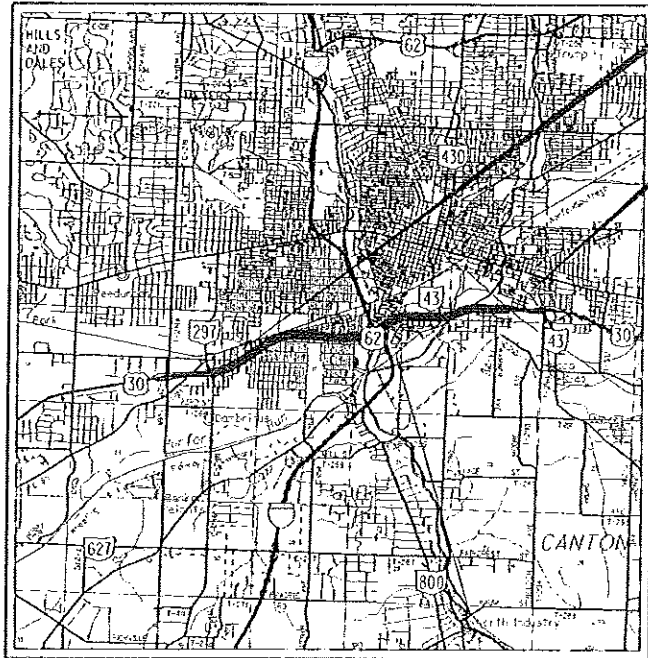


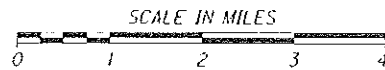
STA - IR 77 / US 30 / US 62 VAR
160130 PID - 77887
Dist 4 3/24/2016

Contract Proposal Available @ www.
contracts.dot.state.oh.us/home



LOCATION MAP

LATITUDE: N40°47'05" LONGITUDE: W81°23'08"



PORTION TO BE IMPROVED -----
INTERSTATE HIGHWAY -----
FEDERAL ROUTES -----
STATE ROUTES -----
COUNTY & TOWNSHIP ROADS -----
OTHER ROADS -----

DESIGN DESIGNATION US 30
CURRENT ADT (2014) 44350
TRUCKS (24 HOUR B&C) 12%
DESIGN SPEED 65
LEGAL SPEED 60
DESIGN FUNCTIONAL CLASSIFICATION:
URBAN OTHER FREEWAYS AND EXPRESSWAYS
NHS PROJECT YES

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES	
CONTACT BOTH SERVICES CALL TWO WORKING DAYS BEFORE YOU DIG	
CALL 1-800-362-2764 (TOLL FREE)	
OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY	
OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE CALL: 1-800-925-0988	

PLAN PREPARED BY:
ODOT --- DISTRICT 4 PLANNING & ENGINEERING
2088 SOUTH ARLINGTON ROAD
AKRON, OHIO 44306

ENGINEERS SEAL:

SIGNED: *TPowell*
DATE: 10-15-15

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14	MGS-6.1	7/19/13	MT-102.20	7/18/14	800	10/16/15 WPC 3/19/15
BP-4.1	7/19/13	MGS-6.2	1/18/13	MT-103.10	1/16/15	821	4/20/16
BP-9.1	7/19/13			MT-105.10	7/19/13	832	1/17/14
		RM-4.6	7/19/13			843	4/18/03
I-2.1	1/17/14			TC-41.20	10/18/13	847	7/17/15
		EXJ-4-87	7/19/02	TC-52.10	10/18/13	902	12/31/16
DM-1.1	1/18/13			TC-52.20	7/18/14	921	4/20/16
DM-4.3	7/19/13	MT-95.30	7/18/14	TC-65.10	1/17/14		
DM-4.4	7/20/12	MT-95.40	7/18/14	TC-65.11	7/18/14		
		MT-98.10	7/18/14	TC-71.10	1/17/14		
MGS-1.1	7/19/13	MT-98.11	7/18/14	TC-72.20	7/18/14		
MGS-2.1	7/19/13	MT-98.20	7/18/14				
MGS-4.2	7/19/13	MT-101.60	7/19/13	HL-10.31	7/17/15		
MGS-4.3	1/18/13	MT-101.70	1/17/14				
MGS-5.2	7/19/13	MT-101.90	7/17/15				
MGS-5.3	7/19/13	MT-102.10	7/18/14				

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

STA-77 / 30 / 62-VAR

CITY OF CANTON
STARK COUNTY

INDEX OF SHEETS:

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PROJECT DESCRIPTION

IMPROVEMENT OF 3.43 MILES OF US 30 IN STARK COUNTY BY PLANING AND RESURFACING INCLUDING PARTIAL DEPTH , FULL DEPTH PAVEMENT REPAIRS, AND RESURFACING OF THE US 30 RAMPS. MINOR WORK TO VARIOUS STRUCTURES OF US 30. MEDIAN WALL LIGHTPOLE REPLACEMENT.

PROJECT EARTH DISTURBED AREA: 3.89 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.00 ACRES
NOTICE OF INTENT EDA: N/A (NOI NOT REQUIRED)

LIMITED ACCESS

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

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 9 AND 53-63, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED *Am C B*
DATE 10-15-15 DISTRICT DEPUTY DIRECTOR

APPROVED *James Whay*
DATE 11-4-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E071 (048)

PID NO.
77887

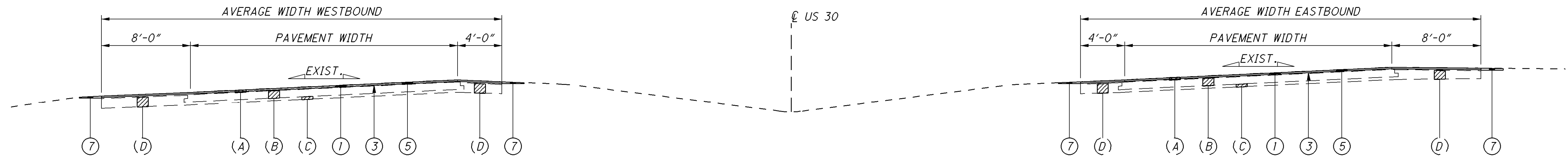
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NORFOLK SOUTHERN
WHEELING & LAKE ERIE

STA-77 / 30 / 62-VAR

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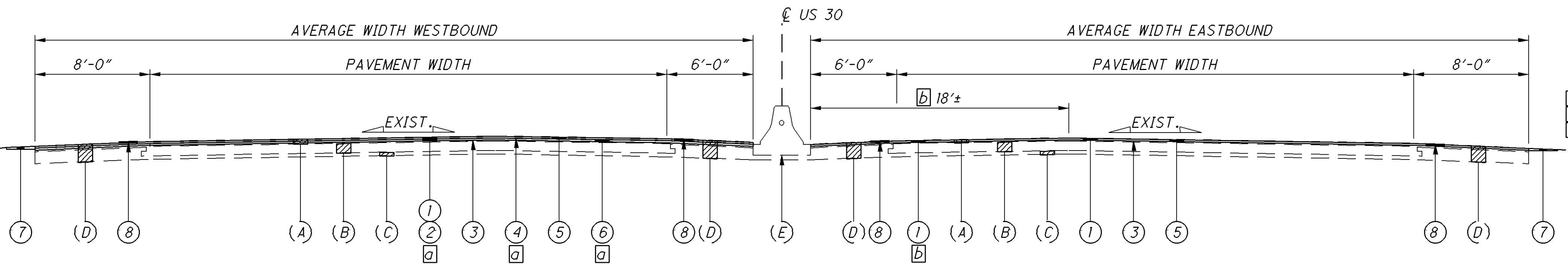
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TYPICAL 1. WESTBOUND:				
ROUTE	SLM		AVG WIDTH (FEET)	LENGTH (MILES)
	FROM	TO		
U.S. 30	13.07	13.36	36	0.29
TOTAL =			36	0.29

TYPICAL 1. EASTBOUND:				
ROUTE	SLM		AVG WIDTH (FEET)	LENGTH (MILES)
	FROM	TO		
U.S. 30	13.07	13.36	36	0.29
TOTAL =			36	0.29

TYPICAL 2. WESTBOUND:				
ROUTE	SLM		AVG WIDTH (FEET)	LENGTH (MILES)
	FROM	TO		
U.S. 30	13.42	13.91	50	0.49
U.S. 30	13.91	14.02	60	0.11
U.S. 30	14.02	14.40	50	0.38
U.S. 30	14.40	14.65	69.75	0.25
U.S. 30	14.65	14.75	42	0.10
U.S. 30	14.78	14.81	50	0.03
U.S. 30	14.94	14.99	50	0.05
U.S. 30	15.09	15.19	50	0.10
U.S. 30	15.24	15.42	76	0.18
U.S. 30	15.42	15.56	55.25	0.14
U.S. 30	15.59	15.79	68	0.20
U.S. 30	15.83	15.89	56	0.06
U.S. 30	16.02	16.34	50	0.32
U.S. 30	16.36	16.38	50	0.02
U.S. 30	16.43	16.46	50	0.03
TOTAL =			2.46	



TYPICAL 2. EASTBOUND:				
ROUTE	SLM		AVG WIDTH (FEET)	LENGTH (MILES)
	FROM	TO		
U.S. 30	13.42	13.88	50	0.46
U.S. 30	13.88	13.99	50	0.11
U.S. 30	13.99	14.36	60	0.37
U.S. 30	14.36	14.54	50	0.18
U.S. 30	14.54	14.69	69.5	0.15
U.S. 30	14.69	14.75	38	0.06
U.S. 30	14.78	14.81	38	0.03
U.S. 30	14.94	14.99	38	0.05
U.S. 30	15.09	15.19	50	0.10
U.S. 30	15.24	15.56	62	0.32
U.S. 30	15.59	15.79	62	0.20
U.S. 30	15.83	15.89	60.25	0.06
U.S. 30	16.02	16.34	50	0.32
U.S. 30	16.36	16.38	50	0.02
U.S. 30	16.43	16.46	50	0.03
TOTAL =			2.46	

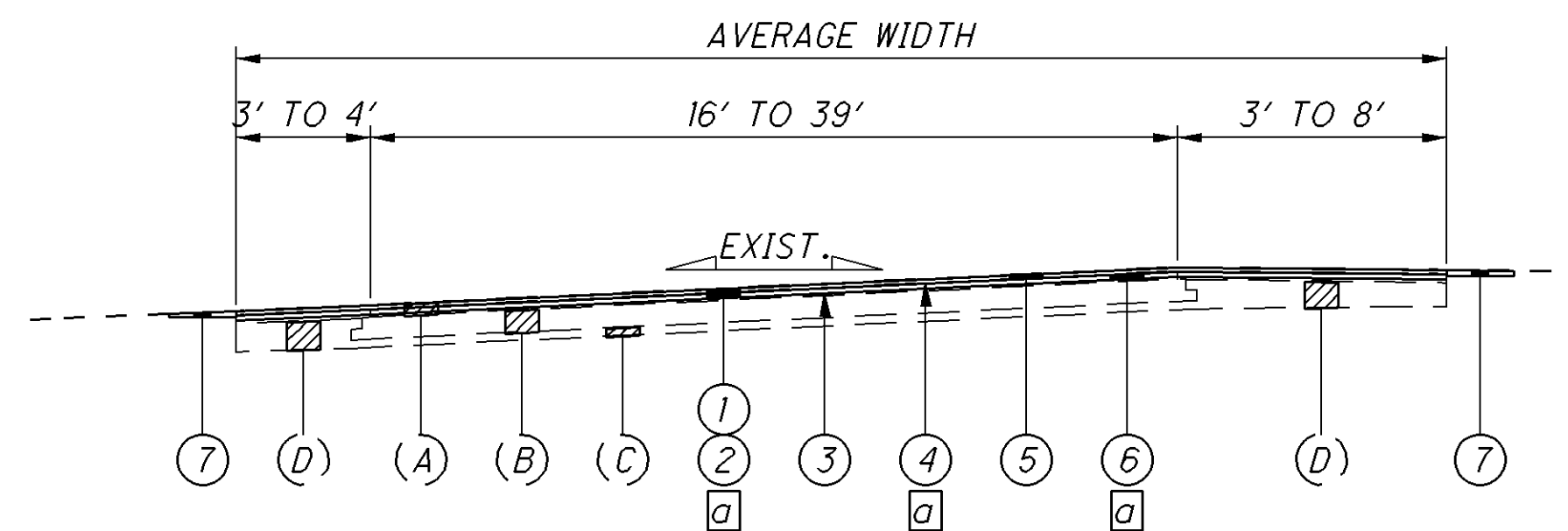
LEGEND

- 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=1 1/2")
- 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3 1/4")
- SPECIAL, TACK COAT, TRACKLESS TACK
- SPECIAL, TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE
- 442, ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T=1 1/2")
- 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T=1 3/4")
- 617, COMPACTED AGGREGATE, AS PER PLAN (2" AVG.)
- 618, RUMBLE STRIPS, (ASPHALT CONCRETE)
- 606, GUARDRAIL, TYPE MGS WITH LONG POSTS
- 209, LINEAR GRADING, AS PER PLAN
- 441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1 (448), (UNDER GUARDRAIL), AS PER PLAN (T=2")

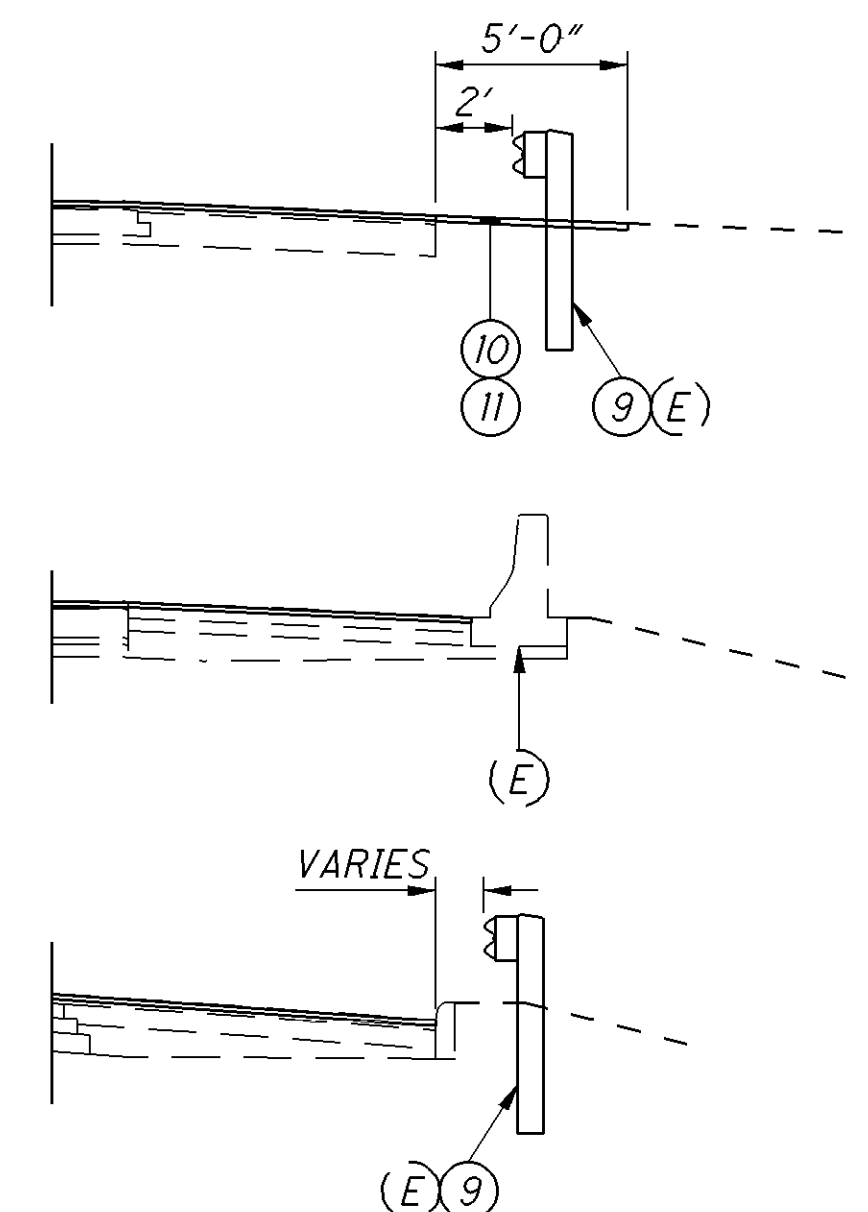
- (A) EXISTING 5"± ASPHALT CONCRETE SURFACE
(B) EXISTING 8" ASPHALT CONCRETE BASE
(C) EXISTING 3" AGGREGATE BASE
(D) EXISTING TREATED SHOULDER (6"± ASPHALT OVER 10"± AGGREGATE BASE)
(E) EXISTING CONCRETE BARRIER
(F) EXISTING GUARDRAIL

WESTBOUND SLM 15.00 TO SLM 16.46 AND
EASTBOUND ON-RAMP (RAMP O) FROM RAFF RD.

EASTBOUND STA. 897+00 (SLM 13.70) TO STA. 922+00 (SLM 14.17)
VARIABLE DEPTH PLANING FOR SLOPE CORRECTION (SEE CROSS
SECTIONS)



TYPICAL 3. SECTION APPLIES:		
ROUTE	AVG WIDTH (FEET)	LENGTH (MILES)
RAMP P - GORE 1	24.00	0.41
RAMP R - GORE 2	30.00	0.33
RAMP T - GORE 3	36.00	0.26
RAMP B & GORE	12-26	0.20
RAMP H	26.00	0.23
RAMP W-C - GORE 5	27.00	0.28
RAMP C-E - GORE 6	22.00	0.20
RAMP O - GORE 7	30.00	0.28
RAMP Q - GORE 8	22.00	0.18
RAMP S - GORE 9	24.00	0.19
RAMP A - GORE 10	26-39	0.22
RAMP D & GORE	36.00	0.04
RAMP E & GORE	27-29	0.16
RAMP CN-W - GORE 11	22.00	0.18
RAMP CS-W - GORE 12	24.00	0.16
RAMP E-C - GORE 13	26.00	0.15
TOTAL =		3.49



BARRIER SECTIONS
(SEE GUARDRAIL SUB-SUMMARY FOR LOCATIONS)

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UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-3145 KEN GREENE

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AEP Telecom ATTN: Robert Kackley 1 Riverside Plaza Columbus, OH 43215 614-716-3551 614-716-3535 Fax	City of Canton Water Department ATTN Lewis Miller 2664 Harrisburg Ave. N.E. Canton, OH 44705 330-489-3310 330-489-3073 Fax
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AEP Transmission Lines ATTN: Barbara Dunlap 700 Morrison Road Gahanna, Ohio 43230 614-552-1893	AT&T The Ohio Bell Telephone Company ATTN: Cindy Zuchegno 50 W. Bowery St., 4th Floor Akron, OH 44308 330-384-3561
--	---

AEPN: Ray Zitney 301 Cleveland Avenue, SW P.O. Box 24400 Canton, Ohio 44701 330-438-7718	Stark County Metro Sewer District ATTN: Jeff Yohe 1701 Mahoning Rd., N.E. Canton, OH 44705 330-451-2311 330-453-9044 Fax
--	---

Enervest Operating, L.L.C. ATTN: Tom Lorentz 125 State Route 43 Hartville, OH 44632 330-587-1208	Inland Corporation (Sunoco Logistics) Line Locator ATTN: Norbert Bruening 216-214-5905
--	---

MCI Communications ATTN: Beth Seubert 2400 North Glenville Richardson, TX 75082	Range Resources - Appalachia, LLC ATTN: Ed Haas 125 State Route 43 P.O. Box 550 Hartville, OH 44632 330 877-6747 ext. 182 330-877-6129 Fax
--	--

Dominion East Ohio ATTN: Bryan D. Dayton 320 Springside Drive, Suite 320 Akron, OH 44333 Office: 330-664-2409	Time Warner Cable ATTN: Justin Freudeman 5520 Whipple Ave. NW Canton, OH 44720 330-494-9200 ext. 330-555-3192
---	---

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS [AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS]:

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
US 30	13.03 TO 16.46	12 FT.

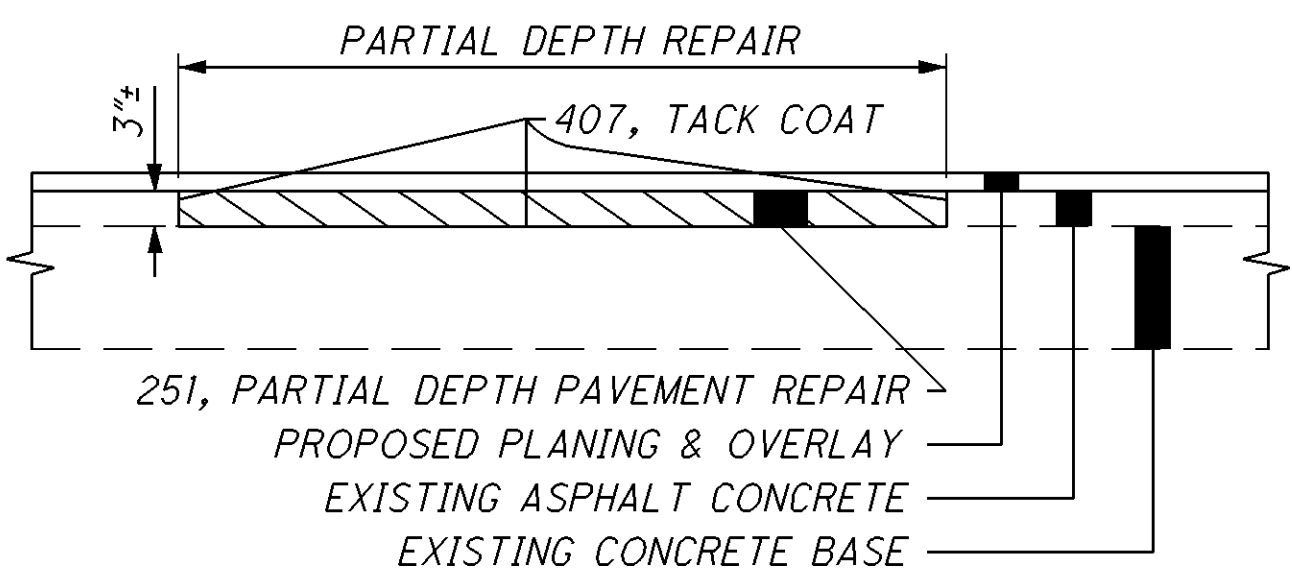
PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 448 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING.PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR, 1500 SQ. YD.



ITEM 611 - INLET RECONSTRUCTED TO GRADE, AS PER PLAN

EXISTING INLETS SHALL BE REMOVED TO THE SPRING LINE AND AT THE OPTION OF THE CONTRACTOR EITHER RECONSTRUCTED TO GRADE PER CMS 611.10.C OR REPLACED WITH A NEW PRECAST OR CAST-IN-PLACE INLET, INCLUDING MEDIAN BARRIER, TROUGH AND BASE OF INLET.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 611, INLET RECONSTRUCTED TO GRADE, AS PER PLAN. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

611, INLET RECONSTRUCTED TO GRADE, AS PER PLAN 28 EACH

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 3000 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

253, PAVEMENT REPAIR, 200 SQ YD

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

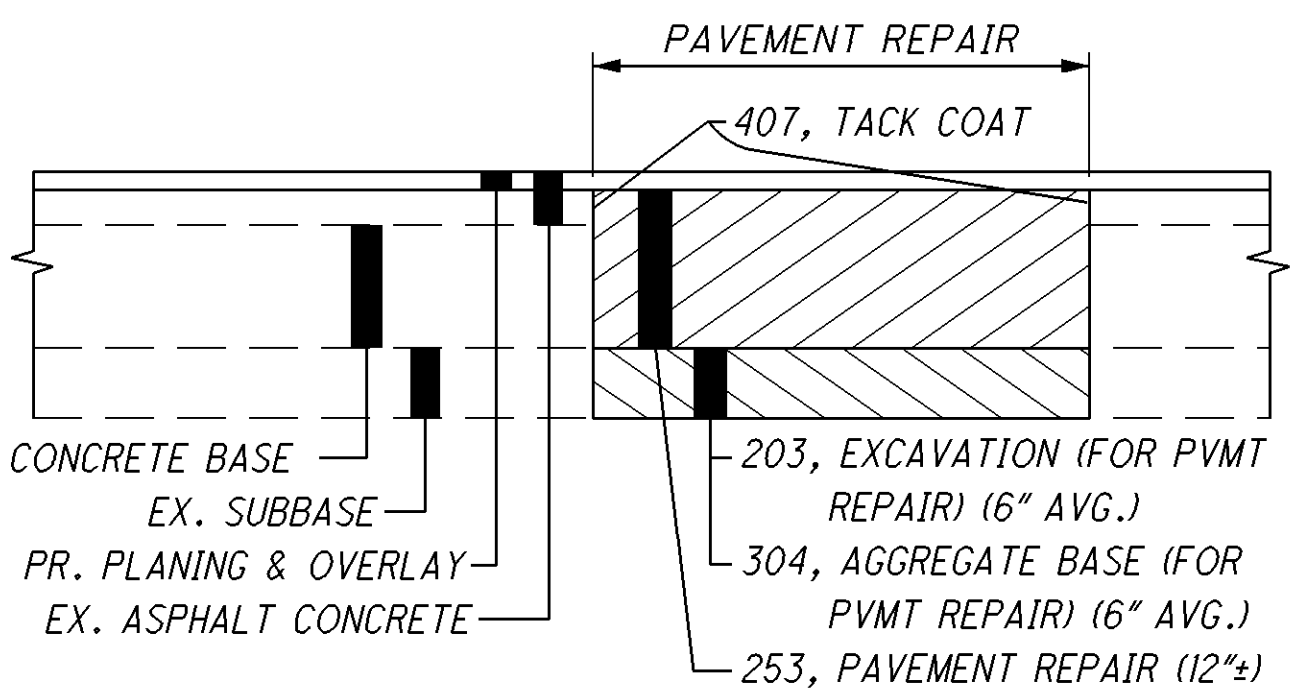
THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION (FOR PAVEMENT REPAIR) 35 CU YD

ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE (FOR PAVEMENT REPAIR) 35 CU YD



BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

202, REMOVAL MISC.: BARRIER REFLECTOR	475 EACH
626, BARRIER REFLECTOR, TYPE B	528 EACH

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

- METHOD A:
1. SET GUARDRAIL POSTS
 2. PLACE ITEM 441

- METHOD B:
1. PLACE ITEM 441
 2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
 3. SET GUARDRAIL POSTS
 4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

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ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	33
NO. 200	0-13

LINEAR GRADING

SHOULDER WIDTH BEYOND THE LIMITS OF THE COMPACTED AGGREGATE WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND WILL BE PERFORMED ONLY IN THE AREAS NECESSARY. THIS WORK WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. THE AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. THESE ITEMS OF WORK WILL BE PERFORMED AFTER THE PLACEMENT OF ITEM 617 - COMPACTED AGGREGATE. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF, OR ADDITION OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. EXCESS MATERIAL WILL BE WINDROWED ON THE SHOULDER. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITTED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

209, LINEAR GRADING	196 STA.
659, SEEDING AND MULCHING	188 SQ YD
659, COMMERCIAL FERTILIZER	2.54 TON
659, LIME	3.89 ACRES
659, WATER	102 M. GAL.
(659 ITEMS INCLUDE QUANTITIES FROM PAVING UNDER GUARDRAIL LINEAR GRADING, AS PER PLAN AREAS.)	

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 3 65 MPH, HAZARD WIDTH (IN INCHES), UNIDIRECTIONAL, EACH, AND SHALL INCLUDE ALL LABOR,TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

CONTINGENCY INFORMATION PROVIDED TO CONSTRUCT A COMPLETE DEVICE. THEY INCLUDE:
LOCATION: U.S. 30 EB SLM 14.72 GORE @ I.R. 77
DESIGN SPEED: 65 MPH
WIDTH OF HAZARD: 96 INCHES
AVAILABLE FOOT PRINT AREA FOR THE PRODUCT: WITHIN THE PAVED GORE FOR THE REMOVAL LIMITS OF THE EXISTING IMPACT ATTENUATOR.
FOUNDATION TYPE: EXISTING CONCRETE PAD
TRANSITION TYPE: VERTICAL EDGE OF EXISTING BACKSTOP
BACKUP SUPPORT: EXISTING CONCRETE BACKSTOP

LOCATION: U.S. 30 WB SLM 15.22 GORE @ I.R. 77
DESIGN SPEED: 65 MPH
WIDTH OF HAZARD: 96 INCHES
AVAILABLE FOOT PRINT AREA FOR THE PRODUCT: WEST OF PAVED GORE IN BERM AREA BETWEEN U.S. 30 AND RAMP TO I.R. 77 SHOULDERS.
FOUNDATION TYPE: PROPOSED ASPHALT PAD (ITEMS PROVIDED)
TRANSITION TYPE: AS REQUIRED BY THE MANUFACTURER
BACKUP SUPPORT: AS REQUIRED BY THE MANUFACTURER

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

202, IMPACT ATTENUATOR REMOVED	2 EACH
203, EXCAVATION	2 CU YD
301, 6" ASPHALT CONCRETE BASE, PG64-22	2 CU YD
606, IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL, 65 MPH/96 INCH WIDTH	2 EACH

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

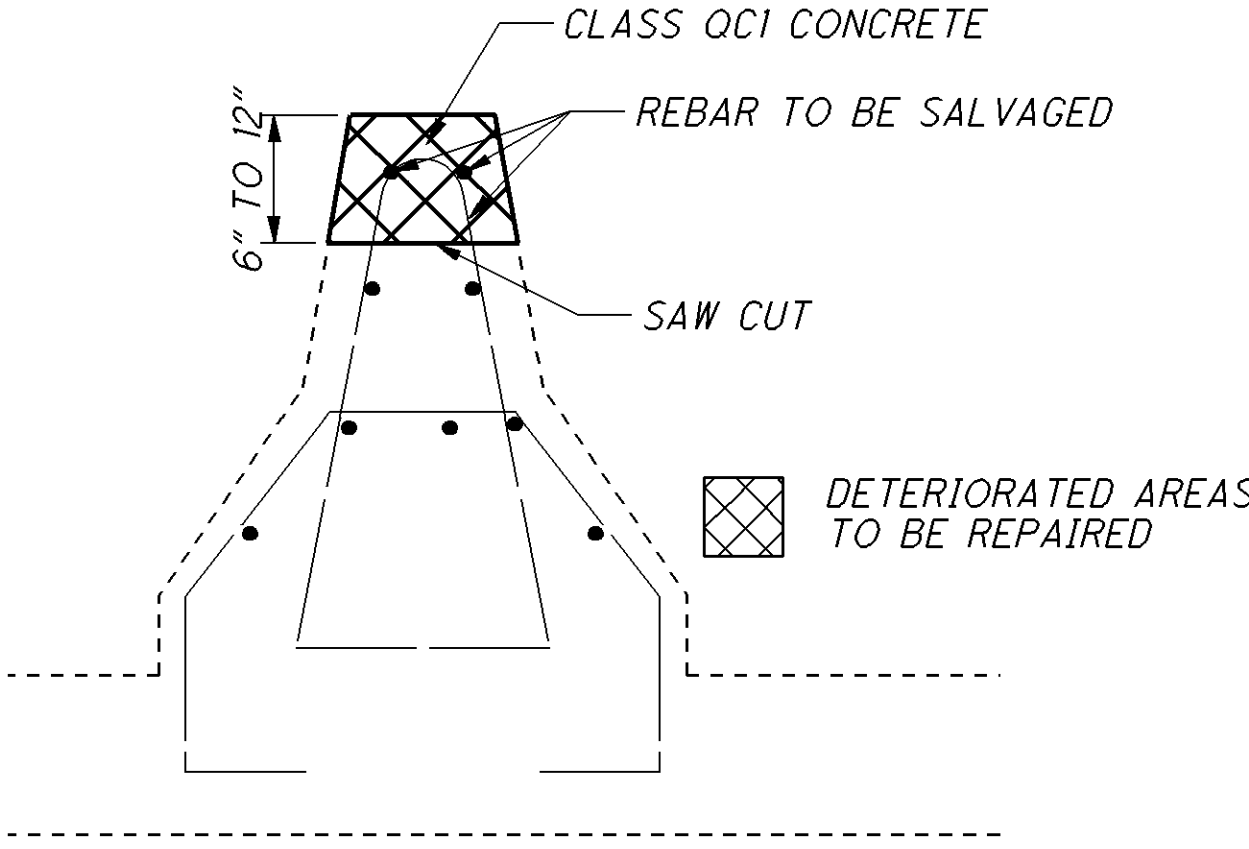
REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.
509, REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN 600 LB

ITEM 511 - CONCRETE MISC.: MEDIAN BARRIER REPAIR

THIS ITEM WILL BE USED TO REPAIR DAMAGED MEDIAN BARRIER. SAWCUT AND REMOVE DAMAGED/SPALLED AREAS OF THE EXISTING MEDIAN BARRIER TO A MINIMUM DEPTH OF 6" AND A MAXIMUM DEPTH OF 12" OR AS DIRECTED BY THE ENGINEER. CARE SHALL BE TAKEN WHEN REMOVING SPALLED CONCRETE TO SALVAGE EXISTING REBAR. CLASS QC1 CONCRETE WILL BE USED TO REPAIR THE DAMAGED MEDIAN BARRIER. THE REMOVAL OF CONCRETE, PREPARATION OF THE SURFACES, FORMS, AND CLASS QC1 CONCRETE WILL BE INCIDENTAL TO THIS ITEM. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE PER FOOT FOR ITEM 511, CONCRETE MISC.: MEDIAN BARRIER REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

511, CONCRETE MISC.: MEDIAN BARRIER REPAIR 2000 FT



ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM WILL BE USED TO REPAIR DAMAGED MEDIAN BARRIER BENEATH THE LIMITS OF THE ITEM 511 REPAIRS. PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

519, PATCHING CONCRETE STRUCTURES, AS PER PLAN 5000 SQ FT

PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

THIS ITEM IS PROVIDED TO REPAIR SURFACE DETERIORATION AND SPALLED AREAS WHERE ITEM 511 OR 519 HAVE NOT BEEN USED. THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND THE MIXING, PLACING, FINISHING AND CURING OF THE PATCHES IN THE AREAS SHOWN OR NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED UPON CONCRETE COMPONENTS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

843, PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR 5000 SQ FT

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ITEM SPECIAL - TACK COAT, TRACKLESS TACK

ITEM SPECIAL - TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE

DESCRIPTION: THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.

FURNISH MATERIALS ACCORDING TO THE DEPARTMENT'S APPROVED LIST.

MEET ALL REQUIREMENTS OF ITEM 407 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

MATERIAL: MEET ALL PROPERTIES OF THE APPROVED MANUFACTURER'S TRACKLESS TACK SPECIFICATION REQUIREMENTS ON FILE WITH THE LABORATORY AT TIME OF PLACEMENT.

ACCEPTANCE AND SAMPLING OF MATERIALS: SUPPLY CERTIFIED TEST DATA TO THE ENGINEER AND TO THE DISTRICT LABORATORY DEMONSTRATING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS ALL MATERIAL PROPERTIES SHOWN ON THE DEPARTMENT'S APPROVED LIST.

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE FROM THE DISTRIBUTOR AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF ONE QUART OF TRACKLESS TACK FOR EVERY 25,000 GALLONS USED ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE PROPER PLASTIC QUART SAMPLING CONTAINER. CLEARLY MARK ON THE SAMPLE WITH THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

EQUIPMENT: FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.

APPLICATION OF ASPHALT MATERIAL: UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACKLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160 °F TO 180 °F. DO NOT EXCEED 180 °F. THE

ENGINEER WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DISTRICT TESTING ENGINEER AND NEW PRODUCT ENGINEER, BRAD YOUNG 614-351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE LAB TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY ANOTHER APPROVED TRACKLESS TACK PRODUCT FOR THE REMAINDER OF THE PROJECT AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY FAILING TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE DEPARTMENT'S APPROVED LIST.

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

CALCULATED	RCB	GENERAL NOTES	STA - 77 / 30 / 62 - VAR	<table><tr><td>5</td></tr><tr><td>98</td></tr></table>	5	98
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MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN TEN LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

5. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

6. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE [1] MILE.

7. ONLY DURING OFF-PEAK PERIODS (i.e ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

8. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

9. A QUANTITY OF 30 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

10. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

11. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 [BUMP], W8-H13 [NO EDGE LINES], W8-11 [UNEVEN LANES]. THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I- PLANED SURFACE
614, WORK ZONE LANE LINE, CLASS II, 12.42 MILE
614, WORK ZONE STOP LINE, CLASS I, 198 FT
614, WORK ZONE CHANNELIZING LINE, CLASS II, 9440 FT
614, WORK ZONE MARKING SIGN, (ALL PHASES) 40 EACH

PHASE II- INTERMEDIATE COURSE
614, WORK ZONE LANE LINE, CLASS II, 12.42 MILE
614, WORK ZONE STOP LINE, CLASS I, 198 FT
614, WORK ZONE CHANNELIZING LINE, CLASS II, 9440 FT

PHASE III- SURFACE COURSE
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT, 12.42 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 198 FT
614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 9440 FT

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT, 13.72 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1. NOVEMBER 14 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND DISINCENTIVES OF \$2600 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CLOSING 6 OR MORE LANES

REFER TO OMUCD FIGURE 6H-37, DOUBLE LANE CLOSURE ON A FREEWAY (TA-37). OMUTCD FIGURE 6H-38, INTEROR LANE CLOSURE ON A FREEWAY (TA-38) WILL NOT BE USED.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT PROJECT STA-30/62-14.84/18.70 (PID 88956) MAY BE ONGOING IN AN AREA IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT IN 2017. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECTS. IN ACCORDANCE WITH 105.08, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECIEVE DAILY APPROVALS FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA, OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

TRAFFIC COUNTERS

THE CONTRACTOR WILL CONTACT THE TRAFFIC MONITORING SECTION, FIELD MANAGER AT 614 -275-1382, FOURTEEN (14) CALENDAR DAYS PRIOR TO WORK INVOLVING THE TRAFFIC DATA COLLECTION SITE AT SLM 13.70 (ATR 756) AND SLM 16.20 (ATR 556).

INTERIM COMPLETION DATE: CONCRETE OVERLAYS

CONCRETE OVERLAYS ON STRUCTURES STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, STA-30-1646, AND STA-62-1870L SHALL BE COMPLETED BY OCTOBER 1, 2016. THIS DATE WILL BE CONSIDERED AN INTERIM COMPLETION DATE AND DISINCENTIVES OF \$2600 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THIS WORK IS NOT COMPLETED.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
NFL PRO FOOTBALL HALL OF FAME FESTIVITIES:	
JULY 31 - AUGUST 10,2016	
JULY 30- AUGUST 9, 2017	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$4500 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITS MESSAGE BOARDS

THE EXISTING ITS MESSAGE BOARDS IN THE VICINITY OF THE PROJECT WILL BE UTILIZED TO PROVIDE SUPPLEMENTAL INFORMATION TO THE TRAVELING PUBLIC. THE CONTRACTOR WILL NOTIFY THE PROJECT ENGINEER ONE [1] WEEK IN ADVANCE OF ANY PHASE CHANGE ON US 30. THE PROJECT ENGINEER WILL COORDINATE WITH EITHER LISA BOSE AT 330-786-4817 OR BRENT KOVACS AT 330-786-2208 TO GET THE ITS MESSAGE BOARDS ADJUSTED.

INTERIM COMPLETION DATE STA-30 SLM 14.76 TO SLM 15.94

ALL WORK ON US 30 FROM SLM 14.76 (I-77) TO SLM 15.94 (WARNER ST) WILL BE COMPLETED BY SEPTEMBER 2, 2016. THIS SHALL INCLUDE CONCRETE OVERLAYS ON STRUCTURES STA-30-1479, STA-30-1488, STA-30-1502, AND STA-30-1520. THIS DATE WILL BE CONSIDERED AN INTERMIN COMPLETION DATE AND DISINCENTIVES OF \$2600 SHALL BE ASSESSED FOR EACH CALENDAR DAY THE WORK IS NOT COMPLETED.

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TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE 7 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$2600 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMT.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-786-3146) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE FOLLOWING INTERSECTIONS:

US 30 AT SR 297 (RAMP O)
US 30 AT HARRISON AVE (RAMP R)

LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWERHEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS SPECIFIED BELOW. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT. ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10 AND THE LOOP SHALL BE PLACED AT THE SAME LOCATION AS THE EXISTING LOOPS.

THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 725.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS. ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

632 DETECTOR LOOP, AS PER PLAN,4 EACH
(3 EACH, POWERHEAD (20') , 1 EACH, ADD)

DETOUR NOTIFICATION [ODOT/ CITY OF CANTON]

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) AND THE CITY OF CANTON (330-489-3291) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

LANE CLOSURES

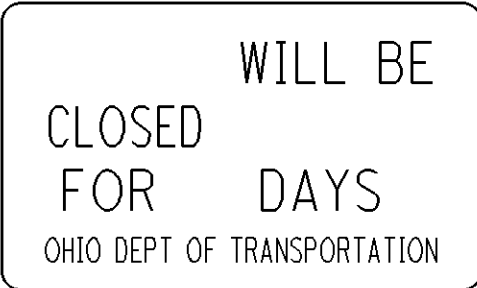
DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:
<http://plcm.dot.state.oh.us>

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF \$2500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



W20-H14-60

BARRIER REPAIR RESTRICTIONS

ALL CONCRETE MISC.: BARRIER REPAIRS SHALL BE PERFORMED AND COMPLETED WHEN ADJACENT LANE IS CLOSED. THE WALL SHALL BE FULLY REPAIRED BEFORE ADJACENT LANE IS OPEN TO TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (US 30 RAMPS)

ALL TRAFFIC ON THE US 30 RAMPS LISTED IN THE TABLE "DETOURS FOR US 30 RAMPS" SHALL BE MAINTAINED ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THE DURATIONS LISTED IN "DETOURS FOR US 30 RAMPS. A DISINCENTIVE SHOWN IN THE TABLE "DETOURS FOR US 30 RAMPS" SHALL BE ASSESSED FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (US 30 RAMPS AT I-77 INTERCHANGE)

ALL TRAFFIC ON THE US 30 RAMPS LISTED IN THE TABLE "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE" SHALL BE MAINTAINED ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THE DURATIONS LISTED IN "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE". A DISINCENTIVE SHOWN IN THE TABLE "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE" SHALL BE ASSESSED FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

EXCEPTIONS TO THE PERMITTED LANE CLOSURE CHART: CONCRETE OVERLAYS COMBINED WORK ZONES

THE CONTRACTOR SHALL COMBINE STRUCTURE WORK ZONES TO COMPLETE THE CONCRETE OVERLAYS OF THIS PROJECT. THE CONTRACTOR SHALL REDUCE US-30 IN EACH ZONE TO ONE LANE TO COMPLETE THE OVERLAYS. THE ZONES SHALL BE AS FOLLOWS:

ZONE 1: STA-30-1303L/R AND STA-30-1338

ZONE 2: STA-30-1479, STA-30-1488, STA-30-1502, AND STA-30-1520

ZONE 3: STA-30-1520 RAMP LANE H, OUTSIDE CONSTRUCTION OF STA-30-1558 EASTBOUND AND LIGHT TOWER REPLACEMENT

ZONE 4: STA-30-1558, STA-30-1580, AND STA-30-1594

ZONE 5: STA-30-1634, STA-30-1640, AND STA-30-1646

EACH ZONE HAS BEEN DIVIDED BY DIRECTION AND PHASE. OUTSIDE CONSTRUCTION IS THE OUTSIDE LANES OF THE THE STRUCTURES BEING OVERLAYED WITH TRAFFIC ON THE INSIDE. INSIDE CONSTRUCTION IS THE INSIDE LANES OF THE STRCUTURES BEING OVERLAYED AND TRAFFIC ON THE OUTSIDE.

ALL DURATIONS AND RESTRICTIONS FOR EACH ZONE SHALL BE FOLLOWED AS LISTED IN THE TABLE "STA-30 CONCRETE OVERLAYS," SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS STATED DISINCETIVES IN THE TABLE "STA-30 CONCRETE OVERLAYS" SHALL BE ASSESSED PER HOUR THAT THE CLOSURE REMAINS IN PLACE.

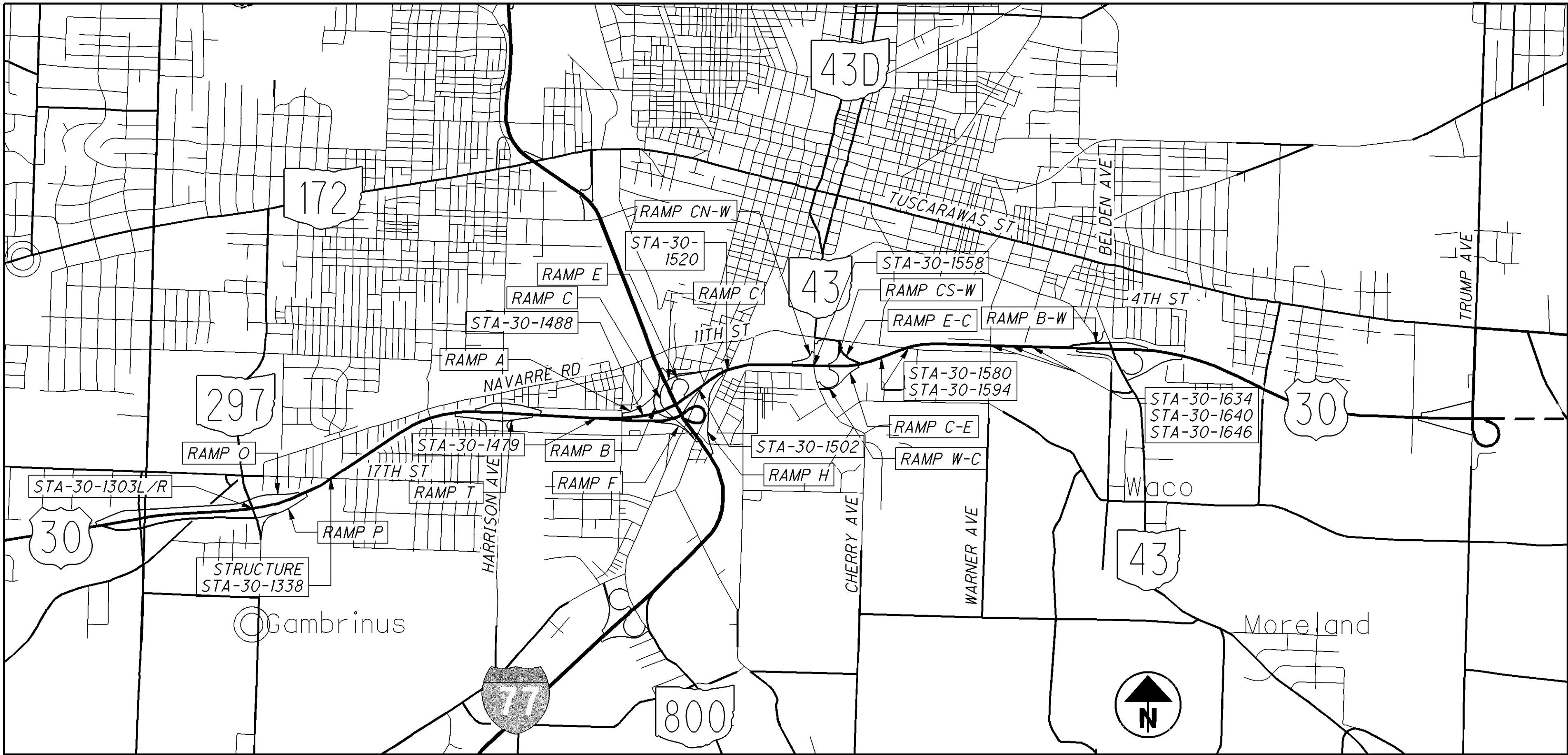
ITEM 614, MAINTAINING TRAFFIC LIGHT TOWER INSTALLATION US-30 AND I-77 INTERCHANGE

THERE SHALL BE NO OTHER LANE CLOSURES OR FULL CLOSURES DURING THE INSTALLATION OF THE LIGHT TOWERS AT THE US-30 / I-77 INTERCHANGE.

THE CONTRACTOR SHALL CLOSE RAMPS C (US-30WEST TO I-77SOUTH) AND F (US-30 EAST TO I-77 SOUTH) SIMULTANEOUSLY TO INSTALL POLES 1BK-11 AND 2BM-1. RAMPS C AND F TRAFFIC SHALL BE DETOURED AS SHOWN IN TABLE "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE." THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES SHOWN IN THE TABLE "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE" PER CALENDAR DAY THAT THE RAMPS REMAIN CLOSED BEYOND THE SPECIFIED LIMIT.

THE CONTRACTOR SHALL INSTALL THE LIGHT TOWERS 2BN-2, HOU2-2, AND 2BN-1 ON RAMP H (I-77 NORTH TO US-30 WEST) SIMULTANEOUSLY. THE POLES SHALL BE INSTALLED DURING RAMP H CLOSURE FOR THE CONCRETE OVERLAY OF US-30-1520 AND US-30-1557 (ZONE 3). RAMP H SHALL BE CLOSED ACCORDING TO TABLE "DETOUR FOR US 30 RAMPS AT I-77 INTERCHANGE." THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES SHOWN IN THE TABLE "DETOURS FOR US 30 RAMPS AT I-77 INTERCHANGE" PER CALENDAR DAY THAT THE RAMP REMAINS CLOSED BEYOND THE SPECIFIED LIMIT.

STA-30-CONCRETE OVERLAYS						
ZONE	DIRECTION	PHASE	STRUCTURES	CLOSE RAMPS	DURATION	DISINCENTIVE PER CALENDAR DAY
1	EB	1 (INSIDE CONSTRUCTION)	STA-30-1303R AND STA-30-1338	RAMP P (RAFF RD (SR 297) TO US 30 E)	1 WEEKEND (6PM FRIDAY - 6AM MONDAY)	\$2,000
		2 (OUTSIDE CONSTRUCTION)		RAMP P (RAFF RD (SR 297) TO US 30 E)	1 WEEKEND (6PM FRIDAY - 6AM MONDAY)	\$2,000
	WB	1 (INSIDE CONSTRUCTION)	STA-30-1303L AND STA-30-1338	RAMP O (US 30W TO RAFF RD)	1 WEEKEND (6PM FRIDAY - 6AM MONDAY)	\$2,000
		2 (OUTSIDE CONSTRUCTION)		RAMP O (US 30W TO RAFF RD)	1 WEEKEND (6PM FRIDAY - 6AM MONDAY)	\$2,000
2	EB	1 (INSIDE CONSTRUCTION)	STA-30-1479, STA-30-1488, STA-30-1502, AND STA-30-1520	NONE	10 CONSECUTIVE CALENDAR DAYS	\$5,000
		2 (OUTSIDE CONSTRUCTION)	STA-30-1479, STA-30-1488, STA-30-1502 AND STA-30-1520 MAINLINE US 30	RAMP B (77S TO US 30E)	10 CONSECUTIVE CALENDAR DAYS	\$5,000
	WB	1 (OUTSIDE CONSTRUCTION)	STA-30-1479, STA-30-1488, AND STA-30-1502	RAMP E (77N TO US 30W) AND RAMP CN-W (CHERRY AVE TO US 30W)	10 CONSECUTIVE CALENDAR DAYS	\$5,000
		2 (INSIDE CONSTRUCTION)		RAMP CN-W (CHERRY AVE TO US 30W)	10 CONSECUTIVE CALENDAR DAYS	\$5,000
3	EB	RAMP H LANE OF STA-30-1520 AND STA-30-1557 OUTSIDE CONSTRUCTION	RAMP H LANE OF STA-30-1520 AND STA-30-1558 OUTSIDE CONSTRUCTION	RAMP H (77N TO US 30W)	1 WEEKEND (5PM FRIDAY TO 6AM MONDAY)	\$2,000
4	EB	1 (OUTSIDE CONSTRUCTION)	STA-30-1580, AND STA-30-1594	RAMP W-C/ W-CN (US 30E TO CHERRY AVE)	1 WEEKEND (7PM THURSDAY TO 6AM MONDAY)	\$2,000
		2 (INSIDE CONSTRUCTION)	STA-30-1558, STA-30-1580, AND STA-30-1594	RAMP W-C/ W-CN (US 30E TO CHERRY AVE)	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	\$2,000
	WB	1 (OUTSIDE CONSTRUCTION)	STA-30-1558, STA-30-1580, AND STA-30-1594	RAMP CS-W (11TH ST TO US 30E) AND RAMP E-C (US 30W TO 11TH ST)	1 WEEKEND (7PM WEDNESDAY TO 6AM MONDAY)	\$2,000
		2 (INSIDE CONSTRUCTION)		RAMP CS-W (11TH ST TO US 30E)	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	\$2,000
5	EB	1 (OUTSIDE CONSTRUCTION)	STA-30-1634, STA-30-1640, AND STA-30-1646	NONE	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	\$2,000
		2 (INSIDE CONSTRUCTION)			1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	
	WB	1 (OUTSIDE CONSTRUCTION)	STA-30-1634, STA-30-1640, AND STA-30-1646	RAMP B-W (BELDEN AVE TO US 30W)	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	\$2,000
		2 (INSIDE CONSTRUCTION)		NONE	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	



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DETOURS FOR US 30 RAMPS						
RAMP	RAMP DESCRIPTION	DURATIONS	DETOUR ROUTE	APROX. NUMBER OF PCMS	ADDITIONAL RESTRICTIONS	DISINCENTIVE PER CALENDAR DAY
RAMP P	RAFF RD (SR 297) TO US 30 EAST	2 WEEKENDS (6PM FRIDAY - 6AM MONDAY)	RAFF RD (SR 297) / 17TH ST / HARRISON AVE	SEE SHEET 58 FOR DETOUR	RAMP P SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP T	\$2,000
RAMP O	US 30 WEST TO RAFF RD (SR 297)	2 WEEKENDS (6PM FRIDAY - 6AM MONDAY)	US 30 WEST / SR 627 (RICHVILLE DR / US 30 EAST	3	NONE	\$2,000
RAMP T	HARRISON AVE TO US 30 EAST	2, 10 CONSECUTIVE CALENDAR DAYS CLOSURES	HARRISON AVE / BAVARRE RD / 11TH ST	SEE SHEET 59 FOR DETOUR	RAMP T SHALL NOT BE CLOSED CONCURRENTLY WITH RAMPS B, P, CN-W, AND CS-W	\$2,000
Ramp W-C	US 30 EAST TO CHERRY AVE	2 WEEKENDS: 1 WEEKEND RAMP H AND 1558 OVERLAY: 5PM FRIDAY TO 6AM MONDAY 1 WEEKEND 1580 AND 1594 OUTSIDE CONSTRUCTION: 7PM THURSDAY - 6AM MONDAY	US 30 EAST / BELDEN AVE / US 30 WEST	SEE SHEET 55 FOR DETOUR	RAMP W-C SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP B-W	\$2,000
RAMP C-E	CHERRY AVE TO US 30 EAST	1 WEEKEND (7PM THURSDAY TO 6AM MONDAY)	CHERRY AVE / 3RD ST / RIVERSIDE DR / TUSCARWAS ST (SR 172) / BELDEN AVE / 4TH ST / ROSHONG AVE	SEE SHEET 57 FOR DETOUR	NONE	\$2,000
RAMP CN-W	CHERRY AVE TO US 30 WEST	2, 10 CONSECUTIVE CALENDAR DAYS CLOSURES	11TH ST / NAVARRE RD / HARRISON AVE	SEE SHEET 53 FOR DETOUR WITH RAMP CS-W; SEE SHEET 54 WHEN ONLY RAMP CN-W IS CLSOED	RAMP CN-W SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP T, P AND B	\$2,000
RAMP CS-W	11TH ST TO US 30 WEST	3 CLOSURES: 10 CONSECUTIVE CALENDAR DAYS 1 WEEKEND 1558, 1580, AND 1594 OUTSIDE CONSTRUCTION: 7PM WEDNESDAY - 6AM MONDAY 1 WEEKEND 1558, 1580, 1594 INSIDE CONSTRUCTION: 9AM FRIDAY - 6AM MONDAY	11TH ST / NAVARRE RD / HARRISON AVE	SEE SHEET 53 FOR DETOUR WITH RAMP CN-W	RAMP CS-W SHALL NOT BE CLOSED CONCURRENTLY WITH RAMPS A AND T	\$2,000
RAMP E-C	US 30 WEST TO 11TH ST	1 WEEKEND (7PM WEDNESDAY - 6AM MONDAY)	US 30 WEST / HARRISON AVE	SEE SHEET 56 FOR DETOUR	RAMP E-C SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP T	\$2,000
RAMP B-W	ROSHING AVE AND WAYNESBURG DR TO US 30 WEST	1 WEEKEND (9AM FRIDAY TO 6AM MONDAY)	30 EAST / TRUMP AVE	3	RAMP B-W SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP W-C	\$2,000

DETOUR FOR US 30 RAMPS AT I-77 INTERCHANGE						
RAMP	RAMP DESCRIPTION	DURATIONS	DETOUR ROUTE	APROX. NUMBER OF PCMS	ADDITIONAL RESTRICTIONS	DISINCENTIVE PER CALENDAR DAY
RAMP B	I-77 SOUTH TO US 30 EAST	10 CONSECUTIVE CALENDAR DAYS FOR CONCRETE OVERLAYS AND 1 WEEKEND (5PM FRIDAY TO 6AM MONDAY) TO PAVE RAMP B	DURING 10 DAY CLOSURE: US30 WEST / HARRISON AVE WEEKEND CLOSURE: I-77 SOUTH / SR 800 / I-77 NORTH	SEE SHEET 60 FOR DETOUR DURING OVERLAY SEE SHEET 63 FOR DETOUR DURING PAVING	DURING 10 DAY CLOSURE RAMP A, T, E AND H SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP B, DURING WEEKEND CLOSURE CLOSE RAMP A CONCURRENTLY WITH RAMP B	\$5,000
RAMP H	I-77 NORTH TO US 30 EAST	1 WEEKEND (5PM FRIDAY TO 6AM MONDAY)	77 NORTH / TUSCARAWAS ST (SR 172) / 77 SOUTH	3	RAMP H SHALL NOT BE CLOSED CONCURRENTLY WITH RAMPS A, B,C AND F: INSTALL 2BN-2, HOU2-2 AND 2BN-1 LIGHT POLES DURING CLOSURE	\$5,000
RAMP E	I-77 NORTH TO US 30 WEST	10 CONSECUTIVE CALENDAR DAYS	77 NORTH / TUSCARAWAS ST (SR 172) / 77 SOUTH	SEE SHEET 61 - 62 FOR DETOUR	RAMP E SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP B	\$5,000
RAMP A	I-77 SOUTH TO US 30 WEST	2 WEEKENDS (5PM FRIDAY TO 6AM MONDAY)	DURING 1 WEEKEND CONCRETE OVERLAY: US 30 EAST / CHERRY AVE DURING 1 WEEKEND TO PAVE RAMP A: I-77 SOUTH / SR 800 / I-77 NORTH	3 PORTABLE CHANGEABLE MESSAGE BOARDS DURING OVERLAY SEE SHEET 63 FOR DETOUR DURING PAVING	DURING WEEKEND CONCRETE OVERLAY: RAMP A SHALL NOT BE CLOSED CONCURRRENTLY WITH RAMP B, W-CN AND CS-W DURING PAVING: RAMP A SHALL BE CLOSED CONCURRENTLY WITH RAMP B; RAMP A SHALL NOT BE CLOSED CONCURRENTLY WITH RAMP H	\$5,000
RAMP C	US 30 WEST TO I-77 SOUTH	2 CONSECUTIVE CALENDAR DAYS (7PM FRIDAY - 6AM SUNDAY)	I-77 NORTH / TUSCARAWAS AVE (SR172)	3	CLOSE RAMP C CONCURRENTLY WITH RAMP F;CANNOT PERFORM LANE CLOSURE ON RAMP D (US 30 WEST TO I-77 NORTH) SIMULTANEOUSLY	\$5,000
RAMP F	US 30 EAST TO I-77 SOUTH	2 CONSECUTIVE CALENDAR DAYS (7PM FRIDAY - 6AM SUNDAY)	I-77 NORTH / TUSCARAWAS AVE (SR172)	1	CLOSE RAMP F CONCURRENTLY WITH RAMP C;CANNOT PERFORM LANE CLOSURE ON RAMP D (US 30 WEST TO I-77 NORTH) SIMULTANEOUSLY	\$5,000

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ITEM 614 – LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST’S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS’ DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 1000 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 – PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 650 FEET AND 475 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED. IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

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

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, 24 SIGN MONTH

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DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 622- PORTABLE BARRIER PLACEMENT FOR MEDIAN INLETS

PORTABLE BARRIER SHALL BE USED TO CLOSE THE SHOULDER TO REPAIR THE 28 MEDIAN INLETS.

THE ADJACENT LANE WILL BE CLOSED PER THE PERMITTED LANE CLOSURE CHART TO PLACE THE BARRIER WALL AND TO COMPLETE ALL WORK TO REPLACE THE LIGHT POLE FOUNDATION. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-95.30.

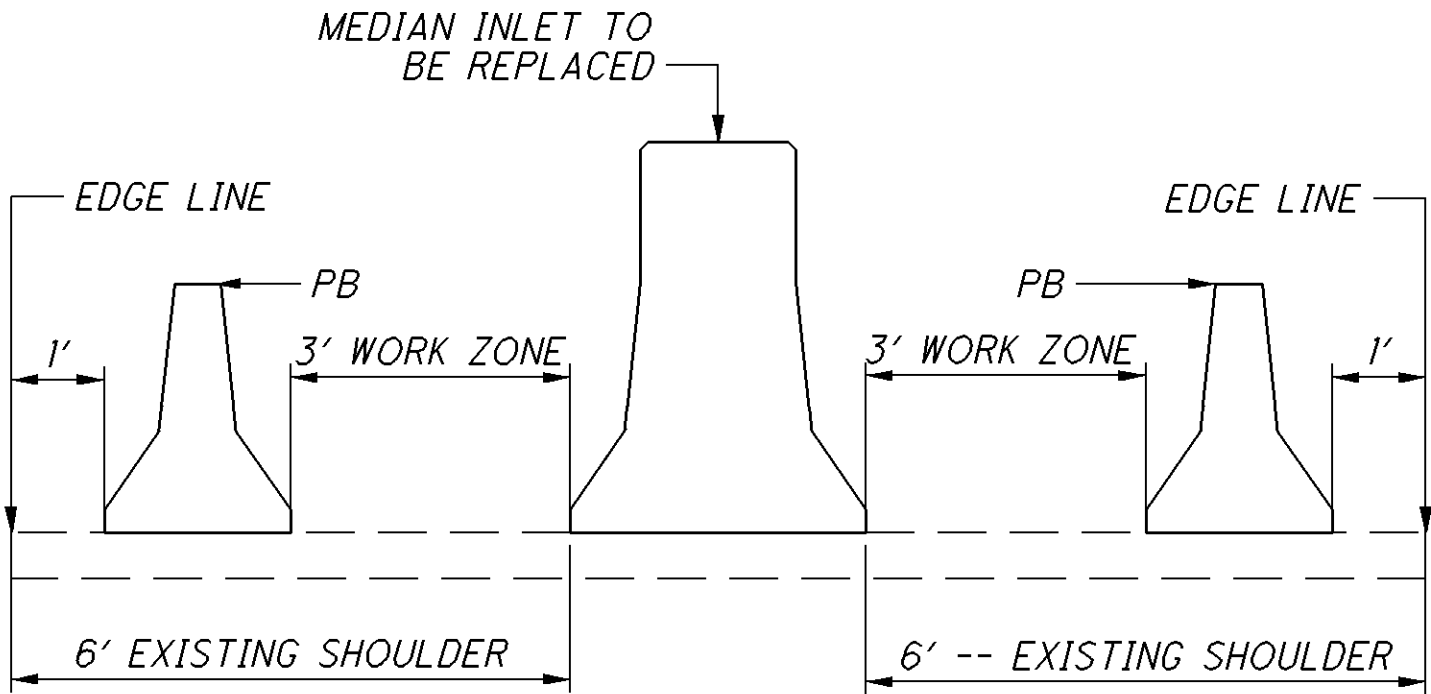
THE BARRIER SHALL BE PLACED ACCORDING TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL FIGURE 6H-5, SHOULDER CLOSURE ON A FREEWAY (TA-5).

THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 PORTABLE CONCRETE BARRIER.

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMMARY:

ITEM 622, PORTABLE BARRIER, 50", 2240 FEET
ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL), 56 EACH
ITEM 614, BARRIER REFLECTOR, 112 EACH
ITEM 614, OBJECT MARKER, ONE WAY 112 EACH



STRUCTURE STA-30-1479, STA-30-1488, AND STA-30-1502 EASTBOUND WORK ZONE QUANTITIES

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR STRUTURES STA-30-1479, STA-30-1488, AND STA-30-1502 AND CARRIED TO THE GENERAL SUMMARY:

ITEM 622, PORTABLE BARRIER, 50", 5350 FT
ITEM 614, WORK ZONE IMPACT ATTENUATOR, (UNIDIRECTIONAL) 2 EACH
ITEM 614, BARRIER REFLECTOR, 54 EACH
ITEM 614, OBJECT MARKER, ONE WAY 54 EACH

REMOVAL OF EXISTING RUMBLE STRIPS

WHERE TRAFFIC WILL BER SHIFTED ONTO THE SHOULDER, FOR AN OF THE PROPOSED CONCRETE OVERLAYS WITHIN THIS PLAN, ALL EXISTING RUMBLE STRIPS WILL BE REMOVED PRIOR TO CONSTRUCTION. THE RUMBLE STRIPS WILL BE REPLACED WITH THE PAVING OF US-30 UNDER ITEM 618- RUMBLE STRIPS. PAYMENT FOR ALL WORK AND MATERIALS ASSOICATED WITH THE REMOVAL OF THE RUMBLE STRIPS WILL BE PAID FOR UNDER ITEM 614, MAINTAINING TRAFFIC, MISC.: SHOULDER RUMBLE STRIPS.

THE RUMBLE STRIPS SHALL BE REMOVED FOR ZONE 1: 1303 AND 1338 EAST AND WEST BOUND DIRECTION, AND ZONE 2 EASTBOUND 1479, 1482, 1502, AND 1520 FOR THE INSIDE AND OUTSIDE CONSTRUCTION.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, MAINTAINING TRAFFIC MISC.: SHOULDER RUMBLE STRIPS, 12,142 FT

WORK ZONE PAVEMENT MARKINGS

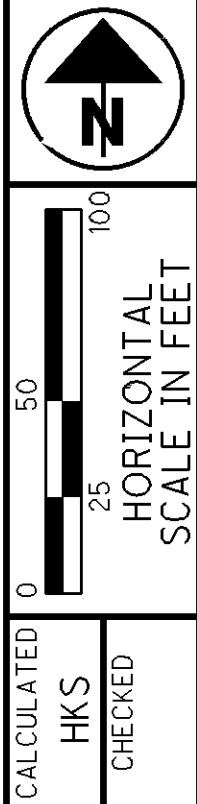
THE QUANTITIES LISTED IN THE TABLE BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED DURING THE CONCRETE OVERLAY COMBINED WORK ZONE.

ZONE	PHASE	614	614	614	614
		WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 642 PAINT (YELLOW)	WORK ZONE EDGE LINE, CLASS I, 642 PAINT (WHITE)	WORK ZONE DOTTED LINE, CLASS III, 642 PAINT
		FT	MILE	MILE	FT
2	EASTBOUND OUTSIDE CONSTRUCTION	3099	1.11	0.53	
2	EASTBOUND INSIDE CONSTRUCTION	1140	0.80	1.57	840
2	WESTBOUND OUTSIDE CONSTRUCTION			1.38	
	WESTBOUND INSIDE CONSTRUCTION		1.58		
3	1157+ RAMP H	1880			
4	EASTBOUND OUTSIDE CONSTRUCTION	2000		1.43	
4	WESTBOUND OUTSIDE CONSTRUCTION	1014		1.59	
TOTALS CARRIED TO GENERAL SUMMARY		9133	4	7	840

CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

STA-77 / 30 /
62-VAR

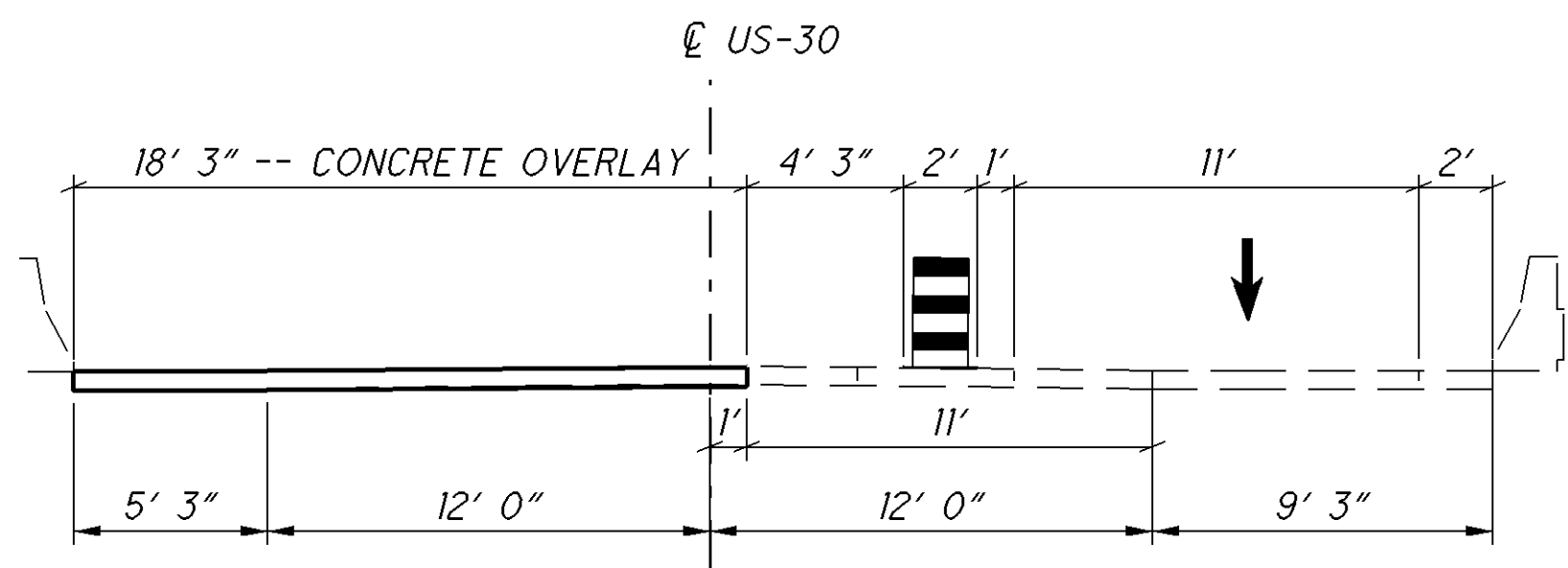
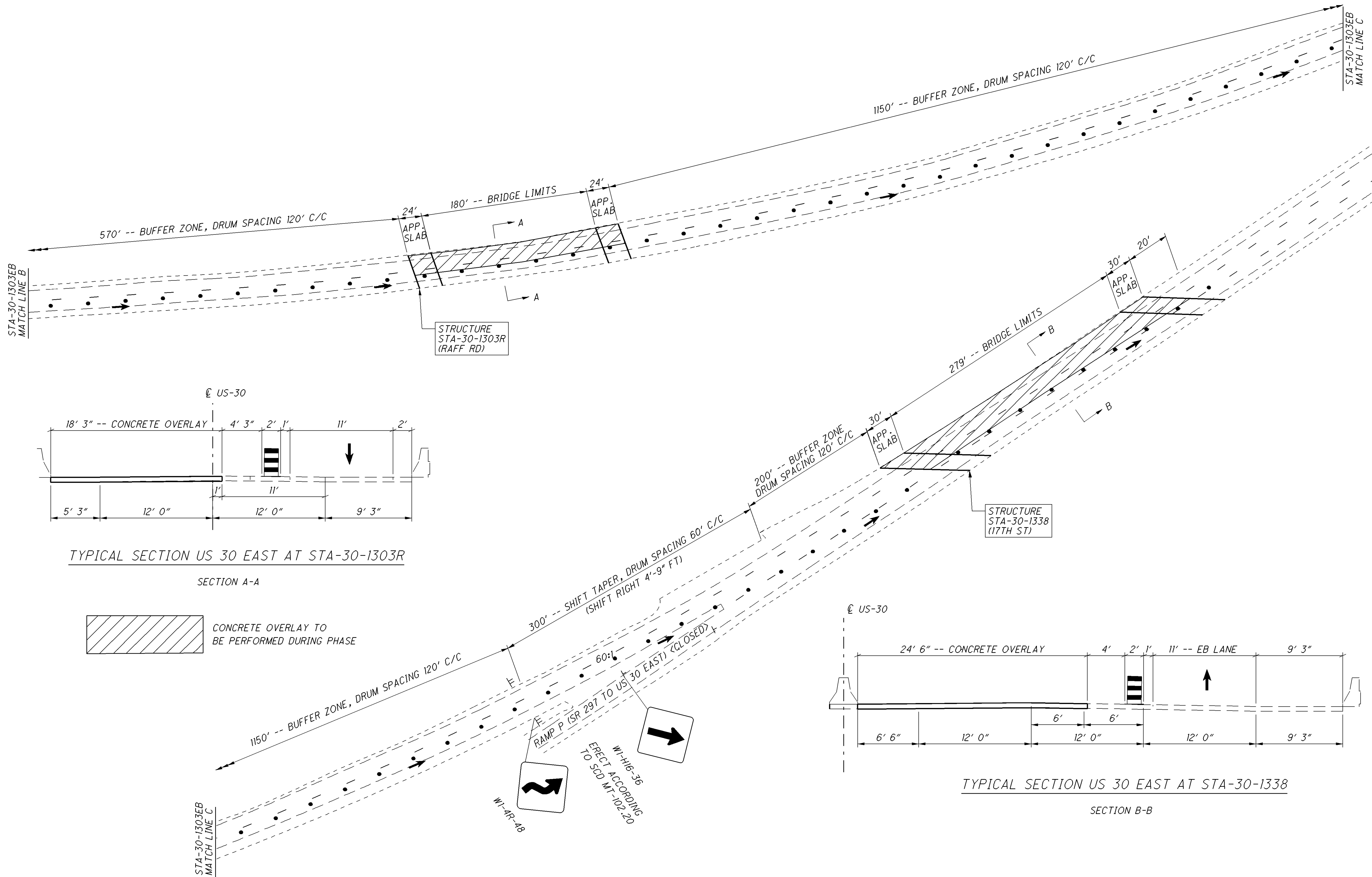


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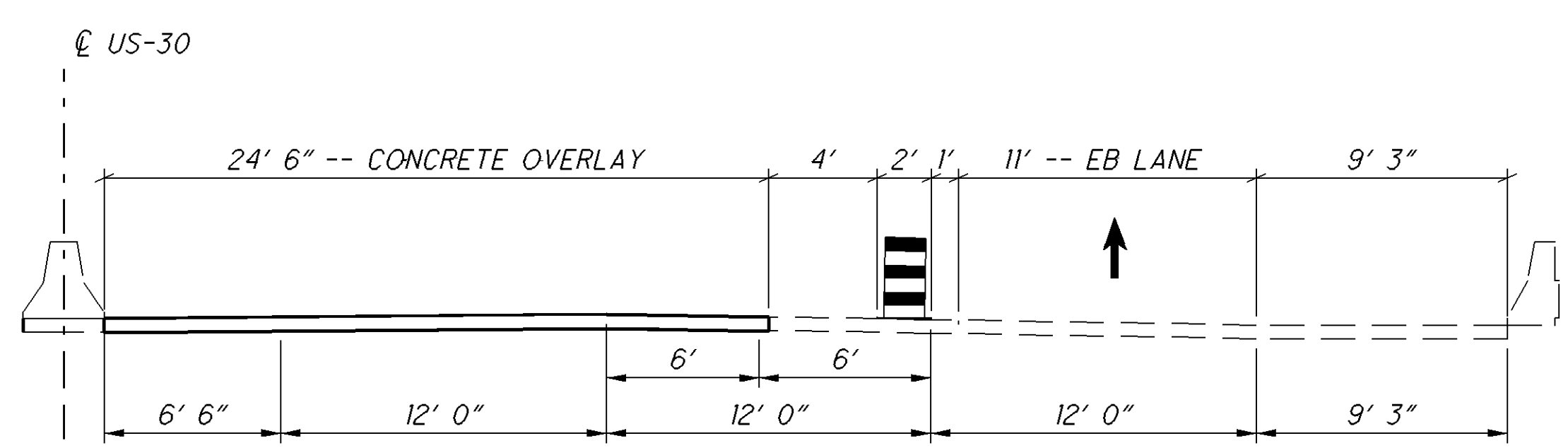
STA-77 / 30 / 62-VAR

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TYPICAL SECTION US 30 EAST AT STA-30-1303R

CONCRETE OVERLAY TO BE PERFORMED DURING PHASE



TYPICAL SECTION US 30 EAST AT STA-30-1338

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HORIZONTAL

SCALE IN FEET

CALCULATED

HKS

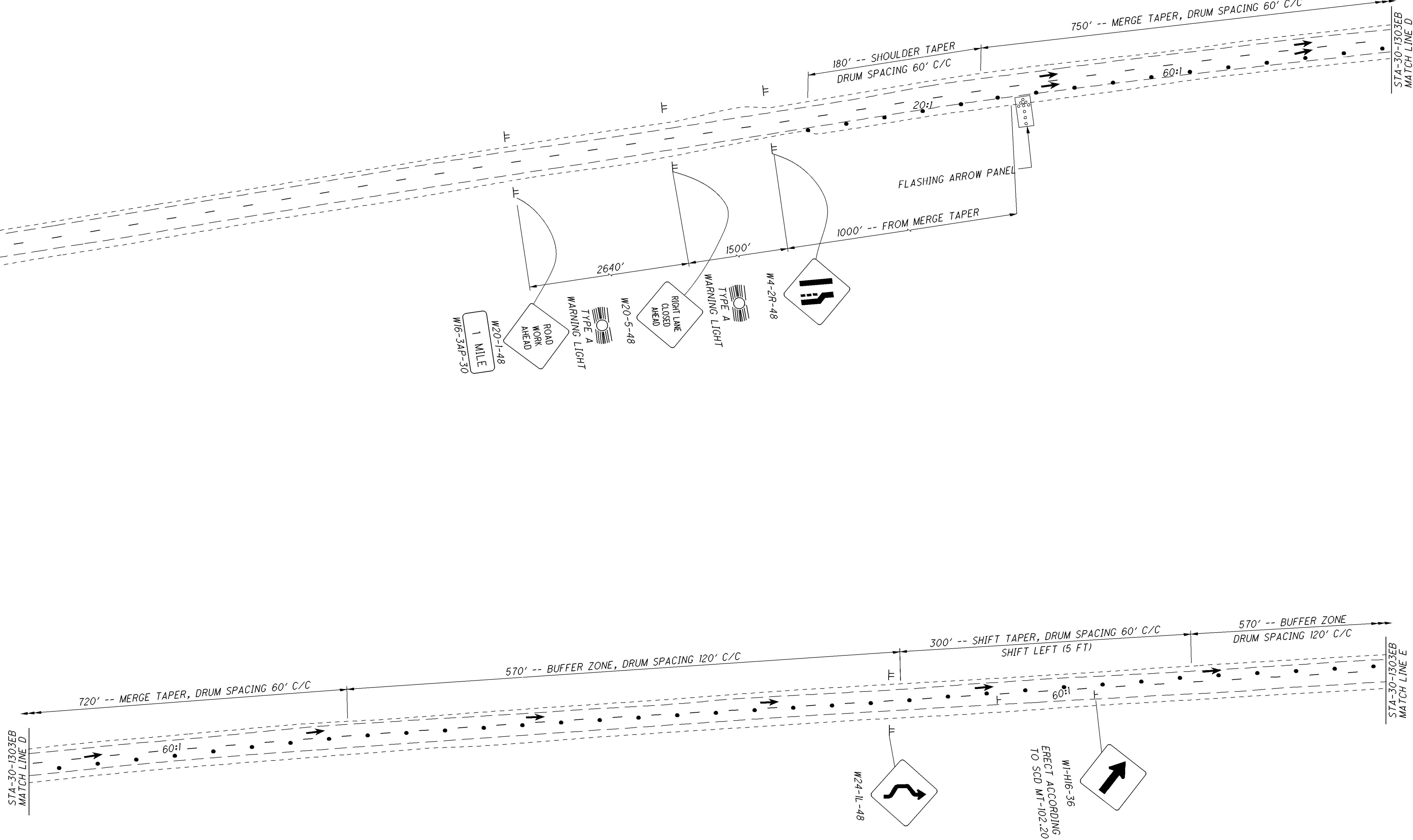
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MAINTENANCE OF TRAFFIC (ZONE 1)

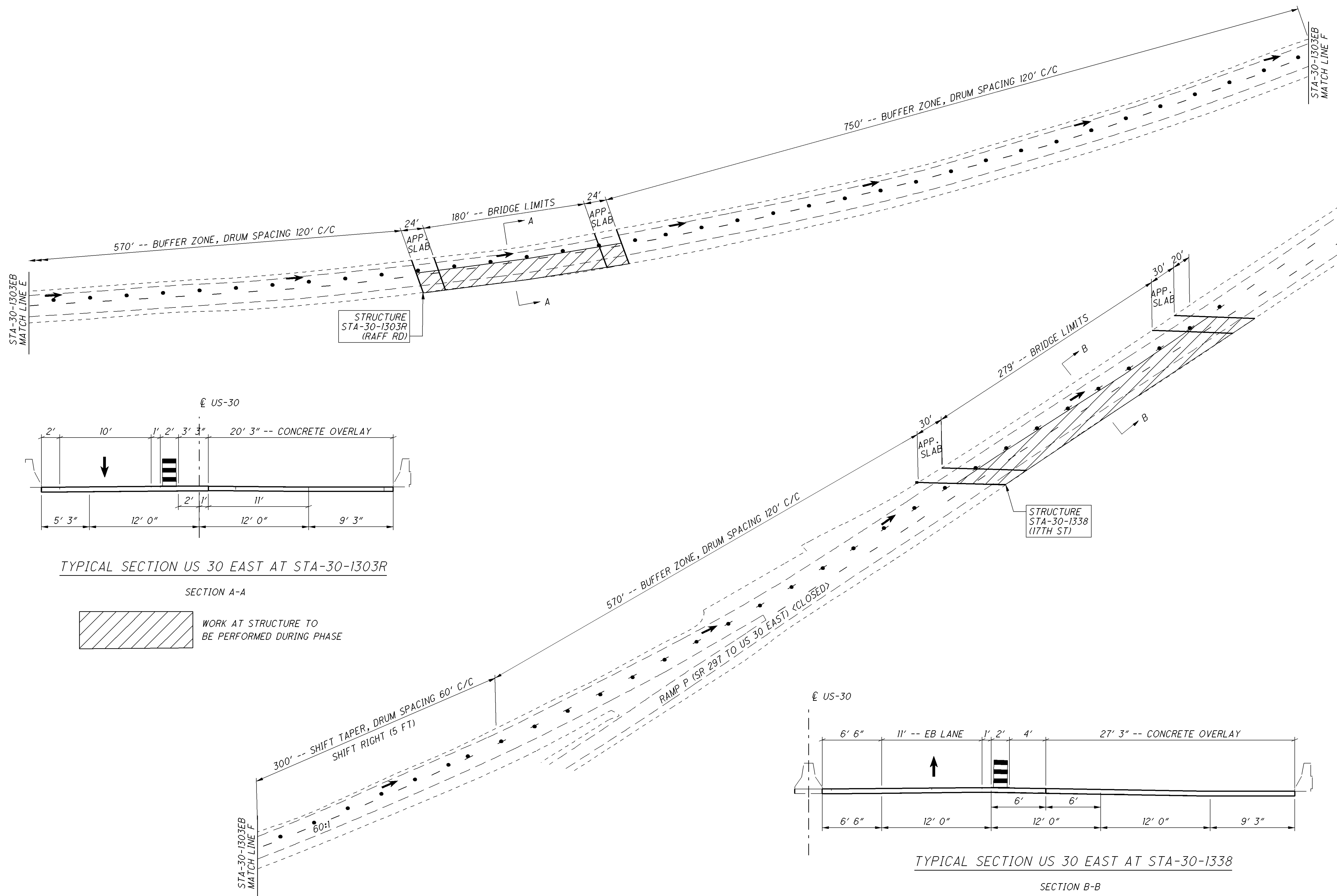
STA-30-(1303R)(1337) EASTBOUND PHASE 1

STA-77 / 30/ 62-VAR

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STA-77 / 30 / 62-VAR

MAINTENANCE OF TRAFFIC ZONE 1

STA-30-(1303R)(1337) EASTBOUND PHASE 2

CALCULATED
HKS

CHECKED

0 50 100

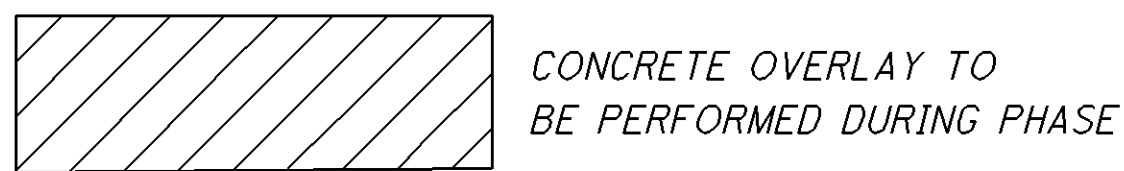
HORIZONTAL SCALE IN FEET

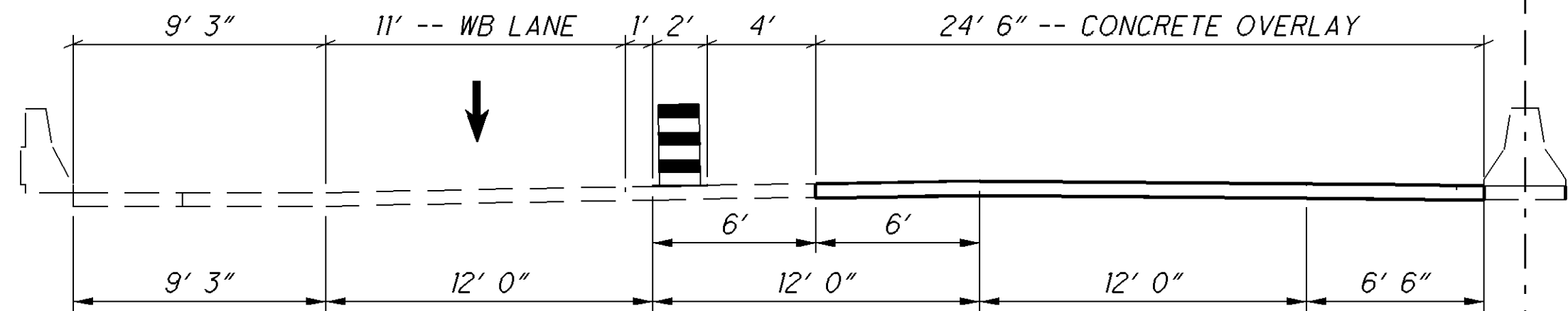
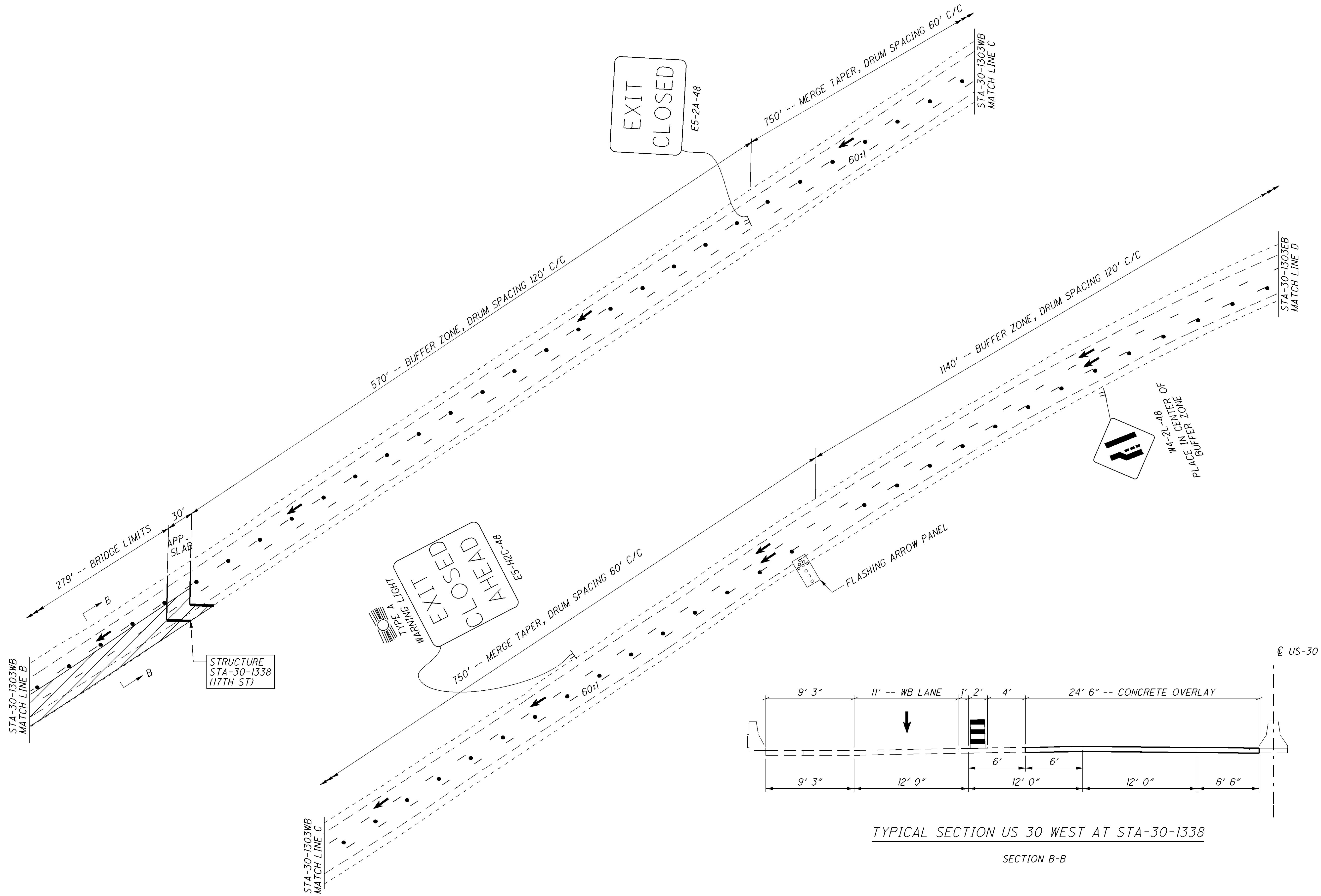
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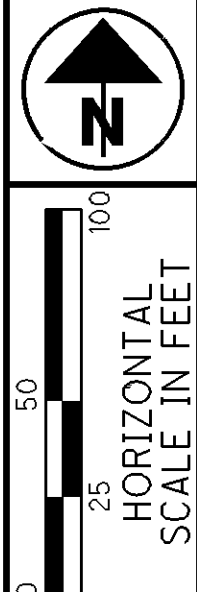
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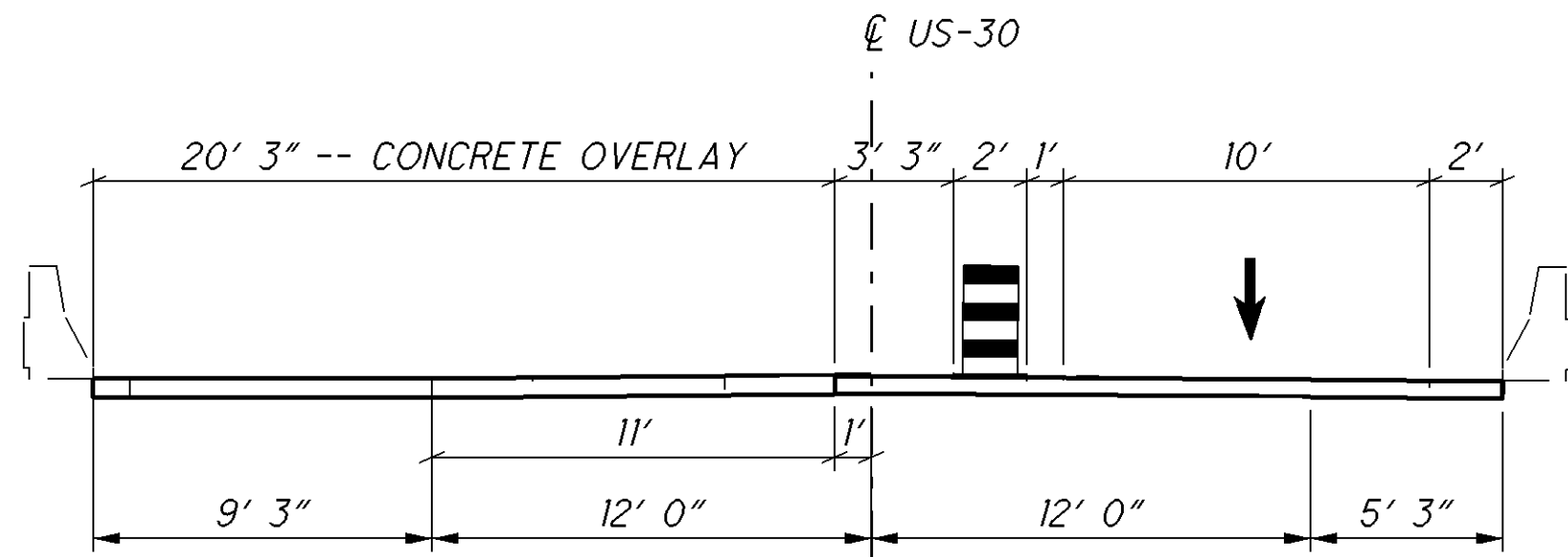
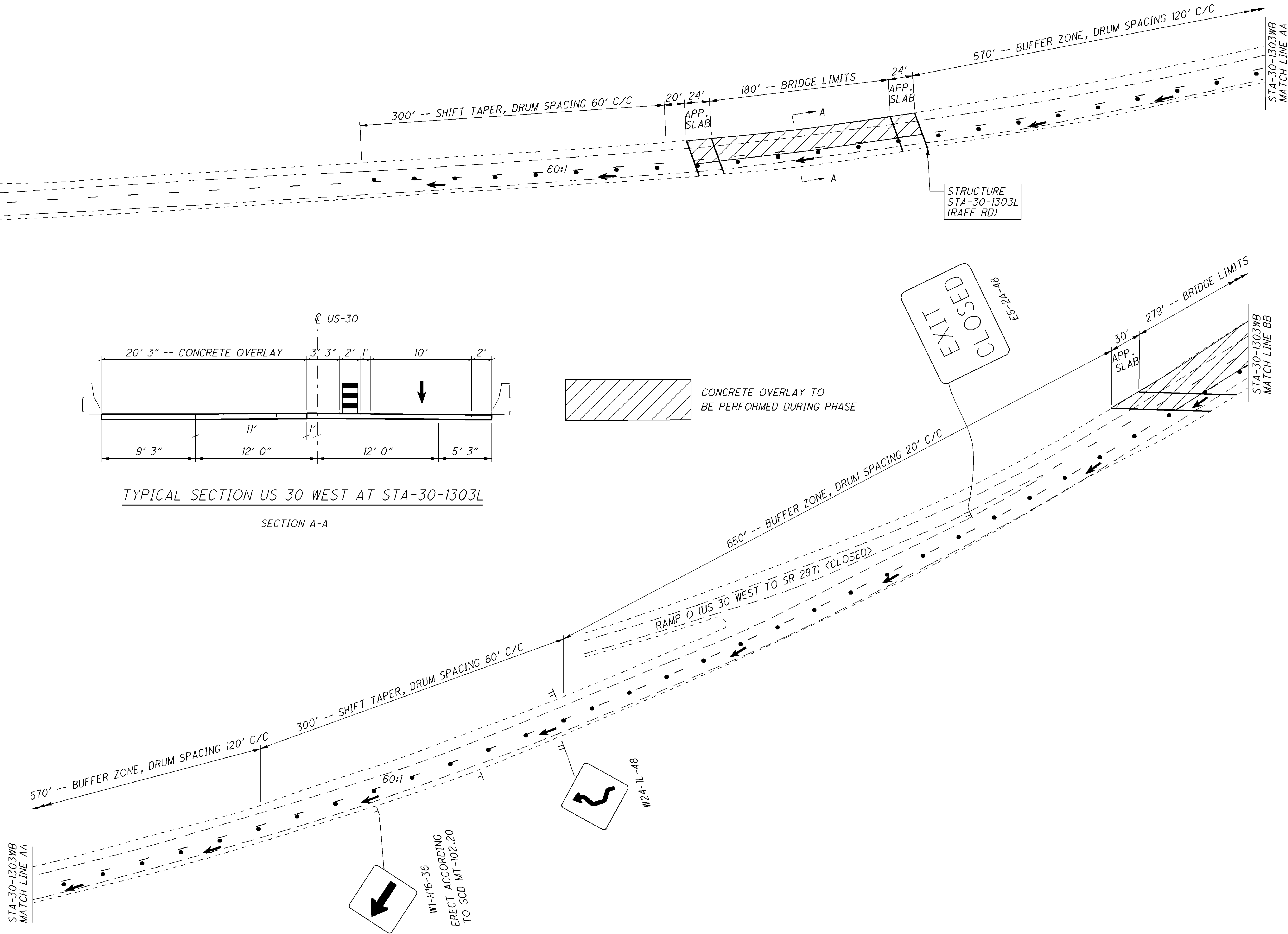






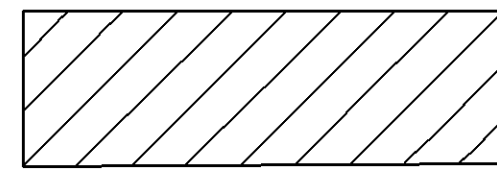
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TYPICAL SECTION US 30 WEST AT STA-30-1303L

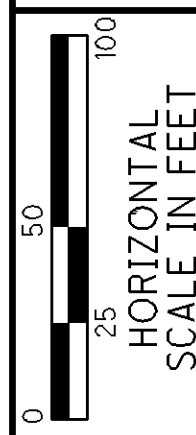
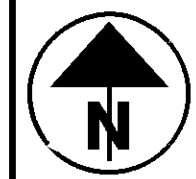
SECTION A-A



CONCRETE OVERLAY TO BE PERFORMED DURING PHASE



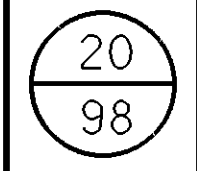
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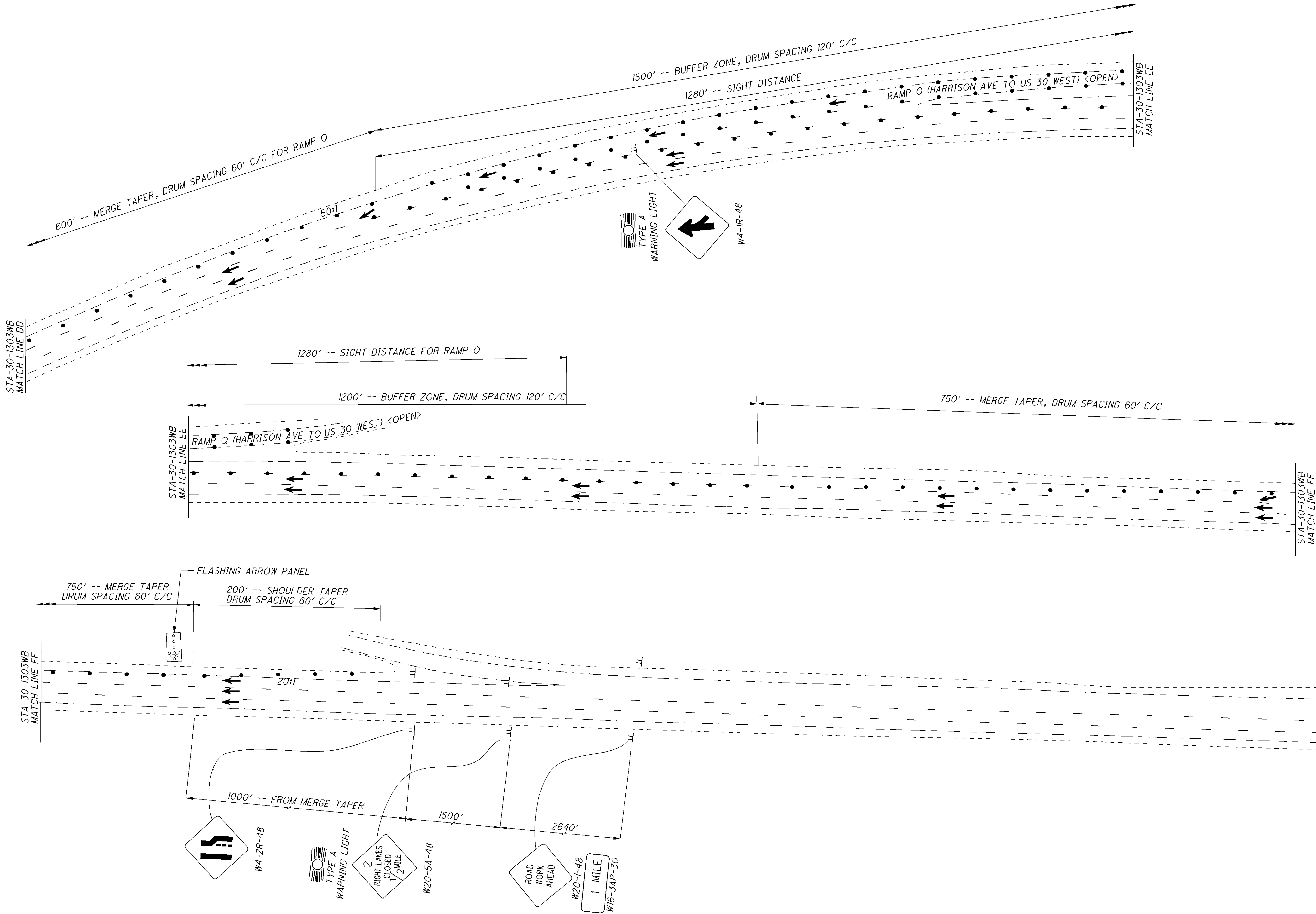


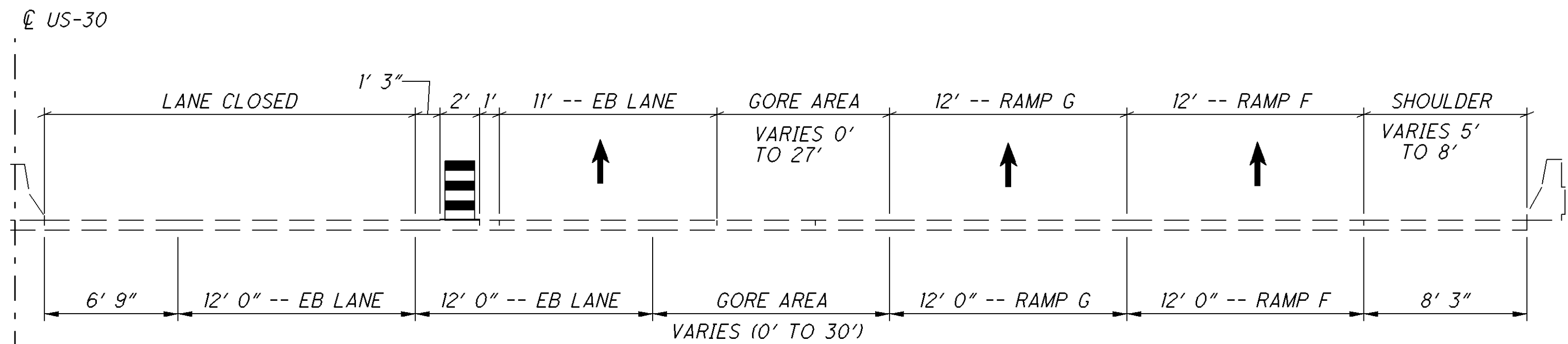
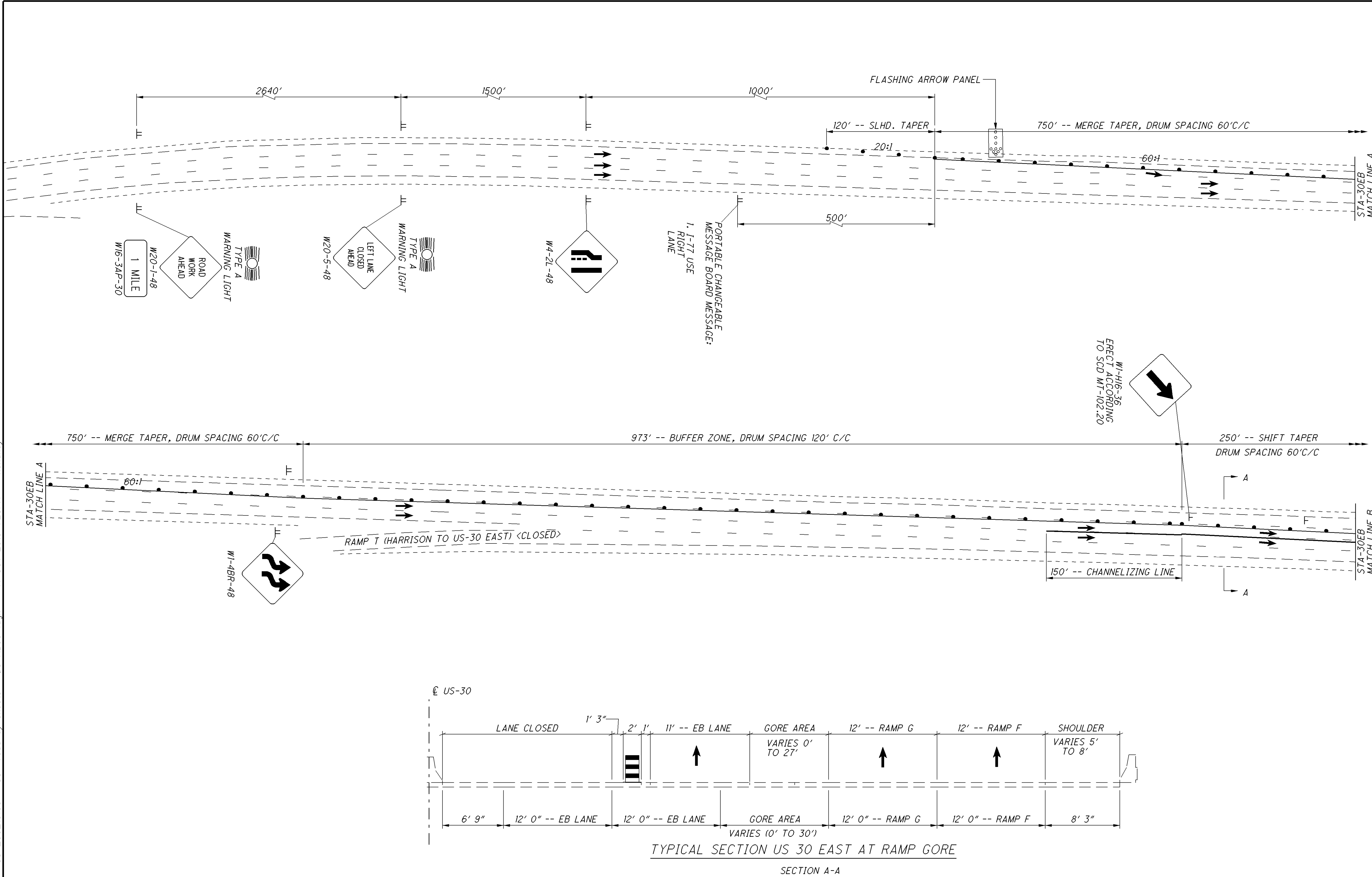
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MAINTENANCE OF TRAFFIC (ZONE 1)
STA-30-(1303L)(1337) WESTBOUND PHASE 2

STA-77 / 30 / 62-VAR



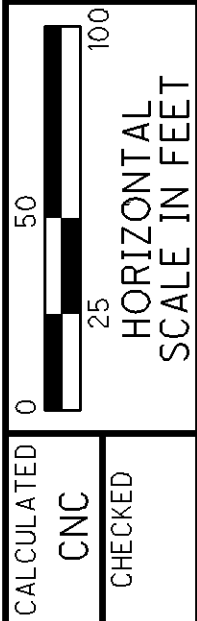
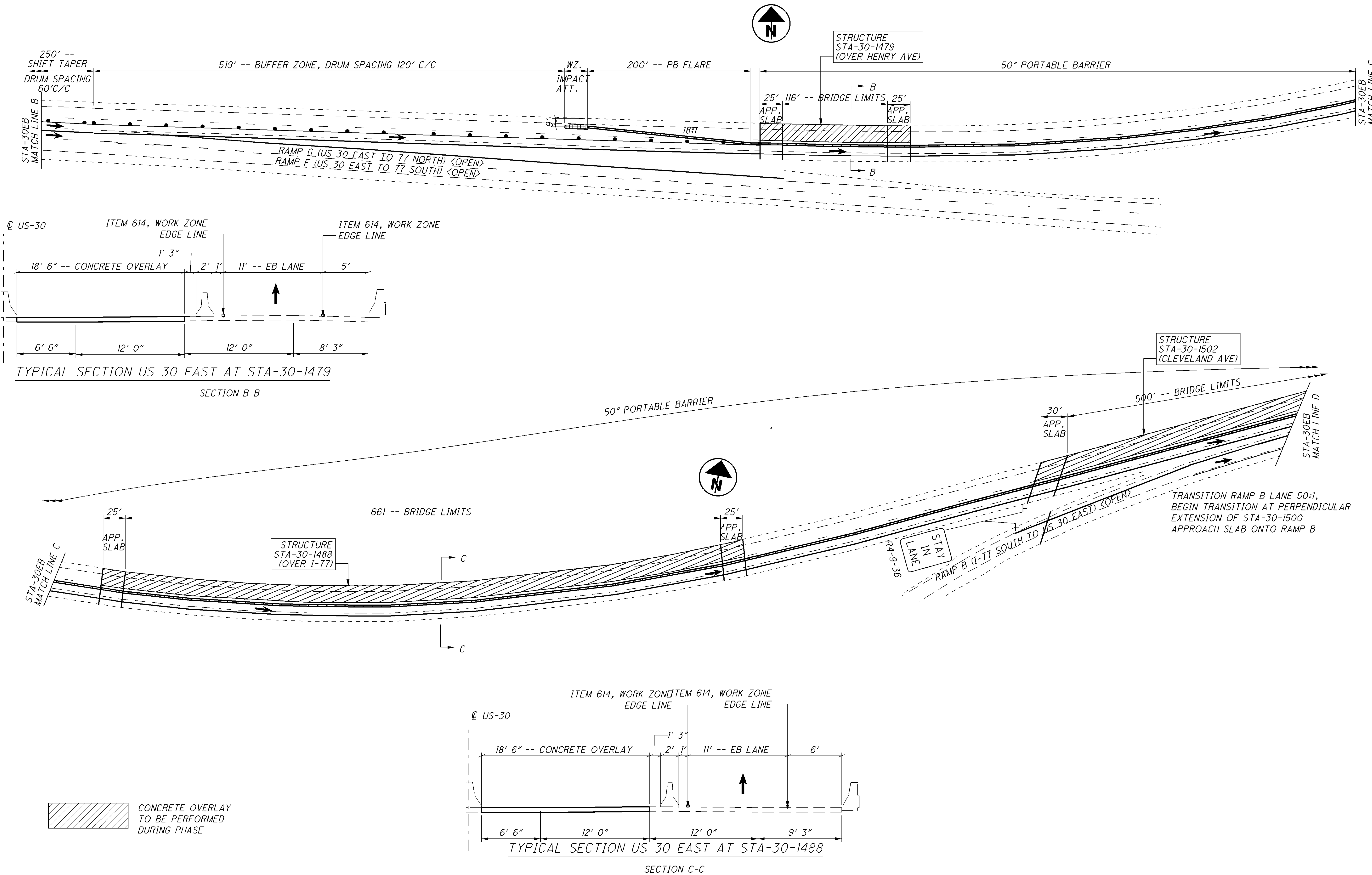




TYPICAL SECTION US 30 EAST AT RAMP GORE

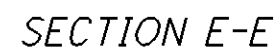
SECTION A-A

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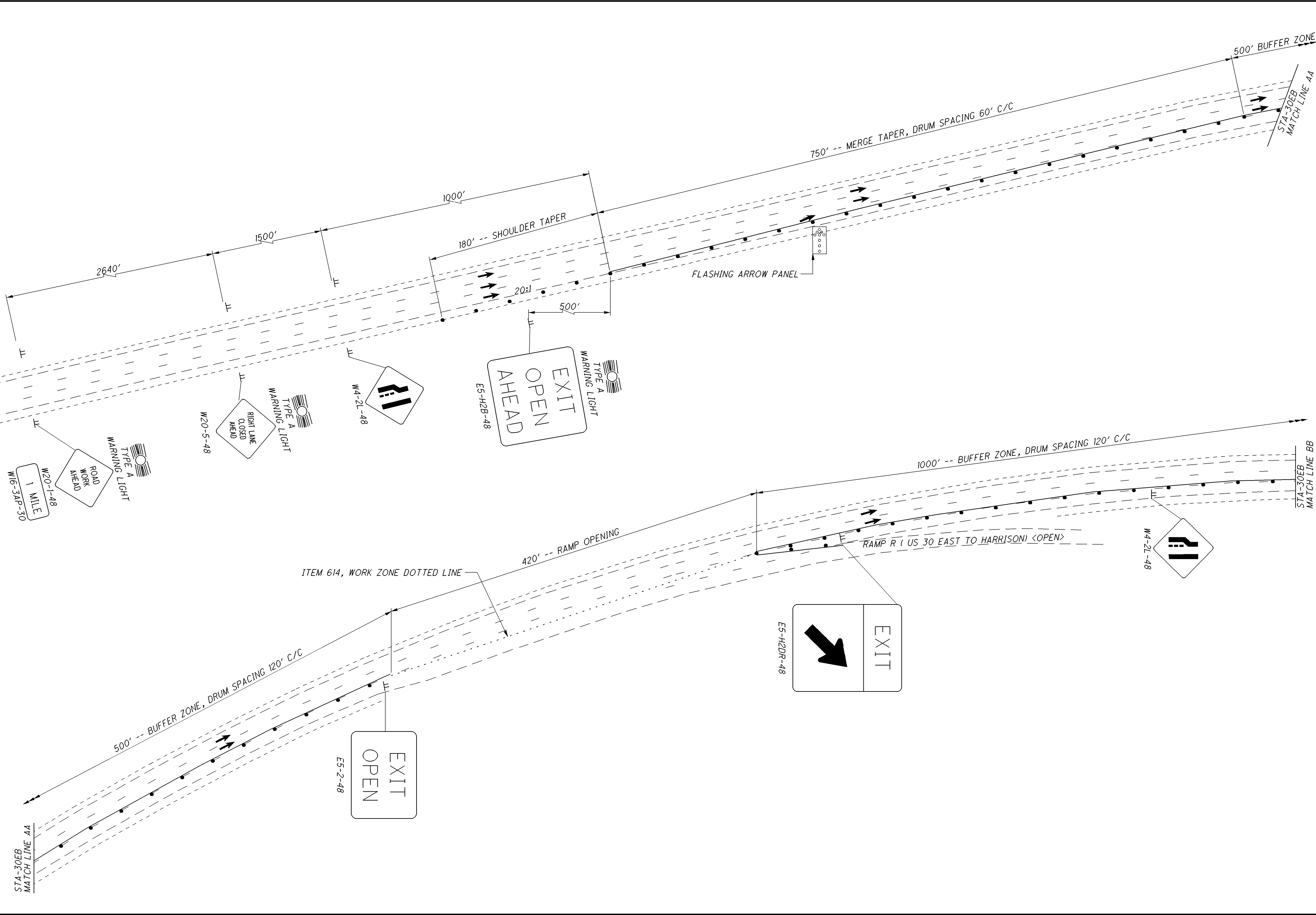


MAINTENANCE OF TRAFFIC (ZONE 2)
STA-30 (1476) (1482) (1500) (1520) EB PHASE 1

STA-77/62/30
-VAR

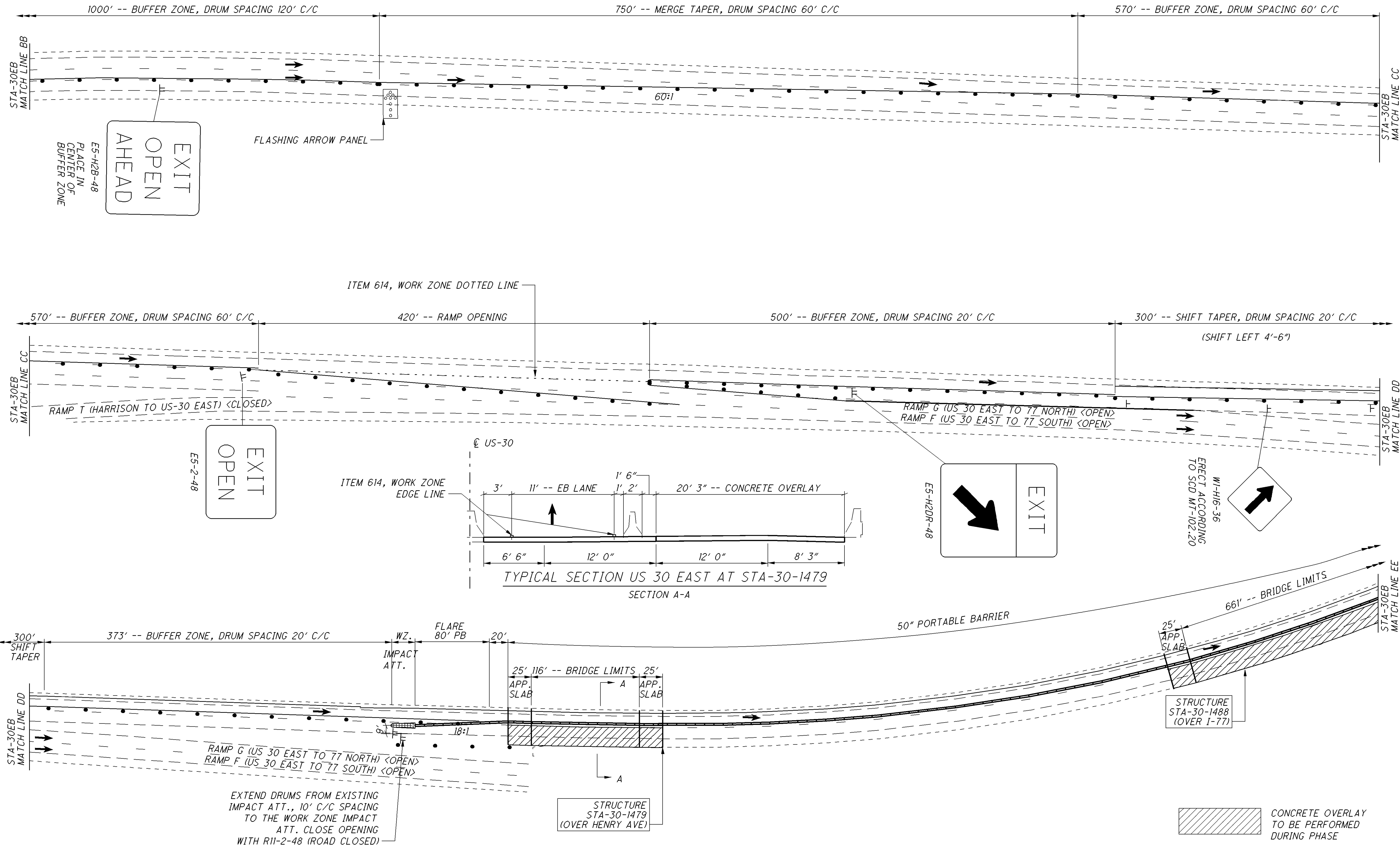


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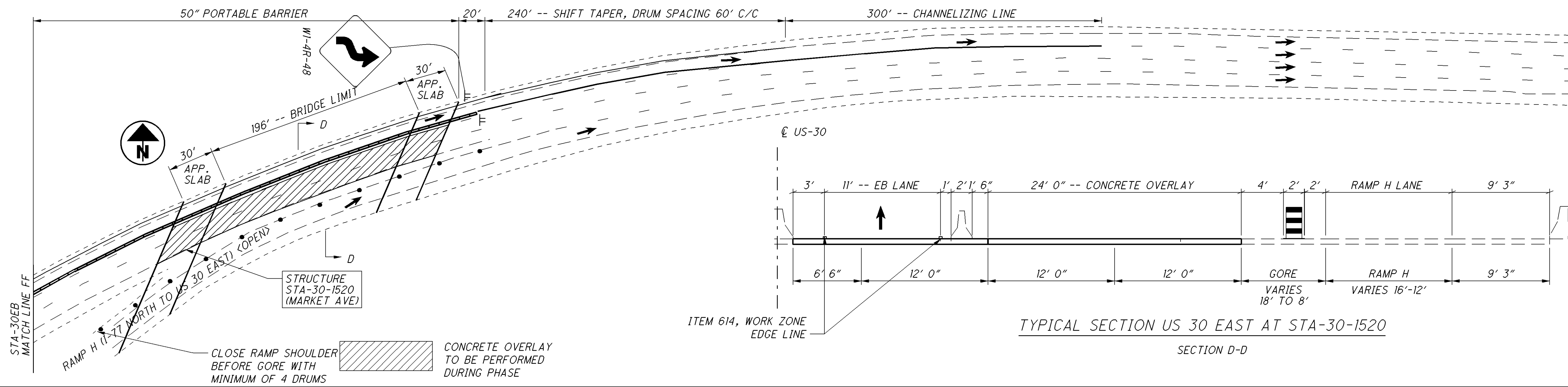
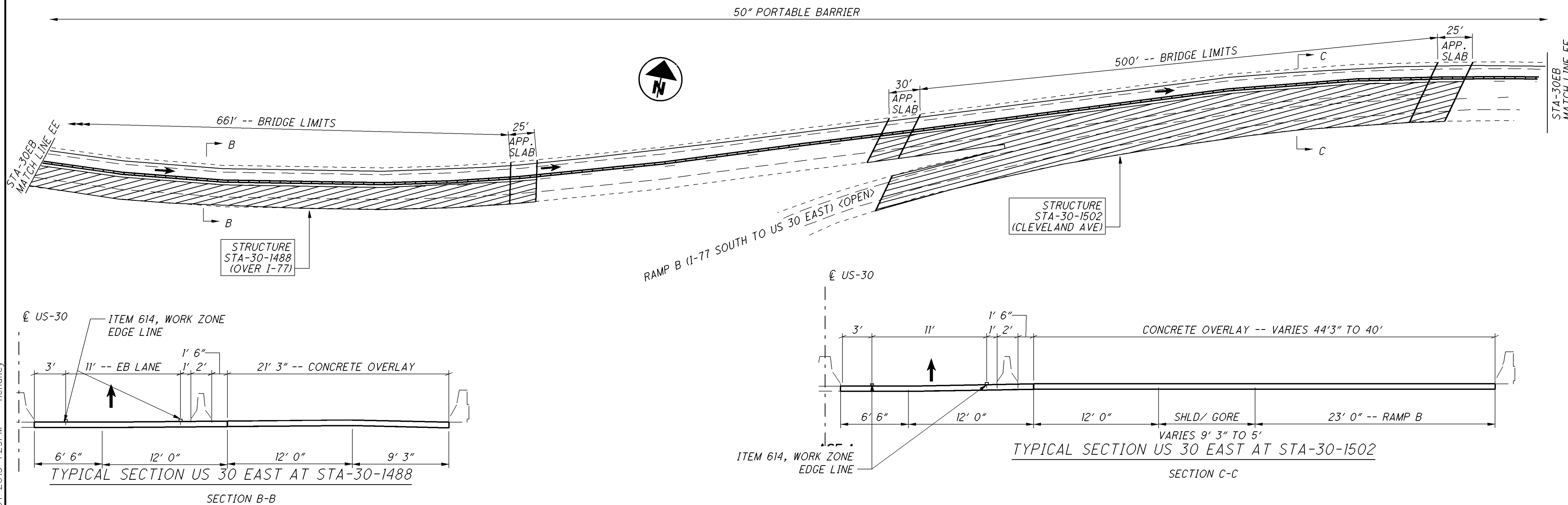


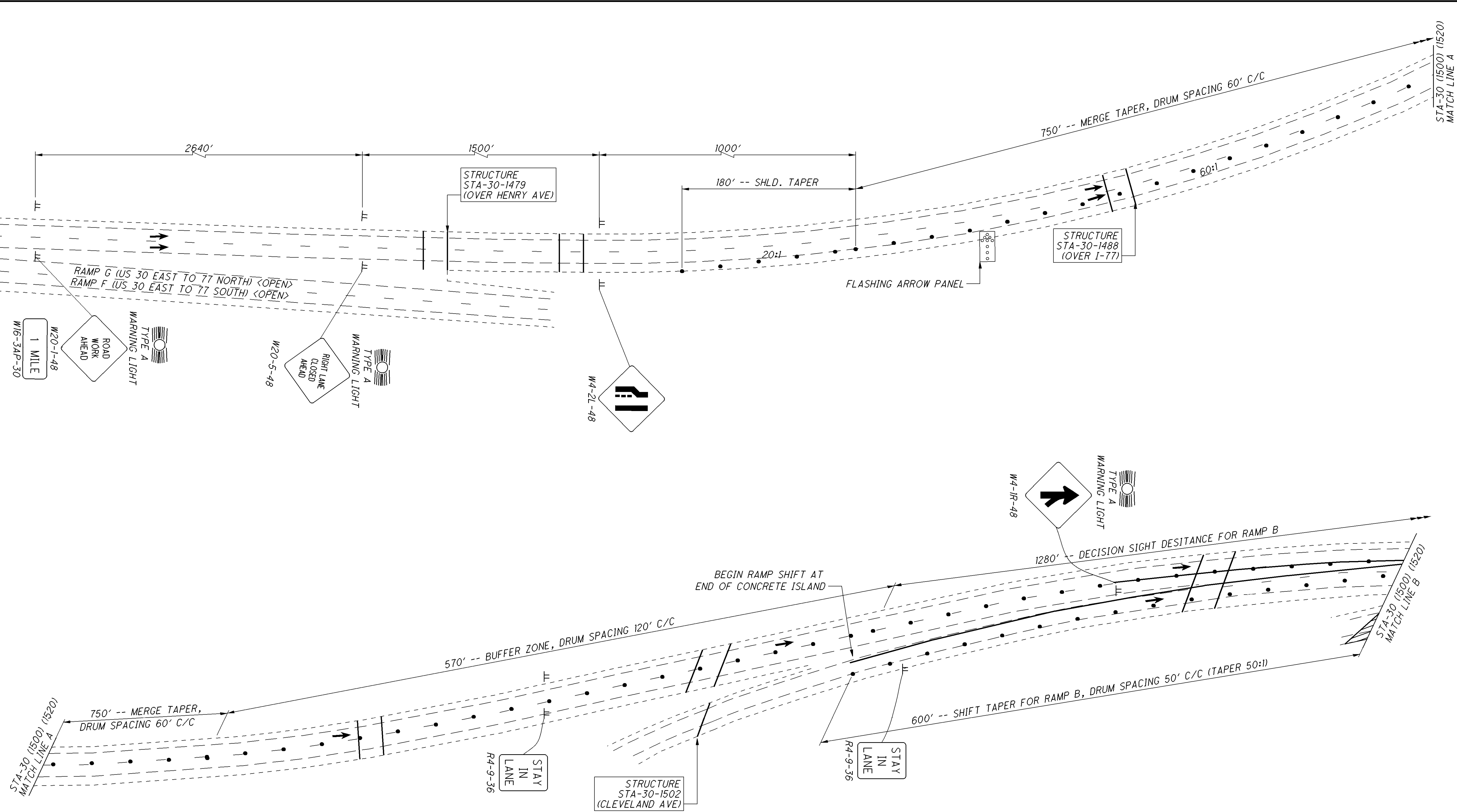
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	CHECKED	
STA-77/62/30 -VAR		
MAINTENANCE OF TRAFFIC (ZONE 2) STA-30 (1476) (1482) (1500) EB PHASE 2		

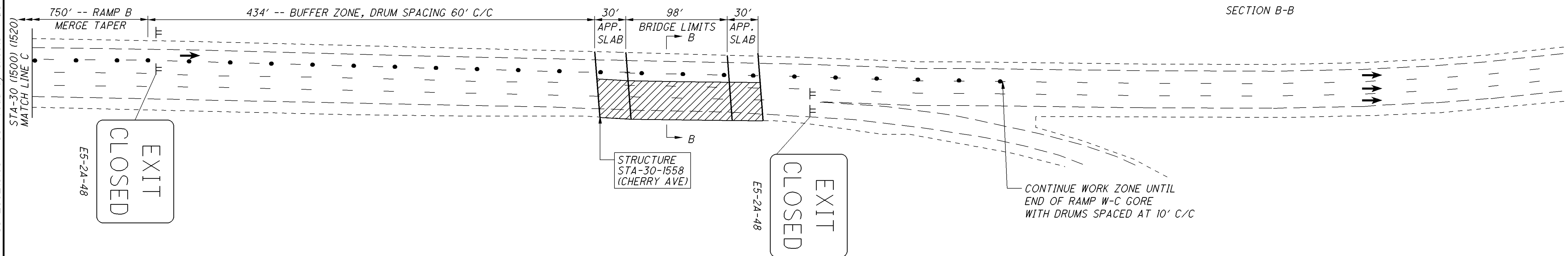
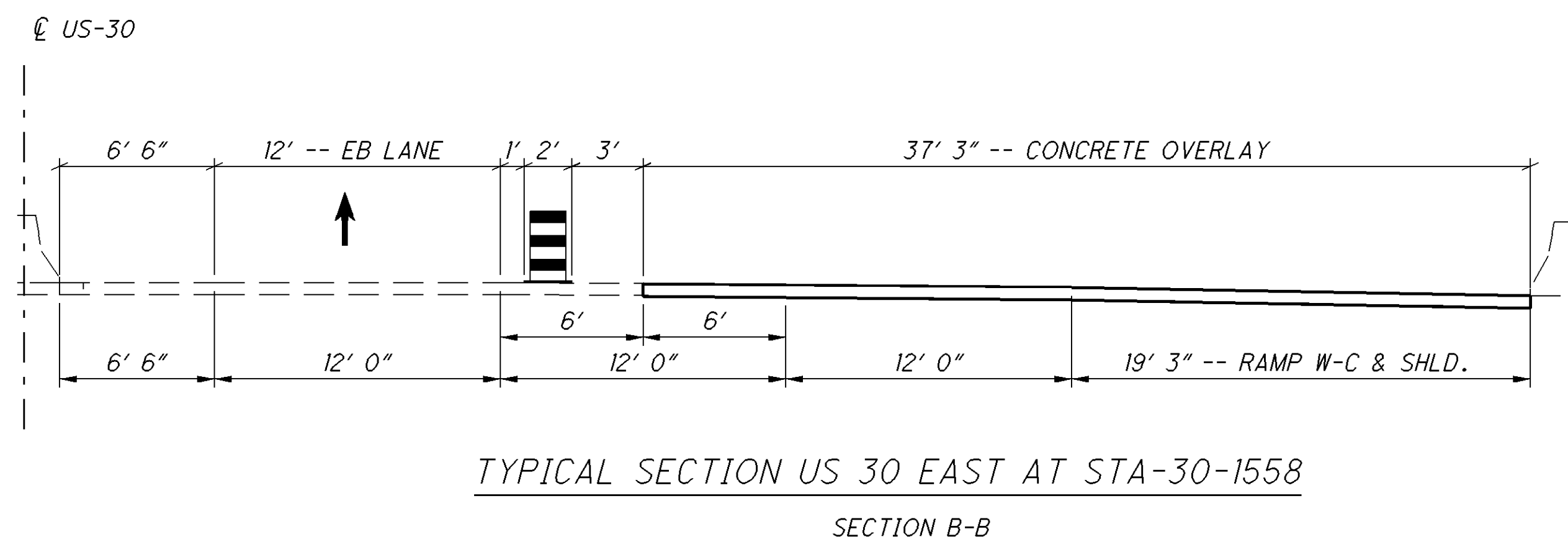
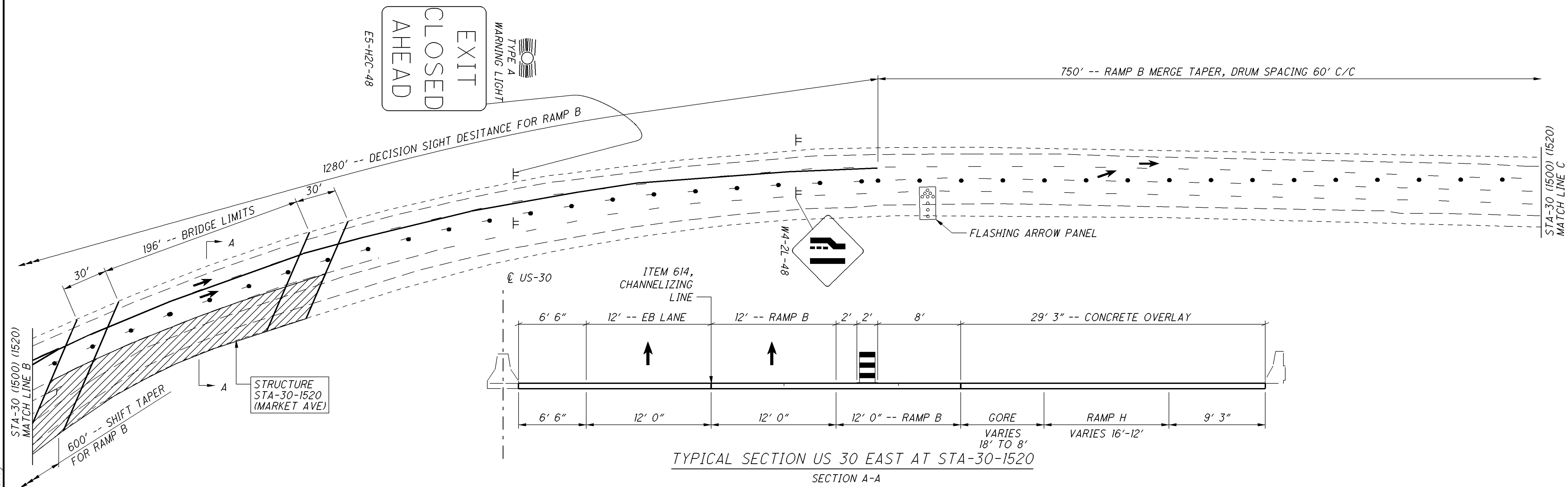
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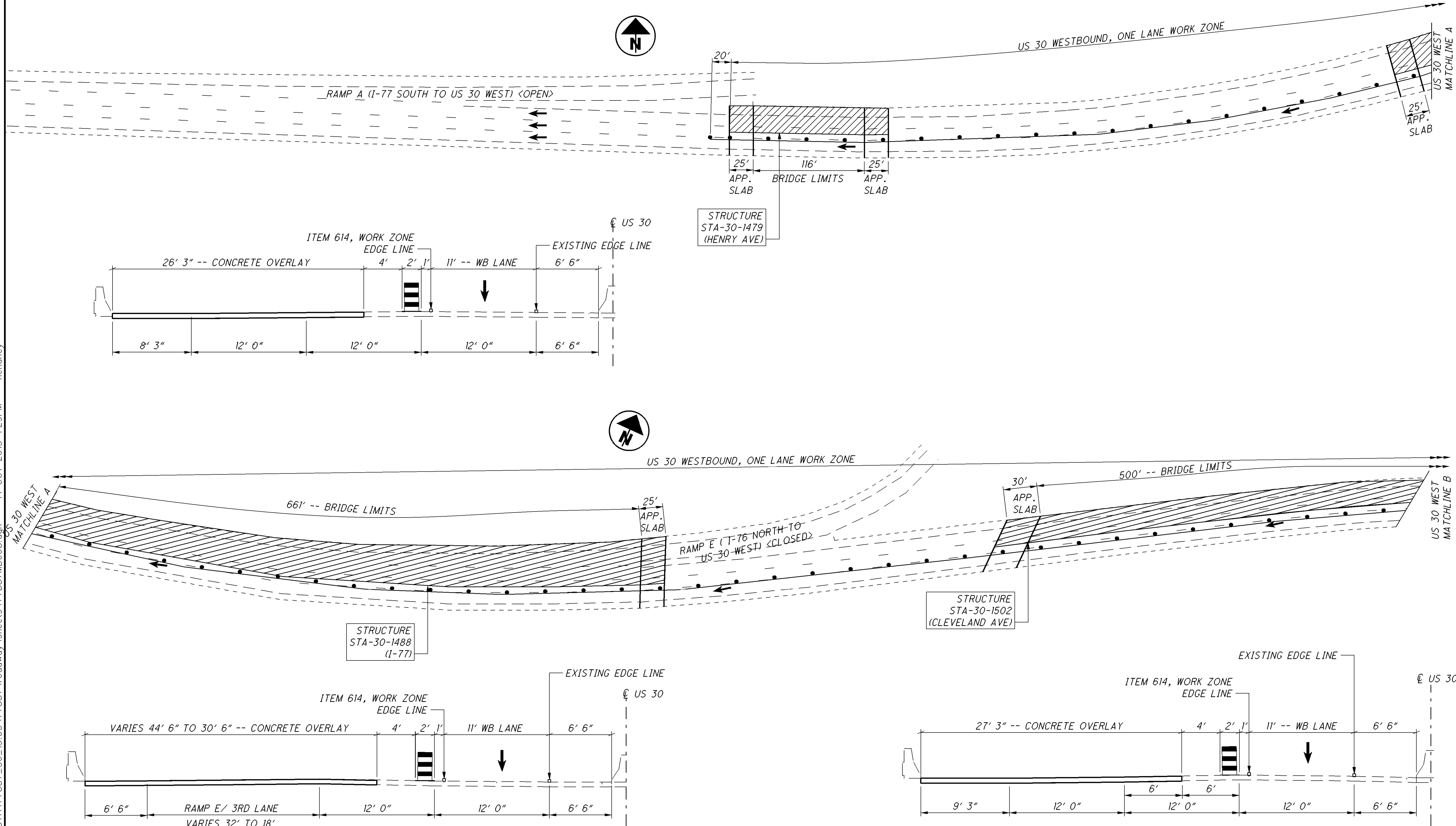
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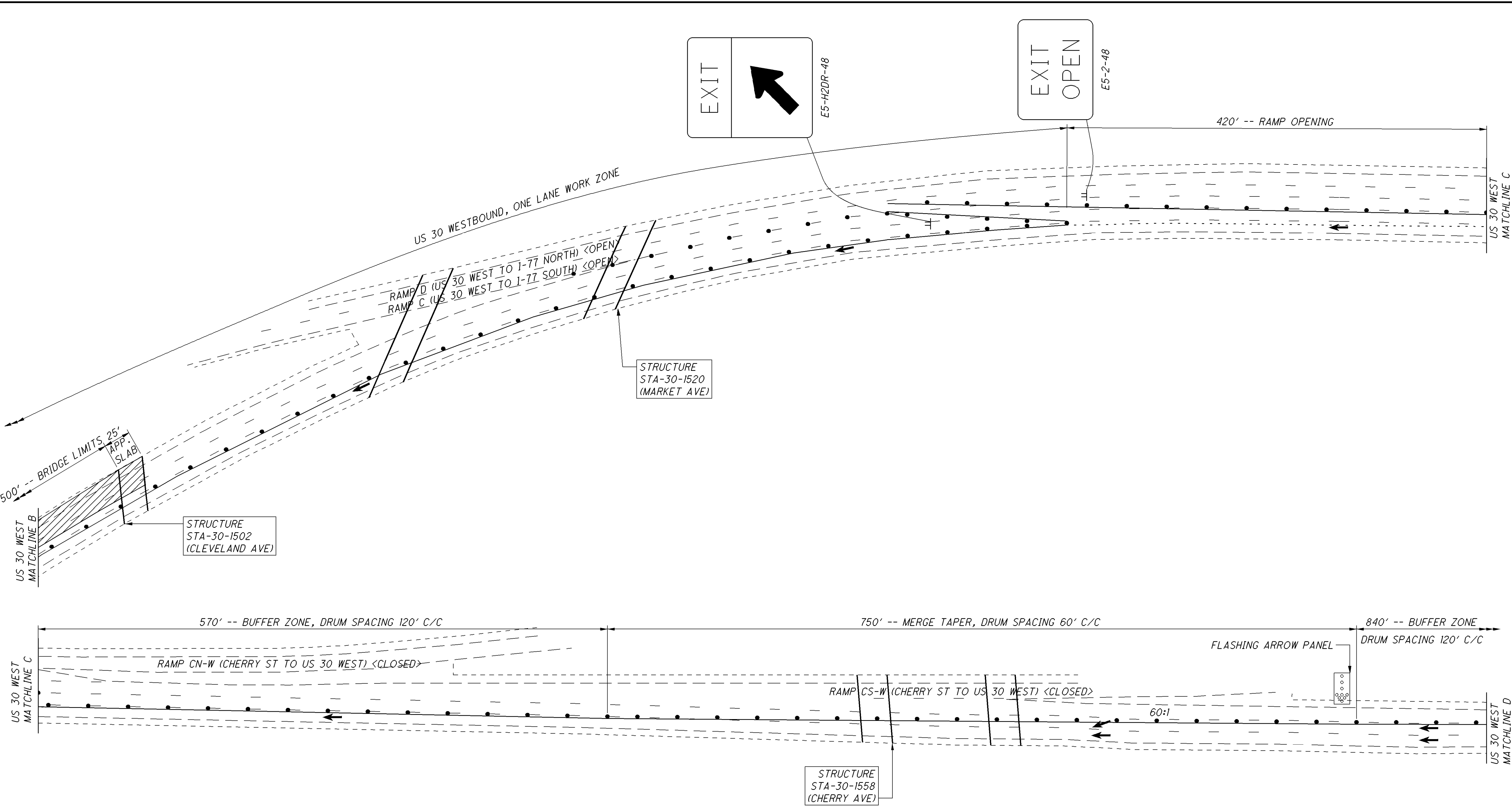


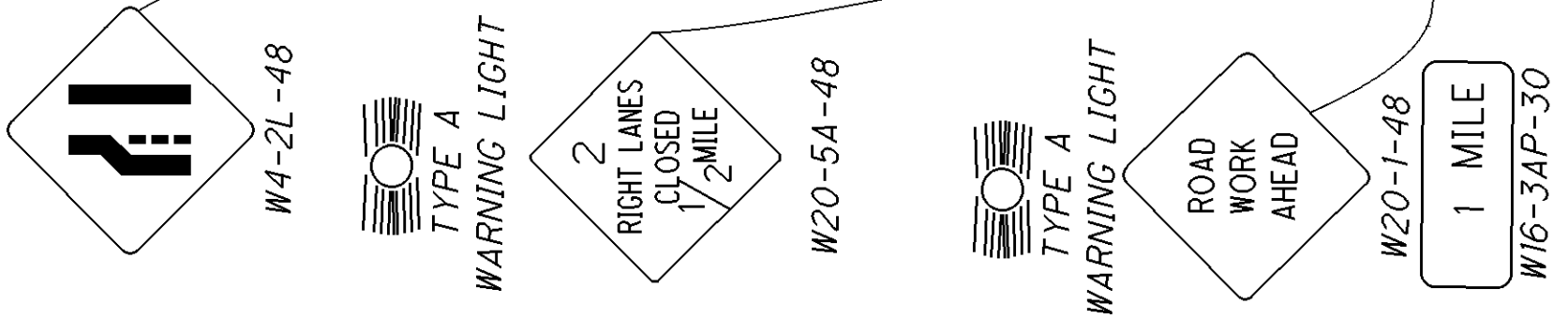
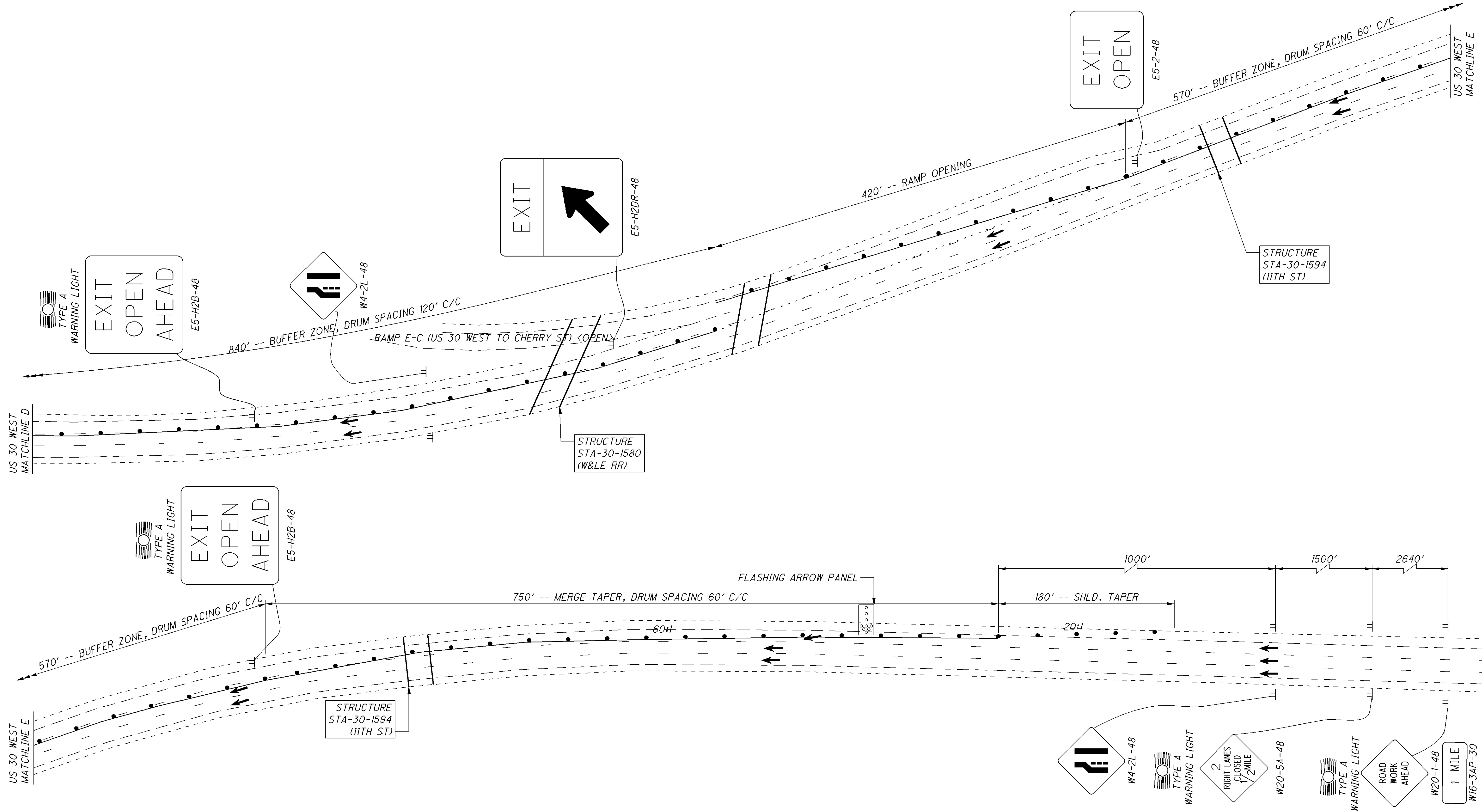
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0 25 50 100 HORIZONTAL SCALE IN FEET	CALCULATED	CNC	CHECKED
	MAINTENANCE OF TRAFFIC (ZONE 2) STA-30 (1476) (1482) (1500) WB PHASE 1		
STA-77 / 30 / 62-VAR			
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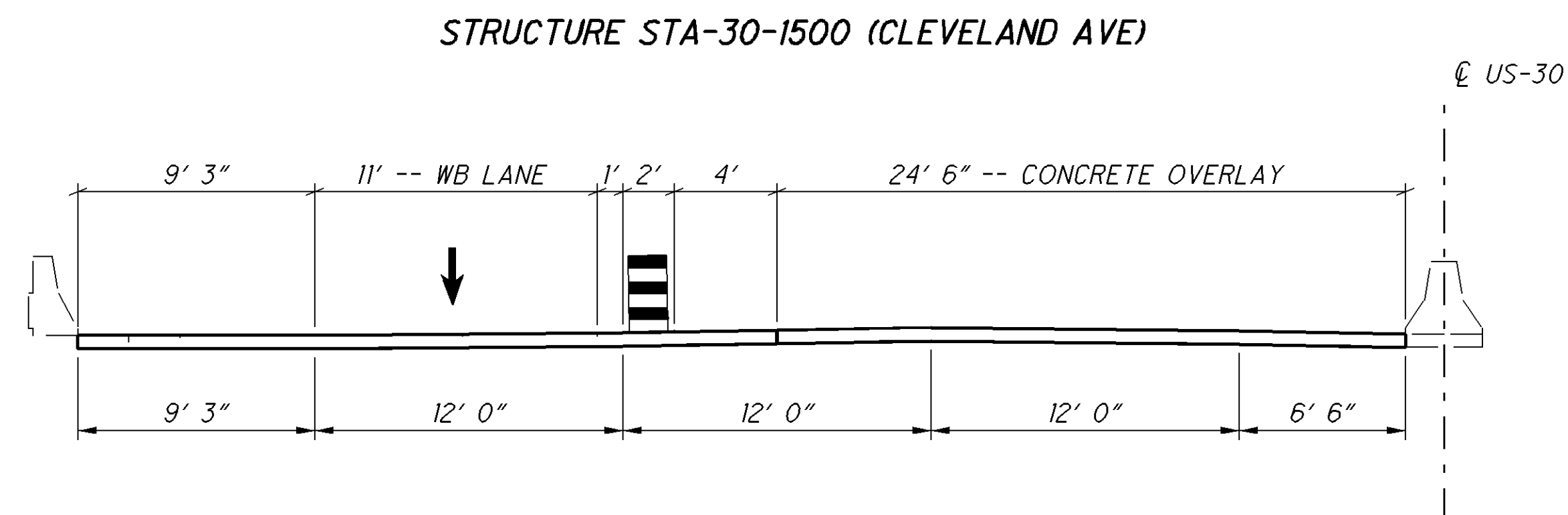
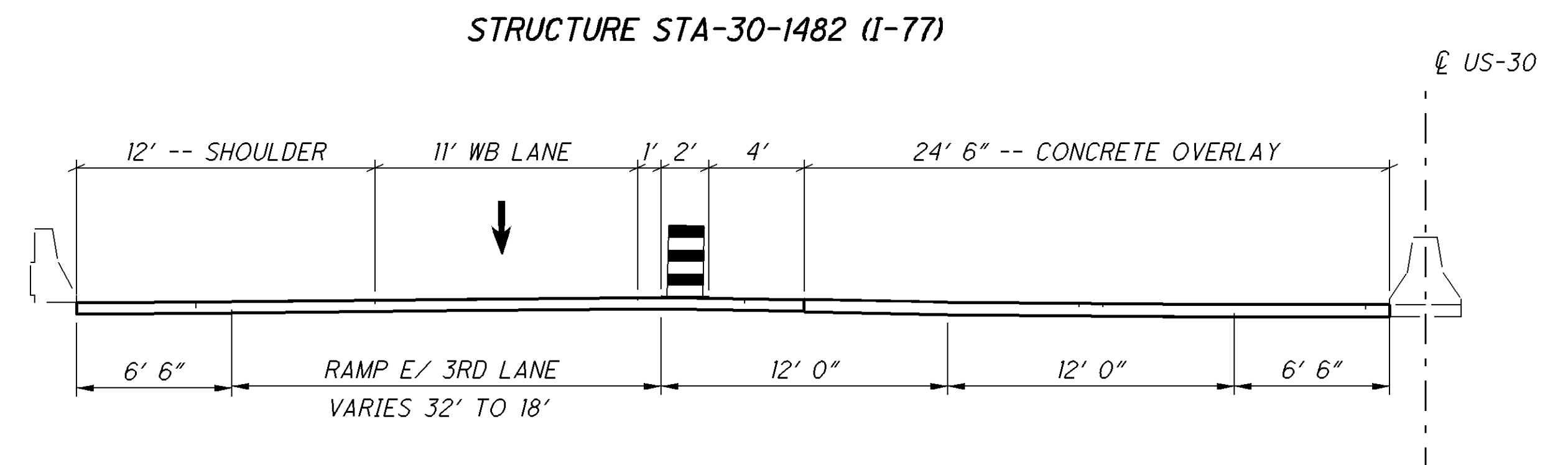
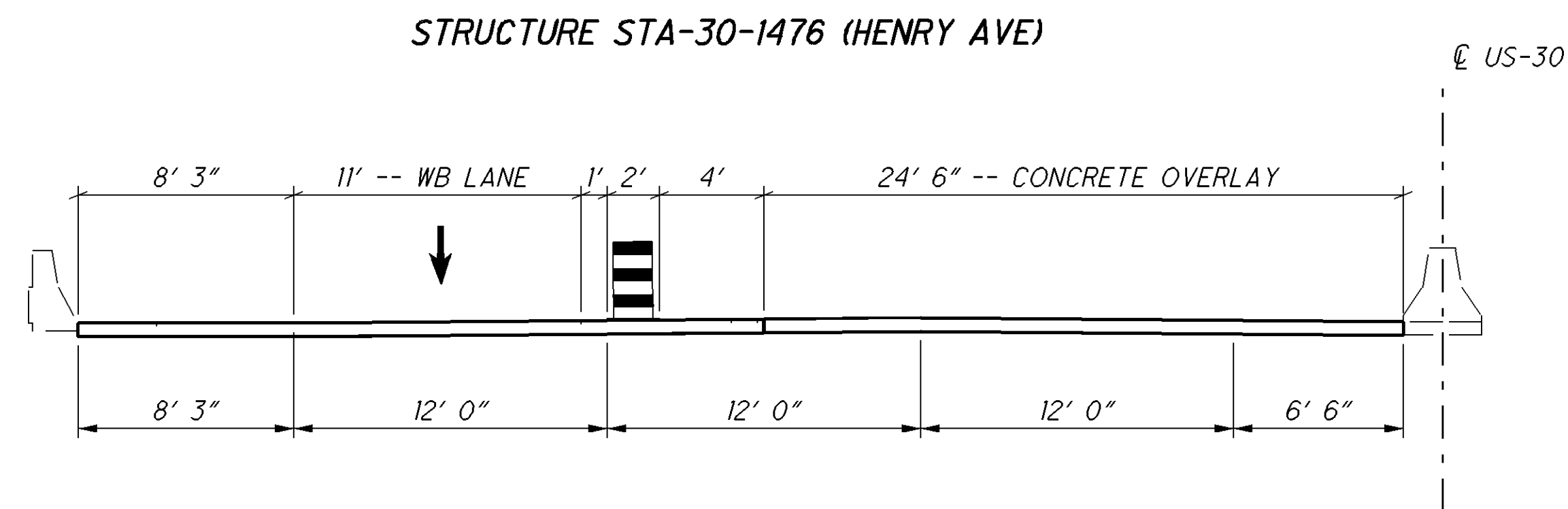
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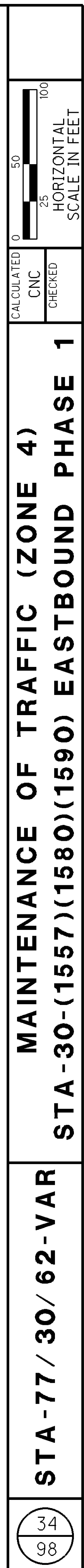
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MAINTENANCE OF TRAFFIC (ZONE 2) STA-30 (1476) (1482) (1500) WB PHASE 1		
STA-77 / 30/ 62-VAR	32 98	

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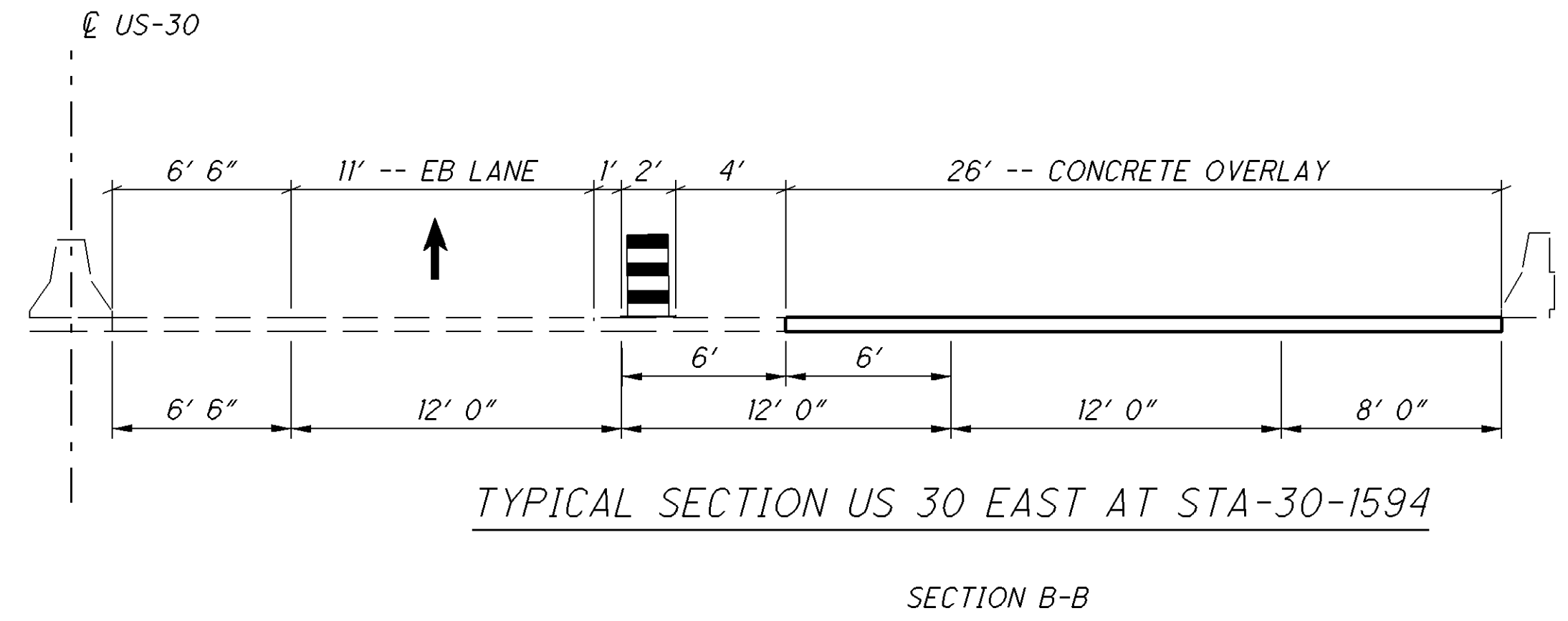
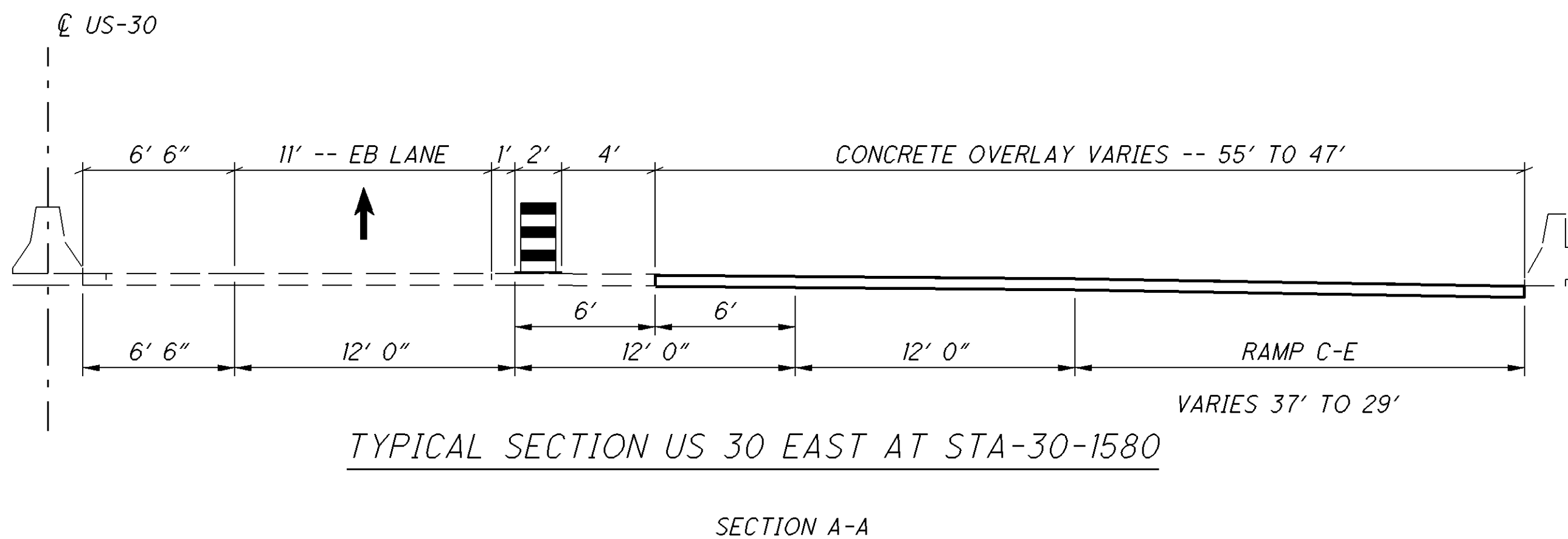
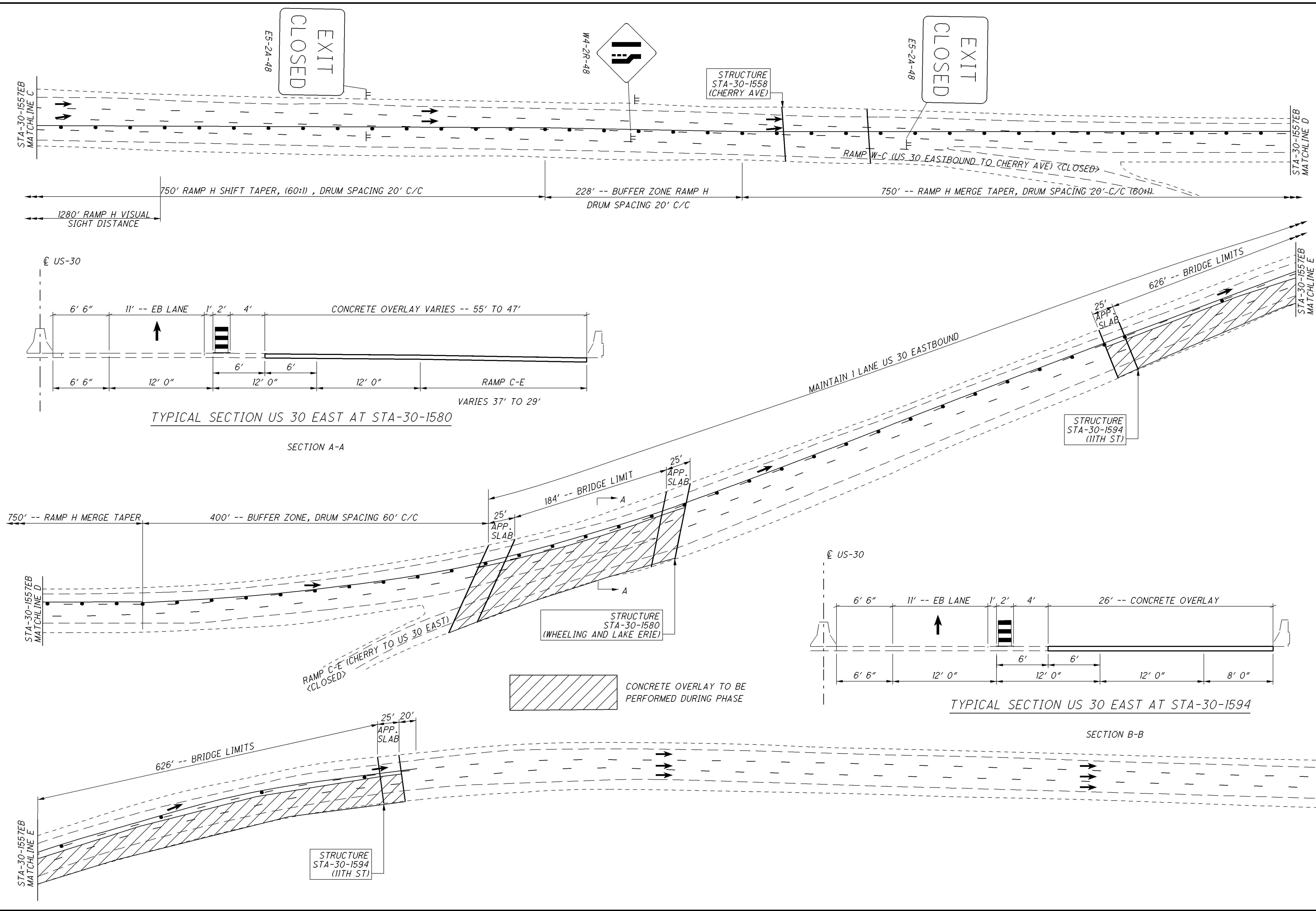


THE CONTRACTOR SHALL EXTEND THE WORK ZONE TO COMPLETE STRUCTURES' STA-30-1476, STA-30-1482, AND STA-30-1500 CONCRETE OVERLAY IN THE WESTBOUND DIRECTION. THE CONTRACTOR SHALL REFER TO OMUTCD FIGURE 6H-37, DOUBLE LANE CLOSURE ON A FREEWAY (TA-37), TO CLOSE THE TWO INTERIOR LANES. USE A 60 MPH DESIGN SPEED AND ALL BUFFER ZONES.

THE INTERIOR LANE SHALL BE CLOSED BEFORE ENTERANCE RAMP CS-W (IITH ST TO US 30 WB). ALL EXIT AND ENTERANCE RAMPS, EXCEPT RAMP CN-W (CHERRY ST TO US 30 WB) SHALL REMAIN OPEN DURING THIS PHASE. ALL PAVEMENT MARKINGS SHALL BE PLACED TO MARK NEW TEMPORARY CONDITION.



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CONCRETE OVERLAY TO BE PERFORMED DURING PHASE

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50

75

100

HORIZONTAL SCALE IN FEET

CALCULATED

CNC

CHECKED

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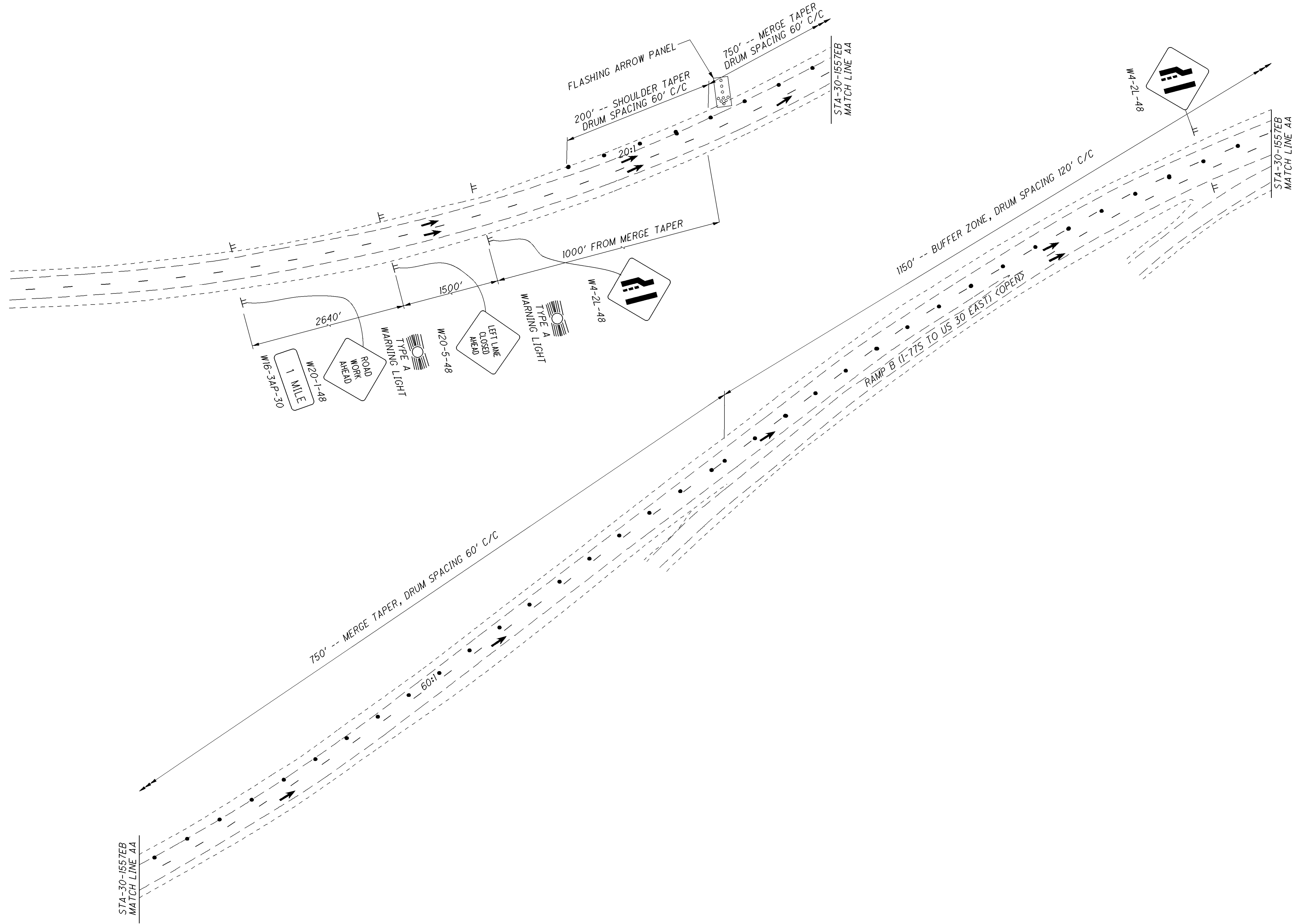
MAINTENANCE OF TRAFFIC (ZONE 4)

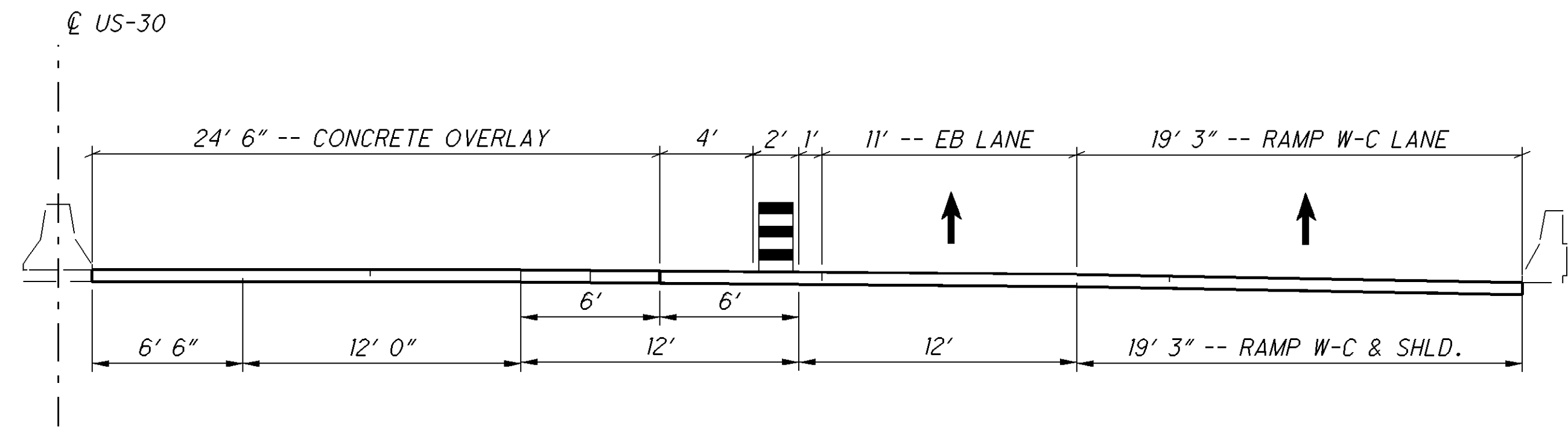
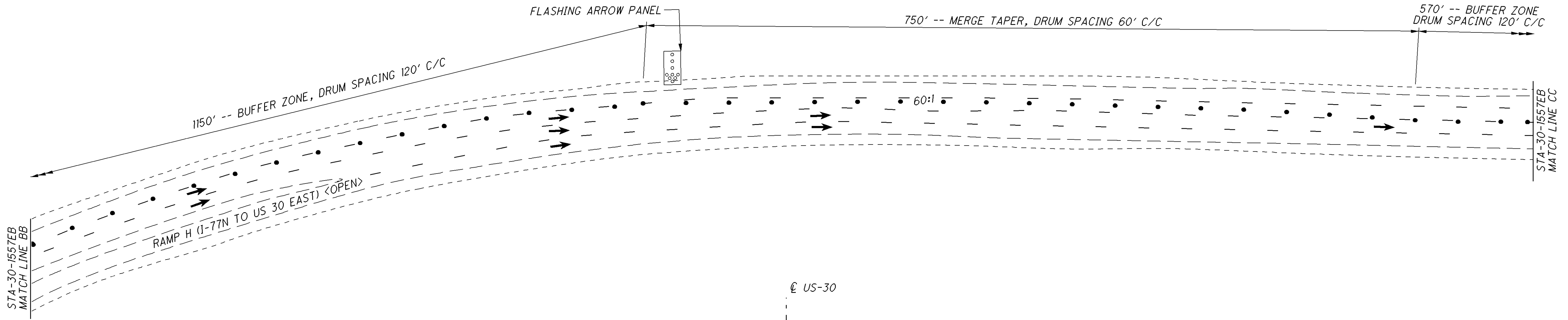
STA-30-(1557)(1580)(1590) EASTBOUND PHASE 1

STA-77 / 30 / 62-VAR

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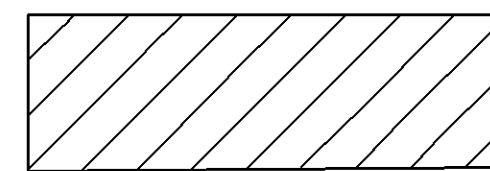
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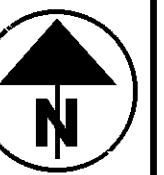
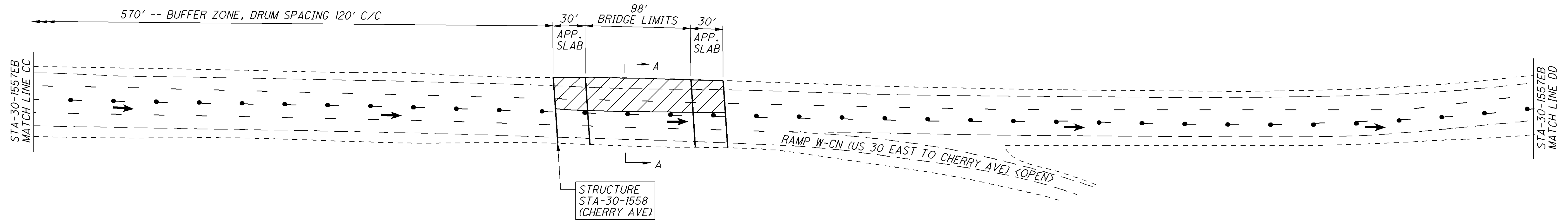


TYPICAL SECTION US 30 EAST AT STA-30-1558

SECTION A-A



WORK AT STRUCTURE TO
BE PERFORMED DURING PHASE

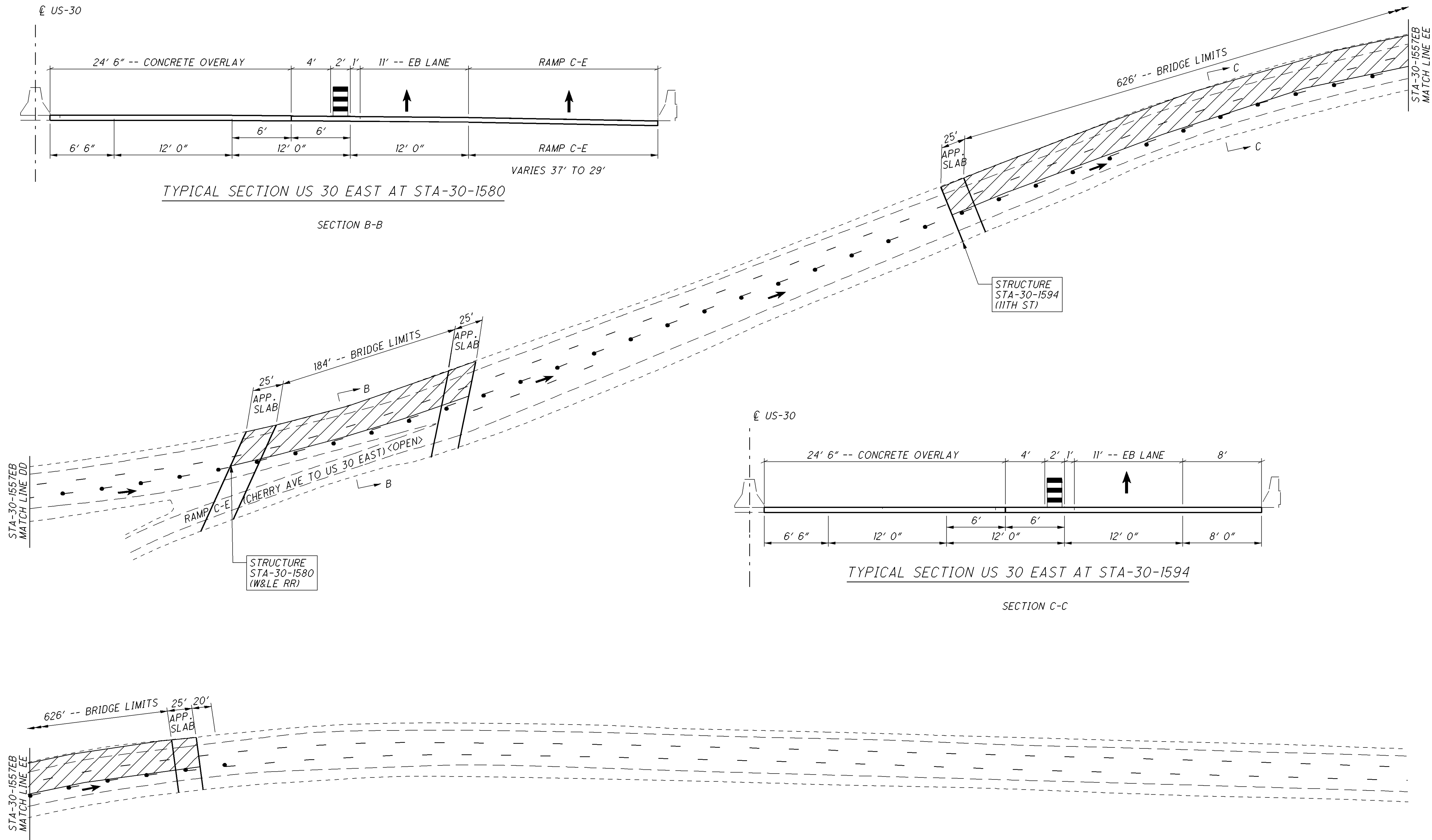


CALCULATED
HKS
CHECKED

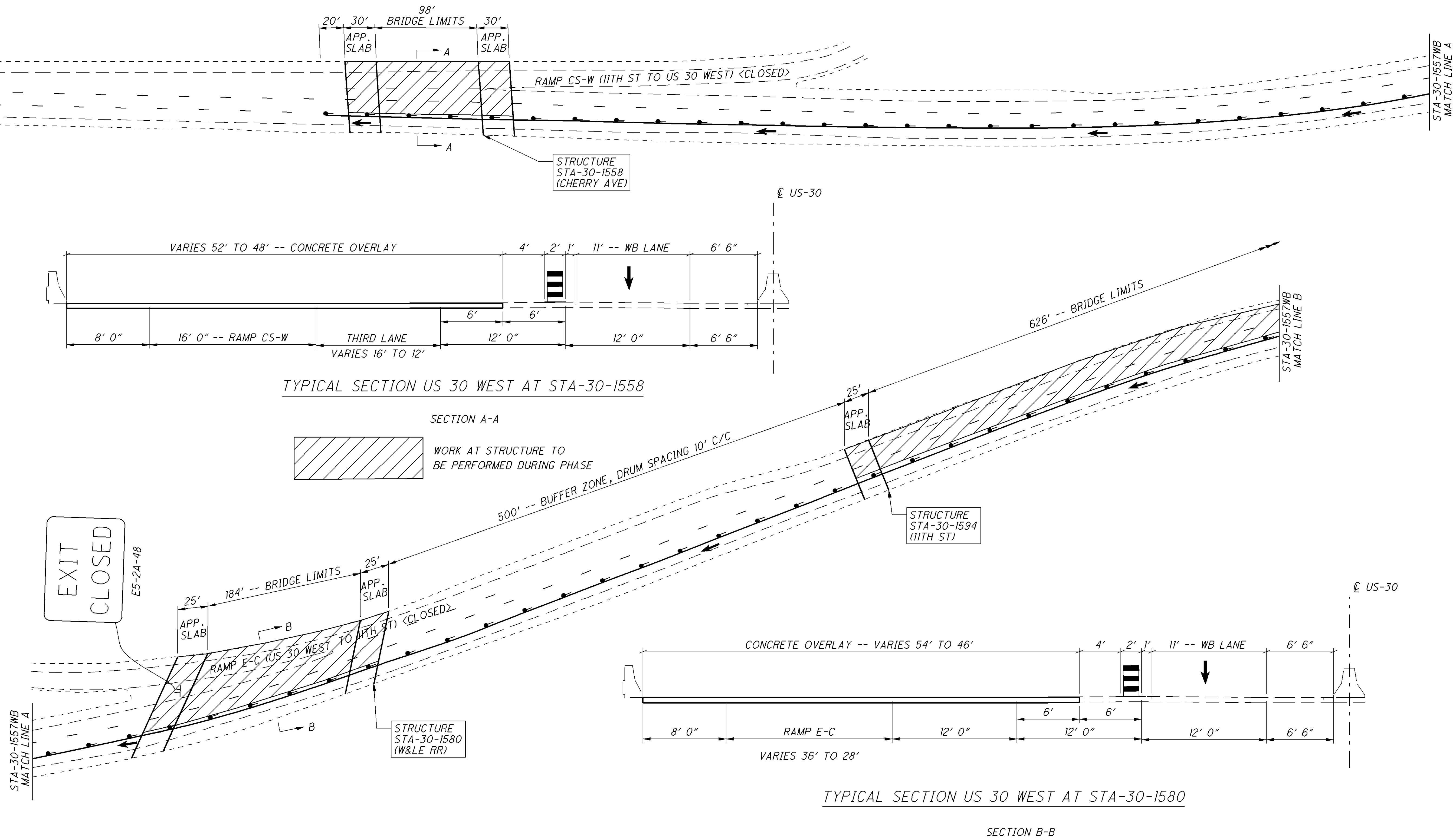
MAINTENANCE OF TRAFFIC (ZONE 4)
STA-30-(1557)(1580)(1590) EASTBOUND PHASE 2

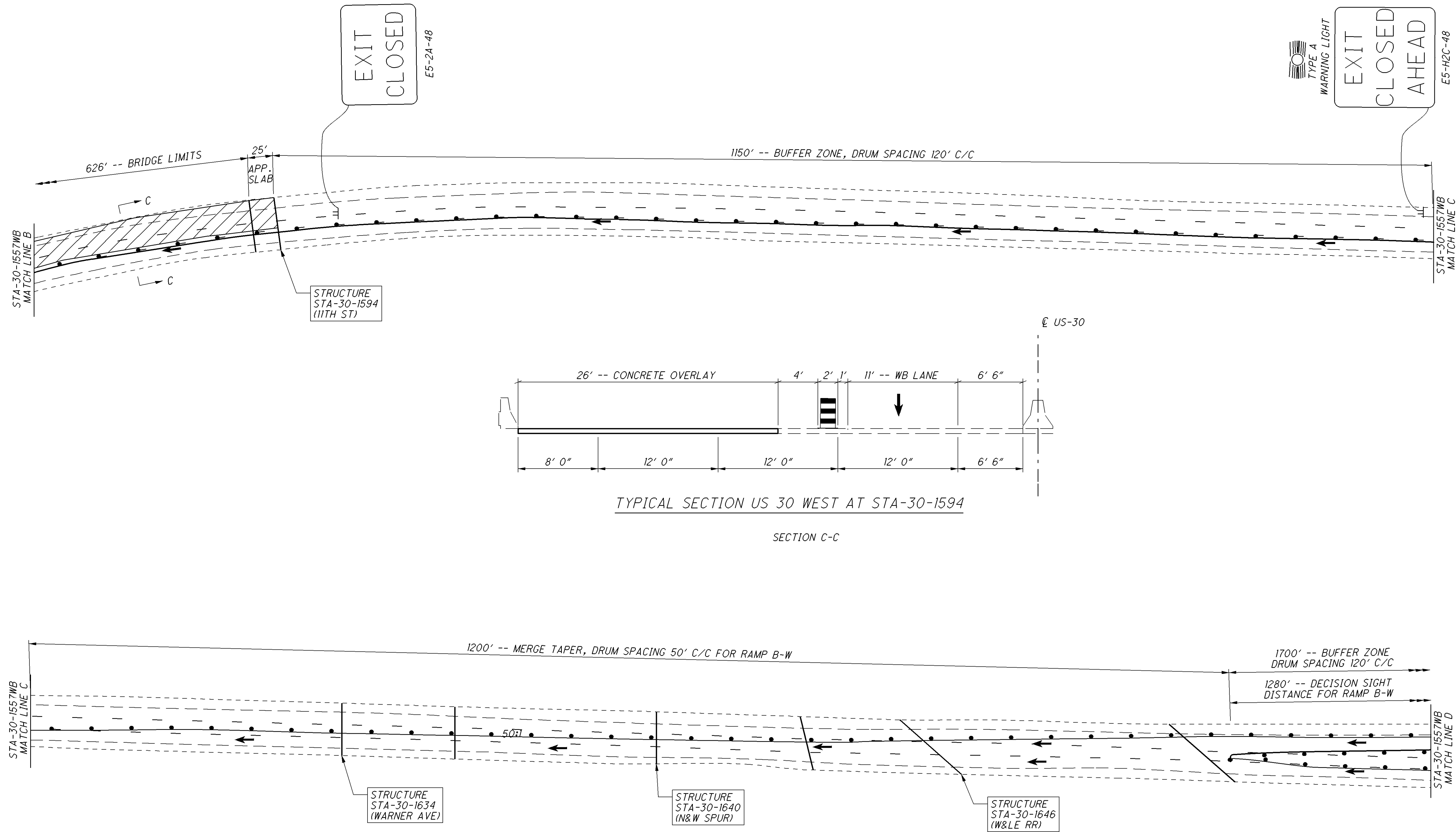
STA-77 / 30 / 62-VAR

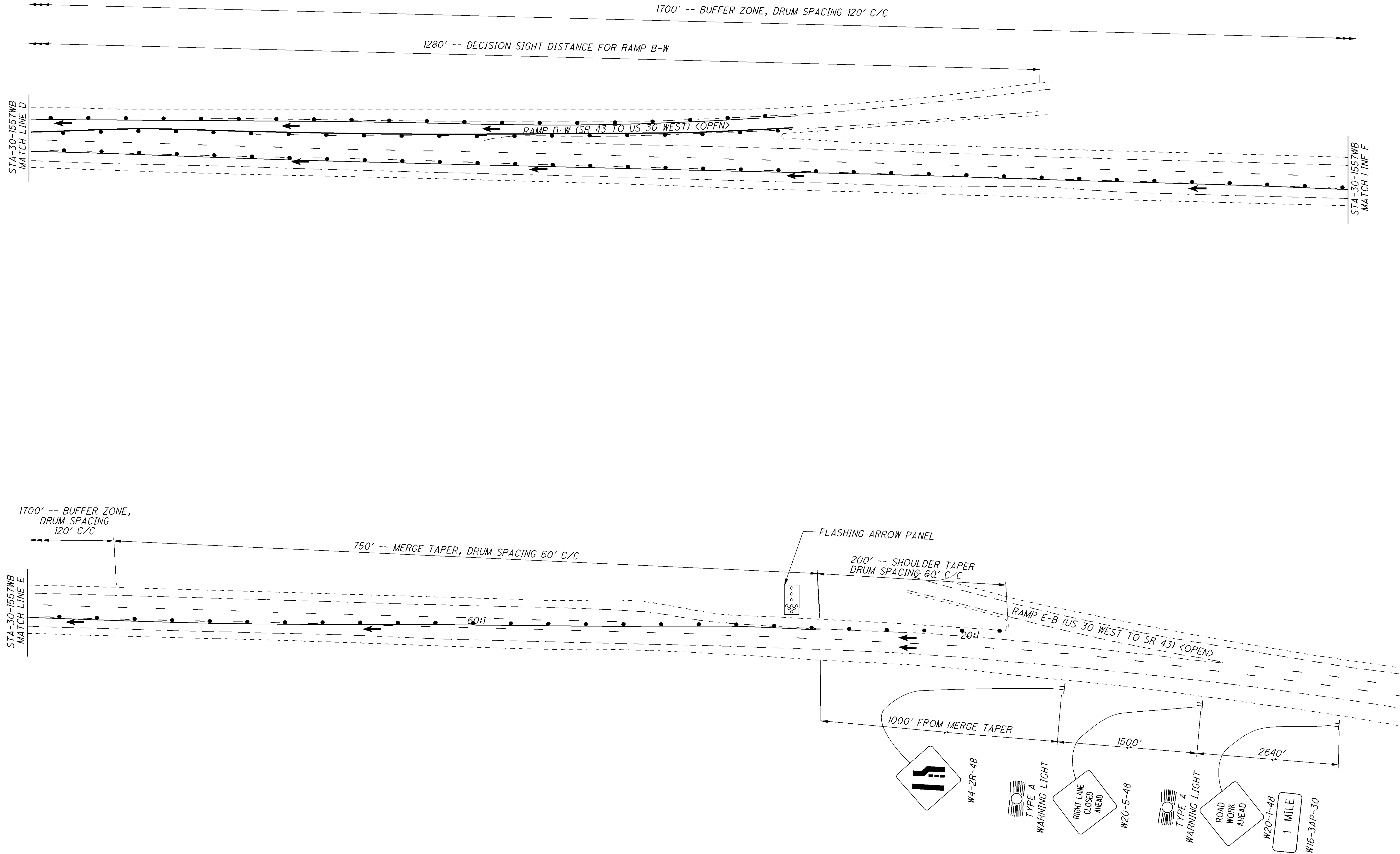
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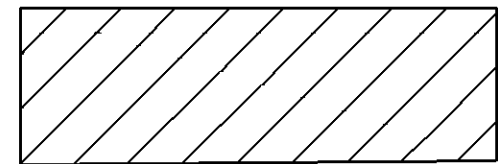
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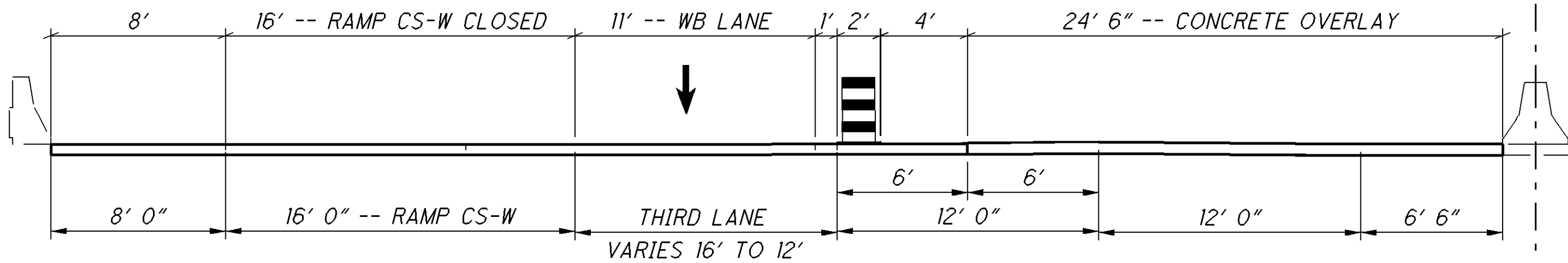
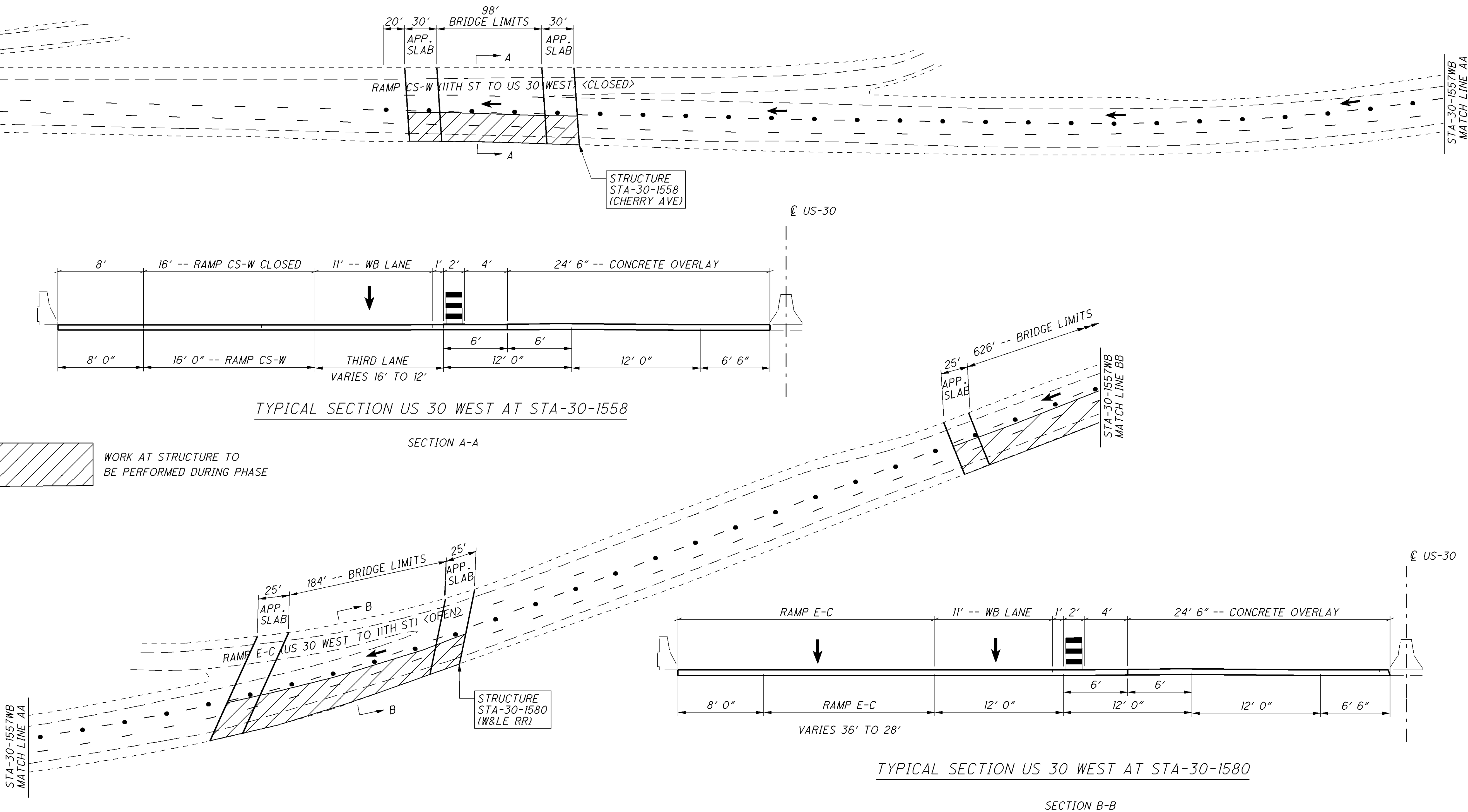




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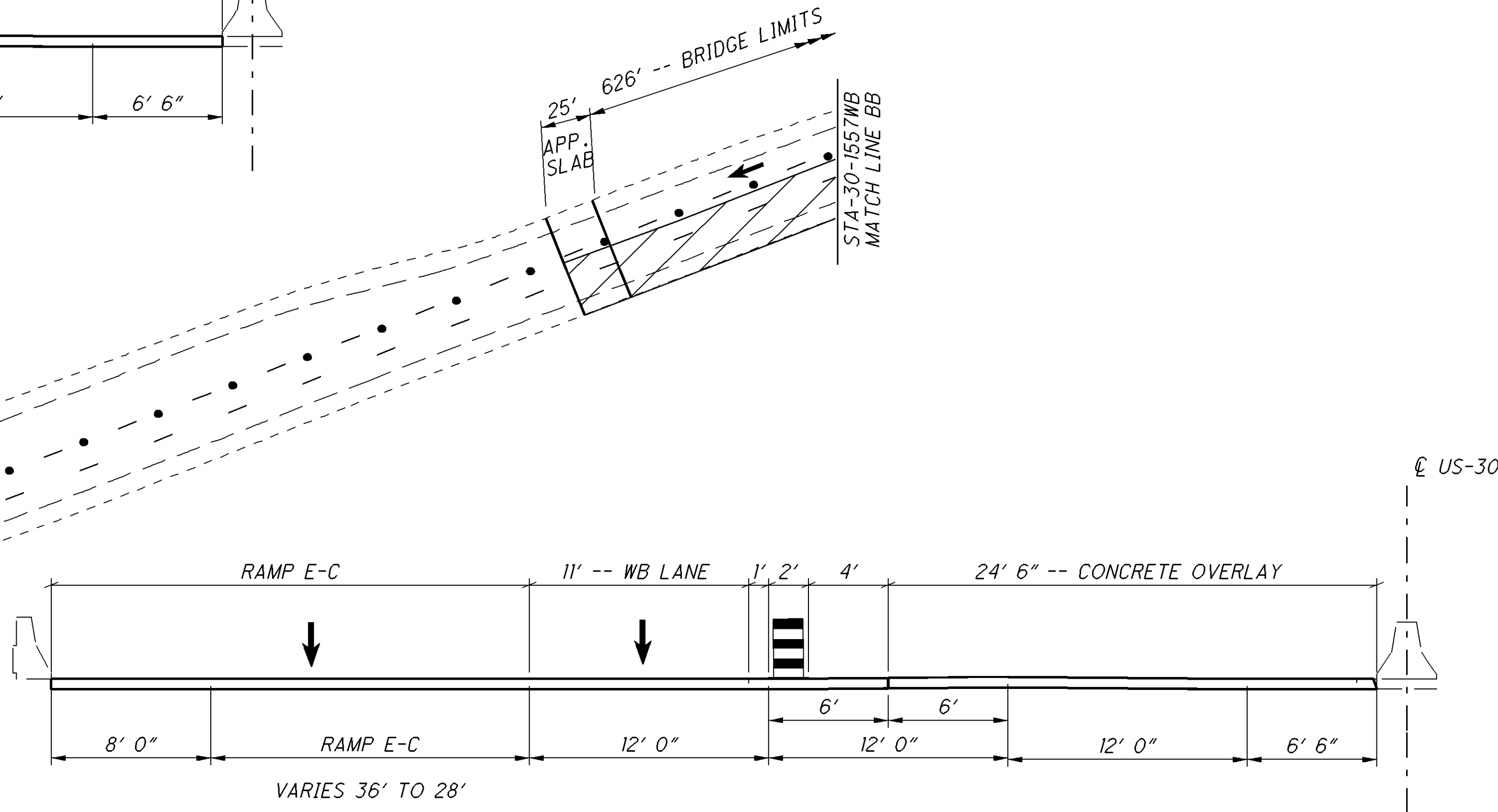


WORK AT STRUCTURE TO
BE PERFORMED DURING PHASE



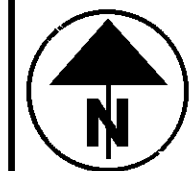
TYPICAL SECTION US 30 WEST AT STA-30-1558

SECTION A-A



TYPICAL SECTION US 30 WEST AT STA-30-1580

SECTION B-B



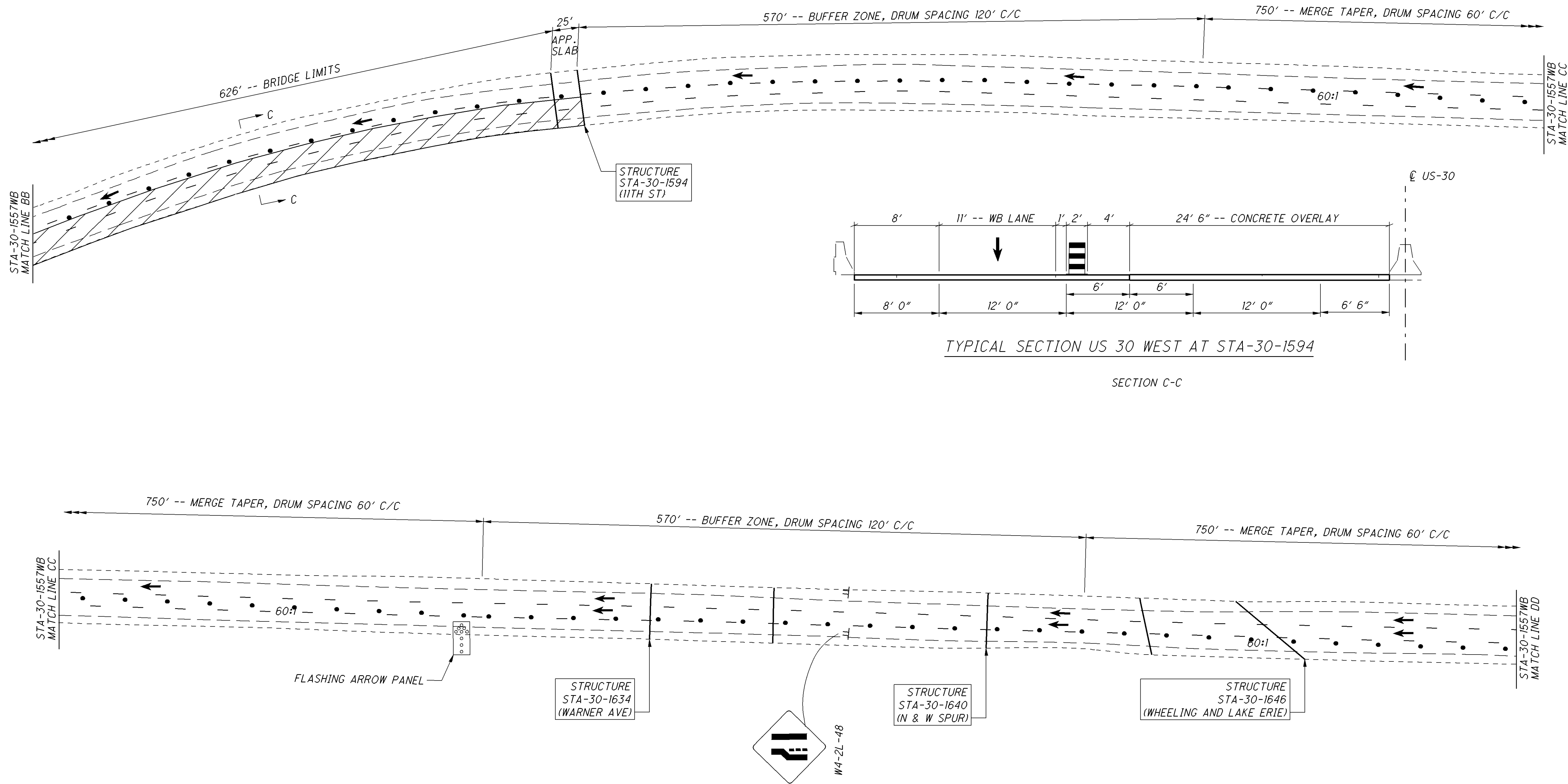
HORIZONTAL
SCALE IN FEET

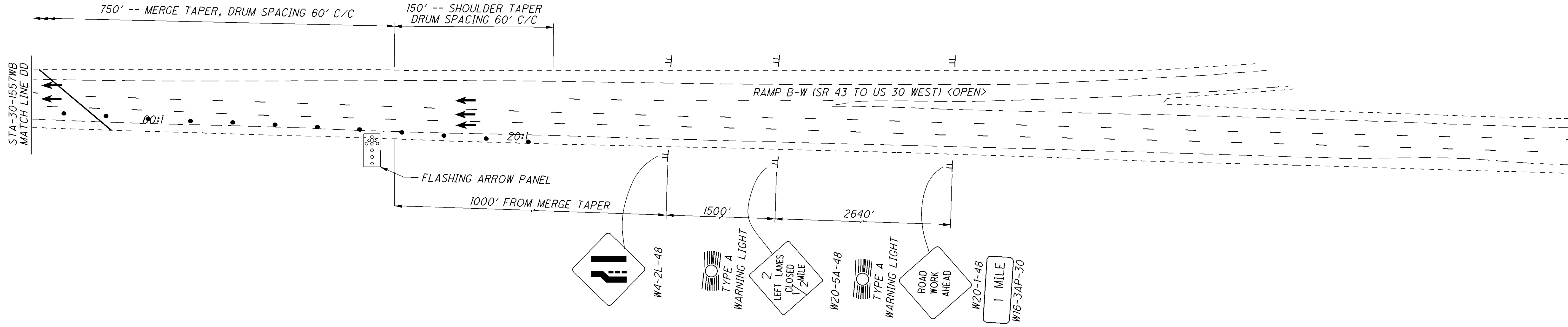
CALCULATED
HKS
CHECKED

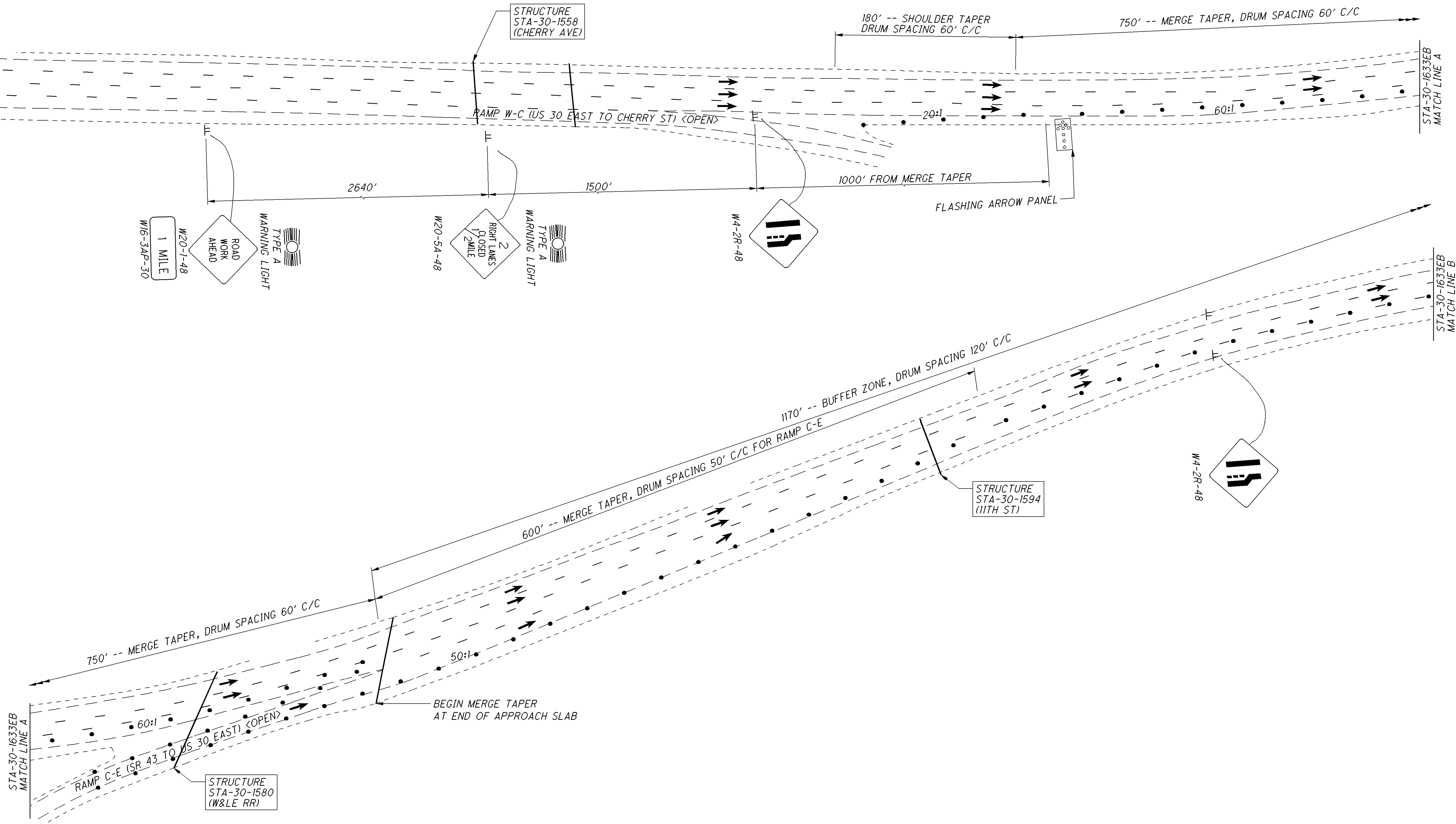
MAINTENANCE OF TRAFFIC (ZONE 4)
STA-30-(1557)(1580)(1590) WESTBOUND PHASE 2

STA-77 / 30 / 62-VAR

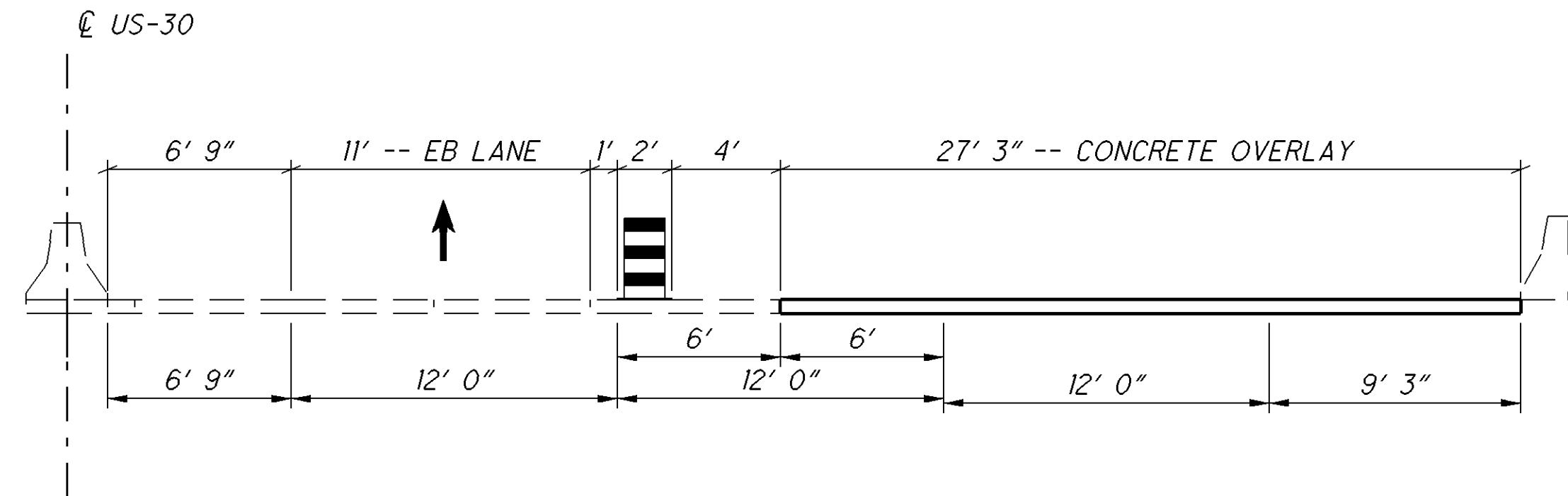
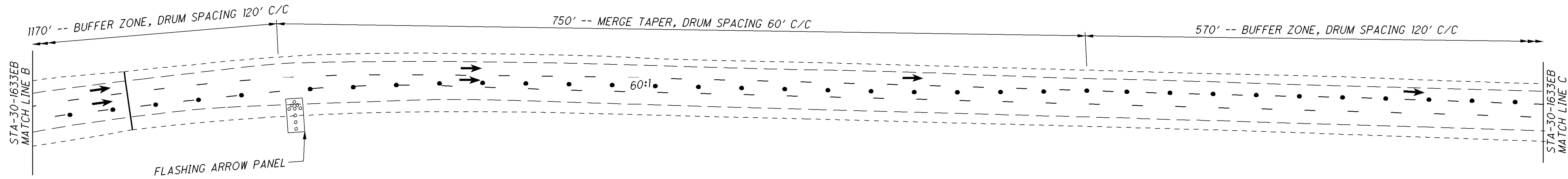
42
98





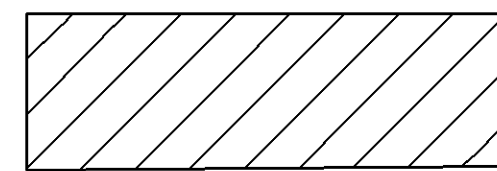


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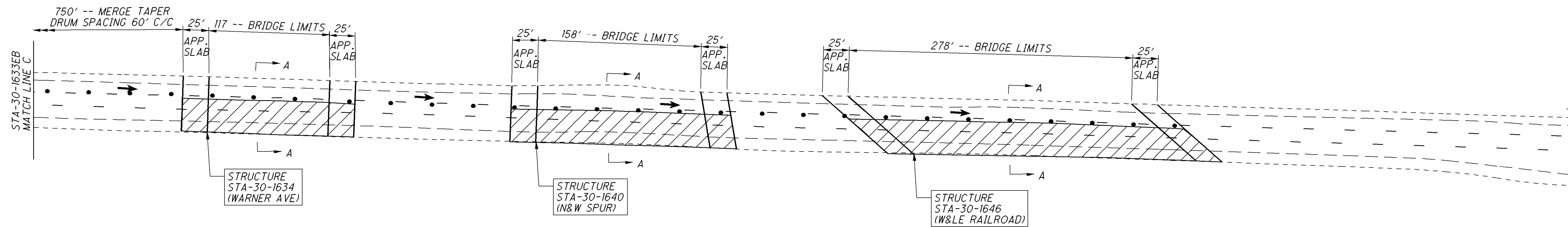


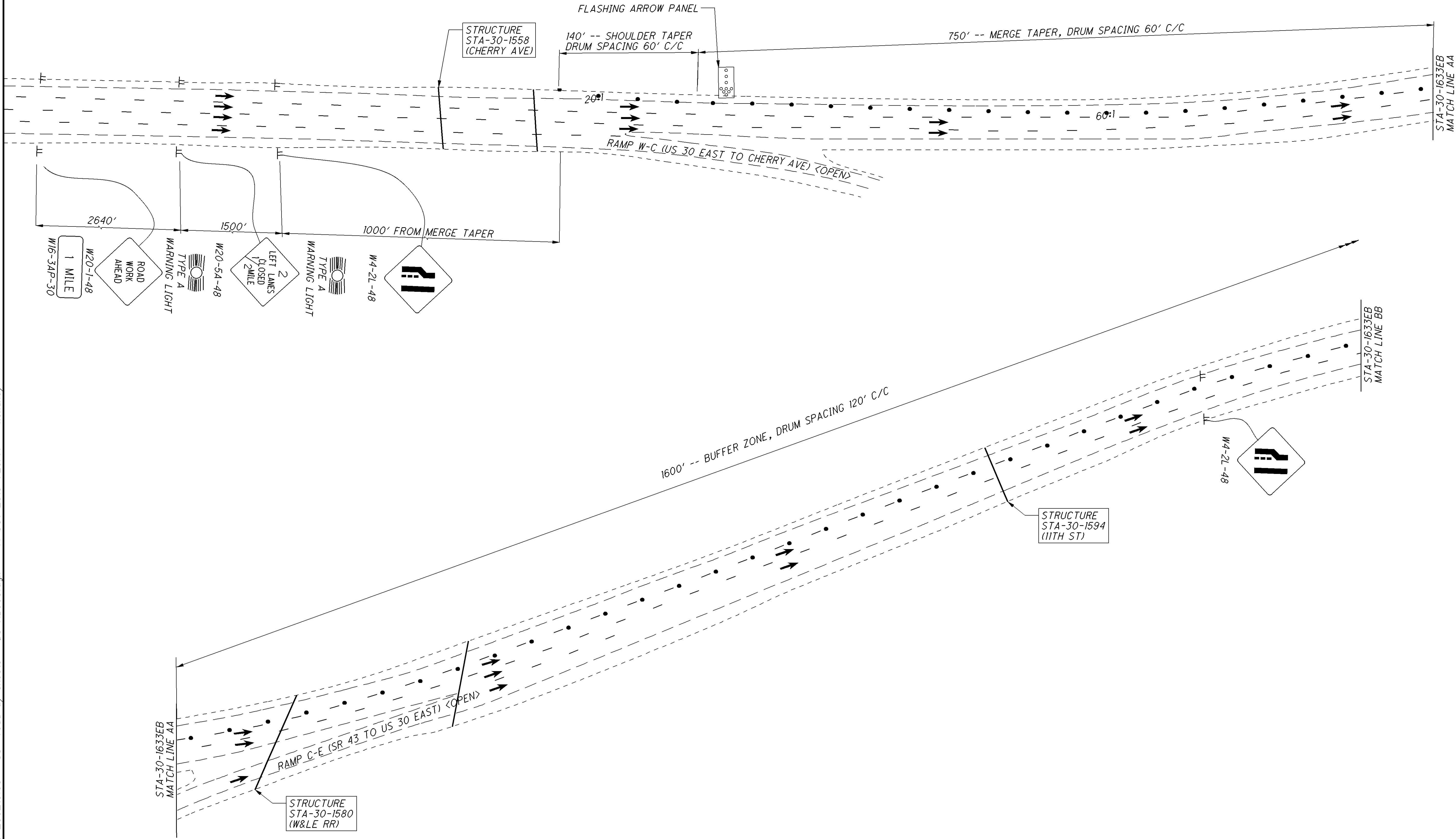
TYPICAL SECTION US 30 EAST AT STA-30-1634, STA-30-1640, & STA-30-1646

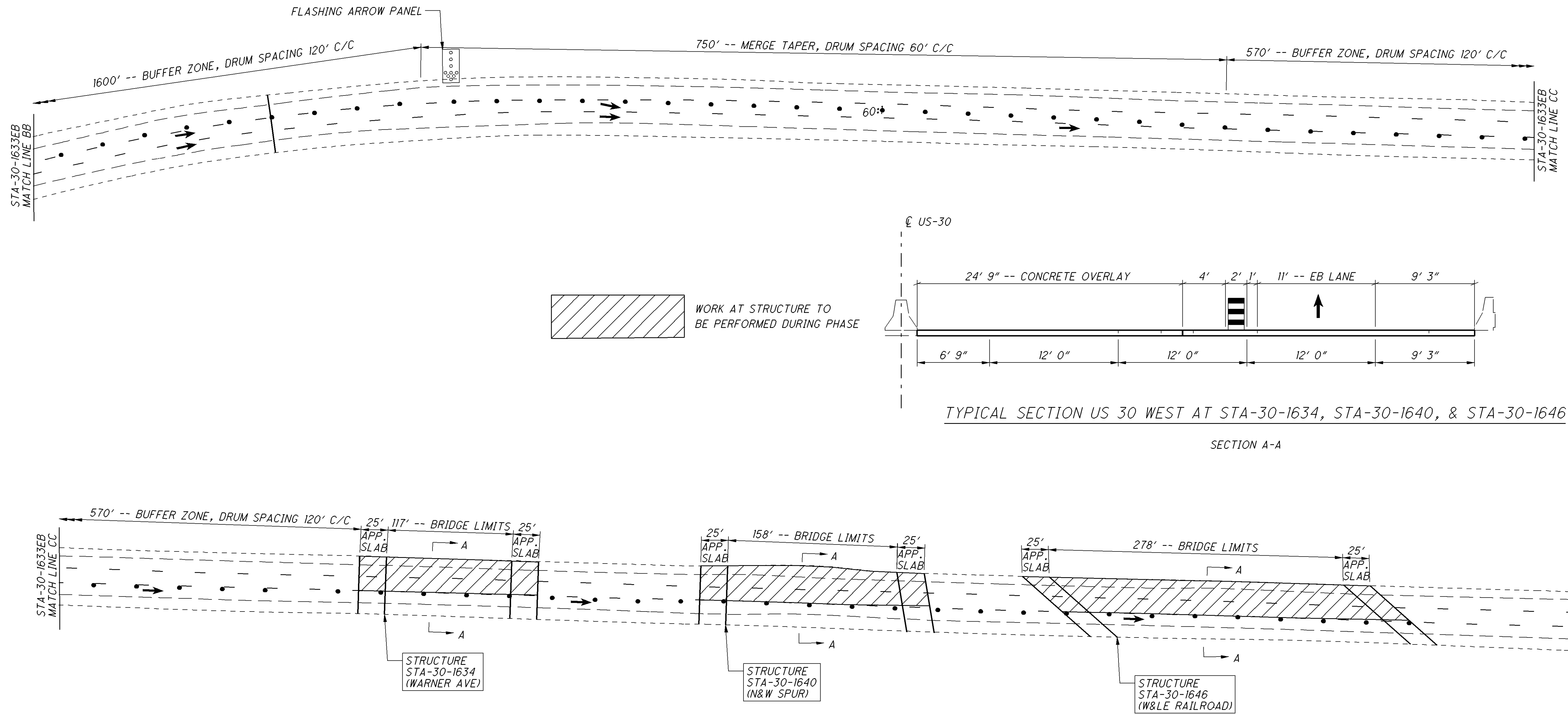
SECTION A-A



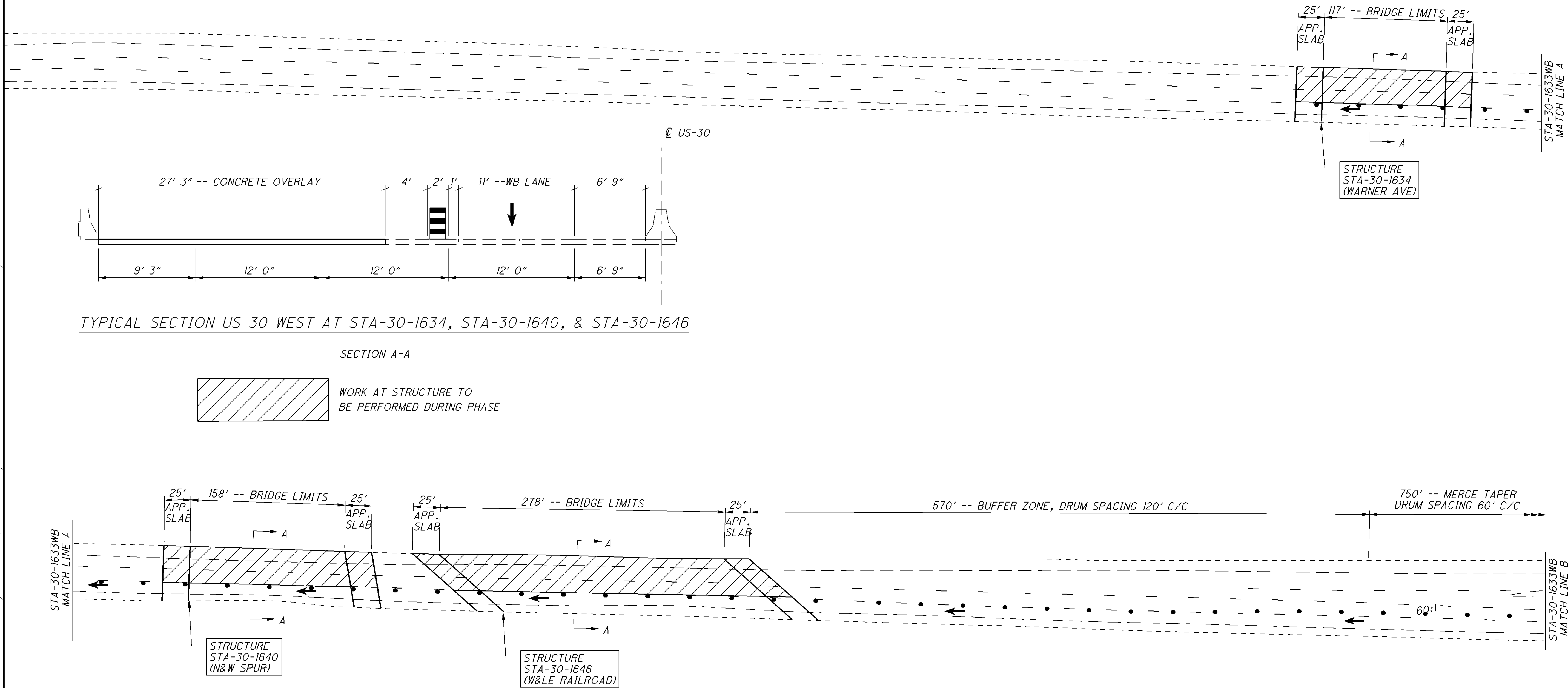
WORK AT STRUCTURE TO
BE PERFORMED DURING PHASE

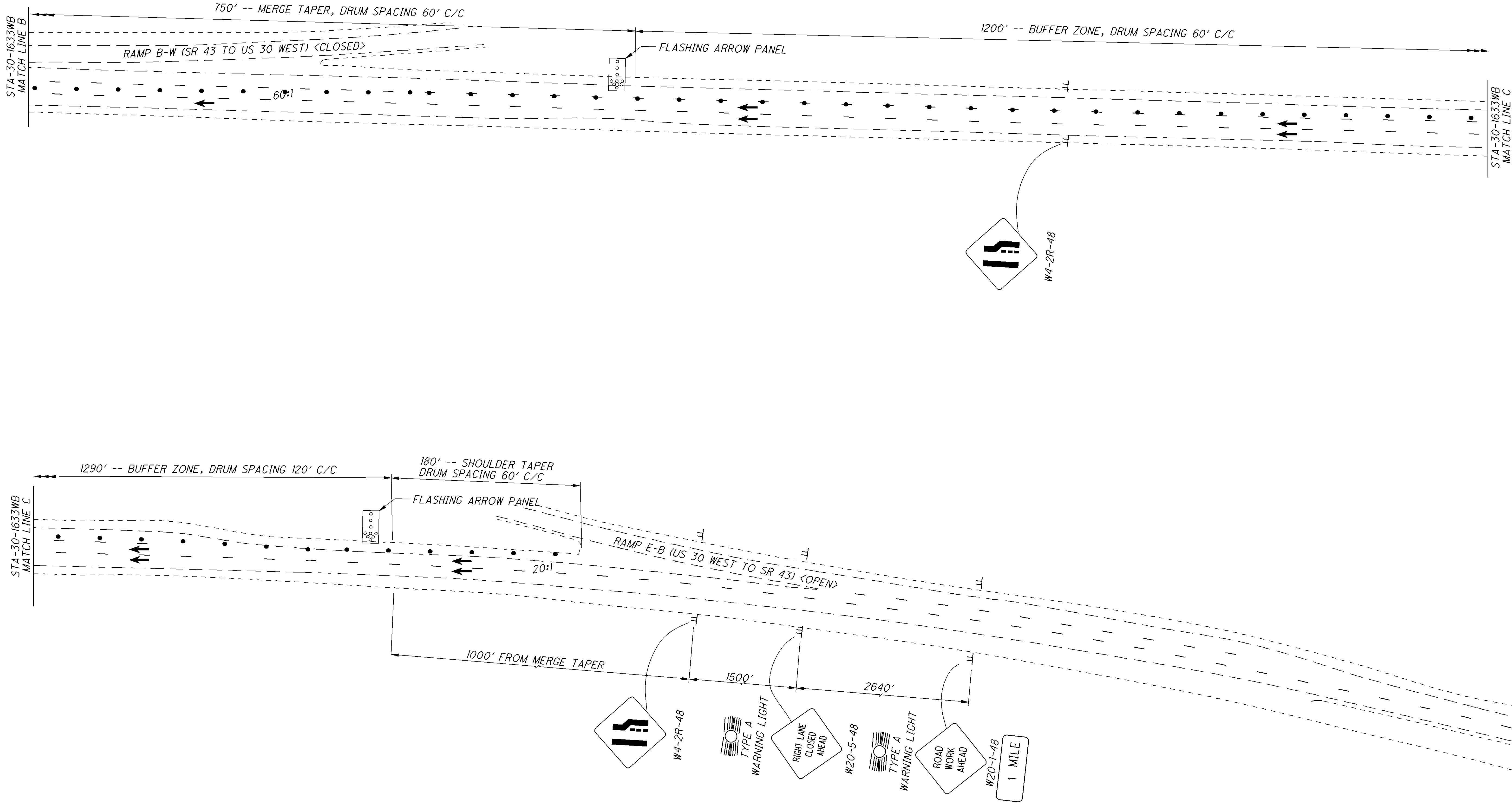




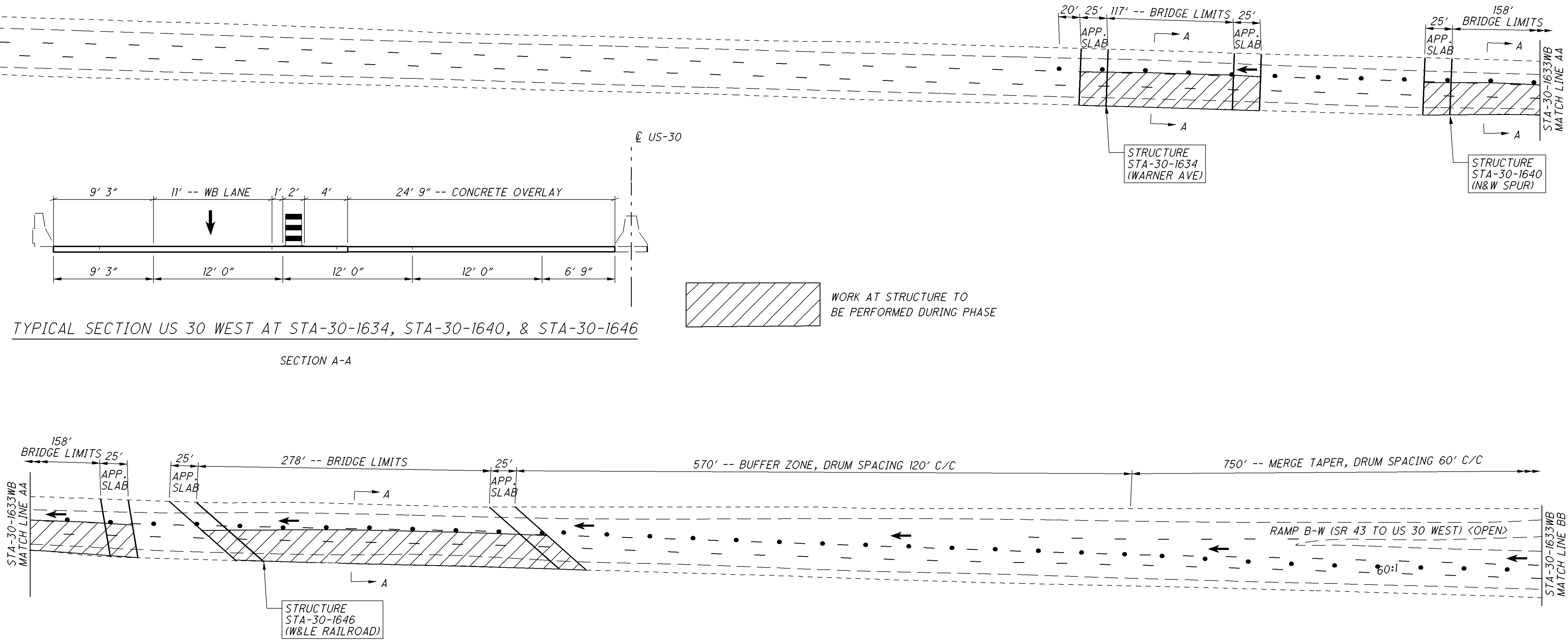


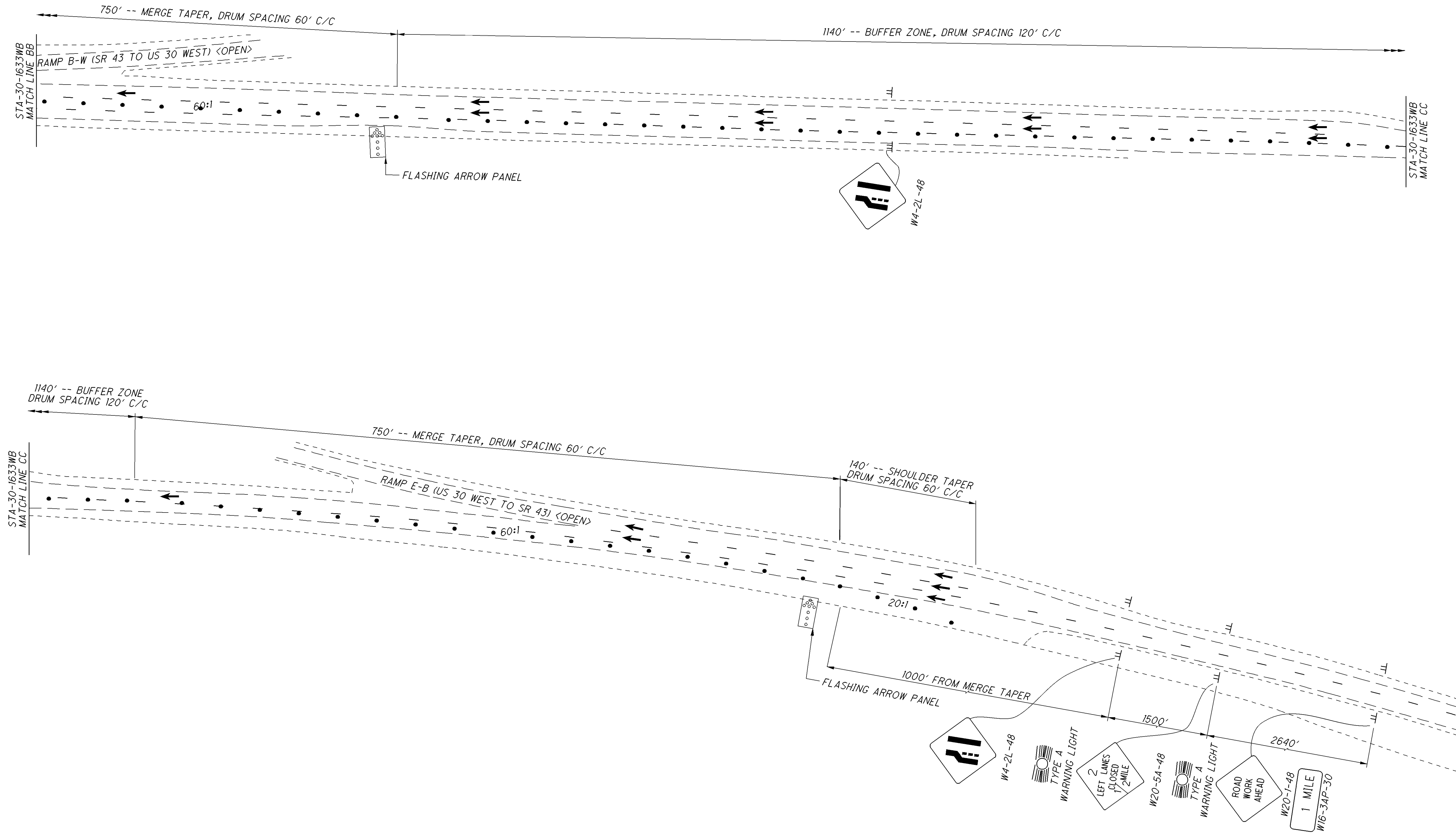
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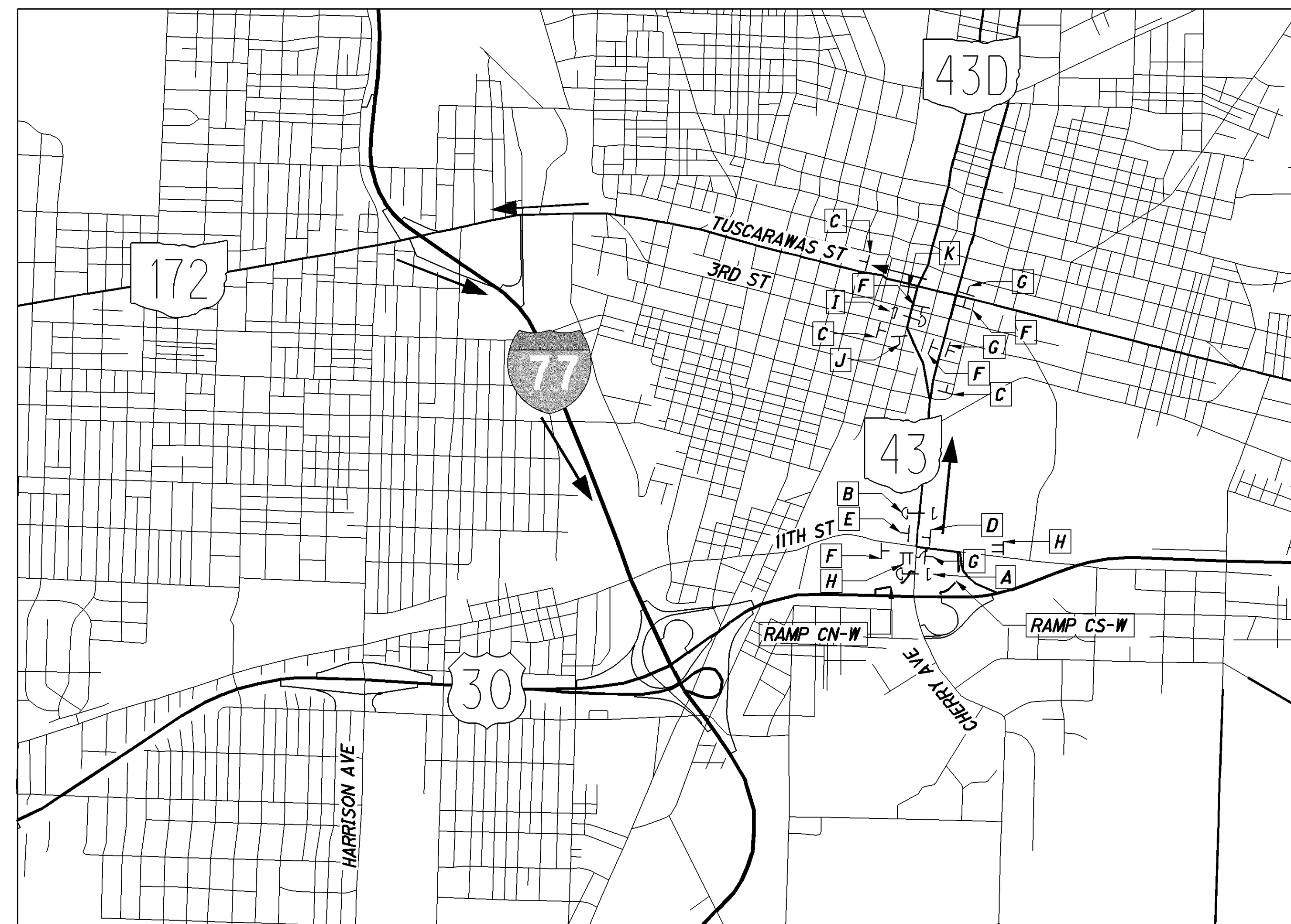




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DETOUR PLAN FOR CLOSING RAMPS CS-W AND CN-W



NOT TO SCALE

--- CLOSE RAMP PER STD. DWG. MT-101.60

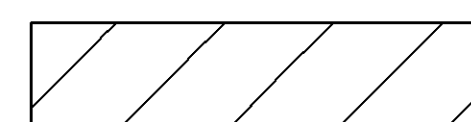
OFFICIAL DETOUR ROUTE: CHERRY AVE (SR 43) / TUSCARAWAS ST (SR 172) / I-77 SOUTH

NOTE:

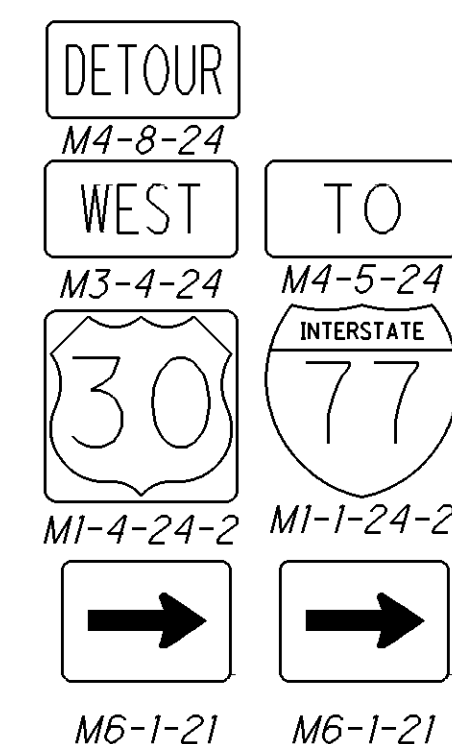
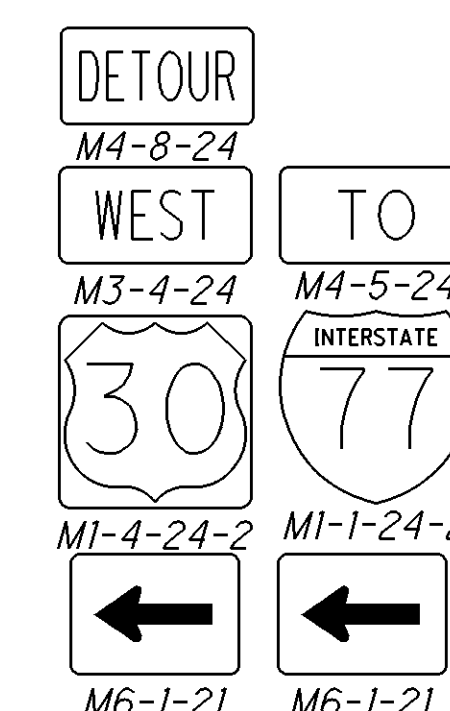
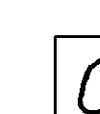
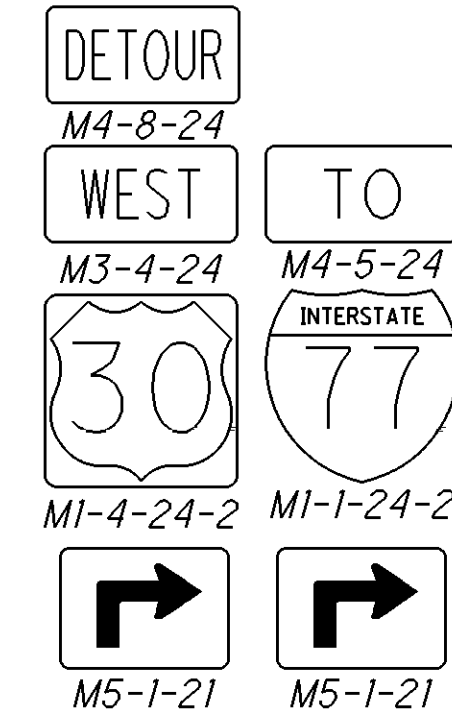
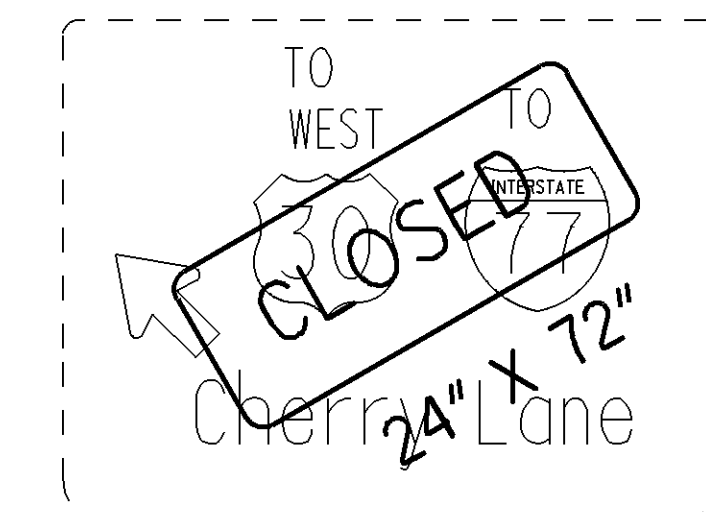
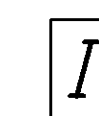
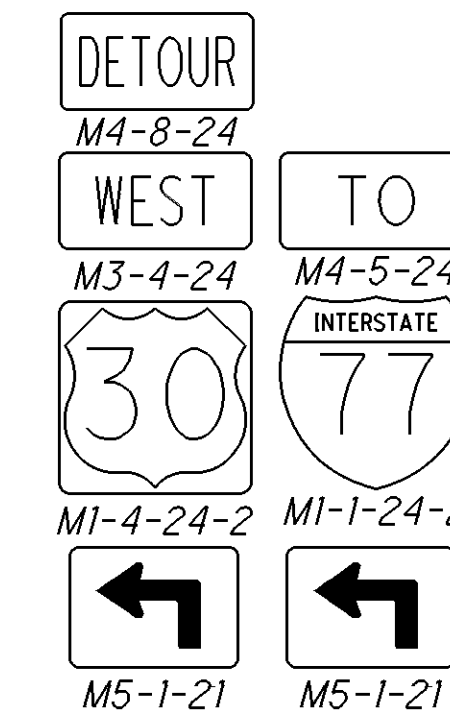
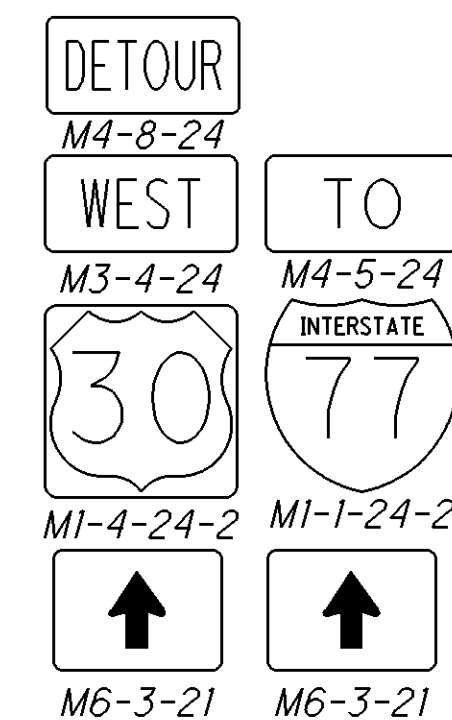
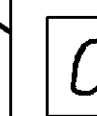
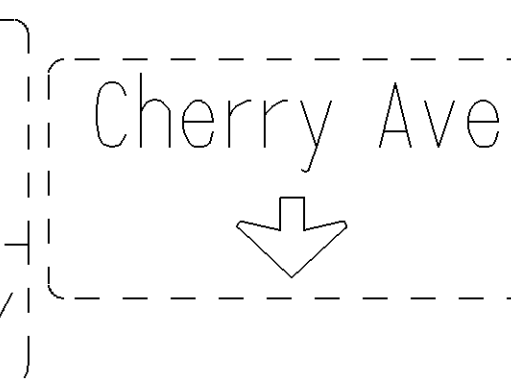
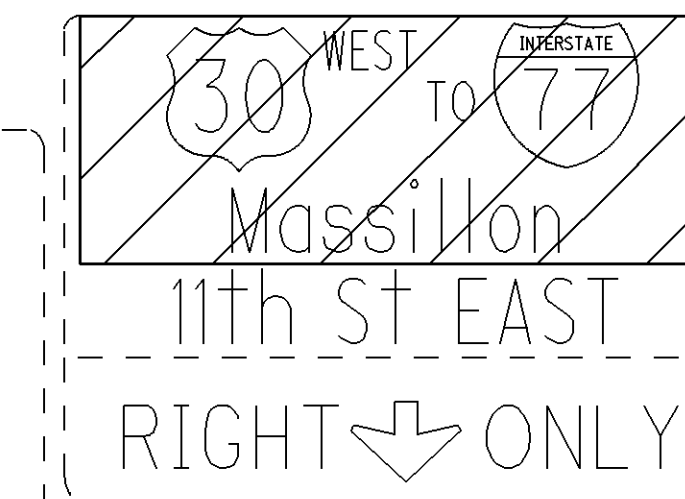
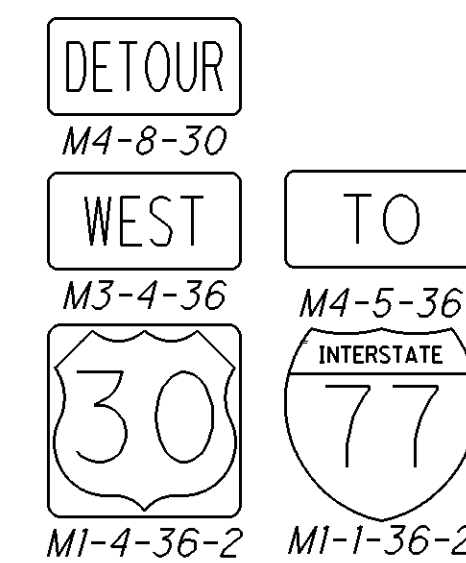
THIS DETOUR SHALL BE USED WHEN RAMP CN-W AND CS-W WILL BE CLOSED SIMULTANEOUSLY
TO COMPLETE THE OUTSIDE CONSTRUCTION OF STA-30-1479, STA-30-1488, AND STA-30-1502

WHEN ONLY RAMP CS-W IS CLOSED REMOVE SIGN "B", AND SIGNS "F" AND "G" FROM 11TH ST EASTBOUND AND CHERRY AVE, AND ALL SIGNS AT 3RD ST AND CHERRY AVE

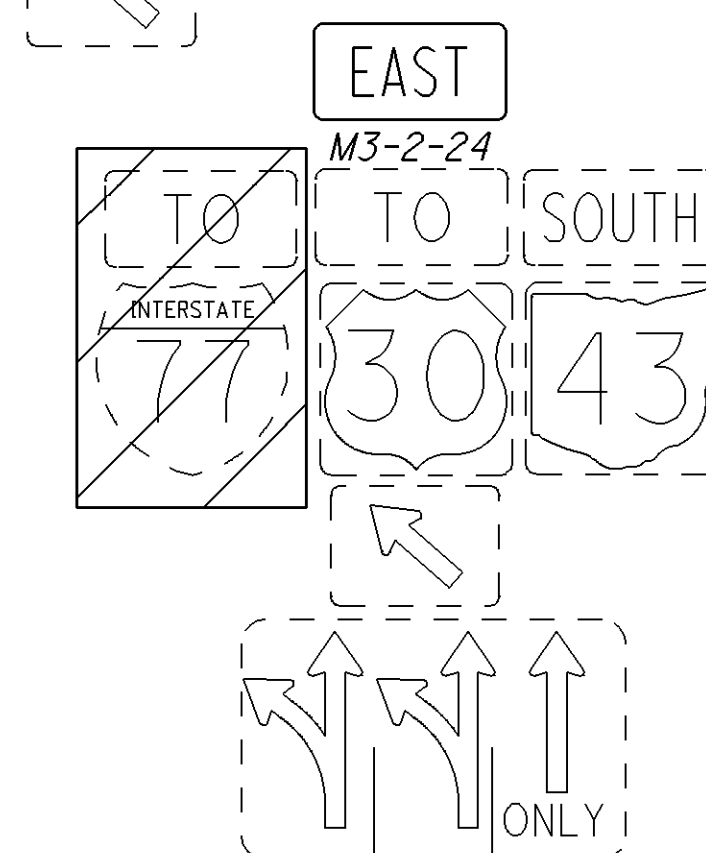
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



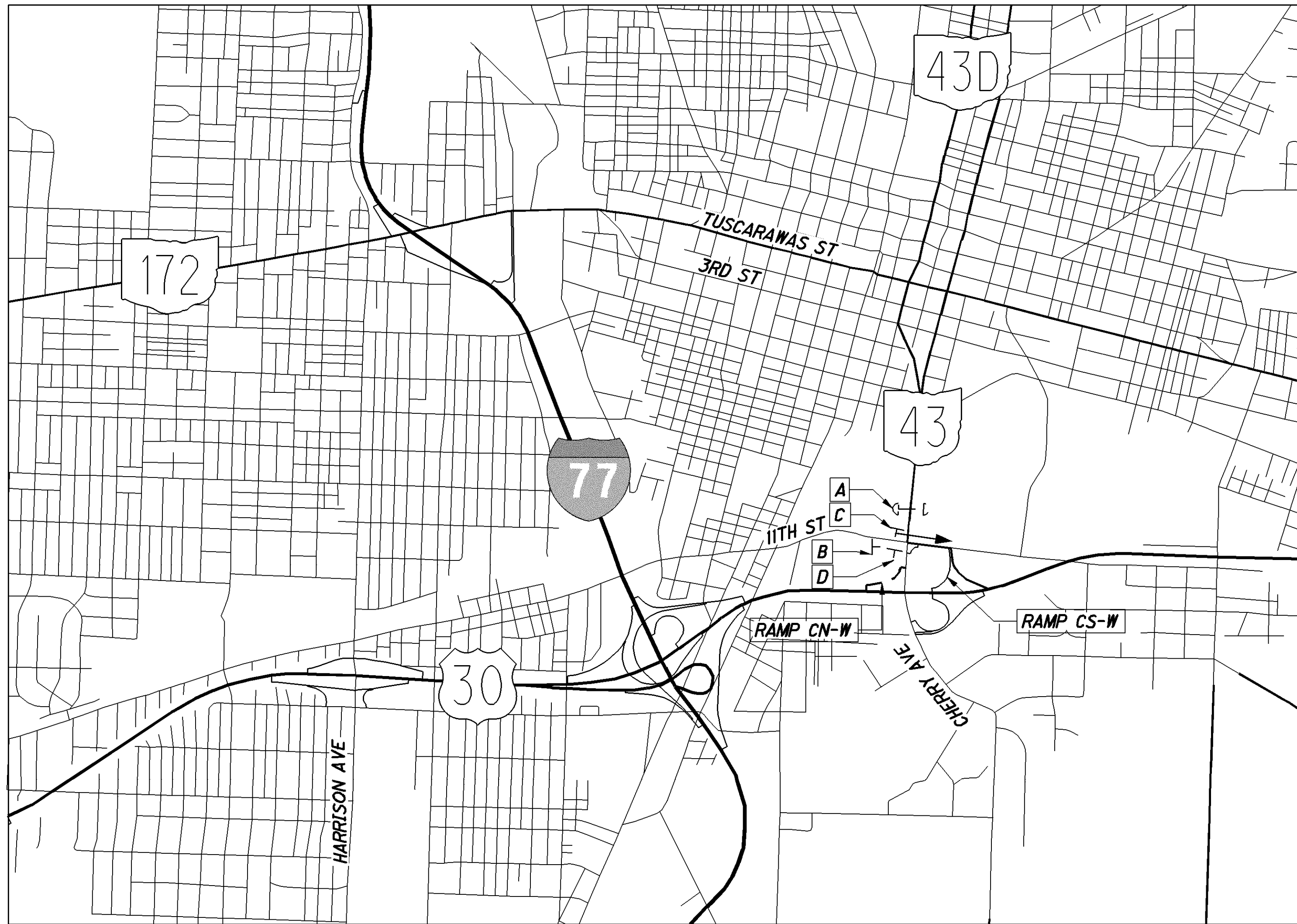
COVER SIGN



PORTABLE CHANGEABLE
MESSAGE MESSAGES:
- PLACE 10 DAYS IN ADVANCED



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DETOUR PLAN FOR CLOSING RAMPS CN-W

- CLOSE RAMP PER STD. DWG. MT-101.60
- ← OFFICIAL DETOUR ROUTE: 11TH ST

NOTE:
THIS DETOUR SHALL BE USED WHEN RAMP CS-W IS OPEN.

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

A

DETOUR
M4-8-30
WEST
M3-4-36
30
MI-4-36-2
TO
M4-5-36
INTERSTATE
77
MI-1-36-2
11th St
EAST
EXIT ↓ ONLY
Cherry Ave
↓
11th St
WEST
EXIT ↓ ONLY
NEXT 24" X 72" RIGHT

B

DETOUR
M4-8-24
WEST
M3-4-24
30
MI-4-24-2
TO
M4-5-24
INTERSTATE
77
MI-1-24-2
↑
M6-3-21

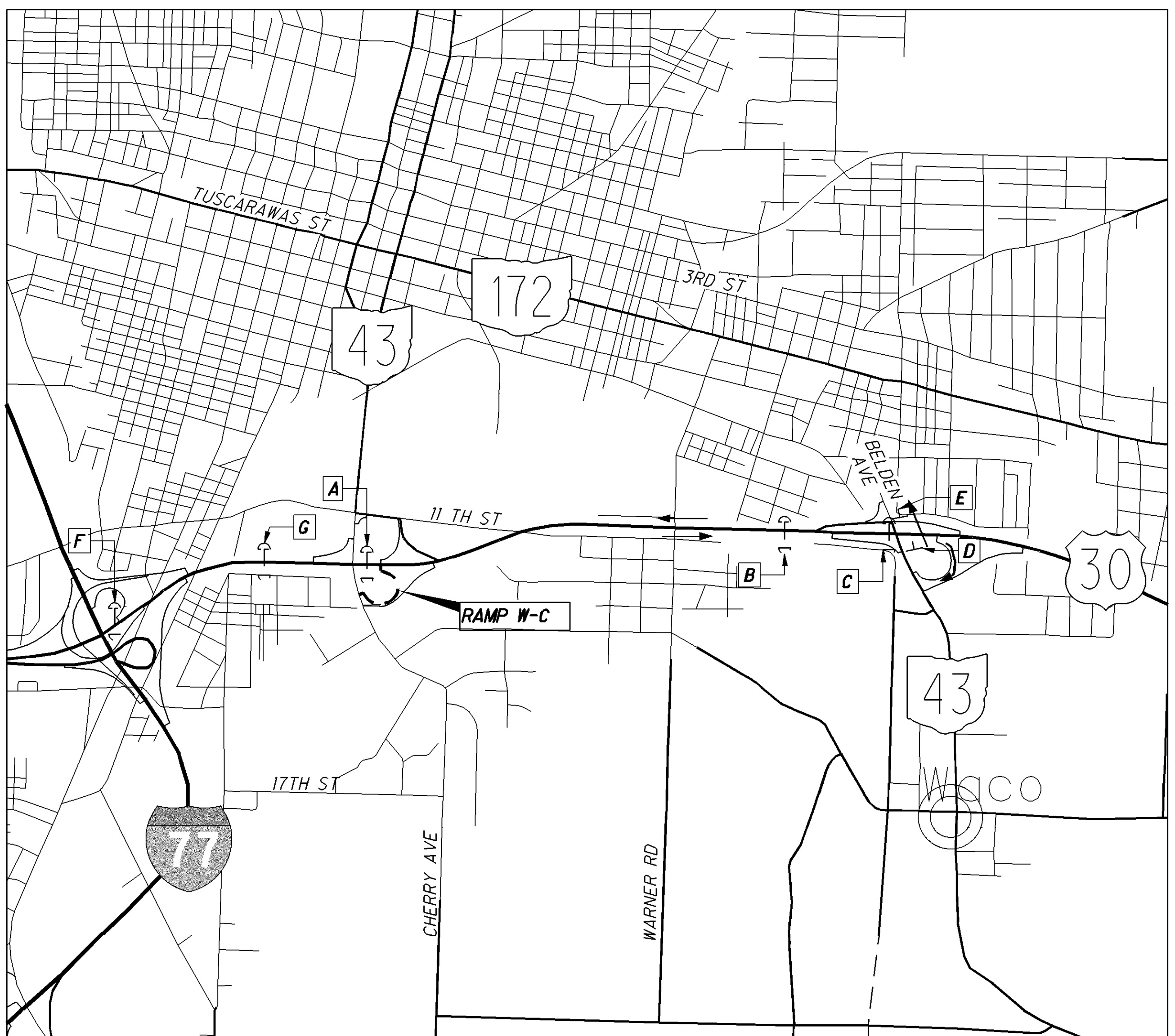
C

DETOUR
M4-8-24
WEST
M3-4-24
30
MI-4-24-2
TO
M4-5-24
INTERSTATE
77
MI-1-24-2
←
M5-1-21

D

DETOUR
M4-8-24
WEST
M3-4-24
30
MI-4-24-2
TO
M4-5-24
INTERSTATE
77
MI-1-24-2
←
M6-1-21

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DETOUR PLAN FOR RAMPS W-C (TO SR 43 AND CHERRY ST)

- CLOSE RAMP PER STD. DWG. MT-98.29
- ← OFFICIAL DETOUR ROUTE: US 30 EAST / BELDEN AVE / US 30 WEST

NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.
ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-101.60

A

DETOUR
M4-8-30
NORTH
M3-1-36
43
MI-5-36-2
Cherry Ave
D3-1-VAR

30 EAST
E Liverpool

43 SOUTH
Belden Ave
Waynesburg
EXITS 1 MILE

43 NORTH
Cherry Ave
Downtown
CLOSED
24" x 72" EXIT ONLY

B

DETOUR
M4-8-30
NORTH
M3-1-36
43
MI-5-36-2
Cherry Ave
D3-1-VAR
NORTH

30 EAST
E Liverpool

BELDEN AVE
NEXT RIGHT

43 SOUTH
Waynesburg

C

DETOUR
M4-8-30
NORTH
M3-1-36
43
MI-5-36-2
Cherry Ave
D3-1-VAR

LANE ENDS
MERGE LEFT

6-2-30
NORTH
Belden Ave

D

DETOUR
M4-8-24
NORTH
M3-1-24
43
MI-5-24-2
Cherry Ave
D3-1-VAR
M5-1-21

E

DETOUR
M4-8-24
NORTH
M3-1-24
43
MI-5-24-2
Cherry Ave
D3-1-VAR
M6-1-21

F

43 NORTH
Cherry Ave
Downtown
CLOSED
24" x 72" NEXT RIGHT

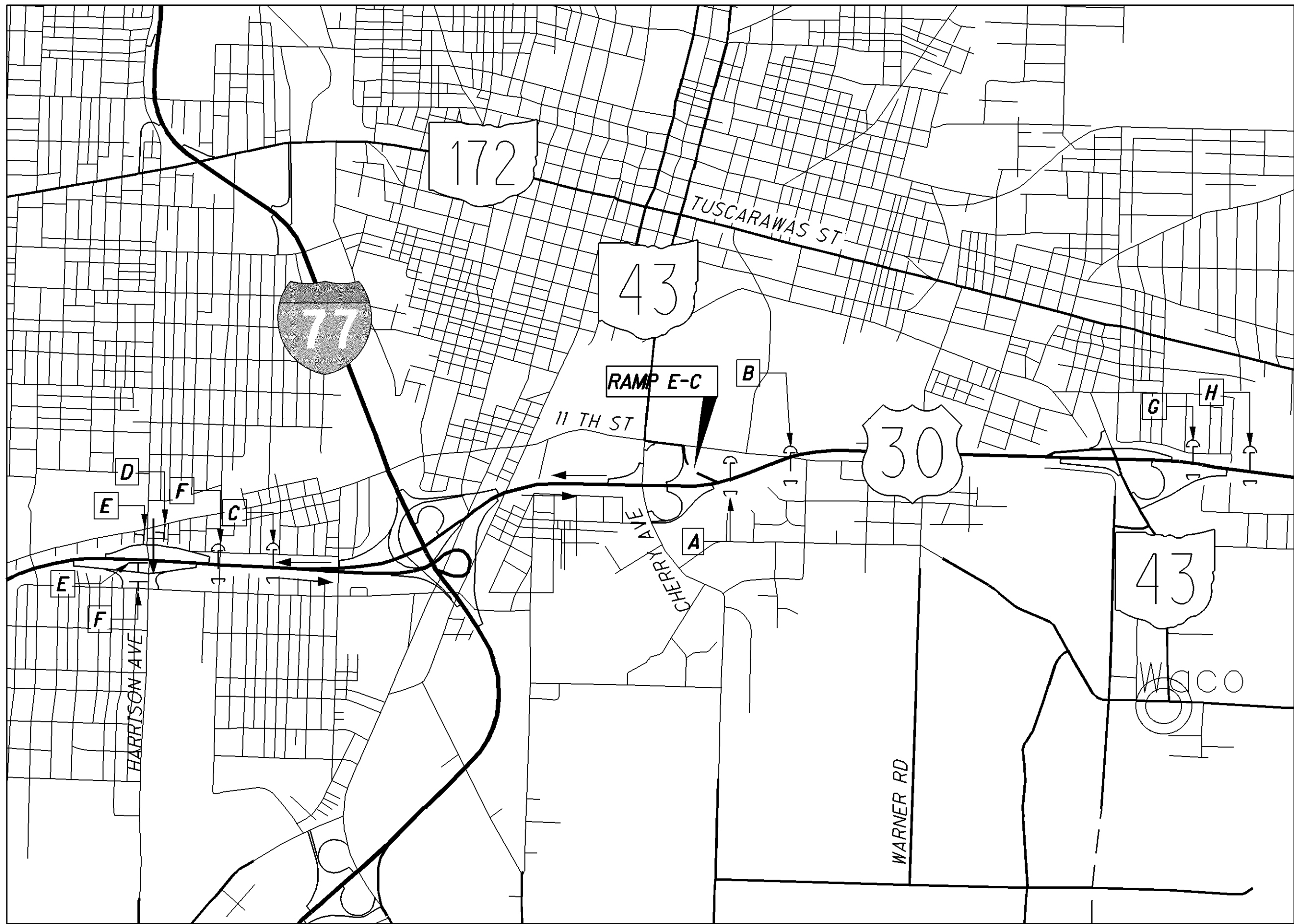
G

30 EAST
E Liverpool

43 SOUTH
Belden Ave
Waynesburg
EXITS 1 1/4 MILES

Arts/ Historic Dist
43 NORTH
Cherry Ave
Downtown
CLOSED
24" x 72" EXIT ONLY

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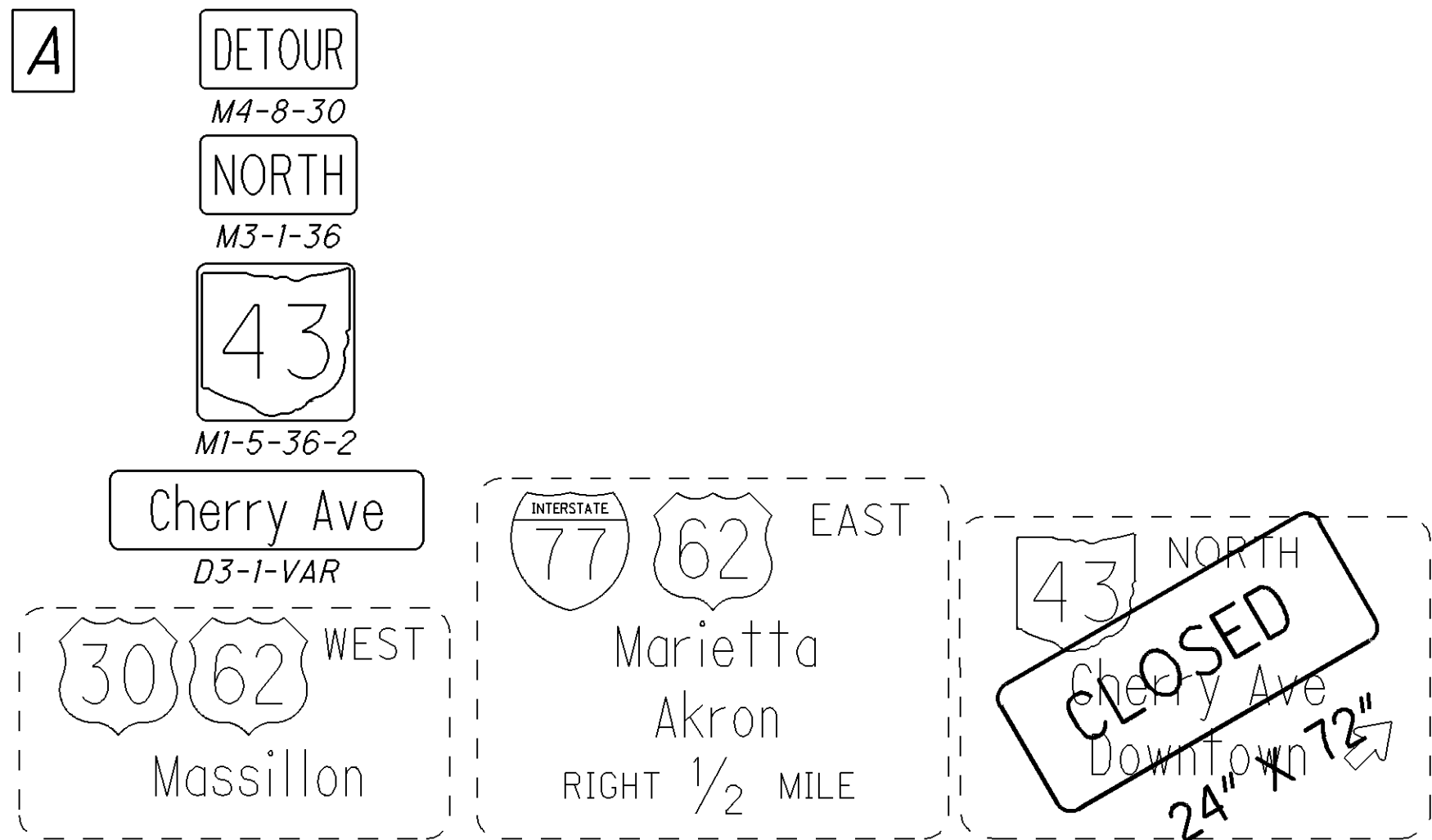
DETOUR PLAN FOR RAMPS E-C (SR 43/ CHERRY ST)

- CLOSE RAMP PER STD. DWG. MT-98.29
- OFFICIAL DETOUR ROUTE: US 30 WEST / HARRISON AVE / US 30 EAST

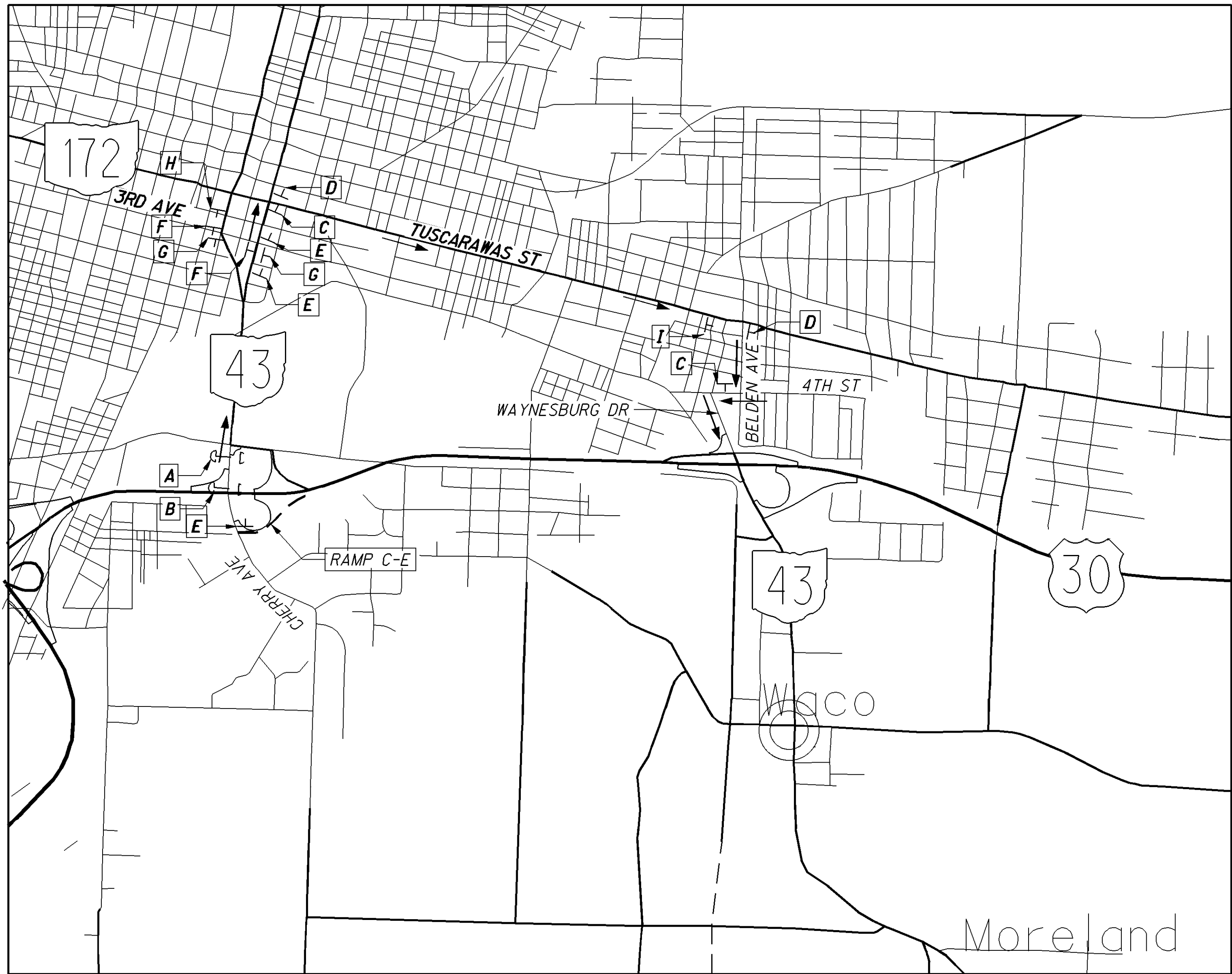


NOT TO SCALE

NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8
(TYPICAL APPLICATION 8), FOR SIGN SPACING.



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DETOUR PLAN FOR RAMPS C-E (TO US 30 EAST)



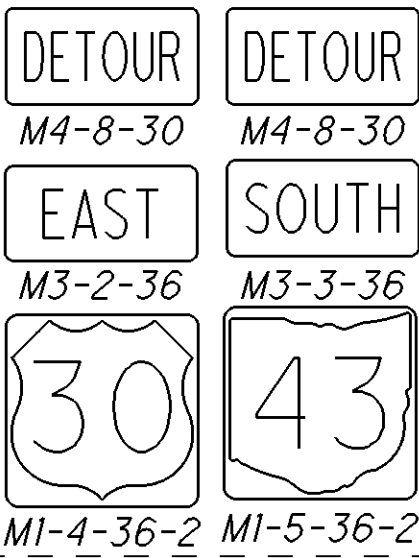
NOT TO SCALE

--- CLOSE RAMP PER STD. DWG. MT-101.60

← OFFICIAL DETOUR ROUTE: CHERRY AVE (SR 43) / TUSCARAWAS ST (SR 172) / BELDEN AVE / 4TH ST / WAYNESBURG DR

NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

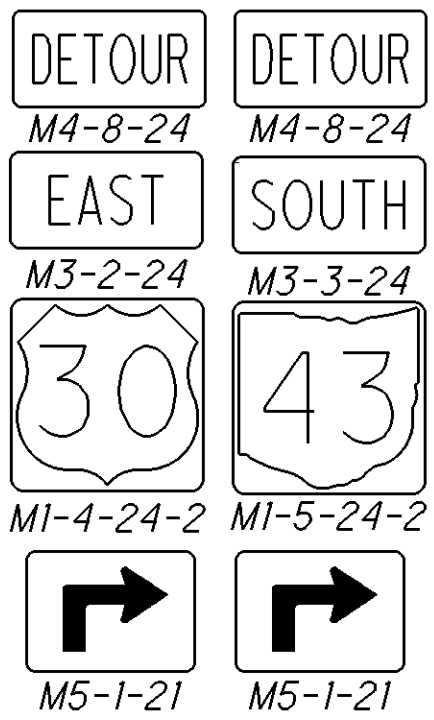
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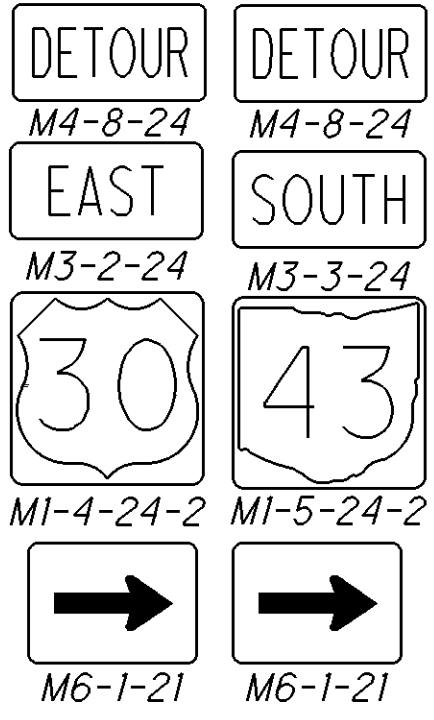
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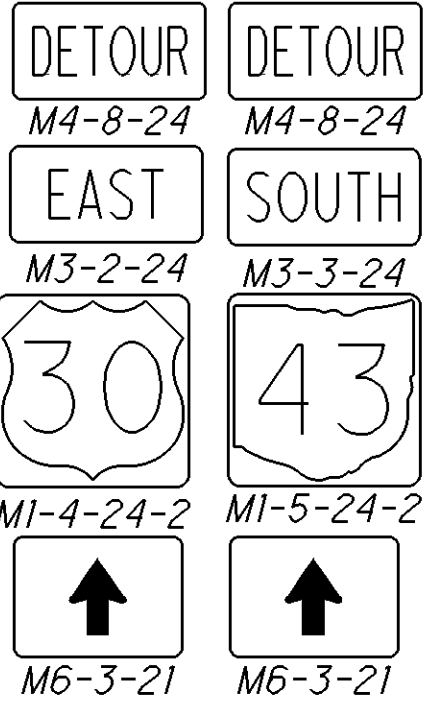
C



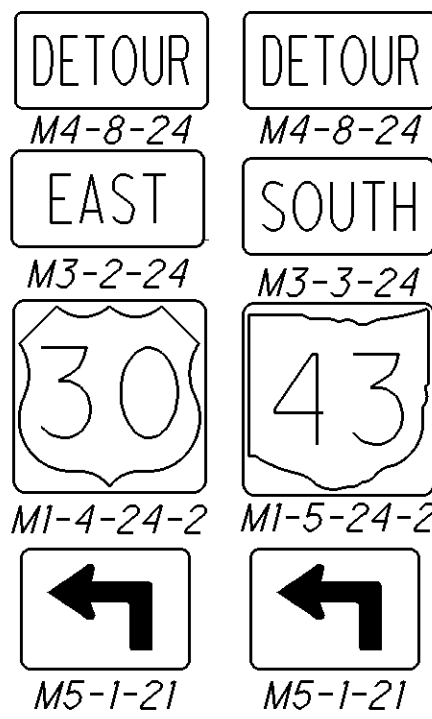
D



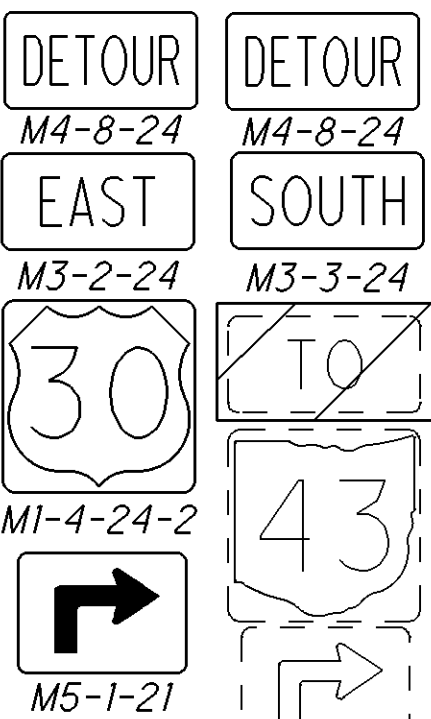
E



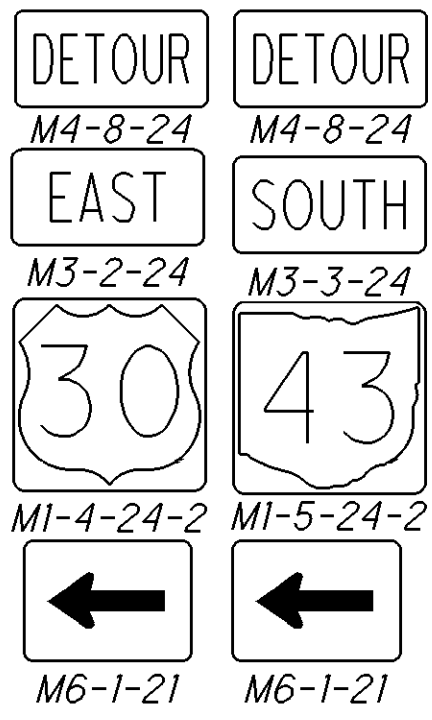
F



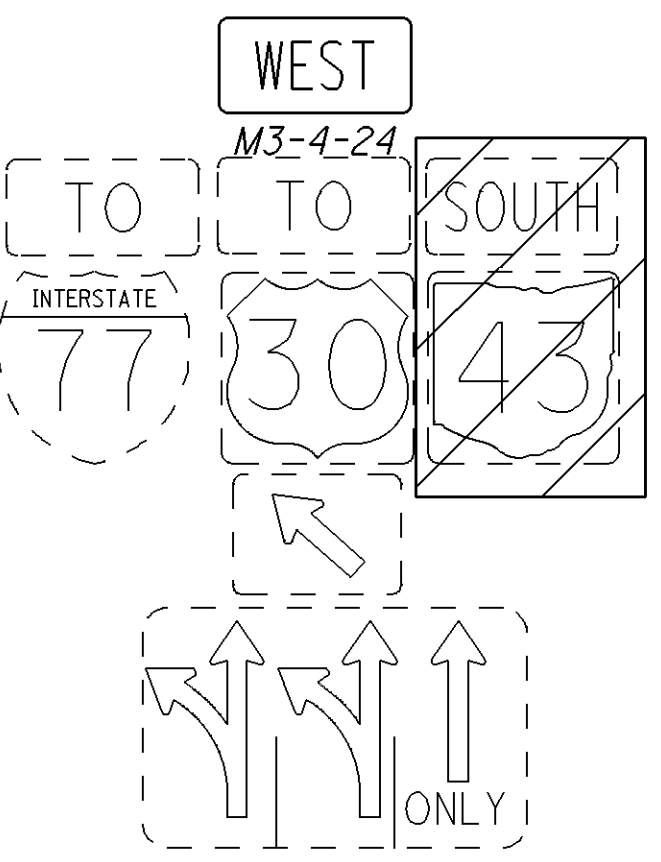
I



G



H



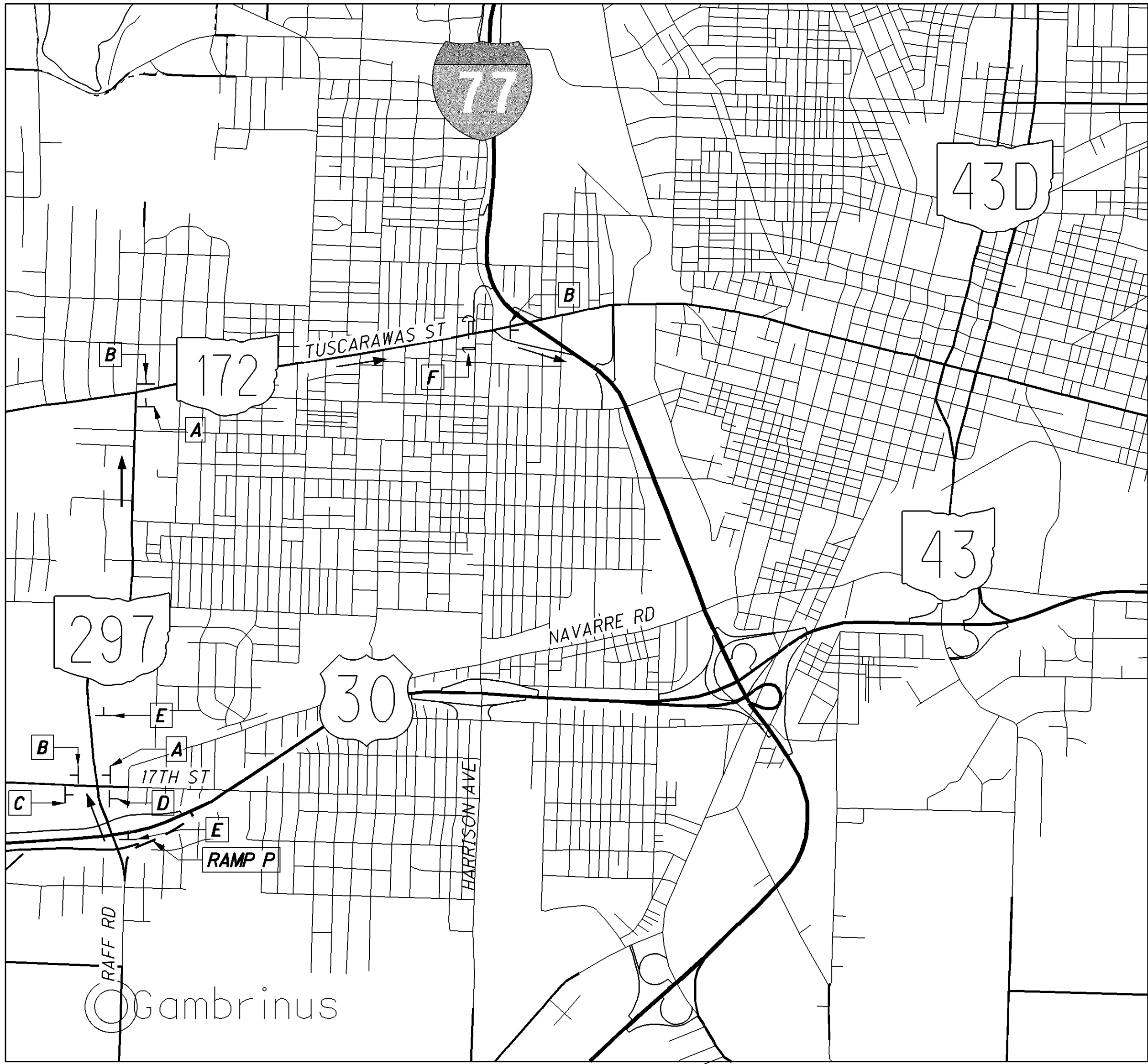
CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC DETOUR PLAN RAMP C-E

STA-77 / 30 /
62-VAR

57
98

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DETOUR PLAN FOR RAMP P (RAFF RD (SR 297))

- CLOSE RAMP PER STD. DWG. MT-101.60
- ← OFFICIAL DETOUR ROUTE: RAFF RD (SR 297) / TUSCARAWAS ST (SR 172) / I-77 SOUTH

NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



NOT TO SCALE

A

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
→	→
M5-1-21	M5-1-21

B

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
→	→
M6-1-21	M6-1-21

C

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
←	←
M5-1-21	M5-1-21

D

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
←	←
M6-1-21	M6-1-21

E

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
↑	↑
M6-3-21	M6-3-21

F

NORTH	INTERSTATE 77	SOUTH
↑		NEXT RIGHT

DETOUR	DETOUR
M4-8-24	M4-8-24
EAST	EAST
M3-2-24	M3-2-24
30	62
M1-4-24-2	M1-4-24-2
→	→
M5-1-21	M5-1-21

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DETOUR PLAN FOR RAMP T (HARRISON AVE)

--- CLOSE RAMP PER STD. DWG. MT-101.60

← OFFICIAL DETOUR ROUTE: HARRISON AVE / NAVARRE RD / 11TH ST

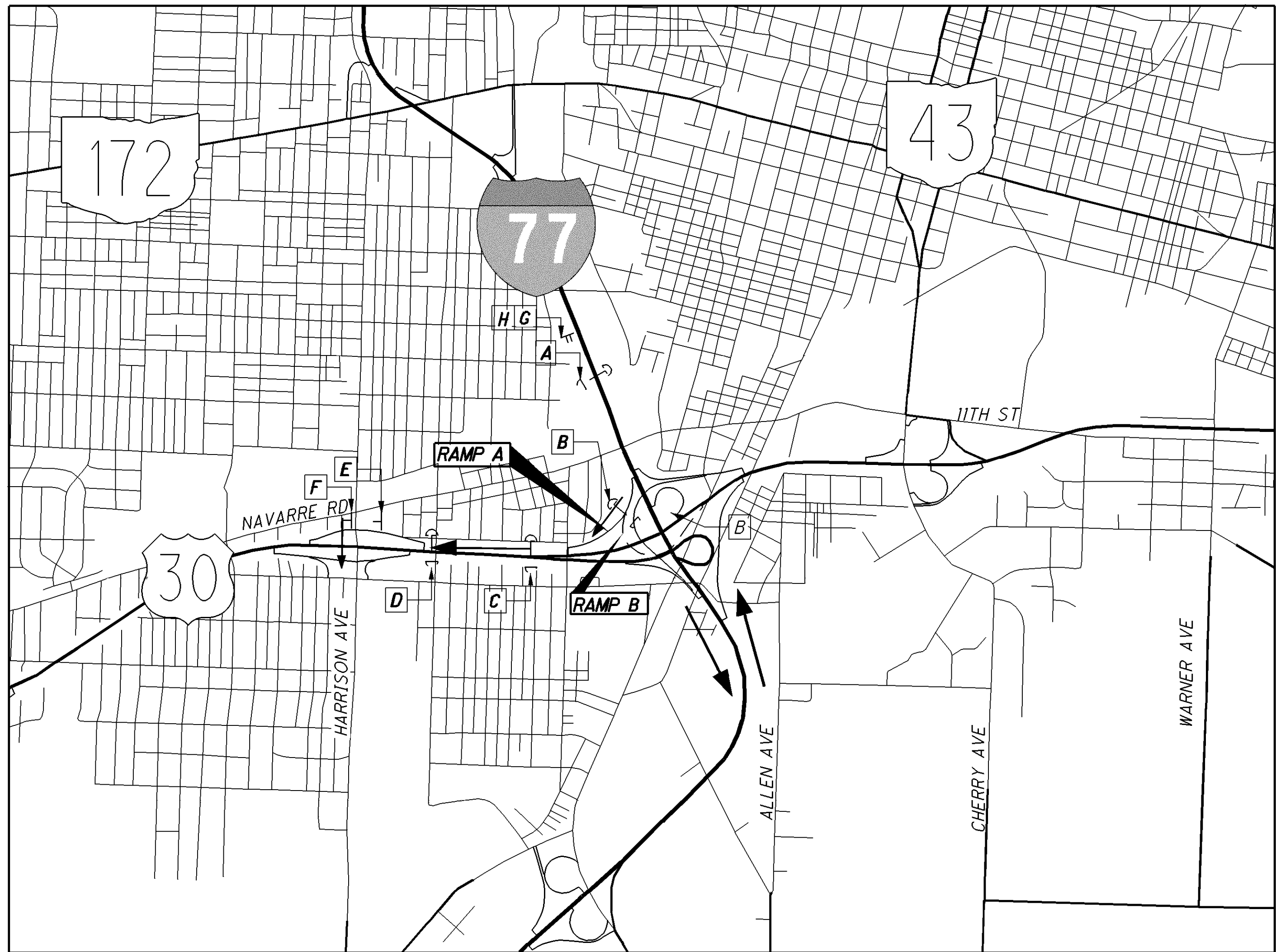
NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8
(TYPICAL APPLICATION 8), FOR SIGN SPACING.



NOT TO SCALE

A	DETOUR	DETOUR
	M4-8-24	M4-8-24
	EAST	EAST
	M3-2-24	M3-2-24
	30	62
B	DETOUR	DETOUR
	M4-8-24	M4-8-24
	EAST	EAST
	M3-2-24	M3-2-24
	30	62
C	DETOUR	DETOUR
	M4-8-24	M4-8-24
	EAST	EAST
	M3-2-24	M3-2-24
	30	62

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DETOUR PLAN FOR:
RAMP B (I-77 SOUTH TO US-30 EAST)



NOT TO SCALE

- CLOSE RAMP B PER STD. DWG. MT-98.29
- ← OFFICIAL DETOUR ROUTE: US 30 WEST / HARRISON AVE →

NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 6H-8
(TYPICAL APPLICATION 8), FOR SIGN SPACING.
THIS DETOUR SHALL BE USED WHEN RAMP A IS OPEN

A

East Canton
Minerva
FOLLOW 30 EAST
WEST
M3-4-36

B

DETOUR
M4-8-30
EAST
M3-2-36
30
MI-4-36-2
30 62 WEST
Massillon
24" X 12"

C

DETOUR
M4-8-30
EAST
M3-2-36
30
MI-4-36-2
Harrison Ave
Navarre Rd
EXIT ONLY

D

30 62 WEST
Massillon
↓ ↓
297
Raff Ave
Whipple Ave
EXIT 1 MILE
DETOUR
M4-8-30
EAST
M3-2-36
30
MI-4-36-2
M6-2-30
Harrison Ave
Navarre Rd
EXIT ONLY

E

DETOUR
M4-8-24
EAST
M3-2-24
30
MI-4-24-2
M5-1-21

F

DETOUR
M4-8-24
EAST
M3-2-24
30
MI-4-24-2
M6-1-21

G

PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:
-PLACE 10 DAY BEFORE CLOSURE
1. US 30E
CLOSED
2. (DATES)

H

PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:
-PLACE 10 DAY BEFORE CLOSURE
1. US 30E
CLOSED
2. FOLLOW
US 30W

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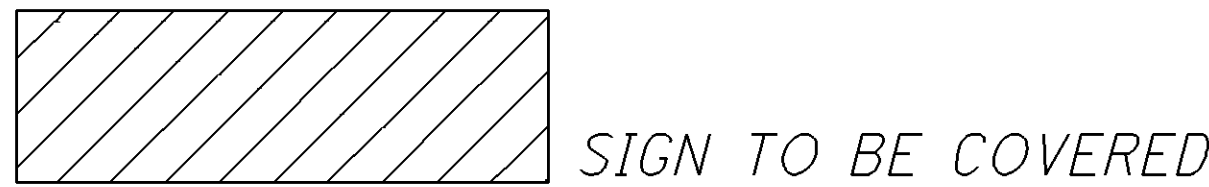
DETOUR PLAN FOR:
RAMP E (I-77 NORTH TO US-30 WEST)



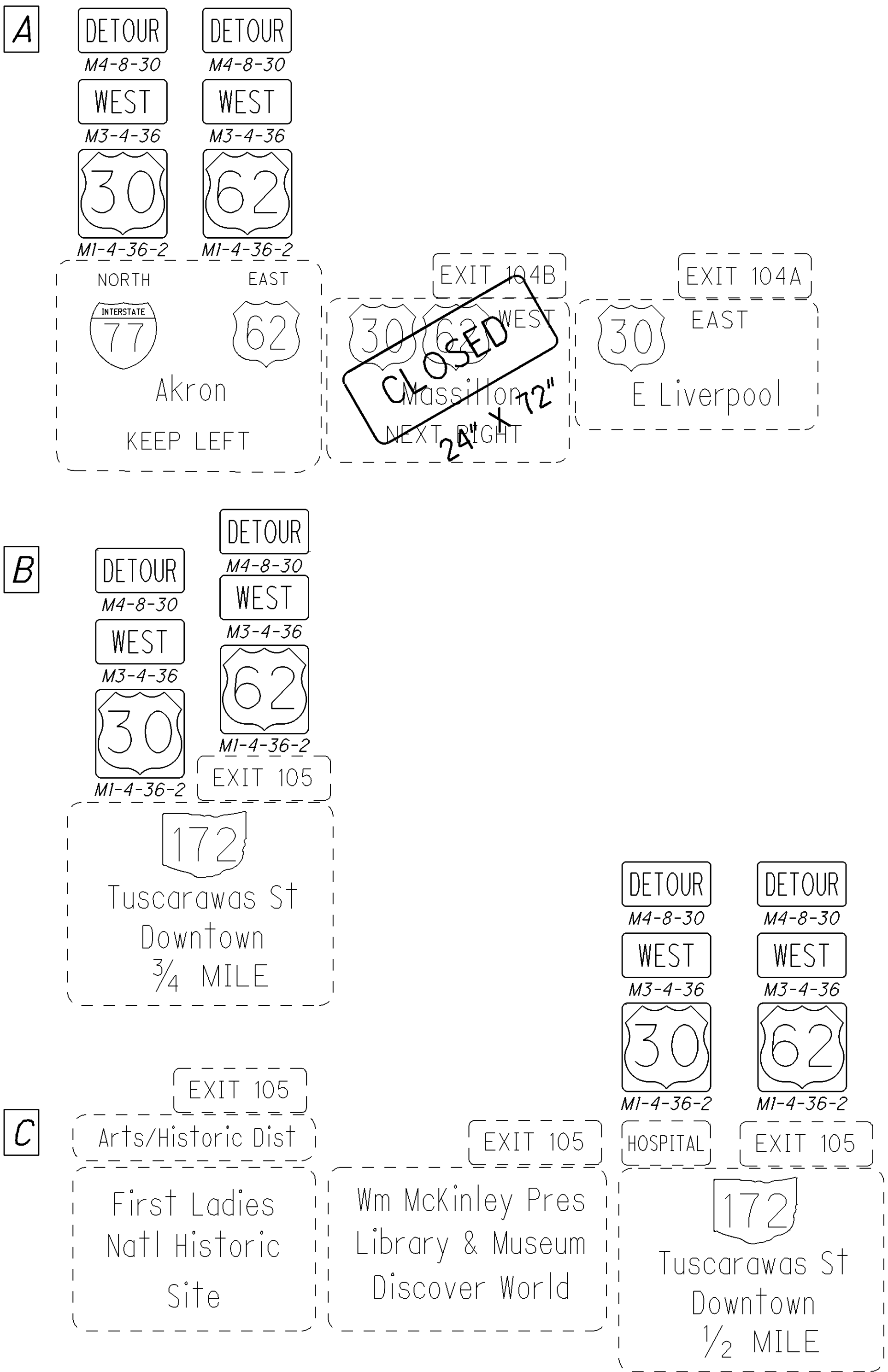
NOT TO SCALE

- CLOSE RAMP PER STD. DWG. MT-98.29
- ← OFFICIAL DETOUR ROUTE: I-77 NORTH / TUSCARAWAS AVE (SR 172) / I-77 SOUTH

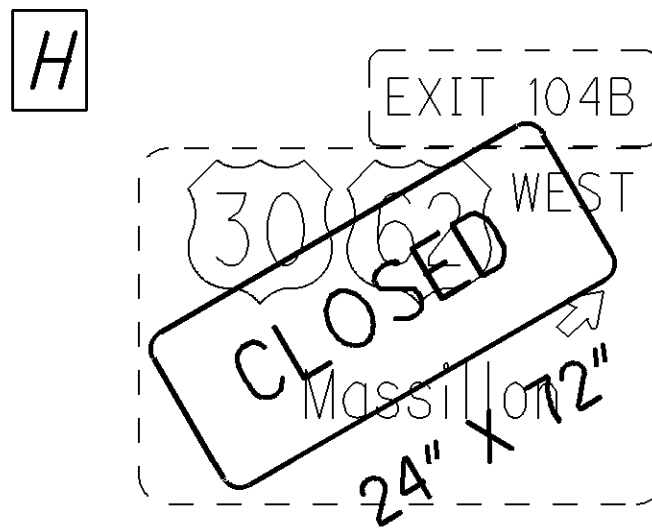
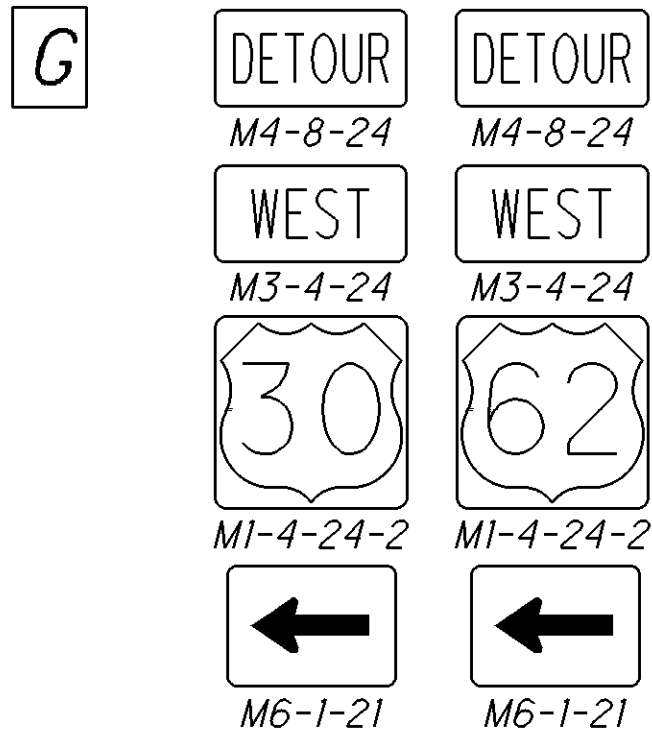
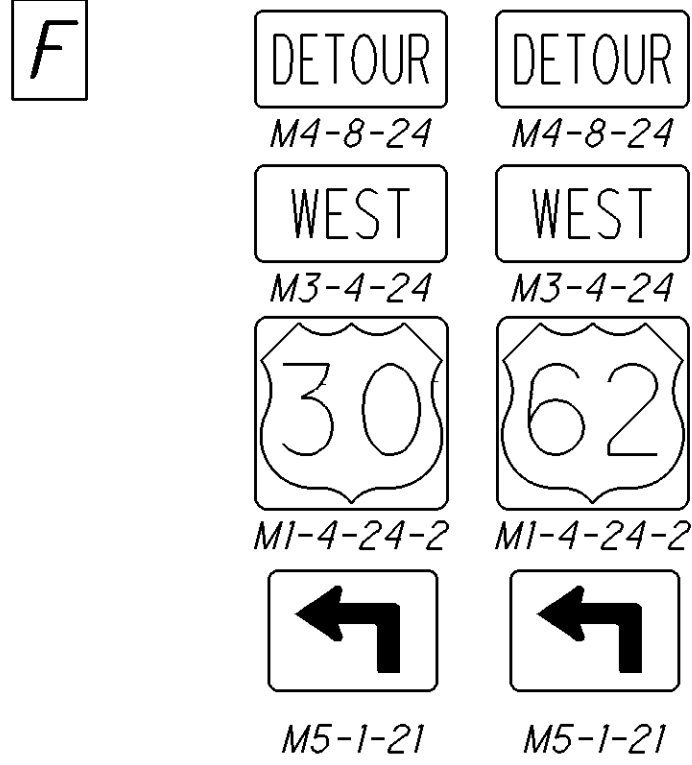
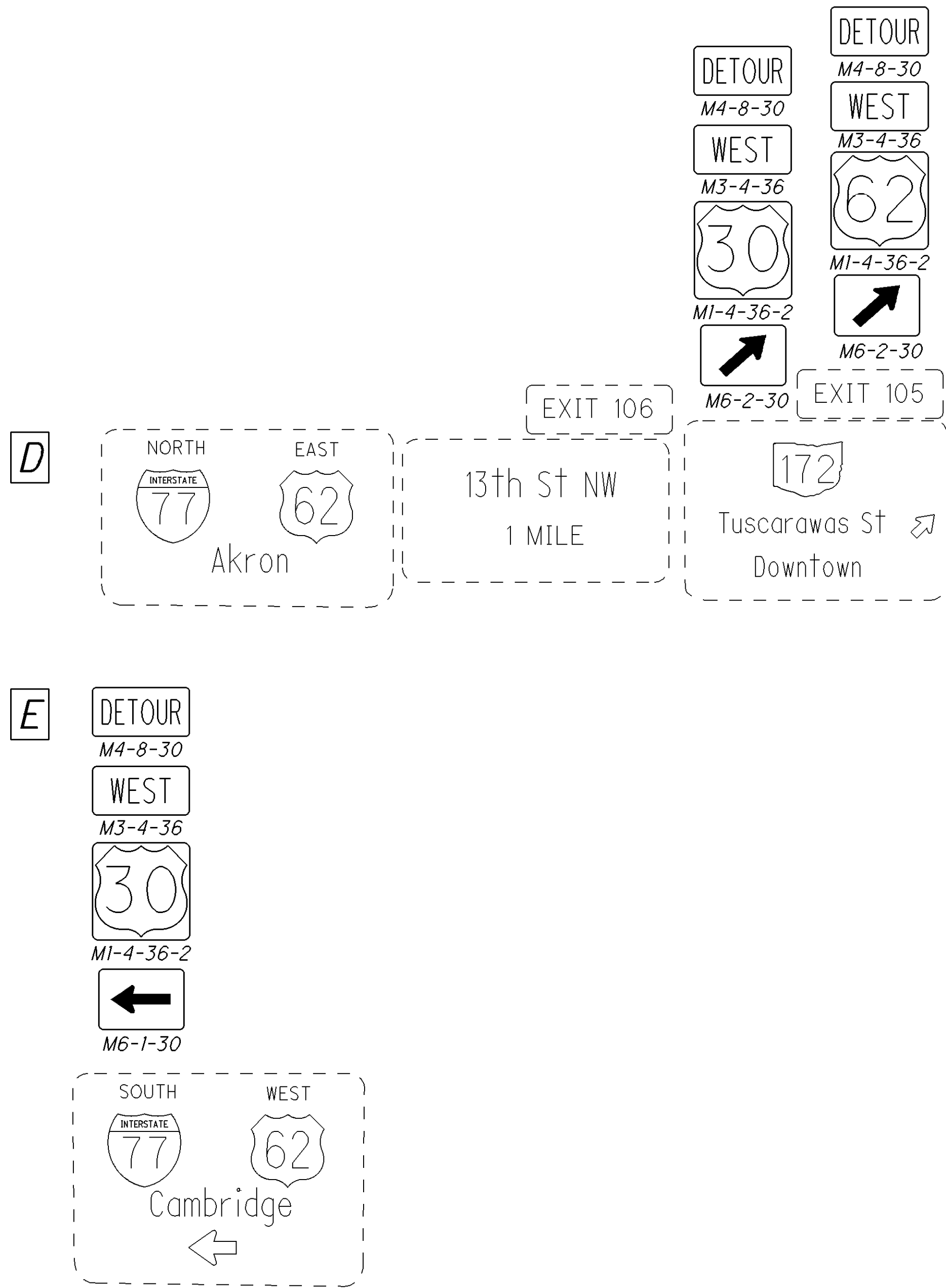
NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,
FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



SIGN TO BE COVERED



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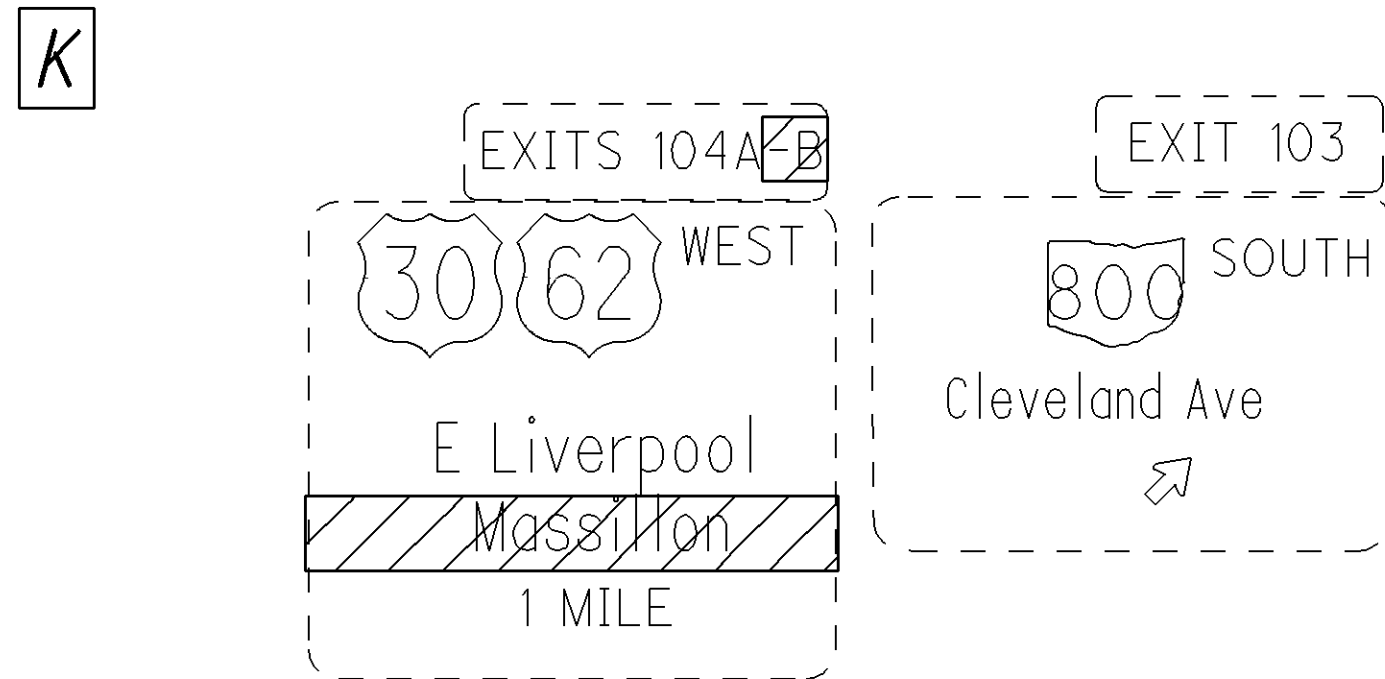


I PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:
-PLACE 10 DAY BEFORE CLOSURE

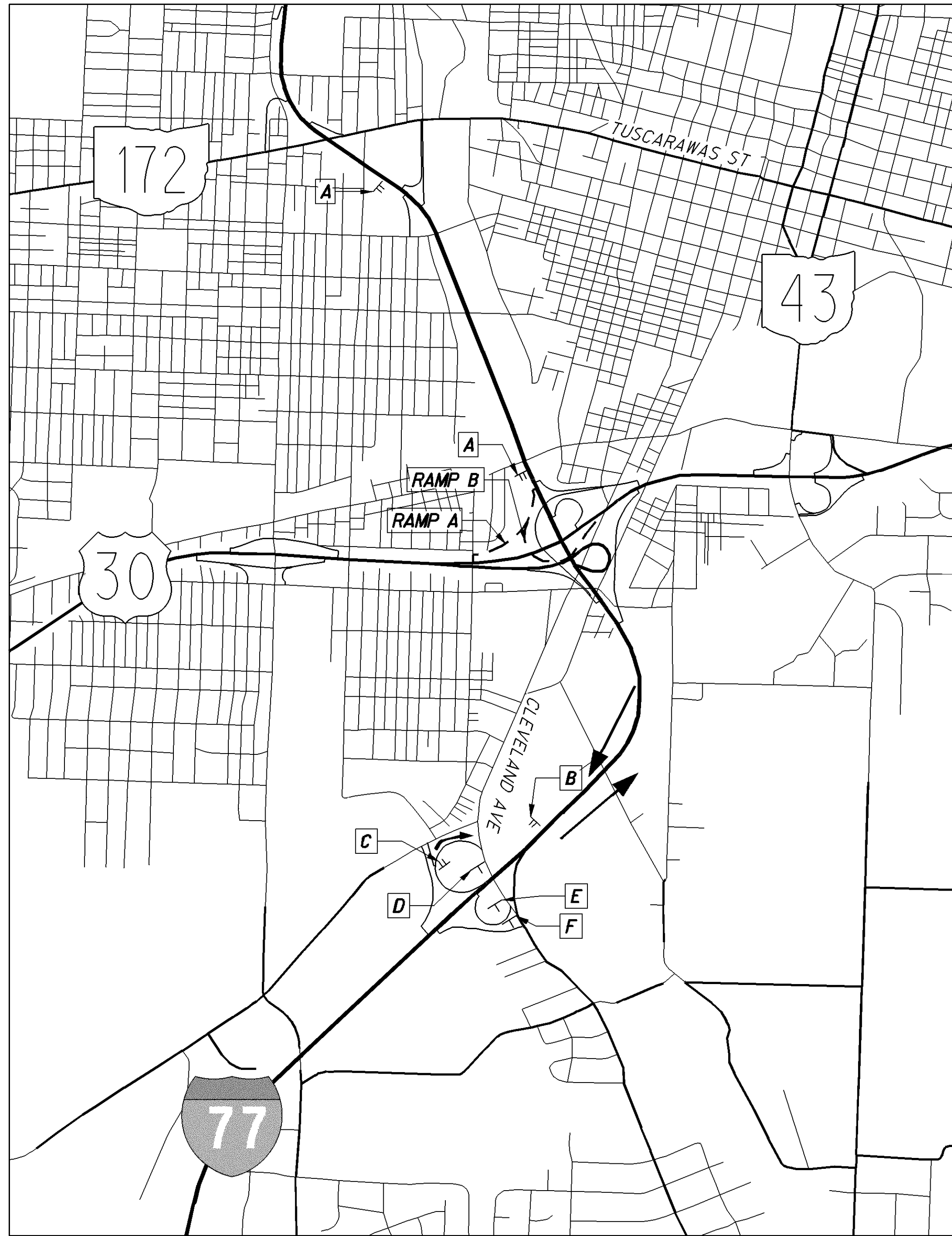
1. US 30W
CLOSED
2. (DATES)

J PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:
-PLACE 10 DAY BEFORE CLOSURE

1. US 30W
CLOSED
2. FOLLOW
77N



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DETOUR PLAN FOR SIMULTANEOUS CLOSURE OF RAMPS
A (I-77 SOUTH TO US-30 WEST)
B (I-77 SOUTH TO US-30 EAST)

- CLOSE RAMP PER STD. DWG. MT-98.29
- ← OFFICIAL DETOUR ROUTE: I-77 SOUTH / SR 800 / I-77 NORTH

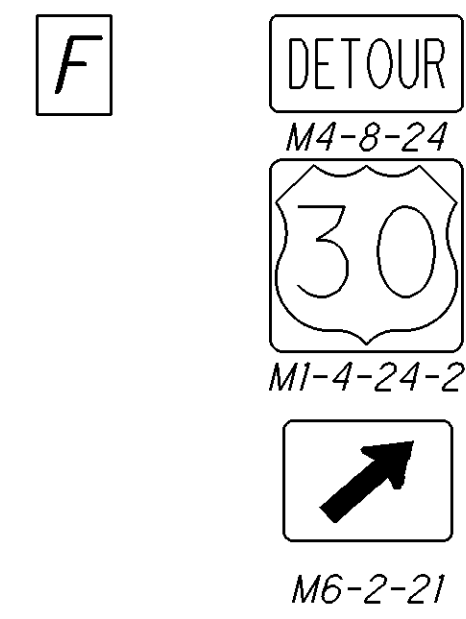
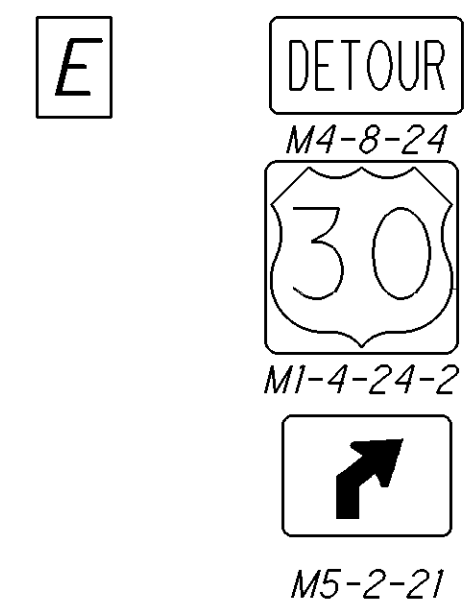
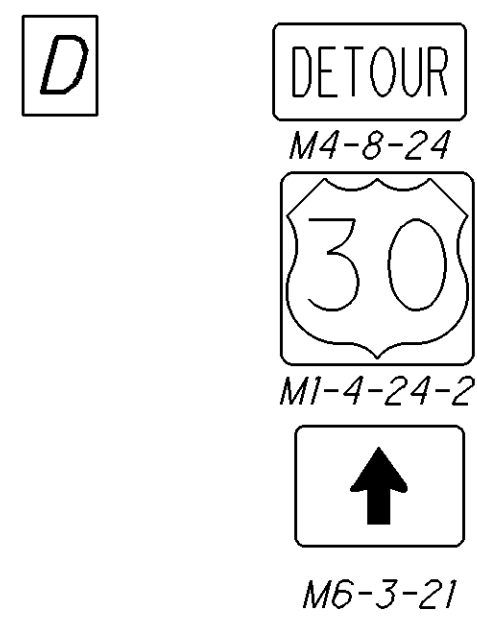
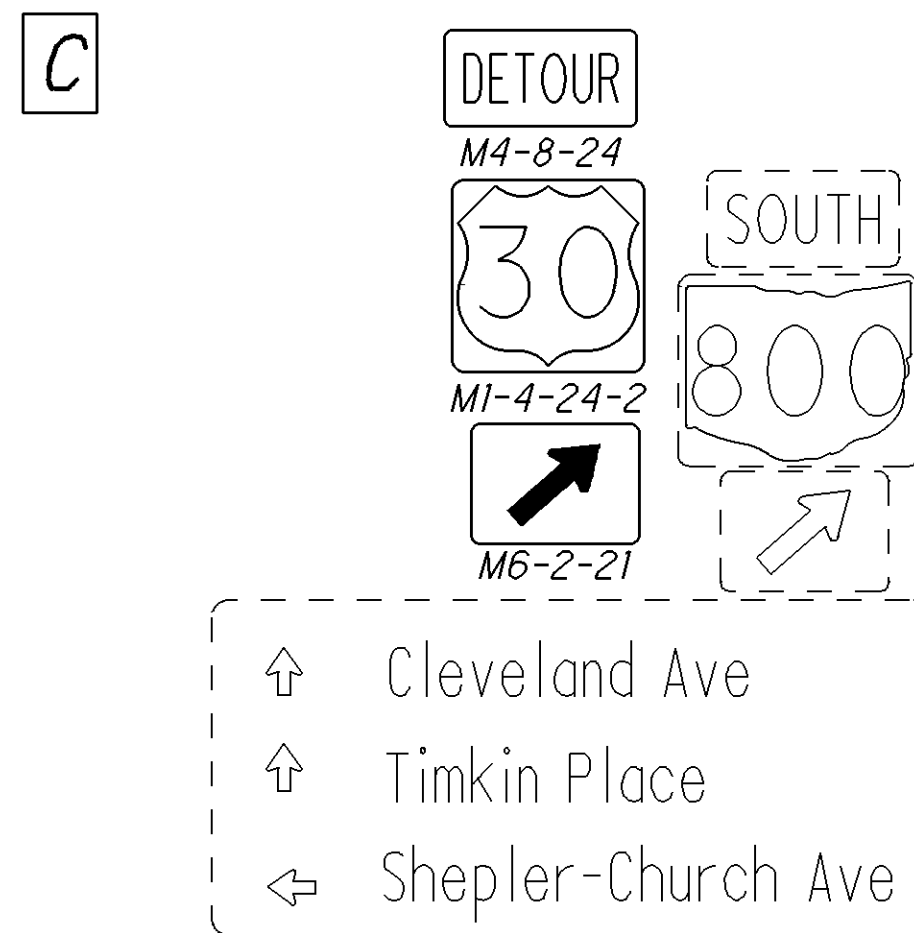
NOTE:
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,
FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.

A PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:

1. RAMPS TO
US-30
CLOSED
2. FOLLOW
I-77S

B PORTABLE CHANGEABLE MESSAGE
SIGN MESSAGES:

1. RAMPS TO
US-30
CLOSED
2. FOLLOW
SR 800



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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED RCB	CHECKED	NRC
3	4	66	67	68	69	73	83	84					01/NHS/P V		EXT	TOTAL						
								LS					LS	201	11000	LS		ROADWAY				
			481										481	202	23500	481	SY	WEARING COURSE REMOVED				
		21535											21535	202	38000	21,535	FT	GUARDRAIL REMOVED				
475	2												2	202	47800	2	EACH	IMPACT ATTENUATOR REMOVED				
		247											722	202	98100	722	EACH	REMOVAL MISC.: BARRIER REFLECTOR	4			
	2					59							61	203	10000	61	CY	EXCAVATION				
35													35	203	10000	35	CY	EXCAVATION (FOR PAVEMENT REPAIR)				
						111							111	203	20000	111	CY	EMBANKMENT				
						454							454	204	10000	454	SY	SUBGRADE COMPACTION				
	196												196	209	60200	196	STA	LINEAR GRADING				
		215											215	209	60201	215	STA	LINEAR GRADING, AS PER PLAN	3			
	600												600	509	20001	600	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	4			
	2000												2000	511	81100	2,000	FT	CONCRETE, MISC.: MEDIAN BARRIER REPAIR (FOR BARRIER REPAIR)	4			
	5000												5000	519	11101	5,000	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN (FOR BARRIER REPAIR)	4			
		17900											17900	606	15100	17,900	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS				
		1912.5											1912.5	606	15200	1,912.50	FT	GUARDRAIL, TYPE MGS HALF POST SPACING WITH LONG POSTS				
		675											675	606	15550	675	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS				
		2											2	606	26050	2	EACH	ANCHOR ASSEMBLY, MGS TYPE B				
		26											26	606	26150	26	EACH	ANCHOR ASSEMBLY, MGS TYPE E				
		26											26	606	26550	26	EACH	ANCHOR ASSEMBLY, MGS TYPE T				
		36											36	606	35000	36	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1				
		25											25	606	35100	25	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2				
	2												2	606	60040	2	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL, 65 MPH/96 INCH WIDTH				
	5000												5000	843	50000	5,000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR (FOR BARRIER REPAIR)				
																		EROSION CONTROL				
	18828												18828	659	10000	18,828	SY	SEEDING AND MULCHING				
	2.54												2.54	659	20000	2.54	TON	COMMERCIAL FERTILIZER				
	3.89												3.89	659	31000	3.89	ACRE	LIME				
	102												102	659	35000	102	MGAL	WATER				
													5000	832	30000	5,000	EACH	EROSION CONTROL				
																		DRAINAGE				
28													28	611	99155	28	EACH	INLET RECONSTRUCTED TO GRADE, AS PER PLAN	3			
3000													3000	SPECIAL	61199820	3,000	LB	MISCELLANEOUS METAL	3			
																		PAVEMENT				
1500													1500	251	01000	1,500	SY	PARTIAL DEPTH PAVEMENT REPAIR				
200													200	253	01000	200	SY	PAVEMENT REPAIR				
			4964										4964	254	01000	4,964	SY	PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE DEPTH)				
			77303	50558	54458								182319	254	01000	182,319	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")				
				36300	5957								42257	254	01000	42,257	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=3.25")				
	2							65					67	301	46000	67	CY	ASPHALT CONCRETE BASE, PG64-22				
35													35	304	20000	35	CY	AGGREGATE BASE (FOR PAVEMENT REPAIR)				
								70					70	304	20001	70	CY	AGGREGATE BASE, AS PER PLAN	3			
			12340	8686	6042								27068	SPECIAL	40720500	27,068	GAL	TACK COAT, TRACKLESS TACK	5			
				1452	596	73							2121	SPECIAL	40720510	2,121	GAL	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE	5			
		661											661	441	50701	661	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	3			
			3428	3620	2518	16							9582	442	20051	9,582	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN	3			
				1765	290	18							2073	442	20250	2,073	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)				
			199	199	251								649	617	10101	649	CY	COMPACTED AGGREGATE, AS PER PLAN	4			
			6	6									12	618	40600	12	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)				
																		LIGHTING				
							72	34					106	625	00450	106	EACH	CONNECTION, FUSED PULL APART				
							36	17					53	625	10490	53	EACH	LIGHT POLE, CONVENTIONAL, A8BB39.0				
								1					1	625	13201	1	EACH	LIGHT TOWER, BBBB100, AS PER PLAN	84			
								3					3	625	13205	3	EACH	LIGHT TOWER, BBBB110, AS PER PLAN	84			
								1					1	625	13209	1	EACH	LIGHT TOWER, BBBB120, AS PER PLAN	84			
								1					1	625	13211	1	EACH	LIGHT TOWER, BBBB130, AS PER PLAN	84			
								1					1	625	13401	1	EACH	LIGHT TOWER, BBBBBB100, AS PER PLAN	84			
								1					1	625	13407	1	EACH	LIGHT TOWER, BBBBBB120, AS PER PLAN	84			
								1					1	625	13411	1	EACH	LIGHT TOWER, BBBBBB130, AS PER PLAN	84			
								2					2	625	13421	2	EACH	LIGHT TOWER, BBBBBB140, AS PER PLAN	84			
							4896	2312					7208	625	23400	7,208	FT	NO. 10 AWG POLE AND BRACKET CABLE				
							72	34					106	625	26251	106	EACH	LUMINAIRE, CONVENTIONAL, AS PER PLAN, STYLE C, TYPE III, 200W HPS FIXTURE, 725.11	83			

GENERAL SUMMARY

STA - 77 / 30 / 62 - VAR

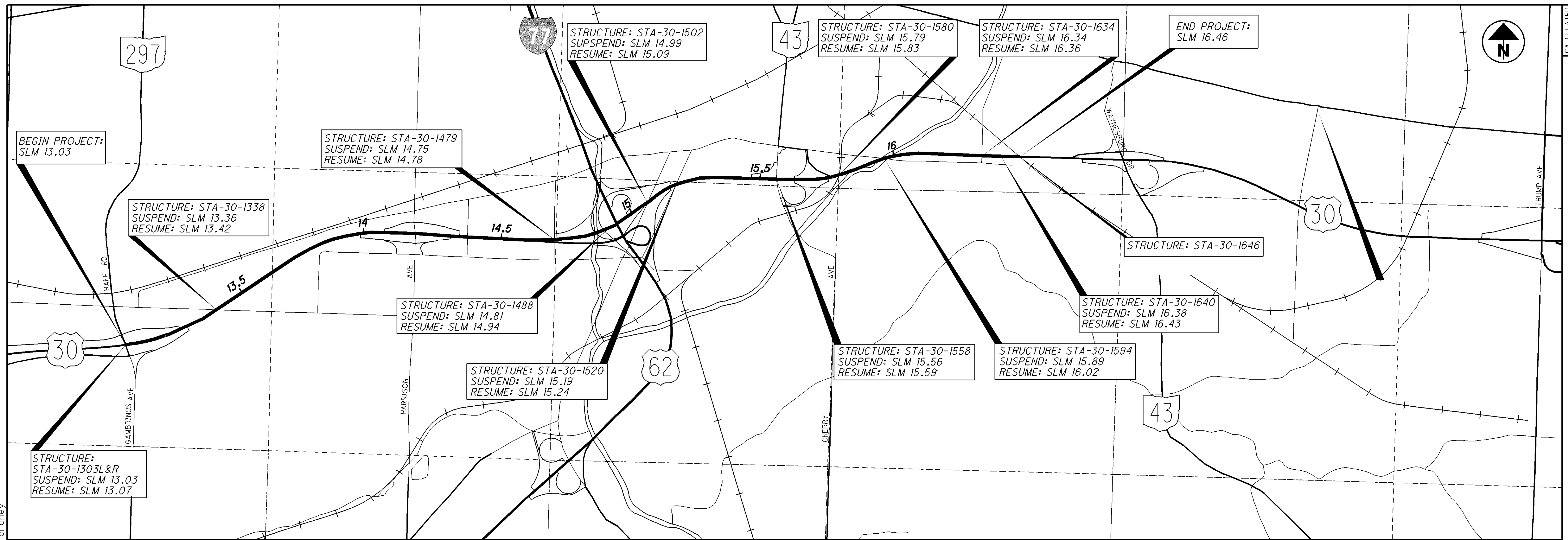
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SHEET NUM.													PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE	CALCULATED	RCB	CHECKED	NRC
3	6	7	10	11	66	73	81	83	84				01/NHS/P V		EXT	TOTAL			SHEET NO.				
								LS	54				54	625	26261	54	EACH	LUMINAIRE, HIGH MAST, AS PER PLAN 400W HPS	84				
													LS	SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	83				
									11				11	625	75350	11	EACH	LIGHT TOWER REMOVED					
								24	17				41	625	75400	41	EACH	LIGHT POLE REMOVED					
								47	63				110	625	75506	110	EACH	LUMINAIRE REMOVED					
								106					106	625	26251	106	EACH	LIGHTING ALTERNATES LUMINAIRE, CONVENTIONAL, AS PER PLAN, LED - ALTERNATE BID	83				
528					292								820	626	00100	820	EACH	TRAFFIC CONTROL BARRIER REFLECTOR					
						27							27	630	03100	27	FT	GROUND MOUNTED SUPPORT, NO. 3 POST					
						28							28	630	80100	28	SF	SIGN, FLAT SHEET					
							12.42						12.42	646	10110	12.42	MILE	LANE LINE, 6"					
							9440						9440	646	10300	9,440	FT	CHANNELIZING LINE, 8"					
									198				198	646	10400	198	FT	STOP LINE					
									255				255	646	10500	255	FT	CROSSWALK LINE					
									200				200	646	10620	200	FT	CHEVRON MARKING					
									14				14	646	20300	14	EACH	LANE ARROW					
									11810				11810	646	20500	11,810	FT	DOTTED LINE					
		4											4	632	26501	4	EACH	TRAFFIC SIGNALS DETECTOR LOOP, AS PER PLAN	7				
																		STRUCTURE REPAIRS					
																		FOR STA-30-1303L ESTIMATED QUANTITIES	94				
																		FOR STA-30-1303R ESTIMATED QUANTITIES	94				
																		FOR STA-30-1338 ESTIMATED QUANTITIES	94				
																		FOR STA-30-1479 ESTIMATED QUANTITIES	94				
																		FOR STA-30-1488 ESTIMATED QUANTITIES	94				
																		FOR STA-30-1502 ESTIMATED QUANTITIES	94				
																		FOR STA-30-1520 ESTIMATED QUANTITIES	94				
																		FOR STA-30-1558 ESTIMATED QUANTITIES	95				
																		FOR STA-30-1580 ESTIMATED QUANTITIES	95				
																		FOR STA-30-1594 ESTIMATED QUANTITIES	95				
																		FOR STA-30-1634 ESTIMATED QUANTITIES	95				
																		FOR STA-30-1640 ESTIMATED QUANTITIES	95				
																		FOR STA-30-1646 ESTIMATED QUANTITIES	95				
																		FOR STA-62-1870L ESTIMATED QUANTITIES	95				
																		FOR STA-77-0926 ESTIMATED QUANTITIES	94				
																		MAINTENANCE OF TRAFFIC					
			1000										1000	614	11110	1,000	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
				58									58	614	12336	58	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)					
		LS											LS	614	12420	LS		DETOUR SIGNING					
	40												40	614	12460	40	EACH	WORK ZONE MARKING SIGN					
	30												30	614	13000	30	cy	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC					
				166									166	614	13100	166	EACH	BARRIER REFLECTOR					
				166									166	614	13350	166	EACH	OBJECT MARKER, ONE WAY					
				12142									12142	614	18030	12,142	FT	MAINTAINING TRAFFIC, MISC.: SHOULDER RUMBLE STRIPS	11				
			24										24	614	18601	24	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10				
	24.84												24.84	614	20400	24.84	MILE	WORK ZONE LANE LINE, CLASS II					
	12.42												12.42	614	20550	12.42	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT					
				11									11	614	22100	11	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT					
	13.72												13.72	614	22350	13.72	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT					
				9133									9133	614	23200	9,133	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT					
	18880												18880	614	23650	18,880	FT	WORK ZONE CHANNELIZING LINE, CLASS II					
	9440												9440	614	23660	9,440	FT	WORK ZONE CHANNELIZING LINE, CLASS II, 642 PAINT					
				840									840	614	24610	840	FT	WORK ZONE DOTTED LINE, CLASS III, 642 PAINT					
	396												396	614	26000	396	FT	WORK ZONE STOP LINE, CLASS I					
	198												198	614	26610	198	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT					
				7590									7590	622	41010	7,590	FT	PORTABLE BARRIER, 50"					
																		INCIDENTALS					
													LUMP	SPECIAL	10810000	LS		CPM PROGRESS SCHEDULE					
													LS	614	11000	LS		MAINTAINING TRAFFIC					
													8	619	16020	8	MNTH	FIELD OFFICE, TYPE C					
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING					
													LS	624	10000	LS		MOBILIZATION					

GENERAL SUMMARY

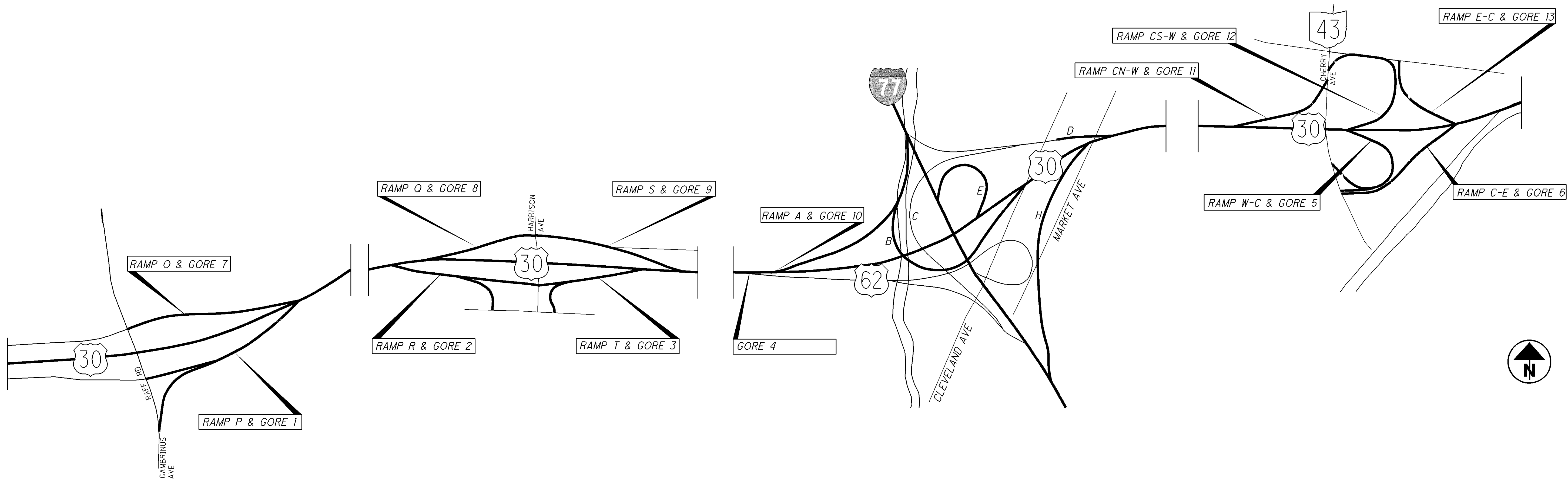
STA - 77 / 30 / 62 - VAR

66 98 STA-77 / 30 / 62-VAR	GUARDRAIL SUB-SUMMARY			
				CALCULATED
				RCB CHECKED

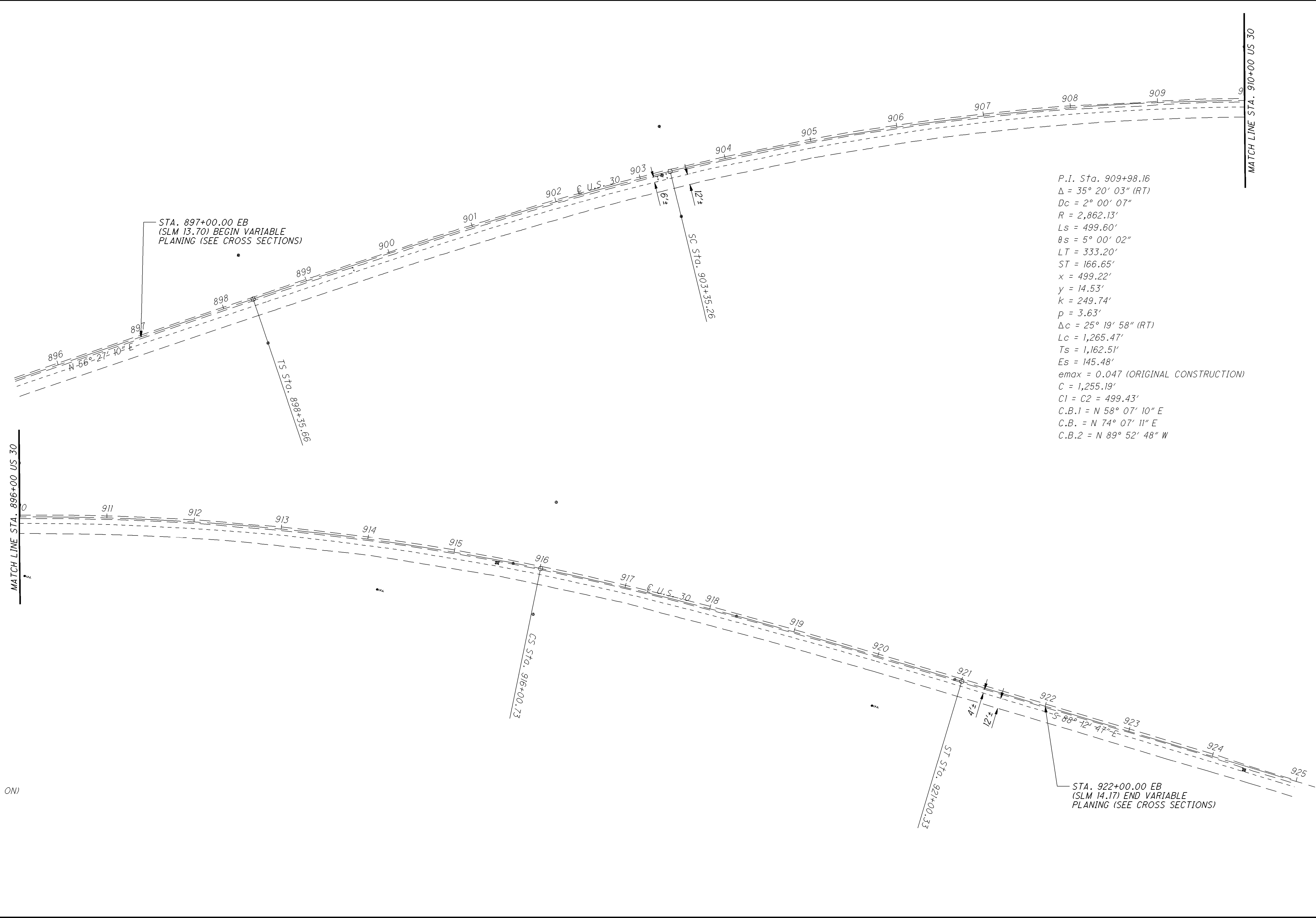


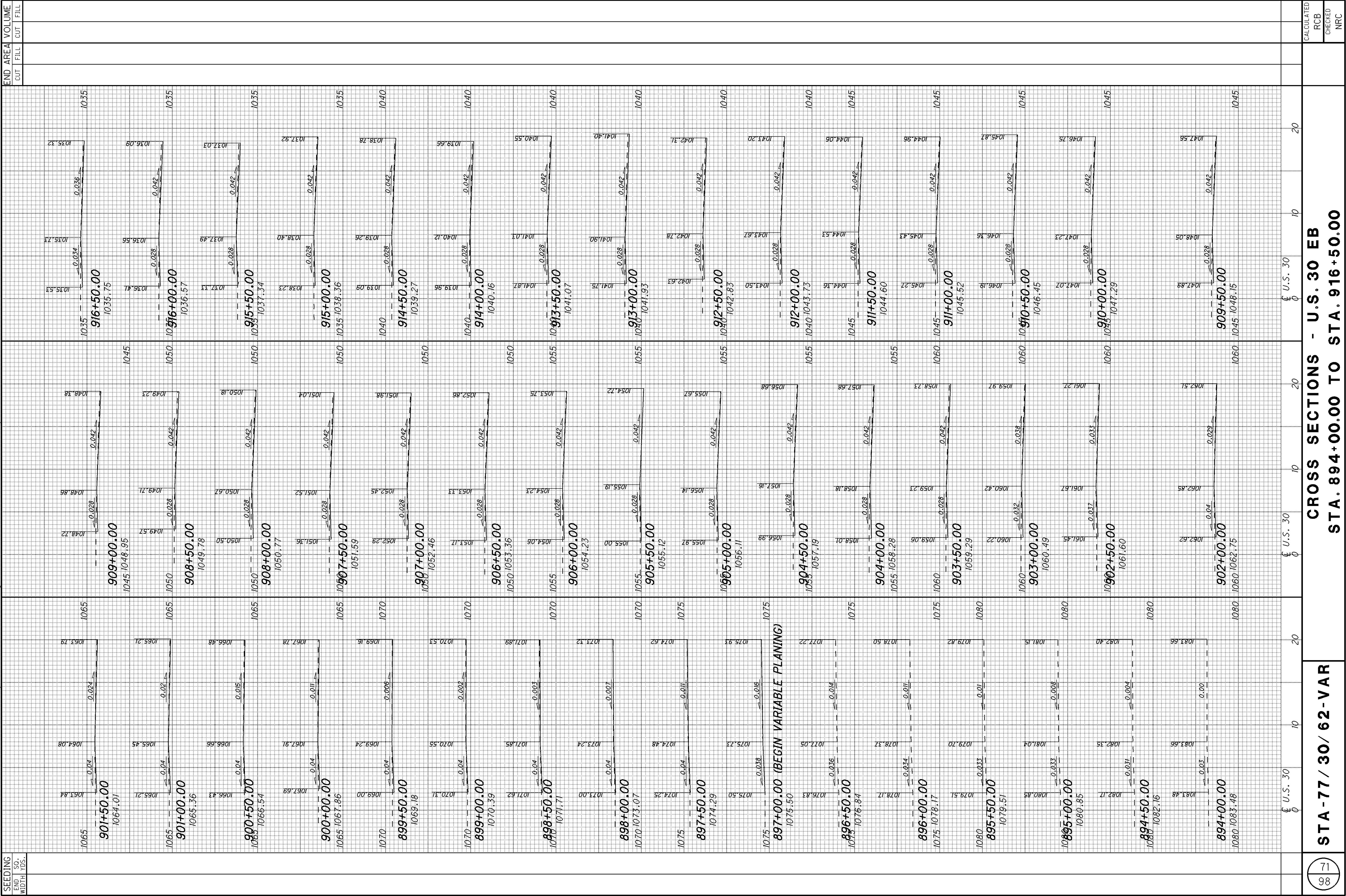
SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	202	254	254	SPEC		442		617		618										
									WEARING COURSE REMOVED	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE DEPTH)	TACK COAT, TRACKLESS TACK @ 0.15 GAL/SY		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN (T=1.5")		COMPACTED AGGREGATE, AS PER PLAN (T=2")		RUMBLE STRIPS, (ASPHALT CONCRETE) D/5280 x #SIDES										
									SY	SY	SY	GAL		CY		CY		MILE										
EASTBOUND					FT	FT	SQ YD	SQ YD																				
13.07	TO	13.36	1		1531.20	36.00	6124.80		32.00	6124.80		918.72		255.20		37.81		0.58										
13.42	TO	13.88	2		2428.80	50.00	13493.33		22.22	13493.33		2024.00		562.22		29.99		0.92										
13.88	TO	13.99	2		580.80	60.00	3872.00			3872.00		580.80		161.33		7.17		0.22										
13.99	TO	14.36	2		1953.60	50.00	10853.33			10853.33		1628.00		452.22		24.12		0.74										
14.36	TO	14.54	2		950.40	69.50	7339.20			7339.20		1100.88		305.80		11.73		0.36										
14.54	TO	14.69	2		792.00	30.00	2640.00			2640.00		396.00		110.00		9.78		0.30										
14.69	TO	14.75	2		316.80	38.00	1337.60		16.89	1337.60		200.64		55.73		3.91		0.12										
14.78	TO	14.81	2		158.40	38.00	668.80		33.78	668.80		100.32		27.87		1.96		0.06										
14.94	TO	14.99	2		264.00	38.00	1114.67		33.78	1114.67		167.20		46.44		3.26		0.10										
15.09	TO	15.19	2		528.00	50.00	2933.33		44.44	2933.33		440.00		122.22		6.52		0.20										
15.24	TO	15.56	2		1689.60	62.00	11639.47		55.11	11639.47		1745.92		484.98		20.86		0.64										
15.59	TO	15.79	2		1056.00	62.00	7274.67		55.11	7274.67		1091.20		303.11		13.04		0.40										
15.83	TO	15.89	2		316.80	60.25	2120.80		53.56	2120.80		318.12		88.37		3.91		0.12										
16.02	TO	16.34	2		1689.60	50.00	9386.67		44.44	9386.67		1408.00		391.11		20.86		0.64										
16.36	TO	16.38	2		105.60	50.00	586.67		44.44	586.67		88.00		24.44		1.30		0.04										
16.43	TO	16.46	2		158.40	50.00	880.00		44.44	880.00		132.00		36.67		1.96		0.06										
SLOPE CORRECTION																												
13.70	TO	14.17	2		2481.60	18.00	4963.20			-4963.20		4963.20																
SUBTOTALS									480.22	77302.13	4963.20	12339.80	0.00	3427.72	0.00	198.16	0.00	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOTALS CARRIED TO GENERAL SUMMARY									481	77303	4964	12340	0	3428	0	199	0	6	0	0	0	0	0	0	0	0	0	

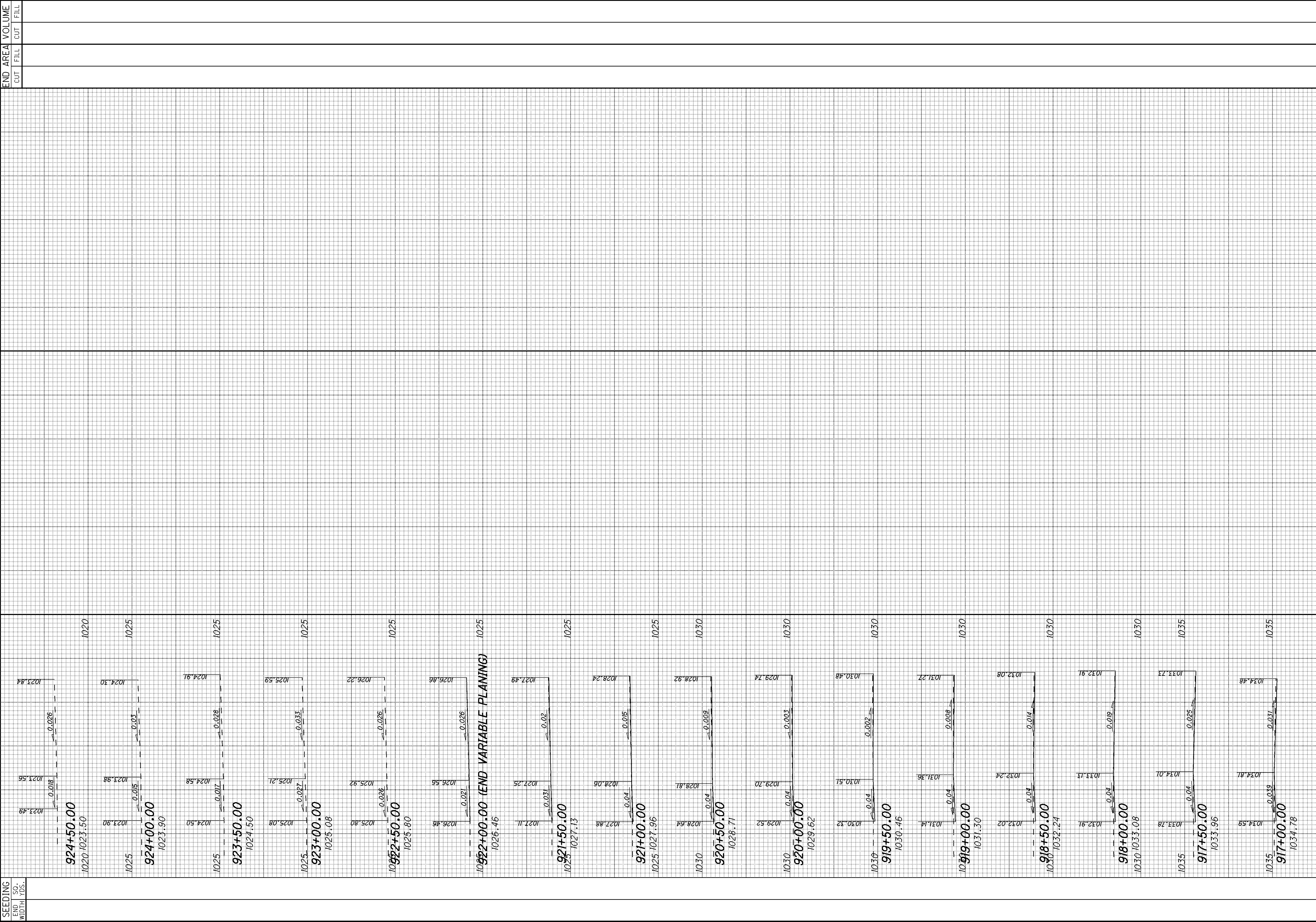
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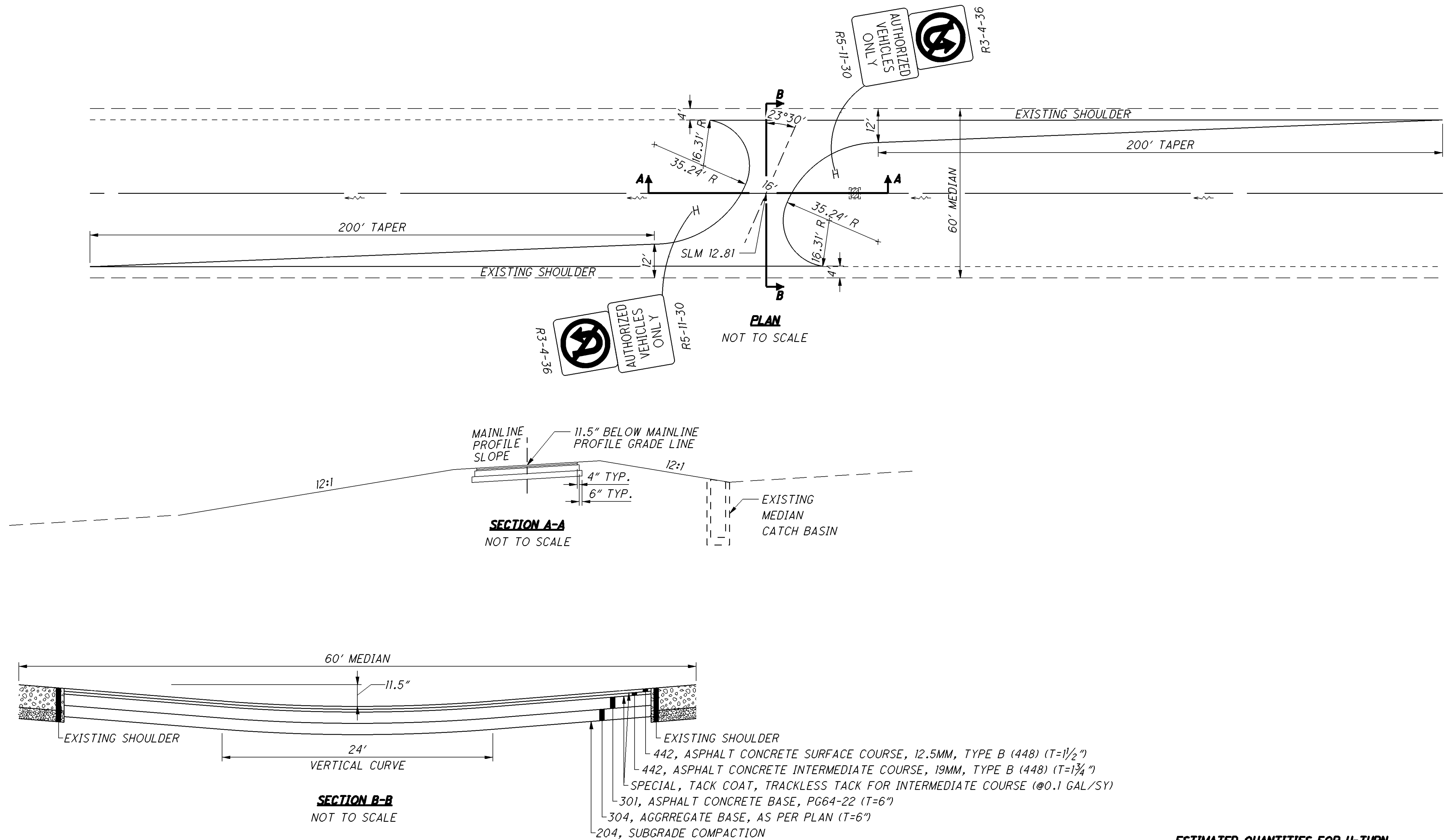


SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA (GORE AREAS)		254	254		SPEC	SPEC		442	442		617							
									PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	PAVEMENT PLANING, ASPHALT CONCRETE (T=3.25")		TACK COAT, TRACKLESS TACK @ 0.1 GAL/SY	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE @ 0.1 GAL/SY		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN (T=1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T=1.75")		COMPACTED AGGREGATE, AS PER PLAN (T=2")						
			FT	FT	SQ YD	SQ YD		SY	SY		GAL	GAL		CY	CY		CY							
EASTBOUND																								
RAMP P - GORE 1	3		2152.00	24.00	5738.67	217.44			5956.11		595.61	595.61		248.17	289.53		34.33							
RAMP R - GORE 2	3		1765.00	30.00	5883.33	329.33		6212.66			621.27			258.86			30.70							
RAMP T - GORE 3	3		1367.00	36.00	5468.00	338.67		5806.67			580.67			241.94			17.62							
GORE 4						1386.67		1386.67			138.67			57.78										
RAMP B & GORE	3		1071.87	12-26	2463.90	40.30		2504.20			250.42			104.34			9.49							
RAMP H	3		1228.70	26	3549.58			3549.58			354.96			147.90			15.17							
RAMP W-C - GORE 5	3		1504.00	27.00	4512.00	287.58		4799.58			479.96			199.98			15.83							
RAMP C-E - GORE 6	3		1052.00	22.00	2571.56	150.00		2721.56			272.16			113.40			6.65							
WESTBOUND																								
RAMP O - GORE 7	3		1500.00	30.00	5000.00	452.66		5452.66			545.27			227.19			25.80							
RAMP Q - GORE 8	3		950.00	22.00	2322.22	337.28		2659.50			265.95			110.81			17.83							
RAMP S - GORE 9	3		979.00	24.00	2610.67	273.88		2884.55			288.45			120.19			20.79							
RAMP A - GORE 10	3		1187.34	26-39	4098.52	313.50		4412.02			441.20			183.83			14.66							
RAMP D & GORE	3		237.53	36.00	950.12	159.00		1109.12			110.91			46.21			2.93							
RAMP E & GORE	3		866.32	27-29	2747.04	445.50		3192.54			319.25			133.02			10.70							
RAMP CN-W - GORE 11	3		944.00	22.00	2307.56	389.5		2697.06			269.71			112.38			10.14							
RAMP CS-W - GORE 12	3		822.00	24.00	2192.00	462.22		2654.22			265.42			110.59			7.65							
RAMP E-C - GORE 13	3		783.00	26.00	2262.00	153.33		2415.33			241.53			100.64			10.10							
SUBTOTALS							0.00	54457.91	5956.11	0.00	6041.40	595.61	0.00	2517.25	289.53	0.00	250.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS CARRIED TO GENERAL SUMMARY							0	54458	5957	0	6042	596	0	2518	290	0	251	0	0	0	0	0	0	0









ESTIMATED QUANTITIES FOR U-TURN

CADD GENERATED AREA (A)	203	203	204	301	304	SPEC	442	442	630	630
	EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION (A)	ASPHALT CONCRETE BASE, PG64-22 (T=6")	AGGREGATE BASE, AS PER PLAN (T=6")	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE (@ 2 x 0.1 GAL/SY)	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (448), AS PER PLAN (T=1.5")	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T=1.75")	GROUND MOUNTED SUPPORT, NO. 3 POST	SIGN, FLAT SHEET
SQ YD	CY	CY	SY	CY	CY	GAL	CY	CY	FT	SF
364.44						72.89	15.19	17.72	27	28
384.44				64.07						
414.33					69.06					
453.89	59	110.45	453.89							
TOTALS	59	111	454	65	70	73	16	18	27	28

NOTES

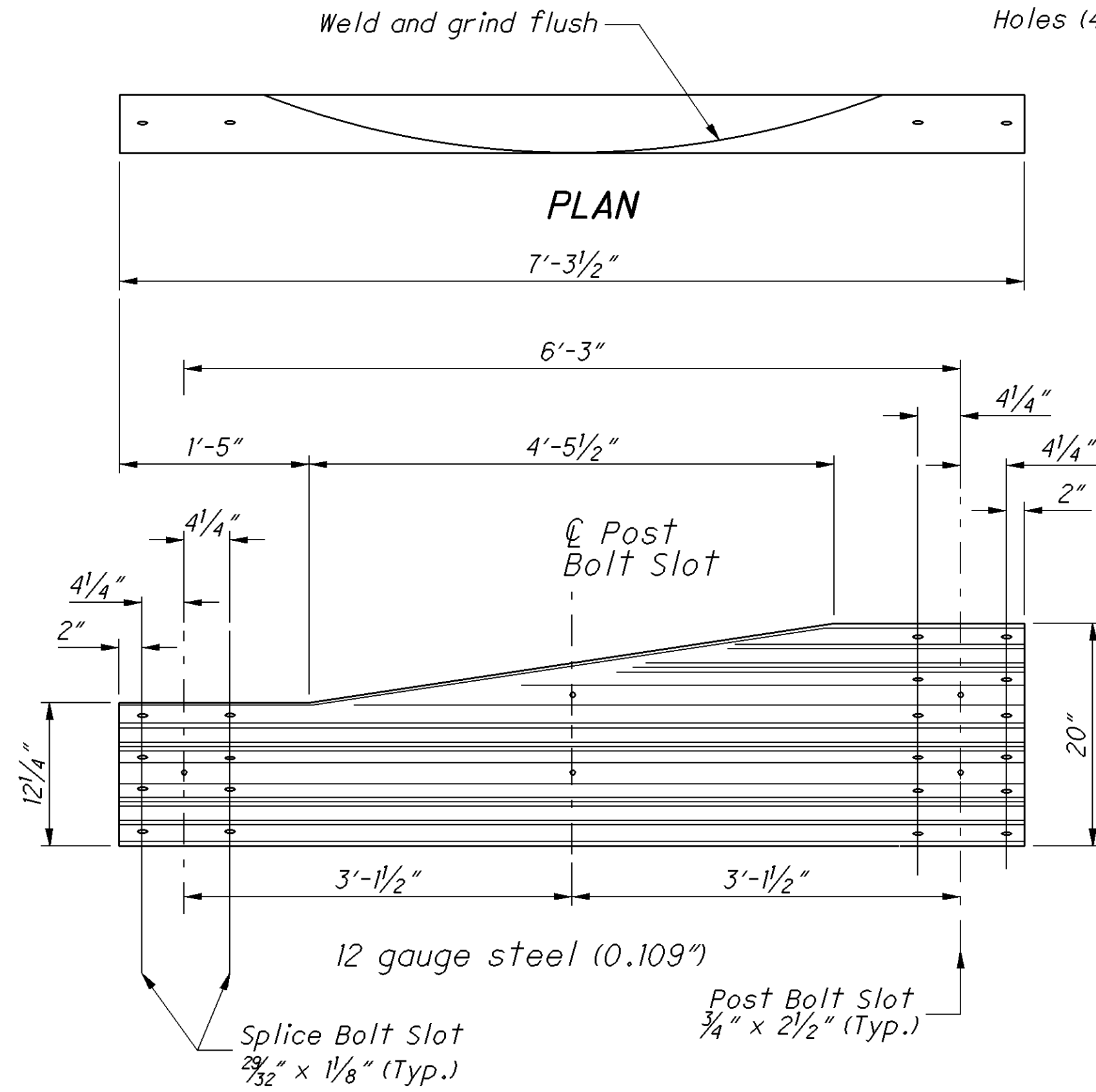
GENERAL: Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.

See CMS 606 for guardrail specifications not covered on these drawings.

Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam Transition sections.

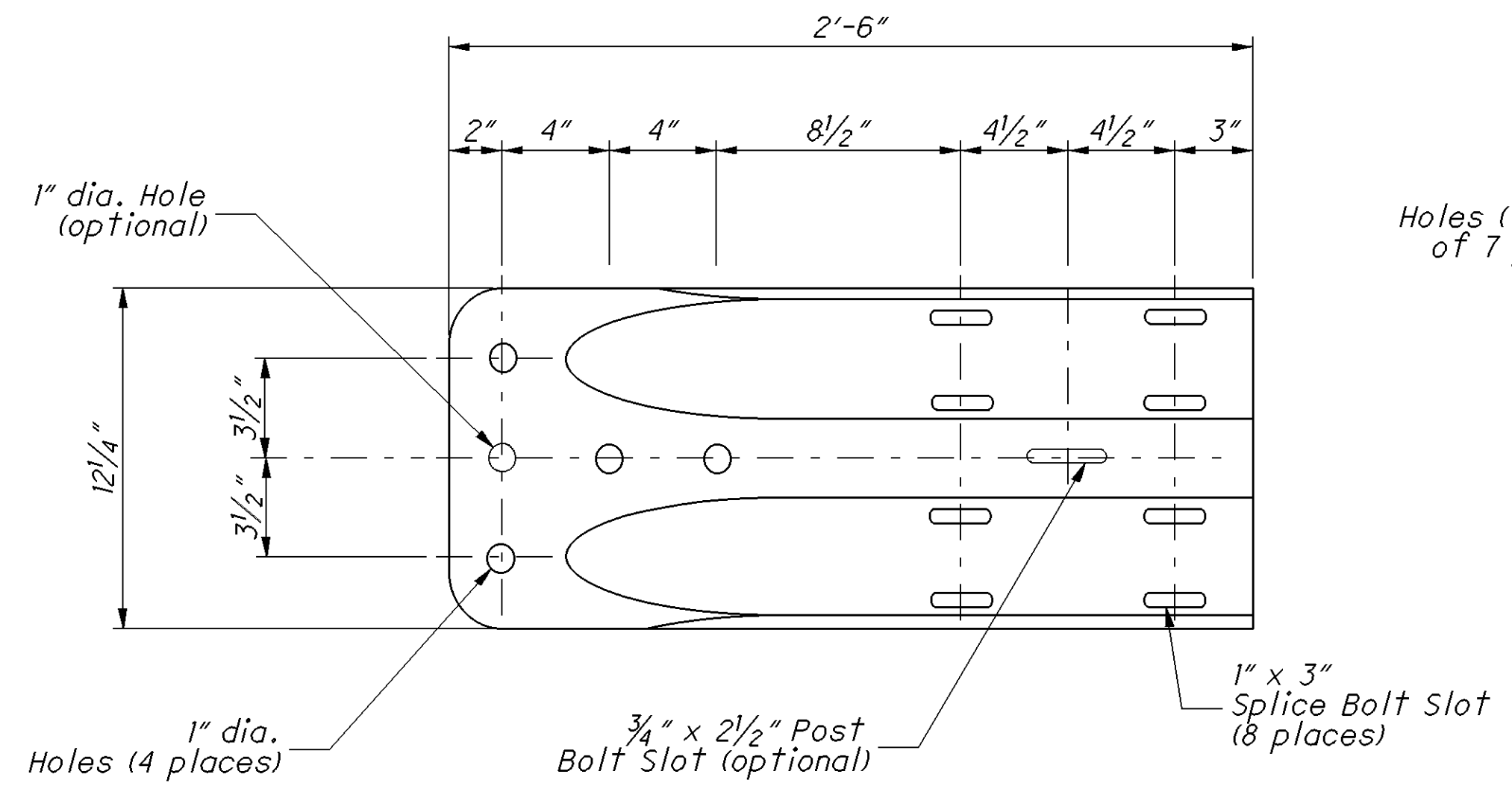
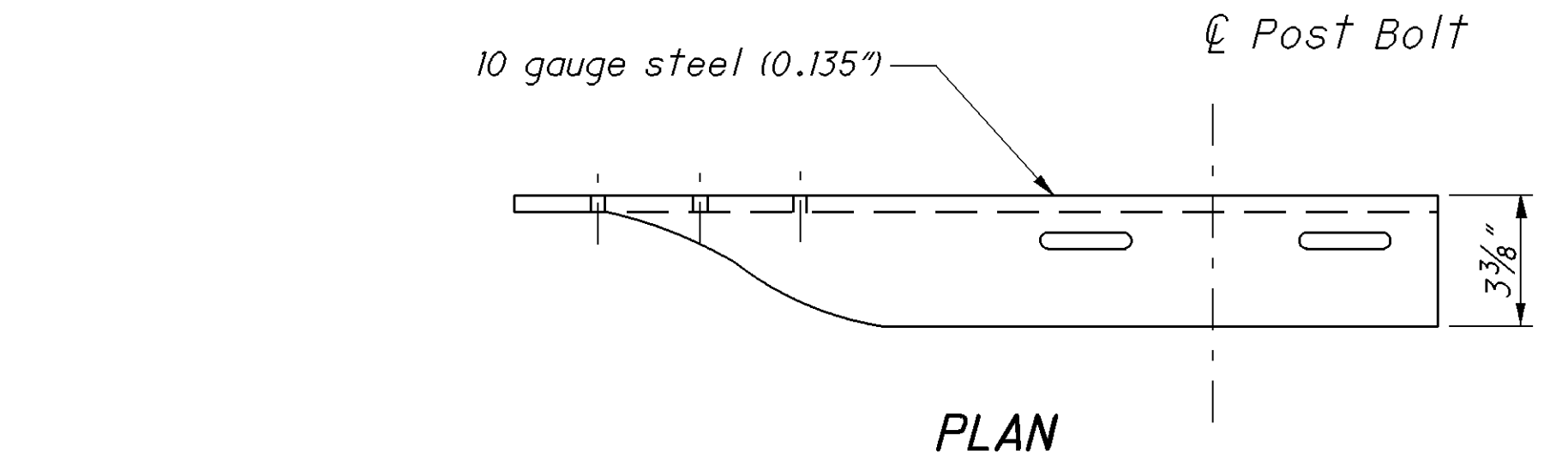
RAIL ELEMENTS: W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with $\frac{3}{4}$ " x $2\frac{1}{2}$ " post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.

RAIL SPLICES: Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.

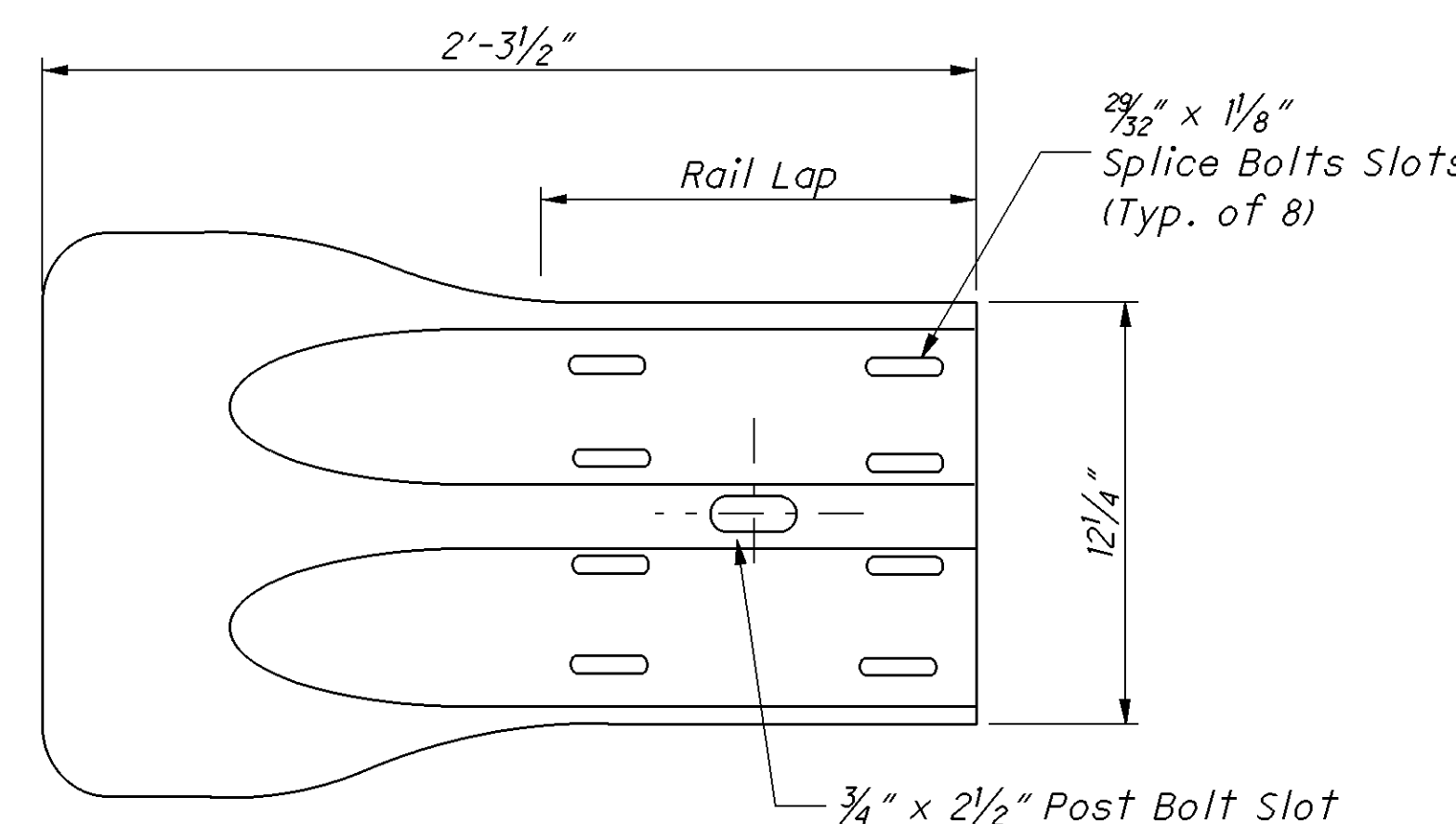
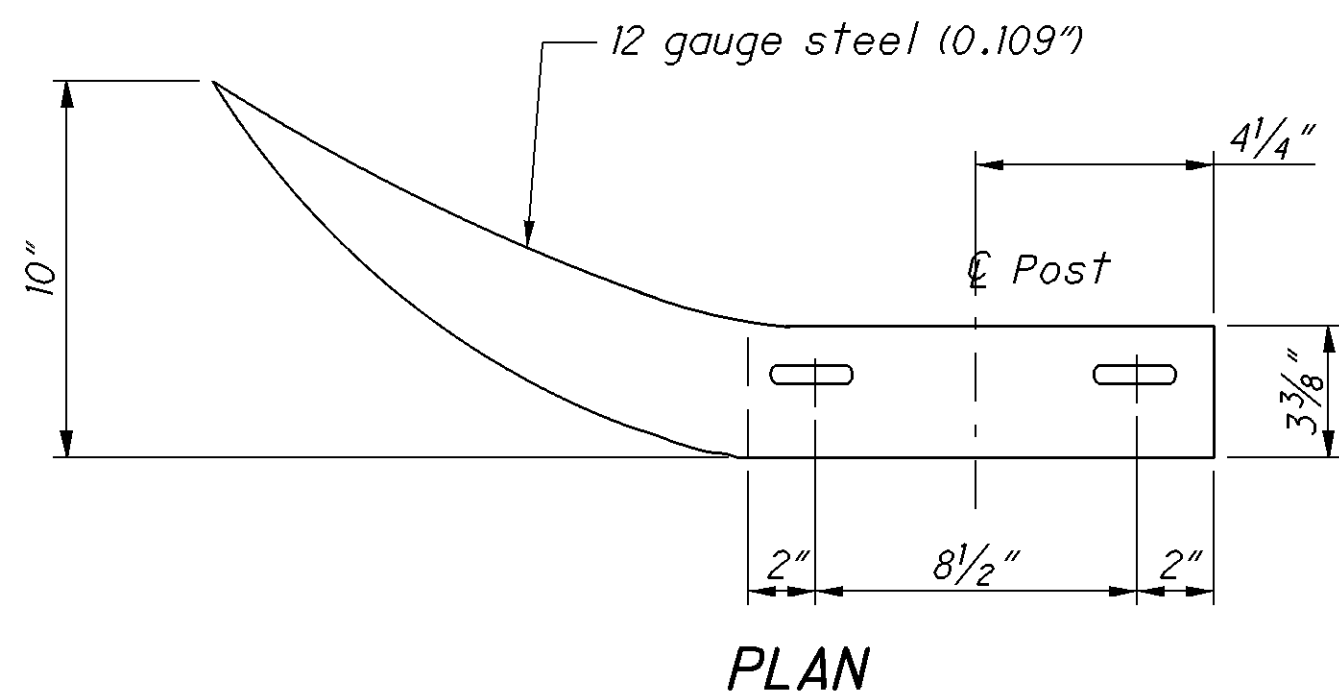


ELEVATION
TYPE 2 TRANSITION SECTION
(Asymmetric W to Thrie-Beam)

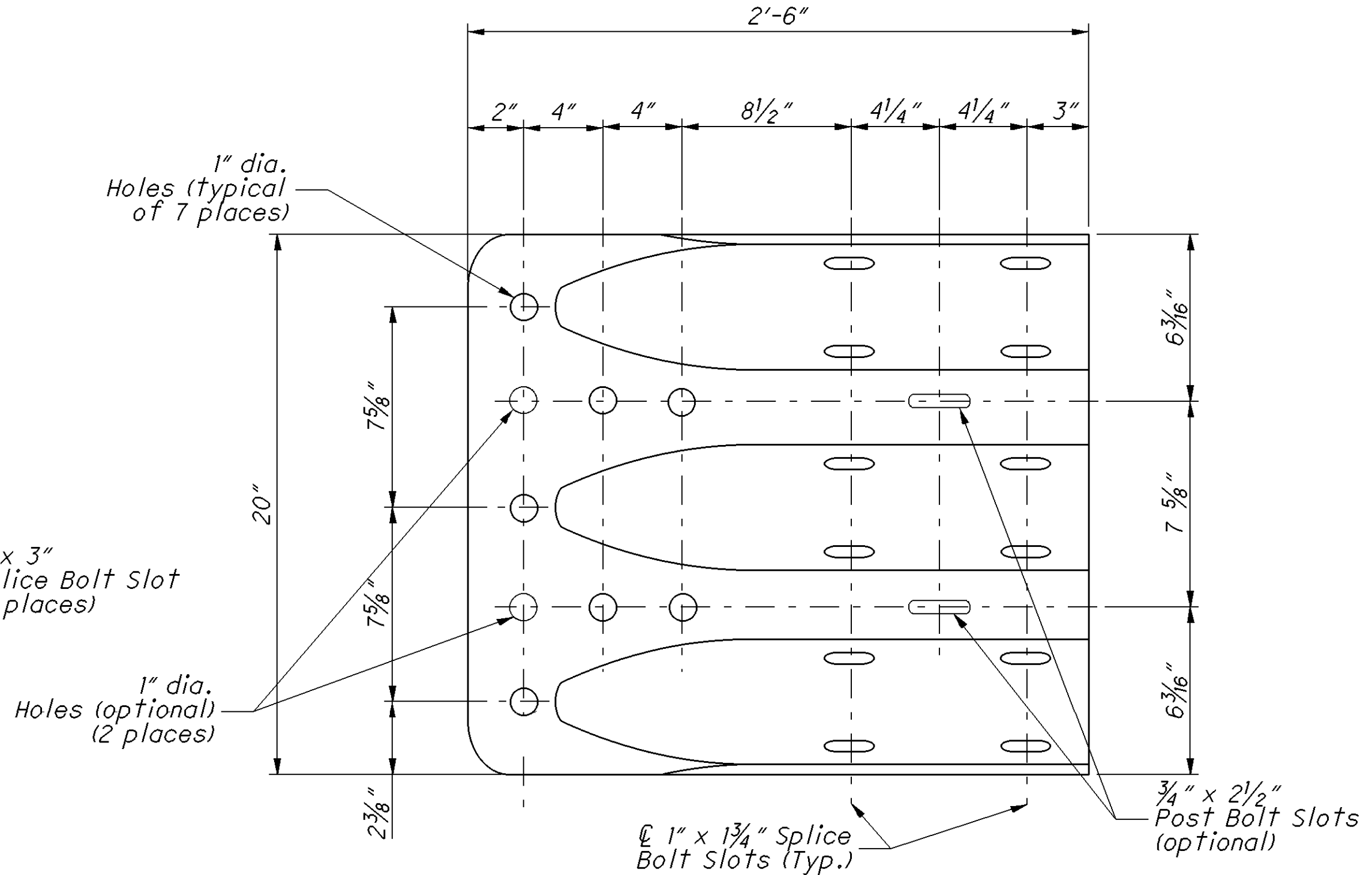
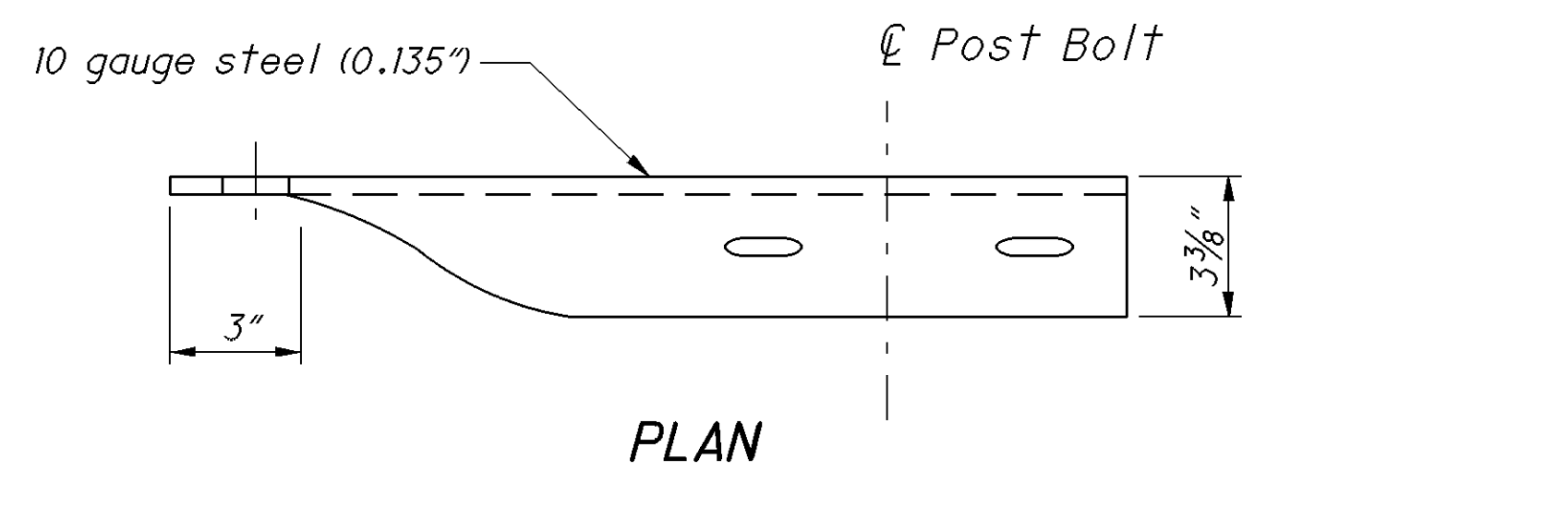
For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.



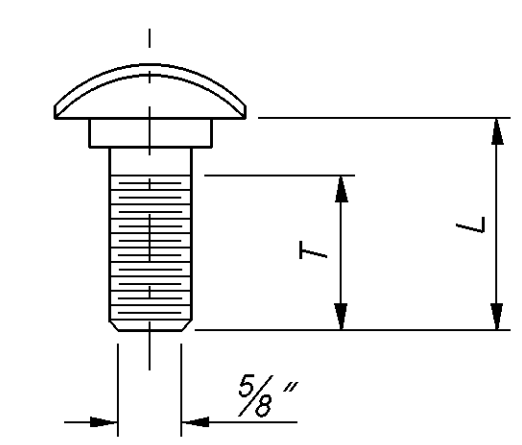
ELEVATION
W-BEAM TERMINAL CONNECTOR



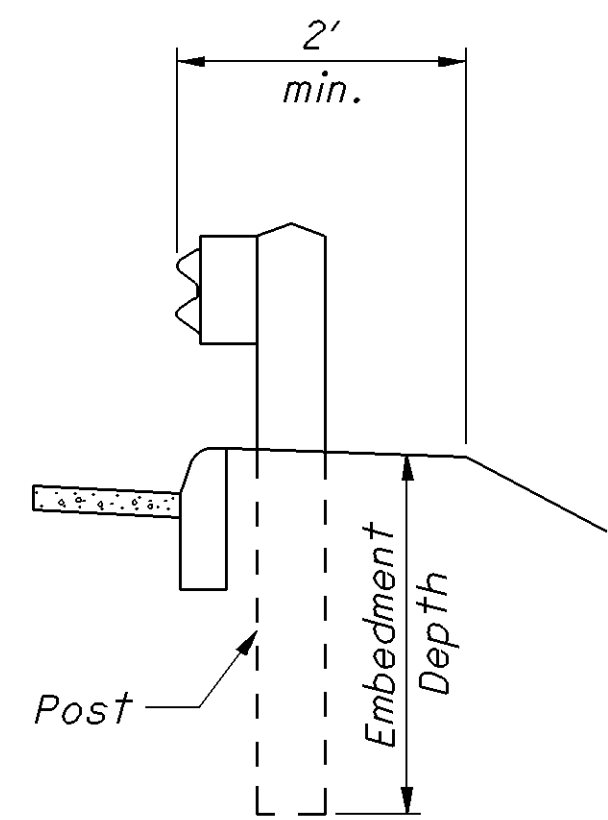
ELEVATION
W-BEAM FLARED END SECTION



ELEVATION
THRIE-BEAM TERMINAL CONNECTOR

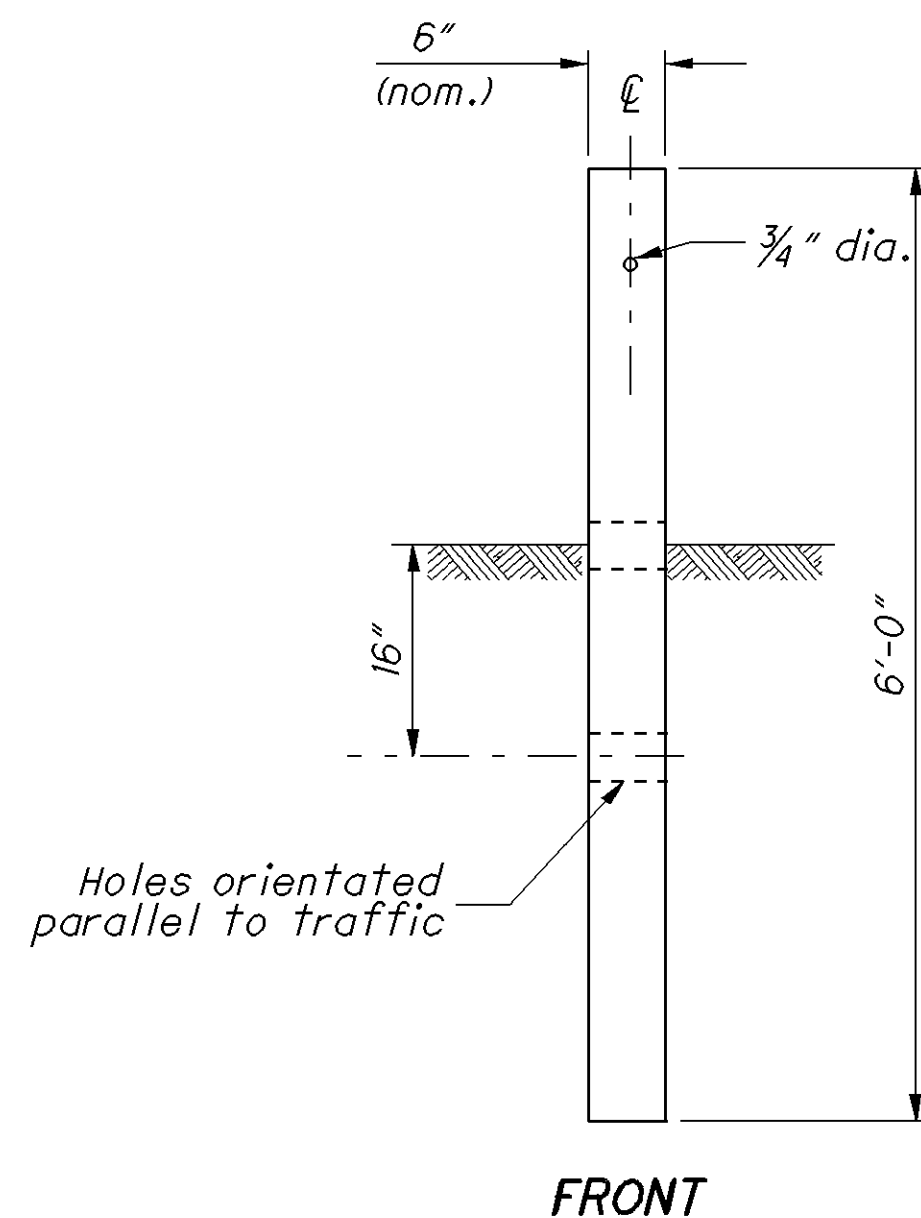


GUARDRAIL BOLT (For Post and Splice Bolts)		
L	T min.	Bolt Use
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1 1/4"	1 1/8"	Splice Bolt
WP = Wood Post WB = Wood Blockout SP = Steel Post PB = Plastic Blockout Longer Bolt may be needed for round Wood Post larger than 8" dia.		



DETAIL A

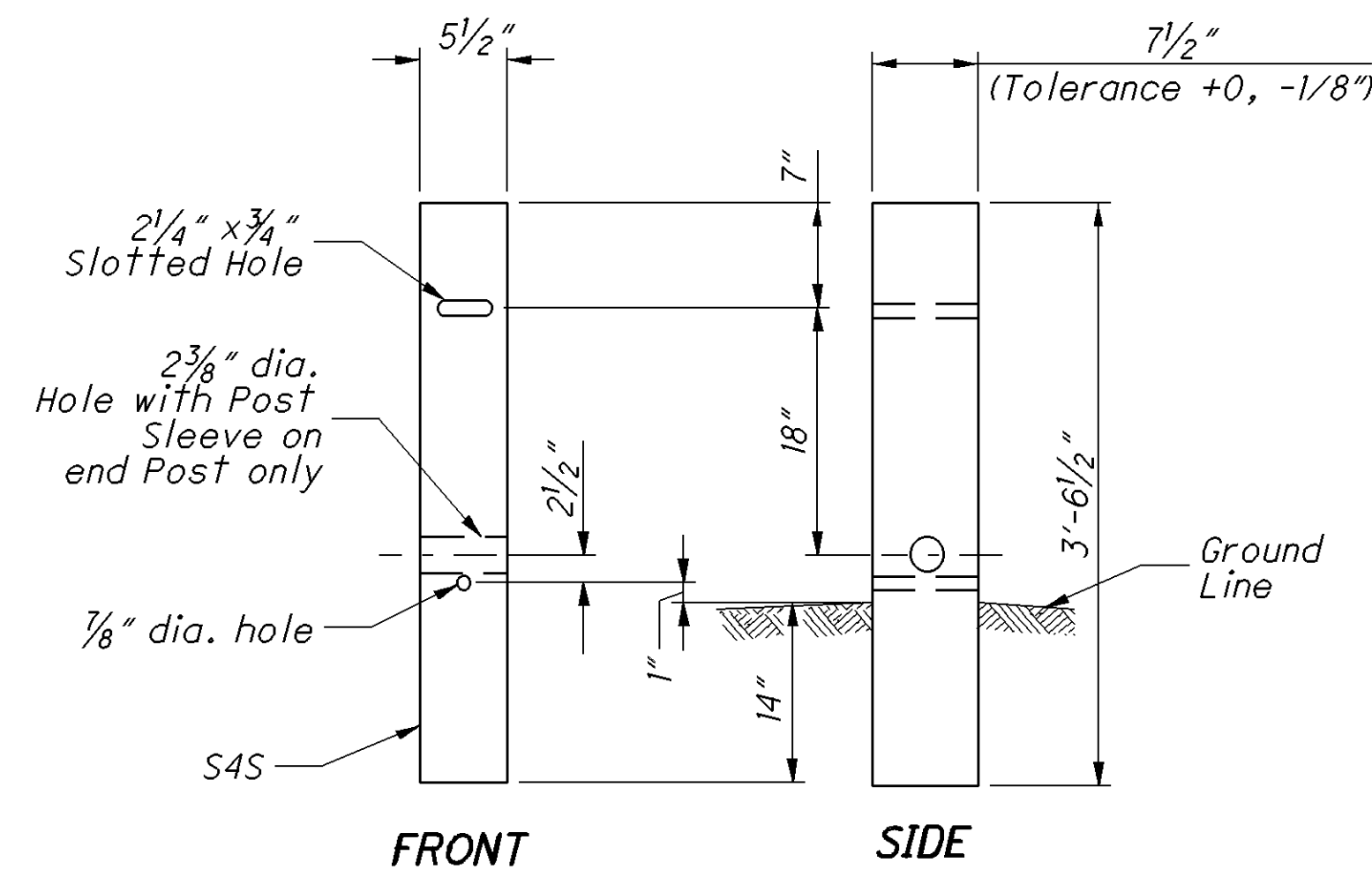
See POST EMBEDMENT DEPTH Note



FRONT

SIDE

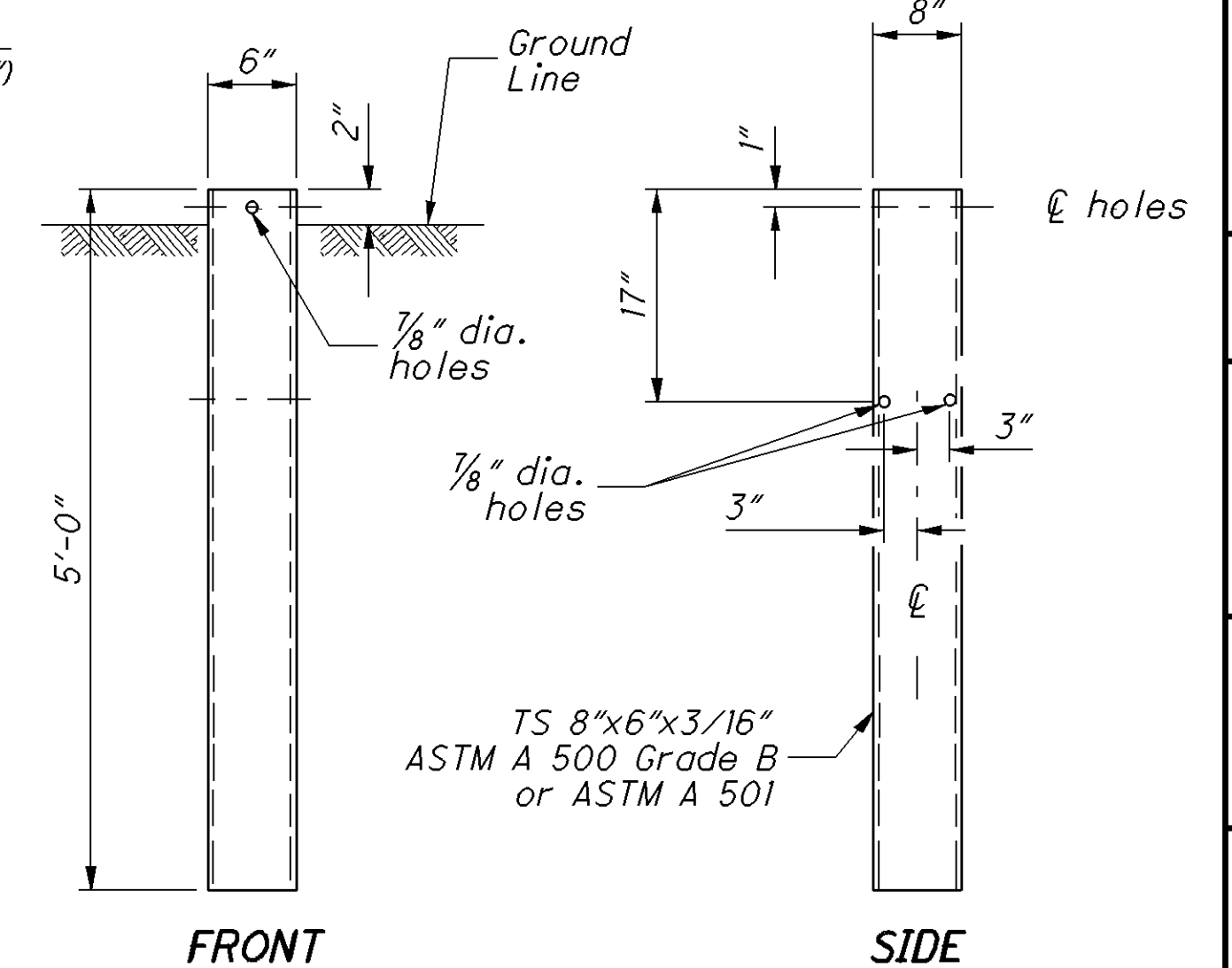
TYPE 1 BREAKAWAY CRT POST



FRONT

SIDE

TYPE 2 BREAKAWAY CRT POST



FRONT

SIDE

STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: For initial installation, construct the guardrail within $\pm 1"$ of the standard height, h , or **29'** to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)
When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within $\pm 2.5"$ of the standard height.

POST EMBEDMENT DEPTH: Standard embedment is 3'-5" min. Where less than 2' of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5'-5" embedment depth is provided. Payment for the longer posts will be made at the unit price bid for **ITEM 606 - GUARDRAIL POST, 9', Each.**

SPECIAL POST MOUNTINGS: Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on **SCD GR-2.2.**

Install posts located over a footing with a cover of less than 2'-6" with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of **SCD GR-2.2**, may be used as an alternative attachment method.) Where the cover is between 2'-6" and 3'-5", the footing anchor may be omitted and the post encased instead with 4" (min.) of concrete.

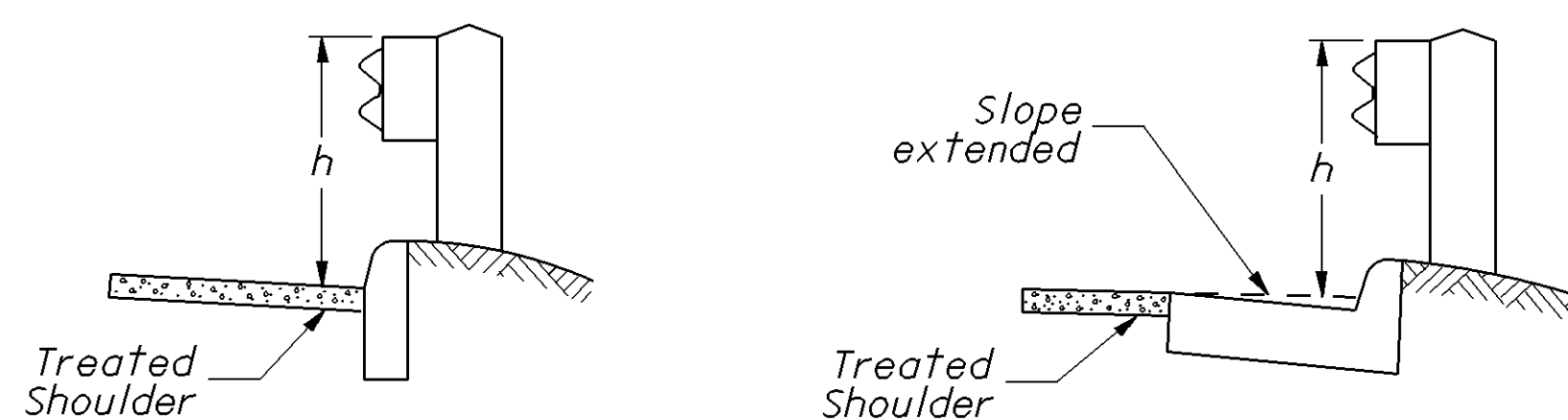
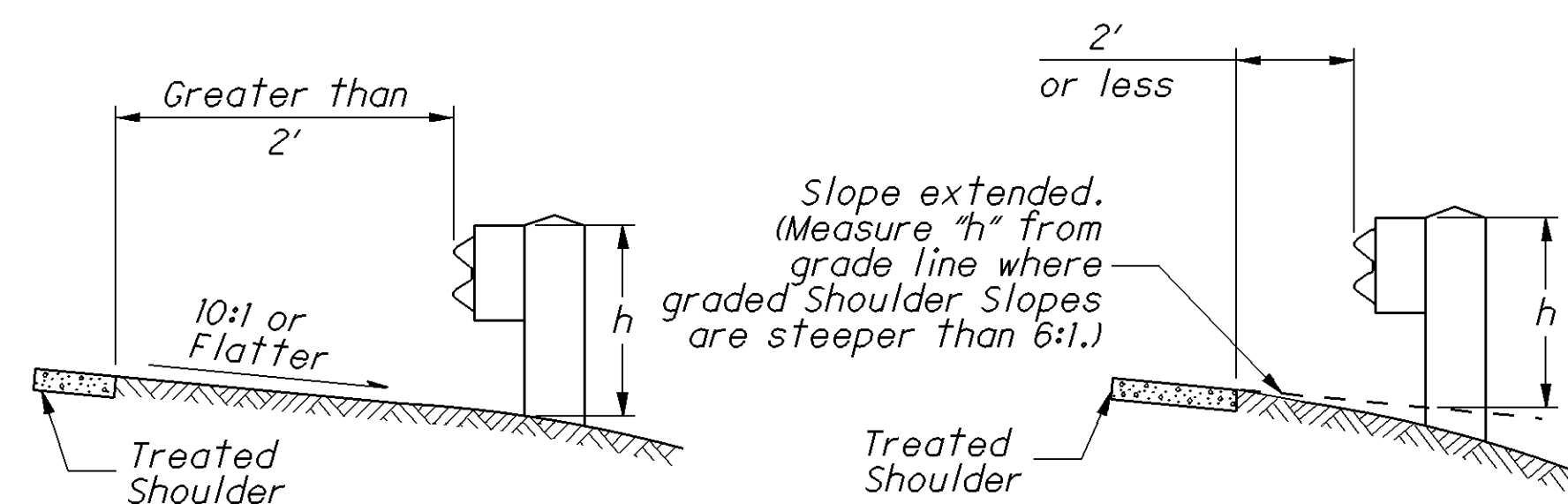
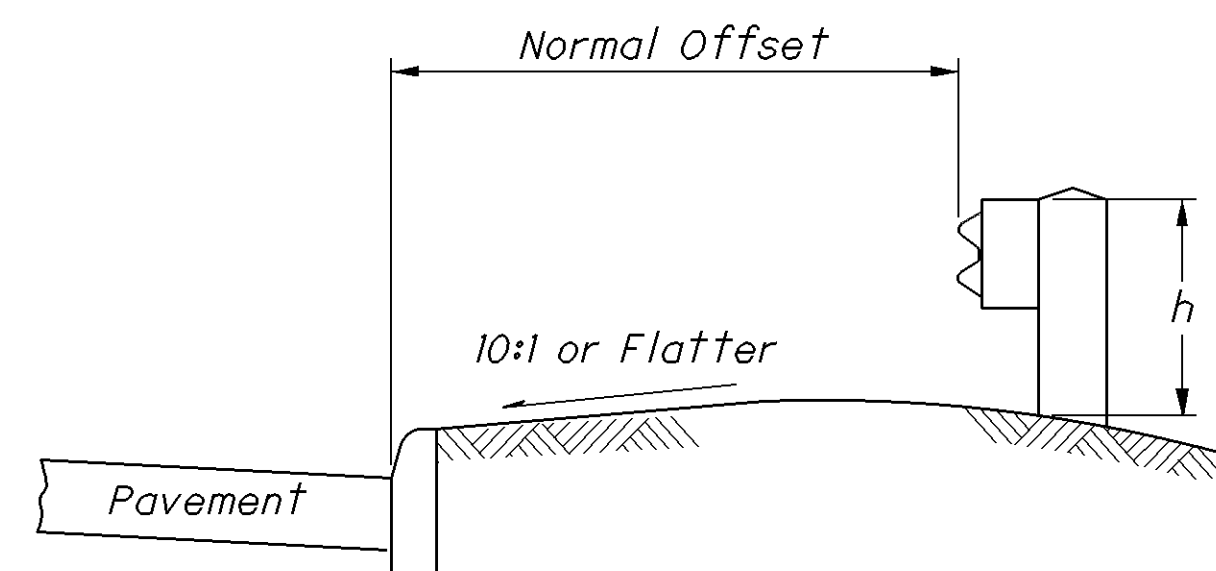
Do not drive posts located over a culvert with less than 4'-3" of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3'-5", encase the post with a minimum of 4" concrete.

All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

ANCHORS: Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.

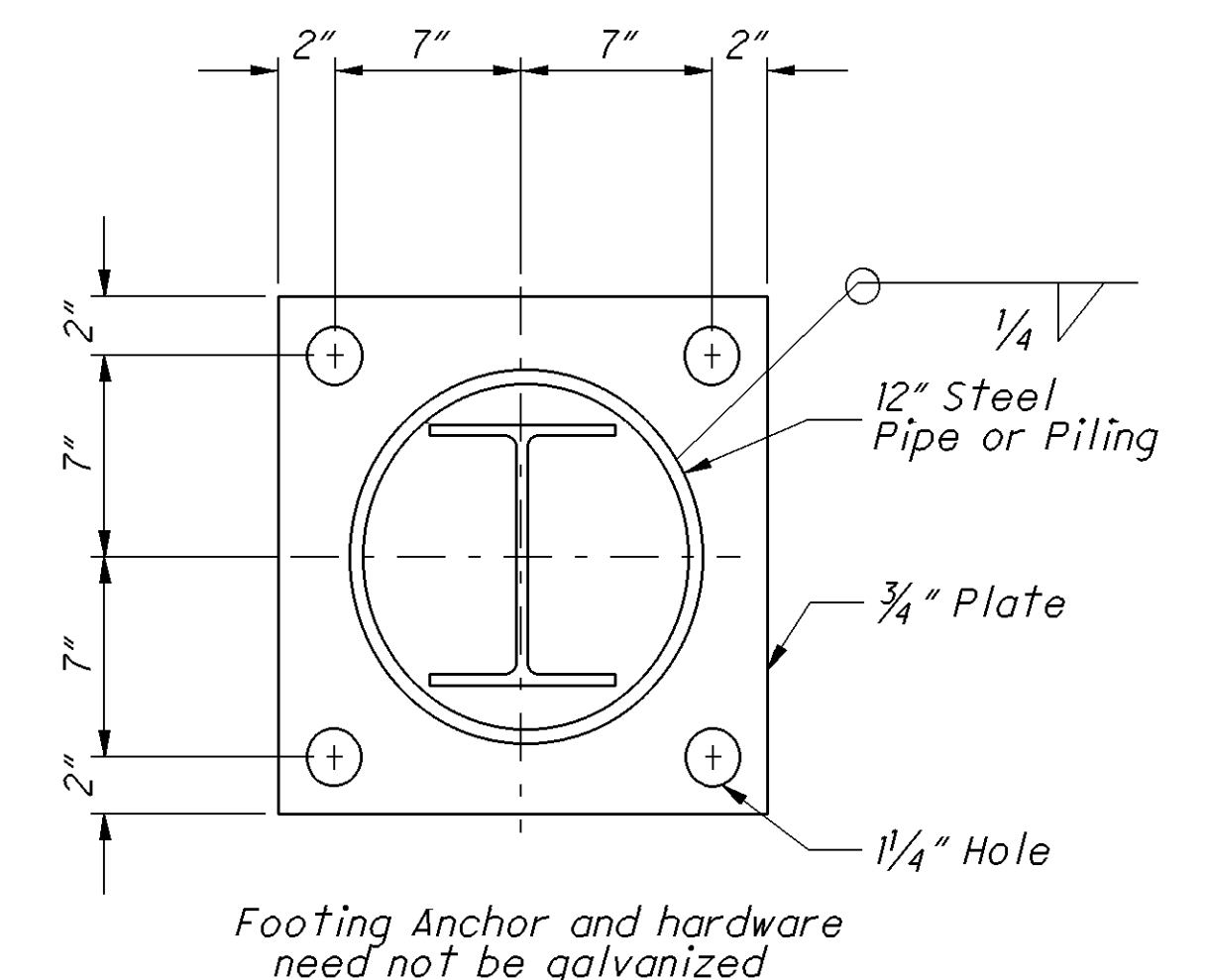
Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)

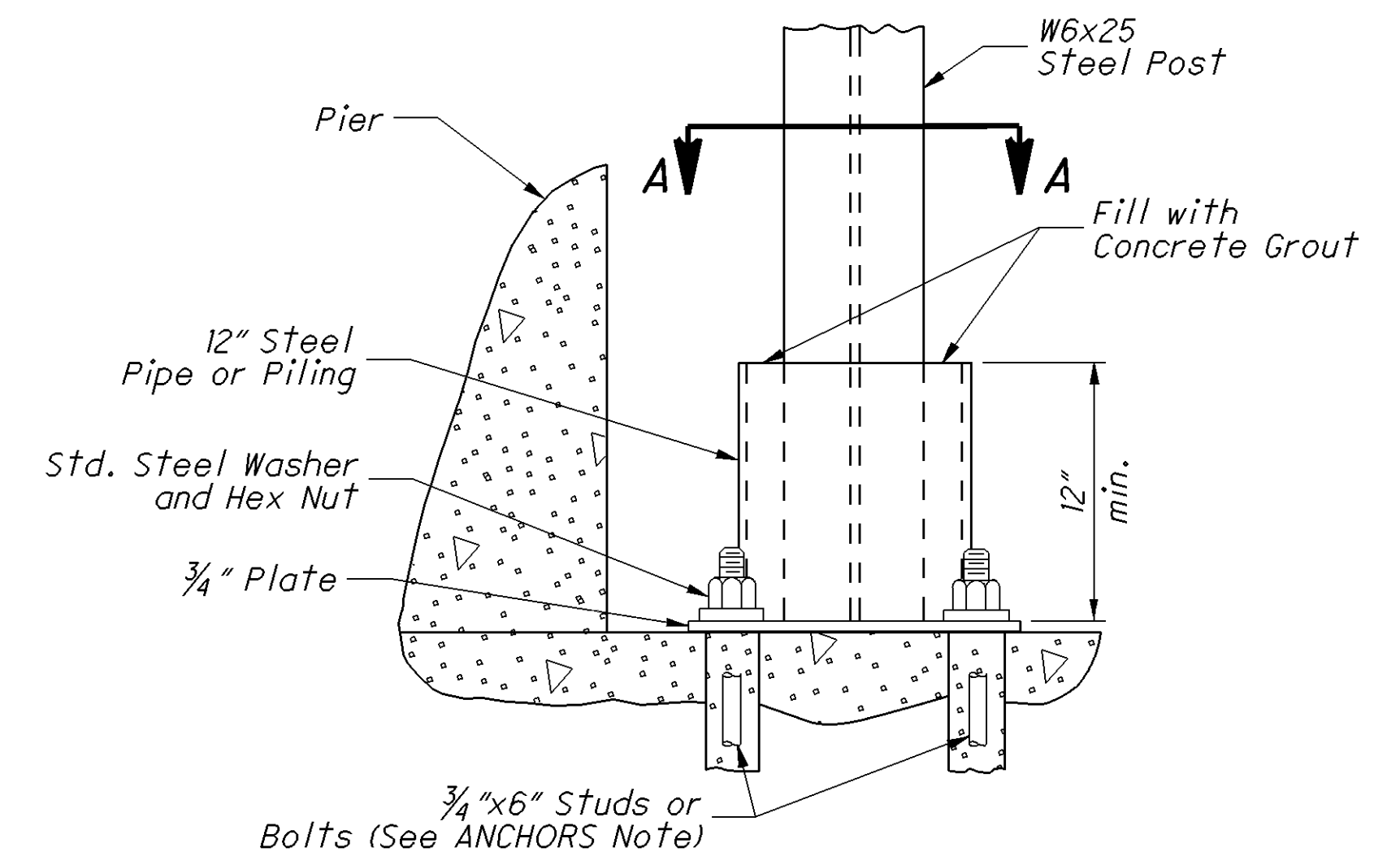


h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT

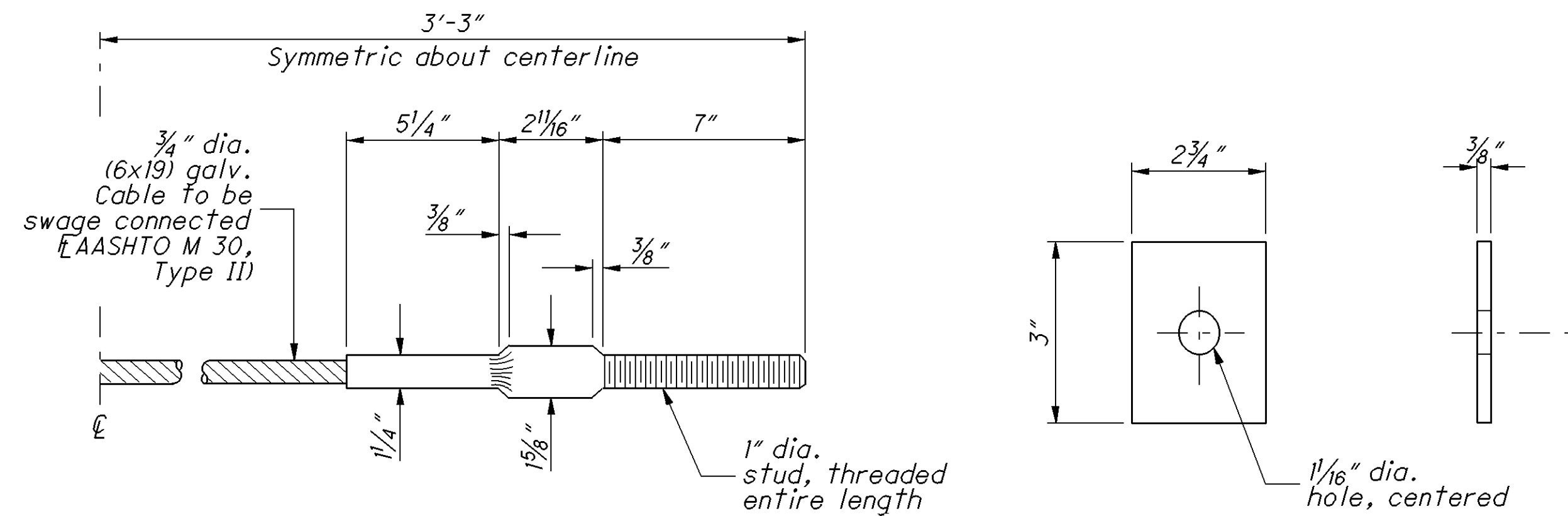


SECTION A-A



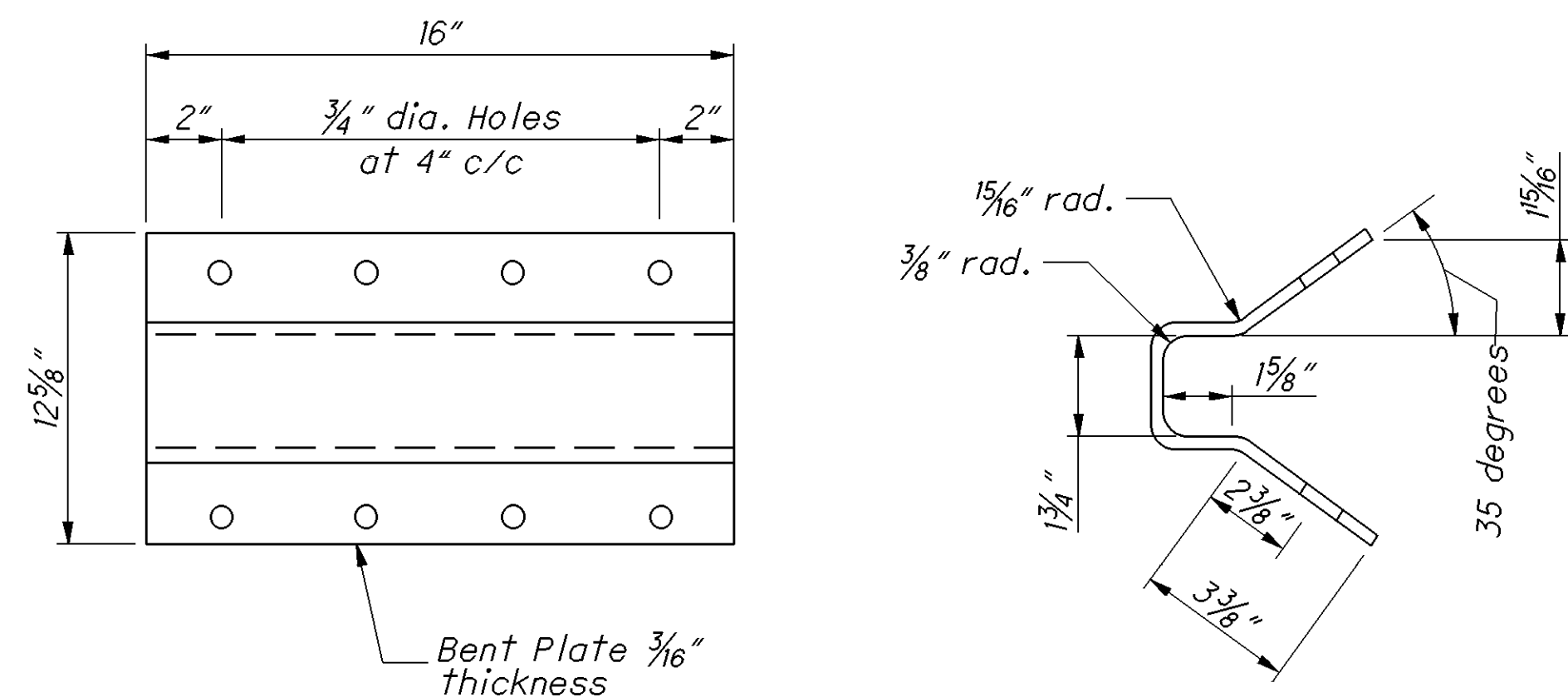
ELEVATION FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

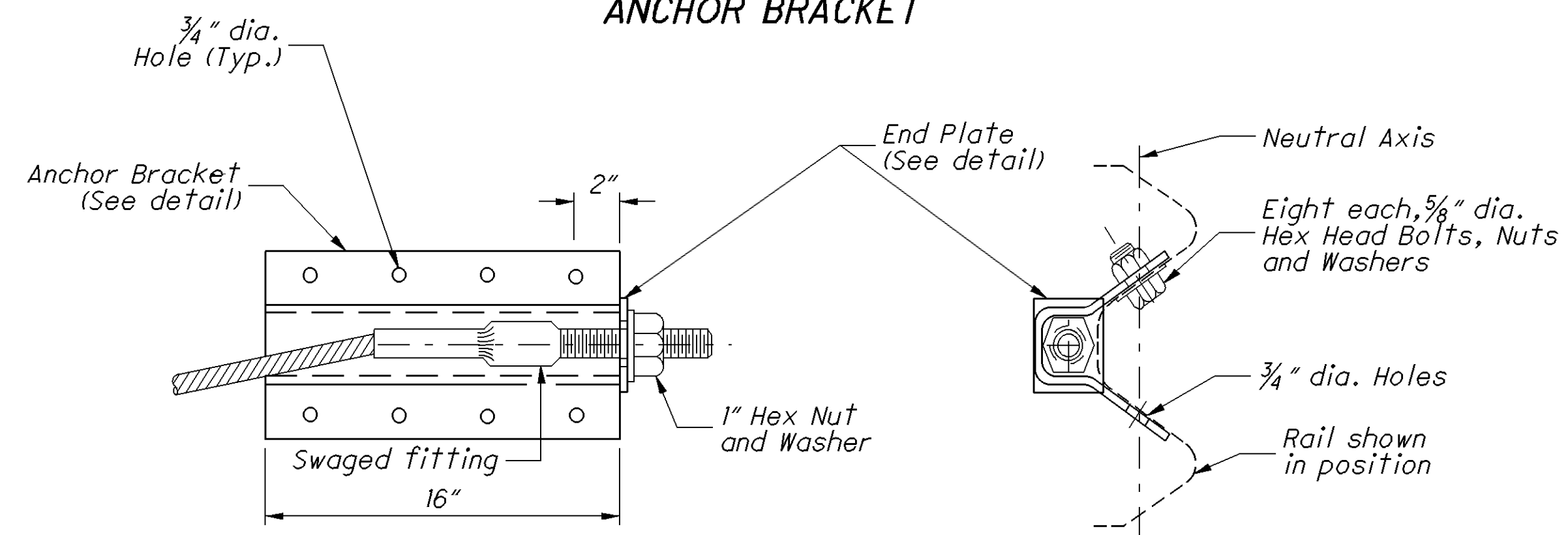


STANDARD SWAGED FITTING AND STUD
CABLE ANCHOR

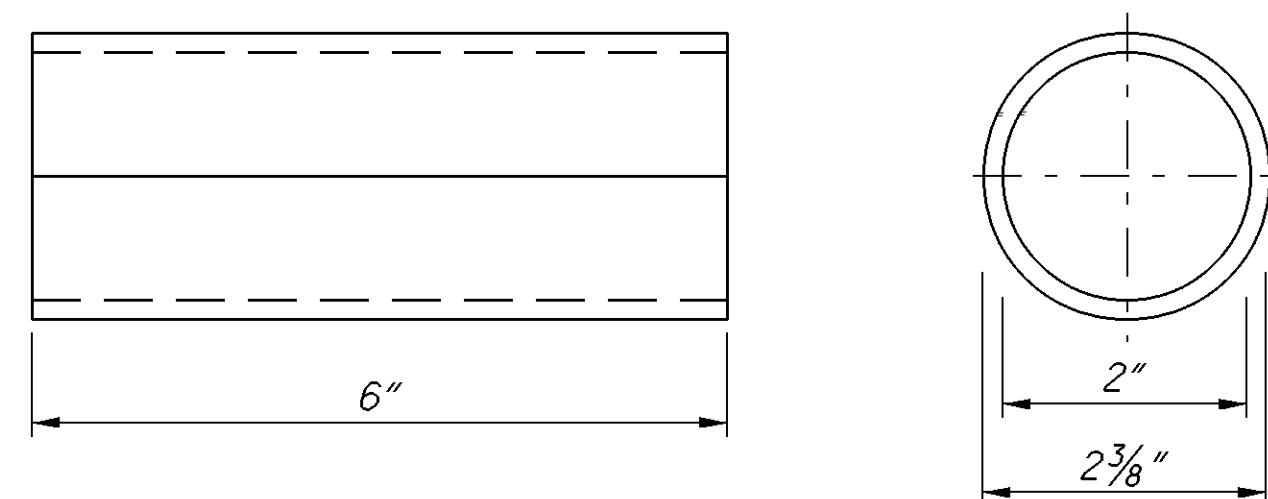
END PLATE



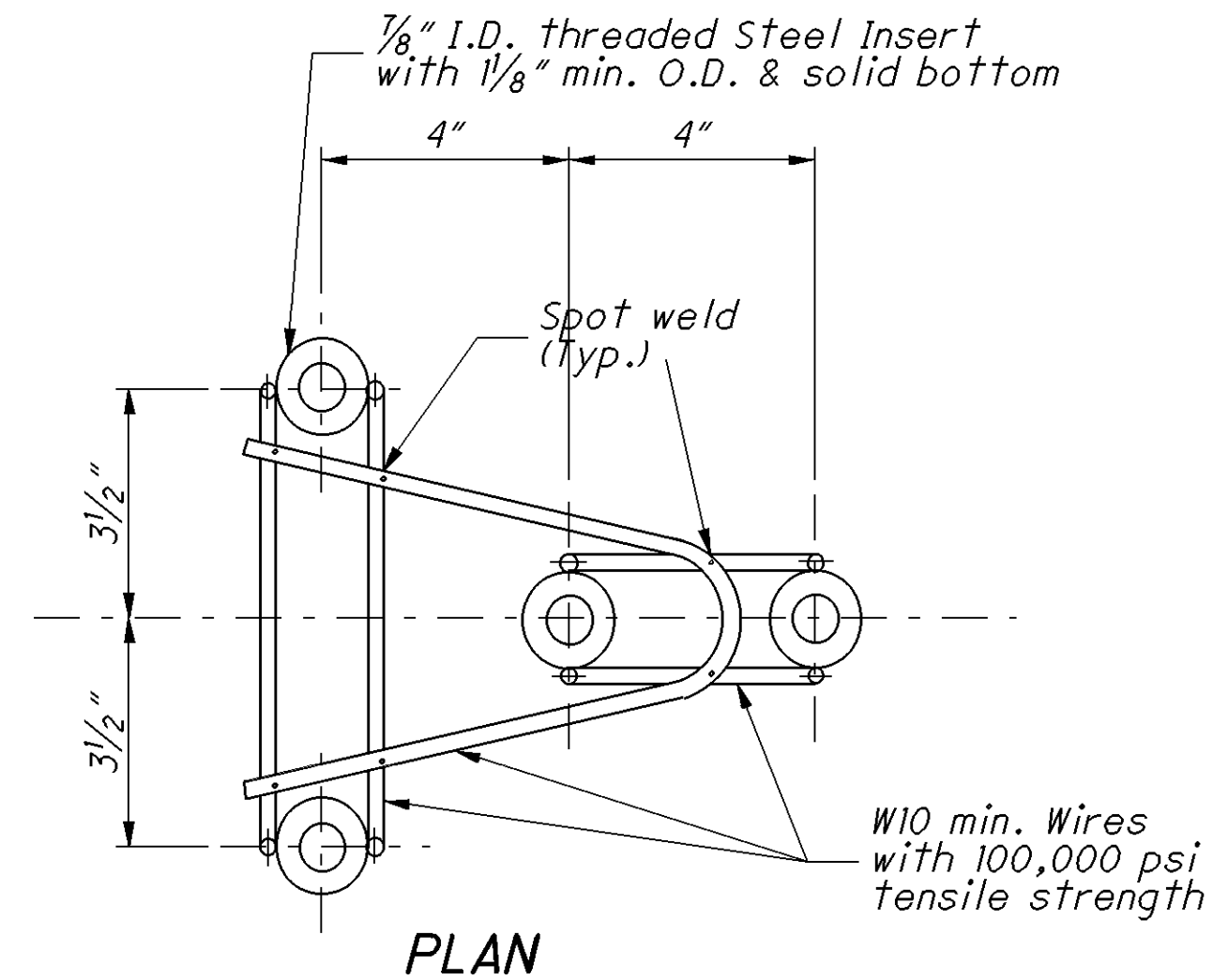
ANCHOR BRACKET



ANCHOR BRACKET ASSEMBLY DETAILS



POST SLEEVE

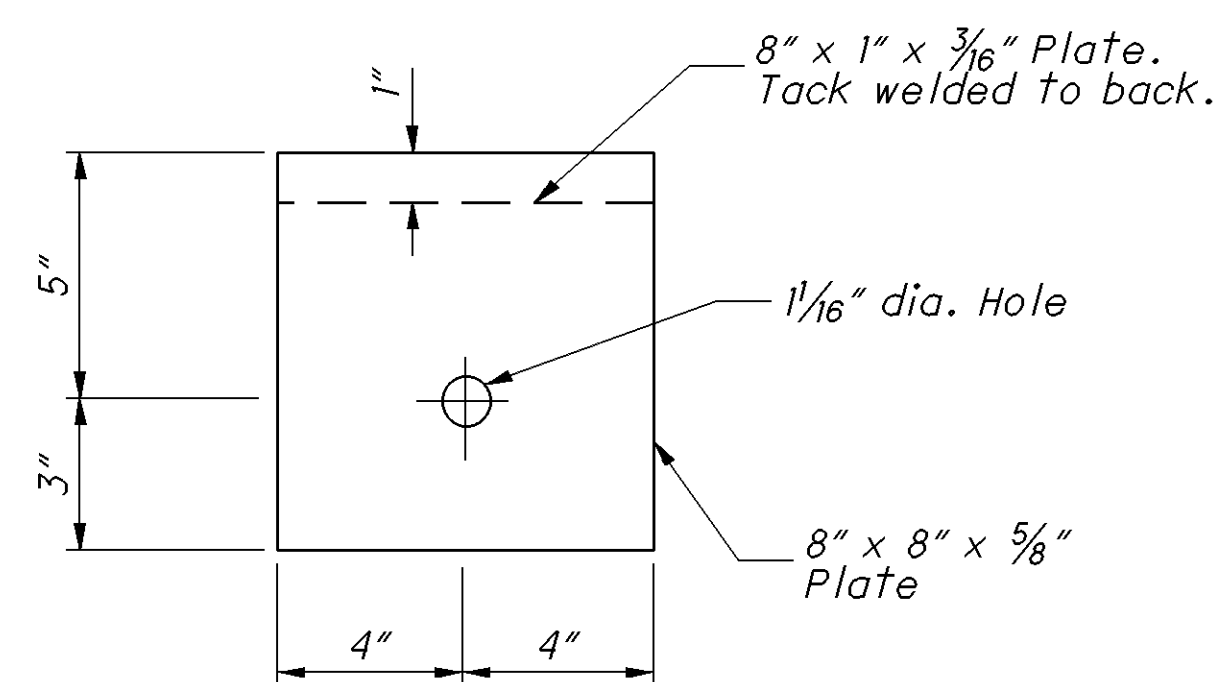


PLAN

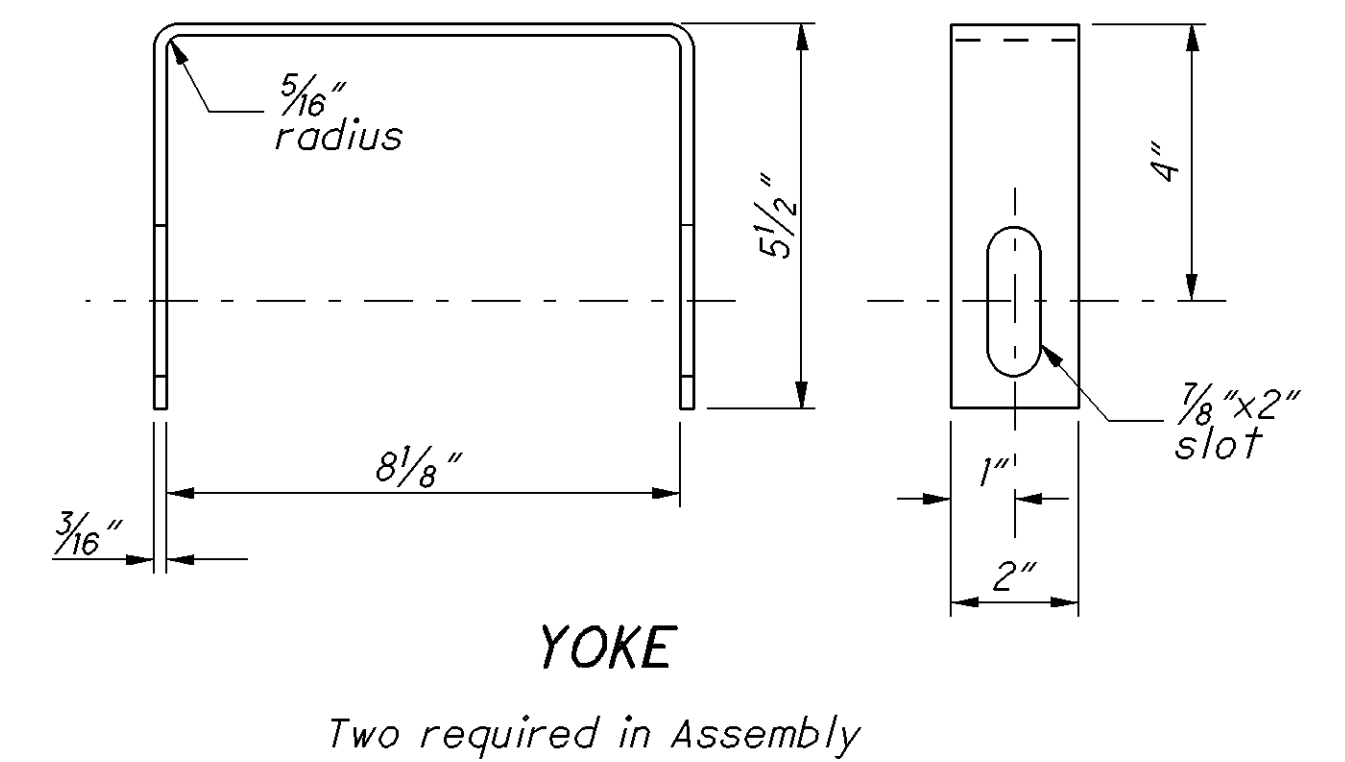
ELEVATION

CONCRETE INSERT ANCHOR ASSEMBLY
(W-BEAM ONLY)

See ANCHORS and PROTECTIVE
COATINGS Notes on Sheet 2

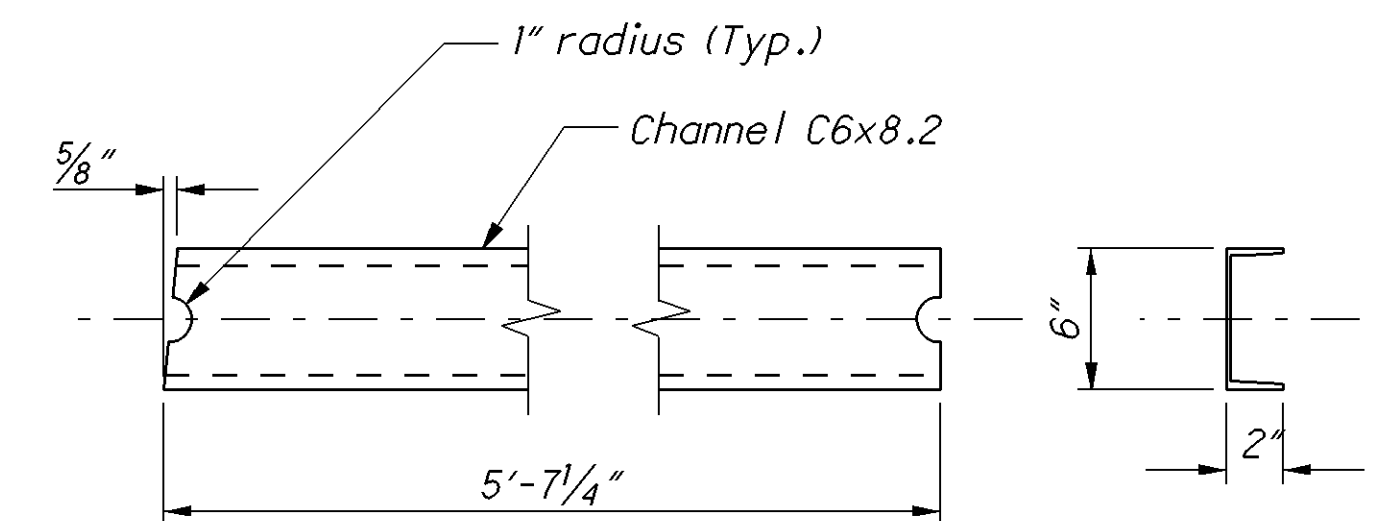


BEARING PLATE

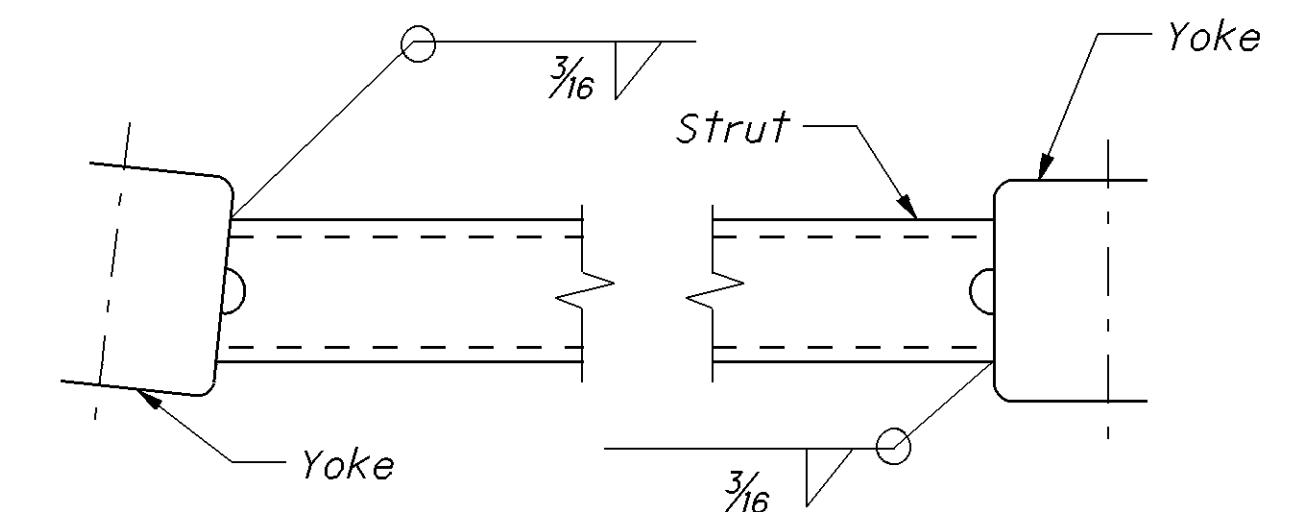


YOKE

Two required in Assembly

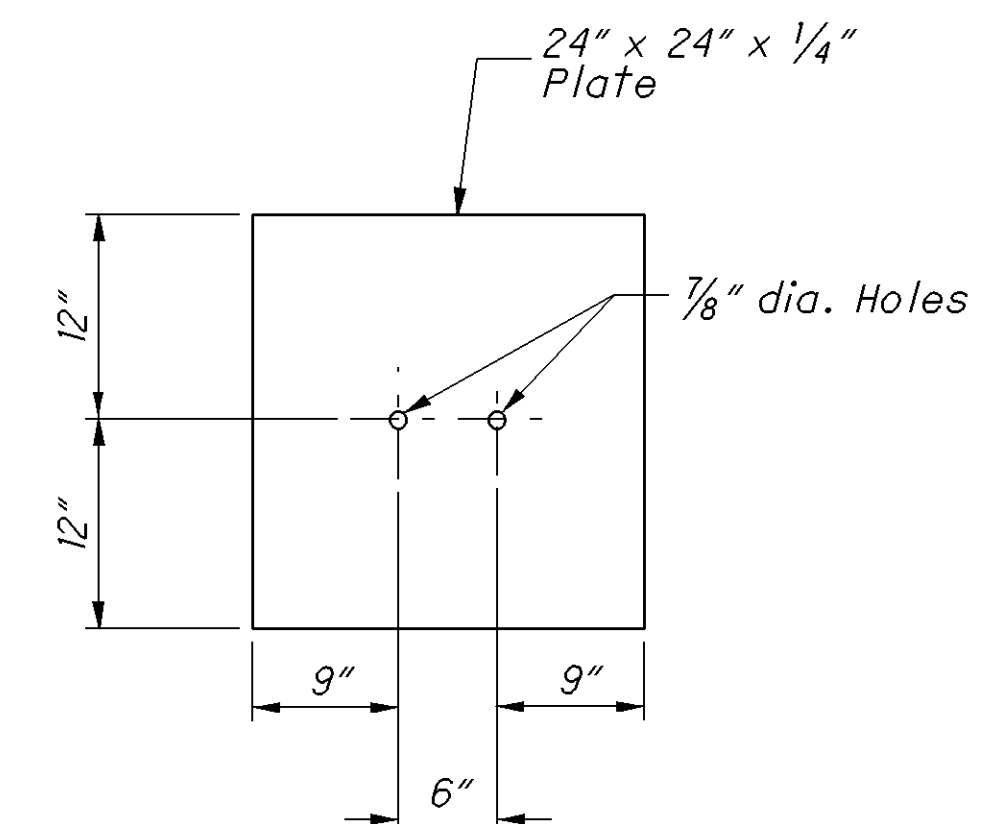


STRUT

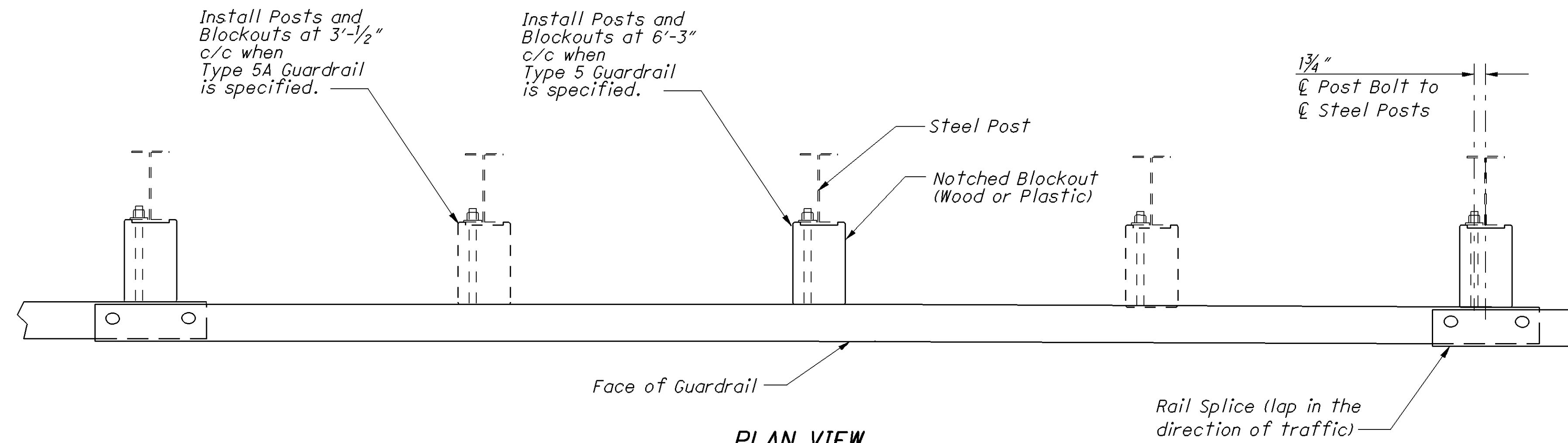


Channel legs shown down. For opposite
hand, install Channel legs up.

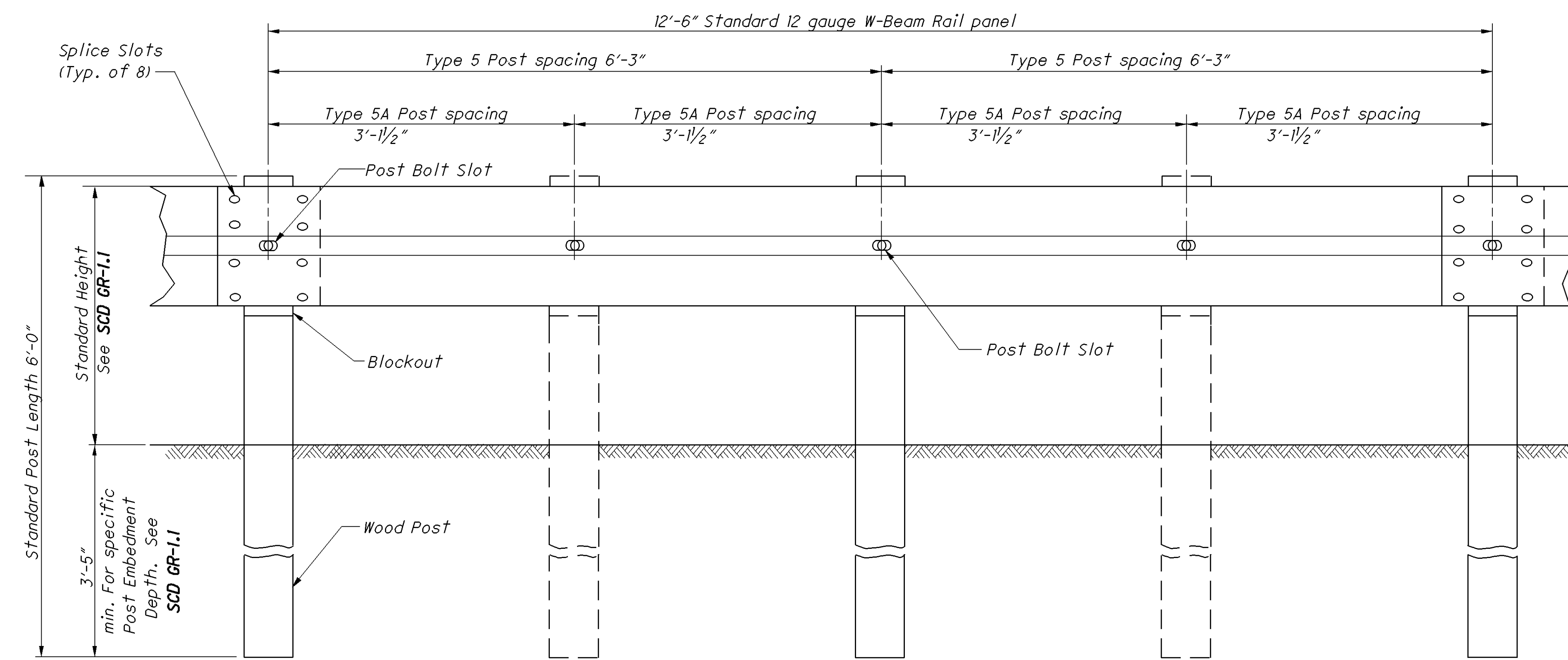
STRUT AND YOKE ASSEMBLY



SOIL PLATE



PLAN VIEW
(Steel Posts shown)



ELEVATION
(Wood Posts shown)

NOTES

RAIL: Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.

POSTS: Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:

- Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.
- Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.
- Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the **Office of Materials Management's** Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.

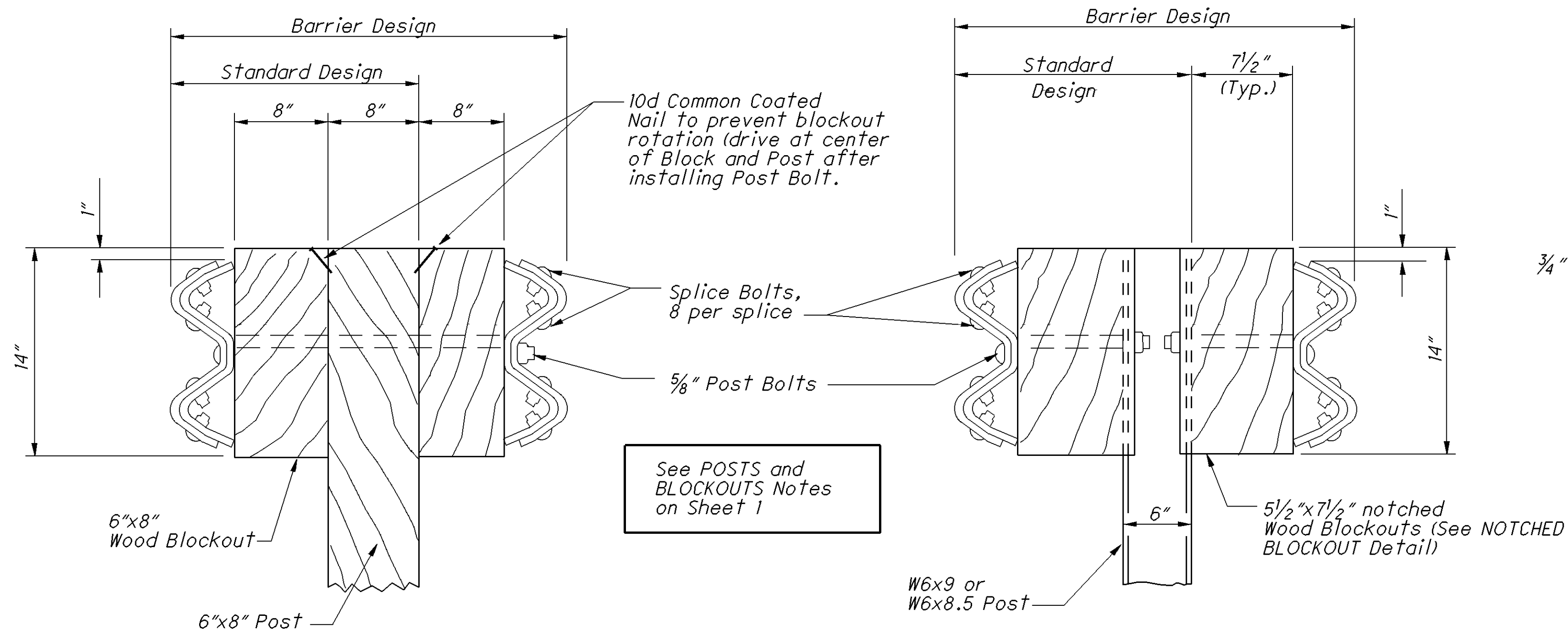
BLOCKOUTS: Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the **Office of Roadway Engineering**.

WASHERS: Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.

DELINEATION: For barrier reflectors, see CMS 626.

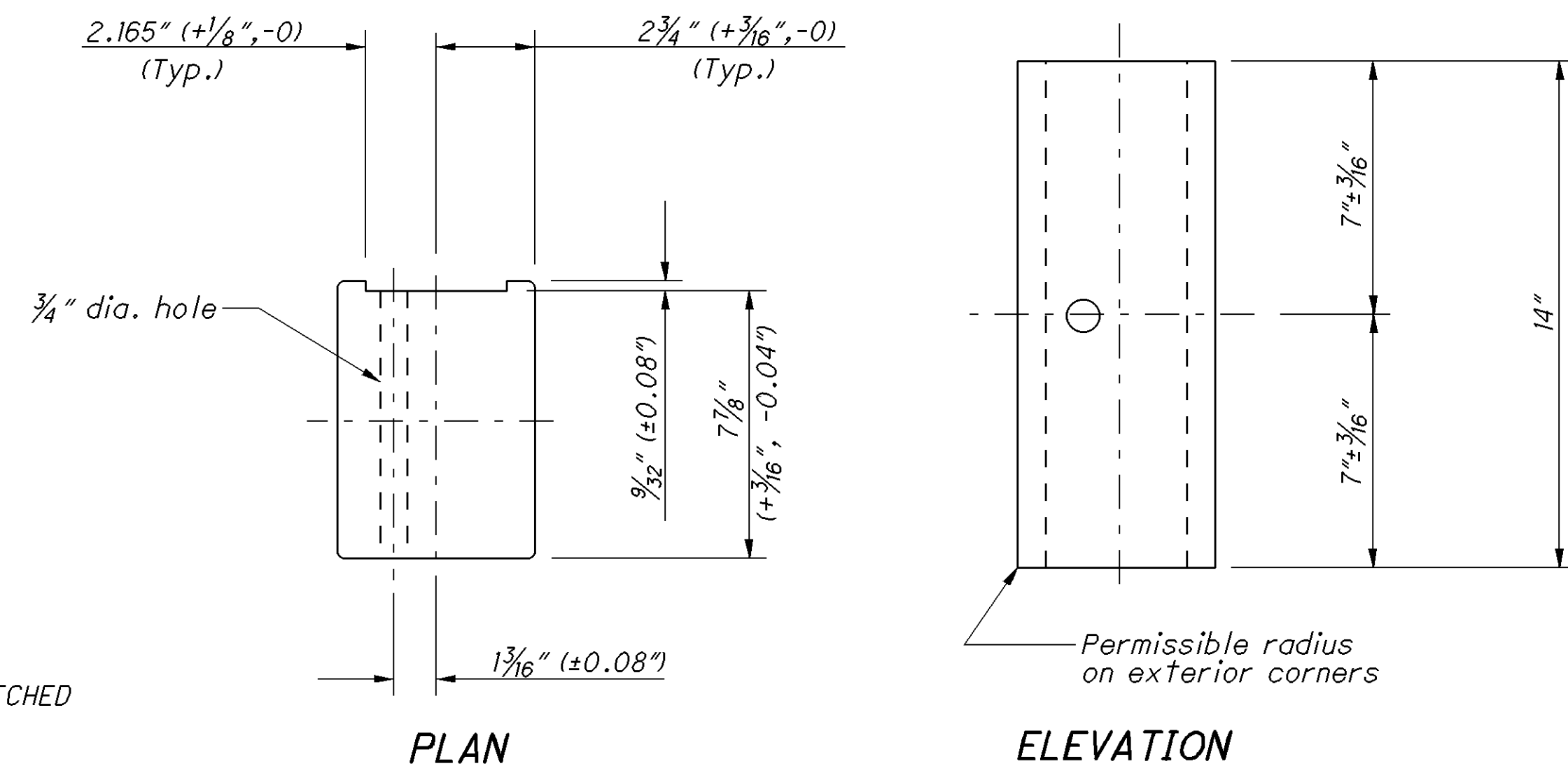
MISCELLANEOUS: For other guardrail details, see SCD GR-1.1.

STEEL BEAM POSTS (English)				
Size	Beam depth	Flange width	Flange thickness	Web thickness
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

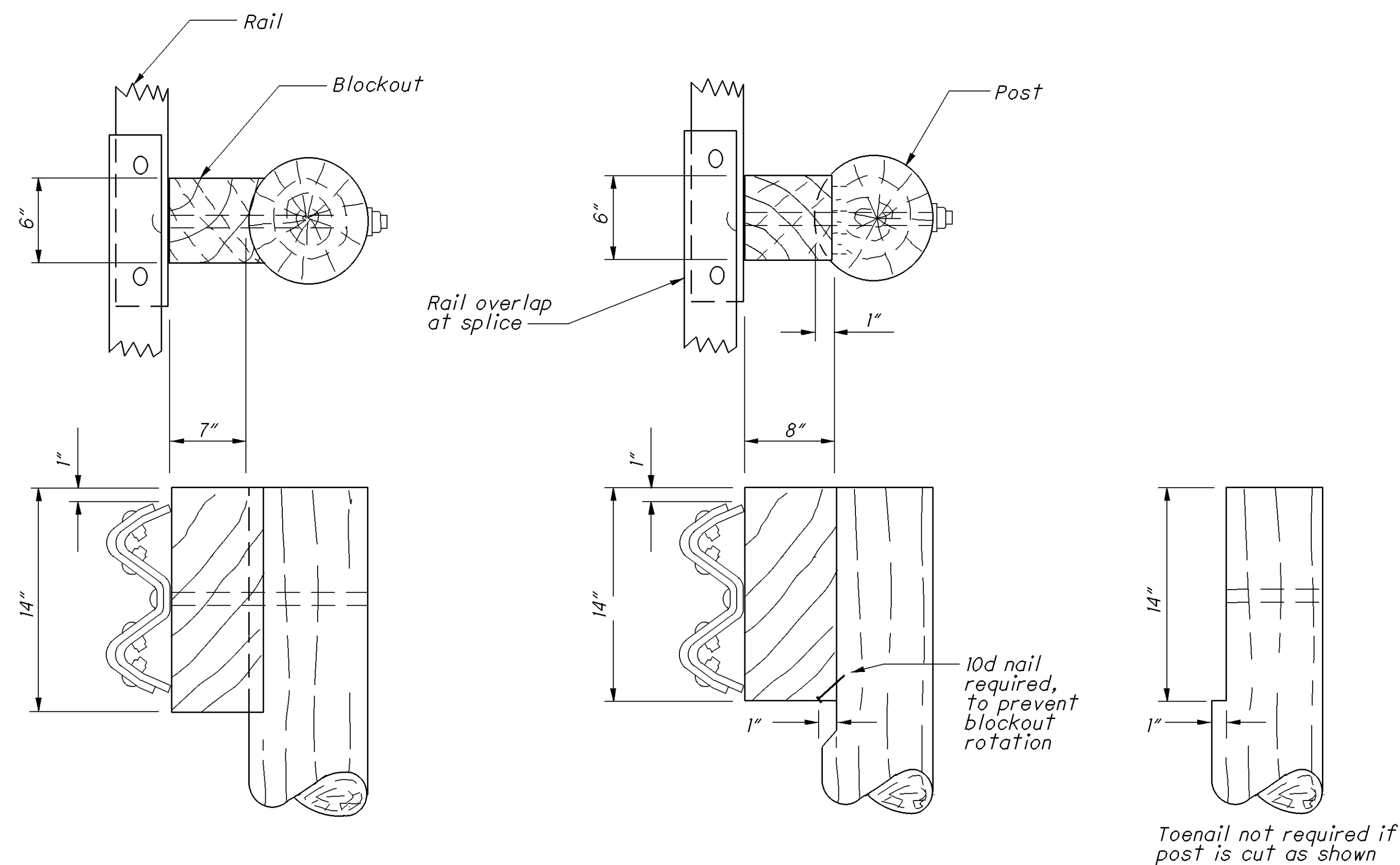


SQUARE WOOD POST

STEEL POST
See POSTS Note, Sheet 1



NOTCHED BLOCKOUTS FOR STEEL POSTS
See BLOCKOUTS Note on Sheet 1

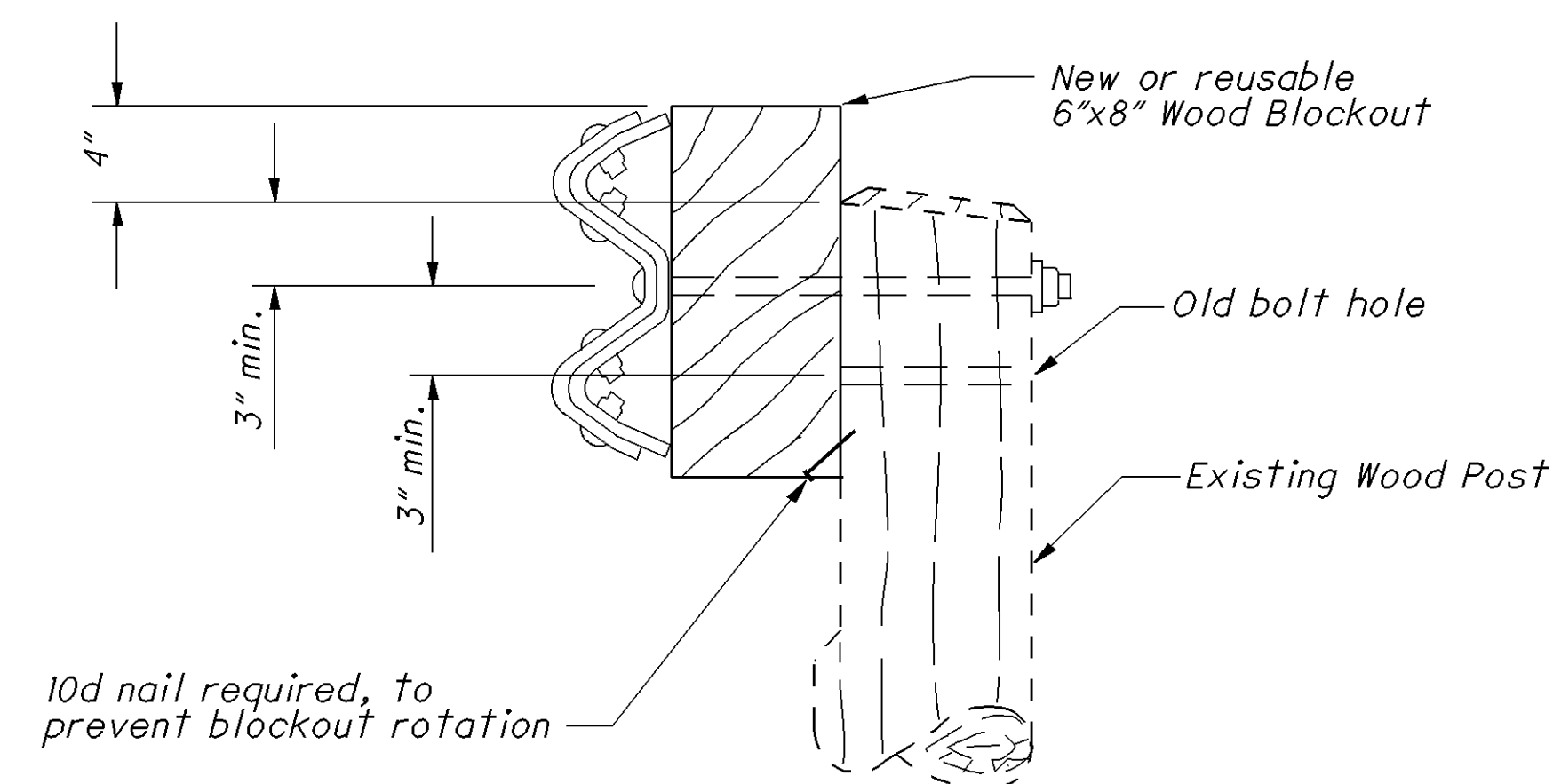


Method 1
Routed Blockout

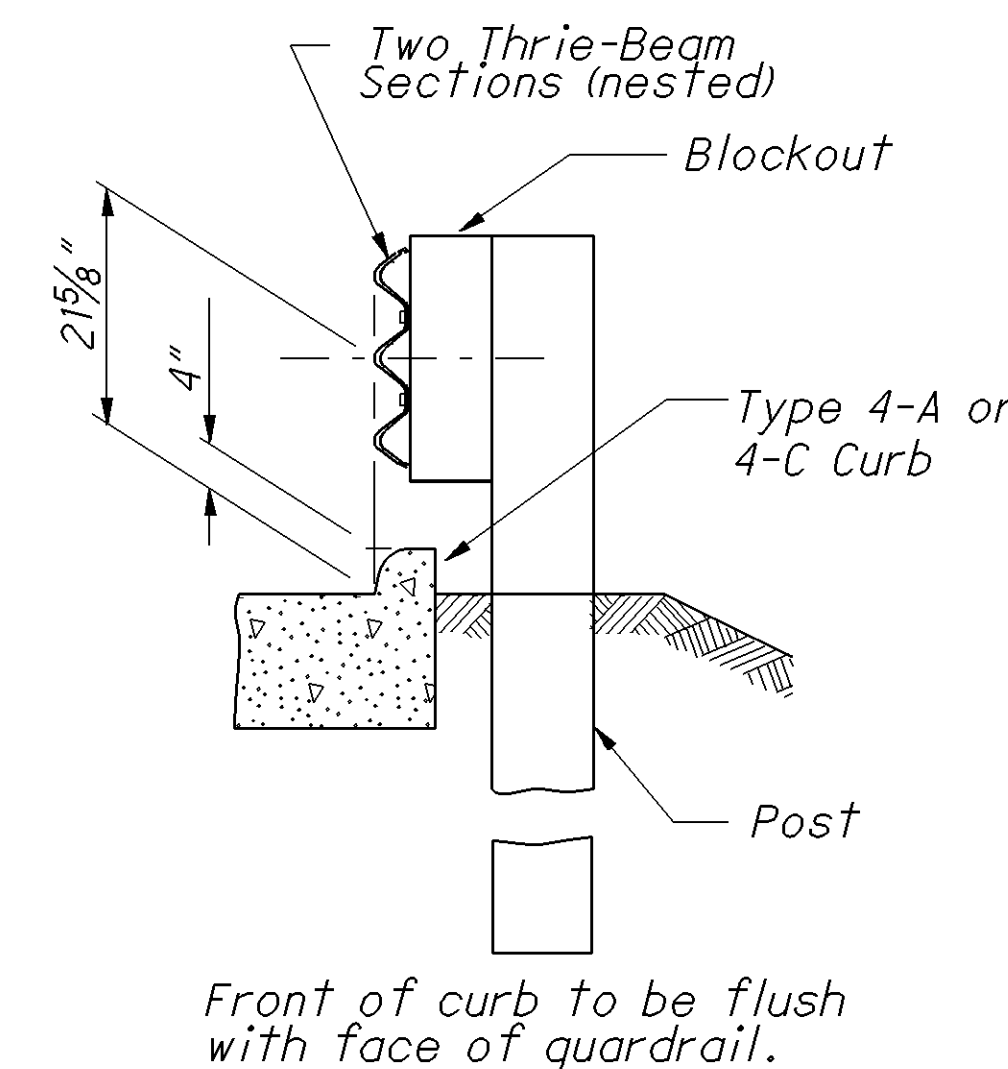
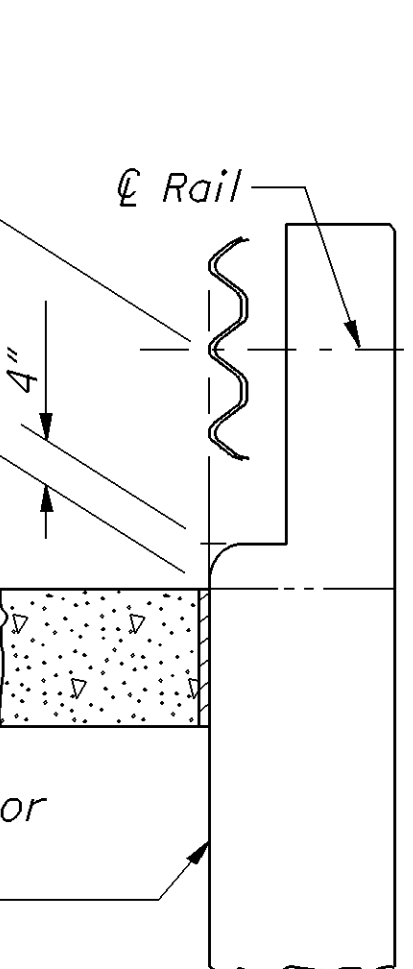
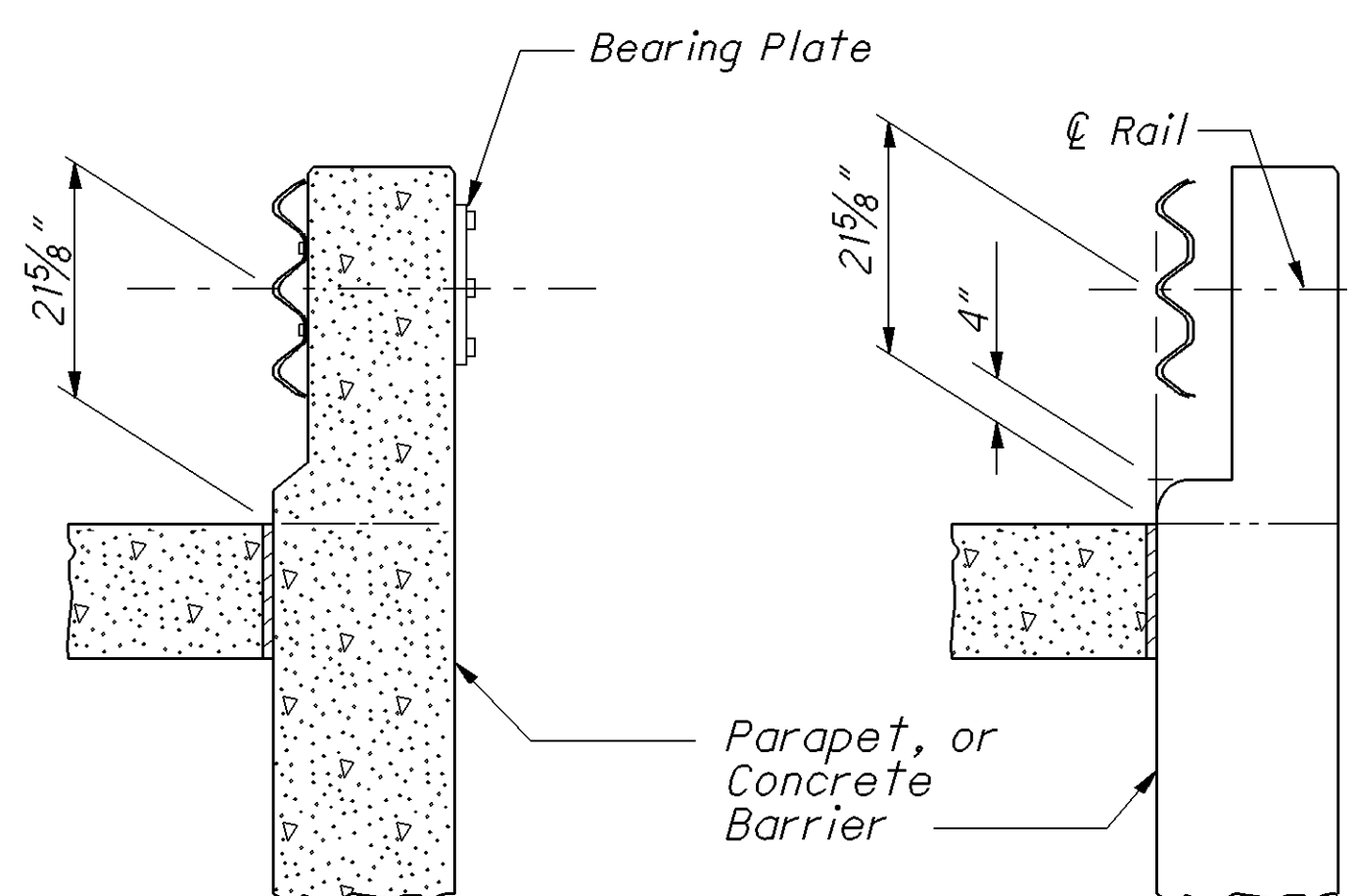
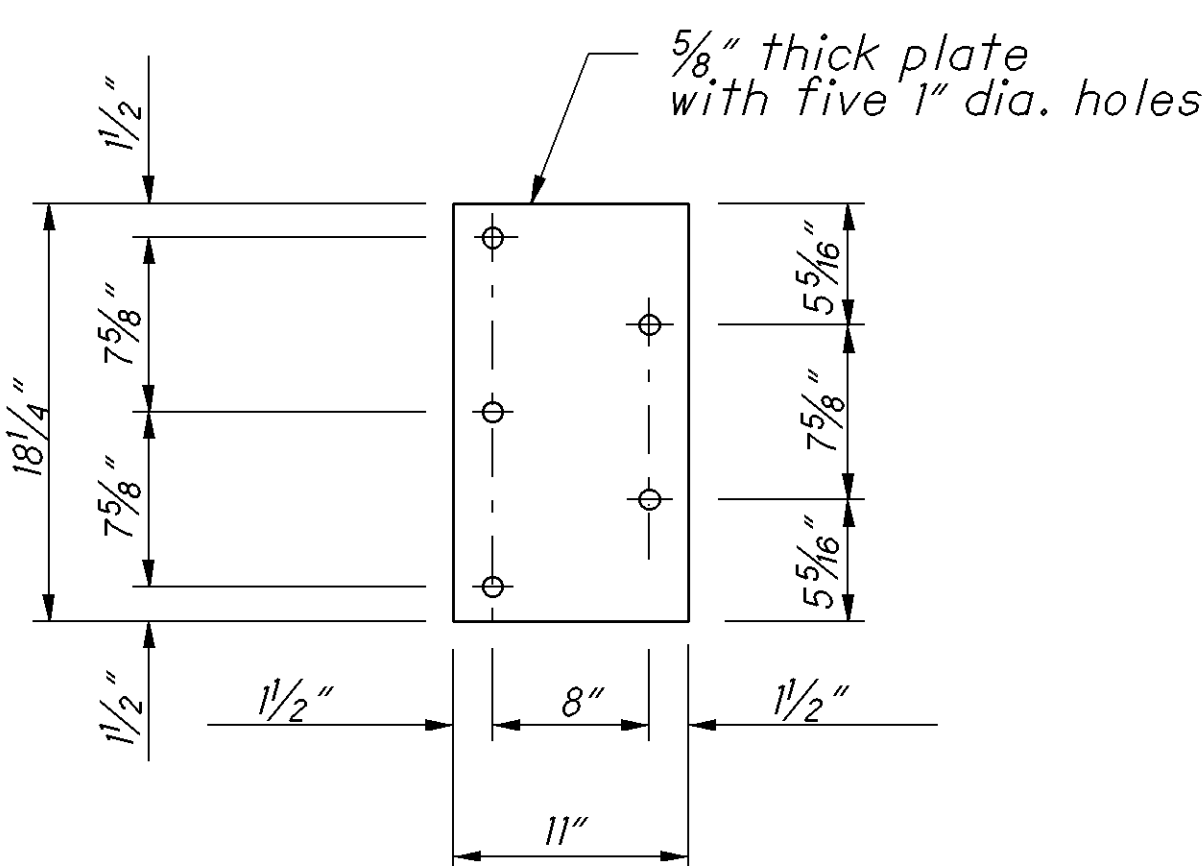
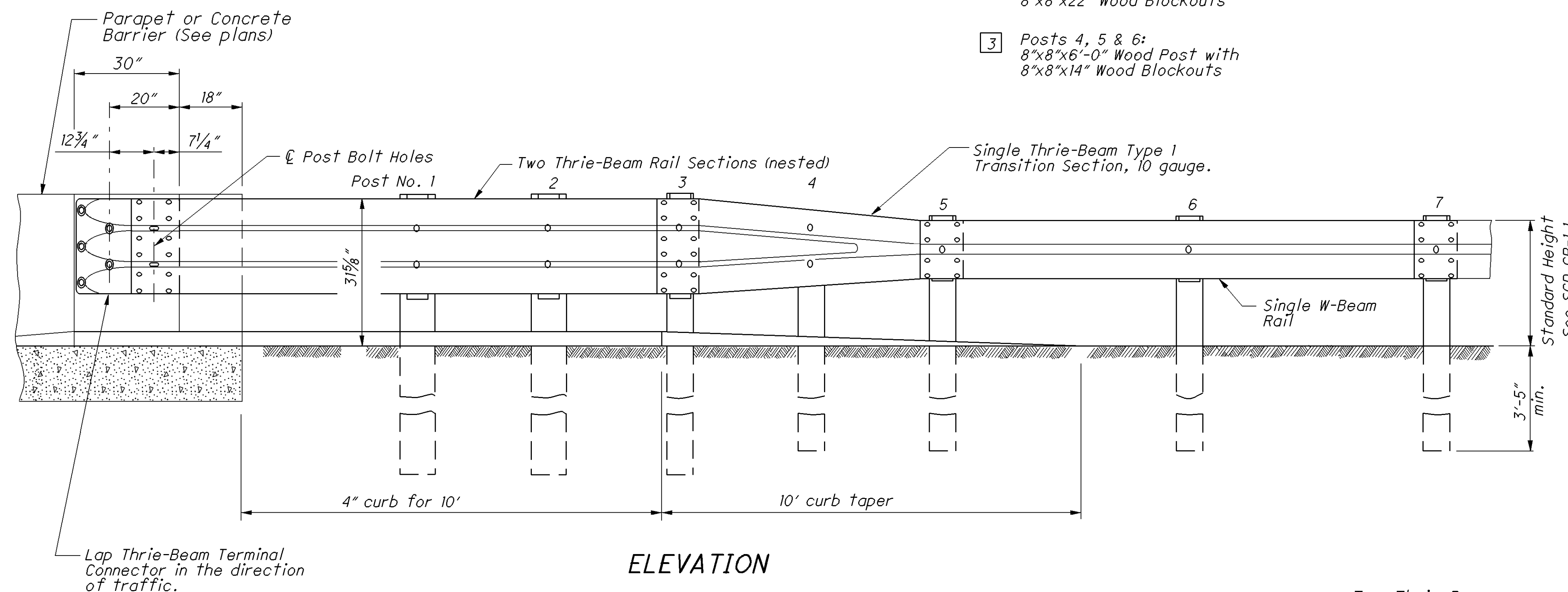
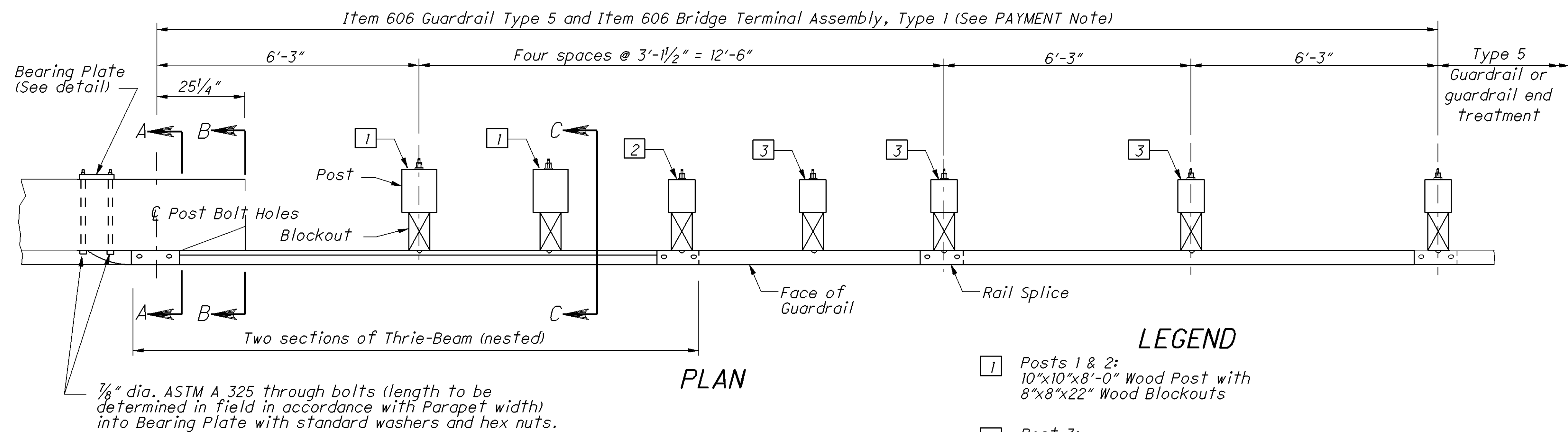
Method 2
Notched Post

Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS
Single Sided runs only (Standard Design)



WOOD POSTS WITH WOOD BLOCK
RAISING EXISTING GUARDRAIL HEIGHT



NOTES

GENERAL: For additional details, see **SCD GR-1.1**.

APPLICATION: Use Type 1 Bridge Terminal Assembly to connect guardrail runs to bridges having deflector Parapet Type Bridge Railing (see **Structural Engineering's SCD BR-II**). It may also be used to connect guardrail runs to the approach ends of Concrete Barrier (see **SCD RM-4.6**).

On undivided, bi-directional roadways, Type 1's may be used to anchor guardrail runs to the trailing end of Deflector Parapets or Concrete Barrier installations.

THRIE BEAM TRANSITION: Symmetrical W-Beam to Thrie Beam transition panel shall be 10 gauge.

POSTS: Posts may be set in drilled holes or driven to grade. See **SCD GR-1.1** for additional Post embedment details.

WOOD POSTS - Use square sawed pressure treated wood as per CMS 710.14 and fabricate with square ends. Bore bolt holes and trim the tops of posts, if required, after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W8x24 for 10"x10" wood posts and use W6x25 for 8"x8" posts. Use same post material throughout assembly.

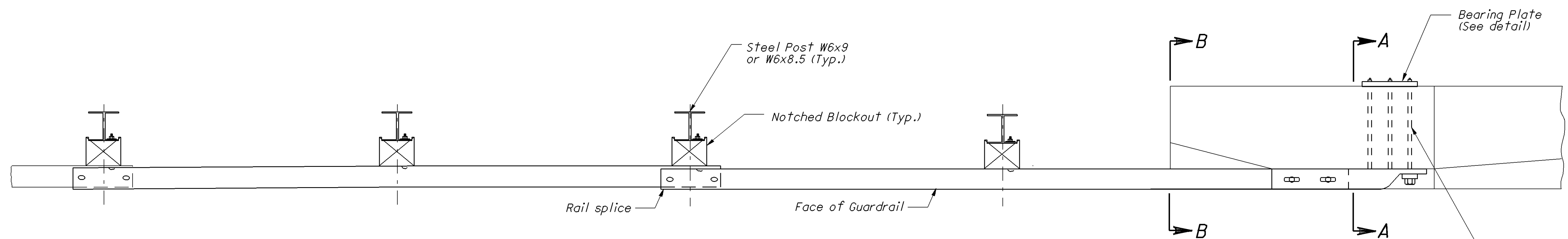
BLOCKOUTS: Use wood blockouts only, steel or plastic blockouts are not permitted. Use notched blockouts with steel posts.

CURB: Provide a Type 4A or 4C concrete curb minimum of 20', or longer as shown on plans, including a 10' taper (from curb height to flush). Front of curb to be flush with face of guardrail.

FLARED GUARDRAIL: Begin Standard Guardrail Flares as shown on **SCD GR-5.1** preferably at or beyond Post No. 7; however, the flare may begin at Post No. 5.

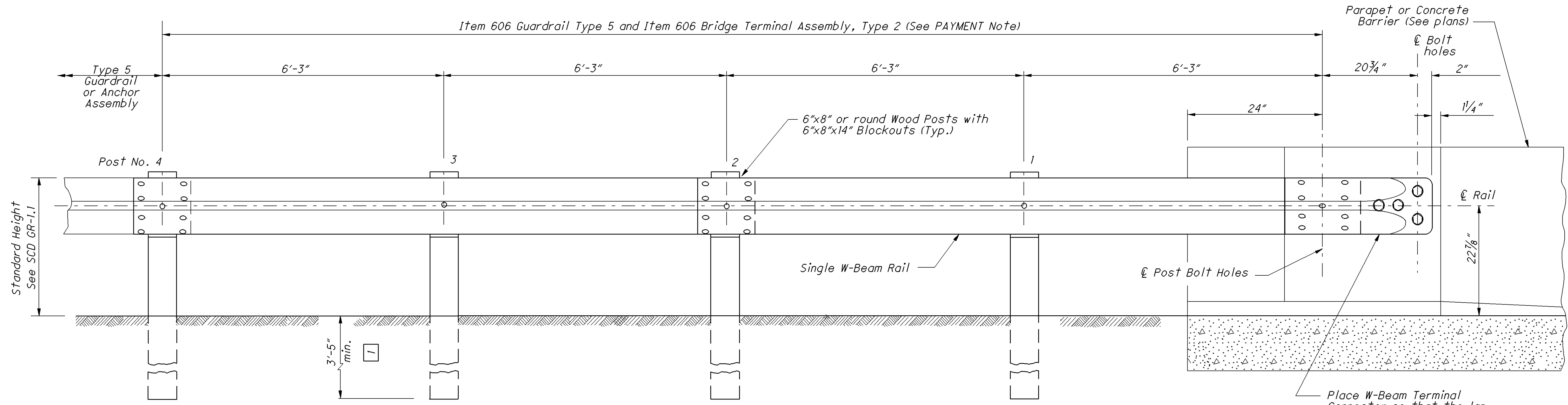
PAYMENT: Item 606 - Bridge Terminal Assembly, Type 1, Each, includes the cost of extra components, in excess of normal guardrail, for additional and different size of posts and blockouts, nested Thrie-Beam, transition and connector sections, Bearing Plate, bolts, washers, nuts, and other hardware.

The curb is required in this design, and is paid separately under **Item 609 - Curb, Type 4A (or 4C), per Foot**, for the curb and taper sections, including materials, forming and labor needed to construct as shown.



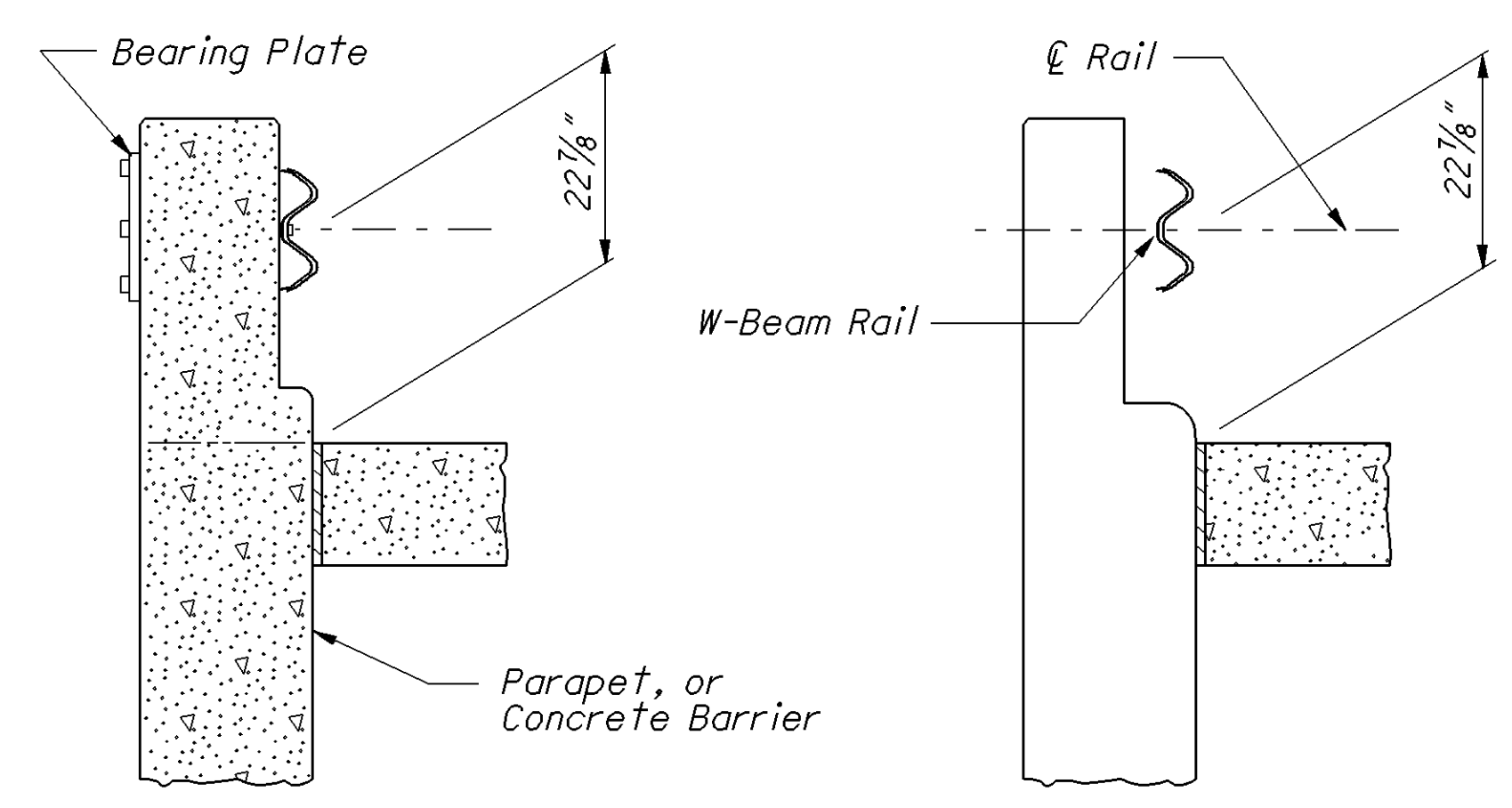
PLAN (Steel Posts shown. See POSTS Note.)

$\frac{7}{8}$ " dia. ASTM A 325 through bolts (length to be determined in field in accordance with Parapet width) into Bearing Plate with standard washers and hex nuts



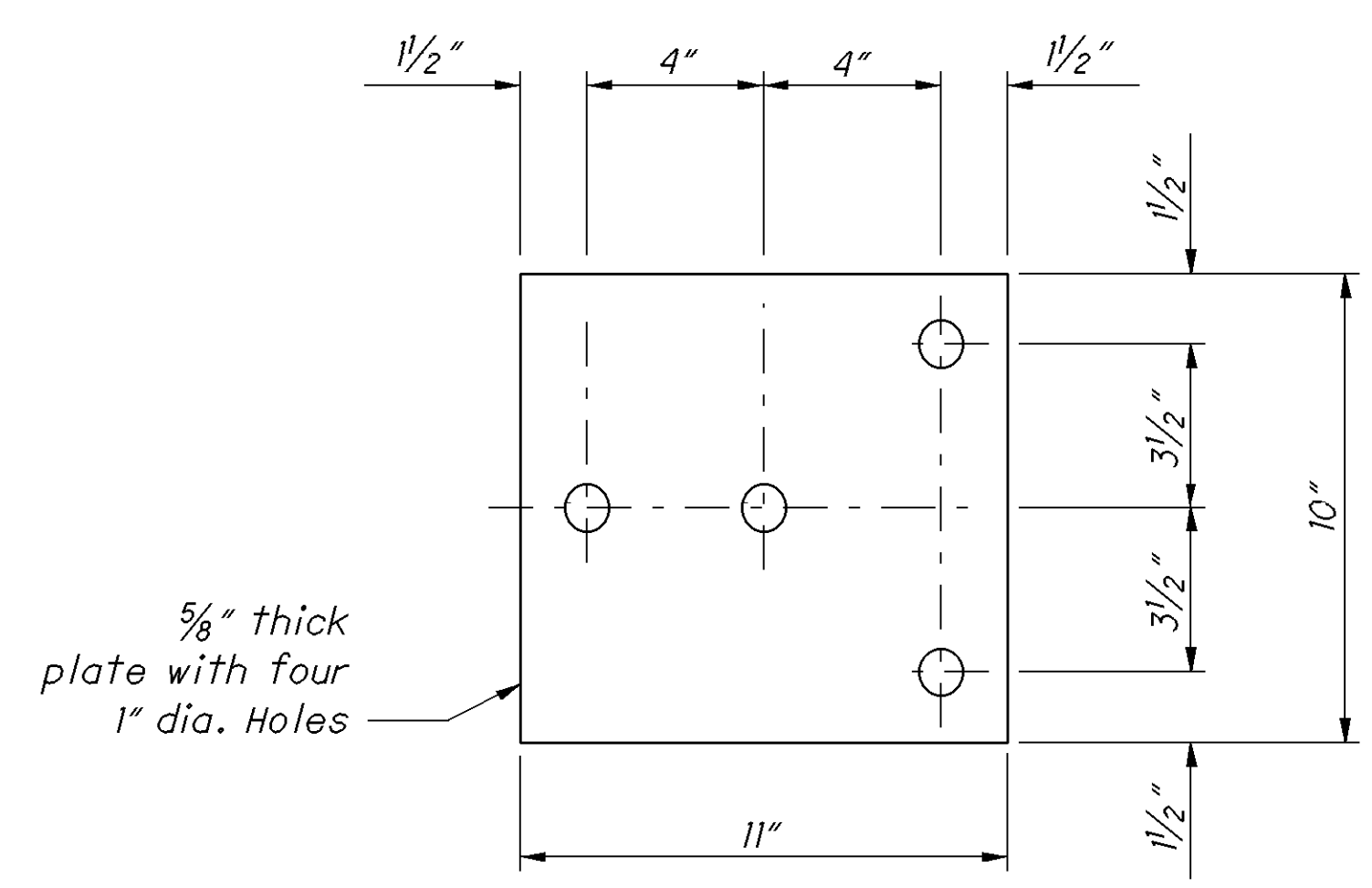
ELEVATION (Wood Posts shown. See POSTS Note.)

Place W-Beam Terminal Connector so that the lap is in the direction of traffic.



SECTION A-A

SECTION B-B



BEARING PLATE

NOTES

- GENERAL:** For additional rail and post details, see **SCD GR-1.1**.
- APPLICATION:** Use Type 2 Bridge Terminal Assembly to connect guardrail runs to the trailing end of Parapets or Concrete Barriers (see **SCD RM-4.6** for barrier) on one-directional roadways. Do not use if located within clear zone of opposing traffic.
- POSTS:** Posts shall be of standard size and material specified for the appropriate type of guardrail to be installed leaving the bridge or barrier. For Type 5 guardrail, see **SCD GR-2.1**.
- BLOCKOUTS:** Wood or plastic blockouts are permitted.
- FLARED GUARDRAIL:** Begin Standard Guardrail Flares as shown on **SCD GR-5.1**, preferably at or beyond Post No. 4, however, the flare may begin at Post No. 2.
- PAYMENT:** **Item 606 - Bridge Terminal Assembly, Type 2, Each** includes the cost of extra components, in excess of normal guardrail for the Terminal connector, Bearing Plates, bolts, washers, nuts, and other hardware.

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EDGE LINE																	GENERAL SPEC: 640				
																	MATERIAL TYPE: 646				
CTY	ROUTE	TRUE LOG	FROM		TRUE LOG	TO		6" WHITE EDGE LINE			6" YELLOW EDGE LINE			COMMENTS							
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP										
STA	S 30 / 43 W	16.46	0.20 MILE WEST OF S.R. 43		13.03	RAFF ROAD			3.43			3.43									
	US 30 / 62 E	13.03	RAFF ROAD		16.46	0.20 MILE WEST OF S.R. 43			3.43			3.43									
	US 30 / 62	13.30	RAFF ROAD EXIT/ENTRANCE RAMP			U.S. 30 / U.S. 62				0.68			0.68	RAMP O AND RAMP P							
	US 30 / 62		HARRISON EXT/ENTRANCE RAMPS			U.S. 30 / U.S. 62				0.95			0.95	RAMPS O, R, S, T AND INCLUDES RAMPS TO 15TH STREET							
	U.S. 30		S.R. 43 (CHERRY AVE.) RAMPS			U.S. 30 / S.R. 43				1.05			1.05	RAMPS CH-W, CS-W, E-C , C-E , W-C , C-CH							
	I.R. 77		I.R. 77 NORTHBOUND			U.S. 30 / S.R. 43 EASTBOUND				0.47			0.47	RAMP H							
	I.R. 77		I.R. 77 NORTHBOUND			U.S. 30 / U.S. 62 WESTBOUND				0.23			0.23	RAMP E							
	I.R. 77		I.R. 77 SOUTHBOUND			U.S. 30 / U.S. 62 WESTBOUND				0.34			0.34	RAMP A							
	I.R. 77		I.R. 77 SOUTHBOUND			U.S. 30 / S.R. 43 EASTBOUND				0.42			0.42	RAMP B							
TOTAL								0	6.86	4.14	0	6.86	4.14								
LANE LINE																					
CTY	ROUTE	TRUE LOG	FROM		TRUE LOG	TO		TOTAL MILES	6" LANE LINE		COMMENTS										
						DASHED	SOLID														
STA	S 30 / 43 W	16.46	0.20 MILE WEST OF S.R. 43		13.03	RAFF ROAD		6.19	6.19												
STA	S 30 / 62 E	13.03	RAFF ROAD		16.46	0.20 MILE WEST OF S.R. 43		6.23	6.23												
TOTAL								12.42	12.42												
CENTER LINE																					
CTY	ROUTE	TRUE LOG	FROM		TRUE LOG	TO		TOTAL MILES	EQUIVALENT SOLID LINE		COMMENTS										
TOTAL																					
AUXILIARY																					
CTY	ROUTE LOCATION		TRUE LOG	CHANNEL LINE	STOP LINE	CROSS WALK LINES	CHEVRON MARKING		ISLAND MARKING	SYMBOL MARKINGS			LANE ARROWS				WORD ON PVMT ONLY		DOTTED LINES	COMMENTS	
							WHITE	YELLOW		RxR	SCHOOL		TURN	TURN	THRU	COMB.					
											FT	FT					72"	96"			LEFT
STA	US 30 WB OFF RAMP & SR 297 (R		13.030	430	40											8					
STA	US 30/US 62 GORE RAFF RD.		13.300	1530														2920			
STA	US 30/62 EB EXIT RAMP TO HARR		14.250	180	45	130							3								
STA	US 30/62 WB EXIT RAMP TO HARR		14.250	160	45	125							3								
STA	US30/US 62 GORE HARRISON AV		14.150	2650														2220	DOTTED BETWEEN HARRISON EXIT TO IR 77 SB EXIT		
STA	IR 77 SB RAMP A AND B			1700			200											3500	DOTTED BETWEEN US 30 EB ENT. TO HARRISON EXT		
STA	IR 77 NB RAMP E		15.040	400														610			
STA	US 30 WB EXIT TO 11TH ST.				50																
STA	US 30 EB EXT TO CHERRY AVE.			90	18																
STA	US 30 WB GORE SR 43 AND 11TH		15.800	900														1460	ENTRANCE RAMPS CS-W AND CN-W		
STA	US 30 EB GORE CHERRY STREET		15.800	600														600	ENTRANCE RAMP C-E		
STA	US 30 WB GORE 11TH		15.800	400														500	EXIT RAMP E-C		
STA	US 30 EB GORE S.R. 43		15.600	400																	
TOTAL				9440	198	255	200						6			8			11810		

81

98

STA - 77 / 30 / 62 - VAR

PAVEMENT MARKING SUB SUMMARY

CALCULATED
MW
CHECKED

LIGHTING SCOPE

LIGHTING WORK WILL INCLUDE REPLACEMENT OF MEDIAN MOUNTED POLES ALONG WITH PLACEMENT OF POLES ON EXISTING FOUNDATIONS OF POLES THAT WERE REMOVED BY THE CITY AS SHOWN ON THE NEXT 4 SHEETS. ALSO INCLUDES REPLACEMENT OF 12 LIGHTING TOWERS ON SHEETS 88A-C.

625, LUMINAIRE, CONVENTIONAL, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS WITH AN IES II-M-SC DISTRIBUTION AND 200 WATT HIGH PRESSURE SODIUM LAMPS SHALL BE AMERICAN ELECTRIC "SERIES 126" WITH PHOTOMETRIC DISTRIBUTION AE38491, COOPER "OVD" WITH PHOTOMETRIC DISTRIBUTION OVD2S2F, GENERAL ELECTRIC "M-400" WITH PHOTOMETRIC DISTRIBUTION 1014, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS. ITEM 625, "LUMINAIRE, CONVENTIONAL, AS PER PLAN, STYLE C, TYPE III, 400W HPS FIXTURE, 725.11, FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION A WRITTEN RECORD OF THE CONDITION OF THE EXISTING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT OPERATIONAL, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS. REPLACEMENTS OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A PER UNIT BASIS. BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS. THE MAINTAINING AGENCY SHALL GIVE THE CONTRACTOR ONE COPY

OF THE EXISTING LIGHTING CIRCUITRY LAYOUT. WHEN THE CONTRACTOR HAS TAKEN OVER THE MAINTENANCE OF THE EXISTING SYSTEM, HE SHALL PROVIDE ALL REQUIRED LAYOUT AND LOCATING OF EXISTING LIGHTING CIRCUITS WITHIN THE PROJECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. TWO (2) WEEKS PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY RATIO NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THIS CRITERIA, THEN UNDERGROUND WIRING WILL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. A SEPARATE POWER SERVICE WILL BE PROVIDED BY THE CONTRACTOR FOR THE TEMPORARY LIGHTING SYSTEM. THE TEMPORARY LIGHTING SHALL NOT BE SPLICED INTO EXISTING LIGHTING CIRCUITS. THE CONTRACTOR SHALL PAY ALL HOOK-UP FEES AND ELECTRICAL COSTS FOR THE TEMPORARY SYSTEM. THESE COSTS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM SPECIAL MAINTAIN EXISTING LIGHTING. WHEN NO LONGER NEEDED THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE LUMP SUM BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, INCIDENTALS, AND TEMPORARY POWER SERVICES NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE QUANTITIES BELOW HAVE BEEN INCLUDED IN THE LIGHTING
GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MAINTAIN EXISTING LIGHTING LUMP

EXISTING CIRCUITRY

THE EXISTING LIGHTING WIRING/CABLE IS TO BE REUSED WHERE POSSIBLE.

POLE ID		ROUTE	MOUNTING		625	625		625	625			625		625	
				CONNECTION, FUSED PULL APART	LIGHT POLE; CONVENTIONAL, A8BB39.0		NO. 10 AWG POLE AND BRACKET CABLE	LUMINAIRE, CONVENTIONAL, AS PER PLAN, STYLE C, TYPE III, 200W HPS FIXTURE, 725.11			LIGHT POLE REMOVED		LUMINAIRE REMOVED		
															EACH
1B-13		US-30	Median Wall		2	1		136	2						
1B-12		US-30	Median Wall		2	1		136	2			1		2	
1B-11		US-30	Median Wall		2	1		136	2			1		2	
1B-14		US-30	Median Wall		2	1		136	2						
1B-15		US-30	Median Wall		2	1		136	2						
1B-16		US-30	Median Wall		2	1		136	2			1		1	
1B-17		US-30	Median Wall		2	1		136	2						
1B-18		US-30	Median Wall		2	1		136	2						
1B-19		US-30	Median Wall		2	1		136	2			1		2	
1B-20		US-30	Median Wall		2	1		136	2			1		2	
2D-18		US-30	Median Wall		2	1		136	2						
2D-17		US-30	Median Wall		2	1		136	2			1		2	
2D-16		US-30	Median Wall		2	1		136	2						
2D-15		US-30	Median Wall		2	1		136	2			1		2	
2D-14		US-30	Median Wall		2	1		136	2						
2D-12		US-30	Median Wall		2	1		136	2			1		2	
2D-11		US-30	Median Wall		2	1		136	2			1		2	
2D-10		US-30	Median Wall		2	1		136	2			1		2	
2D-9		US-30	Median Wall		2	1		136	2			1		2	
1SC01-6		US-30	Median Wall		2	1		136	2			1		2	
1SC02-6		US-30	Median Wall		2	1		136	2						
1SC01-5		US-30	Median Wall		2	1		136	2			1		2	
1SC02-5		US-30	Median Wall		2	1		136	2			1		2	
1SC01-4		US-30	Median Wall		2	1		136	2			1		2	
1SC02-4		US-30	Median Wall		2	1		136	2			1		2	
1SC01-3		US-30	Median Wall		2	1		136	2						
1SC02-3		US-30	Median Wall		2	1		136	2			1		2	
1SC01-2		US-30	Median Wall		2	1		136	2			1		2	
1SC02-2		US-30	Median Wall		2	1		136	2						
1SC01-1		US-30	Median Wall		2	1		136	2			1		2	
1SC02-1		US-30	Median Wall		2	1		136	2			1		2	
HOU 1-29		US-30	Median Wall		2	1		136	2			1		2	
HOU 1-30		US-30	Median Wall		2	1		136	2			1		2	
HOU 2-4		US-30	Median Wall		2	1		136	2						
HOU 2-5		US-30	Median Wall		2	1		136	2			1		2	
HOU 2-6		US-30	Median Wall		2	1		136	2			1		2	
TOTALS CARRIED TO GENERAL SUMMARY					72	36	0	4896	72	0	0	24	0	47	0

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POLE ID		ROUTE	MOUNTING	SIZE (INCHES)	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	
					CONNECTION, FUSED PULL APART	LIGHT POLE, CONVENTIONAL, A8BB39.0	LIGHT TOWER, BBBB100, AS PER PLAN	LIGHT TOWER, BBBB110, AS PER PLAN	LIGHT TOWER, BBBB120, AS PER PLAN	LIGHT TOWER, BBBB130	LIGHT TOWER, BBBBBBB100, AS PER PLAN	LIGHT TOWER, BBBBBBB120, AS PER PLAN	LIGHT TOWER, BBBBBBB130, AS PER PLAN	LIGHT TOWER, BBBBBBB140, AS PER PLAN	NO. 10 AWG POLE AND BRACKET CABLE	LUMINAIRE, CONVENTIONAL, AS PER PLAN, STYLE C, TYPE III, 200W/HPS FIXTURE, 725.11	LUMINAIRE, HIGH MAST, AS PER PLAN 400W/HPS	LIGHT TOWER REMOVED	LIGHT POLE REMOVED	LUMINAIRE REMOVED
EACH	EACH	EACH	EACH	EACH	#N/A	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH				
BEL 1-9		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-8		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-8		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-7		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-7		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-6		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-6		US-30	Median Wall		2	1								136	2			1		
BEL 2-5		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-5		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-4		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-4		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-3		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-3		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-2		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-2		US-30	Median Wall		2	1								136	2			1	2	
BEL 2-1		US-30	Median Wall		2	1								136	2			1	2	
BEL 1-1		US-30	Median Wall		2	1								136	2			1	2	
1BL-2		IR-77					1										4	1		2
HOU 1-14		US-30						1									4	1		2
HOU 1-15		US-30							1								4	1		2
HOU 2-2		US-30								1							6	1		3
HOU 2-3		US-30											1				6	1		3
1BK-11		IR-77											1				6	1		4
1BK-10		IR-77										1					6	1		5
2BN-1		IR-77					1										4	1		2
1BL-1		IR-77									1						6	1		4
2BM-1		IR-77					1										4	1		2
2BN-2		IR-77					1										4	1		2
TOTALS CARRIED TO GENERAL SUMMARY					34	17	1	3	1	1	1	1	1	2	2312	34	54	11	17	63

LUMINAIRE, HIGH MAST, AS PER PLAN

THE LUMINAIRE ARRAYS AND ASSOCIATED ILLUMINATION TEST AREAS SPECIFIED IN C&MS 725.21 ARE HEREBY WAIVED. INSTEAD, THE LUMINAIRES FOR HIGH-MAST LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS:

LUMINAIRES FOR HIGH-MAST LIGHTING UNITS WITH SYMMETRIC DISTRIBUTION SHALL BE HOLOPHANE "HMST" WITH PHOTOMETRIC DISTRIBUTION 36383, GENERAL ELECTRIC "HM" WITH PHOTO- METRIC DISTRIBUTION 6312, OR COOPER "HMX" WITH PHOTO- METRIC DISTRIBUTION HMX4SDW, OR EQUAL AS APPROVED BY THE ENGINEER.

LUMINAIRES FOR HIGH-MAST LIGHTING UNITS WITH ASYMMETRIC DISTRIBUTION SHALL BE HOLOPHANE "HMST" WITH PHOTOMETRIC DISTRIBUTION 46973, GENERAL ELECTRIC "HM" WITH PHOTO- METRIC DISTRIBUTION 7349, OR COOPER "HMC" WITH PHOTO- METRIC DISTRIBUTION HMC4S3D, OR EQUAL AS APPROVED BY THE ENGINEER.

LUMINAIRES FOR HIGH-MAST LIGHTING UNITS WITH LONG AND NARROW DISTRIBUTION SHALL BE HOLOPHANE "HMST" WITH PHOTOMETRIC DISTRIBUTION 36801, GENERAL ELECTRIC "HM" WITH PHOTOMETRIC DISTRIBUTION 8946, OR COOPER "HMC" WITH PHOTOMETRIC DISTRIBUTION HMC4SIDL, OR EQUAL AS APPROVED BY THE ENGINEER.

IN ADDITION, OTHER LUMINAIRES WILL BE CONSIDERED IF THE DESIGNED INTENSITY AND UNIFORMITY ARE PROVIDED USING THE DESIGNED POLE LOCATIONS AND THE DESIGNED NUMBER AND TYPE OF FIXTURES PER POLE.

ITEM 625 LIGHT TOWER, BY TYPE, AS PER PLAN

THE CONTRACTOR SHALL VERIFY ANCHOT BOLT QUANTITY, LOCATION & DIMENSIONS BEFORE ORDERING POLES. THE CONTRACTOR SHALL ALSO ATTACH VARMINIT SCREEN AT BASE OF TOWER AS PER HL-10.31 (AFTER REMOVING CONCRETE GROUT AT THE BASE OF THE TOWER).

PAYMENT FOR THE ABOVE WORK IS INCIDENTAL TO ITEM 625, LIGHT TOWER, BY TYPE, AS PER PLAN.

ITEM 625 - LUMINAIRE, CONVENTIONAL, AS PER PLAN, LED - ALTERNATE BID ITEM

THIS SPECIFICATION COVERS THE USE OF HIGH OUTPUT LED TECHNOLOGY FOR ROADWAY LIGHTING FIXTURES. THE LED LUMINAIRE PERFORMANCE SHALL BE COMPARABLE TO 250-400W HPS ROADWAY LUMINAIRE. THE LED LUMINAIRE SHALL NOT BE A PROTOTYPE.

A. GENERAL CONSTRUCTION

1. LUMINAIRE
- LUMINAIRE HOUSING TO BE FABRICATED FROM DIE CAST ALUMINUM LOW COPPER CONTENT ALLOY.
- a. LUMINAIRE HOUSING TO ACT AS A PASSIVE HEAT SINK FOR LED ARRAY.

b. HOUSING TO BE DESIGNED IN SUCH MANNER THAT DEBRIS BUILD-UP WITH-IN "HEAT-FIN" STRUCTURE WILL NOT SIGNIFICANTLY IMPACT LAMP LUMEN DEPRECIATION (LLD).

c. LUMINAIRE FINISH AND CASTING TO BE TESTED TO ASTM B117 SALT FOG, AND MUST MAINTAIN A SCRIBE CREEPAGE RATING OF 7 PER ASTM D1654 AFTER THE HOURS LISTED BELOW.

1. STANDARD FINISH IS RATED FOR 1000 HRS.

2. CR-CORROSION RESISTANT FINISH IS RATED FOR 5000 HRS.

d. ACCESS TO ELECTRICAL COMPARTMENT SHALL BE TOOL-LESS BY MEANS OF ALUMINUM OR STAINLESS STEEL TRIGGER LATCH.

e. TOOL-LESS ACCESS SHOULD ACCOMMODATE USER WEARING ELECTRICAL GLOVES.
2. LED LIGHT ENGINE
- a. SHALL BE IP66 RATED.

b. LENSES SHALL BE CREATED FROM HIGH TEMPERATURE, UV STABILIZED OPTICAL GRADE ACRYLIC.
3. LUMINAIRE ATTACHMENT
- a. LUMINAIRE SHALL BE ABLE TO ATTACH TO 1¼" AND/OR 2" IPS SCHEDULE 40 MAST ARMS (1½" TO 2¾ OD).

b. LUMINAIRE SHALL BE DESIGNED TO BE ABLE TO TILT +/-5 DEGREES FROM HORIZONTAL.

c. LUMINAIRE SHALL BE DESIGNED TO WITHSTAND 3G VIBRATION TESTING PRESCRIBED IN ANSI C136.31.

d. LUMINAIRE SHALL BE SECURED TO THE MOUNTING ARM USING A 4 BOLT FITTER CLAMP CONFIGURATION.

e. LUMINAIRE SHALL INCLUDE INTERNAL INTEGRAL LEVELING BUBBLE TO ASSIST IN THE INSTALLATION.
4. LUMINAIRE MARKINGS
- a. SHALL HAVE EXTERNAL WATTAGE LABEL AFFIXED ON UNDERSIDE OF LUMINAIRE TO BE SEEN FROM GROUND PER ANSI C136.15

b. LUMINAIRE SHALL HAVE INTERNAL LABEL INDICATING MANUFACTURER'S NAME, PRODUCT NAME, INPUT VOLTAGE & DATE OF MANUFACTURE.
5. WILDLIFE SHIELD SHALL BE A CAST IN FEATURE (NOT A SEPARATE COMPONENT)
- B. ELECTRICAL
1. ALL ELECTRICAL COMPONENTS WITH THE EXCEPTION OF THE LED LIGHTING ARRAY SHALL BE MOUNTED ON LOWER REMOVABLE ACCESS DOOR.

2. ALL ELECTRICAL COMPONENTS SHALL BE TERMINATED THROUGH THE USE OF QUICK DISCONNECT COUPLINGS.

a. THERE SHALL NOT BE ANY WIRE NUTS SUPPLIED IN THE LUMINAIRE

b. ALL LUMINAIRES SHALL BE EQUIPPED WITH A 3 STATION TUNNEL STYLE TERMINAL BLOCK FOR TERMINATING SUPPLY WIRE.

1. TERMINAL BLOCK SHALL ACCOMMODATE UP TO 6 AWG CONDUCTORS.

2. FOR EASE OF INSTALLATION, THE TERMINAL BLOCK SHALL BE POSITIONED IN SUCH A MANNER THAT SUPPLY WIRES DO NOT NEED BENT OR REROUTED AROUND COMPONENTS TO MAKE ELECTRICAL TERMINATION.

c. LUMINAIRE SHALL PROVIDE MEANS TO PROTECT LED DRIVER & LED LIGHTING ARRAY FROM ELECTRICAL TRANSIENTS CAUSED BY ELECTRICAL STORMS OR CAPACITOR SWITCHING BY MEANS OF SURGE PROTECTION DEVICE.

1. SURGE PROTECTION DEVICE (SPD) SHALL BE UL1449 RECOGNIZED.

2. SPD SHALL BE 3 WIRES AND PROVIDE BOTH COMMON AND DIFFERENTIAL MODE PROTECTION.

3. SPD MUST HAVE AN INDUCTIVE FILTER CIRCUIT THAT REDUCES THE AMOUNT OF ENERGY PASSED THRU TO ELECTRONICS DURING A SURGE EVENT.

4. SURGE PROTECTION DEVICE SHALL BE RATED TO PROTECT THE LUMINAIRE UP TO 10KV/5KA COMBINATION WAVE SURGES IN ACCORDANCE WITH ANSI C136.2 (MOST CURRENT).

5. SURGE PROTECTION SHALL BE THERMALLY FUSED.

6. FAILURE MODE OF SURGE PROTECTION IS TO LEAVE LUMINAIRE OFF.

c. LED DRIVER SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS.

1. LED DRIVER SHALL HAVE A MINIMUM POWER FACTOR OF 90% AT FULL LOAD.

2. LED DRIVER THD SHALL BE LESS THAN 20% AT FULL LOAD.

3. LED DRIVER MAXIMUM CASE TEMPERATURE SHALL NOT BE EXCEEDED WHEN LUMINAIRE IS OPERATING IN A 40C AMBIENT.

4. LED DRIVER SHALL BE ROHS COMPLIANT.

5. LED DRIVER SHALL HAVE IN INGRESS PROTECTION RATING IP65.

C. LIFE

1. COMPONENT RATED LIFE SHALL BE A MINIMUM OF 20 YEARS (OR 100,000 HOURS) WHEN OPERATING IN A CONTINUOUS 25°C AMBIENT.

2. THE DESIGN LIFE OF THE LED ARRAY (BASED ON LM80/TM21) SHALL BE DEFINED AS L80 AT 100,000 HOURS OPERATION IN AN AMBIENT OF 25°C.

D. LED LUMINAIRE PERFORMANCE

1. CORRELATED COLOR TEMPERATURE (CCT) SHALL BE NOMINALLY RATED AT 5000K CCT.

a. ALLOWABLE CCT RANGE PER NEMA C78.377 SHALL BE 4745K TO 5311K FOR 5000K RATED LUMINAIRE.

2. MINIMUM COLOR RENDERING INDEX (CRI) SHALL BE 60 FOR 5000K CCT RATED LUMINAIRE.

3. LUMINAIRE SHALL HAVE A BUG RATING PER TM-15 OF BX-U0-GX.

4. LUMINAIRE EFFICACY SHALL BE A MINIMUM OF 75 LUMENS/WATT (LPW); WITH A TOTAL LUMINOUS OUTPUT OF 17400 LUMENS MINIMUM AND A TOTAL WATTAGE DRAW OF 130 WATTS MAXIMUM.

5. THE MANUFACTURER SHALL PROVIDE DOCUMENTATION VIA A PHOTOMETRIC LAYOUT THAT THEIR LED LIGHT ENGINE MEETS PHOTOMETRIC PERFORMANCE REQUIREMENTS AS FOLLOWS:

a. ROADWAY SUMMARY: FOR DISTRIBUTION TYPE III, MEDIUM; MINIMUM OF 13,650 LUMENS DOWNWARD STREET SIDE & A MINIMUM OF 3,800 LUMENS DOWNWARD HOUSE SIDE FOR A TOTAL MINIMUM OF 17400 LUMENS; AND AN UPWARD TOTAL OF 0 LUMENS.

b. THE LED LIGHT ENGINE SHALL MEET THESE REQUIREMENTS OVER A -40°C (-40°F) TO +40°C (104°F) AMBIENT AIR TEMPERATURE RANGE.

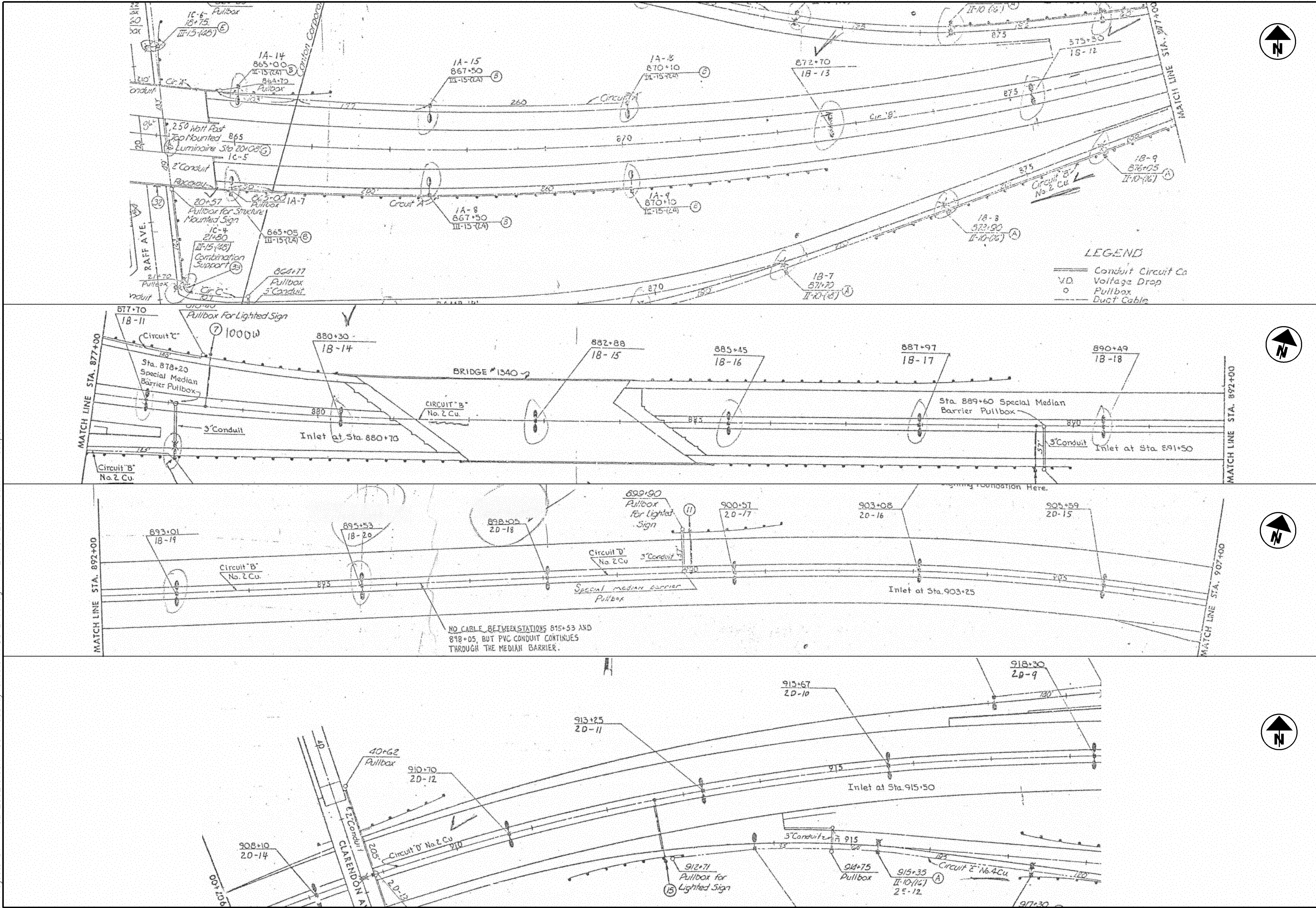
E. WARRANTY

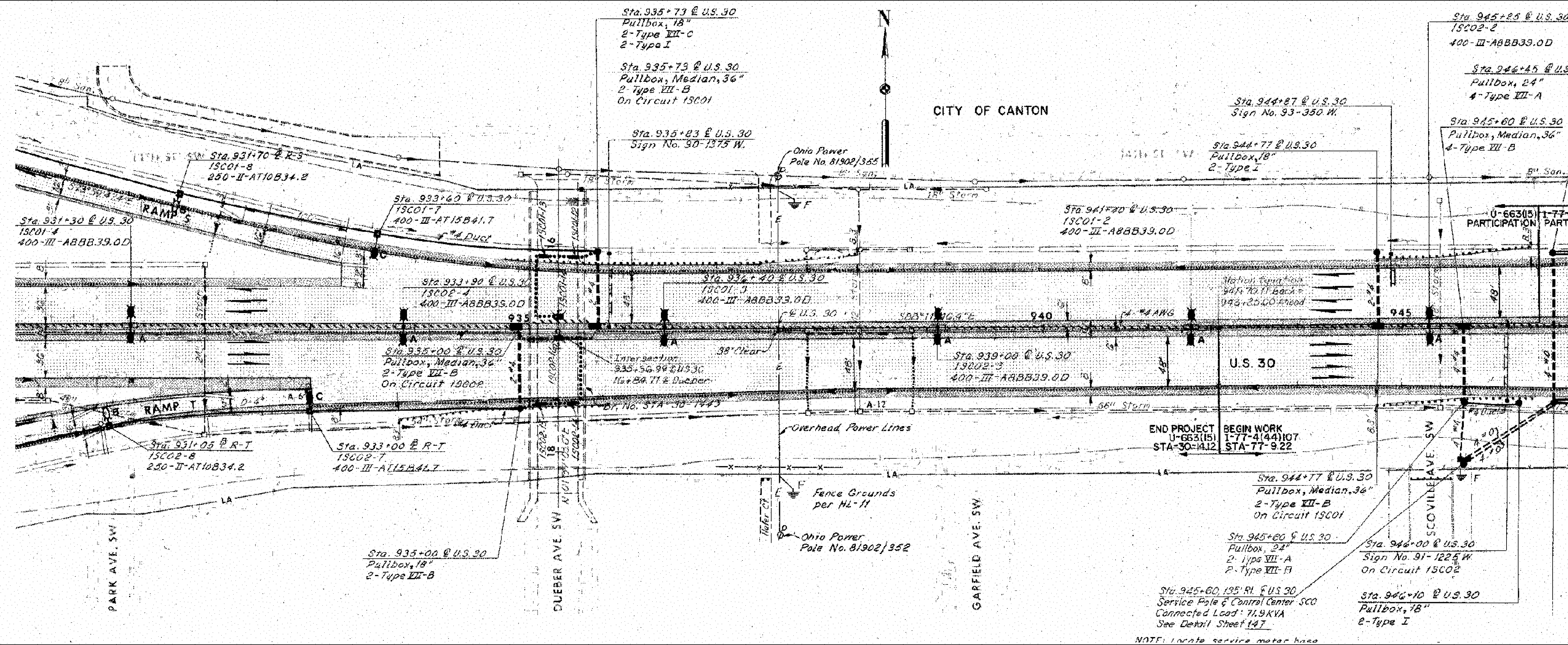
LUMINAIRE SHALL BE WARRANTED TO BE FREE FROM MANUFACTURING DEFECTS FOR A PERIOD OF 10 YEARS.
- PAYMENT WILL BE AT THE CONTRACT UNIT PRICE FOR EACH, IN PLACE, ALL CONNECTIONS MADE & WIRING COMPLETED, TESTED & ACCEPTED.
- CALCULATED
RMB
CHECKED

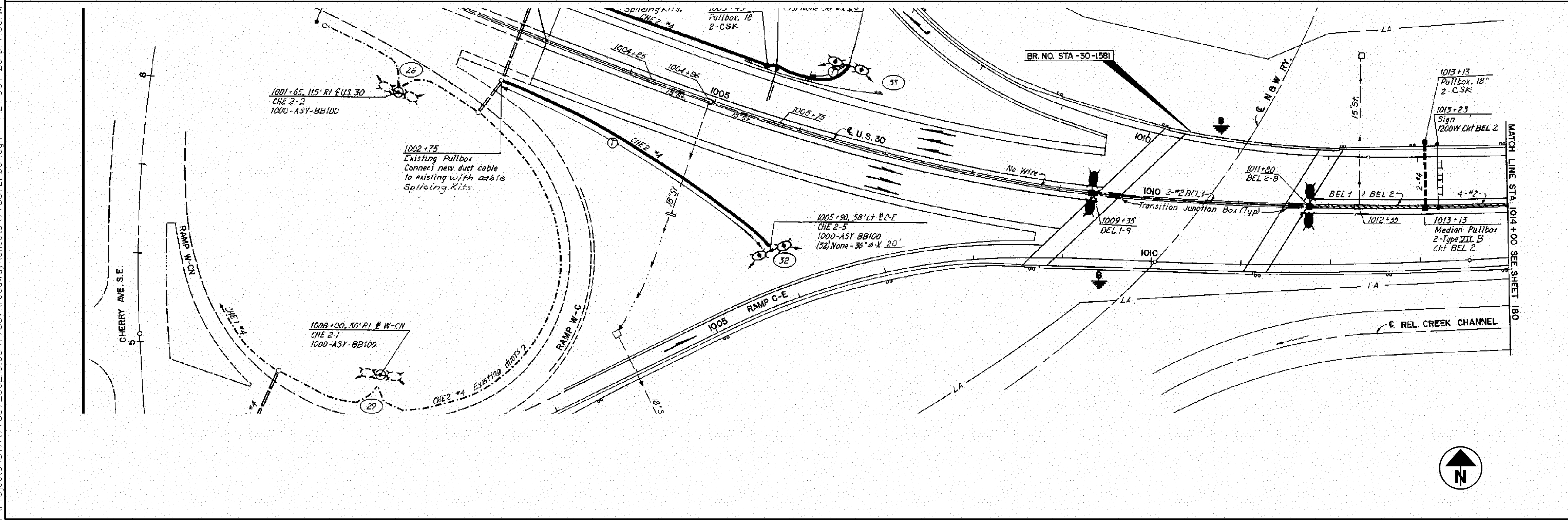
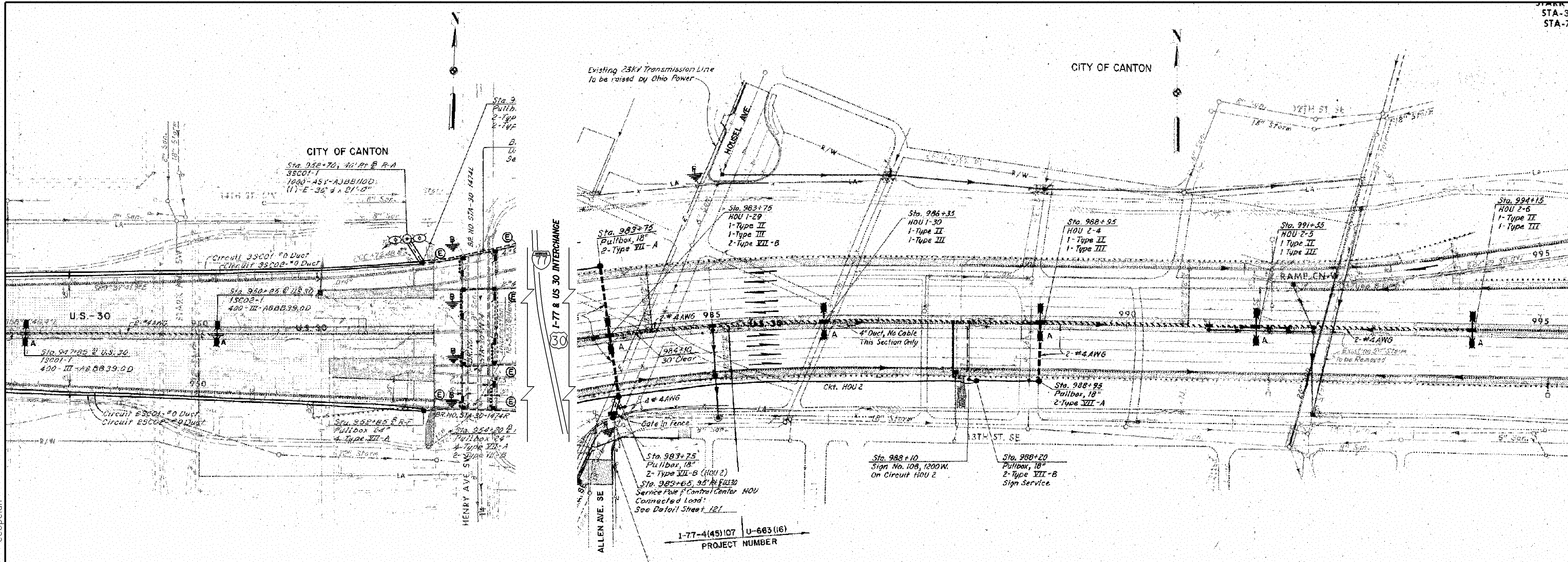
US 30 LIGHTING REPLACEMENT NOTES & QUANTITIES

STA -77 / 30/ 62-VAR

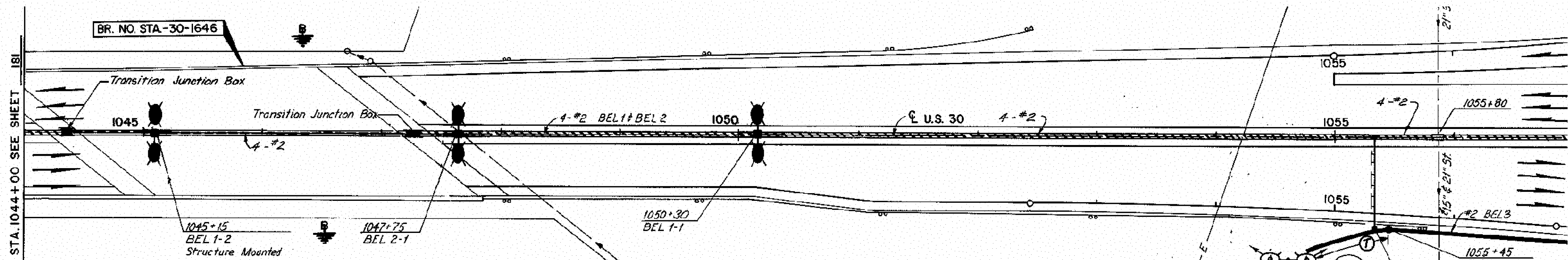
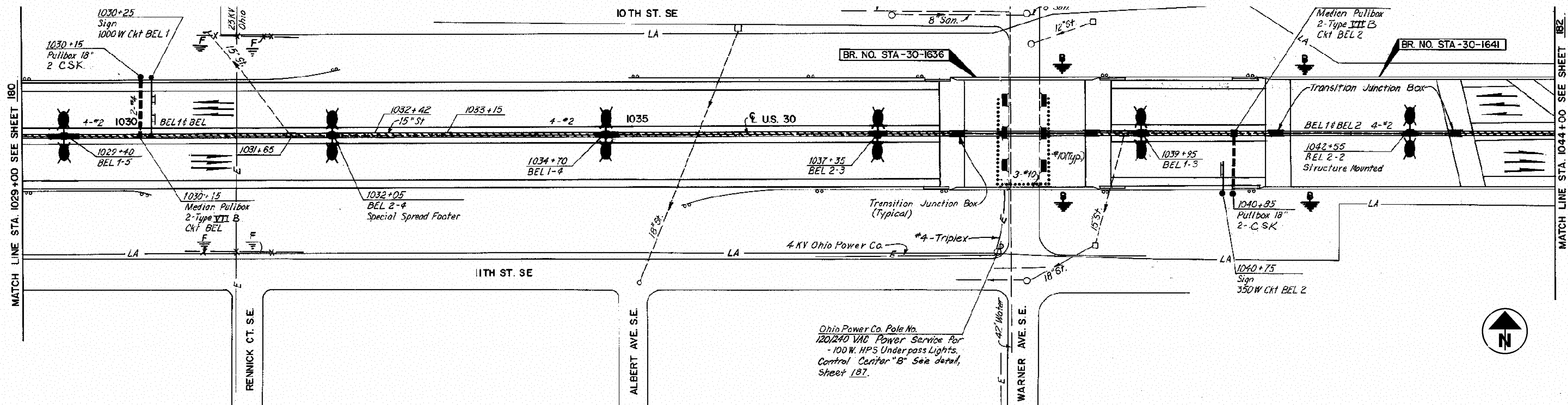
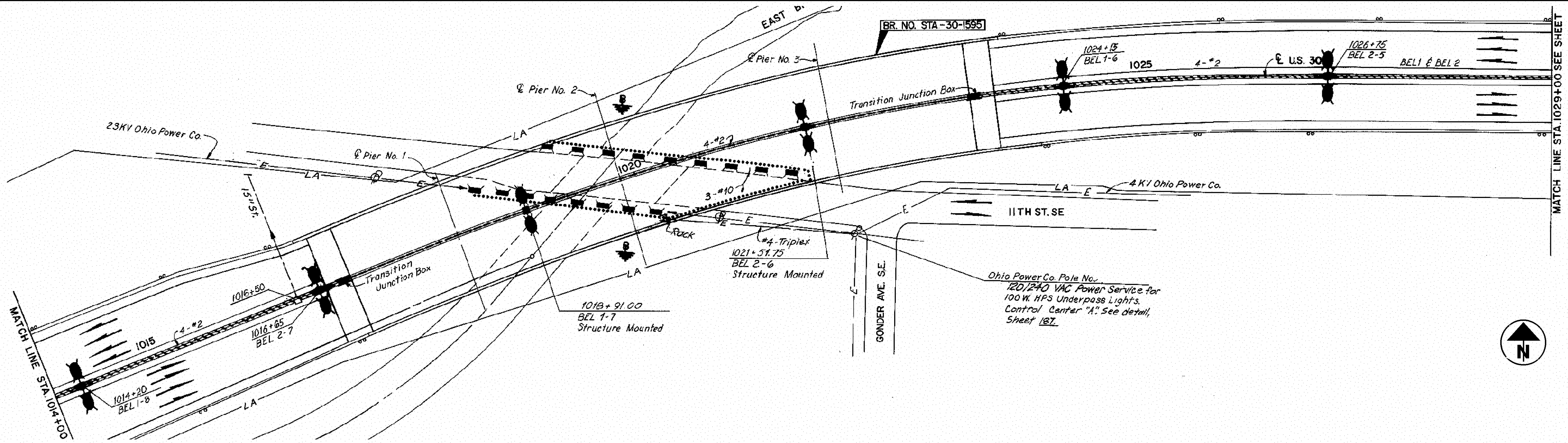
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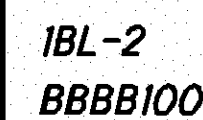


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US 30 MEDIAN LIGHTING REPLACEMENT

STA-77 / 30 / 62-VAR

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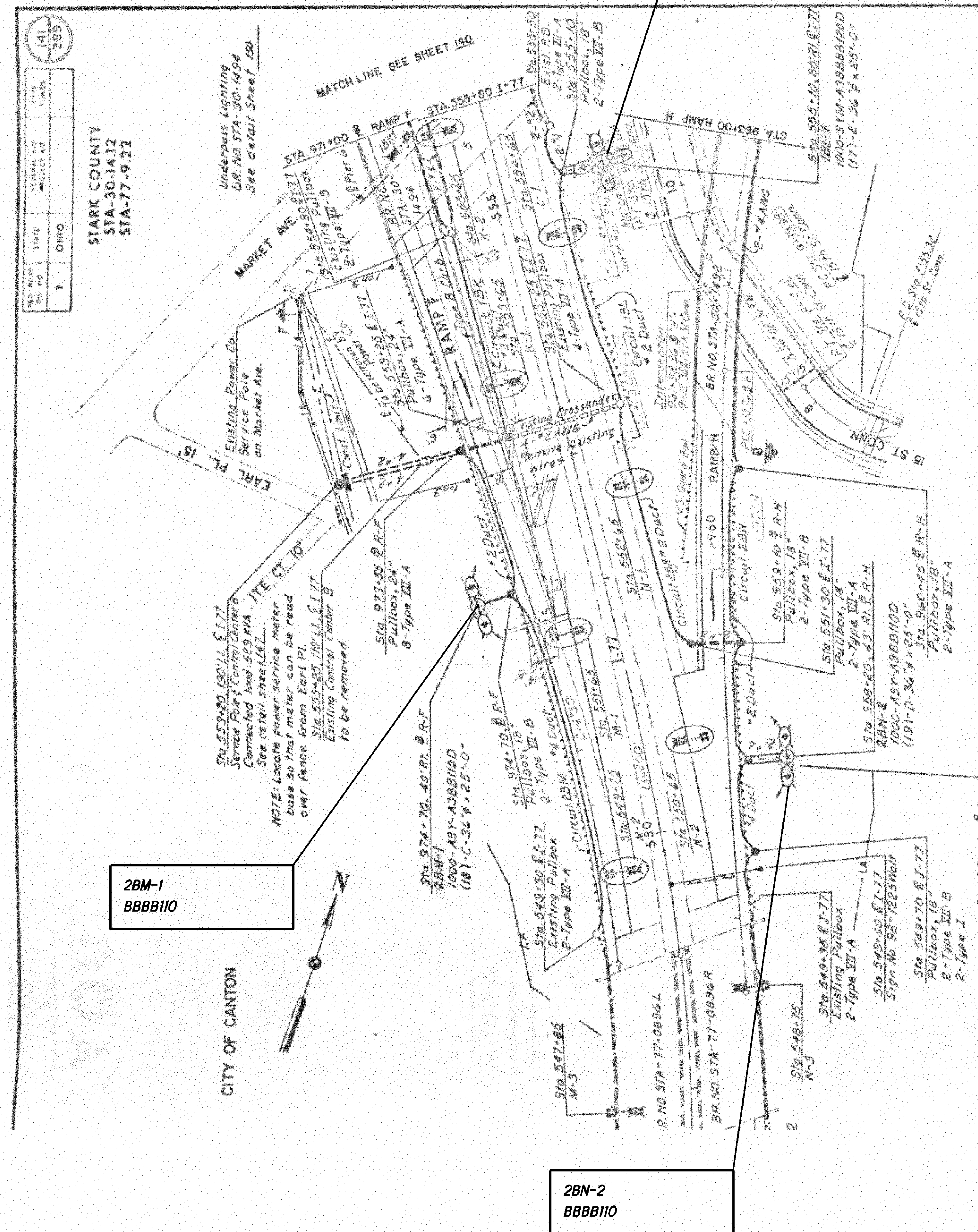
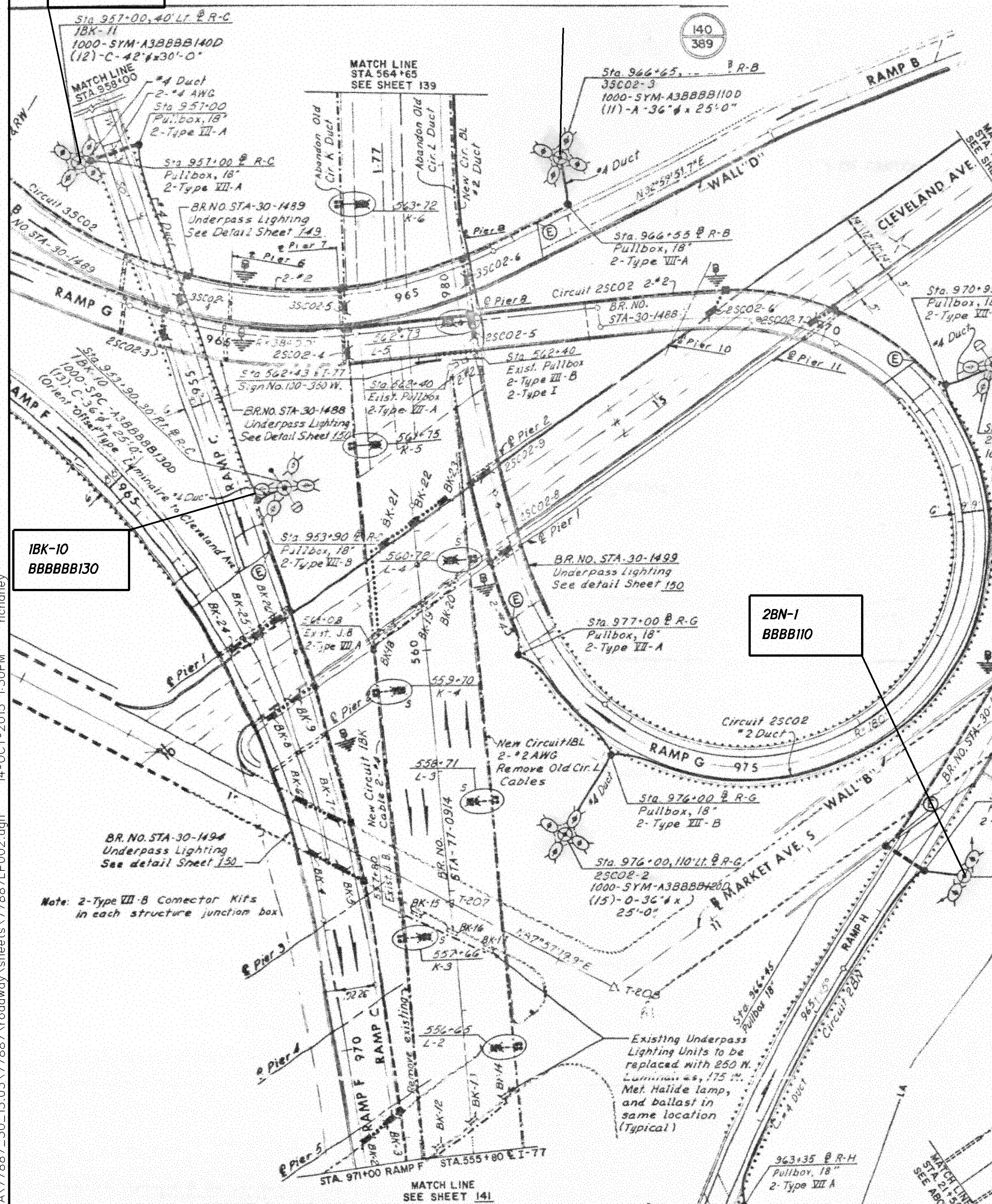
HOU1-14
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HOU2-2
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FED ROAD DN NO	STATE	FEDERAL AID PROJECT NO	TYPE FUNDS
2	OHIO		

STARK COUNTY
STA-30-15.04
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

EXJ-4-87 DATED/REVISED 07/19/02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

SS 843 DATED 04/18/03

SS 847 DATED 07/17/05

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO “STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES” ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION , INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

STA-77-0926 (SB RAMP OVER IR 77 TO 30 EB)
-SEAL EXISTING WEARING SURFACE AND APPROACH SLABS WITH GRAVITY-FED RESIN CONCRETE TREATMENT
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REPAIR DAMAGED OR DETERIORATED PARAPETS
-SEAL ALL EXPOSED CONCRETE SURFACES THAT HAVE BEEN PATCHED WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION

STA-30-1303L (OVER SR 297 RAFF ROAD)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REPLACE EXISTING ELASTOMERIC STRIP SEAL WITH NEW STRIP SEAL
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-NEW STURCTURE IDENTIFICATION SIGNS
-CLEAN EXISTING STRUCTURAL STEEL, BEAM SEATS AND PIER CAPS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS WITH EPOXY-URETHANE
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS

STA-30-1303R (OVER SR 297 RAFF ROAD)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REPLACE EXISTING ELASTOMERIC STRIP SEAL WITH NEW STRIP SEAL
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-NEW STURCTURE IDENTIFICATION SIGNS
-CLEAN EXISTING STRUCTURAL STEEL, BEAM SEATS AND PIER CAPS
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS WITH EPOXY-URETHANE
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS

STA-30-1338 (OVER 17TH STREET & NORFOLK SOUTHERN)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PROVIDE AN ITEM TO REPAIR THE BACKWALL AT REAR APPROACH SLAB
-CLEAN OUT SCUPPERS AND DOWNSPOUTS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-REPAIR CONCRETE SLOPE PROTECTION AT REAR ABUTMENT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE ABUTMENTS, PARAPETS AND WING WALLS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE INCLUDING VEGETATION GROWING OUT OF SLOPE PROTECTION
-REPLACE END MARKER AT RIGHT REAR OF STRUCTURE
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1479 (OVER HENRY AVE. SW)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1488 (IR 77, CREEK, RAMP)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS
-CLEAN OUT SCUPPERS
-REPAIR DAMAGED OR DETERIORATED PARAPETS WALLS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE FALSEWORK FROM BOTTOM OF STRUCTURE
-REPAIR EROSION AT REAR ABUTMENT WHERE FOOTER IS EXPOSED
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1502 (30 EB/WB OVER CLEVELAND AVE)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REPAIR DAMAGED OR DETERIORATED PARAPET WALL
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS
-REPAIR CONCRETE SLOPE PROTECTION AT FORWARD ABUTMENT
-REPAIR EROSION IN THE EMBANKMENT AT REAR RIGHT OF STRUCTURE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1520 (US 30 EB & WB OVER MARKET)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS IN THE EAST BOUND DIRECTION ONLY
-REFURBISH EXISTING ABUTMENT BEARINGS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE FALSEWORK FROM BOTTOM OF STRUCTURE
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-REPAIR CONCRETE SLOPE PROTECTION AT THE FORWARD ABUTMENT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1558 (OVER CHERRY AVE CR 568)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-CLEAN OUT EXISTING SCUPPERS
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1580 (OVER WHEELING & LAKE ERIE)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS
-REPAIR DAMAGED OR DETERIORATED CONCRETE MEDIAN OR PARAPETS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-REPAIR EROSION AT THE REAR LEFT ABUTMENT
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1594 (OVER 11TH STREET)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-REFURBISH AND RESET EXISTING ABUTMENT BEARINGS
-REPAIR EROSION AROUND PIERS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1634 (OVER WARNER AVE.)
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-NEW STURCTURE IDENTIFICATION SIGNS

STA-30-1640 (OVER ABANDONED RAIL SPUR)
-CONTRACTOR TO COORDINATE WORK ACTIVITIES WITH SLESNICK STEEL; LEASES ROADWAY BELOW BRIDGE FROM WHEELING & LAKE ERIE FOR TRUCK ACCESS
-REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
-PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
-REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
-SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
-CLEARING AND GRUBBING 15’ AROUND STRUCTURE TO REMOVE ALL VEGETATION
-PROVIDE NEW BRIDGE END MARKERS IN WESTBOUND DIRECTION
-NEW STURCTURE IDENTIFICATION SIGNS

STA -77/30/ 62- VAR PID No. 77887		STRUCTURE GENERAL NOTES				DESIGN AGENCY	
1/9		STA-77-0926, STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1479, STA-30-1488, STA-30-1502, STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, STA-30-1646, & STA-62-1870L				DRAWN NRC	DESIGNED NRC
90 98						REVIEWED TJP	DATE 09/21/15
						STRUCTURE FILE NUMBER	ODOT --- DISTRICT 4 PLANNING AND ENGINEERING

- REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
- REFURBISH EXISTING BEARING DEVICES AT ABUTMENTS
- REPAIR EROSION AT THE REAR ABUTMENT WHERE THE FOOTER IS EXPOSED
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
- REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS AND MEDIAN BARRIER WALL WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION
- PROVIDE NEW END MARKERS IN EASTBOUND DIRECTION
- NEW STRUCTURE IDENTIFICATION SIGNS

- REMOVE EXISTING CONCRETE OVERLAY AND REPLACE WITH A NEW CONCRETE OVERLAY ON THE DECK AND APPROACH SLABS
- REFURBISH AND RESET EXISTING BEARING DEVICES AT PIERS
- PAINT THE STRUCTURAL STEEL WITH OZEU PAINT SYSTEM
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE INCLUDING PARAPETS
- REMOVE ALL SPALLED AREAS FROM BOTTOM OF DECK FLOOR AND SEAL WITH EXPOXY-URETHANE
- REPAIR DAMAGED OR DETERIORATED PARAPETS
- SEAL ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, ABUTMENTS, WING WALLS, PIER CAPS AND PIER COLUMNS WITH EPOXY-URETHANE
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION, INCLUDING VEGETATION FROM CONCRETE SLOPE PROTECTION
- NEW STURCTURE IDENTIFICATION SIGNS

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

THIS WORK WILL CONSIST OF REMOVING AND REPLACING SLABS OF THE CONCRETE SLOPE PROTECTION UNDER STRUCTURES STA-30-1338, STA-30-1502, AND STA-30-1520 WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL AND ITEM 601, CONCRETE SLOPE PROTECTION.

CONCRETE SLOPE PROTECTION REPLACEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 601, CONCRETE SLOPE PROTECTION AND ITEM 613, LOW STRENGTH MORTAR BACKFILL. REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 202, CONCRETE SLOPE PROTECTION REMOVED. THE PRICE FOR EACH ITEM WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

THIS WORK WILL CONSIST OF REPAIRING THE EROSION ALONG THE REAR EMBANKMENTS OF STRUCTURES STA-30-1488, STA-30-1502, STA-30-1580, AND STA-30-1646. FOR STRUCTURE STA-30-1594, REPAIR WORK WILL BE ALONG STREAM BANK OF 2 PIER COLUMNS WITH STEEL PIER CAP. REPAIR WORK WILL BE PAID FOR BY THE FOLLOWING ITEMS.

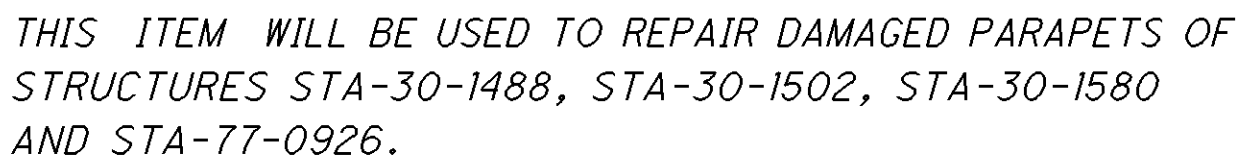
STRUCTURE STA-30-1502:
ITEM 203, BORROW 5 CY

STRUCTURE STA-30-1594:
ITEM 601, DUMPED ROCK FILL, TYPE A 10 CY

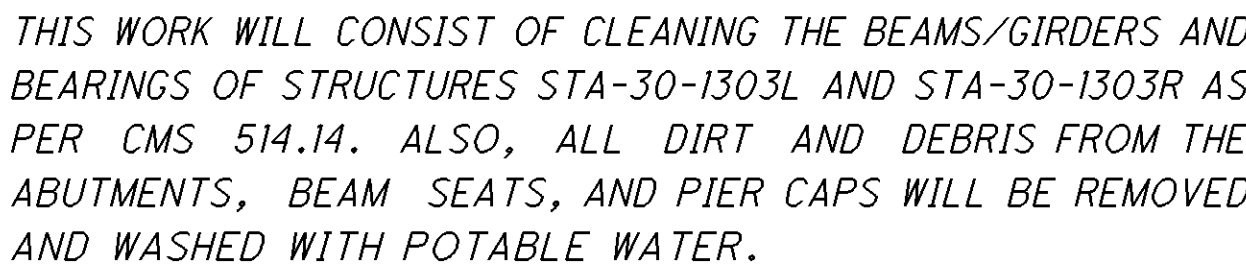
REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE
ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE
DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING
STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

THIS ITEM OF WORK CONSISTS OF THE REMOVAL OF ALL UNSOUND CONCRETE AT THE REAR ABUTMENT BACKWALL OF STRUCTURE STA-30-1338 TO THE LIMITS SHOWN BELOW OR AS DIRECTED BY THE ENGINEER. THE PREPARATION OF THE SURFACE, FORMS, TEMPORARY SUPPORTS OF THE EXPANSION JOINT, AND PLACING CLASS MS CONCRETE, SUBSTRUCTURE.

PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER CU. YD.
FOR ITEM 511 - CONCRETE MISC.: BACKWALL REPAIR WHICH WILL
INCLUDE ALL MATERIALS AND LABOR INCLUDING REMOVAL AND
DISPOSAL OF THE EXISTING CONCRETE REQUIRED TO MAKE THIS
WORK COMPLETE.



SAWCUT AND REMOVE DAMAGED/SPALLED AREAS OF THE EXISTING PARAPETS TO A MINIMUM DEPTH OF 6" AND A MAXIMUM DEPTH OF 12" OR AS DIRECTED BY THE ENGINEER. CARE SHALL BE TAKEN WHEN REMOVING SPALLED CONCRETE TO SALVAGE EXISTING REBAR. CLASS QC1 CONCRETE WILL BE USED TO REPAIR THE DAMAGED PARAPETS. THE REMOVAL OF CONCRETE, PREPARATION OF THE SURFACES, FORMS, AND CLASS QC1 CONCRETE WILL BE INCIDENTAL TO THIS ITEM. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE PER FOOT FOR ITEM 511, CONCRETE MISC.: PARAPET REPAIR.



STRUCTURE CLEANING WILL BE PAID FOR AT THE LUMP SUM BID FOR SPECIAL , STRUCTURE MISC.: STRUCTURE CLEANING. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE WORK.

THIS ITEM OF WORK WILL CONSIST OF PAINTING ALL OF THE BEAMS, CROSS FRAMES AND BEARINGS OF STRUCTURE STA-62-1870L. THE COLOR FOR THE FINISHED COAT OF STRUCTURE(S) STA-62-1870L WILL CONFORM TO FEDERAL NUMBER 14272 (GREEN).

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

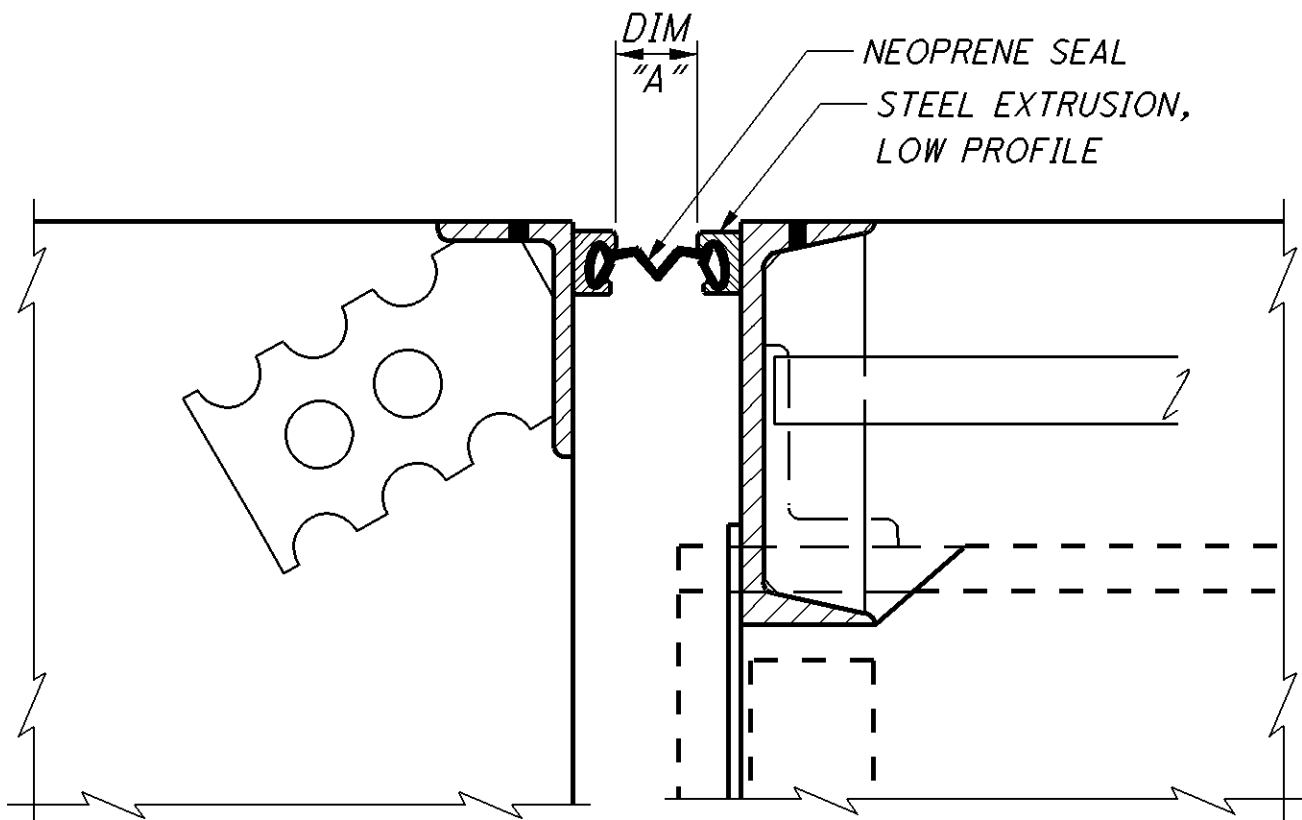
THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

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ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

THIS ITEM WILL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING SEALS FROM EDGE TO EDGE OF STRUCTURES STA-30-1303L AND STA-30-1303R DECKS. UPON REMOVAL OF THE SEAL, THE CONTRACTOR WILL ATTEMPT TO MATCH THE REPLACEMENT SEAL AS CLOSELY AS POSSIBLE WITH THE EXISTING SEAL SO AS TO PROVIDE A SNUG, WATERTIGHT SEAL. THE EXISTING SEAL WILL BE FIELD MEASURE PRIOR TO ORDERING MATERIAL.

THIS WORK WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 516, ELASTOMERIC STRIP SEAL, AS PER PLAN. THIS PRICE WILL INCLUDE THE REMOVAL OF THE EXISTING SEAL, LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS REQUIRED TO REPLACE THE SEAL.



DIMENSION A

TEMPERATURE, °F	STA-30-1303L&R FWD. ABUTMENT	STA-30-1303L&R REAR ABUTMENT
30°	1.80"	1.91"
40°	1.78"	1.80"
50°	1.75"	1.70"
60°	1.70"	1.61"
70°	1.66"	1.53"
80°	1.60"	1.45"
90°	1.55"	1.35"

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM OF THE DECK FLOOR OF STRUCTURE(S) STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1479, STA-30-1488, STA-30-1502, STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, STA-30-1646, AND STA-30-1870L WITHOUT SOUNDING. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM SPECIAL - STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

FOR EACH STRUCTURE LISTED ABOVE:
ITEM SPEC-STRUCTURE MISC.: CONCRETE SPALL REMOVAL 50 SY
ITEM 512-SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) 50 SY

ITEM 530 - STRUCTURE MISC.: FALSEWORK REMOVAL

THIS WORK CONSISTS OF REMOVAL AND DISPOSAL OF THE EXISTING FALSEWORK SYSTEM FROM STRUCTURE(S) STA-30-1488 AND STA-30-1520 IN ORDER TO COMPLETE THE PATCHING AND SPALL REMOVAL. THE EXISTING FALSEWORK IS NOT TO BE REPLACED WITH NEW AFTER THE PATCHING AND SPALL REMOVAL WORK IS COMPLETE. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
STA-77-0926 (1 APPROACH), STA-30-1338 (EASTBOUND), STA-30-1479 (WESTBOUND), STA-30-1594 (EASTBOUND), STA-30-1640 (WESTBOUND), STA-62-1870L (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

OBJECT MARKERS AND STRUCTURE IDENTIFICATION SIGNS

OBJECT MARKERS WILL BE PLACED ON EACH APPROACH OFF THE LEFT AND RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. ONE OM-3L AND ONE OM-3R WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND SHALL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 10.5 FT IN LENGTH.

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE INSTALLED ON THE SAME POST AND DIRECTLY BELOW THE OBJECT MARKER OFF THE RIGHT SHOULDER ON EACH APPROACH. A QUANTITY OF ONE SIGN WILL BE INSTALLED AT EACH APPROACH. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:
STA-30-1303L (1 APPROACH), STA-30-1303R (1 APPROACH), STA-30-1338 (1 APPROACH), STA-30-1479 (1 APROACH), STA-30-1488 (2 APPROACHES), STA-30-1502 (2 APPROACHES), STA-30-1520 (2 APPROACHES), STA-30-1558 (2 APPROACHES), STA-30-1580 (2 APPROACHES), STA-30-1594 (1 APPROACH), STA-30-1634 (2 APPROACHES), STA-30-1640 (1 APPROACH), STA-30-1646 (1 APPROACH), STA-62-1870L (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 - SIGN, FLAT SHEET, 6 SQ FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 21 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 3 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 2 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATIONS SIGNS.

STRUCTURE STA-30-1303L (SFN: 7607679) THE EXISTING SIGN SHOWS 1305L. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1303L.

STRUCTURE STA-30-1303R (SFN: 7607644) THE EXISTING SIGN SHOWS 1305R. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1303R.

STRUCTURE STA-30-1338 (SFN: 7607709) THE EXISTING SIGN SHOWS 1340. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1338.

STRUCTURE STA-30-1479 (SFN: 7600925) THE EXISTING SIGN SHOWS 14. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1479.

STRUCTURE STA-30-1488 (SFN: 7600941) THE EXISTING SIGN SHOWS 1487. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1488.

STRUCTURE STA-30-1502 (SFN: 7600860) THE EXISTING SIGN SHOWS 1505. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1502.

STRUCTURE STA-30-1520 (SFN: 7600844) THE EXISTING SIGN SHOWS 1522. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1520.

STRUCTURE STA-30-1558 (SFN: 7600895) THE EXISTING SIGN SHOWS 1560. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1558.

STRUCTURE STA-30-1580 (SFN: 7600976) THE EXISTING SIGN SHOWS 1581. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1580.

STRUCTURE STA-30-1594 (SFN: 7600984) THE EXISTING SIGN SHOWS 1595. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1594.

STRUCTURE STA-30-1634 (SFN: 7601018) THE EXISTING SIGN SHOWS 1636. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1634.

STRUCTURE STA-30-1640 (SFN: 7601026) THE EXISTING SIGN SHOWS 1641. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1640.

STRUCTURE STA-30-1646 (SFN: 7601042) THE EXISTING SIGN SHOWS 1646. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1646.

STRUCTURE STA-62-1870L (SFN: 7602200) THE EXISTING SIGN SHOWS 1868L. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 1870L.

STA-77-30/30/62-VAR
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STRUCTURE GENERAL NOTES
STA-77-0926, STA-30-1303L, STA-30-1303R, STA-30-1338, STA-A-30-1479, STA-30-1488, STA-30-1502
STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, STA-30-1646, & STA-62-1870L

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STRUCTURE FILE NUMBER

DATE
09/21/15

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

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ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN
ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
ITEM 847 - FULL DEPTH REPAIR, AS PER PLAN
ITEM 847 - WEARING COURSE REMOVED, AS PER PLAN
ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE SCARIFICATION AND CHIPPING WITH THE FOLLOWING REVISIONS:

THE THICKNESS OF THE CONCRETE OVERLAY REMOVED, ASPHALT WEARING COURSE REMOVED, PROPOSED OVERLAY, AND THE DEPTH OF REMOVAL BY SCARIFICATION SHALL BE AS SPECIFIED IN THE PLANS.

CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN THE WHEEL LINE.

(SEE 847.11) THE COMPONENTS OF THE MICRO-SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS.

CONCRETE TABLE
QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)

AGGREGATE TYPE	FINE AGGREG. (LB)	* # 8 COARSE AGGREG. (LB)	AGGREG. TOTAL (LB)	CEMENT CONTENT (LB)	MICRO-SILICA (LB)	WATER TO CEMENTITIOUS RATIO	AIR CONTENT ± 2%	**FIBER (1 1/4" POLYPROPYLENE) (LB)
GRAVEL	1410	1430	2840	600	50	0.4	8	1
LIMESTONE	1410	1450	2860	600	50	0.4	8	1
SLAG	1300	1350	2650	600	50	0.4	8	1

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

** FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED-NETWORK FORM AND SHALL BE 1/4" IN LENGTH.

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, MICRO-SILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED. FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN.

ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED BY ASTM C127

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

(SEE 847.18) THE FINAL DECK SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

(SEE 847.19) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

(SEE 847.25) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 847.25) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PST (4.2 Mpa).

(SEE 847.26) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 11:00 AM.

(SEE 847.27) FOR EACH PHASE, THE CONTRACTOR SHALL PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS, AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPa). TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.5 Mpa).

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

ENDANGERED SPECIES HABITAT - INDIANA BAT AND NORTHERN LONG-EARED BAT

TREES WITHIN THE PROJECT CONSTRUCTION LIMITS SHALL BE CLEARED BETWEEN SEPTEMBER 30 AND APRIL 1, WHENEVER PRACTICABLE. IF SOME TREE REMOVAL MUST BE CONDUCTED BETWEEN APRIL 1 AND SEPTEMBER 30, TREES CONTAINING SUITABLE BAT ROOSTING HABITAT SHALL BE MARKED FOR AVOIDANCE DURING THESE MONTHS. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF ANY BRIDGES, THE USFWS, ECOLOGICAL SERVICES DIVISION (614-416-8993), ODOT OFFICE OF ENVIRONMENTAL SERVICES (614-466-7880) AND ODOT DISTRICT 4 ENVIRONMENTAL SECTION (330-786-4930) SHALL BE CONTACTED TO PROVIDE THIS INFORMATION. SHOULD ADDITIONAL INFORMATION ON LISTED ENDANGERED/THREATENED/POTENTIALLY THREATENED SPECIES OR THEIR CRITICAL HABITAT BECOME AVAILABLE, OR IF NEW INFORMATION REVEALS EFFECTS OF THIS PROJECT THAT WERE NOT PREVIOUSLY CONSIDERED, ODOT WILL REINITIATE CONSULTATION WITH THE USFWS AND ODNR TO ASSESS WHETHER THE PROJECT DETERMINATIONS ARE STILL VALID.

BEST MANAGEMENT PRACTICES

WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION.

NATURAL BUFFERS ADJACENT TO STREAMS AND WETLANDS SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE. EXISTING RIPARIAN HABITATS SHOULD BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE AND EQUIPMENT STAGING AREAS SHALL BE KEPT WELL AWAY FROM STREAMS AND WETLANDS TO THE EXTENT PRACTICABLE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS/WETLANDS.

AREAS DISTURBED BY THE PROJECT SHALL BE SEEDED/REVEGETATED WITH NATIVE PLANT SPECIES AND MULCHED DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF VEGETATION COVER, DECREASE EROSION AND PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

THE CONTRACTOR SHALL UTILIZE AN APPROVED DISPOSAL SITE FOR THE DISPOSAL OF ALL WASTE MATERIALS. ALL WASTE SOIL AND SEDIMENT MATERIALS SHALL BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E. SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. IMMEDIATE REMOVAL IS DEFINED BY THE UNITED STATES ARMY CORPS OF ENGINEERS AS DEPOSITING THE REMOVED MATERIALS DIRECTLY INTO A TRUCK AND REMOVING THE MATERIAL FROM THE SITE. THE APPROVED DISPOSAL SITE SHALL NOT INCLUDE ANY WETLANDS, STREAM BANKS OR RIVERBANKS OR ANY 100-YEAR FLOOD PLAINS.

WATERWAY PERMIT DETERMINATION (404/401) - ODOT PROJECTS

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. THE WATERWAY PERMITS CONDITIONS VERIFIED FOR THE PROJECT ARE INCORPORATED INTO THE PROJECT CONSTRUCTION PLAN AS SPECIAL PROVISIONS. THE PROJECT CONTRACTOR SHALL ADHERE TO ALL WATERWAY PERMIT TERMS AND CONDITIONS THROUGHOUT PROJECT CONSTRUCTION.

MIDDLE BRANCH OF NIMISHILLEN CREEK - BRIDGE NO. STA-30-1590
NO IN-STREAM WORK (I.E., WORK BELOW THE ORDINARY HIGH WATER MARK) SHALL BE PERFORMED IN THE MIDDLE BRANCH OF NIMISHILLEN CREEK FROM APRIL 15 THROUGH JUNE 30. THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE MIDDLE BRANCH OF NIMISHILLEN CREEK. THIS PERTAINS TO ANY EXCAVATION OPERATION SUCH AS EXCAVATION FOR ROCK CHANNEL PROTECTION.

WEST BRANCH OF NIMISHILLEN CREEK AVOIDANCE - BRIDGE NO. STA-30-1482

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN IN THE WEST BRANCH OF NIMISHILLEN CREEK. NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN IN THE WEST BRANCH OF NIMISHILLEN CREEK. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES. ODOT SUPPLEMENTAL SPECIFICATION 832, TEMPORARY SEDIMENT AND EROSION CONTROL, PROHIBITS FORDING OF STREAMS AND/OR RIVERS.

CONSTRUCTION AND DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING WETLANDS AND STREAMS. ANY DEBRIS THAT DOES FALL INTO WETLANDS AND/OR STREAMS SHALL BE REMOVED AS SOON AS POSSIBLE WITHIN 72 HOURS.

MECHANICAL OPERATION AT THE STREAM CHANNEL

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN SUCH A WAY AS TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

PAINTING AND SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

STA-77-77/30/62-VAR
PID No. 77887

STRUCTURE GENERAL NOTES

STA-77-0926, STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1478, STA-30-1488, STA-30-1502
STA-30-1620, STA-30-1658, STA-30-1680, STA-30-1634, STA-30-1640, STA-30-1646, & STA-62-1870L

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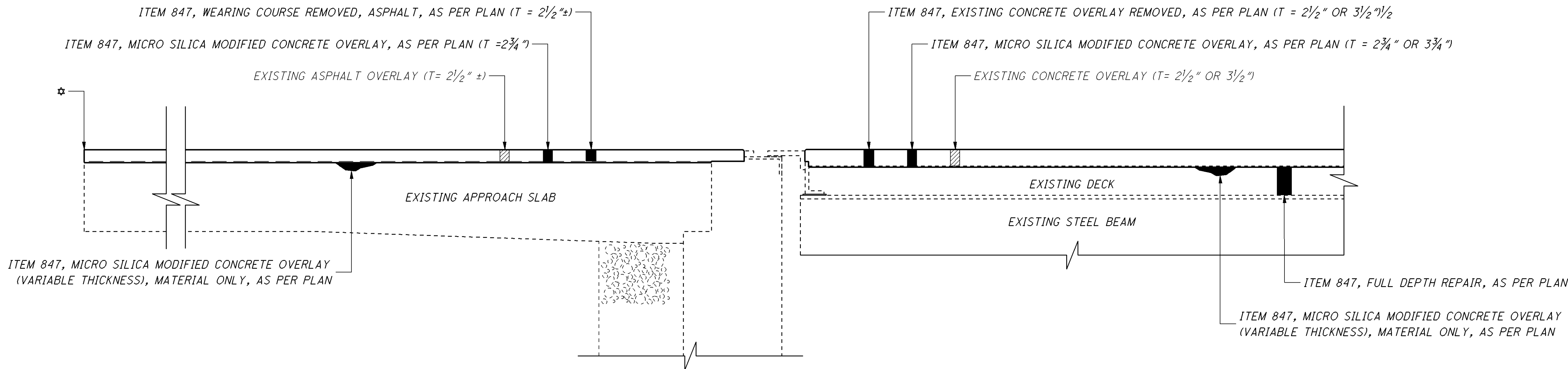
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DESIGN AGENCY	ODOT --- DISTRICT 4
PLANNING AND ENGINEERING	

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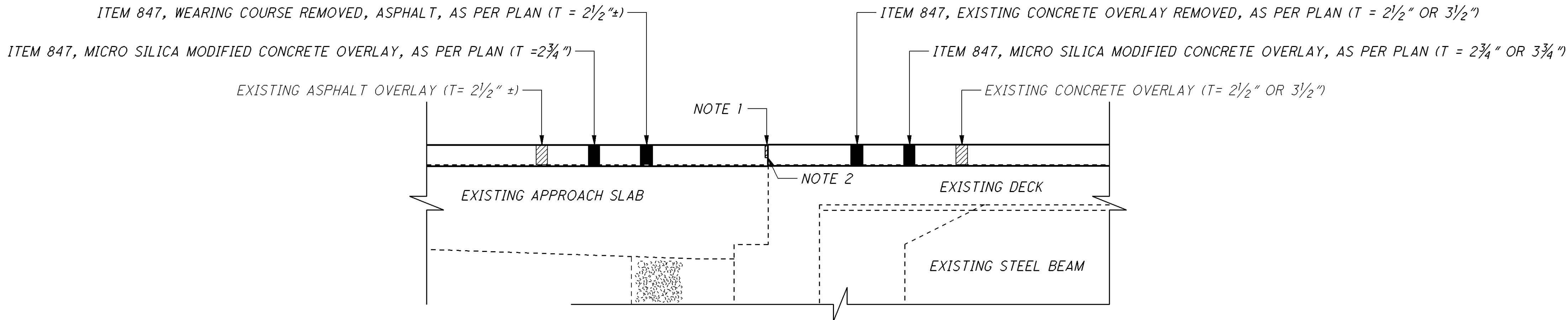
								CALC: NRC		DATE: 7/20/2015		
								CHECKED: TJP		DATE: 9/21/2015		
ESTIMATED QUANTITIES												
BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
STA-30-1558 7600895 02/NHS/BR	STA-30-1580 7600976 02/NHS/BR	STA-30-1594 7600984 02/NHS/BR	STA-30-1634 7601018 02/NHS/BR	STA-30-1640 7601026 02/NHS/BR	STA-30-1646 7601042 02/NHS/BR	STA-62-1870L 7602200 02/NHS/BR						
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP		201	11000		CLEARING AND GRUBBING	
	20				5			203	40000	CY	BORROW	
	50							509	20001	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	2/9
	10							511	81100	FT	CONCRETE, MISC.: PAPRAPET REPAIR	2/9
320	601	1724	414	427	516	450		512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
								512	73501	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN, AS PER PLAN	
		1674						512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
						LUMP		514	00100		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
						LUMP		514	00200		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
						LUMP		514	00300		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
						LUMP		514	00400		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
						8		514	00504	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
						3		514	10000	EACH	FINAL INSPECTION REPAIR	
32	38	28			28	8		516	46801	EACH	REFURBISH AND RESET BEARING, AS PER PLAN	2/9
LUMP	LUMP	LUMP			LUMP	LUMP		516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	2/9
11								518	12500	EACH	SCUPPER, MISC.: CLEANOUT	3/9
200	250	250	250	200	200	250		519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3/9
50	50	50	50	50	50	50		SPEC	53000800	SY	STRUCTURE, MISC.: CONCRETE SPALL REMOVAL	3/9
	15				5			601	20010	CY	CRUSHED AGGREGATE SLOPE PROTECTION	
		10						601	25000	CY	DUMPED ROCK FILL, TYPE A	
42	42	28.5	42	28.5	28.5	21		630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
2	2	2	2	2	2	1		630	80100	SF	SIGN, FLAT SHEET, 730.20	
12	12	6	12	6	6	6		630	80100	SF	SIGN, FLAT SHEET	
6	6	4	6	4	4	3		630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
4	4	3	4	3	3	2		630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
150	175	175	150	100	100	150		843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	
2283	4550	8037	1930	2439	3864	474		847	10001	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN	4/9
153	304	536	129	163	258	32		847	20001	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	4/9
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP		847	30000		TEST SLAB	
1	1	1	1	1	1	1		847	30201	CY	FULL DEPTH REPAIR, AS PER PLAN	4/9
867	973	595	578	587	589	150		847	30301	SY	WEARING COURSE REMOVED, ASPHALT, AS PER PLAN	4/9
1416	3578	7443	1352	1852	3275	324		847	30401	SY	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (T=2 1/2" OR 3 1/2")	4/9
69	137	242	58	74	116	15		847	50000	SY	HAND CHIPPING	

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STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1488,
STA-30-1502, STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, & STA-30-1646

APPROACH SHOWN,
TRAILING SIMILAR



STA-30-1479, STA-30-1634, STA-30-1640, & STA-62-1870L

INTEGRAL ABUTMENT DETAIL

APPROACH SHOWN,
TRAILING SIMILAR

SEE SHEET 8/9 FOR OVERLAY CALCULATIONS.

STRUCTURE:	APPROACH SLAB ASPHALT THICKNESS:	EXISTING CONCRETE OVERLAY THICKNESS:	PROPOSED CONCRETE OVERLAY THICKNESS (APPROACH SLAB):	PROPOSED CONCRETE OVERLAY THICKNESS:
STA-30-1303L	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1303R	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1338	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1479	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1488	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1502	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1520	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1558	2 1/2"	2 1/2"	2 3/4"	2 3/4"
STA-30-1580	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1594	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1634	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1640	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-30-1646	2 1/2"	3 1/2"	2 3/4"	3 3/4"
STA-62-1870L	2 1/2"	2 1/2"	2 3/4"	2 3/4"

✱ PAVEMENT SHALL TAPER TO THE APPROACH SLAB PER
SCD BP - 3.1

NOTE 1: PREFORMED ELASTOMERIC JOINT SEAL, 705.11
(1/4" WIDE FOR A 1/2" WIDE GROOVE) PLACED
IN 1/2" X 2 1/4" GROOVE.

NOTE 2: TYPE "A" WATERPROOFING.

STRUCTURE DETAILS

STA-77-0926, STA-30-1303L, STA-30-1303R, STA-30-1479, STA-30-1488, STA-30-1502
STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, & STA-30-1646, STA-62-1870L

STA-77/30/62-
VAR
PID No. 77887

7 / 8

96
98

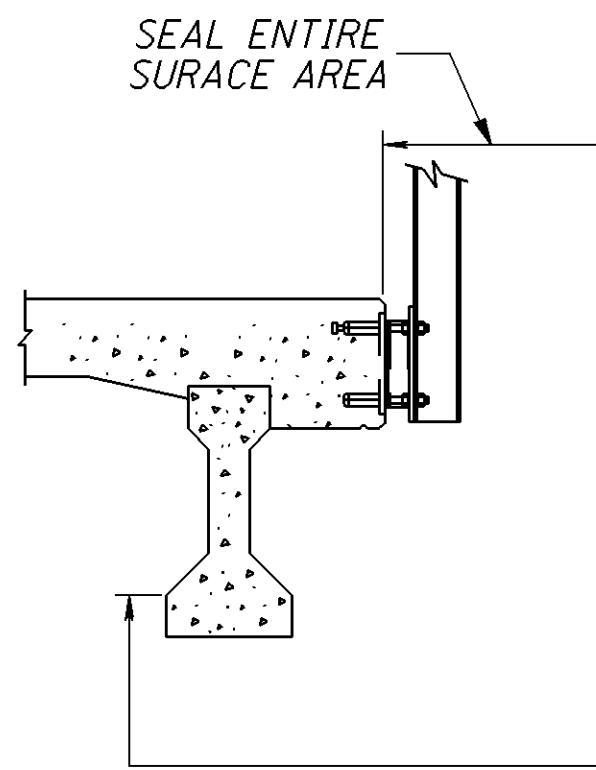
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ODOT --- DISTRICT 4
PLANNING AND ENGINEERING

DATE
09/21/15
REVIEWED
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STRUCTURE FILE NUMBER

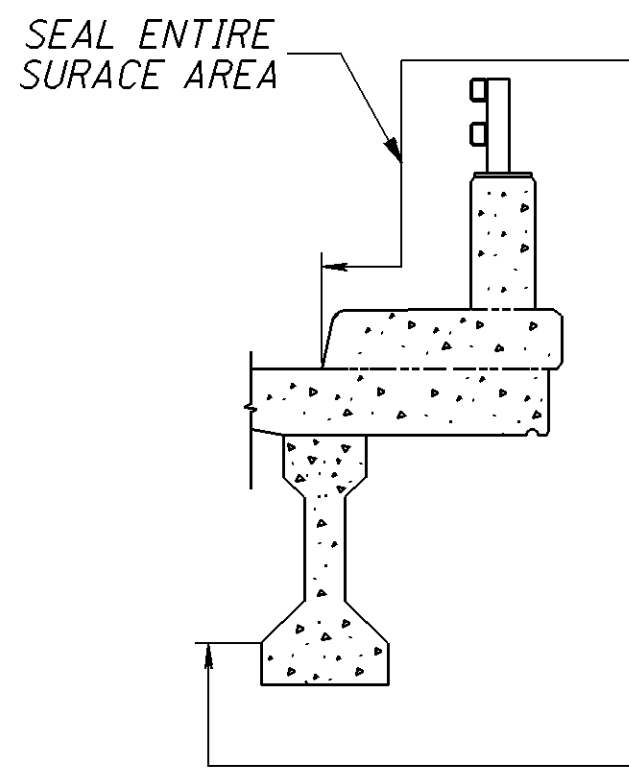
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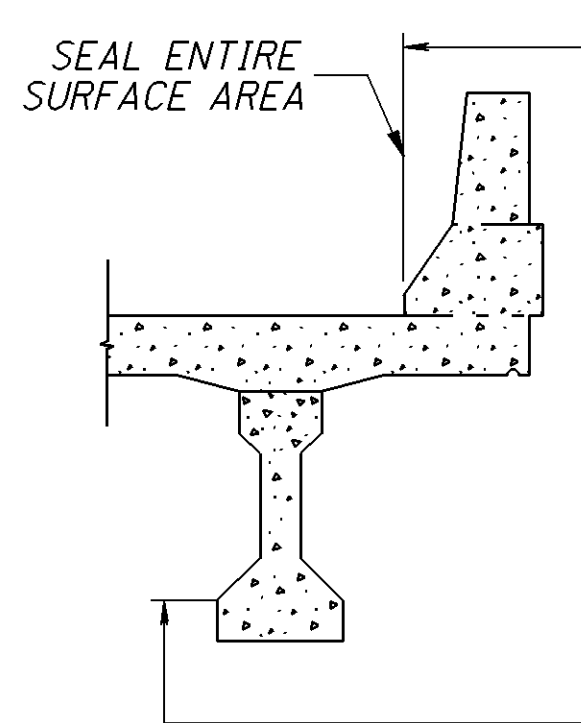
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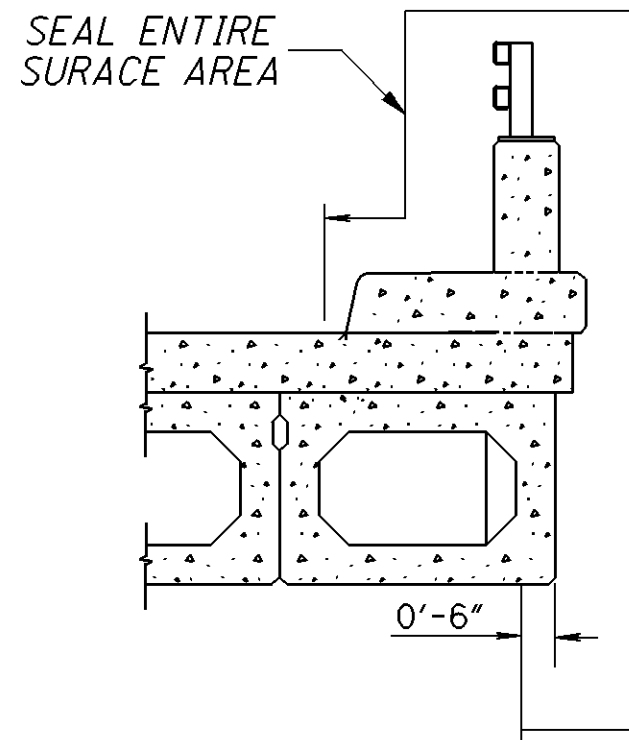
DETAIL A
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



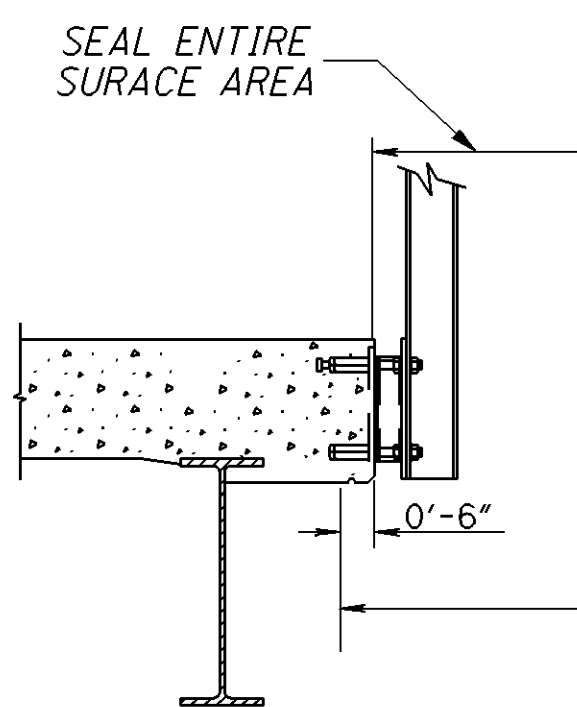
DETAIL B
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



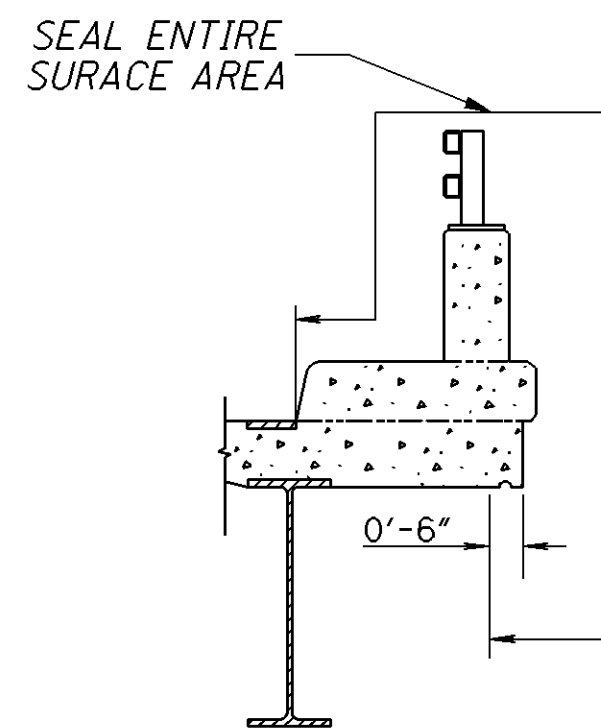
DETAIL C
CONCRETE DECK WITH
DEFLECTOR PARAPET



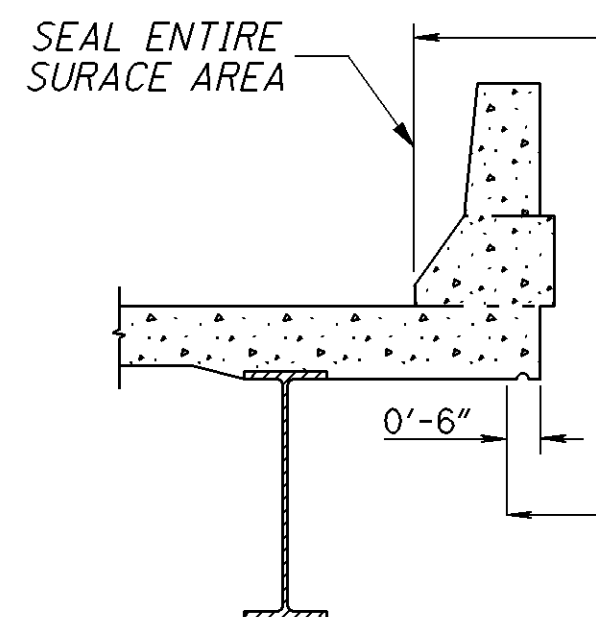
DETAIL D
PRESTRESSED BOX BEAM DECK
WITH DEFLECTOR PARAPET



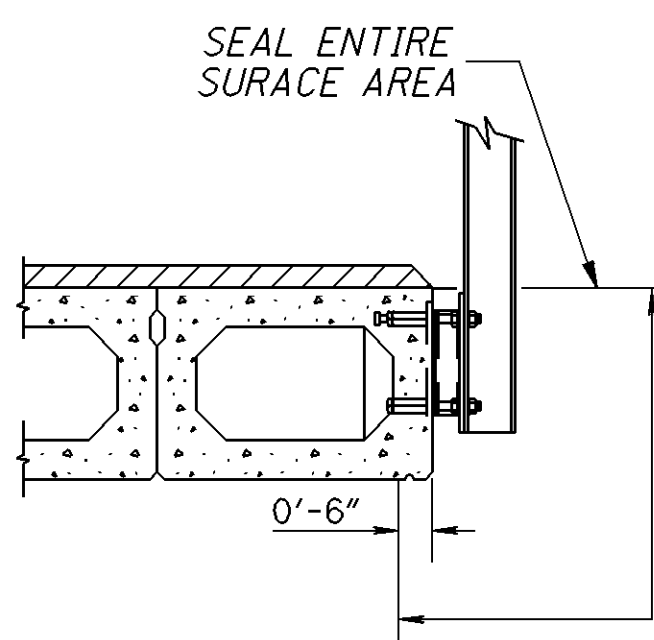
DETAIL E
CONCRETE DECKS WITH
OVER THE SIDE DRAINAGE



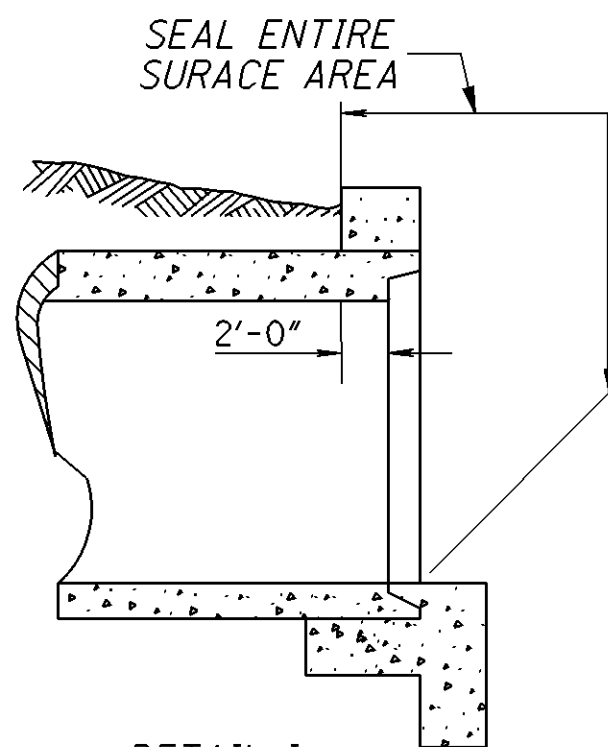
DETAIL F
CONCRETE DECKS WITH CURBS,
SIDEWALKS AND PARAPET



DETAIL G
CONCRETE DECK WITH
DEFLECTOR PARAPET



DETAIL H
PRESTRESSED BOX BEAM DECK
WITH OVER THE SIDE DRAINAGE



DETAIL I
PRECAST REINFORCED
CONCRETE BOX CULVERT

NOTES:

- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
STA-77-0926	4 SPAN CONTINUOUS STEEL BEAM	SEAL ALL AREAS THAT HAVE BEEN PATCHED	PER CMS				100	100
STA-30-1303L	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			304	50	354
STA-30-1303R	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			304	50	354
STA-30-1338	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS	807		700	50	1557
STA-30-1479	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			517	50	567
STA-30-1488	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			1763	50	1813
STA-30-1502	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			1600	50	1650
STA-30-1520	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			610	50	660
STA-30-1558	STEEL BEAM SIMPLE SPAN	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			270	50	320
STA-30-1580	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			551	50	601
STA-30-1594	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			1674	50	1724
STA-30-1634	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			364	50	414
STA-30-1640	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			377	50	427
STA-30-1646	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL SPALL REMOVALS FROM DECK FLOOR	PER CMS			466	50	516
STA-62-1870L	4 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS PER DETAIL G SEAL ALL EXPOSED CON	PER CMS	190	15	195	50	450

CONCRETE SEALING DETAILS

STA-77-0926, STA-30-1303L, STA-30-1303R, STA-30-1338, STA-30-1479, STA-30-1488, STA-30-1502, STA-30-1520, STA-30-1558, STA-30-1580, STA-30-1594, STA-30-1634, STA-30-1640, STA-30-1646, & STA-62-1870L

STA-77/30/62-VAR
PID No. 77887

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