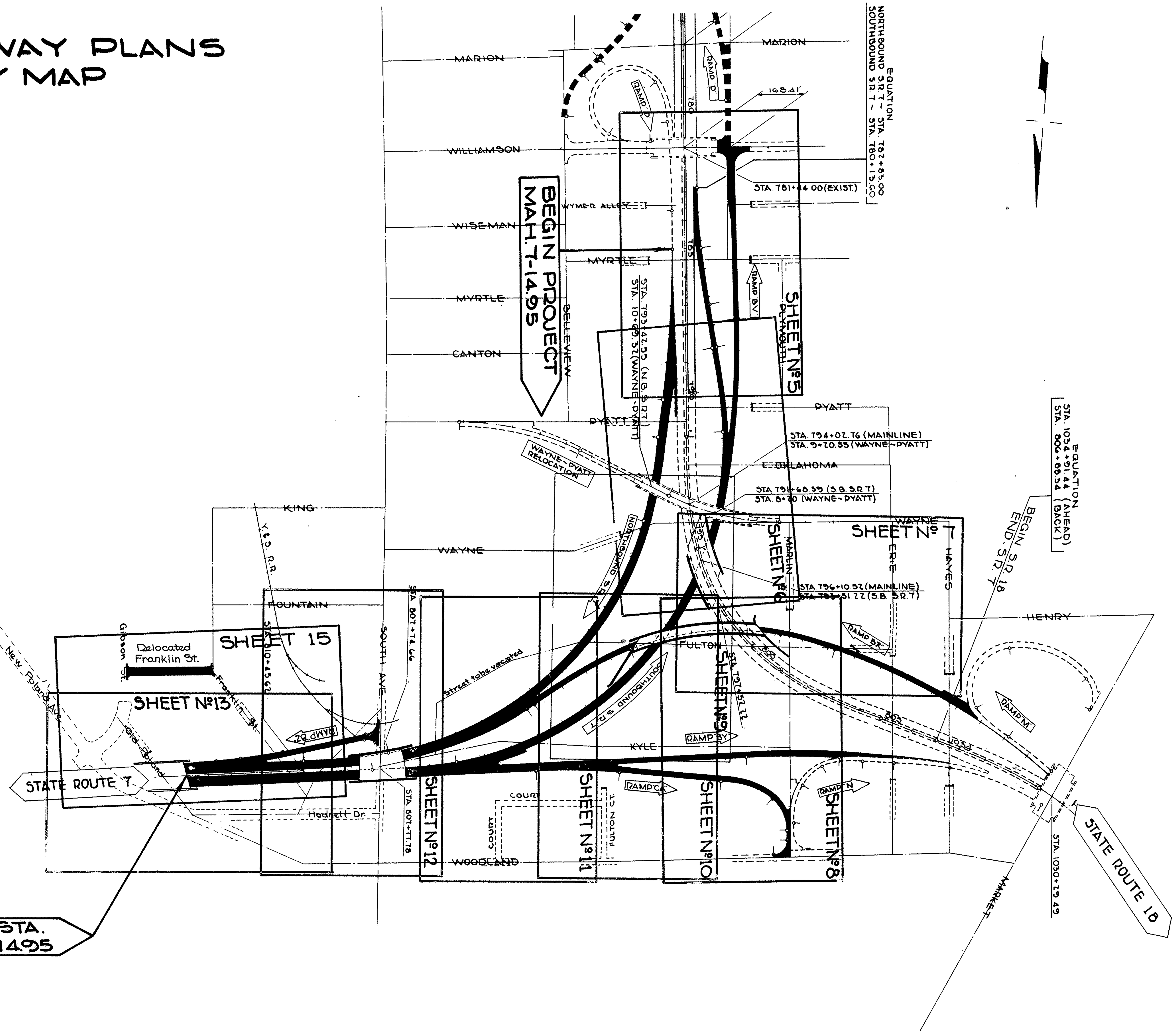
Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

114
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

RIGHT-OF-WAY PLANS
KEY MAP



LEGEND

PROPOSED EXPRESSWAY STATE ROUTE 7

APPROVED EXPRESSWAY (CONTRACT UNDER CONSTRUCTION)

FUTURE CONSTRUCTION

R/W SHEET Nº 4 OF 15

Mega-Flex Tracing

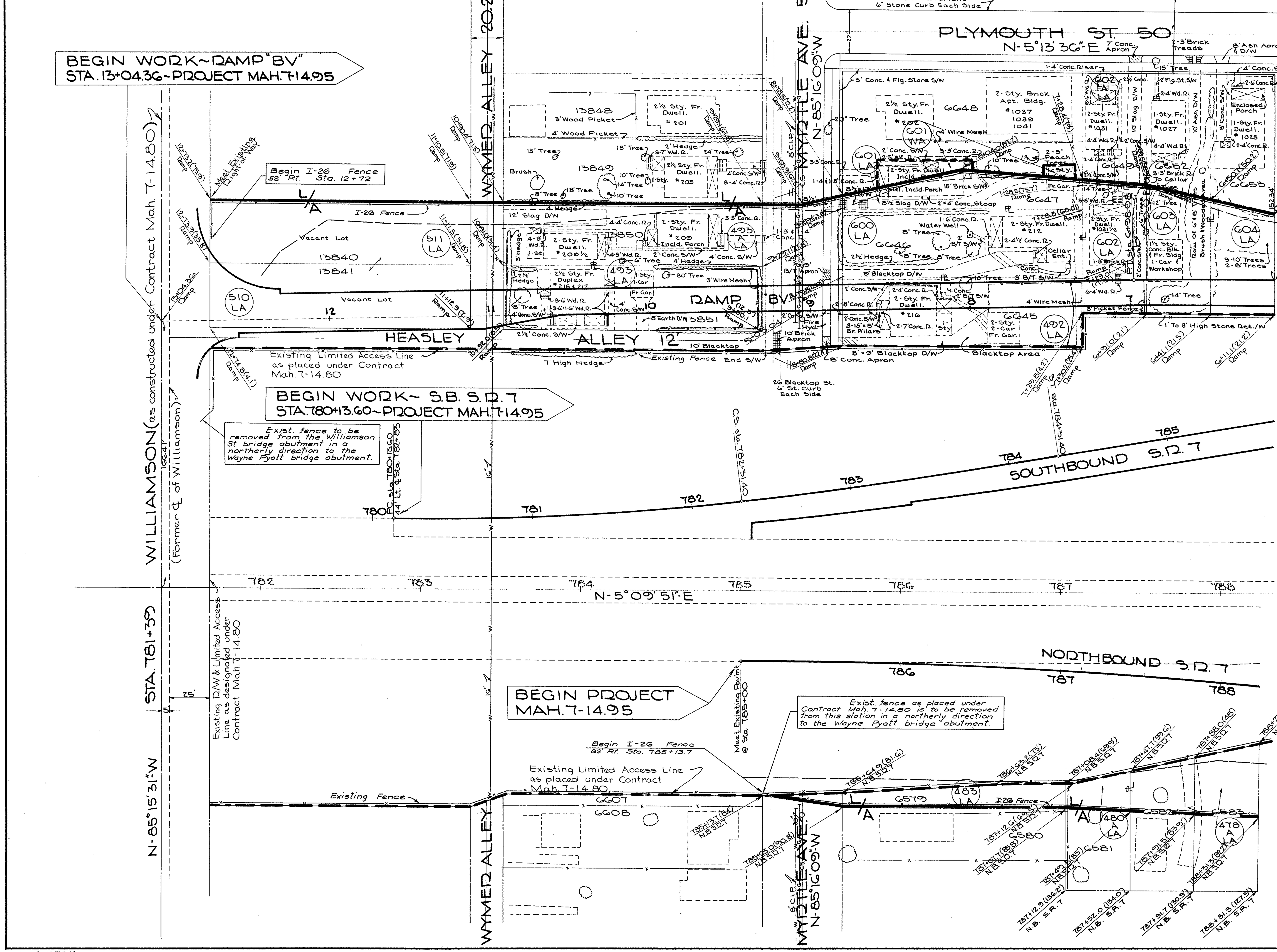
Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	115 / 206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

WORK AGREEMENTS

PARCEL Nº	NAME	
601 WA	Anna Fecko, et. al.	FILL & GRADE AREA WHERE NECESSARY



PARCEL Nº	NAME	BUILDINGS HOUSES	GARAGES	OTHERS	SQ.FT. OF TAKING
492-LA	Mario Garritano	Yes	Yes	No	6,413
493-LA	James Prendergast	Yes	Yes	No	6,480
493A-LA	Vassel & Mary A. Jonesco	Yes	No	No	6,480
478A-LA	Catherine Kelly	No	No	No	3,093
600-LA	Caroline Pachut	Yes	No	No	6,413
601-LA	Anna Fecko, et. al.	Yes	Yes	No	2,708
602-LA	Mary C. Yarwick	Yes	No	No	3,200
602A-LA	Alex & Louise Yarwick	No	No	No	70
603-LA	William P. & Cecelia Delores Griffiths	No	Yes	No	3,016
604-LA	Joe & Maria Zappavigna	No	No	No	2,712

SPECIAL PARCELS

PARCEL Nº	NAME	REMARKS	SQ.FT. REQUIRED MAH. 7-14.95
480A-LA	CITY OF YOUNGSTOWN	Lot 6581 was purchased in total under Contract Mah. 7-14.80	860
483-LA	CITY OF YOUNGSTOWN	Lot 6579 was purchased in total under Contract Mah. 7-14.80	1,764
510-LA	CITY OF YOUNGSTOWN	Lot 13841 was purchased in total under Contract Mah. 7-14.80	6,480
511-LA	CITY OF YOUNGSTOWN	Lot 13840 was purchased in total under Contract Mah. 7-14.80	6,480

NOTE: *The Right-of-Way fence is to remain 2' distant from the Limited Access Line unless otherwise stationed.*

I-26 CHAIN LINK FENCE = 1002 LIN. FT.
I-26 REMOVED FOR REUSE, CHAIN LINK FENCE = 1052 LIN. FT.

REVISIONS		Date Completed	
Rev. Nº	Nature of Revision	Date	Made By
# 1	Revised L/A line and corrected appropriate items pertaining thereto for pd's 601 LA; 602 LA, 603 LA & 604 LA	3/12/62	@

R/W SHEET Nº 5 OF 15

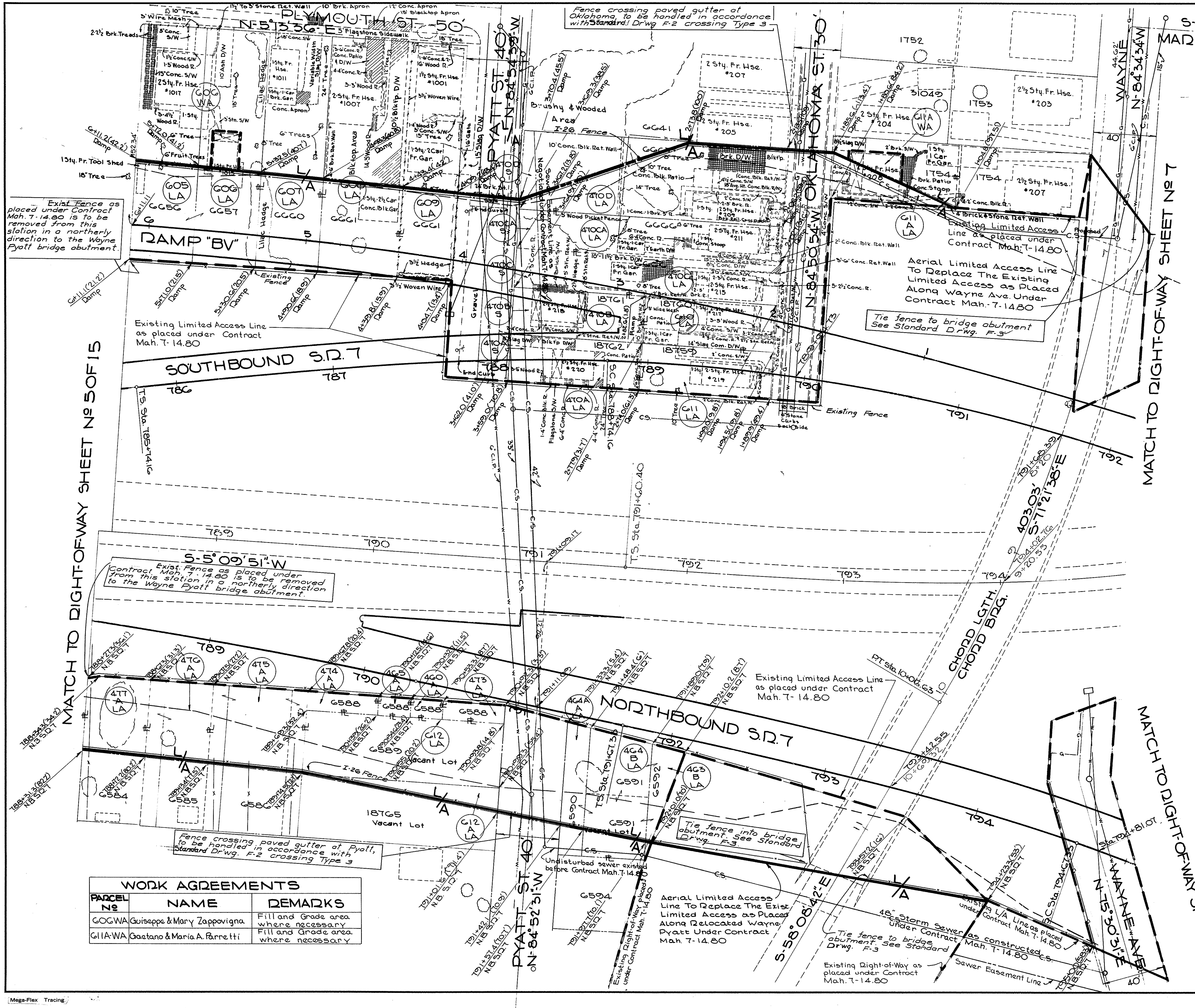
Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

116
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS



PARCEL Nº	NAME	BUILDINGS: HOUSES	BUILDINGS: GARAGE	BUILDINGS: OTHER	SQ. FT. OF TAKING	REMARKS
463B-LA	City of Youngstown	No	No	No	916	
464B-LA	City of Youngstown	No	No	No	2,549	
470A-LA	State of Ohio	Yes	No	No	2,520	Parcel 470A-S is incorporated and included within this taking
470B-LA	State of Ohio	Yes	No	No	2,520	Parcel 470B-S is incorporated and included within this taking
470C-LA	John & Anna Dwulit	Yes	Yes	No	4,200	Parcel 470C-S is incorporated and included within this taking
470CA-LA	State of Ohio	Yes	Yes	No	4,200	Parcel 470CA-S is incorporated and included within this taking
470D-LA	Letterina Coniglio	Yes	No	No	6,142	Parcel 470D-S is incorporated and included within this taking
473A-LA	Abraham Haynie	No	No	No	480	
474A-LA		No	No	No	534	
605-LA	Guiseppe & Mary Zappovigna	No	No	Yes	2,536	
606-LA	Guiseppe & Mary Zappovigna	Yes	No	No	2,484	
607-LA	Albert L. & Alma F. Williams	No	No	No	2,428	
608-LA	Dennis Troll, Sr.	No	Yes	No	2,976	
609-LA	Anthony Leombruno	No	Yes	No	2,012	
610-LA	John Esposito	Yes	Yes	No	2,520	
611-LA	Rose Anzivino	Yes	No	No	2,520	
611A-LA	Gaetano & Maria A. Parretti	Yes	No	No	1,178	
612-LA	Antonio Gemma	No	No	No	5,016	
612A-LA	Antonio Gemma	No	No	No	1,004	

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 1059 LIN. FT.
I-26 REMOVED FOR REUSE, CHAIN LINK FENCE = 1341 LIN. FT.

SEWER EASEMENTS

PARCEL Nº	NAME	REMARKS
470A-S	State of Ohio	Negotiated under Mah. 7-14.80 as an easement. Now permanent acquisition (See 470A-LA)
470B-S	State of Ohio	Negotiated under Mah. 7-14.80 as an easement. Now permanent acquisition (See 470B-LA)
470C-S	John & Anna Dwulit	Negotiated under Mah. 7-14.80 as an easement. Now permanent acquisition (See 470C-LA)
470CA-S	John & Josephine Esposito	Negotiated under Mah. 7-14.80 as an easement. Now permanent acquisition (See 470CA-LA)
470D-S	Letterina Coniglio	Negotiated under Mah. 7-14.80 as an easement. Now permanent acquisition (See 470D-LA)

SPECIAL PARCELS

PARCEL Nº	NAME	REMARKS	SQ. FT. REQUIRED MAH. 7-14.95
460A-LA	CITY OF YOUNGSTOWN	This Area of Lot 6588 was purchased along with the required taking under Parcel 460-LA Contract Mah. 7-14.80	246
464A-A-LA	CITY OF YOUNGSTOWN	Lot 6590 was purchased in total under Contract Mah. 7-14.80	963
465A-LA	CITY OF YOUNGSTOWN	This Area of Lot 6588 was purchased along with the required taking under Parcel 465-LA Contract Mah. 7-14.80	256
475A-LA	CITY OF YOUNGSTOWN	Lot 6586 was purchased in total under Contract Mah. 7-14.80	3,773
476A-LA	CITY OF YOUNGSTOWN	Lot 6585 was purchased in total under Contract Mah. 7-14.80	1,993
477A-LA	CITY OF YOUNGSTOWN	Lot 6584 was purchased in total under Contract Mah. 7-14.80	1,920

REVISIONS

Rev. Nº	Nature of Revision	Date Completed: Date	Date Completed: Made By
# 1	Revised L/A line and corrected appropriate items pertaining thereto for pcl's 605 LA, 606 LA, 607 LA, 608 LA, 609 LA & 470 D-LA	3/12/62	[illegible]
# 1	Corrected ownership for Pcl. 470 CA-LA	3/12/62	[illegible]
# 2	Added Aerial Limited Access Line Across Reloc. Wayne-Pyatt & Exist. Wayne Ave. Which Replaces The Exist. L/A Under Previous Contract.	7/6/62	C.B.

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
606-WA	Guiseppe & Mary Zappovigna	Fill and Grade area where necessary
611A-WA	Gaetano & Maria A. Parretti	Fill and Grade area where necessary

GRAPHIC SCALE
0 25' 50' 75' 100'

R/W SHEET Nº 6 OF 15

Submitted January 31, 1962

Mega-Flex Tracing

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	117/206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 618 LIN. FT.
I-26 REMOVED FOR REUSE, CHAIN LINK FENCE = 845 LIN. FT.

SEWER EASEMENT			
Nº	NAME	SQ. FT.	REMARKS
621 S	National Dairy Products	270	Sewer Relocation
624 S	Henry F. Dusek	325	Sewer Relocation
626 S	Isadore & Maria Brusa	675	Sewer Relocation

PARCEL Nº	NAME	BUILDINGS: HOUSES	BUILDINGS: GARAGES	BUILDINGS: OTHERS	SQ. FT. OF TAKING
617 LA	Edward & June A. Wells	Yes	No	No	1,132
618 LA	Mary L. DelBene	Yes	No	No	2,160
619 LA	Lillian Liamis	No	Yes	No	1,013
+ 620 LA	George Skebo	No	No	No	65
621 LA	National Dairy Products	No	No	No	25
622 LA	National Dairy Products	No	No	No	882
623A-LA	Vasile & Marie Morar	Yes	No	No	1,602
624 LA	Henry F. Dusek	Yes	No	No	1,431
625 LA	Henry F. Dusek	See above	No	No	847
626 LA	Isadore & Maria Brusa	Yes	No	No	3,697
620A-LA	Rose Sambles	No purchase involved			
620B-LA	Nicholas Slaviyac	No purchase involved			

Note:
+ Indicates a similar number out of numerical order.

WORK AGREEMENTS		
PARCEL Nº	NAME	REMARKS
619 WA	Lillian Liamis	Fill and Grade area where necessary
623A-WA	Vasile & Marie Morar	Fill and Grade area where necessary
624 WA	Henry F. Dusek	Fill and Grade area where necessary
617 WA	Edward & June A. Wells	Fill and Grade area where necessary

REVISIONS		Date Completed	
Rev. Nº	Nature of Revision	Date	Made By
#1	Revised L/A line and corrected appropriate items pertaining thereto for pcl's 617 LA, 619 LA, 620 LA, 621 LA, 622 LA & 623A-LA.	3/16/62	e
#1	Added parcel 617 WA	3/16/62	e

R/W SHEET Nº 7 OF 15

Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

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YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

PARCEL Nº	NAME	BUILDINGS HOUSES	GARAGE	OTHER	SQ.FT.OF TAKING
G35LA	Abe Simon, Deceased ½ Interest Sarah Simon ½ Interest	Yes	No	No	6,447
G36LA	Arvids & Milda Brastins	Yes	No	Yes	7,754
G37LA	Walter J. & Anna K. Kowardy	Yes	Yes	No	6,535
G47LA	Robert S. Turowski	No	No	No	10,263
G48LA	Catherine Quinlan	Yes	No	No	5,132
G49LA	Charlie Null	Yes	No	Yes	5,132
+ G50LA	Albert & Florence Cosey	Yes	Yes	No	4,350
G51LA	Esther Carlson	Yes	Yes	No	4,713
G52LA	Roland Alexander, et.al.	Yes	Yes	No	6,000
G53LA	King D. Mixon	Yes	No	No	7,500
G54LA	Sylvia Fuller	Yes	Yes	No	6,750
G63LA	Ella Irene Underwood, etal.	Yes	No	No	3,360
G64LA	Charlie Jr. & Beatrice Jones	Yes	No	No	1,358
G65LA	Sanford Roth	Yes	No	No	6,302
G66LA	Sanford Roth	see above	No	No	3,583
G66A-LA	Ablon Mike	No	No	No	429
G67LA	Elizabeth Hodel	Yes	No	Yes	5,132
G68LA	Paul & Nancy Epps	Yes	Yes	No	5,115
G69LA	Vila J. Beniston	Yes	No	No	6,220
G70LA	James & Jettie Izzare	Yes	Yes	No	4,043
G71LA	Francesca Petrella	Yes	Yes	Yes	4,043
G72LA	Julius Tareshawty	Yes	No	No	11,585
G73LA	Julius Tareshawty	Yes	Yes	No	7,630
G74LA	Robert Pierce	Yes	No	No	6,412
G75LA	Ernest & Dollie Jackson	Yes	No	No	6,620
G50A-LA	Luther Whoey	Yes	No	No	4,075

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
G73WA	Julius Tareshawty	Fill and Grade area where necessary
G72WA	Julius Tareshawty	Fill and Grade area where necessary

REVISIONS

Rev. Nº	Nature of Revision	Date Completed: Date	Made By
# 1	Revised L/A line and corrected appropriate items for pcl's G72 LA, G73 LA, G74 LA & G75 LA.	3/16/62	@
# 1	Added parcel G72 WA	3/16/62	@

This area purchased under Contract Mah. 18-17.20. Marlin St. Right-of-Way is shown incomplete for said contract. Detailed information can be obtained from Sht. 485 of 492.

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 446 LIN. FT.
I-26 REMOVED FOR REUSE, CHAIN LINK FENCE = 279 LIN. FT.

Note:
+ Indicates a similar number out of numerical order.

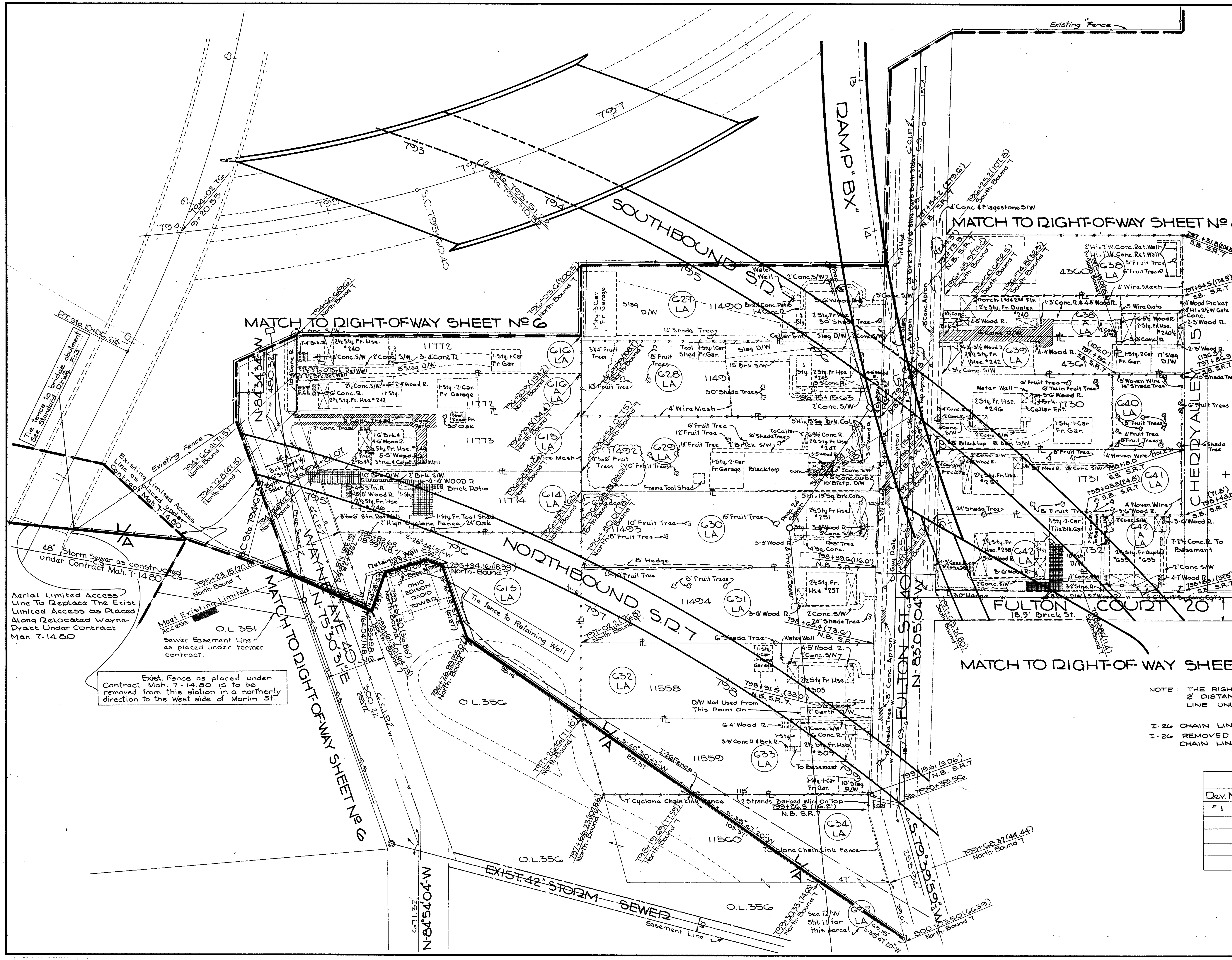
GRAPHIC SCALE
0 25 50 75 100'

R/W SHEET Nº 8 OF 15

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(1) 238 U-524(9)	

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS



PARCEL Nº	NAME	BUILDINGS HOUSES	BUILDINGS GARAGE	BUILDINGS OTHER	SQ.FT. OF TAKING
613 LA	Ohio Edison Company	No	No	No	9,911
614 LA	Joseph Guerriero	Yes	No	Yes	6,664
615 LA	John E. & Anne M. Javorsky	Yes	No	Yes	7,230
616 LA	John Jr. & Catherine Burnich	Yes	Yes	No	4,708
616A-LA	Myrtle B. Makinson	Yes	Yes	No	4,708
627 LA	Annie Shater aka Annie Shatter	Yes	Yes	No	9,996
628 LA	Sisto & Nellie Sandoro	Yes	Yes	Yes	9,928
629 LA	Emil & Rafira Cismas	Yes	Yes	Yes	9,860
630 LA	Anna M. Kubala	Yes	No	No	9,800
631 LA	Stanislaw & Mary Swider	Yes	No	No	9,724
632 LA	Ali Araz	Yes	Yes	No	9,655
633 LA	Maria Carkido	Yes	Yes	No	7,760
634 LA	Ohio Edison Company	No	No	No	5,314
634A-LA	Omit Parcel	—	—	—	—
638 LA	Florence Pope	Yes	No	No	6,298
639 LA	Mary Stas	Yes	No	No	2,875
640 LA	Dan Bretfelian, Jr.	Yes	Yes	No	8,033
641 LA	Bella Iroff ½ Interest Lillian Waldman ½ Interest	Yes	No	No	6,923
642 LA	Mary Devan	Yes	Yes	No	4,917
642A-LA	Andrew & Sarah Gierscher	Yes	No	No	3,316
638A-LA	Eli & Katherine Nadrich	Yes	Yes	No	5,425

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 446 LIN. FT.

I-26 REMOVED FOR REUSE, CHAIN LINK FENCE ≐ 982 LIN. FT.

REVISIONS		Date Completed	
Rev. Nº	Nature of Revision	Date	Made By
#1	Added Aerial Limited Access Line Across Reloc. Wayne-Pyatt Which Replaces The Existing L/A Under Previous Contract.	7/6/62	C.B.

GRAPHIC SCALE

0' 25' 50' 75' 100'

Mega-Flex Tracing.

Submitted January 31, 1962

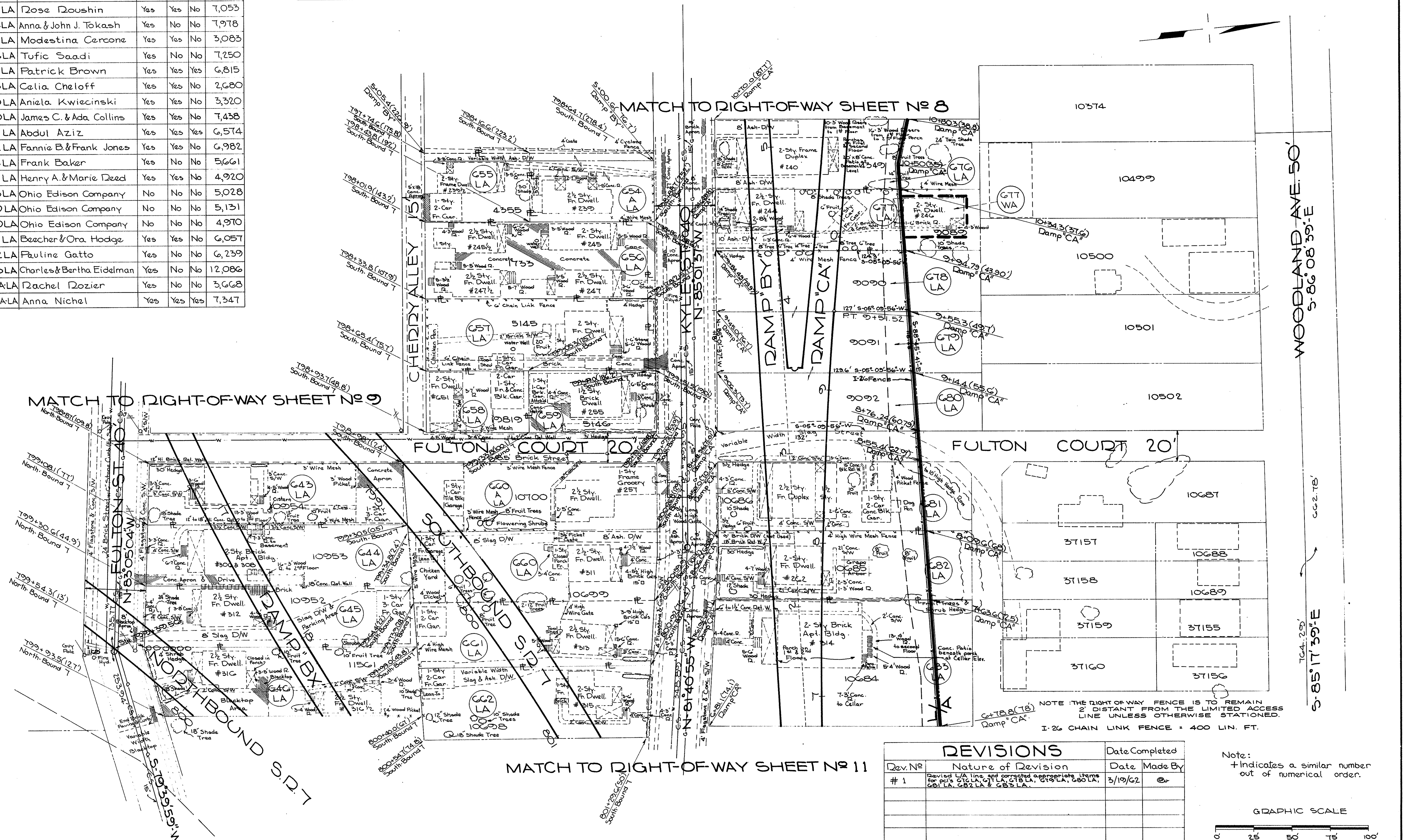
FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(8)	

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

PARCEL Nº	NAME	BUILDINGS HOUSES	BUILDINGS GARAGE	BUILDINGS OTHER	SQ. FT. OF TAKING
643 LA	Stanley Maszczak	Yes	Yes	No	6,750
644 LA	Cecelia Catone	Yes	No	No	6,900
645 LA	Rose Roushin	Yes	Yes	No	7,053
646 LA	Anna & John J. Tokash	Yes	No	No	7,978
+ 655 LA	Modestina Cercone	Yes	Yes	No	3,083
656 LA	Tufic Saadi	Yes	No	No	7,250
657 LA	Patrick Brown	Yes	Yes	Yes	6,815
658 LA	Celia Cheloff	Yes	Yes	No	2,680
659 LA	Aniela Kwiecinski	Yes	Yes	No	3,320
+ 660 LA	James C. & Ada Collins	Yes	Yes	No	7,438
661 LA	Abdul Aziz	Yes	Yes	Yes	6,574
662 LA	Fannie B. & Frank Jones	Yes	Yes	No	6,982
676 LA	Frank Baker	Yes	No	No	5,661
677 LA	Henry A. & Marie Reed	Yes	Yes	No	4,920
678 LA	Ohio Edison Company	No	No	No	5,028
679 LA	Ohio Edison Company	No	No	No	5,131
680 LA	Ohio Edison Company	No	No	No	4,970
681 LA	Beecher & Ora Hodge	Yes	Yes	No	6,057
682 LA	Pauline Gatto	Yes	No	No	6,239
683 LA	Charles & Bertha Eidelman	Yes	No	No	12,086
654A LA	Rachel Rozier	Yes	No	No	3,668
660A LA	Anna Nichel	Yes	Yes	Yes	7,347

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
677 WA	Henry A. & Marie Reed	Fill and Grade area where necessary



NOTE: THE RIGHT OF WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 400 LIN. FT.

REVISIONS

Rev. Nº	Nature of Revision	Date Completed: Date	Made By
# 1	Revised L/A line and corrected appropriate items for pcl's 676 LA, 677 LA, 678 LA, 679 LA, 680 LA, 681 LA, 682 LA & 683 LA.	3/19/62	

Note:
+ Indicates a similar number out of numerical order.

GRAPHIC SCALE
0 25 50 75 100'

R/W SHEET Nº 10 OF 15

Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11)238 U-524(9)	

121
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
691 WA	Margit Vasu	Fill and Grade area where necessary
709 WA	Faye Kirkorsky	Fill and Grade area where necessary

REVISIONS

Rev. Nº	Nature of Revision	Date Completed: Date	Date Completed: Made By
# 1	Revised L/A line and corrected appropriate items pertaining thereto for pcl's 684 LA, 685 LA, 685A-LA, 686 LA, 687 LA, 688 LA, 689 LA, 691 LA, 692 LA & 693 LA	3/20/62	@
# 1	Add Pcl 691 WA	3/20/62	@
# 1	Revised L/A line and corrected appropriate items pertaining thereto for pcl's 702 LA, 703 LA, 706 LA, 707 LA, 708 LA, 709 LA, 710 LA, & 711 LA	3/20/62	@
# 1	Omit Pcl. 708 WA — Add Pcl. 709 WA	3/20/62	@

MATCH TO RIGHT-OF-WAY SHEET Nº 10

PARCEL Nº	NAME	BUILDINGS: HOUSES	BUILDINGS: GARAGE	BUILDINGS: OTHER	SQ. FT. OF TAKING
684 LA	Irving Mendelssohn aka Irving Manson	No	No	No	6,817
+ 685 LA	Robert Bell & Azeeza Duke	Yes	No	No	3,352
686 LA	Alfred Karlson aka Alfred C. Carlson	Yes	Yes	Yes	6,495
687 LA	William P. Flanagan	Yes	No	No	6,343
688 LA	Herbert Williams	Yes	No	No	6,533
689 LA	Viola Robinson	Yes	No	No	5,144
690 LA	Nathaniel & Elizabeth Dunn	Yes	No	No	4,876
691 LA	Margit Vasu	Yes	Yes	No	4,889
692 LA	David McCoy	Yes	No	No	4,880
693 LA	Isaiah S. Dismukes	Yes	No	No	4,886
694 LA	Louise Duganne	Yes	No	No	4,294
+ 694A-LA	Tufic S. Saadi	Yes	No	No	5,147
697 LA	Ohio Edison Company	No	No	No	896
698 LA	Rose Stillerman	Yes	No	No	6,557
699 LA	Dan & Mary Bretfelian	Yes	No	Yes	6,940

(See Lower Left for Additional Parcels)

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED. I-26 CHAIN LINK FENCE = 990 LIN. FT.

PARCEL Nº	NAME	BUILDINGS: HOUSES	BUILDINGS: GARAGE	BUILDINGS: OTHER	SQ. FT. OF TAKING
700 LA	Nathaniel & Lois Mattison	Yes	Yes	No	6,383
701 LA	Fay Kirkorsky	Yes	No	No	6,666
702 LA	Steve & Anna Kolchak	Yes	Yes	No	5,343
703 LA	Dorothy Dyer	No	No	No	4,144
704 LA	Esther M. Heyman	Yes	No	No	6,094
705 LA	Mary Dill	Yes	Yes	No	6,139
706 LA	Dorothy Dyer	No	No	No	3,256
707 LA	Margit Vasu, Deceased R.G. Vasu, Executor	Yes	Yes	Yes	6,670
708 LA	Mary Bobola	Yes	No	No	11,462
709 LA	Faye Kirkorsky	Yes	Yes	No	4,386
710 LA	Emery G. & Edna Jackson	Yes	No	No	3,775
711 LA	Alma Haren	Yes	No	No	3,427
694B-LA	General Outdoor Advertising Co.	No	No	No	226
685A-LA	Sarah Frances Alexander	Yes	No	No	3,693

Note:
+ Indicates a similar number out of numerical order.

GRAPHIC SCALE
0' 25' 50' 75' 100'

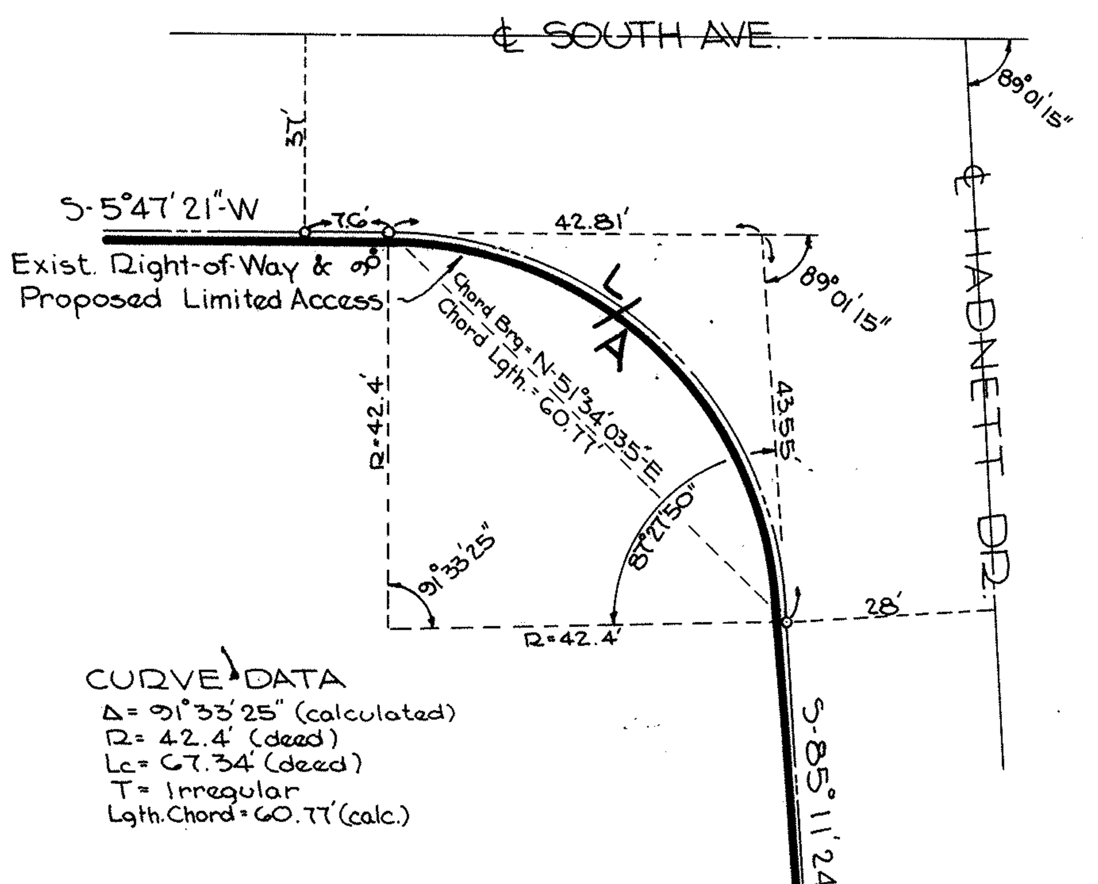
MATCH TO RIGHT-OF-WAY SHEET Nº 12

Submitted January 31, 1962

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
712WA	Sarah Monus	Fill and Grade area where necessary
728WA	H.K.R. Realty Company	Fill and Grade area where necessary

PARCEL Nº	NAME	BUILDINGS HOUSES	BUILDINGS GARAGE	BUILDINGS OTHER	SQ.FT. OF TAKING
695 LA	John F. & Alice Ann Boos	No	No	Yes	10,448
696 LA	John F. & Alice Ann Boos	See	695	LA	8,773
712 LA	Sarah Monus	Yes	Yes	No	4,469
713 LA	The Ohio Edison Company	No	No	No	693
714 LA	Dorothy Kopcash	No	No	Yes	4,478
715 LA	Dorothy Kopcash	See 714 LA			3,436
716 LA	Youngstown & Southern R.R.	No	No	No	2,363
717 LA	Lackey Realty Company	No	No	Yes	781
718 LA	Lackey Realty Company	No	No	Yes	2,227
719 LA	Lackey Realty Company	No	No	see above	2,960
720 LA	Athens Nasse	No	No	Yes	2,091
721 LA	Athens Nasse	No	No	see above	1,827
722 LA	Athens Nasse	No	No	see above	7,700
723 LA	Lackey Realty Company	No	No	see 718 LA	6,752
724 LA	Lackey Realty Company	No	No	Yes	3,746
725 LA	Lackey Realty Company	No	No	Yes	3,570
725A LA	Youngstown & Southern R.R.	No	No	No	811
726 LA	The Erster Siebenburger Sachsen Kranken Unterstutzung Verein	No	Yes	Yes	12,035
727 LA	The Saxon Club of Youngstown	No	No	No	6,945
728 LA	H.K.R. Realty Company	Yes	Yes	No	4,005



CURVE DATA
Δ = 91°33'25" (calculated)
R = 42.4' (deed)
Lc = 67.34' (deed)
T = Irregular
Lgth. Chord = 60.77' (calc.)

DETAIL 1
No Scale

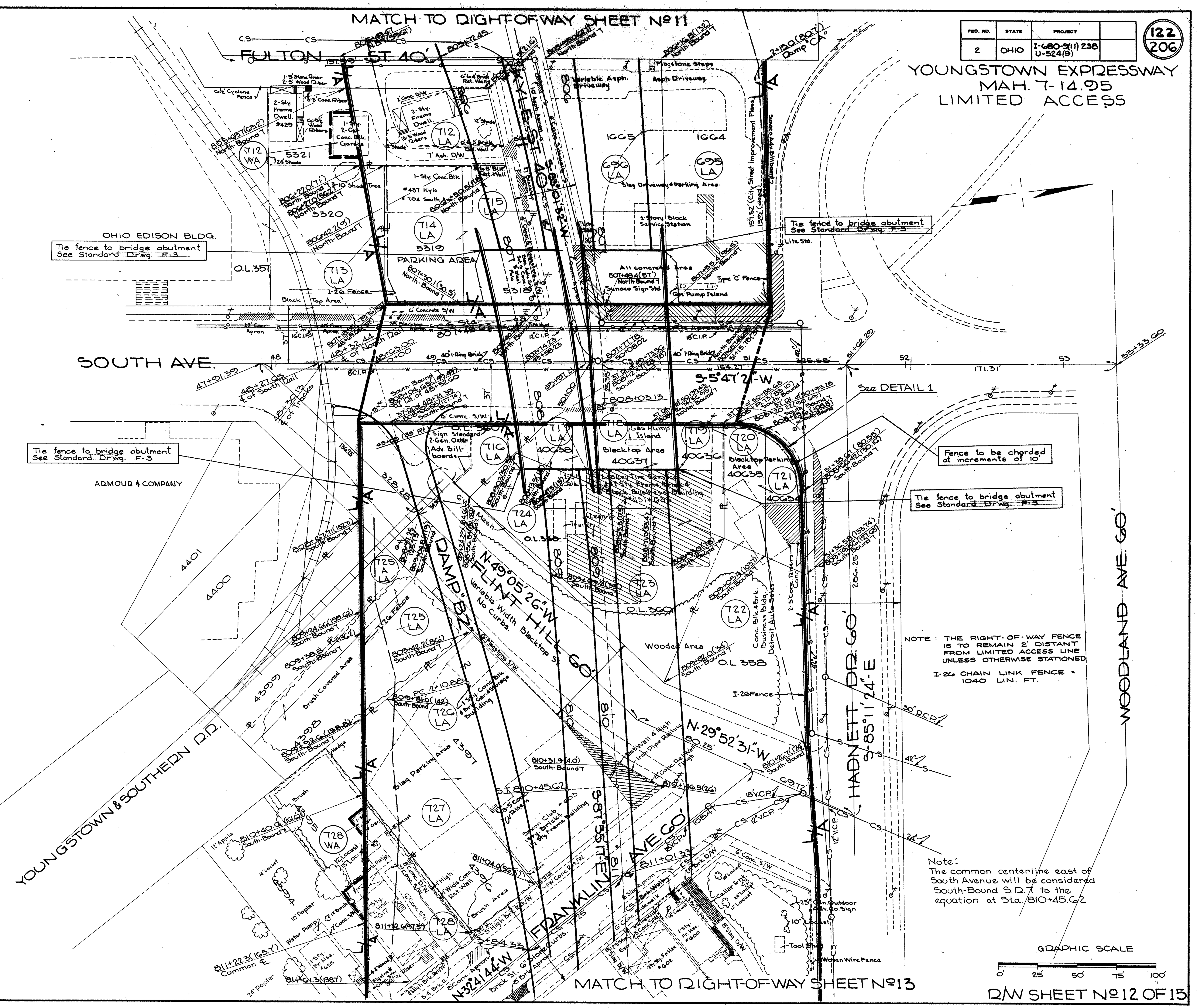
REVISIONS		Date Completed	
Rev. Nº	Nature of Revision	Date	Made By
# 1	Added L/A line across South Ave.	3/19/62	[illegible]

FED. RD.	STATE	PROJECT
2	OHIO	I-680-9(11) 238 U-524(9)

122
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

MATCH TO RIGHT-OF-WAY SHEET Nº 11



NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.
I-26 CHAIN LINK FENCE = 1040 LIN. FT.

Note:
The common centerline east of South Avenue will be considered South-Bound S.R. 7 to the equation at Sta. 810+45.62

GRAPHIC SCALE
0 25 50 75 100

MATCH TO RIGHT-OF-WAY SHEET Nº 13

R/W SHEET Nº 12 OF 15

Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

123
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

WORK AGREEMENTS

PARCEL Nº	NAME	REMARKS
729WA	United Realty Company	Fill and Grade area where necessary
743WA	Albert Goodman	Fill and Grade area where necessary
744WA	Abe Feibus, Deceased Julia S. Feibus, Executrix	Fill and Grade area where necessary.

PARCEL Nº	NAME	BUILDINGS			SQ.FT.OF TAKING
		HOUSES	GARAGE	OTHER	
725LA	See Right-of-Way Sheet Nº 12				——
725A-LA	See Right-of-Way Sheet Nº 12				——
726LA	See Right-of-Way Sheet Nº 12				——
727LA	See Right-of-Way Sheet Nº 12				——
728LA	See Right-of-Way Sheet Nº 12				——
729LA	United Realty Company	Yes	No	No	895
730LA	John A. Majernik	Yes	No	No	4,103
731LA	John A. Majernik	No	No	Yes	2,278
+ 732LA	John A. Majernik	No	No	No	1,614
733LA	Omit Parcel	——	——	——	——
734LA	Eileen Sullivan and James M. Trahey, Sr.	Yes	No	No	7,500
732A-LA	John A. Majernik	No	No	No	277

PARCEL Nº	NAME	BUILDINGS			SQ.FT.OF TAKING
		HOUSES	GARAGE	OTHER	
+ 735LA	Albert Goodman	No	No	No	2,146
736LA	Wawrzynice Jedrzejczyk Katherine Jedrzejczyk	No	No	No	3,600
737LA	Wawrzynice Jedrzejczyk Katherine Jedrzejczyk	No	No	No	3,900
738LA	Wawzynice Yendrzejczyk Kejdy Yendrzejczyk	Yes	Yes	Yes	3,750
739LA	Albert Goodman	Yes	No	No	3,750
740LA	Albert Goodman	No	No	No	3,750
741LA	Albert Goodman	No	No	No	3,750
742LA	Albert Goodman	Yes	No	No	7,334
743LA	Albert Goodman	See 742LA	No	No	4,860
744LA	Abe Feibus, Deceased Julia Stewart Feibus, Execut.	Yes	No	No	1,625
745LA	Abe Feibus, Deceased Julia Stewart Feibus, Execut.	Yes	No	Yes	7,500
745WL-1	US Unirea & Plugarol An Ohio Corporation	No	No	Yes	5360
746LA	Albert Goodman	No	No	No	7,500
747LA	Albert Goodman	No	No	No	7,500
748LA	Albert Goodman	No	No	Yes	7,500
749LA	Albert Goodman	No	No	See 748LA	3,750
750LA	Albert Goodman	No	No	No	3,375
751LA	Albert Goodman	No	No	No	5,054
735A-LA	Albert Goodman	No	No	No	47

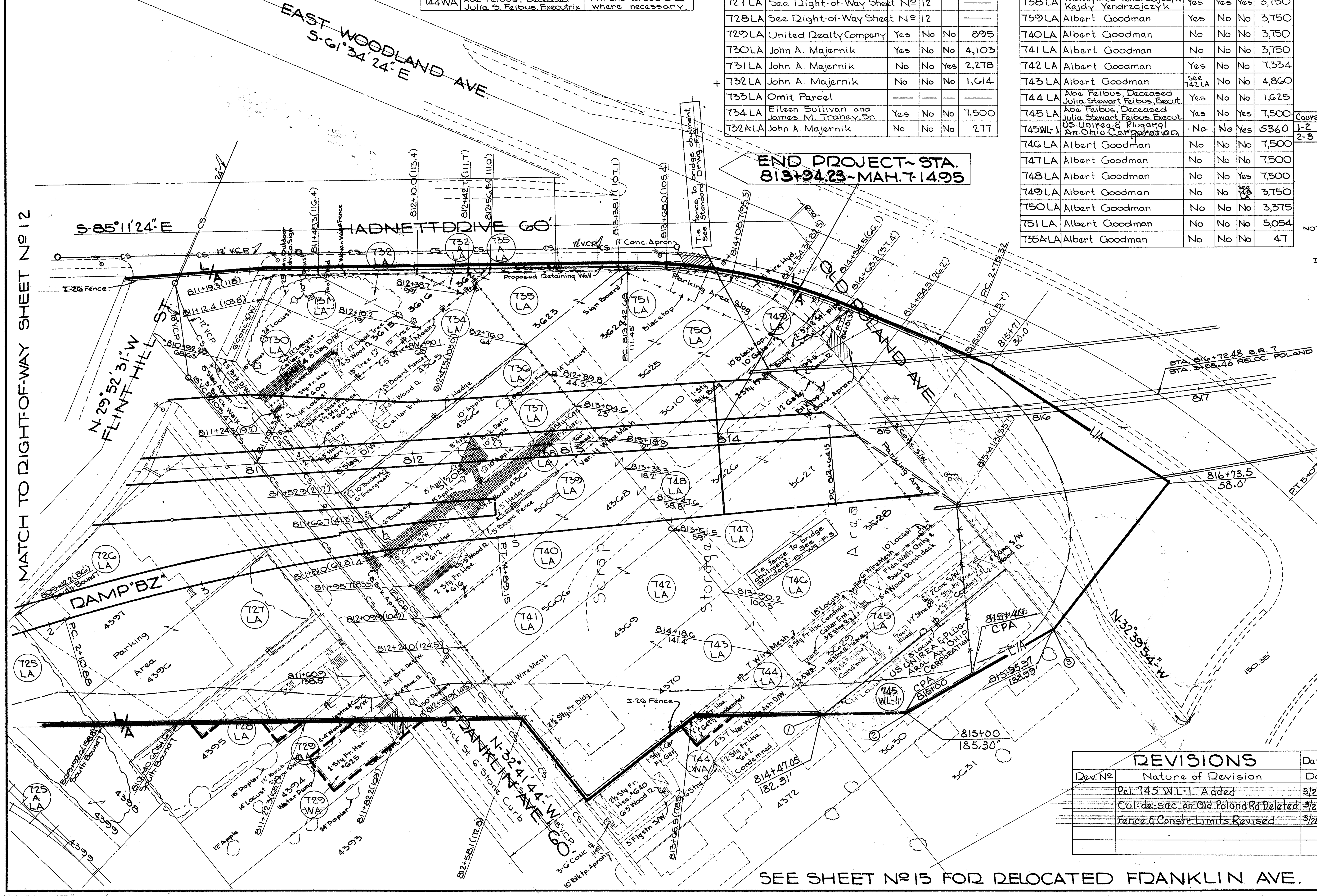
Course	Bearing	Distance
1-2	S-85°-03'-54" E	55.33'
2-3	N-65°-50'-56" E	111.47'

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

I-26 CHAIN LINK FENCE = 1186 LIN. FT.

CURVE DATA
℄ SURVEY S.R. 7
Δ = 34°50'02"
Dc = 2°00'
Lc = 1741.68'
T = 898.70'
R = 2864.79'
P.I. STA. 823+62.85

END PROJECT ~ STA. 813+94.23 ~ MAH. 7-14.95



REVISIONS

Rev. Nº	Nature of Revision	Date Completed	
		Date	Made By
	Pcl. 745 WL-1 Added	3/28/68	
	Cul-de-sac on Old Poland Rd Deleted	3/28/68	
	Fence & Constr. Limits Revised	3/28/68	

Note:
+ Indicates a similar number out of numerical order.

GRAPHIC SCALE
0 25 50 75 100'

SEE SHEET Nº 15 FOR RELOCATED FRANKLIN AVE.

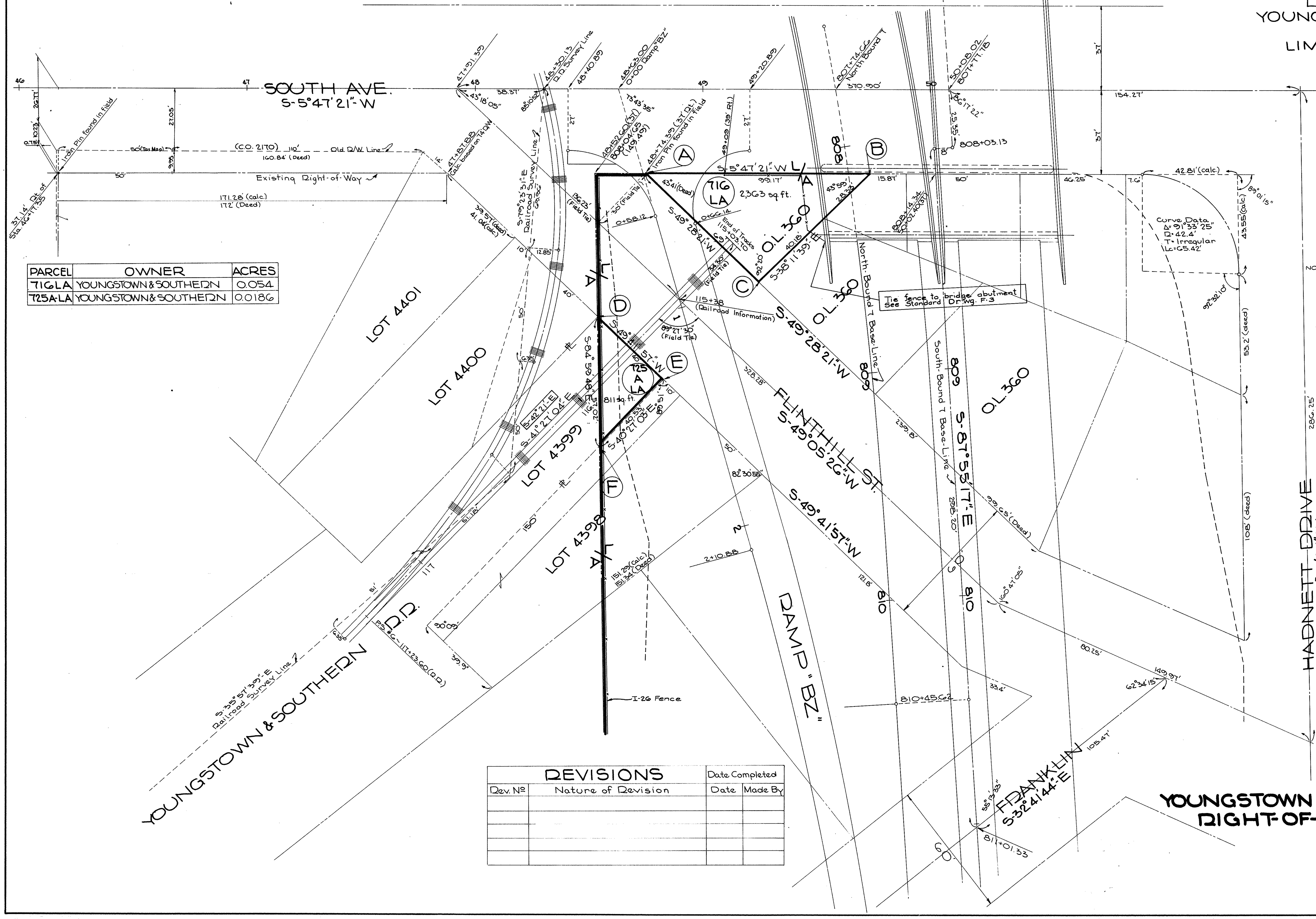
R/W SHEET Nº 13 OF 15

Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-3(11) 238 U-524(3)	

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS



PARCEL	OWNER	ACRES
716LA	YOUNGSTOWN & SOUTHERN	0.054
725A-LA	YOUNGSTOWN & SOUTHERN	0.0186

NOTE: THE RIGHT-OF-WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

FOR FENCE QUANTITIES AND ADDITIONAL INFORMATION IN THIS AREA SEE R/W SHEET 12 OF 15

	YOUNGSTOWN EXPRESSWAY	YOUNGSTOWN & SOUTHERN
	STATION OFFSET	STATION OFFSET
A	808+06.05 127.74' Rt.	115+07.53 50.17' Rt.
B	808+12.47 28.78' Rt.	114+13.03 22.65' Lt.
C	808+56.84 81.03' Rt.	115+08.64 18.83' Lt.
D	808+67.71 152.71' Rt.	115+68.09 22.66' Rt.
E	808+97.25 125.75' Rt.	115+68.89 17.33' Lt.
F	809+24.66 155.62' Rt.	116+09.42 16.63' Lt.

Notes:
Youngstown Expressway stationing is referenced to the South-Bound Base Line.
Bearings appearing in boxed form are related to the Youngstown & Southern Railroad. All remaining bearings are related to the Youngstown Expressway.

REVISIONS		Date Completed	
Rev. No	Nature of Revision	Date	Made By

YOUNGSTOWN & SOUTHERN R.R. RIGHT-OF-WAY PLAT

GRAPHIC SCALE
0 10 20 40 60

Mega-Flex Tracing

Submitted January 31, 1962

FED. RD.	STATE	PROJECT	
2	OHIO	I-680-9(11) 238 U-524(9)	

125
206

YOUNGSTOWN EXPRESSWAY
MAH. 7-14.95
LIMITED ACCESS

CURVE DATA
℄ SURVEY S.R. 7
Δ = 34°50'02"
Dc = 2°00'
Lc = 1741.69'
T = 898.70'
R = 2864.79'
P.I. STA. 823+62.85

SLOPE EASEMENT

PARCEL	OWNER	BUILDINGS HOUSES	GARAGE	OTHER	SQ. FT. OF TAKING
755 SL	MARY LAUGHRAN	No	No	No	498
756 SL	JULIUS CERCONE	No	No	No	1,200
757 SL	H.K.R. REALTY Co.	No	Yes	No	911
759 SL	JULIUS CERCONE	No	No	No	101

NOTE: THE RIGHT OF WAY FENCE IS TO REMAIN 2' DISTANT FROM THE LIMITED ACCESS LINE UNLESS OTHERWISE STATIONED.

FOR FENCE QUANTITIES AND ADDITIONAL INFORMATION SEE R/W SHEET 12 OF 15.

SUMMARY OF RIGHT-OF-WAY REQUIRED

PARCEL NO.	OWNER	SHEET NO.	EXIST. BLDGS.	SQ. FT. TO BE ACQUIRED LA "T"	SQ. FT. REMAINING "R"	SEVERANCE SQ. FT. LEFT	SEVERANCE SQ. FT. RIGHT	SQ. FT. TO BE ACQUIRED SLOPE EASEMENT	SQ. FT. TO BE ACQUIRED NOT "LA" LEFT	SQ. FT. TO BE ACQUIRED NOT "LA" RIGHT	TOTAL SQ. FT.	REMARKS
752	MARY LAUGHRAN	15	No	0	7,632	—	—	0	0	15	7,647	Additional property listed under Parcel 755
753		15	No	0		—	—	0	0	309		
754	OMIT PARCEL	15	—	—	—	—	—	—	—	—	—	
755	MARY LAUGHRAN	15	No	0	878	—	—	498	0	5,592	7,968	A separate property (Also, see slope easement)
756	JULIUS CERCONE	15	No	0	5,601	—	—	1,200	0	699	7,500	See Slope Easement
757	H.K.R. REALTY CO.	15	No	0	5,040	—	—	911	0	49	6,000	See Slope Easement
758	NATHAN ROBINS	15	Yes	0	0	—	—	0	0	4,800	4,800	
759	JULIUS CERCONE	15	No	0	4,812	—	—	101	0	487	5,400	See Slope Easement

North R/W Curve Data
Δ = 90°00'00"
R = 5.5'
T = 5.5'
Lc = 8.64'
P.C. Sta. 2+94.56 (22' Lt.)
P.T. Sta. 50+27.00 (23' Lt.)

South R/W Curve Data
Δ = 73°15'03"
R = 16.5'
T = 12.27'
Lc = 21.09'
P.C. Sta. 2+84.26 (22' Lt.)
P.T. Sta. 49+65.75 (23' Lt.)

DETAIL 1
No Scale

Δ = 52°12'
R = 214.86'
T = 105.26'
L = 195.75'

REVISIONS

Rev. №	Nature of Revision	Date Completed: Date	Made By
	Pcl. 745 WL-1 Added	3/28/68	
	Old Poland Ave. Cul-de-sac Deleted	3/28/68	

FRANKLIN AVE. RELOCATION PROPERTY PLAT

GRAPHIC SCALE
0 25 50 75 100'

R/W SHEET № 15 OF 15

Mega-Flex Tracing

Submitted January 31, 1962

SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95

1/7

THE H. C. NUTTING CO.
CINCINNATI, OHIO

NOTE: The information shown by this subgrade profile was secured for the use of the State of Ohio and is not to be construed as a part of the plans governing the construction of the project.

- Topsoil = X" = Approximate depth.
- Auger boring - plan view.
- Drive sample or core boring - plan view.
- Water content nearly equal to or greater than liquid limit.
- Number of blows for "Standard Penetration" test. X = number of blows for first 6 inches. Y = number of blows for second 6 inches.
- W——— Free water.
- Auger boring plotted to vertical scale only.

NOTE: Figures beside borings indicates water content in percent, e.g. 15%.

LEGEND FOR PROJECT — AVERAGE RESULTS OF TESTS — 343 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C.SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel	A-1-a	A-1-a	60	15	12	— 13	—	19	3	9	7
Gravel with Sand	A-1-b	A-1-b	44	20	22	— 14	—	19	3	9	24
FS Fine Sand	A-3	A-3	4	2	85	— 9	—	NP	NP	4	1
Coarse and Fine Sand		A-3a	6	10	64	— 20	—	NP	NP	11	26
Gravel with Sand and Silt	A-2-4	A-2-4	35	15	21	18	11	17	6	12	11
Gravel with Sand, Silt and Clay	A-2-6	A-2-6	35	16	15	19	15	25	17	13	1
Sandy Silt	A-4	A-4a	16	9	22	33	20	22	5	13	112
Silt	A-4	A-4b	2	3	15	61	19	27	5	20	18
Silt and Clay	A-6	A-6a	5	3	8	43	41	34	12	25	5
Random fill			VISUAL	CLASSIFICATION							137
Rock-Soil Mixture			VISUAL	CLASSIFICATION							1

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.

*Denotes sample taken at or near grade

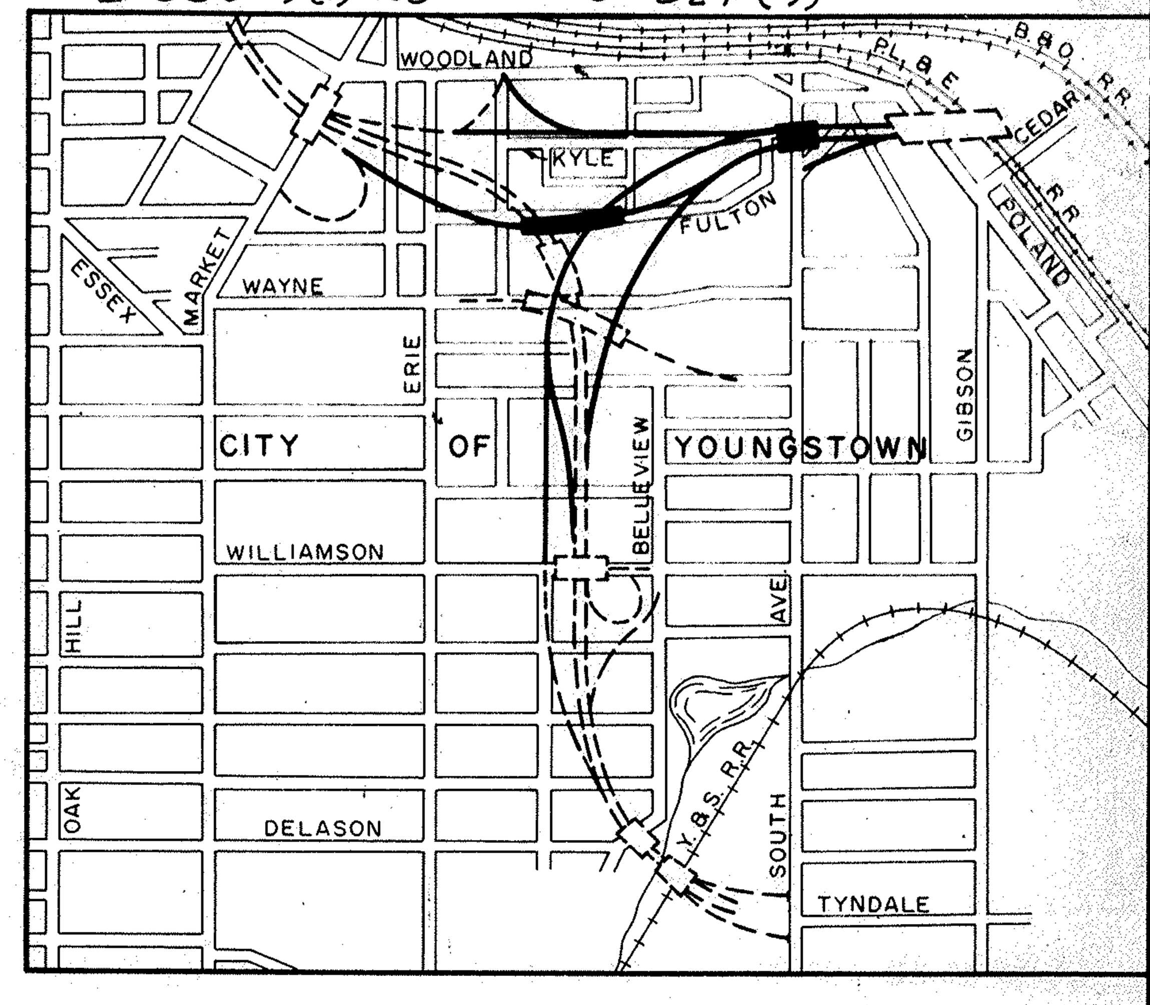
NORTHBOUND STATE ROUTE NO. 7

Station	& Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
788+50	B.L.	0.0-1.0	Random Fill							14	Visual*
		1.0-2.0	Random Fill							15	Visual
		2.0-3.0	Random Fill							16	Visual
		3.0-4.0	Random Fill							17	Visual
		4.0-4.5	Random Fill							19	Visual
		4.5-5.5	54	8	18	12	8	NP	NP	13	A-1-b
		5.5-8.0	0	0	24	68	8	NP	NP	23	A-4b
		8.0-11.5	0	1	74	- 25	-			25	A-3a
		11.5-12.0	9	4	50	28	9	NP	NP	24	A-4a
		12.0-14.0	20	9	31	25	15	18	2	15	A-4a
		14.0-15.0	15	8	21	30	26	21	6	14	A-4a
		15.0-15.5	14	8	21	32	25	21	6	13	A-4a
788+50	50' R. of B.L.	0.5-2.5	9	9	15	45	22	27	5	9	A-4a*
		2.5-5.0	3	5	29	42	21	23	3	11	A-4a
		5.0-7.5	14	9	23	35	19	23	5	12	A-4a
		7.5-8.5	7	9	25	40	19	23	5	12	A-4a
		8.5-11.0	0	1	23	70	6	NP	NP	24	A-4b
		11.0-11.5	13	12	29	33	13	19	3	12	A-4a
789+50	50' R. of B.L.	0.0-5.0	Random Fill							11	Visual
		5.0-7.5	Random Fill							10	Visual
		7.5-12.5	Random Fill							14	Visual
		12.5-15.0	Random Fill							15	Visual*
		15.0-15.5	Random Fill							15	Visual
		15.5-20.0	Random Fill							18	Visual
		20.0-22.5	Random Fill							14	Visual
		22.5-23.0	Random Fill							5	Visual
		23.0-25.0	1	4	4	58	33	33	12	21	A-6a
		25.0-25.5	47	18	16	- 19	-			8	A-1-b
		25.5-26.5	9	21	59	- 11	-			5	A-3a
790+50	50' R. of B.L.	0.0-6.5	Random Fill							11	Visual
		6.5-11.0	Random Fill							15	Visual*
		11.0-15.0	Random Fill							12	Visual
		15.0-20.0	Random Fill							25	Visual
		20.0-25.0	Random Fill							23	Visual
		25.0-30.0	Random Fill							27	Visual
		30.0-32.5	Random Fill							18	Visual
		32.5-35.0	Random Fill							18	Visual
		35.0-37.5	Random Fill							13	Visual
		37.5-39.0	44	16	21	12	7	17	2	13	A-1-b
		39.0-39.4	51	11	18	- 20	-			7	A-1-b
791+35	B.L.	0.0-0.5	Random Fill							13	Visual
		0.5-3.0	Random Fill							10	Visual
		3.0-4.5	Random Fill							9	Visual
		4.5-5.0	Random Fill							11	Visual
		5.0-6.5	Random Fill							13	Visual
		6.5-11.0	Random Fill							10	Visual
		11.0-13.5	14	10	18	36	22	23	5	15	A-4a
		13.5-14.0	18	9	18	33	22	25	7	17	A-4a

NORTHBOUND STATE ROUTE NO. 7

Station	& Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
791+51	55' R. of B.L.	0.0-5.0	Random Fill							10	Visual*
		5.0-5.5	Random Fill							11	Visual
		5.5-10.0	Random Fill							16	Visual
		10.0-15.0	Random Fill							26	Visual
		15.0-20.0	Random Fill							28	Visual
		20.0-22.0	Random Fill							24	Visual
		22.0-27.0	Random Fill							8	Visual
		27.0-30.0	Random Fill							17	Visual
		30.0-31.5	Random Fill							18	Visual
792+02	B.L.	0.0-5.0	Random Fill							9	Visual
		5.0-7.0	Random Fill							11	Visual
		7.0-10.0	Random Fill							11	Visual
		10.0-10.5	Random Fill							14	Visual
		10.5-15.0	Random Fill							20	Visual
		15.0-20.0	Random Fill							22	Visual
		20.0-20.5	4	34	42	- 20	-			12	A-3a
		20.5-21.5	4	13	20	47	16	24	5	19	A-4a
		21.5-23.0	46	25	17	- 12	-			10	A-1-b
792+47	43' L. of B.L.	0.0-5.0	Random Fill							10	Visual
		5.0-9.5	Random Fill							8	Visual
		9.5-14.5	Random Fill							17	Visual
		14.5-15.0	Random Fill							16	Visual
		15.0-20.0	Random Fill							20	Visual
		20.0-23.0	Random Fill							13	Visual
		23.0-27.0	37	17	34	- 12	-			8	A-1-b
		27.0-28.5	32	36	23	- 9	-			7	A-1-b
794+52.5	B.L.	0.0-3.5	Random Fill							8	Visual
		3.5-5.0	24	11	17	30	18	25	7	13	A-4a
		5.0-10.0	23	14	21	25	17	24	7	15	A-4a
		10.0-12.5	70	4	11	- 15	-			19	A-1-a
		12.5-14.0	59	15	13	6	7	NP	NP	12	A-1-a
797+45	12' L. of B.L.	0.0-0.5	Random Fill							13	Visual
		0.5-1.5	Random Fill							11	Visual
		1.5-6.0	Random Fill							8	Visual
		6.0-7.5	Random Fill							10	Visual
		7.5-8.0	Random Fill							71	Visual
		8.0-11.0	Random Fill							21	Visual
		11.0-11.5	Random Fill							22	Visual
		11.5-12.5	Random Fill							40	Visual
		12.5-15.0	Random Fill							15	Visual
		15.0-17.5	Random Fill							117	Visual
		17.5-20.0	Random Fill							30	Visual
		20.0-25.0	Random Fill							66	Visual
		25.0-30.0	Random Fill							107	Visual
		30.0-35.0	Random Fill							122	Visual
		35.0-37.5	Random Fill							154	Visual
		37.5-38.5	Random Fill							78	Visual
		38.5-40.0	Random Fill							37	Visual
		40.0-42.5	Random Fill							34	Visual
		42.5-45.0	Random Fill							15	Visual
		45.0-46.0	23	36	36	- 5	-			14	A-1-b
		46.0-46.5	7	3	69	- 21	-			19	A-3a

I-680-9(1) 238   U-524 (9)



LOCATION MAP

NORTHBOUND STATE ROUTE NO. 7

Station	& Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	W C	SHTL Class
[illegible]00+84	B.L.	0.5-1.5	54	8	8	19	11	29	9	11	A-2-4
		1.5-5.0	62	9	13	- 16	-			9	A-1-b
		5.0-6.0	67	21	7	- 5	-			7	A-1-a*
		6.0-6.5	34	25	26	- 15	-			8	A-1-b
		6.5-9.0	1	3	41	46	9	NP	NP	10	A-4a
		9.0-9.5	0	4	70	19	7	NP	NP	8	A-3a
		9.5-10.5	17	10	41	- 32	-			8	A-3a
802+50	B.L.	1.0-2.5	19	19	30	18	14	22	5	9	A-2-4
		2.5-3.0	14	27	40	9	10	NP	NP	6	A-3a
		3.0-7.5	43	20	14	- 23	-			7	A-1-b
		7.5-8.5	63	18	9	- 10	-			8	A-1-a*
		8.5-11.0	17	26	50	- 7	-			7	A-3a
		11.0-14.0	50	21	17	- 12	-			7	A-1-a
		14.0-14.5	39	22	31	- 8	-			5	A-1-b
		14.5-16.0	4	2	85	- 9	-			4	A-3
		16.0-16.5	14	5	70	- 11	-			6	A-3a
804+66	B.L.	0.5-1.0	Random Fill							8	Visual
		1.0-4.0	54	13	15	- 18	-			9	A-1-b
		4.0-6.5	25	16	30	- 29	-			11	A-2-4
		6.5-9.0	0	2	32	49	17	20	2	15	A-4a
		9.0-10.5	1	6	20	54	19	23	5	16	A-4b
812+00	B.L.	0.5-5.0	Random Fill							8	Visual
		5.0-7.5	Random Fill							15	Visual
		7.5-9.0	44	14	11	20	11	24	5	11	A-2-4
		9.0-10.0	13	8	14	43	22	24	5	21	A-4a
		10.0-10.5	4	9	66	- 21	-			5	A-3a

SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95

2/7

THE H. C. NUTTING CO.,
CINCINNATI, OHIO

SUMMARY OF SOIL TEST DATA (CONTINUED)

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
SOUTHBOUND STATE ROUTE NO. 7											
782+50	10' R. of B.L.	0.0-2.0	Random Fill							19	Visual*
		2.0-5.0	23	10	23	27	17	17	3	7	A-4a
		5.0-10.0	16	9	23	32	20	18	4	10	A-4a
		10.0-11.5	35	9	17	25	14	18	4	10	A-4a
783+00	102' L. of B.L.	0.5-2.5	9	10	14	42	25	27	7	17	A-4a
		2.5-7.0	10	8	18	39	25	23	6	12	A-4a
		7.0-10.0	23	8	17	32	20	23	5	13	A-4a
		10.0-15.0	12	11	20	38	19	22	4	13	A-4a
		15.0-15.5	28	7	16	31	18	24	7	15	A-4a*
		15.5-20.0	18	10	19	35	18	19	4	10	A-4a
		20.0-25.0	30	9	22	27	12	17	3	7	A-4a
		25.0-30.0	10	11	27	31	21	19	5	8	A-4a
		30.0-35.0	7	12	29	33	19	18	4	8	A-4a
		35.0-40.0	12	11	25	34	18	18	4	9	A-4a
		40.0-41.5	13	11	27	31	18	18	4	10	A-4a
785+00	B.L.	2.0-7.0	9	9	19	35	28	27	9	12	A-4a
		7.0-12.0	10	10	24	34	22	22	6	10	A-4a
		12.0-17.0	13	9	27	31	20	21	5	11	A-4a
		17.0-19.0	13	8	25	36	18	21	3	14	A-4a*
		19.0-25.0	27	16	24	21	12	16	2	9	A-2-4
		25.0-28.0	26	9	19	29	17	19	4	10	A-4a
		28.0-29.0	8	5	14	40	33	24	9	12	A-4a
785+50	80' L. of B.L.	1.0-5.0	24	8	15	33	20	26	8	16	A-4a
		5.0-10.0	9	10	18	37	26	27	9	14	A-4a
		10.0-15.0	9	10	21	37	23	23	6	11	A-4a*
		15.0-17.5	14	12	26	29	19	22	5	10	A-4a
		17.5-18.0	13	9	25	31	22	23	7	9	A-4a
		18.0-22.5	12	12	27	31	18	18	5	9	A-4a
		22.5-27.5	19	10	24	29	18	18	4	8	A-4a
		27.5-30.0	31	9	22	24	14	17	4	10	A-4a
		30.0-31.0	61	16	16	- 7	-			8	A-1-a
		31.0-31.5	28	9	18	27	18	19	4	11	A-4a
786+00	B.L.	0.0-5.0	Random Fill							11	Visual
		5.0-5.5	Random Fill							15	Visual
		5.5-8.0	Random Fill							20	Visual*
		8.0-10.0	21	3	7	44	25	33	13	21	A-6a
		10.0-14.0	5	8	25	50	12	21	2	18	A-4b
		14.0-16.5	21	8	20	35	16	22	5	15	A-4a
		16.5-18.0	17	10	18	38	17	23	5	16	A-4a
786+00	50' L. of B.L.	0.0-1.5	Random Fill							13	Visual
		1.5-3.0	Random Fill							11	Visual
		3.0-4.0	Random Fill							17	Visual
		4.0-5.0	Random Fill							18	Visual
		5.0-7.5	Random Fill							10	Visual
		7.5-10.0	13	8	20	37	22	23	6	14	A-4a*
		10.0-11.5	14	11	22	[illegible]	21	25	7	14	A-4a
786+35	B.L.	0.0-5.0	Random Fill							14	Visual*
		5.0-6.5	Random Fill							19	Visual
		6.5-8.5	22	7	9	41	21	25	6	17	A-4a
		8.5-12.5	11	14	43	21	11	NP	NP	15	A-3a
		12.5-14.0	24	22	41	- 13	-			19	A-3a

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
RAMP CA											
4+20	B.L.	1.5-3.0	10	10	40	27	13	NP	NP	15	A-4a
		3.0-4.5	0	3	69	16	12	NP	NP	16	A-3a
		4.5-5.5	0	3	27	49	21	22	4	18	A-4a
		5.5-6.0	0	2	62	- 36	-			23	A-4a
		6.0-8.5	48	21	18	- 13	-			11	A-1-b
		8.5-9.0	47	21	20	- 12	-			10	A-1-b
7+00	B.L.	5.0-10.0	34	31	18	- 17	-			8	A-1-b
		10.0-13.0	17	34	38	- 11	-			5	A-1-b
		13.0-15.0	0	0	36	54	10	NP	NP	21	A-4b
		15.0-20.0	0	6	83	- 11	-			3	A-3a
		20.0-25.0	0	1	70	- 29	-			5	A-3a
		25.0-27.0	0	6	74	- 20	-			10	A-3a*
		27.0-30.0	0	0	35	56	9	NP	NP	23	A-4b
		30.0-31.5	1	22	61	- 16	-			20	A-3a
		31.5-33.0	0	2	6	69	23	26	4	20	A-4b
		(Bag 15-21)	0	4	75	15	6	NP	NP		A-3a
11+00	B.L.	0.0-0.5	Random Fill							25	Visual
		0.5-3.0	Random Fill							7	Visual
		3.0-4.0	Random Fill							37	Visual
		4.0-4.5	Random Fill							6	Visual*
		4.5-7.0	7	9	19	45	20	23	5	8	A-4a
		7.0-11.0	35	12	17	22	14	22	5	10	A-4a
		11.0-12.0	3	3	11	58	25	28	5	17	A-4b
		12.0-13.5	10	8	19	42	21	24	5	14	A-4a
		13.5-14	17	11	19	36	17	24	7	13	A-4a
14+00	B.L.	0.0-1.0	Random Fill							27	Visual
		1.0-2.5	Random Fill							16	Visual
		2.5-4.0	59	12	11	12	6	21	4	12	A-1-b
		4.0-7.5	17	9	18	32	24	25	8	16	A-4a
		7.5-8.5	12	12	21	38	17	21	4	18	A-4a
		8.5-9.5	12	16	21	43	8	NP	NP	21	A-4a
		9.5-10.0	23	11	20	38	8	NP	NP	19	A-4a

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
SOUTHBOUND STATE ROUTE NO. 7											
787+00	B.L.	0.0-2.5	Random Fill							14	Visual*
		2.5-3.0	35	10	21	22	12	21	4	9	A-2-4(Fill)
		3.0-3.5	Random Fill							10	Visual
		3.5-4.0	26	10	23	25	16	22	5	11	A-4a(Fill)
		4.0-6.0	Random Fill							10	Visual
		6.0-9.0	Random Fill							15	Visual
		9.0-12.5	Random Fill							12	Visual
		12.5-13.5	Random Fill							59	Visual
		13.5-15.0	29	8	16	28	19	26	8	20	A-4a(Fill)
		15.0-19.0	Random Fill							39	Visual
		19.0-23.0	Random Fill							68	Visual
		23.0-27.5	Random Fill							31	Visual
		27.5-29.0	Random Fill							34	Visual
		29.0-32.5	0	1	9	66	24	25	4	19	A-4b
		32.5-33.3	16	11	30	29	14	18	3	9	A-4a
787+00	24.6' R. of B.L.	0.0-5.0	Random Fill							15	Visual*
		5.0-8.0	Random Fill							17	Visual
		8.0-13.0	Random Fill							58	Visual
		13.0-18.0	Random Fill							58	Visual
		18.0-19.0	Random Fill							40	Visual
		19.0-20.0	Random Fill							17	Visual
		20.0-21.0	Random Fill							47	Visual
		21.0-25.0	0	1	3	47	49	30	9	28	A-4a
		25.0-26.5	1	2	10	68	19	NP	NP	22	A-4b
787+00	50' L. of B.L.	0.0-5.0	Random Fill							16	Visual
		5.0-7.5	Random Fill							16	Visual
		7.5-12.5	Random Fill							24	Visual
		12.5-14.0	Random Fill							71	Visual
		14.0-15.0	0	2	8	37	53	37	14	30	A-6a
		15.0-20.0	0	10	33	40	17	20	3	14	A-4a
		20.0-20.5	1	5	14	38	42	32	11	27	A-6a
		20.5-21.5	0	4	26	59	11	NP	NP	20	A-4b
788+00	B.L.	0.0-5.0	Random Fill							7	Visual
		5.0-7.5	Random Fill							14	Visual
		7.5-10.0	Random Fill							16	Visual
		10.0-12.5	Random Fill							18	Visual
		12.5-15.0	8	9	24	34	25	24	7	15	A-4a
		15.0-16.5	16	10	24	31	19	22	6	12	A-4a
788+00	36' R. of B.L.	0.0-2.5	Random Fill							10	Visual*
		2.5-3.0	Random Fill							17	Visual
		3.0-6.0	Random Fill							10	Visual
		6.0-9.0	Random Fill							18	Visual
		9.0-10.5	Random Fill							18	Visual
		10.5-12.0	22	8	25	29	16	20	4	13	A-4a
		12.0-13.5	15	12	25	30	[illegible]	21	5	11	A-4a
789+20	5' L. of B.L.	2.0-7.0	11	9	21	39	20	23	6	10	A-4a
		7.0-12.0	51	19	15	- 15	-			5	A-1-a
		12.0-17.0	27	12	25	22	14	18	1	10	A-4a
		17.0-22.0	12	19	56	- 12	-			8	A-3a
		22.0-25.0	9	14	62	- 15	-			15	A-3a
		25.0-27.0	1	4	78	- 17	-			19	A-3a
		27.0-32.0	20	11	26	27	16	17	4	9	A-4a*
		32.0-37.0	31	9	22	22	16	17	3	10	A-4a
		37.0-38.5	21	11	24	27	17	18	5	8	A-4a

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
RAMP BV											
3+71	B.L.	0.0-1.5	Random Fill							14	Visual
		1.5-3.0	Random Fill							12	Visual
		3.0-8.0	Random Fill							15	Visual
		8.0-10.0	Random Fill							15	Visual
		10.0-14.0	Random Fill							37	Visual
		14.0-17.0	0	0	0	66	34	31	6	21	A-4b
		17.0-18.5	2	0	0	51	47	32	7	24	A-4b
3+72	45' R. of B.L.	0.0-5.0	Random Fill							12	Visual*
		5.0-10.0	Random Fill							14	Visual
		10.0-10.5	Random Fill							21	Visual
		10.5-11.0	1	2	6	39	52	36	11	26	A-6a
5+00	B.L.	0.0-5.0	Random Fill							20	Visual
		5.0-5.5	Random Fill							24	Visual
		5.5-10.0	5	9	14	44	28	28	8	22	A-4a
		10.0-10.5	10	18	17	25	30	32	9	25	A-4a
		10.5-12.0	0	0	1	48	51	36	10	28	A-4a
		12.0-13.5	11	12	22	30	25	20	5	11	A-4a
8+00	B.L.	0.5-5.0	28	7	14	30	21	30	10	11	A-4a
		5.0-10.0	14	8	18	38	22	22	4	13	A-4a
		10.0-15.0	16	10	19	35	20	22	4	12	A-4a
		15.0-15.5	13	10	20	40	17	21	4	12	A-4a
		15.5-17.0	18	11	18	36	17	20	4	10	A-4a
		17.0-17.9	33	11	19	26	11	18	4	8	A-4a
		(Bag 3-15)	23	8	17	32	20	23	6		A-4a
12+00	B.L.	1.0-1.5	3	7	10	51	29	30	9	14	A-4b
		1.5-6.0	22	7	16	36	19	25	7	13	A-4a
		6.0-9.5	11	8	19	38	24	24	7	13	A-4a*
		9.5-10.5	11	9	20	39	21	22	5	14	A-4a
		10.5-11.5	52	12	17	- 19	-			10	A-1-b
		11.5-12.0	45	13	21	- 21	-			13	A-1-b

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
SOUTHBOUND STATE ROUTE NO. 7											
792+50	3' R. of B.L.	0.0-5.0	39	10	14	25	12	23	6	12	A-4a
		5.0-8.5	35	16	15	19	15	25	17	13	A-2-6
		8.5-10.0	22	31	33	- 14	-			14	A-1-b
		10.0-12.5	44	26	13	9	8	26	10	15	A-2-4
		12.5-14.0	58	11	12	- 19	-			8	A-1-b
		14.0-17.5	3	1	61	- 35	-			10	A-3a
		17.5-20.0	10	3	66	- 21	-			17	A-3a
		20.0-20.9	60	10	14	9	7	19	3	8	A-1-a*
		(Bag 0-5)	15	7	19	34	25	25	8	12.8	A-4a
800+50	B.L.	0.0-2.0	Random Fill							17	Visual
		2.0-6.0	9	7	16	38	30	28	10	15	A-4a
		6.0-7.5	0	10	48	30	12	NP	NP	10	A-4a
		7.5-10.0	42	11	17	17	13	23	6	14	A-2-4
		10.0-15.0	37	17	34	- 12	-			10	A-1-b
		15.0-20.0	40	8	30	14	8	NP	NP	16	A-2-4
		20.0-27.0	0	4	77	- 17	-			8	A-3a*
		27.0-28.0	4	4	9	61	22	26	5	19	A-4b
		28.0-31.0								11	A-4a
		31.0-32.5	9	9	33	36	13	NP	NP	8	A-4a
		(Bag 10-26)	29	14	23	20	14	22	7		A-2-4

Station	Offset	STRATUM Depth From To	% Agg	% C S	% F S	% Silt	% Clay	L L	P I	% W C	SHTL Class
RAMP BX											
5+00	B.L.	0.5-1.5	22	6	13	37	22	26	6	14	A-4a
		1.5-6.5	24	9	18	27	22	26	8	11	A-4a
		6.5-7.0	20	8	25	29	18	21	5	9	A-4a
		7.0-10.0	12	9	27	32	20	21	5	11	A-4a
		10.0-12.5	16	10	26	30	18	21	5	10	A-4a
		12.5-17.0	26	11	20	29	14	20	4	9	A-4a*
		17.0-17.9	19	9	23	31	18	20	5	8	A-4a
		(Bag 12.5-16)	11	11	27	32	19	19	5		A-4a
8+50	B.L.	0.0-0.5	Random Fill							14	Visual
		0.5-1.0	Random Fill							16	Visual
		1.0-2.0	Random Fill							17	Visual
		2.0-4.0	11	5	10	50	24	28	7	21	A-4b
		4.0-6.0	23	8	18	32	19	24	7	14	A-4a
		6.0-7.0	25	20	23	24	8	NP	NP	12	A-2-4
		7.0-9.5	16	10	25	29	20	21	5	10	A-4a
		9.5-10.0	14	12	28	28	18	20	4	12	A-4a
17+67	5' L. of B.L.	0.5-1.0	43	9	12	21	15	26	7	14	A-4a
		1.0-2.0	24	8	18	31	19	27	7	12	A-4a
		2.0-7.0	0	1	8	77	14	NP	NP	7	A-4b
		7.0-9.5	0	2	75	15	8	NP	NP	3	A-3a
		9.5-10.0	0	2	80	14	4	NP	NP	4	A-3a
RAMP BY											
7+50	B.L.	0.0-0.5	Random Fill							20	Visual
		0.5-1.0	Random Fill							12	Visual
		1.0-1.5	Random Fill							10	Visual*
		1.5-2.5	Random Fill							6	Visual
		2.5-3.5	8	12	17	40	23	27	6	12	A-4a
		3.5-9.0	12	20	22	27	19	24	7	11	A-4a
		9.0-10.0	19	9	16	37	19	20	3	16	A-4a
		10.0-10.5	0	2	12	68	18	NP	NP	24	A-4b
		10.5-11.0	15	8	16	42	19	21	3	16	A-4a

SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95

3/7

THE H. C. NUTTING CO.
CINCINNATI, OHIO

PLAN VIEW

SCALE: 1"=100'


SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95
4/7
THE H. C. NUTTING CO.
CINCINNATI, OHIO
PROFILE - S.R.#7 NORTHBOUND
LOG OF OFFSET BORING Sta.792+47 43'LT.
LOG OF OFFSET BORING Sta.788+50 50'RT.
LOG OF OFFSET BORING Sta.789+50 50'RT.
LOG OF OFFSET BORING Sta.790+50 50'RT.
LOG OF OFFSET BORING Sta.791+51 55'RT.
Random fill
0.3' Brick pavement
12'LT.
785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814
970 960 950 940 930 920 910 900 890 880 870 860 850


SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95
5/7
THE H. C. NUTTING CO.
CINCINNATI, OHIO
LOG OF OFFSET BORING
Sta. 786+00
50' LT.
Random fill
CROSS SECTION
STA. 787+00
Proposed grade
*(Sta. 786+90)
*This boring is also located on Ramp "BV" ℄ Sta. 5+00.
CROSS SECTION
STA. 788+00
(Sta. 788+20)
(Sta. 788+12)
This boring is also located on Ramp "BV" ℄ Sta. 3+72, 45' RT.
This boring is also located on Ramp "BV" ℄ Sta. 3+71
10' RT.
5' LT.
3' RT.
T.S.=0.5'
T.S.=0.1'
Soil fill
Refusal
PROFILE - S.R.#7 SOUTHBOUND
781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813
970 960 950 940 930 920 910 900 890 880 870 860 850

SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95

6/7

THE H. C. NUTTING CO.
CINCINNATI, OHIO

Note: For cross section on this station (4+90), see cross section on S.R. # 7 southbound at station 787+00, sheet # 5.

Note: For boring offset 45' Rt. and cross section on this station (3+72), see cross section on S.R. # 7 southbound at station 788+00, sheet # 5.

* Surveyed location of this boring is on southbound S.R. 7 ℄ Sta. 783+00, 102' Lt.

⊛ Surveyed location of this boring is on southbound S.R. 7 ℄ Sta. 785+50, 80' Lt.

SOIL PROFILE
MAHONING COUNTY
MAH-7-14.95

7/7

THE H. C. NUTTING CO.
CINCINNATI, OHIO