

# **SAMPLE PLAN SHEETS**

## **PURPOSE AND APPLICATION**

THE SAMPLE PLAN SHEETS ARE CONSIDERED TO BE AN INTEGRAL PART OF THE LOCATION AND DESIGN MANUAL'S VOLUME 3. IT IS FOR INFORMATIONAL PURPOSES ONLY AND IS INTENDED TO BE USED AS A STANDARDIZED GUIDELINE FOR THE PREPARATION OF HIGHWAY CONSTRUCTION PLANS IN THE STATE OF OHIO. EXAMPLES CONTAINED HEREIN ILLUSTRATE PREFERRED TECHNIQUES TO ENSURE THE UNIFORMITY, QUALITY, AND CONTINUITY OF THE PLANS, BUT DO NOT NECESSARILY REPRESENT A PREFERRED DESIGN. EXAMPLES HAVE BEEN PROVIDED BASED UPON THE MOST COMMONLY OCCURRING SITUATIONS. HOWEVER, IT IS RECOGNIZED THAT SOME PROJECTS MAY HAVE UNUSUAL CIRCUMSTANCES THAT MAY REQUIRE VARIATIONS FROM THE STANDARDS CONTAINED HEREIN. PLEASE CONTACT THE APPROPRIATE ODOT TECHNICAL OFFICE WITH QUESTIONS.

THIS SET OF SAMPLE PLAN SHEETS IS A COLLECTION OF INDIVIDUAL SHEET TYPES. IT SHOULD NOT BE CONSIDERED, OR USED, AS A SINGLE, COORDINATED PLAN. ACTUAL PLAN SHEETS HAVE BEEN USED TO DEVELOP THE SHEETS CONTAINED HEREIN. IT IS IMPORTANT TO NOTE THAT MODIFICATIONS HAVE BEEN MADE TO THESE SHEETS IN ORDER TO DEVELOP AN APPROPRIATE SAMPLE SHEET, THEREFORE, THEY ARE NO LONGER TO BE CONSIDERED AN OFFICIAL RECORD OF THE PLANS FROM WHICH THEY WERE TAKEN.

IN CASES WHERE THE INFORMATION SHOWN ON A SAMPLE PLAN SHEET IS IN CONFLICT WITH, OR CONTRADICTORY TO, THE DESIGN POLICIES OR PRACTICES CONTAINED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, DESIGN MANUALS, OR STANDARD CONSTRUCTION DRAWINGS, THE POLICIES OR PRACTICES WILL SUPERSEDE THE CONFLICTING SAMPLE PLAN SHEET INFORMATION.

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: 4.9 ACRES

**LIMITED ACCESS**

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

**2016 SPECIFICATIONS**

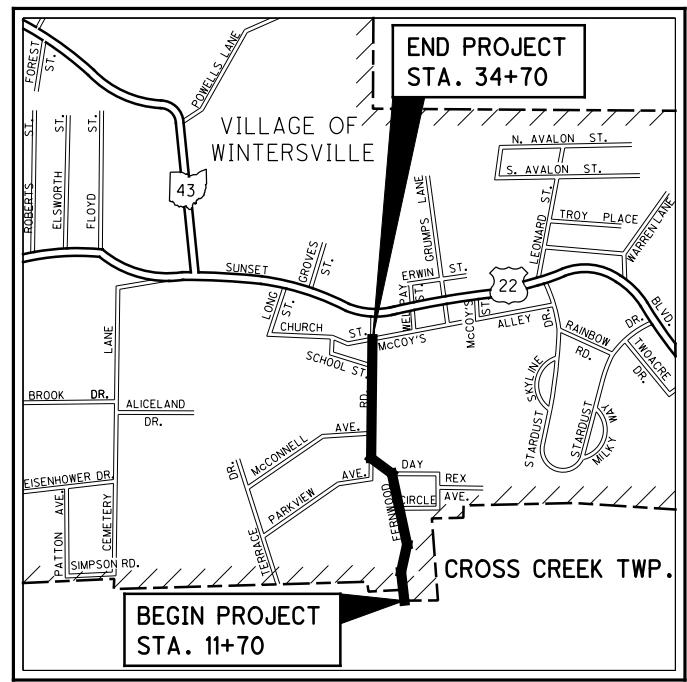
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ MAYOR, VILLAGE OF WINTERSVILLE

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION



**LOCATION MAP**

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



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

**DESIGN DESIGNATION**

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

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBER
HORIZONTAL ALIGNMENT: Superelevation	6-27-16	2
VERTICAL ALIGNMENT: Stopping Sight Distance	6-27-16	10, 12

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

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

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**ENGINEERS SEAL:**

SIGNED: *John J. Doe*  
DATE: 11/11/16

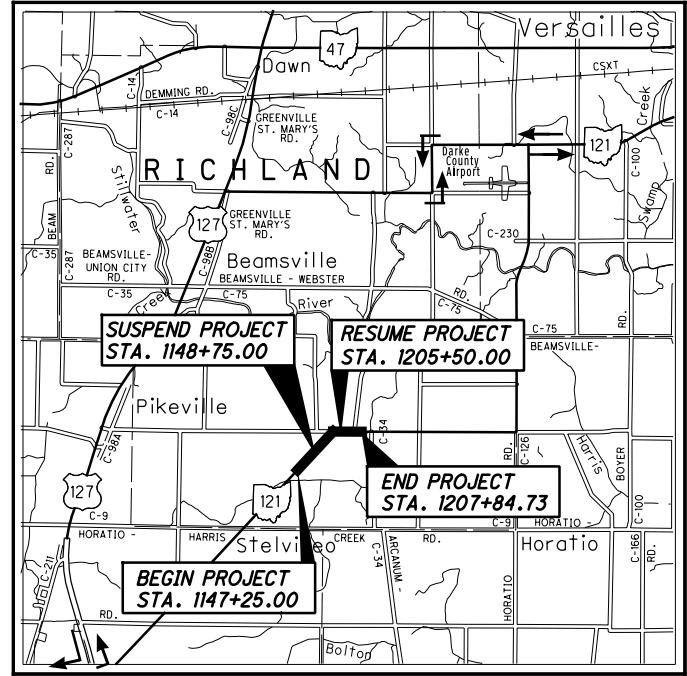
**PLAN PREPARED BY:**  
JOHN J. DOE CONSULTING, INC.  
9999 ENGLISH DRIVE  
COMPUTERLAND, OHIO 00000

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS		
BP-1.1	7/28/00	MGS-1.1	7/19/13	MT-105.10	7/19/13	800-2016	4/15/16	REINFORCED EARTH
BP-2.1	7/17/15	MGS-2.1	7/19/13			832	1/17/14	
BP-2.2	7/18/08	MGS-4.2	7/19/13	TC-41.20	10/18/13			5/27/14
BP-3.1	7/18/14	MGS-5.3	7/15/16	TC-41.40	10/18/13			WATERWAY PERMIT
BP-4.1	7/19/13			TC-42.20	10/18/13			
BP-5.1	7/19/13	HW-2.1	1/15/16	TC-52.10	10/18/13			1/23/15
BP-7.1	7/18/14	HW-2.2	1/15/16	TC-52.20	7/15/16			
				TC-71.10	7/15/16			
CB-2.1	1/18/13	LA-1.1	10/15/10					
CB-2.2	1/17/14	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					

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**DAR-121-(21.73)(22.83)**

**RICHLAND TOWNSHIP  
DARKE COUNTY**



LOCATION MAP

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



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

**DESIGN DESIGNATION**

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

**DESIGN EXCEPTIONS**

NONE REQUIRED

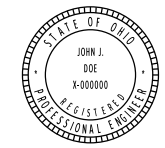
**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

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

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

**ENGINEERS SEAL:**

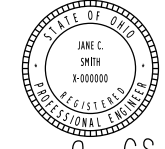
FOR STRUCTURES  
OVER 20' SPAN



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

**ENGINEERS SEAL:**

FOR ENTIRE PLAN  
EXCEPT STRUCTURES  
OVER 20' SPAN



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

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STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14	WO-1.1	1/18/13	800-2013 1/21/15	WATERWAY PERMIT 1/23/15
BP-4.1	7/19/13	WO-1.2	1/18/13	832 1/17/14	
DM-1.1	1/18/13	AS-1-81	1/18/13		
DM-4.1	7/19/13	EXJ-4-87	7/19/02		
MGS-1.1	1/20/12	PSBD-2-07	1/21/11		
MGS-2.1	7/19/13	TST-1-99	1/17/14		
MGS-4.2	7/19/13				
MGS-5.3	7/19/13				
LA-1.1	10/15/10				
LA-1.2	10/15/10				

**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.

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

FEDERAL PROJECT NO. **NON-FEDERAL**  
PID NO. **14653**  
CONSTRUCTION PROJECT NO. \_\_\_\_\_  
RAILROAD INVOLVEMENT **NONE**  
**DAR-121-(21.73)(22.83)**  
1/36

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

# TUS-93-8.02

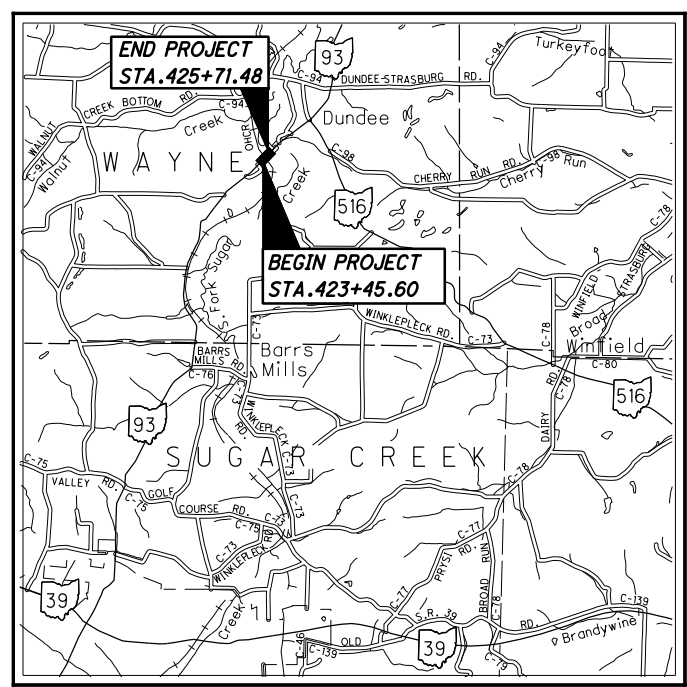
RECONSTRUCTION OF EXISTING  
SEPARATED CROSSING WITH THE  
OHIO CENTRAL RAILROAD

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: 4.9 ACRES

**2016 SPECIFICATIONS**  
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



**LOCATION MAP**

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



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

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig



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

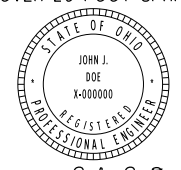
PLAN PREPARED BY:  
JOHN DOE ENGINEERING, INC.  
9999 ENGLISH DRIVE  
COMPUTERLAND, OHIO 00000

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**ENGINEERS SEAL:**

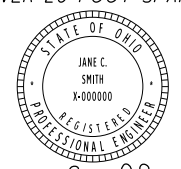
FOR STRUCTURES  
OVER 20 FOOT SPAN



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

**ENGINEERS SEAL:**

FOR ENTIRE PLAN  
EXCEPT STRUCTURES  
OVER 20 FOOT SPAN



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

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14	CPA-1-08	7/18/08	800-2016 1/19/18	WATERWAY PERMIT
BP-4.1	7/19/13	CS-1-08	7/18/08	832 1/17/14	1/23/18
BP-5.1	1/19/18				
DM-1.1	1/18/13	MT-96.11	7/18/14		
DM-4.4	7/20/12	MT-96.20	7/15/16		
		MT-96.26	7/19/13		
MGS-1.1	1/19/18				
MGS-2.1	1/19/18				
MGS-3.1	1/19/18				
MGS-4.2	7/19/13				
MGS-5.3	7/15/16				
RM-4.2	4/18/14				

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

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**WYA-30-9.11**  
SALEM TOWNSHIP  
WYANDOT COUNTY

**PROJECT DESCRIPTION**

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

**EARTH DISTURBED AREAS**

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

**LIMITED ACCESS**

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

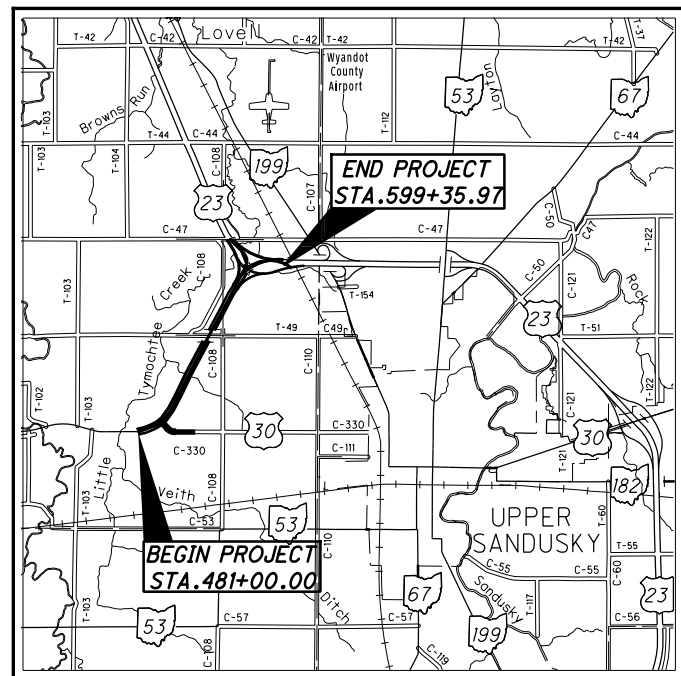
**2019 SPECIFICATIONS**

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

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

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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



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

**DESIGN DESIGNATION**

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

**DESIGN EXCEPTIONS**

NONE REQUIRED

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

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

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

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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
		MGS-2.1	1/19/18	MH-1.2	1/15/16	HL-20.11	4/21/17	TC-12.30	1/19/18	B32	10/19/18	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			GEOTECHNICAL REPORT
CB-3.1	1/15/16	MGS-4.2	7/19/13			HL-20.21	1/18/18	TC-21.20	7/20/18			4/19/17
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							TC-52.20	7/20/18			
		WO-1.1	1/18/13									
		WO-1.2	1/15/16									

FEDERAL PROJECT NO. **E043 (184)**  
PID NO. **23436**  
CONSTRUCTION PROJECT NO. **WYA-30-9.11**  
RAILROAD INVOLVEMENT **NONE**  
1/521

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

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

**CITY OF VERMILION  
BROWNHELM TOWNSHIP  
VERMILION TOWNSHIP  
ERIE AND LORAIN COUNTIES**

**PROJECT DESCRIPTION**

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

**EARTH DISTURBED AREAS**

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

**LIMITED ACCESS**

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

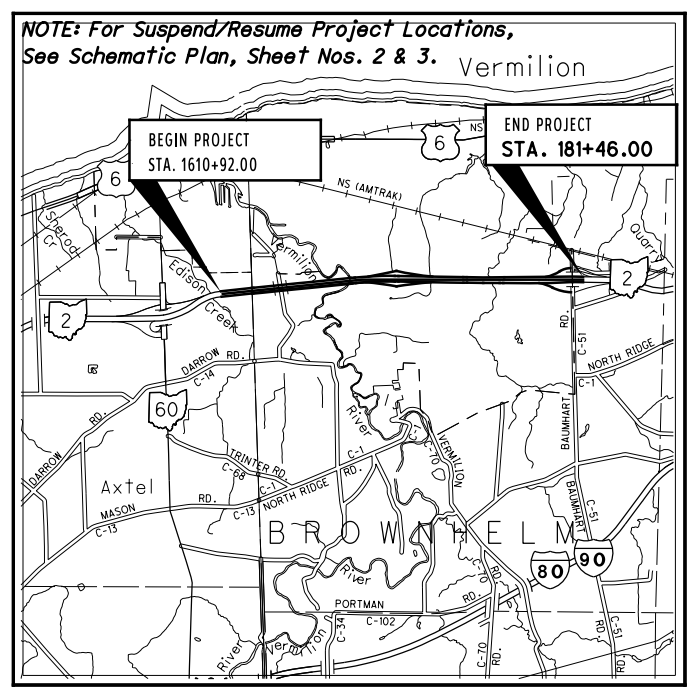
**2016 SPECIFICATIONS**

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE RAMP AND SIDE ROADS AS DESCRIBED ON SHEETS 16 & 17 AND AS SHOWN ON SHEETS 19-22, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

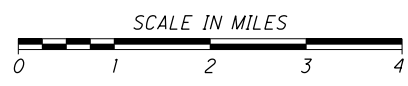
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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



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

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

**INDEX OF SHEETS:**

TITLE SHEET	1	DETAILS:	
SCHEMATIC PLAN	2-3	PAVEMENT JOINT REPAIR	144-146
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MAINTENANCE OF TRAFFIC	16-59, 59A	APPROACH SLABS	157-158
GENERAL SUMMARY	60-62	CURB REMOVAL & SHOULDER REPLACEMENT	159-166
SUBSUMMARIES:		CONCRETE SHOULDER	167
GUARDRAIL	63	MEDIAN CROSSEVER	168
SEEDING	64	DRAINAGE	169, 169A
DRAINAGE	65-66	SUPERELEVATION TABLES	170-171
CALCULATIONS		PREFABRICATED STRUCTURES	172-179
JOINT REPAIR	74-80	WEITH-IN-MOTION DETAILS	180-185
PAVEMENT GRINDING	81	TRAFFIC CONTROL	186-205
JOINT SEALING	82-83	STRUCTURES OVER 20 FOOT SPAN	
SEEDING	84-85	LOR-2-3001	206-214
PROJECT SITE PLAN	89-90	LOR-2-9806	215-223
PLAN AND PROFILE - S.R.2	91-108	LOR-2-1070	224-233
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RAMPS - VERMILLION INTERCHANGE	129-132	LOR-2-3331	262-267
RAMPS - BAUMHART INTERCHANGE	133-134	SOIL PROFILES	
WEST RIVER ROAD	135-136	SHEETS NOT USED	67-73, 86-88
VERMILLION ROAD	137-138		
VERMILLION INTERCHANGE ROAD	139		
SUNNYSIDE ROAD	140-141		
CLAUS ROAD	142-143		

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

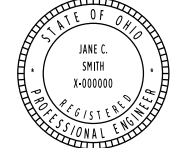


OHIO811, 8-1-1, or 1-800-362-2764  
(Non-members must be called directly)

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

**ENGINEERS SEAL:**

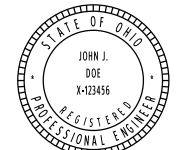
FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20'



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

**ENGINEERS SEAL:**

FOR STRUCTURES 20' & UNDER



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

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-1.1	7/28/00	MGS-1.1	7/19/13	HL-10.13	1/16/15	TC-18.24	1/17/14	800-2013	1/21/15	WATERWAY PERMIT
BP-2.1	7/19/13	MGS-2.1	7/19/13	HL-20.14	1/16/15	TC-22.20	1/17/14	832	1/17/14	1/23/14
BP-2.2	7/18/08	MGS-3.1	7/18/14	HL-30.11	1/16/15	TC-41.10	7/19/13			
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			
DM-1.1	1/18/13	AS-1-81	1/18/13	MT-96.26	7/19/13	TC-65.11	7/18/14			
DM-4.4	7/20/12	EXJ-4-87	7/19/02	MT-99.20	7/19/13	TC-72.20	7/18/14			
		RB-1-55	7/19/13			TC-82.10	10/18/13			

FEDERAL PROJECT NO. E115 (218)  
PID NO. 20283  
CONSTRUCTION PROJECT NO.  
RAILROAD INVOLVEMENT NONE  
ERI-2-30.51 AND VARIOUS LOR-2-0.00 AND VARIOUS  
1/267

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

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

**PROJECT DESCRIPTION**

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

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 1.7 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.8 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

**2013 SPECIFICATIONS**

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

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

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

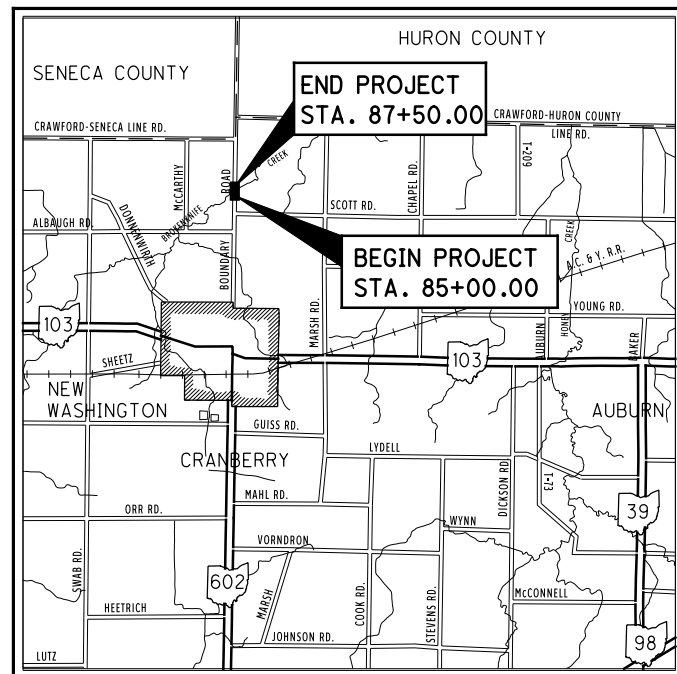
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ ENGINEER, CRAWFORD COUNTY

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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



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

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

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

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

**INDEX OF SHEETS:**

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

**ENGINEERS SEAL:**  
FOR DESIGN CHANGES NOTED ON SHEET 4

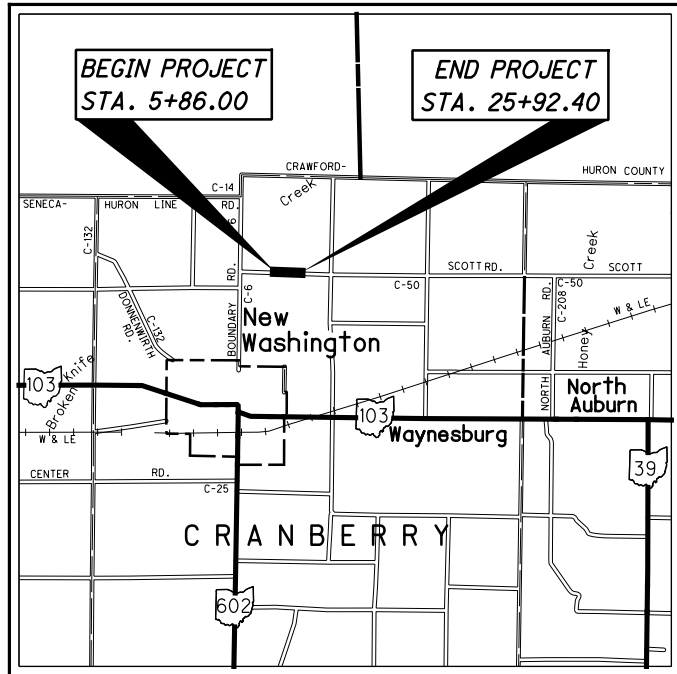
SIGNED: John J. Doe  
DATE: 11/11/14

**ENGINEERS SEAL:**  
FOR ENTIRE PLAN EXCEPT STRUCTURES 20' & OVER

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

PARTS 1 AND 2				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
STANDARD CONSTRUCTION DRAWINGS					
BP-3.1	7/18/14	RM-1.1	7/18/14	800-2013 1/21/15	WATERWAY PERMIT 1/23/15
CB-1.1	1/18/13	AS-1-81	1/18/13	832 1/17/14	
CB-1.2	1/18/13	TST-1-99	1/17/14		
DM-1.1	1/18/13	MT-105.10	7/19/13		
DM-4.4	7/20/12	MT-110.10	7/19/13		
MGS-1.1	7/19/13	TC-41.20	10/18/13		
MGS-2.1	7/19/13	TC-41.40	10/18/13		
MGS-4.2	7/19/13	TC-52.10	10/18/13		
MGS-5.3	7/19/13	TC-52.20	7/18/14		
HW-2.1	1/18/13				
HW-2.2	1/18/13				

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



**LOCATION MAP**

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



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

**DESIGN DESIGNATION**

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

**DESIGN EXCEPTIONS**

NONE REQUIRED

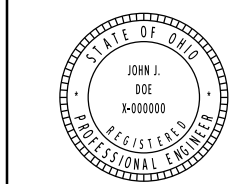
**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

**OHIO811.org**  
Before You Dig

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

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

**ENGINEERS SEAL:**



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

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)**

**INDEX OF SHEETS:**

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

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

**PROJECT DESCRIPTION**

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

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA:	3.5 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.9 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.9 ACRES

**2019 SPECIFICATIONS**

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

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

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ ENGINEER, CRAWFORD COUNTY

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DISTRICT DEPUTY DIRECTOR

APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. **E025 (319)**

PID NO. **24988**

CONSTRUCTION PROJECT NO. \_\_\_\_\_

RAILROAD INVOLVEMENT **NONE**

**CRA-C.R. 31**  
**(SCOTT RD.) PART 2**

1/35



STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

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

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

**PROJECT DESCRIPTION**

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

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

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: N/A\*  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A\*  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A\*

\* 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.

FEDERAL PROJECT NO.

NONE

PID NO.

93708

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

DEL-257-8.37

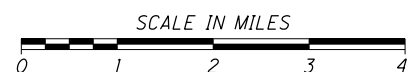
MAR-257-0.00

1  
11

FOR LOCATION MAP  
SEE SHEET 6

**LOCATION MAP**

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



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

**DESIGN DESIGNATION**                      **DEL-257-8.37**    **MAR-257-0.00**

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

**DESIGN FUNCTIONAL CLASSIFICATION:**

DEL-257-8.37: 05 MAJOR COLLECTOR (RURAL)  
MAR-257-0.00: 06 MINOR COLLECTOR (RURAL)

NHS PROJECT ----- NO

**DESIGN EXCEPTIONS**

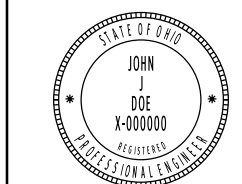
NONE REQUIRED

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

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

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

**ENGINEERS SEAL:**



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

**INDEX OF SHEETS:**

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

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING 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

**IMPORTANT NOTE:** SPEDuP plans will become obsolete at the end of FY2020 and will no longer be accepted. Contact the Office of Estimating with questions.

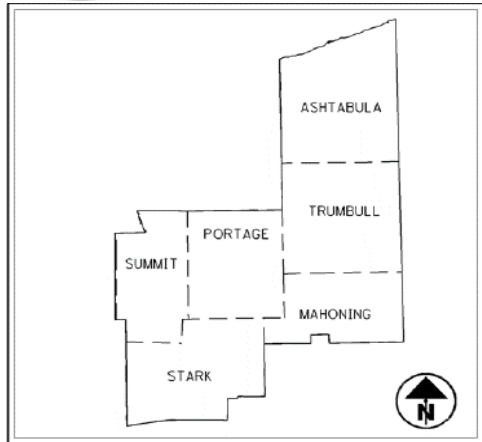
SP 1302-08  
JANUARY 2020



STATE OF OHIO, DEPARTMENT OF TRANSPORTATION

# D04-PMF-FY18

## FAST DRY PAVEMENT MARKINGS



CONSTRUCTION PROJECT NUMBER: 19-\_\_\_\_\_  
 PID NO: \_\_\_\_\_  
 FEDERAL PROJECT NUMBER: 100% STATE

**PROJECT DESCRIPTION**  
 PLACEMENT OF PAVEMENT MARKING USING FAST DRY AT EXISTING LOCATIONS.

**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.

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

LATITUDE: 40° 17' 52" LONGITUDE: 83° 02' 58"

Project Earth Disturbed Area: N/A (Maintenance Project)  
 Est. Contractor Earth Disturbed Area: N/A (Maintenance Project)  
 Notice of Intent Earth Disturbed Area: N/A (Maintenance Project)  
 Railroad Involvement: None  
 DESIGN DESIGNATION: See Sheet \_\_\_\_\_  
 DESIGN EXCEPTIONS: None

**UNDERGROUND UTILITIES**  
 Contact Two Working Days Before You Dig

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

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: \_\_\_\_\_  
 DISTRICT DEPUTY DIRECTOR

DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DATE: \_\_\_\_\_

**PLANS PREPARED BY:**  
 JOHN J. DOE & ASSOCIATES  
 CONSULTING ENGINEERS  
 999 ENGLISH DRIVE  
 COMPUTERLAND, OHIO 00000

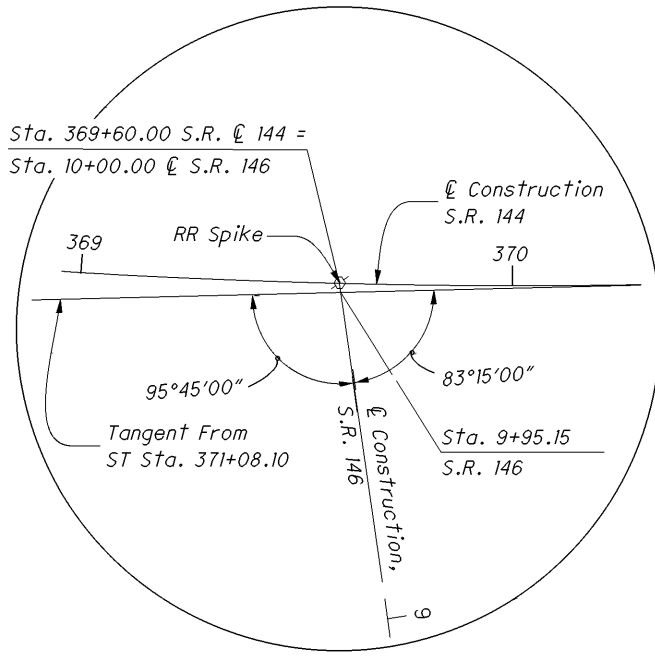
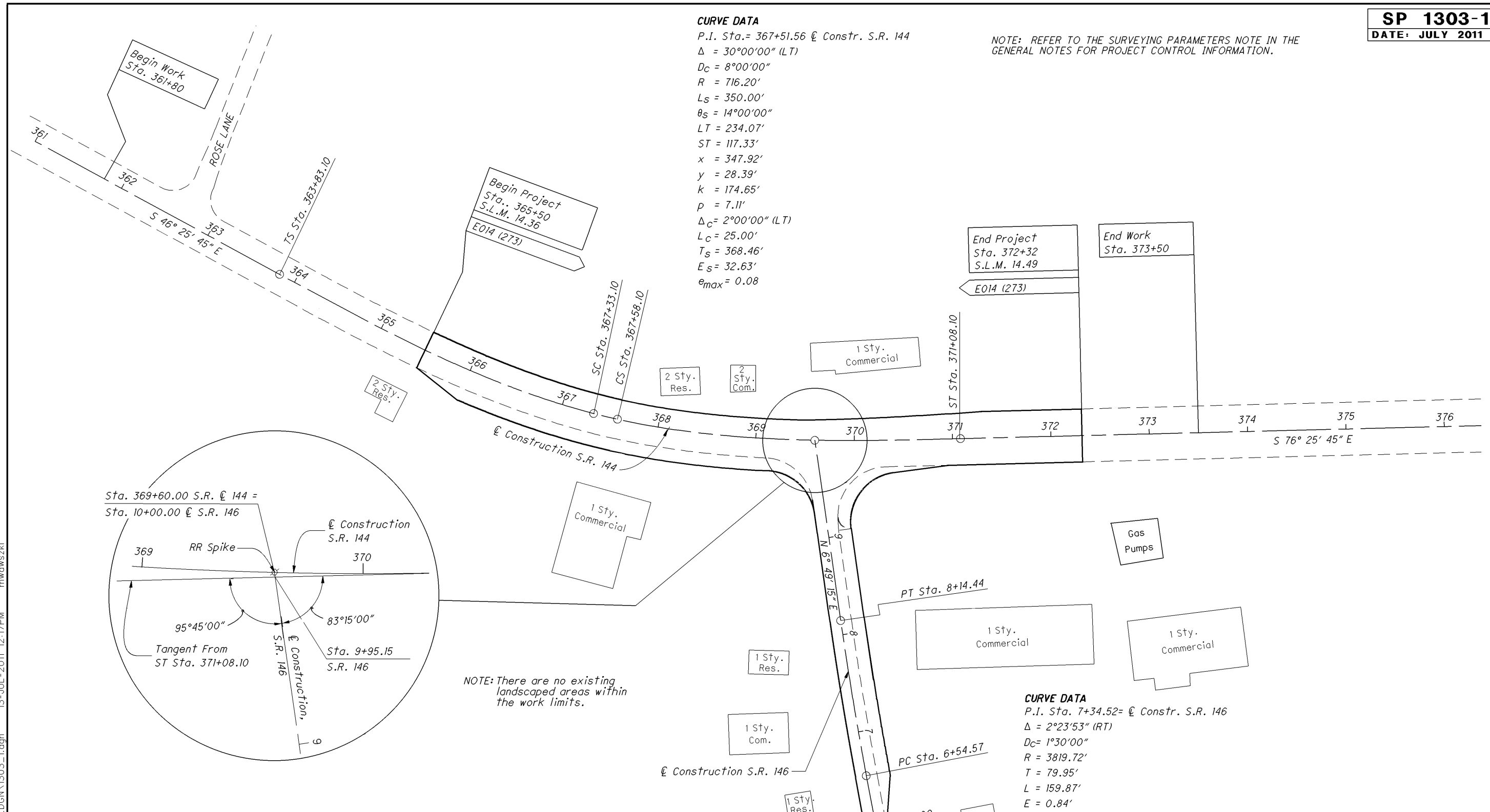
ENGINEERS SEAL:	STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS	
	 SIGNED: <u>John Doe</u> DATE: <u>11-11-18</u>	MT-95.30	07/18/14	MT-105.10	07/19/13	TC-41.20	10/18/13		800-2016
MT-95.31		07/18/14			TC-72.20	07/20/18		832	10/19/2018
MT-95.32		07/18/14							
MT-95.50		07/21/17							
MT-98.10		01/20/17							
MT-98.11		07/18/14							
MT-98.20		07/18/14							
MT-98.22		01/20/17							
MT-98.28		01/20/17							
MT-99.20		07/19/13							
								<b>SPECIAL PROVISIONS</b>	
								<b>NONE</b>	



**CURVE DATA**

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

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

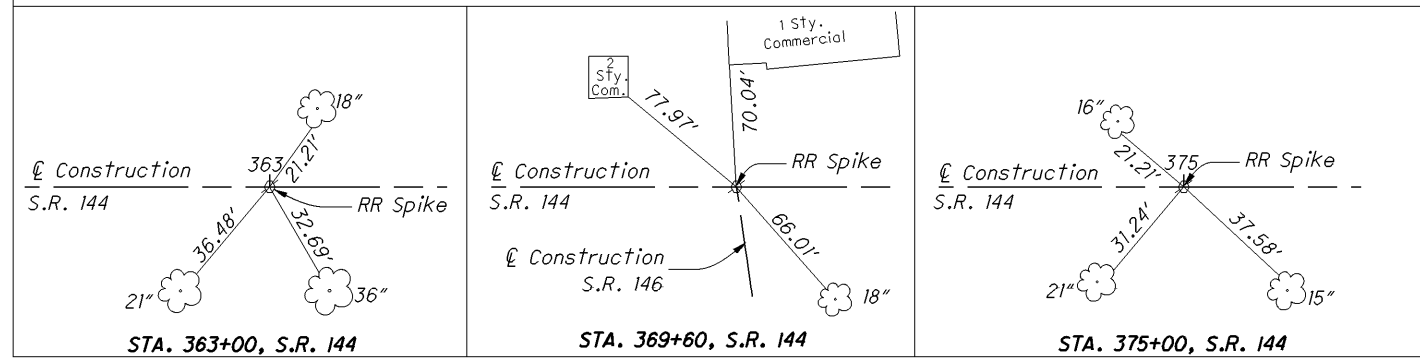


NOTE: There are no existing landscaped areas within the work limits.

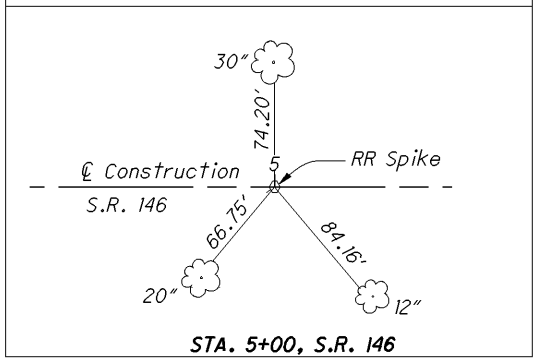
**CURVE DATA**

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

**CENTERLINE REFERENCES (Not to Scale)**



**CENTERLINE REFERENCE (Not to Scale)**



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SCHEMATIC PLAN & DESIGN DESIGNATIONS

MIA-43-26.15

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

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

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

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

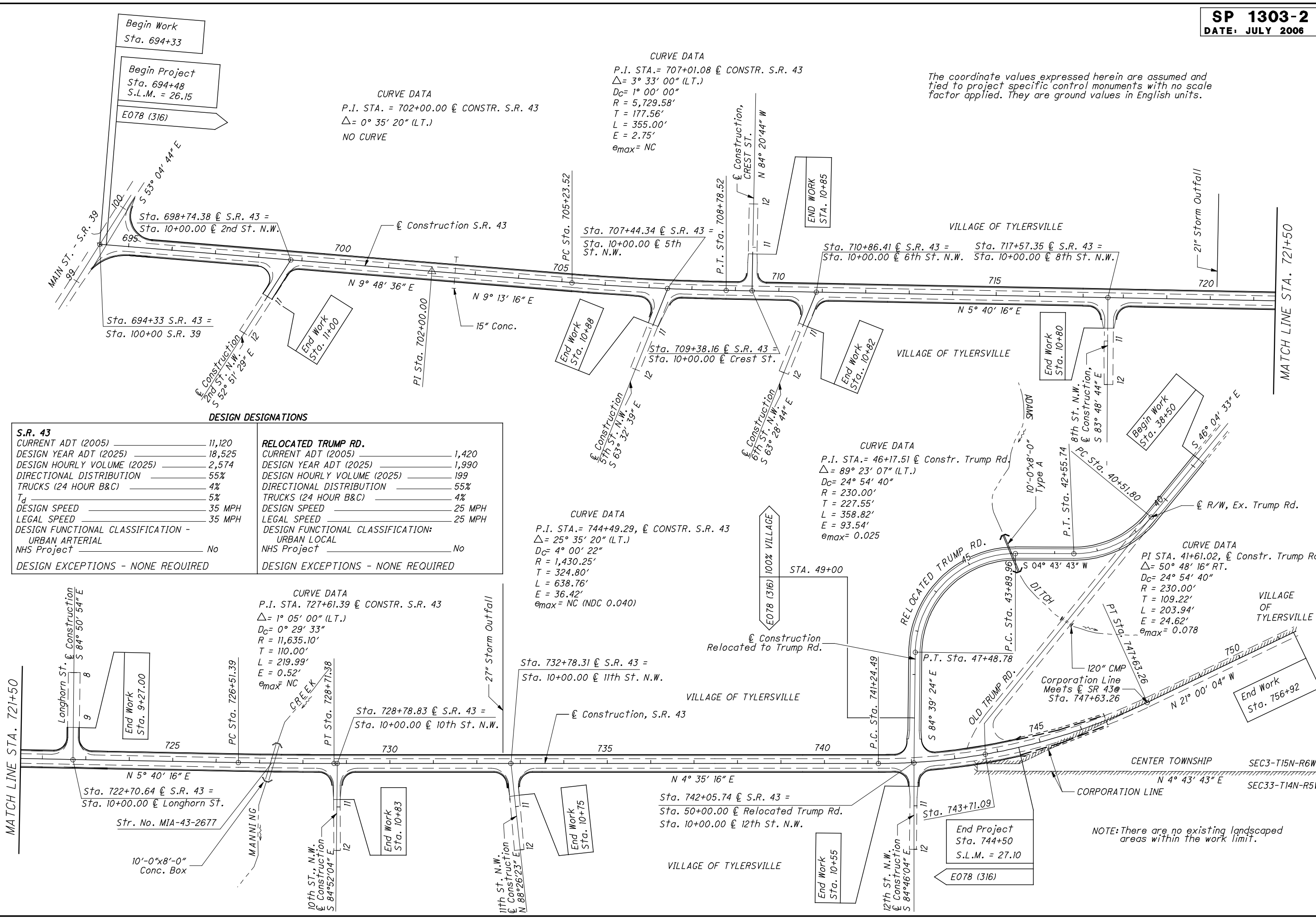
**CURVE DATA**  
P.I. STA.= 744+49.29, @ CONSTR. S.R. 43  
 $\Delta = 25^\circ 35' 20''$  (LT.)  
 $D_c = 4^\circ 00' 22''$   
 $R = 1,430.25'$   
 $T = 324.80'$   
 $L = 638.76'$   
 $E = 36.42'$   
 $e_{max} = NC$  (NDC 0.040)

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

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

**DESIGN DESIGNATIONS**

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



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

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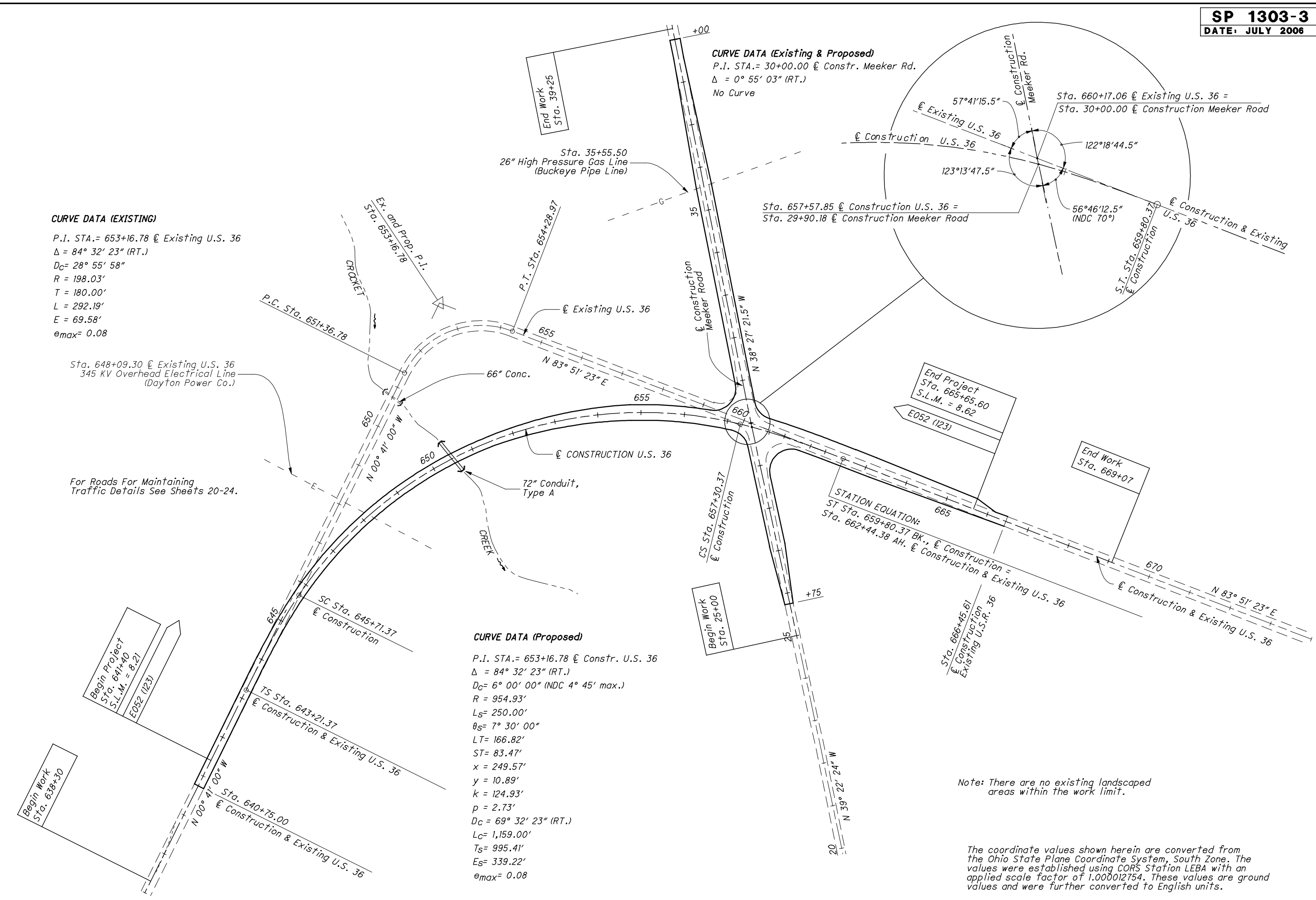
**SCHEMATIC PLAN**

**HAS - 36 - 8.21**

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

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

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



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

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

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

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**SCHEMATIC PLAN & DESIGN DESIGNATION**

**SUM/POR-21-30.51/0.00 AND VARIOUS**

CITY OF VICTORY

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

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

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

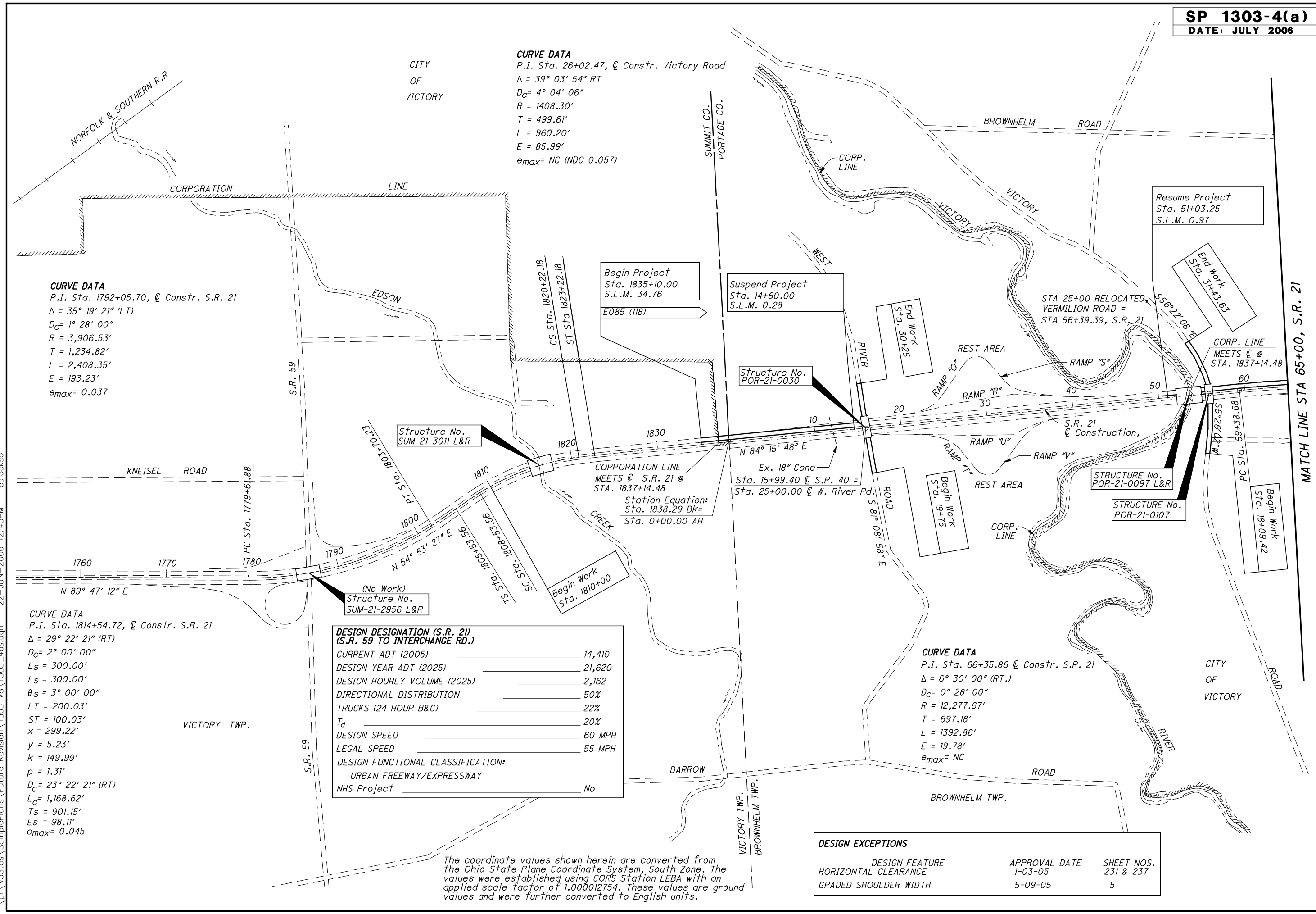
**DESIGN DESIGNATION (S.R. 21) (S.R. 59 TO INTERCHANGE RD.)**

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

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.

**DESIGN EXCEPTIONS**

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





**SCHEMATIC PLAN & DESIGN DESIGNATION**

**SUM/POR-21-30.51-0.00 AND VARIOUS**

CITY OF VICTORY

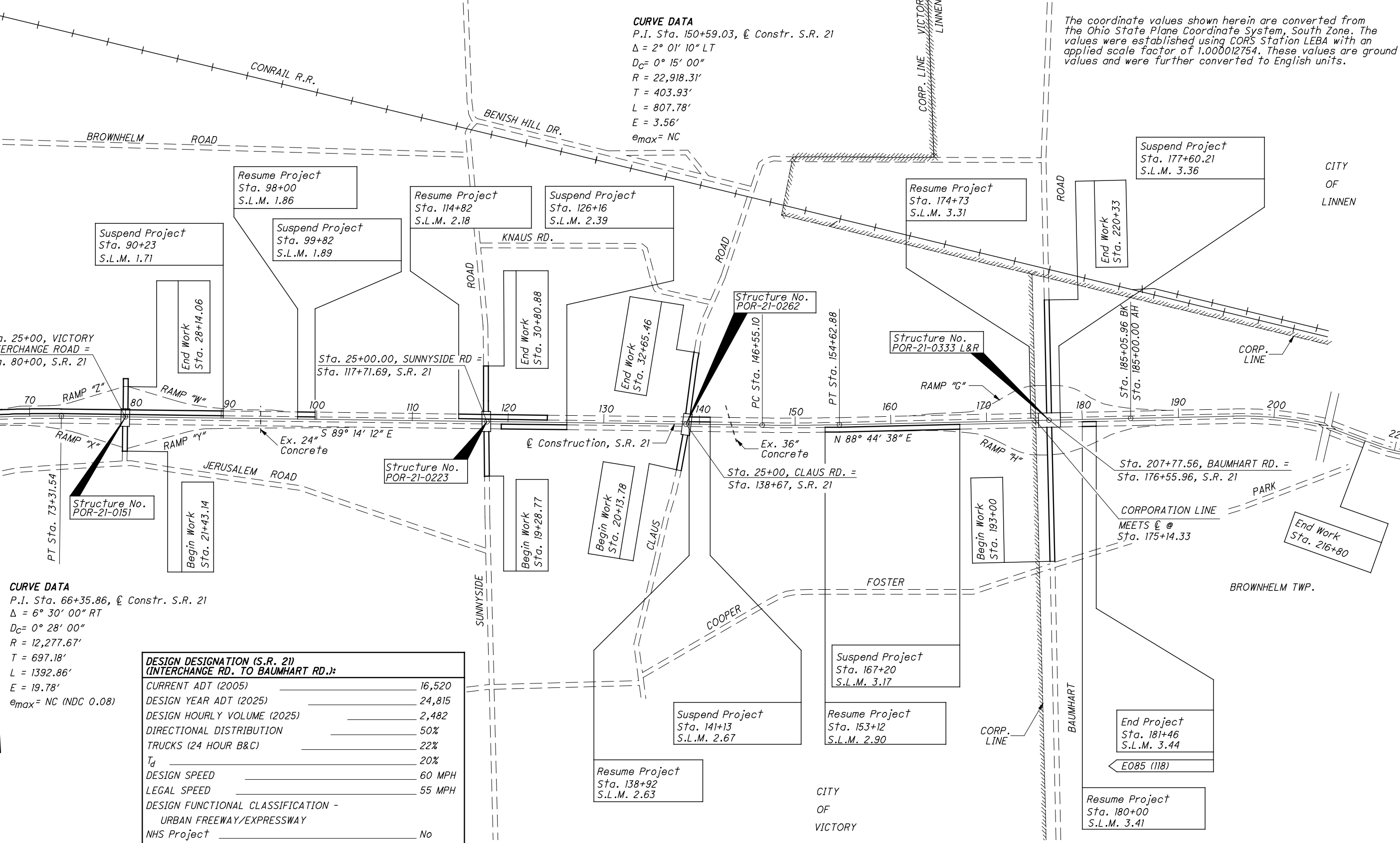
CITY OF LINNEN

BROWNHELM TWP.

CITY OF VICTORY

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

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



MATCH LINE STA 65+00 S.R. 21

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

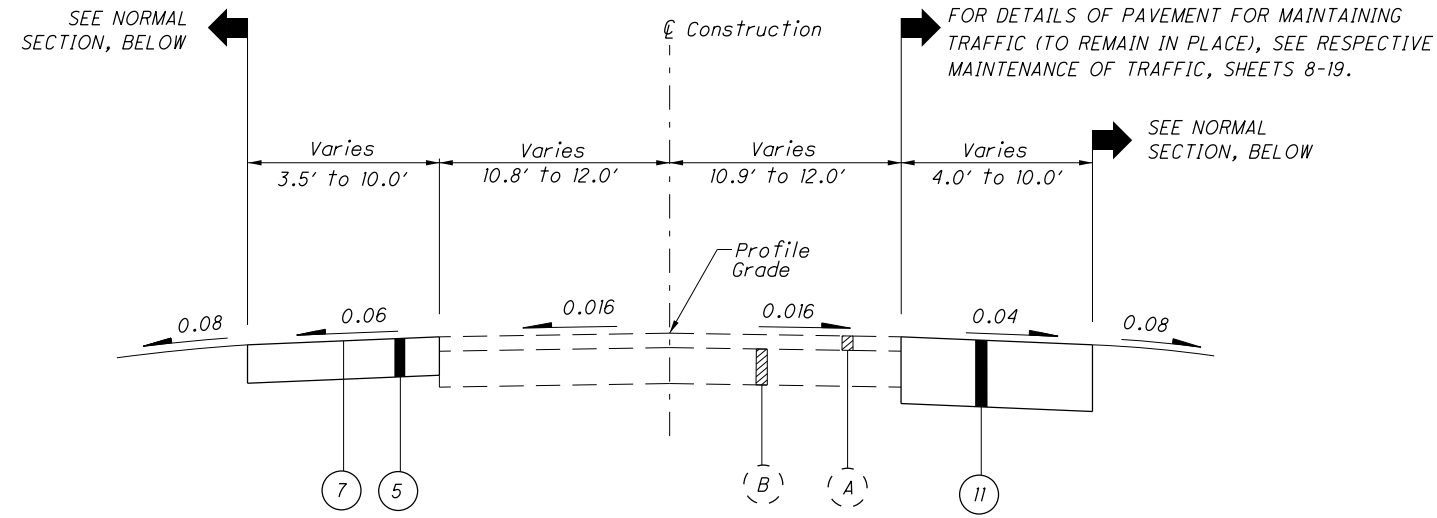
**DESIGN DESIGNATION (S.R. 21)  
(INTERCHANGE RD. TO BAUMHART RD.):**

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

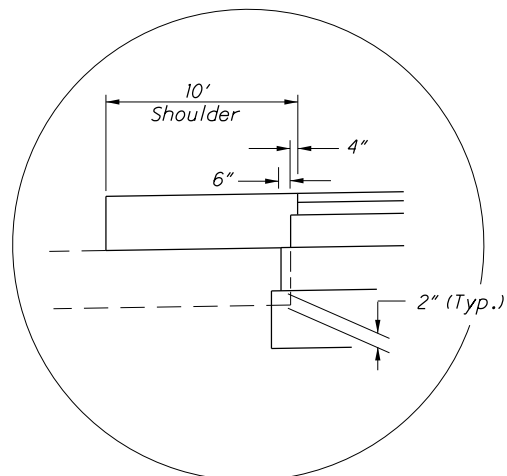
**DESIGN EXCEPTIONS:**

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

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

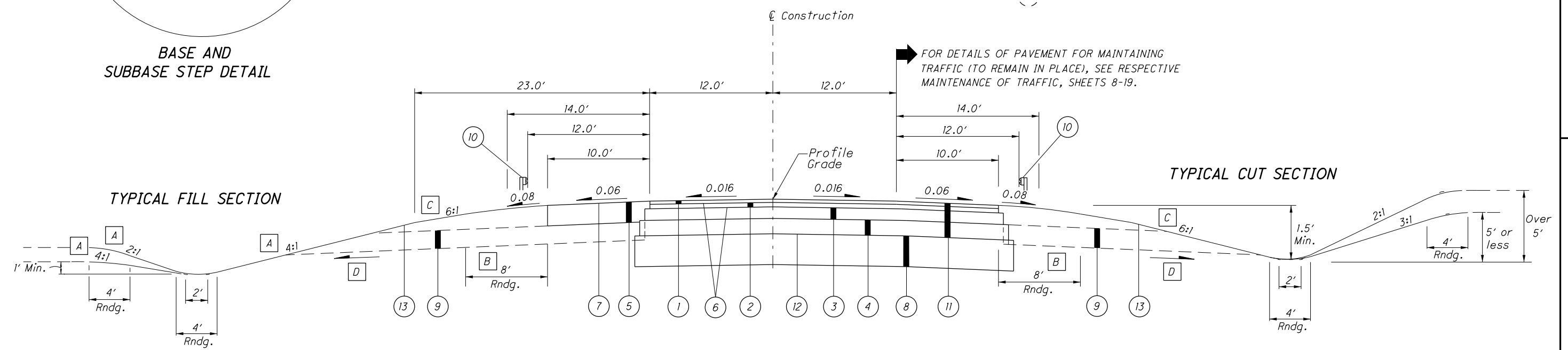


**BASE AND SUBBASE STEP DETAIL**

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

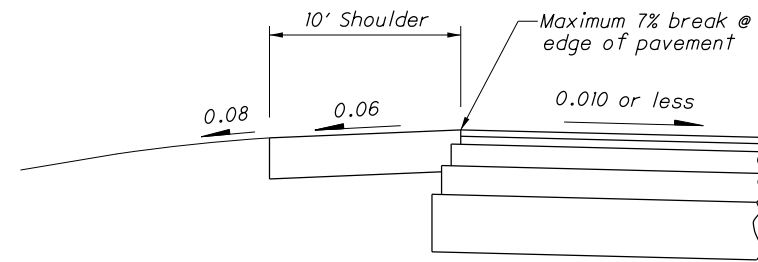
**LEGEND**

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

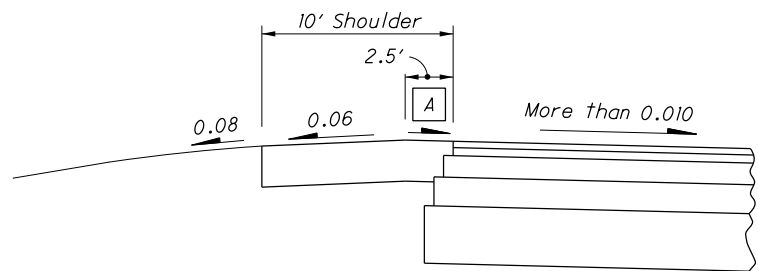


**NORMAL SECTION - U.S. 46**  
Sta. 635+75.00 to Sta. 642+81.37  
Sta. 638+22.44 to Sta. 640+48.86

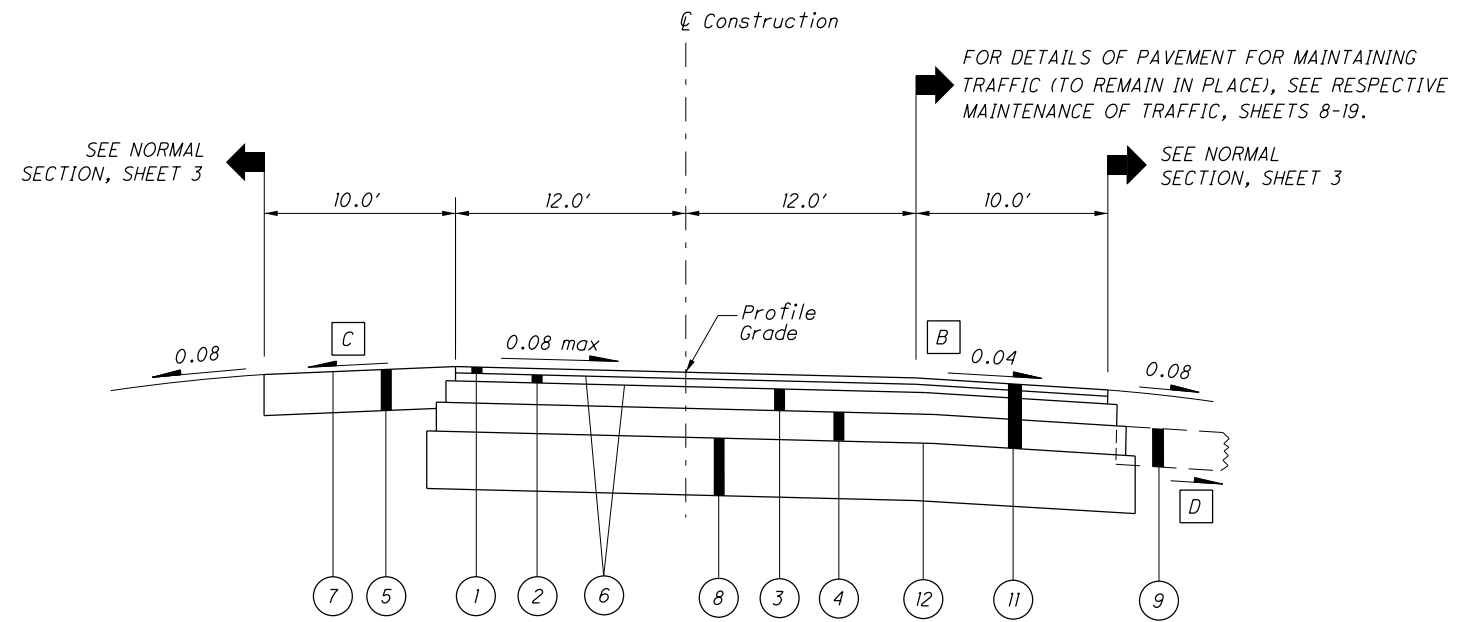




**SHOULDER DETAIL**  
For pavement slopes of 0.010 or less

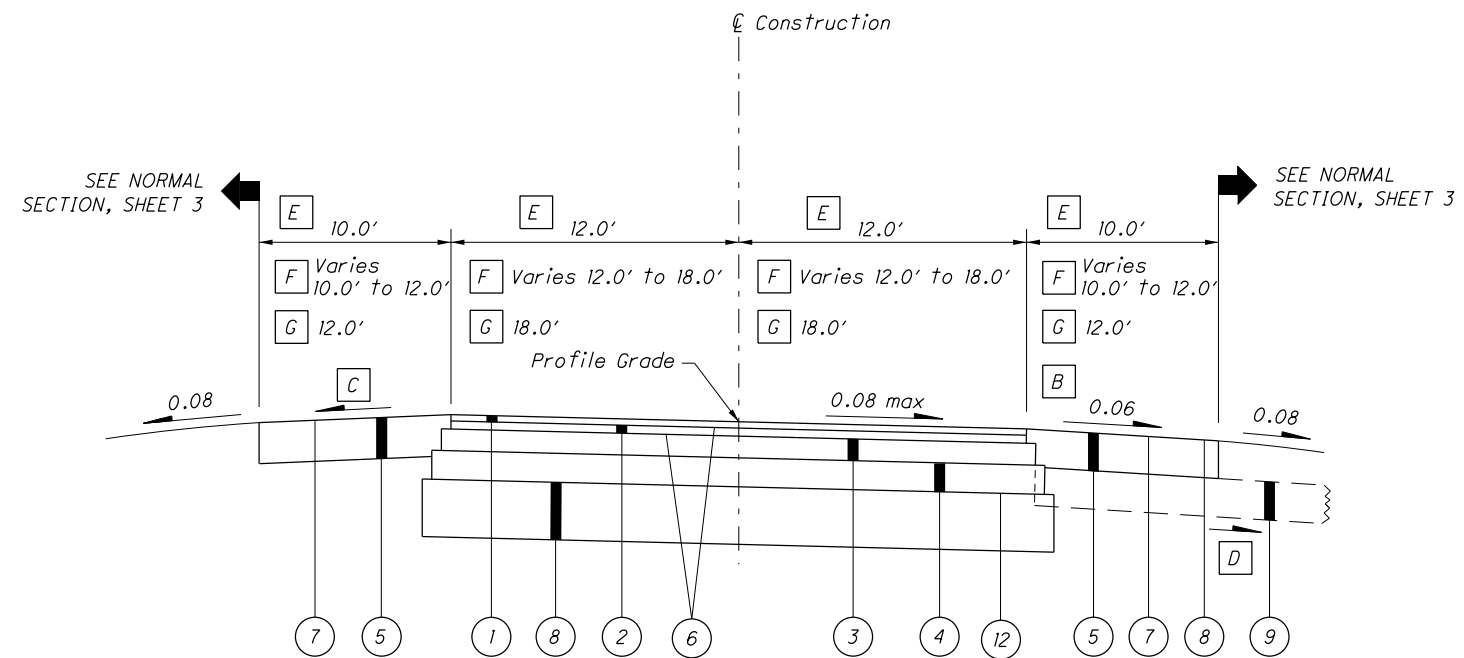


**SHOULDER DETAIL**  
For pavement slopes greater than 0.010



**SUPERELEVATED SECTION - U.S. 46**

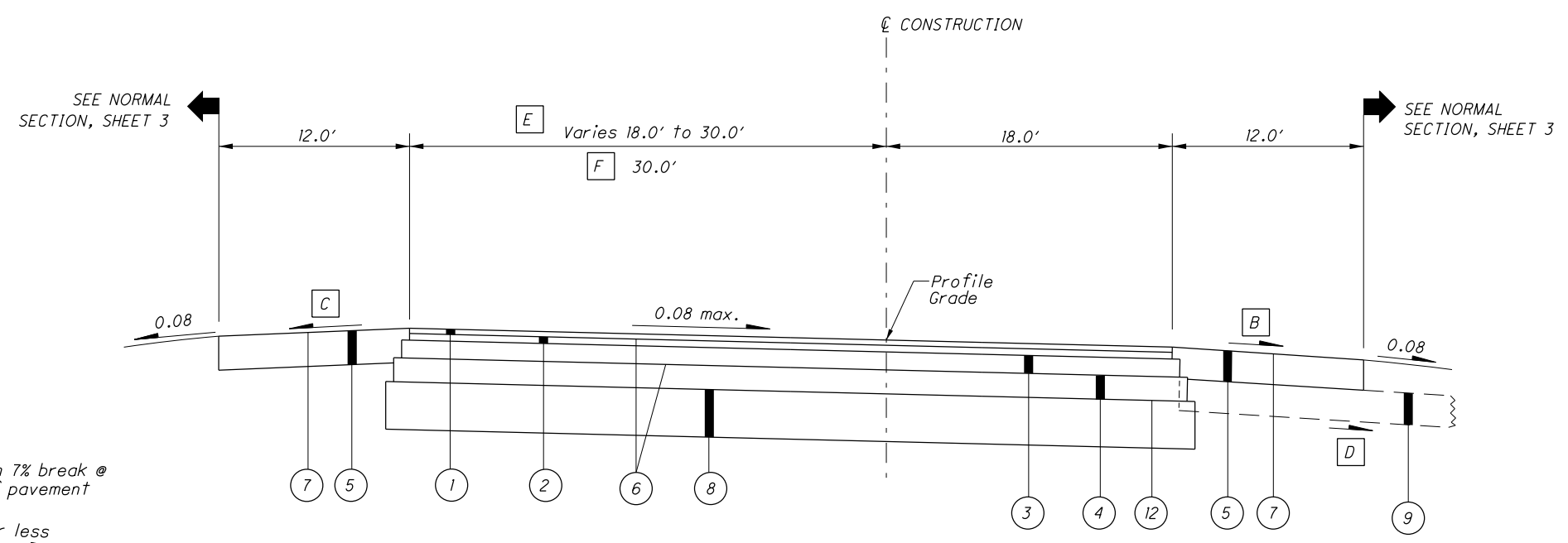
Sta. 642+81.37 to Sta. 649+00.00



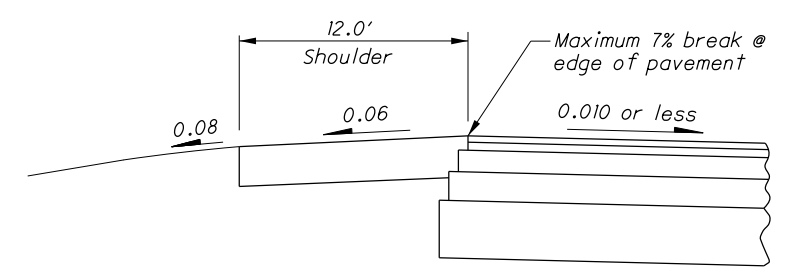
**SUPERELEVATED SECTION - U.S. 46**

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

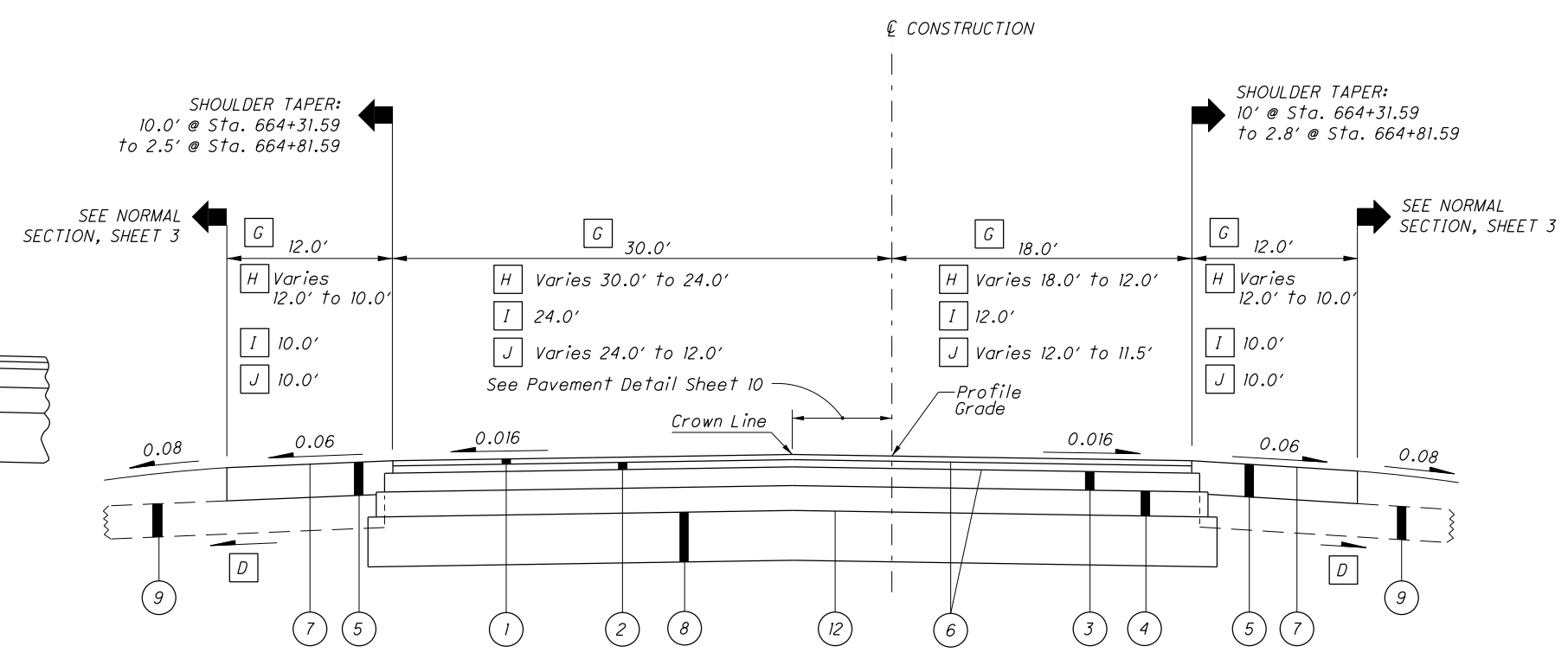
STA. 656+57.63 TO STA. 658+77.85, SEE INTERSECTION DETAIL ON SHEET 39.  
SEE INTERSECTION DETAIL, SHEET 39.  
FOR PAVEMENT LEGEND, SEE SHEET 3.  
FOR BASE AND SUBBASE STEP DETAIL, SEE SHEET 3.



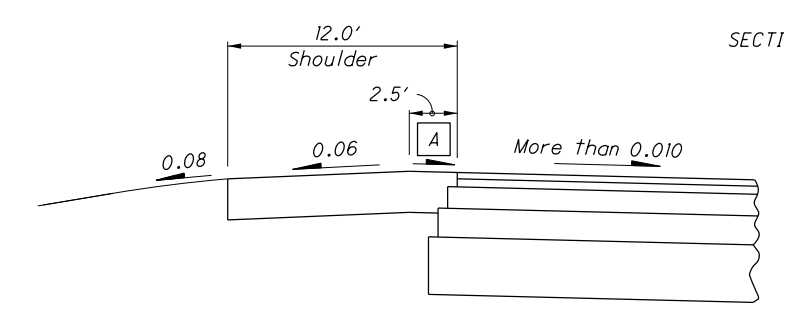
**SUPERELEVATED SECTION - U.S. 46**  
 [E] STA. 658+77.85 TO STA. 659+27.03  
 [F] STA. 659+27.03 TO STA. 660+20.37



**SHOULDER DETAIL**  
For pavement slopes of 0.010 or less



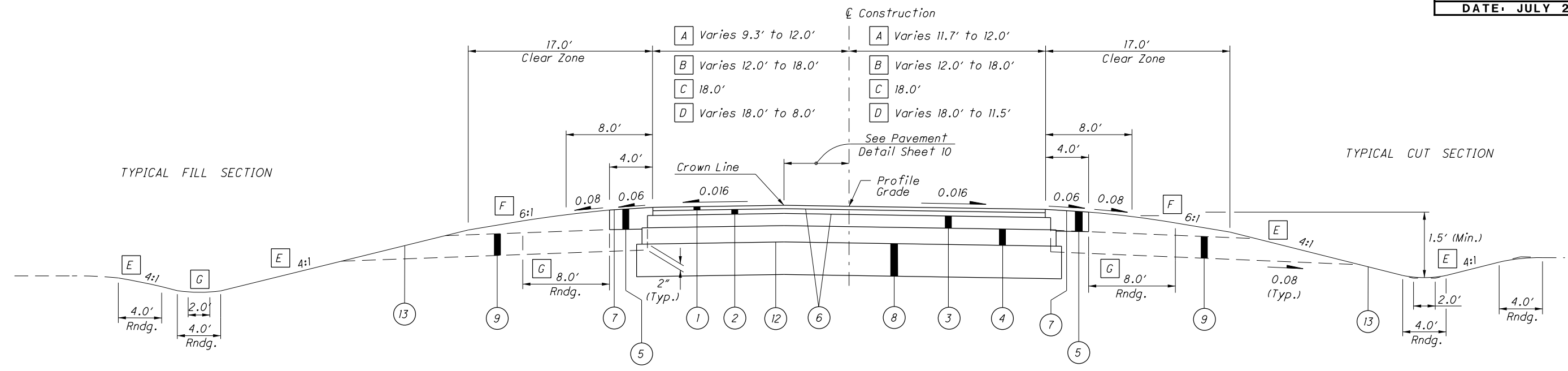
**NORMAL SECTION - U.S. 46**  
 [G] STA. 660+20.37 TO STA. 660+51.59  
 [H] STA. 660+51.59 TO STA. 663+81.59  
 [I] STA. 663+81.59 TO STA. 664+31.59  
 [J] STA. 664+31.59 TO STA. 664+81.59



**SHOULDER DETAIL**  
For pavement slopes of more than 0.010

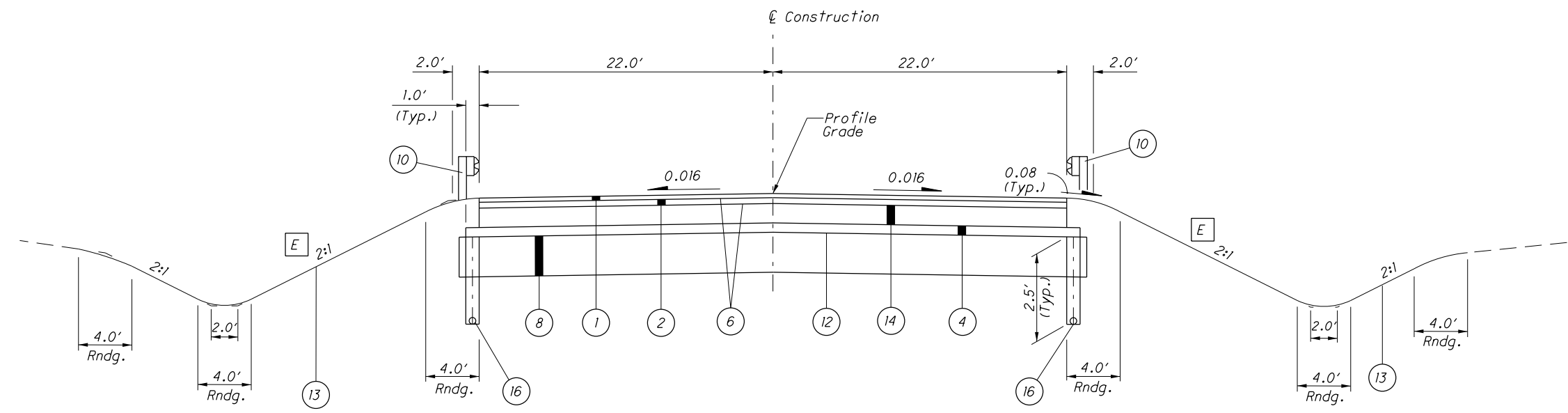
- [A] SAME SLOPE AS PAVEMENT
- [B] 0.06 OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER
- [C] FOR HIGH SIDE SHOULDER SLOPES ON SUPERELEVATED SECTIONS SEE SHOULDER DETAILS, THIS SHEET.
- [D] 0.04 MIN., 0.08 DESIRABLE

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



**NORMAL SECTION - ARLINGTON ROAD**

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



**APPROACH SLAB TYPICAL SECTION - U.S. 46**

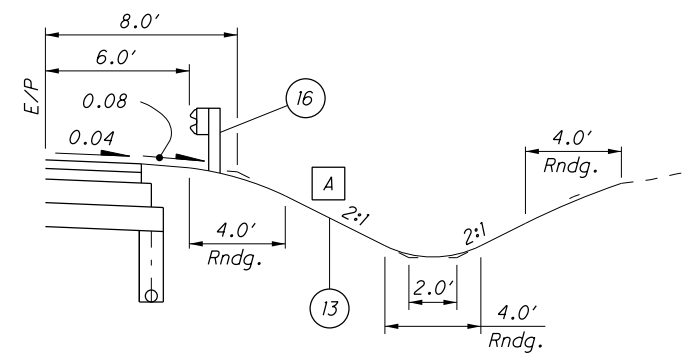
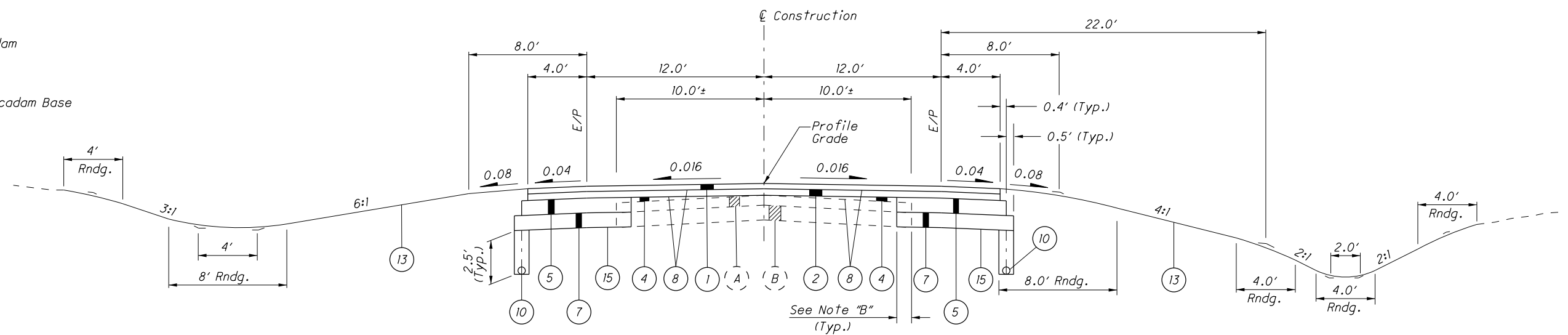
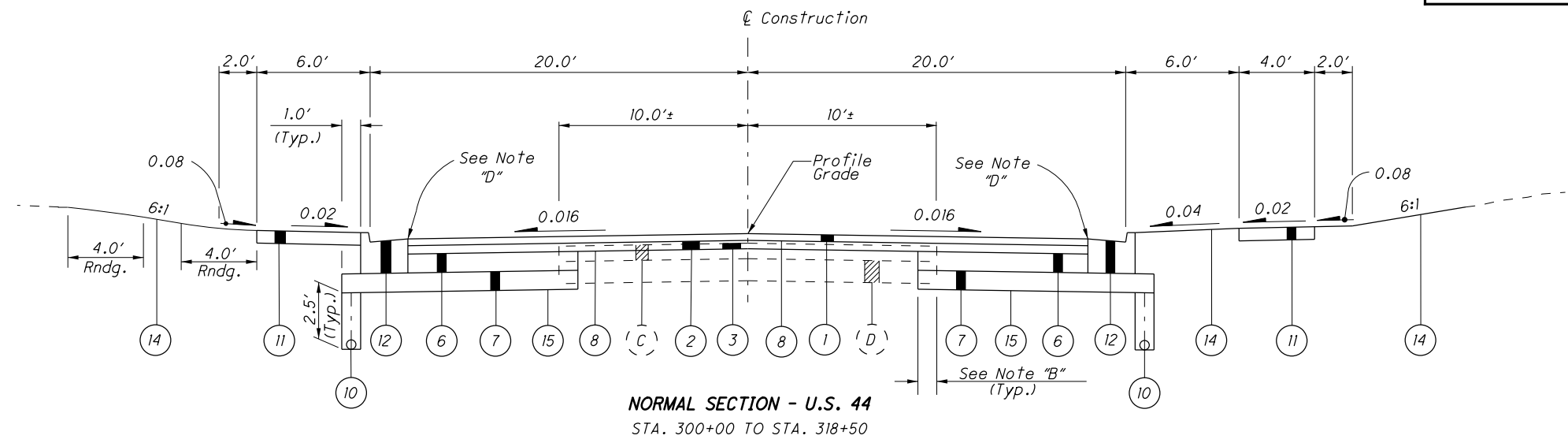
STRUCTURE PIC-46-1209 = Sta. 638+22.44 to Sta. 640+48.86  
Sta. 638+47.44 to Sta. 640+23.86

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

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

**LEGEND**

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



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

**NOTE "B"**  
The existing pavement edges shall be saw cut to locate a sound pavement edge per Sec. 203.04(E) of the CMS. For estimating purposes, pavement calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

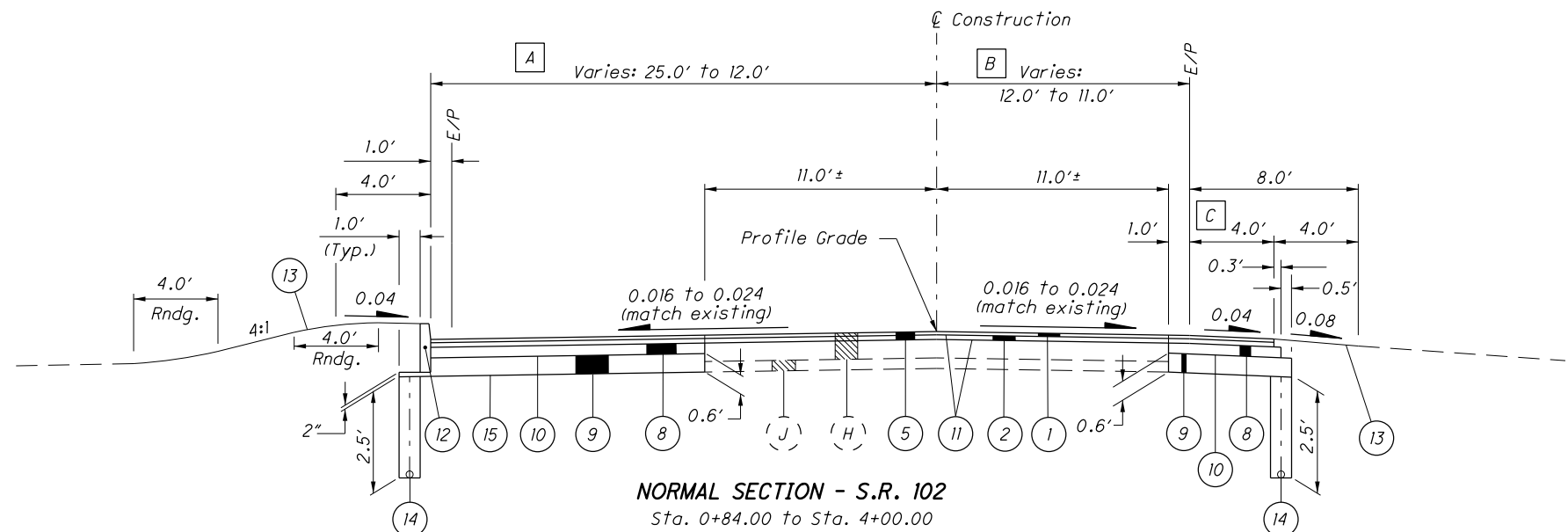
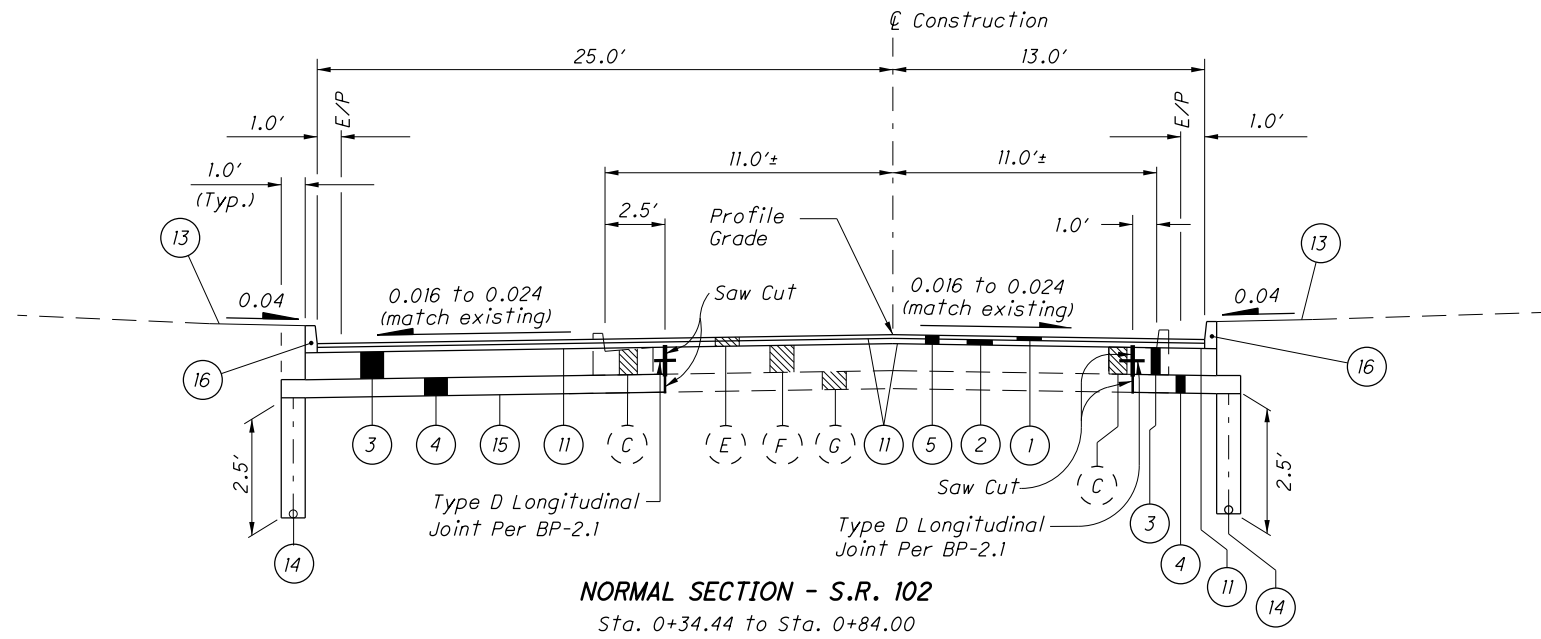
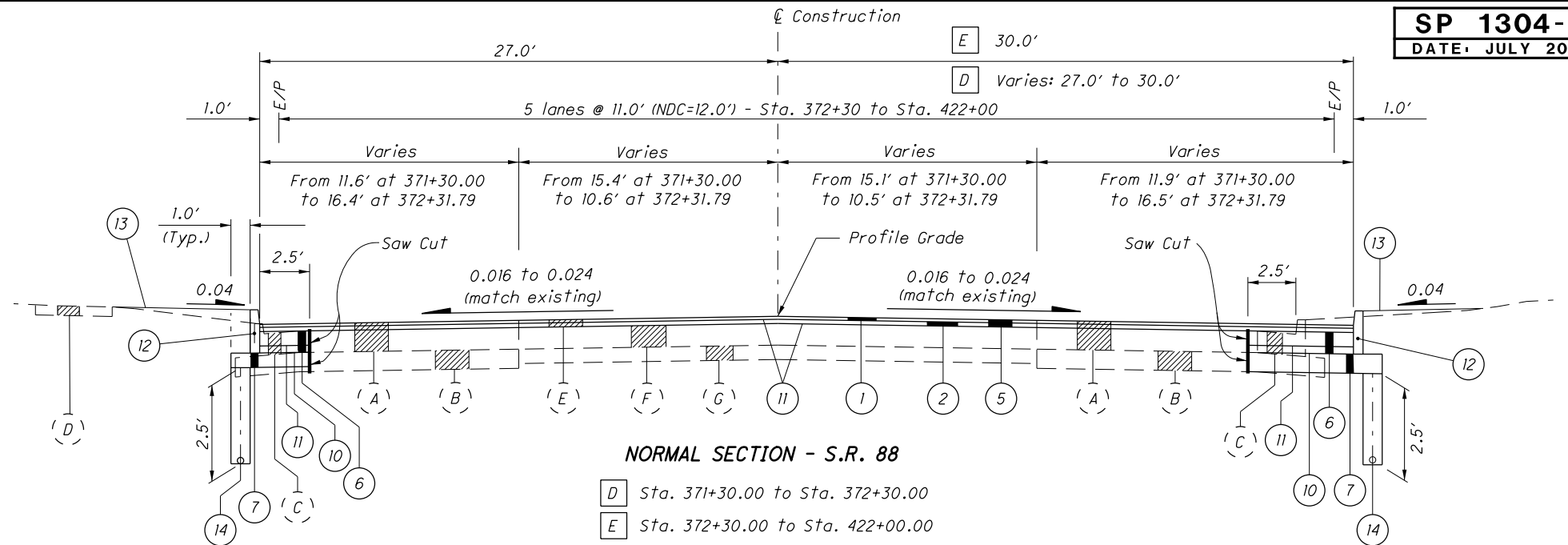
**NOTE "C"**  
Item 441, Asphalt Concrete Intermediate Course, Type 1 (448), is to be used as a leveling course to establish a 0.016 cross slope. Estimated quantities have been calculated based on exaggerated cross-sections shown on sheets 51-58.

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

**GUARDRAIL DETAIL - S.R. 106**  
SECTION APPLIES :  
Sta. 635+50 to Sta. 637+75 Rt.  
[A] Unless otherwise shown on the cross sections

**LEGEND**

- ① ITEM 441 - 1 1/4" Asphalt Concrete Surface Course, Type 1, (448) PG64-22
  - ② ITEM 441 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (448)
  - ③ ITEM 305 - 9" Concrete Base, 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 PLANING TABLES

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

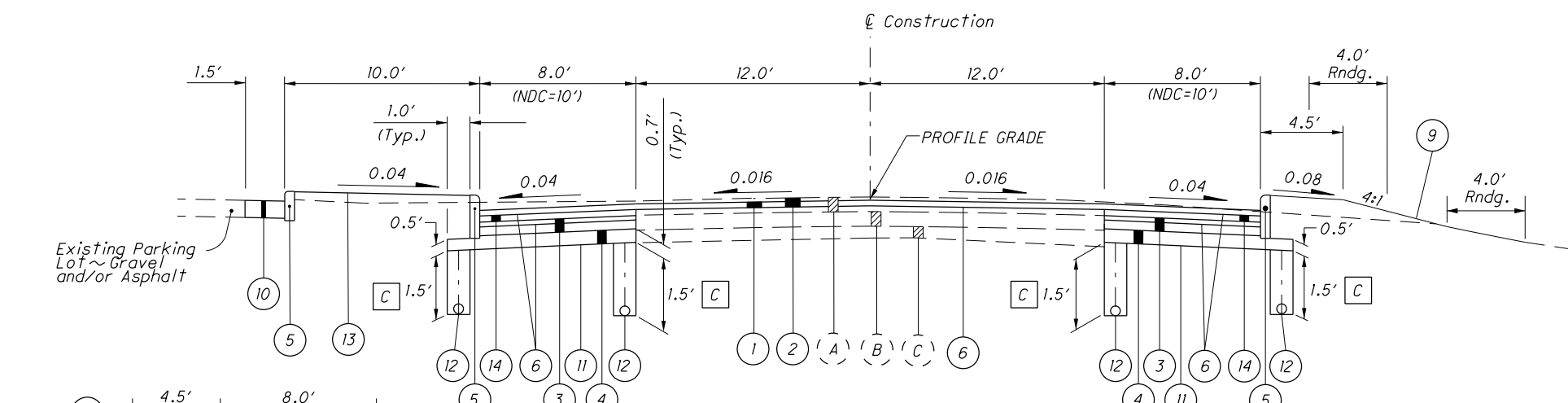
NOTES

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

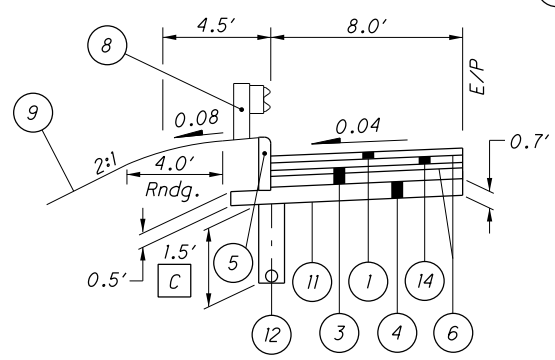
**A** IN AN EFFORT TO REMOVE EXISTING PARABOLIC CROWN AND ESTABLISH A SMOOTH AND CONSISTENT PROFILE THROUGHOUT THE PROJECT, THE PAVEMENT SHALL BE PLANED TO A DEPTH INDICATED IN THE PAVEMENT PLANING TABLE ON THIS SHEET. A 0.016 NORMAL CROSS SLOPE SHALL BE ESTABLISHED FROM THE CENTERLINE TO THE EXISTING EDGE OF PAVEMENT.

**B** THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING ASPHALT PAVEMENT SHALL BE AS FOLLOWS:  
 ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22  
 ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)  
 ITEM 304 - 8" AGGREGATE BASE  
 THE PAVEMENT BUILD-UP WHEN ADJOINING AN EXISTING GRAVEL OR SLAG PARKING AREA SHALL BE AS FOLLOWS:  
 ITEM 304 - 11" AGGREGATE BASE

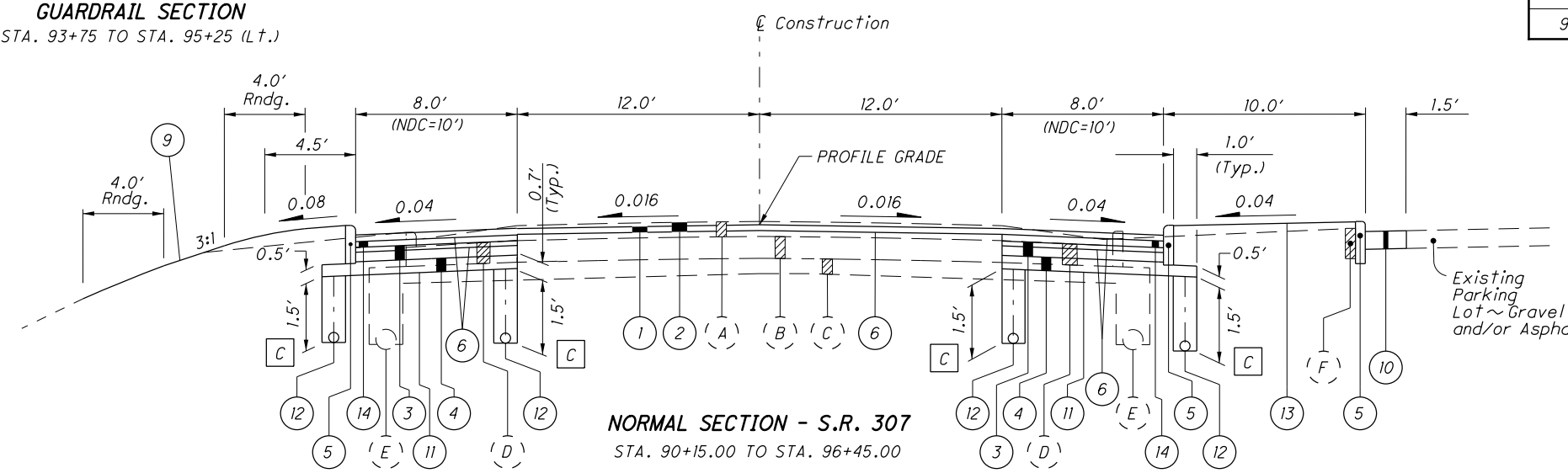
**C** UNCLASSIFIED UNDERDRAIN LIMITS:  
 STA. 88+75 TO STA. 91+25 AND  
 STA. 95+25 TO STA. 96+27.25



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



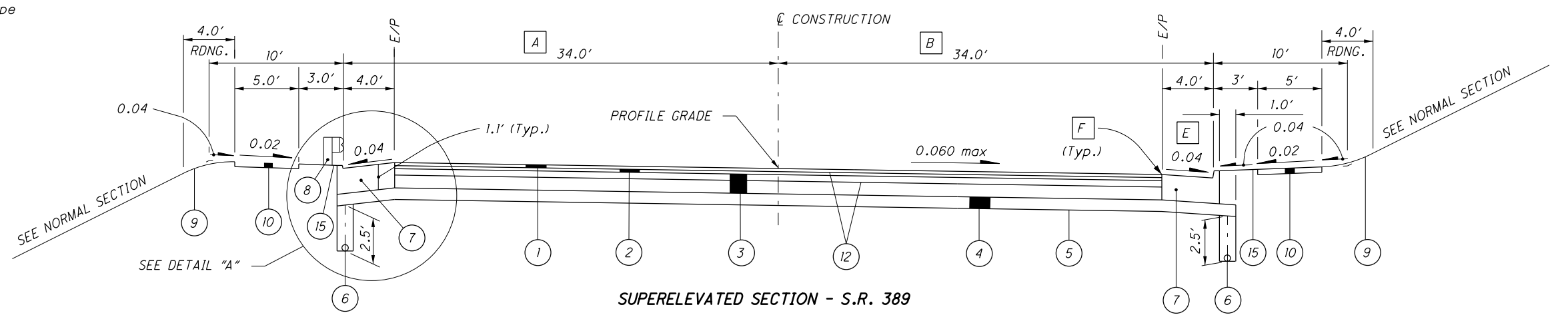
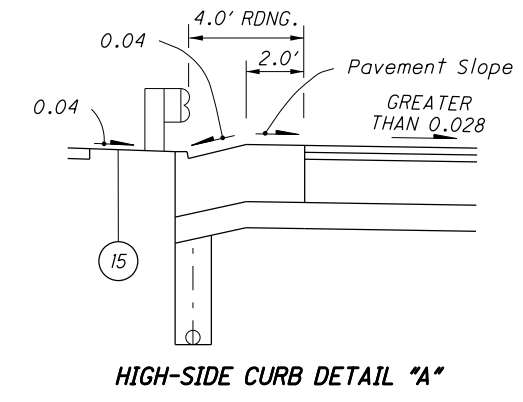
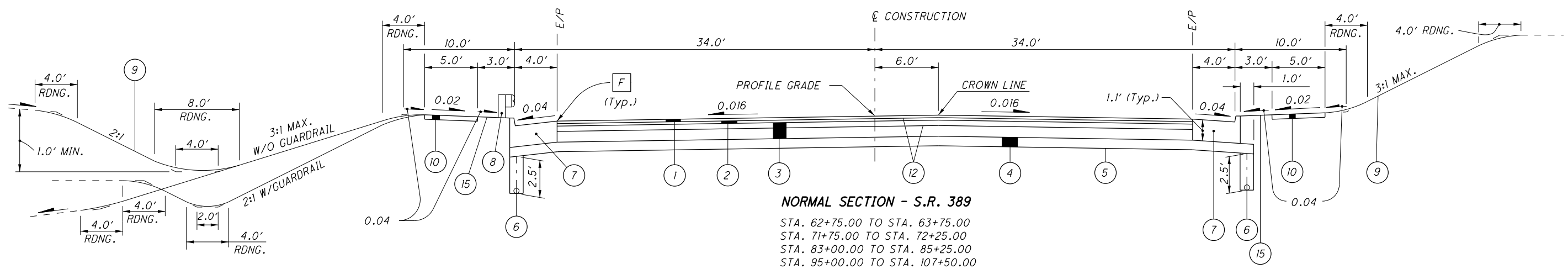
GUARDRAIL SECTION  
STA. 93+75 TO STA. 95+25 (L.T.)



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

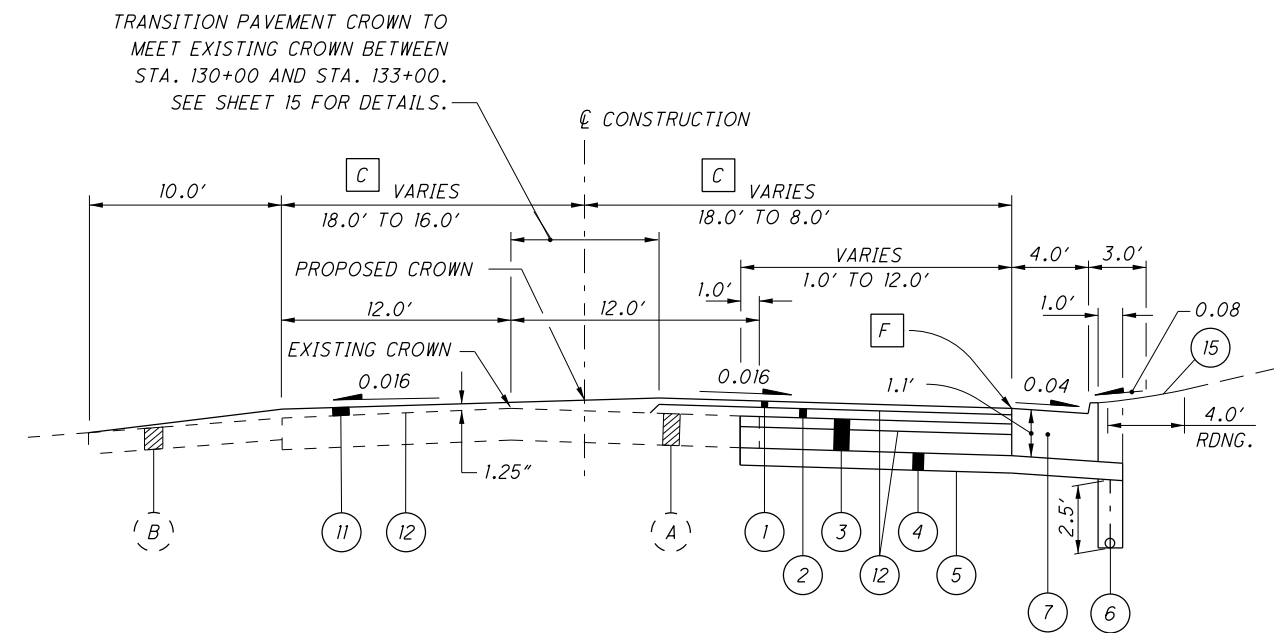
LEGEND

- ① ITEM 441 - 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448) PG64-22
- 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 - 1 3/4" 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)



**LEGEND**

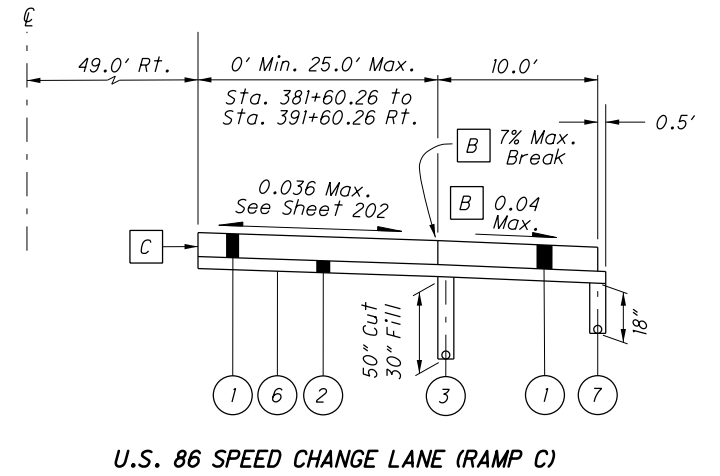
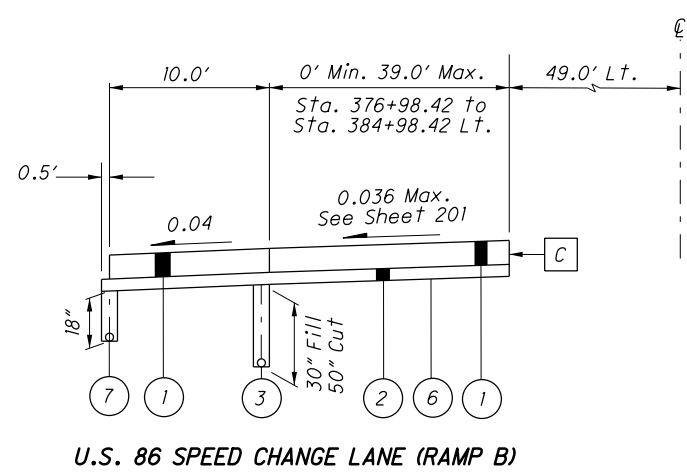
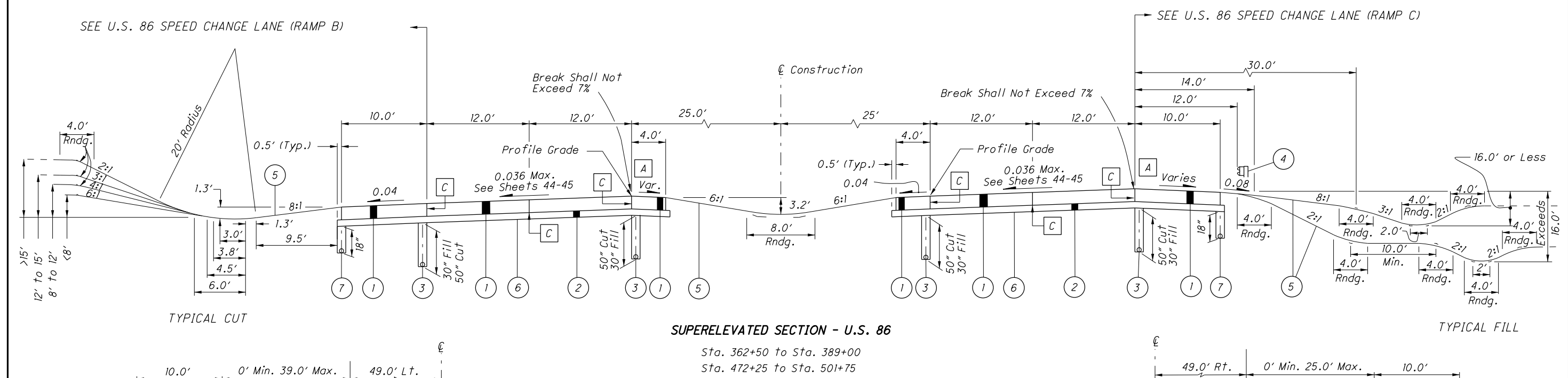
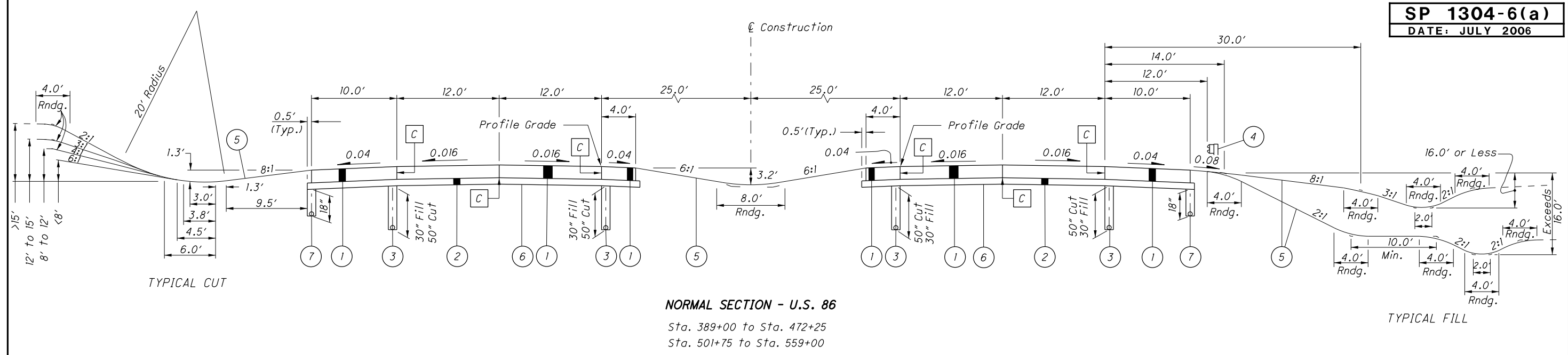
- ① ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
- ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- ③ ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 204 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS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



**WIDENING AND RESURFACING - S.R. 389**  
 STA. 130+00.00 TO STA. 133+00.00

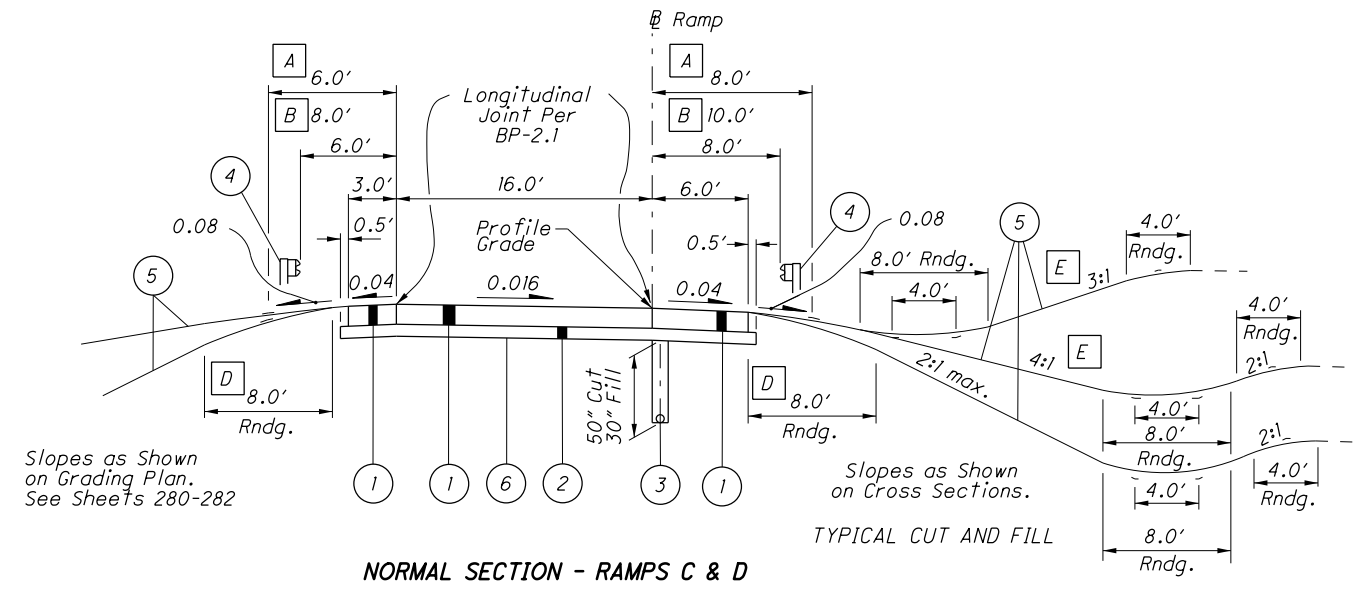
**NOTES:**

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



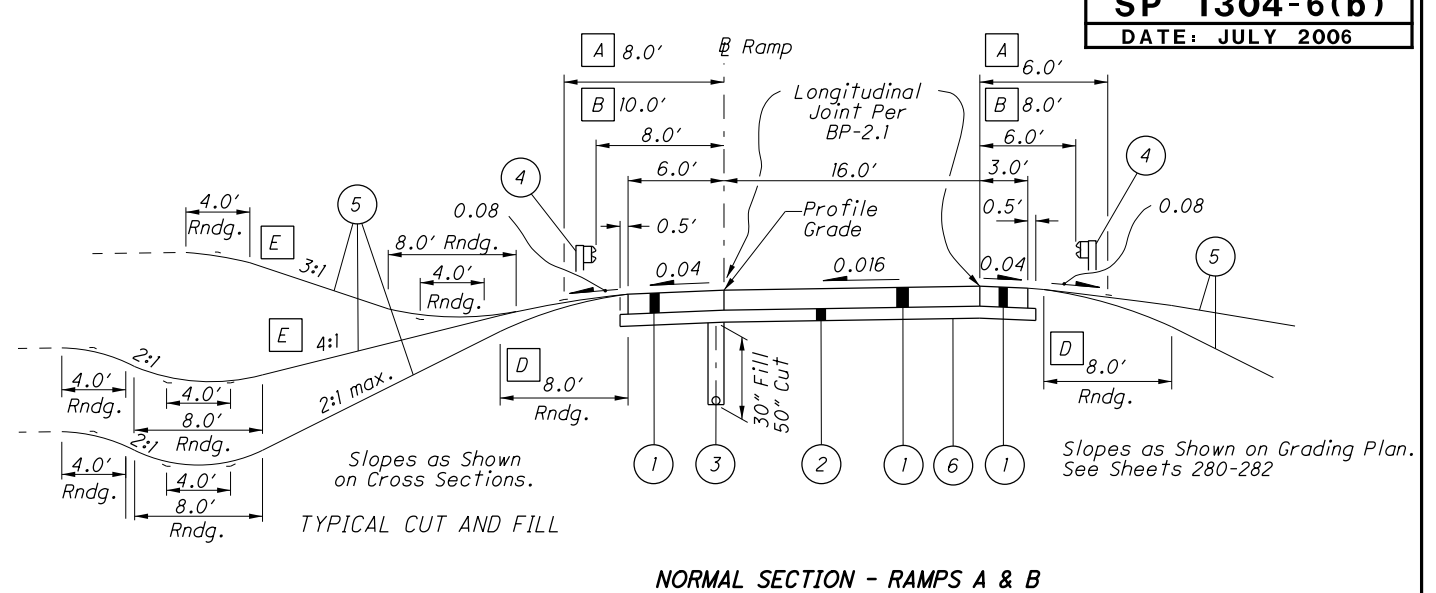
- LEGEND**
- (1) ITEM 452 - 12" Non-Reinforced Concrete Pavement
  - (2) ITEM 304 - 6" Aggregate Base
  - (3) ITEM 605 - 6" Deep Pipe Underdrains
  - (4) ITEM 606 - Guardrail, Type MGS
  - (5) ITEM 659 - Seeding and Mulching
  - (6) ITEM 204 - Subgrade Compaction
  - (7) ITEM 605 - 6" Base Pipe Underdrains
  - A 0.04 Max. to 0.034 Min.
  - B Slope conditions shown for high side shoulder adjacent to speed change lane pavement; For low side of shoulders adjacent to speed change lane pavement, shoulder slope shall be 0.04.
  - C Longitudinal Joint Per BP-2.1





**NORMAL SECTION - RAMPS C & D**

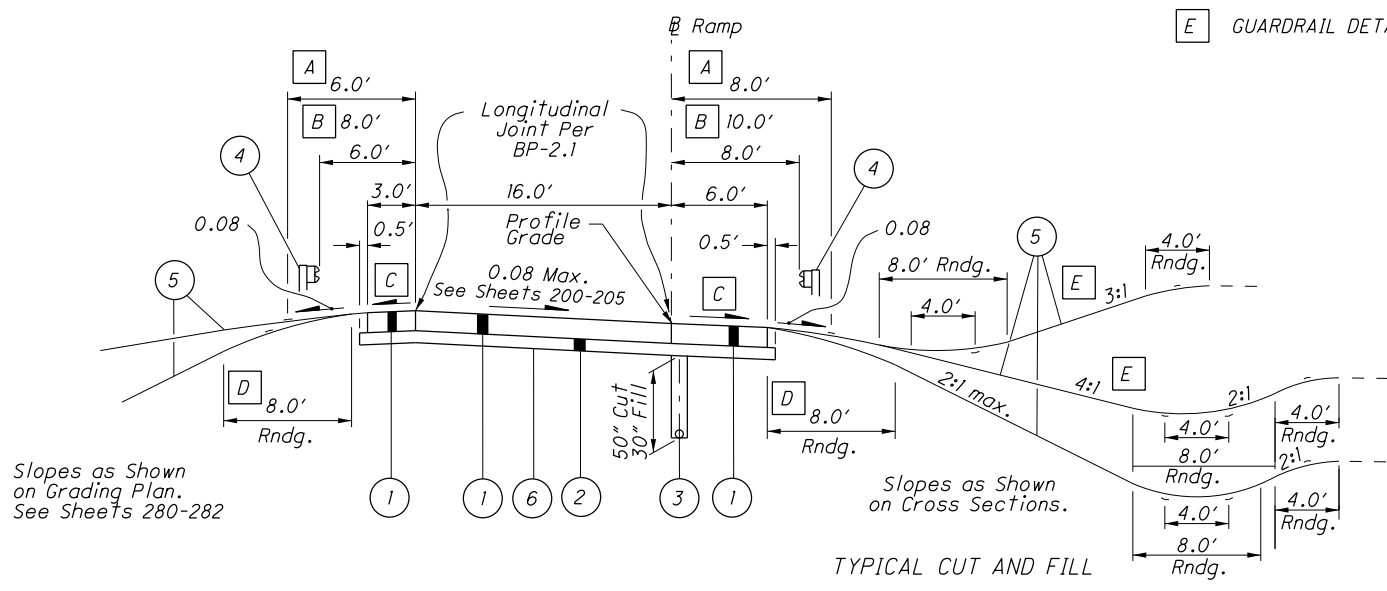
Sta. 465+49.13 to Sta. 477+25.00 Ramp C  
Sta. 557+00.00 to Sta. 566+96.94 Ramp D



**NORMAL SECTION - RAMPS A & B**

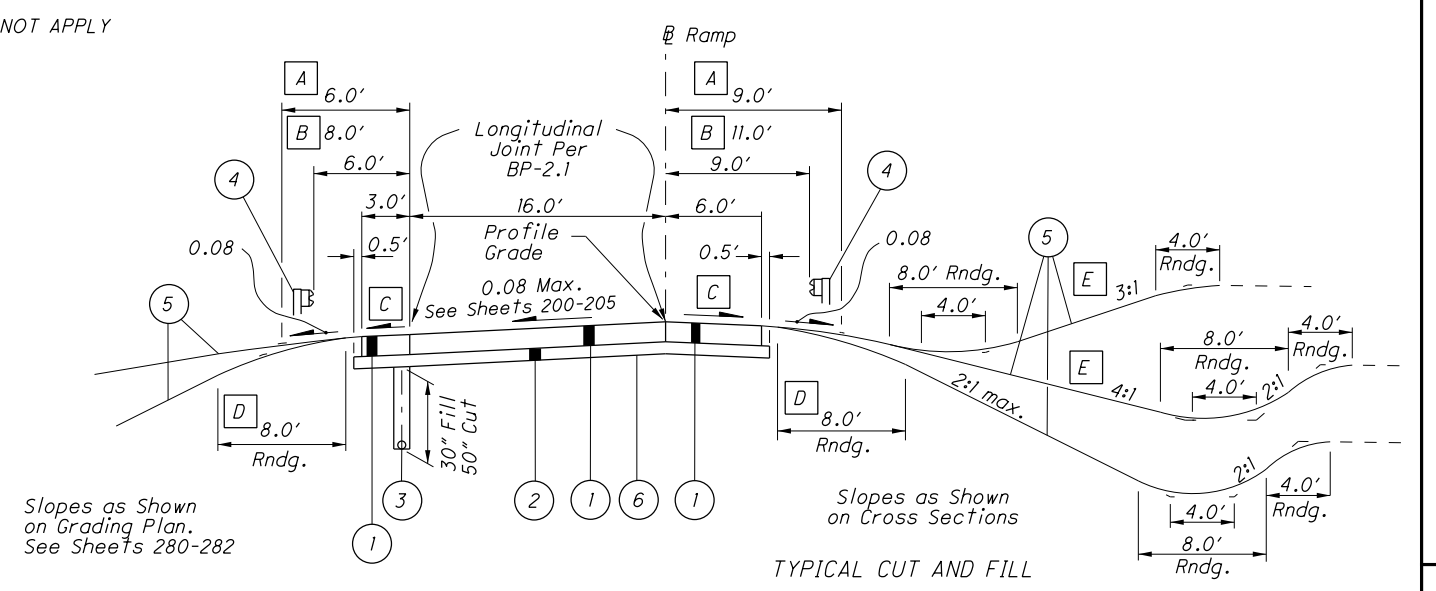
Sta. 160+75.00 to Sta. 166+65.18 Ramp A  
Sta. 266+17.10 to Sta. 271+50.00 Ramp B

- 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



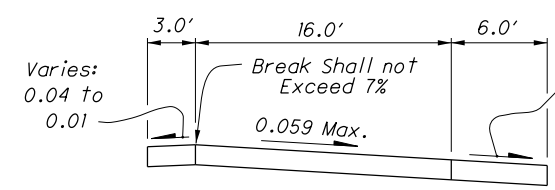
**SUPERELEVATED SECTION (RIGHT) - RAMPS C & D**

Sta. 477+25.00 to Sta. 481+60.26 Ramp C  
Sta. 554+58.38 to Sta. 557+00.00 Ramp D

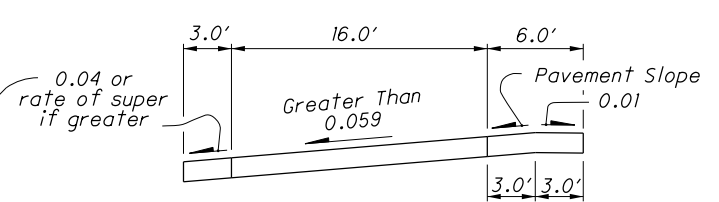


**SUPERELEVATED SECTION (LEFT) - RAMPS E & F**

Sta. 354+62.19 to Sta. 360+75.00 Ramp E  
Sta. 571+50.00 to Sta. 577+03.57 Ramp F



**DETAIL A**

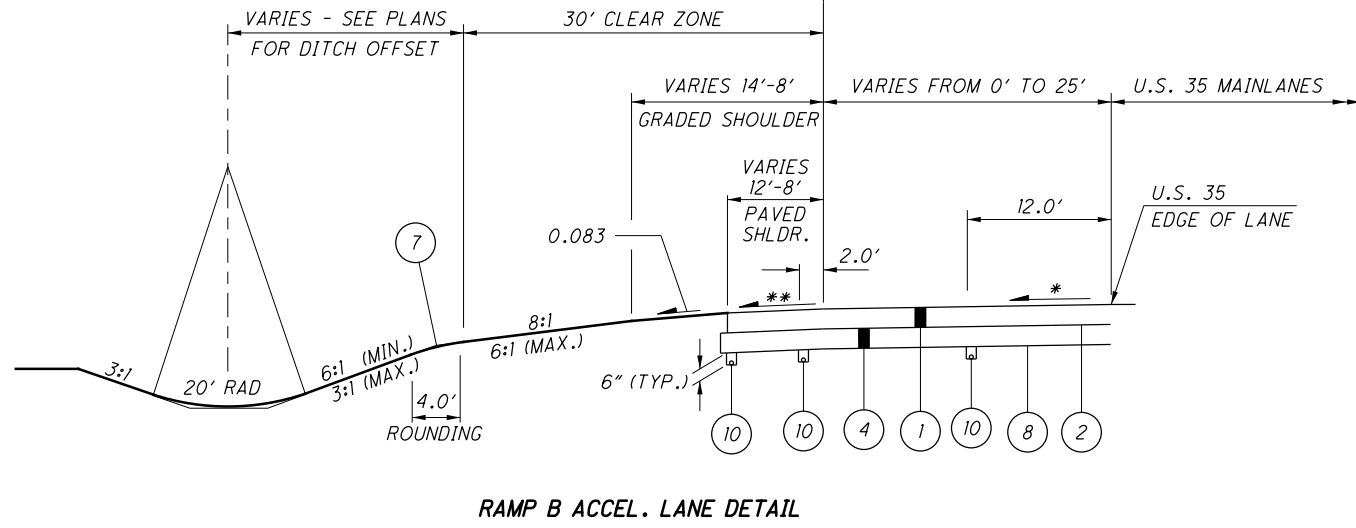
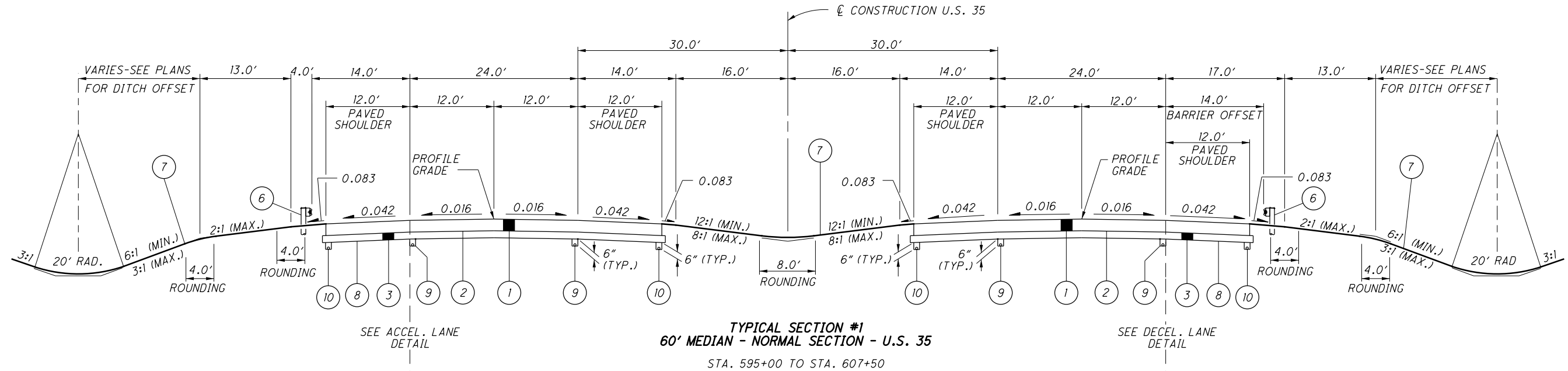


**DETAIL B**

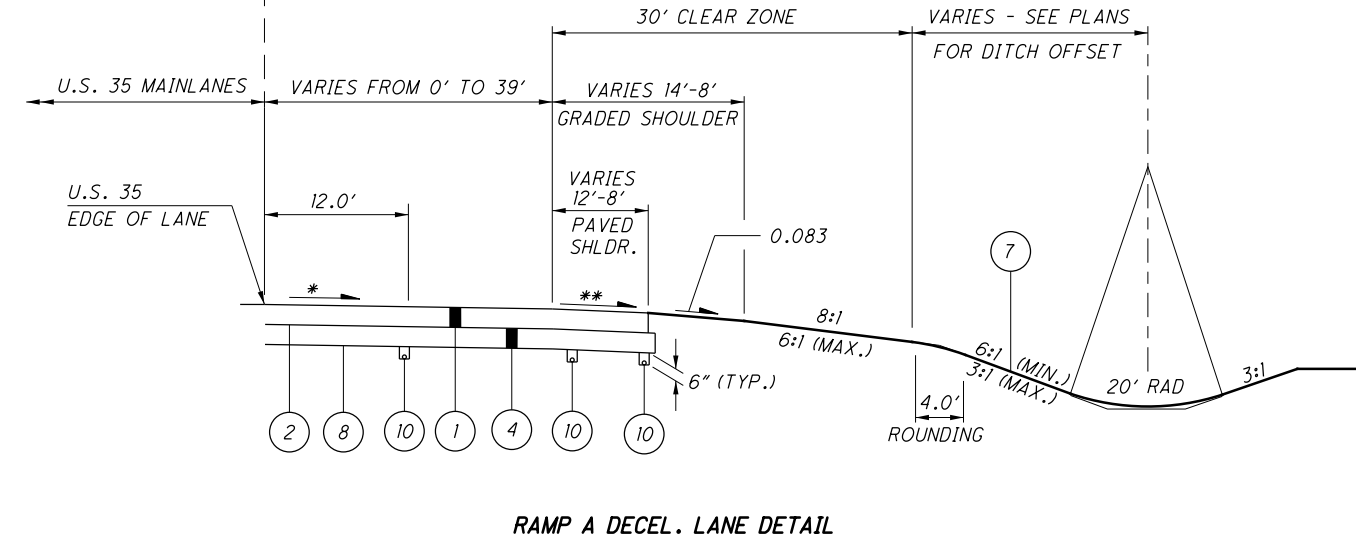
FOR LEGEND, SEE SHEET 9

LEGEND

- |   |   |   |                                     |
|---|---|---|-------------------------------------|
| ① | ITEM 880 - 10" ASPHALT CONCRETE (7 YEAR WARRANTY)   | ⑥ | ITEM 606 - GUARDRAIL, MGS           |
| ② | ITEM 408 - PRIME COAT (0.4 GAL/YD <sup>2</sup> )    | 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 |



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



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

**ROUNDING**

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

**UTILITIES**

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

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

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

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

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

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

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

**UTILITIES**

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

**SURVEYING PARAMETERS**

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

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

**PRIMARY PROJECT CONTROL**

POSITIONING METHOD: STATIC GNSS  
 MONUMENT TYPE: A

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD88  
 GEOID: GEOID09

**HORIZONTAL POSITIONING**

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

USE THE POSITIONING METHOD AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623 - CONSTRUCTION LAYOUT STAKES AND SURVEY MONUMENTS.

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

**WORK LIMITS**

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

**CLEARING AND GRUBBING**

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

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

**SEEDING AND MULCHING**

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

659, SEEDING AND MULCHING 310 SY

659, REPAIR SEEDING AND MULCHING 16 SY  
 (310) X (0.05) = 15.5 SY

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 34 CY  
 (310) X (111 CY PER 1000 SY) = 34.4 CY

659, COMMERCIAL FERTILIZER 0.05 TON  
 [(310) X (1 TON / 7410 SY)] + [(16 SY) X (1 TON / 11115 SY)] = 0.05 TON

659, LIME 0.1 ACRE  
 (310) X (1 ACRE / 4840 SY) = 0.06 ACRE

659, INTER-SEEDING 16 SY  
 (310) X (0.05) = 15.5 SY

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

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 AND TEMPORARY EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

**RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS**

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

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

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

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

**PROFILE AND ALIGNMENT**

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

PRIMARY PROJECT CONTROL INFORMATION

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

**ITEM 659, SEEDING AND MULCHING**

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

SEE SHEET 18 FOR SEEDING AND MULCHING SUBSUMMARY.

**WATERING AND MOWING PERMANENT SEEDED AREAS**

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

659, WATER	22 M.GAL.
659, MOWING	23 M SQ. FT.

**EROSION CONTROL**

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

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

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

**ITEM 611 - CONDUIT BORED OR JACKED**

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

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

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

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

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

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

**ITEM 605, AGGREGATE DRAINS**

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

**UNRECORDED UNTREATED NON-STORMWATER DRAINAGE**

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

**REVIEW OF DRAINAGE FACILITIES**

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

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

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

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

**UNRECORDED ACTIVE SANITARY SEWER CONNECTIONS**

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

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

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

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

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

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

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

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

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

**GENERAL NOTES**

**FRA -44 -13.67**

**ITEM 614, MAINTAINING TRAFFIC**

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

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

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

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

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

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

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

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

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

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

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

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

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

**SEQUENCE OF CONSTRUCTION**

**INITIAL DETOUR PHASE**

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

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

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

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

- CONSTRUCT A TEMPORARY BRIDGE AT EACH LOCATION.

- COMPLETE SHORING AND BRACING.

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

- COMPLETE DRIVE TO #3753-55 BEECHMONT COURT.

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

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

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

**PHASE I AND II**

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

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

**PHASE I**

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

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

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

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

**PHASE II**

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

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

COMPLETE WORK ON BEECHMONT COURT.

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

**FINAL DETOUR PHASE**

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

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

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

- COMPLETE THE PLACEMENT OF FULL DEPTH PAVEMENT BASE COURSES.

REMOVE TRAFFIC SIGNAL FOR MAINTAINING TRAFFIC.

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

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

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

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

MAINTENANCE OF TRAFFIC GENERAL NOTES

FAY-86-7.39

**SEQUENCE OF CONSTRUCTION**

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

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

**PHASE ONE**

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

AREAS OF SHOULDER REPLACEMENT:

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

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

EASTBOUND AREA

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

WESTBOUND AREA

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

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

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

**PHASE TWO**

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

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

**PHASE THREE**

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

**PHASE FOUR**

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

**BRIDGES**

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

**SIDE ROAD STRUCTURES OVER FREEWAY**

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

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

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

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

**FREEWAY STRUCTURES OVER SIDE ROADS**

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

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

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT THE UNDERPASS ROADWAY DURING REMOVAL OF EXISTING AND CONSTRUCTION OF NEW CONCRETE PARAPETS. THE DESIGN OF THE NET OR PLATFORM SHALL CONFORM WITH OSHA REQUIREMENTS, SHALL HAVE APPROVAL FROM THE ODOT OFFICE OF STRUCTURAL ENGINEERING, AND SHALL REMAIN IN PLACE UNTIL WORK HAS BEEN COMPLETED. THE EXISTING VERTICAL CLEARANCE

OVER THE UNDERPASS ROADWAY SHALL BE MAINTAINED AT ALL TIMES. IN THE EVENT A LANE RESTRICTION IS NECESSARY, THE METHOD OF INSTALLATION AND DESIGN OF THE TEMPORARY LANE CLOSURE SHALL CONFORM TO STANDARD DRAWINGS MT-95.30 OR MT-97.10. COST FOR THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

**PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN**

THE PAVEMENT BUILDUP SHALL BE:

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

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

**PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN**

THE PAVEMENT BUILDUP SHALL BE:

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

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

**NOTICE OF CLOSURE SIGNS**

THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND BESIDE OF THE ROAD/RAMP FACING TRAFFIC AND SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY

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

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

WILL BE  
 CLOSED  
 FOR \_\_\_\_\_ DAYS  
 OHIO DEPT. OF TRANSPORTATION

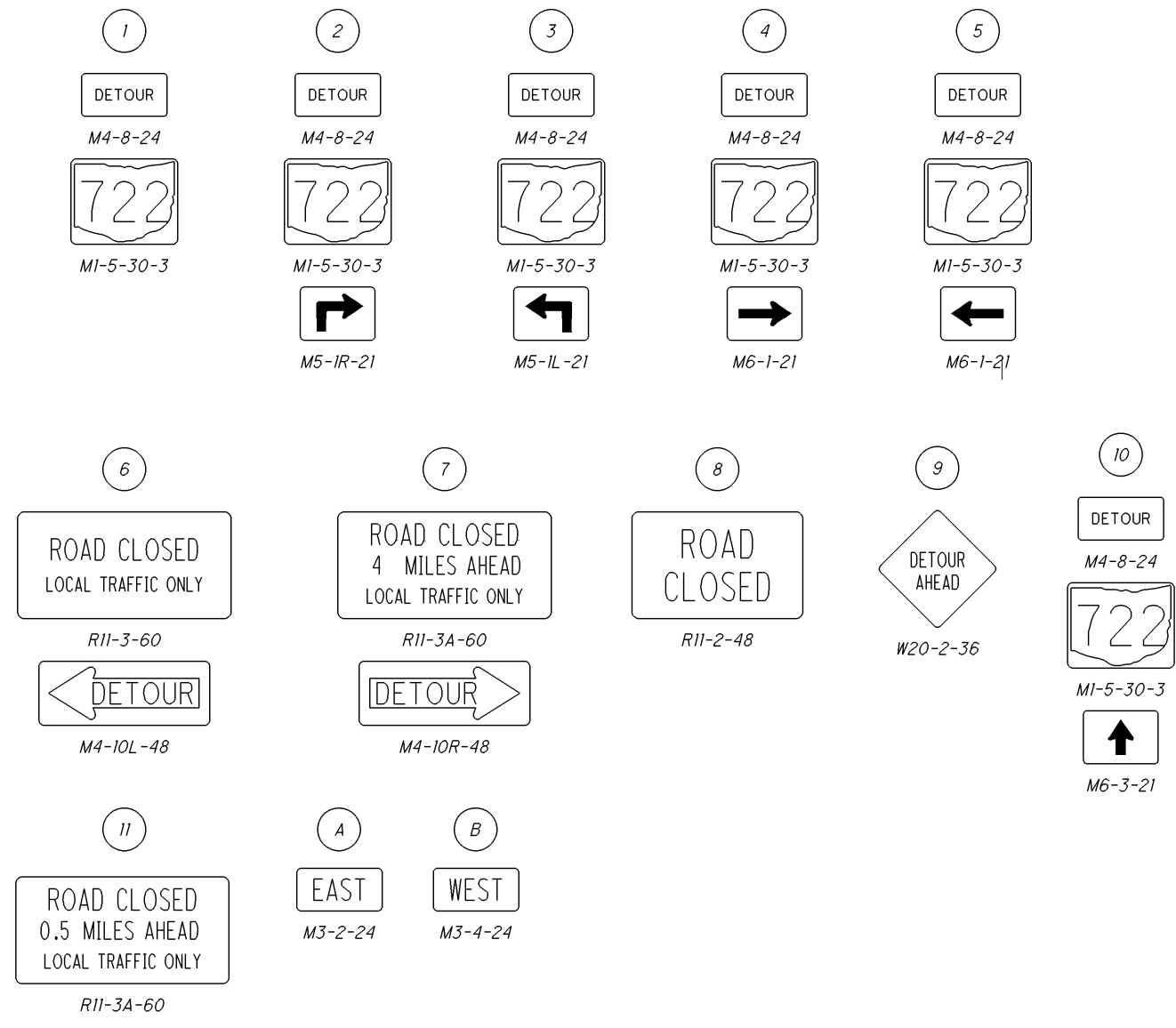
W20-H14-60

MAINTENANCE OF TRAFFIC GENERAL NOTES

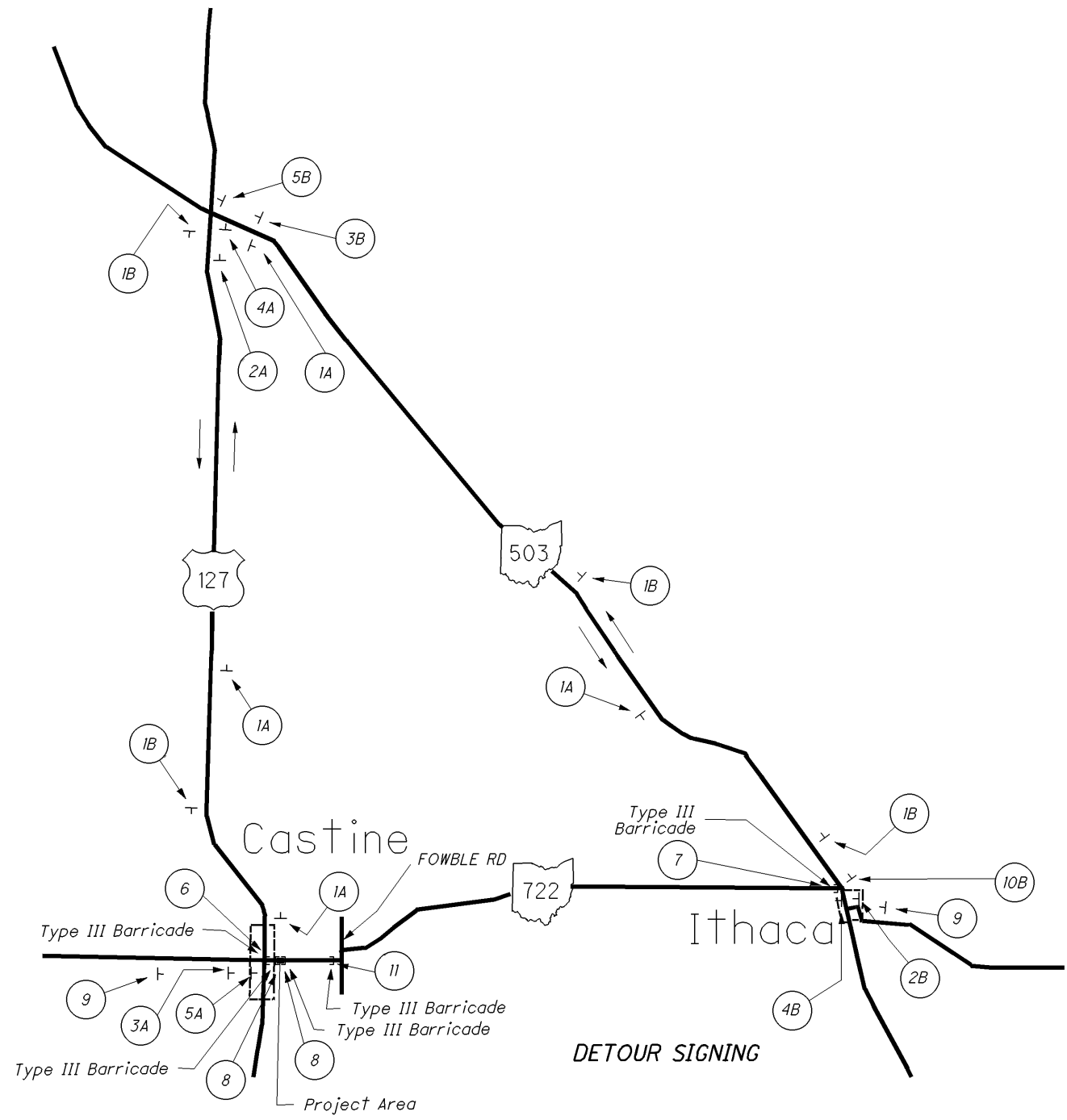
WOO-96-16.21

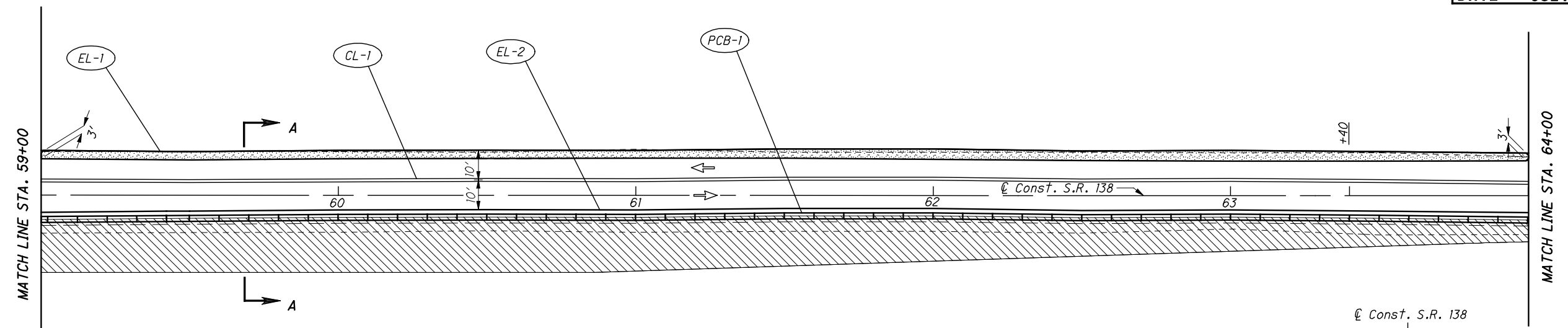


I:\pr\35\ids\SamplePlans\Future Revision\Draft\_0908\1306\_DGN\1306\_3.dgn 30-SEP-2008 1:07PM mwawski

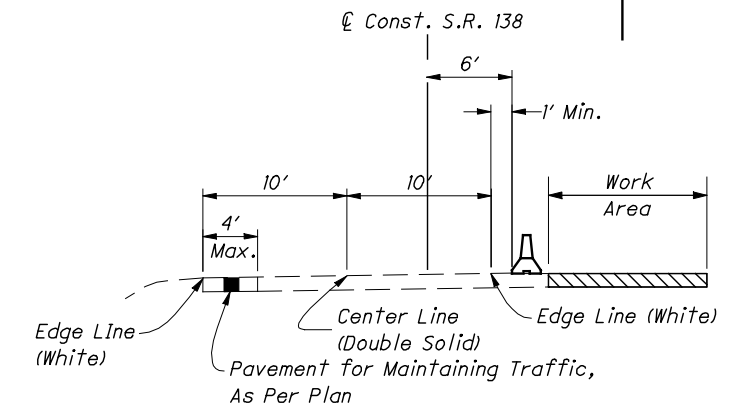


For Maintenance of Traffic Notes, see Sheet 7.

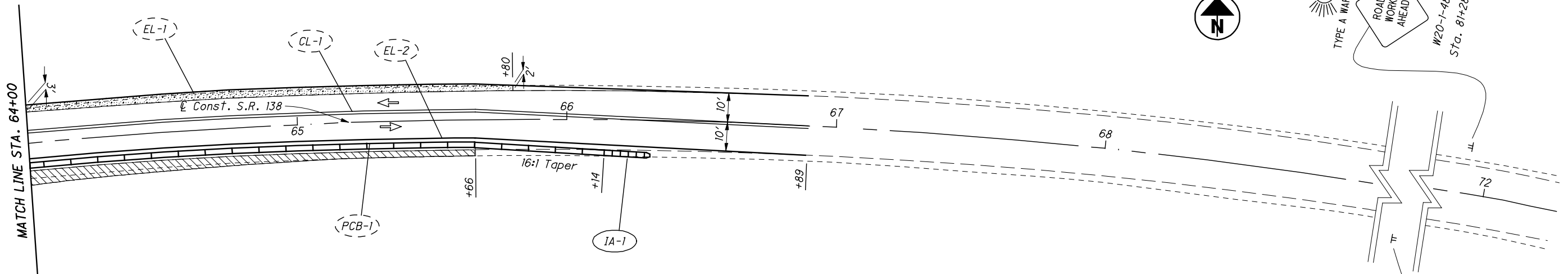




ESTIMATED QUANTITIES								
REF No.	Station to Station	Side	614				622	
			WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE)	PORTABLE CONCRETE BARRIER, 32"
			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

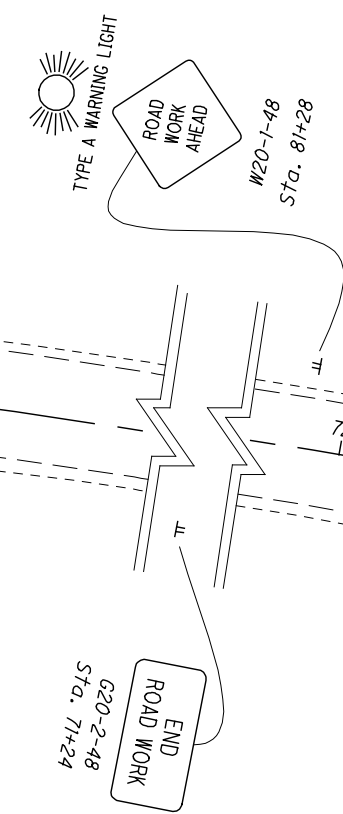


SECTION A-A



LEGEND

- 32" Portable Concrete Barrier
- Area to be Constructed
- Pavement for Maintaining Traffic, As Per Plan (Constructed in Phase One)
- Direction of Traffic



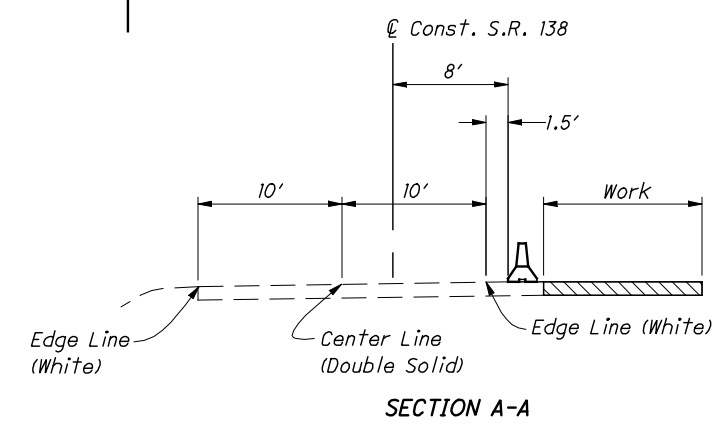
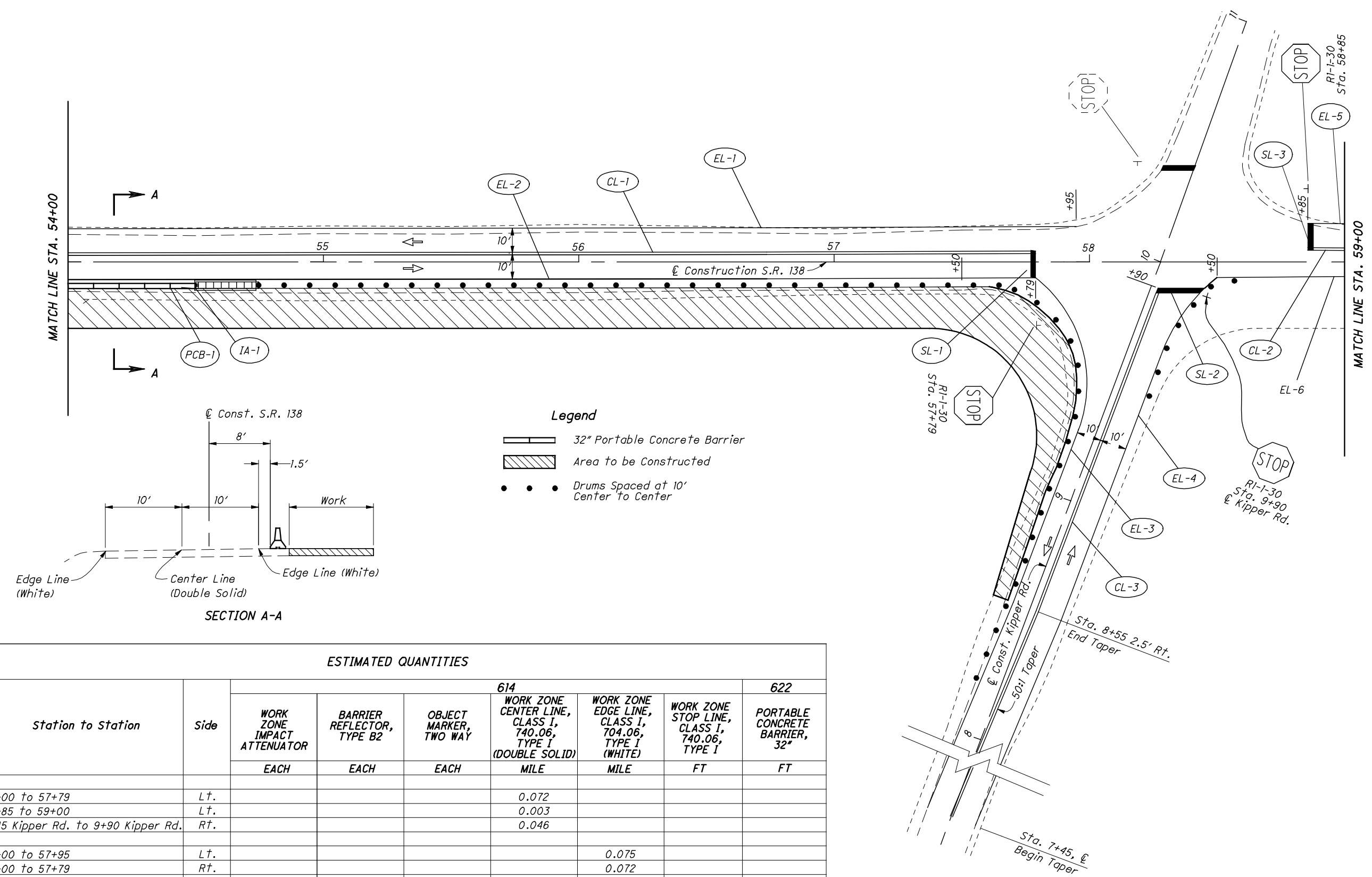




CALCULATED  
DAN  
CHECKED  
DEK

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

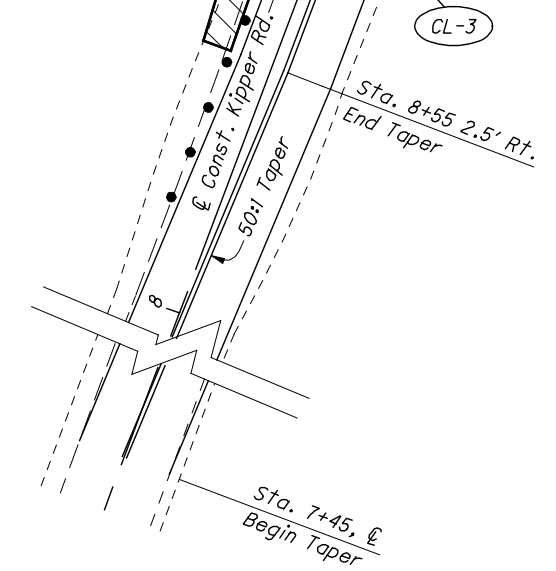
**SCI-138-11.44**



- Legend**
- 32" Portable Concrete Barrier
  - Area to be Constructed
  - Drums Spaced at 10' Center to Center

**ESTIMATED QUANTITIES**

REF No.	Station to Station	Side	614					622	
			WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS 1, 704.06, TYPE I (WHITE)	WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE I	PORTABLE CONCRETE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT	FT
CL-1	54+00 to 57+79	Lt.				0.072			
CL-2	58+85 to 59+00	Lt.				0.003			
CL-3	7+45 Kipper Rd. to 9+90 Kipper Rd.	Rt.				0.046			
EL-1	54+00 to 57+95	Lt.					0.075		
EL-2	54+00 to 57+79	Rt.					0.072		
EL-3	57+79 to 7+45 Kipper Rd.	Rt.					0.051		
EL-4	7+45 Kipper Rd. to 58+50	Rt.					0.049		
EL-5	58+85 to 59+00	Lt.					0.003		
EL-6	58+50 to 59+00	Rt.					0.009		
SL-1	57+79	Rt.						15	
SL-2	9+90 Kipper Rd.	Rt.						18	
SL-3	58+85	Rt.						10	50
PCB-1	54+00 to 54+50	Rt.		2	2				
IA-1	54+50 to 54+75	Rt.	1						
<b>TOTALS CARRIED TO SUBSUMMARY</b>			<b>1</b>	<b>2</b>	<b>2</b>	<b>0.05</b>	<b>0.10</b>	<b>43</b>	<b>50</b>





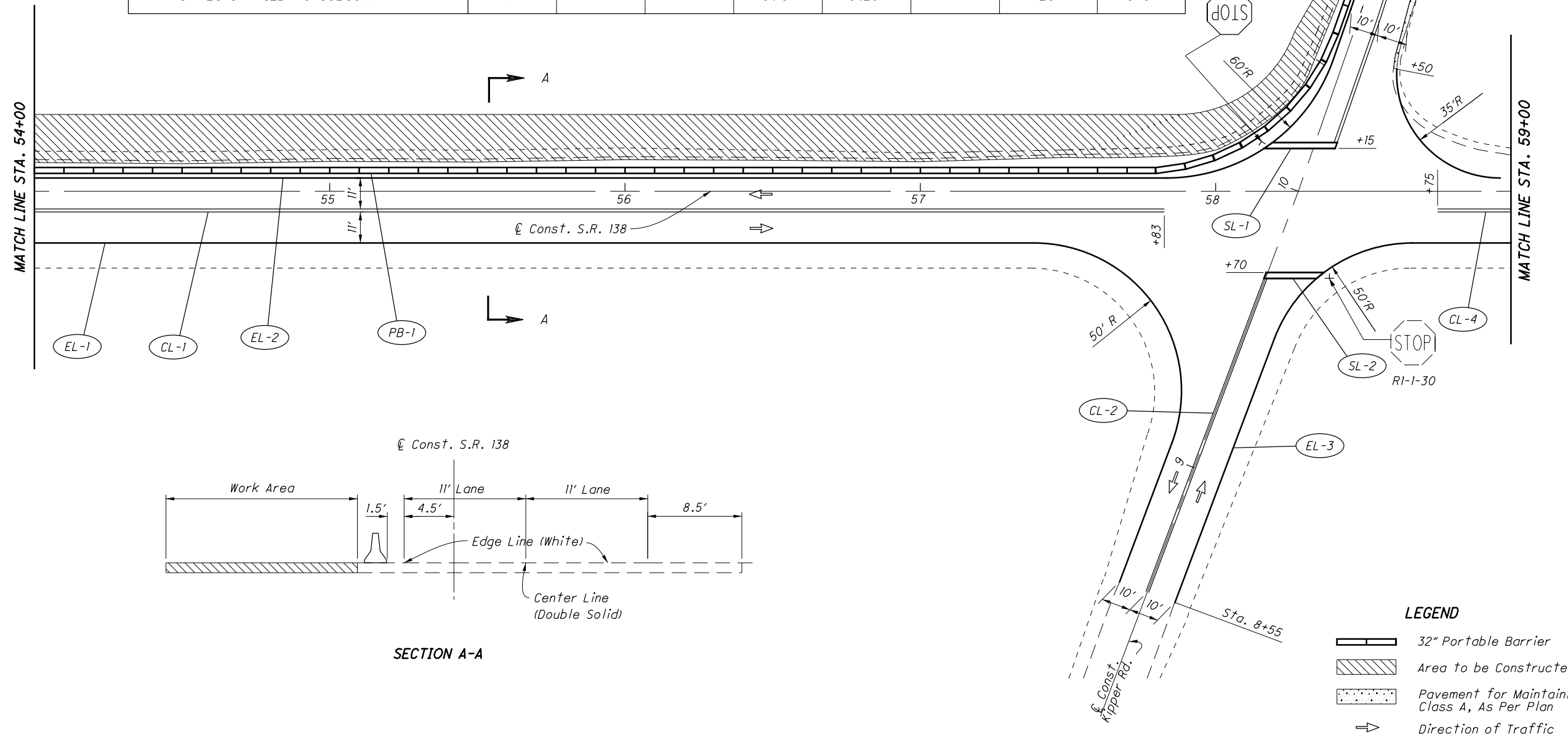
0 20 40  
HORIZONTAL SCALE IN FEET

CALCULATED  
CAN  
CHECKED  
DEK

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

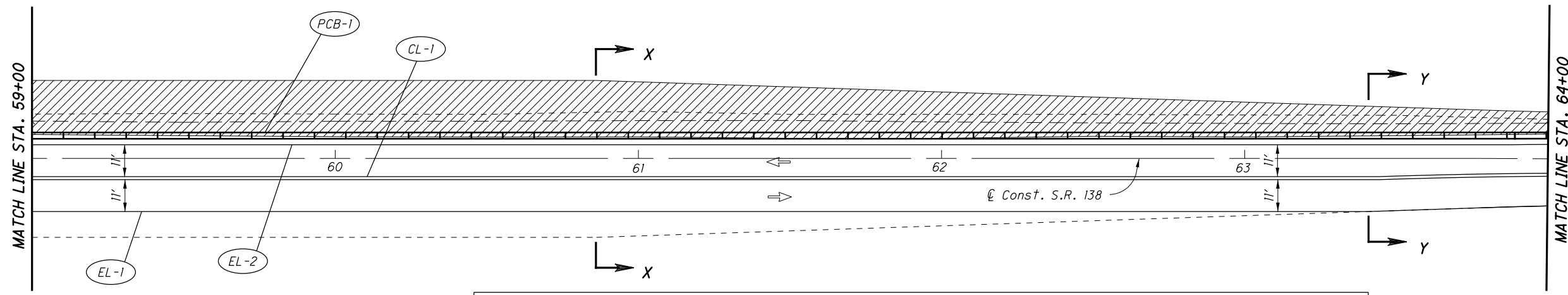
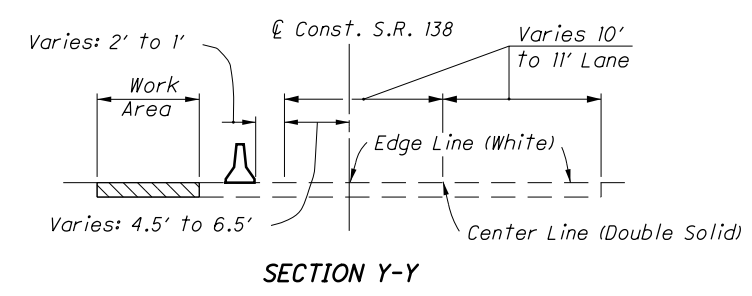
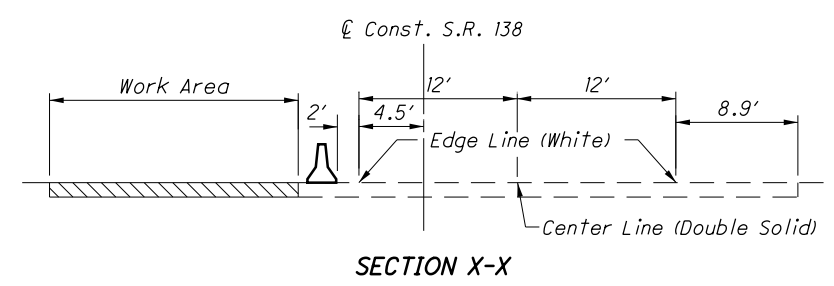
SCI-138-11.44

ESTIMATED QUANTITIES										
REF No.	Station to Station	SIDE	614			615		622		
			WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE)	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	PORTABLE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT	SY	FT
CL-1	54+00 to 57+83	Rt.				0.07				
CL-2	8+55 Kipper Rd. to 9+70 Kipper Rd.	Rt.				0.02				
CL-3	10+15 Kipper Rd. to 11+45 Kipper Rd.	Lt.				0.03				
CL-4	58+75 to 59+00	Rt.				0.01				
EL-1	54+00 to 8+55 Kipper Rd	Rt.					0.09			
EL-2	54+00 to 12+00 Kipper Rd.	Lt.					0.12			
EL-3	8+55 Kipper Rd. to 59+00	Rt.					0.04			
EL-4	11+45 Kipper Rd. to 59+00	Lt.					0.03			
SL-1	10+15 Kipper Rd	Lt.						24		
SL-2	9+70 Kipper Rd.	Rt.						20		
PCB-1	54+00 to 11+48 Kipper Rd.	Lt.		11	11				578	
IA-1	11+48 Kipper Rd. to 11+73 Kipper Rd.	Lt.	1							
TP-1	10+50 Kipper Rd. to 11+70 Kipper Rd.	Rt.						20		
TOTALS CARRIED TO SUBSUMMARY			1	11	11	0.13	0.28	44	20	578



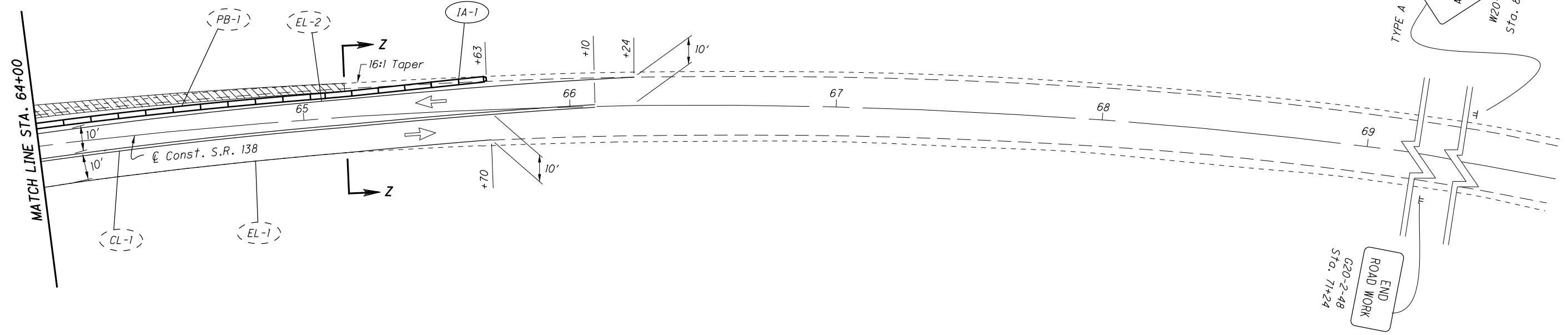
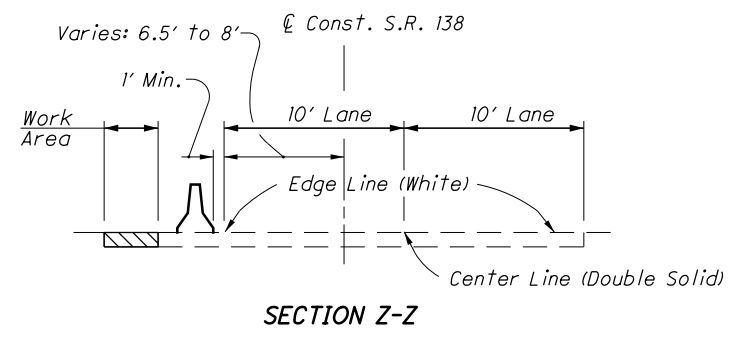
**LEGEND**

- 32" Portable Barrier
- Area to be Constructed
- Pavement for Maintaining Traffic, Class A, As Per Plan
- Direction of Traffic



- LEGEND**
- 32" Portable Barrier
  - Area to be Constructed
  - Direction of Traffic

REF No.	STATION TO STATION	SIDE	614				622	
			REMOVE AND REPLACE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE 1 (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE 1 (WHITE)	PORTABLE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT
CL-1	59+00 to 66+10	Rt.				0.13		
EL-1	59+00 to 65+70	Rt.					0.13	
EL-2	59+00 to 66+24	Lt.					0.14	
PB-1	59+00 to 65+38	Lt.		14	14			638
IA-1	65+38 to 65+63	Lt.	1					
<b>TOTALS CARRIED TO SUBSUMMARY</b>			<b>1</b>	<b>14</b>	<b>14</b>	<b>0.13</b>	<b>0.27</b>	<b>638</b>



SHEET NO.	PHASE	614											615		622											
		WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO-WAY	WORK ZONE CENTER LINE, CLASS I (DOUBLE SOLID)	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I (WHITE)	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I (WHITE)	WORK ZONE CHANNELIZING LINE, CLASS I	WORK ZONE TRANSVERSE LINE, CLASS I (YELLOW)	WORK ZONE STOP LINE, CLASS I, 740.06 TYPE I	WORK ZONE LANE ARROW, CLASS I	ROADS FOR MAINTAINING TRAFFIC	PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN	PORTABLE CONCRETE BARRIER, 32"											
		EACH	EACH	EACH	MILE	MILE	MILE	MILE	FT	FT	FT	EACH	LUMP	SQ. YD.	FT											
14													LUMP													
15	1														100											
16	1													188												
18	2				0.08		0.04																			
19	2	1	15	15	0.15		0.03								714											
20	2	2	7	7	0.10		0.19								310											
21	2				0.02	0.14	0.03	0.16																		
22	2					0.03		0.07																		
25	3	1	2	2	0.05		0.10					43			50											
26	3	1	7	7	0.10		0.19								310											
27	3	1	6	6	0.07		0.16		49		45	2			298											
28	3				0.02	0.15	0.03	0.16																		
29	3					0.03		0.07																		
36	4				0.02		0.02																			
37	4	1	11	11	0.13		0.28					44		20	578											
38	4	1	5	5	0.12		0.19								225											
39	4	1	8	8	0.10	0.03	0.17					33			365											
40	4				0.03	0.14	0.03	0.08																		
41	4					0.04		0.04																		
43	5				0.04		0.02																			
44	5				0.19		0.13																			
45	5				0.11		0.19																			
46	5				0.15		0.15		53	350	72	4														
47	5				0.03	0.20	0.03	0.20			25															
TOTALS CARRIED TO GENERAL SUMMARY		9	61	61	1.51	0.76	1.98	0.78	102	375	237	6	LUMP	308	2,850											

MAINTENANCE OF TRAFFIC SUBSUMMARY



CALCULATED TD CHECKED NEM  
HORIZONTAL SCALE IN FEET  
0 25 50 100

**TEMPORARY ROAD PLAN AND PROFILE**

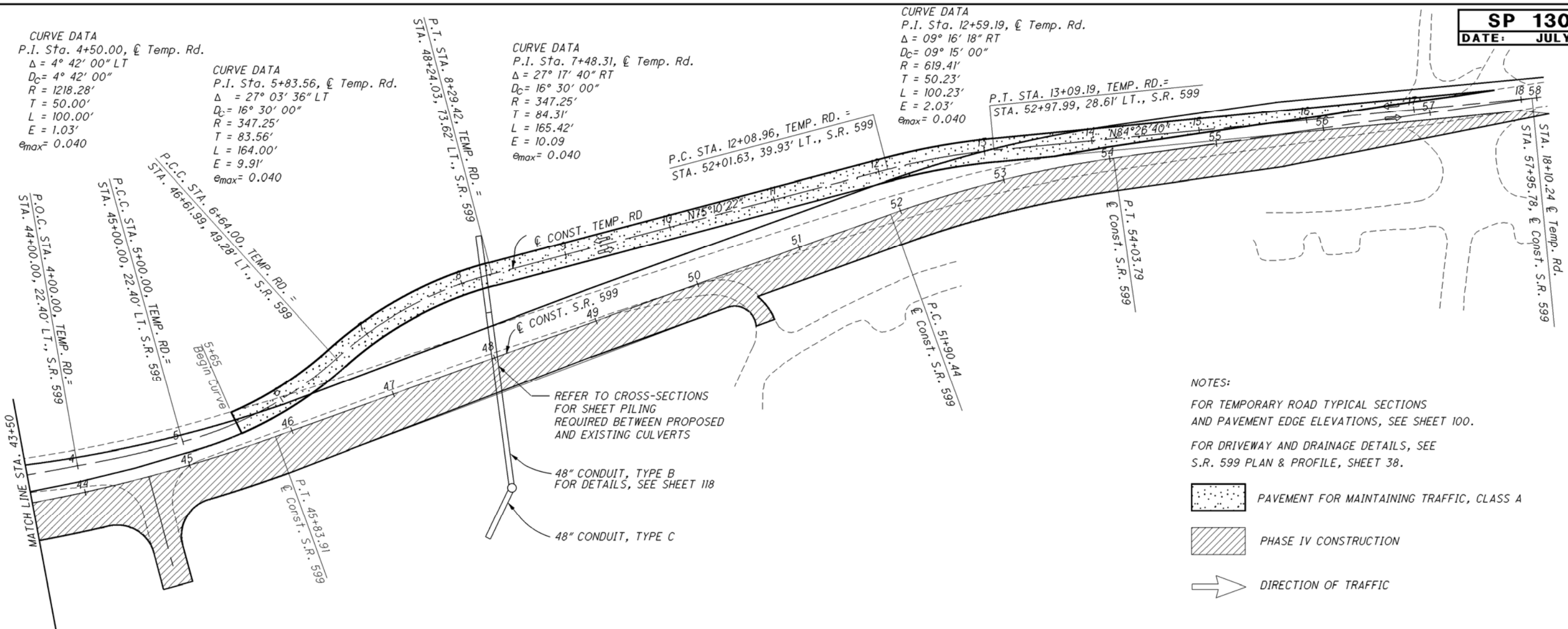
**LIC-599-8.54**

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

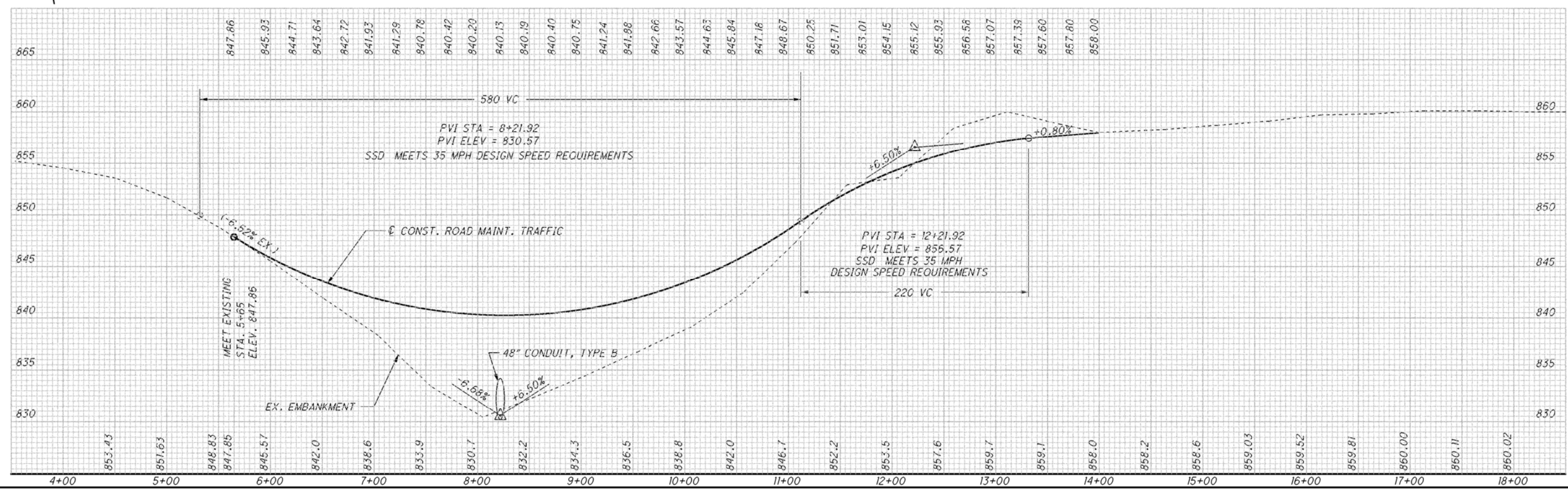
**CURVE DATA**  
P.I. Sta. 5+83.56,  $\text{\textcircled{C}}$  Temp. Rd.  
 $\Delta = 27^\circ 03' 36''$  LT  
 $D_C = 16^\circ 30' 00''$   
 $R = 347.25'$   
 $T = 83.56'$   
 $L = 164.00'$   
 $E = 9.91'$   
 $e_{max} = 0.040$

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

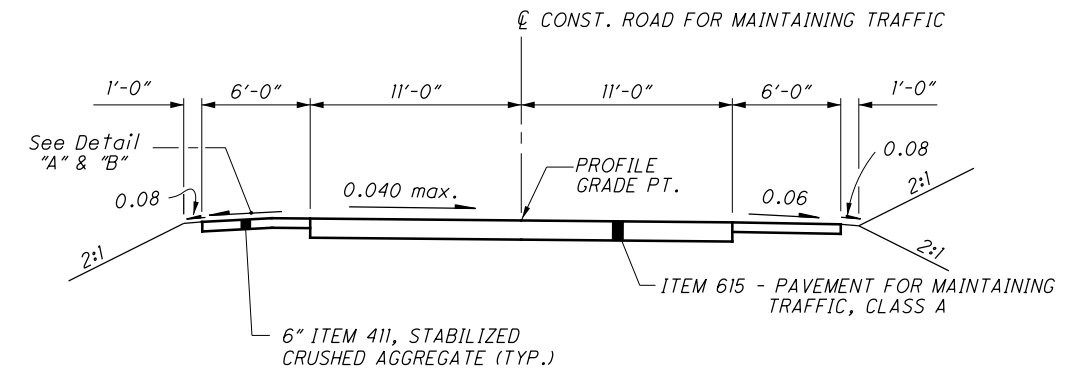
**CURVE DATA**  
P.I. Sta. 12+59.19,  $\text{\textcircled{C}}$  Temp. Rd.  
 $\Delta = 09^\circ 16' 18''$  RT  
 $D_C = 09^\circ 15' 00''$   
 $R = 619.41'$   
 $T = 50.23'$   
 $L = 100.23'$   
 $E = 2.03'$   
 $e_{max} = 0.040$



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

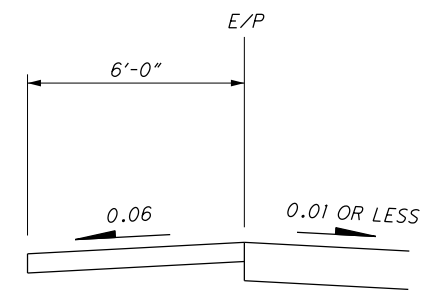


ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85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

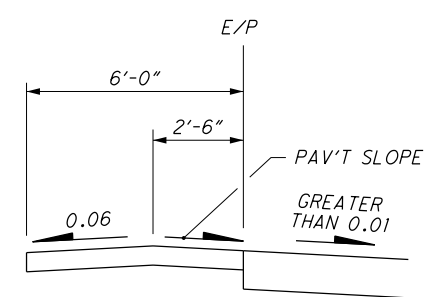


**SUPERELEVATED SECTION**

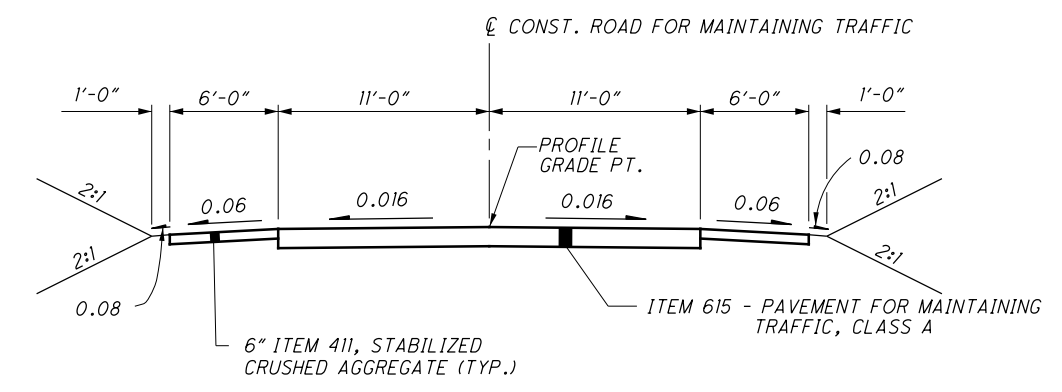
STA. 5+65.00 TO STA. 6+64.00  
 STA. 6+64.00 TO STA. 9+20.00 (OPPOSITE HAND)  
 STA. 11+40.00 TO STA. 13+50.00



**DETAIL "A"**

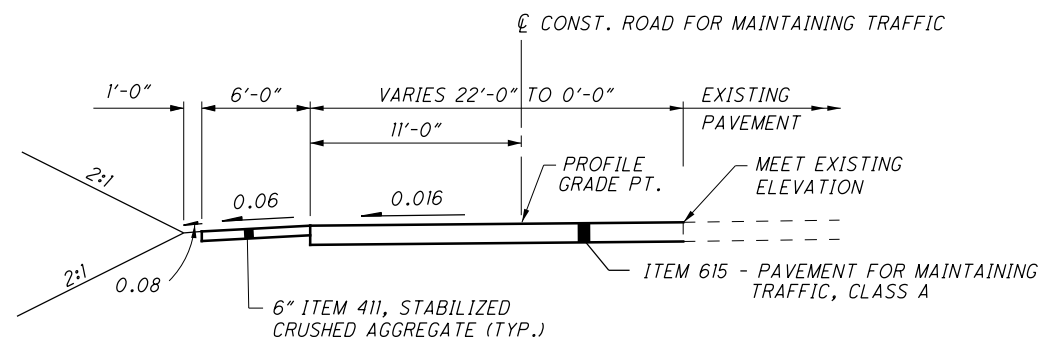


**DETAIL "B"**



**NORMAL SECTION**

STA. 9+20.00 TO STA. 11+40.00



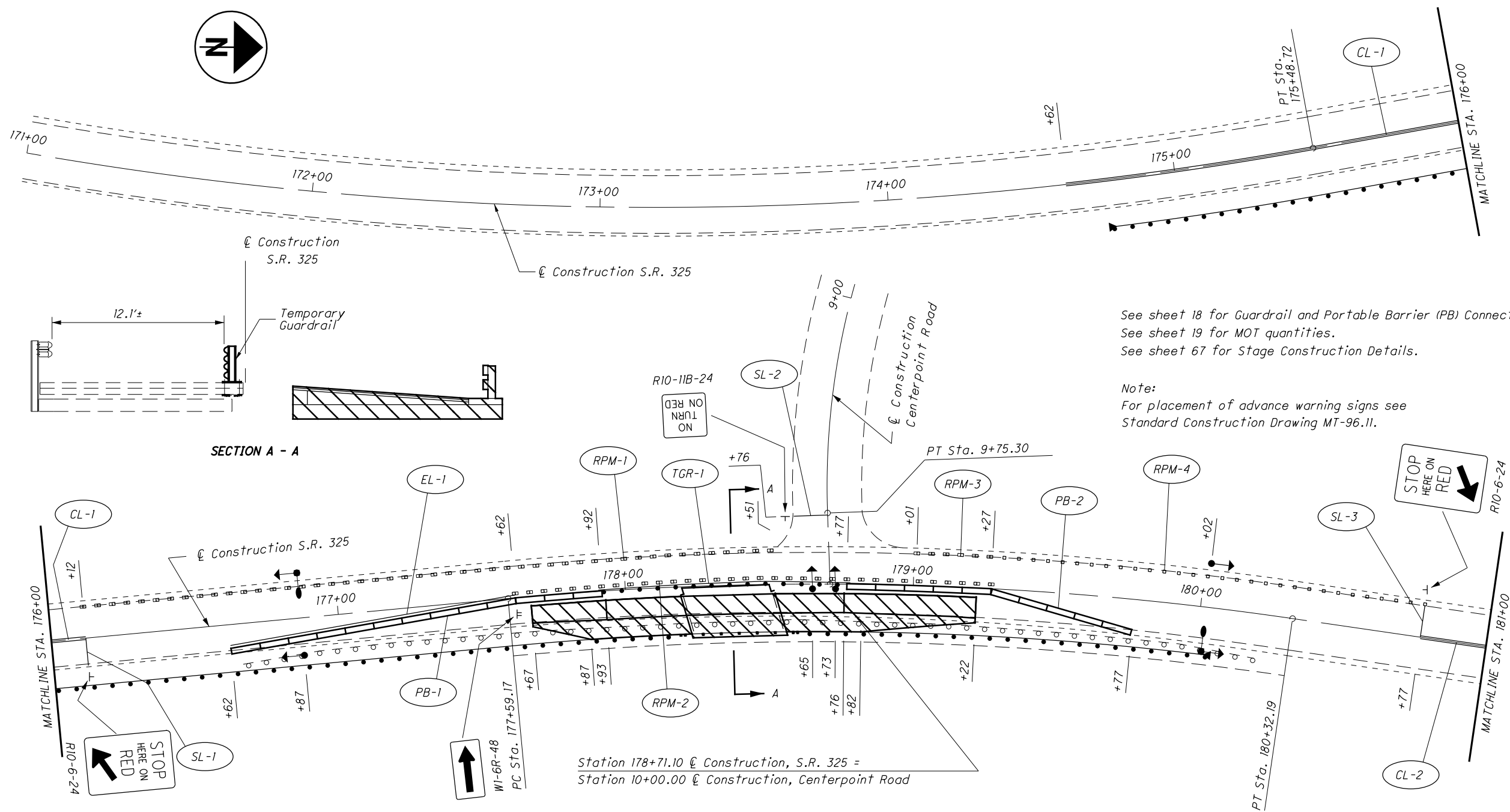
**TAPER SECTION**

STA. 13+50.00 TO STA. 18+10.24

**TEMPORARY ROAD TYPICAL SECTIONS AND ELEVATIONS**

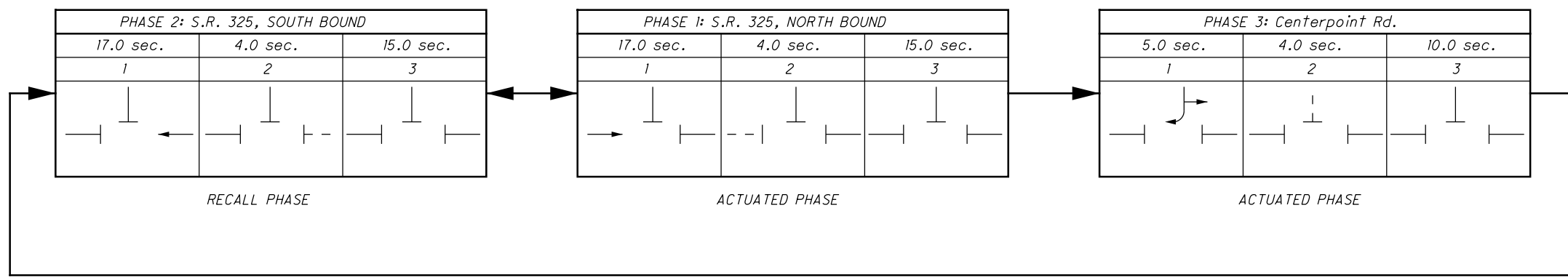
**LIC-599-8.54**

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



Legend

- 32" Concrete Barrier
- Area to be constructed



PHASE 1 - SIGNAL TIMING DIAGRAM

BENDS AND BRANCHES  
 FOR INFORMATION ONLY

SHEET NO.	202		601		611										605										
	CATCH BASIN ABANDONED	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	6" CONDUIT, TYPE B	12" CONDUIT, TYPE C	15" CONDUIT, TYPE C	21" CONDUIT, TYPE B	30" CONDUIT, TYPE B	CONDUIT, BORED OR JACKED (6", TYPE B)	6" CONDUIT, TYPE F	CATCH BASIN, NO. 4	CATCH BASIN, NO. 5, AS PER PLAN	CATCH BASIN ADJUSTED TO GRADE	CATCH BASIN RECONSTRUCTED TO GRADE	PRECAST REINFORCED CONCRETE OUTLET	4" SHALLOW PIPE UNDERDRAINS	4" UNCLASSIFIED PIPE UNDERDRAINS	4" ROCK CUT UNDERDRAINS				6"X45° BEND	6"X90° BEND	6"X6" TEE	6"X6" WYE	6"X6" CROSS
	EACH	CY	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT				EACH	EACH	EACH	EACH	EACH
117								35	222					3	2793						3	2	1		1
118								42	42					1	4000						6	2	2		2
119	1				105				260	1				4	3783			267			4	2	2		
120									26					1	50			3947				4		2	1
121		23				6	6	50	180		1	1	1					4000					3	3	2
122								51	213				1		1660			873			2				
123									112						1882						1			2	
124									90				1		3984						3	2	2		
125			25						98					1	3683	283					5			1	
126	1								160	1				2	4071						5	2	3		
127				108										1	3650	350					4				
128									196					4	4000						4		3		
129	1				107				188	1				4	4000						4		2		
130			25						130					1	4000						4		2		
131									198					4	4000						2	2	2	1	1
132									123					2	4000						2			2	
133									144					3	4000						2	2	2		1
134								27	171			1		3	4577						4	2	3	1	
135														2	3160						2	3			
135A			50						156					1	2024						2	2	2		
136									60					3	928								2		
137									26					1	836	47						2			
138									24					1	542	50						1		1	
139									40			1		2	958						2				1
142									56					3	1122							3			
143									18					1	720	50					2		1		
144									38					2	814							2			
145									38					2	1218							4			
146									40					2	822							2	2	1	
147									34					2	720							2			1
TOTALS CARRIED TO GENERAL SUMMARY	3	23	100	215	105	6	6	163	3196	3	1	5	2	56	71997	780	9087								

**DRAINAGE SUBSUMMARY**

**STA - 6 - 18.84**



REF NO.	STORM SEWER PROFILE SHEET NO.	STATION		SIDE	202		601	602	611										605	670	SP 1307-2			
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CONCRETE MASONRY	6" CONDUIT, TYPE F	12" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	24" CONDUIT, TYPE B	42" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 4	CATCH BASIN, NO. 4A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	4" SHALLOW PIPE UNDERDRAINS	DITCH EROSION PROTECTION	DATE: JULY 2016			
																					BENDS AND BRANCHES FOR INFORMATION ONLY			
FROM	TO	FT	EACH	CY	CY	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	SY	6"X6" TEE	6"X6" CROSS	6"X90° BEND				
D1	209 & 210	360+00	364+00	℄							400				1						125			
D2	210		364+00	RT							200										250			
D3	154		363+60	LT&RT						160														
D4	154		364+00	LT																				
D5	154		364+00	℄																				
D6	154		364+00	RT			6								1									
D7	154		364+00	LT																				
D8	210	364+00	365+00	RT							100						1					197		
D9	210	364+00	365+35	℄											1							226		
D10	210	364+00	365+75	LT							175						1					259		
D11	157		368+20	℄										64		1								
D12	157		368+20	LT									68				1							
D13	157		368+20	RT			1	0.4						77										
D14	212	368+20	371+00	LT							280											125		
D15	212	368+20	371+00	℄							280				1							125		
D16	212	368+20	371+00	RT							280						1					125		
RI			368+00	RT	20	1																		
U1		359+90	363+97	RT						20												407	1	
U2		359+90	363+97	LT						20												407	1	
U3		359+90	363+97	LT						22												814	1	
U4		359+90	363+97	RT						22												814	1	
U5		364+03	368+18	RT						20												415	1	
U6		364+03	368+18	RT						22												830	1	
U7		364+03	368+18	LT						22												830	1	
U8		364+03	368+18	LT						20												415	1	
U9		368+22	371+00	LT						22												556	1	
U10		368+22	371+00	RT						22												556	1	
U11		368+22	371+00	RT						20												278	1	
U12		368+22	371+00	LT						20												278	1	
U13		371+00	373+50	LT																		500	2	
U14		371+00	373+50	LT																		250	1	
U15		371+00	373+50	RT																		500	2	
U16		371+00	373+50	RT																		250	1	
ALL QUANTITIES FROM PLAN & PROFILE SHEET 81																								
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					20	1	7	0.4	252	160	1850	68	141	144	4	1	7	2	8100	1557				

CALCULATED: MTG  
 CHECKED: CJM  
**ESTIMATED QUANTITIES**  
**LUC-76-31.48**  
 82  
 488



SHEET NUMBER

OFFICE CALCS 196

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

SEE SHEET NO. CALCULATED JKP CHECKED FGW

ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
<b>PAVEMENT</b>					
312	251	312	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
4140	253	4140	SY	PAVEMENT REPAIR	
9005	255	9005	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS OC1, AS PER PLAN	16
2894	255	2894	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS OC MS, AS PER PLAN	16
34828	255	34828	FT	FULL DEPTH PAVEMENT SAWING	
17759	304	17759	CY	AGGREGATE BASE	
3892	305	3892	SY	9" CONCRETE BASE, CLASS OC 1P	
127	407	127	GAL	TACK COAT	
5813	408	5813	GAL	PRIME COAT	
1029	451	1029	SY	9" REINFORCED CONCRETE PAVEMENT, CLASS OC 1P, AS PER PLAN	12
31690	451	31690	SY	10" REINFORCED CONCRETE PAVEMENT, CLASS OC 1P, AS PER PLAN	12
6783	452	6783	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC 1P, AS PER PLAN	12
50342	452	50342	SY	VARIABLE THICKNESS NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
<b>WATER WORK</b>					
	3649	3649	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS	
	2481	2481	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, BOLTLESS-RESTRAINED JOINTS AND FITTINGS	
	2107	2107	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 55, BALL AND SOCKET JOINTS AND FITTINGS	
	1142	1142	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, AWWA C900, DR18	
	1608	1608	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, ASTM SDR 26	
	438	438	FT	3/4" COPPER SERVICE BRANCH	
	464	464	FT	3/4" POLYETHYLENE SERVICE BRANCH	
	212	212	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT	
	310	310	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED	
	18	18	EACH	12" GATE VALVE AND VALVE BOX	
	16	16	EACH	12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX	
	12	12	EACH	12" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	
	36	36	EACH	6" FIRE HYDRANT	
	10	10	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE	
	8	8	EACH	FIRE HYDRANT REMOVED AND RESET	
	8	8	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET	
	12	12	EACH	VALVE BOX ADJUSTED TO GRADE	
	6	6	EACH	SERVICE BOX ADJUSTED TO GRADE	
	4	4	EACH	METER AND CHAMBER REMOVED AND RESET	

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER										PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-3(c) DATE: JULY 2019		SEE SHEET NO.	CALCULATED	JKP CHECKED	FGW
16	18	23	55	192	262	192	262	108	190													
<b>RETAINING WALLS (WALL 1) OPTION A: REINFORCED EARTH WALL</b>																						
				1710						203	20000	1710	CY	EMBANKMENT								
				3474						203	35000	3474	CY	GRANULAR EMBANKMENT								
				LS						503	11100	LS		COFFERDAMS AND EXCAVATION BRACING								
				1124						503	21101	1124	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	108							
				4766						610	50010	4766	SF	RETAINING WALL, MISC.: REINFORCED EARTH WALL SYSTEM	190							
<b>RETAINING WALLS (WALL 1) OPTION B: RETAINED EARTH WALL</b>																						
				1636						203	20000	1636	CY	EMBANKMENT								
				3584						203	35000	3584	CY	GRANULAR EMBANKMENT								
				LS						503	11100	LS		COFFERDAMS AND EXCAVATION BRACING								
				1150						503	21101	1150	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	108							
				4738						610	50010	4738	SF	RETAINING WALL, MISC.: RETAINED EARTH WALL SYSTEM	190							
<b>BUILDING DEMOLITION</b>																						
								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								
<b>STRUCTURES OVER 20 FOOT SPAN</b>																						
														<b>STRUCTURE TRU-99-1924 GENERAL SUMMARY</b>	229							
														<b>STRUCTURE TRU-99-2056 GENERAL SUMMARY</b>	236							
								878		SPECIAL	51272000	878	SY	EPOXY WATERPROOFING OVERLAY (1/4" THICK)	190							
<b>MAINTENANCE OF TRAFFIC</b>																						
	10									614	11110	10	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE								
	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								
								1528		614	12800	1528	EACH	WORK ZONE RAISED PAVEMENT MARKER								
				1201						614	13310	1201	EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)								
	14.00									614	20300	14.00	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE II								
				0.11						614	21300	0.11	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE II								
	0.26									614	21700	0.26	MILE	WORK ZONE CENTER LINE, CLASS II, 740.06, TYPE II								
				4.33						614	22000	4.33	MILE	WORK ZONE EDGE LINE, CLASS I, 4"								
				7.34						614	22300	7.34	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE II								
				48						614	26600	48	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE II								
	5692									614	28600	5692	FT	WORK ZONE GORE MARKING, CLASS II, 740.06, TYPE II								
				LS						615	10000	LS		ROADS FOR MAINTAINING TRAFFIC								
				944						615	20001	944	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	17							
	30									616	10000	30	M GAL	WATER								
	10									616	20000	10	TON	CALCIUM CHLORIDE								
				30280						622	41001	30280	FT	PORTABLE BARRIER, 32", AS PER PLAN	58							
<b>INCIDENTALS</b>																						
										614	11000	LS		MAINTAINING TRAFFIC								
										619	16020	8	MNTH	FIELD OFFICE, TYPE C								
										623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING								
										624	10000	LS		MOBILIZATION								

GENERAL SUMMARY

TRU - 99 - 13.48

SHEET NUMBER										PARTICIPATION	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	FIG. 1307-3(d)	SEE SHEET NO.	CALCULATED	JKP	CHECKED	FGW												
10	18	25								01/SC2/OT/HEBR						DATE: JULY 2019																	
<b>ADDITIVE ALTERNATE 1: SIDEWALK</b>																																	
5985											5985	608	10000	5985	SF	4" CONCRETE WALK																	
126											126	608	52000	126	SF	CURB RAMP																	
		5									5	616	10000	5	MGAL	WATER																	
		105									105	659	00300	105	CY	TOPSOIL																	
		940									940	659	10000	940	SY	SEEDING AND MULCHING																	
<b>ADDITIVE ALTERNATE 2: PEDESTRIAN CROSSWALK</b>																																	
			52								52	630	02100	52	FT	GROUND MOUNTED SUPPORT, NO. 2 POST																	
			1								1	630	08600	1	EACH	SIGN POST REFLECTOR																	
			27.8								27.8	630	80100	27.8	SF	SIGN, FLAT SHEET																	
			2								2	630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL																	
			2								2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL																	
			2								2	631	92001	2	EACH	SIGN FLASHER ASSEMBLY, AS PER PLAN					5												
			13								13	644	00500	13	FT	STOP LINE																	
			200								200	644	00600	200	FT	CROSSWALK LINE																	
<b>INCIDENTALS</b>																																	
												614	11000	LS		MAINTAINING TRAFFIC																	
												619	16010	6	MNTH	FIELD OFFICE, TYPE B																	
												623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING																	
												624	10000	LS		MOBILIZATION																	

GENERAL SUMMARY

LIC-C.R. 79-0.89

SHEET NUMBER							PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-4 DATE: JULY 2019	SEE SHEET NO.	CALCULATED DMK CHECKED CML
OFFICE CALCS	64	68	97	165	175	01/NHS/ PV/COLS	02/NHS/PV	03/STR/PV										
														<b>ROADWAY</b>				
1000								1000			202	23000	1000	SY	PAVEMENT REMOVED			
	12										202	58700	12	EACH	MANHOLE ABANDONED			
											202	75000	225	FT	FENCE REMOVED			
											202	75250	1	EACH	GATE REMOVED			
															<b>ROADWAY ALTERNATES</b>			
									X		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIFEN) (ALTERNATE 1)		9	
									X		606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIFEN) (ALTERNATE 1)		9	
									X		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (TRINITY) (ALTERNATE 2)		9	
									X		606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (TRINITY) (ALTERNATE 2)		9	
									X		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (MARION STEEL) (ALTERNATE 3)		9	
									X		606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (MARION STEEL) (ALTERNATE 3)		9	
															<b>EROSION CONTROL</b>			
											659	00100	2	EACH	SOIL ANALYSIS TEST			
											659	00300	44	CY	TOPSOIL			
											659	10000	400	SY	SEEDING AND MULCHING			
											659	14000	20	SY	REPAIR SEEDING AND MULCHING			
											659	15000	20	SY	INTER-SEEDING			
											659	20000	0.05	TON	COMMERCIAL FERTILIZER			
											659	31000	0.08	ACRE	LIME			
											659	35000	2	MGAL	WATER			
											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			
															<b>PAVEMENT</b>			
1844								1844			254	01000	1844	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1 1/2")			
1265											301	46000	1265	CY	ASPHALT CONCRETE BASE, PG64-22			
50											301	48000	50	CY	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)			
2627								986	1641		304	20000	2627	CY	AGGREGATE BASE			
5333								5333			305	12010	5333	SY	8" CONCRETE BASE, CLASS QC 1P			
5695								3647	2048		407	10000	5695	GAL	TACK COAT			
18											441	50400	18	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS)			
415								226	189		442	10000	415	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (446)			
497								268	229		442	10100	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A, (446)			
4000								4000			609	12000	4000	FT	COMBINATION CURB AND GUTTER, TYPE 2			
															<b>WATER WORK</b>			
								896			SPECIAL	63820184	896	FT	12" WATER MAIN DIP CLASS 54 MECHANICAL JOINTS AND FITTINGS (COL. 801)			
								14			SPECIAL	63820538	14	EACH	6" GATE VALVE WITH VALVE BOX (COL. 802)			
								260			SPECIAL	63820750	260	EACH	6" FIRE HYDRANT (COL. 809)			
								8			SPECIAL	63820844	8	FT	INSTALL 1 1/2" COPPER WATER SERVICE CONNECTION (COL. 805)			
								4			SPECIAL	63820902	4	EACH	SERVICE BOX ADJUSTED TO GRADE (COL. 807)			
															<b>SANITARY SEWER</b>			
								200			611	00900	200	FT	6" CONDUIT, TYPE B, 706.01 OR 706.08 WITH 706.11 OR 706.12 JOINTS			
								284			611	02000	284	FT	8" CONDUIT, TYPE C, 706.08 WITH 706.12 JOINTS			
								273			611	04400	273	FT	12" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS			
								28			611	05900	28	FT	15" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS			
								230			611	07400	230	FT	18" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS			
								5			611	99574	5	EACH	MANHOLE, NO. 3 WITH 706.11 JOINTS			
								8			611	99654	8	EACH	MANHOLE ADJUSTED TO GRADE			
								3			611	99660	3	EACH	MANHOLE RECONSTRUCTED TO GRADE			

GENERAL SUMMARY

FRA-11-26.48

SHEET NUMBER				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-5 DATE: JANUARY 2017	SEE SHEET NO.	CALCULATED JKP	CHECKED FGW
87	96			01/NHS/PV	02/SK2/PV/ATB									
										TRAFFIC CONTROL				
	161				161	621	00100	161	EACH	RPM				
	146				146	630	02100	146	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				
	229				229	630	03100	229	FT	GROUND MOUNTED SUPPORT, NO. 3 POST				
	4				4	630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED				
	96				96	630	80100	96	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	644	00100	3.29	MILE	EDGE LINE, 4"				
	1.36				1.06	644	00200	1.36	MILE	LANE LINE, 4"				
	1.25				0.98	644	00300	1.25	MILE	CENTER LINE				
	1368				430	644	00400	1368	FT	CHANNELIZING LINE, 8"				
	146				146	644	00500	146	FT	STOP LINE				
	313				313	644	00600	313	FT	CROSSWALK LINE				
	450				180	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE				
	24				24	644	00900	24	SF	ISLAND MARKING				
	9				2	644	01300	9	EACH	LANE ARROW				
	8				2	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	29600	120	FT	TRENCH IN PAVED AREA, TYPE B				
		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				
		1			1	632	04916	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, ALUMINUM				
		2			2	632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, ALUMINUM				
		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	MESSENGER WIRE, 7 STRAND, 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 MESSENGER 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	01661	1	EACH	CONTROLLER UNIT, TYPE 2070E WITH SEPAC SOFTWARE, WITH CABINET, TYPE 332, AS PER PLAN		95		
		1			1	633	67100	1	EACH	CABINET FOUNDATION				
		1			1	633	67200	1	EACH	CONTROLLER WORK PAD				

GENERAL SUMMARY

ATB-208-13.43

**NOTE:** SPEDuP plans will become obsolete at the end of Fiscal Year 2020 and will no longer be accepted. Contact the Office of Estimating with questions.

D04-PM-FY2016

SP 1307-6
DATE: <b>JANUARY 2020</b>

SHEET									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	DEL	MRW	FRA1	FRA2	MAD	MRW	PIC	UNI						
5	15	16	17	18	19	20	21	22						
													<b>TRAFFIC CONTROL</b>	
	209.90	48.60	12.20	12.60	34.20	152.70	100.60	120.20	642	00090	691.00	MILE	EDGE LINE, 4"	
	113.00	33.30	369.90	298.00	29.90	59.80	94.30		642	00094	998.20	MILE	EDGE LINE, 6"	
	70.00	32.70	273.00	314.10	22.20	30.60	59.60		642	00194	802.20	MILE	LANE LINE, 6"	
	106.00	23.40	8.40	6.70	17.40	79.70	50.10		642	00290	291.70	MILE	CENTER LINE	
	9201	3171	8512	4512	528		7548		642	00394	33472	FT	CHANNELIZING LINE, 12"	
		106	7689	5459	897		950		642	01510	15101	FT	DOTTED LINE, 6", <b>TYPE 1</b>	
LS									642	20000		LS	TWO WAY RADIO EQUIPMENT	
													<b>MAINTENANCE OF TRAFFIC</b>	
240									614	11110	240	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
													<b>INCIDENTALS</b>	
LS									614	11000		LS	MAINTAINING TRAFFIC	
LS									614	11001		LS	MAINTAINING TRAFFIC, AS PER PLAN	4
LS									624	10001		LS	MOBILIZATION, AS PER PLAN	4

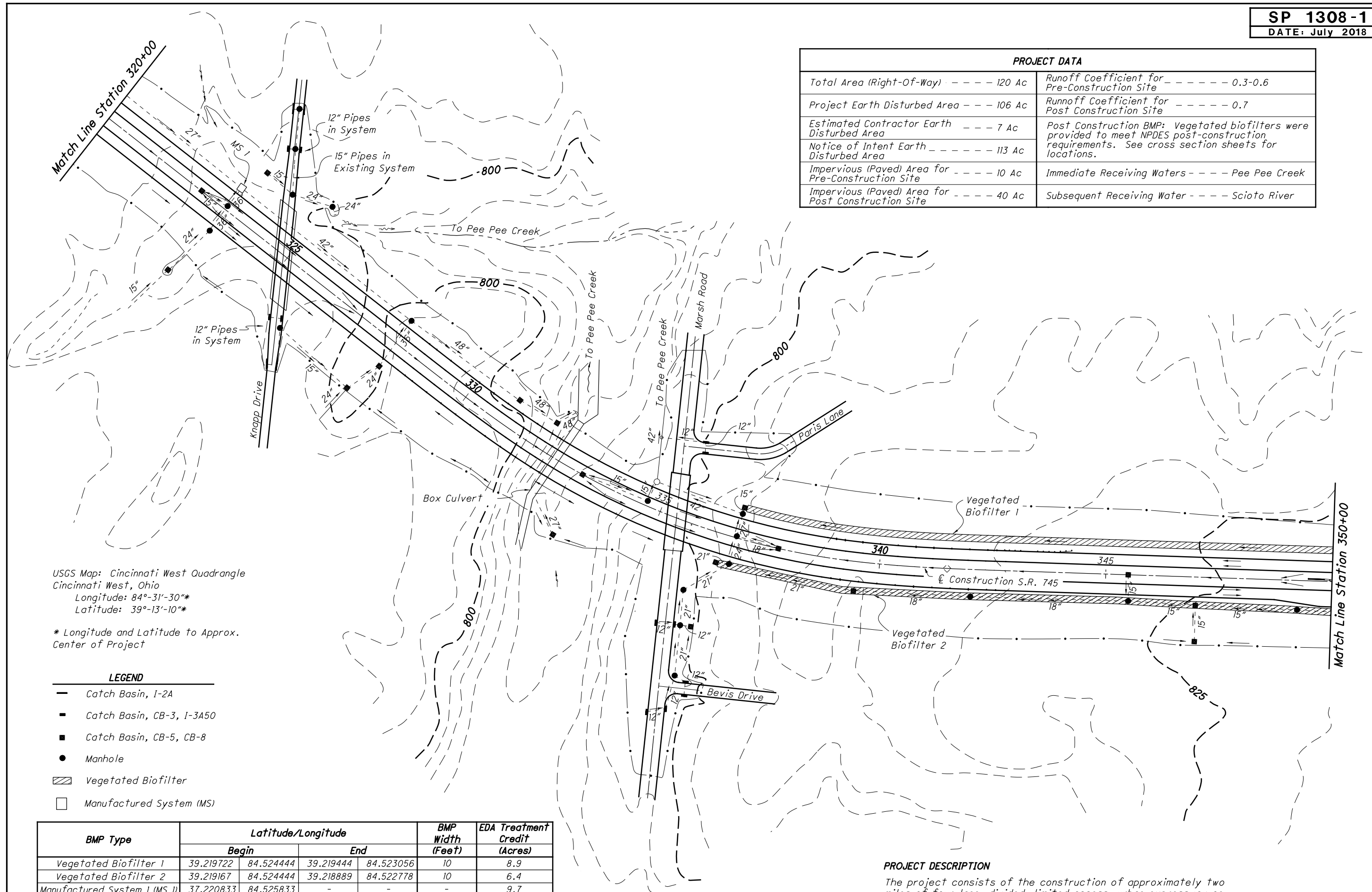
Calculated by: JJD  
 Checked by: DAC





CALCULATED: JOH  
CHECKED: JDH

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



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

\* Longitude and Latitude to Approx. Center of Project

**LEGEND**

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

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

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

**PROJECT DESCRIPTION**

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

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

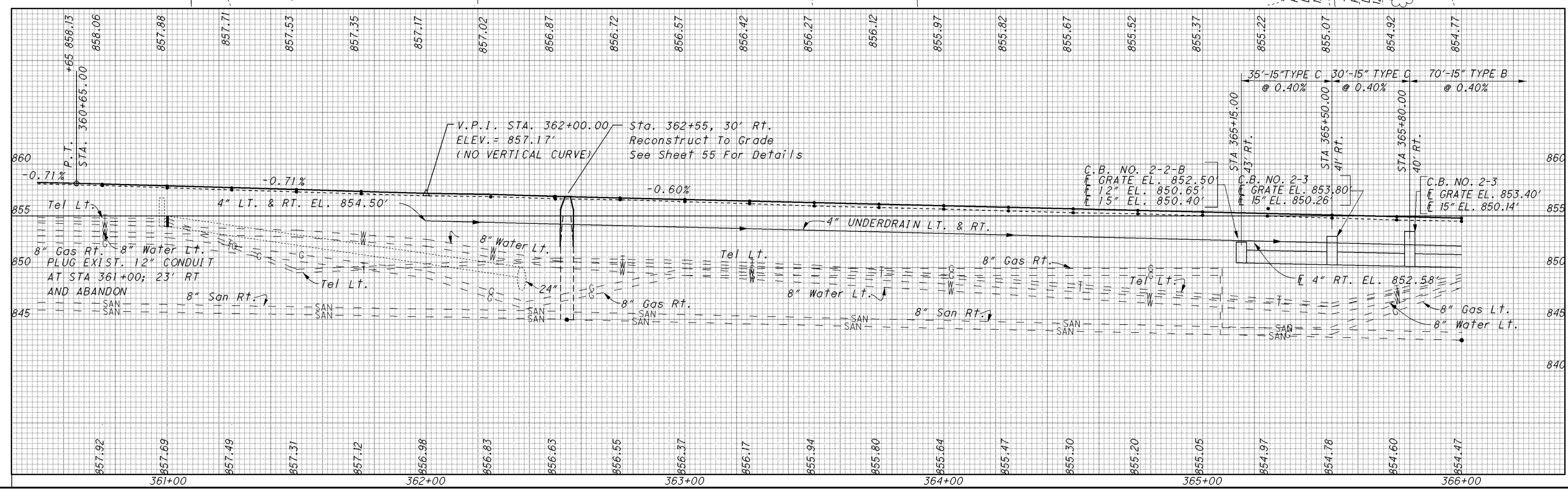
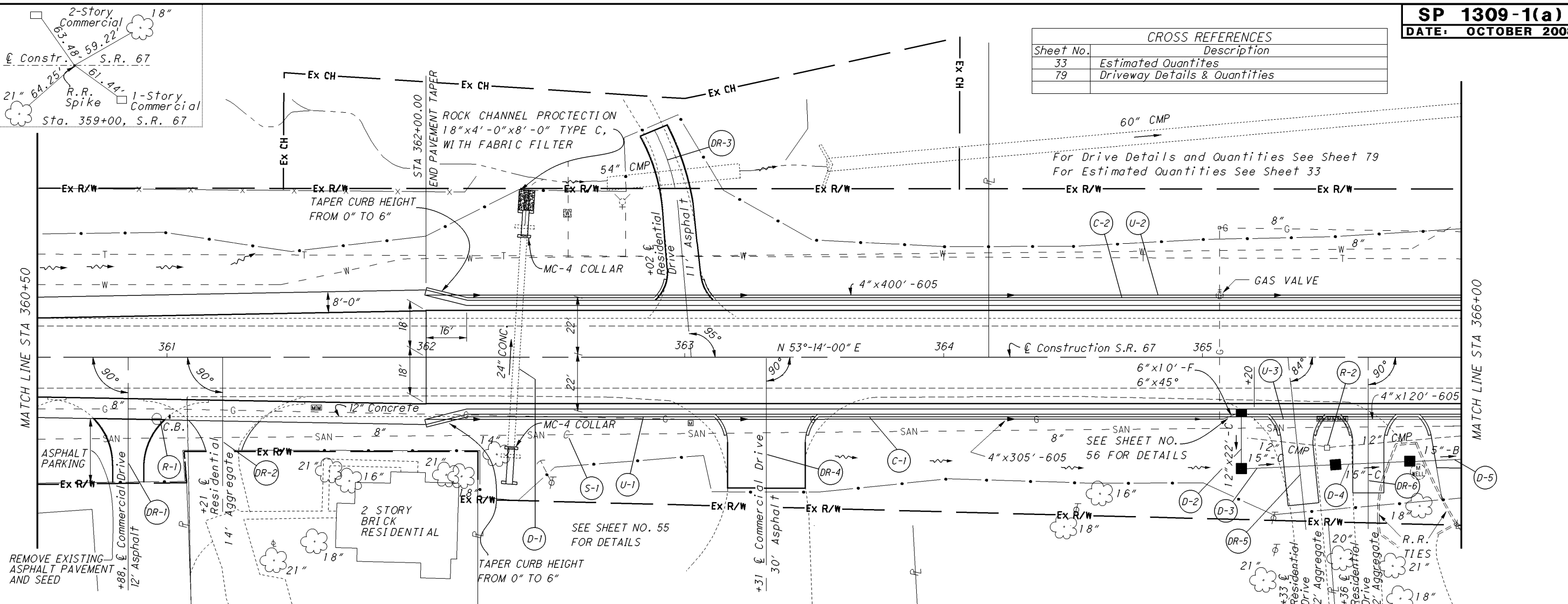
**HAM-745-18.36**



0 10 20 30 40  
HORIZONTAL SCALE IN FEET

CALCULATED MJG  
CHECKED DSN

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



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

CLI-67-16.86

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REF NO.	SHEET NO.	STATION		SIDE	202		601	602	611										SP 1309-1(b)			CALCULATED MJC CHECKED DSN															
					CATCH BASIN REMOVED	PIPE REMOVED 24" AND UNDER	ROCK CHANNEL PROTECTION TYPE C WITH FABRIC 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, TYPE F	MANHOLE ADJUSTED TO GRADE (SANITARY)	MANHOLE RECONSTRUCTED TO GRADE (SANITARY)	CATCH BASIN, NO. 2-2B	CATCH BASIN, NO. 2-3	CATCH BASIN, NO. 3A	DATE: JANUARY 2013		BENDS AND BRANCHES FOR INFO. ONLY														
																					605			609	NO.												
FROM	TO	EACH	FT	CY	CY	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	4" SHALLOW PIPE UNDERDRAIN	COMBINATION CURB AND GUTTER TYPE 2	6"x45°																
C-1	31-32,34	362+00	373+00	Rt																																	
C-2	31-32	362+00	366+93	Lt																																	
C-3	32,34	367+37	371+67	Lt																																	
R-1	31	360+97		Rt	1																																
R-2	31 & 32	365+16	366+30	Rt	1	114																															
R-3	32	366+89	367+33	Rt		44																															
R-4	32	367+28	367+35	Rt		28																															
R-5	32	367+56	368+03	Rt		47																															
R-6	32	368+65	369+13	Rt		48																															
R-7	32	369+46	370+50	Rt		104																															
R-8	32 & 34	370+83	372+00	Rt	1	117																															
D-1	31 & 55	362+35		Lt & Rt			2	0.9	24																												
D-2	31	365+15		Rt									22																								
D-3	31	365+15	365+50	Rt										35																							
D-4	31	365+50	365+80	Rt										30																							
D-5	31 & 32	365+80	366+50	Rt																																	
D-6	32	366+42	366+62	Lt																																	
D-7	32	366+50		Rt																																	
D-8	32	366+50	367+47	Rt																																	
D-9	32	367+27	367+47	Rt																																	
D-10	32	367+47	368+50	Rt																																	
D-11	32	368+50		Rt																																	
D-12	32	368+50	369+32	Rt																																	
D-13	32	369+32	369+98	Rt																																	
D-14	32	369+98		Rt																																	
D-15	32	369+98	370+70	Rt																																	
D-16	32	370+70	371+45	Rt																																	
S-1	31 & 55	362+55		Rt																																	
S-2	32 & 57	366+36		Rt																																	
S-3	32 & 57	369+40		Rt																																	
U-1	31	362+00	365+15	Rt																																	
U-2	31 & 32	362+00	366+42	Lt																																	
U-3	31 & 32	365+20	366+50	Rt																																	
U-4	32	366+55	368+50	Rt																																	
U-5	32	368+55	369+98	Rt																																	
U-6	32	367+55	371+45	Lt																																	
U-7	32 & 34	370+03	372+00	Rt																																	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					3	502	2	0.9	24	70	495	147	65	25	70	1	2	1	8	5	1744	2090															

ESTIMATED QUANTITIES - STA. 360+50 TO STA 371+50

CLI-67-16.86



0 20 40  
HORIZONTAL  
SCALE IN FEET

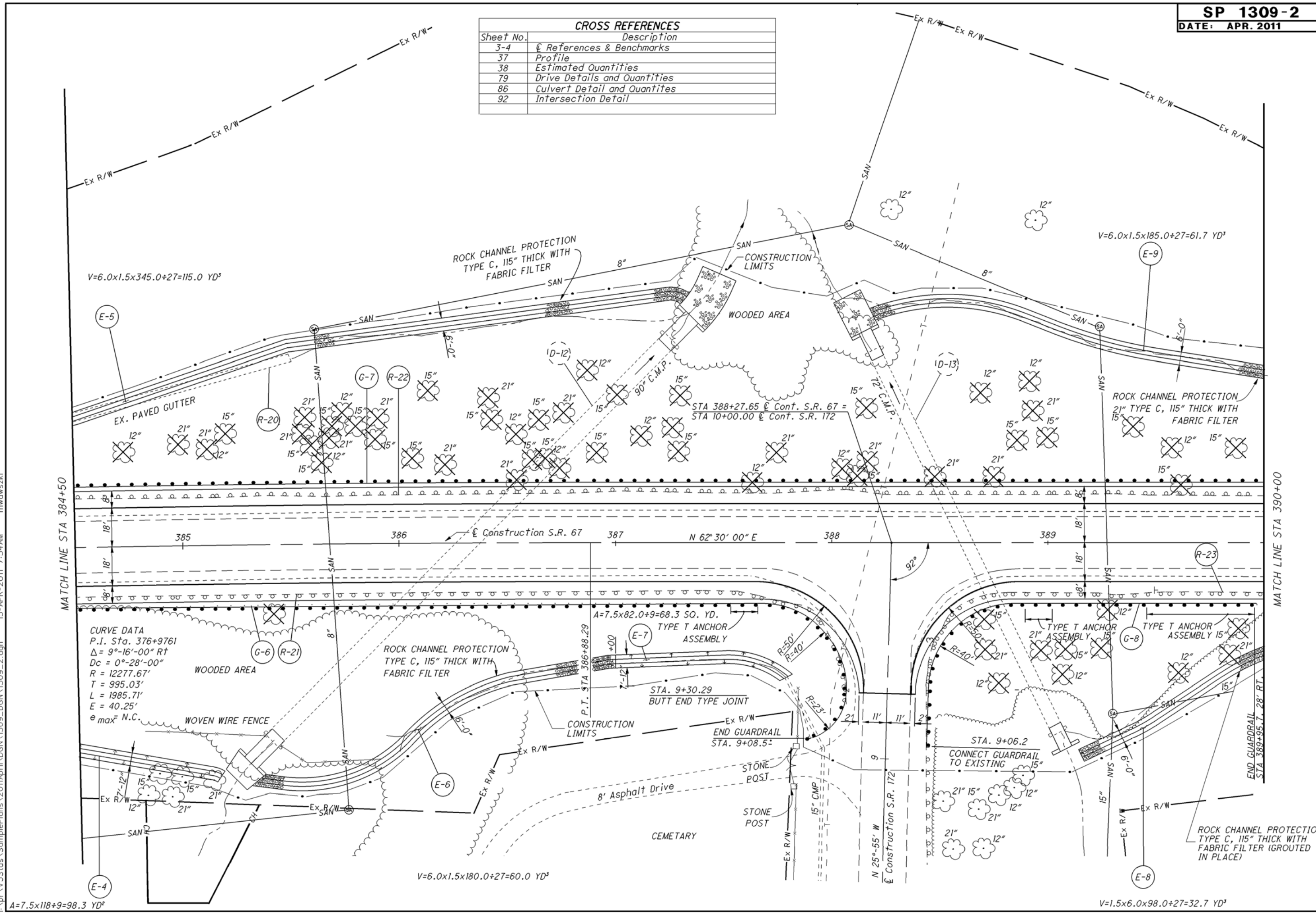
CALCULATED  
M/JG  
CHECKED  
DSN

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

CLI-67-16.86

36  
97

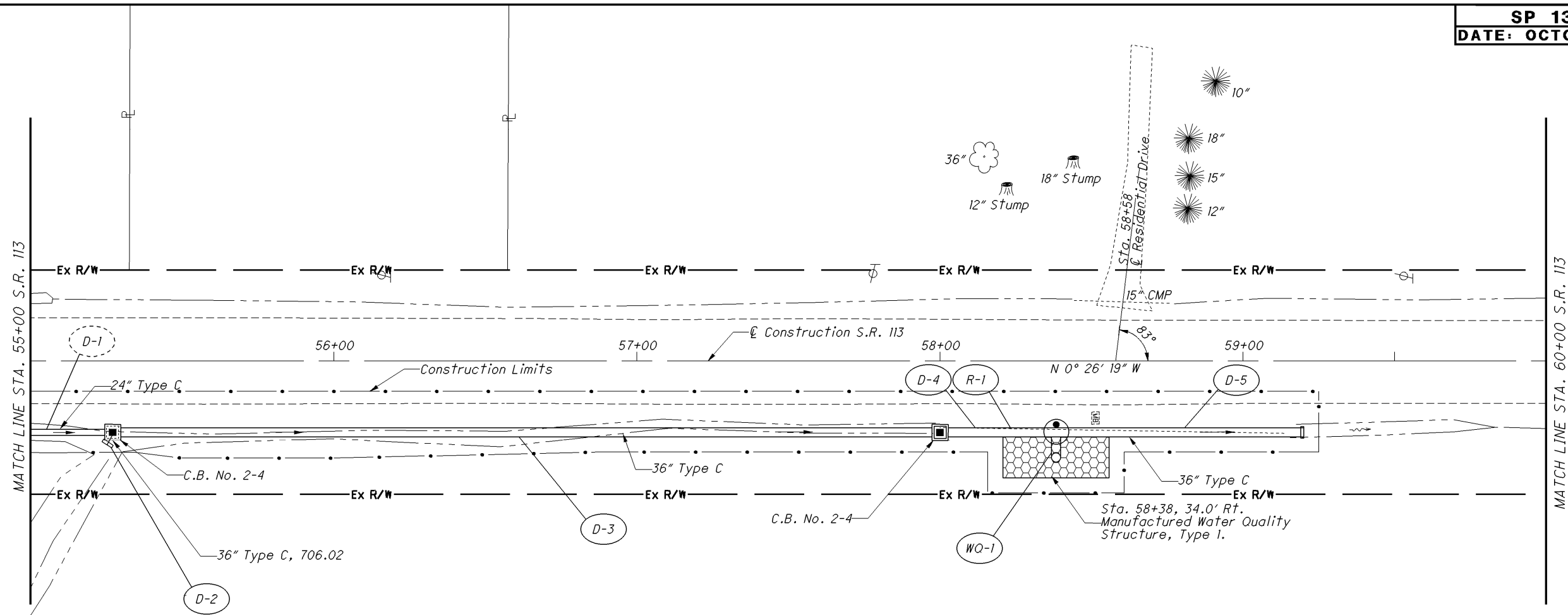
CROSS REFERENCES	
Sheet No.	Description
3-4	References & Benchmarks
37	Profile
38	Estimated Quantities
79	Drive Details and Quantities
86	Culvert Detail and Quantities
92	Intersection Detail



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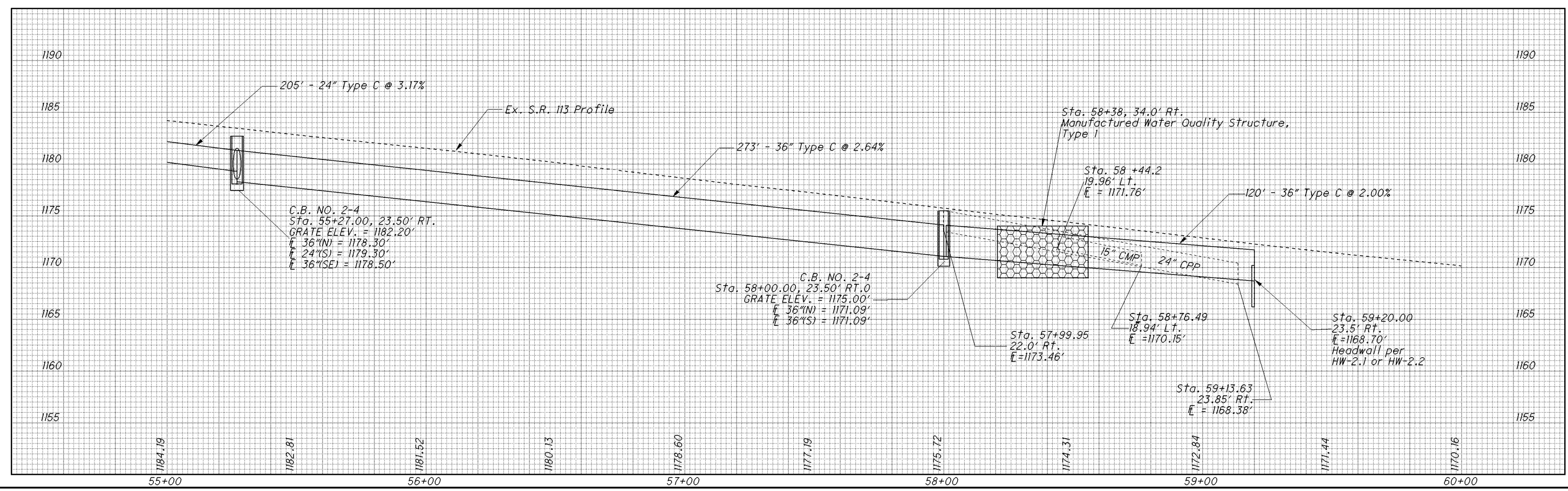


CALCULATED  
DRT  
CHECKED  
TGH



For Quantities, See Sheet 20.

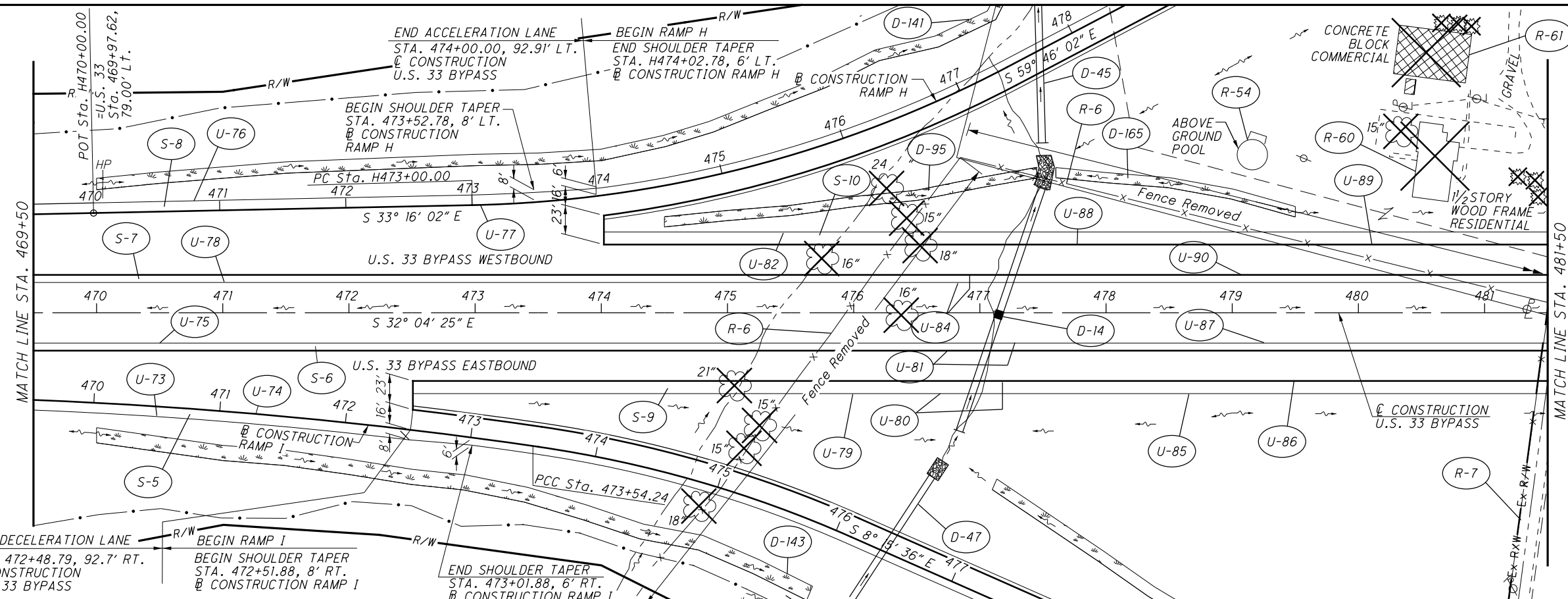
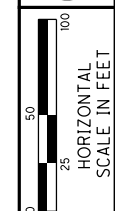
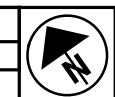
AREA FOR MANUFACTURED SYSTEM



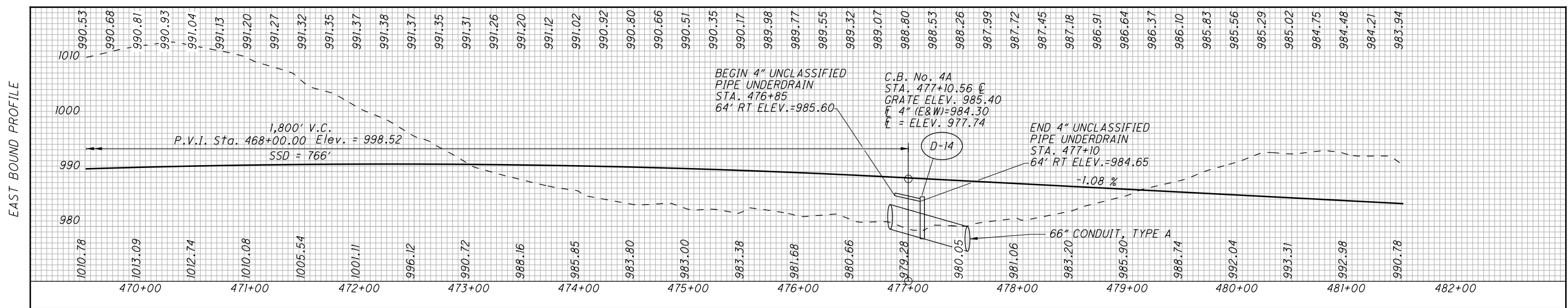
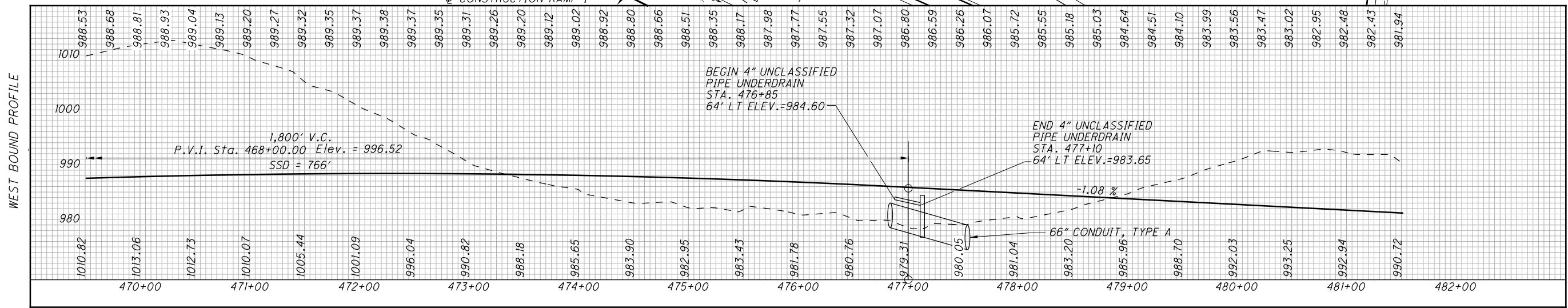
PLAN AND PROFILE  
STA. 55+00 TO STA. 60+00 S.R. 113

NOB-113-0.58

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



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

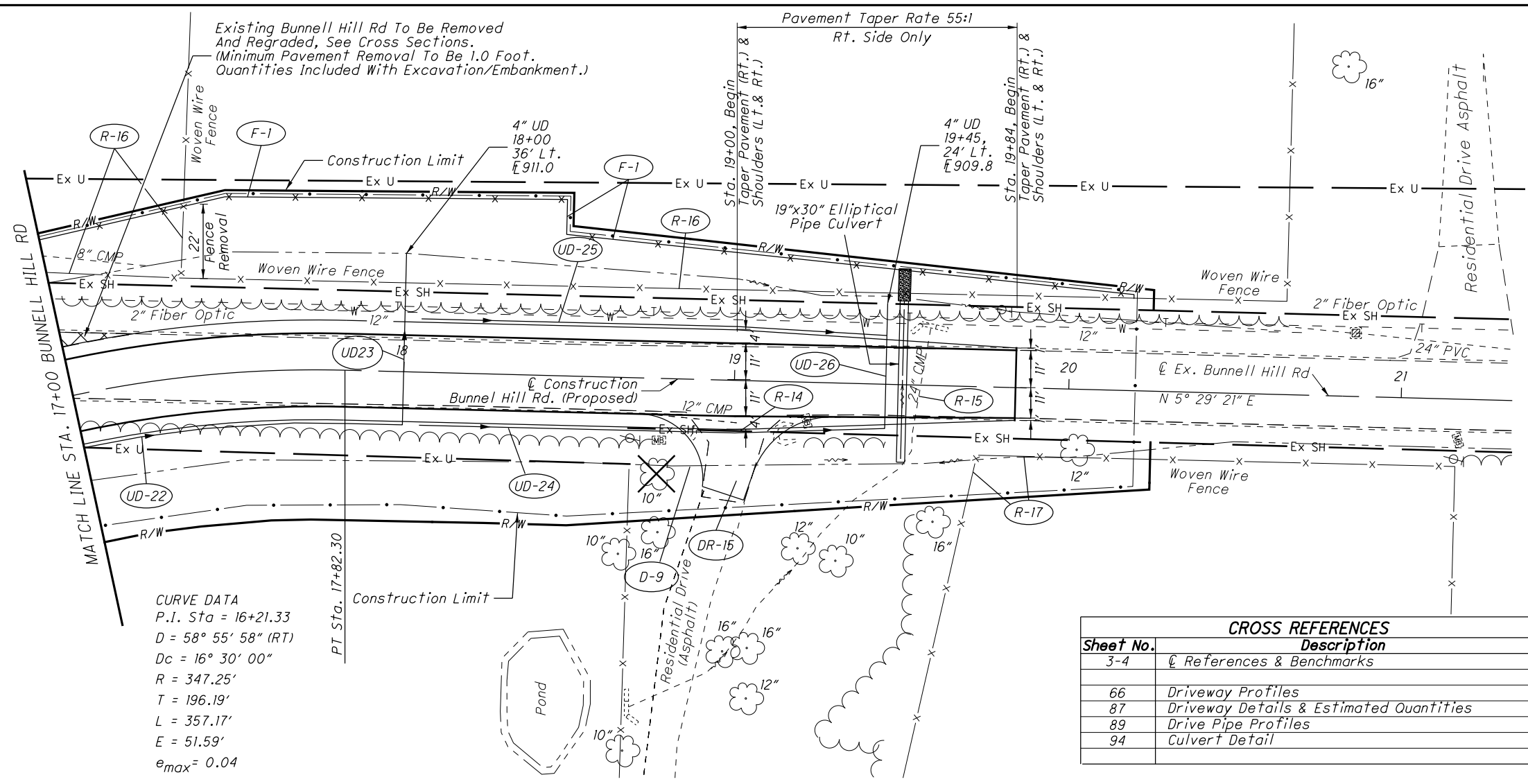
FAI-33-13.25



CALCULATED MSO  
CHECKED JAD

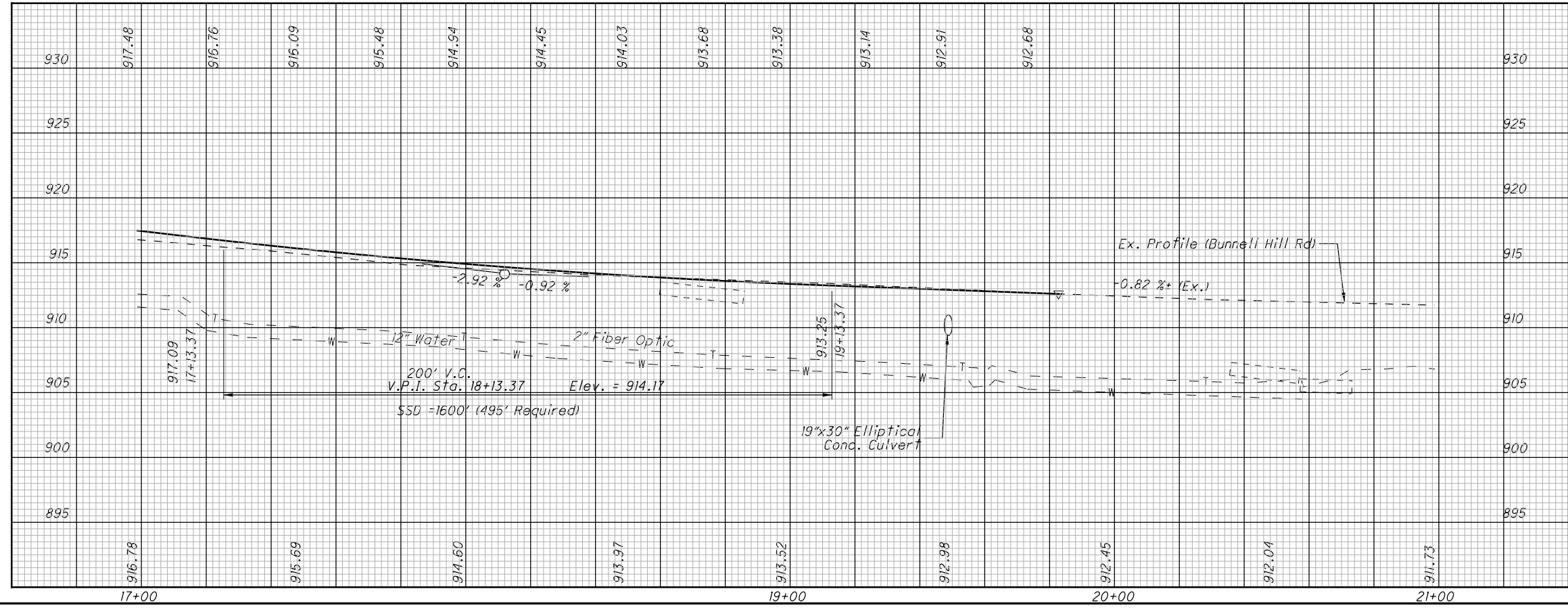
PLAN AND PROFILE - BUNNELL HILL RD  
STA. 17+00 TO STA 21+00

WAR-48.19.40



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

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

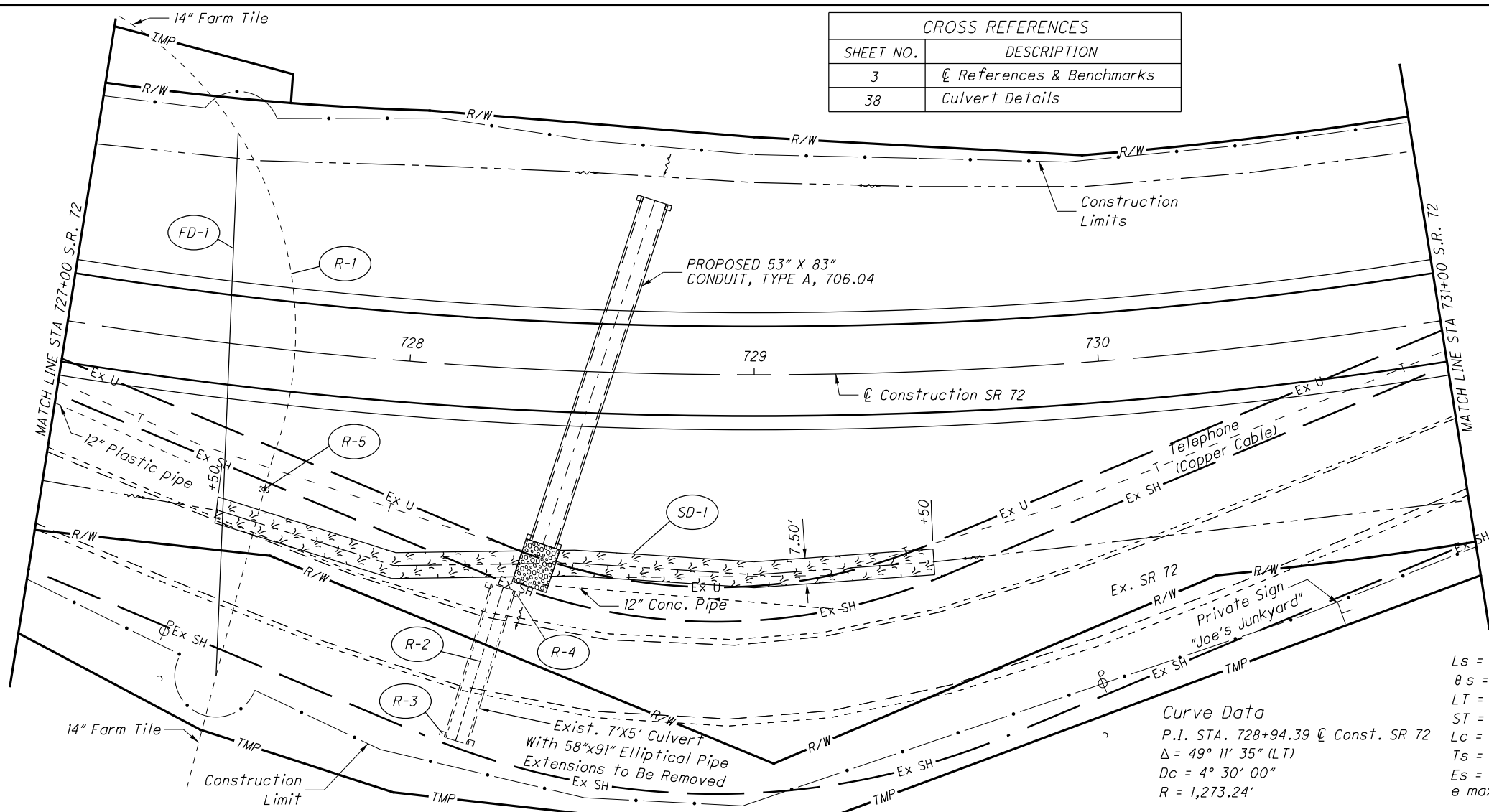


REF NO.	STATION		SIDE	DESCRIPTION	QUANTITY
	FROM	TO			
R-14	18+86	19+20	Rt.	4" BASE PIPE UNDERDRAIN (18" DEEP)	140
R-15	19+52	19+55	Center	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	140
R-16	16+60	20+20	Lt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
R-17	19+70	20+19	Rt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
UD-22	17+00	18+00	Rt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
UD-23	18+00	18+00	Center	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
UD-24	18+05	19+45	Rt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
UD-25	18+05	19+45	Lt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
UD-26	19+45	19+45	Center	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
D-9	18+83	19+17	Rt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
F-1	16+62	20+19	Lt.	4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					
				PIPE REMOVED, 24" AND UNDER	57
				FENCE REMOVED	470
				4" BASE PIPE UNDERDRAIN (18" DEEP)	280
				4" SHALLOW PIPE UNDERDRAIN (24" DEEP)	96
				FENCE, TYPE 4TRA	390
				12" CONDUIT, TYPE D	33
				4" CONDUIT, TYPE B	89
				PRECAST REINF. CONCRETE OUTLET	2
				BENDS & BRANCHES FOR INFO. ONLY	
				45° 90° BEND/BEND	
				1	
				2	

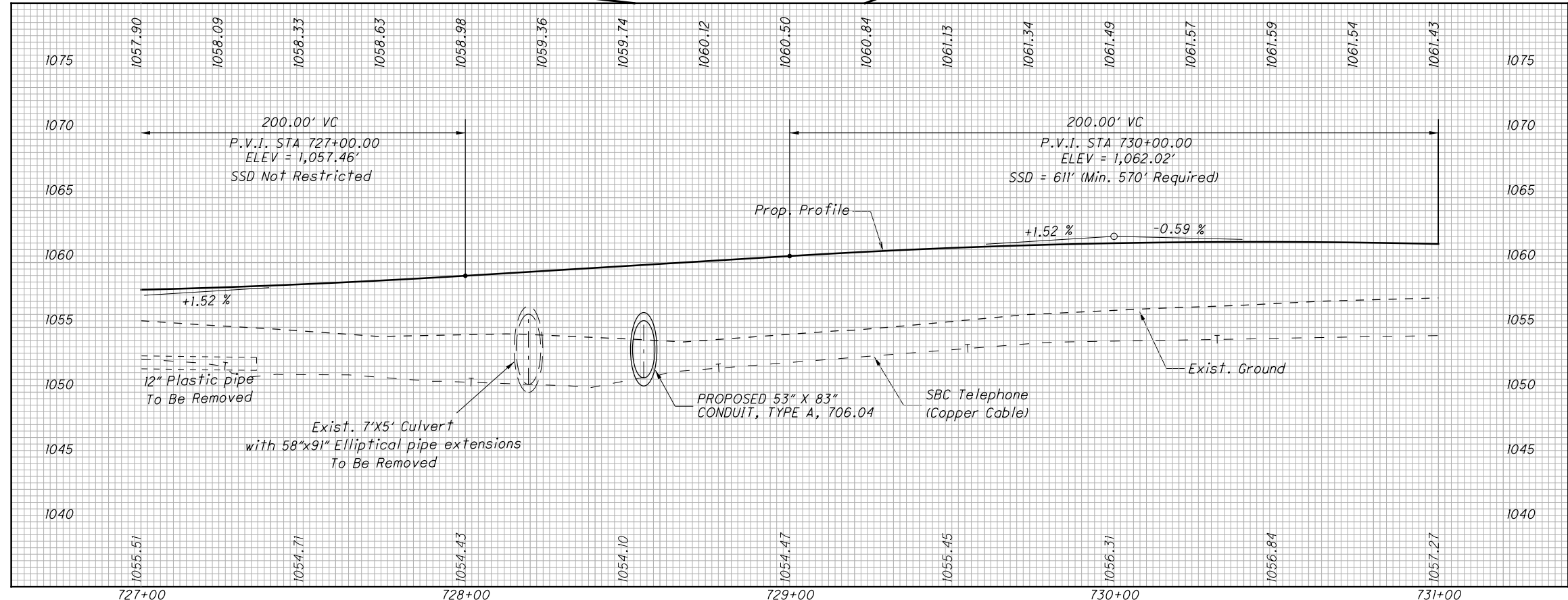
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	☉ References & Benchmarks
38	Culvert Details



Curve Data  
 P.I. STA. 728+94.39 @ Const. SR 72  
 $\Delta = 49^\circ 11' 35''$  (LT)  
 $D_c = 4^\circ 30' 00''$   
 $R = 1,273.24'$   
 $L_s = 222.00'$   
 $\theta_s = 4^\circ 59' 42''$   
 $LT = 148.06'$   
 $ST = 74.05'$   
 $L_c = 871.18'$   
 $T_s = 694.55'$   
 $E_s = 128.83'$   
 $e_{max} = 0.08$



REF NO.	STATION		SIDE	DESCRIPTION	QTY	UNIT	REMARKS
	FROM	TO					
R-1	727+43	727+56	RT & LT				
R-2	728+15	728+22	RT		1		
R-3	728+17	728+23	RT		1		
R-4	728+27	728+35	RT		1		
R-5	728+51	728+53	RT		1		
FD-1	727+43	727+56	RT & LT				
SD-1	727+50	729+50	RT			167	
TOTALS CARRIED TO GENERAL SUMMARY							

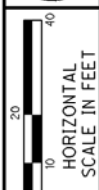


CALCULATED: MSO  
 CHECKED: JAD

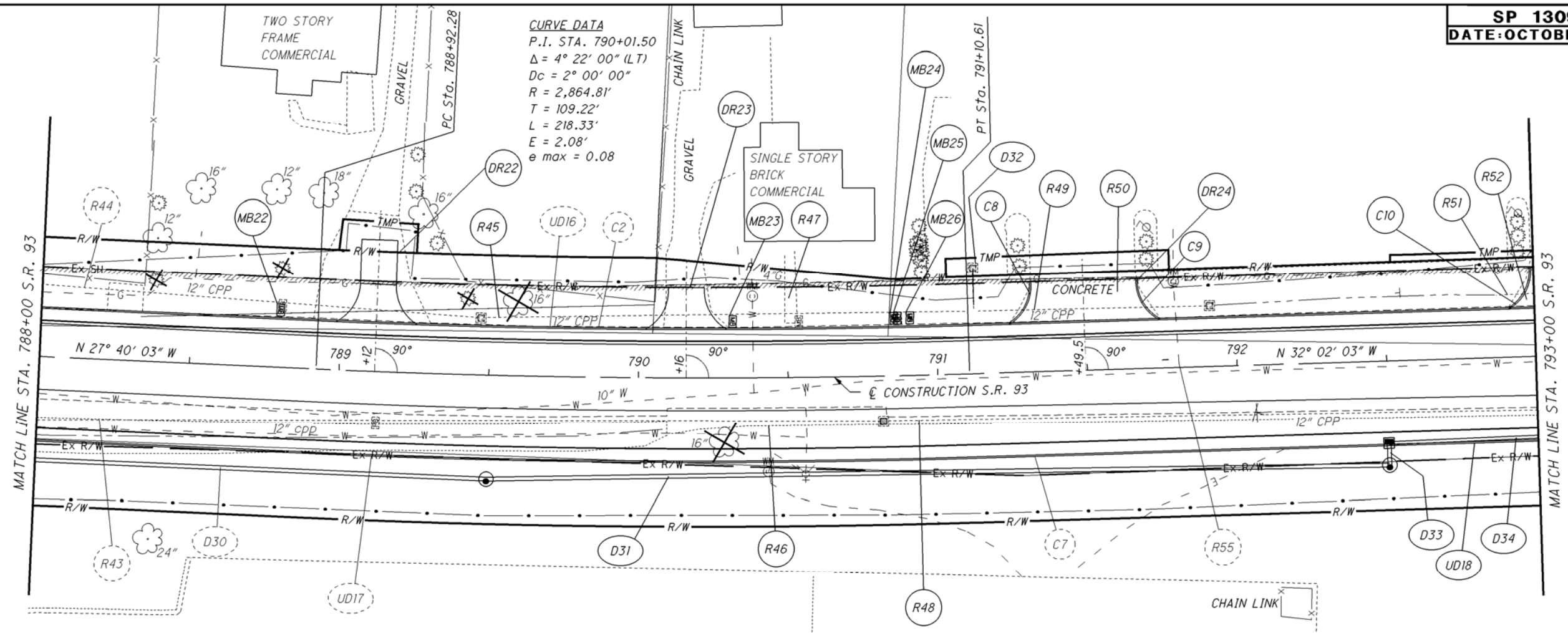
PLAN AND PROFILE  
 STA 727+00 TO 731+00

GRE-72-13.67



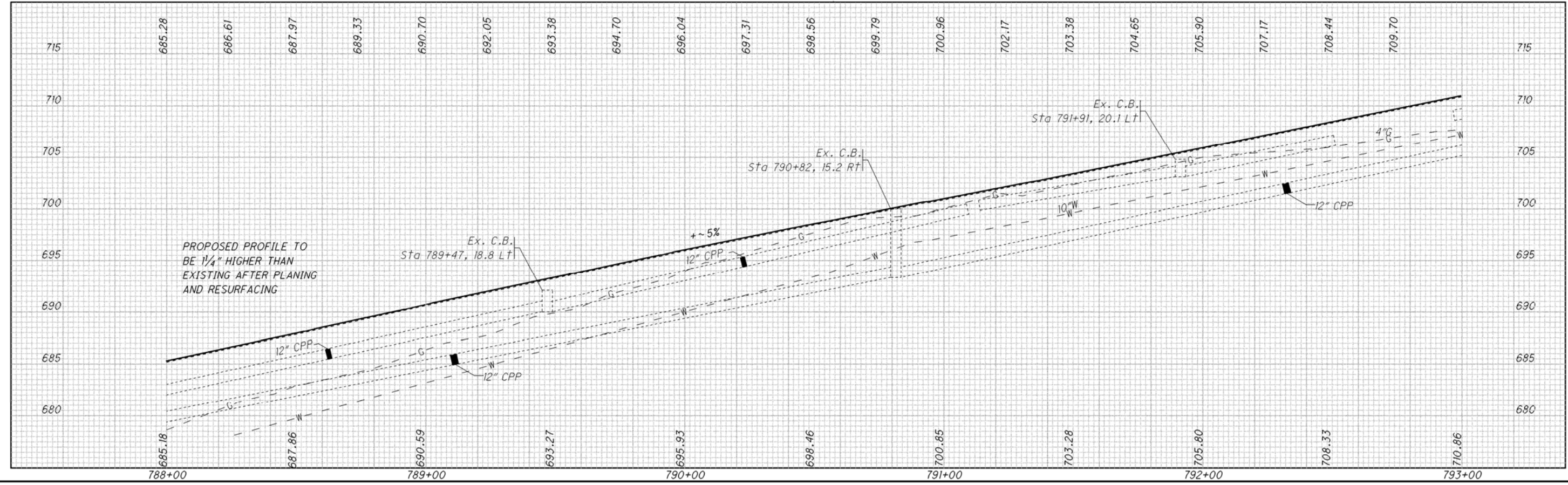


CALCULATED MSO  
CHECKED JAD



**CURVE DATA**  
 P.I. STA. 790+01.50  
 $\Delta = 4^\circ 22' 00''$  (LT)  
 $D_c = 2^\circ 00' 00''$   
 $R = 2,864.81'$   
 $T = 109.22'$   
 $L = 218.33'$   
 $E = 2.08'$   
 $e_{max} = 0.08$

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

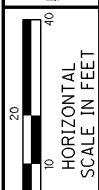


PROPOSED PROFILE TO BE 1/4" HIGHER THAN EXISTING AFTER PLANING AND RESURFACING

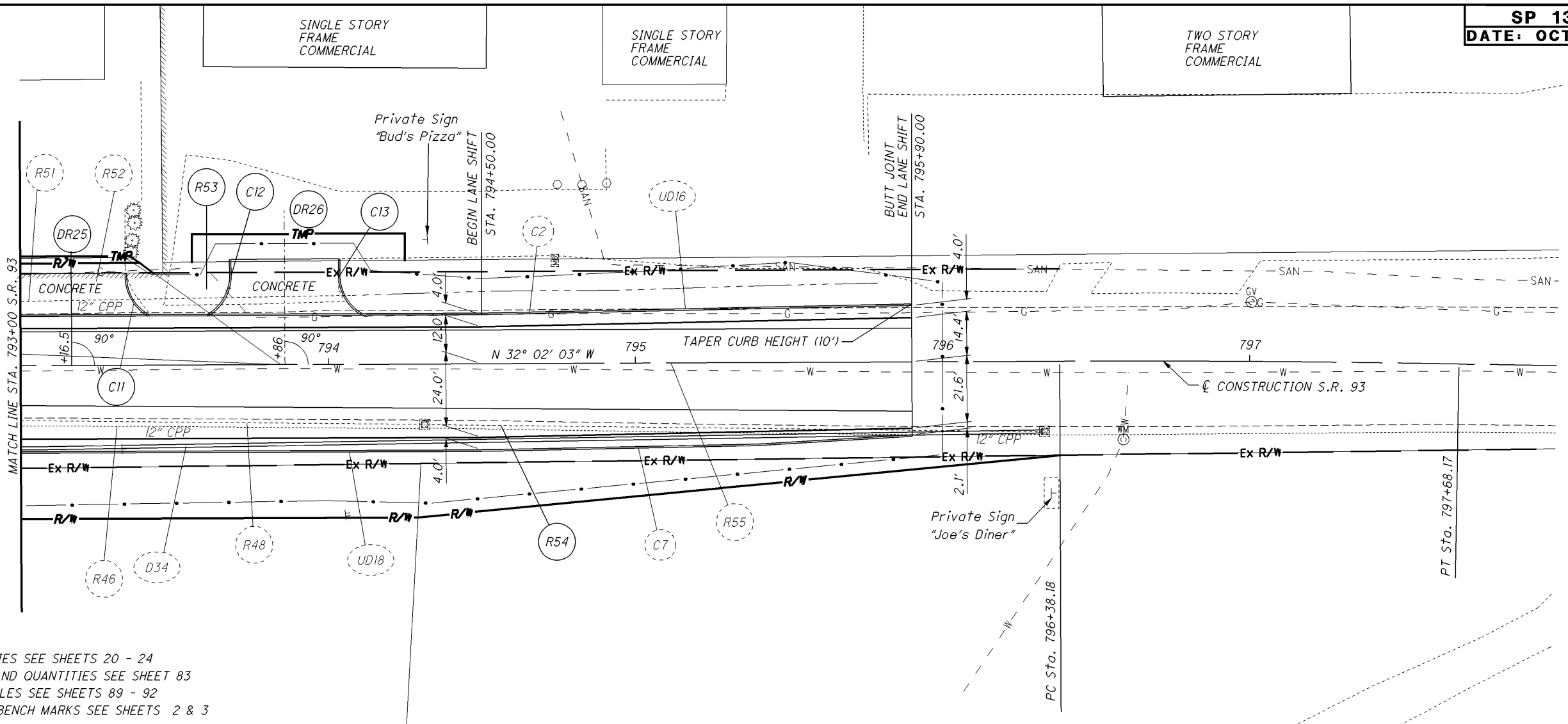
**PLAN AND PROFILE**  
**STA. 788+00 TO STA. 793+00**

**MOE-93-22.35**

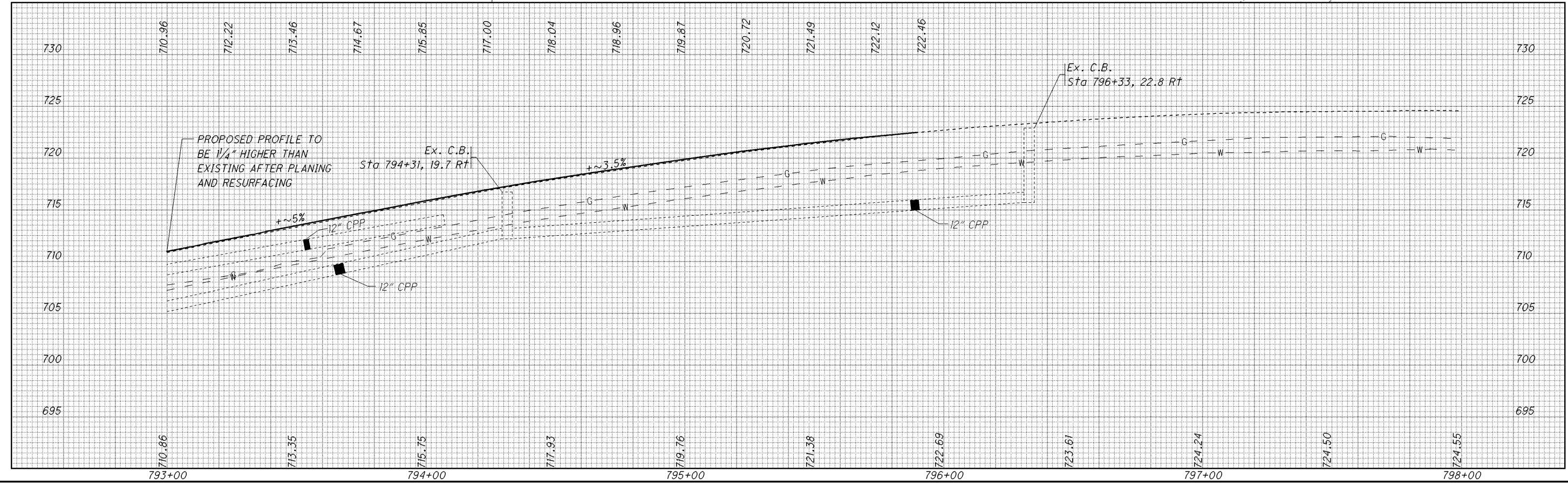
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CALCULATED MSO  
CHECKED JAD



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



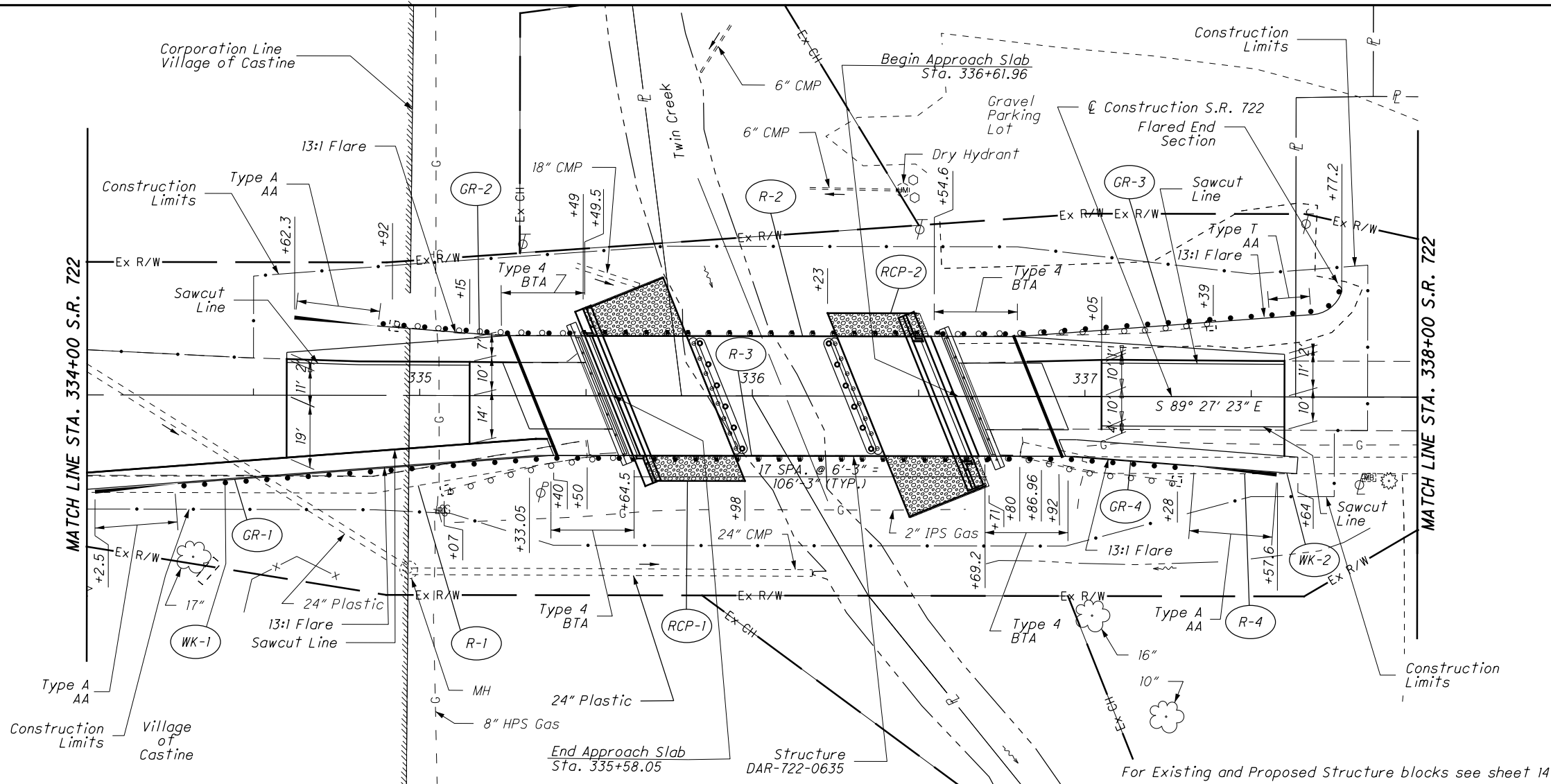
PLAN AND PROFILE  
STA. 793+00 TO STA. 798+00

MOE-93-22.35

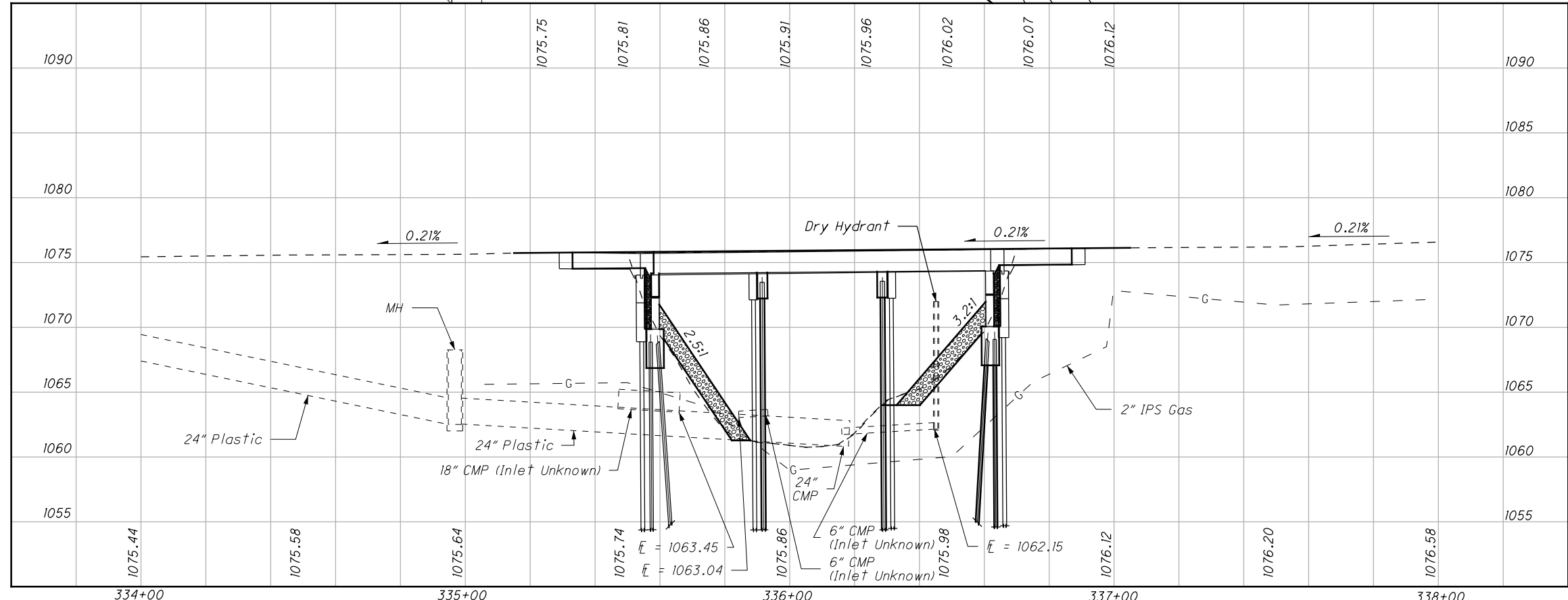
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0 10 20 30 40  
HORIZONTAL SCALE IN FEET



For Existing and Proposed Structure blocks see sheet 14.



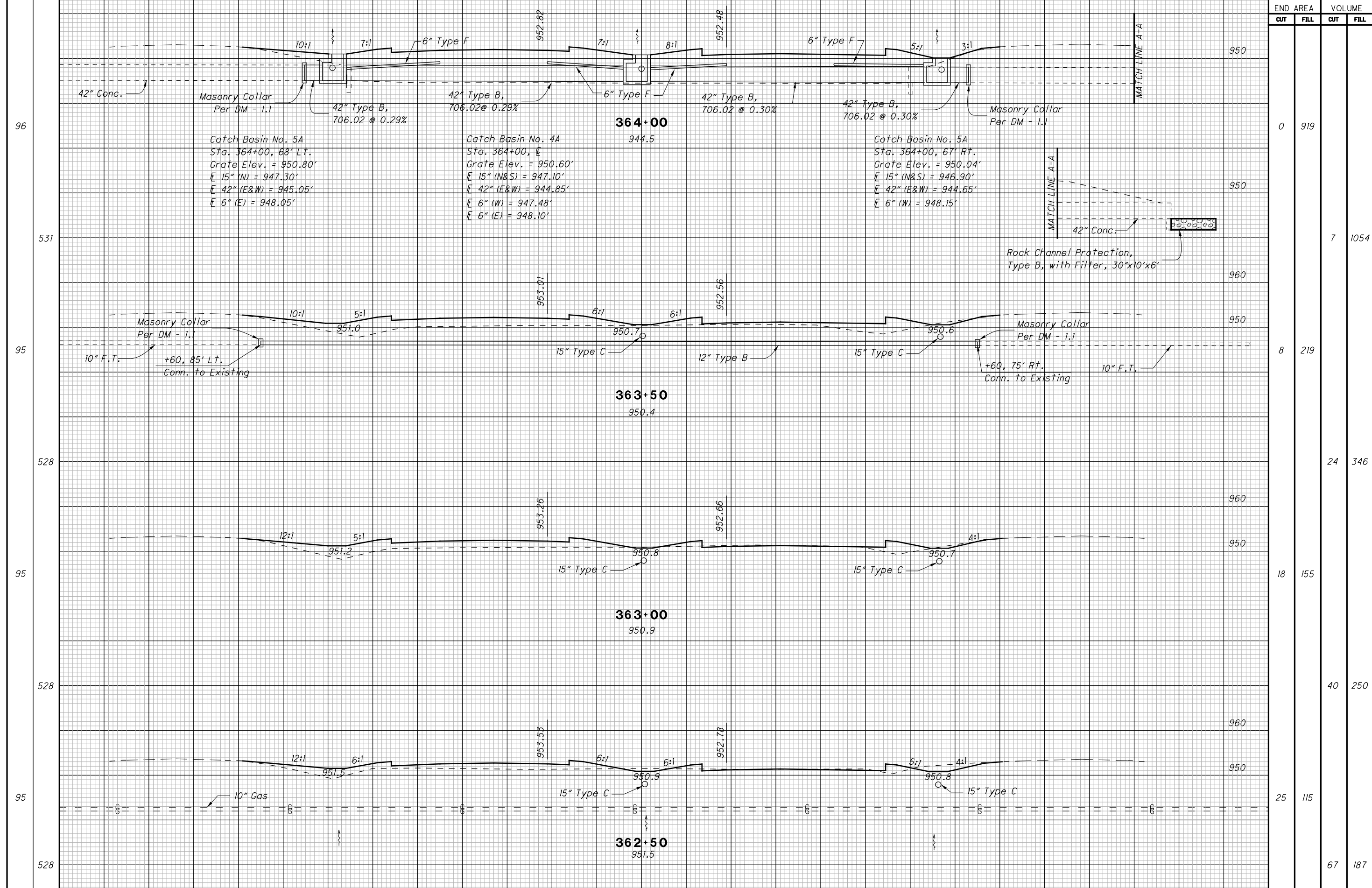
REF NO.	STATION		SIDE	QUANTITY	UNIT	TOTALS CARRIED TO GENERAL SUMMARY
	FROM	TO				
GR-1	334+02.5	335+49.5	RT.	1		
GR-2	334+62.3	335+64.5	LT.	1		
GR-3	336+54.6	337+77.2	LT.	1		
GR-4	336+69.2	337+67.6	RT.	1		
R-2	334+92	337+39	LT.	1		
R-3	335+07	337+28	RT.	1		
R-4	336+80	337+64	RT.	1		
RPC-1	335+49	335+98	LT/RT	1		
RPC-2	336+23	336+71	LT/RT	1		
WK-2	336+92	337+64	RT.	1		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>						
601			ROCK CHANNEL PROTECTION TYPE C WITH FILTER		CY	250
608			4" CONCRETE WALK		SF	354
606			BRIDGE TERMINAL ASSEMBLY, TYPE 4		EACH	4
606			ANCHOR ASSEMBLY, TYPE T		EACH	1
606			ANCHOR ASSEMBLY, TYPE A		EACH	3
606			GUARDRAIL TYPE 5		FT	387.5
202			GUARDRAIL REMOVED		FT	475
202			WALK REMOVED		SF	405

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

DAR-722-6.34

SEEDING
END WIDTH
SO. YDS.

CALCULATED	MT/G
CHECKED	C/M



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

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

LUC-76-31.48

154  
488

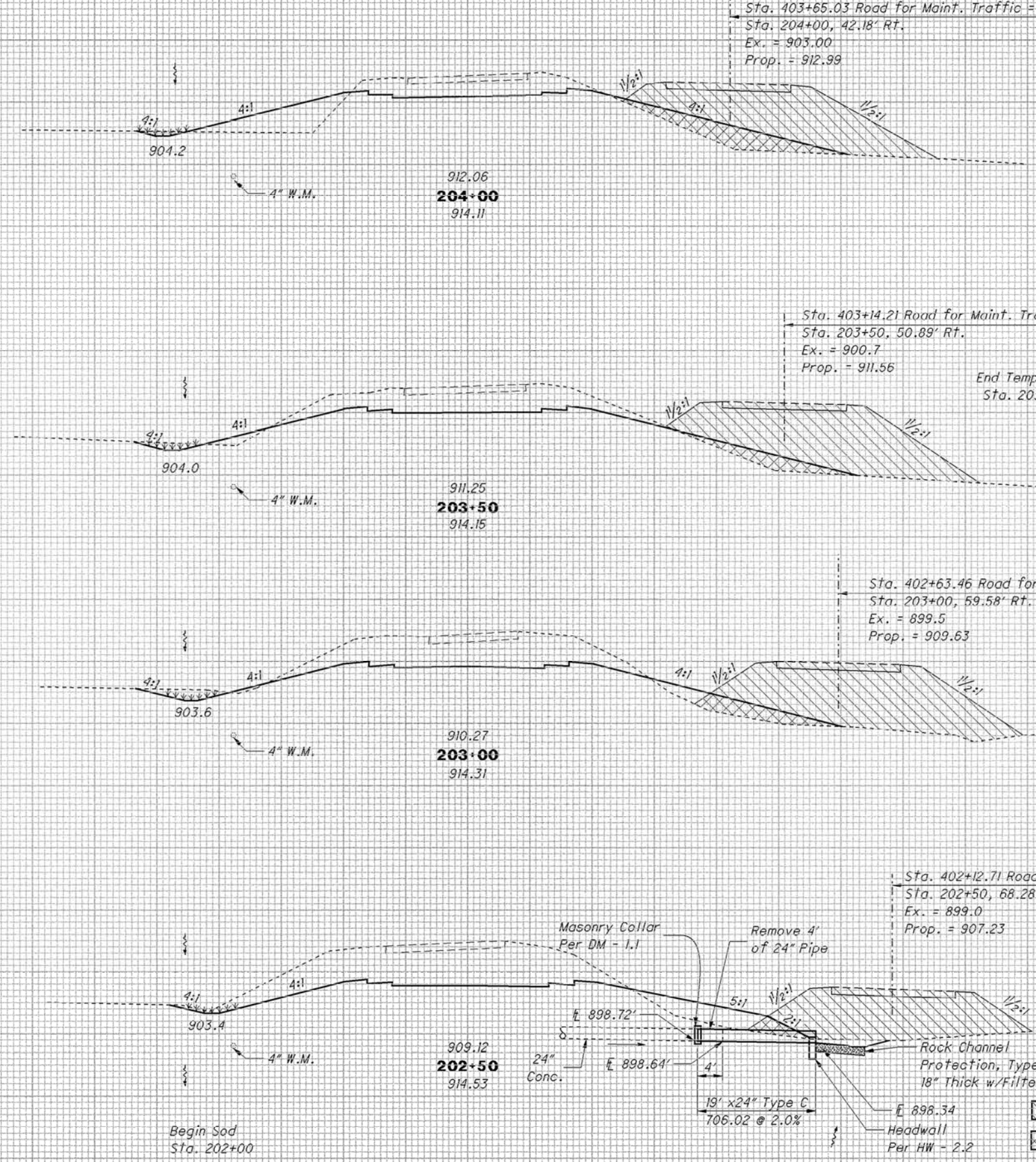
2115	SHEET TOTAL	100	80	60	40	20	0	20	40	60	80	100	SHEET TOTAL
------	-------------	-----	----	----	----	----	---	----	----	----	----	-----	-------------

SEEDING  
END WIDTH SQ. YDS.

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

CALCULATED RDN CHECKED PDG

517  
104  
583  
106  
586  
105  
581  
104  
2267 SHEET TOTAL



Sta. 403+65.03 Road for Maint. Traffic =  
Sta. 204+00, 42.18' Rt.  
Ex. = 903.00  
Prop. = 912.99

Sta. 403+14.21 Road for Maint. Traffic =  
Sta. 203+50, 50.89' Rt.  
Ex. = 900.7  
Prop. = 911.56

End Temp Ditch  
Sta. 203+15

Sta. 402+63.46 Road for Maint. Traffic =  
Sta. 203+00, 59.58' Rt.  
Ex. = 899.5  
Prop. = 909.63

Sta. 402+12.71 Road for Maint. Traffic =  
Sta. 202+50, 68.28' Rt.  
Ex. = 899.0  
Prop. = 907.23

Road for Maint. Traffic Earthwork  
Included with Permanent Earthwork Quantities

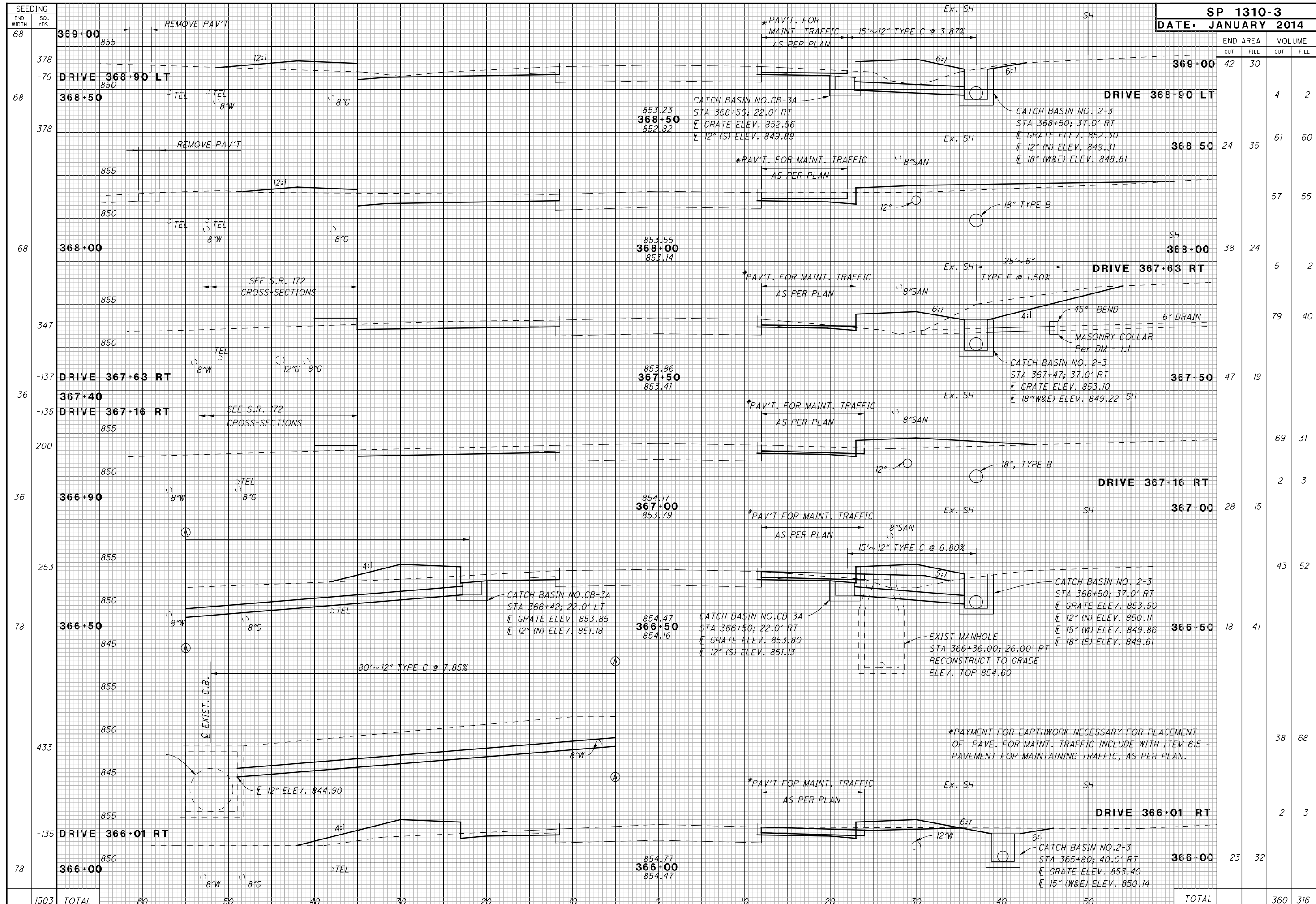
\*For Information Only

END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
0	332			95	136	156	171
0	645			241	169		
0	364			165	46		
6	703			367	94		
7	395			231	56		
6	616			509	96		
0	270			319	48		
7	297						
*19		*2261				1273 530	

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

MED - 130-1.23

74  
103



END STA	AREA	VOLUME	
		CUT	FILL
369+00	42	30	
368+90 LT			4
368+50	24	35	61
368+00	38	24	
367+63 RT			5
367+50	47	19	
367+40			69
367+16 RT			2
367+00	28	15	
366+90			43
366+50	18	41	
366+01 RT			38
366+00	23	32	
<b>TOTAL</b>		<b>360</b>	<b>316</b>

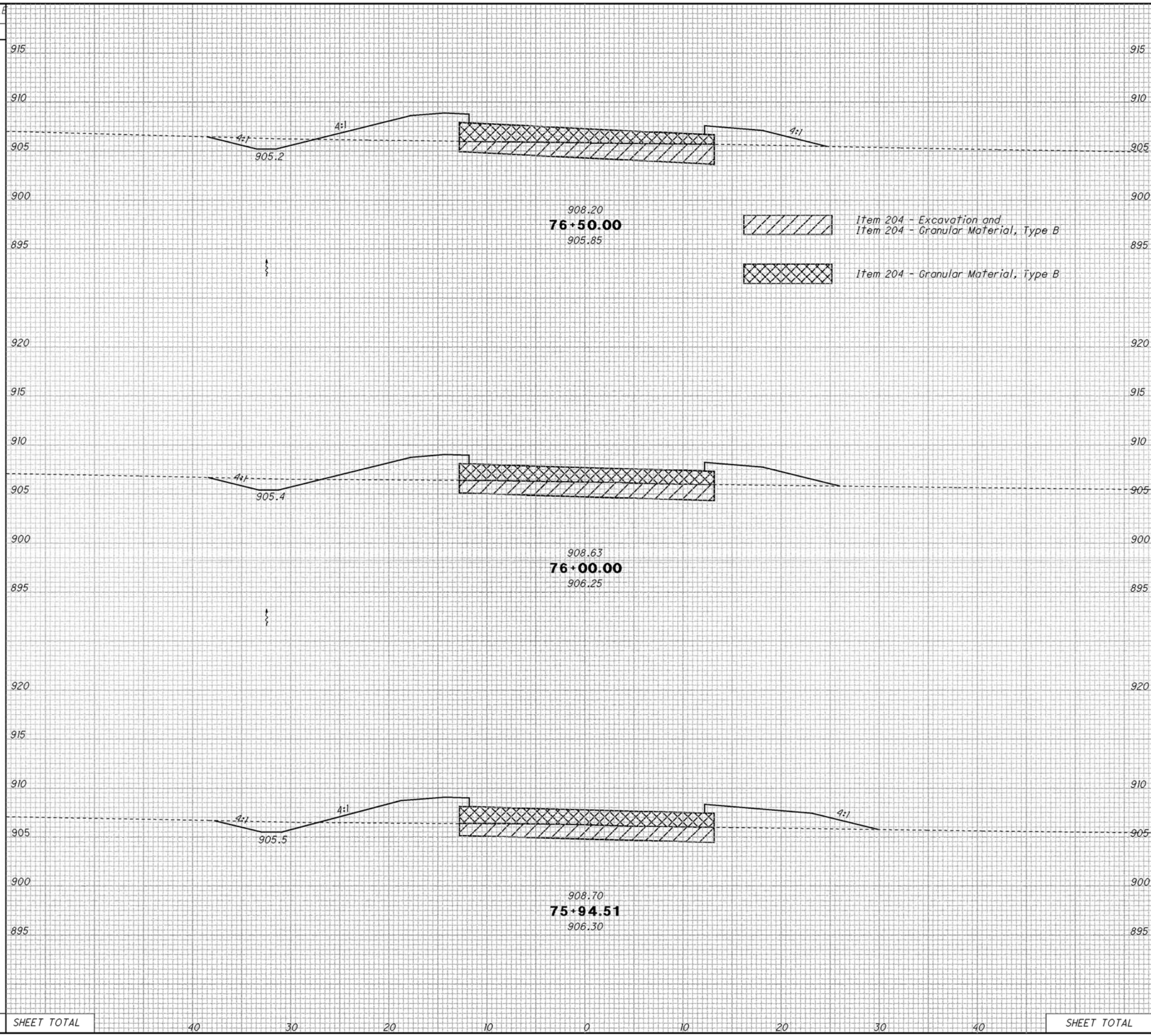
CROSS SECTIONS - S.R. 67  
STA. 366+00 TO STA. 368+50

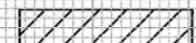

CLI-67-16.86

57  
97

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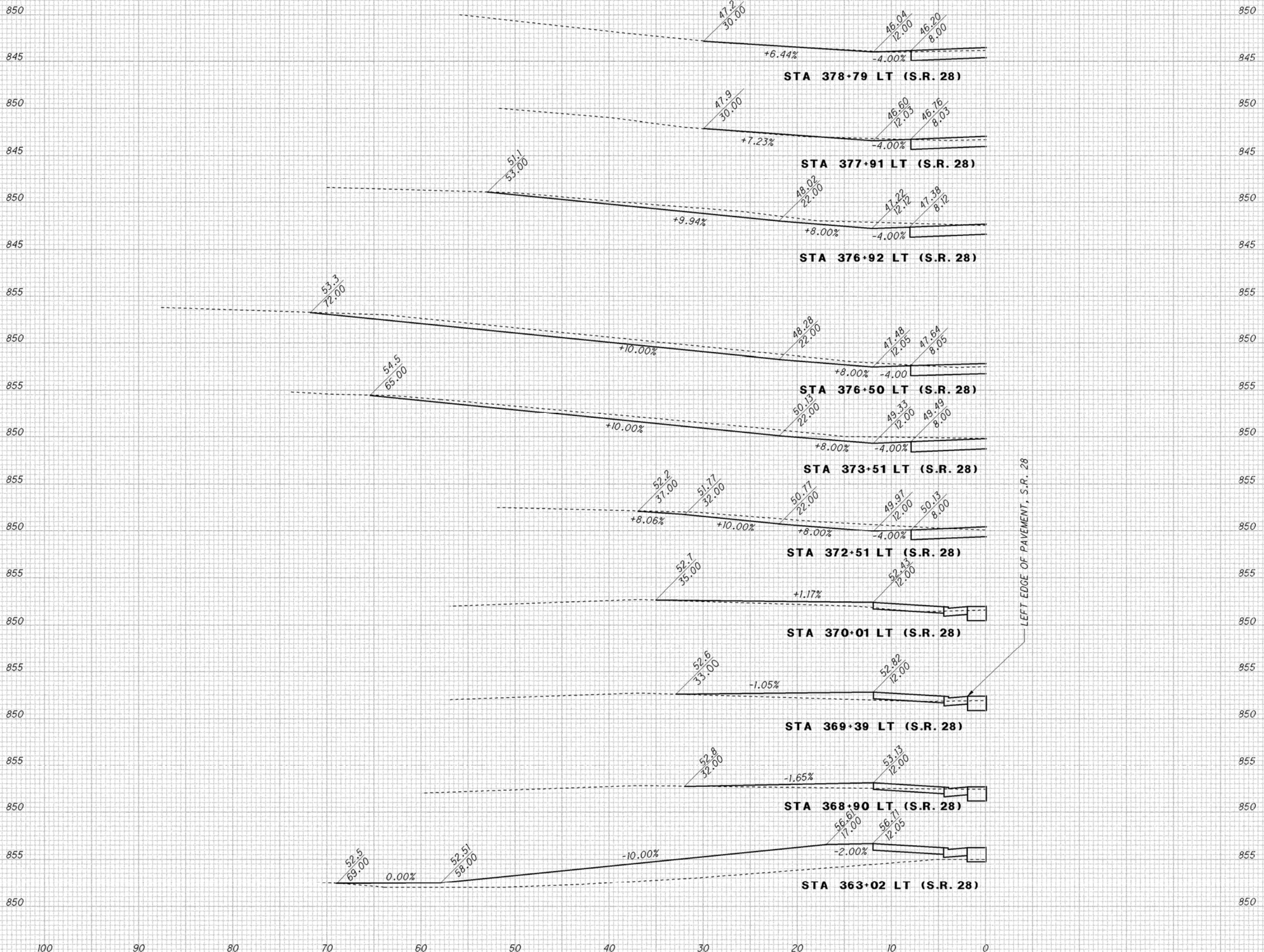
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
44	24	24	133
45	24	24	15
48	24	24	148
275	148	SHEET TOTAL	



 Item 204 - Excavation and  
 Item 204 - Granular Material, Type B  
 Item 204 - Granular Material, Type B

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

CALCULATED GFR  
 CHECKED JAD  
**CROSS SECTIONS - RELOCATED BOUNDARIES RD (C.R. 9)**  
**STA. 75+92.89 TO STA. 76+50**  
**PER / LIC-13-28.73 / 0.00**  
 210  
 310



LEFT EDGE OF PAVEMENT, S.R. 28

DRIVEWAY PROFILES

HUR - 28 - 6.86

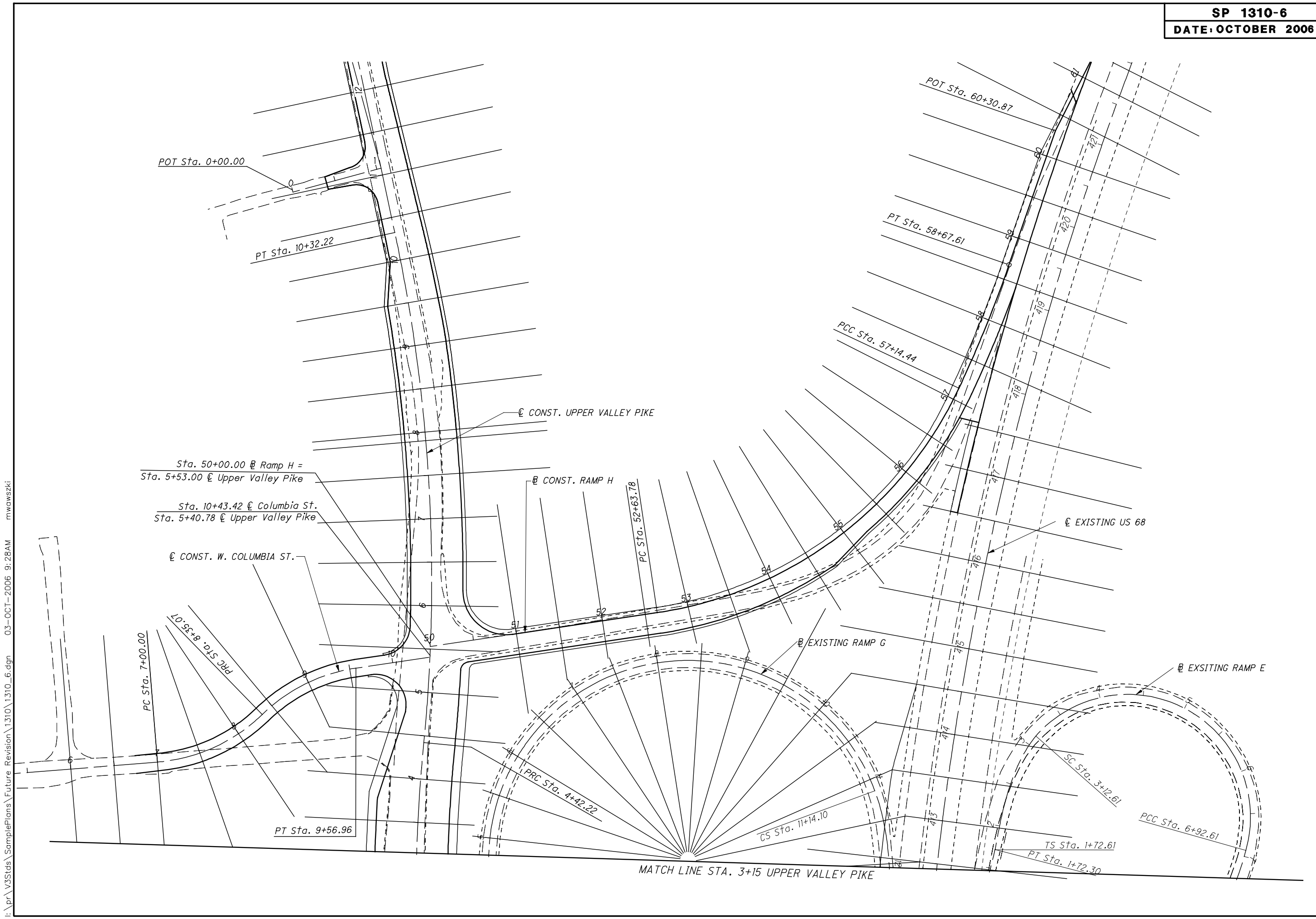




CALCULATED MSO  
CHECKED JAD

CROSS SECTION LAYOUT



CLA-40-10.18

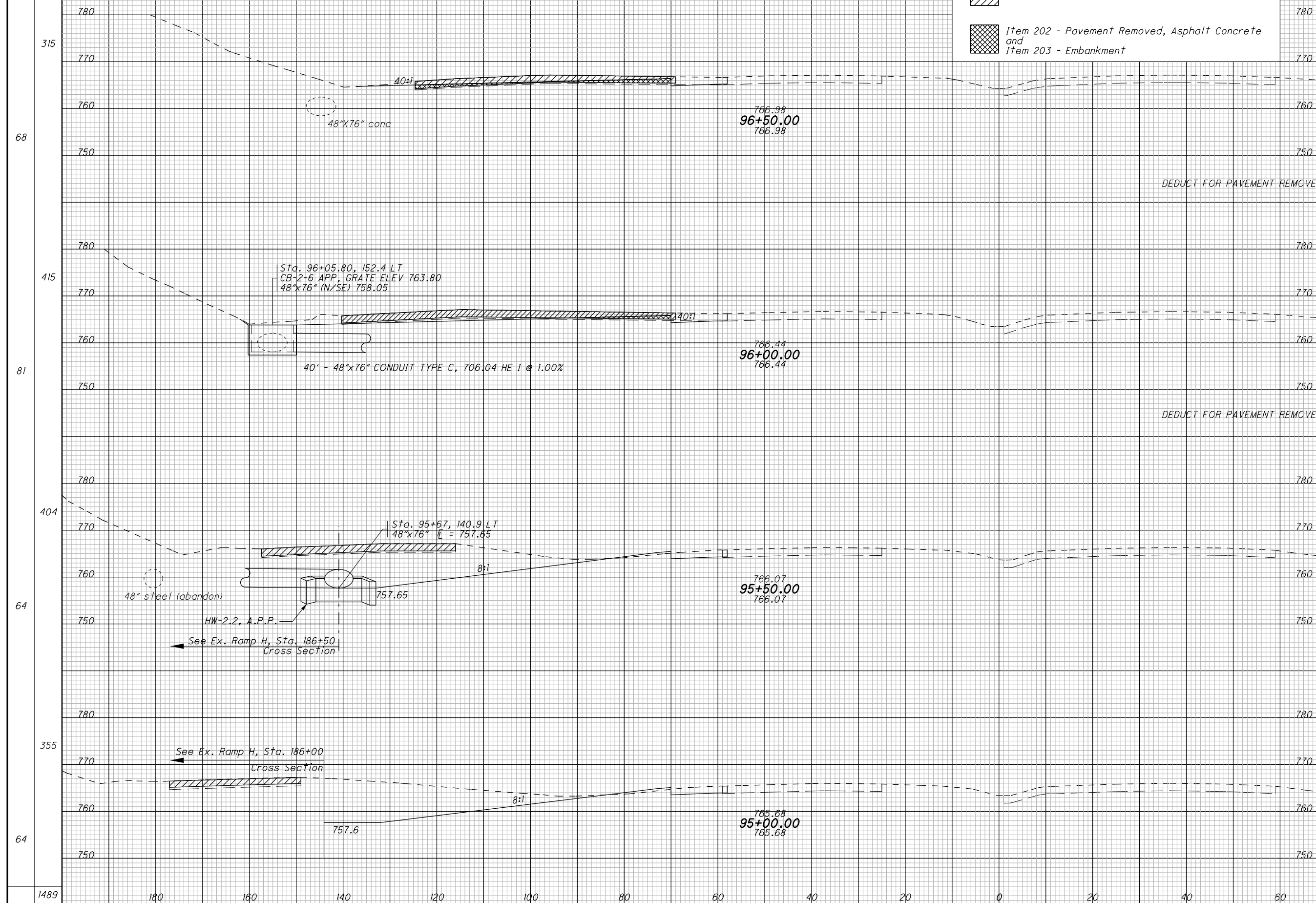


I:\pr\35\35\SamplePlans\Future Revision\1310\1310\_6.dgn 03-OCT-2006 9:28AM mawaszki

SEEDING	
END WIDTH	SO. YDS.
315	
68	
81	
64	
355	
64	
1489	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
81	26		
		224	32
		-157	0
160	9		
		459	3
		-124	0
335	4		
		602	8
315	5		
		605	16
		1609	59

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



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

FRA - 315 - 12.18

**SUPERELEVATION TABLE**

P. I. Station 20+00.00

Dc = 6° 00'

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
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	1/2 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	2/11	+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	2/11	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	2/11	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	2/11	+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	1/2 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'

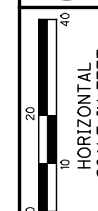
SP 1311-1  
DATE: OCTOBER 2006

CALCULATED  
KAK  
CHECKED  
LJS

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
606.93		-0.19	-0.0156	12.00	33+92.16	607.12	12.00	-0.0156	-0.19		606.93	N.C.
607.13		-0.16	-0.0133	12.00	34+00.00	607.29	12.00	-0.0156	-0.19		607.10	
607.76		-0.05	-0.0042	12.00	34+25.00	607.81	12.00	-0.0156	-0.19		607.62	
608.04		0.00	0.0000	12.00	34+37.09	608.04	12.00	-0.0156	-0.19		607.85	T.S.
608.34		+0.05	+0.0042	12.00	34+50.00	608.29	12.00	-0.0156	-0.19		608.10	
608.88		+0.16	+0.0133	12.00	34+75.00	608.72	12.00	-0.0156	-0.19		608.53	
609.02		+0.19	+0.0156	12.00	34+82.02	608.83	12.00	-0.0156	-0.19		608.64	R.C.
609.38	2/11	+0.27	+0.0225	12.00	35+00.00	609.11	12.00	-0.0225	-0.27		608.84	
609.84		+0.37	+0.0308	12.00	35+25.00	609.47	12.00	-0.0308	-0.37		609.10	
610.26		+0.48	+0.0400	12.00	35+50.00	609.78	12.00	-0.0400	-0.48		609.30	
610.63		+0.58	+0.0483	12.00	35+75.00	610.05	12.00	-0.0483	-0.58	2/11	609.47	
610.97		+0.69	+0.0575	12.00	36+00.00	610.28	12.00	-0.0575	-0.69		609.59	
611.12		+0.74	+0.0620	12.00	36+12.09	610.38	12.00	-0.0620	-0.74		609.64	S.C.
611.21		+0.74	+0.0620	12.00	36+25.00	610.47	12.00	-0.0620	-0.74		609.73	
611.36		+0.74	+0.0620	12.00	36+50.00	610.62	12.00	-0.0620	-0.74		609.88	
611.47		+0.74	+0.0620	12.00	36+75.00	610.73	12.00	-0.0620	-0.74		609.99	
611.48		+0.74	+0.0620	12.00	36+77.94	610.74	12.00	-0.0620	-0.74		610.00	C.S.
611.44		+0.65	+0.0542	12.00	37+00.00	610.79	12.00	-0.0542	-0.65		610.14	
611.36		+0.54	+0.0450	12.00	37+25.00	610.82	12.00	-0.0450	-0.54		610.28	
611.25		+0.44	+0.0367	12.00	37+50.00	610.81	12.00	-0.0367	-0.44		610.37	
611.08		+0.33	+0.0275	12.00	37+75.00	610.75	12.00	-0.0275	-0.33	2/11	610.42	
610.87		+0.22	+0.0183	12.00	38+00.00	610.65	12.00	-0.0183	-0.22		610.43	
610.80	2/11	+0.19	+0.0156	12.00	38+08.01	610.61	12.00	-0.0156	-0.19		610.42	R.C.
610.64		+0.12	+0.0100	12.00	38+25.00	610.52	12.00	-0.0156	-0.19		610.33	
610.35		+0.01	+0.0008	12.00	38+50.00	610.34	12.00	-0.0156	-0.19		610.15	
610.31		0.00	0.0000	12.00	38+52.94	610.31	12.00	-0.0156	-0.19		610.12	S.T.
610.03		-0.09	-0.0075	12.00	38+75.00	610.12	12.00	-0.0156	-0.19		609.93	
609.69		-0.19	-0.0156	12.00	38+97.87	609.88	12.00	-0.0156	-0.19		609.69	N.C.

**SUPERELEVATION TABLE**

**BEL - 148 - 11.48**



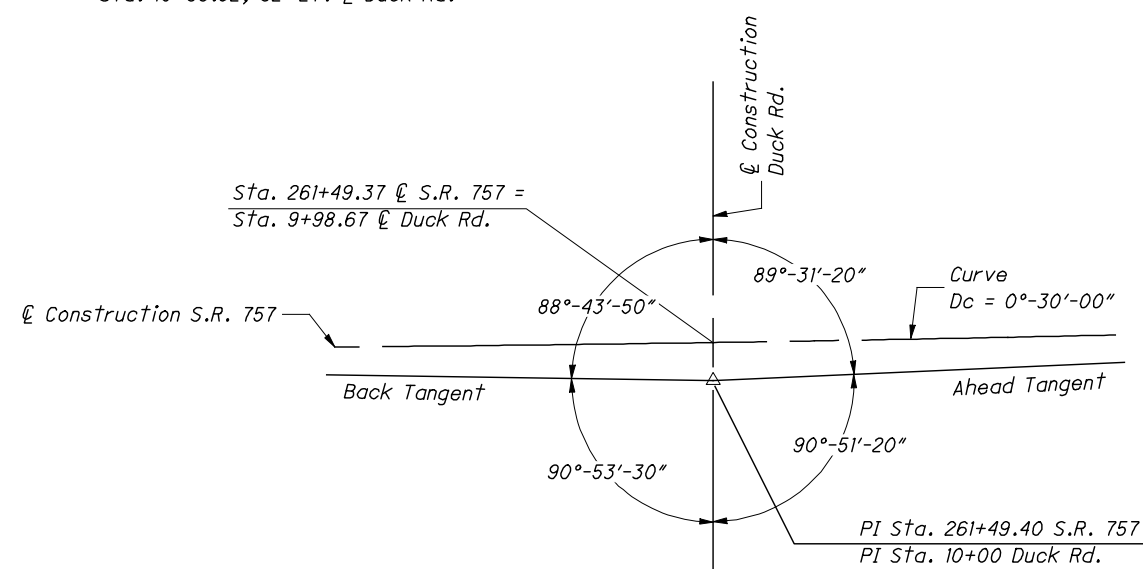
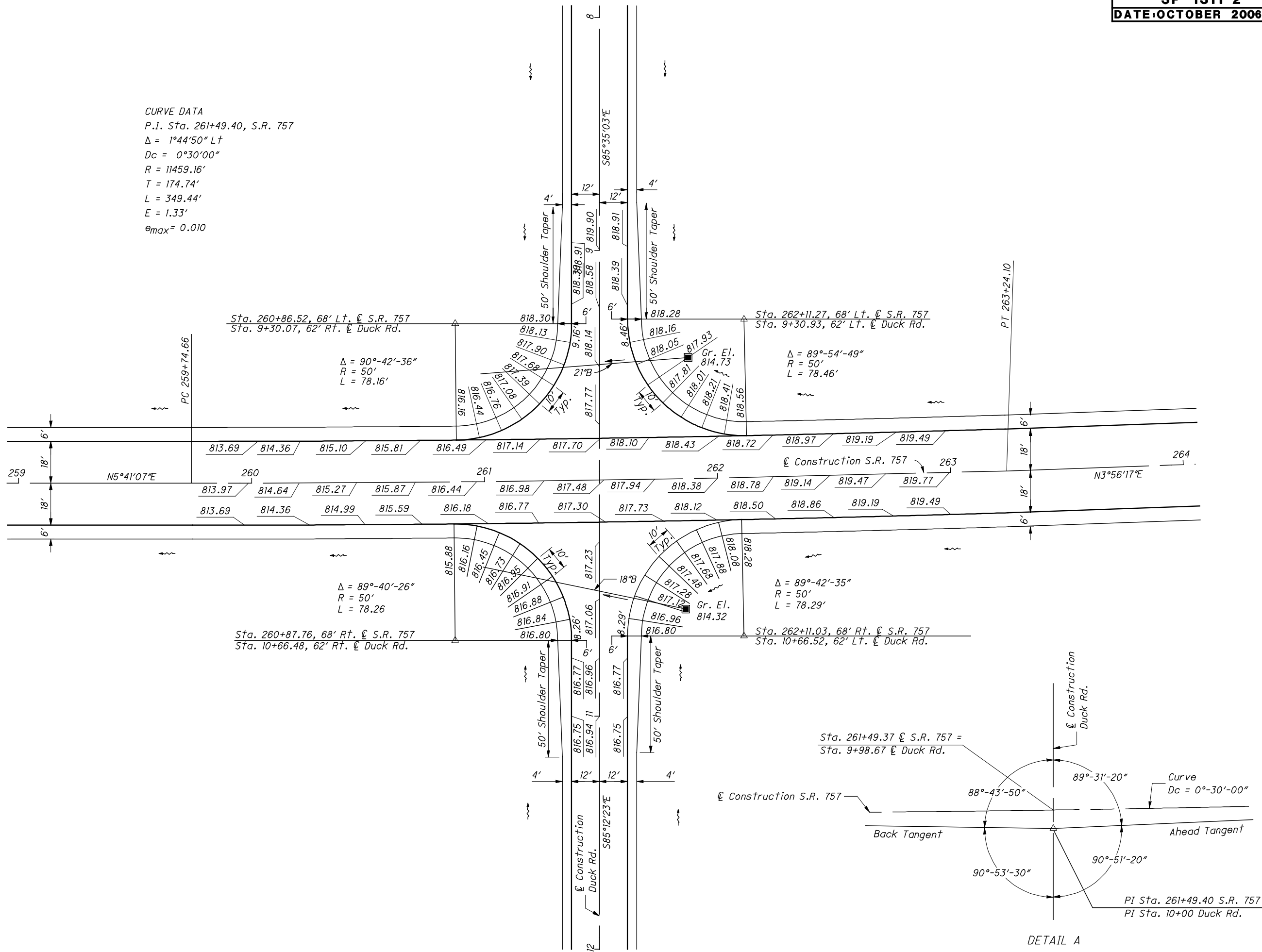
CALCULATED  
VHW  
CHECKED  
TLH

INTERSECTION DETAIL - S.R. 757 & DUCK ROAD

MEG-757-1.23

CURVE DATA

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



DETAIL A



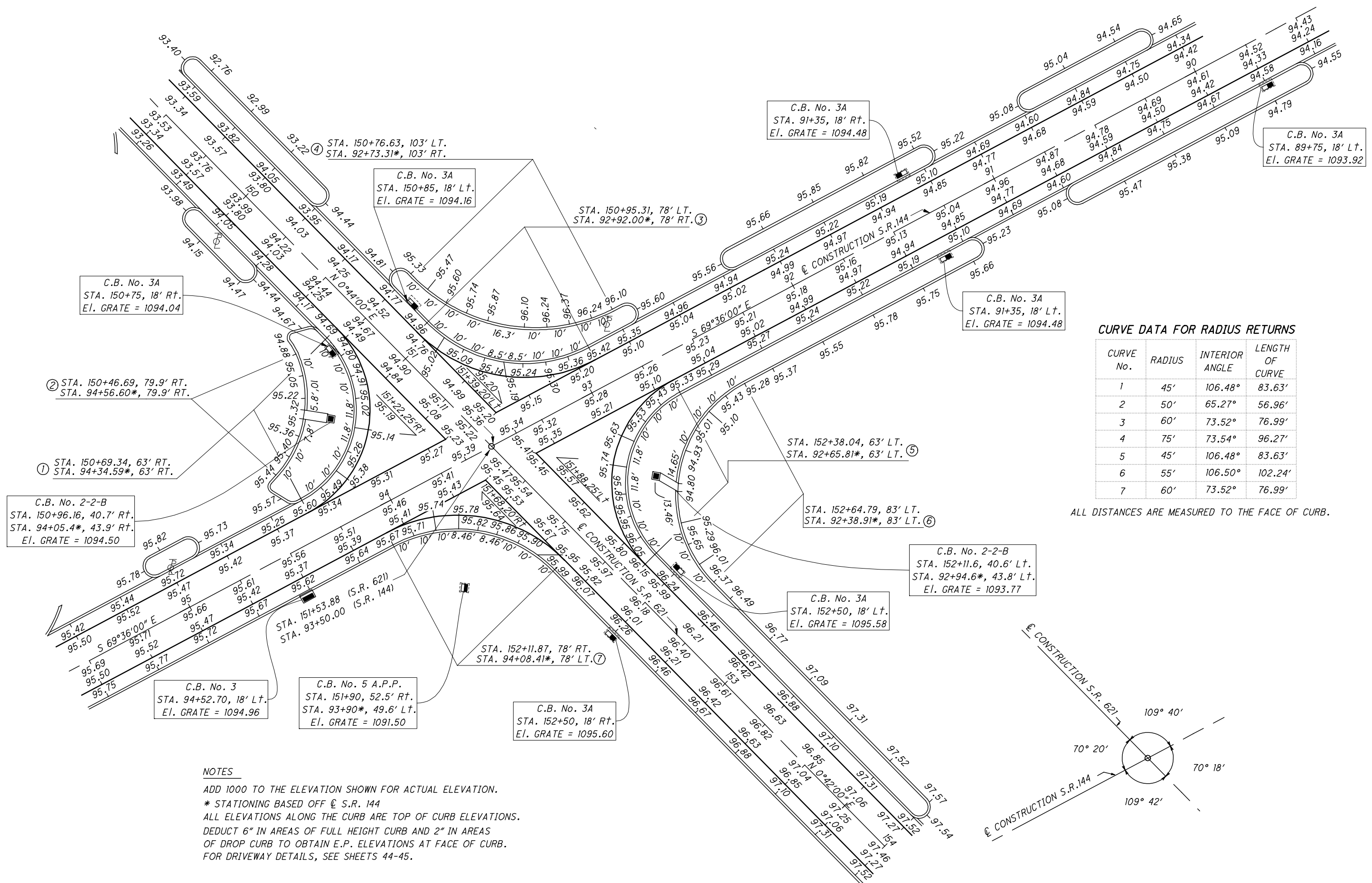
0 10 20 40  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
W/SR  
CHECKED  
SUB

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

BEL-621-5.29

42  
50



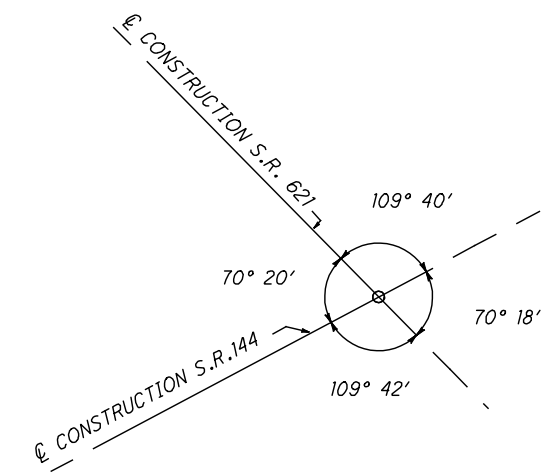
CURVE DATA FOR RADIUS RETURNS

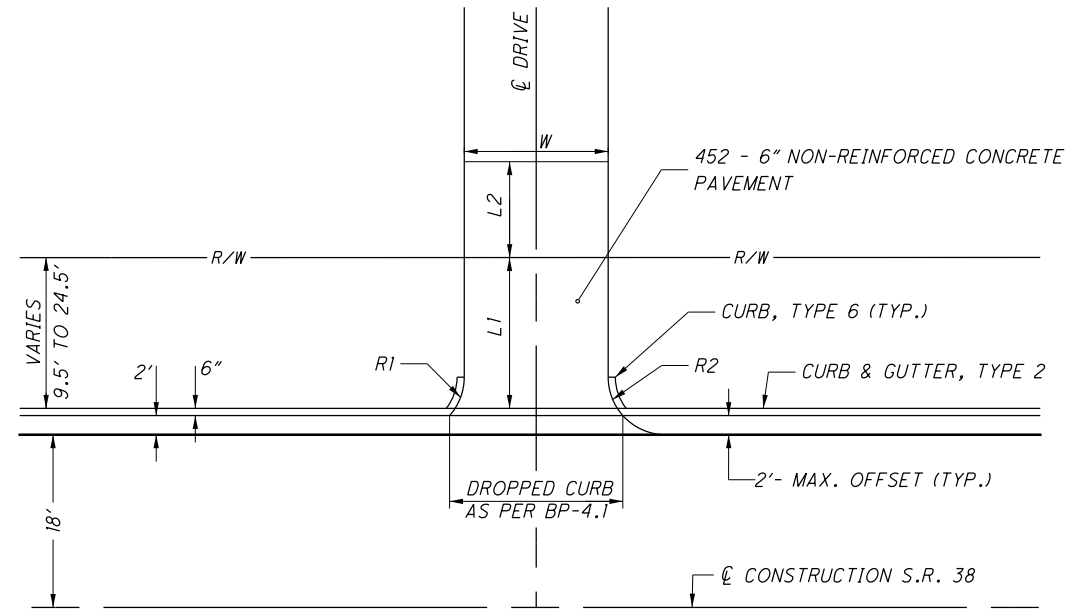
CURVE No.	RADIUS	INTERIOR ANGLE	LENGTH OF CURVE
1	45'	106.48°	83.63'
2	50'	65.27°	56.96'
3	60'	73.52°	76.99'
4	75'	73.54°	96.27'
5	45'	106.48°	83.63'
6	55'	106.50°	102.24'
7	60'	73.52°	76.99'

ALL DISTANCES ARE MEASURED TO THE FACE OF CURB.

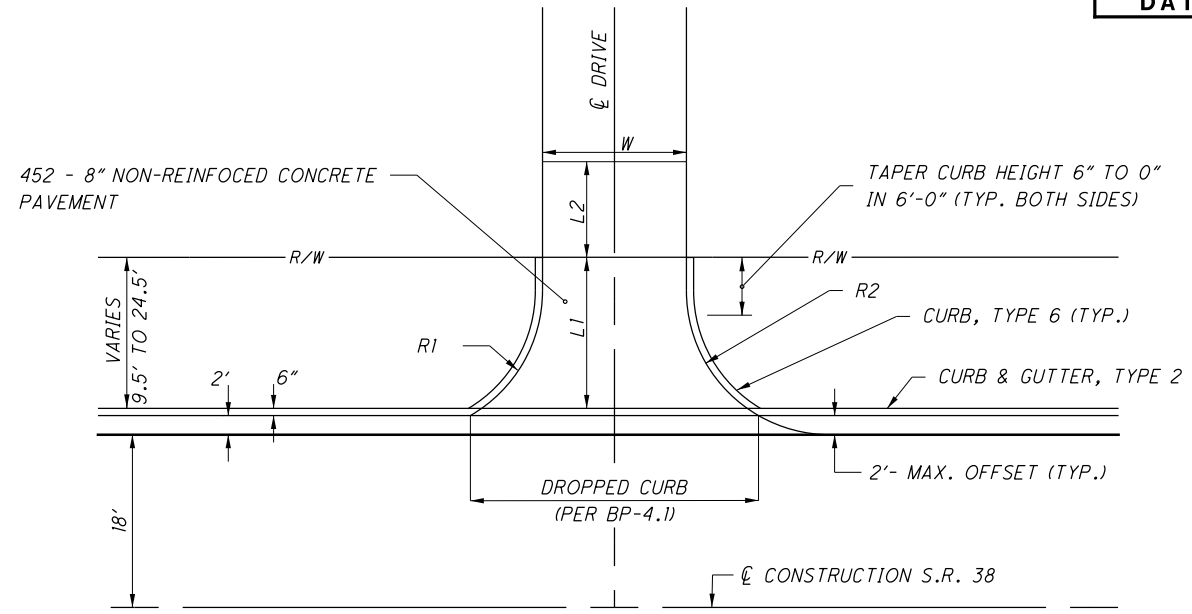
NOTES

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

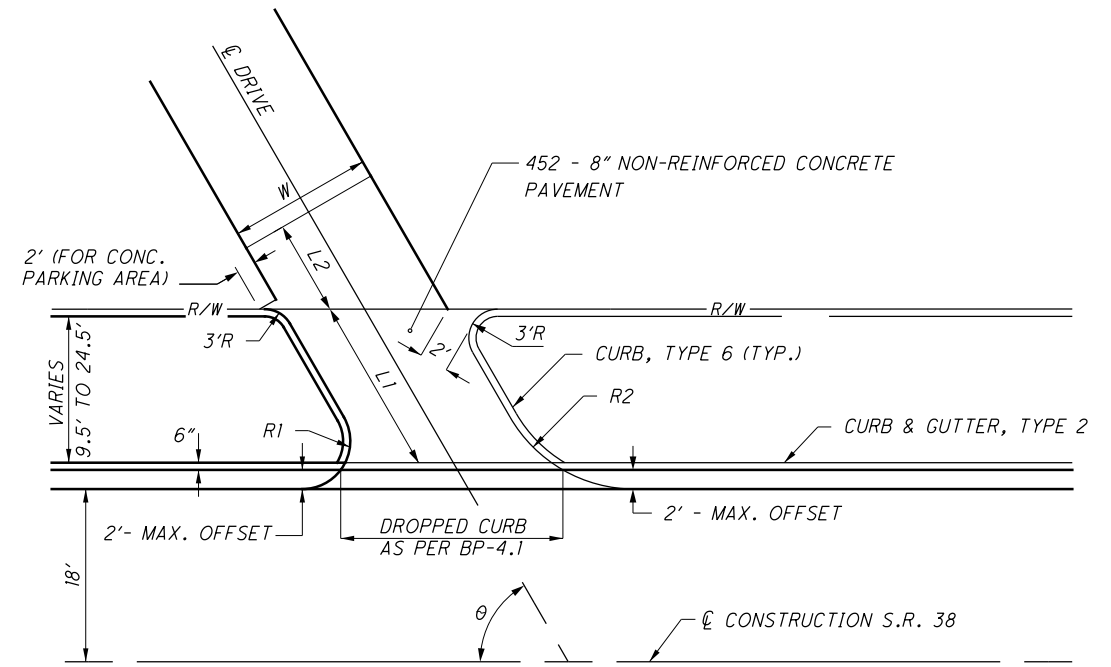




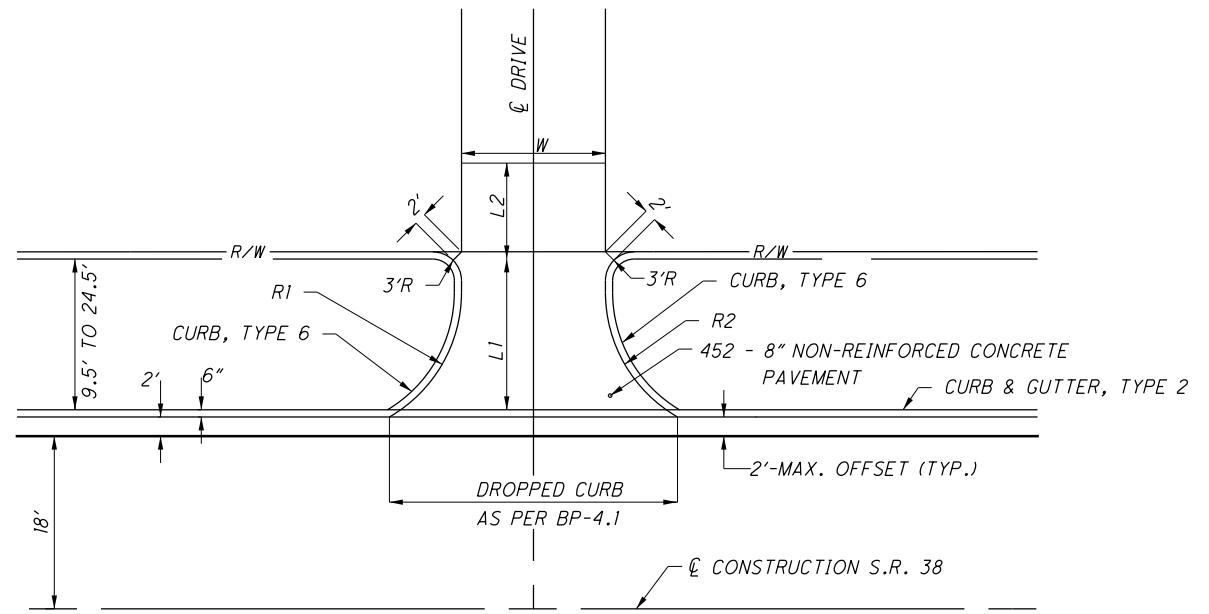
RESIDENTIAL DRIVES



COMMERCIAL DRIVES WITHOUT WRAP-AROUND CURB



SERVICE STATION DRIVES  
FOR  $\theta$ , SEE PLAN/PROFILE SHEETS.



COMMERCIAL DRIVES WITH WRAP-AROUND CURB

**RESIDENTIAL DRIVES**

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

**COMMERCIAL AND SERVICE STATION DRIVES**

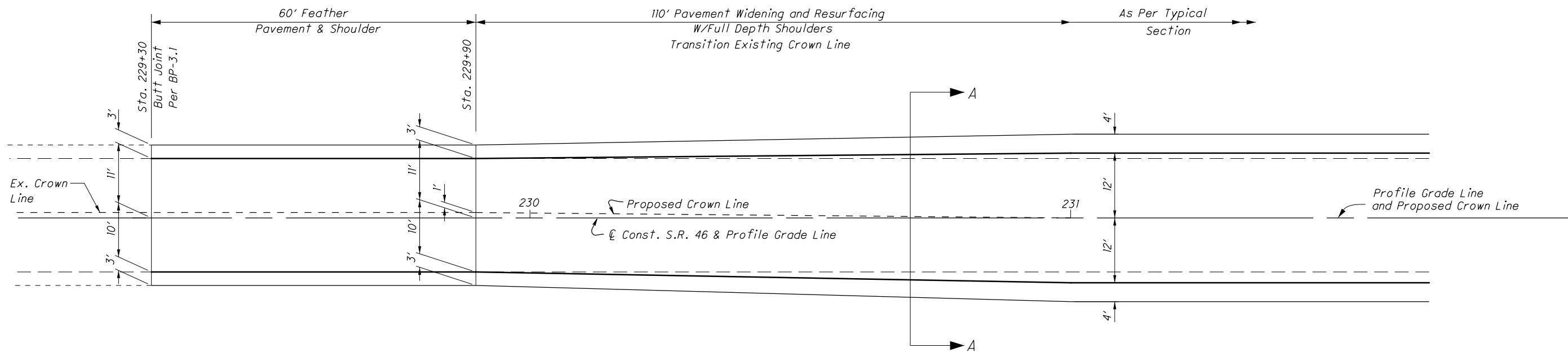
- EXISTING AGGREGATE DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
  - 304 - 10" AGGREGATE BASE
- EXISTING ASPHALT DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
  - 442 - 1/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448)
  - 442 - 1 3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448)
  - 407 - TACK COAT
  - 304 - 8" AGGREGATE BASE
- EXISTING CONCRETE DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)

SEE SHEET 41 FOR DRIVEWAY QUANTITIES.

DRIVEWAY DETAILS

CAR-38-22.56

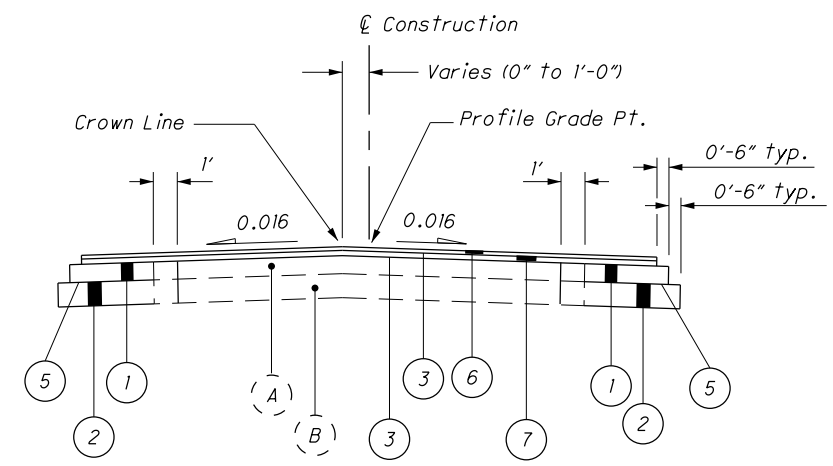




PAVEMENT TRANSITION DETAIL

**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/yd<sup>2</sup>)
- (4) NOT USED
- (5) ITEM 408 - PRIME COAT (Applied at a rate of 0.4 gal/yd<sup>2</sup>)
- (6) ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
- (7) ITEM 441 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- (A) ± 5" Asphalt
- (B) ± 8" Macadam Base



SECTION A-A

PAVEMENT TRANSITION DETAILS

PIC-46-27.22

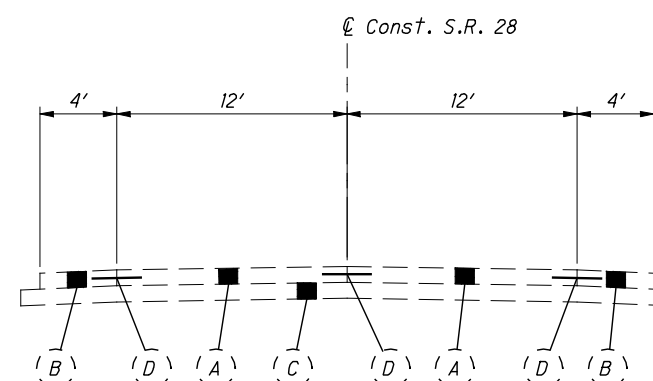
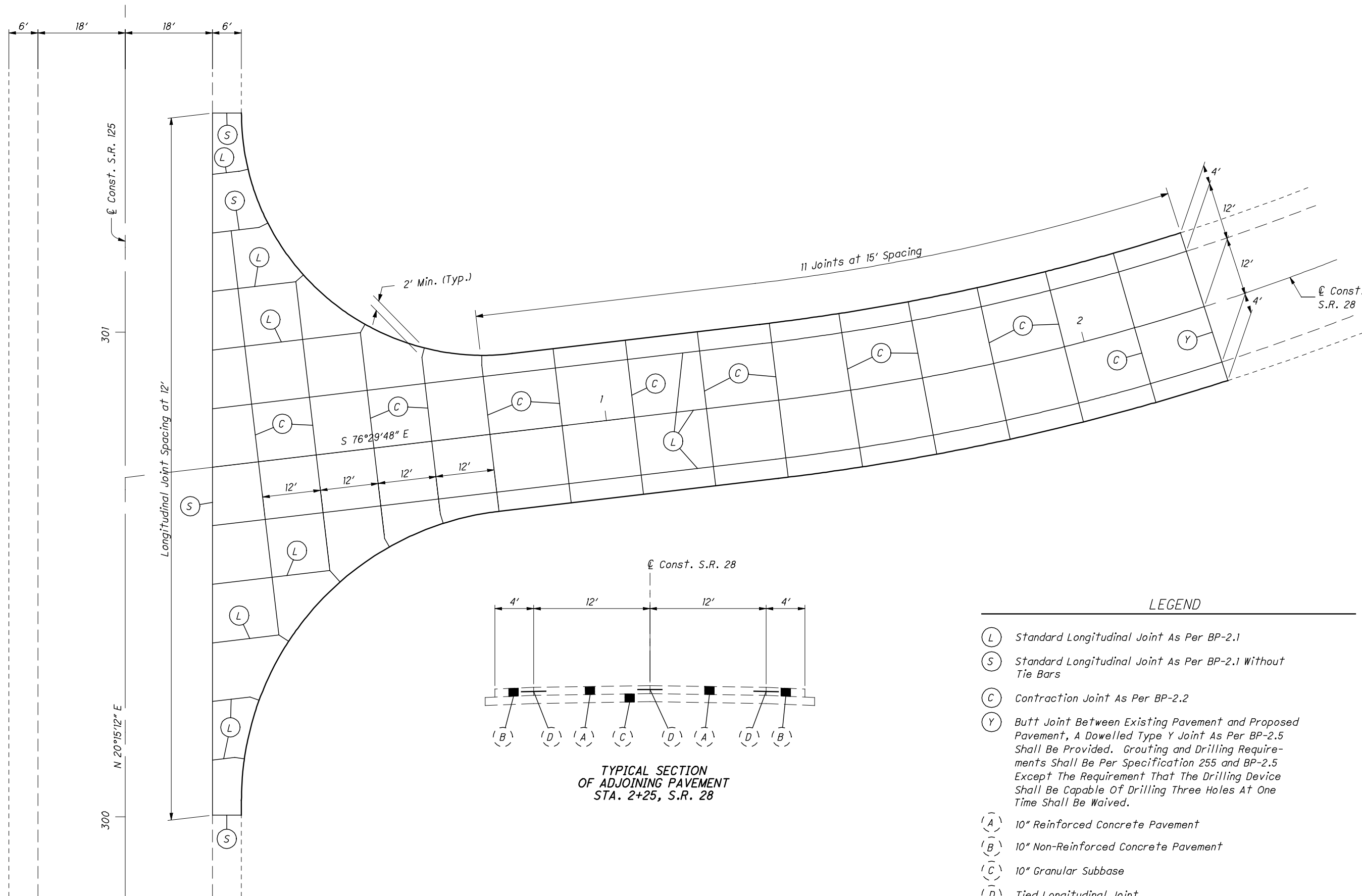




CALCULATED  
AAM  
CHECKED  
DEM

PAVEMENT JOINT DETAIL  
S.R. 28

LOR-28-0.00



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

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



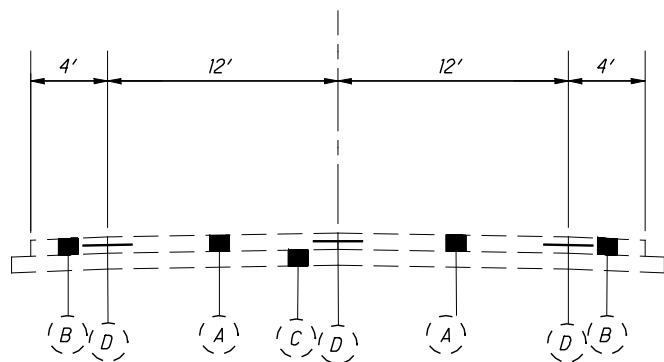
CALCULATED  
VHW  
CHECKED  
TLH

0 20 40  
HORIZONTAL  
SCALE IN FEET

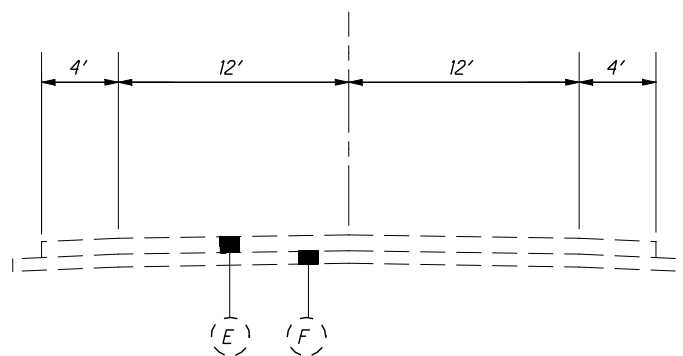
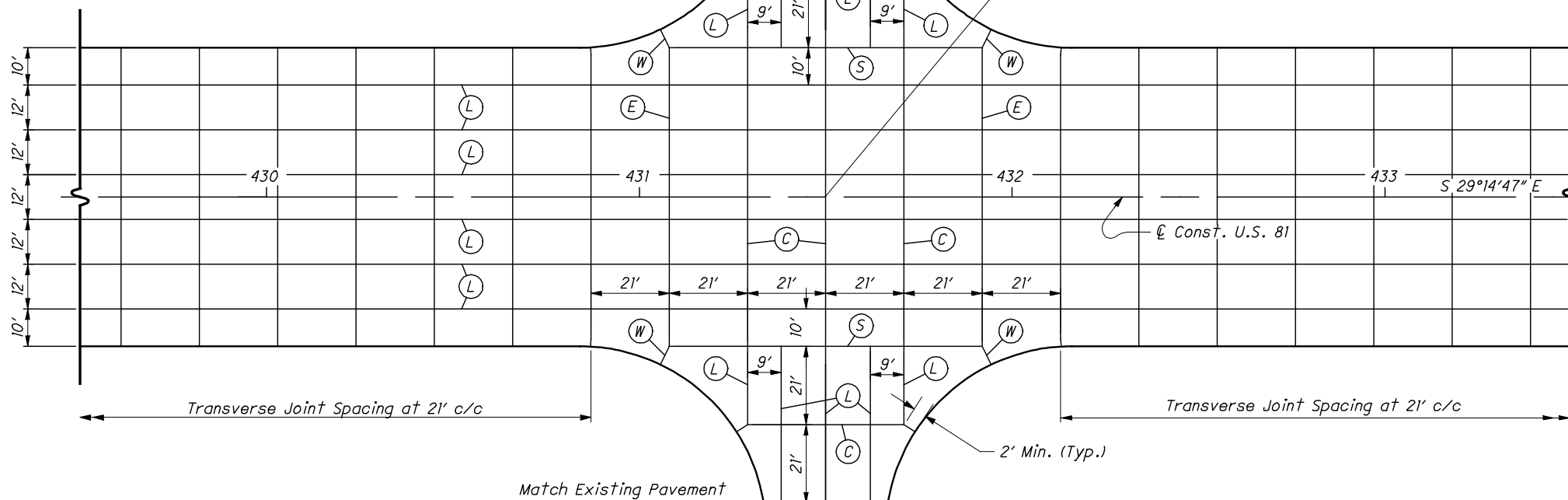
PAVEMENT JOINT DETAIL  
U.S.R. 81 AND S.R. 329

HOC-81-18.58

103  
189



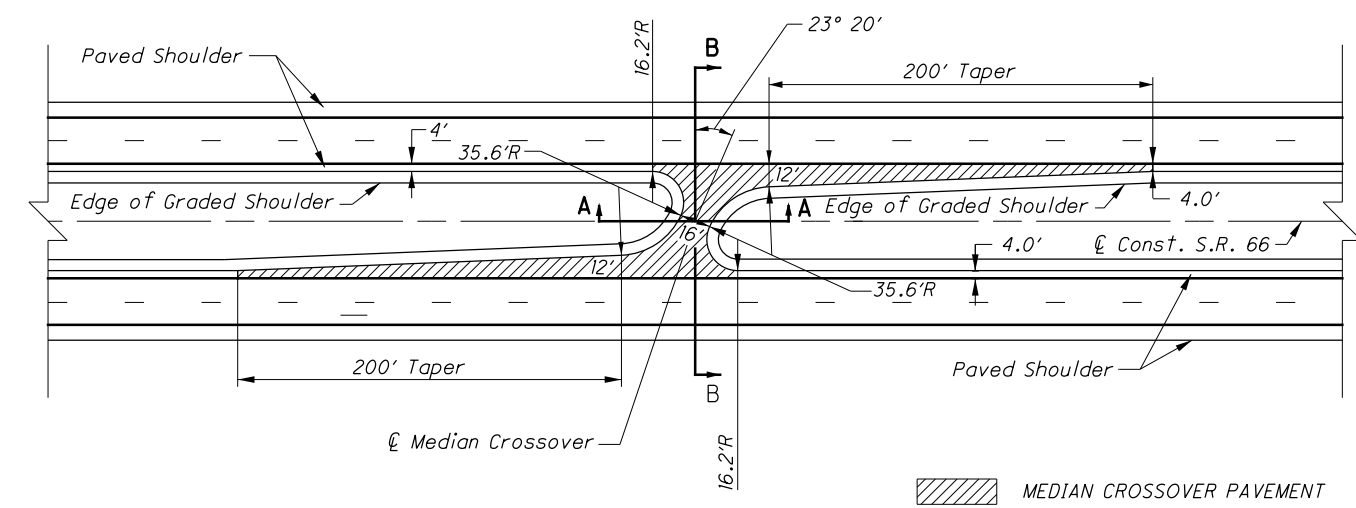
TYPICAL SECTION OF  
ADJOINING PAVEMENT S.R. 329  
Sta. 10+82



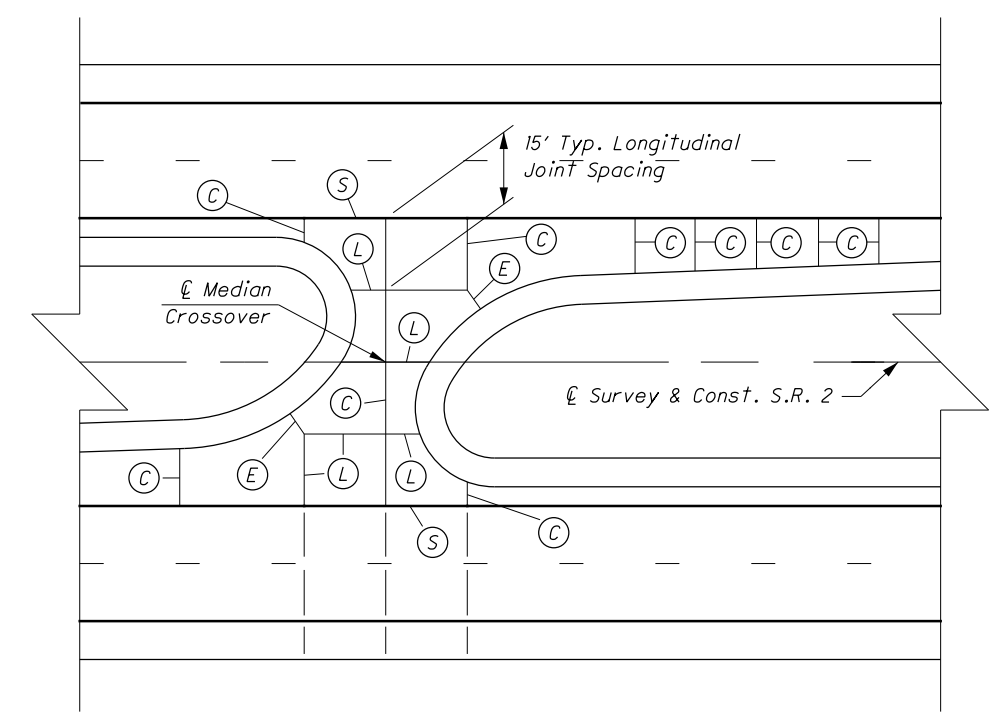
TYPICAL SECTION OF  
ADJOINING PAVEMENT S.R. 329  
Sta. 9+18

LEGEND

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



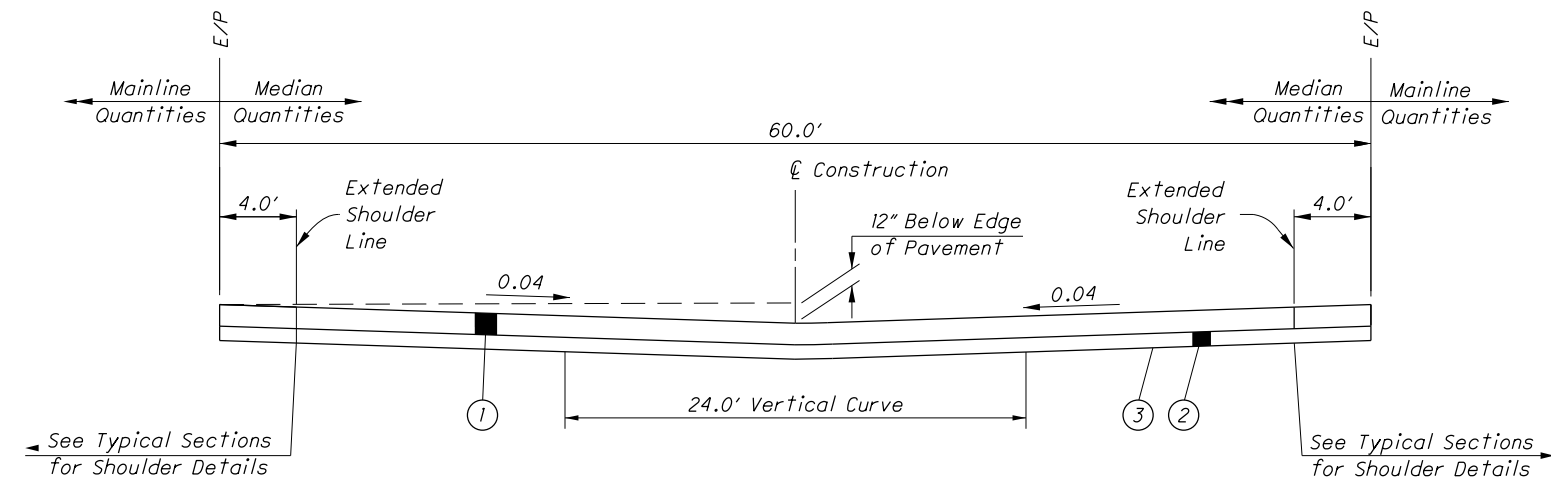
**TYPICAL MEDIAN CROSSOVER DETAIL**  
Applies: Sta. 5+00 and Sta. 124+00



**MEDIAN CROSSOVER JOINT DETAIL**

**NOTES:**

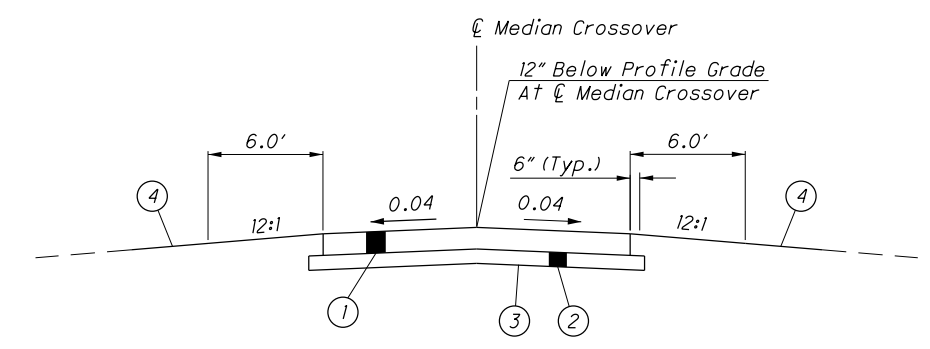
1. The above is a suggested joint diagram. The contractor may submit an alternate joint diagram to the Engineer for approval.
2. Align joints in median crossover to form continuous joints with traverse joints in the mainline pavement.



**SECTION B-B**

**LEGEND**

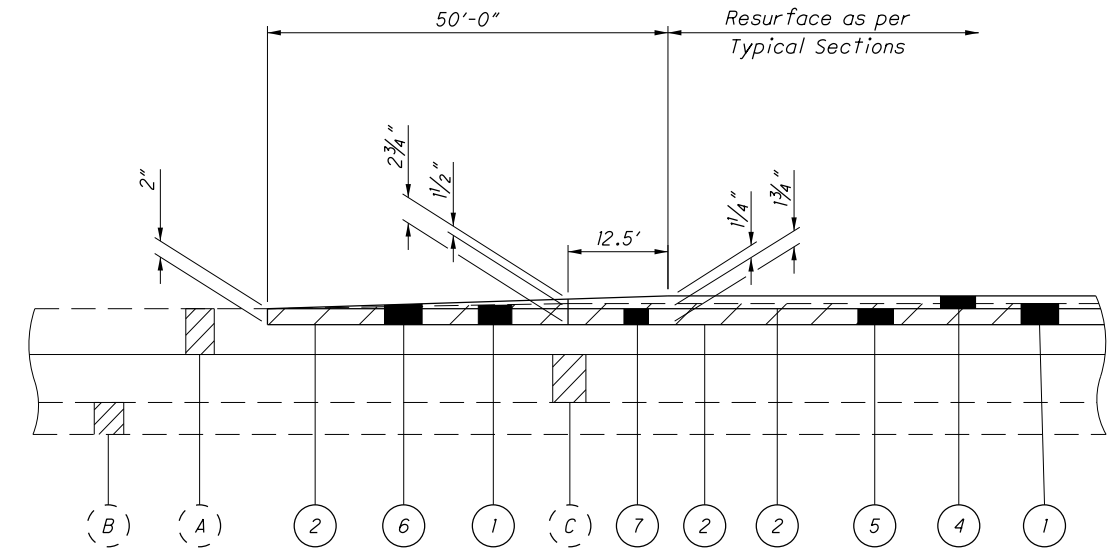
- |   |  |
|---|--|
| ① ITEM 452 - 9" Non-Reinforced Concrete Pavement, Class QCIP, As Per Plan | ⓐ Contraction Joint As Per BP-2.2                              |
| ② ITEM 304 - 6" Aggregate Base  | ⓓ Not Used   |
| ③ ITEM 204 - Subgrade Compaction  | ⓔ Expansion Joint (Without Dowels), As Per BP-2.2              |
| ④ ITEM 659 - Seeding And Mulching   | Ⓢ Standard Longitudinal Joint, As Per BP 2.1 without Tie Bar 3 |
|   | Ⓛ Longitudinal Joint, As Per BP-2.1                            |



**SECTION A-A**

**PROPOSED LEGEND**

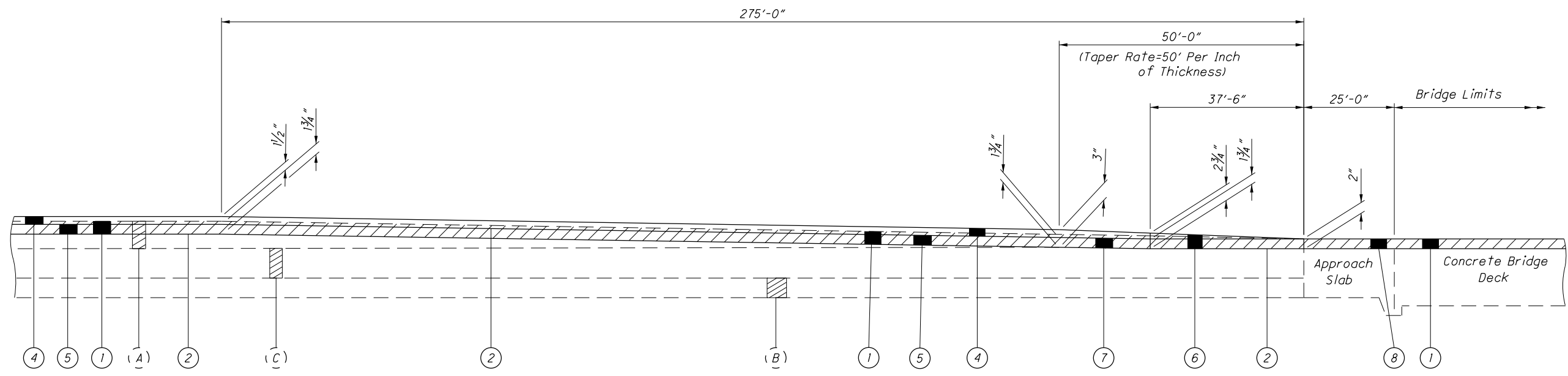
- ① ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
- ② ITEM 407 Tack Coat
- ③ NOT USED
- ④ ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446) PG64-22
- ⑤ ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 1, (446)
- ⑥ ITEM 441 Var. Thickness Asphalt Concrete Surface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

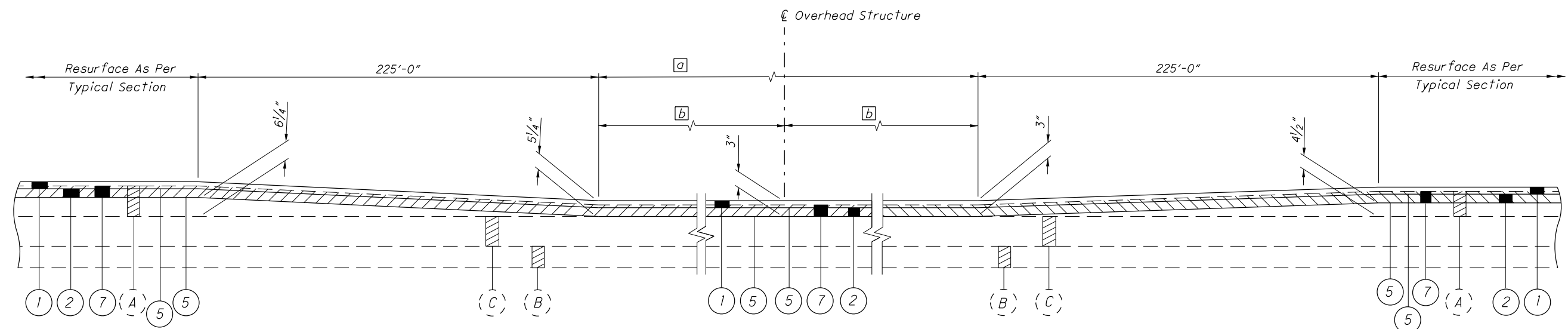


**TRANSITION AT STRUCTURES**

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 DETAILS

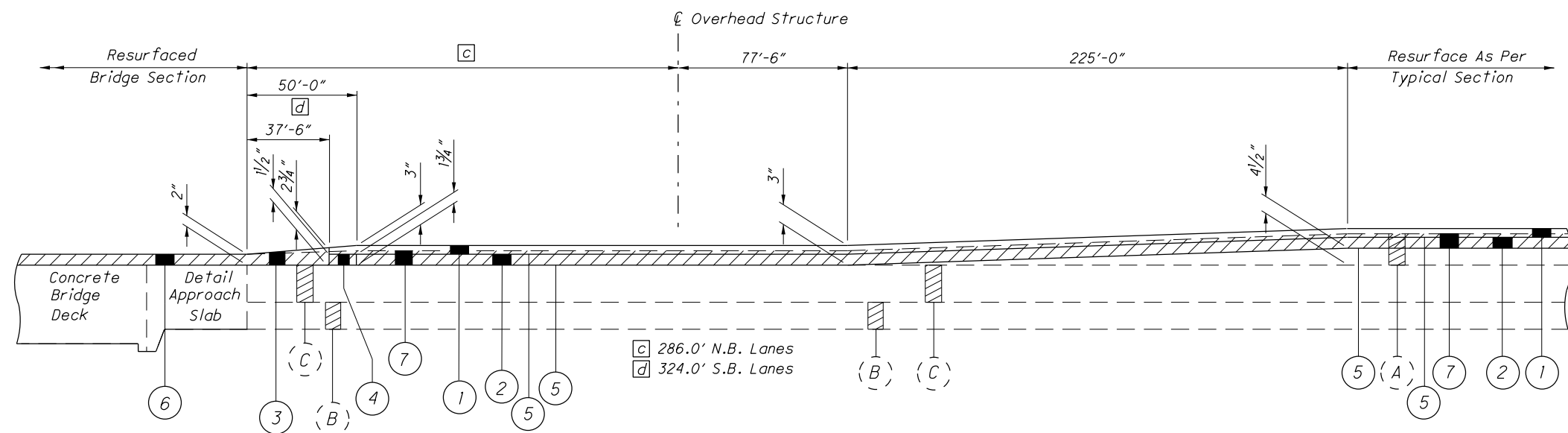
VAN-277-6.66



**PAVEMENT TRANSITION AT OVERHEAD BRIDGE**

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

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



**PAVEMENT TRANSITION AT OVERHEAD AND MAINLINE BRIDGES**

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

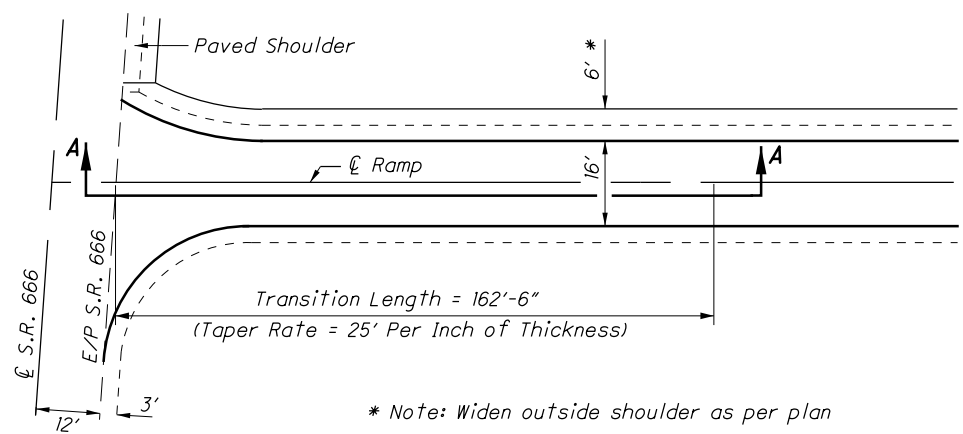
c 286.0' N.B. Lanes  
 d 324.0' S.B. Lanes

**PROPOSED LEGEND**

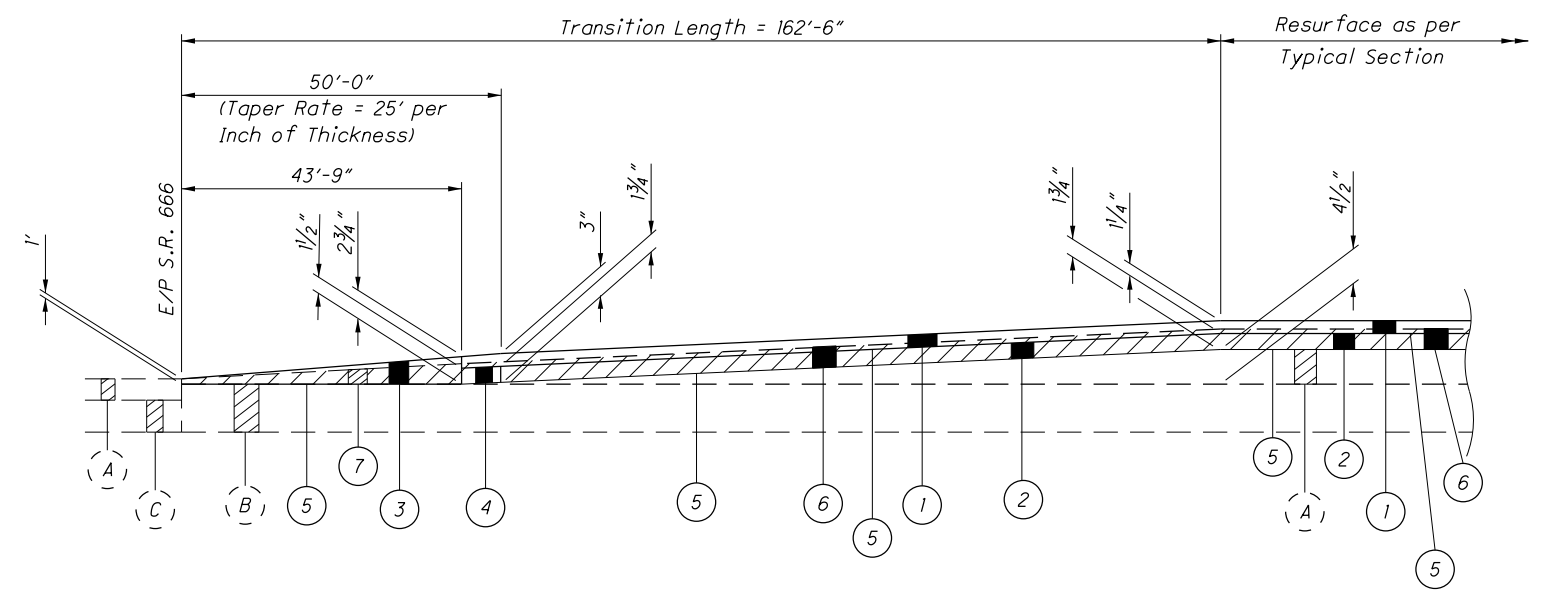
- ① ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22
- ② ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (446)
- ③ ITEM 441 Var. Thickness Asphalt Concrete Surface Course, Type 2, (446), PG 64-22
- ④ ITEM 441 Var. Thickness Asphalt Concrete Intermediate Course, Type 2, (446)
- ⑤ ITEM 407 Tack Coat
- ⑥ ITEM 848 Micro Silica Modified Concrete 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



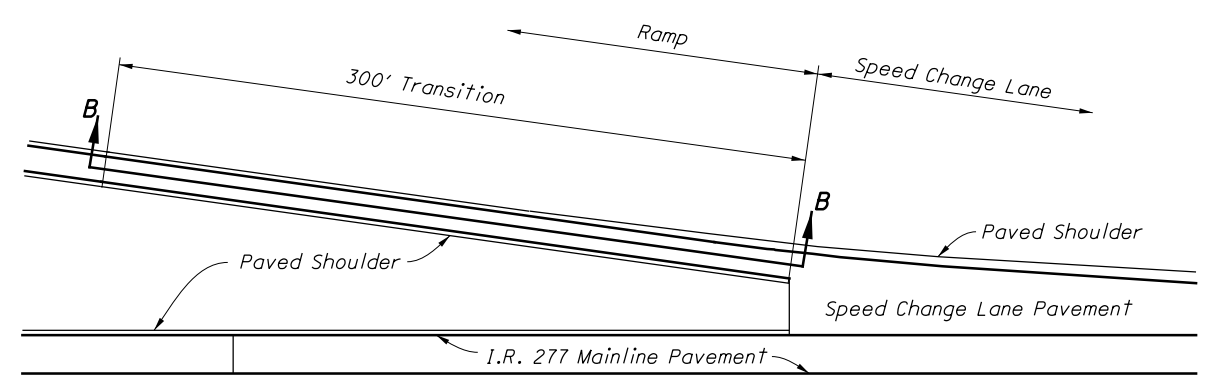
PLAN VIEW



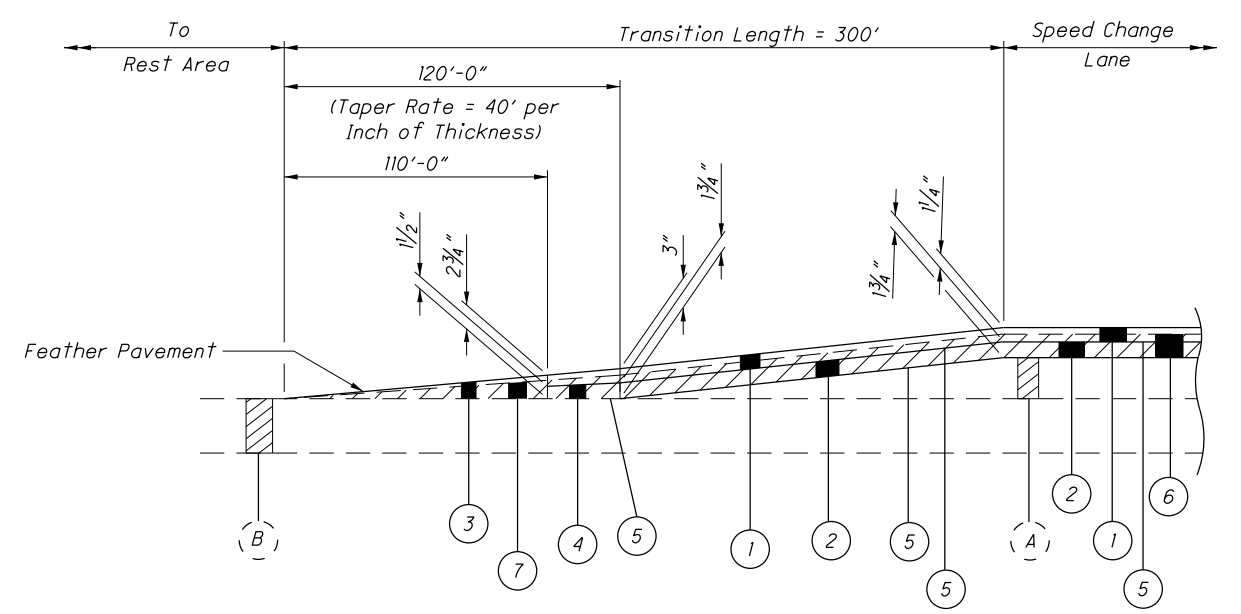
SECTION A-A

TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:  
S.R. 666 Interchange



PLAN VIEW



SECTION B-B

TRANSITION AT REST AREA ENTRANCE/EXIT RAMP DETAIL

PROPOSED LEGEND

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

ITEM 254 Pavement Planing, Asphalt Concrete

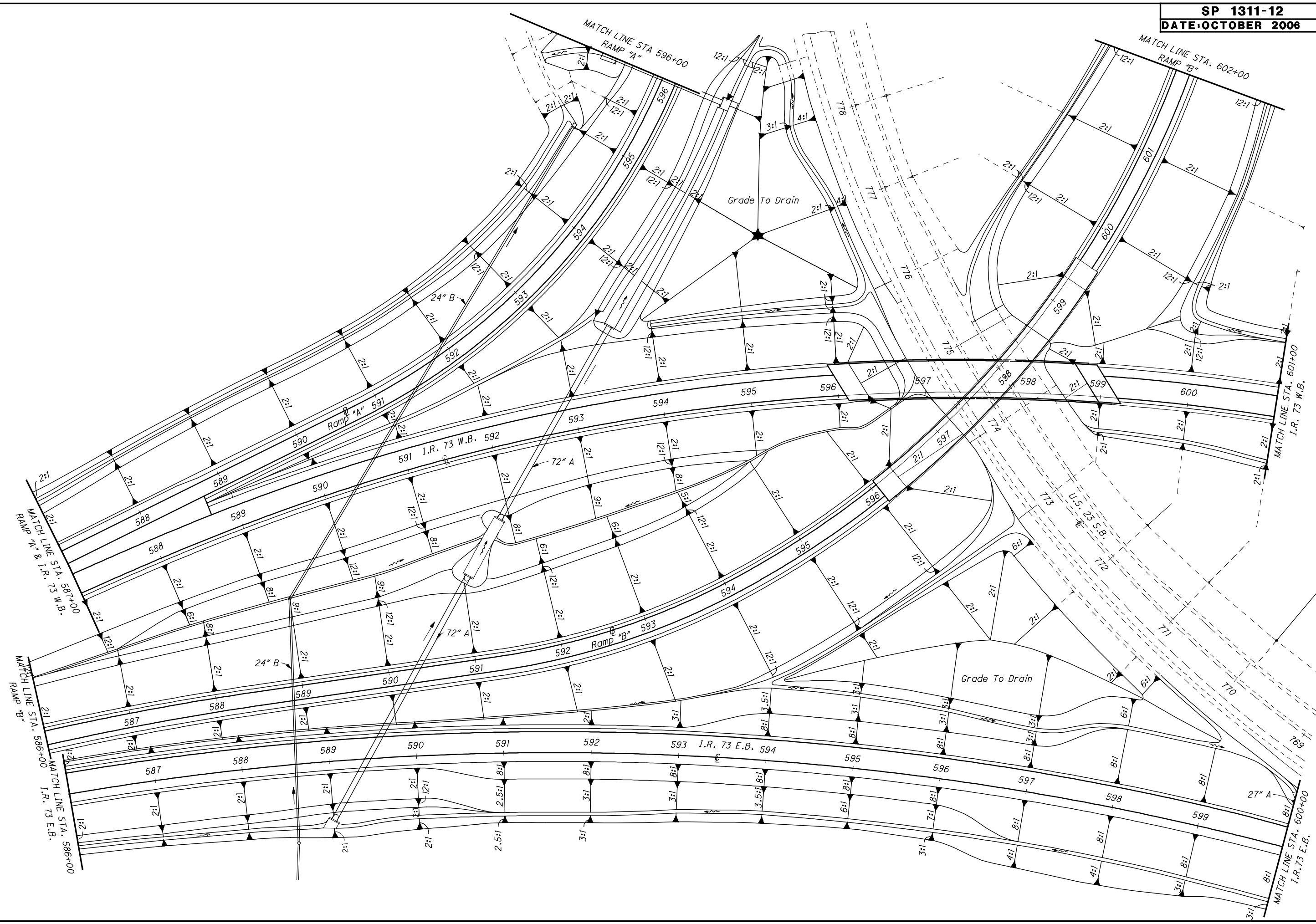
EXISTING LEGEND

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



0 25 50 100  
HORIZONTAL  
SCALE IN FEET

CALCULATED	DMK	CHECKED	CML
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**GRADING DETAILS  
I.R. 73 INTERCHANGE**

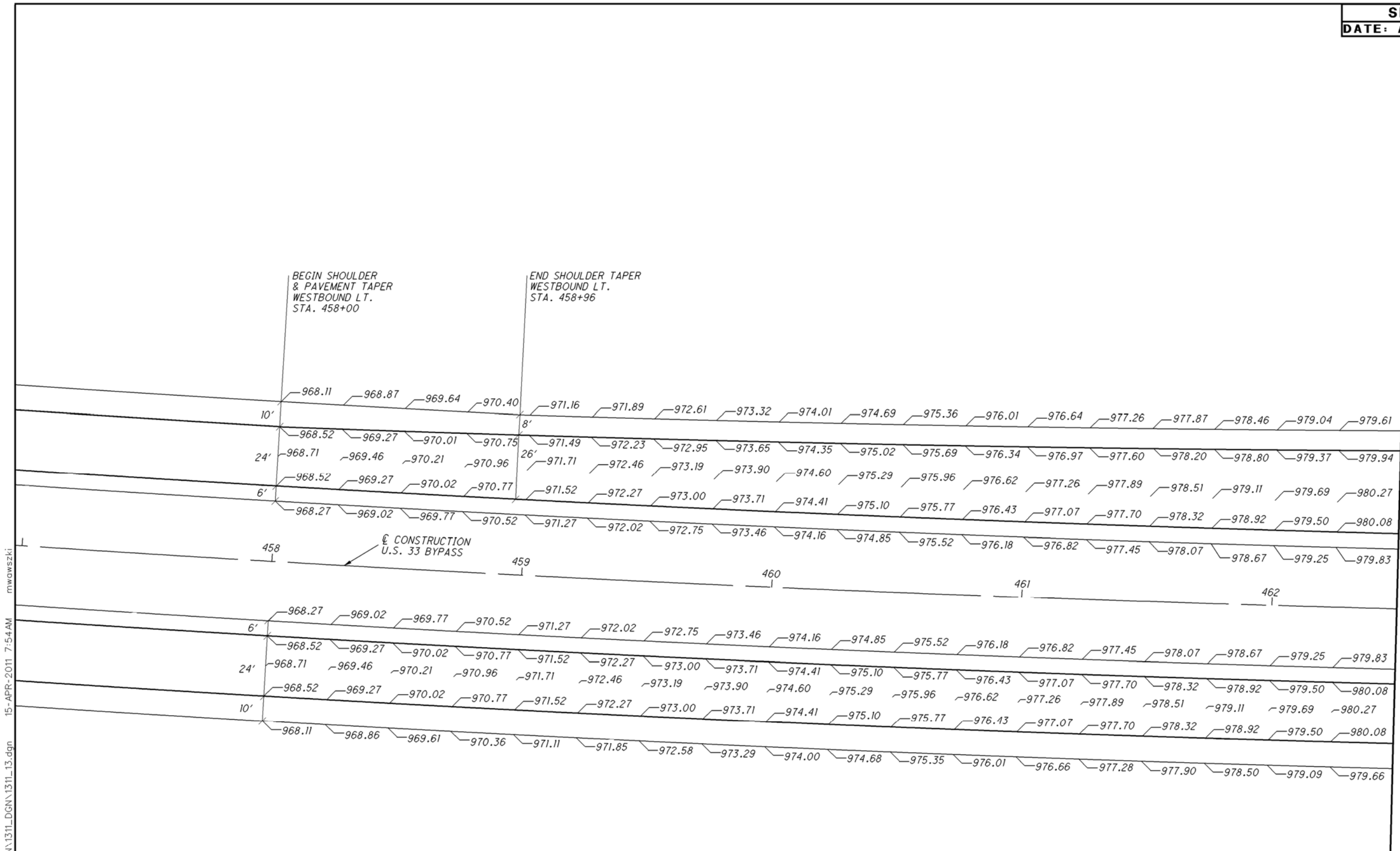
**HAN-73-19.11**



CALCULATED  
CHG  
CHECKED  
LJS

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

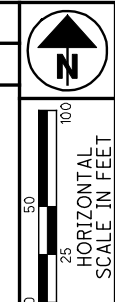
**FAI-33-13.25**



NOTE: ELEVATIONS SHOWN AT 25' INTERVALS

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ROUNDABOUT GEOMETRIC LAYOUT

FRA - 62 - 26.34

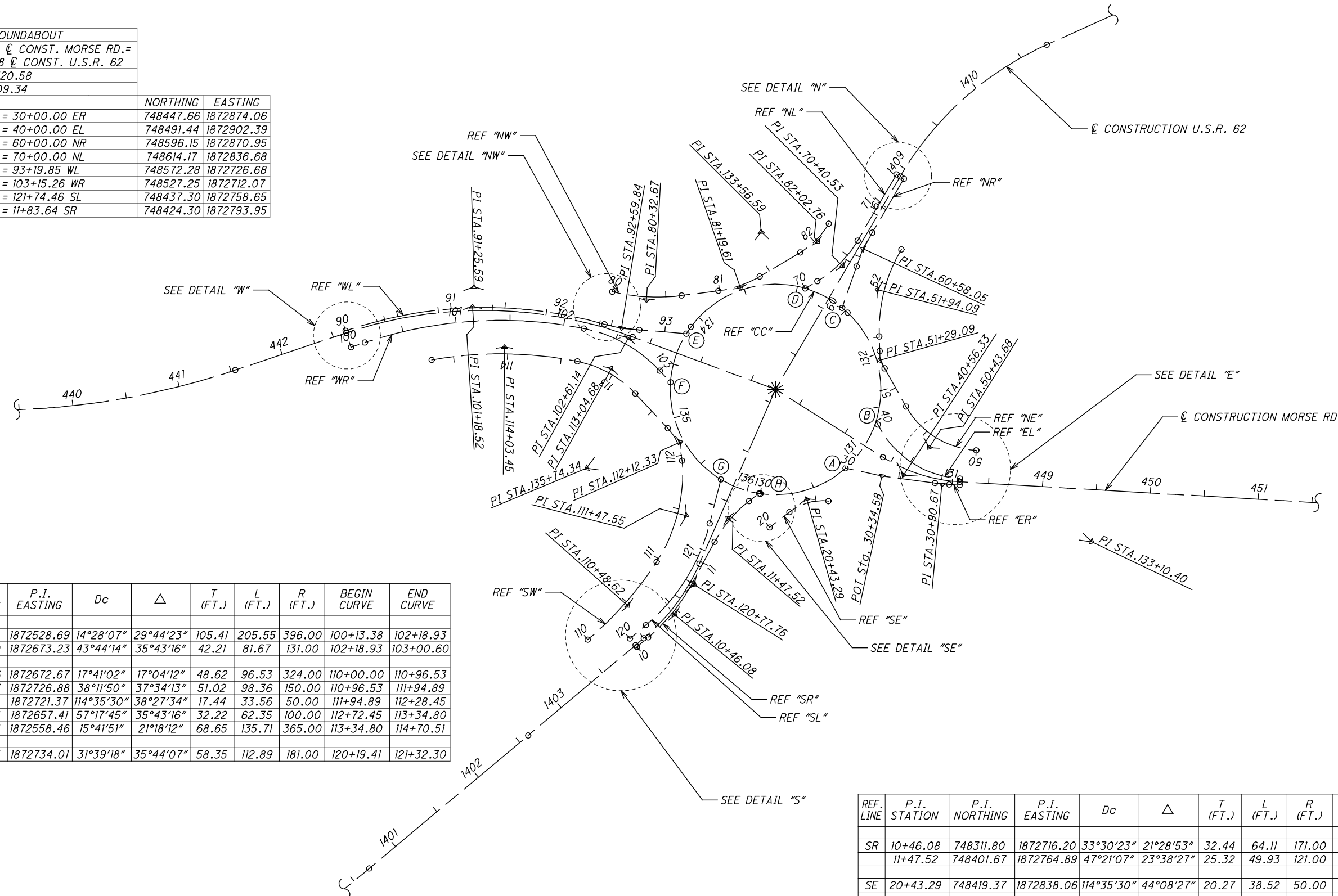
REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
NL	70+40.53	748634.87	1872871.53	54°03'09"	28°58'34"	27.39	53.61	106.00	70+13.14	70+66.75
NW	80+32.67	748603.36	1872689.89	32°44'26"	21°09'05"	32.67	64.60	175.00	80+00.00	80+64.60
	81+19.61	748614.67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

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

\* CENTER OF ROUNDABOUT

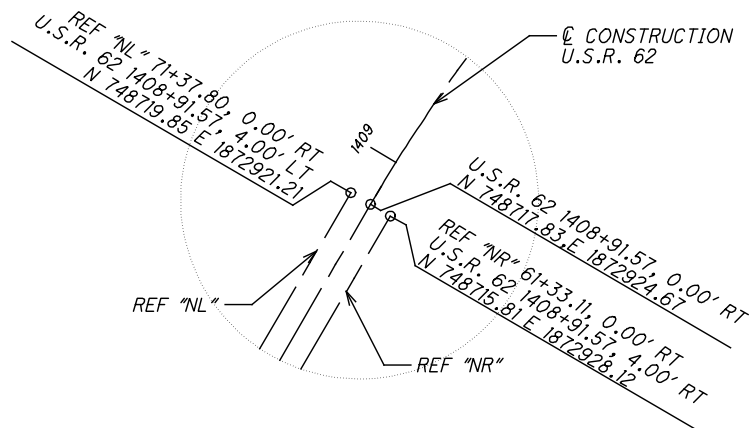
STA. 446+23.93 @ CONST. MORSE RD. =  
STA. 1406+63.08 @ CONST. U.S.R. 62  
NORTHING= 748520.58  
EASTING= 1872809.34

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

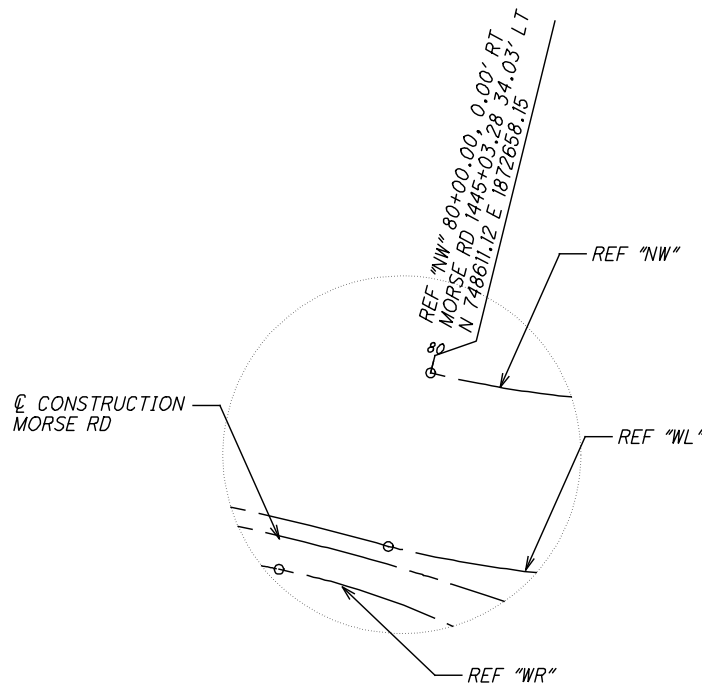


REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
SR	10+46.08	748311.80	1872716.20	33°30'23"	21°28'53"	32.44	64.11	171.00	10+13.64	10+77.75
	11+47.52	748401.67	1872764.89	47°21'07"	23°38'27"	25.32	49.93	121.00	11+22.20	11+72.12
SE	20+43.29	748419.37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

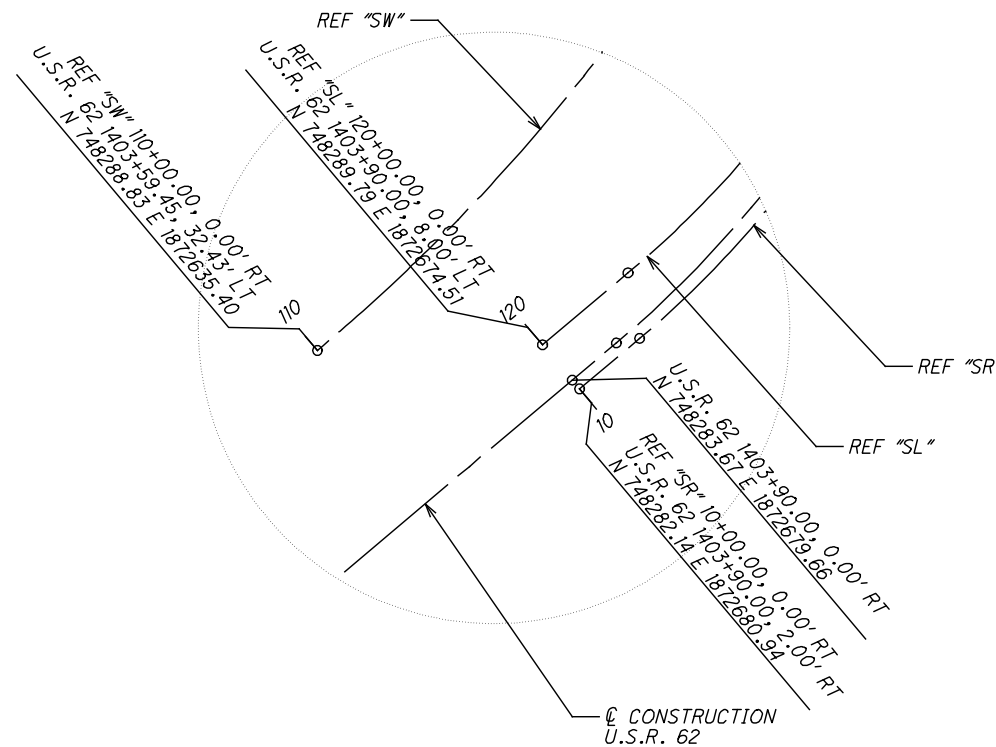
FOR DETAILS "N", "E", "S", "W", "SE" AND "NW" SEE SHEET 4  
FOR U.S.R.62 AND MORSE ROAD DETAILS SEE SHEET 2



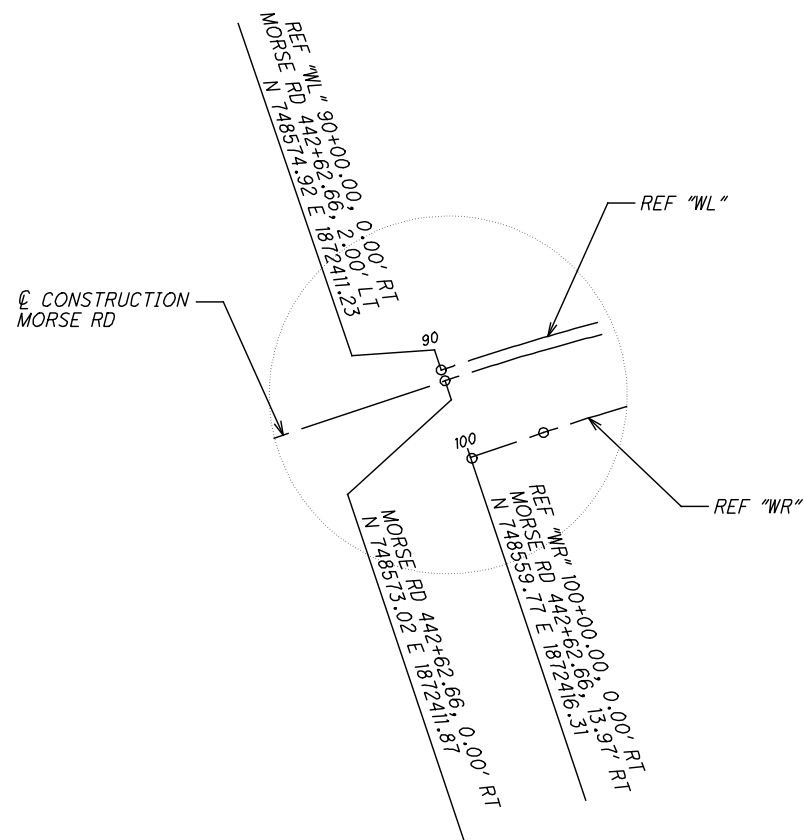
DETAIL "N"  
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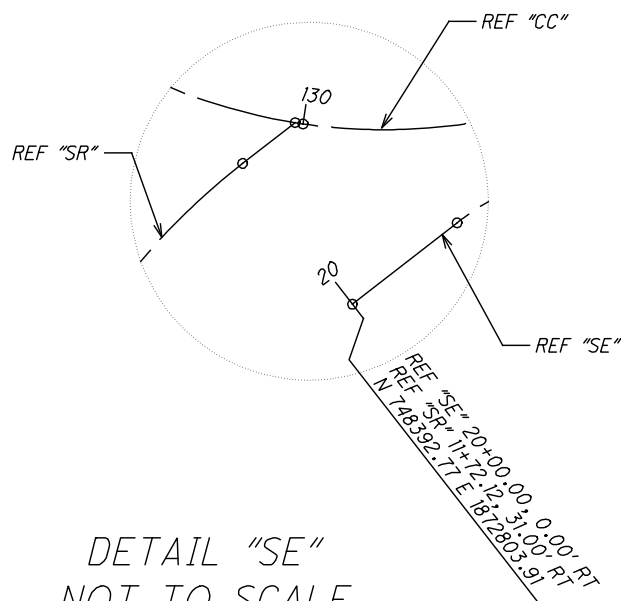
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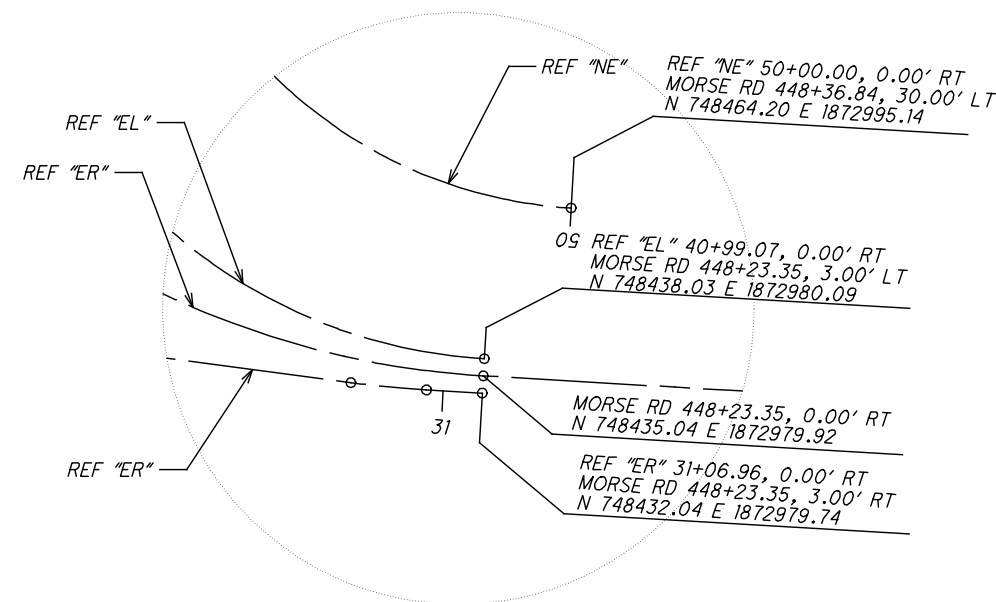
DETAIL "S"  
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DETAIL "W"  
NOT TO SCALE

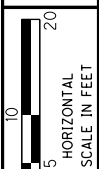


DETAIL "SE"  
NOT TO SCALE

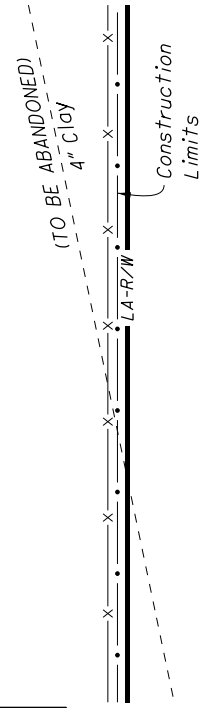
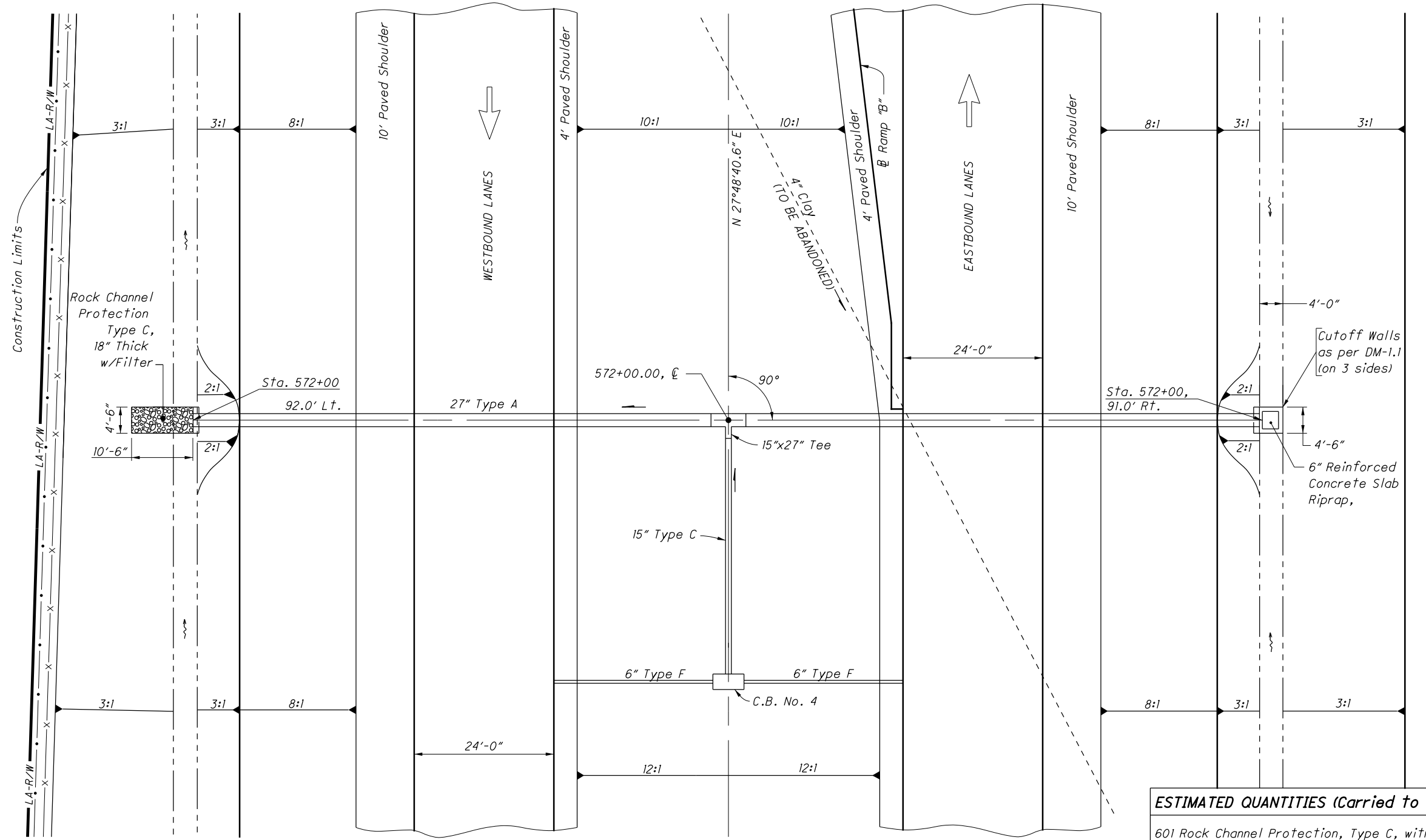


DETAIL "E"  
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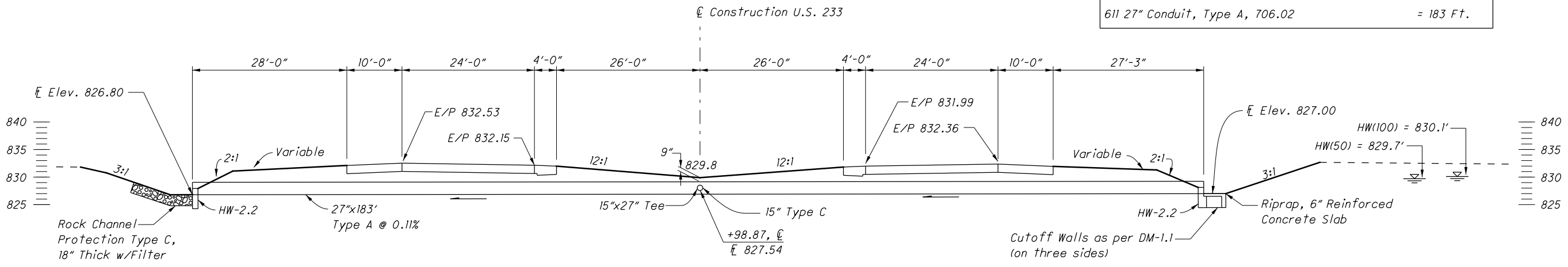
I:\pr\351ids\SamplePlans\Future Revision\1311\1311\_14b.dgn 03-OCT-2006 9:30AM mwawski



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



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



CALCULATED  
DMK  
CHECKED  
CML

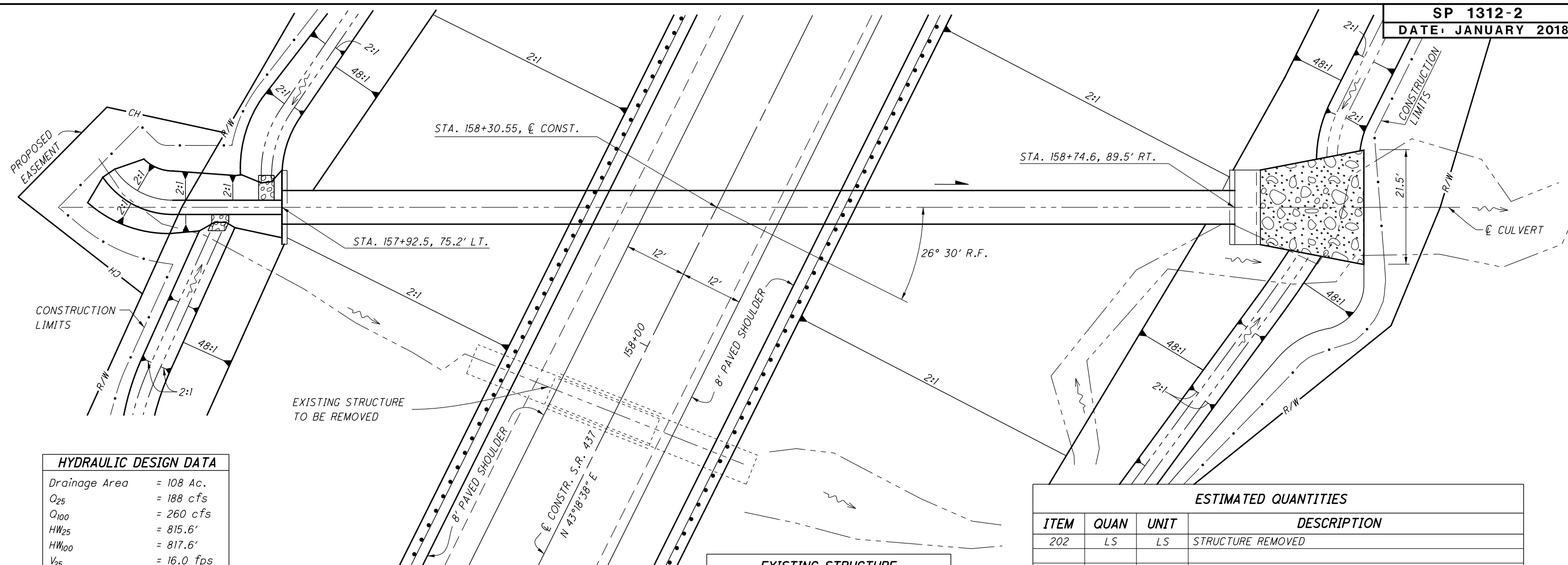
**CULVERT DETAILS**  
**U.S. 233 - STA. 572+00**

**ALL-233-22.69**



0 5 10 20  
HORIZONTAL  
SCALE IN FEET

CALCULATED JOH  
CHECKED JDH



**HYDRAULIC DESIGN DATA**

Drainage Area	= 108 Ac.
$Q_{25}$	= 188 cfs
$Q_{100}$	= 260 cfs
$HW_{25}$	= 815.6'
$HW_{100}$	= 817.6'
$V_{25}$	= 16.0 fps
$V_{100}$	= 18.5 fps
ORDINARY HIGH WATER MARK	= 810.3'
DESIGN SERVICE LIFE	= 75 YR
pH	= 7.5
Abrasion Level:	3
CFN	= 1234567

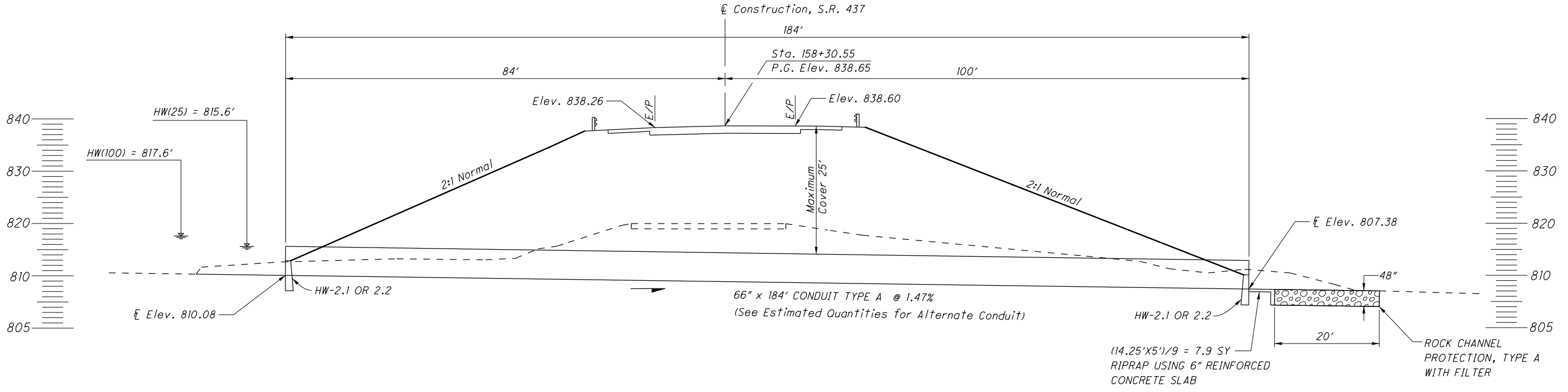
**EXISTING STRUCTURE**

TYPE: STONE ARCH W/72" CMP EXTENSIONS  
 SIZE: 6'X5'X58' ARCH  
 SKEW: 26° 30' R.F.  
 ALIGNMENT: TANGENT  
 DATE BUILT: 1908  
 CONDITION: POOR  
 CFN: 7654321

**ESTIMATED QUANTITIES**

ITEM	QUAN	UNIT	DESCRIPTION
202	LS	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 (0.28) GALVANIZED, 707.02 (0.064) ALUMINIZED, 707.03 (0.138) W/CFP, 707.04 (1") (0.064), 707.05 (0.064), 707.07 (0.109)
670	72	SY	DITCH EROSION PROTECTION MAT TYPE C

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 37

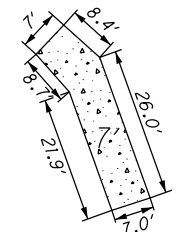
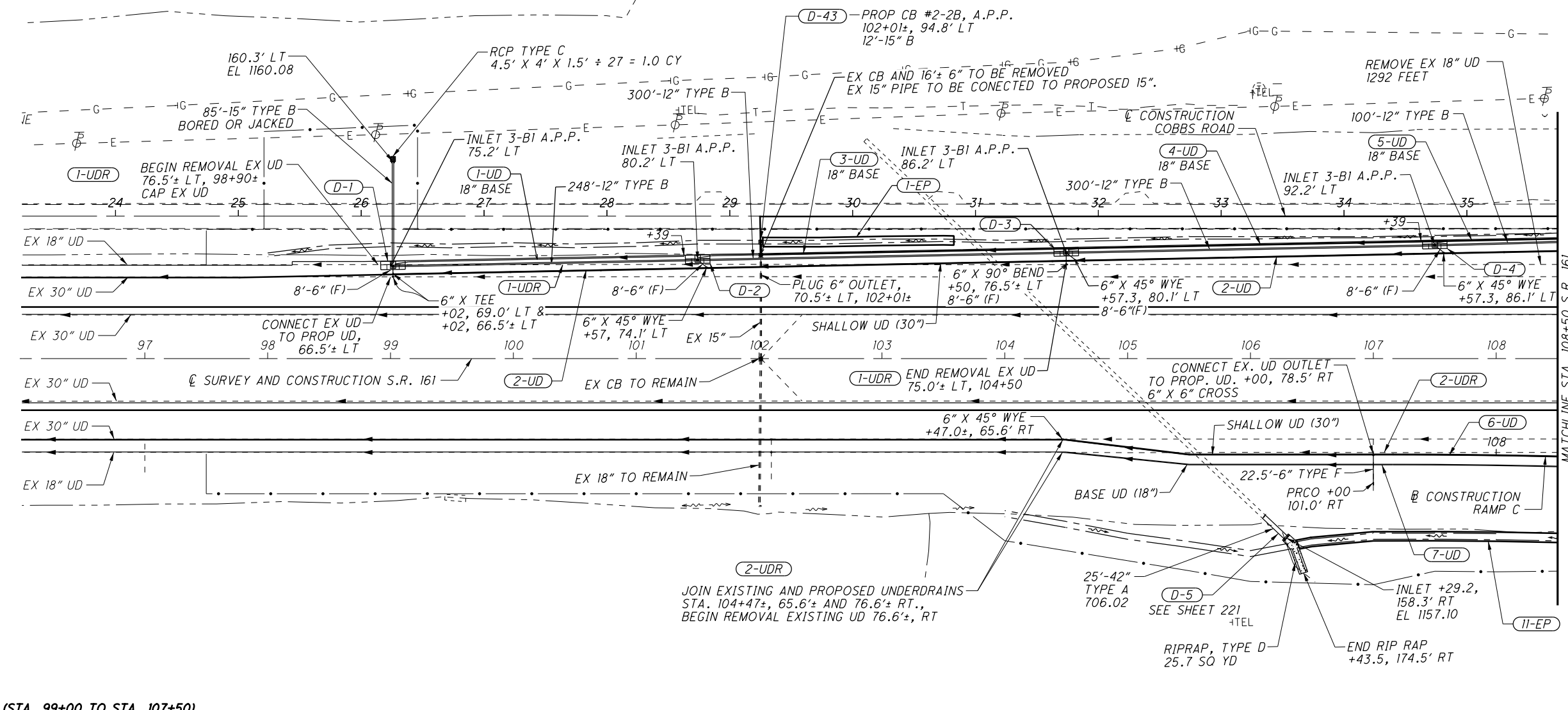


CULVERT DETAIL  
S.R. 437 STA. 158+30

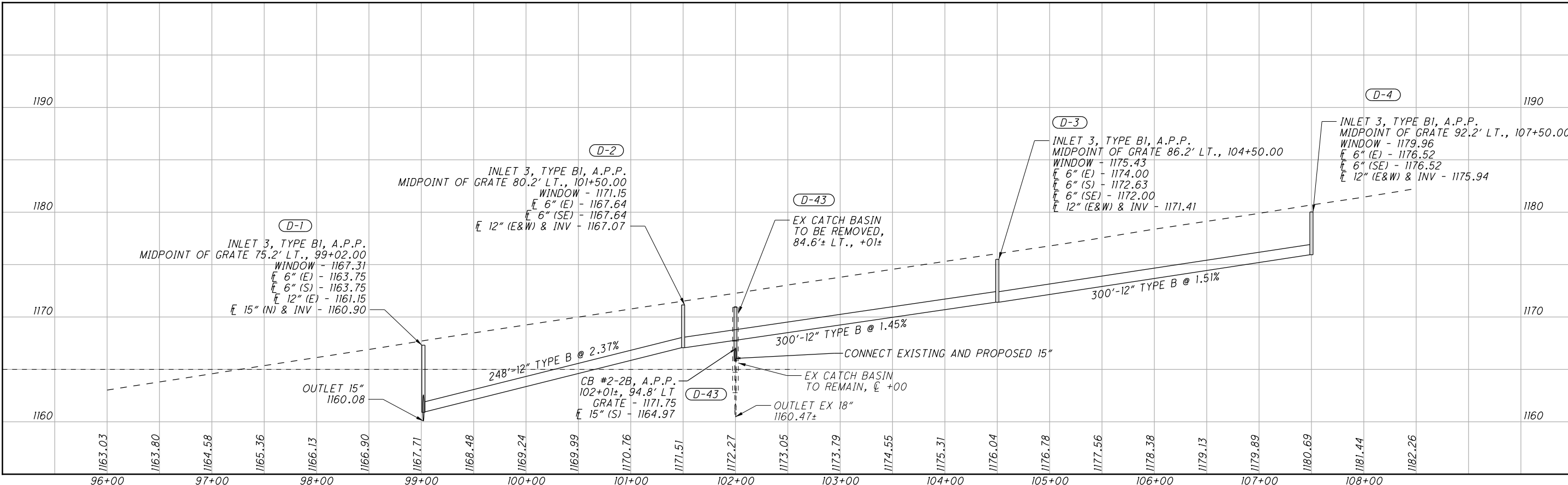
PRE-437-2.65



CALCULATED  
R/JG  
CHECKED  
HAG

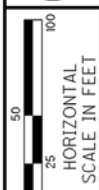


CFN = 1234567 (STA. 99+00 TO STA. 107+50)



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

LIC-161-1.83



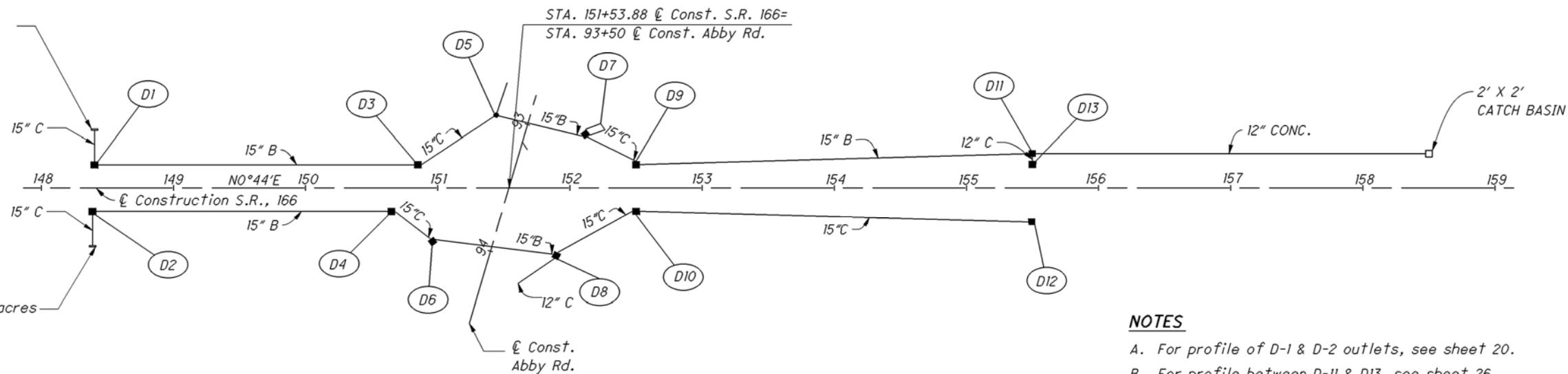
CALCULATED MSO  
CHECKED PDC

S.R. 166 DRAINAGE PROFILE

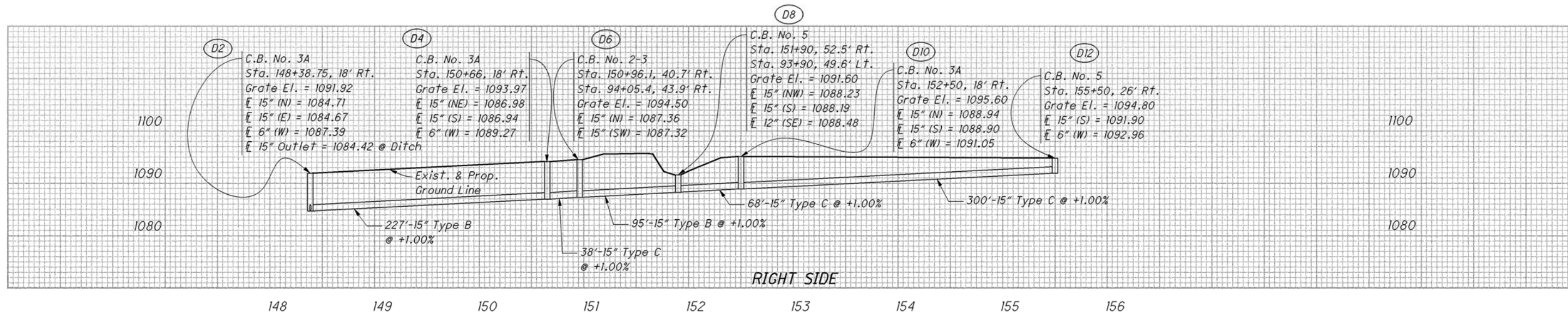
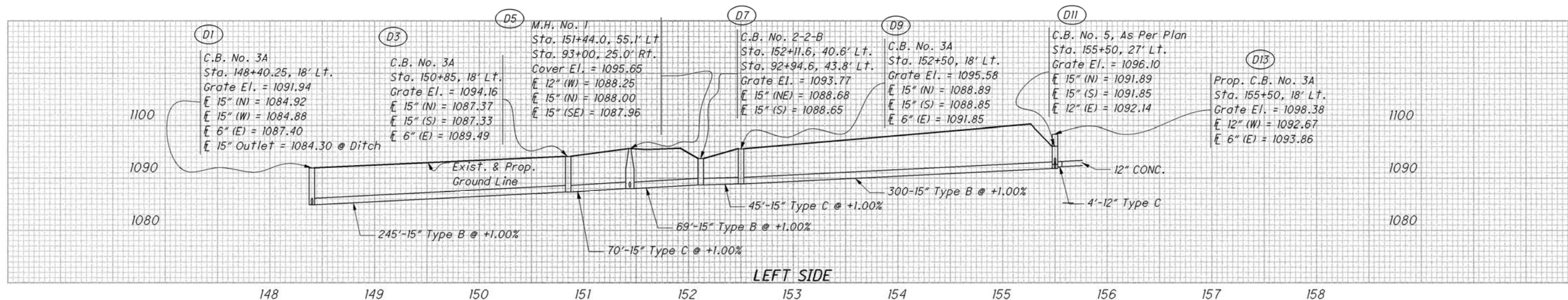
RIC-166-8.37

**Outlet:**  
Drainage Area = 4.3 acres  
 $Q_{10} = 7.3$  cfs  
 $Q_{25} = 8.9$  cfs  
HGL<sub>10</sub> = 1087.1  
HGL<sub>25</sub> = 1087.9

**Outlet:**  
Drainage Area = 3.6 acres  
 $Q_{10} = 5.8$  cfs  
 $Q_{25} = 6.7$  cfs  
HGL<sub>10</sub> = 1086.8  
HGL<sub>25</sub> = 1087.6



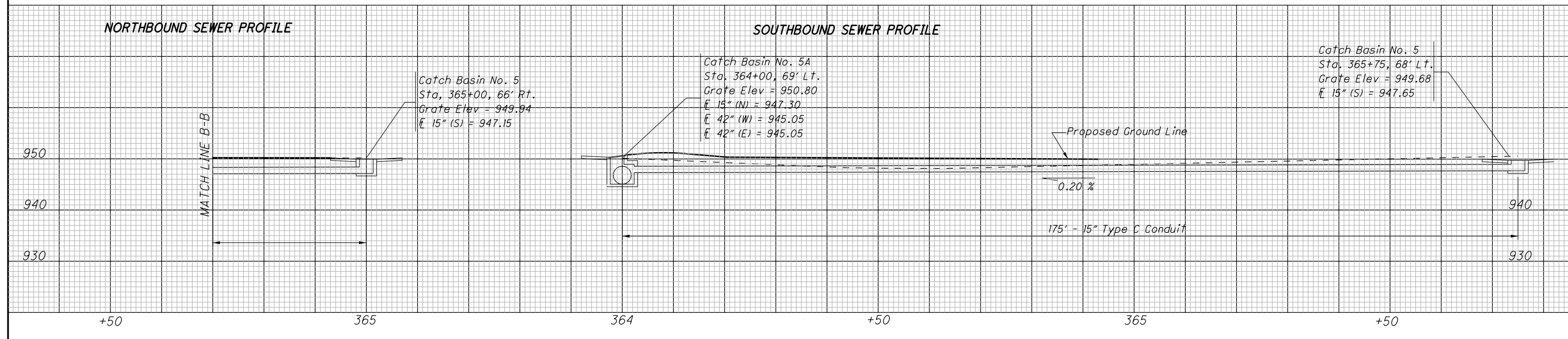
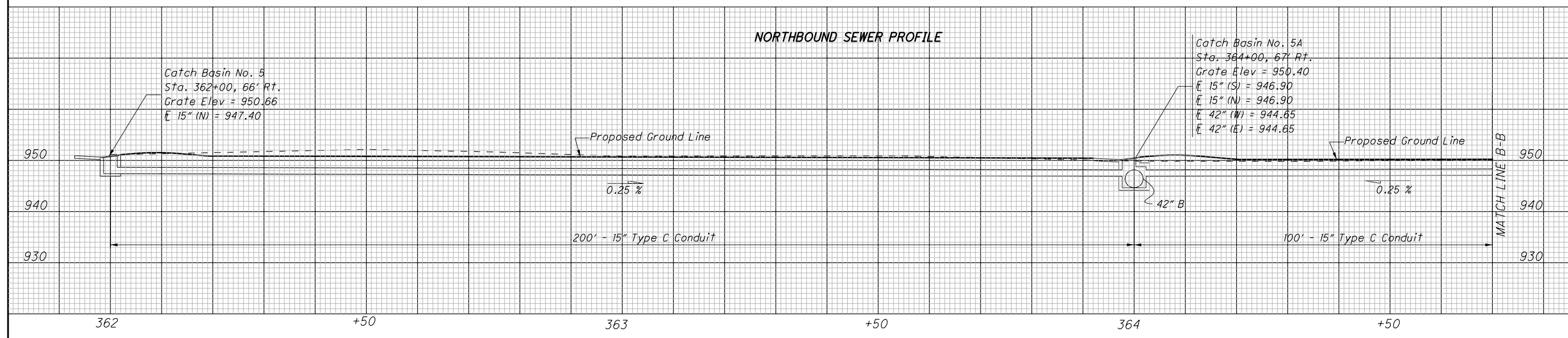
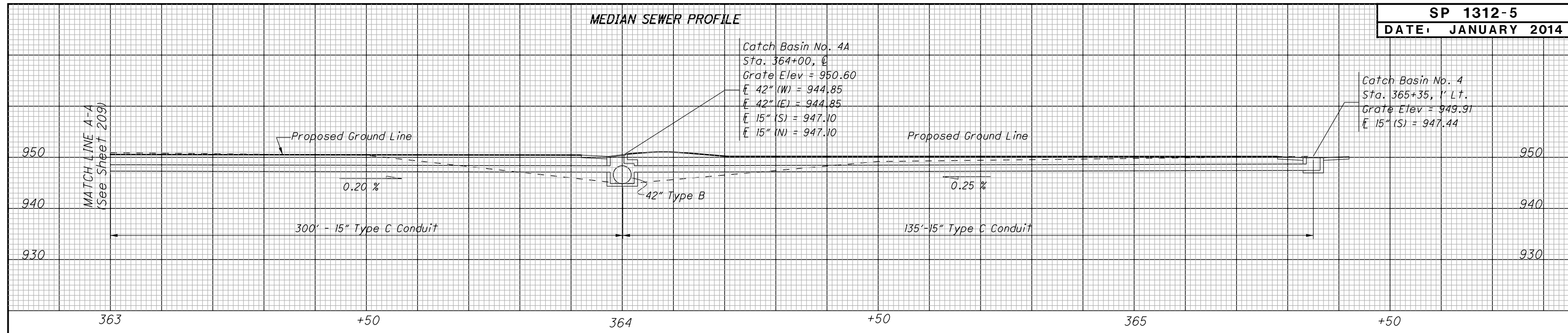
- NOTES**
- A. For profile of D-1 & D-2 outlets, see sheet 20.
  - B. For profile between D-11 & D13, see sheet 26.
  - C. For Abby Rd. drainage profile, see sheet 41.
  - D. For drainage sub-summary, see sheets 14-16.
  - E. For S.R.166 plan & profile, see sheets 17-19.



CALCULATED  
MTC  
CHECKED  
CJM

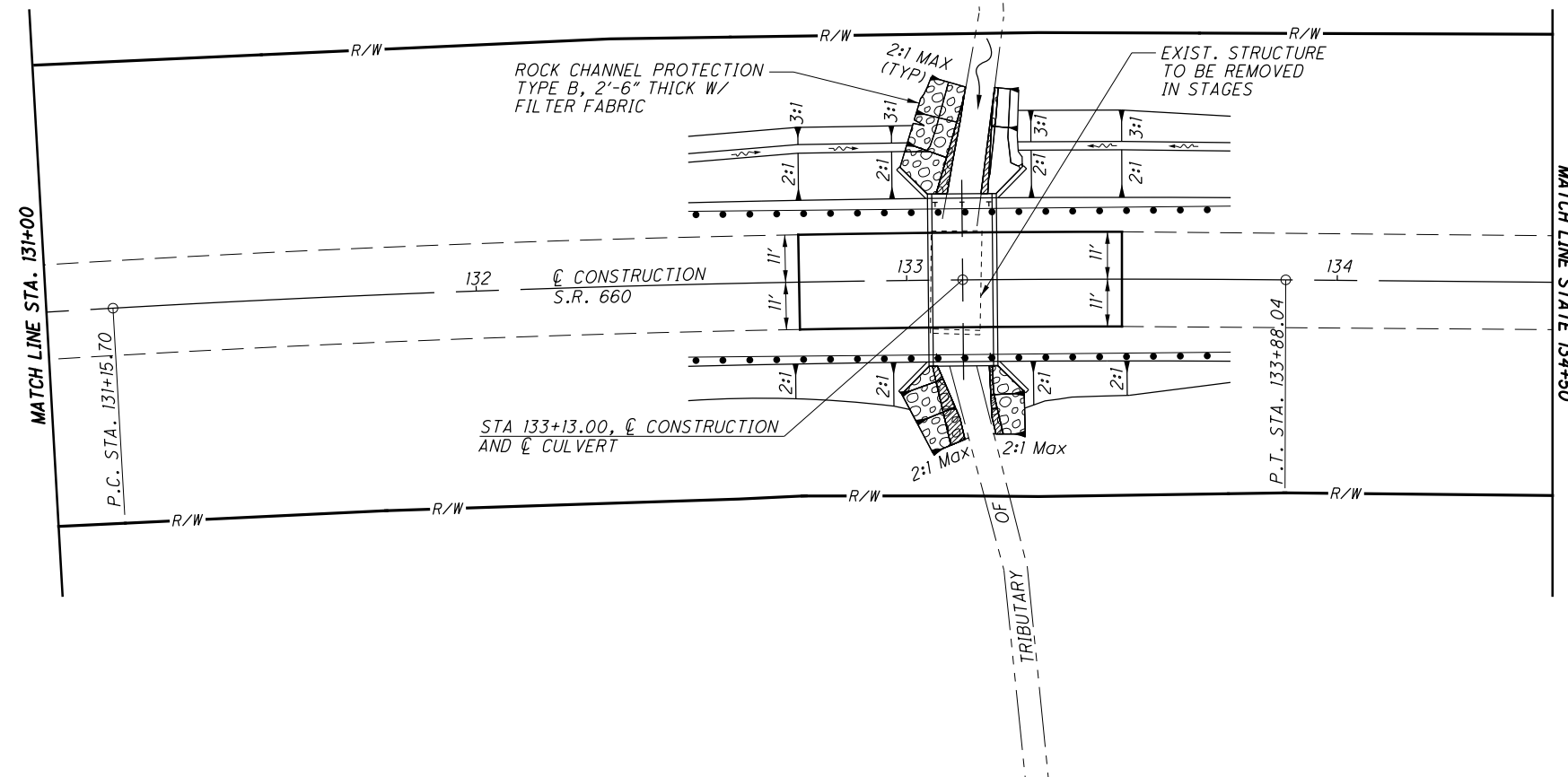
LONGITUDINAL SEWER PROFILE

LUC-76-31.48





CALCULATED KEW  
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	
pH: 7.4	
Abrasion Level: 3	
$Q_{10} = 297$ CFS	$Q_{100} = 518$ CFS
$V_{10} = 6.9$ FPS	$V_{100} = 7.9$ FPS
$HW_{10} = 827.8$	$HW_{100} = 829.9$

**EXISTING STRUCTURE**

TYPE: CONCRETE SLAB SUPPORTED ON GRAVITY WALL ABUTMENT  
 SPAN: 12'-0"  
 ROADWAY: 22'-5" F/F RAILS  
 ALIGNMENT: CURVE  
 APPROACH SLAB: NONE  
 SUPERELEVATION: VARIES  
 DATE BUILT: 1900  
 STRUCTURE FILE NO. 3006514  
 SKEW: 0° REFERENCE CHORD  
 DISPOSITION: TO BE REPLACED  
 LOADING: S-II.3(7)

**PROPOSED STRUCTURE**

TYPE: PRECAST REINFORCED CONCRETE FLAT-TOPPED THREE-SIDED CULVERT  
 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

840					829.76	829.71					
835					+75, MEET EXIST. BUTT END JOINT PER BP-3.1					+50, MEET EXIST. BUTT END JOINT PER BP-3.1	
830						-0.20%					
825							LOW CHORD EL. = 828.44				
820							14'x6' PRECAST CONCRETE THREE-SIDED CULVERT				
815	830.11	830.01	829.91	829.81	829.71	829.61		822.53	818.36	829.51	829.41
	131+00	+50	132+00	+50	133+00	+50				134+00	+50

CULVERT PLAN AND PROFILE  
STA. 133+13.00

GUE-660-2.52



**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL.

**DESIGN LOADING:**

HS25 AND THE ALTERNATE MILITARY LOADING.

**DESIGN STRESSES:**

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

PRECAST STRUCTURES: FOR THREE-SIDED STRUCTURES SEE CULVERT NOTES. FOR BOX AND PIPE CULVERT CMS 611.

**REMOVAL OF EXISTING STRUCTURE:**

PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AS INDICATED.

**FOUNDATION BEARING PRESSURE:**

WINGWALL AND CULVERT FOOTINGS, AS DESIGNED PRODUCE A MAXIMUM BEARING PRESSURE OF 1.5 TONS PER SQUARE FOOT.

**THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS**

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

**ITEM 512, TYPE 2 WATERPROOFING**

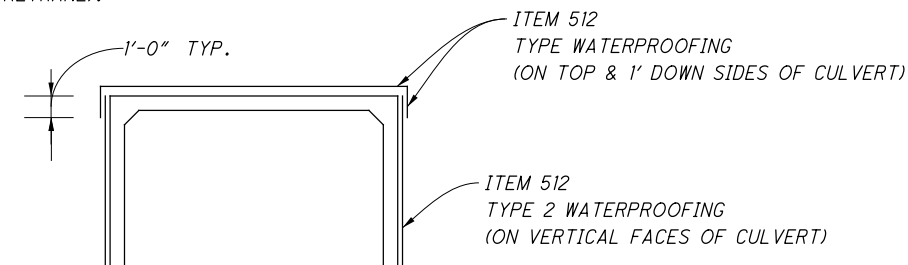
MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS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

**PRECAST WINGWALLS, HEADWALLS AND FOOTERS**

AT THE OPTION OF THE CONTRACTOR, A PRECAST WINGWALL, HEADWALL, OR FOOTER MAY BE FURNISHED PER ITEM 602. THE PRECAST OPTION FURNISHED WILL MEET THE CAST-IN-PLACE STRUCTURAL DESIGN LOADINGS, DESIGN HEIGHT, AND DESIGN LENGTH DIMENSIONS.

FULL COMPENSATION FOR THE PRECAST WINGWALL, HEADWALL, OR FOOTER IS THE NUMBER OF CUBIC YARDS OF ITEM 511 AND POUNDS OF ITEM 509 FOR THE CORRESPONDING CAST-IN-PLACE STRUCTURE.

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).



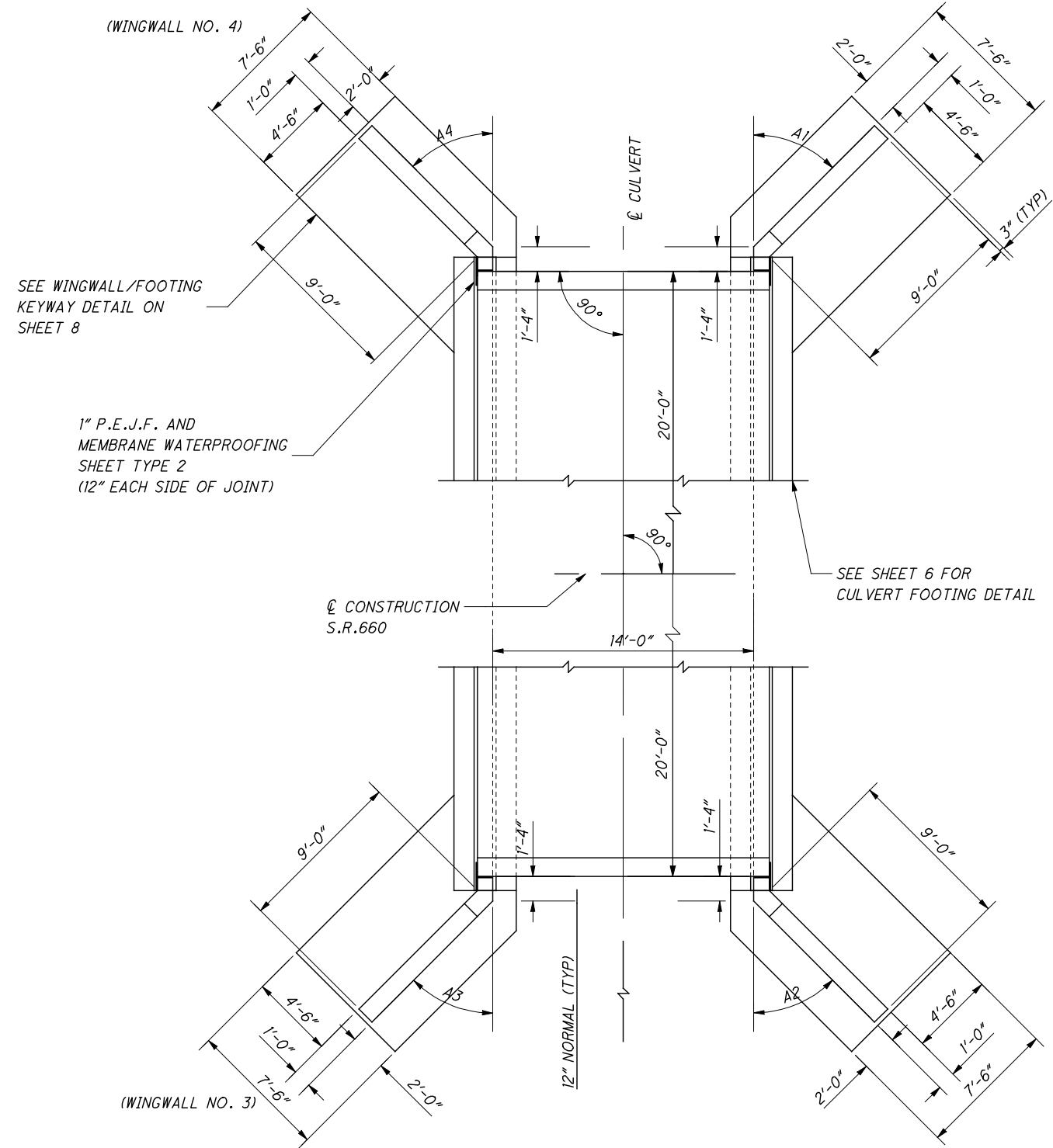
GENERAL SUMMARY (GUE - 660 - 2.52)				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS		STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	6015	LB	EPOXY COATED REINFORCING STEEL
511	46000	12	CY	CLASS QC MISC. CONCRETE, WINGWALL
511	46500	54	CY	CLASS QC MISC. CONCRETE, FOOTING
511	46600	1	CY	CLASS QC MISC. CONCRETE, MISC. : HEADWALLS
512	33000	128	SY	TYPE 2 WATERPROOFING
512	10100	34	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
516	13600	27	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21200	16	CY	POROUS BACKFILL WITH FILTER FABRIC
601	32100	57	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
601	34200	43	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER
611	70000	40	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE FLAT TOPPED, THREE SIDED CULVERT (14'-0" SPAN X 6'-0" RISE)

CULVERT ESTIMATED QUANTITIES  
STA. 133+13.00

GUE - 660 - 2.52



CALCULATED  
KEW  
CHECKED  
JOH



SEE WINGWALL/FOOTING  
KEYWAY DETAIL ON  
SHEET 8

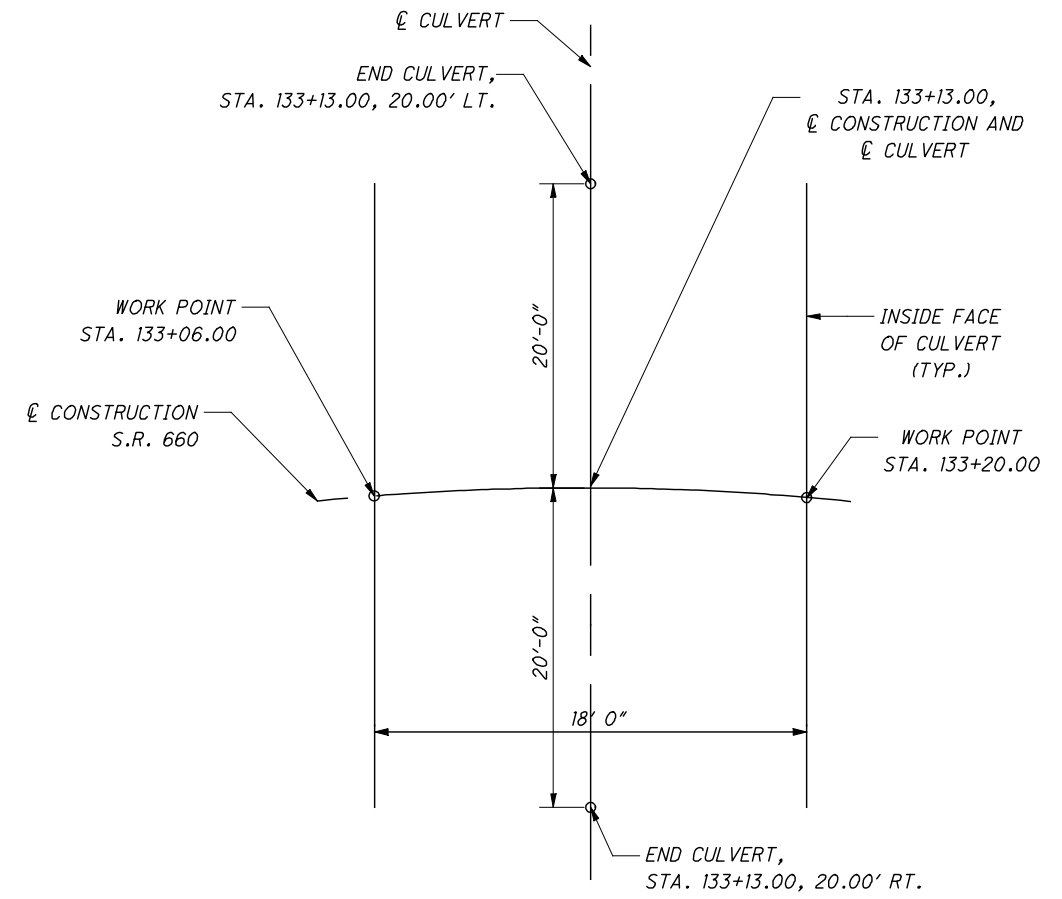
1" P.E.J.F. AND  
MEMBRANE WATERPROOFING  
SHEET TYPE 2  
(12" EACH SIDE OF JOINT)

∅ CONSTRUCTION  
S.R. 660

SEE SHEET 6 FOR  
CULVERT FOOTING DETAIL

(WINGWALL NO. 1)

(WINGWALL NO. 2)



REFERENCE DIAGRAM

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

CULVERT & WINGWALL LAYOUT

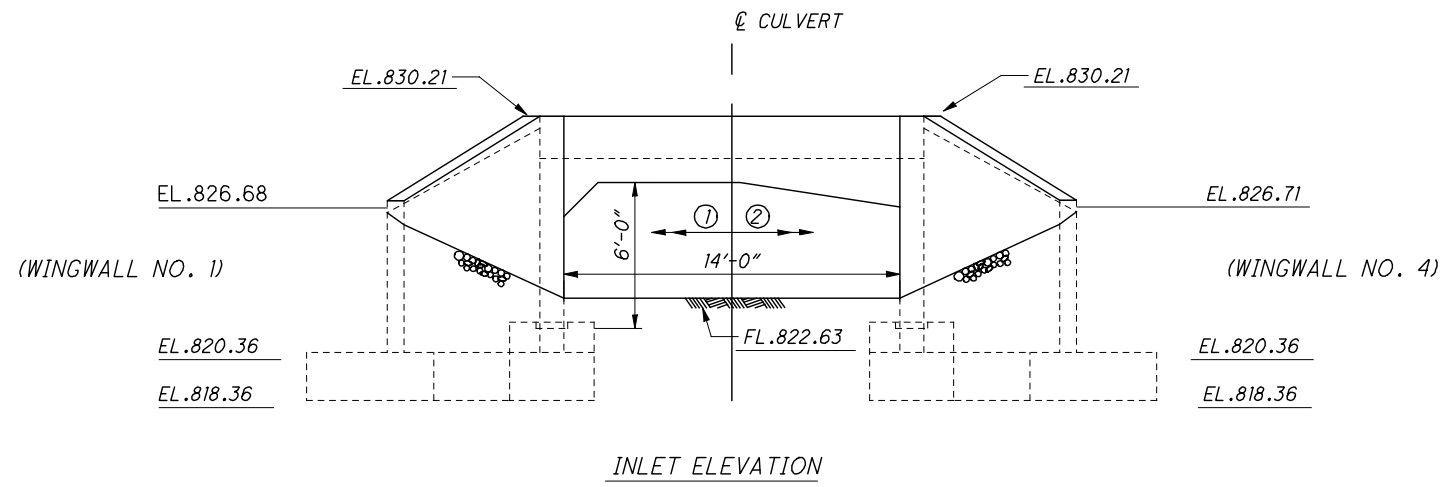
NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

CULVERT LAYOUT  
STA. 133+13.00

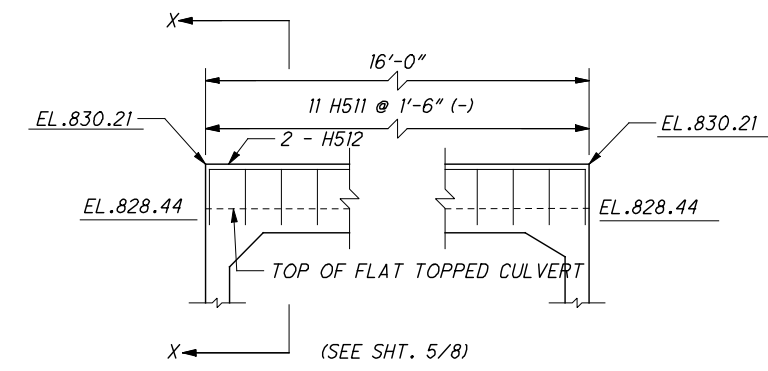
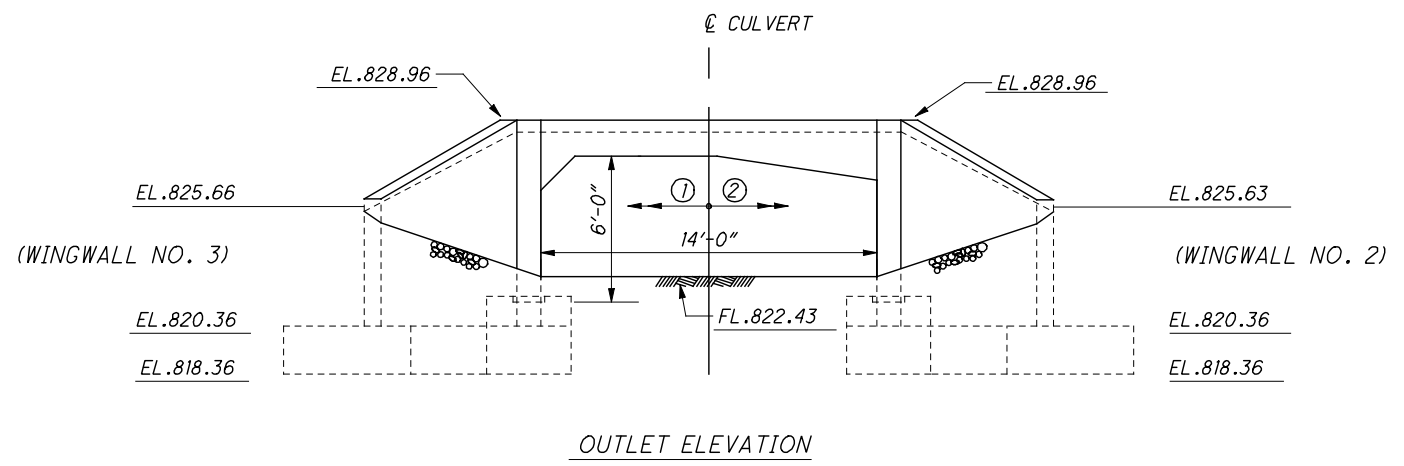
GUE-660-2.52

3 / 8

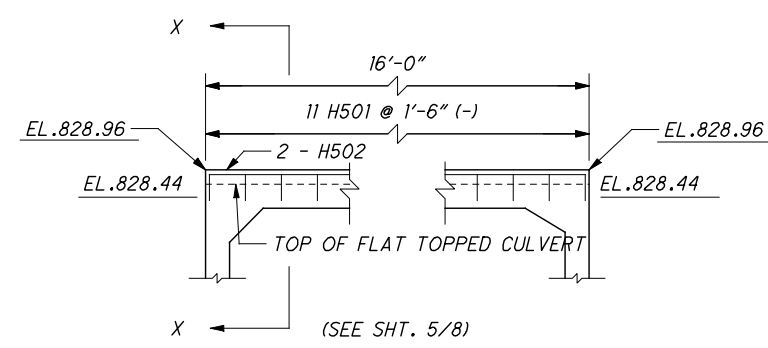
102  
125



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



INLET HEADWALL REINFORCING DETAIL  
(FOR FLAT-TOPPED CULVERTS ONLY)

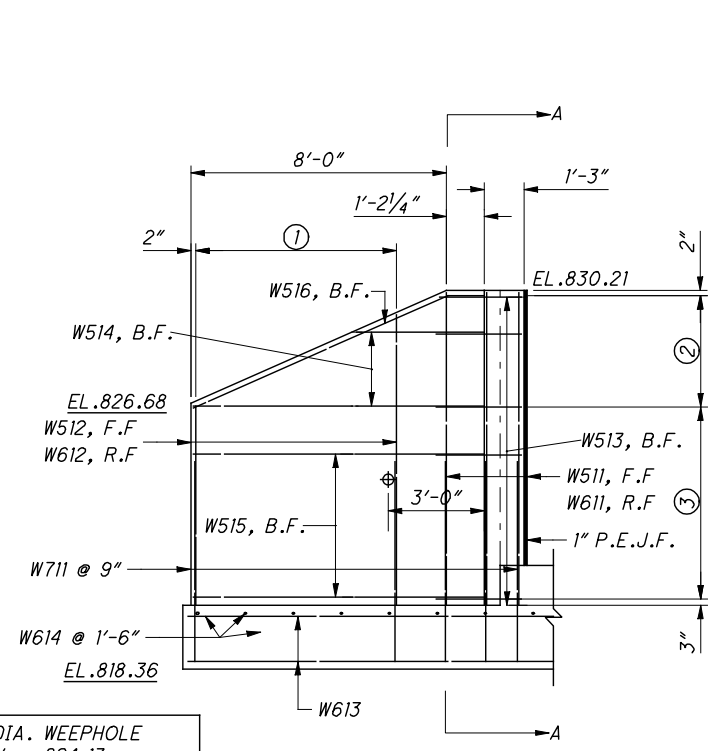


OUTLET HEADWALL REINFORCING DETAIL  
(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION  
STA. 133+13.00

GUE-660-2.52

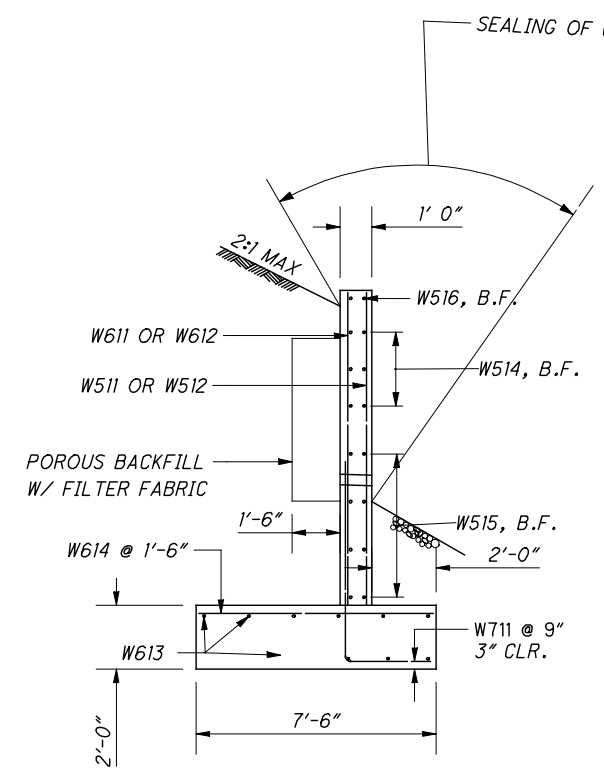
**LEGEND**  
F.F. - FRONT FACE  
R.F. - REAR FACE  
B.F. - BOTH FACE



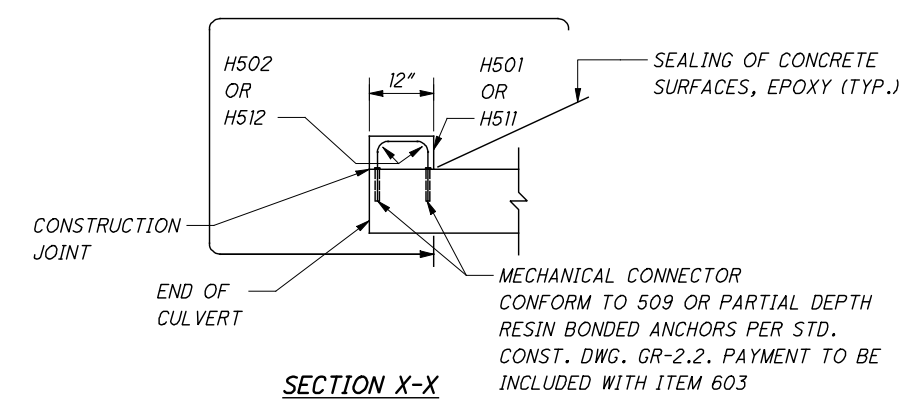
NOTE: 4" DIA. WEEPHOLE  
ELEV. = 824.13

WINGWALL 1 ELEVATION

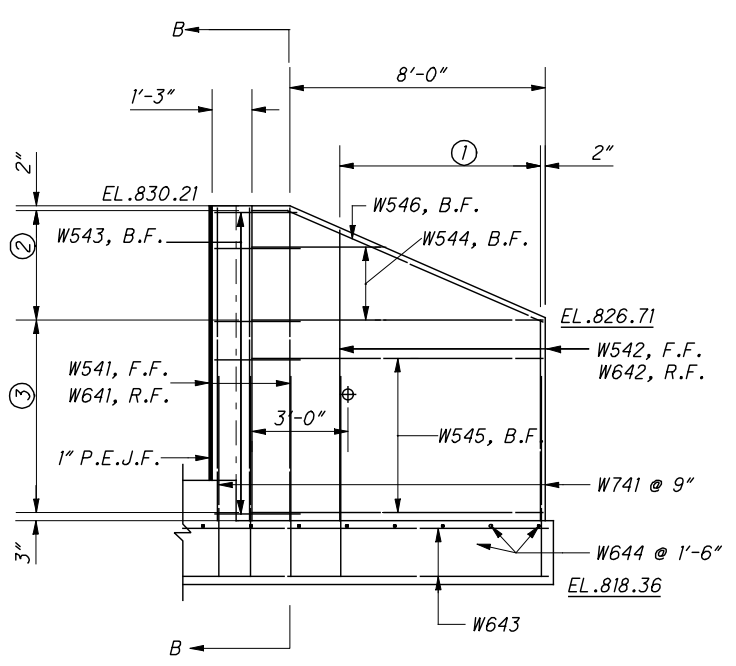
- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-1 3/4"
- ③ 4 SPACES @ 1'-6"



SECTION A-A



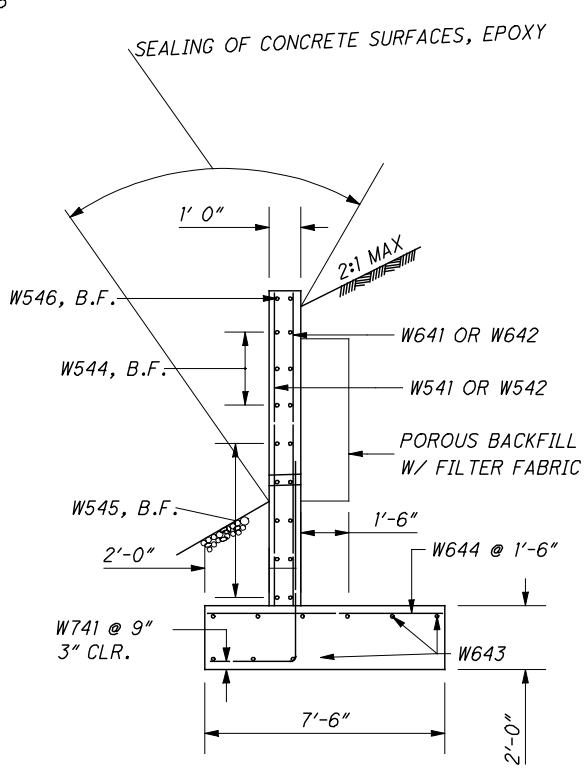
SECTION X-X



NOTE: 4" DIA. WEEPHOLE  
ELEV. = 824.14

WINGWALL 4 ELEVATION

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

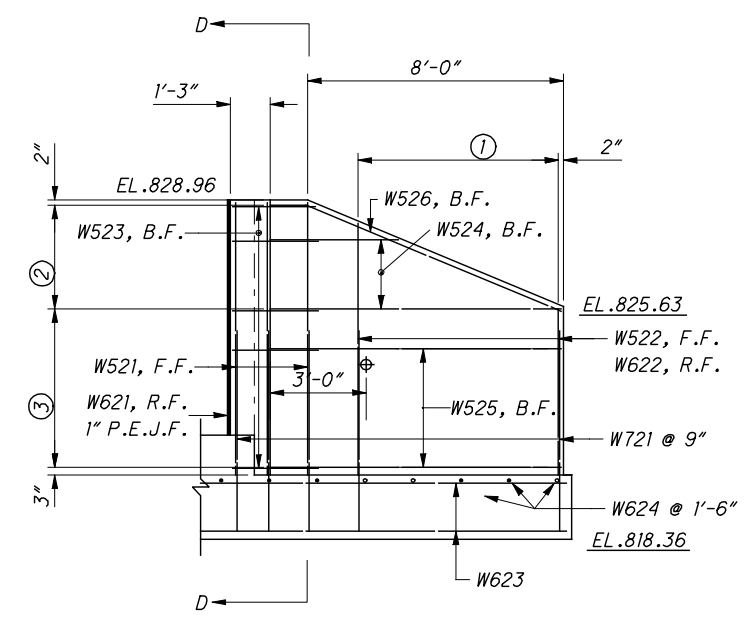


SECTION B-B

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

**LEGEND**

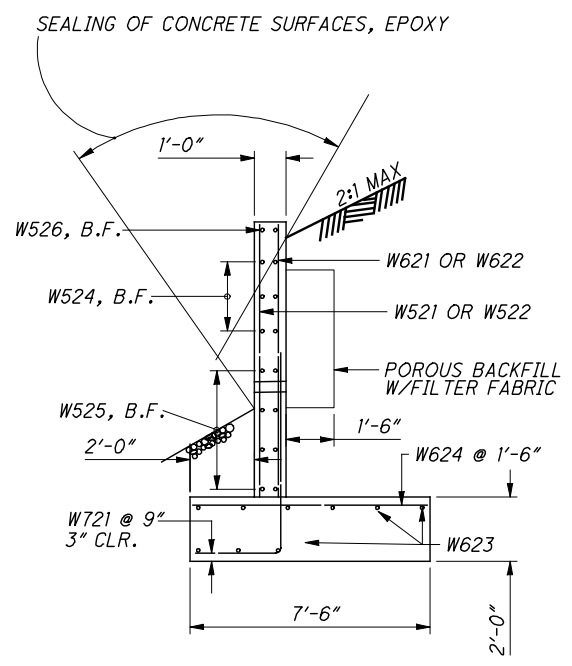
F.F. - FRONT FACE  
R.F. - REAR FACE  
B.F. - BOTH FACE



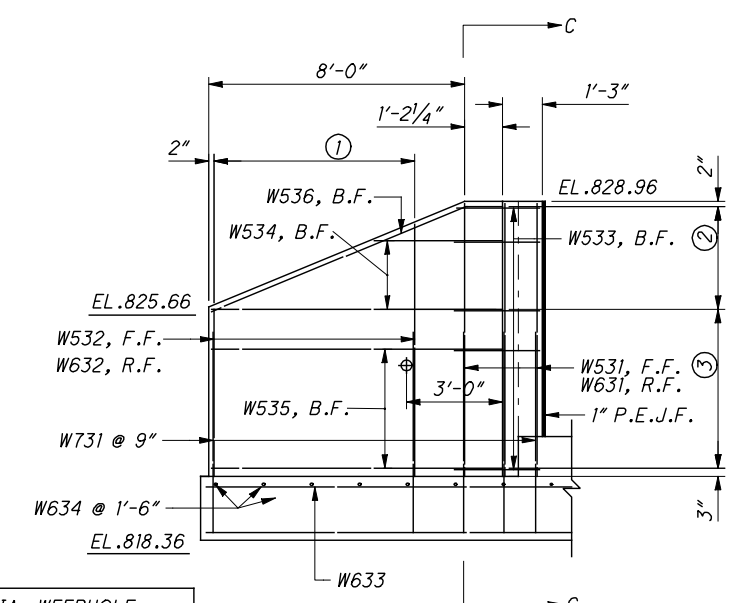
WINGWALL 2 ELEVATION

- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-1"
- ③ 4 SPACES @ 1'-2<sup>3</sup>/<sub>4</sub>"

NOTE: 4" DIA. WEEPHOLE  
ELEV. = 823.65



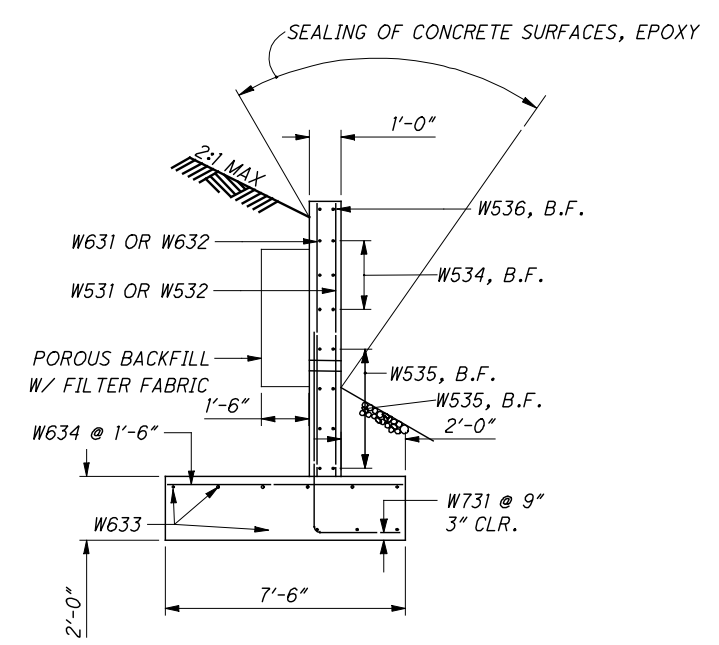
SECTION D-D



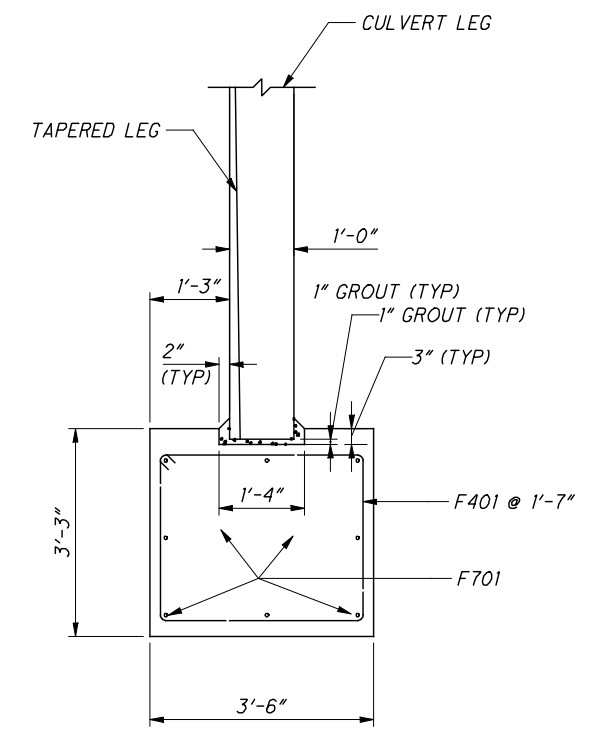
WINGWALL 3 ELEVATION

- ① SER. OF 5 @ 1'-6"
- ② 3 SPACES @ 1'-0<sup>3</sup>/<sub>4</sub>"
- ③ 4 SPACES @ 1'-3"

NOTE: 4" DIA. WEEPHOLE  
ELEV. = 823.66



SECTION C-C



CULVERT FOOTING SECTION



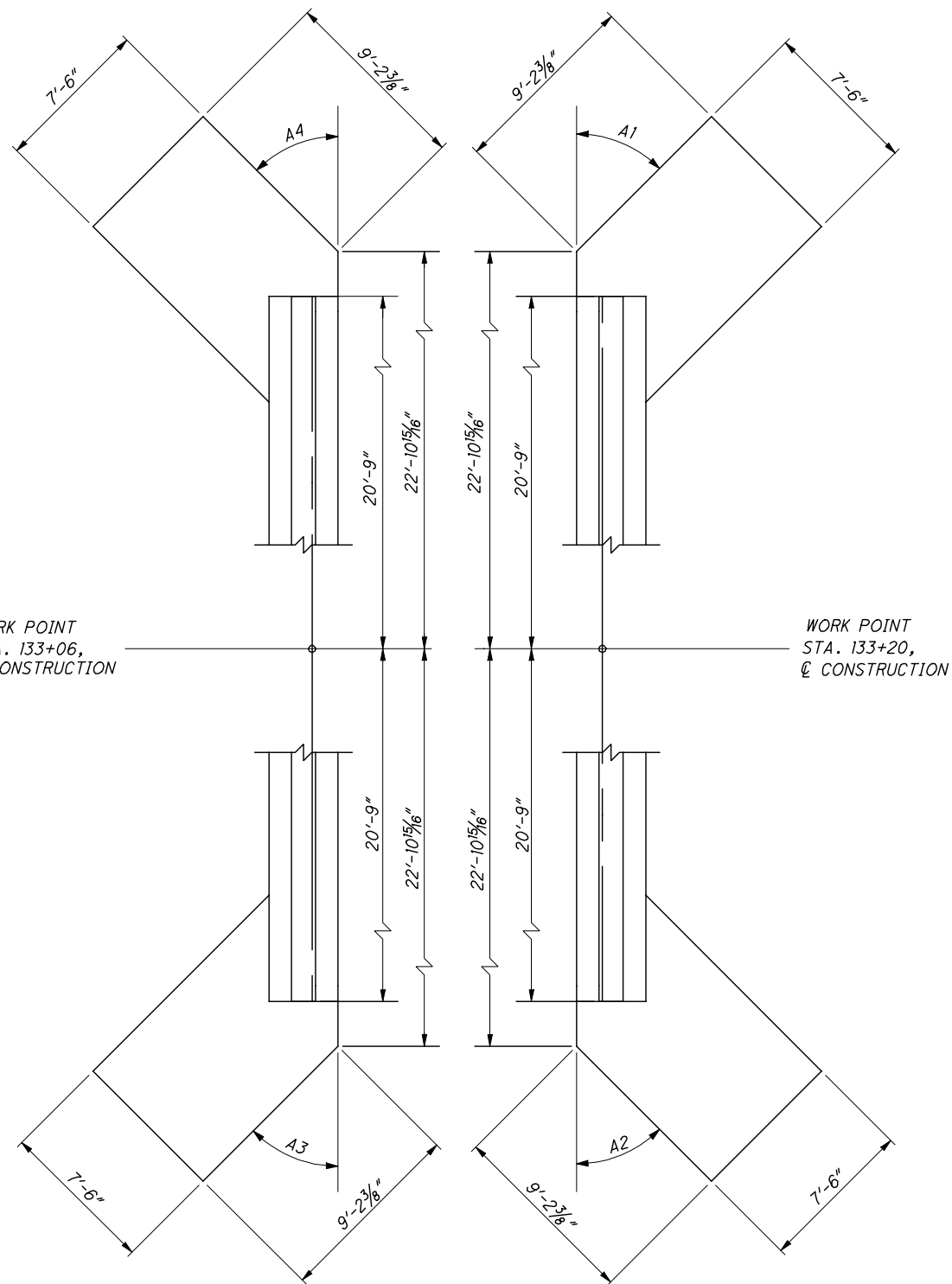
CALCULATED  
KEW  
CHECKED  
JOH

FOOTING DETAILS  
STA. 133+13.00

GUE-660-2.52

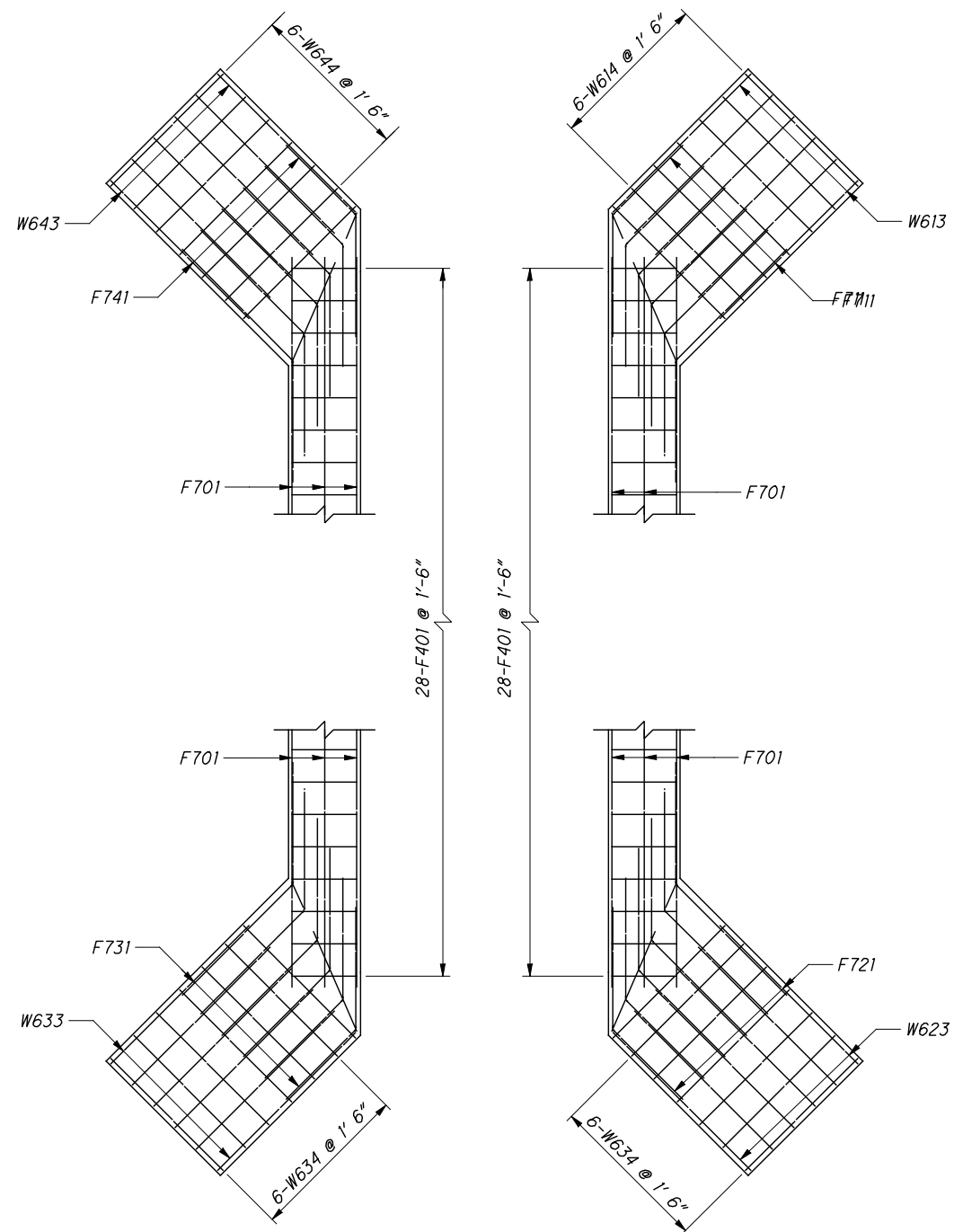
7/8

106  
125



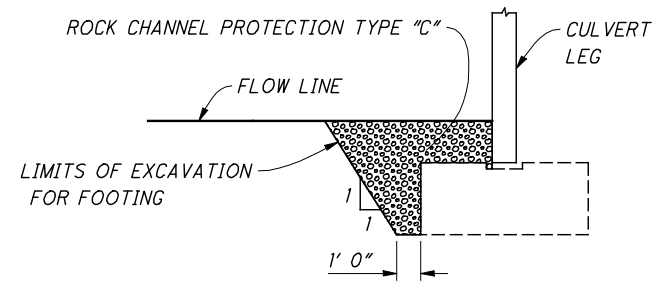
FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4

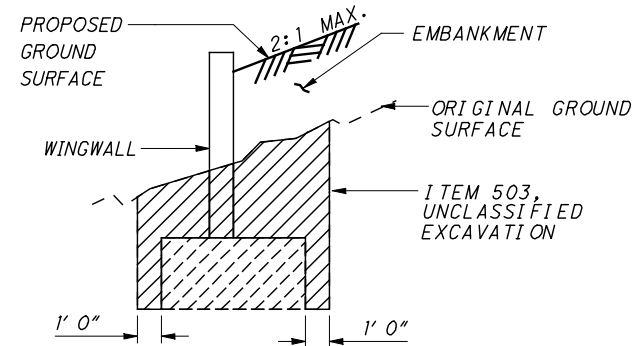


FOOTING REINFORCING PLAN

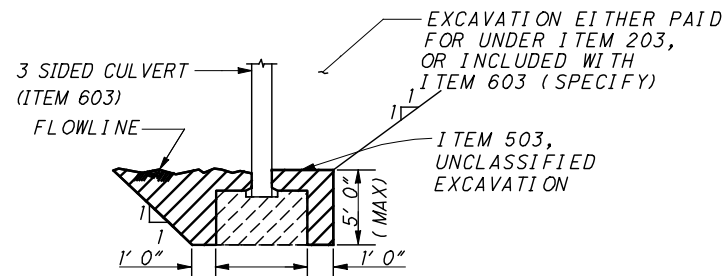
REINFORCING STEEL LIST



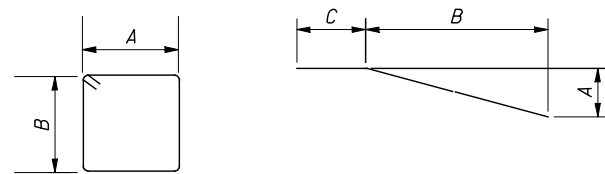
ROCK CHANNEL PROTECTION INSIDE CULVERT



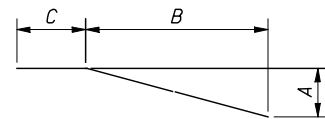
LIMITS OF UNCLASSIFIED EXCAVATION (WINGWALL)



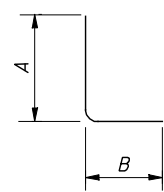
LIMITS OF UNCLASSIFIED EXCAVATION (CULVERT)



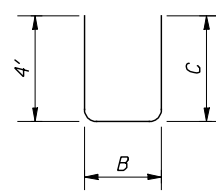
TYPE 1



TYPE 2



TYPE 3



TYPE 4

BENDING DIAGRAMS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
<b>WINGWALL 1</b>									
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"			
<b>WINGWALL 2</b>									
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"			
<b>WINGWALL 3</b>									
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			1768						
S.O. - SERIES OF									

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
W631	3	8'-6"	38	STR					
	1	5'-3"							
W632	S.O.	TO	49	STR				0'-8"	
	5	7'-10"							
W633	9	9'-0"	122	STR					
W634	6	7'-4"	66	STR					
W731	14	8'-9"	250	3	6'-3"	2'-8"			
<b>WINGWALL 4</b>									
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"			
<b>CULVERT FOOTING</b>									
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"			
<b>HEADWALL</b>									
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									



0 5 10 20  
HORIZONTAL SCALE IN FEET  
CALCULATED MRV CHECKED MLC

**EXISTING STRUCTURE**

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

**PROPOSED STRUCTURE**

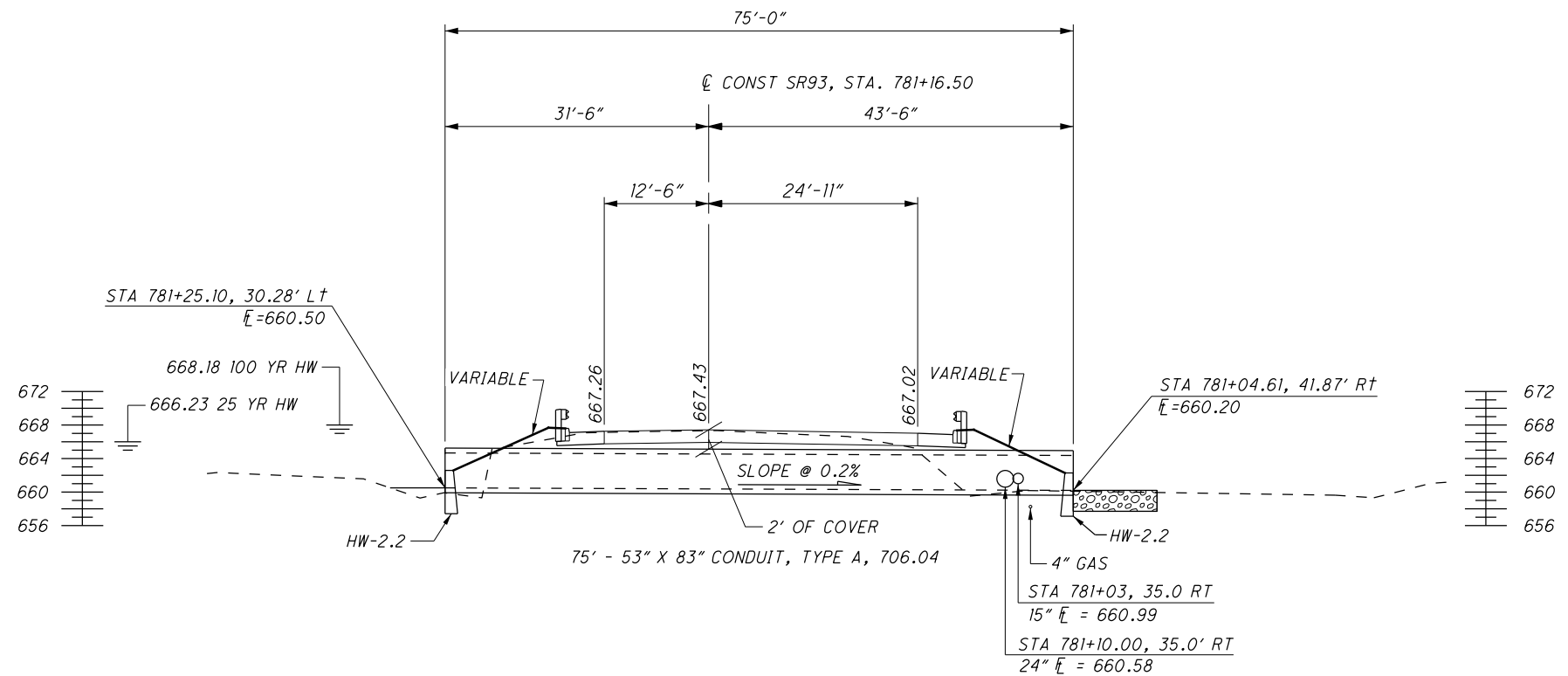
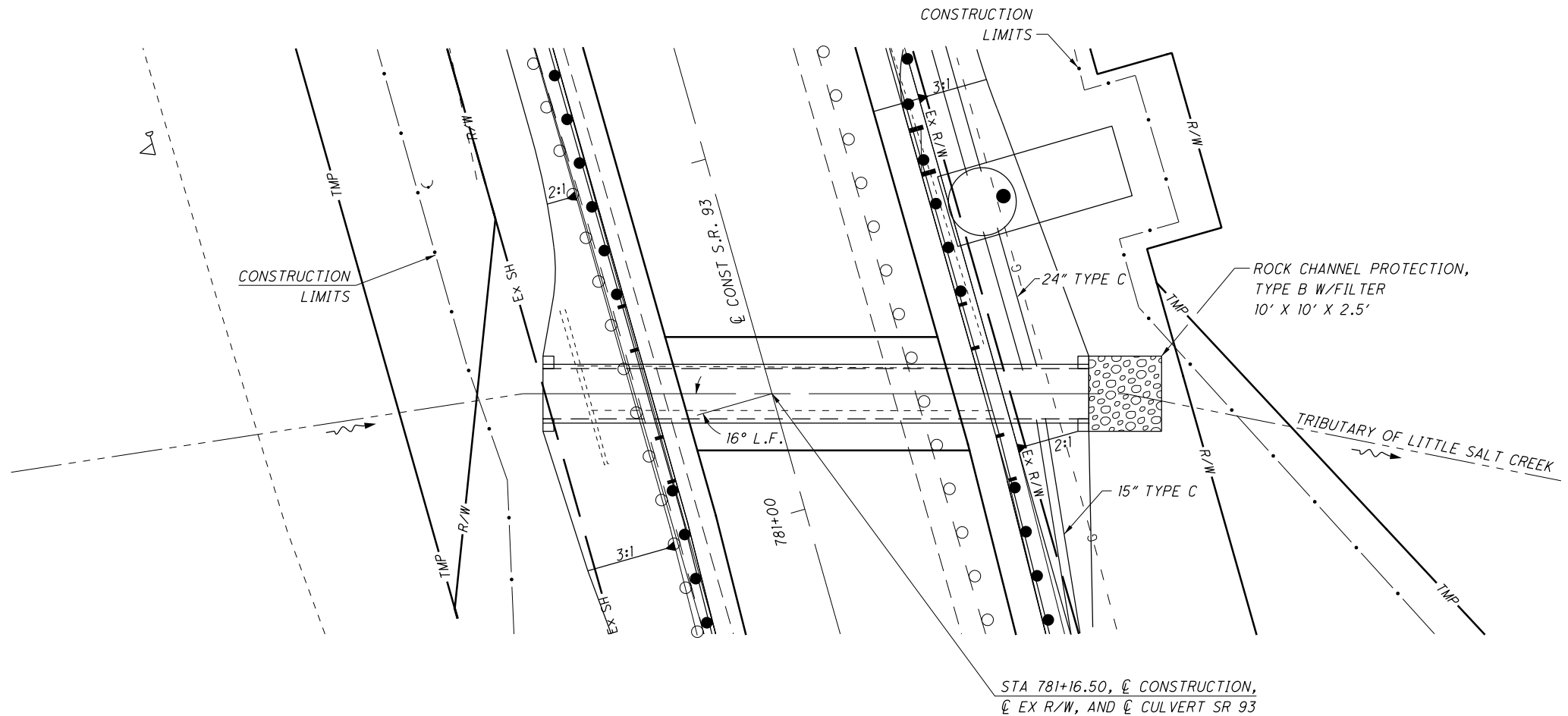
TYPE: 53"X83" ELLIPTICAL CONCRETE PIPE  
SKEW: 16° L.F.  
ALIGNMENT: TANGENT

**HYDRAULIC DESIGN DATA**

DRAINAGE AREA: 344 ACRES  
Q(25): 230 CFS  
HW(25): 666.24 FT  
V(25): 11 FT/S  
Q(100): 325 CFS  
HW(100): 668.81 FT  
V(100): 13 FT/S  
ORDINARY HIGH WATER MARK: 661.0'  
DESIGN SERVICE LIFE: 50 YRS  
pH: 6.8  
Abrasion Level: 4  
CFN: 1234567

**ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY**

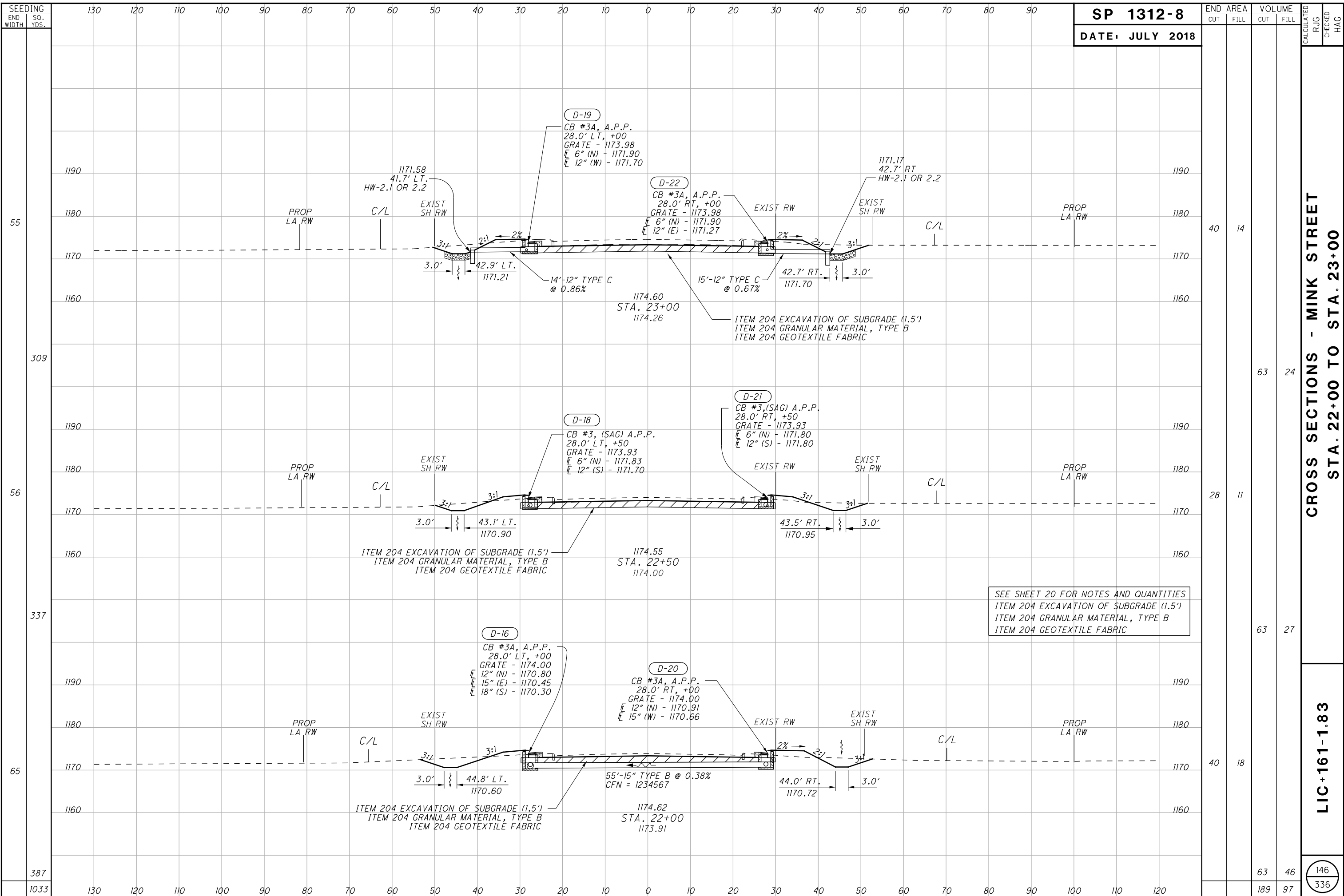
ITEM	QUANTITY	UNIT	DESCRIPTION
601	9	CY	ROCK CHANNEL PROTECTION, TYPE B, W/FILTER
602	3.3	CY	CONCRETE MASONRY
611	75	FT	53" X 83" CONDUIT, TYPE A, 706.04



CULVERT DETAIL  
STA 781+16.50

JAC-93-14.35





**SP 1312-8**  
**DATE: JULY 2018**

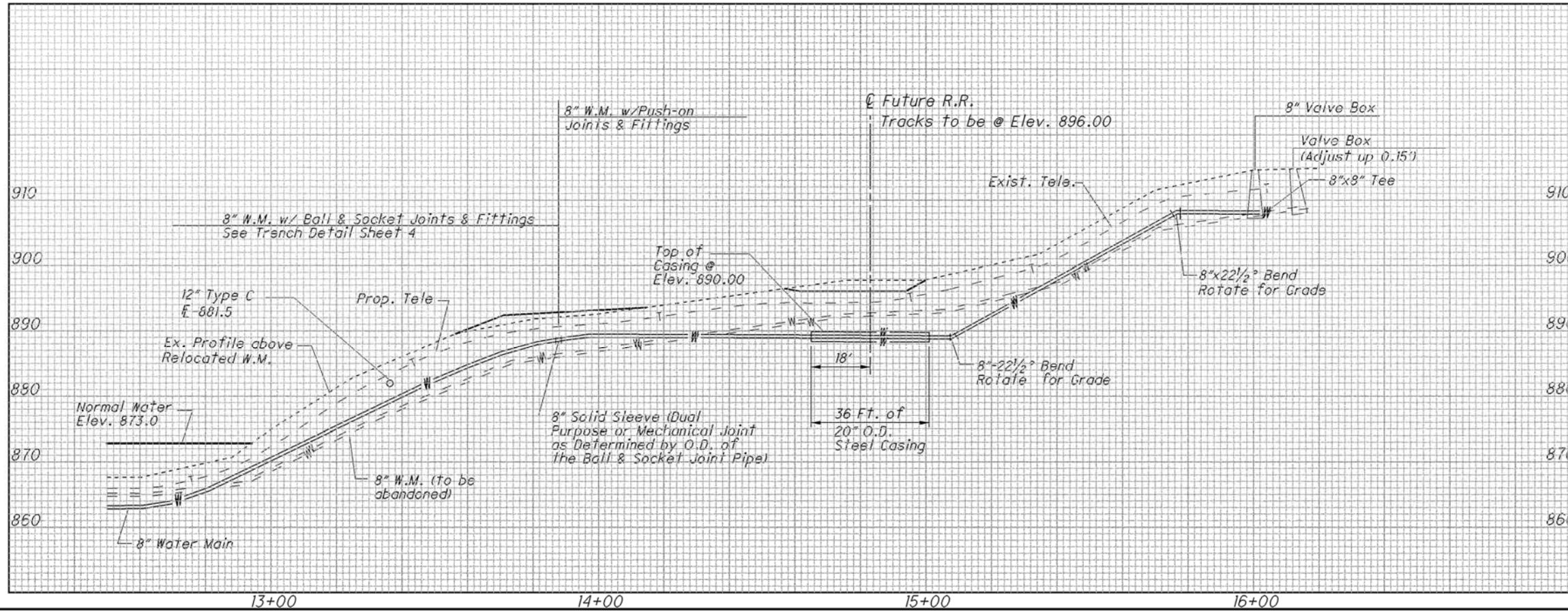
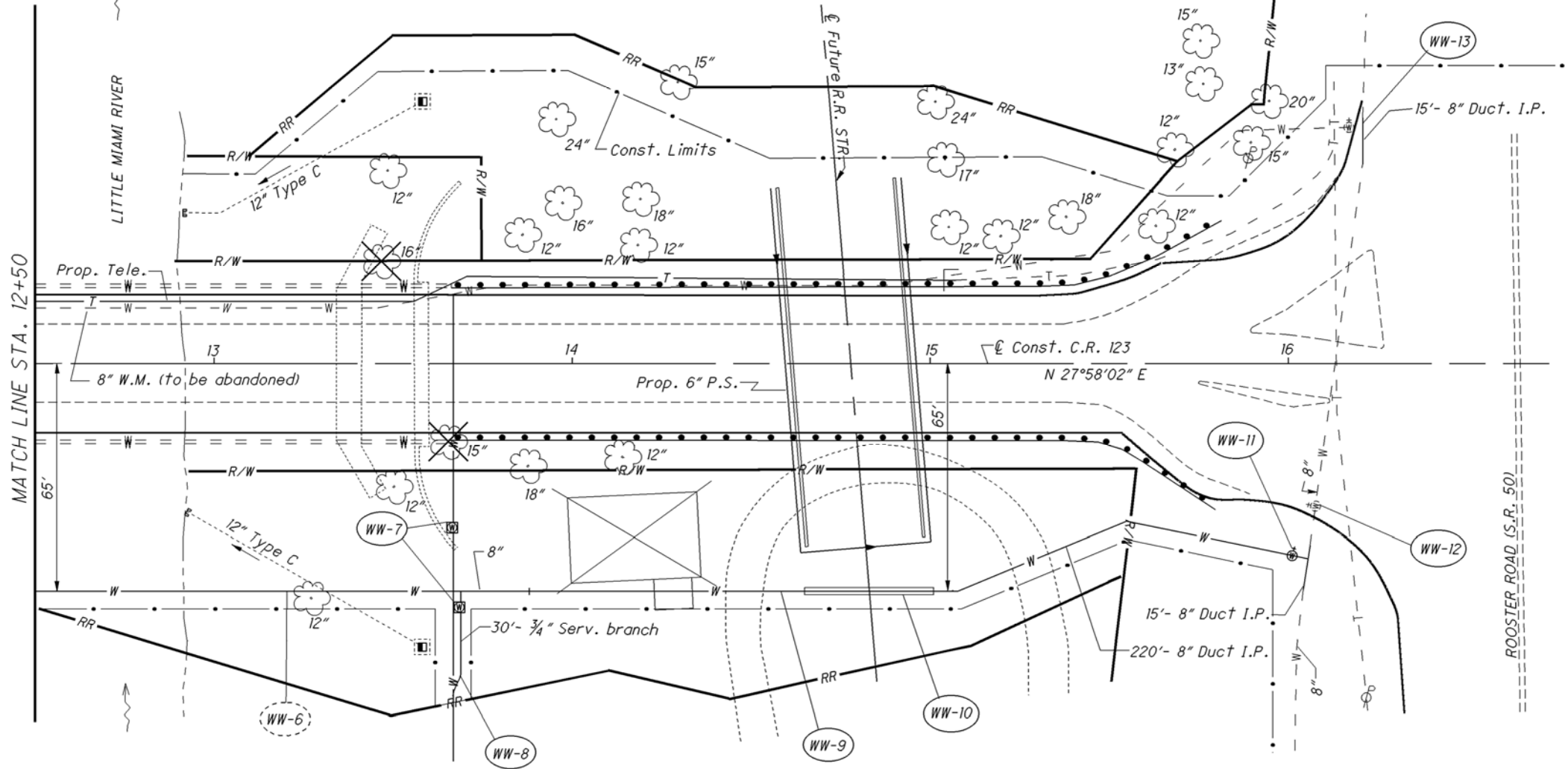
END AREA	VOLUME	CALCULATED	RJC	CHECKED	HAG
40	14				
63	24				
28	11				
63	27				
40	18				
63	46				
189	97				

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

**LIC+161-1.83**

146  
 336

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



**SP. 1313-1**  
DATE: OCTOBER 2006

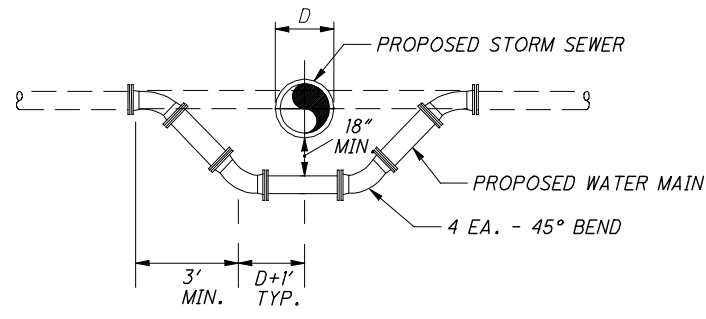


CALCULATED  
GJB  
CHECKED  
DJK

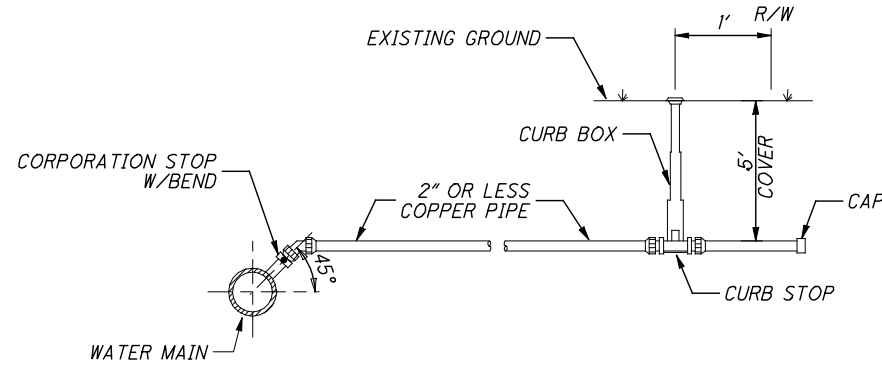
REF NO.	STATION		SIDE	20" Steel Pipe Encasement Open Cut	Valve Box Adjusted To Grade	3/4" Copper Service Branch	Meter and Chamber Removed and Reset	Sheeting and Bracing Ordered and Left in Place	8" Gate Valve & Valve Box
	FROM	TO							
WW-7	13+66	13+70	RT				1		EACH
WW-8	13+67	13+70	RT			30			
WW-9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

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

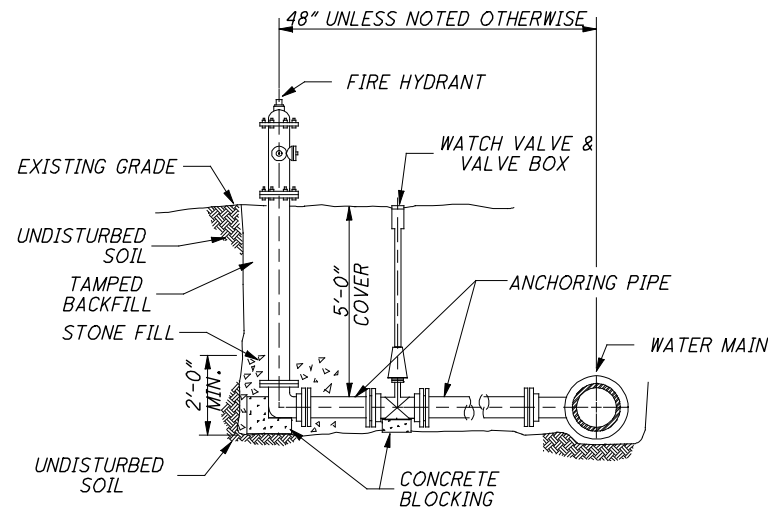
**CUY-CR123-6.55**



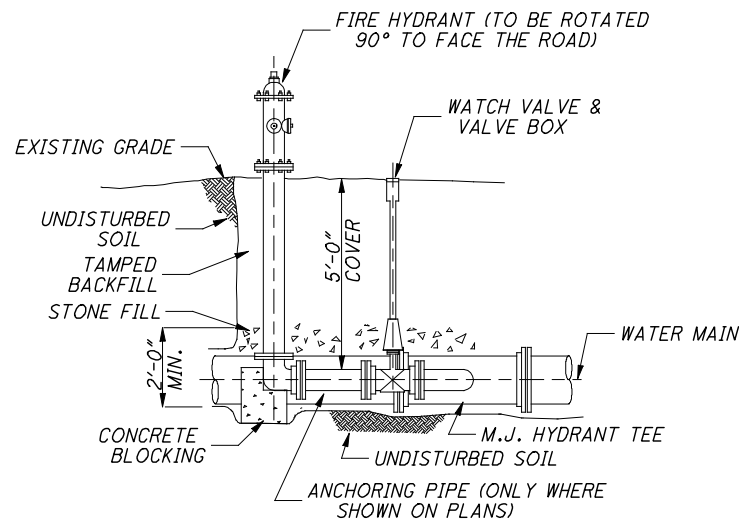
**DETAIL "A"**  
 EXISTING WATER MAIN RELOCATION  
 UNDER PROPOSED UTILITY LINE  
 (ELEVATION)



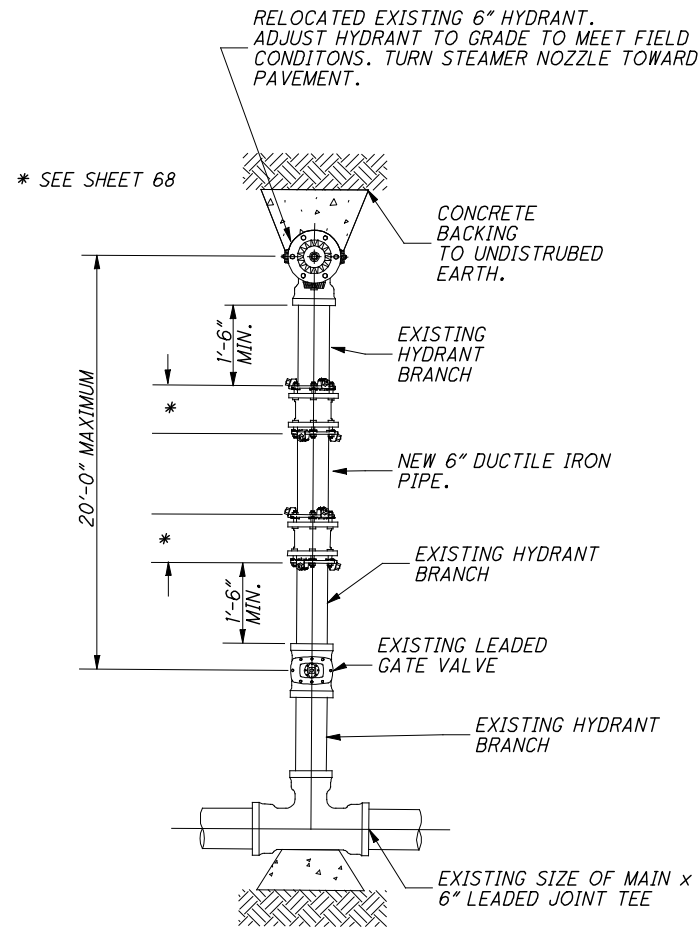
**DETAIL "B"**  
 TYPICAL 2" OR LESS SERVICE CONNECTION  
 (ELEVATION)



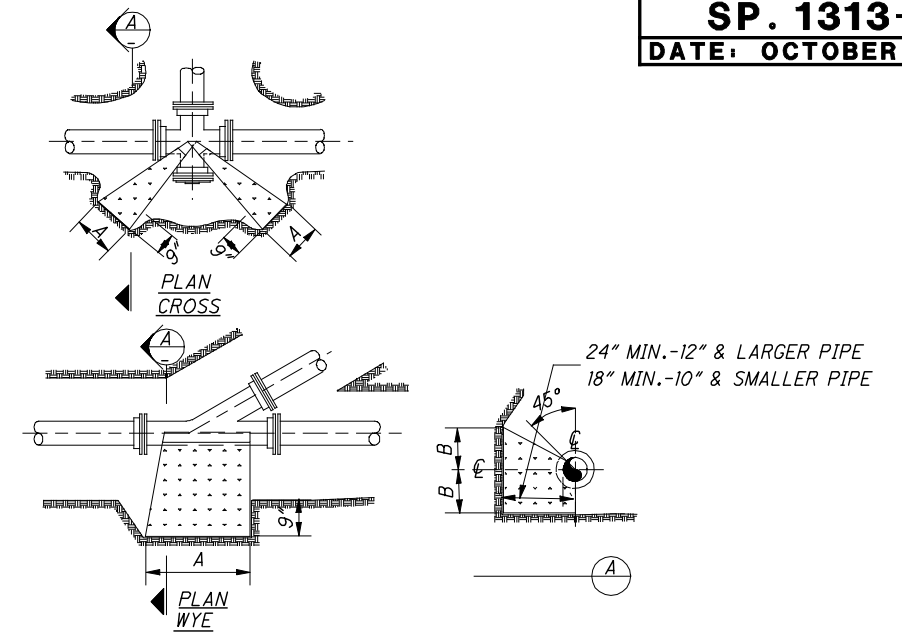
**DETAIL "C"**  
 HYDRANT ASSEMBLY  
 PERPENDICULAR TO WATER  
 (ELEVATION)



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



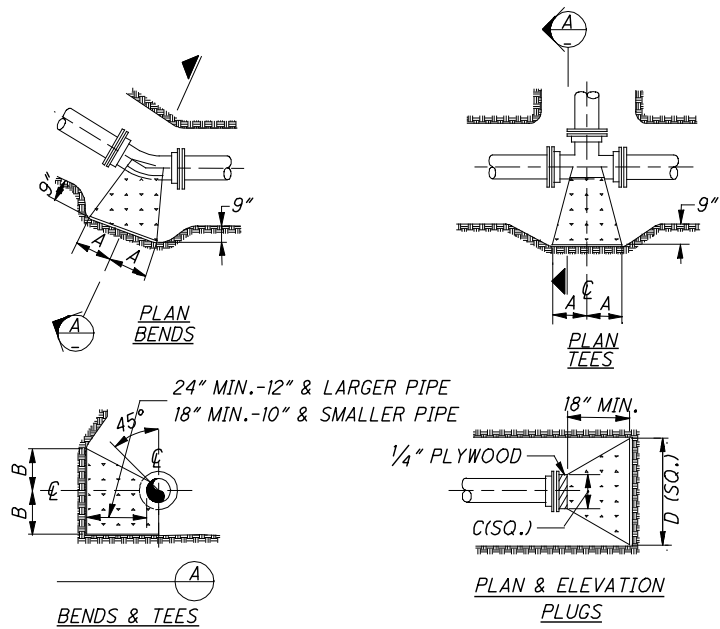
**DETAIL "E"**  
 FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE  
 (PLAN)



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

\*6" OR LESS

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



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

\*6" OR LESS

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

SHEET NO.	REFERENCE NO.	LOCATION	STATION		SIDE	202			621			642						
			FROM	TO		RAISED PAVEMENT MARKER REMOVED	RPM (2-way yellow)	RPM (1-way white)	EDGE LINE (White)	EDGE LINE, TYPE 1 (White)	CENTER LINE, TYPE 1 (Dashed-Solid)	CHANNELIZING LINE, TYPE 1	STOP LINE, TYPE 1	LANE ARROW, TYPE 1	WORD ON PAVEMENT, 96", TYPE 1	ISLAND MARKING, TYPE 1 (Yellow)		
			EACH	EACH		EACH	MILE	MILE	MILE	FT	FT	EACH	EACH	SQ FT				
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	CL	4	5				0.014							
57	CL-12	Const. MEYERS RD.	8+55	9+41	CL	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	CL	1	1				0.016							
58	CL-15	Const. S.R. 17	65+00	65+66	CL	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		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				
<b>SUBTOTALS</b>						240		112	204	0.020		0.663	656	75	9	3	389	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>						240		316		0.84		0.66	656	75	9	3	389	

PAVEMENT MARKING SUBSUMMARY

UNI-17-3.14

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630												
							SIGN, FLAT SHEET	ONE WAY SUPPORT, No. 3 POST	GROUND MOUNTED SUPPORT, No. 3 POST	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10x12	REMOVAL OF GROUND MOUNTED SIGN & RE-ERECTION	REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL	REMOVAL OF GROUND MOUNTED MAJOR SIGN & DISPOSAL	SIGN ERECTED, EXTRUSHEET	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	BREAKAWAY STRUCTURAL BEAM CONNECTION		
							SQ FT	FT	FT	FT	EACH	EACH	EACH	EACH	SQ FT	EACH	EACH		
56	S1	⊕ Const. S.R. 17	44+91	LT.	M3-1-24	24" x 12"	2.0												
					M1-1-24-2	24" x 24"	4.0												
					M6-1-24	24" x 18"	3.0												
					M2-H7-66	66" x 24"	11.0												
56	S2		40+41	LT.	R1-1-48	48" x 48"	16.0	14.5	13.5										
					R6-1-48	48" x 18"	6.0												
					R5-1-36	36" x 36"	9.0												
					R6-1-48	48" x 18"	6.0												
56	S3		45+60	LT.	R3-H8ba-36	36" x 30"	7.5		12.5										
56	S4		47+80	LT.	D1-H6	192" x 72"				17.5-18.0				96	2	2			
56	S5		48+40	RT.	R3-9b-24	24" x 36"	6.0		14										
					R3-H9j-24	24" x 6"	1.0												
56	S6		48+75	LT.	R3-H8dg-36	36" x 30"	7.5		12.5										
56	S7		49+93	LT.	D-3				10										
56	S8		50+05	LT.	R2-1-30	30" x 30"	6.25		12.5										
56	S9		46+20	RT.	M3-2-24	12" x 24"	2.0			14-14									
					M1-5-24-3	24" x 30"	5.0												
56	S10		54+36	RT.	R3-H8dg-36	36" x 30"			7.5										
					M2-1	24" x 12"	2.0												
57	S11		53+00	LT.	M1-1-24-2	24" x 24"	4.0		13										
					R3-H9j-24	24" x 6"	1.0												
57	S12		55+56	LT.	R3-9b-24	24" x 36"	6.0		14										
57	S13		55+56	RT.	R3-H8bh-36	36" x 30"	7.5		12.5										
57	S14		57+25	RT.	R3-H8bh-36	36" x 30"	7.5		12.5										
57	S15		56+89	LT.	M1-5-30-3	30" x 24"	5.0		11										
57	S16		57+72	RT.	D-3				10										
57	S17		58+31	LT.	R2-1-30	30" x 30"	6.25		13.5-13.5										
					R5-H2b-24														
57	S18		58+48	LT.	R2-1-30	30" x 30"	6.25		11										
					R2-1-30	30" x 30"	6.25			13.5-13.5									
57	S19		58+65	RT.	R2-1-30	30" x 30"	6.25		13.5-13.5										
					R5-H2b-24														
57	S20		59+47	RT.	R2-1-30	30" x 30"	6.25		13.5-13.5										
					R5-H2b-24														
58	S21		59+25	LT.	R3-H8bh-36	36" x 30"	7.5		12.5										
58	S22		59+38	RT.	M1-5-24-3	30" x 24"	5.0		11										
58	S23	⊕ Const. S.R. 17	60+86	LT.	R3-H8bh-36	36" x 30"	7.5		12.5										
56	R1	⊕ Const. S.R. 17	44+91	LT.								4	1						
56	R2		40+41	LT.								3	1						
56	R3		47+80	LT.						3			1						
56	R4		47+65	RT.	W6-3						1	1							
56	R5		49+93	LT.							1	1							
56	R6		50+05	LT.							1	1							
56	R7		46+20	RT.							2	1							
56	R8	⊕ Const. S.R. 17	54+36	RT.							1	1							
<b>SUBTOTALS</b>							170.25	14.5	311.5	35.5	3	13	7	1	96	2	2		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>							<b>170</b>	<b>15</b>	<b>312</b>	<b>36</b>	<b>3</b>	<b>13</b>	<b>7</b>	<b>1</b>	<b>96</b>	<b>2</b>	<b>2</b>		

SIGNING SUBSUMMARY

UNI-17-3.14



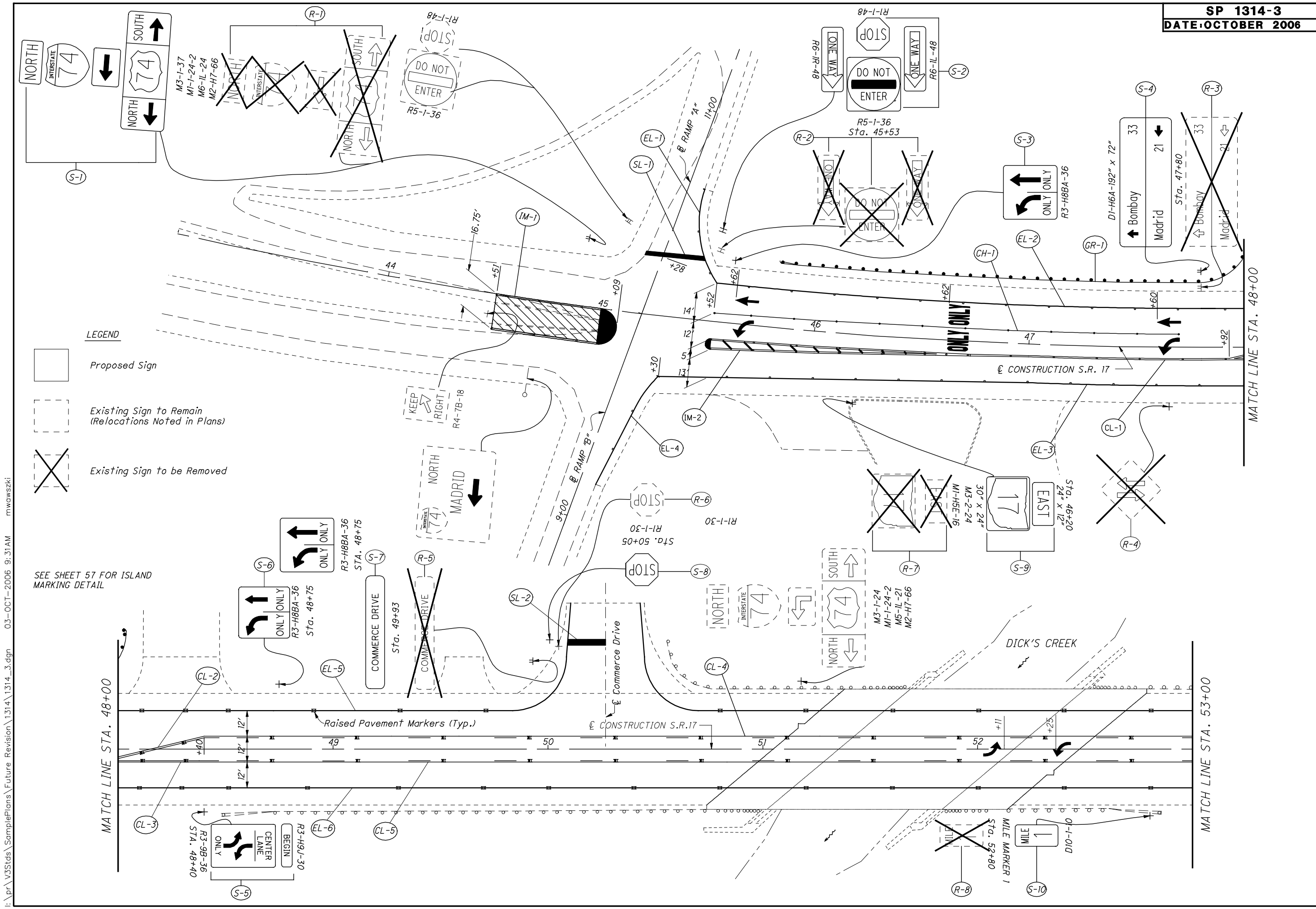
0 10 20 40  
HORIZONTAL SCALE IN FEET

CALCULATED DAM CHECKED JAG

**SIGN AND PAVEMENT MARKING PLAN**

**UNI-17-3.14**

56  
65

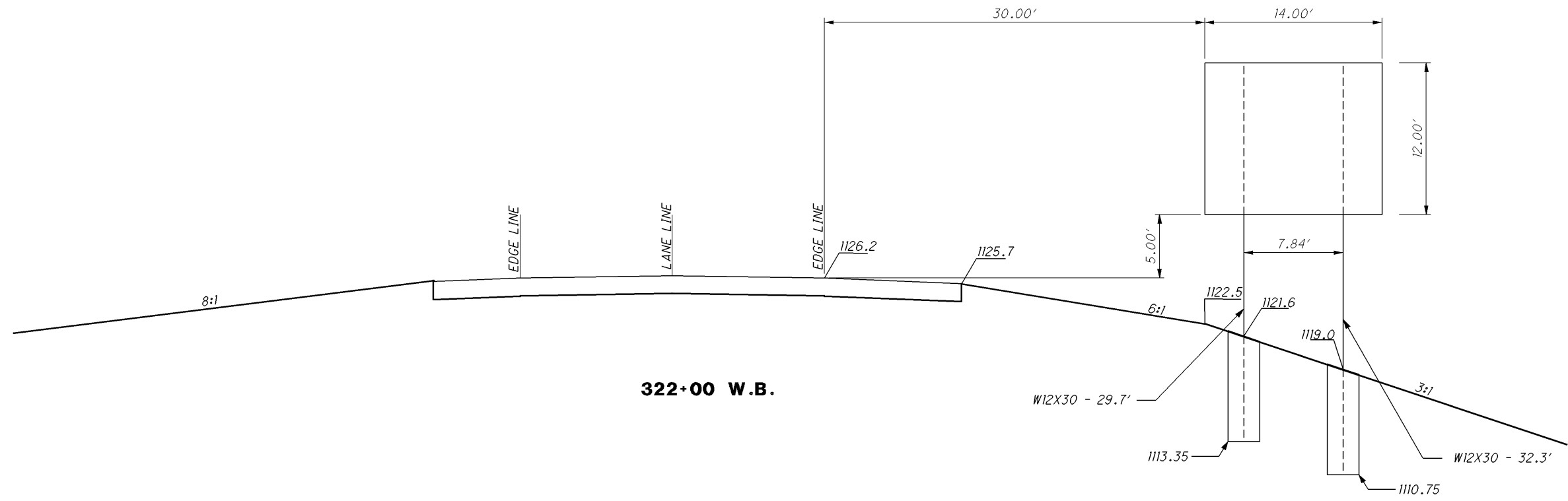


**LEGEND**

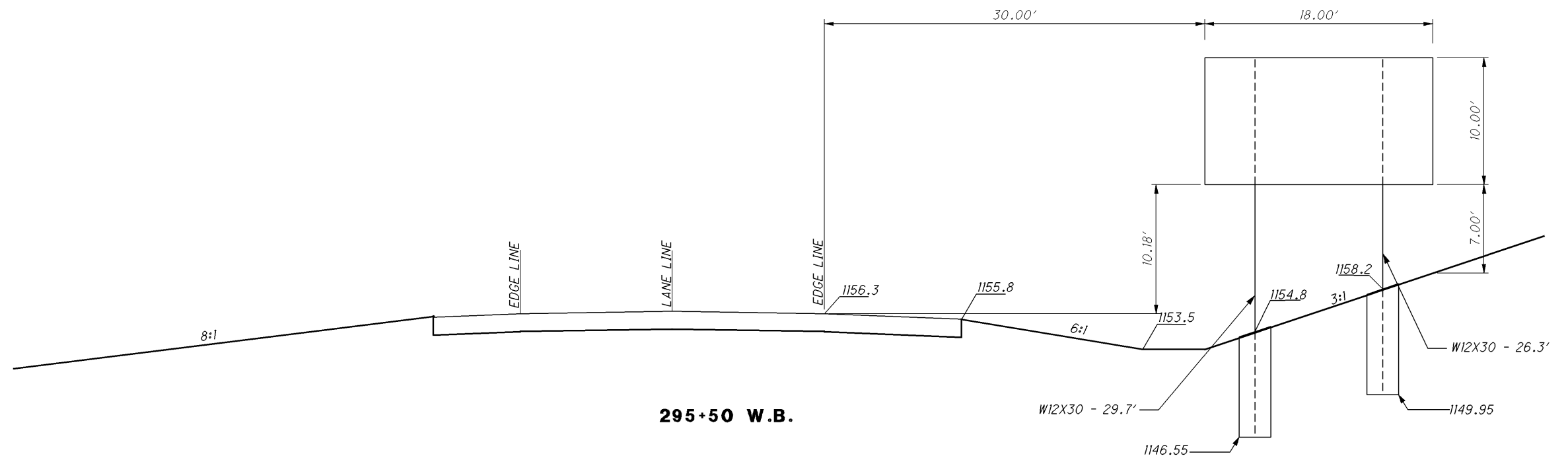
- Proposed Sign
- Existing Sign to Remain (Relocations Noted in Plans)
- X Existing Sign to be Removed

SEE SHEET 57 FOR ISLAND MARKING DETAIL

I:\pr\355ids\SamplePlans\Future Revision\1314\1314\_3.dgn 03-OCT-2006 9:31AM mwawski

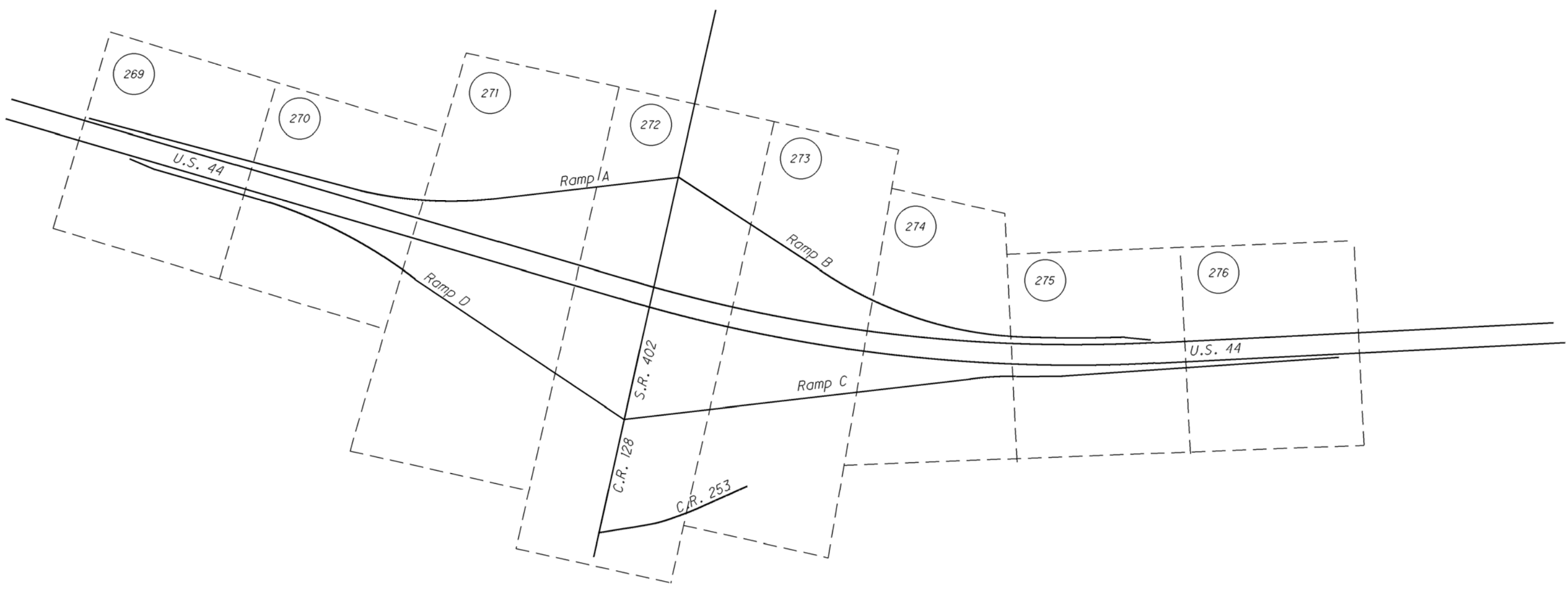
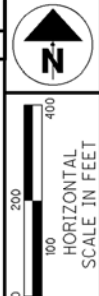


322+00 W.B.



295+50 W.B.

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LEGEND

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

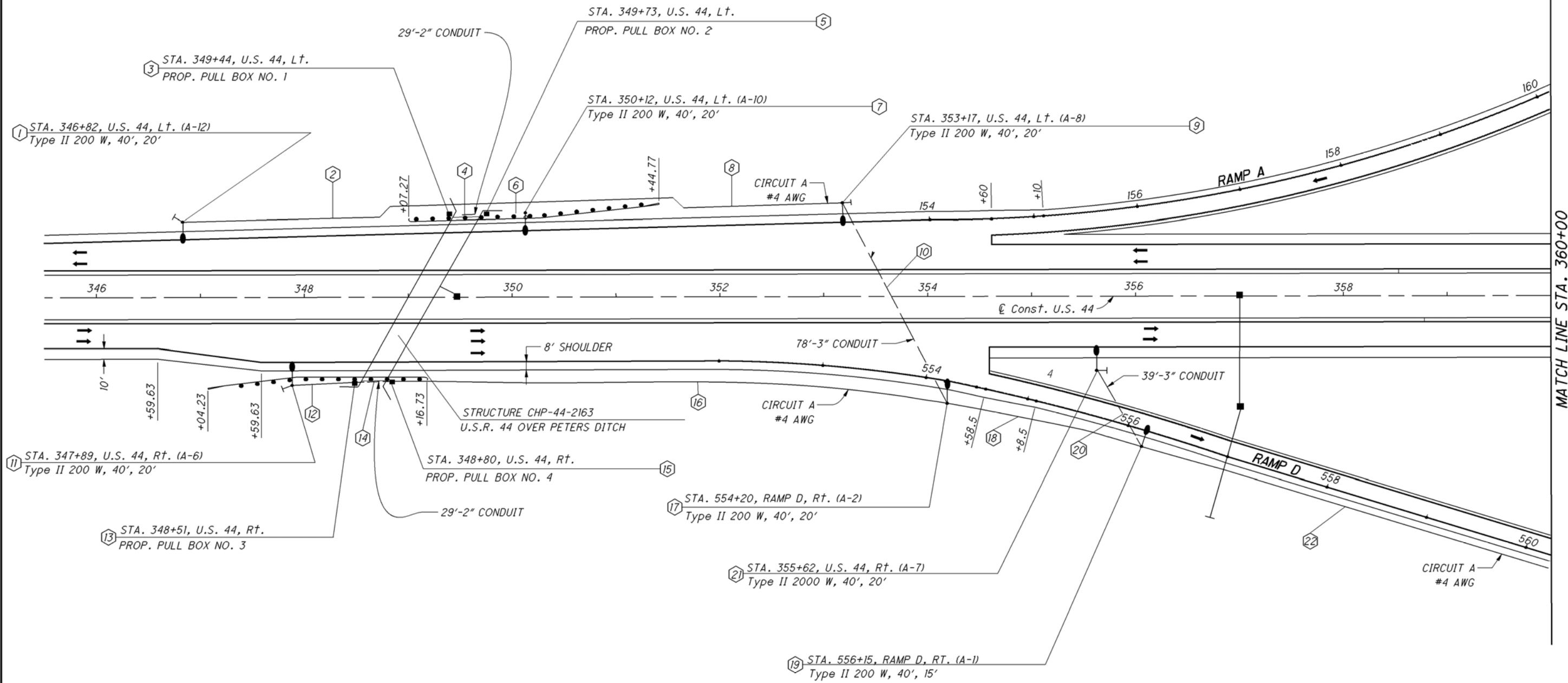
POLE LEGEND

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





CALCULATED  
RMM  
CHECKED  
CWR



MATCH LINE STA. 360+00

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

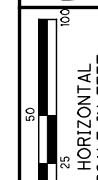
**CHP - 44 - 11.29**

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

REFERENCE NUMBER	SHEET No.	SIDE	ROADWAY	STATION TO STATION	625																	Ground Rod	Structure Grounding System	Plastic Caution Tape
					Luminaire, Style B, Type II, 200 W H.P.S., 480V	Luminaire, Style B, Type III, 200 W H.P.S., 480V	Light Pole, Design AT15B40	Light Pole, Design AT20B40	Light Pole Foundation, 24" x 8' Deep	Pull Box, 725.08, 18"	Trench, 24"	Conduit, 2", 725.04	Conduit, 3", 725.04	No. 4 AWG 5000 V Distribution Cable	No. 10 AWG Pole & Bracket Cable	1/2" Duct Cable W/3 No. 4 AWG 5000 V Cables	Connection, Fused Pull-Apart	Connection, Unfused Pull-Apart	Connection, Unfused Bolted	Connection, Unfused Permanent	Power Service, As Per Plan			
					EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FOOT		
SHEET 269																								
1	269	L†	US-44	346+82		1		1							124		2							
2	269	L†	US-44	346+82 to 349+44						262										1			262	
3	269	L†	US-44	349+44																				
4	269	L†	US-44	349+44 to 349+73																				
5	269	L†	US-44	349+73																				
6	269	L†	US-44	349+73 to 350+12						39													39	
7	269	L†	US-44	350+12		1		1	1						124		2							
8	269	L†	US-44	350+12 to 353+17						305											1		305	
9	269	L†	US-44	353+17		1		1	1						124		2							
10	269	L/R	44/D	353+17 to 554+20						212			146								1		212	
11	269	R†	US-44	347+89		1		1	1						124		2							
12	269	R†	US-44	347+89 to 348+51						62											1		62	
13	269	R†	US-44	348+51																				
14	269	R†	US-44	348+51 to 348+80																				
15	269	R†	US-44	348+80																				
16	269	R†	44/D	348+80 to 554+20						540													540	
17	269	R†	RAMP D	554+20		1		1	1						124		1	1	2					
18	269	R†	RAMP D	554+20 to 556+15						195											1		195	
19	269	R†	RAMP D	556+15	1		1	1							114		1	1	2					
20	269	R†	44/D	355+62 to 556+15						85			39								1		85	
21	269	R†	US-44	355+62		1		1	1						124		2							
22	269	R†	RAMP D	556+15 to 560+30						415											1		415	
SHEET 270																								
23	270	R†	SR-402	54+90	1		1	1							114		2							
24	270	L/R	SR-402	53+88 to 54+90						188			97								1		188	
25	270	L†	SR-402	53+88	1		1	1							124		2							
26	270	L†	SR-402	51+32 to 53+88						256													256	
27	270	L†	SR-402	51+32																				
28	270	L†	SR-402	48+78 to 51+32																				
29	270	L†	SR-402	48+78																				
30	270	L†	128/402	45+10 to 48+78																				
31	270	L/R	D/128	560+30 to 45+20						660													660	
32	270	R†	SR-402	46+22	1		1	1							114		2							
33	270	L/R	128/402	45+10 to 46+22						170			115								1		170	
34	270	R†	128/C	45+20 to 475+86						1030													1030	
35	270	L†	CR-128	45+10	1		1	1							114		1	1	2					
36	270	L†	CR-128	44+10 to 45+10						100													100	
37	270	L†	CR-128	44+10																				
38	270	L†	CR-128	44+10 to 45+20						110													110	
39	270	L/R	CR-128	44+10 to 45+20						159			49										159	
40	270	L†	RAMP B	275+49	1		1	1							114		2							
41	270	L†	USR-44	357+98																				
42	270	L†	RAMP B	275+49 to 276+01																				
43	270	L/R	B/44	275+49 to 357+98						83			83										83	
<b>SUBTOTALS CARRIED TO GENERAL SUMMARY</b>					6	7	5	8	13	6	5311	312	609	1026	1562	5471	23	3	6	12	1	13	1	5311

LIGHTING PLAN SUB-SUMMARY

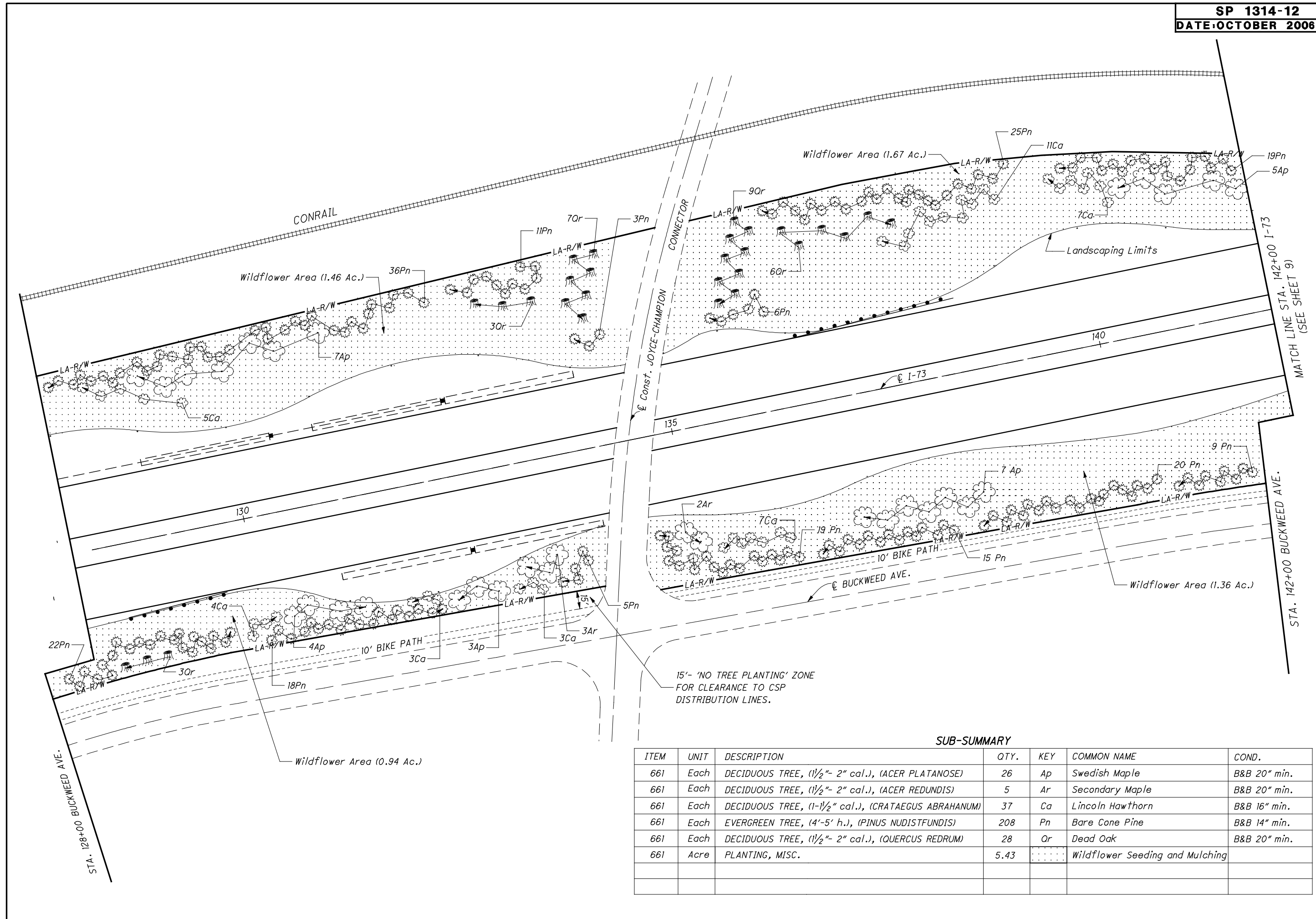
CHP - 44 - 11.29



CALCULATED  
MTG  
CHECKED  
CJM

LANDSCAPING PLAN

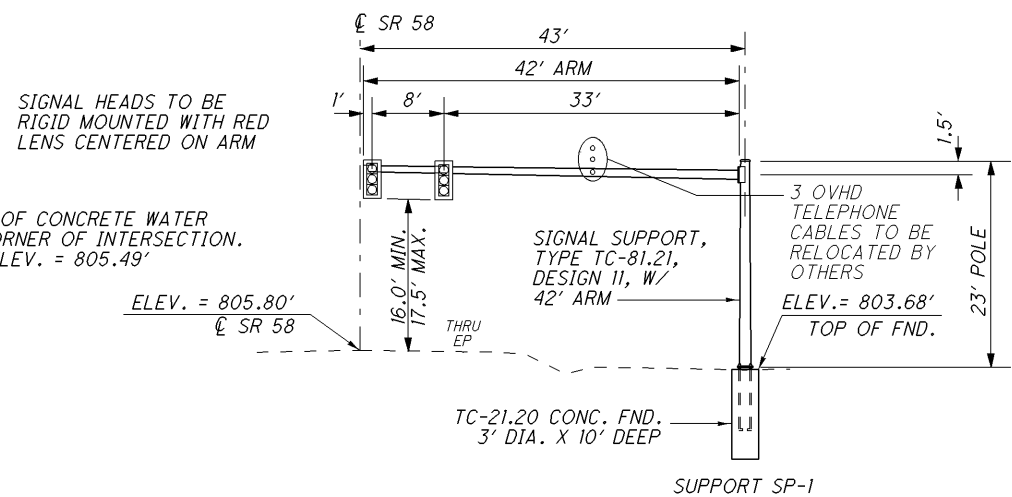
LUC-73-3.93



15'- 'NO TREE PLANTING' ZONE  
FOR CLEARANCE TO CSP  
DISTRIBUTION LINES.

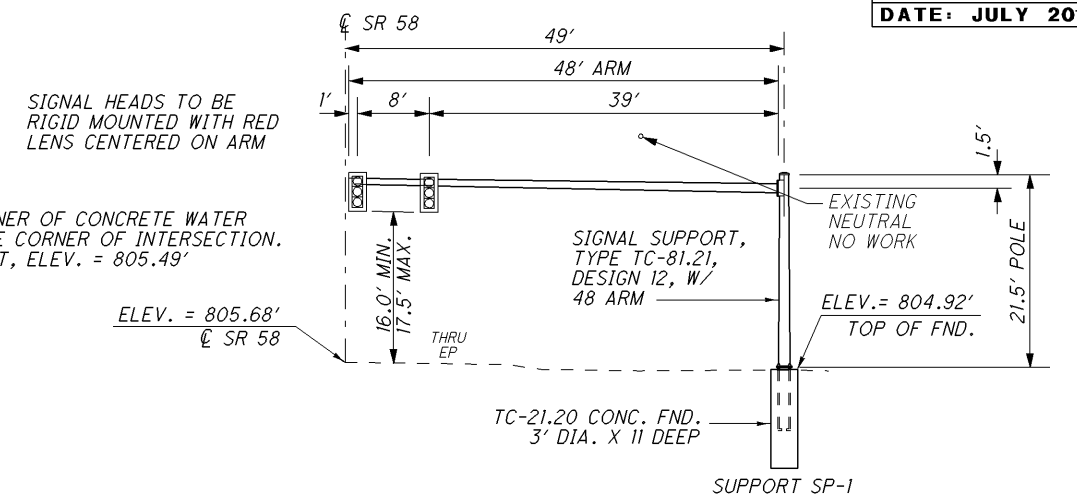
SUB-SUMMARY

ITEM	UNIT	DESCRIPTION	QTY.	KEY	COMMON NAME	COND.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER PLATANOSE)	26	Ap	Swedish Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER REDUNDIS)	5	Ar	Secondary Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1-1½" cal.), (CRATAEGUS ABRAHANUM)	37	Ca	Lincoln Hawthorn	B&B 16" min.
661	Each	EVERGREEN TREE, (4'-5' h.), (PINUS NUDISTFUNDIS)	208	Pn	Bare Cone Pine	B&B 14" min.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (QUERCUS REDRUM)	28	Qr	Dead Oak	B&B 20" min.
661	Acre	PLANTING, MISC.	5.43		Wildflower Seeding and Mulching	



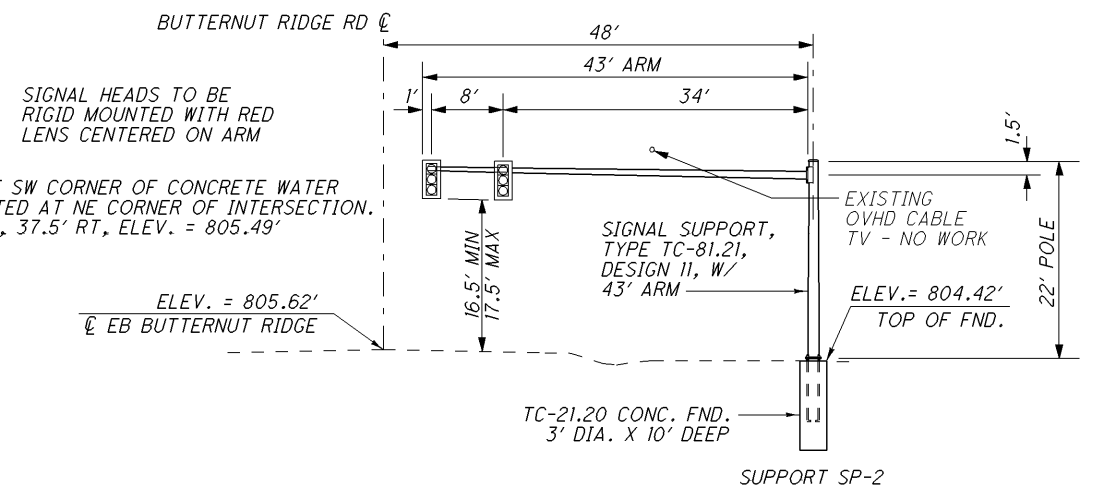
**SIGNAL SUPPORT SP-1  
ELEVATION VIEW**

STA 898+69.9, 43' LT  
LOOKING SOUTH



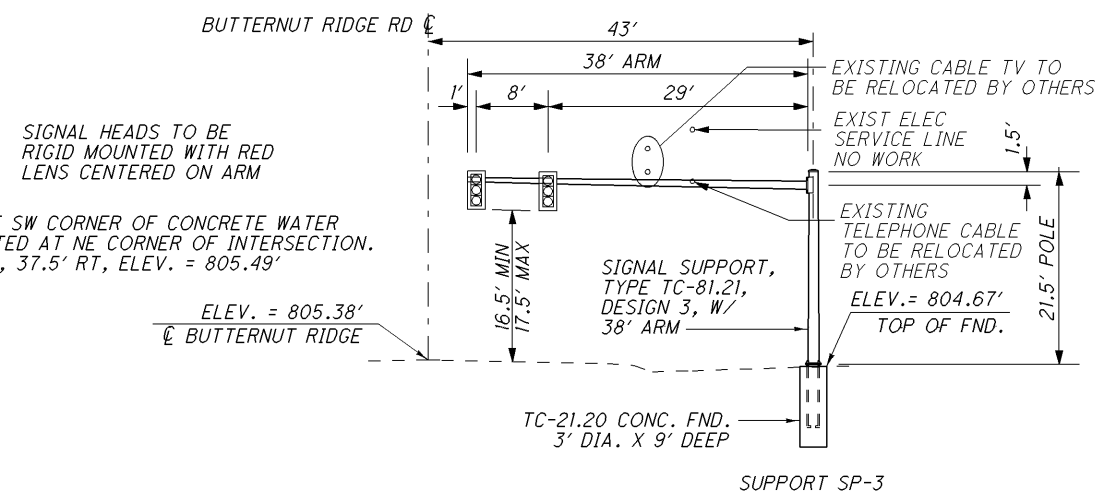
**SIGNAL SUPPORT SP-4  
ELEVATION VIEW**

STA 899+60.6, 49' RT  
LOOKING NORTH



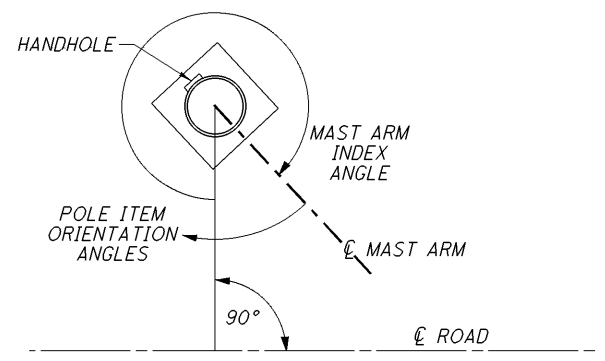
**SIGNAL SUPPORT SP-2  
ELEVATION VIEW**

STA 550+43.4, 48' RT  
LOOKING EAST



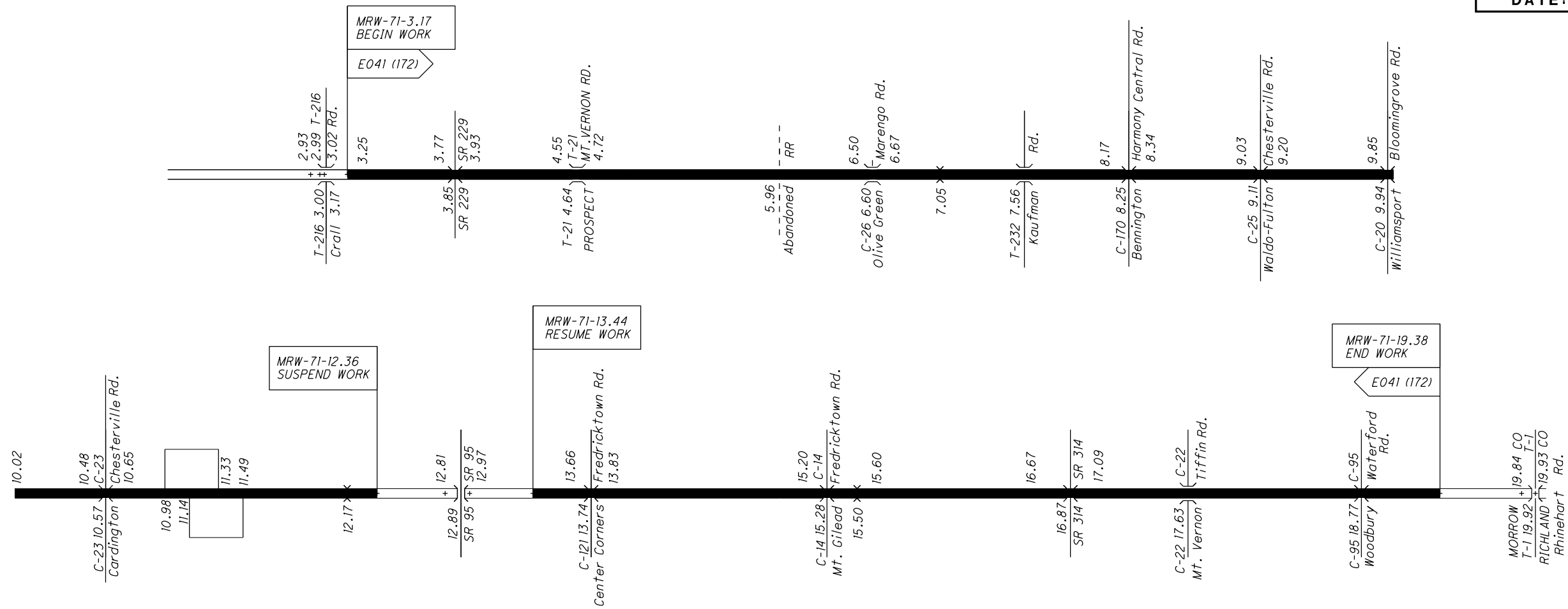
**SIGNAL SUPPORT SP-3  
ELEVATION VIEW**

STA 49+65.1, 43' LT  
LOOKING WEST

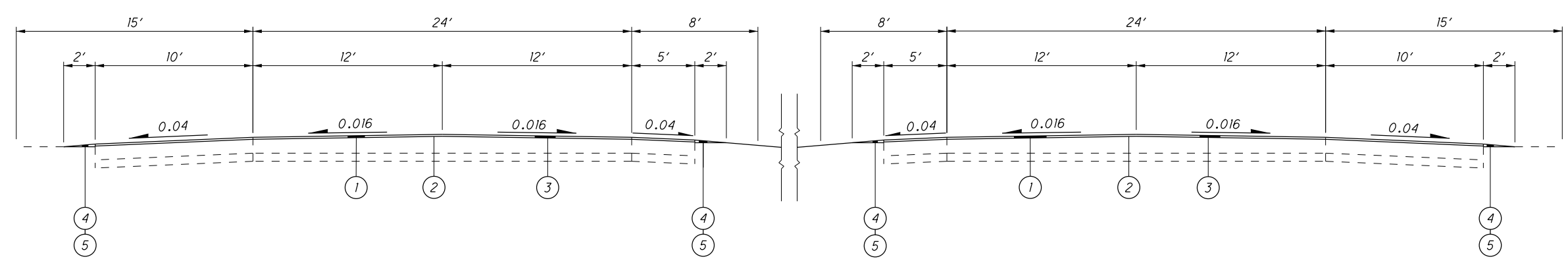


SUPPORT NO.	MAST ARM INDEX ANGLE	ORIENTATION ANGLES (DEG.) FROM MAST ARM					
		POWER SERVICE	CONTROLLER	HANDHOLE	3" CONDUIT	2" CONDUIT	2" CAPPED CONDUIT
SP-1	0°			180°	270°	90°	
SP-2	0°			180°	283°	180°	
SP-3	0°			180°	240°	90°	
SP-4	0°	90°		180°	180°	90°	

I:\pr\35\tds\SamplePlans\2011\July\DGN\1314-13.dgn 13-JUL-2011 12:19PM mwawski



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



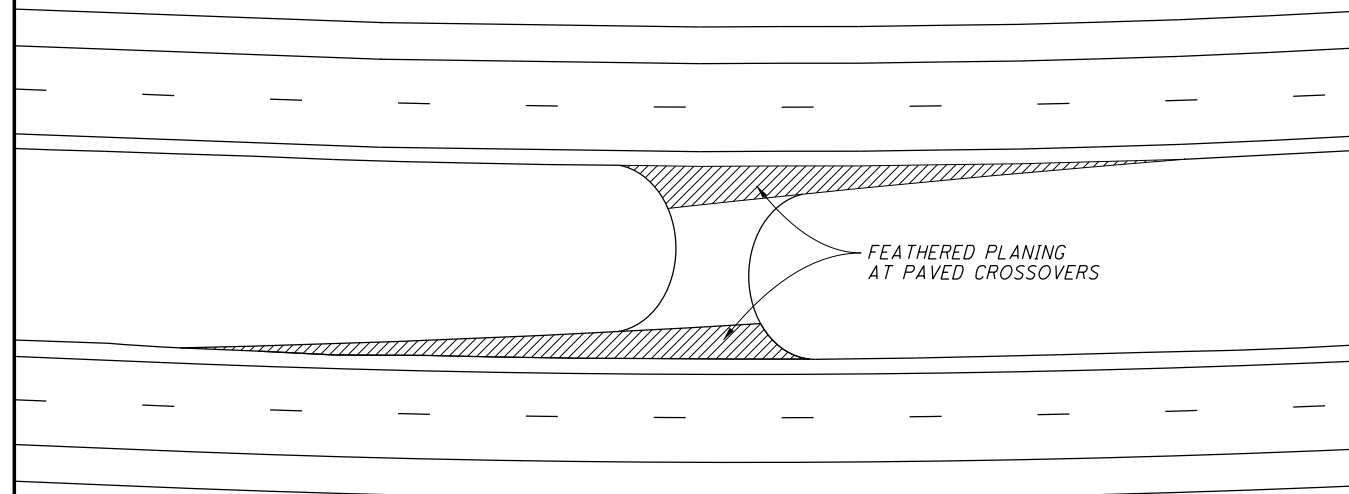
**LEGEND**

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

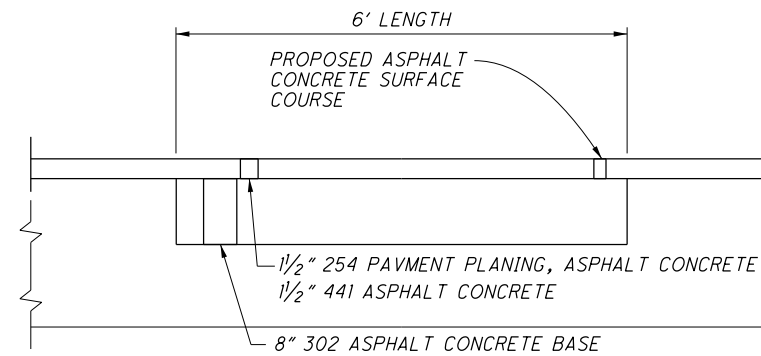
**RESURFACING**

**MRW-71-3.17**

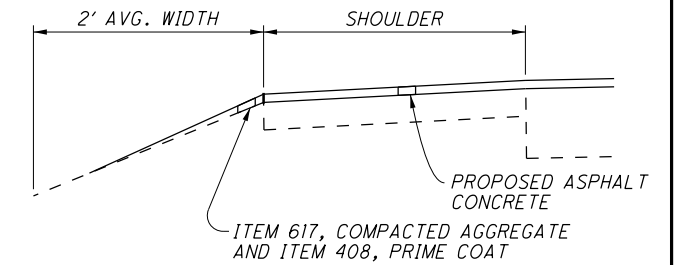
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



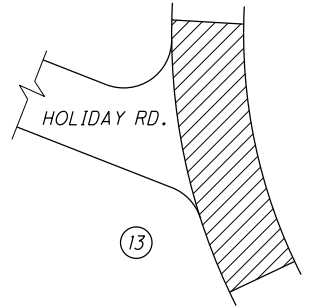
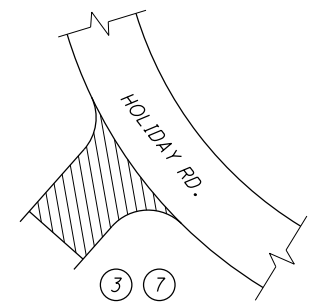
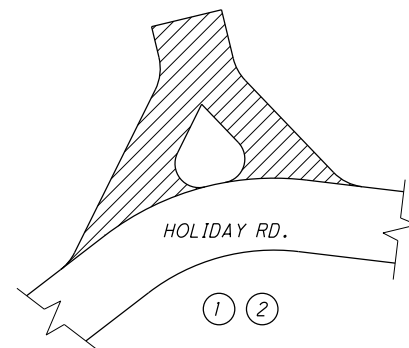
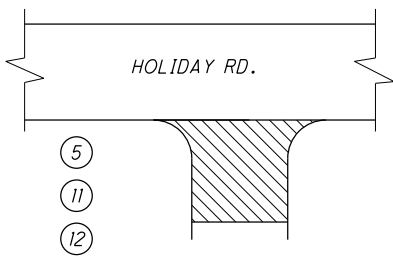
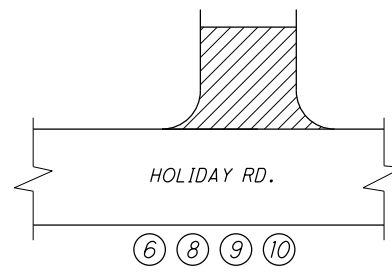
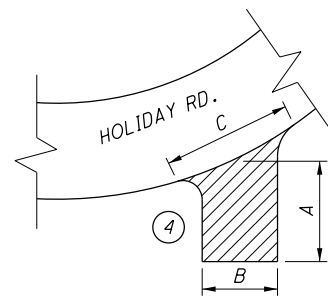
SHOULDER DETAIL



LOCATION					PAVEMENT WIDTH							QUANTITIES						REMARKS
COUNTY	ROUTE	S L M	S L M	TYPICAL	NORTHBOUND				SOUTHBOUND			254	407	408	441	617	618	REMARKS
					LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE 1/2" DEPTH SY	TACK COAT GAL	PRIME COAT (0.4 GAL/YD²) GAL	ASPHALT SURFACE COURSE, TYPE 1, (446), PG 64-22 1/2" DEPTH CY	COMPACT AGGREGATE 2" DEPTH CY	RUMBLE STRIP (ASPHALT CONCRETE) FT	
MRW	71	3.17	12.07	1	46,992'	10'	24'	5'									MAINLINE (SOUTH OF SR-95)	
MRW	71	3.17	12.36	1	48,523'				5'	24'	10'						MAINLINE (SOUTH OF SR-95)	
MRW	71	13.44	19.38	1	31,363'	10'	24'	5'									MAINLINE (NORTH OF SR-95)	
MRW	71	13.57	19.38	1	30,677'				5'	24'	10'						MAINLINE (NORTH OF SR-95)	
MRW	71	10.99	11.14	1	792'	10'	32'*					3,696	277		154		EXTRA AREA (RAMP TAPER)	
MRW	71	11.39	11.70	1	1,637'	10'	32'*					7,638	573		318		EXTRA AREA (RAMP TAPER)	
MRW	71	11.33	11.48	1	792'					32'*	10'	3,696	277		154		EXTRA AREA (RAMP TAPER)	
MRW	71	10.75	11.06	1	1,637'					32'*	10'	7,638	573		318		EXTRA AREA (RAMP TAPER)	
MRW	71	4.41										340	25		14		* AVERAGE PAVEMENT WIDTH	
MRW	71	6.67													10		EXTRA AREA (PAVED CROSSOVER)	
MRW	71	7.40										340	25		14		GRAVEL CROSSOVER	
MRW	71	10.37										340	25		14		EXTRA AREA (PAVED CROSSOVER)	
MRW	71	11.98										340	25		14		EXTRA AREA (PAVED CROSSOVER)	
MRW	71	13.63										340	25		14		EXTRA AREA (PAVED CROSSOVER)	
MRW	71	14.67													10		GRAVEL CROSSOVER	
MRW	71	15.06													10		GRAVEL CROSSOVER	
MRW	71	15.60													10		GRAVEL CROSSOVER	
MRW	71	16.75										340	25		14		EXTRA AREA (PAVED CROSSOVER)	
MRW	71	17.52													10		GRAVEL CROSSOVER	
MRW	71	18.03													10		GRAVEL CROSSOVER	
MRW	71	5.96	6.01		255'	10'	24'	5'	5'	24'	10'	-2,210	-2	-45	-92	-6	-510	DEDUCTIONS & EXTRA AREAS
MRW	71	7.05	7.07		120'	10'	24'	5'	5'	24'	10'	-1,039	4	-21	2	-3	-240	DEDUCTIONS & EXTRA AREAS
MRW	71	7.56	7.59		145'	10'	24'	5'	5'	24'	10'	-1,254	5	-26	3	-4	-289	DEDUCTIONS & EXTRA AREAS
MRW	71	12.17	12.19		103'	10'	24'	5'	5'	24'	10'	-892	3	-18	2	-3	-206	DEDUCTIONS & EXTRA AREAS
MRW	71	15.50	15.52		80'	10'	24'	5'	5'	24'	10'	-691	3	-14	1	-2	-159	DEDUCTIONS & EXTRA AREAS
MRW	71	17.63	17.68		257'	10'	24'	5'	5'	24'	10'	-2,224	9	-46	5	-6	-513	DEDUCTIONS & EXTRA AREAS
MRW	71	18.77	18.80		155'	10'	24'	5'	5'	24'	10'	-1,341	5	-28	3	-4	-309	DEDUCTIONS & EXTRA AREAS
<b>TOTALS CARRIED TO SUBSUMMARY</b>												<b>697,797</b>	<b>53,082</b>	<b>27,812</b>	<b>29,400</b>	<b>3,924</b>	<b>312,883</b>	

PAVEMENT SUBSUMMARY AND DETAILS

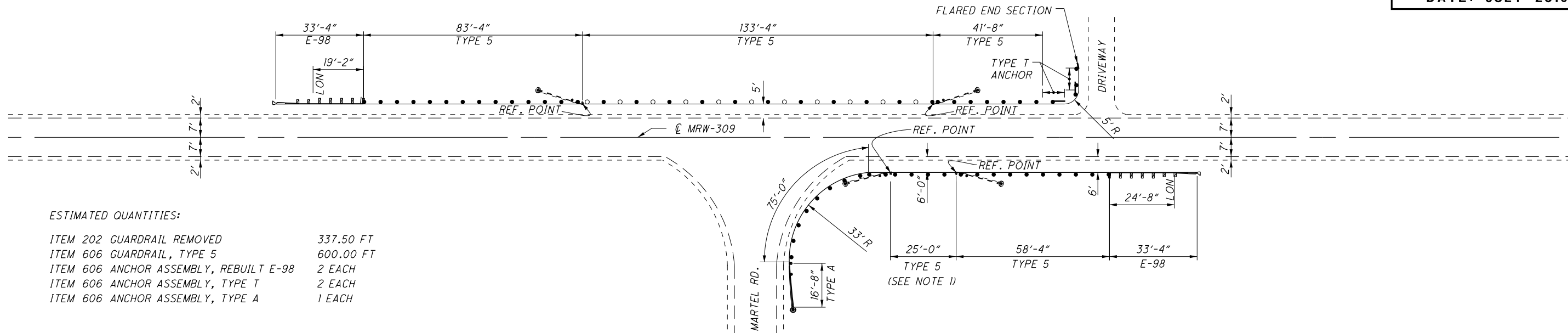
MRW - 71 - 3.17



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

CALCULATIONS

KNO - 444 - 0.00



ESTIMATED QUANTITIES:

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

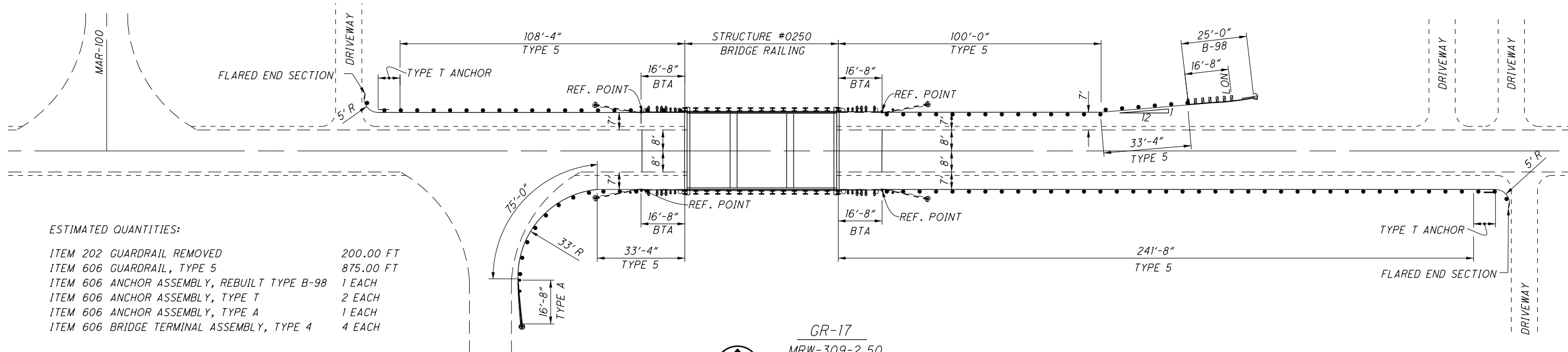
ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.

GR-16  
MRW-309-2.37



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



ESTIMATED QUANTITIES:

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

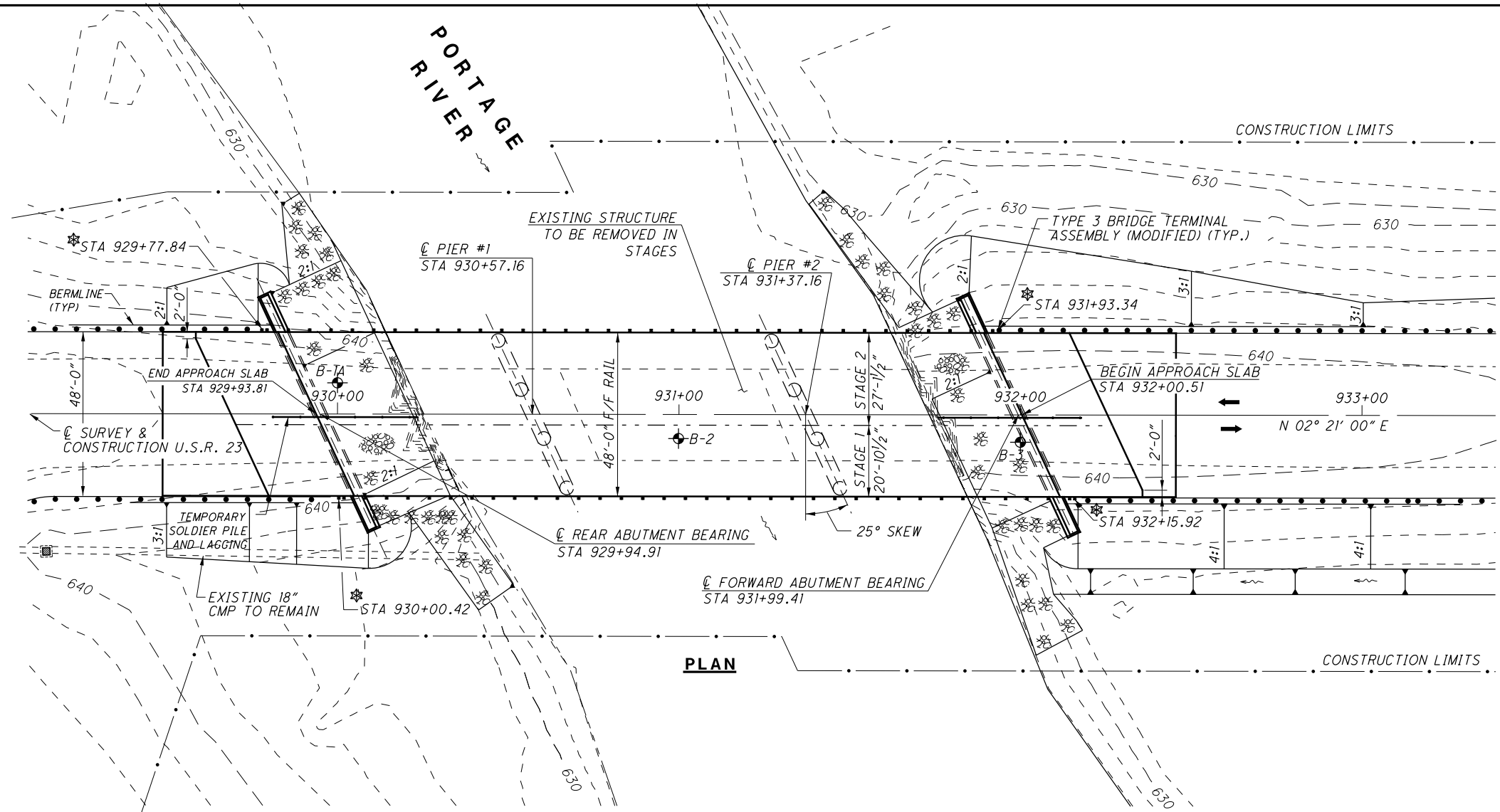
ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.

GR-17  
MRW-309-2.50







**PLAN**

**BENCHMARK DATA**

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

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

**NOTES:**

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

**DESIGN TRAFFIC:**

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

**LEGEND:**

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

**HYDRAULIC DATA**

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

**EXISTING STRUCTURE  
(TO BE REMOVED)**

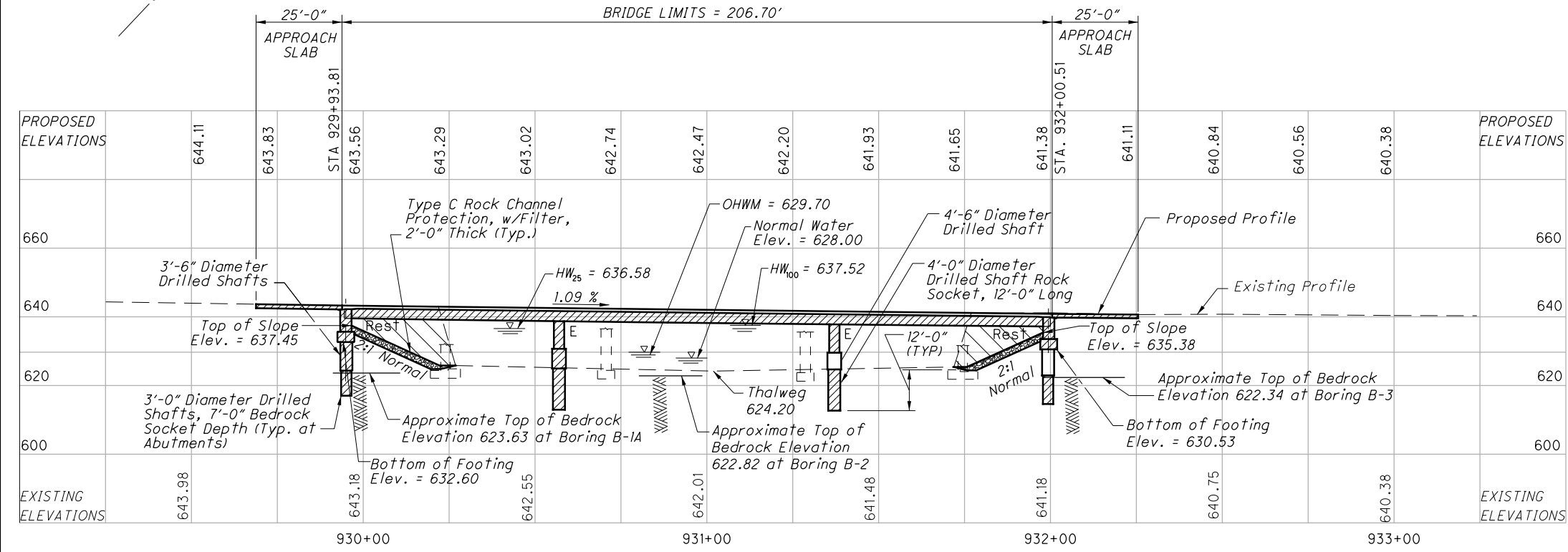
TYPE: CONTINUOUS STEEL BEAM WITH COMPOSITE REINFORCED  
CONCRETE DECK AND SUPERSTRUCTURE  
SPANS: 46'-0"±, 58'-0"±, 46'-0"± C/C BEARINGS  
ROADWAY: 27'-0"± F/F RAIL  
LOADING: H-15  
SKEW: 25° RF  
APPROACH SLABS: NONE  
ALIGNMENT: TANGENT  
CROWN: 3/16" PER FOOT  
STRUCTURAL FILE NUMBER: 8701504  
DATE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

**PROPOSED STRUCTURE**

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

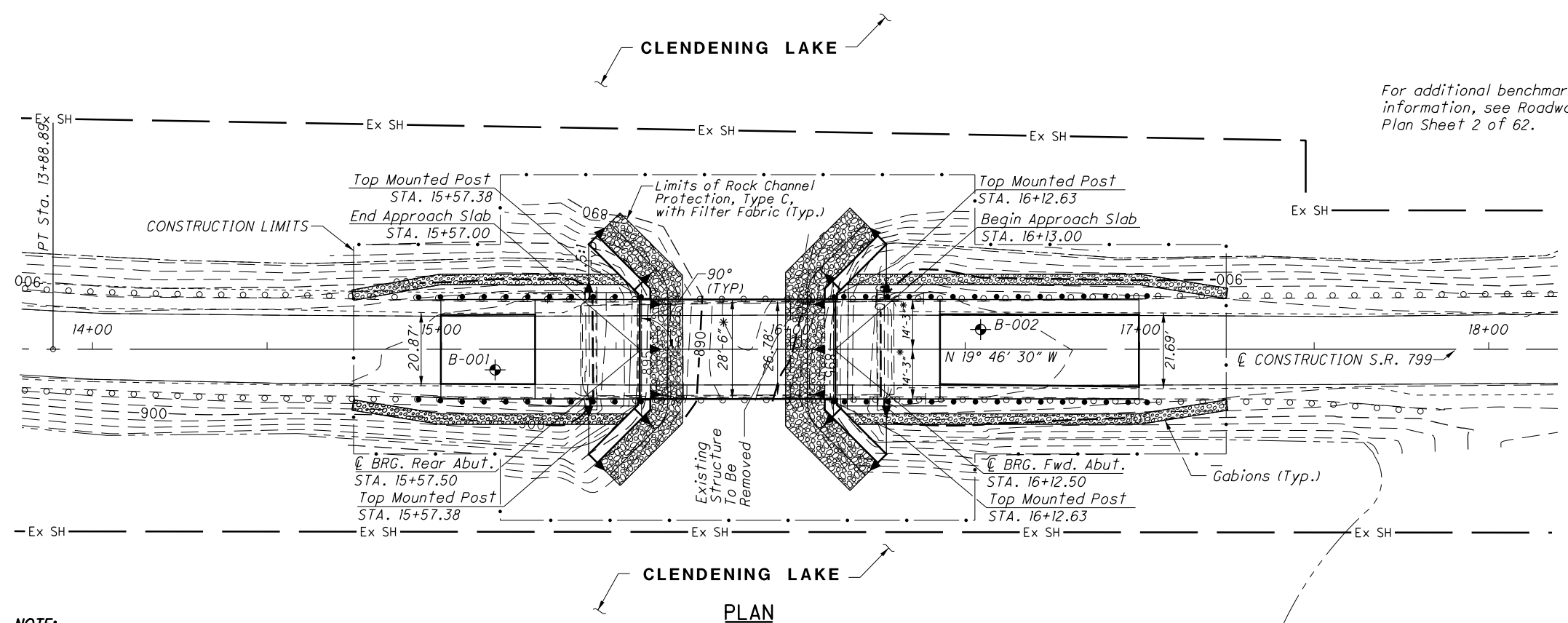
**SITE PLAN**  
**BRIDGE NO. WOO-23-1760 OVER THE PORTAGE RIVER**  
**STA. 929+93.81 TO STA. 932+00.51**

WOO-23-17.60



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

DESIGNER	CHECKER
BCW	DB
REVIEWER	
TAA	07-13-17
PROJECT ID	123456
SUBSET	TOTAL
1	20
SHEET	TOTAL
20	40



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%

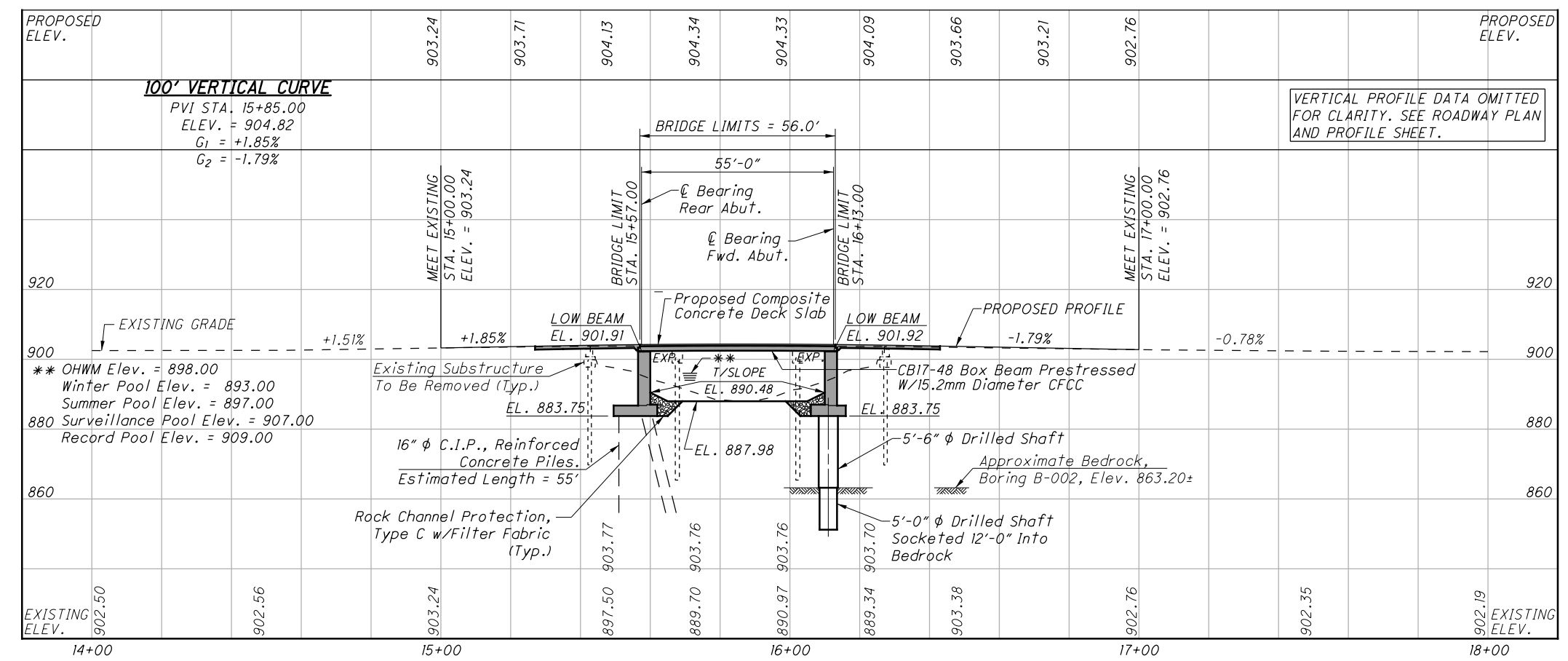
**LEGEND**  
◆ APPROXIMATE BORING LOCATION  
CFCC = CARBON FIBER COMPOSITE CABLE

**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.

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

\* Includes 1" gap between beams for post-tensioning



VERTICAL PROFILE DATA OMITTED FOR CLARITY. SEE ROADWAY PLAN AND PROFILE SHEET.

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

PROFILE ALONG  $\phi$  SURVEY AND  $\phi$  CONSTRUCTION S.R. 799

SITE PLAN  
 BRIDGE NO. HAS-799-0380 OVER CLENDENING LAKE  
 STA. 15+57.00 TO STA. 16+13.00

HAS-799-0380

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