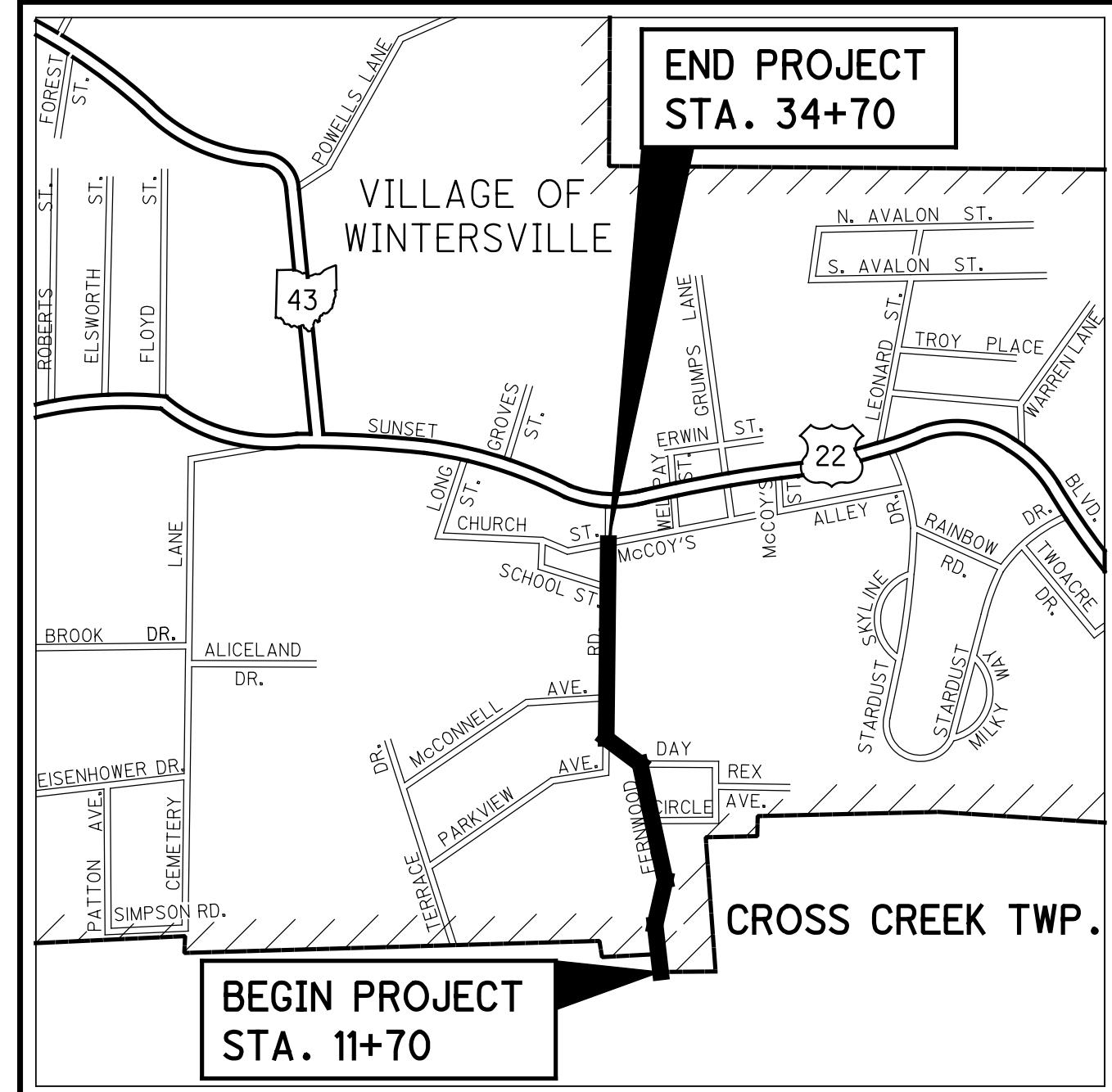


SP 1302-1
DATE: JULY 2020

FEDERAL PROJECT NO.
E025 (762)



LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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.org Before You Dig	
OHIO 811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)	

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.

INDEX OF SHEETS:

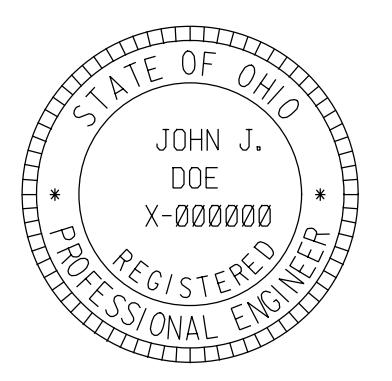
TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-4
GENERAL NOTES	5
MAINTENANCE OF TRAFFIC	6-7
GENERAL SUMMARY	8
PROJECT SITE PLAN	9
PLAN AND PROFILE	10
CROSS SECTIONS	11-17
SIDE APPROACHES	18-25
SUPERELEVATION TABLE	26-30
DRIVE DETAILS	31
DRAINAGE DETAILS	32-37
TRAFFIC CONTROL	38-39
RIGHT OF WAY	40-50
SOIL PROFILES	

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

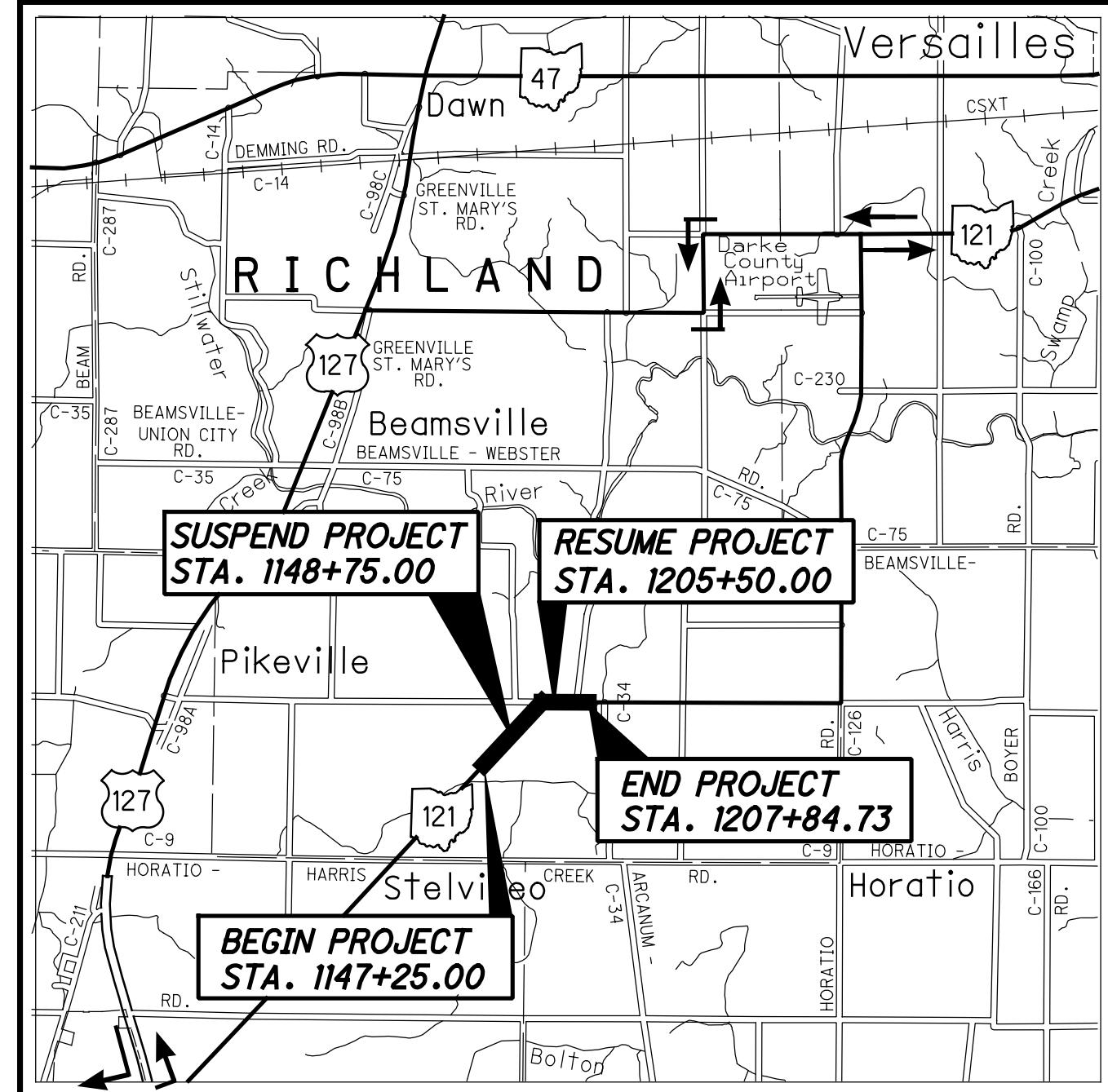
APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEERS SEAL:	STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
	BP-1.1	7/28/00	MGS-1.1	1/19/18		
	BP-2.1	7/17/15	MGS-2.1	1/19/18		800-2020 4/17/20 832 10/19/18
SIGNED: John J. Doe DATE: 11/11/19	BP-2.2	7/18/08	MGS-4.2	7/19/13	TC-41.20	REINFORCED EARTH 5/27/17
	BP-3.1	1/17/20	MGS-5.3	7/15/16	TC-41.40	
	BP-4.1	7/19/13			TC-42.20	WATERWAY PERMIT 1/23/18
	BP-5.1	1/18/19	HW-2.1	1/15/16	TC-52.10	
	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		

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

1
50



LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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.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, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

DAR-121-(21.73)(22.83)

RICHLAND TOWNSHIP DARKE COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-4
GENERAL NOTES	5
MAINTENANCE OF TRAFFIC	6
GENERAL SUMMARY	8
PROJECT SITE PLAN	9
PLAN AND PROFILE	10-17
CROSS SECTIONS	17-23
CHANNEL CROSS SECTIONS	23-25
STRUCTURES OVER 20 FOOT SPAN	25-30
RIGHT OF WAY	31-36
SOIL PROFILES	

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.

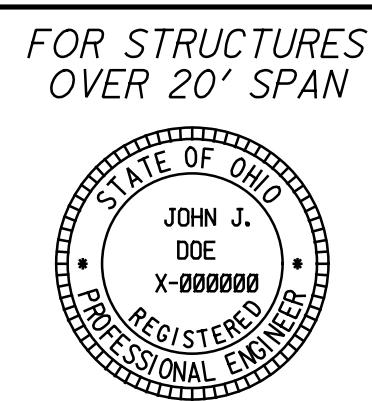
EARTH DISTURBED AREAS

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.

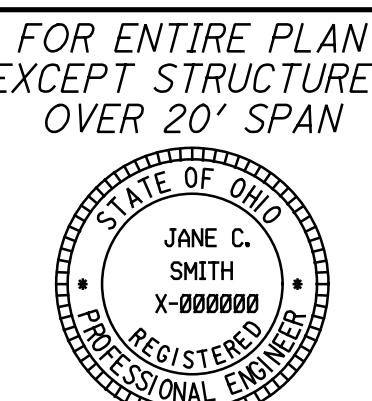
ENGINEERS SEAL:



STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	WQ-1.1	1/18/13	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-4.1	7/19/13	WQ-1.2	1/15/16	800-2016 10/19/18 832 10/19/18	WATERWAY PERMIT 1/23/16

ENGINEERS SEAL:



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				

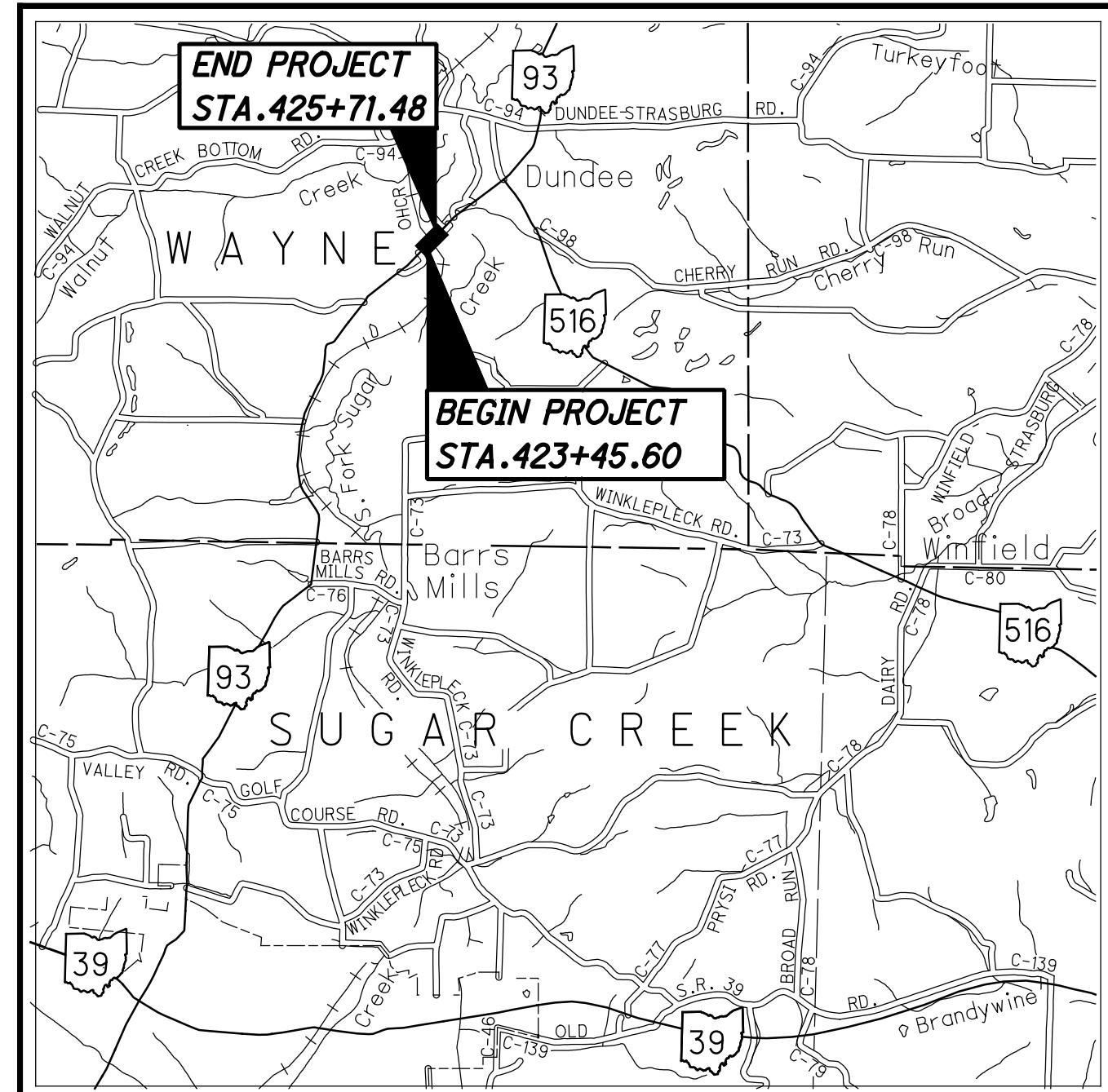
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED, AS INDICATED ON SHEET 1.

APPROVED _____ DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____ DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

DAR-121-(21.73)(22.83)

1
36



LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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

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

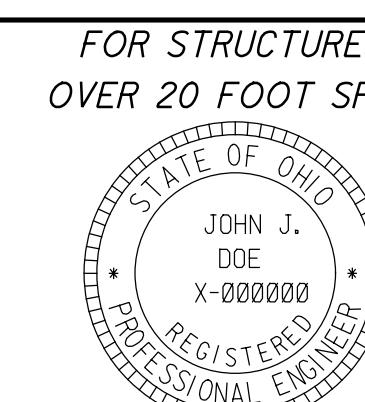
2019 SPECIFICATIONS

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.

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3
GENERAL NOTES	4
MAINTENANCE OF TRAFFIC	5-7
GENERAL SUMMARY	8
PROJECT SITE PLAN	9
PLAN AND PROFILE	10-11
CROSS SECTIONS	12-13
TRAFFIC CONTROL	14
STRUCTURES OVER 20 FOOT SPAN	15-21
RIGHT OF WAY	22-28
SOIL PROFILES	

ENGINEERS SEAL:



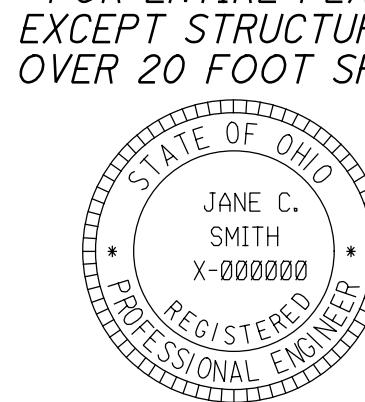
SIGNED: John J. Doe
DATE: 6/11/20

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-I-08	7/18/08	832 10/19/18
BP-5.1	1/18/19			

ENGINEERS SEAL:



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

STANDARD CONSTRUCTION DRAWINGS

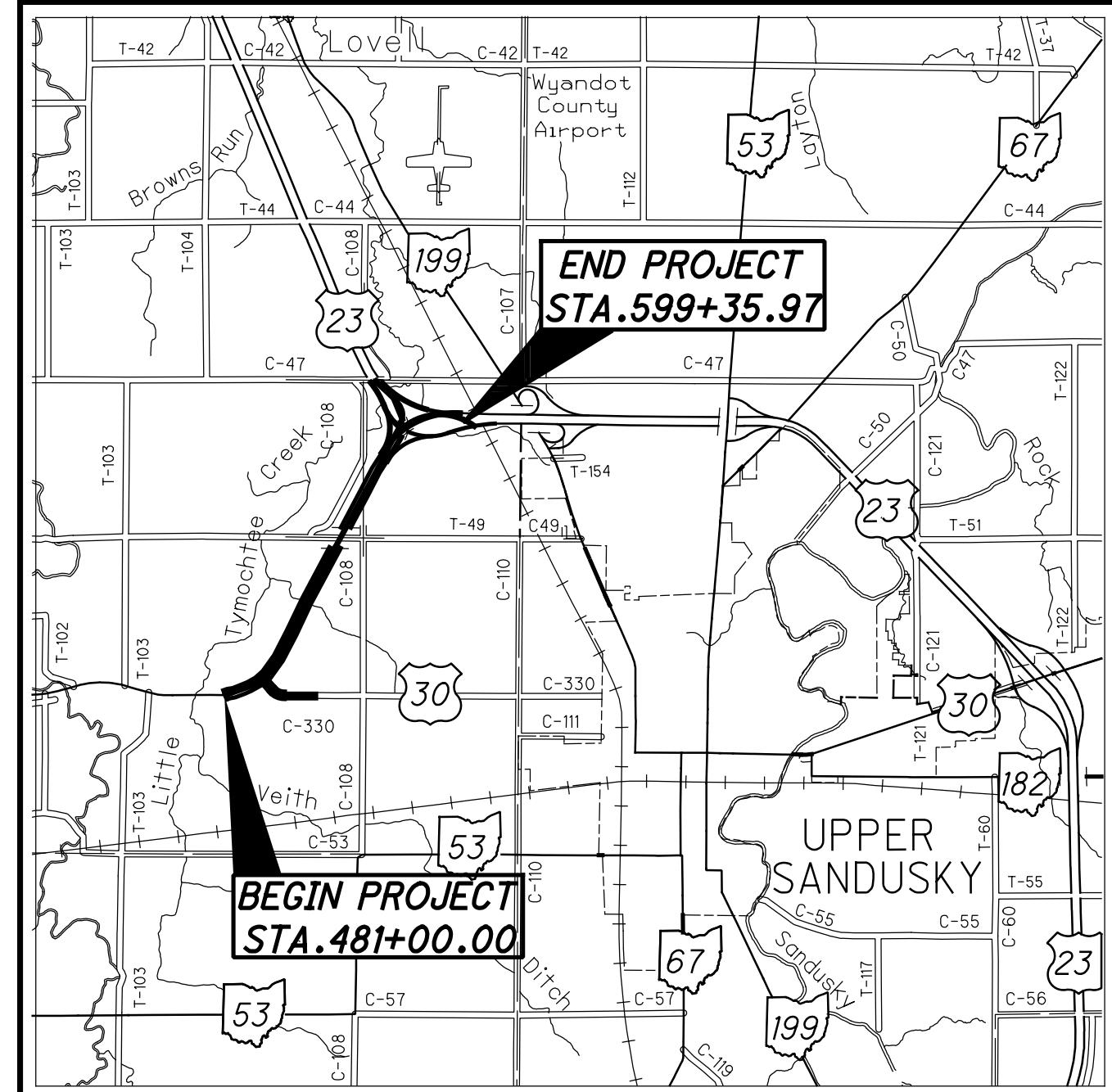
SPECIAL PROVISIONS

DM-1.1	1/18/13	MT-96.11	7/18/14	WATERWAY PERMIT 1/23/18
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			

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



LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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



OHIO 811, 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

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

WYA - 30-9.11

SALEM TOWNSHIP WYANDOT COUNTY

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.

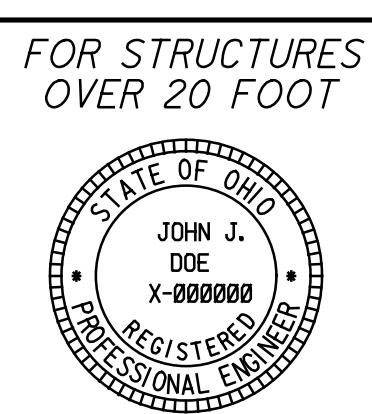
2019 SPECIFICATIONS

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.

INDEX OF SHEETS:

TITLE SHEET	1	SUPERELEVATION TABLES	270-273
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PLAN AND PROFILE - INTERCHANGE RAMP	113-115	TRAFFIC CONTROL	323-393
PLAN AND PROFILE - MAINTENANCE DRIVE	116-117	LIGHTING	394-409
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CROSS SECTIONS - T.R. 49	239-253		
CROSS SECTIONS - T.R. 47	254-269		

ENGINEERS SEAL:

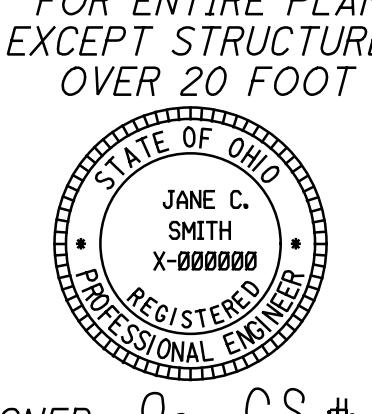


FOR STRUCTURES
OVER 20 FOOT

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

STANDARD CONSTRUCTION DRAWINGS

SUPPLEMENTAL SPECIFICATIONS

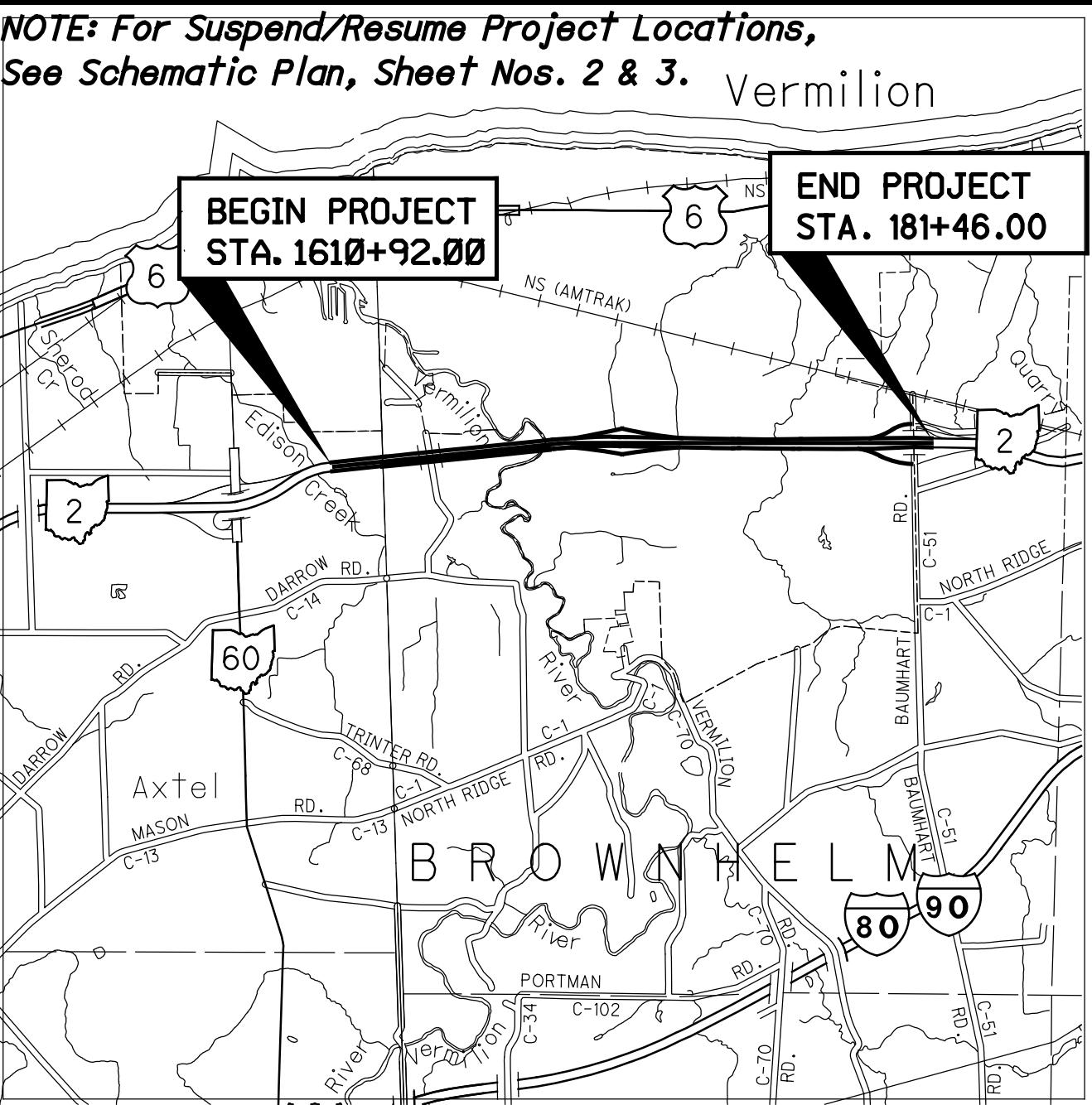
SPECIAL PROVISIONS

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 5/01/19
CB-2.2	7/20/18	MGS-3.1	1/19/18	MH-3.1	1/18/13	HL-20.14	1/18/19	TC-21.10	7/21/17	832	10/19/18	GEOTECHNICAL REPORT 4/19/17
CB-3.1	1/15/16	MGS-4.2	7/19/13			HL-20.21	1/18/18	TC-21.20	7/20/18			
CB-3.2	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			
CB-3.4	1/15/16	MGS-6.1	1/19/18	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	HW-1.1	1/18/13			HL-30.31	1/17/14	TC-41.40	10/18/13			
DM-4.4	1/15/16	HW-2.1	1/18/13	MT-95.30	7/18/14	HL-40.10	1/20/17	TC-41.50	10/18/13			
		HW-2.2	1/18/13	MT-102.10	7/18/14	HL-50.11	1/16/15	TC-42.10	10/18/13			
F-2.1	7/20/18					HL-60.21	7/20/18	TC-42.20	10/18/13			
F-3.1	7/19/13	LA-1.1	10/15/10			HL-60.31	1/18/19	TC-51.11	1/15/16			
F-3.3	7/19/13	LA-1.2	1/16/09	ICD-1-82	7/19/02			TC-52.10	10/18/13			
F-3.4	7/19/13			WQ-1.1	1/18/13			TC-52.20	7/20/18			
				WQ-1.2	1/15/16							

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



LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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.

UNDERGROUND UTILITIES

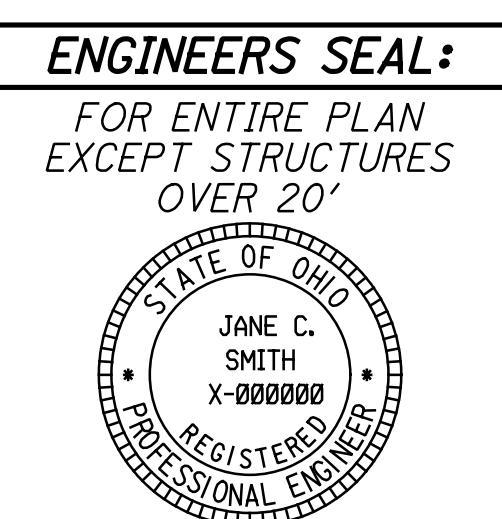
Contact Two Working Days
Before You Dig



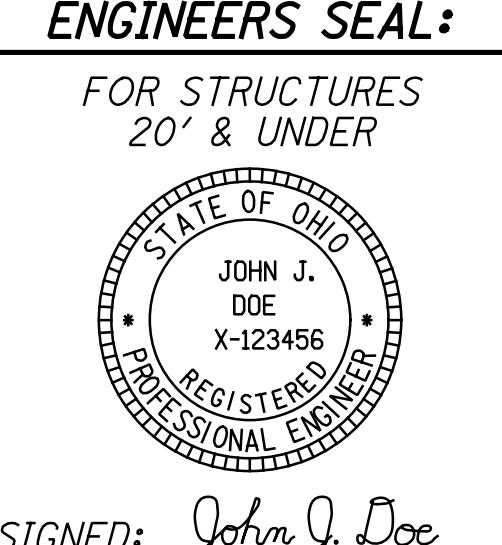
OHIO 811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:

JOHN DOE CONSULTANTS, INC.
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000



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



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

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 REIVER 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.

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SCHEMATIC PLAN	2-3	PAVEMENT JOINT REPAIR 144-146
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STANDARD CONSTRUCTION DRAWINGS

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	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	

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

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

1
267

RAILROAD INVOLVEMENT
CONSTRUCTION PROJECT NO.

20283
PID NO.

E115 (218)
FEDERAL PROJECT NO.

PROJECT DESCRIPTION

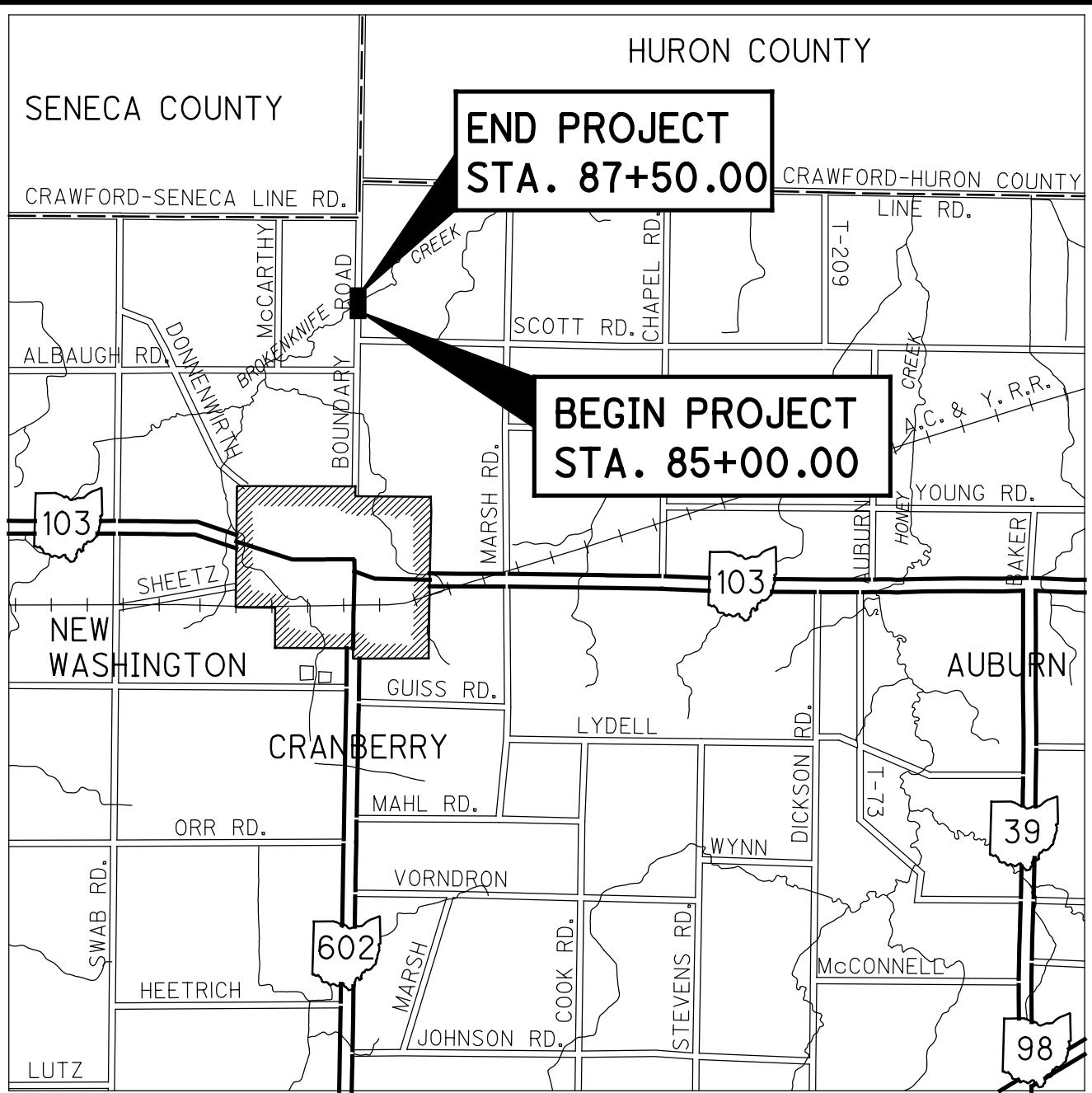
IMPROVEMENT OF 0.04 MILE OF C.R. 6 (BOUNDARY ROAD) BY REPLACEMENT OF AN EXISTING STEEL TRUSS STRUCTURE OVER BROKEN KNIFE CREEK WITH A PRECAST PRESTRESSED BOX BEAM TYPE STRUCTURE INCLUDING APPROACH RECONSTRUCTION.

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.



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



PLAN PREPARED BY:

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

**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.)

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	

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

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

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	RM-1.1	7/18/14			800-2020 4/17/20 832 10/19/18
CB-1.1	1/18/13	AS-1-81	1/18/13			
CB-1.2	1/18/13	ST-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.
EO17 (212)

PID NO.
24988

RAILROAD INVOLVEMENT
NONE

**CRA-C.R. 6-1.61
(BOUNDARY RD.) PART 1**

SP 1302-6(b)
DATE: JULY 2020

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

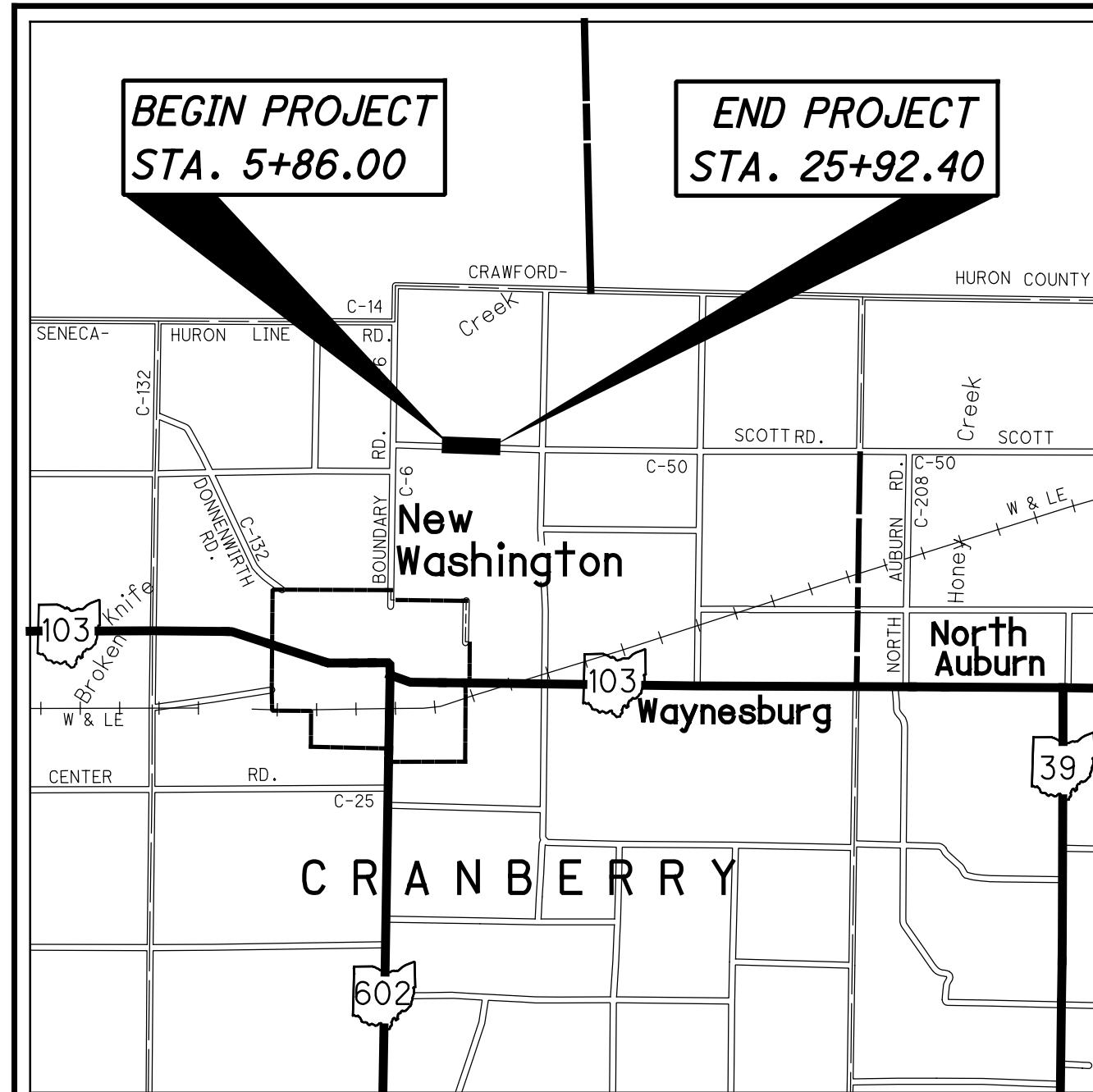
CRA - C.R. 31

(SCOTT RD.) PART 2

CRANBERRY TOWNSHIP

CRAWFORD COUNTY

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



LOCATION MAP

LATITUDE: $40^{\circ}58'50''$ LONGITUDE: $82^{\circ}50'40''$

SCALE IN MILES

0 1 2 3 4

N

TO BE IMPROVED _____

TE HIGHWAY _____

ROUTES _____

UTES _____

TOWNSHIP ROADS _____

ADS _____

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	

DESIGN FUNCTIONAL CLASSIFICATION

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED



PLAN PREPARED BY:

PROJECT DESCRIPTION

*IMPROVEMENT OF 0.38 MILE OF C.R. 31 (SCOTT RD.)
BY RECONSTRUCTION OF EXISTING VERTICAL ALIGN-
MENT 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 DE-
TOURS WILL BE PROVIDED AS INDICATED ON SHEET 6.*

APPROVED _____
DATE _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____ *CRAWFORD COUNTY COMMISSIONER*

APPROVED _____
DATE _____ *ENGINEER - CRAWFORD COUNTY*

APPROVED _____
DATE _____ DISTRICT SUPERVISOR DIRECTOR _____

APPROVED _____
DATE _____ *DIRECTOR, DEPARTMENT OF
EDUCATION*

SP 1302-7
DATE: JULY 2020

FEDERAL PROJECT NO.
NONE

FOR LOCATION MAP
SEE SHEET 6

LOCATION MAP

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

SCALE IN MILES
0 1 2 3 4



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.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,
9999 ENGLISH DRIVE
COMPUTERLAND, OHIO 00000

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

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**

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

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 (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.

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				

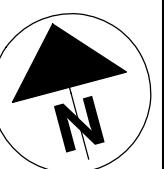
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED DATE DISTRICT DEPUTY DIRECTOR

APPROVED DATE DIRECTOR, DEPARTMENT OF TRANSPORTATION

**DEL-257-8.37
MAR-257-0.00**

1
11



100
50
25
0
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

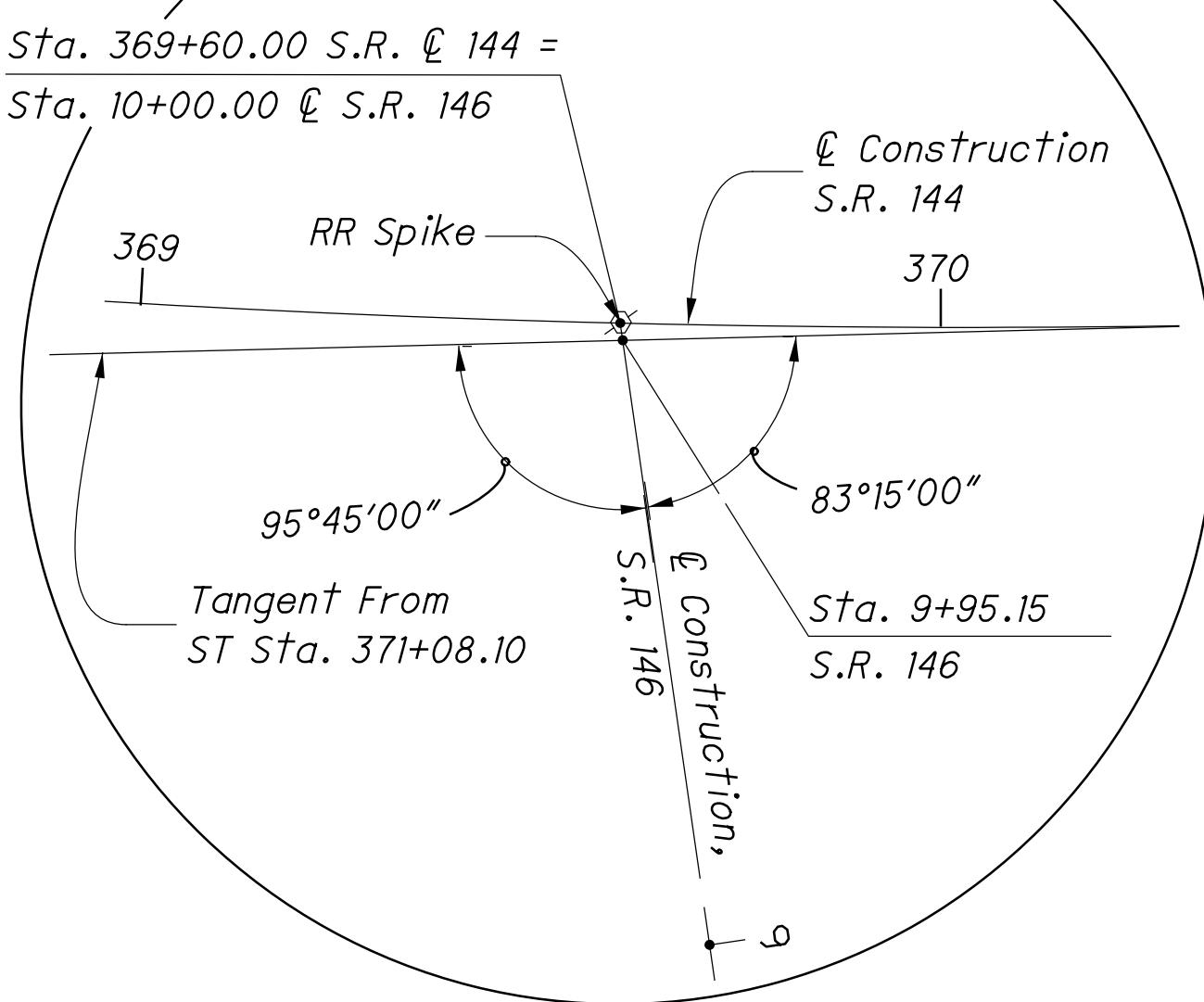
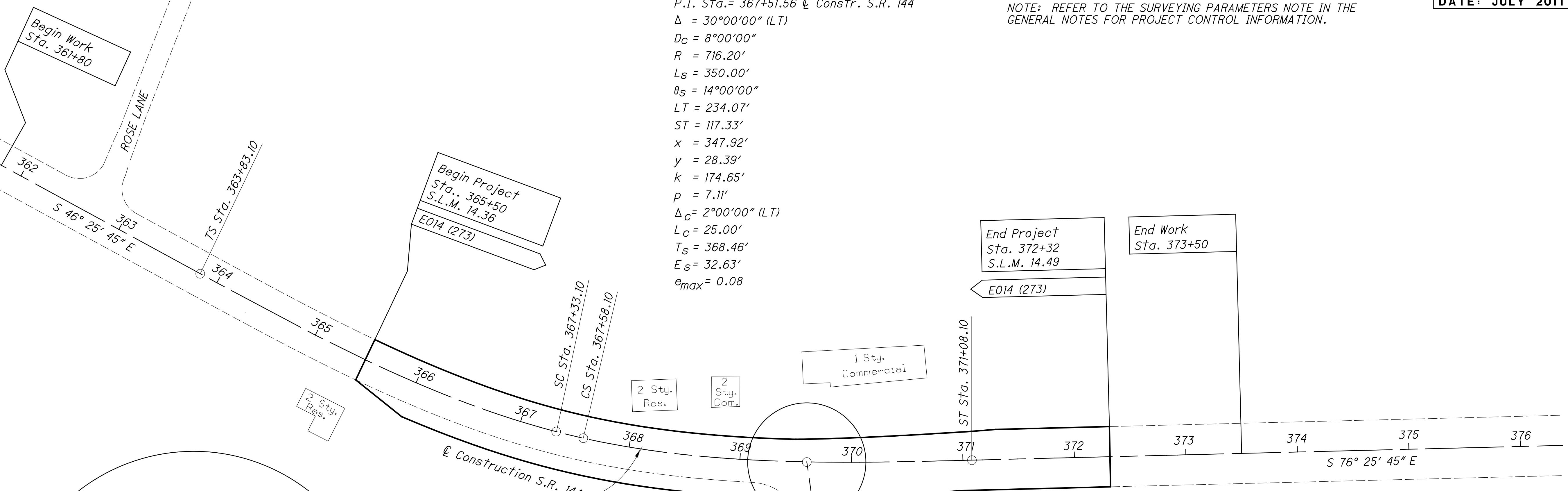
COS-144-14.36

2
72

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

CURVE DATA

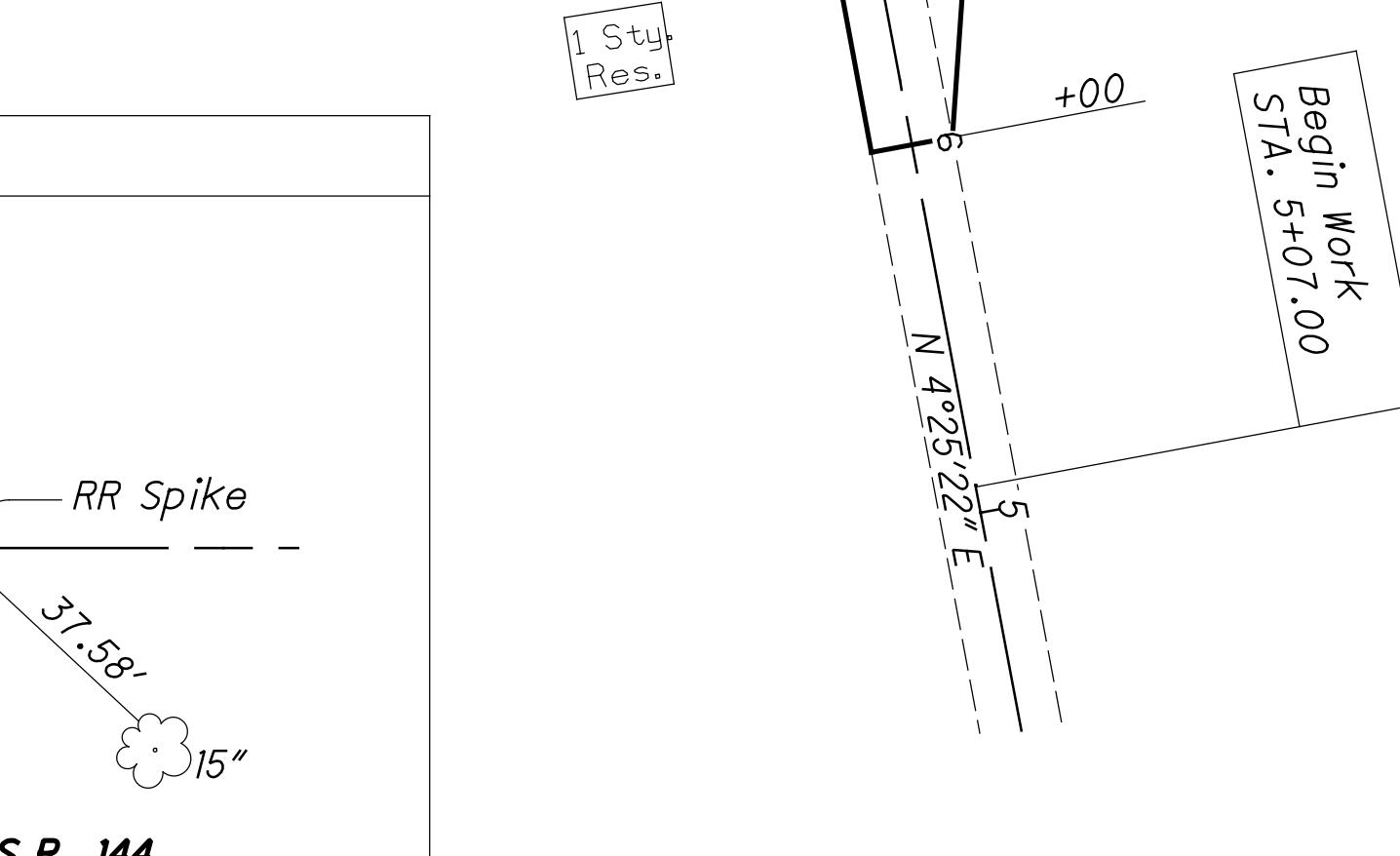
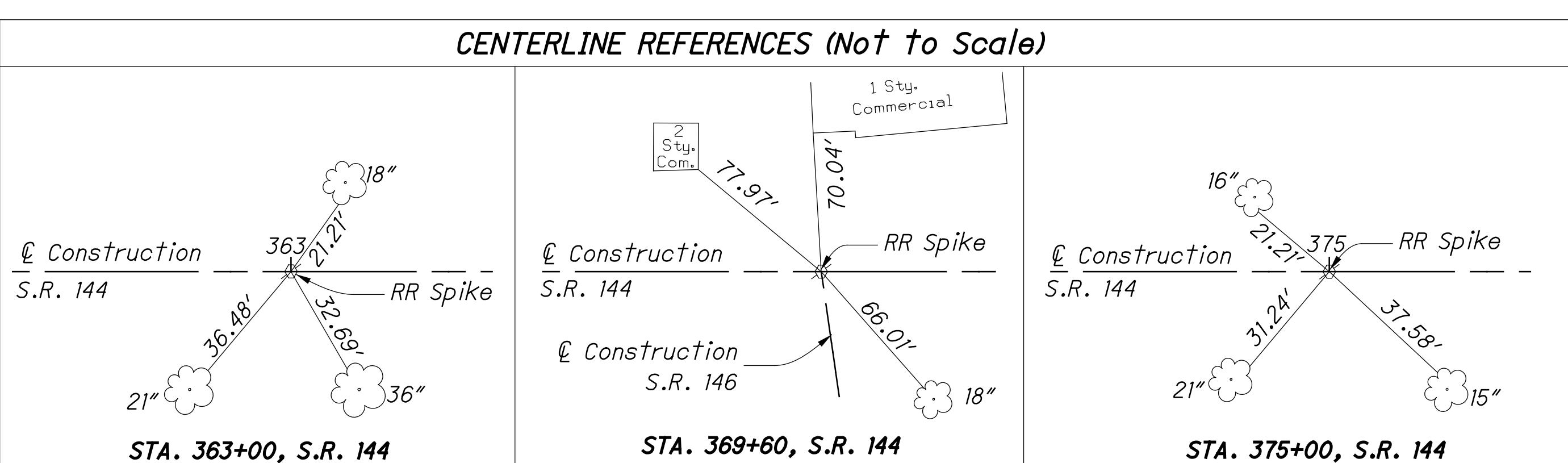
P.I. Sta. = 367+51.56 & Constr. S.R. 144
 $\Delta = 30^{\circ}00'00''$ (LT)
 $D_C = 8^{\circ}00'00''$
 $R = 716.20'$
 $L_S = 350.00'$
 $\theta_S = 14^{\circ}00'00''$
 $LT = 234.07'$
 $ST = 117.33'$
 $x = 347.92'$
 $y = 28.39'$
 $k = 174.65'$
 $p = 7.11'$
 $\Delta_C = 2^{\circ}00'00''$ (LT)
 $L_C = 25.00'$
 $T_S = 368.46'$
 $E_S = 32.63'$
 $e_{max} = 0.08$

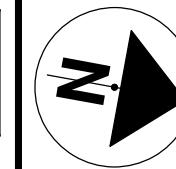


NOTE: There are no existing landscaped areas within the work limits.

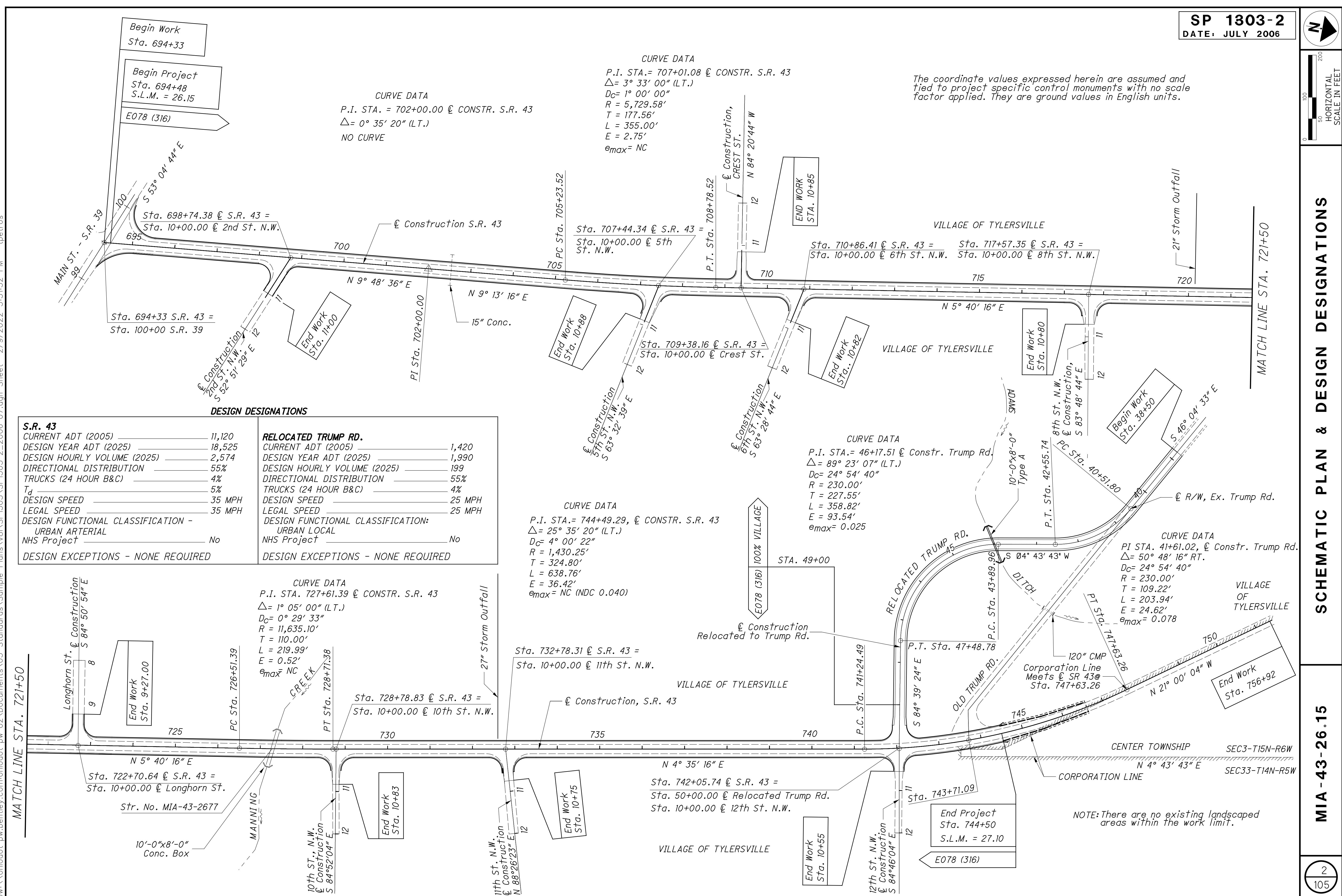
CURVE DATA

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)





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.





100
50
0
200
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

HAS-36-8.21

2
95

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.

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

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

Sta. 660+17.06 £ Existing U.S. 36 =
Sta. 30+00.00 £ Construction Meeker Road

£ Existing U.S. 36
£ construction U.S. 36
122°18'44.5"
123°13'47.5"
56°46'12.5" (NDC 70°)
57°41'15.5"
S.T. Sta. 659+80.37 £ Construction & Existing U.S. 36

CURVE DATA (EXISTING)

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

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.

Begin Project
STA. 641+20
S.L.M. = 8.21
E052 (123)

Begin Work
STA. 638+30

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° 45' max.)
 $R = 954.93'$
 $L_s = 250.00'$
 $\theta_s = 7^\circ 30' 00''$
 $L_T = 166.82'$
 $S_T = 83.47'$
 $x = 249.57'$
 $y = 10.89'$
 $k = 124.93'$
 $p = 2.73'$
 $D_c = 69^\circ 32' 23''$ (RT.)
 $L_c = 1,159.00'$
 $T_s = 995.41'$
 $E_s = 339.22'$
 $e_{max} = 0.08$

Begin Work
STA. 25+00
CS STA. 657+30.37 £ Construction

+75

20
N 39° 22' 24" W

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

Sta. 666+45.61
£ Construction U.S.R. 36

End Project
STA. 665+65.60
S.L.M. = 8.62
E052 (123)

End Work
STA. 669+07



**HORIZONTAL
SCALE IN FEET**

אָמֵן אָמֵן אָמֵן אָמֵן אָמֵן

SUM / P0R-21-30.51 / 0.00

26

CURVE DATA

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

CURVE DATA

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

**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

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 a coordinate reference system of NAD 1983 Ohio StatePlane FIPS 100-012751. The

DATE: JULY 2006

DESIGN EXCEPTIONS

CURVE DATA

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

RESUME PROJECT
 Sta. 51+03.25
 S.L.M. 0.97

SUSPEND PROJECT
 Sta. 14+60.00
 S.L.M. 0.28

END WORK
 Sta. 30+25

STRUCTURE NO.
 POR-21-0030

STRUCTURE NO.
 POR-21-0097 L&R

STRUCTURE NO.
 POR-21-0107

BEGIN WORK
 Sta. 18+09.42

END WORK
 Sta. 31+43.63

PC STA. 59+38.68
STA. 55°26'02" W

MEETS Q @
STA. 1837+14.48

60

50

40

30

20

10

N 84° 15' 48" E

Ex. 18" Conc
Sta. 15+99.40 & S.R. 40 =
Sta. 25+00.00 & W. River Rd.

RAMP "Q"

RAMP "R"

RAMP "U"

RAMP "V"

RAMP "T"

REST AREA

REST AREA

RAMP "S"

S.R. 21 & Construction,

CORP. LINE

RIVER

ROAD

CITY OF VICTORY

RIVER

ROAD

ROAD

Road

Summit Co.

Portage Co.

West

Brownhelm Twp.

Brownhelm Twp.

Design Feature

Approval Date

Sheet No.

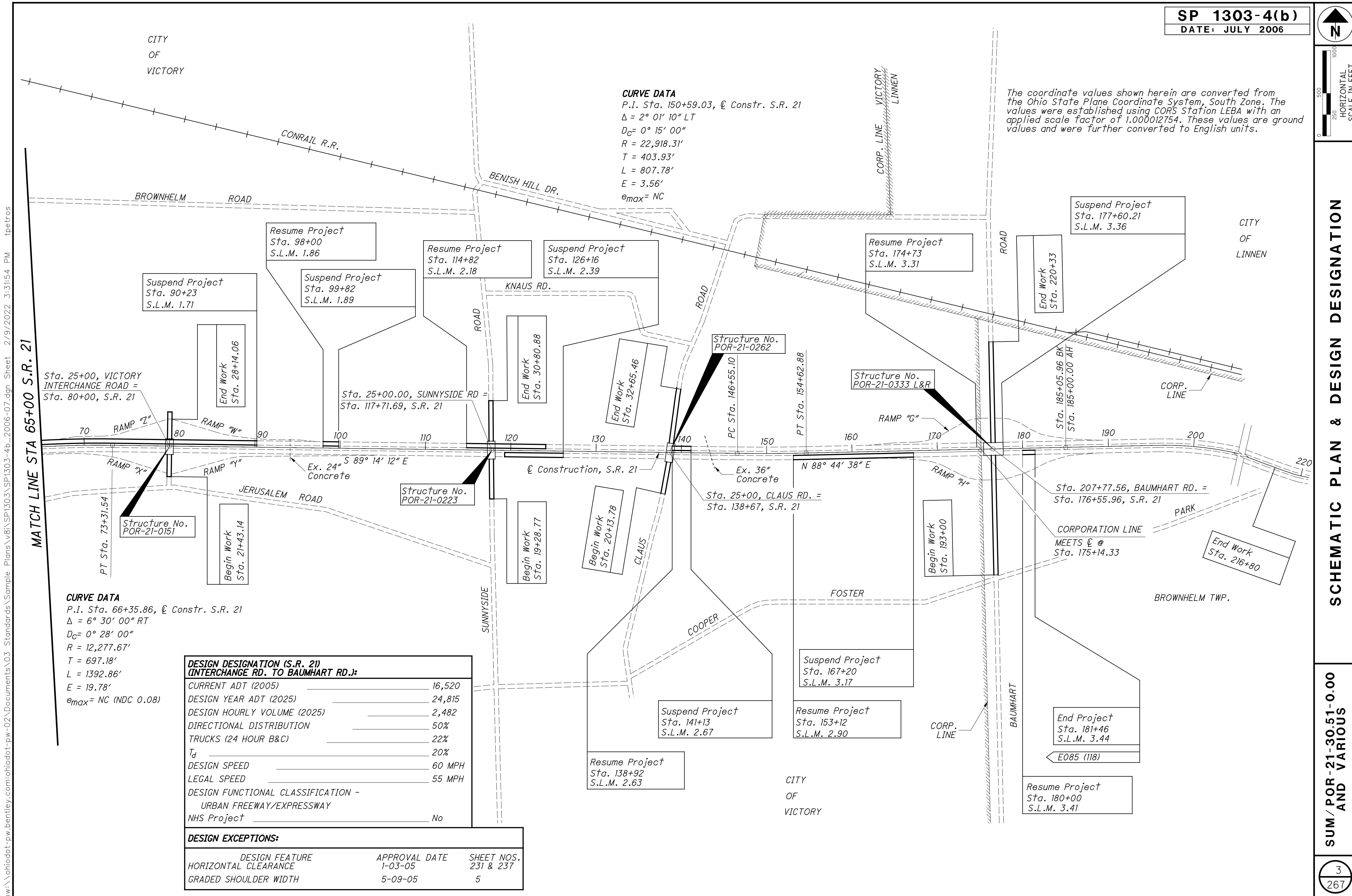
DESIGN EXCEPTIONS

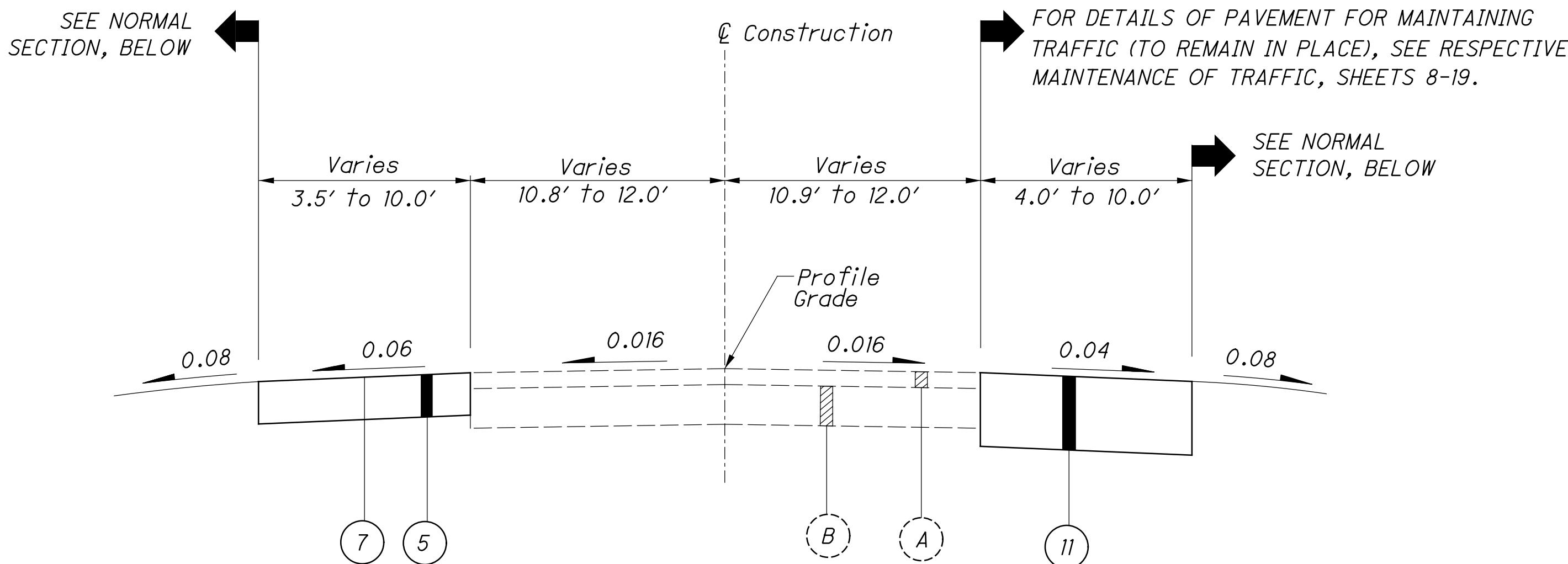
DESIGN FEATURE
HORIZONTAL CLEARANCE
GRADED SHOULDER WIDTH

APPROVAL DATE	SHEET NOS.
1-03-05	231 & 237
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.

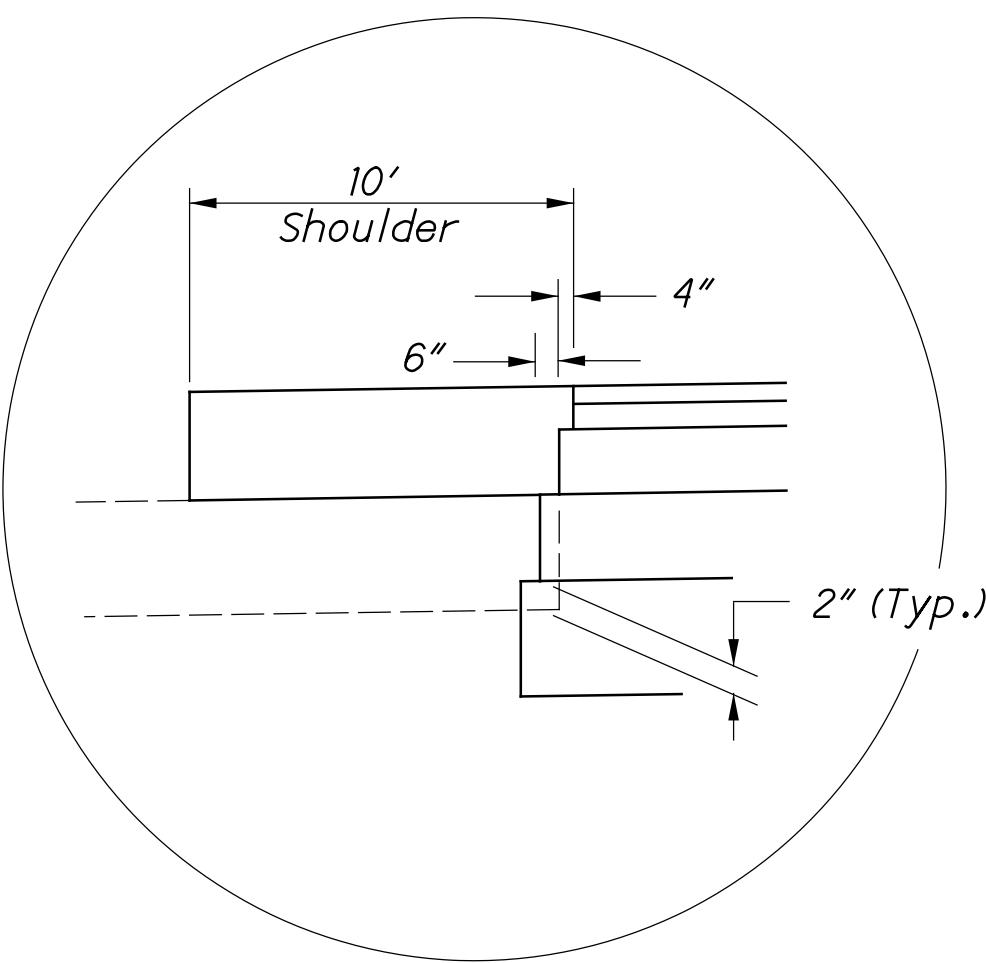




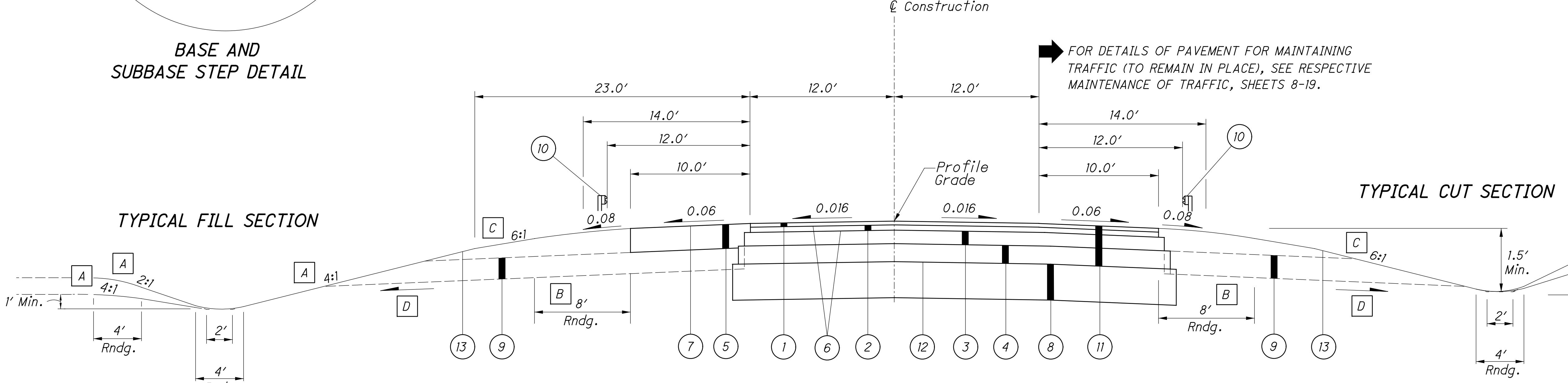
NORMAL SECTION - U.S. 46

Sta. 634+00.00 to Sta. 635+75.00

- [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



BASE AND SUBBASE STEP DETAIL



TYPICAL FILL SECTION

NORMAL SECTION - U.S. 46

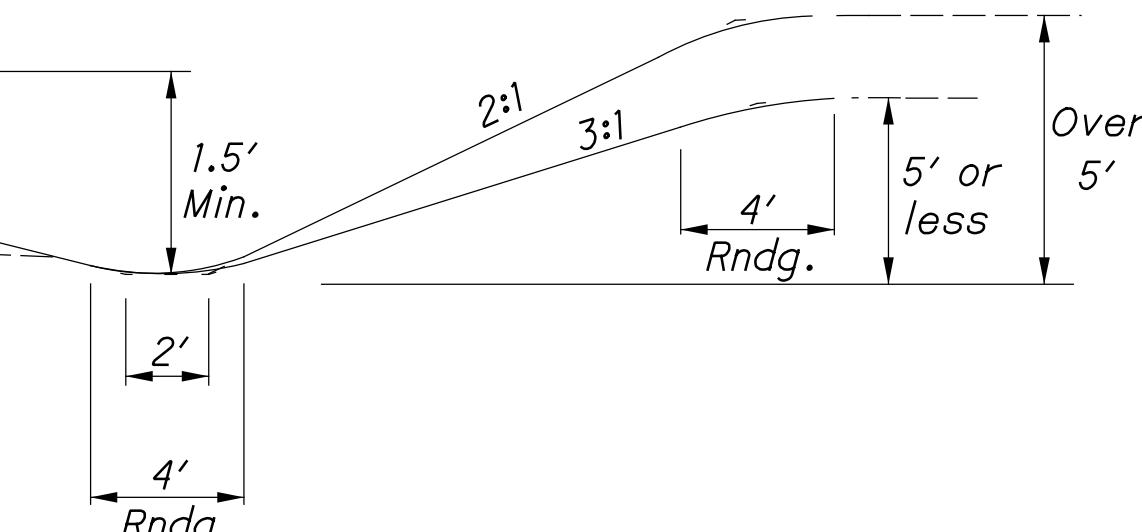
Sta. 635+75.00 to Sta. 642+81.37
Sta. 638+22.44 to Sta. 640+48.86

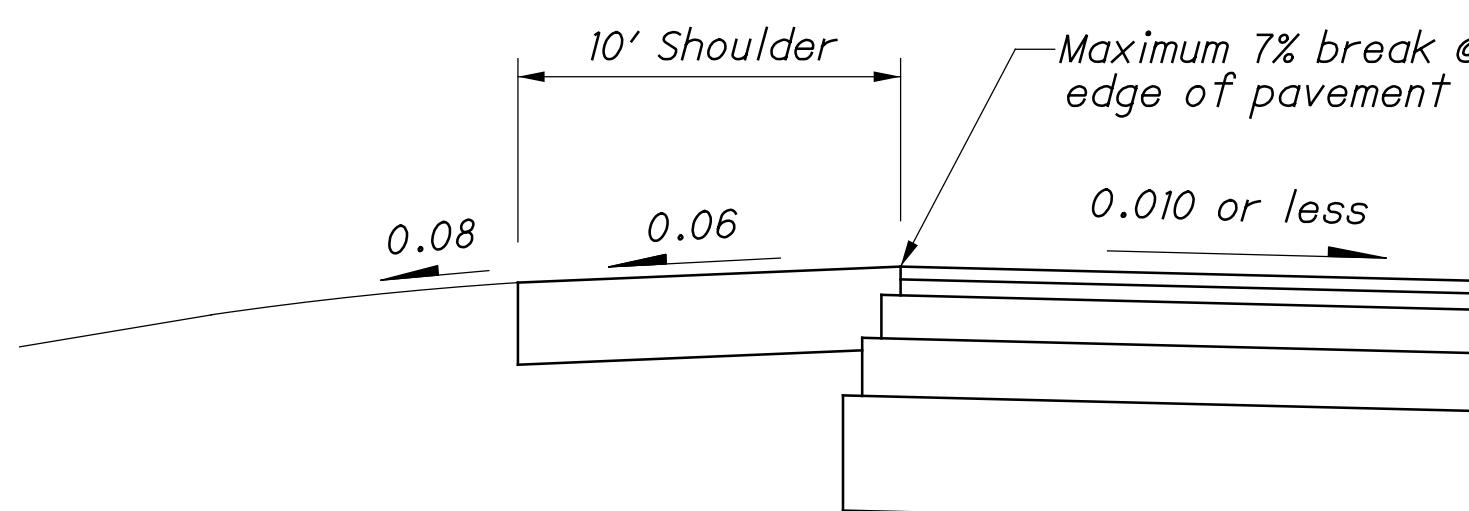
LEGEND

- (1) ITEM 442 - $\frac{1}{2}$ " ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
- (2) ITEM 442 - $\frac{3}{4}$ " 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, 16 INCHES DEEP
- (9) ITEM 605 - AGGREGATE DRAINS
- (10) ITEM 606 - GUARDRAIL, TYPE MCS
- (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

- (A) 3" ± ASPHALT CONCRETE
- (B) 8" ± CONCRETE PAVEMENT

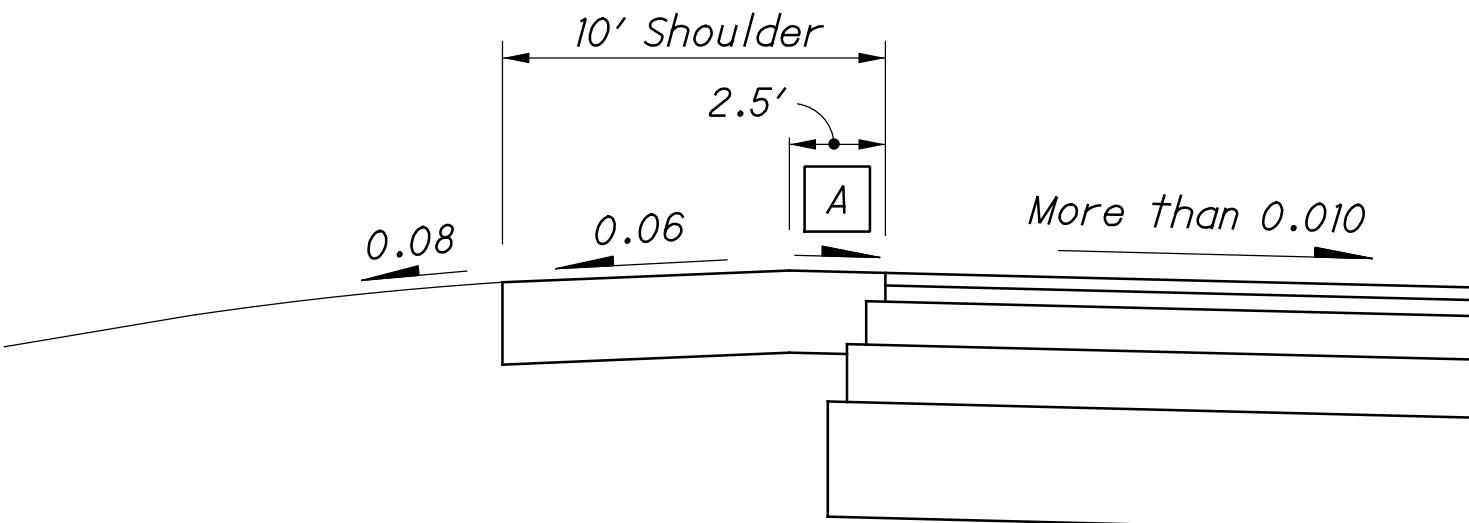
TYPICAL CUT SECTION





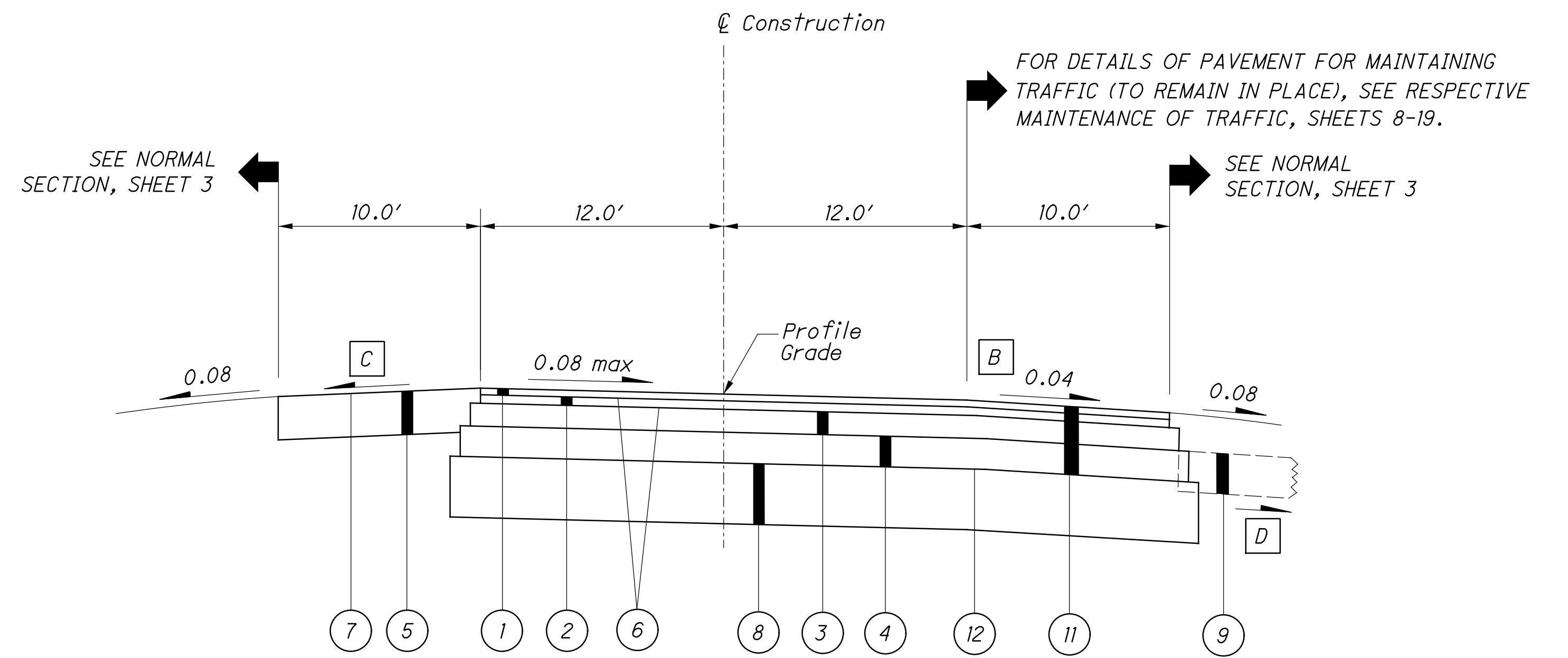
SHOULDER DETAIL

For pavement slopes of 0.010 or less



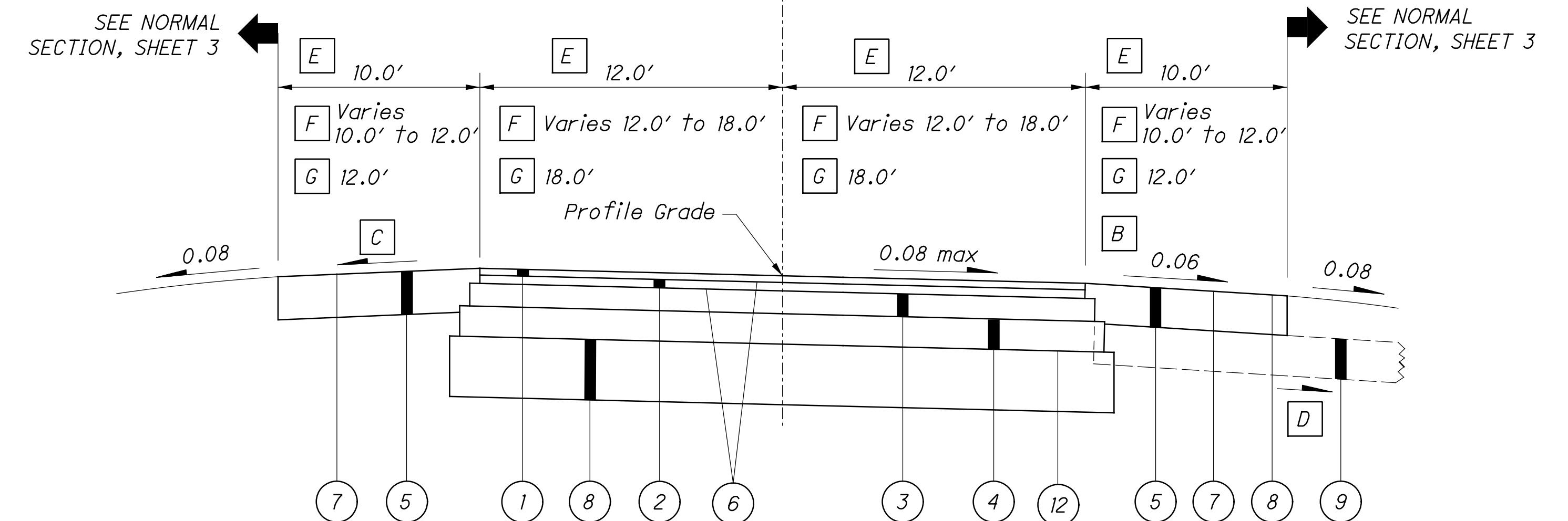
SHOULDER DETAIL

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 super-elevated 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

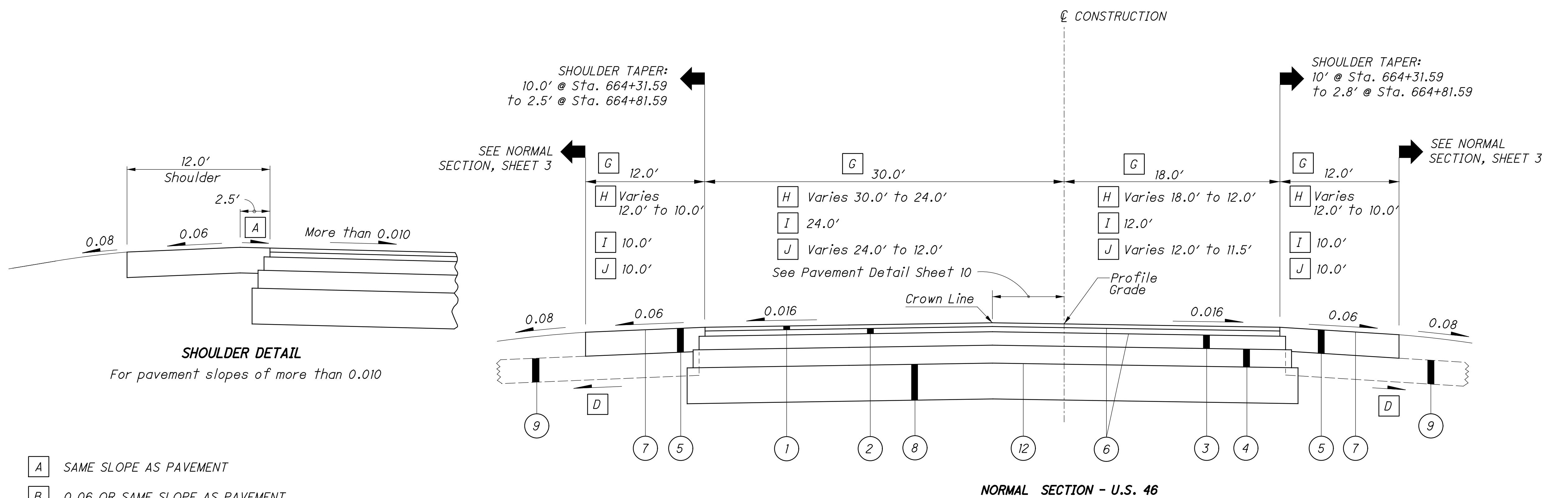
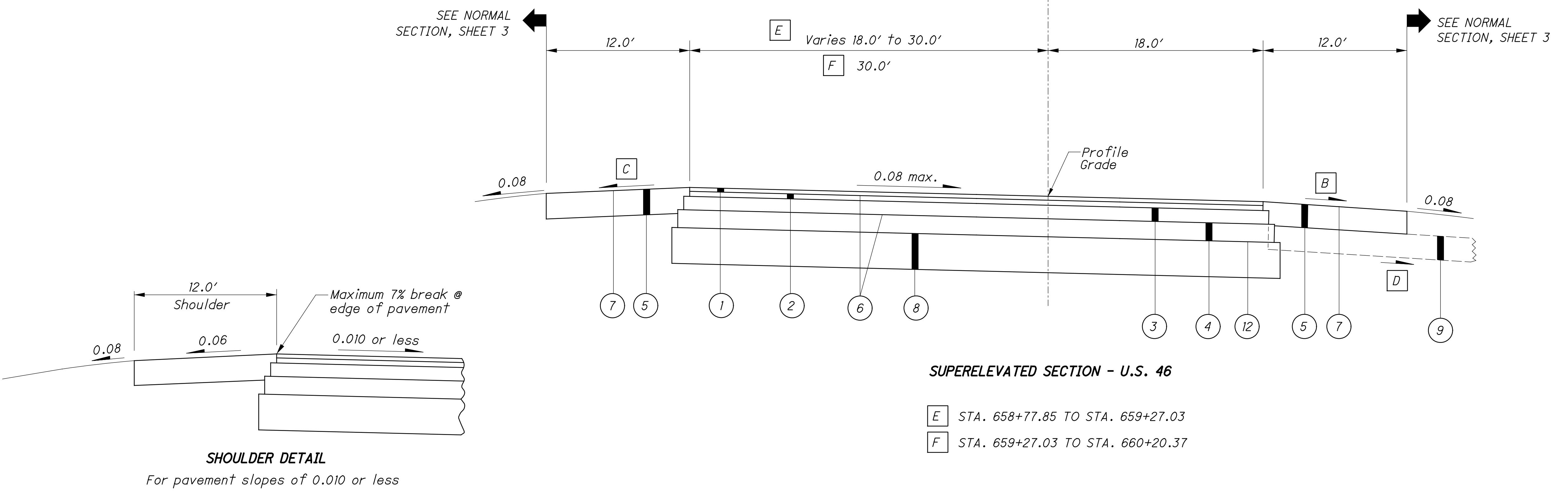
G Sta. 654+75.03 to Sta. 658+77.85

STA. 656+57.63 TO STA. 658+77.85, SEE INTERSECTION DETAIL ON SHEET 39.

SEE INTERSECTION DETAIL, SHEET 39.

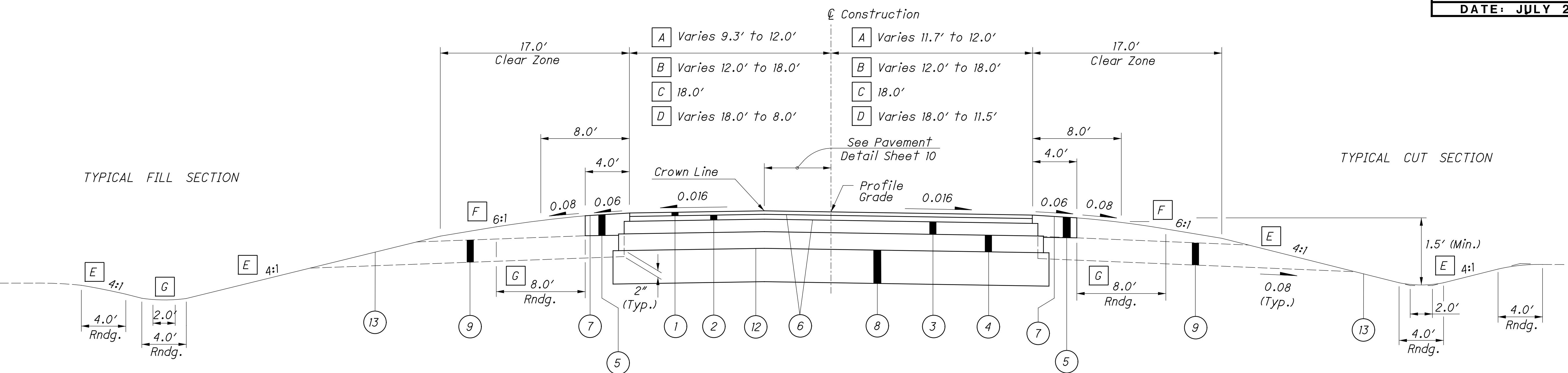
FOR PAVEMENT LEGEND, SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.



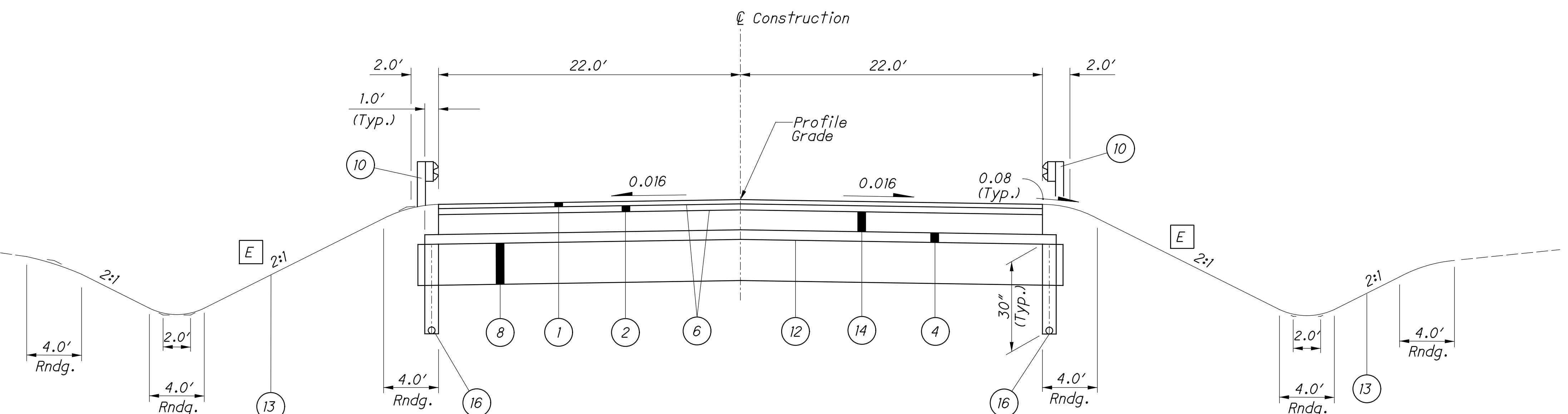
- [G] STA. 660+20.37 TO STA. 660+51.59
[H] STA. 660+51.59 TO STA. 663+81.59
[I] STA. 663+81.59 TO STA. 664+31.59
[J] STA. 664+31.59 TO STA. 664+81.59

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



[E] Unless otherwise shown on Cross Sections

[F] Foreslope may vary in pavement transition areas at extreme ends of pavement work;
See Cross Sections.

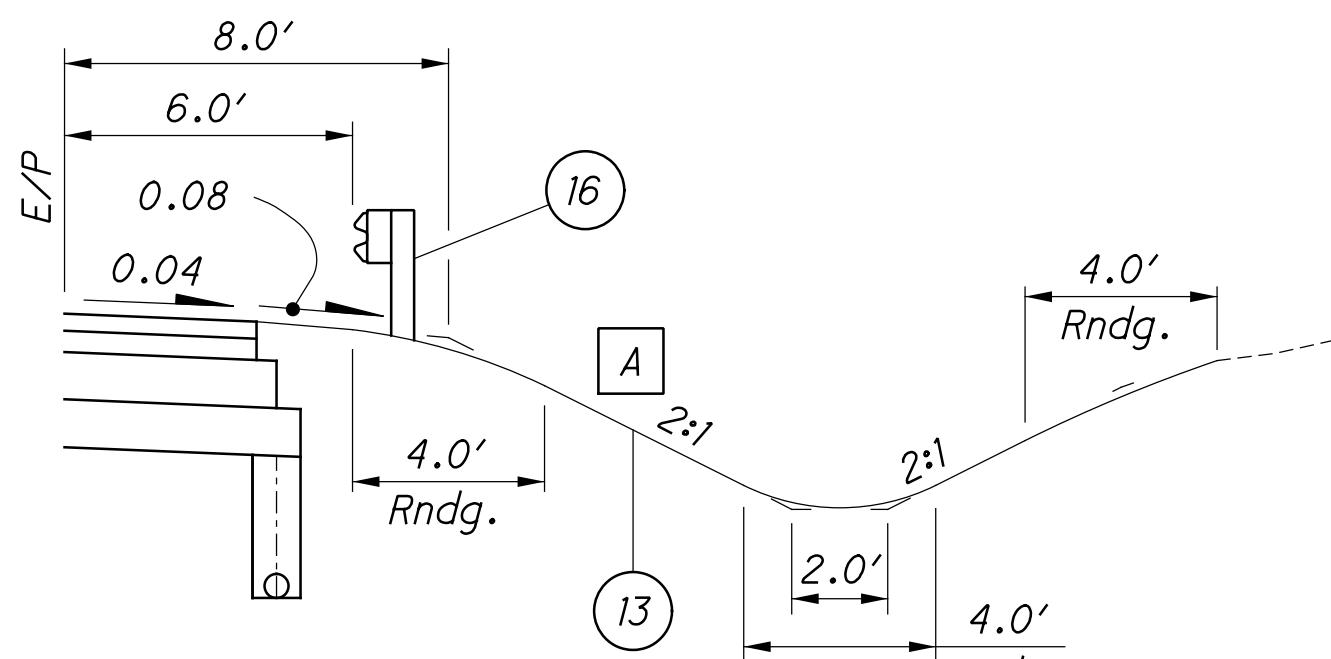
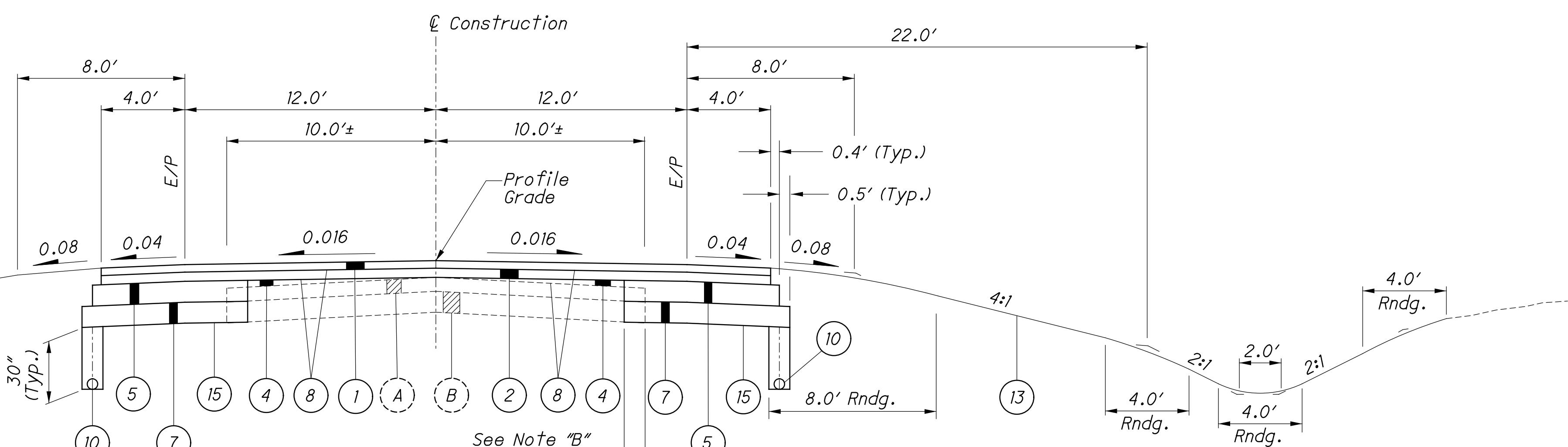
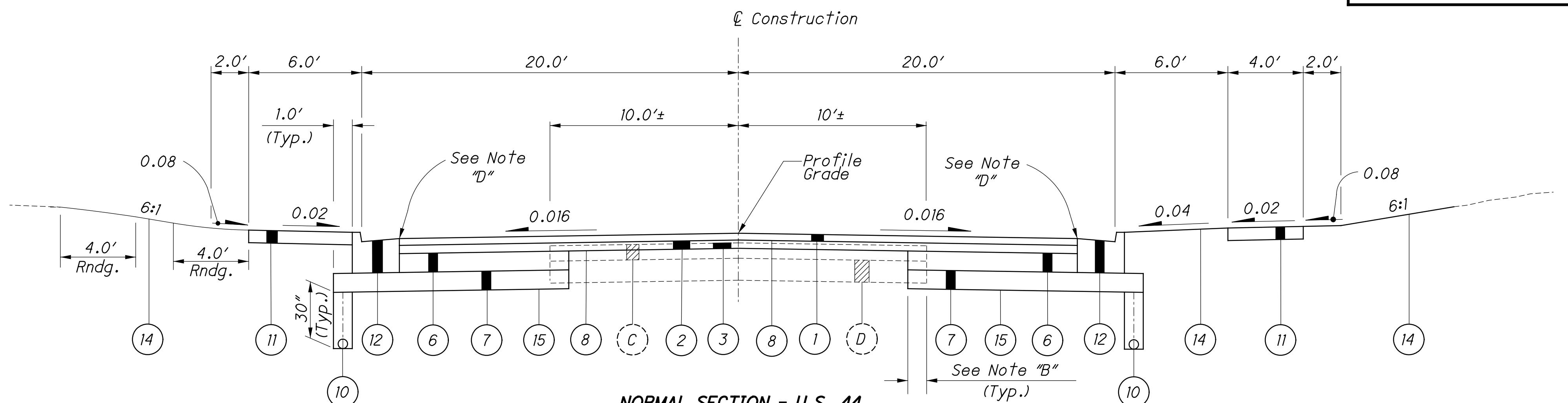
[G] No rounding is required when foreslope is 6:1 or flatter.

FOR PAVEMENT LEGEND SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL,
SEE SHEET 3.

LEGEND

- (1) ITEM 441 - $\frac{1}{4}$ " Asphalt Concrete Surface Course, Type 1, (448), PG64-22
 - (2) ITEM 441 - $\frac{3}{4}$ " 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
- A 5"± Asphalt Concrete
B 5"± Waterbound Macadam
C 4"± Asphalt Concrete
D 6"± Dense Asphalt Macadam Base

**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 £ 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 2½".

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"

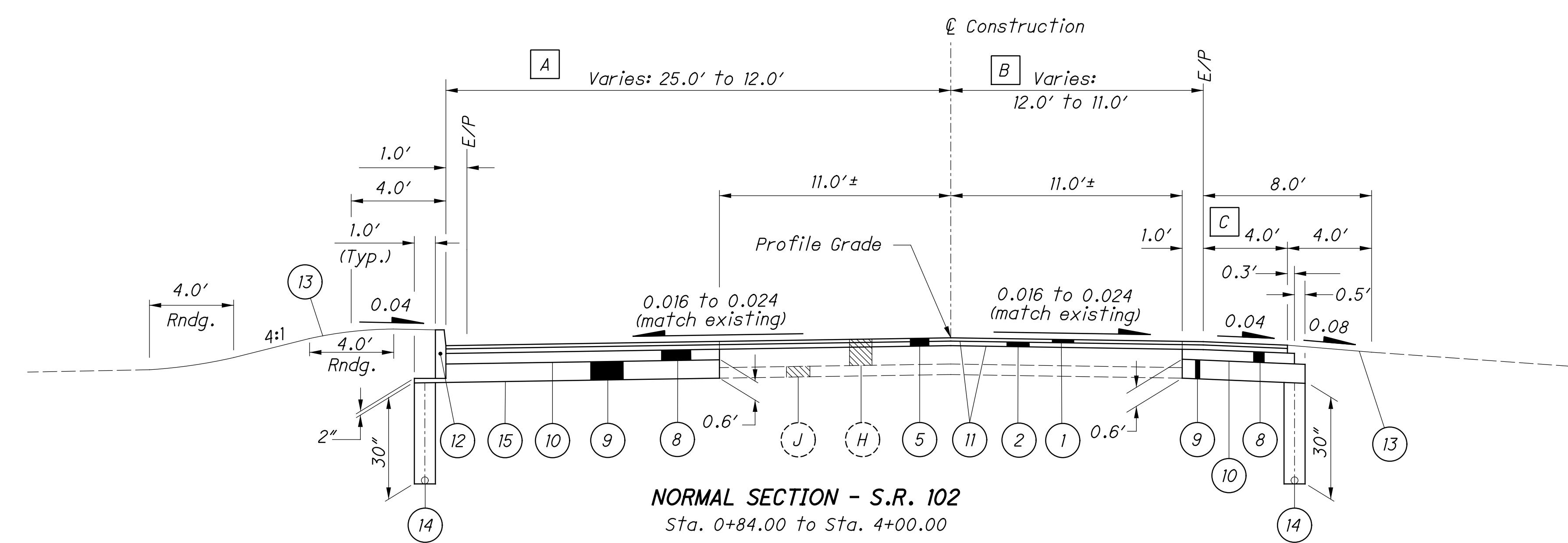
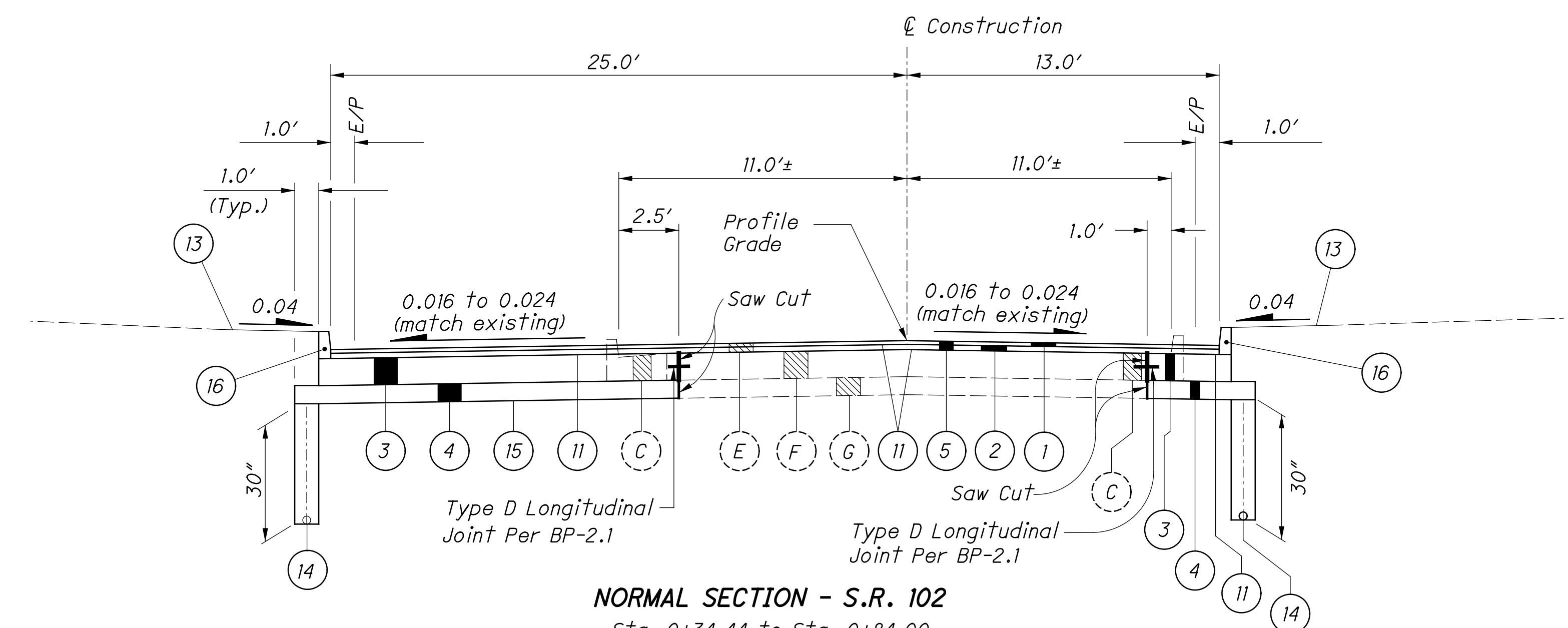
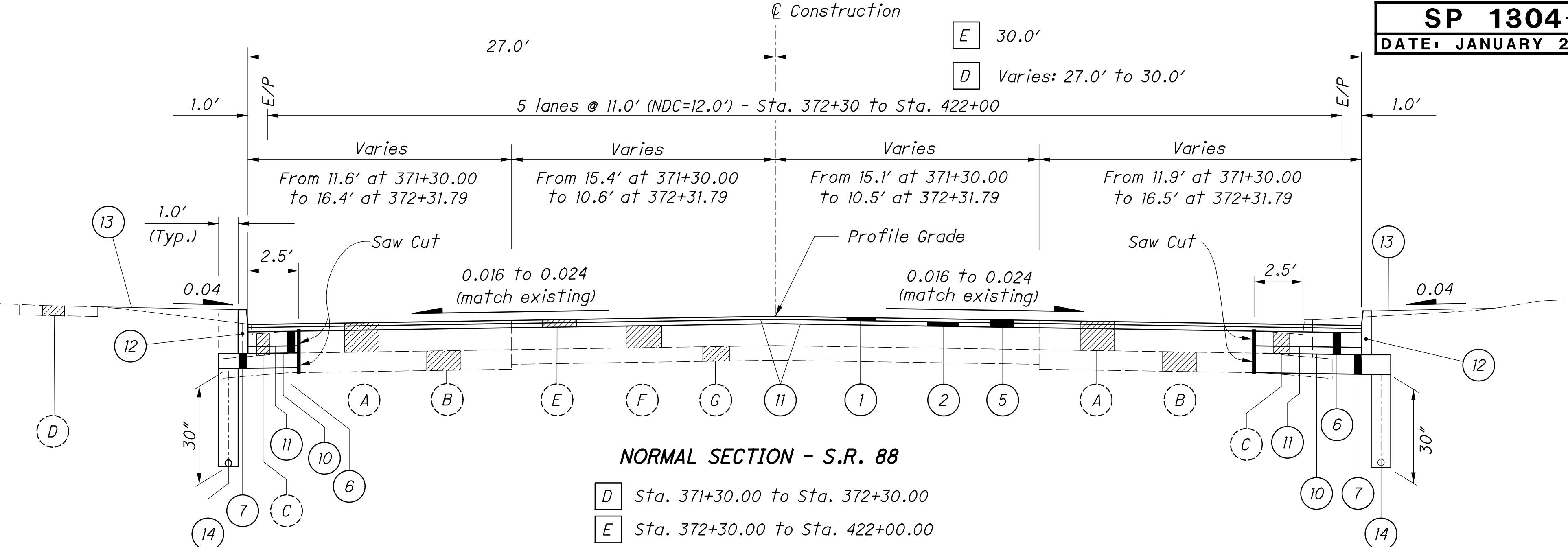
Item 441, Asphalt Concrete Intermediate Course, Type 1, (448), is to be used as a leveling course to establish a 0.016 cross slope. Estimated quantities have been calculated based on exaggerated cross-sections shown on sheets 51-58.

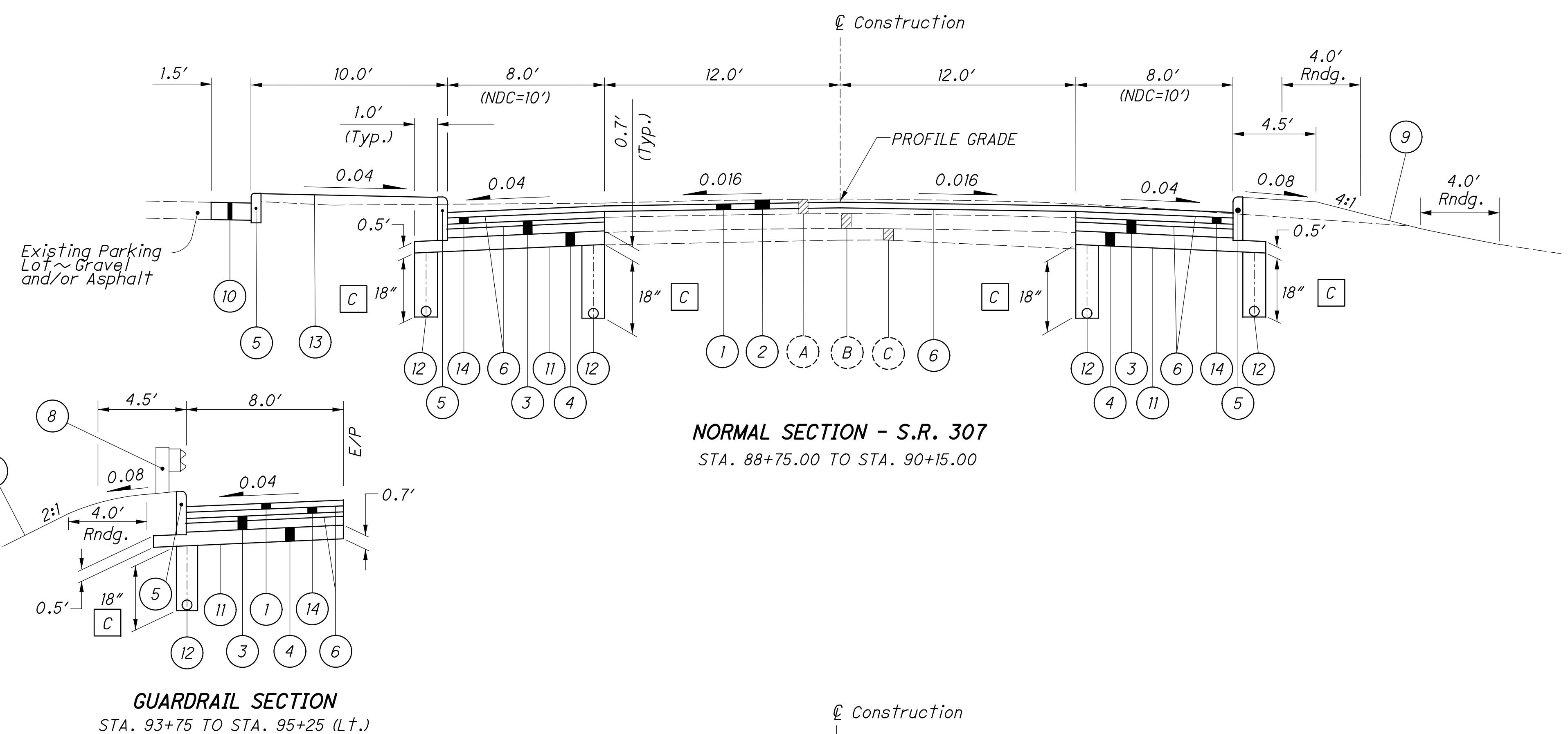
NOTE "D"

Item 441, Asphalt Concrete Surface Course, Type 1, (448), PG64-22, is to be $\frac{1}{4}$ " above gutter plate.

LEGEND

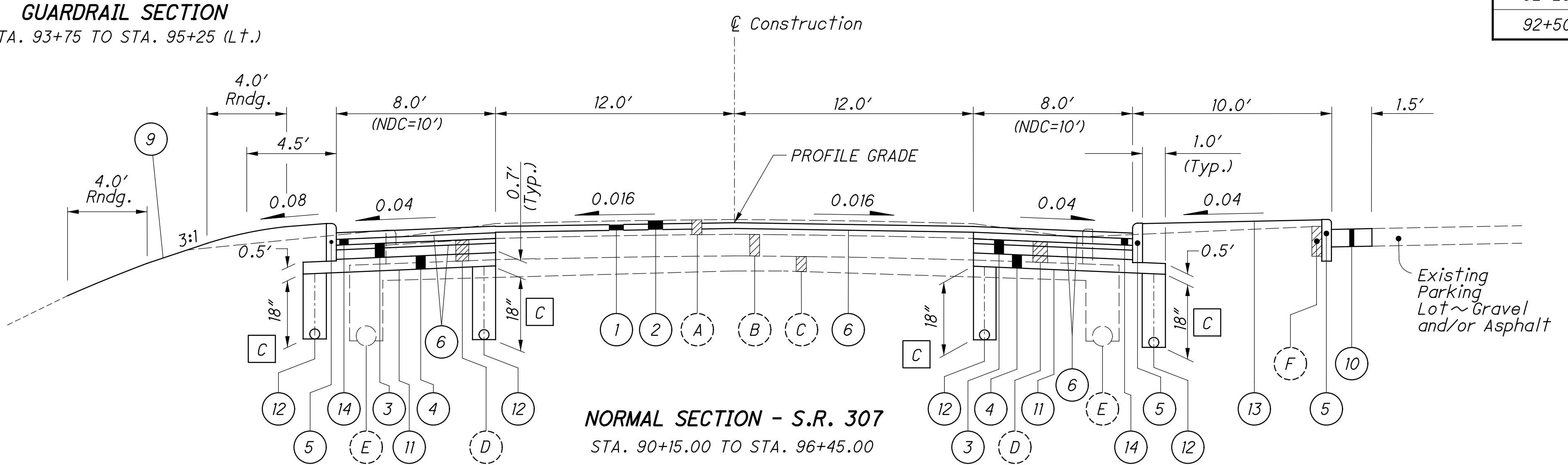
- (1) ITEM 441 - $\frac{1}{4}$ " Asphalt Concrete Surface Course, Type 1, (448), PG64-22
 - (2) ITEM 441 - $\frac{3}{4}$ " Asphalt Concrete Intermediate Course, Type 2, (448)
 - (3) ITEM 305 - 9" Concrete Base, Class QC IP, As Per Plan
 - (4) ITEM 304 - 6" Aggregate Base
 - (5) ITEM 254 - Pavement Planing, 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
- A: 12" ± Asphalt
 B: 8" ± Subbase
 C: Curb & Gutter
 D: 4" Concrete Sidewalk
 E: 3" ± Asphalt
 F: 9" ± Reinforced Concrete
 G: 6" ± Subbase
 H: 10" ± Asphalt
 J: 4" ± Subbase
 A: 25'-0" From Sta. 0+84 to Sta. 3+50
 Varies: 25'-0" @ Sta. 3+50 to 12' @ Sta. 4+00
 B: 12'-0" From Sta. 0+84 to Sta. 3+50
 Varies: 12'-0" @ Sta. 3+50 to 11'-0" @ Sta. 4+00
 C: Varies: 4' @ Sta. 3+50 to 2' @ Sta. 4+00





S.R. 307 PAVEMENT PLANNING TABLES

STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ £	STATION	PROPOSED PROFILE ELEVATION	PLANING DEPTH (FEET) @ £
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			



LEGEND

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

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 - $\frac{1}{4}$ " ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22

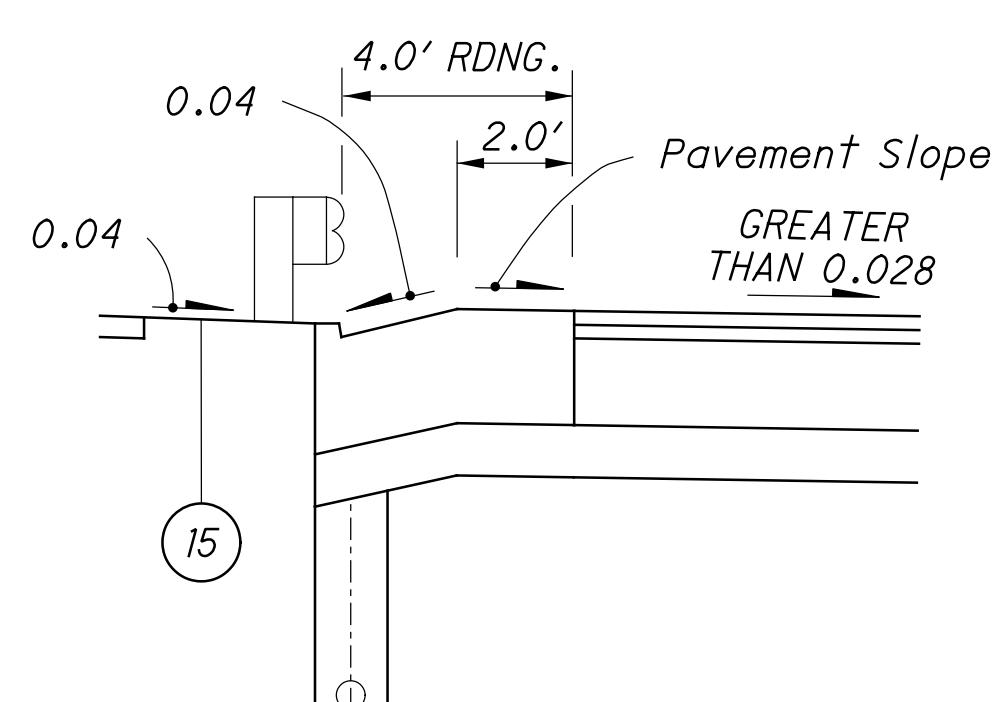
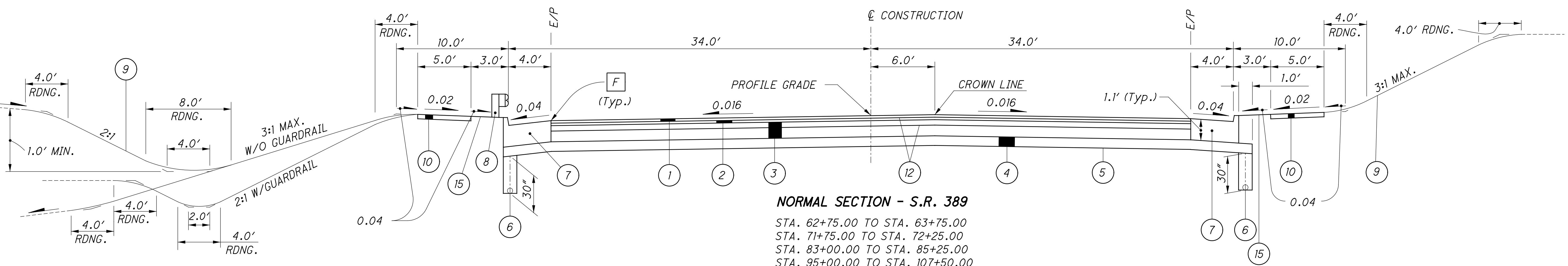
ITEM 441 - $\frac{1}{4}$ " ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

ITEM 304 - 8" AGGREGATE BASE

THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING GRAVEL OR SLAG PARKING AREA SHALL BE AS FOLLOWS:

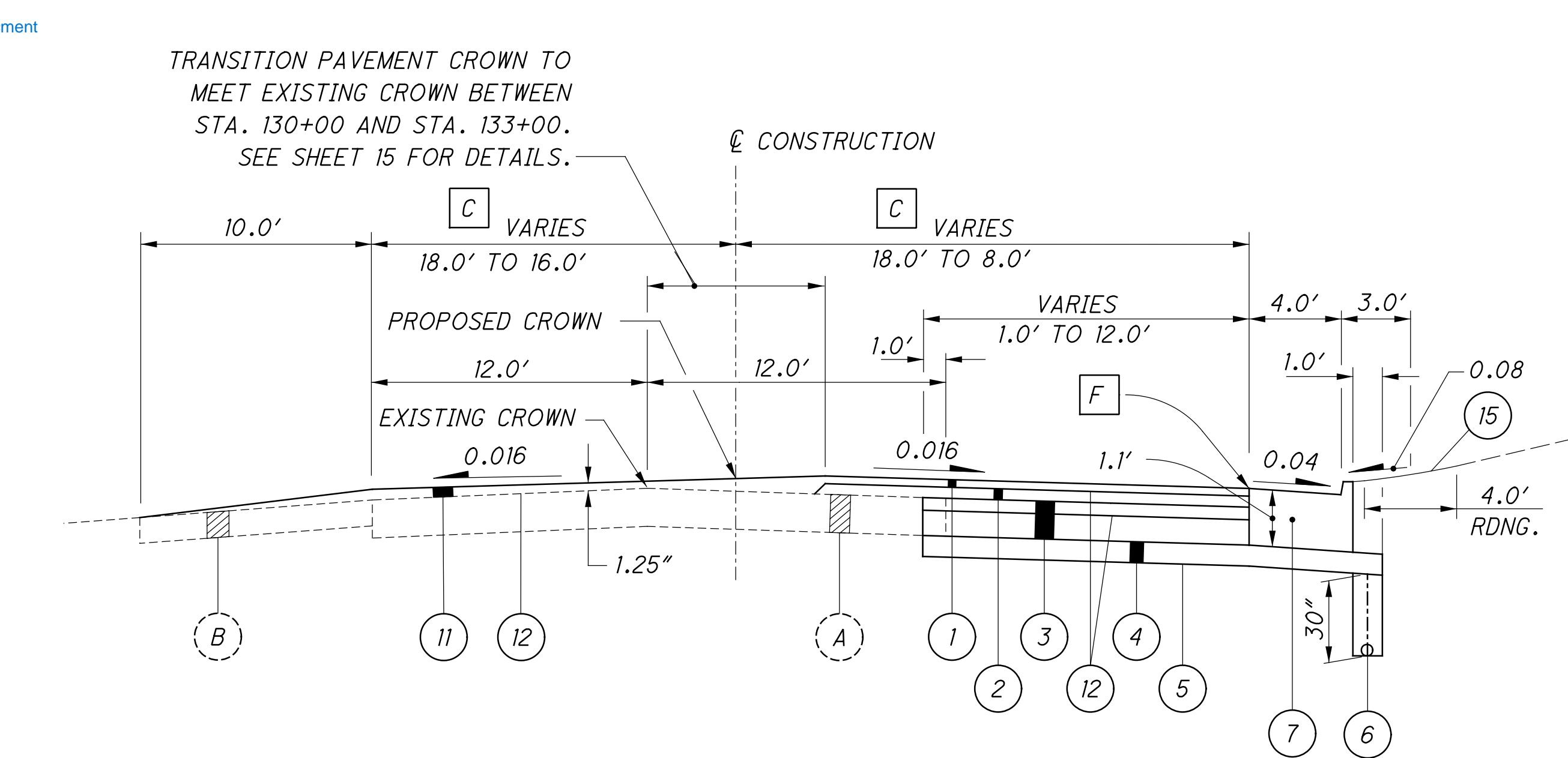
ITEM 304 - 11" AGGREGATE BASE

C UNCLASSIFIED UNDERDRAIN LIMITS:
STA. 88+75 TO STA. 91+25 AND
STA. 95+25 TO STA. 96+27.25



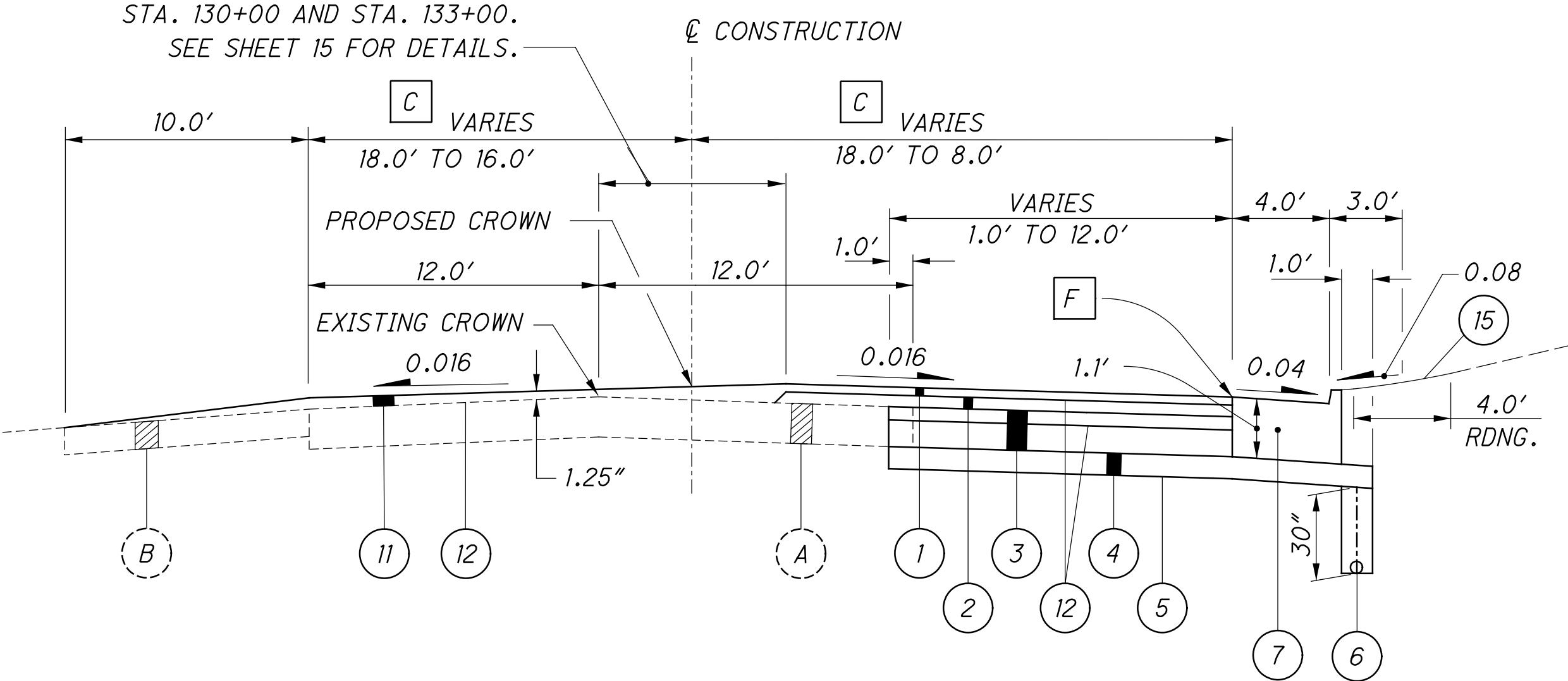
LEGEND

- (1) ITEM 441 - $\frac{1}{4}$ " ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
- (2) ITEM 441 - $\frac{3}{4}$ " 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



Added to modify the document

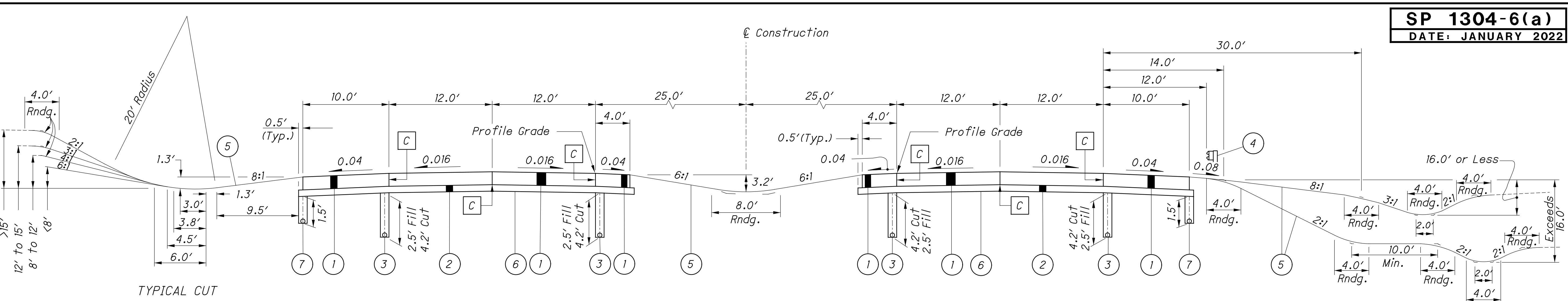
TRANSITION PAVEMENT CROWN TO MEET EXISTING CROWN BETWEEN STA. 130+00 AND STA. 133+00.
SEE SHEET 15 FOR DETAILS.



NOTES:

FOR VARIABLE PAVEMENT WIDTHS AND SIDEWALK LIMITS, SEE PAVEMENT DETAILS, SHEETS 15 - 18.

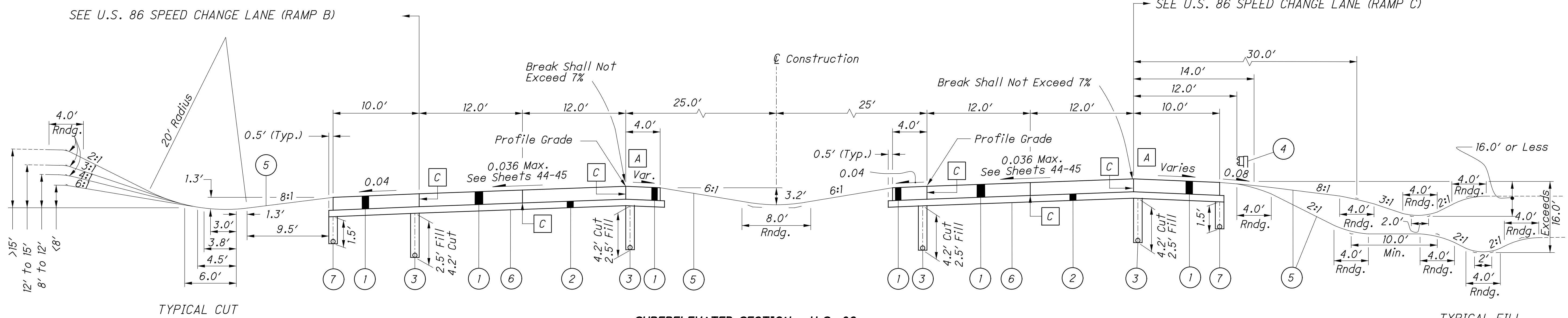
- [A] WIDTH VARIES FROM 34'-0" @ STA. 129+50 TO 22'-0" @ STA. 130+00 DUE TO RIGHT TURN LANE TAPER FROM 12' TO 0'
- [B] WIDTH VARIES FROM 34'-0" @ STA. 124+60 TO 22'-0" @ STA. 130+00 DUE TO RIGHT THRU LANE TAPER FROM 12' TO 0'
- [C] PAVEMENT WIDTH VARIES FROM 18'-0", LT. & RT. @ STA. 130+00 TO 16'-0" 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 $\frac{1}{4}$ " ABOVE GUTTER PLATE.



NORMAL SECTION - U.S. 86

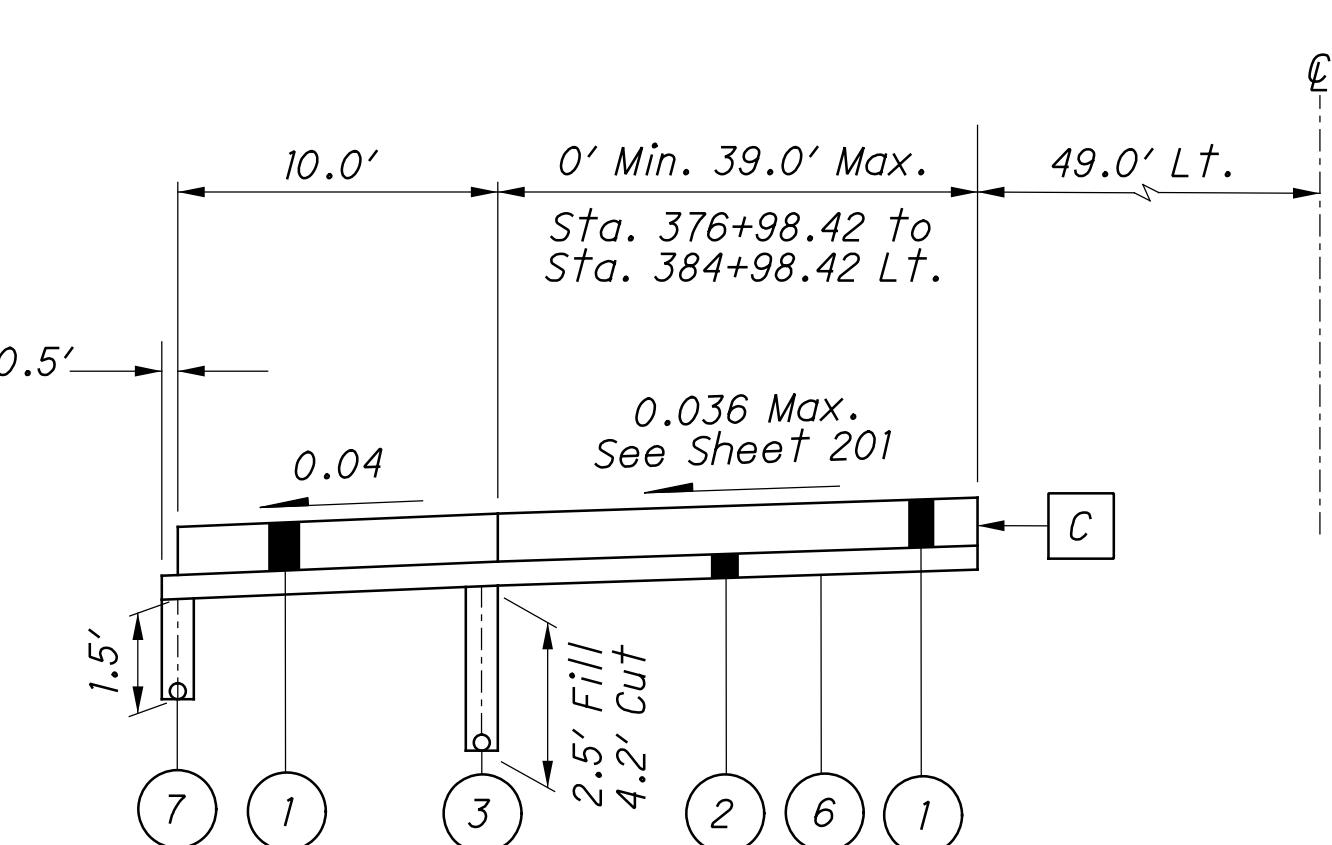
*Sta. 389+00 to Sta. 472+25
Sta. 501+75 to Sta. 559+00*

SEE U.S. 86 SPEED CHANGE LANE (RAMP B)



SUPERELEVATED SECTION - U.S. 86

Sta. 362+50 to Sta. 389+00
Sta. 472+25 to Sta. 501+75

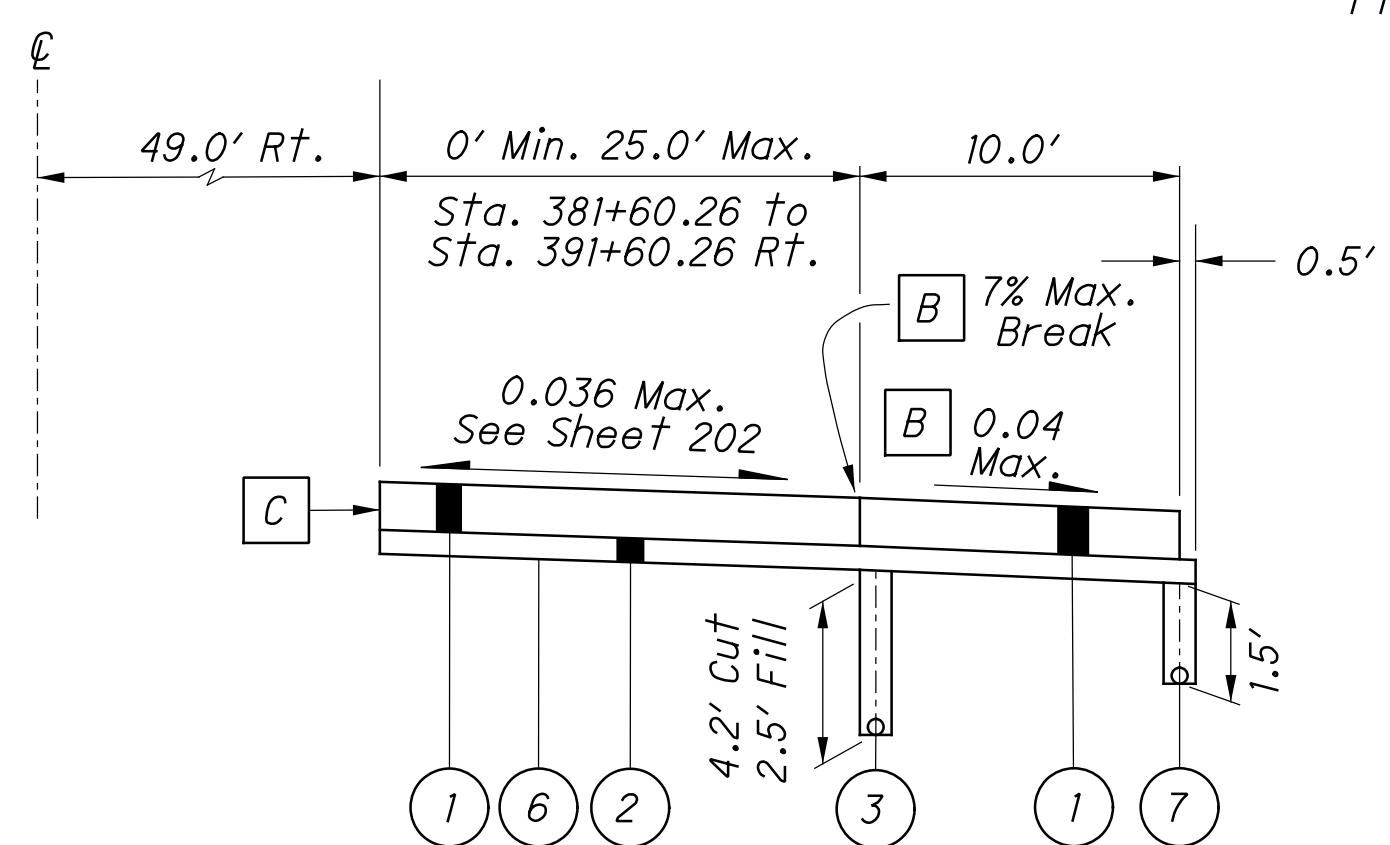


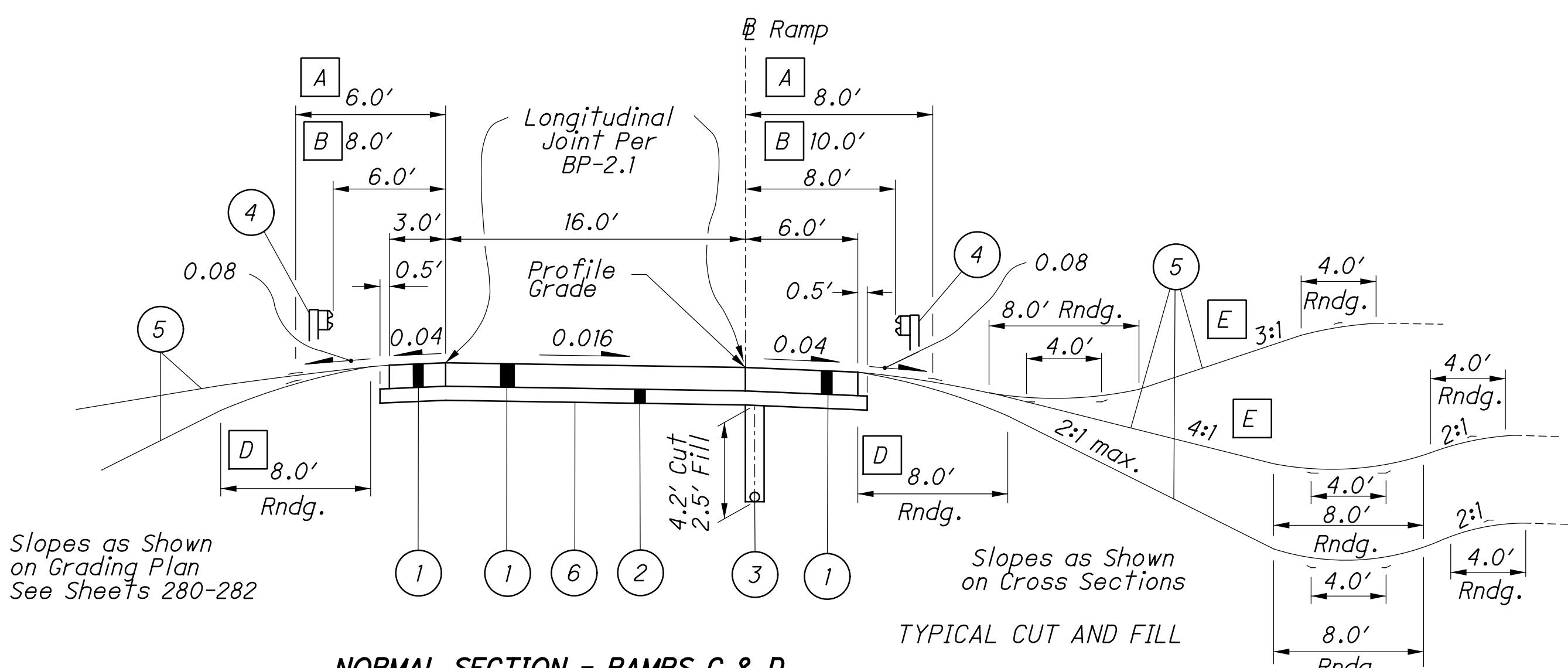
U.S. 86 SPEED CHANGE LANE (RAMP B)

- 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

LEGEND

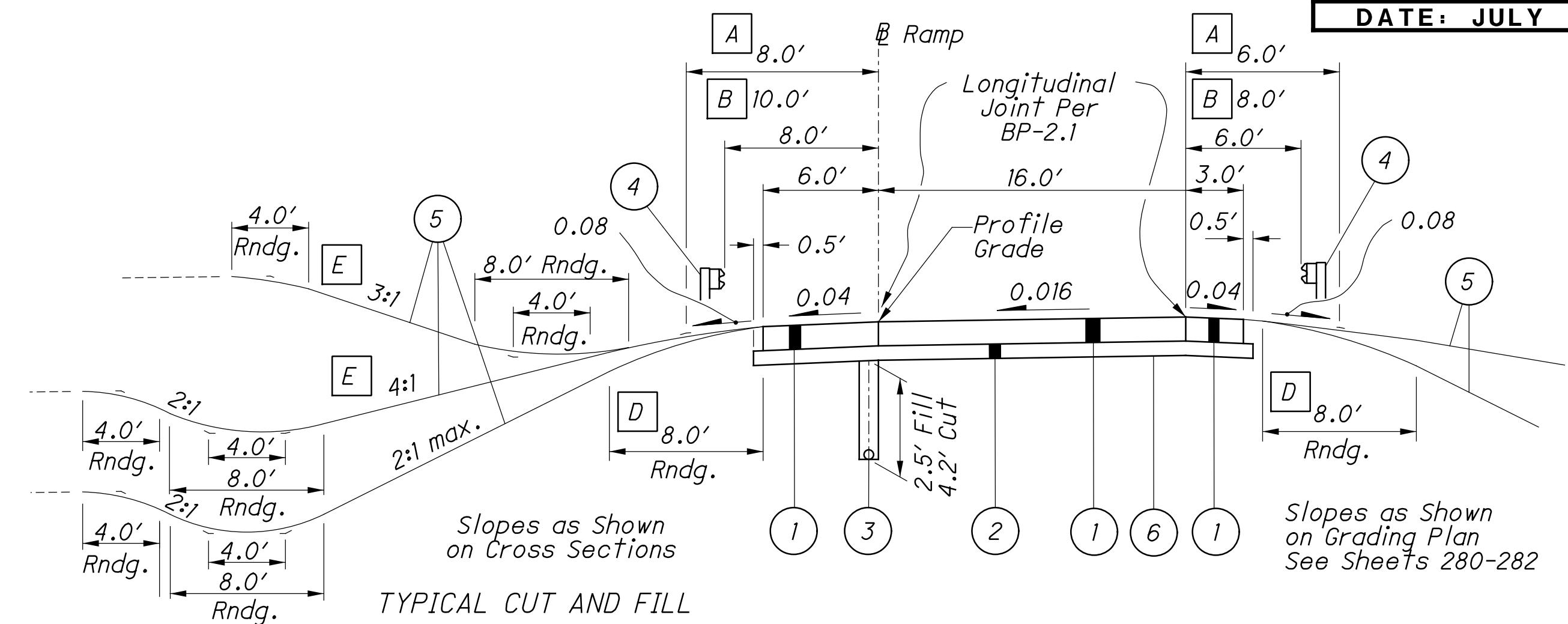
U.S. 86 SPEED CHANGE LANE (RAMP C)





NORMAL SECTION - RAMPS C & D

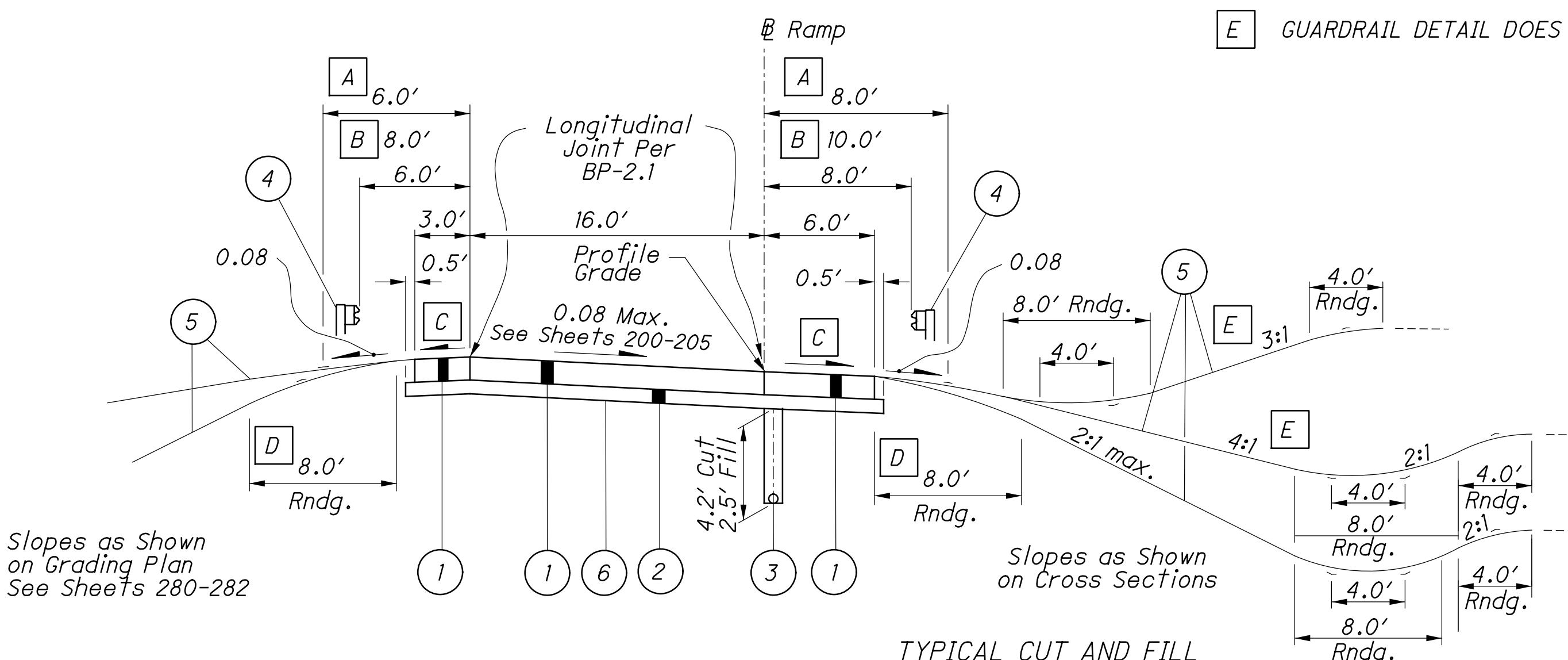
Sta. 465+49.13 to Sta. 477+25 Ramp C
Sta. 557+00 to Sta. 566+96.94 Ramp D



NORMAL SECTION – RAMPS A & B

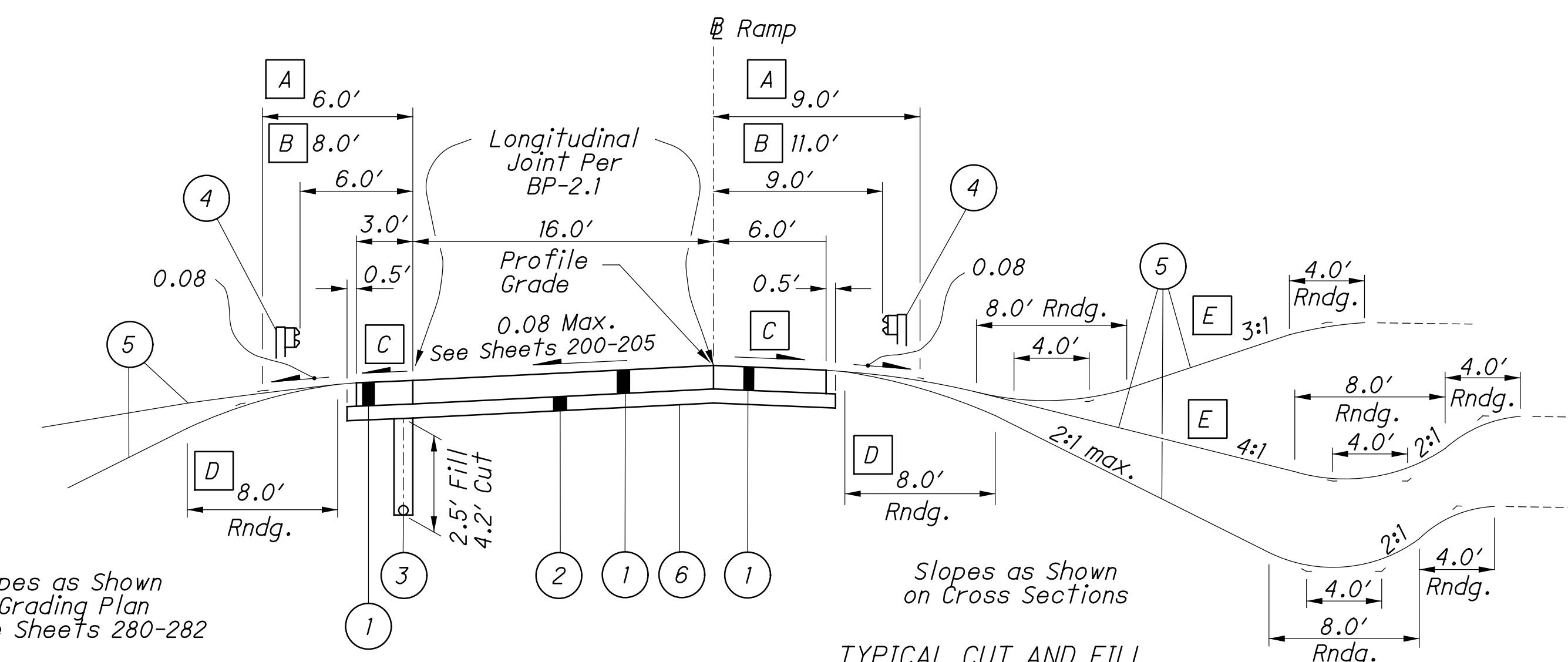
*Sta. 160+75 to Sta. 166+65.18 Ramp A
Sta. 266+17.10 to Sta. 271+50 Ramp B*

- 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



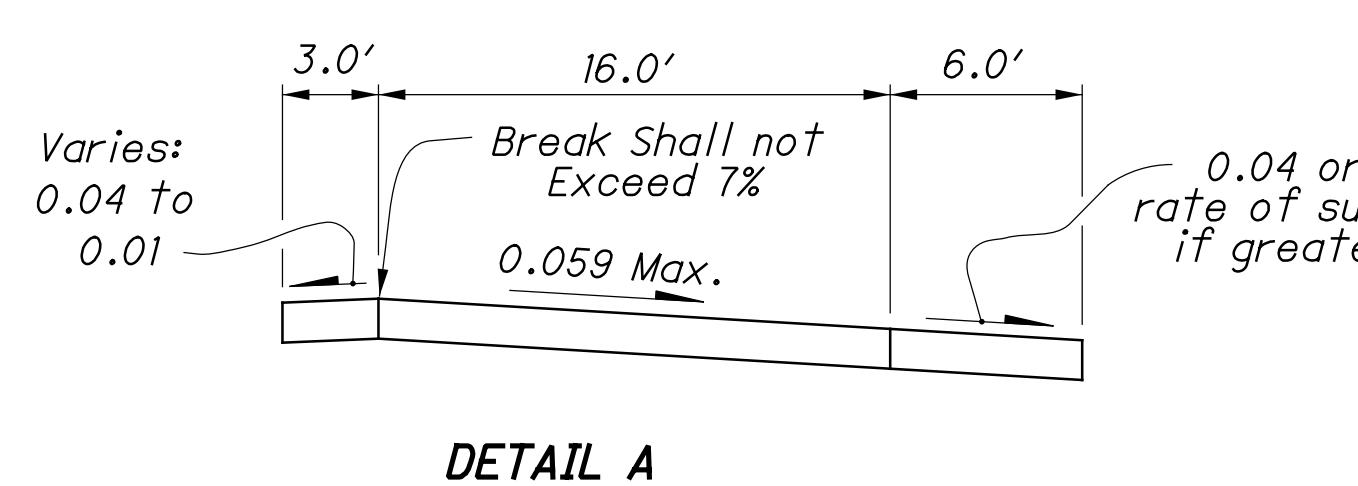
SUPERELEVATED SECTION (RIGHT) - RAMPS C & D

Sta. 477+25 to Sta. 481+60.26 Ramp C
Sta. 554+58.38 to Sta. 557+00 Ramp D

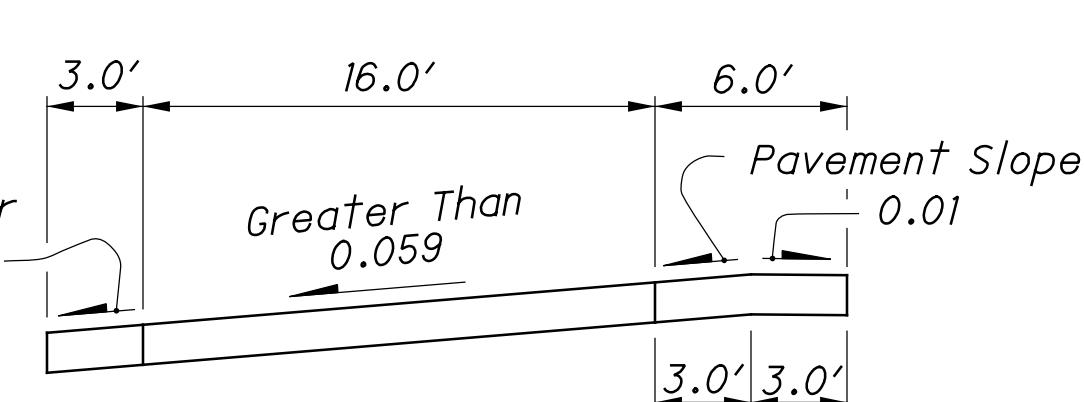


SUPERELEVATED SECTION (LEFT) - RAMPS E & F

*Sta. 354+62.19 to Sta. 360+75 Ramp E
Sta. 571+50 to Sta. 577+03.57 Ramp F*



DETAIL A



DETAIL B

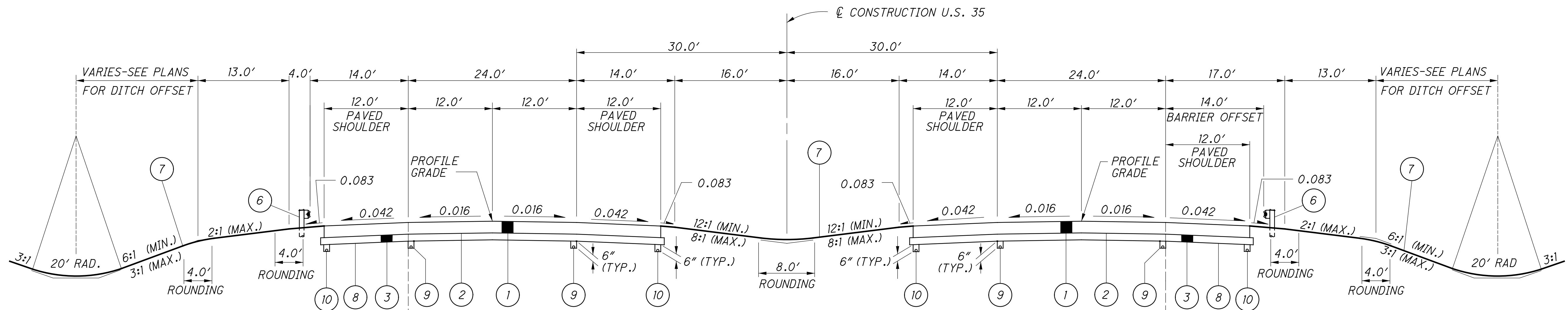
FOR LEGEND SEE SHEET 9

TYPIICAL SECTIONS - U.S. 35

GUE - 35 - 8 ° . 36

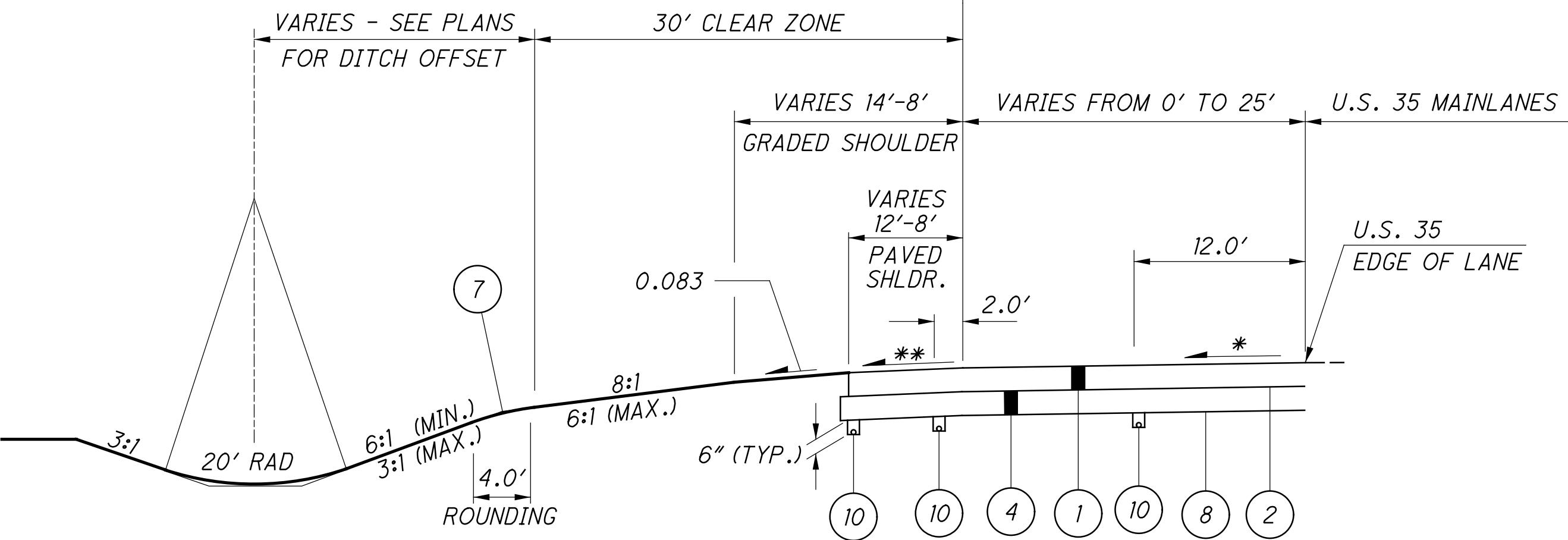
LEGEND

- | | | | |
|---|--|----|-------------------------------------|
| 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

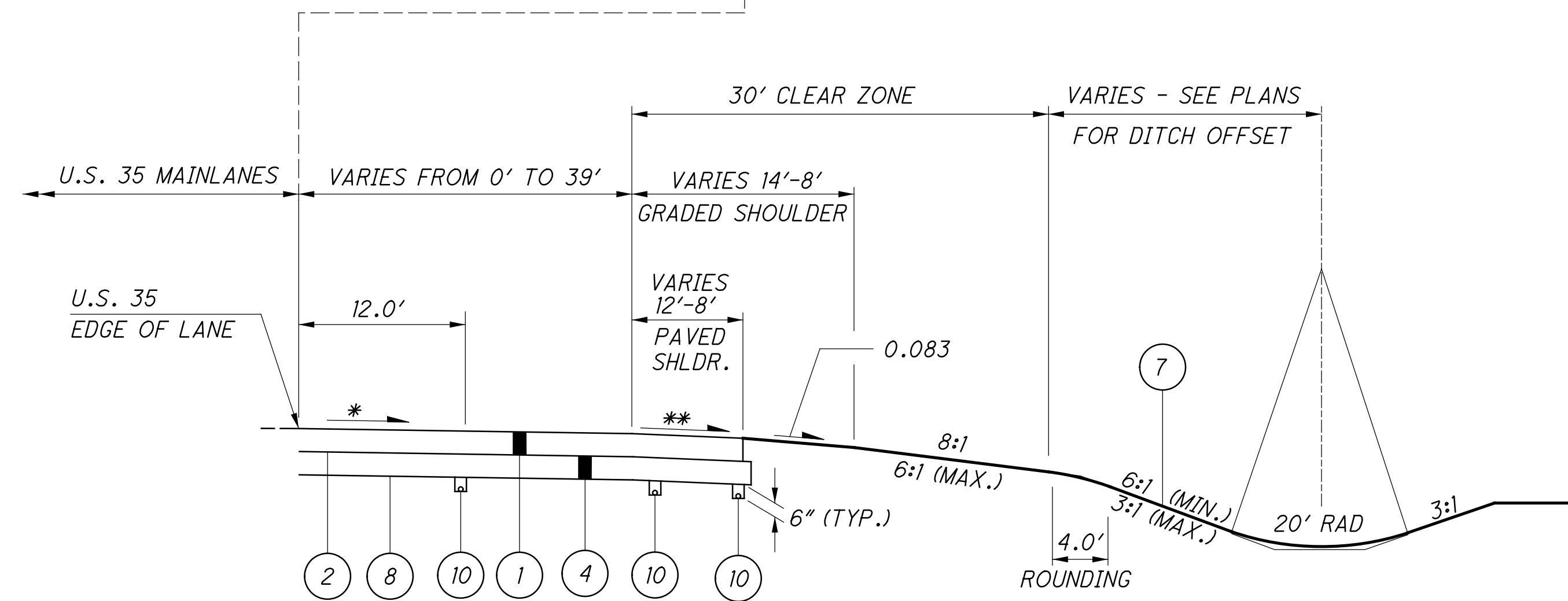
STA. 595+00 TO STA. 607+50



RAMP B ACCEL. LANE DETAIL

* SLOPE MATCHES MAINLANE RATE (0.016) UNTIL SUPERTRANSITION 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: GEOD09

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 = 3.28083333 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 SEADED AREAS:

659, SEEDING AND MULCHING 310 SQ. YD.

659, REPAIR SEEDING AND MULCHING 16 SQ. YD.
 $(310) \times (0.05) = 15.5 \text{ SQ. YD.}$

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 34 CU. YD.
 $(310) \times (111 \text{ CY PER 1000 SY}) = 34.4 \text{ SQ. YD.}$

659, COMMERCIAL FERTILIZER 0.05 TON
 $[(310) \times (1 \text{ TON} / 7410 \text{ SY})] + [(16 \text{ SY}) \times (1 \text{ TON} / 11115 \text{ SY})] = 0.05 \text{ TON}$

659, LIME 0.06 ACRE
 $(310) \times (1 \text{ ACRE} / 4840 \text{ SY}) = 0.06 \text{ ACRE}$

659, INTER-SEEDING 16 SQ. YD.
 $(310) \times (0.05) = 15.5 \text{ SQ. YD.}$

659, WATER 2 M. GAL.
 $[(310) \times (0.0054 \text{ M GAL} / \text{SY})] + [(16) \times (.0027 \text{ GAL/SY})] = 2 \text{ M. GAL}$

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		ORTHOGRAPHIC HEIGHT (ELEVATION)
	NORTHING	EASTING	NORTHING	EASTING	
CP1	648471.989	2085554.754	648510.253	2085677.816	634.80
CP2	646970.005	2084508.912	647008.181	2084631.913	636.54
CP3	647678.067	2084753.211	647716.285	2084876.226	655.38
CP4	647186.714	2084974.770	647224.903	2084974.711	656.63

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 SATISFACTION 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).

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.

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

W20-H14-60

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 COMPAKTED 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 COMPAKCTION (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

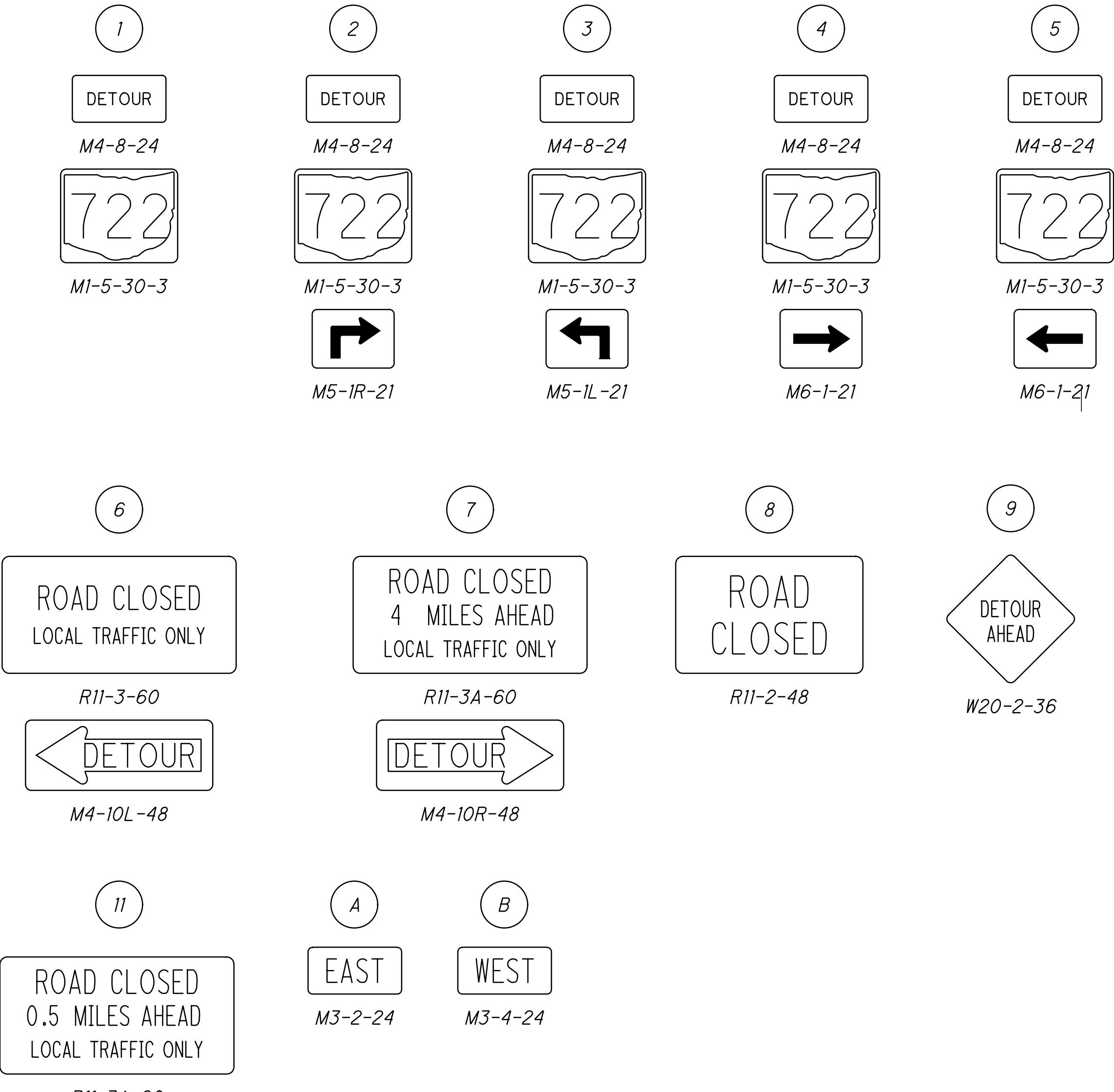
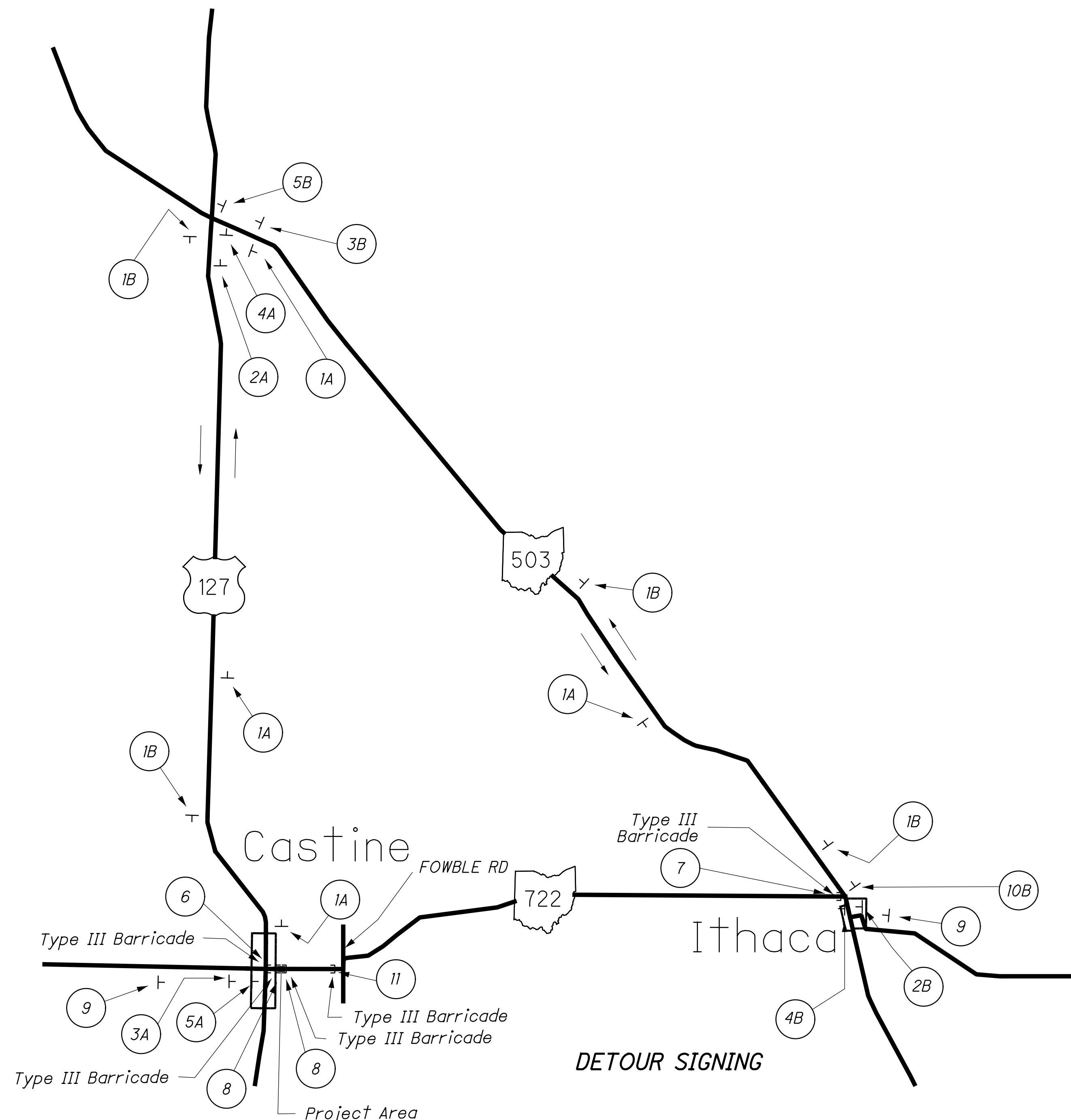
PERMANENT SIGNS. THE SIGNS SHOULD BE ERECTED ALONG ROADWAYS AT THE POINT OF CLOSURE. THE SIGNS MAY BE ANYWHERE ALONG RAMPS WHERE THEY ARE VISIBLE TO THE MOTORIST USING THE RAMP, EXCEPT THAT ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTION TO THE MOTORIST.



MAINTENANCE OF TRAFFIC DETOUR MAP

DAR-722-6.34

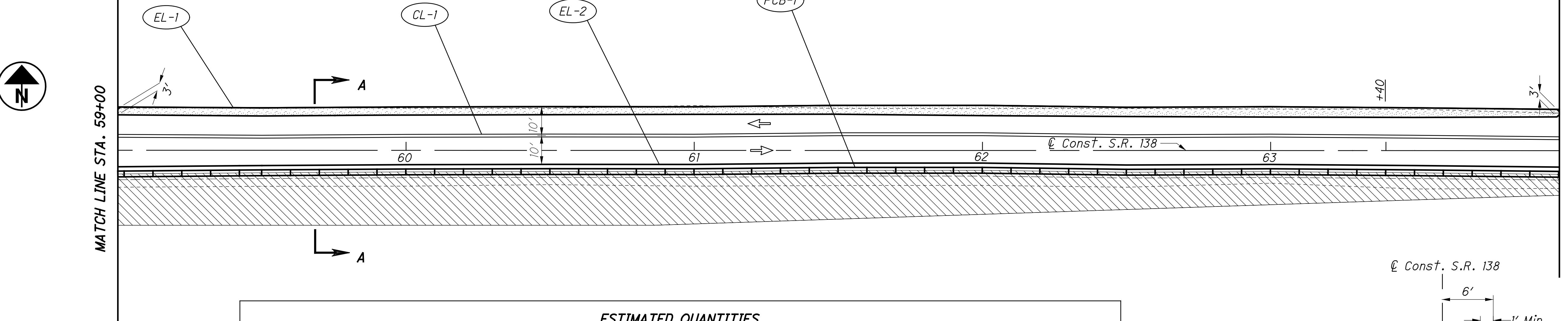
8
34



For Maintenance of Traffic Notes, see Sheet 7.

0 10 20 30 40
CALCULATED DAN CHECKED DEK
HORIZONTAL SCALE IN FEET

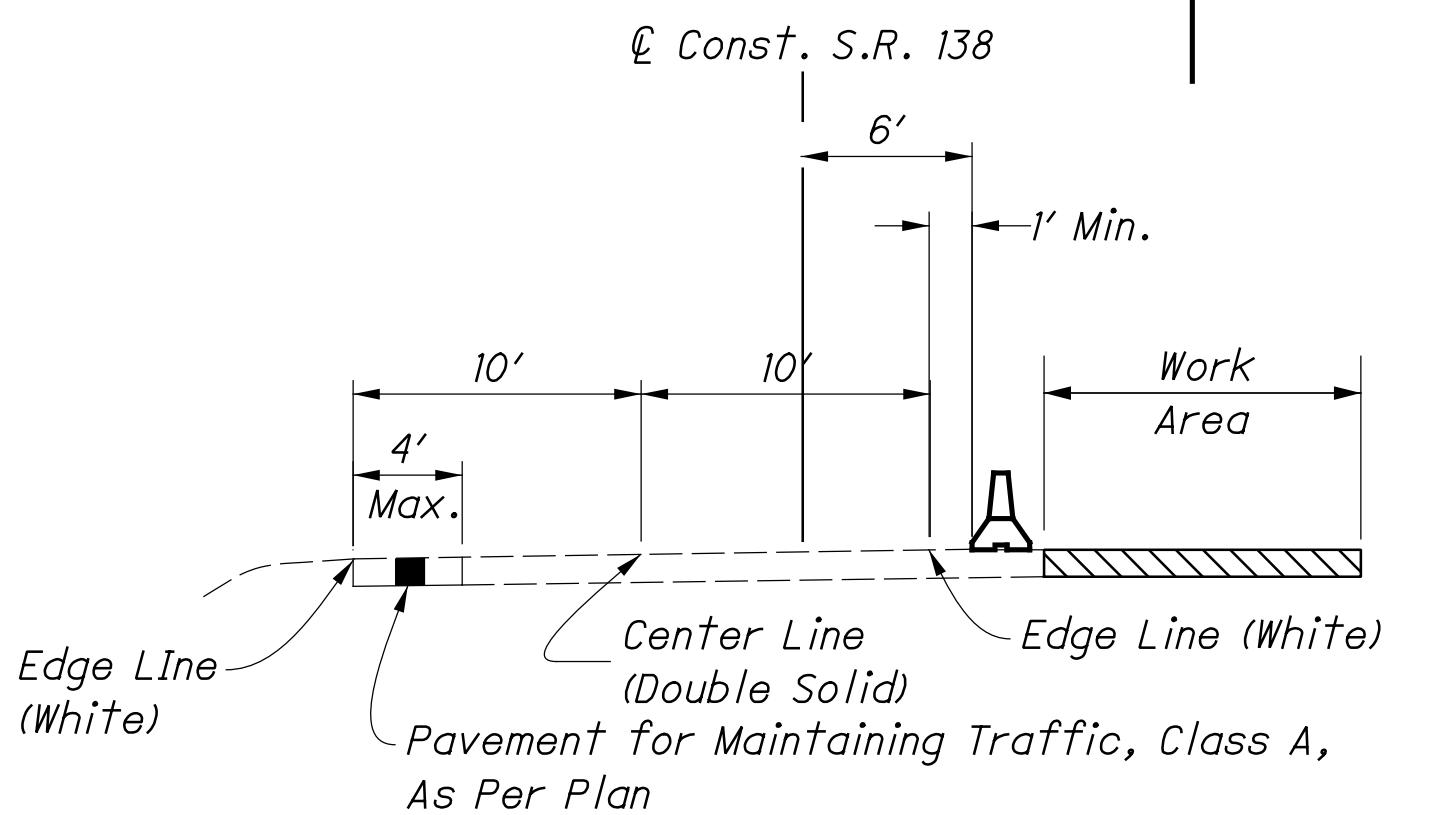
MATCH LINE STA. 59+00



MATCH LINE STA. 64+00

+40
3'

Const. S.R. 138

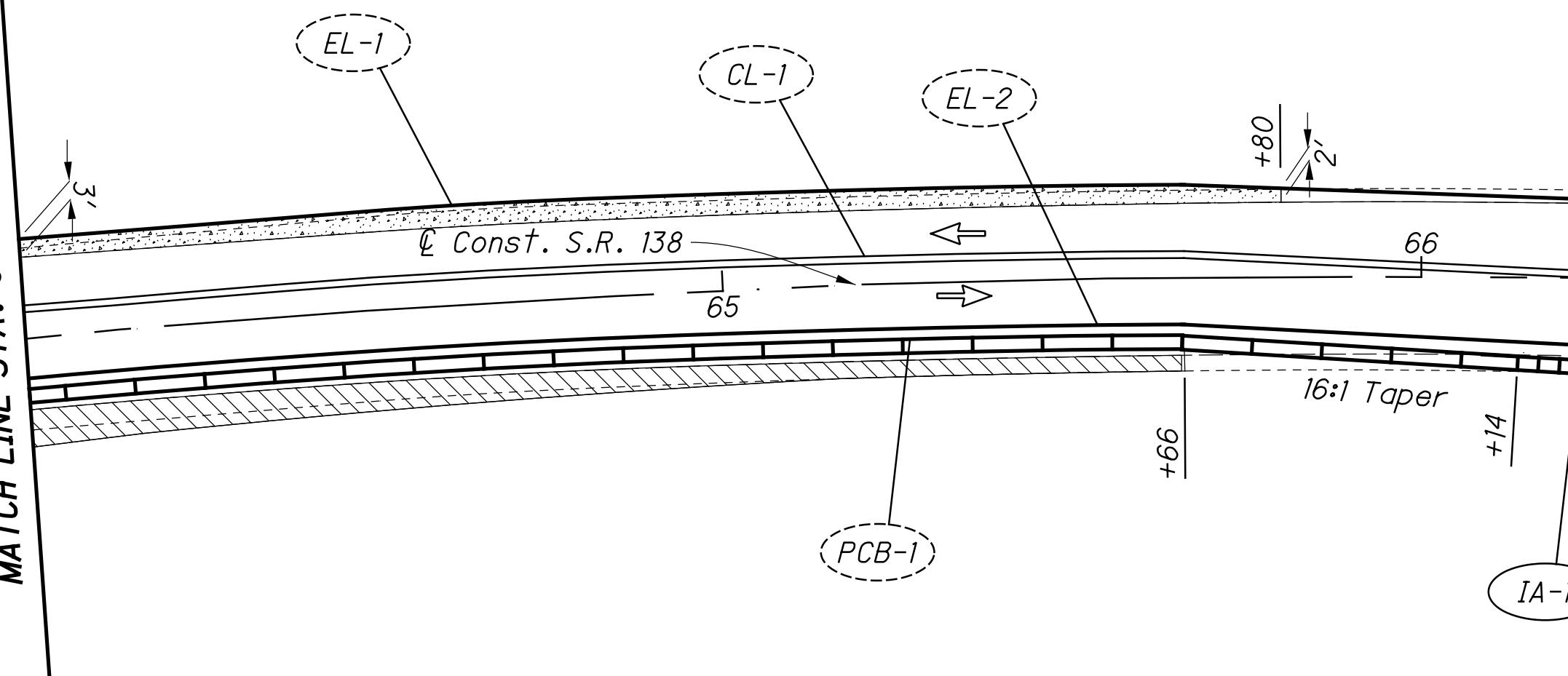


SECTION A-A

ESTIMATED QUANTITIES

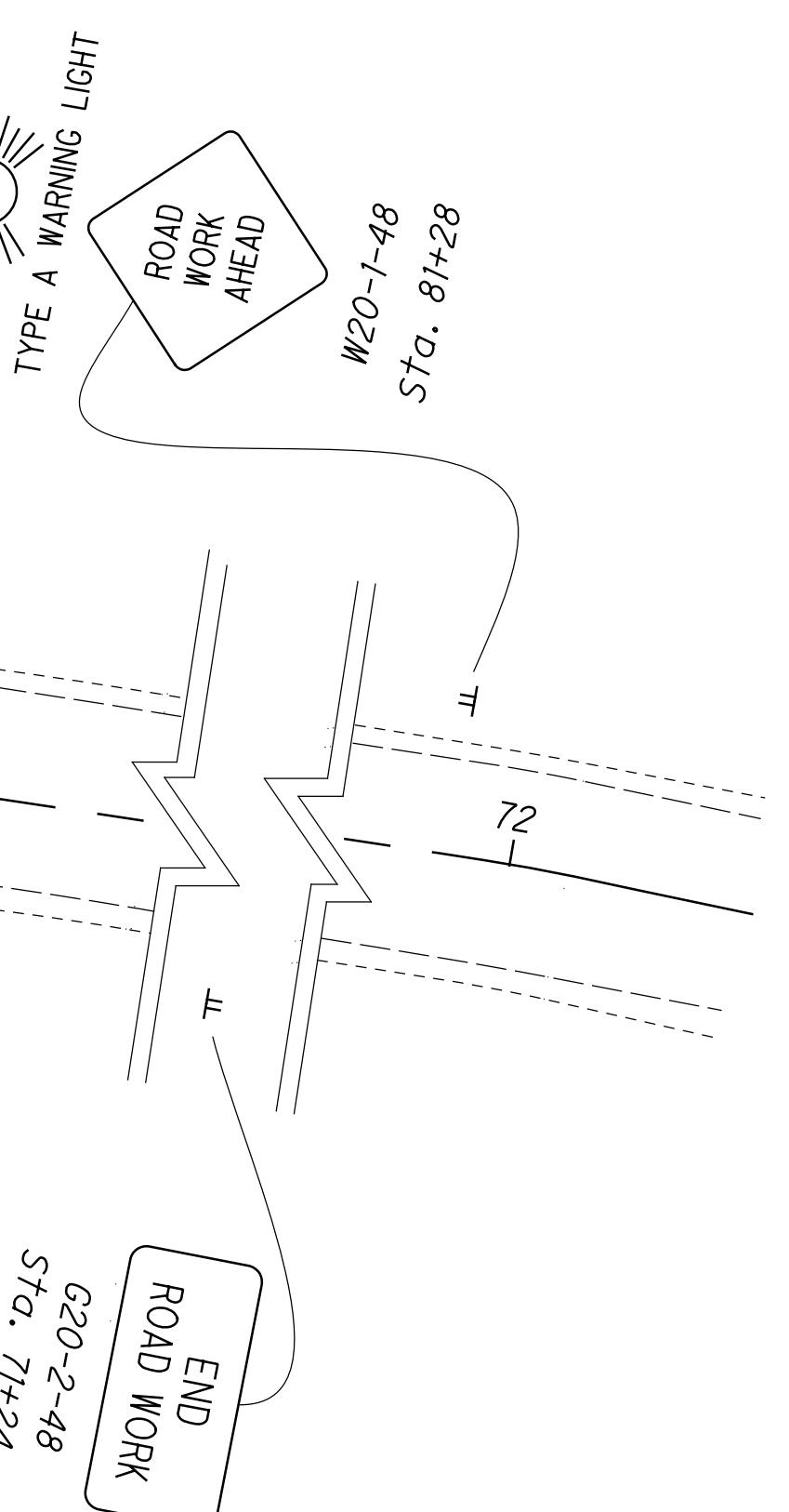
REF No.	Station to Station	Side	614			622		
			WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)	OBJECT MARKER, TWO WAY			
			EACH	EACH	EACH	MILE	MILE	FT
CL-1	59+00 to 66+89	Lt.				0.15		
EL-1	59+00 to 66+89	Lt.				0.15		
EL-2	59+00 to 66+89	Rt.				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

MATCH LINE STA. 64+00



LEGEND

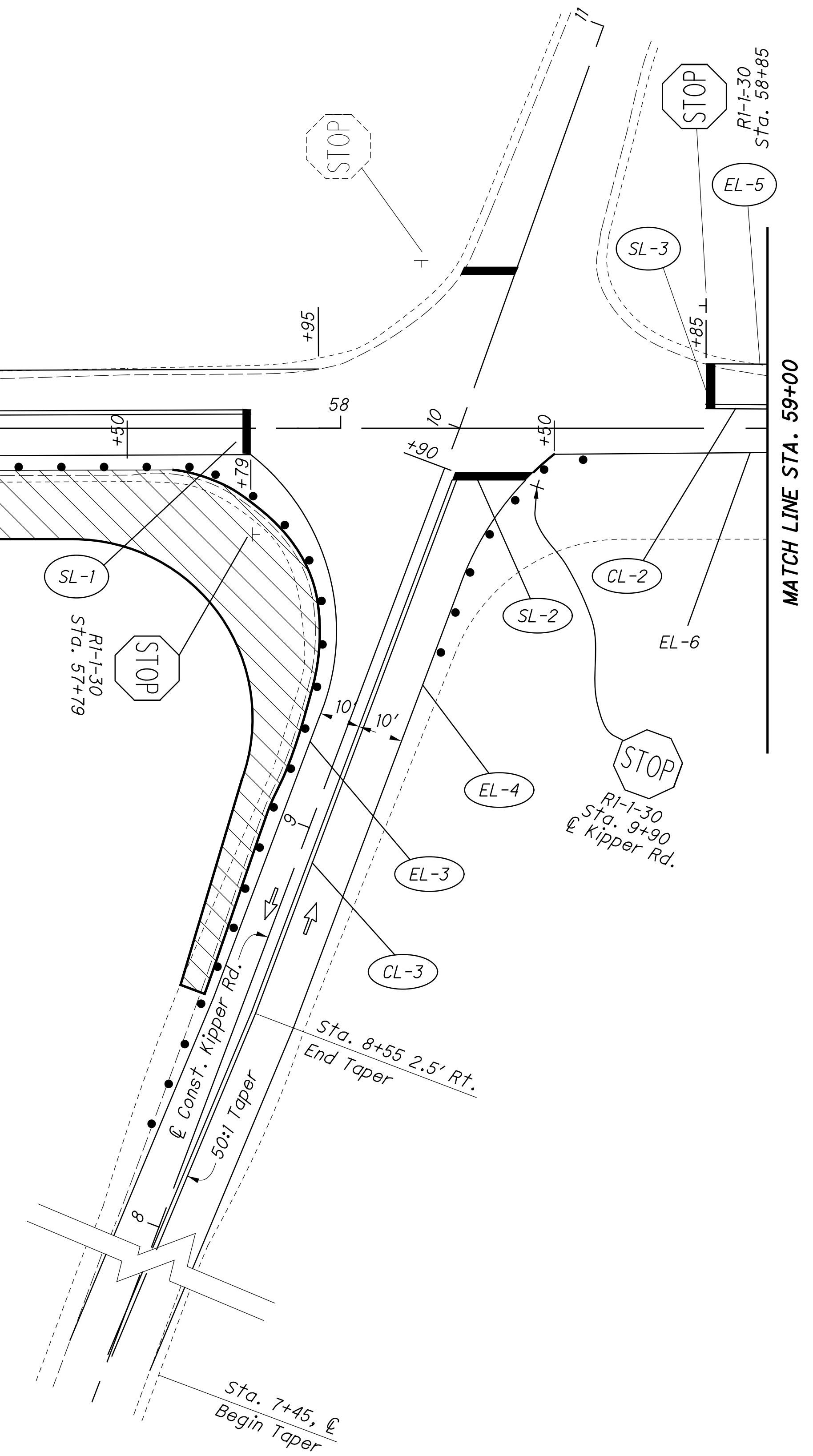
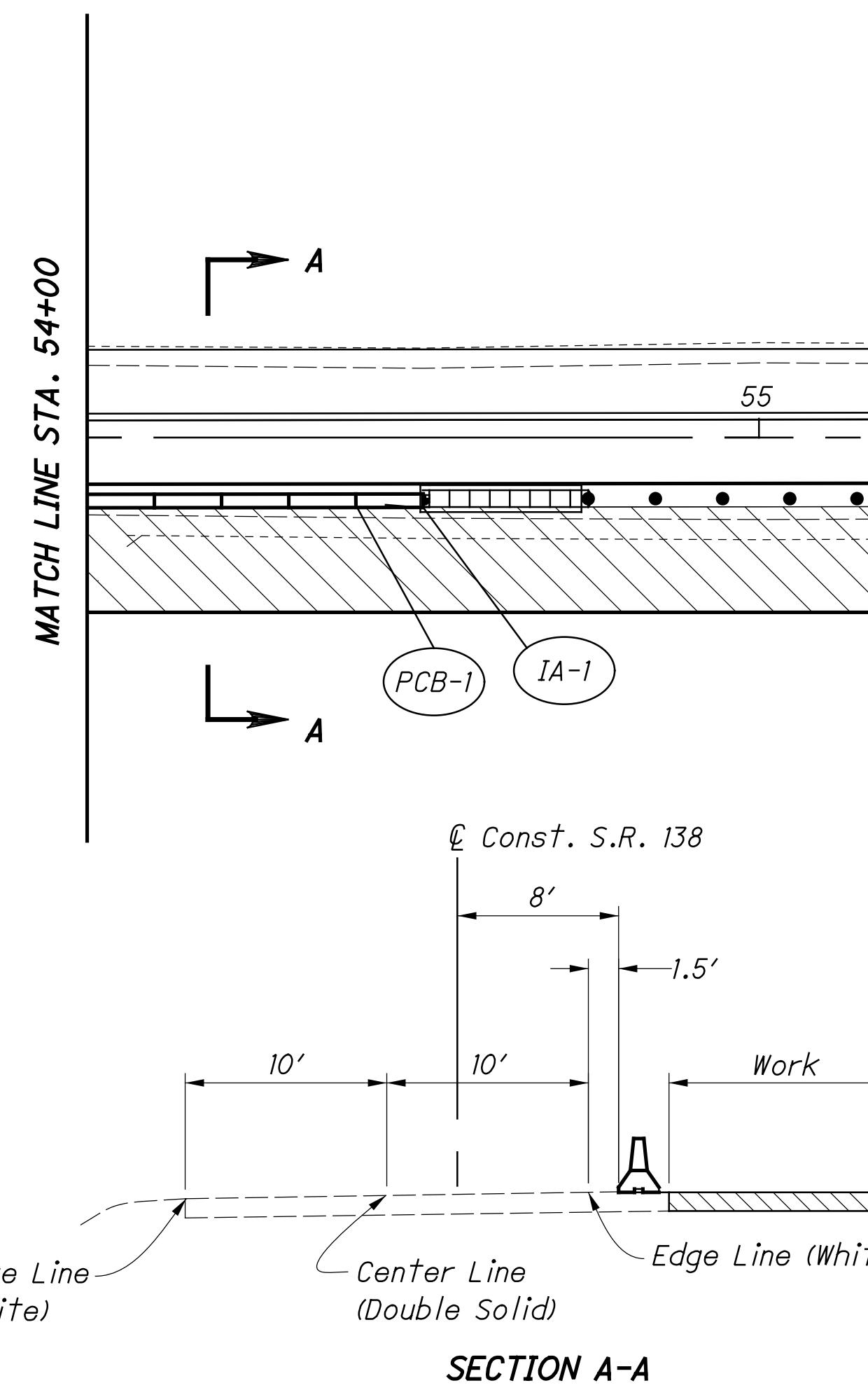
- Portable Barrier, Unanchored
- Area to be Constructed
- Pavement for Maintaining Traffic, Class A, As Per Plan (Constructed in Phase One)
- Direction of Traffic



SCI-138-11.44

MAINTENANCE OF TRAFFIC PHASE TWO
STA. 59+00 TO STA. 72+25

19
280

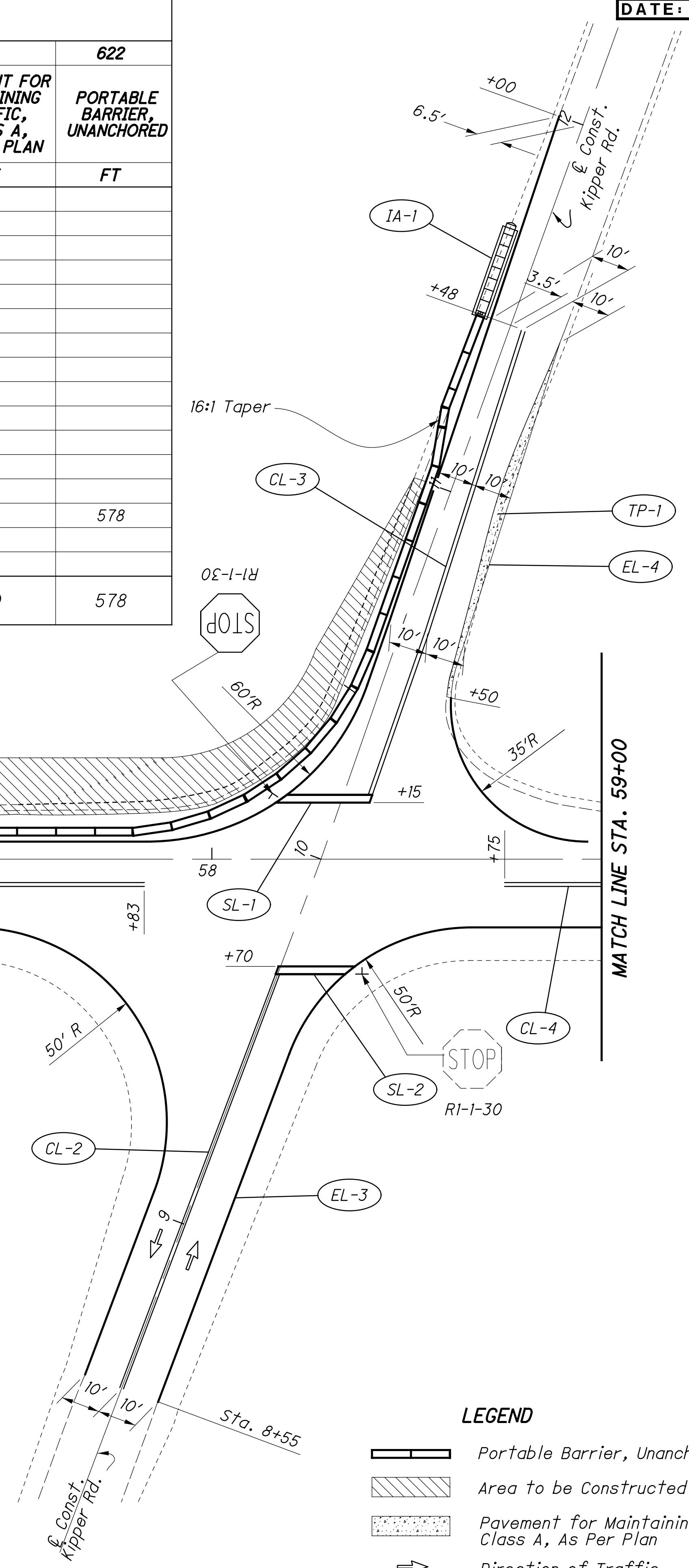
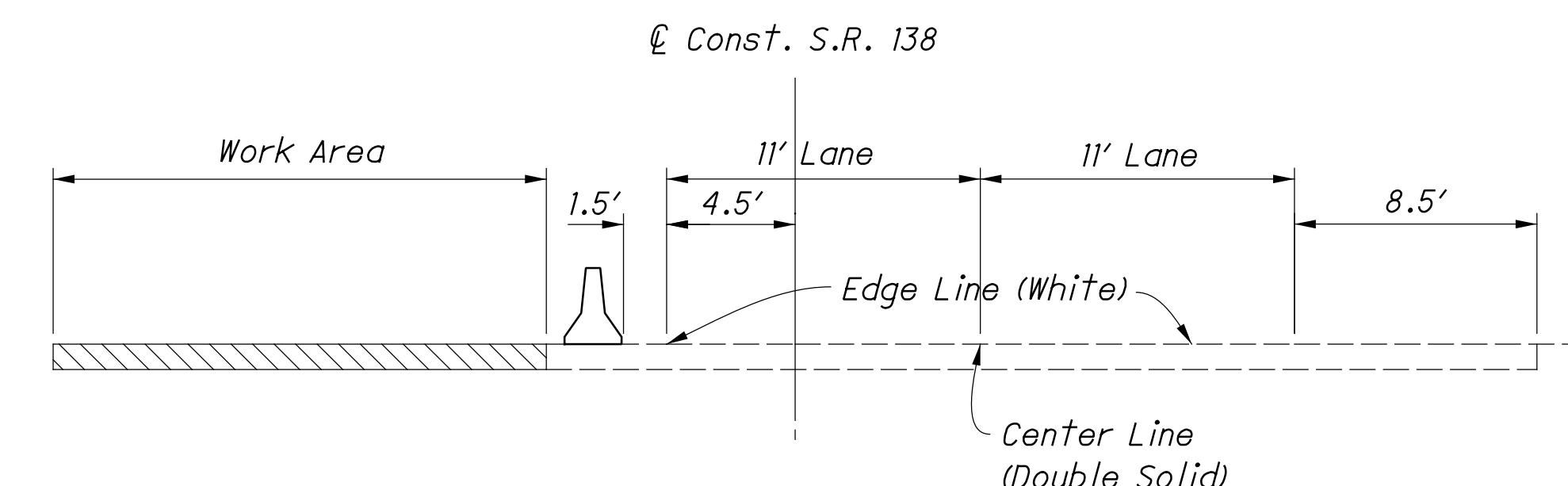


REF No.	Station to Station	Side	ESTIMATED QUANTITIES						
			WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)	OBJECT MARKER, TWO WAY	614		622	
						EACH	EACH	MILE	MILE
CL-1	54+00 to 57+79	LT.						0.072	
CL-2	58+85 to 59+00	LT.						0.003	
CL-3	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



REF. No.	Station to Station	SIDE	ESTIMATED QUANTITIES							
			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, 740.06', TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 6", 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						20	
TP-1	10+50 Kipper Rd. to 11+70 Kipper Rd.	RT.								578
TOTALS CARRIED TO SUBSUMMARY			1	11	11	0.13	0.28	44	20	578

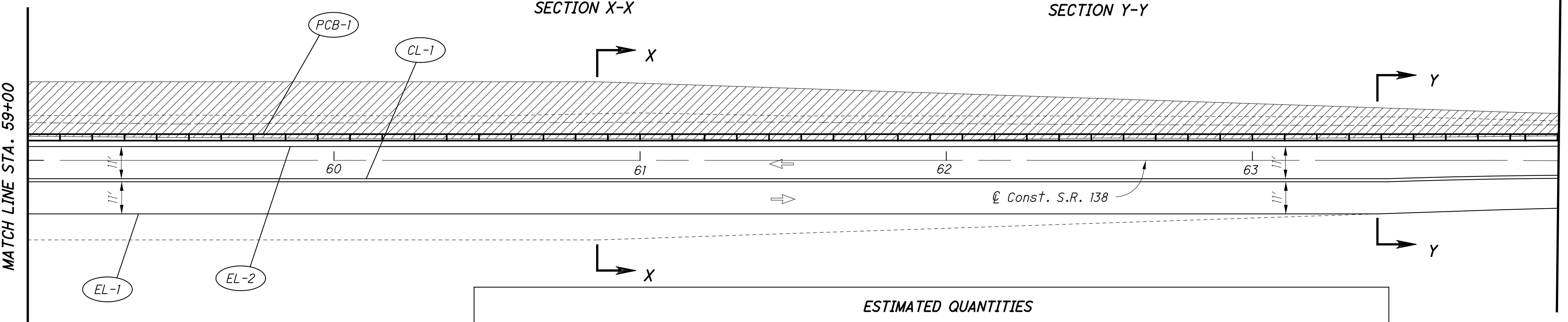
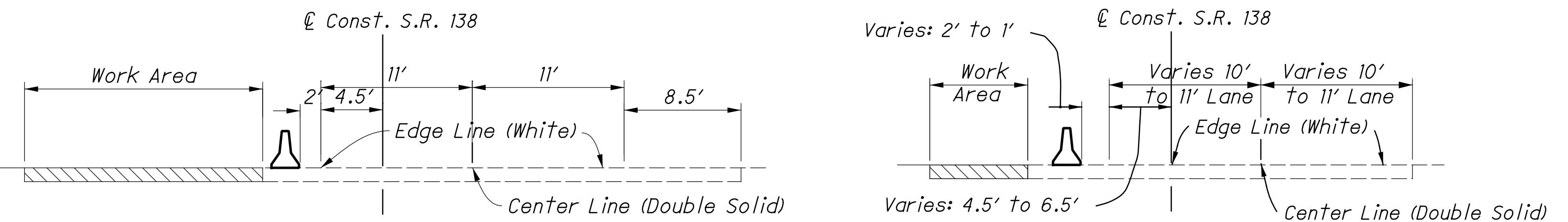
MATCH LINE STA. 54+00



HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PHASE FIVE

STA. 59+00 TO STA. 71+60

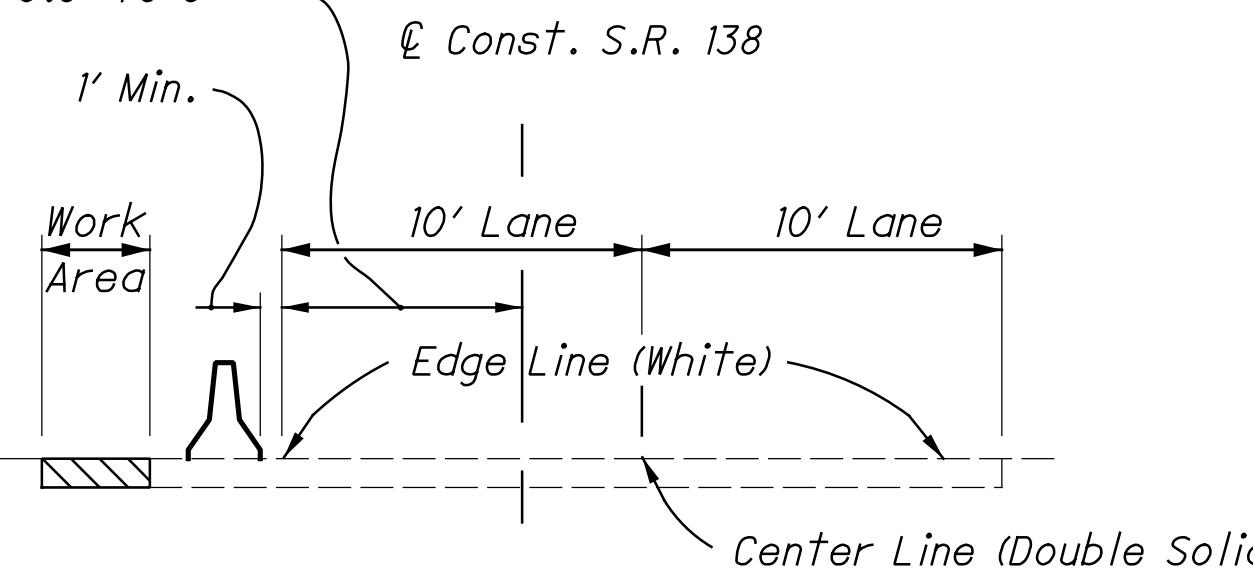
44
208LEGEND

Portable Barrier, Unanchored

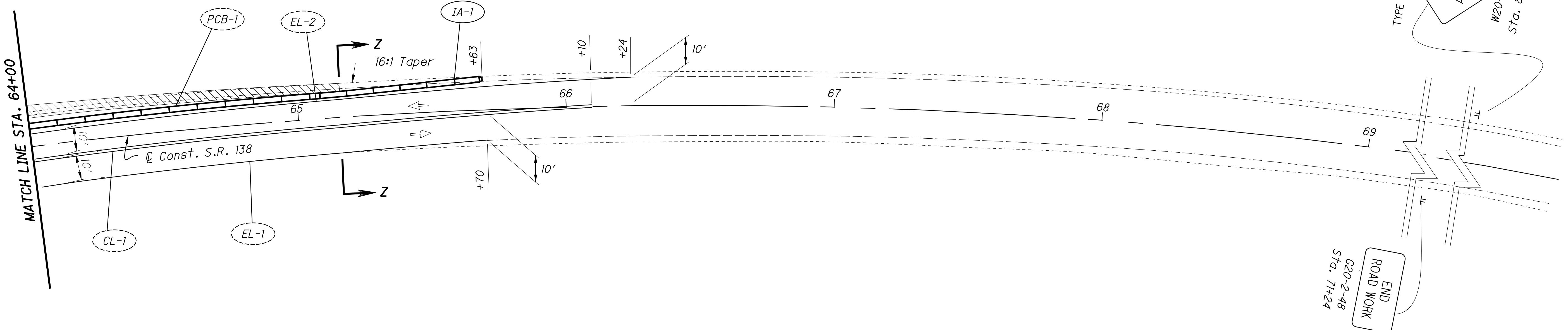
Area to be Constructed

Direction of Traffic

Varies: 6.5' to 8'



REF No.	Station to Station	SIDE	ESTIMATED QUANTITIES					
			614		622		WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE CLASS I, 6", 704.06, TYPE I (WHITE)
			REMOVE AND REPLACE IMPACT ATTENUATOR EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL) EACH	OBJECT MARKER, TWO WAY EACH	MILE		
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

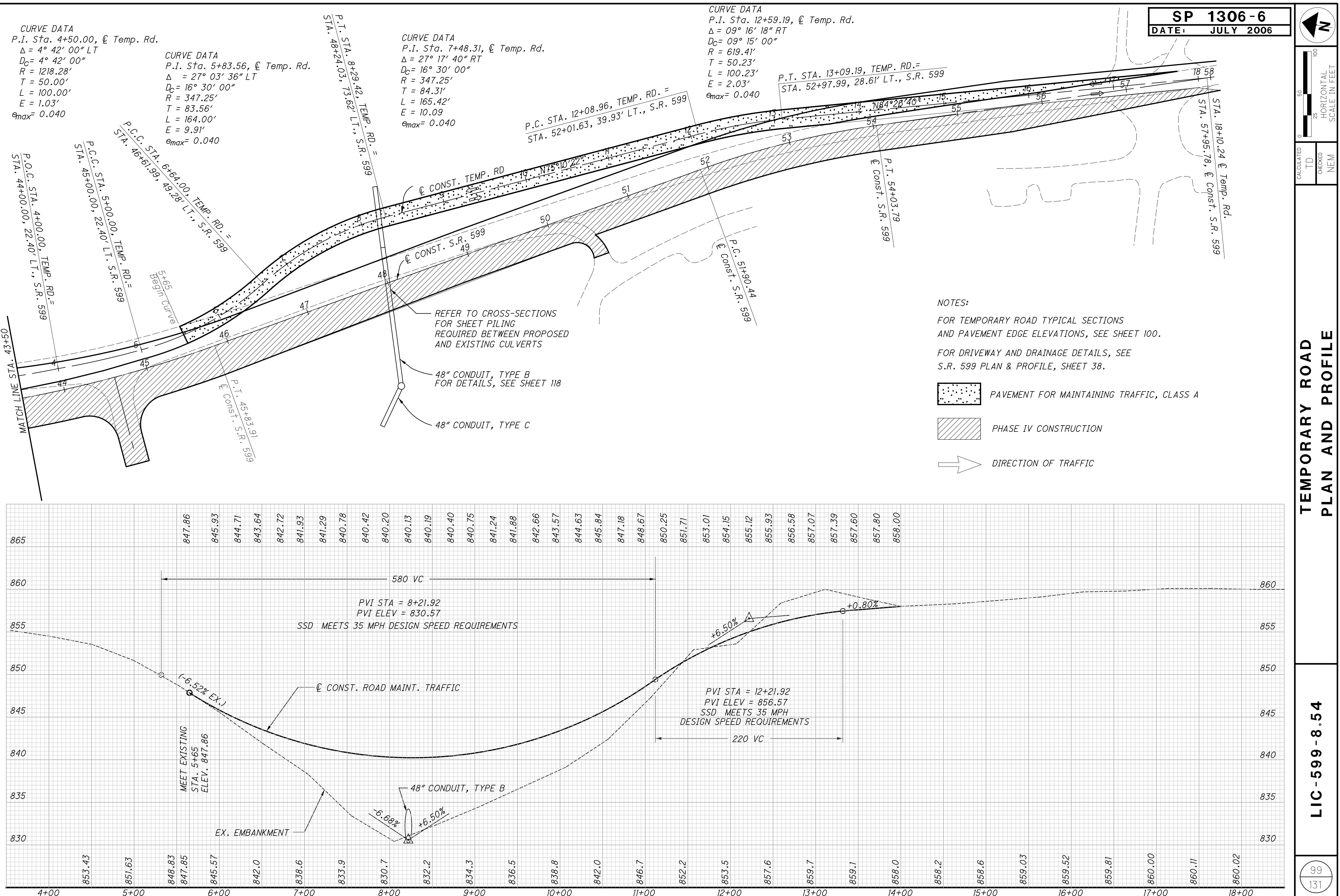


ECCI 129 11 11

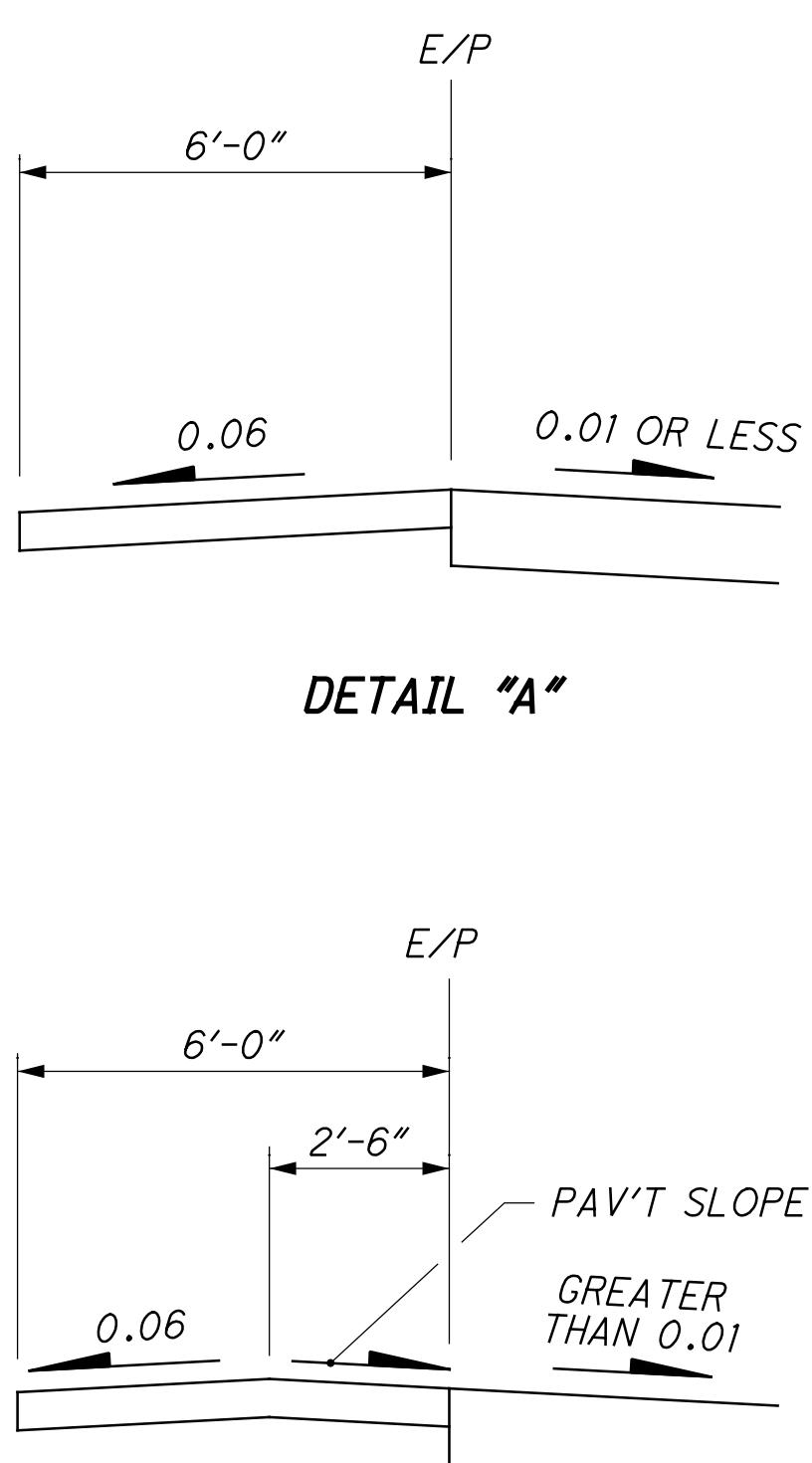
M A I N T E N A N C E O F T D A E E I C C U R B C L I M M A D V

CALCULATED
DAN

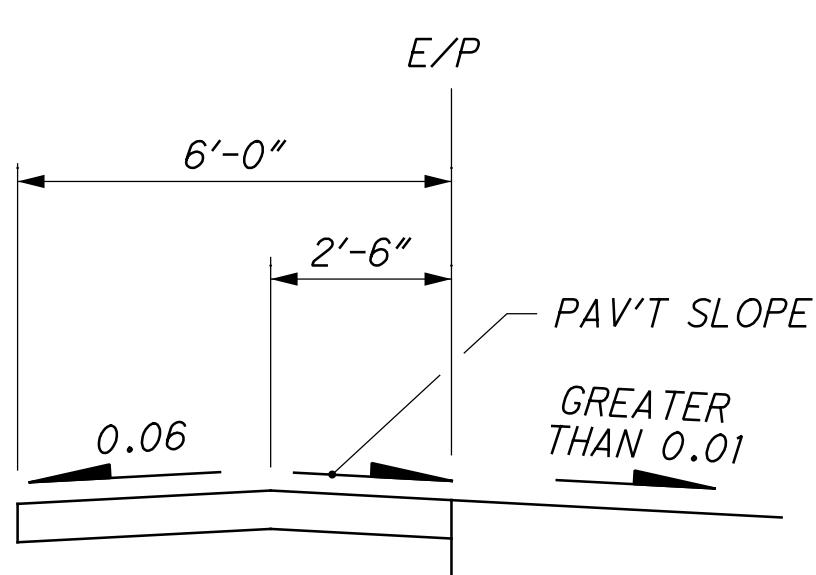
CALCULATED
DAN



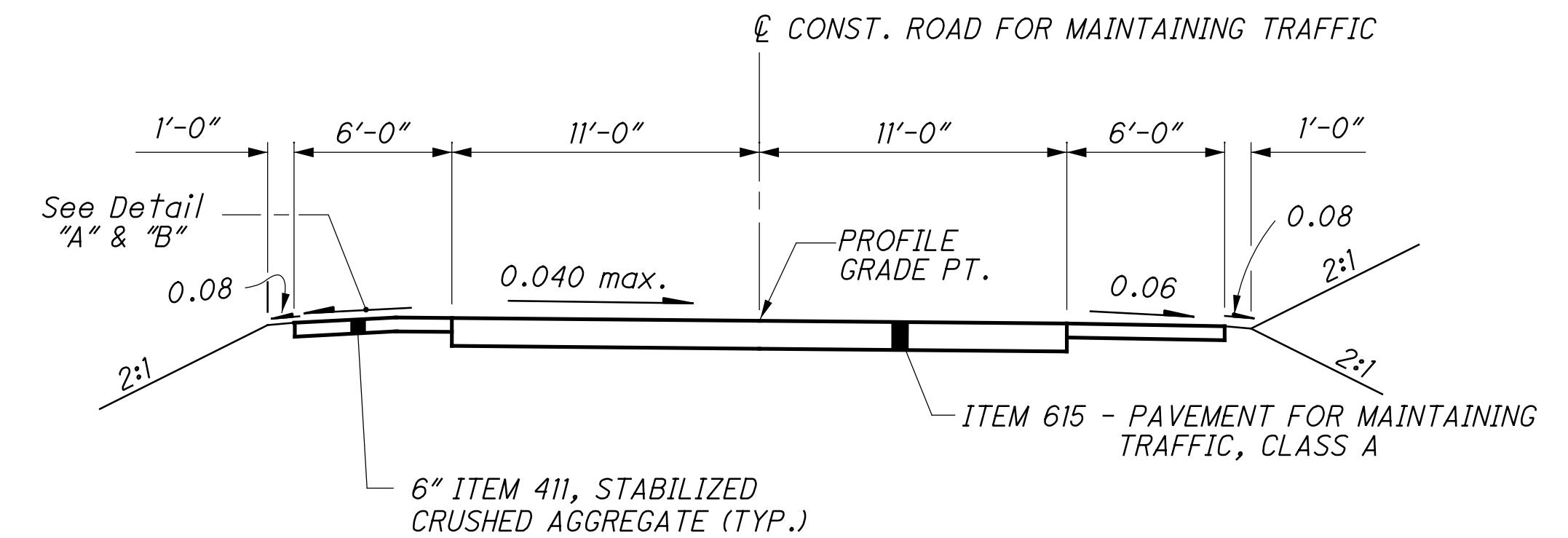
ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85
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"

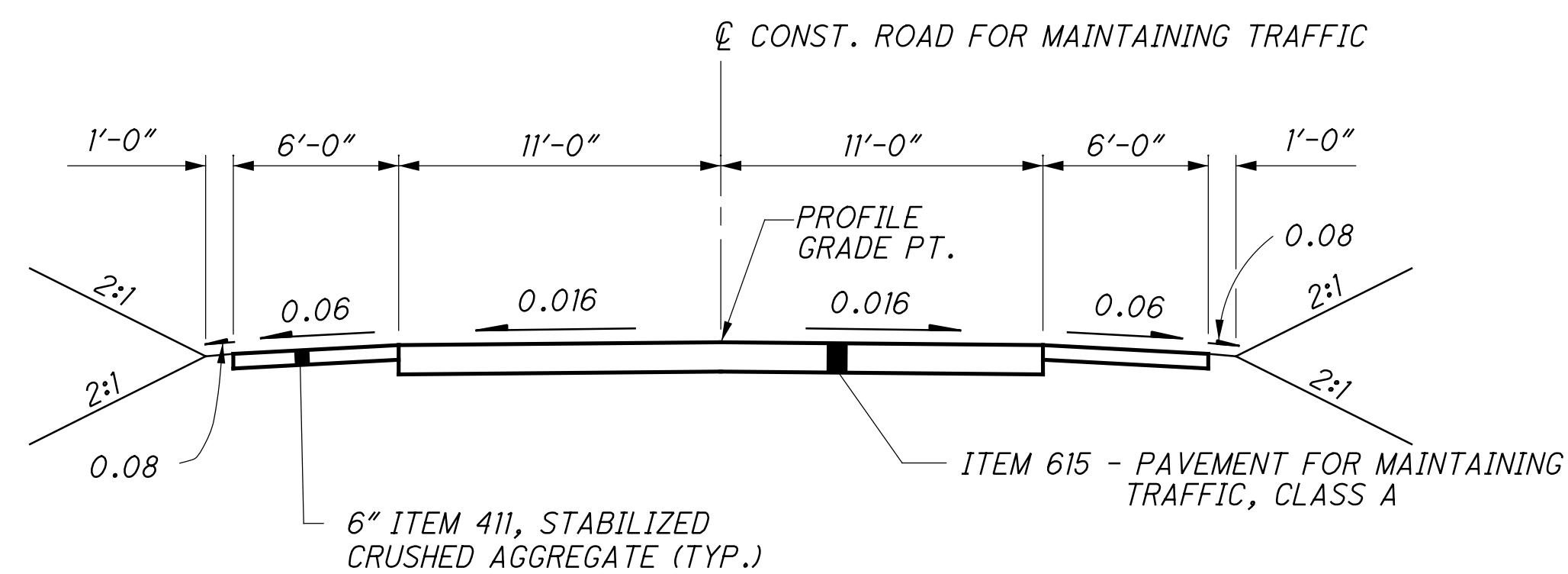


DETAIL "B"



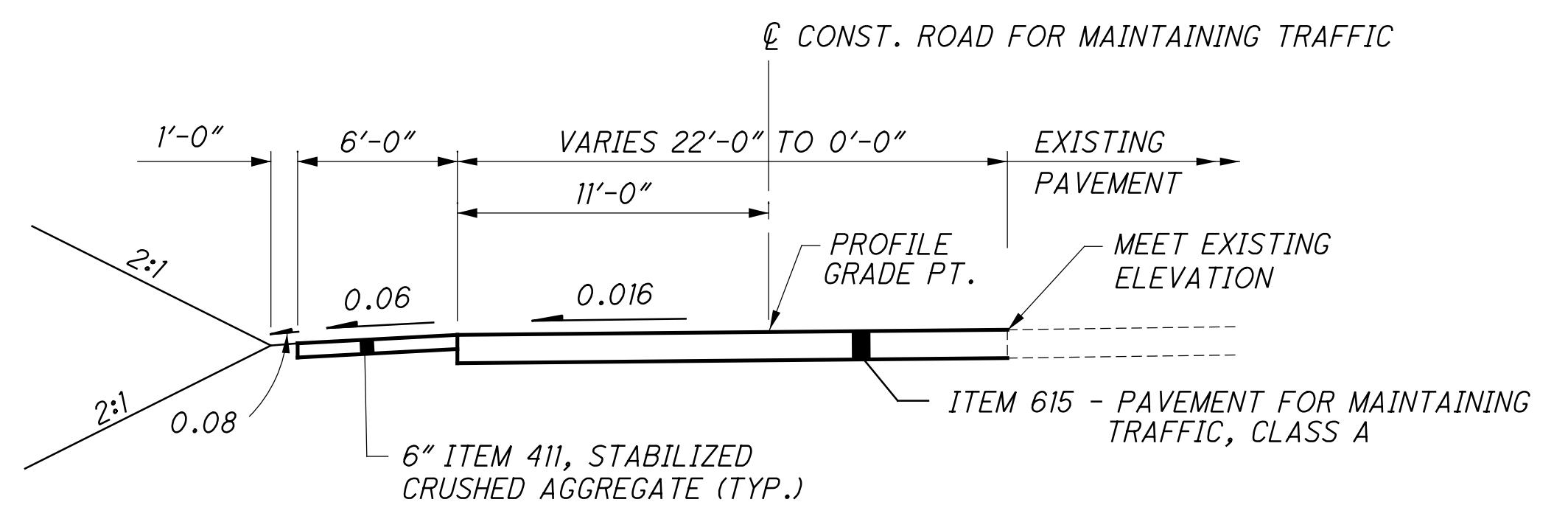
SUPERELEVATED SECTION

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

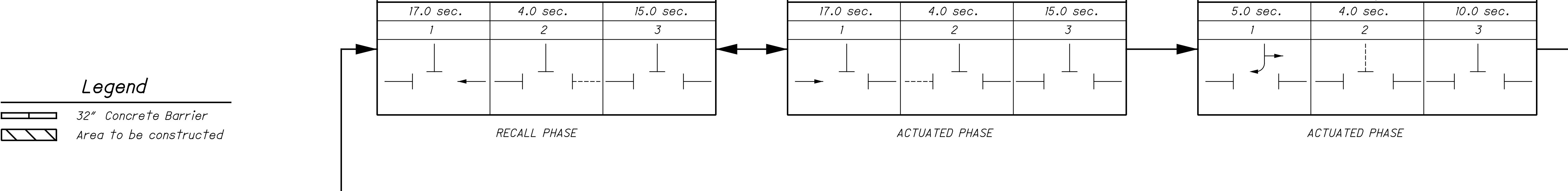
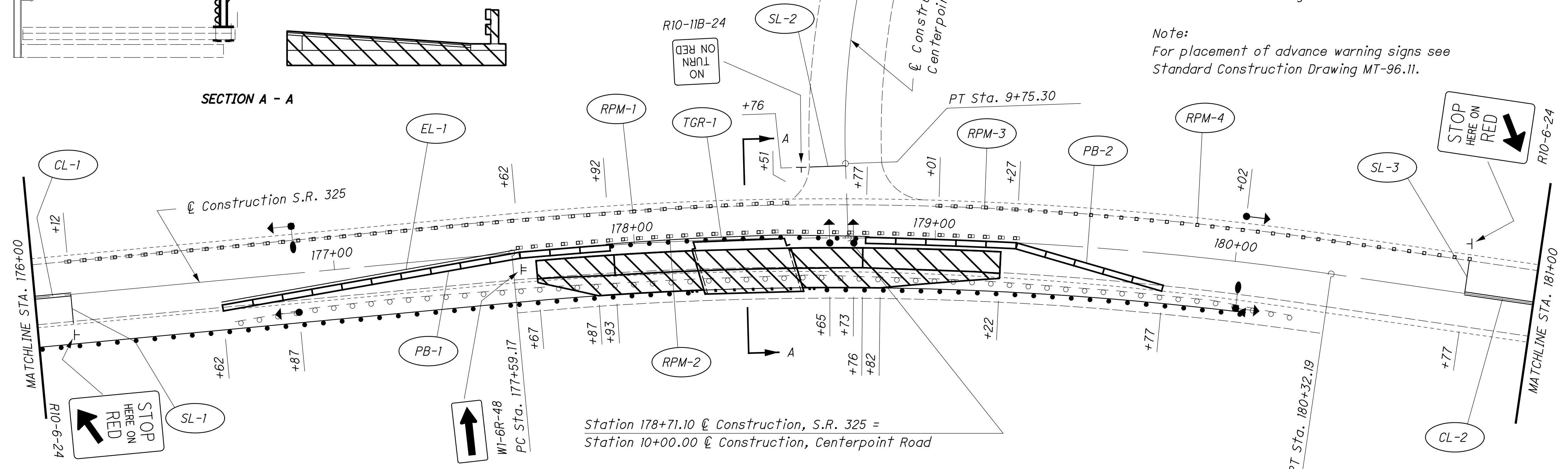
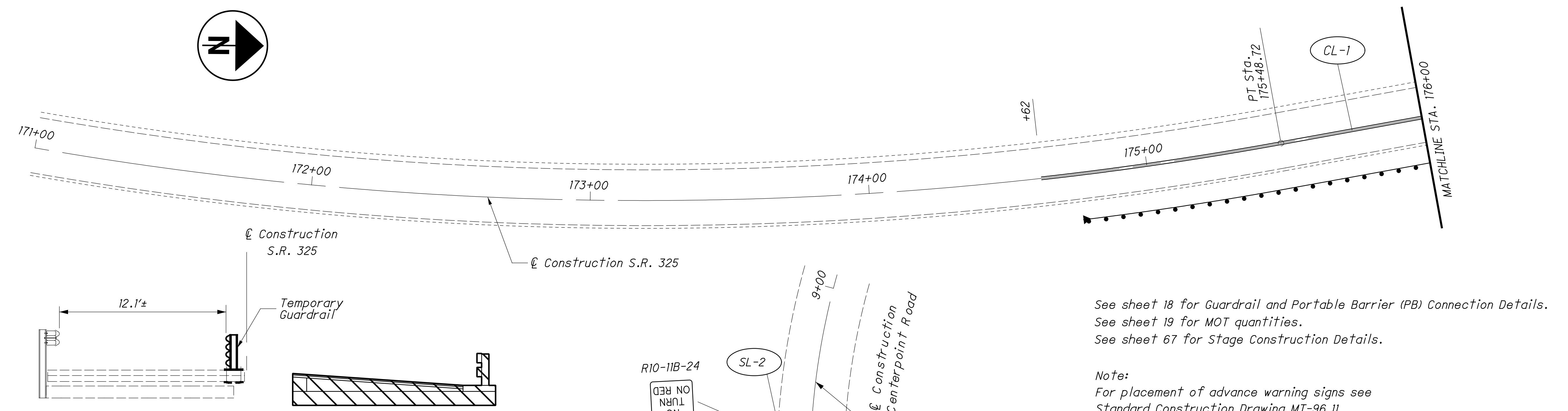
STA. 9+20.00 TO STA. 11+40.00



TAPER SECTION

STA. 13+50.00 TO STA. 18+10.24

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



PHASE 1 - SIGNAL TIMING DIAGRAM

GALL - 325 - (3.37)(3.78) MAINTENANCE OF TRAFFIC - PHASE 1
STRUCTURE 3.37 - STA. 171+00 TO STA. 181+00

DRAINAGE SUBSUMMARY

STA - 6 - 18.84

SHEET NO.	202	601	CATCH BASIN ABANDONED												SP 1307 - 1														
	EACH	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	EACH	EACH	EACH	EACH									
	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER												BENDS AND BRANCHES FOR INFORMATION ONLY												CALCULATED JKP CHECKED FGW				
117																													
118																													
119	1																												
120																													
121		23																											
122																													
123																													
124																													
125																													
126	1																												
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128																													
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135																													
135A		50																											
136																													
137																													
138																													
139																													
142																													
143																													
144																													
145																													
146																													
147																													
TOTALS CARRIED TO GENERAL SUMMARY		3	23	100	215	105	6	6	163	3196	3	1	5	2	56	71997	780	9087											

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. 5	CATCH BASIN, NO. 5A	4" SHALLOW PIPE UNDERDRAINS	DITCH EROSION PROTECTION	6"X6" TEE	6"X6" CROSS	6"X90° BEND
		FROM	TO		FT	EACH	CY	CY	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	FT	SY	EACH	EACH	EACH
D1	209 & 210	360+00	364+00	£												1				125			
D2	210		364+00	RT													1			250			
D3	154		363+60	LT&RT																			
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																197			
D9	210	364+00	365+35	£																226			
D10	210	364+00	365+75	LT																259			
D11	157		368+20	£																			
D12	157		368+20	LT																			
D13	157		368+20	RT			1	0.4															
D14	212	368+20	371+00	LT																125			
D15	212	368+20	371+00	£																125			
D16	212	368+20	371+00	RT																125			
R1		368+00		RT	20	1																	
U1		359+90	363+97	RT																407			1
U2		359+90	363+97	LT																407			1
U3		359+90	363+97	LT																814		1	1
U4		359+90	363+97	RT																814		1	1
U5		364+03	368+18	RT																415		1	
U6		364+03	368+18	RT																830		1	1
U7		364+03	368+18	LT																830		1	1
U8		364+03	368+18	LT																415		1	
U9		368+22	371+00	LT																556		1	1
U10		368+22	371+00	RT																556		1	1
U11		368+22	371+00	RT																278			1
U12		368+22	371+00	LT																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	X	X	X

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: JULY 2022	CALCULATED JKP FGW	
																		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 COMPACTI ON		
															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, TYPE C		
																		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		

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GENERAL SUMMARY

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	FIG. 1307-3(b)		SEE SHEET NO.
OFFICE CALCS									196							DATE: JULY 2022	
PAVEMENT																	
312										251	01000	312	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)			
4140										253	01000	4140	SY	PAVEMENT REPAIR			
9005										255	10011	9005	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC1, 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	13010	3892	SY	9" CONCRETE BASE, CLASS QC 1P			
127										407	10000	127	GAL	TACK COAT			
5813										408	10000	5813	GAL	PRIME COAT			
1029										451	14011	1029	SY	9" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN		12	
31690										451	15011	31690	SY	10" REINFORCED CONCRETE PAVEMENT, CLAS QC 1P, AS PER PLAN		12	
6783										452	13011	6783	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN		12	
50342										452	19001	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		
										1142	638	02900	1142	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, AWWA C900 DR18		
										1608	638	02800	1608	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, ASTM SDR 26		
										438	638	04800	438	FT	¾ COPPER SERVICE BRANCH		
										464	638	05300	464	FT	¾ 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		
TRU - 99 - 13.48																	
80 267																	

SHEET NUMBER								PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-3(c)	SEE SHEET NO.	CALCULATED JKP	CHECKED FGW			
	16	18	23	55		192	262														
										LS		503	11100	LS		RETAINING WALLS (WALL 1)					
										1124		503	21101	1124	CY	COFFERDAMS AND EXCAVATION BRACING					
										4766		870	10000	4766	SF	UNCLASSIFIED EXCAVATION, AS PER PLAN	108				
										1710		870	11100	572	CY	PREFABRICATED MODULAR RETAINING WALL	190				
										480		870	12000	480	FT	NATURAL SOIL					
										52		870	12100	52	FT	6" DRAINAGE PIPE, PERFORATED					
										2		870	14000	2	DAY	6" DRAINAGE PIPE, NON-PERFORATED					
										LS		870	15000	LS		ON-SITE ASSISTANCE					
																PMRW INSPECTION AND COMPACTION TESTING					
																BUILDING DEMOLITION					
										LS		202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 11-WD-1, 1 STORY BRICK BUILDING					
										LS		202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-T, 1 STORY BLOCK BUILDING					
										LS		202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-WL, 2 STORY BRICK BUILDING					
										LS		202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 19-T, 1 STORY METAL BUILDING					
																STRUCTURES OVER 20 FOOT SPAN					
																STRUCTURE TRU-99-1924 GENERAL SUMMARY	229				
																STRUCTURE TRU-99-2056 GENERAL SUMMARY	236				
																	190				
																MAINTENANCE OF TRAFFIC					
																LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE					
										10		614	11110	10	HOUR						
										5		614	12460	5	EACH	WORK ZONE MARKING SIGN					
										38		614	12470	38	EACH	WORK ZONE SPEED LIMIT SIGN					
										100		614	12500	100	EACH	REPLACEMENT SIGN					
										200		614	12600	200	EACH	REPLACEMENT DRUM					
																WORK ZONE RAISED PAVEMENT MARKER					
																1528					
																614	12800	1528	EACH		
																1201	13310	1201	EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)	
																14.00	20300	14.00	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE II	
																0.11	21300	0.11	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE II	
																0.26	21700	0.26	MILE	WORK ZONE CENTER LINE, CLASS II, 740.06, TYPE II	
																4.33	22000	4.33	MILE	WORK ZONE EDGE LINE, CLASS I, 4"	
																7.34	22300	7.34	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE II	
																48	26600	48	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE II	
																5692	28600	5692	FT	WORK ZONE GORE MARKING, CLASS II, 740.06, TYPE II	
																LS	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
																944	20001	944	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	
																30	10000	30	M GAL	WATER	
																10	20000	10	TON	CALCIUM CHLORIDE	
																30280	41101	30280	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	

TRU-99-13.48

SHEET NUMBER						PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-4	SEE SHEET NO.
OFFICE CALCS		64	68	97	165	175	01/NHS/ PV/COLS	02/NHS/PV	03/STR/PV						DATE: JULY 2022	
ROADWAY																
1000							1000			202	23000	1000	SY	PAVEMENT REMOVED		
	12							12		202	58700	12	EACH	MANHOLE ABANDONED		
			225				225			202	75000	225	FT	FENCE REMOVED		
			1				1			202	75250	1	EACH	GATE REMOVED		
ROADWAY ALTERNATES																
		500					500		X	606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIEFEN) (ALTERNATE 1)		9
		20					20		X	606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIEFEN) (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					2			659	00100	2	EACH	SOIL ANALYSIS TEST		
		44					44			659	00300	44	CY	TOPSOIL		
		400					400			659	10000	400	SY	SEEDING AND MULCHING		
		20					20			659	14000	20	SY	REPAIR SEEDING AND MULCHING		
		20					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 (1½")		
1265							1265			301	56000	1265	CY	ASPHALT CONCRETE BASE, PG64-22, (449)		
50							50			301	56100	50	CY	ASPHALT CONCRETE BASE, PG64-22, (449), (DRIVEWAYS)		
2627							986	1641		304	20000	2627	CY	AGGREGATE BASE		
5333							5333			305	12010	5333	SY	8" CONCRETE BASE, CLASS QC 1P		
5695							3647	2048		407	10000	5695	GAL	TACK COAT		
18								18		441	70500	18	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (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 1½" 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		

FRA-11-26.48

27

188

CALCULATED

DMK

CHECKED

CM

CALCULATED

DMK

CHECKED

CM

27

188

FRA-11-26.48

SHEET NUMBER				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-5	SEE SHEET NO.
87	96			01/NHS/PV	02/S<2/PV/ATB						DATE: JULY 2022	
TRAFFIC CONTROL												
161				161		621	00100	161	EACH	RPM		
146.5				146.5		630	02100	146.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
229.8				229.8		630	03100	229.8	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
4				4		630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED		
96.0				96.0		630	80100	96.0	SF	SIGN, FLAT SHEET		
11				11		630	85000	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE		
14				14		630	86002	14	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
3.29				2.49	0.80	644	00100	3.29	MILE	EDGE LINE, 4"		
1.36				1.06	0.30	644	00200	1.36	MILE	LANE LINE, 4"		
1.25				0.98	0.27	644	00300	1.25	MILE	CENTER LINE		
1368				430	938	644	00400	1368	FT	CHANNELIZING LINE, 8"		
146				146		644	00500	146	FT	STOP LINE		
313				313		644	00620	313	FT	CROSSWALK LINE, 12"		
450				180	270	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE		
24				24		644	00900	24	SF	ISLAND MARKING		
9				2	7	644	01300	9	EACH	LANE ARROW		
8				2	6	644	01410	8	EACH	WORD ON PAVEMENT, 96"		
TRAFFIC SIGNALS												
122				122		625	25400	122	FT	CONDUIT, 2", 725.04		
180				180		625	25500	180	FT	CONDUIT, 3", 725.04		
182				182		625	29000	182	FT	TRENCH		
120				120		625	29400	120	FT	TRENCH IN PAVED AREA		
2				2		625	30706	2	EACH	PULL BOX, 725.08, 24"		
7				7		625	32000	7	EACH	GROUND ROD		
4				4		632	04910	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, ALUMINUM (BLACK)		
1				1		632	04916	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, ALUMINUM (BLACK)		
2				2		632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, ALUMINUM (BLACK)		
8				8		632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD		
2				2		632	27004	2	EACH	LOOP DETECTOR UNIT		
3				3		632	27008	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE		
139				139		632	30200	139	FT	MESSENDER WIRE, 7 STRAND, $\frac{3}{8}$ DIAMETER WITH ACCESSORIES		
823				823		632	40300	823	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG		
1168				1168		632	40500	1168	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		
100				100		632	62810	100	FT	INTERCONNECT CABLE, MISC.: INTEGRAL MESSENDER WIRE TYPE, 7 CONDUCTOR, NO. 12 AWG		95
1601				1601		632	65200	1601	FT	LOOP DETECTOR LEAD-IN CABLE		
25				25		632	67200	25	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG		
1				1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN		95
2				2		632	85000	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10		
5				5		632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE		
1				1		632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
1				1		633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN		95
1				1		633	67100	1	EACH	CABINET FOUNDATION		
1				1		633	67200	1	EACH	CONTROLLER WORK PAD		
1				1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN		95

ATB - 208 - 13.4.3

36
108

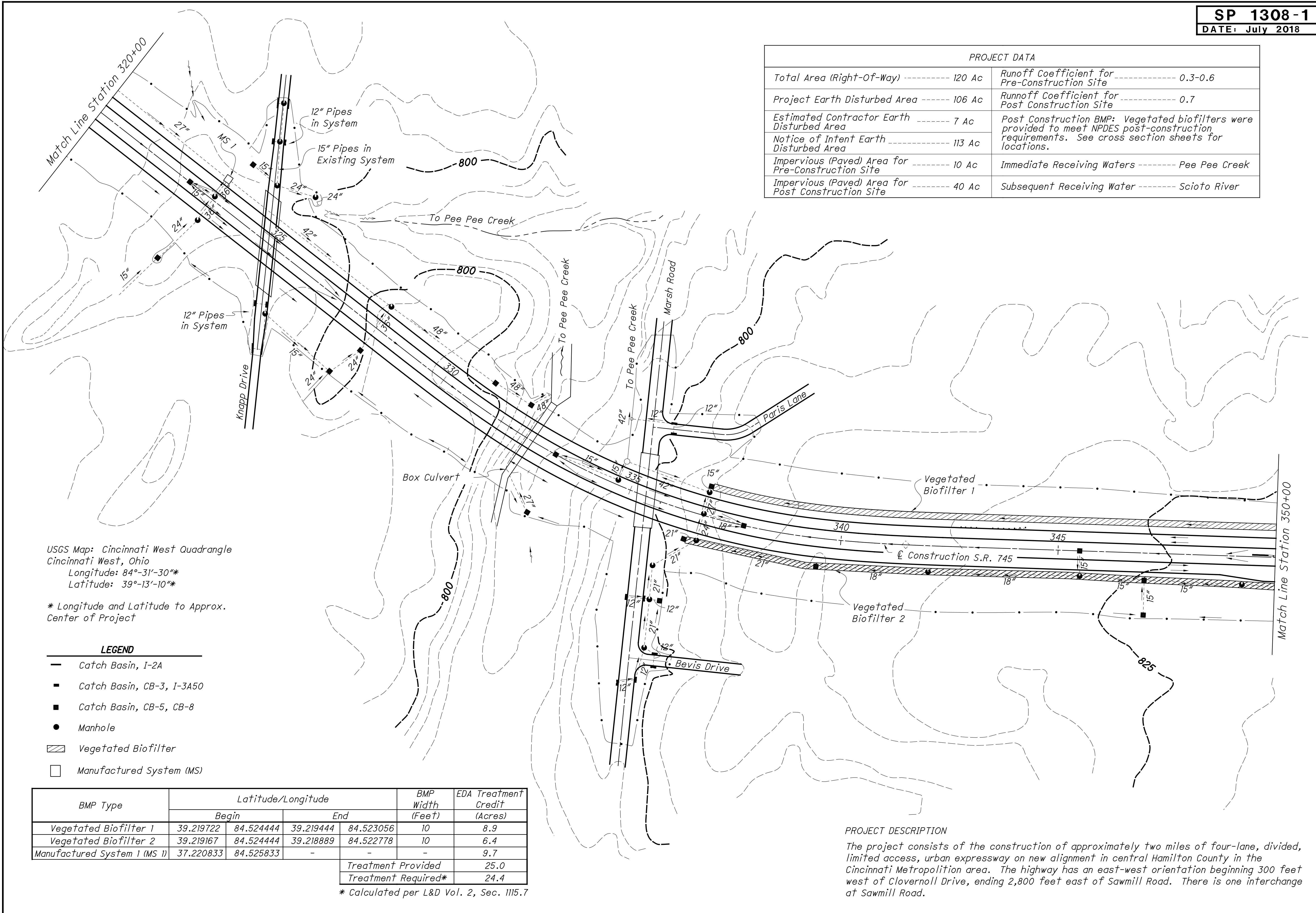
GENERAL SUMMARY

CALCULATED
JKP
CHECKED
FGW



200
100
50
0
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	
Notice of Intent Earth Disturbed Area	113 Ac
Impervious (Paved) Area for Pre-Construction Site	10 Ac
Post Construction BMP: Vegetated biofilters were provided to meet NPDES post-construction requirements. See cross section sheets for locations.	
Impervious (Paved) Area for Post Construction Site	40 Ac
Immediate Receiving Waters -----	Pee Pee Creek
Subsequent Receiving Water -----	Scioto River

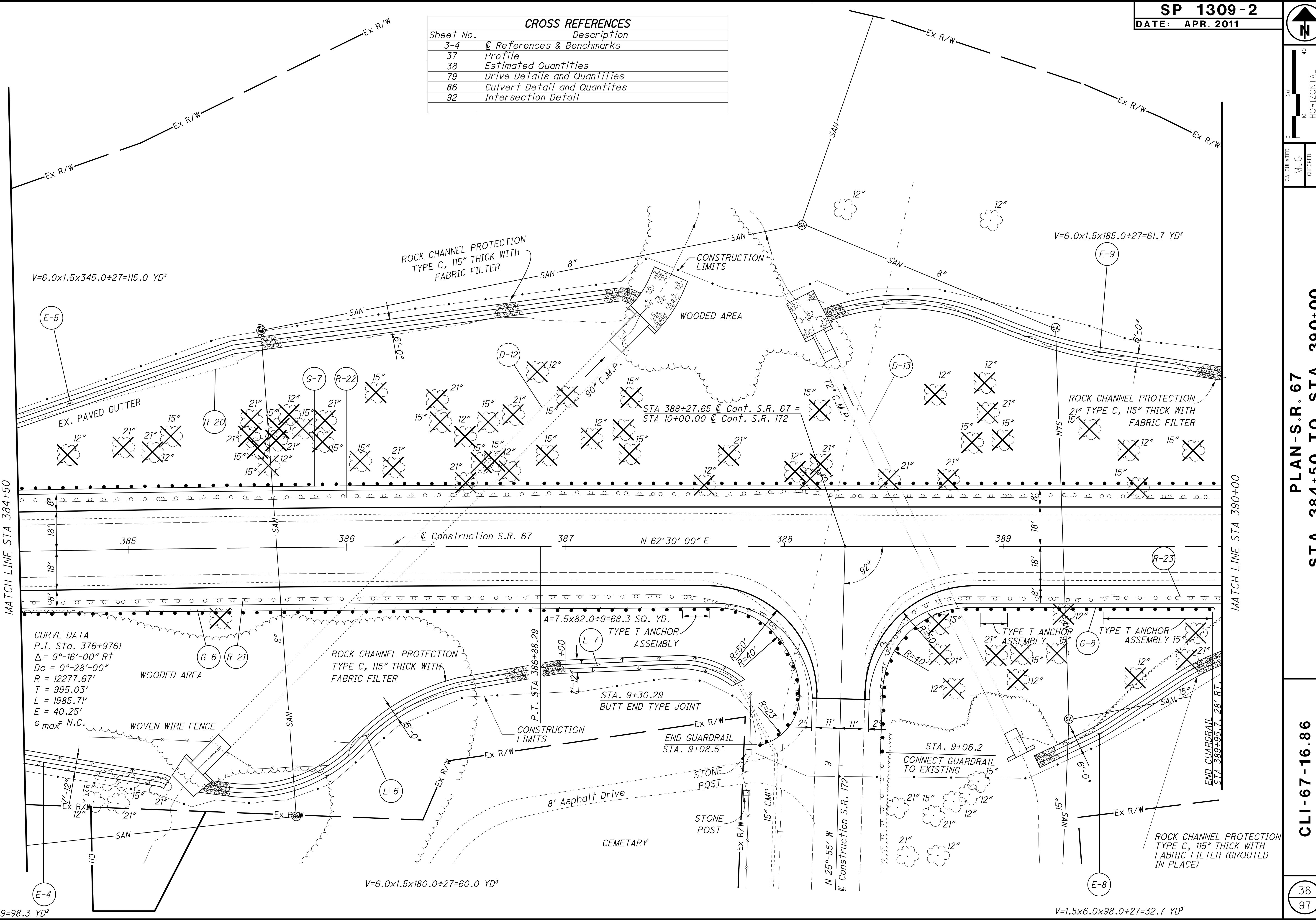


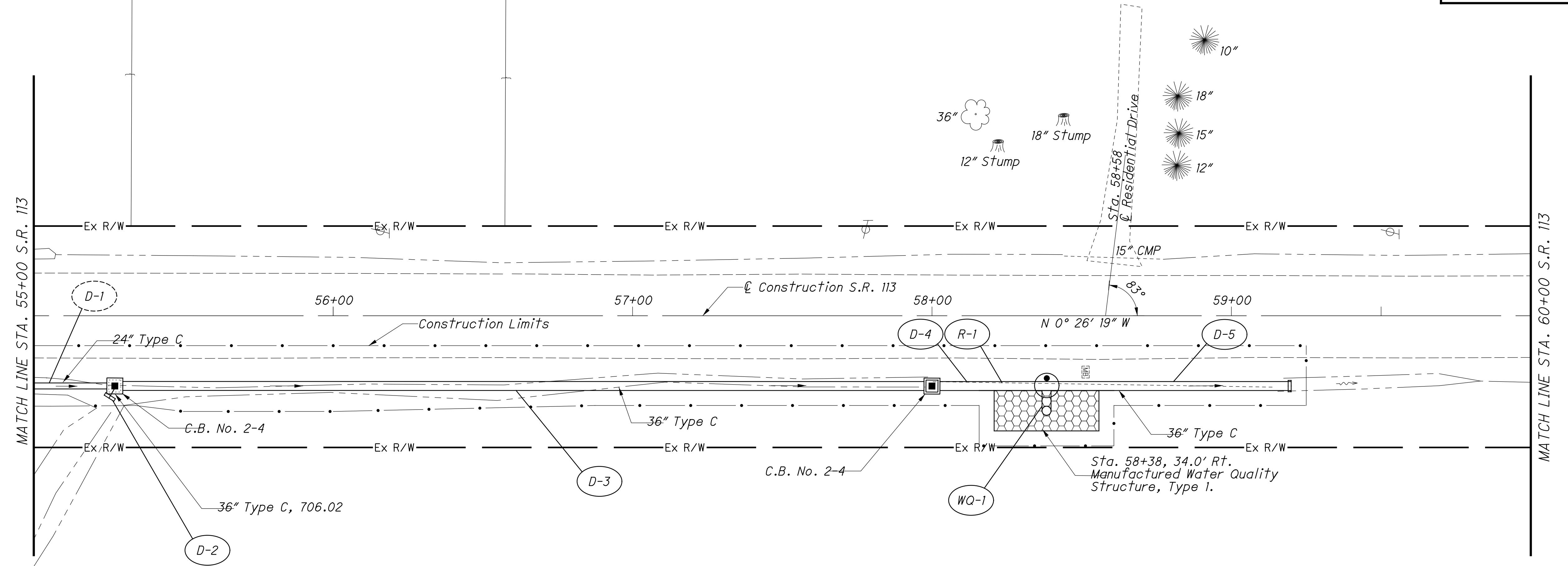
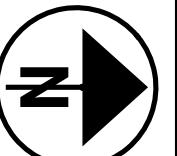
REF NO.	SHEET NO.	STATION		SIDE	202		601	602	611							SP 1309 -1(b)			DATE: JULY 2022	BENDS AND BRANCHES	FOR INFO. ONLY	CALCULATED MJC	CHECKED DSN						
					CATCH BASIN REMOVED	PIPE REMOVED, 24" AND UNDER	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	24" CONDUIT, TYPE A, 706.02'	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE C	6" CONDUIT, TYPE F	6" CONDUIT, AS PER PLAN	EACH	EACH	EACH	EACH	EACH	EACH	DATE: JULY 2022	BENDS AND BRANCHES	FOR INFO. ONLY	CALCULATED MJC	CHECKED DSN			
		FROM	TO		EACH	FT	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	FT	COMBINATION CURB AND GUTTER, TYPE 2	4" SHALLOW PIPE UNDERDRAINS	605	609								
C-1	31-32,34	362+00	373+00	R†																								1100	
C-2	31-32	362+00	366+93	L†																								532	
C-3	32,34	367+37	371+67	L†																								458	
R-1	31	360+97		R†	1																								
R-2	31 & 32	365+16	366+30	R†	1	114																							
R-3	32	366+89	367+33	R†			44																						
R-4	32	367+28	367+35	R†			28																						
R-5	32	367+56	368+03	R†			47																						
R-6	32	368+65	369+13	R†			48																						
R-7	32	369+46	370+50	R†			104																						
R-8	32 & 34	370+83	372+00	R†	1	117																							
D-1	31 & 55	362+35		L† & RT			2	0.9	24																				
D-2	31	365+15		R†																									
D-3	31	365+15	365+50	R†																									
D-4	31	365+50	365+80	R†																									
D-5	31 & 32	365+80	366+50	R†																									
D-6	32	366+42	366+62	L†																									
D-7	32	366+50		R†																									
D-8	32	366+50	367+47	R†																									
D-9	32	367+27	367+47	R†																									
D-10	32	367+47	368+50	R†																									
D-11	32	368+50		R†																									
D-12	32	368+50	369+32	R†																									
D-13	32	369+32	369+98	R†																									
D-14	32	369+98		R†																									
D-15	32	369+98	370+70	R†																									
D-16	32	370+70	371+45	R†																									
S-1	31 & 55	362+55		R†																									
S-2	32 & 57	366+36		R†																									
S-3	32 & 57	369+40		R†																									
U-1	31	362+00	365+15	R†																									305
U-2	31 & 32	362+00	366+42	L†																									1
U-3	31 & 32	365+20	366+50	R†																									120
U-4	32	366+55	368+50	R†																									185
U-5	32	368+55	369+98	R†																									133
U-6	32	367+55	371+45	L†																									382
U-7	32 & 34	370+03	372+00	R†																									187
TOTALS CARRIED TO GENERAL SUMMARY					3	502	2	0.9	24	70	495	147	65	25	70	1	2	1	8	5	1744	2090							
CLI - 67 - 16.86					ESTIMATED QUANTITIES - STA. 360+50 TO STA. 371+50																						33		



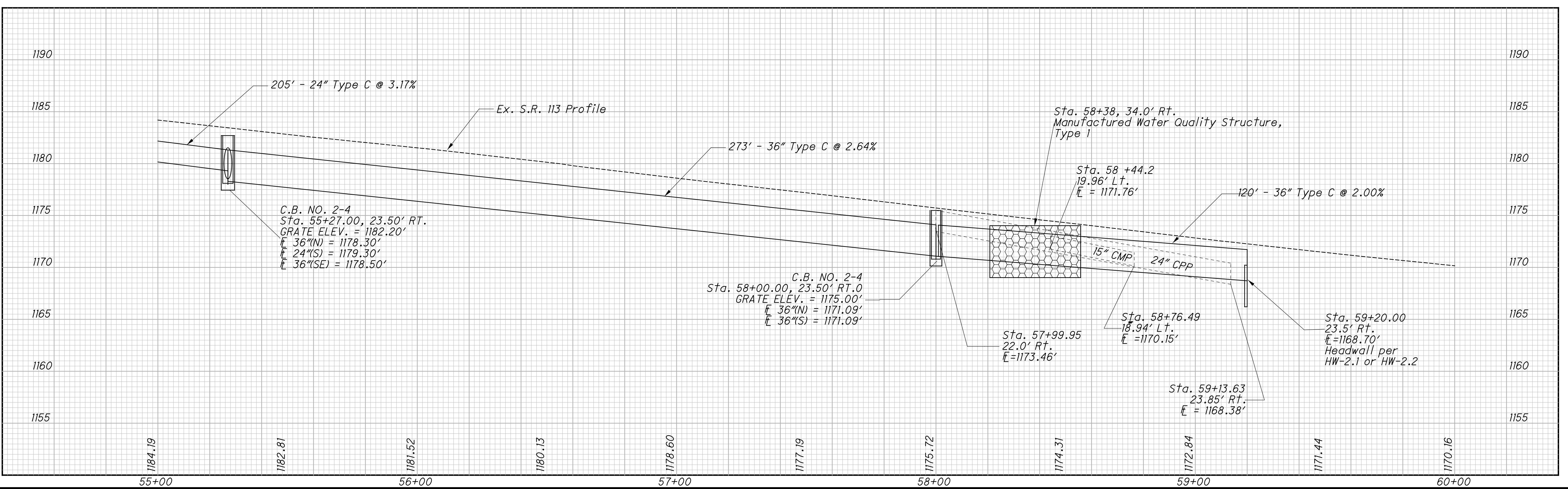
CROSS REFERENCES	
Sheet No.	Description
3-4	References & Benchmarks
37	Profile
38	Estimated Quantities
79	Drive Details and Quantities
86	Culvert Detail and Quantities
92	Intersection Detail

pw:\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\03 Standards\Sample Plans\v8i\SP1309\SP1309-2_2011-04.dgn Sheet 2/9/2022 3:36:36 PM tpetros





For Quantities, See Sheet 20.

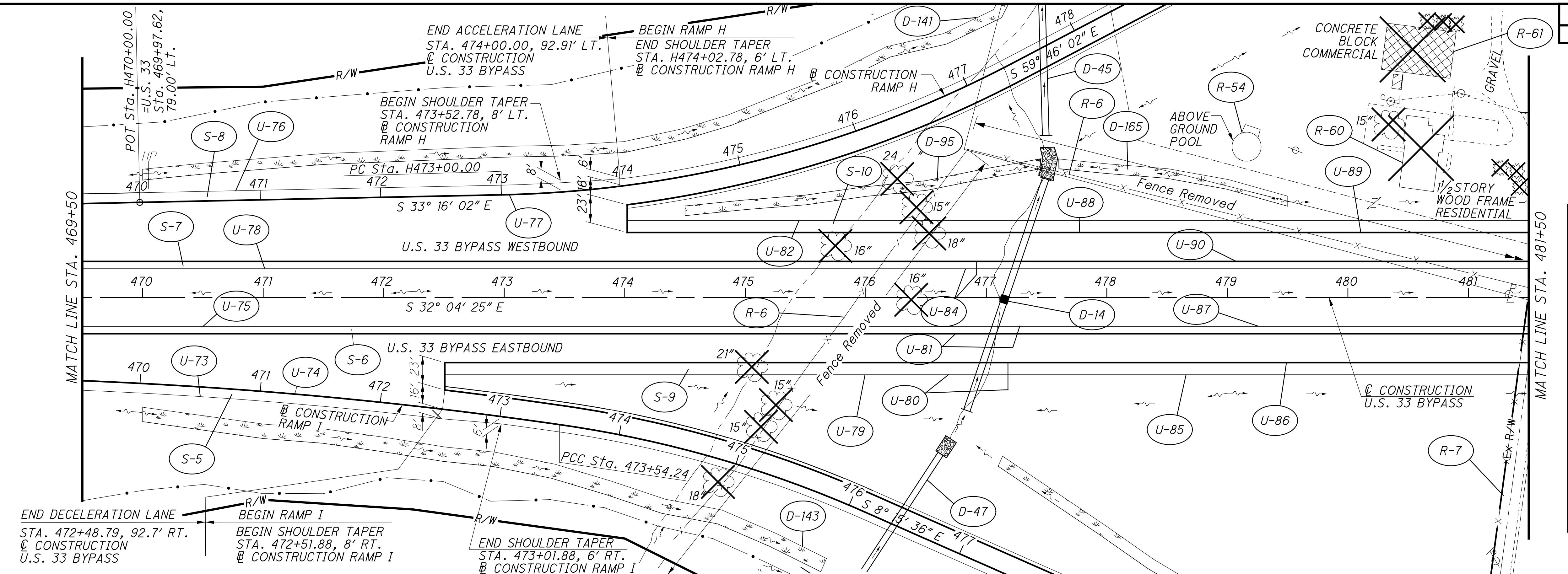
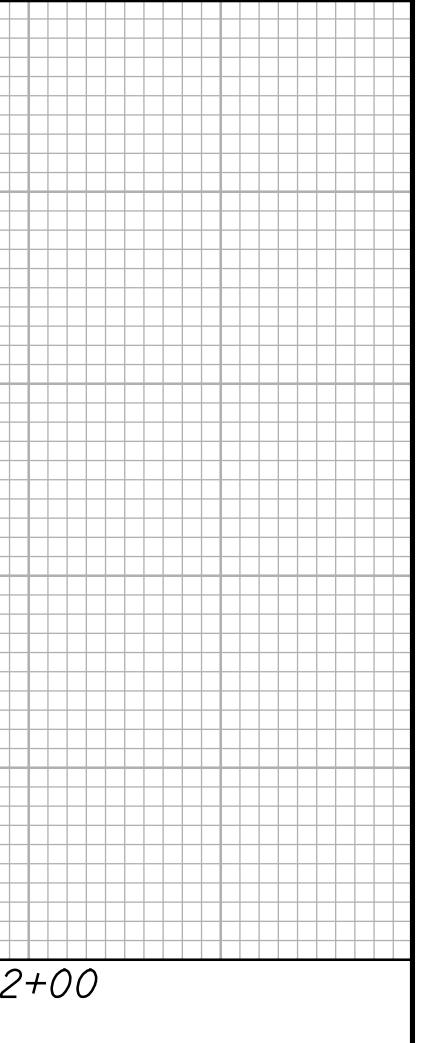
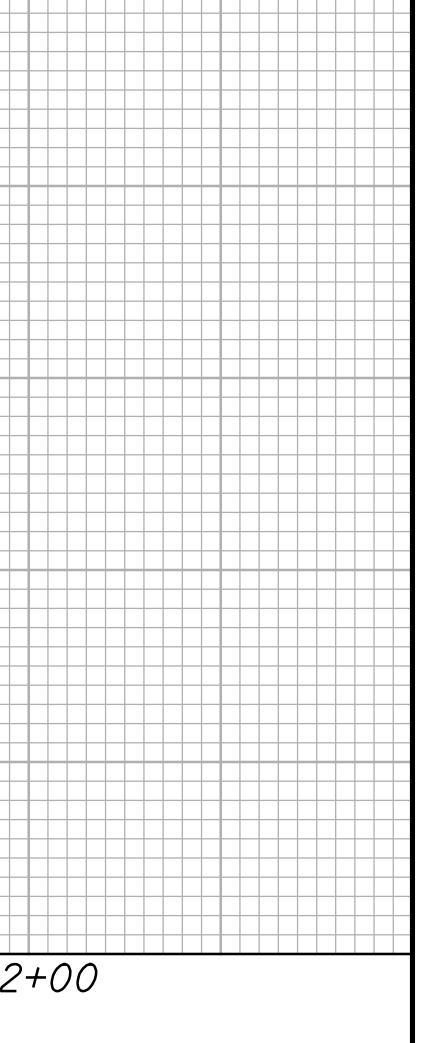


93
739

PLAN AND PROFILE - U.S. 33 BYPASS

STA. 469+50 TO STA. 418+50

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

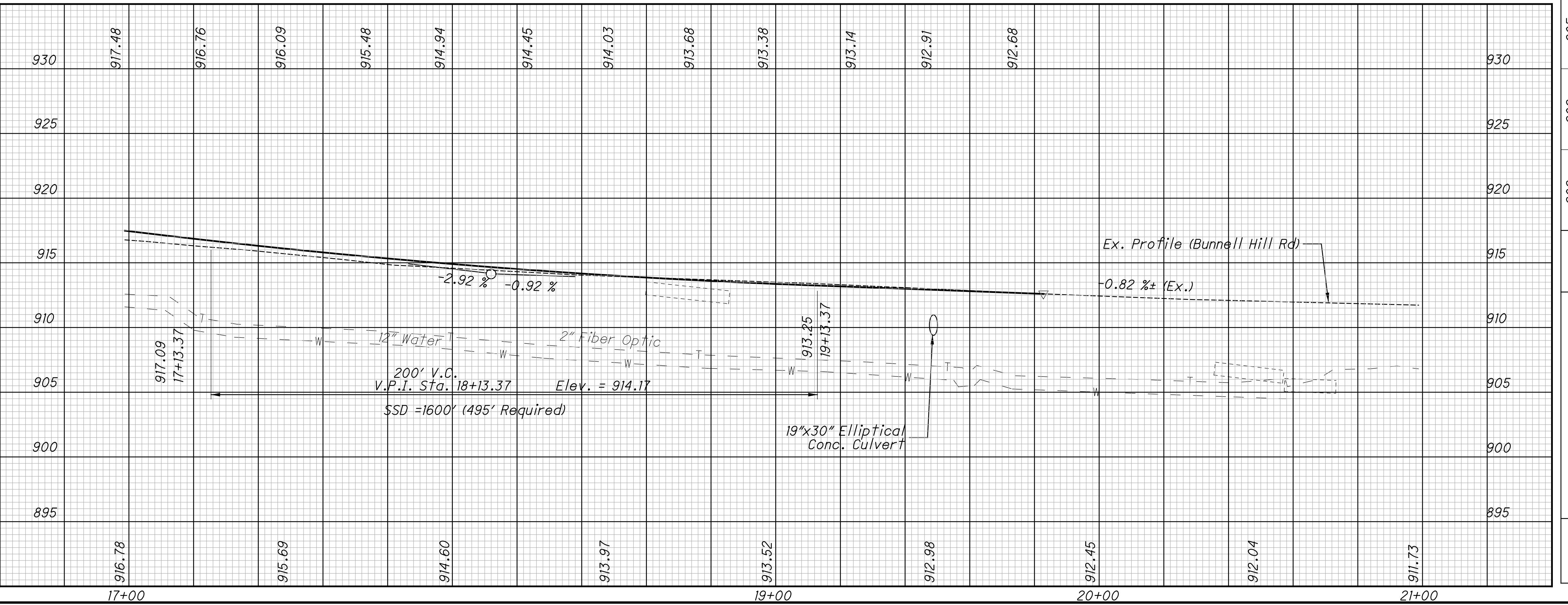
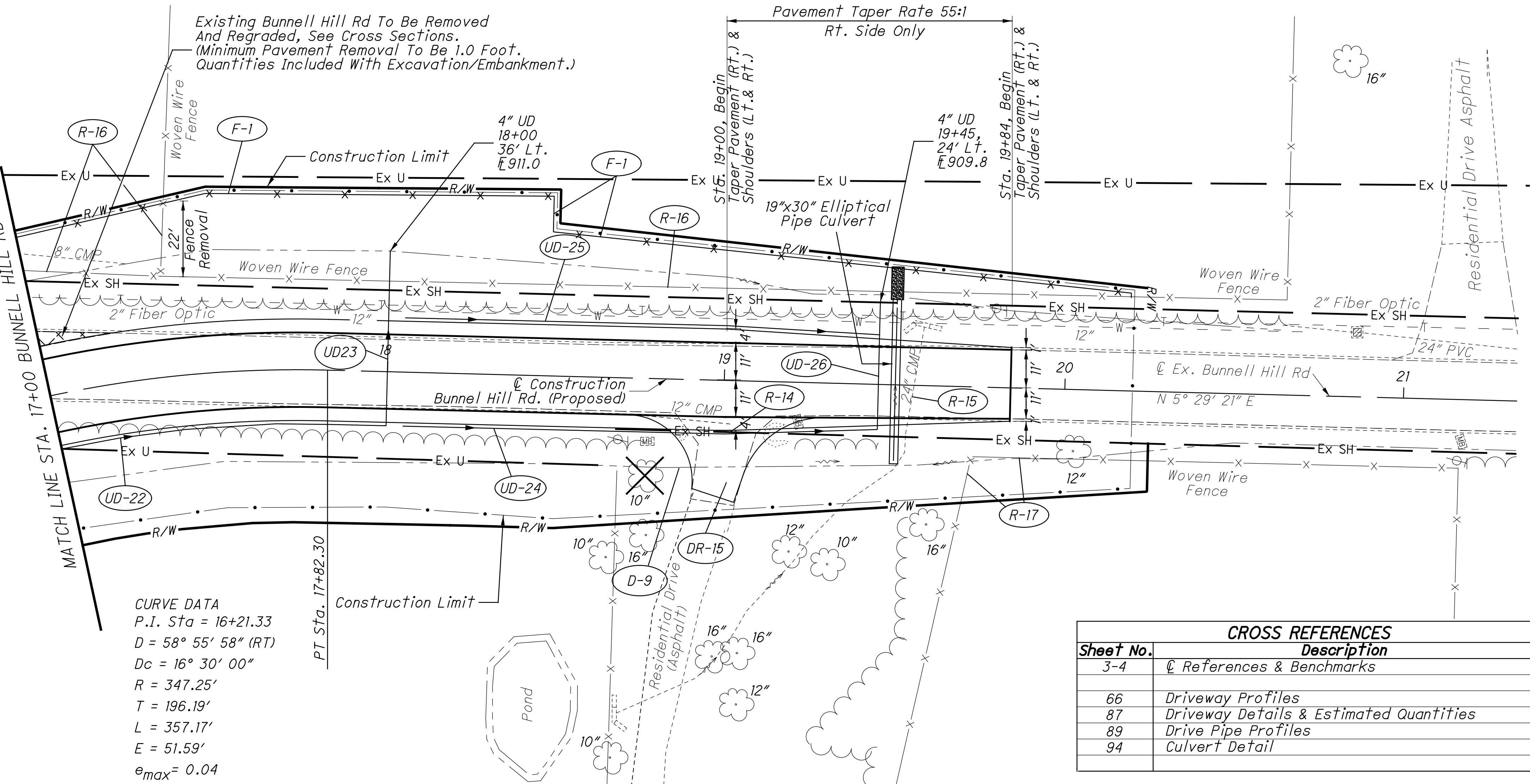
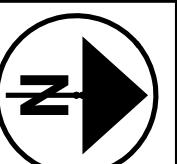


FAI-33-13.25

CALCULATED
CHECKED
LJS

CHG

100
50
25
Horizontal Scale in Feet



REF NO.	STATION	SIDE	PIPE REMOVED, 24" AND UNDER		4" SHALLOW PIPE UNDERDRAINS (24" DEEP)		611	PRECAST REINFORCED CONCRETE OUTLET
			FROM	TO	FT	FT		
R-14	18+86				26			
R-15	19+52							
R-16	16+60							
R-17	19+70							
UD-22	17+00							
UD-23	18+00							
UD-24	18+05							
UD-25	18+05							
UD-26	19+45							
D-9	18+83							
F-1	16+62							
TOTALS CARRIED TO GENERAL SUMMARY								
	57		470		96	280	390	33
								2

WAR-48.19.40**PLAN AND PROFILE - BUNNELL HILL RD STA. 17+00 TO STA 21+00**

(30)
(130)

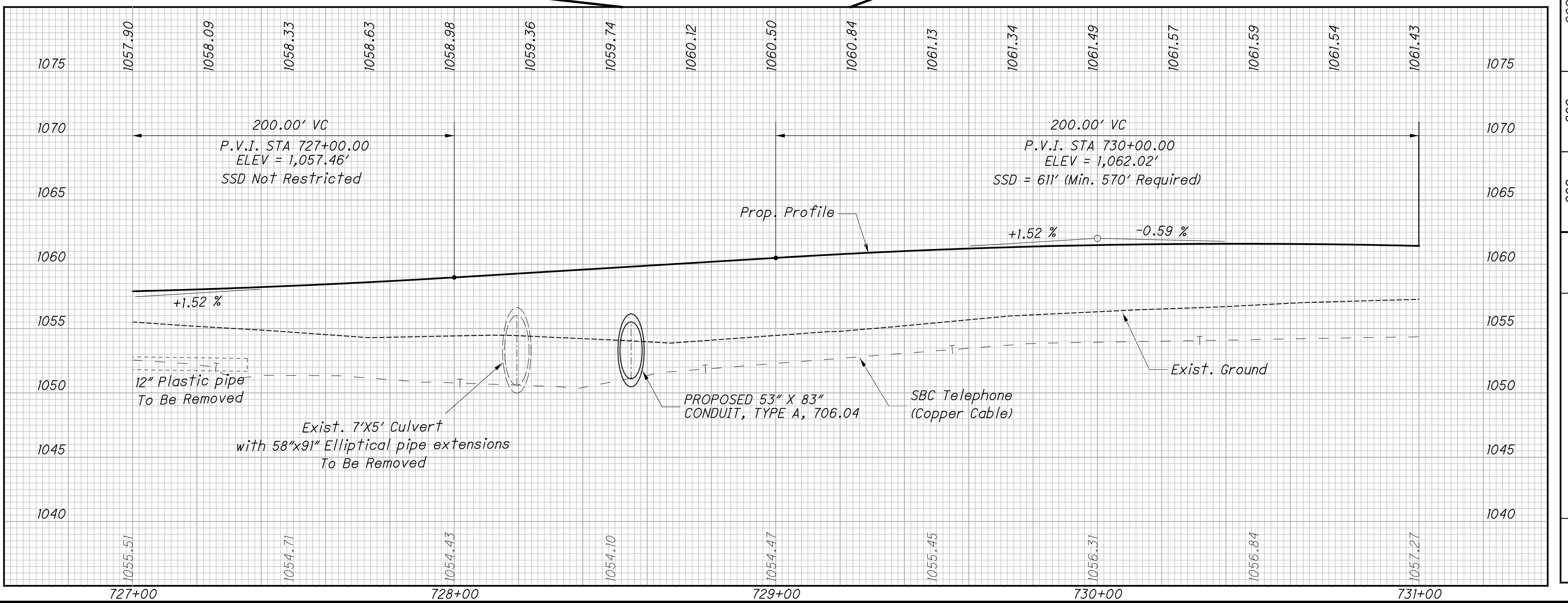
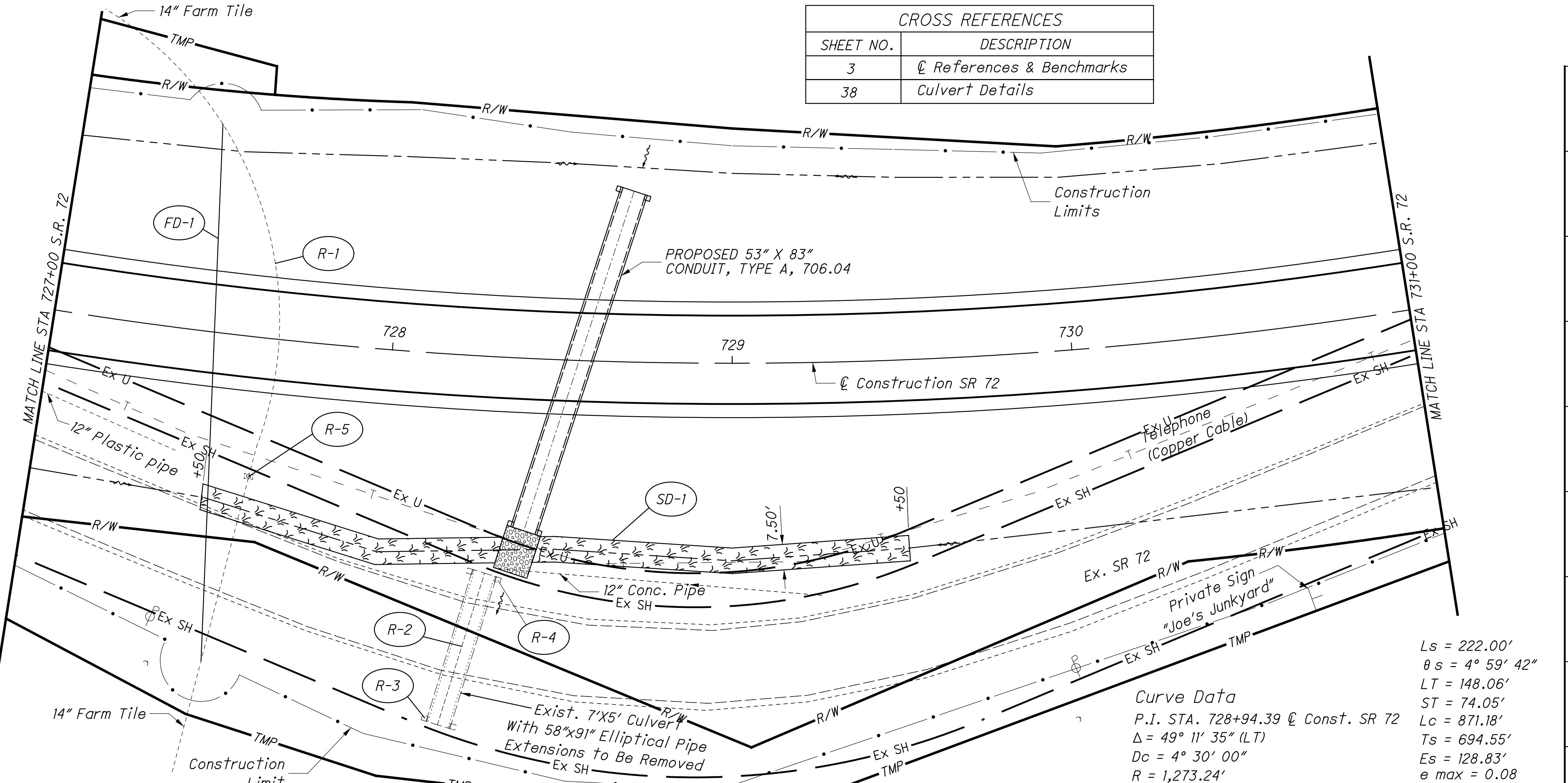
HORIZONTAL SCALE IN FEET

40
20
10

0



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



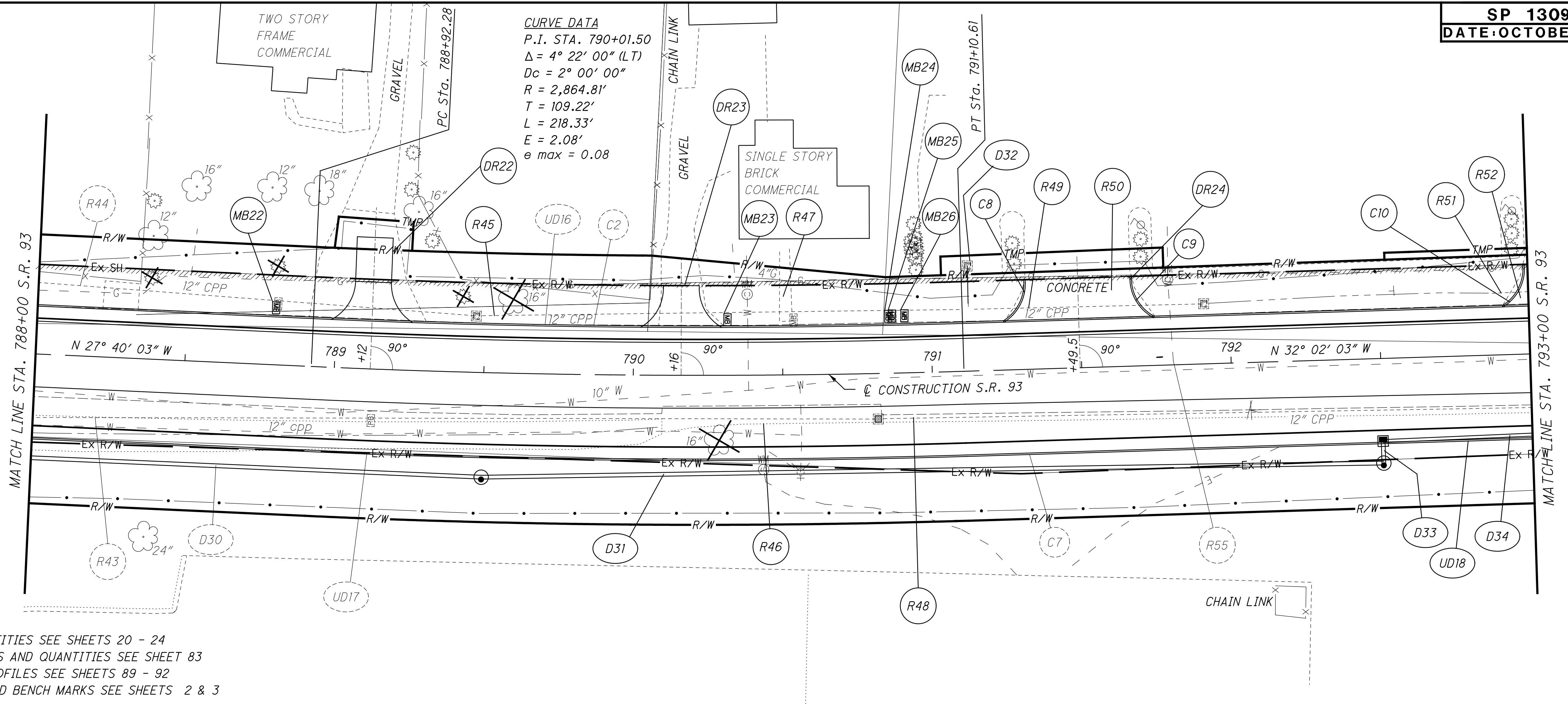
REF NO.	STATION	SIDE	TO	FROM	HEADWALL REMOVED	PIPE REMOVED, 24" AND UNDER	REMOVAL MISC.: 7'X5' CONCRETE BOX CULVERT WITH 58" X 9" ELLIPTICAL PIPE EXTENSIONS	EACH	FT	SY	PLAN AND PROFILE	
											GENERAL SUMMARY	CALCULATED
R-1	727+43		727+56	727+43	RT & LT	RT	15" CONDUIT, TYPE B	1			1075	1057.90
R-2	728+15		728+22	728+15	RT	RT	2'X2' FARM TILE JUNCTION BOX	1			1070	1058.09
R-3	728+17		728+23	728+17	RT	RT		1			1065	1058.33
R-4	728+27		728+35	728+27	RT	RT		1			1060	1058.63
R-5	728+51		728+53	728+51	RT	RT		1			1055	1058.98
FD-1	727+43		727+56	727+43	RT & LT	RT					1045	1059.36
SD-1	727+50		729+50	727+50	RT	RT					1040	1059.74
TOTALS CARRIED TO				2	184	1		1			1040	1060.12
											1040	1060.50
											1045	1060.84
											1050	1061.13
											1055	1061.34
											1060	1061.49
											1065	1061.57
											1070	1061.59
											1075	1061.54
											1075	1061.43

GRE-72-13.67

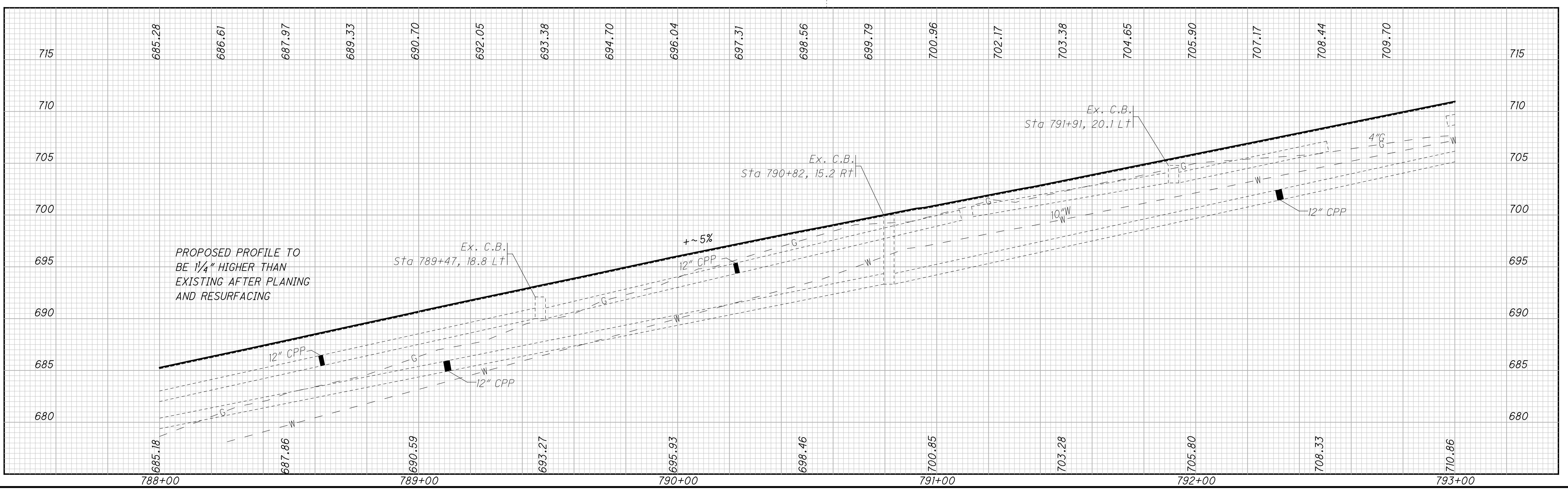
STA 727+00 TO 731+00

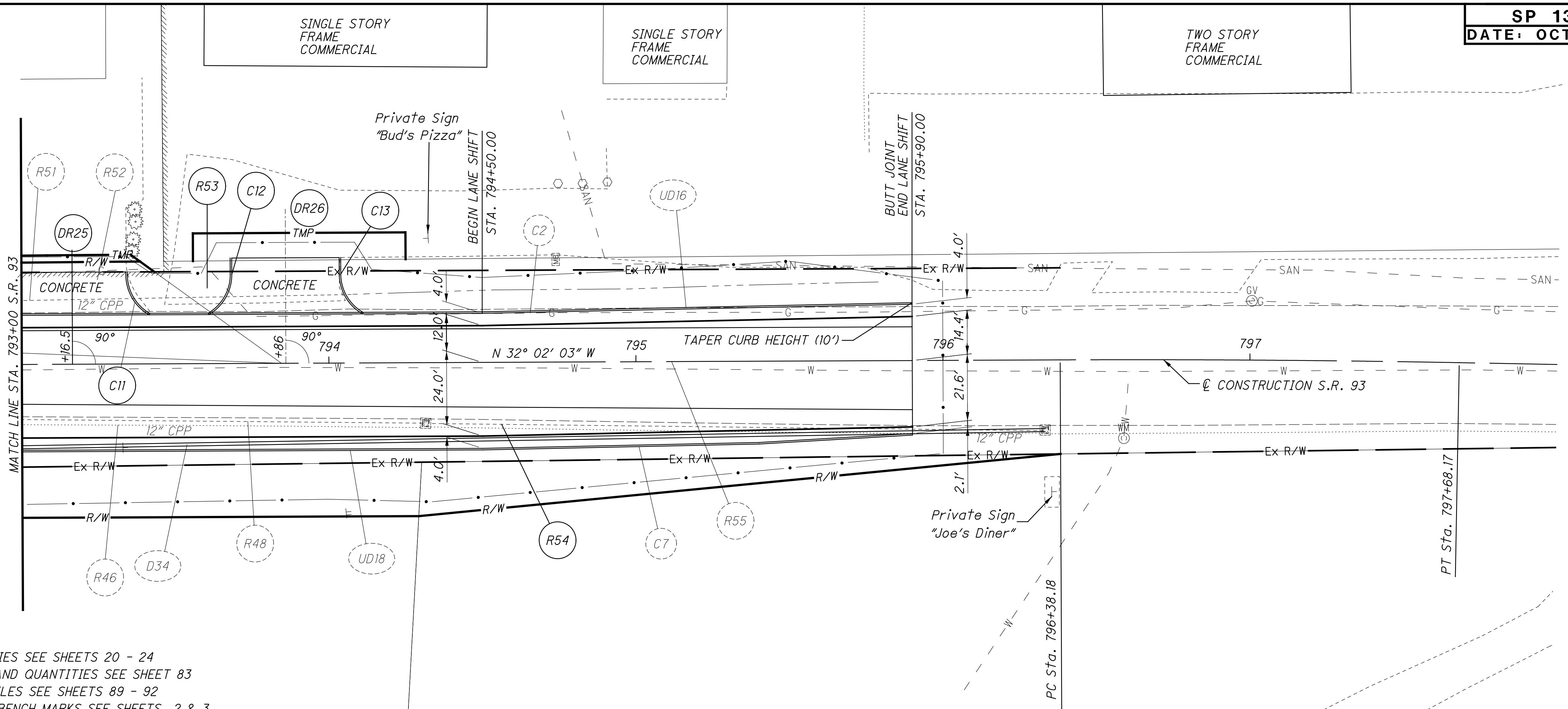
51

HORIZONTAL SCALE IN FEET

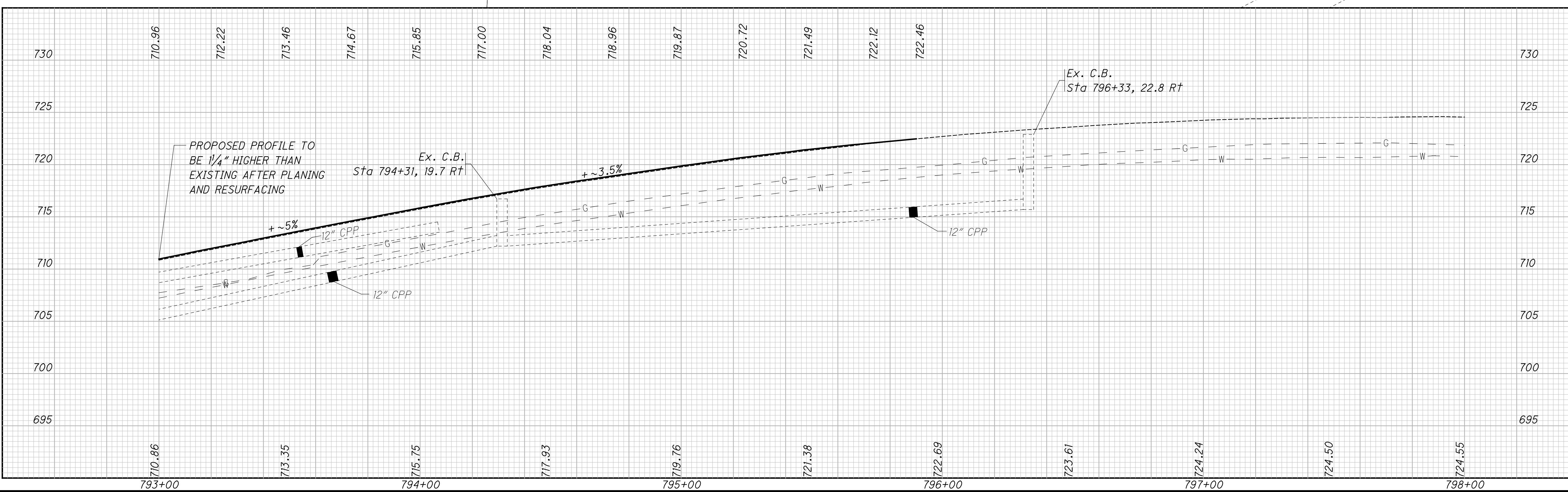


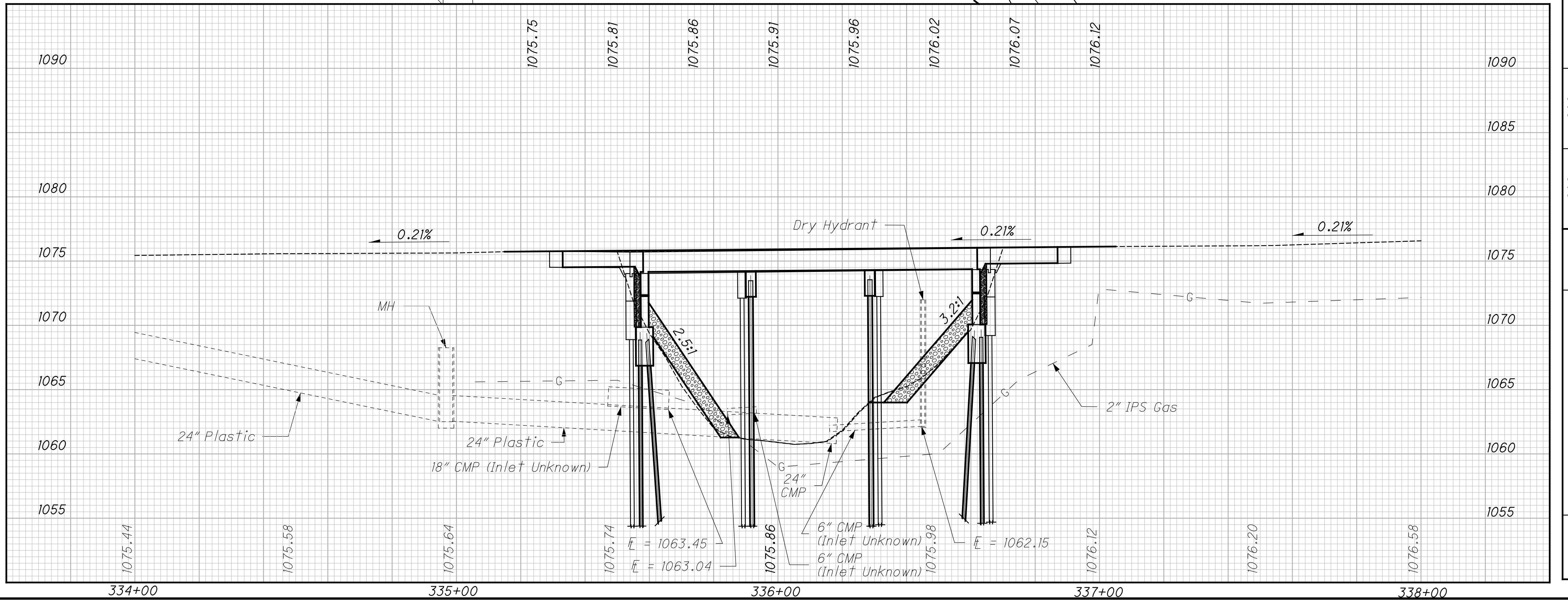
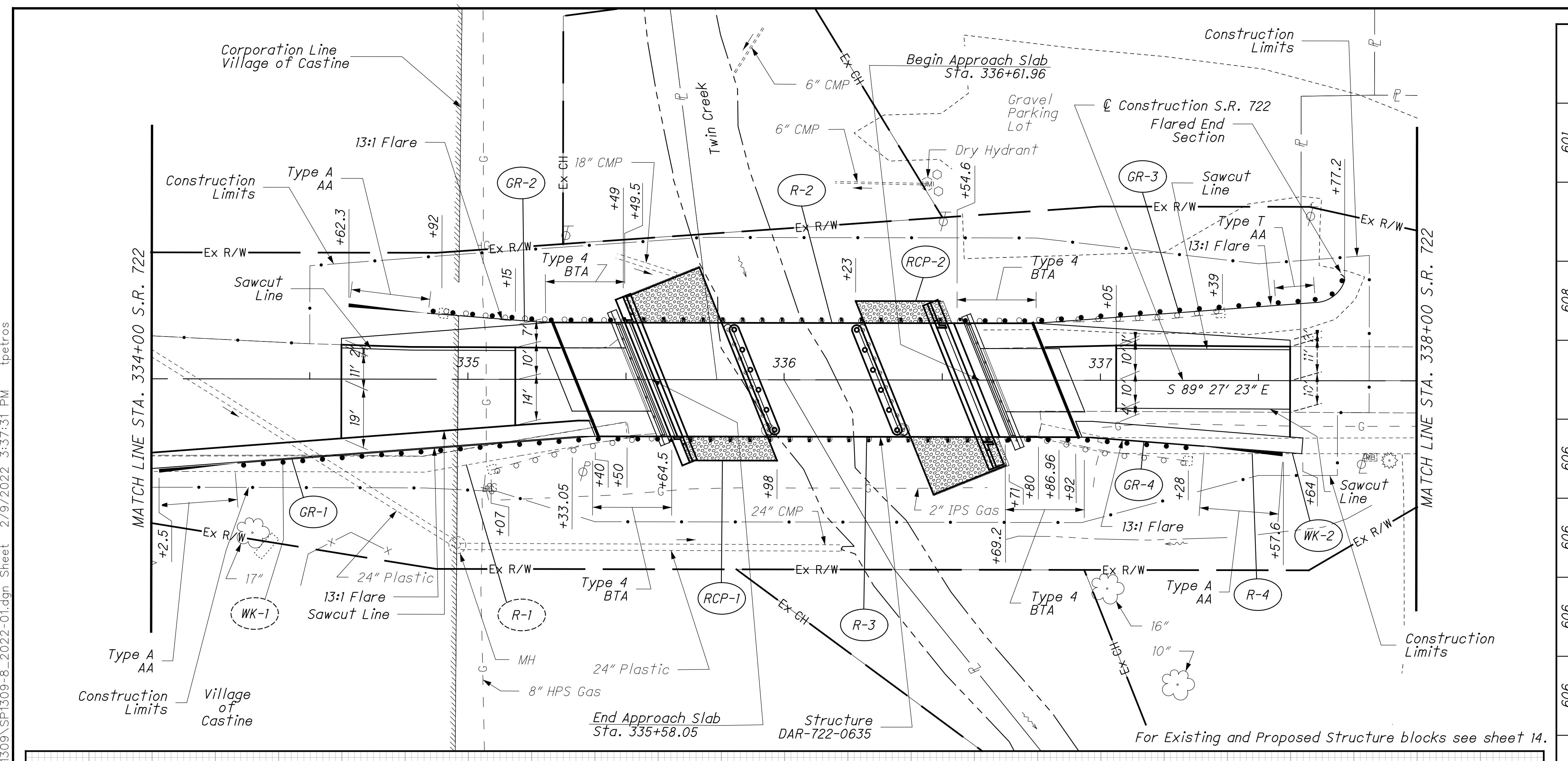
FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
 FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
 FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
 FOR C REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3





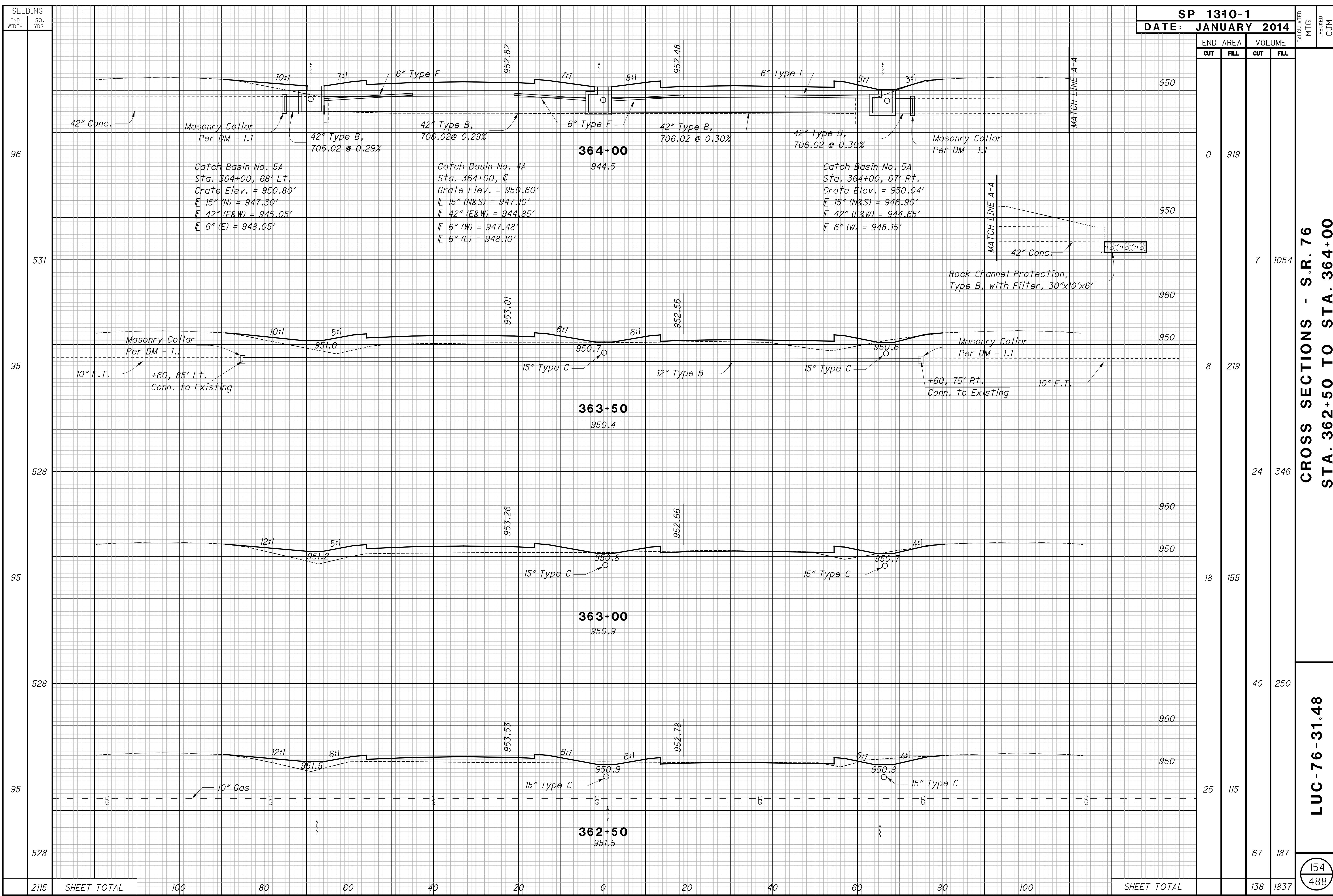
*FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
FOR £ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3*

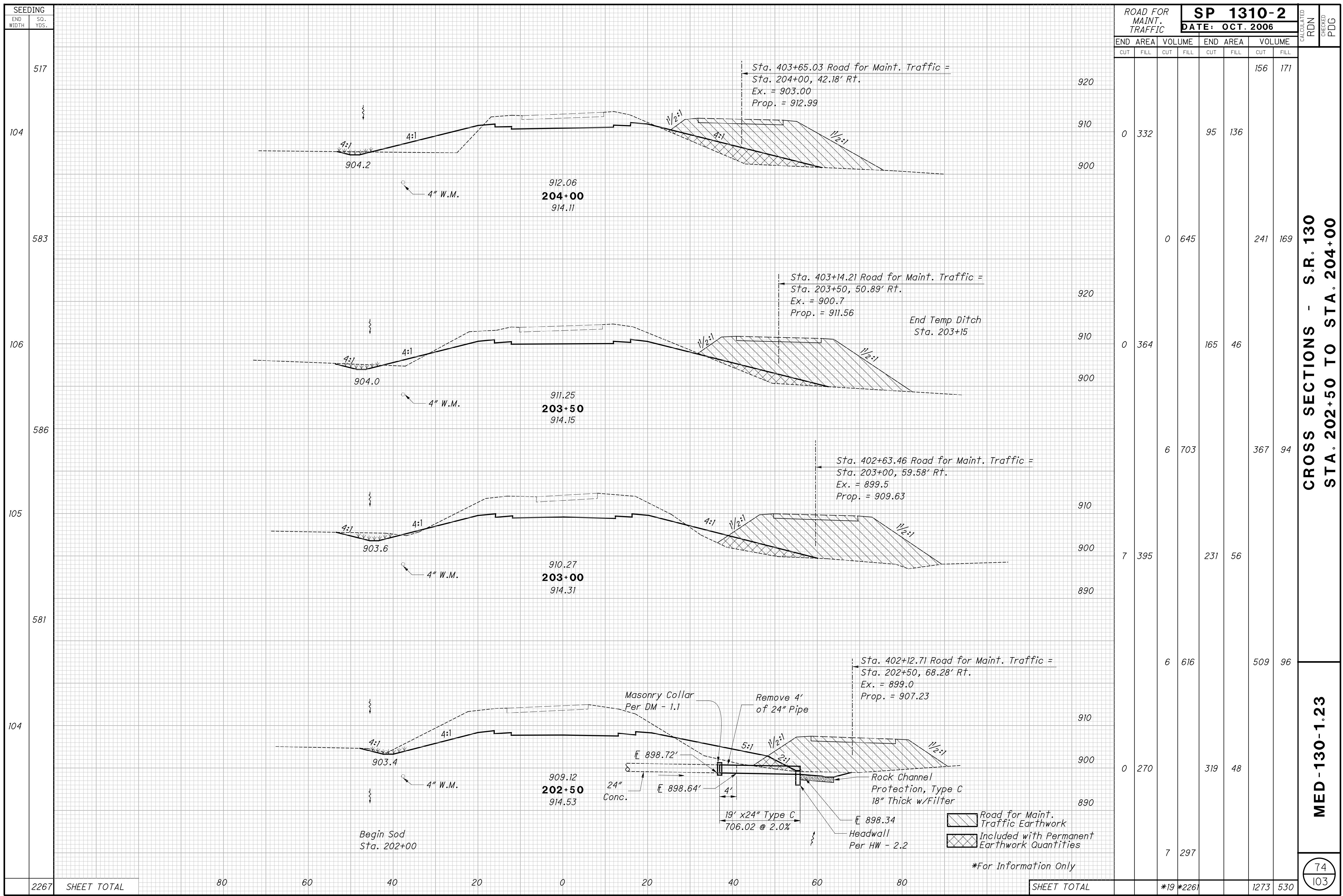




SP 1310-1

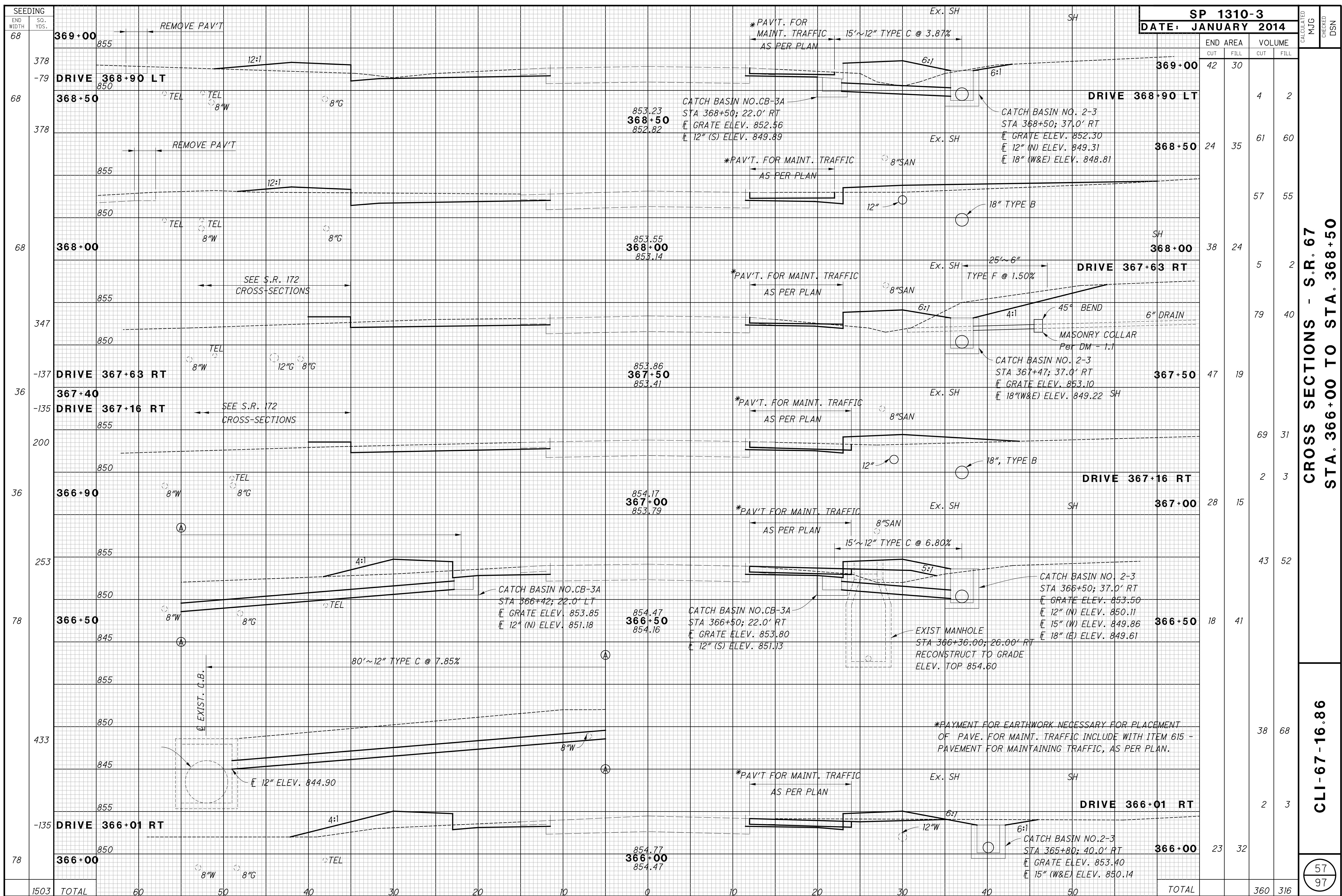
DATE: JANUARY 2014

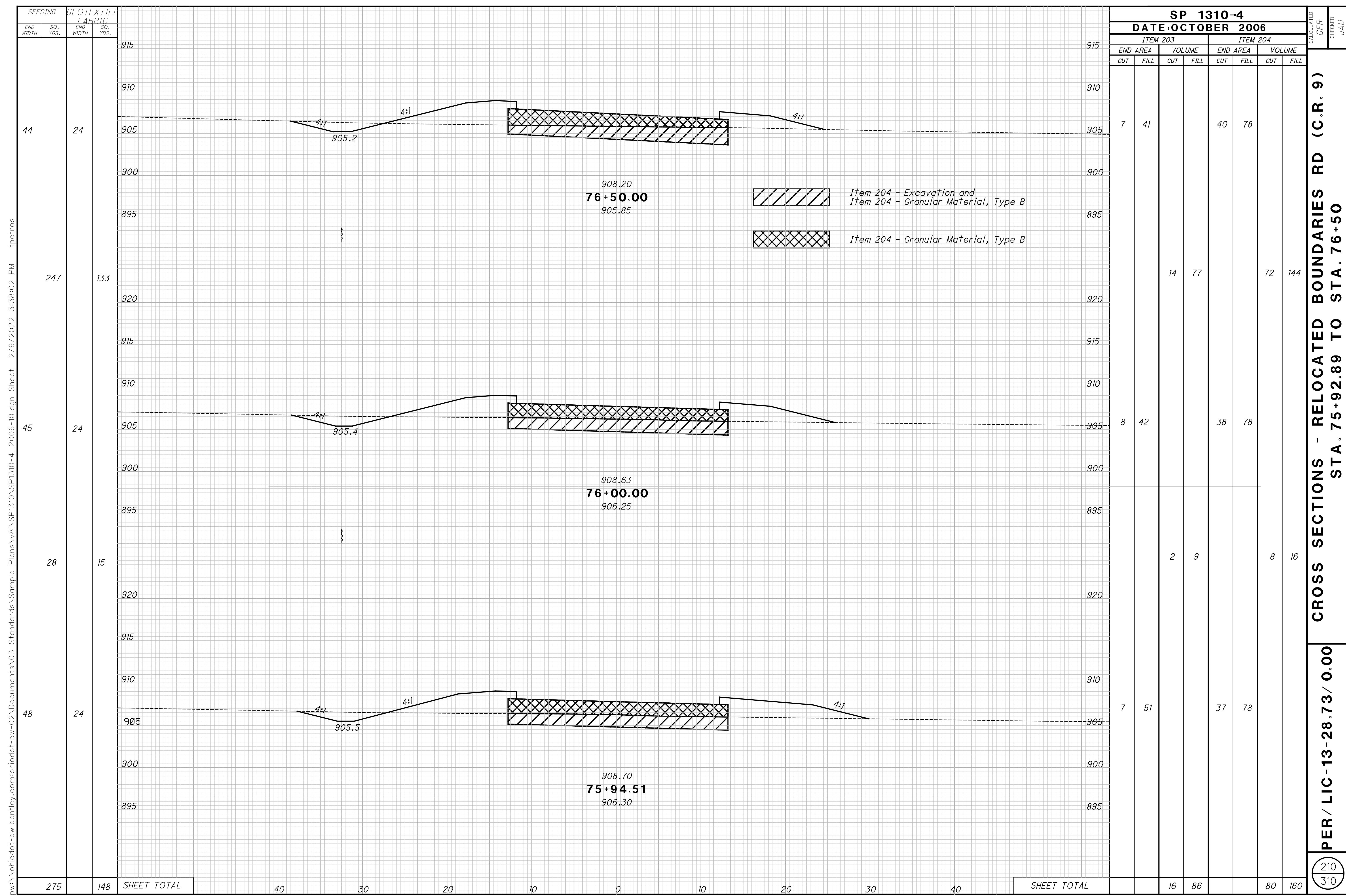




CROSS SECTIONS - S.R. 67
STA. 366+00 TO STA. 368+50

CLI-67-16.86

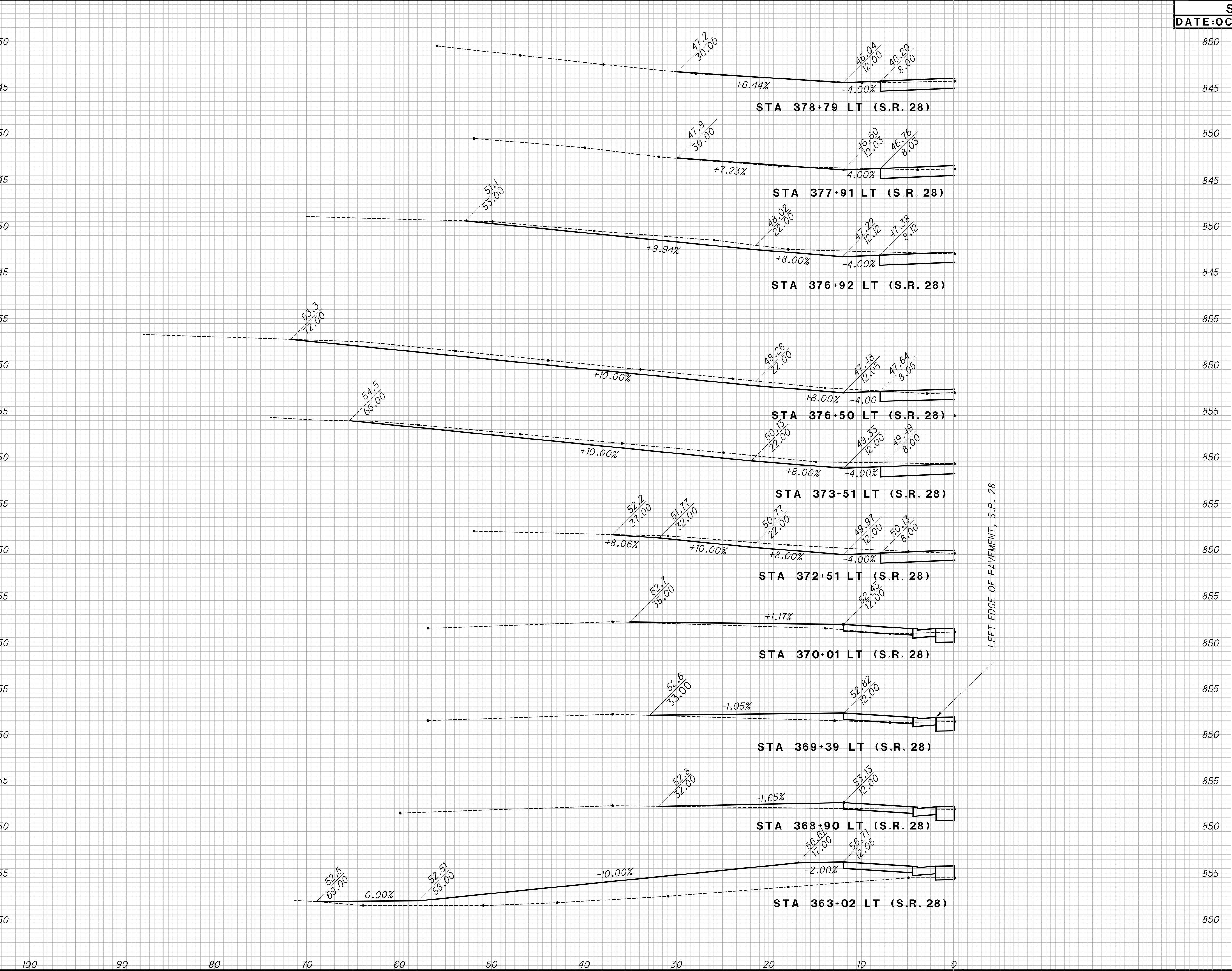




DRIVEWAY PROFILES

HUR - 28 - 6.86

82
97



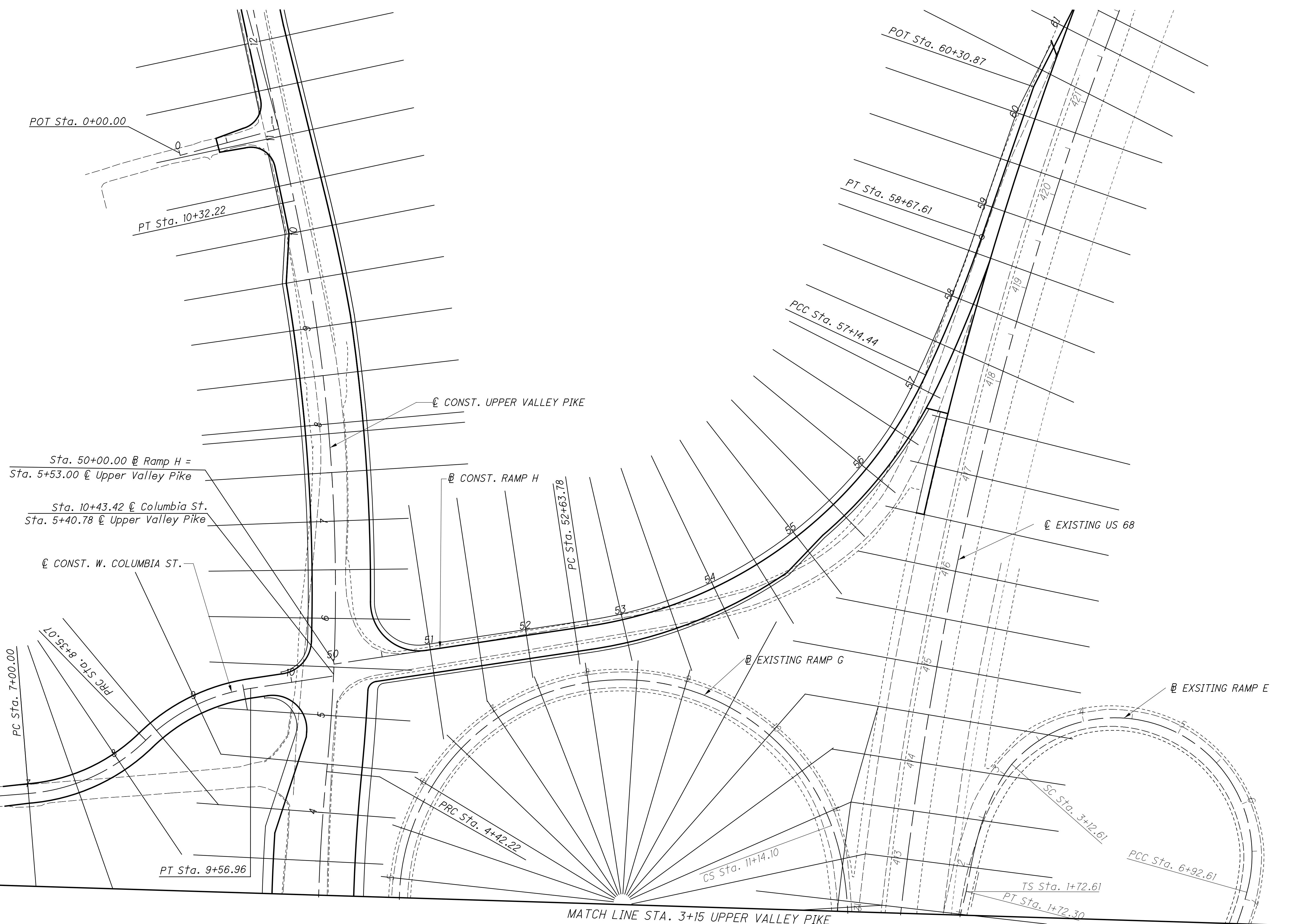


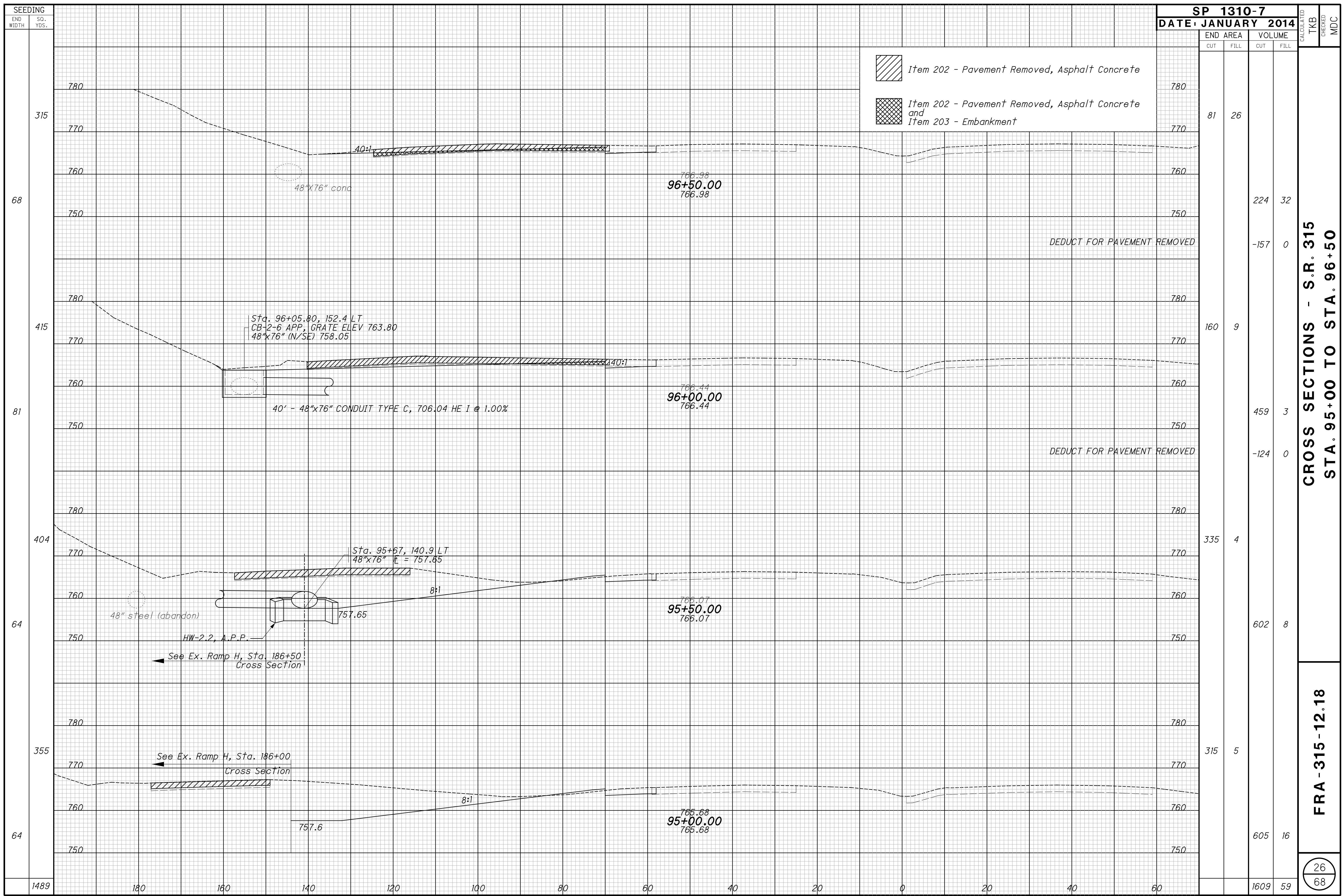
CLA - 40-10.18

CROSS SECTION LAYOUT

25
140

CALCULATED	MSQ	HORIZONTAL
CHECKED	JAD	SCALE IN FEET

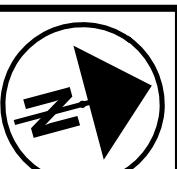




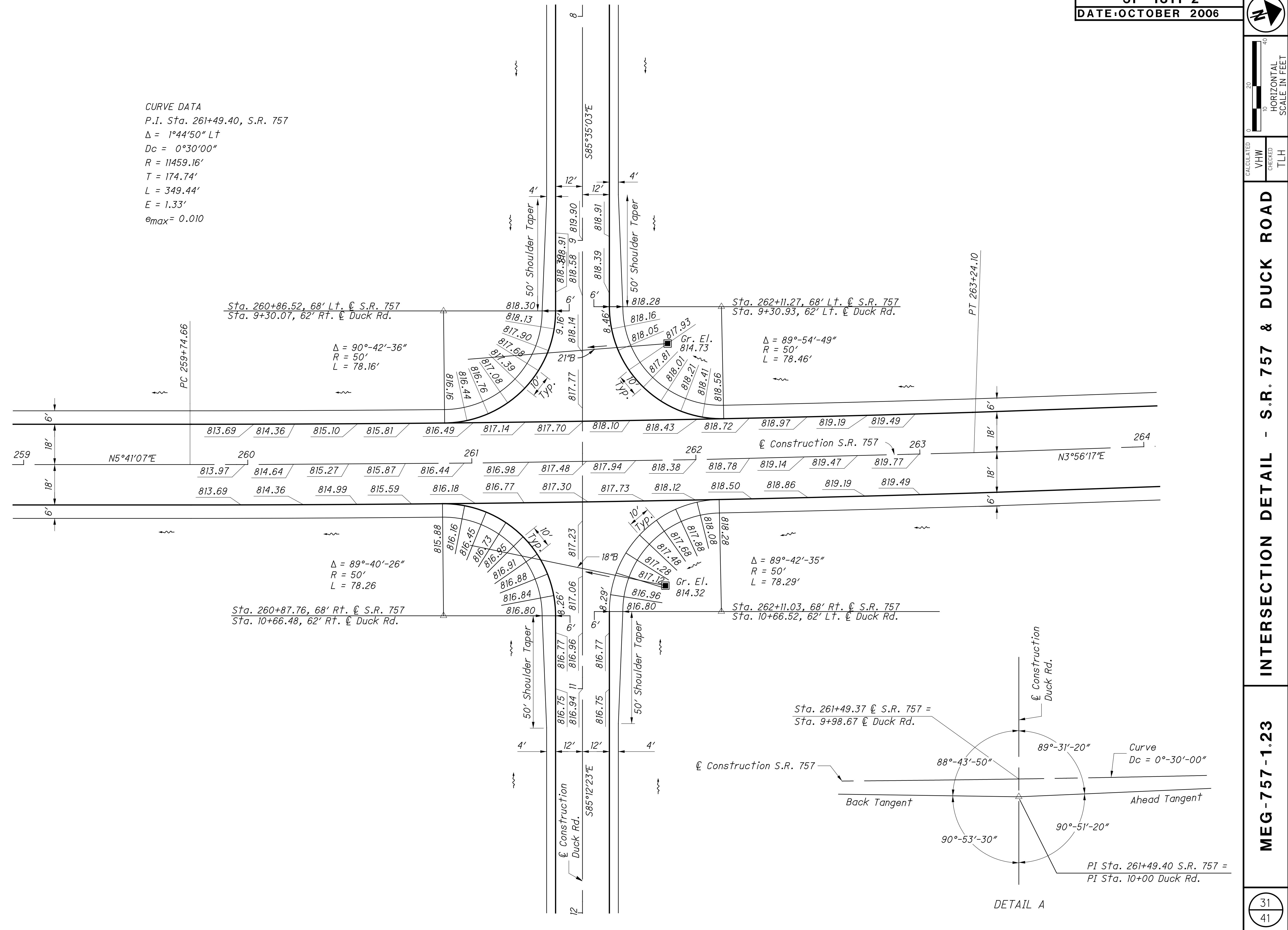
SUPERELEVATION TABLE												
P. I. Station 20+00.00					Dc = 6° 00'							
LEFT SIDE				CENTERLINE CONTROL		RIGHT SIDE						
EDGE ELEVATION	TRANSITION RATE	* ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	* ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS
840.79	▲	-0.17	-0.0156	11.01	14+95.00	840.96	11.01	-0.0156	-0.17		840.79	N.C.
840.81		-0.15	-0.0135	11.10	15+00.00	840.96	11.10	-0.0156	-0.17		840.79	
840.93		-0.03	-0.0026	11.55	15+25.00	840.96	11.55	-0.0156	-0.18		840.78	
840.96	0.00	0.0000	11.66	15+31.25	840.96	11.66	-0.0156	-0.18		840.78	½ LEVEL	
841.05	+0.09	+0.0075	12.00	15+50.00	840.96	12.00	-0.0156	-0.19		840.77		
841.14	+0.19	+0.0156	12.00	15+68.80	840.96	12.00	-0.0156	-0.19	▲	840.77	R.C.	
841.17	+0.21	+0.0179	12.00	15+75.00	840.96	12.00	-0.0179	-0.21		840.75		
841.28	2/1:1	+0.33	+0.0278	12.00	16+00.00	840.95	12.00	-0.0278	-0.33		840.62	
841.40		+0.45	+0.0397	12.00	16+25.00	840.95	12.00	-0.0377	-0.45		840.50	
841.52		+0.57	+0.0476	12.00	16+50.00	840.95	12.00	-0.0476	-0.57		840.38	
841.61		+0.66	+0.0553	12.00	16+69.40	840.95	12.00	-0.0553	-0.66	2/1:1	840.29	P.C.
841.64		+0.69	+0.0575	12.00	16+75.00	840.95	12.00	-0.0575	-0.69		840.26	
841.76		+0.81	+0.0674	12.00	17+00.00	840.95	12.00	-0.0674	-0.81		840.14	
841.88		+0.93	+0.0773	12.00	17+25.00	840.95	12.00	-0.0773	-0.93		840.02	
841.95	▼	+1.00	+0.0830	12.00	17+39.33	840.95	12.00	-0.0830	-1.00	▼	839.95	
841.95		+1.00	+0.0830	12.00	17+50.00	840.95	12.00	-0.0830	-1.00	▼	839.95	F.S.
842.00		+1.00	+0.0830	12.00	17+75.00	841.00	12.00	-0.0830	-1.00		840.00	
842.15		+1.00	+0.0830	12.00	18+00.00	841.25	12.00	-0.0830	-1.00		840.15	
842.42		+1.00	+0.0830	12.00	18+25.00	841.42	12.00	-0.0830	-1.00		840.42	
842.78		+1.00	+0.0830	12.00	18+50.00	841.78	12.00	-0.0830	-1.00		840.78	
843.26		+1.00	+0.0830	12.00	18+75.00	842.26	12.00	-0.0830	-1.00		841.26	
843.84		+1.00	+0.0830	12.00	19+00.00	842.84	12.00	-0.0830	-1.00		841.84	
844.52		+1.00	+0.0830	12.00	19+25.00	843.52	12.00	-0.0830	-1.00		842.52	
845.31		+1.00	+0.0830	12.00	19+50.00	844.31	12.00	-0.0830	-1.00		843.31	
846.21		+1.00	+0.0830	12.00	19+75.00	845.21	12.00	-0.0830	-1.00		844.21	
847.21		+1.00	+0.0830	12.00	20+00.00	846.21	12.00	-0.0830	-1.00		845.21	
848.32		+1.00	+0.0830	12.00	20+25.00	847.32	12.00	-0.0830	-1.00		846.32	
849.53		+1.00	+0.0830	12.00	20+50.00	848.53	12.00	-0.0830	-1.00		847.53	
850.85		+1.00	+0.0830	12.00	20+75.00	849.85	12.00	-0.0830	-1.00		848.85	
852.27		+1.00	+0.0830	12.00	21+00.00	851.27	12.00	-0.0830	-1.00		850.27	
853.80		+1.00	+0.0830	12.00	21+25.00	852.80	12.00	-0.0830	-1.00		851.80	
855.44		+1.00	+0.0830	12.00	21+50.00	854.44	12.00	-0.0830	-1.00		853.44	
857.18		+1.00	+0.0830	12.00	21+75.00	856.18	12.00	-0.0830	-1.00		855.18	
859.03		+1.00	+0.0830	12.00	22+00.00	858.03	12.00	-0.0830	-1.00		857.03	
860.98		+1.00	+0.0830	12.00	22+25.00	859.98	12.00	-0.0830	-1.00		858.98	
861.87	▲	+1.00	+0.0830	12.00	22+35.95	860.87	12.00	-0.0830	-1.00	▲	859.87	F.S.
862.96		+0.93	+0.0775	12.00	22+50.00	862.03	12.00	-0.0776	-0.93		861.10	
865.01		+0.81	+0.0677	12.00	22+75.00	864.20	12.00	-0.0677	-0.81		863.39	
867.16		+0.69	+0.0578	12.00	23+00.00	866.47	12.00	-0.0578	-0.69		865.78	
867.69		+0.67	+0.0554	12.00	23+05.94	867.02	12.00	-0.0554	-0.67	2/1:1	866.35	P.T.
869.41		+0.57	+0.0479	12.00	23+25.00	868.84	12.00	-0.0479	-0.57		868.27	
871.78		+0.46	+0.0380	12.00	23+50.00	871.32	12.00	-0.0380	-0.46		870.86	
874.19	2/1:1	+0.34	+0.0281	12.00	23+75.00	873.85	12.00	-0.0281	-0.34		873.51	
876.61		+0.22	+0.0182	12.00	24+00.00	876.39	12.00	-0.0182	-0.22		876.17	
877.24		+0.19	+0.0156	12.00	24+06.48	877.05	12.00	-0.0156	-0.19	▼	876.86	R.C.
879.02		+0.10	+0.0083	12.00	24+25.00	878.92	12.00	-0.0156	-0.19		878.73	
881.03	0.00	0.0000	11.62	24+45.83	881.03	11.62	-0.0156	-0.18		880.85	½ LEVEL	
881.43	-0.02	-0.0017	11.55	24+50.00	881.45	11.55	-0.0156	-0.18		881.27		
883.84	-0.14	-0.0126	11.10	24+75.00	883.98	11.10	-0.0156	-0.17		883.81		
884.47	▼	-0.17	-0.0156	10.98	24+81.50	884.64	10.98	-0.0156	-0.17		884.47	N.C.

* NEGATIVE CORRECTIONS MEANING BELOW PROFILE GRADE
POSITIVE CORRECTIONS MEANING ABOVE PROFILE GRADE.

SUPERELEVATION TABLE											
P. I. Station 36+45.21					Dc = 3° 00'						
LEFT SIDE				CENTERLINE CONTROL		RIGHT SIDE					



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



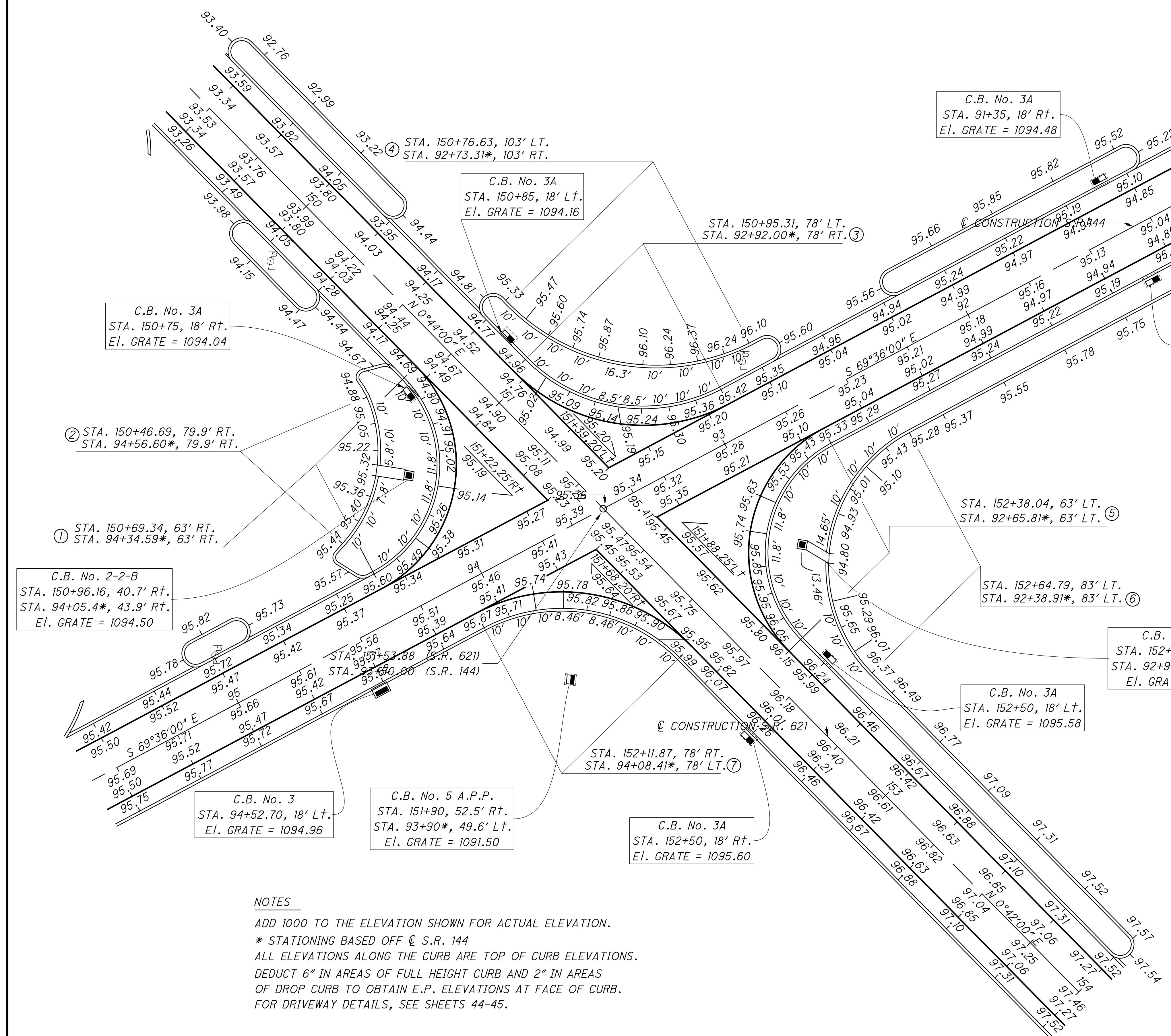
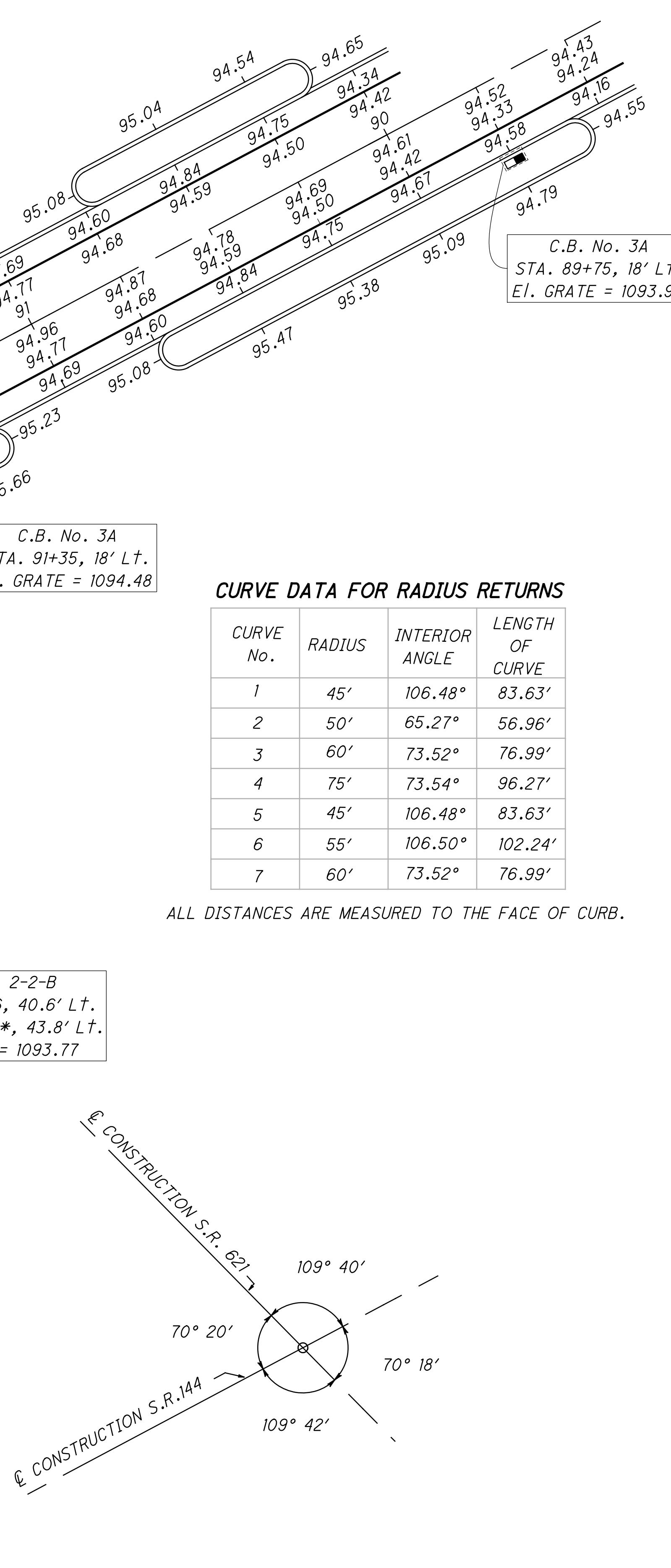


INTERSECTION DETAIL & PAVEMENT ELEVATIONS

DETAILED & PAVEMENT

<i>CURVE No.</i>	<i>RADIUS</i>	<i>INTERIOR ANGLE</i>	<i>LENGTH OF CURVE</i>
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

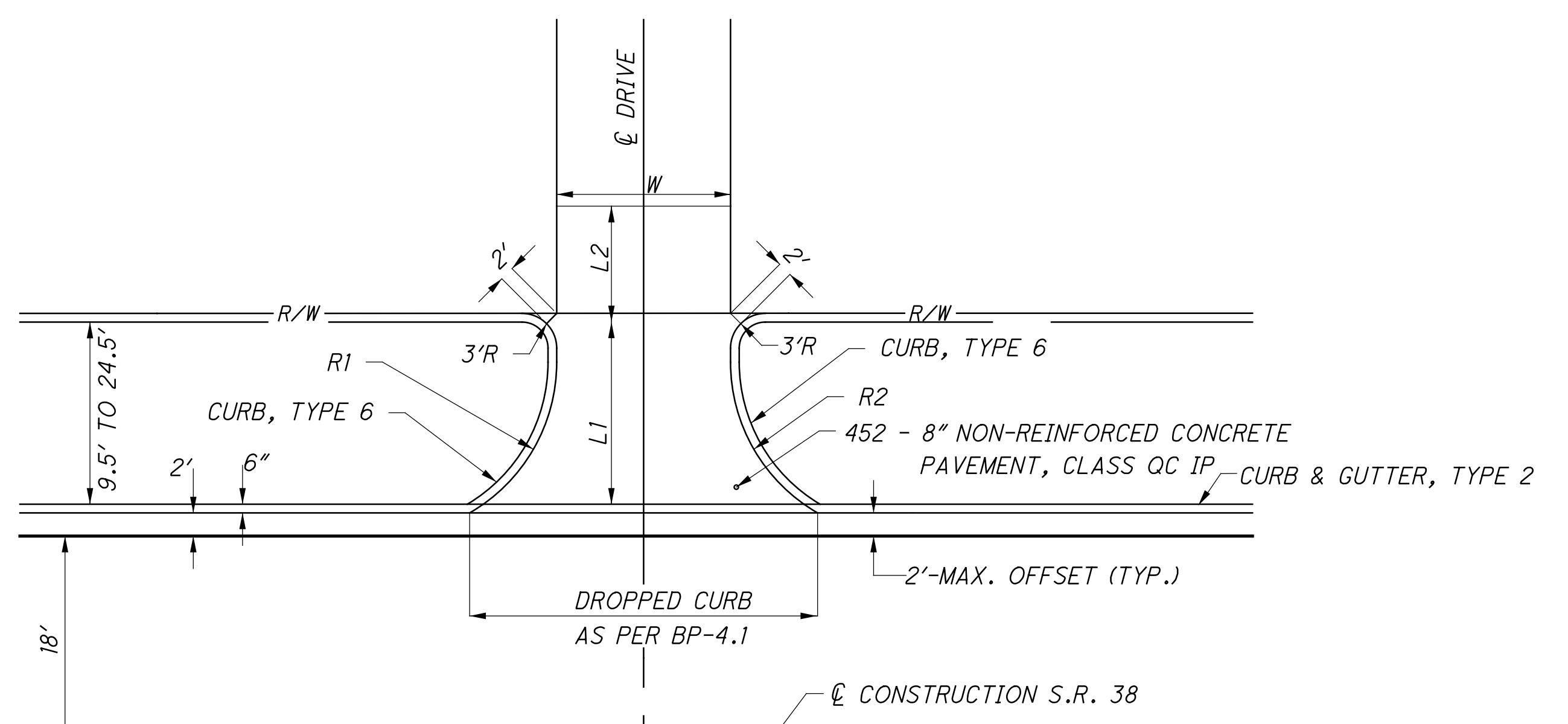
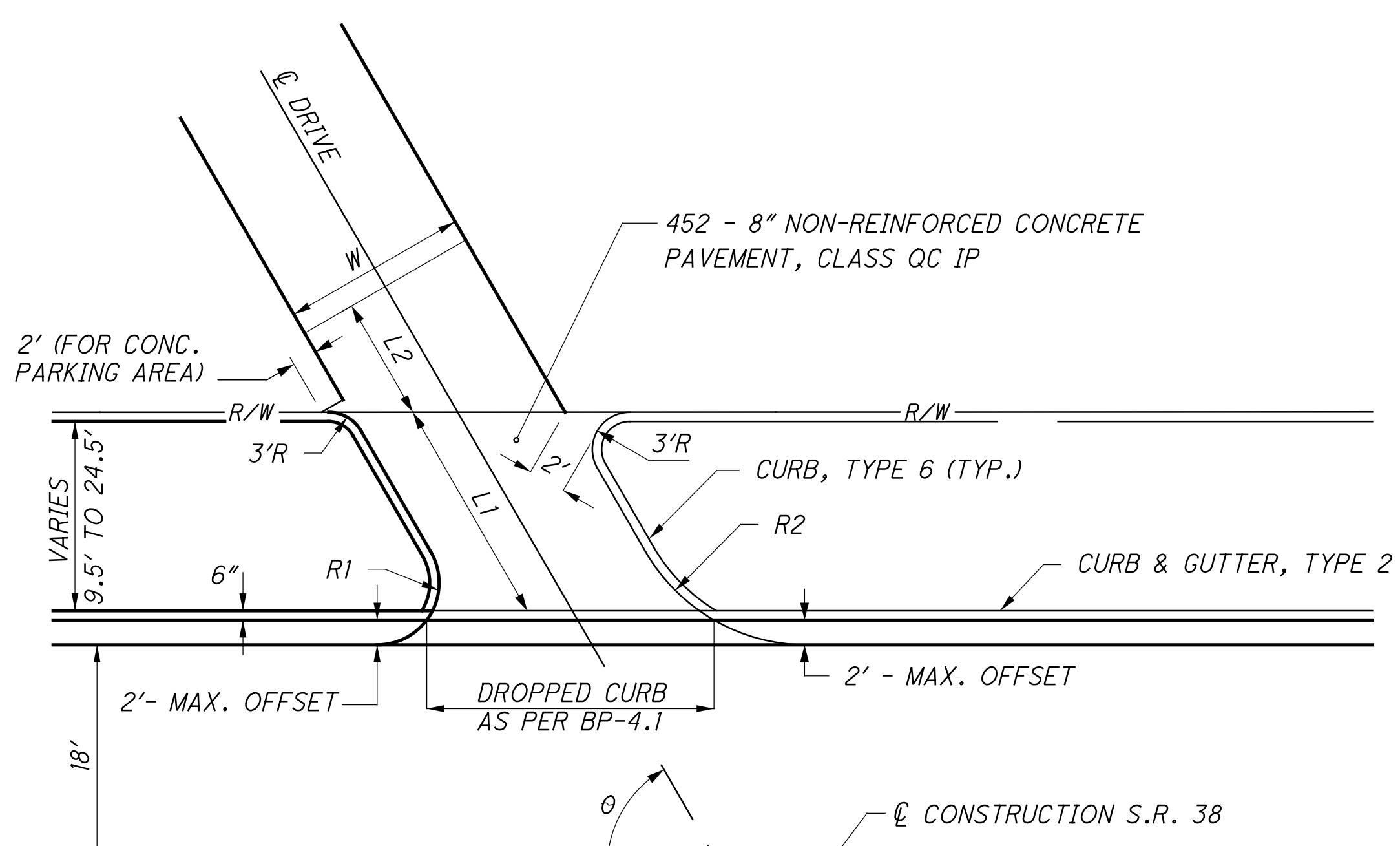
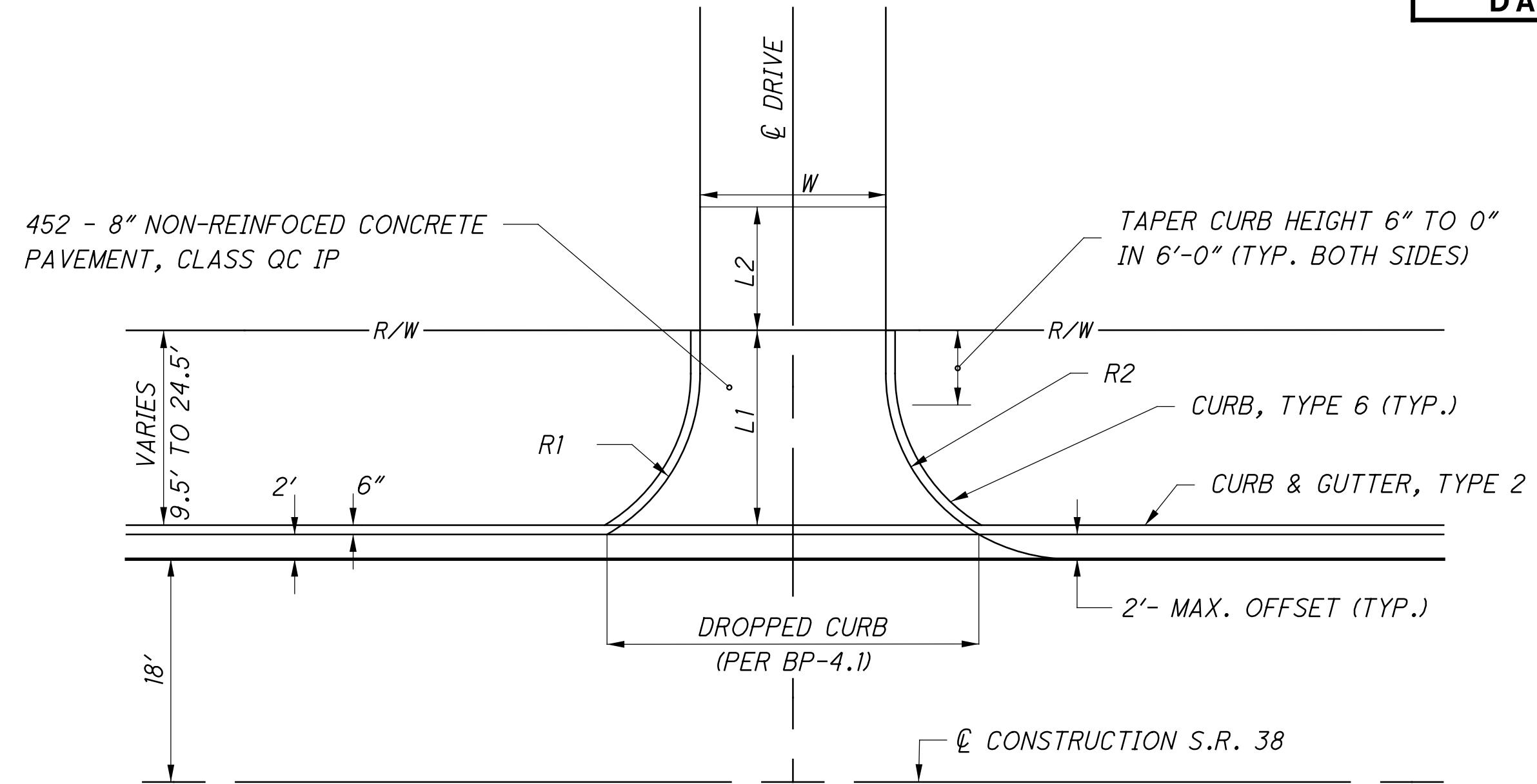
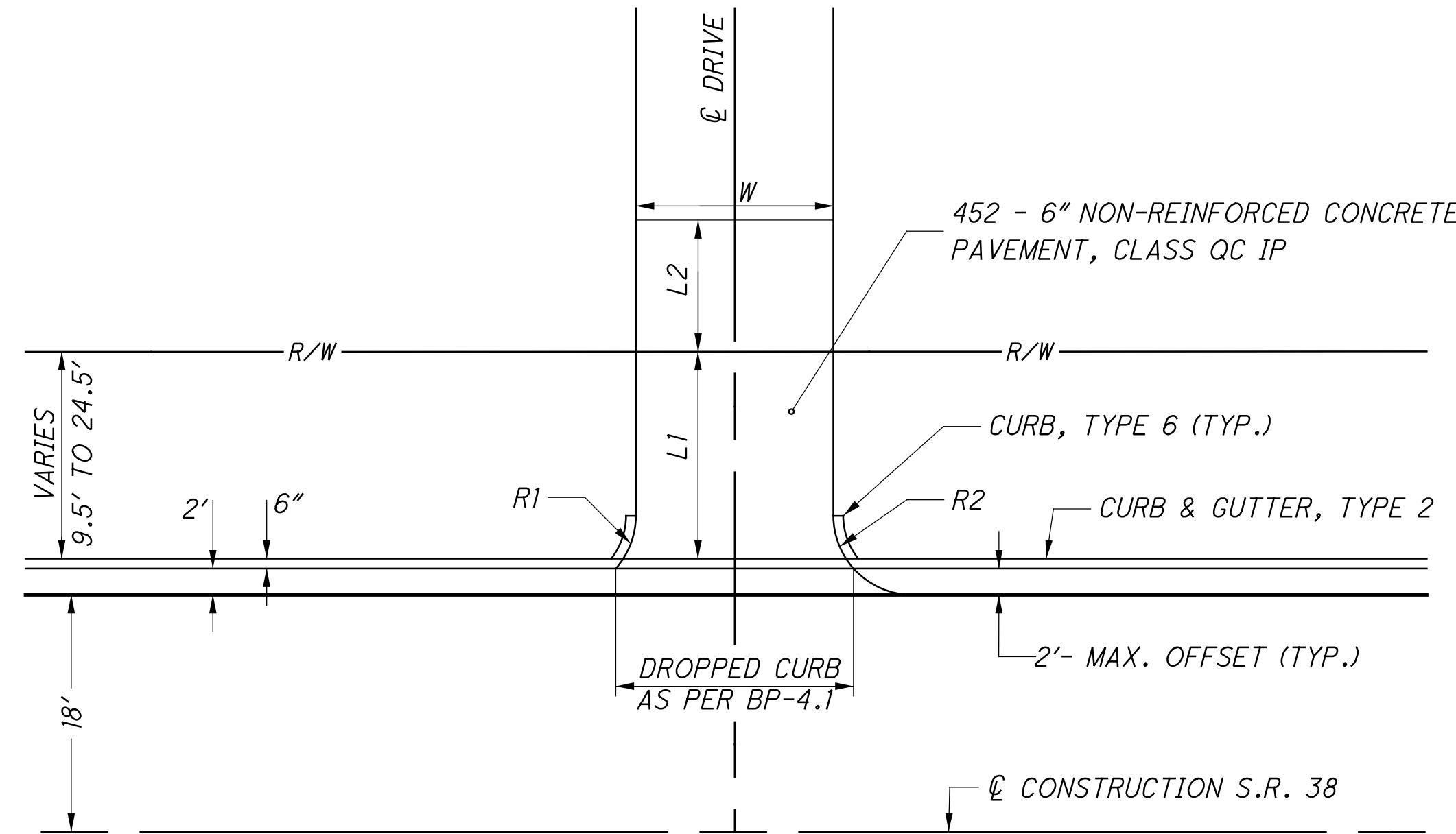
DEDUCT 6 IN AREAS OF FULL HEIGHT CURB AND 2 IN AREAS OF DROP CURB TO OBTAIN E.P. ELEVATIONS AT FACE OF

FOR DRIVEWAY DETAILS, SEE SHEETS 44-45.

THE BOSTONIAN, THE BRAVE, THE BRAVE, THE BRAVE



0 5 10 15 20
HORIZONTAL SCALE IN FEET



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 - 1/4" 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.

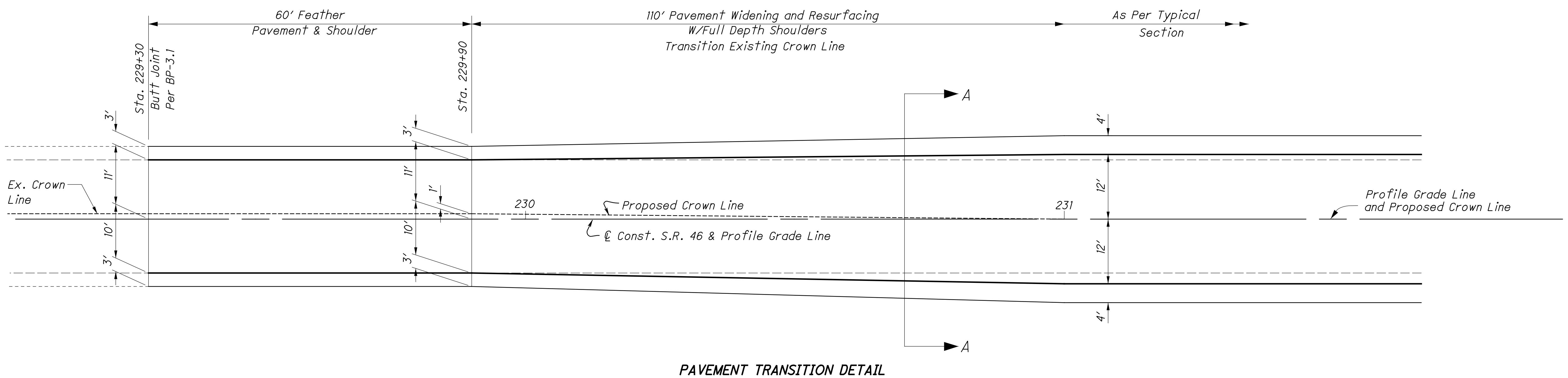


0 5 10 15 20
HORIZONTAL SCALE IN FEET

PAVEMENT TRANSITION DETAILS

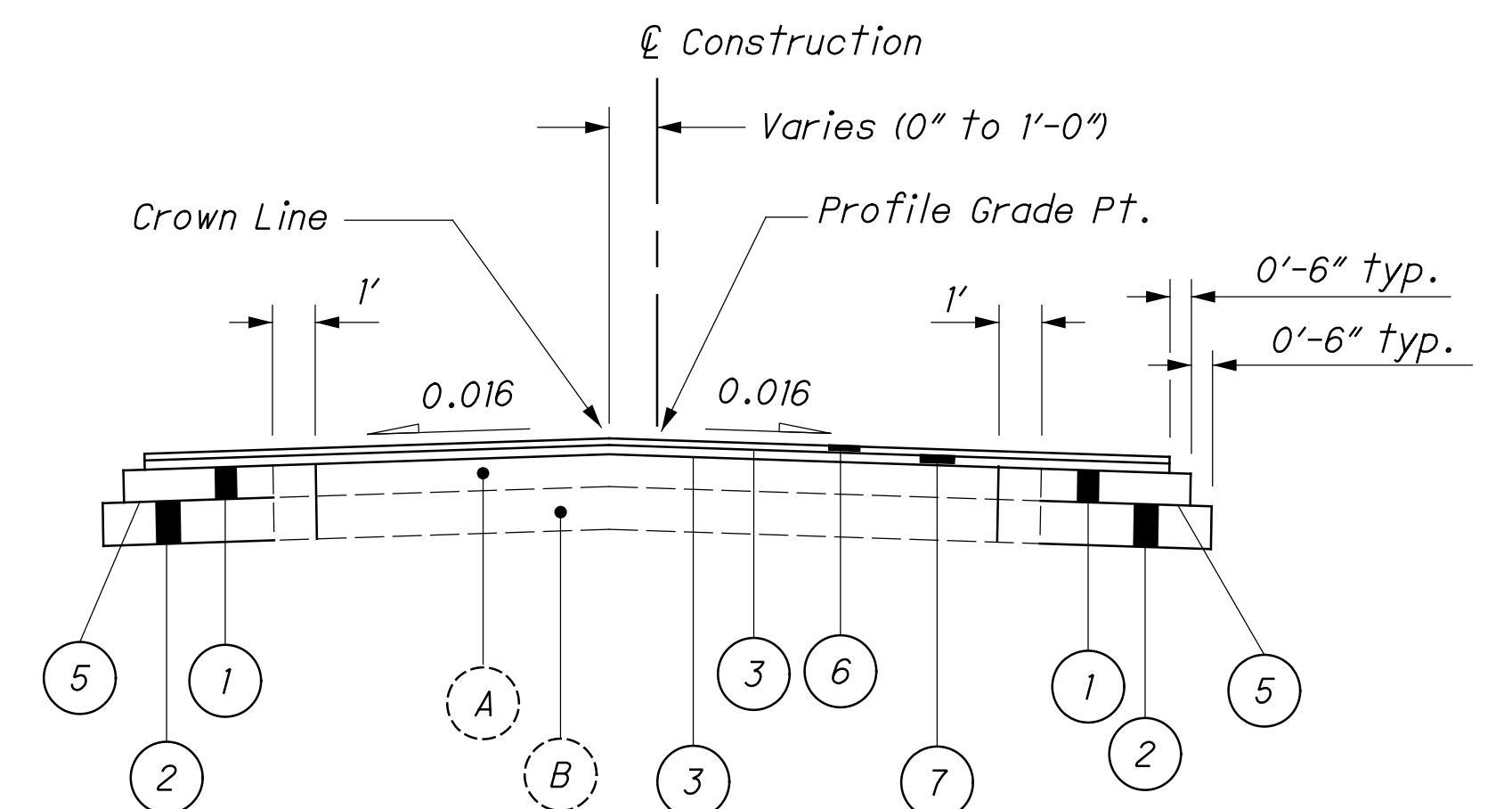
PIG - 46-27.22

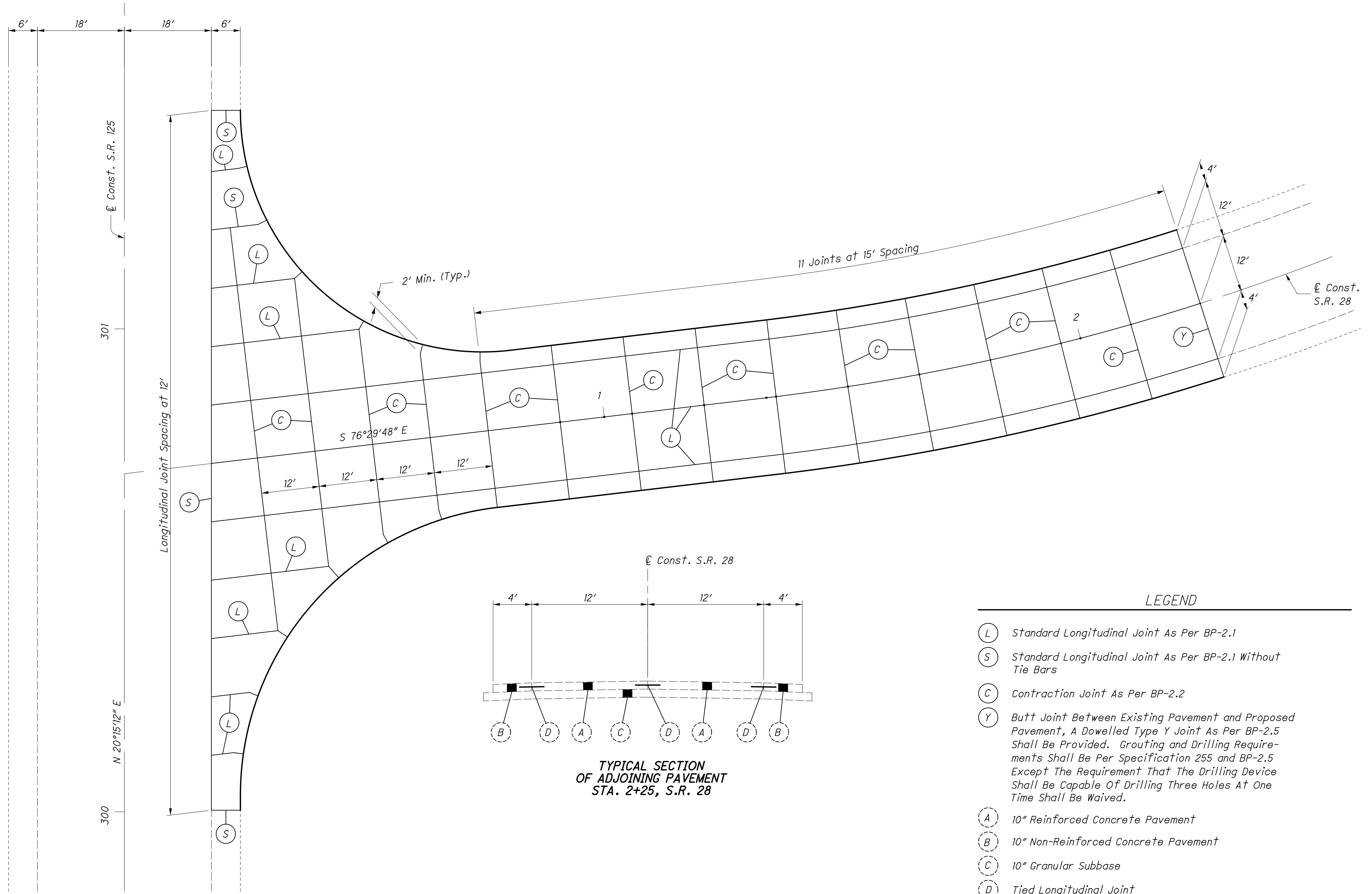
33
156



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 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- (A) ± 5" Asphalt
- (B) ± 8" Macadam Base





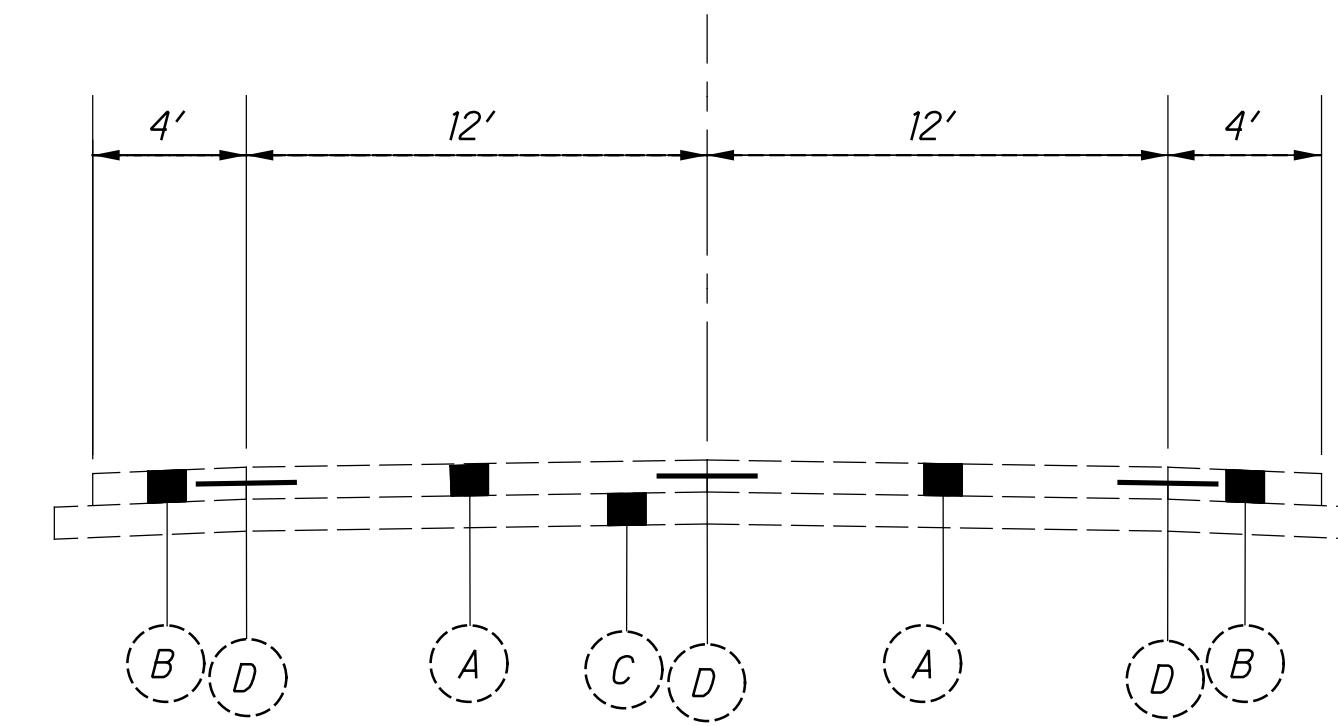
LOR - 28 - 0.00

48
96

PAVEMENT JOINT DETAIL
S.R. 28

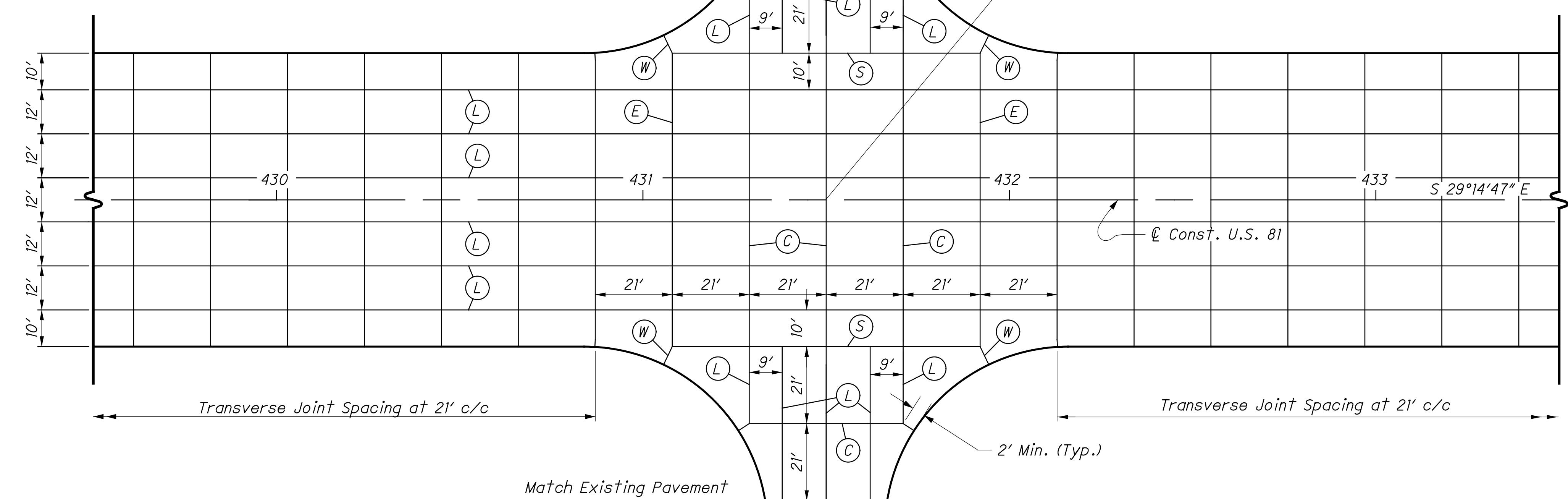
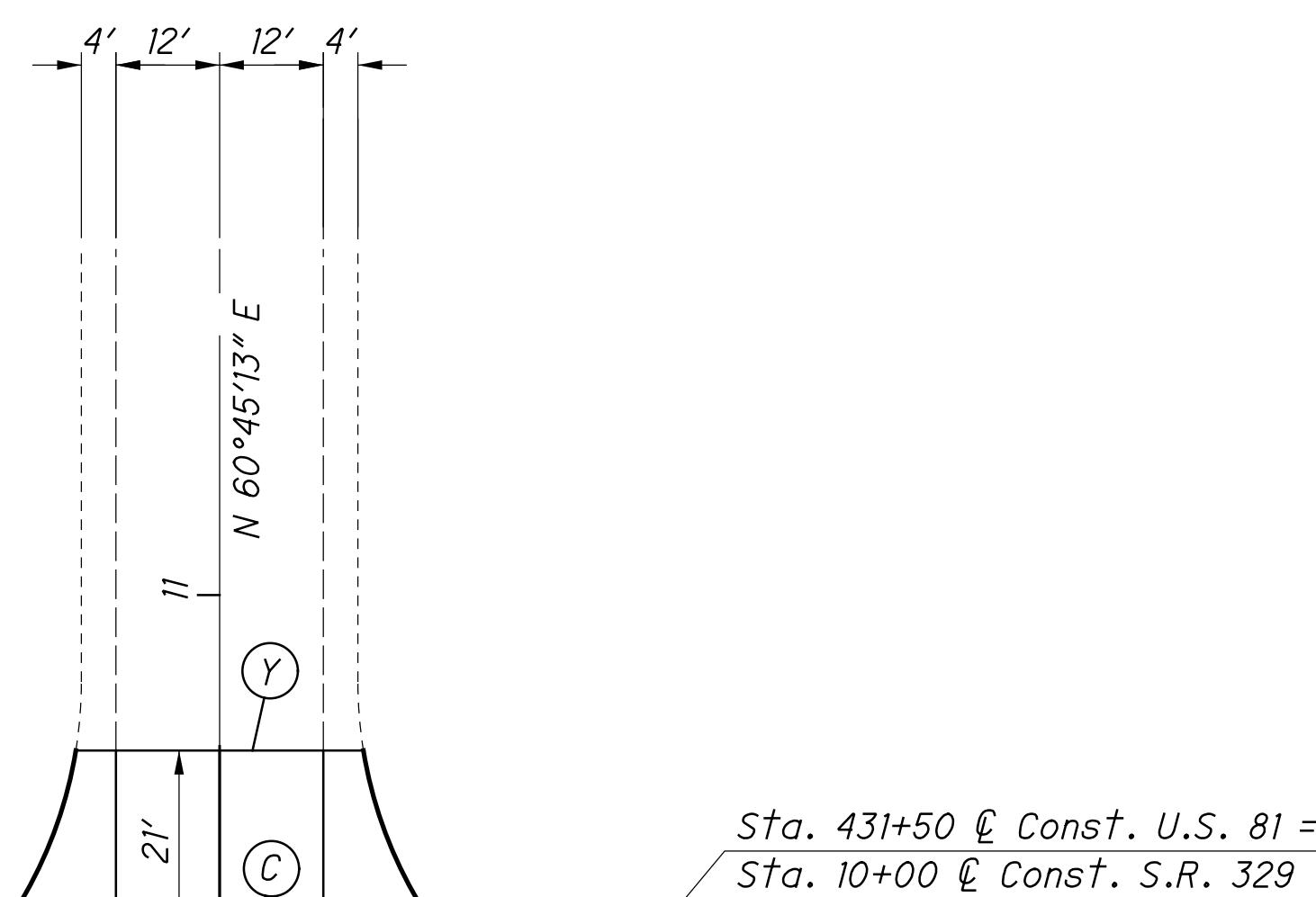
CALCULATED
AAM
CHECKED
DEM

0
5
10
15
20
HORIZONTAL SCALE IN FEET



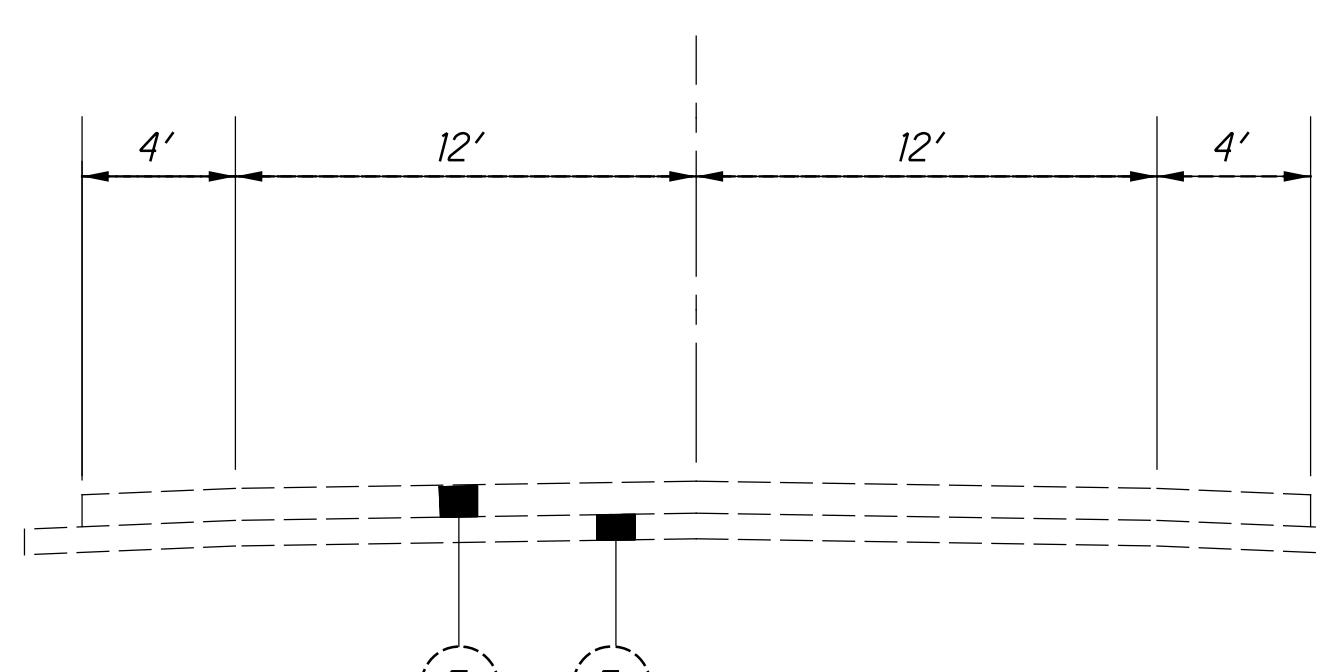
TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329

Sta. 10+82



LEGEND

- | | |
|-----|---|
| (E) | Expansion Joint As Per BP-2.2 |
| (W) | Expansion Joint As Per BP-2.2 Without Dowel Bars |
| (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 |
| (E) | Asphalt Concrete Pavement, Depth Unknown |
| (F) | Aggregate Base, Depth Unknown |

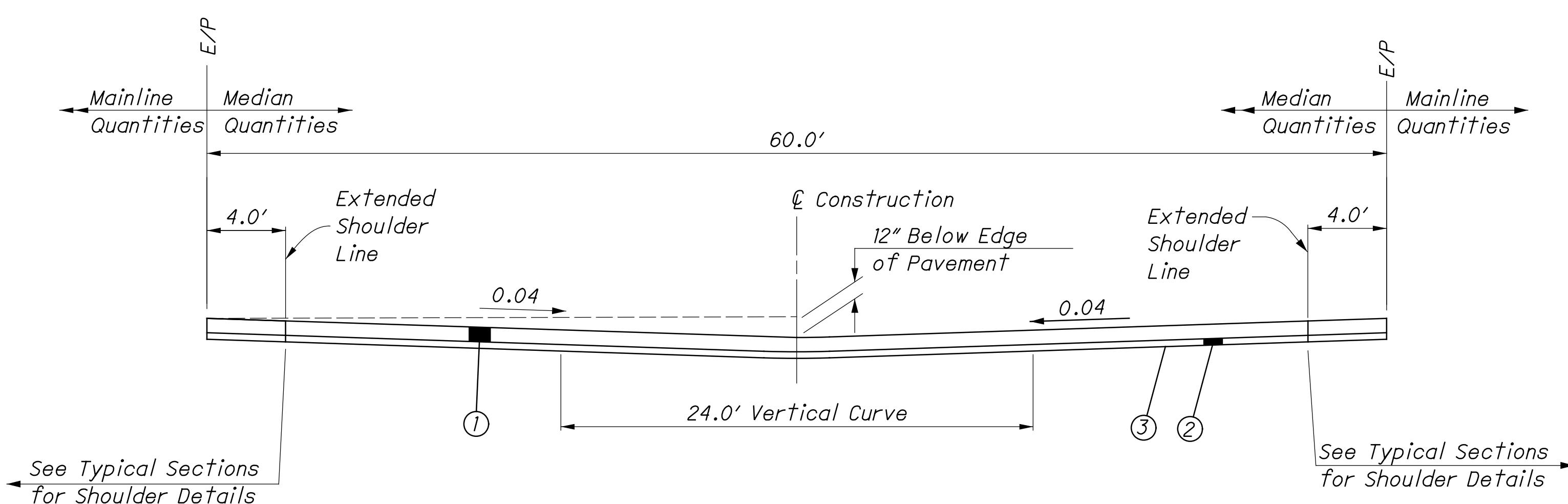
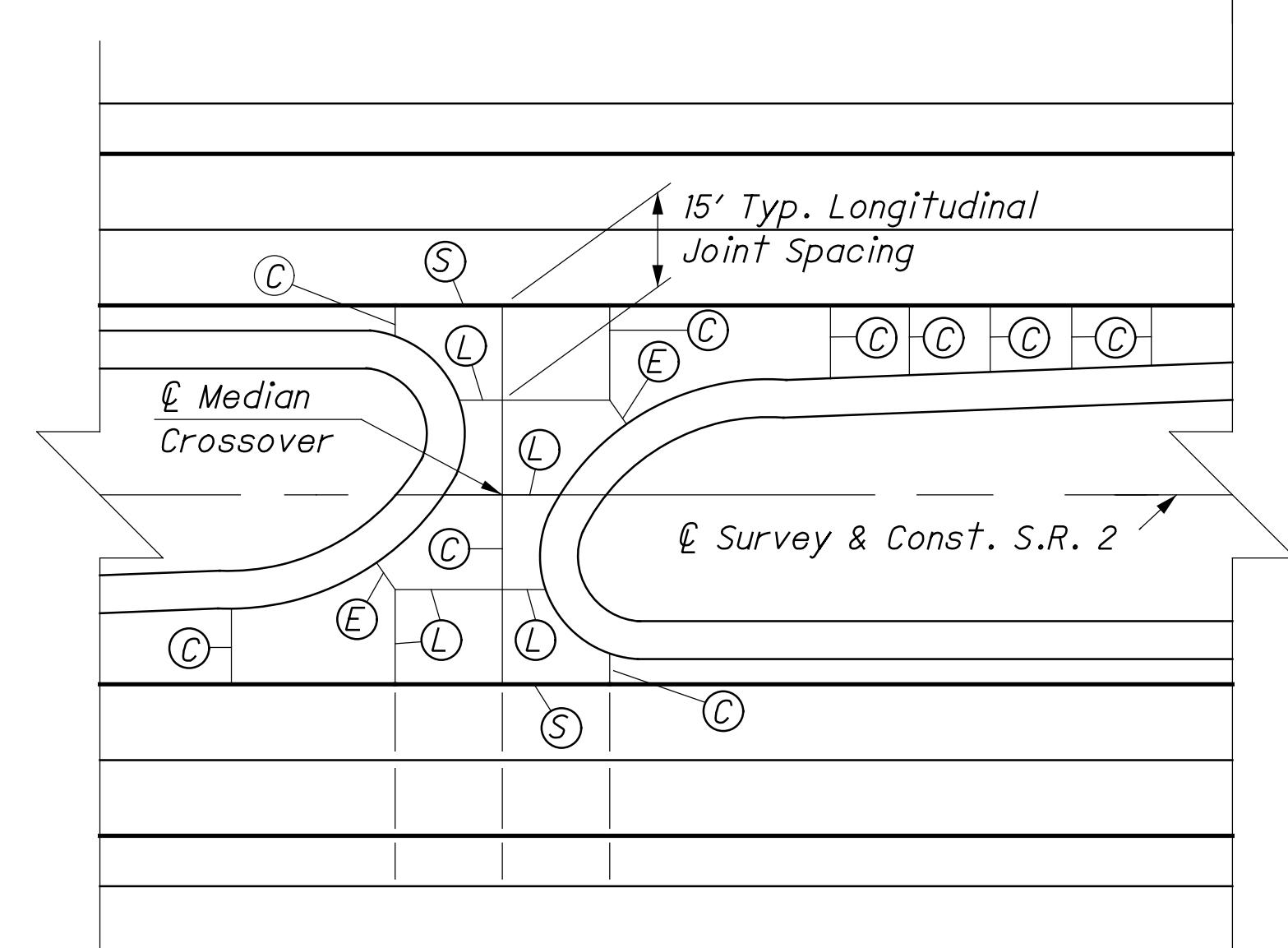
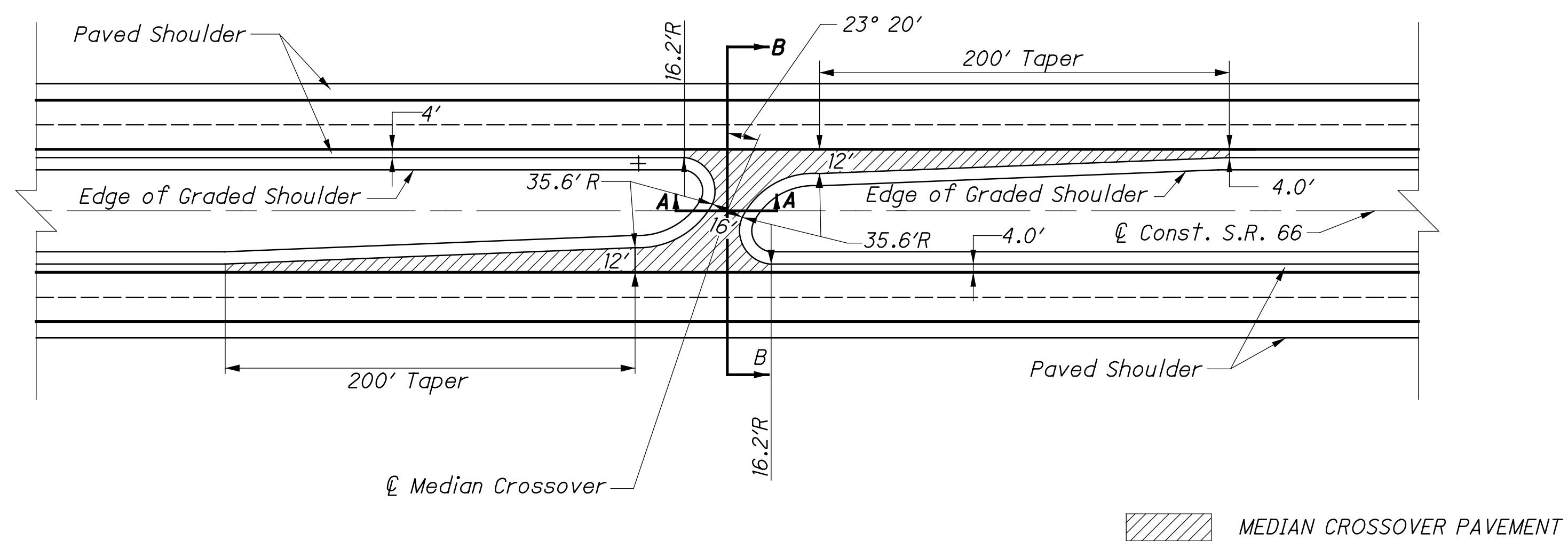


TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329

Sta. 9+18

HOC-81-18.58

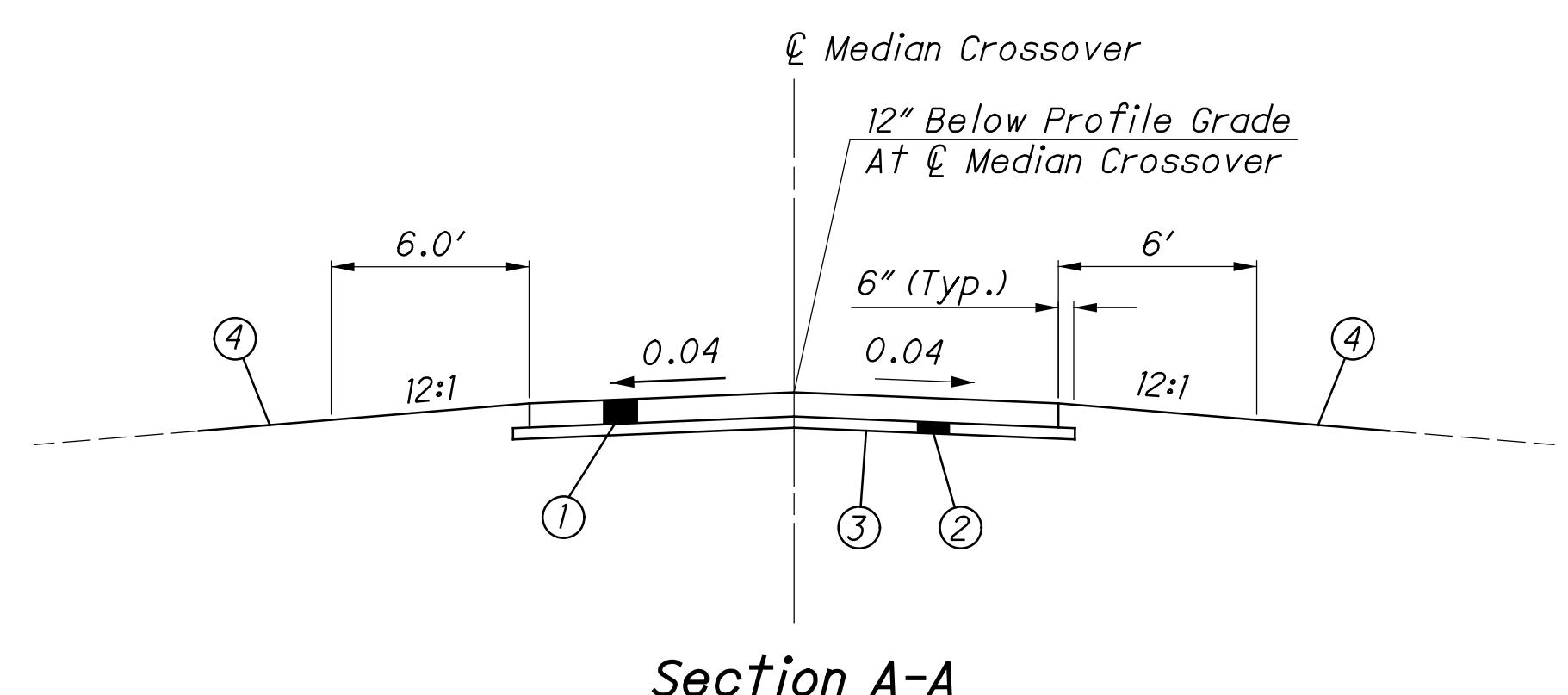
103
189



MEDIAN CROSSOVER JOINT DETAIL

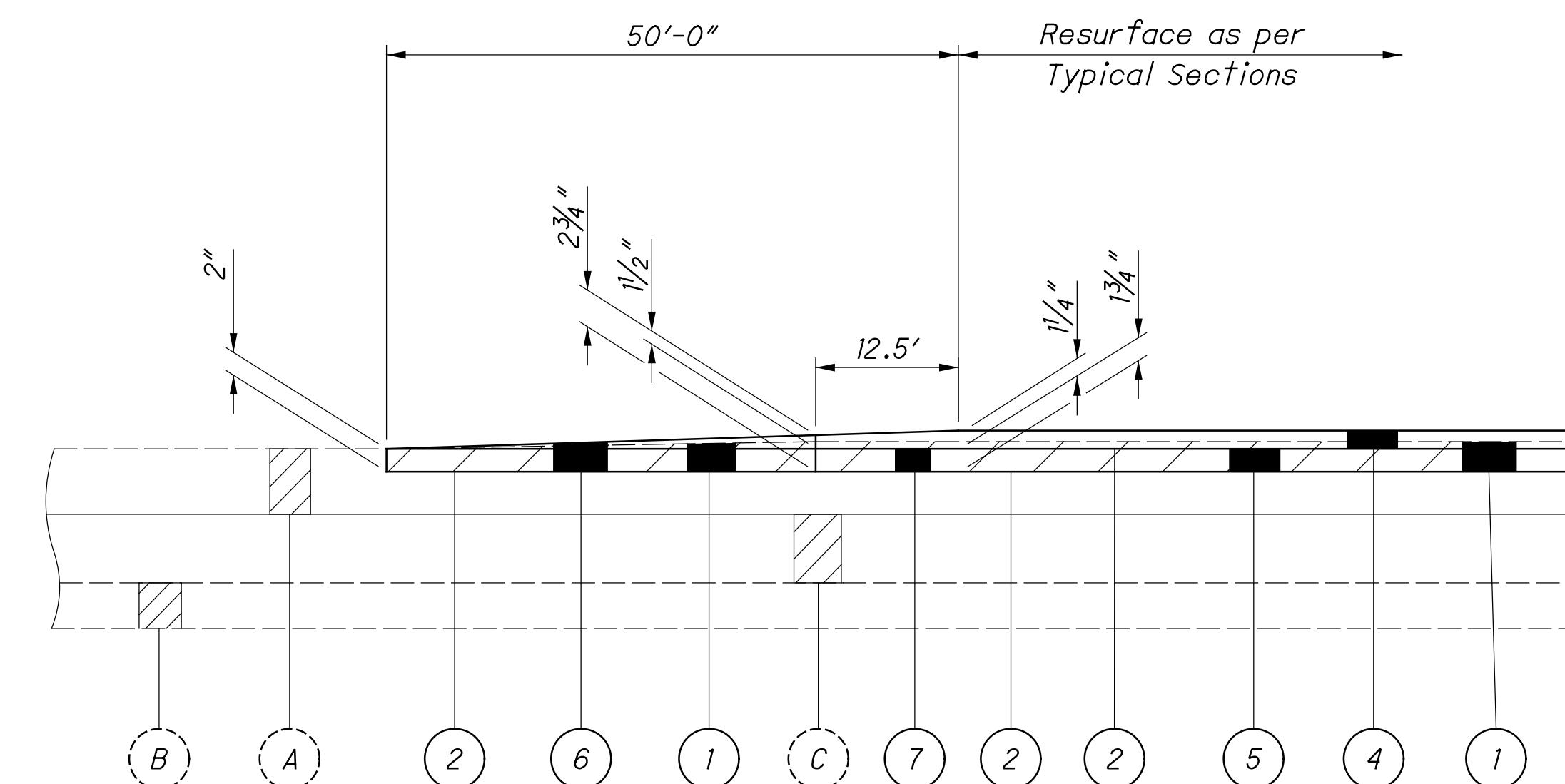
Note:

1. The Above is A Suggested Joint Diagram. The Contractor May Submit an Alternate Joint Diagram to the Engineer for Approval.
2. Align Joints in Median Crossover to form Continuous Joints with traverse joints in the Mainline Pavement.



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

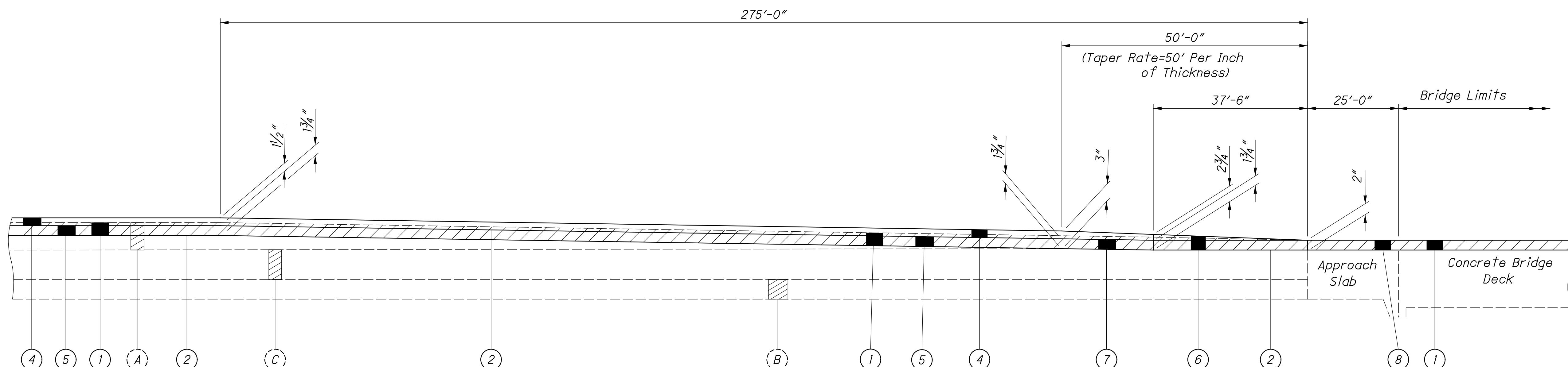


EXISTING LEGEND

- (A) ± 6 1/2" Asphalt Concrete
- (B) ± 6" Subbase
- (C) ± 9" Reinforced Portland Cement Concrete Pavement

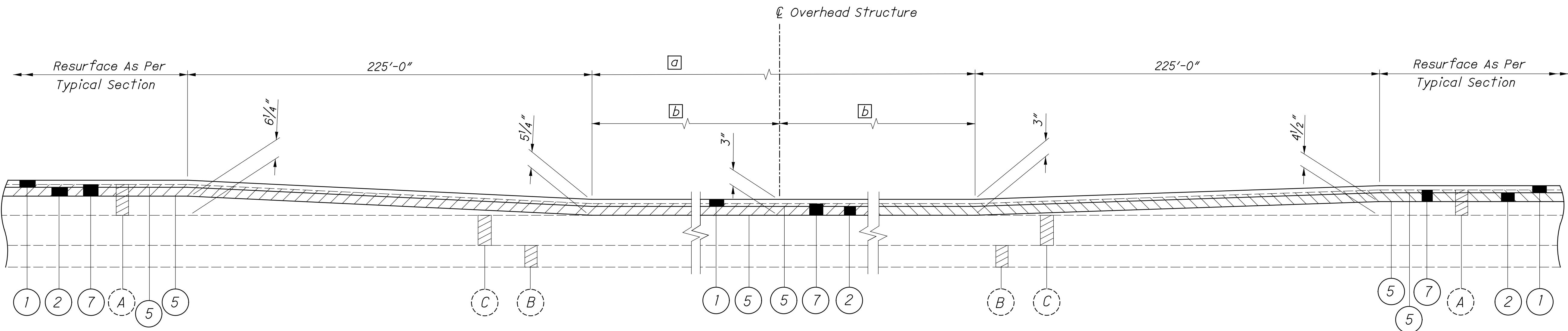
= Item 254 Pavement Planing, Asphalt Concrete

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)

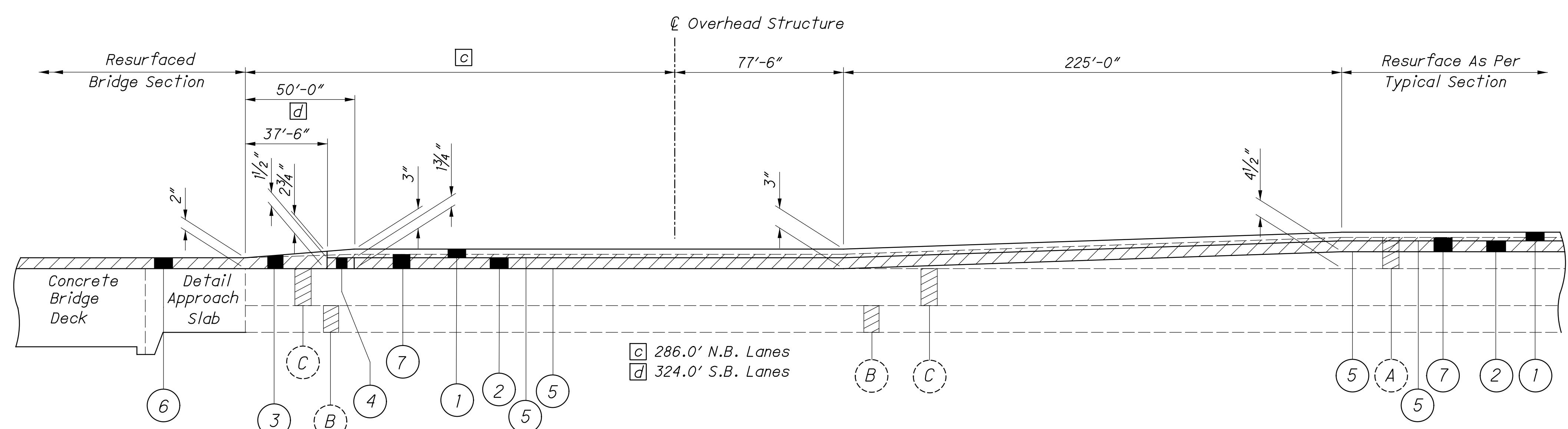


PAVEMENT TRANSITION AT OVERHEAD BRIDGE

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:

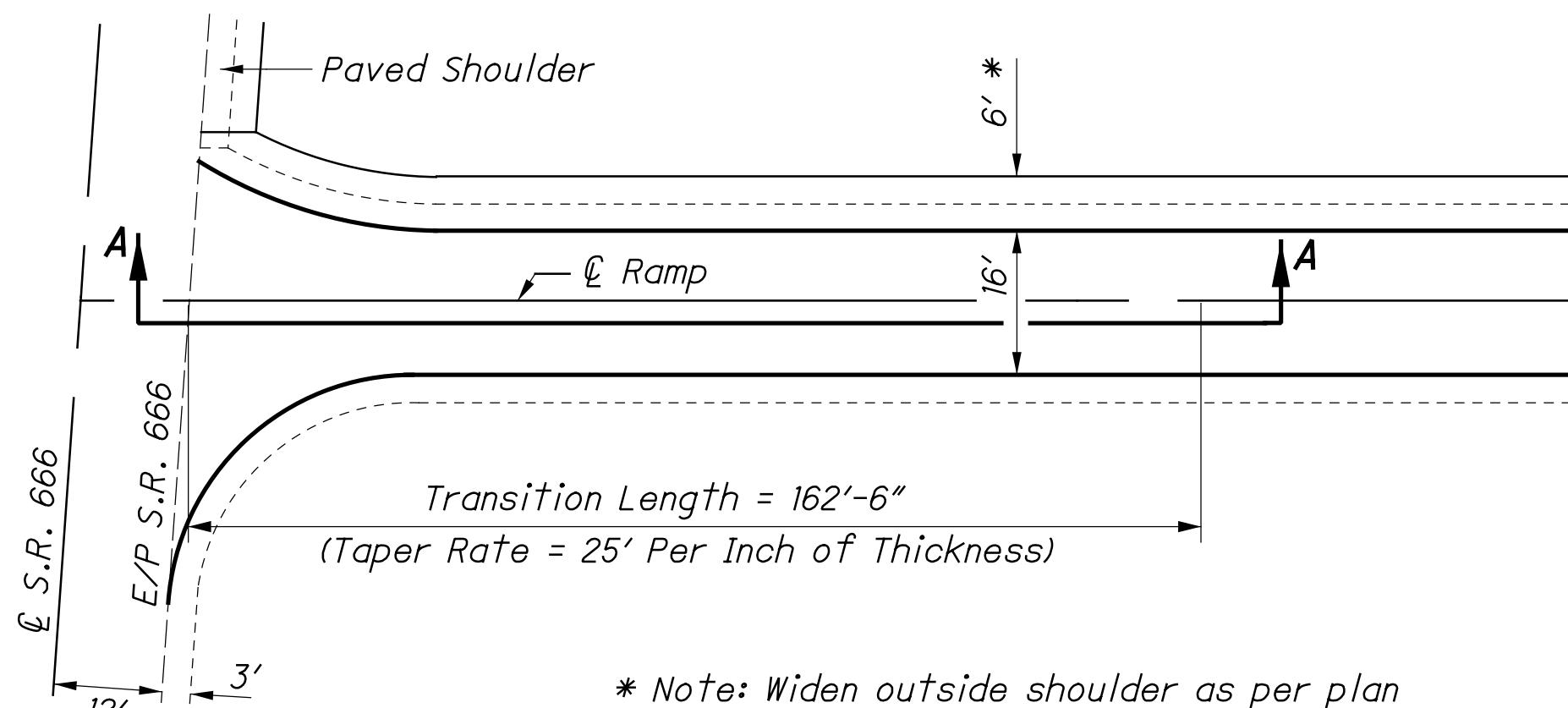
VAN-277-1047
VAN-277-1041 (North Side Only)

PROPOSED LEGEND

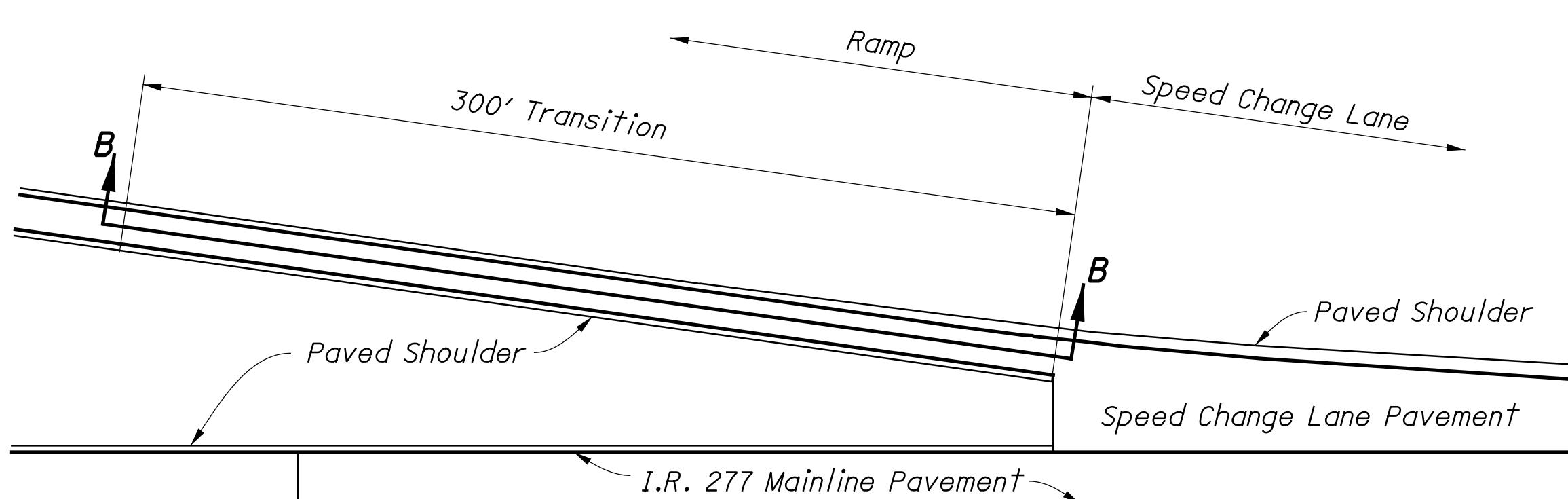
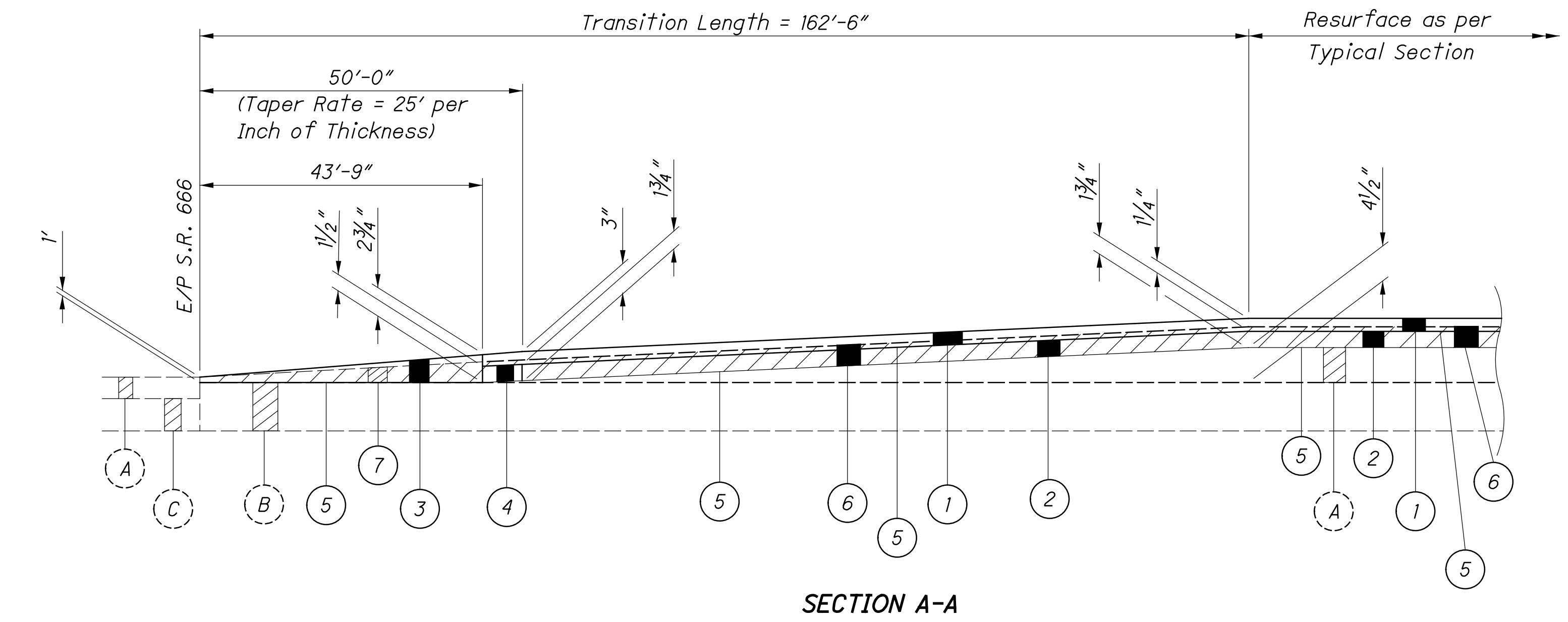
- (1) ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- (2) ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446)
- (3) ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- (4) ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, 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



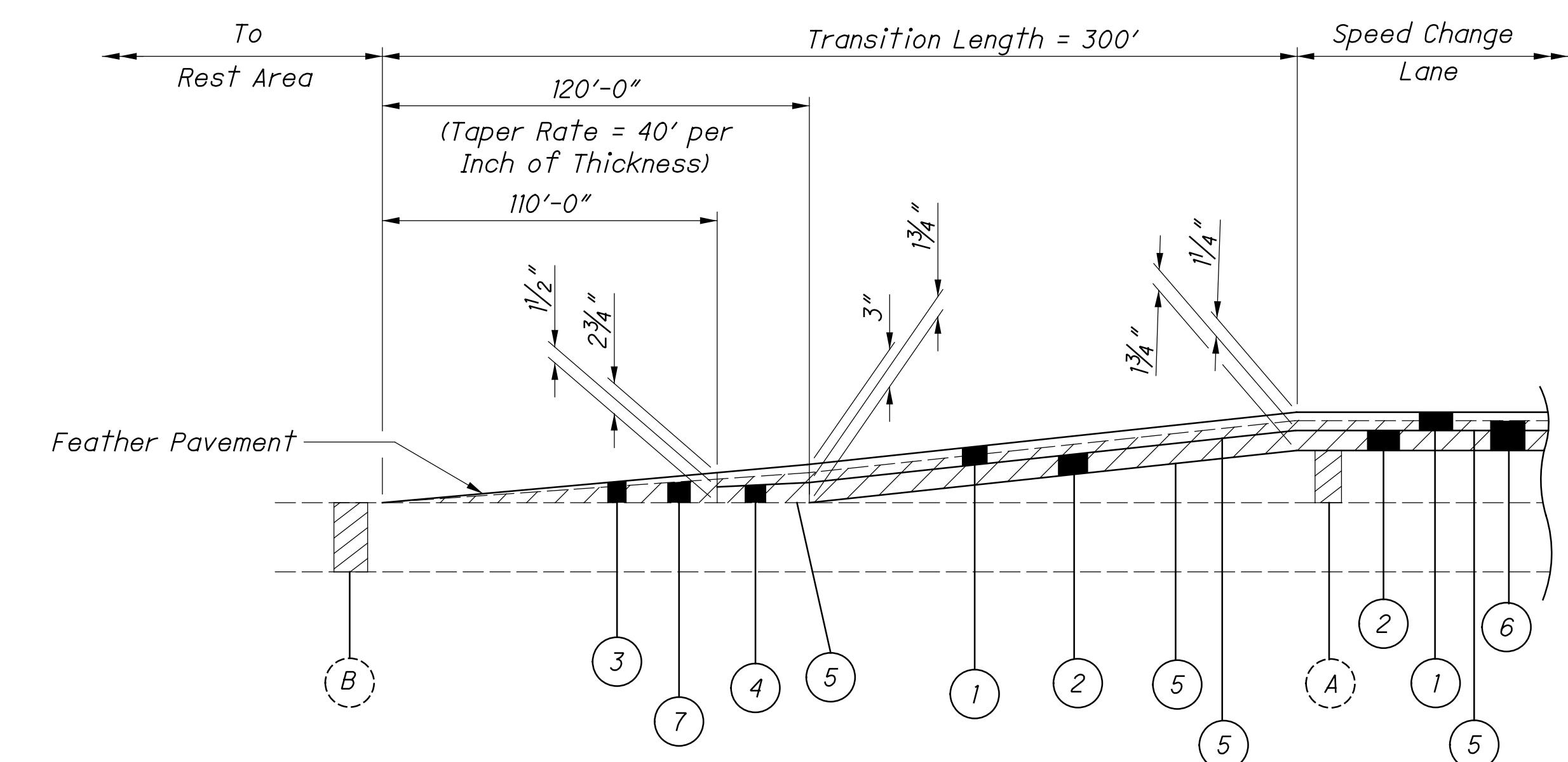
PLAN VIEW



PLAN VIEW

TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:
S.R. 666 Interchange



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
- (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 254 Pavement Planing, Asphalt Concrete (Depth = 2")
- (7) ITEM 254 Pavement Planing, Asphalt Concrete (Var. Thickness)

- ITEM 254 Pavement Planing, Asphalt Concrete

EXISTING LEGEND

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



HORIZONTAL SCALE IN FEET

100

50

25

0

50

100

150

200

250

300

350

400

450

500

550

600

650

700

750

800

850

900

950

1000

1050

1100

1150

1200

1250

1300

1350

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1450

1500

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1600

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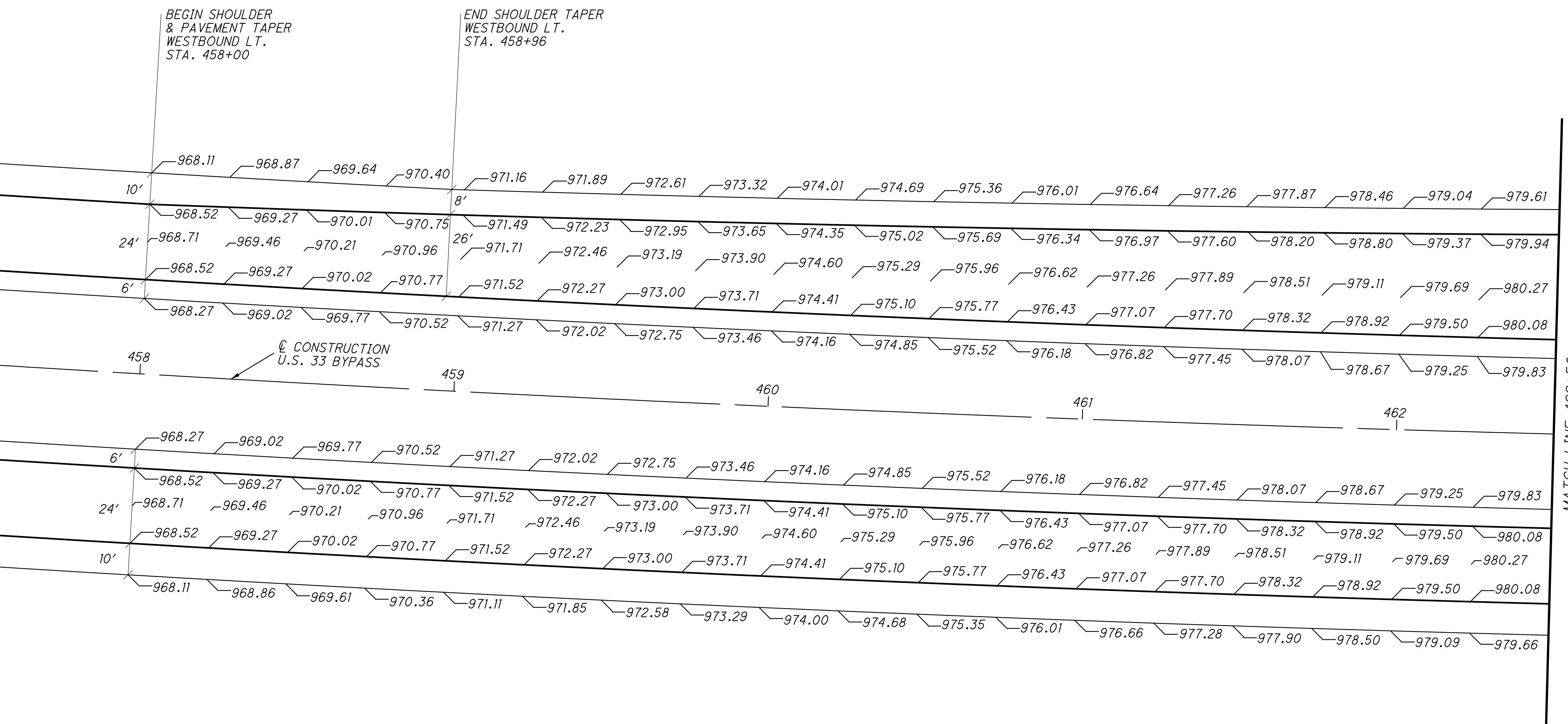
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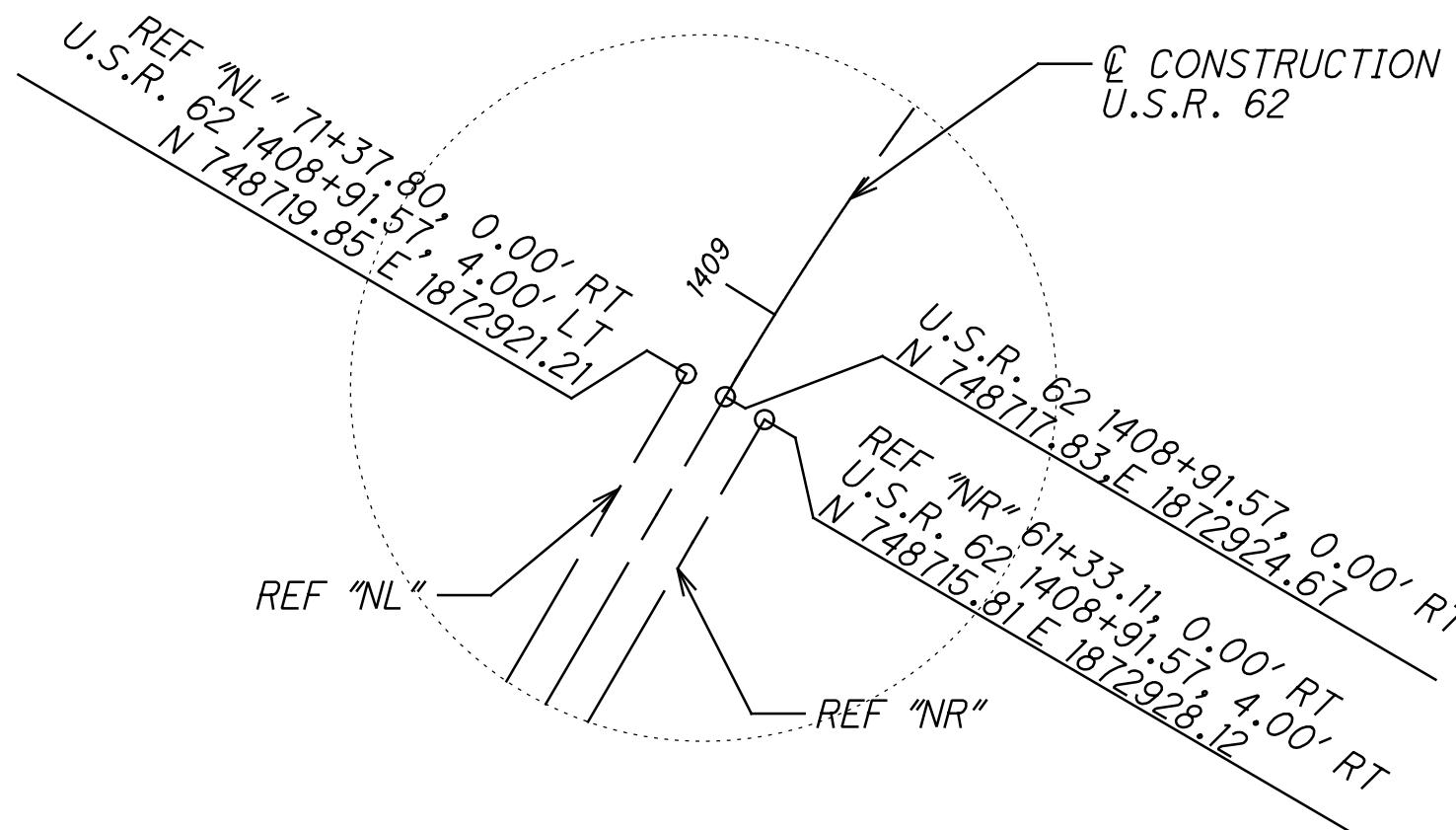
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9450

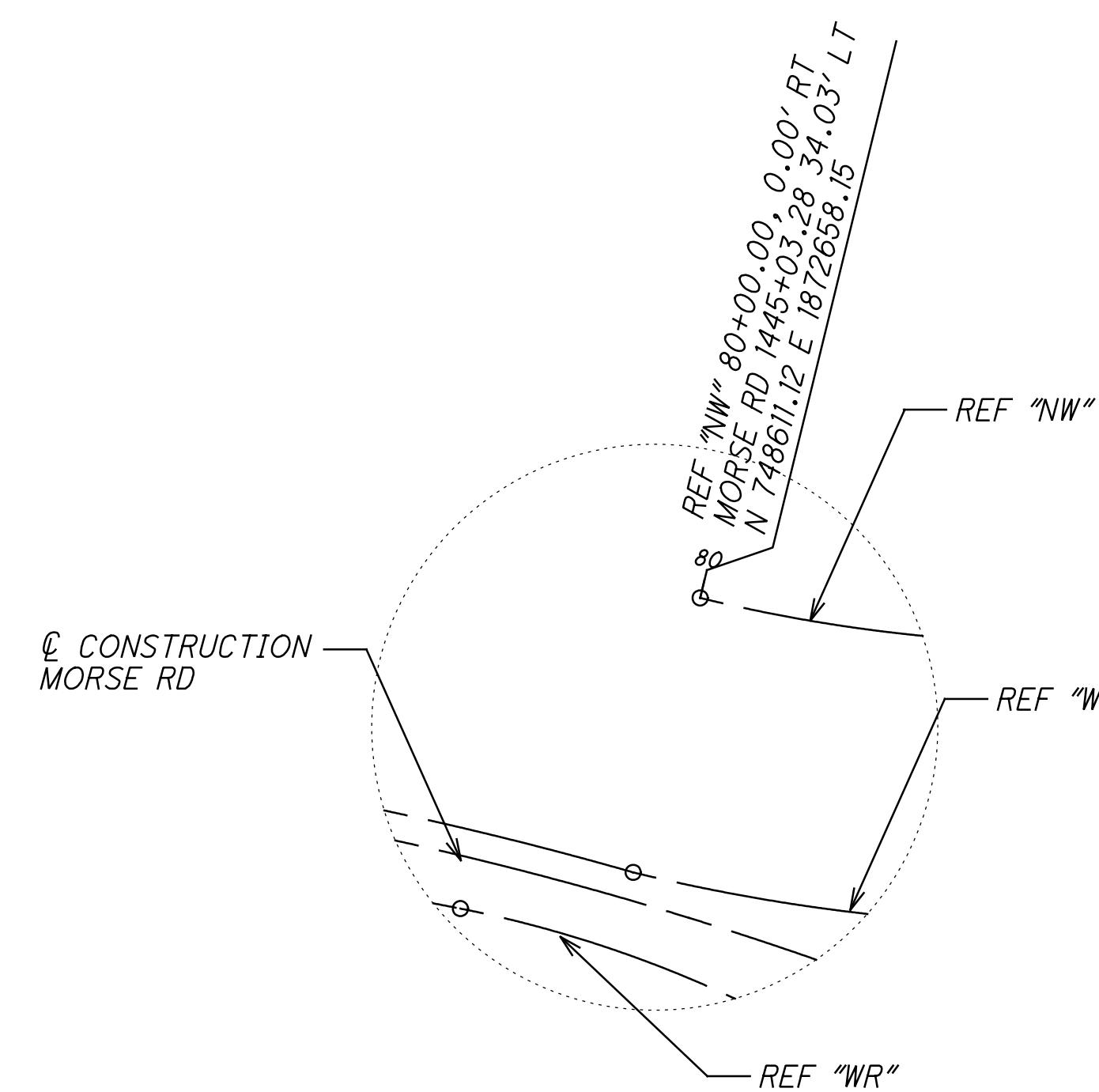


ROUNDABOUT GEOMETRIC LAYOUT

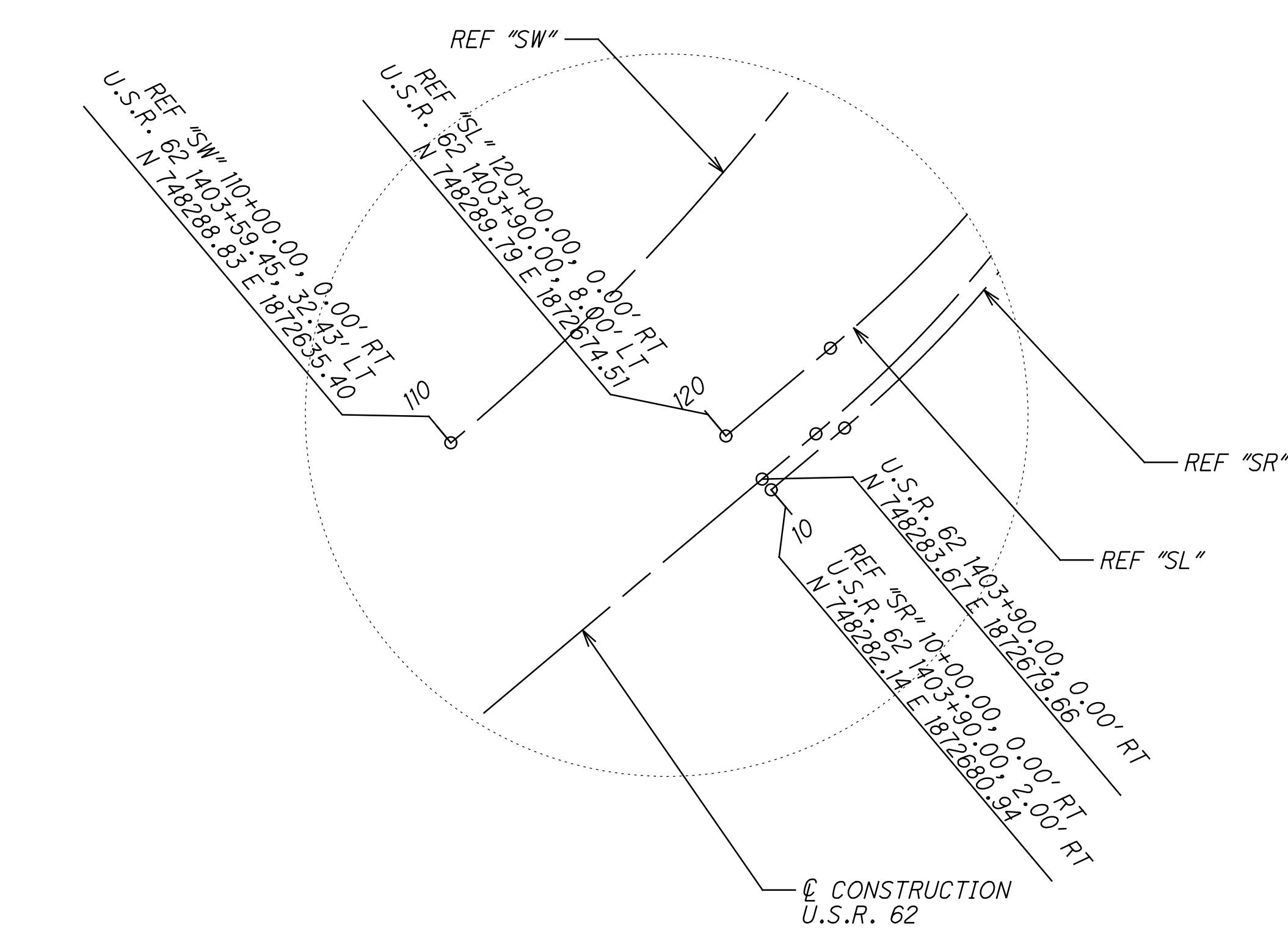
FRA -62-26.34



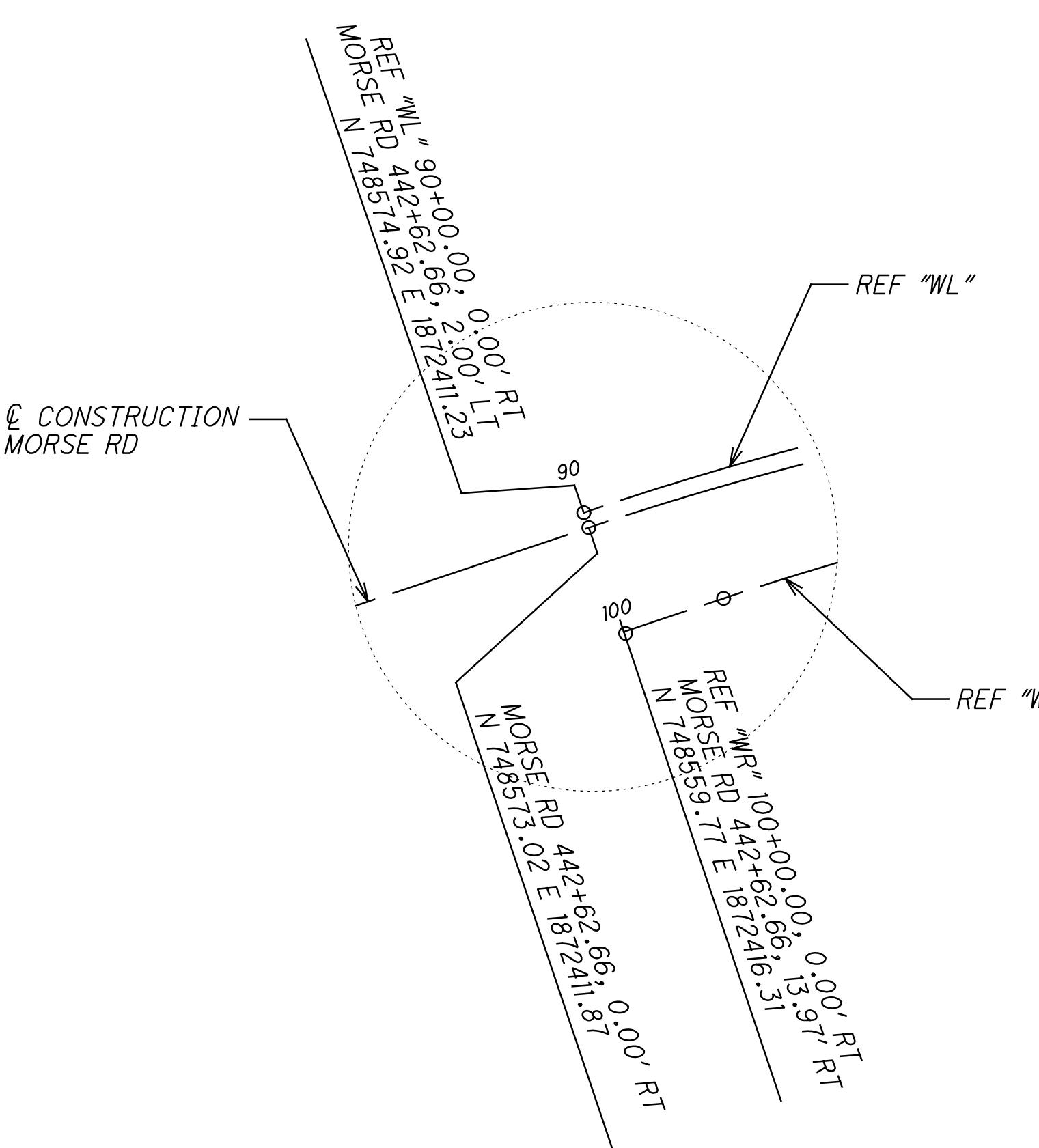
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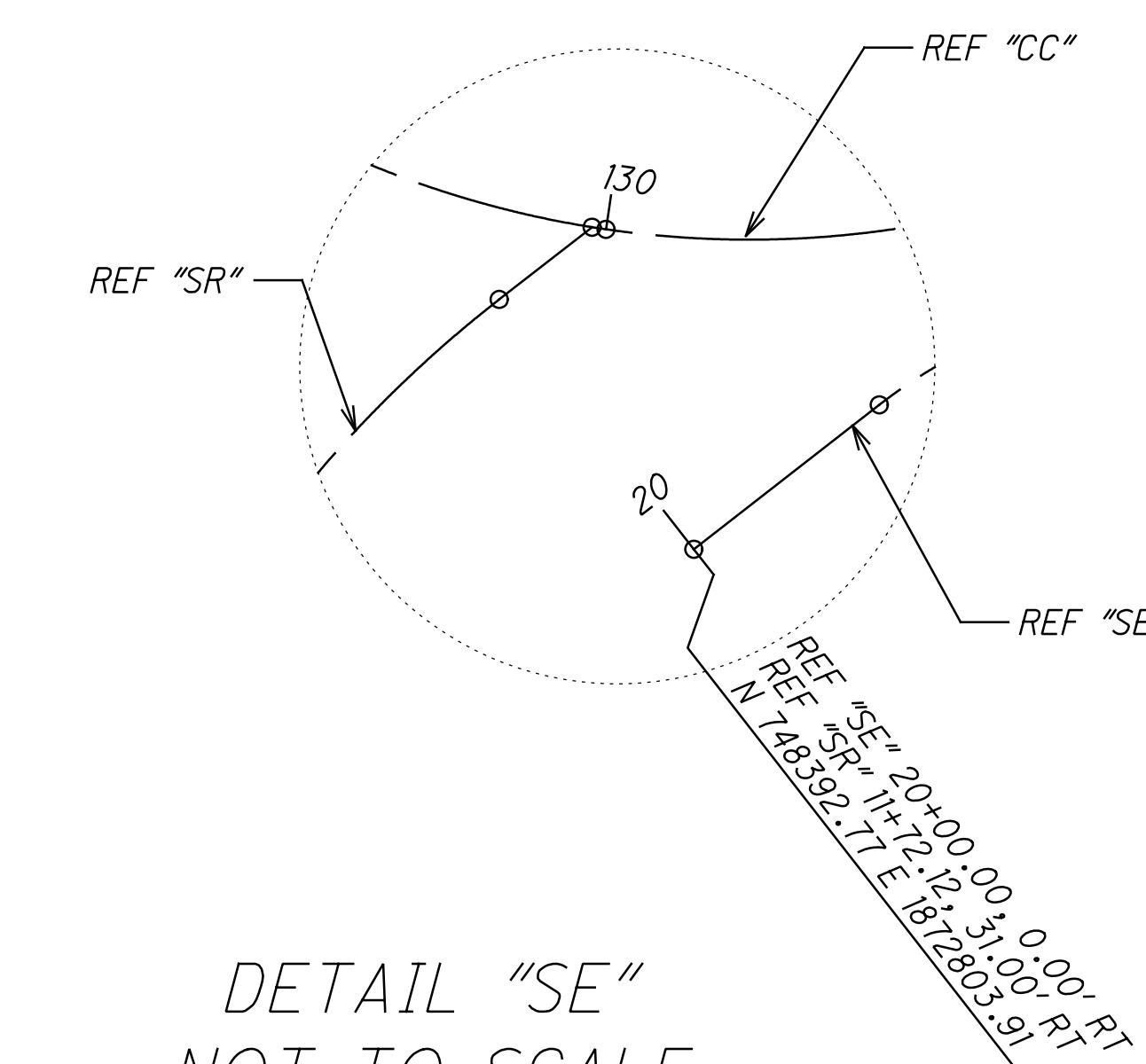
DETAIL "NW"
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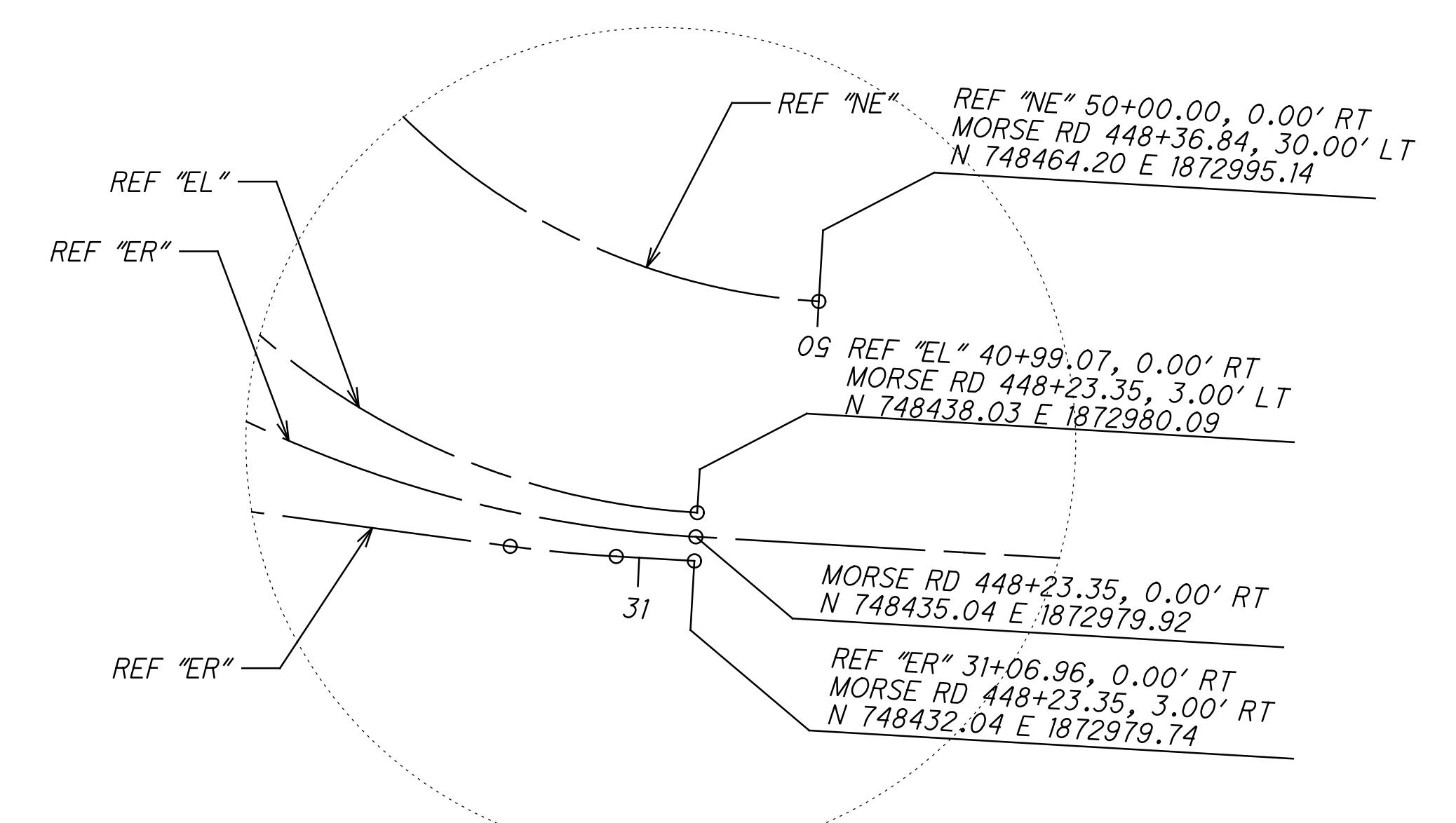
DETAIL "S"
NOT TO SCALE



DETAIL "W"
NOT TO SCALE



DETAIL "SE"
NOT TO SCALE



DETAIL "E"
NOT TO SCALE

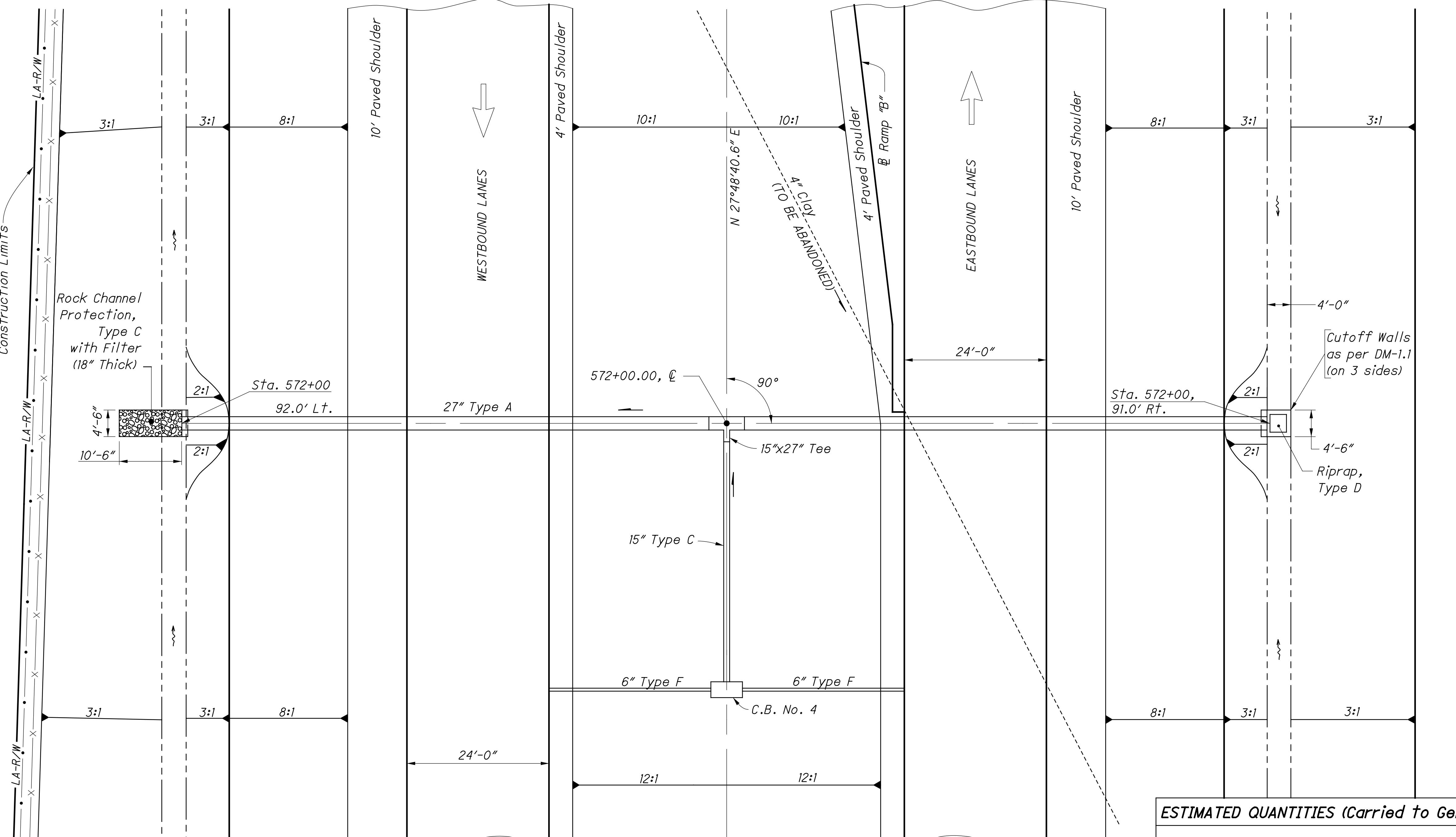


HYDRAULIC DESIGN DATA	
Drainage Area	= 28 Ac.
Q_{50}	= 22 cfs
Q_{100}	= 25 cfs
HW_{50}	= 829.7'
HW_{100}	= 830.1'
V_{50}	= 5.6 fps
V_{100}	= 6.1 fps
Ordinary High Water Mark	= 827.3'
Design Service Life	= 75 Yr.
pH	= 7.8
Abrasion Level:	4
CFN	= 1234567

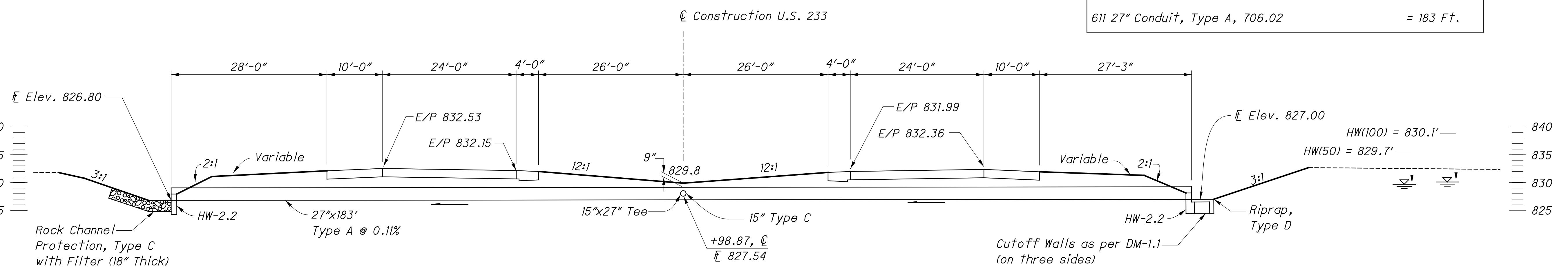
CULVERT DETAILS
U.S. 233 - STA. 572+00

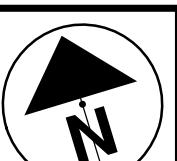
ALL - 233-22.69

283
586

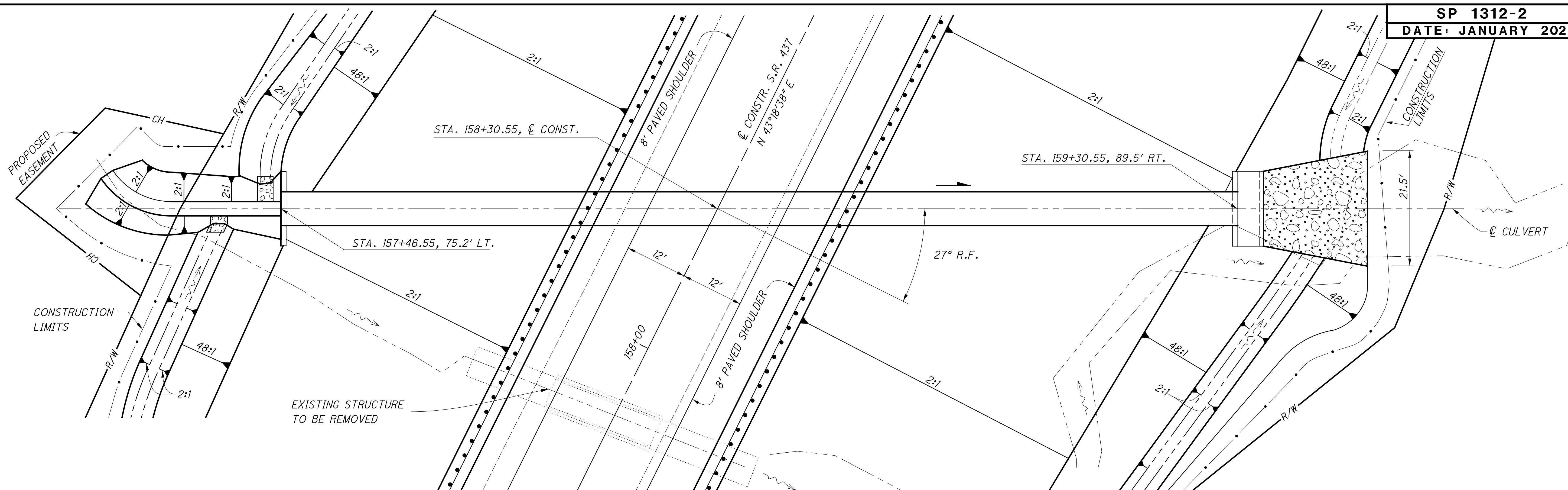


ESTIMATED QUANTITIES (Carried to General Summary)	
601 Rock Channel Protection, Type C with Filter	= 2.8 Cu.Yd.
601 Riprap, Type D	= 2.0 Sq.Yd.
602 Concrete Masonry	= 1.2 Cu.Yd.
611 27" Conduit, Type A, 706.02	= 183 FT.





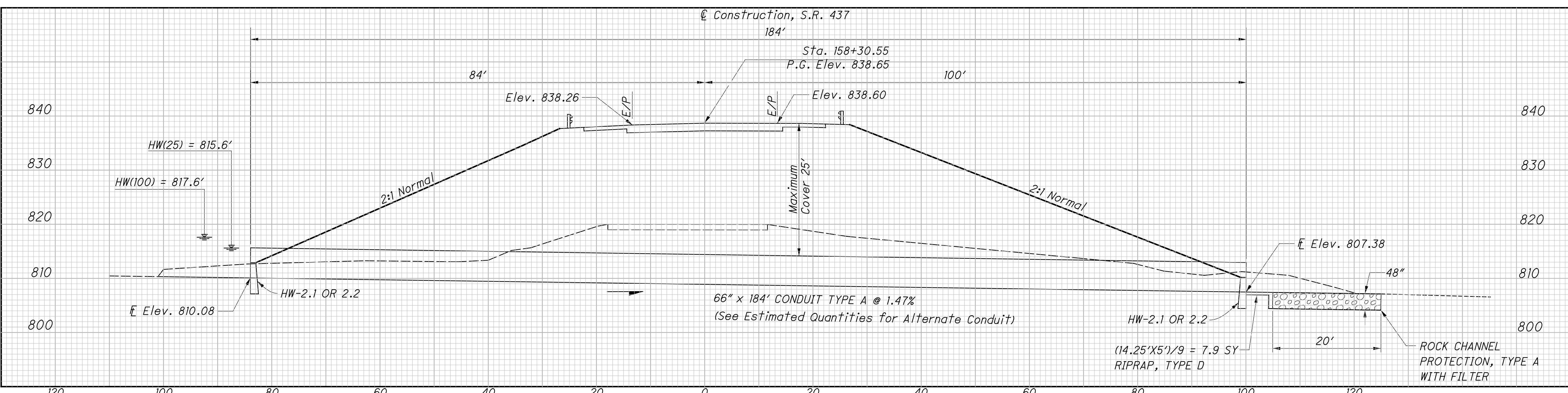
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CALCULATED 0
JOH 5
CHECKED 10
JDH 20

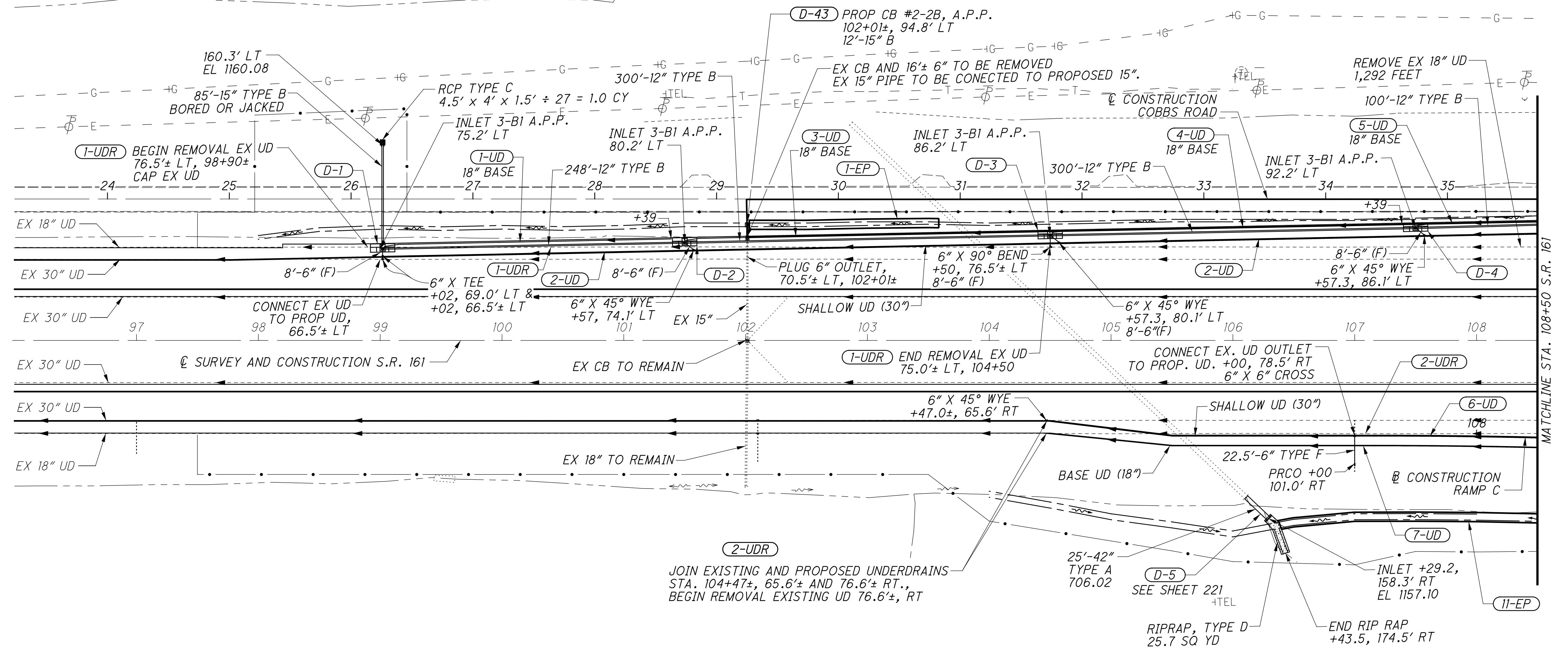


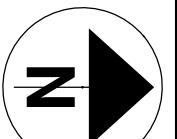
QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 37

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

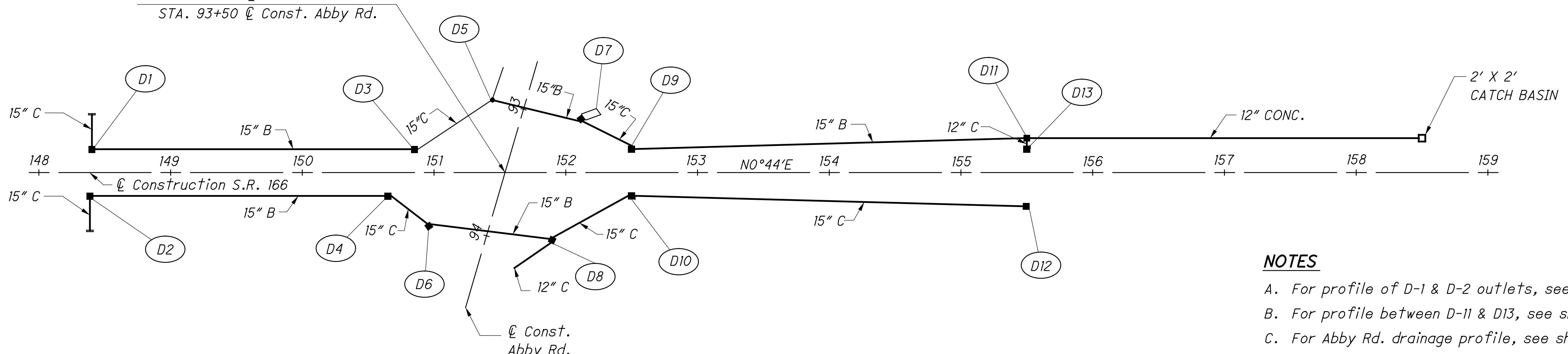




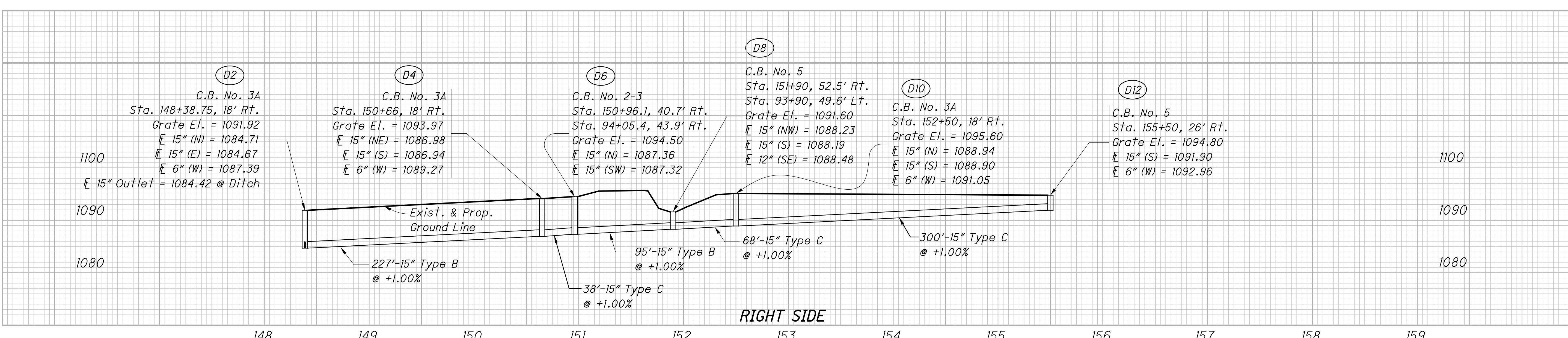
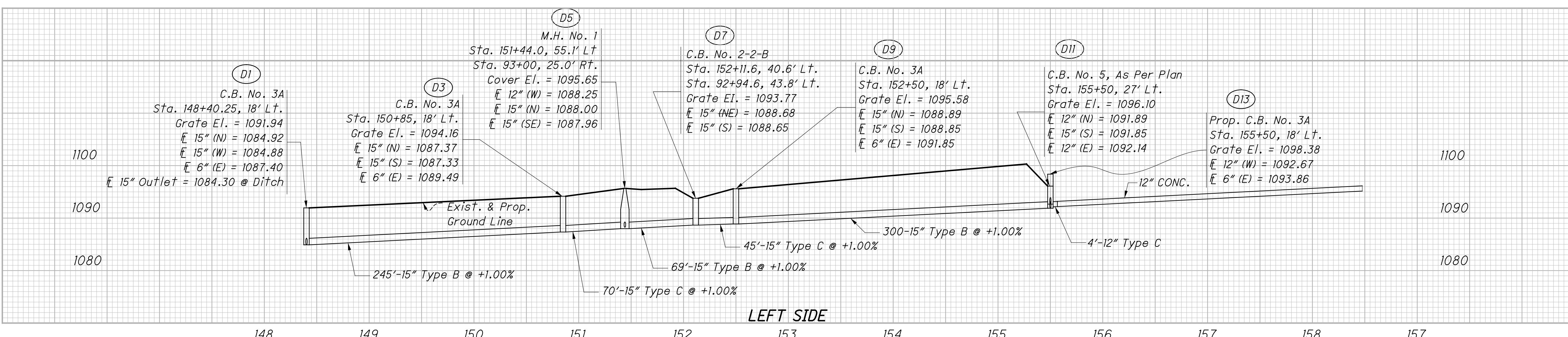


100
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CALCULATED
MSQ
CHECKED
PDG
HORIZONTAL SCALE IN FEET

STA. 151+53.88 E Const. S.R. 166 =
STA. 93+50 E Const. Abby Rd.

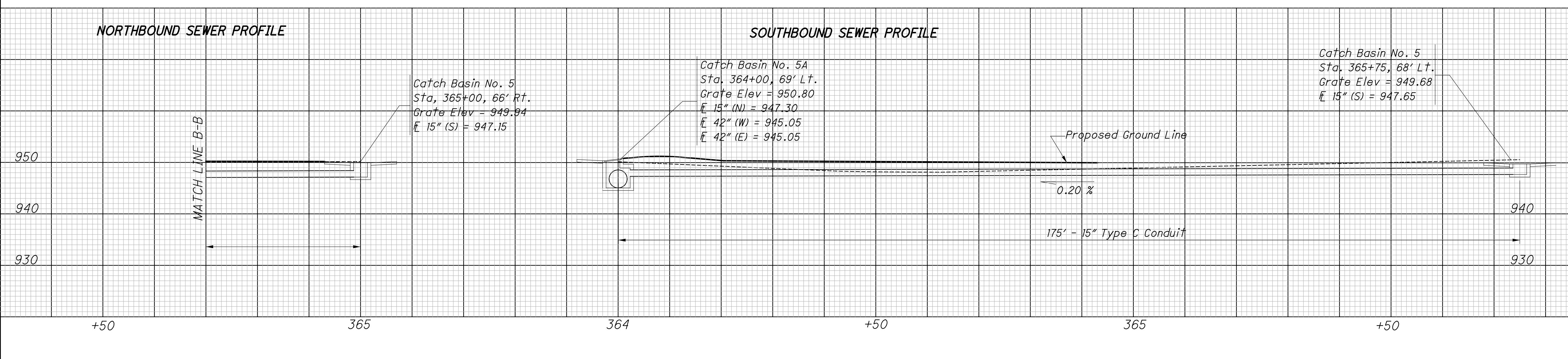
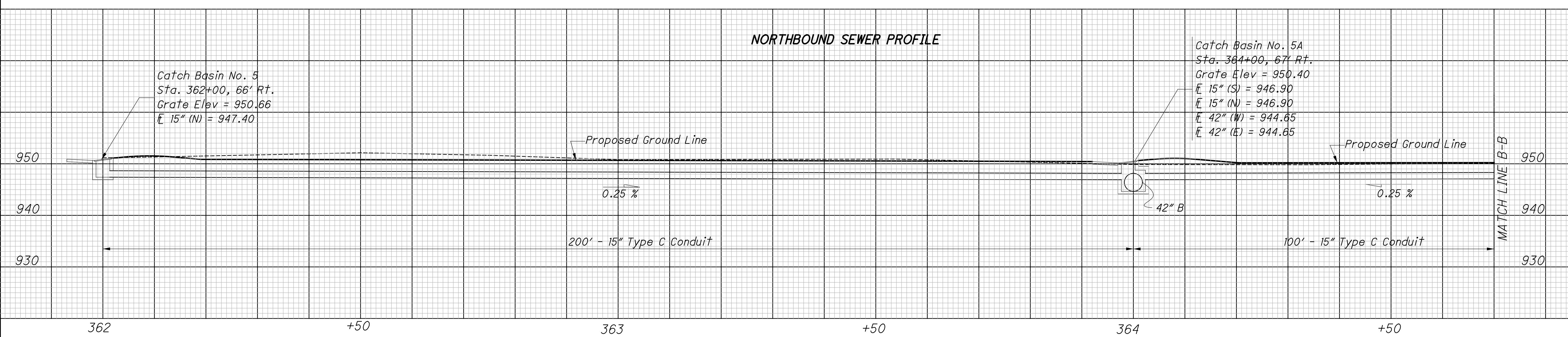
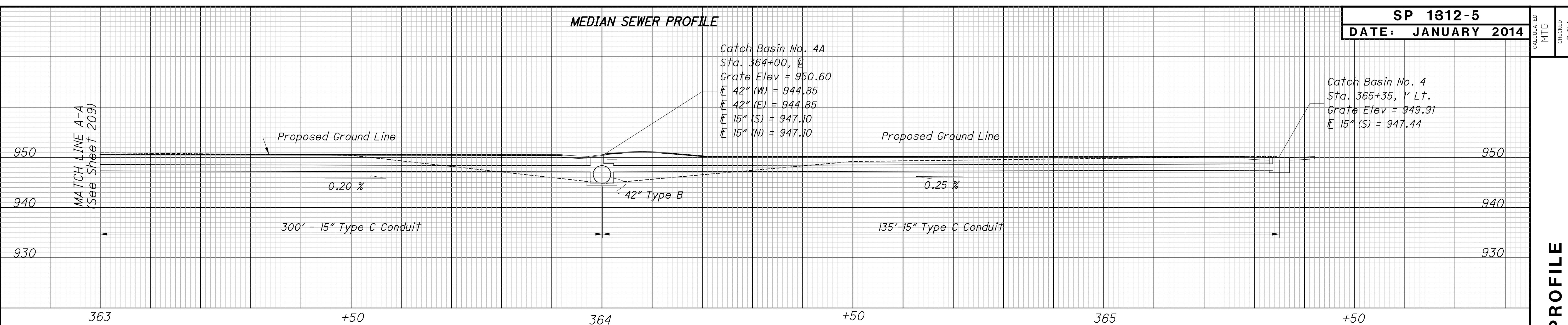
**NOTES**

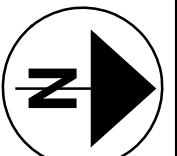
- A. For profile of D-1 & D-2 outlets, see sheet 20.
- B. For profile between D-11 & D-13, see sheet 26.
- C. For Abby Rd. drainage profile, see sheet 41.
- D. For drainage sub-summary, see sheets 14-16.
- E. For S.R.166 plan & profile, see sheets 17-19.



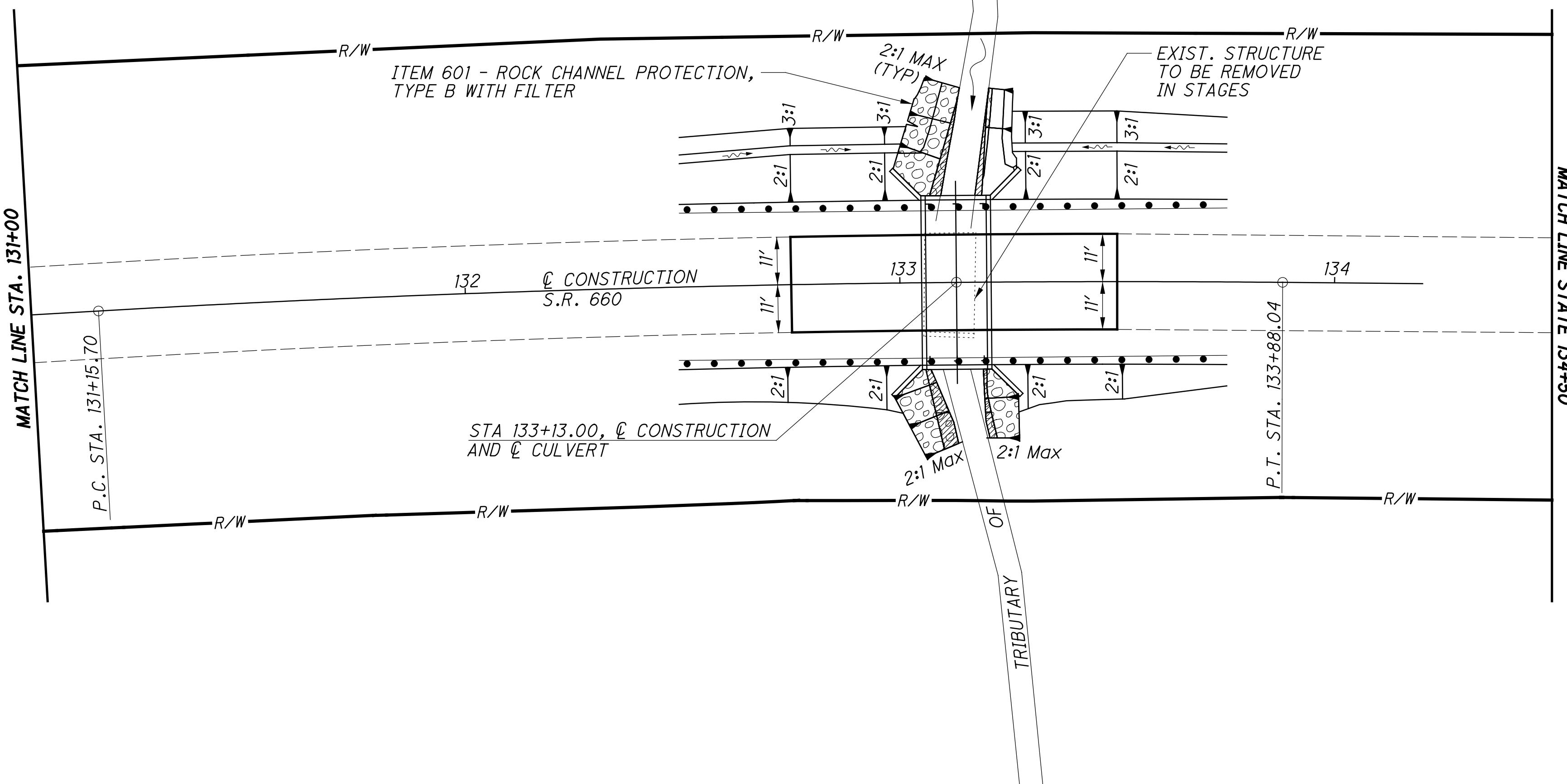
SP 1812-5
DATE: JANUARY 2014

CALCULATED
MTG
CHECKED
CJM





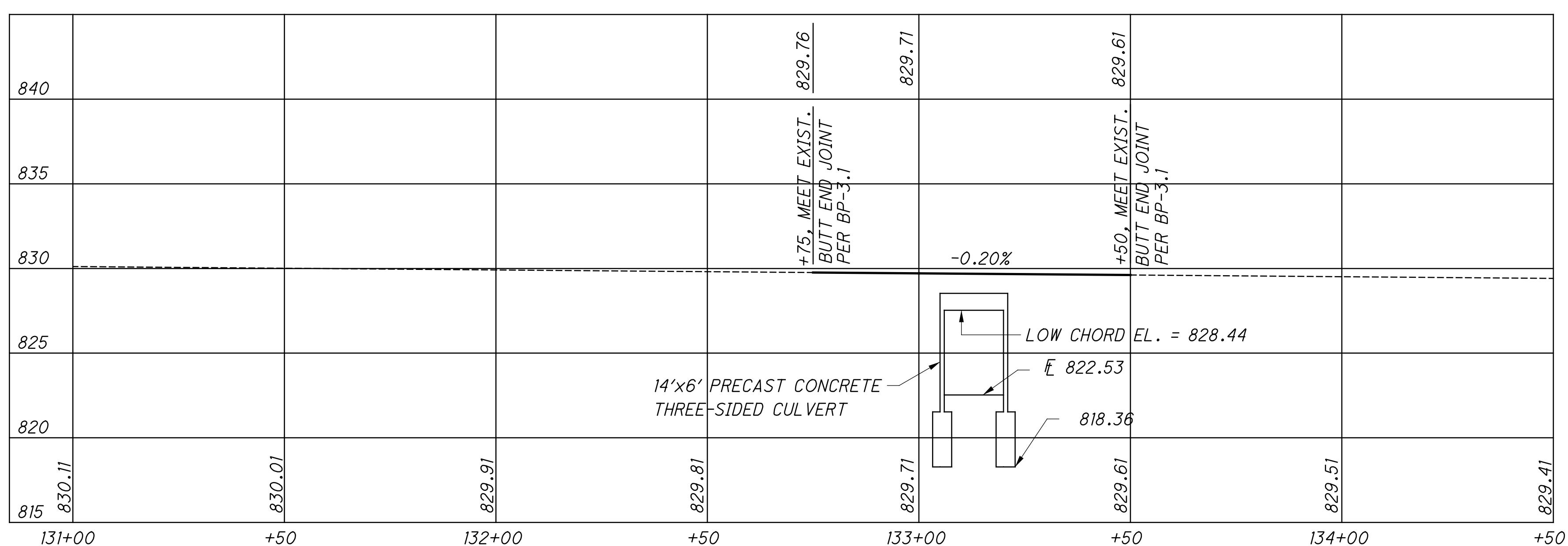
HORIZONTAL SCALE IN FEET
100 125
100 125
10 20 40
CALCULATED
CHECKED
JOH



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
V_{10}	= 6.9 FPS
HW_{10}	= 827.8
Q_{100}	= 518 CFS
V_{100}	= 7.9 FPS
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:	VARIABLES
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:	VARIABLES
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." - $f'c = 4,000 \text{ psi}$ SUBSTRUCTURE

REINFORCING STEEL - ASTM A615, A616, OR A617

$F_y = 60,000 \text{ psi}$.

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 ACCOMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

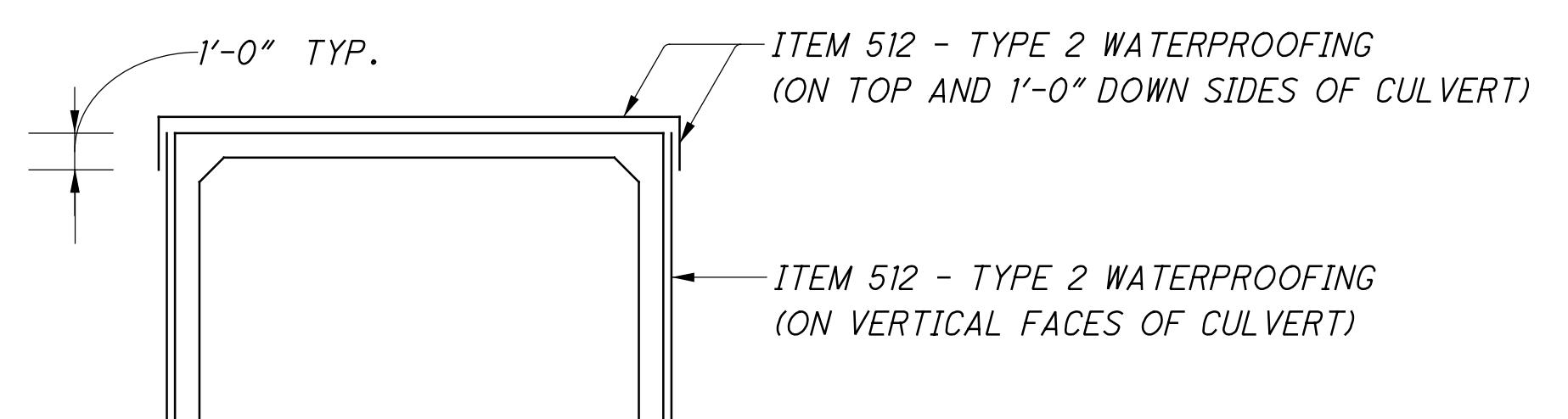
ITEM 512, TYPE 2 WATERPROOFING:

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)

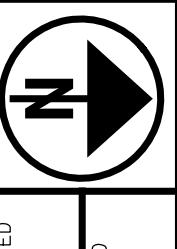
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS	LUMP	STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	6015	LB	EPOXY COATED REINFORCING STEEL
511	46010	12	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	46510	54	CY	CLASS QC1 CONCRETE, FOOTING
511	46610	1	CY	CLASS 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 GEOTEXTILE 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, THREE SIDED FLAT TOPPED CULVERT (14'-0" SPAN X 6'-0" RISE)

CULVERT ESTIMATED QUANTITIES

GUE - 660 - 2.52

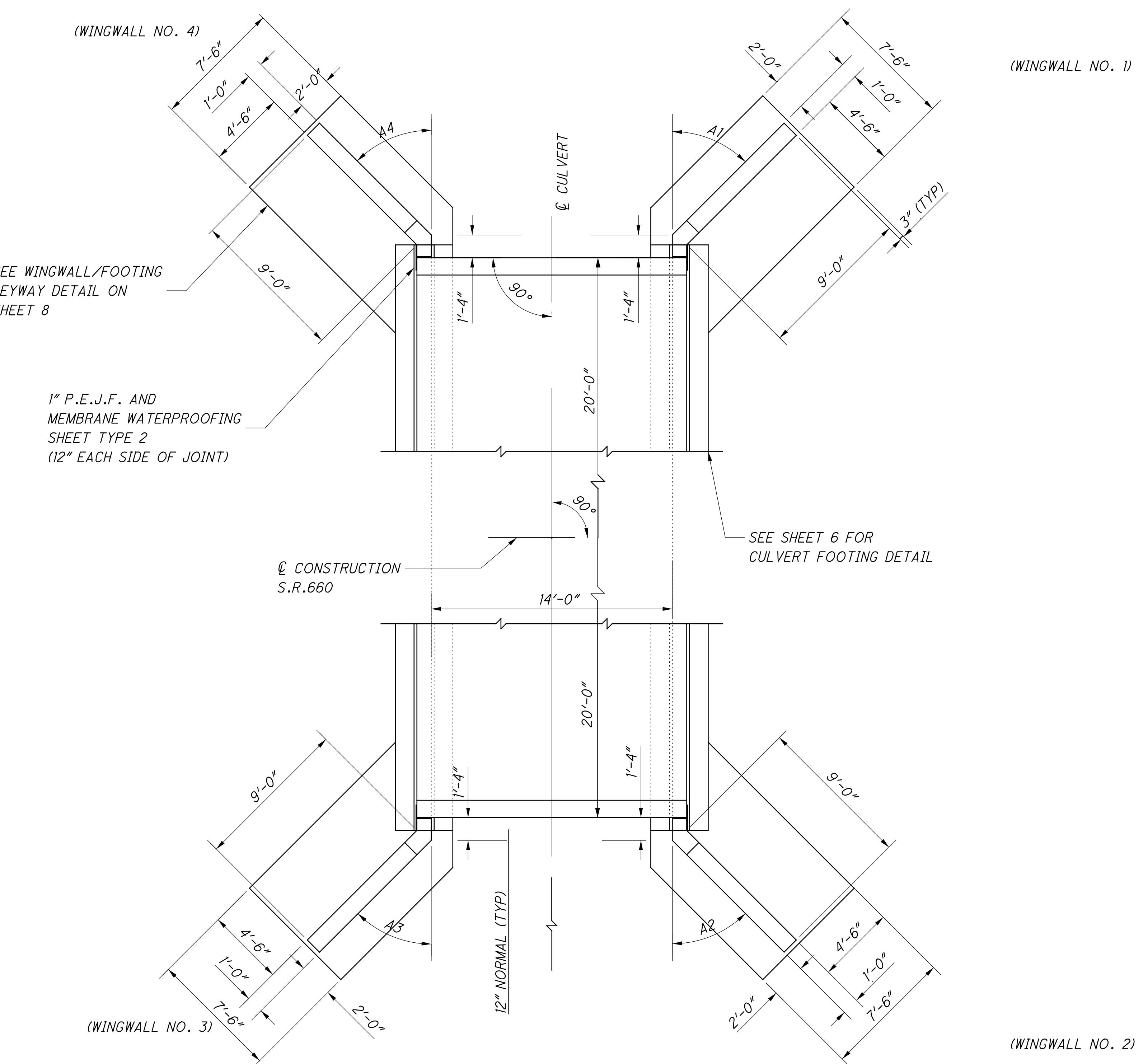
2 / 8

101
125



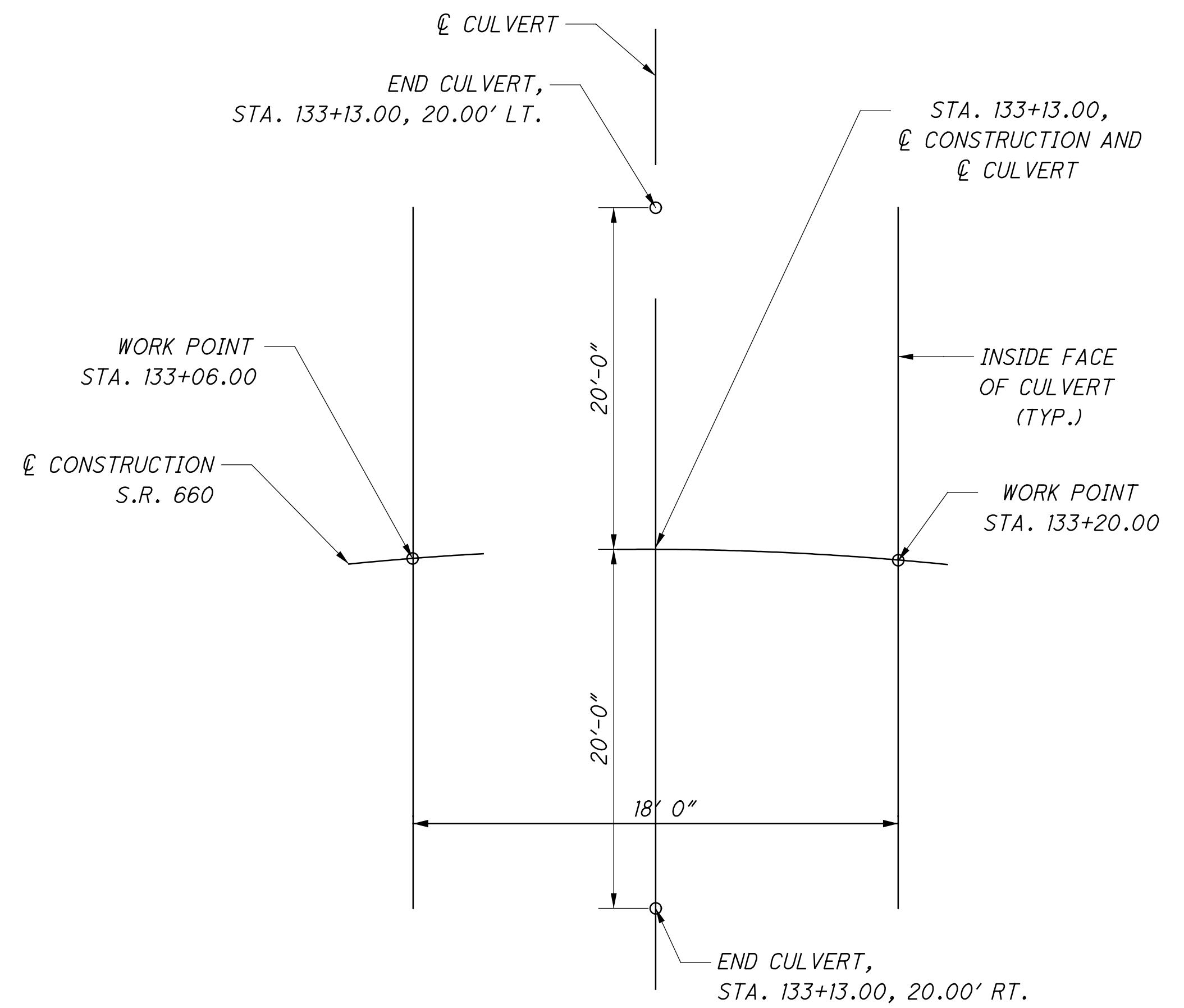
CALCULATED
KEW
CHECKED
JOH

CULVERT LAYOUT STA. 133+13.00



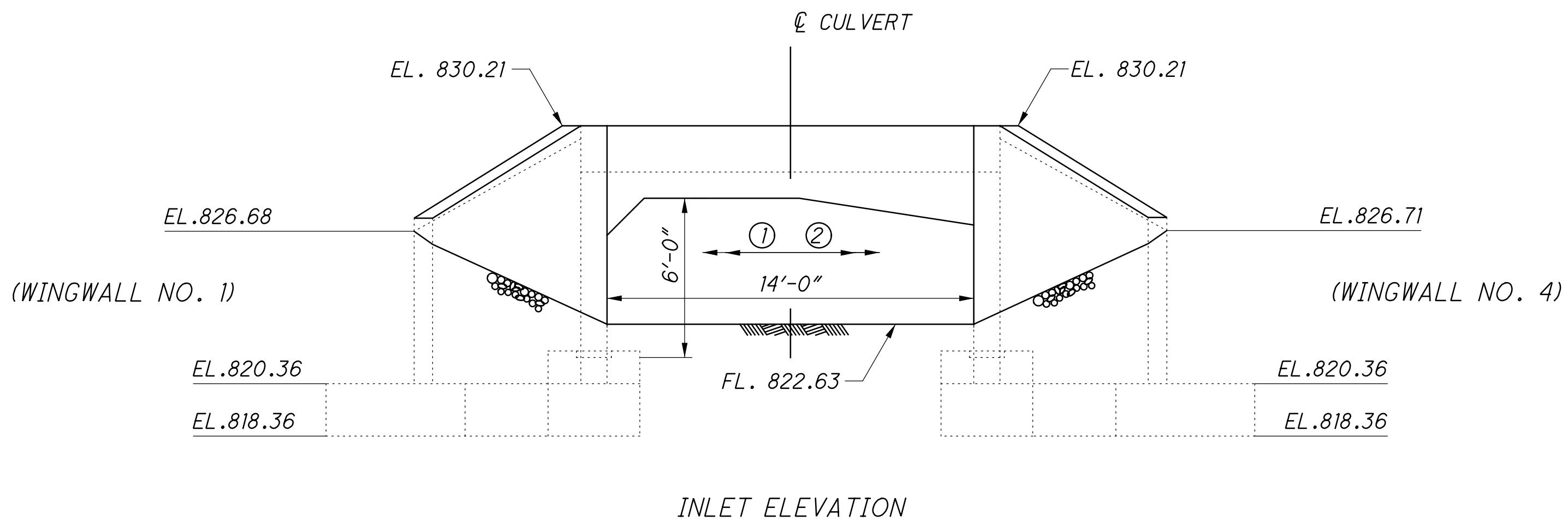
CULVERT & WINGWALL LAYOUT

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

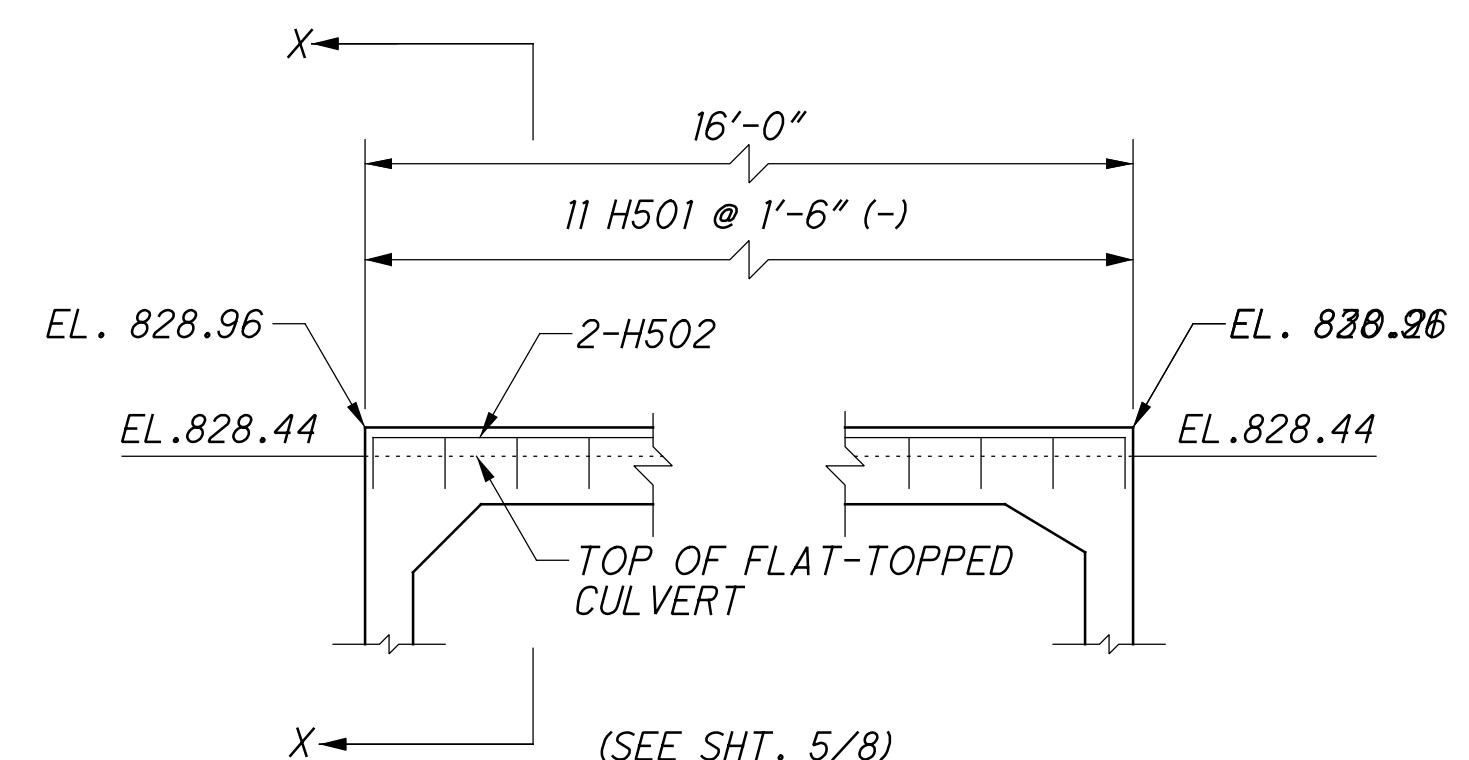
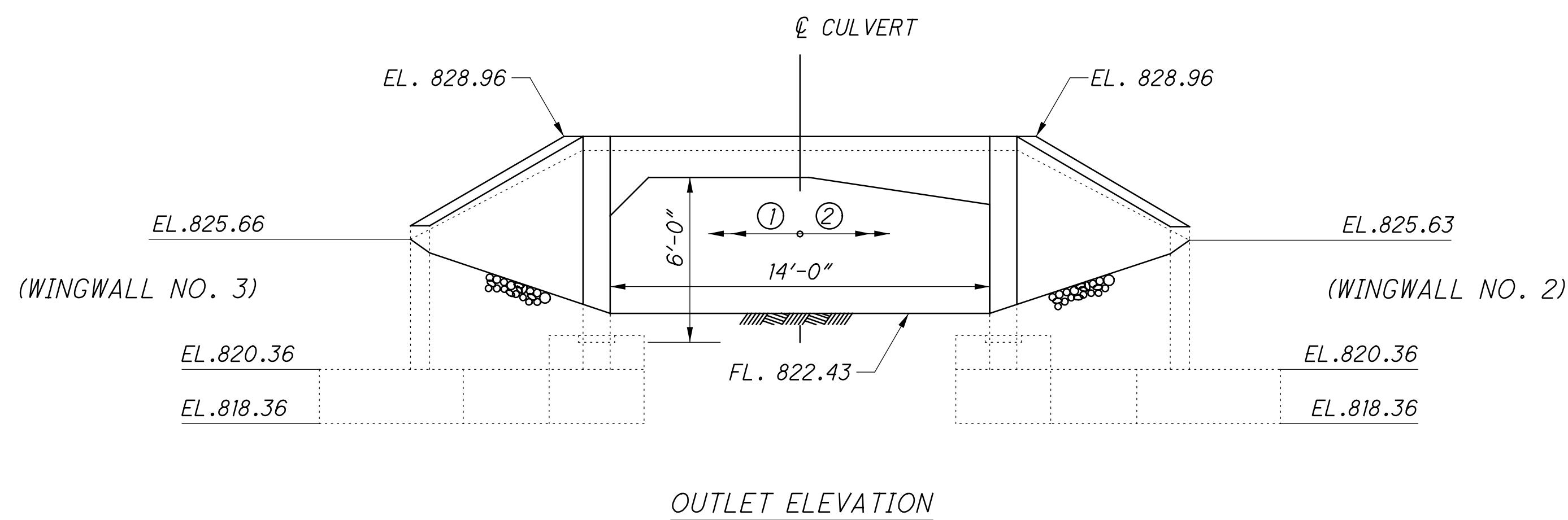
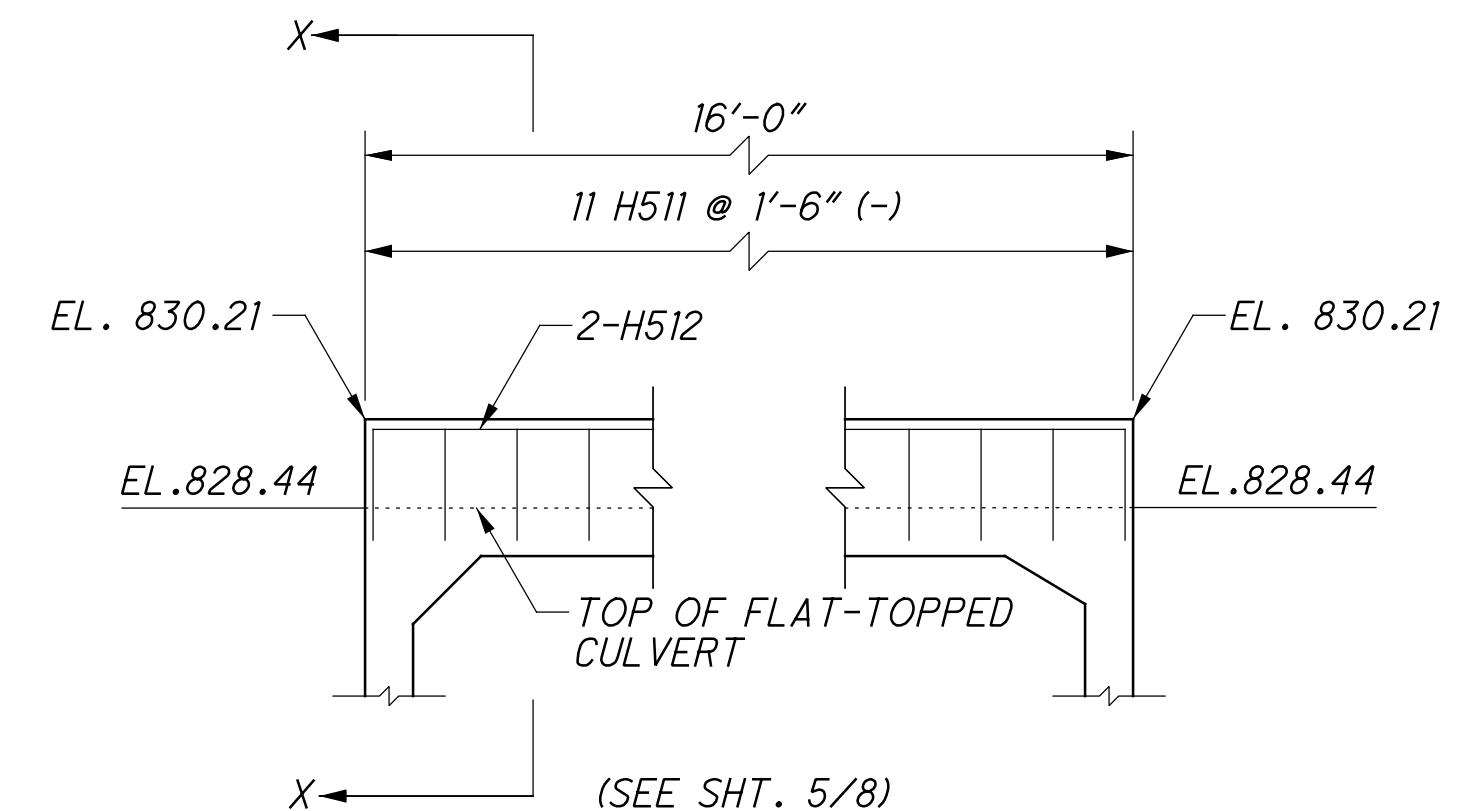


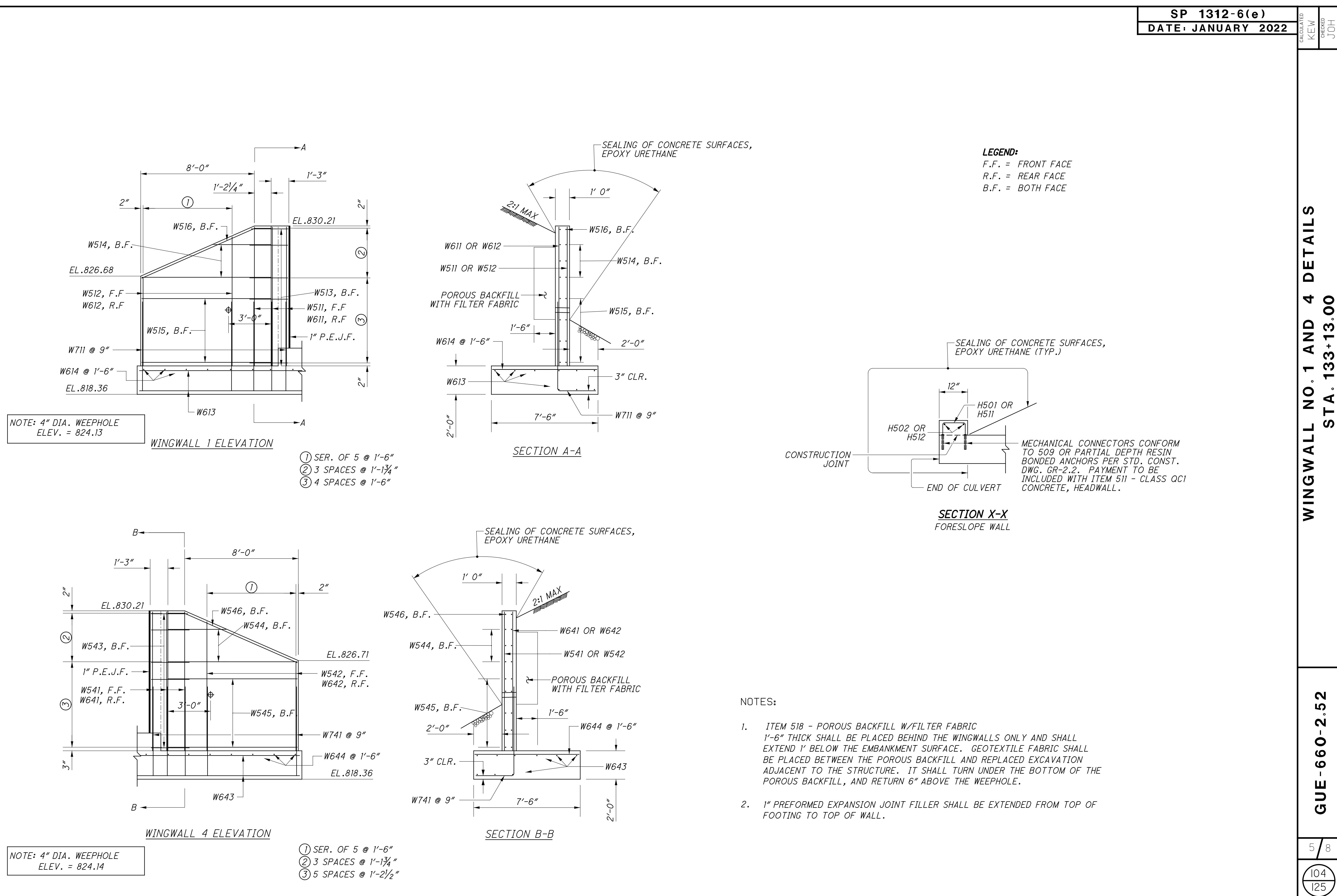
REFERENCE DIAGRAM

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



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



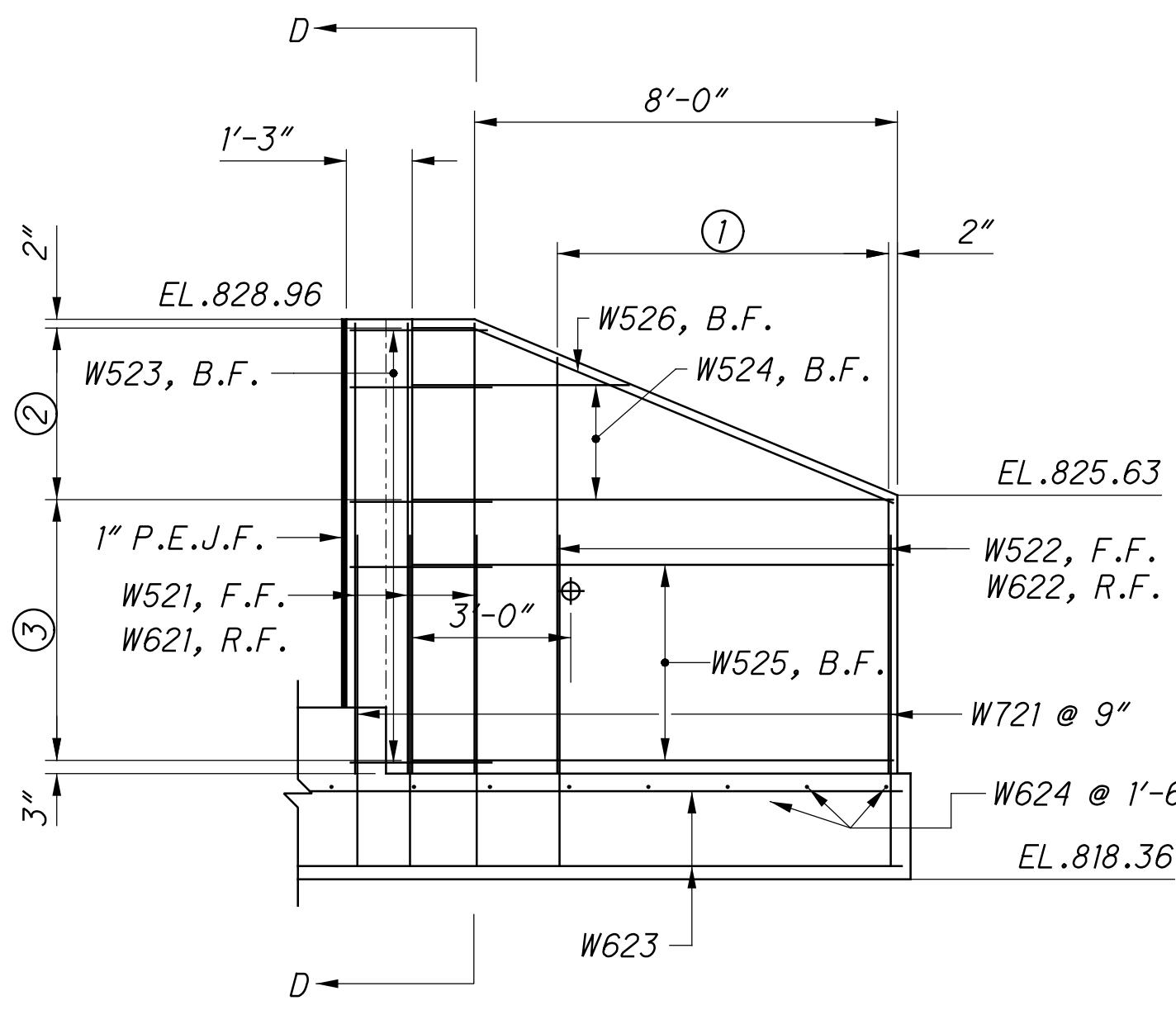


WINGWALL NO. 2 AND 3 DETAILS
STA. 133+13.00

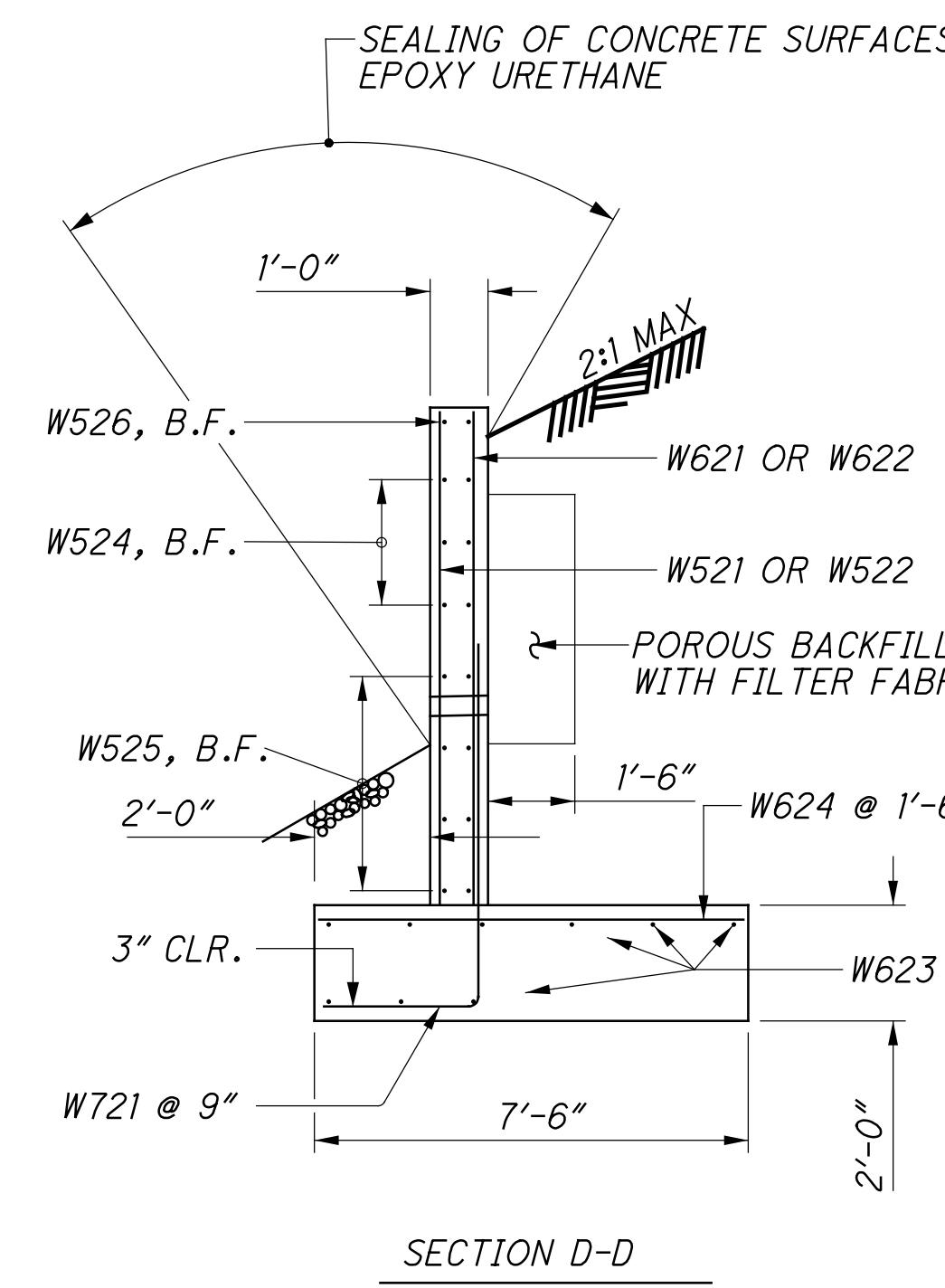
GUE-660-2.52

6 / 8

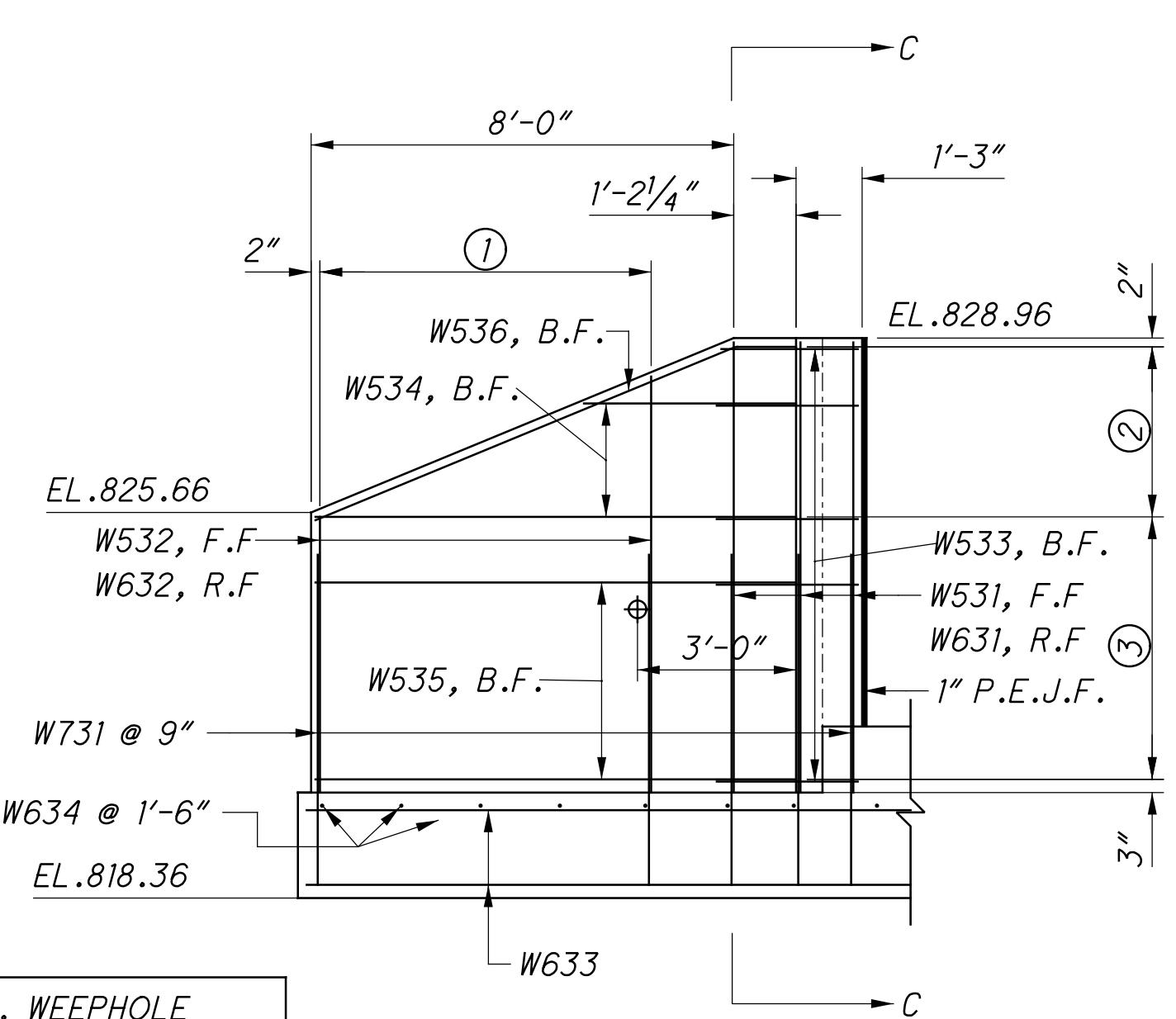
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125



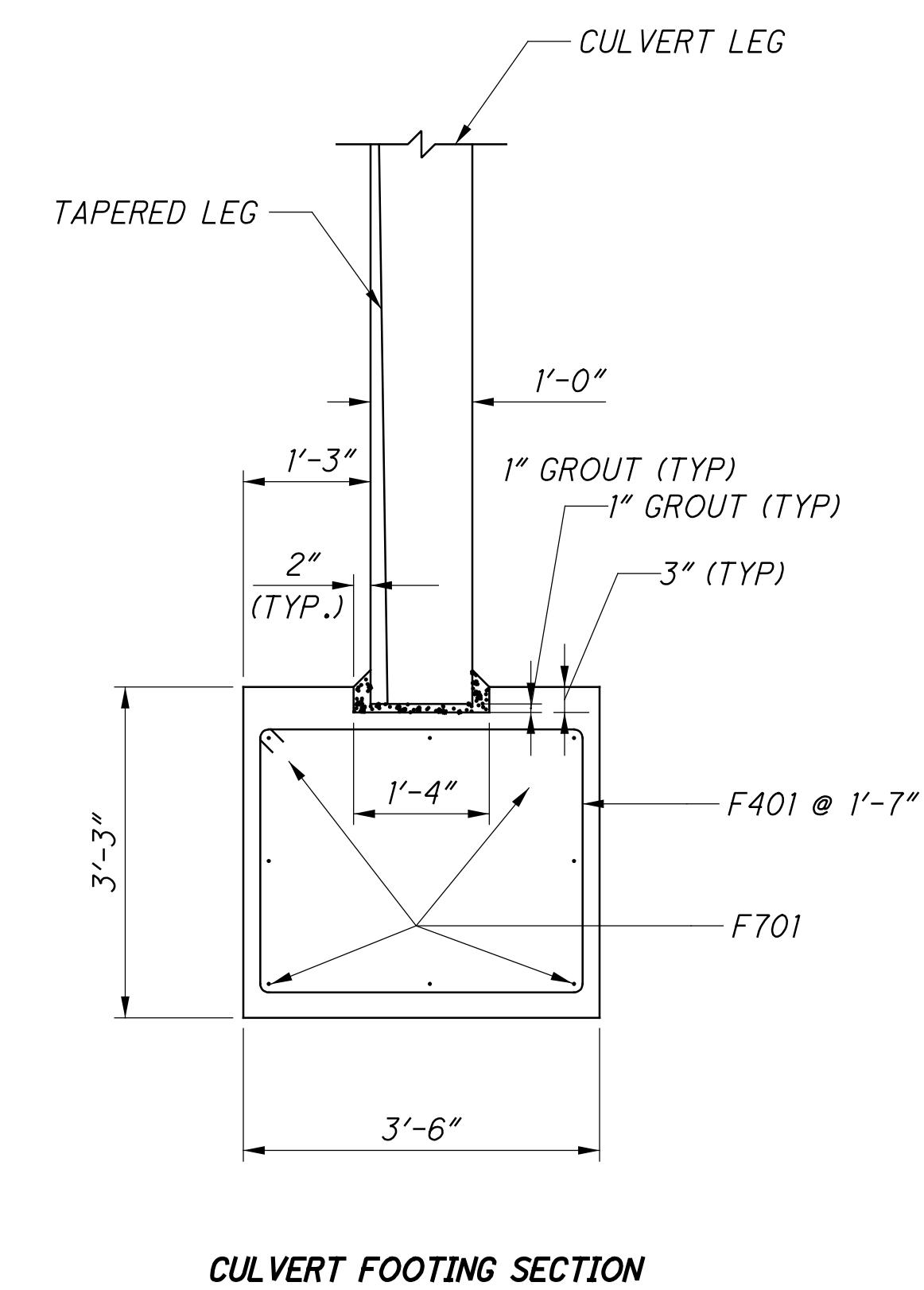
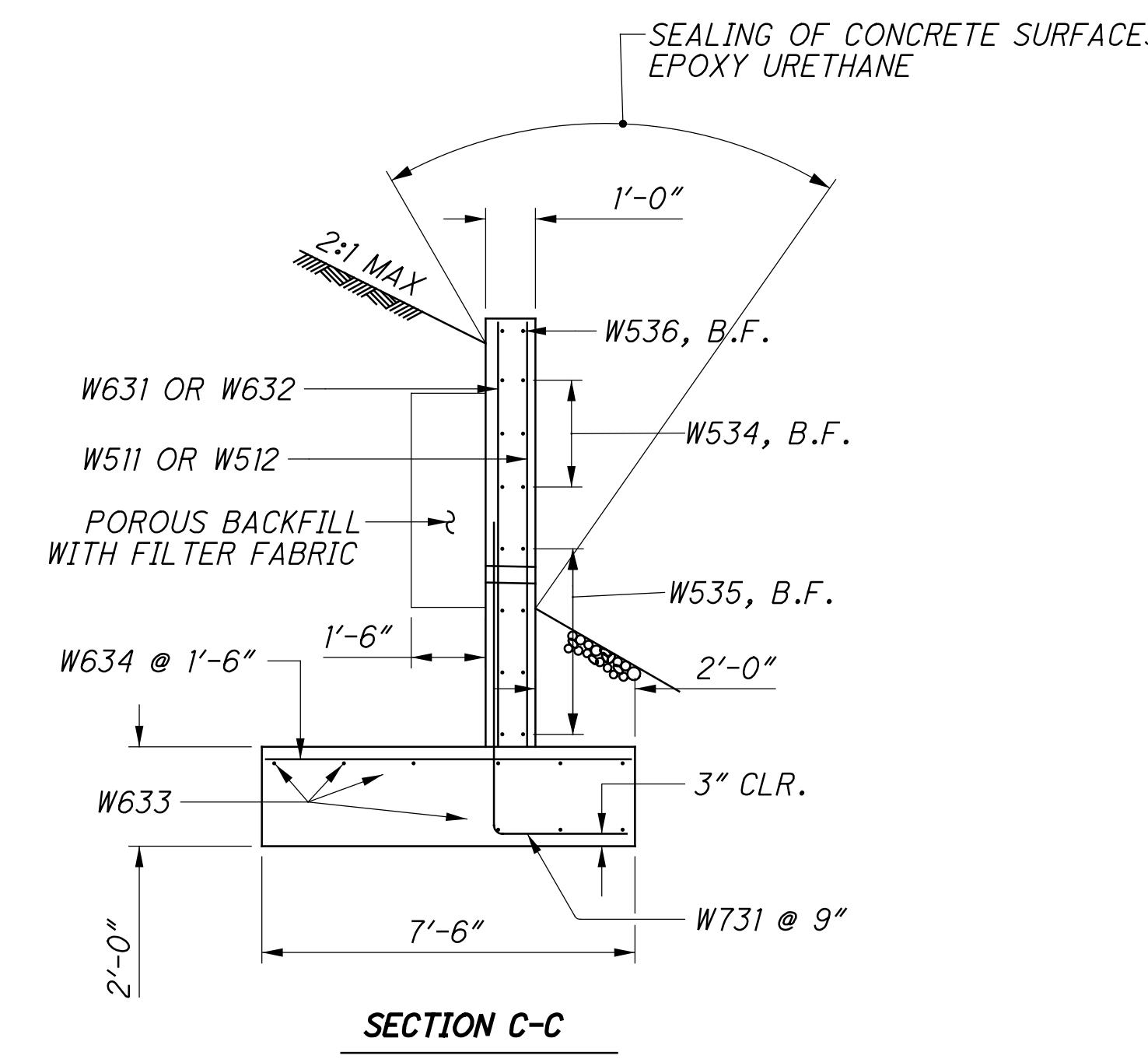
NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.65



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



NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.66





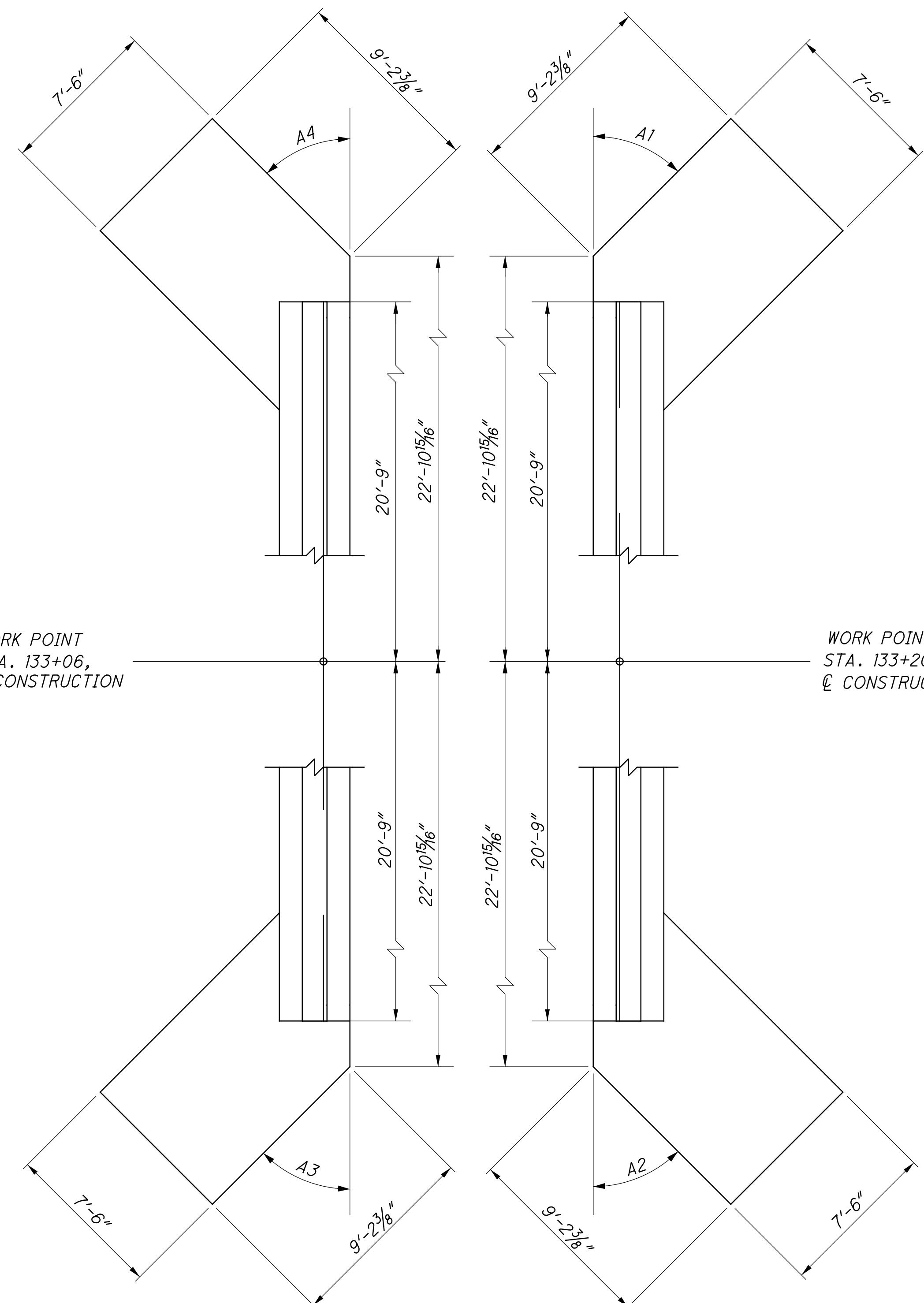
CALCULATED
KEW
CHECKED
JOH

FOOTING DETAILS STA. 133+13.00

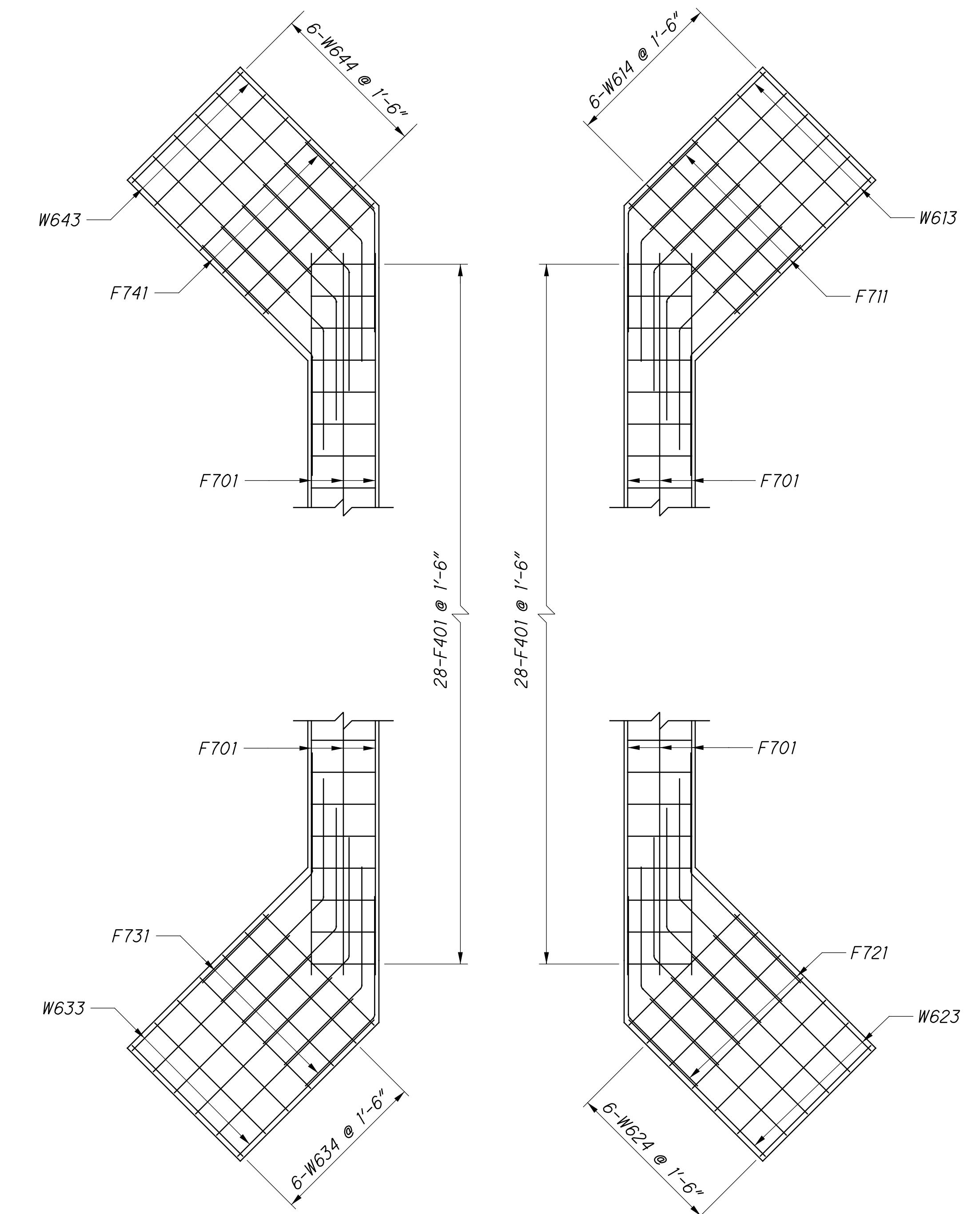
GUE - 660 - 2.52

7 / 8

106
125

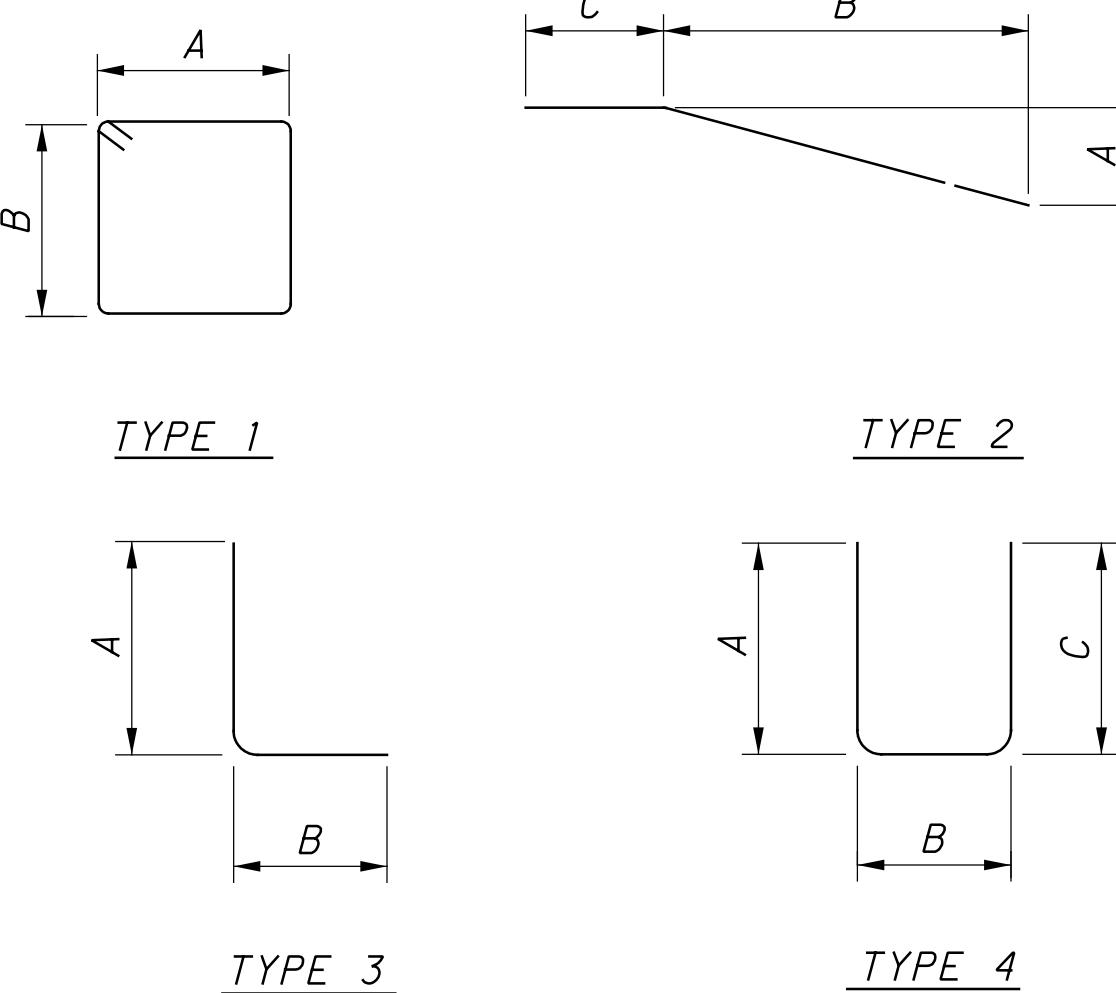
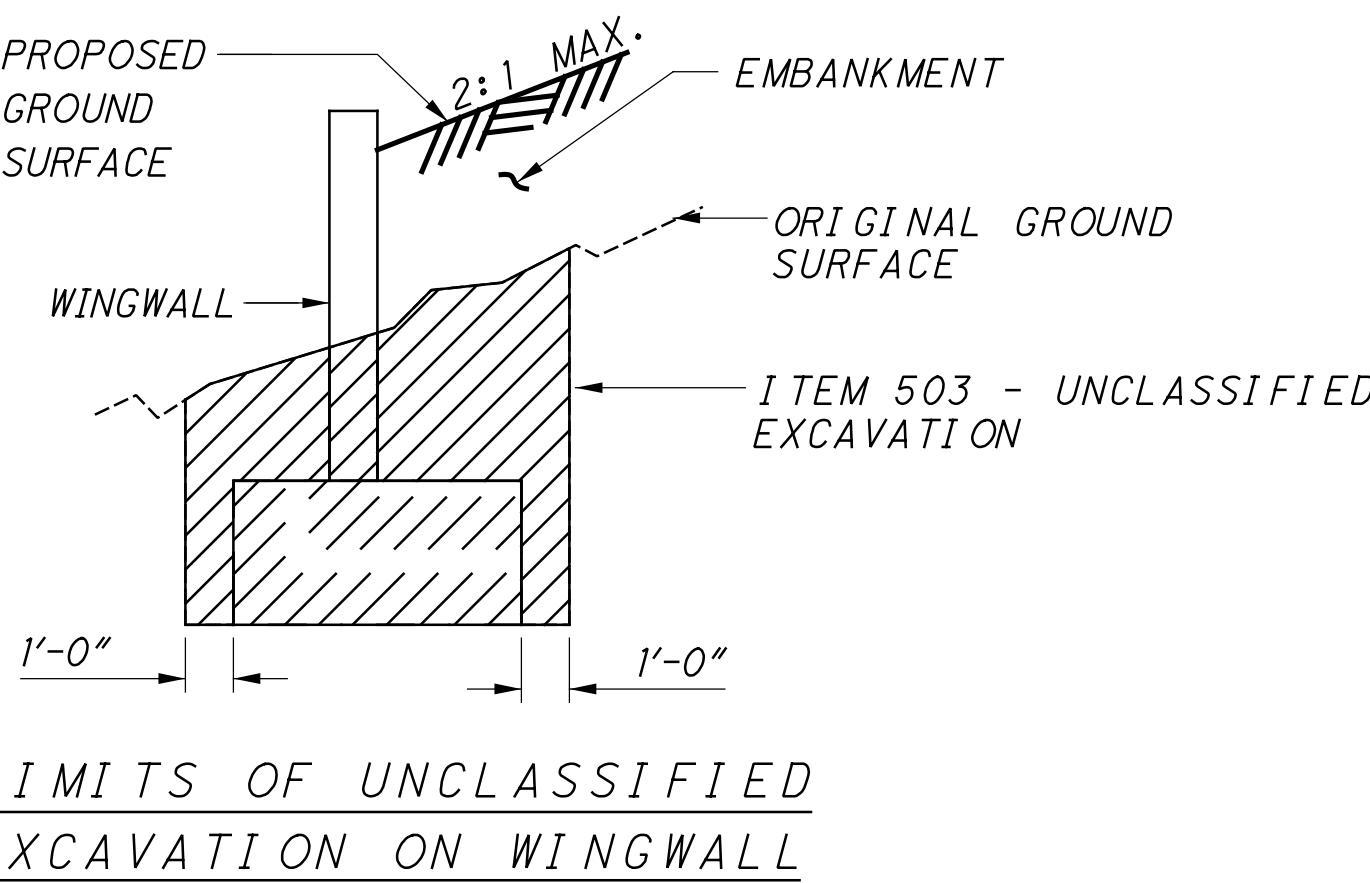
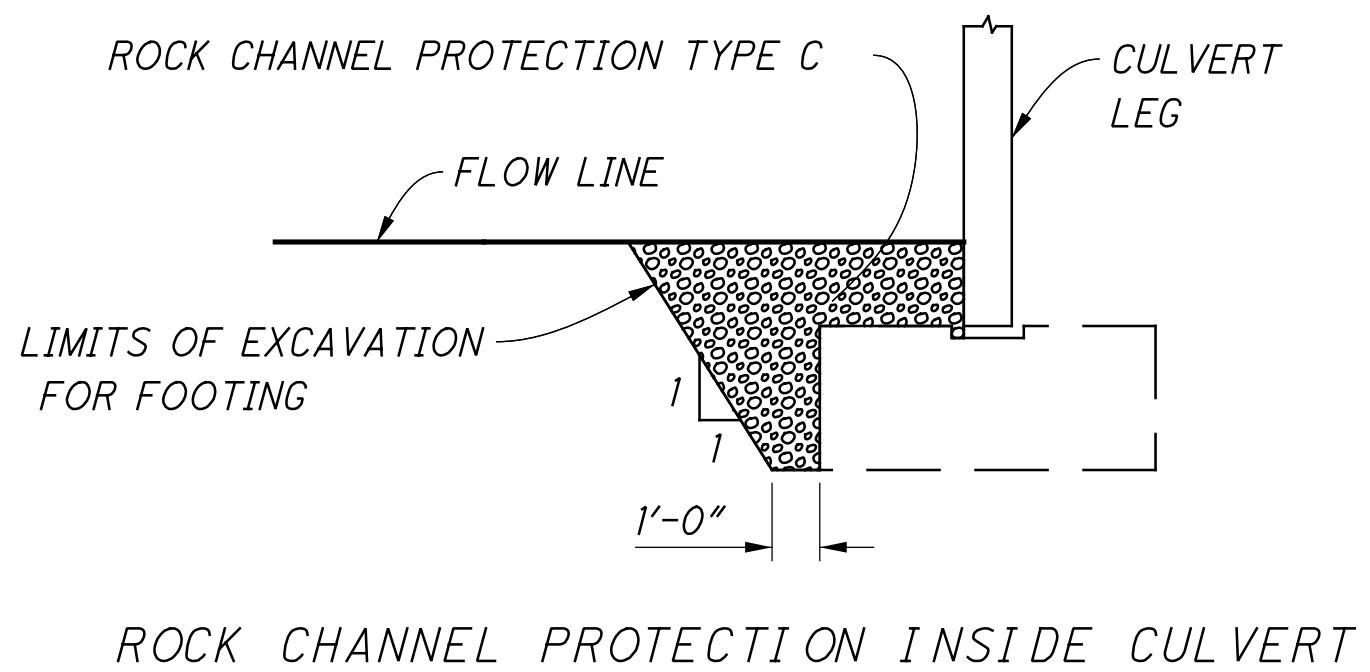


FOOTING LAYOUT
SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4



FOOTING REINFORCING PLAN

REINFORCING STEEL LIST



BENDING DIAGRAMS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
WINGWALL 1									
W511	3	9'-9"	31	STR					
	1	6'-3"							
W512	S.O.	TO	40	STR				0'-9"	
	5	9'-1"							
W513	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W514	S.O.	TO	41	STR				2'-7"	
	3	9'-1"							
W515	8	9'-1"	76	STR					
W516	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
W611	3	9'-9"	44	STR					
	1	6'-3"							
W612	S.O.	TO	58	STR				0'-9"	
	5	9'-1"							
W613	9	9'-0"	122	STR					
W614	6	7'-4"	66	STR					
W711	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 2									
W521	3	8'-6"	27	STR					
	1	5'-2"							
W522	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W523	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W524	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W525	8	9'-1"	76	STR					
W526	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
W621	3	8'-6"	38	STR					
	1	5'-2"							
W622	S.O.	TO	49	STR				0'-8"	
	5	7'-10"							
W623	9	9'-0"	122	STR					
W624	6	7'-4"	66	STR					
W721	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 3									
W531	3	8'-6"	27	STR					
	1	5'-3"							
W532	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W533	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W534	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W535	8	9'-1"	76	STR					
W536	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
SUBTOTAL									
S.O. - SERIES OF									

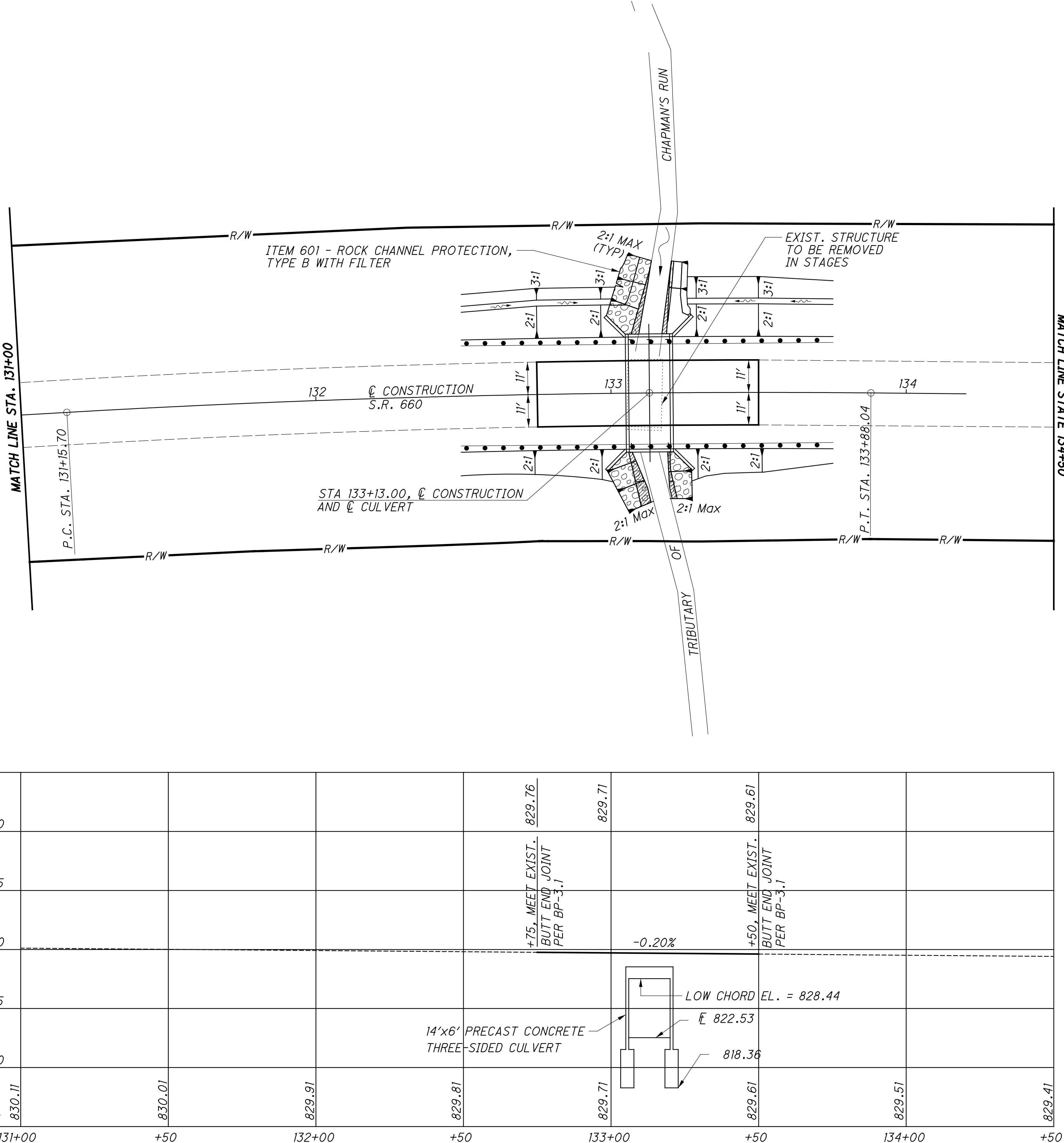
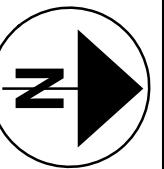
S.O. - SERIES OF

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
WINGWALL 4									
W541	3	9'-9"	31	STR					
	1	6'-3"							
W542	S.O.	TO	40	STR				0'-8"	
	5	9'-1"							
W543	18	2'-4"	44	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W544	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W545	10	9'-1"	95	STR					
W546	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
W641	3	9'-9"	44	STR					
	1	6'-3"							
W642	S.O.	TO	58	STR				0'-8"	
	5	9'-1"							
W643	9	9'-0"	122	STR					
W644	6	7'-4"	66	STR					
W741	14	8'-9"	250	3	6'-3"	2'-8"			
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									
4229									
TOTAL CARRIED TO SHEET 2 OF 8									

GUE - 660-2.52

8 / 8

107
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

$$\begin{array}{lll}
 Q_{10} & = & 297 \text{ CFS} \\
 V_{10} & = & 6.9 \text{ FPS} \\
 HW_{10} & = & 827.8
 \end{array}
 \quad
 \begin{array}{lll}
 Q_{100} & = & 518 \text{ CFS} \\
 V_{100} & = & 7.9 \text{ FPS} \\
 HW_{100} & = & 829.9
 \end{array}$$

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." - $f'c = 4,000 \text{ psi}$ SUBSTRUCTURE

REINFORCING STEEL - ASTM A615, A616, OR A617

$F_y = 60,000 \text{ psi}$.

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 ACCOMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

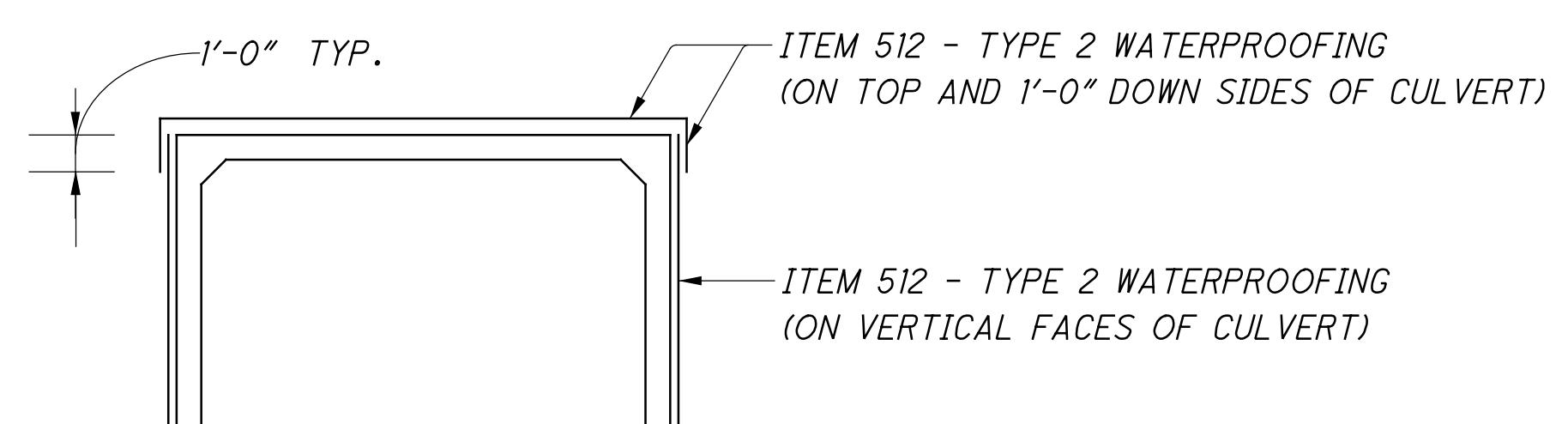
ITEM 512, TYPE 2 WATERPROOFING:

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).

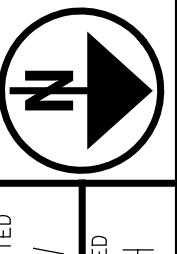


GENERAL SUMMARY (GUE - 660 - 2.52)

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

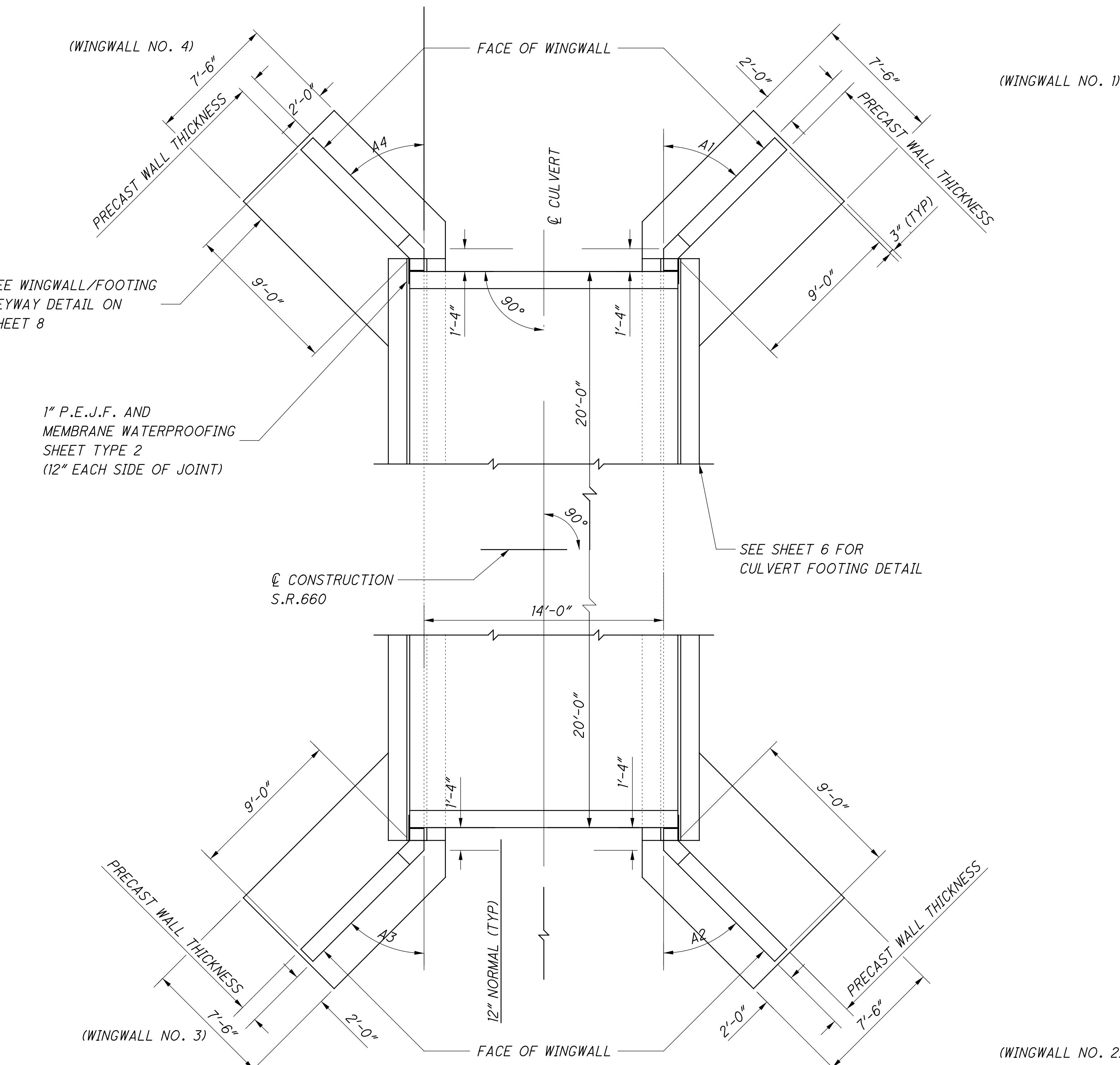
CULVERT ESTIMATED QUANTITIES

GUE - 660 - 2.52



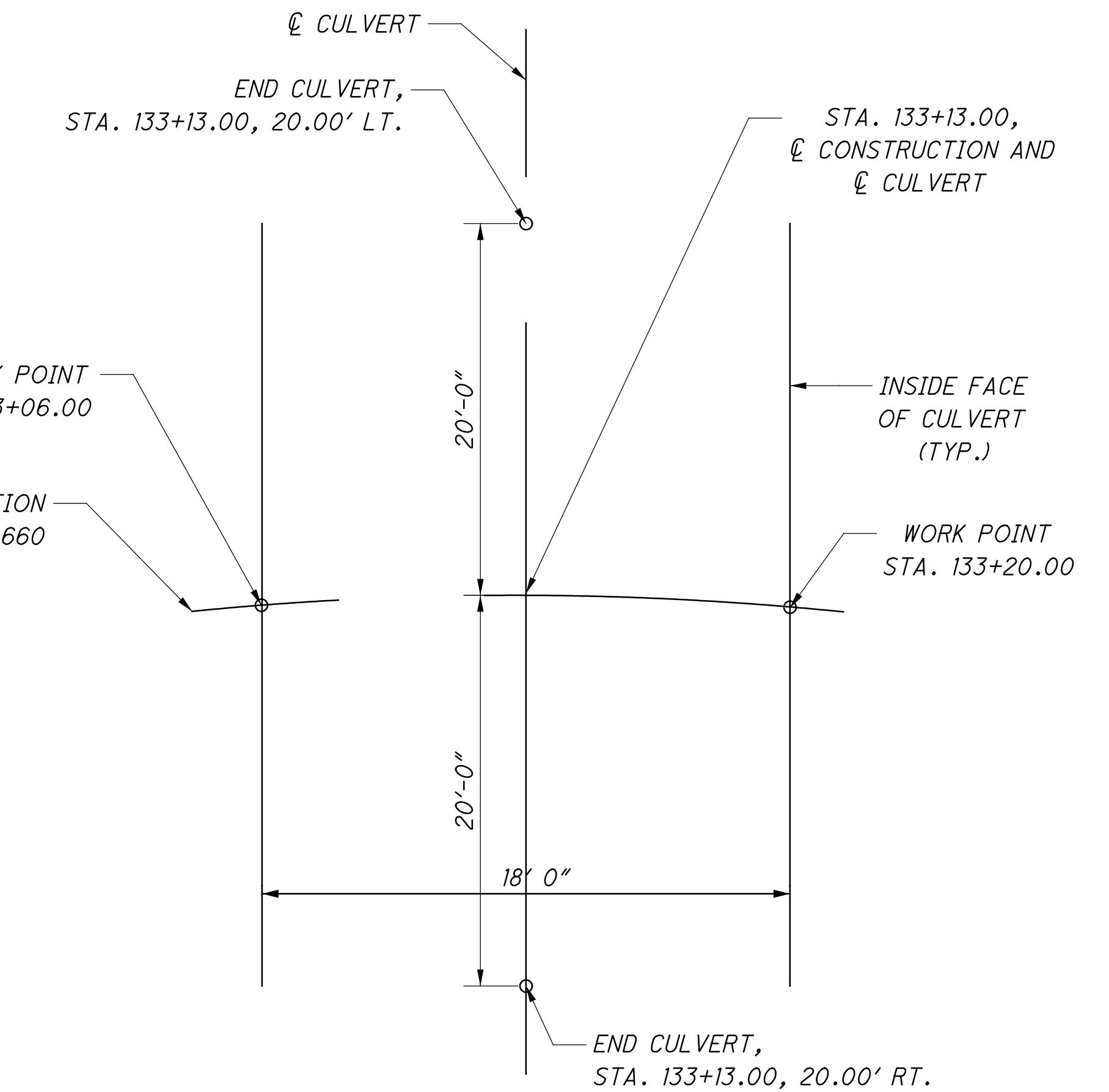
CALCULATED
KEW
CHECKED
JOH

CULVERT LAYOUT STA. 133+13.00



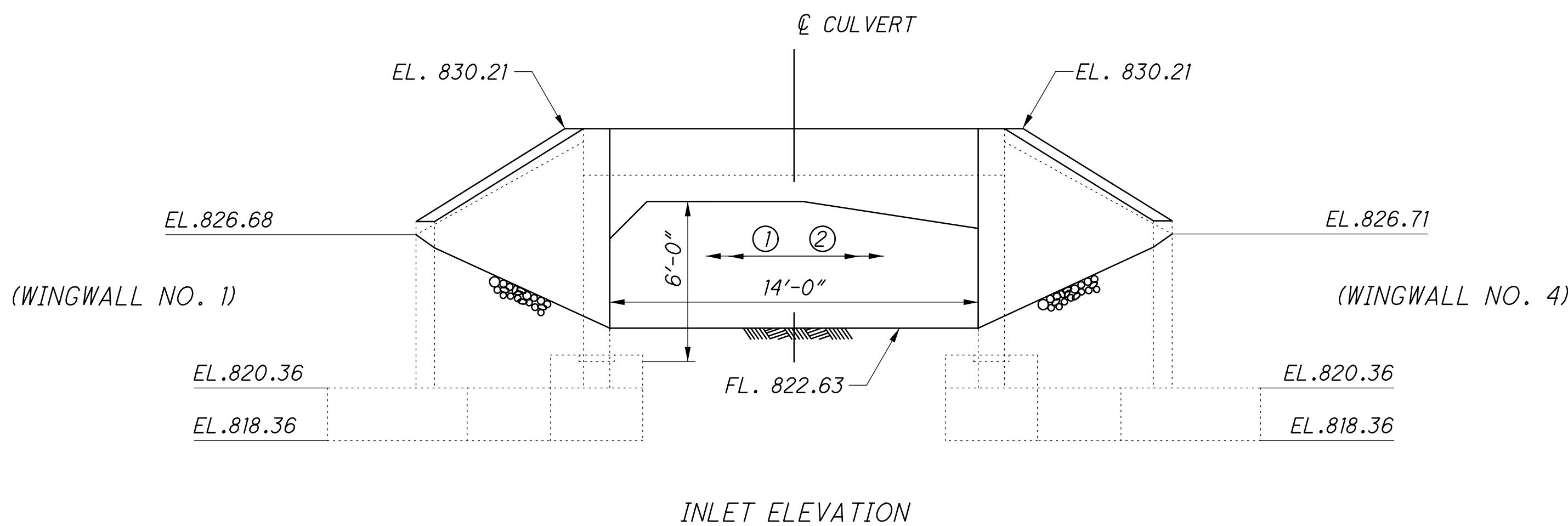
CULVERT & WINGWALL LAYOUT

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

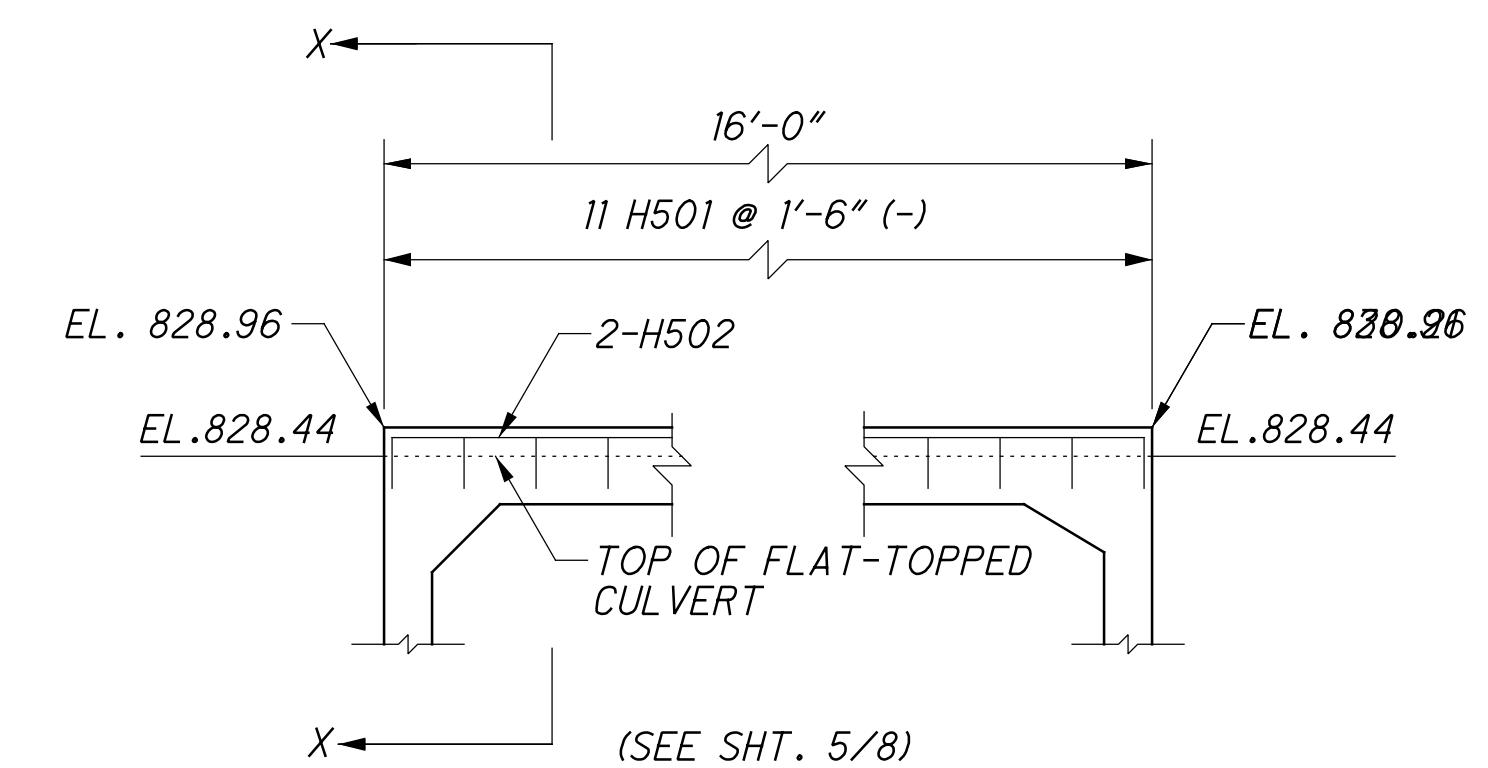
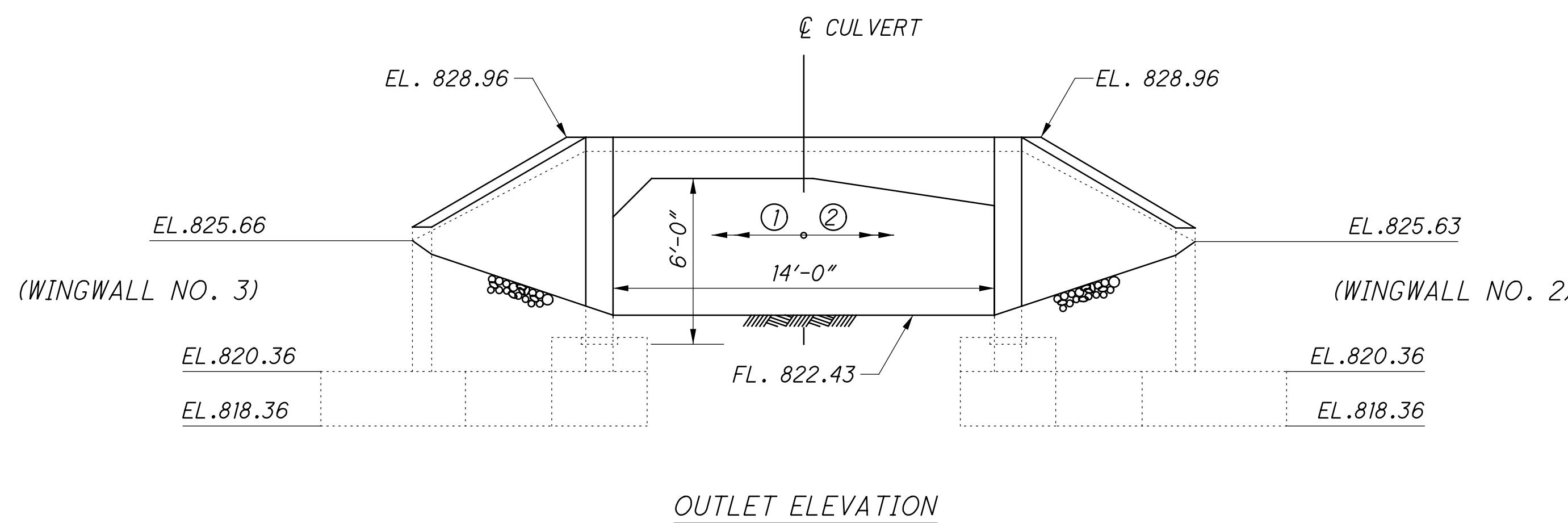
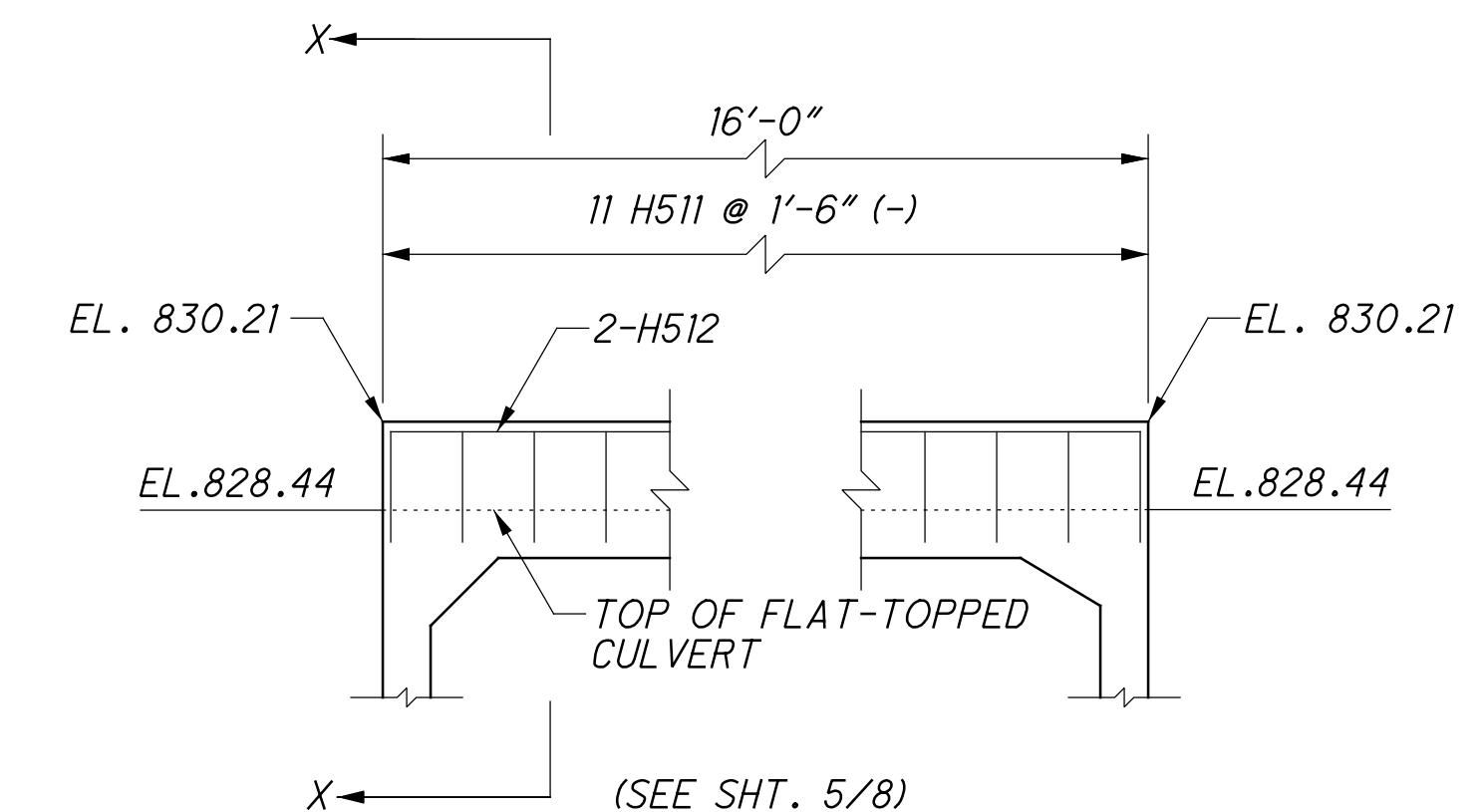


REFERENCE DIAGRAM

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

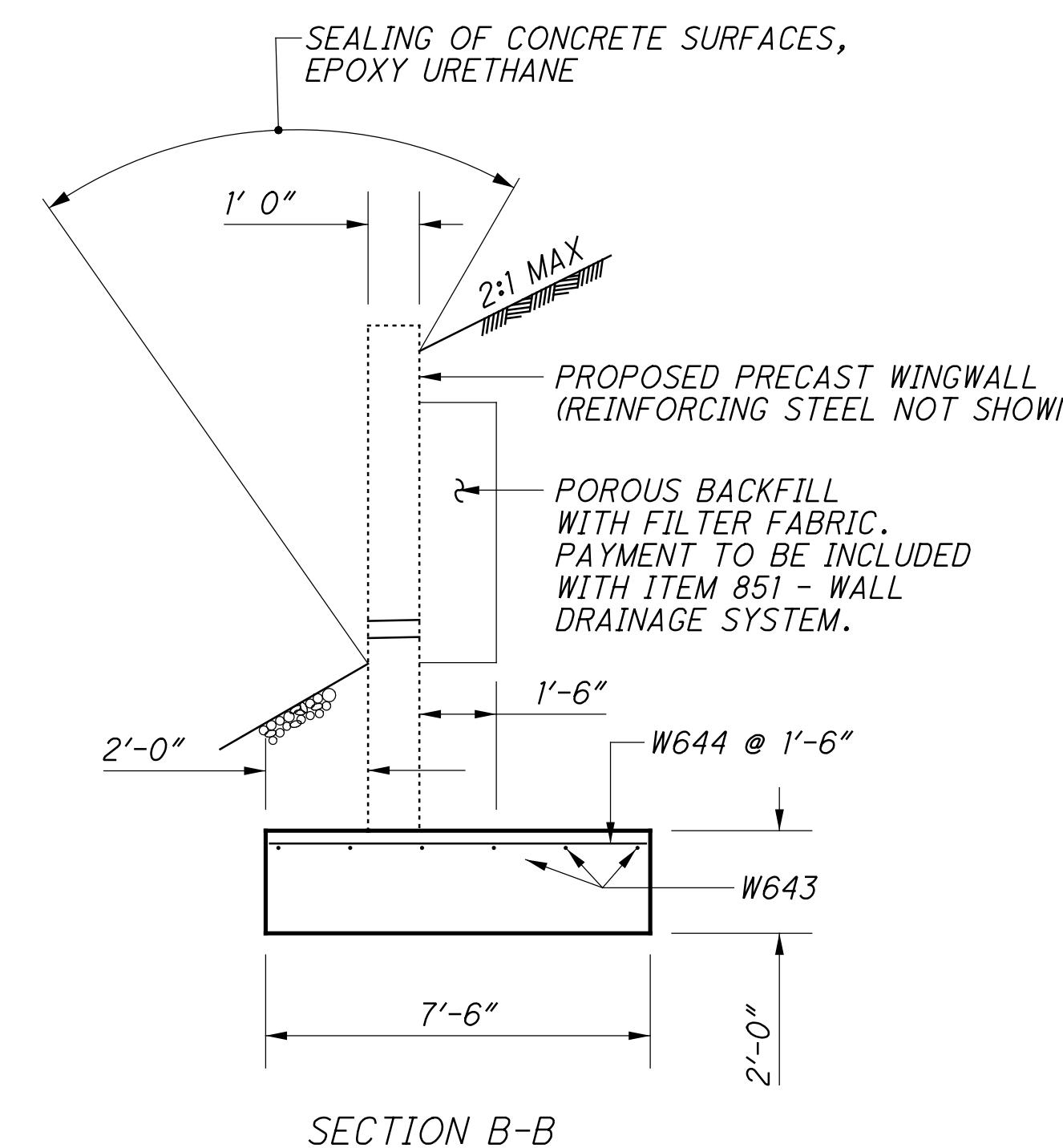
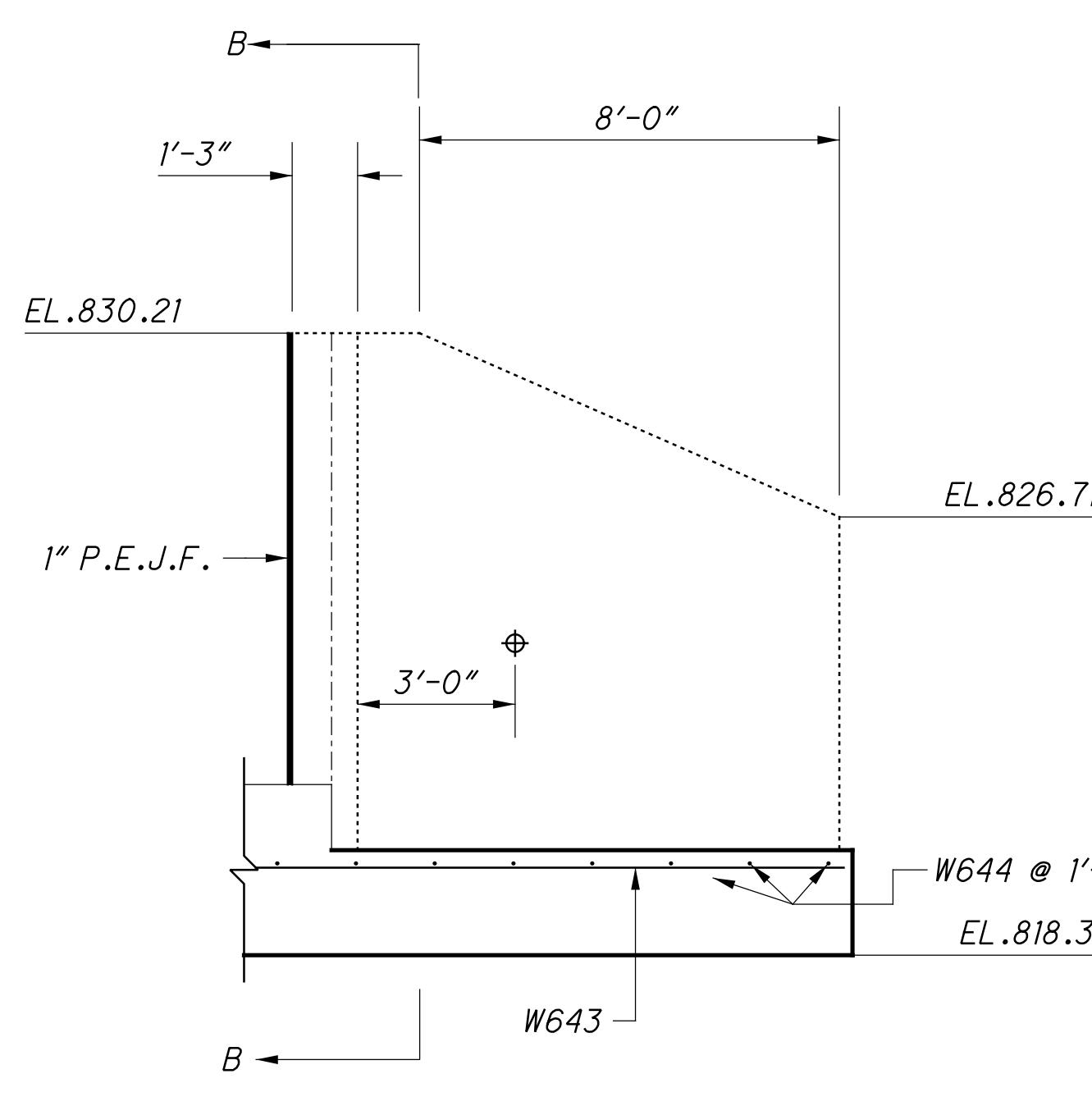
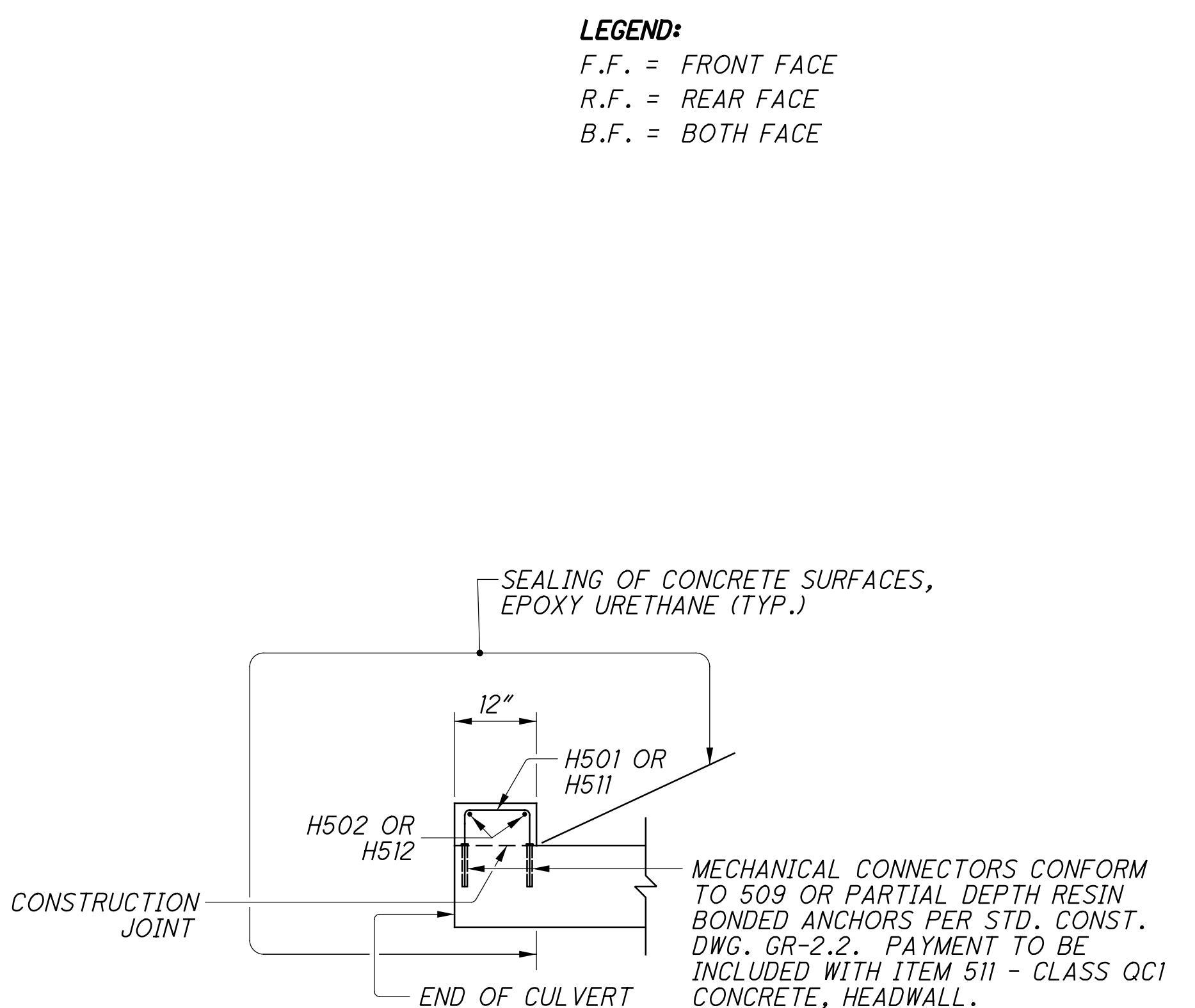
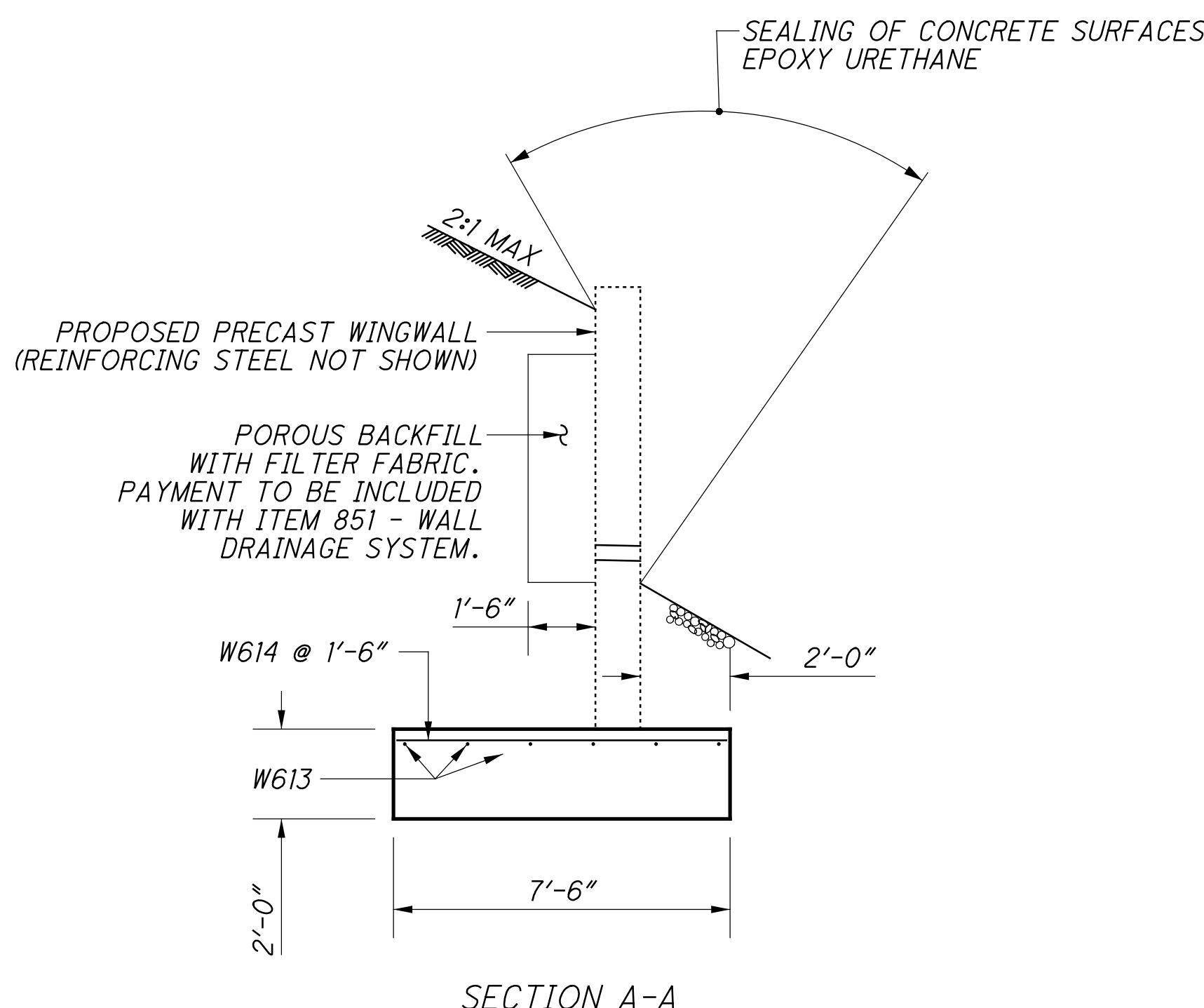
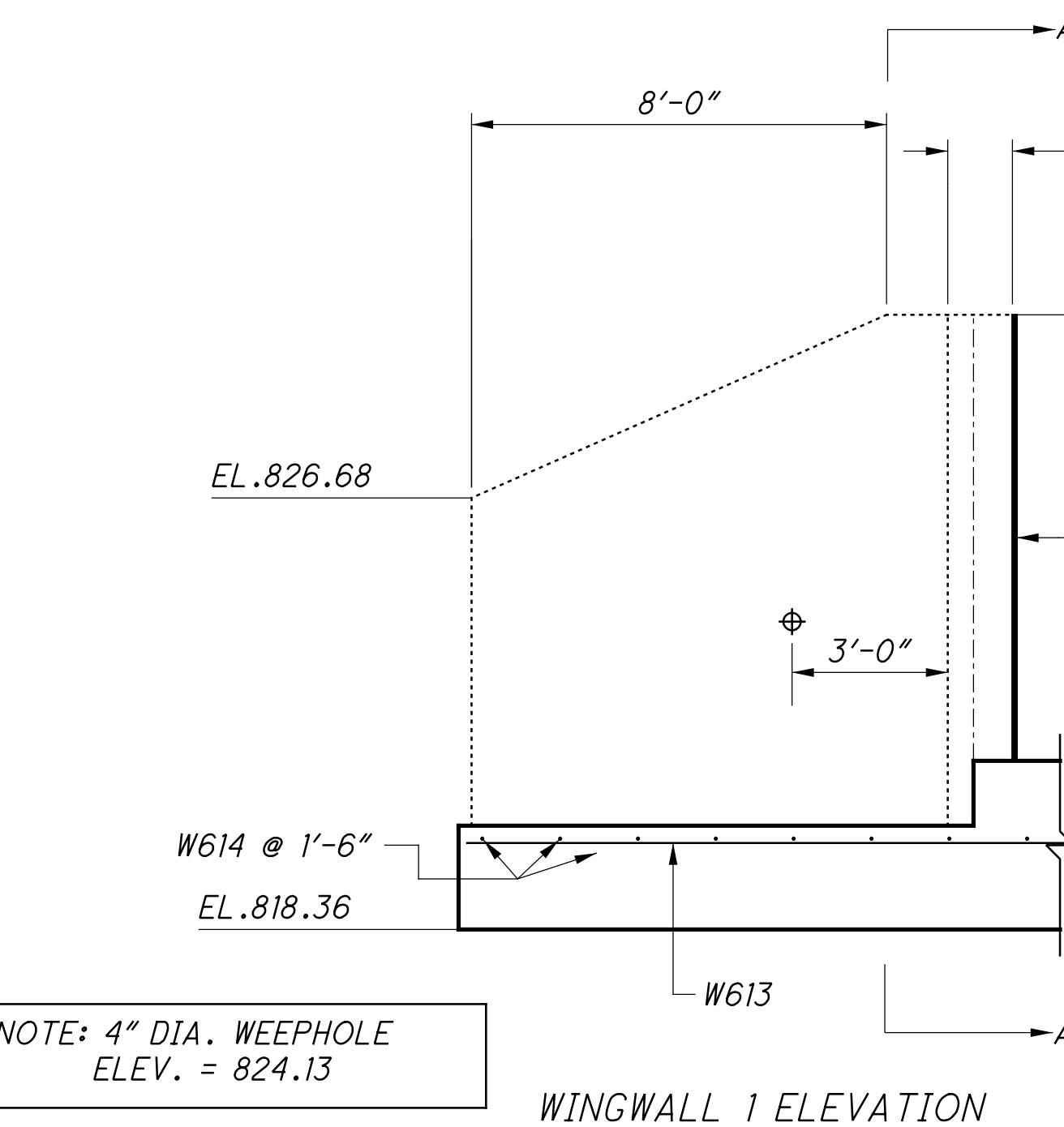


NOTE: ① - SHORT HAUNCH PRECAST UNIT
② - LONG HAUNCH PRECAST UNIT



WINGWALL NO. 1 AND 4 DETAILS
STA. 133+13.00

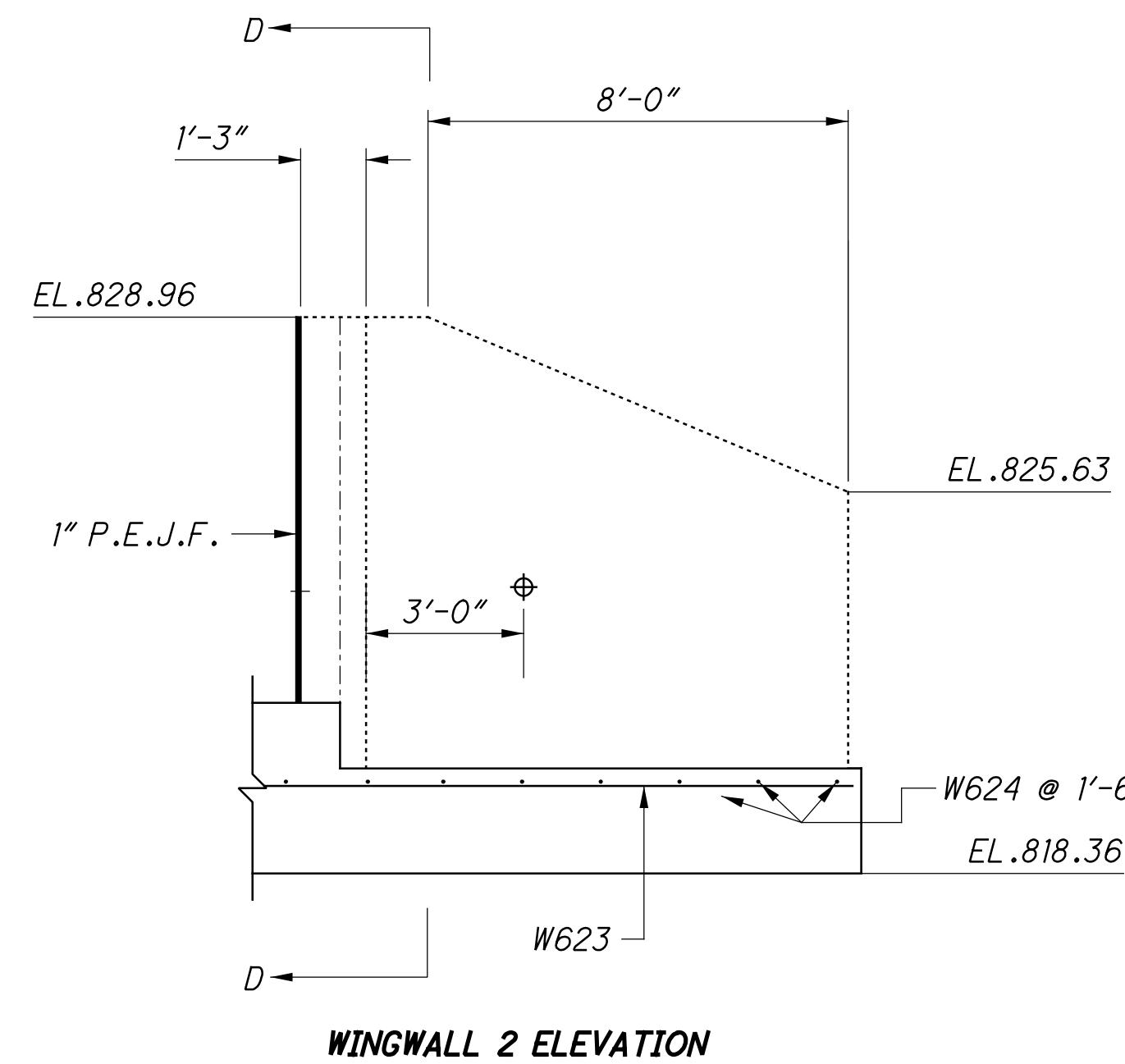
GUE-660-2.52



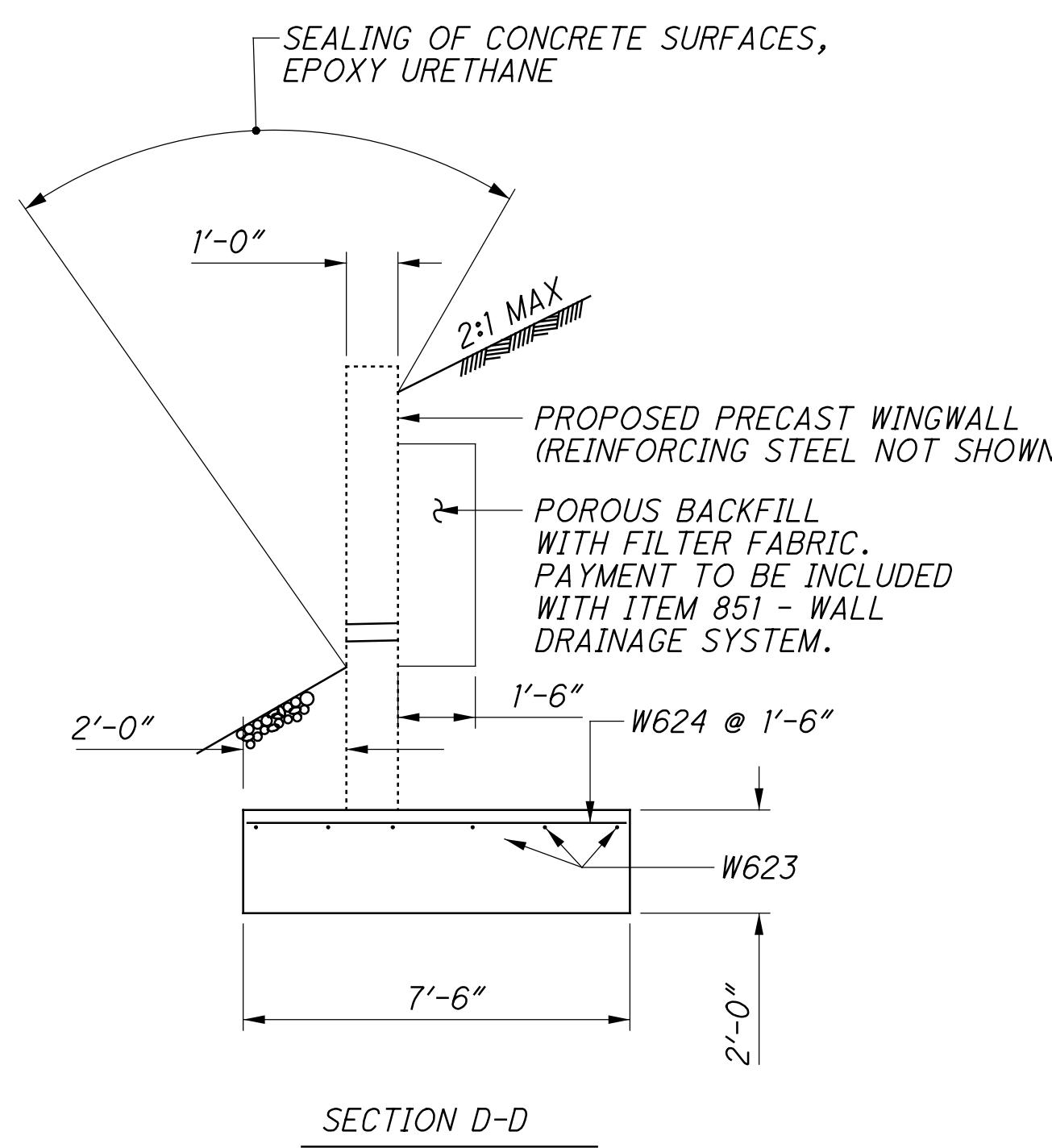
NOTES:

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.

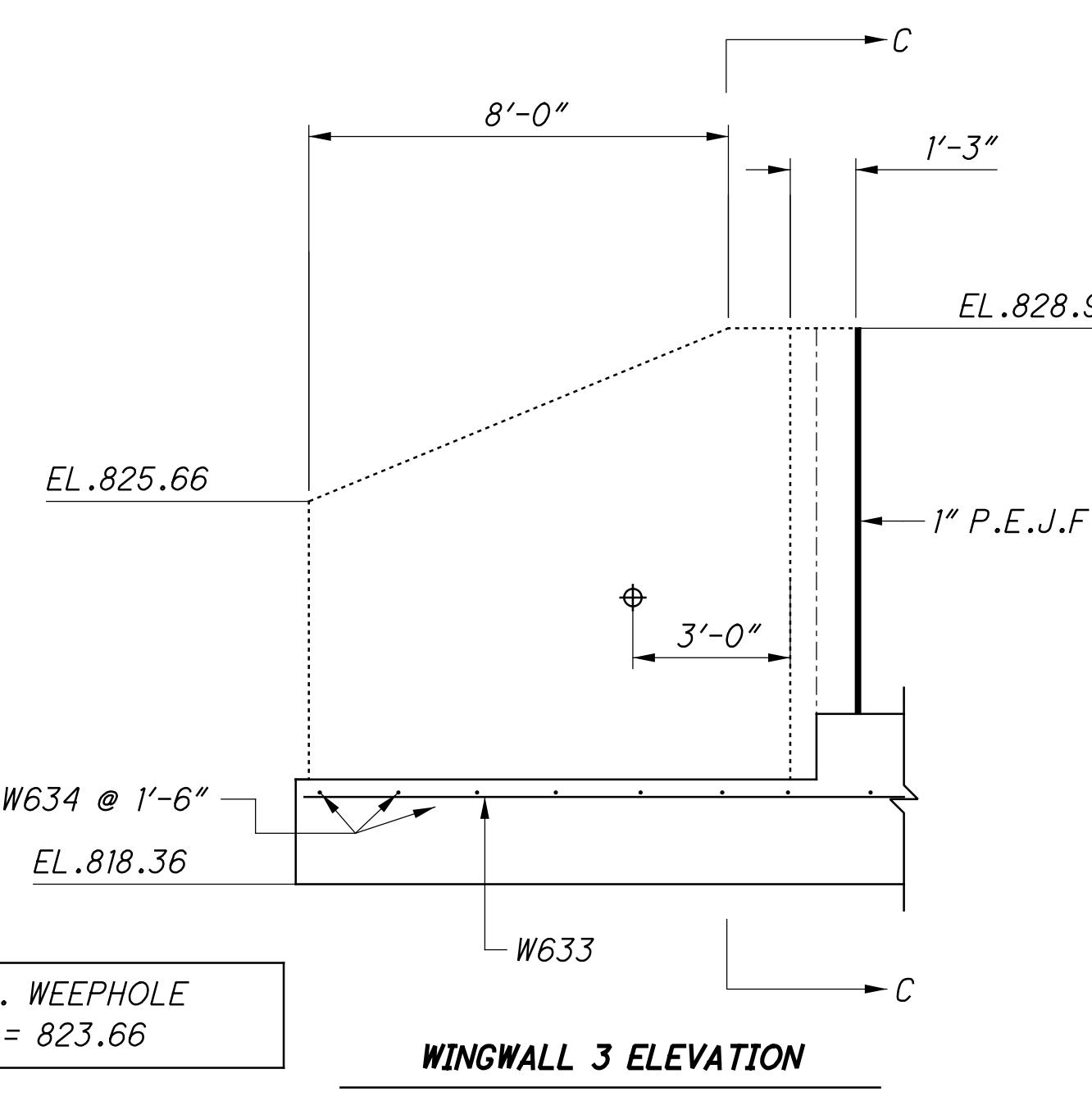
NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.14



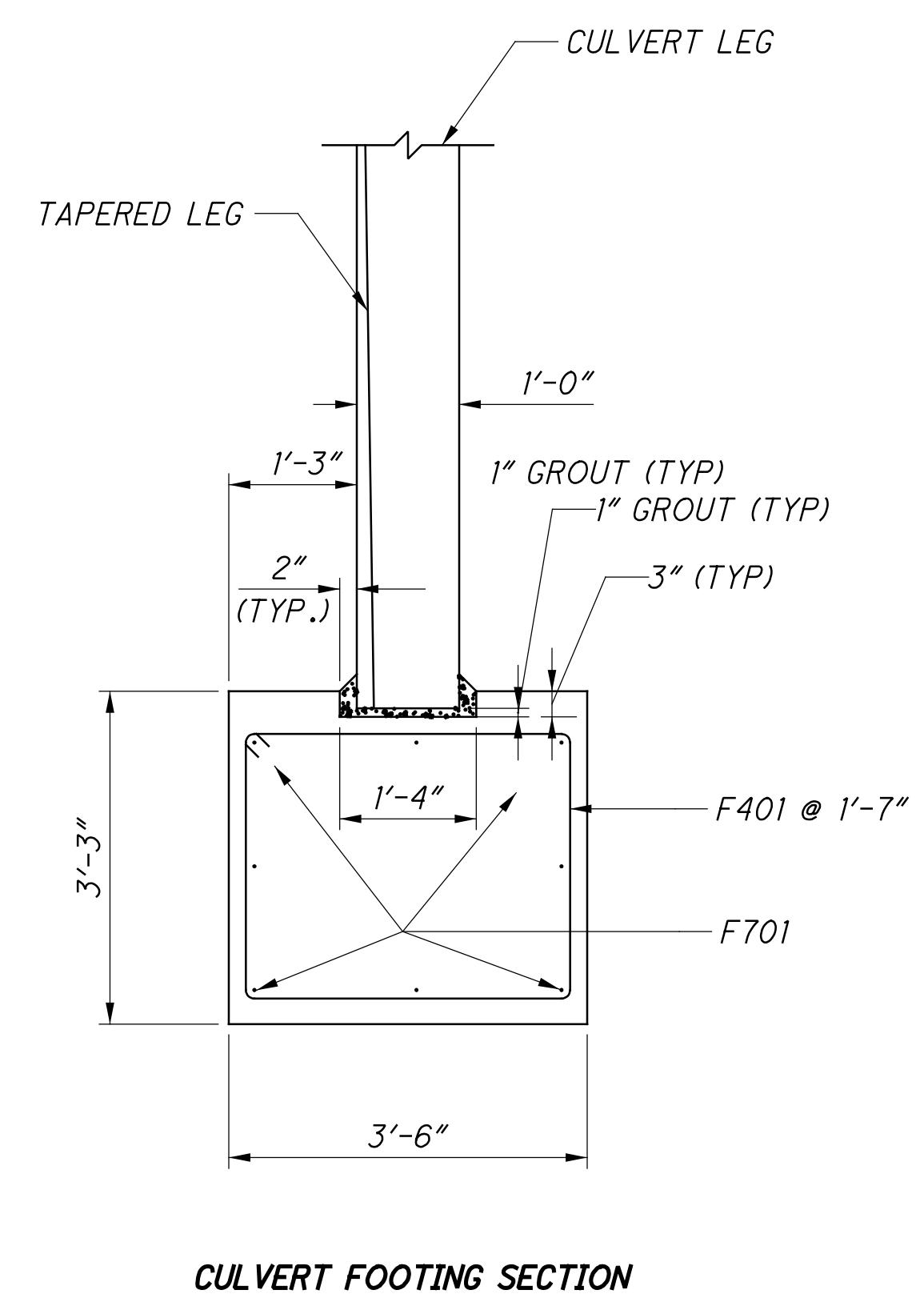
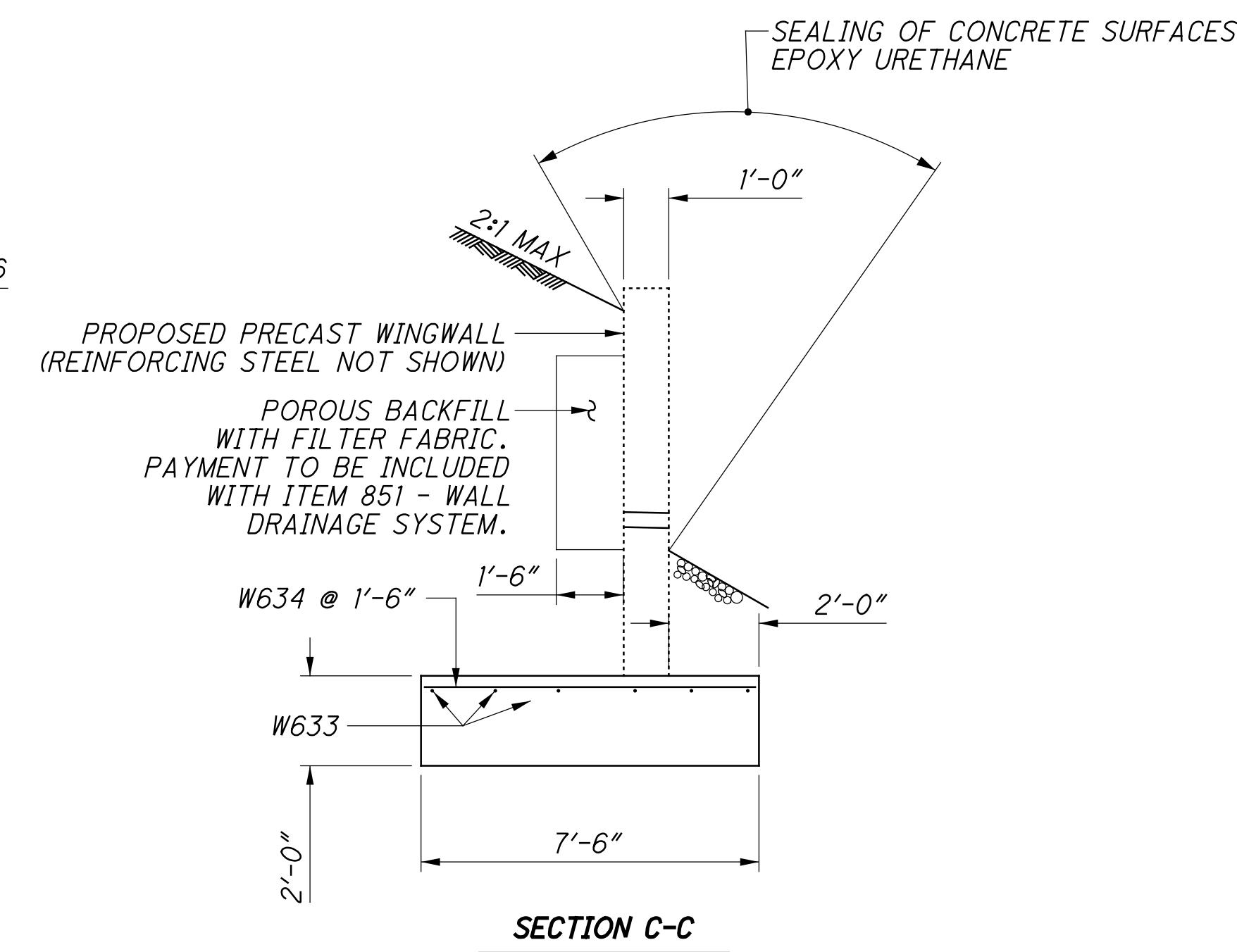
NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.65



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



NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.66





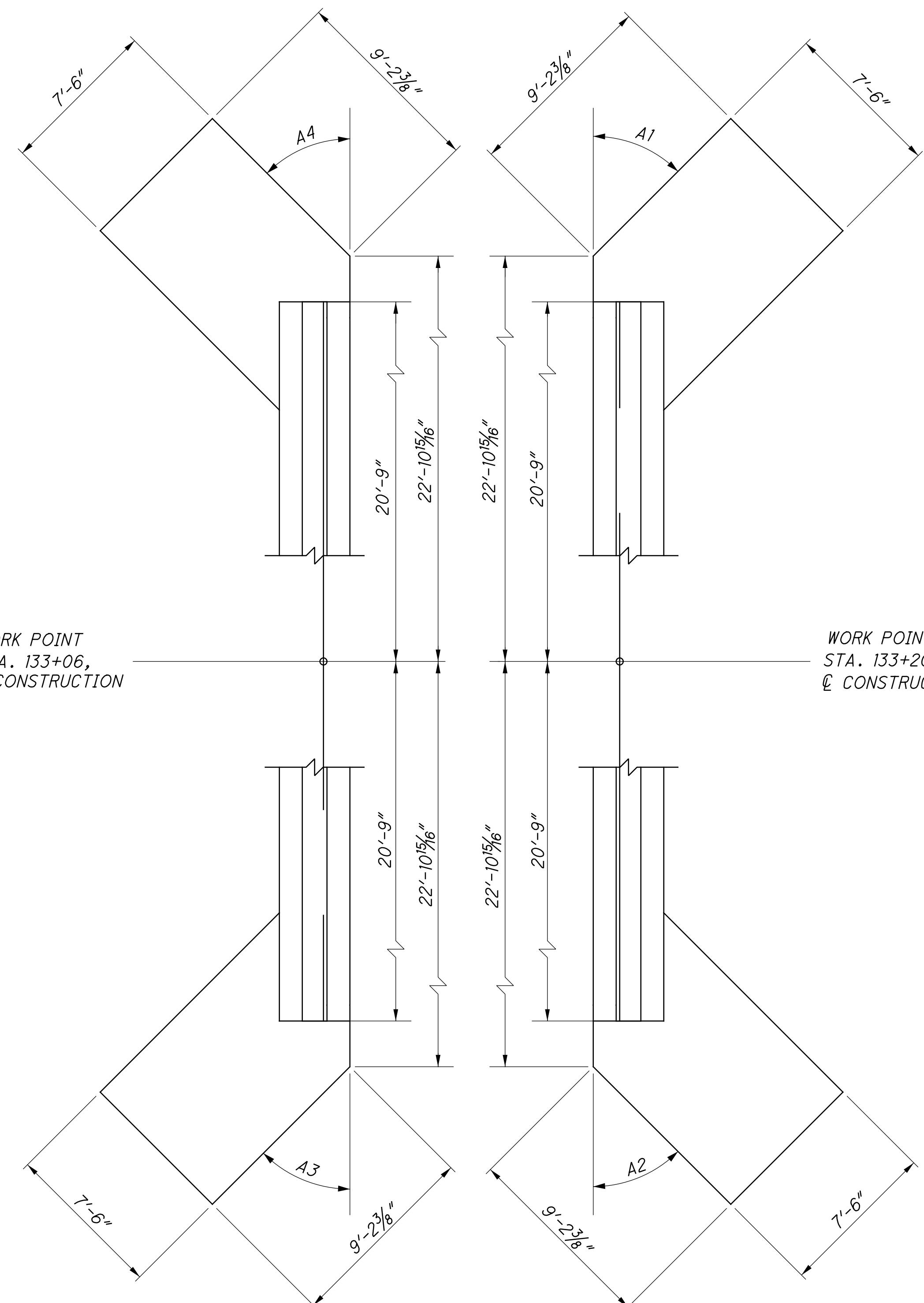
CALCULATED
KEW
CHECKED
JOH

FOOTING DETAILS STA. 133+13.00

GUE - 660 - 2.52

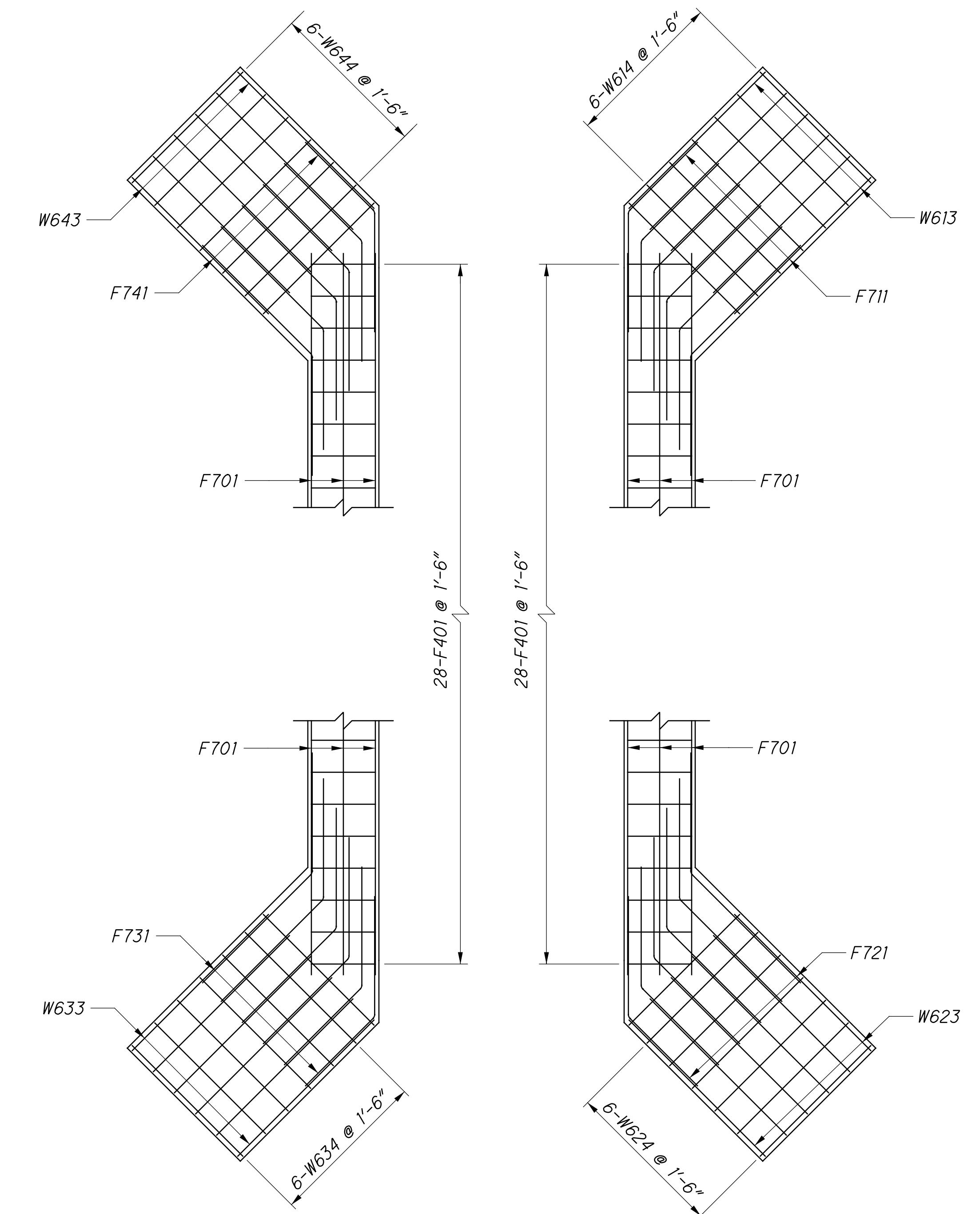
7 / 8

106
125



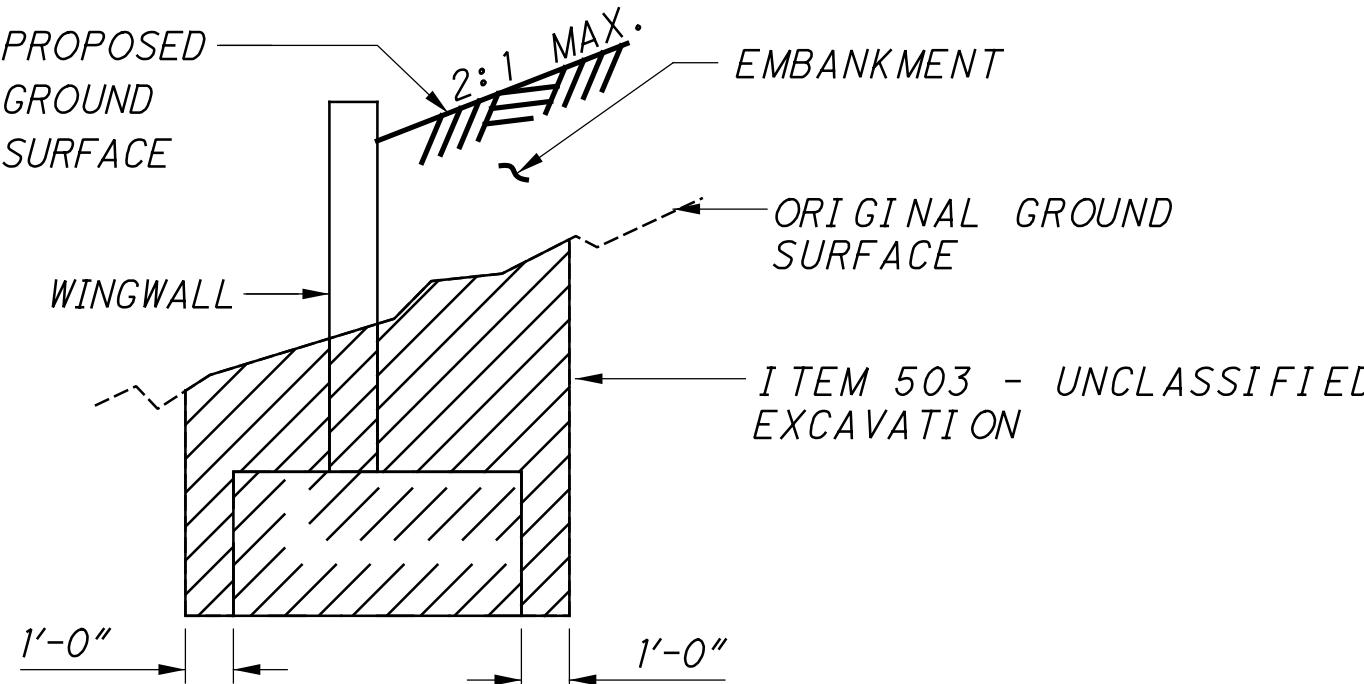
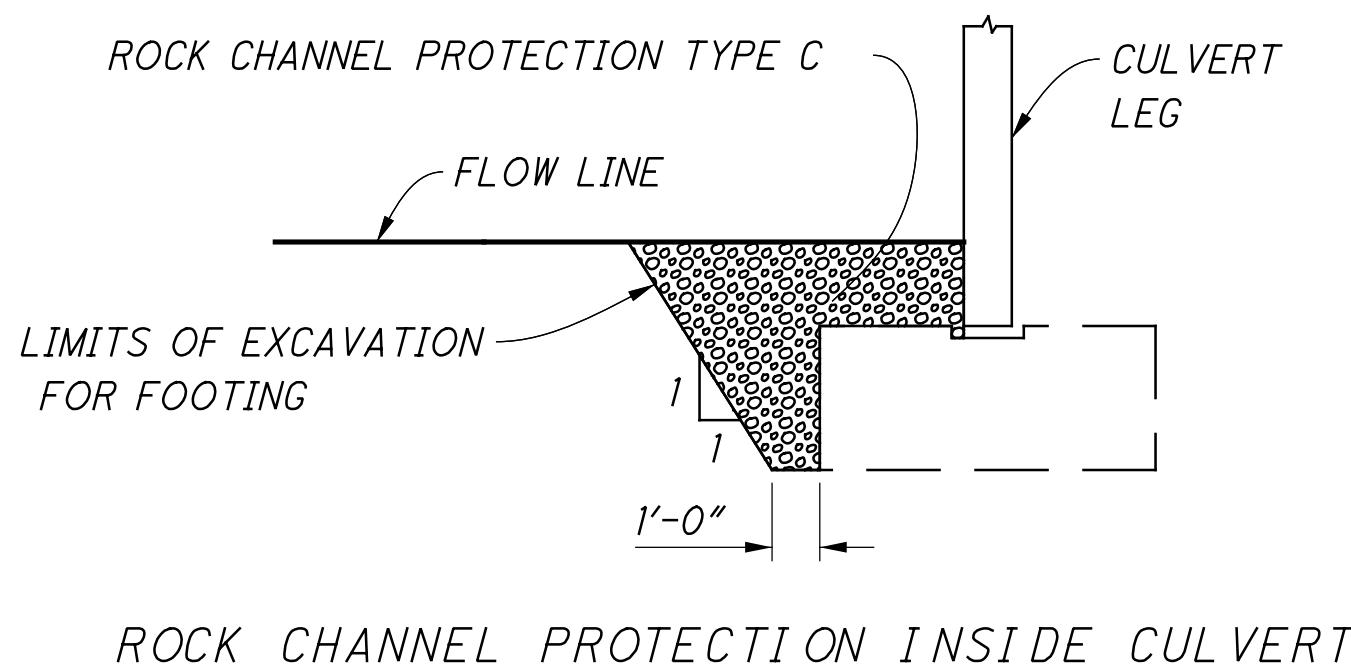
FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4



FOOTING REINFORCING PLAN

REINFORCING STEEL LIST



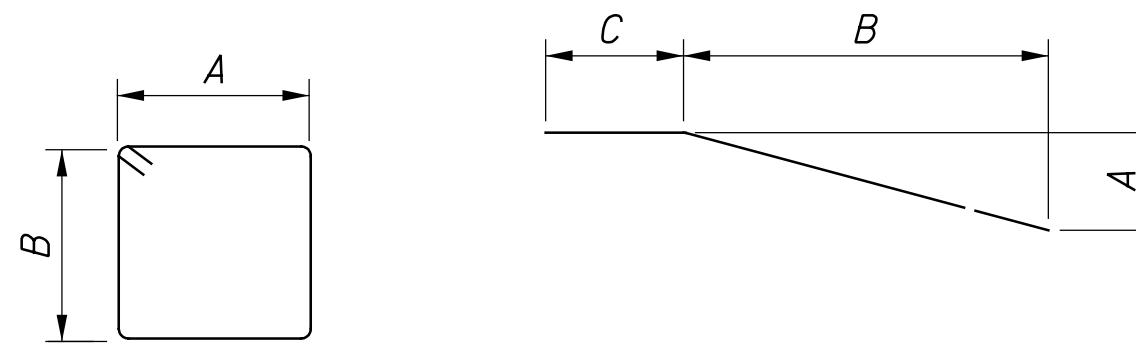
LIMITS OF UNCLASSIFIED EXCAVATION ON WINGWALL

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						

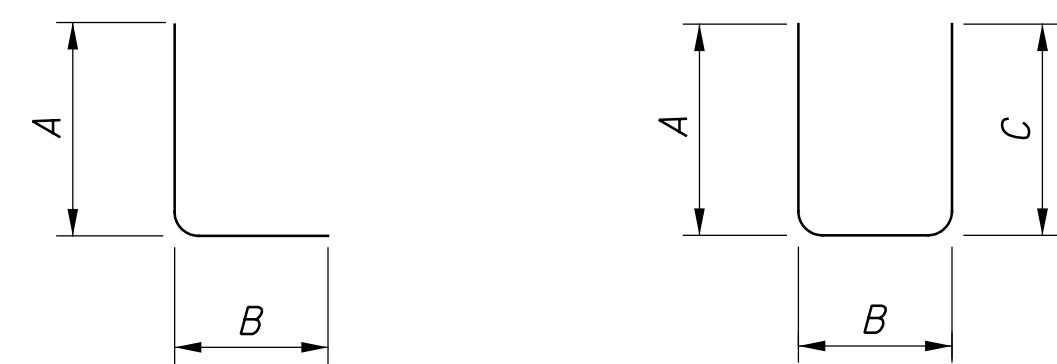
S.O. - SERIES OF

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	3'-3"	3'-3"			
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						

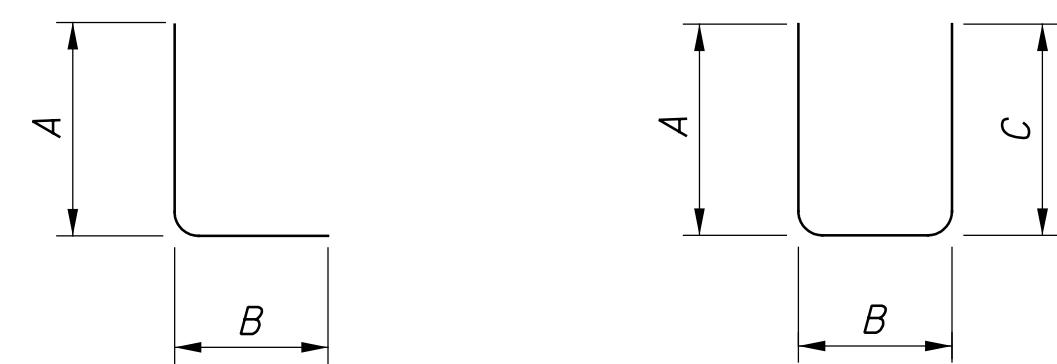
TOTAL CARRIED TO SHEET 2 OF 8



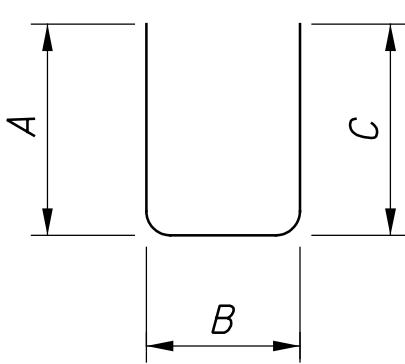
TYPE 1



TYPE 2



TYPE 3



TYPE 4

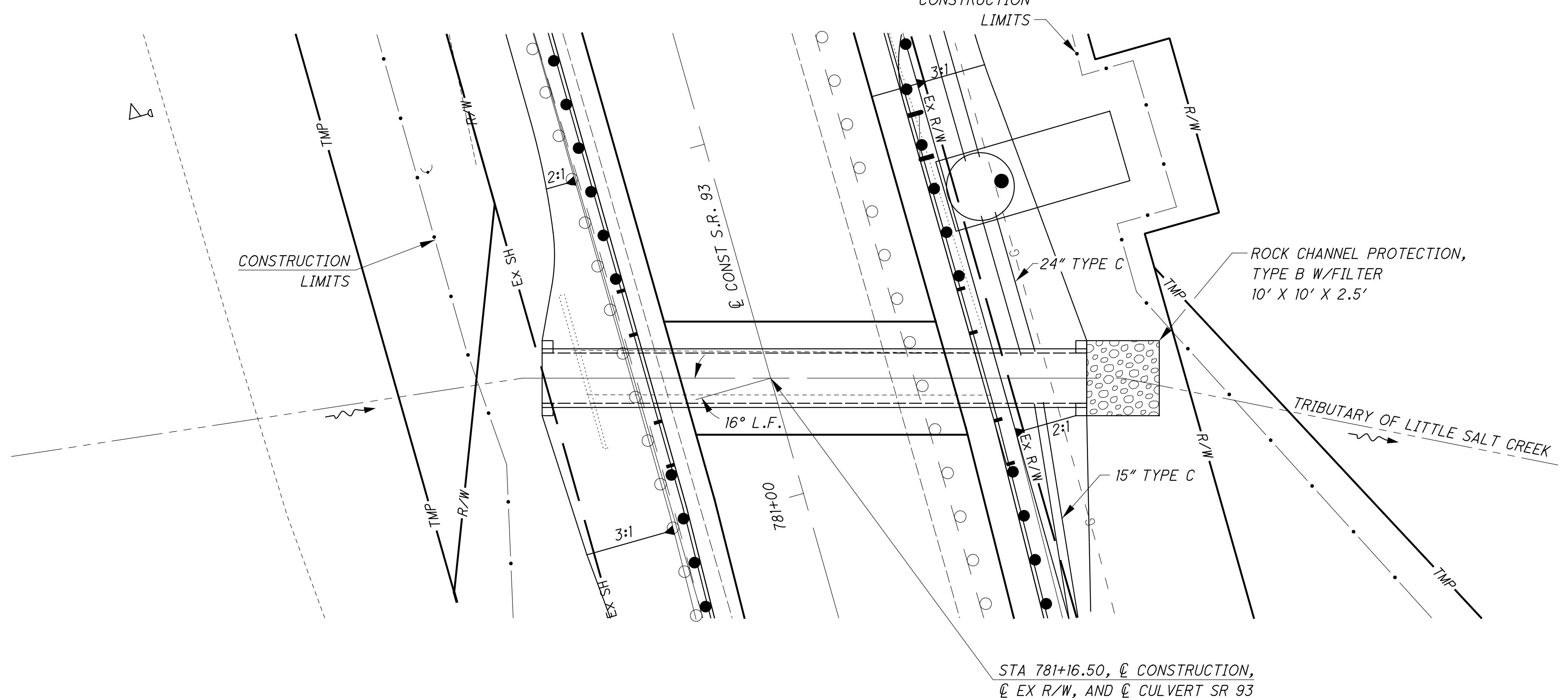
BENDING DIAGRAMS

REINFORCING SCHEDULE

GUE-660-2.52



CALCULATED
MRV
CHECKED
MLC
HORIZONTAL
SCALE IN FEET



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

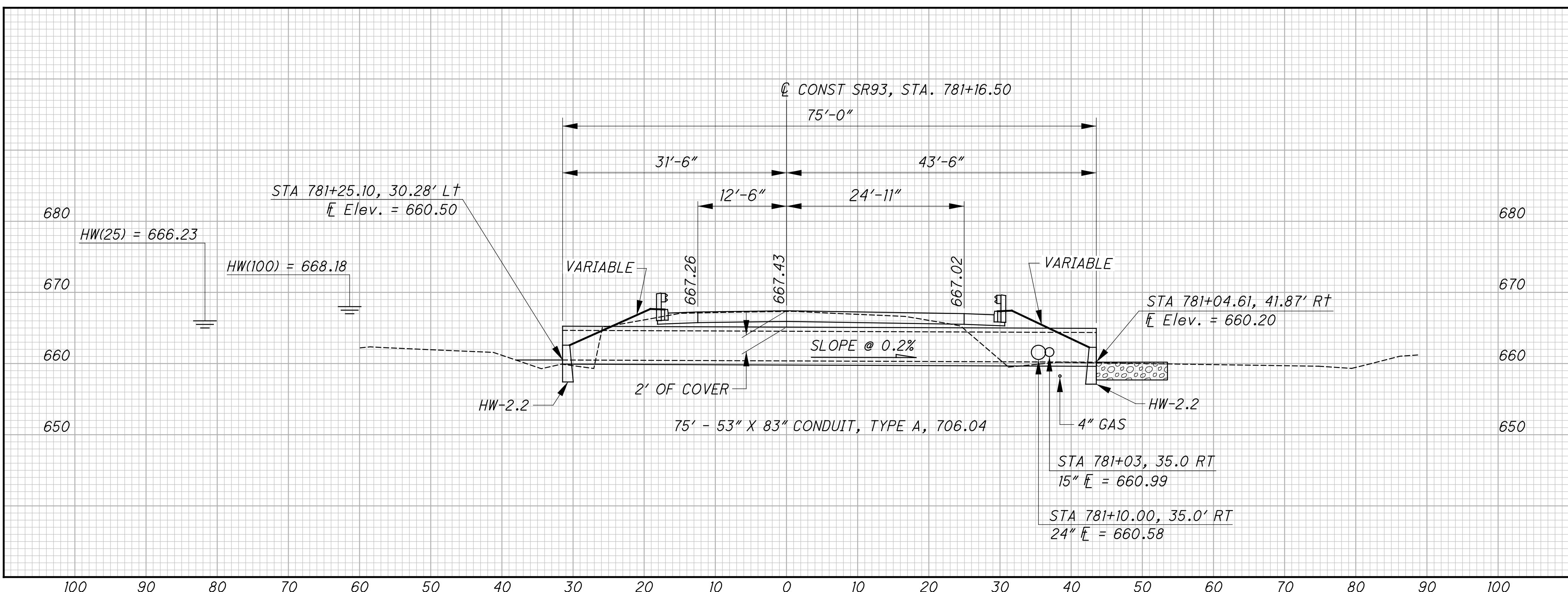
QUANTITIES CARRIED TO GENERAL SUMMARY

HYDRAULIC DATA

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

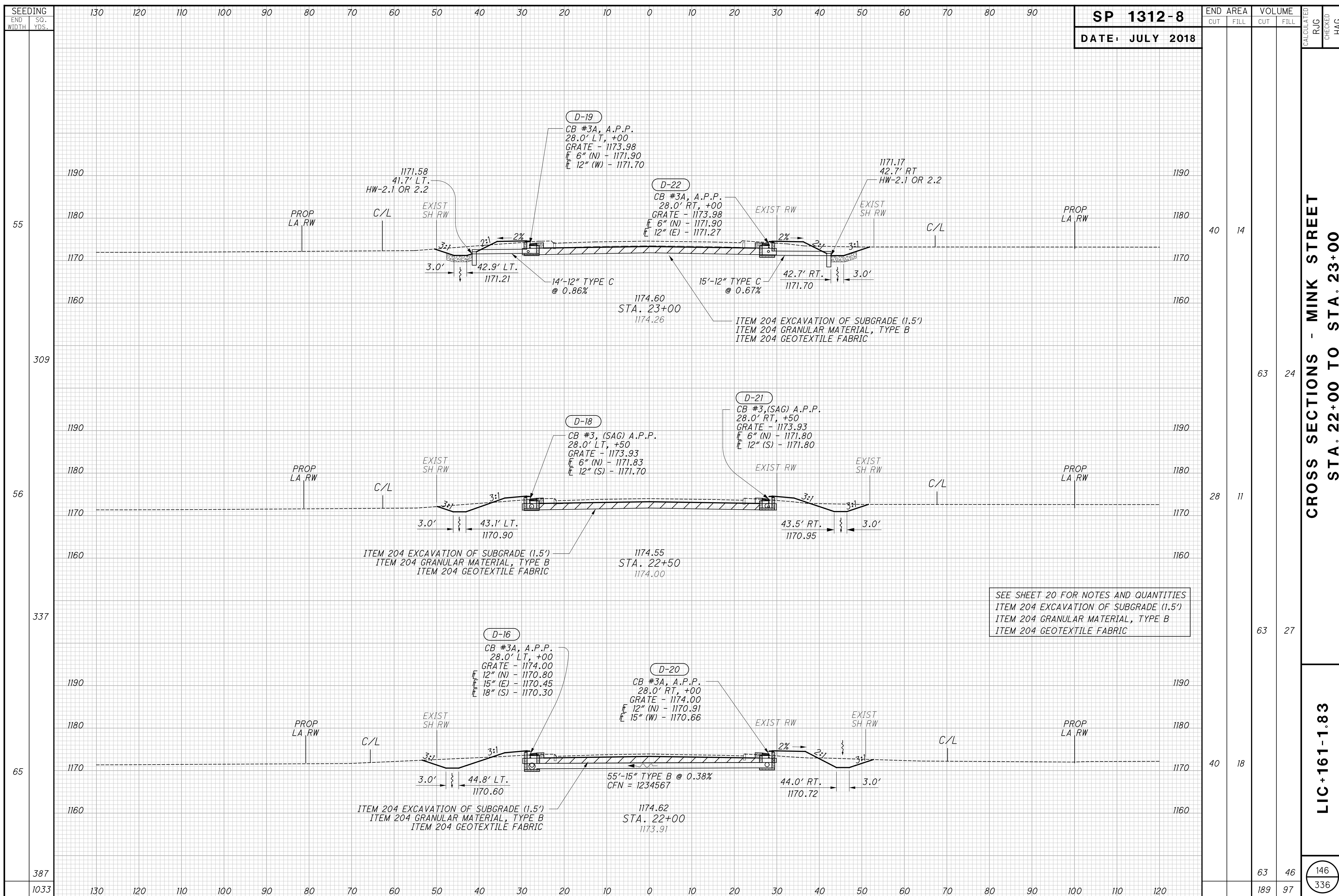
EXISTING STRUCTURE
TYPE: 48" AND 54" CORRUGATED METAL PIPES SKEW: 16° L.F. ALIGNMENT: TANGENT CFN: 7654321

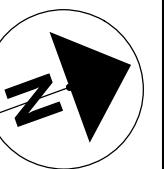
PROPOSED STRUCTURE
TYPE: 53" X 83" ELLIPTICAL CONCRETE PIPE SKEW: 16° L.F. ALIGNMENT: TANGENT CFN: 1234567



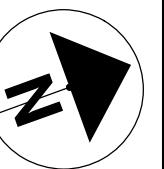
JAC-93-14.35

87
126

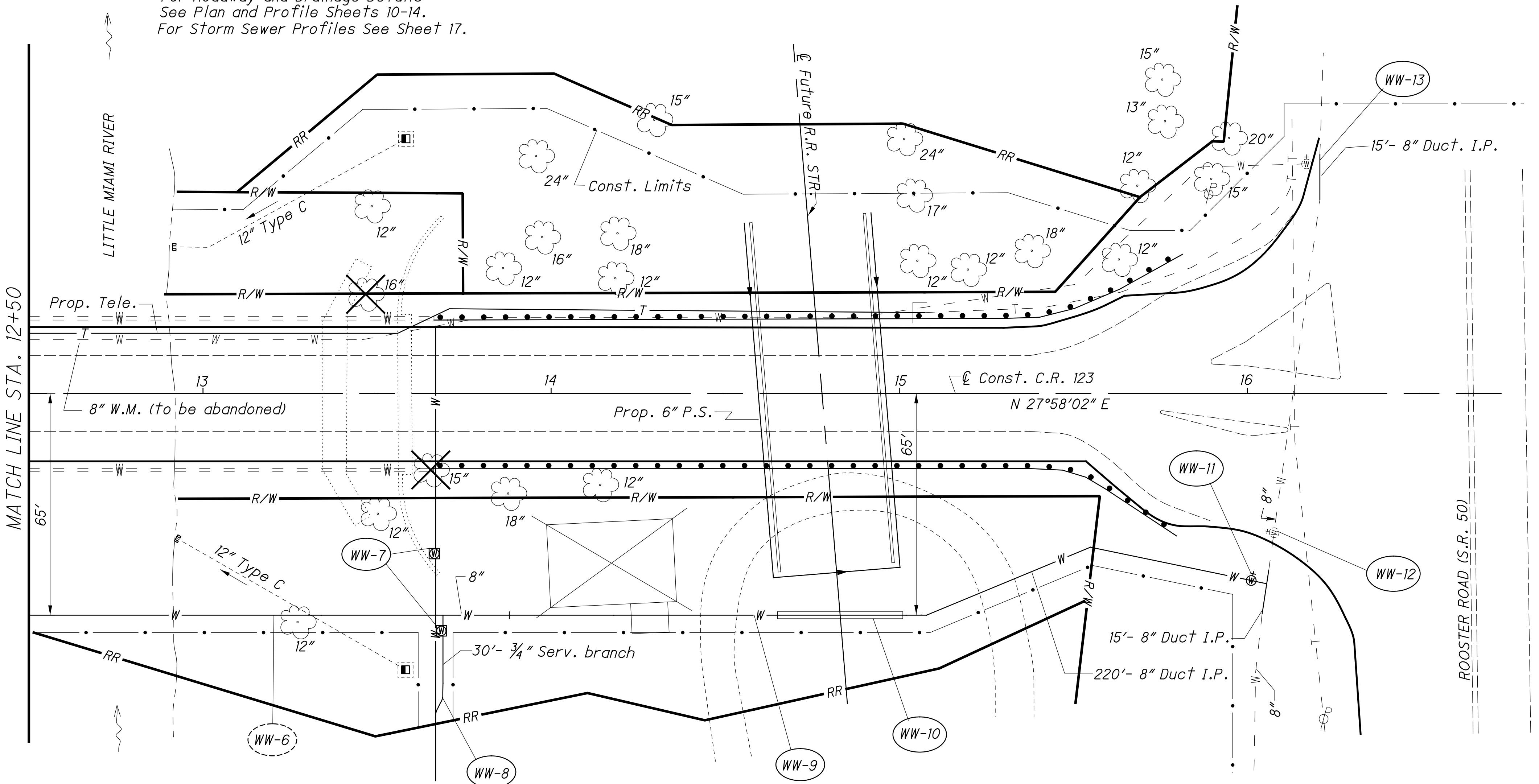




SP. 1313-1
DATE: JANUARY 2022



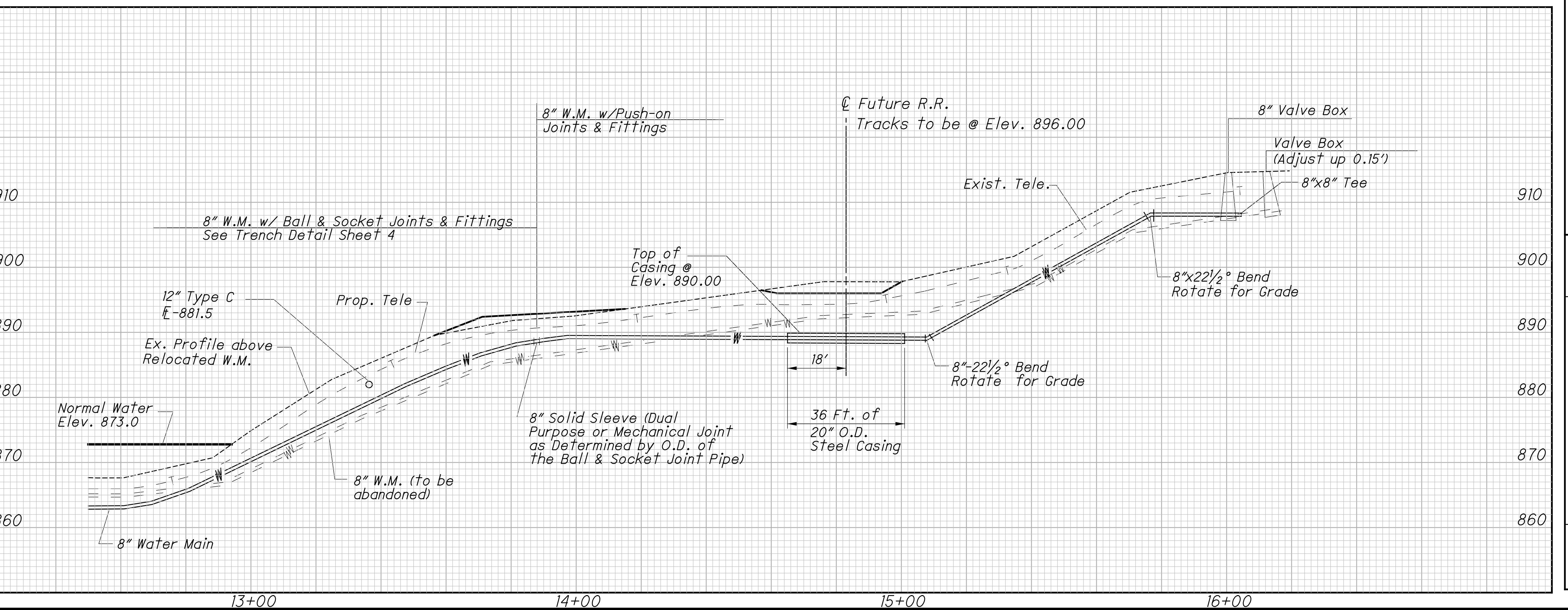
For Roadway and Drainage Details
See Plan and Profile Sheets 10-14.
For Storm Sewer Profiles See Sheet 17.



GENERAL SUMMARY		250	36	1	30	1	1	1	1	1
REF NO.	STATION	SIDE	8" Water Main, Ductile Iron Pipe ANSI Class 53, Push-on Joints and Fittings	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	Calculated GJB Checked DJK
WW-7	13+66	TO	13+70	RT						
WW-8	13+67	TO	13+70	RT						
WW-9	13+88	TO	16+07	RT						
WW-10	14+65	TO	15+01	RT						
WW-11	16+00	TO	RT							
WW-12	16+08	TO	RT							
WW-13	16+20	TO	LT							
TOTALS CARRIED TO GENERAL SUMMARY		250	36	1	30	1	1	1	1	1
CUY-CR123-6.55										

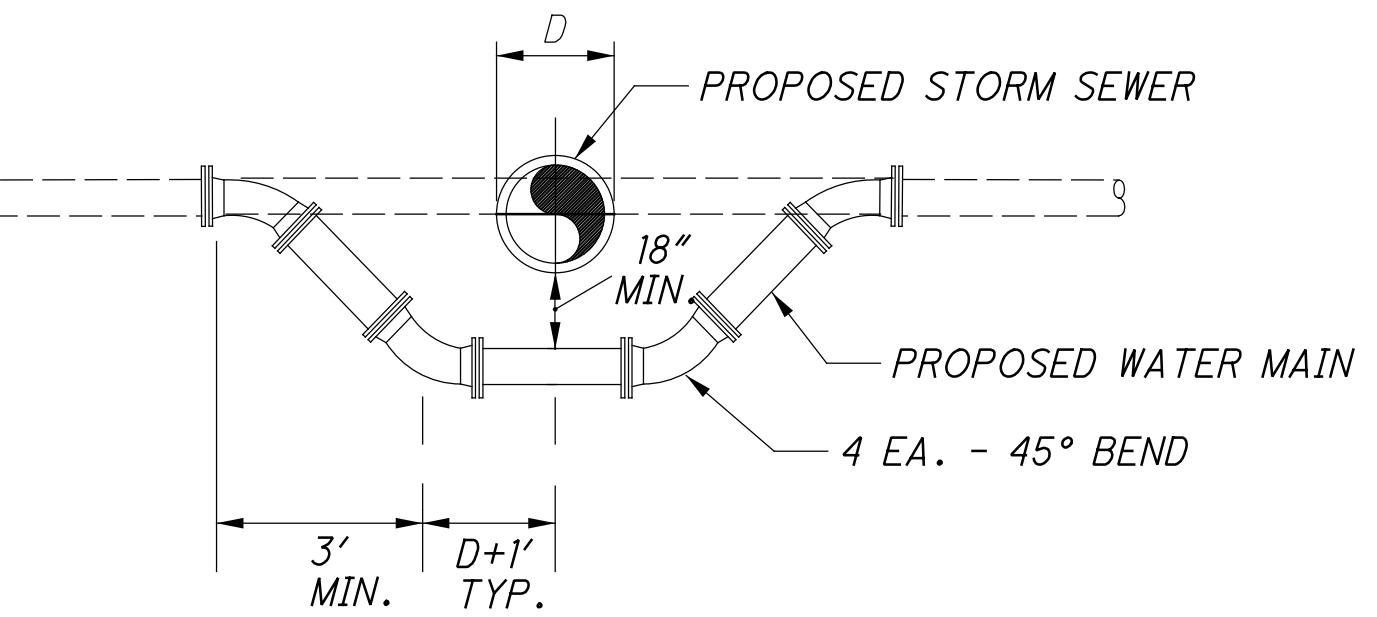
WATER WORK PLAN

STA. 12+50 TO STA. 16+00

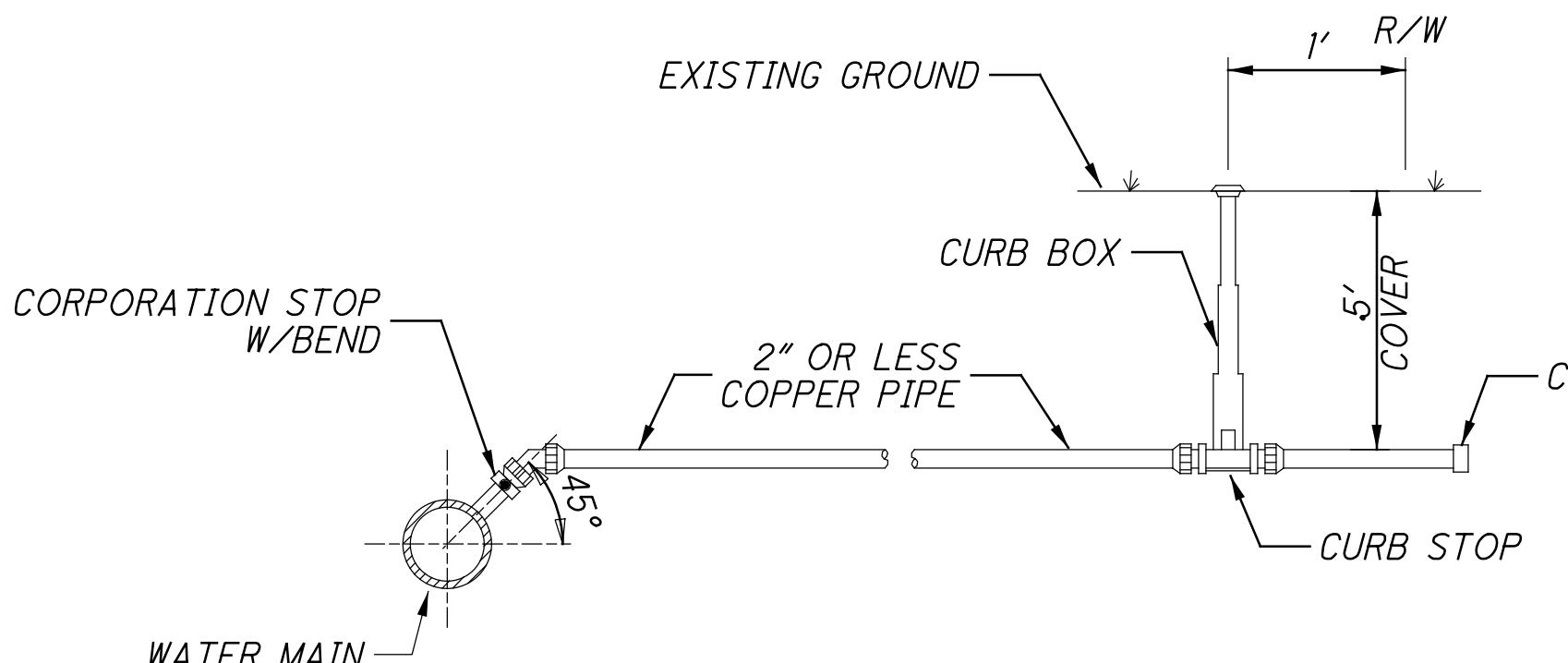


WATER WORK DETAILS

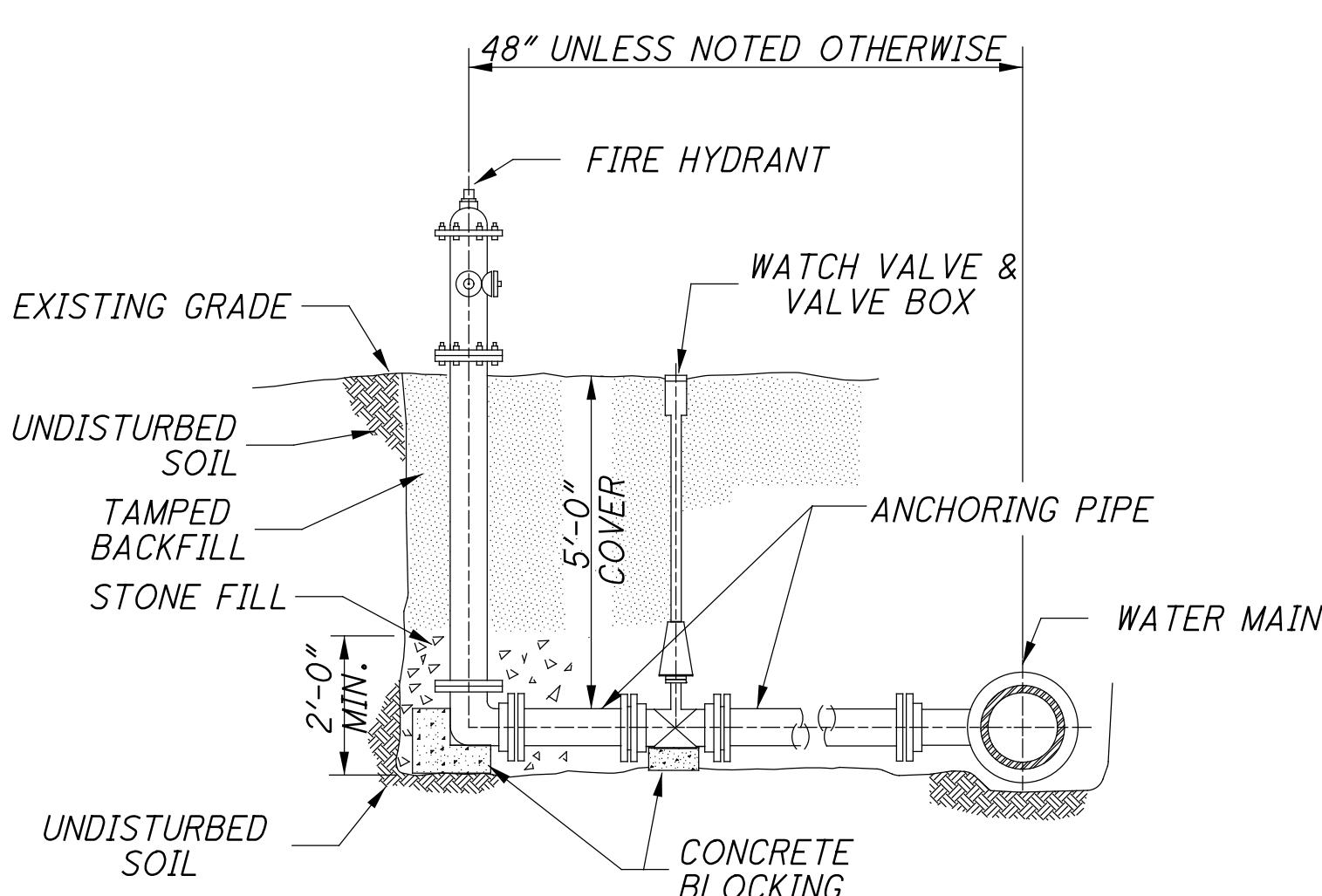
TUS-10-13.15



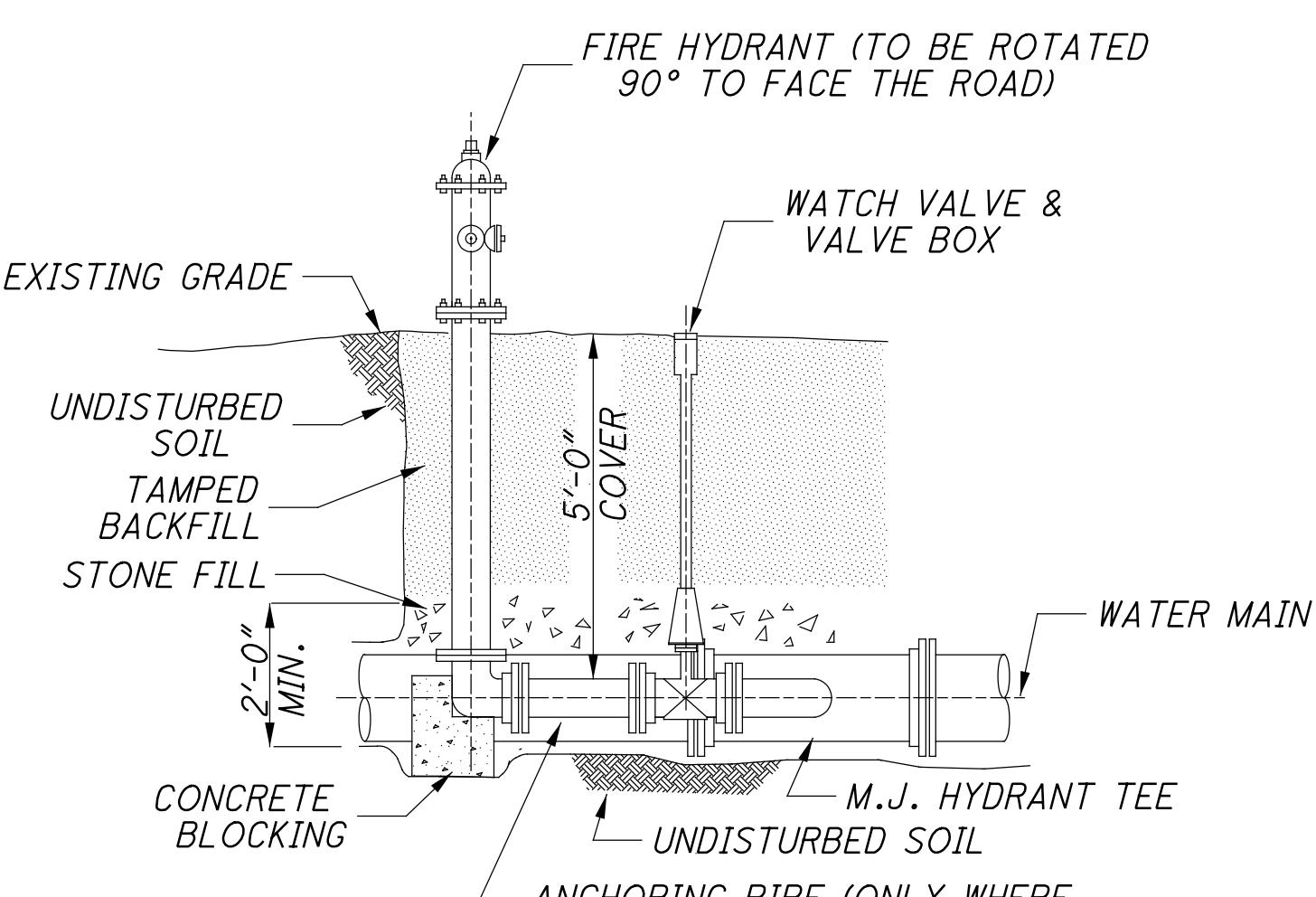
DETAIL "A"
EXISTING WATER MAIN RELOCATION
UNDER PROPOSED UTILITY LINE
(ELEVATION)



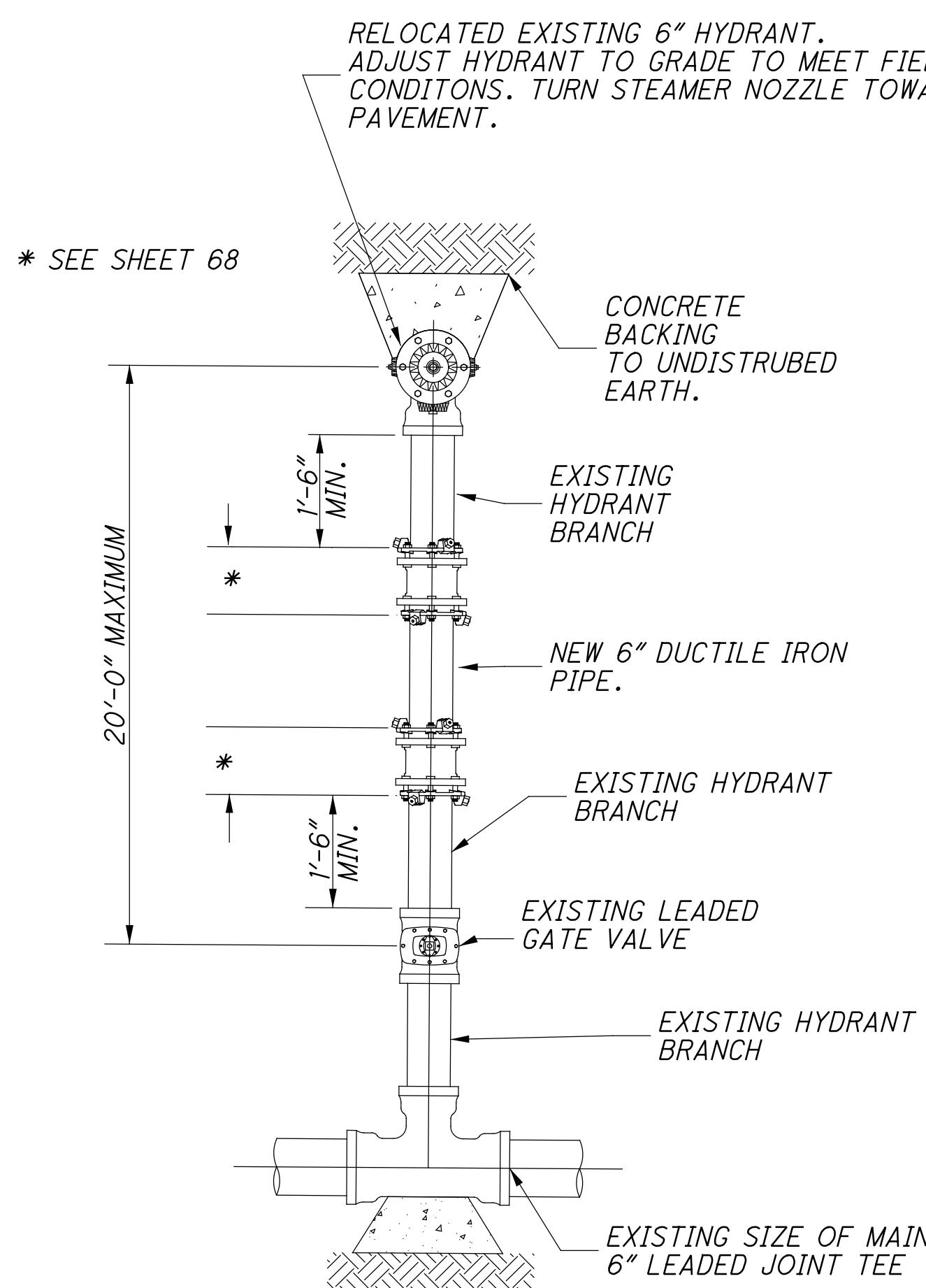
DETAIL "B"
TYPICAL 2" OR LESS SERVICE CONNECTION
(ELEVATION)



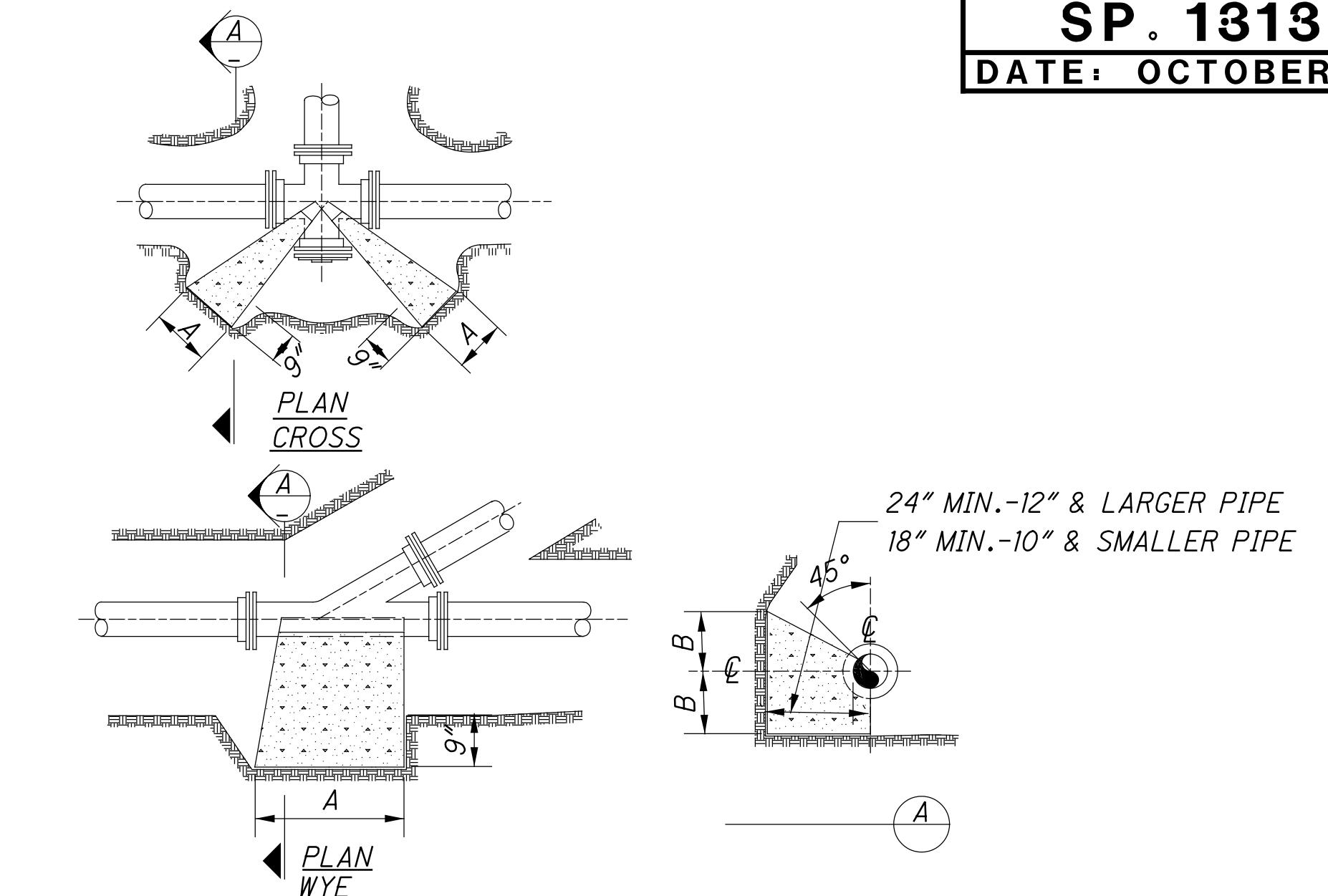
DETAIL "C"
HYDRANT ASSEMBLY
PERPENDICULAR TO WATER
(ELEVATION)



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

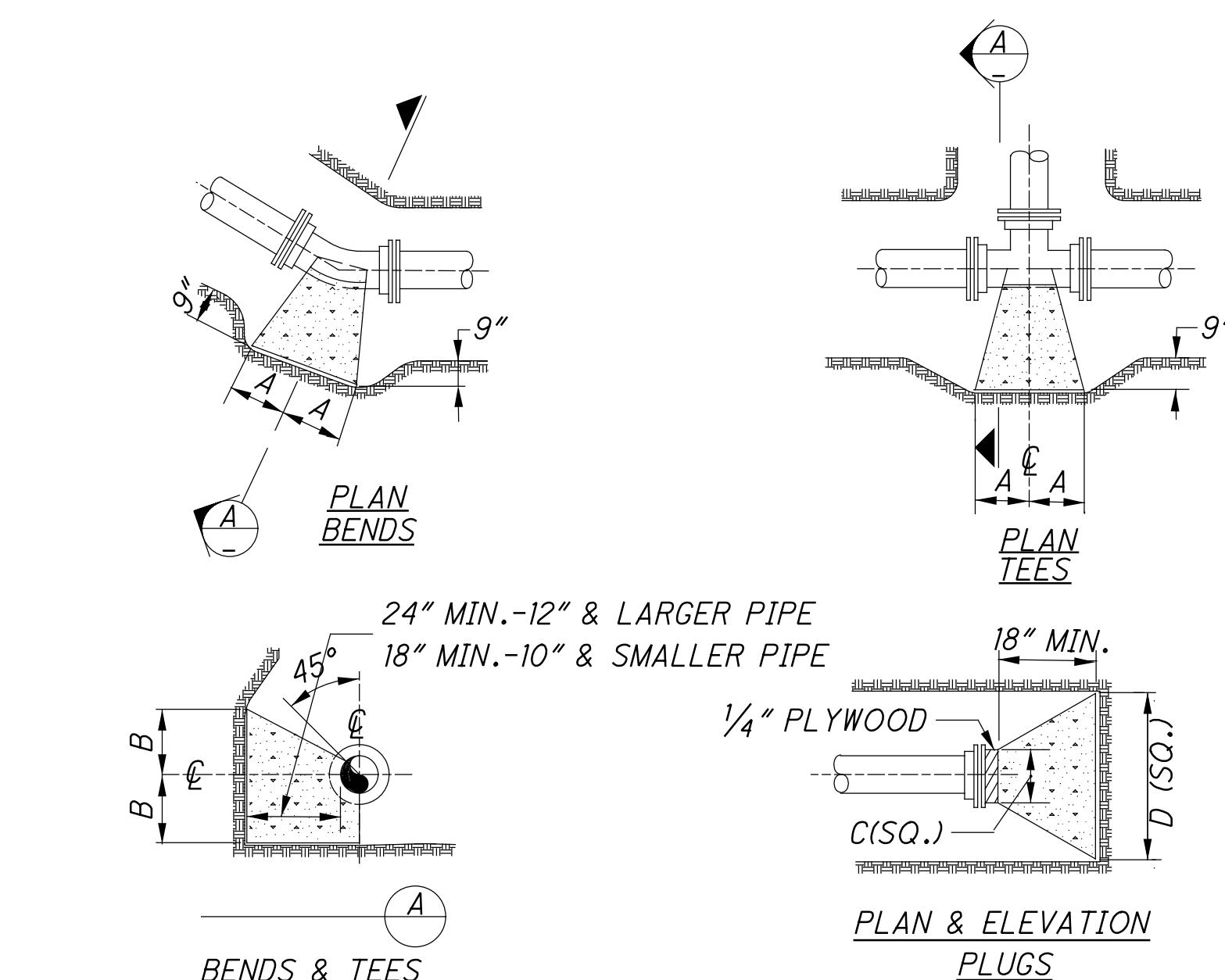


DETAIL "E"
FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE
(PLAN)



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	C	D	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.

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	RAISED PAVEMENT MARKER REMOVED	621			642					
						FROM	TO	EACH	EACH	EACH	MILE	FT	FT	EACH
56	CL-1	€ Const. S.R. 17	46+73	48+00	RT.	7		7			0.024			
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		2			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		
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
TOTALS CARRIED TO GENERAL SUMMARY						240		316			0.85	0.67	656	75

SIGNING SUBSUMMARY

UNI-17-3.14

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	SIGN, FLAT SHEET	ONE WAY SUPPORT, No. 3 POST	GROUND MOUNTED SUPPORT, No. 3 POST	630			GND MNTD STRUCTURAL BEAM SUPPORT, W6x12	REMOVAL OF GND MNTD SIGN AND REERCTION	REMOVAL OF GND MNTD SIGN AND DISPOSAL	REMOVAL OF GND MNTD POST SUPPORT AND DISPOSAL	REMOVAL OF GND MNTD MAJOR SIGN AND DISPOSAL	SIGN ERECTED, EXTRASHEET	GND MNTD STRUCTURAL BEAM SUPPORT FOUNDATION	BREAKAWAY STRUCTURAL BEAM CONNECTION	
										SQ FT	FT	FT									
56	S1	Const. S.R. 17	44+91	L.T.	M3-1-24 M1-1-24-2 M6-1-24 M2-H7-66 R1-1-48 R6-1-48 R5-1-36 R6-1-48	24" x 12" 24" x 24" 24" x 18" 66" x 24" 48" x 48" 48" x 18" 36" x 36" 48" x 18"	2.0 4.0 3.0 11.0 16.0 6.0 9.0 6.0	14.5	13.5	12.5	17.5-18.0	96	2	2							
56	S2		40+41	L.T.	R3-9b-24 R3-H9j-24	24" x 36" 24" x 6"	6.0 1.0														
56	S3		45+60	L.T.	R3-H8ba-36	36" x 30"	7.5														
56	S4		47+80	L.T.	D1-H6	192" x 72"															
56	S5		48+40	R.T.	R3-9b-24 R3-H9j-24	24" x 36" 24" x 6"	6.0 1.0														
56	S6		48+75	L.T.	R3-H8dg-36	36" x 30"	7.5														
56	S7		49+93	L.T.	D-3																
56	S8		50+05	L.T.	R2-1-30	30" x 30"	6.25														
56	S9		46+20	R.T.	M3-2-24 M1-5-24-3	12" x 24" 24" x 30"	2.0 5.0														
56	S10		54+36	R.T.	R3-H8dg-36	36" x 30"															
57	S11		53+00	L.T.	M2-1 MI-1-24-2	24" x 12" 24" x 24"	2.0 4.0														
57	S12		55+56	L.T.	R3-H9j-24 R3-9b-24	24" x 6" 24" x 36"	1.0 6.0														
57	S13		55+56	R.T.	R3-H8bh-36	36" x 30"	7.5														
57	S14		57+25	R.T.	R3-H8bh-36	36" x 30"	7.5														
57	S15		56+89	L.T.	M1-5-30-3	30" x 24"	5.0														
57	S16		57+72	R.T.	D-3																
57	S17		58+31	L.T.	R2-1-30 R5-H2b-24	30" x 30"	6.25														
57	S18		58+48	L.T.	R2-1-30	30" x 30"	6.25														
57	S19		58+65	R.T.	R2-1-30 R5-H2b-24	30" x 30"	6.25														
57	S20		59+47	R.T.	R2-1-30 R5-H2b-24	30" x 30"	6.25														
58	S21		59+25	L.T.	R3-H8bh-36	36" x 30"	7.5														
58	S22		59+38	R.T.	M1-5-24-3	30" x 24"	5.0														
58	S23	Const. S.R. 17	60+86	L.T.	R3-H8bh-36	36" x 30"	7.5														
56	R1	Const. S.R. 17	44+91	L.T.													4	1			
56	R2		40+41	L.T.													3	1			
56	R3		47+80	L.T.												3		1			
56	R4		47+65	R.T.	W6-3												1	1			
56	R5		49+93	L.T.													1	1			
56	R6		50+05	L.T.													1	1			
56	R7		46+20	R.T.													2	1			
56	R8	Const. S.R. 17	54+36	R.T.													1	1			
SUBTOTALS							170.25	14.5	311.5	35.5	3	13	7	1	96	2	2				
TOTALS CARRIED TO GENERAL SUMMARY							170	15	312	36	3	13	7	1	96	2	2				

56
65SIGN AND PAVEMENT
MARKING PLAN

MATCH LINE STA. 48+00

MATCH LINE STA. 53+00

SEE SHEET 57 FOR ISLAND
MARKING DETAIL

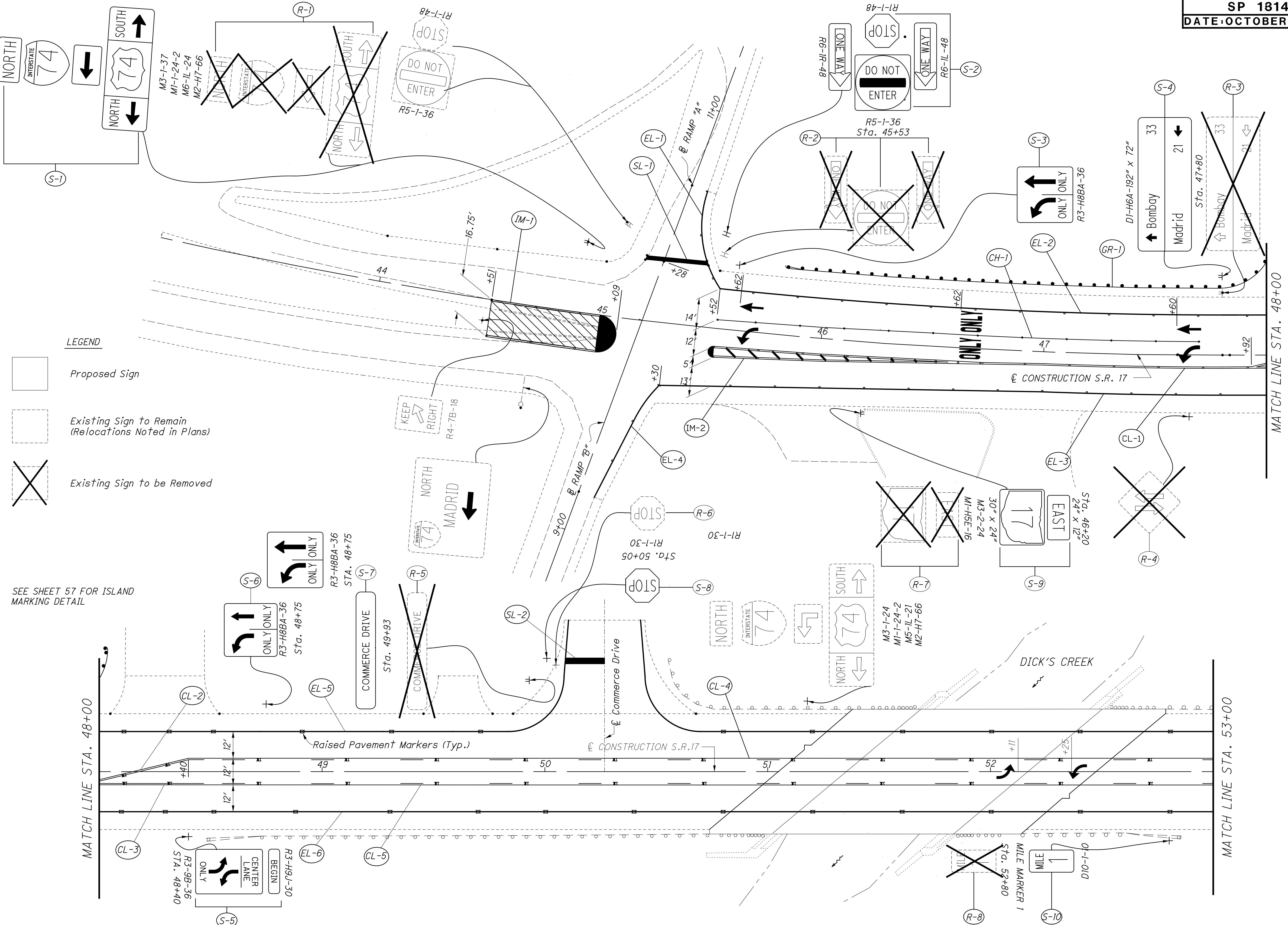
pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\03 Standards\Sample Plans\v81\SP1314\SP1314-3_2006-10.dgn Sheet 2/9/2022 3:44:13 PM tbpetros

LEGEND

Proposed Sign

Existing Sign to Remain
(Relocations Noted in Plans)

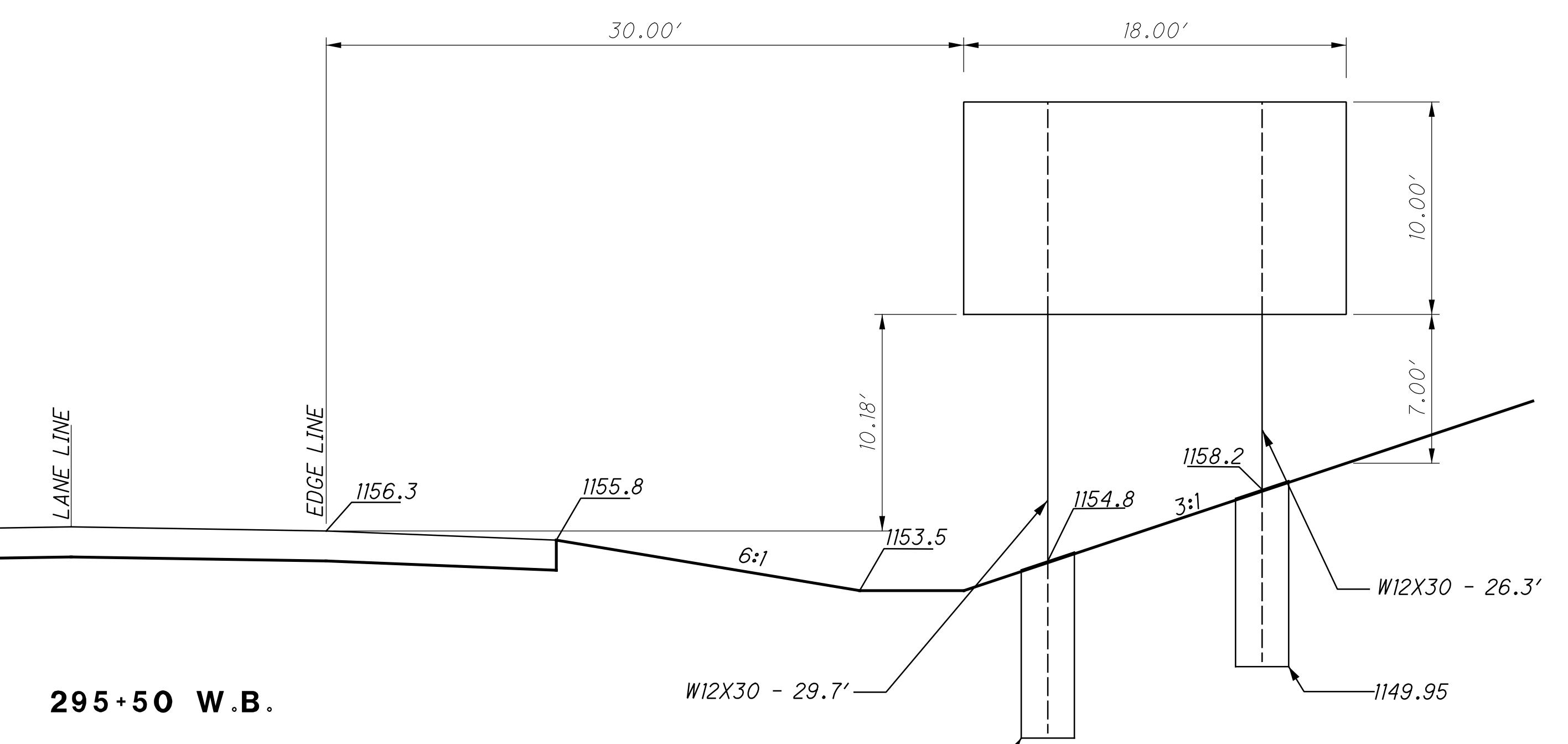
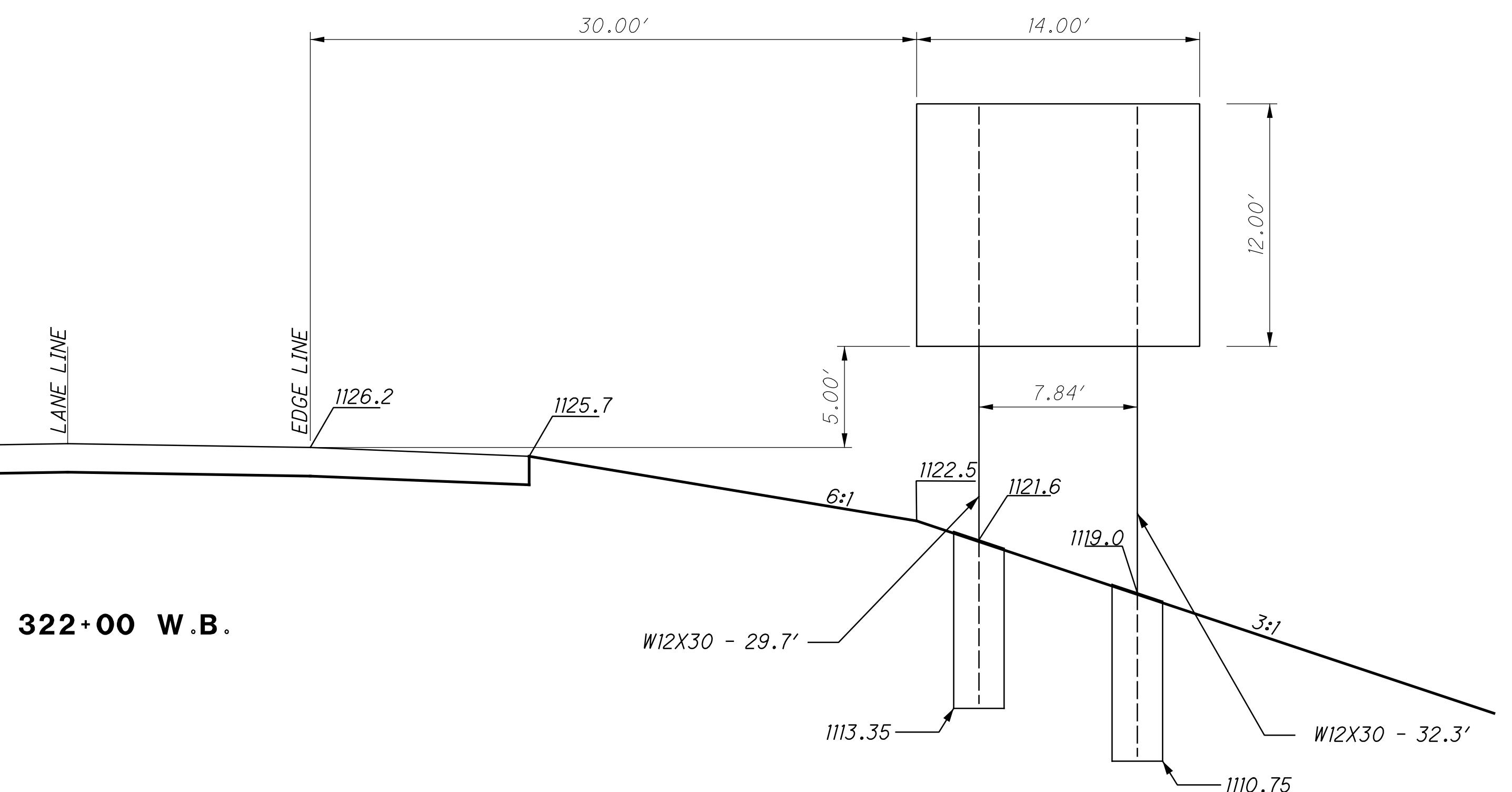
Existing Sign to be Removed

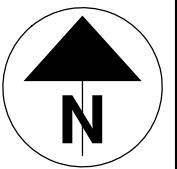


GUIDE SIGN ELEVATION DETAILS

FRA-161-23.20
LIC-161-0.00

686
2117

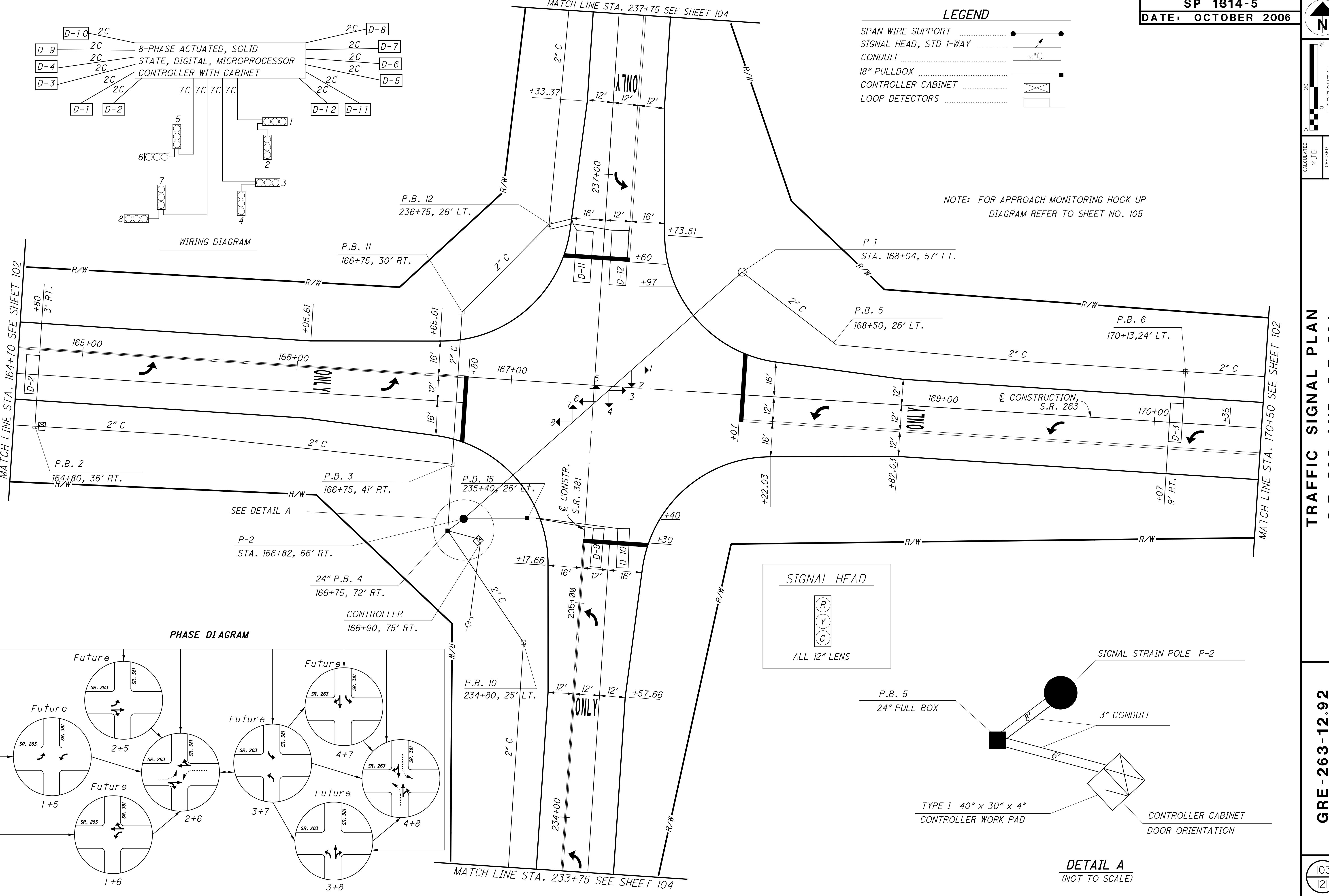


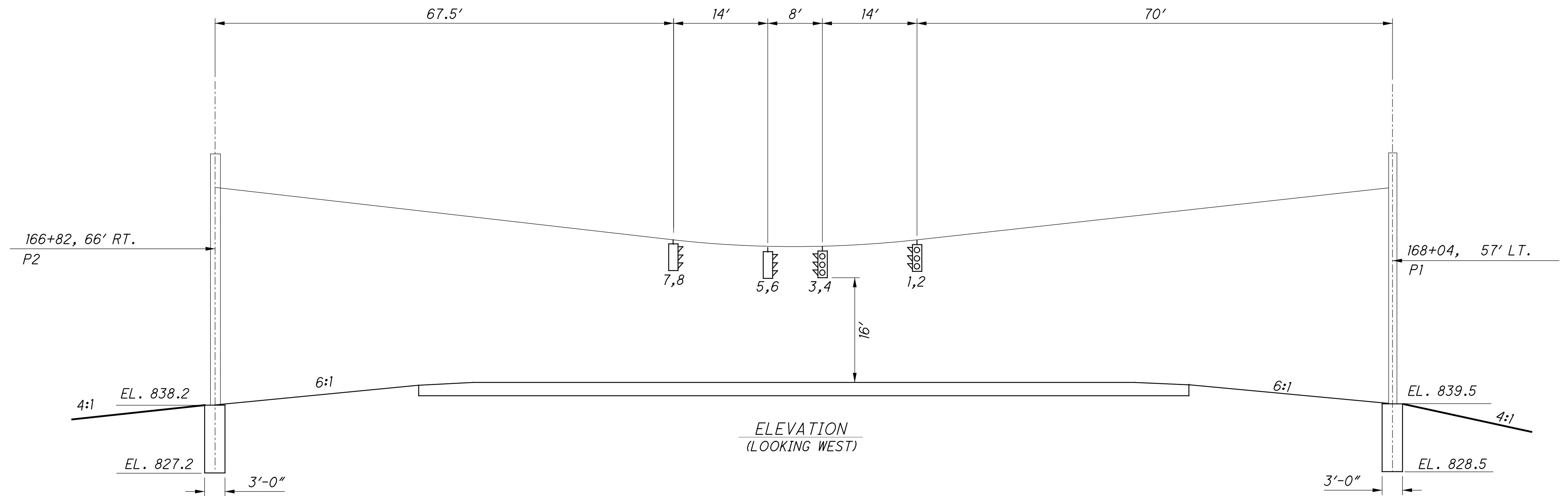


TRAFFIC SIGNAL PLAN

S.R. 263 AND S.R. 381

卷之三





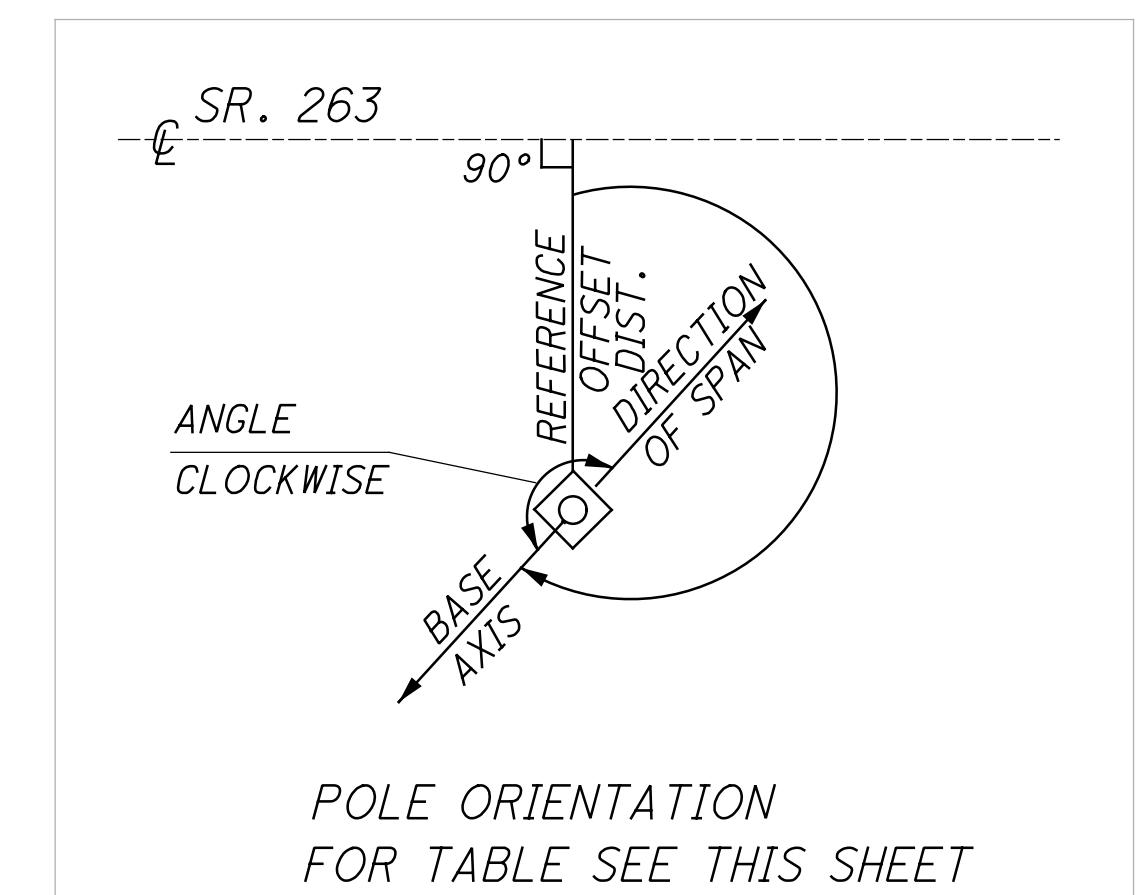
POLE SIZE AND FOUNDATION ELEVATION				ORIENTATION OF ACCESSORIES (Angles Measured from Index Line)					
POLE NUMBER	POLE DESIGN	POLE SIZE	ELEVATION TOP OF FOUNDATION	ELEVATION BOTTOM OF FOUNDATION	SERVICE CABLE 1-1/2"	HAND HOLE	CABLE ENTRANCE	SPAN WIRE ATTACHMENT	LUMINAIRE
P-1	10	34'	839.5	828.5	----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

SIGNAL HEAD MOUNTING DATA			
SIGNAL	PAVEMENT ELEVATION BELOW SIGNAL	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

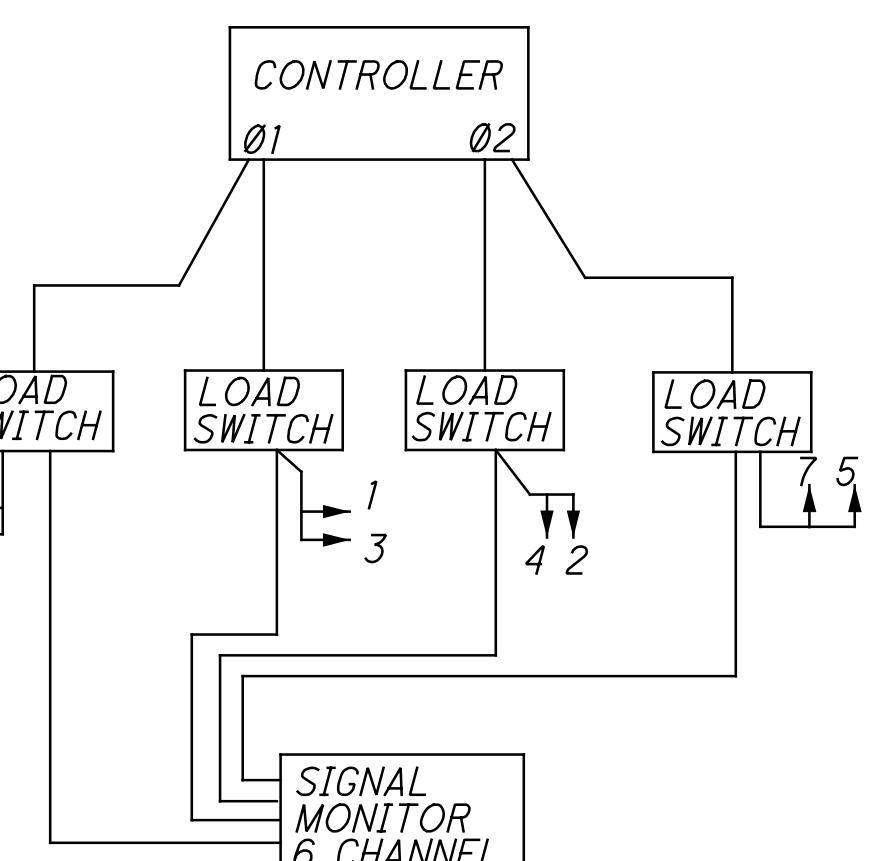
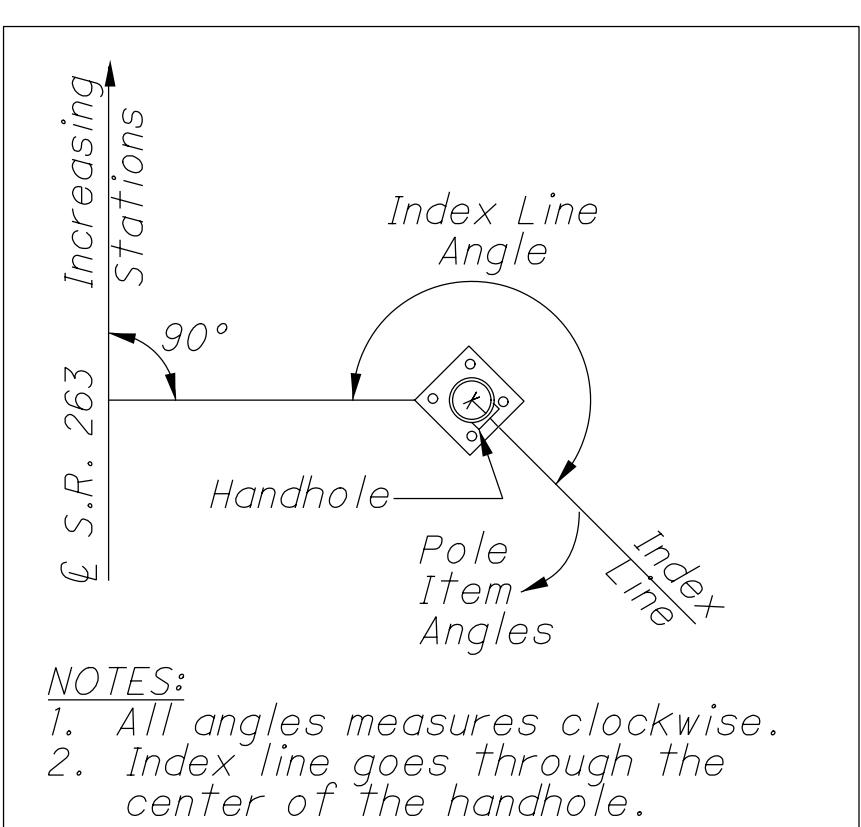
SIGNAL TIMING			
PHASE	1	2	
MINIMUM	15	15	
MAXIMUM	25	25	
EXTENSION	3	3	
ADDED INITIAL	1.0		
FLASH	Y	R	
RECALL	MIN	----	
Y-CLEAR	4	4	
ALL-RED	2	2	
INITIALIZE	G	R	

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

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



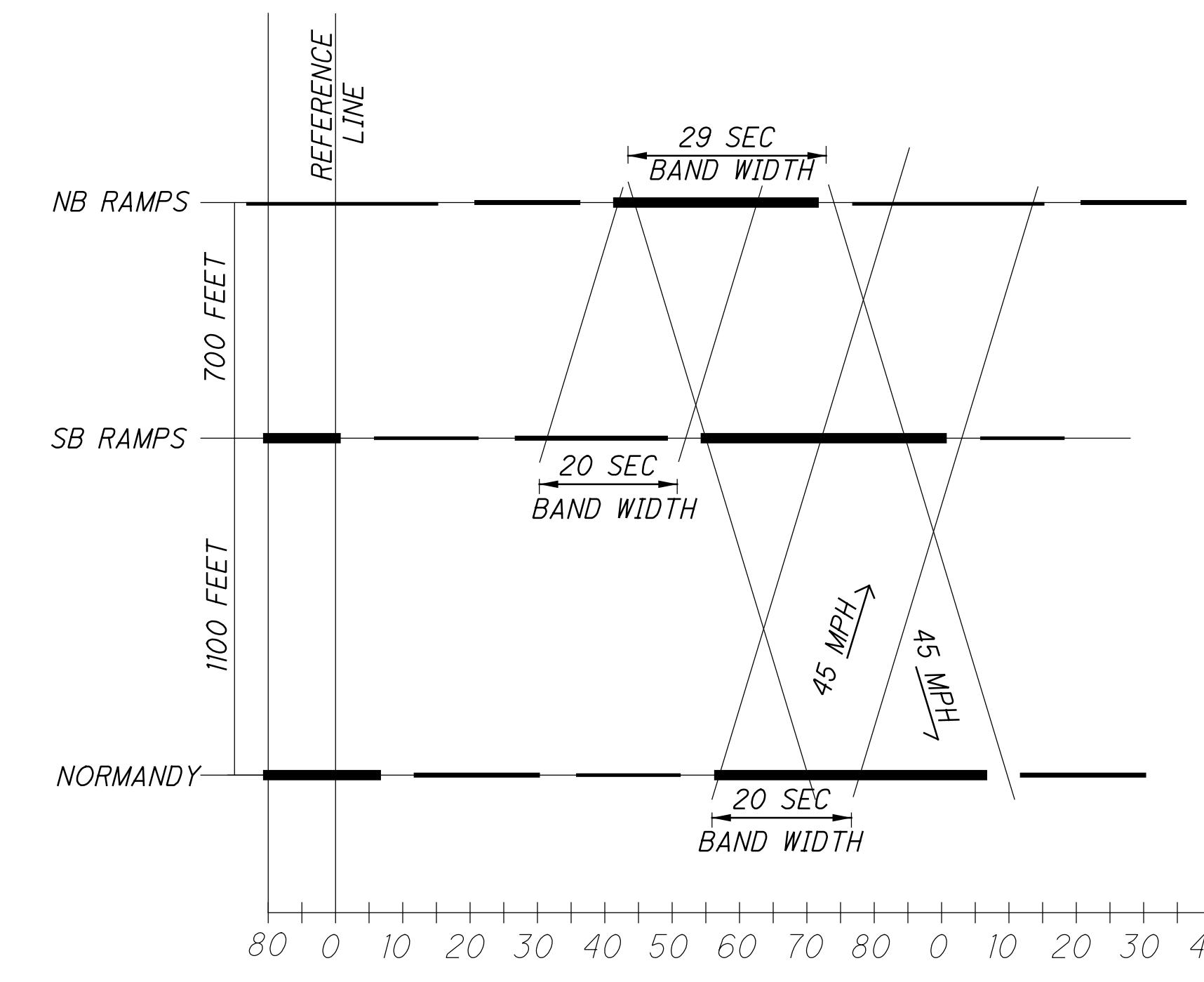
POLE ORIENTATION
FOR TABLE SEE THIS SHEET



APPROACH MONITORING HOOK-UP DIAGRAM

TRAFFIC SIGNAL PLAN DETAILS

GRE-263-12.92

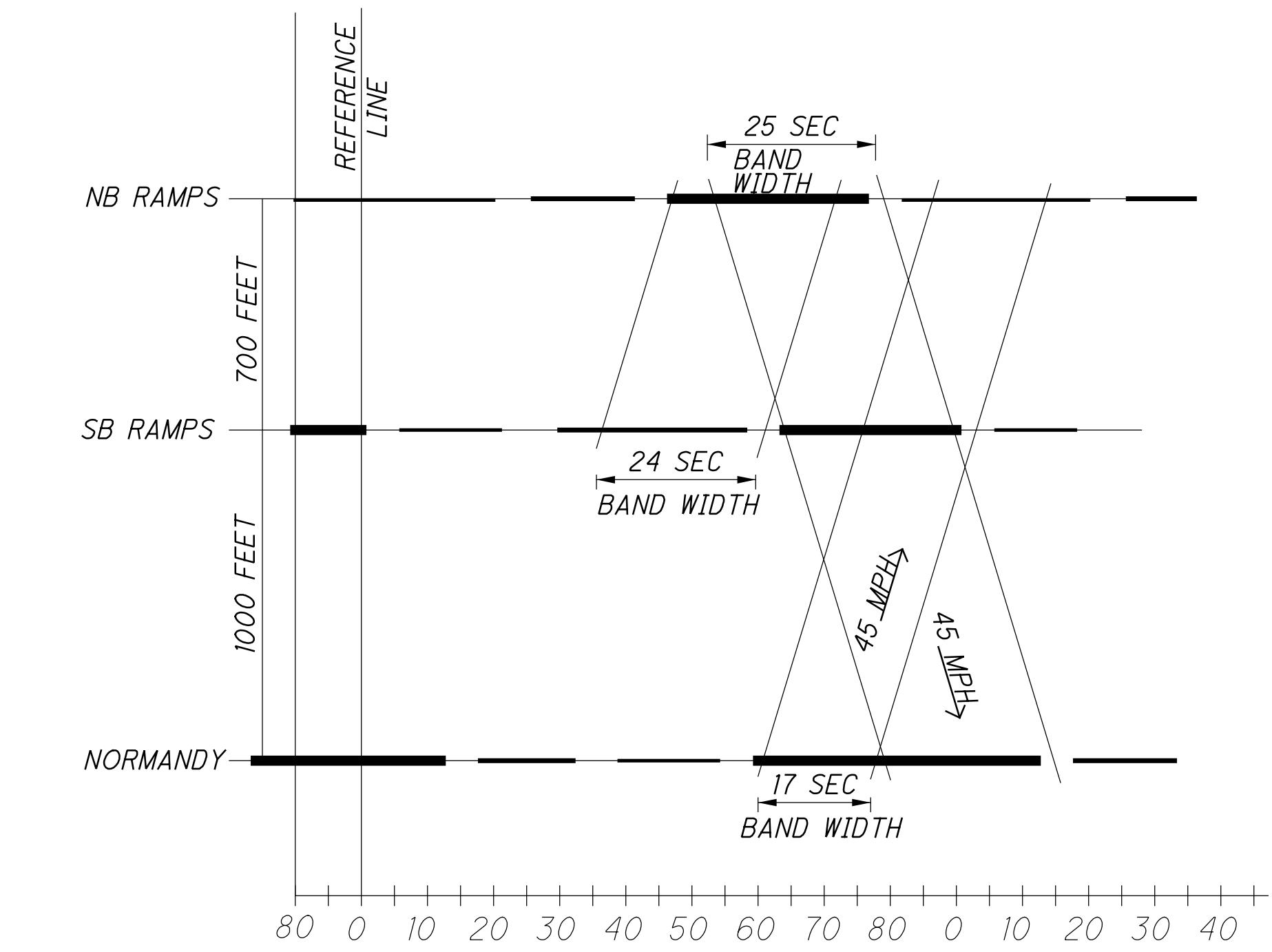


90 SECOND CYCLE LAGGING LEFT

PROTECTED ONLY LEFT TURN

MORNING & OFF PEAK

DIAL #1



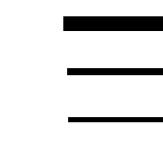
90 SECOND CYCLE LAGGING LEFT

PROTECTED ONLY LEFT TURN

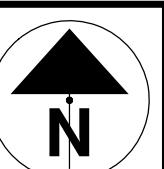
EVENING PEAK

DIAL #2

SR 18 GREEN
RAMP GREEN
PROTECTED LEFT TURN



TIME-SPACE DIAGRAMS

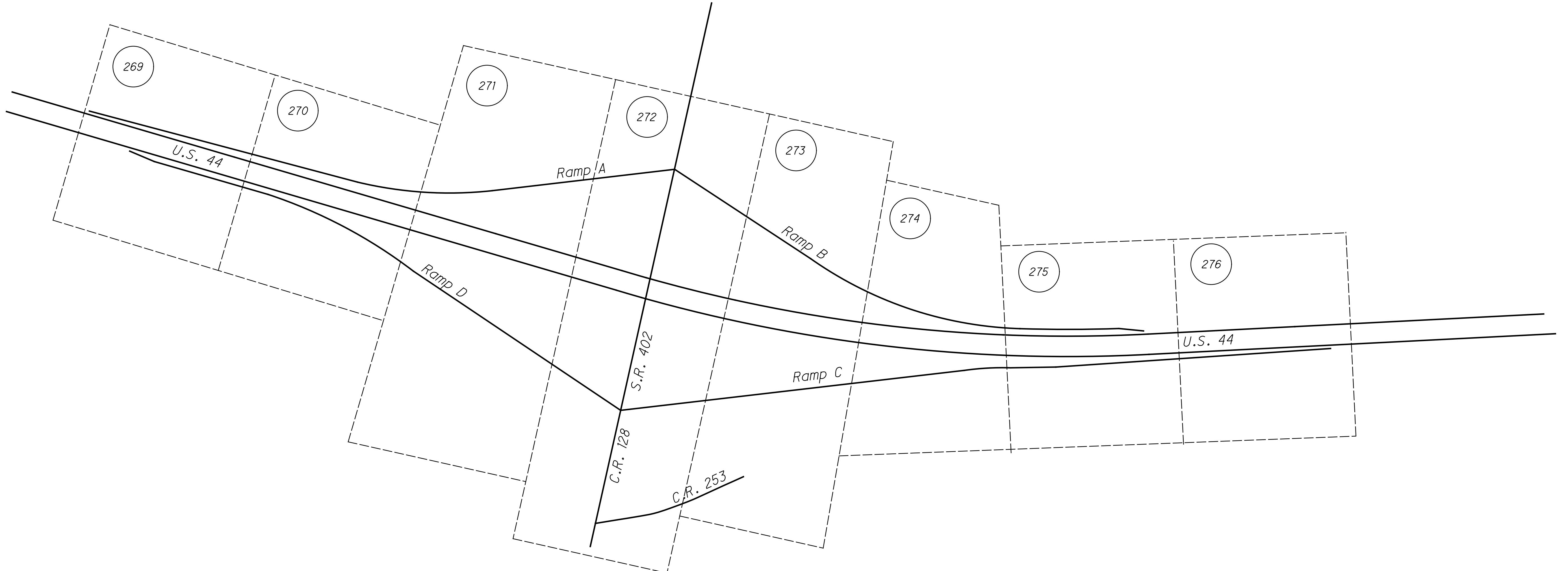


0 100 200 300 400
HORIZONTAL SCALE IN FEET

LIGHTING SCHEMATIC PLAN

CHP - 44-11.29

264
306



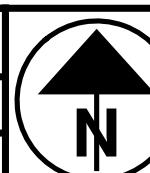
LEGEND

- 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	WATTAGE OF LUMINAIRE	SUPPORT HEIGHT	BRACKET ARM LENGTH	CIRCUIT NUMBER	POLE NUMBER	POLE REF NO.

CHND 11 11 20



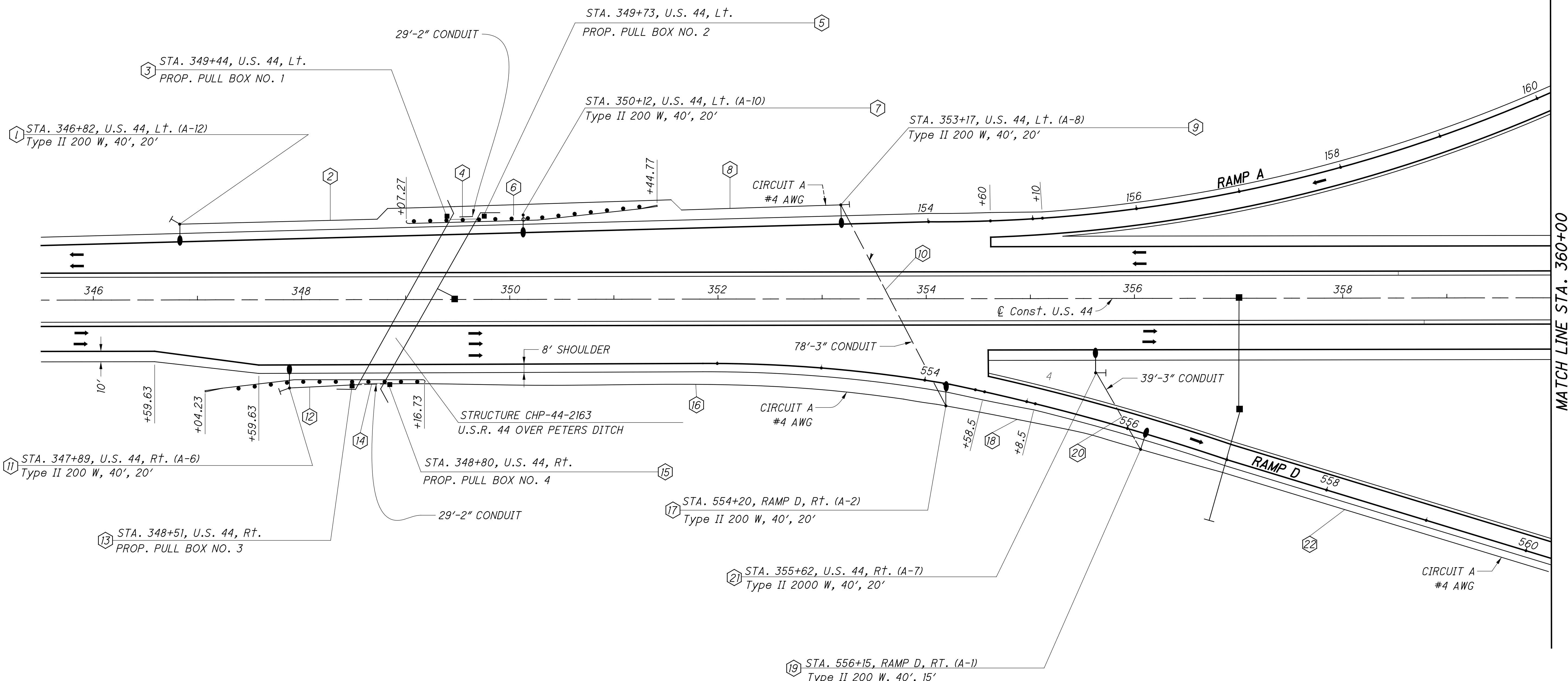
HORIZONTAL SCALE IN FEET

25 50 100
CALCULATED RNM CHECKED CWR

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

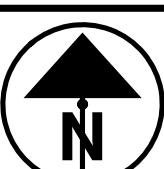
CHP - 44-11.29

269
306



FOR LEGEND, SEE SHEET 264.

FOR QUANTITIES, SEE SHEET 267.



HORIZONTAL SCALE IN FEET

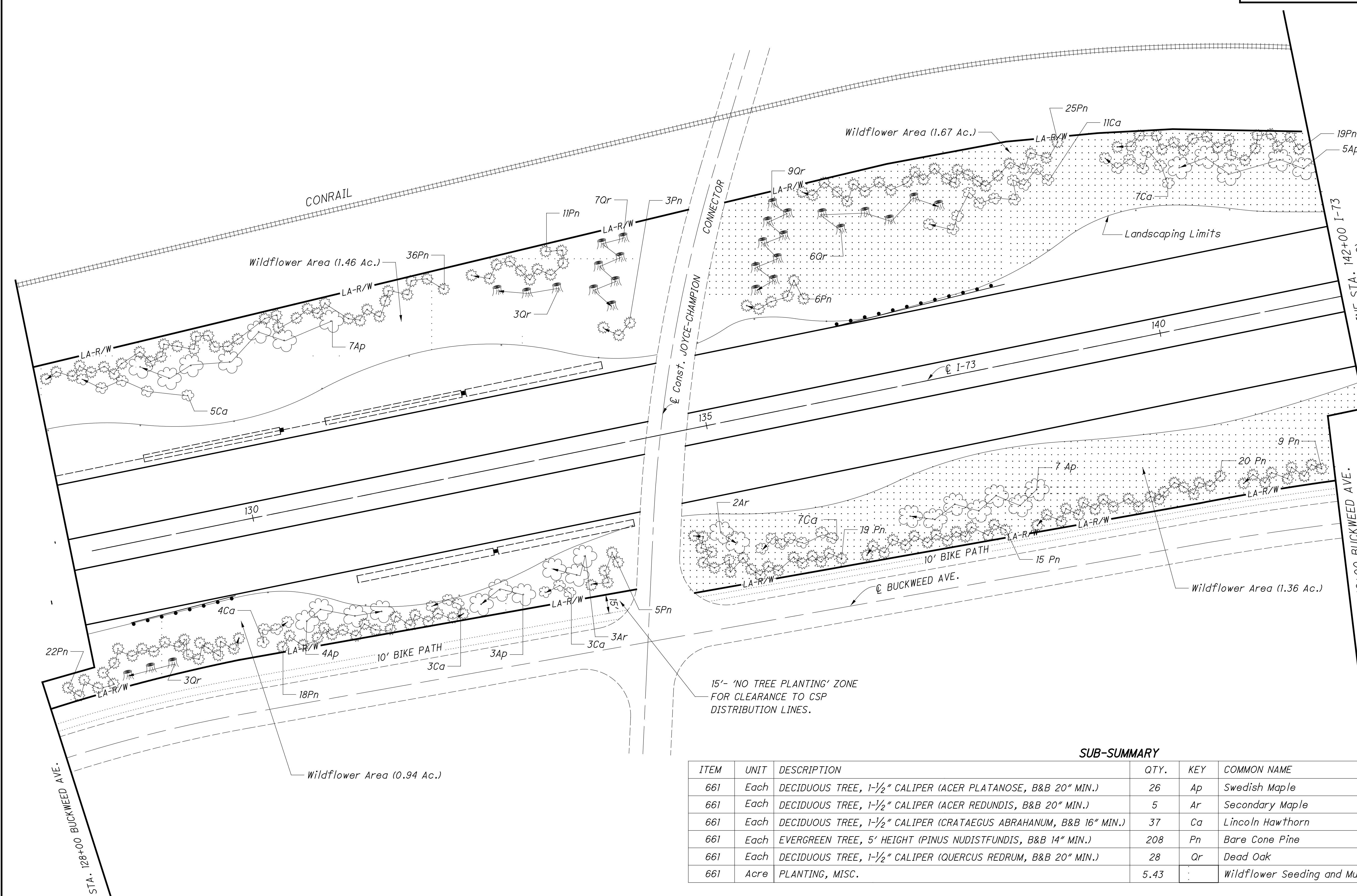
LANDSCAPING PLAN

LUC-73-3.93

8
13

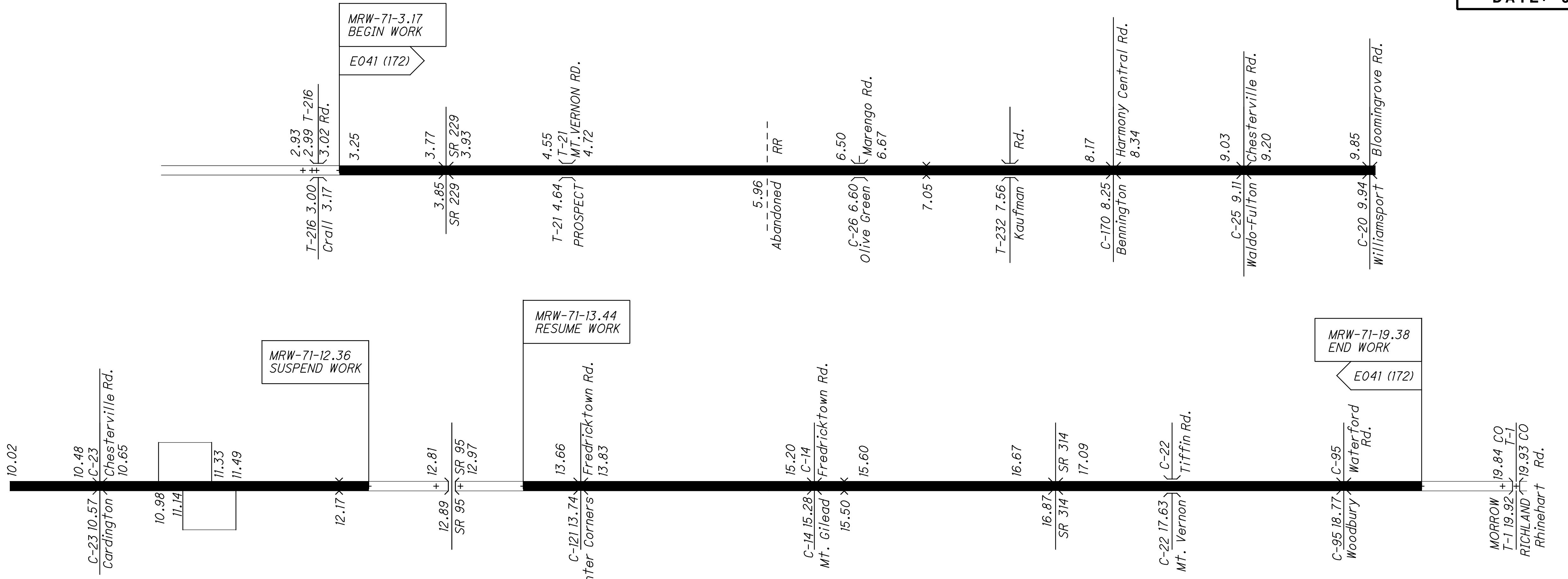
STA. 142+00 BUCKWEED AVE.

MATCH LINE STA. 142+00 I-73
(SEE SHEET 9)



SUB-SUMMARY

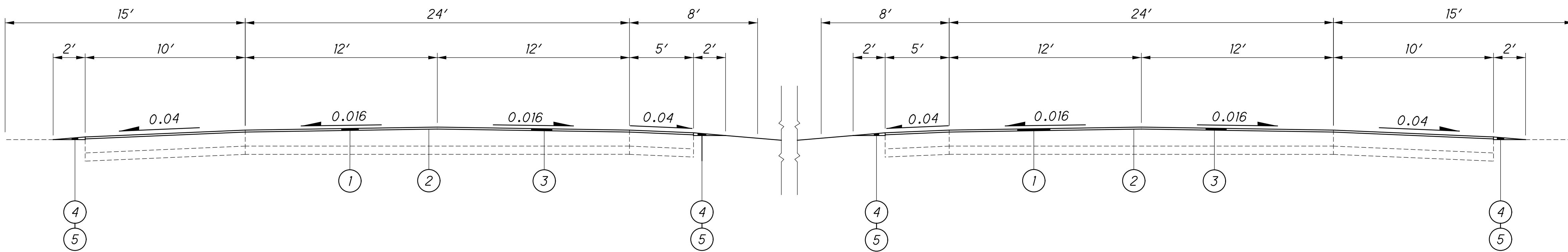
ITEM	UNIT	DESCRIPTION	QTY.	KEY	COMMON NAME
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (ACER PLATANOSE, B&B 20" MIN.)	26	Ap	Swedish Maple
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (ACER REDUNDIS, B&B 20" MIN.)	5	Ar	Secondary Maple
661	Each	DECIDUOUS TREE, 1-1/2" CALIPER (CRATAEGUS ABRAHAMUM, B&B 16" MIN.)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



RESURFACING

* NOTES

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



LEGEND

- (1) ITEM 254 - $1\frac{1}{2}$ " PAVEMENT PLANING, ASPHALT CONCRETE
 - (2) ITEM 407 - TACK COAT
 - (3) ITEM 441 - $1\frac{1}{2}$ " 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

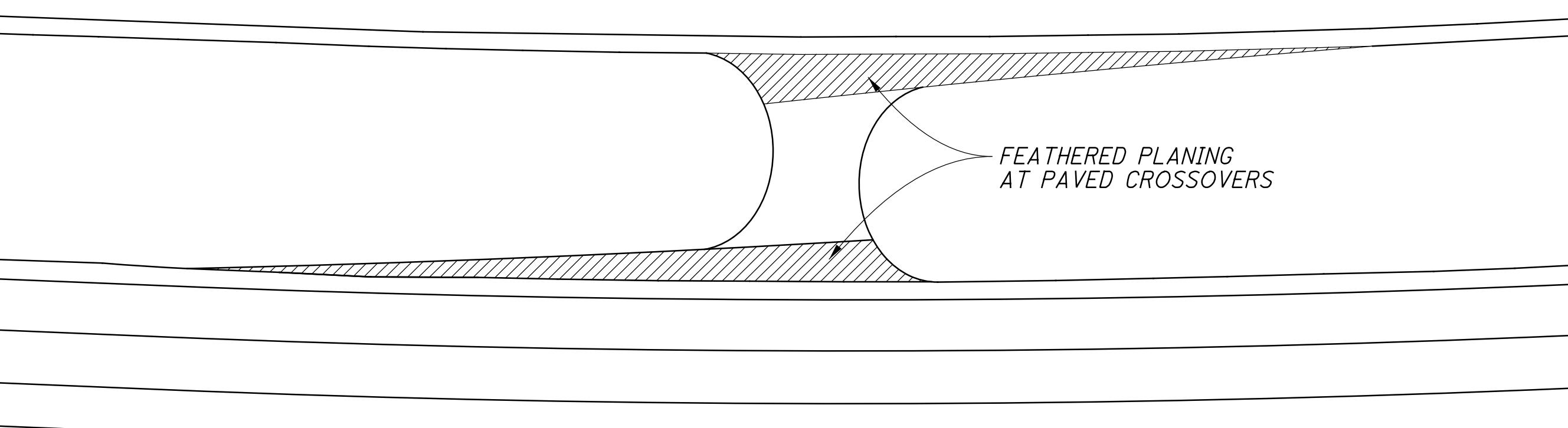
Crossover Detail

SP 1315-2

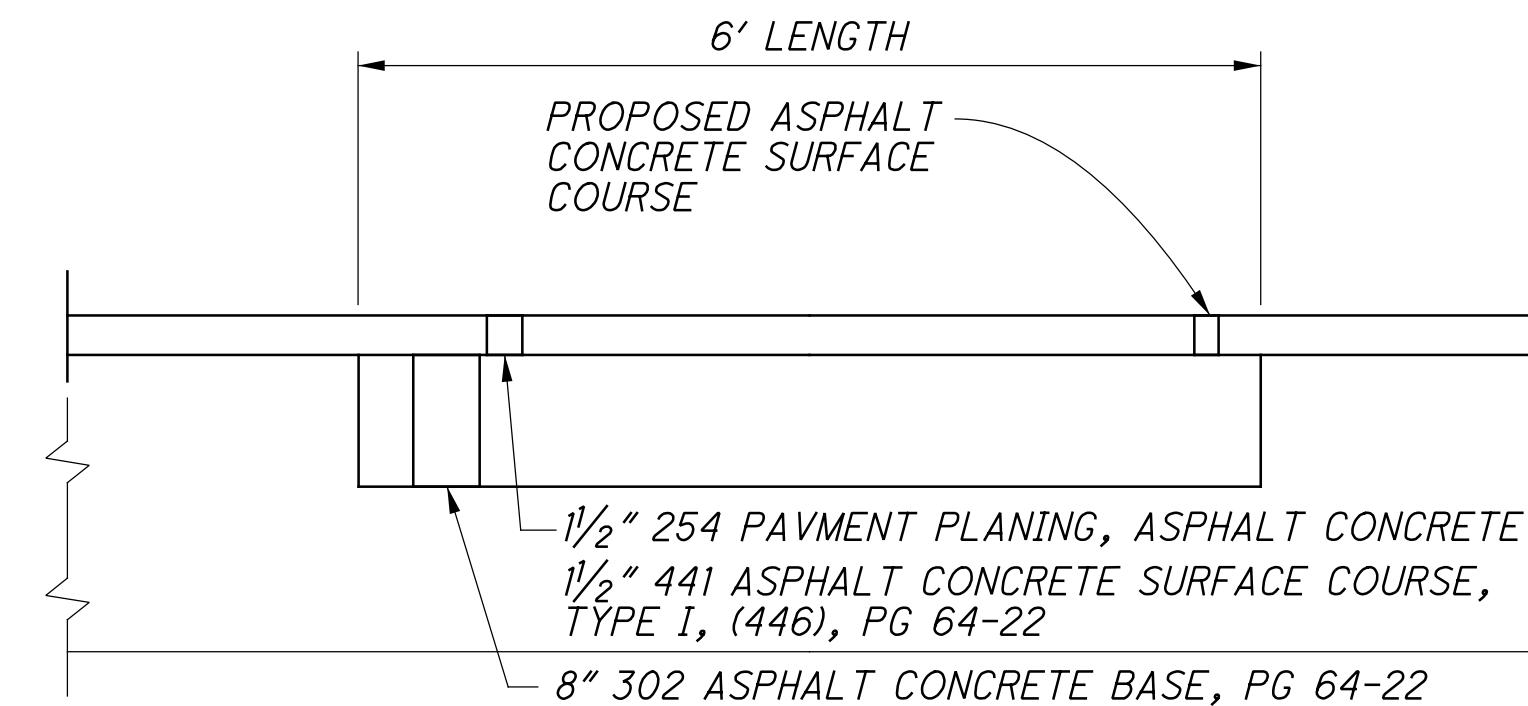
DATE: JULY 2022

CALCULATED
RDK

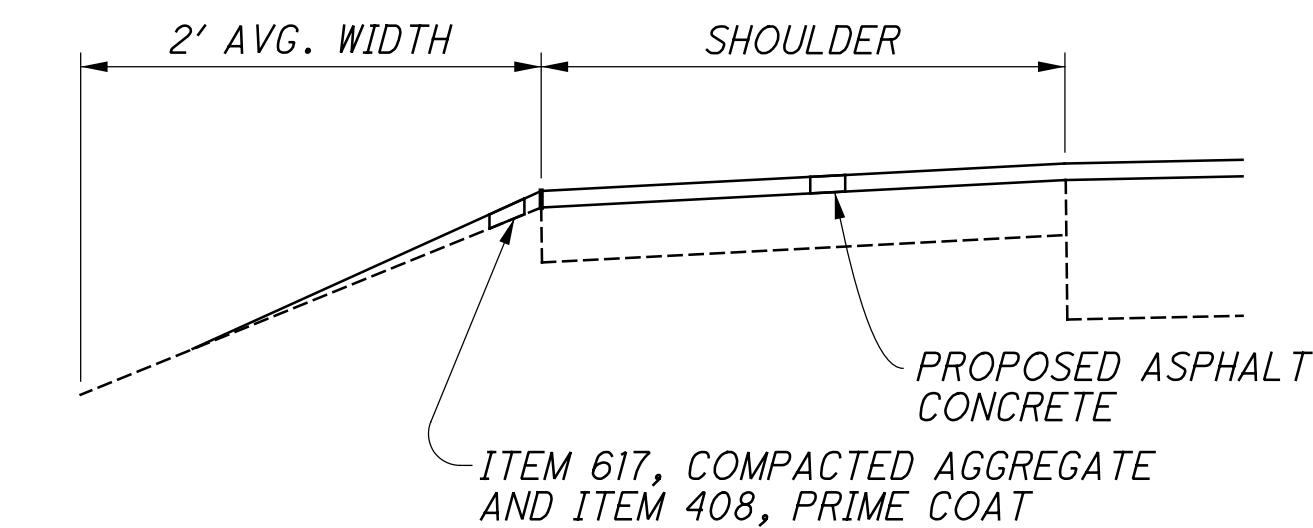
CHECKED
RDK



**PARTIAL DEPTH
PAVEMENT REPAIR
AS PER PLAN**



SHOULDER DETAIL

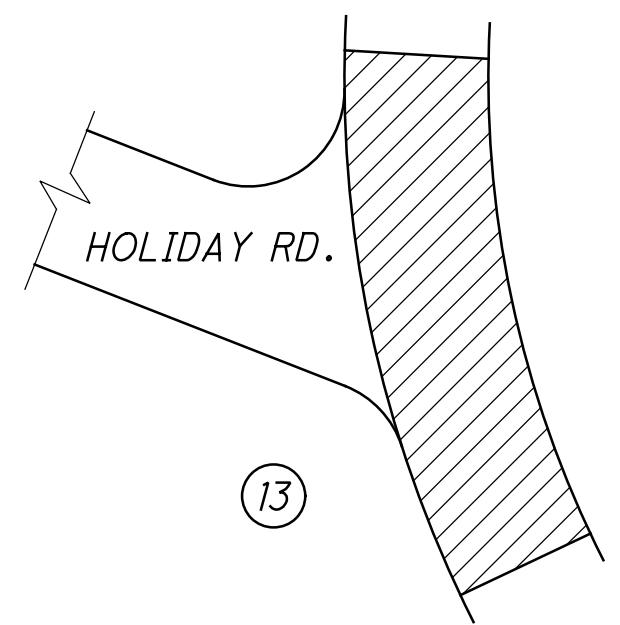
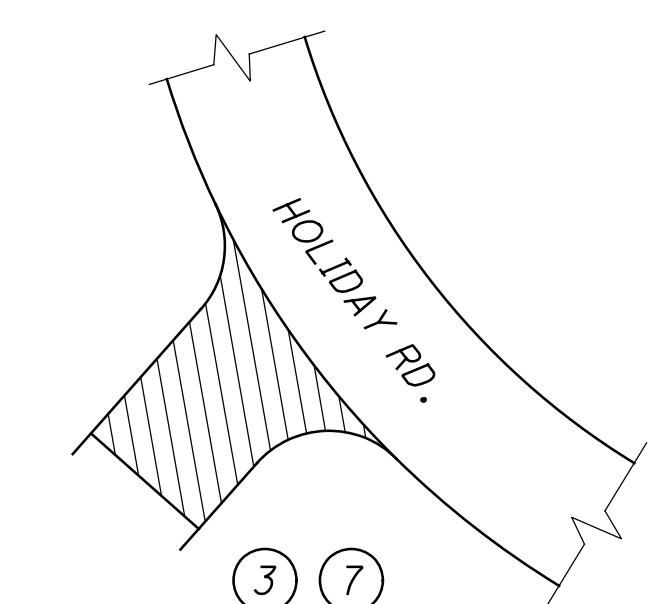
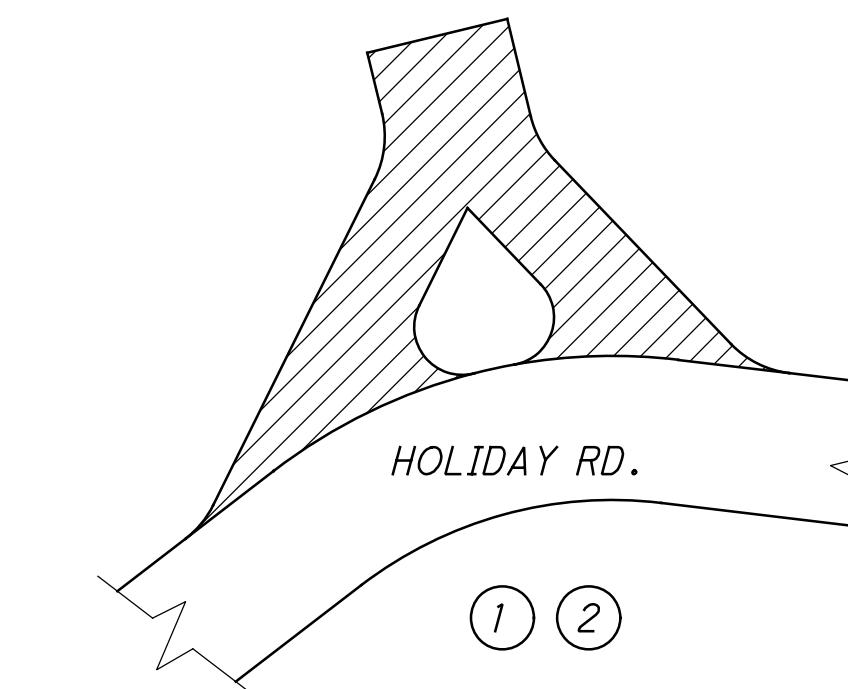
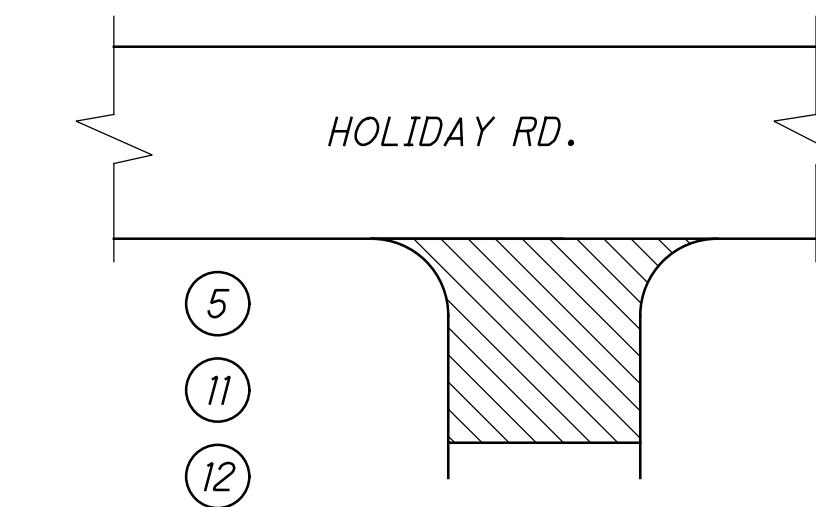
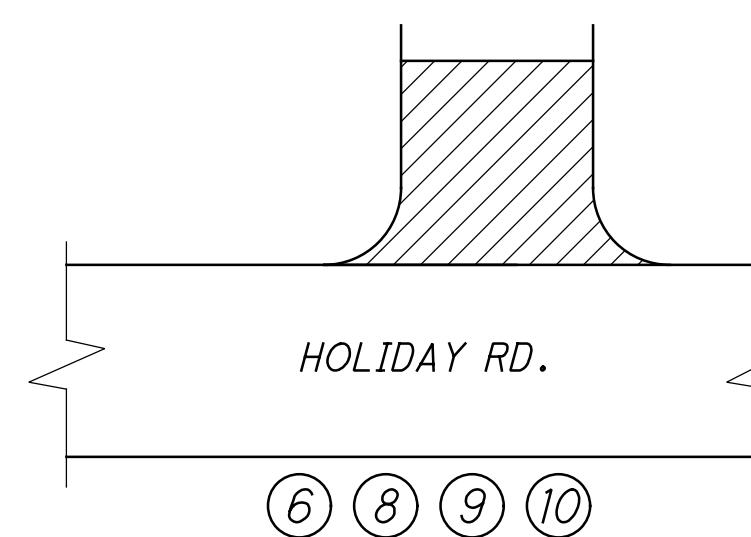
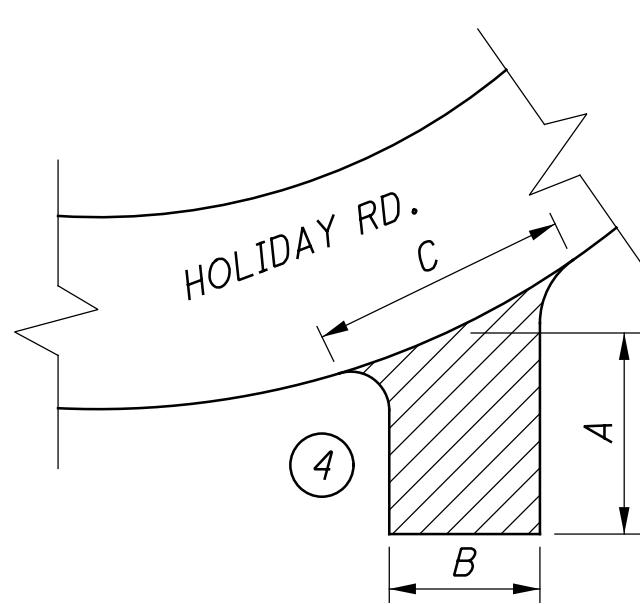


LOCATION					PAVEMENT WIDTH								QUANTITIES						REMARKS		
C O U N T Y	R O U T E	S L M	S L M	T Y P I C A L	NORTHBOUND				SOUTHBOUND				254	407	408	441	617	618	* 6' LENGTH X 12' LANE WIDTH		
					LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT	PRIME COAT (0.4 GAL/YD ²)	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG 64-22	COMPACTED AGGREGATE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)				
					FT	FT	FT	FT	FT	FT	FT	1½" DEPTH	SY	GAL	CY	CY	FT				
					FT	FT	FT	FT	FT	FT	FT	1½" DEPTH	SY	GAL	CY	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	24	-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

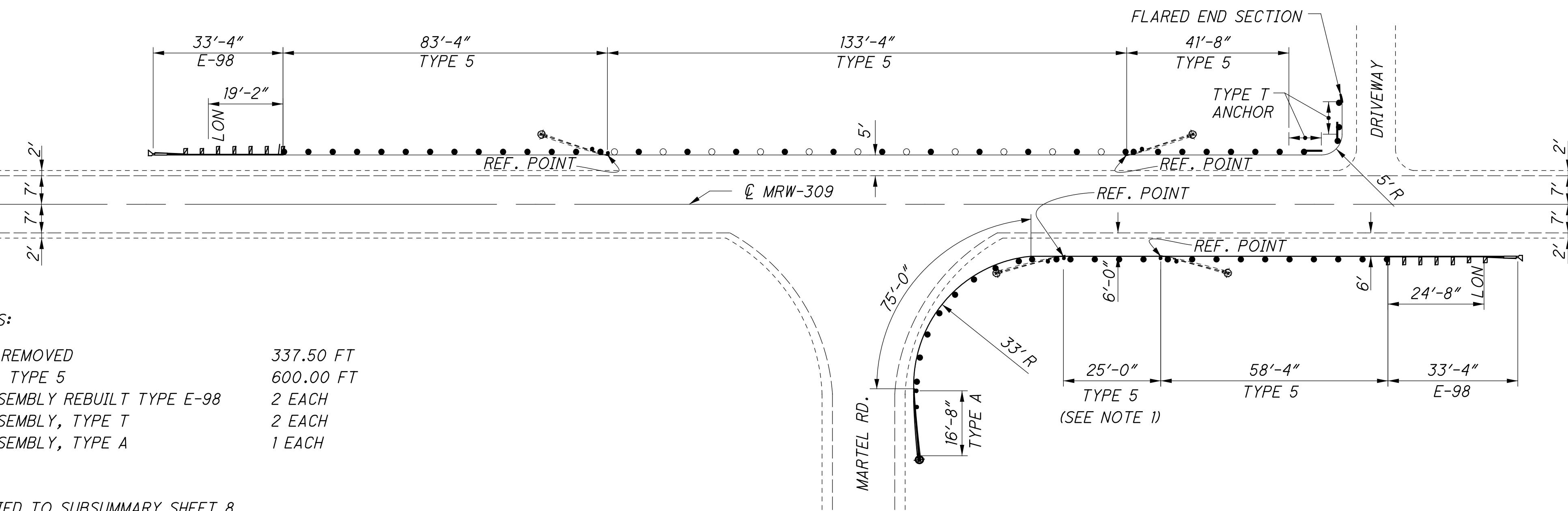
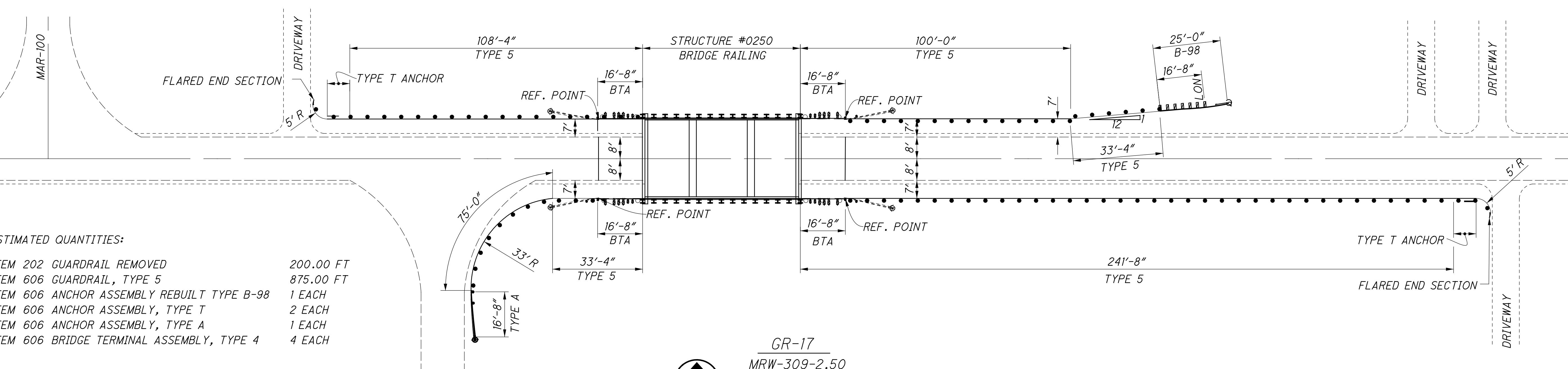
8

15



GUARDRAIL PLAN

MRW - 309 - 7.65

18
33GR-16
MRW-309-2.37NOTE:
REMOVE AS PER ITEM 202, GUARDRAIL REMOVED.
REPLACE WITH ITEM 606, GUARDRAIL, TYPE 5.GR-17
MRW-309-2.50



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
 $Q(25) = 10800 \text{ cfs}$ $V(25) = 6.0 \text{ ft/s}$
 $Q(100) = 13000 \text{ cfs}$ $V(100) = 6.6 \text{ ft/s}$
 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: $\frac{3}{16}$ " 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 Q SURVEY & CONSTRUCTION

APPROACH SLABS: 25'-0" LONG (AS-1-81)

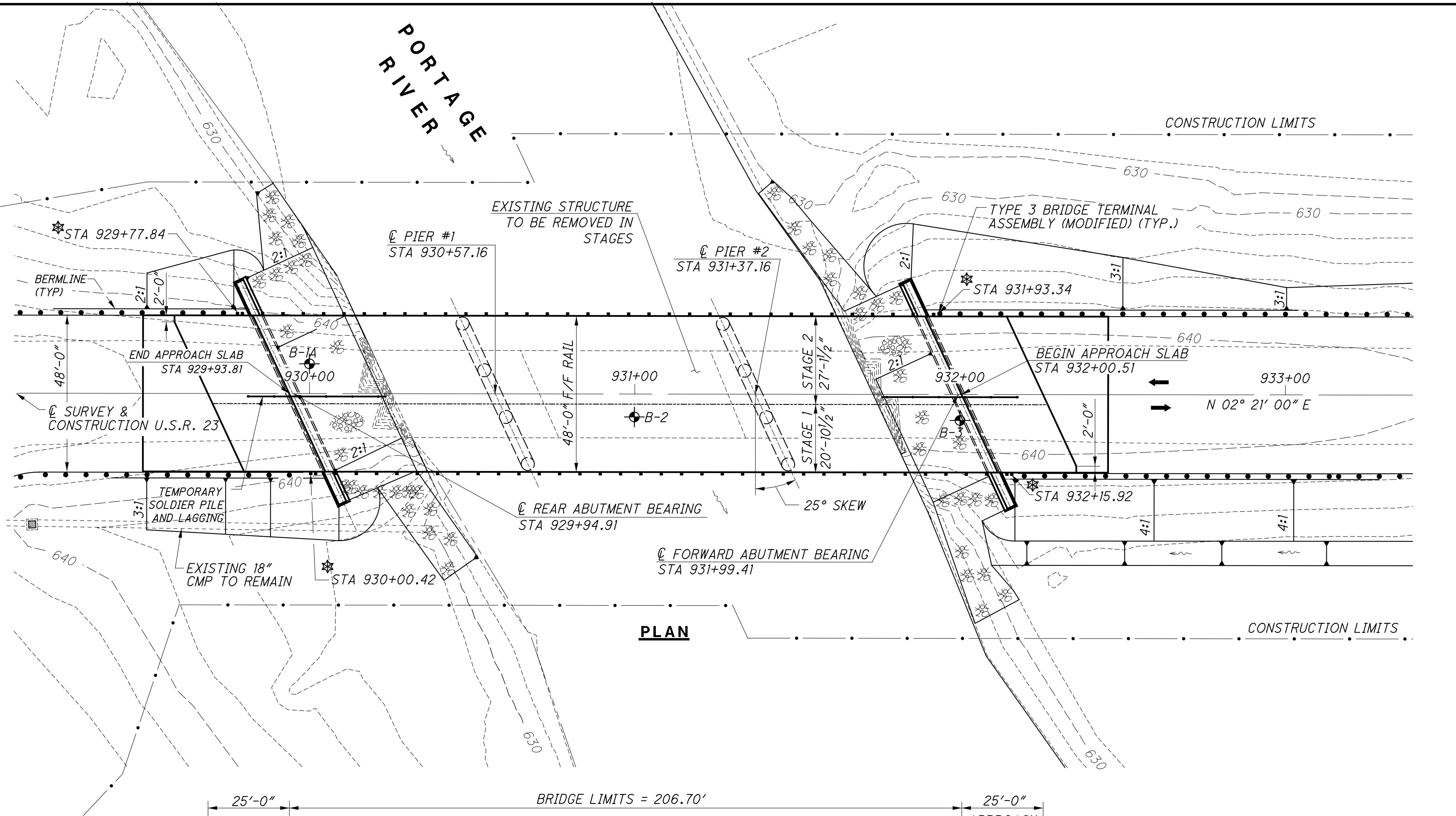
WEARING SURFACE: MONOLITHIC CONCRETE

ALIGNMENT: TANGENT

CROWN: $\frac{3}{16}$ " PER FOOT

DECK AREA = 9,922 SQ.FT.

COORDINATES: LATITUDE 41°25'27.21"N
LONGITUDE 83°25'12.05"W



PROFILE ALONG C SURVEY & CONSTRUCTION U.S. 23

This figure is a cross-sectional diagram of a bridge foundation design, showing proposed and existing profiles, elevation levels, and geological features.

Proposed Elevations:

- Top of Slope Elevation = 637.45
- Bottom of Footing Elevation = 632.60
- Approximate Top of Bedrock at Boring B-1A = 623.63
- Thalweg = 624.20
- Approximate Top of Bedrock Elevation = 622.34 at Boring B-3
- Bottom of Footing Elevation = 630.53
- OHWM = 629.70
- Normal Water Elev. = 628.00
- HW₂₅ = 636.58
- HW₁₀₀ = 637.52
- 1.09 %
- 12'-0" (TYP)
- 2:1 Normal
- Rest
- Type C Rock Channel Protection, w/Filter, 2'-0" Thick (Typ.)
- 3'-6" Diameter Drilled Shafts
- 4'-6" Diameter Drilled Shaft
- 4'-0" Diameter Drilled Shaft Rock Socket, 12'-0" Long
- Existing Profile
- Proposed Profile

Existing Elevations:

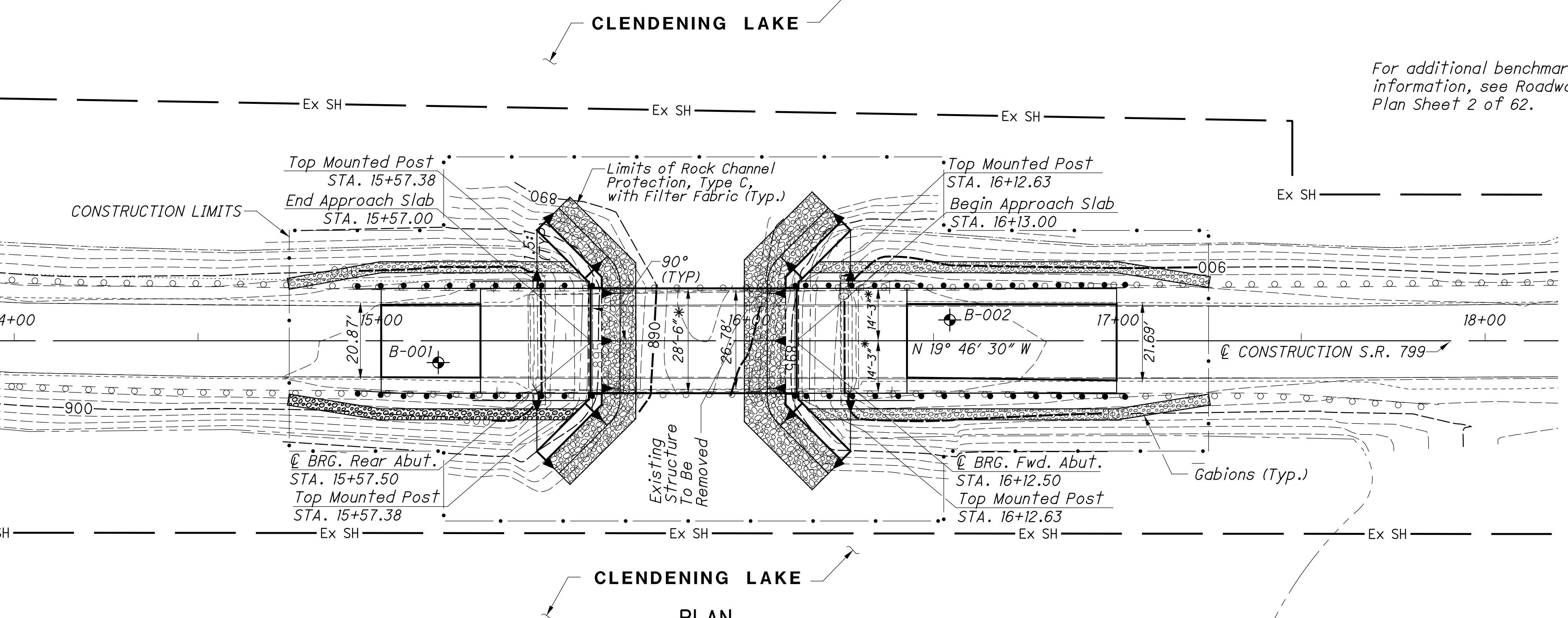
- Top of Slope Elevation = 635.38
- Bottom of Footing Elevation = 630.53
- Approximate Top of Bedrock Elevation = 622.34 at Boring B-3
- Bottom of Footing Elevation = 630.53
- EXISTING ELEVATIONS

Proposed Elevations:

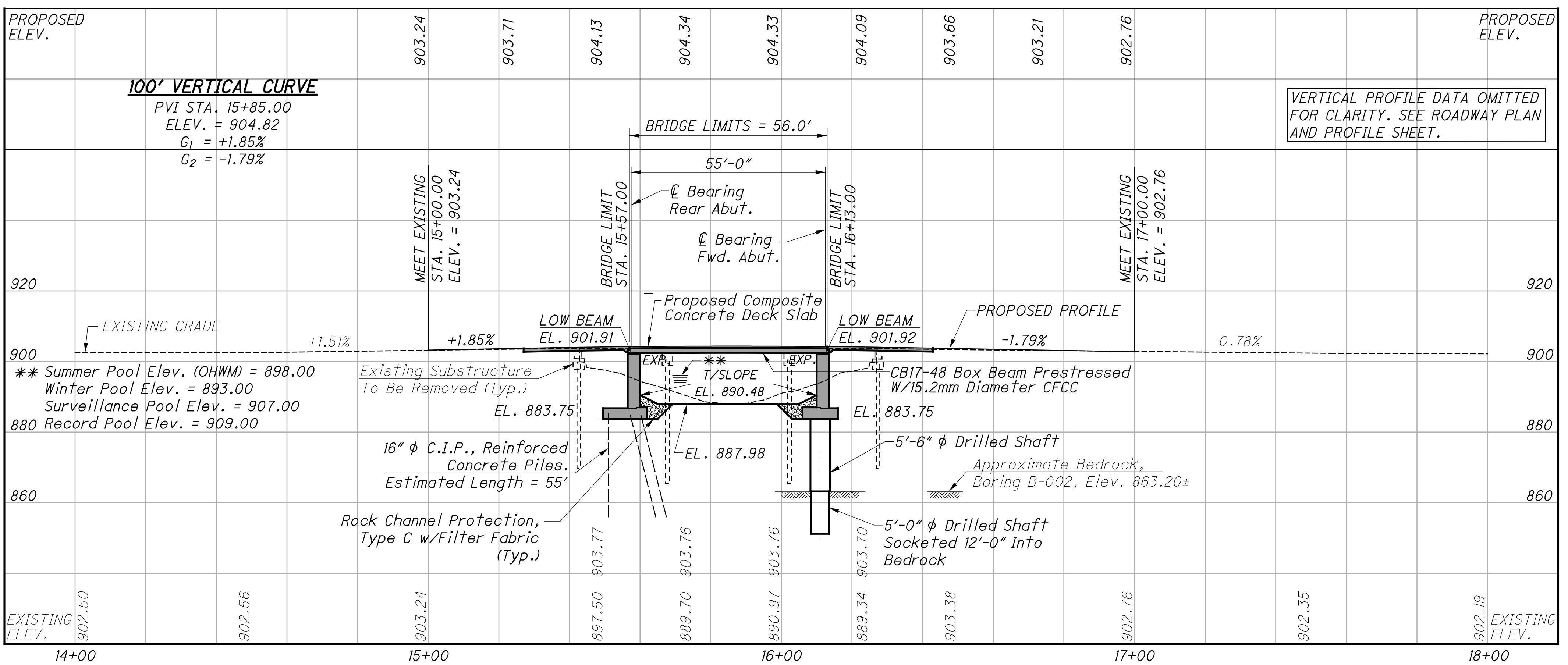
- Top of Slope Elevation = 644.11
- Bottom of Footing Elevation = 643.83
- Approximate Top of Bedrock Elevation = 640.56
- Bottom of Footing Elevation = 640.38
- EXISTING ELEVATIONS

Geological Features:

- STA 929+643.56
- STA 932-641.11
- STA 932-641.38
- STA 933+640.75
- STA 933+640.38
- 642.74
- 642.47
- 642.20
- 641.93
- 641.65
- 640.84
- 640.56
- 640.38
- 643.29
- 643.02
- 642.55
- 642.01
- 641.48
- 641.18
- 643.18
- 643.98
- 642.55
- 642.01
- 641.48
- 641.18
- 640.75
- 640.38
- 643.56
- 643.29
- 643.02
- 642.74
- 642.47
- 642.20
- 641.93
- 641.65
- 640.84
- 640.56
- 640.38
- 643.98
- 643.18
- 642.55
- 642.01
- 641.48
- 641.18
- 640.75
- 640.38



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.



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

For additional benchmark information, see Roadway Plan Sheet 2 of 62.

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, TRANSVERSELY 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

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, Mansfield, OH 44942
AMM	AMT
REVIEWER	DWS 12-15-16
PROJECT ID	91603
SUBSET	TOTAL
1	21
SHEET	TOTAL
24	59