

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
JEF-FERNWOOD RD.
VILLAGE OF WINTERSVILLE
CROSS CREEK TOWNSHIP
JEFFERSON COUNTY

PROJECT DESCRIPTION

UPGRADING 0.44 MILE OF FERNWOOD ROAD BY WIDENING AND RESURFACING, INCLUDING NEW STORM SEWER SYSTEM, CURB AND GUTTER, SIDEWALK, TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 3.1 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.5 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 3.6 ACRES

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.

2019 SPECIFICATIONS

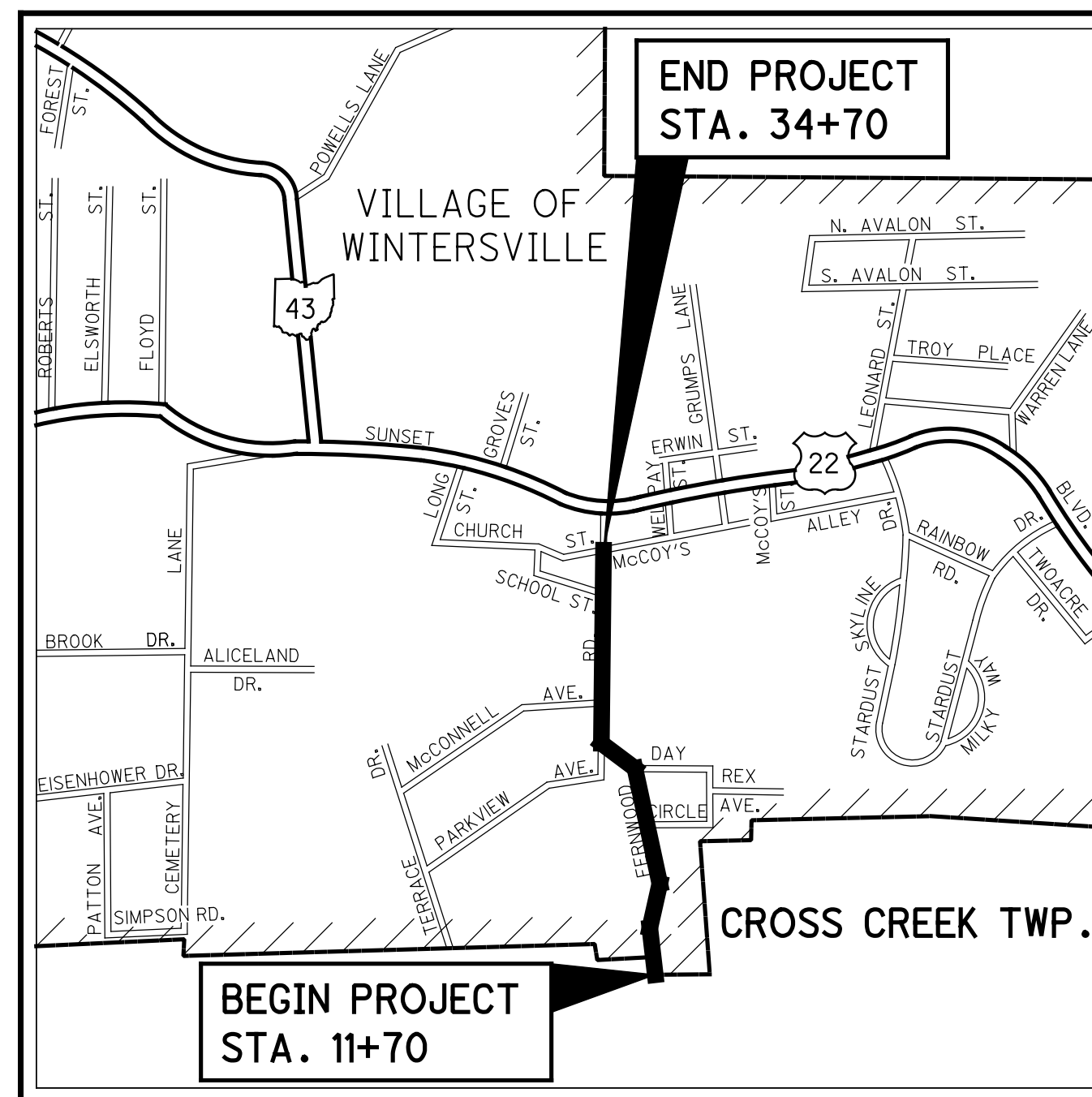
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES

APPROVED _____
DATE _____ MAYOR, VILLAGE OF WINTERSVILLE

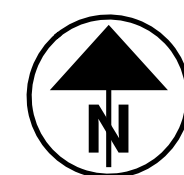
APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 40°22'20" LONGITUDE: 80°42'05"



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

DESIGN DESIGNATION

CURRENT ADT (2016)	2940
DESIGN YEAR ADT (20)	4494
DESIGN HOURLY VOLUME (20)	449
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	3R PROJECT
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
06 MINOR COLLECTOR (URBAN)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBER
HORIZONTAL: Superelevation	6-27-19	2
VERTICAL: Stopping Sight Distance	6-27-19	10, 12

ADA DESIGN WAIVER

NONE REQUIRED

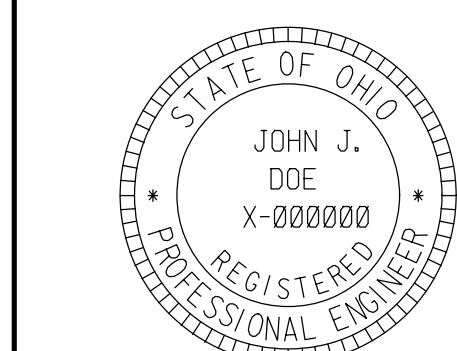
UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)

INDEX OF SHEETS:

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ENGINEERS SEAL:



SIGNED: John J. Doe
DATE: 11/11/19

PLAN PREPARED BY:
JOHN J. DOE CONSULTING, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/28/00	MGS-1.1	1/19/18	MT-105.10	7/19/13	800-2020 4/17/20	REINFORCED EARTH
BP-2.1	7/17/15	MGS-2.1	1/19/18			832 10/19/18	5/27/17
BP-2.2	7/18/08	MGS-4.2	7/19/13	TC-41.20	10/18/13		WATERWAY PERMIT 1/23/18
BP-3.1	1/17/20	MGS-5.3	7/15/16	TC-41.40	10/18/13		
BP-4.1	7/19/13			TC-42.20	10/18/13		
BP-5.1	1/18/19	HW-2.1	1/15/16	TC-52.10	10/18/13		
BP-7.1	7/20/18	HW-2.2	1/15/16	TC-52.20	7/20/18		
				TC-71.10	1/19/18		
CB-2.1	7/20/18	LA-1.1	10/15/10				
CB-2.2	7/20/18	LA-1.2	1/16/09				
CB-2.3	1/15/16						
		MH-1.1	1/15/16				
DM-1.1	7/21/17	MH-1.2	1/15/16				
DM-4.4	1/15/16	MH-1.3	1/18/13				

FEDERAL PROJECT NO. E025 (762)
PID NO. 15549
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
JEF-FERNWOOD RD.
1/50

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

DAR-121-(21.73)(22.83)

**RICHLAND TOWNSHIP
DARKE COUNTY**

PROJECT DESCRIPTION

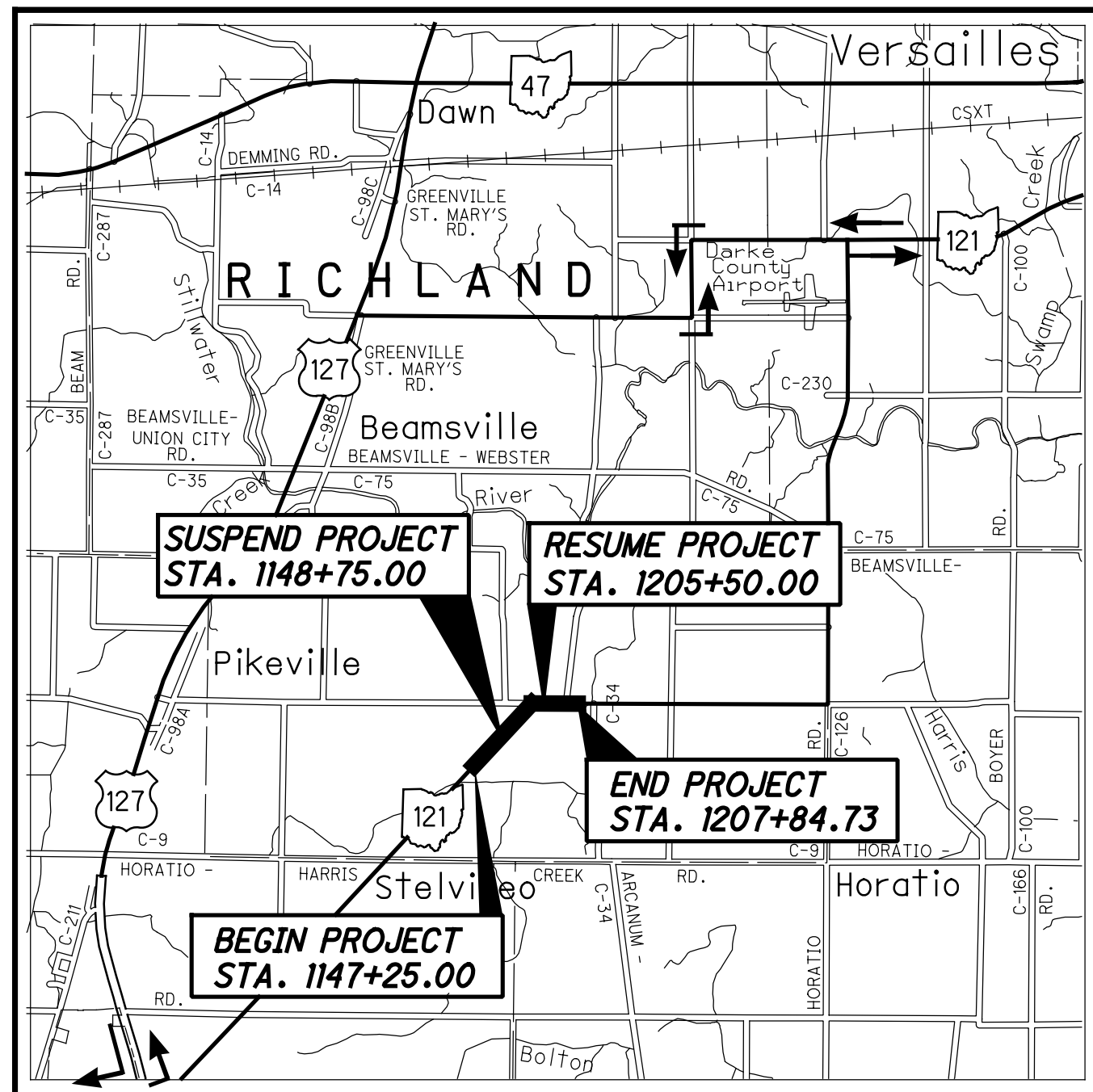
IMPROVEMENT OF 0.07 MILE OF STATE ROUTE 121 BY REPLACEMENT OF TWO STRUCTURES OVER A BRANCH OF THE STILLWATER RIVER, INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 5.4 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 2.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 7.5 ACRES

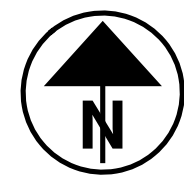
2016 SPECIFICATIONS

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



LOCATION MAP

LATITUDE: 40°09'30" LONGITUDE: 84°34'05"



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

DESIGN DESIGNATION

CURRENT ADT (2013)	1460
DESIGN YEAR ADT (2033)	2040
DESIGN HOURLY VOLUME (2033)	204
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	55MPH
LEGAL SPEED	55MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS: NONE REQUIRED

ADA DESIGN WAIVERS: NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811. 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

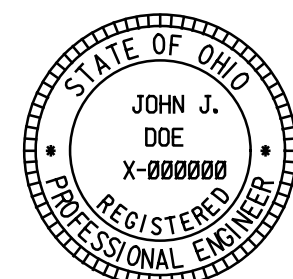
PLAN PREPARED BY:
JOHN DOE CONSULTING, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

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ENGINEERS SEAL:

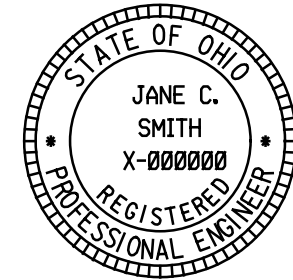
FOR STRUCTURES OVER 20' SPAN



SIGNED: John J. Doe
DATE: 11-11-18

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20' SPAN



SIGNED: Jane C. Smith
DATE: 11-11-18

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14	WQ-1.1	1/18/13	800-2016 10/19/18 832 10/19/18	WATERWAY PERMIT 1/23/16
BP-4.1	7/19/13	WQ-1.2	1/15/16		
DM-1.1	7/21/18	AS-1-81	1/18/13		
DM-4.1	7/20/18	EXJ-4-87	1/19/18		
		PSBD-2-07	7/20/18		
MGS-1.1	1/19/18	TST-1-99	7/20/18		
MGS-2.1	1/19/18				
MGS-4.2	7/19/13				
MGS-5.3	7/15/16				
LA-1.1	10/15/10				
LA-1.2	1/16/09				

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DE-TOURS WILL BE PROVIDED, AS INDICATED ON SHEET 1.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
NON-FEDERAL

PID NO.
14653

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

DAR-121-(21.73)(22.83)

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

TUS-93-8.02

**RECONSTRUCTION OF EXISTING
SEPARATED CROSSING WITH THE
OHIO CENTRAL RAILROAD**

**WAYNE TOWNSHIP
TUSCARAWAS COUNTY**

PROJECT DESCRIPTION

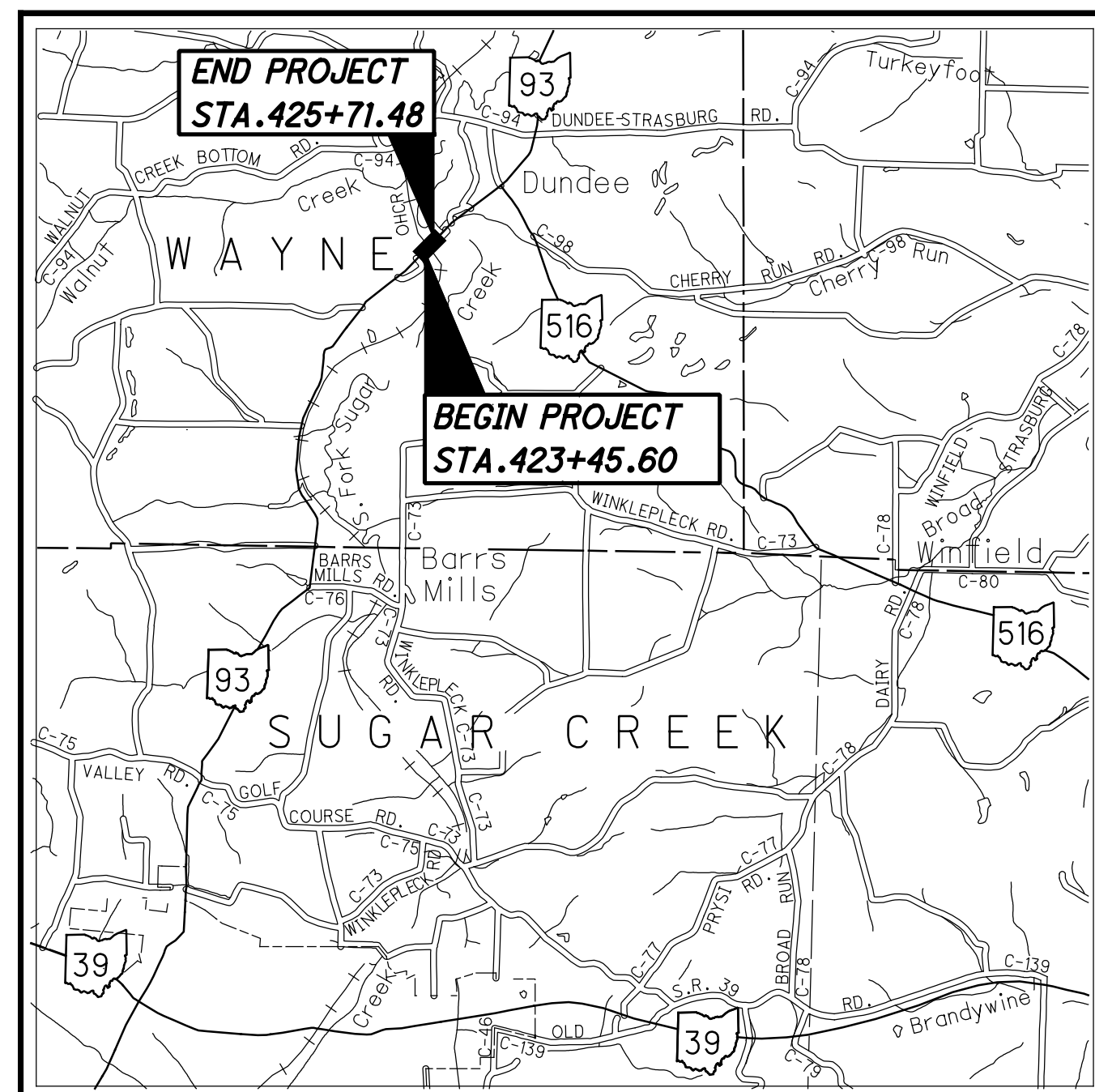
REHABILITATION OF THE EXISTING STRUCTURE OVER THE OHIO CENTRAL RAILROAD BY REPLACEMENT OF THE BRIDGE DECK AND APPROACH SLABS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 1.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.7 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 2.2 ACRES

2019 SPECIFICATIONS

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



LOCATION MAP

LATITUDE: 40°34'20" LONGITUDE: 81°37'00"

SCALE IN MILES



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

DESIGN DESIGNATION

CURRENT ADT (2018)	1270
DESIGN YEAR ADT (2038)	2240
DESIGN HOURLY VOLUME (2038)	224
DIRECTIONAL DISTRIBUTION	60%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
06 MINOR COLLECTOR (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig



OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

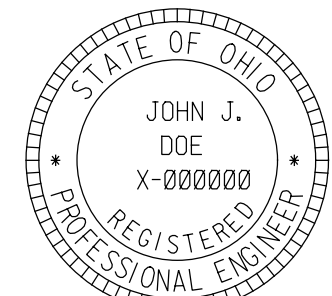
PLAN PREPARED BY:
JOHN DOE ENGINEERING, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

INDEX OF SHEETS:

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ENGINEERS SEAL:

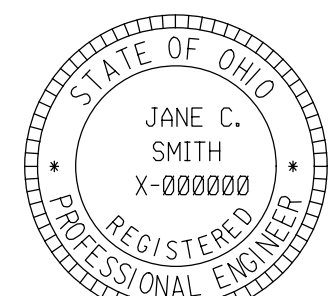
FOR STRUCTURES
OVER 20 FOOT SPAN



SIGNED: *John J. Doe*
DATE: 6/11/20

ENGINEERS SEAL:

FOR ENTIRE PLAN
EXCEPT STRUCTURES
OVER 20 FOOT SPAN



SIGNED: *Jane C. Smith*
DATE: 6/11/20

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS
BP-3.1	7/18/14	CPA-1-08	7/18/08	800-2020 4/17/20
BP-4.1	7/19/13	CS-1-08	7/18/08	832 10/19/18
BP-5.1	1/18/19			
DM-1.1	1/18/13	MT-96.11	7/18/14	
DM-4.4	7/20/12	MT-96.20	7/15/16	
		MT-96.26	7/19/13	
MGS-1.1	1/19/18			
MGS-2.1	1/19/18			
MGS-3.1	1/19/18			
MGS-4.2	7/19/13			
MGS-5.3	7/15/16			
RM-4.2	4/18/14			

SUPPLEMENTAL SPECIFICATIONS

800-2020 4/17/20
832 10/19/18

SPECIAL PROVISIONS

WATERWAY PERMIT
1/23/18

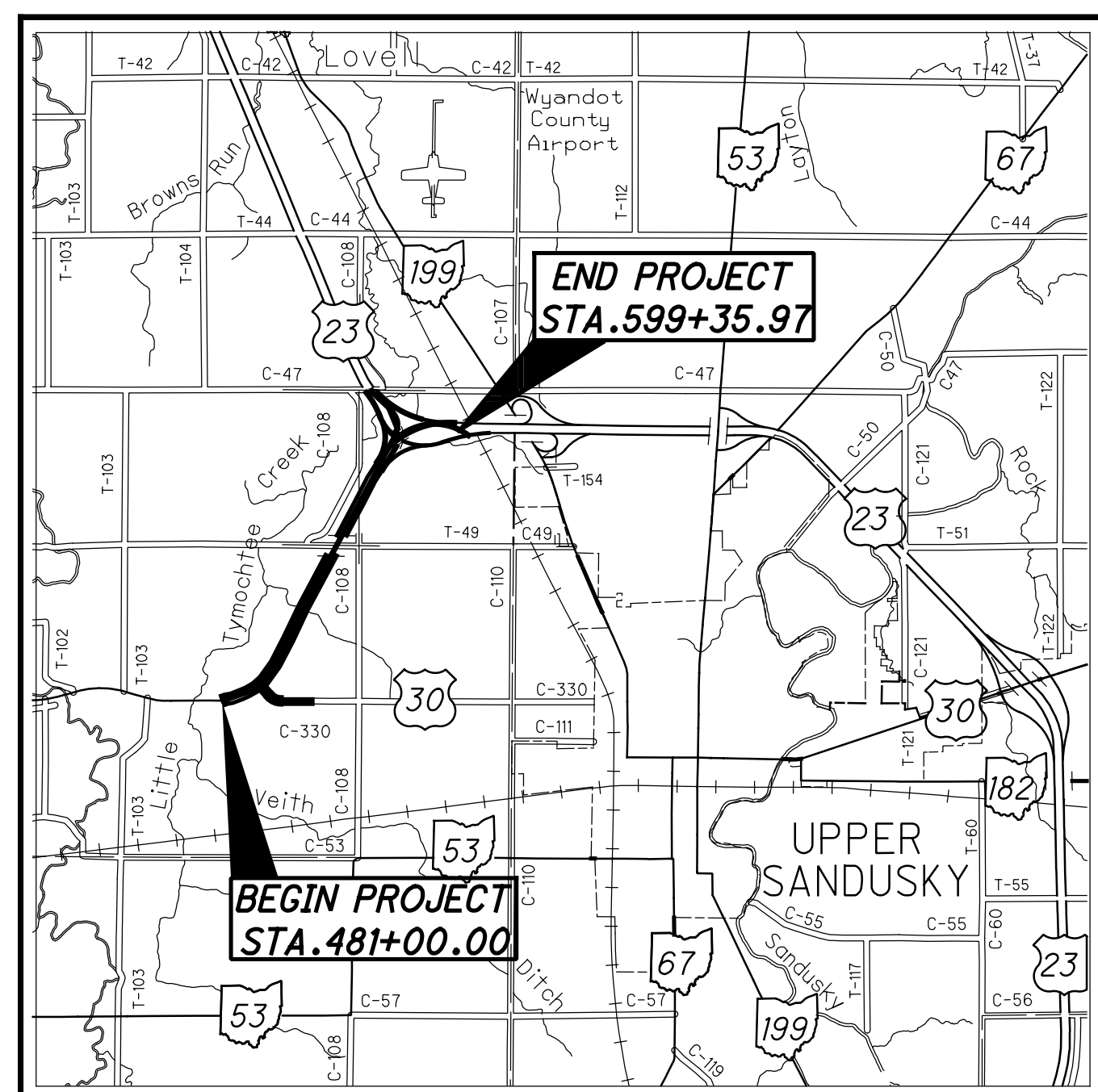
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

WYA-30-9.11
SALEM TOWNSHIP
WYANDOT COUNTY



LOCATION MAP

LATITUDE: 40°50'50" LONGITUDE: 83°18'35"



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

DESIGN DESIGNATION

CURRENT ADT (2019)	3510
DESIGN YEAR ADT (2039)	4880
DESIGN HOURLY VOLUME (2039)	488
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	20%
DESIGN SPEED	70 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	06 FREEWAY (RURAL)
T _d	20%
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
JOHN J. DOE & ASSOC., INC.
CONSULTING ENGINEERS
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL:
FOR STRUCTURES OVER 20 FOOT

SIGNED: *John J. Doe*
DATE: 11/11/14

ENGINEERS SEAL:
FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20 FOOT

SIGNED: *Jane C. Smith*
DATE: 11/11/14

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STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS				
BP-1.1	7/28/00	MGS-1.1	1/19/18	MH-1.1	1/15/16	HL-10.31	1/19/18	TC-07.65	7/20/18	800-2019	4/19/19	WATERWAY PERMIT
										832	10/19/18	5/01/19
CB-2.2	7/20/18	MGS-2.1	1/19/18	MH-1.2	1/15/16	HL-20.11	4/21/17	TC-12.30	1/19/18			GEOTECHNICAL REPORT
												4/19/17
CB-3.1	1/15/16	MGS-3.1	1/19/18	MH-3.1	1/18/13	HL-20.14	1/18/19	TC-21.10	7/21/17			
CB-3.2	1/15/16	MGS-4.2	7/19/13			HL-20.21	1/18/18	TC-21.20	7/20/18			
CB-3.4	1/15/16	MGS-5.3	7/15/16	RM-1.1	7/18/14	HL-30.11	1/18/19	TC-22.20	1/17/14			
				RM-4.2	7/20/18	HL-30.21	1/17/14	TC-41.10	7/19/13			
				RM-4.3	7/18/14	HL-30.22	1/17/14	TC-41.20	10/18/13			
DM-1.1	7/21/17	MGS-6.1	1/19/18			HL-30.31	1/17/14	TC-41.40	10/18/13			
DM-4.4	1/15/16	HW-1.1	1/18/13	MT-95.30	7/18/14	HL-40.10	1/20/17	TC-41.50	10/18/13			
		HW-2.1	1/18/13	MT-102.10	7/18/14	HL-50.11	1/16/15	TC-42.10	10/18/13			
		HW-2.2	1/18/13			HL-60.21	7/20/18	TC-42.20	10/18/13			
F-2.1	7/20/18					HL-60.31	1/18/19	TC-51.11	1/15/16			
F-3.1	7/19/13	LA-1.1	10/15/10	ICD-1-82	7/19/02			TC-52.10	10/18/13			
F-3.3	7/19/13	LA-1.2	1/16/09					TC-52.20	7/20/18			
F-3.4	7/19/13	WQ-1.1	1/18/13									
		WQ-1.2	1/15/16									

PROJECT DESCRIPTION

CONSTRUCTION OF A 2.24 MILE CONNECTION FROM U.S. 30 TO U.S. 23, WITH A CONNECTING ROAD AT U.S. 30 AND A LIGHTED INTERCHANGE AT U.S. 23. INCLUDING CONSTRUCTION OF STRUCTURES U.S. 30 UNDER T.R. 49, U.S. 30 WB OVER U.S. 23 SB, RAMP B, AND U.S. 23 UNDER C.R. 47; REPLACEMENT OF STRUCTURES U.S. 23 NB AND SB OVER LITTLE TYMOCHTEE CREEK; RECONSTRUCTION OF VARIOUS LOCAL ROADS; AND INSTALLATION OF NECESSARY TRAFFIC CONTROL DEVICES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 20.6 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 5.4 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 26.0 ACRES

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.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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 FOR THE SIDE ROADS AS DESCRIBED ON SHEETS AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.
E043 (184)

PID NO.
23436

CONSTRUCTION PROJECT NO.
WYA-30-9.11

RAILROAD INVOLVEMENT
NONE

WYA-30-9.11

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

ERI-2-30.51 AND VARIOUS
LOR-2-0.00 AND VARIOUS

CITY OF VERMILION
BROWNHELM TOWNSHIP
VERMILION TOWNSHIP
ERIE AND LORAIN COUNTIES

PROJECT DESCRIPTION

REHABILITATION OF 1.72 MILES OF EXISTING PAVEMENT AND SHOULDERS FOR ONGOING RESEARCH PROJECTS INCLUDING THE INSTALLATION OF WEIGH-IN-MOTION INSTRUMENTATION AND THE REHABILITATION OF BRIDGES UNDER WEST RIVER ROAD, VERMILION ROAD, VERMILION INTERCHANGE ROAD, SUNNYSIDE ROAD AND CLAUS ROAD AND OVER THE VERMILION RIVER AND BAUMHART ROAD.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 9.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 2.6 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 12.1 ACRES

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.

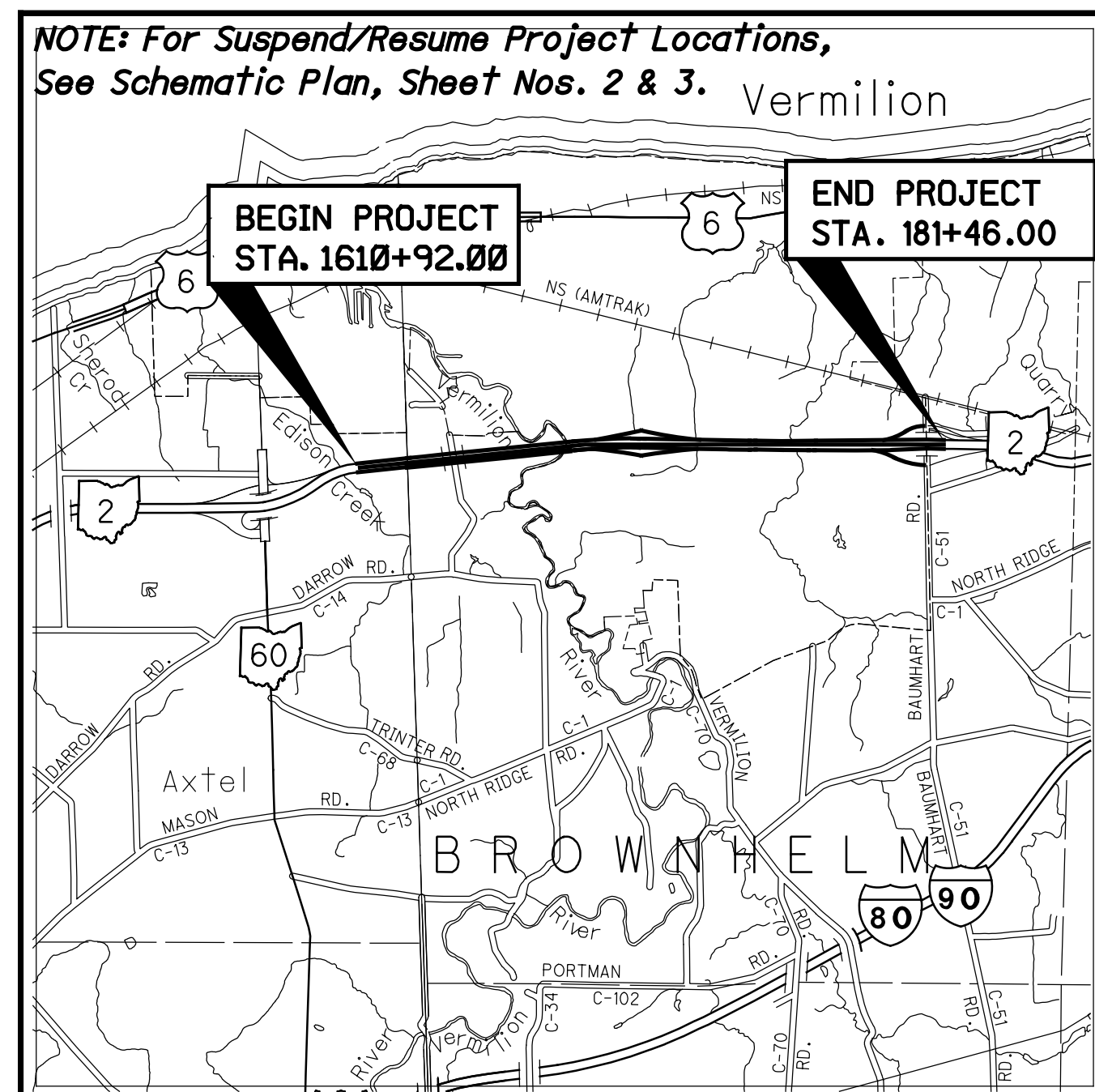
2016 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES 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 FOR THE RAMPS AND SIDE ROADS AS DESCRIBED ON SHEETS 16 & 17 AND AS SHOWN ON SHEETS 19-22, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 41°24'10" LONGITUDE: 82°18'40"



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

FOR DESIGN DESIGNATION AND DESIGN EXCEPTION INFORMATION, SEE SHEETS 2 AND 3.

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GUARDRAIL	63	MEDIAN CROSSEVER	168
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VERMILLION INTERCHANGE ROAD	139		
SUNNYSIDE ROAD	140-141		
CLAUS ROAD	142-143		

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
JOHN DOE CONSULTANTS, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL:
FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20'

SIGNED: Jane C. Smith
DATE: 11-11-14

ENGINEERS SEAL:
FOR STRUCTURES 20' & UNDER

SIGNED: John J. Doe
DATE: 11-11-14

STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/28/00	MGS-1.1	7/19/13	HL-10.13	1/16/15	TC-18.24	1/17/14	
BP-2.1	7/19/13	MGS-2.1	7/19/13	HL-20.14	1/16/15	TC-22.20	1/17/14	800-2013 1/21/15
BP-2.2	7/18/08	MGS-3.1	7/18/14	HL-30.11	1/16/15	TC-41.10	7/19/13	832 1/17/14
BP-2.3	7/18/14	MGS-3.2	1/18/13	HL-30.21	1/17/14	TC-41.20	10/18/13	
BP-2.5	7/19/13	MGS-4.2	7/19/13	HL-30.31	1/17/14	TC-41.40	10/18/13	
BP-3.1	7/18/14	MGS-5.3	7/19/13	HL-30.32	1/17/14	TC-41.50	10/18/13	
BP-6.1	7/19/13	MGS-6.1	7/19/13	HL-40.10	1/17/14	TC-42.10	10/18/13	
CB-1.1	1/18/13	RM-4.2	6/4/14	MT-95.30	7/18/14	TC-51.11	1/17/14	
CB-2.2	1/17/14	RM-4.3	7/18/14	MT-95.31	7/18/14	TC-52.10	10/18/13	
CB-3.1	1/18/13	RM-4.4	7/18/14	MT-96.11	7/18/14	TC-52.20	7/18/14	
CB-3.2	1/18/13			MT-96.20	7/19/13	TC-65.10	1/17/14	
		AS-1-81	1/18/13	MT-96.26	7/19/13	TC-65.11	7/18/14	
DM-1.1	1/18/13	EXJ-4-87	7/19/02	MT-99.20	7/19/13	TC-72.20	7/18/14	
DM-4.4	7/20/12	RB-1-55	7/19/13			TC-82.10	10/18/13	

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CRA-C.R. 6-1.61
(BOUNDARY RD.) PART 1
CRANBERRY TOWNSHIP
CRAWFORD COUNTY
FOR PART 2, SEE CAR-C.R. 31 (SCOTT RD.)

PROJECT DESCRIPTION

IMPROVEMENT OF 0.04 MILE OF C.R. 6 (BOUNDARY ROAD) BY REPLACEMENT OF AN EXISTING STEEL TRUSS STRUCTURE OVER BROKEN KNIFE CREEK WITH A PRECAST PRESTRESSED BOX BEAM TYPE STRUCTURE INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 1.7 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.8 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 2.5 ACRES

2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 7.

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

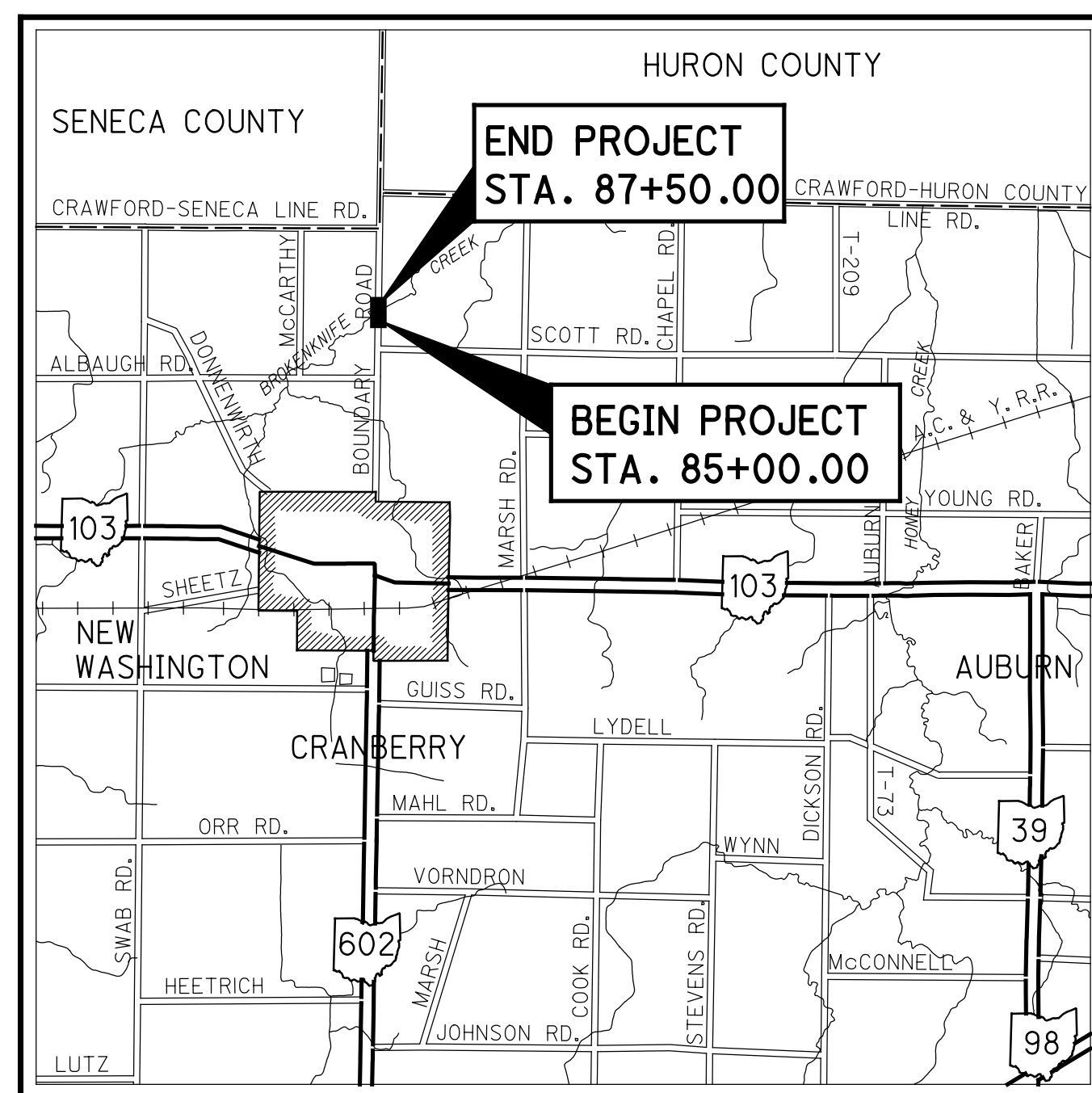
APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ ENGINEER, CRAWFORD COUNTY

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 40°59'10" LONGITUDE: 82°51'10"

SCALE IN MILES



PORTION TO BE IMPROVED	-----
INTERSTATE & DIVIDED HIGHWAY	=====
UNDIVIDED STATE & FEDERAL ROUTES	-----
OTHER ROADS	-----

DESIGN DESIGNATION

CURRENT ADT (2013)	1500
DESIGN YEAR ADT (2033)	2020
DESIGN HOURLY VOLUME (2033)	166
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	05 MAJOR COLLECTOR (RURAL)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

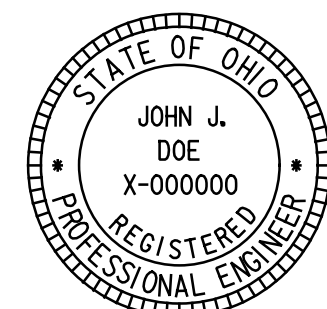
JOHN J. DOE & ASSOC., INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-4
GENERAL NOTES	5
MAINTENANCE OF TRAFFIC	6
DETOUR PLAN	7
MAINTENANCE OF TRAFFIC	8-9
GENERAL SUMMARY AND CALCULATIONS	10
PROJECT SITE PLAN	11
PLAN AND PROFILE	12-13
CROSS SECTIONS	14-17
PREFABRICATED STRUCTURES	18-21
RIGHT OF WAY	22-27
SOIL PROFILES	

ENGINEERS SEAL:

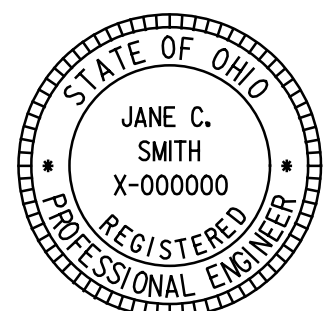
FOR DESIGN CHANGES NOTED ON SHEET 4



SIGNED: John J. Doe
DATE: 11/11/14

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT STRUCTURES 20' & OVER



SIGNED: Jane C. Smith
DATE: 11/11/14

PARTS 1 AND 2

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	RM-1.1	7/18/14			800-2020	4/17/20
CB-1.1	1/18/13	AS-1-81	1/18/13			832	10/19/18
CB-1.2	1/18/13	TST-1-99	1/17/14				
DM-1.1	1/18/13	MT-105.10	7/19/13				
DM-4.4	7/20/12	MT-110.10	7/19/13				
MGS-1.1	7/19/13	TC-41.20	10/18/13				
MGS-2.1	7/19/13	TC-41.40	10/18/13				
MGS-4.2	7/19/13	TC-52.10	10/18/13				
MGS-5.3	7/19/13	TC-52.20	7/18/14				
HW-2.1	1/18/13						
HW-2.2	1/18/13						
						SPECIAL PROVISIONS	
						WATERWAY PERMIT	
						1/23/18	

FEDERAL PROJECT NO. E017 (212)
CONSTRUCTION PROJECT NO. 24988
RAILROAD INVOLVEMENT NONE
CRA-C.R. 6-1.61 (BOUNDARY RD.) PART 1
1/27

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CRA-C.R.31
(SCOTT RD.) PART 2

PROJECT DESCRIPTION

IMPROVEMENT OF 0.38 MILE OF C.R. 31 (SCOTT RD.) BY RECONSTRUCTION OF EXISTING VERTICAL ALIGNMENT TO ELIMINATE HAZARDOUS VERTICAL CURVES INCLUDING UPGRADING OF GUARDRAIL, DRAINAGE SIGNING AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 3.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.9 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.4 ACRES

2019 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 6.

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

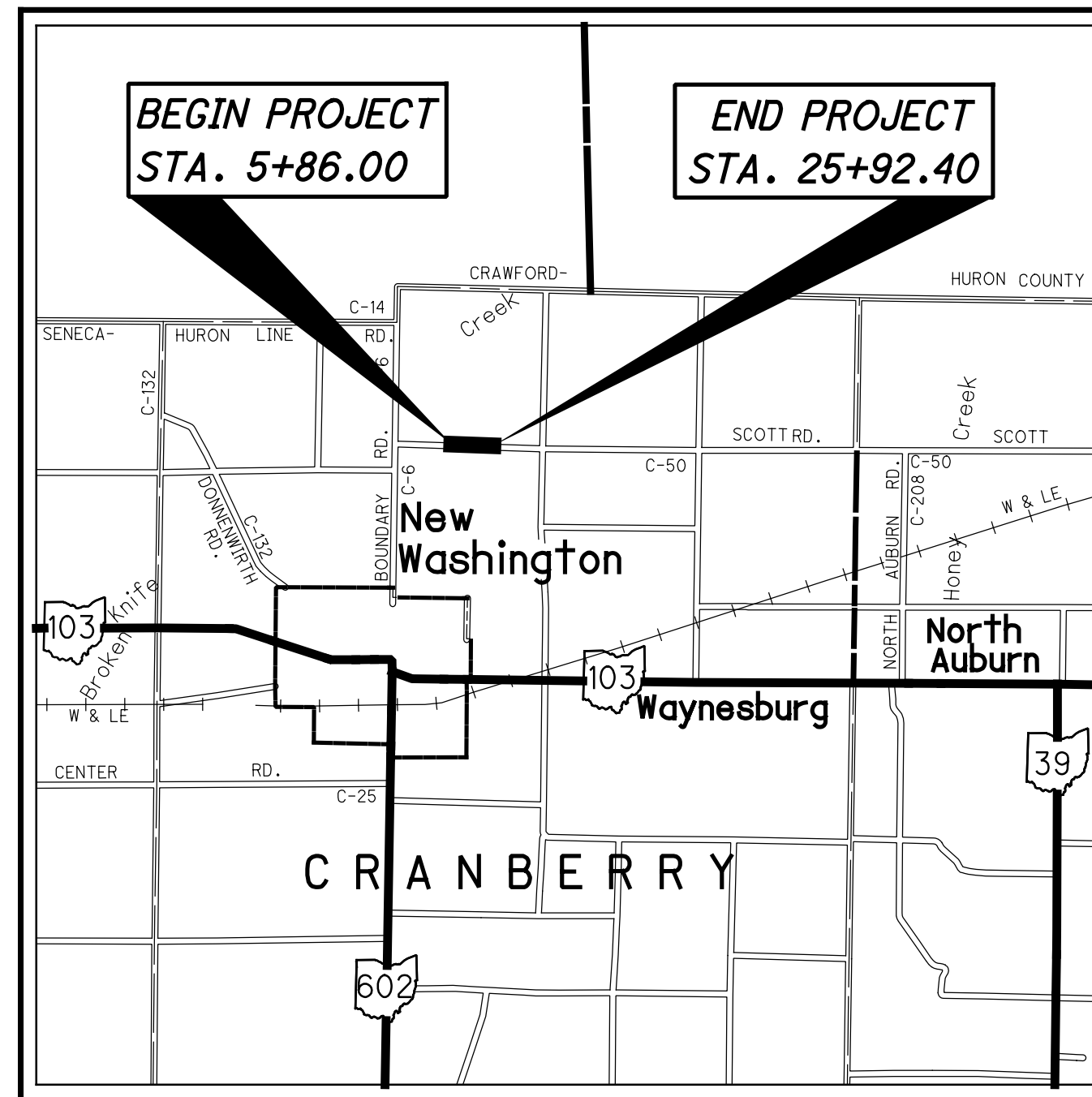
APPROVED _____
DATE _____ ENGINEER, CRAWFORD COUNTY

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E025 (319)
PID NO. 24988
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CRA-C.R. 31 (SCOTT RD.) PART 2

CRANBERRY TOWNSHIP
CRAWFORD COUNTY
FOR PART 1, SEE CRA-C.R.6-1.61 (BOUNDARY ROAD)



LOCATION MAP

LATITUDE: 40°58'50" LONGITUDE: 82°50'40"



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

DESIGN DESIGNATION

CURRENT ADT (2019)	2300
DESIGN YEAR ADT (2039)	3150
DESIGN HOURLY VOLUME (2039)	315
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
07 LOCAL ROAD (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

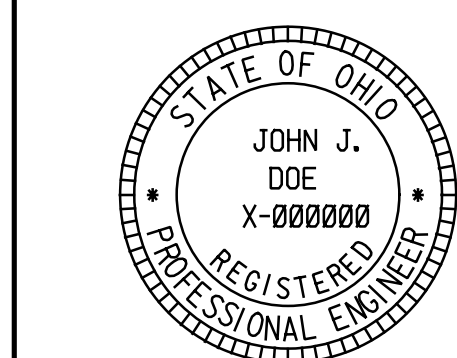
ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org
Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
JOHN DOE CONSULTING ENGINEERS, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

ENGINEERS SEAL:



SIGNED: John J. Doe
DATE: 4/19/19

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3
GENERAL NOTES	4
DETOUR PLAN	5
MAINTENANCE OF TRAFFIC	6-8
GENERAL SUMMARY	9
CALCULATIONS & SUBSUMMARIES	10
PROJECT SITE PLAN	11
PLAN & PROFILE	12-17
CROSS SECTIONS	18-25
TRAFFIC CONTROL	26
RIGHT OF WAY	27-35
SOIL PROFILES	

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
		SEE PART 1		SEE PART 1	SEE PART 1

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

DEL - 257 - 8.37
MAR - 257 - 0.00

VILLAGE OF PROSPECT
 CONCORD AND SCIOTO TOWNSHIPS
 THOMPSON AND PROSPECT TOWNSHIPS
 DELAWARE AND MARION COUNTIES

PROJECT DESCRIPTION

SPOT PAVEMENT REPAIRS ON S.R. 257 IN DELAWARE COUNTY BETWEEN SLM 8.37 (U.S. 42/S.R. 745) AND SLM 14.28 (S.R. 37).

8' WIDE, CONTINUOUS, SLOT PAVING ON OUTSIDE EDGE OF S.R. 257, BEGINNING AT SLM 14.26 (S.R. 37) IN DELAWARE COUNTY AND ENDING AT S.R. 47 IN MARION COUNTY (SLM. 66).

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 4.0 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.1 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)*

* ROUTINE MAINTENANCE PROJECT

2019 SPECIFICATIONS

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

FOR LOCATION MAP
 SEE SHEET 6

LOCATION MAP

LATITUDE: 40°20'20" LONGITUDE: 83°10'47"



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

DESIGN DESIGNATION	DEL-257-8.37	MAR-257-0.00
CURRENT ADT (2019)	1,762	813
DESIGN YEAR ADT (2039)	1,869	862
DESIGN HOURLY VOLUME (2039)	78	36
DIRECTIONAL DISTRIBUTION	50%	50%
TRUCKS (24 HOUR B&C)	4%	9%
DESIGN SPEED	60	60
LEGAL SPEED	55	35/55

DESIGN FUNCTIONAL CLASSIFICATION:
 DEL-257-8.37: 05 MAJOR COLLECTOR (RURAL)
 MAR-257-0.00: 06 MINOR COLLECTOR (RURAL)
 NHS PROJECT: NO

DESIGN EXCEPTIONS
 NONE REQUIRED

ADA DESIGN WAIVERS
 NONE REQUIRED

UNDERGROUND UTILITIES
 Contact Two Working Days Before You Dig

 OHIO811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)

PLAN PREPARED BY:
 JOHN DOE CONSULTING ENGINEERS,
 9999 ENGLISH DRIVE
 COMPUTERLAND, OHIO 00000

ENGINEERS SEAL:

 SIGNED: John J. Doe
 DATE: 01/21/19

INDEX OF SHEETS:

TITLE	1
TYPICAL SECTIONS	2-3
GENERAL NOTES	4-5
MAINTENANCE OF TRAFFIC NOTES	6-7
GENERAL SUMMARY	8
PLAN SUBSUMMARY	9
PAVEMENT MARKING SUBSUMMARY	10
RPM SUBSUMMARY	11

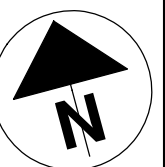
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14			800-2019 4/19/19	
MT-97.11	1/20/17			821 4/20/12	
MT-97.12	1/20/17			832 10/19/18	
MT-99.20	4/19/19				
MT-105.10	7/19/13				
TC-41.20	10/18/13				
TC-42.20	10/18/13				
TC-52.10	10/18/13				
TC-52.20	7/20/18				
TC-65.10	1/17/14				
TC-65.11	7/21/17				
TC-71.10	1/19/18				
TC-82.10	1/18/19				

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
 DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
 DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

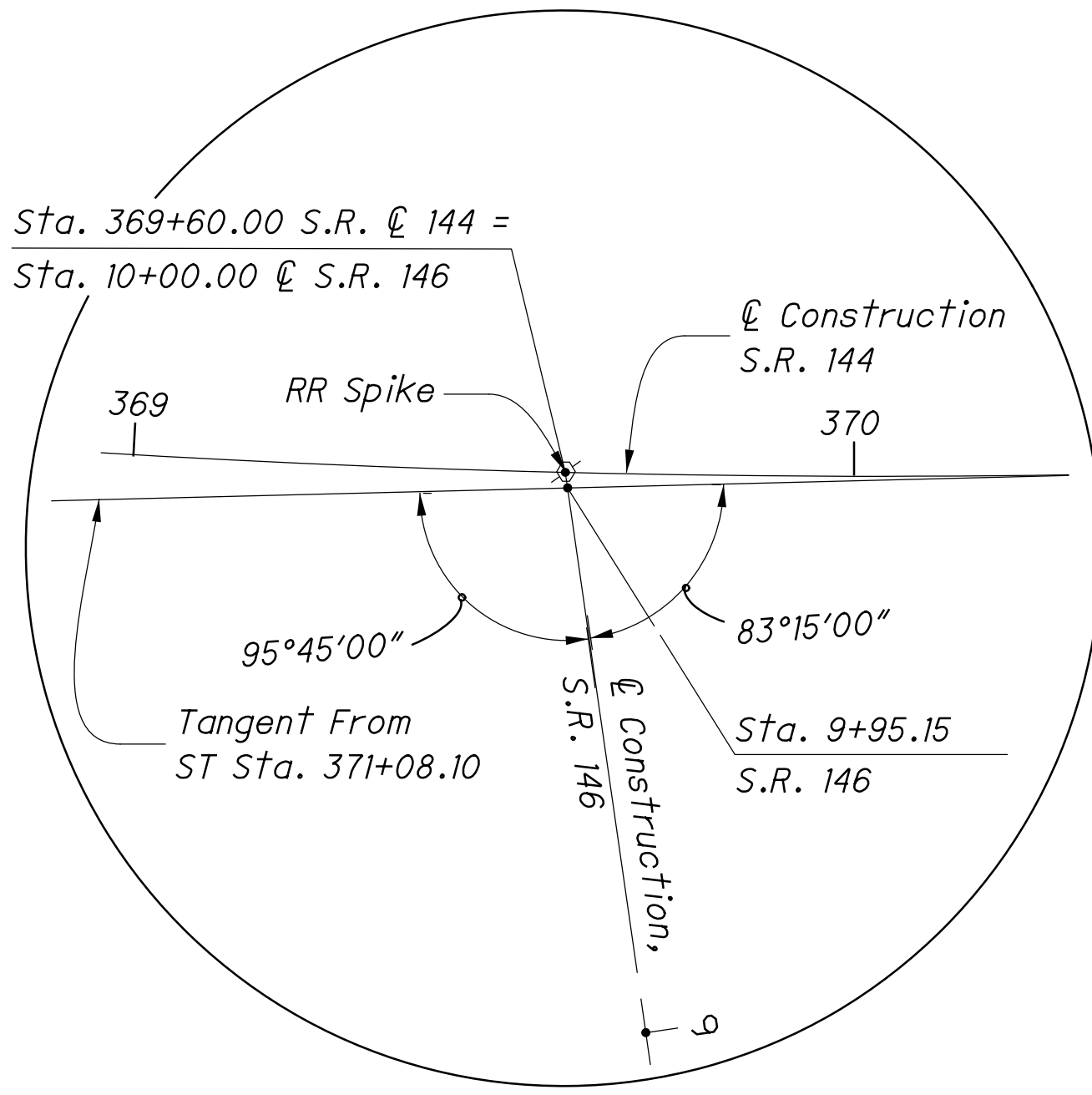
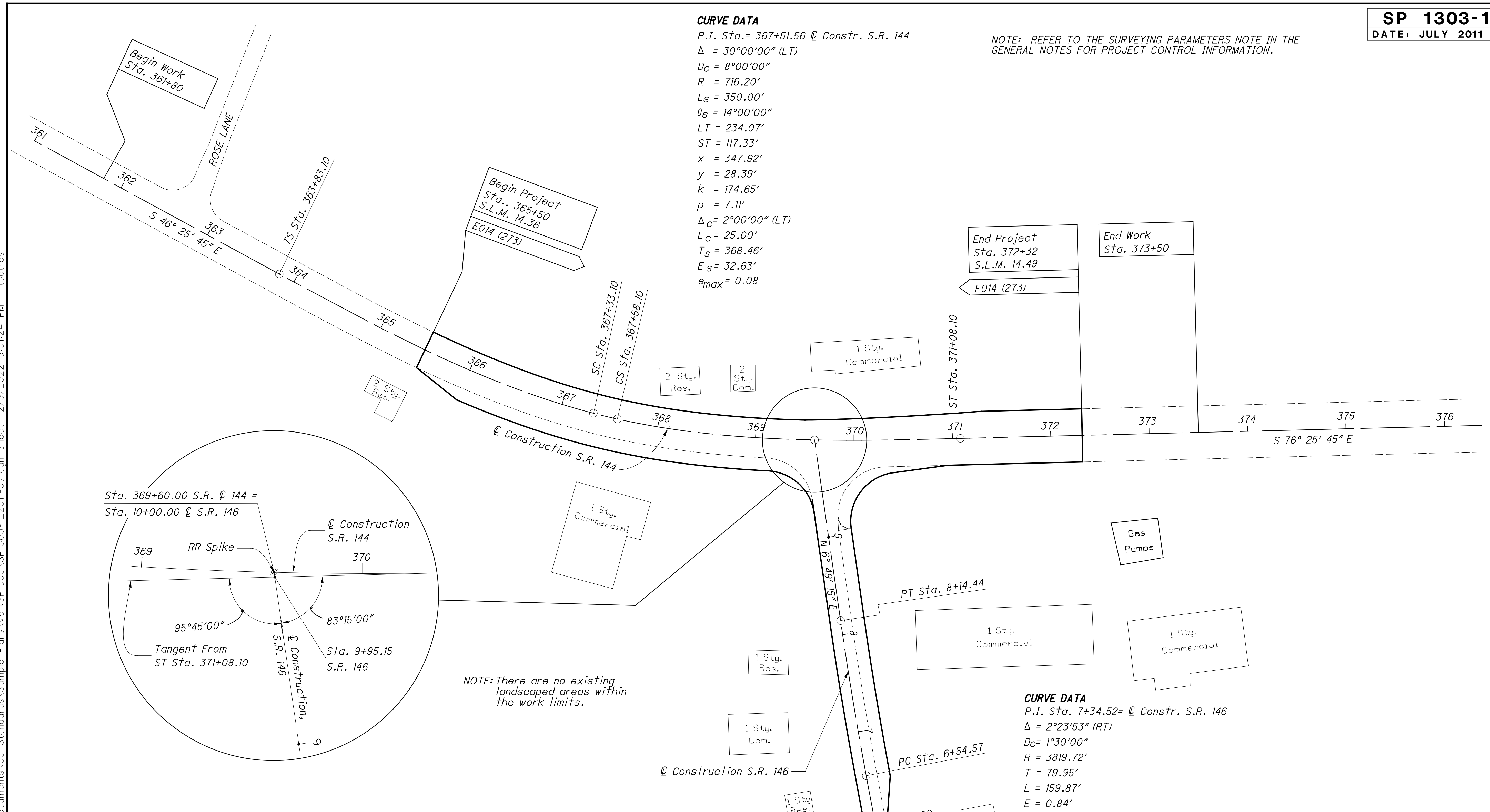
FEDERAL PROJECT NO. NONE
 PID NO. 93708
 CONSTRUCTION PROJECT NO.
 RAILROAD INVOLVEMENT
DEL - 257 - 8.37
MAR - 257 - 0.00
 1/11



CURVE DATA

P.I. Sta. = 367+51.56 @ Constr. S.R. 144
 $\Delta = 30^{\circ}00'00''$ (LT)
 $D_c = 8^{\circ}00'00''$
 $R = 716.20'$
 $L_s = 350.00'$
 $\theta_s = 14^{\circ}00'00''$
 $LT = 234.07'$
 $ST = 117.33'$
 $x = 347.92'$
 $y = 28.39'$
 $k = 174.65'$
 $p = 7.11'$
 $\Delta_c = 2^{\circ}00'00''$ (LT)
 $L_c = 25.00'$
 $T_s = 368.46'$
 $E_s = 32.63'$
 $e_{max} = 0.08$

NOTE: REFER TO THE SURVEYING PARAMETERS NOTE IN THE GENERAL NOTES FOR PROJECT CONTROL INFORMATION.

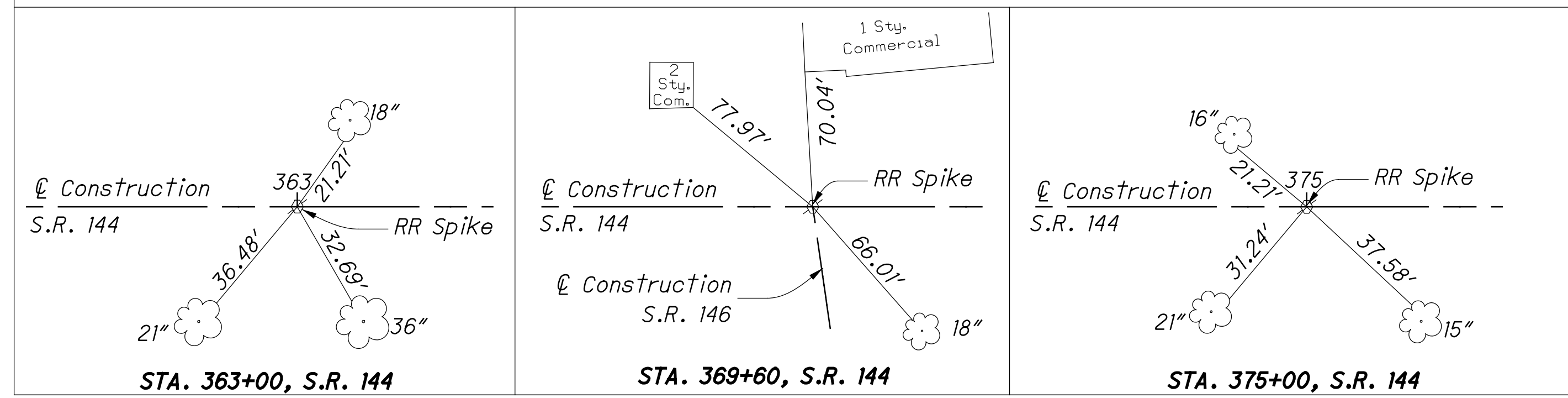


NOTE: There are no existing landscaped areas within the work limits.

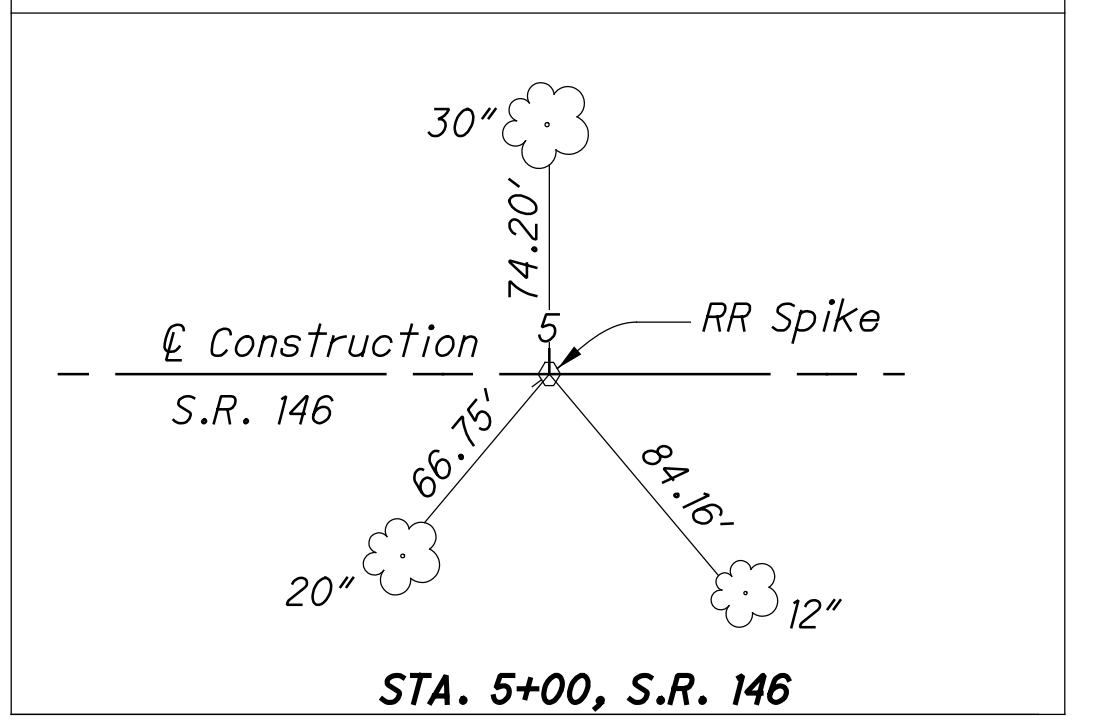
CURVE DATA

P.I. Sta. = 7+34.52 @ Constr. S.R. 146
 $\Delta = 2^{\circ}23'53''$ (RT)
 $D_c = 1^{\circ}30'00''$
 $R = 3819.72'$
 $T = 79.95'$
 $L = 159.87'$
 $E = 0.84'$
 $e_{max} = NC$ (NDC 0.025)

CENTERLINE REFERENCES (Not to Scale)



CENTERLINE REFERENCE (Not to Scale)



p:\ohiodot-pw\ohiodot-pw-02\Documents\03 Standards\Sample Plans\81\SP1303-1\2011-07.dgn Sheet 2/9/2022 3:31:24 PM tpetros



SCHEMATIC PLAN & DESIGN DESIGNATIONS

MIA -43-26.15

The coordinate values expressed herein are assumed and tied to project specific control monuments with no scale factor applied. They are ground values in English units.

CURVE DATA
P.I. STA.= 707+01.08 @ CONSTR. S.R. 43
 $\Delta = 3^\circ 33' 00''$ (LT.)
 $D_c = 1^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 177.56'$
 $L = 355.00'$
 $E = 2.75'$
 $e_{max} = NC$

CURVE DATA
P.I. STA. = 702+00.00 @ CONSTR. S.R. 43
 $\Delta = 0^\circ 35' 20''$ (LT.)
NO CURVE

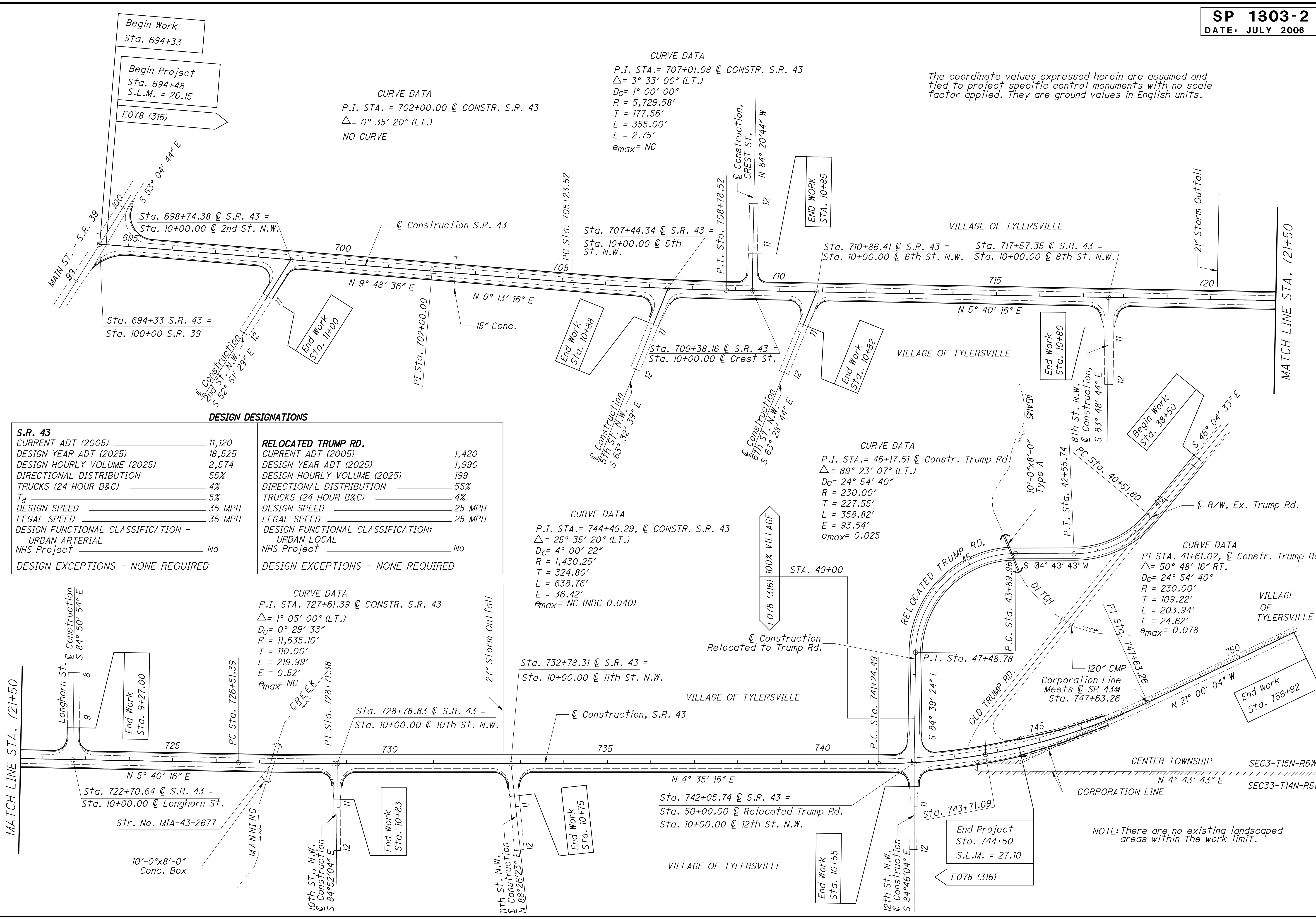
CURVE DATA
P.I. STA.= 46+17.51 @ Constr. Trump Rd.
 $\Delta = 89^\circ 23' 07''$ (LT.)
 $D_c = 24^\circ 54' 40''$
 $R = 230.00'$
 $T = 227.55'$
 $L = 358.82'$
 $E = 93.54'$
 $e_{max} = 0.025$

CURVE DATA
P.I. STA.= 744+49.29, @ CONSTR. S.R. 43
 $\Delta = 25^\circ 35' 20''$ (LT.)
 $D_c = 4^\circ 00' 22''$
 $R = 1,430.25'$
 $T = 324.80'$
 $L = 638.76'$
 $E = 36.42'$
 $e_{max} = NC$ (NDC 0.040)

CURVE DATA
P.I. STA. 727+61.39 @ CONSTR. S.R. 43
 $\Delta = 1^\circ 05' 00''$ (LT.)
 $D_c = 0^\circ 29' 33''$
 $R = 11,635.10'$
 $T = 110.00'$
 $L = 219.99'$
 $E = 0.52'$
 $e_{max} = NC$

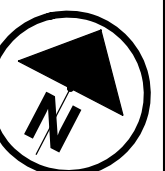
CURVE DATA
PI STA. 41+61.02, @ Constr. Trump Rd.
 $\Delta = 50^\circ 48' 16''$ RT.
 $D_c = 24^\circ 54' 40''$
 $R = 230.00'$
 $T = 109.22'$
 $L = 203.94'$
 $E = 24.62'$
 $e_{max} = 0.078$

DESIGN DESIGNATIONS	
S.R. 43	
CURRENT ADT (2005)	11,120
DESIGN YEAR ADT (2025)	18,525
DESIGN HOURLY VOLUME (2025)	2,574
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	4%
T_d	5%
DESIGN SPEED	35 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION - URBAN ARTERIAL	
NHS Project	No
DESIGN EXCEPTIONS - NONE REQUIRED	
RELOCATED TRUMP RD.	
CURRENT ADT (2005)	1,420
DESIGN YEAR ADT (2025)	1,990
DESIGN HOURLY VOLUME (2025)	199
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	4%
DESIGN SPEED	25 MPH
LEGAL SPEED	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN LOCAL	
NHS Project	No
DESIGN EXCEPTIONS - NONE REQUIRED	



NOTE: There are no existing landscaped areas within the work limit.

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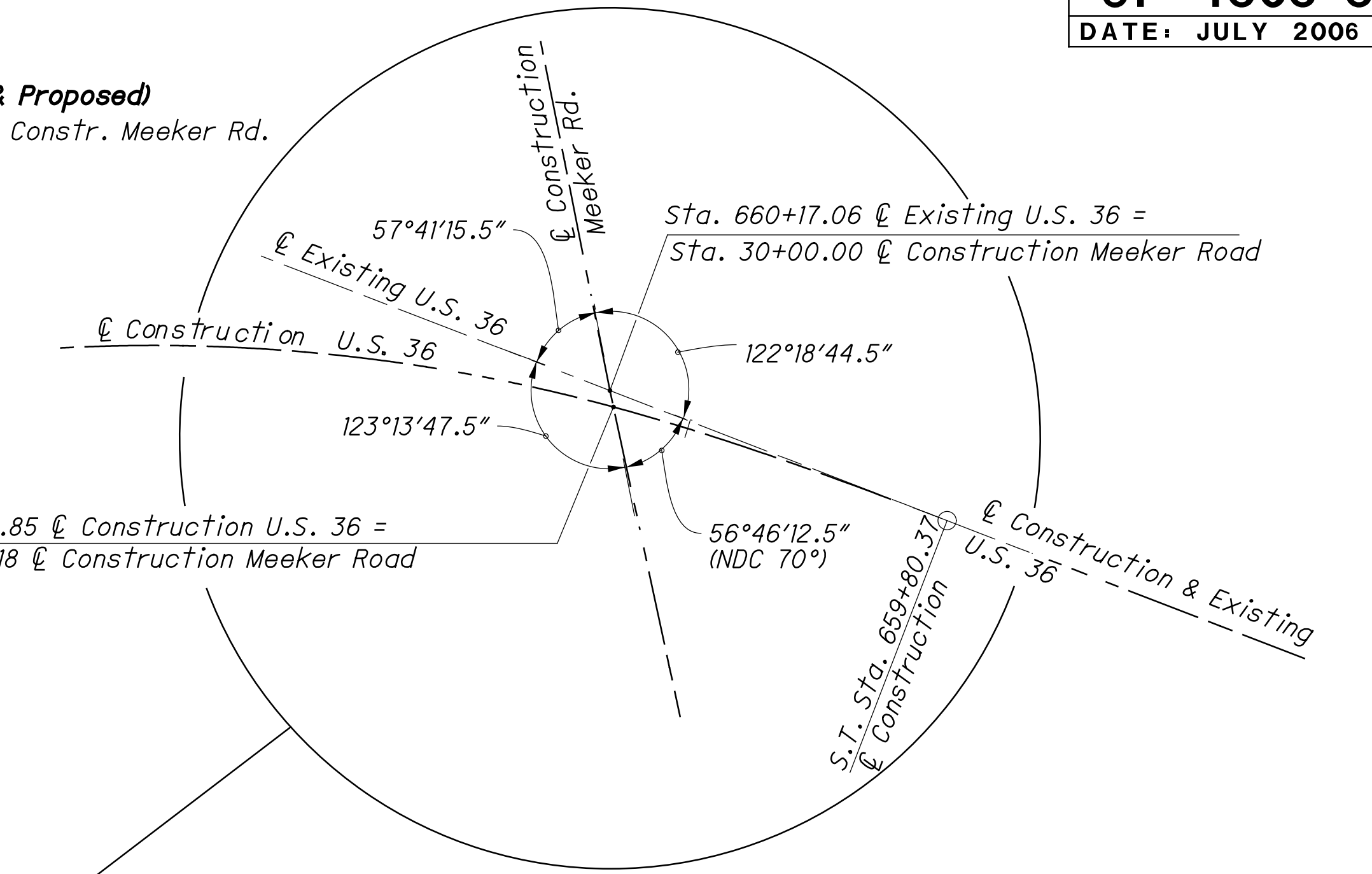
SCHEMATIC PLAN

HAS - 36 - 8.21

CURVE DATA (Existing & Proposed)
P.I. STA.= 30+00.00 @ Constr. Meeker Rd.
 $\Delta = 0^\circ 55' 03''$ (RT.)
No Curve

CURVE DATA (EXISTING)
P.I. STA.= 653+16.78 @ Existing U.S. 36
 $\Delta = 84^\circ 32' 23''$ (RT.)
 $D_C = 28^\circ 55' 58''$
 $R = 198.03'$
 $T = 180.00'$
 $L = 292.19'$
 $E = 69.58'$
 $e_{max} = 0.08$

CURVE DATA (Proposed)
P.I. STA.= 653+16.78 @ Constr. U.S. 36
 $\Delta = 84^\circ 32' 23''$ (RT.)
 $D_C = 6^\circ 00' 00''$ (NDC $4^\circ 45'$ max.)
 $R = 954.93'$
 $L_S = 250.00'$
 $\theta_S = 7^\circ 30' 00''$
 $LT = 166.82'$
 $ST = 83.47'$
 $x = 249.57'$
 $y = 10.89'$
 $k = 124.93'$
 $p = 2.73'$
 $D_C = 69^\circ 32' 23''$ (RT.)
 $L_C = 1,159.00'$
 $T_S = 995.41'$
 $E_S = 339.22'$
 $e_{max} = 0.08$



Sta. 648+09.30 @ Existing U.S. 36
345 KV Overhead Electrical Line
(Dayton Power Co.)

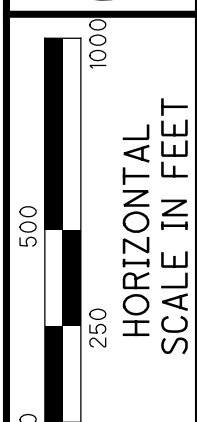
For Roads For Maintaining
Traffic Details See Sheets 20-24.

STATION EQUATION:
ST Sta. 659+80.37 BK., @ Construction =
Sta. 662+44.38 AH. @ Construction & Existing U.S. 36

Note: There are no existing landscaped areas within the work limit.

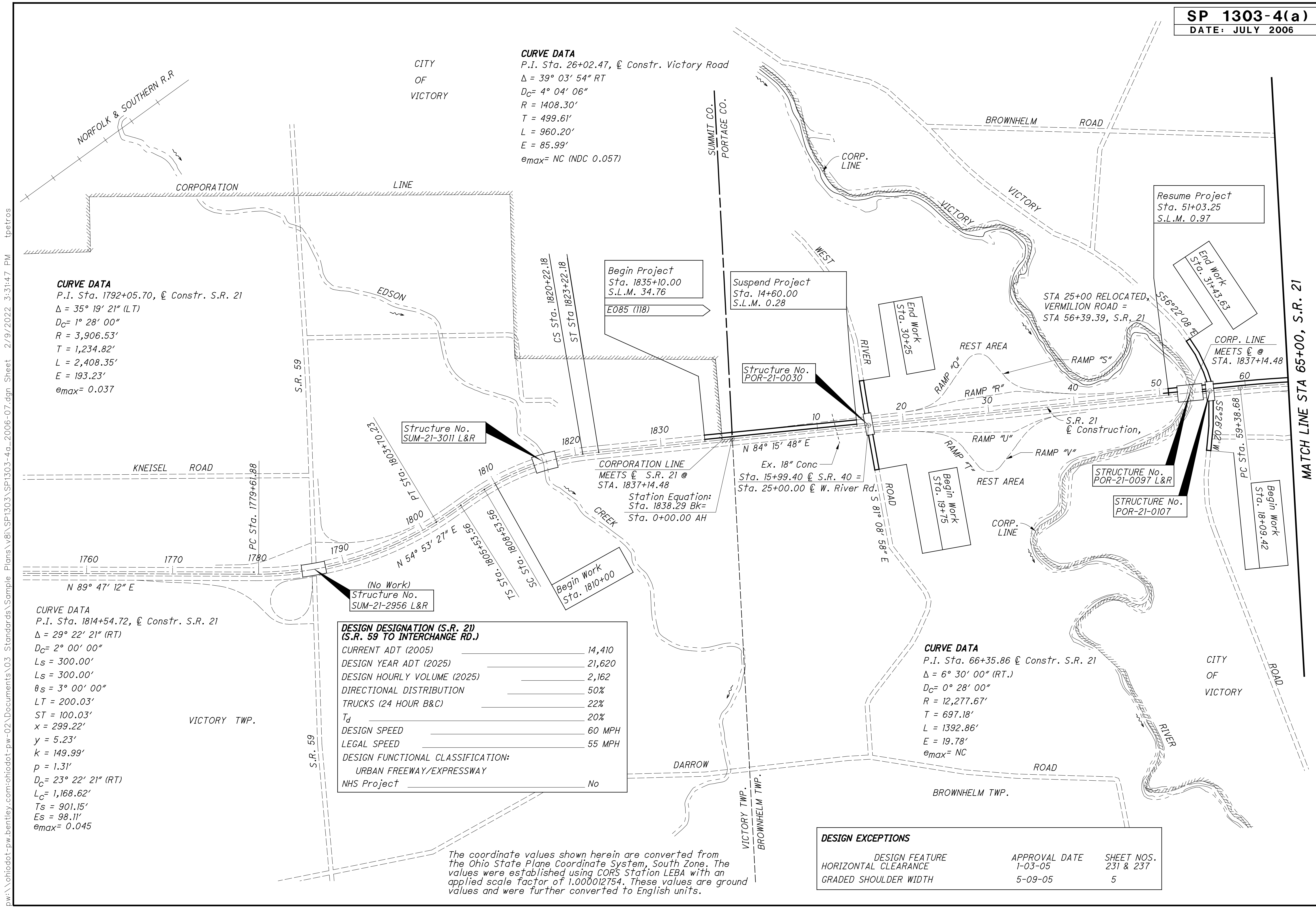
The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.

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SCHEMATIC PLAN & DESIGN DESIGNATION

SUM/POR-21-30.51/0.00
AND VARIOUS



CURVE DATA
P.I. Sta. 1792+05.70, @ Constr. S.R. 21
 $\Delta = 35^\circ 19' 21''$ (LT)
 $D_c = 1^\circ 28' 00''$
 $R = 3,906.53'$
 $T = 1,234.82'$
 $L = 2,408.35'$
 $E = 193.23'$
 $\theta_{max} = 0.037$

CURVE DATA
P.I. Sta. 26+02.47, @ Constr. Victory Road
 $\Delta = 39^\circ 03' 54''$ RT
 $D_c = 4^\circ 04' 06''$
 $R = 1408.30'$
 $T = 499.61'$
 $L = 960.20'$
 $E = 85.99'$
 $\theta_{max} = NC$ (NDC 0.057)

CURVE DATA
P.I. Sta. 1814+54.72, @ Constr. S.R. 21
 $\Delta = 29^\circ 22' 21''$ (RT)
 $D_c = 2^\circ 00' 00''$
 $L_s = 300.00'$
 $L_s = 300.00'$
 $\theta_s = 3^\circ 00' 00''$
 $LT = 200.03'$
 $ST = 100.03'$
 $x = 299.22'$
 $y = 5.23'$
 $k = 149.99'$
 $p = 1.31'$
 $D_c = 23^\circ 22' 21''$ (RT)
 $L_c = 1,168.62'$
 $T_s = 901.15'$
 $E_s = 98.11'$
 $\theta_{max} = 0.045$

**DESIGN DESIGNATION (S.R. 21)
(S.R. 59 TO INTERCHANGE RD.)**

CURRENT ADT (2005)	14,410
DESIGN YEAR ADT (2025)	21,620
DESIGN HOURLY VOLUME (2025)	2,162
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	22%
T_d	20%
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN FREEWAY/EXPRESSWAY	
NHS Project	No

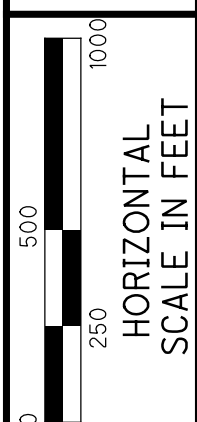
CURVE DATA
P.I. Sta. 66+35.86 @ Constr. S.R. 21
 $\Delta = 6^\circ 30' 00''$ (RT.)
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 697.18'$
 $L = 1392.86'$
 $E = 19.78'$
 $\theta_{max} = NC$

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
HORIZONTAL CLEARANCE	1-03-05	231 & 237
GRADED SHOULDER WIDTH	5-09-05	5

The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.

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HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN & DESIGN DESIGNATION

SUM/POR-21-30.51-0.00
AND VARIOUS

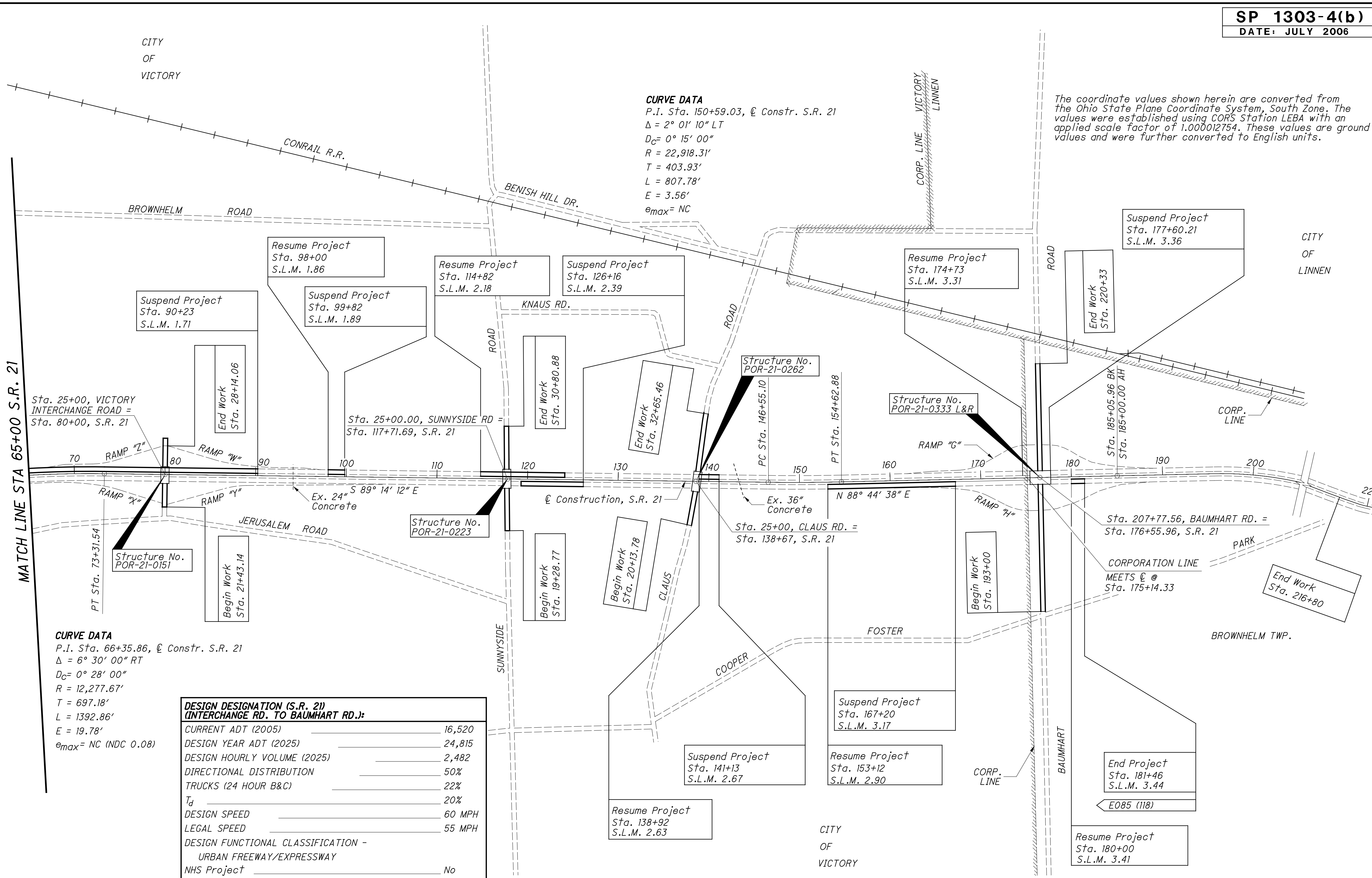
CITY OF VICTORY

CITY OF LINNEN

CITY OF VICTORY

CURVE DATA
P.I. Sta. 150+59.03, @ Constr. S.R. 21
 $\Delta = 2^\circ 01' 10''$ LT
 $D_c = 0^\circ 15' 00''$
 $R = 22,918.31'$
 $T = 403.93'$
 $L = 807.78'$
 $E = 3.56'$
 $e_{max} = NC$

The coordinate values shown herein are converted from the Ohio State Plane Coordinate System, South Zone. The values were established using CORS Station LEBA with an applied scale factor of 1.000012754. These values are ground values and were further converted to English units.



CURVE DATA
P.I. Sta. 66+35.86, @ Constr. S.R. 21
 $\Delta = 6^\circ 30' 00''$ RT
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 697.18'$
 $L = 1392.86'$
 $E = 19.78'$
 $e_{max} = NC$ (NDC 0.08)

**DESIGN DESIGNATION (S.R. 21)
(INTERCHANGE RD. TO BAUMHART RD.):**

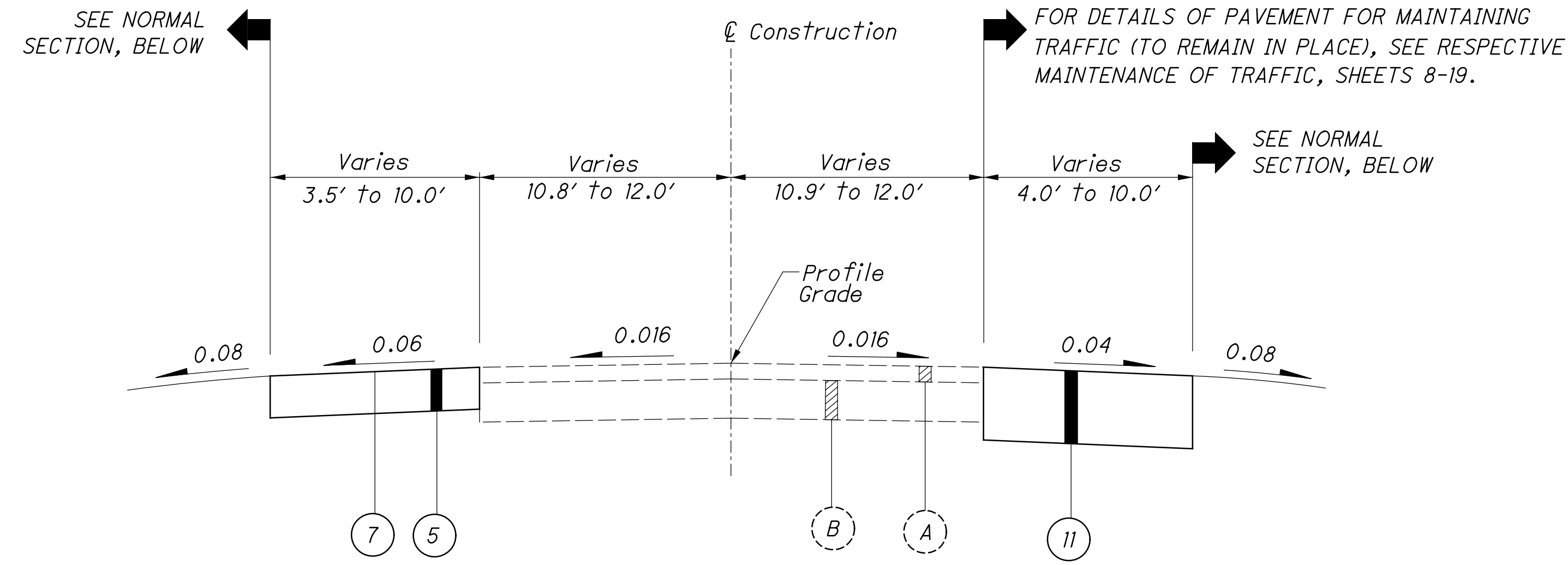
CURRENT ADT (2005)	16,520
DESIGN YEAR ADT (2025)	24,815
DESIGN HOURLY VOLUME (2025)	2,482
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	22%
T_d	20%
DESIGN SPEED	60 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION - URBAN FREEWAY/EXPRESSWAY	
NHS Project	No

DESIGN EXCEPTIONS:

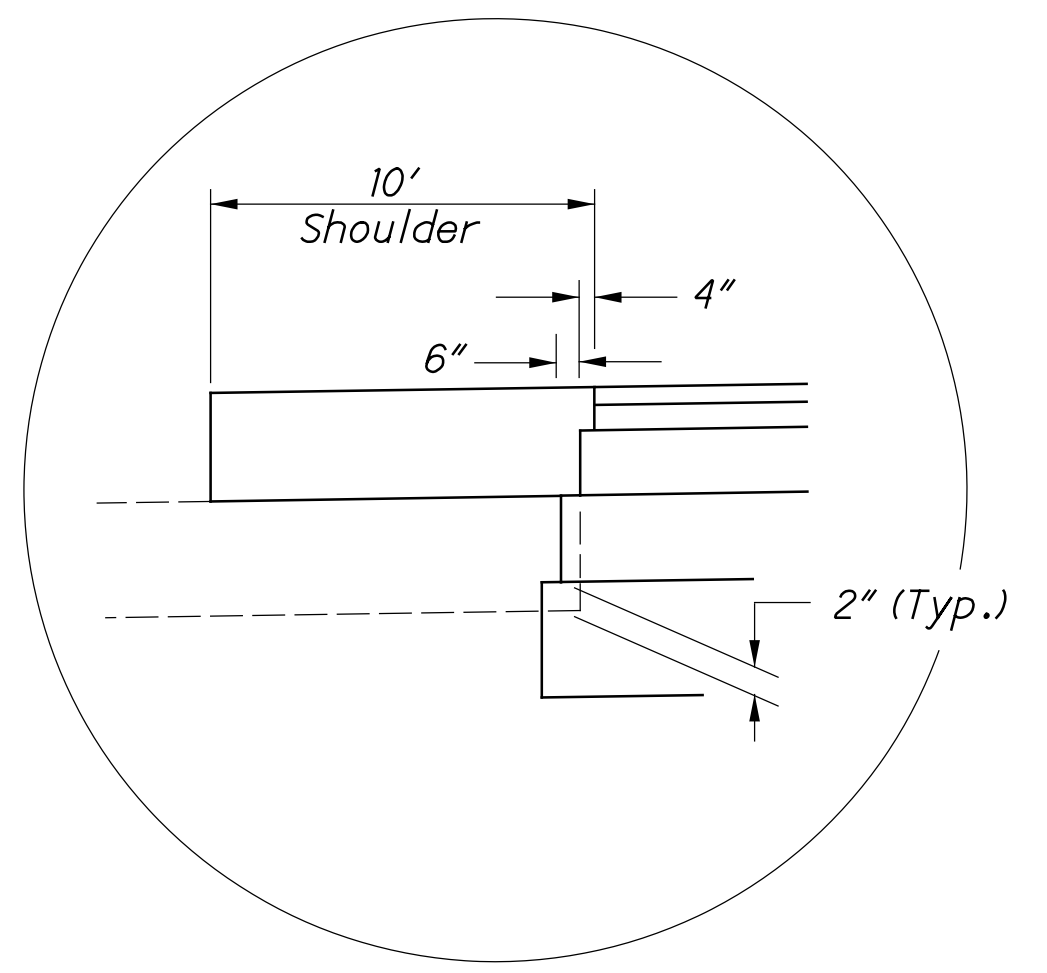
DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
HORIZONTAL CLEARANCE	1-03-05	231 & 237
GRADED SHOULDER WIDTH	5-09-05	5

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MATCH LINE STA 65+00 S.R. 21



NORMAL SECTION - U.S. 46
Sta. 634+00.00 to Sta. 635+75.00

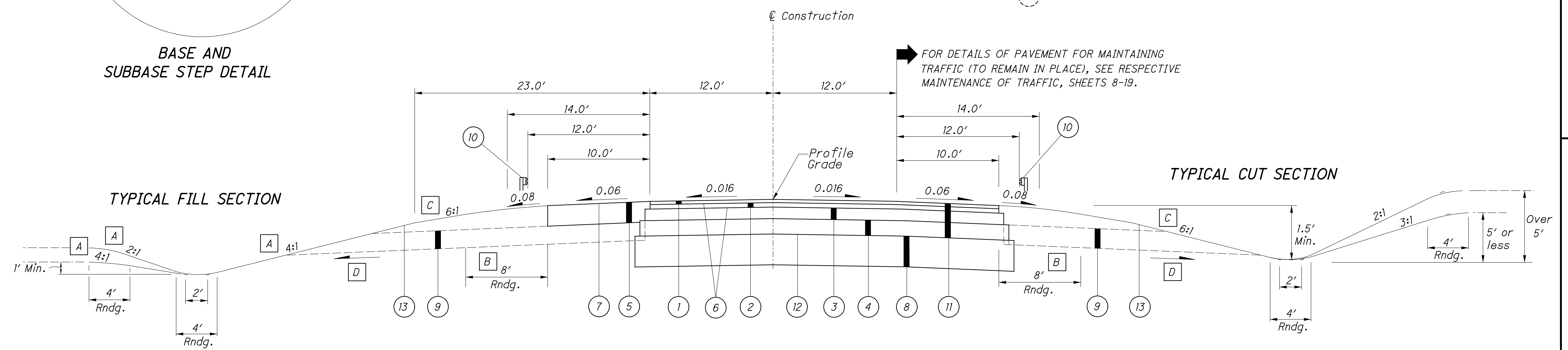


BASE AND SUBBASE STEP DETAIL

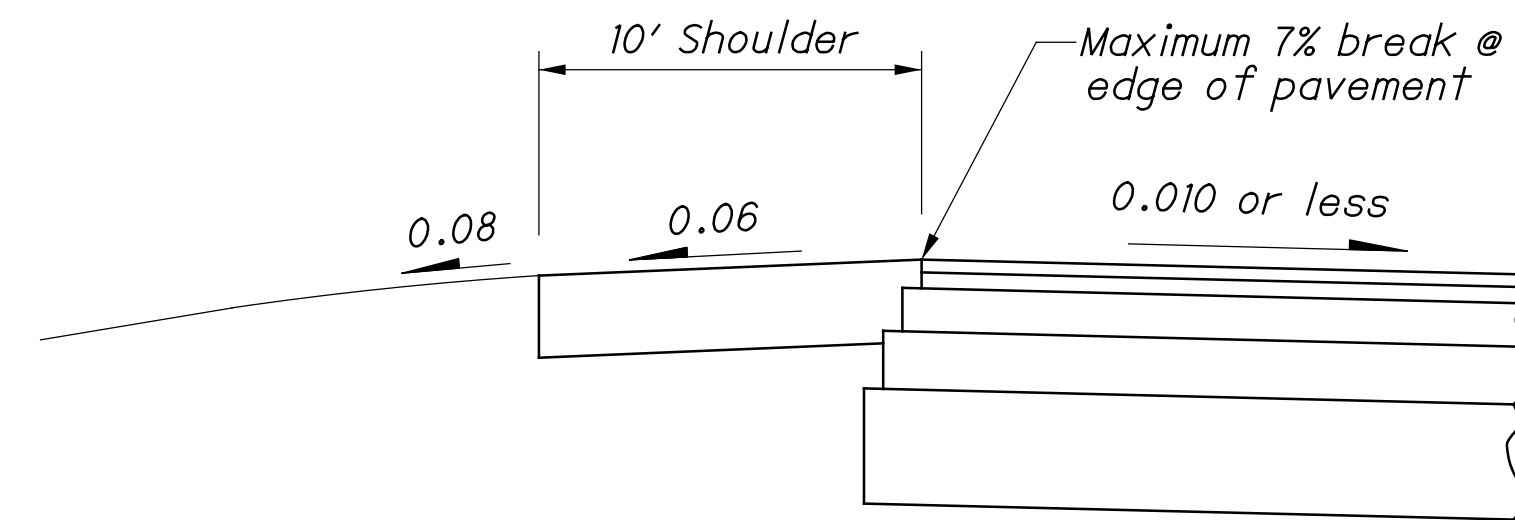
- A** Unless otherwise shown on Cross Sections
- B** No rounding is required when foreslope is 6:1 or flatter. 4' Rounding when guardrail is required.
- C** Foreslope may vary in pavement transition areas at extreme ends of pavement work and adjacent to Structure PIC-46-1209; see cross sections.
- D** 0.04 Min., 0.08 Desirable

LEGEND

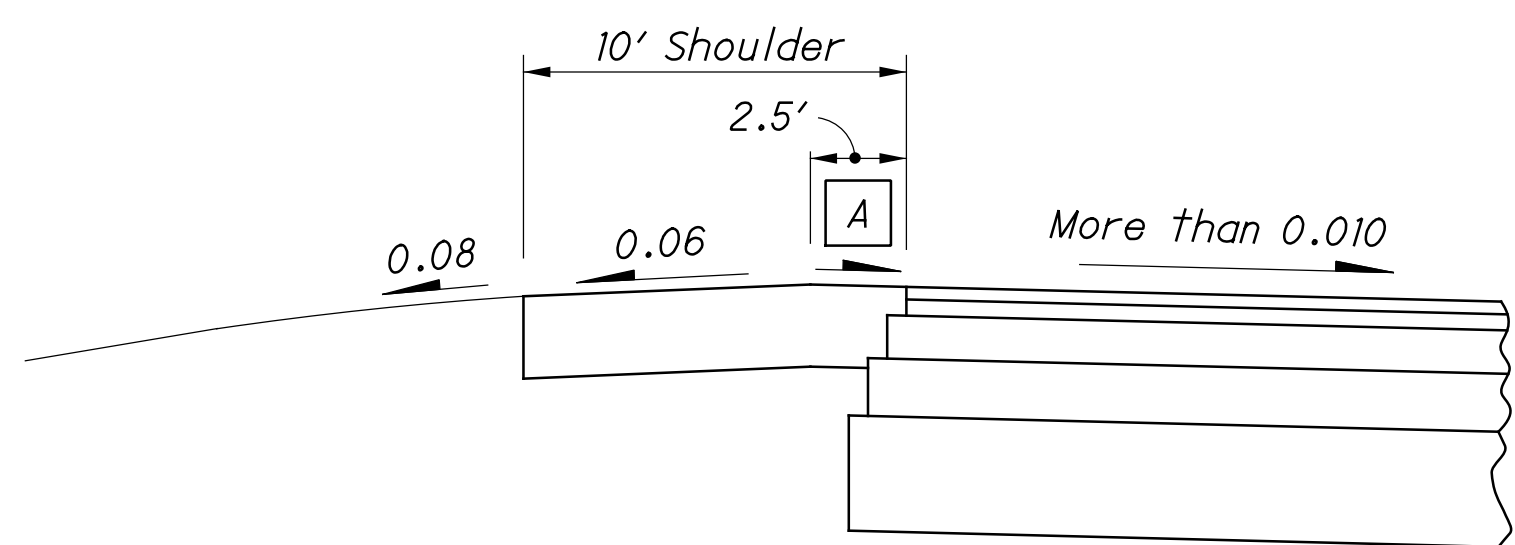
- ① ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
 - ② ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, Type A (448)
 - ③ ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
 - ④ ITEM 304 - 6" AGGREGATE BASE
 - ⑤ ITEM 304 - 8" AGGREGATE BASE
 - ⑥ ITEM 407 - TACK COAT
 - ⑦ ITEM 408 - PRIME COAT (APPLIED AT A RATE OF 0.40 GAL./SQ. YD.)
 - ⑧ ITEM 206 - LIME STABILIZED SUBGRADE, 18 INCHES DEEP
 - ⑨ ITEM 605 - AGGREGATE DRAINS
 - ⑩ ITEM 606 - GUARDRAIL, TYPE MGS
 - ⑪ ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SEE RESPECTIVE MAINTENANCE OF TRAFFIC DETAILS)
 - ⑫ ITEM 204 - SUBGRADE COMPACTION
 - ⑬ ITEM 659 - SEEDING AND MULCHING
 - ⑭ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15")
 - ⑮ NOT USED
 - ⑯ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- Ⓐ 3" ± ASPHALT CONCRETE
- Ⓑ 8" ± CONCRETE PAVEMENT



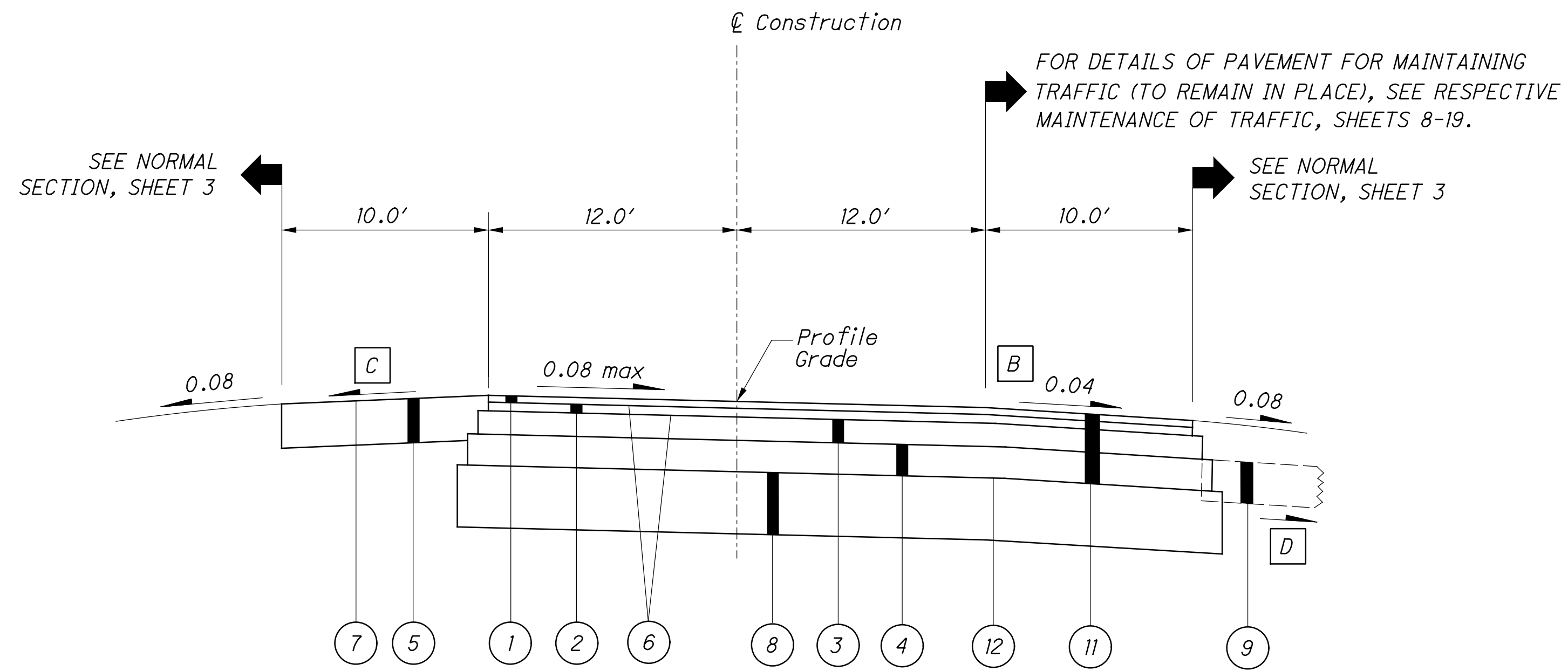
NORMAL SECTION - U.S. 46
Sta. 635+75.00 to Sta. 642+81.37
Sta. 638+22.44 to Sta. 640+48.86



SHOULDER DETAIL
For pavement slopes of 0.010 or less

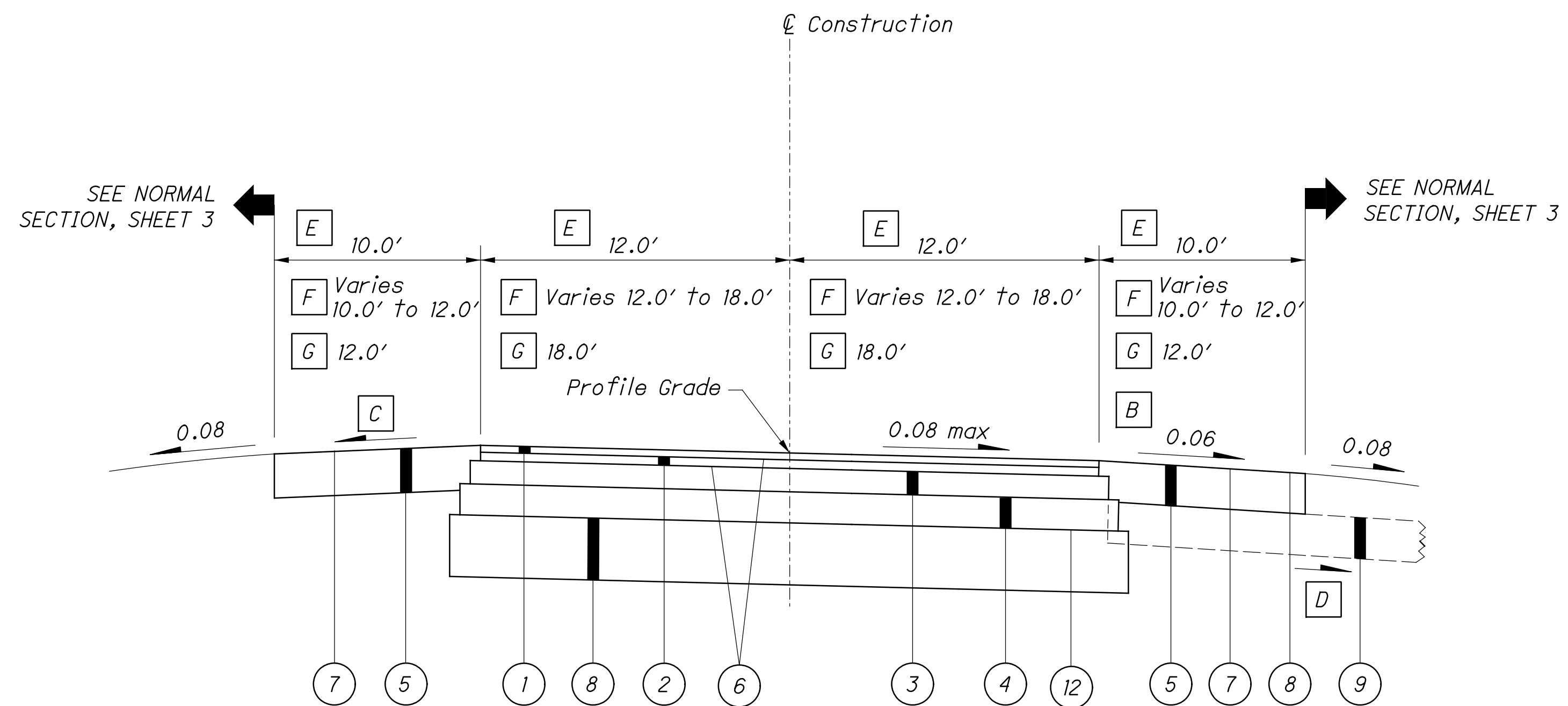


SHOULDER DETAIL
For pavement slopes greater than 0.010



SUPERELEVATED SECTION - U.S. 46

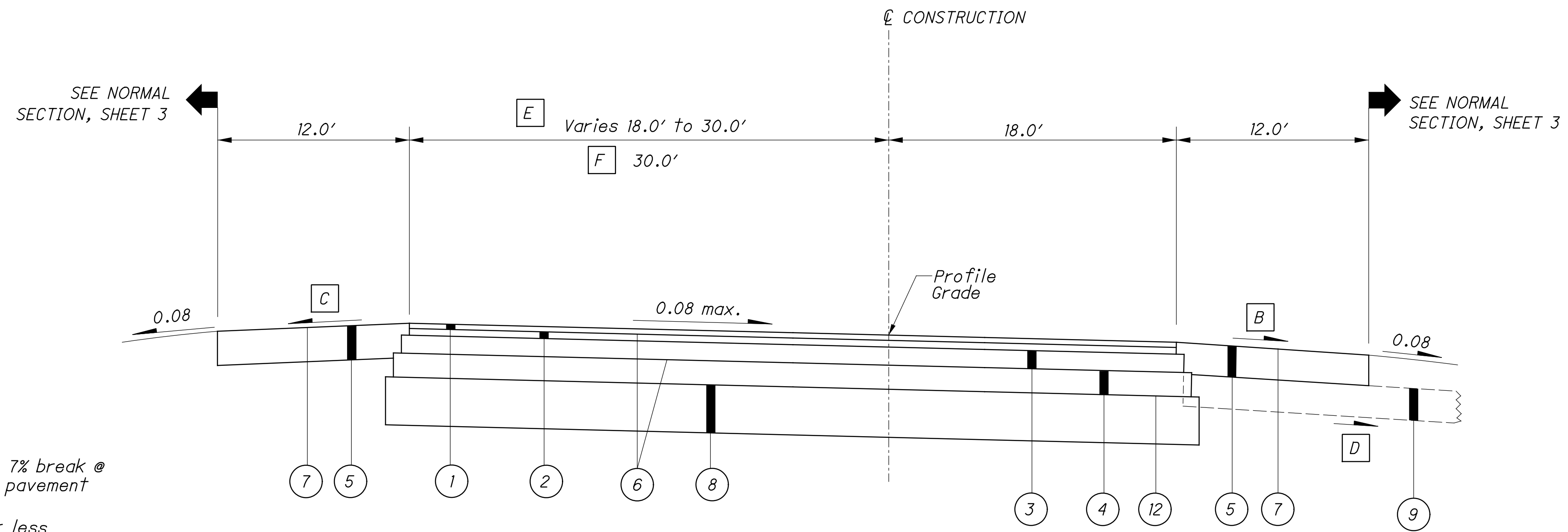
Sta. 642+81.37 to Sta. 649+00.00



SUPERELEVATED SECTION - U.S. 46

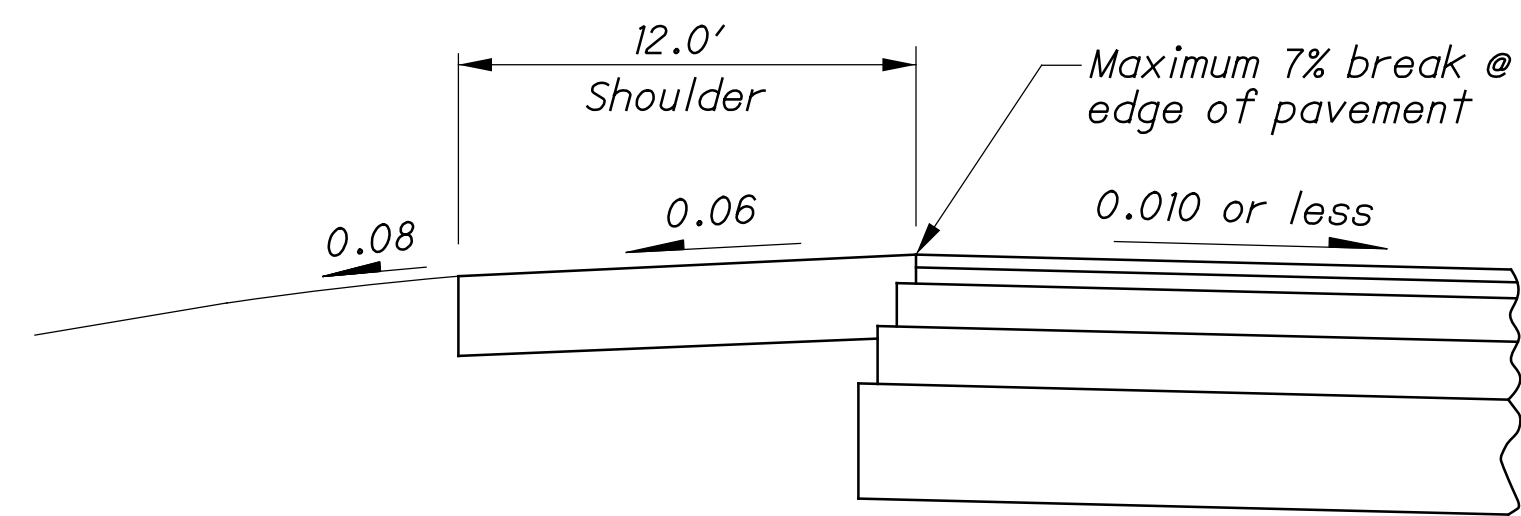
- A Same slope as pavement
- B Or pavement slope whichever is greater
- C For high side shoulder slopes on superelevated sections see shoulder details, this sheet.
- D 0.04 Min., 0.08 Desirable
- E Sta. 649+00.00 to Sta. 651+45.03
- F Sta. 651+45.03 to Sta. 654+75.03
- G Sta. 654+75.03 to Sta. 658+77.85

STA. 656+57.63 TO STA. 658+77.85, SEE INTERSECTION DETAIL ON SHEET 39.
SEE INTERSECTION DETAIL, SHEET 39.
FOR PAVEMENT LEGEND, SEE SHEET 3.
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.



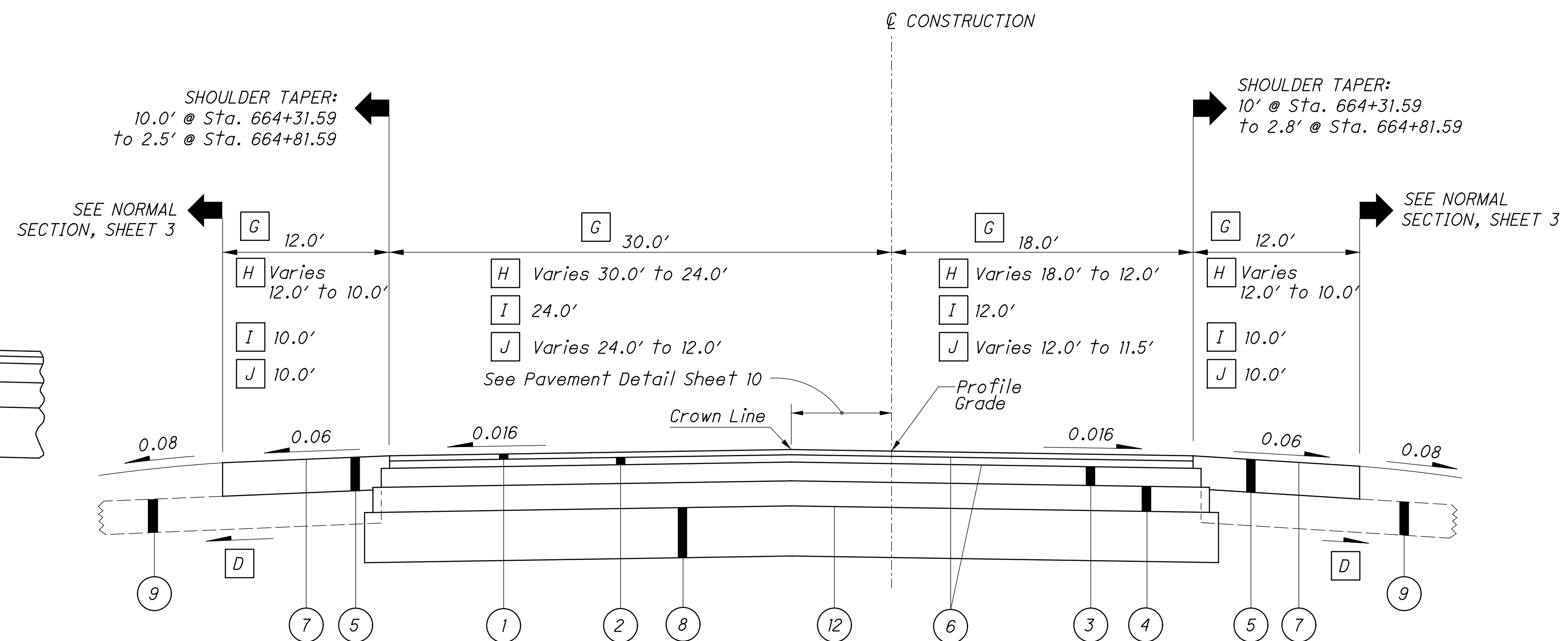
SUPERELEVATED SECTION - U.S. 46

E STA. 658+77.85 TO STA. 659+27.03
F STA. 659+27.03 TO STA. 660+20.37



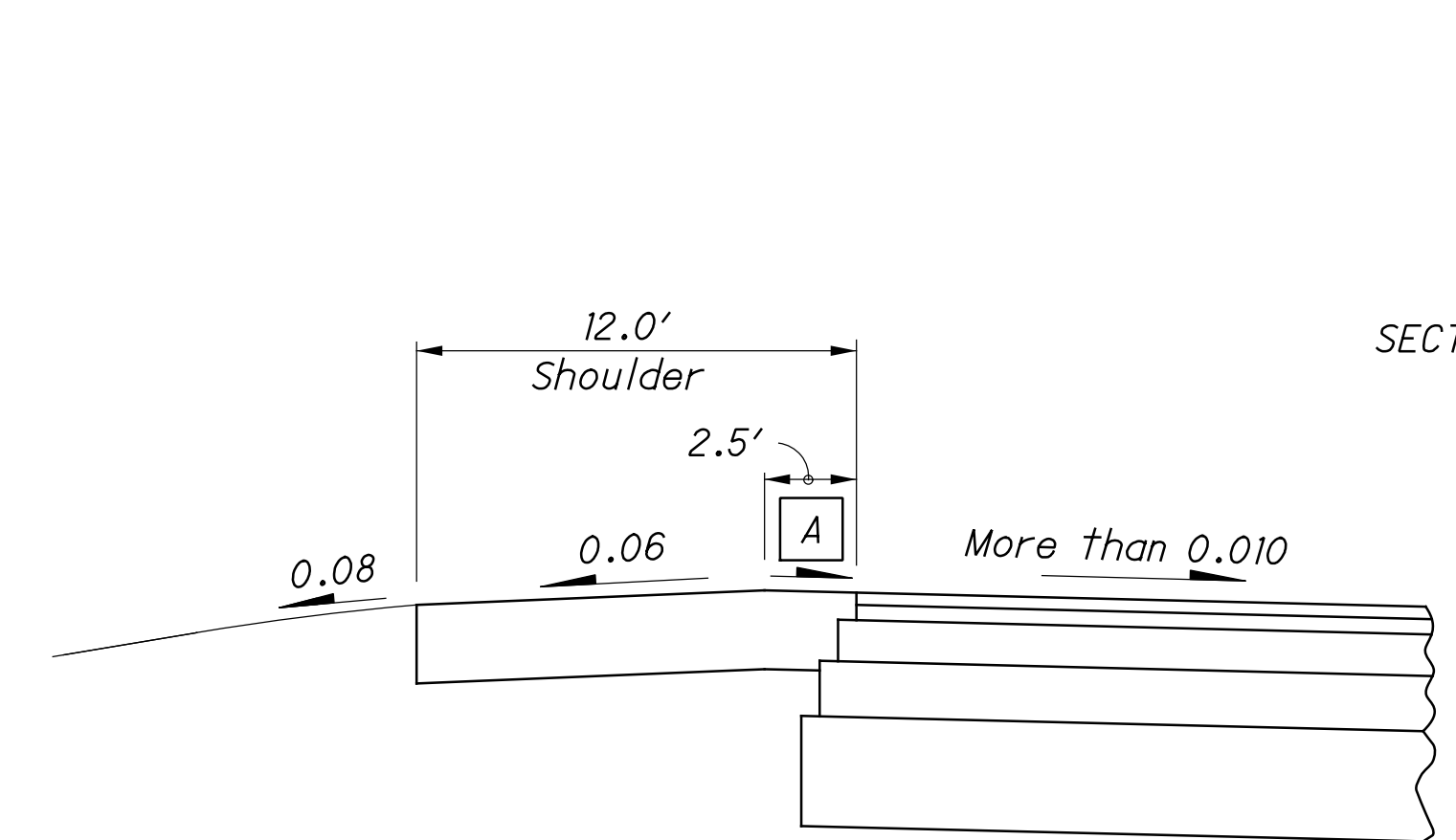
SHOULDER DETAIL

For pavement slopes of 0.010 or less



NORMAL SECTION - U.S. 46

G STA. 660+20.37 TO STA. 660+51.59
H STA. 660+51.59 TO STA. 663+81.59
I STA. 663+81.59 TO STA. 664+31.59
J STA. 664+31.59 TO STA. 664+81.59

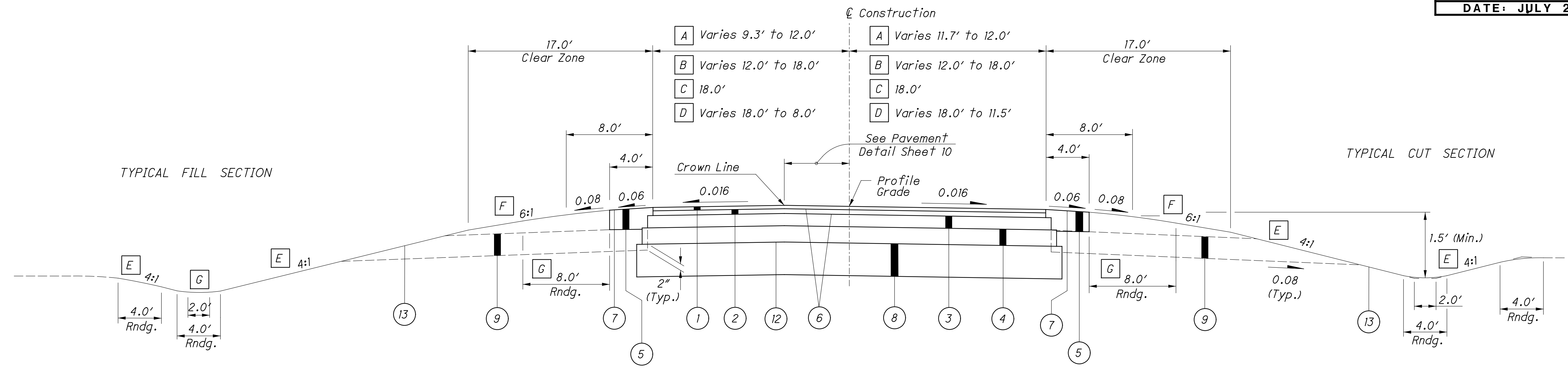


SHOULDER DETAIL

For pavement slopes of more than 0.010

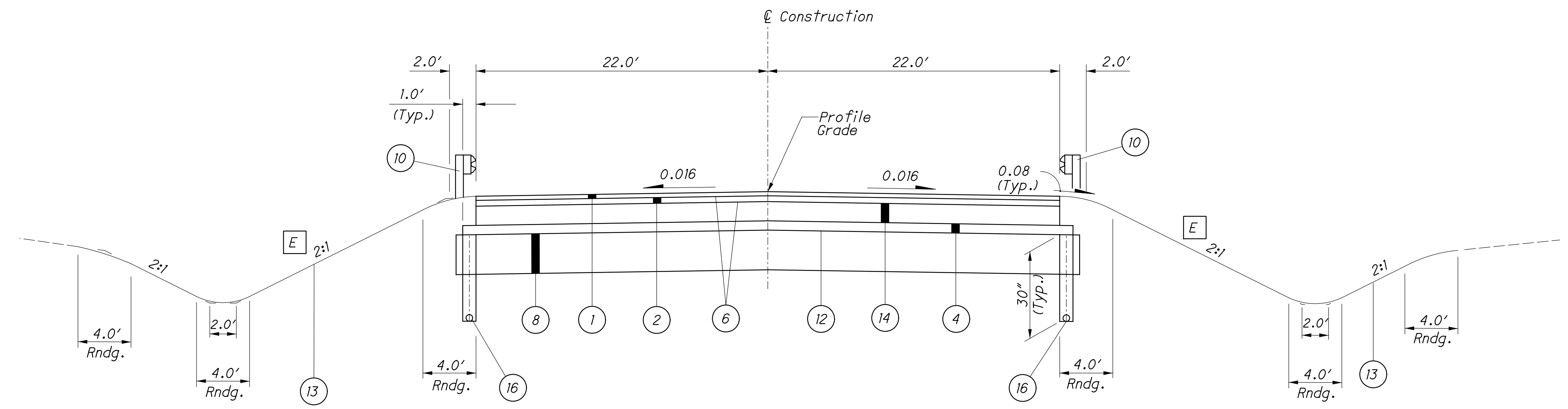
- A** SAME SLOPE AS PAVEMENT
- B** 0.06 OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER
- C** FOR HIGH SIDE SHOULDER SLOPES ON SUPERELEVATED SECTIONS SEE SHOULDER DETAILS, THIS SHEET.
- D** 0.04 MIN., 0.08 DESIRABLE

FOR PAVEMENT LEGEND SEE SHEET 3.
FOR BASE AND SUBBASE STEP DETAIL SEE SHEET 3.



NORMAL SECTION - ARLINGTON ROAD

- A** Sta. 21+00.00 to Sta. 21+37.83
- B** Sta. 21+37.83 to Sta. 24+37.83
- C** Sta. 24+37.83 to Sta. 29+05.61
Sta. 31+26.68 to Sta. 31+44.41
- D** Sta. 31+44.41 to Sta. 34+25.00



APPROACH SLAB TYPICAL SECTION - U.S. 46

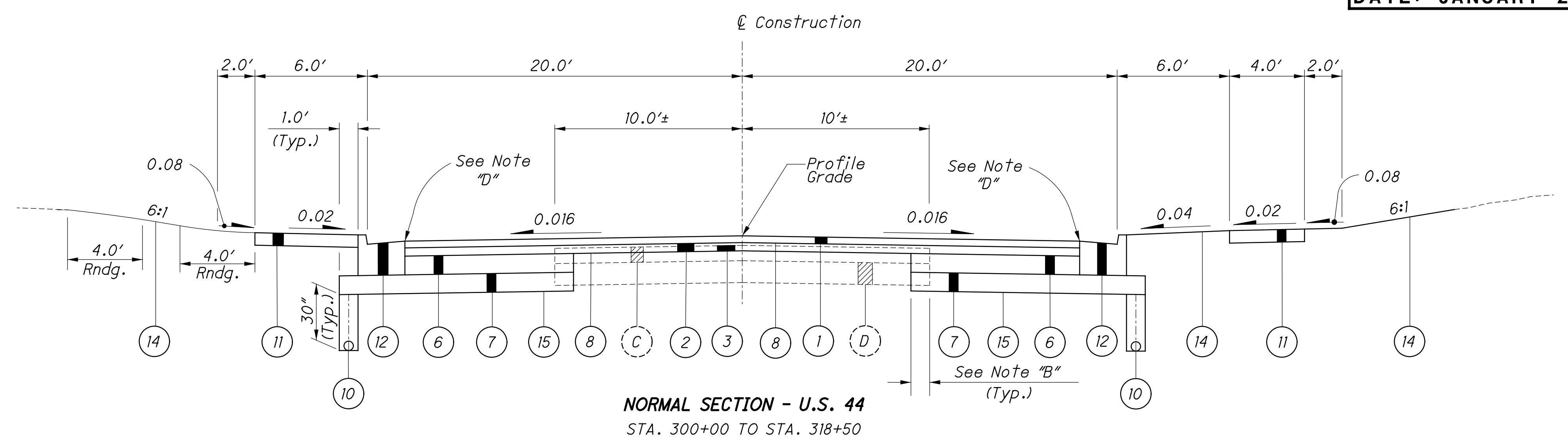
STRUCTURE PIC-46-1209 = Sta. 638+22.44 to Sta. 640+48.86
Sta. 638+47.44 to Sta. 640+23.86

- E** Unless otherwise shown on Cross Sections
- F** Foreslope may vary in pavement transition areas at extreme ends of pavement work; See Cross Sections.
- G** No rounding is required when foreslope is 6:1 or flatter.

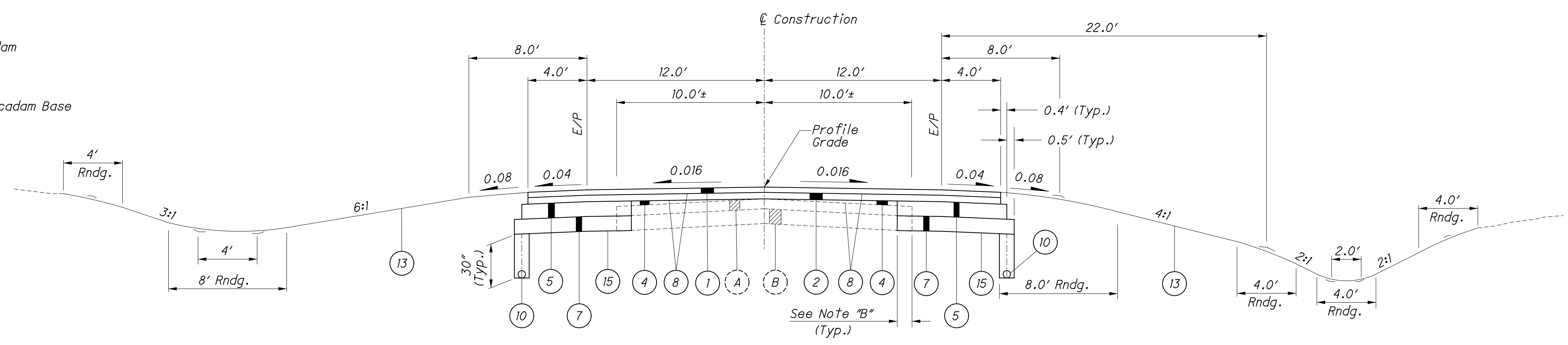
FOR PAVEMENT LEGEND SEE SHEET 3.
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.

LEGEND

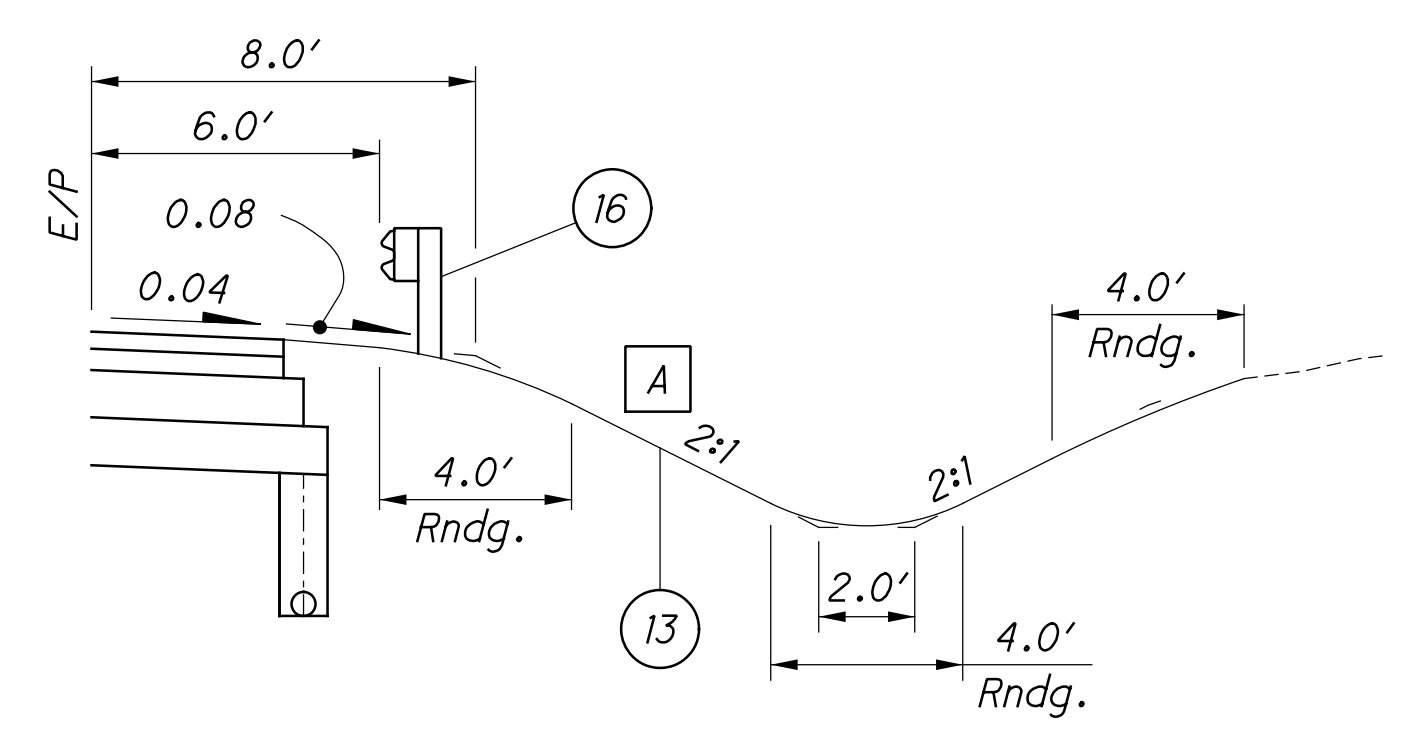
- ① ITEM 441 - 1 1/4" Asphalt Concrete Surface Course, Type 1, (448), PG64-22
- ② ITEM 441 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (448)
- ③ ITEM 254 - Pavement Planing, Asphalt Concrete (See Note "A")
- ④ ITEM 441 - 0" Min. Asphalt Concrete Intermediate Course, Type 1, (448) (See Note "C")
- ⑤ ITEM 301 - 5" Asphalt Concrete Base, PG64-22
- ⑥ ITEM 301 - 6" Asphalt Concrete Base, PG64-22
- ⑦ ITEM 304 - 6" Aggregate Base
- ⑧ ITEM 407 - Tack Coat
- ⑨ Not Used
- ⑩ ITEM 605 - 6" Shallow Pipe Underdrains
- ⑪ ITEM 608 - 4" Concrete Walk
- ⑫ ITEM 609 - Combination Curb and Gutter, Type 2
- ⑬ ITEM 659 - Seeding and Mulching
- ⑭ ITEM 660 - Sodding Unstaked
- ⑮ ITEM 204 - Subgrade Compaction
- ⑯ ITEM 606 - Guardrail, TYPE MGS
- Ⓐ 5"± Asphalt Concrete
- Ⓑ 5"± Waterbound Macadam
- Ⓒ 4"± Asphalt Concrete
- Ⓓ 6"± Dense Asphalt Macadam Base



NORMAL SECTION - U.S. 44
 STA. 300+00 TO STA. 318+50



NORMAL SECTION - S.R. 106
 STA. 621+35 TO STA. 640+50



GUARDRAIL DETAIL - S.R. 106

SECTION APPLIES :
 Sta. 635+50 to Sta. 637+75 Rt.

Ⓐ Unless otherwise shown on the cross sections

NOTE "A"
 Pavement planing shall be a constant depth of 1" at the $\text{\textcircled{C}}$ of Construction with a uniform cross slope of 0.016 established. Maximum depth of planing at the outside edges of existing pavement has been calculated to be 2 1/2".

NOTE "B"
 For estimating purposes, Item 202 - Pavement Removed calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

NOTE "C"
 Item 441, Asphalt Concrete Intermediate Course, Type 1, (448), is to be used as a leveling course to establish a 0.016 cross slope. Estimated quantities have been calculated based on exaggerated cross-sections shown on sheets 51-58.

NOTE "D"
 Item 441, Asphalt Concrete Surface Course, Type 1, (448), PG64-22, is to be 1/4" above gutter plate.

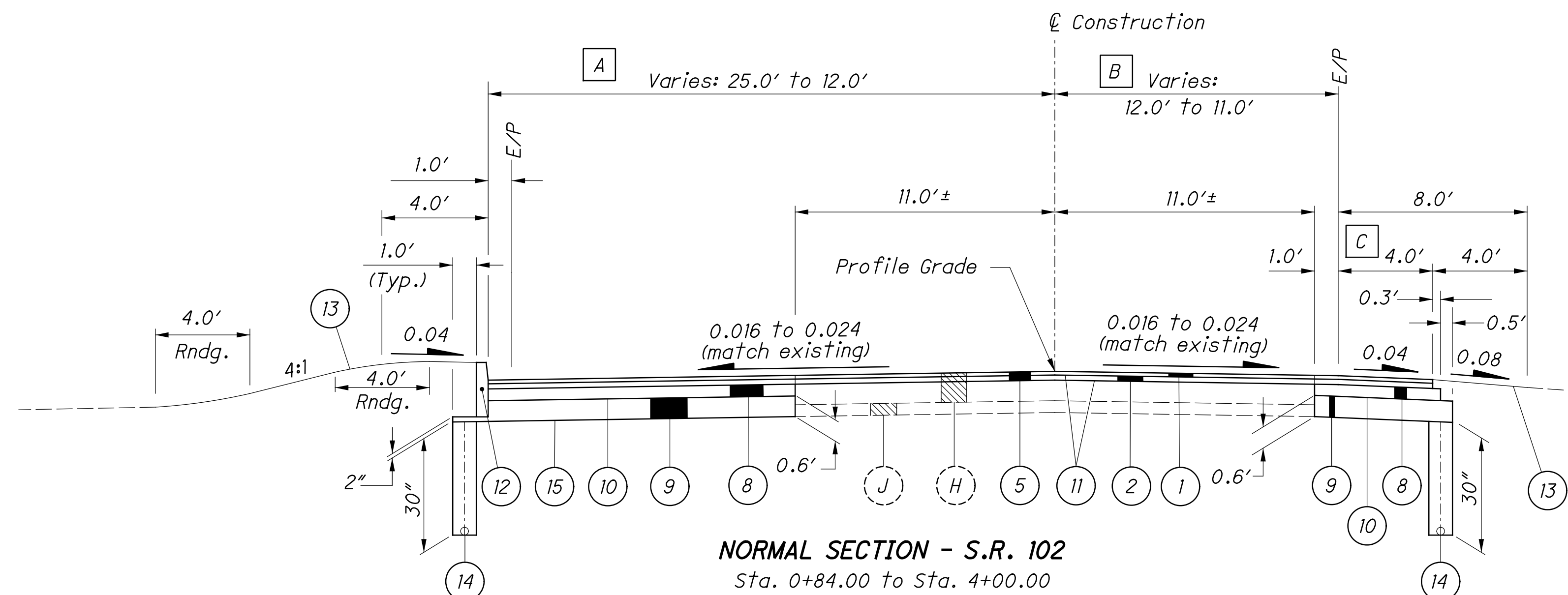
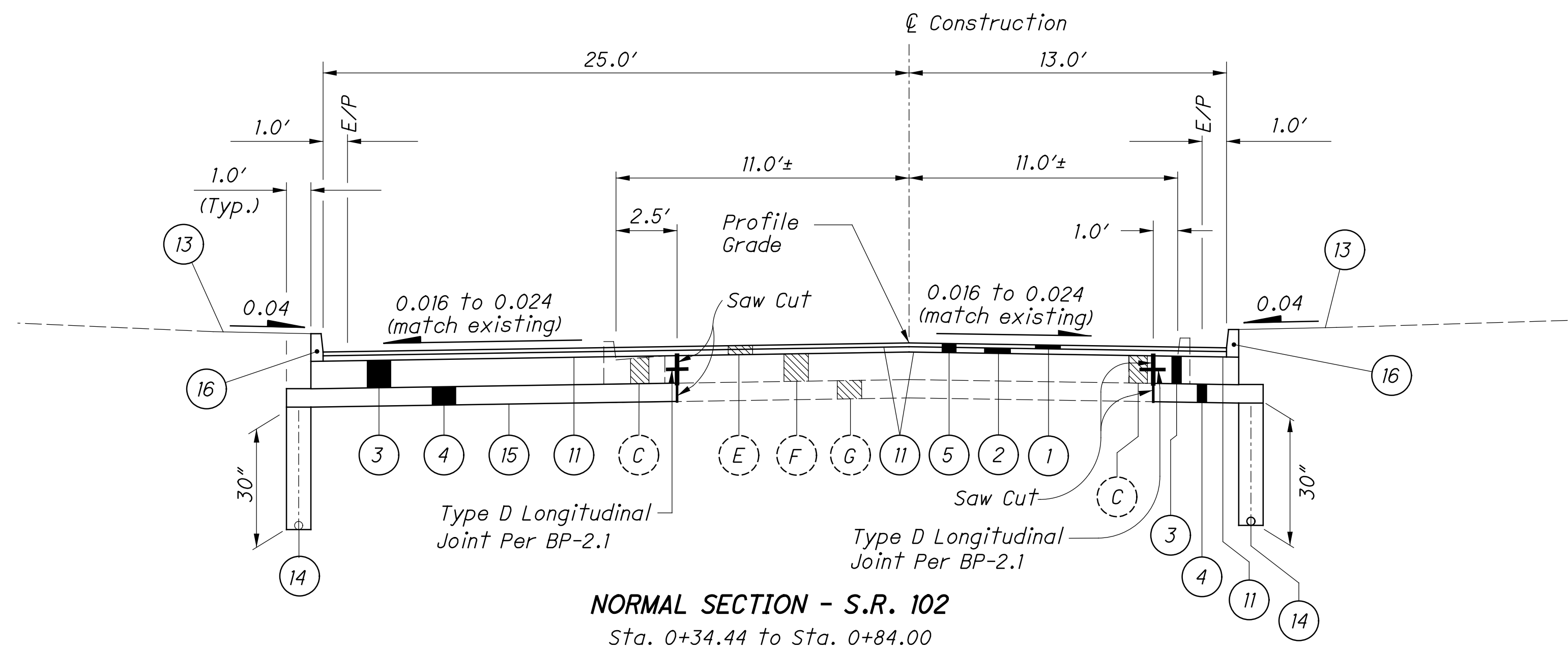
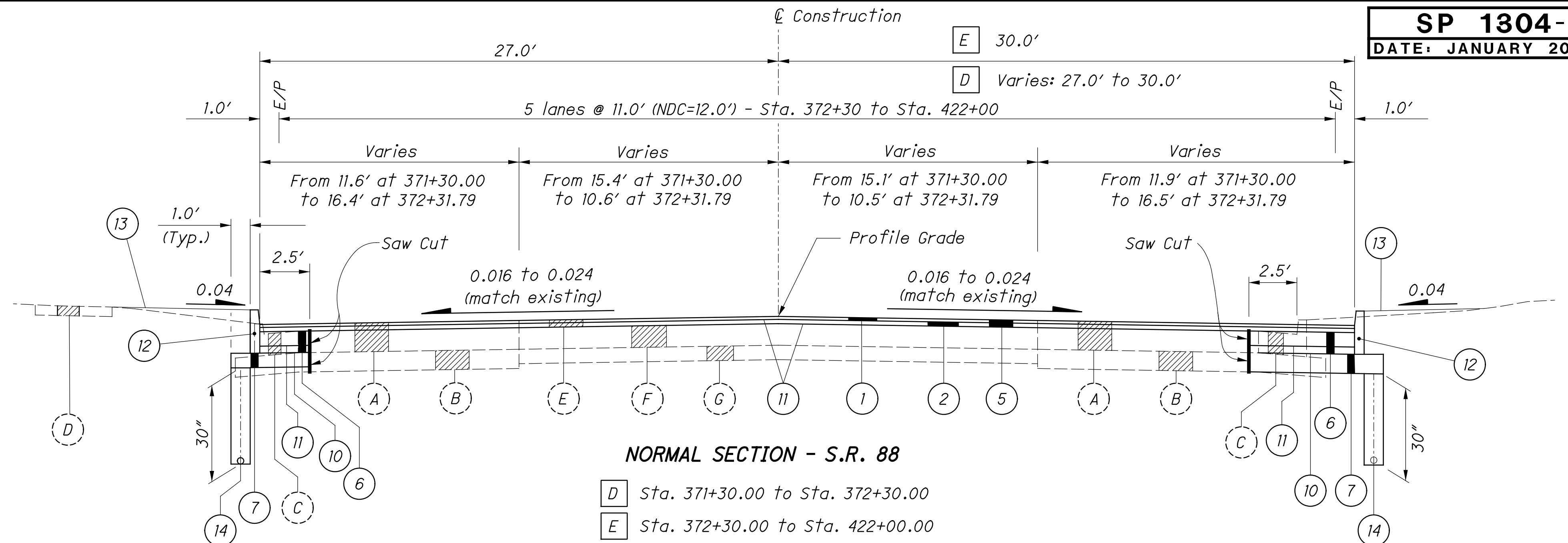
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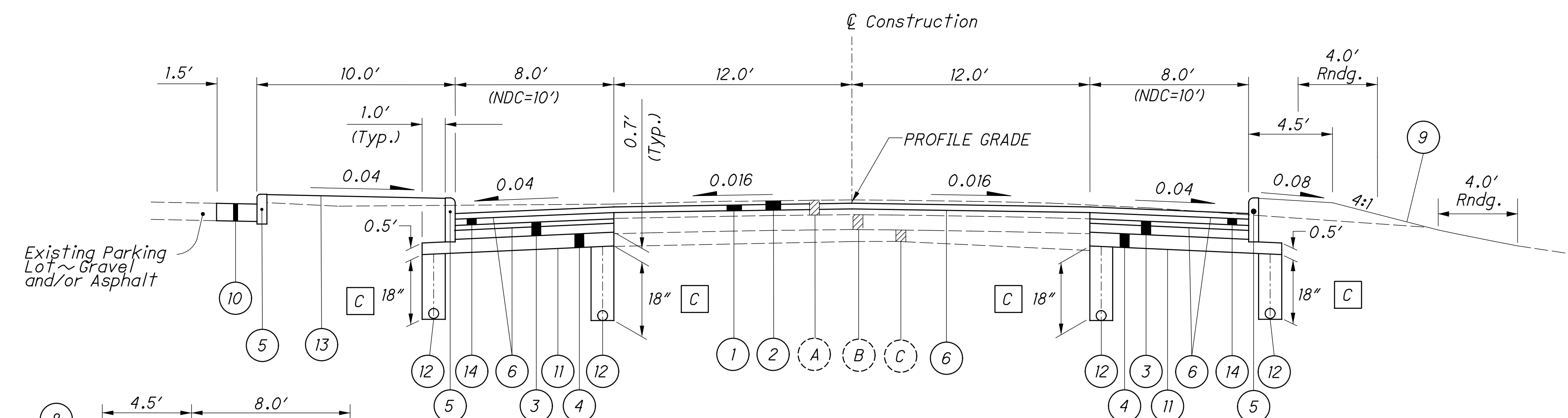
LEGEND

- ① ITEM 441 - 1 1/4" Asphalt Concrete Surface Course, Type 1, (448), PG64-22
- ② ITEM 441 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (448)
- ③ ITEM 305 - 9" Concrete Base, Class QC IP, As Per Plan
- ④ ITEM 304 - 6" Aggregate Base
- ⑤ ITEM 254 - Pavement Planing, Asphalt Concrete (Max. Depth=3")
- ⑥ ITEM 301 - 9" Asphalt Concrete Base, PG64-22
- ⑦ ITEM 304 - 9" Aggregate Base
- ⑧ ITEM 301 - 4" Asphalt Concrete Base, PG64-22
- ⑨ ITEM 304 - Aggregate Base, Depth as shown
- ⑩ ITEM 408 - Prime Coat (Applied At The Rate Of 0.4 Gal/Sq. Yd.)
- ⑪ ITEM 407 - Tack Coat
- ⑫ ITEM 609 - Curb, Type 6
- ⑬ ITEM 660 - Sodding Unstaked
- ⑭ ITEM 605 - 6" Shallow Pipe Underdrains
- ⑮ ITEM 204 - Subgrade Compaction
- ⑯ ITEM 609 - Curb, Type 2-B

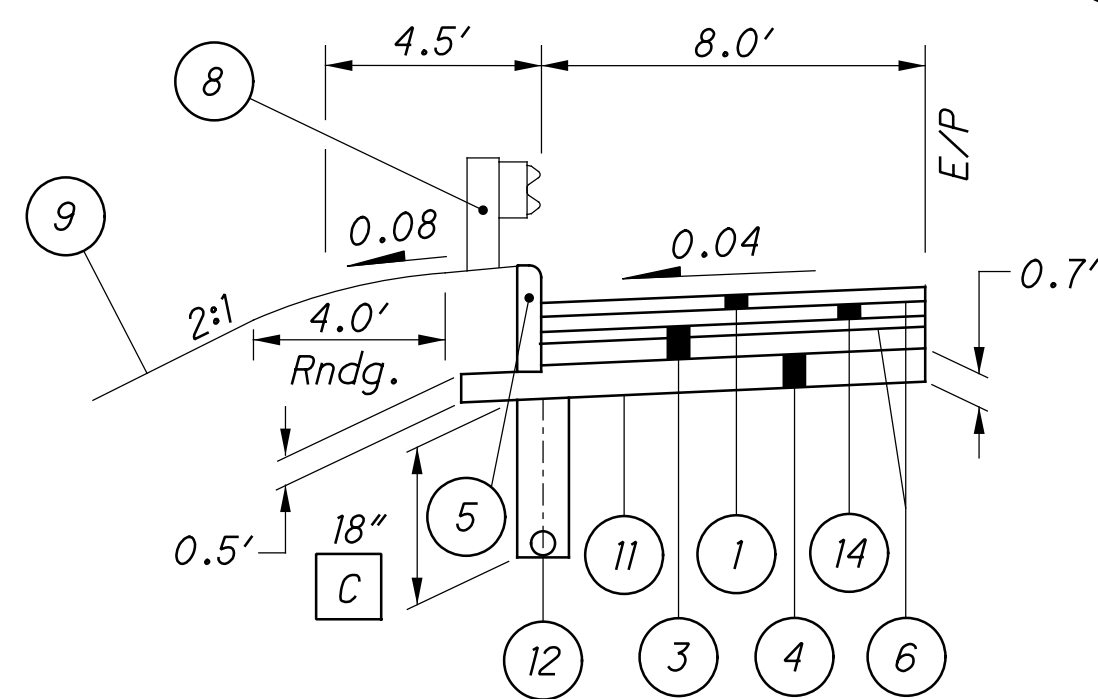
- Ⓐ 12" ± Asphalt
- Ⓑ 8" ± Subbase
- Ⓒ Curb & Gutter
- Ⓓ 4" Concrete Sidewalk
- Ⓔ 3" ± Asphalt
- Ⓕ 9" ± Reinforced Concrete
- Ⓖ 6" ± Subbase
- Ⓗ 10" ± Asphalt
- Ⓙ 4" ± Subbase

- Ⓐ 25'-0" From Sta. 0+84 to Sta. 3+50
Varies: 25'-0" @ Sta. 3+50 to 12' @ Sta. 4+00
- Ⓑ 12'-0" From Sta. 0+84 to Sta. 3+50
Varies: 12'-0" @ Sta. 3+50 to 11'-0" @ Sta. 4+00
- Ⓒ Varies: 4' @ Sta. 3+50 to 2' @ Sta. 4+00

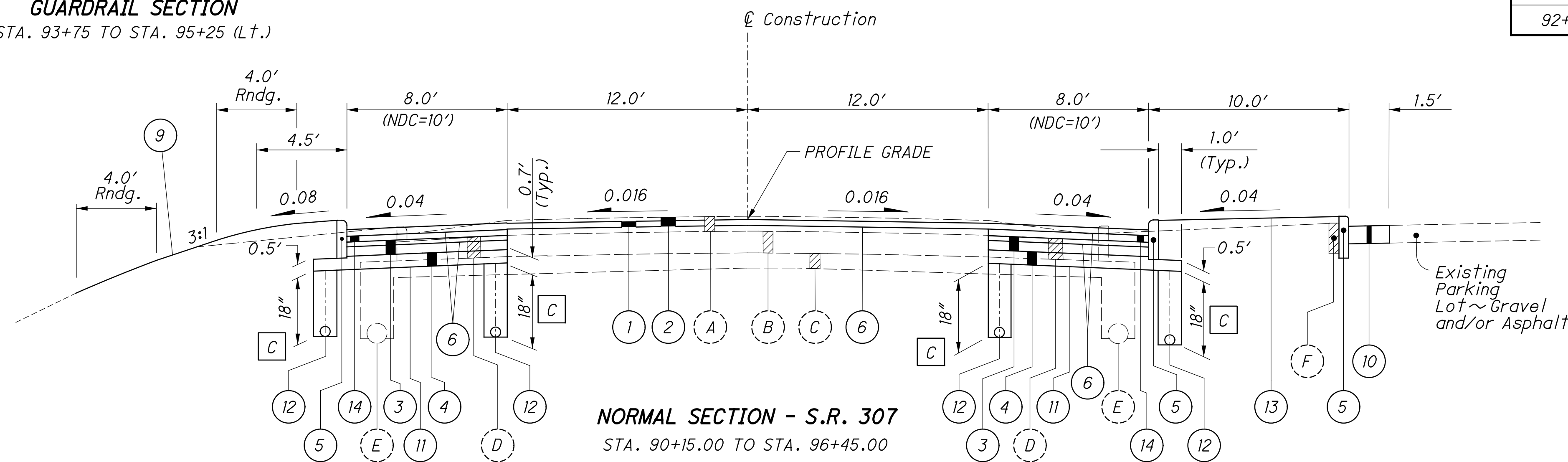




NORMAL SECTION - S.R. 307
STA. 88+75.00 TO STA. 90+15.00



GUARDRAIL SECTION
STA. 93+75 TO STA. 95+25 (L.T.)



NORMAL SECTION - S.R. 307
STA. 90+15.00 TO STA. 96+45.00

LEGEND

- | | |
|---|---|
| ① ITEM 441 - 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 | ⑧ ITEM 606 - GUARDRAIL, TYPE MGS |
| ② ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE [A] | ⑨ ITEM 659 - SEEDING AND MULCHING (SEE GENERAL NOTE) |
| ③ ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22 | ⑩ SEE PAVEMENT BUILDUP NOTE, THIS SHEET [B] |
| ④ ITEM 304 - AGGREGATE BASE, DEPTH AS SHOWN | ⑪ ITEM 204 - SUBGRADE COMPACTION |
| ⑤ ITEM 609 - CURB, TYPE 6 | ⑫ ITEM 605 - 6" BASE PIPE UNDERDRAINS |
| ⑥ ITEM 407 - TACK COAT | ⑬ ITEM 660 - SODDING UNSTAKED |
| ⑦ ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ.YD.) | ⑭ ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) |
| Ⓐ 6" ASPHALT SURFACE | Ⓓ CURB & GUTTER (TO BE REMOVED) |
| Ⓑ 9" REINFORCED CONCRETE BASE | Ⓔ ROADWAY DRAINAGE, 12" (TO BE REMOVED) |
| Ⓒ 6" MIN. CLASSIFIED EMBANKMENT BLANKET COURSE | Ⓕ CURB (TO BE REMOVED) |

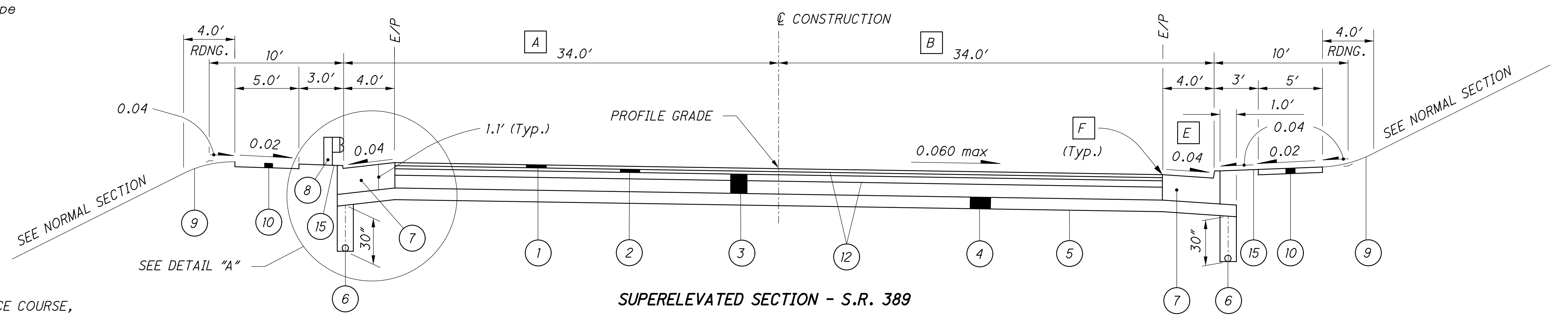
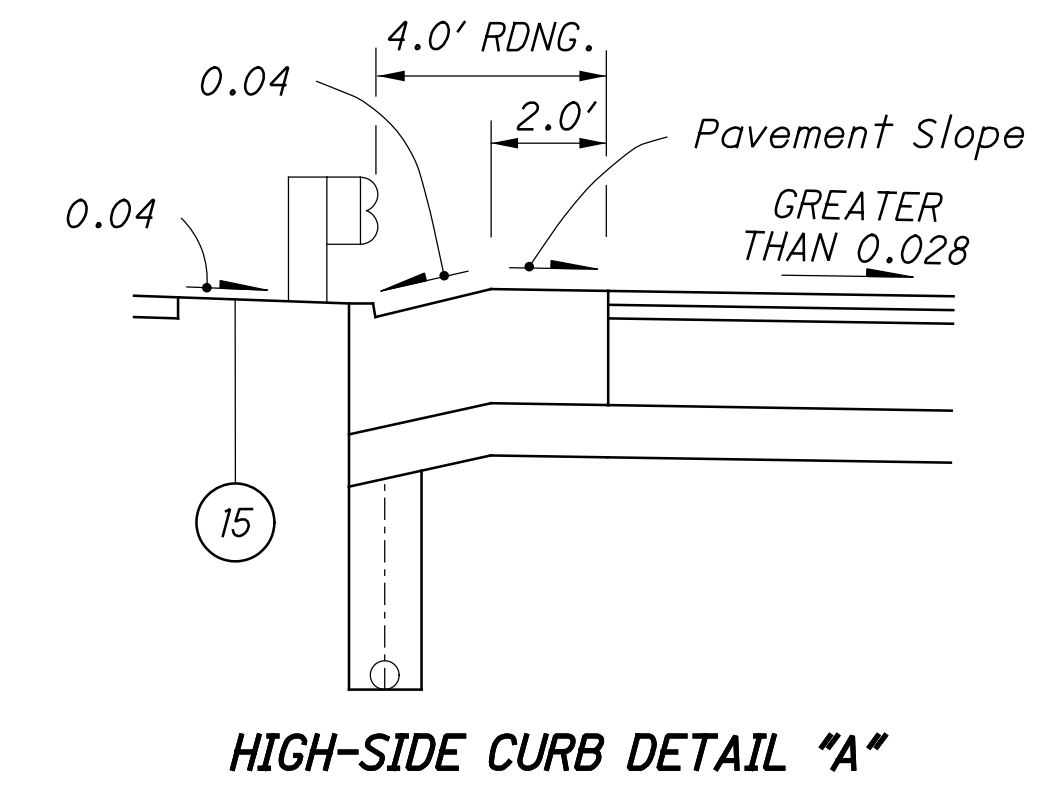
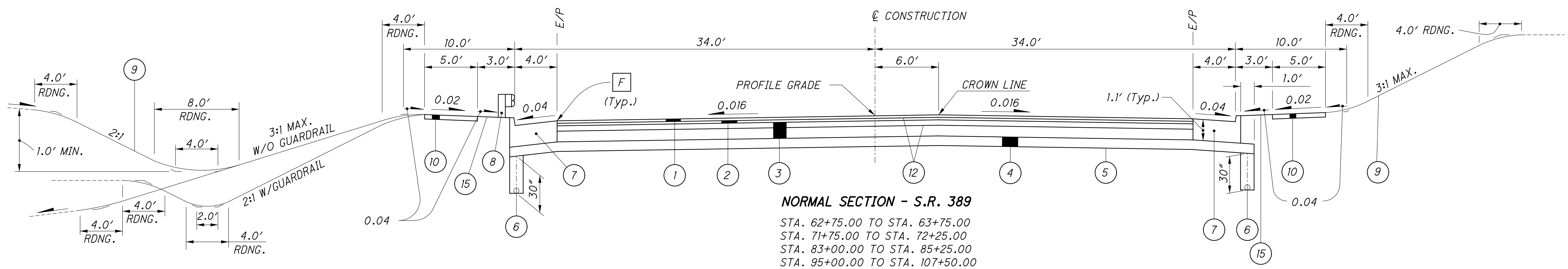
S.R. 307 PAVEMENT PLANING TABLES

STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ ϵ	STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ ϵ
88+50	1094.08	0.17	92+75	1095.26	0.27
88+75	1094.17	0.15	93+00	1095.28	0.19
89+00	1094.26	0.16	93+25	1095.32	0.20
89+25	1094.34	0.19	93+50	1095.36	0.21
89+50	1094.43	0.20	93+75	1095.41	0.22
89+75	1094.52	0.19	94+00	1095.46	0.24
90+00	1094.61	0.21	94+25	1095.51	0.28
90+25	1094.69	0.20	94+50	1095.56	0.38
90+50	1094.78	0.18	94+75	1095.61	0.34
90+75	1094.87	0.18	95+00	1095.66	0.26
91+00	1094.96	0.18	95+25	1095.71	0.17
91+25	1095.04	0.17	95+50	1095.69	0.16
91+50	1095.13	0.17	95+75	1095.67	0.15
91+75	1095.16	0.18	96+00	1095.65	0.14
92+00	1095.18	0.20	96+25	1095.63	0.15
92+25	1095.21	0.23	96+50	1095.61	0.16
92+50	1095.23	0.28			

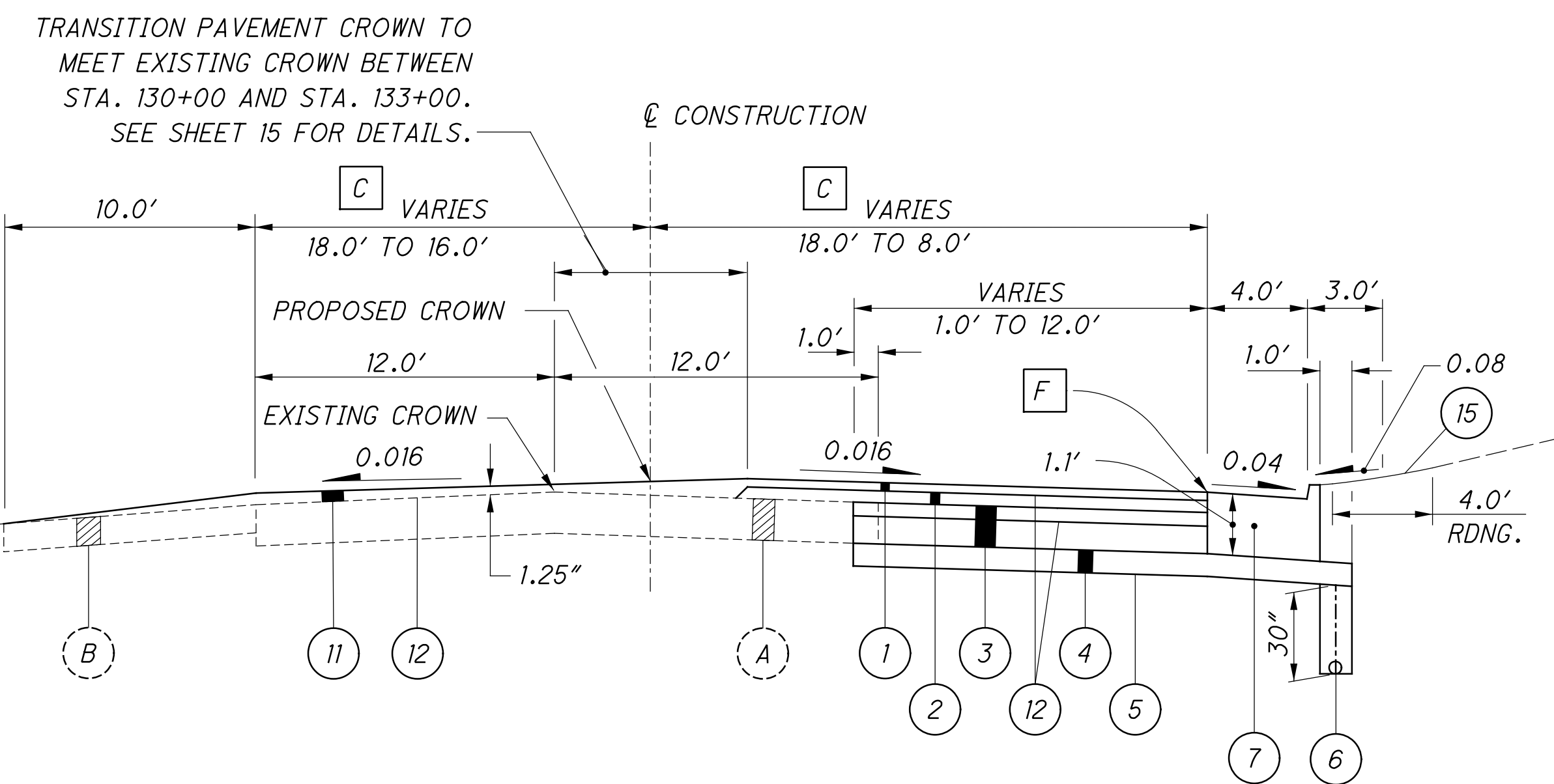
NOTES

- S.R. 307 - THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT BETWEEN STA. 92+57.25 AND STA. 92+97.25.
- THE PAVEMENT BETWEEN STA. 92+97.25 AND STA. 94+02.25 SHALL BE BUILT WITHOUT CROWN.
- THE CROWN SHALL BE WORKED INTO THE PAVEMENT BETWEEN STA. 94+02.25 AND STA. 94+42.25.

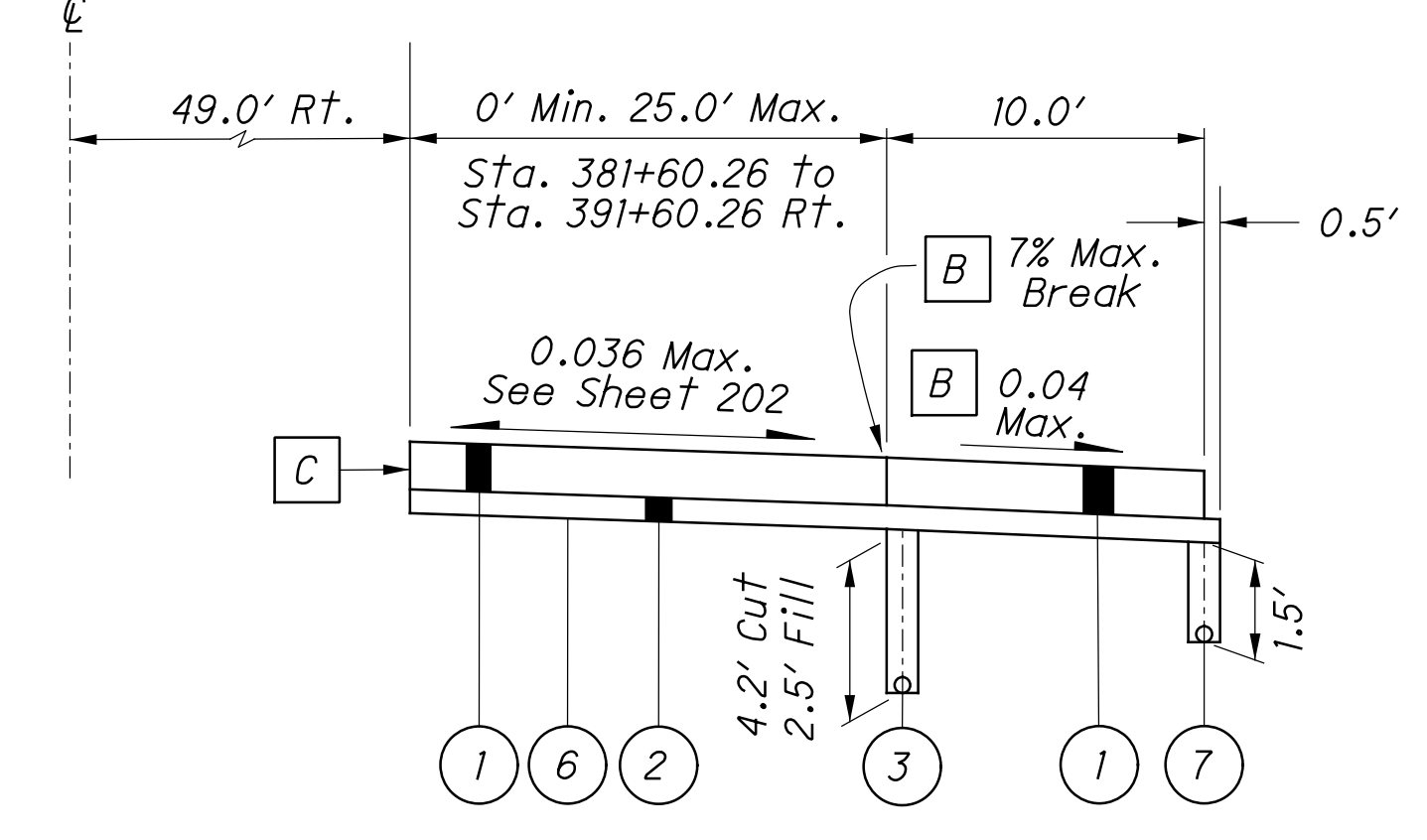
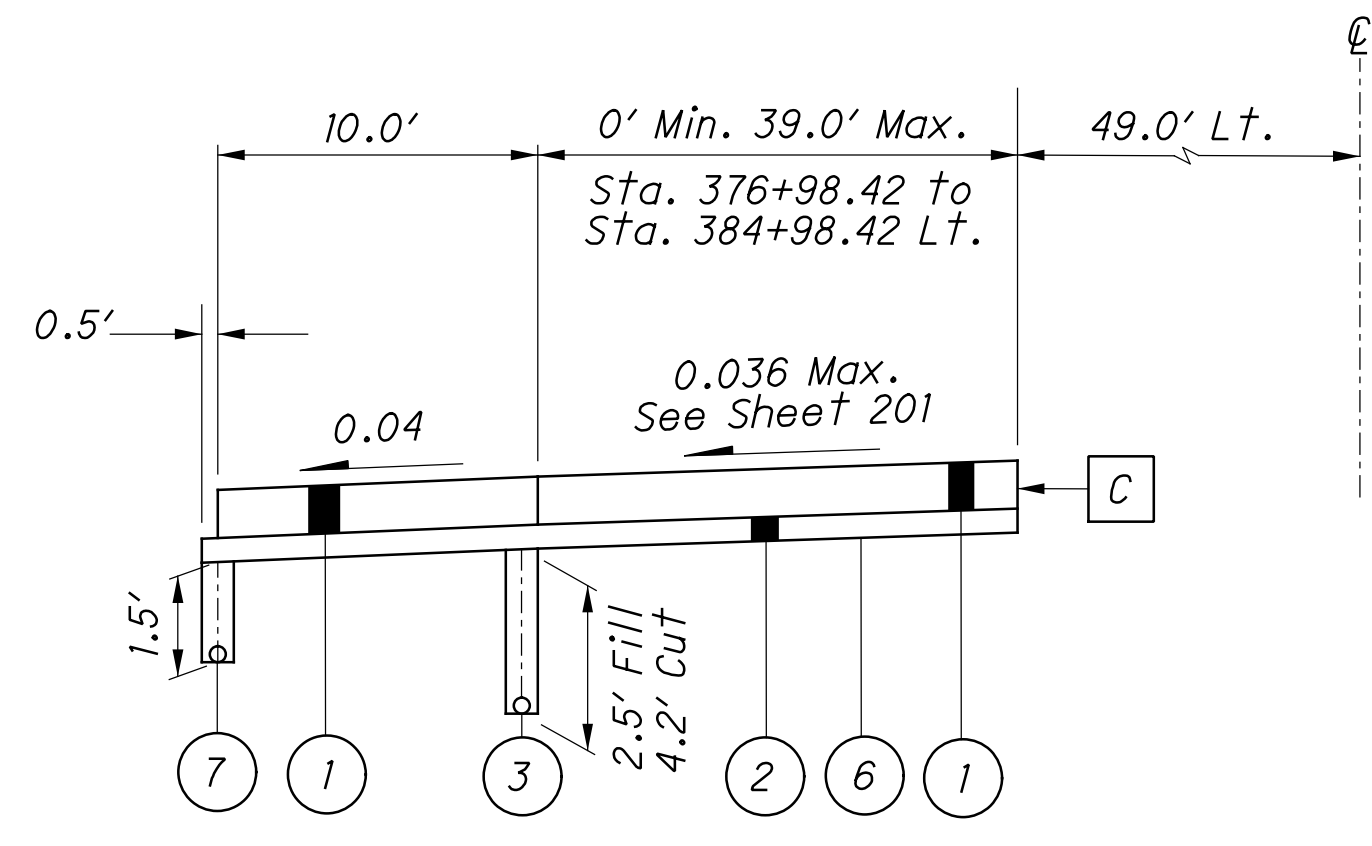
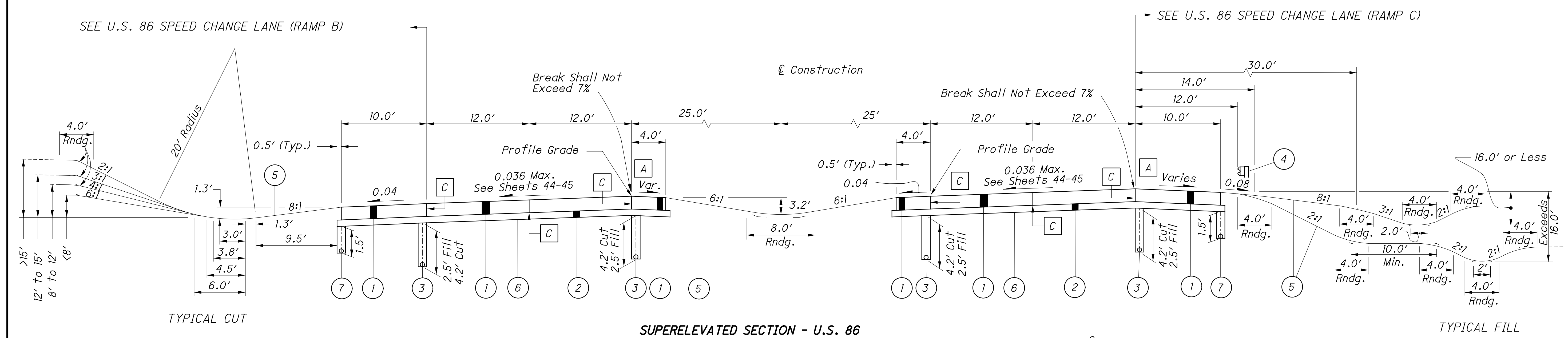
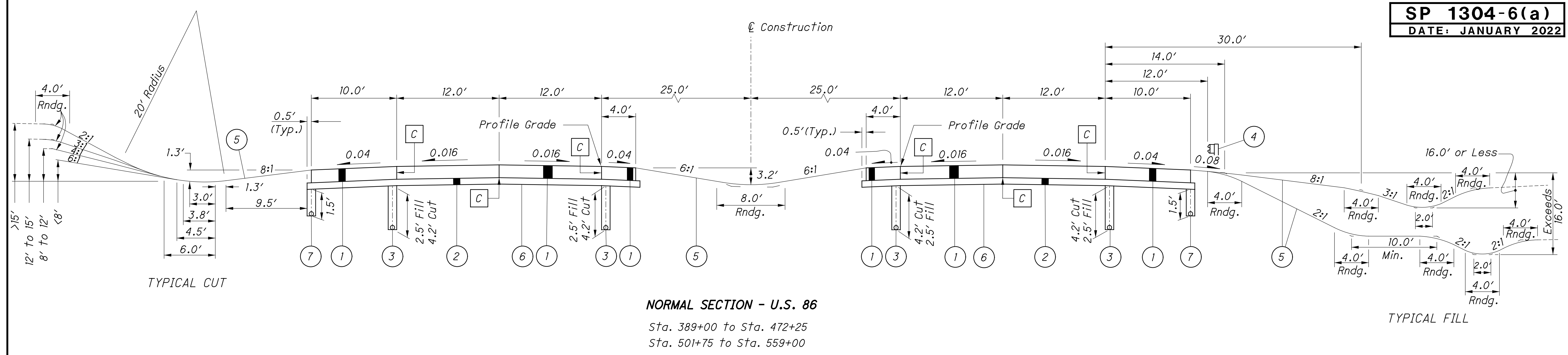
- [A] IN AN EFFORT TO REMOVE EXISTING PARABOLIC CROWN AND ESTABLISH A SMOOTH AND CONSISTENT PROFILE THROUGHOUT THE PROJECT, THE PAVEMENT SHALL BE PLANED TO A DEPTH INDICATED IN THE PAVEMENT PLANING TABLE ON THIS SHEET. A 0.016 NORMAL CROSS SLOPE SHALL BE ESTABLISHED FROM THE CENTERLINE TO THE EXISTING EDGE OF PAVEMENT.
- [B] THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING ASPHALT PAVEMENT SHALL BE AS FOLLOWS:
 ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
 ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
 ITEM 304 - 8" AGGREGATE BASE
 THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING GRAVEL OR SLAG PARKING AREA SHALL BE AS FOLLOWS:
 ITEM 304 - 11" AGGREGATE BASE
- [C] UNCLASSIFIED UNDERDRAIN LIMITS:
 STA. 88+75 TO STA. 91+25 AND
 STA. 95+25 TO STA. 96+27.25



- LEGEND**
- ① ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
 - ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
 - ③ ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
 - ④ ITEM 304 - 6" AGGREGATE BASE
 - ⑤ ITEM 204 - SUBGRADE COMPACTION
 - ⑥ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS [D]
 - ⑦ ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN (SEE SHEET 9)
 - ⑧ ITEM 606 - GUARDRAIL, TYPE 5
 - ⑨ ITEM 659 - SEEDING AND MULCHING
 - ⑩ ITEM 608 - 4" CONCRETE WALK
 - ⑪ ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22 (VARIABLE THICKNESS)
 - ⑫ ITEM 407 - TACK COAT
 - ⑬ ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.)
 - ⑭ NOT USED
 - ⑮ ITEM 660 - SODDING UNSTAKED
 - [A] 3" ± ASPHALT PAVEMENT OVER 10" ± AGGREGATE SUBBASE
 - [B] 8" ± DENSE ASPHALT



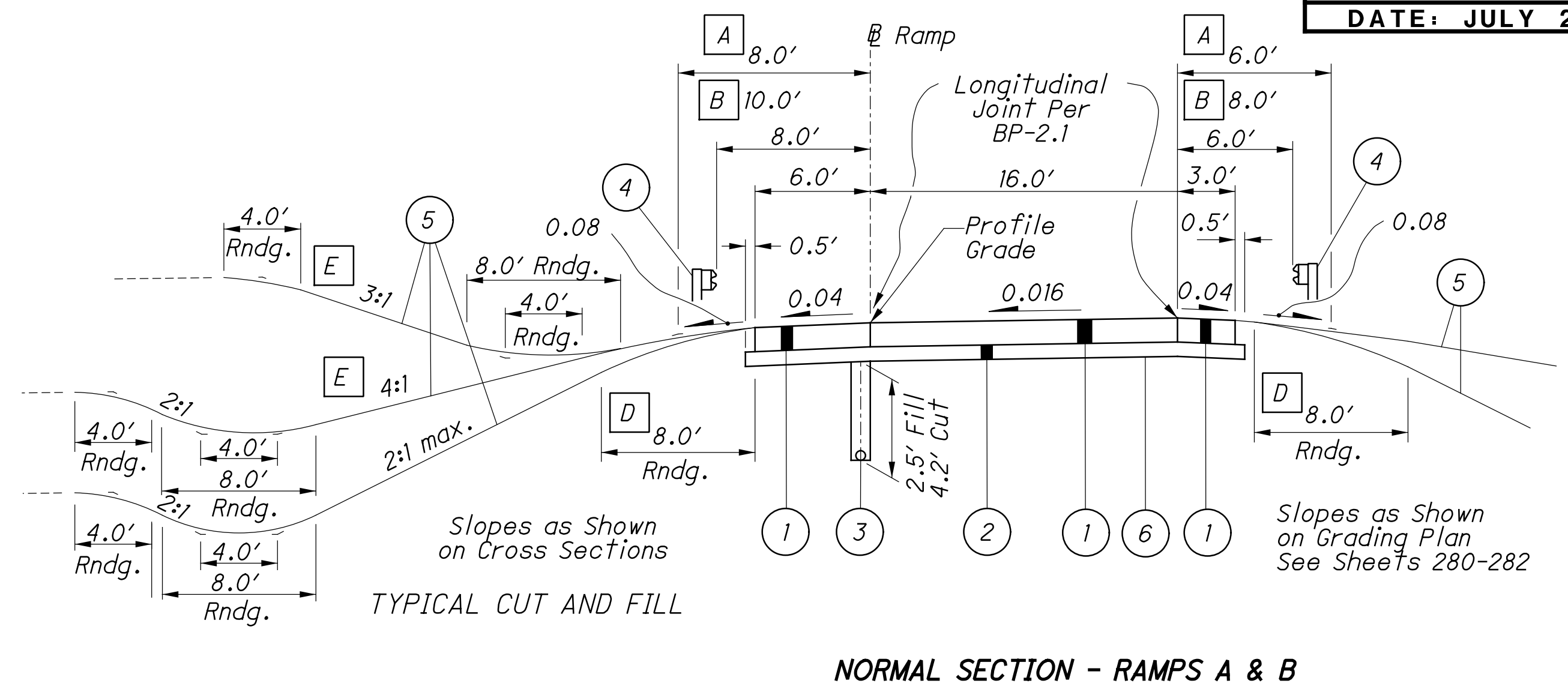
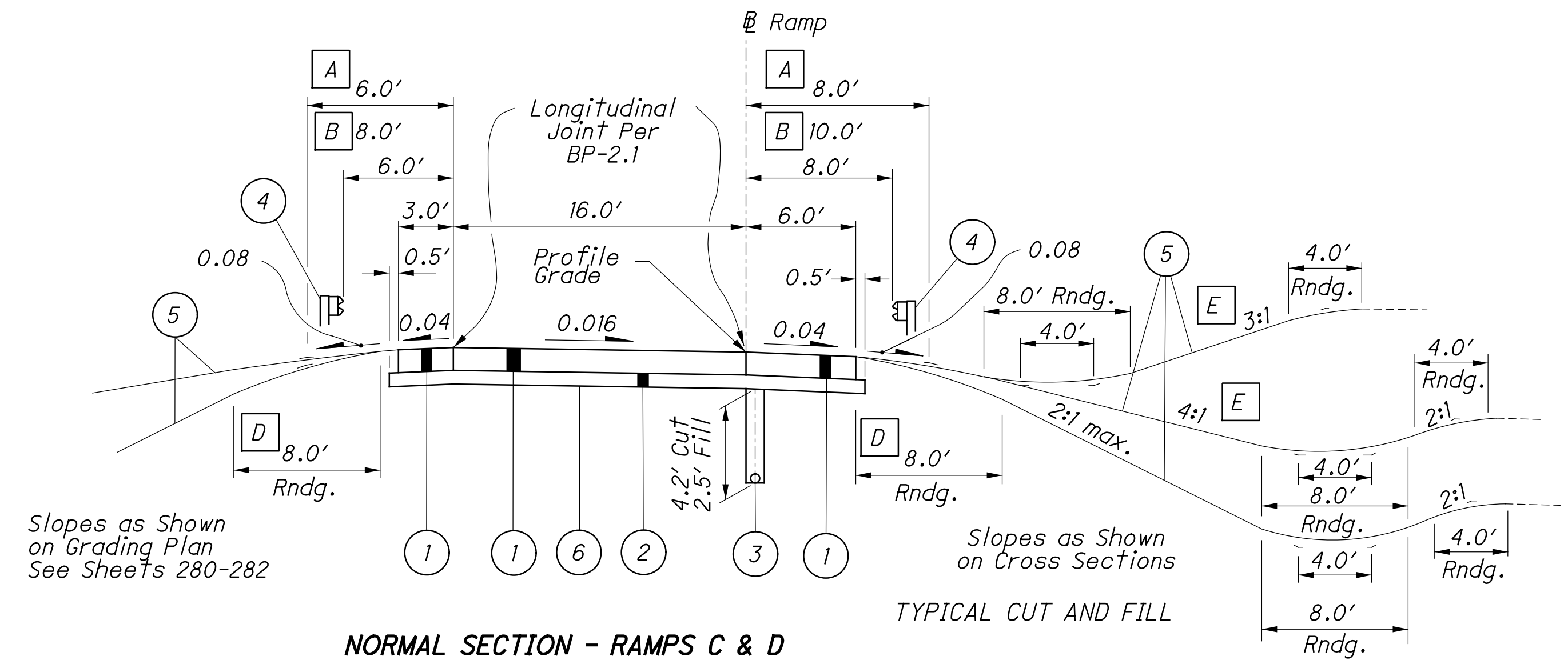
- NOTES:**
- FOR VARIABLE PAVEMENT WIDTHS AND SIDEWALK LIMITS, SEE PAVEMENT DETAILS, SHEETS 15 - 18.
 - [A] WIDTH VARIES FROM 34'-0" @ STA. 129+50 TO 22'-0" @ STA. 130+00 DUE TO RIGHT TURN LANE TAPER FROM 12' TO 0'
 - [B] WIDTH VARIES FROM 34'-0" @ STA. 124+60 TO 22'-0" @ STA. 130+00 DUE TO RIGHT THRU LANE TAPER FROM 12' TO 0'
 - [C] PAVEMENT WIDTH VARIES FROM 18'-0", LT. & RT. @ STA. 130+00 TO 16'-0" LT. AND 8'-0", RT. @ STA. 133+00 DUE TO LEFT TURN LANE TRANSITION
 - [D] EXCEPT IN AREAS OF GUARDRAIL SECTIONS, PIPE UNDERDRAINS SHALL BE LOCATED IMMEDIATELY BEHIND THE CURB.
 - [E] OR PAVEMENT SLOPE, IF GREATER
 - [F] ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22, IS TO BE 1/4" ABOVE GUTTER PLATE.



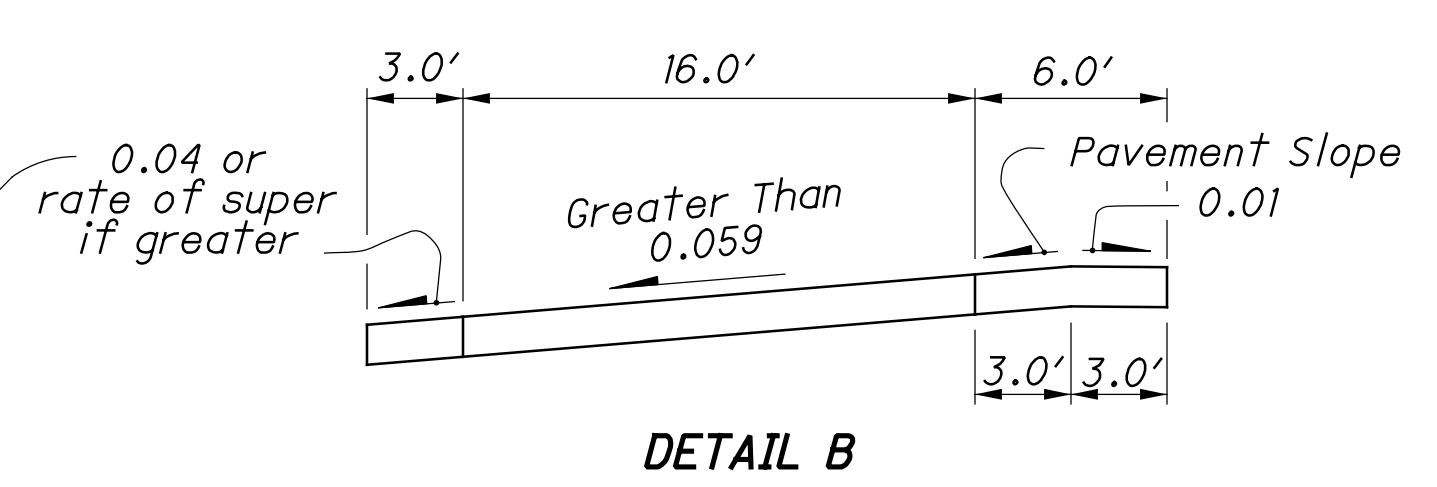
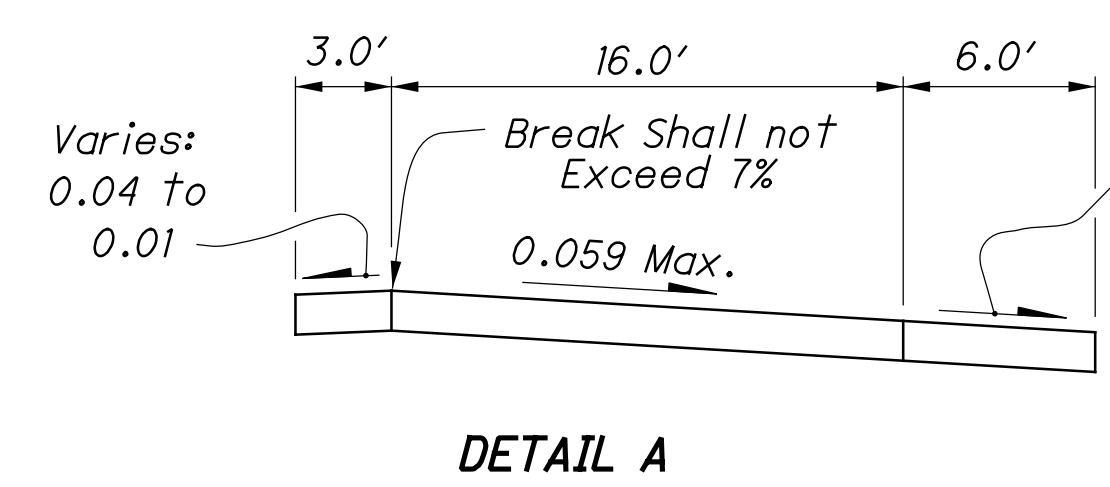
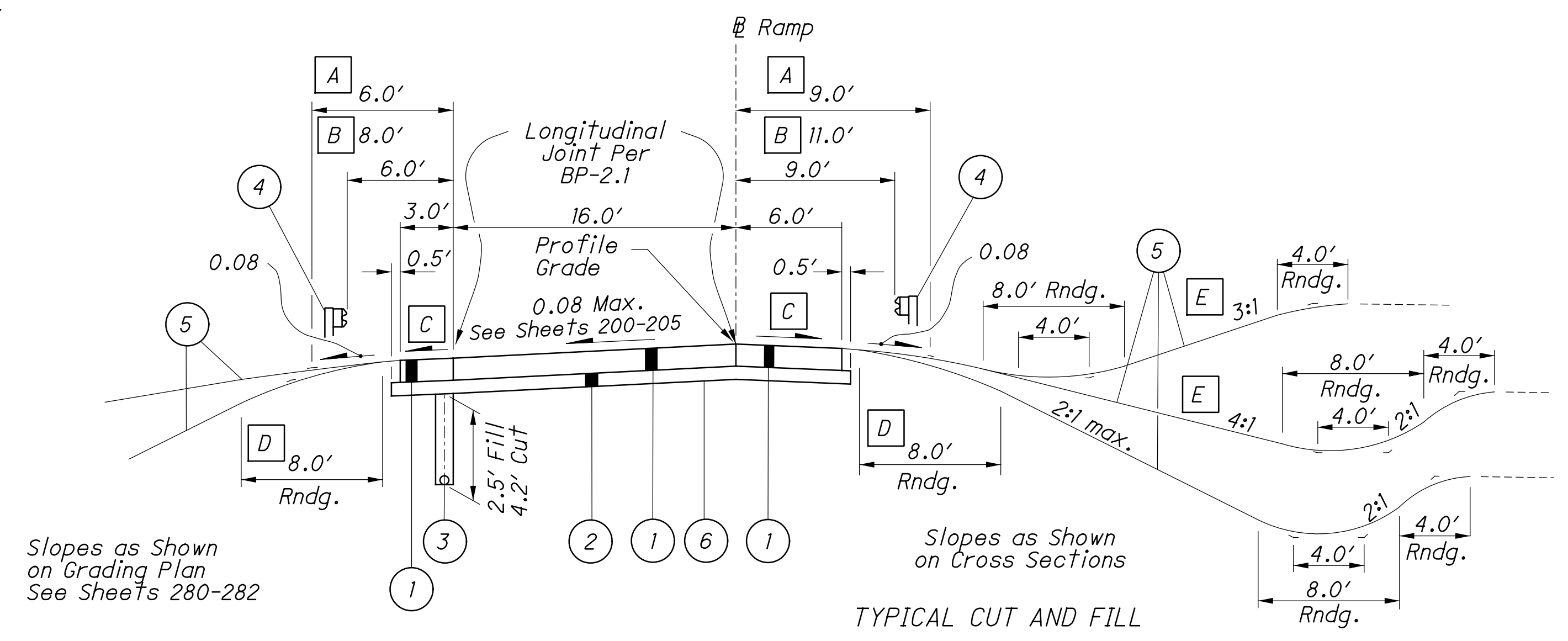
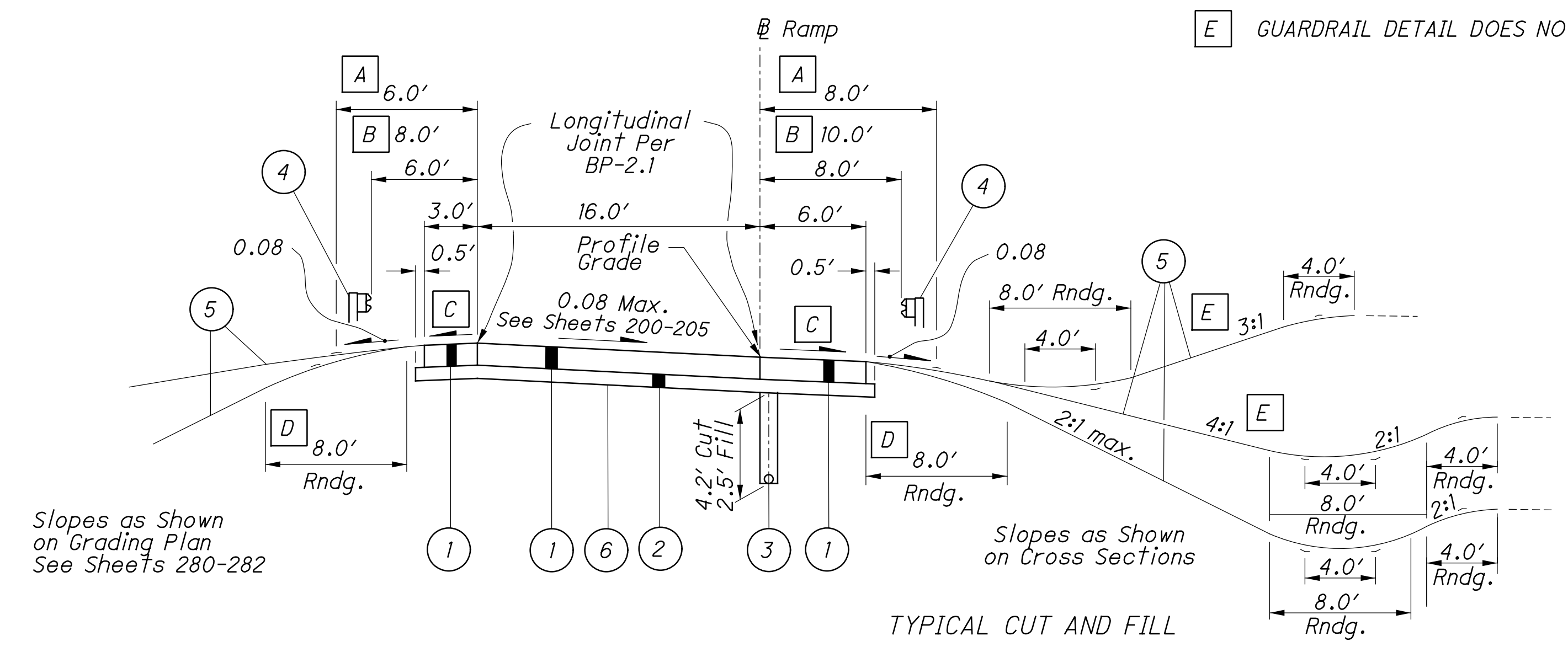
- A** 0.04 Max. to 0.034 Min.
- B** Slope conditions shown for high side shoulder adjacent to speed change lane pavement; For low side of shoulders adjacent to speed change lane pavement, shoulder slope shall be 0.04.
- C** Longitudinal Joint Per BP-2.1

LEGEND

- ① ITEM 452 - 12" Non-Reinforced Concrete Pavement, Class QC IP
- ② ITEM 304 - 6" Aggregate Base
- ③ ITEM 605 - 6" Deep Pipe Underdrains
- ④ ITEM 606 - Guardrail, Type 5
- ⑤ ITEM 659 - Seeding and Mulching
- ⑥ ITEM 204 - Subgrade Compaction
- ⑦ ITEM 605 - 6" Base Pipe Underdrains



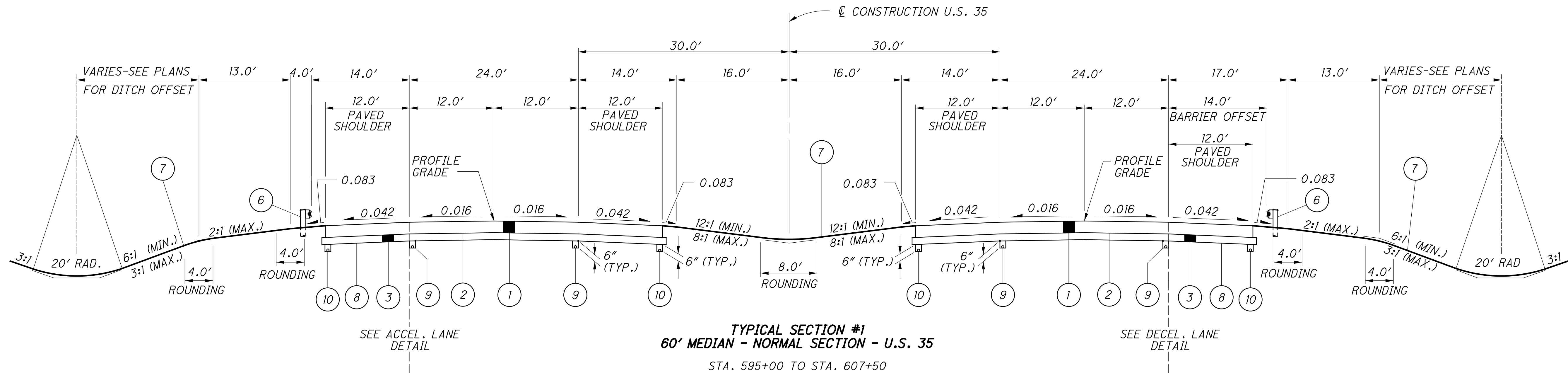
- A** WHEN FORESLOPE IS 6:1 OR FLATTER
- B** FOR GUARDRAIL SECTIONS AND NON-GUARDRAIL SECTIONS WITH FORESLOPE STEEPER THAN 6:1
- C** SEE DETAILS "A" AND "B"
- D** 4' ROUNDING ON GUARDRAIL SECTIONS; NO ROUNDING REQUIRED WHEN FORESLOPE IS 6:1 OR FLATTER.
- E** GUARDRAIL DETAIL DOES NOT APPLY



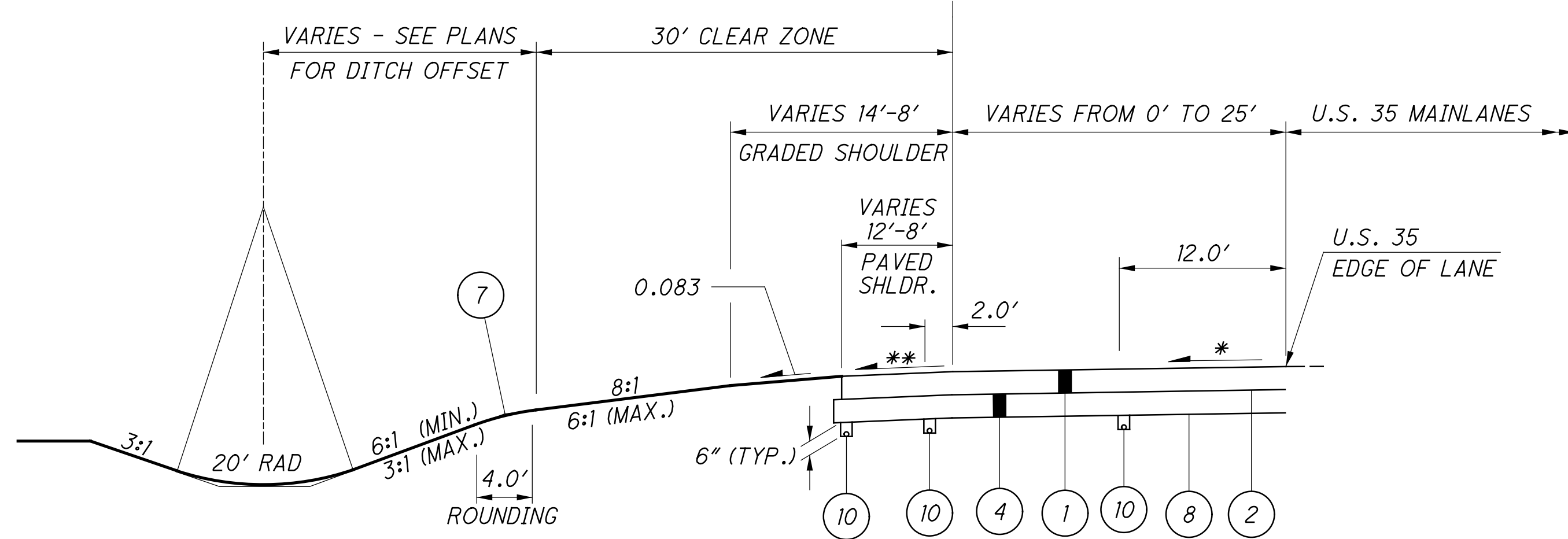
FOR LEGEND, SEE SHEET 9

LEGEND

- | | | | |
|---|---|---|-------------------------------------|
| ① | ITEM 880 - 10" ASPHALT CONCRETE WITH WARRANTY (7 YEARS) | ⑥ | ITEM 606 - GUARDRAIL, TYPE MGS |
| ② | ITEM 408 - PRIME COAT (0.4 GAL/YD ²) | ⑦ | ITEM 659 - SEEDING AND MULCHING |
| ③ | ITEM 304 - 6" AGGREGATE BASE | ⑧ | ITEM 204 - SUBGRADE COMPACTION |
| ④ | ITEM 304 - 10" AGGREGATE BASE | ⑨ | ITEM 605 - 6" BASE PIPE UNDERDRAINS |
| ⑤ | ITEM 605 - 4" SHALLOW PIPE UNDERDRAINS, AS PER PLAN | ⑩ | ITEM 605 - 4" BASE PIPE UNDERDRAINS |

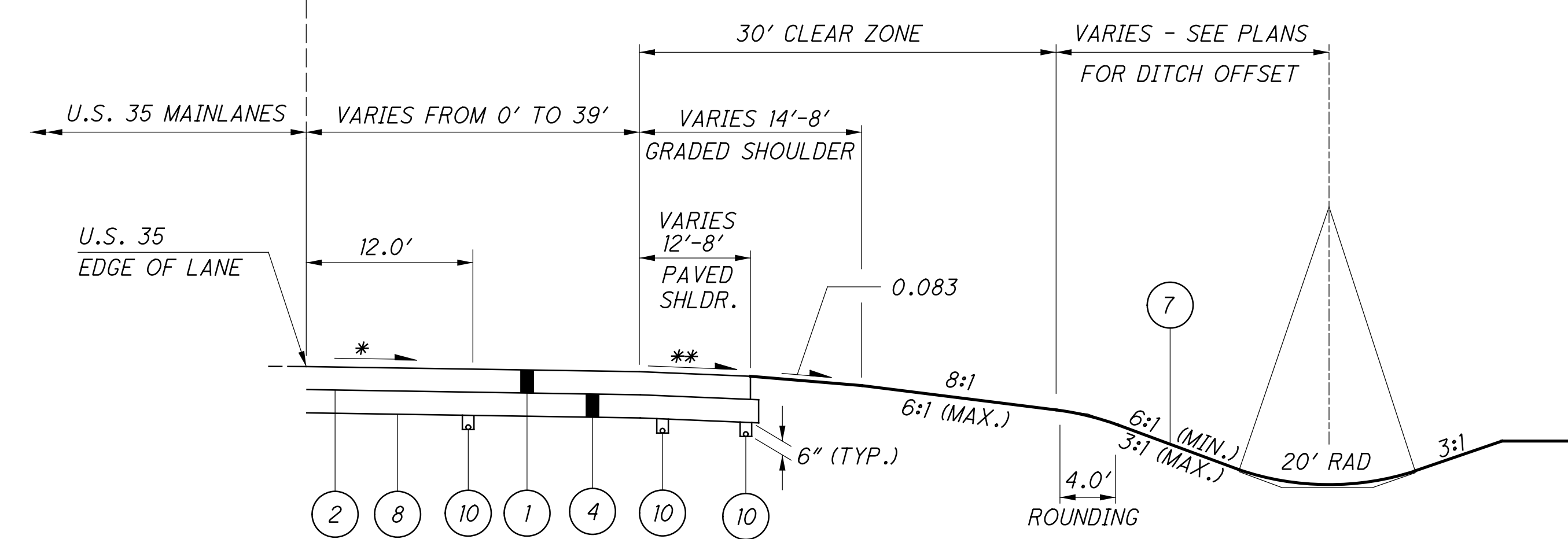


TYPICAL SECTION #1
60' MEDIAN - NORMAL SECTION - U.S. 35
STA. 595+00 TO STA. 607+50



RAMP B ACCEL. LANE DETAIL

* SLOPE MATCHES MAINLANE RATE (0.016) UNTIL SUPER TRANSITION FOR RAMP. TRANSITION FROM NORMAL CROSS SLOPE TO SUPERELEVATED SECTION BETWEEN STATIONS 598+75 AND 600+90.
** 0.042 OR RATE OF SUPER, IF GREATER.



RAMP A DECEL. LANE DETAIL

* SLOPE MATCHES MAINLANE RATE (0.016) UNTIL SUPER TRANSITION FOR RAMP. TRANSITION FROM NORMAL CROSS SLOPE TO SUPERELEVATED SECTION BETWEEN STATIONS 595+50 AND 596+25.
** 0.042 OR RATE OF SUPER, IF GREATER.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

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

ELECTRIC:
 AMERICAN ELECTRIC POWER
 215 NORTH FRONT STREET
 COLUMBUS, OHIO 43215
 (614) 464-7911

GAS:
 COLUMBIA GAS OF OHIO
 939 WEST GOODALE BOULEVARD
 COLUMBUS, OHIO 43212
 (614) 460-2240

TELEPHONE:
 SBC AMERITECH
 150 EAST GAY STREET
 ROOM 6F
 COLUMBUS, OHIO 43215
 (614) 223-8535

CABLE:
 TIME WARNER COMMUNICATIONS
 1266 DUBLIN ROAD
 COLUMBUS, OHIO 43212
 (614) 481-5261

SANITARY, STORM:
 CITY OF COLUMBUS
 DIVISION OF SEWERAGE & DRAINAGE
 910 DUBLIN ROAD
 COLUMBUS, OHIO 43215
 (614) 645-7175

WATER:
 CITY OF COLUMBUS
 DIVISION OF WATER
 910 DUBLIN ROAD
 COLUMBUS, OHIO 43215
 (614) 645-7677

UTILITIES

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET FOR A TABLE CONTAINING PRIMARY PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PRIMARY PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PRIMARY PROJECT CONTROL

POSITIONING METHOD: STATIC GNSS
 MONUMENT TYPE: A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
 GEOID: GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS96)
 ELLIPSOID: GRS80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE - SOUTH ZONE
 COMBINED SCALE FACTOR: 1.000059007
 ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHOD AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

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.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	8	2	10
30"	1	2	3
48"	0	1	1
60"	1	0	1

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SEEDING AND MULCHING 310 SQ. YD.

659, REPAIR SEEDING AND MULCHING 16 SQ. YD.
 (310) X (0.05) = 15.5 SQ. YD.

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 34 CU. YD.
 (310) X (111 CY PER 1000 SY) = 34.4 SQ. YD.

659, COMMERCIAL FERTILIZER 0.05 TON
 [(310) X (1 TON / 7410 SY)] + [(16 SY) X (1 TON / 1115 SY)] = 0.05 TON

659, LIME 0.06 ACRE
 (310) X (1 ACRE / 4840 SY) = 0.06 ACRE

659, INTER-SEEDING 16 SQ. YD.
 (310) X (0.05) = 15.5 SQ. YD.

659, WATER 2 M. GAL.
 [(310) X (0.0054 M GAL / SY)] + [(16) X (.0027 GAL/SY)] = 2 M. GAL

APPLY SEEDING AND MULCHING TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR TEMPORARY EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS

EXISTING ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTING A CONDUIT THROUGH THE CURB OR INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEW CONDUIT REQUIRED TO REPLACE OR EXTEND THE EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 6" CONDUIT, TYPE B	50 FT.
611, 6" CONDUIT, TYPE C	50 FT.
611, 6" CONDUIT, TYPE E	50 FT.
611, 6" CONDUIT, TYPE F	50 FT.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT SHOWN ON THE PLAN VIEW SHEETS. THE PROPOSED PROFILE SHALL FOLLOW THE PROPOSED ELEVATIONS SHOWN ON THE CROSS SECTION SHEETS. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL VARY TO PRODUCE THE PROPOSED ELEVATIONS SHOWN ON THE CROSS SECTIONS.

PRIMARY PROJECT CONTROL INFORMATION

POINT NUMBER	GRID COORDINATES U.S. SURVEY FEET		SCALED COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
CP1	648471.989	2085554.754	648510.253	2085677.816	634.80	PROJECT CONTROL - STEEL ROD SET IN CONCRETE
CP2	646970.005	2084508.912	647008.181	2084631.913	636.54	PROJECT CONTROL - STEEL ROD SET IN CONCRETE
CP3	647678.067	2084753.211	647716.285	2084876.226	655.38	AZIMUTH MARK - STEEL ROD SET IN CONCRETE
CP4	647186.714	2084974.770	647224.903	2084974.711	656.63	AZIMUTH MARK - STEEL ROD SET IN CONCRETE

ITEM 659, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

SEE SHEET 18 FOR SEEDING AND MULCHING SUBSUMMARY.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER	22 MGAL.
659, MOWING	23 MSF

EROSION CONTROL

ITEMS 601, 660 AND 670 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS AND TURF OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE 660 OR 670. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM 604, CATCH BASIN NO. 2-3 AND 2-5 AS PER PLAN

CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH ITEM 604 EXCEPT THAT THE GRATES SHALL BE NEENAH NO. R-4859-C OR EAST JORDAN NO. 5110 TYPE M2 OR APPROVED EQUALS.

ITEM 611 - CONDUIT BORED OR JACKED

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 10 FEET TO THE (EDGE OF PAVEMENT) NEAREST RAIL). PROVIDE A 0.50 INCH UNGALVANIZED CASING PIPE CONFORMING TO 748.06 THAT HAS JOINT WITH A CIRCUMFERENTIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. THE INSTALLED CASING PIPE IN THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

ITEM 605, AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

UNRECORDED UNTREATED NON-STORMWATER DRAINAGE

FURNISH NO CONTINUANCE FOR ANY UNRECORDED UNTREATED NON-STORMWATER DRAINAGE SUCH AS UNTREATED SEPTIC, UNTREATED WASTEWATER, UNTREATED CURTAIN/GRADIENT DRAINS, AND UNTREATED FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. PLUG ANY UNRECORDED, UNTREATED, NON-STORMWATER DRAINAGE WITH CLASS C CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR PLUGGING SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 OR 203 ITEM.

REVIEW OF DRAINAGE FACILITIES

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

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

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

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

UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS

FURNISH A CONTINUANCE FOR ALL UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS SUCH AS SANITARY, WASTEWATER, CURTAIN/GRADIENT DRAINS, AND FOUNDATION FLOOR DRAINS DISTURBED BY THE WORK. FURNISH AN UNOBSTRUCTED CONTINUANCE OF THE UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS TO THE SATISFACTIN OF THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES A RIGHT-OF-WAY USE PERMIT. ALL SANITARY AND SANITARY WASTEWATER MAY ALSO REQUIRE A NPDES PERMIT FROM THE OHIO ENVIRONMENTAL PROTECTION AGENCY. REPORT ALL CONTINUANCE TO THE LOCAL HEALTH DEPARTMENT.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.42, 707.43, 707.44, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35, 706.01, 706.02, OR 706.08 WITH JOINTS AS PER 706.11 OR 706.12.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 8" CONDUIT, TYPE B, FOR SANITARY 100 FT.

611, 6" CONDUIT, TYPE C, FOR SANITARY 100 FT.

ITEM 611 - 10' X 8' CONDUIT, TYPE A, 706.05, AS PER PLAN (DESIGN EARTH COVER = 6 FEET)

SEGMENTAL, PRECAST CONCRETE FOUR SIDED STRUCTURES WHICH ARE BELOW FINISHED GRADE AND WILL NOT BE PAVED DIRECTLY OVER SHALL HAVE ITEM SPECIAL, MEMBRANE WATERPROOFING, SHEET TYPE 2 (SEE PROPOSAL NOTE) APPLIED TO THE TOP SURFACE AND VERTICALLY DOWN THE ENTIRE SIDES FOR ALL PORTIONS OF THE STRUCTURE WHICH SHALL BE IN CONTACT WITH THE BACKFILL.

THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST STRUCTURE SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR PERTINENT ITEM SPECIAL, MEMBRANE WATERPROOFING, SHEET TYPE (SEE PROPOSAL NOTE).

WHEN ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE STRUCTURE, ANY PRECAST STRUCTURE SECTIONS BEYOND THE LIMIT OF THE MEMBRANE WATERPROOFING SHALL ALSO BE SEALED WITH THE SAME SEALANT. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE STRUCTURE SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL, SEALING OF CONCRETE SURFACES (EPOXY) (SEE PROPOSAL NOTE).

GENERAL NOTES

FRA -44-13.67

ITEM 614, MAINTAINING TRAFFIC

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND DIRECTOR OF PUBLIC WORKS, CITY OF PETERSBURG, AT LEAST 48 HOURS IN ADVANCE (EXCLUSIVE OF SATURDAY, SUNDAY OR HOLIDAYS) OF HIS INTENT TO DIVERT TRAFFIC AND TWO WEEKS IN ADVANCE OF A DETOUR.

NO CHANGE IN TRAFFIC PATTERNS SHALL TAKE PLACE DURING PEAK HOURS, 6:00 A.M. TO 9:00 A.M. AND 3:00 P.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY.

THE CONTRACTOR SHALL NOTIFY CONRAIL (PHONE: 215-596-2923) AND THE ENGINEER AT LEAST ONE WEEK IN ADVANCE OF HIS INTENT TO CLOSE CONRAIL TRACKS TO TRAFFIC FOR THE REMOVAL OF PORTIONS OF EXISTING BRIDGE OVER AND/OR NEAR THE TRACKS. THE TRACK CLOSURES SHALL BE LIMITED TO SATURDAY, SUNDAY AND/OR MONDAY.

ACCESS TO THE PARKING LOT ON BEECHMONT COURT (EAST OF CONRAIL TRACKS) SHALL BE MAINTAINED AT ALL TIMES AND OTHER LOCAL TRAFFIC SHALL BE MAINTAINED AS PER CMS 614.02(A).

S.R. 86 - TWO LANE, TWO WAY TRAFFIC SHALL BE MAINTAINED DURING PEAK HOURS AND AT ALL OTHER TIMES EXCEPT AS FOLLOWS:

ONE LANE, TWO WAY TRAFFIC (USING STANDARD DWG. MT-97.10) WILL BE PERMITTED FOR MINIMUM PERIODS CONSISTENT WITH REQUIREMENTS OF THE SPECIFICATIONS FOR COMPLETED ASPHALT COURSES AND WHEN NECESSARY FOR THE CONTRACTOR'S EQUIPMENT TO OCCUPY THE PAVEMENT FOR A SHORT TIME.

S.R. 86 MAY BE CLOSED TO TRAFFIC UNDER CONDITIONS STATED IN THE SEQUENCE OF CONSTRUCTION.

EASTERN AVENUE AND BEECHMONT CIRCLE MAY BE CLOSED FOR SHORT DURATIONS (15 MINUTES) DURING BRIDGE DEMOLITION OR BRIDGE BEAM ERECTION. TRAFFIC BACKUP SHALL BE CLEARED AFTER EACH CLOSURE AND ALLOWED TO PASS FREELY WITH NO RESTRICTION (ONE LANE IN EACH DIRECTION FOR 10 MINUTES BEFORE ANOTHER CLOSURE IS MADE. TWO LANE, TWO WAY TRAFFIC SHALL BE MAINTAINED DURING PEAK HOURS NOTED ABOVE.

RAMP C AND E MAY BE CLOSED AS PER THE SEQUENCE OF CONSTRUCTION; OTHERWISE, TRAFFIC SHALL BE MAINTAINED ON EXISTING, PAVEMENT FOR MAINTAINING TRAFFIC OR PROPOSED PAVEMENT BASE COURSES.

THE FINAL SURFACE AND INTERMEDIATE PAVEMENT COURSES SHALL BE COMPLETED TO THE EXTENT POSSIBLE DURING THE "FINAL DETOUR" PHASE. THE REMAINING WORK SHALL BE COMPLETED AFTER THE "FINAL DETOUR" PHASE WHILE MAINTAINING TRAFFIC.

BEECHMONT COURT SHALL BE OPEN AT ALL TIMES EXCEPT THAT ACCESS TO #3753 BEECHMONT COURT MAY BE CUT OFF CUT OFF WHEN THE DRIVE TO BEECHMONT CIRCLE IS COMPLETED. ACCESS TO #3755, #3711 BEECHMONT COURT AND #4747 EASTERN AVENUE SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN TRAFFIC THROUGHOUT THE PROJECT CONSTRUCTION FROM BEACHMONT AVENUE/CHURCH PLACE INTERSECTION TO EASTERN AVENUE BY KEEPING THE EXISTING STAIRS LOCATED IN THE NORTHEAST QUADRANT OF THE INTERSECTION OPEN FOR THE DURATION OF THE "INITIAL DETOUR PHASE" AND "PHASE I". THE EXISTING STAIRS SHALL REMAIN OPEN UNTIL PEDESTRIAN ACCESS IS PROVIDED BY OPENING THE PROPOSED STAIRS LOCATED IN THE SOUTHEAST QUADRANT AND CONSTRUCTED DURING PHASE I FOR PEDESTRIAN USE DURING "PHASE II" AND THE "FINAL DETOUR" PHASE.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SEQUENCE OF CONSTRUCTION

INITIAL DETOUR PHASE

PREPARE TO CLOSE S.R. 86 TO TRAFFIC BY ERECTING TRAFFIC CONTROL (SEE SHEET 32 AND 33) AND COORDINATING THE DETOUR WITH THE CITY OF PETERSBURG. AT THE SAME TIME, SHORE OR BRACE PORTIONS OF THE EXISTING BRIDGE THAT WILL BE USED TO MAINTAIN TRAFFIC. PERFORM ANY OTHER WORK THAT CAN REDUCE THE TIME REQUIRED TO DETOUR TRAFFIC. SEE SHEET NO. 31 FOR DETOUR MAP.

WHEN CITY OF PETERSBURG FORCES HAVE COMPLETED THE DETOUR SIGNING OUTSIDE THE PROJECT AREA AND THE CONTRACTOR HAS COMPLETED ALL DETOUR SIGNING, CLOSURE SIGNING AND BARRIER PLACEMENT WITHIN THE PROJECT AREA, S.R. 86, RAMP C AND RAMP E SHALL BE CLOSED TO TRAFFIC. THIS CLOSURE SHALL BE LIMITED TO 60 CALENDAR DAYS.

WHILE THE HIGHWAY IS CLOSED PRIOR TO "PHASE I", THE FOLLOWING WORK SHALL BE COMPLETED.

- REMOVE THE PLATE GIRDER BRIDGES OVER EASTERN AVENUE AND CONRAIL.

- CONSTRUCT A TEMPORARY BRIDGE AT EACH LOCATION.

- COMPLETE SHORING AND BRACING.

- SAW CUT THE EXISTING CONCRETE BRIDGE SUPERSTRUCTURE AND PIERS AND BEGIN TO REMOVE THE SOUTH PORTION OF THE EXISTING BRIDGE.

- COMPLETE DRIVE TO #3753-55 BEECHMONT COURT.

- CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN, AT RAMP C AND E.

- INSTALL THE TEMPORARY TRAFFIC SIGNAL (INCLUDING THE "PREPARE TO STOP WHEN FLASHING" ADVANCE WARNING SIGN AT THE INTERSECTION OF RAMP F/CHURCH AND S.R. 86.

- ERECT TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER FOR "PHASE I" PRIOR TO OPENING RAMP C. THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE PRIOR TO PHASE I OPENING TO TRAFFIC.

PHASE I AND II

THE CONTRACTOR IS EXPECTED TO USE ALL MEANS POSSIBLE POSSIBLE INCLUDING, BUT NOT RESTRICTED TO, MULTIPLE SHIFTS, TWENTY-FOUR (24) HOURS PER DAY SCHEDULING SEVEN (7) DAYS A WEEK (SUBJECT TO THE RESTRICTIONS OF SECTION 910.8 OF THE CITY OF PETERSBURG MUNICIPAL CODE GOVERN-

ING NIGHTTIME CONSTRUCTION BETWEEN THE HOURS OF 11:00 P.M. AND 7:00 A.M.), ADDITIONAL CREWS, LIGHTING FOR NIGHT WORK, MULTIPLE MATERIAL SOURCES, MULTIPLE SUBCONTRACTORS, ETC., IN ORDER TO COMPLETE PHASE I AND II WITHIN 120 CALENDAR DAYS. NO TIME EXTENSIONS (SEE PROPOSAL NOTE) OF THIS INTERIM COMPLETION PERIOD WILL BE CONSIDERED. FAILURE TO OPEN THE HIGHWAY TO FOUR LANE TRAFFIC WILL RESULT IN THE ASSESSMENT OF \$15,000.00 LIQUIDATED DAMAGES FOR EACH CALENDAR DAY (INCLUDING WEEKENDS AND HOLIDAYS) BEYOND THE ALLOTTED TIME.

PHASE I

AFTER THE INITIAL PHASE DETOUR WORK IS COMPLETED, RE-OPEN S.R. 86 AND RAMPS C AND E TO TRAFFIC USING THE TEMPORARY BRIDGES AND A PORTION OF THE EXISTING BRIDGE TO MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION.

COVER DETOUR SIGNS FOR RE-USE DURING THE "FINAL DETOUR" PHASE.

COMPLETE CONSTRUCTION OF THE SOUTH ONE HALF OF THE PROPOSED BRIDGE, RETAINING WALLS, TEMPORARY RETAINING WALLS AND STAIRS IN THE SE QUADRANT OF S.R. 86 AND CHURCH PLACE/RAMP F INTERSECTION.

ERECT TRAFFIC CONTROL AND PORTABLE CONCRETE BARRIER, AND ADJUST TEMPORARY TRAFFIC SIGNAL FOR "PHASE II". THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE PRIOR TO "PHASE II" OPENING TO TRAFFIC.

PHASE II

AFTER PHASE I WORK IS COMPLETED, RELOCATE TRAFFIC ON S.R. 86 AND RAMPS C AND E FOR "PHASE II" USING THE COMPLETED PORTION OF THE NEW STRUCTURE (MAINTAINING ONE LANE OF TRAFFIC IN EACH DIRECTION) AND NEW FULL DEPTH BASE COURSES ON THE RAMPS.

REMOVE THE TEMPORARY BRIDGES AND THE BALANCE OF THE EXISTING BRIDGE. COMPLETE CONSTRUCTION (EXCEPT THE GAP (SECTION OF DECK).

COMPLETE WORK ON BEECHMONT COURT.

SOME ITEMS (I.E. SANITARY) ARE NOT INCLUDED IN THE SEQUENCE, BECAUSE THEY HAVE ONLY MINOR EFFECT ON MAINTAINING TRAFFIC. THE CONTRACTOR MAY COMPLETE THIS WORK WHEN CONVENIENT DURING THE SEQUENCE OF CONSTRUCTION.

FINAL DETOUR PHASE

UNCOVER DETOUR SIGNS, SET UP CLOSURE SIGNING AND PLACE BARRIER TO CLOSE S.R. 86 AND RAMP C TO TRAFFIC. COORDINATE THE CLOSURE WITH THE CITY OF PETERSBURG, AS BEFORE. SEE SHEET 31 FOR DETOUR MAP.

WHILE THE HIGHWAY IS CLOSED, THE FOLLOWING WORK SHALL BE CONSTRUCTED:

- CLOSE THE REMAINING GAP IN THE DECK NOT COMPLETED IN "PHASE I AND II".

- COMPLETE THE PLACEMENT OF FULL DEPTH PAVEMENT BASE COURSES.

REMOVE TRAFFIC SIGNAL FOR MAINTAINING TRAFFIC.

THIS CLOSURE WILL BE LIMITED TO FIVE DAYS, TWO OF WHICH SHALL BE SATURDAY AND SUNDAY.

FAILURE TO RE-OPEN ON TIME WILL RESULT IN THE ASSESSMENT OF \$25,000.00 LIQUIDATED DAMAGES FOR EACH CALENDAR DAY (INCLUDING WEEKENDS AND HOLIDAYS) BEYOND THE ALLOTTED TIME.

PRIOR TO OPENING THE PROJECT TO TRAFFIC, THE SOLID, DOUBLE YELLOW CENTERLINE SHALL BE IN PLACE AND MAINTAINED DURING SURFACE AND INTERMEDIATE PAVEMENT COURSE PLACEMENT OPERATIONS NOT COMPLETED IN THE "FINAL DETOUR" PHASE.

AFTER THE "FINAL DETOUR" PHASE, IT MAY BE NECESSARY TO REDUCE THE NUMBER OF LANES TO LESS THAN FOUR IN ORDER TO COMPLETE THE PROJECT. THIS WILL BE ACCEPTABLE BUT ONLY DURING ACTUAL CONTRACTOR WORKING HOURS WITH TRAFFIC CONTROL PER APPROPRIATE STANDARD DRAWINGS. NO REDUCTION IN THE NUMBER OF THE LANES SHALL BE PERMITTED DURING PEAK HOURS, THAT BEING FROM 6:00 A.M. TO 9:00 A.M. AND FROM 3:00 P.M. TO 6:00 P.M.

SEQUENCE OF CONSTRUCTION

IT IS THE INTENT OF THE FOLLOWING SEQUENCE OF CONSTRUCTION TO PROVIDE A WORK AREA FOR THE CONTRACTOR WHILE ALSO MAINTAINING TRAFFIC IN A MANNER WHICH IS SAFE FOR THE TRAVELING PUBLIC; THEREFORE, ALL PHASES SHALL HAVE STRICT ADHERENCE.

ALL TEMPORARY OR PERMANENT PAVEMENT MARKINGS SHALL BE IN PLACE BEFORE ANY PAVEMENT IS OPENED TO TRAFFIC.

PHASE ONE

THE CONTRACTOR SHALL REPLACE THE OUTSIDE BERM WITH AN 8' SHOULDER IN THE DESIGNATED AREAS WITH TEMPORARY PAVEMENT USING A ONE LANE CLOSURE PER MT-95.30. LANE CLOSURE PER MT-95.30.

AREAS OF SHOULDER REPLACEMENT:

EASTBOUND	WESTBOUND
50+49 to 51+28.25	1833+00 to 8+86
55+81.25 to 58+20	48+90 to 51+28.25
116+23 to 128+26	55+81.25 to 60+36
150+12 to 160+10	72+48 to 88+20.5
167+67 to 175+76.71	95+78 to 102+82
177+35.21 to 183+56	112+72 TO 126+26
	136+82 to 144+13
	172+63 to 175+76.71
	177+35.21 to 180+55

AFTER THE SHOULDER REPLACEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL THEN PERFORM THE JOINT REPAIRS IN THE FOLLOWING AREAS:

EASTBOUND AREA

A	STA. 147+97 TO STA. 150+05
B	STA. 113+12 TO STA. 115+94
C	STA. 58+26 TO STA. 63+00
D	STA. 1828+26 TO STA. 1832+61

WESTBOUND AREA

E	STA. 103+30 TO STA. 107+08
F	STA. 109+40 TO STA. 112+44
G	STA. 129+43 TO STA. 136+63
H	STA. 144+25 TO STA. 147+82

THE JOINT REPAIRS SHALL BE PERFORMED IN ALPHABETICAL ORDER ON EACH SIDE AND THE PAVEMENT WILL BE OPEN TO TRAFFIC AS SPECIFIED IN THE PLAN NOTE.

FOR ADDITIONAL PHASE I DETAILS AND QUANTITIES SEE SHEETS 22-23.

PHASE TWO

THE CONTRACTOR SHALL PERFORM THE WORK ON THE INSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. TRAFFIC SHALL BE MAINTAINED DURING THIS PHASE PER THE DETAILS SHOWN ON SHEETS 24 THRU 37, EXCEPT THAT

CORES WILL BE TAKEN DURING THIS PHASE WHICH WILL REQUIRE THE CLOSING OF BOTH LANES FOR A BRIEF PERIOD. ODOT WILL PROVIDE TRAFFIC MAINTENANCE FOR THE CORING PRO-

PHASE THREE

THE CONTRACTOR SHALL PERFORM THE WORK ON THE OUTSIDE LANES, WHICH SHALL INCLUDE THE JOINT REPAIR, FULL-DEPTH PAVEMENT, BERM REPLACEMENT, AND BRIDGE REHABILITATION. THE JOINT REPAIRS SHALL BE DONE PRIOR TO THE BERM REPLACEMENT. TRAFFIC MAINTENANCE DETAILS FOR THIS PHASE ARE SHOWN ON SHEETS 38 THRU 52.

PHASE FOUR

THE CONTRACTOR SHALL GRIND AND SEAL THE PAVEMENT MAINTAINING TRAFFIC BY USE OF A ONE-LANE CLOSURE PER STANDARD DRAWING MT-95.30. THIS WORK SHALL BE PERFORMED ON BOTH LANES AND IN BOTH DIRECTIONS.

BRIDGES

WEST RIVER ROAD AND VERMILION ROAD BRIDGES WILL BE CONSTRUCTED PART-WIDTH USING A TEMPORARY SIGNAL INSTALLATION TO MAINTAIN ONE LANE, TWO-WAY TRAFFIC. DETAILS FOR MAINTAINING TRAFFIC AT THESE BRIDGES ARE SHOWN ON SHEETS 53 AND 54. SUNNYSIDE ROAD AND CLAUS ROAD BRIDGES MAY BE CLOSED FOR A MAXIMUM OF 30 DAYS EACH. BUT THEY SHALL NOT BE CLOSED AT THE SAME TIME. THE DETOUR PLAN FOR THESE BRIDGES IS SHOWN ON SHEETS 19 AND 20. DETAILS FOR THE VERMILION INTERCHANGE BRIDGE CLOSURE ARE SHOWN ON SHEET 21.

SIDE ROAD STRUCTURES OVER FREEWAY

FOUR LANE, TWO WAY TRAFFIC ON THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE REHABILITATION OF THE EXISTING STRUCTURES OVER THE FREEWAY, EXCEPT AS FOLLOWS:

1. DURING THE RETROFITTING OF THE EXISTING OVERHEAD PARAPETS.
2. UNLESS OTHERWISE SHOWN IN THE PLAN.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT TO THE TRAVEL LANES OF THE FREEWAY DURING RETROFITTING OF EXISTING CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS, SHALL HAVE APPROVAL FROM THE ODOT OFFICE OF STRUCTURAL ENGINEERING, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE OVER THE FREEWAY SHALL BE MAINTAINED AT ALL TIMES.

IN THE EVENT A LANE RESTRICTION ON THE FREEWAY IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF TEMPORARY AND DESIGN OF TEMPORARY LANE CLOSURE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING MT-95.30. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

FREEWAY STRUCTURES OVER SIDE ROADS

TWO LANE, TWO WAY TRAFFIC ON SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING REPLACEMENT OF BEARINGS AND REHABILITATION OF MAINLINE BRIDGES, EXCEPT DURING THE FOLLOWING OPERATIONS:

- 1.) DEMOLITION OF THE EXISTING BRIDGE PARAPETS.
- 2.) CONSTRUCTION OF THE PROPOSED PARAPET OVER THE LOCAL ROAD OR STATE ROUTE WHERE THE ENGINEER BELIEVES TEMPORARY CLOSURE OF A TRAFFIC LANE IS WARRANTED.

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE UNDERPASS ROADWAY DURING REMOVAL OF EXISTING AND CONSTRUCTION OF NEW CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS, SHALL HAVE APPROVAL FROM THE ODOT OFFICE OF STRUCTURAL ENGINEERING, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE OVER THE UNDERPASS ROADWAY SHALL BE MAINTAINED AT ALL TIMES. IN THE EVENT A LANE RESTRICTION IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF THE TEMPORARY LANE CLOSURE SHALL CONFORM TO STANDARD DRAWINGS MT-95.30 OR MT-97.10. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

- 6" - ITEM 301, ASPHALT CONCRETE BASE, PG64-22
- 4" - ITEM 304, AGGREGATE BASE

PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203, EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE PAVEMENT FOR MAINTAINING TRAFFIC SHALL BE REMOVED UNDER ITEM 203.

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

- 6" - ITEM 301, ASPHALT CONCRETE BASE, PG64-22
- 4" - ITEM 304, AGGREGATE BASE.

PAYMENT SHALL INCLUDE ANY ADDITIONAL COST OF ITEM 203, EXCAVATION TO PLACE THE ITEM 301 OR ITEM 304. THE SUBGRADE SHALL BE COMPACTED TO A DEPTH OF 12" ACCORDING TO THE CONSTRUCTION AND MATERIALS SPECIFICATION, SECTION 204.03 AND PAYMENT FOR SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204, SUBGRADE COMPACTION (SEE SHEETS 148 THRU 151 FOR QUANTITIES). THIS PAVEMENT SHALL REMAIN IN PLACE.

NOTICE OF CLOSURE SIGNS

THESE SIGNS 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 BESIDE OF THE ROAD/RAMP FACING TRAFFIC AND SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY

PERMANENT SIGNS. THE SIGNS SHOULD BE ERECTED ALONG ROADWAYS AT THE POINT OF CLOSURE. THE SIGNS MAY BE ANYWHERE ALONG RAMPS WHERE THEY ARE VISIBLE TO THE MOTORIST USING THE RAMP, EXCEPT THAT ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTION TO THE MOTORIST.


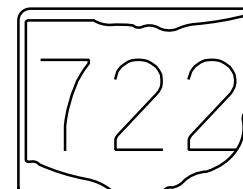

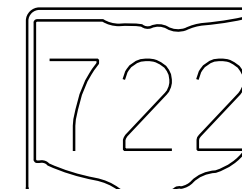
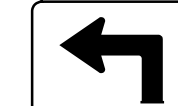
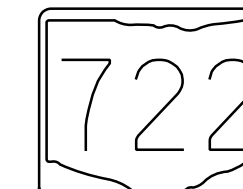

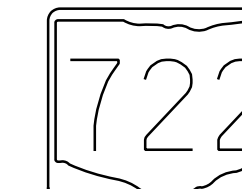
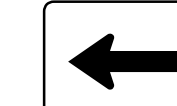


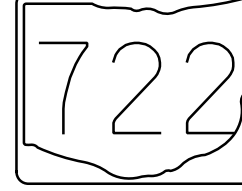
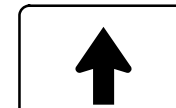
PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS, INCLUDING SUPPORTS.

WILL BE
CLOSED
FOR _____ DAYS
OHIO DEPT. OF TRANSPORTATION

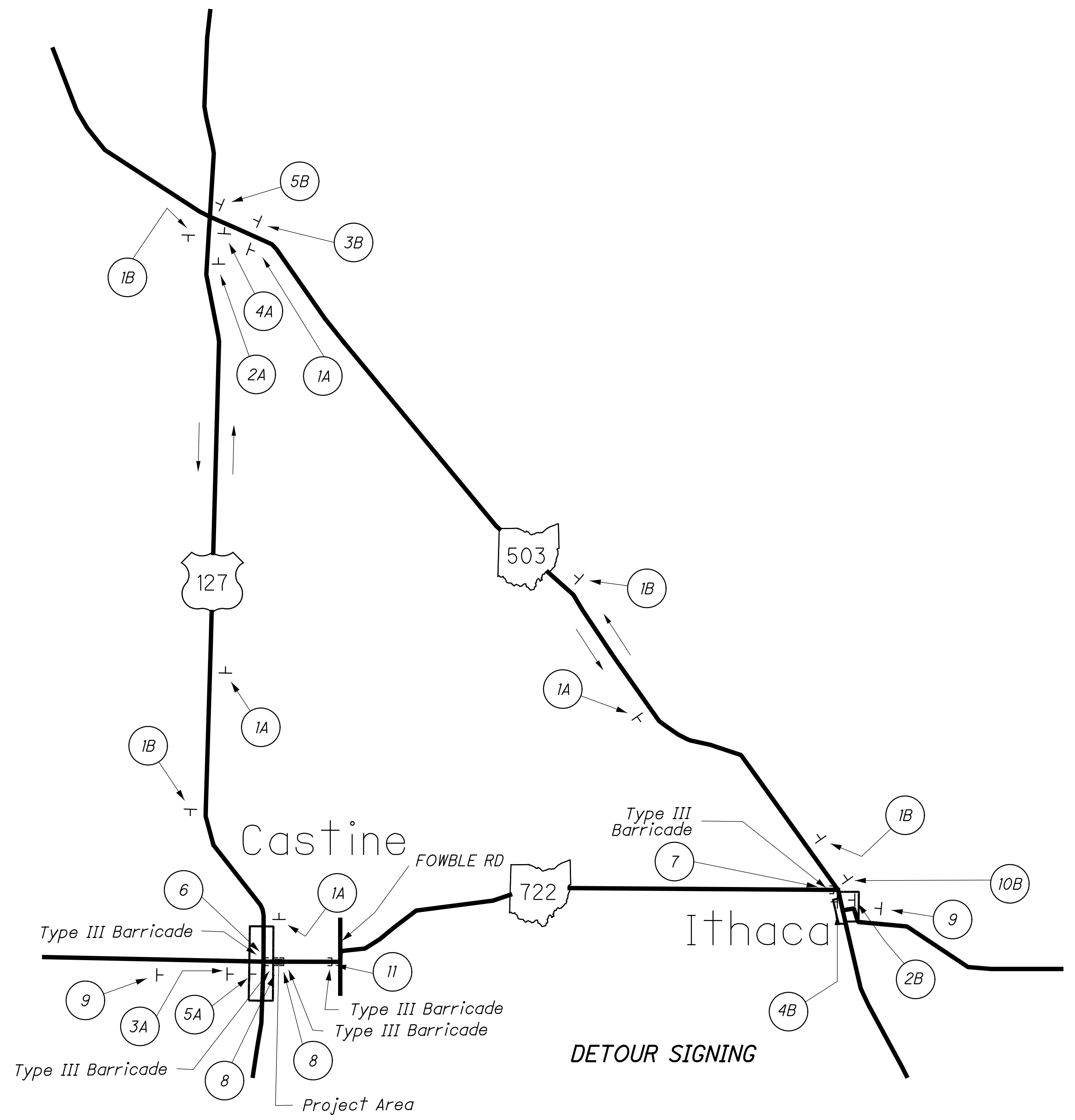
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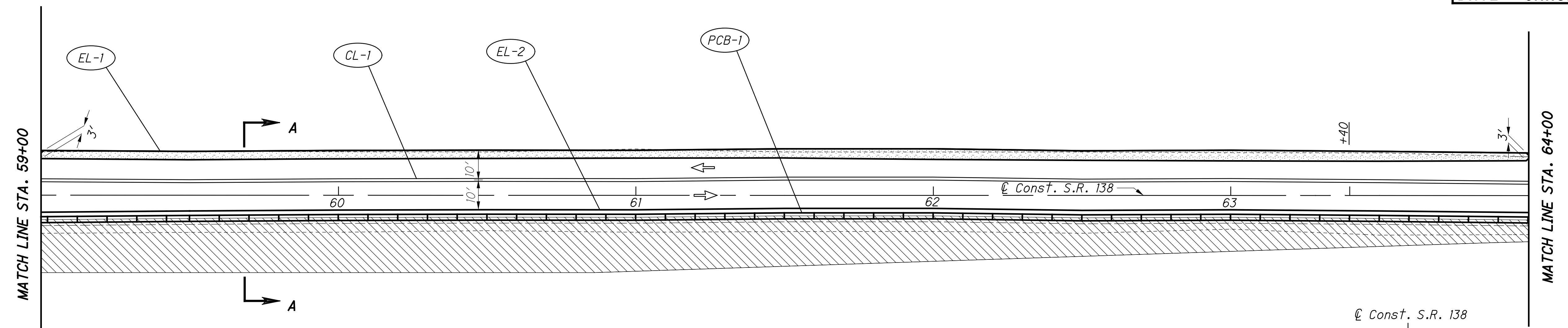
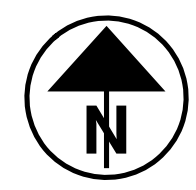


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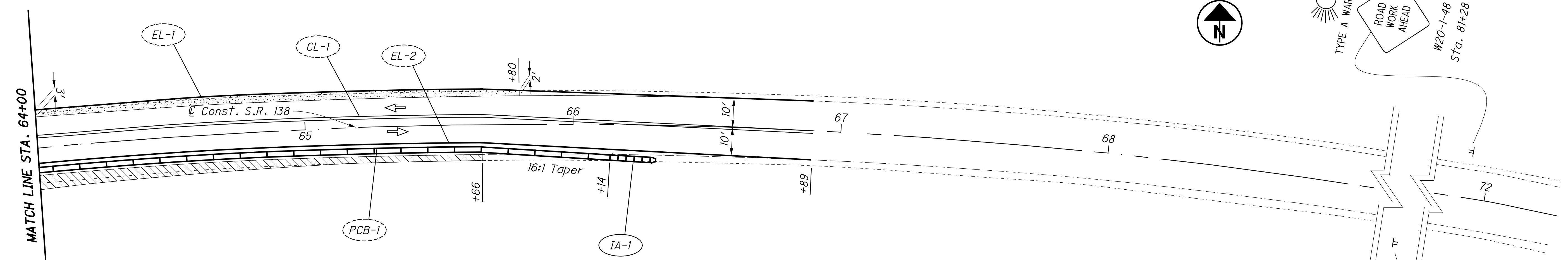
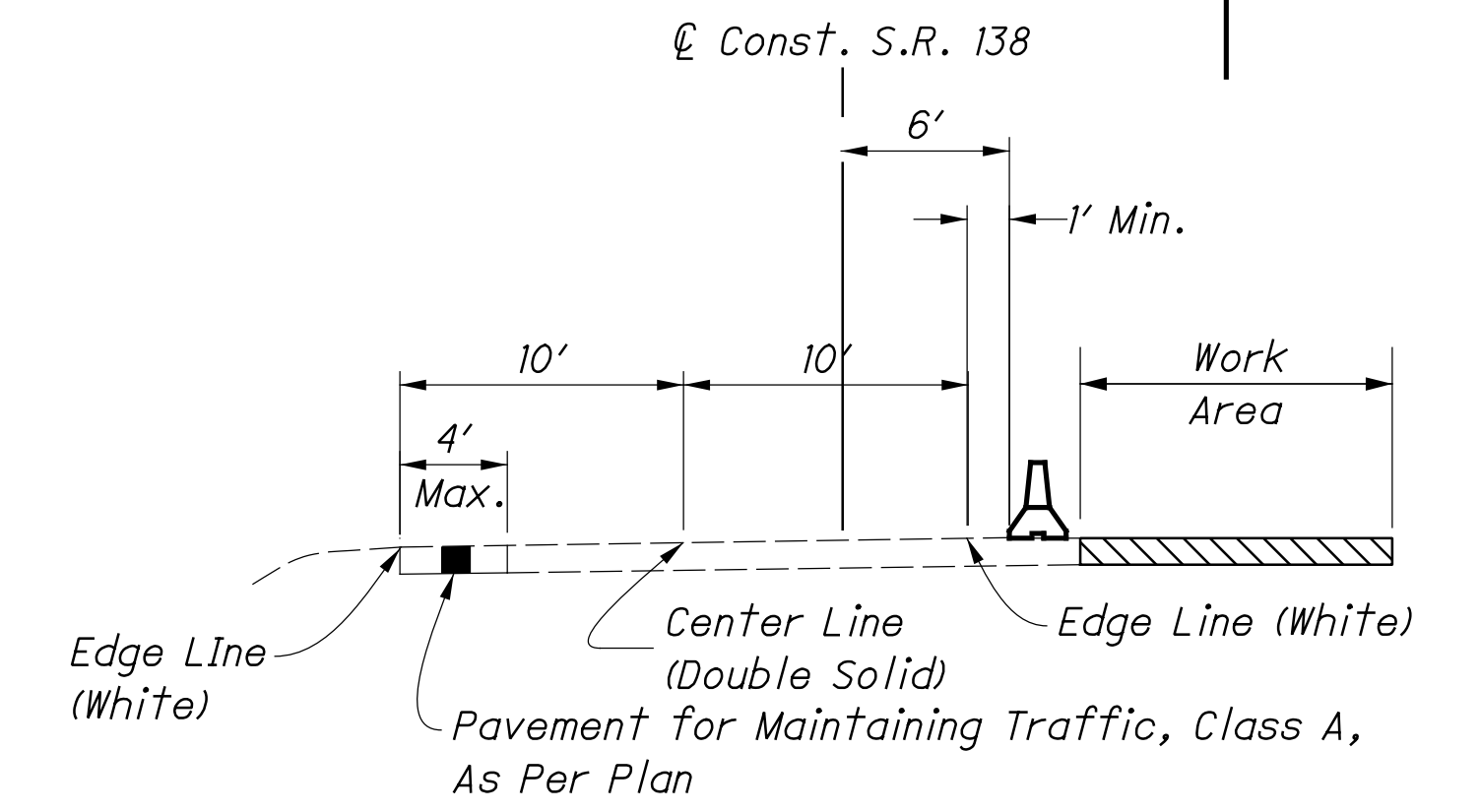
<p>1</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>	<p>2</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>  <p>M5-1R-21</p>	<p>3</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>  <p>M5-1L-21</p>	<p>4</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>  <p>M6-1-21</p>	<p>5</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>  <p>M6-1-21</p>
<p>6</p> <p>ROAD CLOSED LOCAL TRAFFIC ONLY</p> <p>R11-3-60</p>  <p>M4-10L-48</p>	<p>7</p> <p>ROAD CLOSED 4 MILES AHEAD LOCAL TRAFFIC ONLY</p> <p>R11-3A-60</p>  <p>M4-10R-48</p>	<p>8</p> <p>ROAD CLOSED</p> <p>R11-2-48</p>	<p>9</p> <p>DETOUR AHEAD</p> <p>W20-2-36</p>	<p>10</p> <p>DETOUR</p> <p>M4-8-24</p>  <p>MI-5-30-3</p>  <p>M6-3-21</p>
<p>11</p> <p>ROAD CLOSED 0.5 MILES AHEAD LOCAL TRAFFIC ONLY</p> <p>R11-3A-60</p>	<p>A</p> <p>EAST</p> <p>M3-2-24</p>	<p>B</p> <p>WEST</p> <p>M3-4-24</p>		

For Maintenance of Traffic Notes, see Sheet 7.



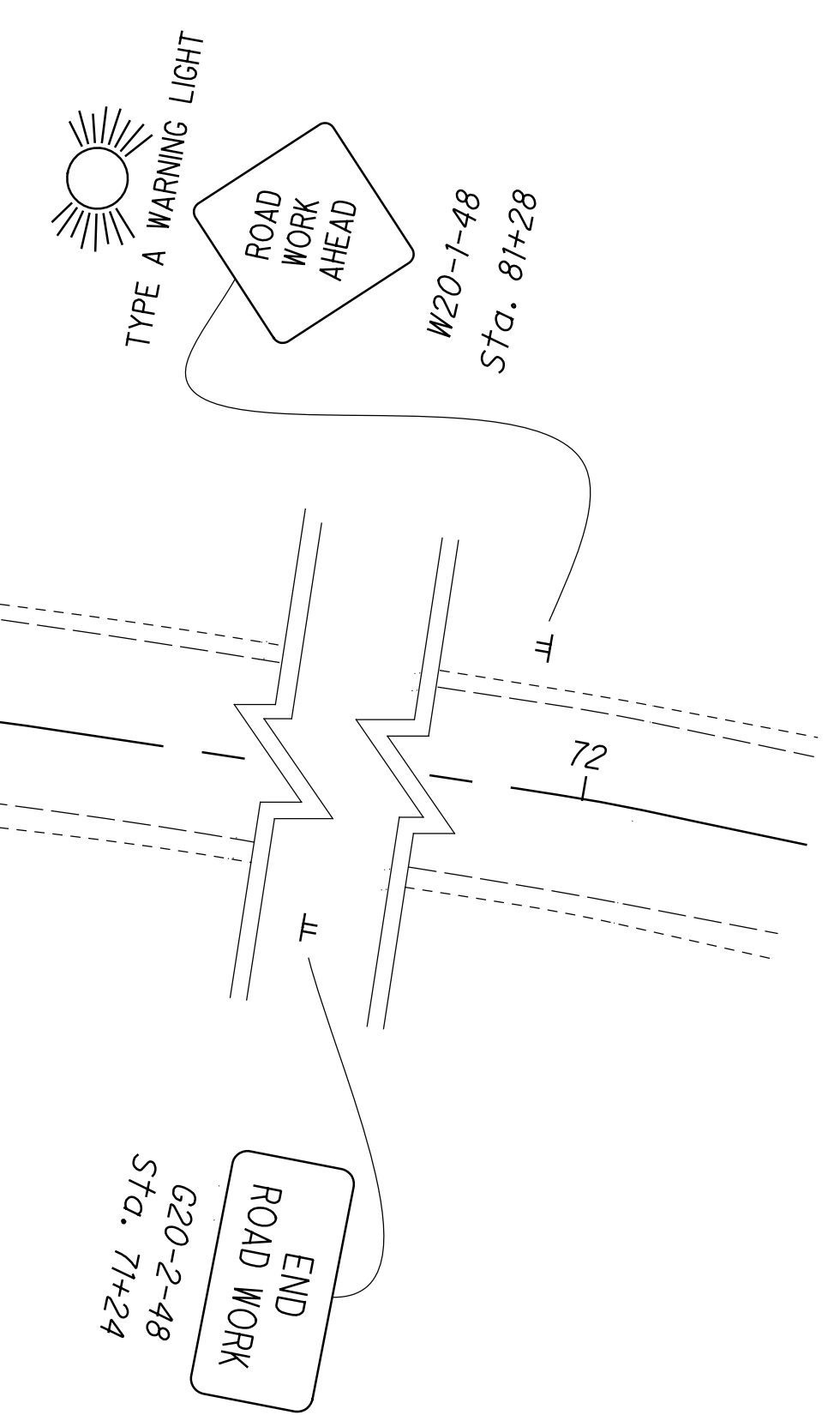
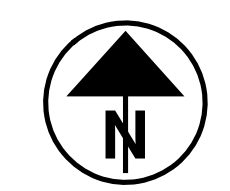


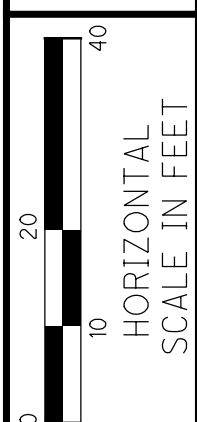
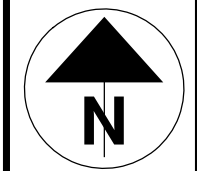
ESTIMATED QUANTITIES								
REF No.	Station to Station	Side	614				622	
			WORK ZONE IMPACT ATTENUATOR 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE I (WHITE) MILE	PORTABLE BARRIER, UNANCHORED FT
CL-1	59+00 to 66+89	Lt.				0.15		
EL-1	59+00 to 66+89	Lt.					0.15	
EL-2	59+00 to 66+89	Rt.					0.15	
PCB-1	59+00 to 66+14	Lt.		15	15		714	
IA-1	66+14 to 66+39	Lt.	1					
TOTALS CARRIED TO SUB-SUMMARY			1	15	15	0.15	0.30	714



LEGEND

- Portable Barrier, Unanchored
- Area to be Constructed
- Pavement for Maintaining Traffic, Class A, As Per Plan (Constructed in Phase One)
- Direction of Traffic

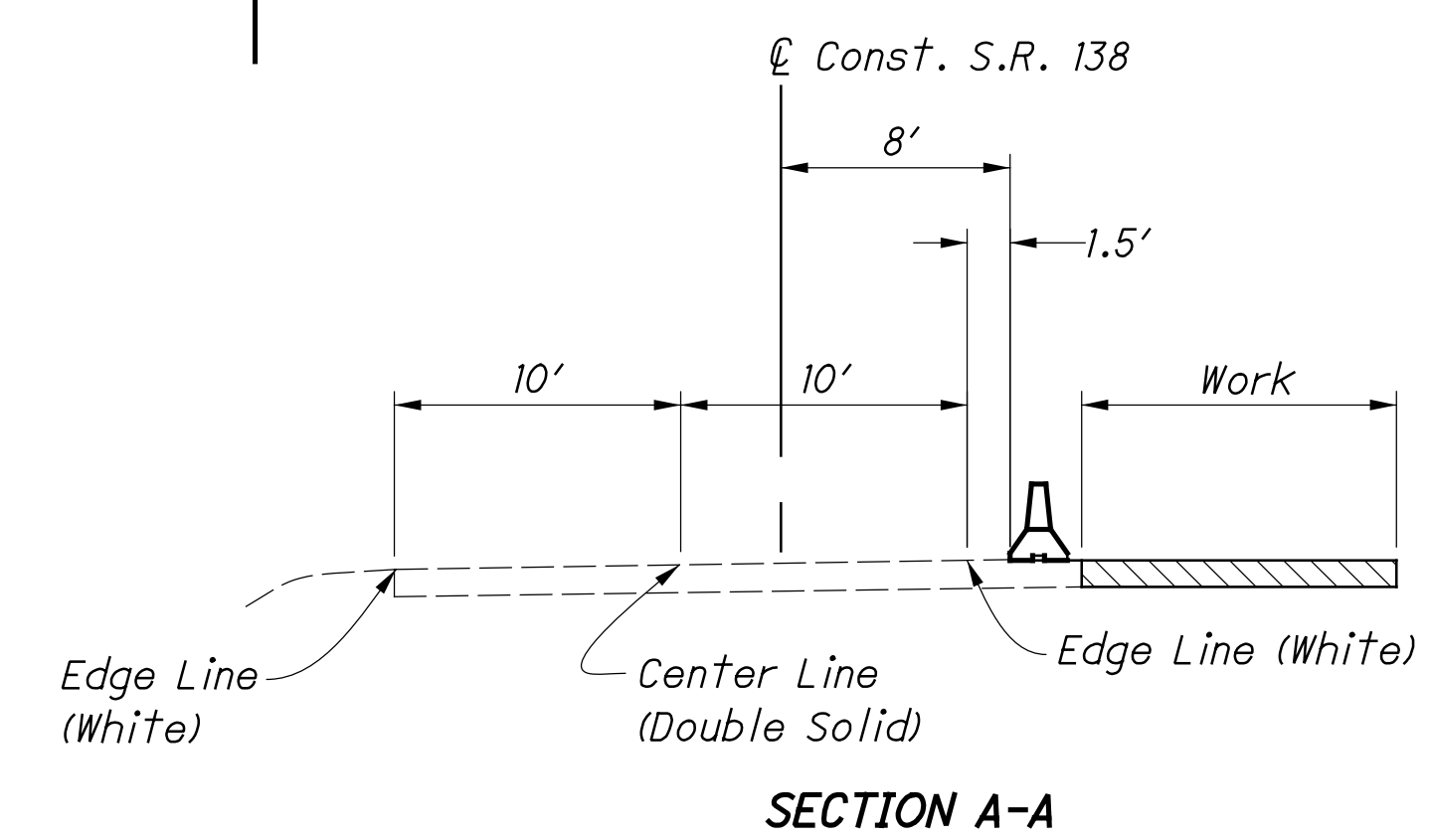
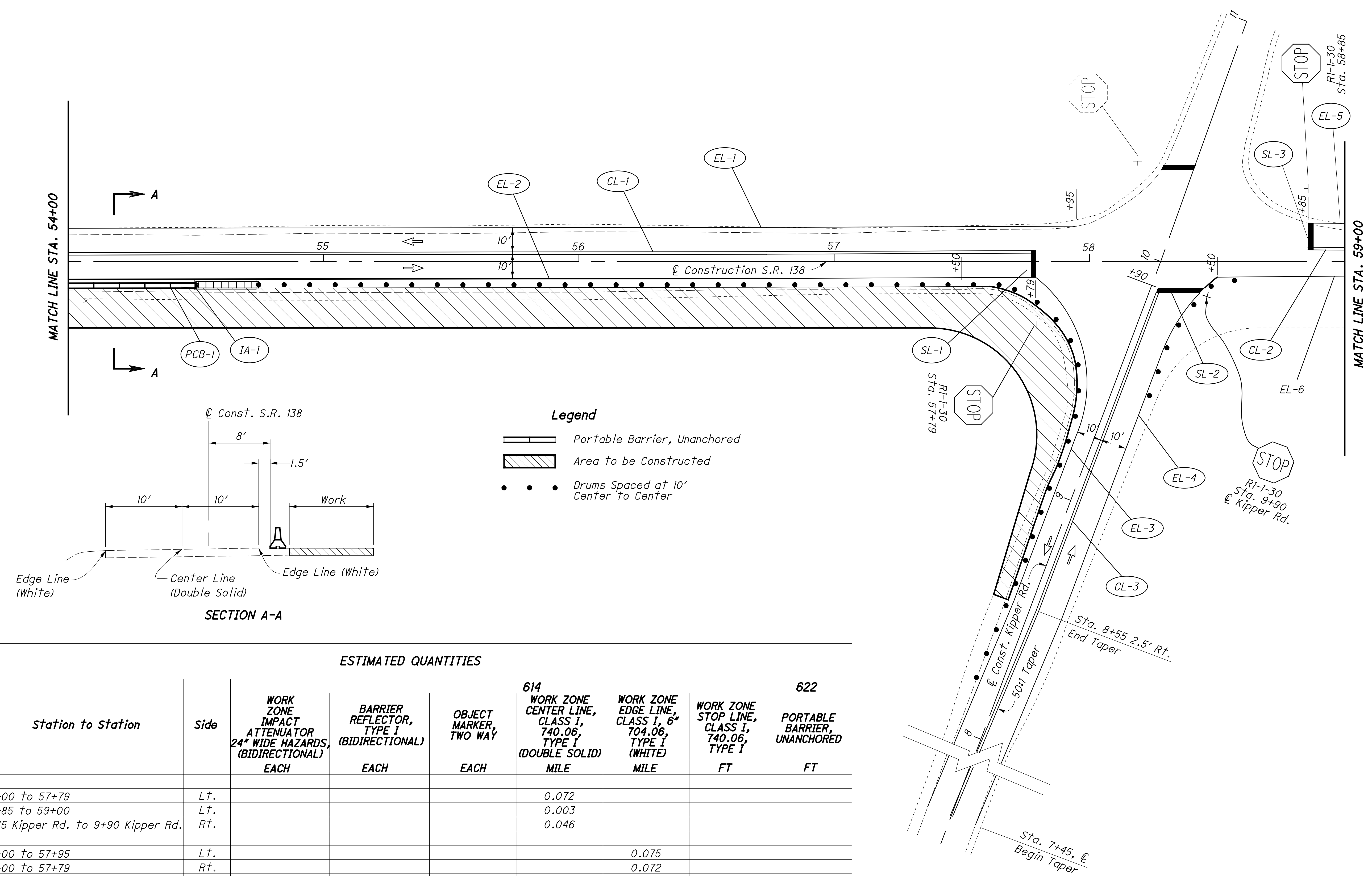




CALCULATED
DAN
CHECKED
DEK

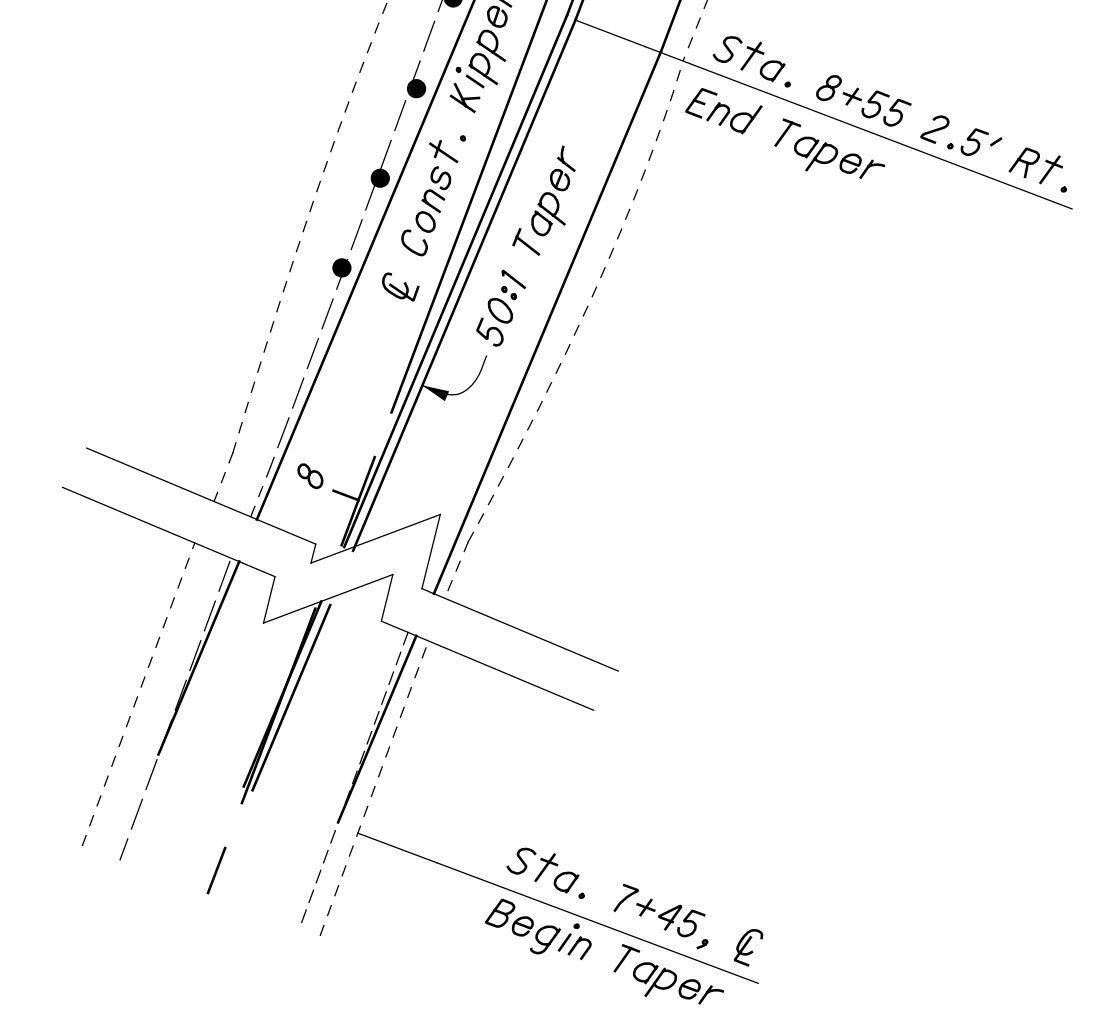
MAINTENANCE OF TRAFFIC PHASE THREE
STA. 54+00 TO STA. 59+00

SCI-138-11.44



- Legend**
- Portable Barrier, Unanchored
 - Area to be Constructed
 - Drums Spaced at 10' Center to Center

ESTIMATED QUANTITIES									
REF No.	Station to Station	Side	WORK ZONE IMPACT ATTENUATOR 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO WAY EACH	614		622	
						WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE) MILE	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I FT	PORTABLE BARRIER UNANCHORED FT
CL-1	54+00 to 57+79	Lt.				0.072			
CL-2	58+85 to 59+00	Lt.				0.003			
CL-3	7+45 Kipper Rd. to 9+90 Kipper Rd.	Rt.				0.046			
EL-1	54+00 to 57+95	Lt.					0.075		
EL-2	54+00 to 57+79	Rt.					0.072		
EL-3	57+79 to 7+45 Kipper Rd.	Rt.					0.051		
EL-4	7+45 Kipper Rd. to 58+50	Rt.					0.049		
EL-5	58+85 to 59+00	Lt.					0.003		
EL-6	58+50 to 59+00	Rt.					0.009		
SL-1	57+79	Rt.						15	
SL-2	9+90 Kipper Rd.	Rt.						18	
SL-3	58+85	Rt.						10	50
PCB-1	54+00 to 54+50	Rt.		2	2				
IA-1	54+50 to 54+75	Rt.	1						
TOTALS CARRIED TO SUBSUMMARY			1	2	2	0.05	0.10	43	50



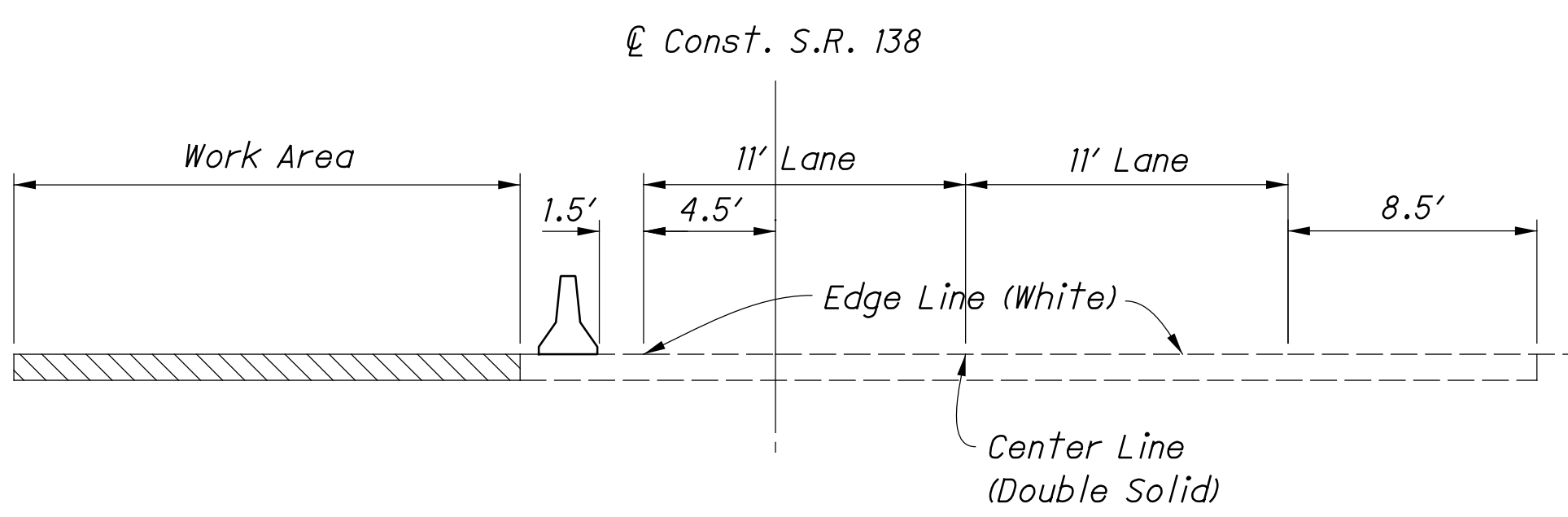
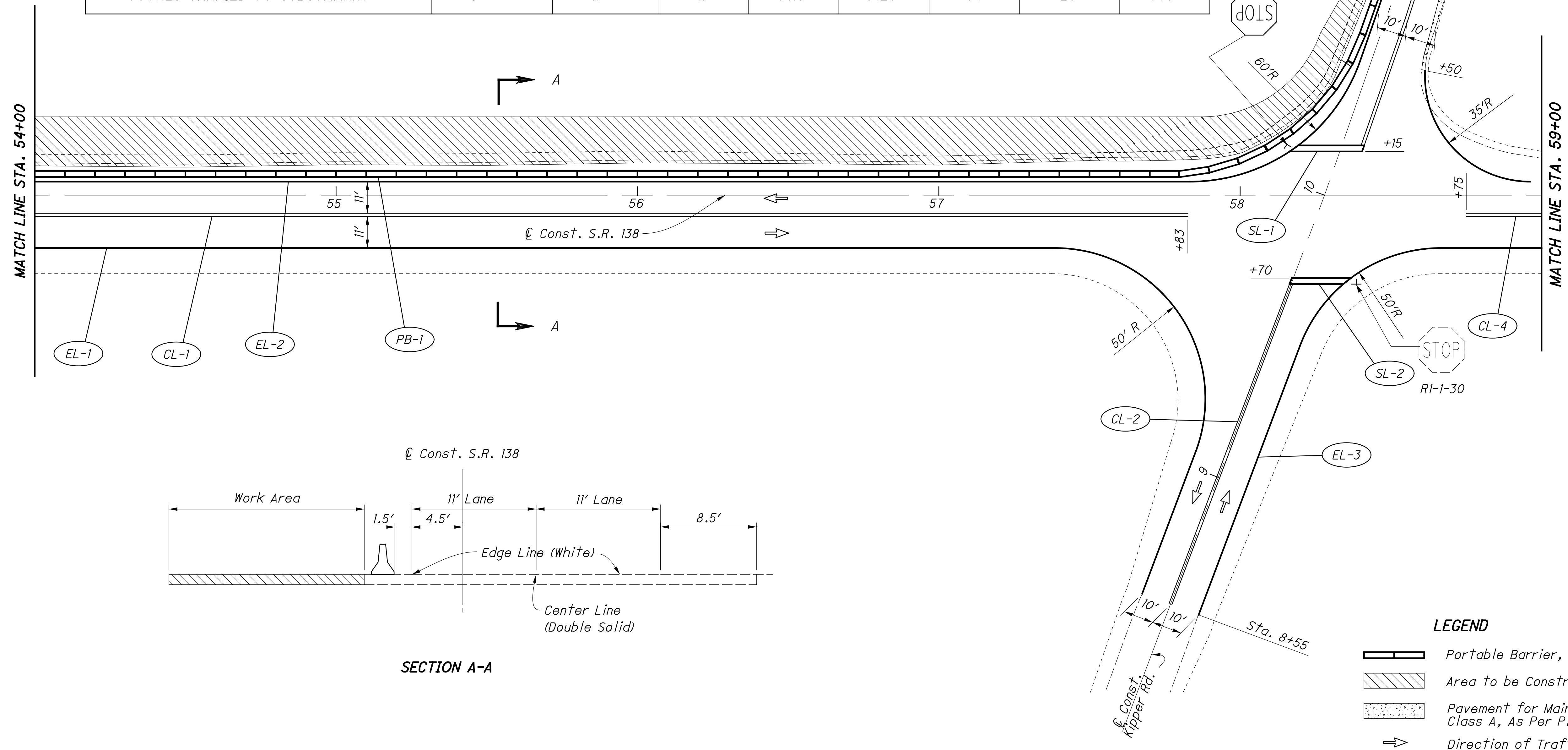


0 20 40
HORIZONTAL
SCALE IN FEET

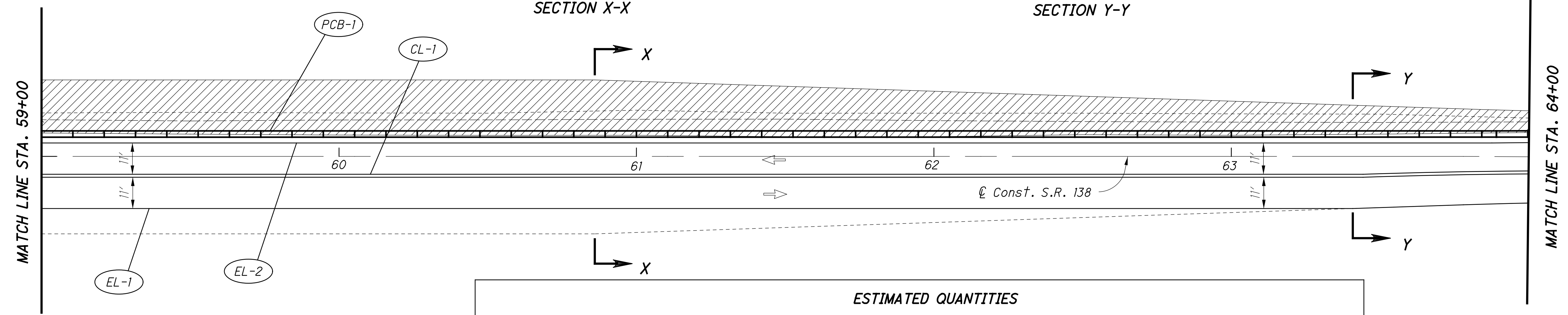
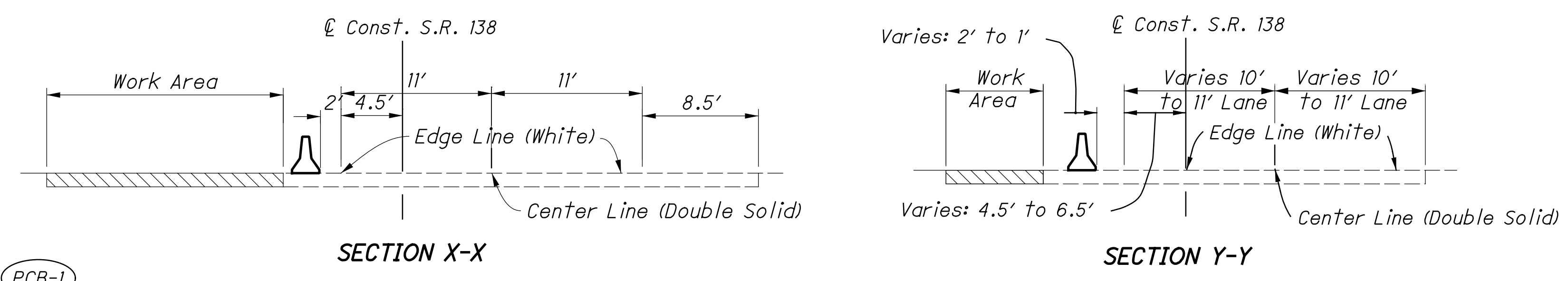
MAINTENANCE OF TRAFFIC PHASE FOUR
STA. 54+00 TO STA. 59+00

SCI-138-11.44

ESTIMATED QUANTITIES										
REF No.	Station to Station	SIDE	614			615	615	622		
			WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE) MILE	WORK ZONE STOP LINE, CLASS I, 6" 740.06, TYPE I FT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY	PORTABLE BARRIER, UNANCHORED FT
CL-1	54+00 to 57+83	Rt.				0.07				
CL-2	8+55 Kipper Rd. to 9+70 Kipper Rd.	Rt.				0.02				
CL-3	10+15 Kipper Rd. to 11+45 Kipper Rd.	Lt.				0.03				
CL-4	58+75 to 59+00	Rt.				0.01				
EL-1	54+00 to 8+55 Kipper Rd	Rt.					0.09			
EL-2	54+00 to 12+00 Kipper Rd.	Lt.					0.12			
EL-3	8+55 Kipper Rd. to 59+00	Rt.					0.04			
EL-4	11+45 Kipper Rd. to 59+00	Lt.					0.03			
SL-1	10+15 Kipper Rd	Lt.						24		
SL-2	9+70 Kipper Rd.	Rt.						20		
PCB-1	54+00 to 11+48 Kipper Rd.	Lt.		11	11					578
IA-1	11+48 Kipper Rd. to 11+73 Kipper Rd.	Lt.	1							
TP-1	10+50 Kipper Rd. to 11+70 Kipper Rd.	Rt.							20	
TOTALS CARRIED TO SUBSUMMARY			1	11	11	0.13	0.28	44	20	578



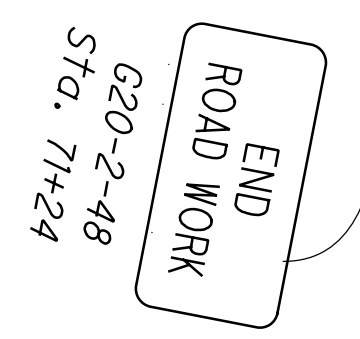
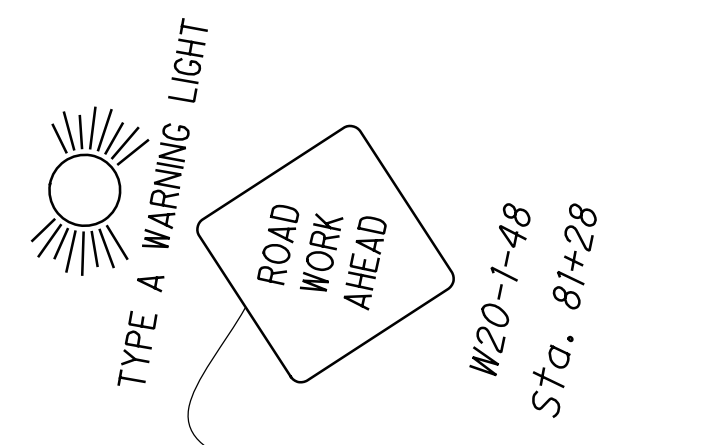
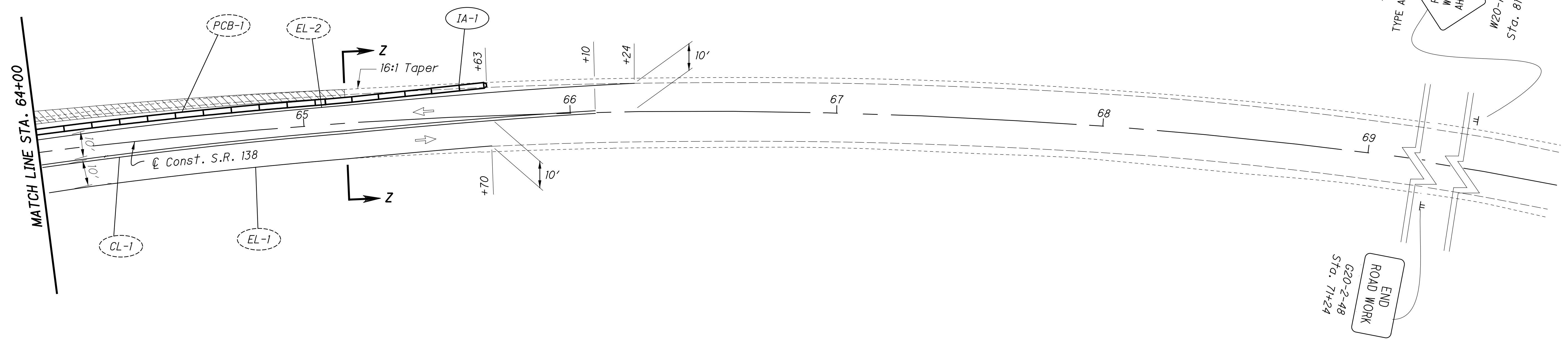
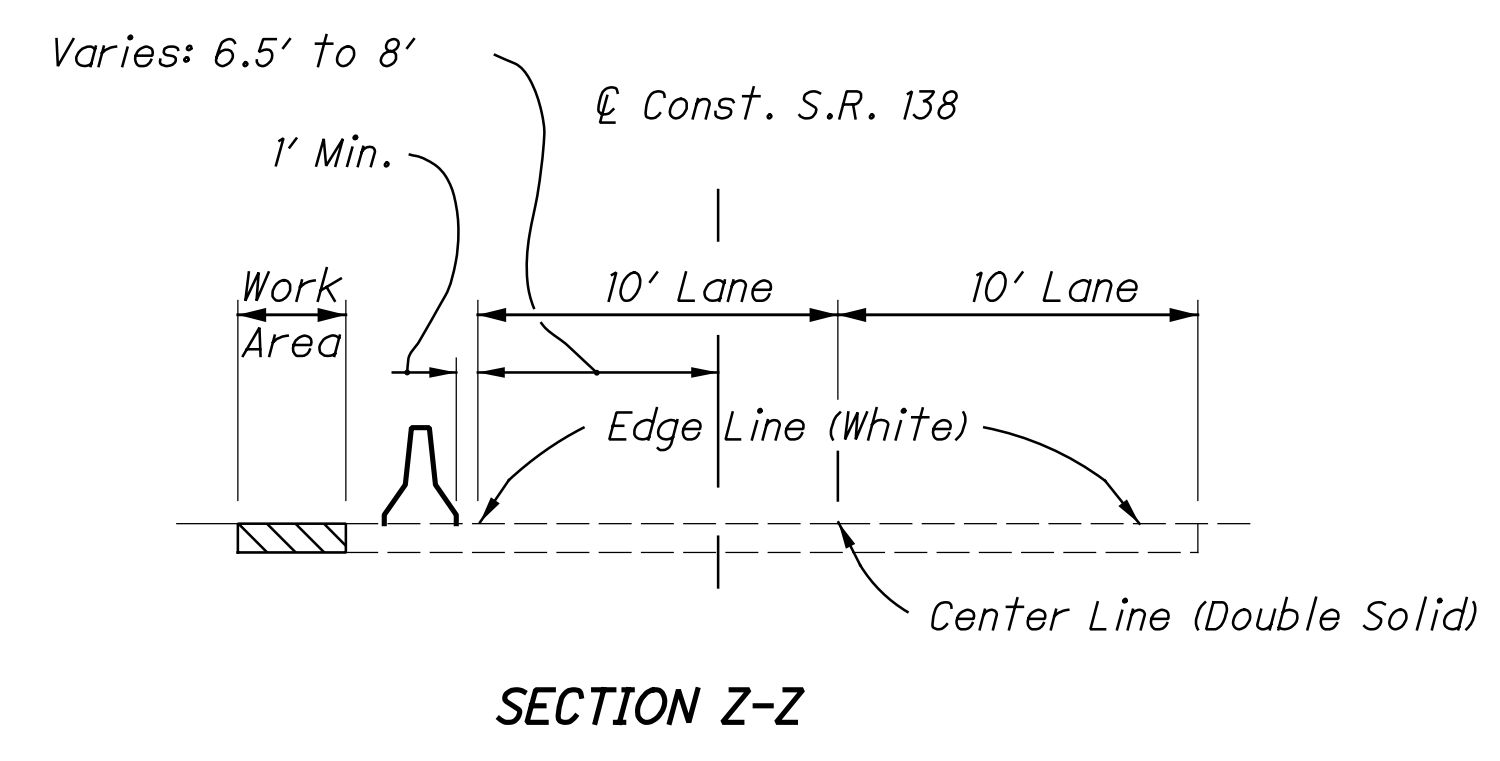
- LEGEND**
- Portable Barrier, Unanchored
 - Area to be Constructed
 - Pavement for Maintaining Traffic, Class A, As Per Plan
 - Direction of Traffic



LEGEND

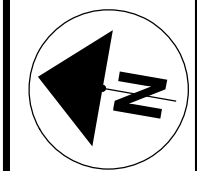
- Portable Barrier, Unanchored
- Area to be Constructed
- Direction of Traffic

REF No.	Station to Station	SIDE	614				622	
			REMOVE AND REPLACE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE 1 (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE 1 (WHITE)	PORTABLE BARRIER, UNANCHORED
			EACH	EACH	EACH	MILE	MILE	FT
CL-1	59+00 to 66+10	Rt.				0.13		
EL-1	59+00 to 65+70	Rt.				0.13		
EL-2	59+00 to 66+24	Lt.				0.14		
PCB-1	59+00 to 65+38	Lt.		14	14		638	
IA-1	65+38 to 65+63	Lt.	1					
TOTALS CARRIED TO SUBSUMMARY			1	14	14	0.13	0.27	638



SHEET NO.	PHASE	614											615		622						
		WORK ZONE IMPACT ATTENUATOR 24" WIDE HAZARDS, (BIDIRECTIONAL) EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO-WAY EACH	WORK ZONE CENTER LINE, CLASS I (DOUBLE SOLID) MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 6" (WHITE) MILE	WORK ZONE EDGE LINE, CLASS I, 6" 740.06, TYPE I (WHITE) MILE	WORK ZONE CHANNELIZING LINE, CLASS I, 8" FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I (YELLOW) FT	WORK ZONE STOP LINE, CLASS I, 740.06 TYPE I FT	WORK ZONE ARROW, CLASS I EACH	ROADS FOR MAINTAINING TRAFFIC LUMP	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SY	PORTABLE BARRIER, UNANCHORED FT						
14												LUMP									
15	1													100							
16	1													188							
18	2				0.08		0.04														
19	2	1	15	15	0.15		0.03										714				
20	2	2	7	7	0.10		0.19										310				
21	2				0.02	0.14	0.03	0.16													
22	2					0.03		0.07													
25	3	1	2	2	0.05		0.10					43					50				
26	3	1	7	7	0.10		0.19										310				
27	3	1	6	6	0.07		0.16		49		45	2					298				
28	3				0.02	0.15	0.03	0.16													
29	3					0.03		0.07													
36	4				0.02		0.02														
37	4	1	11	11	0.13		0.28					44		20			578				
38	4	1	5	5	0.12		0.19										225				
39	4	1	8	8	0.10	0.03	0.17					33					365				
40	4				0.03	0.14	0.03	0.08													
41	4					0.04		0.04													
43	5				0.04		0.02														
44	5				0.19		0.13														
45	5				0.11		0.19														
46	5				0.15		0.15		53	350	72	4									
47	5				0.03	0.20	0.03	0.20			25										
TOTALS CARRIED TO GENERAL SUMMARY		9	61	61	1.51	0.76	1.98	0.78	102	375	237	6	LUMP	308			2,850				

MAINTENANCE OF TRAFFIC SUBSUMMARY



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED TD CHECKED NEM

TEMPORARY ROAD PLAN AND PROFILE

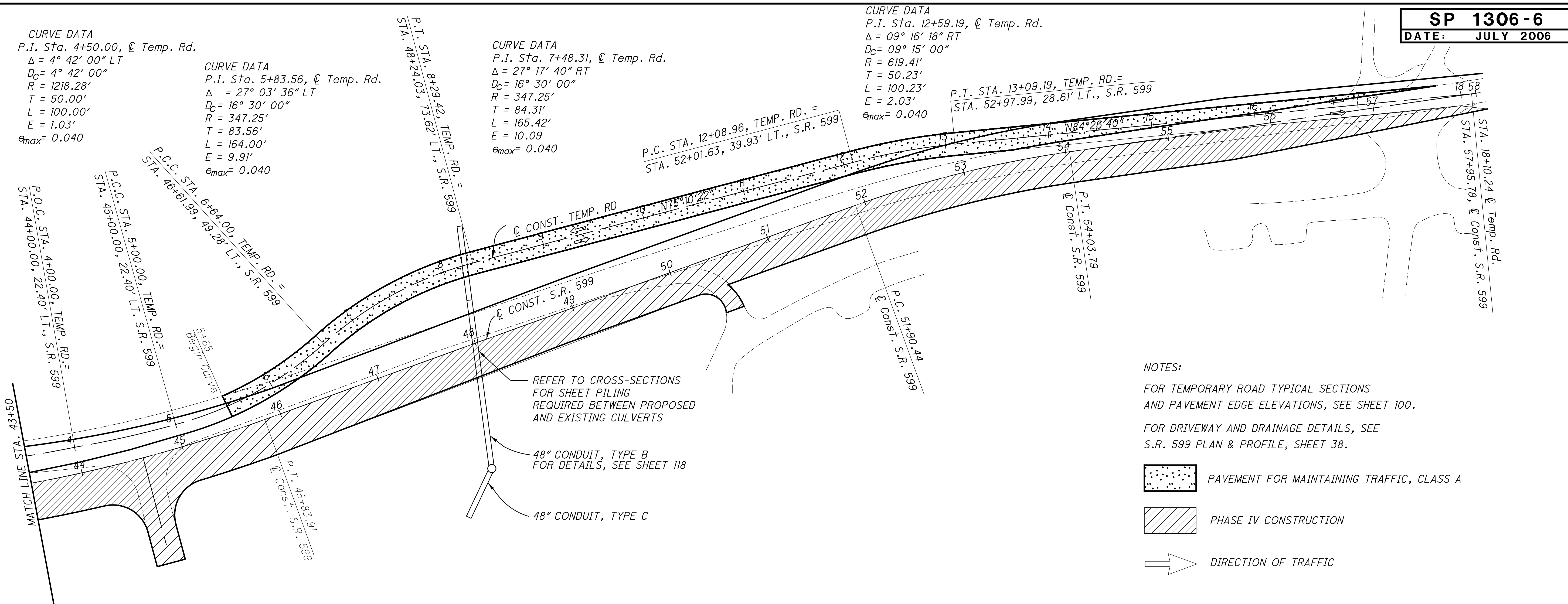
LIC-599-8.54

CURVE DATA
P.I. Sta. 4+50.00, @ Temp. Rd.
 $\Delta = 4^\circ 42' 00''$ LT
 $D_C = 4^\circ 42' 00''$
 $R = 1218.28'$
 $T = 50.00'$
 $L = 100.00'$
 $E = 1.03'$
 $e_{max} = 0.040$

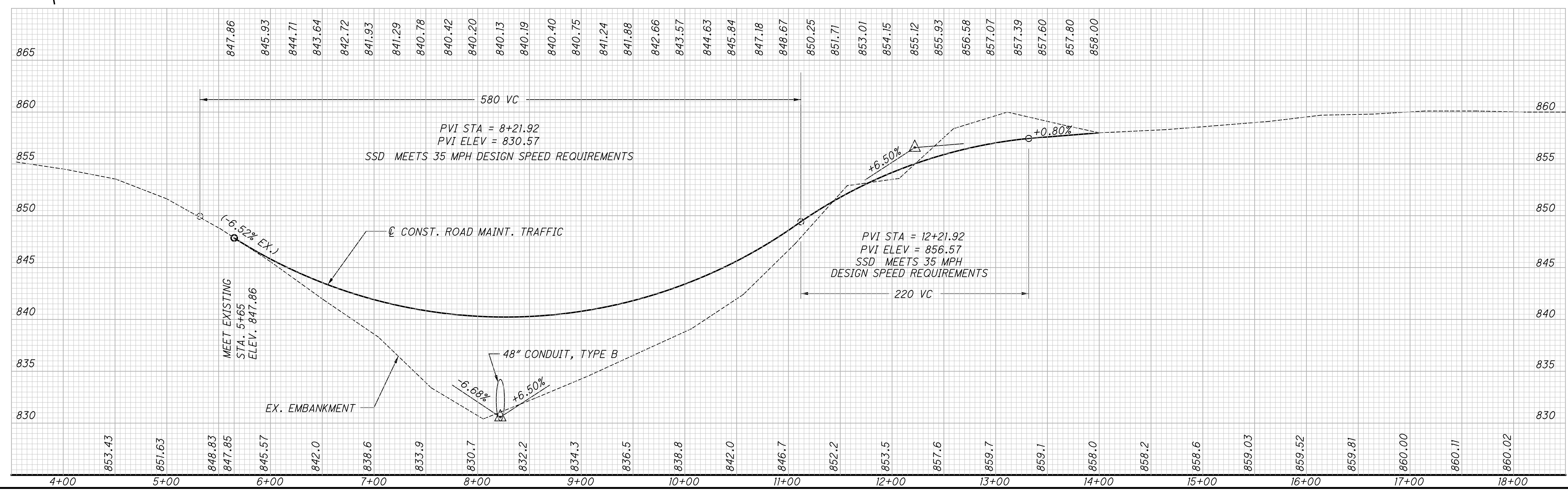
CURVE DATA
P.I. Sta. 5+83.56, @ Temp. Rd.
 $\Delta = 27^\circ 03' 36''$ LT
 $D_C = 16^\circ 30' 00''$
 $R = 347.25'$
 $T = 83.56'$
 $L = 164.00'$
 $E = 9.91'$
 $e_{max} = 0.040$

CURVE DATA
P.I. Sta. 7+48.31, @ Temp. Rd.
 $\Delta = 27^\circ 17' 40''$ RT
 $D_C = 16^\circ 30' 00''$
 $R = 347.25'$
 $T = 84.31'$
 $L = 165.42'$
 $E = 10.09'$
 $e_{max} = 0.040$

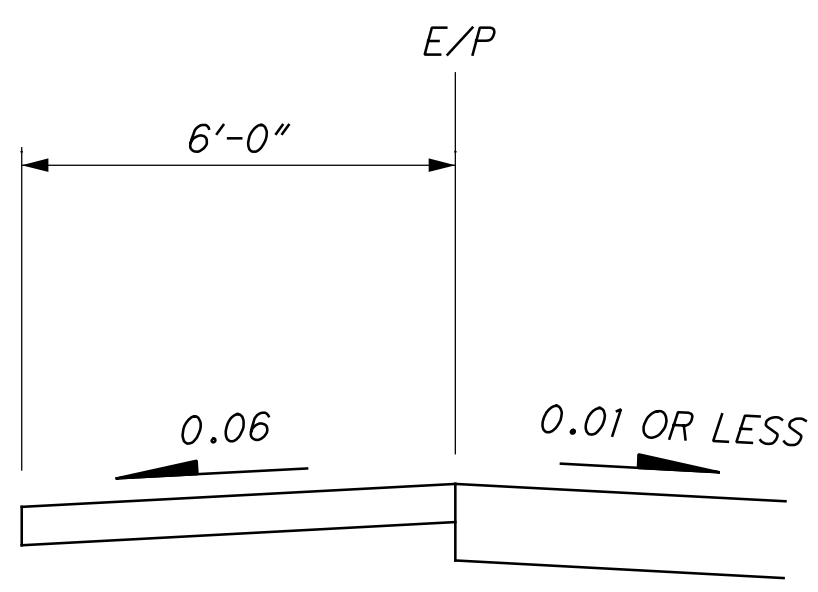
CURVE DATA
P.I. Sta. 12+59.19, @ Temp. Rd.
 $\Delta = 09^\circ 16' 18''$ RT
 $D_C = 09^\circ 15' 00''$
 $R = 619.41'$
 $T = 50.23'$
 $L = 100.23'$
 $E = 2.03'$
 $e_{max} = 0.040$



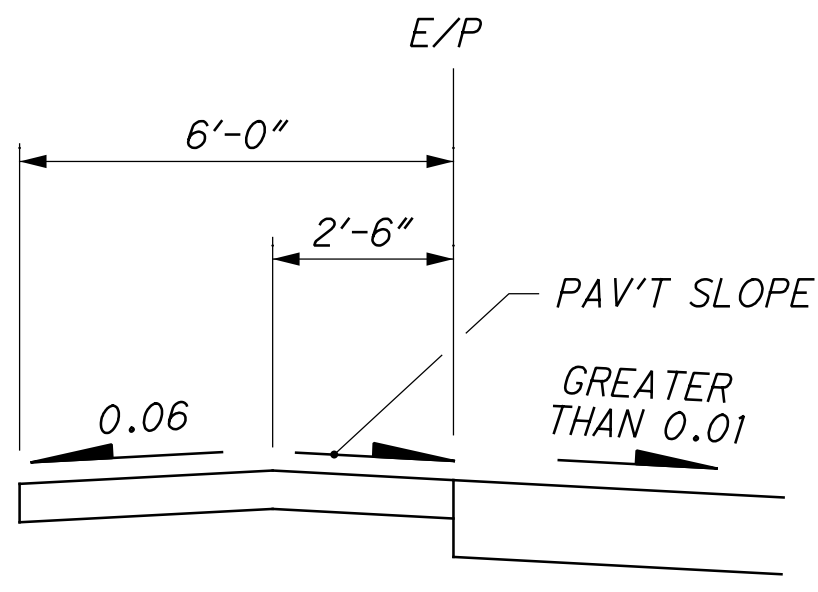
- NOTES:**
- FOR TEMPORARY ROAD TYPICAL SECTIONS AND PAVEMENT EDGE ELEVATIONS, SEE SHEET 100.
 - FOR DRIVEWAY AND DRAINAGE DETAILS, SEE S.R. 599 PLAN & PROFILE, SHEET 38.
 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A
 - PHASE IV CONSTRUCTION
 - DIRECTION OF TRAFFIC



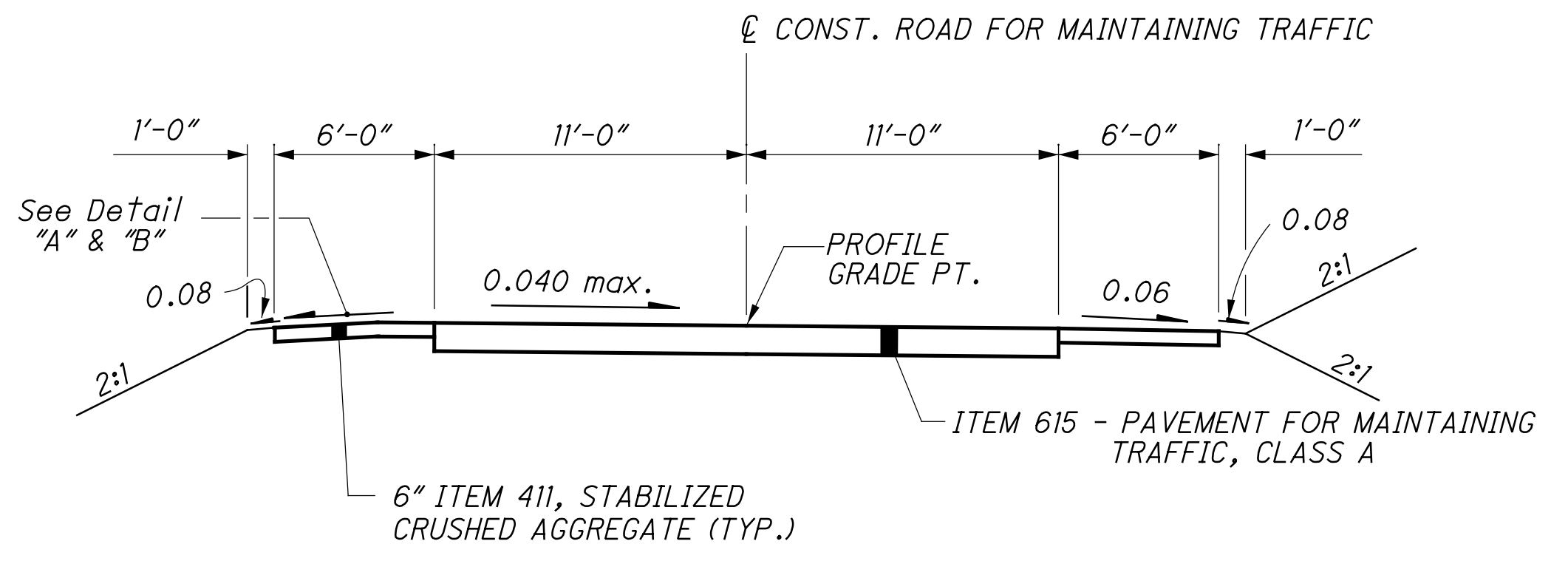
ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85
840.36	8+25	839.88
840.32	8+50	840.02
840.42	8+75	840.23
840.66	9+00	840.58
841.07	9+25	841.07
841.70	9+50	841.70
842.48	9+75	842.48
843.40	10+00	843.40
844.46	10+25	844.46
845.66	10+50	845.66
847.01	10+75	847.01
848.49	11+00	848.49
850.08	11+25	850.08
851.58	11+50	851.54
852.99	11+75	852.84
854.21	12+00	853.98
855.25	12+25	854.95
856.10	12+50	855.76
856.75	12+75	856.41
857.13	13+00	857.01
857.33	13+25	857.45
MEET TAPER SECTION	13+50	MEET TAPER SECTION



DETAIL "A"

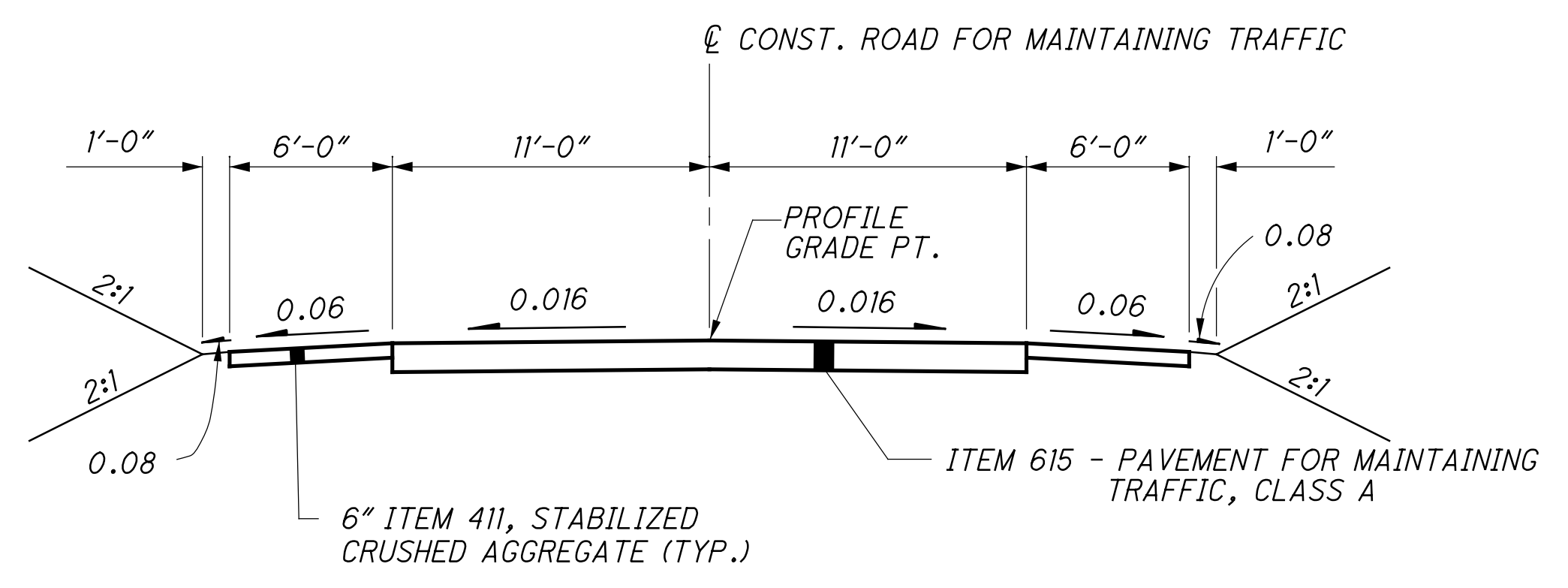


DETAIL "B"



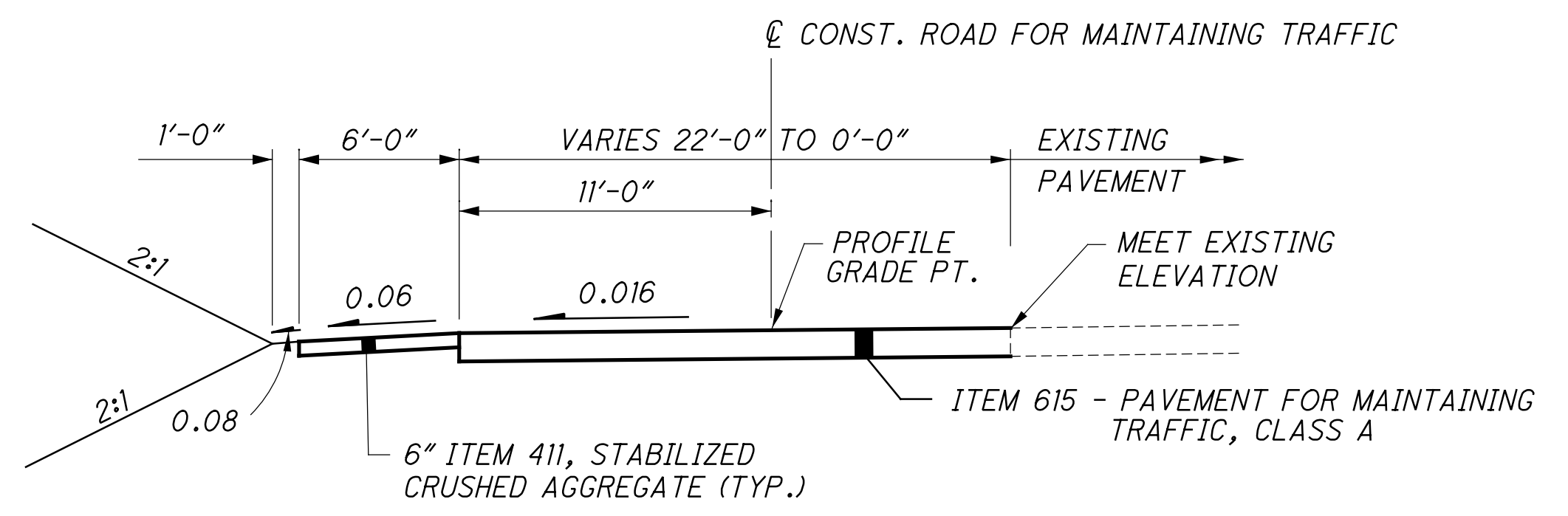
SUPERELEVATED SECTION

STA. 5+65.00 TO STA. 6+64.00
STA. 6+64.00 TO STA. 9+20.00 (OPPOSITE HAND)
STA. 11+40.00 TO STA. 13+50.00



NORMAL SECTION

STA. 9+20.00 TO STA. 11+40.00



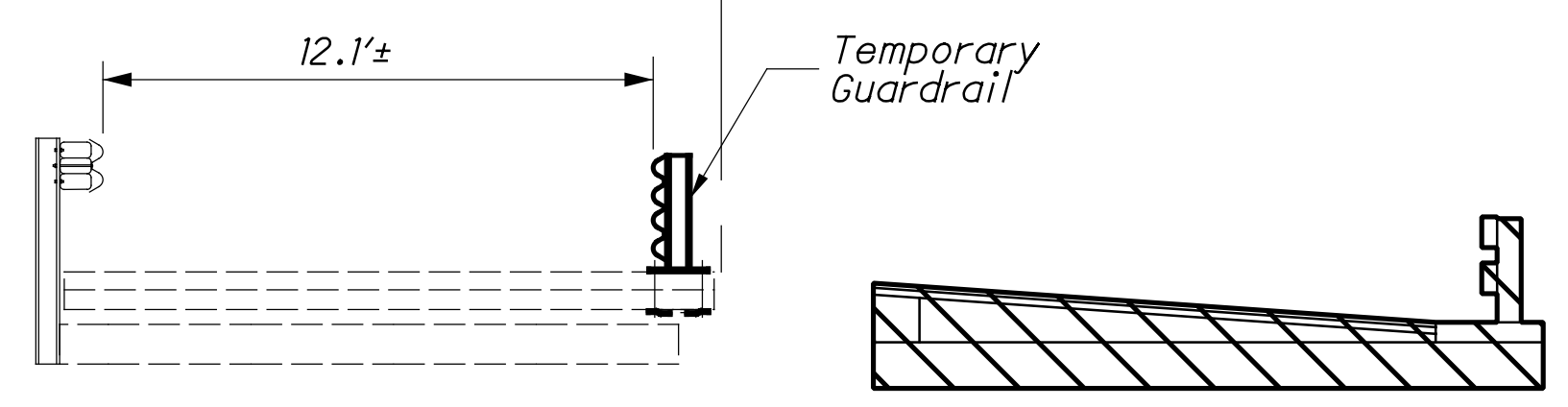
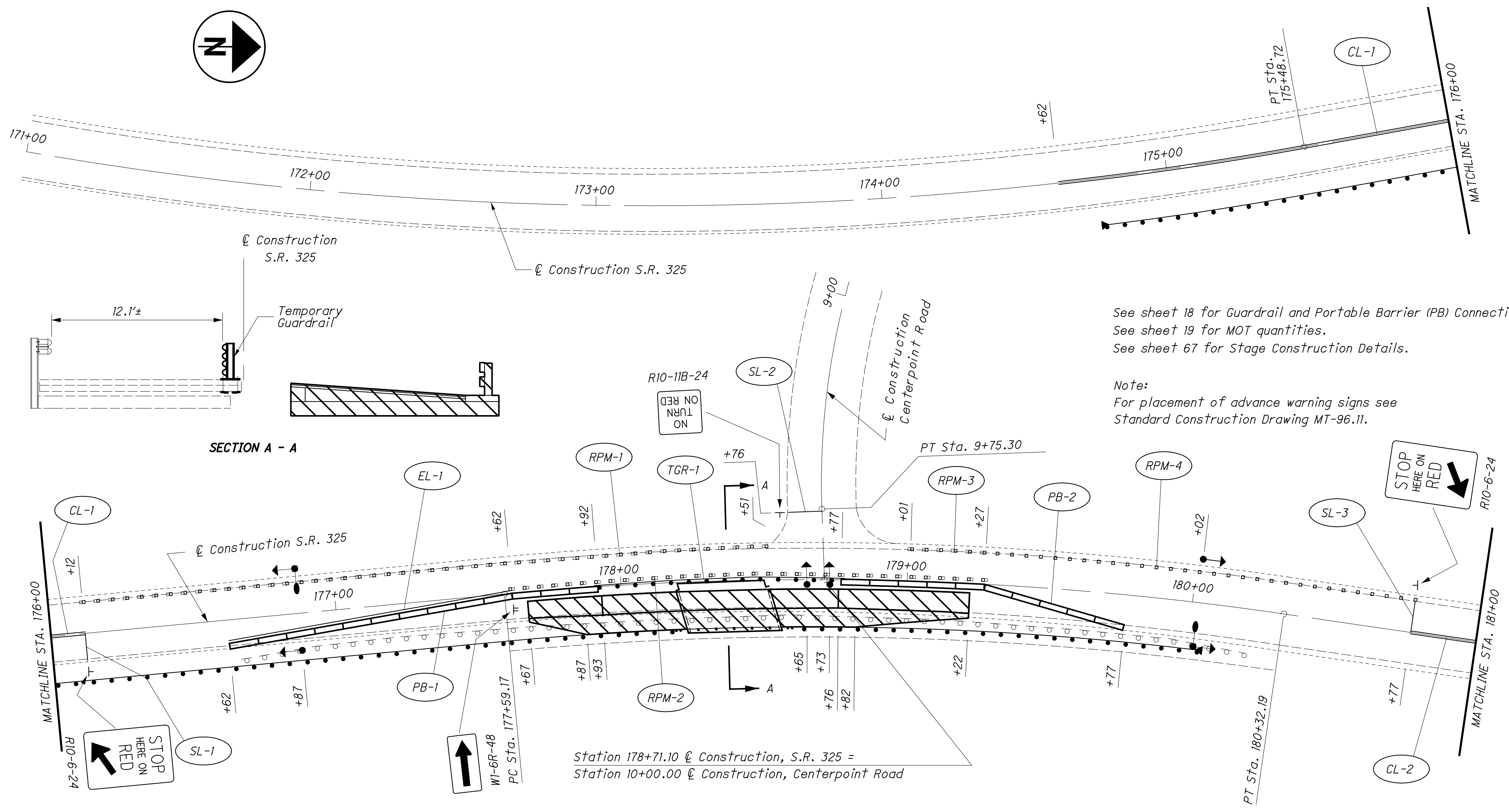
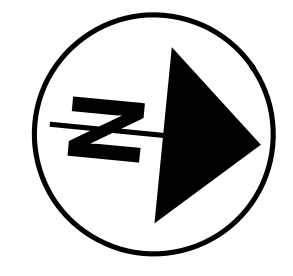
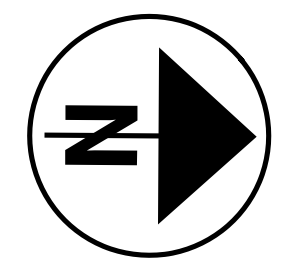
TAPER SECTION

STA. 13+50.00 TO STA. 18+10.24

TEMPORARY ROAD
TYPICAL SECTIONS AND ELEVATIONS

LIC-599-8.54

NOTE: FOR PLAN & PROFILE OF ROAD FOR MAINTAINING TRAFFIC, SEE SHEET 99.

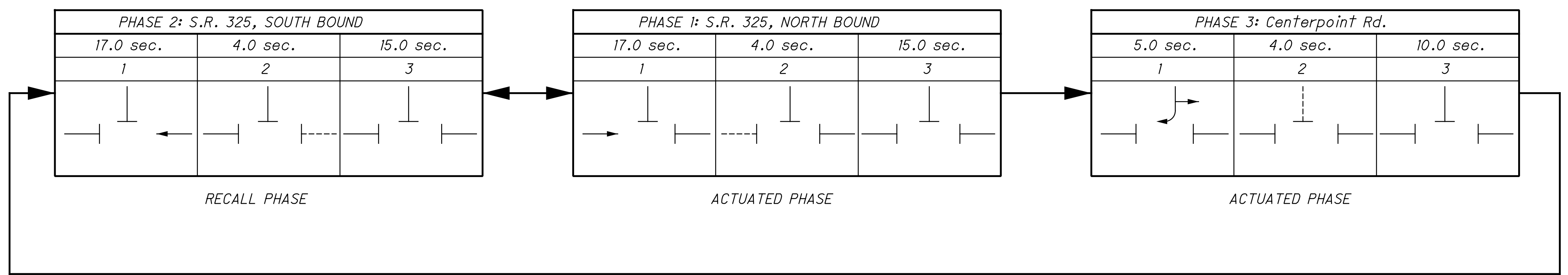


See sheet 18 for Guardrail and Portable Barrier (PB) Connection Details.
See sheet 19 for MOT quantities.
See sheet 67 for Stage Construction Details.

Note:
For placement of advance warning signs see Standard Construction Drawing MT-96.11.

Legend

- 32" Concrete Barrier
- Area to be constructed



PHASE 1 - SIGNAL TIMING DIAGRAM

BENDS AND BRANCHES
 FOR INFORMATION ONLY

SHEET NO.	202		601		611										605												
	CATCH BASIN ABANDONED		ROCK CHANNEL PROTECTION, TYPE D WITH FILTER		6" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE C	21" CONDUIT, TYPE B	30" CONDUIT, TYPE B	CONDUIT, BORED OR JACKED (6", TYPE B)	6" CONDUIT, TYPE F	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	PRECAST REINFORCED CONCRETE OUTLET	4" SHALLOW PIPE UNDERDRAINS	4" UNCLASSIFIED PIPE UNDERDRAINS	4" ROCK CUT UNDERDRAINS				6"x45° BEND	6"x90° BEND	6"x6" TEE	6"x6" WYE	6"x6" CROSS
	EACH		CY		FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT				EACH	EACH	EACH	EACH	EACH
117										35	222				3	2793						3	2	1		1	
118										42	42				1	4000						6	2	2		2	
119	1					105					260	1			4	3783			267			4	2	2			
120											26				1	50			3947				4			2	1
121		23					6	6		50	180		1	1	1				4000					3	3	2	
122										51	213				1		1660			873							
123											112						1882									2	
124											90			1			3984						3	2	2		
125					25						98						3683	283					5			1	
126	1										160	1				2	4071						5	2	3		
127						108																					
128											113					1	3650	350					4				
129	1										196					4	4000						4		3		
130					25						188	1				4	4000						4		2		
131											130					1	4000						4	2	2	1	1
132											198					4	4000						2	2	2	1	1
133											123					2	4000						2			2	
134											144					3	4000						2	2	2		1
135									27		171			1		3	4577						4	2	3	1	
135A					50						156					1	2024						2	2	2		
136											60					3	928								2		
137											26					1	836	47						2			
138											24					1	542	50						1			
139											40			1		2	958						2				1
142											56					3	1122						3				
143											18					1	720	50					2		1		
144											38					2	814							2			
145											38					2	1218							4			
146											40					2	822							2	2	1	
147											34					2	720							2			1
TOTALS CARRIED TO GENERAL SUMMARY	3	23	100	215	105	6	6	163	3196	3	1	5	2	56	71997	780	9087										

DRAINAGE SUBSUMMARY

STA - 6 - 18.84

REF NO.	STORM SEWER PROFILE SHEET NO.	STATION		SIDE	202		601	602	611								605	670	SP 1307-2				
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CONCRETE MASONRY	6" CONDUIT, TYPE F	12" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	24" CONDUIT, TYPE B	42" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 4	CATCH BASIN, NO. 4A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	4" SHALLOW PIPE UNDERDRAINS	DITCH EROSION PROTECTION	DATE: JULY 2016		
																					BENDS AND BRANCHES FOR INFORMATION ONLY		
FROM	TO	FT	EACH	CY	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	SY	6"X6" TEE	6"X6" CROSS	6"X90° BEND			
D1	209 & 210	360+00	364+00	℄						400					1					125			
D2	210		364+00	RT						200										250			
D3	154		363+60	LT&RT							160												
D4	154		364+00	LT																	125		
D5	154		364+00	℄																			
D6	154		364+00	RT				6															
D7	154		364+00	LT																			
D8	210	364+00	365+00	RT						100											197		
D9	210	364+00	365+35	℄						135					1						226		
D10	210	364+00	365+75	LT						175											259		
D11	157		368+20	℄									64		1								
D12	157		368+20	LT									68										
D13	157		368+20	RT				1	0.4														
D14	212	368+20	371+00	LT						280											125		
D15	212	368+20	371+00	℄						280					1						125		
D16	212	368+20	371+00	RT						280											125		
RI			368+00	RT	20	1																	
U1		359+90	363+97	RT						20											407	1	
U2		359+90	363+97	LT						20											407	1	
U3		359+90	363+97	LT						22											814	1	
U4		359+90	363+97	RT						22											814	1	
U5		364+03	368+18	RT						20											415	1	
U6		364+03	368+18	RT						22											830	1	
U7		364+03	368+18	LT						22											830	1	
U8		364+03	368+18	LT						20											415	1	
U9		368+22	371+00	LT						22											556	1	
U10		368+22	371+00	RT						22											556	1	
U11		368+22	371+00	RT						20											278	1	
U12		368+22	371+00	LT						20											278	1	
U13		371+00	373+50	LT																	500	2	
U14		371+00	373+50	LT																	250	1	
U15		371+00	373+50	RT																	500	2	
U16		371+00	373+50	RT																	250	1	
TOTALS CARRIED TO GENERAL SUMMARY					20	1	7	0.4	252	160	1850	68	141	144	4	1	7	2	8100	1557			

ESTIMATED QUANTITIES

LUC-76-31.48

OFFICE CALCS		SHEET NUMBER													ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-3(a)		SEE SHEET NO.
		11	82	83	84	85	86	87	88	89	91	105	157	255						259	DATE:	
ROADWAY																						
	LS															201	11000	LS		CLEARING AND GRUBBING		
32738																202	23000	32738	SY	PAVEMENT REMOVED		
1503																202	23500	1503	SY	WEARING COURSE REMOVED		
																202	32000	1953	FT	CURB REMOVED		
																202	32001	927	FT	CURB REMOVED, AS PER PLAN	105	
																202	38000	12687.5	FT	GUARDRAIL REMOVED		
																202	38700	34	EACH	GUARDRAIL POST REMOVED		
																202	58500	3	EACH	CATCH BASIN ABANDONED		
	185	8423	20657	6224	169						188	479	153	331		2870	203	10000	39679	CY	EXCAVATION	
		1067	2189	7148	1069						225	1144	50	62			203	20000	12954	CY	EMBANKMENT	
71464																204	10000	71464	SY	SUBGRADE COMPACTION		
																	606	15050	11650	FT	GUARDRAIL, TYPE MGS	
																	606	15150	175	FT	GUARDRAIL, TYPE MGS HALF POST SPACING	
																	606	25550	12	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
																	606	26150	12	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
																	606	26550	23	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
																	606	35002	36	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
																	606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
	10																623	38500	10	EACH	MONUMENT ASSEMBLY	
EROSION CONTROL																						
																50	601	32200	50	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
	2																659	00100	2	EACH	SOIL ANALYSIS TEST	
	1773																659	00300	1773	CY	TOPSOIL	
	15970																659	10000	15970	SY	SEEDING AND MULCHING	
	799																659	14000	799	SY	REPAIR SEEDING AND MULCHING	
	799																659	15000	799	SY	INTER-SEEDING	
	2.23																659	20000	2.23	TON	COMMERCIAL FERTILIZER	
	3.30																659	31000	3.30	ACRE	LIME	
	86																659	35000	86	MGAL	WATER	
																	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
																	832	30000	15000	EACH	EROSION CONTROL	
DRAINAGE																						
																	605	05100	8680	FT	4" SHALLOW PIPE UNDERDRAINS	
																	605	05101	63317	FT	4" SHALLOW PIPE UNDERDRAINS, AS PER PLAN	116
																	611	01500	3196	FT	6" CONDUIT, TYPE F	
																	611	04600	215	FT	12" CONDUIT, TYPE C	
																	611	06100	105	FT	15" CONDUIT, TYPE C, 706.02	
																	611	08900	246	FT	21" CONDUIT, TYPE B, 706.02	
																	611	11700	138	FT	27" CONDUIT, TYPE A, 706.02; OR 30", 707.01	
																	611	27001	350	FT	78" CONDUIT, TYPE A, AS PER PLAN, 706.02	116
																	611	52500	96	FT	24" X 38" CONDUIT, TYPE A, 706.04	
																	611	96600	183	FT	CONDUIT, BORED OR JACKED (6", TYPE B)	
																	611	98230	3	EACH	CATCH BASIN, NO. 4	
																	611	98301	1	EACH	CATCH BASIN, NO. 5, AS PER PLAN	116
																	611	98630	4	EACH	CATCH BASIN ADJUSTED TO GRADE	

CALCULATED	JKP	CHECKED	FGW
GENERAL SUMMARY			
TRU-99-13.48			
79			
267			

SHEET NUMBER

OFFICE
CALCS

196

ITEM
ITEM
EXT.

GRAND
TOTAL

UNIT

DESCRIPTION

FIG. 1307-3(b)
DATE: JANUARY 2019

SEE
SHEET
NO.

CALCULATED
JKP
CHECKED
FGW

PAVEMENT

312										251	01000	312	SY	PARTIAL DEPTH PAVEMENT REPAIR	
4140										253	01000	4140	SY	PAVEMENT REPAIR	
9005										255	10011	9005	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1P, AS PER PLAN	16
2894										255	10161	2894	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC MS, AS PER PLAN	16
34828										255	20000	34828	FT	FULL DEPTH PAVEMENT SAWING	
17759										304	20000	17759	CY	AGGREGATE BASE	
3892										305	13000	3892	SY	9" CONCRETE BASE	
127										407	10000	127	GAL	TACK COAT	
5813										408	10000	5813	GAL	PRIME COAT	
1029										451	14001	1029	SY	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
31690										451	15001	31690	SY	10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
6783										452	13001	6783	SY	9" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
50342										452	17001	50342	SY	VARIABLE THICKNESS NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12

WATER WORK

										3649	638	02504	3649	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	
										2481	638	02604	2481	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, BOLTLESS-RESTRAINED JOINTS AND FITTINGS	
										2107	638	02700	2107	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 55, BALL AND SOCKET JOINTS AND FITTINGS	
										1608	638	02800	1608	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, ASTM SDR 26	
										1142	638	02900	1142	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, AWWA CLASS 150	
										438	638	04800	438	FT	3/4" COPPER SERVICE BRANCH	
										464	638	05300	464	FT	3/4" POLYETHYLENE SERVICE BRANCH	
										212	638	06704	212	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT	
										310	638	07310	310	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED	
										18	638	08100	18	EACH	12" GATE VALVE AND VALVE BOX	
										16	638	09200	16	EACH	12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX	
										12	638	09700	12	EACH	12" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	
										36	638	10200	36	EACH	6" FIRE HYDRANT	
										10	638	10300	10	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE	
										8	638	10500	8	EACH	FIRE HYDRANT REMOVED AND RESET	
										8	638	10600	8	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	
										12	638	10800	12	EACH	VALVE BOX ADJUSTED TO GRADE	
										6	638	10900	6	EACH	SERVICE BOX ADJUSTED TO GRADE	
										4	638	11100	4	EACH	METER AND CHAMBER REMOVED AND RESET	

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER										PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-3(d)		SEE SHEET NO.	CALCULATED	JKP CHECKED	FGW
10		18		25													DATE:	JANUARY 2022				
										ADDITIVE ALTERNATE 1: SIDEWALK												
5985										5985	608	10000	5985	SF	4" CONCRETE WALK							
126										126	608	52000	126	SF	CURB RAMP							
		5								5	616	10000	5	MGAL	WATER							
		105								105	659	00300	105	CY	TOPSOIL							
		940								940	659	10000	940	SY	SEEDING AND MULCHING							
										ADDITIVE ALTERNATE 2: PEDESTRIAN CROSSWALK												
				52.0						52.0	630	02100	52.0	FT	GROUND MOUNTED SUPPORT, NO. 2 POST							
				1						1	630	08600	1	EACH	SIGN POST REFLECTOR							
				27.8						27.8	630	80100	27.8	SF	SIGN, FLAT SHEET							
				2						2	630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL							
				2						2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL							
				2						2	631	92001	2	EACH	SIGN FLASHER ASSEMBLY, AS PER PLAN							5
				13						13	644	00500	13	FT	STOP LINE							
				200						200	644	00600	200	FT	CROSSWALK LINE							
										INCIDENTALS												
										LS	614	11000	LS		MAINTAINING TRAFFIC							
										6	619	16010	6	MNTH	FIELD OFFICE, TYPE B							
										LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING							
										LS	624	10000	LS		MOBILIZATION							

GENERAL SUMMARY

LIC-C.R. 79-0.89

SHEET NUMBER						PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	64	68	97	165	175	01/NHS/PV/COLS	02/NHS/PV	03/STR/PV							
													ROADWAY		
1000							1000		202	23000	1000	SY	PAVEMENT REMOVED		
	12							12	202	58700	12	EACH	MANHOLE ABANDONED		
					225				202	75000	225	FT	FENCE REMOVED		
					1				202	75250	1	EACH	GATE REMOVED		
													ROADWAY ALTERNATES		
				500			500	X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIFEN) (ALTERNATE 1)	9	
				20			20	X	606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIFEN) (ALTERNATE 1)	9	
				500			500	X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (TRINITY) (ALTERNATE 2)	9	
				2			2	X	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (TRINITY) (ALTERNATE 2)	9	
				500			500	X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (MARION STEEL) (ALTERNATE 3)	9	
				2			2	X	606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (MARION STEEL) (ALTERNATE 3)	9	
													EROSION CONTROL		
				2					659	00100	2	EACH	SOIL ANALYSIS TEST		
				44					659	00300	44	CY	TOPSOIL		
				400					659	10000	400	SY	SEEDING AND MULCHING		
				20					659	14000	20	SY	REPAIR SEEDING AND MULCHING		
				20					659	15000	20	SY	INTER-SEEDING		
				0.05				0.05	659	20000	0.05	TON	COMMERCIAL FERTILIZER		
				0.08				0.08	659	31000	0.08	ACRE	LIME		
				2				2	659	35000	2	MGAL	WATER		
				1				1	659	40000	1	MSF	MOWING		
									832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
									832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS		
									832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE		
									832	30000	5000	EACH	EROSION CONTROL		
													PAVEMENT		
1844							1844		254	01000	1844	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1 1/2")		
1265									301	46000	1265	CY	ASPHALT CONCRETE BASE, PG64-22		
50									301	48000	50	CY	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)		
2627							986	1641	304	20000	2627	CY	AGGREGATE BASE		
5333							5333		305	12010	5333	SY	8" CONCRETE BASE, CLASS QC1P		
5695							3647	2048	407	10000	5695	GAL	TACK COAT		
18									441	50400	18	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)		
415							226	189	442	10000	415	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446)		
497							268	229	442	10100	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A, (446)		
4000							4000		609	12000	4000	FT	COMBINATION CURB AND GUTTER, TYPE 2		
													WATER WORK		
		896					896		SPECIAL	63820184	896	FT	12" WATER MAIN DIP CLASS 54 MECHANICAL JOINTS AND FITTINGS (COL. 801)		
		14					14		SPECIAL	63820538	14	EACH	6" GATE VALVE WITH VALVE BOX (COL. 802)		
		260					260		SPECIAL	63820750	260	EACH	6" FIRE HYDRANT (COL. 809)		
		8					8		SPECIAL	63820844	8	FT	INSTALL 1 1/2" COPPER WATER SERVICE CONNECTION (COL. 805)		
		4					4		SPECIAL	63820902	4	EACH	SERVICE BOX ADJUSTED TO GRADE (COL. 807)		
													SANITARY SEWER		
	200							200	611	00900	200	FT	6" CONDUIT, TYPE B, 706.01 OR 706.08 WITH 706.11 OR 706.12 JOINTS		
	284							284	611	02000	284	FT	8" CONDUIT, TYPE C, 706.08 WITH 706.12 JOINTS		
	273							273	611	04400	273	FT	12" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
	28							28	611	05900	28	FT	15" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
	230							230	611	07400	230	FT	18" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
	5							5	611	99574	5	EACH	MANHOLE, NO. 3 WITH 706.11 JOINTS		
	8							8	611	99654	8	EACH	MANHOLE ADJUSTED TO GRADE		
		3						3	611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE		

GENERAL SUMMARY

FRA-11-26.48

SP 1307-4
DATE: JULY 2019

CALCULATED
DMK
CHECKED
CML

SHEET NUMBER				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
87	96			01/NHS/PV	02/SK2/PV/ATB						
										TRAFFIC CONTROL	
					161	621	00100	161	EACH	RPM	
					146	630	02100	146	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
					229	630	03100	229	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
					4	630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
					96	630	80100	96	SF	SIGN, FLAT SHEET	
					11	630	85000	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	
					14	630	86002	14	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
					3.29	644	00100	3.29	MILE	EDGE LINE, 4"	
					1.36	644	00200	1.36	MILE	LANE LINE, 4"	
					1.25	644	00300	1.25	MILE	CENTER LINE	
					1368	644	00400	1368	FT	CHANNELIZING LINE, 8"	
					146	644	00500	146	FT	STOP LINE	
					313	644	00600	313	FT	CROSSWALK LINE	
					450	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE	
					24	644	00900	24	SF	ISLAND MARKING	
					9	644	01300	9	EACH	LANE ARROW	
					8	644	01410	8	EACH	WORD ON PAVEMENT, 96"	
										TRAFFIC SIGNALS	
					122	625	25400	122	FT	CONDUIT, 2", 725.04	
					180	625	25500	180	FT	CONDUIT, 3", 725.04	
					182	625	29000	182	FT	TRENCH	
					120	625	29400	120	FT	TRENCH IN PAVED AREA	
					2	625	30706	2	EACH	PULL BOX, 725.08, 24"	
					7	625	32000	7	EACH	GROUND ROD	
					4	632	04910	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, ALUMINUM	
					1	632	04916	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, ALUMINUM	
					2	632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, ALUMINUM	
					8	632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
					2	632	27004	2	EACH	LOOP DETECTOR UNIT	
					3	632	27008	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE	
					139	632	30200	139	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES	
					823	632	40300	823	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	
					1168	632	40500	1168	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
					100	632	62810	100	FT	INTERCONNECT CABLE, MISC.: INTEGRAL MESSENGER WIRE TYPE, 7 CONDUCTOR, NO. 12 AWG	95
					1601	632	65200	1601	FT	LOOP DETECTOR LEAD-IN CABLE	
					25	632	67200	25	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG	
					1	632	70001	1	EACH	POWER SERVICE, AS PER PLAN	95
					2	632	85000	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10	
					5	632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
					1	632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
					1	633	01661	1	EACH	CONTROLLER UNIT, TYPE 2070E WITH SEPAC SOFTWARE, WITH CABINET, TYPE 332, AS PER PLAN	95
					1	633	67100	1	EACH	CABINET FOUNDATION	
					1	633	67200	1	EACH	CONTROLLER WORK PAD	

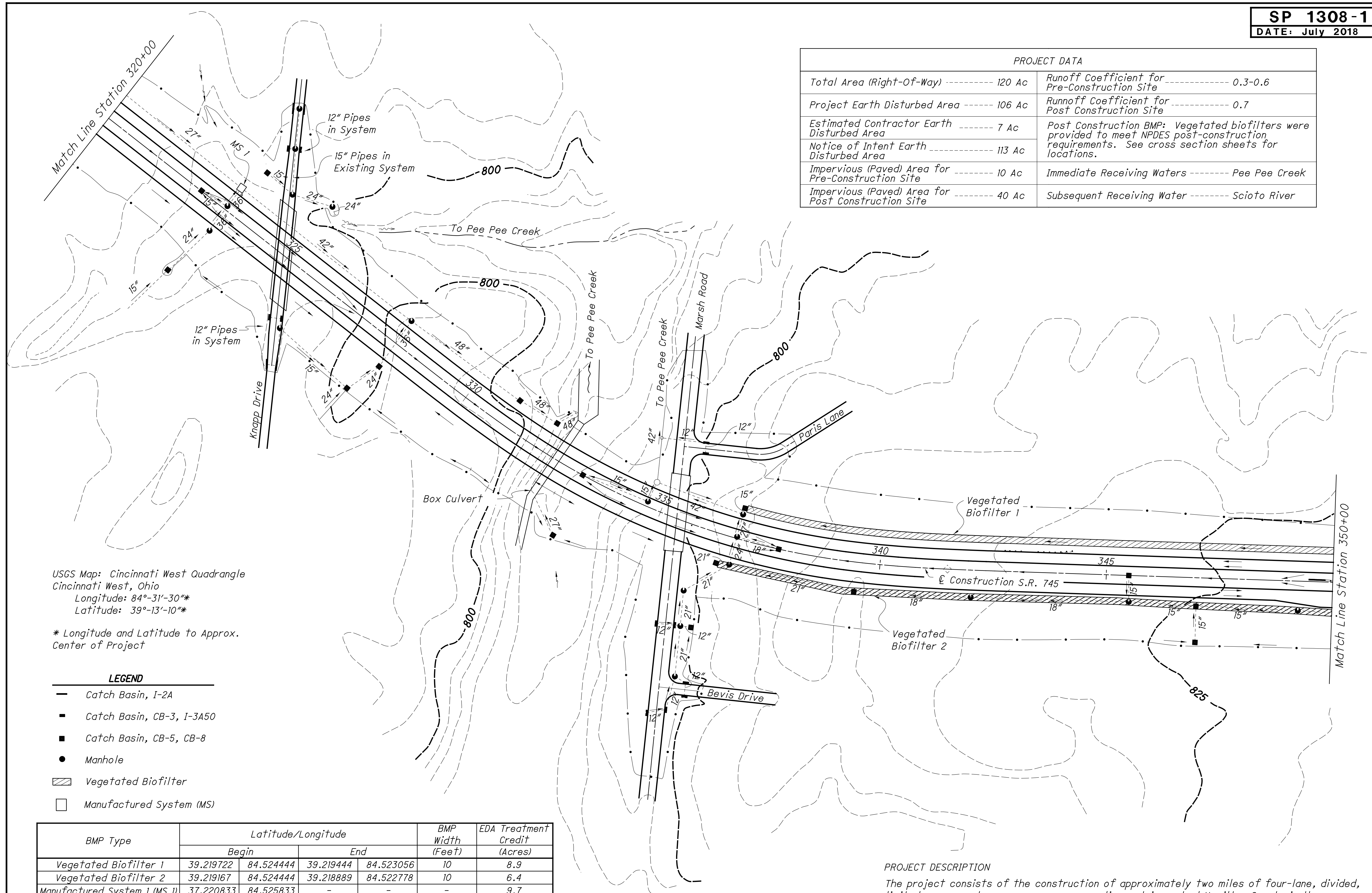
CALCULATED
 JKP
 CHECKED
 FGW
GENERAL SUMMARY
ATB-208-13.43
 36
 108



CALCULATED: JOH
CHECKED: JDH

0 100 200
HORIZONTAL SCALE IN FEET

PROJECT DATA			
Total Area (Right-Of-Way) -----	120 Ac	Runoff Coefficient for Pre-Construction Site -----	0.3-0.6
Project Earth Disturbed Area -----	106 Ac	Runoff Coefficient for Post Construction Site -----	0.7
Estimated Contractor Earth Disturbed Area -----	7 Ac	Post Construction BMP: Vegetated biofilters were provided to meet NPDES post-construction requirements. See cross section sheets for locations.	
Notice of Intent Earth Disturbed Area -----	113 Ac	Immediate Receiving Waters -----	Pee Pee Creek
Impervious (Paved) Area for Pre-Construction Site -----	10 Ac	Subsequent Receiving Water -----	Scioto River
Impervious (Paved) Area for Post Construction Site -----	40 Ac		



USGS Map: Cincinnati West Quadrangle
Cincinnati West, Ohio
Longitude: 84°-31'-30"*
Latitude: 39°-13'-10"*

* Longitude and Latitude to Approx. Center of Project

- LEGEND**
- Catch Basin, I-2A
 - Catch Basin, CB-3, I-3A50
 - Catch Basin, CB-5, CB-8
 - Manhole
 - ▨ Vegetated Biofilter
 - Manufactured System (MS)

BMP Type	Latitude/Longitude				BMP Width (Feet)	EDA Treatment Credit (Acres)
	Begin	End	Begin	End		
Vegetated Biofilter 1	39.219722	84.524444	39.219444	84.523056	10	8.9
Vegetated Biofilter 2	39.219167	84.524444	39.218889	84.522778	10	6.4
Manufactured System 1 (MS 1)	37.220833	84.525833	-	-	-	9.7
					Treatment Provided	25.0
					Treatment Required*	24.4

* Calculated per L&D Vol. 2, Sec. 1115.7

PROJECT DESCRIPTION

The project consists of the construction of approximately two miles of four-lane, divided, limited access, urban expressway on new alignment in central Hamilton County in the Cincinnati Metropolitan area. The highway has an east-west orientation beginning 300 feet west of Clovernoil Drive, ending 2,800 feet east of Sawmill Road. There is one interchange at Sawmill Road.

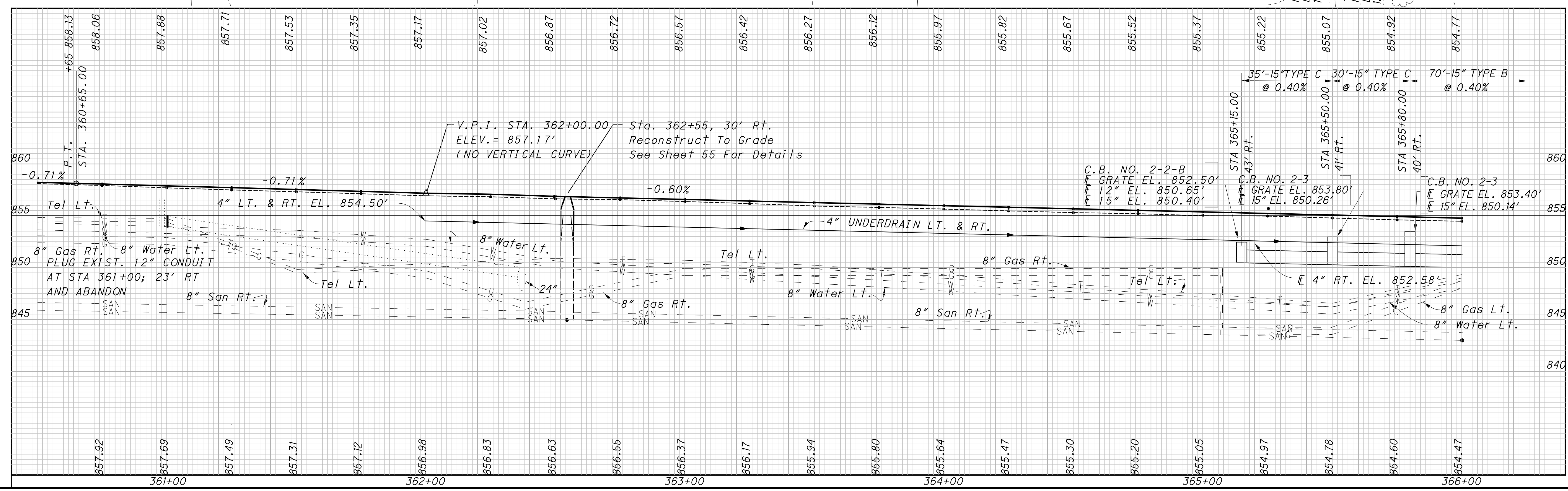
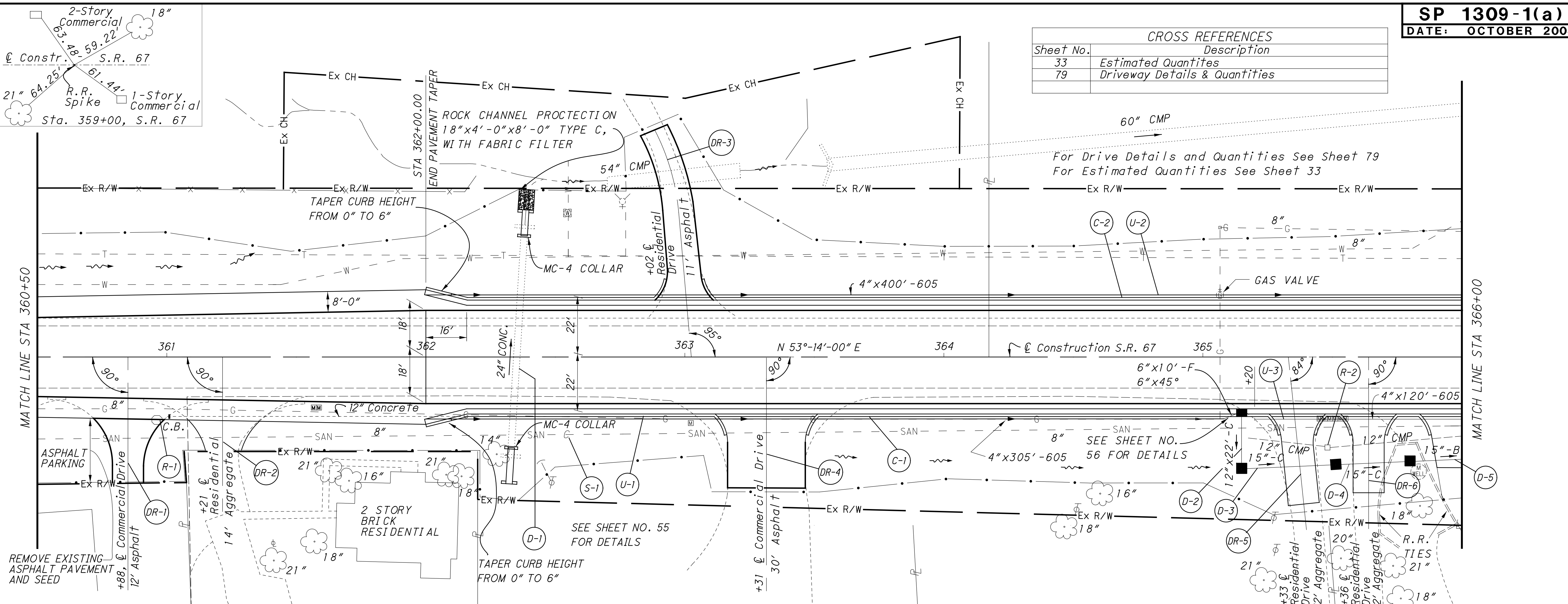
PROJECT SITE PLAN
STA. 320+00 TO STA. 350+00

HAM-745-18.36



SCALE IN FEET
HORIZONTAL
1" = 40'
VERTICAL
1" = 10'

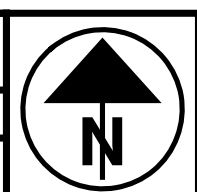
CROSS REFERENCES	
Sheet No.	Description
33	Estimated Quantities
79	Driveway Details & Quantities



PLAN AND PROFILE - S.R. 67
STA. 360+50 to STA. 366+00

CLI-67-16.86

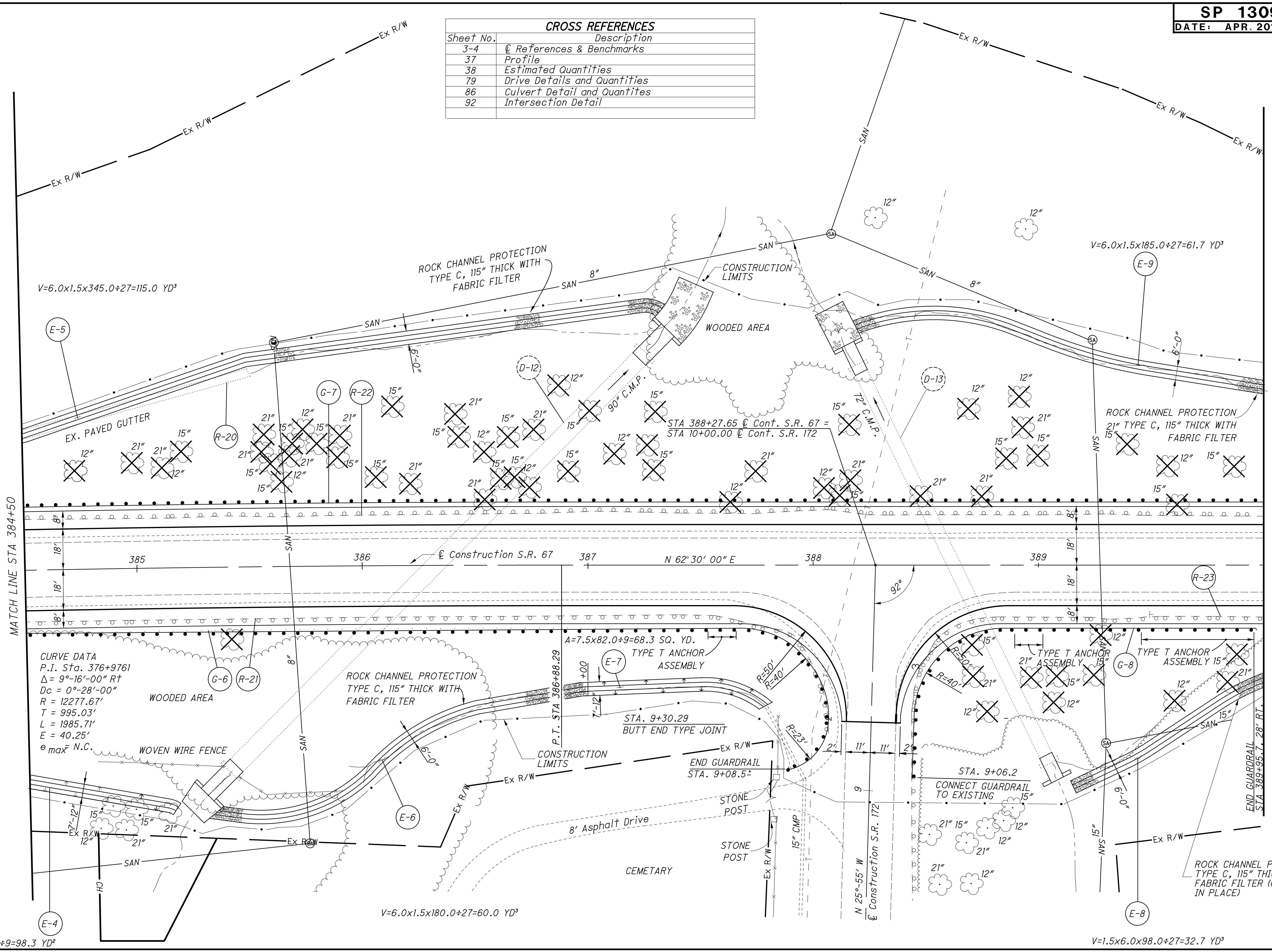
p:\ohiodot-pw\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1309-1(a)_2008-10.dgn Sheet 2/9/2022 3:36:21 PM ipetros



CALCULATED M/JG CHECKED D/SN
HORIZONTAL SCALE IN FEET
0 10 20 40

CROSS REFERENCES	
Sheet No.	Description
3-4	References & Benchmarks
37	Profile
38	Estimated Quantities
79	Drive Details and Quantities
86	Culvert Detail and Quantities
92	Intersection Detail

p:\ohiodot\pw.bentley.com\ohiodot-pw-02\Documents\03_Standards\Sample Plans\SP1309-2_2011-04.dgn Sheet 2/9/2022 3:36:36 PM tpetros



$V=6.0 \times 1.5 \times 345.0 \div 27 = 115.0 \text{ YD}^3$

$V=6.0 \times 1.5 \times 185.0 \div 27 = 61.7 \text{ YD}^3$

CURVE DATA
 P.I. Sta. 376+9761
 $\Delta = 9^\circ-16'-00'' \text{ Rt}$
 $Dc = 0^\circ-28'-00''$
 $R = 12277.67'$
 $T = 995.03'$
 $L = 1985.71'$
 $E = 40.25'$
 $e_{max} \text{ N.C.}$

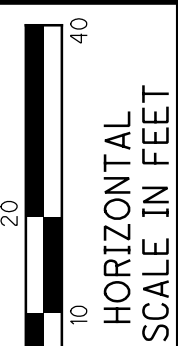
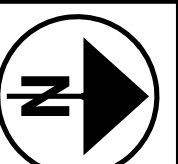
$V=6.0 \times 1.5 \times 180.0 \div 27 = 60.0 \text{ YD}^3$

$V=1.5 \times 6.0 \times 98.0 \div 27 = 32.7 \text{ YD}^3$

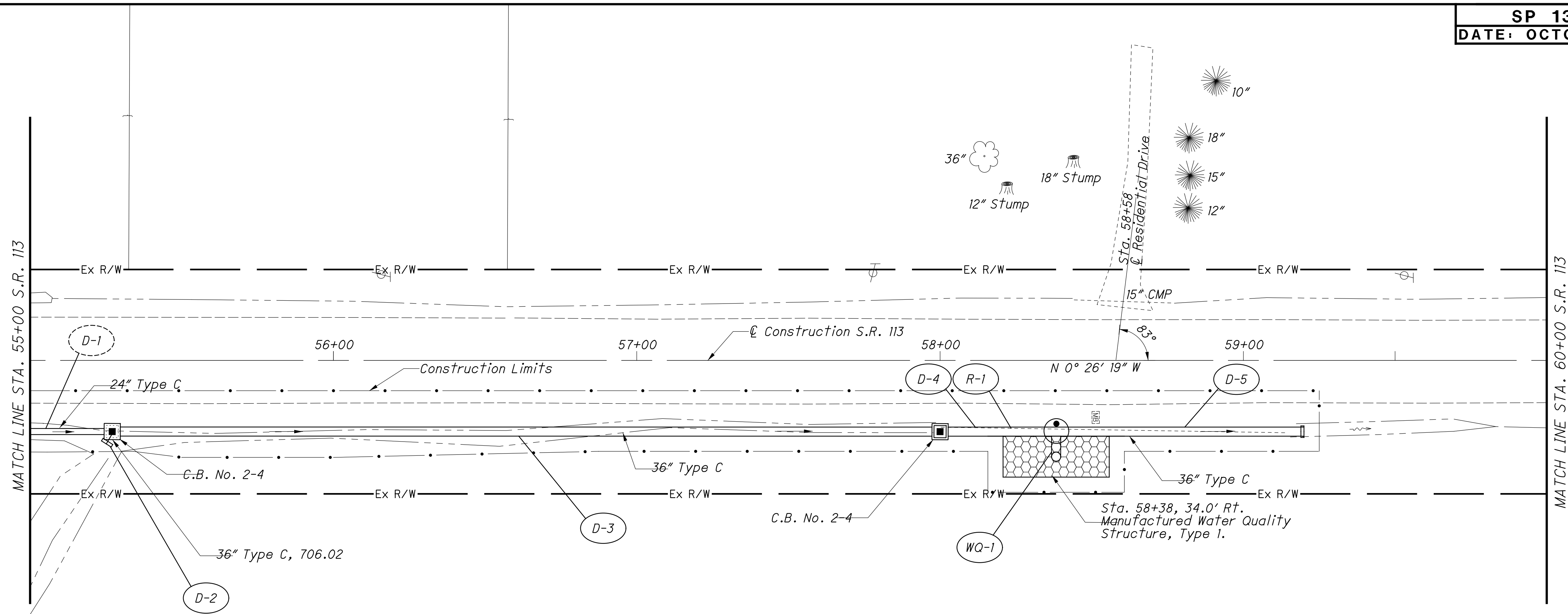
PLAN-S.R. 67
STA. 384+50 TO STA. 390+00

CLI-67-16.86

36
97

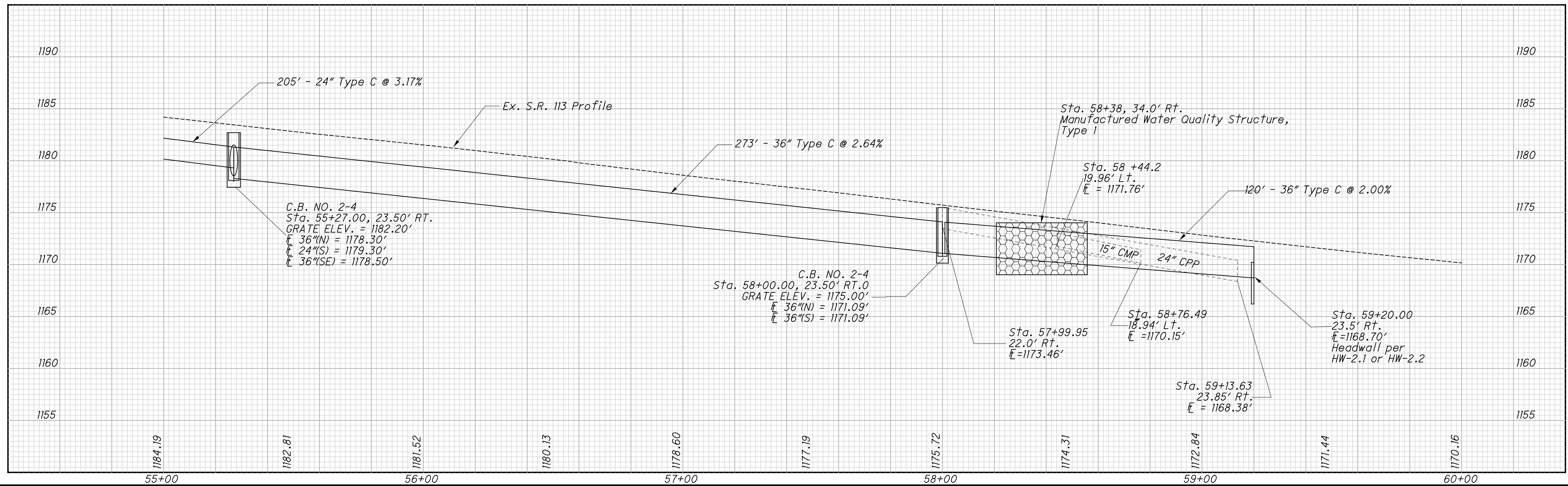


CALCULATED
DRT
CHECKED
TGH



For Quantities, See Sheet 20.

AREA FOR MANUFACTURED SYSTEM

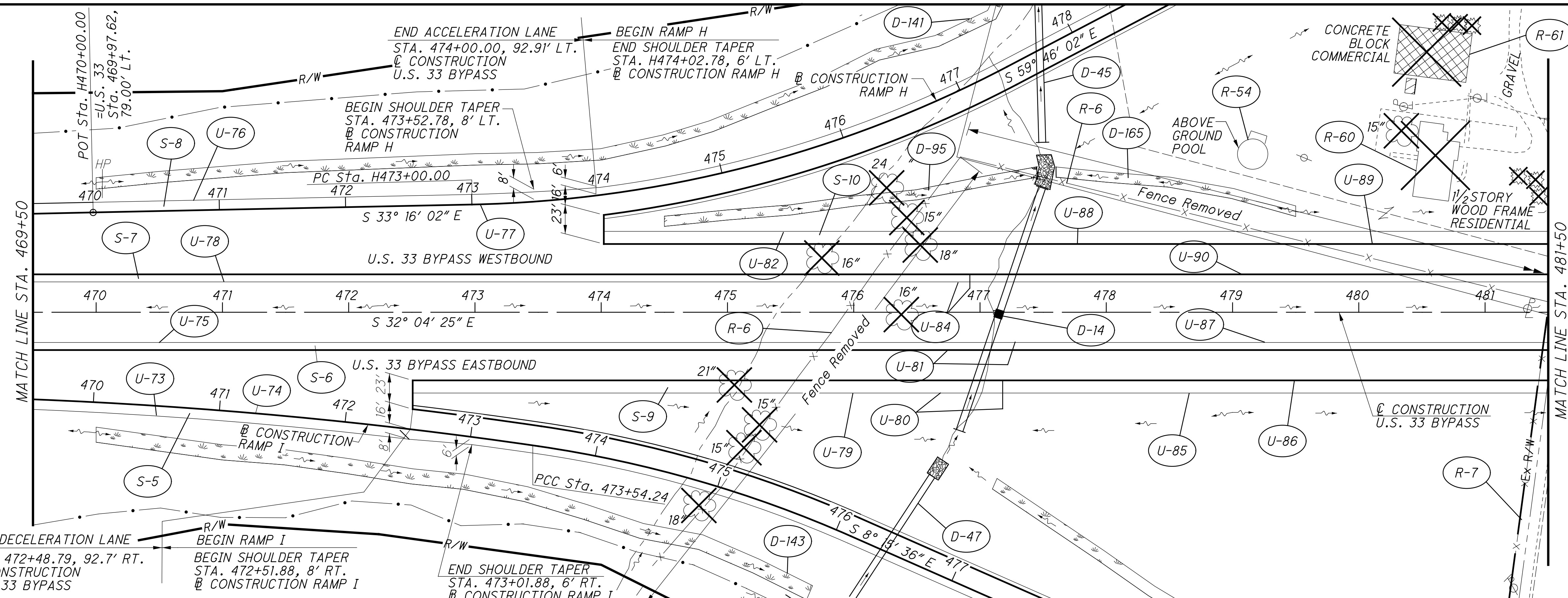
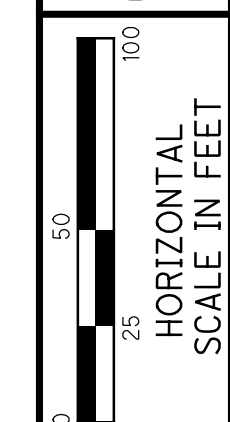
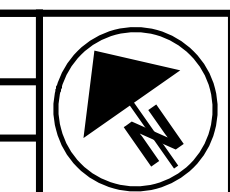


PLAN AND PROFILE
STA. 55+00 TO STA. 60+00 S.R. 113

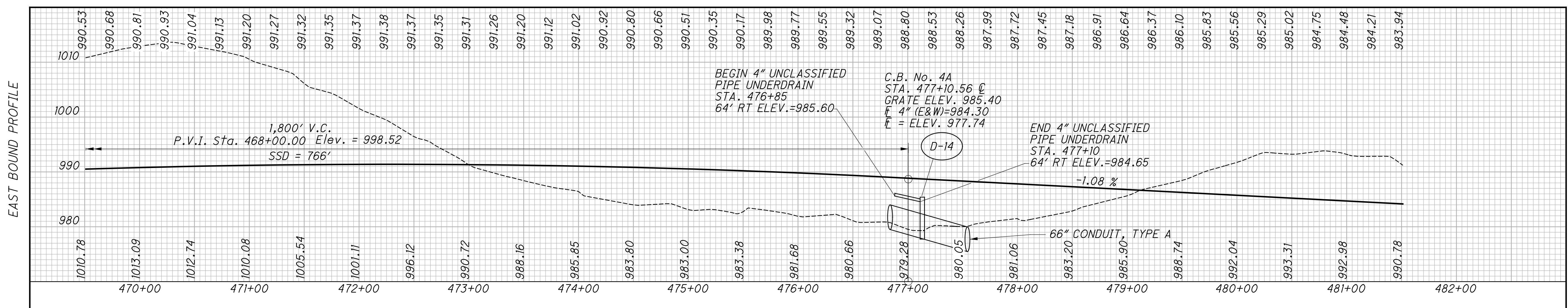
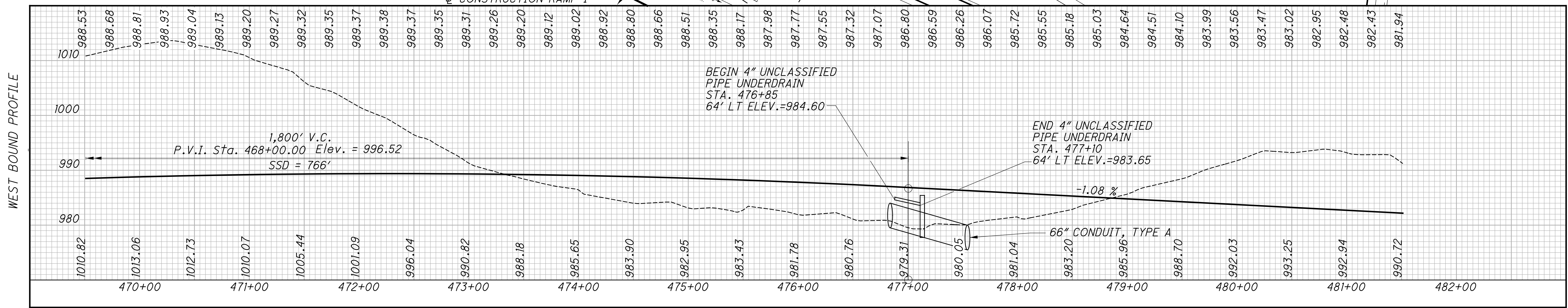
NOB-113-0.58

45
78

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1309-3_2008-10.dgn Sheet 2/9/2022 3:36:44 PM tpetros

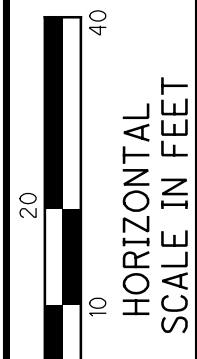
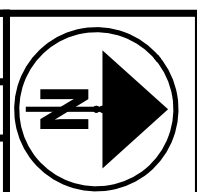


CROSS REFERENCES	
Sheet No.	Description
79	Ref. Monuments, ODOT #418 & #419
46-67	Estimated Quantities
360, 368	Ramps H & I
486, 487	Terminal Detail
503	Culvert Details
667	Fence Detail



PLAN AND PROFILE - U.S. 33 BYPASS
STA. 469+50 TO STA. 418+50

FAI-33-13.25

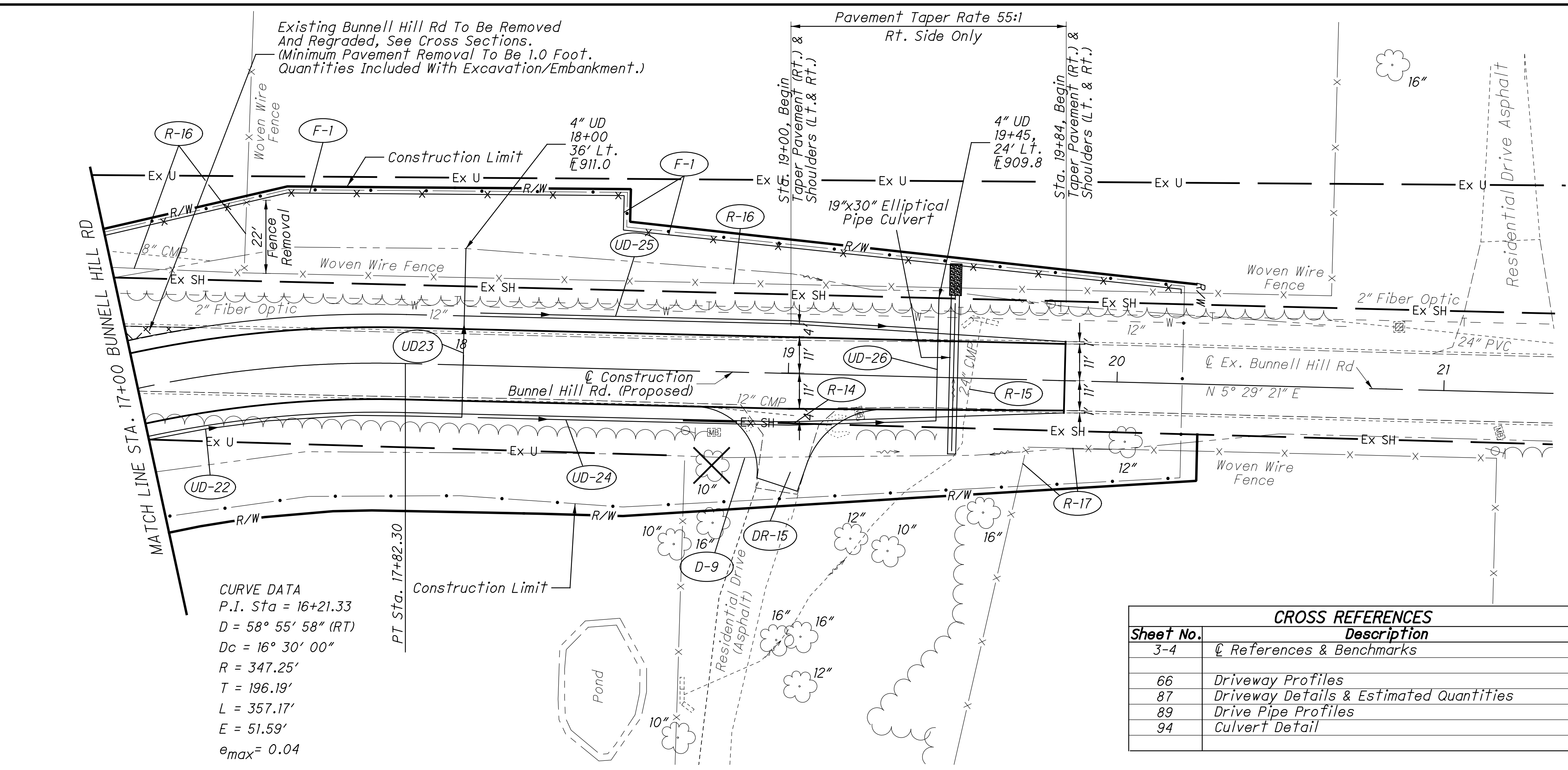


CALCULATED MSQ
CHECKED JAD

**PLAN AND PROFILE - BUNNELL HILL RD
STA. 17+00 TO STA 21+00**

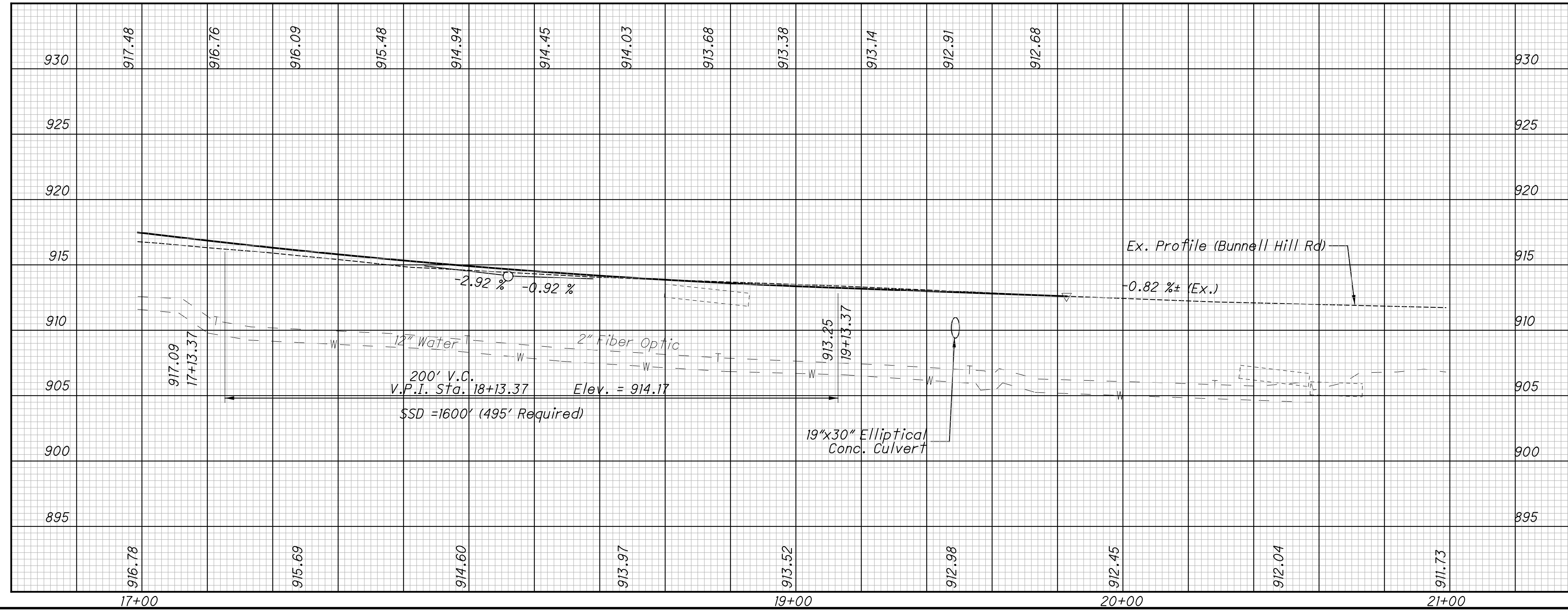
WAR-48.19.40

p:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1309-5_2022-01.dgn Sheet 2/9/2022 3:36:59 PM ipetros

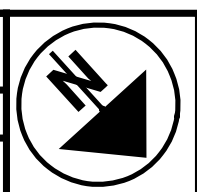


CURVE DATA
P.I. Sta = 16+21.33
D = 58° 55' 58" (RT)
Dc = 16° 30' 00"
R = 347.25'
T = 196.19'
L = 357.17'
E = 51.59'
e_{max} = 0.04

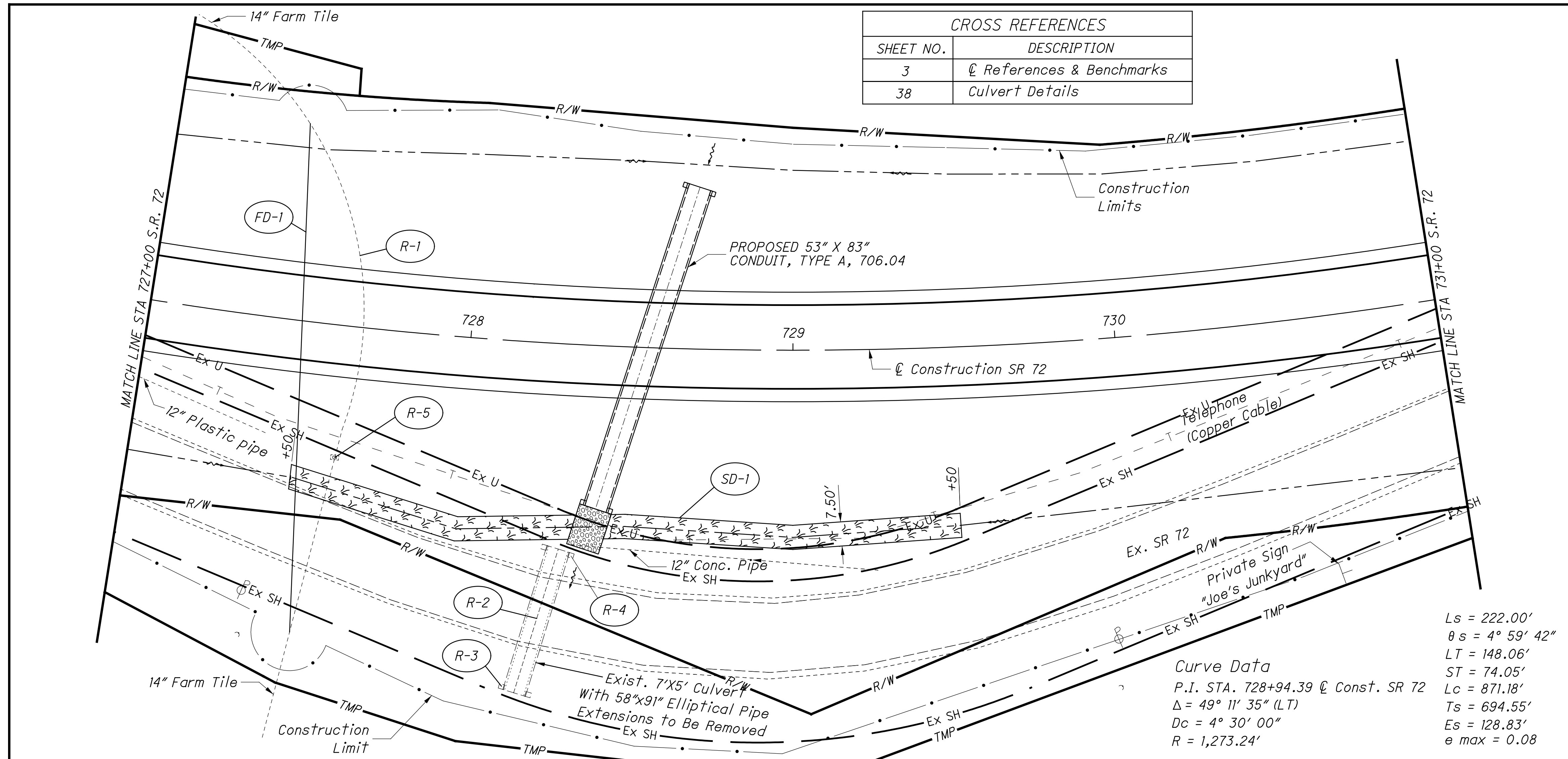
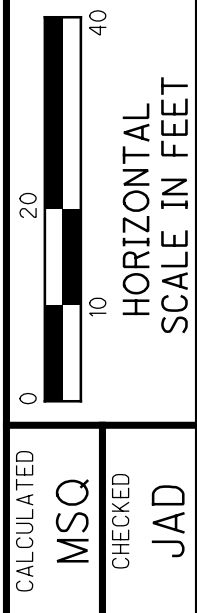
CROSS REFERENCES	
Sheet No.	Description
3-4	☐ References & Benchmarks
66	Driveway Profiles
87	Driveway Details & Estimated Quantities
89	Drive Pipe Profiles
94	Culvert Detail



REF NO.	STATION		SIDE	DESCRIPTION	QUANTITY
	FROM	TO			
R-14	18+86	19+20	Rt.	PRECAST REINF. CONCRETE OUTLET	1
R-15	19+52	19+55	Center	4" CONDUIT, TYPE B	52
R-16	16+60	20+20	Lt.	4" CONDUIT, TYPE D	37
R-17	19+70	20+19	Rt.	12" CONDUIT, TYPE D	33
UD-22	17+00	18+00	Rt.	4" BASE PIPE UNDERDRAINS (18" DEEP)	140
UD-23	18+00	18+00	Center	4" SHALLOW PIPE UNDERDRAINS (24" DEEP)	140
UD-24	18+05	19+45	Rt.	4" SHALLOW PIPE UNDERDRAINS (24" DEEP)	96
UD-25	18+05	19+45	Lt.	4" SHALLOW PIPE UNDERDRAINS (24" DEEP)	96
UD-26	19+45	19+45	Center	4" SHALLOW PIPE UNDERDRAINS (24" DEEP)	96
D-9	18+83	19+17	Rt.	12" CONDUIT, TYPE D	33
F-1	16+62	20+19	Lt.	12" CONDUIT, TYPE D	33
TOTALS CARRIED TO GENERAL SUMMARY					

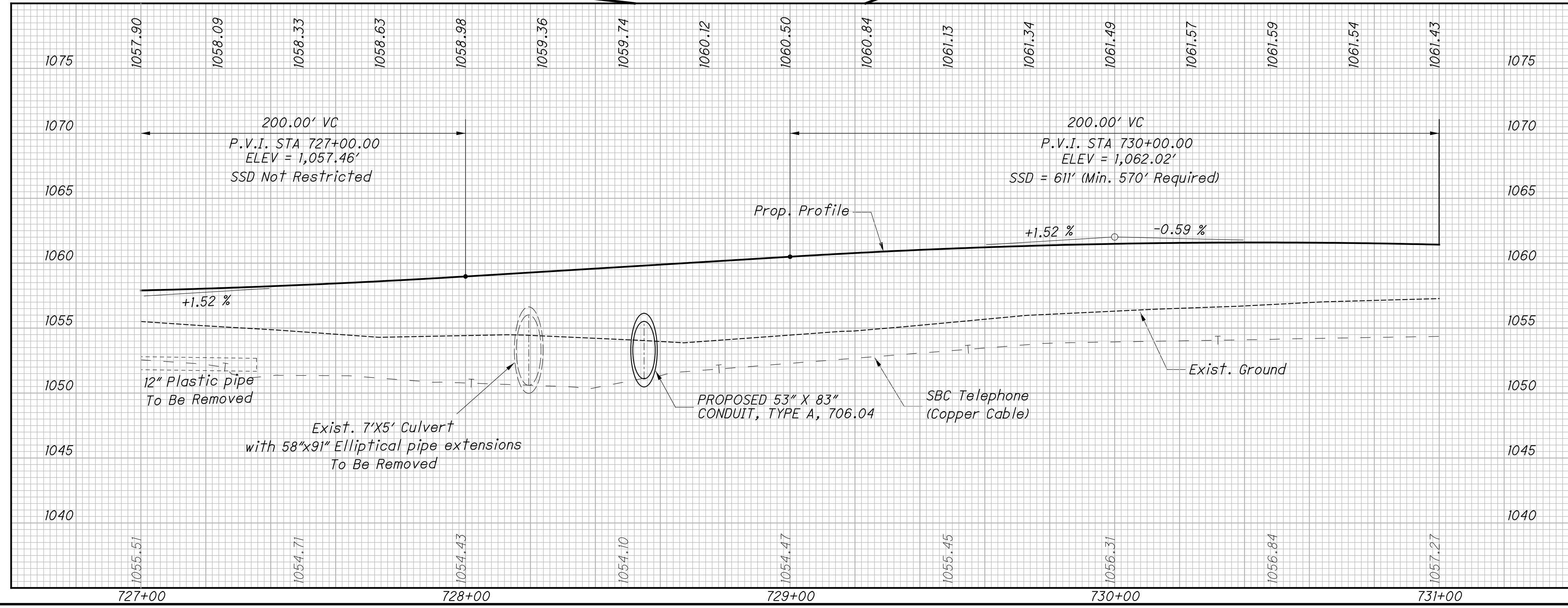


CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	☉ References & Benchmarks
38	Culvert Details



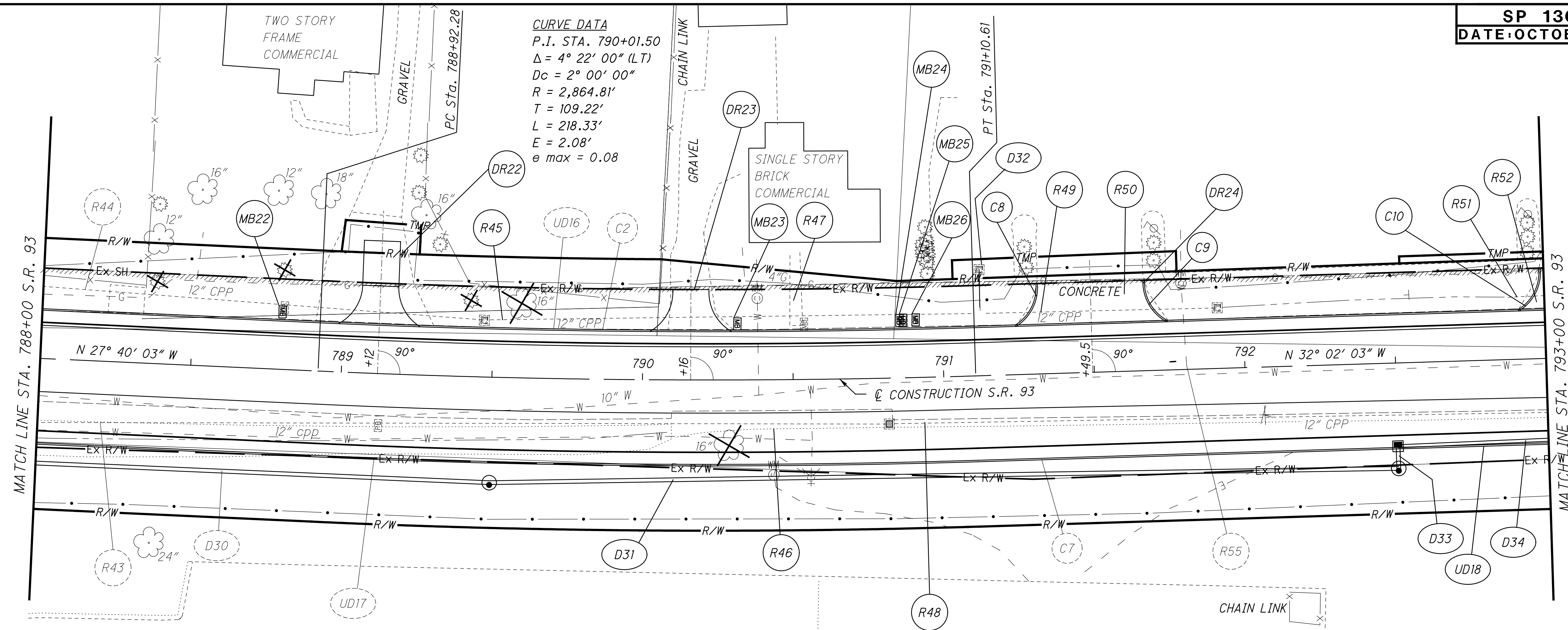
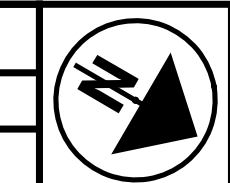
Curve Data
 P.I. STA. 728+94.39 ☉ Const. SR 72
 $\Delta = 49^\circ 11' 35''$ (LT)
 $D_c = 4^\circ 30' 00''$
 $R = 1,273.24'$

$L_s = 222.00'$
 $\theta_s = 4^\circ 59' 42''$
 $LT = 148.06'$
 $ST = 74.05'$
 $L_c = 871.18'$
 $T_s = 694.55'$
 $E_s = 128.83'$
 $e_{max} = 0.08$

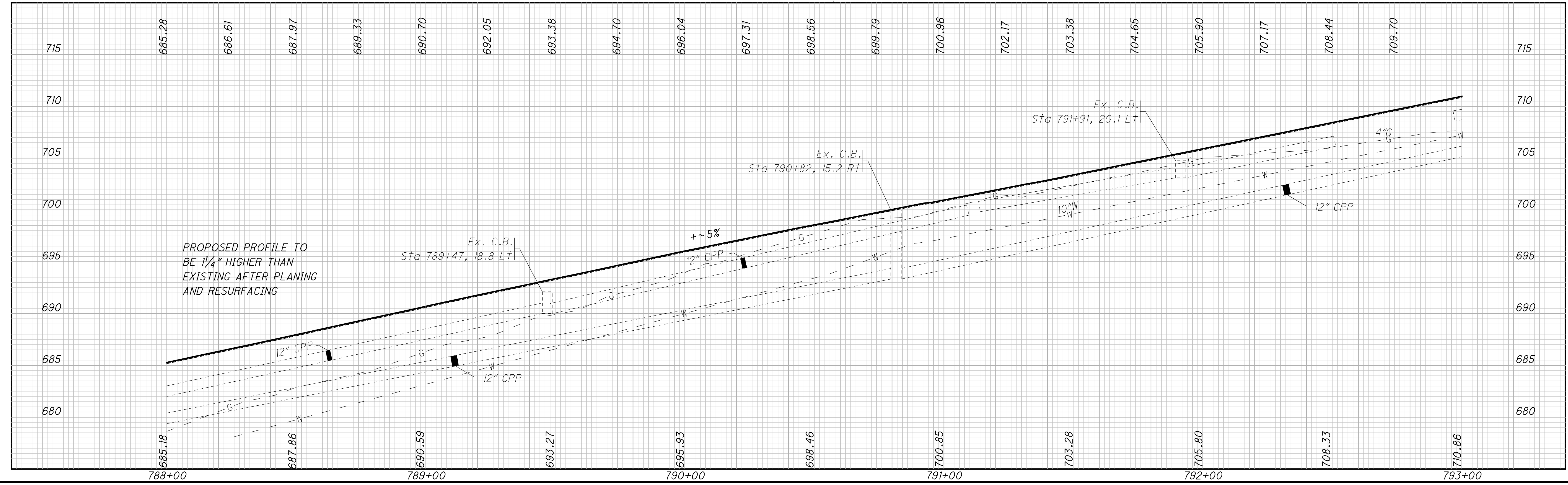


REF NO.	STATION		SIDE	DESCRIPTION	QTY	UNIT	TOTAL
	FROM	TO					
R-1	727+43	727+56	RT & LT	EROSION CONTROL MAT, TYPE A	167	SY	167
R-2	728+15	728+22	RT	15\"/>			
R-3	728+17	728+23	RT	REMOVAL MISC.: 2\"/>			
R-4	728+27	728+35	RT	REMOVAL MISC.: 7\"/>			
R-5	728+51	728+53	RT	REMOVAL MISC.: 7\"/>			
FD-1	727+43	727+56	RT & LT	PIPE REMOVED, 24\"/>			
SD-1	727+50	729+50	RT	HEADWALL REMOVED	2	EACH	2
TOTALS CARRIED TO GENERAL SUMMARY							

PLAN AND PROFILE
 STA 727+00 TO 731+00

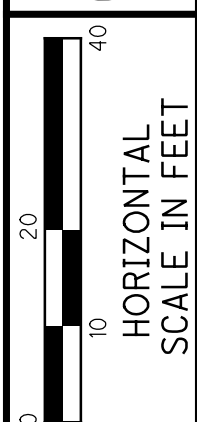
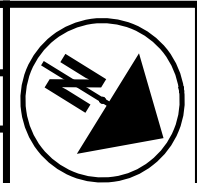


FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
FOR ϕ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3

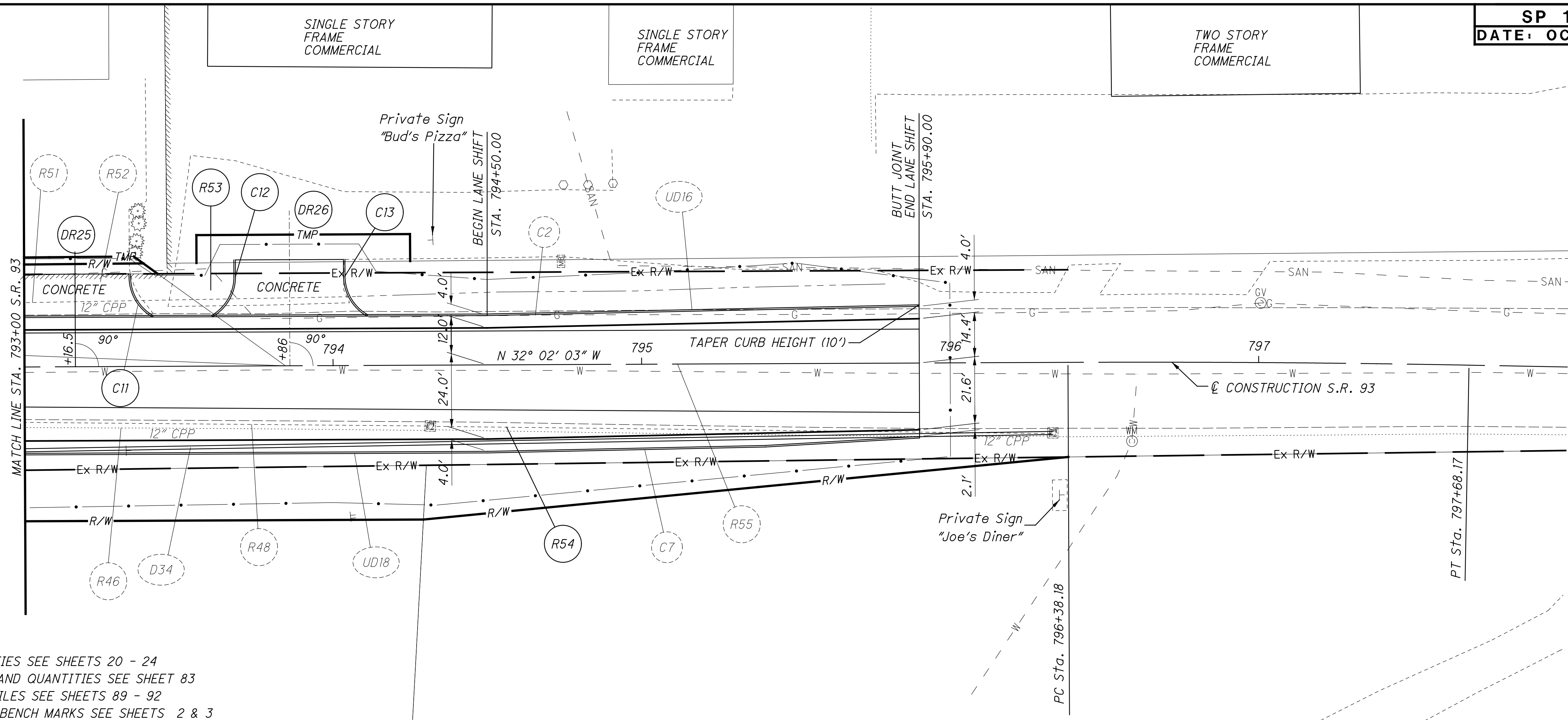


PLAN AND PROFILE
STA. 788+00 TO STA. 793+00

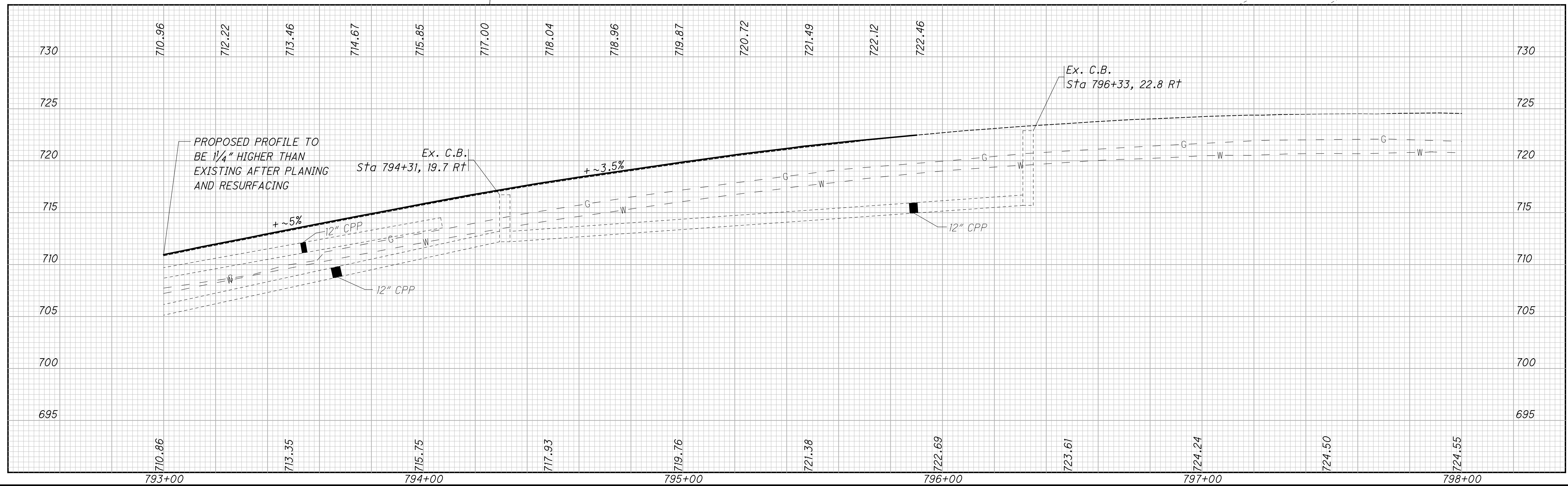
pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1309-7(a)_2006-10.dgn Sheet 2/9/2022 3:37:14 PM tpetros



CALCULATED MSQ
CHECKED JAD



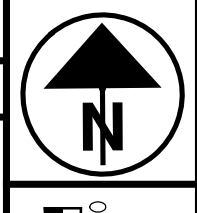
FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
FOR \odot REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3



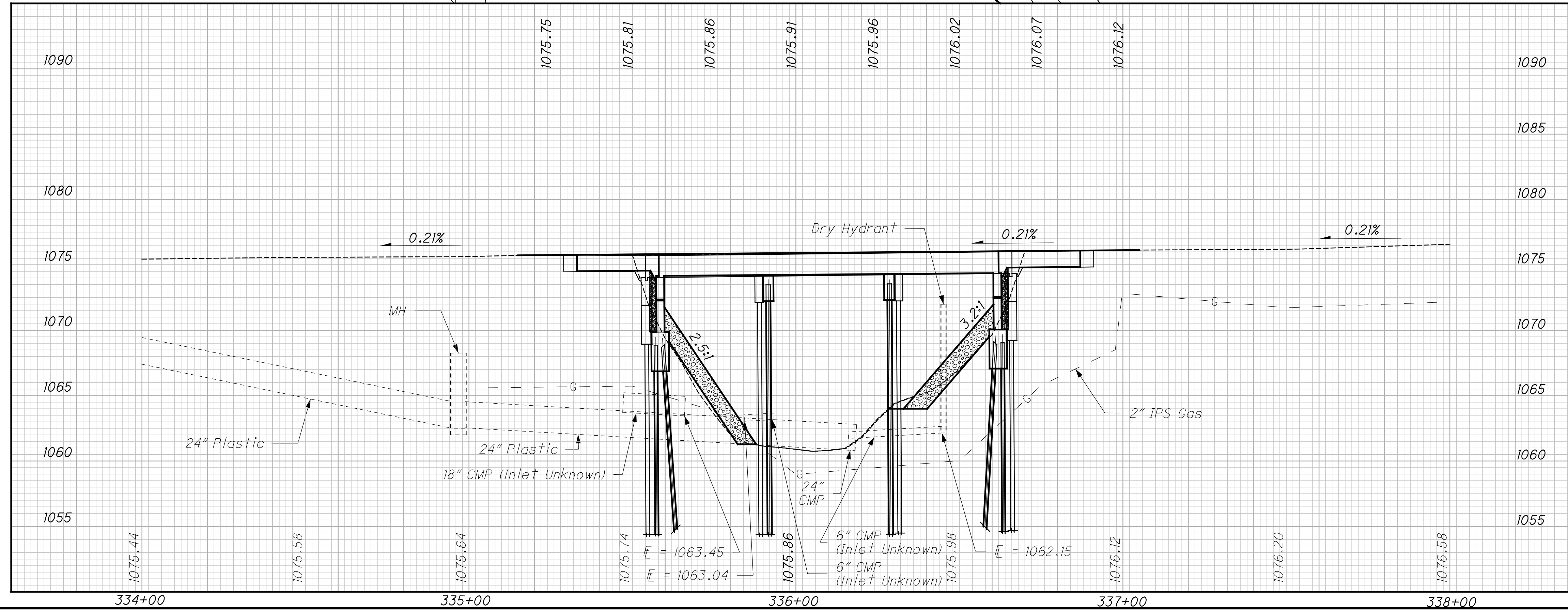
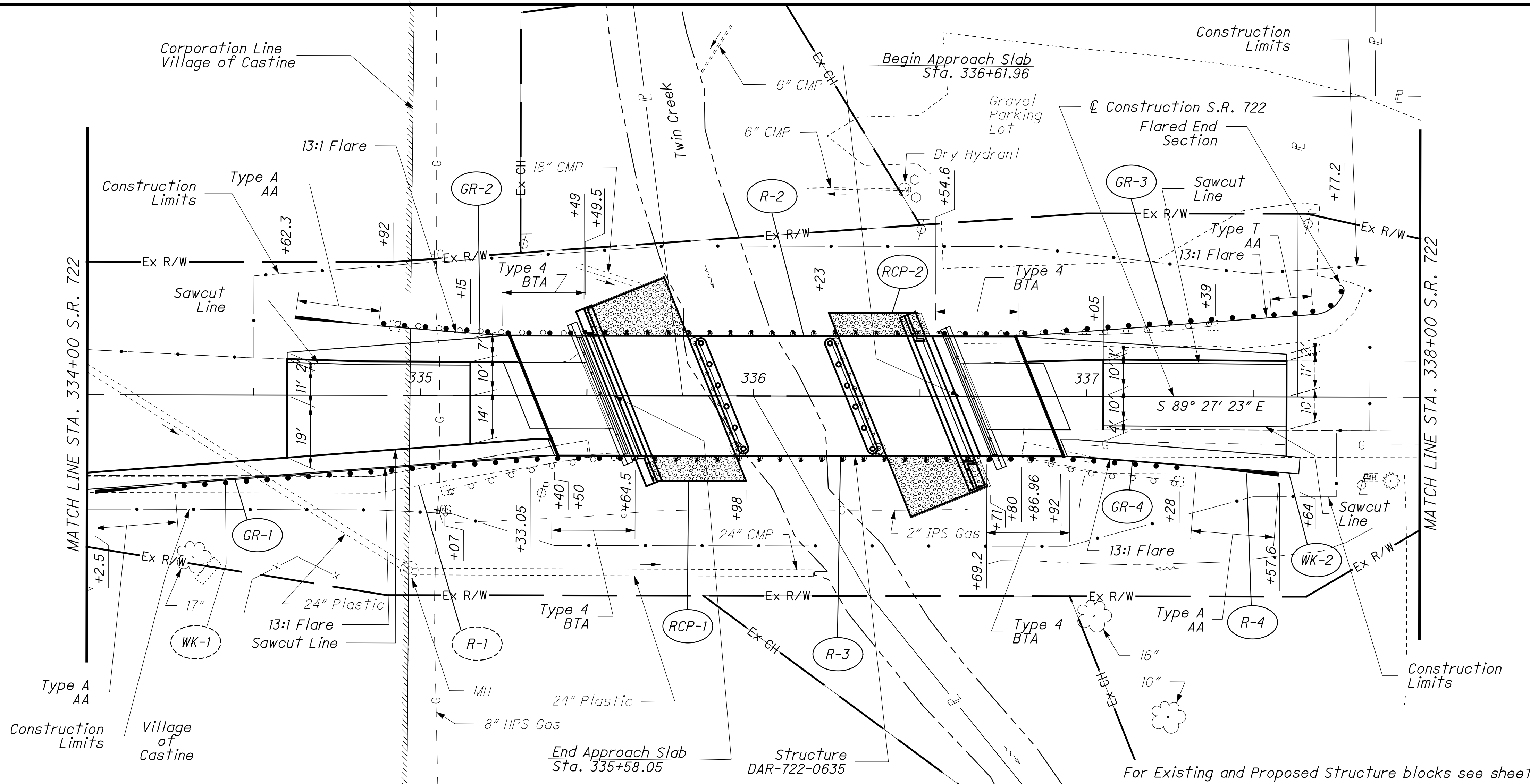
PLAN AND PROFILE
STA. 793+00 TO STA. 798+00

MOE-93-22.35

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HORIZONTAL SCALE IN FEET
0 10 20 40

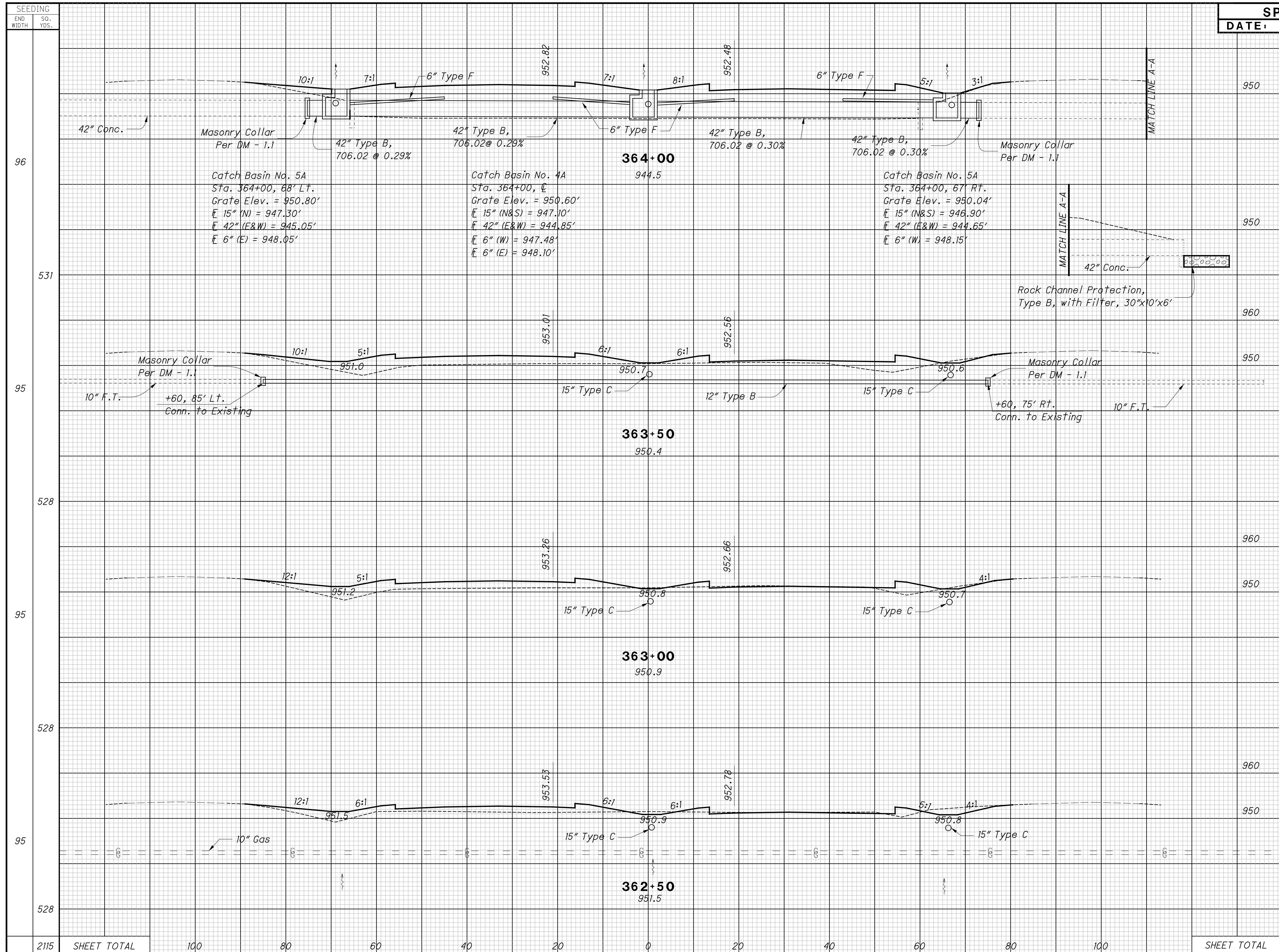


REF NO.	STATION		SIDE	QUANTITY
	FROM	TO		
GR-1	334+02.5	335+49.5	RT.	1
GR-2	334+62.3	335+64.5	LT.	1
GR-3	336+54.6	337+77.2	LT.	1
GR-4	336+69.2	337+67.6	RT.	1
R-2	334+92	337+39	LT.	1
R-3	335+07	337+28	RT.	1
R-4	336+80	337+64	RT.	1
RPC-1	335+49	335+98	LT/RT	4
RPC-2	336+23	336+71	LT/RT	4
WK-2	336+92	337+64	RT.	1
TOTALS CARRIED TO GENERAL SUMMARY				
601	ROCK CHANNEL PROTECTION TYPE C WITH FILTER		CU YD	250
608	4\"/>			

PLAN AND PROFILE - S.R. 722
STA. 334+00 TO STA. 338+00

DAR-722-6.34

p:\ohiodot-pw\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1309-8_2022-01.dgn Sheet 2/9/2022 3:37:31 PM tpetros



END STA.	AREA		VOLUME	
	CUT	FILL	CUT	FILL
950	0	919		
950			7	1054
960				
950	8	219		
960			24	346
950				
950	18	155		
960			40	250
950				
950	25	115		
960			67	187
950				
SHEET TOTAL			138	1837

CROSS SECTIONS - S.R. 76
STA. 362+50 TO STA. 364+00

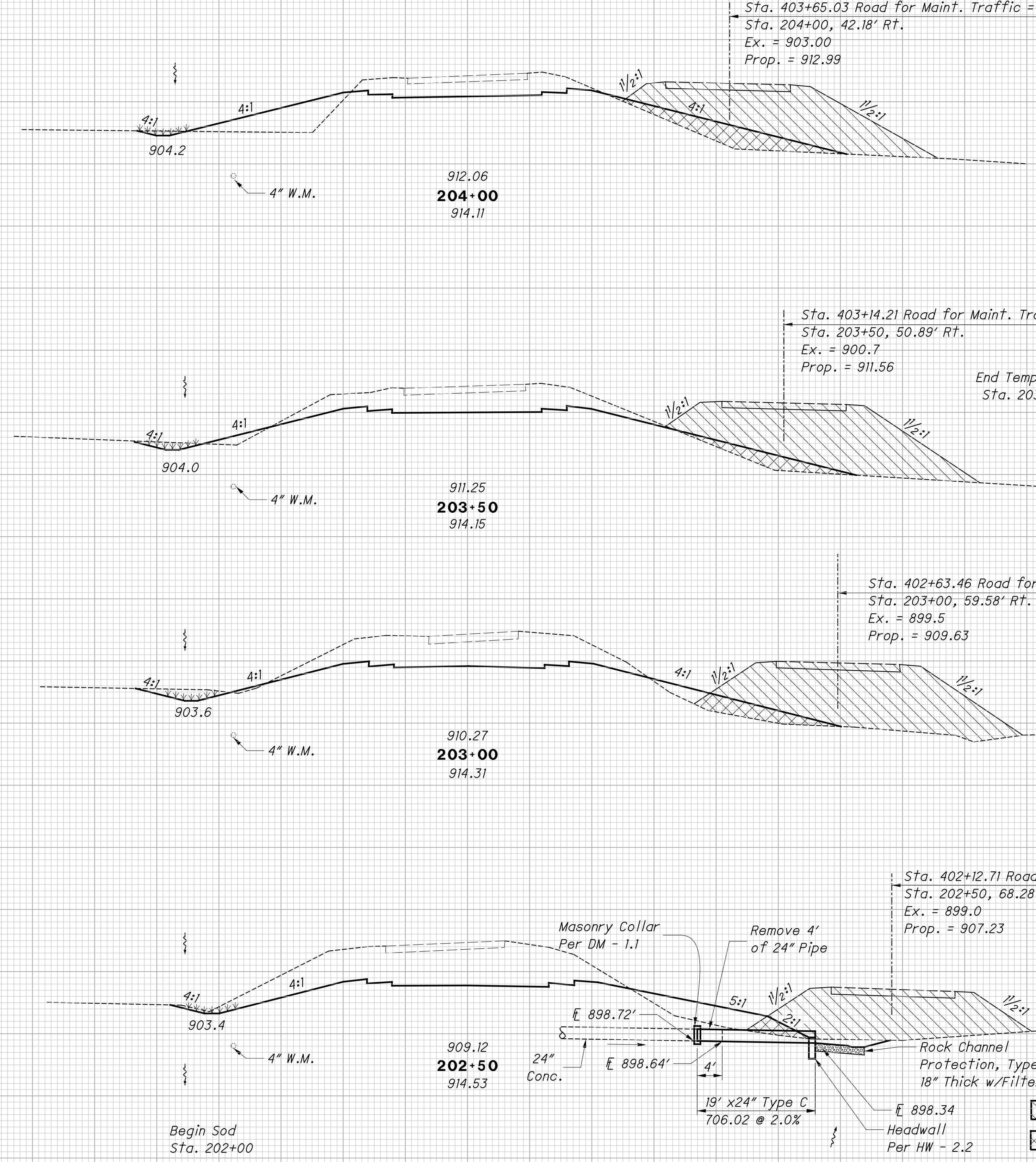
LUC-76-31.48

SEEDING	END WIDTH	SQ. YDS.
	100	
	80	
	60	
	40	
	20	
	0	
	20	
	40	
	60	
	80	
	100	
SHEET TOTAL		

SEEDING
END WIDTH SQ. YDS.

ROAD FOR MAINT. TRAFFIC
SP 1310-2
DATE: OCT. 2006

517
104
583
106
586
105
581
104
2267 SHEET TOTAL



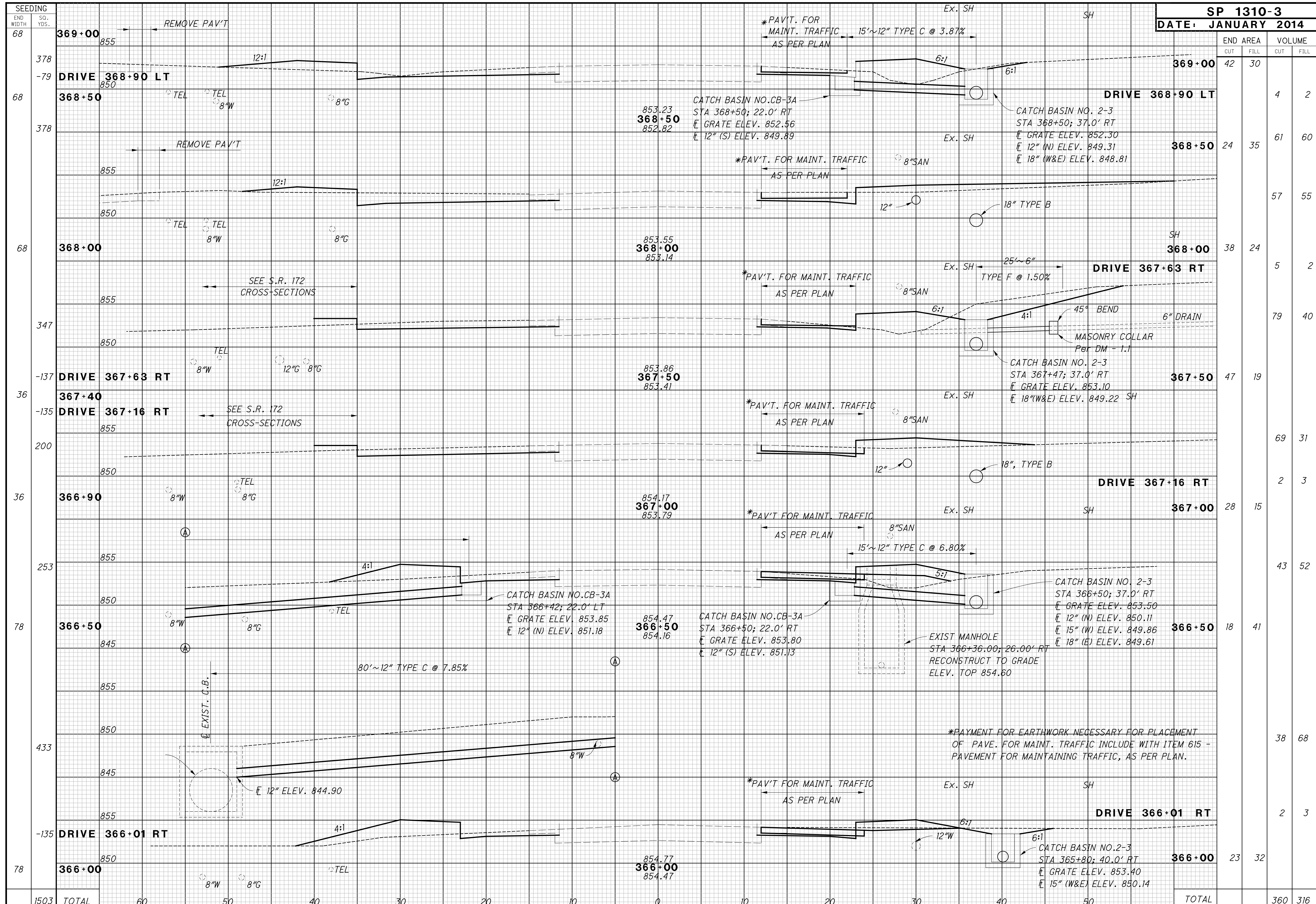
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
0	332			95	136	156	171
		0	645			241	169
		6	703			367	94
7	395			231	56		
		6	616			509	96
0	270			319	48		
		7	297				
SHEET TOTAL		*19	*2261			1273	530

CROSS SECTIONS - S.R. 130
STA. 202+50 TO STA. 204+00

MED - 130-1.23

74
103

*For Information Only



END STA	AREA	VOLUME	CUT		FILL	
			AREA	VOLUME	AREA	VOLUME
369+00	42	30				
368+90 LT					4	2
368+50	24	35	61	60		
368+00	38	24			57	55
367+63 RT					5	2
367+50	47	19	79	40		
367+40					69	31
367+16 RT					2	3
367+00	28	15			69	31
366+90					2	3
366+50	18	41	43	52		
366+01 RT					38	68
366+00 RT	23	32			2	3
TOTAL					360	316

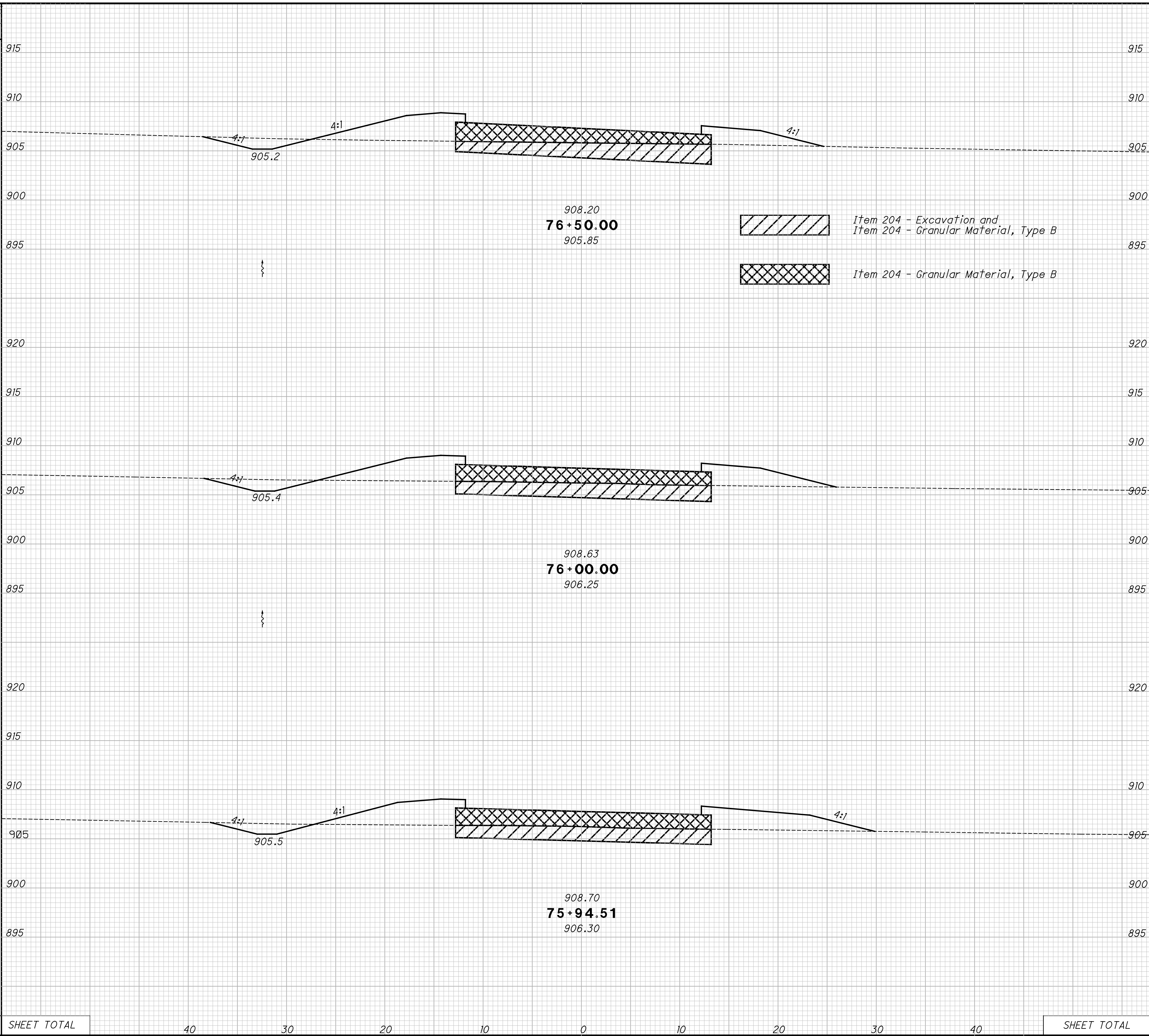
CROSS SECTIONS - S.R. 67
STA. 366+00 TO STA. 368+50

CLI-67-16.86

57
97

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SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
44	24	247	133
45	24	28	15
48	24		
275	148	SHEET TOTAL	



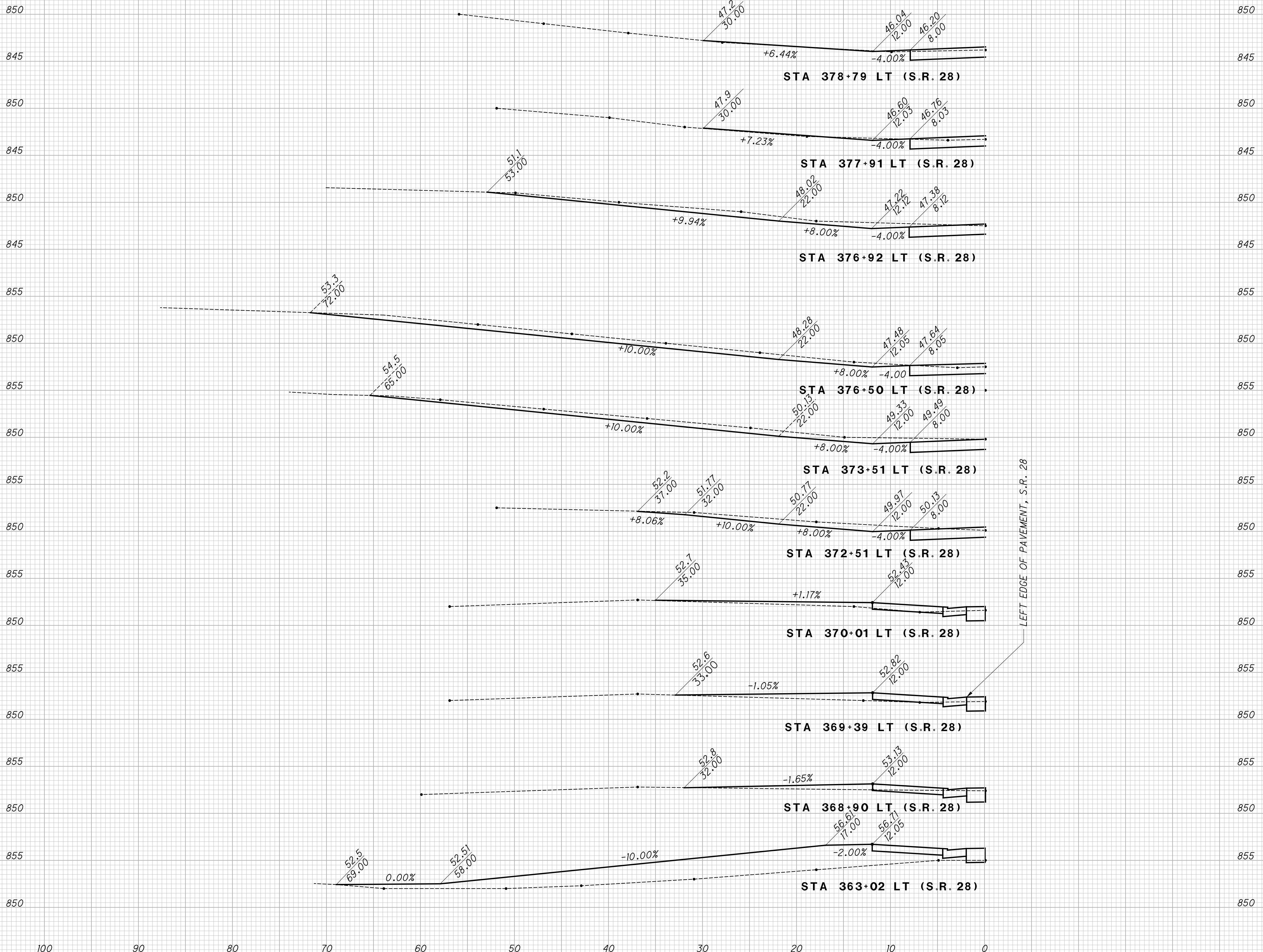
SP 1310-4							
DATE: OCTOBER 2006							
ITEM 203				ITEM 204			
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
7	41			40	78		
		14	77			72	144
8	42			38	78		
		2	9			8	16
7	51			37	78		
SHEET TOTAL		16	86			80	160

CALCULATED GFR CHECKED JAD

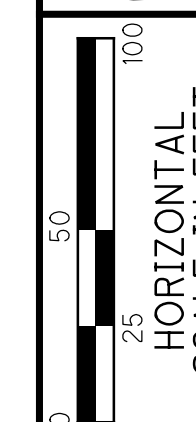
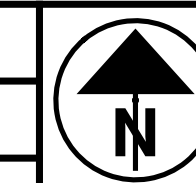
CROSS SECTIONS - RELOCATED BOUNDARIES RD (C.R. 9)
STA. 75+92.89 TO STA. 76+50

PER / LIC-13-28.73 / 0.00

(210 / 310)



LEFT EDGE OF PAVEMENT, S.R. 28

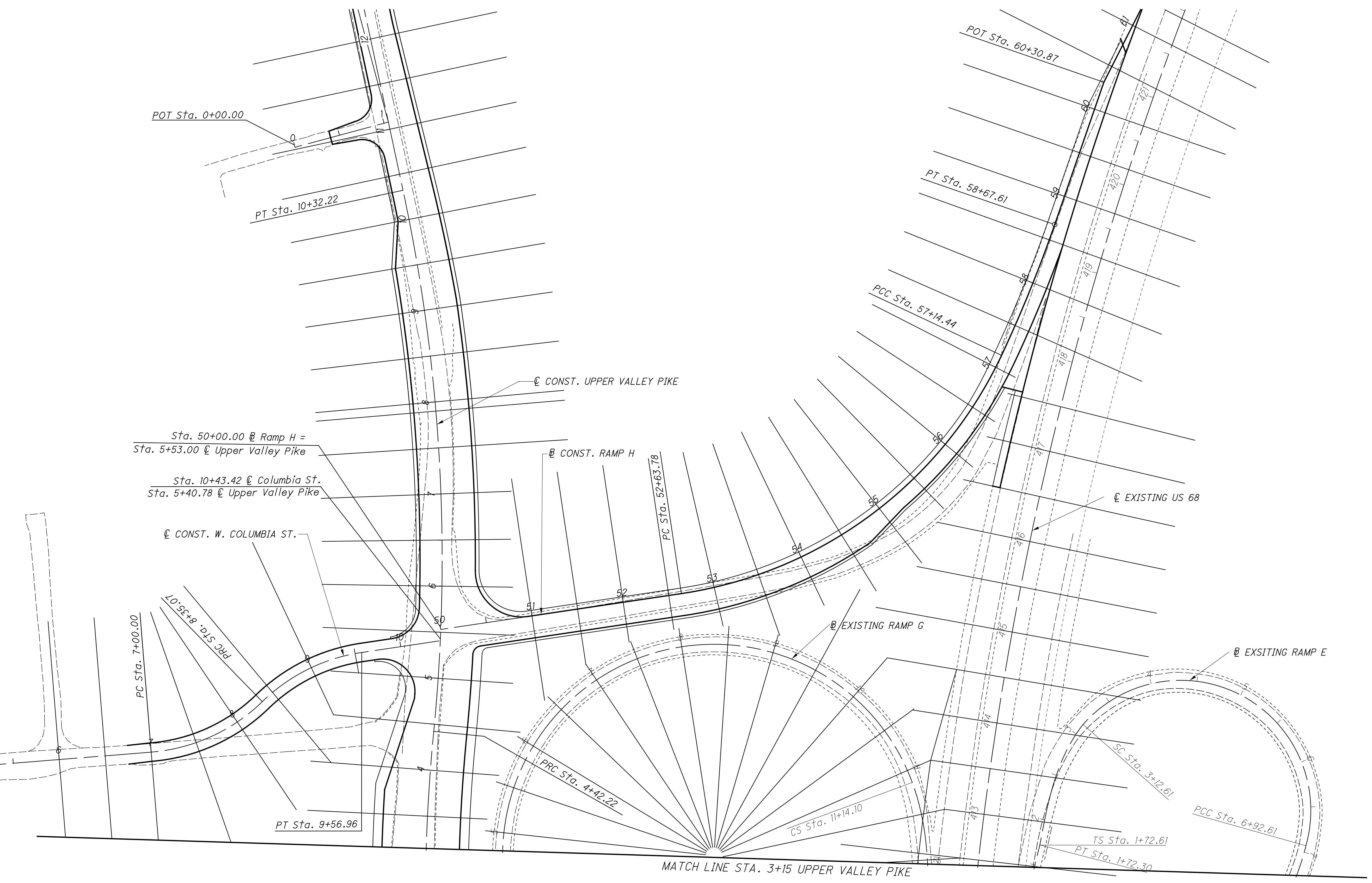


CALCULATED MSQ
CHECKED JAD

CROSS SECTION LAYOUT

CLA-40-10.18

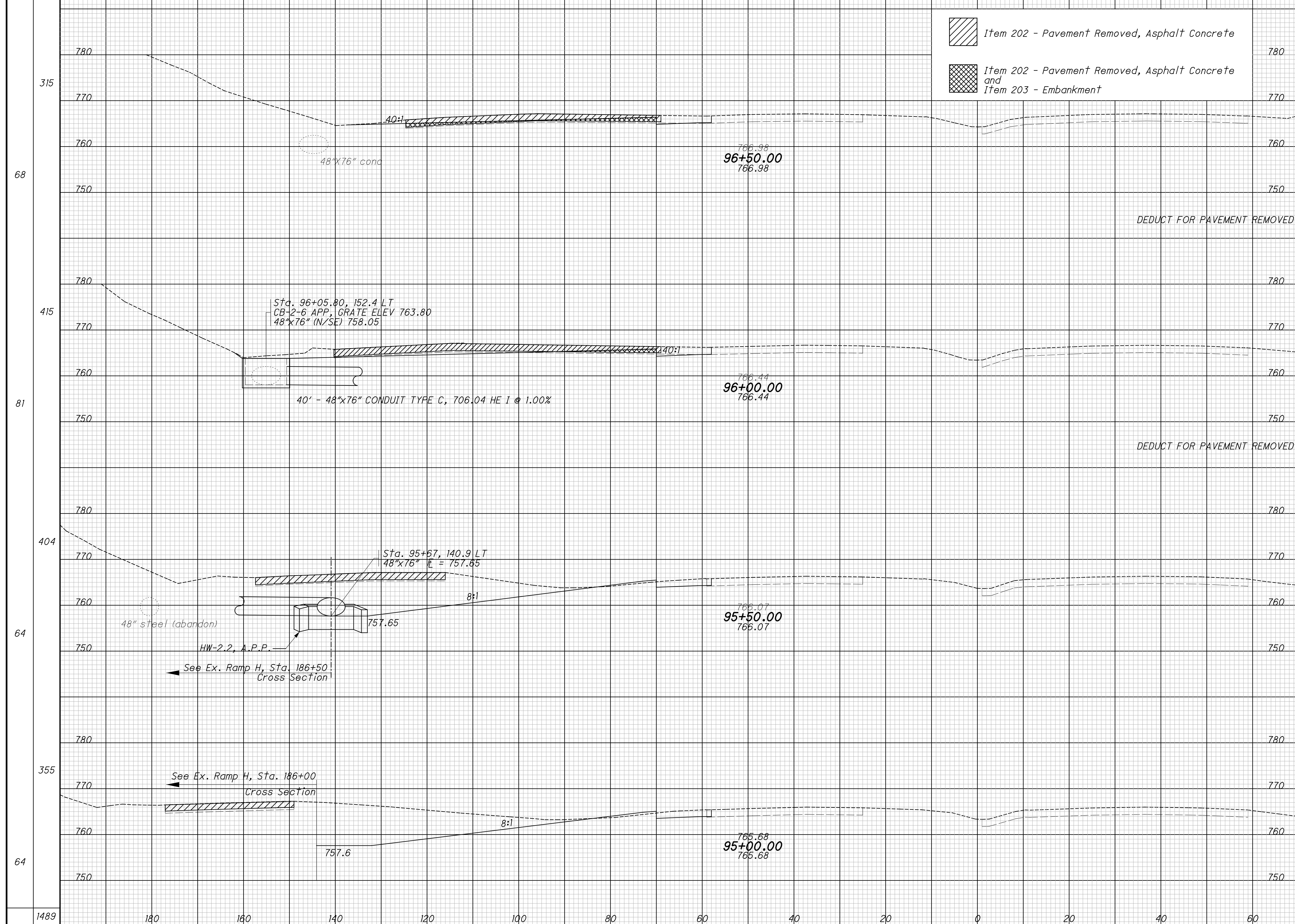
p:\ohiodot-pw\ohiodot-pw-02\Documents\03_Standards\Sample_Plans\SP1310-6_2006-10.dgn Sheet 2/9/2022 3:38:17 PM ipetros



SEEDING
END WIDTH SQ. YDS.

END AREA VOLUME
CUT FILL CUT FILL

 Item 202 - Pavement Removed, Asphalt Concrete
 Item 202 - Pavement Removed, Asphalt Concrete and Item 203 - Embankment



END AREA	VOLUME
CUT	FILL
81	26
160	9
335	4
315	5
1609	59

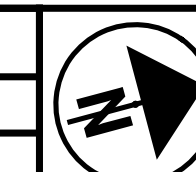
CROSS SECTIONS - S.R. 315
STA. 95+00 TO STA. 96+50

FRA - 315 - 12.18

26
68

1489

180 160 140 120 100 80 60 40 20 0 20 40 60



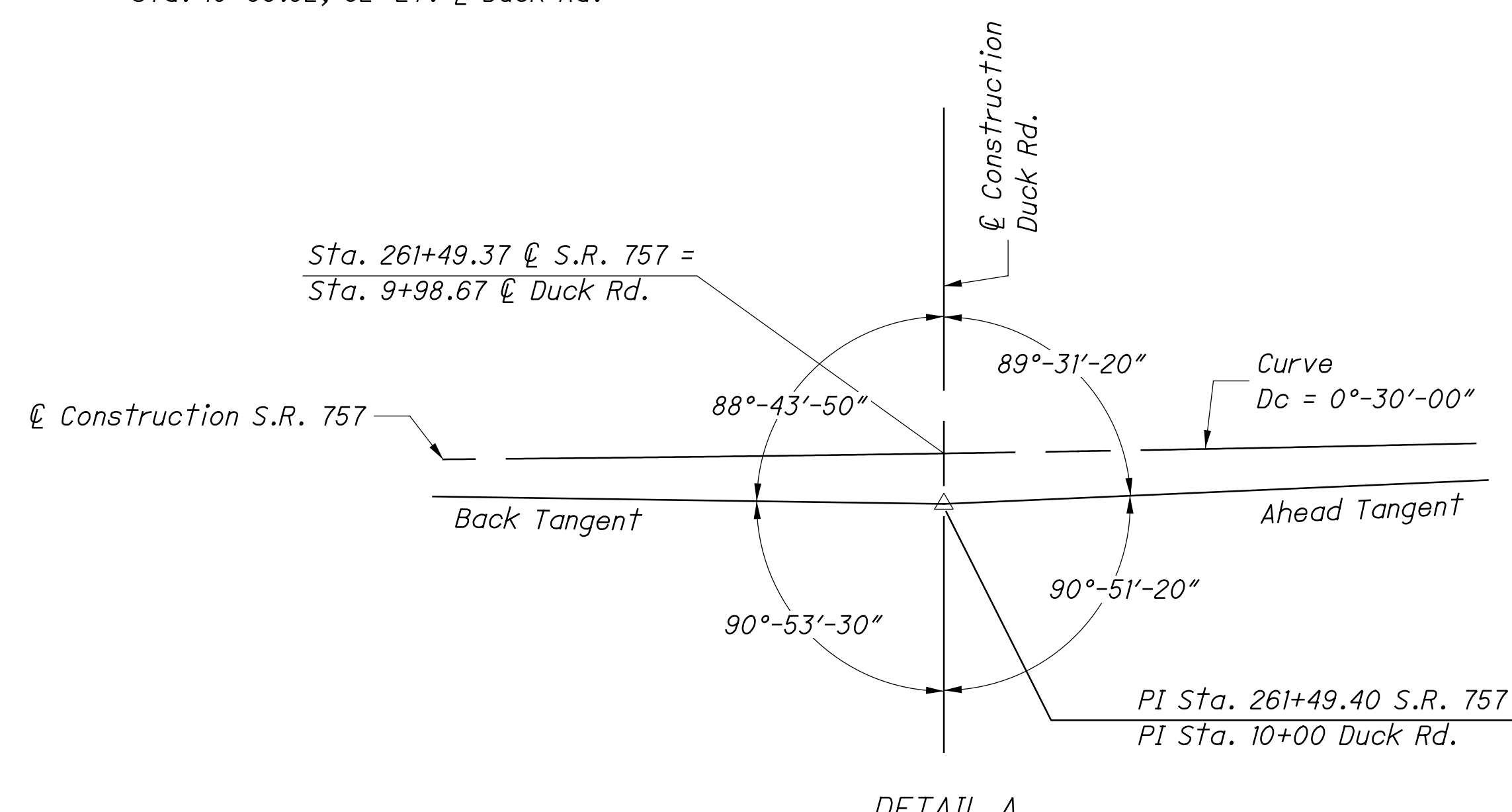
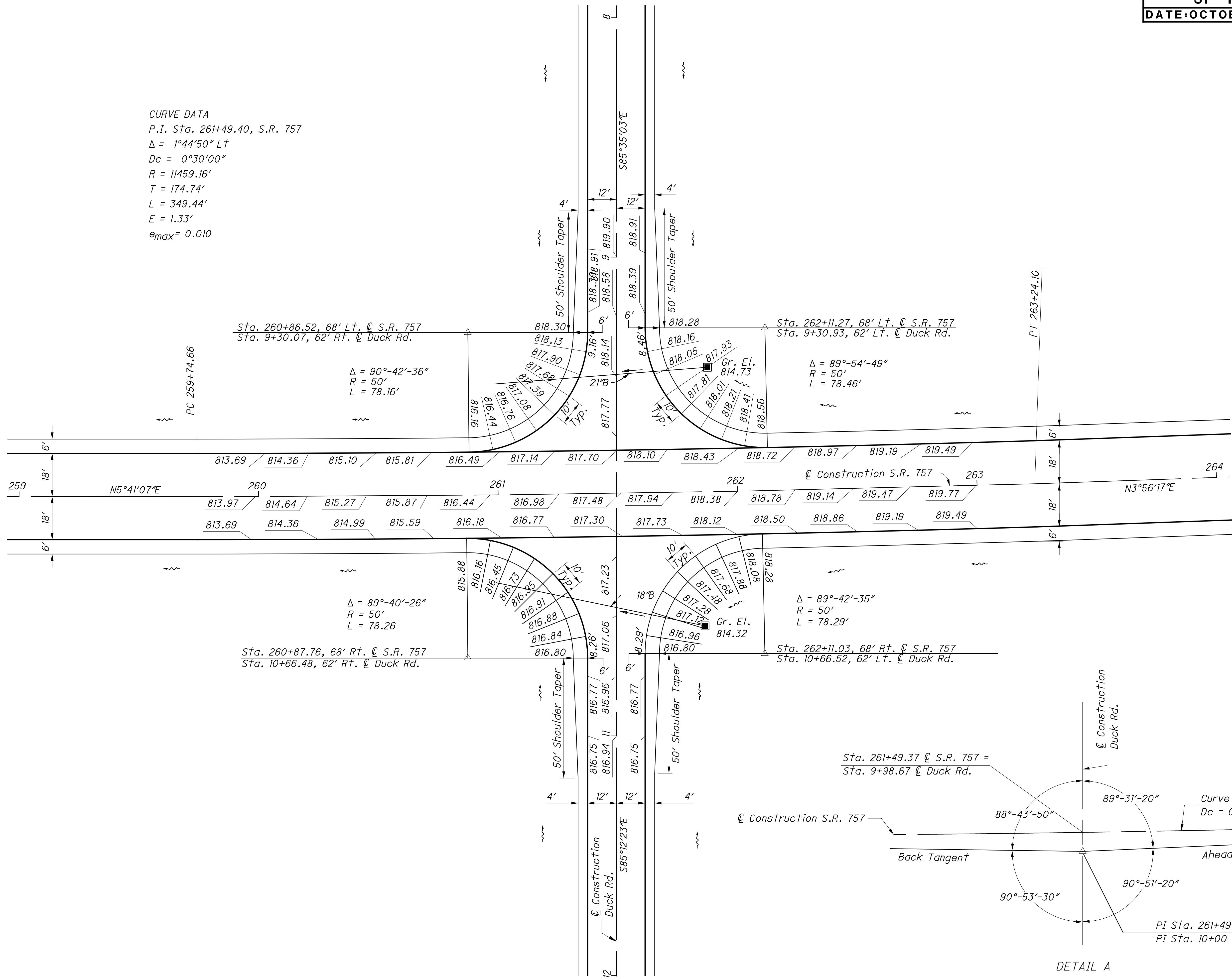
CALCULATED
VHW
CHECKED
TLH

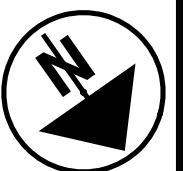
INTERSECTION DETAIL - S.R. 757 & DUCK ROAD

MEG-757-1.23

CURVE DATA

P.I. Sta. 261+49.40, S.R. 757
 $\Delta = 1^\circ 44' 50''$ Lt
 $D_c = 0^\circ 30' 00''$
 $R = 11459.16'$
 $T = 174.74'$
 $L = 349.44'$
 $E = 1.33'$
 $e_{max} = 0.010$



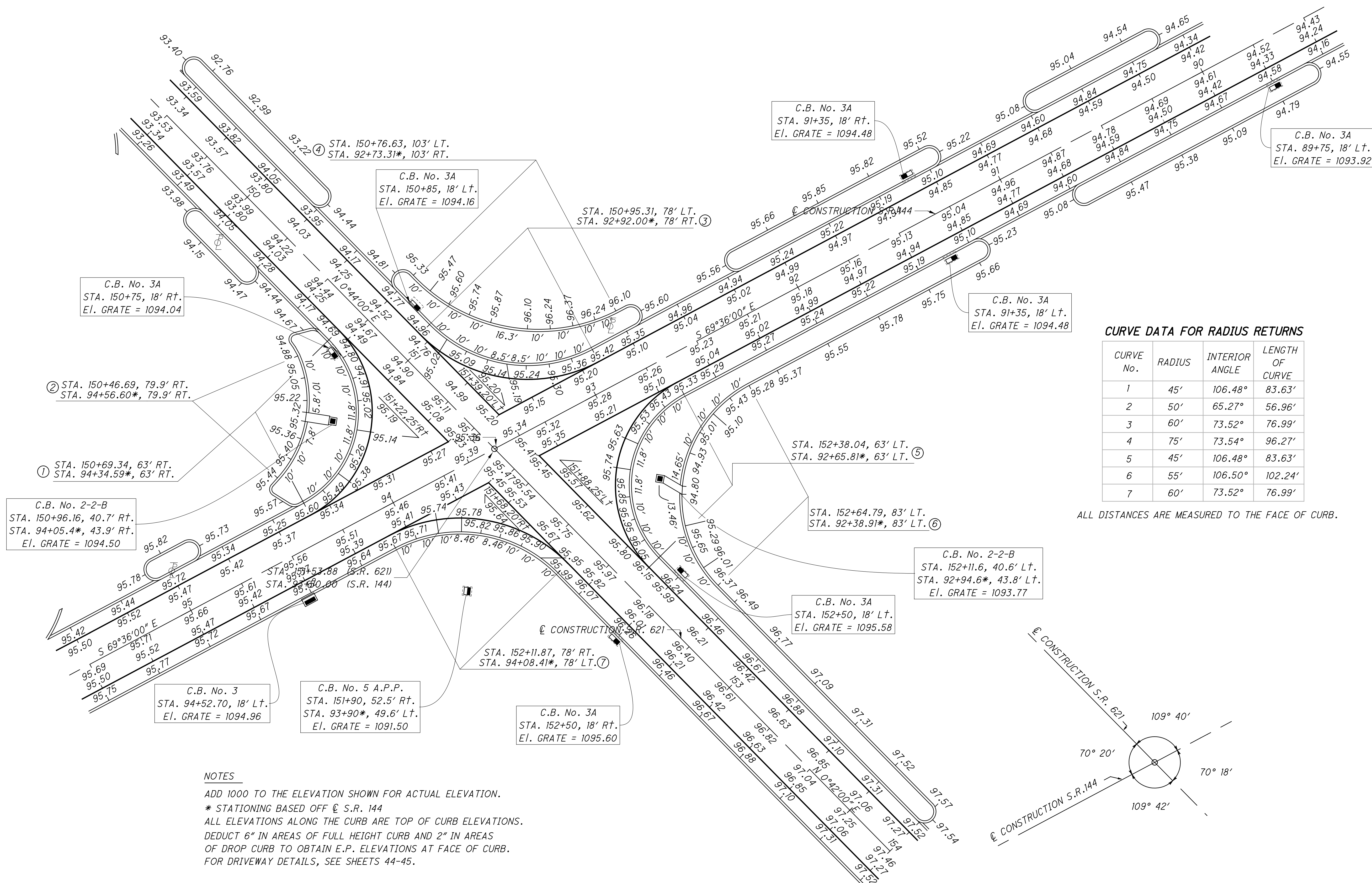


HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED WSR
CHECKED SUB

INTERSECTION DETAIL & PAVEMENT ELEVATIONS
S.R. 621 AND S.R. 144

BEL-621-5.29

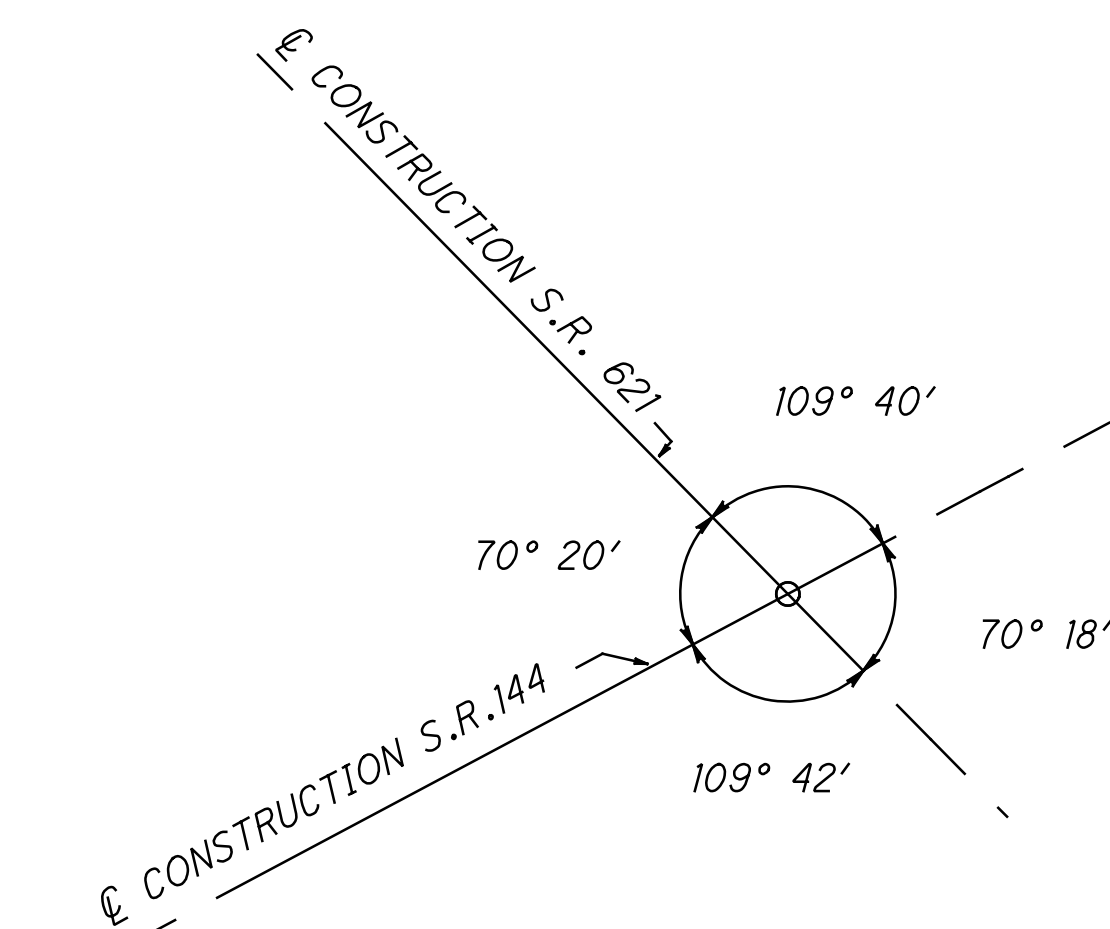


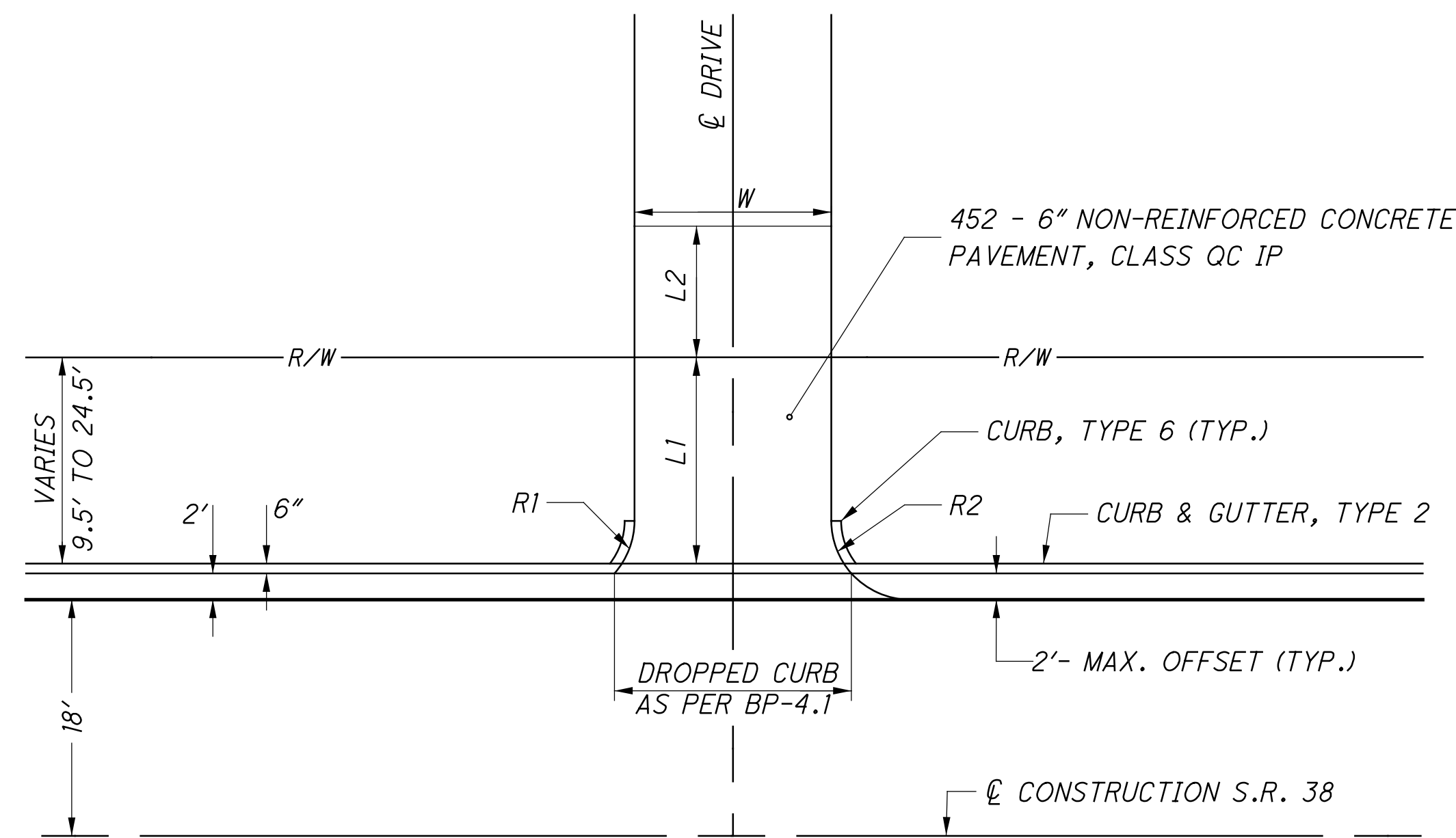
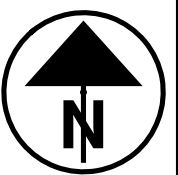
CURVE DATA FOR RADIUS RETURNS

CURVE No.	RADIUS	INTERIOR ANGLE	LENGTH OF CURVE
1	45'	106.48°	83.63'
2	50'	65.27°	56.96'
3	60'	73.52°	76.99'
4	75'	73.54°	96.27'
5	45'	106.48°	83.63'
6	55'	106.50°	102.24'
7	60'	73.52°	76.99'

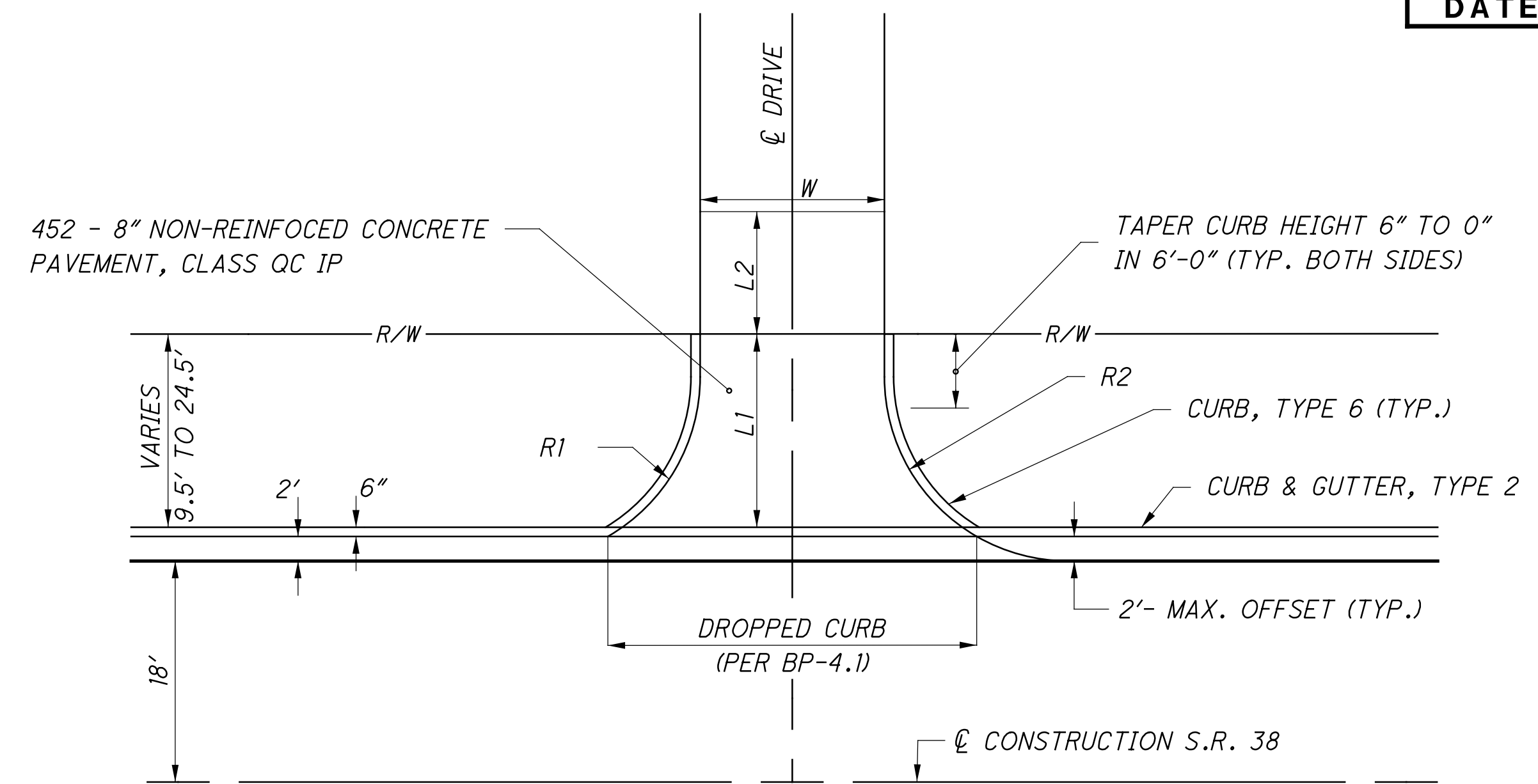
ALL DISTANCES ARE MEASURED TO THE FACE OF CURB.

NOTES
 ADD 1000 TO THE ELEVATION SHOWN FOR ACTUAL ELEVATION.
 * STATIONING BASED OFF @ S.R. 144
 ALL ELEVATIONS ALONG THE CURB ARE TOP OF CURB ELEVATIONS.
 DEDUCT 6" IN AREAS OF FULL HEIGHT CURB AND 2" IN AREAS OF DROP CURB TO OBTAIN E.P. ELEVATIONS AT FACE OF CURB.
 FOR DRIVEWAY DETAILS, SEE SHEETS 44-45.

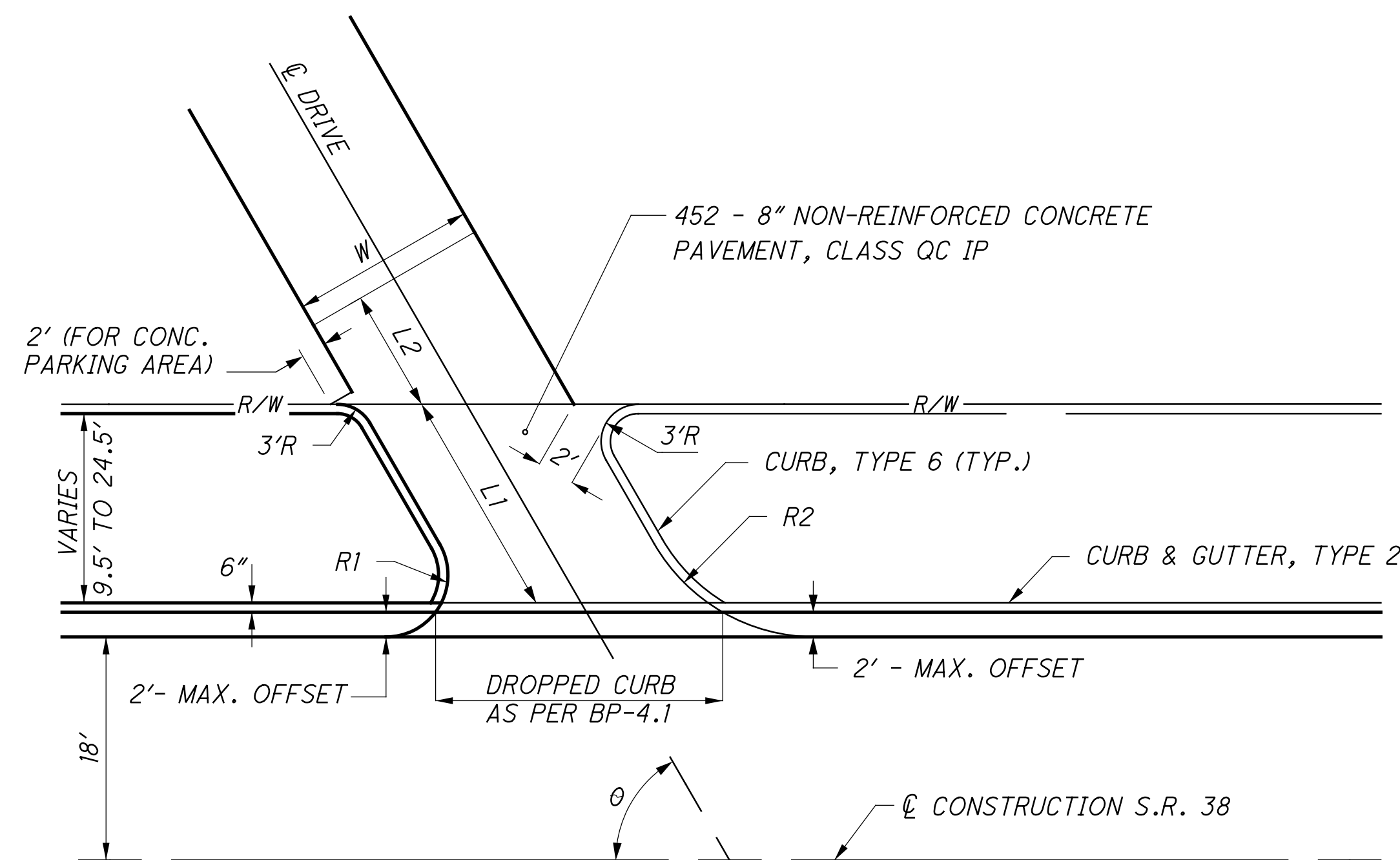




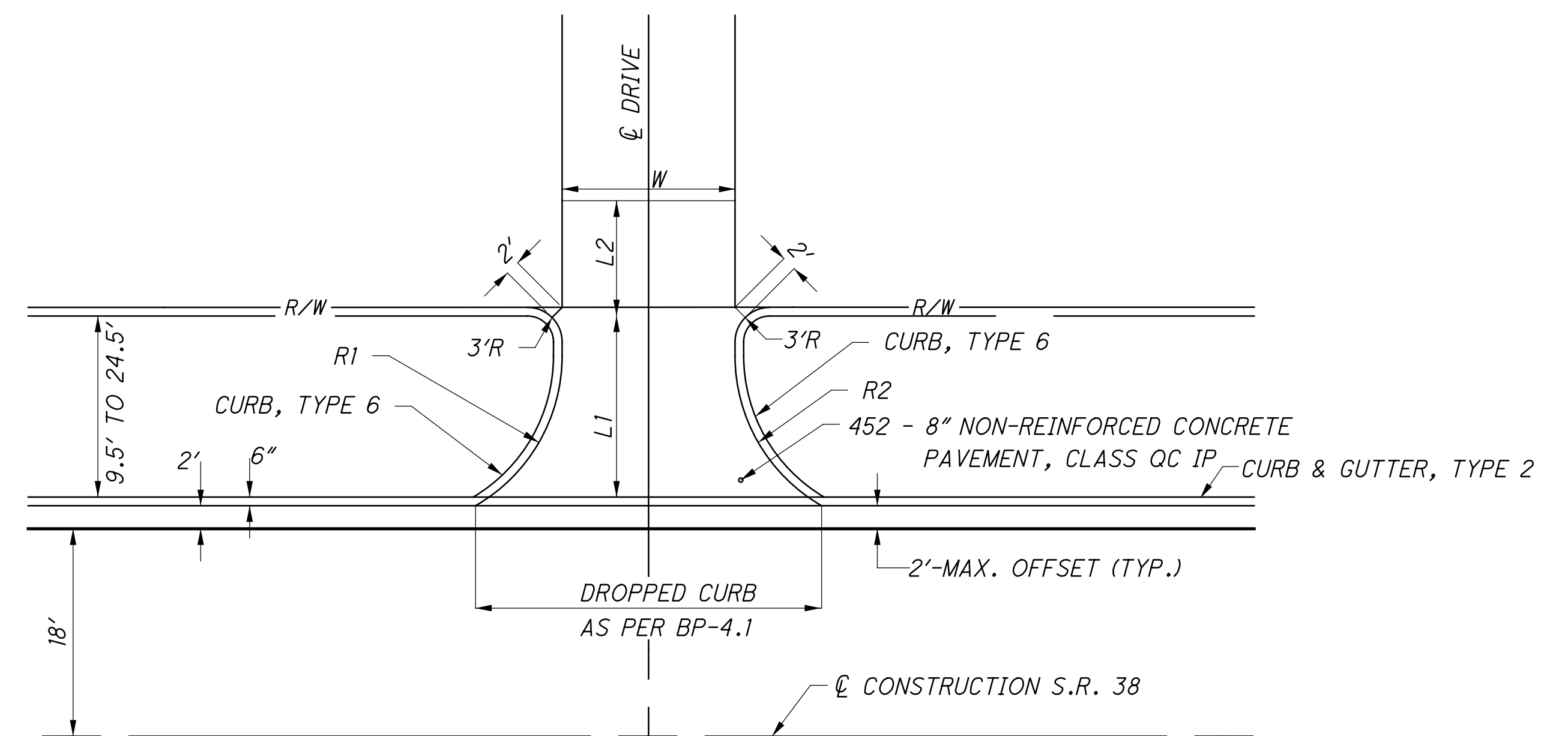
RESIDENTIAL DRIVES



COMMERCIAL DRIVES WITHOUT WRAP-AROUND CURB



SERVICE STATION DRIVES
FOR θ , SEE PLAN/PROFILE SHEETS.



COMMERCIAL DRIVES WITH WRAP-AROUND CURB

RESIDENTIAL DRIVES

- EXISTING AGGREGATE DRIVES
 - 452 - 6" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP (APRON)
 - 301 - 8" ASPHALT CONCRETE BASE, PG64-22
- EXISTING ASPHALT DRIVES
 - 452 - 6" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP (APRON)
 - 301 - 2" ASPHALT CONCRETE BASE, PG64-22
 - 407 - TACK COAT
 - 304 - 6" AGGREGATE BASE
- EXISTING CONCRETE DRIVES
 - 452 - 6" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP (APRON)

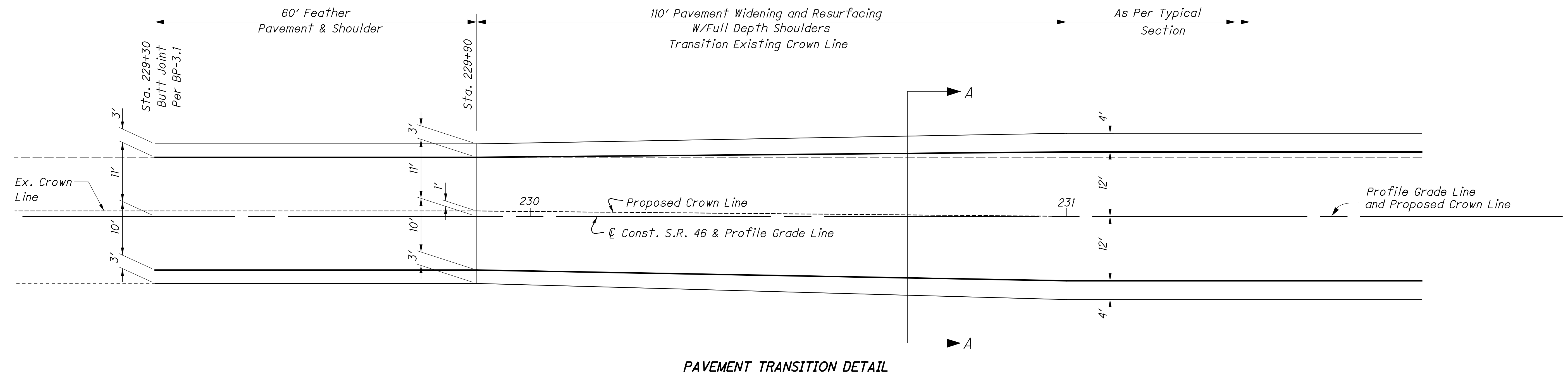
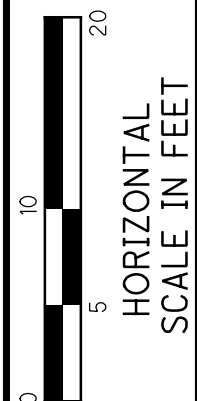
COMMERCIAL AND SERVICE STATION DRIVES

- EXISTING AGGREGATE DRIVE
 - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP (APRON)
 - 304 - 10" AGGREGATE BASE
- EXISTING ASPHALT DRIVE
 - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT CLASS QC IP (APRON)
 - 442 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
 - 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
 - 407 - TACK COAT
 - 304 - 8" AGGREGATE BASE
- EXISTING CONCRETE DRIVE
 - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP (APRON)

SEE SHEET 41 FOR DRIVEWAY QUANTITIES.

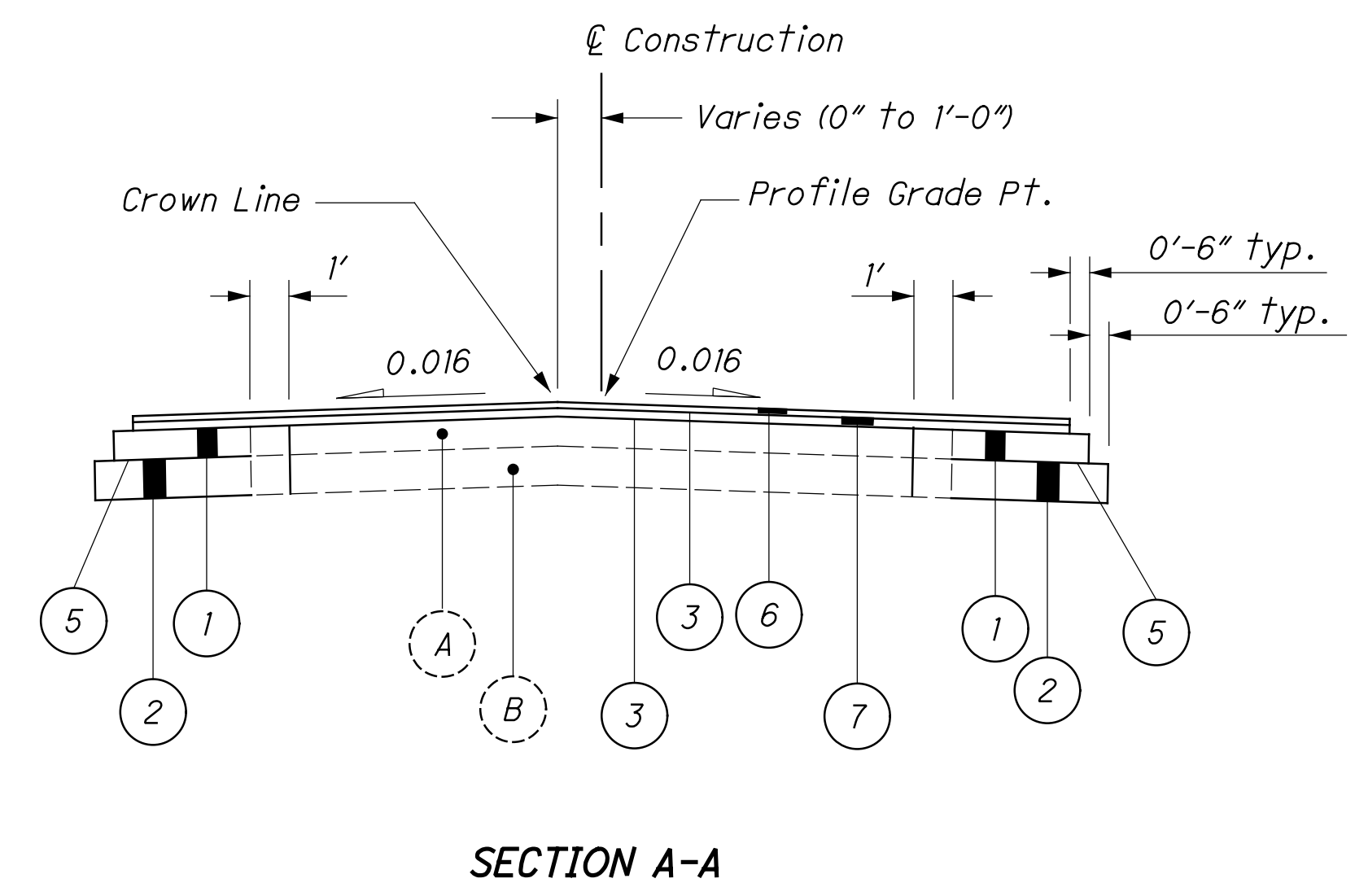
DRIVEWAY DETAILS

CAR-38-22.56



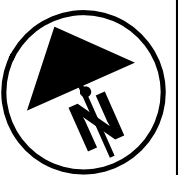
LEGEND

- ① ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
- ② ITEM 304 - 6" AGGREGATE BASE
- ③ ITEM 407 - TACK COAT (Applied at a rate of 0.075 gal/yd²)
- ④ NOT USED
- ⑤ ITEM 408 - PRIME COAT (Applied at a rate of 0.4 gal/yd²)
- ⑥ ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
- ⑦ ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- Ⓐ ± 5" Asphalt
- Ⓑ ± 8" Macadam Base

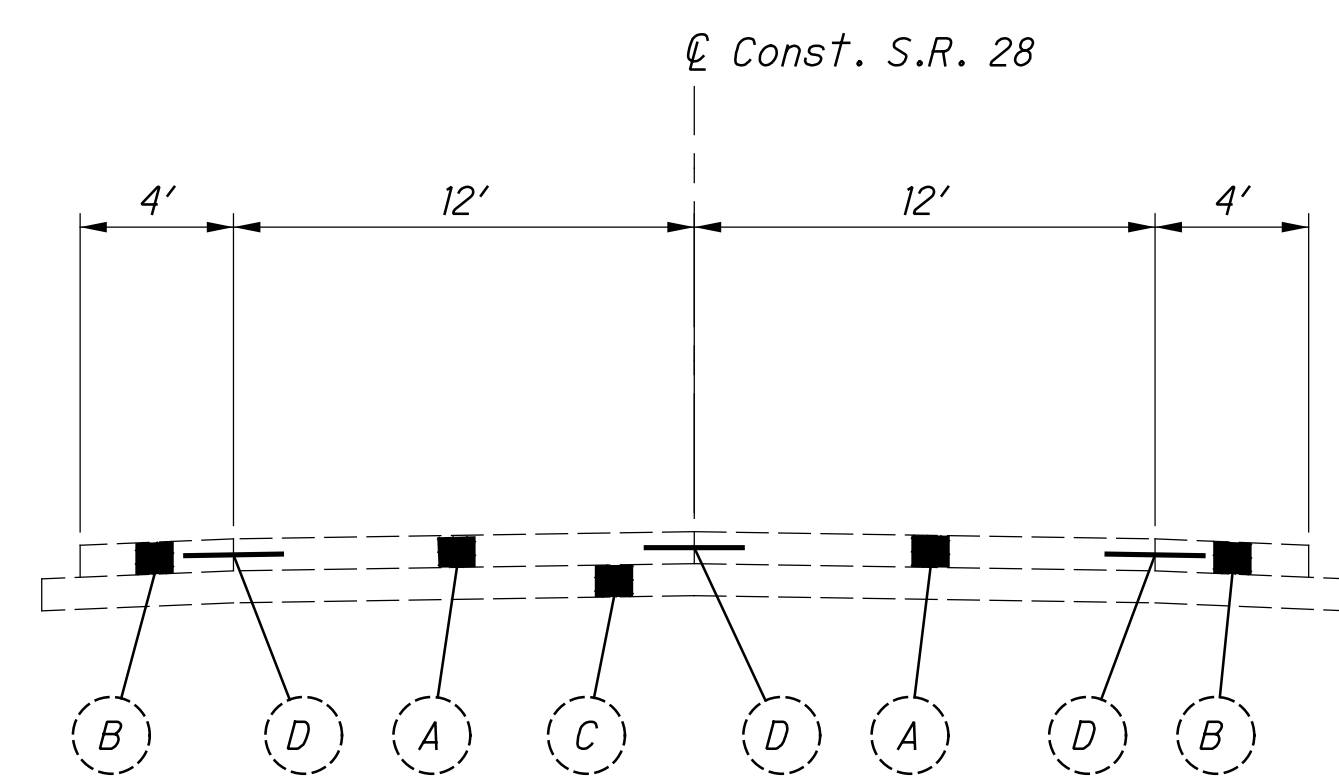
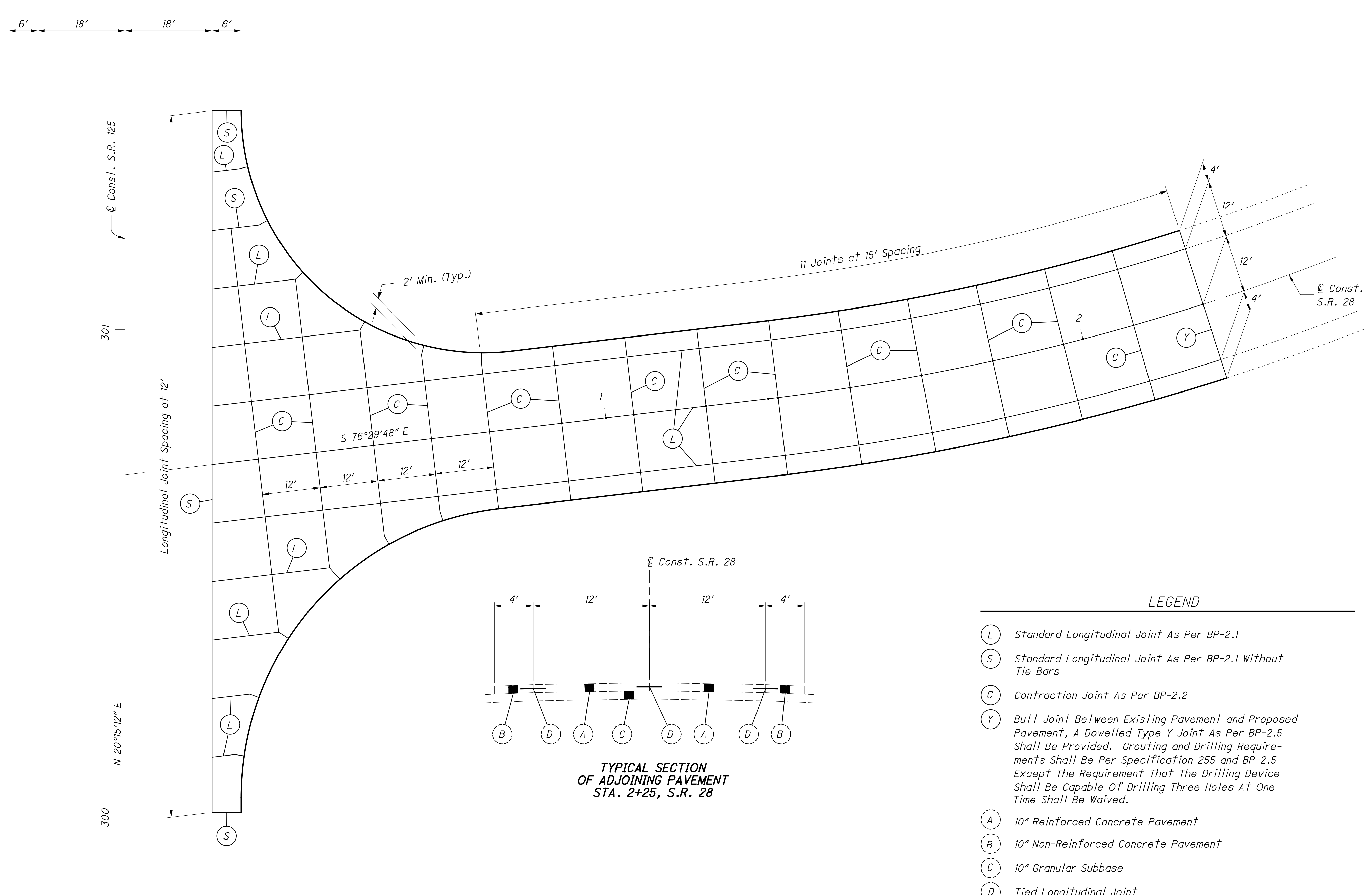


PAVEMENT TRANSITION DETAILS

PIC-46-27.22



CALCULATED
AAM
CHECKED
DEM



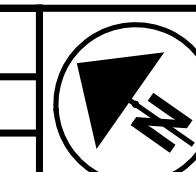
TYPICAL SECTION
OF ADJOINING PAVEMENT
STA. 2+25, S.R. 28

LEGEND

- (L) Standard Longitudinal Joint As Per BP-2.1
- (S) Standard Longitudinal Joint As Per BP-2.1 Without Tie Bars
- (C) Contraction Joint As Per BP-2.2
- (Y) Butt Joint Between Existing Pavement and Proposed Pavement, A Dowelled Type Y Joint As Per BP-2.5 Shall Be Provided. Grouting and Drilling Requirements Shall Be Per Specification 255 and BP-2.5 Except The Requirement That The Drilling Device Shall Be Capable Of Drilling Three Holes At One Time Shall Be Waived.
- (A) 10" Reinforced Concrete Pavement
- (B) 10" Non-Reinforced Concrete Pavement
- (C) 10" Granular Subbase
- (D) Tied Longitudinal Joint

PAVEMENT JOINT DETAIL
S.R. 28

LOR-28-0.00

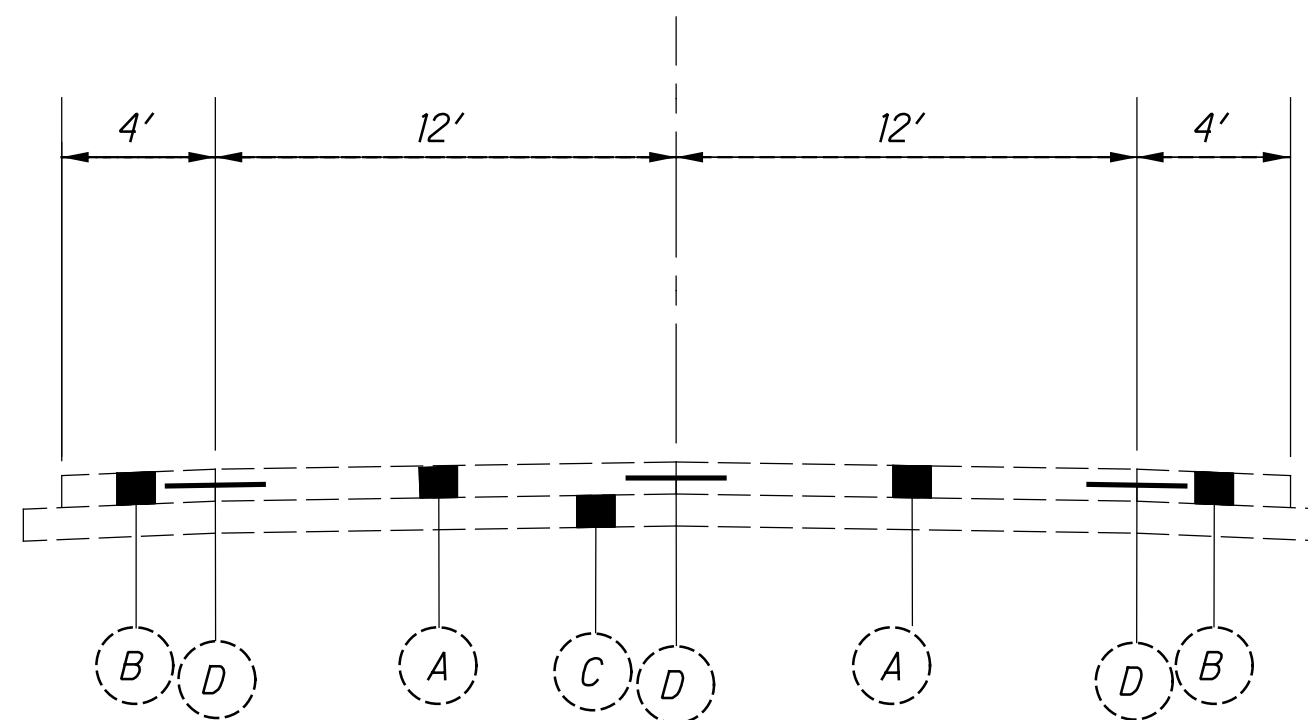


CALCULATED: VHW
CHECKED: TLH

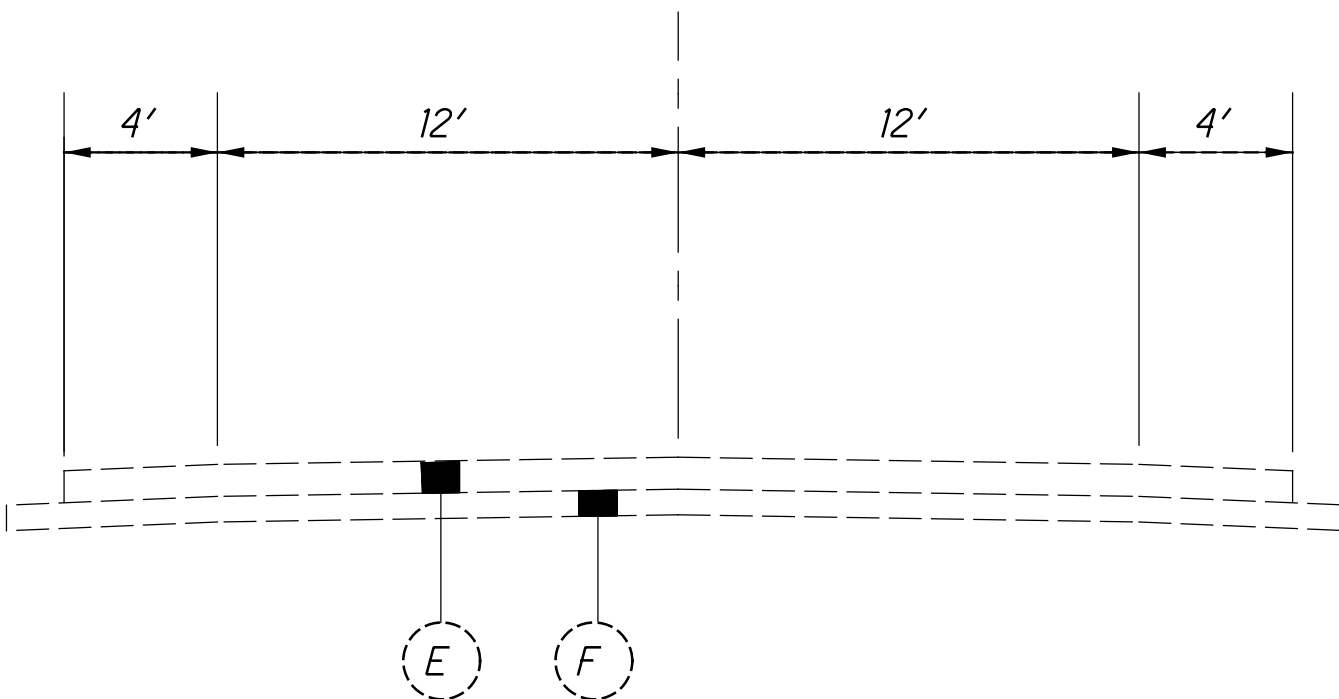
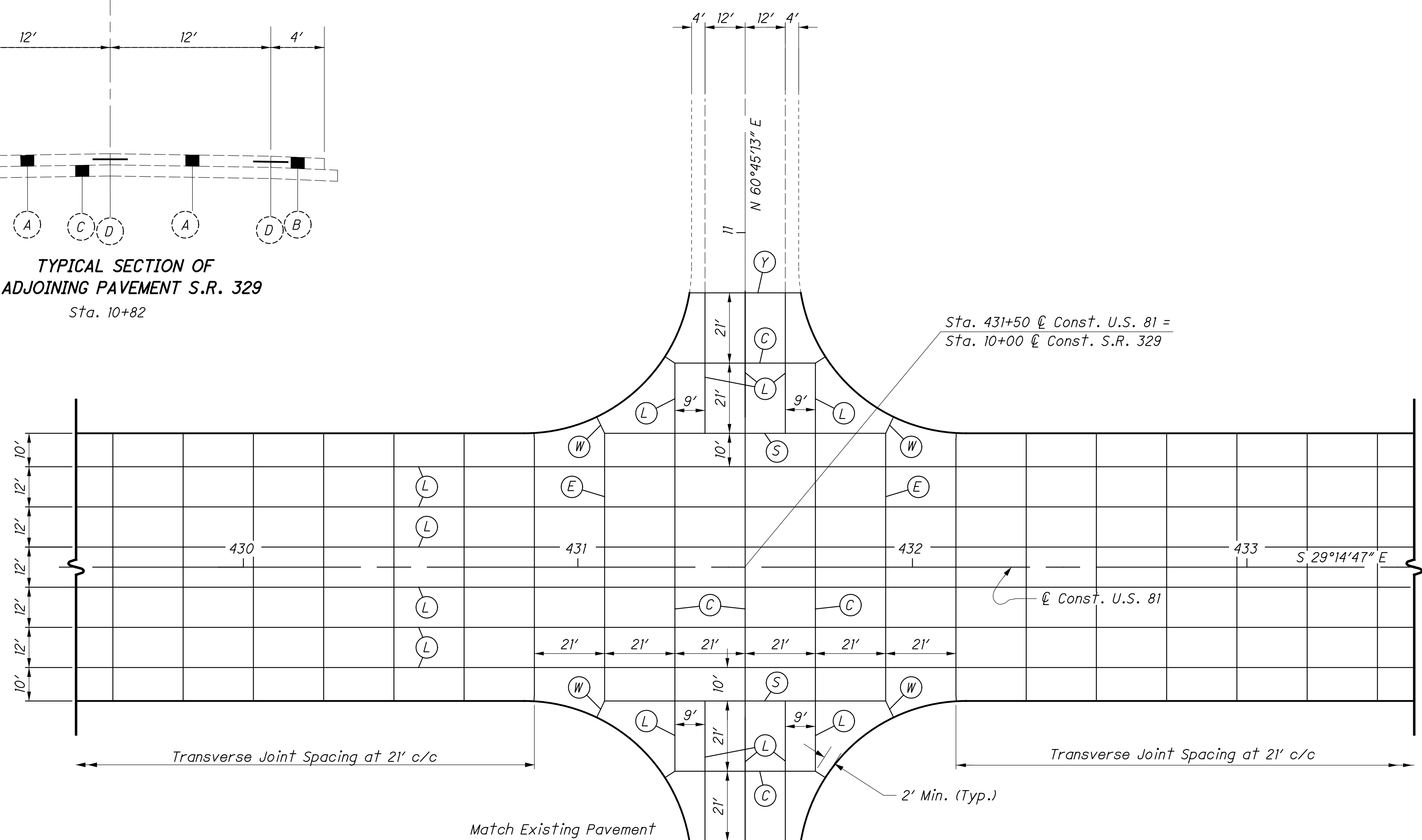
HORIZONTAL SCALE IN FEET
0 10 20 40

PAVEMENT JOINT DETAIL
U.S.R. 81 AND S.R. 329

HOC-81-18.58
103
189



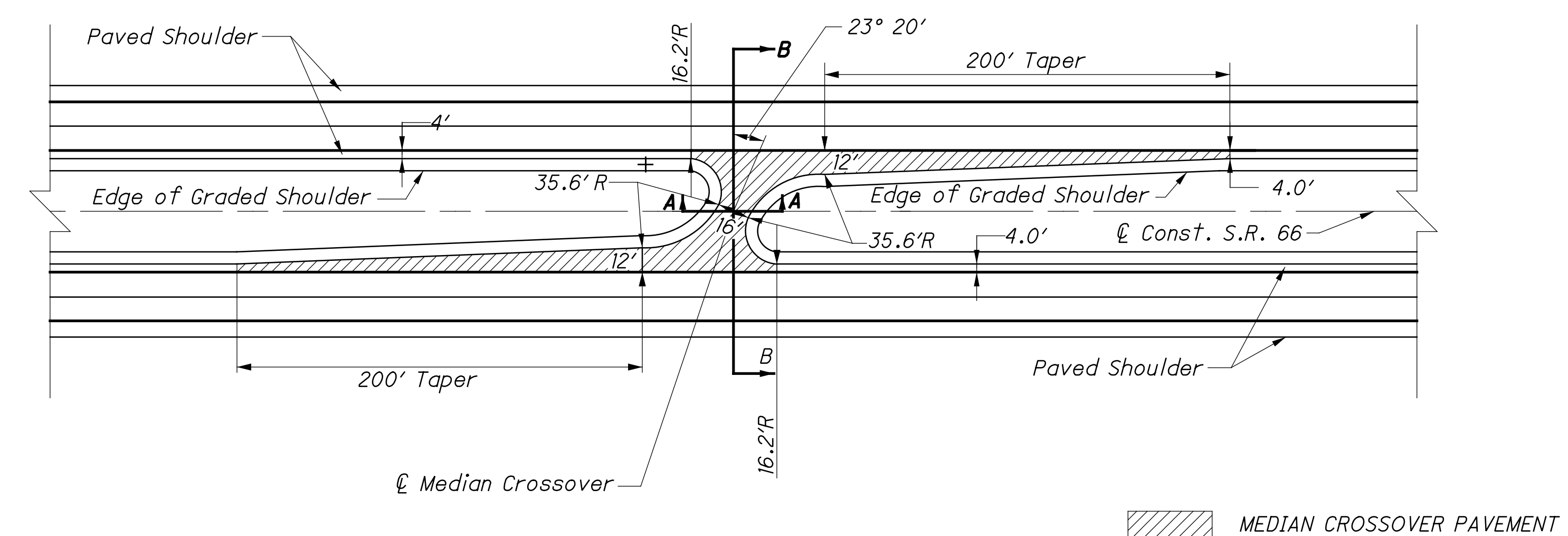
TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 10+82



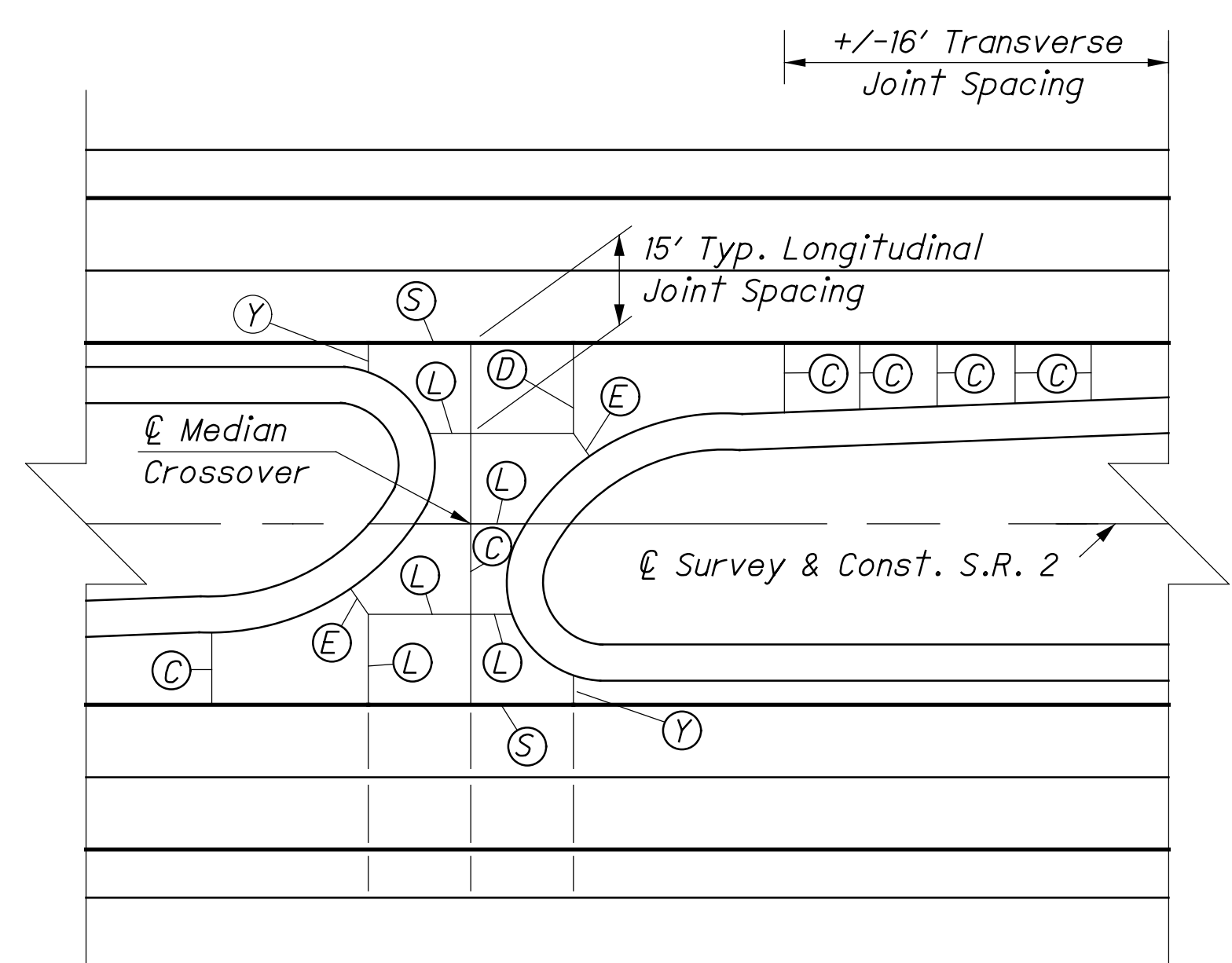
TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 9+18

LEGEND

- | | |
|---|--|
| (E) Expansion Joint As Per BP-2.2 | (A) 10" Reinforced Concrete Pavement |
| (W) Expansion Joint As Per BP-2.2 Without Dowel Bars | (B) 10" Non-Reinforced Concrete Pavement |
| (L) Standard Longitudinal Joint As Per BP-2.1 | (C) 10" Granular Subbase |
| (S) Standard Longitudinal Joint As Per BP-2.1 Without Tie Bars | (D) Tied Longitudinal Joint |
| (C) Contraction Joint As Per BP-2.2 | (E) Asphalt Concrete Pavement, Depth Unknown |
| (Y) Butt Joint Between Existing Pavement and Proposed Pavement, A Dowelled Type Y Joint As Per BP-2.5 Shall Be Provided. Grouting and Drilling Requirements Shall Be Per Specification 255 and BP-2.5 Except The Requirement That The Drilling Device Shall Be Capable Of Drilling Three Holes At One Time Shall Be Waived. | (F) Aggregate Base, Depth Unknown |



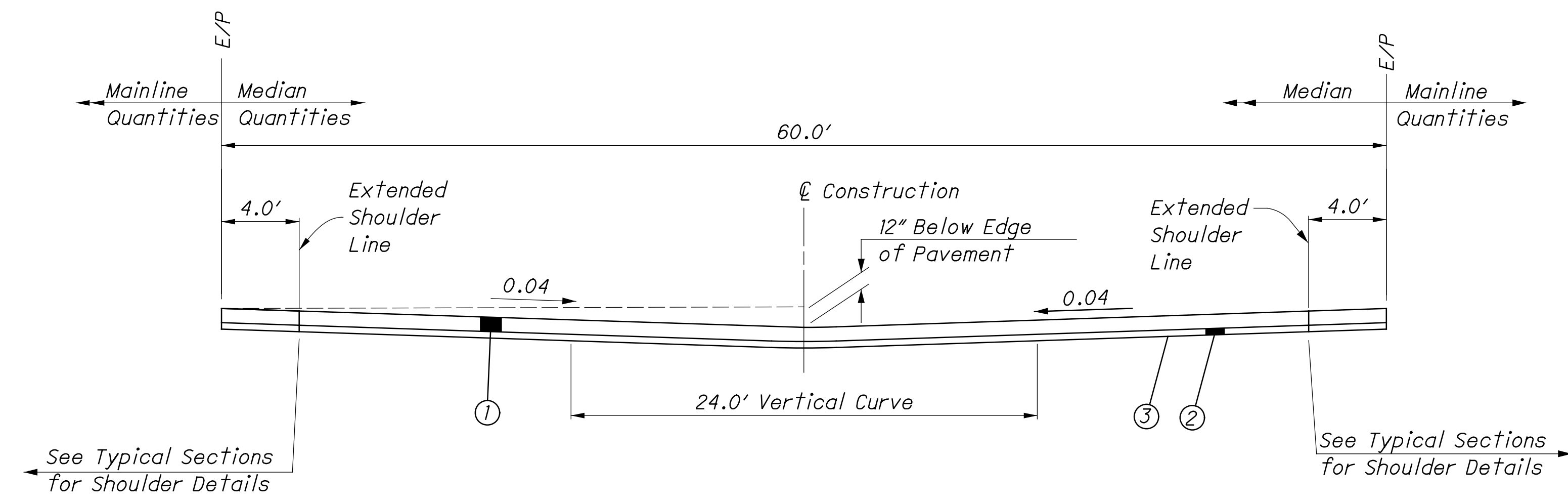
TYPICAL MEDIAN CROSSOVER DETAIL
Applies: Sta. 5+00 and Sta. 124+00



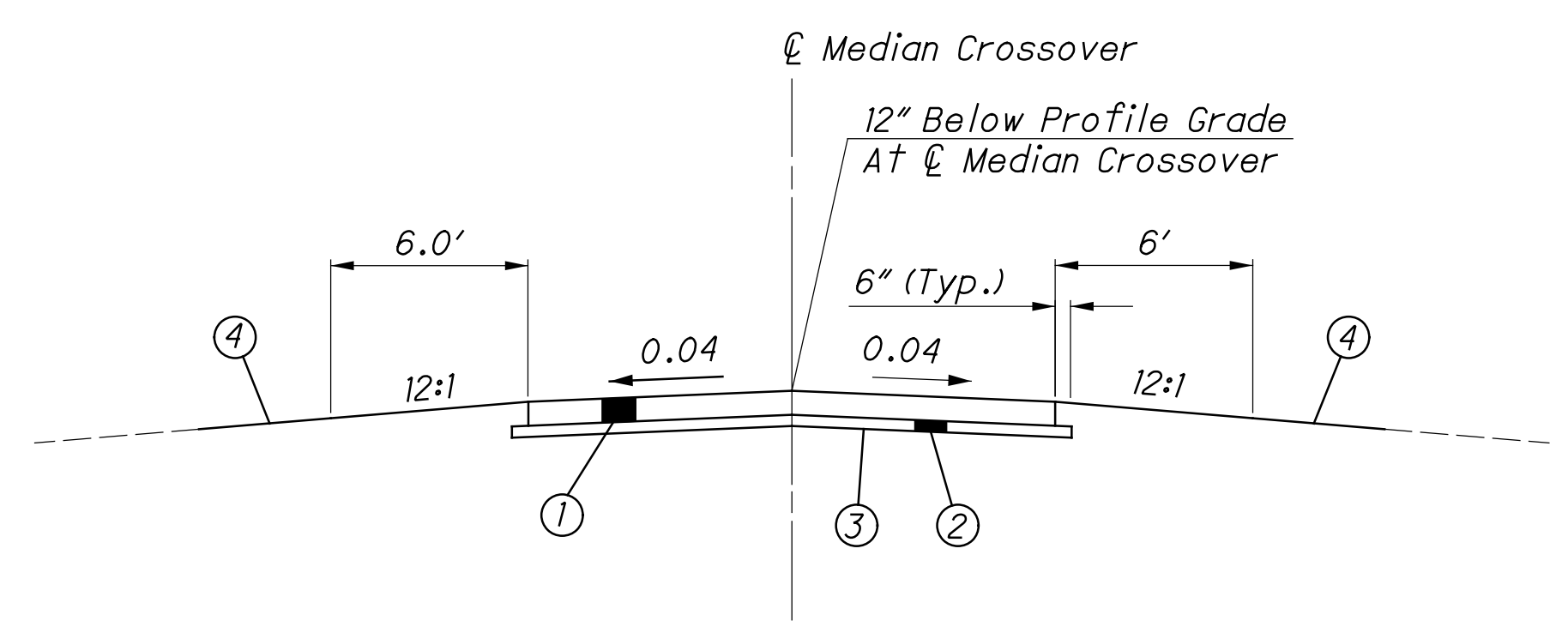
MEDIAN CROSSOVER JOINT DETAIL

*Align Transverse Joints in Median Crossover and Proposed Pavement.

Note: The Above is A Suggested Joint Diagram. The Contractor May Submit an Alternate Joint Diagram to the Engineer for Approval.



Section B-B



Section A-A

LEGEND

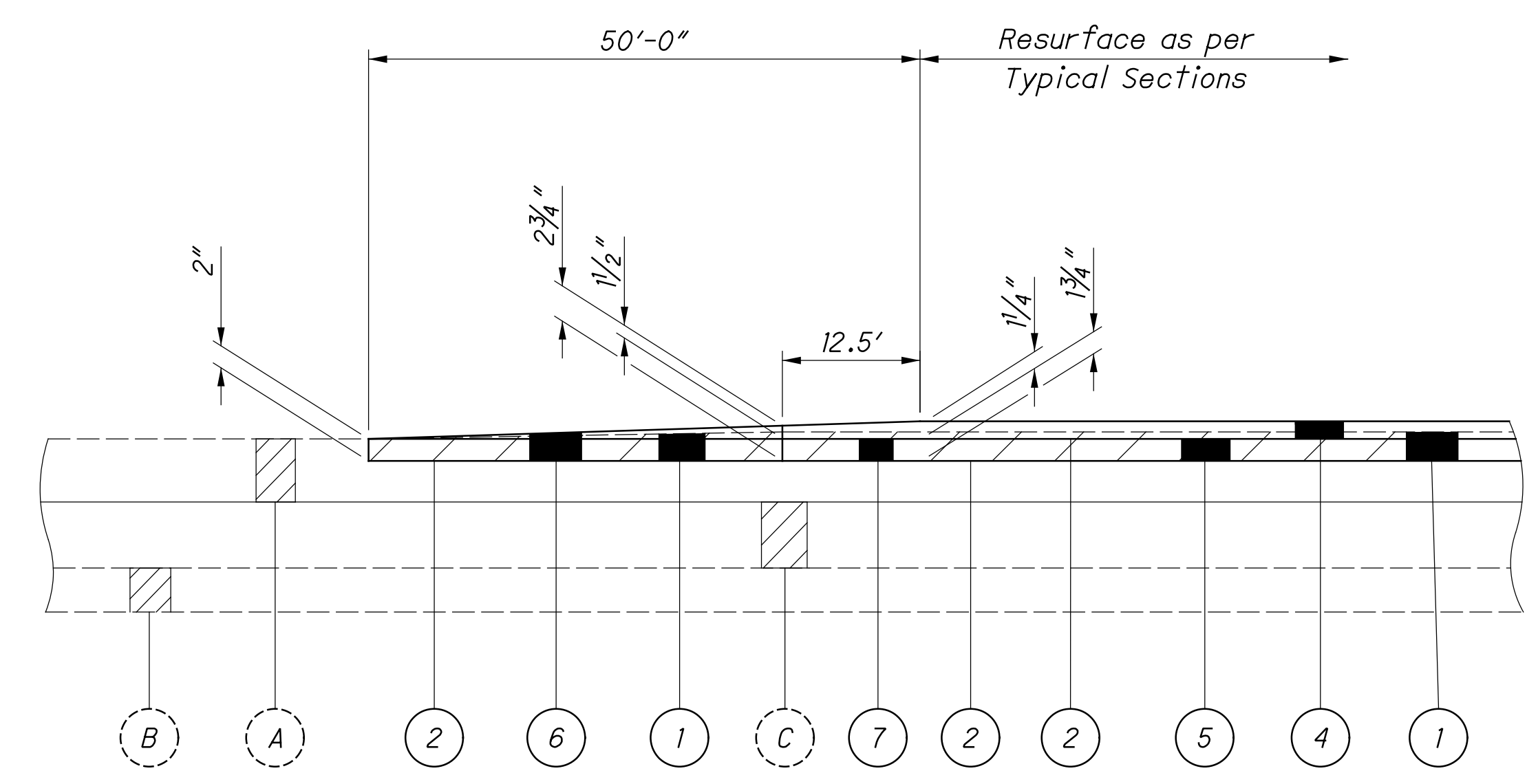
- ① ITEM 452 - 9" Non-Reinforced Concrete Pavement, Class QC IP, As Per Plan
- ② ITEM 304 - 6" Aggregate Base
- ③ ITEM 204 - Subgrade Compaction
- ④ ITEM 659 - Seeding And Mulching
- ⓐ Contraction Joint As Per BP-2.2
- ⓓ Transverse Joint (With Dowels), As Per BP-2.2
- ⓔ Expansion Joint (Without Dowels), As Per BP-2.2
- Ⓢ Standard Longitudinal Joint, As Per BP-2.1 without Tie Bar 3
- Ⓛ Longitudinal Joint, As Per BP-2.1
- Ⓨ Contraction Joint (Type Y) As Per BP-2.5

MEDIAN CROSSOVER DETAILS

OTT-66-4.33

PROPOSED LEGEND

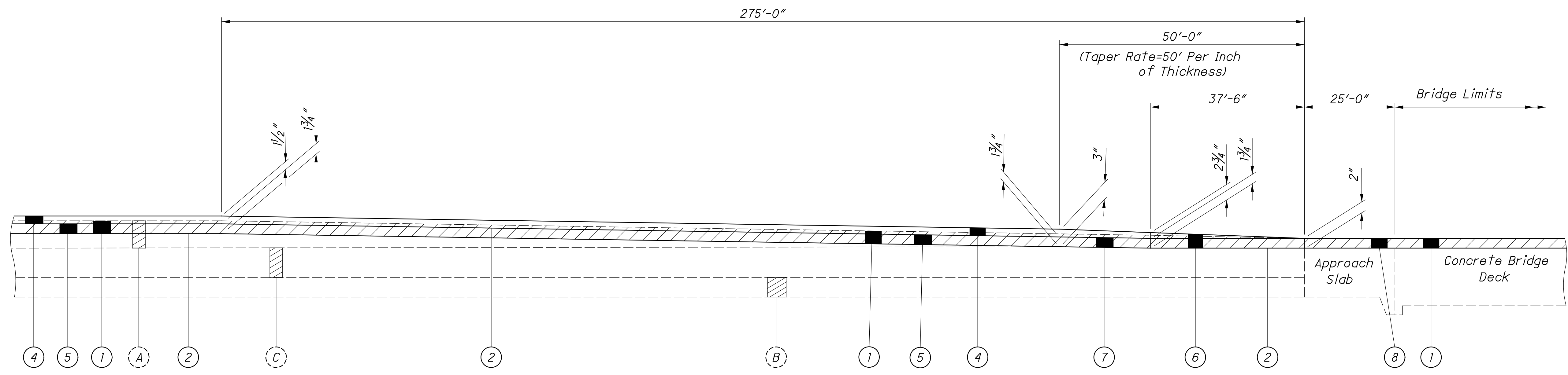
- ① ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
- ② ITEM 407 Tack Coat
- ③ NOT USED
- ④ ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG64-22
- ⑤ ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446)
- ⑥ ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG64-22
- ⑦ ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)
- ⑧ ITEM 848 1 3/4" Superplasticized Dense Concrete Overlay Using Hydrodemolition



EXISTING LEGEND

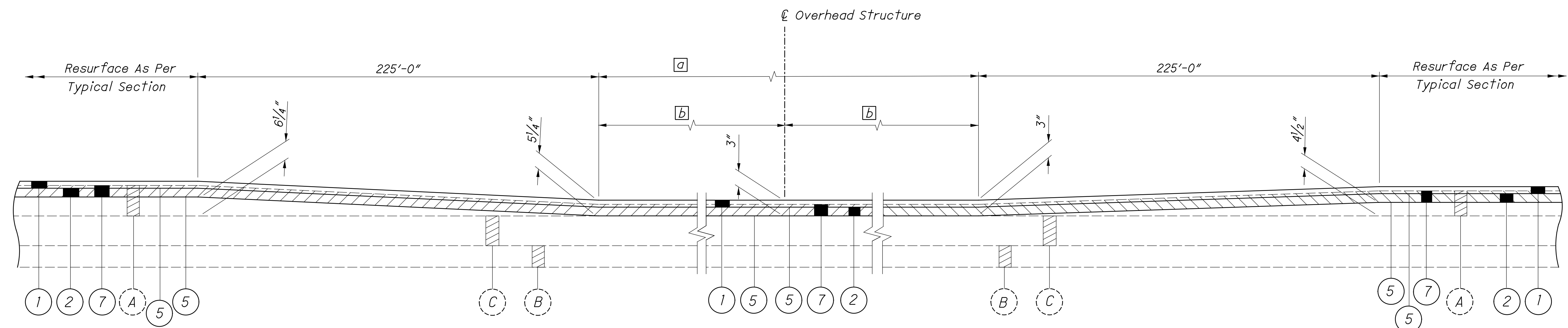
- Ⓐ ± 6 1/2" Asphalt Concrete
 - Ⓑ ± 6" Subbase
 - Ⓒ ± 9" Reinforced Portland Cement Concrete Pavement
- = Item 254 Pavement Planing, Asphalt Concrete

PAVEMENT TRANSITION AT BEGIN/END PAVEMENT



TRANSITION AT STRUCTURES

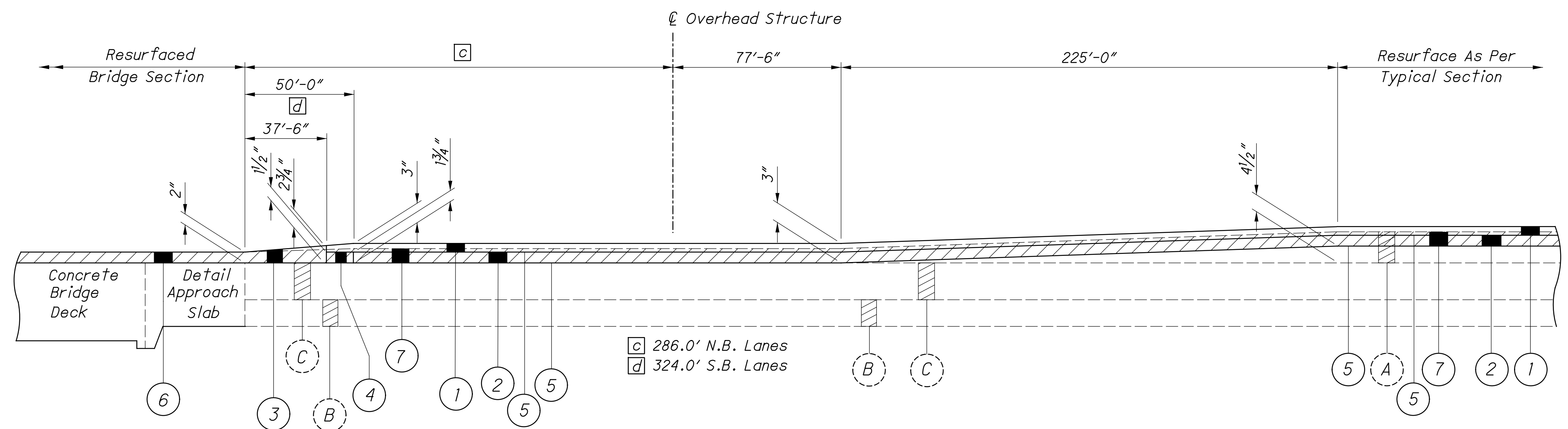
DETAIL APPLIES AT:
VAN-277-0585 Lt. & Rt. (North & South End)
VAN-277-1041 Lt. & Rt. (South Only)
VAN-277-1246 Lt. & Rt. (North Only)



PAVEMENT TRANSITION AT OVERHEAD BRIDGE

DETAIL APPLIES AT STRUCTURES:
 VAN-277-0378 VAN-277-0776
 VAN-277-1234 VAN-277-0911
 VAN-277-1303 VAN-277-0493
 VAN-277-0633

STRUCTURE	a	b
VAN-277-0378	144.0'	72.0'
VAN-277-0493	160.0'	80.0'
VAN-277-0633	166.0'	83.0'
VAN-277-0776	165.0'	82.5'
VAN-277-0911	179.0'	89.5'
VAN-277-1234	155.0'	77.5'
VAN-277-1383	156.0'	78.0'



PAVEMENT TRANSITION AT OVERHEAD AND MAINLINE BRIDGES

DETAIL APPLIES AT STRUCTURES:
 VAN-277-1047
 VAN-277-1041 (North Side Only)

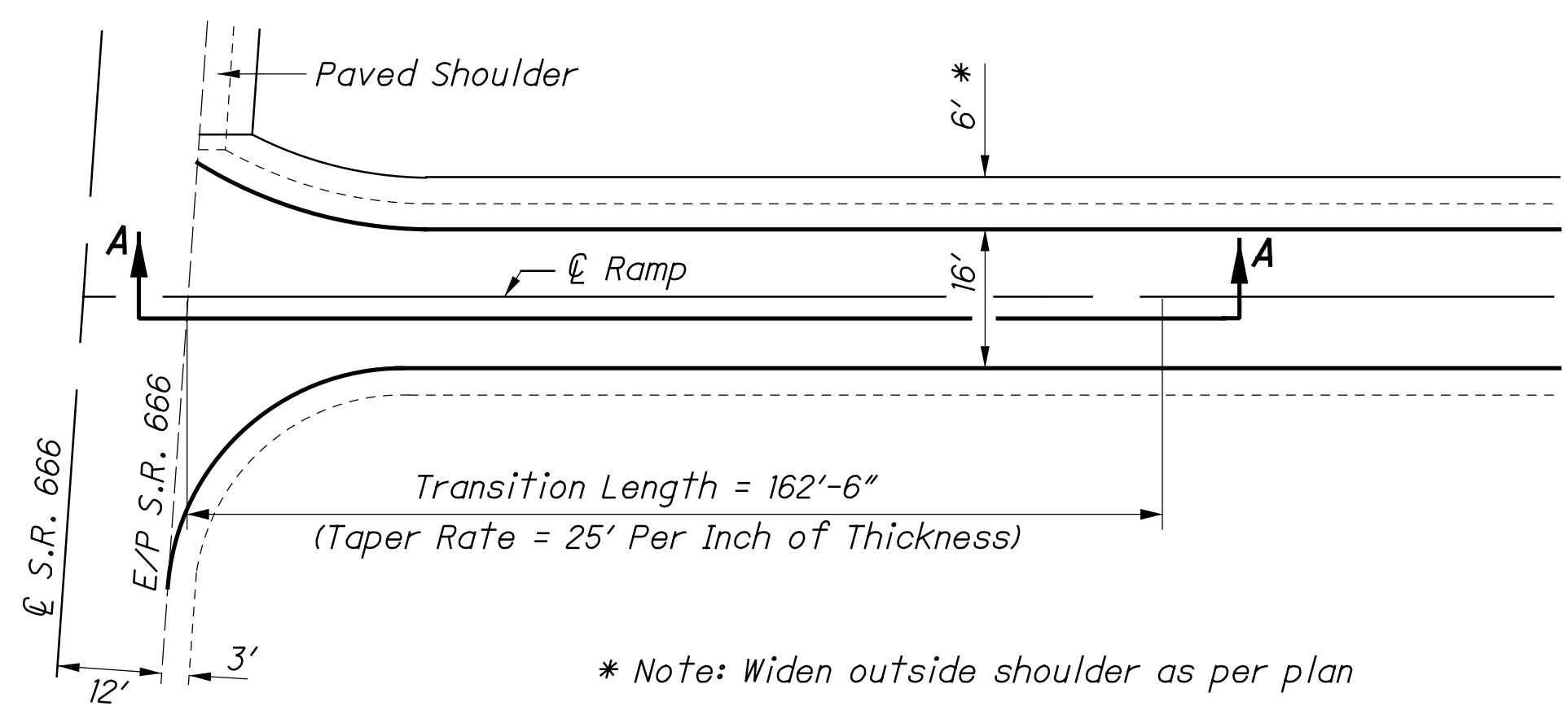
c 286.0' N.B. Lanes
 d 324.0' S.B. Lanes

PROPOSED LEGEND

- 1 ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- 2 ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446)
- 3 ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- 4 ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)
- 5 ITEM 407 Tack Coat
- 6 ITEM 848 Micro Silica Modified Concrete overlay using Hydrodemolition (Thickness 1 1/4" Nominal)
- 7 ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")

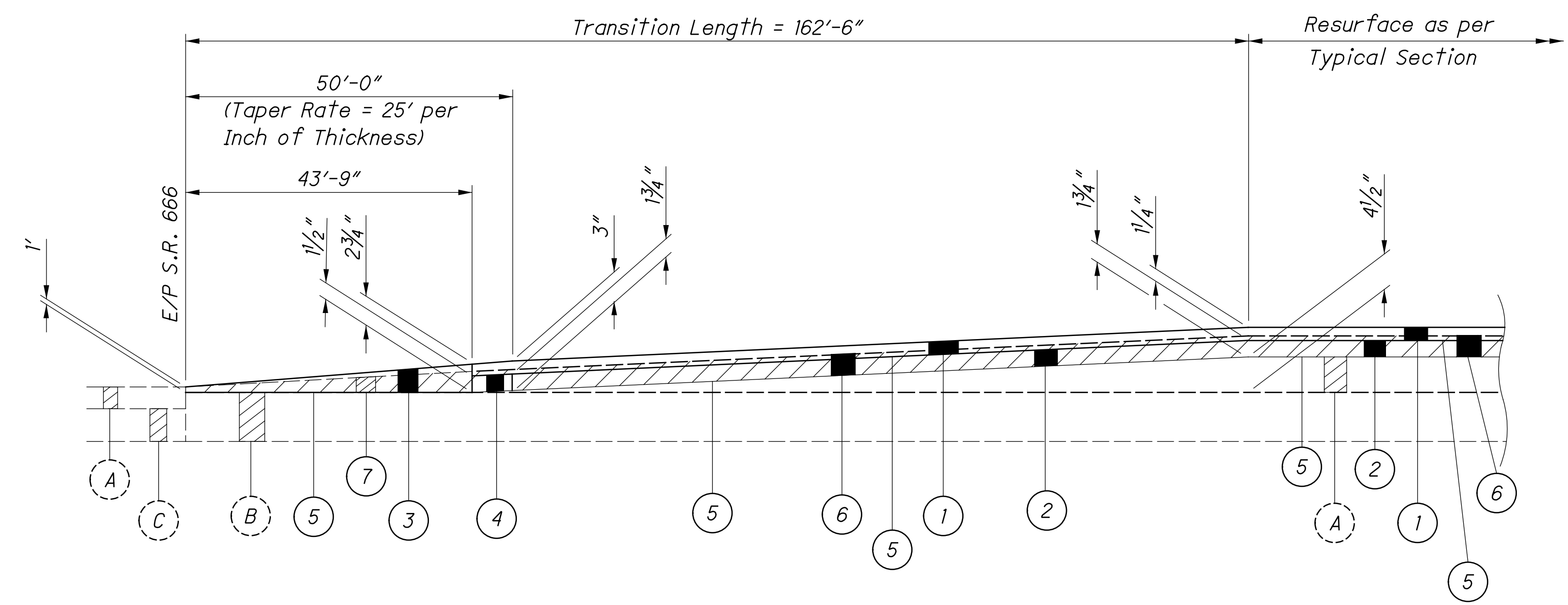
EXISTING LEGEND

- A ±6 1/2" Asphalt Concrete
- B ±6" Subbase
- C ±9" Reinforced Portland Cement Concrete Pavement
- ITEM 254 - Pavement Planing, Asphalt Concrete



* Note: Widen outside shoulder as per plan

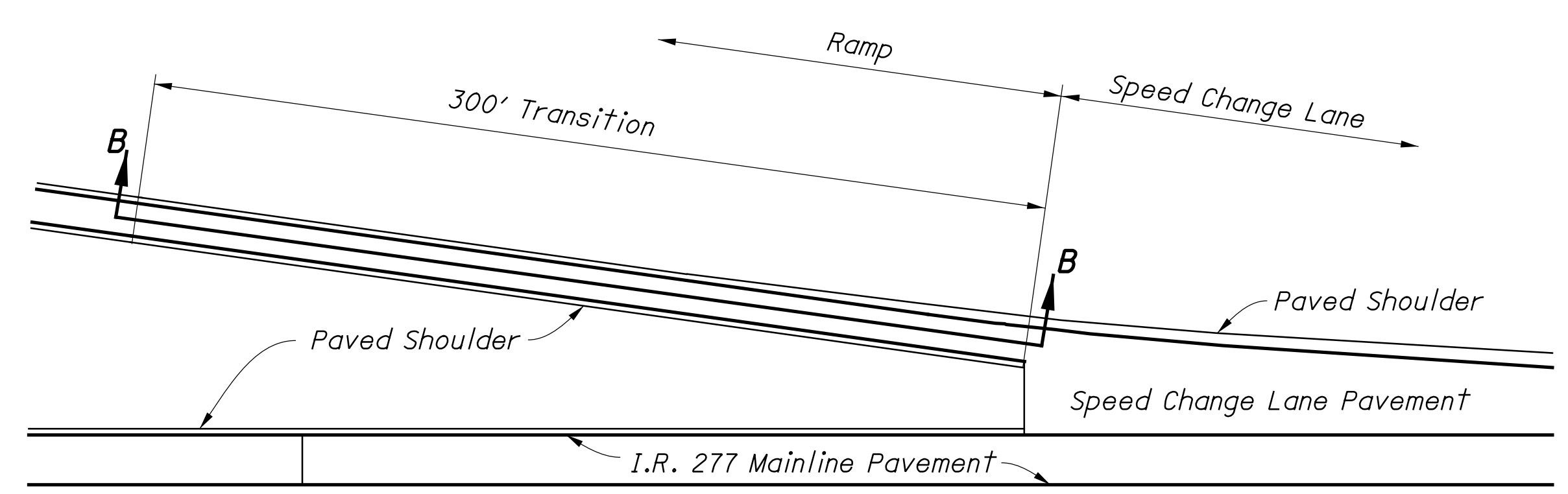
PLAN VIEW



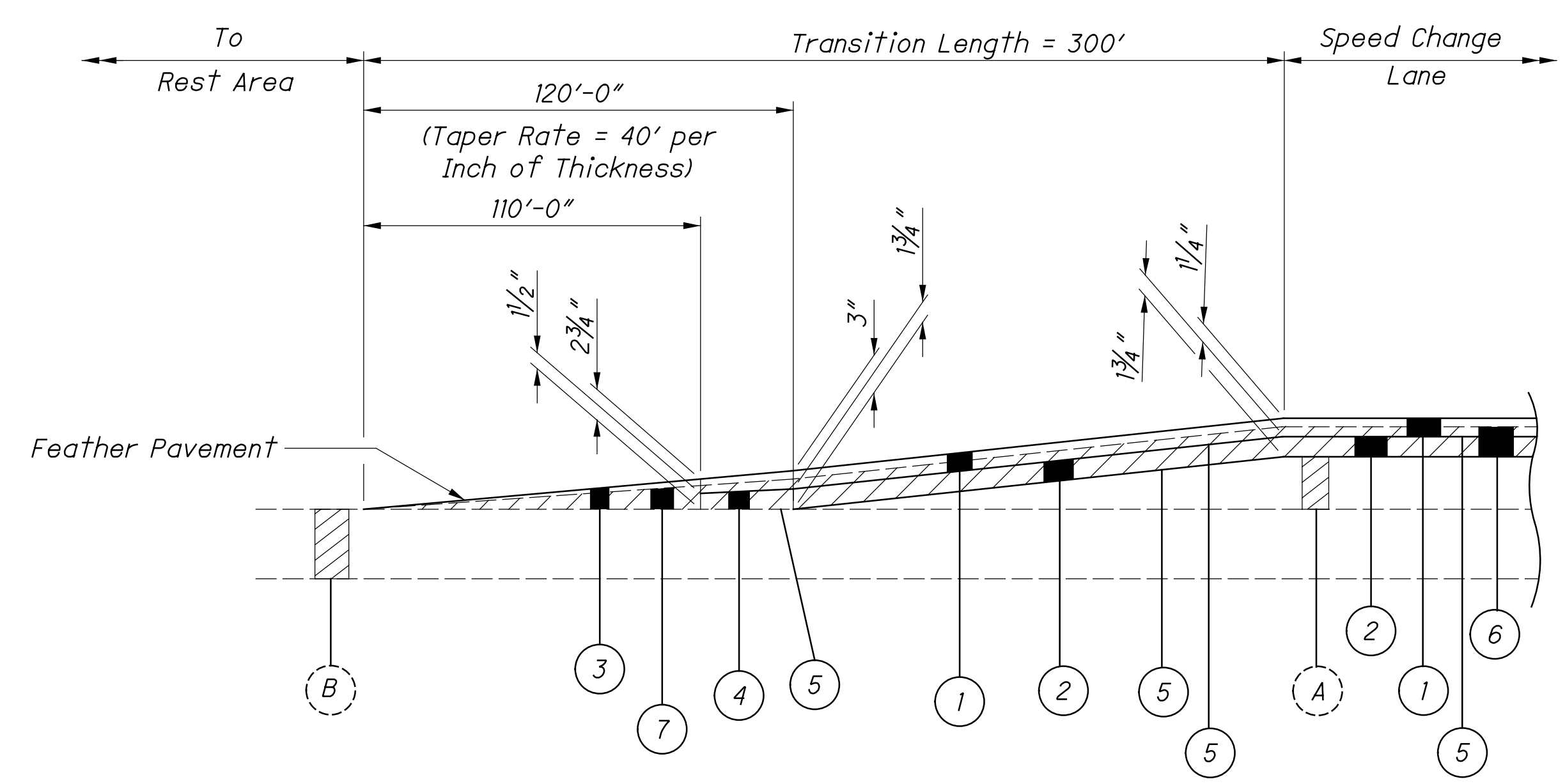
SECTION A-A

TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:
S.R. 666 Interchange



PLAN VIEW



SECTION B-B

TRANSITION AT REST AREA ENTRANCE/EXIT RAMP DETAIL

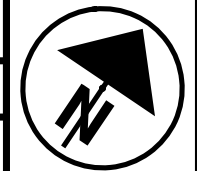
PROPOSED LEGEND

- | | |
|--|--|
| ① ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22 | ⑤ ITEM 407 Tack Coat |
| ② ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446) | ⑥ ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2") |
| ③ ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG 64-22 | ⑦ ITEM 254 Pavement Planing, Asphalt Concrete (Var. Thickness) |
| ④ ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446) | |

ITEM 254 Pavement Planing, Asphalt Concrete

EXISTING LEGEND

- Ⓐ ±6 1/2" Asphalt Concrete
- Ⓑ ±9" Reinforced Portland Cement Concrete Pavement
- Ⓒ ±6" Aggregate Base



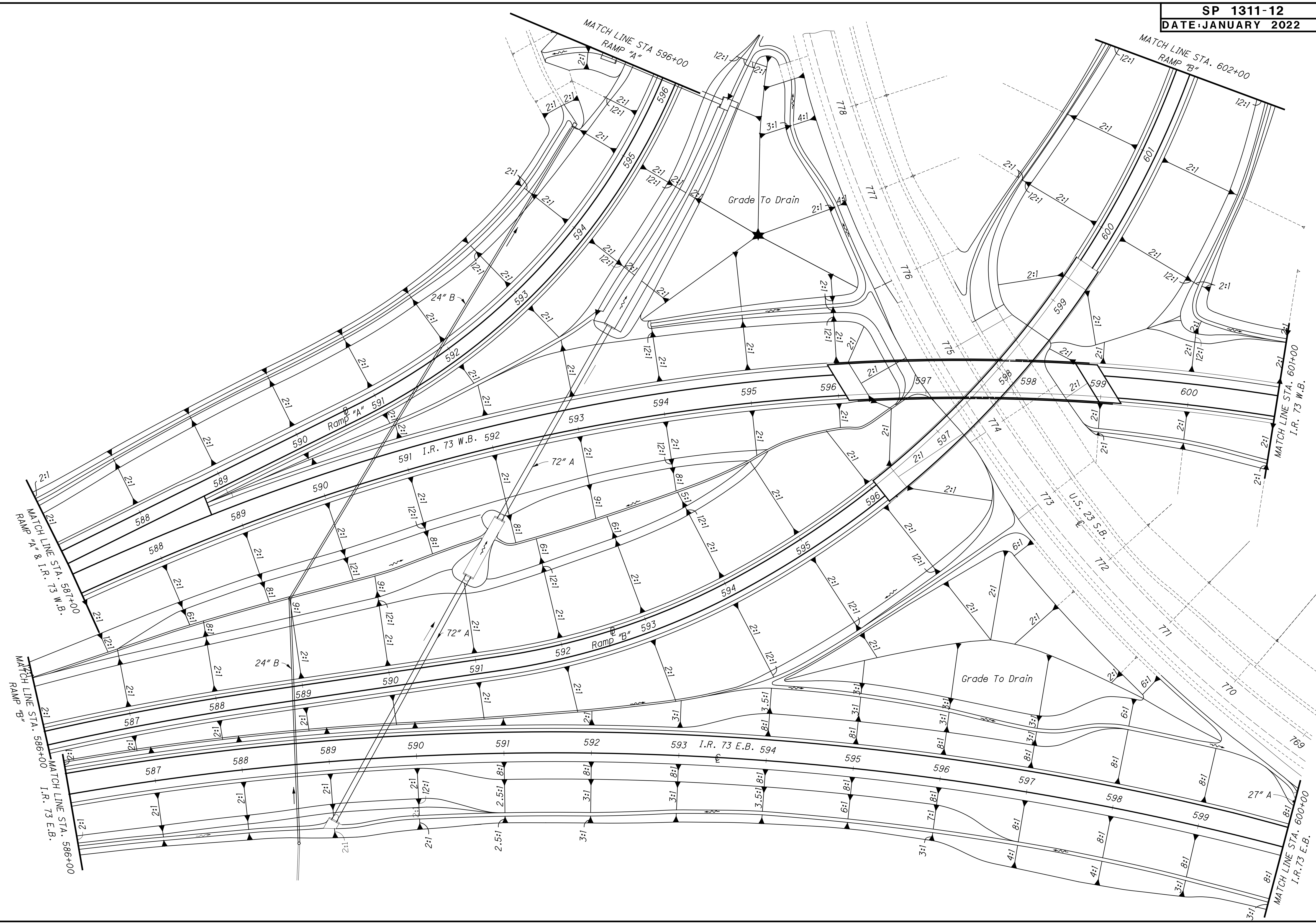
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HORIZONTAL
SCALE IN FEET

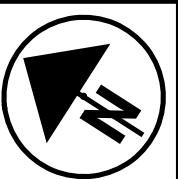
CALCULATED
DMK
CHECKED
CML

GRADING DETAILS
I.R. 73 INTERCHANGE

HAN-73-19.11

278
536





CALCULATED
CHG
CHECKED
LJS

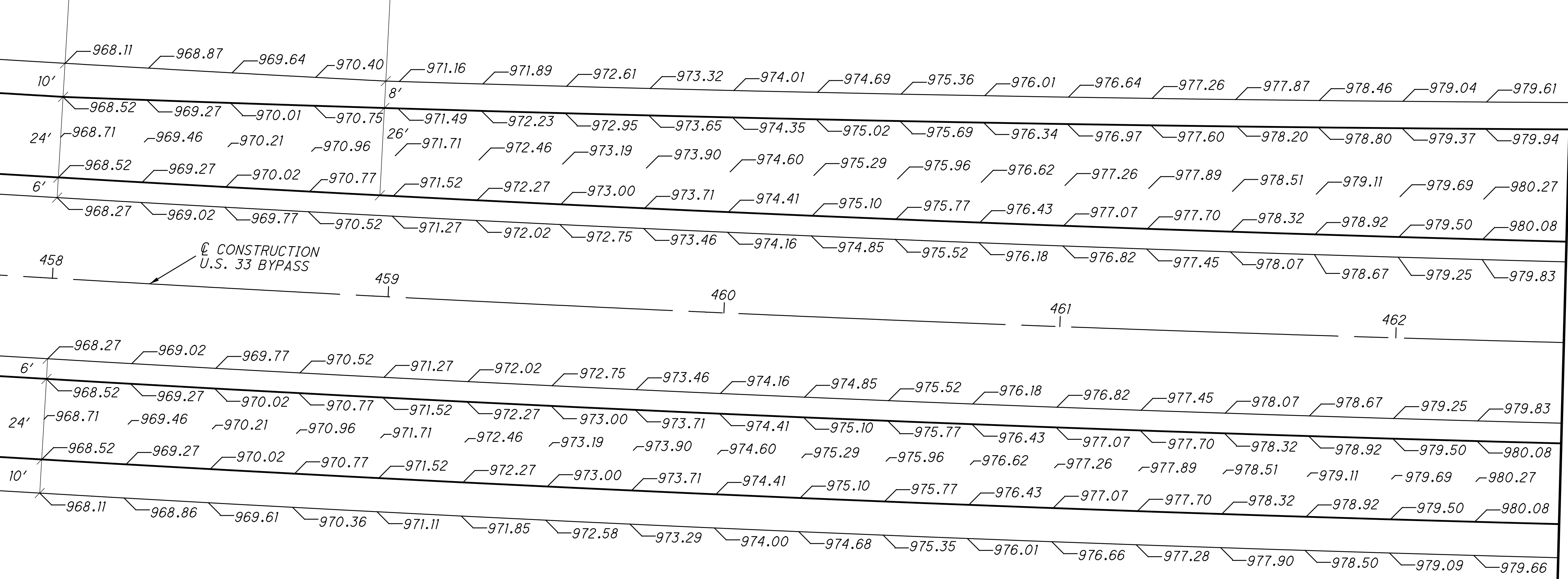
**WEST RAMP TERMINAL DETAILS
STA. 458+00 TO STA. 462+50**

FAI-33-13.25

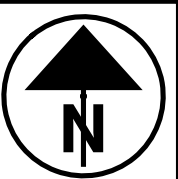
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BEGIN SHOULDER & PAVEMENT TAPER WESTBOUND LT. STA. 458+00

END SHOULDER TAPER WESTBOUND LT. STA. 458+96



NOTE: ELEVATIONS SHOWN AT 25' INTERVALS



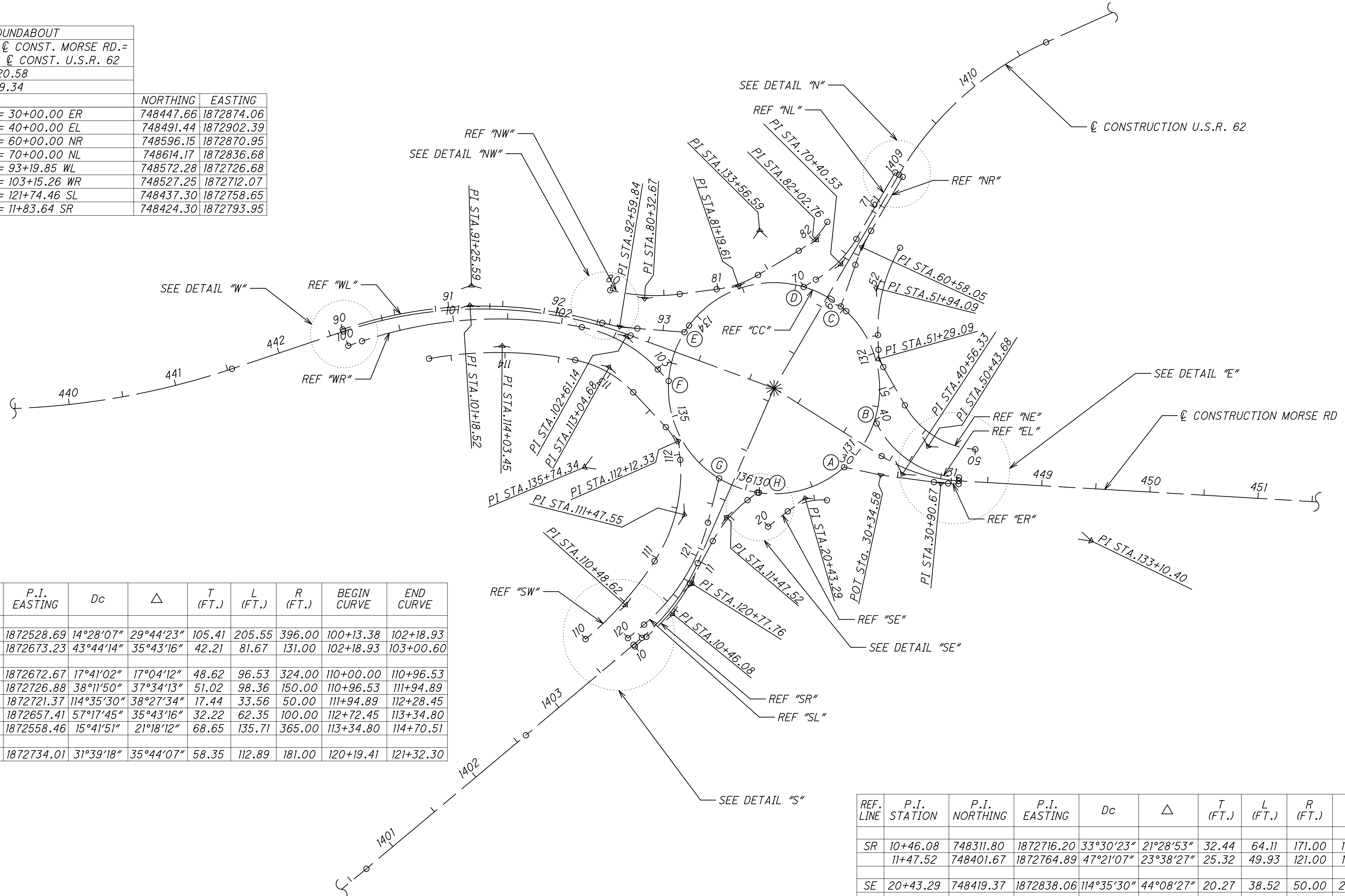
REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
EL	40+56.33	748441.10	1872927.68	62°57'45"	59°58'13"	52.51	95.25	91.00	40+03.82	40+99.07
NE	50+43.68	748466.75	1872951.54	71°37'11"	57°16'00"	43.68	79.96	80.00	50+00.00	50+79.96
	51+29.09	748547.62	1872906.01	163°42'08"	27°30'05"	8.56	16.80	35.00	51+20.52	51+37.32
	51+94.09	748612.92	1872903.87	38°11'50"	32°11'22"	43.28	84.27	150.00	51+50.81	52+35.08
NR	60+58.05	748650.93	1872890.18	31°39'18"	10°58'01"	17.38	34.64	181.00	60+40.68	60+75.32

REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
NL	70+40.53	748634.87	1872871.53	54°03'09"	28°58'34"	27.39	53.61	106.00	70+13.14	70+66.75
NW	80+32.67	748603.36	1872689.89	32°44'26"	21°09'05"	32.67	64.60	175.00	80+00.00	80+64.60
	81+19.61	748614.67	1872776.83	57°17'45"	23°17'51"	20.62	40.66	100.00	80+98.99	81+39.65
	82+02.76	748657.43	1872848.81	76°23'40"	28°58'32"	19.38	37.93	75.00	81+83.38	82+21.31
WL	91+25.59	748615.56	1872530.06	14°19'26"	34°51'45"	125.59	243.39	400.00	90+00.00	92+43.39
	92+59.84	748577.09	1872666.79	27°48'49"	09°07'57"	16.45	32.83	206.00	92+43.39	92+76.22

* CENTER OF ROUNDABOUT

STA. 446+23.93 @ CONST. MORSE RD.=
 STA. 1406+63.08 @ CONST. U.S.R. 62
 NORTHING= 748520.58
 EASTING= 1872809.34

	NORTHING	EASTING
RADIUS= 97.50'		
Ⓐ 130+84.85 CC = 30+00.00 ER	748447.66	1872874.06
Ⓑ 131+37.64 CC = 40+00.00 EL	748491.44	1872902.39
Ⓒ 132+53.70 CC = 60+00.00 NR	748596.15	1872870.95
Ⓓ 132+92.67 CC = 70+00.00 NL	748614.17	1872836.68
Ⓔ 134+19.05 CC = 93+19.85 WL	748572.28	1872726.68
ⓐ 134+66.86 CC = 103+15.26 WR	748527.25	1872712.07
ⓑ 135+73.38 CC = 121+74.46 SL	748437.30	1872758.65
ⓒ 136+11.23 CC = 11+83.64 SR	748424.30	1872793.95

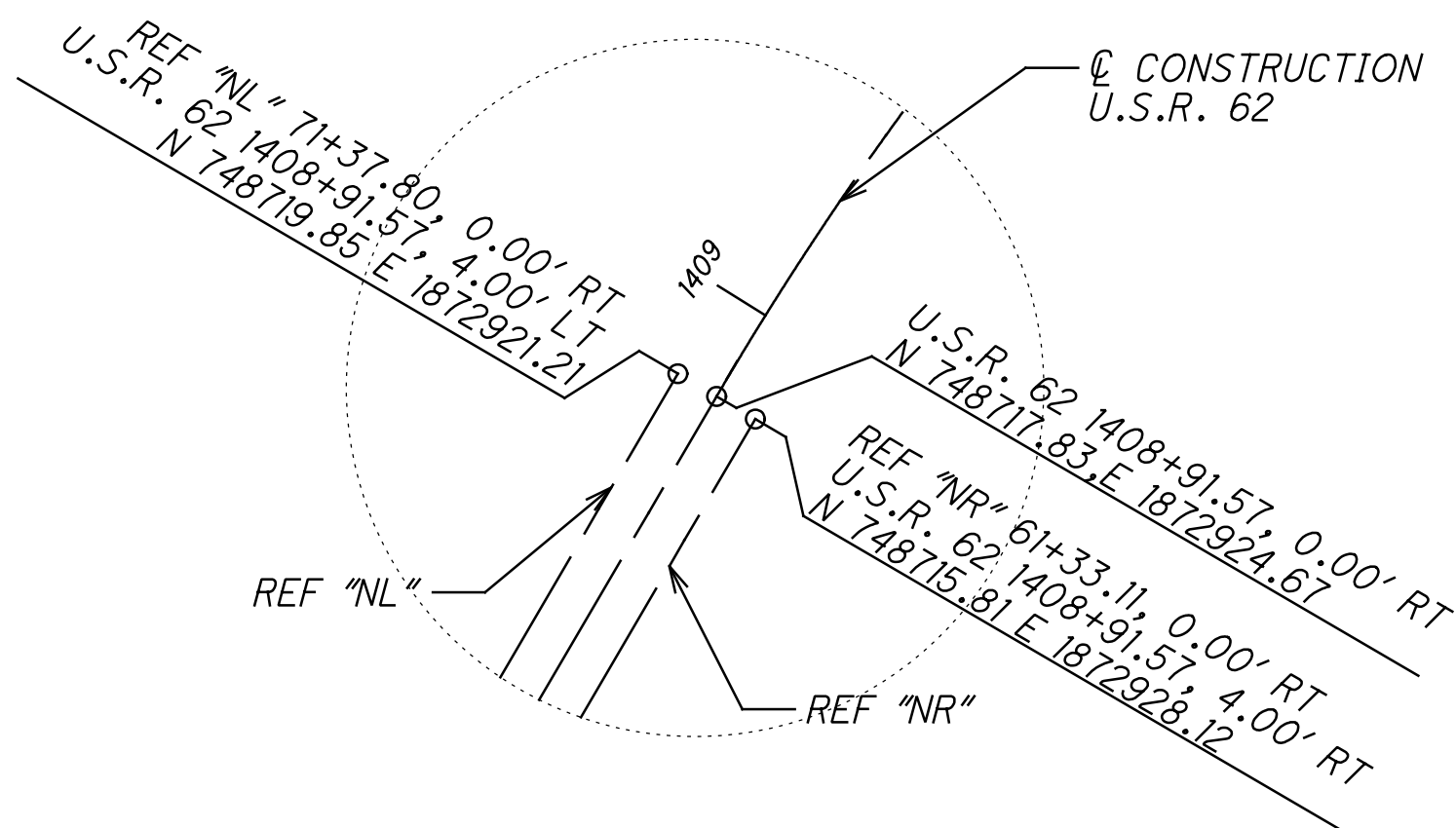


REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
WR	101+18.52	748597.44	1872528.69	14°28'07"	29°44'23"	105.41	205.55	396.00	100+13.38	102+18.93
	102+61.14	748568.80	1872673.23	43°44'14"	35°43'16"	42.21	81.67	131.00	102+18.93	103+00.60
SW	110+48.62	748320.06	1872672.67	17°41'02"	17°04'12"	48.62	96.53	324.00	110+00.00	110+96.53
	111+47.55	748403.67	1872726.88	38°11'50"	37°34'13"	51.02	98.36	150.00	110+96.53	111+94.89
	112+12.33	748471.91	1872721.37	114°35'30"	38°27'34"	17.44	33.56	50.00	111+94.89	112+28.45
	113+04.68	748540.34	1872657.41	57°17'45"	35°43'16"	32.22	62.35	100.00	112+72.45	113+34.80
	114+03.45	748559.94	1872558.46	15°41'51"	21°18'12"	68.65	135.71	365.00	113+34.80	114+70.51
SL	120+77.76	748339.85	1872734.01	31°39'18"	35°44'07"	58.35	112.89	181.00	120+19.41	121+32.30

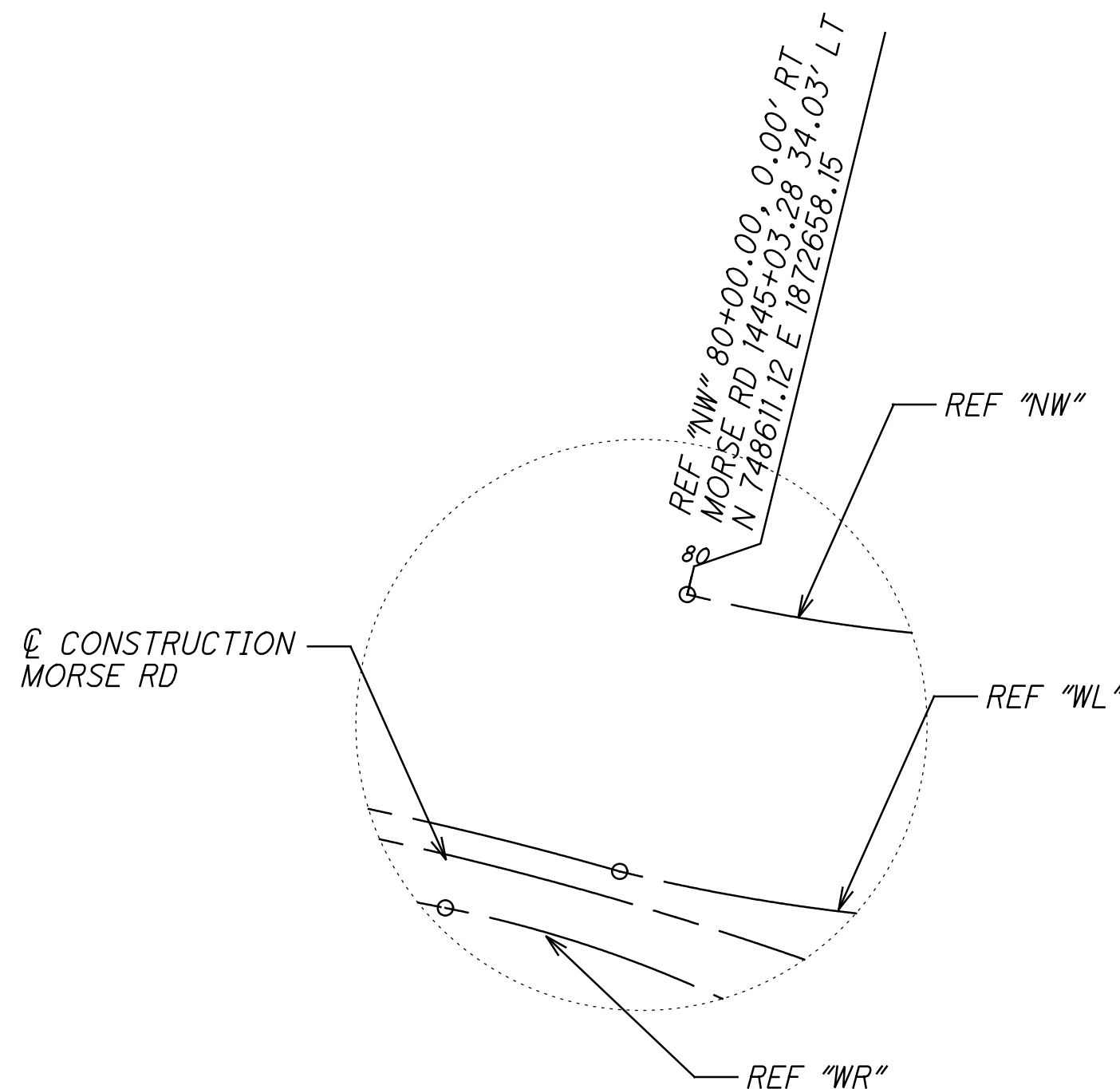
REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
SR	10+46.08	748311.80	1872716.20	33°30'23"	21°28'53"	32.44	64.11	171.00	10+13.64	10+77.75
	11+47.52	748401.67	1872764.89	47°21'07"	23°38'27"	25.32	49.93	121.00	11+22.20	11+72.12
SE	20+43.29	748419.37	1872838.06	114°35'30"	44°08'27"	20.27	38.52	50.00	20+23.01	20+61.53
ER	30+90.67	748433.00	1872963.47	32°00'32"	04°13'17"	6.60	13.19	179.00	30+84.08	30+97.26

FOR DETAILS "N", "E", "S", "W", "SE" AND "NW" SEE SHEET 4
 FOR U.S.R.62 AND MORSE ROAD DETAILS SEE SHEET 2

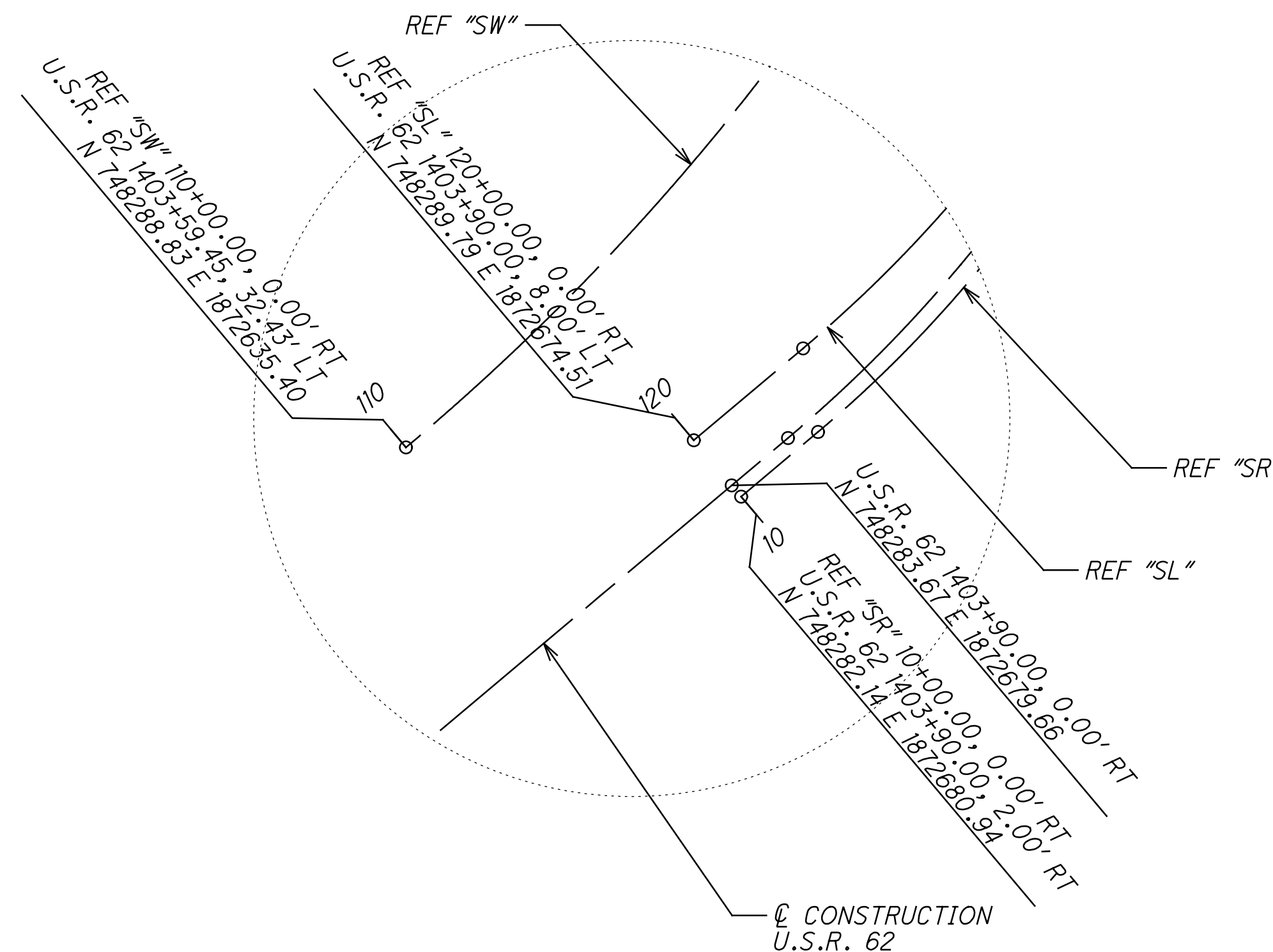
p:\ohiodot\pw.bentley.com\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1311-14a_2006-10.dgn Sheet 2/9/2022 3:40:23 PM tpetros



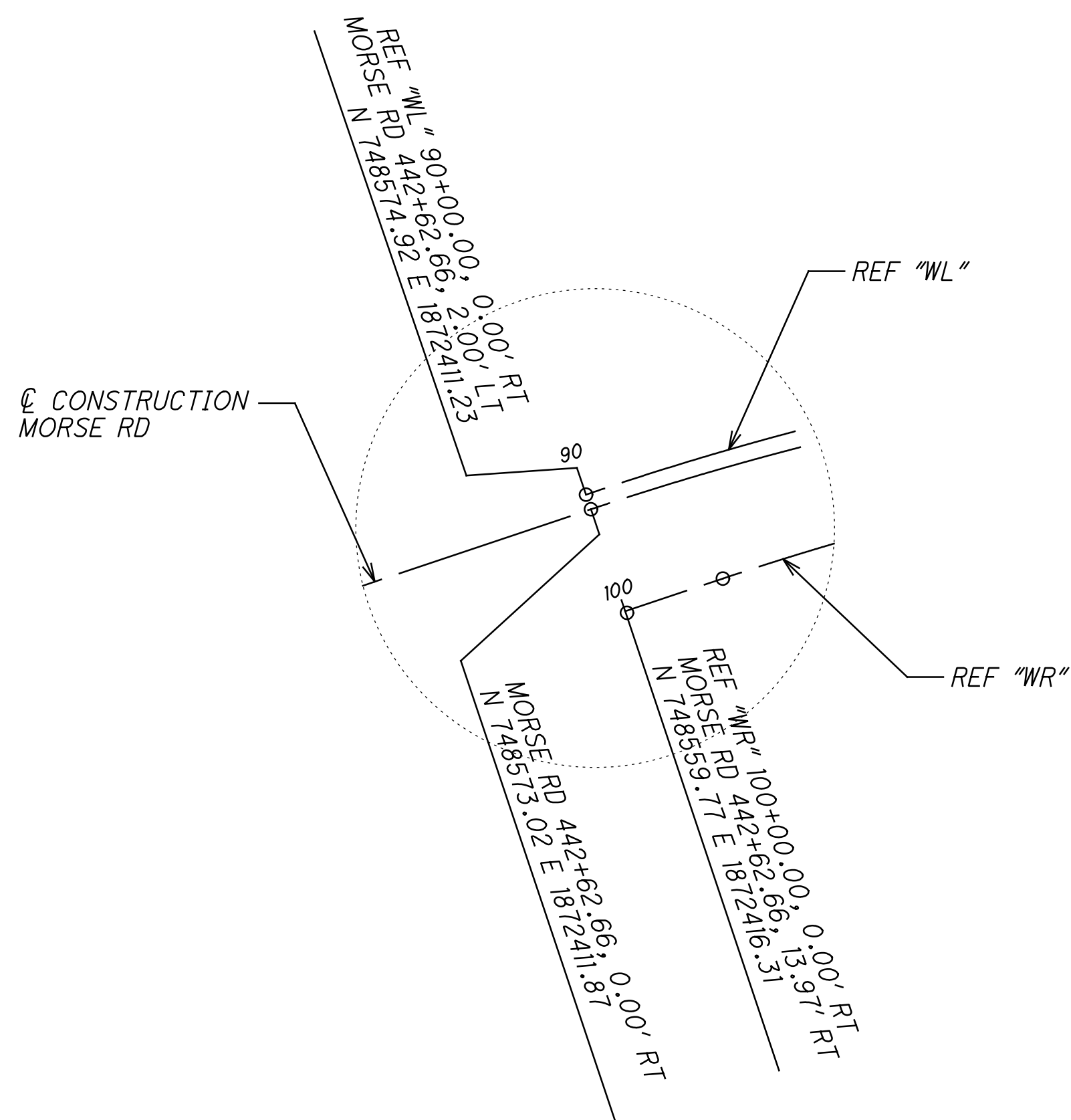
DETAIL "N"
NOT TO SCALE



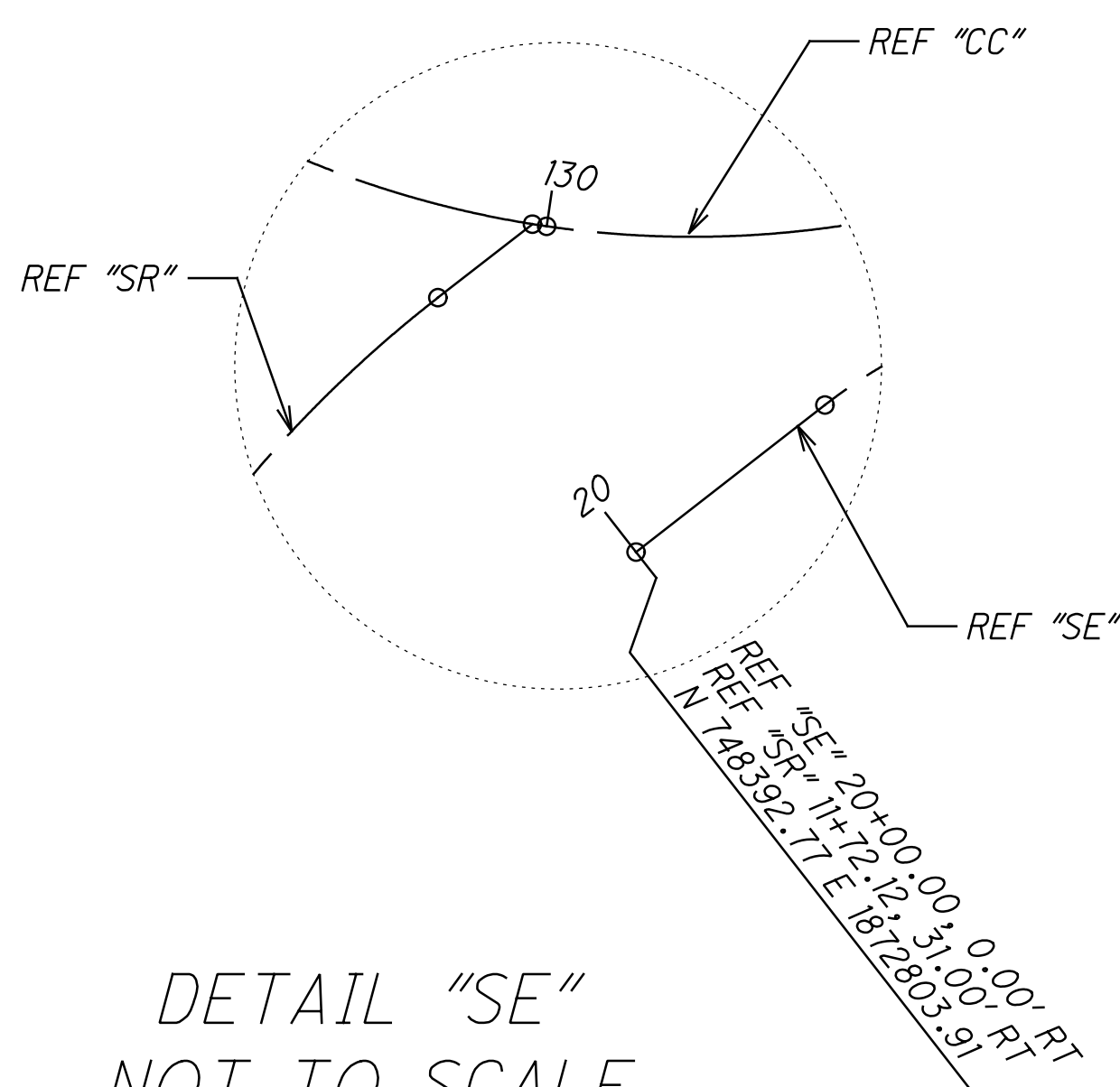
DETAIL "NW"
NOT TO SCALE



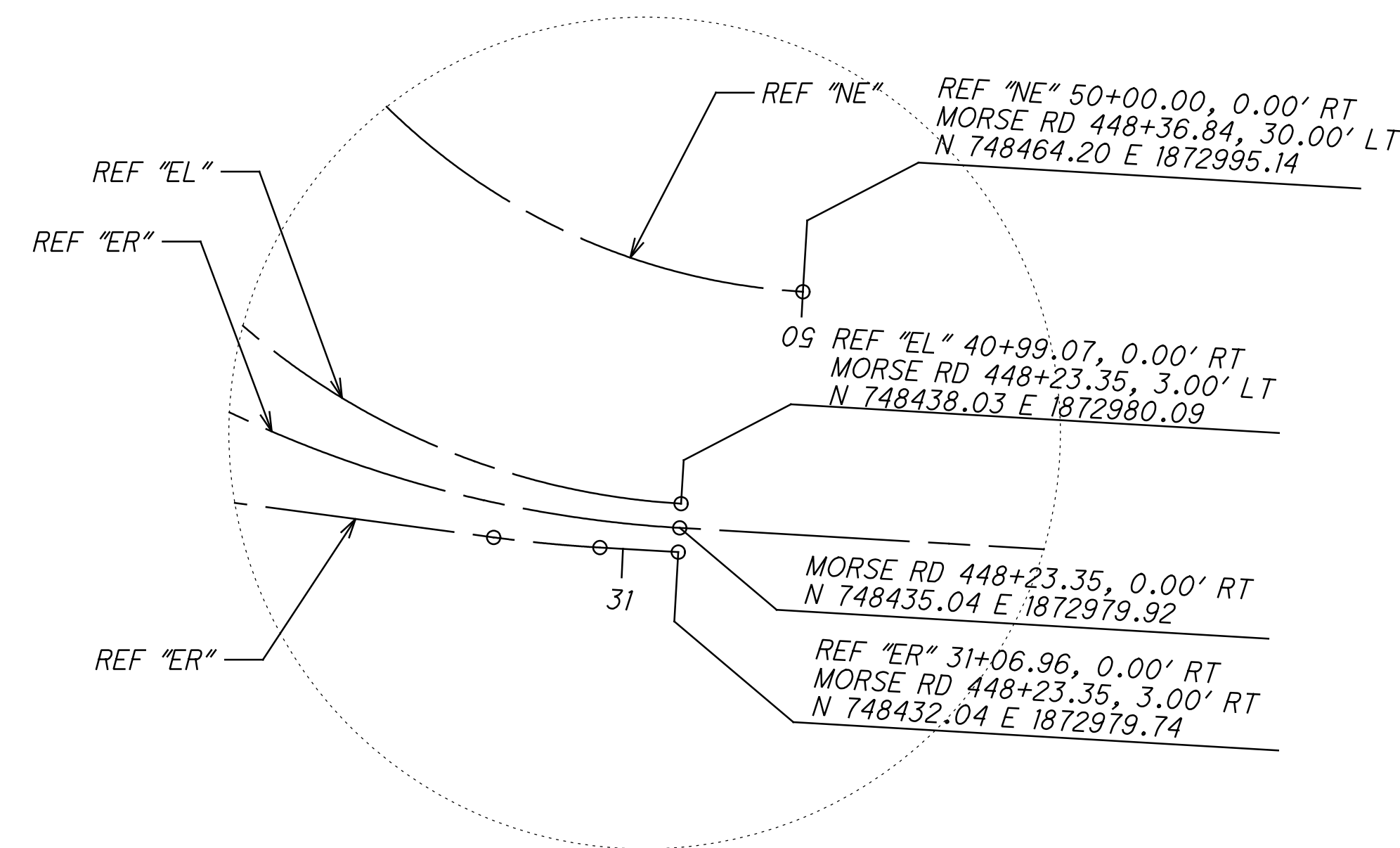
DETAIL "S"
NOT TO SCALE



DETAIL "W"
NOT TO SCALE

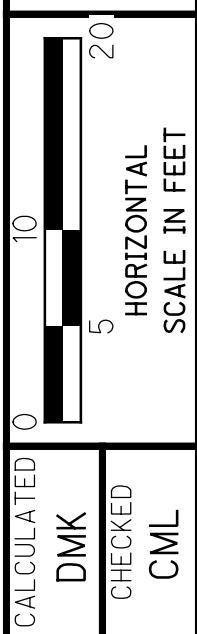


DETAIL "SE"
NOT TO SCALE

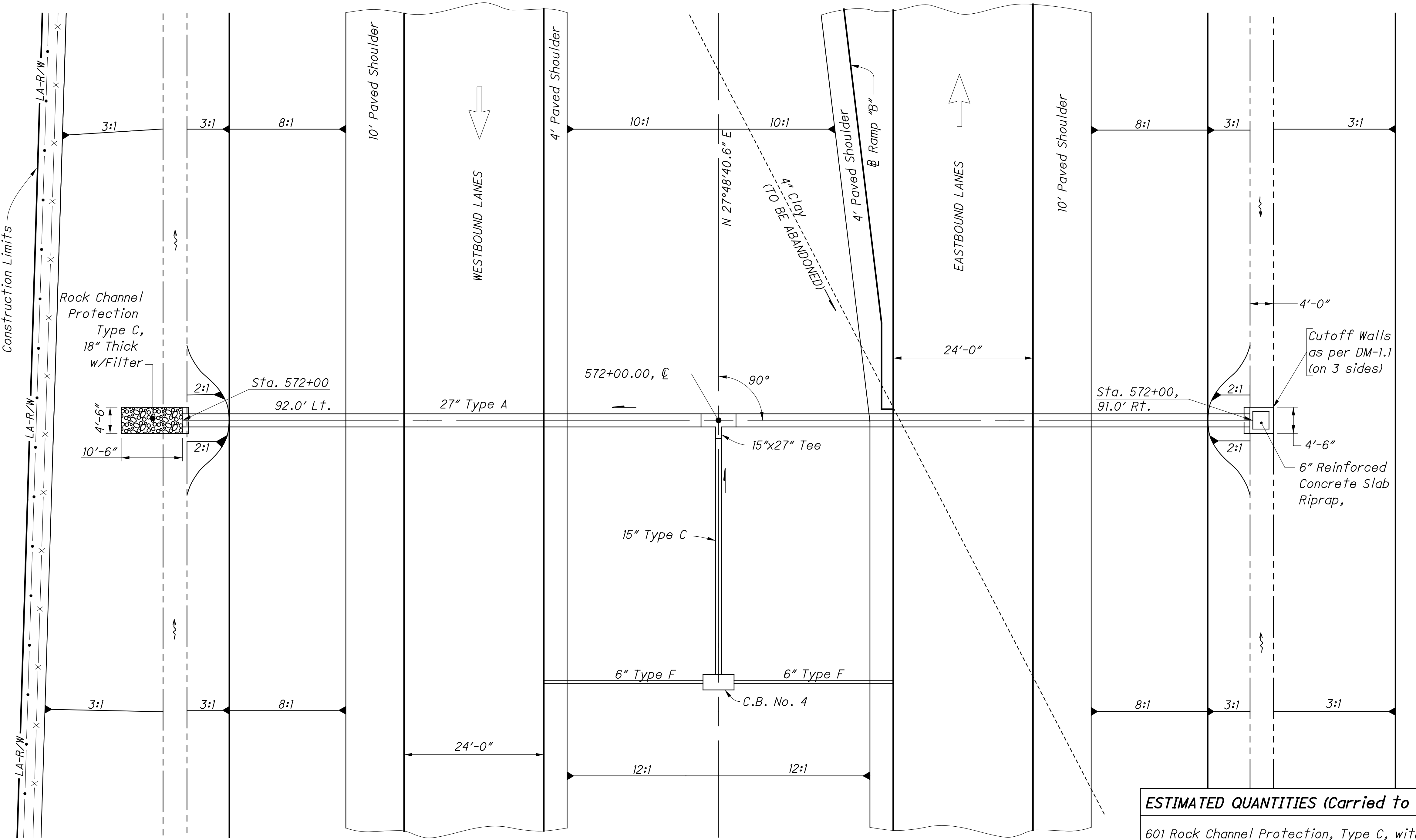


DETAIL "E"
NOT TO SCALE

p:\ohiodot-pw\ohiodot-pw-02\Documents\03_Standards\Sample_Plans\81\SP1311-14b_2006-10.dgn_Sheet 2/9/2022 3:40:31 PM tpetros

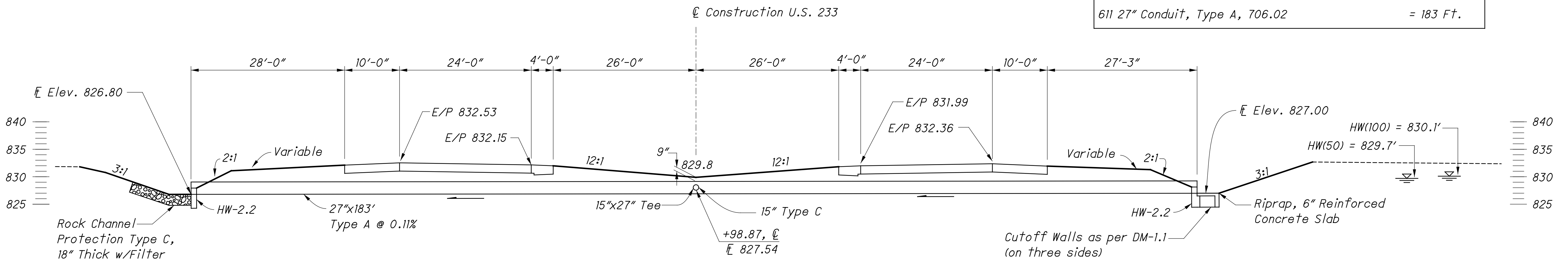


HYDRAULIC DESIGN DATA	
Drainage Area	= 28 Ac.
Q ₅₀	= 22 cfs
Q ₁₀₀	= 25 cfs
HW ₅₀	= 829.7'
HW ₁₀₀	= 830.1'
V ₅₀	= 5.6 fps
V ₁₀₀	= 6.1 fps
Ordinary High Water Mark	= 827.3'
Design Service Life	= 75 Yr.
pH	= 7.8
Abrasion Level: 4	
CFN	= 1234567



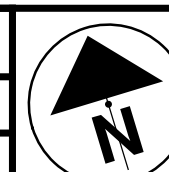
ESTIMATED QUANTITIES (Carried to General Summary)

601 Rock Channel Protection, Type C, with Filter	= 2.8 Cu.Yd.
601 Riprap using 6" Reinforced	= 2.0 Sq.Yd.
602 Concrete Masonry	= 1.15 Cu.Yd.
611 27" Conduit, Type A, 706.02	= 183 Ft.



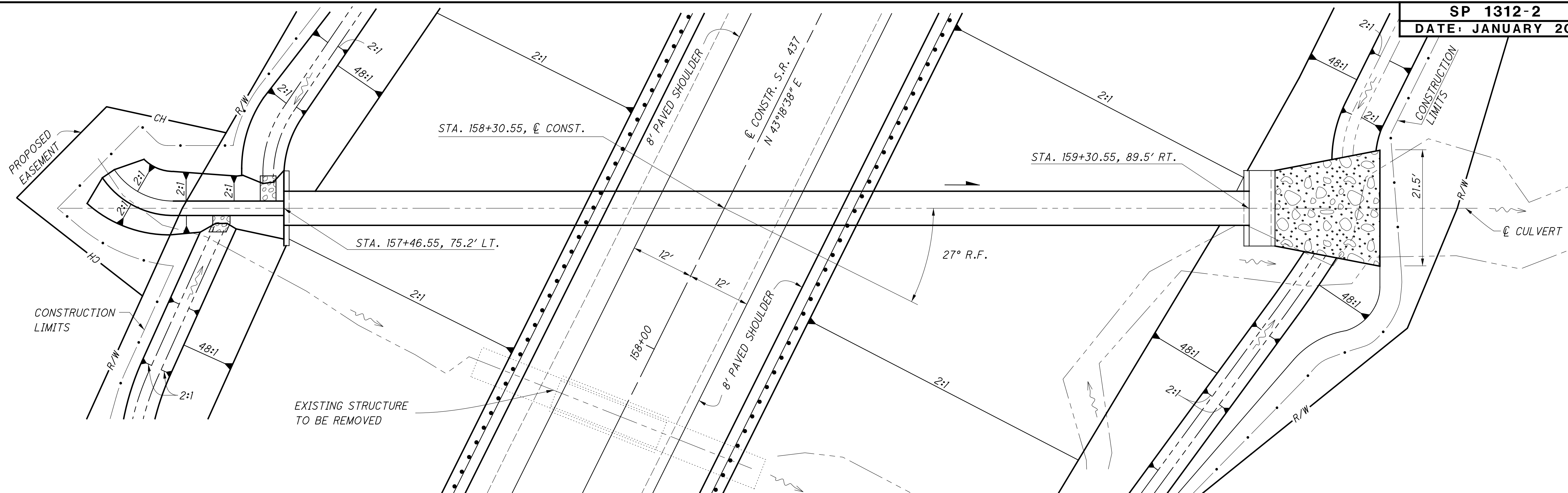
CULVERT DETAILS
U.S. 233 - STA. 572+00

ALL - 233 - 22.69



0 10 20
HORIZONTAL
SCALE IN FEET

CALCULATED
JOH
CHECKED
JDH



HYDRAULIC DATA

DRAINAGE AREA = 108 AC.
ORDINARY HIGH WATER MARK = 810.3 FT.
DESIGN SERVICE LIFE = 75 YEARS
ABRASION LEVEL = 3
PH = 7.5
CFN = 1234567
Q₂₅ = 188 cfs
Q₁₀₀ = 260 cfs
HW₂₅ = 815.6'
HW₁₀₀ = 817.6'
V₂₅ = 16.0 fps
V₁₀₀ = 18.5 fps

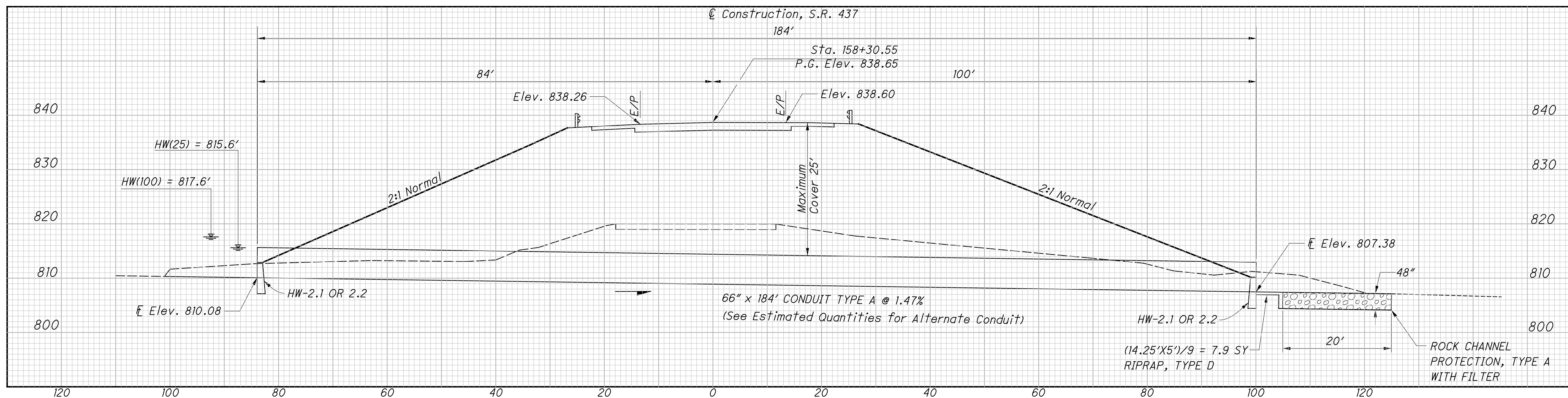
EXISTING STRUCTURE	
TYPE:	STONE ARCH W/72" CMP EXTENSIONS
SIZE:	6'X5'X58' ARCH
SKEW:	27° R.F.
ALIGNMENT:	TANGENT
DATE BUILT:	1908
CONDITION:	POOR
CFN:	7654321

PROPOSED STRUCTURE	
TYPE:	66" CONDUIT, TYPE A, 706.02 OR 78" 707.02 (0.064) ALUMINIZED, 707.03 (0.138) W/CIP, 707.07 (0.109) GALVANIZED, 707.21 W/CIP
SKEW:	27° R.F.
ALIGNMENT:	TANGENT
CFN:	1234567

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 37

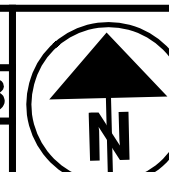
ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
202	LS		STRUCTURE REMOVED
601	60	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
601	8	SY	RIPRAP
602	5.9	CY	CONCRETE MASONRY
611	184	FT	66" CONDUIT, TYPE A, 706.02 OR 78" 707.02 (0.064) ALUMINIZED, 707.03 (0.138) W/CIP, 707.07 (0.109) GALVANIZED, 707.21 W/CIP
670	72	SY	DITCH EROSION PROTECTION MAT TYPE C

CIP = CONCRETE INVERT PAVING



CULVERT DETAIL
STA. 158 + 30.00

PRE - 437 - 2.65



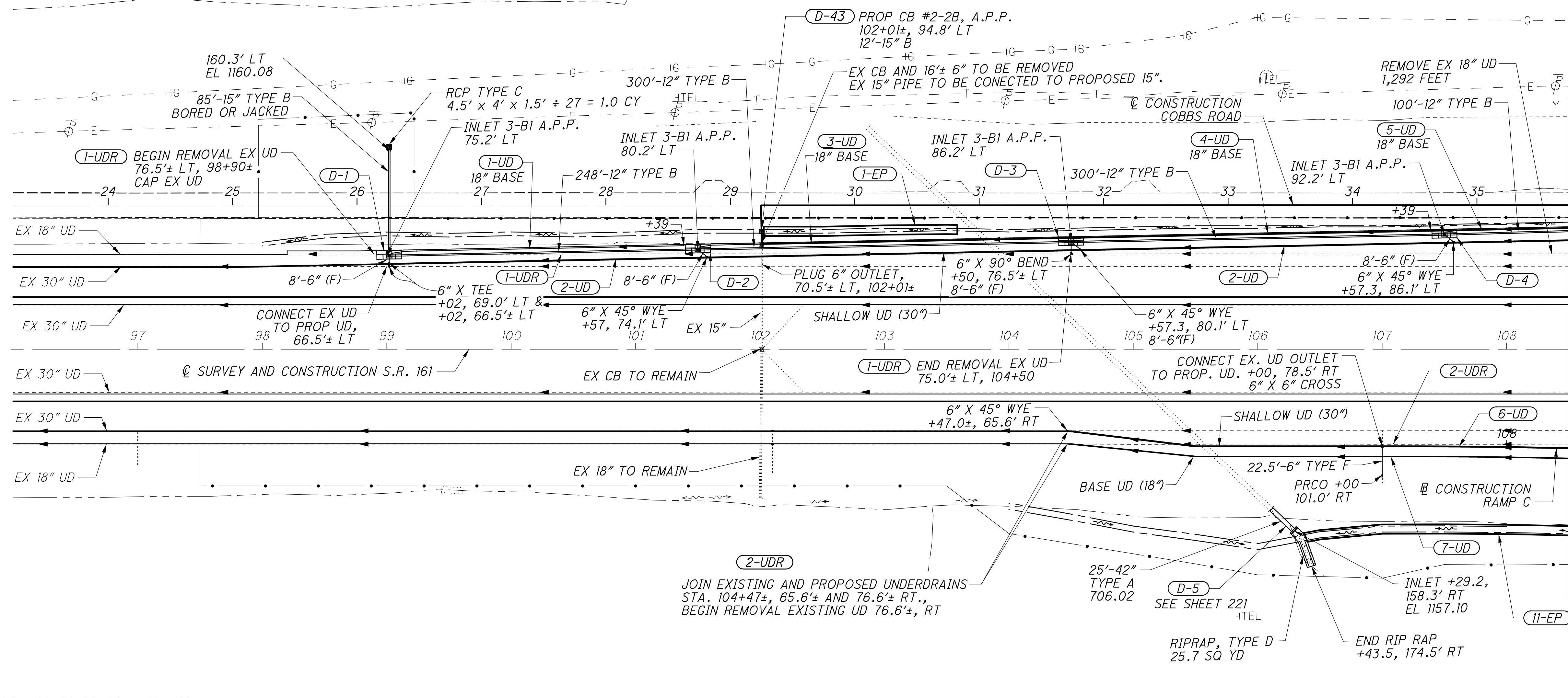
0 50 100
25
HORIZONTAL
SCALE IN FEET

CALCULATED
R/JG
CHECKED
HAG

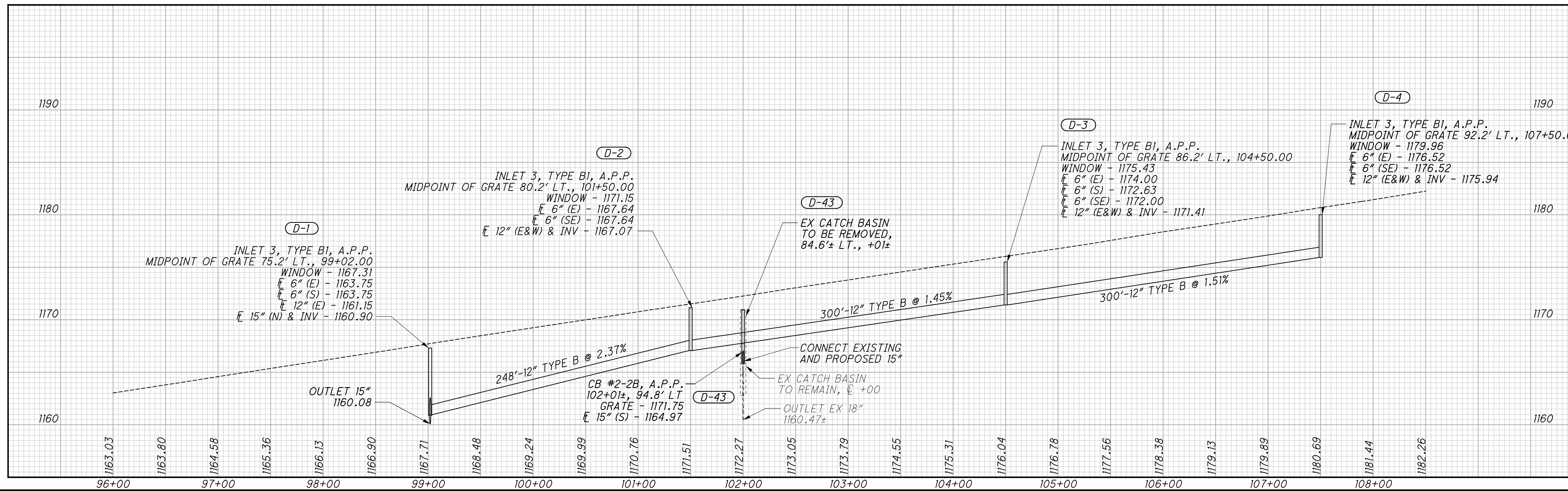
S.R. 161 DRAINAGE PLAN AND PROFILE
STA. 96+00 TO STA. 108+50

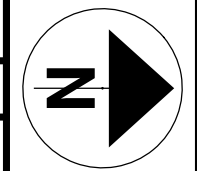
LIC-161-1.83

206
336



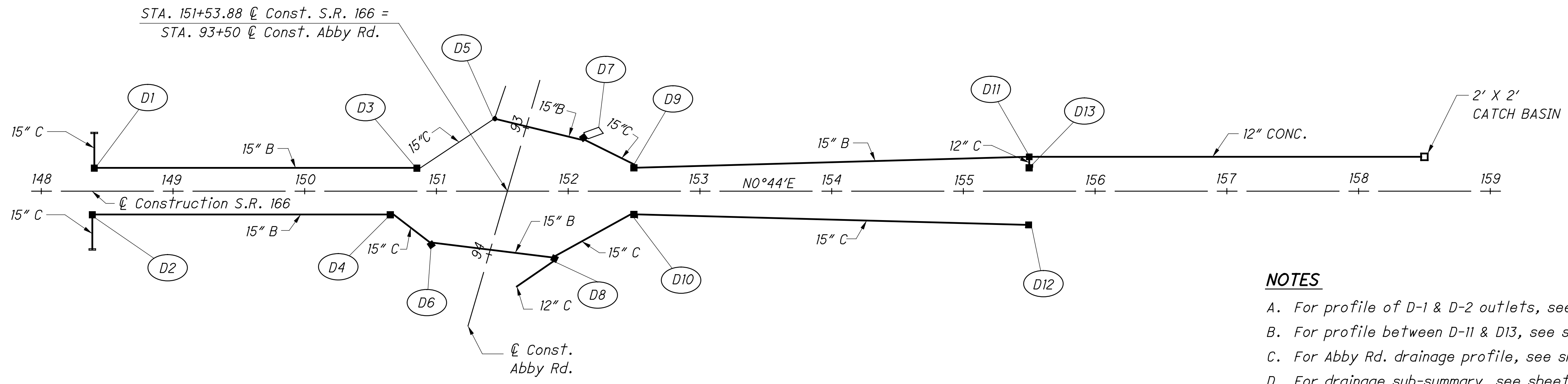
CFN = 1234567 (STA. 99+00 TO STA. 107+50)



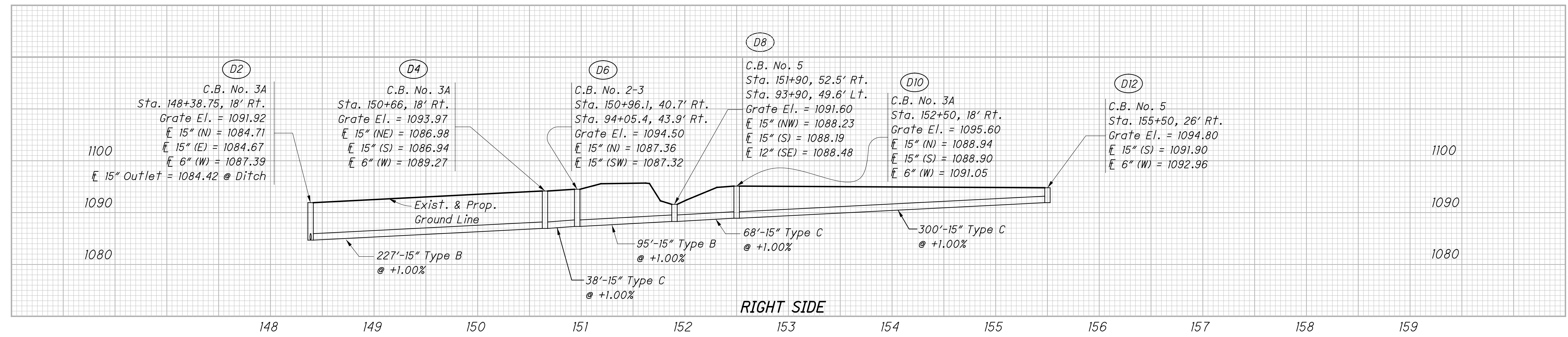
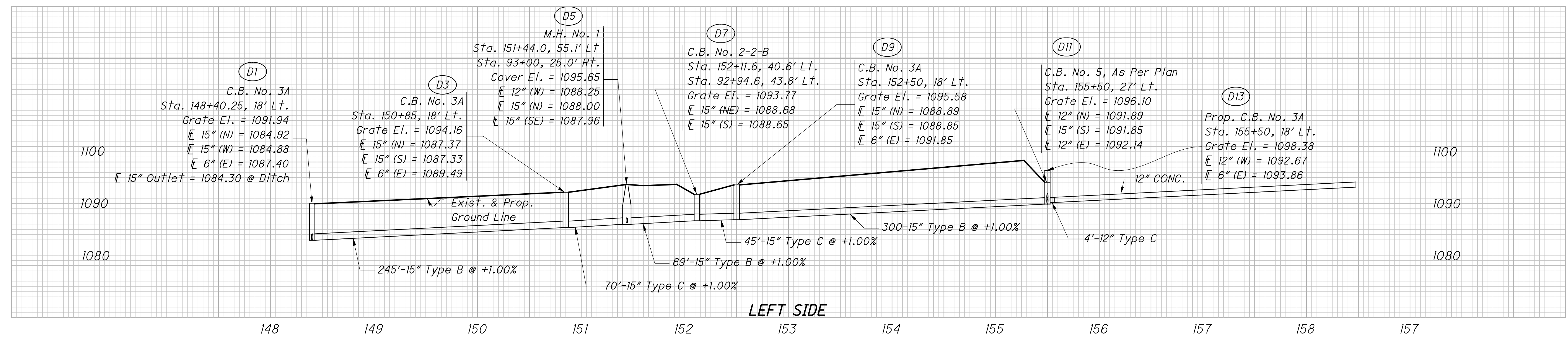


CALCULATED
MSQ
CHECKED
PDG

0 50 100
HORIZONTAL
SCALE IN FEET



- NOTES**
- A. For profile of D-1 & D-2 outlets, see sheet 20.
 - B. For profile between D-11 & D13, see sheet 26.
 - C. For Abby Rd. drainage profile, see sheet 41.
 - D. For drainage sub-summary, see sheets 14-16.
 - E. For S.R.166 plan & profile, see sheets 17-19.



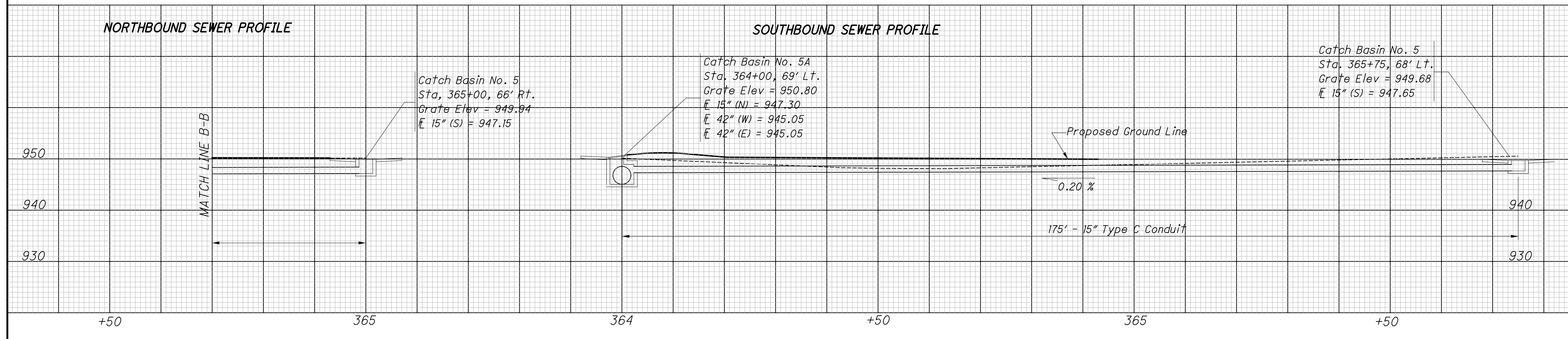
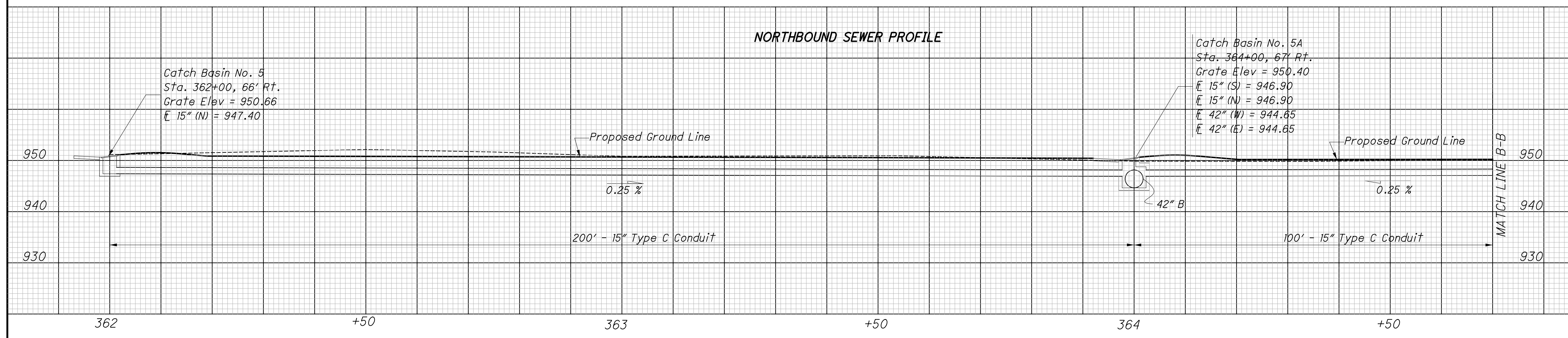
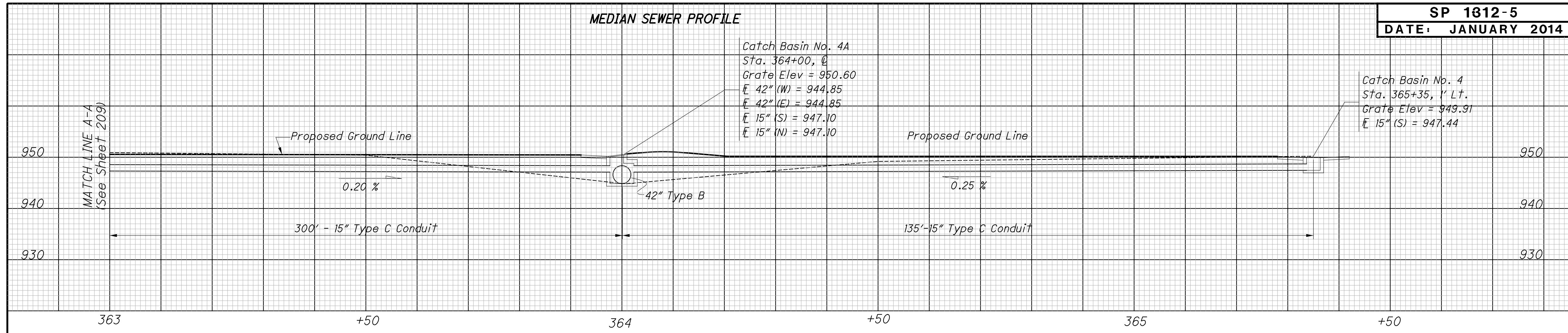
S.R. 166 DRAINAGE PROFILE

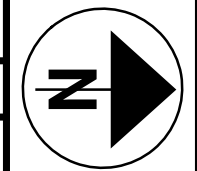
RIC-166-8.37

CALCULATED
MTC
CHECKED
CJM

LONGITUDINAL SEWER PROFILE

LUC-76-31.48





CALCULATED KEW
CHECKED JOH

CULVERT PLAN AND PROFILE
STA. 133+13.00

GUE-660-2.52

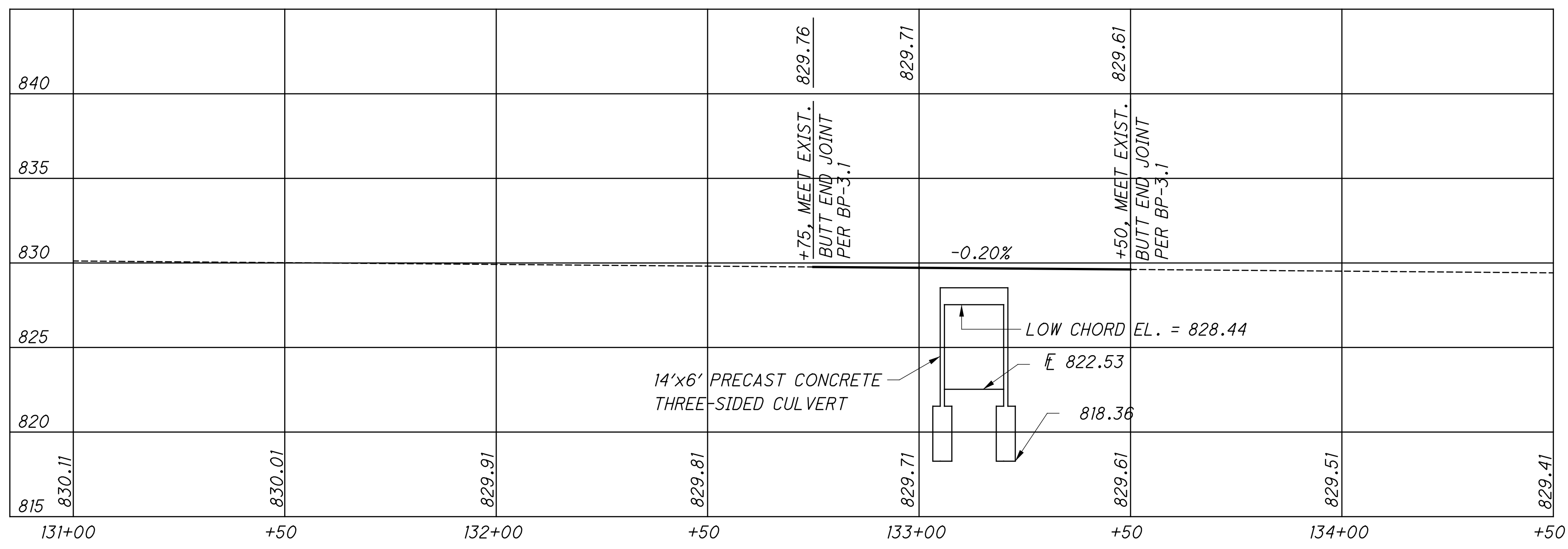
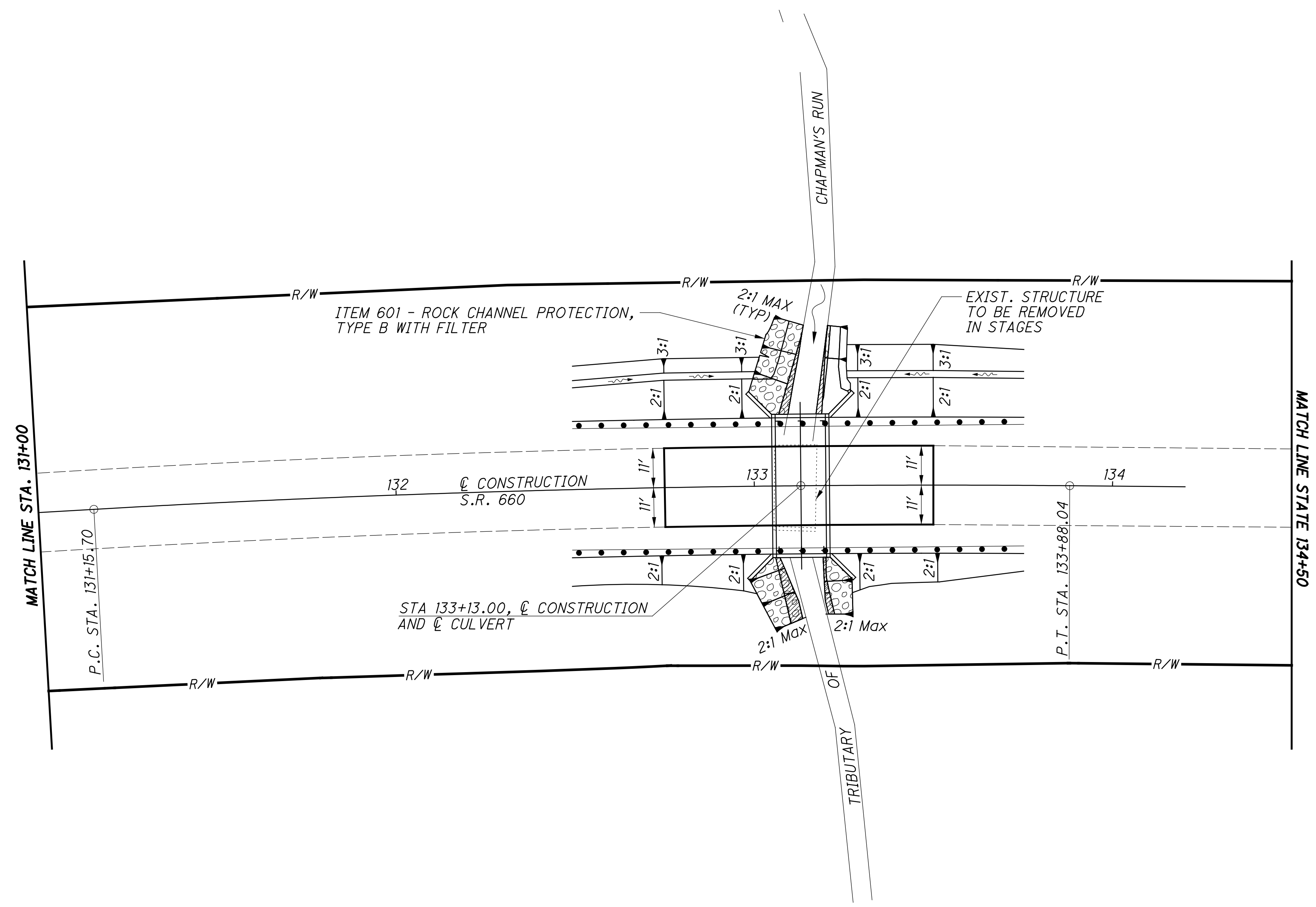
1/8

100
125

HYDRAULIC DATA	
DRAINAGE AREA: 0.79 SQ.MI.	
EXISTING WATERWAY OPENING: 60.0 SF	
PROPOSED WATERWAY OPENING: 70.0 SF	
ORDINARY HIGH WATER MARK: 822.9 FT	
SFN: 3006914	
DESIGN SERVICE LIFE: 75 YRS	
Abrasion Level: 3	
Q_{10} = 297 CFS	Q_{100} = 518 CFS
V_{10} = 6.9 FPS	V_{100} = 7.9 FPS
HW_{10} = 827.8	HW_{100} = 829.9

EXISTING STRUCTURE	
TYPE: CONCRETE SLAB SUPPORTED ON GRAVITY WALL ABUTMENT	
SPAN: 12'-0"	
ROADWAY: 22'-5" F/F RAILS	
ALIGNMENT: CURVE	
APPROACH SLAB: NONE	
SUPERELEVATION: VARIES	
DATE BUILT: 1900	
STRUCTURE FILE NO. 3006514	
SKEW: 0° REFERENCE CHORD	
DISPOSITION: TO BE REPLACED	
LOADING: S-11.3(7)	

PROPOSED STRUCTURE	
TYPE: PRECAST REINFORCED CONCRETE FLAT-TOPPED THREE-SIDED CULVERT WITH CAST-IN-PLACE WINGWALLS	
SPAN: 14'-0" F/F CULVERT	
ROADWAY: 34'-0" F/F RAILS	
ALIGNMENT: 1°19'11" CURVED TO THE RIGHT	
SUPERELEVATION: VARIES	
APPROACH SLAB: NONE	
SKEW: 0°	
WEARING SURFACE: ASPHALT CONCRETE	
LOADING: HL93	
FUTURE WEARING SURFACE: 60 PSF	
SFN: 3006914	



DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93 WITH AN ALLOWANCE OF 0.06 KSF FUTURE WEARING SURFACE.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
CONCRETE CLASS "QC MISC." - $f'_c = 4,000$ psi SUBSTRUCTURE
REINFORCING STEEL - ASTM A615, A616, OR A617
 $F_y = 60,000$ psi.

REMOVAL OF EXISTING STRUCTURE:

PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AS INDICATED.

FOUNDATION BEARING RESISTANCE:

WINGWALL AND CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 3.0 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 4.5 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 4.8 KIPS PER SQUARE FOOT.

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS:

THE WALL AND TOP SLAB THICKNESSES SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

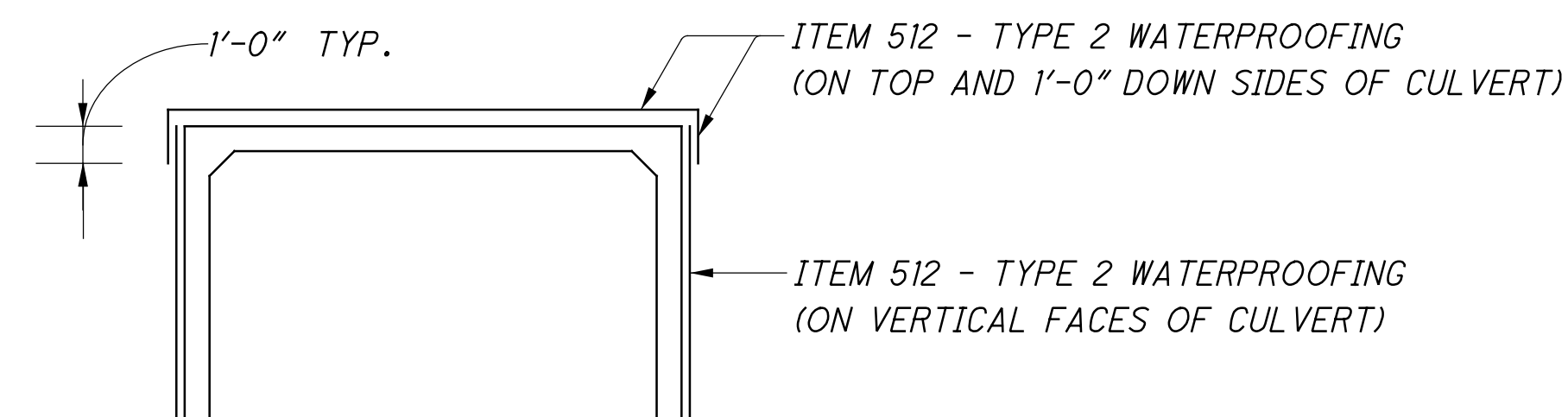
ITEM 512, TYPE 2 WATERPROOFING:

MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.

ITEM 511 - CLASS QC1 CONCRETE, HEADWALL:

THE QUANTITY SHOWN FOR THIS PAY ITEM REPRESENTS THE FORESLOPE WALL LOCATED ATOP EACH END OF THE CONDUIT.

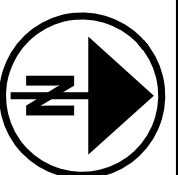
WHEN SEALING OF CONCRETE SURFACES (EPOXY) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE BOX CULVERT, ANY PRECAST CULVERT SECTIONS BEYOND THE LIMIT OF THE MEMBRANE WATERPROOFING SHALL BE SEALED USING EPOXY SEALER. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE BOX SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE).



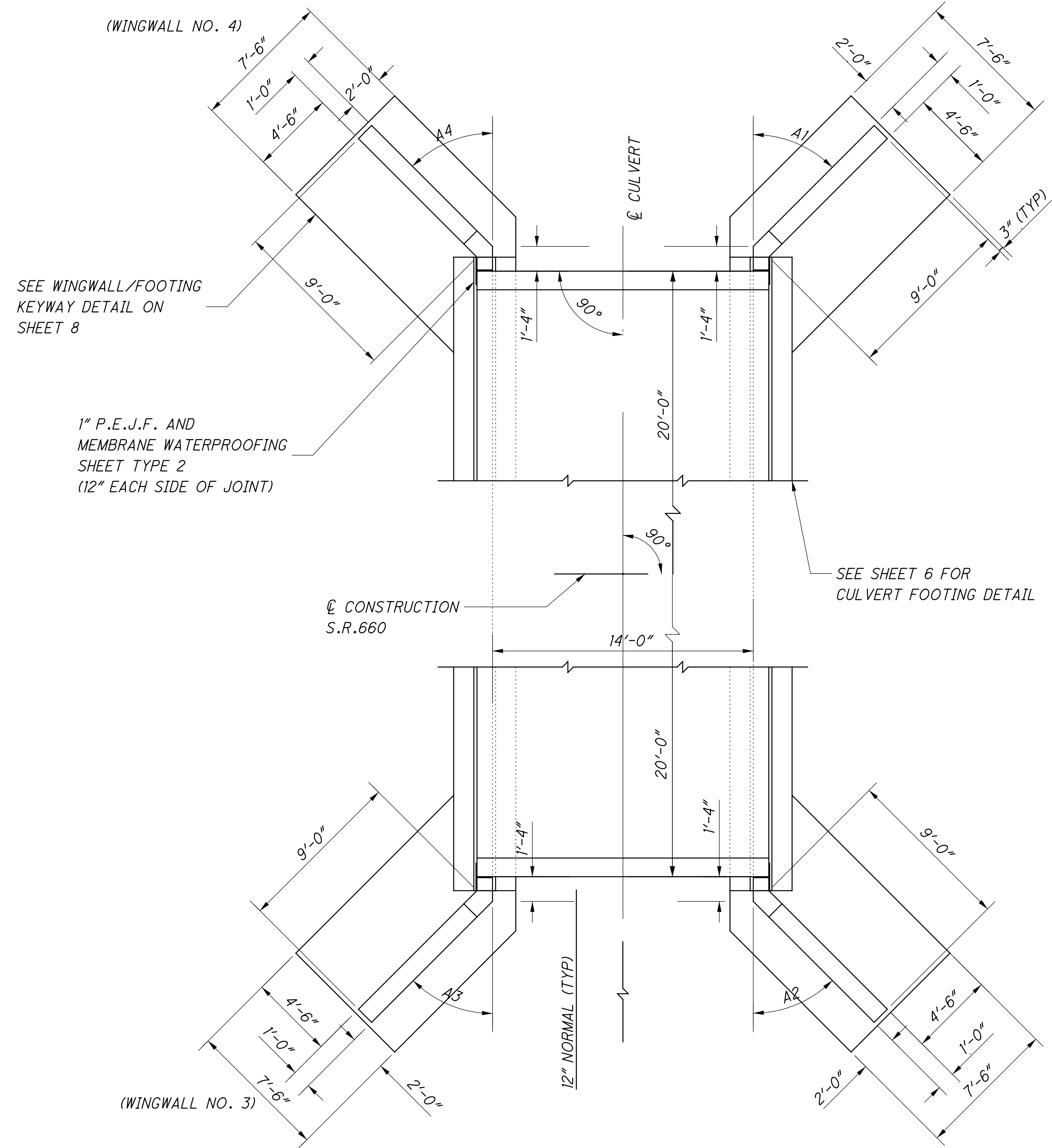
GENERAL SUMMARY (GUE - 660 - 2.52)				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS	LUMP	STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	6015	LB	EPOXY COATED REINFORCING STEEL
511	46000	12	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	46510	54	CY	CLASS QC1 CONCRETE, FOOTING
511	46610	1	CY	CLASS QC1 CONCRETE, HEADWALL
512	33000	128	SY	TYPE 2 WATERPROOFING
512	10100	34	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21200	16	CY	POROUS BACKFILL WITH FILTER FABRIC
601	32100	57	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
601	34200	43	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
611	70000	40	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE FLAT TOPPED, THREE SIDED CULVERT (14'-0" SPAN X 6'-0" RISE)

CULVERT ESTIMATED QUANTITIES
STA. 133+13.00

GUE - 660 - 2.52



CALCULATED
KEW
CHECKED
JOH



SEE WINGWALL/FOOTING
KEYWAY DETAIL ON
SHEET 8

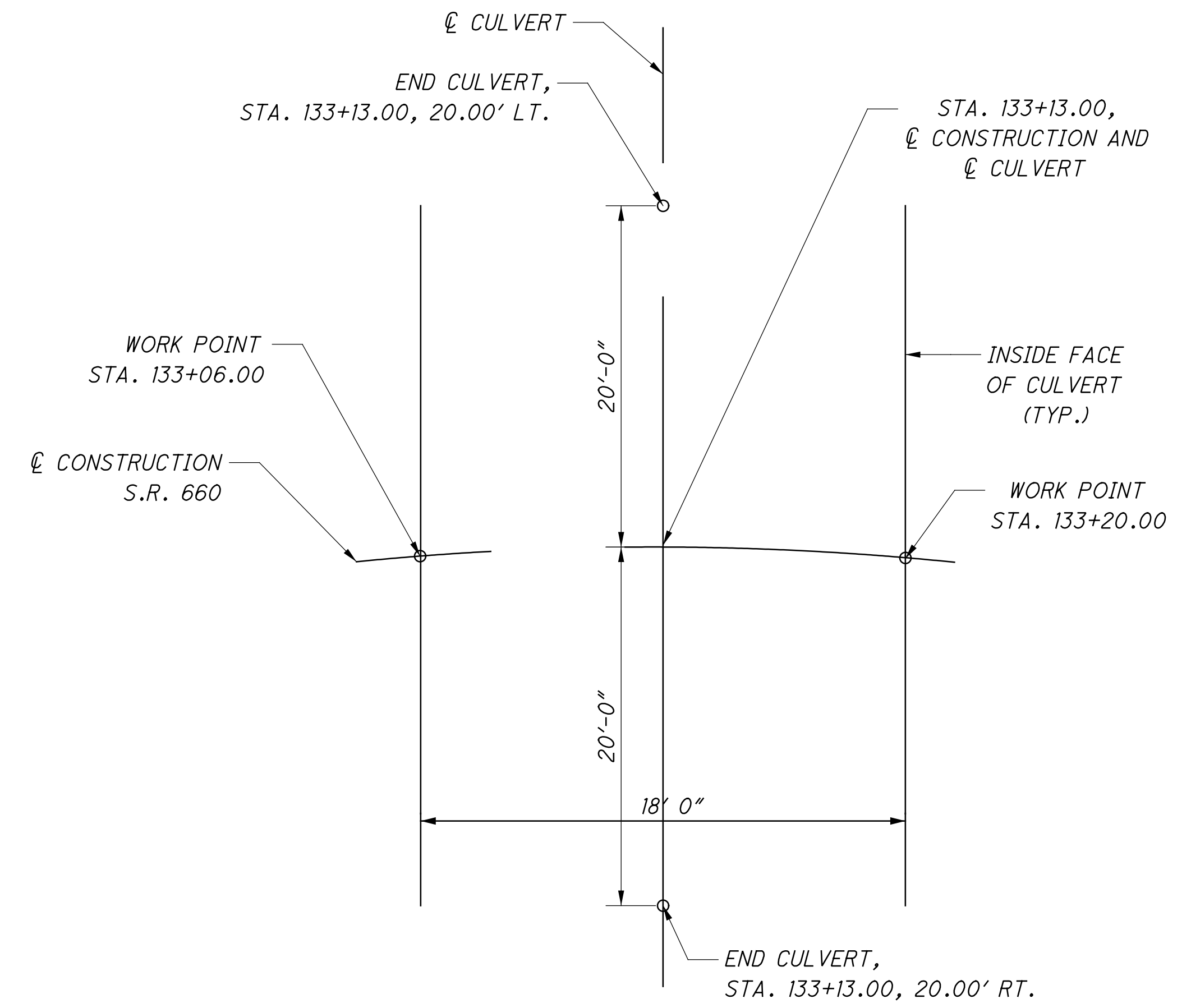
1" P.E.J.F. AND
MEMBRANE WATERPROOFING
SHEET TYPE 2
(12" EACH SIDE OF JOINT)

∅ CONSTRUCTION
S.R.660

SEE SHEET 6 FOR
CULVERT FOOTING DETAIL

(WINGWALL NO. 1)

(WINGWALL NO. 2)



REFERENCE DIAGRAM

WINGWALL ANGLES	
A1	45°0'0"
A2	45°0'0"
A3	45°0'0"
A4	45°0'0"

CULVERT & WINGWALL LAYOUT

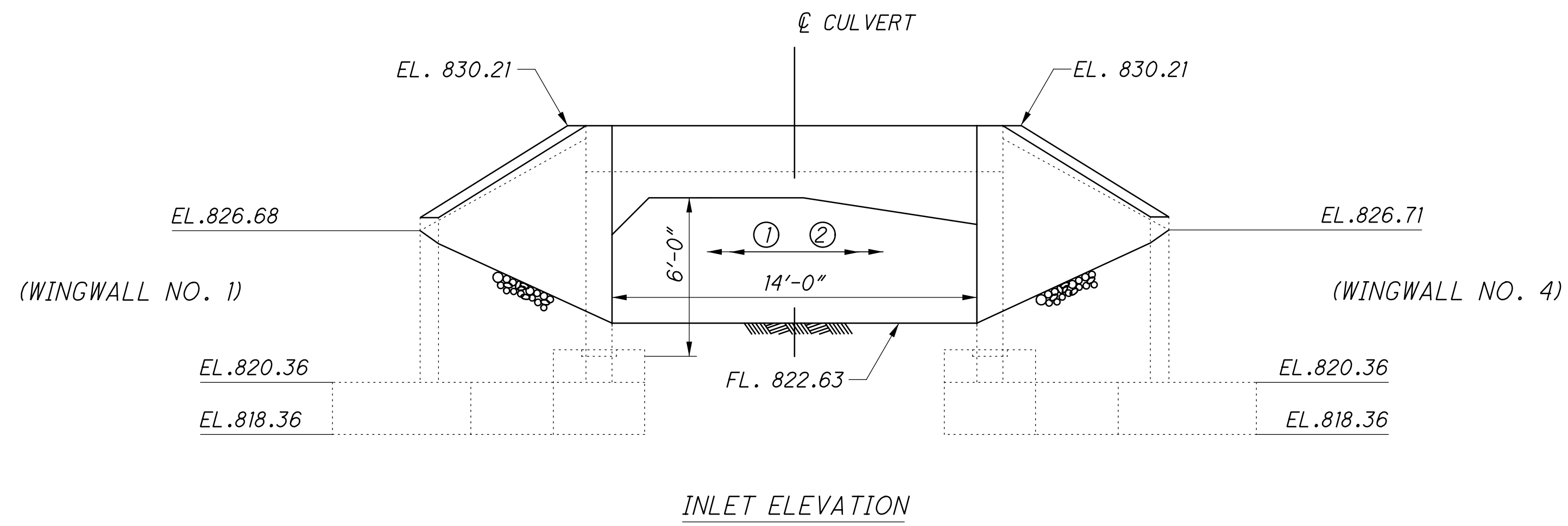
NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

**CULVERT LAYOUT
STA. 133+13.00**

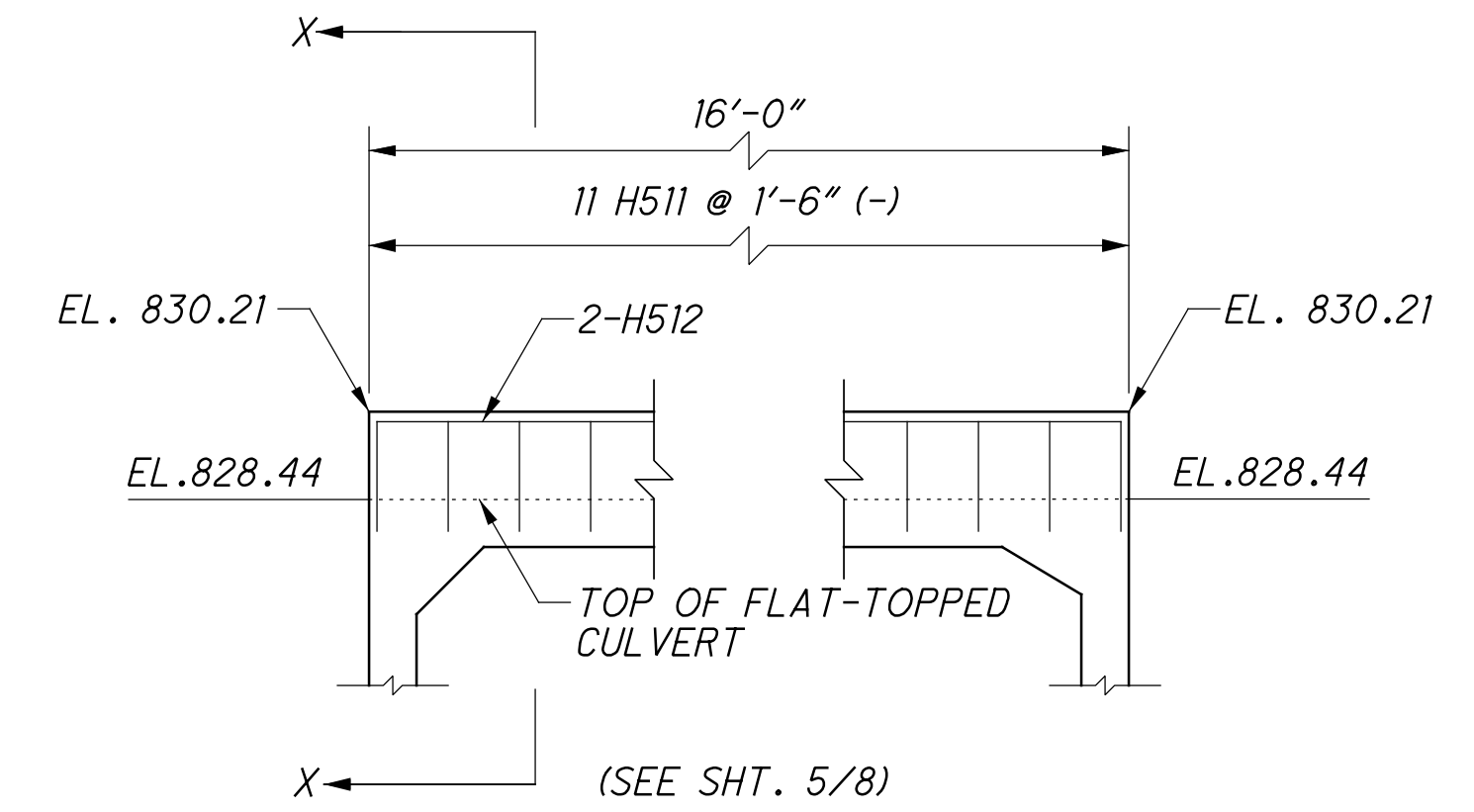
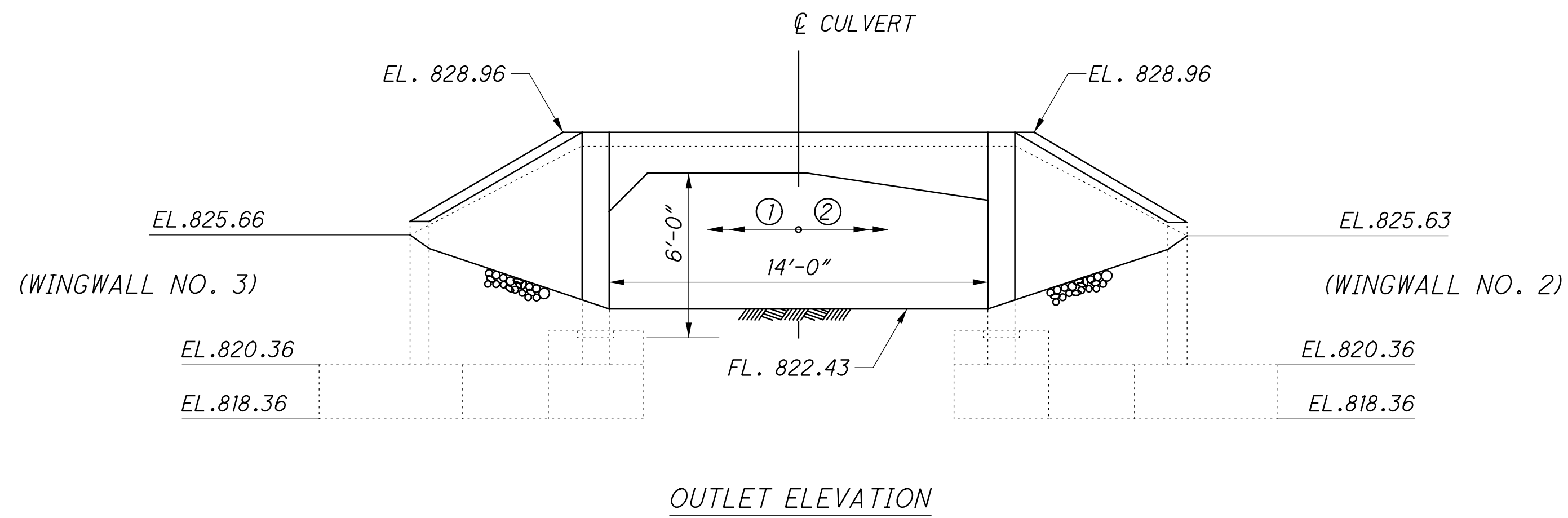
GUE-660-2.52

3 / 8

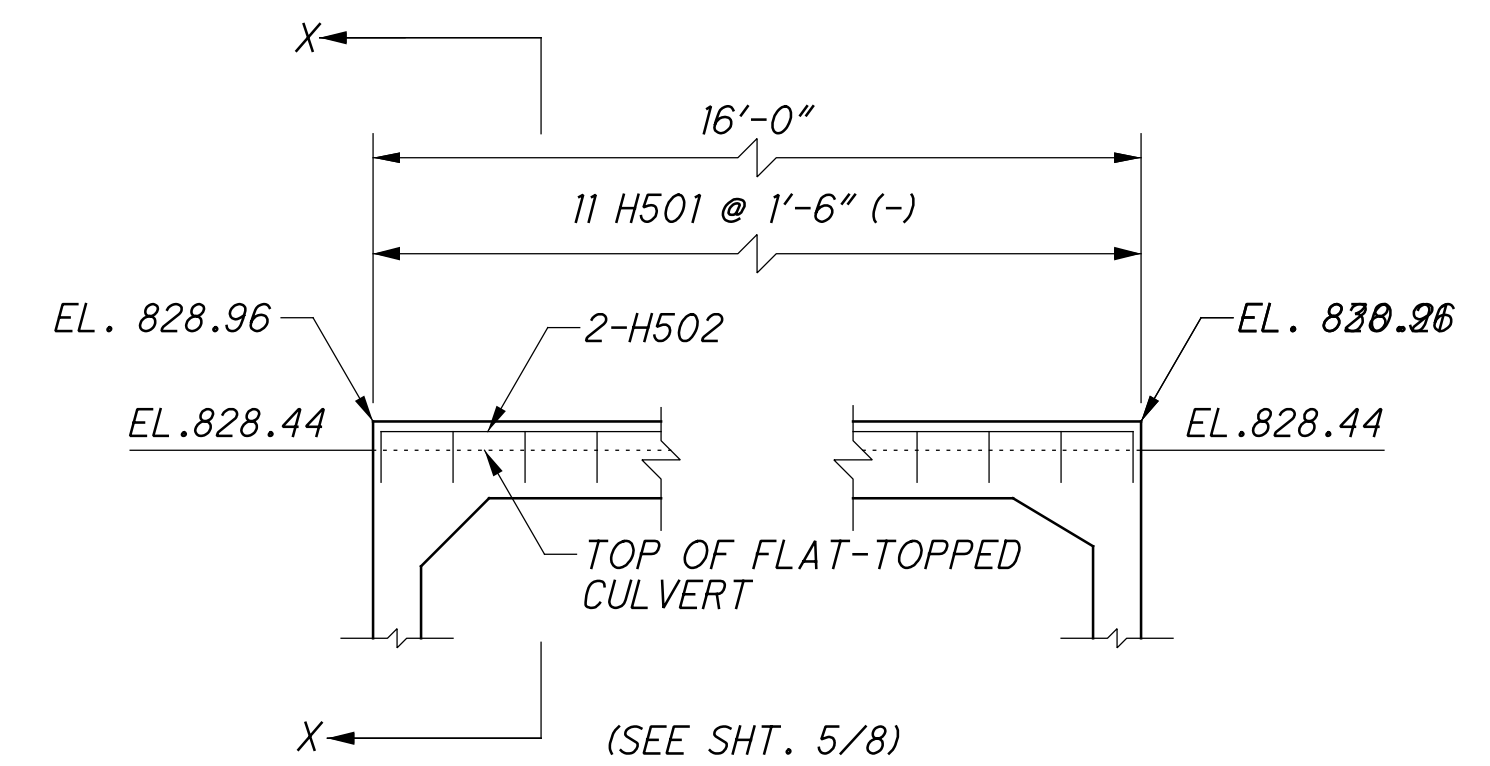
102
125



NOTE: ① - SHORT HAUNCH PRECAST UNIT
② - LONG HAUNCH PRECAST UNIT



INLET FORESLOPE WALL REINFORCING DETAIL
(FOR FLAT-TOPPED CULVERTS ONLY)

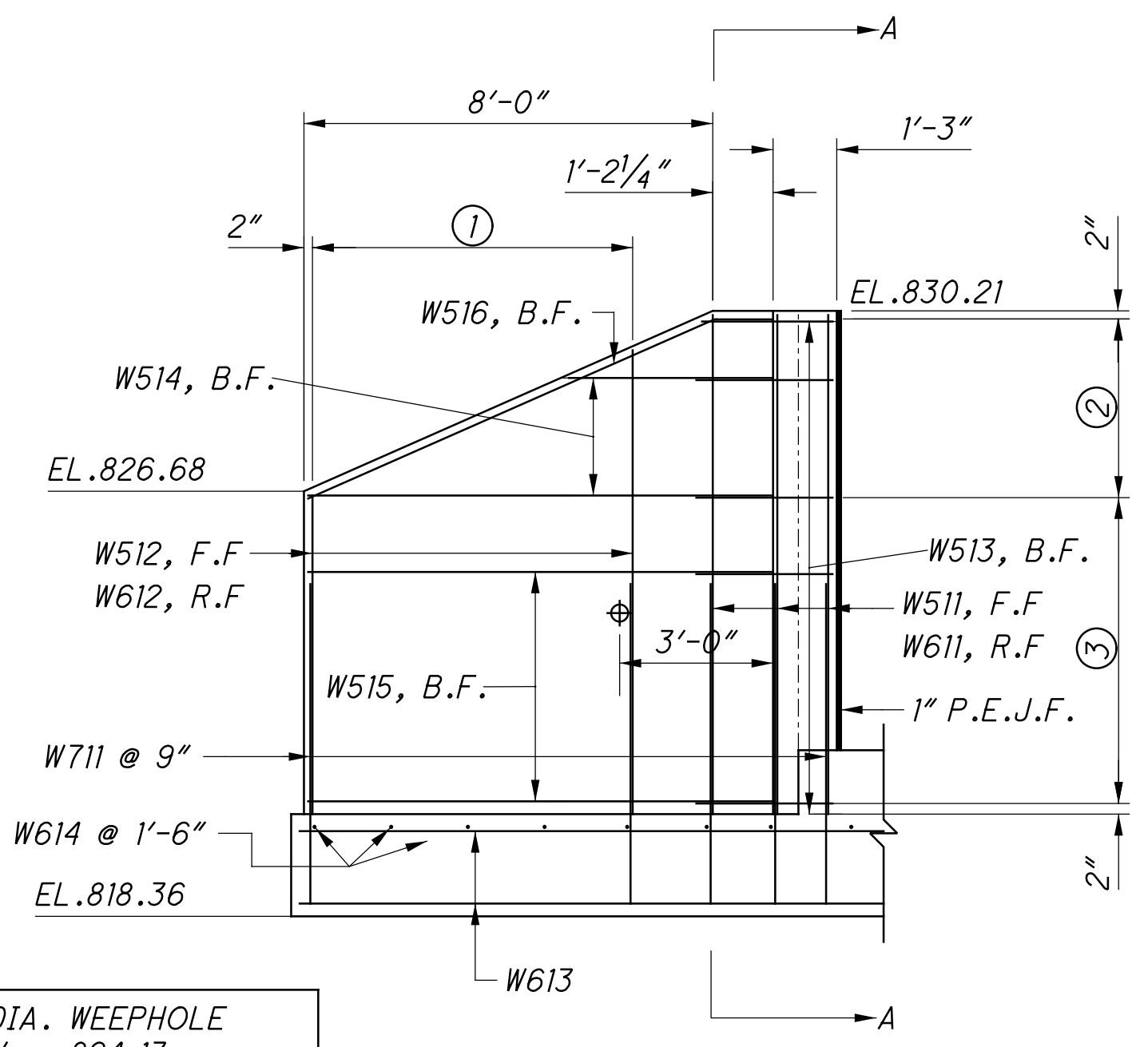


OUTLET FORESLOPE WALL REINFORCING DETAIL
(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION
STA. 133+13.00

GUE-660-2.52

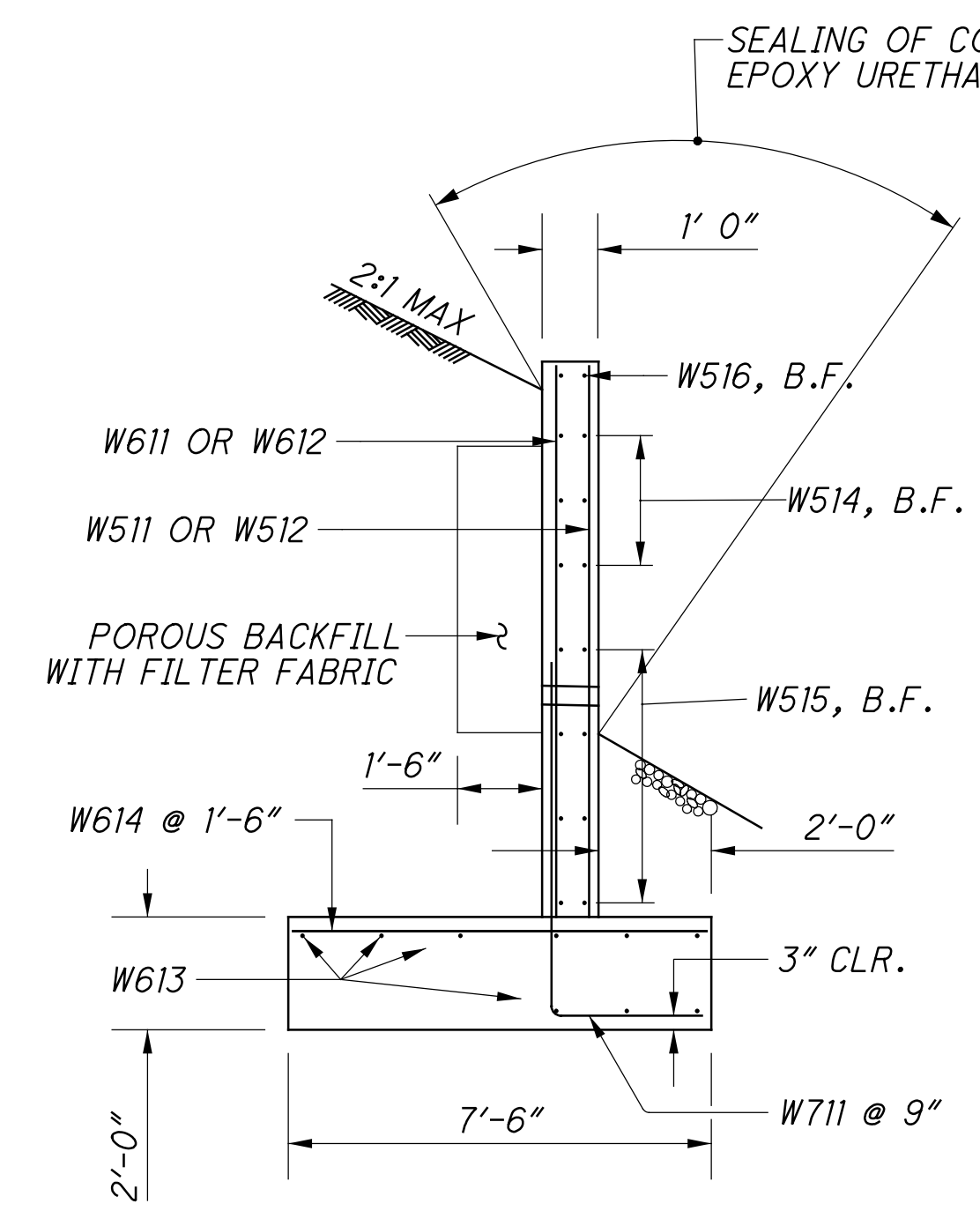
LEGEND:
F.F. = FRONT FACE
R.F. = REAR FACE
B.F. = BOTH FACE



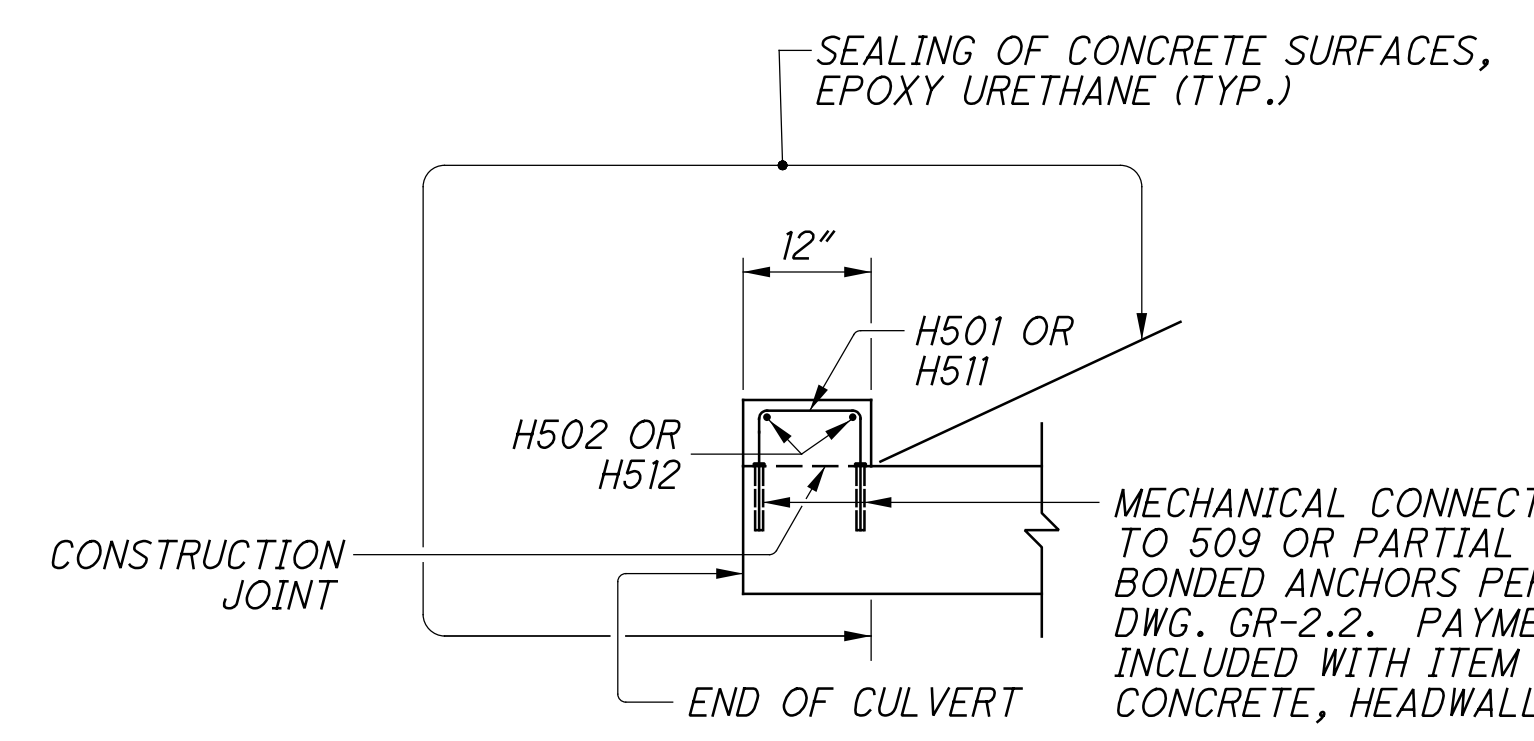
NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.13

WINGWALL 1 ELEVATION

- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-1 3/4"
- ③ 4 SPACES @ 1'-6"

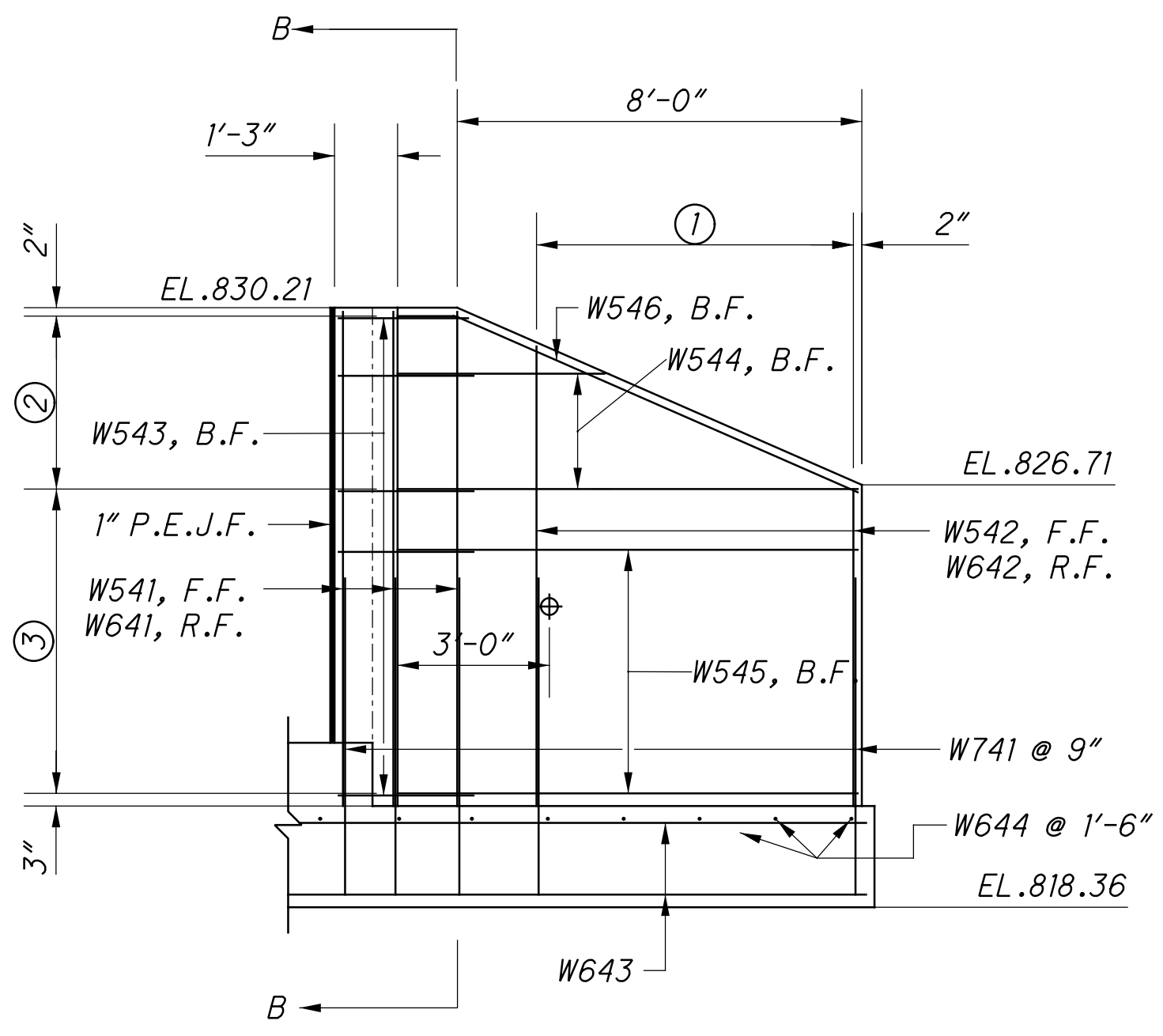


SECTION A-A



SECTION X-X
FORESLOPE WALL

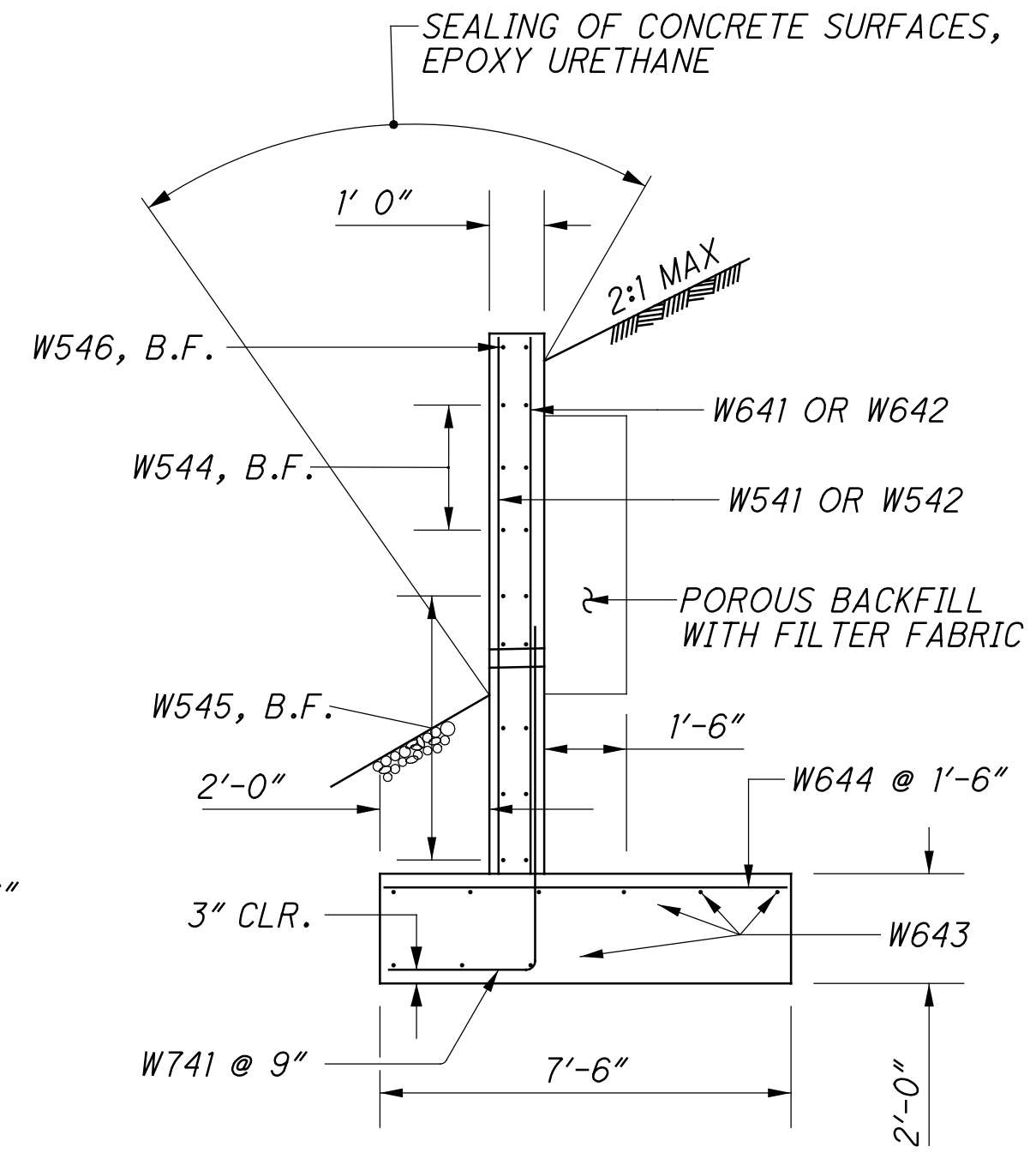
MECHANICAL CONNECTORS CONFORM TO 509 OR PARTIAL DEPTH RESIN BONDED ANCHORS PER STD. CONST. DWG. GR-2.2. PAYMENT TO BE INCLUDED WITH ITEM 511 - CLASS QC1 CONCRETE, HEADWALL.



NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.14

WINGWALL 4 ELEVATION

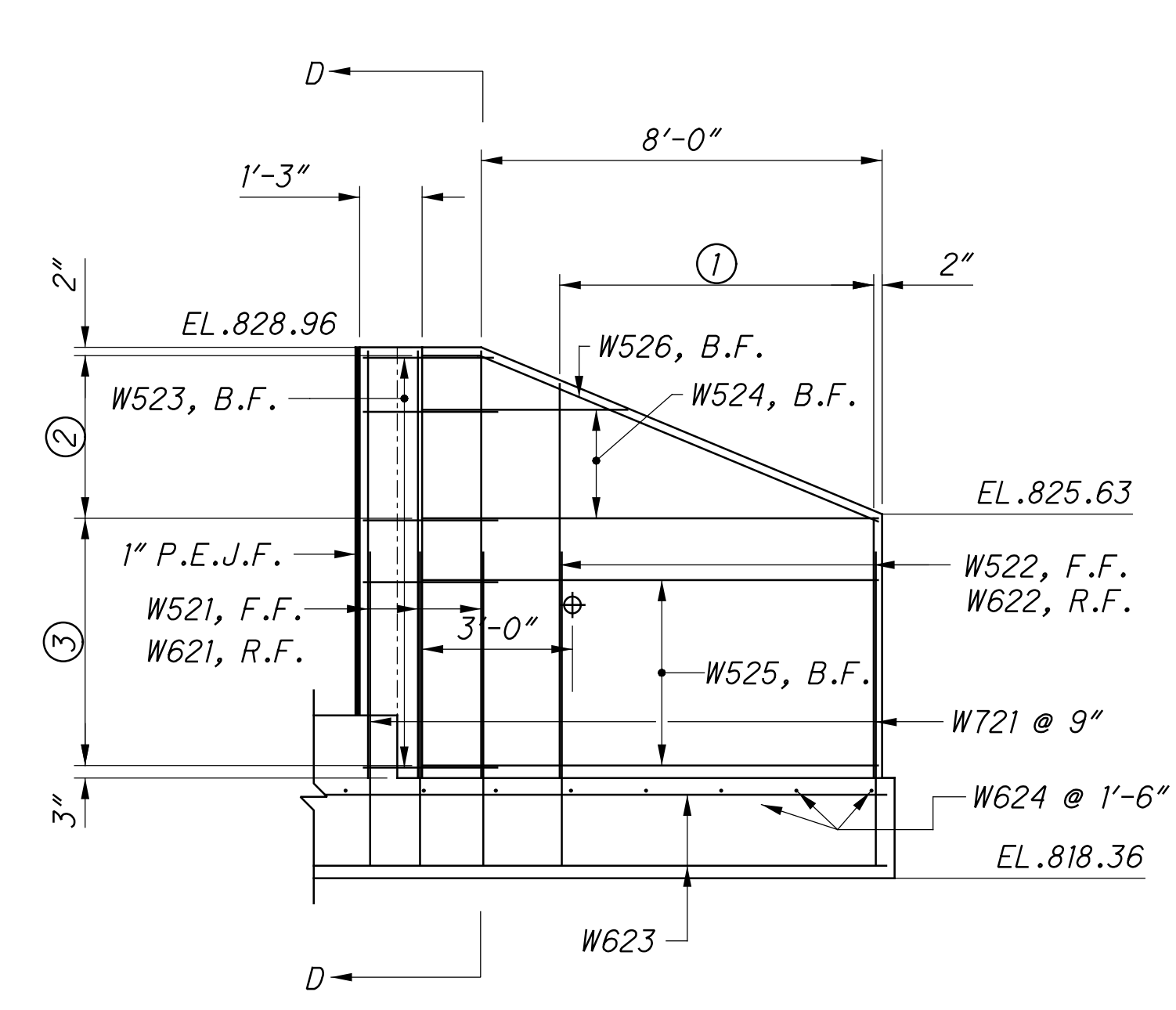
- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-1 3/4"
- ③ 5 SPACES @ 1'-2 1/2"



SECTION B-B

NOTES:

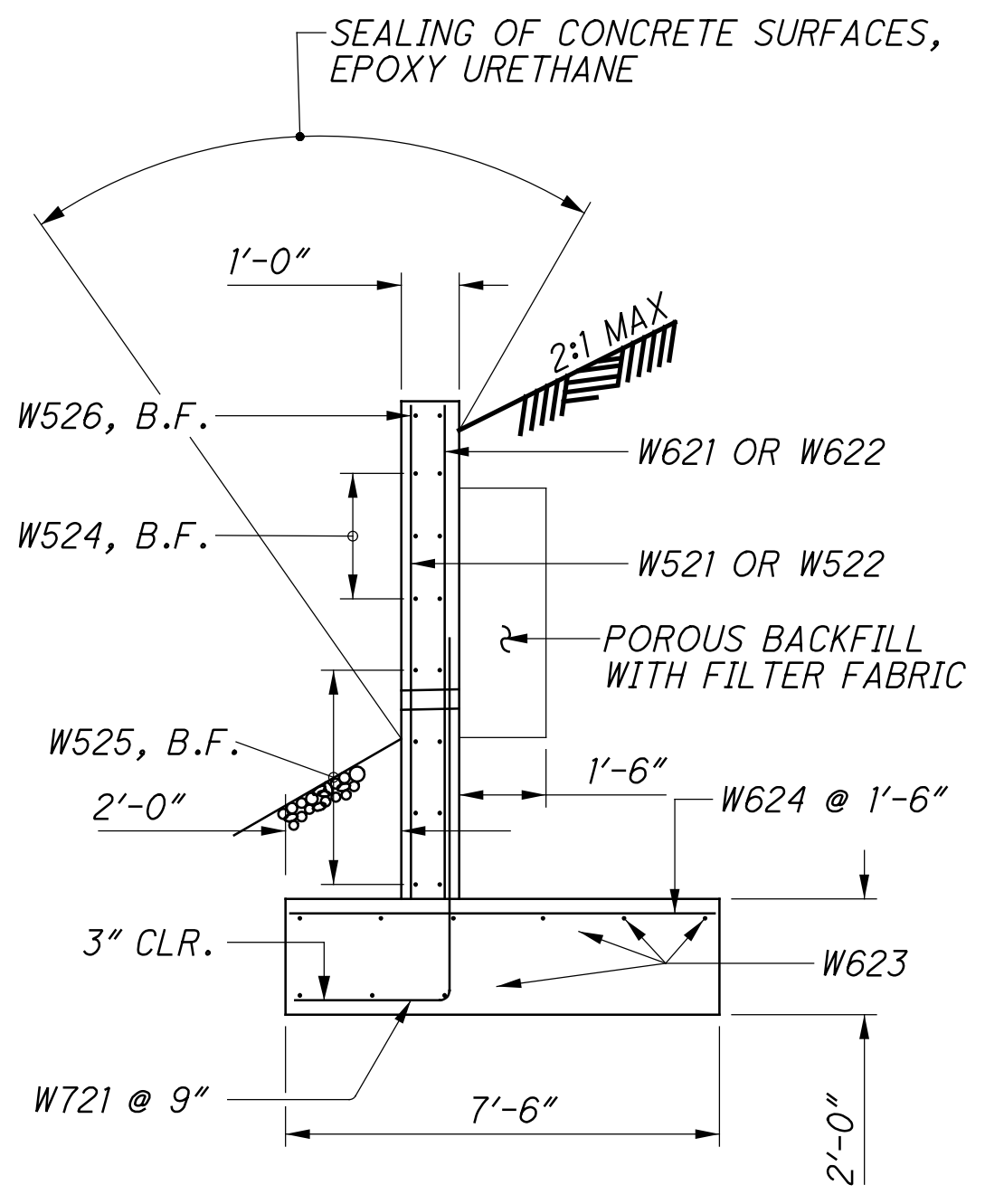
1. ITEM 518 - POROUS BACKFILL W/FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND 1' BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL, AND RETURN 6" ABOVE THE WEEPHOLE.
2. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE EXTENDED FROM TOP OF FOOTING TO TOP OF WALL.



WINGWALL 2 ELEVATION

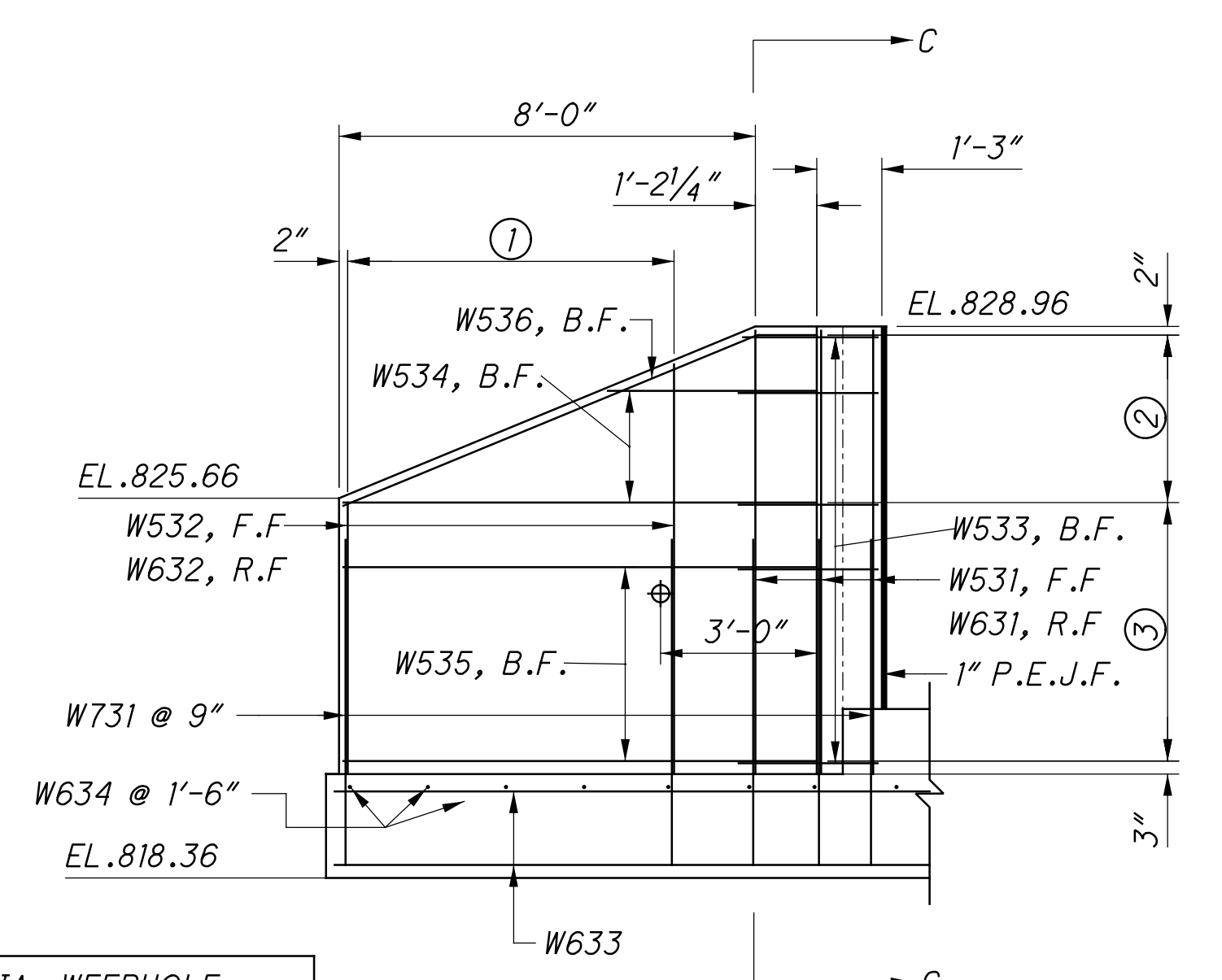
NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.65

- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-1"
- ③ 4 SPACES @ 1'-2³/₄"



SECTION D-D

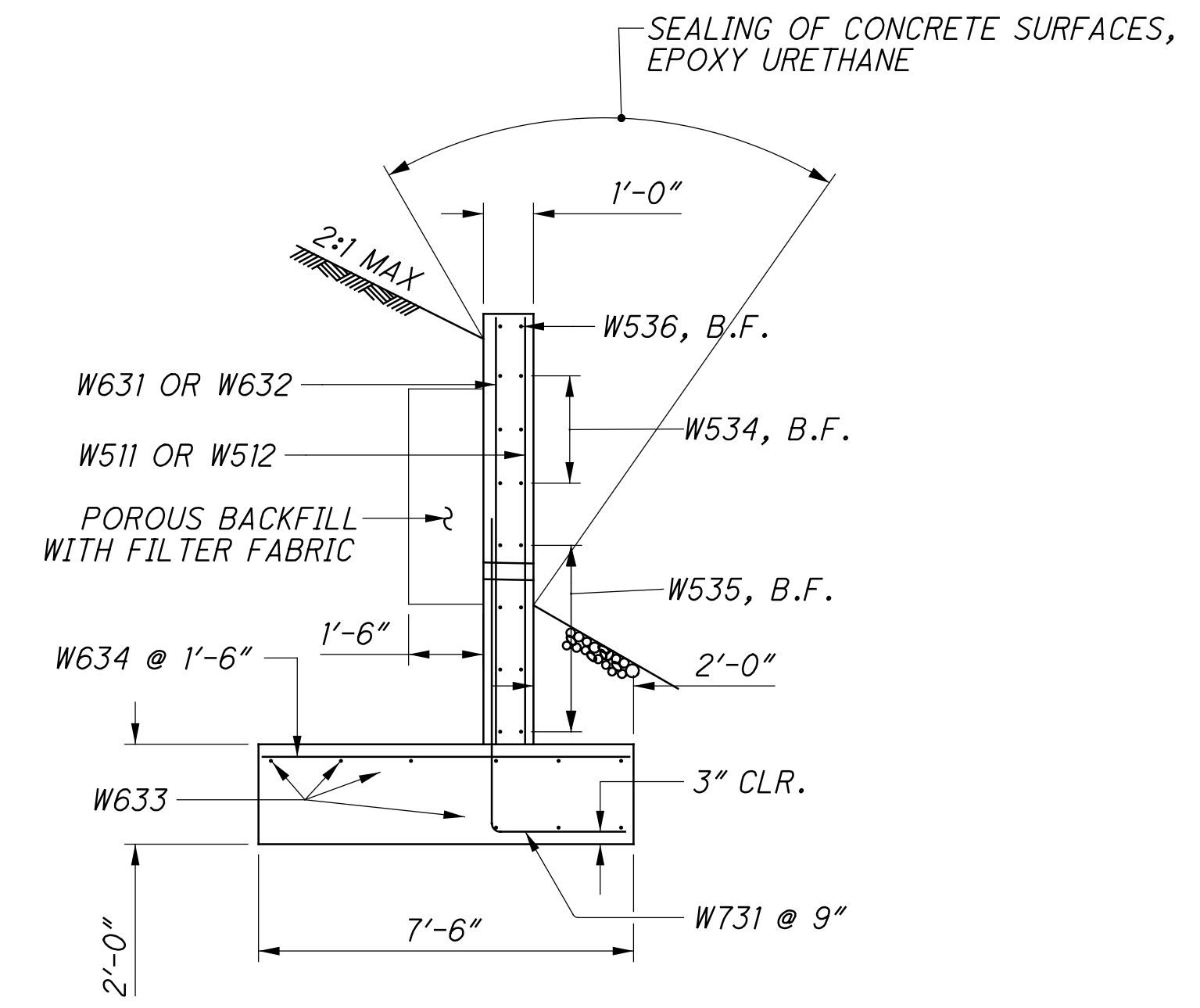
LEGEND:
F.F. = FRONT FACE
R.F. = REAR FACE
B.F. = BOTH FACE



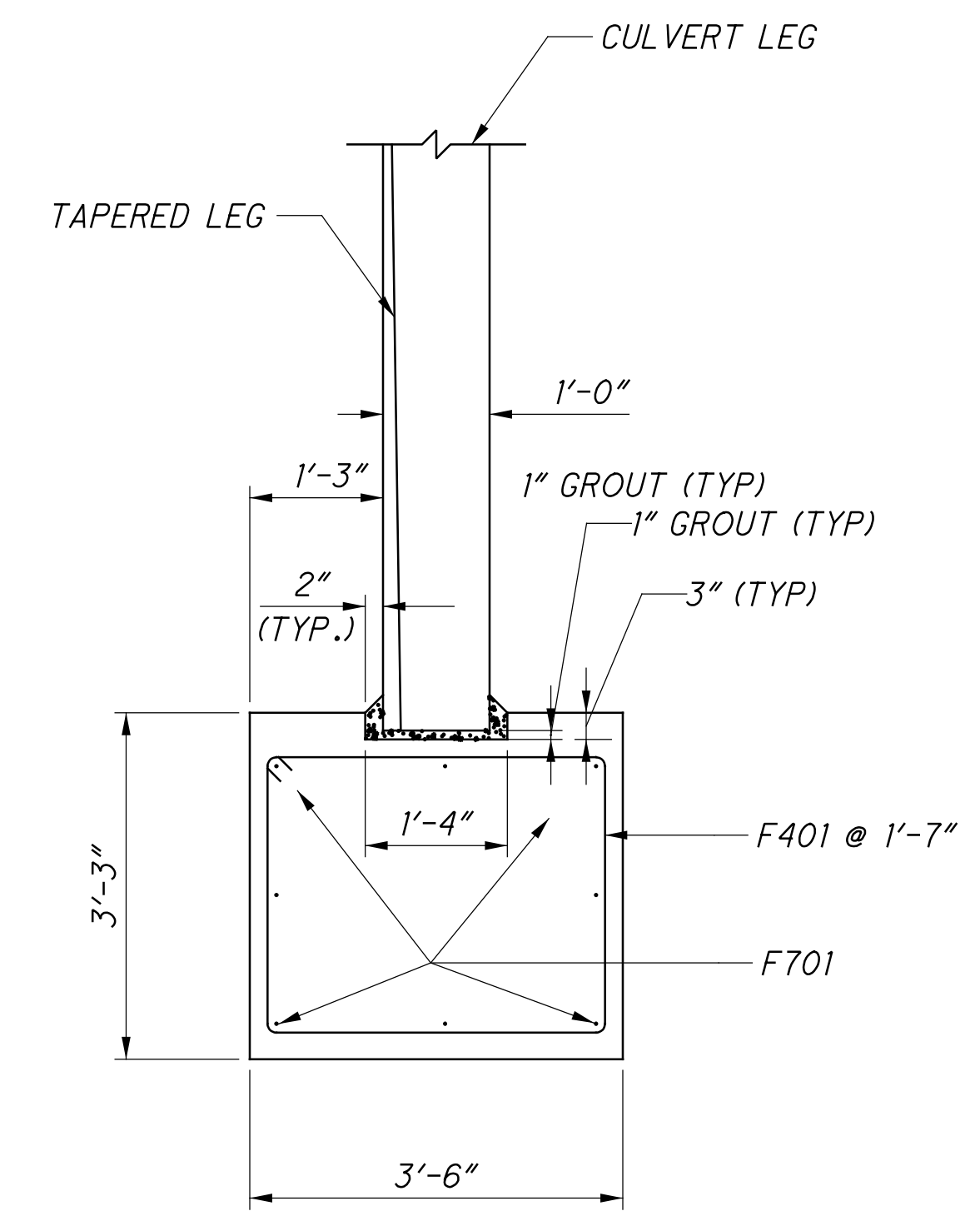
WINGWALL 3 ELEVATION

NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.66

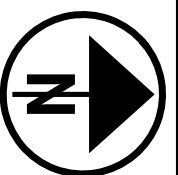
- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-0³/₄"
- ③ 4 SPACES @ 1'-3"



SECTION C-C



CULVERT FOOTING SECTION



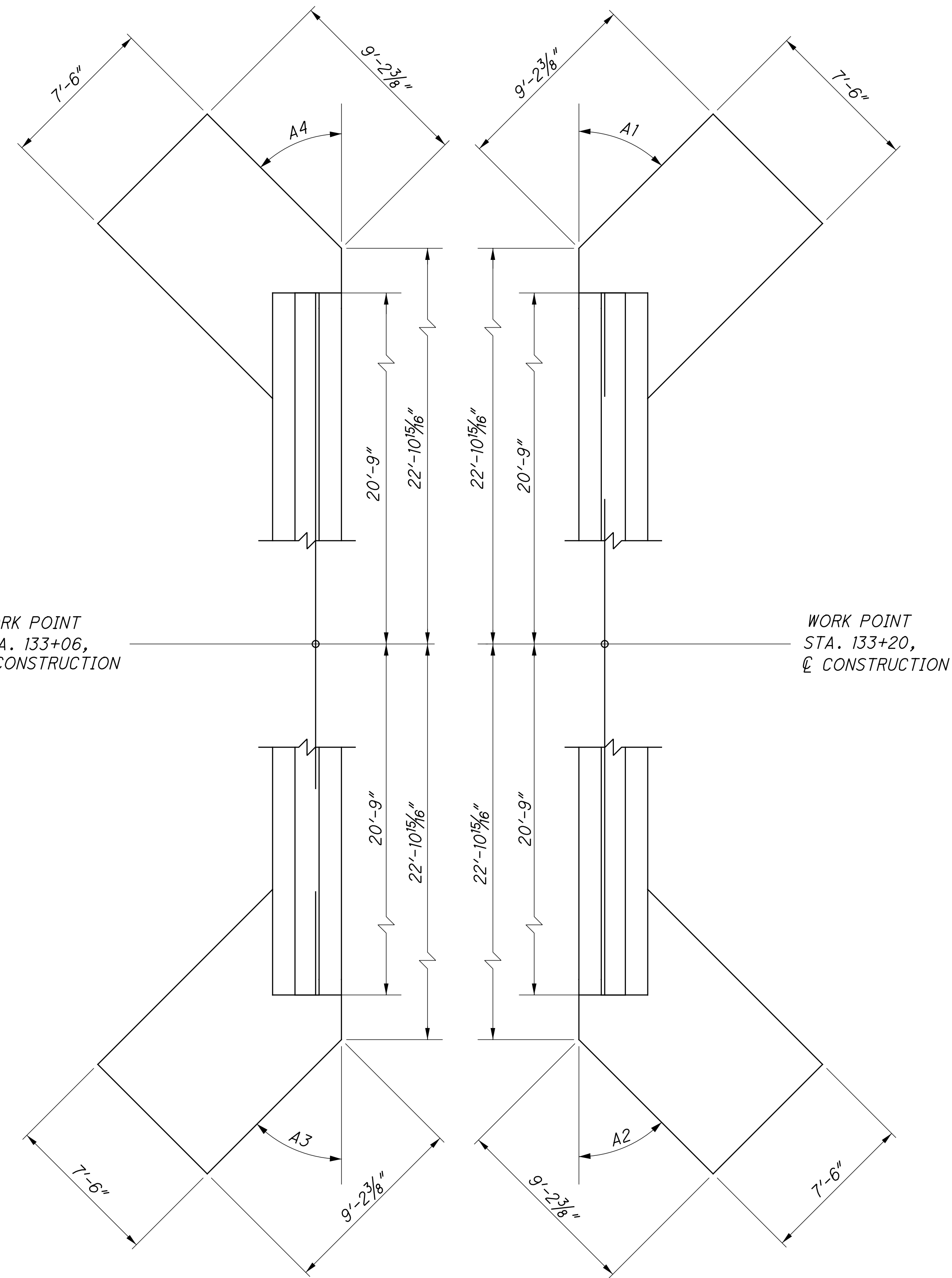
CALCULATED
KEW
CHECKED
JOH

FOOTING DETAILS
STA. 133+13.00

GUE-660-2.52

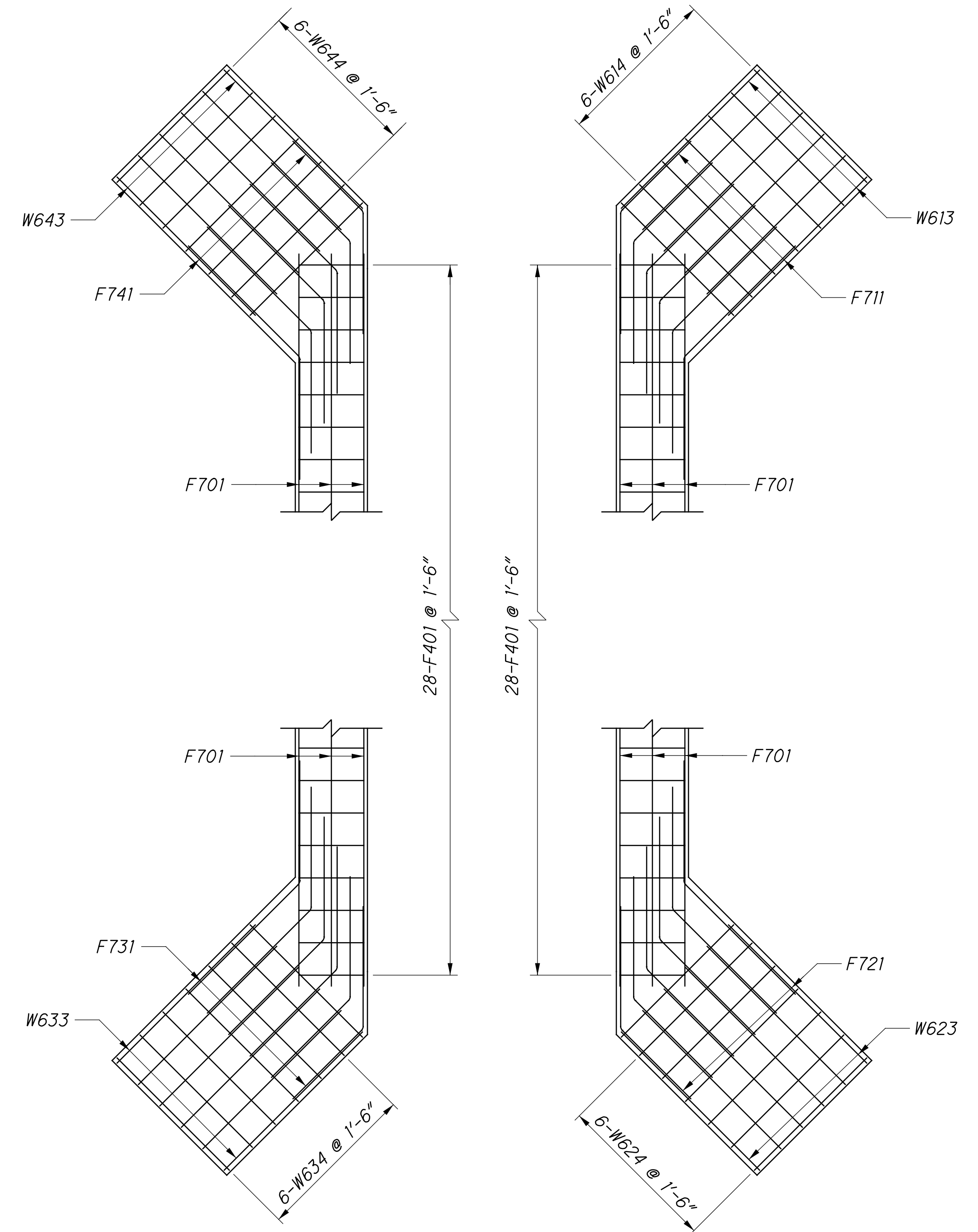
7/8

106
125

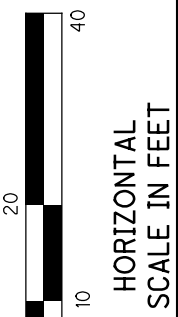
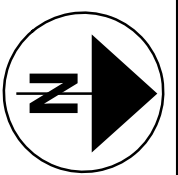


FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4



FOOTING REINFORCING PLAN



CALCULATED
KEW
CHECKED
JOH

CULVERT PLAN AND PROFILE
STA. 133+13.00

GUE-660-2.52

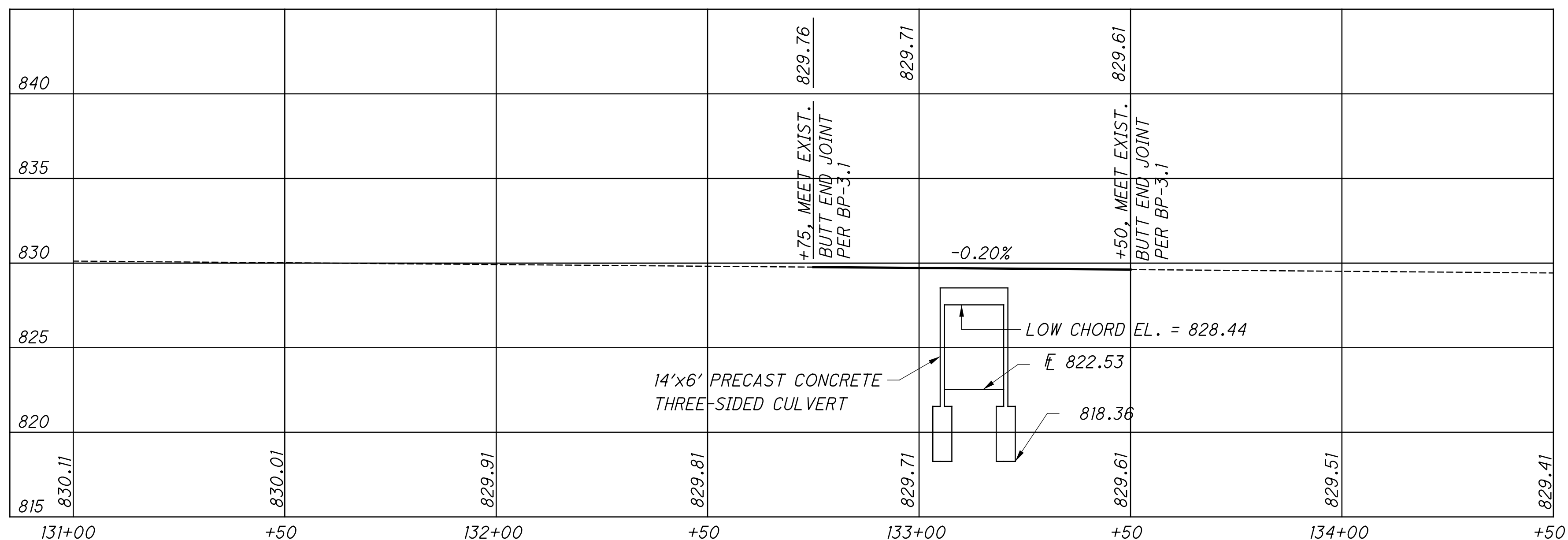
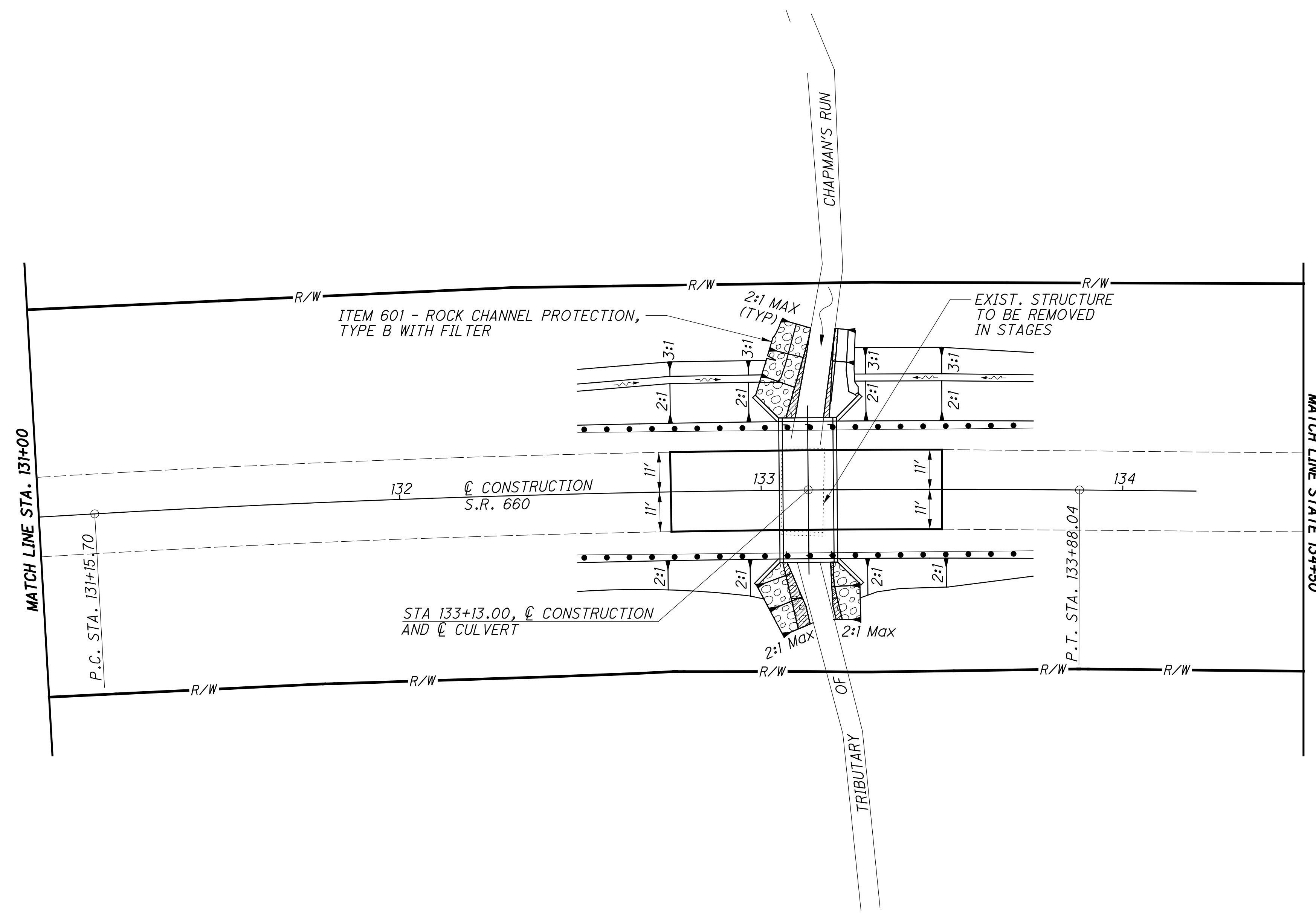
1/8

100
125

HYDRAULIC DATA	
DRAINAGE AREA: 0.79 SQ.MI.	
EXISTING WATERWAY OPENING: 60.0 SF	
PROPOSED WATERWAY OPENING: 70.0 SF	
ORDINARY HIGH WATER MARK: 822.9 FT	
SFN: 3006914	
DESIGN SERVICE LIFE: 75 YRS	
Abrasion Level: 3	
Q_{10} = 297 CFS	Q_{100} = 518 CFS
V_{10} = 6.9 FPS	V_{100} = 7.9 FPS
HW_{10} = 827.8	HW_{100} = 829.9

EXISTING STRUCTURE	
TYPE: CONCRETE SLAB SUPPORTED ON GRAVITY WALL ABUTMENT	
SPAN: 12'-0"	
ROADWAY: 22'-5" F/F RAILS	
ALIGNMENT: CURVE	
APPROACH SLAB: NONE	
SUPERELEVATION: VARIES	
DATE BUILT: 1900	
STRUCTURE FILE NO. 3006514	
SKEW: 0° REFERENCE CHORD	
DISPOSITION: TO BE REPLACED	
LOADING: S-11.3(7)	

PROPOSED STRUCTURE	
TYPE: PRECAST REINFORCED CONCRETE FLAT-TOPPED THREE-SIDED CULVERT WITH PRECAST WINGWALLS	
SPAN: 14'-0" F/F CULVERT	
ROADWAY: 34'-0" F/F RAILS	
ALIGNMENT: 1°19'11" CURVED TO THE RIGHT	
SUPERELEVATION: VARIES	
APPROACH SLAB: NONE	
SKEW: 0°	
WEARING SURFACE: ASPHALT CONCRETE	
LOADING: HL93	
FUTURE WEARING SURFACE: 60 PSF	
SFN: 3006914	



DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93 WITH AN ALLOWANCE OF 0.06 KSF FUTURE WEARING SURFACE.

DESIGN STRESSES:

CAST-IN-PLACE STRUCTURES
CONCRETE CLASS "QC MISC." - $f'c = 4,000$ psi SUBSTRUCTURE
REINFORCING STEEL - ASTM A615, A616, OR A617
 $F_y = 60,000$ psi.

PROVIDE PRECAST GRAVITY AND SEMIGRAVITY WINGWALLS ACCORDING TO SS851.

REMOVAL OF EXISTING STRUCTURE:

PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AS INDICATED.

FOUNDATION BEARING RESISTANCE:

WINGWALL AND CULVERT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 3.0 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 4.5 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 4.8 KIPS PER SQUARE FOOT.

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS:

THE WALL AND TOP SLAB THICKNESSES SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

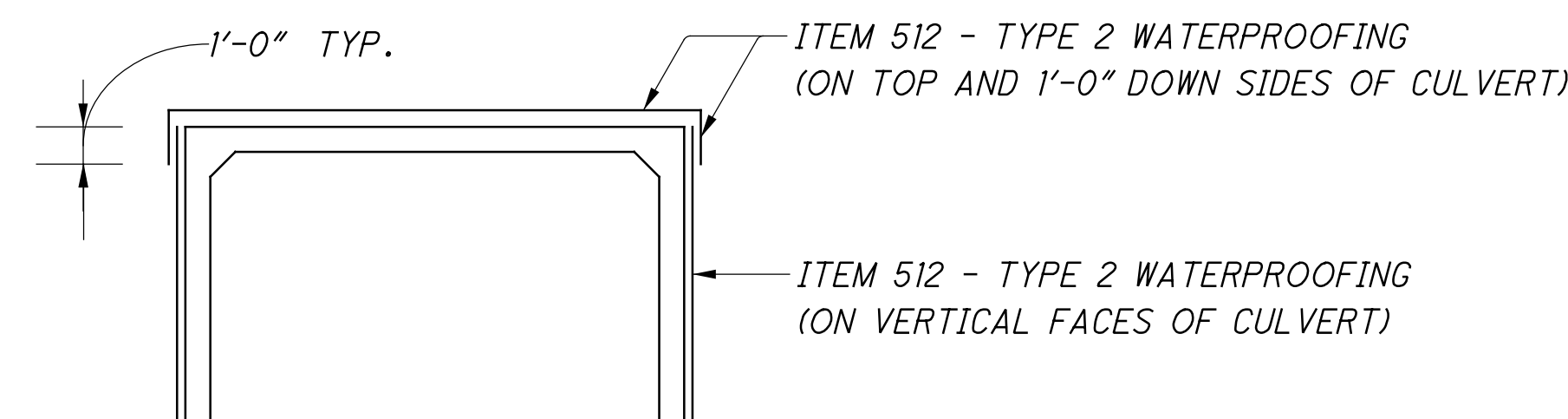
ITEM 512, TYPE 2 WATERPROOFING:

MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512, TYPE 2 WATERPROOFING.

ITEM 511 - CLASS QC1 CONCRETE, HEADWALL:

THE QUANTITY SHOWN FOR THIS PAY ITEM REPRESENTS THE FORESLOPE WALL LOCATED ATOP EACH END OF THE CONDUIT.

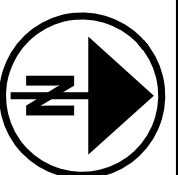
WHEN SEALING OF CONCRETE SURFACES (EPOXY) IS SPECIFIED ON THE HEADWALLS OF A PRECAST CONCRETE BOX CULVERT, ANY PRECAST CULVERT SECTIONS BEYOND THE LIMIT OF THE MEMBRANE WATERPROOFING SHALL BE SEALED USING EPOXY SEALER. PAYMENT FOR THE SEALING OF THE PRECAST CONCRETE BOX SURFACES SHALL BE MADE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY URETHANE).



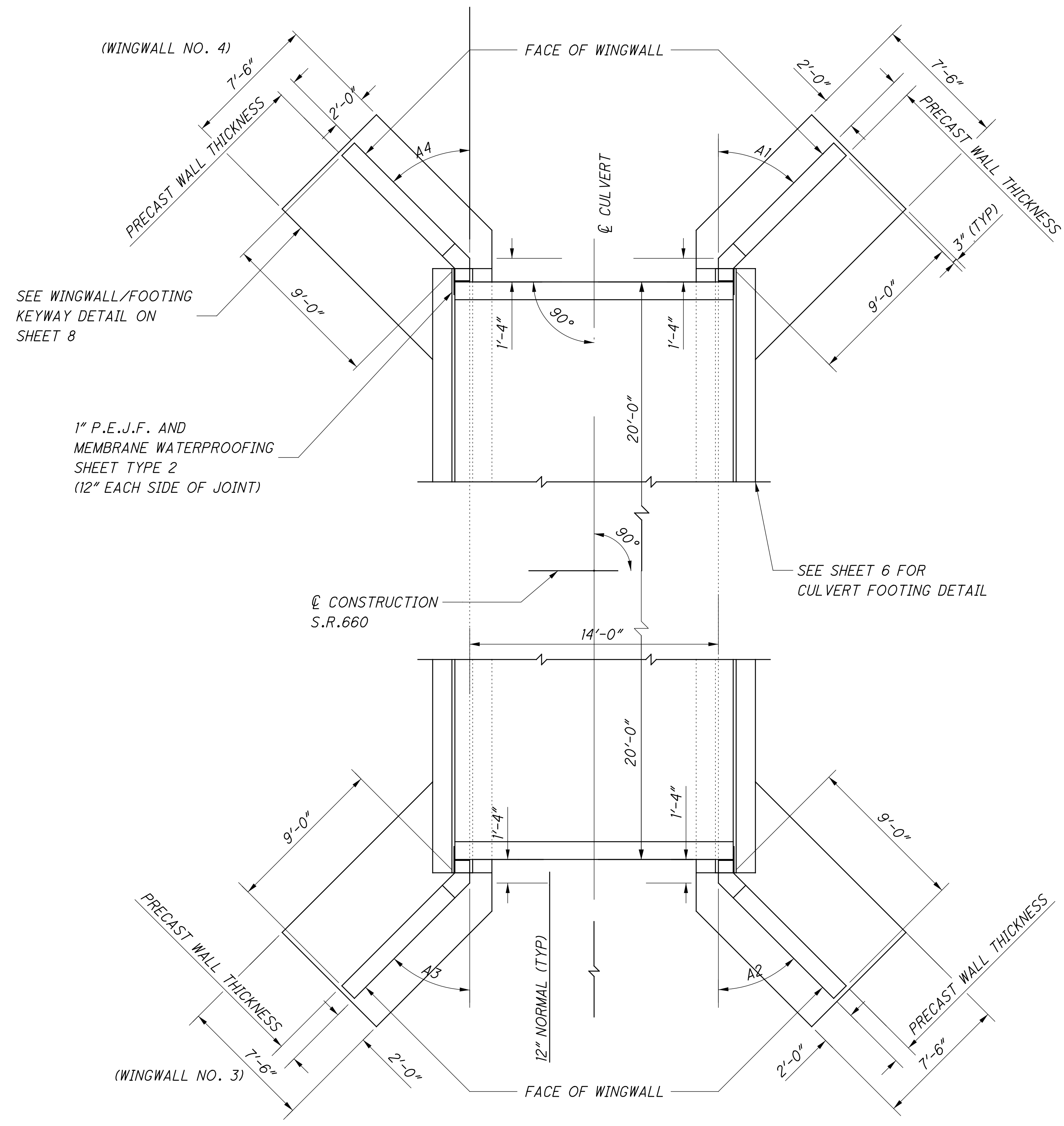
GENERAL SUMMARY (GUE - 660 - 2.52)				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS	LUMP	STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	3481	LB	EPOXY COATED REINFORCING STEEL
511	46510	54	CY	CLASS QC1 CONCRETE, FOOTING
511	46610	1	CY	CLASS QC1 CONCRETE, HEADWALL
512	33000	128	SY	TYPE 2 WATERPROOFING
512	10100	34	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER
601	32100	57	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
601	34200	43	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
611	70000	40	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE FLAT TOPPED, THREE SIDED CULVERT (14'-0" SPAN X 6'-0" RISE)
851	10000	12	SF	PRECAST GRAVITY AND SEMIGRAVITY RETAINING WALL
851	14000	2	DAYS	ON-SITE ASSISTANCE
851	15000	LS	LUMP	WALL DRAINAGE SYSTEM
851	15500	LS	LUMP	PGSRW INSPECTION AND COMPACTION TESTING

CULVERT ESTIMATED QUANTITIES
STA. 133+13.00

GUE - 660 - 2.52



CALCULATED
KEW
CHECKED
JOH



SEE WINGWALL/FOOTING
KEYWAY DETAIL ON
SHEET 8

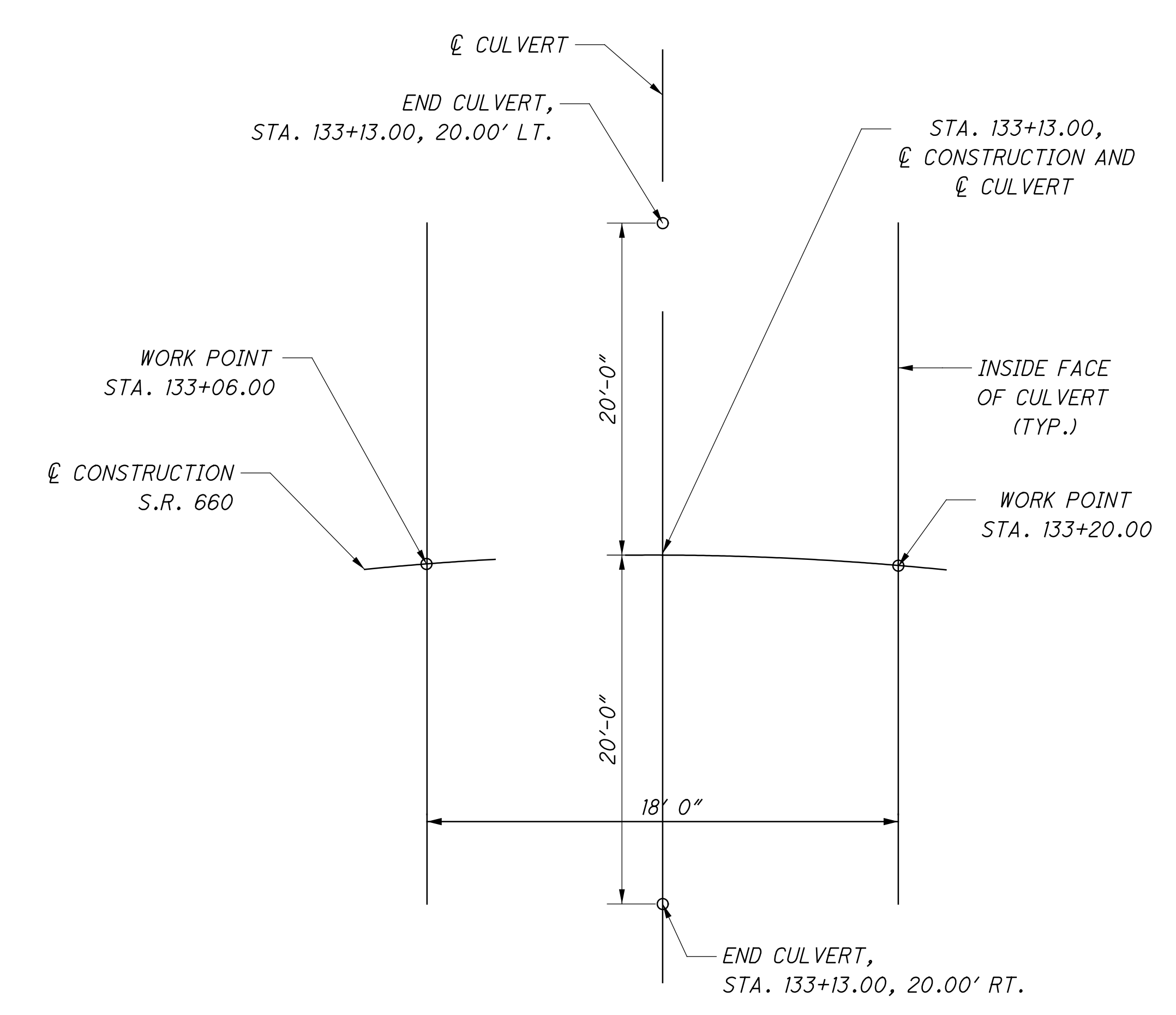
1" P.E.J.F. AND
MEMBRANE WATERPROOFING
SHEET TYPE 2
(12" EACH SIDE OF JOINT)

∅ CONSTRUCTION
S.R. 660

SEE SHEET 6 FOR
CULVERT FOOTING DETAIL

(WINGWALL NO. 1)

(WINGWALL NO. 2)



REFERENCE DIAGRAM

WINGWALL ANGLES	
A1	45°0'0"
A2	45°0'0"
A3	45°0'0"
A4	45°0'0"

CULVERT & WINGWALL LAYOUT

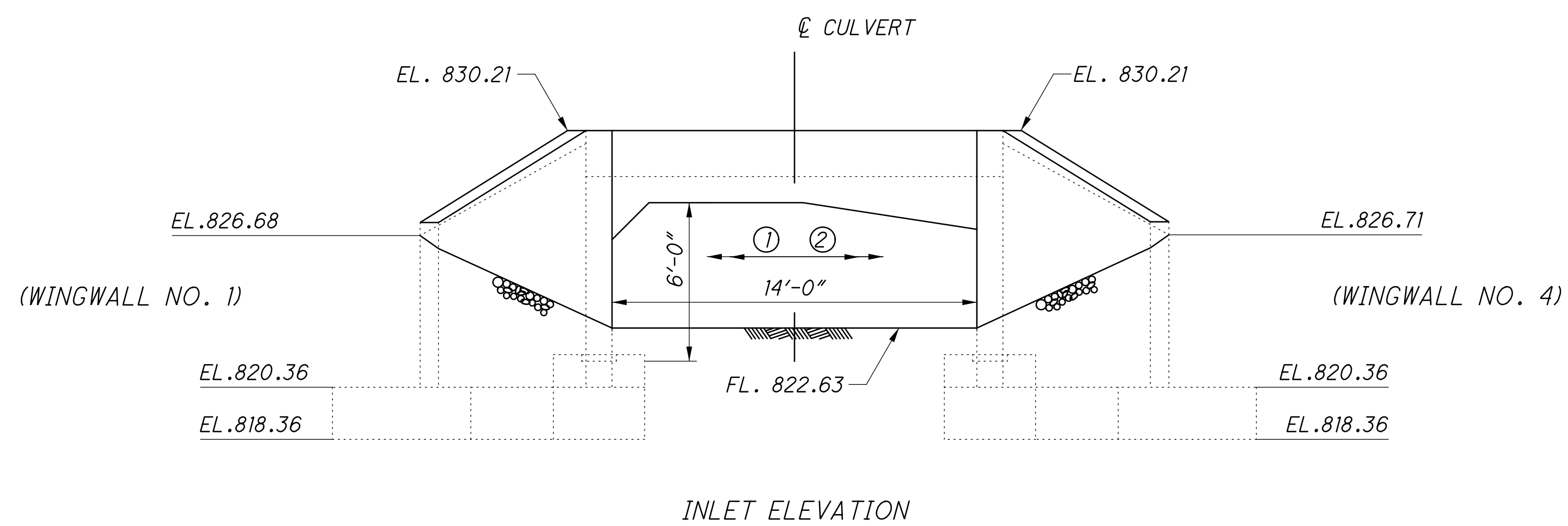
NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

CULVERT LAYOUT
STA. 133+13.00

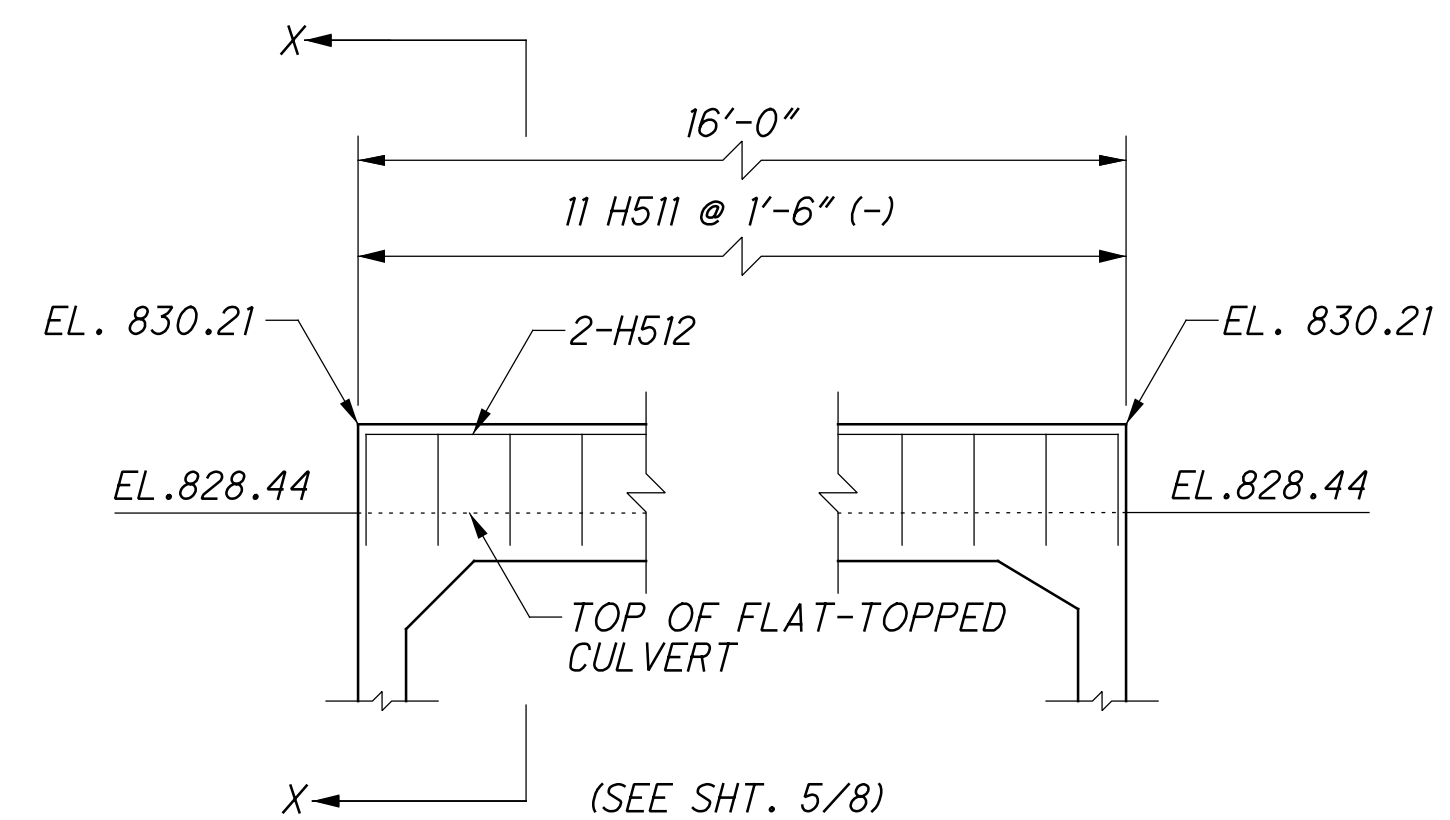
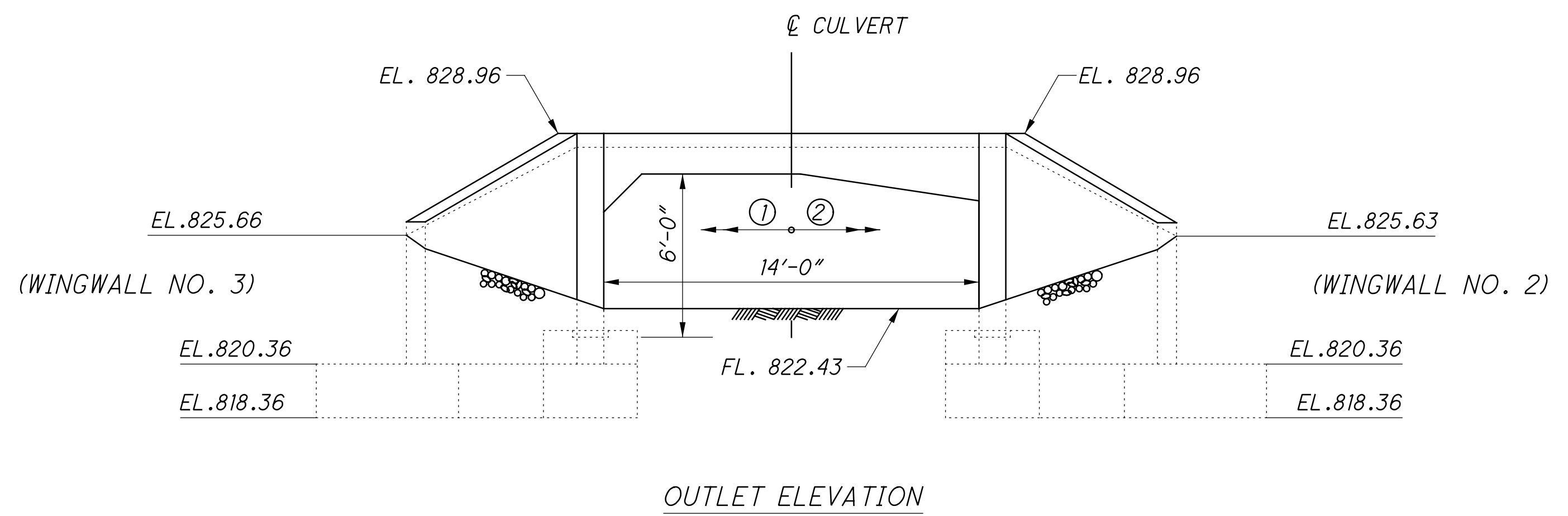
GUE-660-2.52

3 / 8

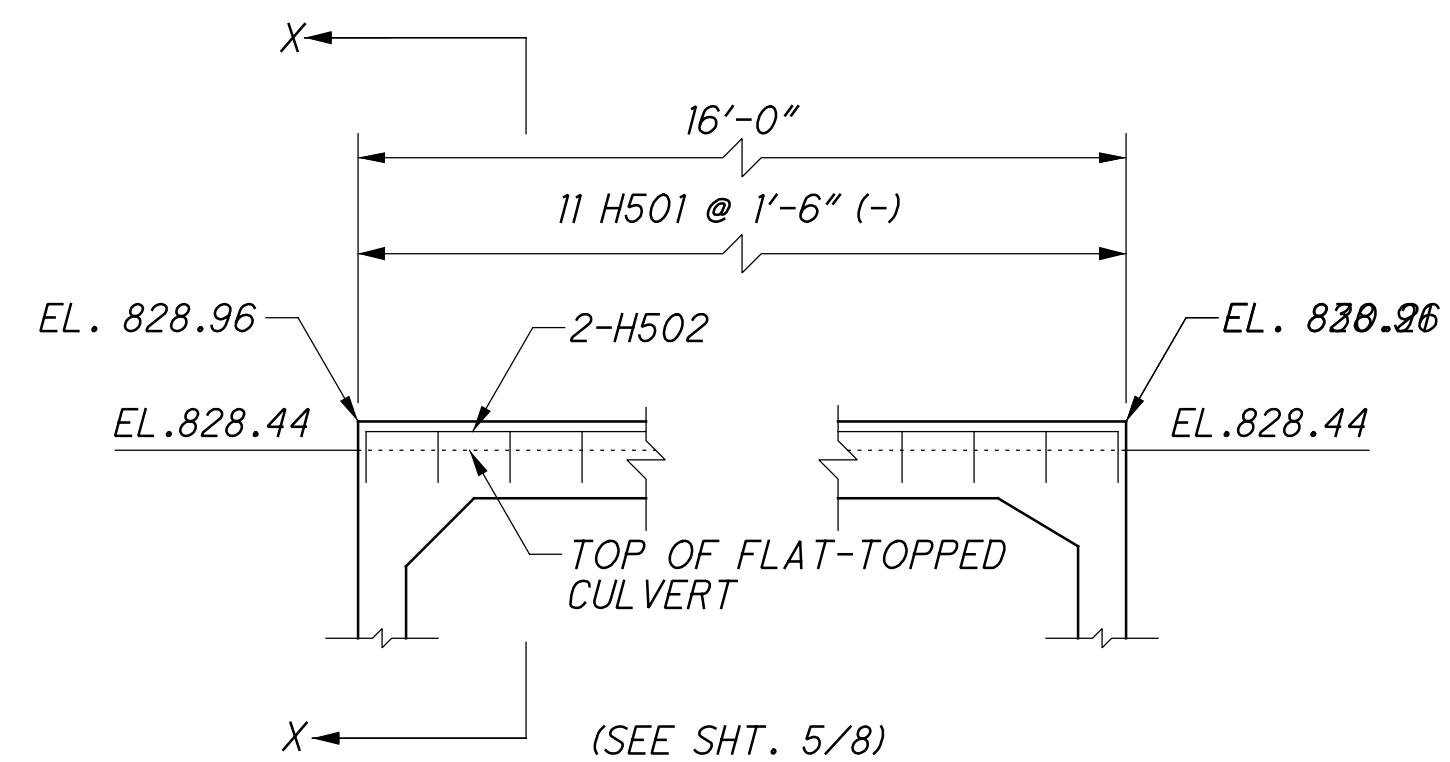
102
125



NOTE: ① - SHORT HAUNCH PRECAST UNIT
② - LONG HAUNCH PRECAST UNIT



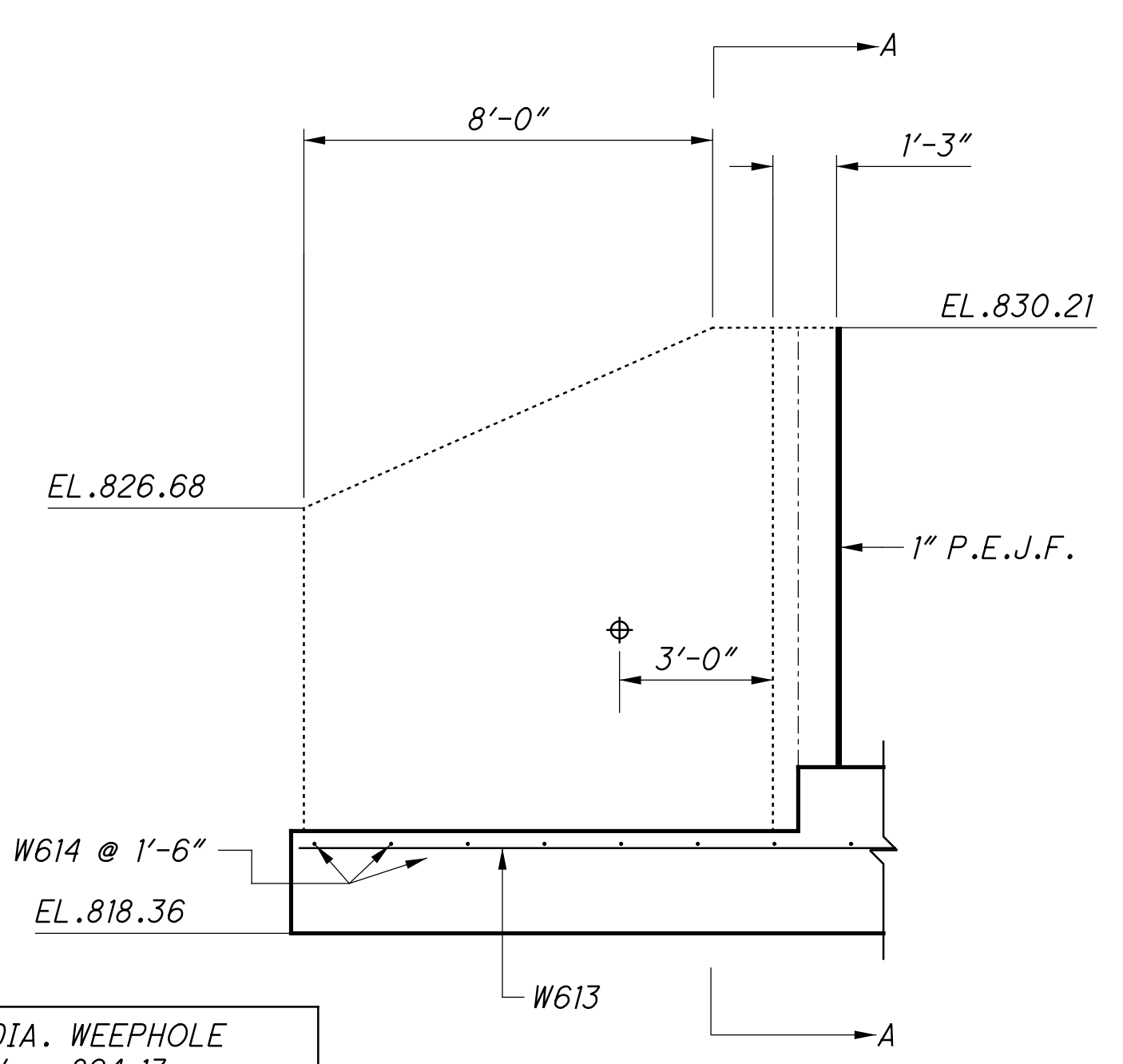
INLET FORESLOPE WALL REINFORCING DETAIL
(FOR FLAT-TOPPED CULVERTS ONLY)



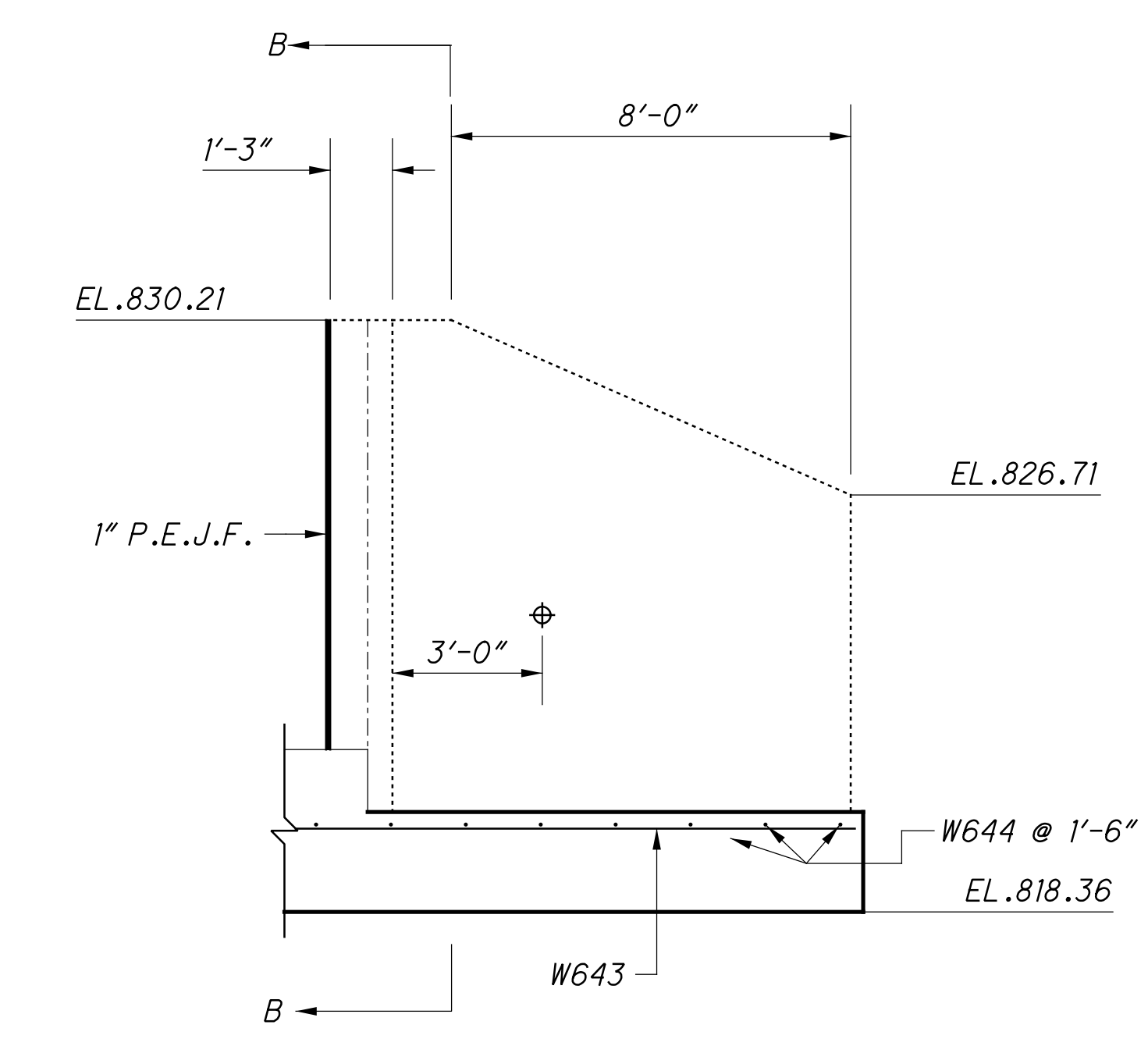
OUTLET FORESLOPE WALL REINFORCING DETAIL
(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION
STA. 133+13.00

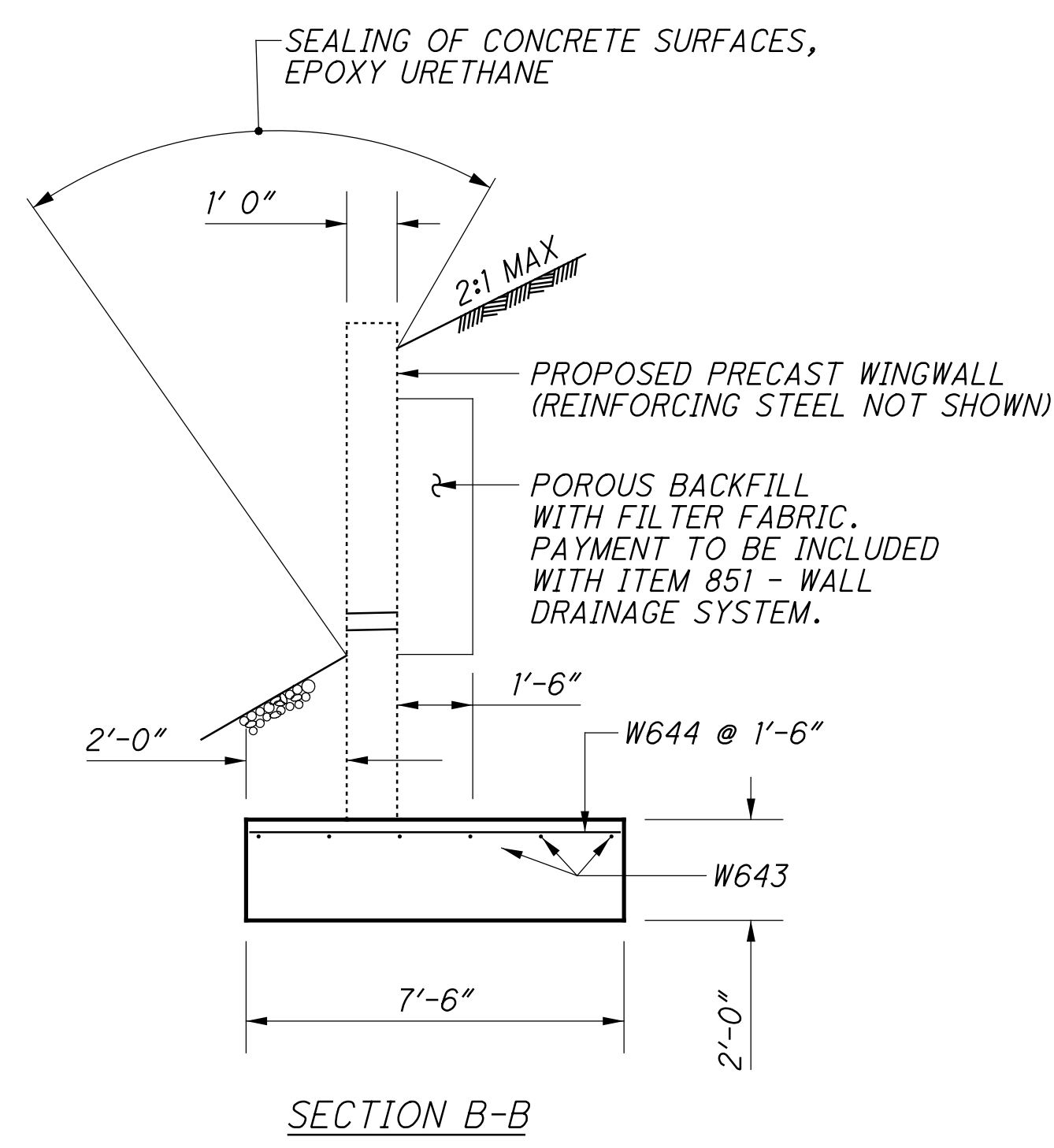
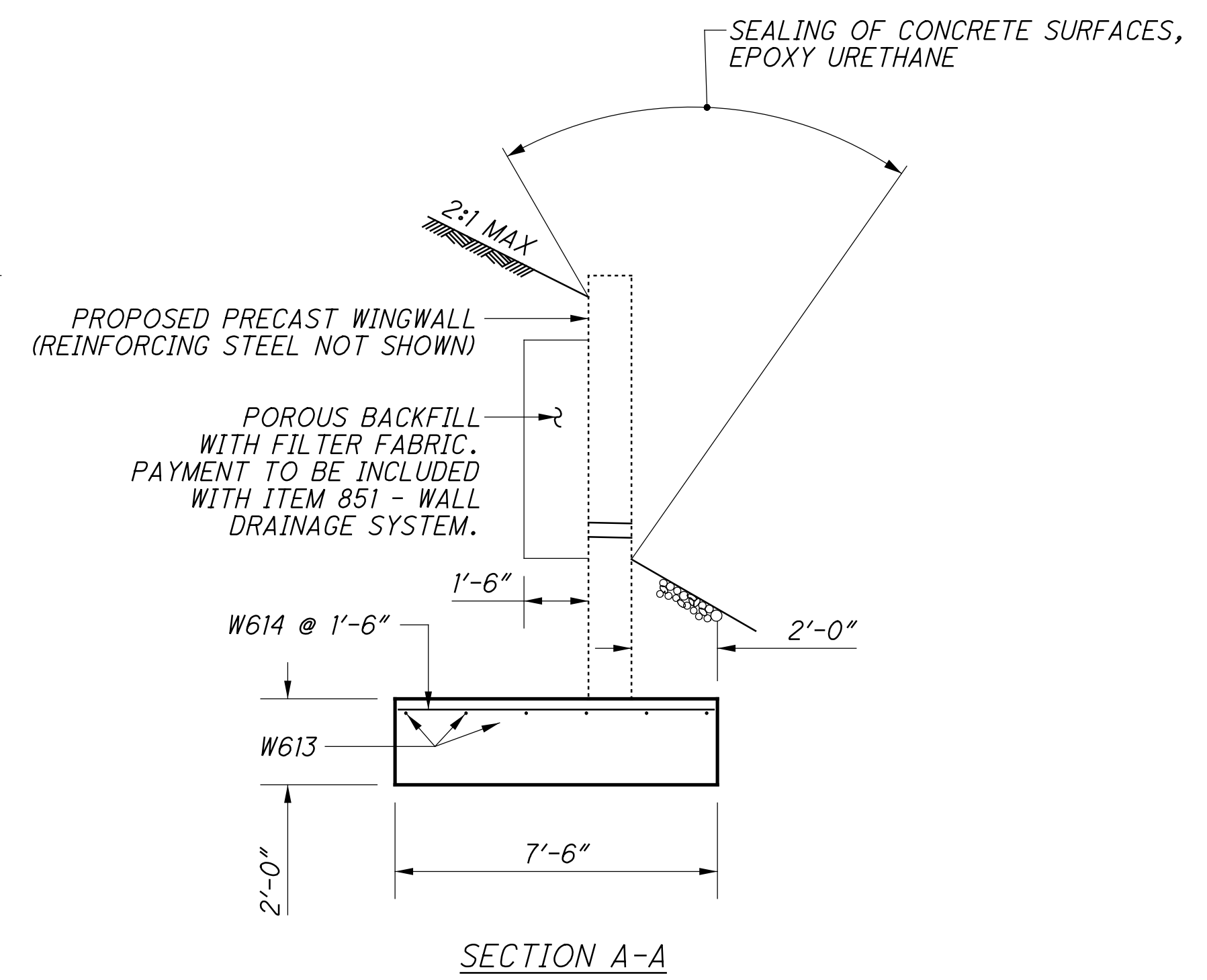
GUE-660-2.52



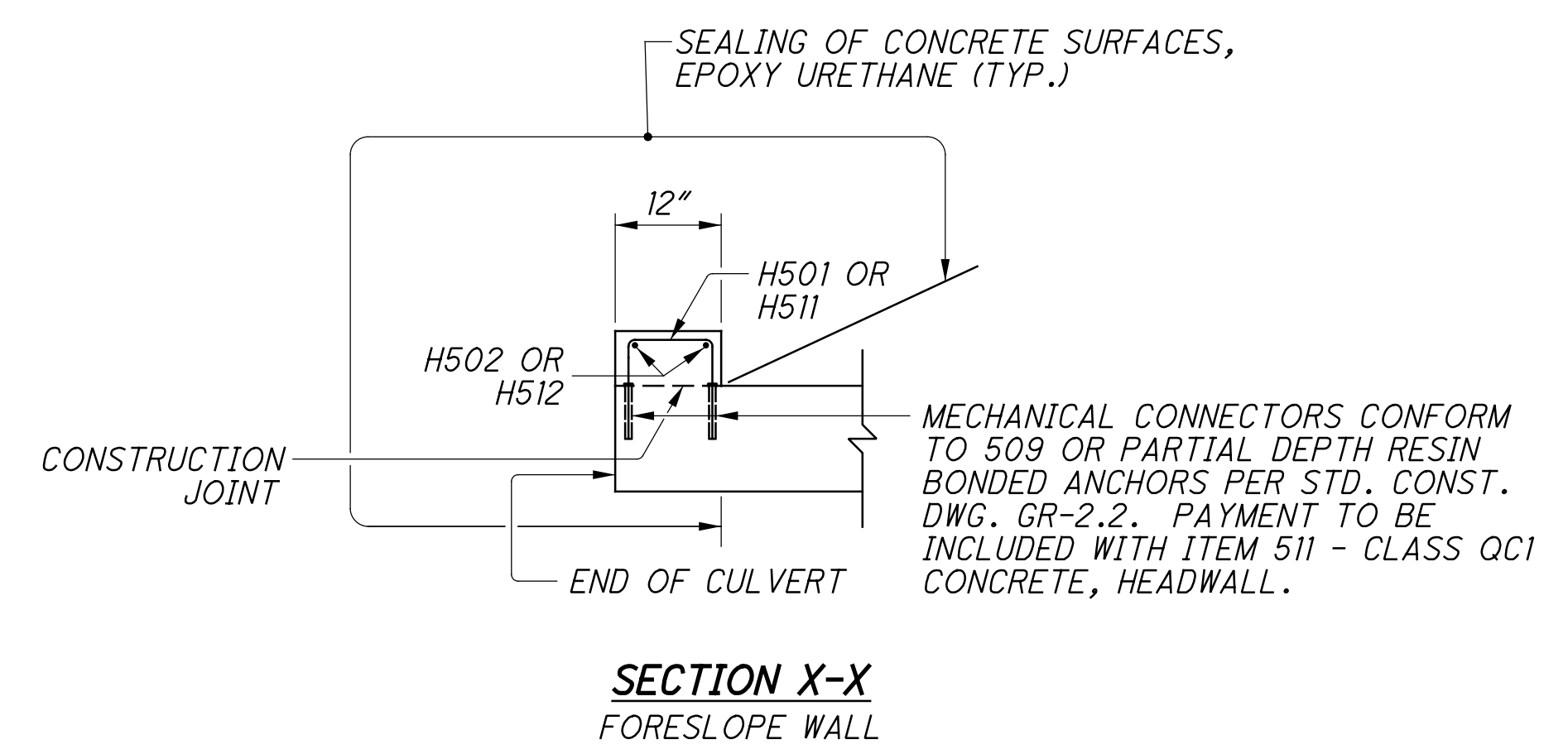
NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.13



NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.14

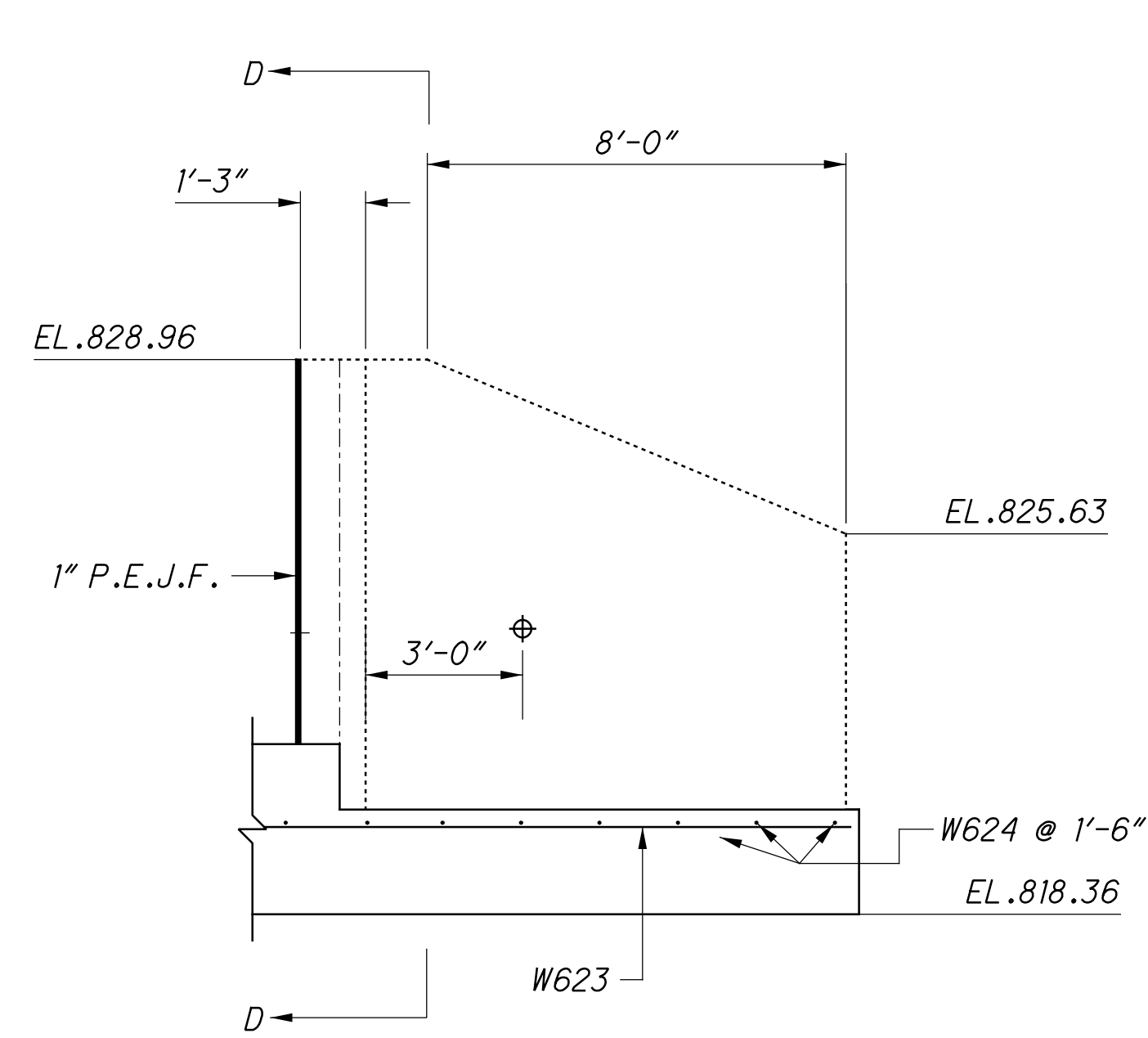


LEGEND:
F.F. = FRONT FACE
R.F. = REAR FACE
B.F. = BOTH FACE



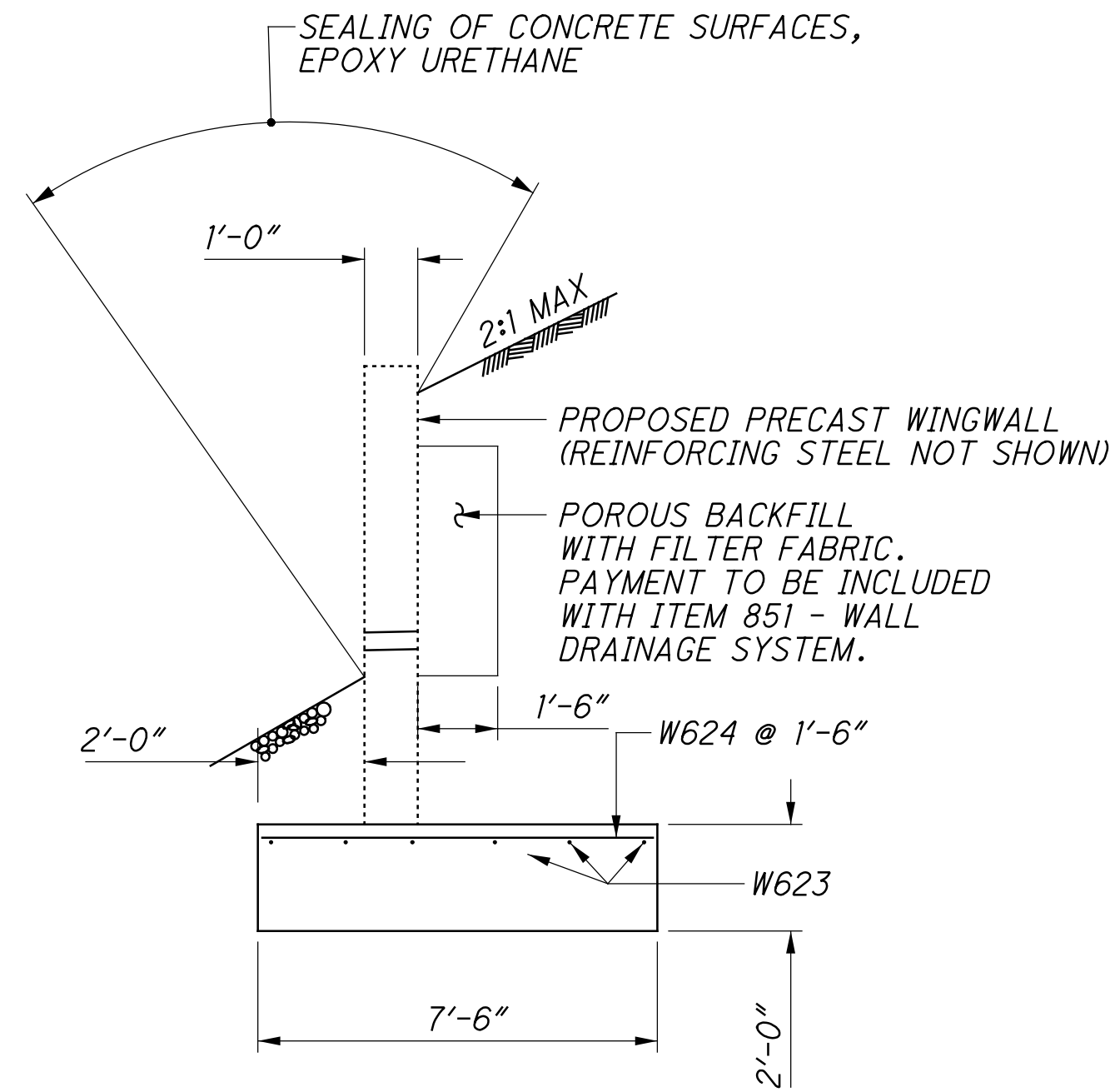
- NOTES:
1. POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND 1'-0" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL, AND RETURN 6" ABOVE THE WEEPHOLE. PAYMENT IS INCLUDED WITH ITEM 851 - WALL DRAINAGE SYSTEM.
 2. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE EXTENDED FROM TOP OF FOOTING TO TOP OF WALL.

LEGEND:
F.F. = FRONT FACE
R.F. = REAR FACE
B.F. = BOTH FACE

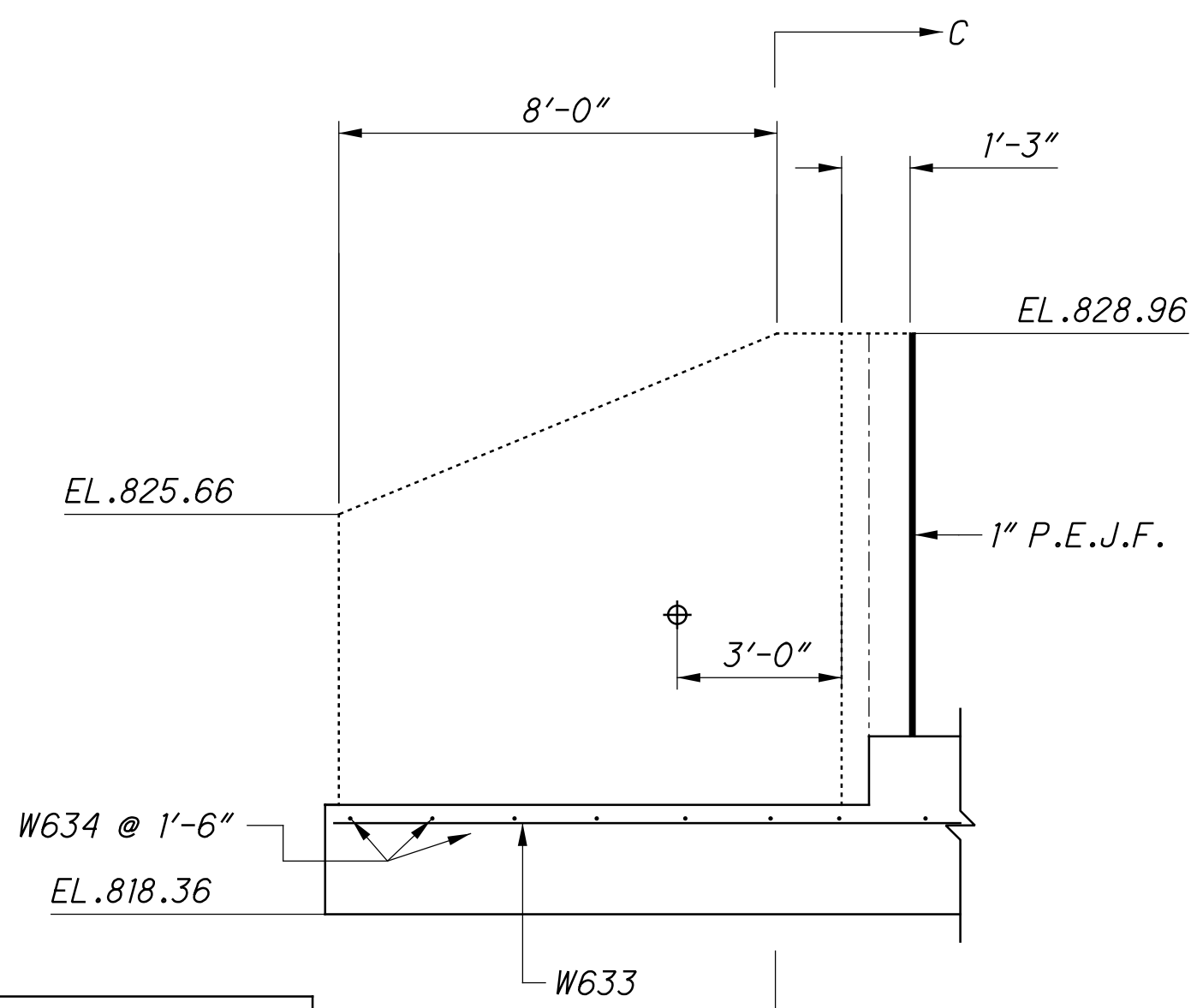


WINGWALL 2 ELEVATION

NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.65

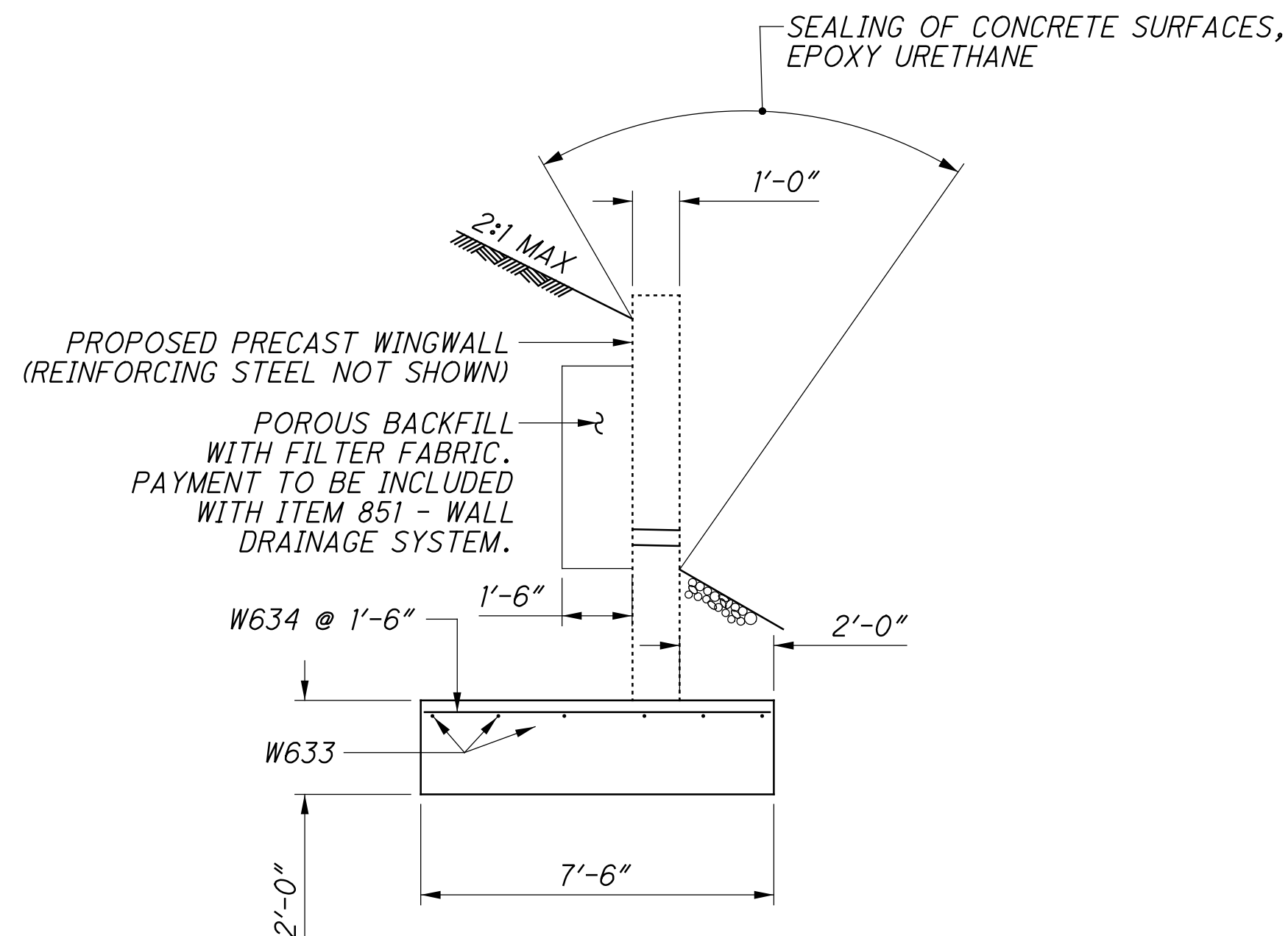


SECTION D-D

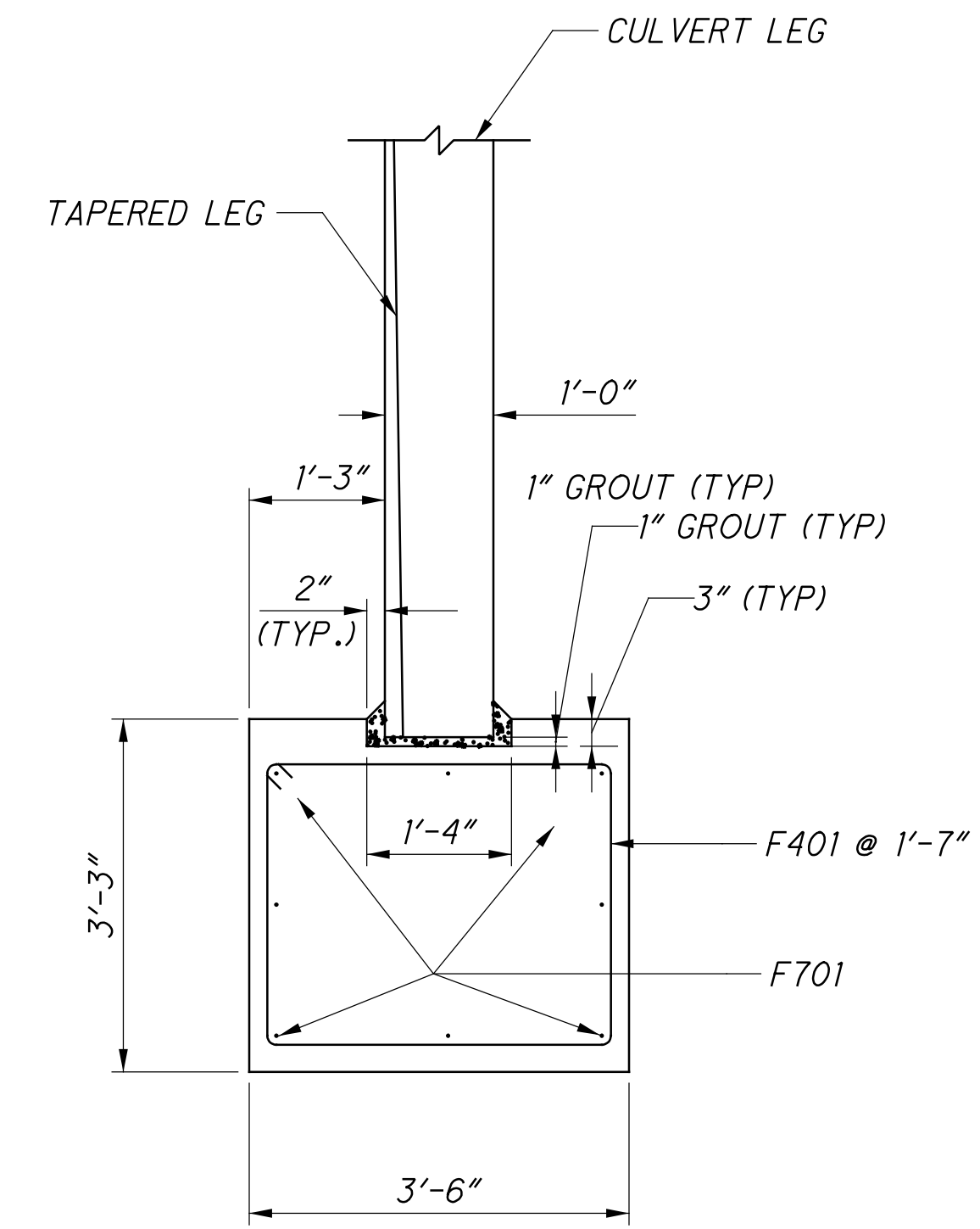


WINGWALL 3 ELEVATION

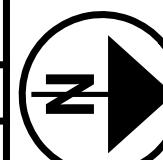
NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.66



SECTION C-C



CULVERT FOOTING SECTION



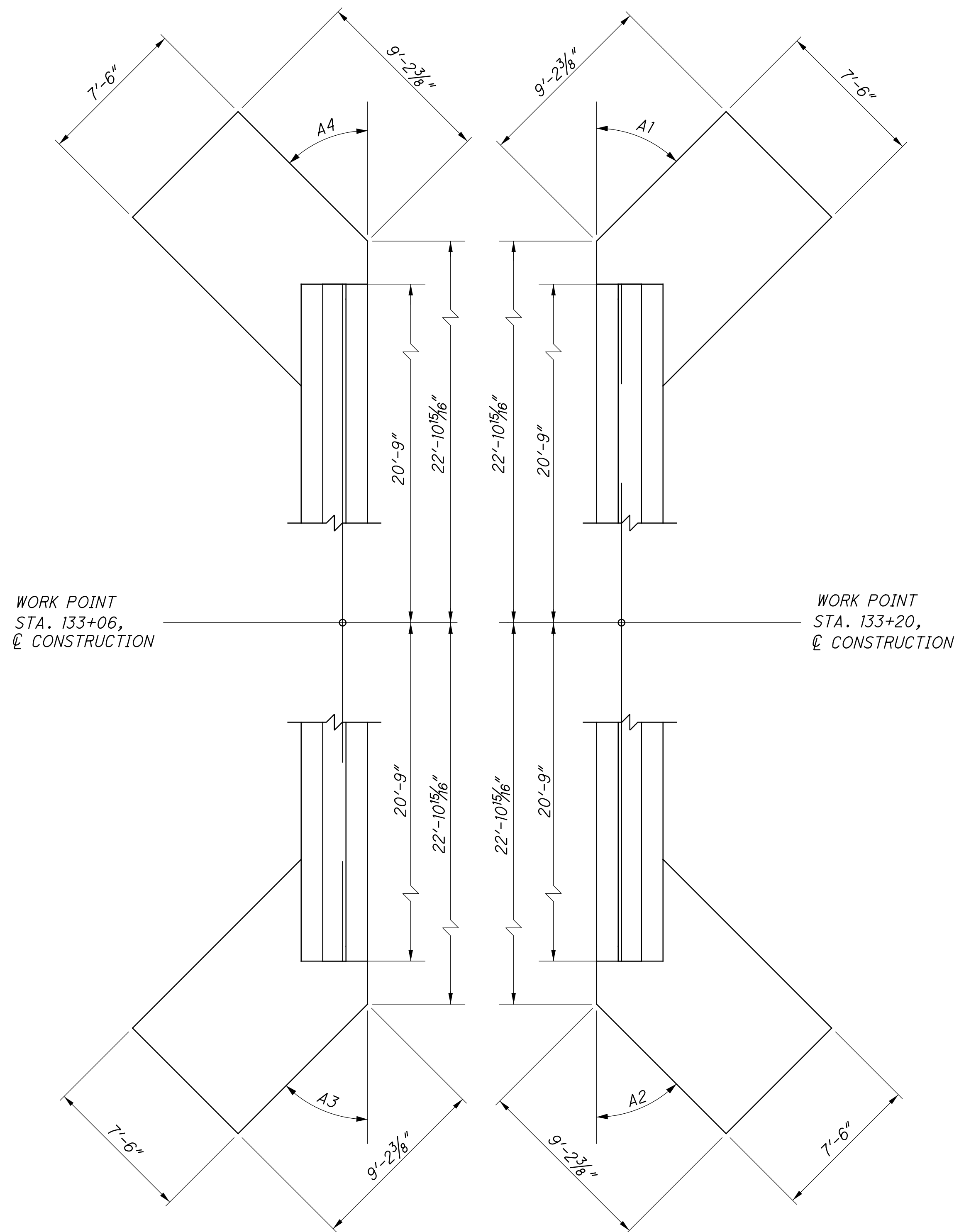
CALCULATED
KEW
CHECKED
JOH

FOOTING DETAILS
STA. 133+13.00

GUE-660-2.52

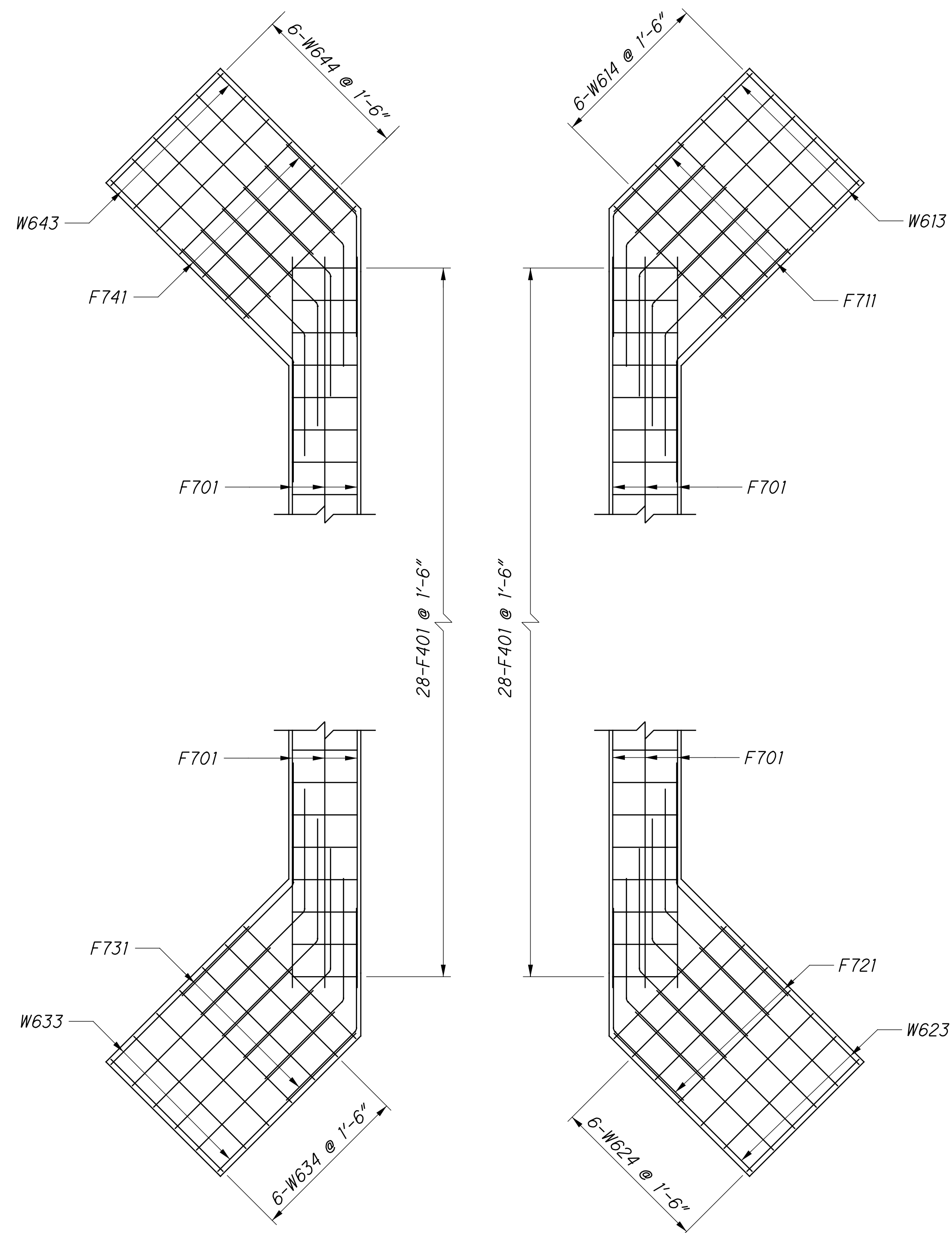
7/8

106
125



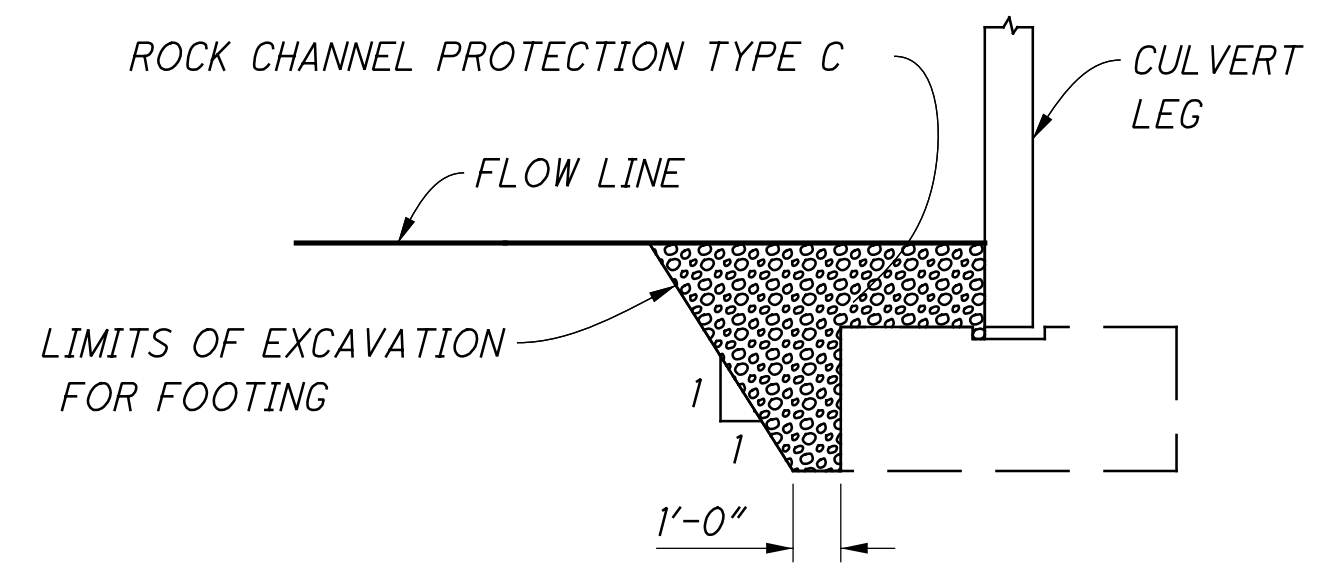
FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4

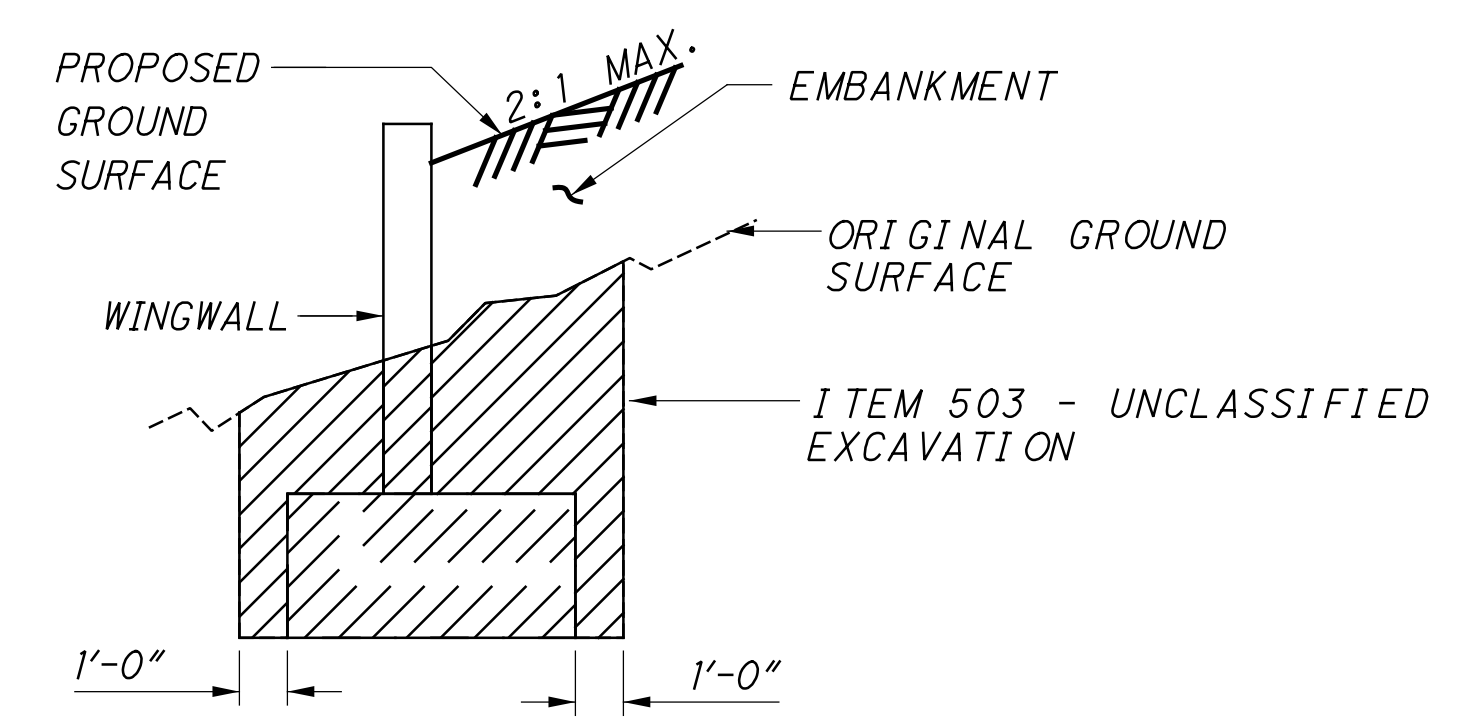


FOOTING REINFORCING PLAN

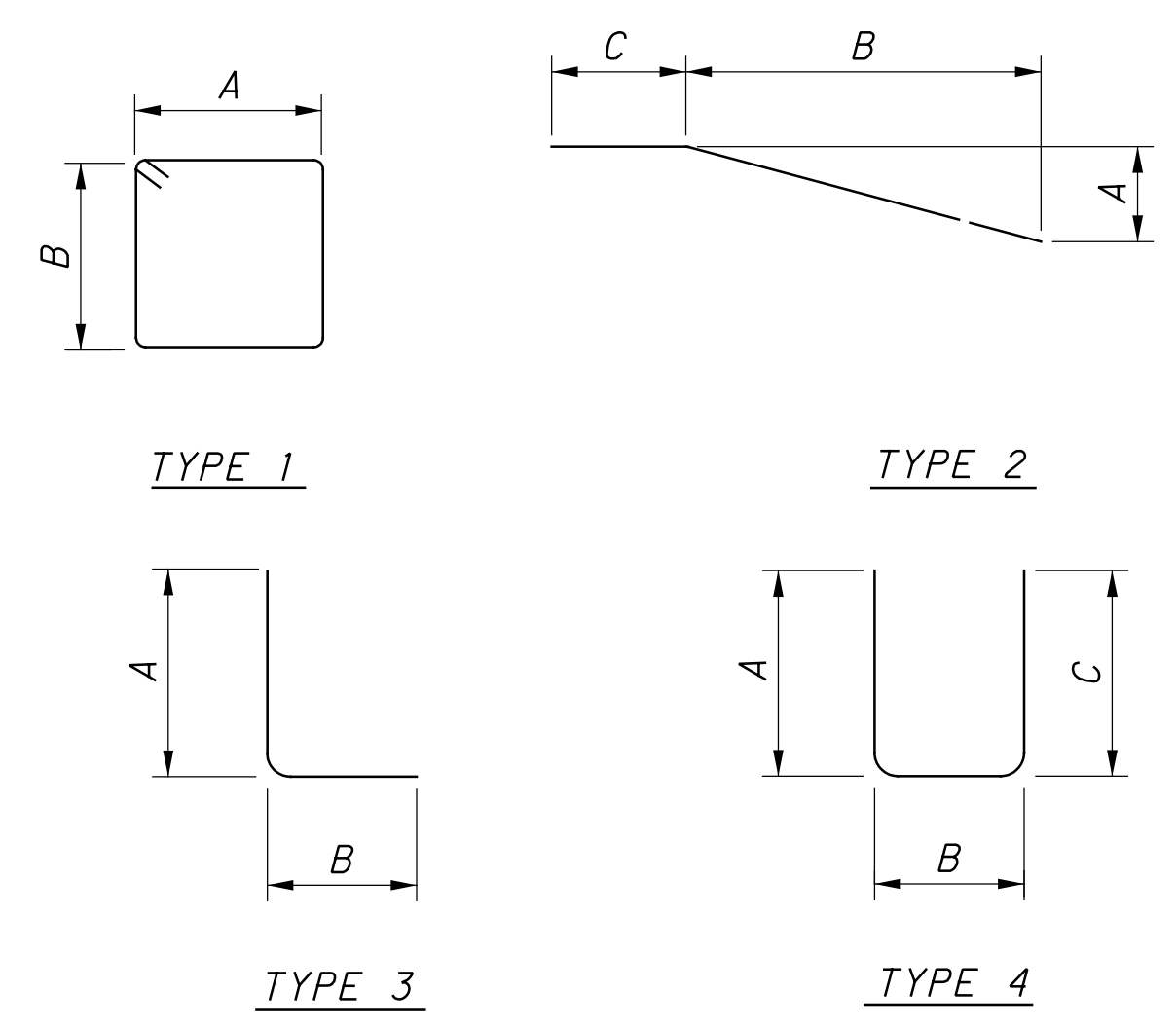
REINFORCING STEEL LIST



ROCK CHANNEL PROTECTION INSIDE CULVERT



LIMITS OF UNCLASSIFIED EXCAVATION ON WINGWALL



BENDING DIAGRAMS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
WINGWALL 1									
W613	9	9'-0"	81	STR					
W614	6	7'-4"	66	STR					
WINGWALL 2									
W623	9	9'-0"	81	STR					
W624	6	7'-4"	66	STR					
WINGWALL 3									
W633	9	9'-0"	81	STR					
W634	6	7'-4"	66	STR					
WINGWALL 4									
W643	9	9'-0"	81	STR					
W644	6	7'-4"	66	STR					
SUBTOTAL			588						

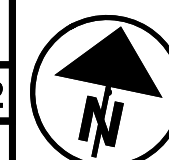
S.O. - SERIES OF

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
CULVERT FOOTING									
F401	56	12'-0"	449	1	3'-2"	2'-7"			
F701	32	21'-11"	1434	STR					
	1	10'-3"			3'-3"	3'-3"			
F711	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F721	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F731	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F741	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
HEADWALL									
H501	11	2'-7"	30	4	1'-1"	0'-8"	1'-1"		
H502	2	15'-10"	33	STR					
H511	11	5'-1"	58	4	2'-4"	0'-8"	2'-4"		
H512	2	15'-10"	33	STR					
SUBTOTAL			2893						

TOTAL CARRIED TO SHEET 2 OF 8

REINFORCING SCHEDULE
STA. 133+13.00

GUE-660-2.52

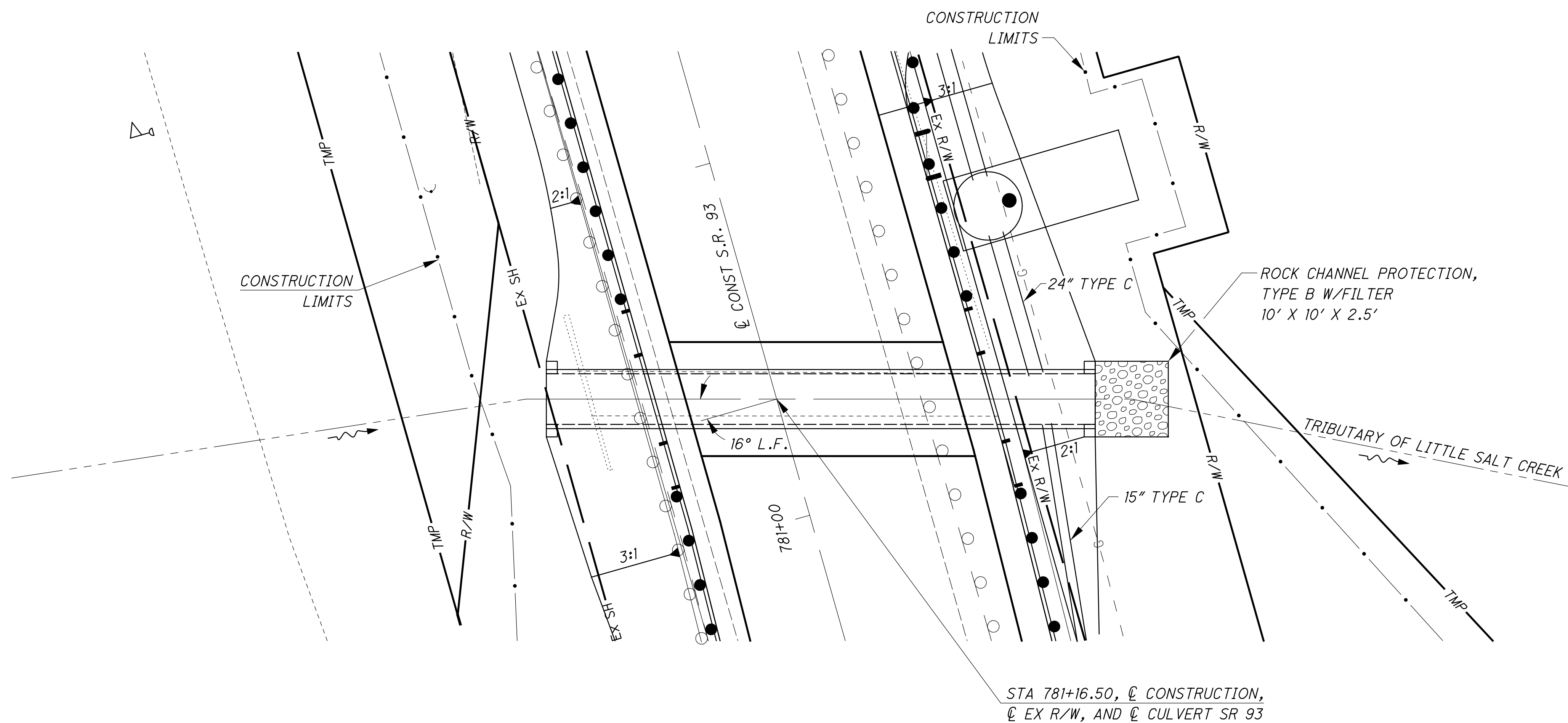


0 5 10 15 20
HORIZONTAL
SCALE IN FEET

CALCULATED
MRV
CHECKED
MLC

CULVERT DETAIL
STA 781+16.50

JAC-93-14.35



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
601	9	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
602	3.3	CY	CONCRETE MASONRY
611	75	FT	53" X 83" CONDUIT, TYPE A, 706.04

QUANTITIES CARRIED TO GENERAL SUMMARY

HYDRAULIC DATA

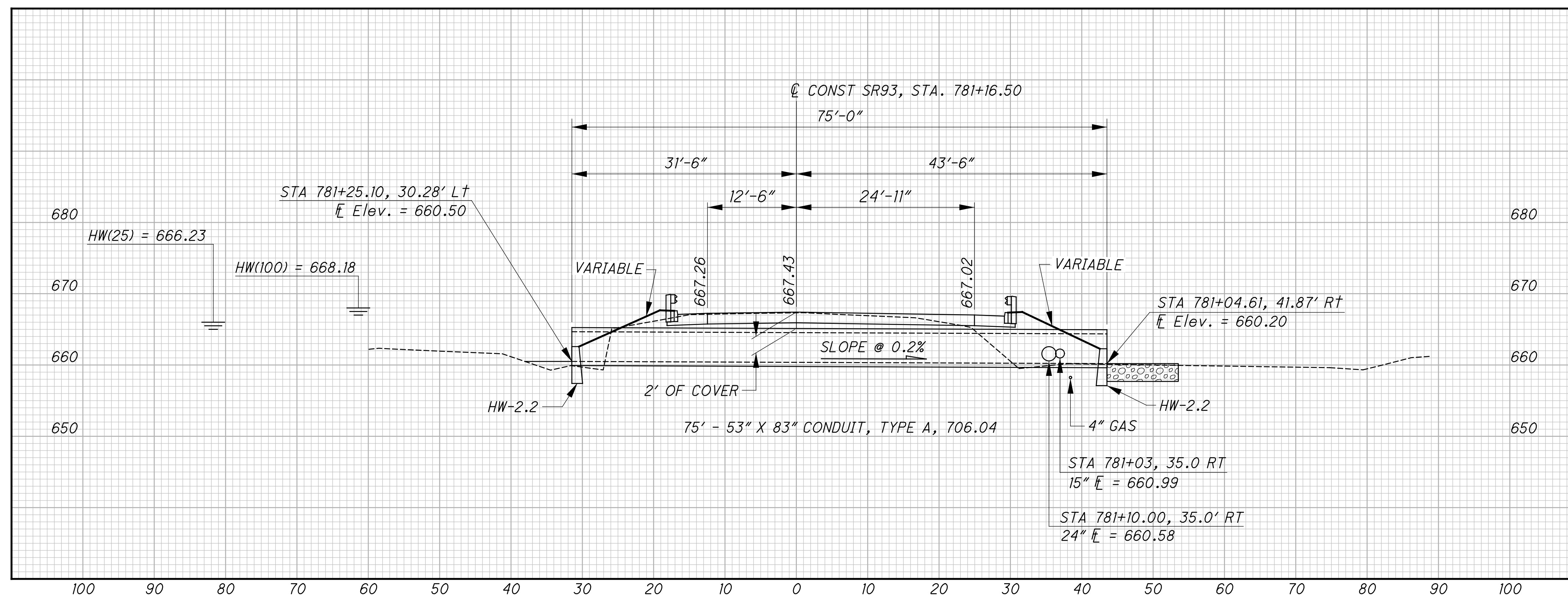
DRAINAGE AREA = 344 ACRES
 Q (25) = 230 CFS V (25) = 11 FT/S HW (25) = 666.24 FT
 Q (100) = 325 CFS V (100) = 13 FT/S HW (100) = 668.81 FT
 ORDINARY HIGH WATER MARK: 661.0 FT
 DESIGN SERVICE LIFE: 75 YRS
 pH: 6.8
 ABRASION LEVEL: 4
 CFN: 1234567

EXISTING STRUCTURE

TYPE: 48" AND 54" CORRUGATED METAL PIPES
 SKEW: 16° L.F.
 ALIGNMENT: TANGENT
 CFN: 7654321

PROPOSED STRUCTURE

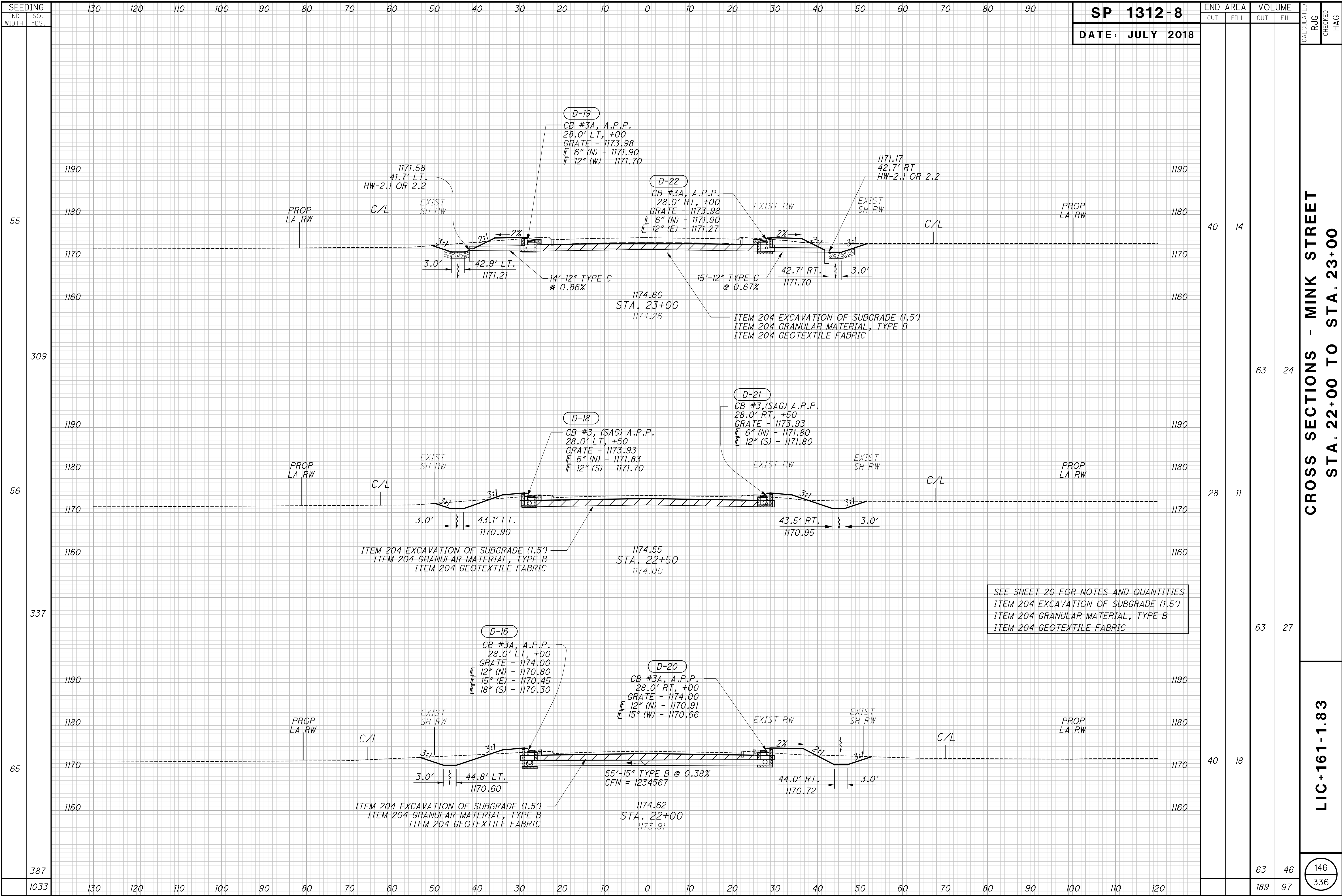
TYPE: 53" X 83" ELLIPTICAL CONCRETE PIPE
 SKEW: 16° L.F.
 ALIGNMENT: TANGENT
 CFN: 1234567



75' - 53" X 83" CONDUIT, TYPE A, 706.04

STA 781+03, 35.0 RT
15" E = 660.99

STA 781+10.00, 35.0' RT
24" E = 660.58



SP 1312-8
DATE: JULY 2018

END AREA	VOLUME	CALCULATED	CHECKED	HAG
40	14			
28	11			
40	18			
63	24			
63	27			
63	46			
189	97			

CROSS SECTIONS - MINK STREET
STA. 22+00 TO STA. 23+00

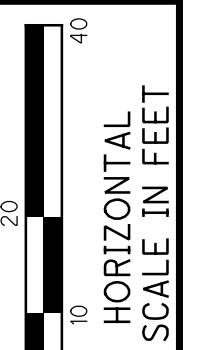
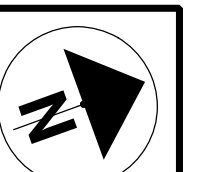
LIC+161-1.83

146
336

SEE SHEET 20 FOR NOTES AND QUANTITIES
 ITEM 204 EXCAVATION OF SUBGRADE (1.5')
 ITEM 204 GRANULAR MATERIAL, TYPE B
 ITEM 204 GEOTEXTILE FABRIC

For Roadway and Drainage Details
See Plan and Profile Sheets 10-14.
For Storm Sewer Profiles See Sheet 17.

SP. 1313-1
DATE: JANUARY 2022



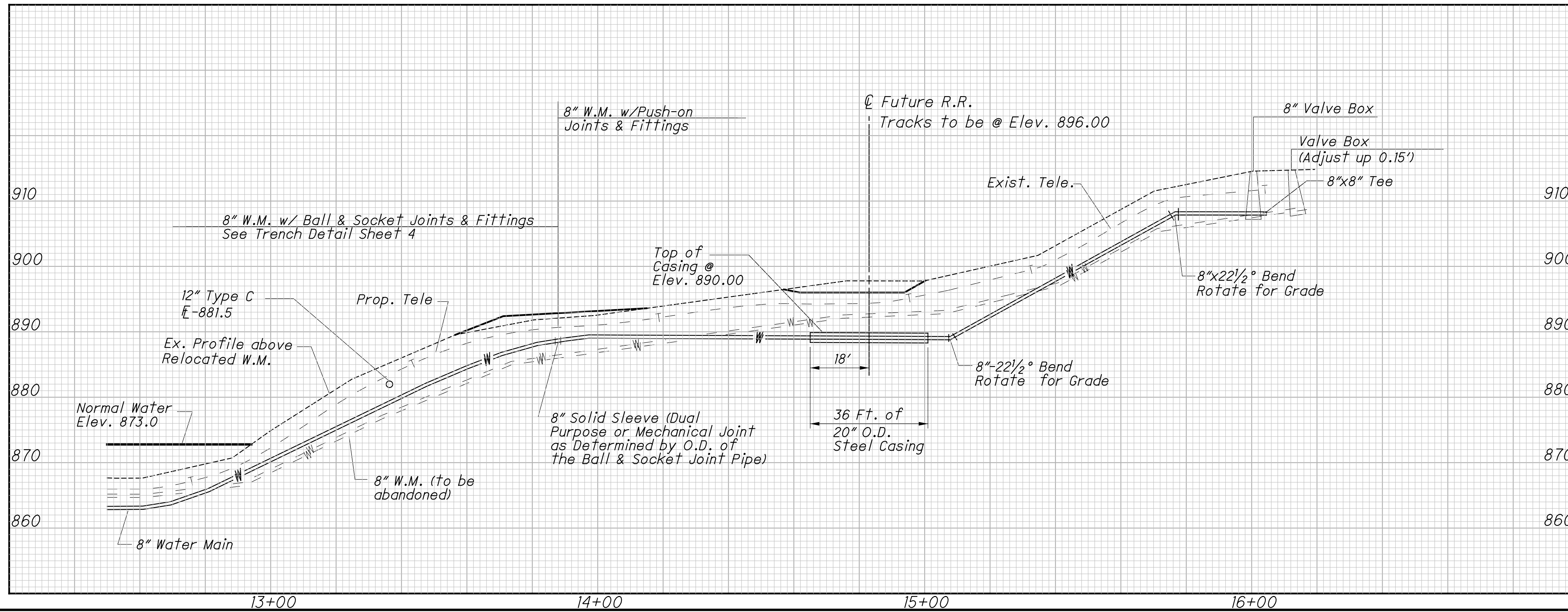
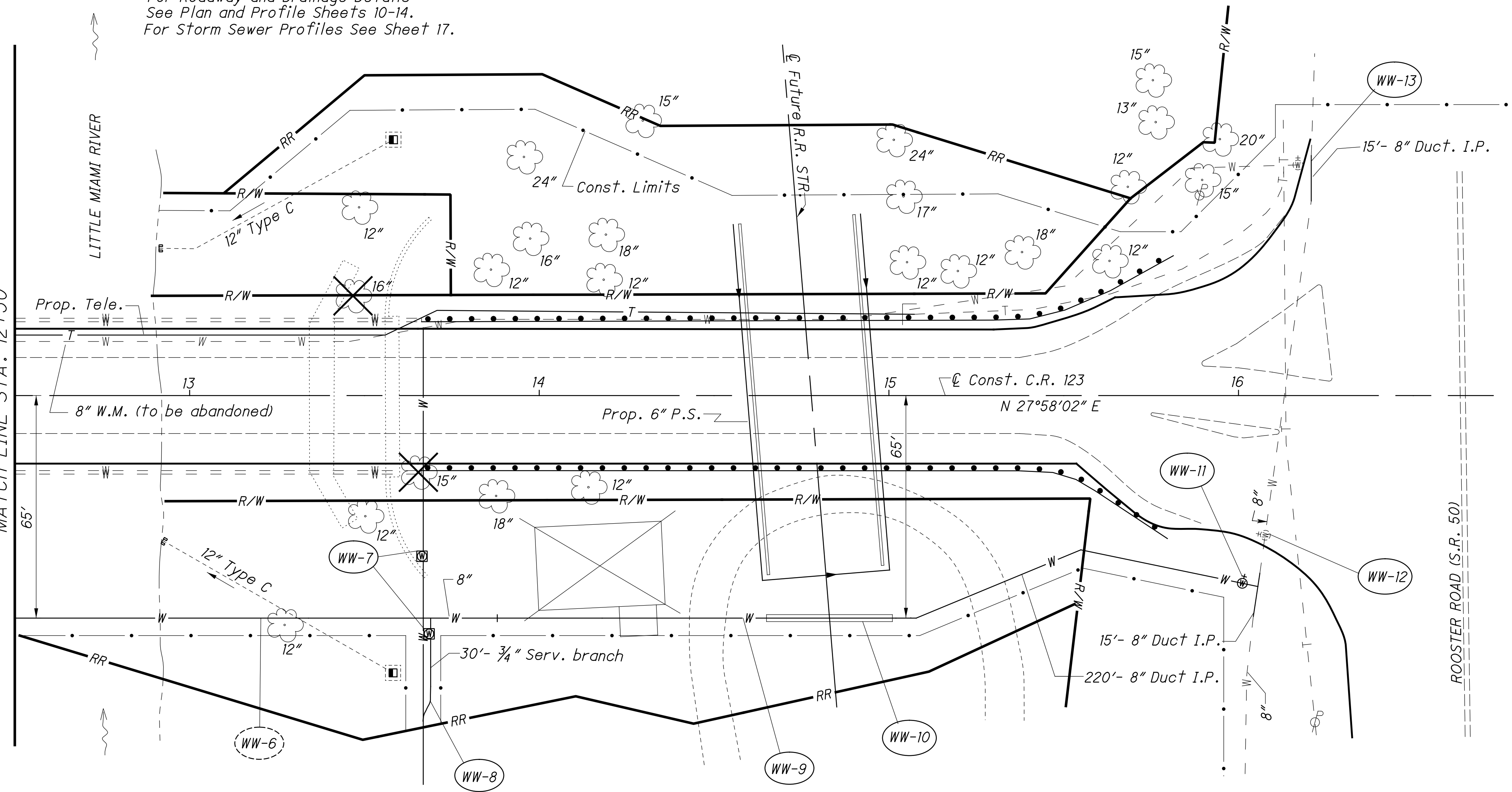
CALCULATED
GJB
CHECKED
DJK

WATER WORK PLAN
STA. 12+50 TO STA. 16+00

CUY - CR123-6.55

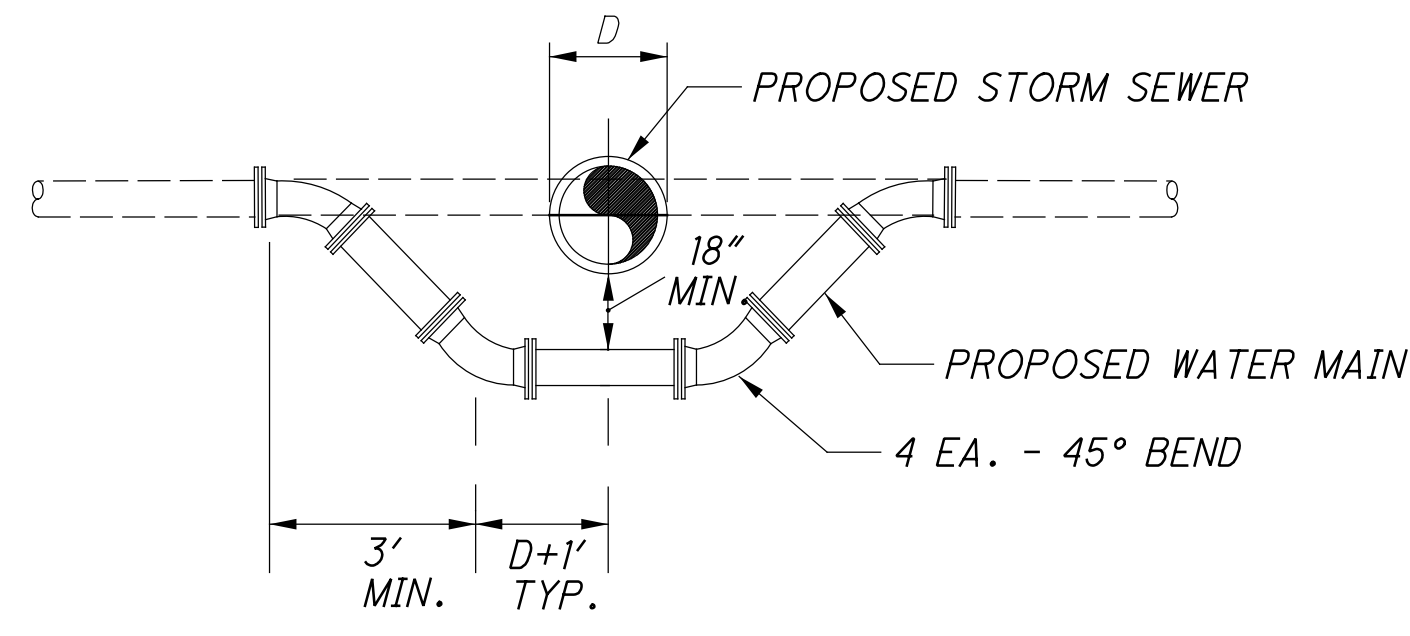
12
127

MATCH LINE STA. 12+50

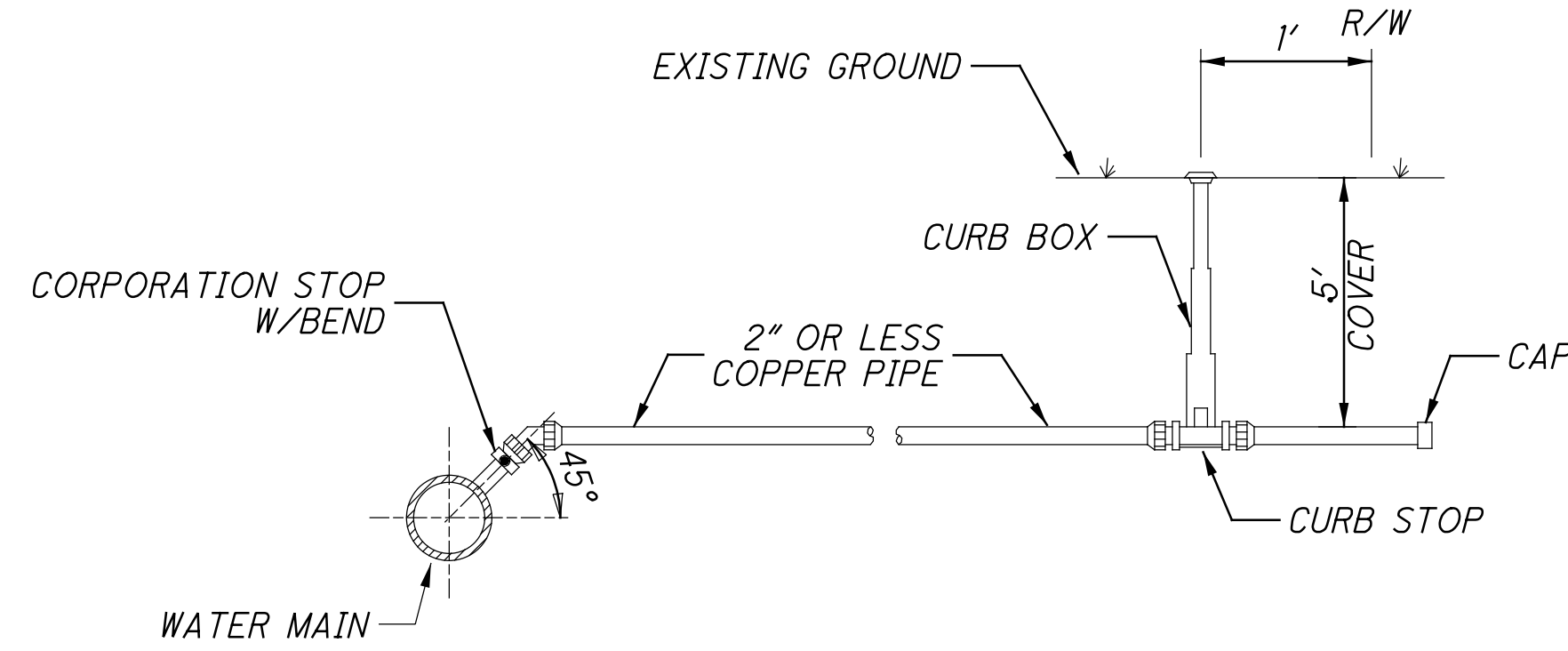


REF NO.	STATION		SIDE	20" Steel Pipe Encasement, Open Cut	Valve Box Adjusted To Grade	3/4" Copper Service Branch	Meter and Chamber Removed and Reset	Sheeting and Bracing Ordered Left in Place	8" Gate Valve and Valve Box
	FROM	TO							
WW-7	13+66	13+70	RT				1		EACH
WW-8	13+67	13+70	RT			30			
WW-9	13+88	16+07	RT	36					
WW-10	14+65	15+01	RT						1
WW-11	16+00	16+00	RT		1				
WW-12	16+08	16+20	RT						
WW-13	16+20	16+20	LT						
TOTALS CARRIED TO GENERAL SUMMARY				36	1	30	1	1	1

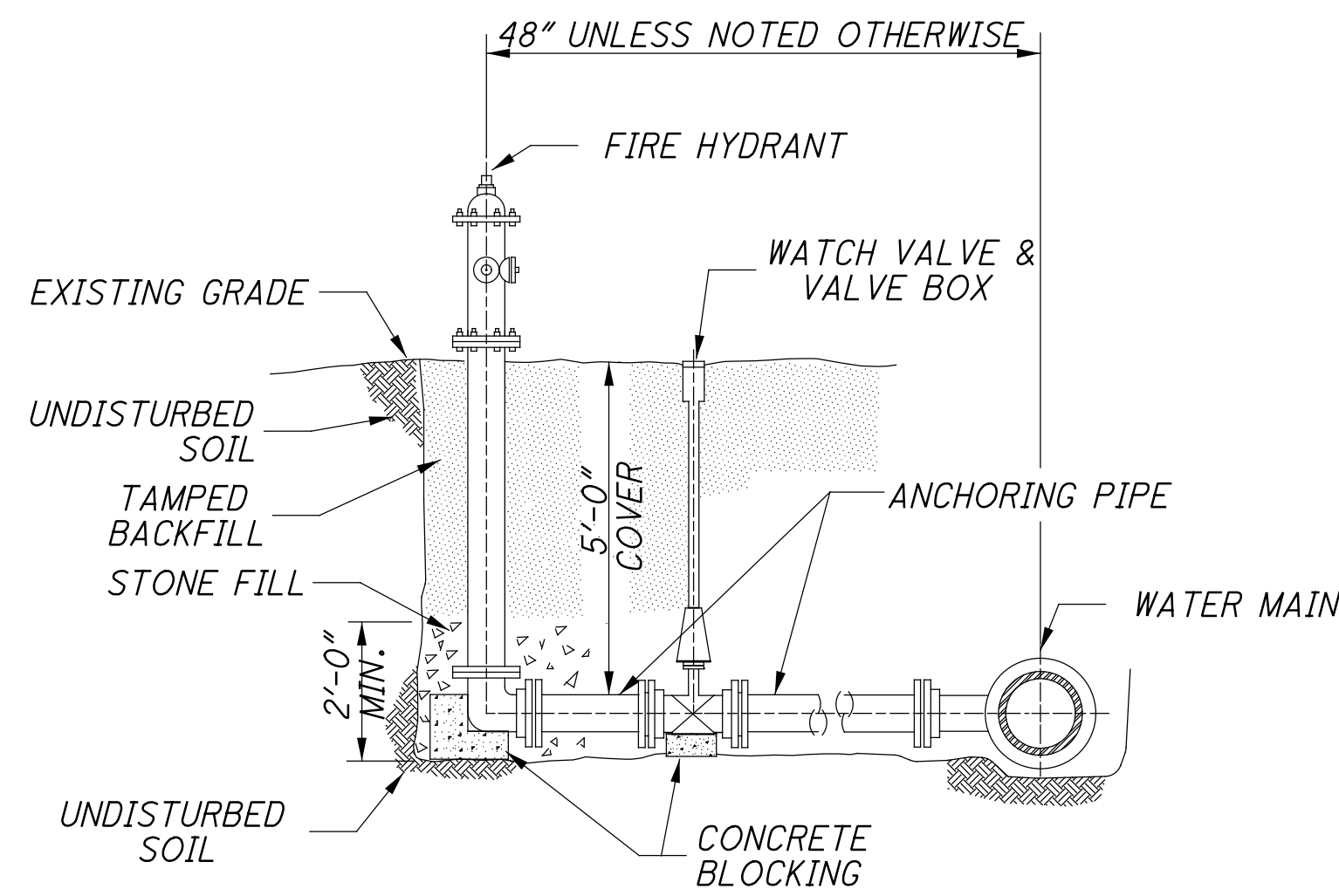
p:\ohiodot-pw\ohiodot-pw-02\Documents\03 Standards\Sample Plans\SP1313-1_2022-01.dgn Sheet 2/9/2022 3:43:25 PM ipetros



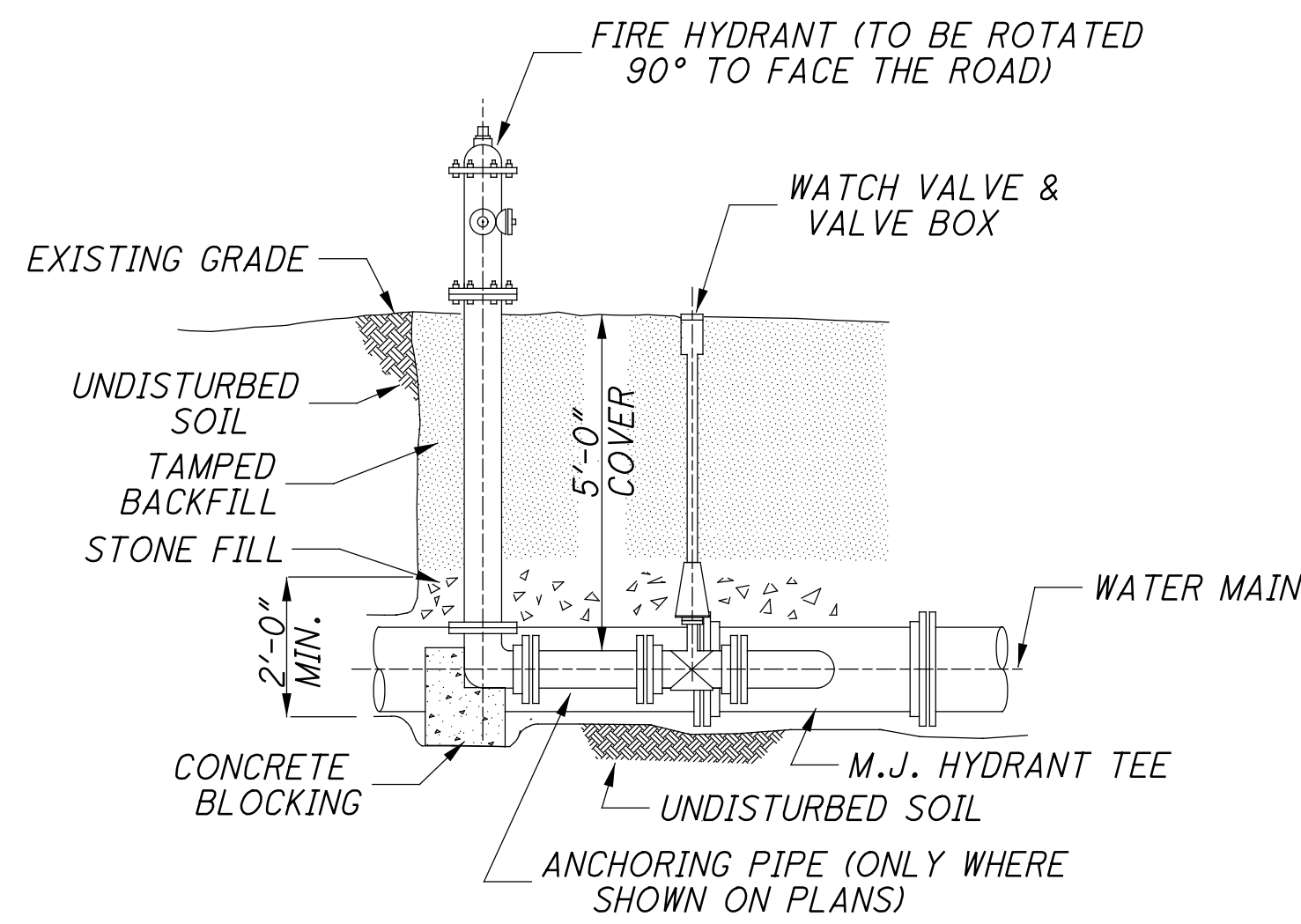
DETAIL "A"
 EXISTING WATER MAIN RELOCATION
 UNDER PROPOSED UTILITY LINE
 (ELEVATION)



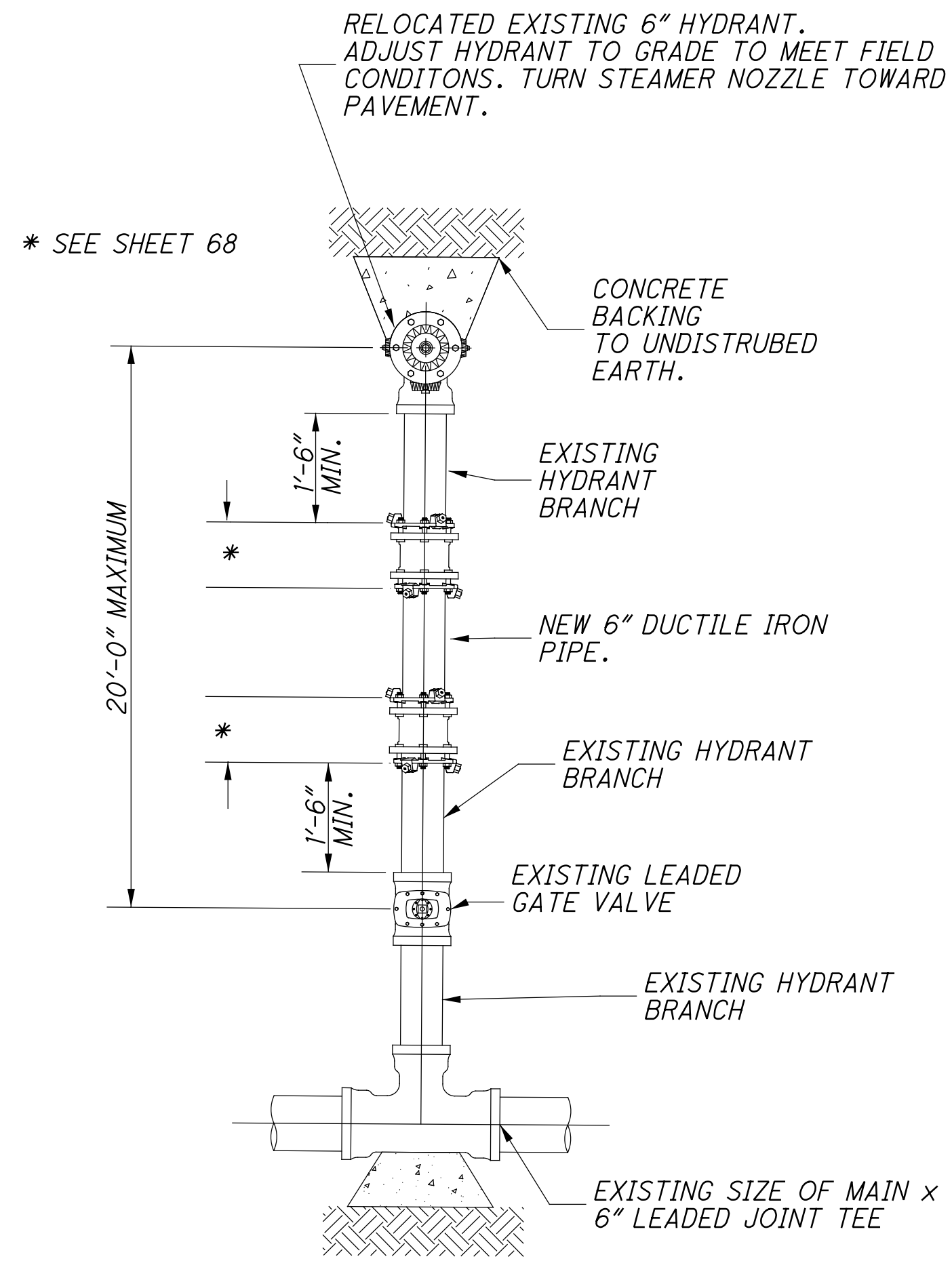
DETAIL "B"
 TYPICAL 2" OR LESS SERVICE CONNECTION
 (ELEVATION)



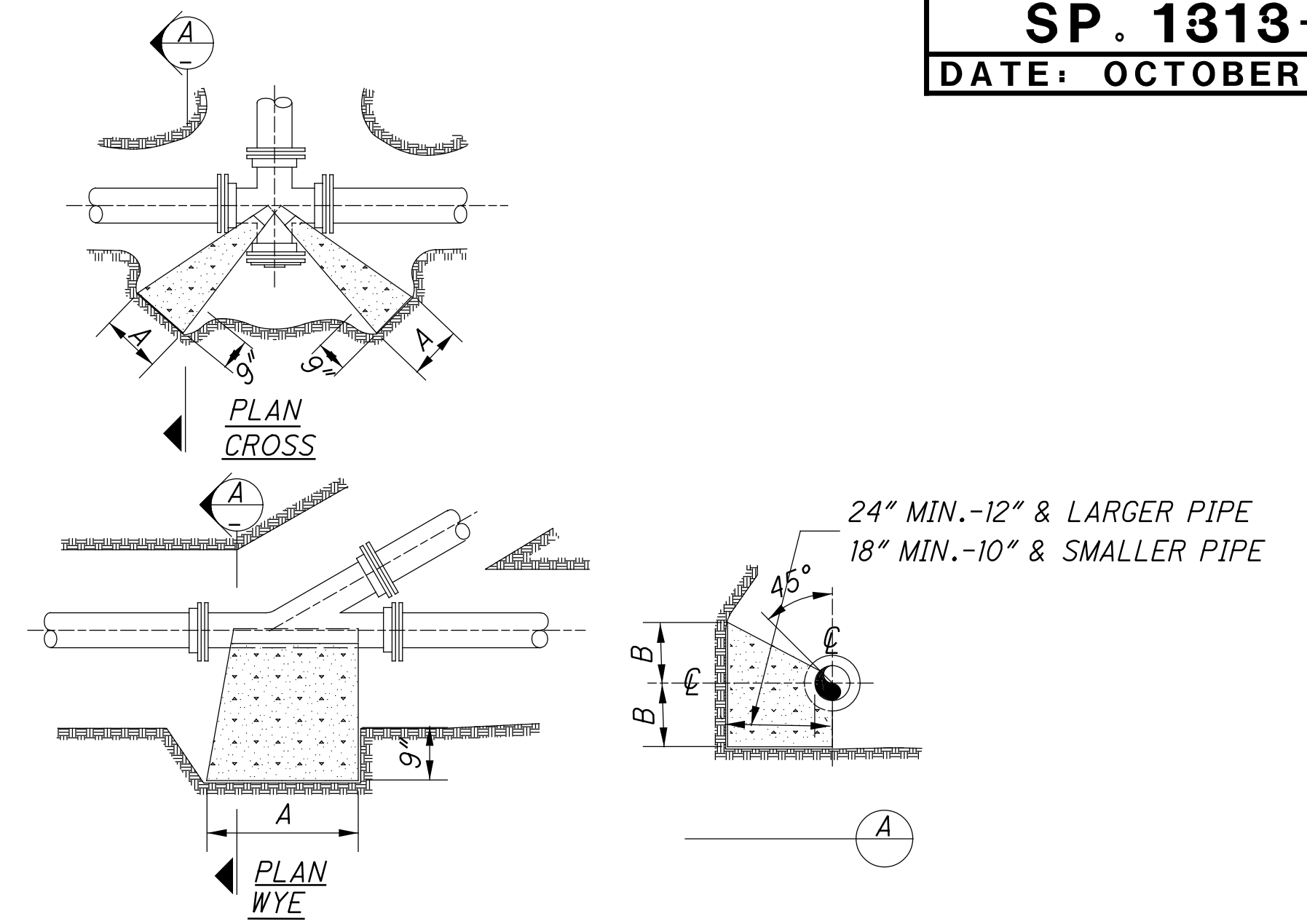
DETAIL "C"
 HYDRANT ASSEMBLY
 PERPENDICULAR TO WATER
 (ELEVATION)



DETAIL "D"
 HYDRANT ASSEMBLY
 PARALLEL TO WATER MAIN
 (ELEVATION)



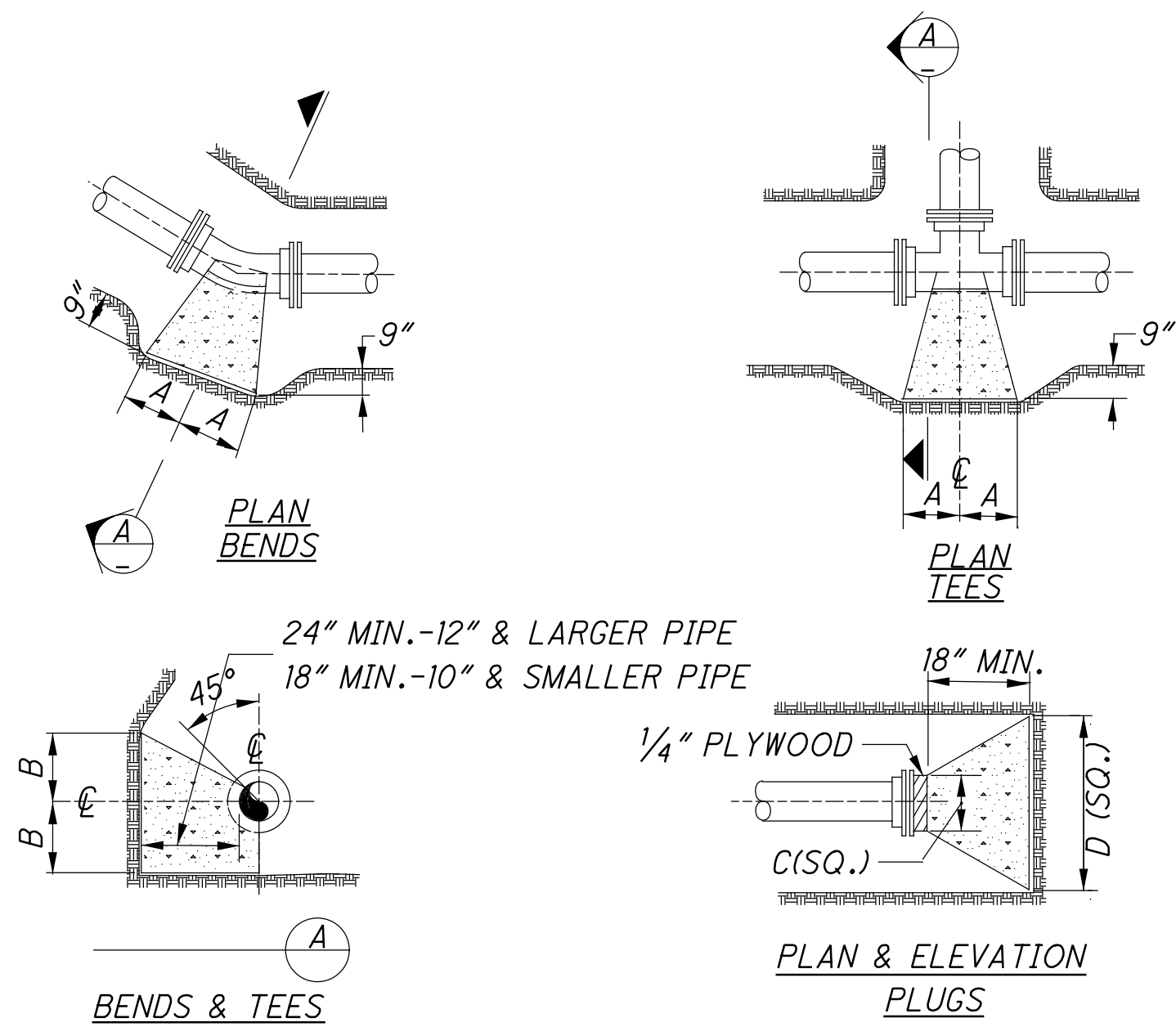
DETAIL "E"
 FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE
 (PLAN)



TYPE	SIZE	CROSS		WYE	
		A	B	A	B
2000 P.S.F. SOIL	6"	11"	13"	10"	12"
	8"	15"	17"	14"	14"
	10"	18"	22"	15"	20"
	12"	21"	26"	18"	23"
	14"	24"	30"	21"	27"
	16"	28"	33"	24"	30"
	20"	33"	42"	27"	43"
	24"	40"	49"	32"	50"

* 6" OR LESS

NOTE: BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.



TYPE	SIZE	90° BENDS		45° BENDS		22-1/2° & 11-1/4° BENDS		TEES		PLUGS	
		A	B	A	B	A	B	A	B	C	D
2000 P.S.F. SOIL	6"	18"	11"	10"	11"	6"	9"	11"	13"	10"	24"
	8"	25"	14"	14"	14"	9"	11"	15"	17"	12"	32"
	10"	27"	20"	16"	19"	10"	15"	18"	22"	14"	40"
	12"	33"	23"	18"	23"	12"	18"	21"	26"	16"	47"
	14"	39"	26"	22"	26"	13"	22"	24"	30"	18"	54"
	16"	43"	30"	24"	30"	14"	26"	28"	33"	20"	61"
	20"	50"	39"	27"	39"	17"	32"	33"	42"	24"	74"
	24"	60"	45"	33"	45"	20"	38"	40"	49"	28"	88"

* 6" OR LESS

NOTE: BASED ON 150 P.S.I. STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

pww:\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\03_Standards\Sample_Plans\SP1313\SP1313-2_2006-10.dgn Sheet 2/9/2022 3:43:33 PM tpetros

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	621			642										
			FROM	TO		RAISED PAVEMENT MARKER REMOVED	RPM (2-way yellow)	RPM (1-way white)	EDGE LINE, 6", TYPE 1 (White)	CENTER LINE, TYPE 1 (Dashed-Solid)	CHANNELIZING LINE, 8" TYPE 1	STOP LINE, TYPE 1	LANE ARROW, TYPE 1	WORD ON PAVEMENT, 96", TYPE 1	ISLAND MARKING, TYPE 1 (Yellow)				
						EACH	EACH	EACH	MILE	MILE	FT	FT	EACH	EACH	SQ FT				
56	CL-1	℄ Const. S.R. 17	46+73	48+00	RT.	7		7											
56	CL-2	℄ Const. S.R. 17	47+90	48+47	LT.			2		0.010									
56	CL-3	℄ Const. S.R. 17	48+00	48+47	RT.	2		11		0.009									
56	CL-4	℄ Const. S.R. 17	48+47	53+00	LT.			11		0.086									
56	CL-5	℄ Const. S.R. 17	48+47	53+00	RT.	11		6		0.086									
57	CL-6	℄ Const. S.R. 17	53+00	55+48	LT.	6		6		0.047									
57	CL-7	℄ Const. S.R. 17	53+00	55+48	RT.			12		0.047									
57	CL-8	℄ Const. S.R. 17	55+48	57+86	LT.	12				0.045									
57	CL-9	℄ Const. S.R. 17	55+48	56+00	RT.			3		0.011									
57	CL-10	℄ Const. S.R. 17	58+68	59+25	RT.	3		4		0.011									
57	CL-11	℄ Const. MEYERS RD.	10+40	11+15	℄	4		5		0.014									
57	CL-12	℄ Const. MEYERS RD.	8+55	9+41	℄	5		6		0.016									
58	CL-13	℄ Const. S.R. 17	59+25	60+39	RT.	6		1		0.022									
58	CL-14	℄ Const. S.R. 17	64+16	65+00	℄	1		1		0.016									
58	CL-15	℄ Const. S.R. 17	65+00	65+66	℄	2				0.013									
56	EL-1	℄ Const. RAMP A	10+25	10+65	RT.	2				0.009									
56	EL-2	℄ Const. S.R. 17	45+52	48+00	LT.	12				0.047									
56	EL-3	℄ Const. S.R. 17	45+30	48+00	RT.	14		12		0.051									
56	EL-4	℄ Const. RAMP B	9+18	9+75	RT.	3		14		0.011									
56	EL-5	℄ Const. S.R. 17	48+00	53+00	LT.	14		3		0.095									
56	EL-6	℄ Const. S.R. 17	48+00	53+00	RT.	14		14		0.095									
57	EL-7	℄ Const. MEYERS RD.	53+00	11+00	LT.	24		14		0.113									
57	EL-8	℄ Const. MEYERS RD.	53+00	8+55	RT.	23		24		0.111									
57	EL-9	℄ Const. MEYERS RD.	11+15	59+25	LT.	8		23		0.029									
57	EL-10	℄ Const. MEYERS RD.	8+55	59+25	RT.	11		8		0.041									
58	EL-11	℄ Const. S.R. 17	59+25	65+00	LT.	21		11		0.109									
58	EL-12	℄ Const. S.R. 17	59+25	65+00	RT.	16		22		0.109									
58	EL-13	℄ Const. S.R. 17	65+00	65+66	LT.	1		29		0.013									
58	EL-14	℄ Const. S.R. 17	65+00	65+66	RT.	1				0.013									
56	CH-1	℄ Const. S.R. 17	45+52	47+70	LT.						218								
57	CH-2	℄ Const. S.R. 17	56+20	57+86	RT.			11			166								
57	CH-3	℄ Const. S.R. 17	58+68	59+25	LT.			9			57								
58	CH-4	℄ Const. S.R. 17	59+25	60+20	LT.			3			95								
56	IM-1	℄ Const. S.R. 17	44+51	45+09	RT.			5		0.019	110								
56	IM-2	℄ Const. S.R. 17	45+52	46+73	RT.	6		6		0.046	10								
58	IM-3	℄ Const. S.R. 17	60+39	64+16	LT&RT	11		12		0.143									
56	SL-1	℄ Const. RAMP A	10+28		LT&RT			19					29						
56	SL-2	℄ Const. S.R. 17	50+07	50+27	LT.								20			108			
57	SL-3	℄ Const. MEYERS RD.	9+41		LT.								12			26			
57	SL-4	℄ Const. MEYERS RD.	10+40		RT.								14			255			
56		℄ Const. S.R. 17	45+62										2						
56		℄ Const. S.R. 17	46+62											2		2			
56		℄ Const. S.R. 17	47+60											2					
56		℄ Const. S.R. 17	52+11											1					
56		℄ Const. S.R. 17	52+25											1					
57		℄ Const. S.R. 17	56+98												1				
57		℄ Const. S.R. 17	56+20											1					
57		℄ Const. S.R. 17	57+76											1					
57		℄ Const. S.R. 17	58+78											1					
SUBTOTALS						240		112		204		0.846	0.665	656	75	9	3	389	
TOTALS CARRIED TO GENERAL SUMMARY						240		316			0.85	0.67	656	75	9	3	389		

PAVEMENT MARKING SUBSUMMARY

UNI - 17 - 3.14

54
65



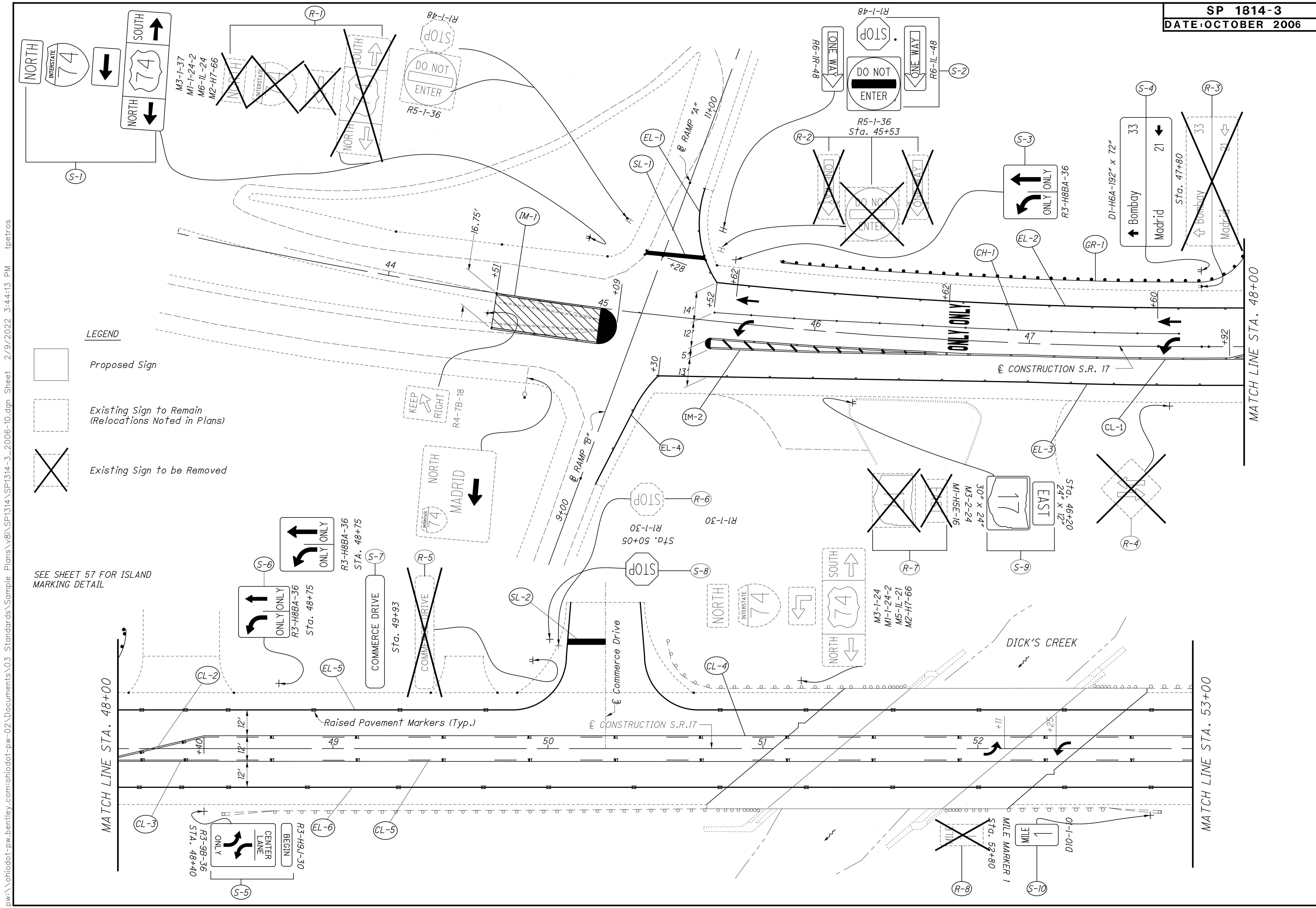
0 10 20
HORIZONTAL
SCALE IN FEET

CALCULATED
DAM
CHECKED
JAG




**SIGN AND PAVEMENT
MARKING PLAN**

UNI-17-3.14

56
65

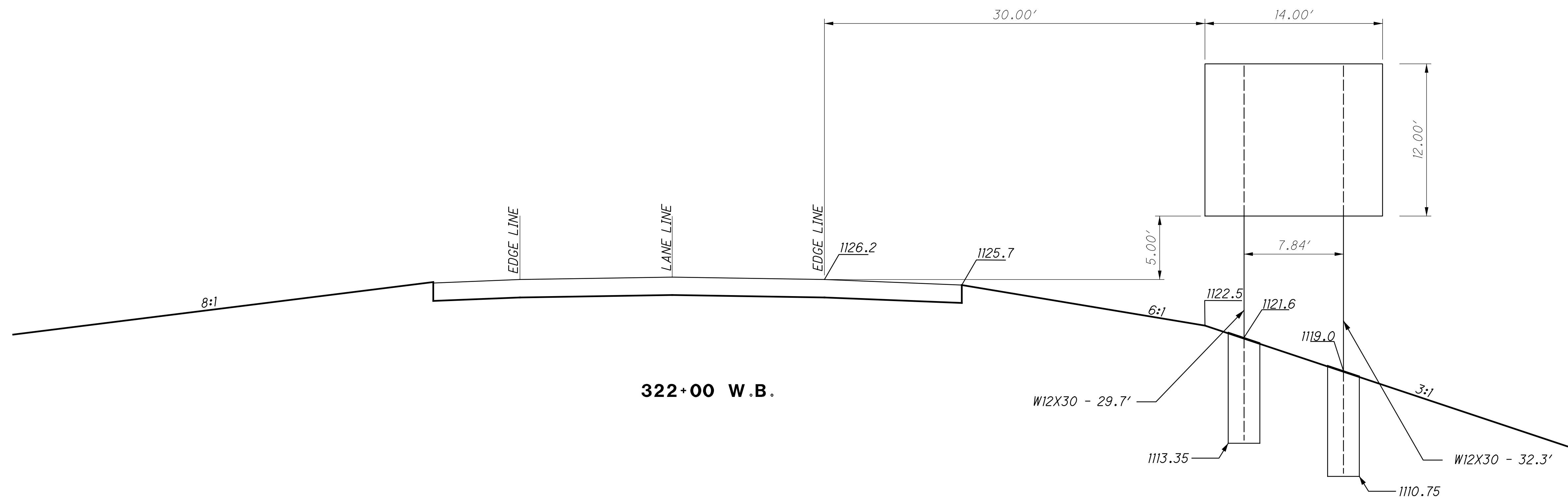


LEGEND

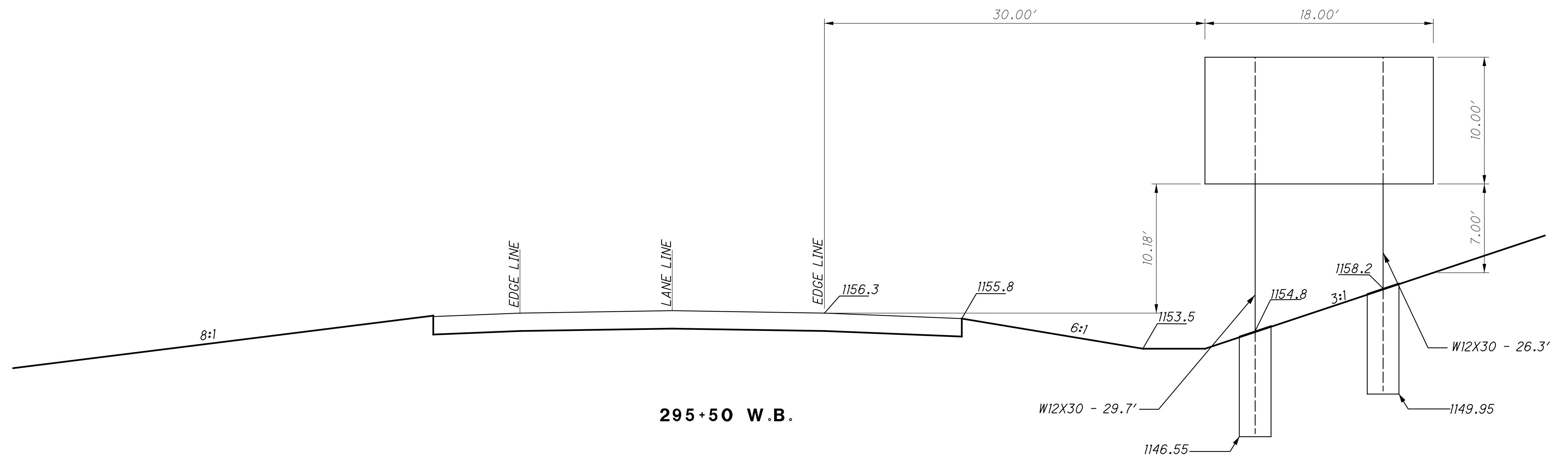
-  Proposed Sign
-  Existing Sign to Remain (Relocations Noted in Plans)
-  Existing Sign to be Removed

SEE SHEET 57 FOR ISLAND MARKING DETAIL

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322+00 W.B.

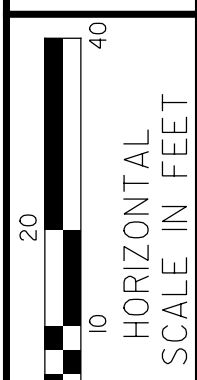
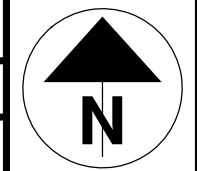


295+50 W.B.

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\03_Standards\Sample_Plans\81\SP1314-4_2008-10.dgn Sheet 2/9/2022 3:44:31 PM tpetros

GUIDE SIGN ELEVATION DETAILS

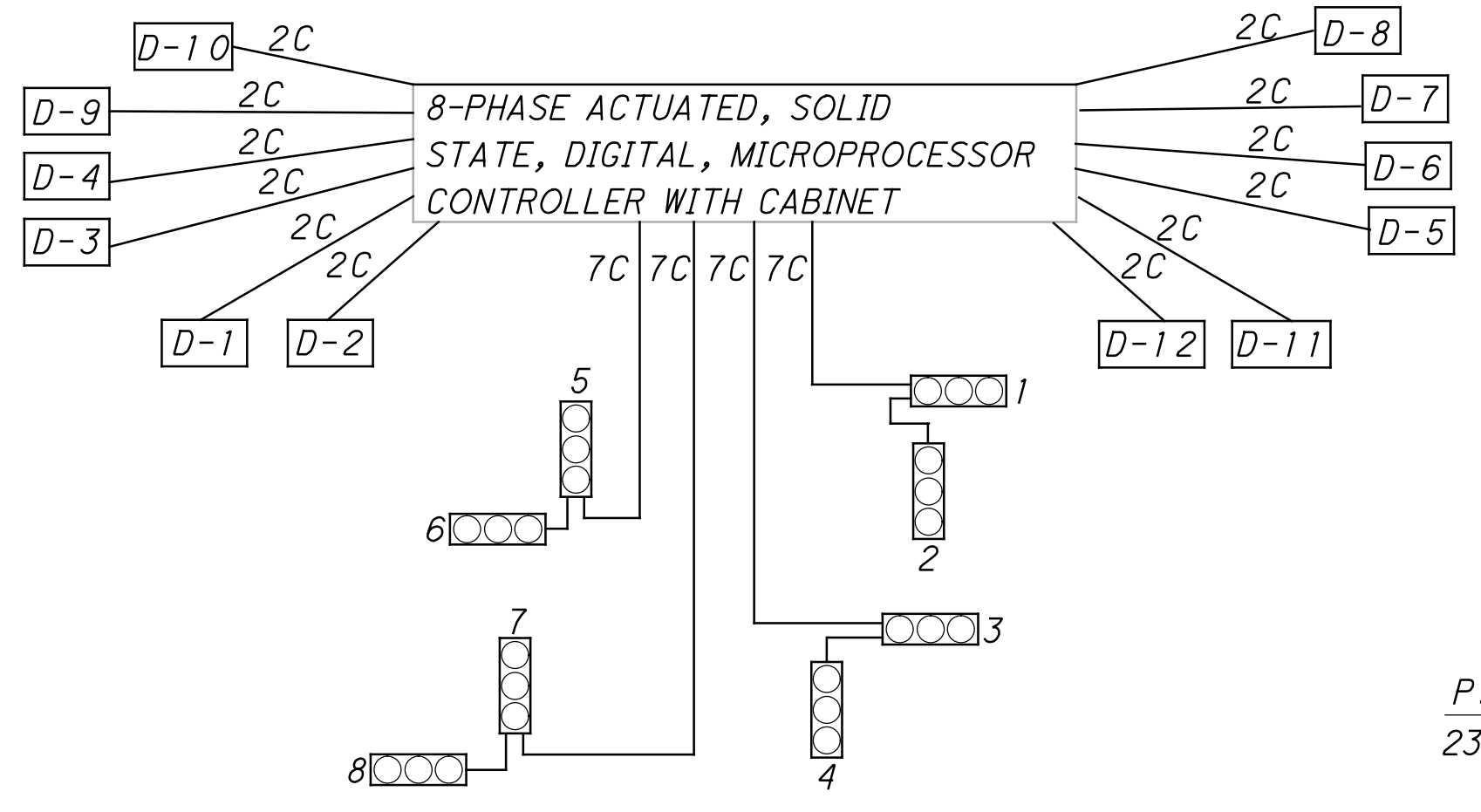
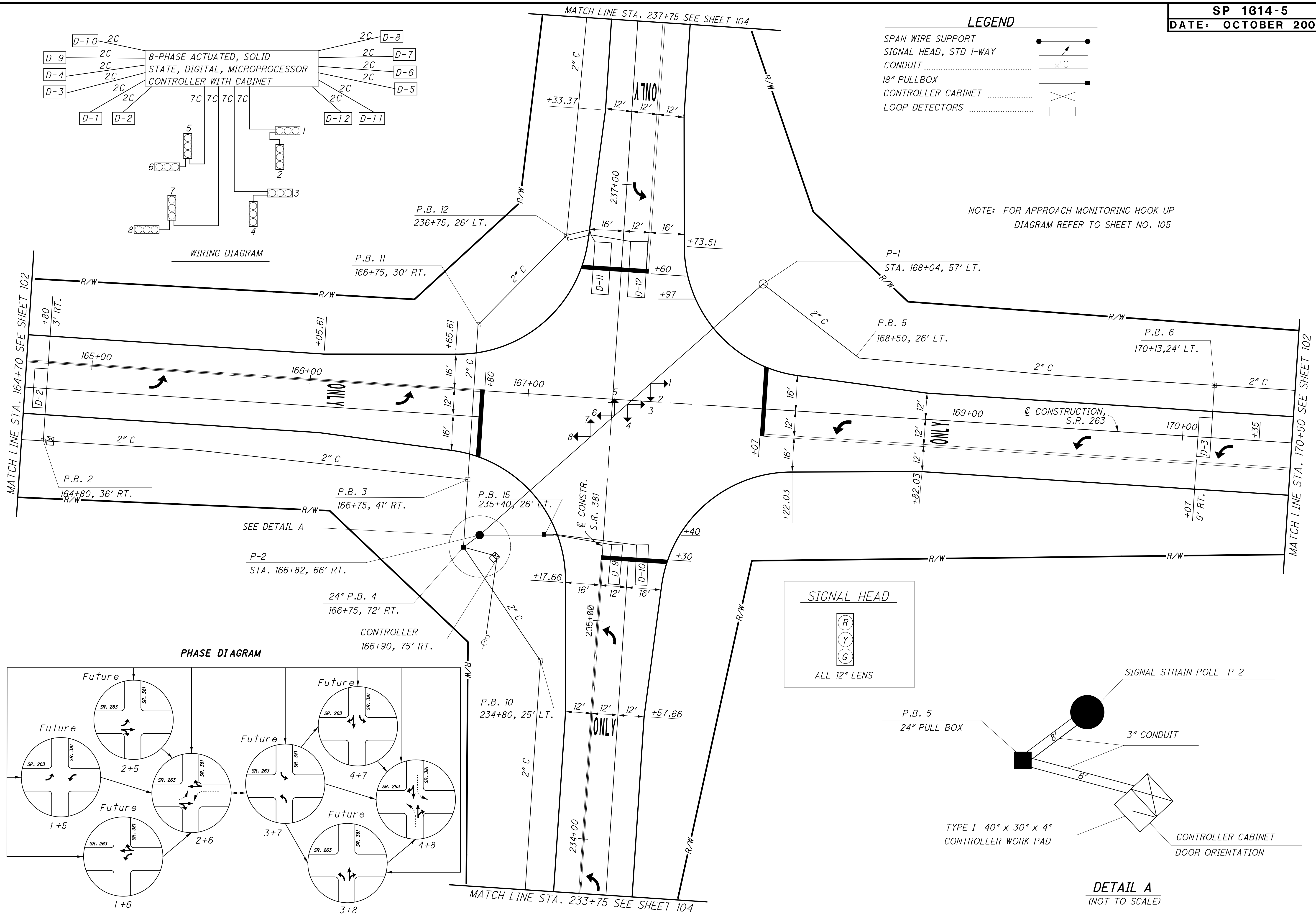
FRA-161-23.20
 LIC-161-0.00



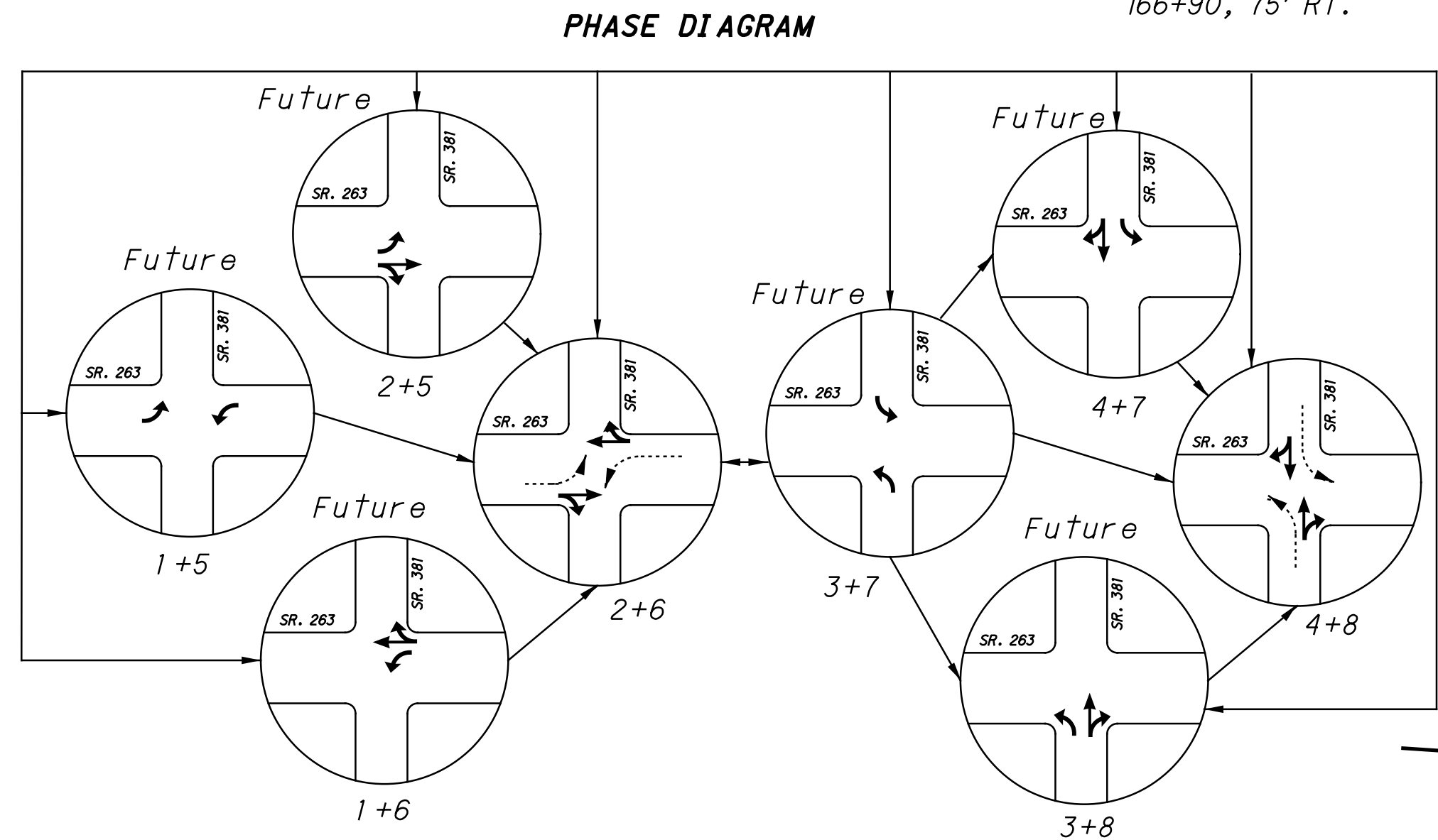
LEGEND

- SPAN WIRE SUPPORT
- SIGNAL HEAD, STD 1-WAY
- CONDUIT
- 18" PULLBOX
- CONTROLLER CABINET
- LOOP DETECTORS

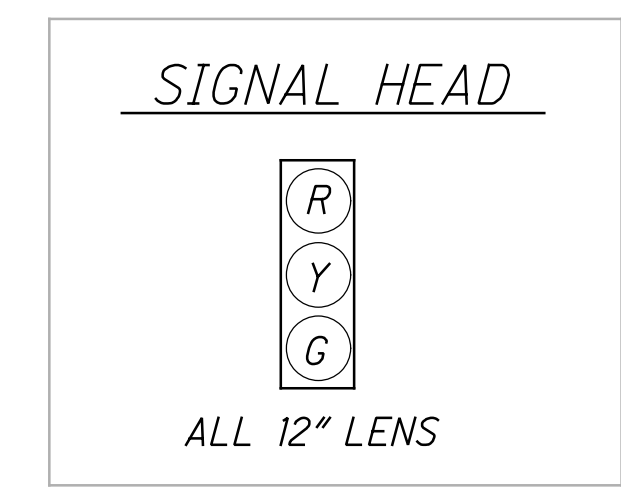
NOTE: FOR APPROACH MONITORING HOOK UP DIAGRAM REFER TO SHEET NO. 105



WIRING DIAGRAM

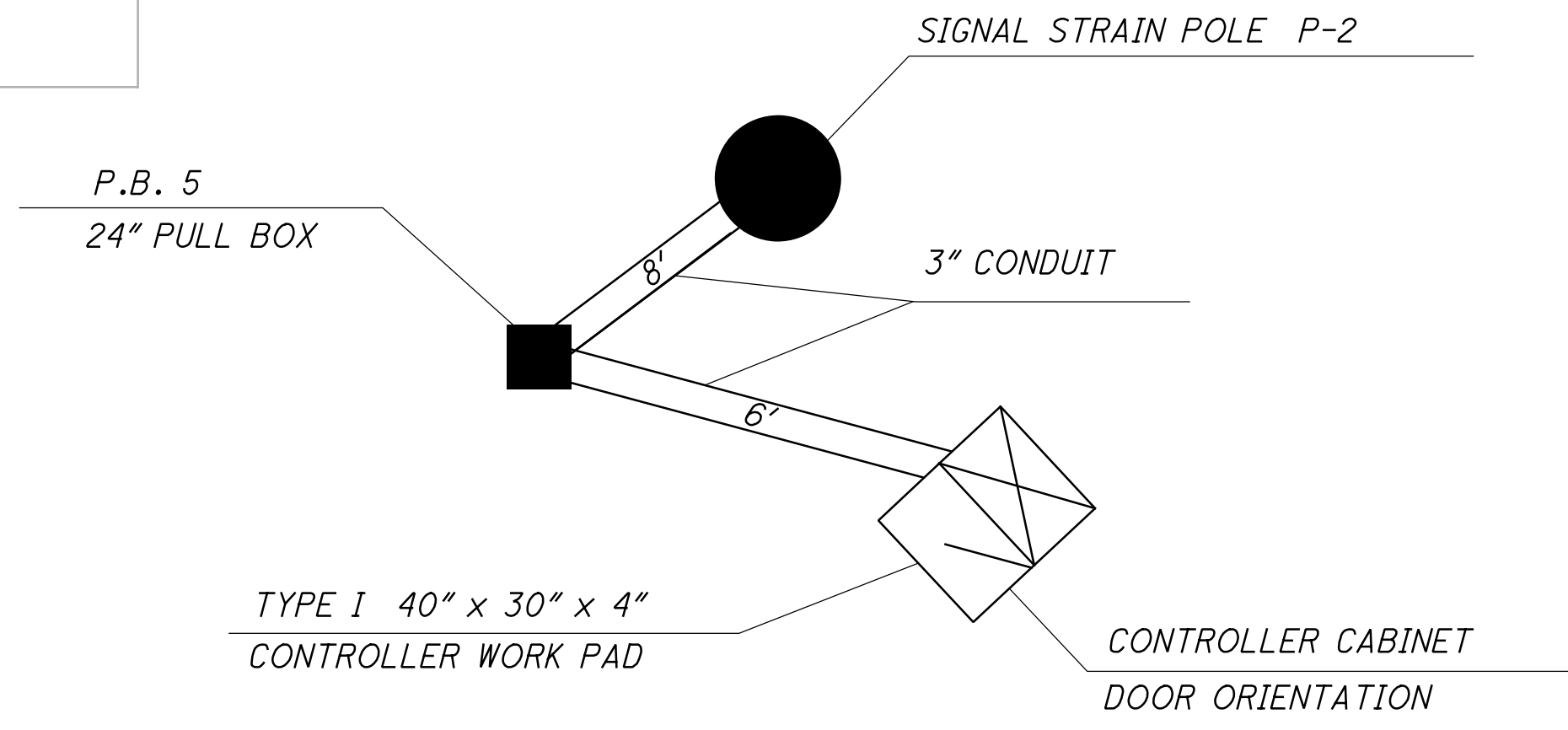


PHASE DIAGRAM

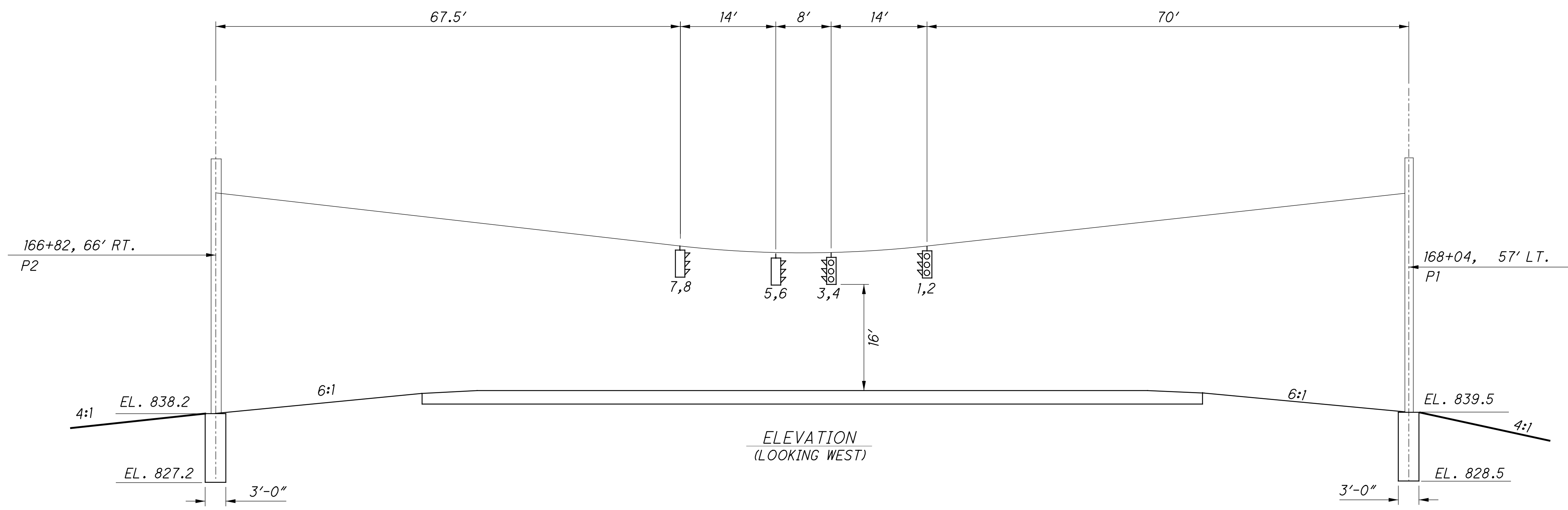


SIGNAL HEAD

ALL 12" LENS



DETAIL A
(NOT TO SCALE)



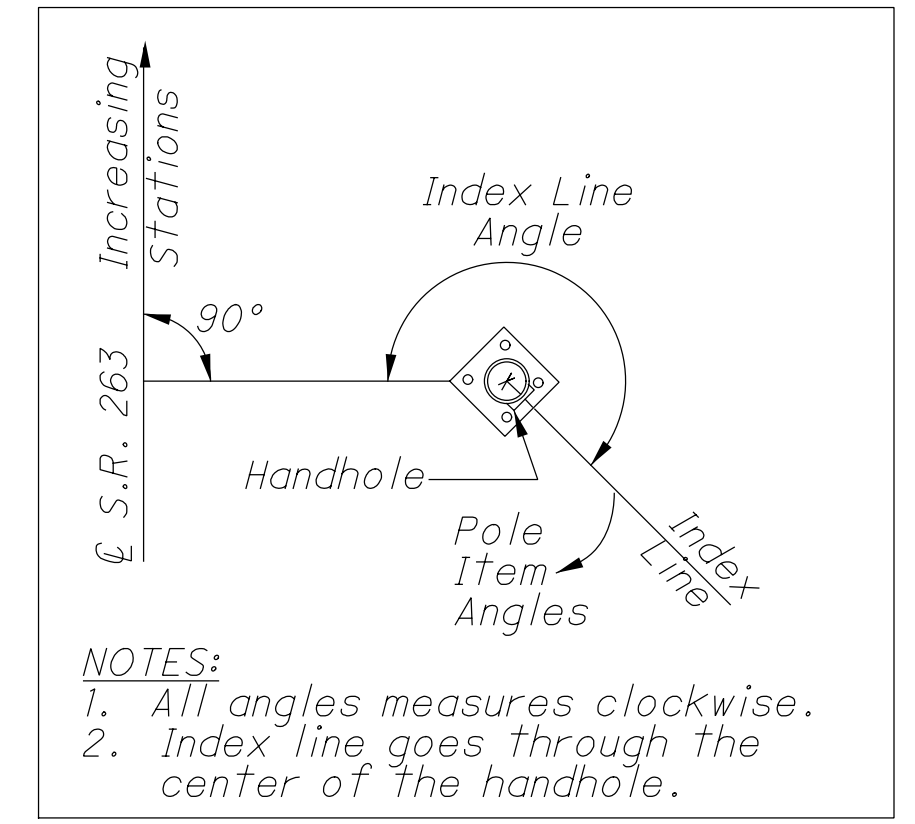
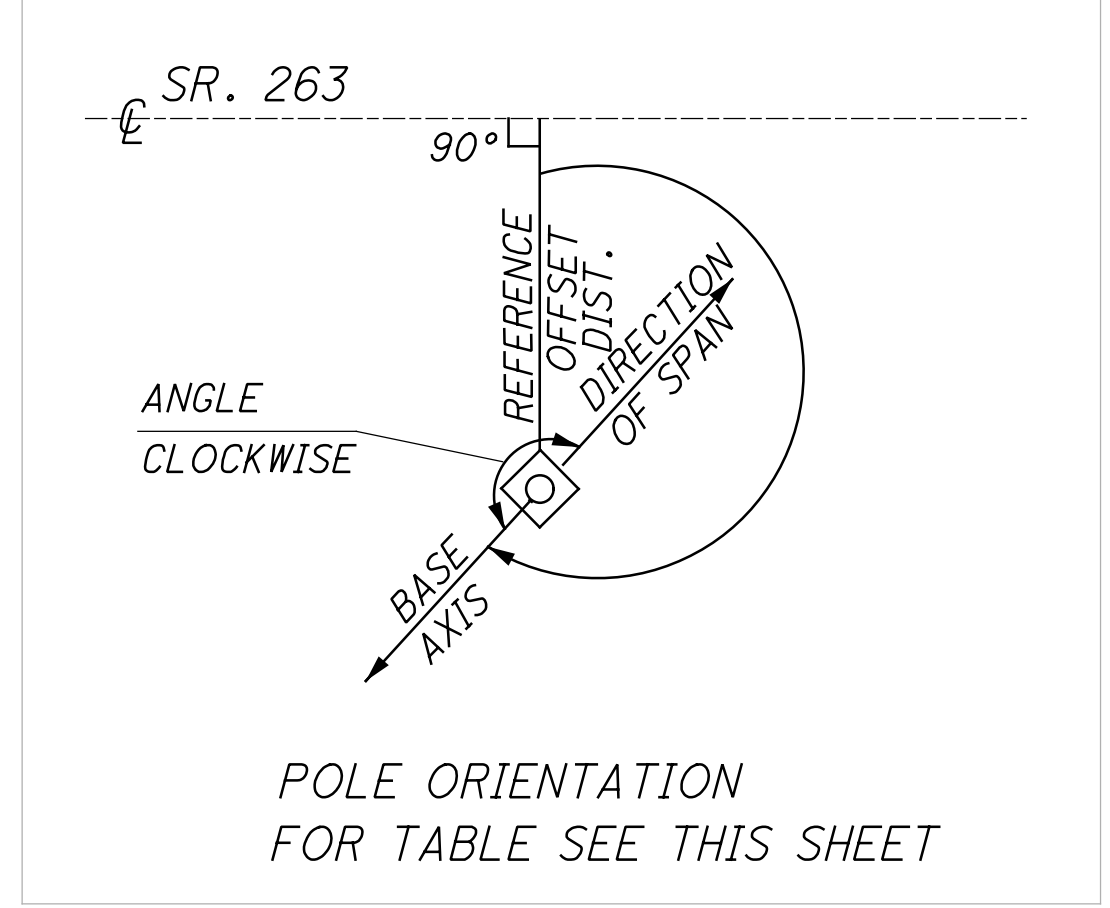
POLE SIZE AND FOUNDATION ELEVATION					ORIENTATION OF ACCESSORIES (Angles Measured from Index Line)				
POLE NUMBER	POLE DESIGN	POLE SIZE	ELEVATION TOP OF FOUNDATION	ELEVATION BOTTOM OF FOUNDATION	SERVICE CABLE 1-1/2"	HAND HOLE	CABLE ENTRANCE	SPAN WIRE ATTACHMENT	LUMINAIRE
P-1	10	34'	839.5	828.5	----	0	180°	180°	----
P-2	10	34'	838.2	827.2	25'	0	180°	180°	----

SIGNAL HEAD MOUNTING DATA			
SIGNAL	PAVEMENT ELEVATION	ACTUAL CLEARANCE FROM PAVE.	ELEVATION BOTTOM OF SIGNAL
1,2	842.2	16.7	858.9
3,4	841.9	16.1	857.9
5,6	841.9	16.4	858.3
7,8	841.9	17.1	858.9

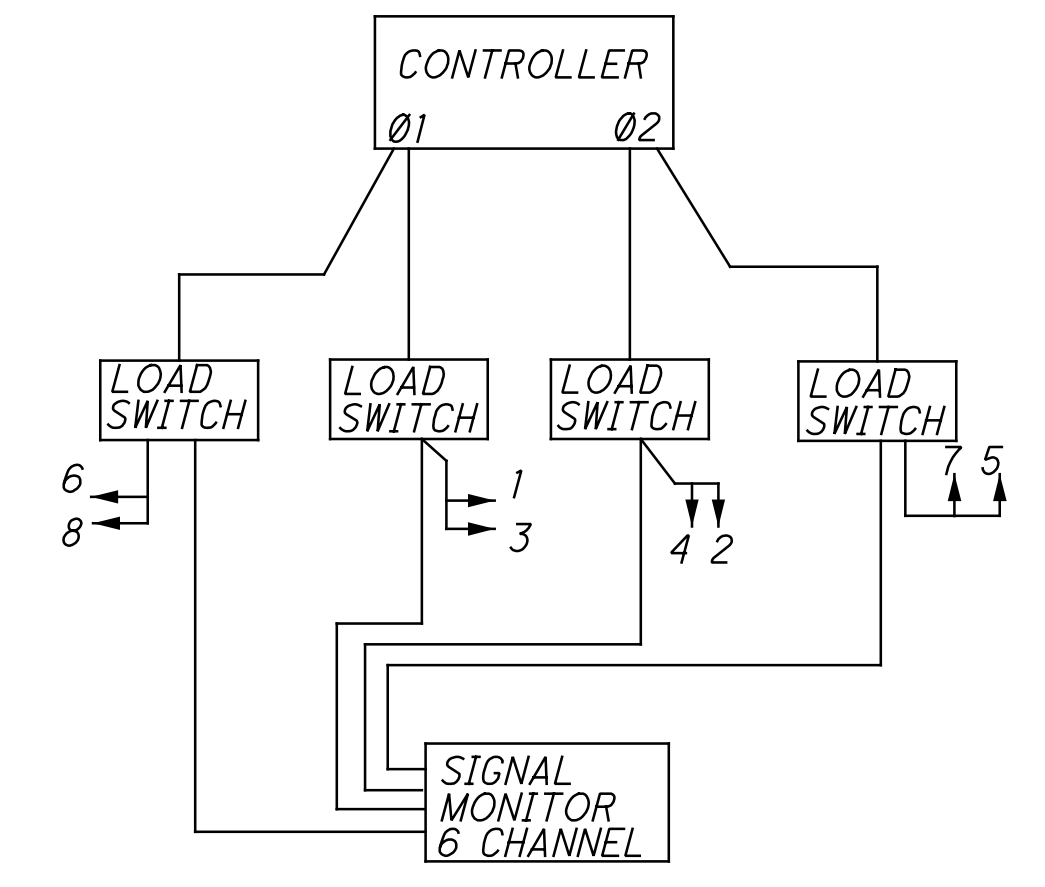
SIGNAL TIMING		
	PHASE 1	PHASE 2
MINIMUM	15	15
MAXIMUM	25	25
EXTENSION	3	3
ADDED INITIAL	1.0	
FLASH	Y	R
RECALL	MIN	----
Y-CLEAR	4	4
ALL-RED	2	2
INITIALIZE	G	R

SIGNAL DISPLAY SEQUENCE CHART						
SIGNAL HEADS	FLASH	PHASE				
		1		2		
		INTERVAL	INTERVAL			
1	Y	G	Y	R	R	R
2	R	R	R	R	G	Y
3	Y	G	Y	R	R	R
4	R	R	R	R	G	Y
5	R	R	R	R	G	Y
6	Y	G	Y	R	R	R
7	R	R	R	R	G	Y
8	Y	G	Y	R	R	R

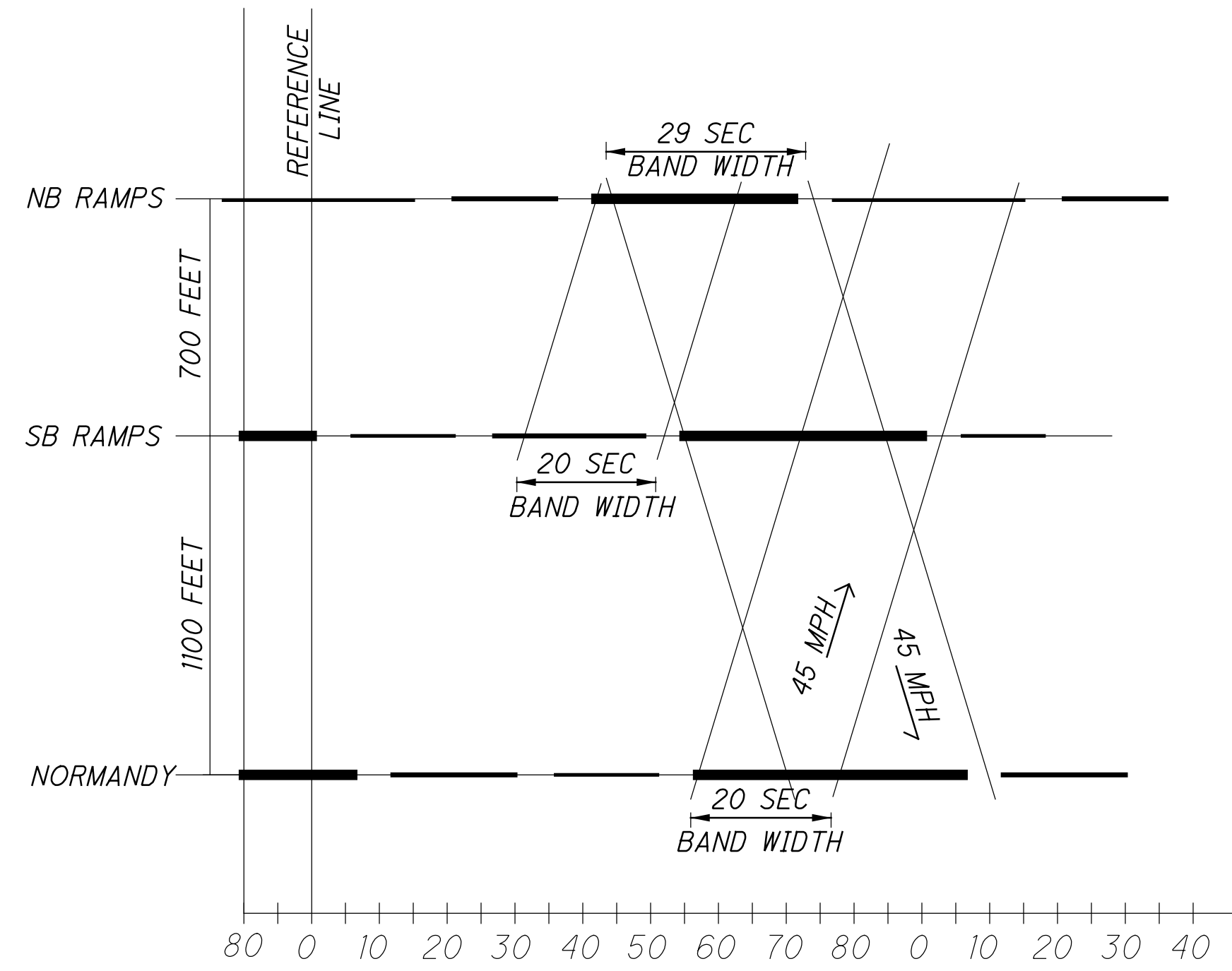
LOOP DETECTOR CHART							
LOOP	PHASE	SIZE	NO. OF TURNS	MODE	LOOP DET. UNIT	DELAY	DELAY INHIBIT PHASE
D-1	2	6 x 6	3	PULSE	1	-	-
D-2	2	6 x 18	2	PULSE	1	-	-
D-3	6	6 x 18	2	PULSE	2	-	-
D-4	6	6 x 6	3	PULSE	2	-	-
D-5	8	6 x 6	3	PULSE	3	3	8
D-6	8	6 x 18	2	PULSE	3	3	8
D-7	4	6 x 18	2	PULSE	4	3	4
D-8	4	6 x 6	3	PULSE	4	3	4
D-9	8	6 x 30	2	PRESENCE	5	3	8
D-10	8	6 x 30	2	PRESENCE	6	6	8
D-11	4	6 x 14	2	PRESENCE	7	6	4
D-12	4	6 x 14	2	PRESENCE	8	3	4



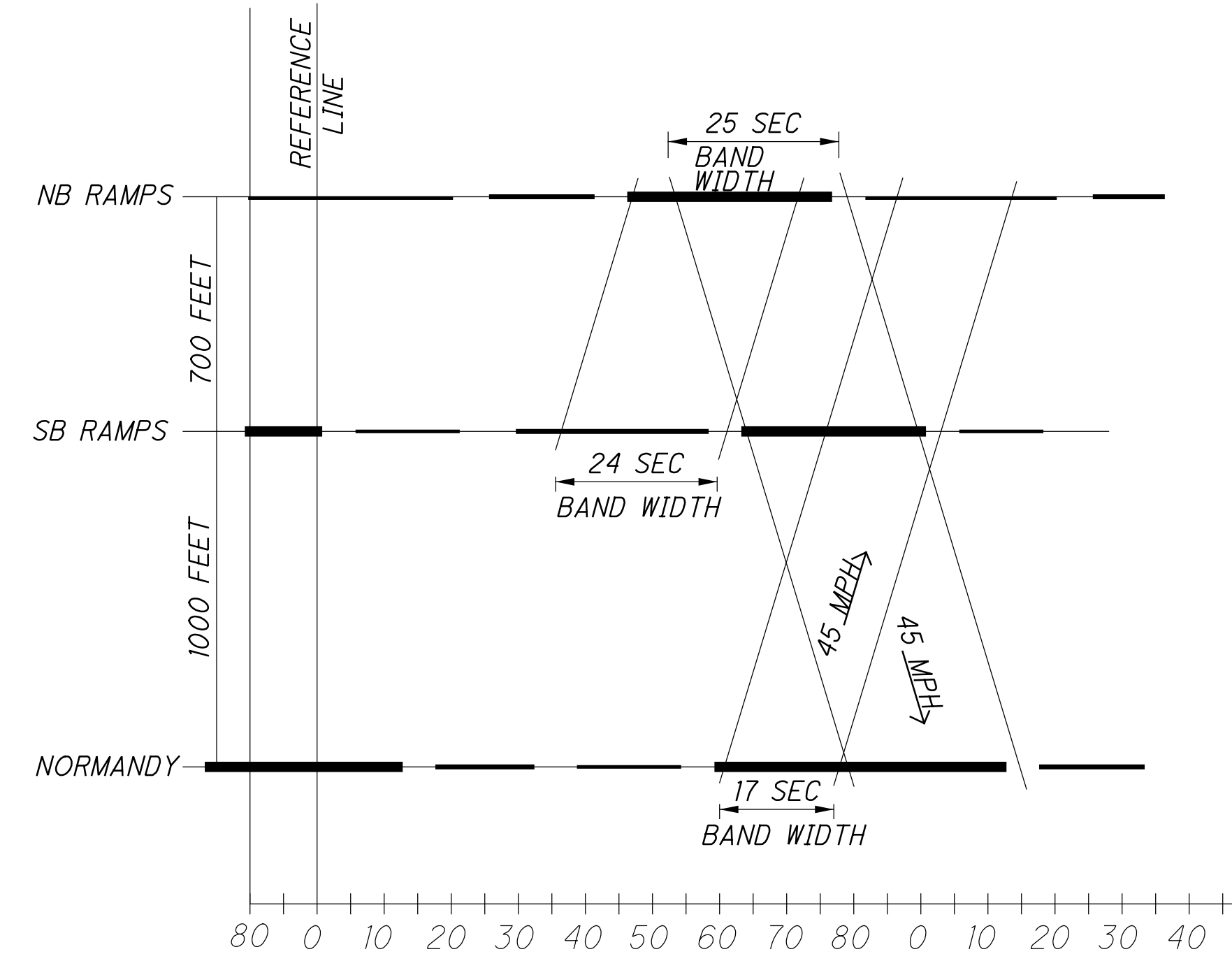
NOTES:
1. All angles measure clockwise.
2. Index line goes through the center of the handhole.



APPROACH MONITORING HOOK-UP DIAGRAM



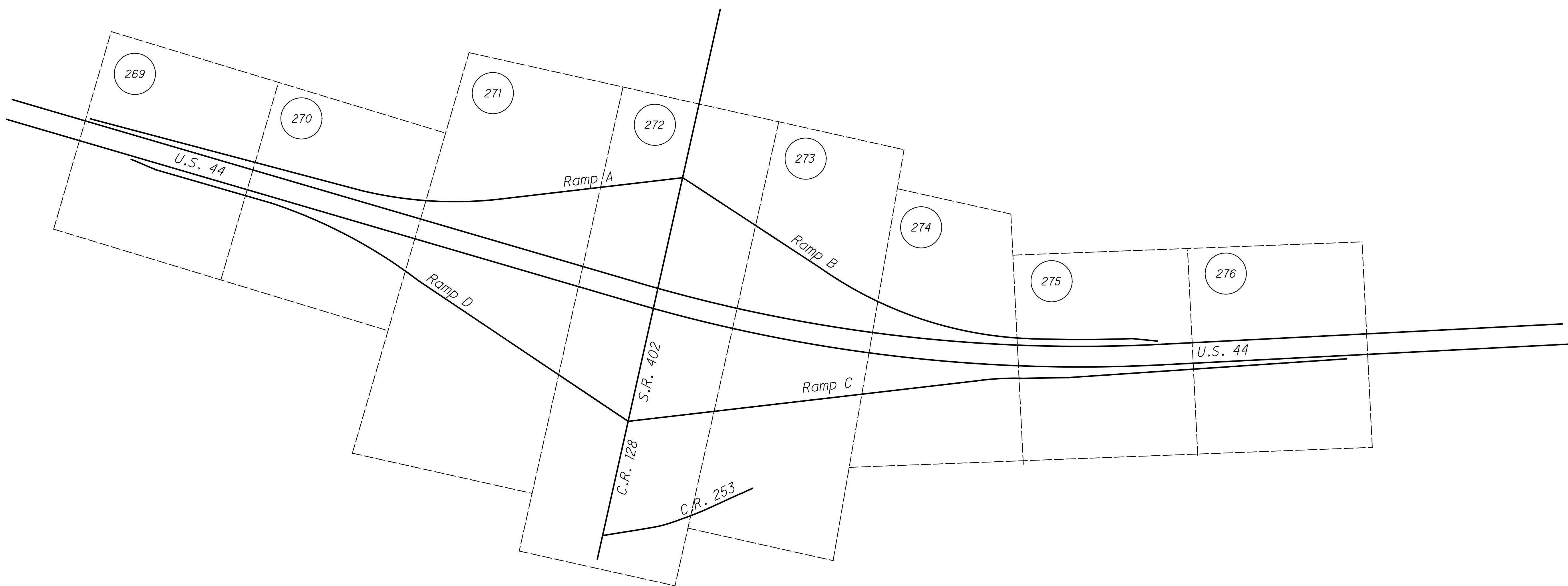
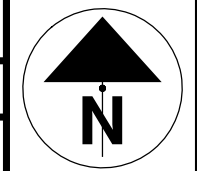
90 SECOND CYCLE LAGGING LEFT
PROTECTED ONLY LEFT TURN
MORNING & OFF PEAK
DIAL #1



90 SECOND CYCLE LAGGING LEFT
PROTECTED ONLY LEFT TURN
EVENING PEAK
DIAL #2

SR 18 GREEN **▬**
RAMP GREEN **▬▬**
PROTECTED LEFT TURN **▬▬▬**

TIME-SPACE DIAGRAMS

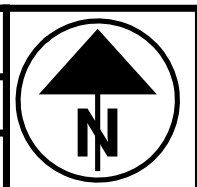


LEGEND

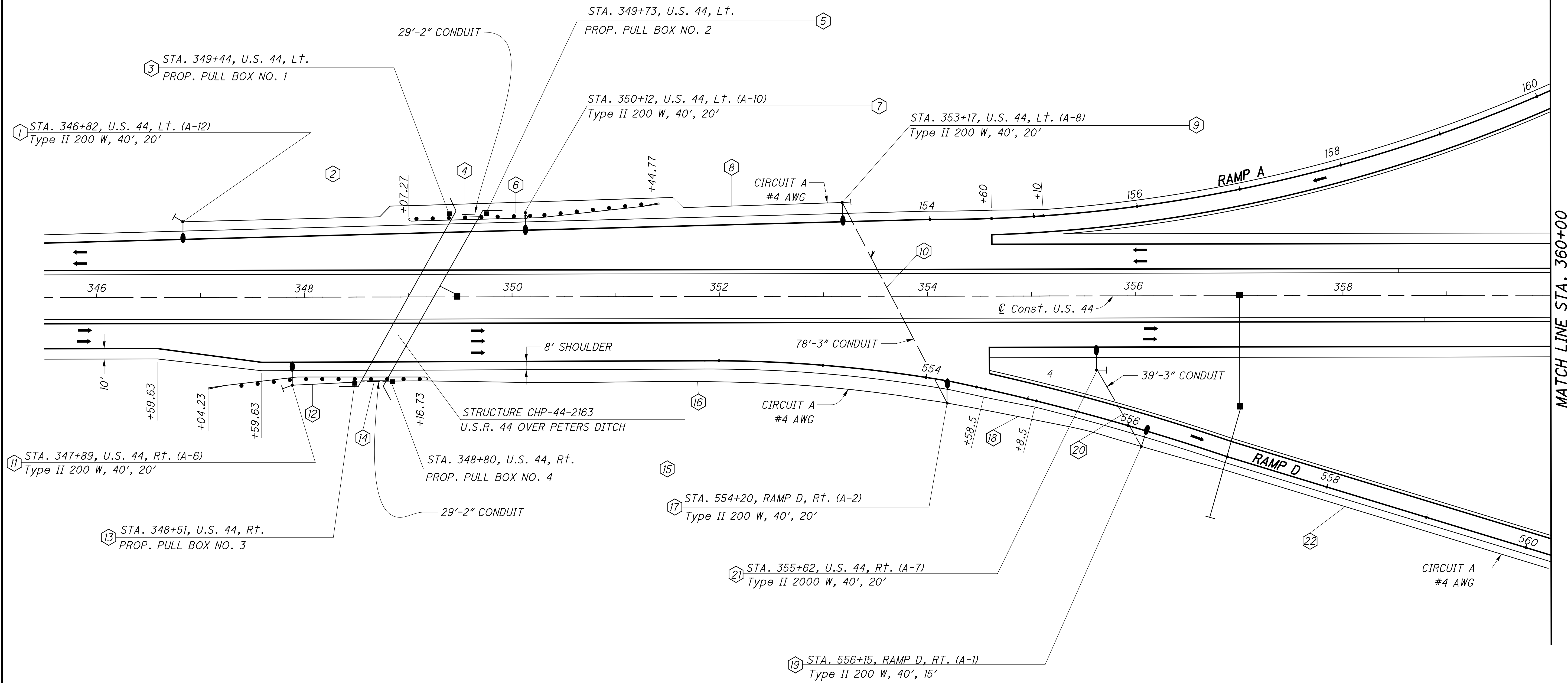
- PROPOSED GUARDRAIL
- SUB-SUMMARY REFERENCE NUMBER
- LIGHTING CIRCUIT
CONDUIT OR DUCT CABLE (AS LABELED)
WITH CONDUCTORS (AS INDICATED)
- CATCH BASIN, PIPE AND HEADWALL
- LIGHT POLE AND LUMINAIRE, INITIAL INSTALLATION
- CONTROL CENTER
- PULL BOX
- CIRCUIT STUB AND CAP

POLE LEGEND

TYPE OF LUMINAIRE	STATION		OFFSET		CIRCUIT NUMBER	POLE NUMBER	POLE REF NO.
	WATTAGE OF LUMINAIRE	SUPPORT HEIGHT	BRACKET ARM LENGTH				



CALCULATED
RNM
CHECKED
CWR

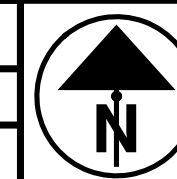


MATCH LINE STA. 360+00

LIGHTING PLAN
STA. 345+50 TO STA. 360+00

FOR LEGEND, SEE SHEET 264.
FOR QUANTITIES, SEE SHEET 267.

CHP-44-11.29



0 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
MTG
CHECKED
CJM

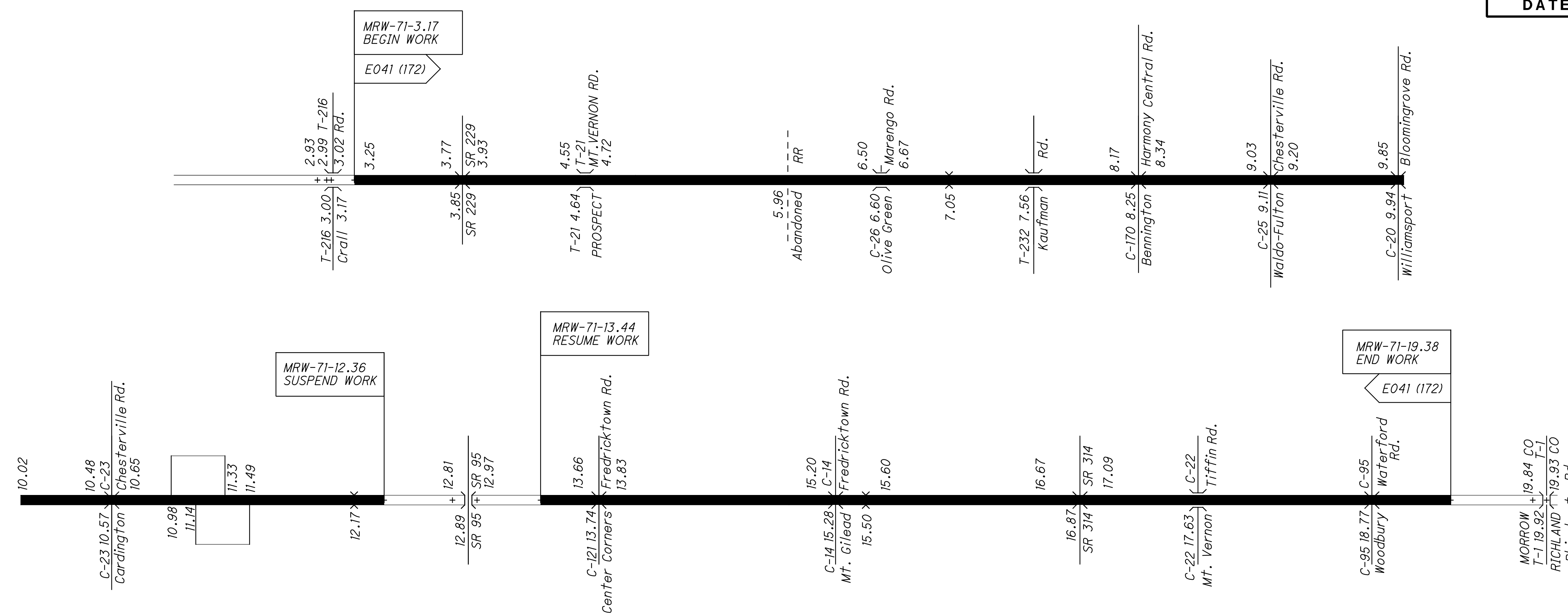
LANDSCAPING PLAN

LUC-73-3.93

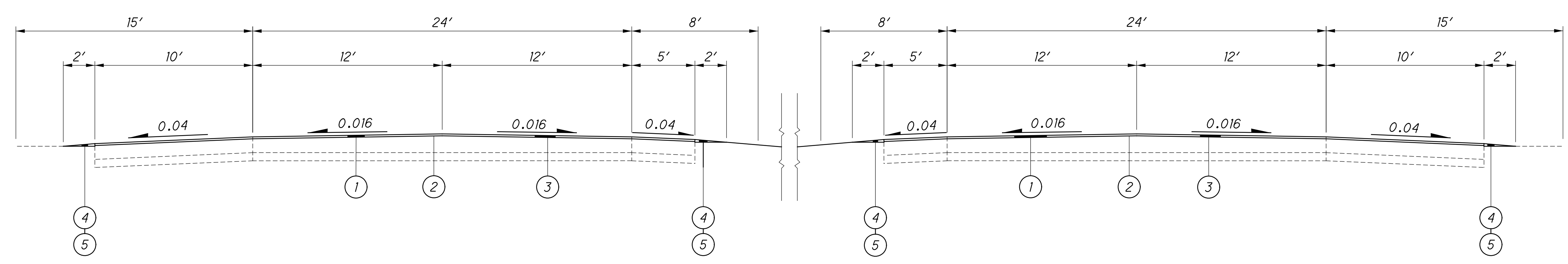


SUB-SUMMARY

ITEM	UNIT	DESCRIPTION	QTY.	KEY	COMMON NAME	COND.
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (ACER PLATANOSE)	26	Ap	Swedish Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (ACER REDUNDIS)	5	Ar	Secondary Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (CRATAEGUS ABRAHANUM)	37	Ca	Lincoln Hawthorn	B&B 16" min.
661	Each	EVERGREEN TREE, 5' HEIGHT (PINUS NUDISTFUNDIS)	208	Pn	Bare Cone Pine	B&B 14" min.
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (QUERCUS REDRUM)	28	Qr	Dead Oak	B&B 20" min.
661	Acre	PLANTING, MISC.	5.43		Wildflower Seeding and Mulching	



*** NOTES**
MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE. SHOULDER WIDTH MAY VARY NEAR EXISTING RAMPS AND CROSSOVERS.



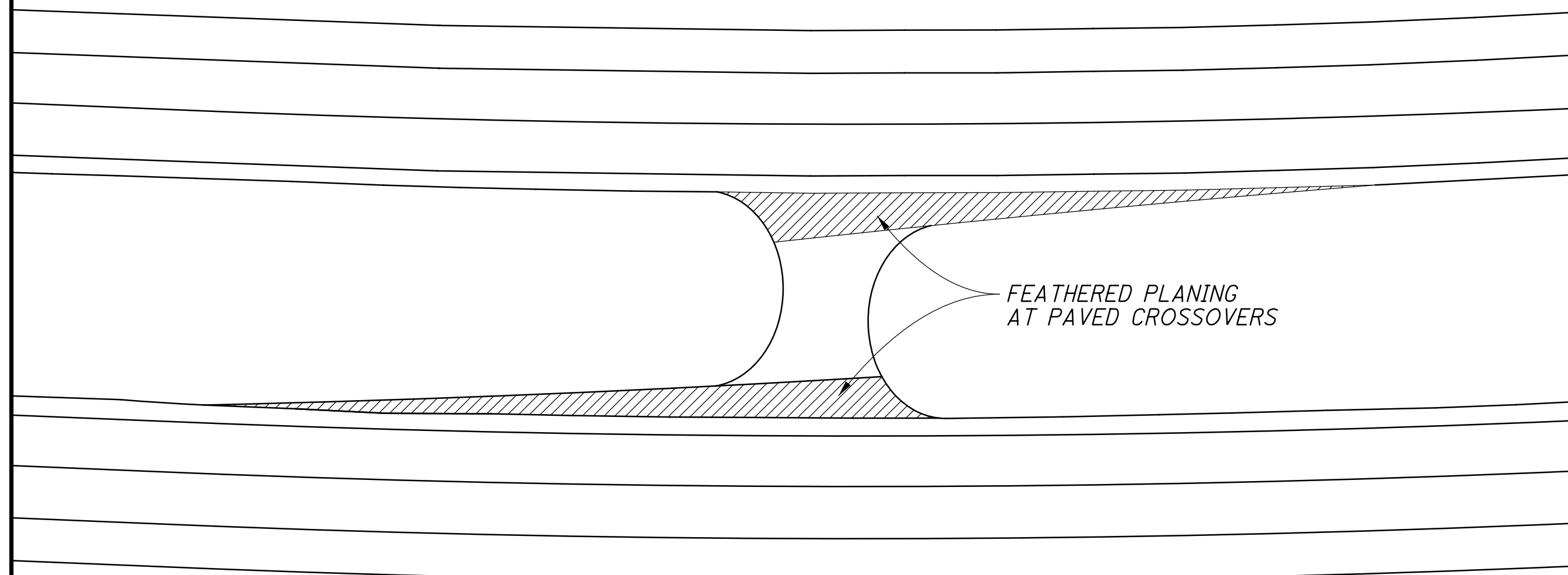
LEGEND

- ① ITEM 254 - 1/2" PAVEMENT PLANING, ASPHALT CONCRETE
- ② ITEM 407 - TACK COAT
- ③ ITEM 441 - 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG 64-22
- ④ ITEM 408 - PRIME COAT @ 0.4 GALLONS PER SQ. YD.
- ⑤ ITEM 617 - COMPACTED AGGREGATE

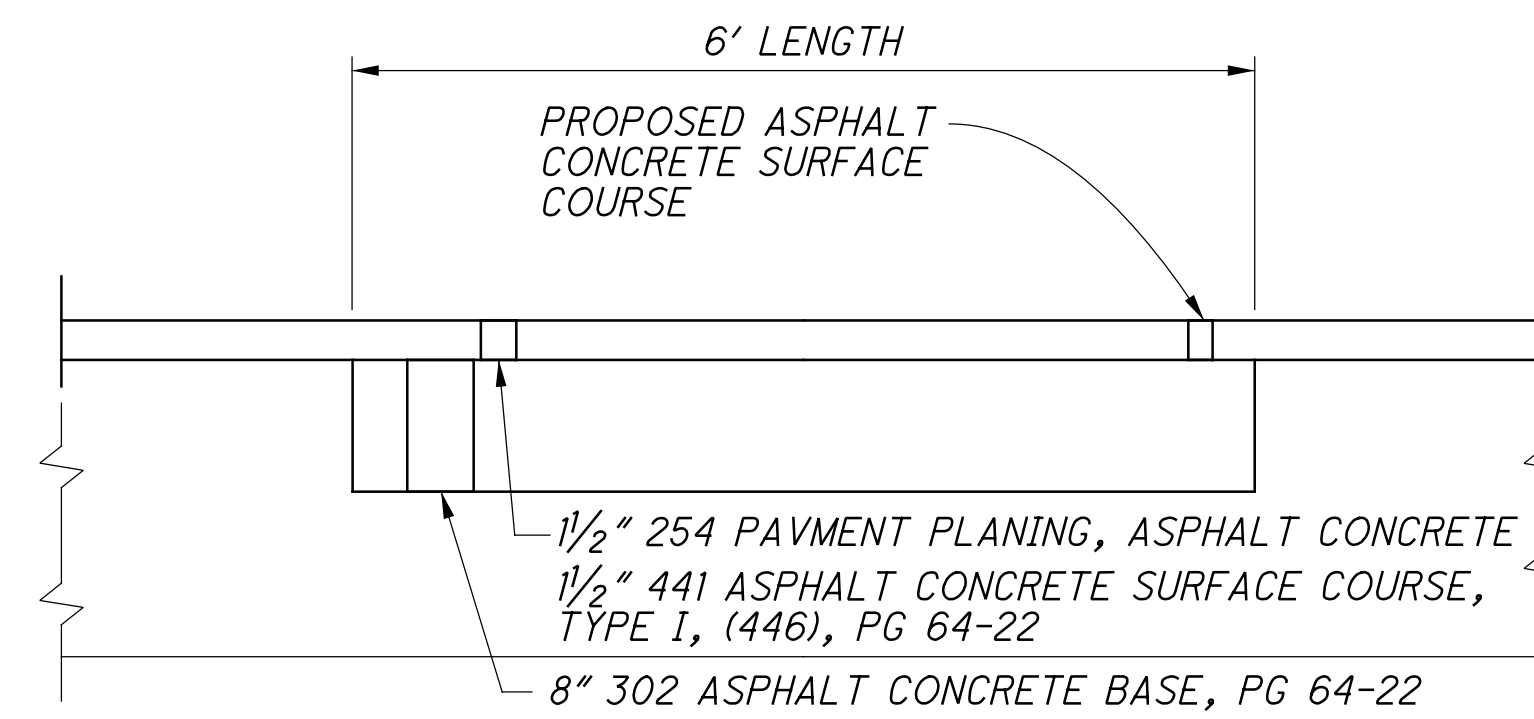
RESURFACING

MRW-71-3.17

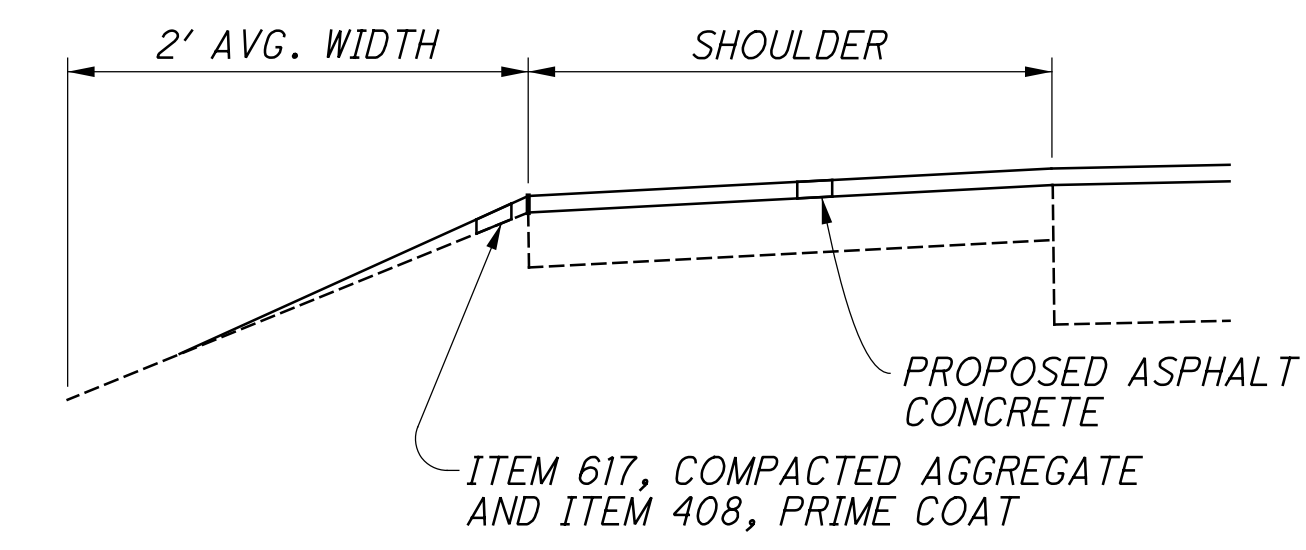
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



SHOULDER DETAIL



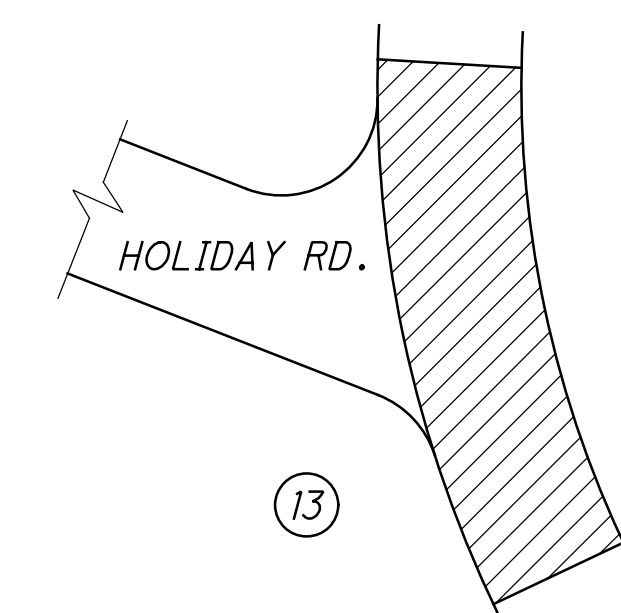
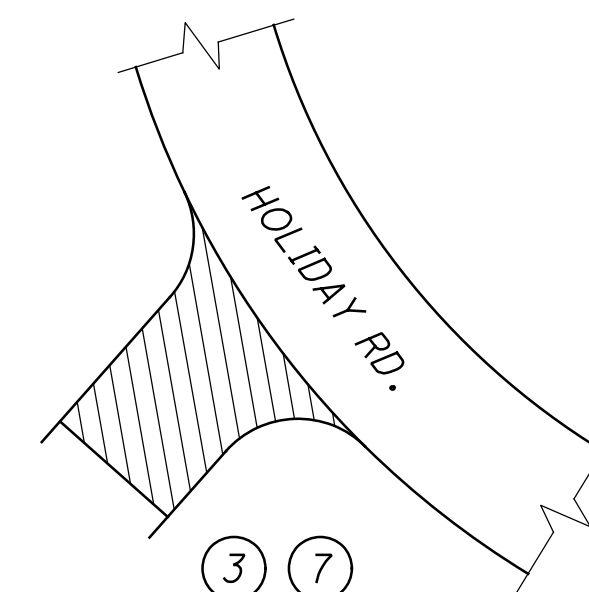
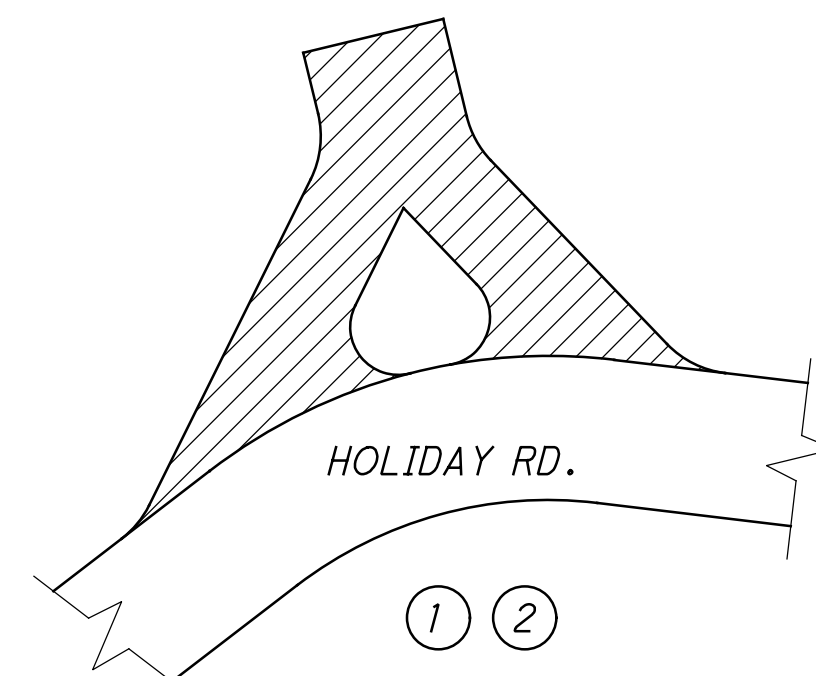
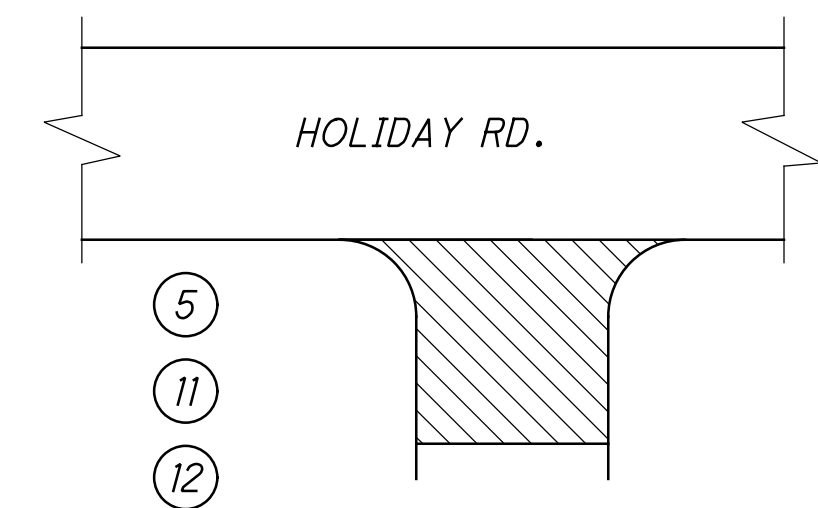
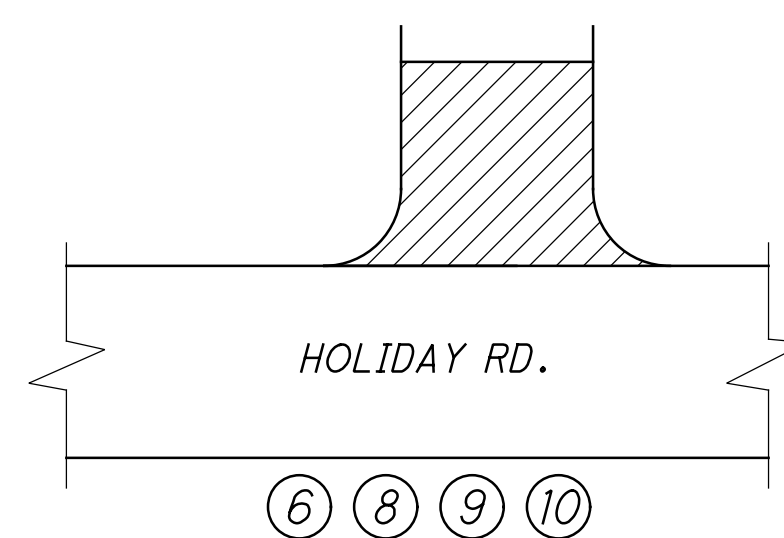
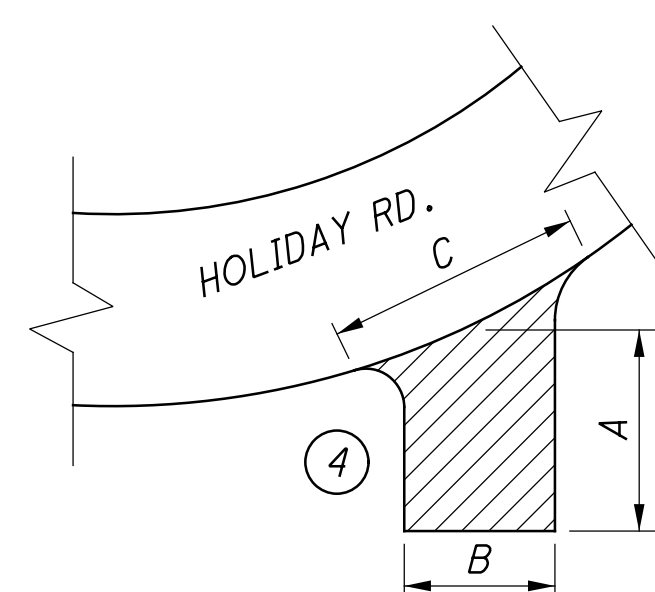
SP 1315-2
DATE: JANUARY 2022

CALCULATED RDK
CHECKED RDK

PAVEMENT SUBSUMMARY AND DETAILS

LOCATION					PAVEMENT WIDTH							QUANTITIES						REMARKS
COUNTY	ROUTE	S L M	S L M	TYPICAL	NORTHBOUND				SOUTHBOUND			254	407	408	441	617	618	REMARKS
					LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT	PRIME COAT (0.4 GAL/YD ²)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG 64-22	COMPACTED AGGREGATE	RUMBLE STRIP, SHOULDER (ASPHALT CONCRETE)	
					FT	FT	FT	FT	FT	FT	FT	1/2" DEPTH SY	GAL	GAL	1/2" DEPTH CY	2" DEPTH CY	FT	
MRW	71	3.17	12.07	1	46,992'	10'	24'	5'				203,632	15,272	8,354	8,485	1,161	93,984	MAINLINE (SOUTH OF SR-95)
MRW	71	3.17	12.36	1	48,523'				5'	24'	10'	210,267	15,770	8,626	8,761	1,198	97,046	MAINLINE (SOUTH OF SR-95)
MRW	71	13.44	19.38	1	31,363'	10'	24'	5'				135,907	10,193	5,576	5,663	775	62,726	MAINLINE (NORTH OF SR-95)
MRW	71	13.57	19.38	1	30,677'				5'	24'	10'	132,933	9,970	5,454	5,539	758	61,354	MAINLINE (NORTH OF SR-95)
MRW	71	10.99	11.14	1	792'	10'	32'*					3,696	277		154			EXTRA AREA (RAMP TAPER)
MRW	71	11.39	11.70	1	1,637'	10'	32'*					7,638	573		318			EXTRA AREA (RAMP TAPER)
MRW	71	11.33	11.48	1	792'					32'*	10'	3,696	277		154			EXTRA AREA (RAMP TAPER)
MRW	71	10.75	11.06	1	1,637'					32'*	10'	7,638	573		318			EXTRA AREA (RAMP TAPER)
MRW	71	4.41										340	25		14			* AVERAGE PAVEMENT WIDTH
MRW	71	6.67													10			EXTRA AREA (PAVED CROSSOVER)
MRW	71	7.40										340	25		14			GRAVEL CROSSOVER
MRW	71	10.37										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	11.98										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	13.63										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	14.67													10			GRAVEL CROSSOVER
MRW	71	15.06													10			GRAVEL CROSSOVER
MRW	71	15.60													10			GRAVEL CROSSOVER
MRW	71	16.75										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	17.52													10			GRAVEL CROSSOVER
MRW	71	18.03													10			GRAVEL CROSSOVER
MRW	71	5.96	6.01		255'	10'	24'	5'	5'	24'	10'	-2,210	-2	-45	-92	-6	-510	DEDUCTIONS & EXTRA AREAS
MRW	71	7.05	7.07		120'	10'	24'	5'	5'	24'	10'	-1,039	4	-21	2	-3	-240	DEDUCTIONS & EXTRA AREAS
MRW	71	7.56	7.59		145'	10'	24'	5'	5'	24'	10'	-1,254	5	-26	3	-4	-289	DEDUCTIONS & EXTRA AREAS
MRW	71	12.17	12.19		103'	10'	24'	5'	5'	24'	10'	-892	3	-18	2	-3	-206	DEDUCTIONS & EXTRA AREAS
MRW	71	15.50	15.52		80'	10'	24'	5'	5'	24'	10'	-691	3	-14	1	-2	-159	DEDUCTIONS & EXTRA AREAS
MRW	71	17.63	17.68		257'	10'	24'	5'	5'	24'	10'	-2,224	9	-46	5	-6	-513	DEDUCTIONS & EXTRA AREAS
MRW	71	18.77	18.80		155'	10'	24'	5'	5'	24'	10'	-1,341	5	-28	3	-4	-309	DEDUCTIONS & EXTRA AREAS
TOTALS CARRIED TO SUBSUMMARY												697,797	53,082	27,812	29,400	3,924	312,883	

MRW - 71 - 3.17

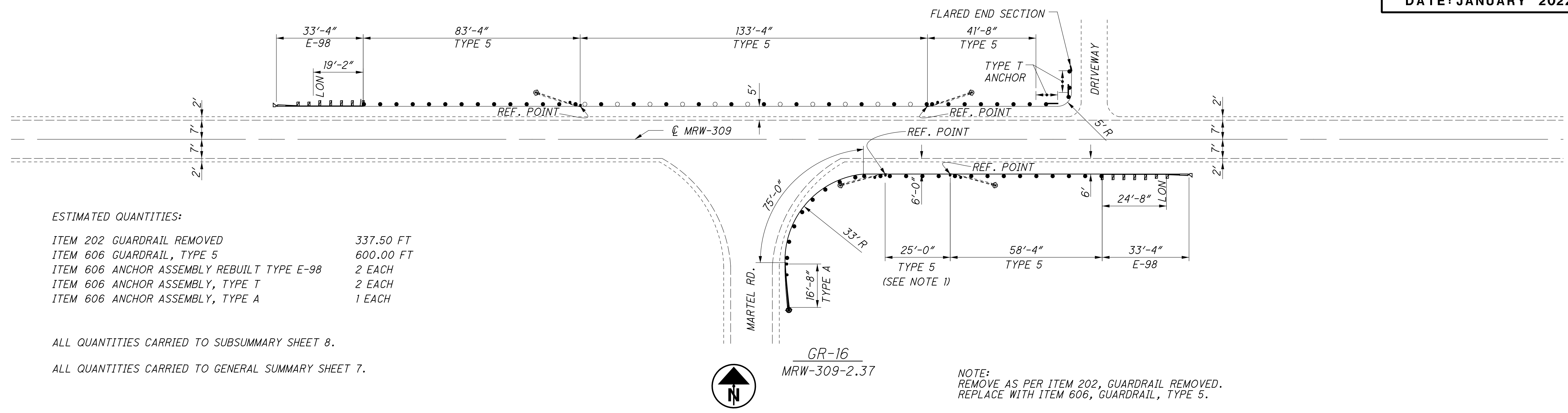


- ① ASPHALT CONCRETE SURFACE COUSE, TYPE I, (446), PG 64 -22
- ② ASPHALT CONCRETE INTERMEDIATE COUSE, TYPE II, (446)

PART	ROUTE	SLM	SIDE	DESCRIPTION	INTERSECTIONS				PROPOSED ITEMS						
					A	B	C	AREA	407	441			EXISTING SURFACE	408	
									TACK COAT	THICKNESS	ITEM 441 TYPE 1	①		②	PRIME COAT (@ 0.40 GAL/YD²)
FT	FT	FT	YD²	GAL	INCHES	CY	CY	INCHES	GAL						
	CR-444	0.00 - 5.88	LT	① POOR RD. (T-304)	182	17	59	1,194		1.00	33	58	1.75	GRAVEL/TAR & CHIP	478
			LT	② POOR RD. SPUR (T-304)	43	17	43	206		1.00	6	10	1.75	GRAVEL/TAR & CHIP	82
			RT	③ VISTA RD. (T-223)	39	20	85	369	28	1.00	10	18	1.75	ASPHALT	
			RT	④ TURNER RD. (T-156)	35	17	65	253		1.00	7	12	1.75	GRAVEL	101
			RT	⑤ BASIL RD. (T-155/CRI56)	70	18	120	934	70	1.00	26	45	1.75	ASPHALT	
			LT	⑥ WOODY RD. (T-155)	30	16	54	180	14	1.00	5	9	1.75	ASPHALT	
			LT	⑦ McCORD RD. SPUR (T-155A)	70	12	145	1,128		1.00	31	55	1.75	GRAVEL	451
			LT	⑧ BUMP RD. (T-215)	30	18	70	234	17	1.00	7	11	1.75	ASPHALT	
			LT	⑨ ROUND CIRCLE	33	18	50	184	14	1.00	5	9	1.75	ASPHALT	
			LT	⑩ GRAPE RD. (T-485)	30	18	95	317	24	1.00	9	15	1.75	ASPHALT	
			RT	⑪ SOUTHERN DR.	24	18	40	107	8	1.00	3	5	1.75	ASPHALT	
			RT	⑫ CHIP RD. (T-316)	60	18	96	640	48	1.00	18	31	1.75	ASPHALT	
			LT	⑬ HOLIDAY RD./SR 32	60	26	112	747	56	1.00	21	36	1.75	ASPHALT	
TOTAL								6,493							
TOTALS (CARRIED TO SHEET 10)									279		181	314			1,112

CALCULATIONS

KNO - 444 - 0.00



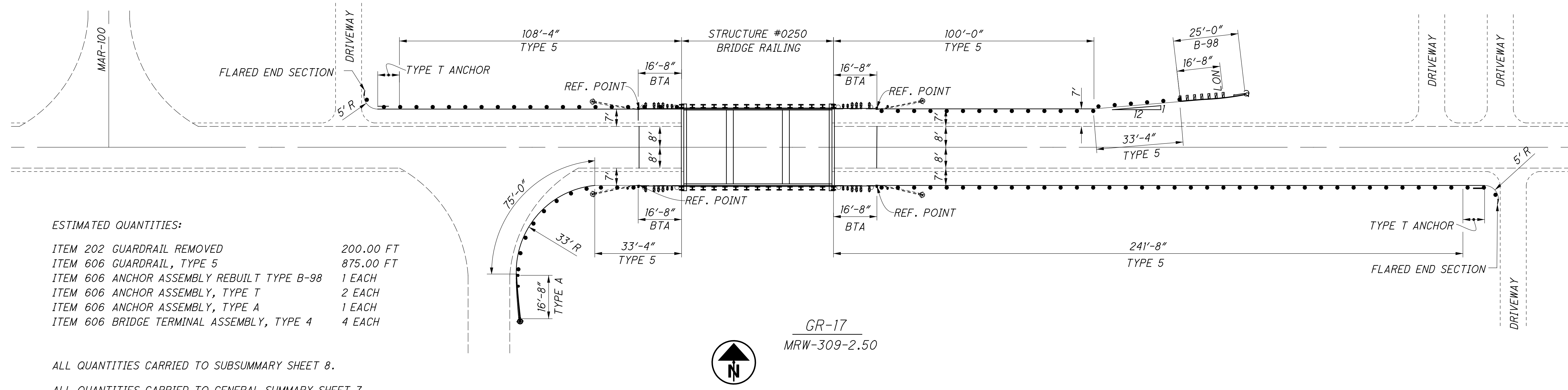
ESTIMATED QUANTITIES:

ITEM 202 GUARDRAIL REMOVED	337.50 FT
ITEM 606 GUARDRAIL, TYPE 5	600.00 FT
ITEM 606 ANCHOR ASSEMBLY REBUILT TYPE E-98	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE T	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE A	1 EACH

ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.

NOTE:
REMOVE AS PER ITEM 202, GUARDRAIL REMOVED.
REPLACE WITH ITEM 606, GUARDRAIL, TYPE 5.

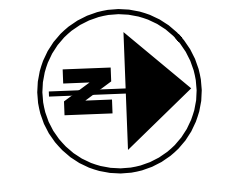


ESTIMATED QUANTITIES:

ITEM 202 GUARDRAIL REMOVED	200.00 FT
ITEM 606 GUARDRAIL, TYPE 5	875.00 FT
ITEM 606 ANCHOR ASSEMBLY REBUILT TYPE B-98	1 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE T	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE A	1 EACH
ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE 4	4 EACH

ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.



BENCHMARK DATA

BM #1 - STA. 929+41.07, OFFSET 51.90' LT,
NAIL ELEV. = 635.54

FOR ADDITIONAL BENCHMARK INFORMATION, SEE
ROADWAY PLAN SHEET 2 OF 40.

NOTES:

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL
SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2015 ADT = 4600 2015 ADTT = 874
2035 ADT = 5800 2035 ADTT = 1102
DIRECTIONAL DISTRIBUTION = 55%

LEGEND:

- HW - HIGHWATER
- E - EXPANSION
- - ORIGINAL SOIL BORING LOCATION
- REST - RESTRAINED
- ★ - 2ND GUARDRAIL POST STATION
- ▨ - CHANNEL EXCAVATION

HYDRAULIC DATA

DRAINAGE AREA = 428 sq miles
Q(25) = 10800 cfs V(25) = 6.0 ft/s
Q(100) = 13000 cfs V(100) = 6.6 ft/s
STRUCTURE CLEARS THE 25 YEAR DESIGN HW BY 0.87 FEET.

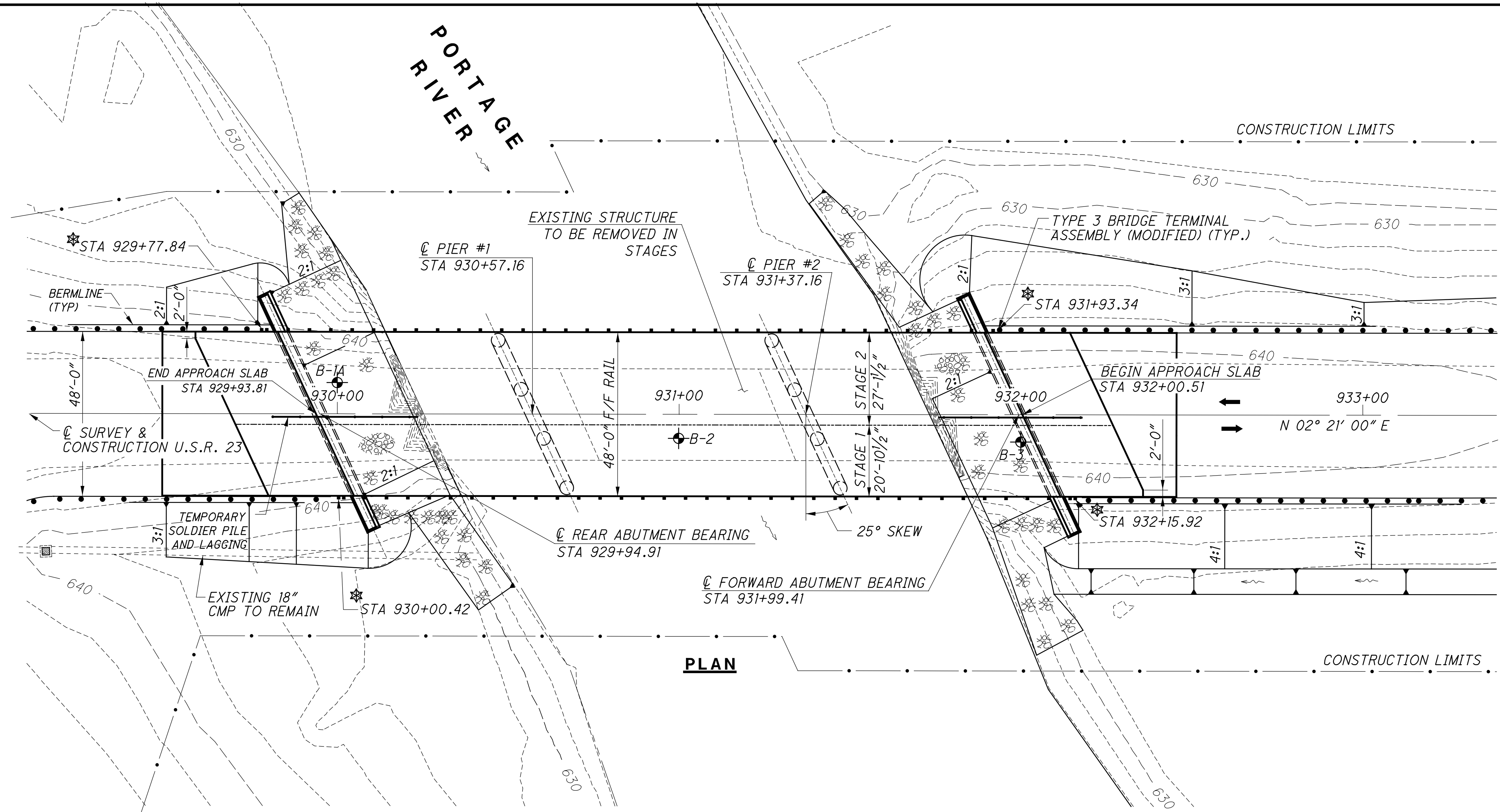
**EXISTING STRUCTURE
(TO BE REMOVED)**

TYPE: CONTINUOUS STEEL BEAM WITH COMPOSITE REINFORCED
CONCRETE DECK AND SUPERSTRUCTURE
SPANS: 46'-0"±, 58'-0"±, 46'-0"± C/C BEARINGS
ROADWAY: 27'-0"± F/F RAIL
LOADING: H-15
SKEW: 25° RF
APPROACH SLABS: NONE
ALIGNMENT: TANGENT
CROWN: 3/16" PER FOOT
STRUCTURAL FILE NUMBER: 8701504
DATE BUILT: 1945 CONDITION: FAIR
DISPOSITION: TO BE REMOVED IN STAGES

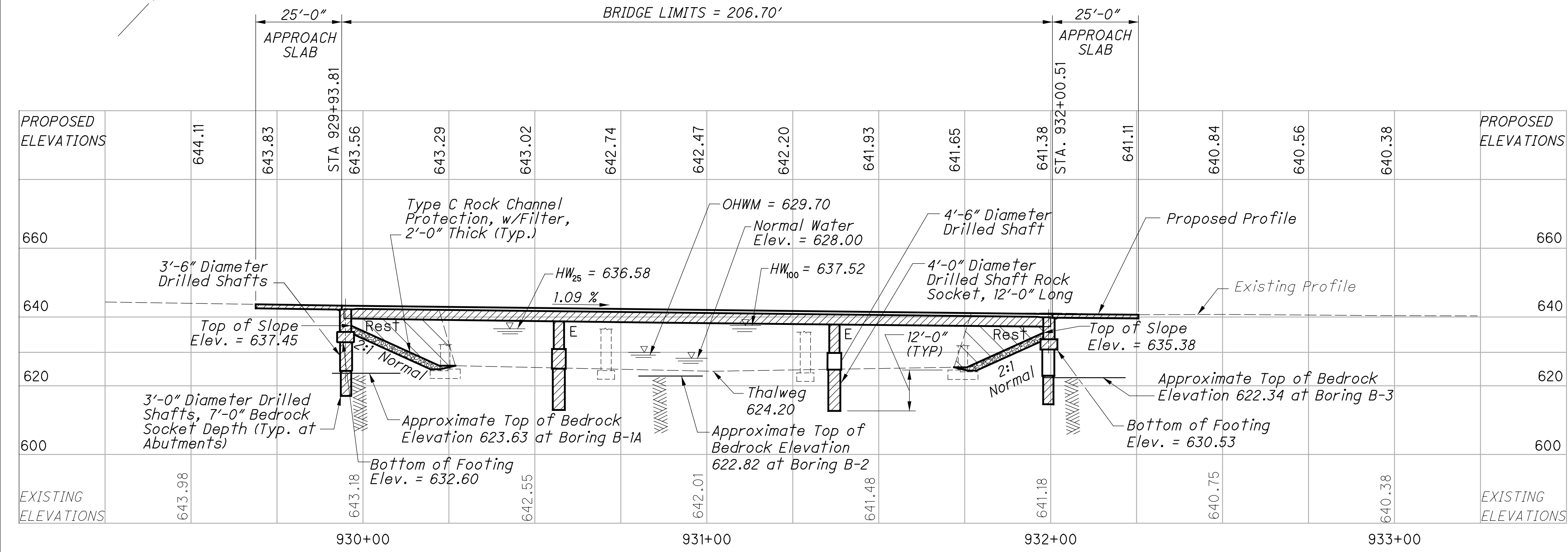
PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS A588 WEATHERING STEEL BEAM
WITH COMPOSITE REINFORCED CONCRETE DECK ON CAP
AND COLUMN PIERS, AND SEMI-INTEGRAL ABUTMENT ON
DRILLED SHAFTS
SPANS: 62'-3", 80'-0", 62'-3" C/C BEARINGS
ROADWAY: 48'-0" F/F GUARDRAIL
LOADING: HS25 CASE II AND ALTERNATE MILITARY
SKEW: 25° RF TO C/SURVEY & CONSTRUCTION
APPROACH SLABS: 25'-0" LONG (AS-1-81)
WEARING SURFACE: MONOLITHIC CONCRETE
ALIGNMENT: TANGENT
CROWN: 3/16" PER FOOT
DECK AREA = 9,922 SQ.FT.
COORDINATES: LATITUDE 41°25'27.21"N
LONGITUDE 83°25'12.05"W

SITE PLAN
BRIDGE NO. WOO-23-1760 OVER THE PORTAGE RIVER
STA. 929+93.81 TO STA. 932+00.51



PLAN

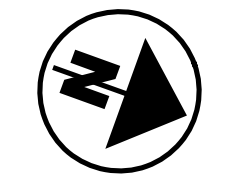


PROFILE ALONG C/SURVEY & CONSTRUCTION U.S. 23

WOO-23-17.60

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/9/2022 TIME: 3:46:37 PM USER: tpeffros
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SFN	8701512
DESIGN AGENCY	ODOT-CO STRUCTURAL ENGINEERING
DESIGNER	BCW
CHECKER	DB
REVIEWER	TAA
PROJECT ID	07-13-17
SUBSET	123456
SHEET	1
TOTAL	20
TOTAL	40



BENCHMARK DATA

BM #1, IPF, STA. 10+43.26, OFFSET 12.67' LEFT, ELEV. = 906.40
 BM #2, IPF, STA. 15+01.16, OFFSET 12.21' RIGHT, ELEV. = 903.22
 BM #3, IPF, STA. 18+98.99, OFFSET 14.27' LEFT, ELEV. = 902.52

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
 2016 ADT = 540 2016 ADTT = 38
 2036 ADT = 550 2036 ADTT = 39
 DIRECTIONAL DISTRIBUTION = 53%

LEGEND

◆ APPROXIMATE BORING LOCATION
 CFCC = CARBON FIBER COMPOSITE CABLE

HYDRAULIC DATA

DRAINAGE AREA = 2.81 SQ. MILES SPILLWAY ELEV. = 910.50
 TOP OF DAM ELEV. = 925.50

PROPOSED WORK

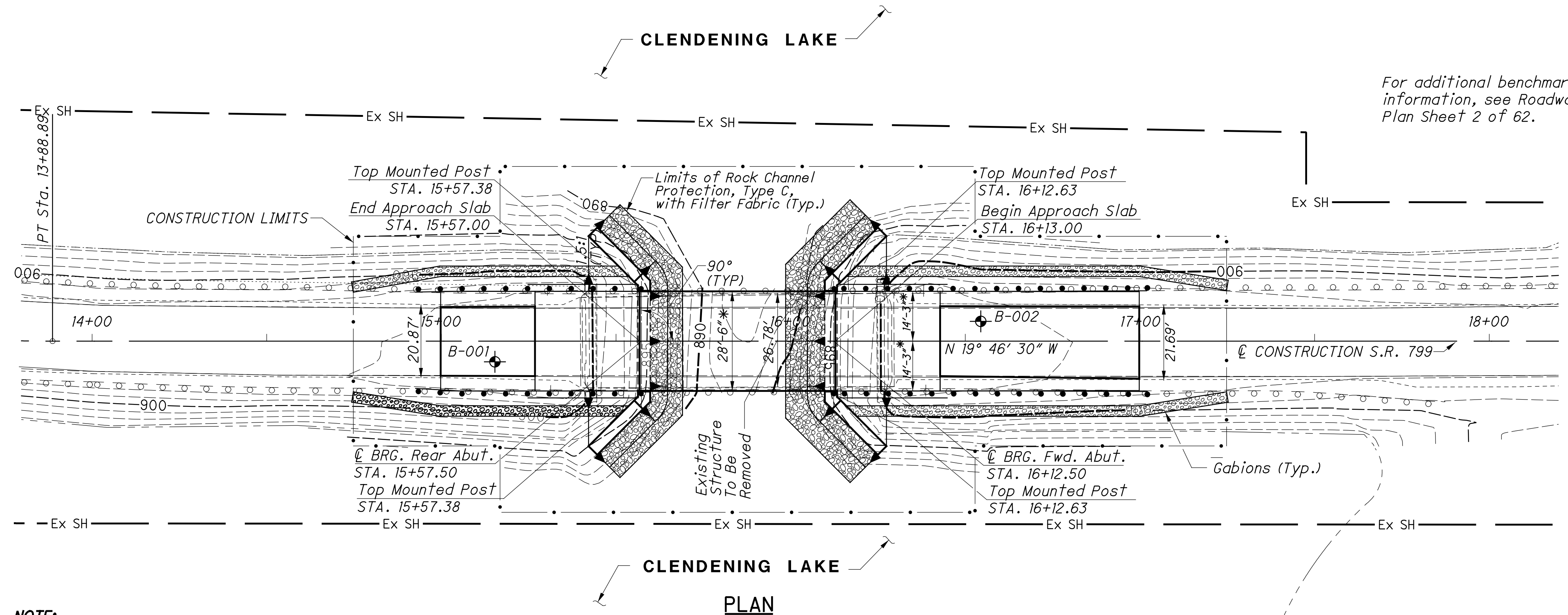
1. REMOVE EXISTING WEARING SURFACE, RAILING, BOX BEAMS, ABUTMENTS, PIER CAPS, AND PORTIONS OF EXISTING PIER PILES.
2. CONSTRUCT NEW ABUTMENTS AND WINGWALLS.
3. INSTALL NEW ABUTMENT BEARINGS.
4. SET BOX BEAMS WITH WATERTIGHT RUBBER SEALS AT ALL DUCT LOCATIONS, AS WELL AS 4"x4"x1" PLYWOOD SPACERS AT LOCATIONS IN PLANS.
5. INSTALL STRANDS IN DUCTS FOR POST-TENSIONING, GROUT JOINTS/ SHEAR KEYS AND ALLOW TO COME TO STRENGTH BEFORE POST-TENSIONING BEAMS.
6. FULLY POST-TENSION TRAVERSELY AT ALL DIAPHRAGM LOCATIONS, GROUT THE DUCTS.
7. CONSTRUCT THE DECK SLAB, ABUTMENT ABOVE THE BRIDGE SEAT AND APPROACH SLABS.
8. INSTALL TWIN TUBE RAILING.
9. SEAL ALL CONCRETE SURFACES.

EXISTING STRUCTURE

TYPE: PRESTRESSED CONCRETE BOX BEAMS ON CAPPED PILE ABUTMENTS AND PIERS
 SPANS: 24'-0", 33'-0", 24'-0" C/C BEARINGS
 ROADWAY: 26'-8" F/F SAFETY CURB
 LOADING: HS20-44 SKEW: NONE
 WEARING SURFACE: 2 3/4" ASPHALT CONCRETE
 APPROACH SLABS: NONE ALIGNMENT: TANGENT
 CROWN: 3/16" PER FOOT DATE BUILT: 1983
 STRUCTURAL FILE NUMBER: 3403173
 DISPOSITION: STRUCTURE TO BE REPLACED

PROPOSED STRUCTURE

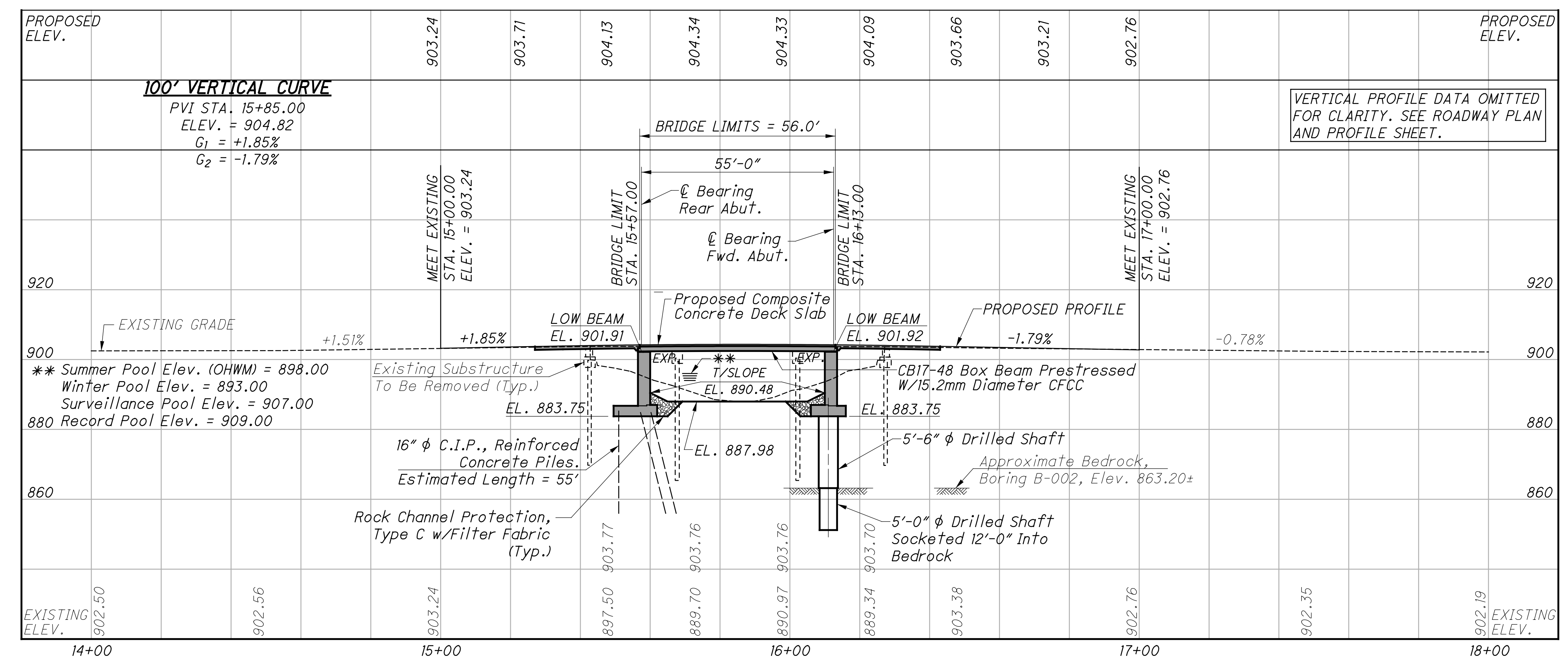
TYPE: SINGLE SPAN PRESTRESSED CONCRETE COMPOSITE BOX BEAMS WITH CFCC STRANDS, TRAVERSELY POST-TENSIONED, WITH SEMI-INTEGRAL WALL TYPE ABUTMENTS SUPPORTED ON CAST-IN-PLACE PILES AND DRILLED SHAFTS
 SPANS: 55'-0" C/C BEARINGS
 ROADWAY: 28'-6" F/F GUARDRAIL TOE/TOE PARAPET
 LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
 SKEW: NONE
 WEARING SURFACE: MONOLITHIC CONCRETE
 APPROACH SLABS: 30'-0" LONG (AS-1-81)
 ALIGNMENT: TANGENT CROWN: 3/16" FT/FT
 DECK AREA: 1,568 SQ.FT.
 COORDINATES: LATITUDE 40°14'45.83"N LONGITUDE 81°12'07.62"W



PLAN

NOTE:
 The pool elevations are maintained by USACE, Huntington District, by controlling the flow at the outlet or spillway. The Contractor is responsible for coordinating construction activities with the owner.

* Includes 1" gap between beams for post-tensioning



PROFILE ALONG ϕ SURVEY AND ϕ CONSTRUCTION S.R. 799

HAS-799-0380

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/9/2022 TIME: 3:47:29 PM USER: tpeffros
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SITE PLAN
 BRIDGE NO. HAS-799-0380 OVER CLENDENING LAKE
 STA. 15+57.00 TO STA. 16+13.00

SFN	3410000
DESIGN AGENCY	LJB Inc., 2500 Newmark Dr., Miami, OH 45342
AMM	AMT
REVIEWER	DWS 12-15-16
PROJECT ID	91603
SUBSET	TOTAL
1	21
SHEET	TOTAL
24	59