

# **SAMPLE PLAN SHEETS**



**Location and Design Manual, Volume Three  
Highway Plans**

# **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**

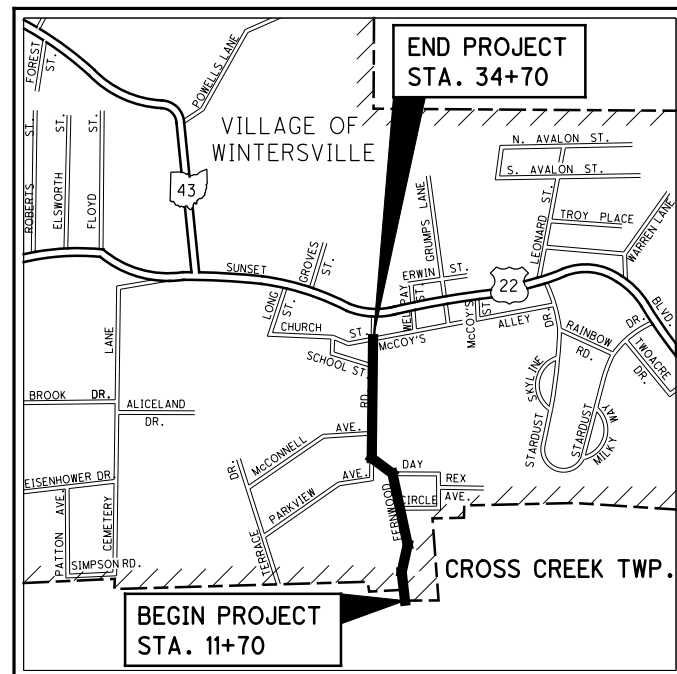
UPGRADING 0.44 MILE OF FERNWOOD ROAD BY WIDENING AND RESURFACING, INCLUDING NEW STORM SEWER SYSTEM, CURB AND GUTTER, SIDEWALK, TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS.

**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

**2013 SPECIFICATIONS**

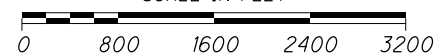
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



LOCATION MAP

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

SCALE IN FEET



PORITION TO BE IMPROVED	
INTERSTATE & DIVIDED HIGHWAY	
UNDIVIDED STATE & FEDERAL ROUTES	
OTHER ROADS	

**DESIGN DESIGNATION**

CURRENT ADT (2013)	2940
DESIGN YEAR ADT (2025)	4494
DESIGN HOURLY VOLUME (2025)	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	6-27-14	2
VERTICAL ALIGNMENT:		
STOPPING SIGHT DISTANCE	6-27-14	10, 12

**UNDERGROUND UTILITIES**

CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
BEFORE YOU DIG



OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: 1-800-925-0988

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

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

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BP-1.1	7/28/00	MGS-1.1	7/19/13	MT-105.10	7/19/13	800-2015	1/21/15
BP-2.1	7/19/13	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		
BP-3.1	7/18/14	MGS-5.3	7/19/13	TC-41.40	10/18/13		
BP-4.1	7/19/13			TC-42.20	10/18/13		
BP-5.1	7/19/13	HW-2.1	1/18/13	TC-52.10	10/18/13		
BP-7.1	7/18/14	HW-2.2	1/18/13	TC-52.20	7/18/14		
				TC-71.10	1/17/14		
CB-2.1	1/18/13	LA-1.1	10/15/10				
CB-2.2	1/17/14	LA-1.2	10/15/10				
CB-2.3	1/18/13						
		MH-1.1	1/18/13				
DM-1.1	1/18/13	MH-1.2	1/18/13			REINFORCED EARTH	5/27/14
DM-4.4	7/20/12	MH-1.3	1/18/13			WATERWAY PERMIT	1/23/15

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

FEDERAL PROJECT NO.  
E025 (762)

PID NO.  
15549

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
NONE

JEF-FERNWOOD RD.

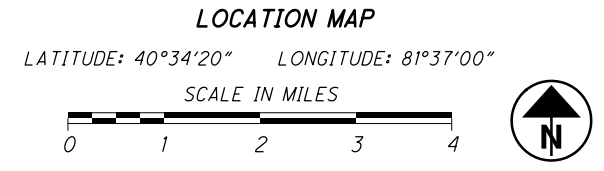
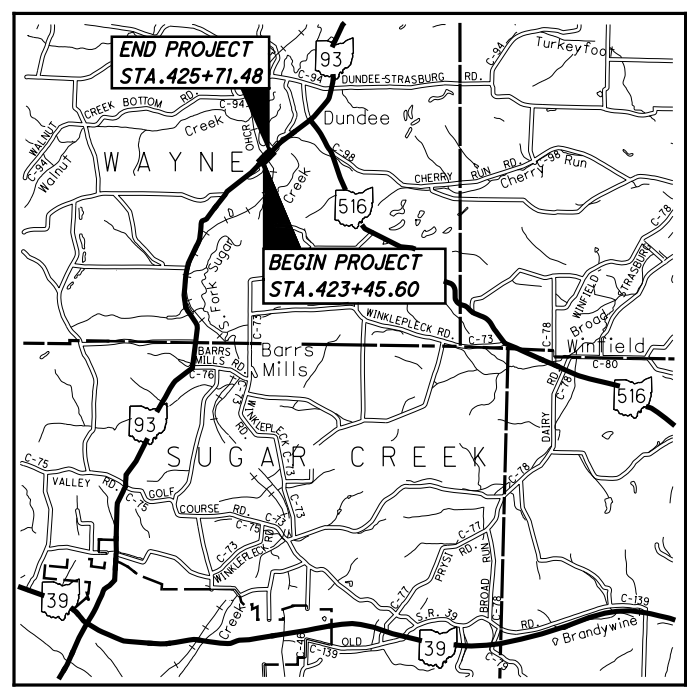


**PROJECT DESCRIPTION**  
REHABILITATION OF THE EXISTING STRUCTURE OVER THE OHIO CENTRAL RAILROAD BY REPLACEMENT OF THE BRIDGE DECK AND APPROACH SLABS.

**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

**2013 SPECIFICATIONS**  
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION  
**TUS-93-8.02**  
RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE OHIO CENTRAL RAILROAD  
WAYNE TOWNSHIP  
TUSCARAWAS COUNTY



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

**DESIGN DESIGNATION**

CURRENT ADT (2013)	1270
DESIGN YEAR ADT (2033)	2240
DESIGN HOURLY VOLUME (2033)	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 BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY  
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

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 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	
BP-3.1	7/18/14	AS-1-81	1/18/13			800-2015	1/21/15
BP-4.1	7/19/13	CPA-1-08	7/18/08			832	1/17/14
BP-5.1	7/19/13	CS-1-08	7/18/08				
		SBR-1-99	7/19/02				
DM-1.1	1/18/13						
DM-1.4	1/18/13	MT-96.11	7/18/14				
DM-4.4	7/20/12	MT-96.20	7/19/13				
		MT-96.26	7/19/13				
MGS-1.1	1/20/12						
MGS-2.1	7/19/13						
MGS-3.1	7/18/14						
MGS-4.2	7/19/13						
MGS-5.3	7/19/13						
RM-4.2	7/19/13						
						<b>SPECIAL PROVISIONS</b>	
						WATERWAY PERMIT	1/23/15

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

FEDERAL PROJECT NO. E073 (345)  
CONSTRUCTION PROJECT NO. 22512  
RAILROAD INVOLVEMENT OHIO CENTRAL R.R.  
TUS-93-8.02  
1/28

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.

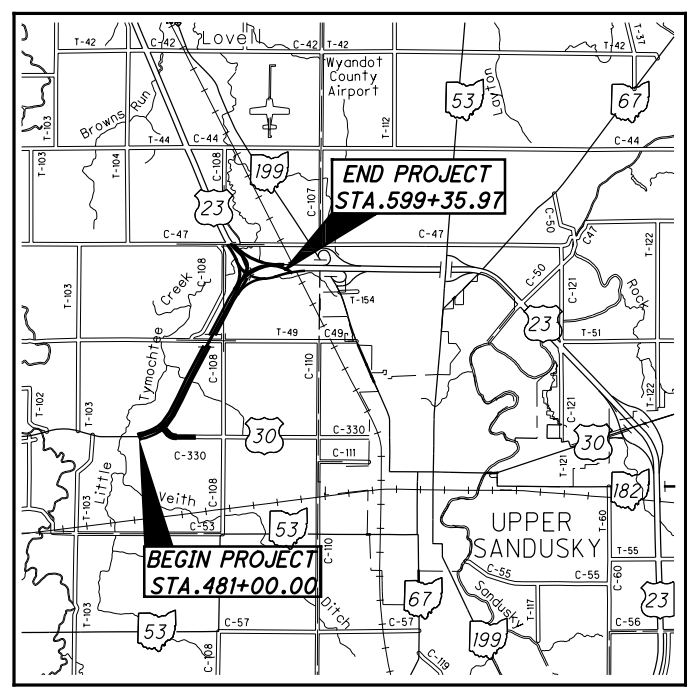
**2013 SPECIFICATIONS**

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I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 25, 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°19'35"



PORTION TO BE IMPROVED . . . . .

INTERSTATE & DIVIDED HIGHWAY . . . . .

UNDIVIDED STATE & FEDERAL ROUTES . . . . .

OTHER ROADS . . . . .

**DESIGN DESIGNATION**

CURRENT ADT (2013)	3510
DESIGN YEAR ADT (2033)	4880
DESIGN HOURLY VOLUME (2033)	488
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	20%
DESIGN SPEED	70 MPH
T <sub>d</sub>	20%
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	06 FREEWAY (RURAL)
NHS PROJECT	NO

**DESIGN EXCEPTIONS**

NONE REQUIRED

**UNDERGROUND UTILITIES**

CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
**BEFORE YOU DIG**

CALL  
**1-800-362-2764**  
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE  
SERVICE CALL: **1-800-925-0988**

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

**ENGINEERS SEAL**

FOR STRUCTURES  
OVER 20 FOOT

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

**ENGINEERS SEAL**

FOR ENTIRE PLAN  
EXCEPT STRUCTURES  
OVER 20 FOOT

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

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STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS			
BP-1.1	7/28/00	MGS-1.1	7/19/13	MH-1.1	1/18/13	HL-10.31	1/16/15	TC-07.65	10/18/13	800-2015	1/21/15
		MGS-2.1	7/19/13	MH-1.2	1/18/13	HL-20.11	1/16/15	TC-12.30	10/18/13	832	1/17/14
CB-2.2	1/17/14	MGS-3.1	7/18/14	MH-3.1	1/18/13	HL-20.14	1/16/15	TC-21.10	10/18/13		
CB-3.1	1/18/13	MGS-4.2	7/19/13			HL-20.21	1/17/14	TC-21.20	1/16/15		
CB-3.2	1/18/13	MGS-5.3	7/19/13	RM-1.1	7/18/14	HL-30.11	1/16/15	TC-22.20	1/17/14		
CB-3.4	1/18/13	MGS-6.1	7/19/13	RM-4.2	6/4/14	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	1/18/13	HW-1.1	1/18/13			HL-30.31	1/17/14	TC-41.40	10/18/13		
DM-4.4	7/20/12	HW-2.1	1/18/13	MT-95.30	7/18/14	HL-40.10	1/17/14	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	7/19/13					HL-60.21	1/16/15	TC-42.20	10/18/13		
F-3.1	7/19/13	LA-1.1	10/15/10	AS-1-81	1/18/13	HL-60.31	1/16/15	TC-51.11	1/17/14		
F-3.3	7/19/13	LA-1.2	10/15/10	ICD-1-82	7/19/02			TC-52.10	10/18/13		
F-3.4	7/19/13							TC-52.20	7/18/14		
		WO-1.1	1/18/13								
		WO-1.2	1/18/13								

**SPECIAL PROVISIONS**

WATERWAY PERMIT  
1/23/15

GEOTECHNICAL REPORT  
6/02/14

FEDERAL PROJECT NO. **E043 (184)**

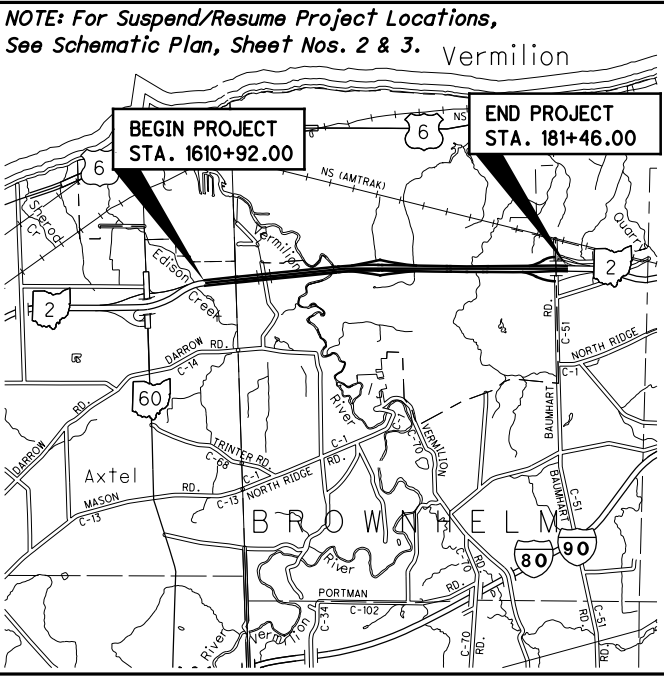
PID NO. **23436**

CONSTRUCTION PROJECT NO. **NONE**

RAILROAD INVOLVEMENT **NONE**

**WYA-30-9.11**

1/521



**LOCATION MAP**

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



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

**FOR DESIGN DESIGNATION AND DESIGN EXCEPTIONS SEE SHEETS 2 AND 3**

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

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

## CITY OF VERMILION BROWHELM TOWNSHIP VERMILION TOWNSHIP ERIE AND LORAIN COUNTIES

**PROJECT DESCRIPTION**

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

**EARTH DISTURBED AREAS**

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

**LIMITED ACCESS**

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

**2013 SPECIFICATIONS**

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

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

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

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

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**UNDERGROUND UTILITIES**

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Call Before You Dig  
**1-800-362-2764**

(Non-members must be called directly)

OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE  
**1-800-925-0988**

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

**ENGINEERS SEAL**

FOR STRUCTURES  
20' & UNDER

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

**ENGINEERS SEAL**

FOR ENTIRE PLAN  
EXCEPT STRUCTURES  
OVER 20'

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

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-1.1	7/28/00	MGS-1.1	7/19/13	HL-10.13	1/16/15	TC-18.24	1/17/14	800-2015	1/21/15
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
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		
						TC-42.20	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		
				MT-96.26	7/19/13	TC-65.11	7/18/14		
DM-1.1	1/18/13	EXJ-4-87	7/19/02	MT-99.20	7/19/13	TC-72.20	7/18/14		
DM-4.4	7/20/12	RB-1-55	7/19/13			TC-82.10	10/18/13		

**SPECIAL PROVISIONS**

WATERWAY PERMIT  
1/23/14

FEDERAL PROJECT NO. E115 (218)  
CONSTRUCTION PROJECT NO. 20283  
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: 0.6 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 4.9 ACRES

**2013 SPECIFICATIONS**

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

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

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

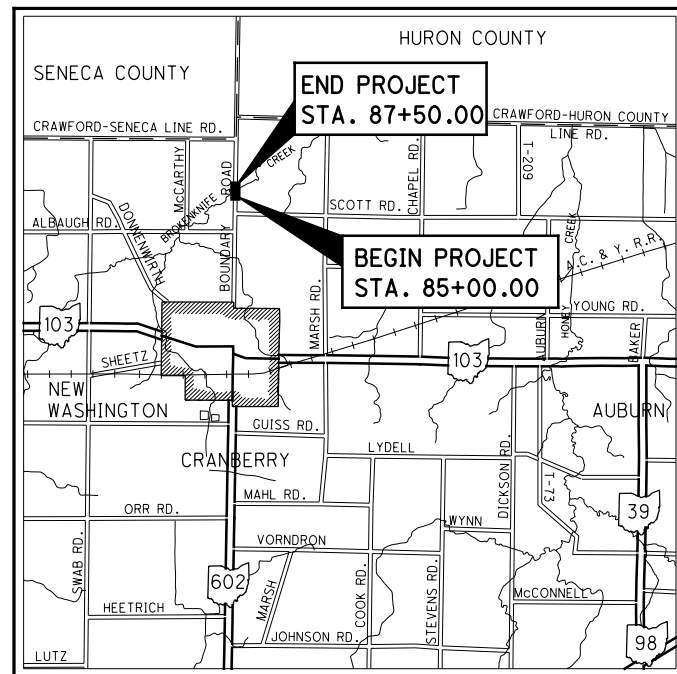
APPROVED \_\_\_\_\_  
DATE \_\_\_\_\_ CRAWFORD COUNTY COMMISSIONER

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 & DIVIDED HIGHWAY - - - - -  
UNDIVIDED STATE & FEDERAL ROUTES - - - - -  
OTHER ROADS - - - - -

**DESIGN DESIGNATION**

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

**DESIGN EXCEPTIONS**

NONE REQUIRED

**UNDERGROUND UTILITIES**

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

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

**INDEX OF SHEETS:**

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

**ENGINEERS SEAL:**

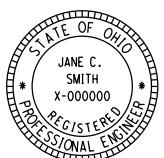
FOR DESIGN CHANGES  
NOTED ON SHEET 4



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

**ENGINEERS SEAL:**

FOR ENTIRE PLAN EXCEPT  
STRUCTURES 20' & OVER



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

**PARTS 1 AND 2**

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	RM-1.1	7/18/14			800-2015	1/21/15
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						
						<b>SPECIAL PROVISIONS</b>	
						WATERWAY PERMIT	
						1/23/15	

FEDERAL PROJECT NO.  
**E017 (212)**

PID NO.  
**24988**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
**NONE**

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





STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**PROJECT DESCRIPTION**

SPOT PAVEMENT REPAIRS ON SR-257 IN DELAWARE COUNTY BETWEEN SLM 8.37 (US-42/SR-745) AND SLM 14.26 (SR-37).  
6' WIDE CONTINUOUS SLOT PAVING ON OUTSIDE EDGE OF SR-257 BEGINNING AT SLM 14.26 (SR-37) IN DELAWARE COUNTY AND ENDING AT SR-47 IN MARION COUNTY (SLM 0.66).

**EARTH DISTURBED AREA:**

PROJECT EARTH DISTURBED AREA N/A\*  
EST. CONTRACTOR EARTH DISTURBED AREA N/A\*  
NOTICE OF INTENT EARTH DISTURBED AREA N/A\*

\* MAINTENANCE PROJECT

FEDERAL PROJECT NO.  
**NONE**

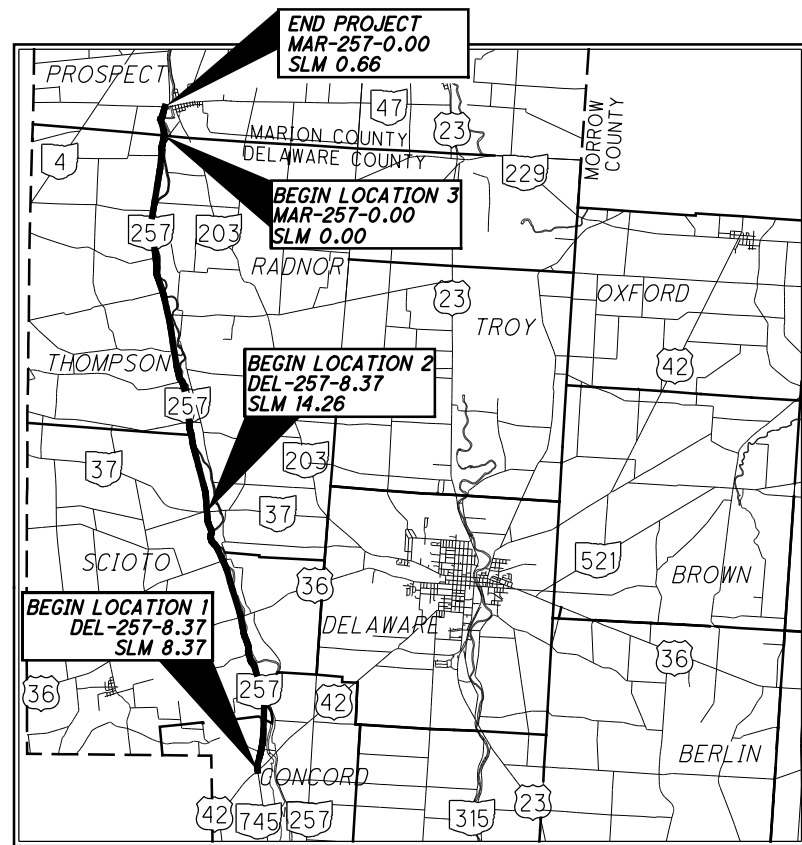
PID NO.  
**93708**

CONSTRUCTION PROJECT NO.

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

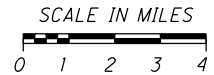
**DEL-257-8.37**  
**MAR-257-0.00**

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



**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	-----	=====

<b>DESIGN DESIGNATION</b>	<b>DEL-257-8.37</b>	<b>MAR-257-0.00</b>
CURRENT ADT (2012)	1,762	813
DESIGN YEAR ADT (2024)	1,869	862
DESIGN HOURLY VOLUME (2024)	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)

**DESIGN EXCEPTIONS**  
NONE REQUIRED

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

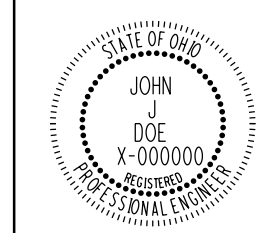
Call Before You Dig  
**1-800-362-2764**

(Non-members must be called directly)

OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE  
**1-800-925-0988**

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

**ENGINEERS SEAL**



SIGNED: *John J. Doe*  
DATE: 01/21/11

**INDEX OF SHEETS:**

TITLE	1
TYPICAL DETAILS	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	
BP-3.1	7/18/14	800-2015	1/21/15
		821	04/20/12
		832	1/17/14
MT-97.11	7/18/14		
MT-97.12	7/18/14		
MT-99.20	7/19/13		
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	7/18/14		
TC-65.10	1/17/14		
TC-65.11	7/18/14		
TC-71.10	1/17/14		
TC-82.10	10/18/13		

**SPECIAL PROVISIONS**

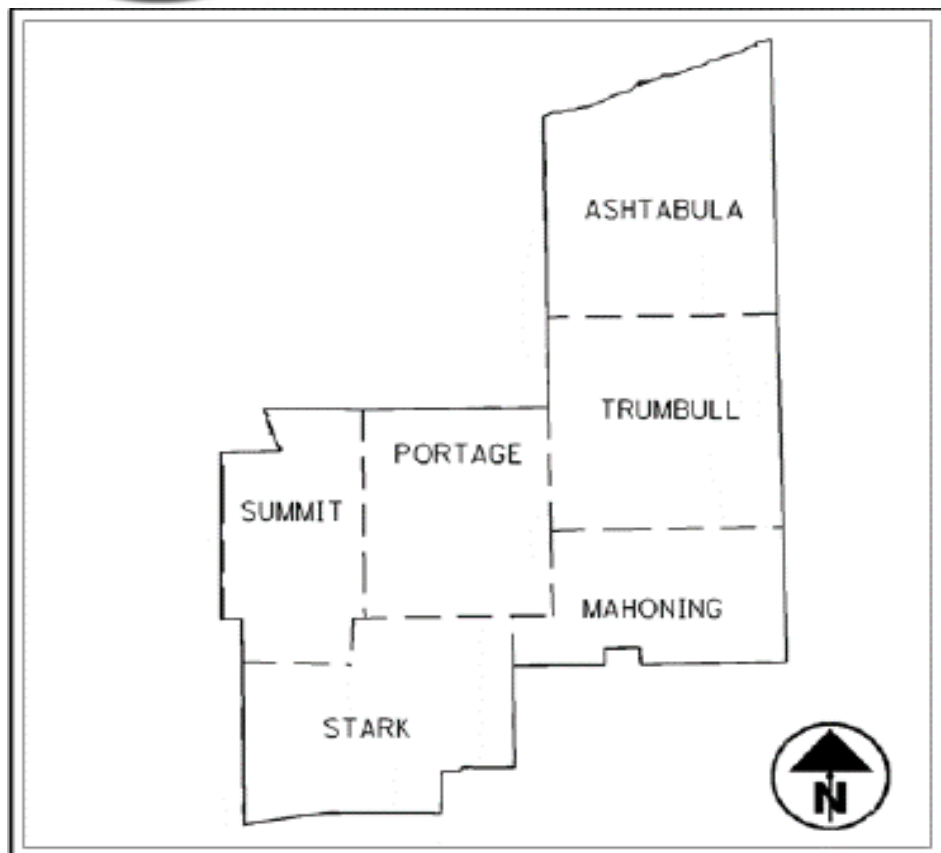
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

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

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



STATE OF OHIO, DEPARTMENT OF TRANSPORTATION



# D04-PMF-FY13

## FAST DRY PAVEMENT MARKINGS

CONSTRUCTION PROJECT NUMBER: 13-\_\_\_\_\_  
 PID NO: \_\_\_\_\_  
 FEDERAL PROJECT NUMBER: 100% STATE

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

**2013 SPECIFICATIONS**  
 THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION. INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATION 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 BOTH SERVICES CALL TWO WORKING DAYS <b>BEFORE YOU DIG</b>	
CALL 1-800-362-2764 (TOLL FREE)	
OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY	
OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE CALL: 1-800-925-0988	

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

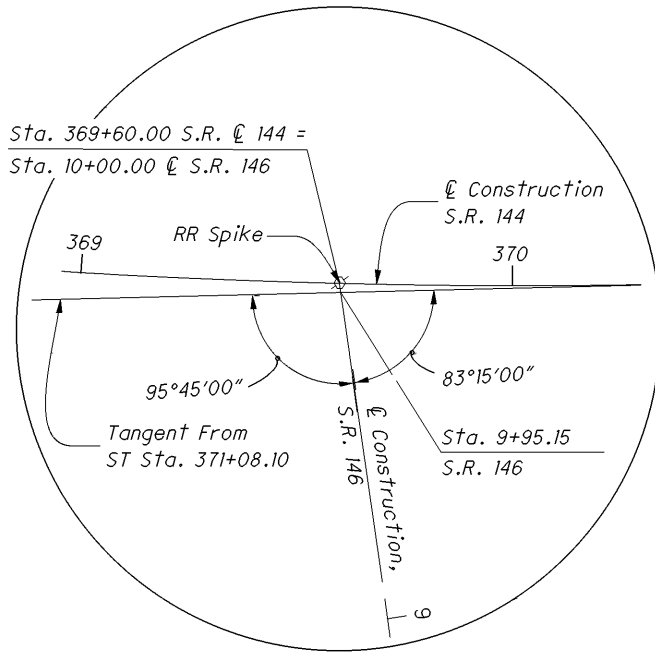
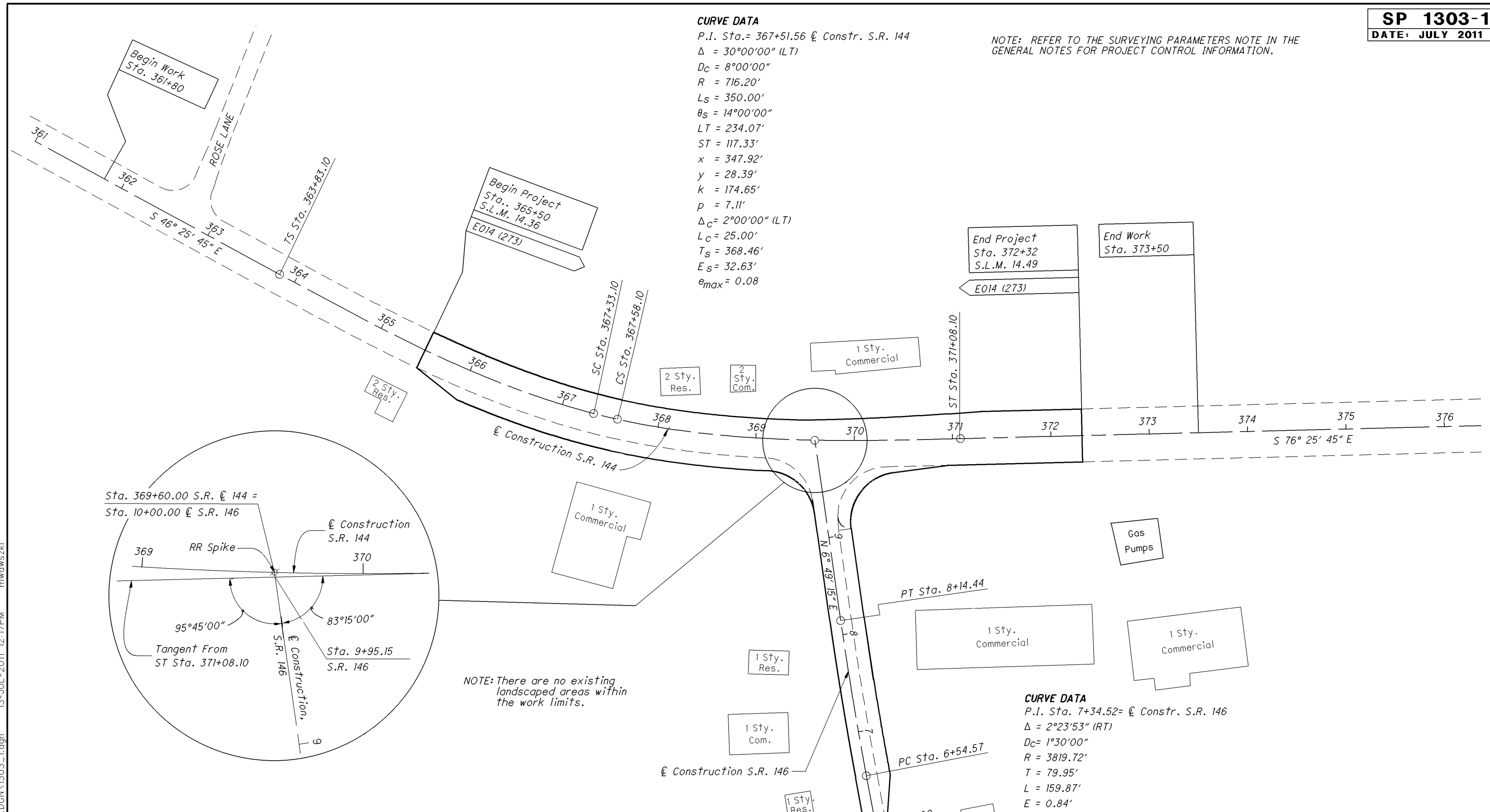
ENGINEERS SEAL:	STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		
SIGNED: <u>John Doe</u> DATE: <u>11-11-14</u>	MT-95.30	07/18/14	MT-105.10	07/19/13	TC-41.20	10/18/13		800-2015	1/15/2015
	MT-95.31	07/18/14			TC-72.20	07/18/14		832	1/17/2014
	MT-95.32	07/18/14							
	MT-95.50	07/19/13							
	MT-98.10	07/18/14						<b>SPECIAL PROVISIONS</b>	
	MT-98.11	07/18/14						<b>NONE</b>	
	MT-98.20	07/18/14							
	MT-98.22	07/18/14							
	MT-98.28	07/18/14							
	MT-99.20	07/19/13							



**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.

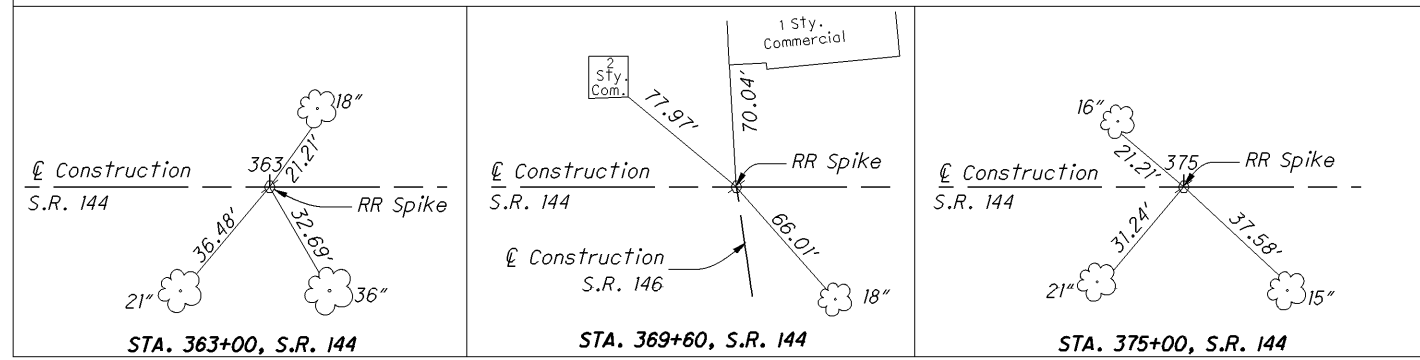


NOTE: There are no existing landscaped areas within the work limits.

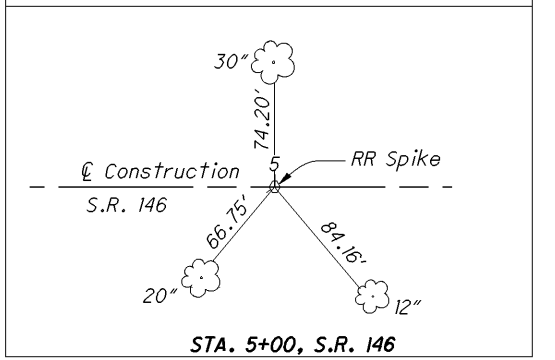
**CURVE DATA**

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)**



I:\pr\35\tds\SamplePlans\2011\July\1303\1303\_1.dgn 13-JUL-2011 12:17PM mwawski



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  
Δ= 3° 33' 00" (LT.)  
Dc= 1° 00' 00"  
R = 5,729.58'  
T = 177.56'  
L = 355.00'  
E = 2.75'  
e<sub>max</sub>= NC

**CURVE DATA**  
P.I. STA. = 702+00.00 @ CONSTR. S.R. 43  
Δ= 0° 35' 20" (LT.)  
NO CURVE

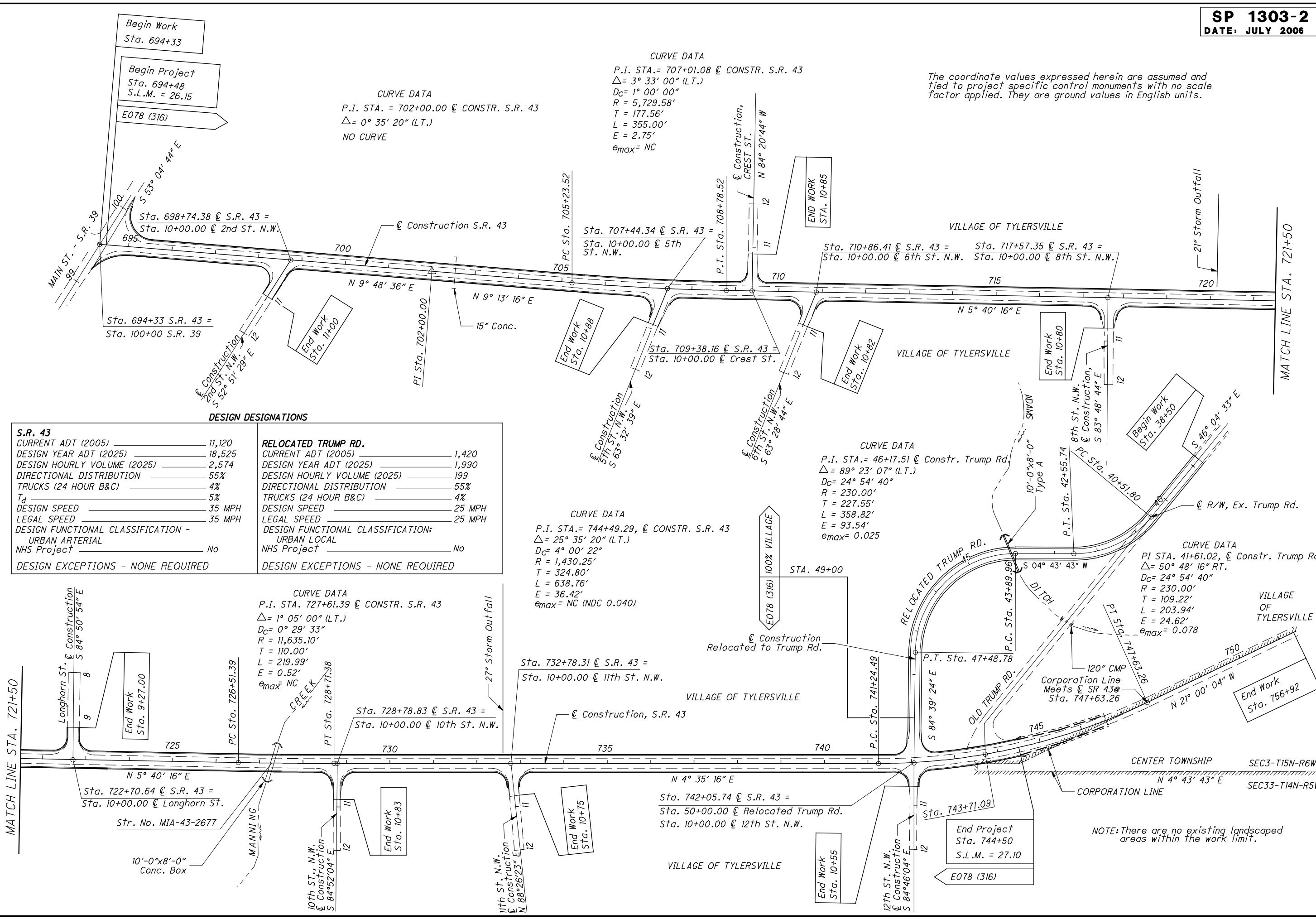
**CURVE DATA**  
P.I. STA.= 46+17.51 @ Constr. Trump Rd.  
Δ= 89° 23' 07" (LT.)  
Dc= 24° 54' 40"  
R = 230.00'  
T = 227.55'  
L = 358.82'  
E = 93.54'  
e<sub>max</sub>= 0.025

**CURVE DATA**  
P.I. STA.= 744+49.29, @ CONSTR. S.R. 43  
Δ= 25° 35' 20" (LT.)  
Dc= 4° 00' 22"  
R = 1,430.25'  
T = 324.80'  
L = 638.76'  
E = 36.42'  
e<sub>max</sub>= NC (NDC 0.040)

**CURVE DATA**  
P.I. STA. 727+61.39 @ CONSTR. S.R. 43  
Δ= 1° 05' 00" (LT.)  
Dc= 0° 29' 33"  
R = 11,635.10'  
T = 110.00'  
L = 219.99'  
E = 0.52'  
e<sub>max</sub>= NC

**CURVE DATA**  
PI STA. 41+61.02, @ Constr. Trump Rd.  
Δ= 50° 48' 16" RT.  
Dc= 24° 54' 40"  
R = 230.00'  
T = 109.22'  
L = 203.94'  
E = 24.62'  
e<sub>max</sub>= 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 <sub>d</sub> _____ 5%	DESIGN SPEED _____ 25 MPH
DESIGN SPEED _____ 35 MPH	LEGAL SPEED _____ 25 MPH
LEGAL SPEED _____ 35 MPH	DESIGN FUNCTIONAL CLASSIFICATION: URBAN LOCAL
DESIGN FUNCTIONAL CLASSIFICATION - 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.

I:\pr\1303\1303\_2s.dgn 22-JUN-2006 12:43PM eblockso





**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)  
 $L_c = 1,168.62'$   
 $T_s = 901.15'$   
 $E_s = 98.11'$   
 $\theta_{max} = 0.045$

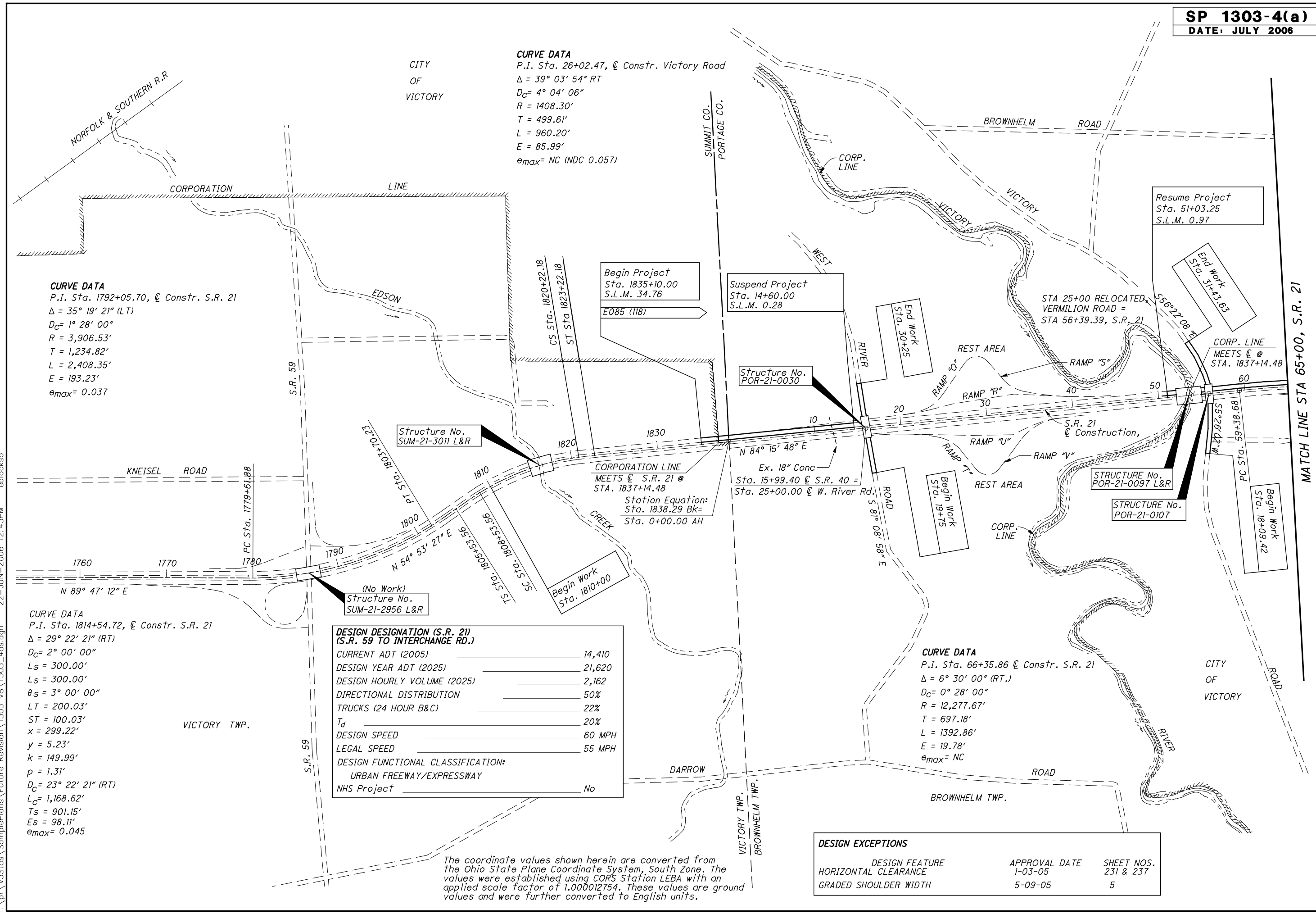
**DESIGN DESIGNATION (S.R. 21) (S.R. 59 TO INTERCHANGE RD.)**

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



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**SCHEMATIC PLAN & DESIGN DESIGNATION**

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

CITY OF VICTORY

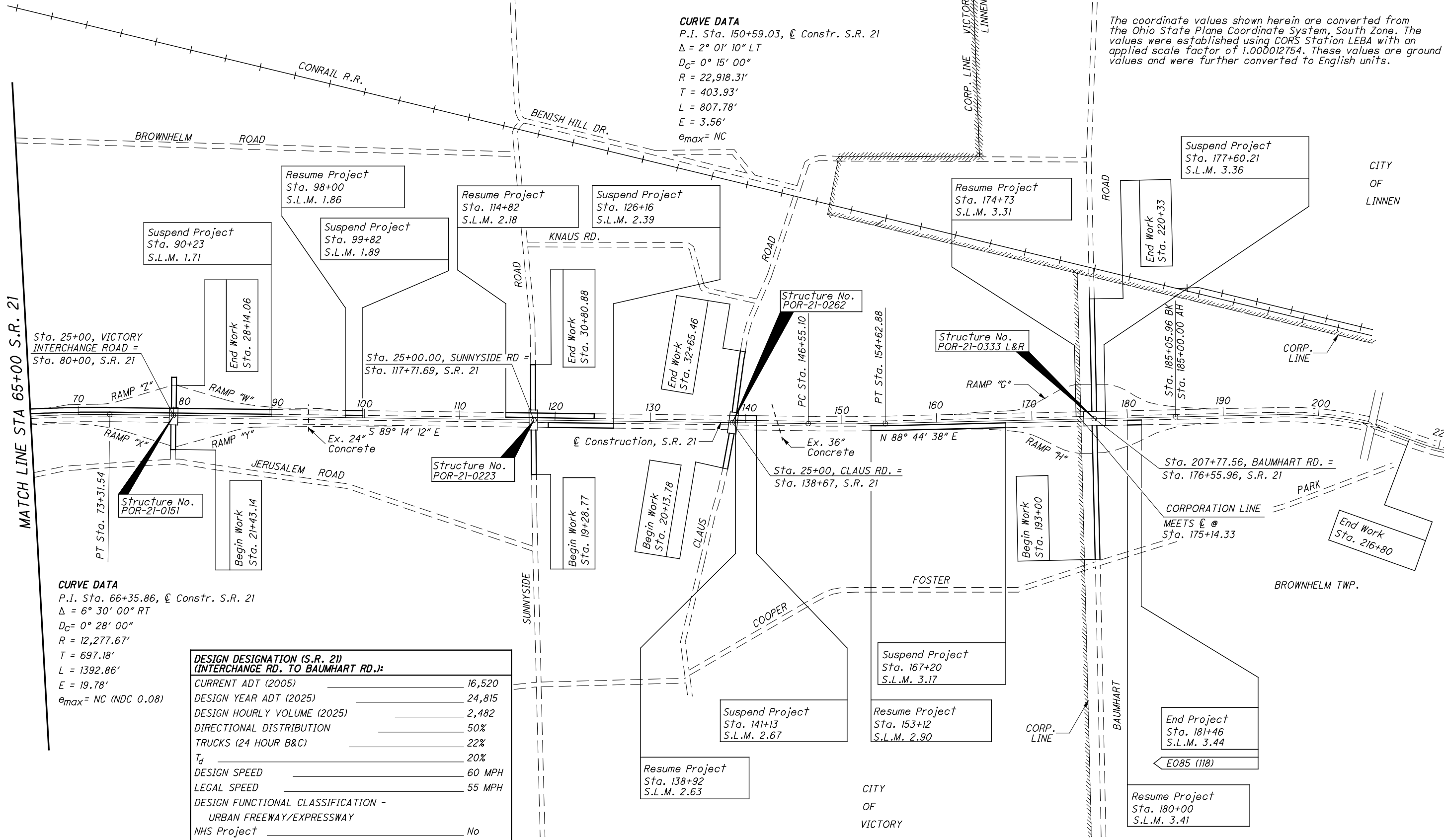
CITY OF LINNEN

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.



**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

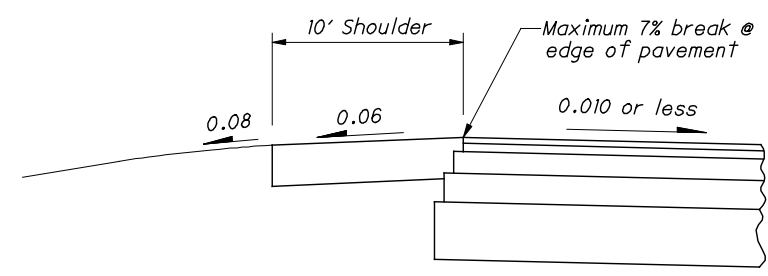
**DESIGN EXCEPTIONS:**

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

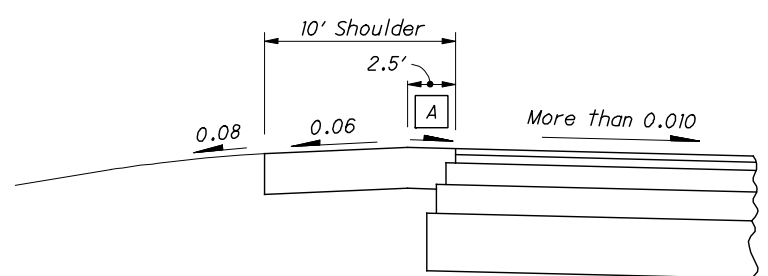
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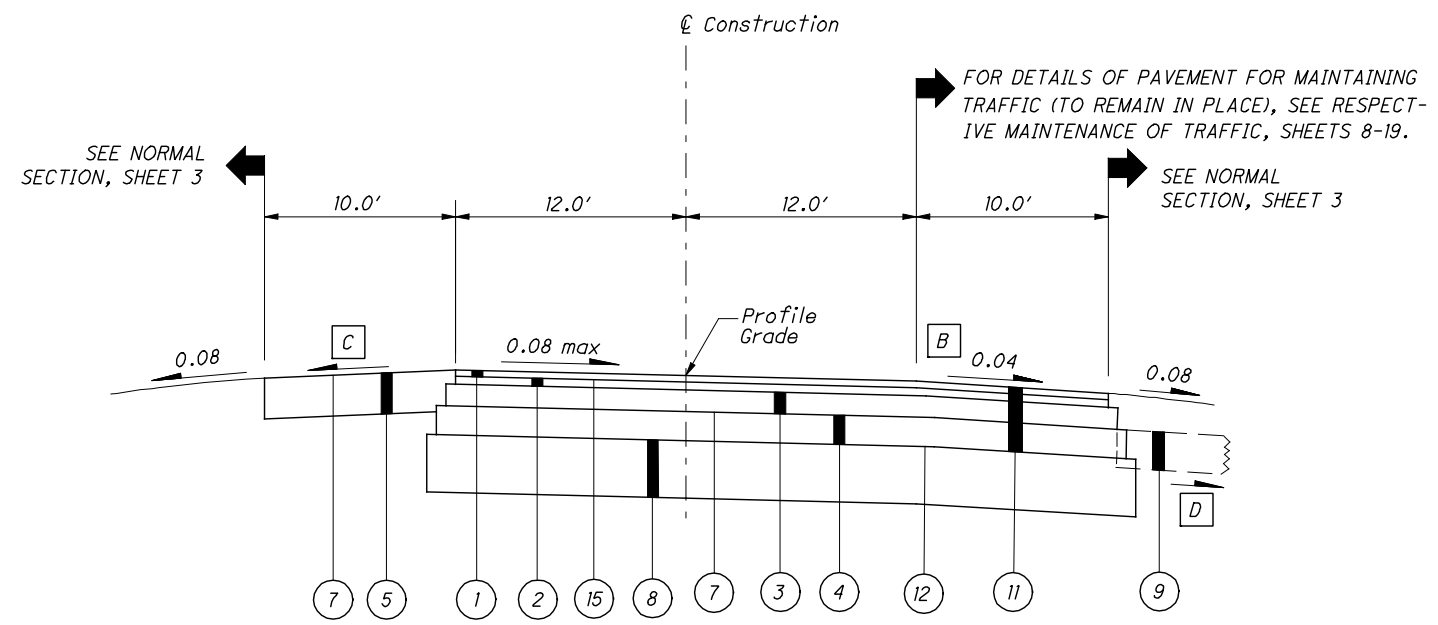


**SHOULDER DETAIL**  
For pavement slopes of 0.010 or less

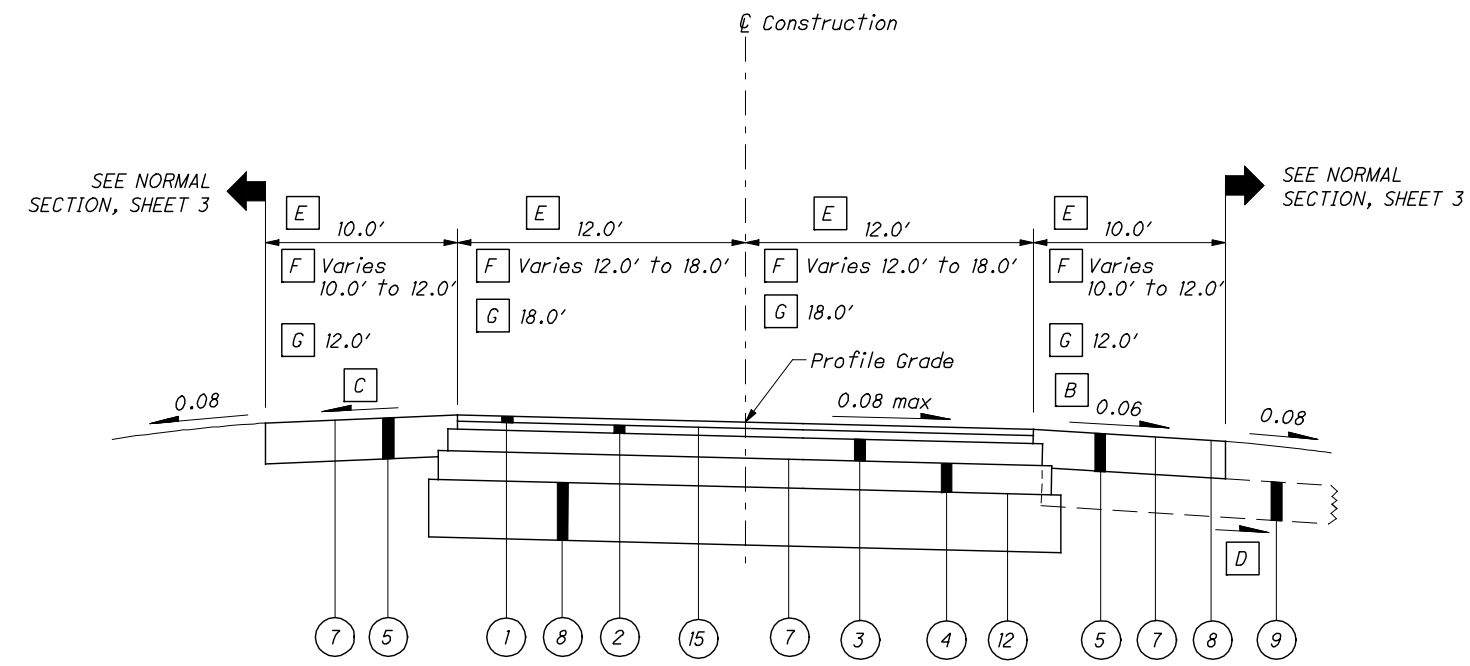


**SHOULDER DETAIL**  
For pavement slopes of more than 0.010

- 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



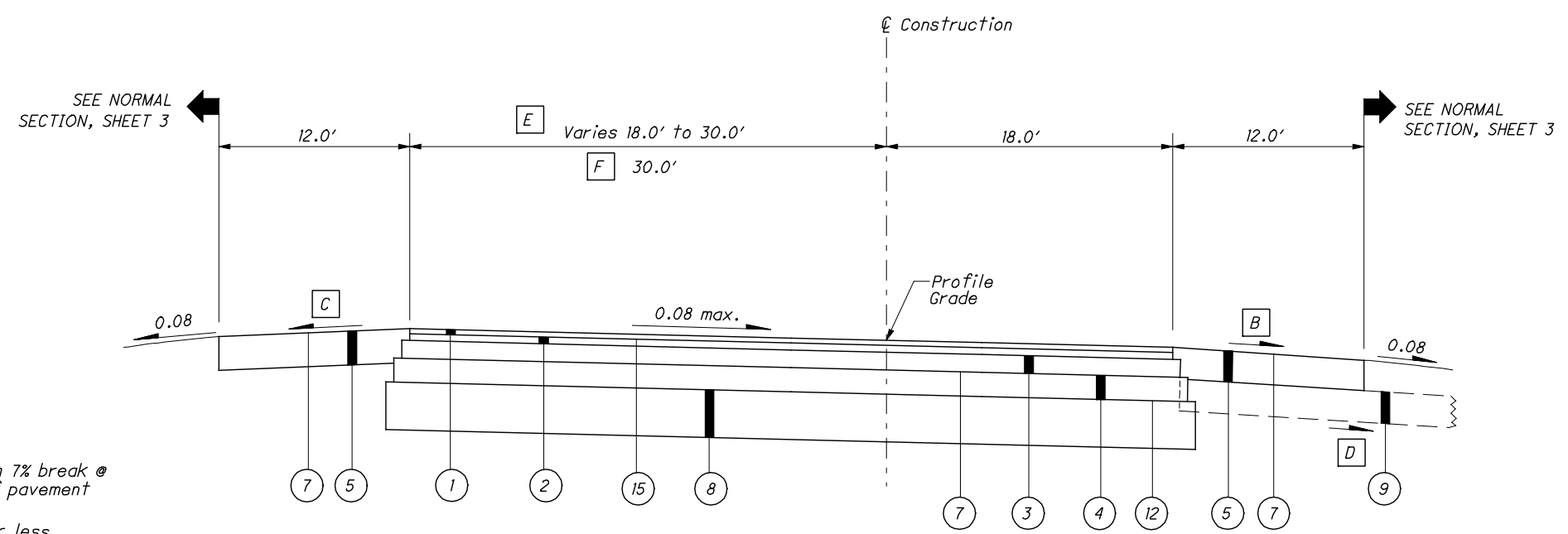
**SUPERELEVATED SECTION - U.S. 46**  
Sta. 642+81.37 to Sta. 649+00.00



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

- 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

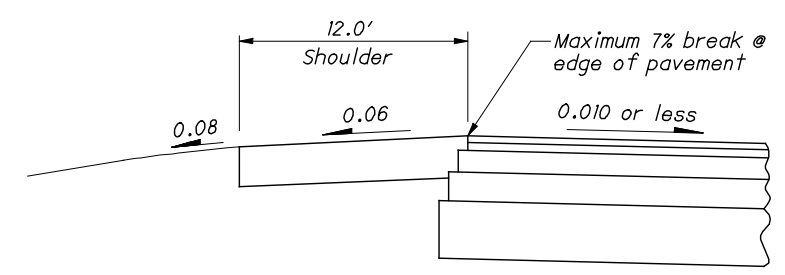
STA. 656+57.63 TO STA. 658+77.85,  
SEE INTERSECTION DETAIL, SHEET 39.  
FOR PAVEMENT LEGEND SEE SHEET 3.  
FOR BASE AND SUBBASE STEP DETAIL,  
SEE SHEET 3.



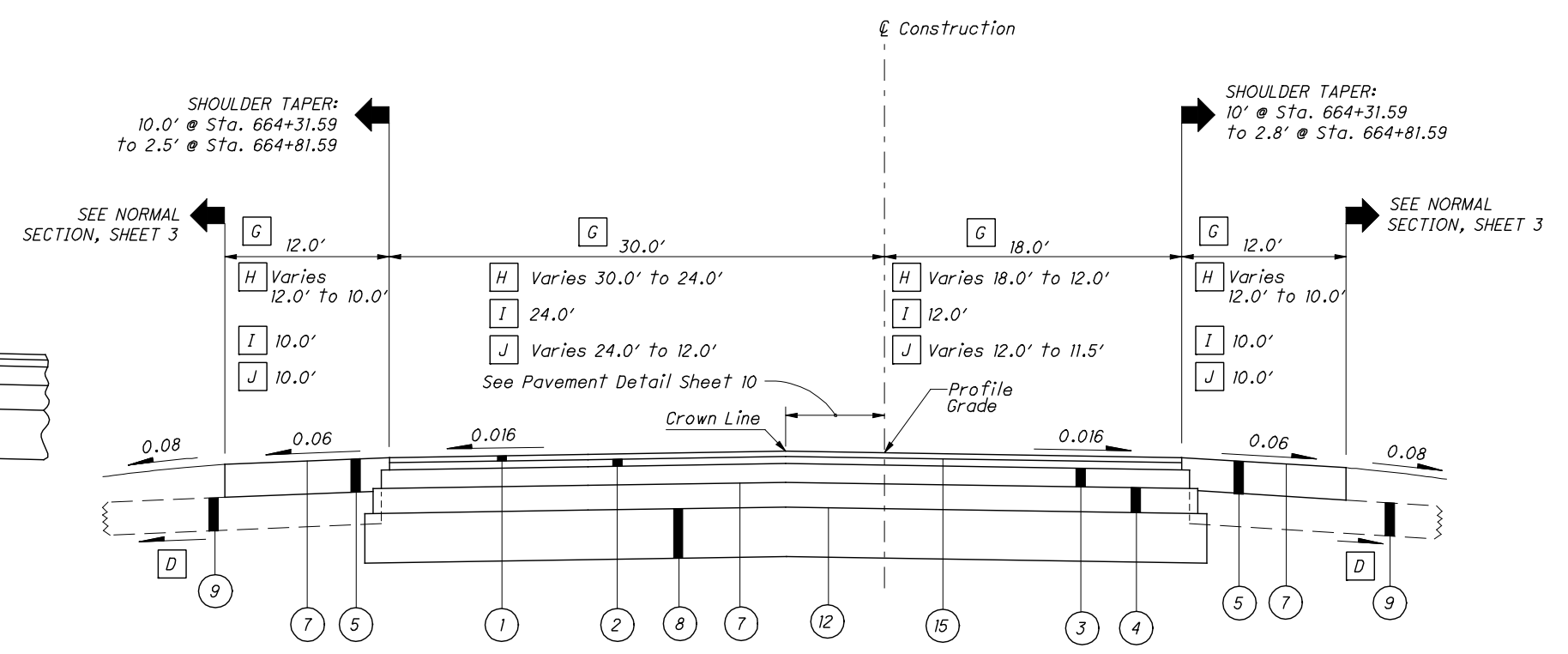
**SUPERELEVATED SECTION - U.S. 46**

[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**

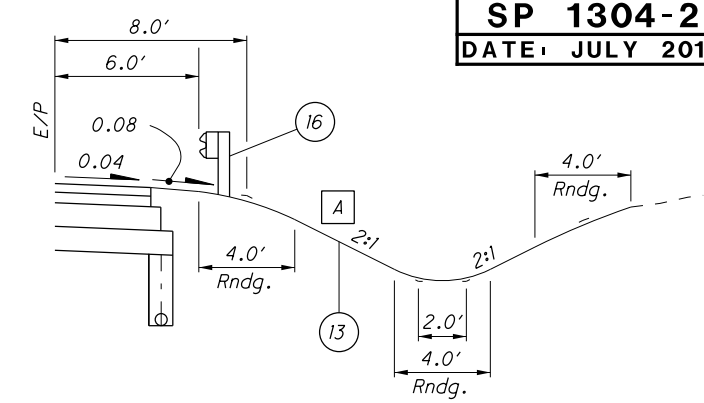
- [G] Sta. 660+20.37 to Sta. 660+51.59
- [H] Sta. 660+51.59 to Sta. 663+81.59
- [I] Sta. 663+81.59 to Sta. 664+31.59
- [J] Sta. 664+31.59 to Sta. 664+81.59

- [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

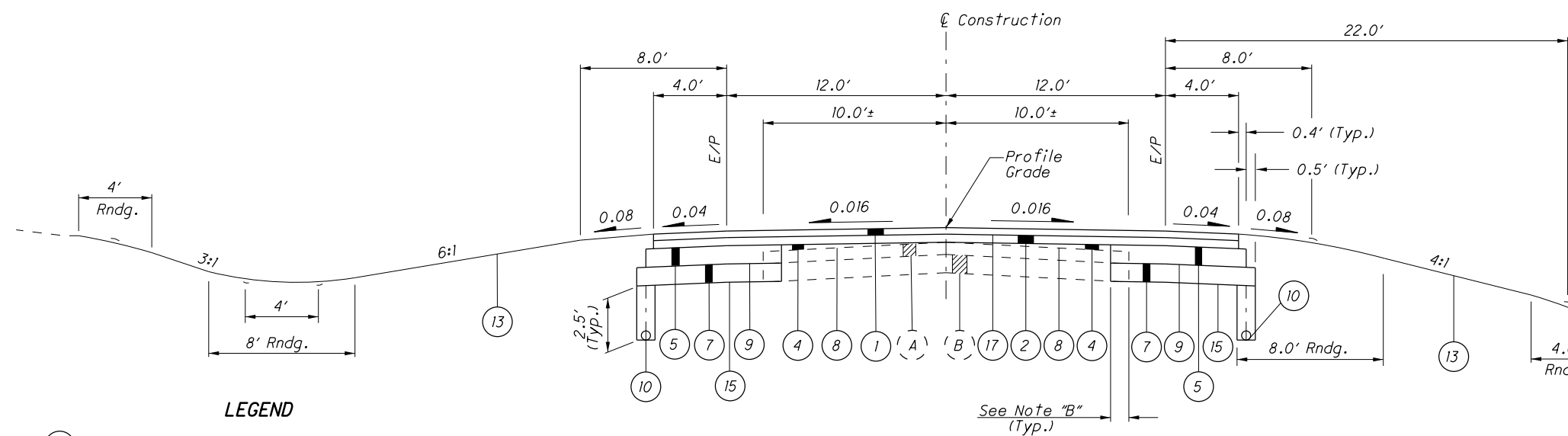
FOR PAVEMENT LEGEND SEE SHEET 3.

FOR BASE AND SUBBASE STEP DETAIL SEE SHEET 3.

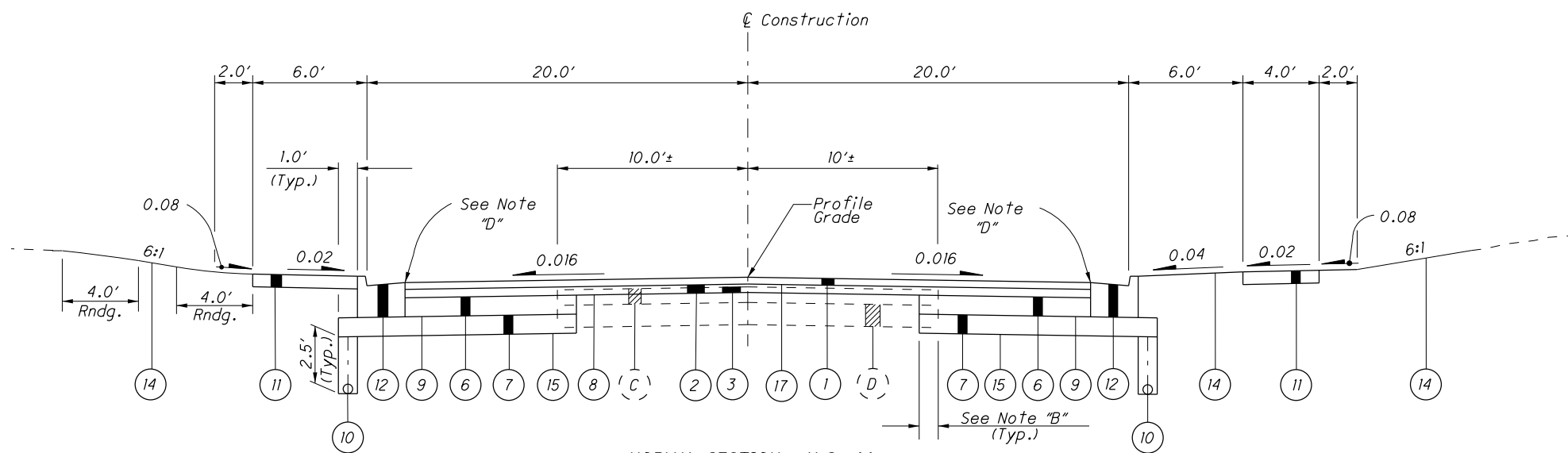




**GUARDRAIL DETAIL - S.R. 106**  
SECTION APPLIES :  
Sta. 635+50 to Sta. 637+75 Rt.  
A Unless otherwise shown on the cross sections



**NORMAL SECTION - S.R. 106**  
Sta. 621+35 to Sta. 640+50



**NORMAL SECTION - U.S. 44**  
Sta. 300+00 to Sta. 318+50

**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 (0.075 gal./sq. yd.)
- 9 ITEM 408 - Prime Coat (Applied at the Rate of 0.4 gal/sq. yd.)
- 10 ITEM 605 - 6" Shallow Pipe Underdrains
- 11 ITEM 608 - 4" Concrete Walk
- 12 ITEM 609 - Combination Curb and Gutter, Type 2
- 13 ITEM 659 - Seeding and Mulching
- 14 ITEM 660 - Sodding Unstaked
- 15 ITEM 204 - Subgrade Compaction
- 16 ITEM 606 - Guardrail, Type 5
- 17 ITEM 407 - Tack Coat for Intermediate Course (Applied at a Rate of 0.075 gal./sq. yd.)
- (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".

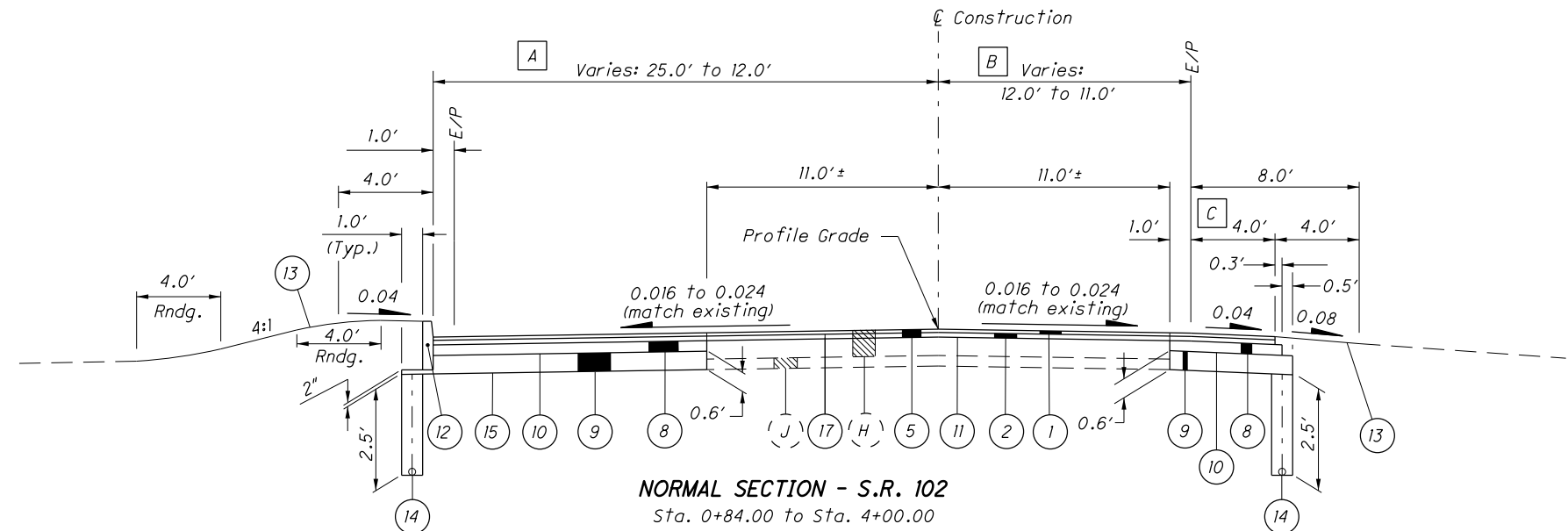
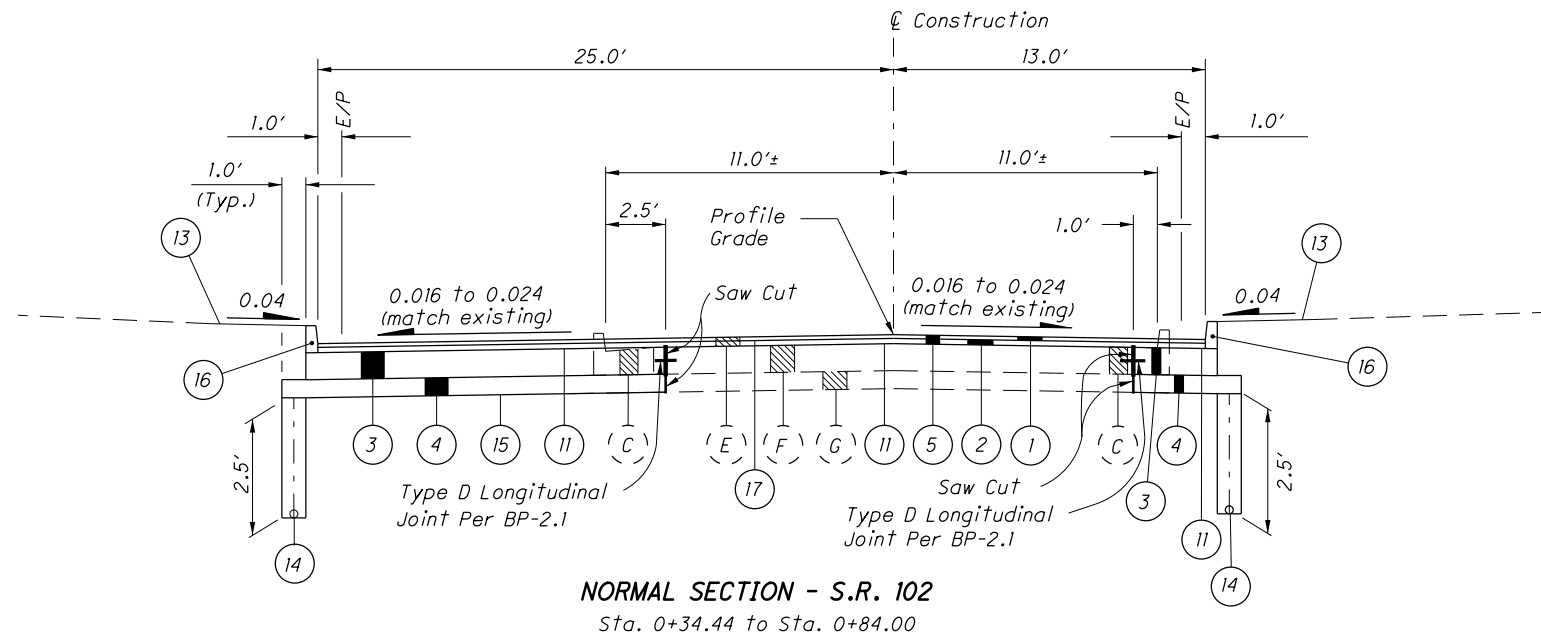
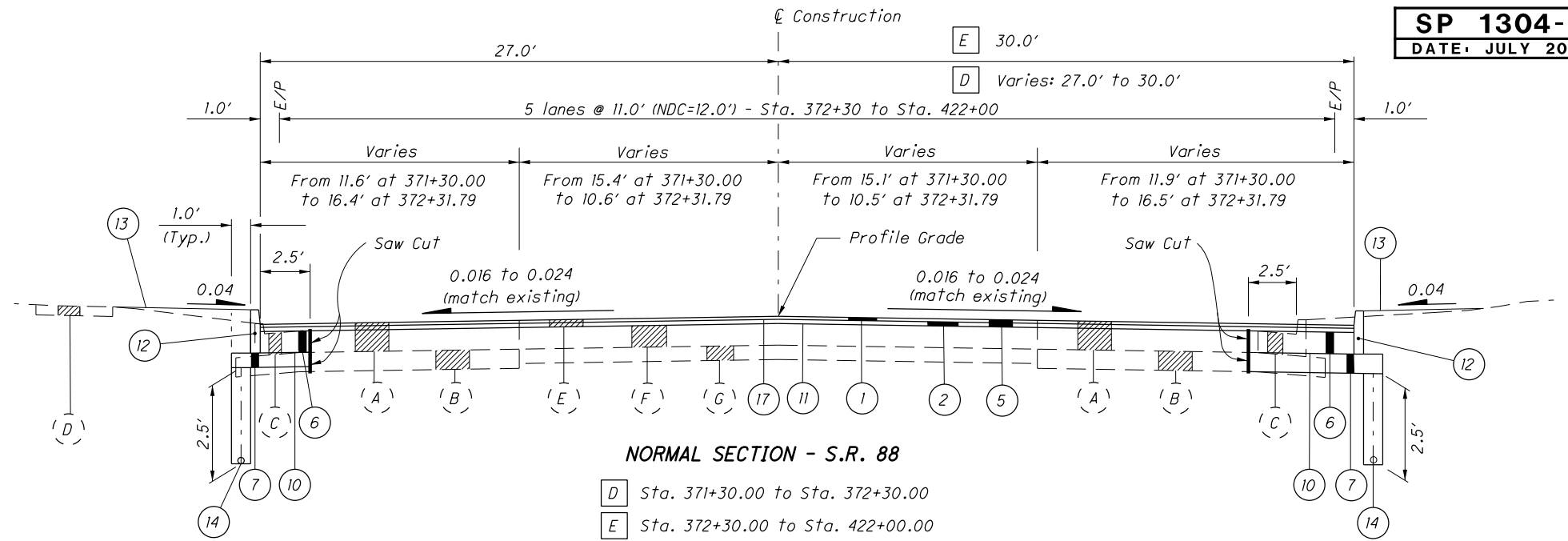
**NOTE "B"**  
The existing pavement edges shall be saw cut to locate a sound pavement edge per sec. 203.04(f) of the CMS. For estimating purposes, pavement calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

**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.

**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 (0.075 Gal./Sq. Yd.)
- 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
- ⑰ ITEM 407 - Tack Coat for Intermediate Course (Applied at a Rate of 0.075 Gal./Sq. Yd.)
- (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 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

ITEM 408 - PRIME COAT @ 0.4 GAL./SQ. YD.

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:

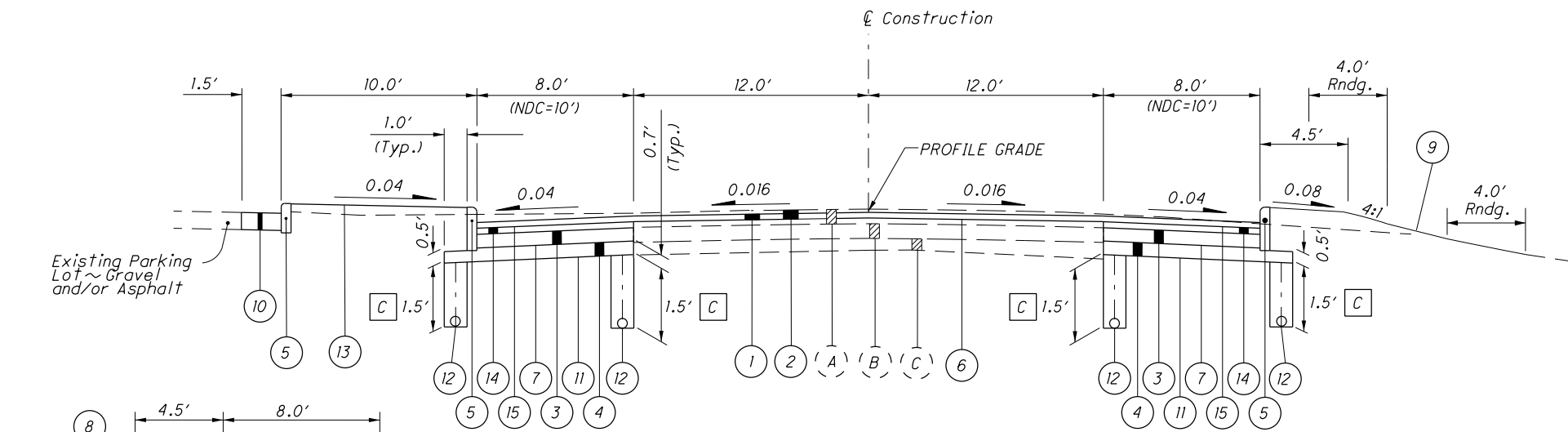
STA. 88+75 TO STA. 91+25 AND

STA. 95+25 TO STA. 96+27.25

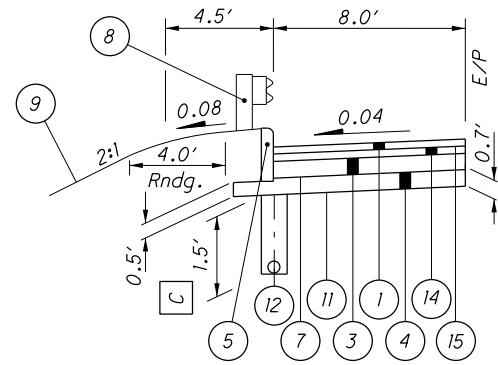
**(D)** CURB & GUTTER (TO BE REMOVED)

**(E)** ROADWAY DRAINAGE, 12" (TO BE REMOVED)

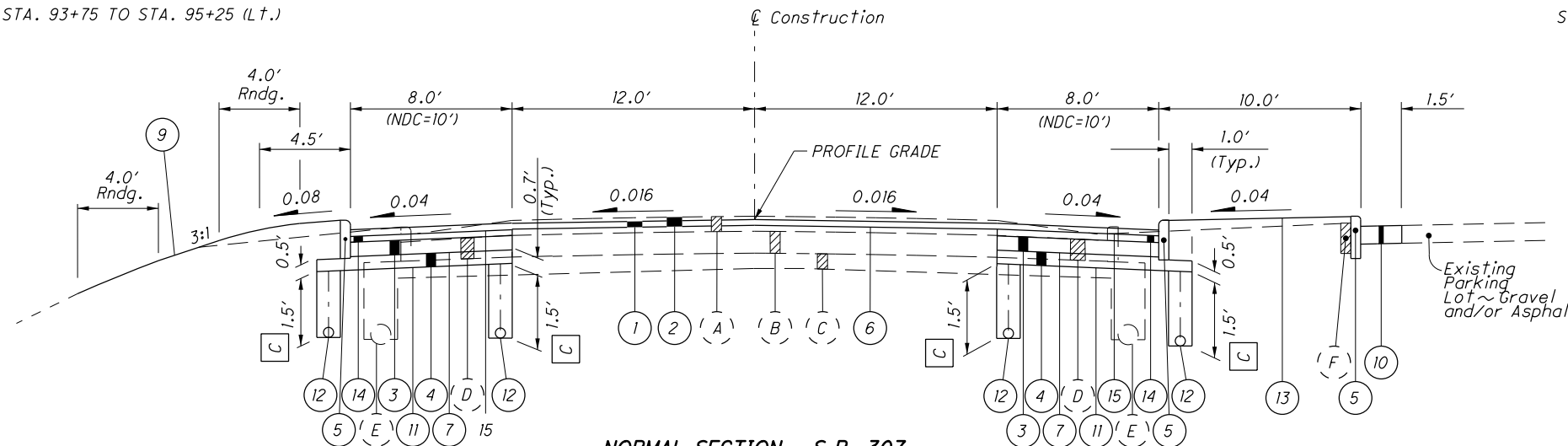
**(F)** CURB (TO BE REMOVED)



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



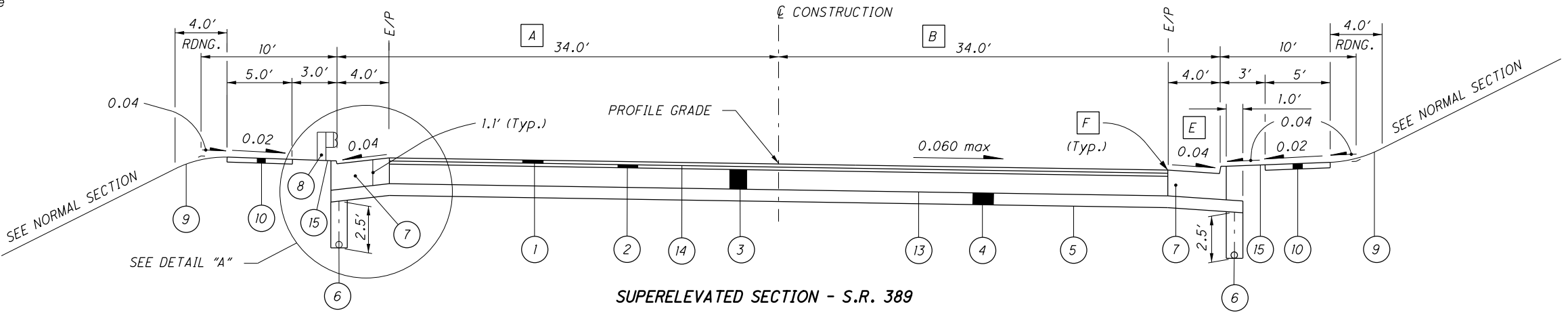
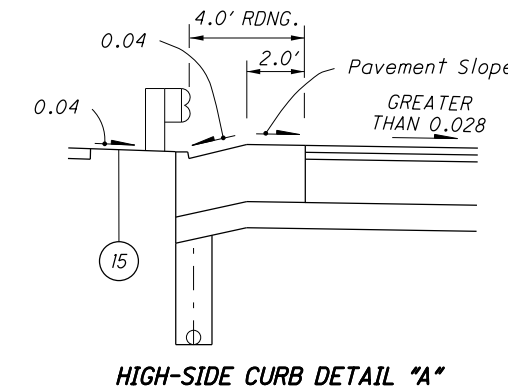
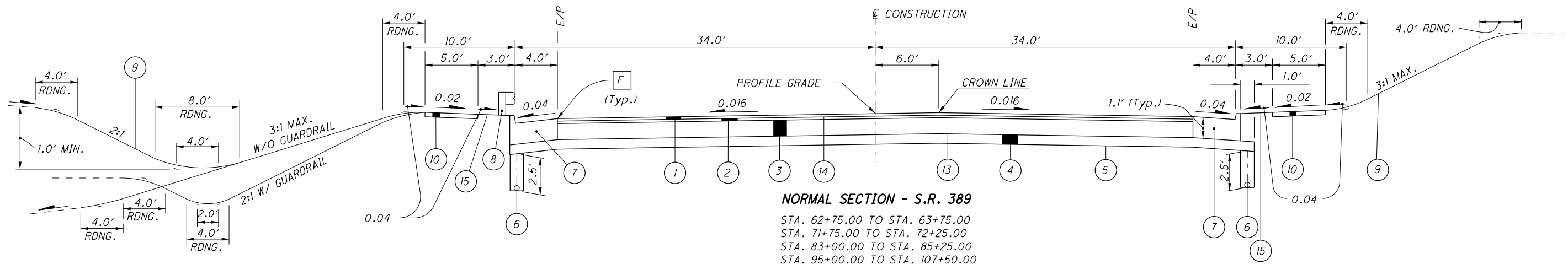
GUARDRAIL SECTION  
STA. 93+75 TO STA. 95+25 (L.T.)



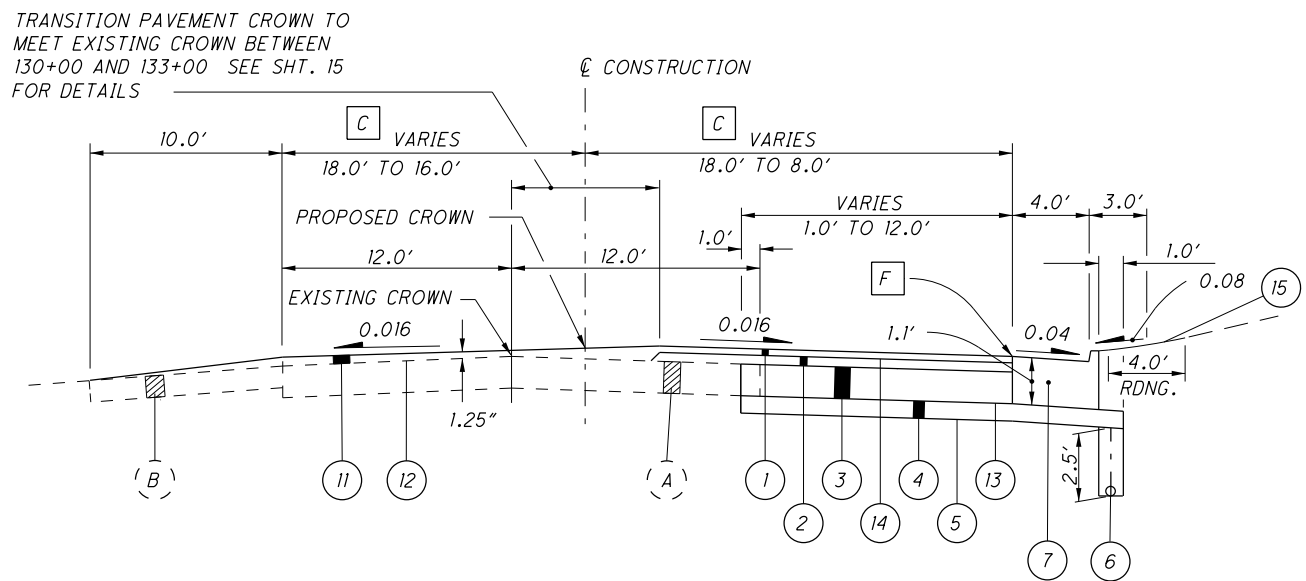
NORMAL SECTION - S.R. 307  
STA. 90+15.00 TO STA. 96+45.00

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 (0.075 GAL./SQ. YD.)
- 7 ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.)
- 8 ITEM 606 - GUARDRAIL, TYPE 5
- 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 - 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- 15 ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED AT A RATE OF 0.075 GAL./SQ. YD.)
- (A) 6" ASPHALT SURFACE
- (B) 9" REINFORCED CONCRETE BASE
- (C) 6" MIN. CLASSIFIED EMBANKMENT BLANKET COURSE



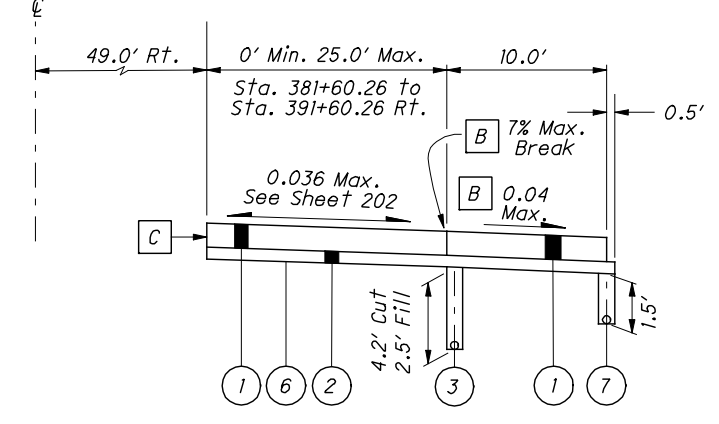
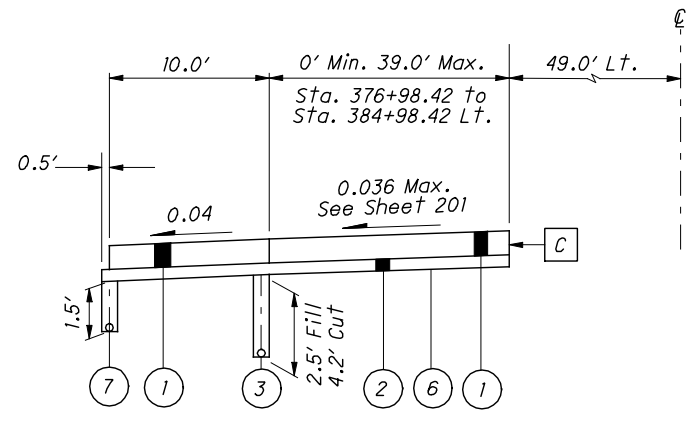
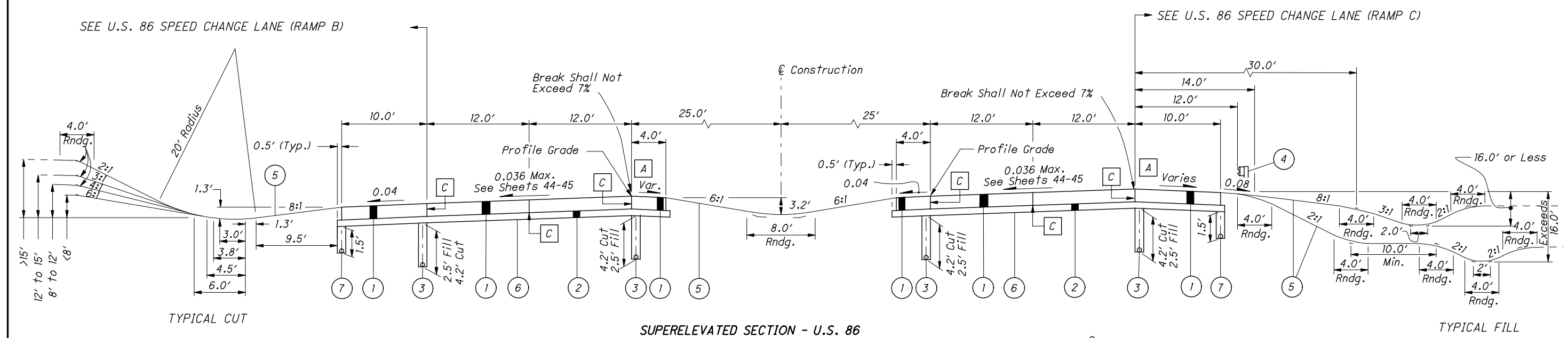
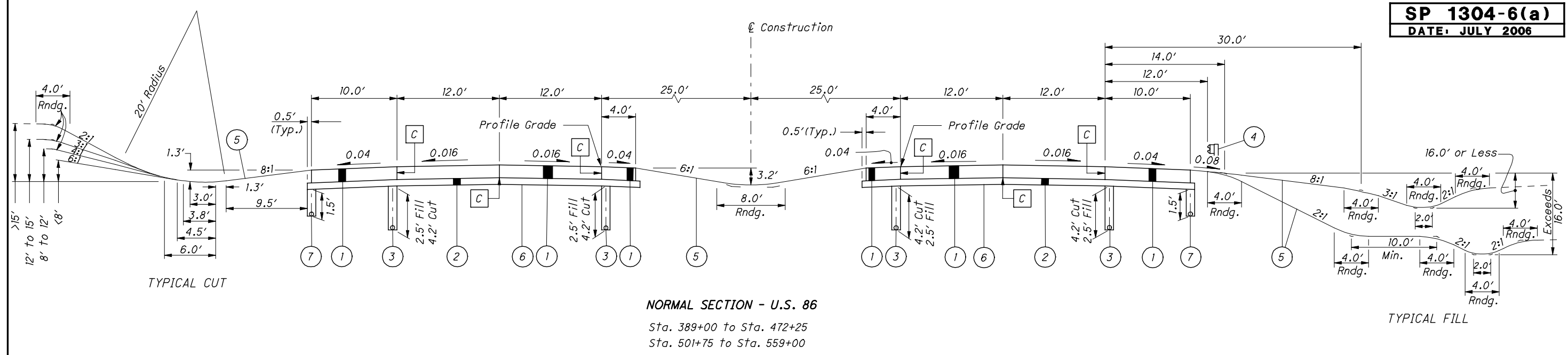
- LEGEND**
- ① ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
  - ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
  - ③ ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
  - ④ ITEM 304 - 6" AGGREGATE BASE
  - ⑤ ITEM 204 - SUBGRADE COMPACTION
  - ⑥ ITEM 605 - 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 (0.075 GAL./SQ. YD.)
  - ⑬ ITEM 408 - PRIME COAT (APPLIED AT THE RATE OF 0.4 GAL./SQ. YD.)
  - ⑭ ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (APPLIED AT A RATE OF 0.075 GAL./SQ. YD.)
  - 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.

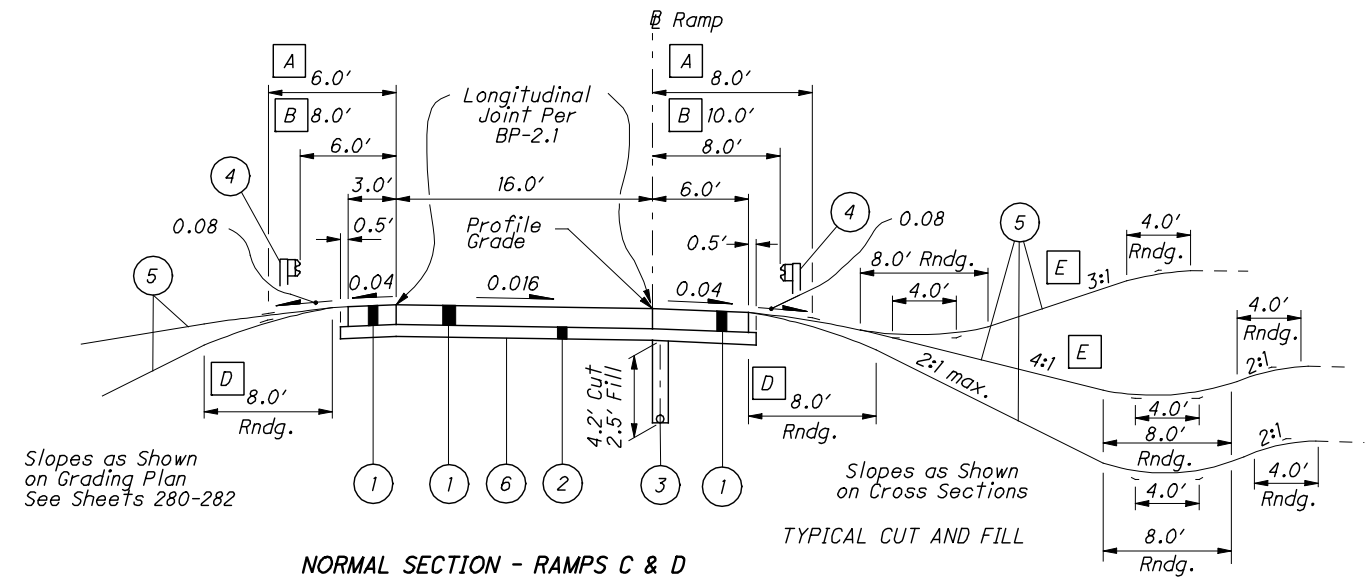




- A** 0.04 Max. to 0.034 Min.
- B** Slope conditions shown for high side shoulder adjacent to speed change lane pavement; For low side of shoulders adjacent to speed change lane pavement, shoulder slope shall be 0.04.
- C** Longitudinal Joint Per BP-2.1

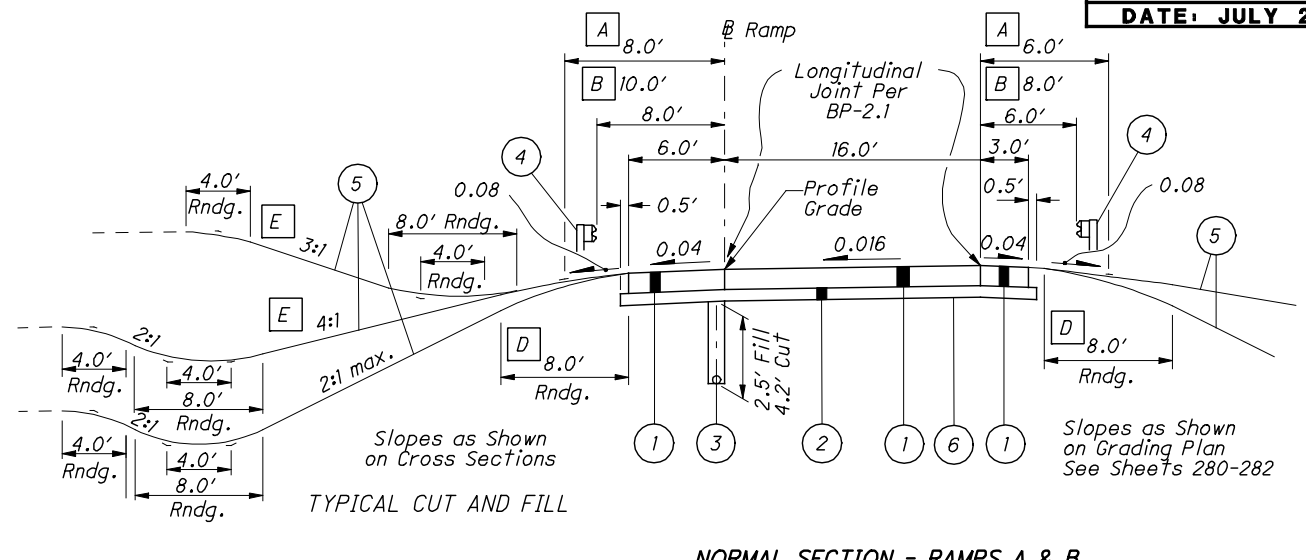
**LEGEND**

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



**NORMAL SECTION - RAMPS C & D**

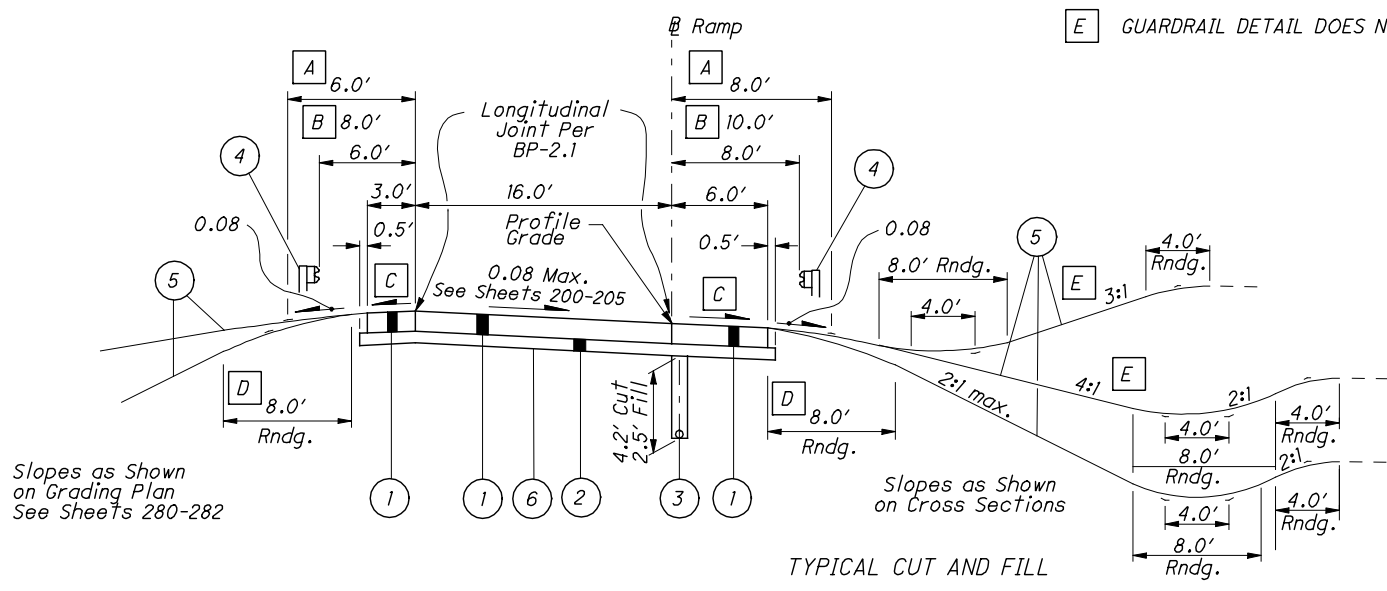
Sta. 465+49.13 to Sta. 477+25 Ramp C  
Sta. 557+00 to Sta. 566+96.94 Ramp D



**NORMAL SECTION - RAMPS A & B**

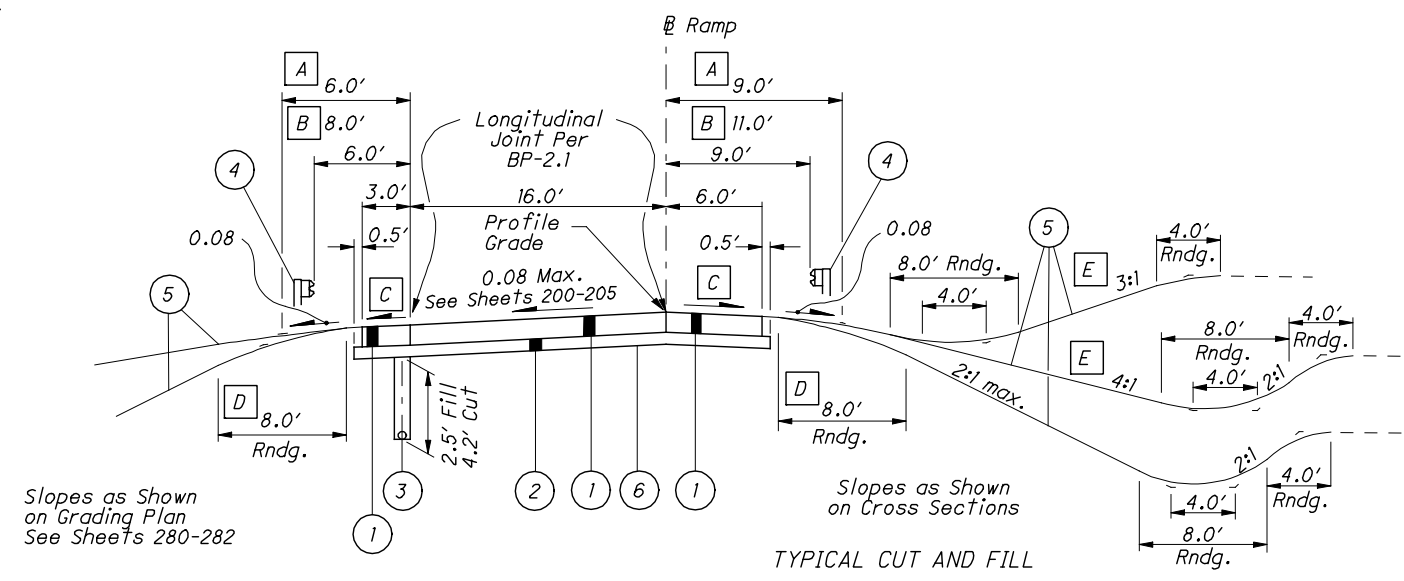
Sta. 160+75 to Sta. 166+65.18 Ramp A  
Sta. 266+17.10 to Sta. 271+50 Ramp B

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



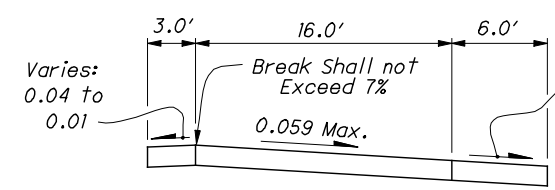
**SUPERELEVATED SECTION (RIGHT) - RAMPS C & D**

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

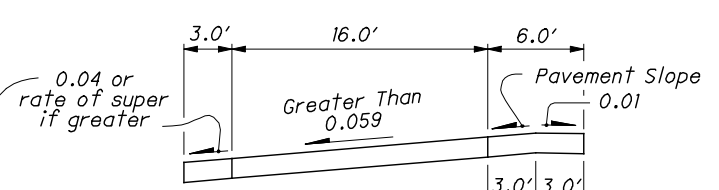


**SUPERELEVATED SECTION (LEFT) - RAMPS E & F**

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



**DETAIL A**

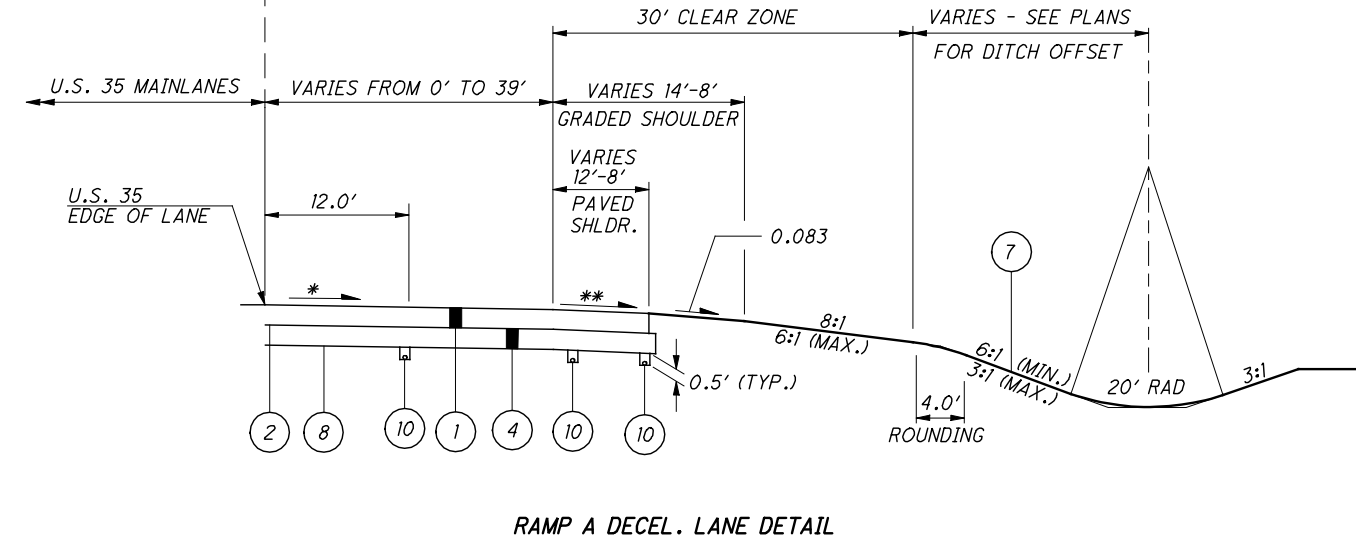
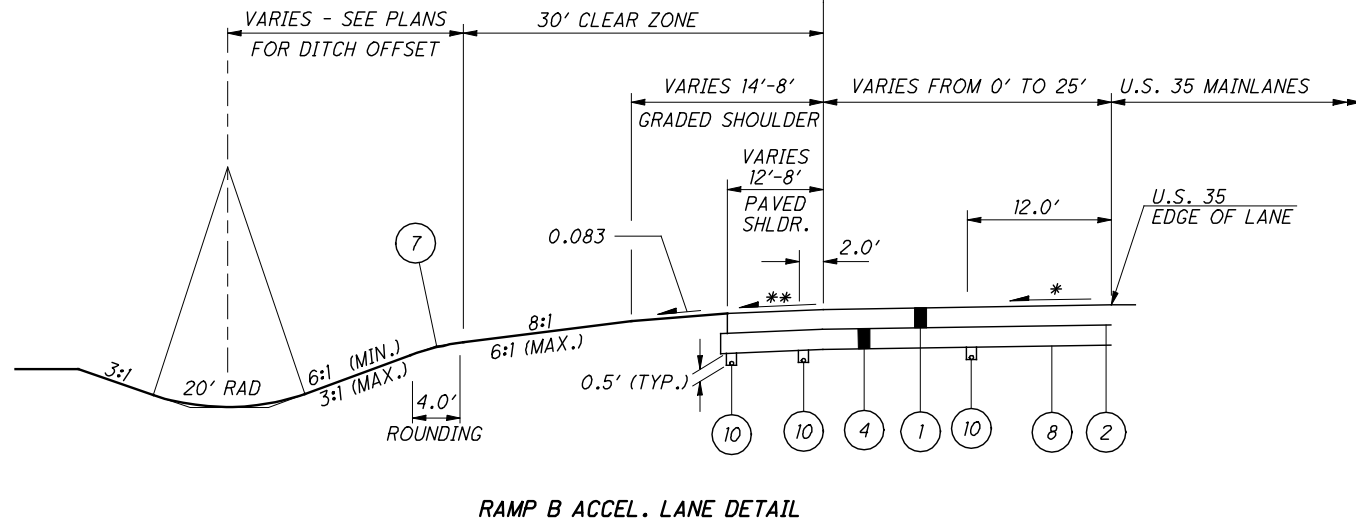
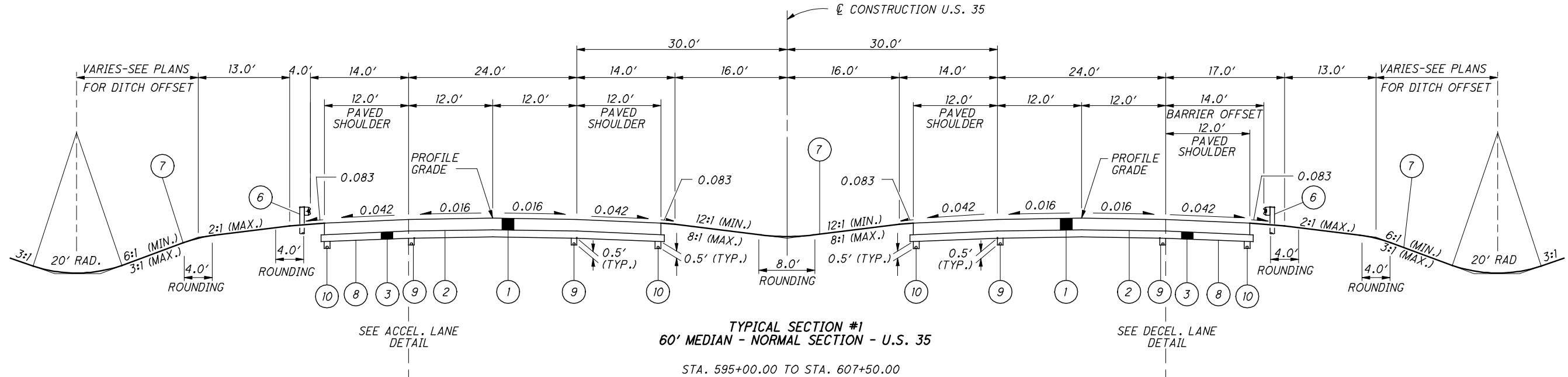


**DETAIL B**

FOR LEGEND, SEE SHEET 9

**LEGEND**

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



\* 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 SUPPLEMENTAL SPECIFICATION 823.

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

**WORK LIMITS**

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

**CLEARING AND GRUBBING**

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

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

**SEEDING AND MULCHING**

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

659, SEEDING AND MULCHING 310 SQ. YD.

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

659, SOIL ANALYSIS TEST 2 EACH

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

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

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

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

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

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

**RESIDENTIAL AND COMMERCIAL DRAINAGE CONNECTIONS**

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

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

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

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

**PROFILE AND ALIGNMENT**

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

PRIMARY PROJECT CONTROL INFORMATION

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

GENERAL NOTES

FRA - 40-13.67

**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 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 PLACE 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 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 GOVERNING 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, REOPEN 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 LANES SHALL BE PERMITTED DURING PEAK HOURS, THAT BEING FROM 6:00 A.M. TO 9:00 A.M. AND FROM 3:00 P.M. TO 6:00 P.M.

**SEQUENCE OF CONSTRUCTION**

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

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

**PHASE ONE**

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

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 PROCEDURE.

**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 SHEET 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 BRIDGE PARAPETS.
2. UNLESS OTHERWISE SHOWN IN THE PLAN

A SAFETY NET OR PLATFORM SHALL BE REQUIRED TO PROTECT 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 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,**

AS PER PLAN "A"  
 THE PAVEMENT BUILDUP SHALL BE 6"-301 ASPHALT CONCRETE BASE, PG64-22 AND 4"-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,**

AS PER PLAN "B"  
 THE PAVEMENT BUILDUP SHALL BE 6"-301 ASPHALT CONCRETE BASE, PG64-22 AND 4"-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 TWELVE INCHES ACCORDING TO THE CONSTRUCTION AND MATERIALS SPECIFICATION 204.13 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 SIDE 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 ERECTED ANYWHERE ALONG RAMPS WHERE THEY ARE VISIBLE TO THE MOTORIST USING THE RAMP EXCEPT THAT ON ENTRANCE RAMPS, THE SIGNS SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTION TO THE MOTORIST.

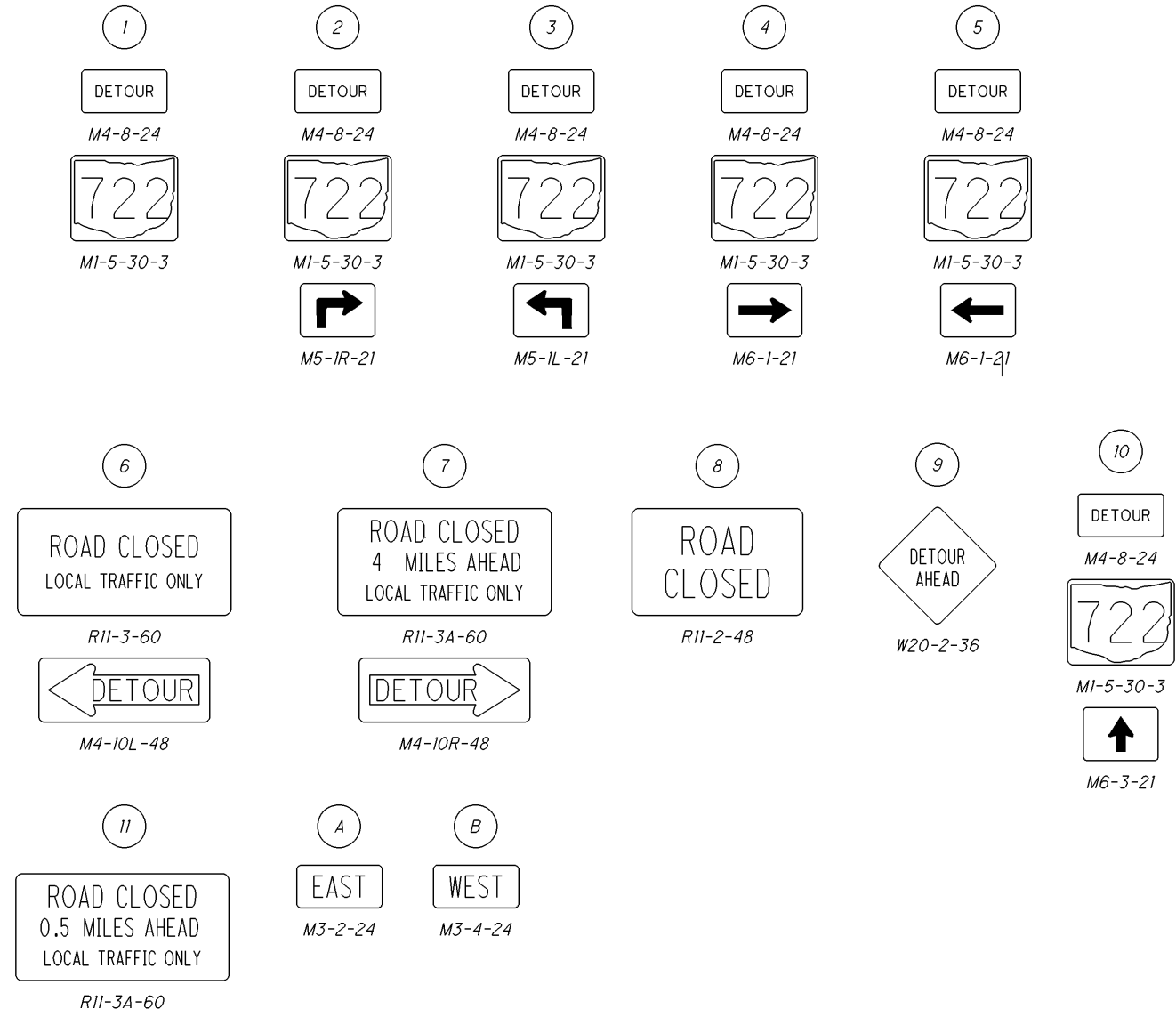
PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC AND SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS INCLUDING SUPPORTS.

WILL BE  
 CLOSED  
 FOR DAYS  
 OHIO DEPT. OF TRANSPORTATION

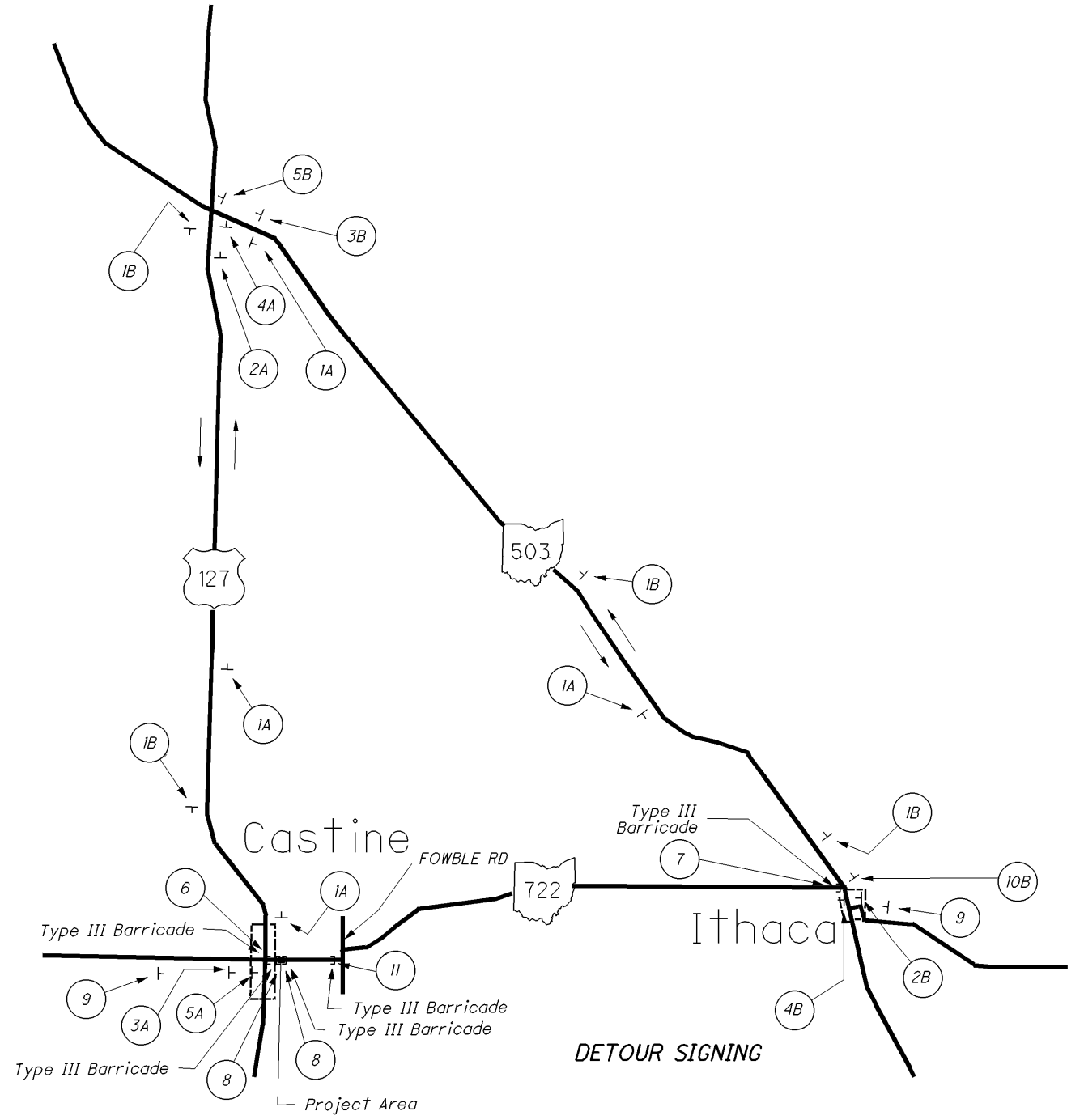
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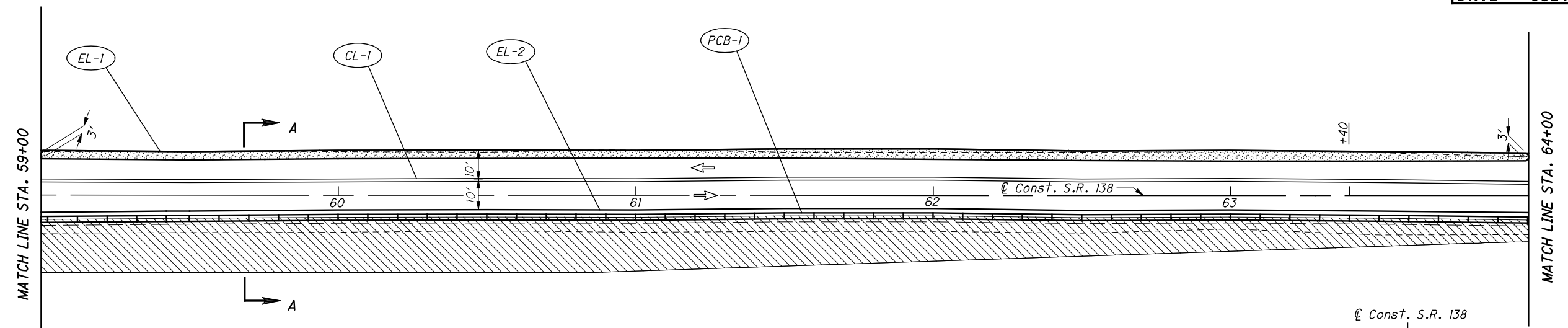


For Maintenance of Traffic Notes, see Sheet 7.

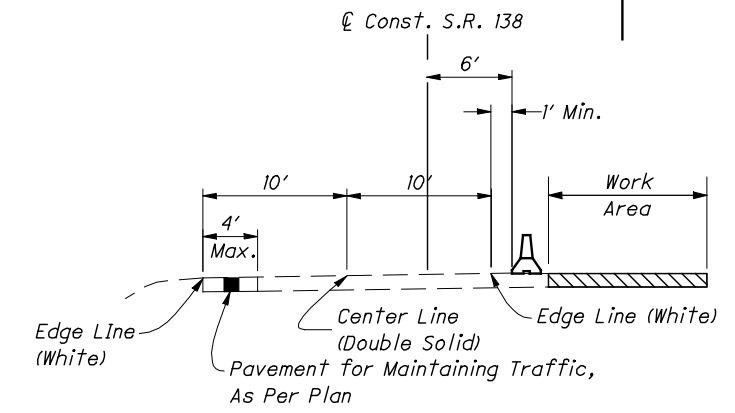


DETOUR SIGNING

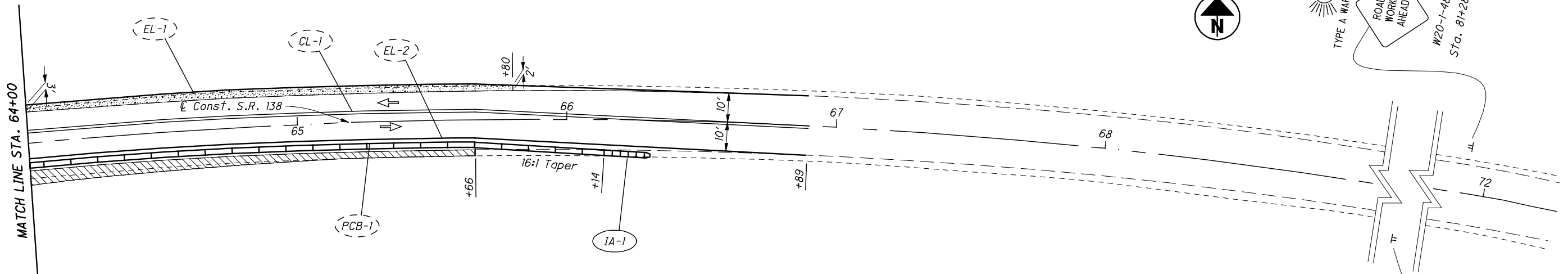




ESTIMATED QUANTITIES								
REF No.	Station to Station	Side	614				622	
			WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE)	PORTABLE CONCRETE BARRIER, 32"
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

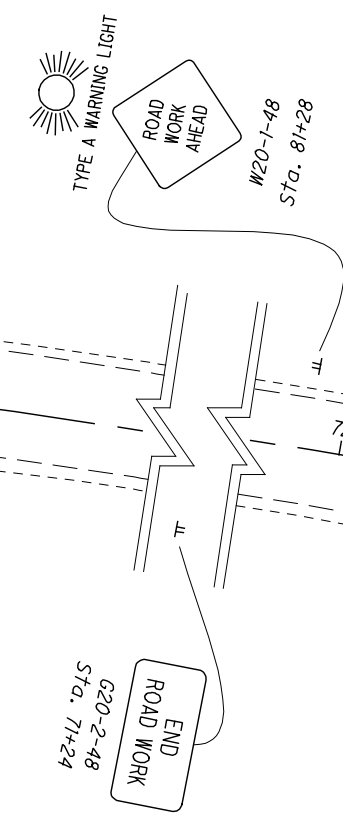


SECTION A-A



LEGEND

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

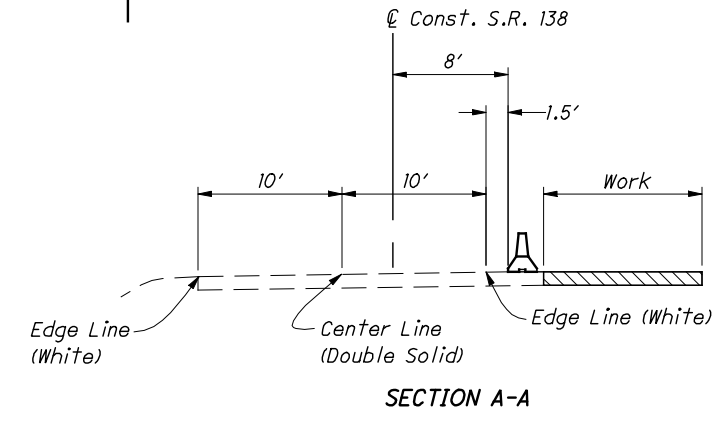
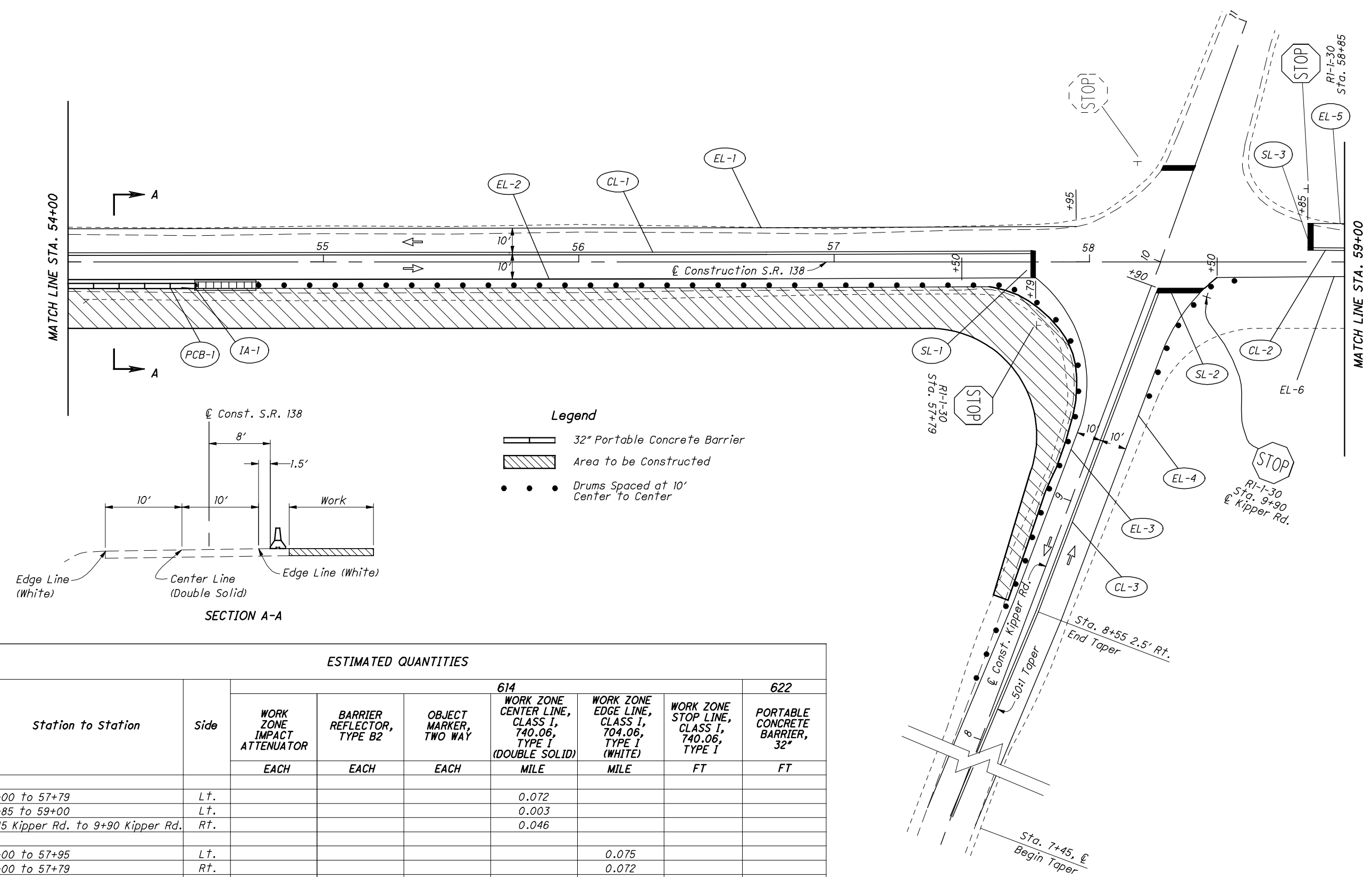




CALCULATED  
DAN  
CHECKED  
DEK

**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>



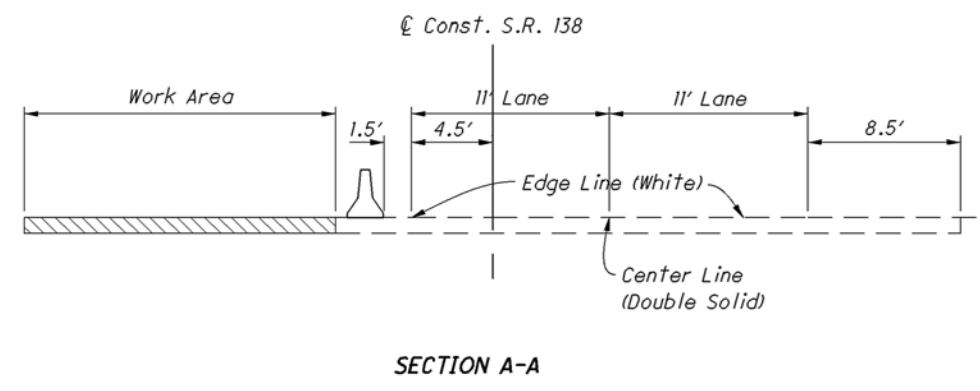
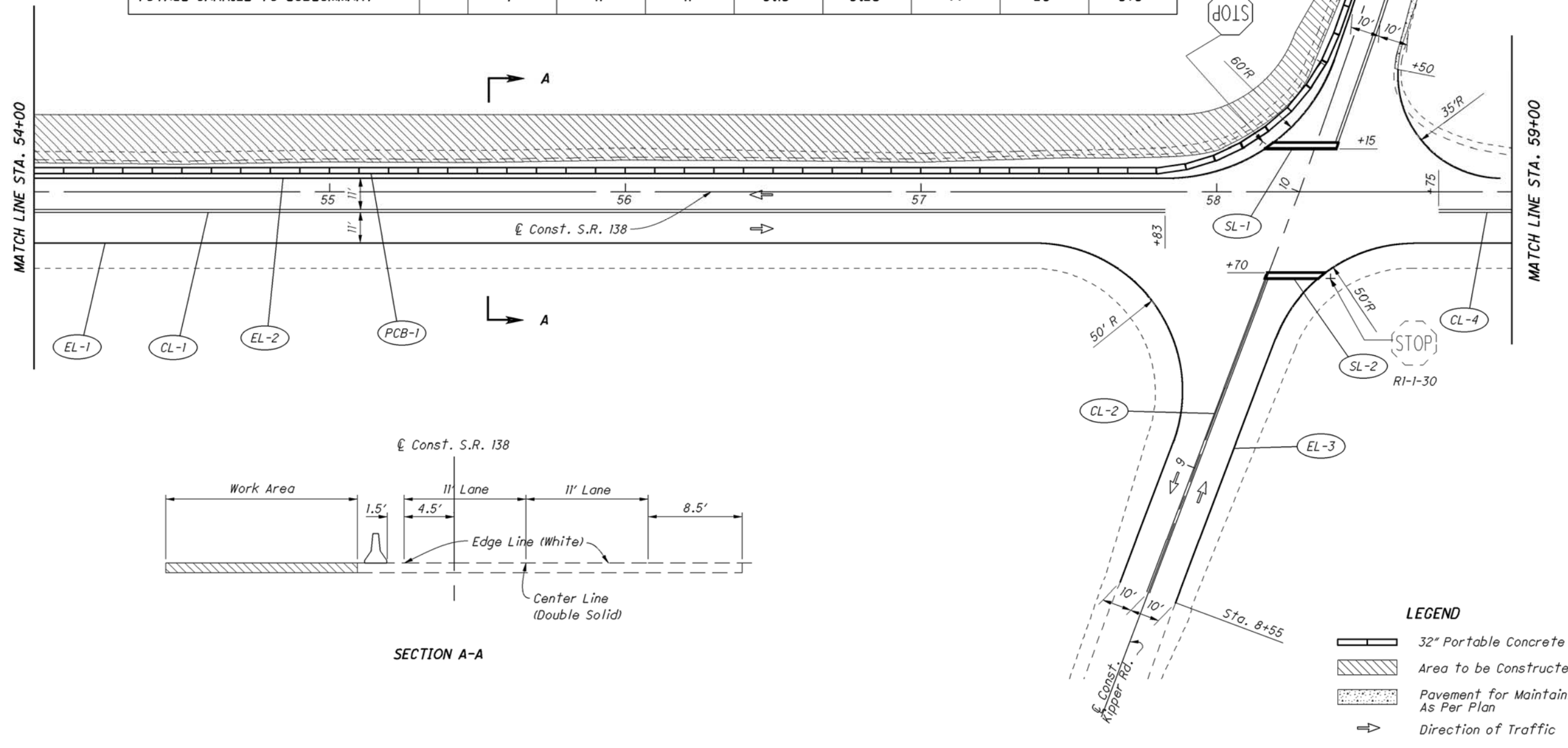
0 10 20 40  
HORIZONTAL SCALE IN FEET

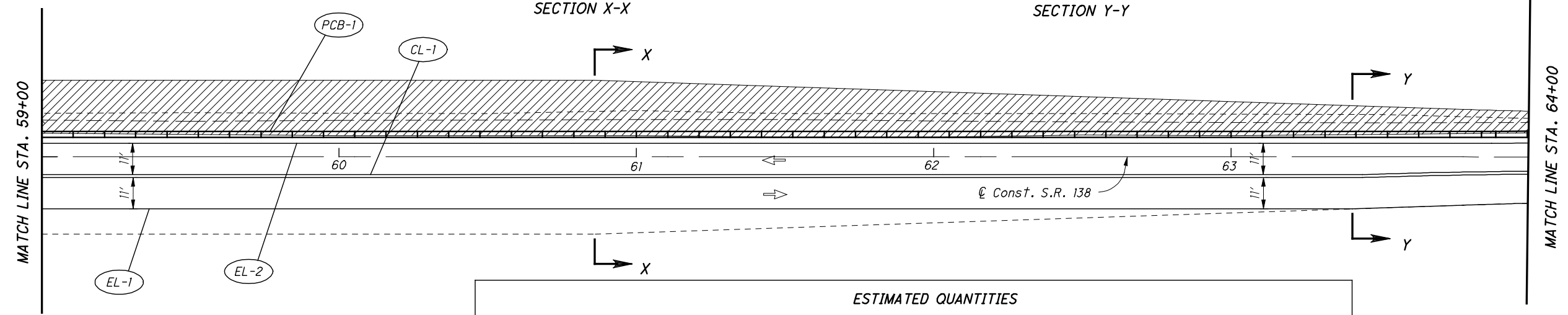
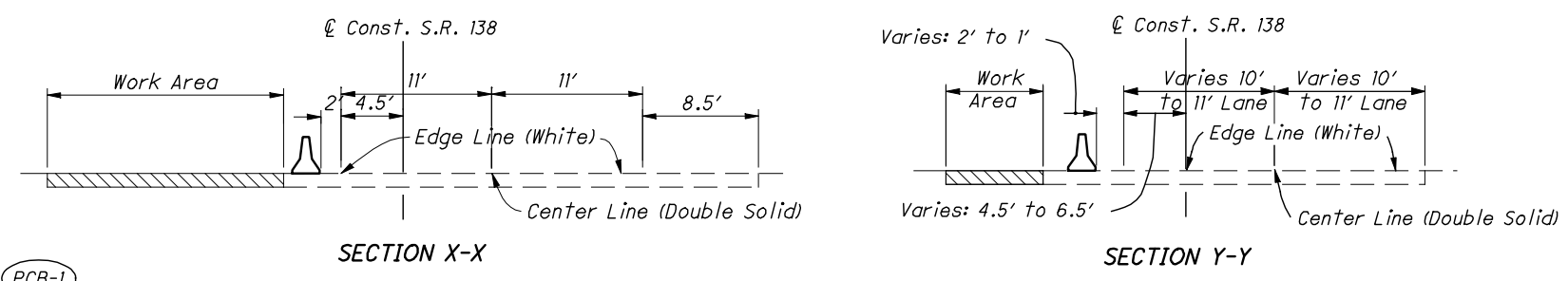
CALCULATED  
CAN  
CHECKED  
DEK

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, AS PER PLAN	PORTABLE CONCRETE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT	SQ. YD.	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		
<b>TOTALS CARRIED TO SUBSUMMARY</b>			<b>1</b>	<b>11</b>	<b>11</b>	<b>0.13</b>	<b>0.28</b>	<b>44</b>	<b>20</b>	<b>578</b>

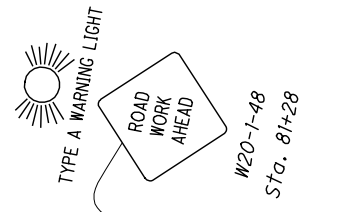
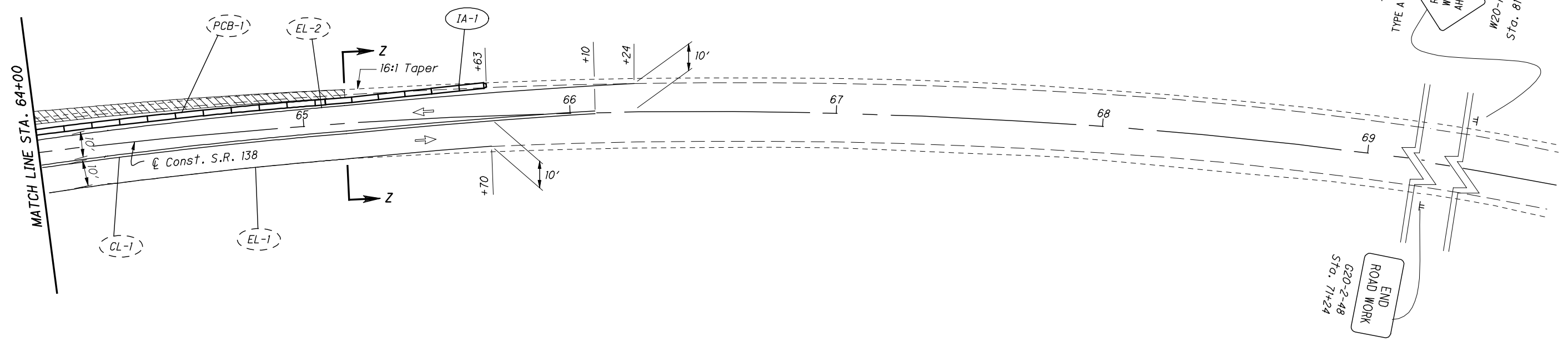
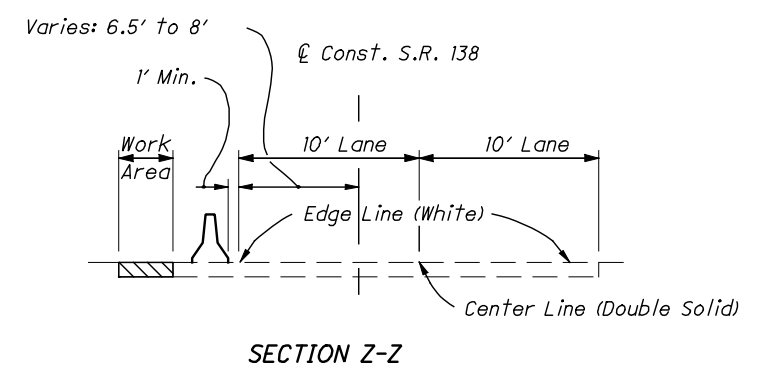




**LEGEND**

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

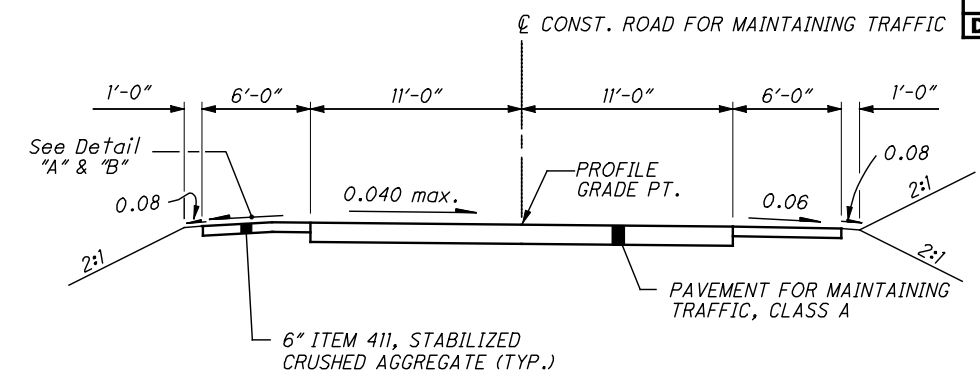
REF No.	Station to Station	SIDE	ESTIMATED QUANTITIES					
			614					622
			REMOVE AND REPLACE IMPACT ATTENUATOR EACH	BARRIER REFLECTOR, TYPE B2 EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID) MILE	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE) MILE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



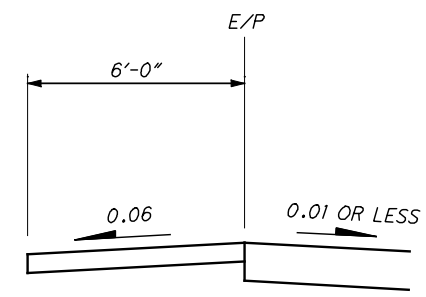




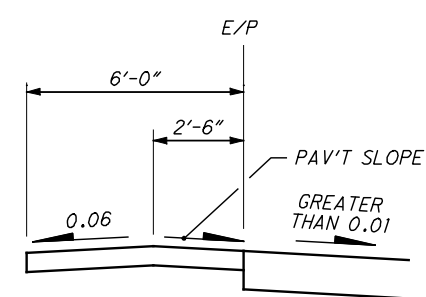
ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85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



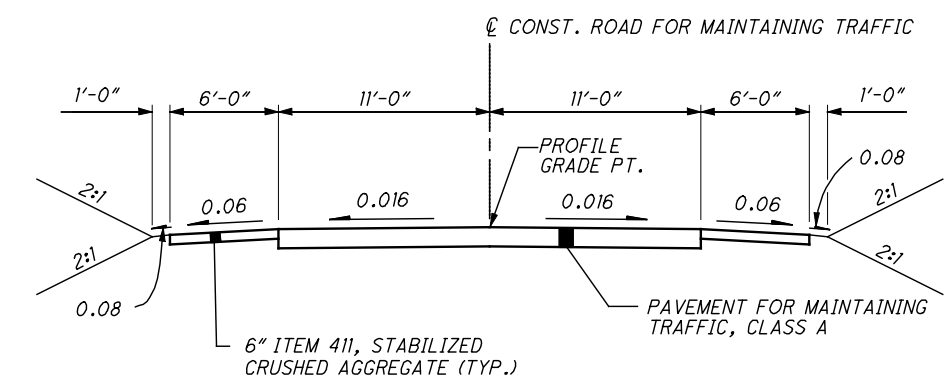
**SUPERELEVATED SECTION**  
 STA. 5+65.00 TO STA. 6+64.00  
 STA. 6+64.00 TO STA. 9+20.00 (OPPOSITE HAND)  
 STA. 11+40.00 TO STA. 13+50.00



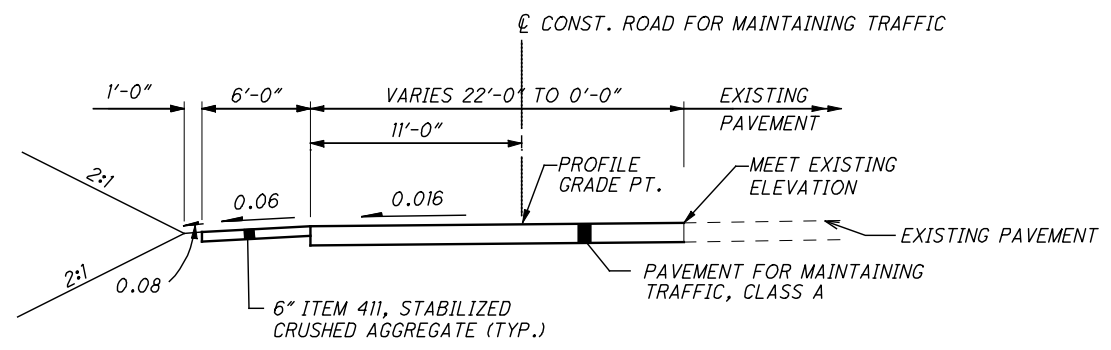
DETAIL "A"



DETAIL "B"



**NORMAL SECTION**  
 STA. 9+20.00 TO STA. 11+40.00



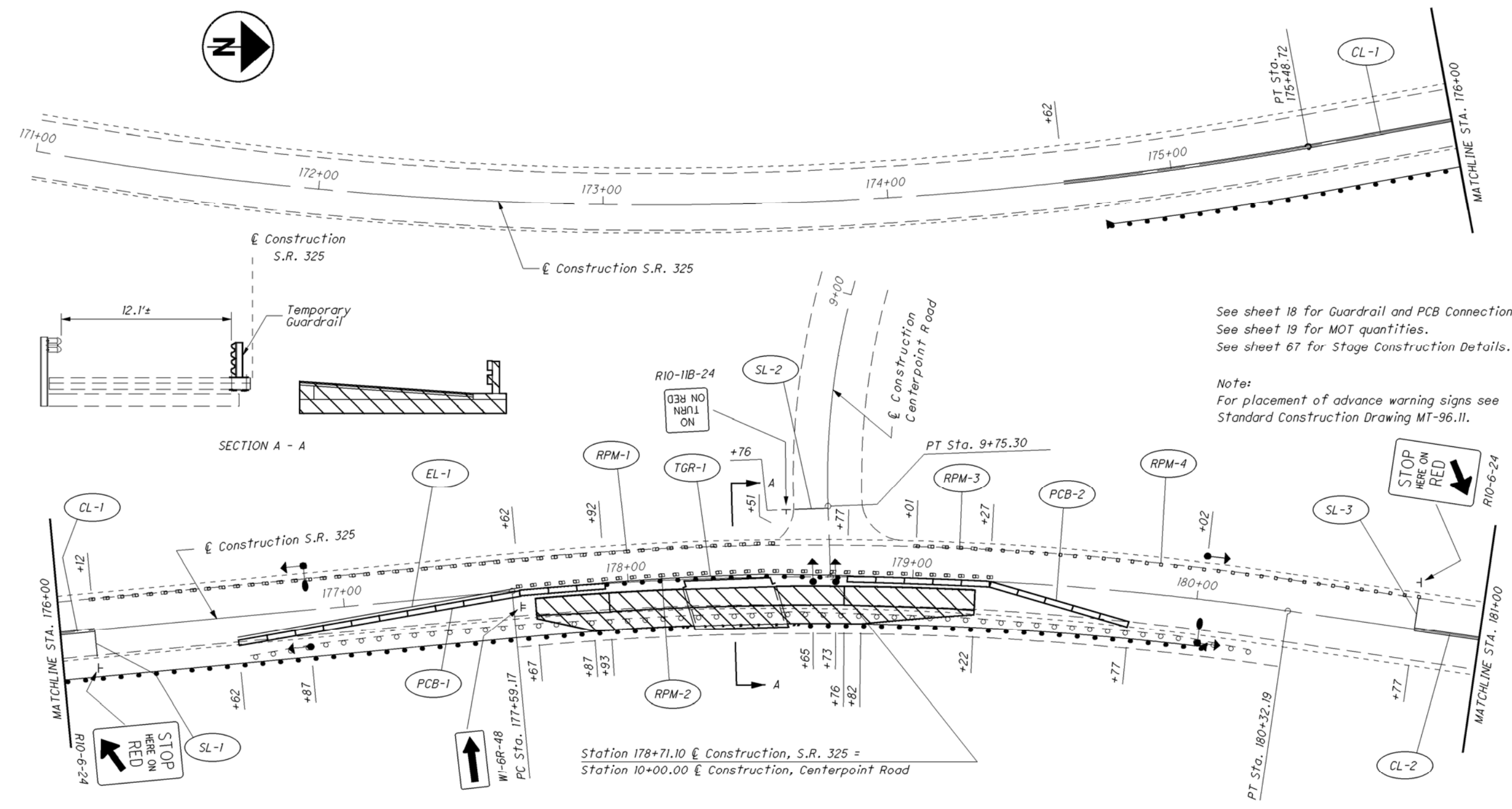
**TAPER SECTION**  
 STA. 13+50.00 TO STA. 18+10.24

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



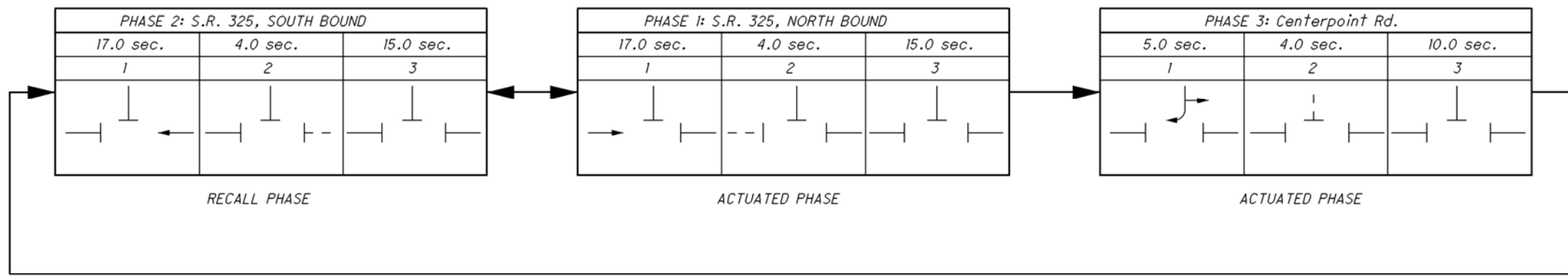
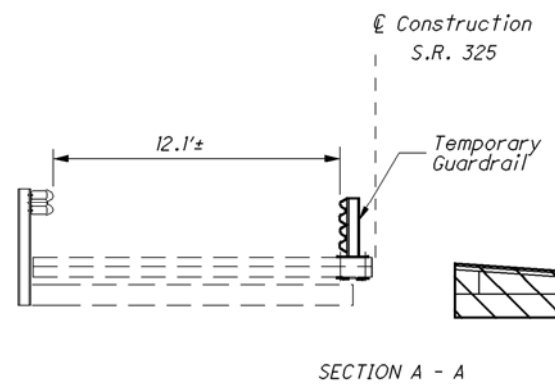
MAINTENANCE OF TRAFFIC - PHASE 1  
STRUCTURE 3.37 - STA. 171+00 TO STA. 181+00

GAL-325-(3.37)(3.78)



See sheet 18 for Guardrail and PCB Connection Details.  
See sheet 19 for MOT quantities.  
See sheet 67 for Stage Construction Details.

Note:  
For placement of advance warning signs see Standard Construction Drawing MT-96.II.



PHASE 1 - SIGNAL TIMING DIAGRAM

Station 178+71.10 @ Construction, S.R. 325 =  
Station 10+00.00 @ Construction, Centerpoint Road

I:\pr\35\tds\SamplePlans\2011April\1306\1306\_1306\_8.dgn 15-APR-2011 7:54AM mwowski



SHEET NO.	202		601		611										605					FOR INFORMATION ONLY				
	CATCH BASIN ABANDONED	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	6" CONDUIT, TYPE B, 707.17 NON-PERFORATED, ASTM D-3034 SDR 35, SS931 OR SS944	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" SHALLOW PIPE UNDERDRAINS	4" UNCLASSIFIED PIPE UNDERDRAINS	4" ROCK CUT UNDERDRAINS	6"x45° BEND	6"x49° BEND	6"x6" TEE	6"x6" WYE	6"x6" CROSS
	EACH	CU YD	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
117								35	222					3		2793				3	2	1		1
118								42	4000					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				108			160	1					2		4071				5	2	3		
127								113						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								171			1			3		4577				4	2	3	1	
135								27								3160				2	3			
135A			50					156						1		2024				2	2	2		
136								60						3			928					2		
137								26						1		836					2			
138								24						1		542	47				1		1	
139								40			1			2		958	50				2			1
142								56						3		1122					3			
143								18						1		720				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	63317	633	8680	147	9087					

DRAINAGE SUBSUMMARY

STA - 6 - 18.84

86  
267





SHEET NUMBER

OFFICE  
CALCS

196

ITEM  
ITEM  
EXT.

GRAND  
TOTAL

UNIT

DESCRIPTION

FIG. 1307-3(b)  
DATE: JULY 2010

SEE  
SHEET  
NO.

CALCULATED  
JKP  
CHECKED  
FGW

PAVEMENT

312										251	01000	312	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR	
4140										253	01000	4140	SQ YD	PAVEMENT REPAIR	
9005										255	10001	9005	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "A"	16
2894										255	10001	2894	SQ YD	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C, AS PER PLAN "B"	16
34828										255	20000	34828	FT	FULL DEPTH PAVEMENT SAWING	
17759										304	20000	17759	CU YD	AGGREGATE BASE	
3892										305	13000	3892	SQ YD	9" CONCRETE BASE	
127										407	10000	127	GALLON	TACK COAT	
5813										408	10000	5813	GALLON	PRIME COAT	
1029										451	14001	1029	SQ YD	9" REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
31690										451	15001	31690	SQ YD	10" REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
6783										452	13001	6783	SQ YD	9" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12
50342										452	17001	50342	SQ YD	VARIABLE THICKNESS NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12

WATER WORK

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

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	FIG. 1307-3(c)		SEE SHEET NO.	CALCULATED	JKP CHECKED	FGW
16	18	23	55	192	262			DATE: JANUARY 2016															
												<b>RETAINING WALLS</b>											
												<b>OPTION A: REINFORCED EARTH WALL</b>											
												1710	203	20000	1710	CU YD	EMBANKMENT						
												3474	203	35000	3474	CU YD	GRANULAR EMBANKMENT						
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING						
												1124	503	21101	1124	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN						108
												4766	SPECIAL	61050010	4766	SQ FT	RETAINING WALL, MISC.: REINFORCED EARTH WALL SYSTEM						190
												<b>OPTION B: RETAINED EARTH WALL</b>											
												1636	203	20000	1636	CU YD	EMBANKMENT						
												3584	203	35000	3584	CU YD	GRANULAR EMBANKMENT						
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING						
												1150	503	21101	1150	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN						108
												4738	SPECIAL	61050010	4738	SQ FT	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' SPAN</b>											
																	<b>STRUCTURE TRU-99-1924 GENERAL SUMMARY</b>						229
																	<b>STRUCTURE TRU-99-2056 GENERAL SUMMARY</b>						236
												878	SPECIAL	51272000	878	SQ YD	EPOXY WATERPROOFING OVERLAY (1/4" THICK)						190
												<b>MAINTENANCE OF TRAFFIC</b>											
	10												614	11110	10	HOURLY	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						
													614	12800	1528	EACH	WORK ZONE RAISED PAVEMENT MARKER						
													614	13100	1201	EACH	BARRIER REFLECTOR						
	14.00												614	20300	14.00	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE II						
													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						
													614	22000	4.33	MILE	WORK ZONE EDGE LINE, CLASS I						
													614	22300	7.34	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE II						
													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						
													615	10000	LS		ROADS FOR MAINTAINING TRAFFIC						
													615	35001	944	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, AS PER PLAN						17
	30												616	10000	30	M GAL	WATER						
	10												616	20000	10	TON	CALCIUM CHLORIDE						
													622	41001	30280	FT	PORTABLE BARRIER, 32", AS PER PLAN						58
												<b>INCIDENTALS</b>											
													614	11000	LS		MAINTAINING TRAFFIC						
													619	16020	8	MONTH	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	SEE SHEET NO.
OFFICE CALCS	64	68	97	165	175	100% CITY	NH	STP							
													<b>ROADWAY</b>		
1000							1000		202	23000	1000	SY	PAVEMENT REMOVED		
	12							12	202	58700	12	EACH	MANHOLE ABANDONED		
					2		2		202	75403	2	EACH	LIGHT POLE REMOVED FOR STORAGE, AS PER PLAN	130	
					2		2		202	75500	2	EACH	LIGHT POLE FOUNDATION REMOVED		
					2		2		202	75505	2	EACH	LUMINAIRE REMOVED FOR STORAGE, AS PER PLAN	130	
				500			500		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (BRIFEN) (ALTERNATE 1)		
				20			20		606	98100	20	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (BRIFEN) (ALTERNATE 1)		
				500			500		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (TRINITY) (ALTERNATE 2)		
				2			2		606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (TRINITY) (ALTERNATE 2)		
				500			500		606	98000	500	FT	GUARDRAIL, MISC.: TENSIONED CABLE (MARION STEEL) (ALTERNATE 3)		
				2			2		606	98100	2	EACH	GUARDRAIL, MISC.: TENSIONED CABLE ANCHOR TERMINAL (MARION STEEL) (ALTERNATE 3)		
													<b>EROSION CONTROL</b>		
					2			2	659	00100	2	EACH	SOIL ANALYSIS		
					44			44	659	00300	44	CY	TOPSOIL		
					400			400	659	10000	400	SY	SEEDING AND MULCHING		
					20			20	659	14000	20	SY	REPAIR SEEDING AND MULCHING		
					20			20	659	15000	20	SY	INTER-SEEDING		
					0.05			0.05	659	20000	0.05	TON	COMMERCIAL FERTILIZER		
					0.08			0.08	659	0.08	31000	ACRE	LIME		
					2.2			2.2	659	35000	2.2	MGAL	WATER		
					0.9			0.9	659	40000	0.9	MSF	MOWING		
									832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
									832	30000	5000	EACH	EROSION CONTROL		
													<b>PAVEMENT</b>		
1844								1844	254	01000	1844	SY	PAVEMENT PLANING, ASPHALT CONCRETE		
1265								1265	301	46000	1265	CY	ASPHALT CONCRETE BASE, PG64-22		
2627							986	1641	304	20000	2627	CY	AGGREGATE BASE		
5333							5333		305	12000	5333	SY	8" CONCRETE BASE		
533							533		407	10000	533	GAL	TACK COAT		
3114							1066	2048	407	14000	3114	GAL	TACK COAT FOR INTERMEDIATE COURSE		
10								10	442	20000	10	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)		
497							268	229	441	46040	497	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)		
38								38	441	46040	38	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS)		
415							226	189	442	50000	415	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A, (446)		
18								18	442	50000	18	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A, (448), (DRIVEWAYS)		
4000							4000		609	12000	4000	FT	COMBINATION CURB AND GUTTER, TYPE 2		
													<b>WATER WORK</b>		
				896			896		SPECIAL	63860400	896	FT	12" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801)		
				14			14		SPECIAL	63861900	14	EACH	6" VALVE AND APPURTENANCES (COL. 802)		
				10			10		SPECIAL	63863800	10	EACH	1-1/2" WATER SERVICE TAP, COMPLETE (COL. 805)		
				8			8		SPECIAL	63865502	8	EACH	SERVICE BOX REMOVED AND RESET (COL. 807)		
				4			4		SPECIAL	63866602	4	EACH	FIRE HYDRANT, TYPE A (COL. 809)		
													<b>SANITARY SEWER</b>		
			200					200	611	00900	200	FT	6" CONDUIT, TYPE B, 706.01 OR 706.08 WITH 706.11 OR 706.12 JOINTS		
			284					284	611	02000	284	FT	8" CONDUIT, TYPE C, 706.08 WITH 706.12 JOINTS		
			273					273	611	04400	273	FT	12" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
			28					28	611	05900	28	FT	15" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
			230					230	611	07400	230	FT	18" CONDUIT, TYPE B, 706.03 WITH 706.11 JOINTS		
			5					5	611	31500	5	EACH	MANHOLE, NO. 3 WITH 706.11 JOINTS		
			8					8	611	34500	8	EACH	MANHOLE ADJUSTED TO GRADE		
			3					3	611	35500	3	EACH	MANHOLE RECONSTRUCTED TO GRADE		

GENERAL SUMMARY

FRA-11-26.48

**SP 1307-4**  
DATE: JULY 2014

SEE SHEET NO.

CALCULATED  
DMK  
CHECKED  
CML

SHEET NUMBER				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-5 DATE: JULY 2006	SEE SHEET NO.
87	96			CITY, STATE & FEDERAL	100% CITY							
										TRAFFIC CONTROL		
					161	621	00100	161	EACH	RPM		
					146	630	02100	146	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
					229	630	03100	229	FT	GROUND MOUNTED SUPPORT, NO. 3 POST		
					4	630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED		
					96	630	80100	96	SQ FT	SIGN, FLAT SHEET		
					11	630	85000	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE		
					14	630	86002	14	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
					3.29	644	00100	3.29	MILE	EDGE LINE		
					1.36	644	00200	1.36	MILE	LANE LINE		
					1.25	644	00300	1.25	MILE	CENTER LINE		
					1368	644	00400	1368	FT	CHANNELIZING LINE		
					146	644	00500	146	FT	STOP LINE		
					313	644	00600	313	FT	CROSSWALK LINE		
					450	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE		
					24	644	00900	24	SQ FT	ISLAND MARKING		
					9	644	01300	9	EACH	LANE ARROW		
					8	644	01410	8	EACH	WORD ON PAVEMENT, 96"		
										TRAFFIC SIGNALS		
					122	625	25400	122	FT	CONDUIT, 2", 725.04		
					180	625	25500	180	FT	CONDUIT, 3", 725.04		
					182	625	29000	182	FT	TRENCH		
					120	625	29600	120	FT	TRENCH IN PAVED AREA, TYPE B		
					2	625	30706	2	EACH	PULL BOX, 725.08, 24"		
					7	625	32000	7	EACH	GROUND ROD		
					4	632	00300	4	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 1-WAY		
					2	632	00500	2	EACH	VEHICULAR SIGNAL HEAD, 5 SECTION, 12" LENS, 1-WAY		
					1	632	01100	1	EACH	VEHICULAR SIGNAL HEAD, 3 SECTION, 12" LENS, 2-WAY		
					8	632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD		
					2	632	27004	2	EACH	LOOP DETECTOR UNIT		
					3	632	27008	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE		
					139	632	30200	139	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES		
					823	632	40300	823	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG		
					1168	632	40500	1168	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG		
					100	632	62700	100	FT	INTERCONNECT CABLE, INTEGRAL MESSENGER WIRE TYPE, 7 CONDUCTOR, NO. 12 AWG		
					1601	632	65200	1601	FT	LOOP DETECTOR LEAD-IN CABLE		
					25	632	67200	25	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG		
					1	632	70001	1	EACH	POWER SERVICE, AS PER PLAN	95	
					2	632	85000	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10		
					5	632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE		
					1	632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION		
					1	633	01601	1	EACH	CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 332, AS PER PLAN "A"	95	
					1	633	67100	1	EACH	CABINET FOUNDATION		
					1	633	67200	1	EACH	CONTROLLER WORK PAD		

GENERAL SUMMARY

ATB-208-13.43

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>														
	209.9	48.6	12.2	12.6	34.2	152.7	100.6	120.2	642	00090	691	MILE	EDGE LINE, 4"	
	113.0	33.3	369.9	298.0	29.9	59.8	94.3		642	00094	885.2	MILE	EDGE LINE, 6"	
	70.0	32.7	273.0	314.1	22.2	30.6	59.6		642	00194	732	MILE	LANE LINE, 6"	
	106.0	23.4	8.4	6.7	17.4	79.7	50.1		642	00290	185.7	MILE	CENTER LINE	
	9201.0	3171.0	8512.0	4512.0	528.0		7548.0		642	00394	24271	FT	CHANNELIZING LINE, 12"	
		106.0	7689.0	5459.0	897.0		950.0		642	01508	14995	FT	DOTTED LINE, 6"	
<b>MAINTENANCE OF TRAFFIC</b>														
240									614	11110	240	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
LS									642	20000	LS		TWO WAY RADIO EQUIPMENT	
<b>INCIDENTALS</b>														
LS									614	11000	LS		MAINTAINING TRAFFIC	4
LS									614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	4
LS									624	10001	LS		MOBILIZATION, AS PER PLAN	

Calculated by: JJD

Checked by: DAC

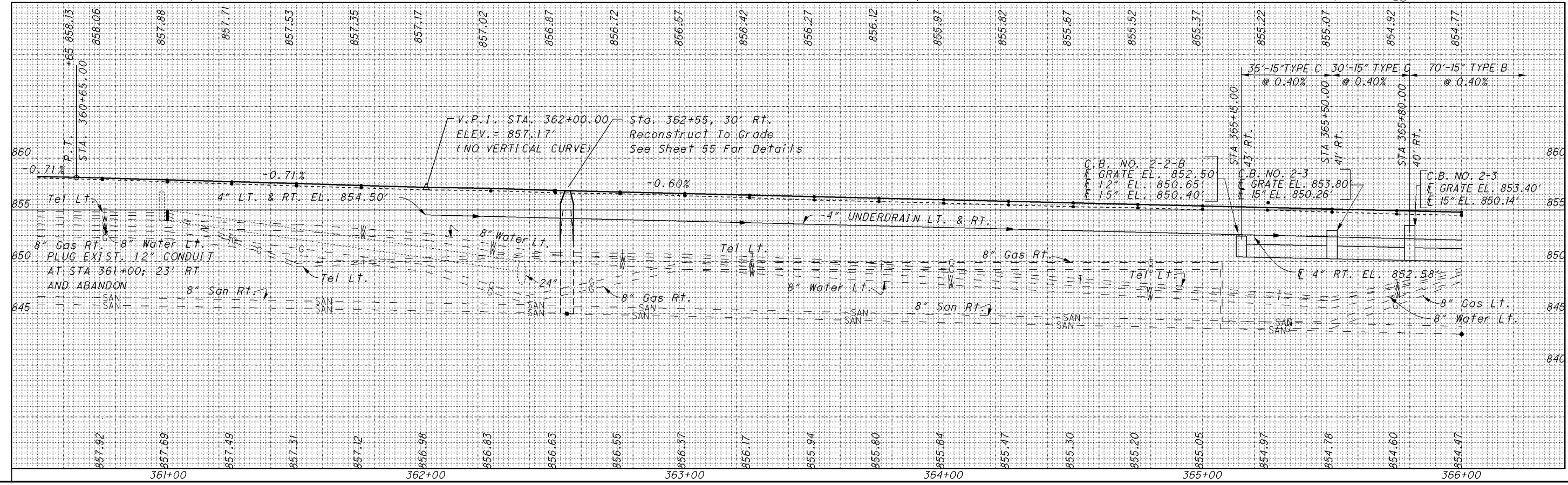
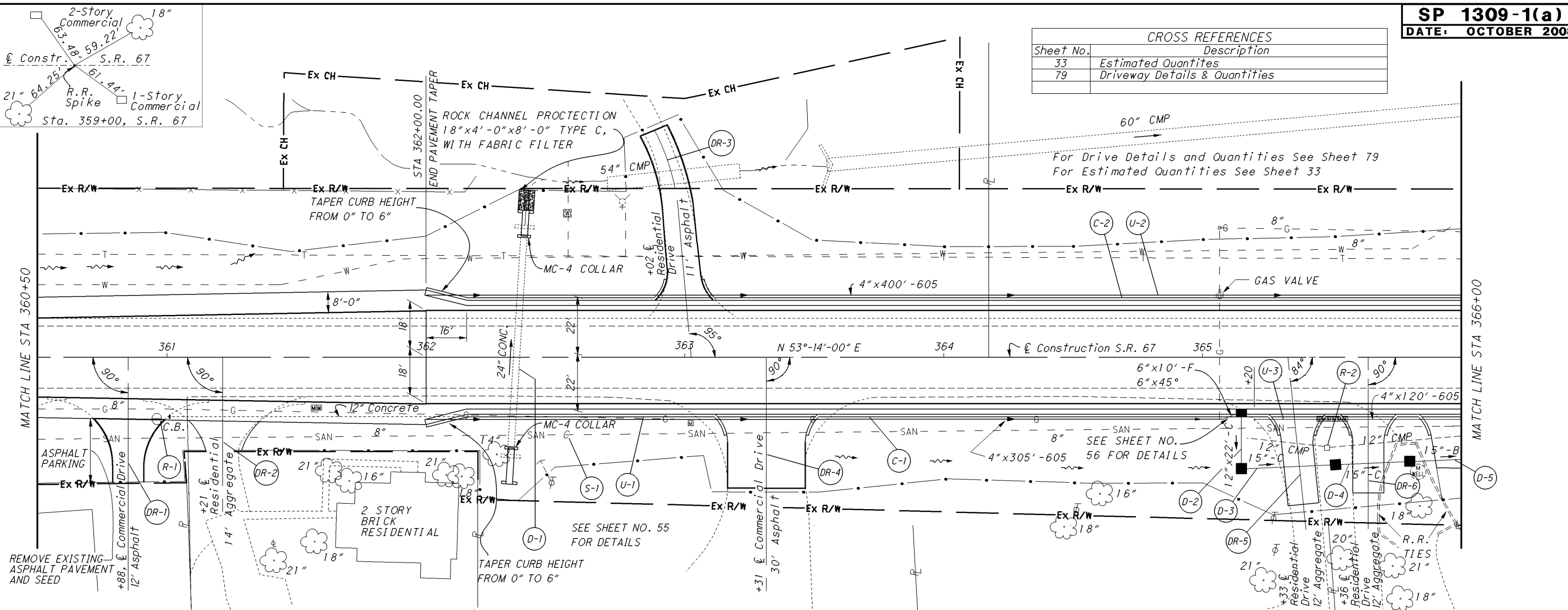






CALCULATED MJD CHECKED DSN  
0 10 20 40  
HORIZONTAL SCALE IN FEET

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

I:\pr\V3Std\SamplePlans\Future Revision\Draft\_0908\1309\_DGN\1309\_1(a).dgn 30-SEP-2008 1:08PM mwowski

I:\pr\35\tds\SamplePlans\2013\January\DGN\1309\_1(b)\_0118.dgn 16-JAN-2013 11:49AM fcheek

REF NO.	SHEET NO.	STATION		SIDE	202		601	602	611										SP 1309-1(b)				
					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	
FROM	TO	EACH	FT	CU YD	CU YD	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	FT	FT	NO.		
C-1	31-32,34	362+00	373+00	Rt																			
C-2	31-32	362+00	366+93	Lt																	1100		
C-3	32,34	367+37	371+67	Lt																	532		
																					458		
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										1	
D-3	31	365+15	365+50	Rt									35			1							
D-4	31	365+50	365+80	Rt									30				1						
D-5	31 & 32	365+80	366+50	Rt						70													
D-6	32	366+42	366+62	Lt																		1	
D-7	32	366+50		Rt																		1	
D-8	32	366+50	367+47	Rt																		1	
D-9	32	367+27	367+47	Rt																		1	
D-10	32	367+47	368+50	Rt										25								1	
D-11	32	368+50		Rt																		1	
D-12	32	368+50	369+32	Rt																		1	
D-13	32	369+32	369+98	Rt																		1	
D-14	32	369+98		Rt																		1	
D-15	32	369+98	370+70	Rt																		1	
D-16	32	370+70	371+45	Rt																		1	
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																	305	1	
U-2	31 & 32	362+00	366+42	Lt																	432	1	
U-3	31 & 32	365+20	366+50	Rt																	120	1	
U-4	32	366+55	368+50	Rt																	185	1	
U-5	32	368+55	369+98	Rt																	133	1	
U-6	32	367+55	371+45	Lt																	382	1	
U-7	32 & 34	370+03	372+00	Rt																	187	1	
<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

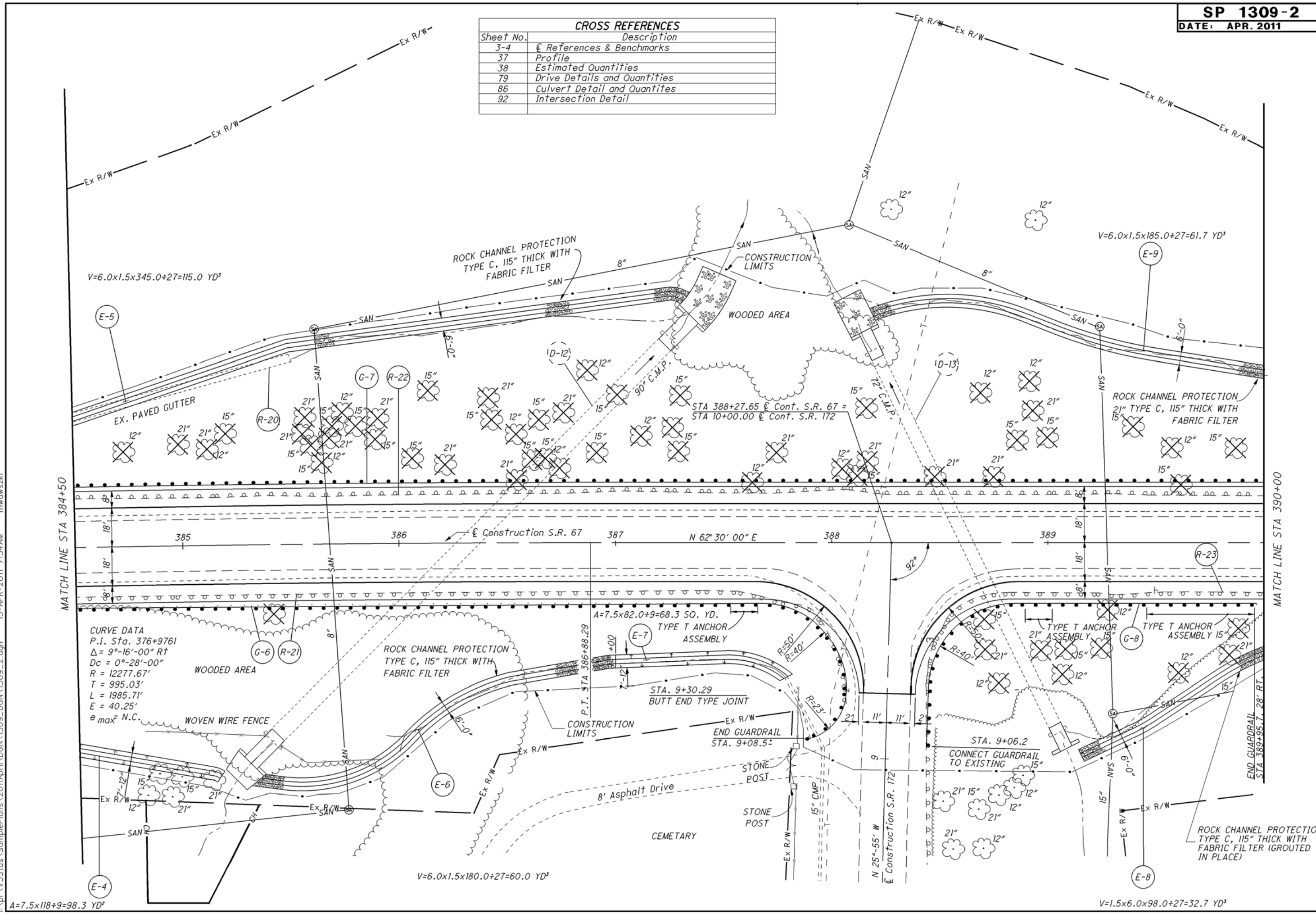
CALCULATED  
M/JG  
CHECKED  
DSN

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



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

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

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

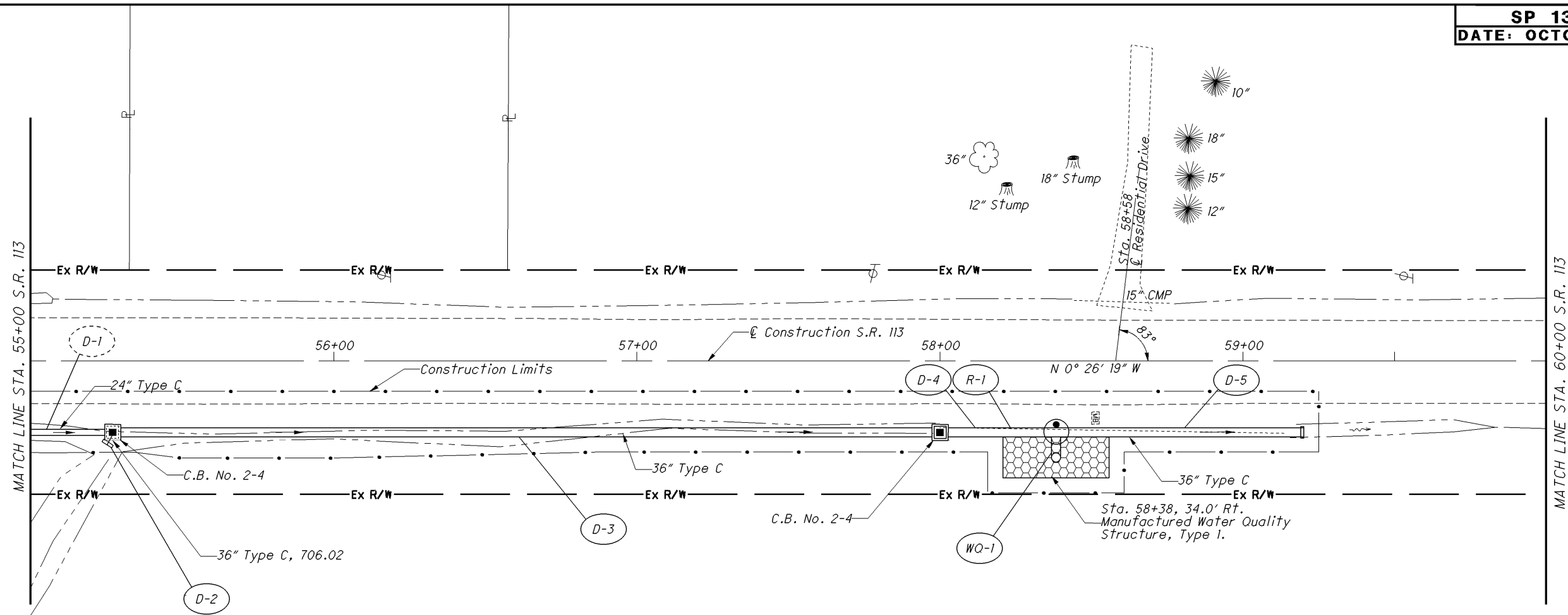
$V=6.0 \times 1.5 \times 180.0 \div 27 = 60.0 \text{ YD}^3$

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

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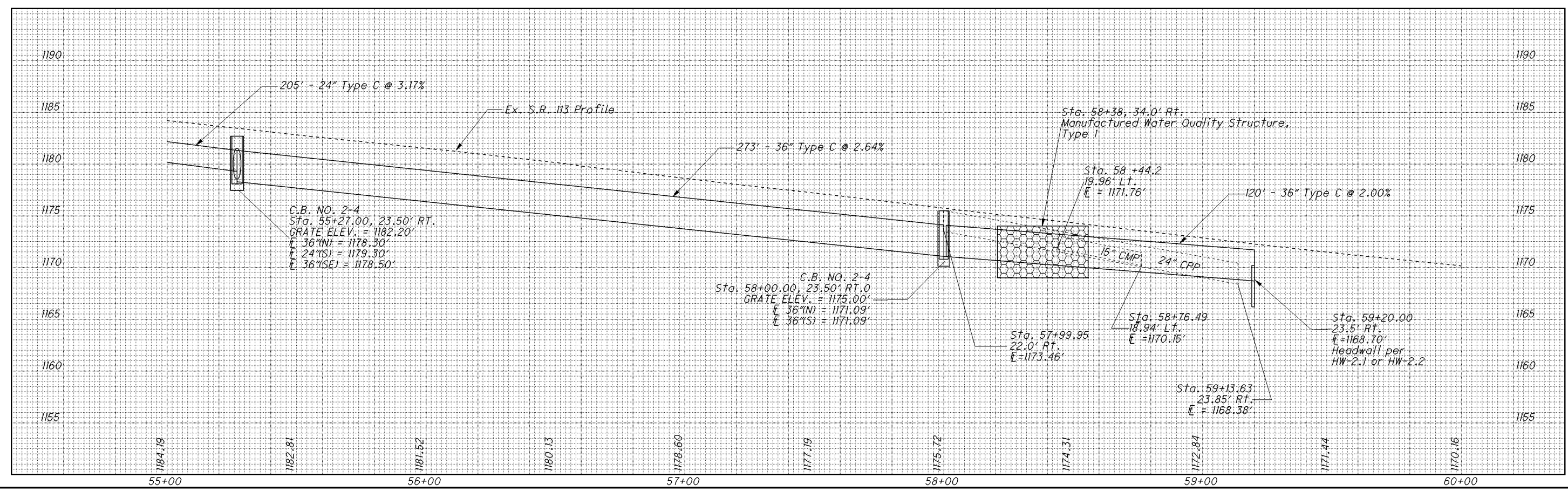


CALCULATED  
DRT  
CHECKED  
TGH



For Quantities, See Sheet 20.

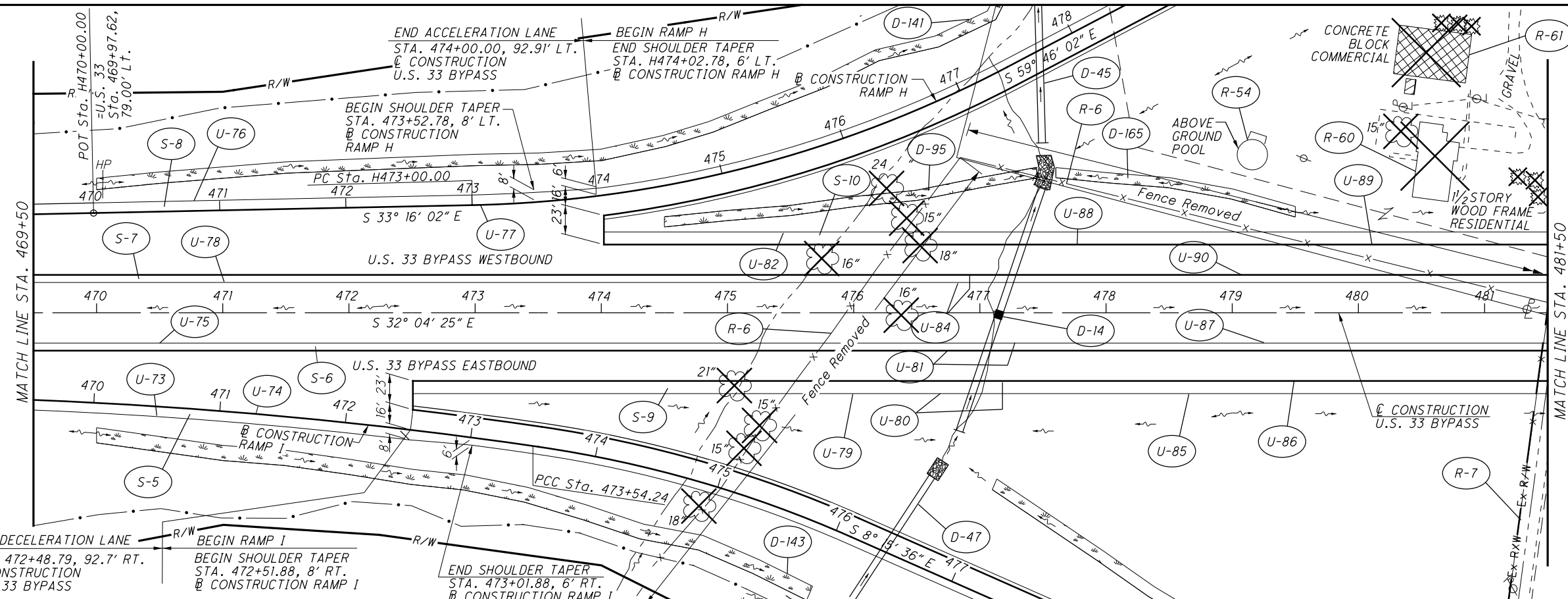
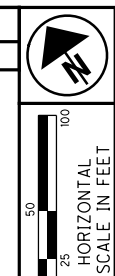
AREA FOR MANUFACTURED SYSTEM



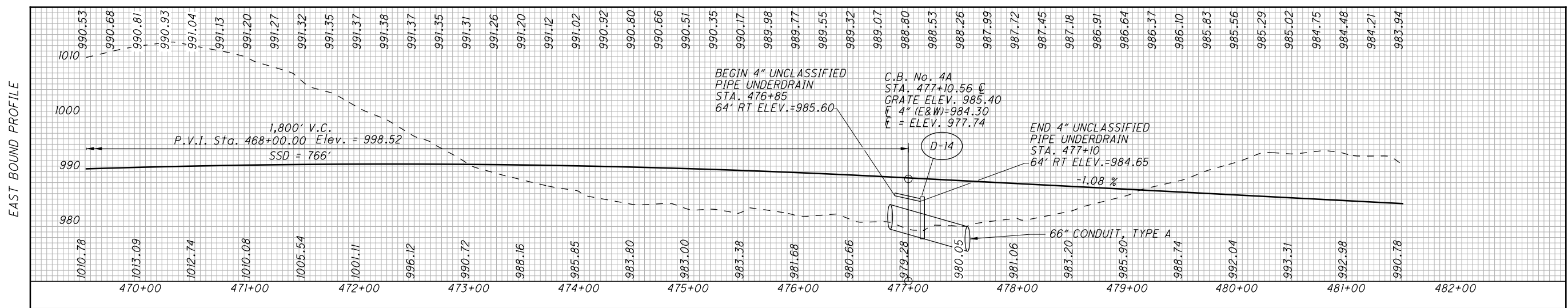
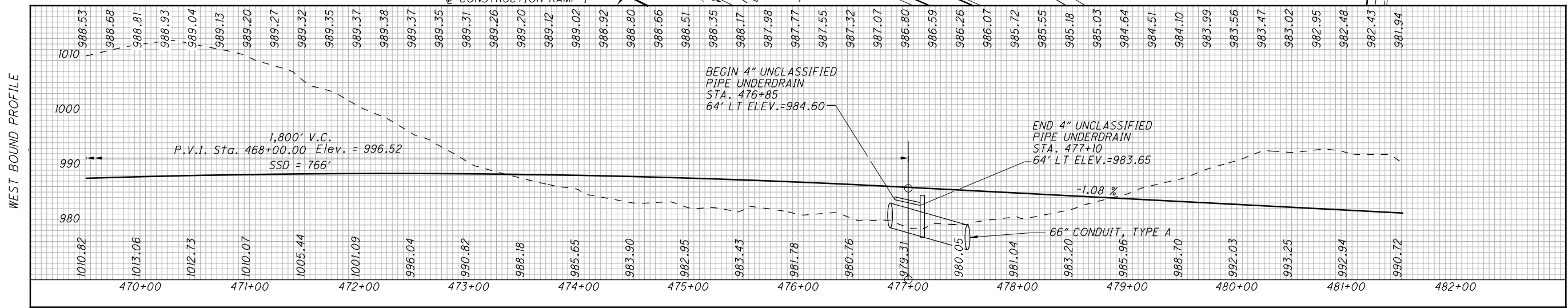
PLAN AND PROFILE  
STA. 55+00 TO STA. 60+00 S.R. 113

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

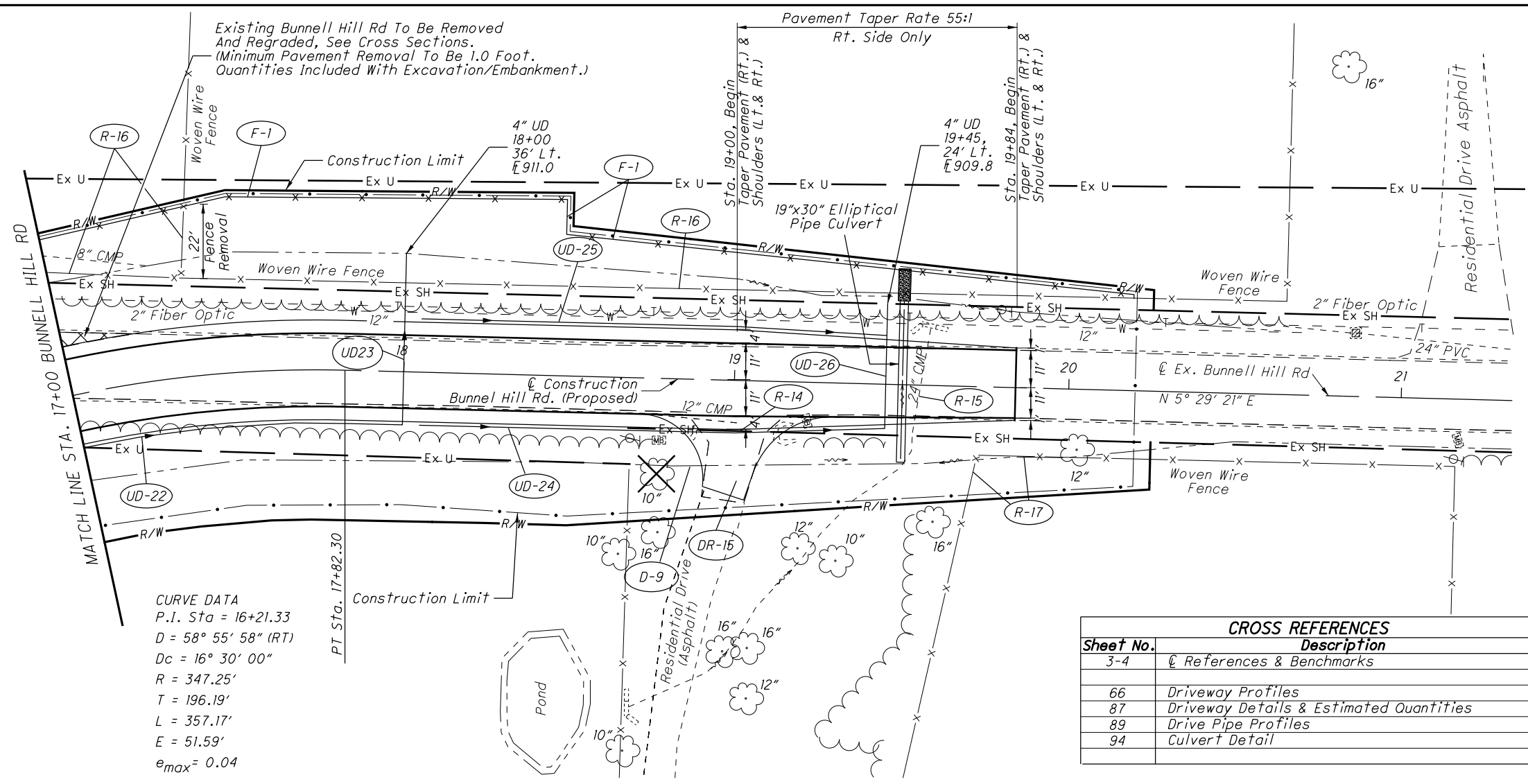
FAI-33-13.25



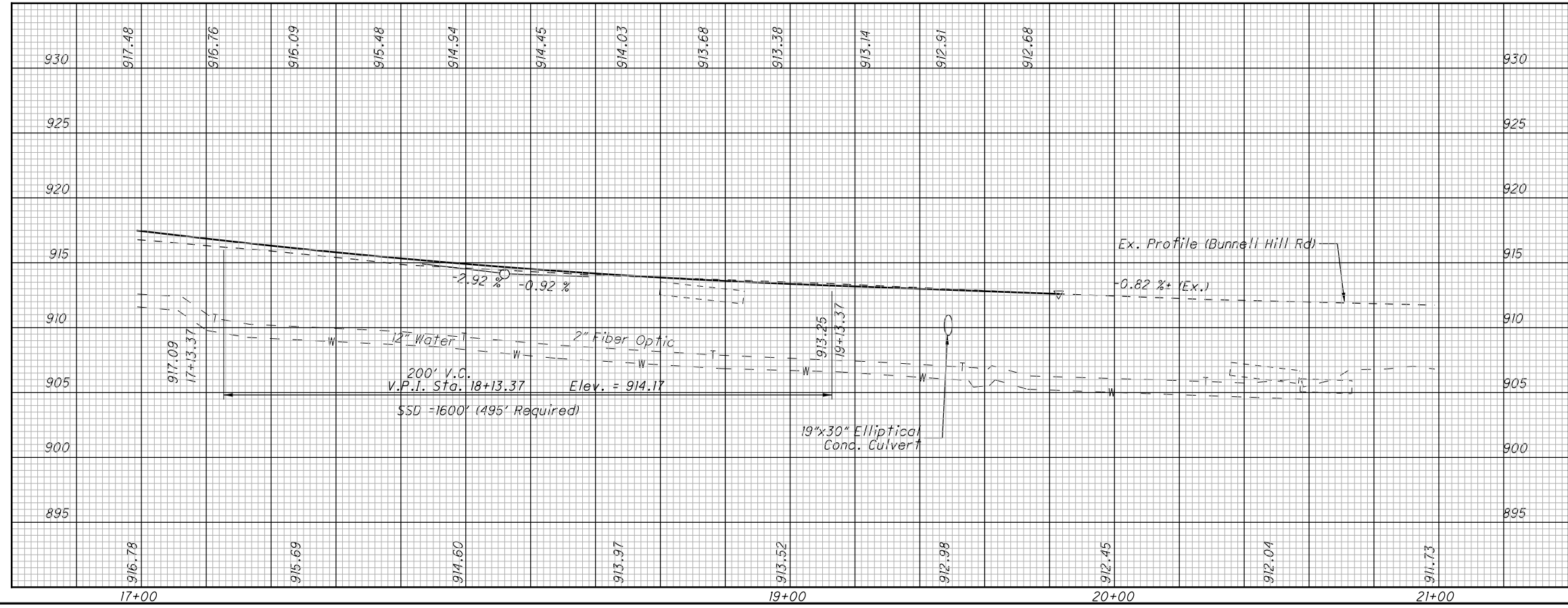
CALCULATED MSO  
CHECKED JAD

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

WAR-48.19.40



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



REF NO.	STATION		SIDE	DESCRIPTION	QUANTITY	UNITS	BENDS & BRANCHES FOR INFO. ONLY						
	FROM	TO											
R-14	18+86	19+20	Rt.										
R-15	19+52	19+55	Center										
R-16	16+60	20+20	Lt.										
R-17	19+70	20+19	Rt.										
UD-22	17+00	18+00	Rt.										
UD-23	18+00	18+00	Center		96								
UD-24	18+05	19+45	Rt.		140								
UD-25	18+05	19+45	Lt.		140								
UD-26	19+45	19+45	Center										
D-9	18+83	19+17	Rt.										
F-1	16+62	20+19	Lt.										
TOTALS CARRIED TO GENERAL SUMMARY					57	470	96	280	390	33	33	89	2

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CROSS REFERENCES	
Sheet No.	Description
3	References & Benchmarks
38	Culvert Details

SP 1309-6  
DATE: JANUARY 2013

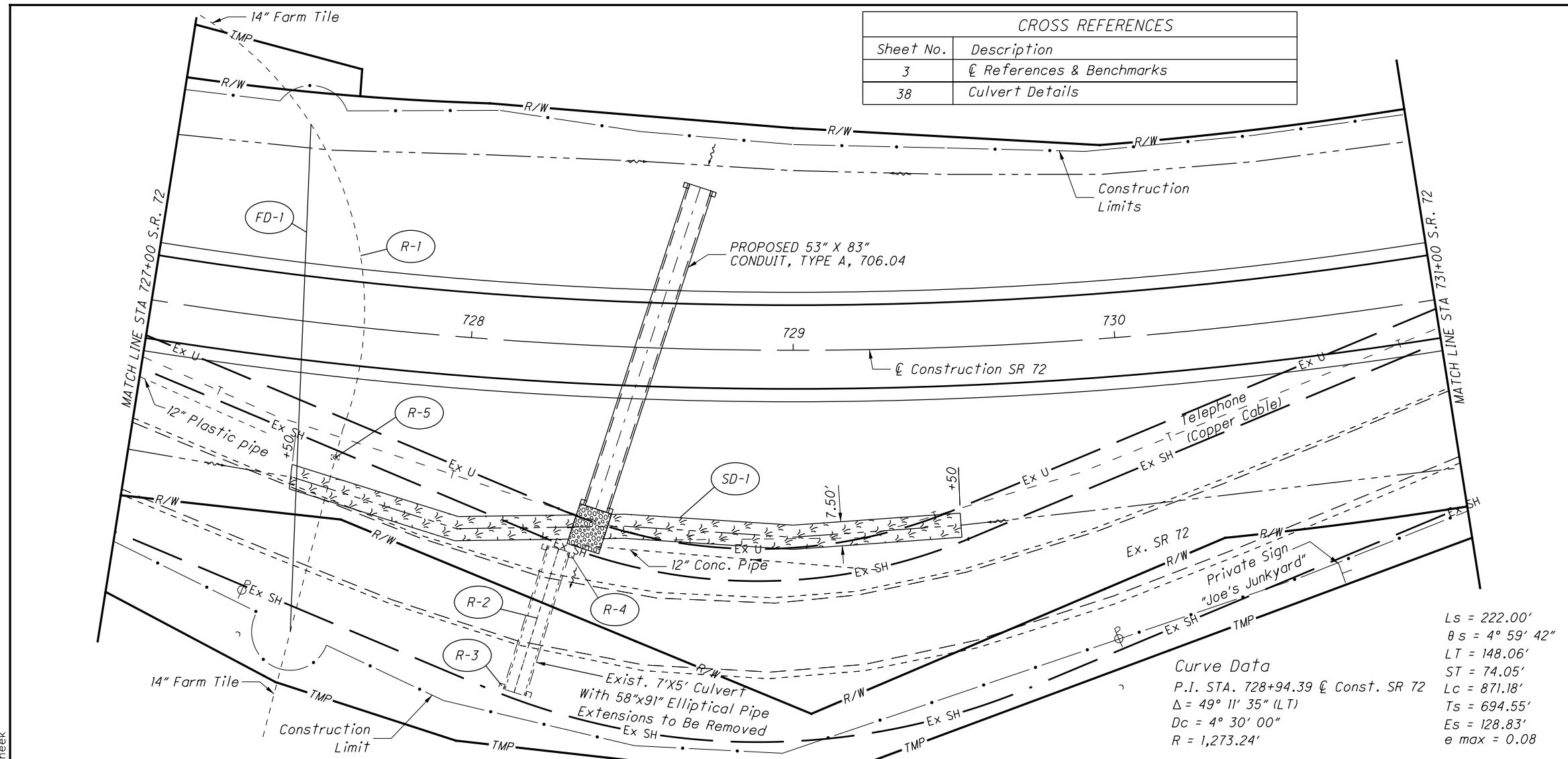


CALCULATED MSO CHECKED JAD

PLAN AND PROFILE  
STA 727+00 TO 731+00

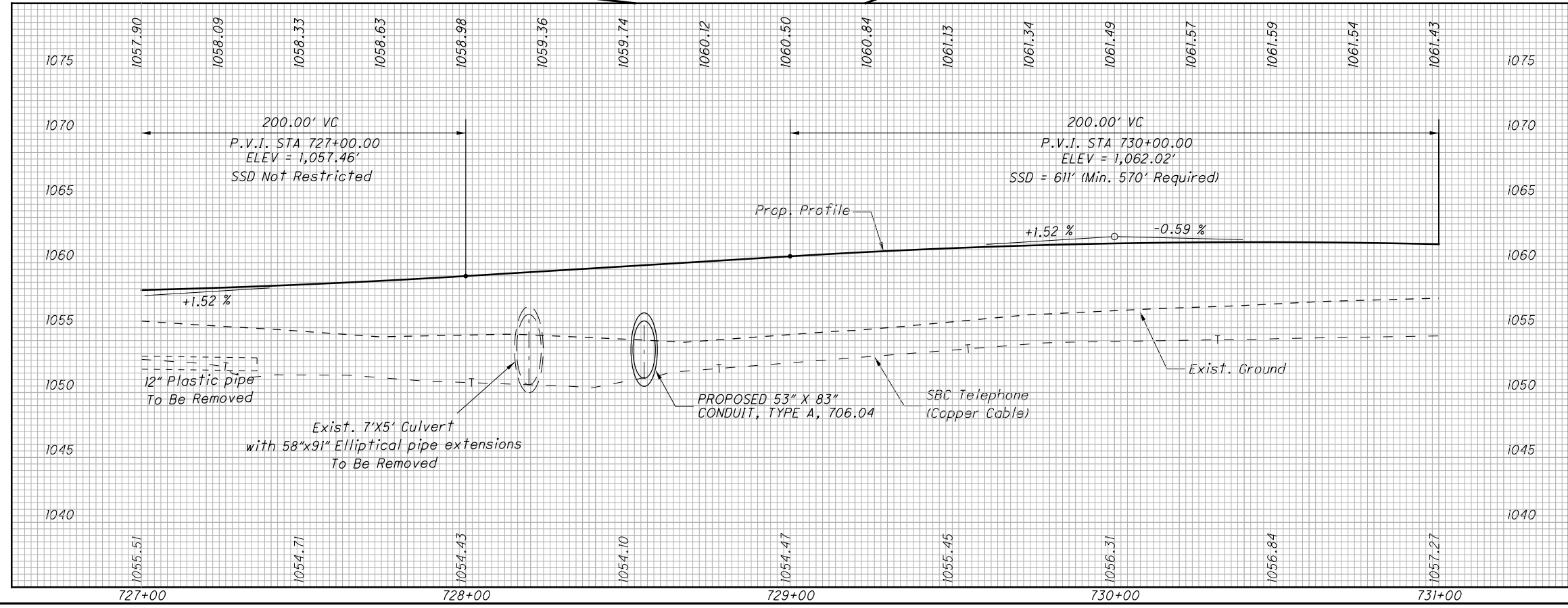
GRE-72-13.67

17  
51



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

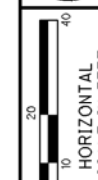
$L_s = 222.00'$   
 $\theta_s = 4^\circ 59' 42''$   
 $LT = 148.06'$   
 $ST = 74.05'$   
 $L_c = 871.18'$   
 $T_s = 694.55'$   
 $E_s = 128.83'$   
 $e_{max} = 0.08$



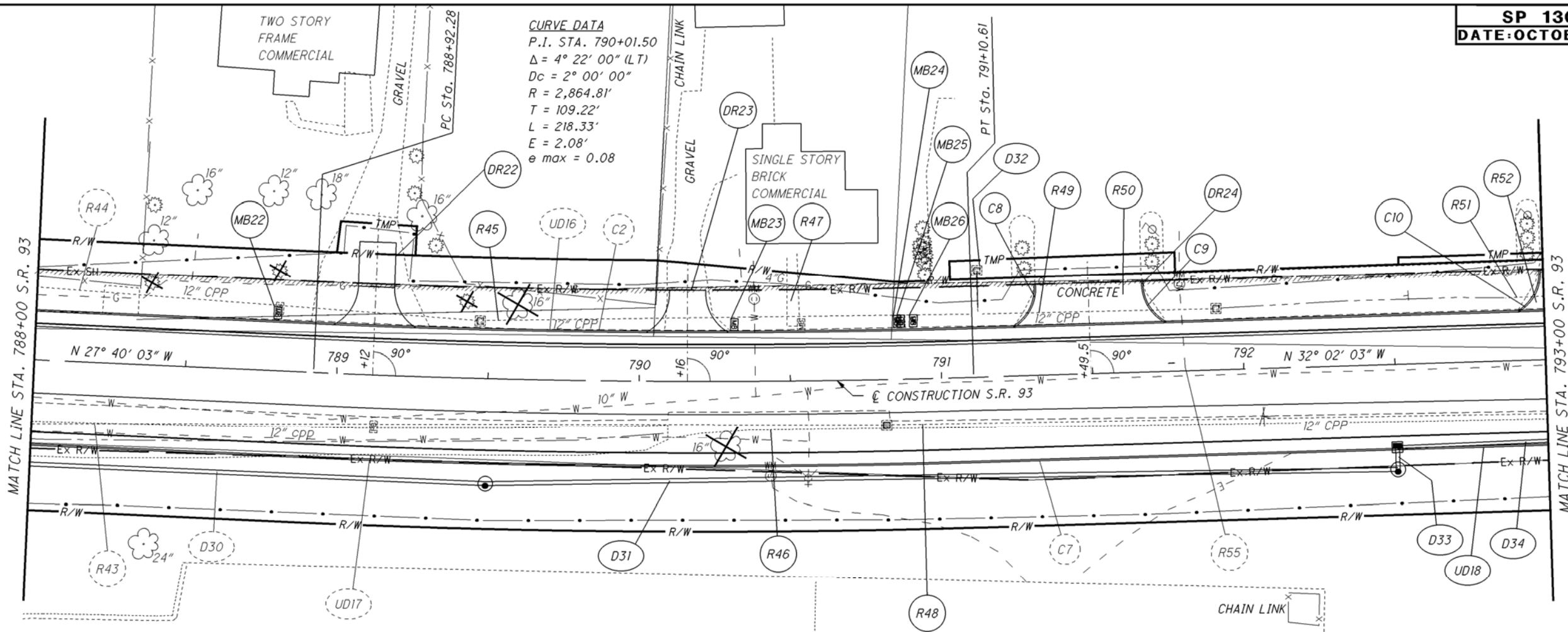
REF NO.	STATION		SIDE	ITEM	QUANTITY	UNIT
	FROM	TO				
R-1	727+43	727+56	RT & LT	EROSION CONTROL MAT, TYPE A	158	SO. YD.
R-2	728+15	728+22	RT	15" CONDUIT, TYPE B	1	FT
R-3	728+17	728+23	RT	REMOVAL MISC.: 7x5' CONCRETE BOX CULVERT WITH 58x9" ELLIPTICAL PIPE EXTENSIONS	1	EACH
R-4	728+27	728+35	RT	REMOVAL MISC.: 2'x2' FARM TILE	1	EACH
R-5	728+51	728+53	RT	REMOVAL MISC.: 2'x2' FARM TILE	1	EACH
FD-1	727+43	727+56	RT & LT	PIPE REMOVED, 24" AND UNDER	184	FT
SD-1	727+50	729+50	RT	HEADWALL REMOVED	2	EACH
TOTALS CARRIED TO GENERAL SUMMARY						

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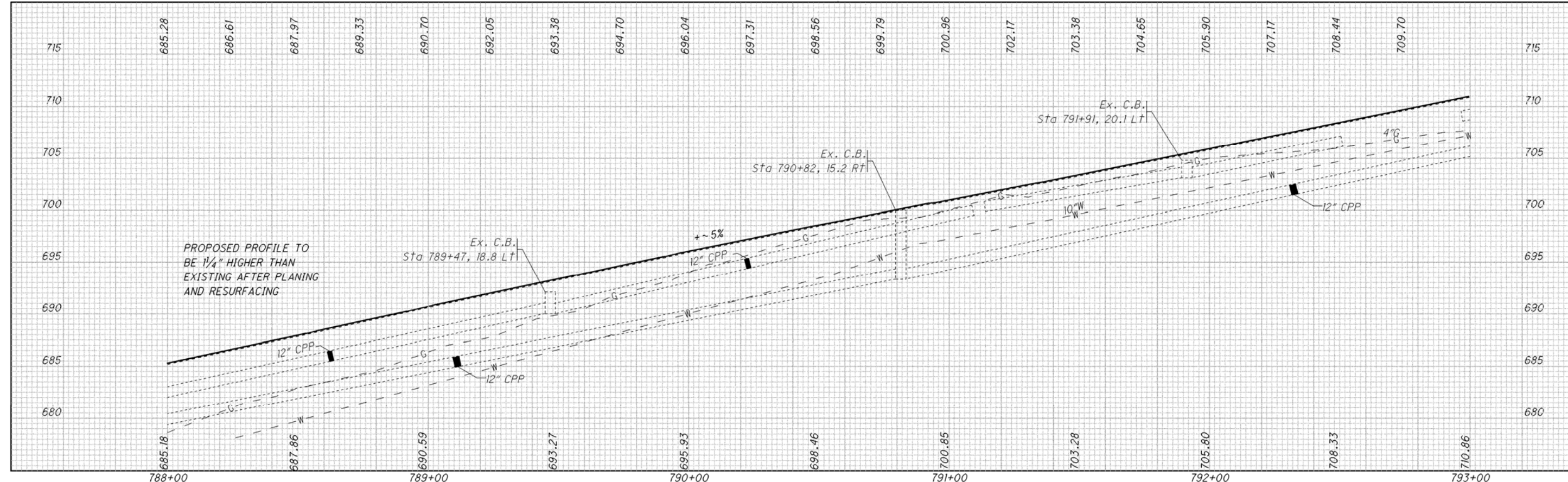


CALCULATED MSO  
CHECKED JAD



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

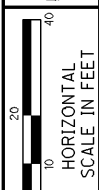
FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24  
 FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83  
 FOR STORM SEWER PROFILES SEE SHEETS 89 - 92  
 FOR  $\epsilon$  REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3



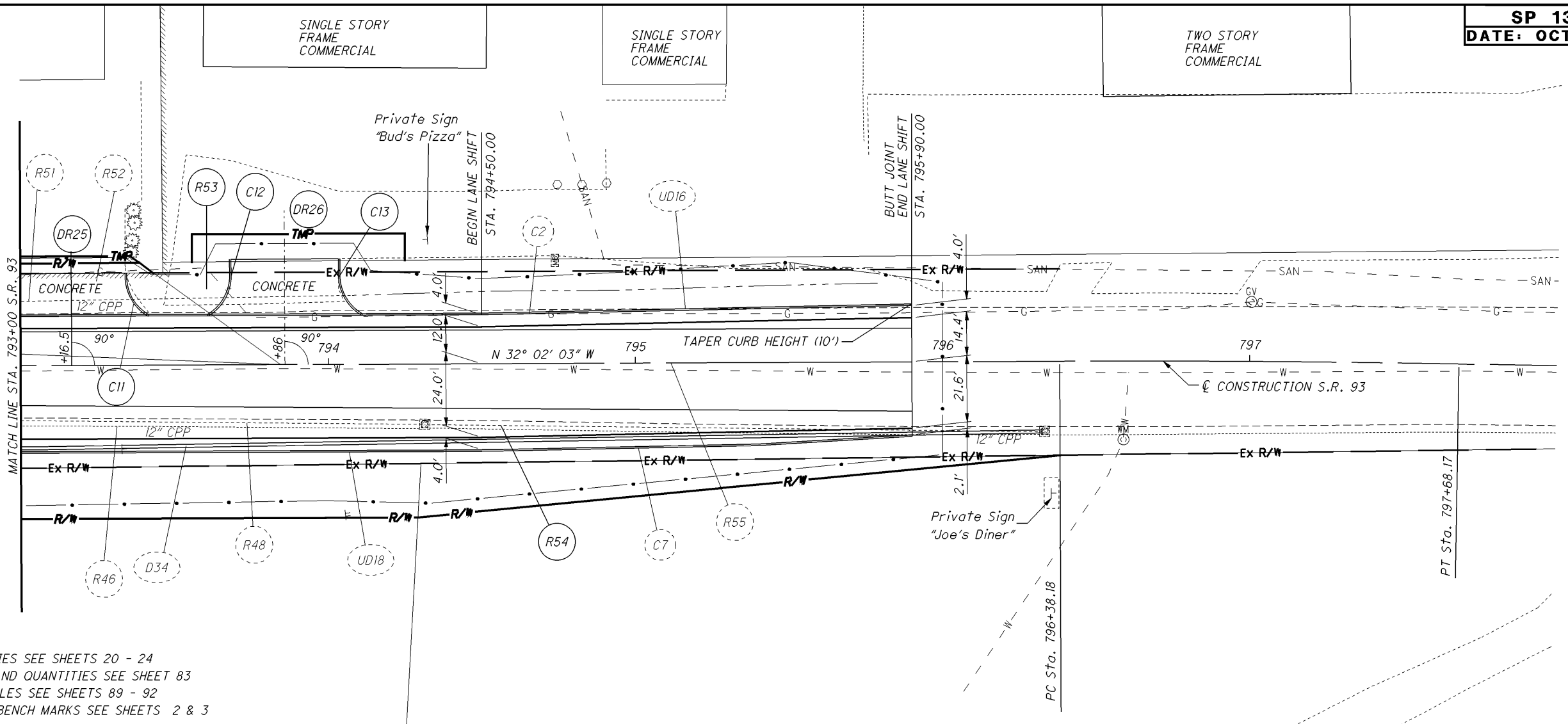
**PLAN AND PROFILE**  
**STA. 788+00 TO STA. 793+00**

**MOE-93-22.35**

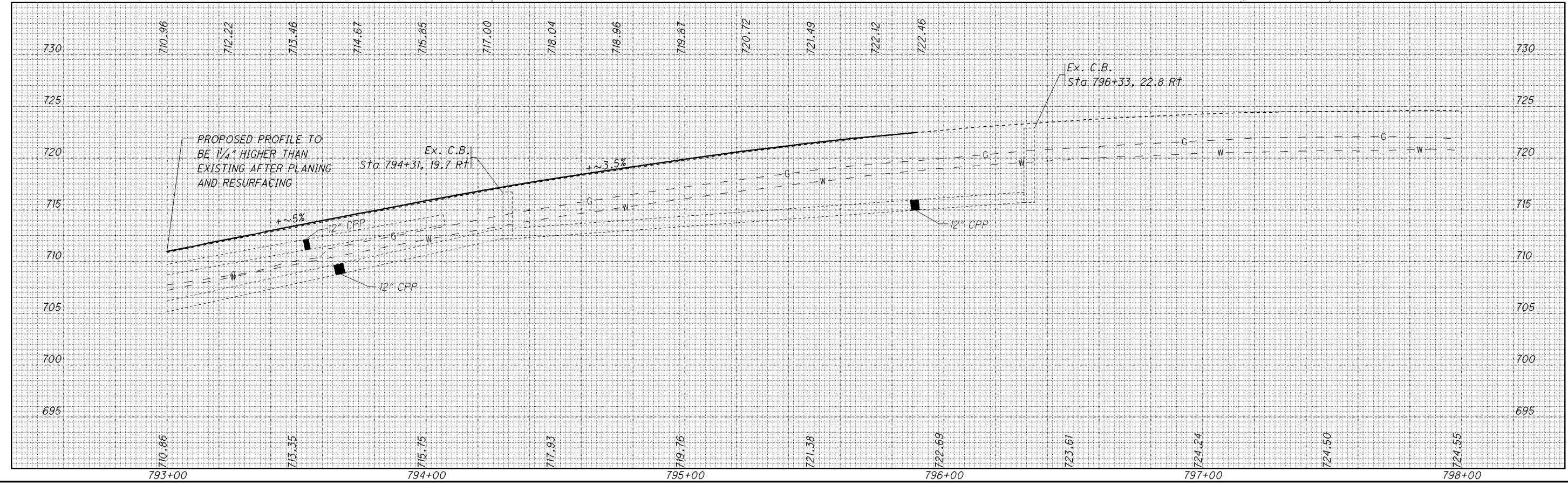
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CALCULATED MSO  
CHECKED JAD



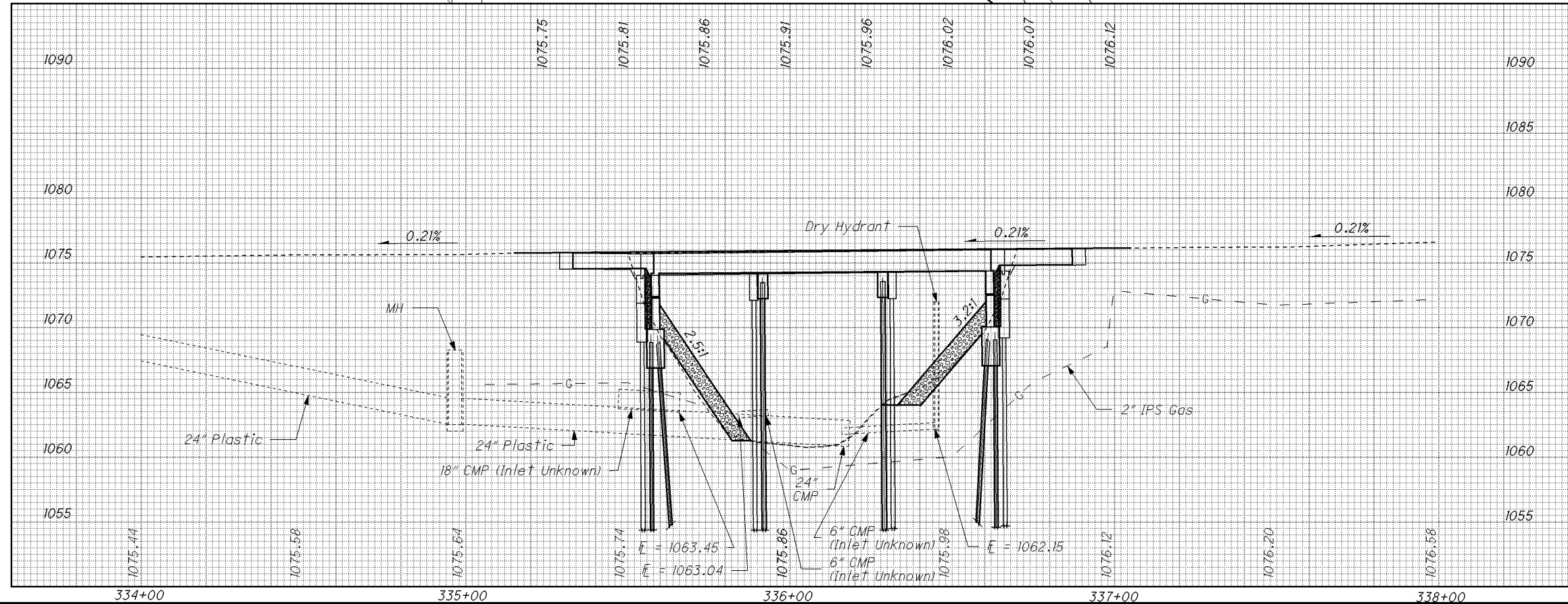
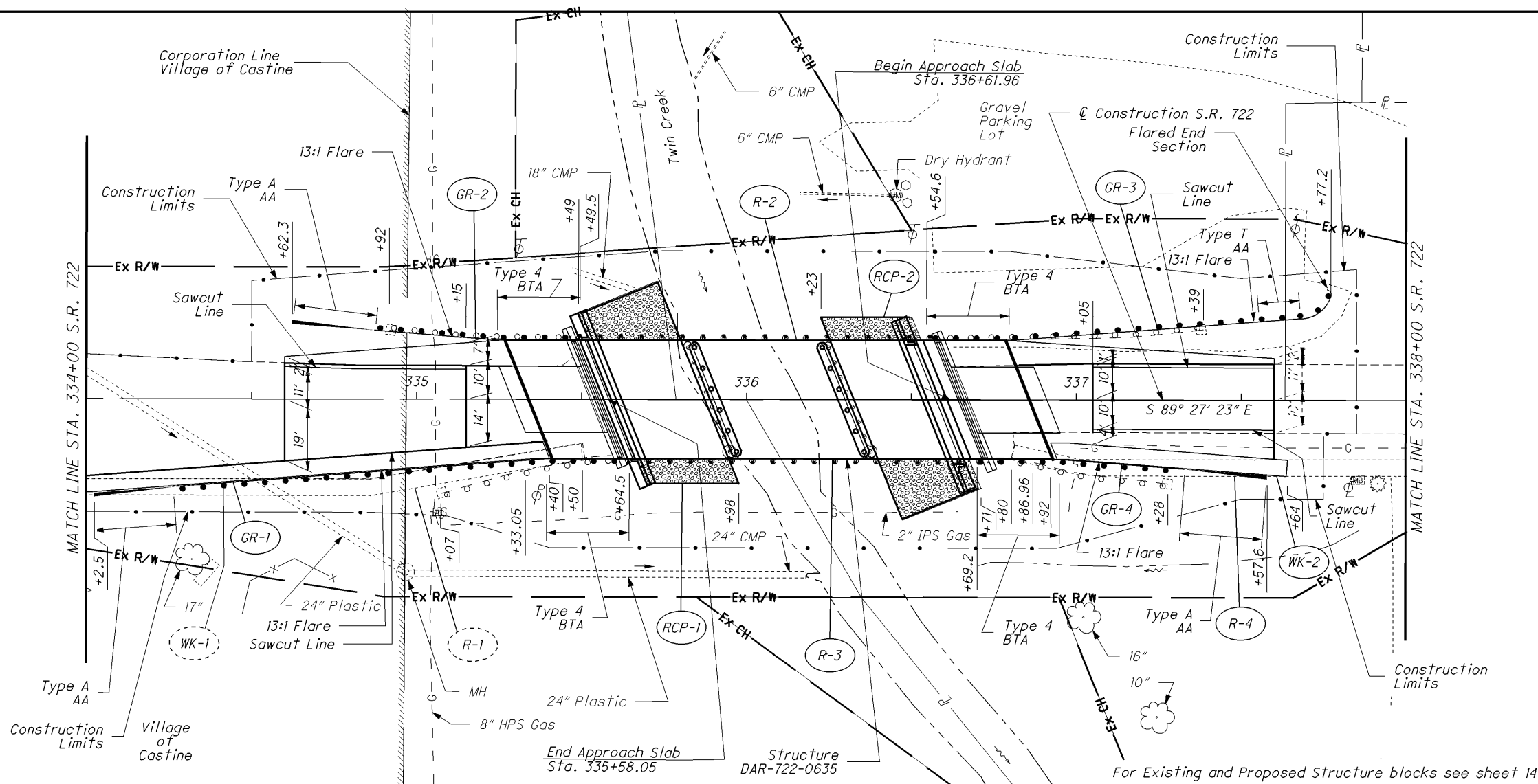
FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24  
FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83  
FOR STORM SEWER PROFILES SEE SHEETS 89 - 92  
FOR @ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3



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

MOE-93-22.35

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REF NO.	STATION		SIDE	QUANTITY	UNIT	DESCRIPTION
	FROM	TO				
GR-1	334+02.5	335+49.5	RT.	1	EA	ANCHOR ASSEMBLY, TYPE A
GR-2	334+62.3	335+64.5	LT.	1	EA	ANCHOR ASSEMBLY, TYPE T
GR-3	336+54.6	337+77.2	LT.	1	EA	ANCHOR ASSEMBLY, TYPE T
GR-4	336+69.2	337+67.6	RT.	1	EA	ANCHOR ASSEMBLY, TYPE T
R-2	334+92	337+39	LT.	1	EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4
R-3	335+07	337+28	RT.	1	EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4
R-4	336+80	337+64	RT.	1	EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4
RPC-1	335+49	335+98	LT/RT	1	EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4
RPC-2	336+23	336+71	LT/RT	1	EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4
WK-2	336+92	337+64	RT.	1	EA	ANCHOR ASSEMBLY, TYPE T
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>						
				387.5	3	ANCHOR ASSEMBLY, TYPE A
				137.5	1	GUARDRAIL, TYPE 5
				62.5	1	GUARDRAIL, TYPE 5
				125	1	GUARDRAIL, TYPE 5
				50.0	1	GUARDRAIL, TYPE 5
				250	1	GUARDRAIL, TYPE 5
				225	1	GUARDRAIL, TYPE 5
				405	1	GUARDRAIL, TYPE 5
				475	1	GUARDRAIL, TYPE 5
				354	1	4" CONCRETE WALK
				354	1	4" CONCRETE WALK
				120	1	ROCK CHANNEL PROTECTION WITH FILTER
				130	1	ROCK CHANNEL PROTECTION WITH FILTER
				250	1	ROCK CHANNEL PROTECTION WITH FILTER

CALCULATED  
JAR

CHECKED  
GFR

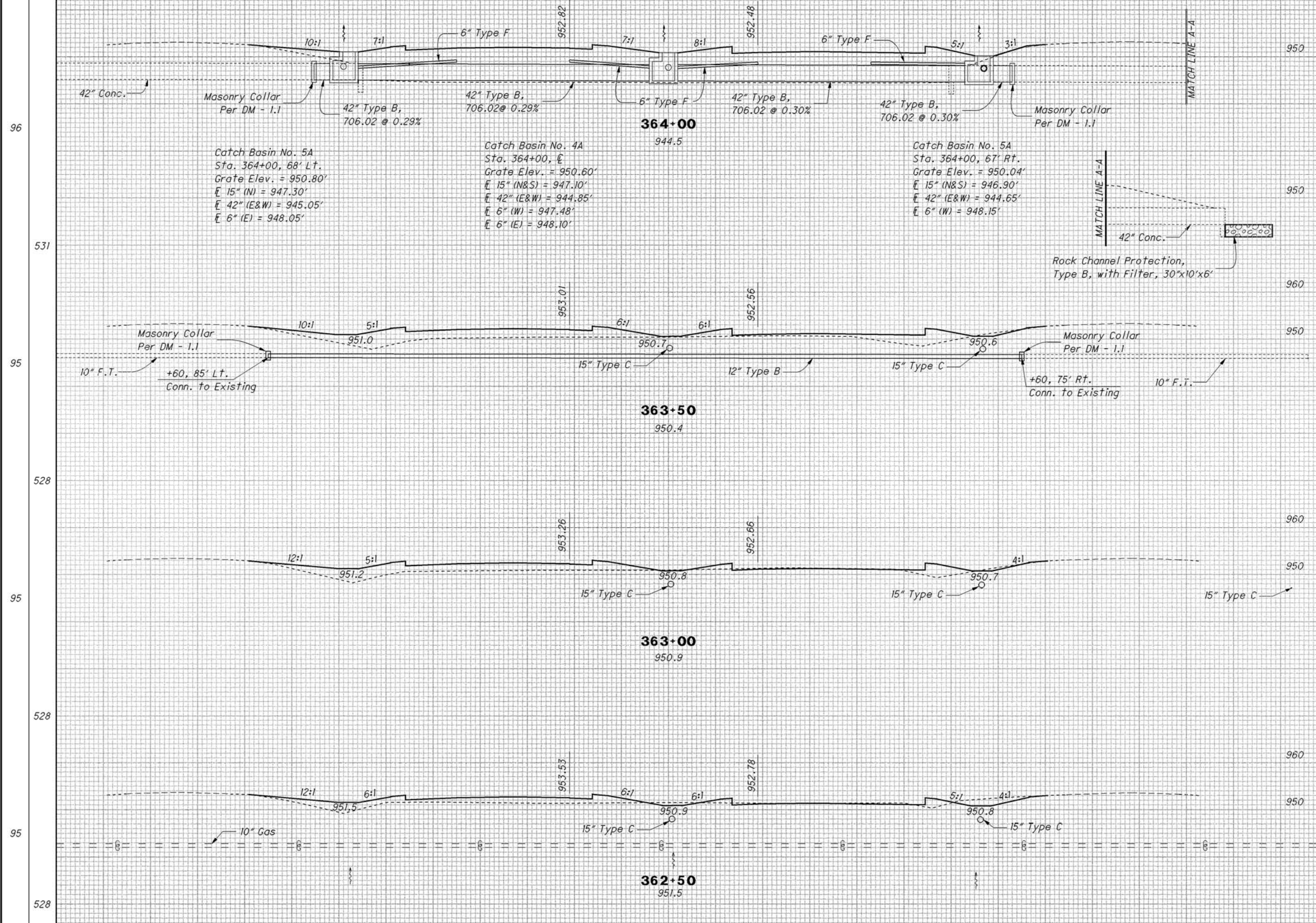
**PLAN AND PROFILE - S.R. 722  
STA. 334+00 TO STA. 338+00**

**DAR-722-6.34**

SEEDING  
END WIDTH SO. YDS.

SP 1310-1  
DATE: OCTOBER 2006

CALCULATED  
MTG  
CHECKED  
CJM



END	AREA		VOLUME	
	CUT	FILL	CUT	FILL
96	0	919		
531			7	1054
95	8	219		
528			24	346
95			18	155
528			40	250
95			25	115
528			67	187
2115	SHEET TOTAL	100	138	1837

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

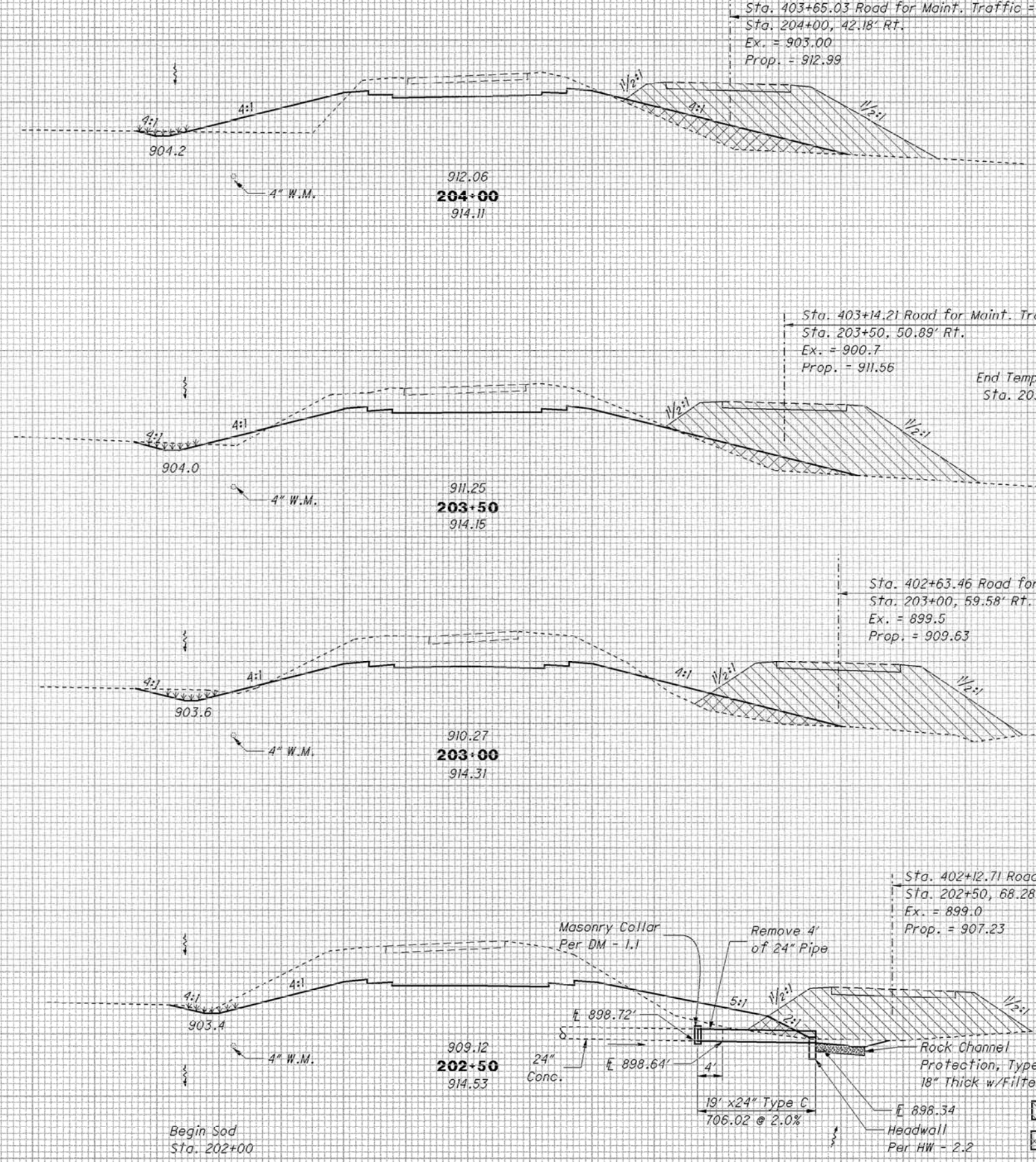
LUC-76-31.48

154  
488

SEEDING  
END WIDTH SQ. YDS.

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

517  
104  
583  
106  
586  
105  
581  
104  
2267 SHEET TOTAL



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

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

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

Road for Maint. Traffic Earthwork  
 Included with Permanent Earthwork Quantities

\*For Information Only

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

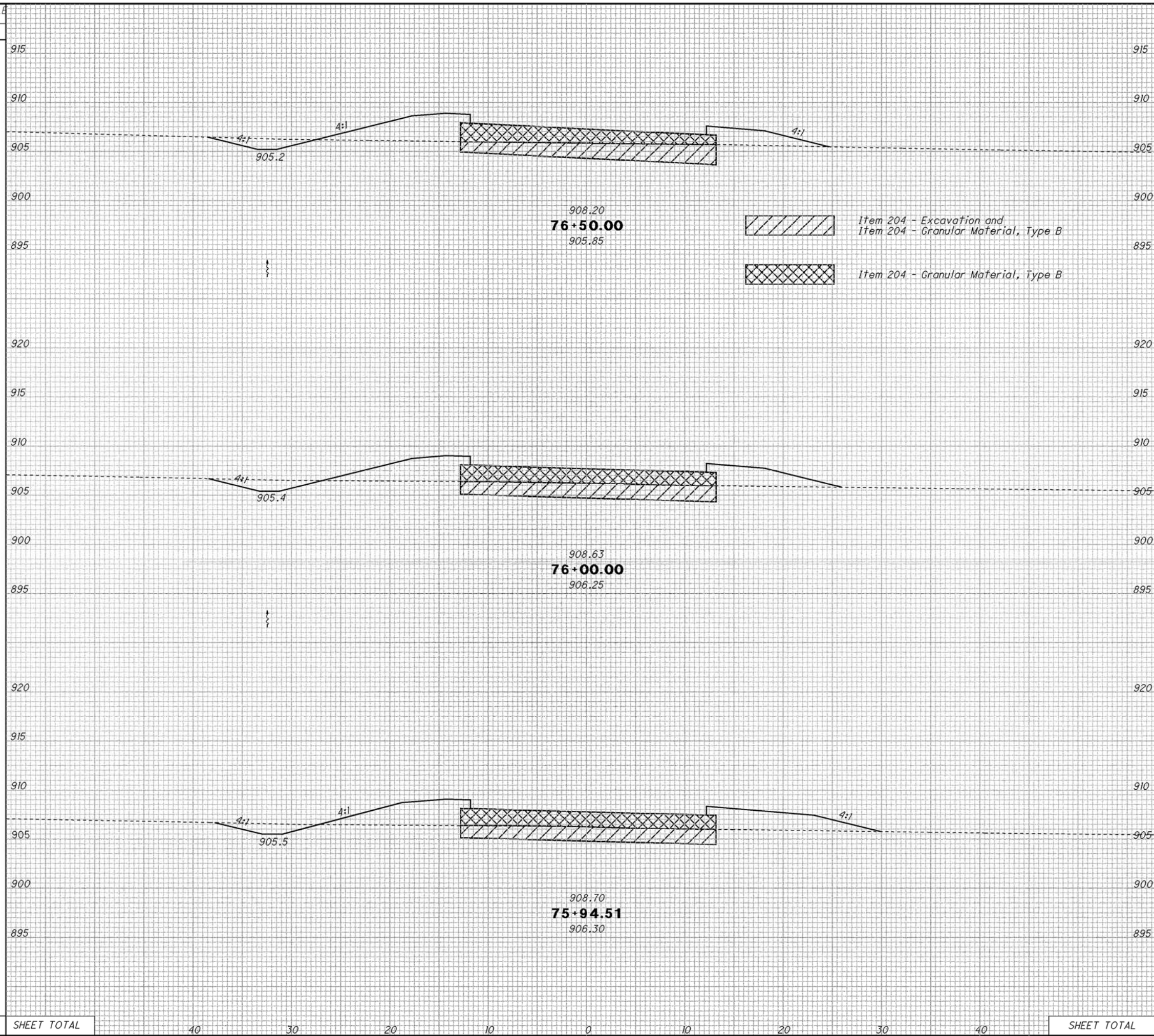
MED - 130-1.23

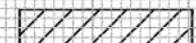

74  
103



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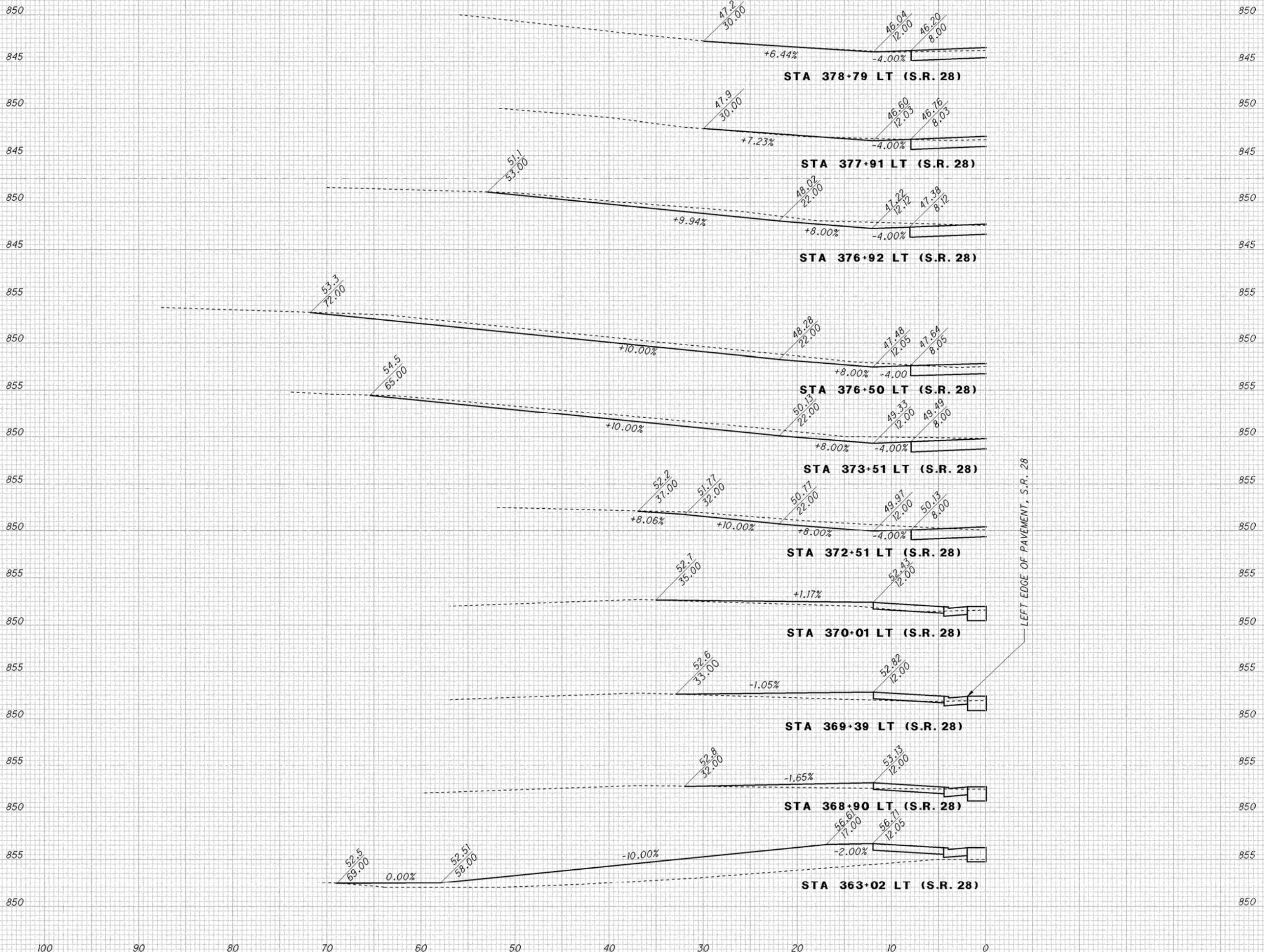
SEEDING		GEOTEXTILE FABRIC	
END WIDTH	SO. YDS.	END WIDTH	SO. YDS.
44	24	24	133
45	24	24	15
48	24	24	148
275	148	SHEET TOTAL	



 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

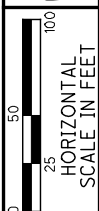


LEFT EDGE OF PAVEMENT, S.R. 28

DRIVEWAY PROFILES

HUR - 28 - 6.86

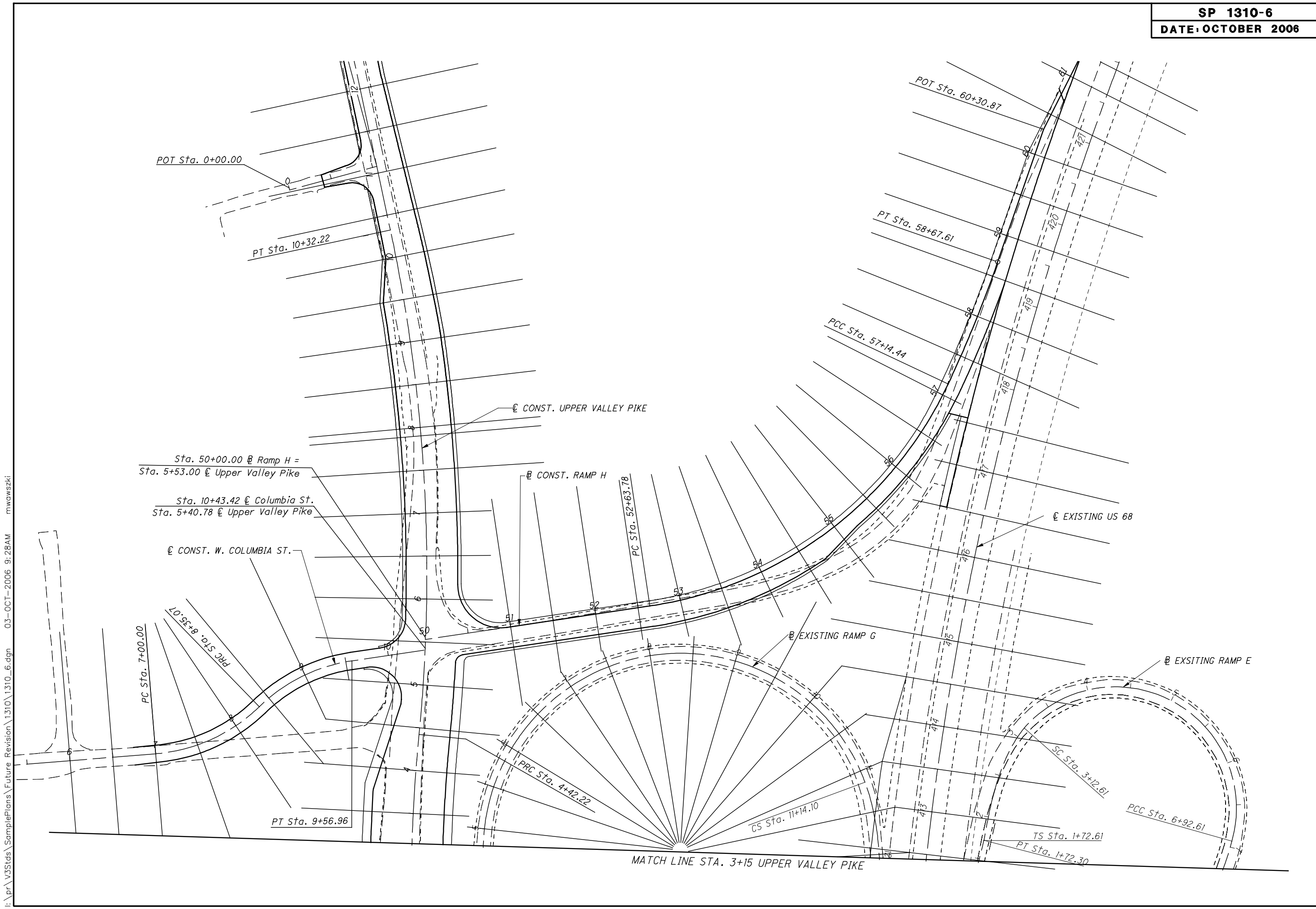




CALCULATED MSO  
CHECKED JAD

CROSS SECTION LAYOUT

CLA-40-10.18




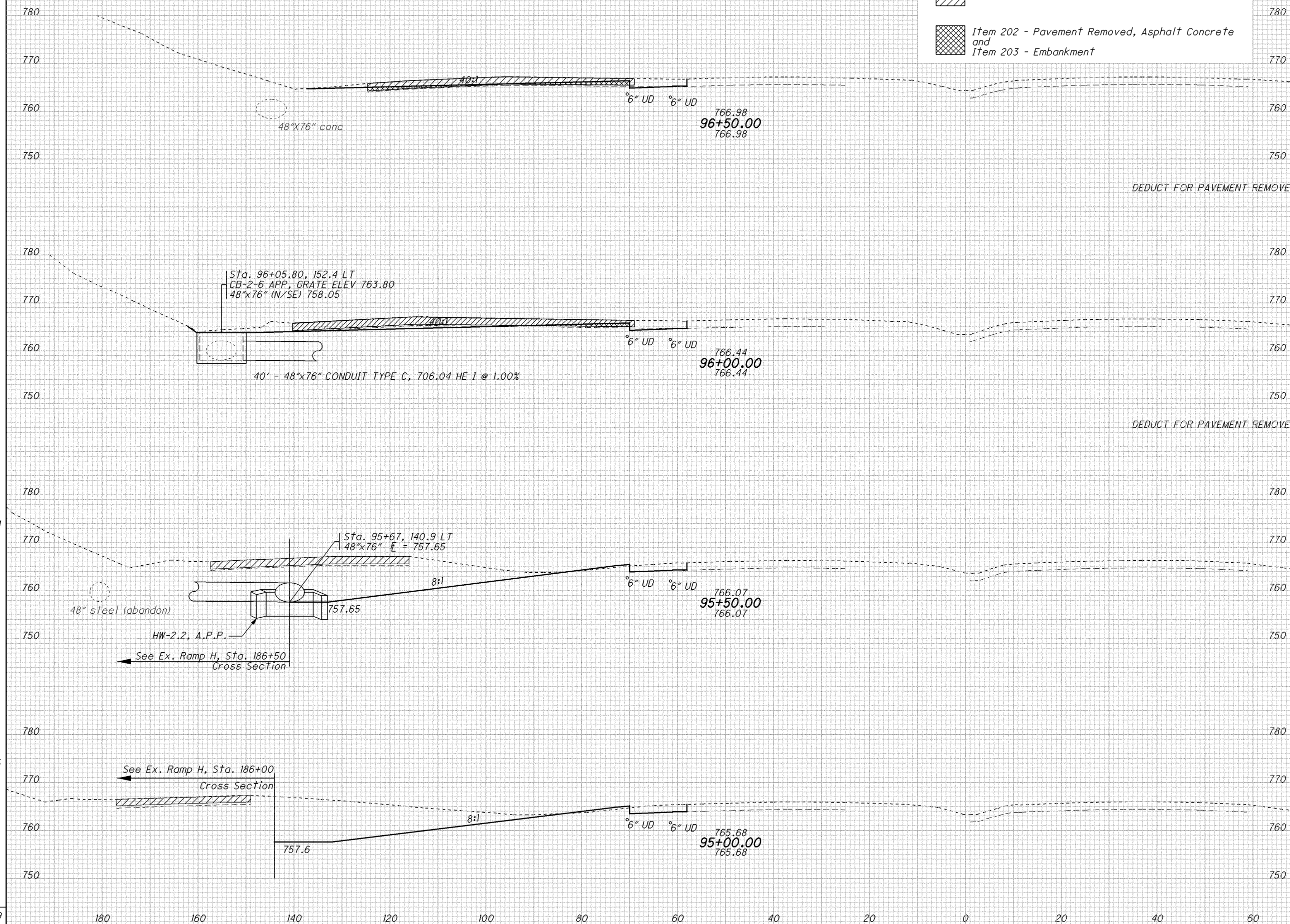
I:\pr\35\35\SamplePlans\Future Revision\1310\1310\_6.dgn 03-OCT-2006 9:28AM mawaszki

SEEDING  
END WIDTH SO. YDS.  
315  
68  
415  
81  
404  
64  
355  
64  
1489

SP 1310-7  
DATE: JULY 2010

END AREA	VOLUME	CALCULATED		TKB	MDC
		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

26  
68

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**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

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	236.5/1	+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	236.5/1	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	236.5/1	610.42	
610.87	236.5/1	+0.22	+0.0183	12.00	38+00.00	610.65	12.00	-0.0183	-0.22		610.43	
610.80		+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  
KAK  
CHECKED  
LJS



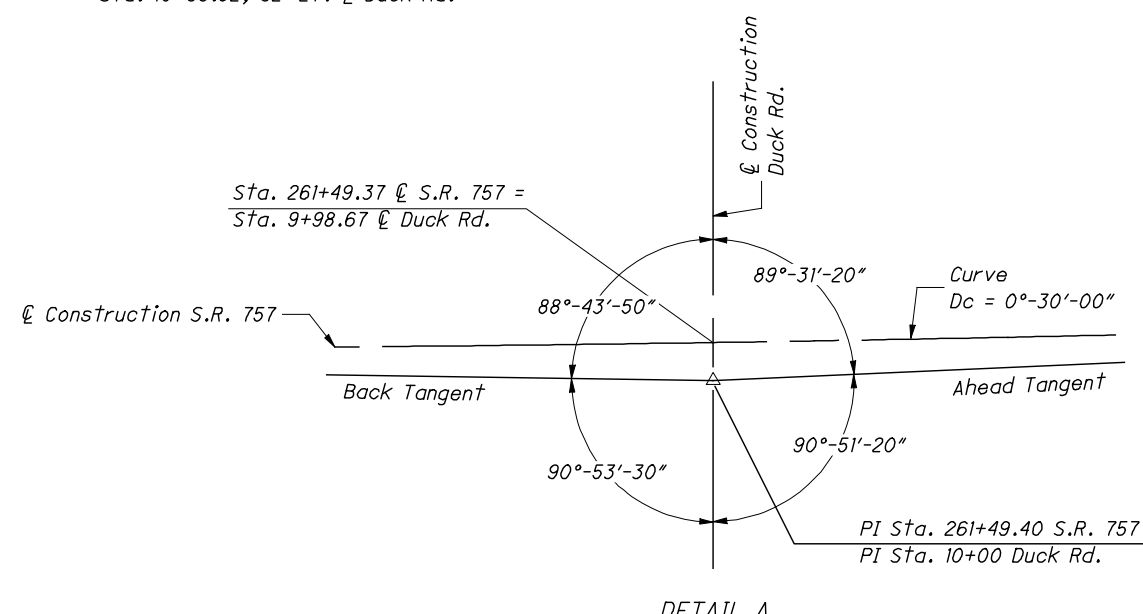
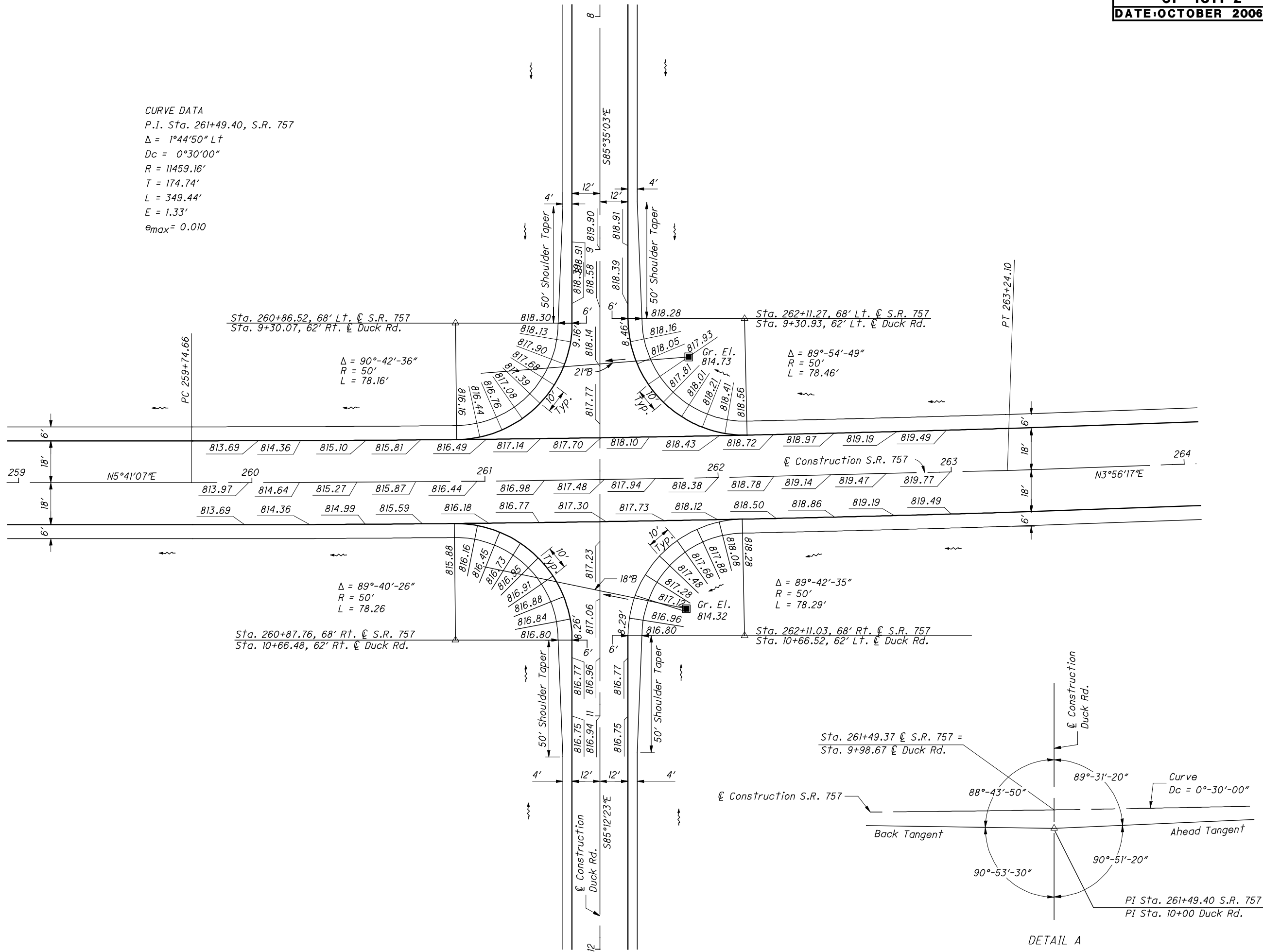
CALCULATED  
VHW  
CHECKED  
TLH

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  
 $D_c = 0^{\circ}30'00''$   
 $R = 11459.16'$   
 $T = 174.74'$   
 $L = 349.44'$   
 $E = 1.33'$   
 $e_{max} = 0.010$



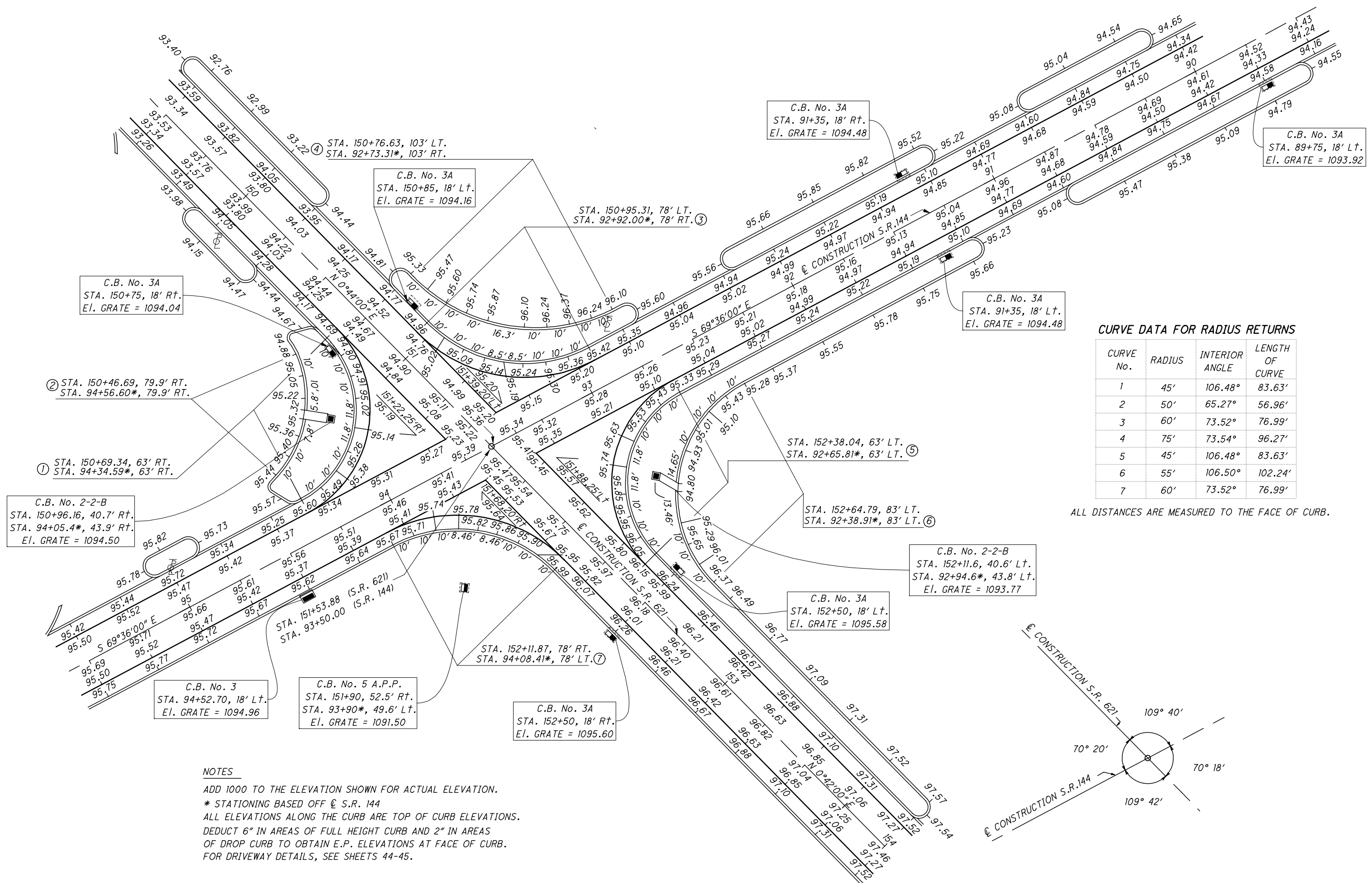
DETAIL A



CALCULATED  
WSR  
CHECKED  
SUB

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

BEL-621-5.29



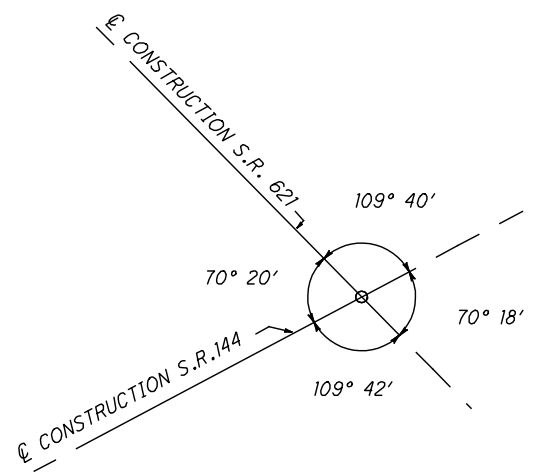
CURVE DATA FOR RADIUS RETURNS

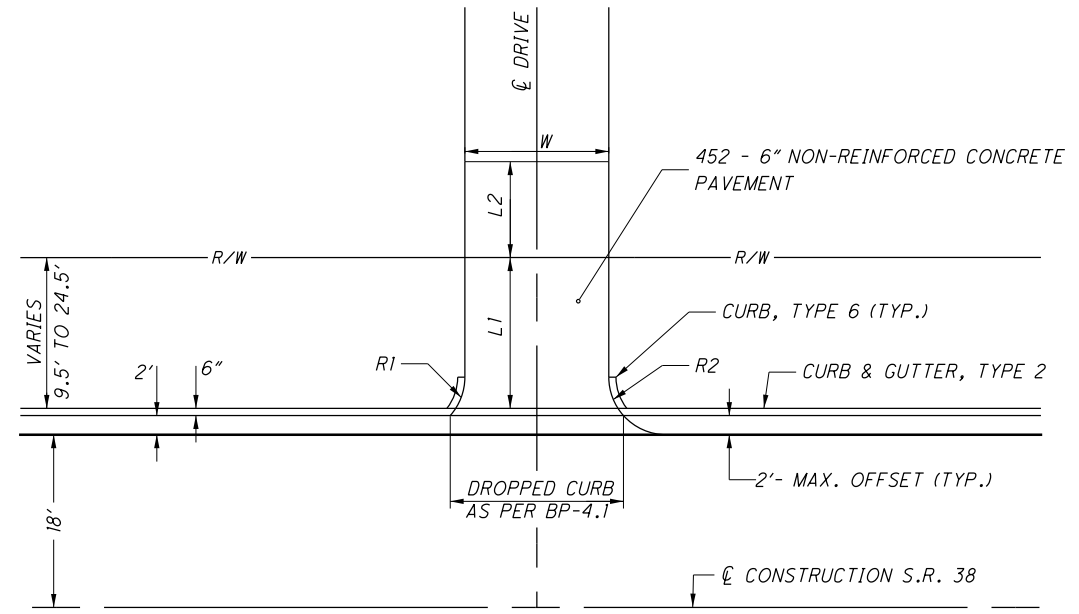
CURVE No.	RADIUS	INTERIOR ANGLE	LENGTH OF CURVE
1	45'	106.48°	83.63'
2	50'	65.27°	56.96'
3	60'	73.52°	76.99'
4	75'	73.54°	96.27'
5	45'	106.48°	83.63'
6	55'	106.50°	102.24'
7	60'	73.52°	76.99'

ALL DISTANCES ARE MEASURED TO THE FACE OF CURB.

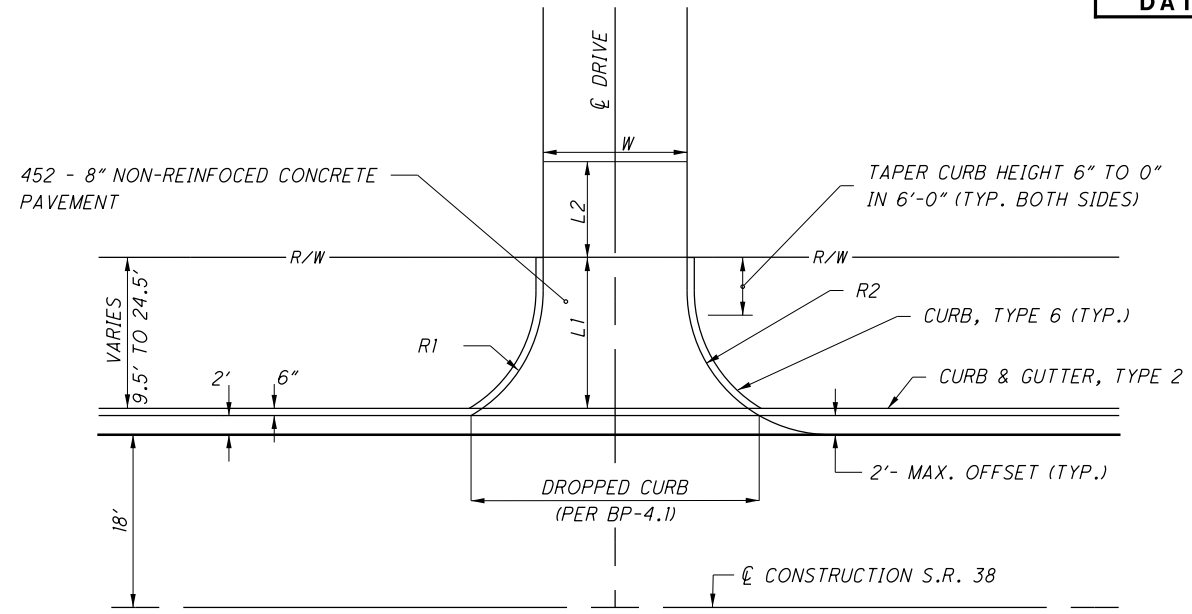
NOTES

- ADD 1000 TO THE ELEVATION SHOWN FOR ACTUAL ELEVATION.
- \* STATIONING BASED OFF  $\angle$  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.

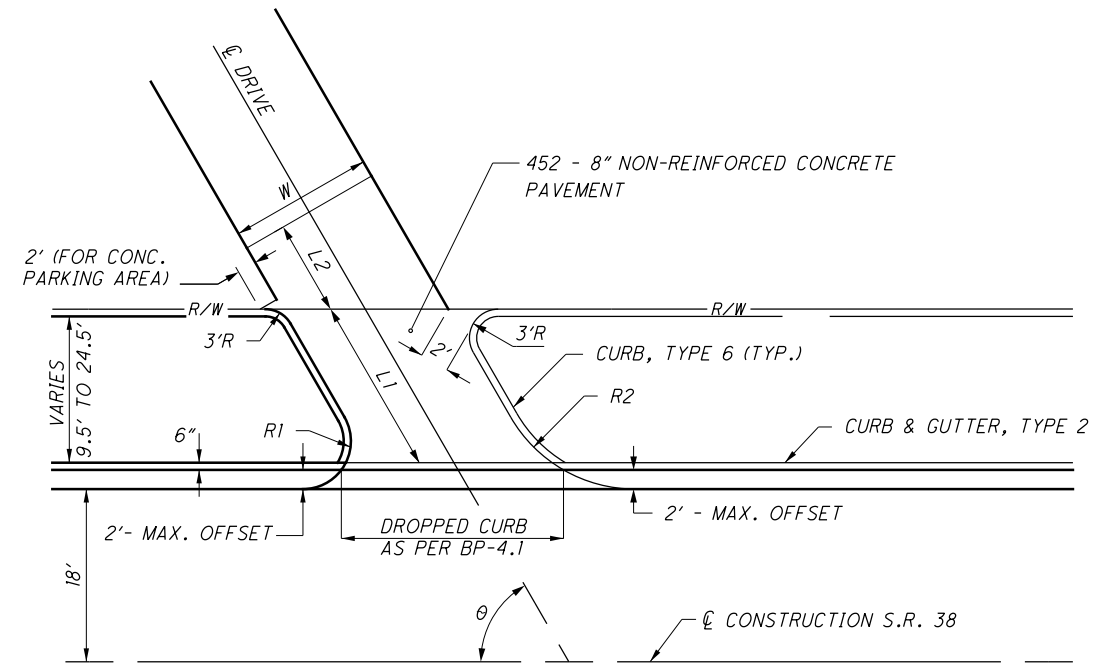




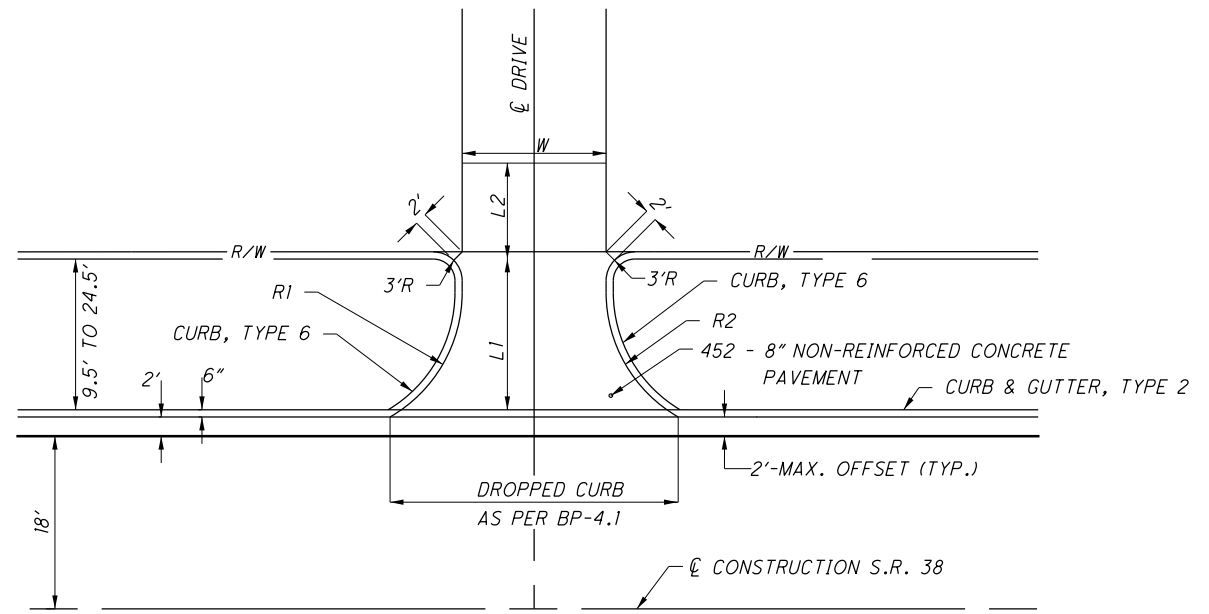
**RESIDENTIAL DRIVES**



**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 FOR INTERMEDIATE COURSE (0.075 GAL./SQ. YD.)
  - 304 - 6" AGGREGATE BASE
- EXISTING CONCRETE DRIVES
  - 452 - 6" NON-REINFORCED CONCRETE PAVEMENT (APRON)

**COMMERCIAL AND SERVICE STATION DRIVES**

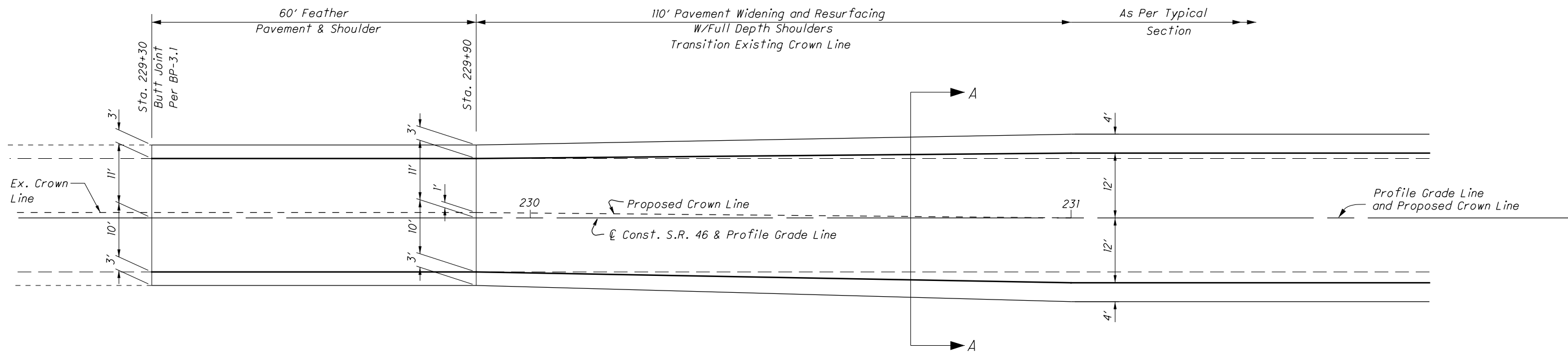
- EXISTING AGGREGATE DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
  - 304 - 10" AGGREGATE BASE
- EXISTING ASPHALT DRIVE
  - 452 - 8" NON-REINFORCED CONCRETE PAVEMENT (APRON)
  - 442 - 1/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (448)
  - 442 - 1 3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448)
  - 407 - TACK COAT FOR INTERMEDIATE COURSE (0.075 GAL./SQ. YD.)
  - 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**

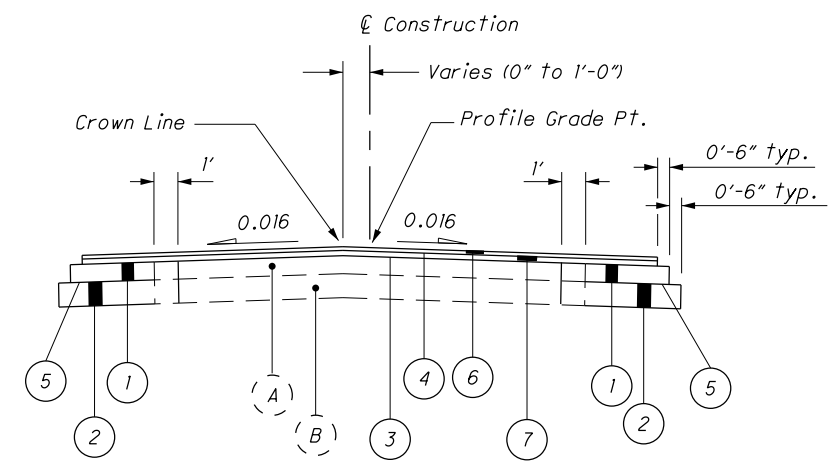




PAVEMENT TRANSITION DETAIL

**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 ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- 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

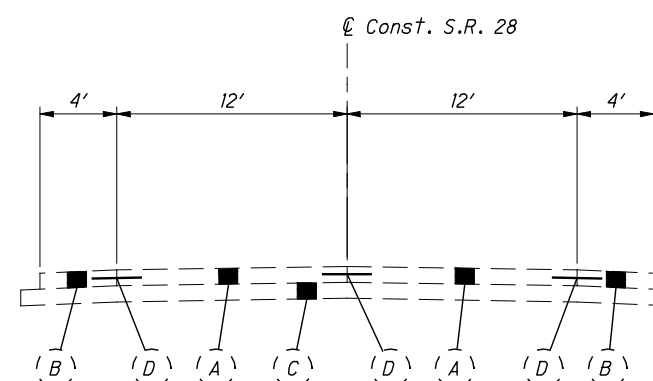
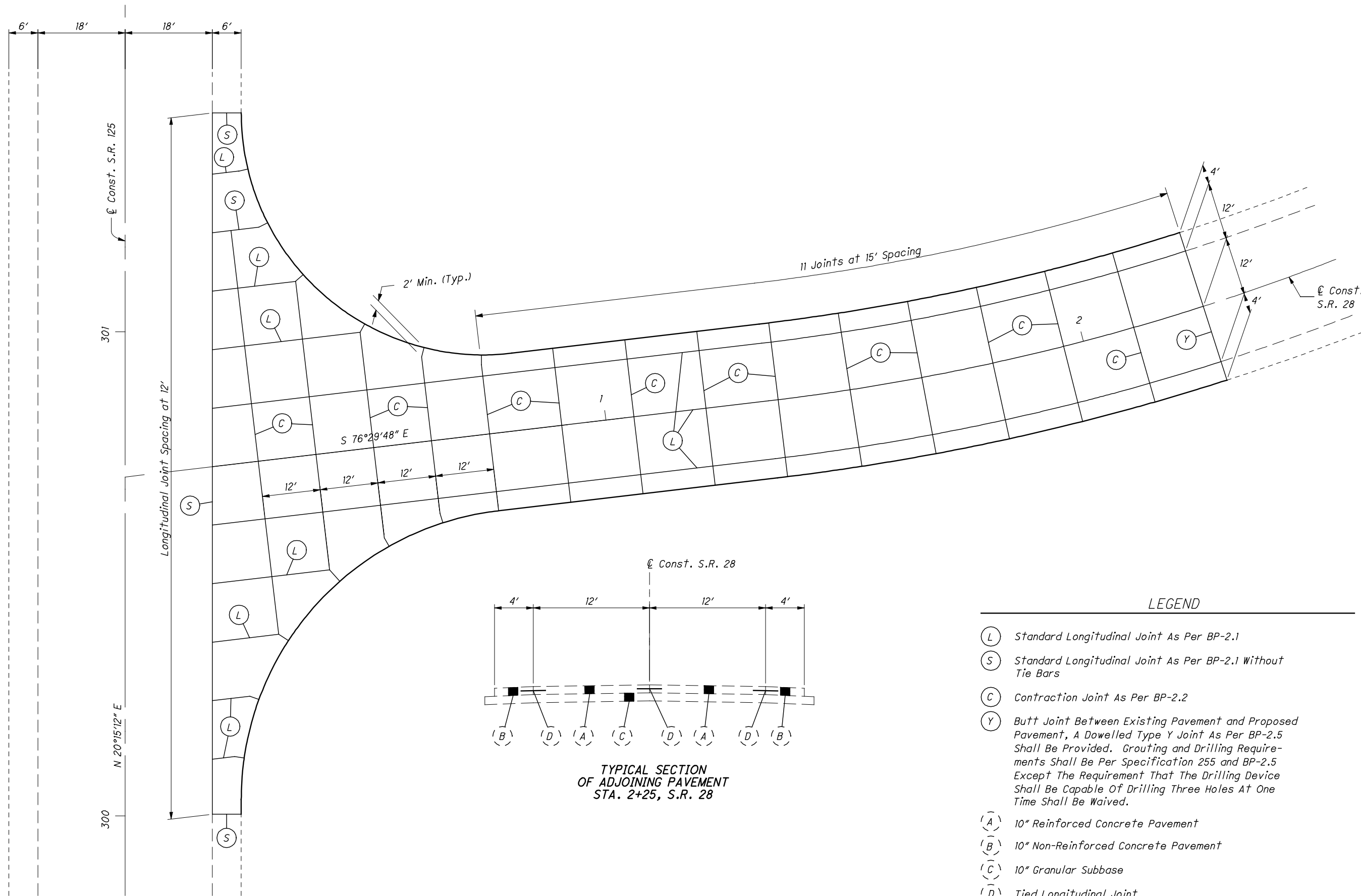




CALCULATED  
AAM  
CHECKED  
DEM

**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

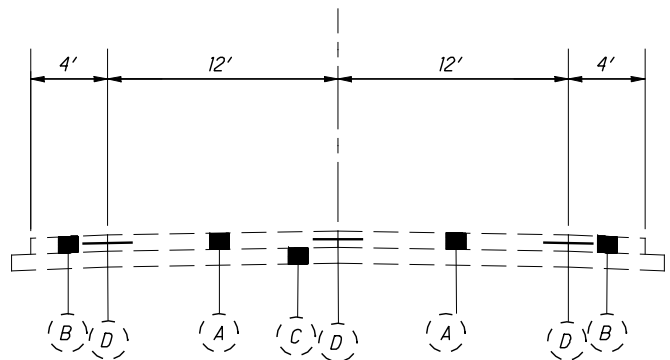


CALCULATED  
VHW  
CHECKED  
TLH

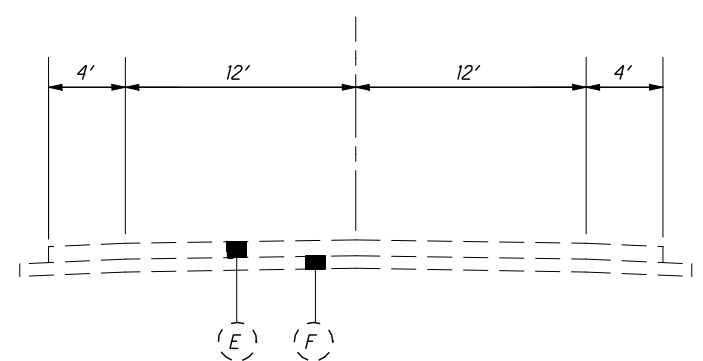
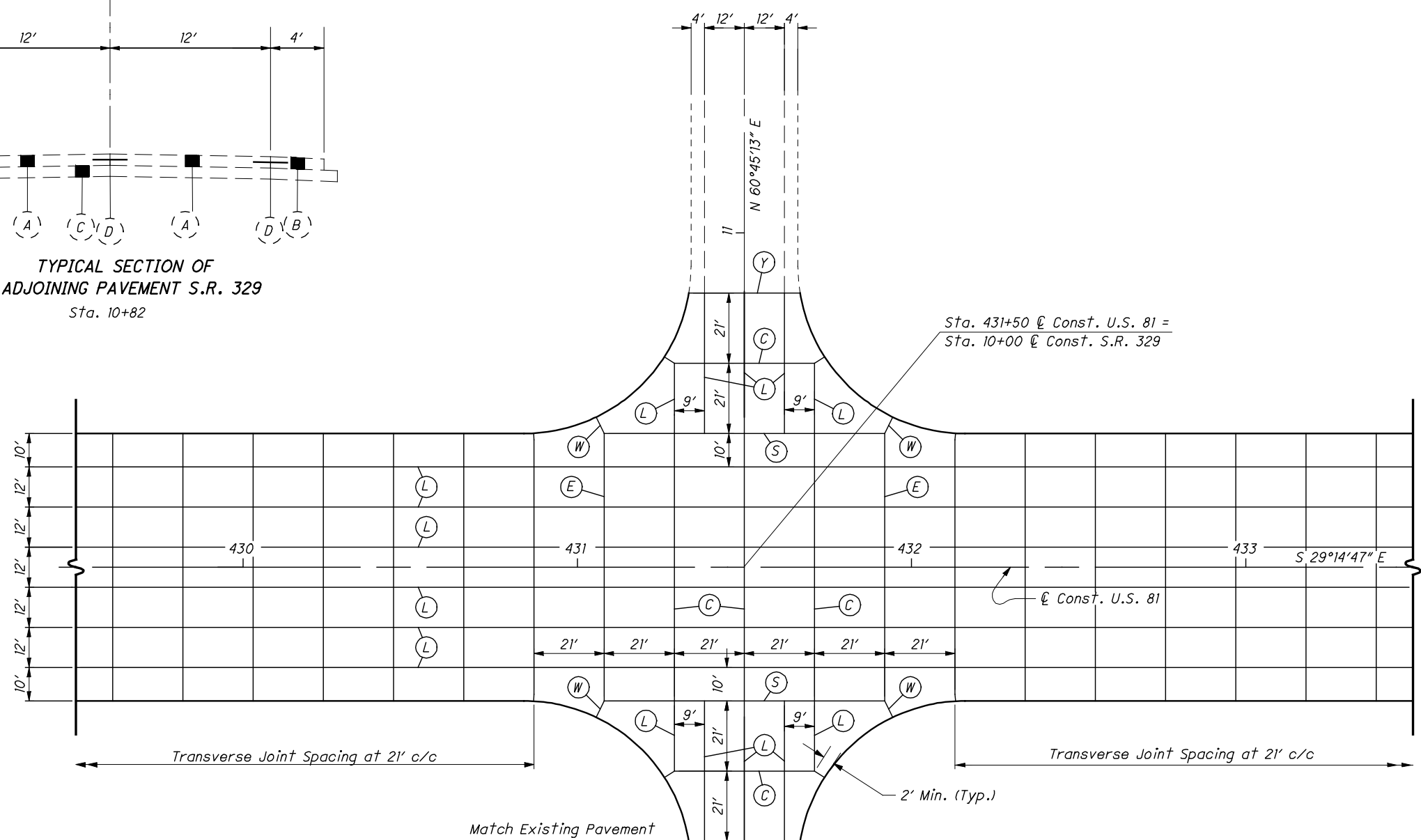
0 20 40  
HORIZONTAL  
SCALE IN FEET

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

HOC-81-18.58



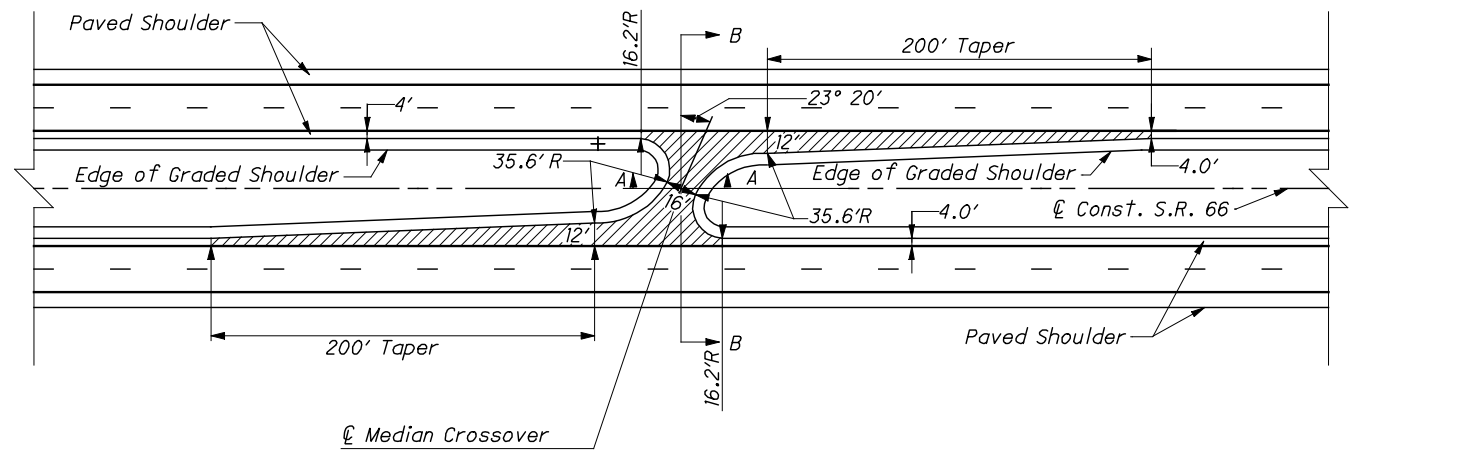
TYPICAL SECTION OF  
ADJOINING PAVEMENT S.R. 329  
Sta. 10+82



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

LEGEND

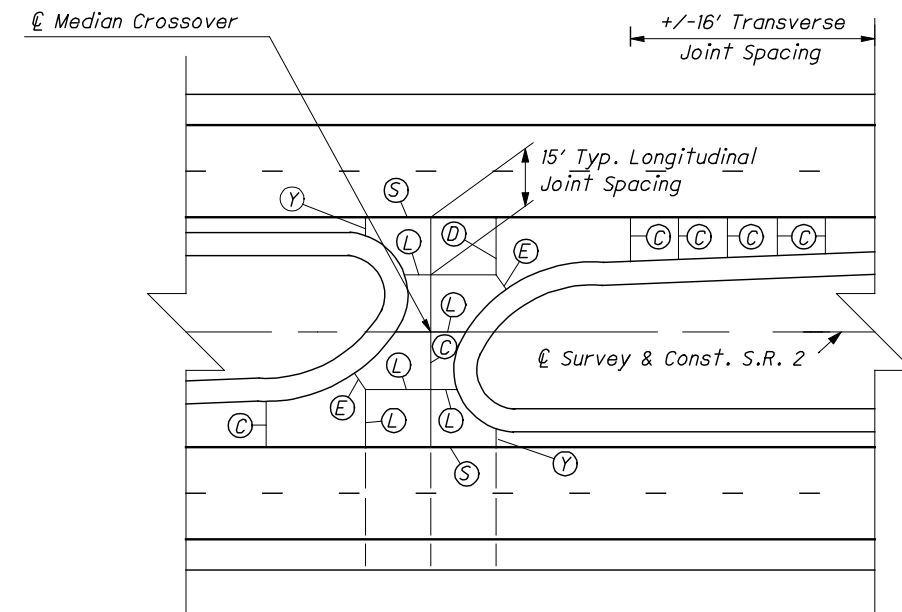
- |   |  |
|---|--|
| (E) Expansion Joint As Per BP-2.2   | (A) 10" Reinforced Concrete Pavement         |
| (W) Expansion Joint As Per BP-2.2 Without Dowel Bars  | (B) 10" Non-Reinforced Concrete Pavement     |
| (L) Standard Longitudinal Joint As Per BP-2.1   | (C) 10" Granular Subbase                     |
| (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

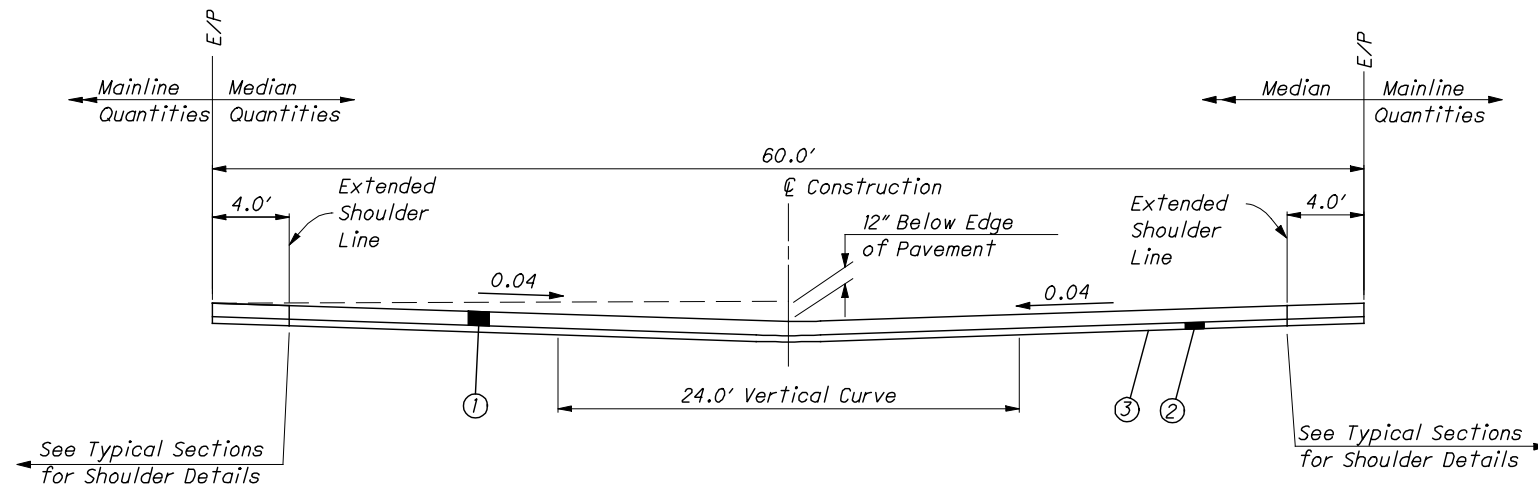
MEDIAN CROSSOVER PAVEMENT



**MEDIAN CROSSOVER JOINT DETAIL**

\*Align Transverse Joints in Median Crossover and Proposed Pavement.

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



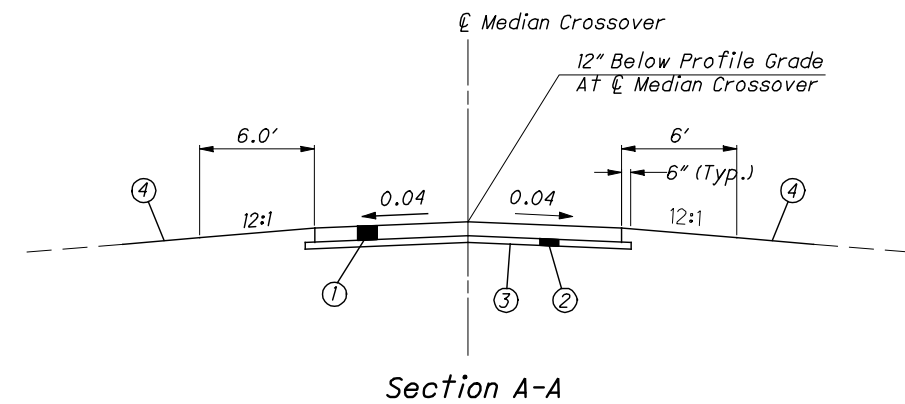
**Section B-B**

See Typical Sections for Shoulder Details

See Typical Sections for Shoulder Details

**LEGEND**

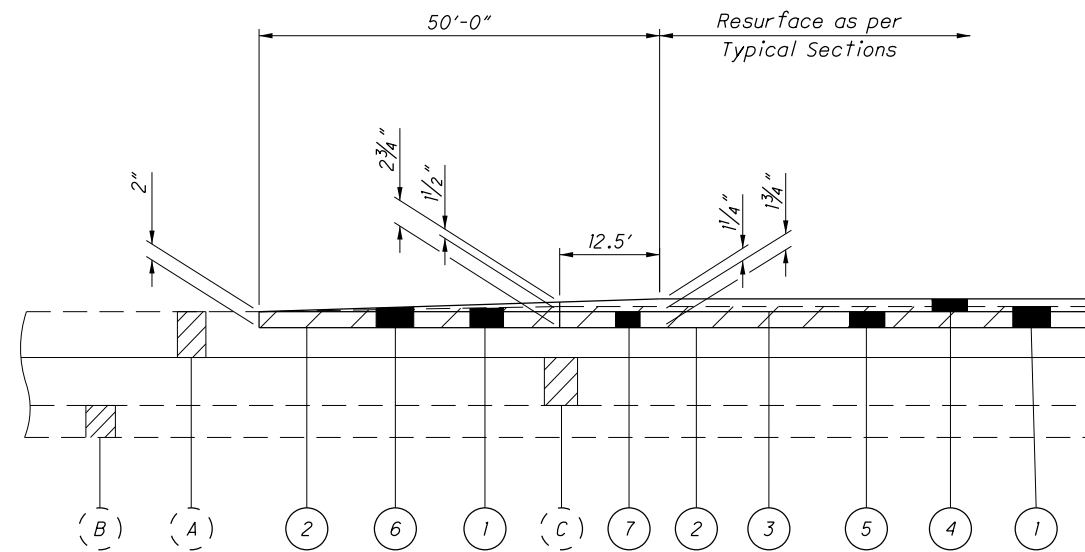
- |   |  |
|---|--|
| ① ITEM 452 - 9" Non-Reinforced Concrete Pavement, As Per Plan | ⓐ Contraction Joint As Per BP-2.2                              |
| ② ITEM 304 - 6" Aggregate Base                                | ⓓ Transverse Joint (With Dowels), As Per BP-2.2                |
| ③ ITEM 204 - Subgrade 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                            |
|   | Ⓨ Contraction Joint (Type Y) As Per BP-2.5                     |



**Section A-A**

**PROPOSED LEGEND**

- ① ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
- ② ITEM 407 Tack Coat (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- ③ ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd)
- 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

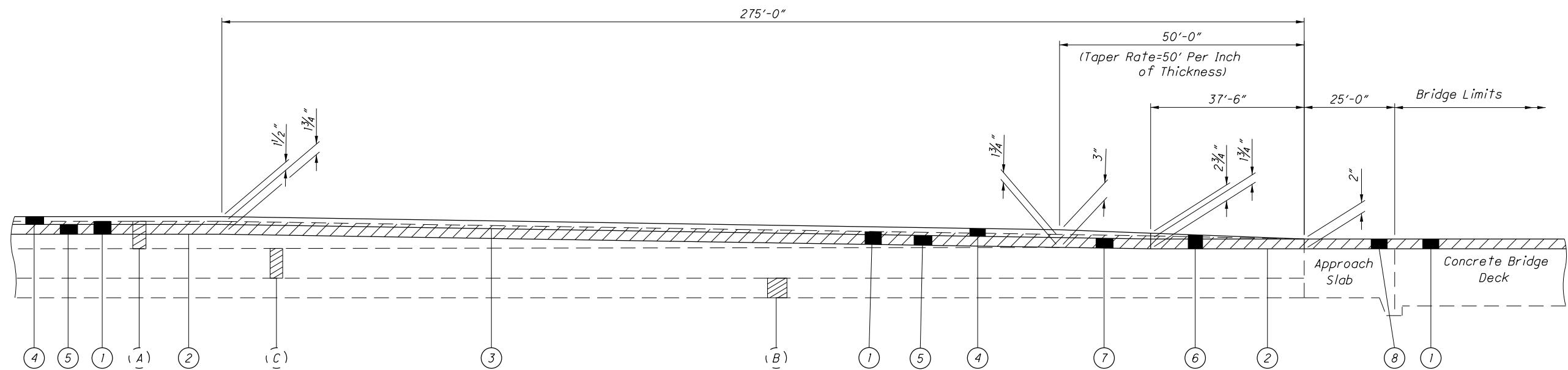


**EXISTING LEGEND**

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

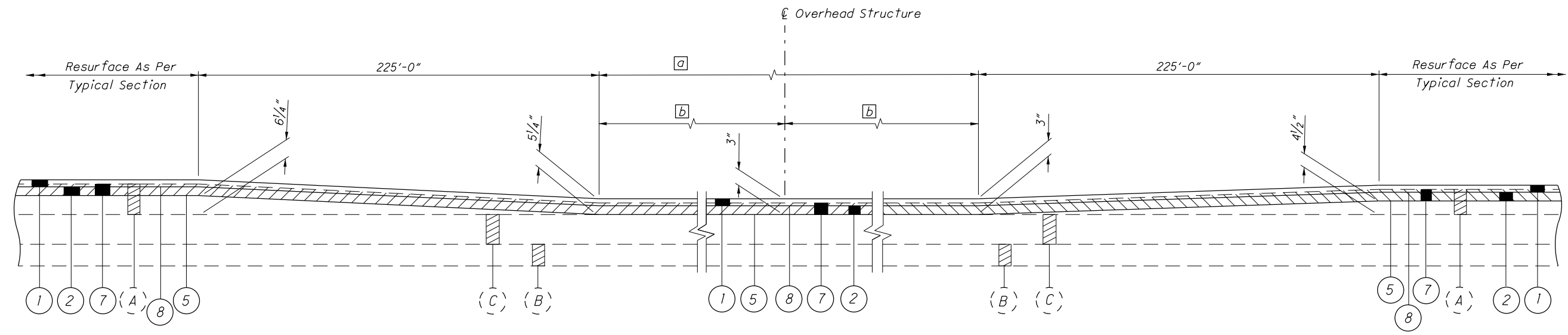
= Item 254 Pavement Planing, Asphalt Concrete

**PAVEMENT TRANSITION AT BEGIN/END PAVEMENT**



**TRANSITION AT STRUCTURES**

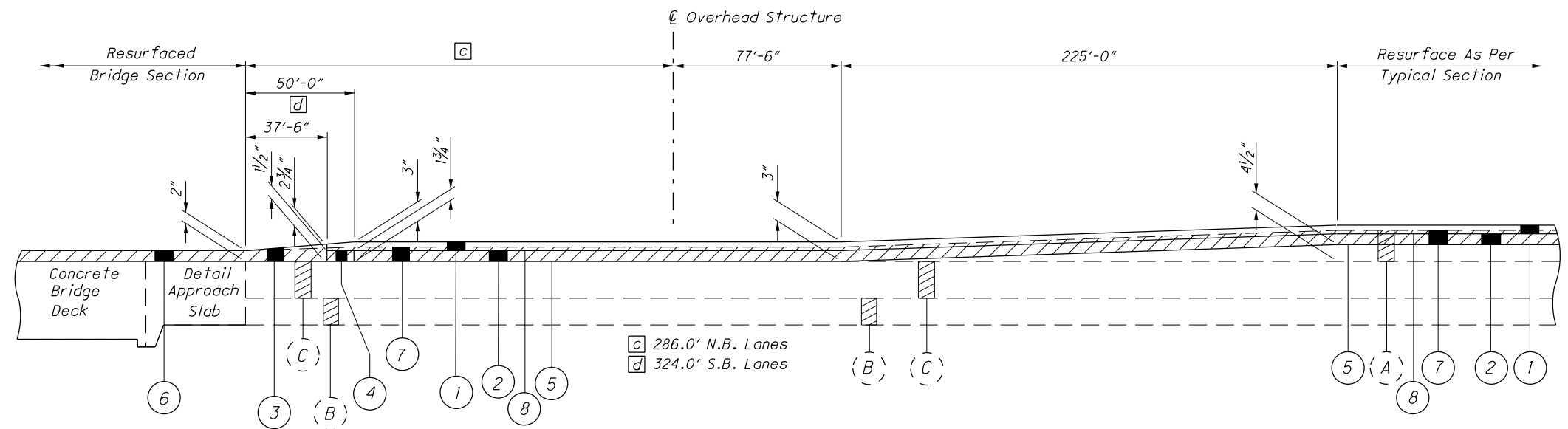
DETAIL APPLIES AT:  
VAN-277-0585 Lt. & Rt. (North & South End)  
VAN-277-1041 Lt. & Rt. (South Only)  
VAN-277-1246 Lt. & Rt. (North Only)



**PAVEMENT TRANSITION AT OVERHEAD BRIDGE**

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

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



**PAVEMENT TRANSITION AT OVERHEAD AND MAINLINE BRIDGES**

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

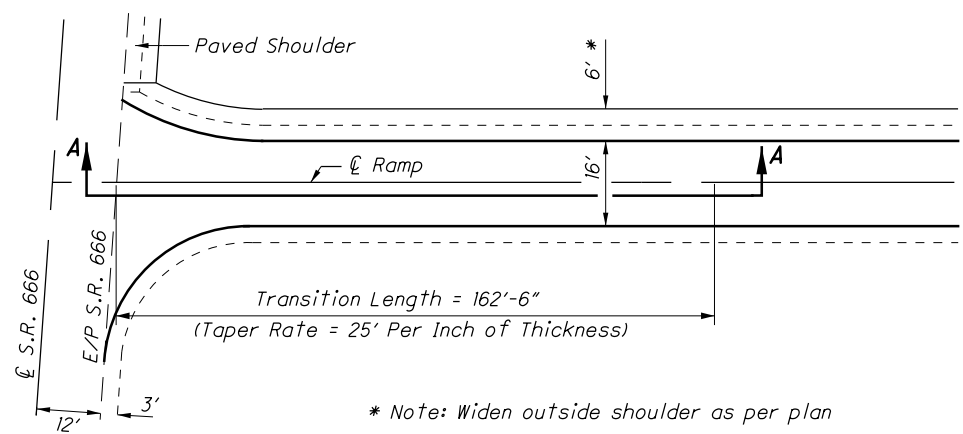
c 286.0' N.B. Lanes  
 d 324.0' S.B. Lanes

**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 (Applied at a rate of 0.075 gal/yd<sup>2</sup>)
- 6 ITEM 848 Micro Silica Modified Concrete (Thickness 1 1/4" Nominal)
- 7 ITEM 254 Pavement Planing, Asphalt Concrete (Depth = 2")
- 8 ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd)

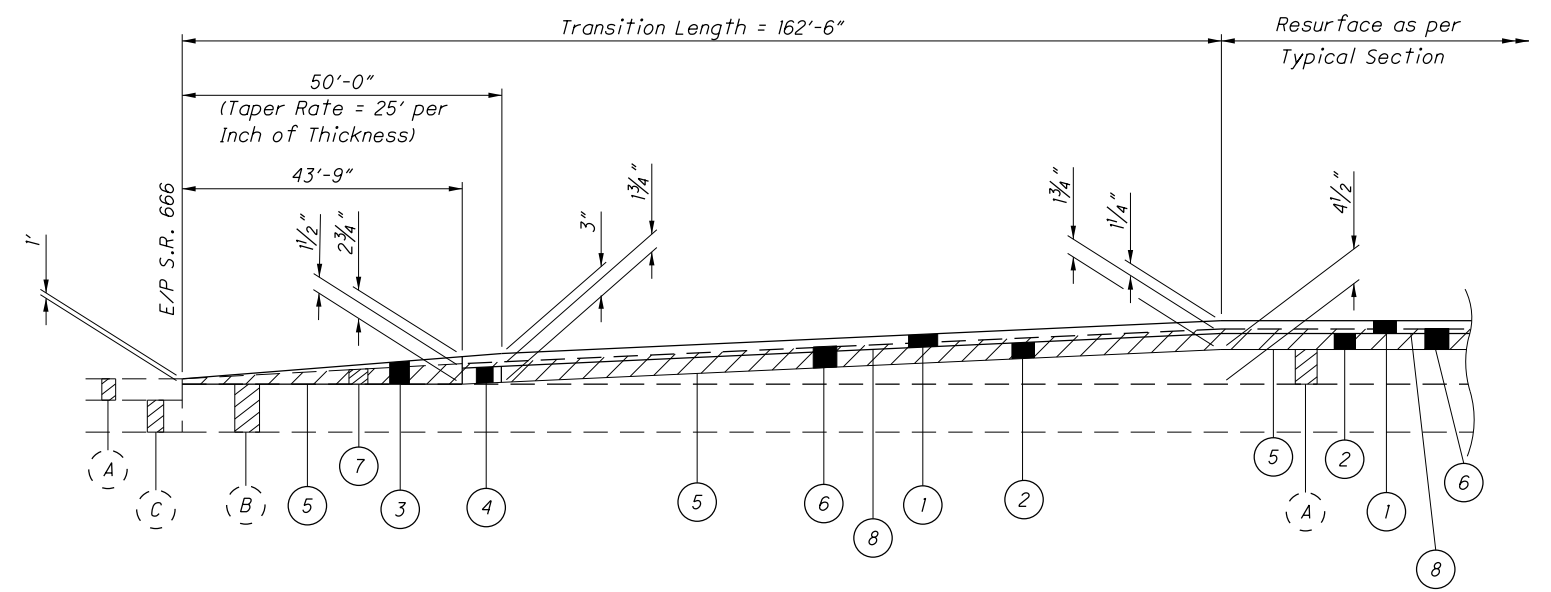
**EXISTING LEGEND**

- (A) ±6 1/2" Asphalt Concrete
- (B) ±6" Subbase
- (C) ±9" Reinforced Portland Cement Concrete Pavement
- [Hatched Box] = ITEM 254 Pavement Planing, Asphalt Concrete



\* Note: Widen outside shoulder as per plan

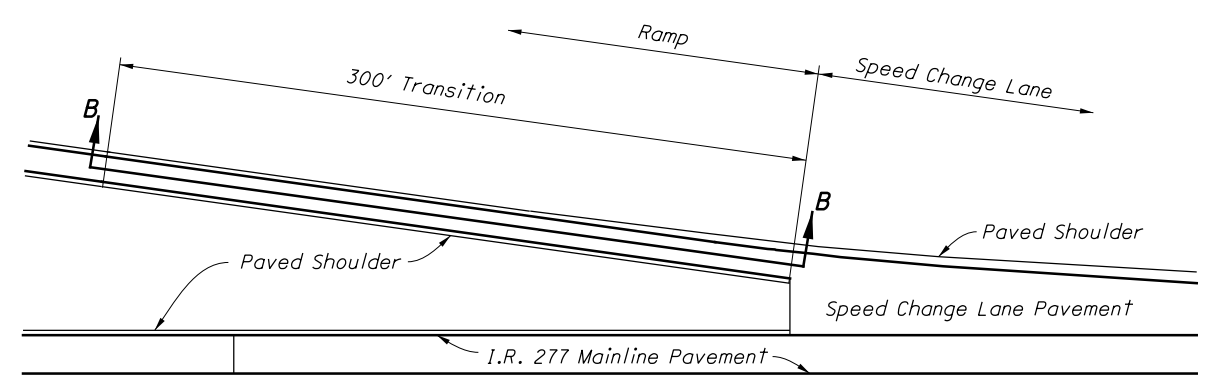
PLAN VIEW



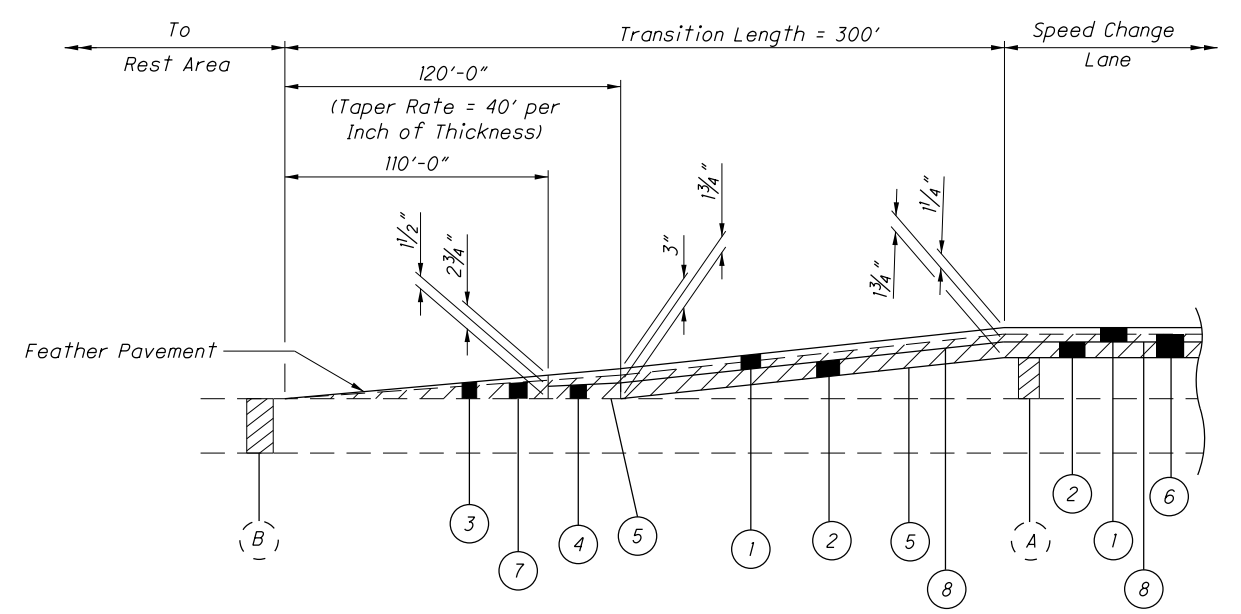
SECTION A-A

TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:  
S.R. 666 Interchange



PLAN VIEW

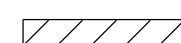


SECTION B-B

TRANSITION AT REST AREA ENTRANCE/EXIT RAMP DETAIL

PROPOSED LEGEND

- |  |  |
|--|--|
| ① ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446), PG 64-22         | ⑤ ITEM 407 Tack Coat (Applied at a rate of 0.075 gal/yd <sup>2</sup> )                         |
| 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)      | ⑧ ITEM 407 Tack Coat for Intermediate Course (Applied at a rate of 0.075 gal/yd <sup>2</sup> ) |

 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



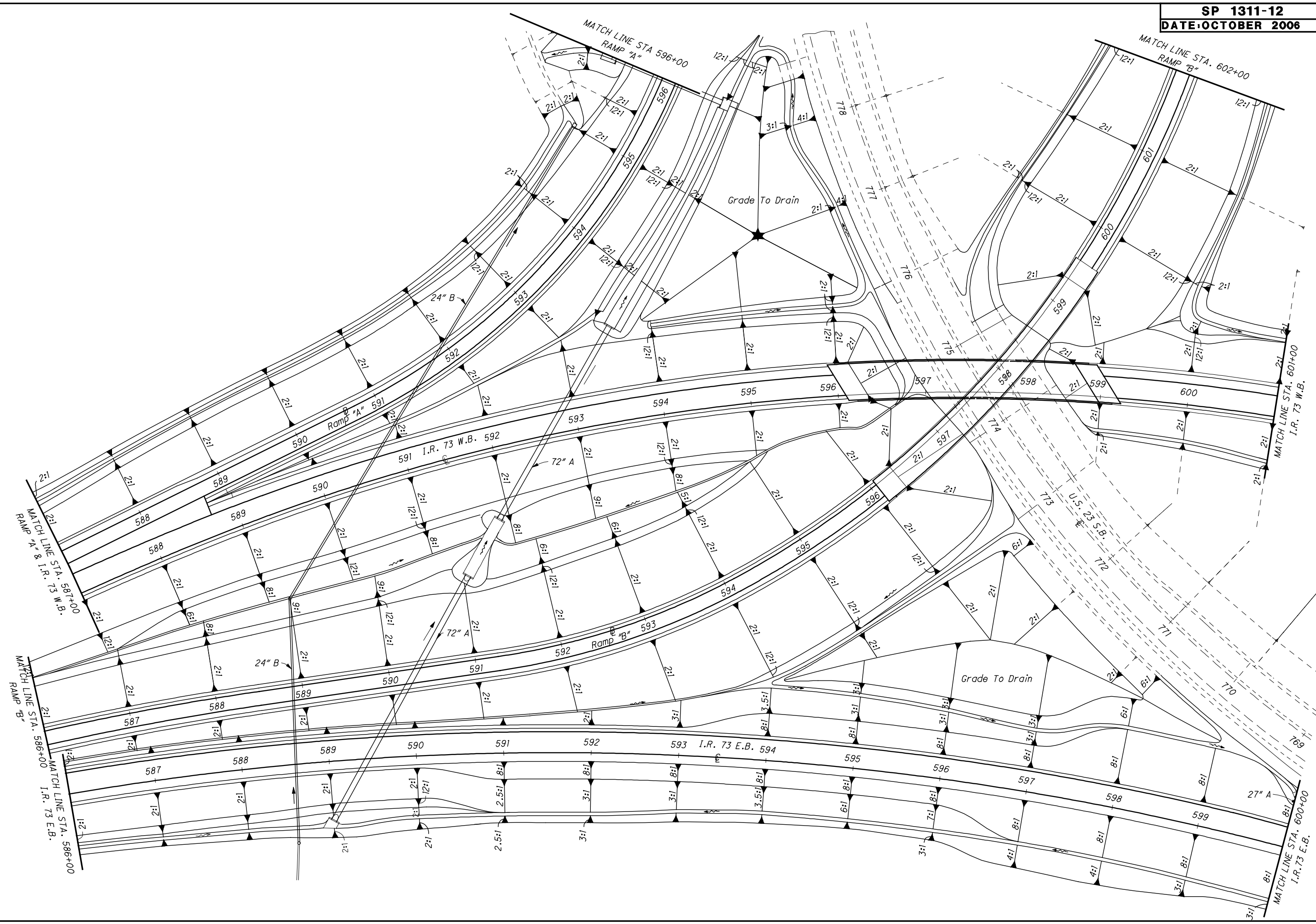
0 25 50 100  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
DMK  
CHECKED  
CML

**GRADING DETAILS  
I.R. 73 INTERCHANGE**

**HAN-73-19.11**

278  
536

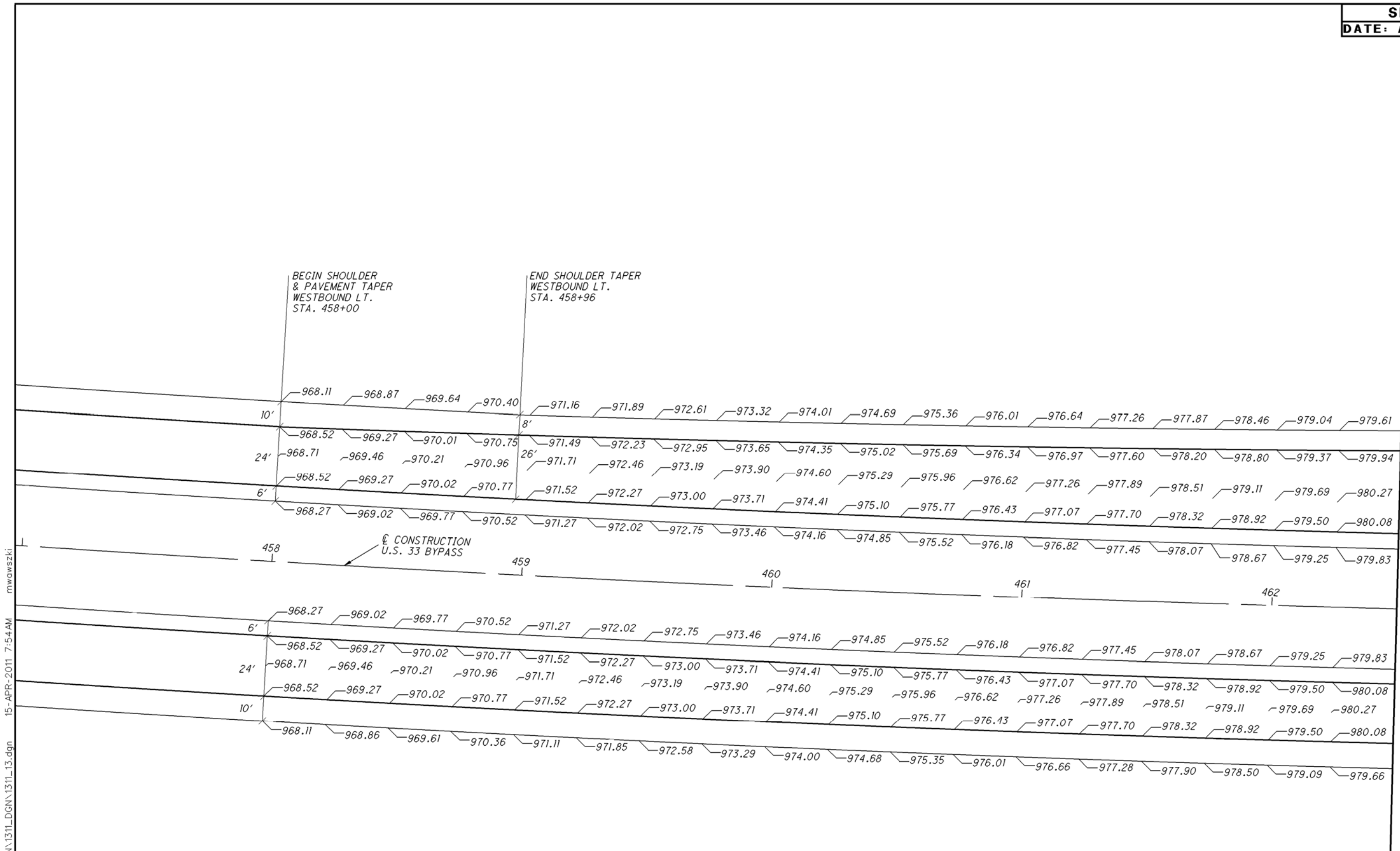




CALCULATED  
CHG  
CHECKED  
LJS

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

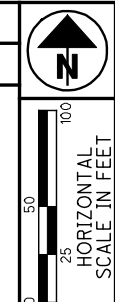
**FAI-33-13.25**



NOTE: ELEVATIONS SHOWN AT 25' INTERVALS

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ROUNDABOUT GEOMETRIC LAYOUT

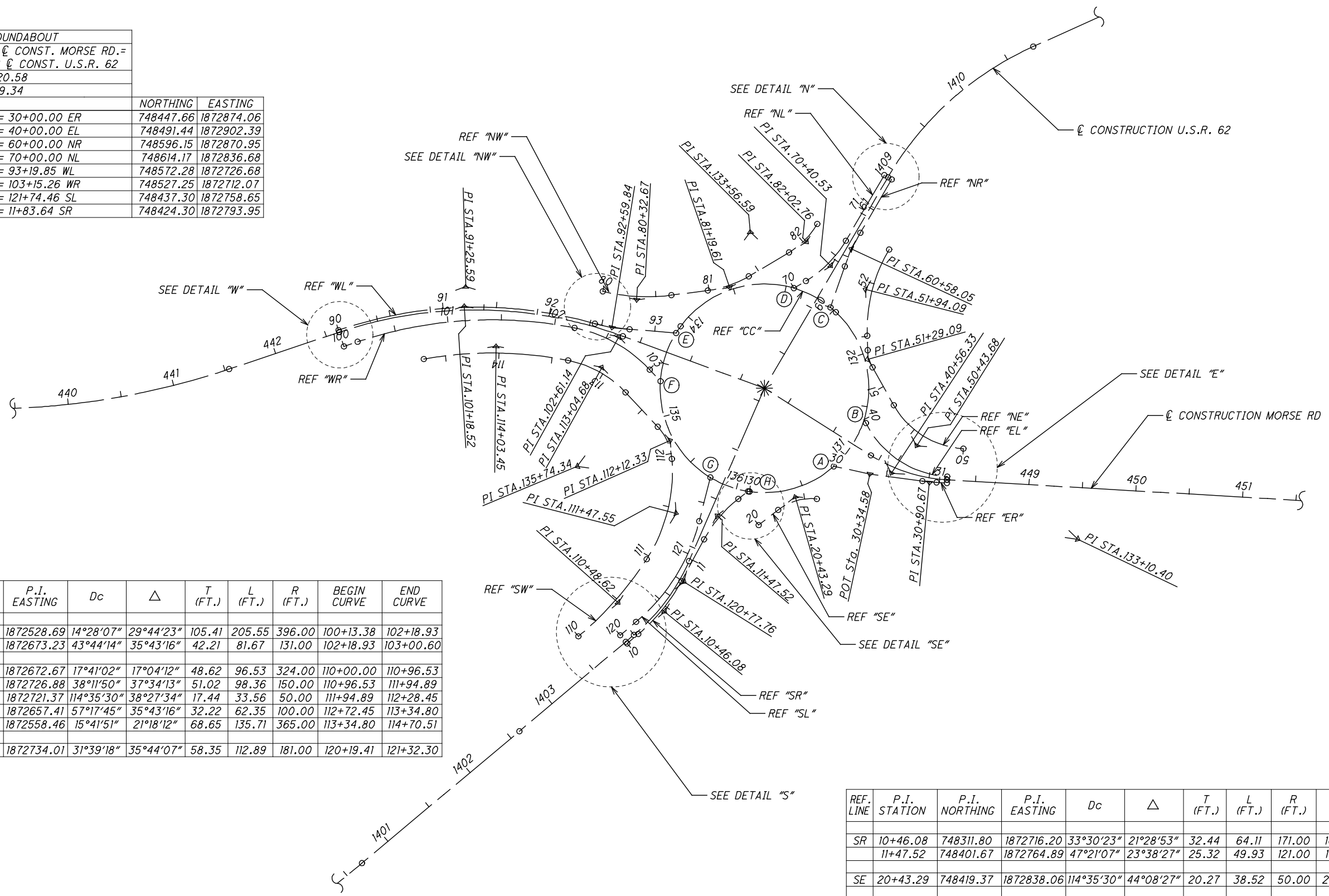
FRA - 62 - 26.34

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'

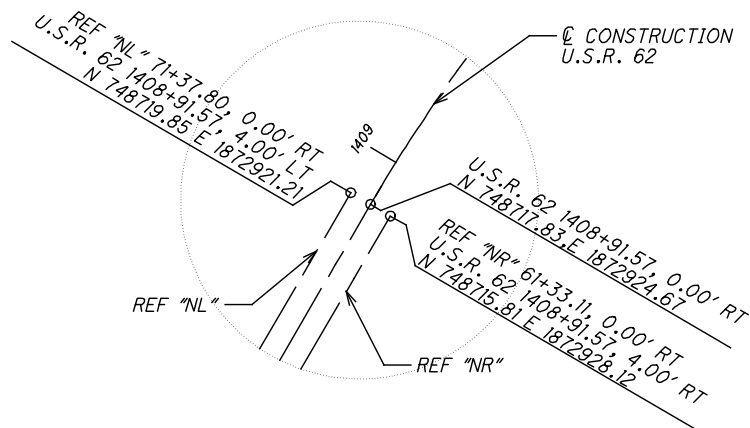
	NORTHING	EASTING
ⓐ 130+84.85 CC = 30+00.00 ER	748447.66	1872874.06
ⓑ 131+37.64 CC = 40+00.00 EL	748491.44	1872902.39
ⓒ 132+53.70 CC = 60+00.00 NR	748596.15	1872870.95
ⓓ 132+92.67 CC = 70+00.00 NL	748614.17	1872836.68
ⓔ 134+19.05 CC = 93+19.85 WL	748572.28	1872726.68
ⓕ 134+66.86 CC = 103+15.26 WR	748527.25	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



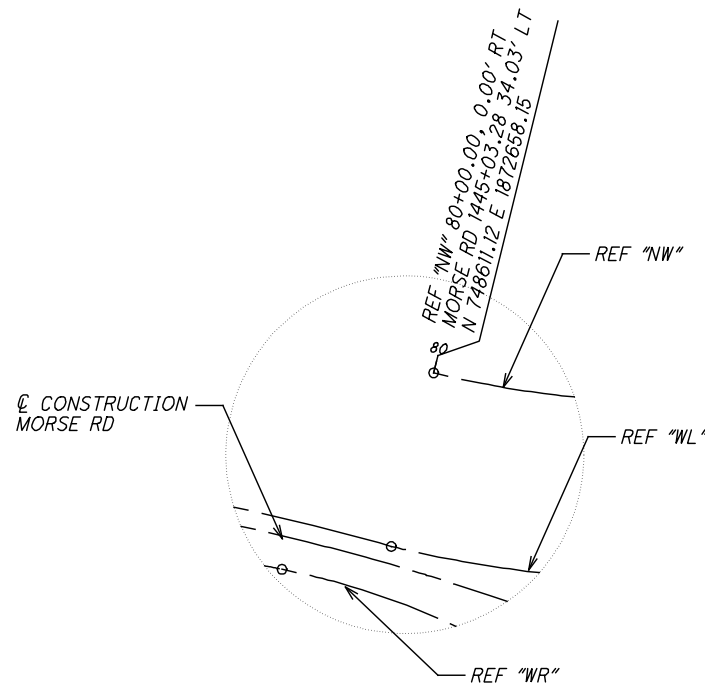
REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
SR	10+46.08	748311.80	1872716.20	33°30'23"	21°28'53"	32.44	64.11	171.00	10+13.64	10+77.75
	11+47.52	748401.67	1872764.89	47°21'07"	23°38'27"	25.32	49.93	121.00	11+22.20	11+72.12
SE	20+43.29	748419.37	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

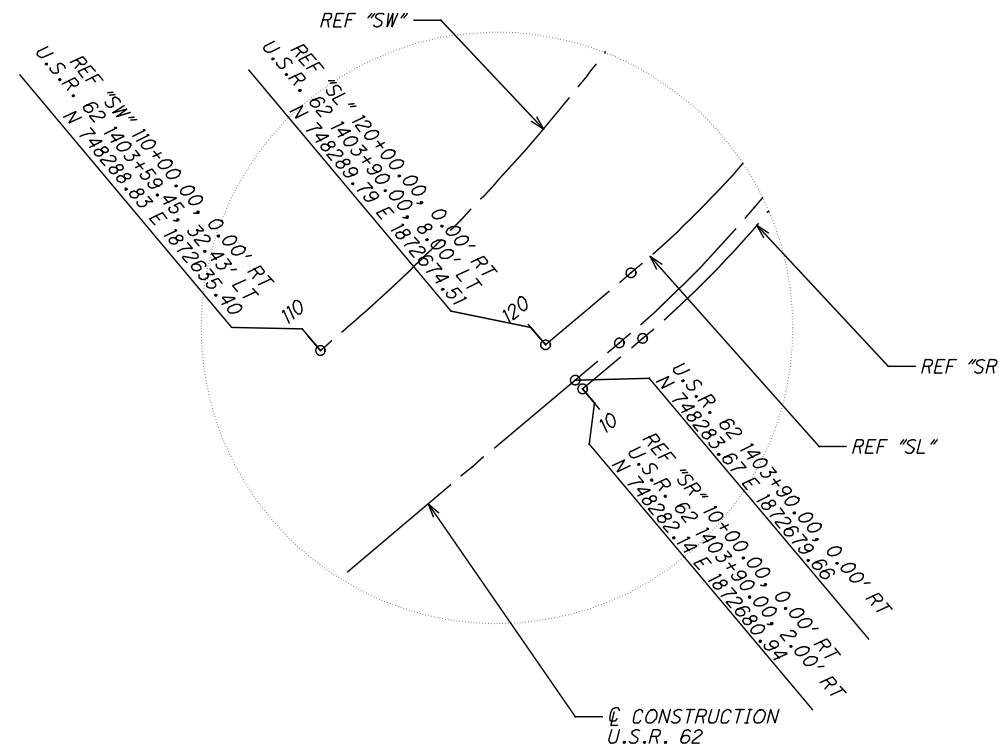
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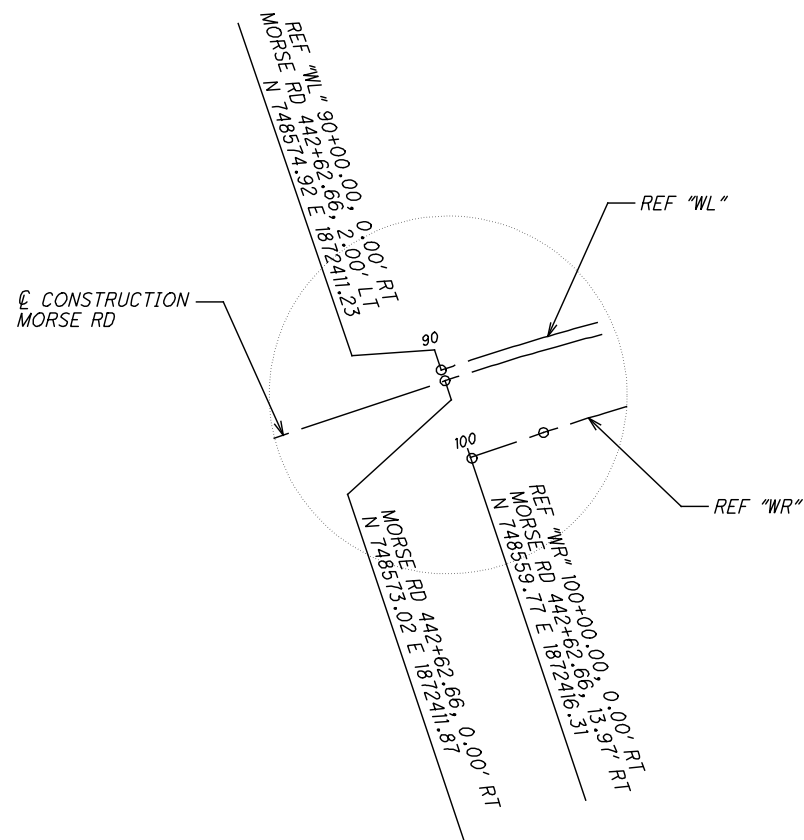
DETAIL "N"  
NOT TO SCALE



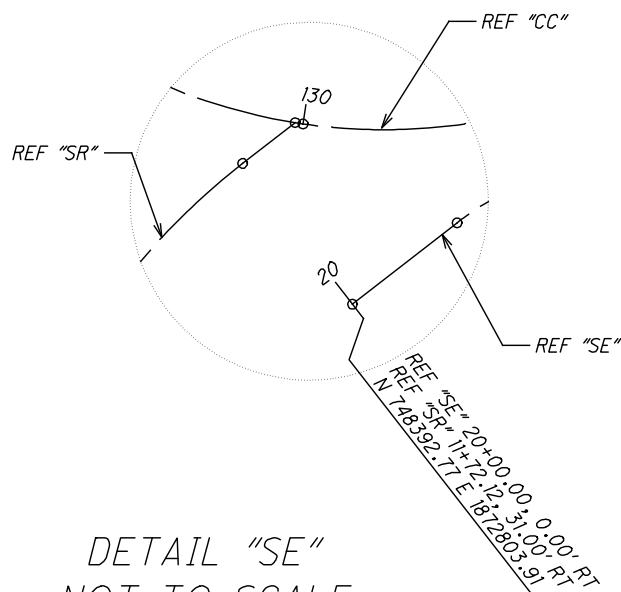
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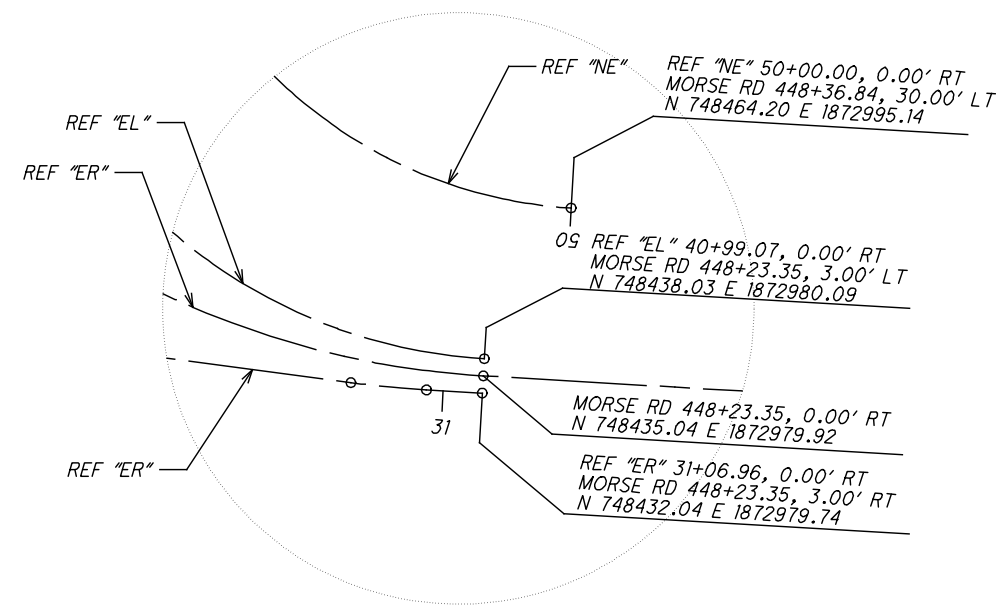
DETAIL "S"  
NOT TO SCALE



DETAIL "W"  
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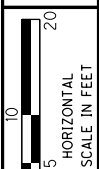


DETAIL "SE"  
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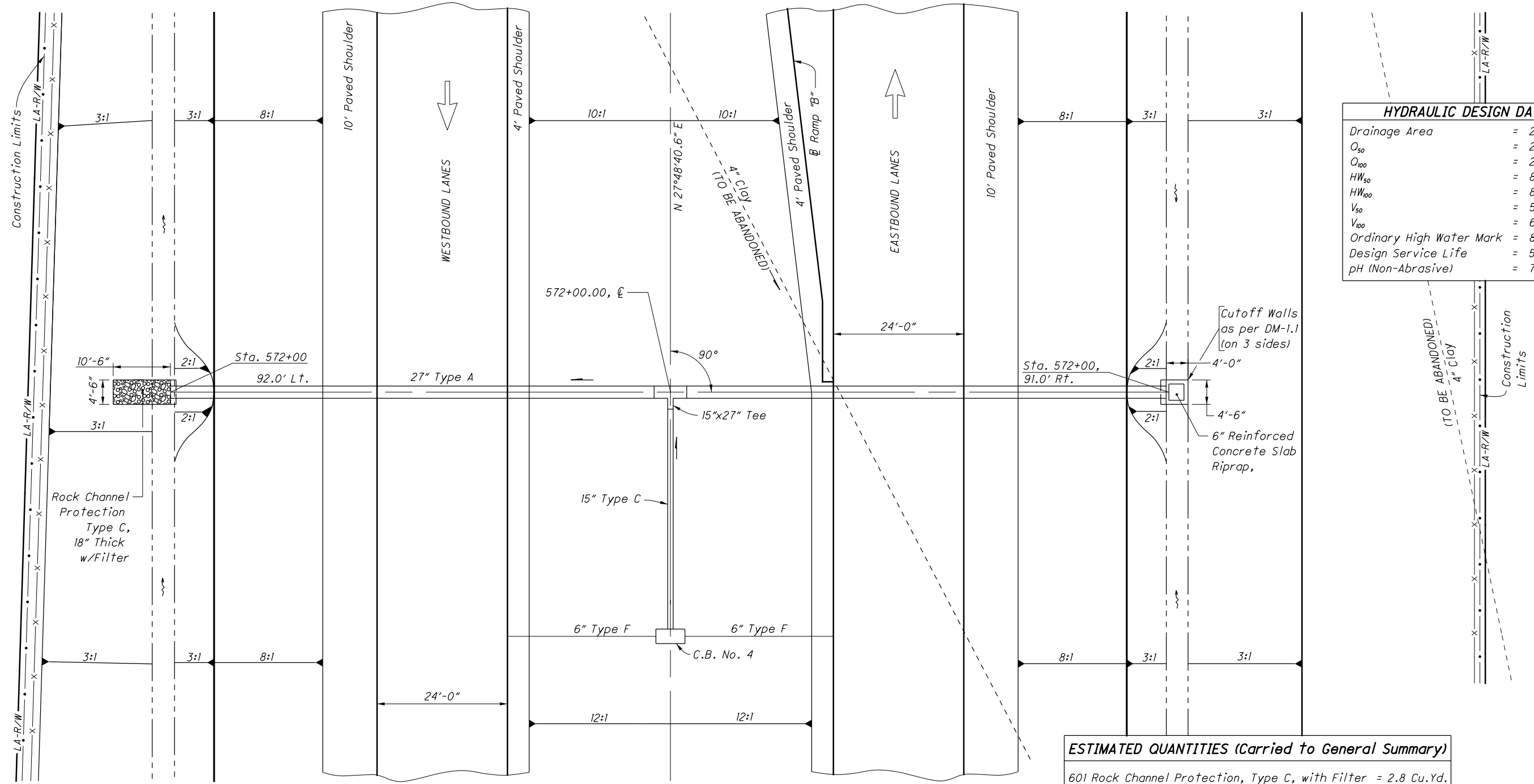
DETAIL "E"  
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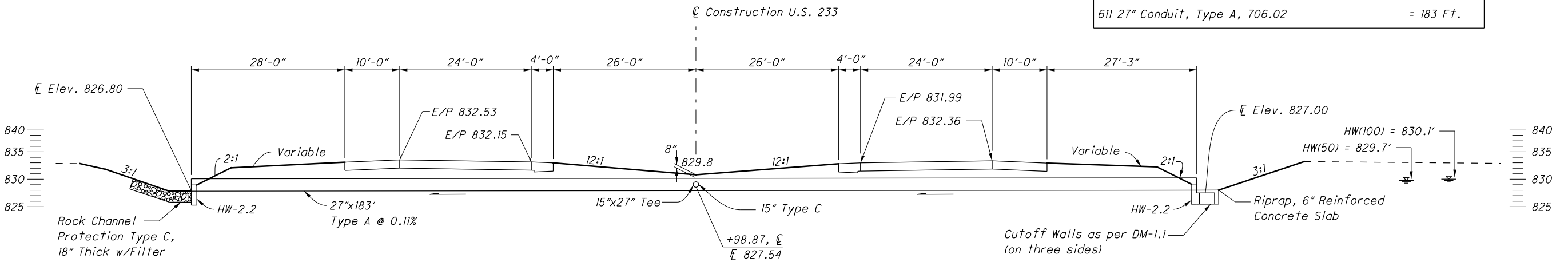


CALCULATED  
DMK  
CHECKED  
CML

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	= 50 Yr.
pH (Non-Abrasive)	= 7.8



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



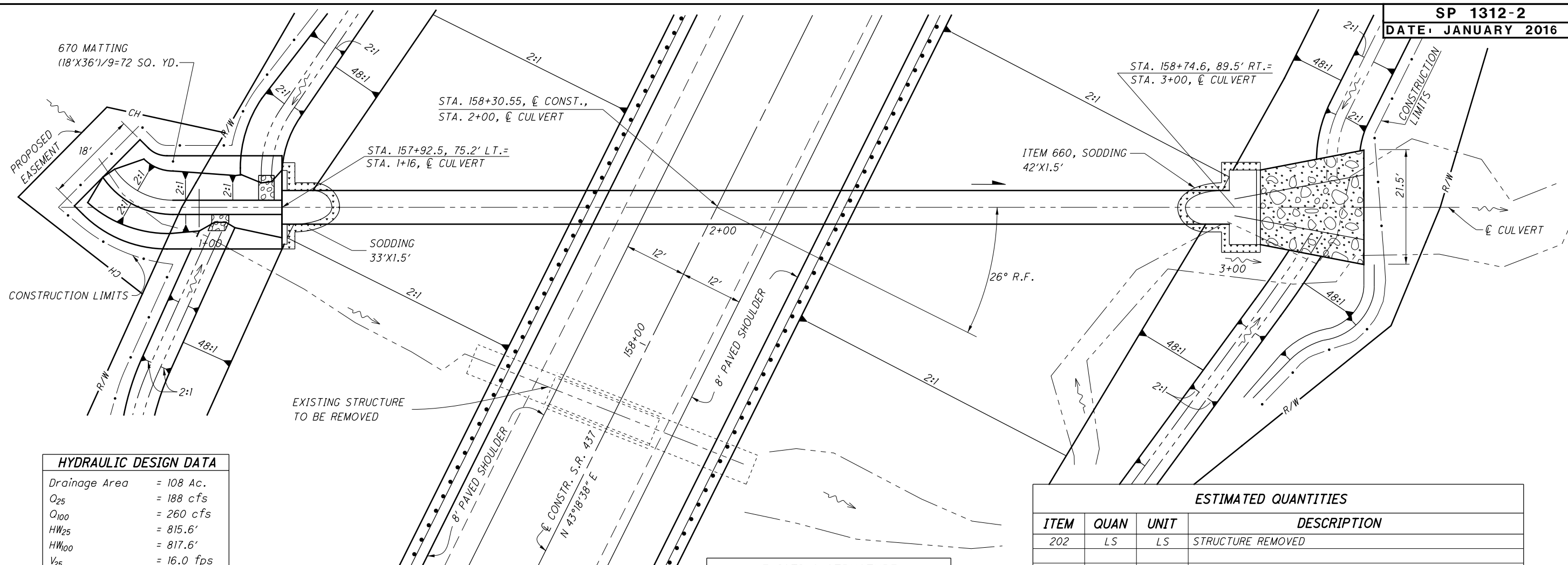
CULVERT DETAILS  
U.S. 233 - STA. 572+00

ALL-233-22.69



0 5 10 15 20  
HORIZONTAL SCALE IN FEET

CALCULATED JOH  
CHECKED JDH



**HYDRAULIC DESIGN DATA**

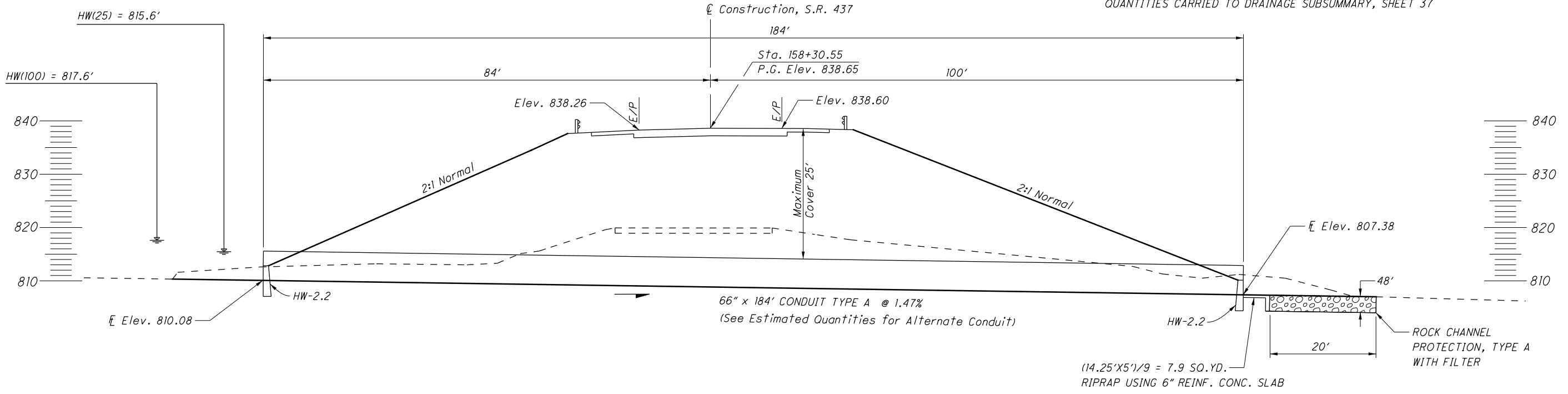
Drainage Area	= 108 Ac.
$Q_{25}$	= 188 cfs
$Q_{100}$	= 260 cfs
$HW_{25}$	= 815.6'
$HW_{100}$	= 817.6'
$V_{25}$	= 16.0 fps
$V_{100}$	= 18.5 fps
ORDINARY HIGH WATER MARK	= 810.3'
DESIGN SERVICE LIFE	= 75 YR
pH ABRASIVE	= 7.5

**EXISTING STRUCTURE**

TYPE: STONE ARCH W/72" CMP EXTENSIONS  
 SIZE: 6'X5'X58" ARCH  
 SKEW: 4°14' R.F.  
 ALIGNMENT: TANGENT  
 DATE BUILT: 1908  
 CONDITION: POOR

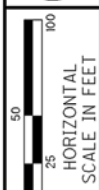
ESTIMATED QUANTITIES			
ITEM	QUAN	UNIT	DESCRIPTION
202	LS	LS	STRUCTURE REMOVED
601	60	CU.YD	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
601	8	SQ.YD	RIPRAP USING 6" REINFORCED CONCRETE SLAB
602	5.9	CU.YD	CONCRETE MASONRY
611	184	FT.	66" CONDUIT, TYPE A, 706.02; OR 78", 707.01 (0.168) ALUMINIZED, 707.02 (0.138) ALUMINIZED, 707.03 (0.109) W/CFP, 707.04 (1") (0.079), 707.05 (0.109), 707.07 (0.109)
660	13	SQ.YD.	SODDING
670	72	SQ.YD.	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



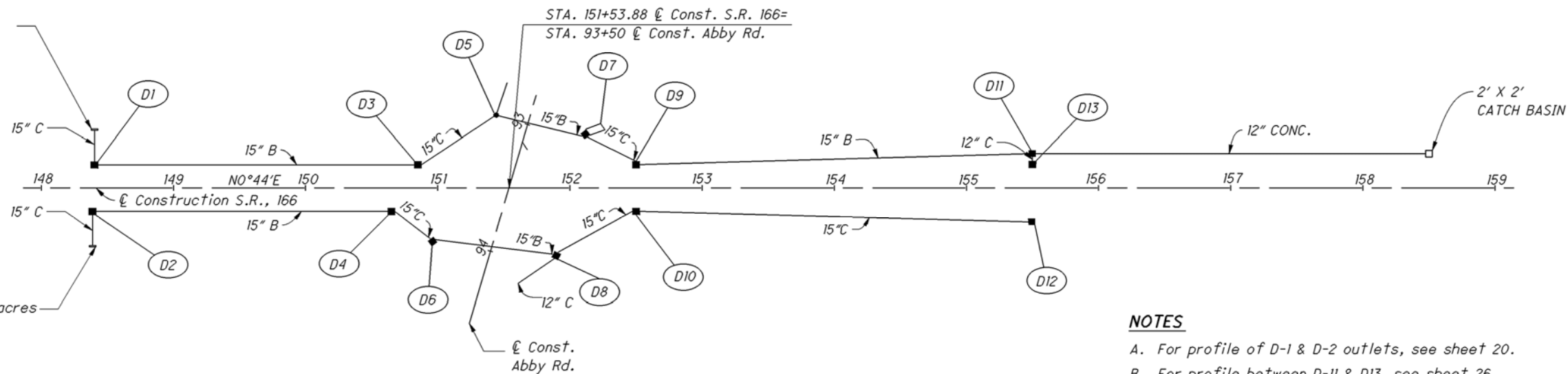
CALCULATED MSO  
CHECKED PDC

S.R. 166 DRAINAGE PROFILE

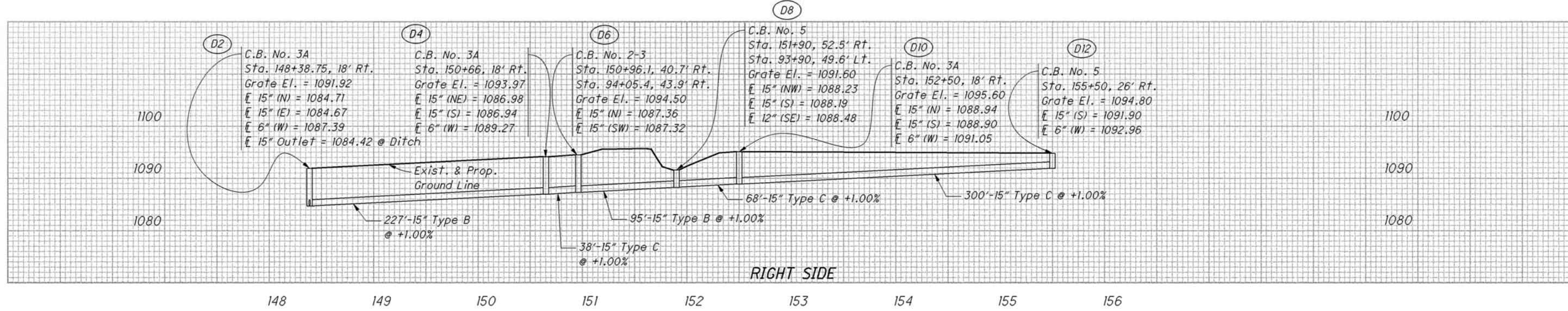
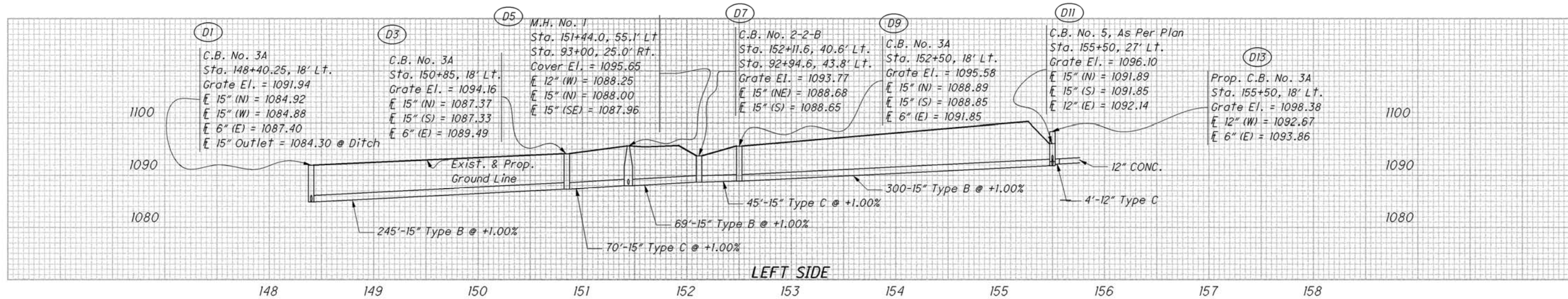
RIC-166-8.37

**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

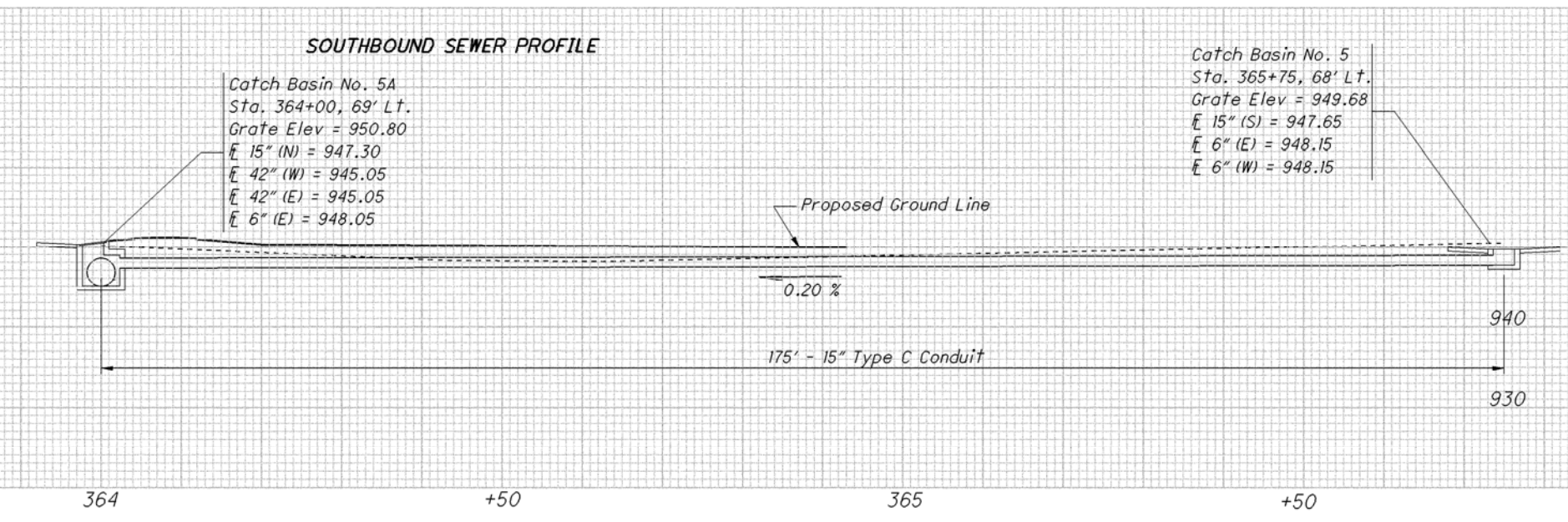
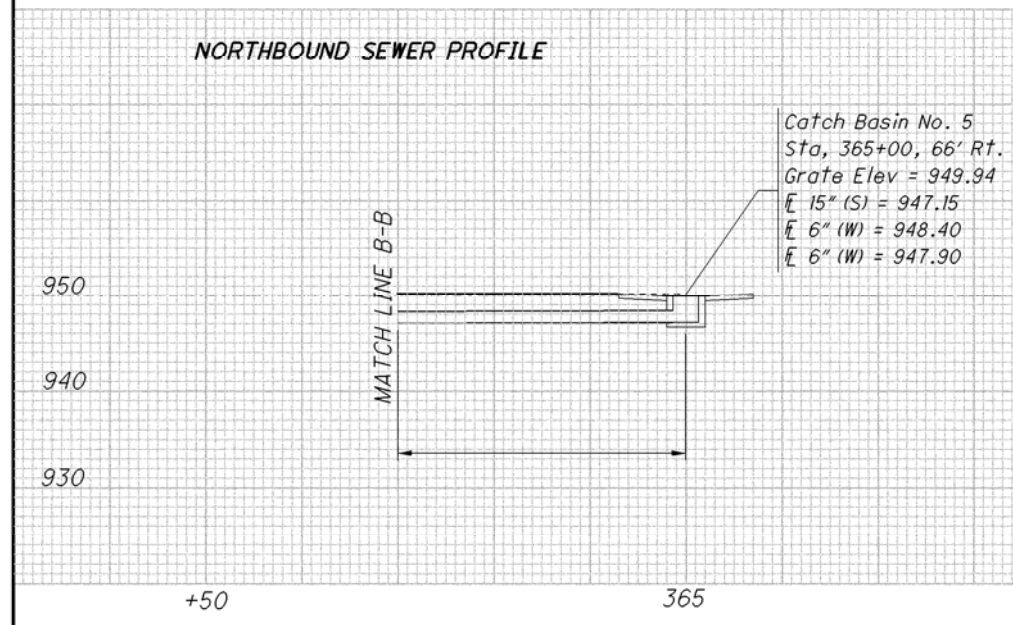
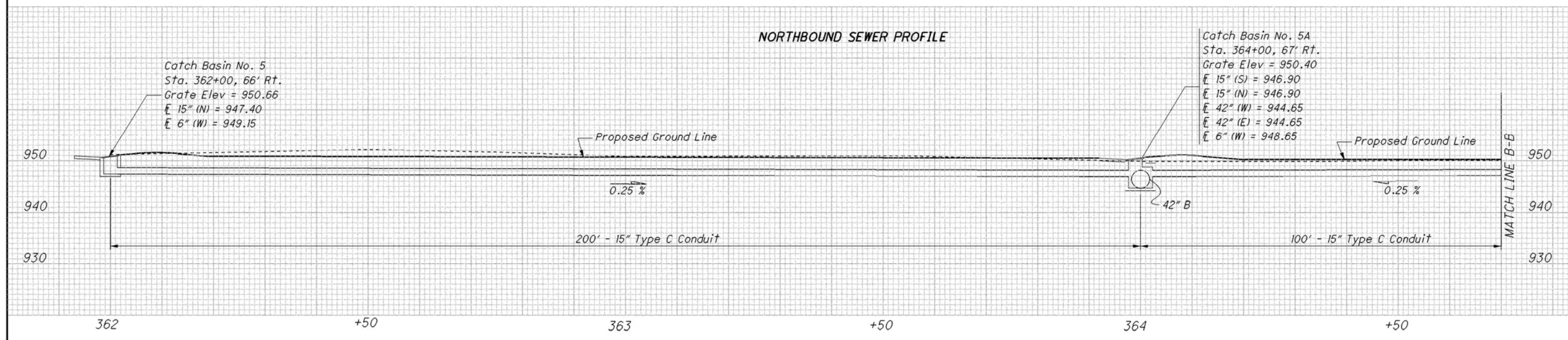
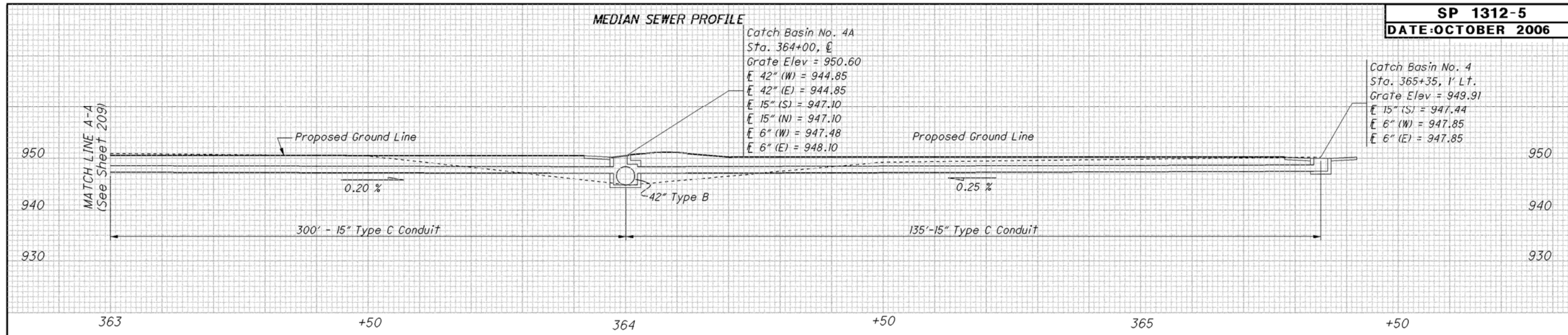


- NOTES**
- A. For profile of D-1 & D-2 outlets, see sheet 20.
  - B. For profile between D-11 & D13, see sheet 26.
  - C. For Abby Rd. drainage profile, see sheet 41.
  - D. For drainage sub-summary, see sheets 14-16.
  - E. For S.R.166 plan & profile, see sheets 17-19.



CALCULATED  
MTC  
CHECKED  
CJM

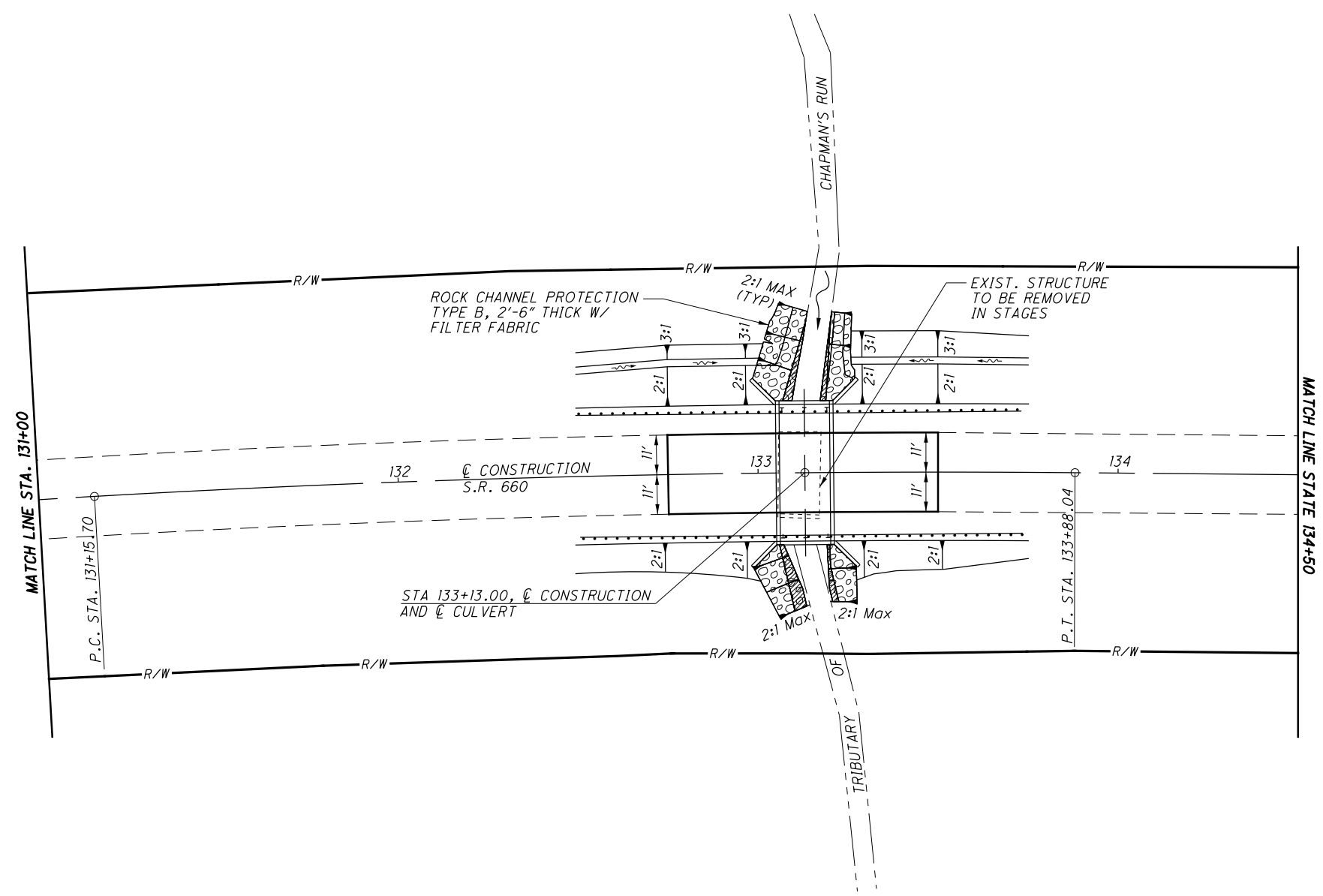
LONGITUDINAL SEWER PROFILE



LUC-76-31.48



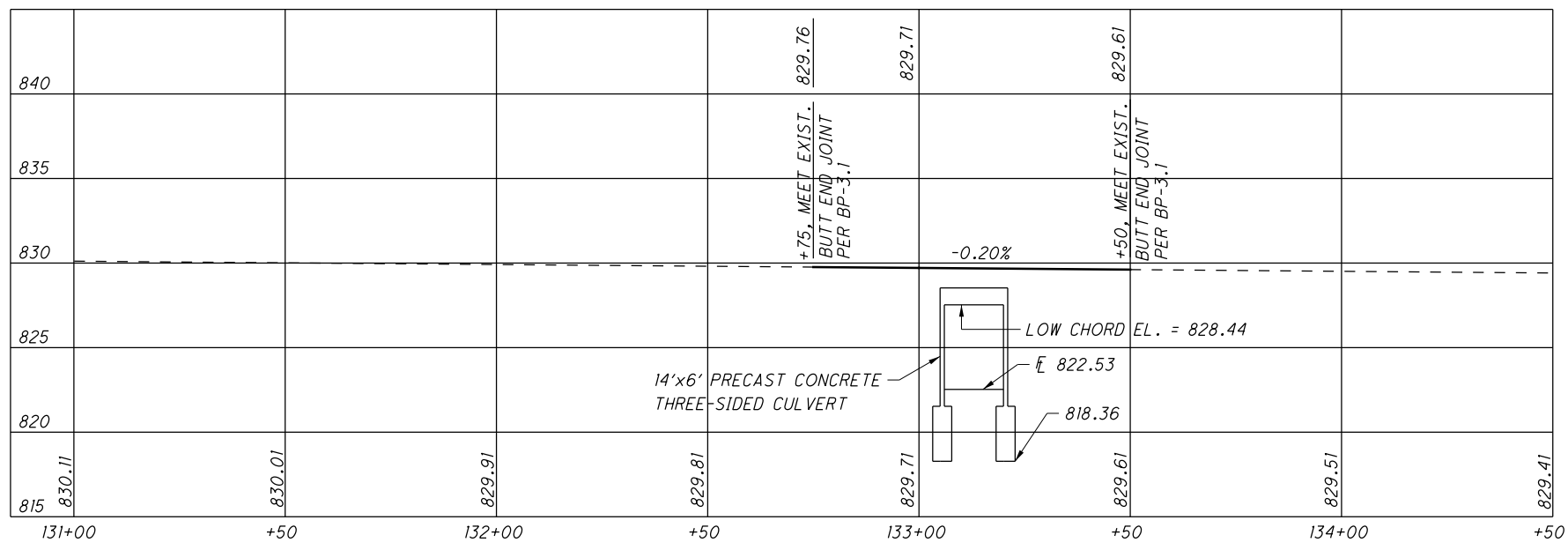
CALCULATED  
KEW  
CHECKED  
JOH



HYDRAULIC DATA	
DRAINAGE AREA: 0.79 SQ.MI.	
EXISTING WATERWAY OPENING: 60.0 SQ.FT.	
PROPOSED WATERWAY OPENING: 70.0 SQ.FT.	
ORDINARY HIGH WATER MARK: 822.9'	
pH (NON-ABRASIVE): 7.4	
$Q_{10} = 297$ 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
pH (NON-ABRASIVE): 7.4



CULVERT PLAN AND PROFILE  
STA. 133+13.00

GUE-660-2.52

1 / 8

100  
125

**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**

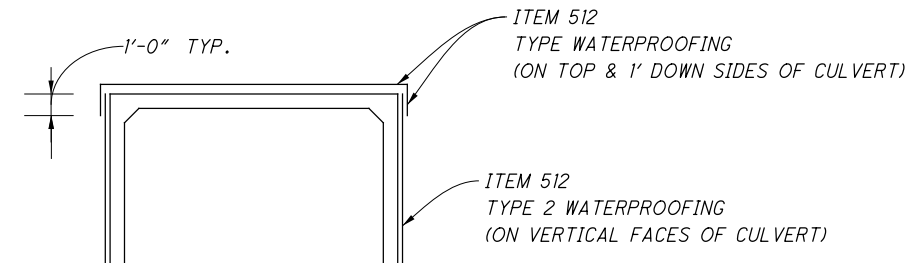
MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS 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)

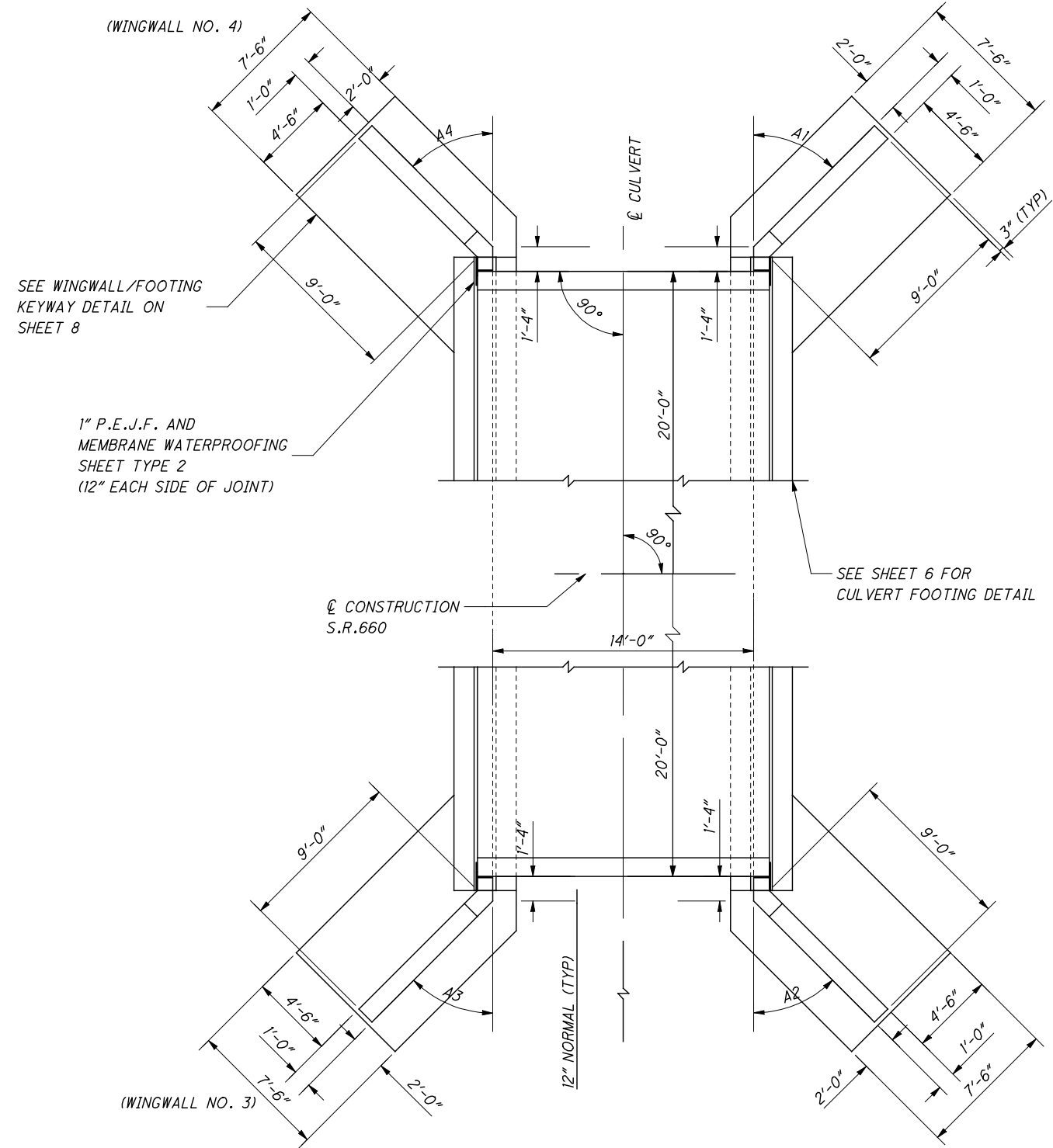
CULVERT ESTIMATED QUANTITIES  
STA. 133+13.00

GUE - 660 - 2.52





CALCULATED  
KEW  
CHECKED  
JOH



SEE WINGWALL/FOOTING  
KEYWAY DETAIL ON  
SHEET 8

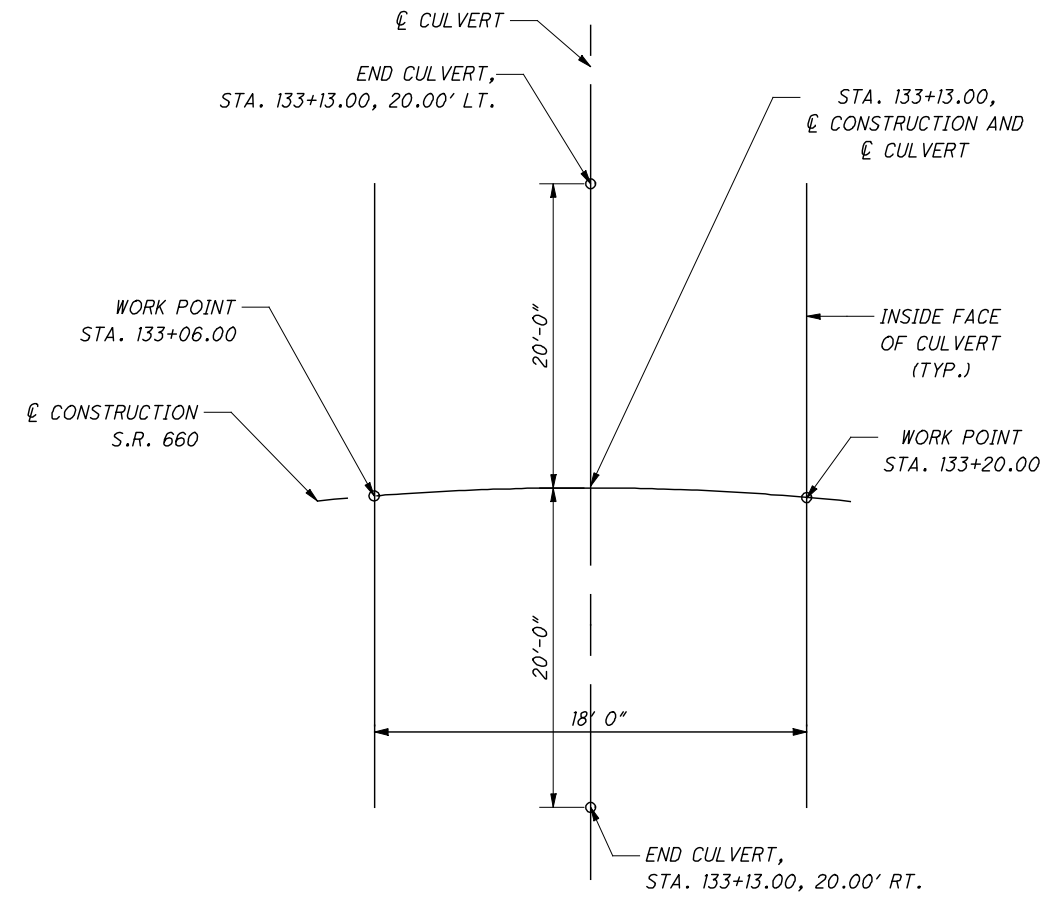
1" P.E.J.F. AND  
MEMBRANE WATERPROOFING  
SHEET TYPE 2  
(12" EACH SIDE OF JOINT)

∅ 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

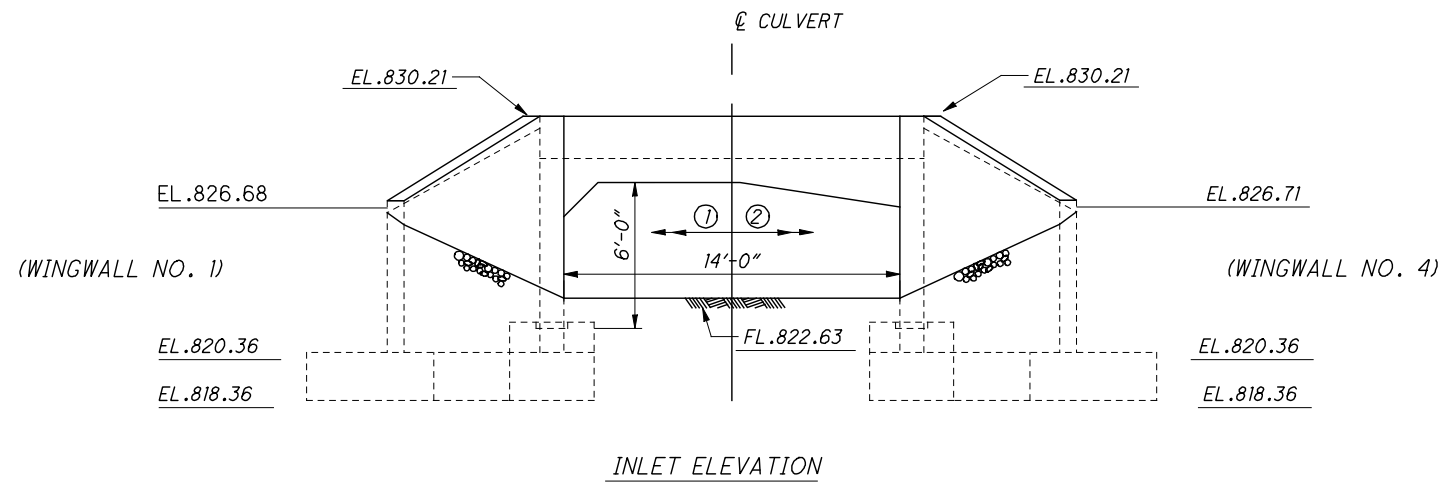
NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

CULVERT LAYOUT  
STA. 133+13.00

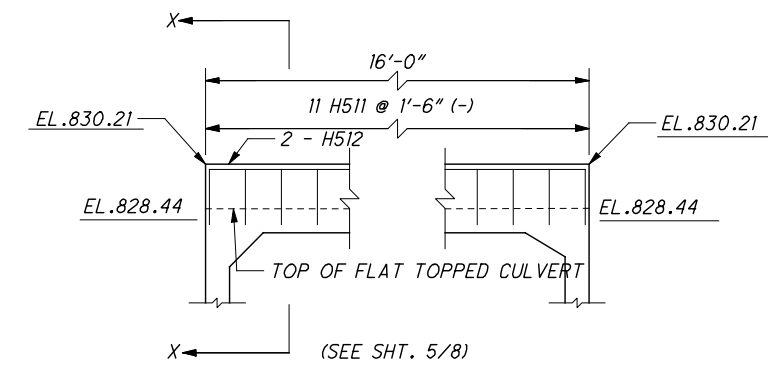
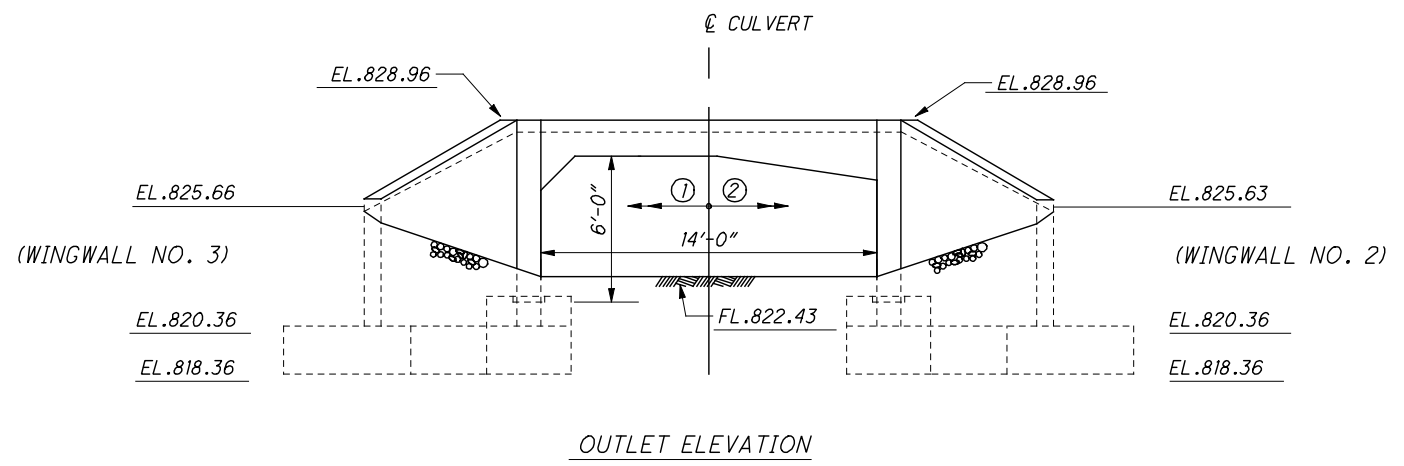
GUE-660-2.52

3 / 8

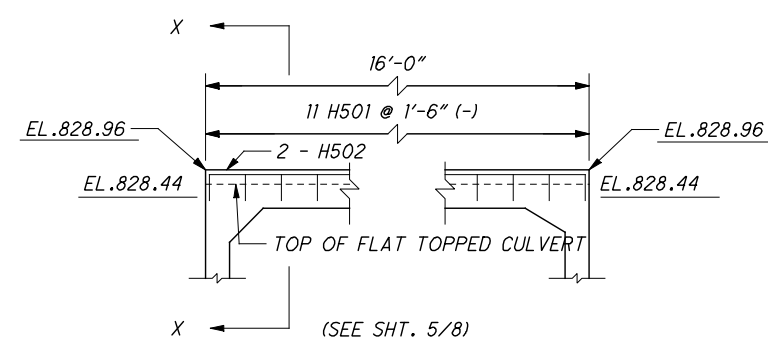
102  
125



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



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

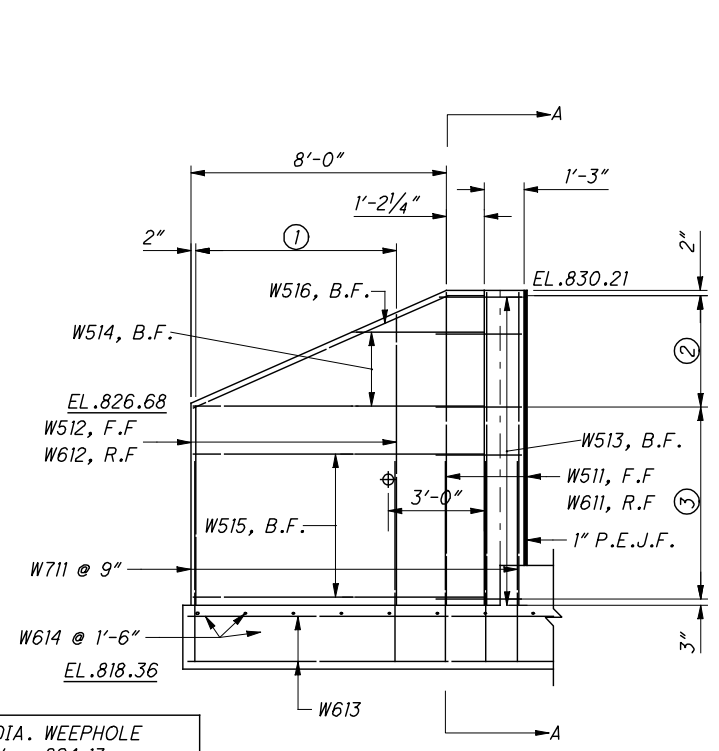


OUTLET HEADWALL REINFORCING DETAIL  
(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION  
STA. 133+13.00

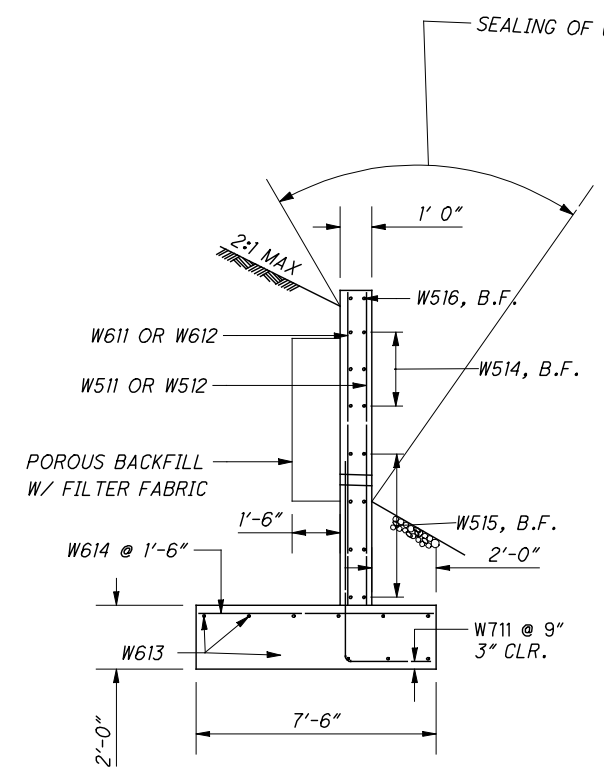
GUE-660-2.52

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

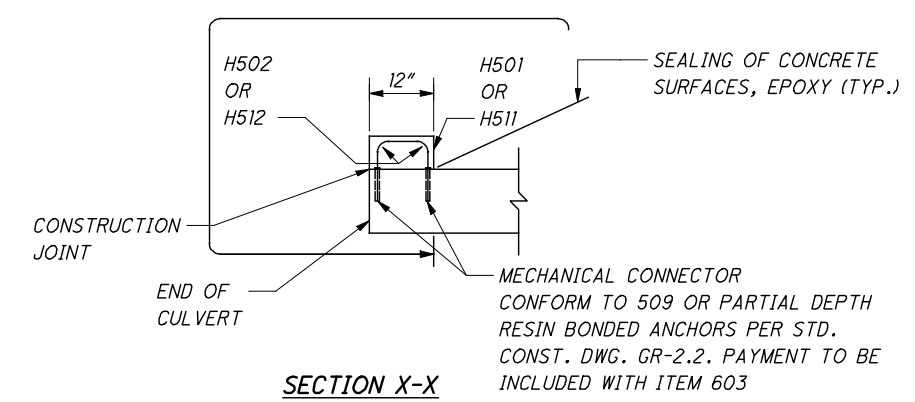


WINGWALL 1 ELEVATION

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

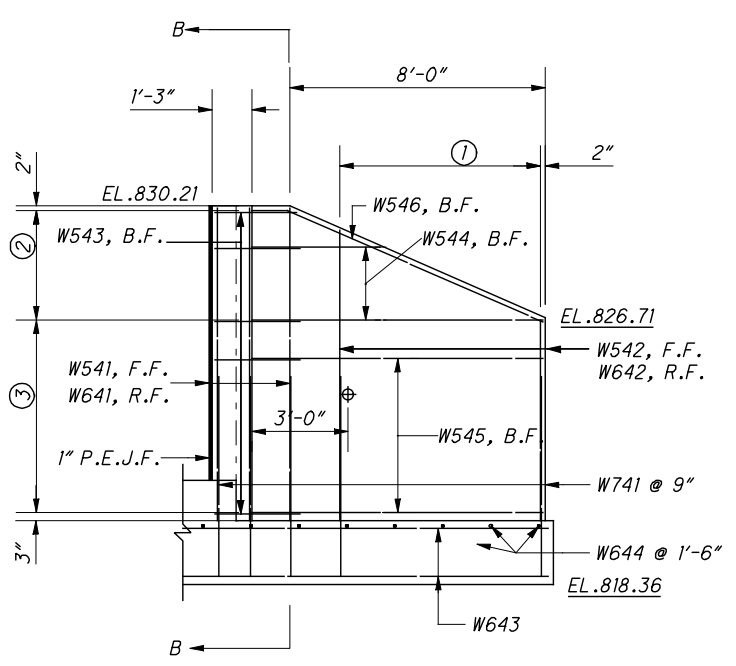


SECTION A-A



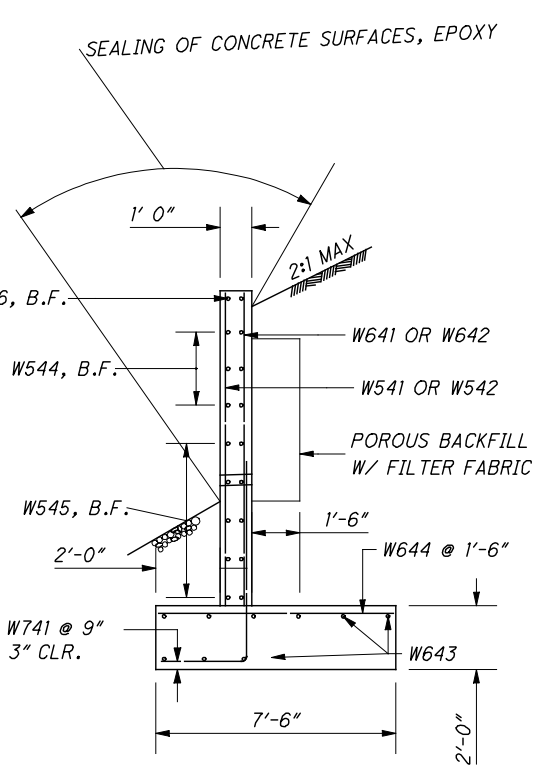
SECTION X-X

MECHANICAL CONNECTOR CONFORM TO 509 OR PARTIAL DEPTH RESIN BONDED ANCHORS PER STD. CONST. DWG. GR-2.2. PAYMENT TO BE INCLUDED WITH ITEM 603



WINGWALL 4 ELEVATION

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



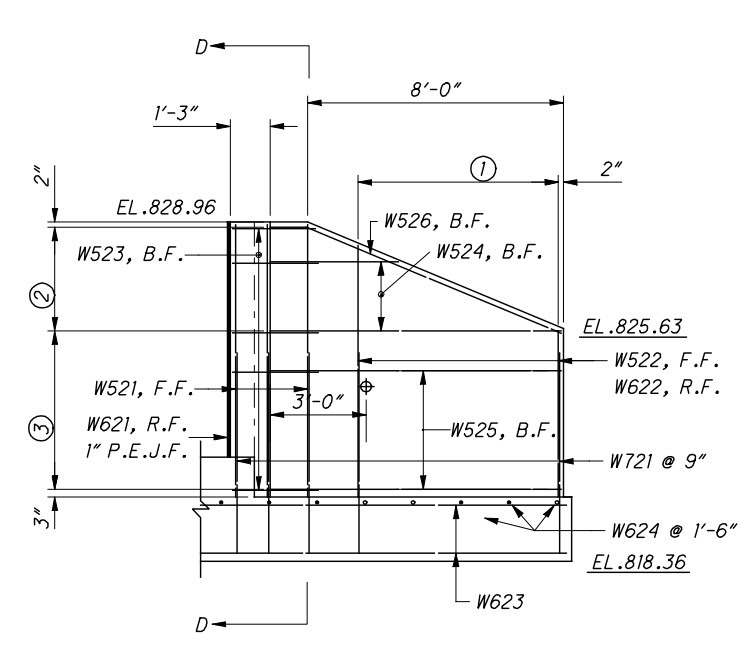
SECTION B-B

- 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.

NOTE: 4" DIA. WEEPHOLE ELEV. = 824.13

NOTE: 4" DIA. WEEPHOLE ELEV. = 824.14

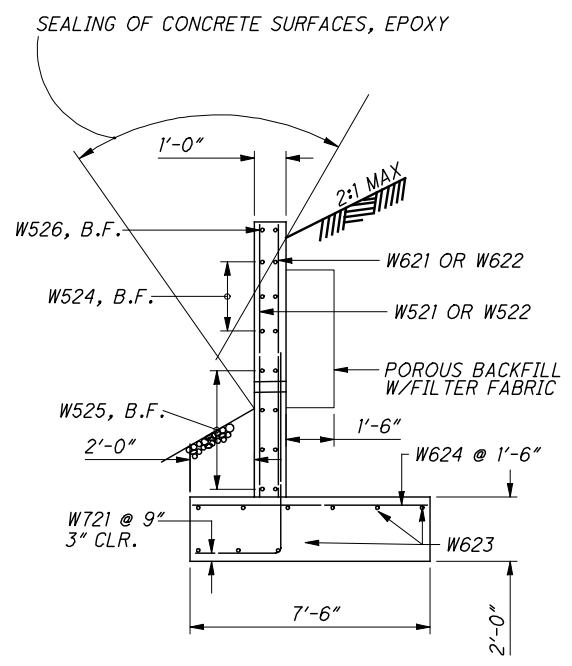
**LEGEND**  
F.F. - FRONT FACE  
R.F. - REAR FACE  
B.F. - BOTH FACE



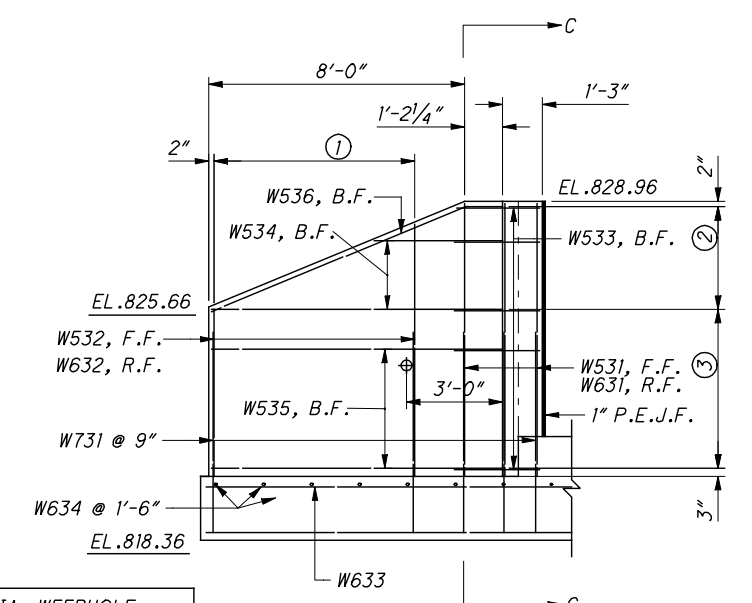
WINGWALL 2 ELEVATION

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

NOTE: 4" DIA. WEEPHOLE  
ELEV. = 823.65



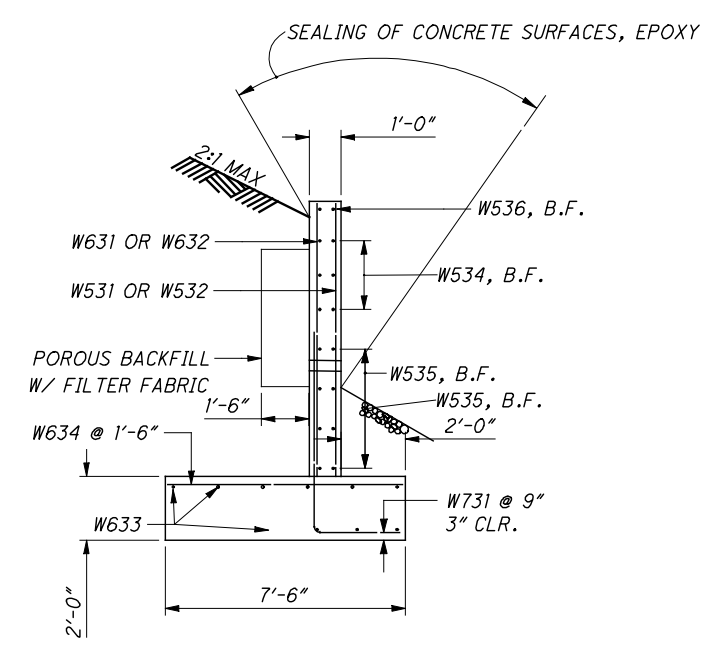
SECTION D-D



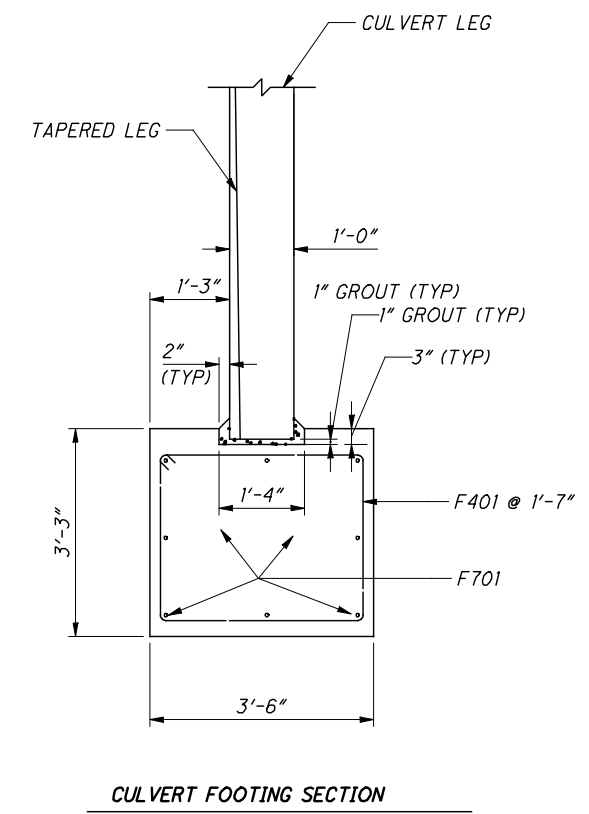
WINGWALL 3 ELEVATION

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

NOTE: 4" DIA. WEEPHOLE  
ELEV. = 823.66



SECTION C-C



CULVERT FOOTING SECTION



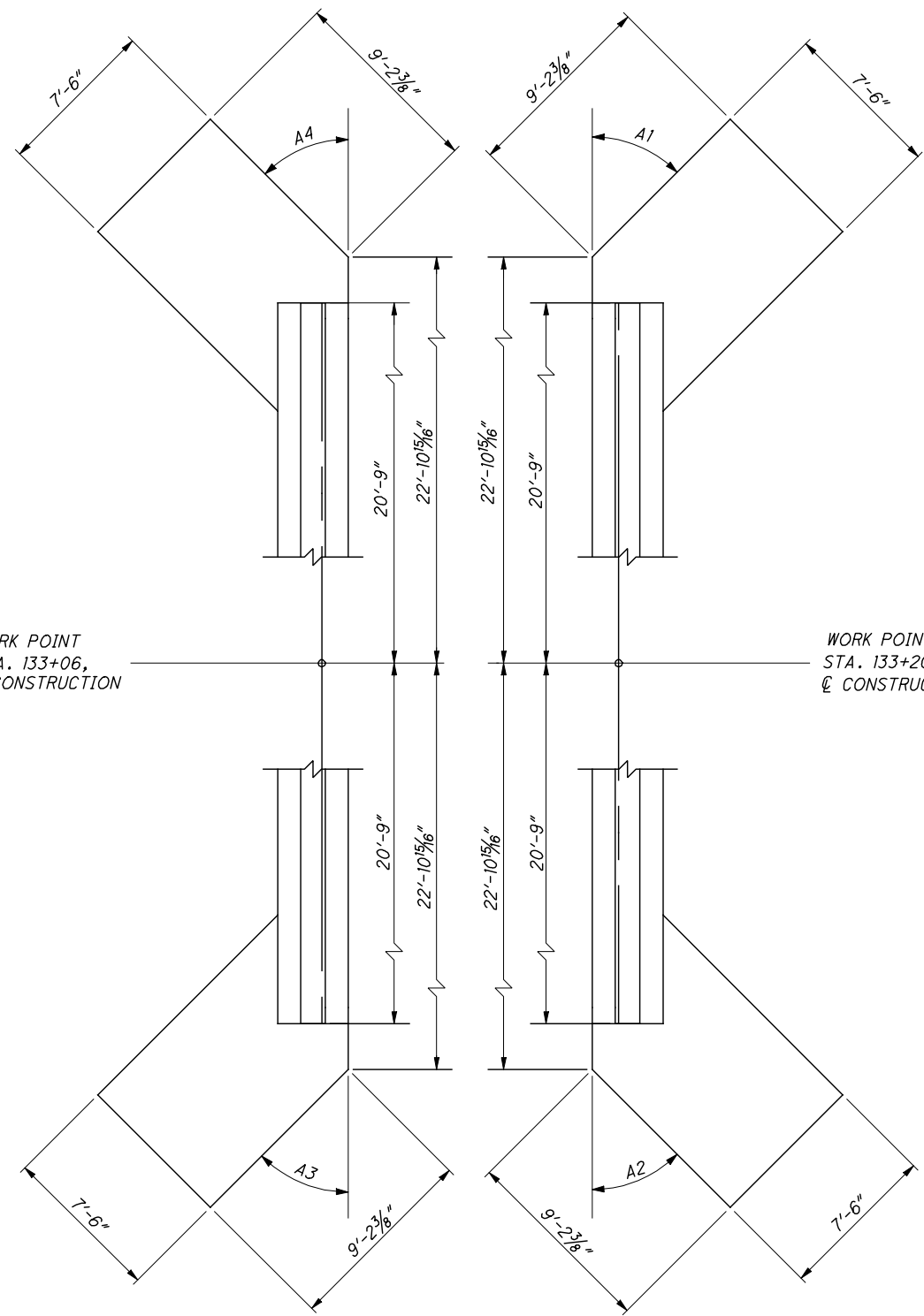
CALCULATED  
KEW  
CHECKED  
JOH

FOOTING DETAILS  
STA. 133+13.00

GUE-660-2.52

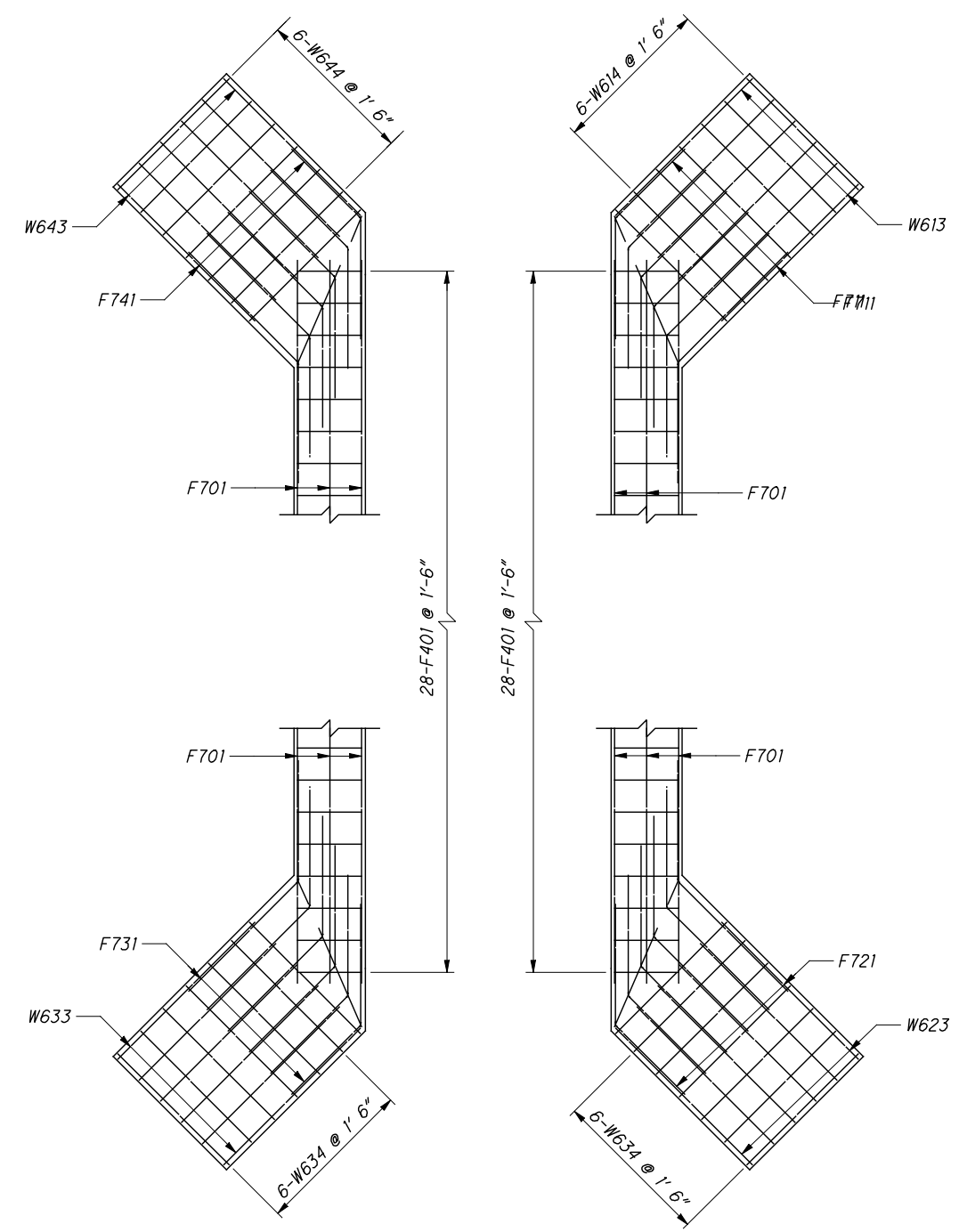
7/8

106  
125



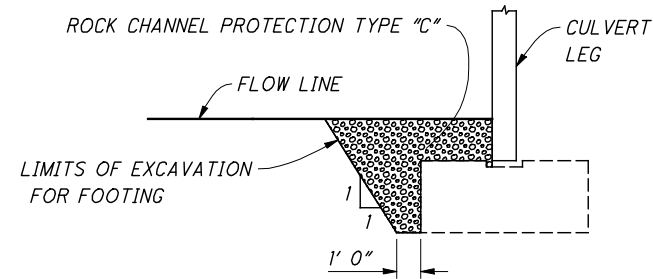
FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4

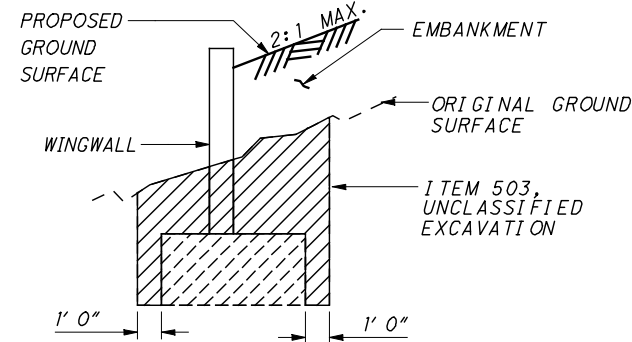


FOOTING REINFORCING PLAN

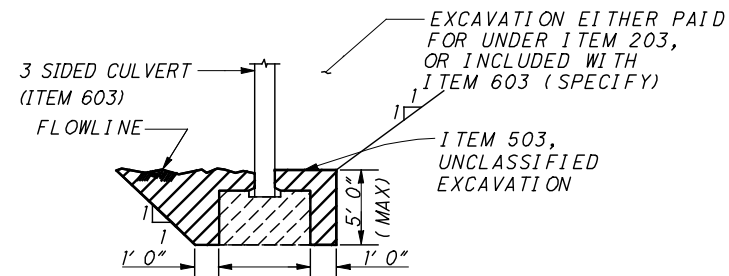
REINFORCING STEEL LIST



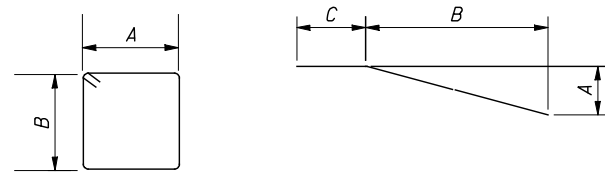
ROCK CHANNEL PROTECTION INSIDE CULVERT



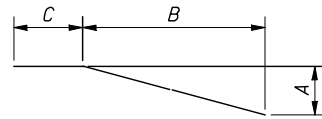
LIMITS OF UNCLASSIFIED EXCAVATION (WINGWALL)



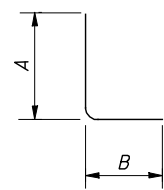
LIMITS OF UNCLASSIFIED EXCAVATION (CULVERT)



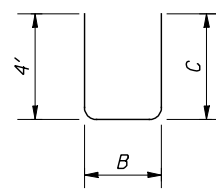
TYPE 1



TYPE 2



TYPE 3



TYPE 4

BENDING DIAGRAMS

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	INCR	REMARKS
WINGWALL 1									
W511	3	9'-9"	31	STR					
	1	6'-3"							
W512	S.O.	TO	40	STR				0'-9"	
	5	9'-1"							
W513	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W514	S.O.	TO	41	STR				2'-7"	
	3	9'-1"							
W515	8	9'-1"	76	STR					
W516	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
WINGWALL 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					
WINGWALL 3									
W711	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 4									
W541	3	9'-9"	31	STR					
	1	6'-3"							
W542	S.O.	TO	40	STR				0'-8"	
	5	9'-1"							
W543	18	2'-4"	44	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W544	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W545	10	9'-1"	95	STR					
W546	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
CULVERT FOOTING									
F401	56	12'-0"	449	1	3'-2"	2'-7"			
HEADWALL									
H501	11	2'-7"	30	4	1'-1"	0'-8"	1'-1"		
H502	2	15'-10"	33	STR					
H511	11	5'-1"	58	4	2'-4"	0'-8"	2'-4"		
H512	2	15'-10"	33	STR					
WINGWALL 1									
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"		
WINGWALL 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					
WINGWALL 3									
W721	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 4									
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"			
WINGWALL 4									
W541	3	9'-9"	31	STR					
	1	6'-3"							
W542	S.O.	TO	40	STR				0'-8"	
	5	9'-1"							
W543	18	2'-4"	44	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W544	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W545	10	9'-1"	95	STR					
W546	2	9'-9"	20	2	3'-4"	7'-11"	1'-2"		
CULVERT FOOTING									
F401	56	12'-0"	449	1	3'-2"	2'-7"			
HEADWALL									
H501	11	2'-7"	30	4	1'-1"	0'-8"	1'-1"		
H502	2	15'-10"	33	STR					
H511	11	5'-1"	58	4	2'-4"	0'-8"	2'-4"		
H512	2	15'-10"	33	STR					
WINGWALL 1									
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"		
WINGWALL 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					
WINGWALL 3									
W721	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 4									
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			4229						
TOTAL CARRIED TO SHEET 2 OF 8									



0 5 10 20  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
MRV  
CHECKED  
MLC

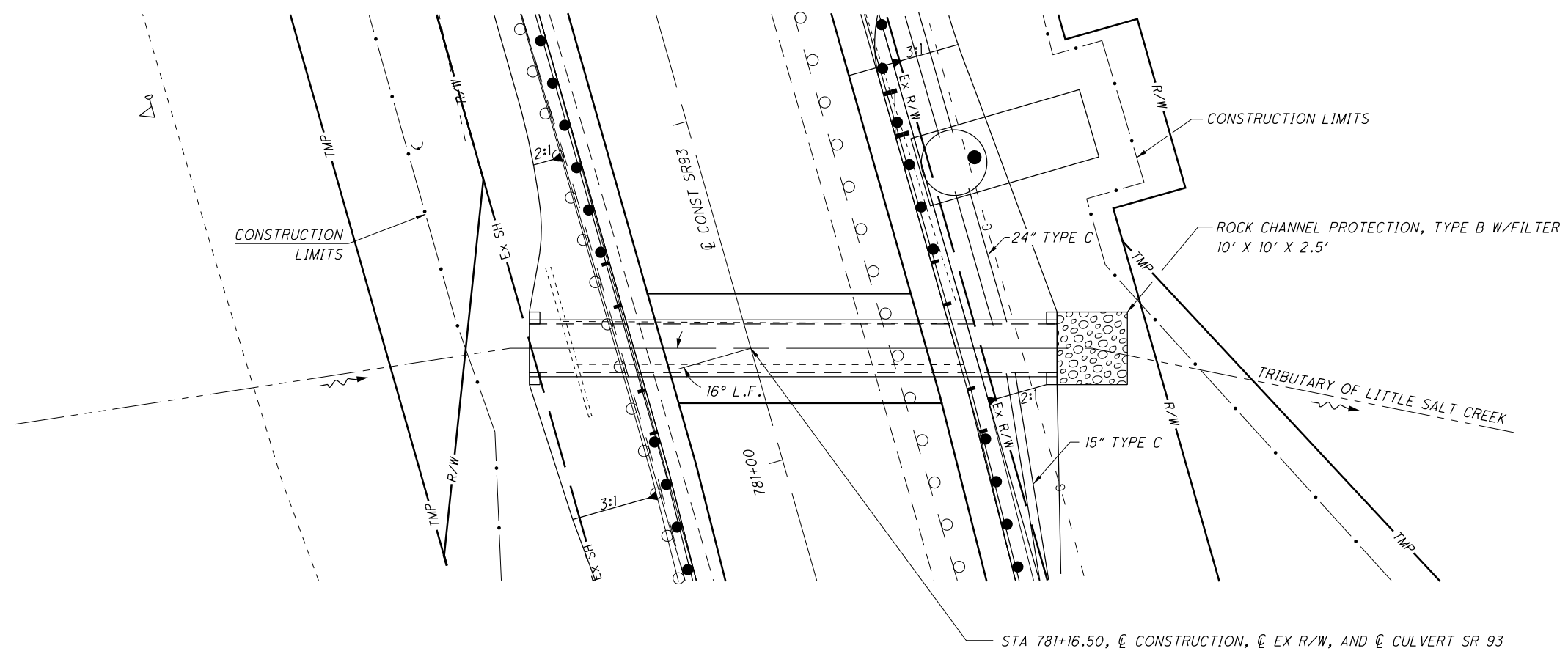
CULVERT DETAIL  
STA 781+16.50

JAC-93-14.35

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

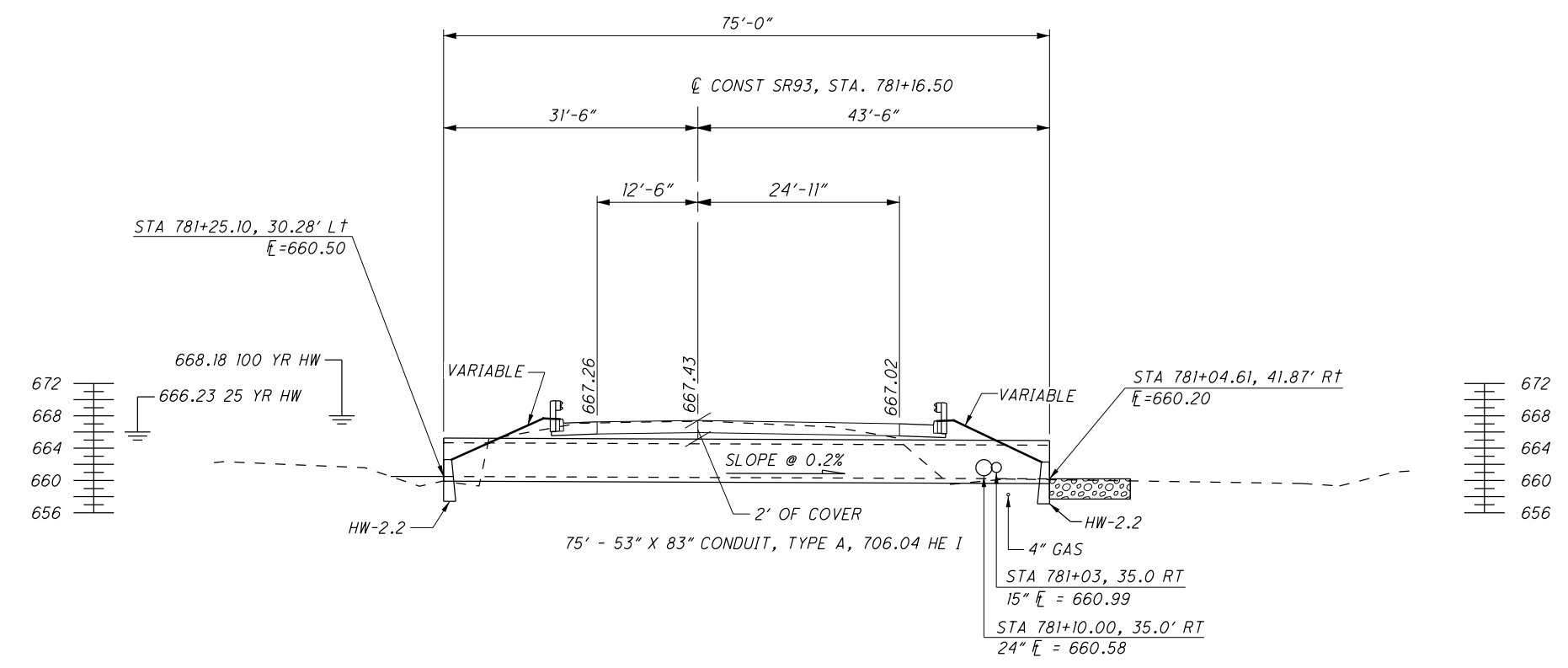
**PROPOSED STRUCTURE**  
TYPE: 53"X83" ELLIPTICAL CONCRETE PIPE  
SKEW: 16° L.F.  
ALIGNMENT: TANGENT

**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  
NON-ABRASIVE

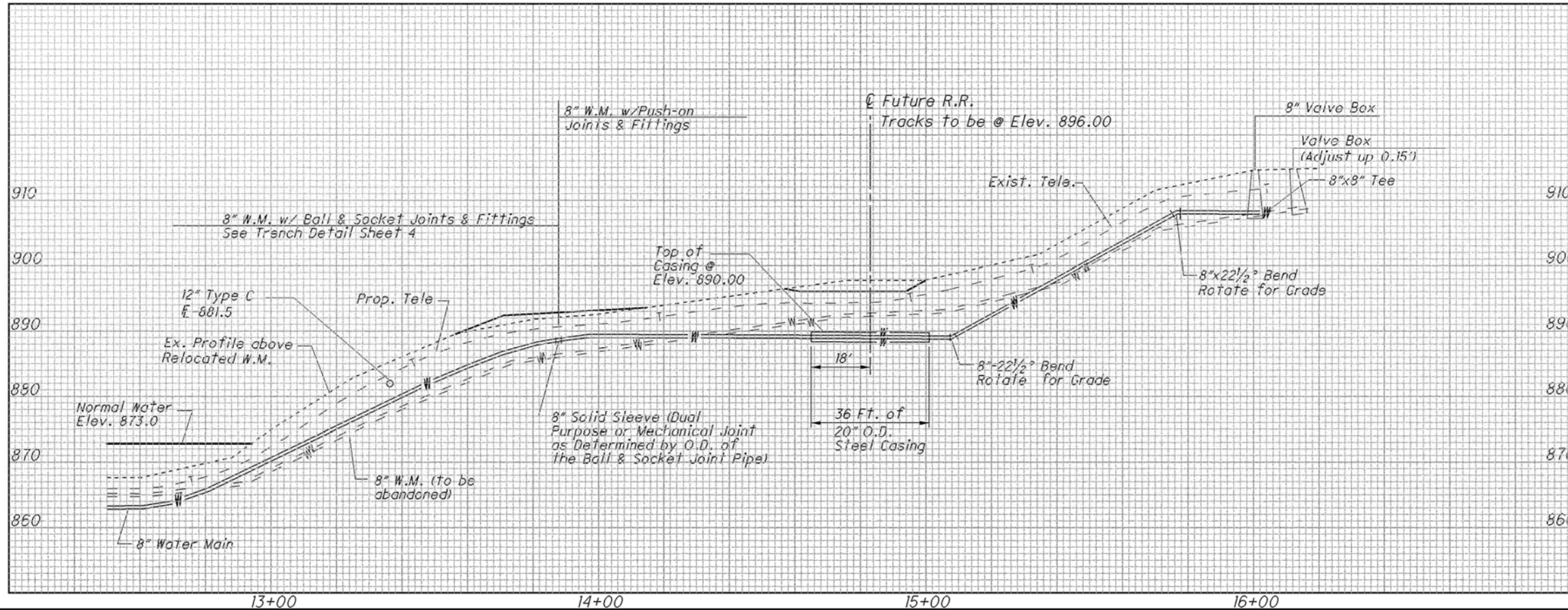
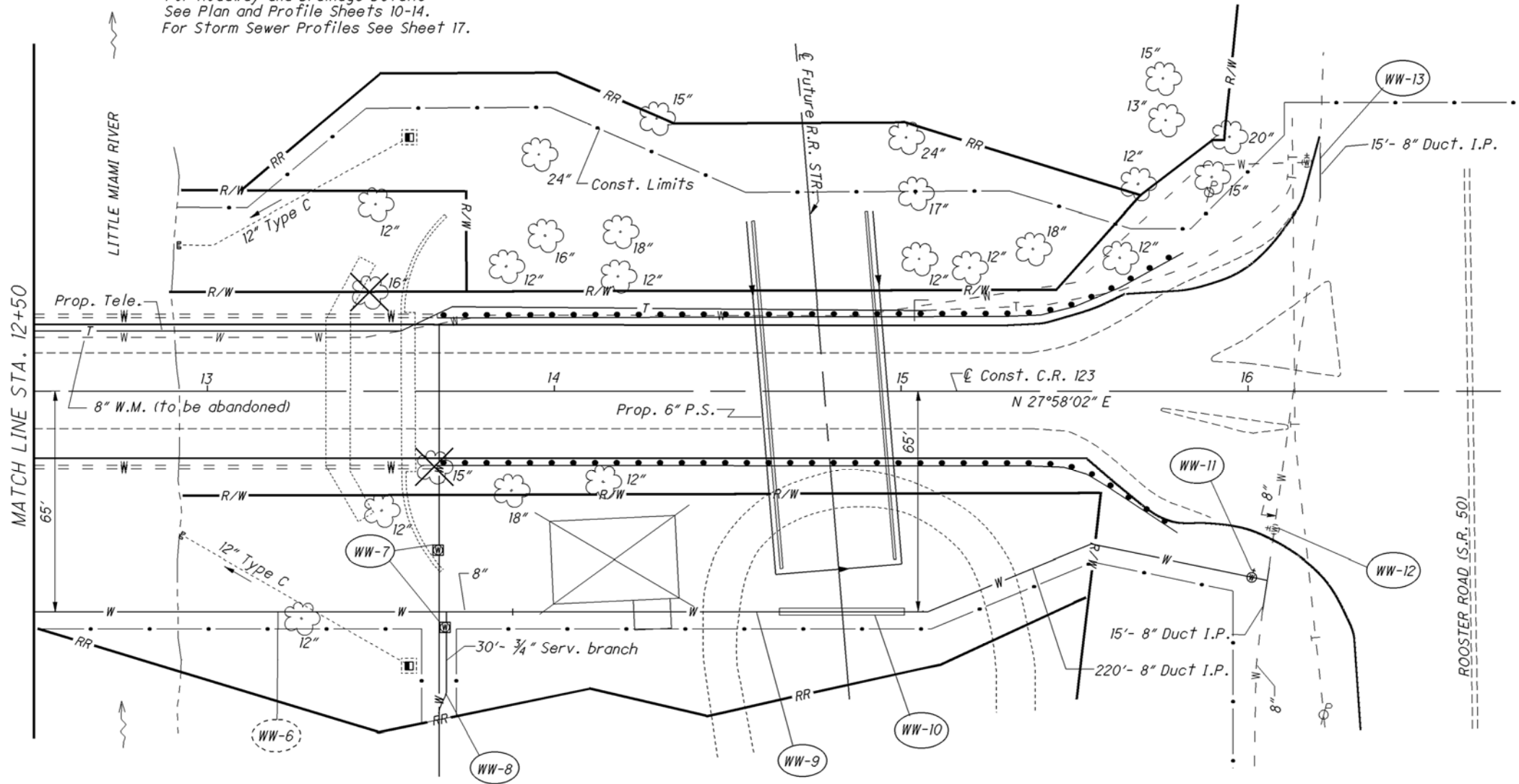


**ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY**

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



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



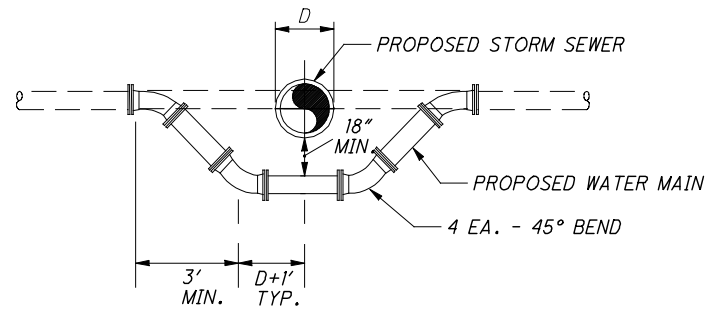
REF NO.	STATION		SIDE	20" Steel Pipe Encasement Open Cut	Valve Box Adjusted To Grade	3/4" Copper Service Branch	Meter and Chamber Removed and Reset	Sheeting and Bracing Ordered and Left in Place	8" Gate Valve & Valve Box
	FROM	TO							
WW-7	13+66	13+70	RT				1		EACH
WW-8	13+67	13+70	RT			30			
WW-9	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+08	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**

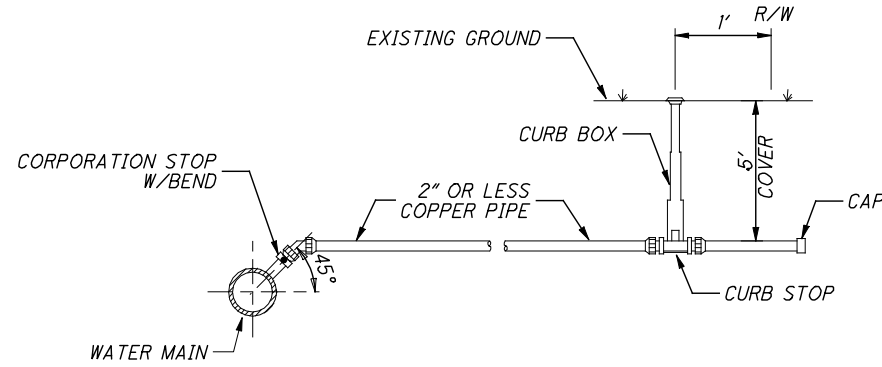
**CUY-CR123-6.55**

I:\pr\35\tds\SamplePlans\2006October\1313\1313-1.dgn 15-APR-2011 7:39AM mwawski

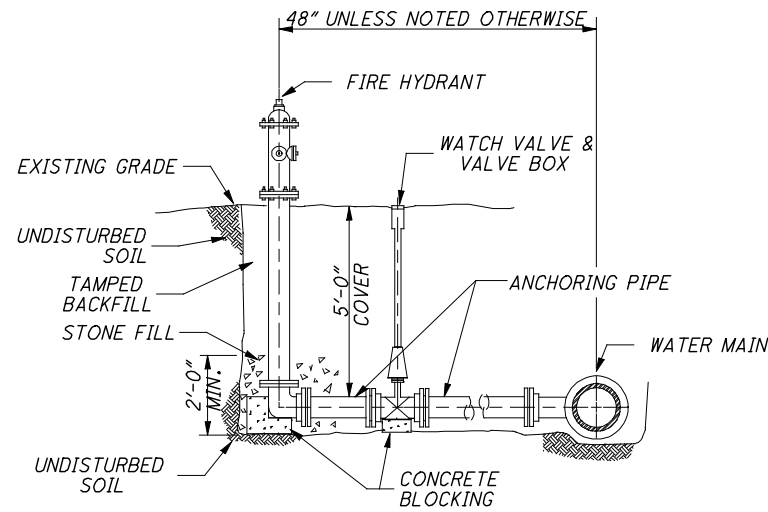




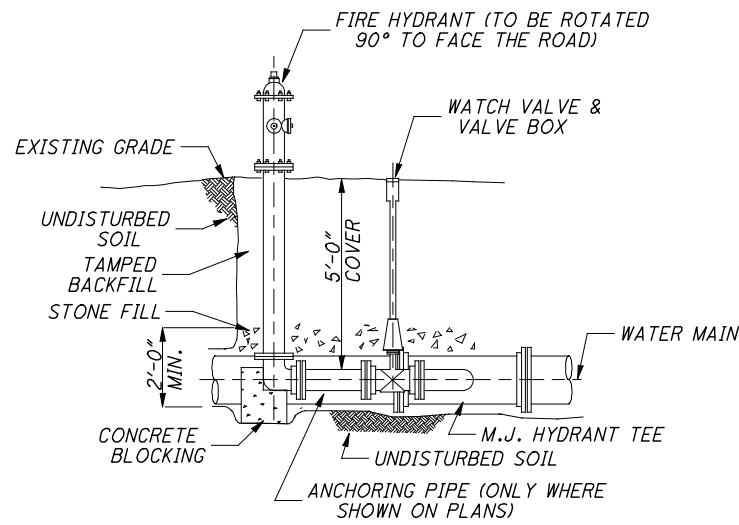
**DETAIL "A"**  
 EXISTING WATER MAIN RELOCATION  
 UNDER PROPOSED UTILITY LINE  
 (ELEVATION)



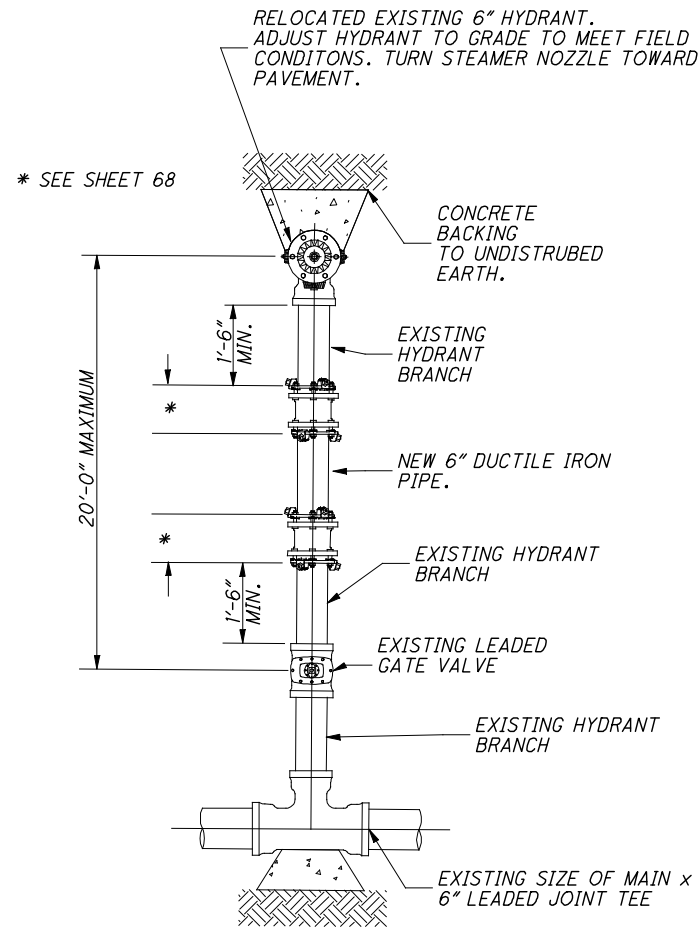
**DETAIL "B"**  
 TYPICAL 2" OR LESS SERVICE CONNECTION  
 (ELEVATION)



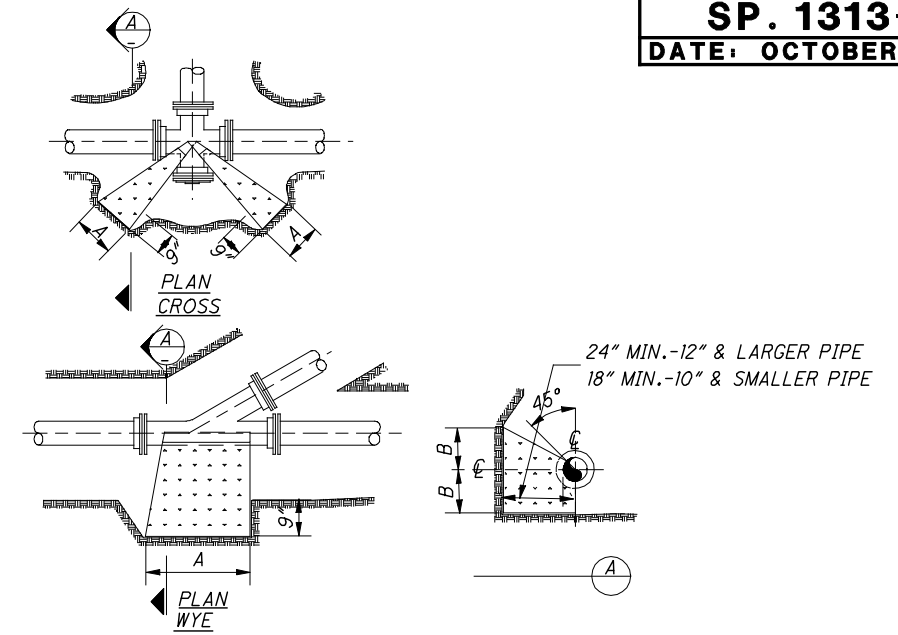
**DETAIL "C"**  
 HYDRANT ASSEMBLY  
 PERPENDICULAR TO WATER  
 (ELEVATION)



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



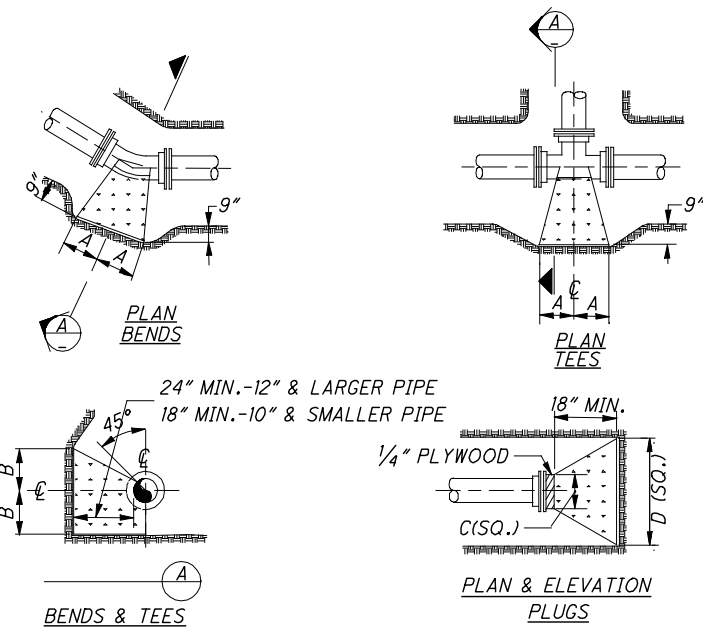
**DETAIL "E"**  
 FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE  
 (PLAN)



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										SIGNED	DATE	
							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										
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>							170	15	312	36	3	13	7	1	96	2	2		

SIGNING SUBSUMMARY

UNI-17-3.14



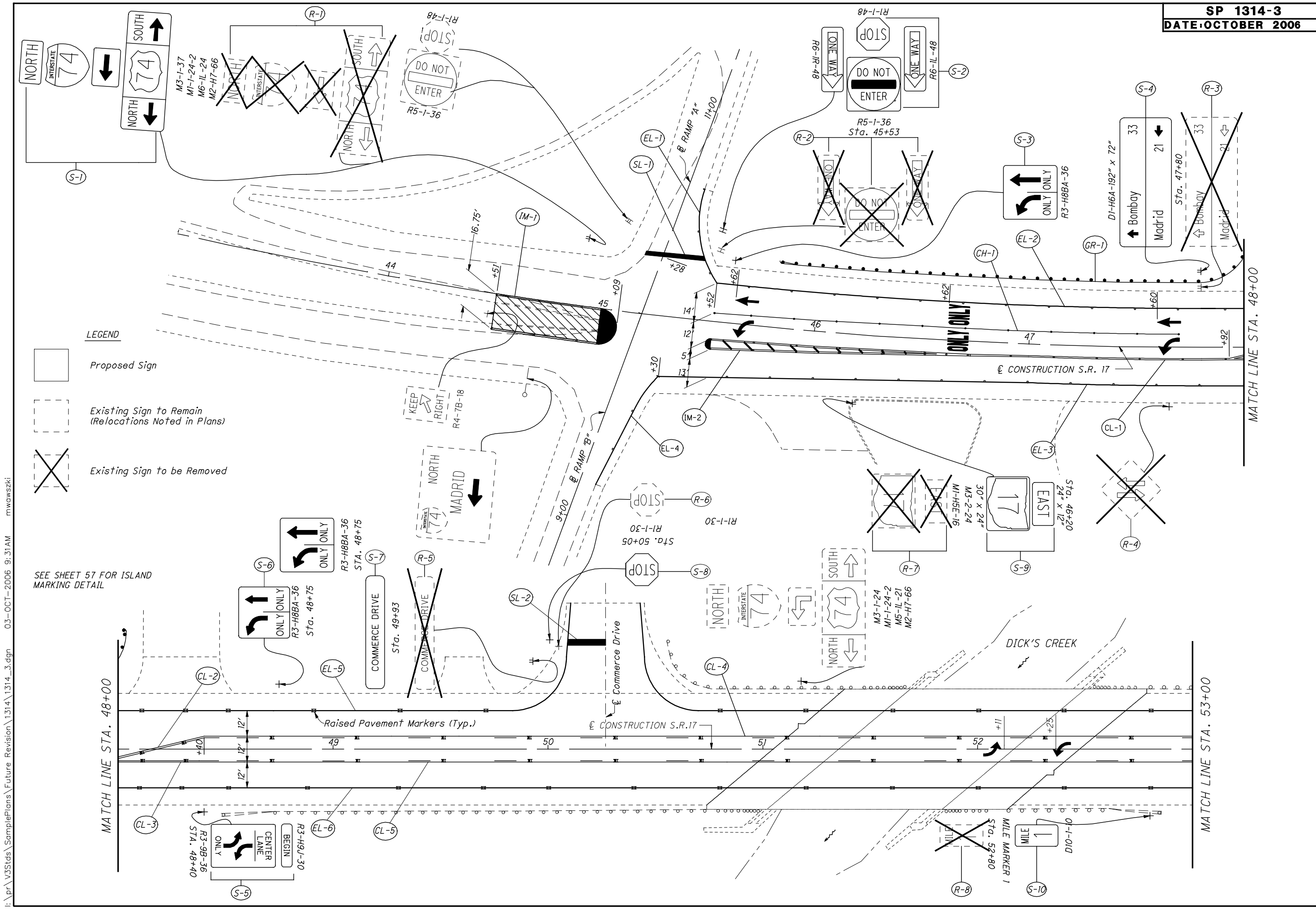
0 10 20 40  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
DAM  
CHECKED  
JAG



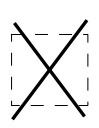
**SIGN AND PAVEMENT  
MARKING PLAN**

**UNI-17-3.14**

56  
65

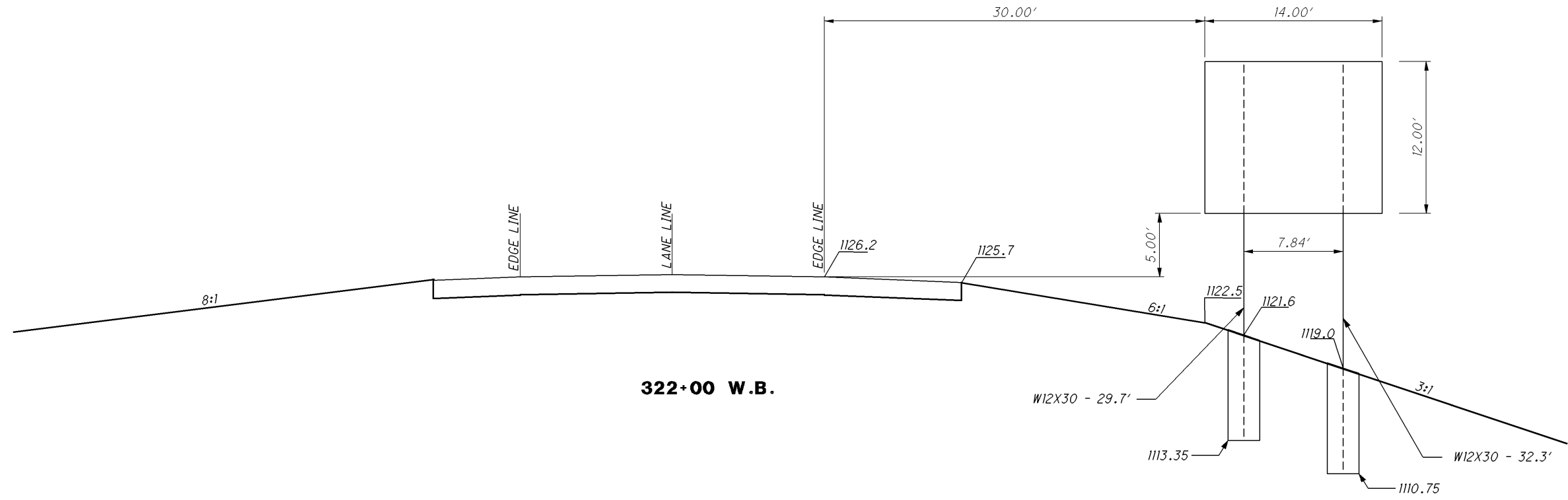


**LEGEND**

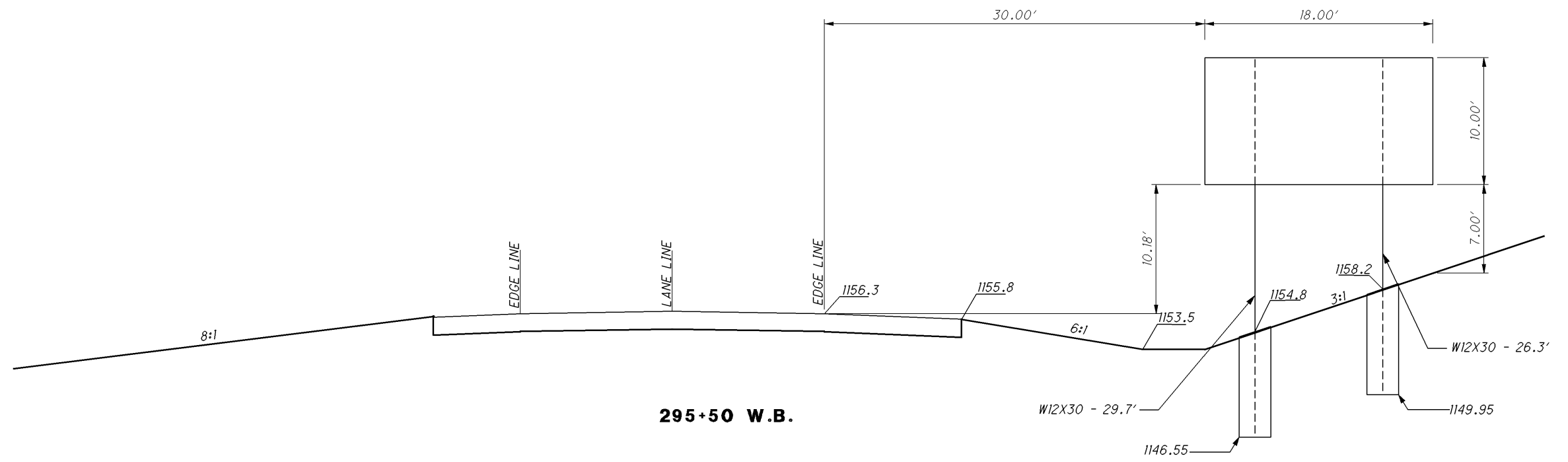
-  Proposed Sign
-  Existing Sign to Remain  
(Relocations Noted in Plans)
-  Existing Sign to be Removed

SEE SHEET 57 FOR ISLAND  
MARKING DETAIL

I:\pr\35\35\SamplePlans\Future Revision\1314\1314\_3.dgn 03-OCT-2006 9:31AM mwawski



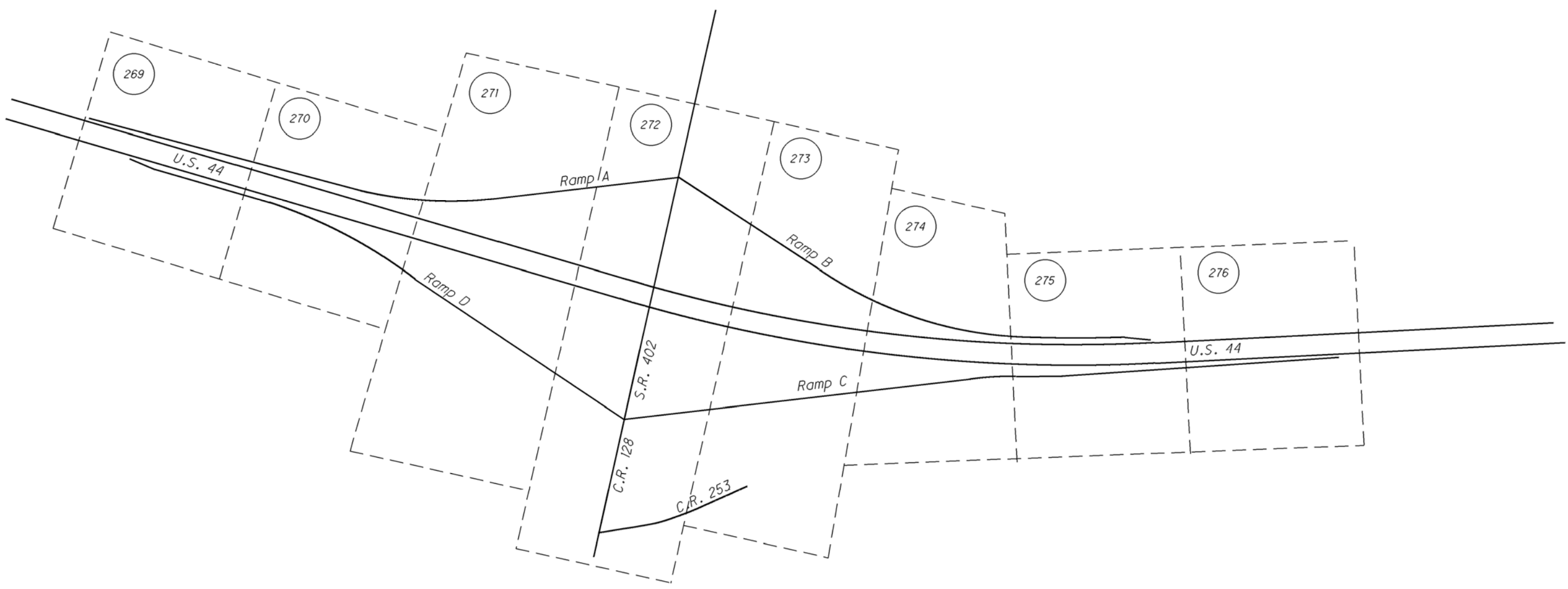
322+00 W.B.



295+50 W.B.

GUIDE SIGN ELEVATION DETAILS

FRA-161-23.20  
 LIC-161-0.00



LEGEND

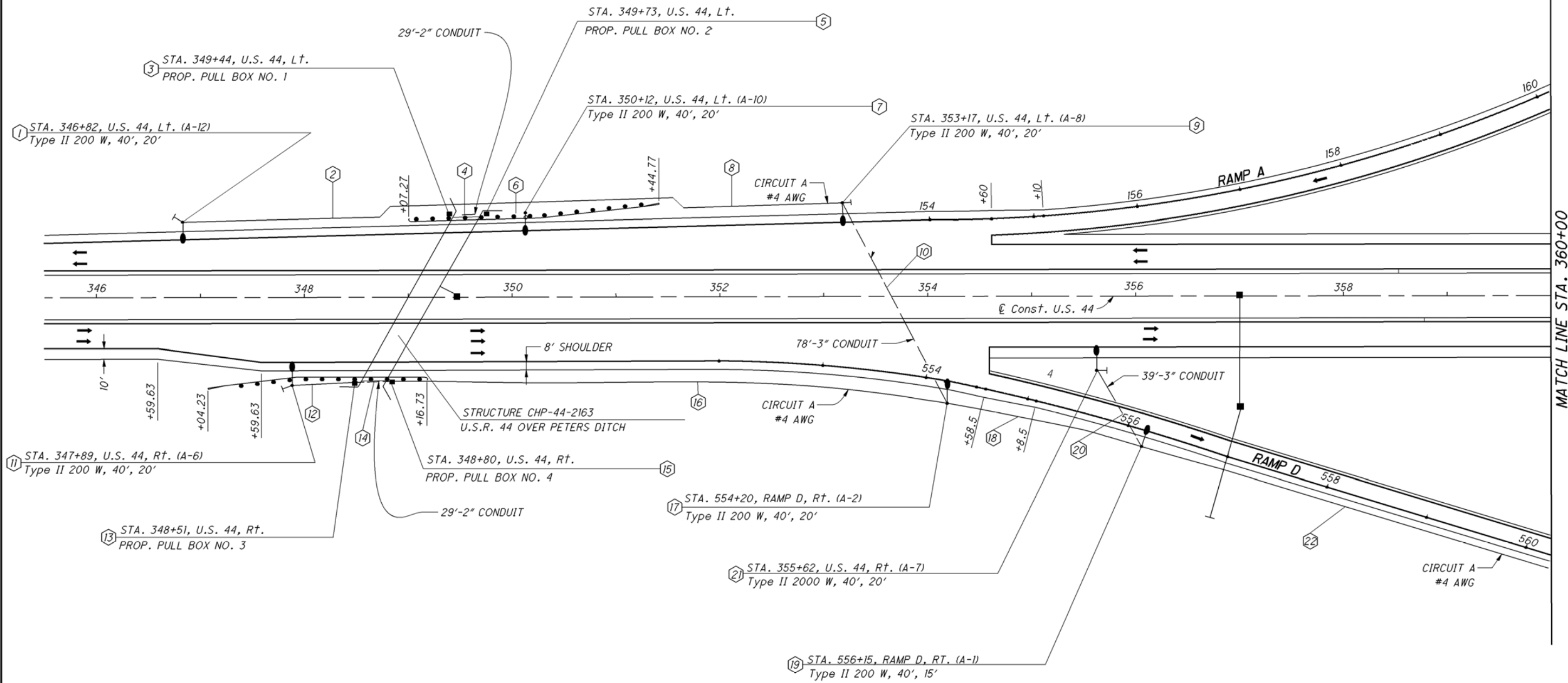
- PROPOSED GUARDRAIL
- SUB-SUMMARY REFERENCE NUMBER
- LIGHTING CIRCUIT  
CONDUIT OR DUCT CABLE (AS LABELED)  
WITH CONDUCTORS (AS INDICATED)
- CATCH BASIN, PIPE AND HEADWALL
- LIGHT POLE AND LUMINAIRE, INITIAL INSTALLATION
- CONTROL CENTER
- PULL BOX
- CIRCUIT STUB AND CAP

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**

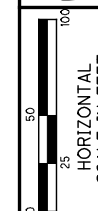
FOR LEGEND, SEE SHEET 264.  
FOR QUANTITIES, SEE SHEET 267.

REFERENCE NUMBER	SHEET No.	SIDE	ROADWAY	STATION TO STATION	625																			
					Luminaire, Style B, Type II, 200 W H.P.S., 480V EACH	Luminaire, Style B, Type III, 200 W H.P.S., 480V EACH	Light Pole, Design AT15B40 EACH	Light Pole, Design AT20B40 EACH	Light Pole Foundation, 24" x 8' Deep EACH	Pull Box, 725.08, 18" EACH	Trench, 24" FOOT	Conduit, 2", 725.04 FOOT	Conduit, 3", 725.04 FOOT	No. 4 AWG 5000 V Distribution Cable FOOT	No. 10 AWG Pole & Bracket Cable FOOT	1/2" Duct Cable W/3 No. 4 AWG 5000 V Cables FOOT	Connection, Fused Pull-Apart EACH	Connection, Unfused Pull-Apart EACH	Connection, Unfused Bolted EACH	Connection, Unfused Permanent EACH	Power Service, As Per Plan EACH	Ground Rod EACH	Structure Grounding System EACH	Plastic Caution Tape FOOT
SHEET 269																								
1	269	L+	US-44	346+82		1	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						1									2					
5	269	L+	US-44	349+73							29		117											
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																2				
14	269	R+	US-44	348+51 to 348+80							29		117											
15	269	R+	US-44	348+80																2				
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										1		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										1		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		1		1	1					124		2								
43	270	L/R	B/44	275+49 to 357+98							83		83								1		52	
SUBTOTALS CARRIED TO GENERAL SUMMARY					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

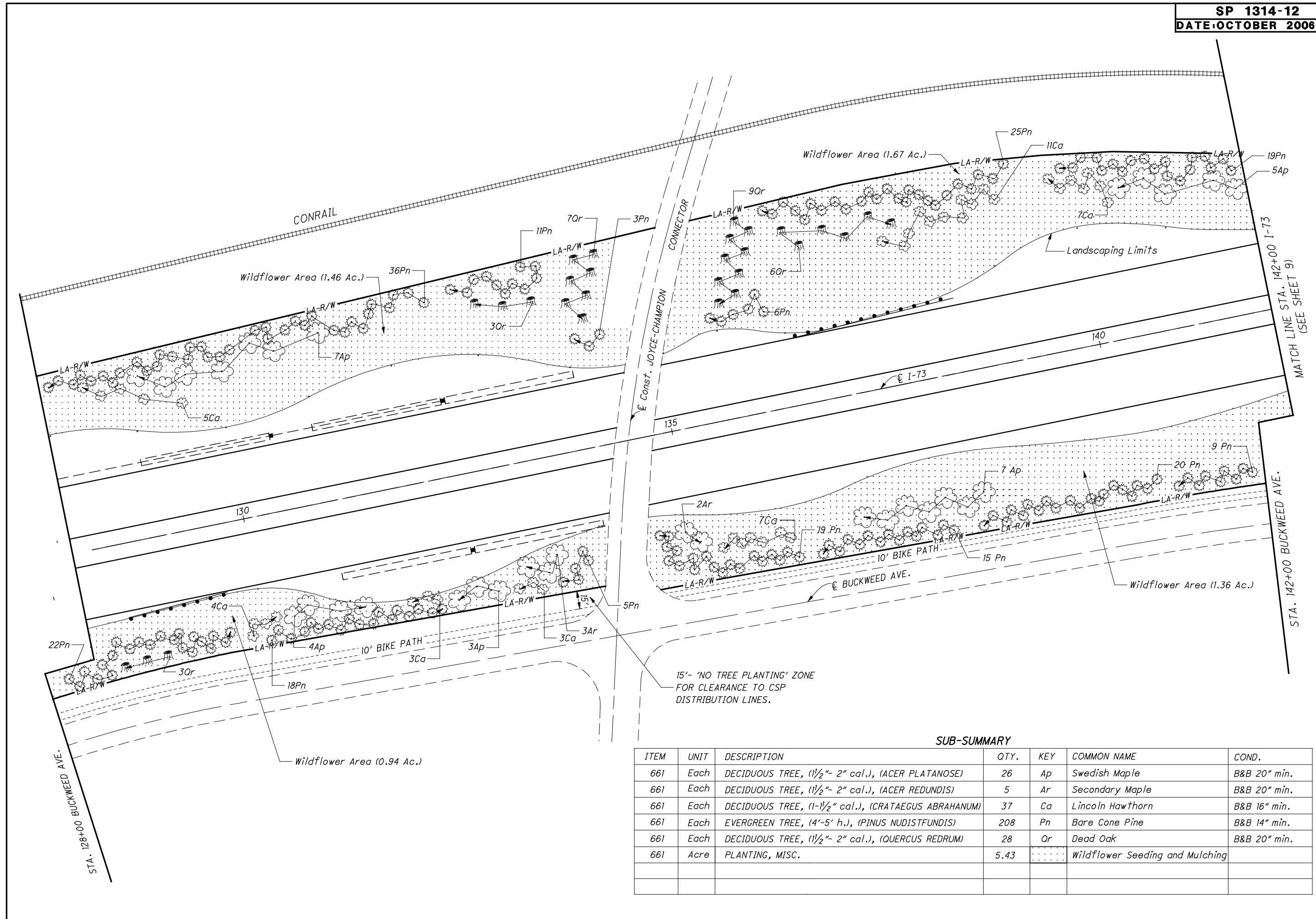




CALCULATED  
MTG  
CHECKED  
CJM

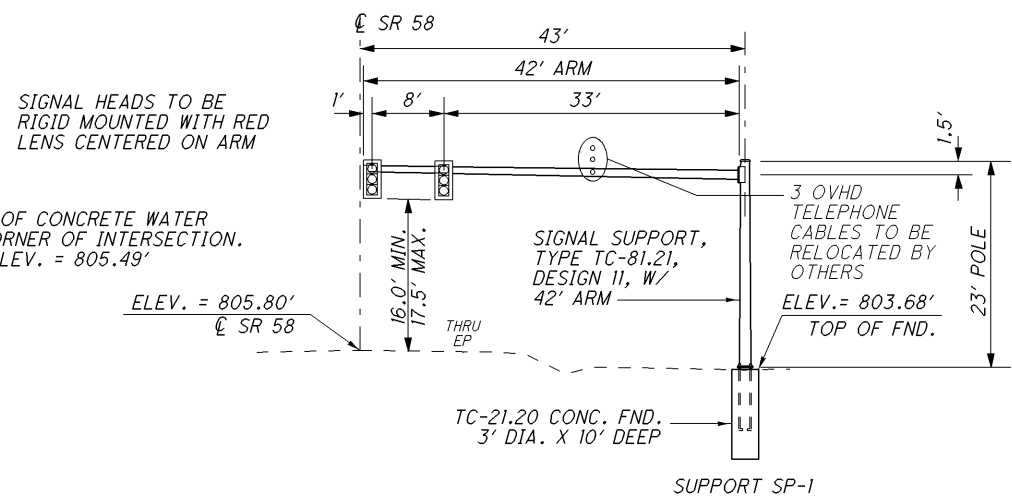
LANDSCAPING PLAN

LUC-73-3.93

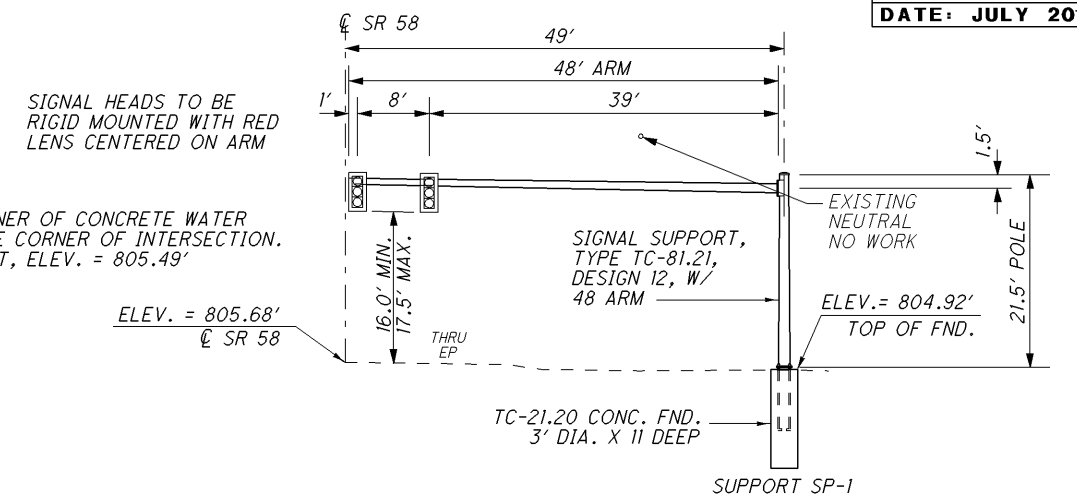


SUB-SUMMARY

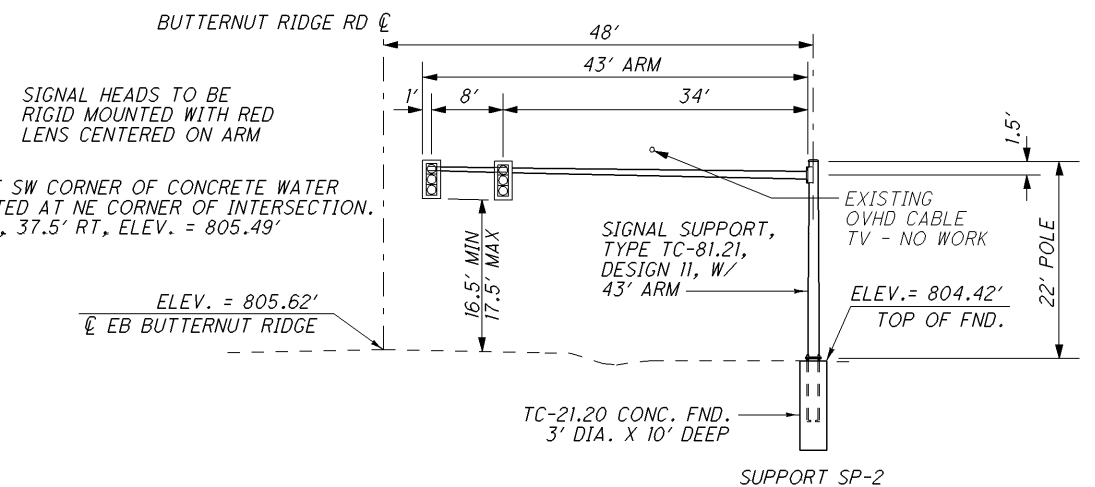
ITEM	UNIT	DESCRIPTION	QTY.	KEY	COMMON NAME	COND.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER PLATANOSE)	26	Ap	Swedish Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1½"- 2" cal.), (ACER REDUNDIS)	5	Ar	Secondary Maple	B&B 20" min.
661	Each	DECIDUOUS TREE, (1-1½" cal.), (CRATAEGUS ABRAHANUM)	37	Ca	Lincoln 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	



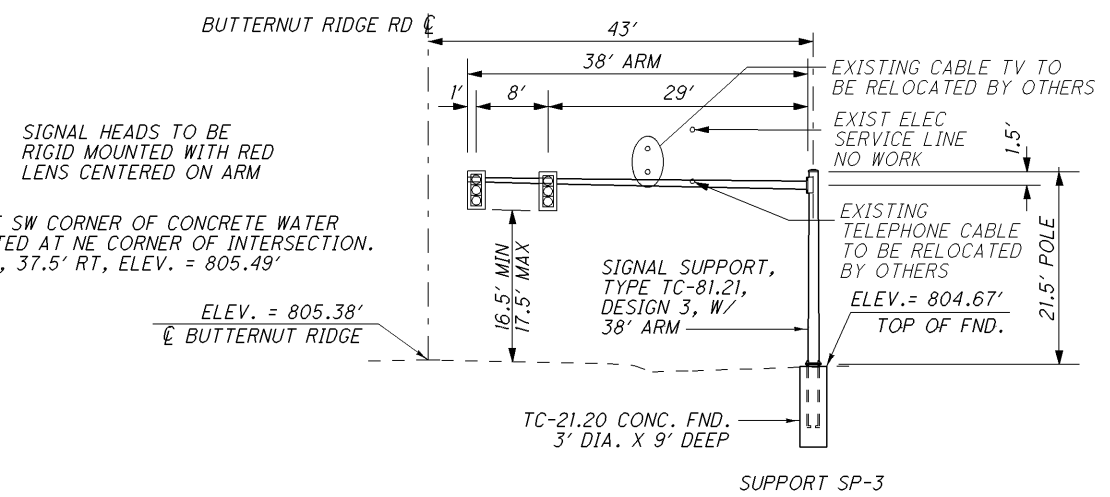
**SIGNAL SUPPORT SP-1  
ELEVATION VIEW**  
STA 898+69.9, 43' LT  
LOOKING SOUTH



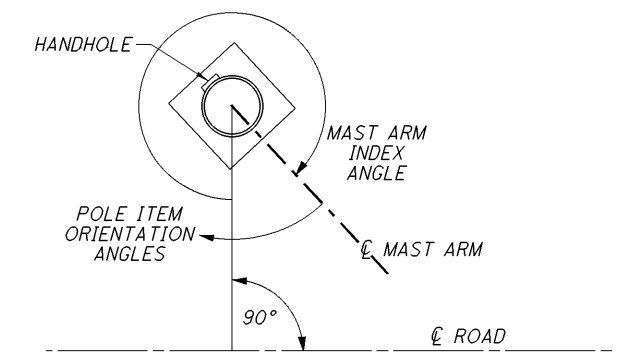
**SIGNAL SUPPORT SP-4  
ELEVATION VIEW**  
STA 899+60.6, 49' RT  
LOOKING NORTH



**SIGNAL SUPPORT SP-2  
ELEVATION VIEW**  
STA 550+43.4, 48' RT  
LOOKING EAST

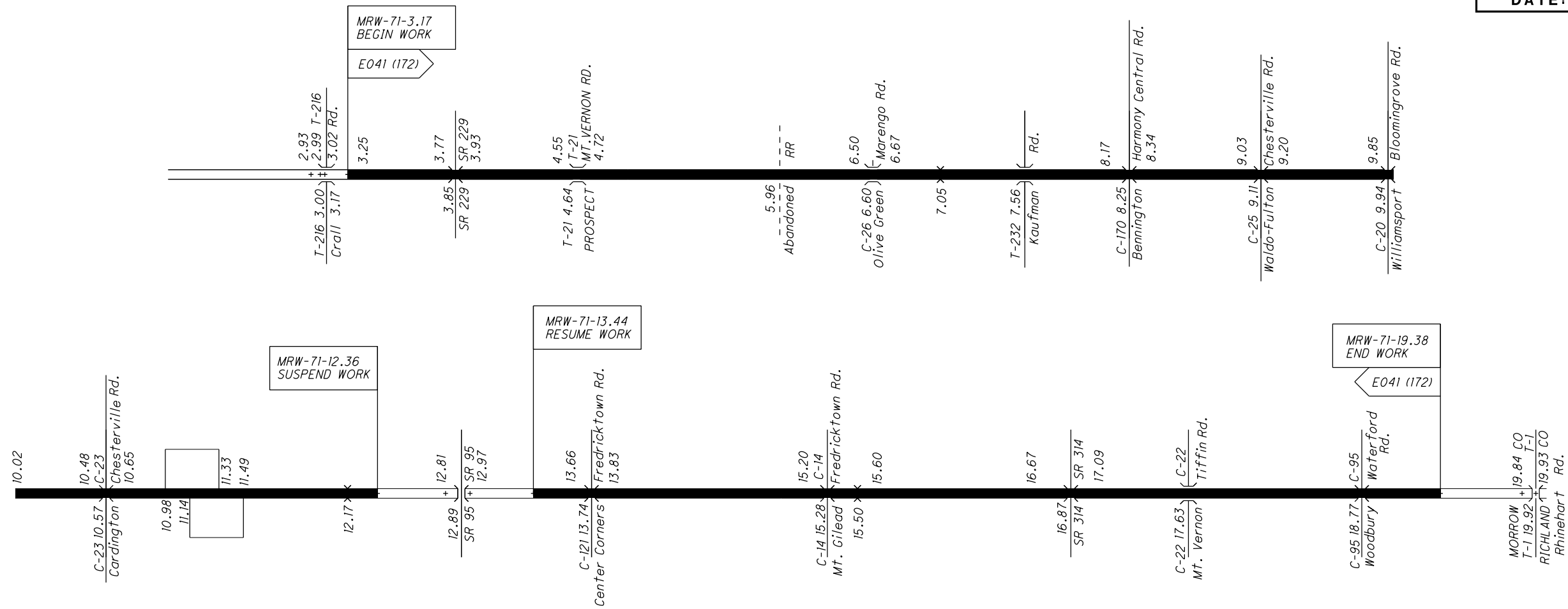


**SIGNAL SUPPORT SP-3  
ELEVATION VIEW**  
STA 49+65.1, 43' LT  
LOOKING WEST

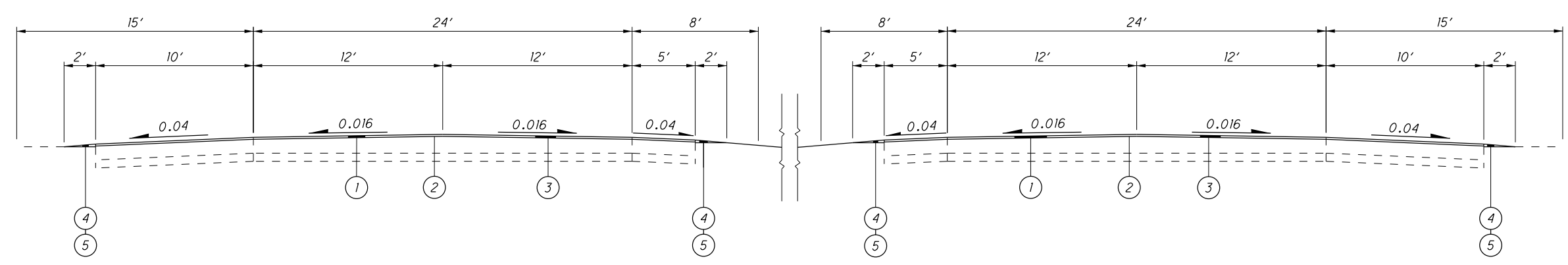


SUPPORT NO.	MAST ARM INDEX ANGLE	ORIENTATION ANGLES (DEG.) FROM MAST ARM					
		POWER SERVICE	CONTROLLER	HANDHOLE	3" CONDUIT	2" CONDUIT	2" CAPPED CONDUIT
SP-1	0°			180°	270°	90°	
SP-2	0°			180°	283°	180°	
SP-3	0°			180°	240°	90°	
SP-4	0°	90°		180°	180°	90°	

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.



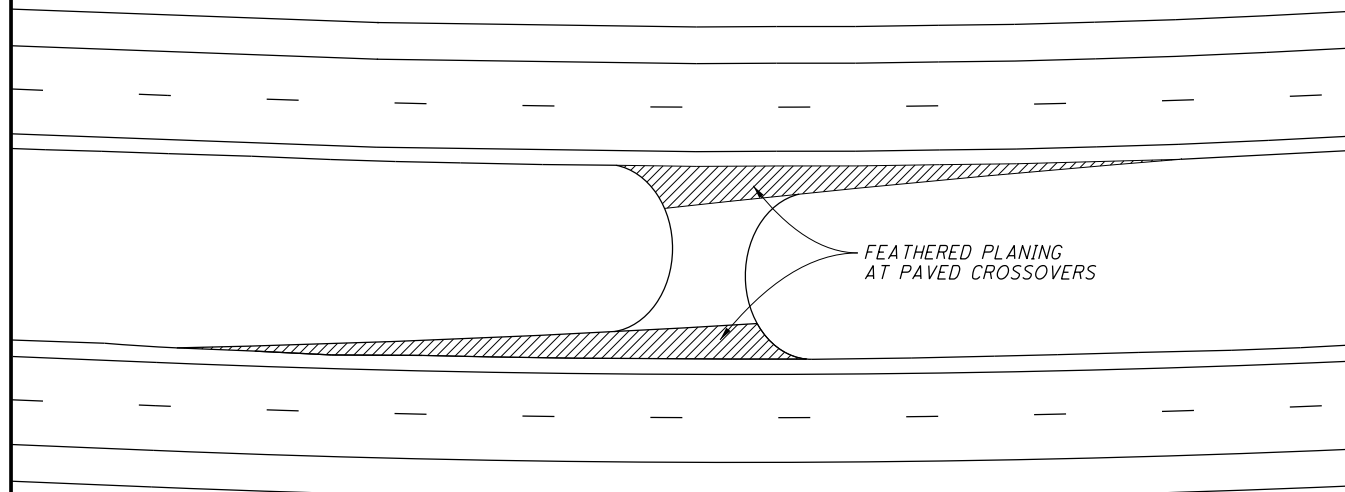
**LEGEND**

- ① ITEM 254 - 1/2" PAVEMENT PLANING, ASPHALT CONCRETE
- ② ITEM 407 - TACK COAT @ 0.075 GALLONS PER SQ. YD.
- 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

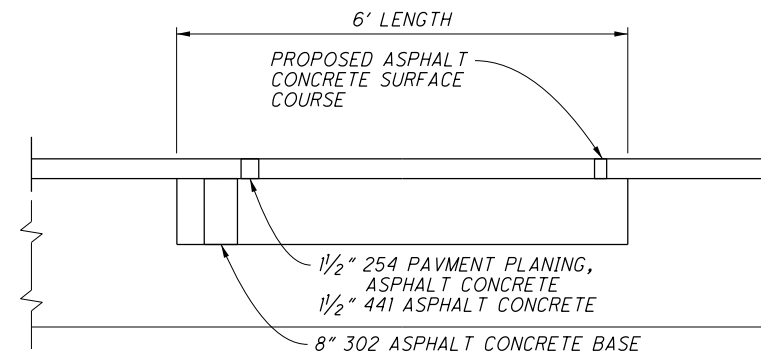
**RESURFACING**

**MRW - 71 - 3.17**

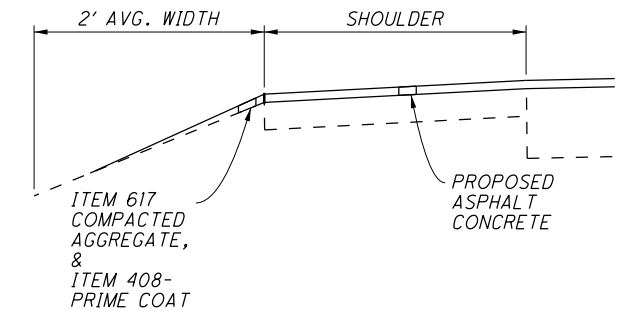
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



SHOULDER DETAIL

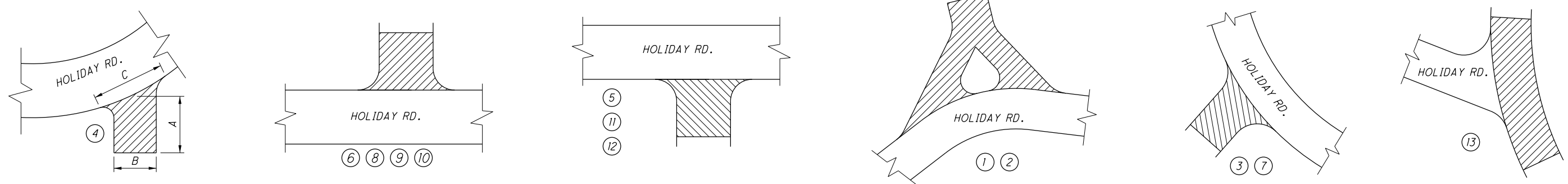


\* 6' LENGTH X 12' LANE WIDTH

LOCATION					PAVEMENT WIDTH							QUANTITIES						REMARKS
COUNTY	ROUTE	S L M	S L M	TYPICAL	NORTHBOUND				SOUTHBOUND			254	407	408	441	617	618	
					LENGTH	OUTSIDE SHOULDER	PAVEMENT	MEDIAN SHOULDER	MEDIAN SHOULDER	PAVEMENT	OUTSIDE SHOULDER	PAVEMENT PLANING, ASPHALT CONCRETE	TACK COAT (0.075 GAL./YD <sup>2</sup> )	PRIME COAT (0.4 GAL./YD <sup>2</sup> )	ASPHALT SURFACE COURSE, TYPE 1, (446), PG 64-22	COMPACT AGGREGATE	RUMBLE STRIP (ASPHALT CONCRETE)	
					FT.	FT.	FT.	FT.	FT.	FT.	FT.	1/2" DEPTH YD <sup>2</sup>	GAL.	GAL.	1/2" DEPTH YD <sup>2</sup>	2" DEPTH YD <sup>2</sup>	FT.	
MRW	71	3.17	12.07	1	46,992'	10'	24'	5'				203,632	15,272	8,354	8,485	1,161	93,984	MAINLINE (SOUTH OF SR-95)
MRW	71	3.17	12.36	1	48,523'				5'		24'	210,267	15,770	8,626	8,761	1,198	97,046	MAINLINE (SOUTH OF SR-95)
MRW	71	13.44	19.38	1	31,363'	10'	24'	5'				135,907	10,193	5,576	5,663	775	62,726	MAINLINE (NORTH OF SR-95)
MRW	71	13.57	19.38	1	30,677'				5'		24'	132,933	9,970	5,454	5,539	758	61,354	MAINLINE (NORTH OF SR-95)
MRW	71	10.99	11.14	1	792'	10'	32'*					3,696	277		154			EXTRA AREA (RAMP TAPER)
MRW	71	11.39	11.70	1	1,637'	10'	32'*					7,638	573		318			EXTRA AREA (RAMP TAPER)
MRW	71	11.33	11.48	1	792'					32'*	10'	3,696	277		154			EXTRA AREA (RAMP TAPER)
MRW	71	10.75	11.06	1	1,637'					32'*	10'	7,638	573		318			EXTRA AREA (RAMP TAPER)
MRW	71	4.41										340	25		14			* AVERAGE PAVEMENT WIDTH
MRW	71	6.67													10			EXTRA AREA (PAVED CROSSOVER)
MRW	71	7.40										340	25		14			GRAVEL CROSSOVER
MRW	71	10.37										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	11.98										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	13.63										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	14.67													10			GRAVEL CROSSOVER
MRW	71	15.06													10			GRAVEL CROSSOVER
MRW	71	15.60													10			GRAVEL CROSSOVER
MRW	71	16.75										340	25		14			EXTRA AREA (PAVED CROSSOVER)
MRW	71	17.52													10			GRAVEL CROSSOVER
MRW	71	18.03													10			GRAVEL CROSSOVER
MRW	71	5.96	6.01		255'	10'	24'	5'	5'	24'	10'	-2,210	-2	-45	-92	-6	-510	DEDUCTIONS & EXTRA AREAS
MRW	71	7.05	7.07		120'	10'	24'	5'	5'	24'	10'	-1,039	4	-21	2	-3	-240	DEDUCTIONS & EXTRA AREAS
MRW	71	7.56	7.59		145'	10'	24'	5'	5'	24'	10'	-1,254	5	-26	3	-4	-289	DEDUCTIONS & EXTRA AREAS
MRW	71	12.17	12.19		103'	10'	24'	5'	5'	24'	10'	-892	3	-18	2	-3	-206	DEDUCTIONS & EXTRA AREAS
MRW	71	15.50	15.52		80'	10'	24'	5'	5'	24'	10'	-691	3	-14	1	-2	-159	DEDUCTIONS & EXTRA AREAS
MRW	71	17.63	17.68		257'	10'	24'	5'	5'	24'	10'	-2,224	9	-46	5	-6	-513	DEDUCTIONS & EXTRA AREAS
MRW	71	18.77	18.80		155'	10'	24'	5'	5'	24'	10'	-1,341	5	-28	3	-4	-309	DEDUCTIONS & EXTRA AREAS
TOTALS CARRIED TO SUBSUMMARY												697,797	53,082	27,812	29,400	3,924	312,883	

PAVEMENT SUBSUMMARY AND DETAILS

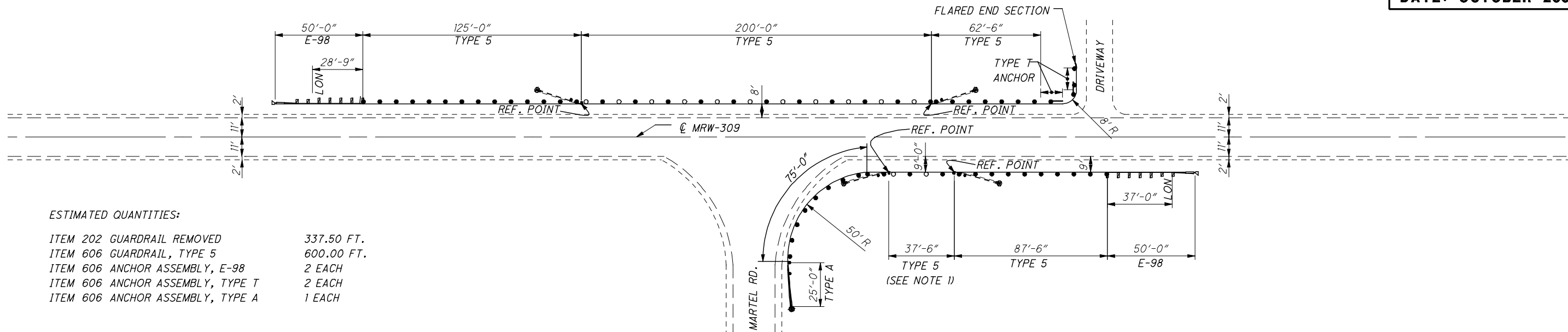
MRW - 71 - 3.17



PART	ROUTE	SLM	SIDE	DESCRIPTION	INTERSECTIONS				PROPOSED ITEMS						
					A	B	C	AREA	407	ASPHALT CONCRETE			EXISTING SURFACE	408	
									TACK COAT (@ 0.075 GAL/YD <sup>2</sup> )	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	YD <sup>3</sup>	YD <sup>3</sup>	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/CRI156)	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	
TOTALS (CARRIED TO SHEET 10)								6,493	279		181	314			1,112

CALCULATIONS

KNO - 444 - 0.00



ESTIMATED QUANTITIES:

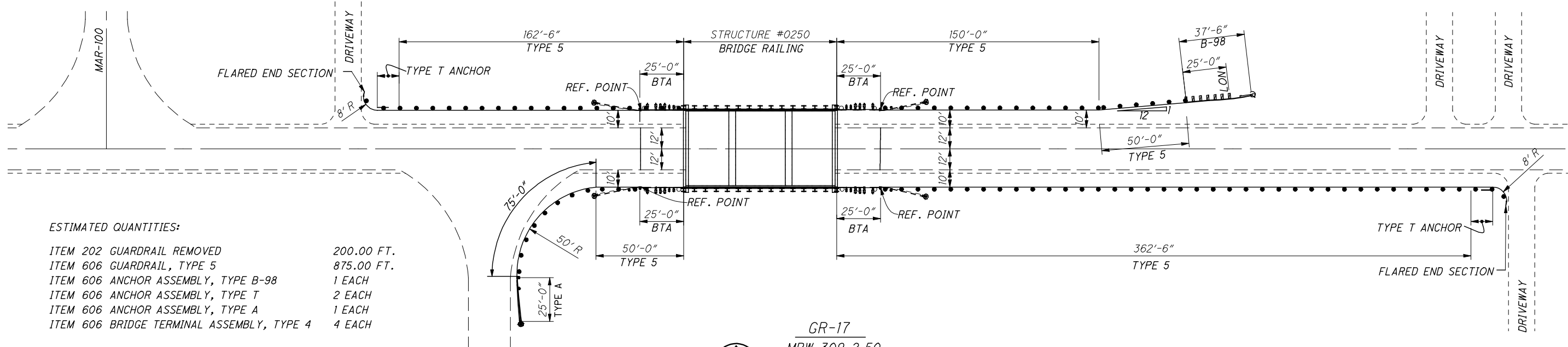
ITEM 202 GUARDRAIL REMOVED	337.50 FT.
ITEM 606 GUARDRAIL, TYPE 5	600.00 FT.
ITEM 606 ANCHOR ASSEMBLY, E-98	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE T	2 EACH
ITEM 606 ANCHOR ASSEMBLY, TYPE A	1 EACH

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, 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

