

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

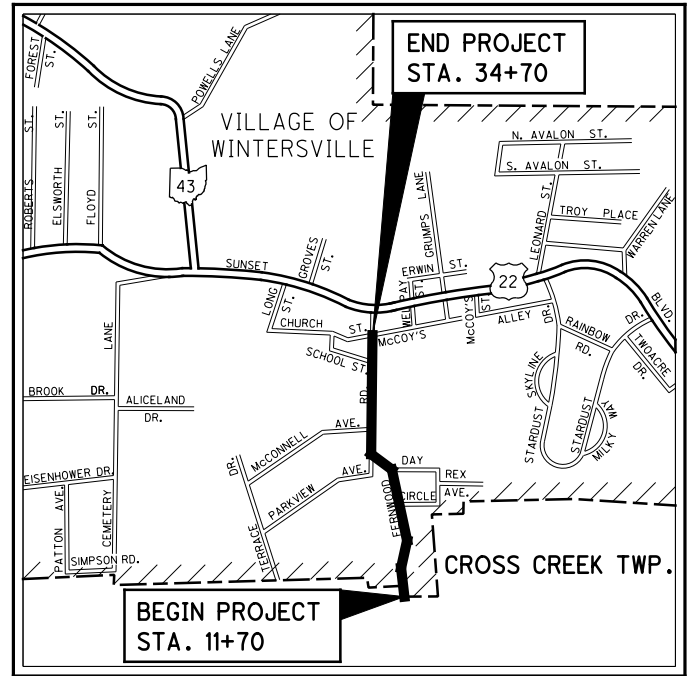
UPGRADING 0.44 MILE OF FERNWOOD ROAD BY WIDENING AND RESURFACING, INCLUDING NEW STORM SEWER SYSTEM, CURB AND GUTTER, SIDEWALK. TRAFFIC CONTROL SIGNS AND PAVEMENT MARKINGS.

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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



LOCATION MAP

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



PORTION 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

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STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-1.1	7/28/00	MGS-1.1	7/19/13	MT-105.10	7/19/13	800-2013	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

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
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: 11/11/14

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

APPROVED _____
DATE _____ MAYOR, VILLAGE OF WINTERSVILLE

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

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

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

DAR-121-(21.73)(22.83)

**RICHLAND TOWNSHIP
DARKE COUNTY**

PROJECT DESCRIPTION

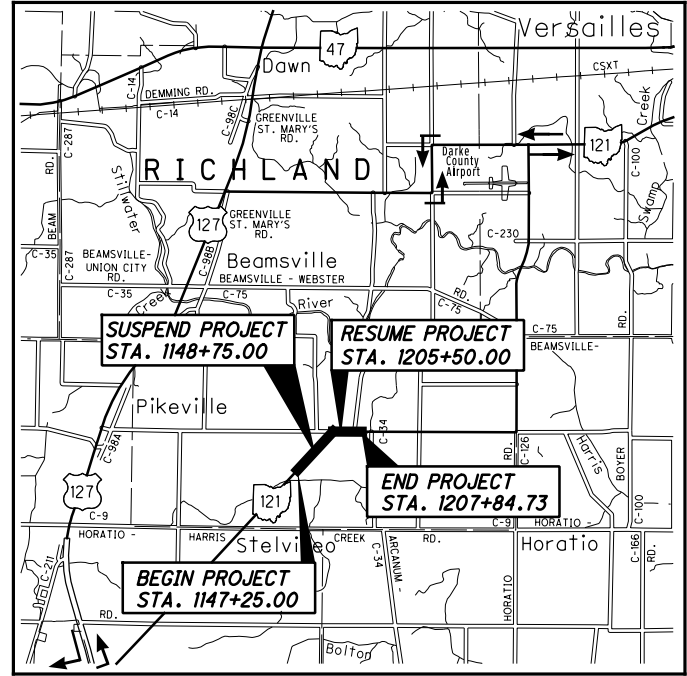
IMPROVEMENT OF 0.07 MILE OF STATE ROUTE 121 BY REPLACEMENT OF TWO STRUCTURES OVER A BRANCH OF THE STILLWATER RIVER, INCLUDING APPROACH RECONSTRUCTION.

EARTH DISTURBED AREAS

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

2013 SPECIFICATIONS

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



LOCATION MAP

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



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

DESIGN DESIGNATION

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

DESIGN EXCEPTIONS

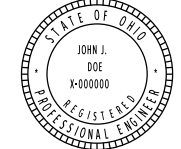
NONE REQUIRED

INDEX OF SHEETS:

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TYPICAL SECTIONS	3-4
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MAINTENANCE OF TRAFFIC	6
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ENGINEERS SEAL

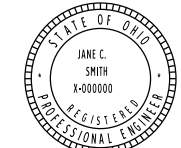
FOR STRUCTURES OVER 20' SPAN



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

ENGINEERS SEAL

FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20' SPAN



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

STANDARD CONSTRUCTION DRAWINGS

NO.	DATE	NO.	DATE	SUPPLEMENTAL SPECIFICATIONS
BP-3.1	7/18/14	WO-1.1	1/18/13	800-2013 1/21/15
BP-4.1	7/19/13	WO-1.2	1/18/13	832 1/17/14
DM-1.1	1/18/13	AS-1-81	1/18/13	
DM-4.1	7/19/13	EXJ-4-87	7/19/02	
		PSBD-2-07	1/21/11	
MGS-1.1	1/20/12	TST-1-99	1/17/14	
MGS-2.1	7/19/13			
MGS-4.2	7/19/13			
MGS-5.3	7/19/13			
LA-1.1	10/15/10			
LA-1.2	10/15/10			

SUPPLEMENTAL SPECIFICATIONS

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

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

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

OHIO Utilities Protection SERVICE
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

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

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

TUS-93-8.02

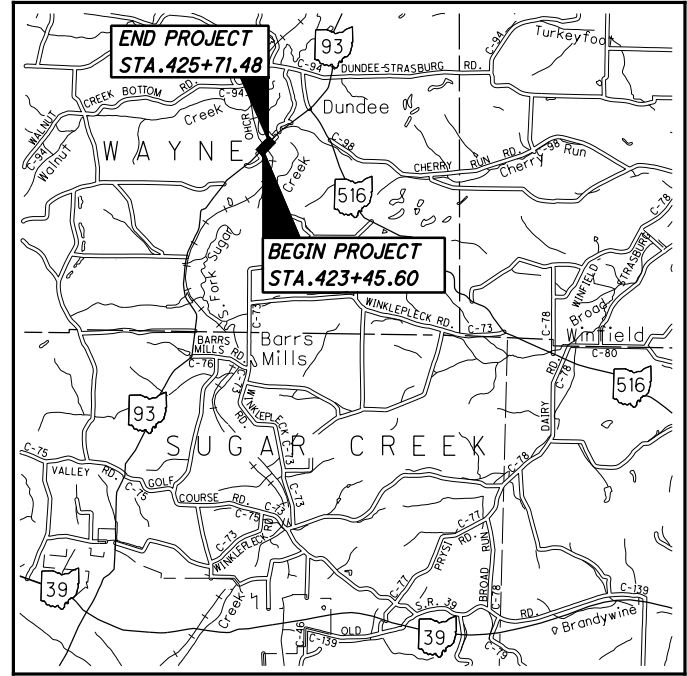
**RECONSTRUCTION OF EXISTING
SEPARATED CROSSING WITH THE
OHIO CENTRAL RAILROAD**

**WAYNE TOWNSHIP
TUSCARAWAS COUNTY**

PROJECT DESCRIPTION
REHABILITATION OF THE EXISTING STRUCTURE
OVER THE OHIO CENTRAL RAILROAD BY REPLACE-
MENT 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
SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS
AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN
THIS IMPROVEMENT.



LOCATION MAP

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



- PORTION TO BE IMPROVED:
- INTERSTATE & 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

INDEX OF SHEETS:

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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

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	AS-1-81	1/18/13	800-2013	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				

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

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

SPECIAL PROVISIONS
WATERWAY PERMIT
1/23/15

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.

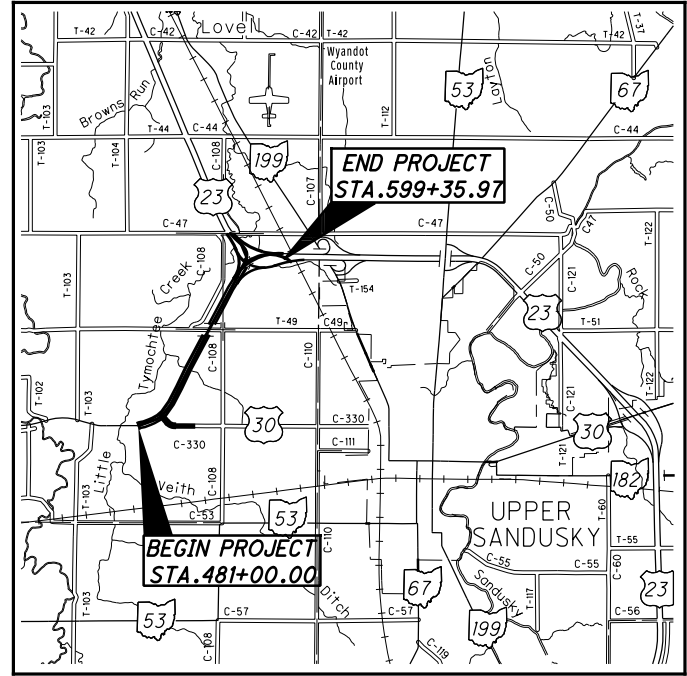
2013 SPECIFICATIONS

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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 _d	20%
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	06 FREEWAY (RURAL)
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

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

OHIO Utilities Protection SERVICE
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

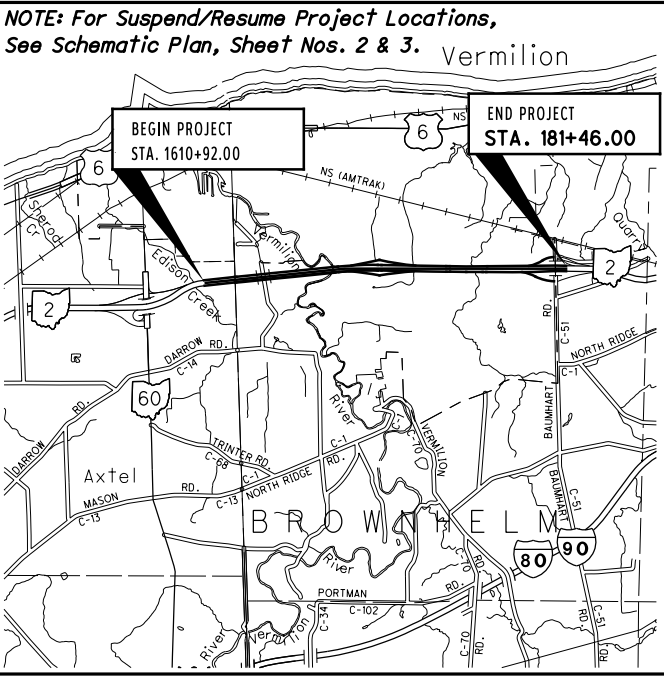
ENGINEERS SEAL FOR STRUCTURES OVER 20 FOOT	ENGINEERS SEAL FOR ENTIRE PLAN EXCEPT STRUCTURES OVER 20 FOOT
SIGNED: <i>John J. Doe</i> DATE: 11/11/14	SIGNED: <i>Jane C. Smith</i> DATE: 11/11/14

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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	800-2013	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



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
 BROWNHELM TOWNSHIP
 VERMILION TOWNSHIP
 ERIE AND LORAIN COUNTIES**

PROJECT DESCRIPTION

REHABILITATION OF 1.72 MILES OF EXISTING PAVEMENT AND SHOULDERS FOR ONGOING RESEARCH PROJECTS INCLUDING THE INSTALLATION OF WEIGH-IN-MOTION INSTRUMENTATION AND THE REHABILITATION OF BRIDGES UNDER WEST REIVER ROAD, VERMILION ROAD, VERMILION INTERCHANGE ROAD, SUNNYSIDE ROAD AND CLAUD 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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

APPROVED _____
 DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
 DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

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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	800-2013	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		
CB-1.1	1/18/13	RM-4.2	6/4/14	MT-95.30	7/18/14	TC-51.11	1/17/14		
CB-2.2	1/17/14	RM-4.3	7/18/14	MT-95.31	7/18/14	TC-52.10	10/18/13		
CB-3.1	1/18/13	RM-4.4	7/18/14	MT-96.11	7/18/14	TC-52.20	7/18/14		
CB-3.2	1/18/13			MT-96.20	7/19/13	TC-65.10	1/17/14		
DM-1.1	1/18/13	AS-1-81	1/18/13	MT-96.26	7/19/13	TC-65.11	7/18/14		
DM-4.4	7/20/12	EXJ-4-87	7/19/02	MT-99.20	7/19/13	TC-72.20	7/18/14		
		RB-1-55	7/19/13			TC-82.10	10/18/13		

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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

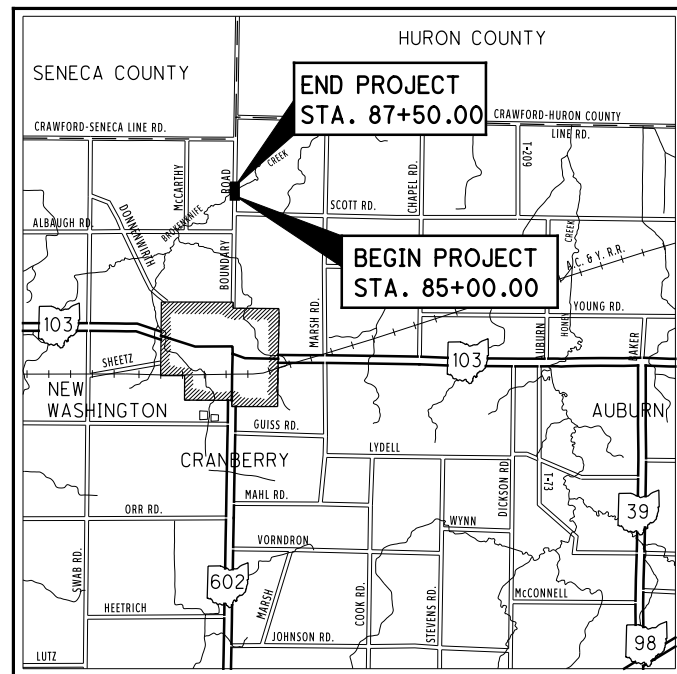
APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ ENGINEER, CRAWFORD COUNTY

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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



PORTION TO BE IMPROVED - - - - -
INTERSTATE & 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 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

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PLAN AND PROFILE	12-13
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RIGHT OF WAY	22-27
SOIL PROFILES	

ENGINEERS SEAL:
FOR DESIGN CHANGES NOTED ON SHEET 4

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

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

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

PARTS 1 AND 2						SUPPLEMENTAL SPECIFICATIONS	
STANDARD CONSTRUCTION DRAWINGS							
BP-3.1	7/18/14	RM-1.1	7/18/14			800-2013	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						
						SPECIAL PROVISIONS	
						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.) PART 1
1/27

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

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

**CRANBERRY TOWNSHIP
CRAWFORD COUNTY**

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

PROJECT DESCRIPTION

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

EARTH DISTURBED AREAS

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

2013 SPECIFICATIONS

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

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

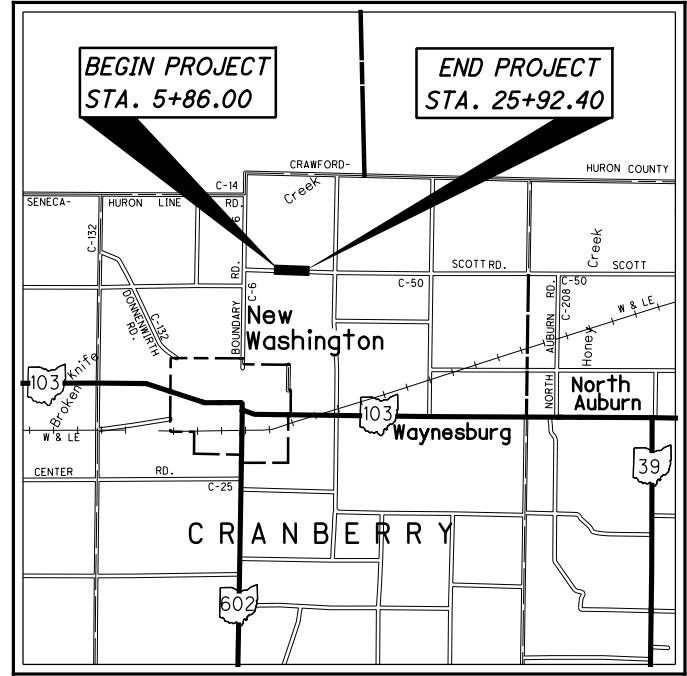
APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ CRAWFORD COUNTY COMMISSIONER

APPROVED _____
DATE _____ ENGINEER, CRAWFORD COUNTY

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

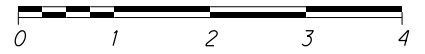
APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

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

SCALE IN MILES



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

DESIGN DESIGNATION

CURRENT ADT (2013)	-----	2300
DESIGN YEAR ADT (2033)	-----	3150
DESIGN HOURLY VOLUME (2033)	-----	315
DIRECTIONAL DISTRIBUTION	-----	55%
TRUCKS (24 HOUR B&C)	-----	3%
DESIGN SPEED	-----	55 MPH
LEGAL SPEED	-----	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	07 LOCAL ROAD (RURAL)	
NHS PROJECT	-----	NO

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
CONTACT 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

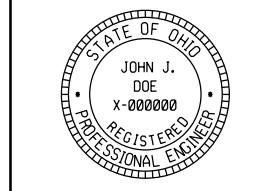
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PLAN & PROFILE	12-17
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SOIL PROFILES	

STANDARD CONSTRUCTION DRAWINGS

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

ENGINEERS SEAL:



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

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

DEL-257-8.37
MAR-257-0.00

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

PROJECT DESCRIPTION

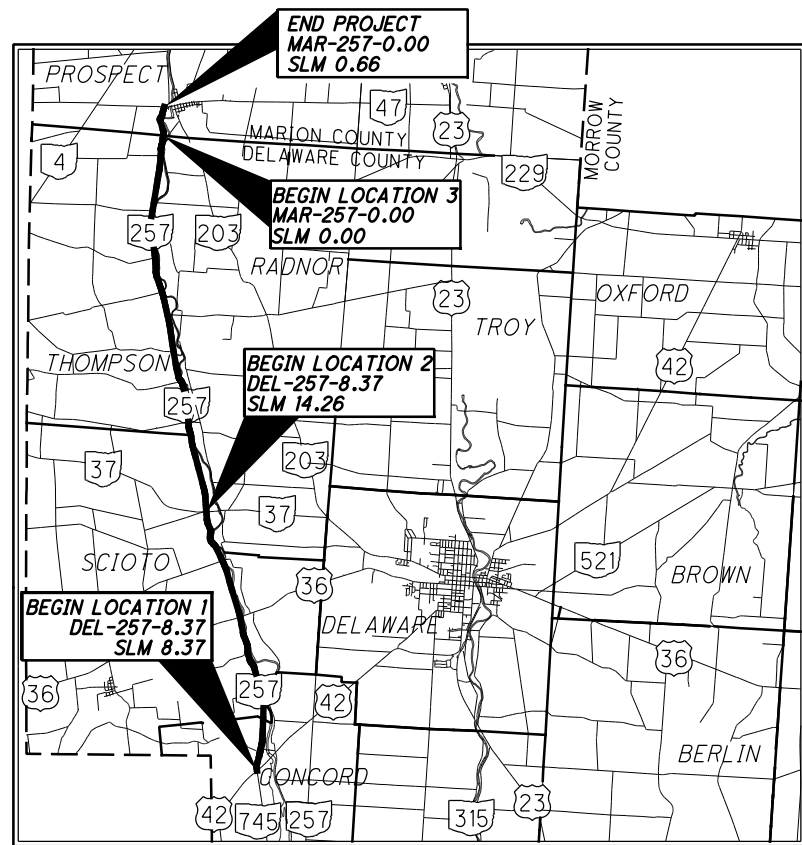
SPOT PAVEMENT REPAIRS ON SR-257 IN DELAWARE COUNTY BETWEEN SLM 8.37 (US-42/SR-745) AND SLM 14.26 (SR-37).

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*

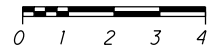
* MAINTENANCE PROJECT



LOCATION MAP

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

SCALE IN MILES



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

DESIGN DESIGNATION	DEL-257-8.37	MAR-257-0.00
CURRENT ADT (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.

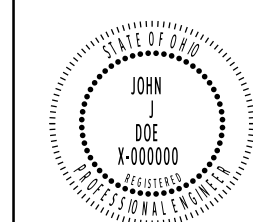
Call Before You Dig
1-800-362-2764

(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

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PAVEMENT MARKING SUBSUMMARY	10
RPM SUBSUMMARY	11

STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7/18/14	800-2013	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

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL 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.
NONE

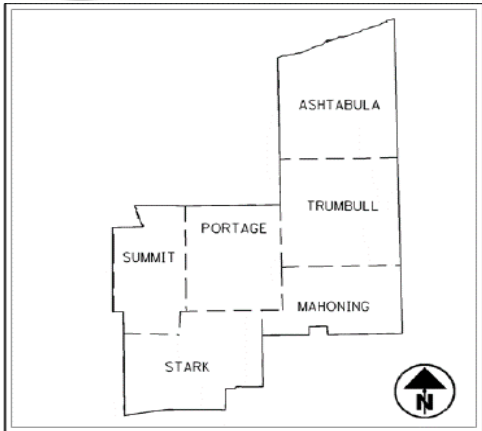
PID NO.
93708

CONSTRUCTION PROJECT NO.

DEL-257-8.37
MAR-257-0.00



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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

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

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

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.

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

Call Before You Dig
1-800-362-2764

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

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:

SIGNED: John Doe
 DATE: 11-11-14

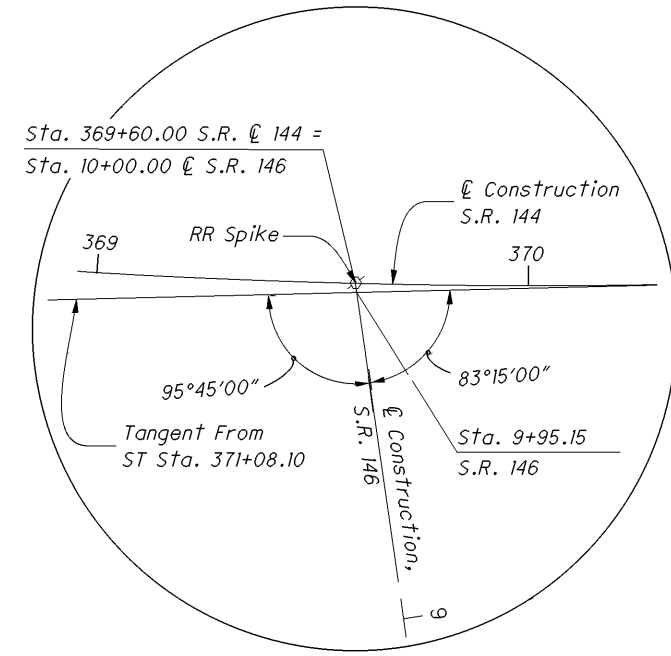
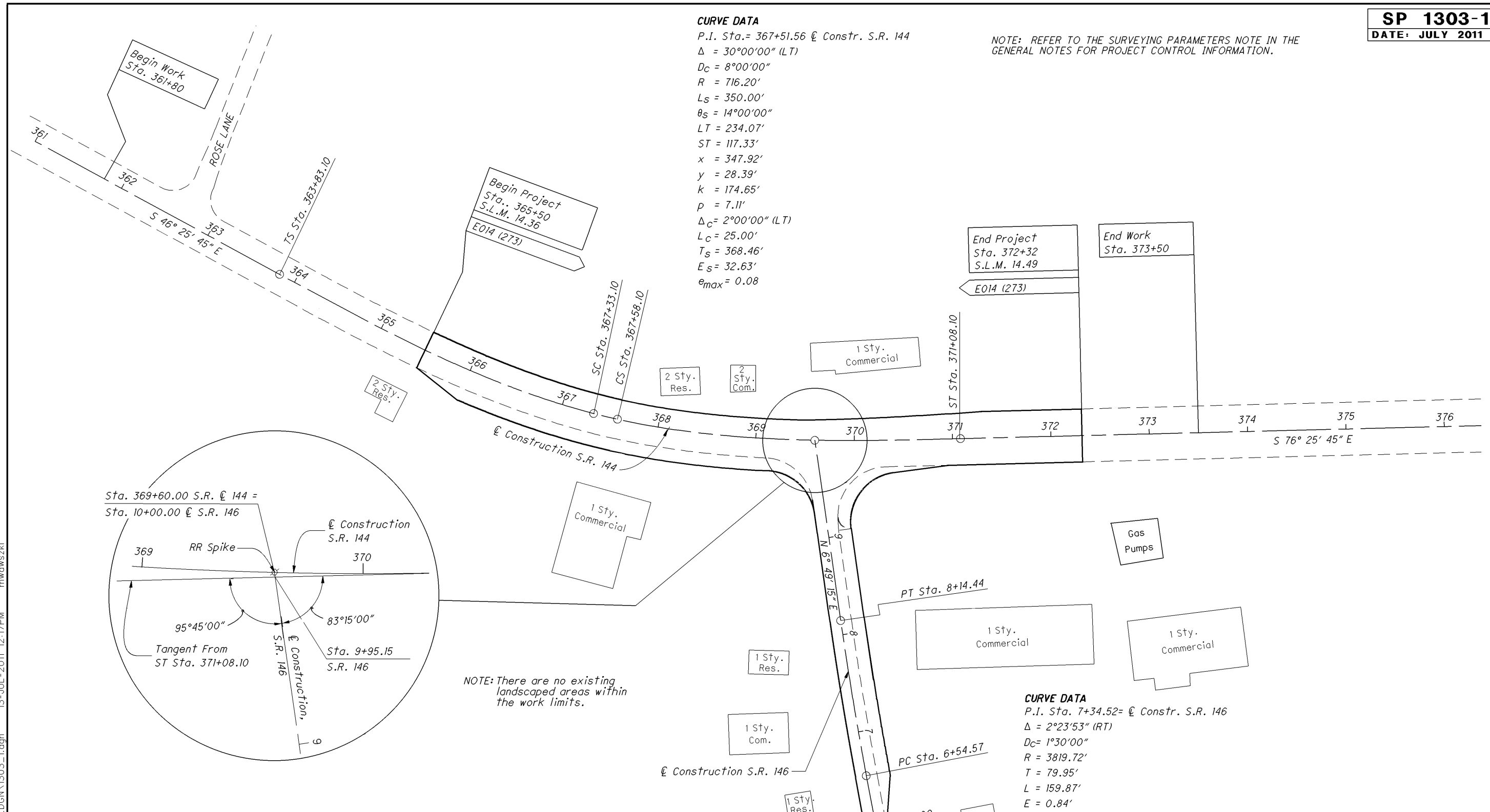
STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
MT-95.30	07/18/14	MT-105.10	07/19/13	TC-41.20	10/18/13			800-2013	1/15/2015
MT-95.31	07/18/14			TC-72.20	07/18/14			832	1/17/2014
MT-95.32	07/18/14								
MT-95.50	07/19/13								
MT-98.10	07/18/14								
MT-98.11	07/18/14								
MT-98.20	07/18/14								
MT-98.22	07/18/14								
MT-98.28	07/18/14								
MT-99.20	07/19/13								
								SPECIAL PROVISIONS	
								NONE	



CURVE DATA

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

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

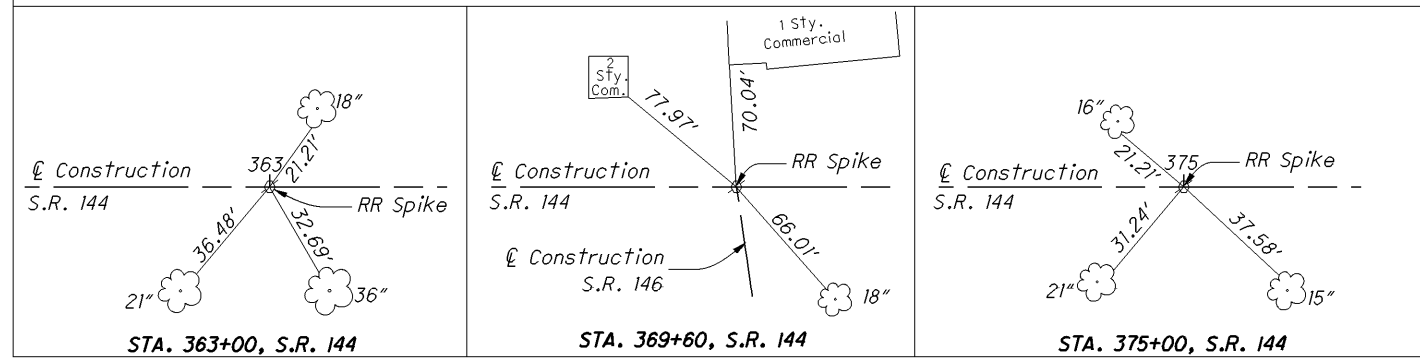


NOTE: There are no existing landscaped areas within the work limits.

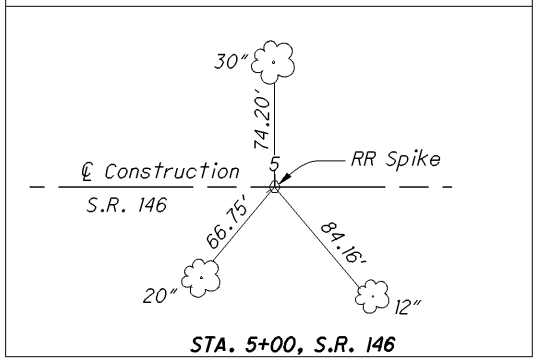
CURVE DATA

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

CENTERLINE REFERENCES (Not to Scale)



CENTERLINE REFERENCE (Not to Scale)



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SCHEMATIC PLAN & DESIGN DESIGNATIONS

MIA -43-26.15

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

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

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

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

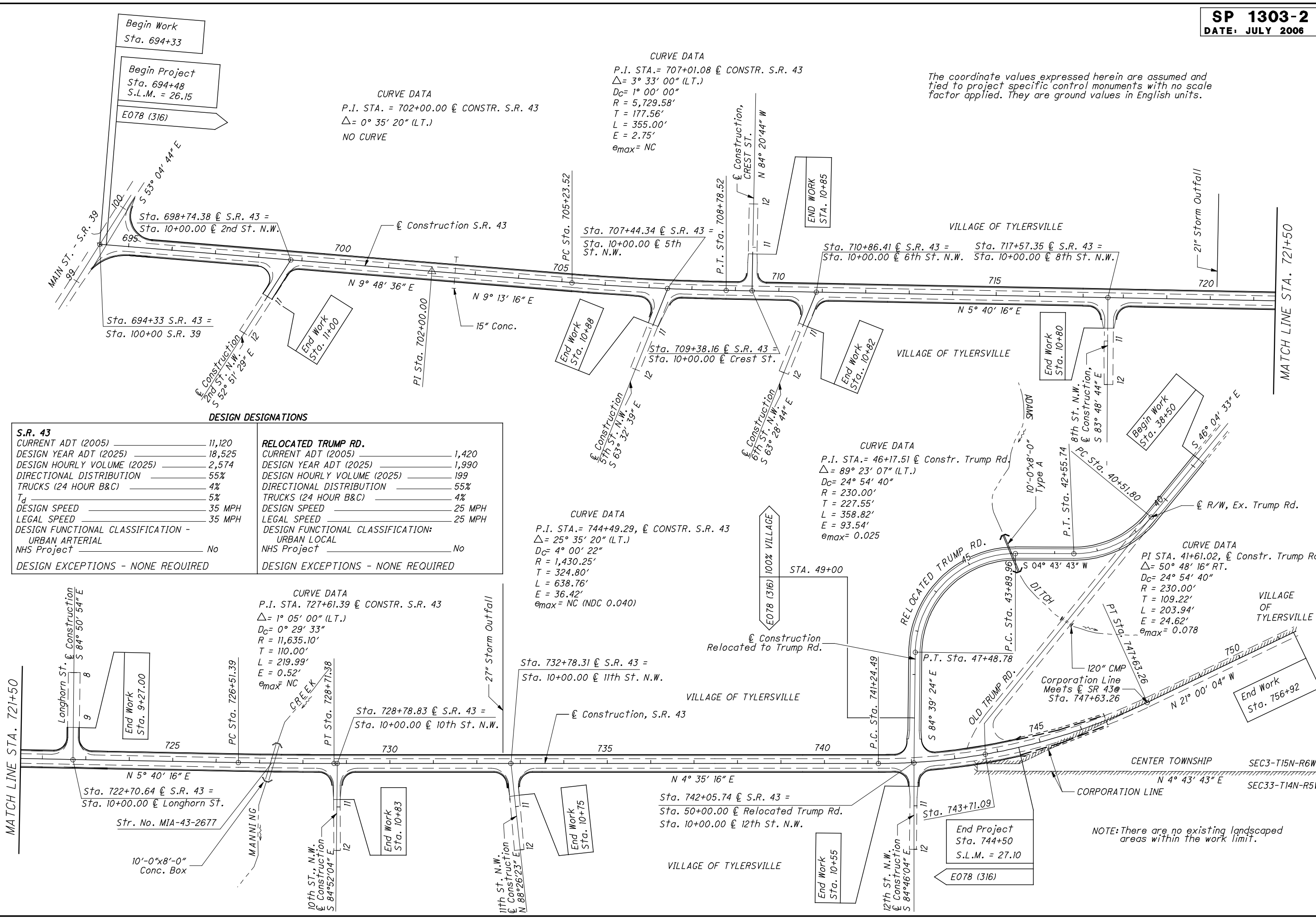
CURVE DATA
 P.I. STA.= 744+49.29, @ CONSTR. S.R. 43
 $\Delta = 25^\circ 35' 20''$ (LT.)
 $D_c = 4^\circ 00' 22''$
 $R = 1,430.25'$
 $T = 324.80'$
 $L = 638.76'$
 $E = 36.42'$
 $e_{max} = NC$ (NDC 0.040)

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

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

DESIGN DESIGNATIONS

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



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

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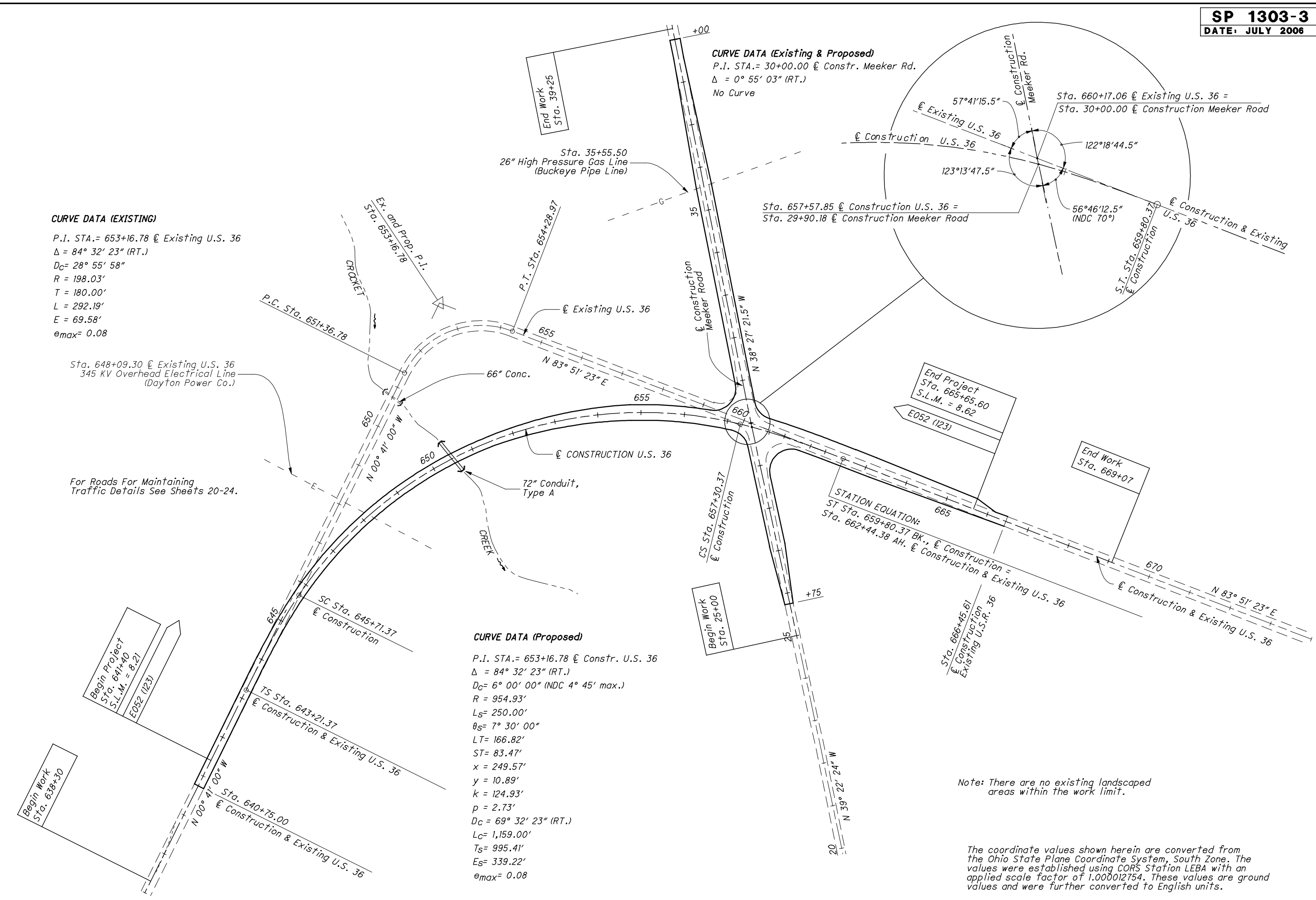
SCHEMATIC PLAN

HAS - 36 - 8.21

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

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

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



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

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

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

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SCHEMATIC PLAN & DESIGN DESIGNATION

SUM/POR-21-30.51/0.00 AND VARIOUS

CITY OF VICTORY

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

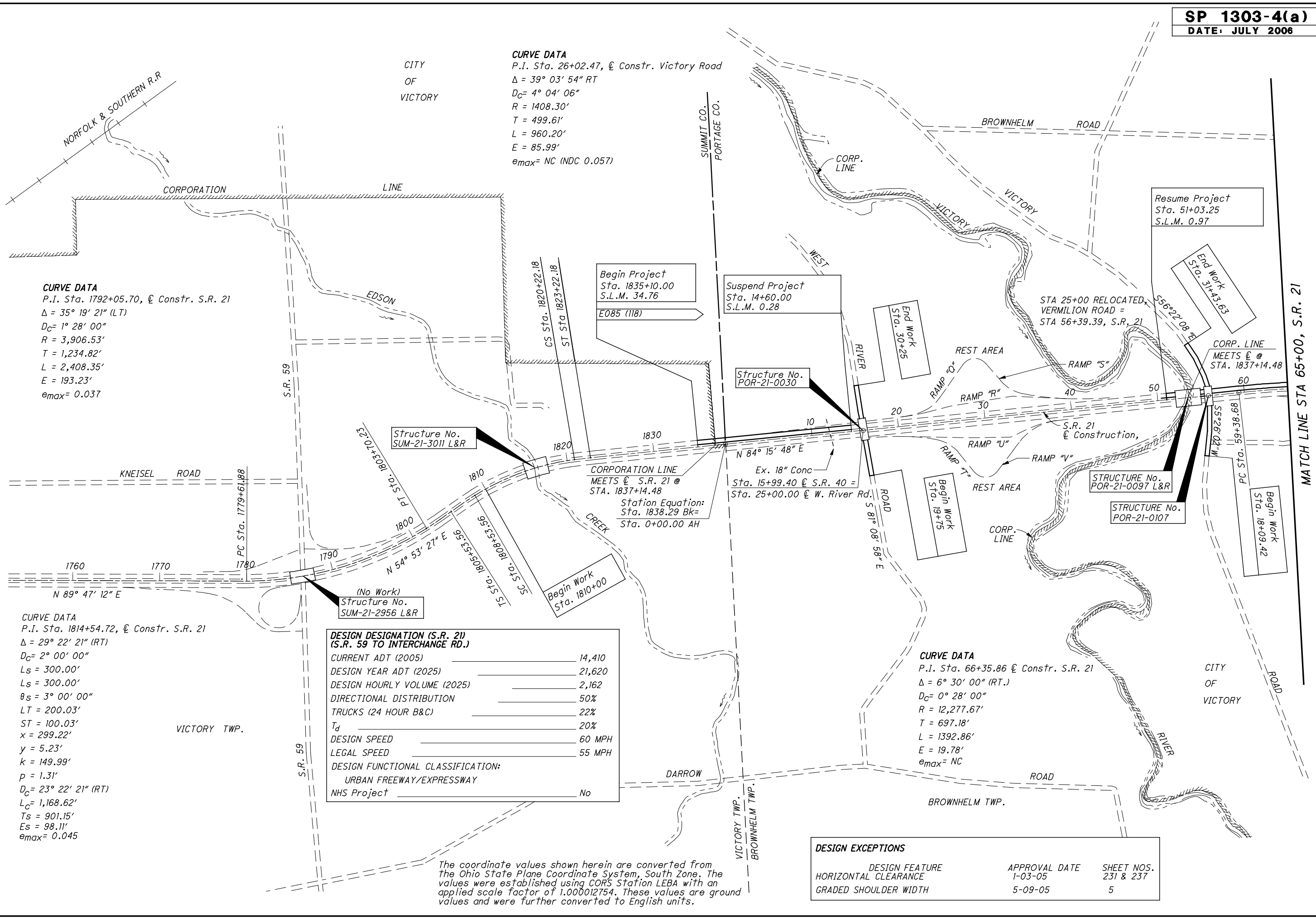
CURVE DATA
P.I. Sta. 1792+05.70, @ Constr. S.R. 21
 $\Delta = 35^\circ 19' 21''$ (LT)
 $D_c = 1^\circ 28' 00''$
 $R = 3,906.53'$
 $T = 1,234.82'$
 $L = 2,408.35'$
 $E = 193.23'$
 $\theta_{max} = 0.037$

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

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

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

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



DESIGN EXCEPTIONS

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



SCHEMATIC PLAN & DESIGN DESIGNATION

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

CITY
OF
VICTORY

CITY
OF
LINNEN

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

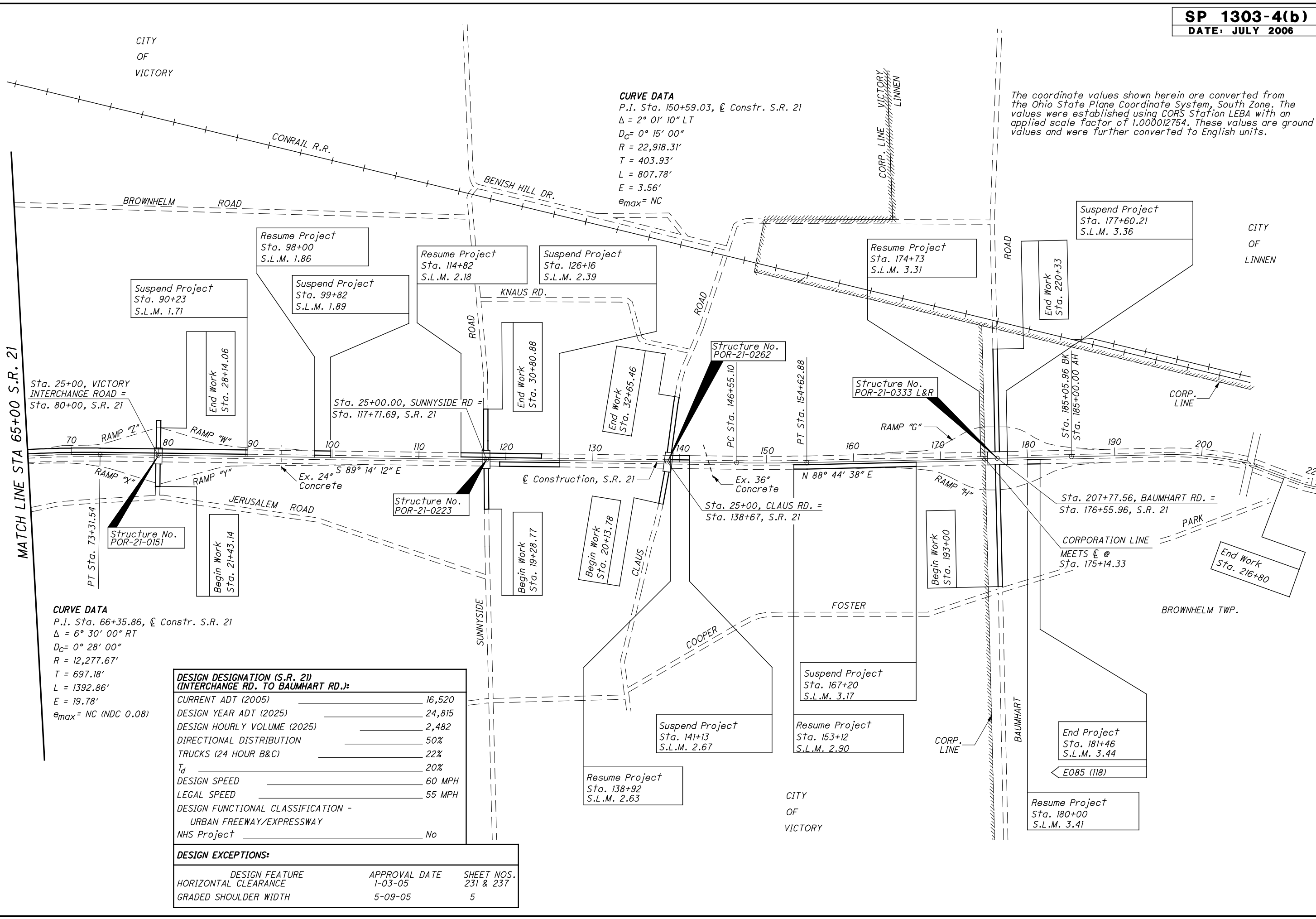
CURVE DATA
P.I. Sta. 66+35.86, @ Constr. S.R. 21
 $\Delta = 6^\circ 30' 00''$ RT
 $D_c = 0^\circ 28' 00''$
 $R = 12,277.67'$
 $T = 697.18'$
 $L = 1392.86'$
 $E = 19.78'$
 $e_{max} = NC$ (NDC 0.08)

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

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

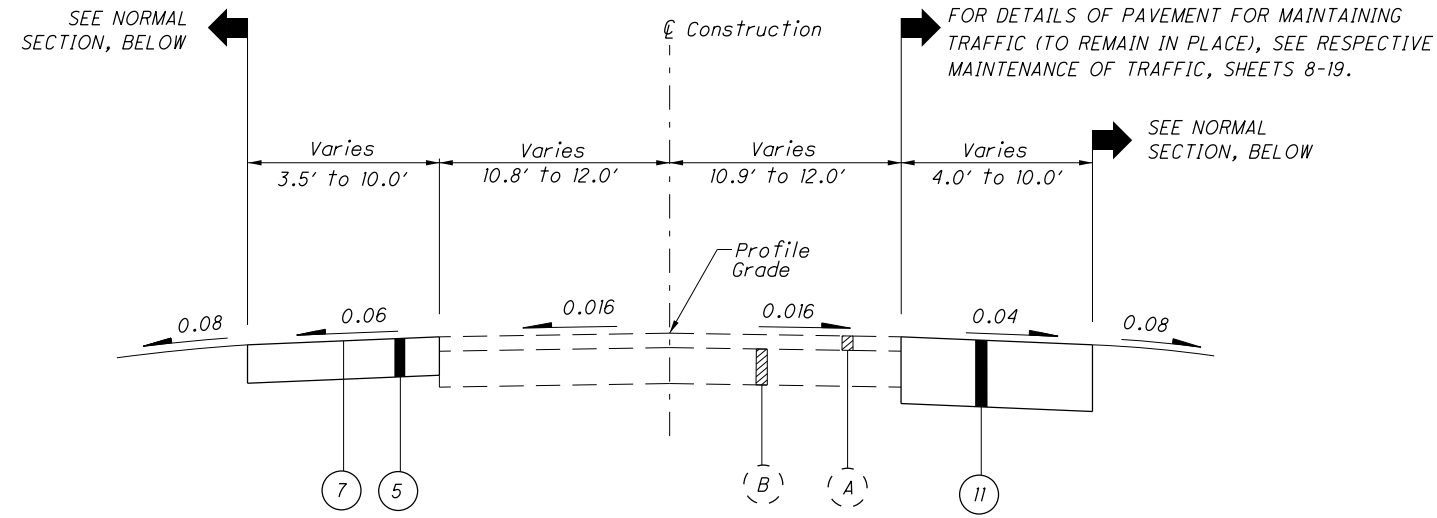
DESIGN EXCEPTIONS:

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

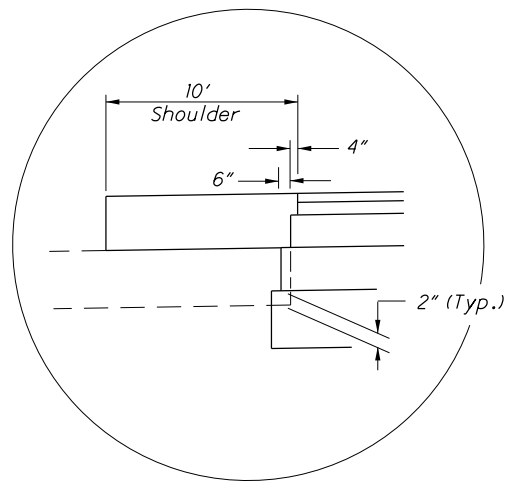


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MATCH LINE STA 65+00 S.R. 21



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

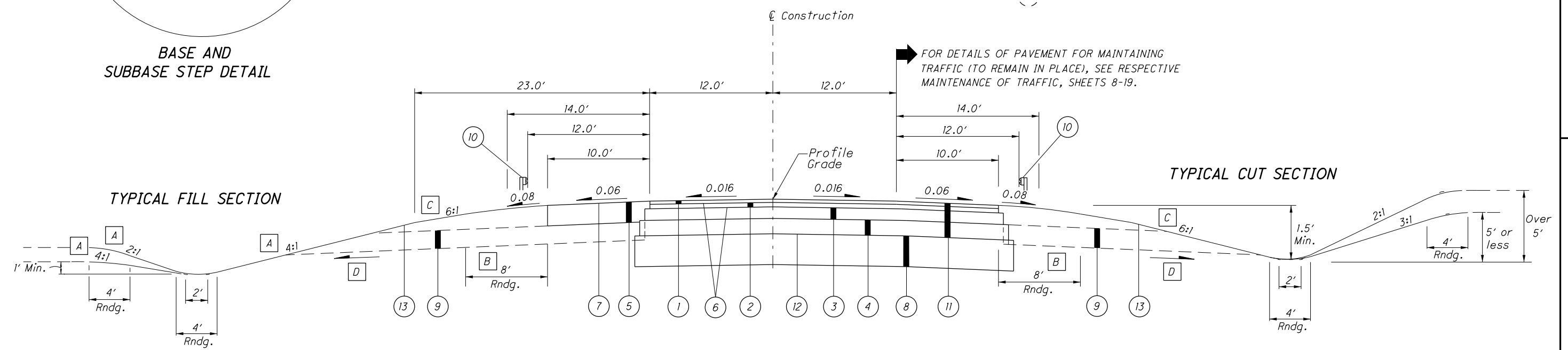


BASE AND SUBBASE STEP DETAIL

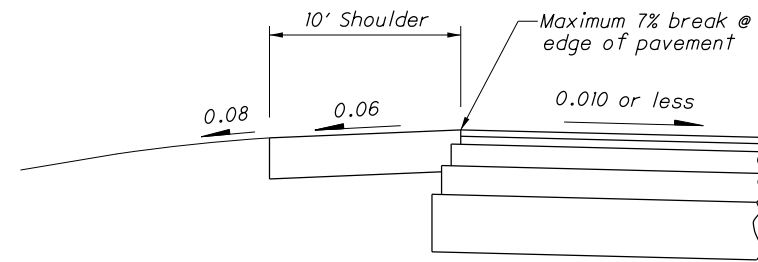
- A** Unless otherwise shown on Cross Sections
- B** No rounding is required when foreslope is 6:1 or flatter. 4' Rounding when guardrail is required.
- C** Foreslope may vary in pavement transition areas at extreme ends of pavement work and adjacent to Structure PIC-46-1209; see cross sections.
- D**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

LEGEND

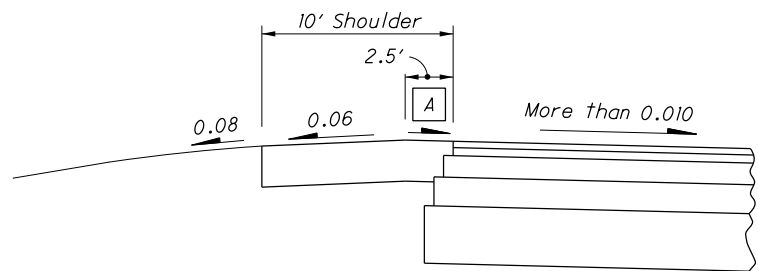
- ① ITEM 442 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (448)
 - ② ITEM 442 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, Type A (448)
 - ③ ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22
 - ④ ITEM 304 - 6" AGGREGATE BASE
 - ⑤ ITEM 304 - 8" AGGREGATE BASE
 - ⑥ ITEM 407 - TACK COAT
 - ⑦ ITEM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



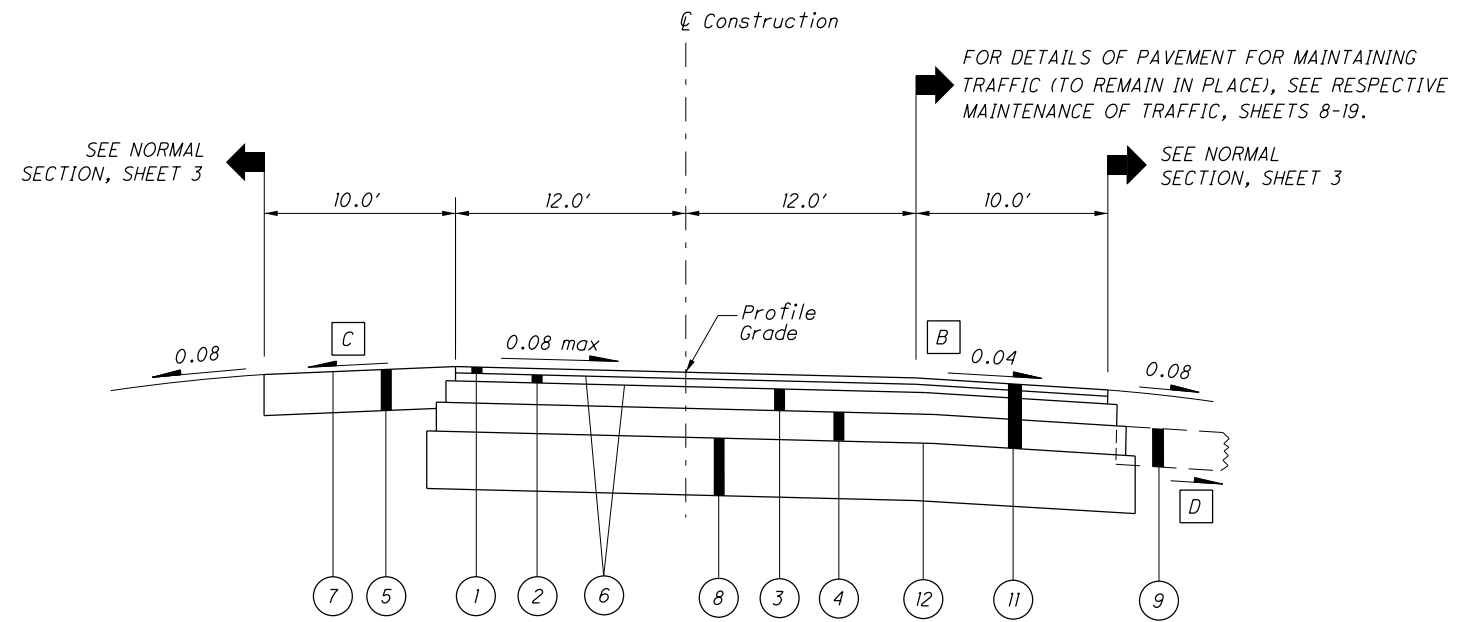
NORMAL SECTION - U.S. 46
Sta. 635+75.00 to Sta. 642+81.37
Sta. 638+22.44 to Sta. 640+48.86



SHOULDER DETAIL
For pavement slopes of 0.010 or less

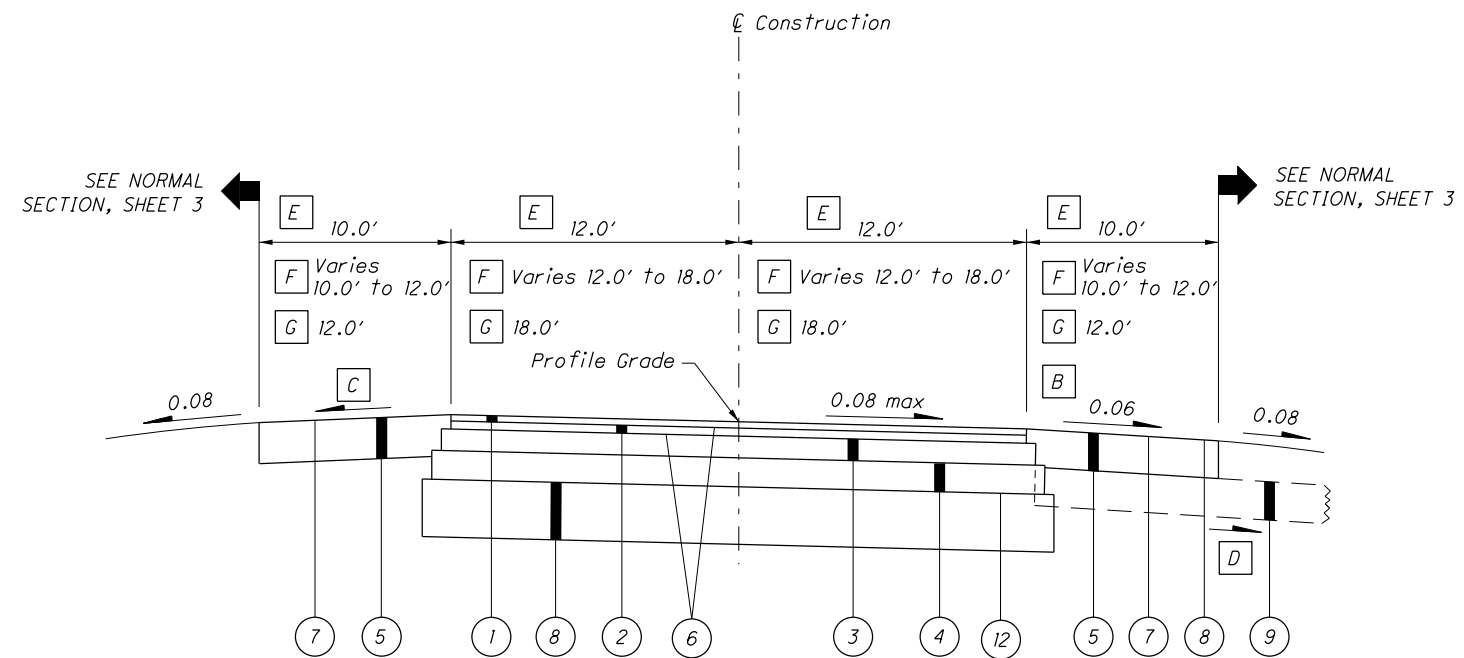


SHOULDER DETAIL
For pavement slopes greater than 0.010



SUPERELEVATED SECTION - U.S. 46

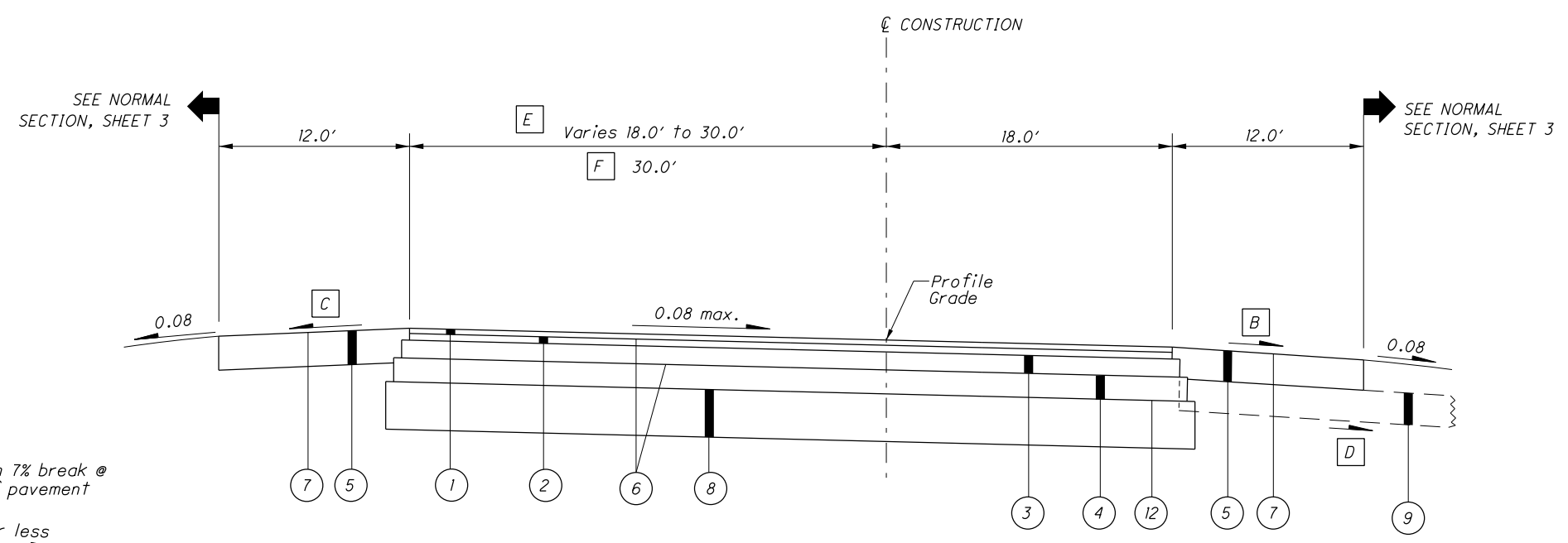
Sta. 642+81.37 to Sta. 649+00.00



SUPERELEVATED SECTION - U.S. 46

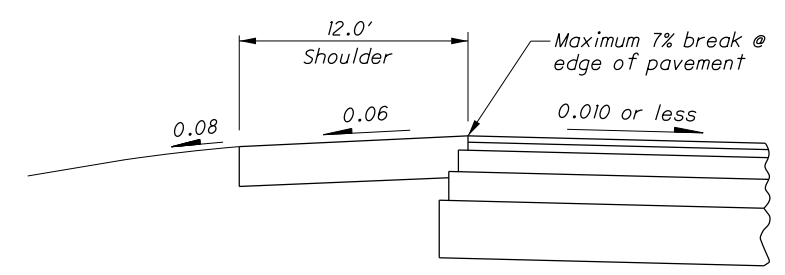
- A Same slope as pavement
- B Or pavement slope whichever is greater
- C For high side shoulder slopes on superelevated sections see shoulder details, this sheet.
- D 0.04 Min., 0.08 Desirable
- E Sta. 649+00.00 to Sta. 651+45.03
- F Sta. 651+45.03 to Sta. 654+75.03
- G Sta. 654+75.03 to Sta. 658+77.85

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

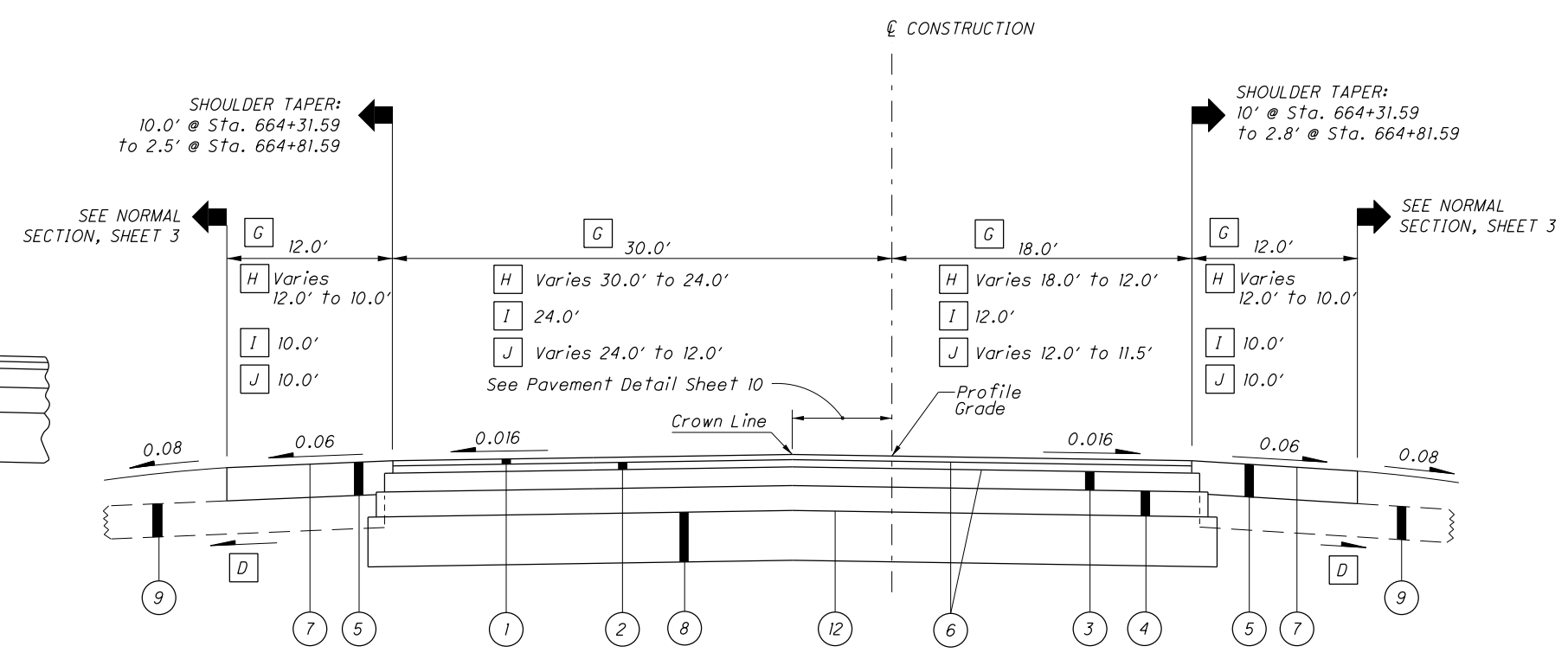


SUPERELEVATED SECTION - U.S. 46

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

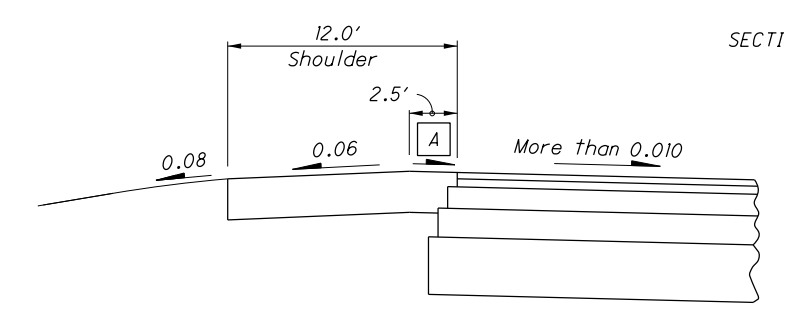


SHOULDER DETAIL
For pavement slopes of 0.010 or less



NORMAL SECTION - U.S. 46

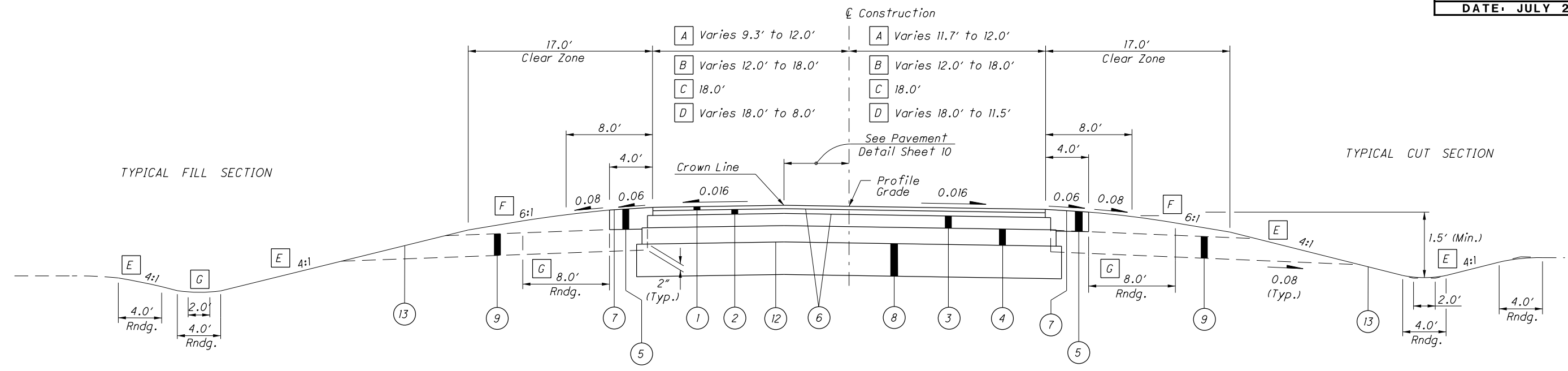
- G** STA. 660+20.37 TO STA. 660+51.59
- H** STA. 660+51.59 TO STA. 663+81.59
- I** STA. 663+81.59 TO STA. 664+31.59
- J** STA. 664+31.59 TO STA. 664+81.59



SHOULDER DETAIL
For pavement slopes of more than 0.010

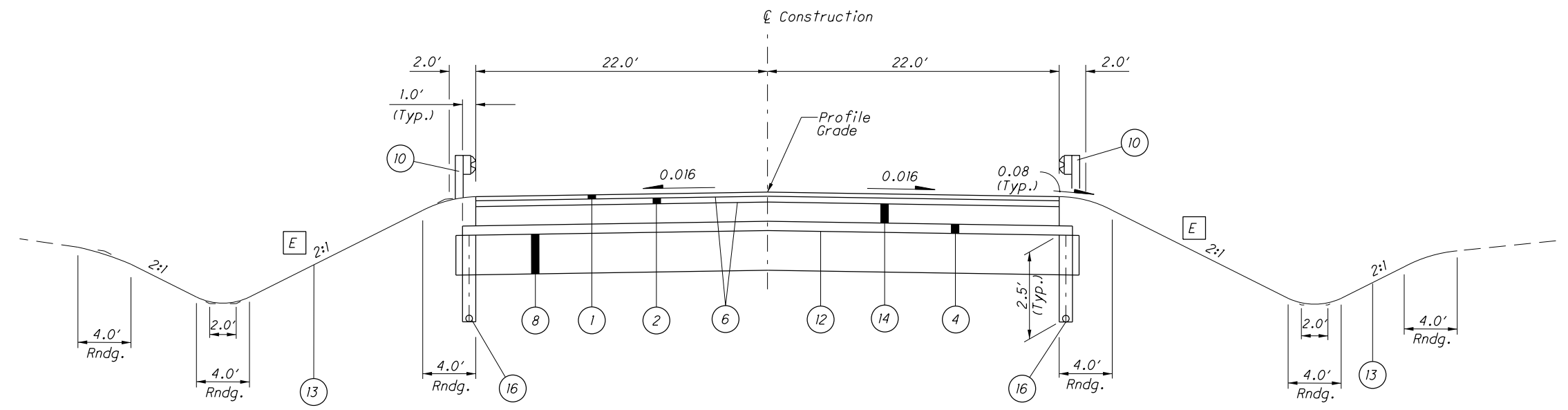
- A** SAME SLOPE AS PAVEMENT
- B** 0.06 OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER
- C** FOR HIGH SIDE SHOULDER SLOPES ON SUPERELEVATED SECTIONS SEE SHOULDER DETAILS, THIS SHEET.
- D** 0.04 MIN., 0.08 DESIRABLE

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



NORMAL SECTION - ARLINGTON ROAD

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



APPROACH SLAB TYPICAL SECTION - U.S. 46

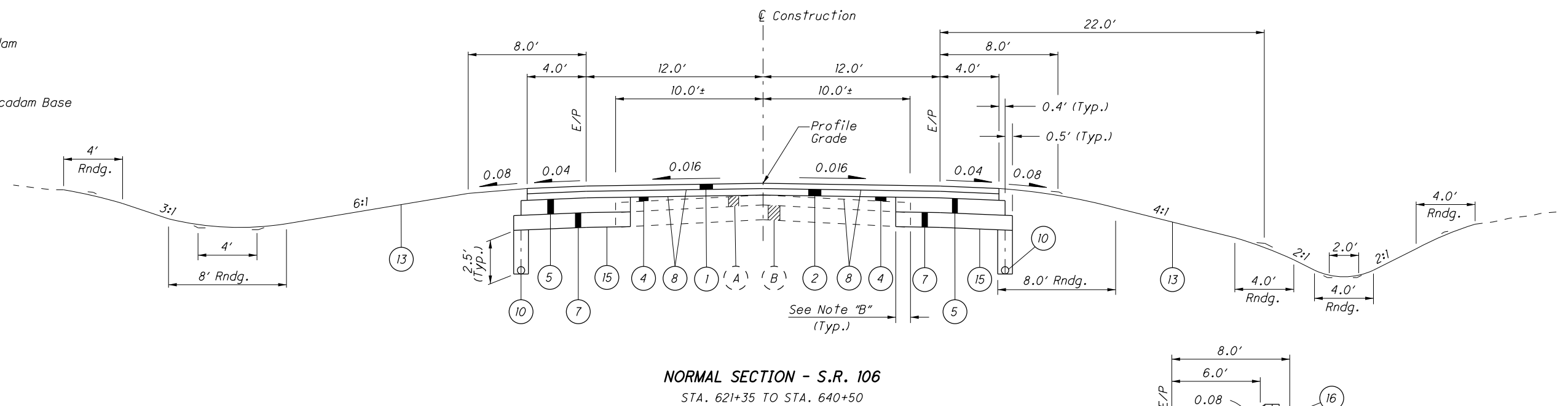
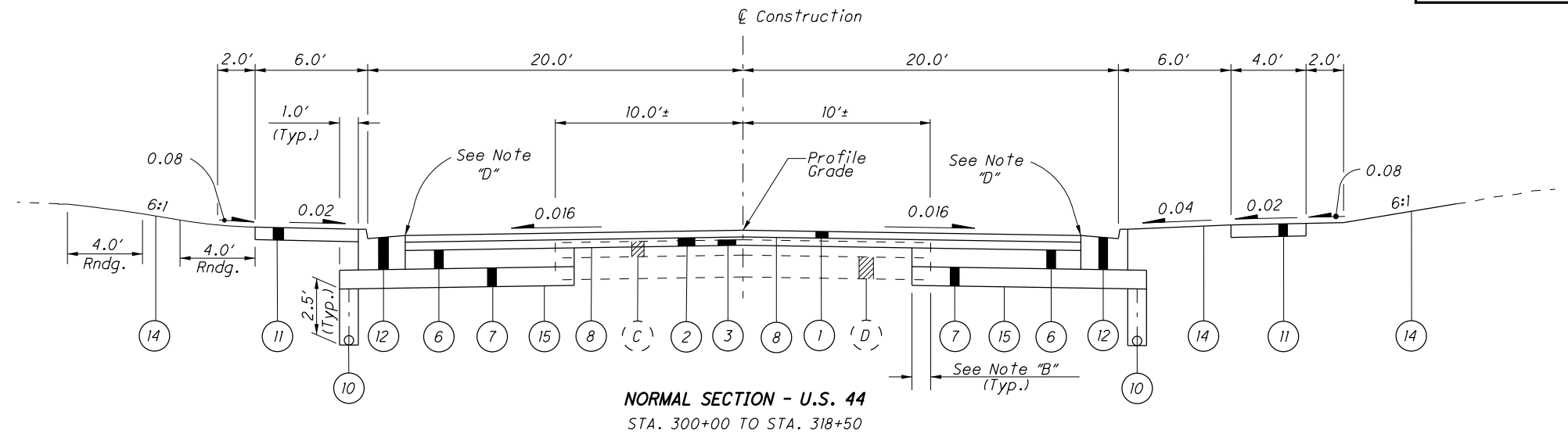
STRUCTURE PIC-46-1209 = Sta. 638+22.44 to Sta. 640+48.86
Sta. 638+47.44 to Sta. 640+23.86

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

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

LEGEND

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



NOTE "A"

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

NOTE "B"

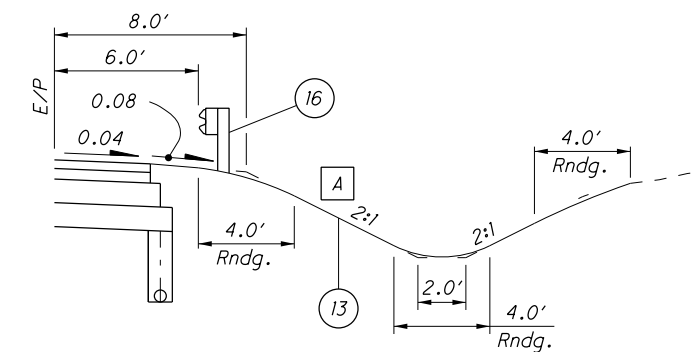
The existing pavement edges shall be saw cut to locate a sound pavement edge per Sec. 203.04(E) of the CMS. For estimating purposes, pavement calculations included in the plan indicate an average width of 1 ft. of existing pavement being replaced.

NOTE "C"

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

NOTE "D"

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



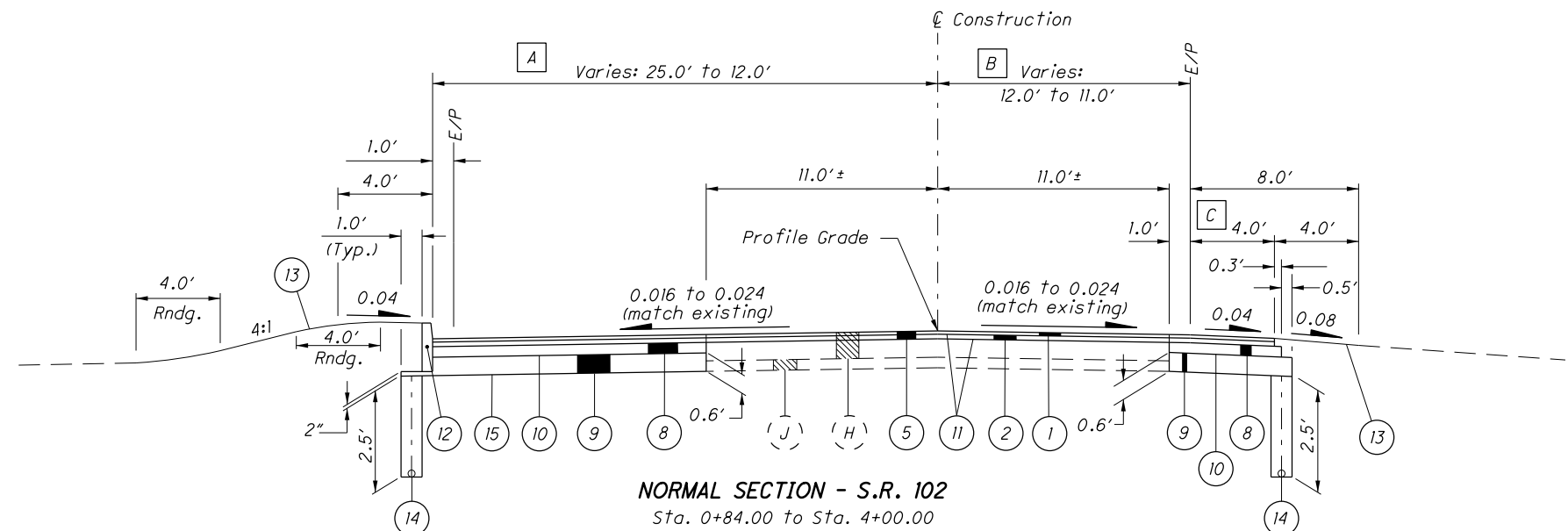
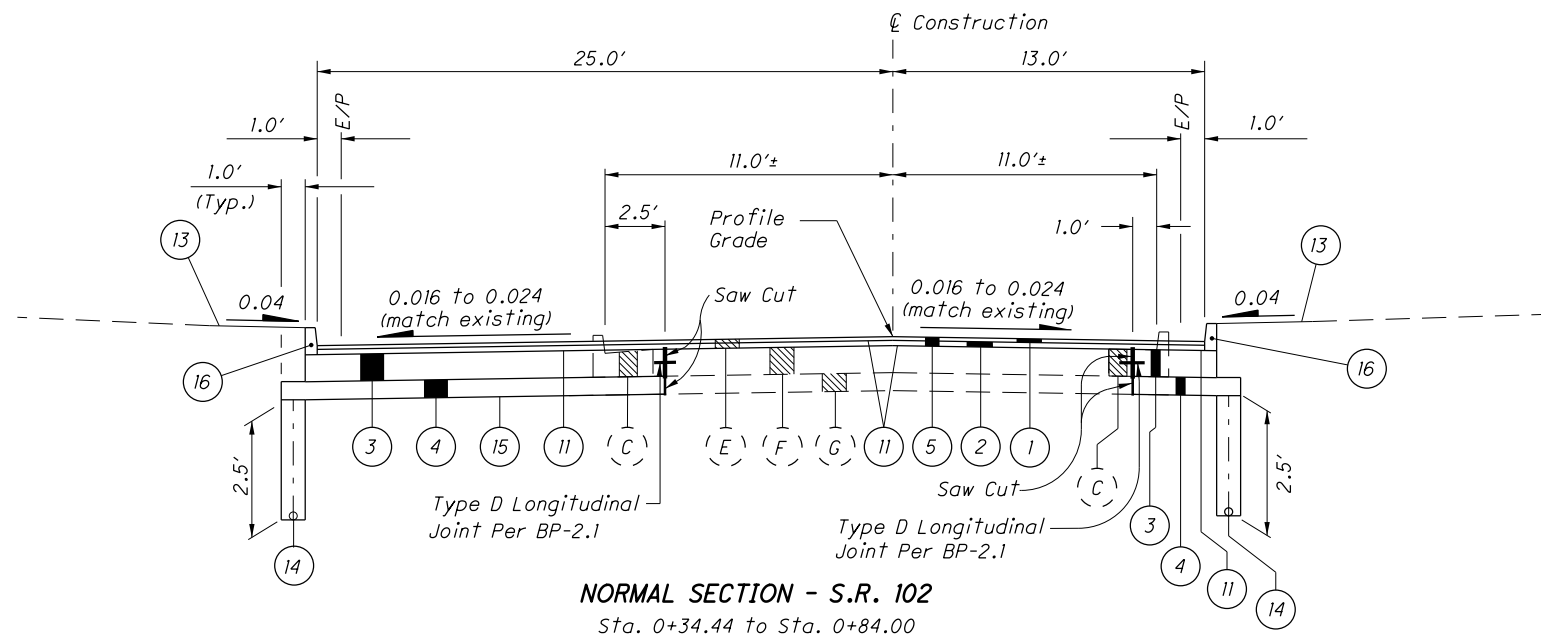
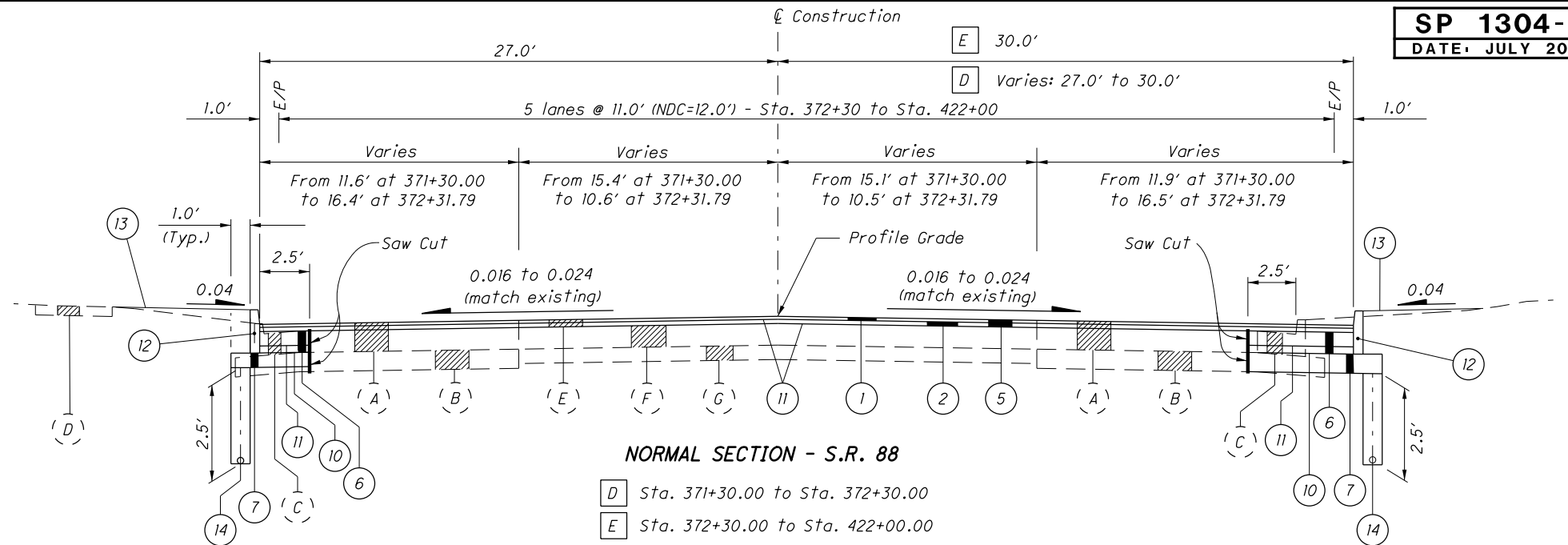
SECTION APPLIES :

Sta. 635+50 to Sta. 637+75 Rt.

[A] Unless otherwise shown on the cross sections

LEGEND

- (1) ITEM 441 - 1 1/4" Asphalt Concrete Surface Course, Type 1, (448) PG64-22
- (2) ITEM 441 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2, (448)
- (3) ITEM 305 - 9" Concrete Base, As Per Plan
- (4) ITEM 304 - 6" Aggregate Base
- (5) ITEM 254 - Pavement Planing, Asphalt Concrete (Max. Depth=3")
- (6) ITEM 301 - 9" Asphalt Concrete Base, PG64-22
- (7) ITEM 304 - 9" Aggregate Base
- (8) ITEM 301 - 4" Asphalt Concrete Base, PG64-22
- (9) ITEM 304 - Aggregate Base, Depth as shown
- (10) ITEM 408 - Prime Coat (Applied At The Rate Of 0.4 Gal/Sq. Yd.)
- (11) ITEM 407 - Tack Coat
- (12) ITEM 609 - Curb, Type 6
- (13) ITEM 660 - Sodding Unstaked
- (14) ITEM 605 - 6" Shallow Pipe Underdrains
- (15) ITEM 204 - Subgrade Compaction
- (16) ITEM 609 - Curb, Type 2-B
- (A) 12" ± Asphalt
- (B) 8" ± Subbase
- (C) Curb & Gutter
- (D) 4" Concrete Sidewalk
- (E) 3" ± Asphalt
- (F) 9" ± Reinforced Concrete
- (G) 6" ± Subbase
- (H) 10" ± Asphalt
- (J) 4" ± Subbase
- [A] 25'-0" From Sta. 0+84 to Sta. 3+50
Varies: 25'-0" @ Sta. 3+50 to 12' @ Sta. 4+00
- [B] 12'-0" From Sta. 0+84 to Sta. 3+50
Varies: 12'-0" @ Sta. 3+50 to 11'-0" @ Sta. 4+00
- [C] Varies: 4' @ Sta. 3+50 to 2' @ Sta. 4+00



S.R. 307 PAVEMENT PLANING TABLES

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

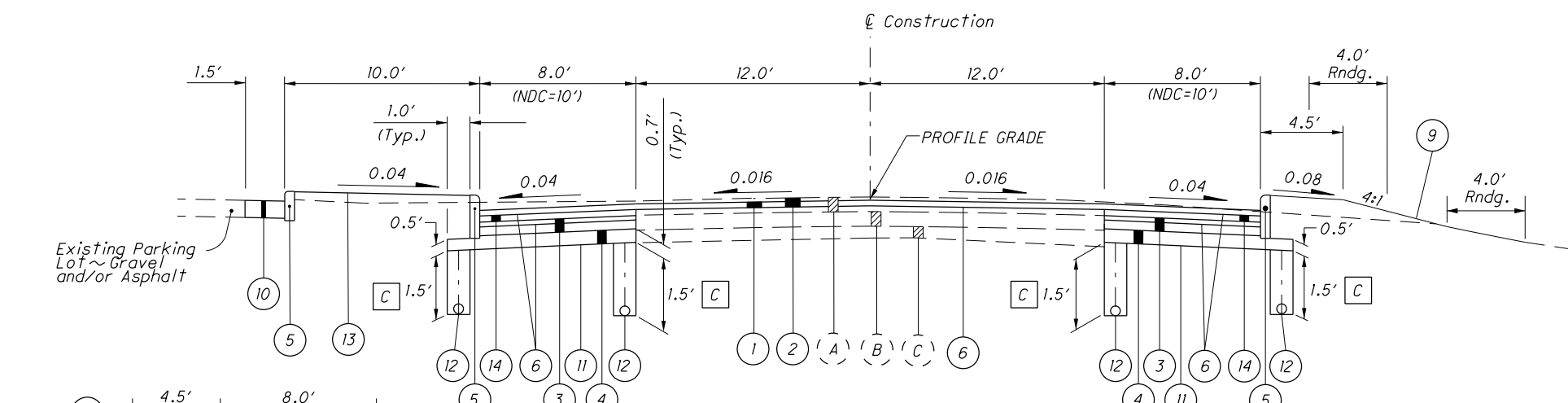
NOTES

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

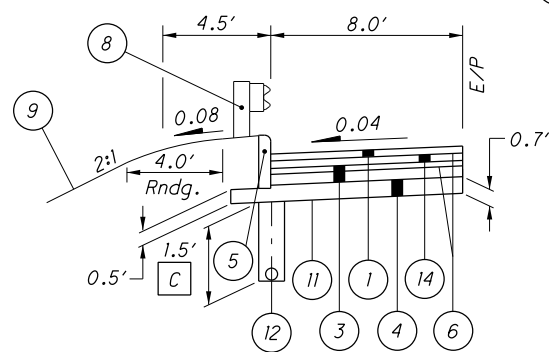
A IN AN EFFORT TO REMOVE EXISTING PARABOLIC CROWN AND ESTABLISH A SMOOTH AND CONSISTENT PROFILE THROUGHOUT THE PROJECT, THE PAVEMENT SHALL BE PLANED TO A DEPTH INDICATED IN THE PAVEMENT PLANING TABLE ON THIS SHEET. A 0.016 NORMAL CROSS SLOPE SHALL BE ESTABLISHED FROM THE CENTERLINE TO THE EXISTING EDGE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

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

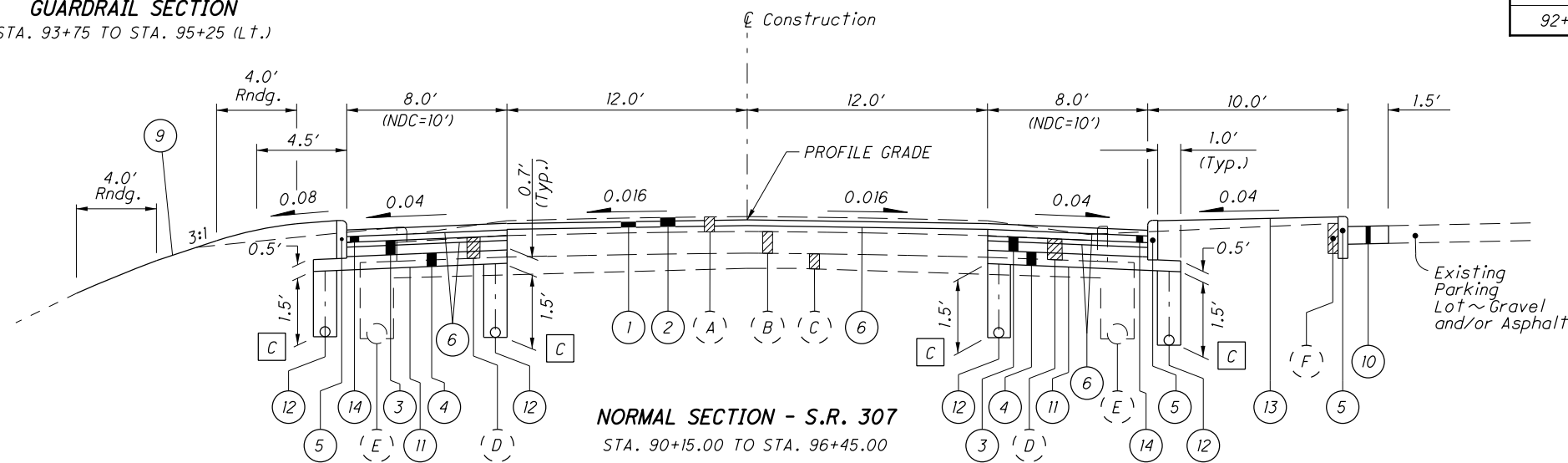
C UNCLASSIFIED UNDERDRAIN LIMITS:
 STA. 88+75 TO STA. 91+25 AND
 STA. 95+25 TO STA. 96+27.25



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



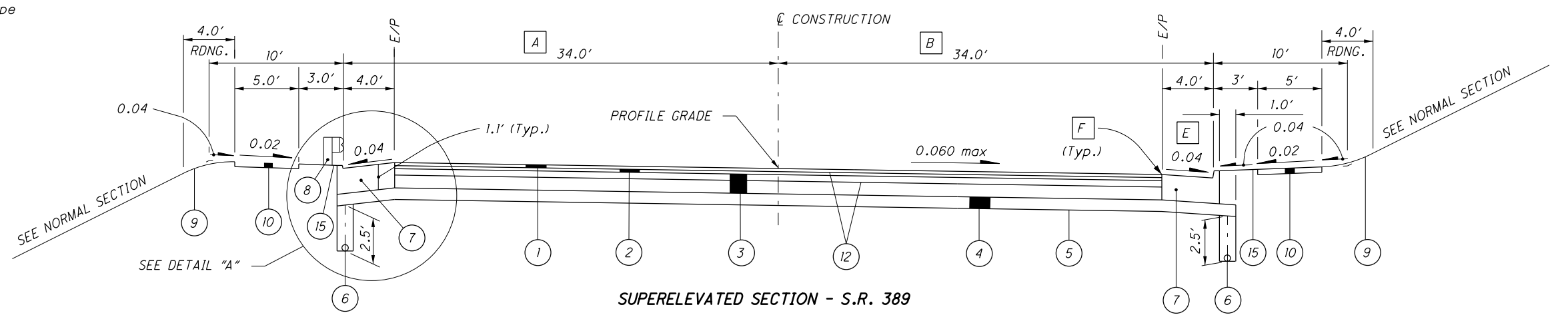
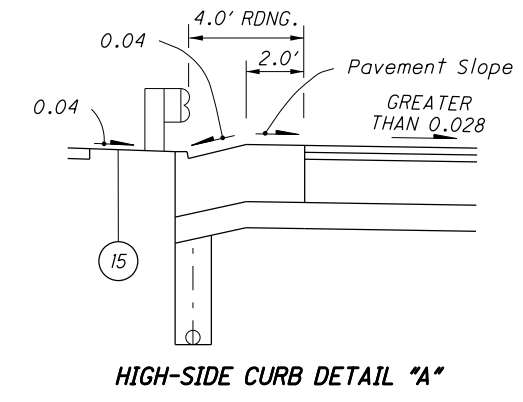
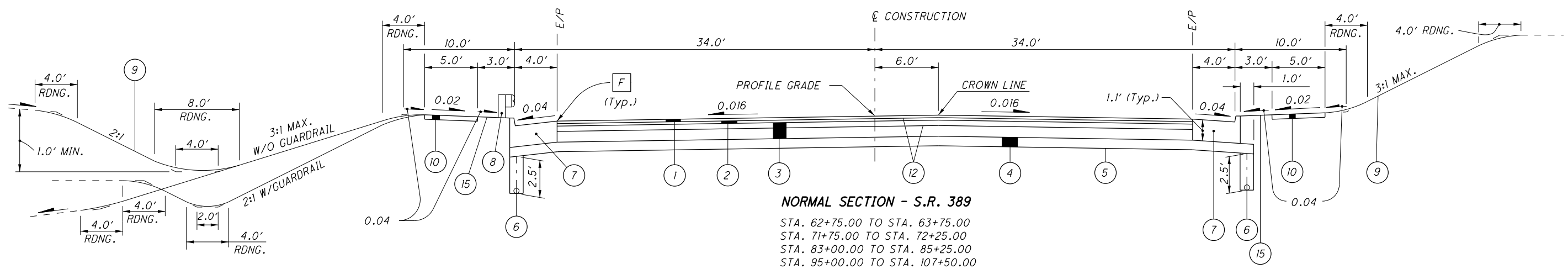
GUARDRAIL SECTION
STA. 93+75 TO STA. 95+25 (L.T.)



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

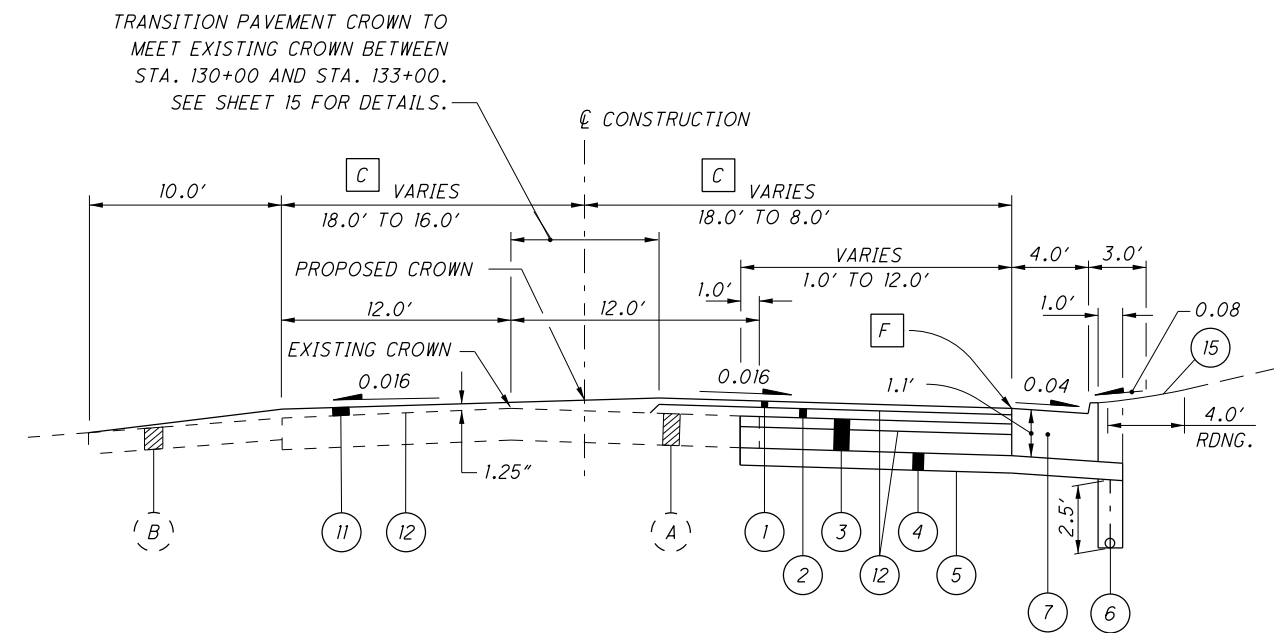
LEGEND

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



LEGEND

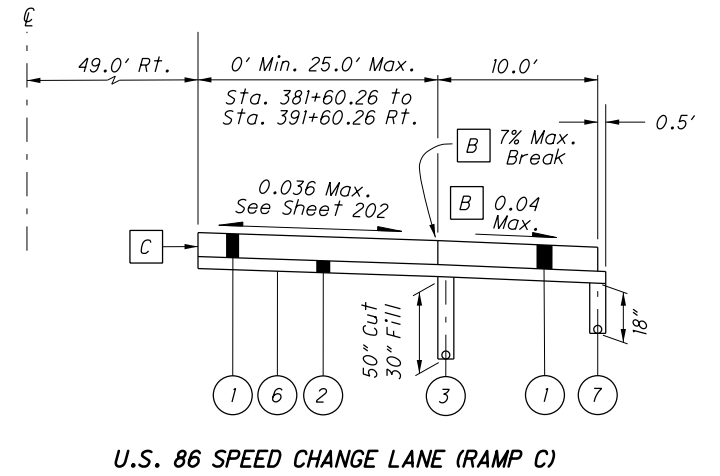
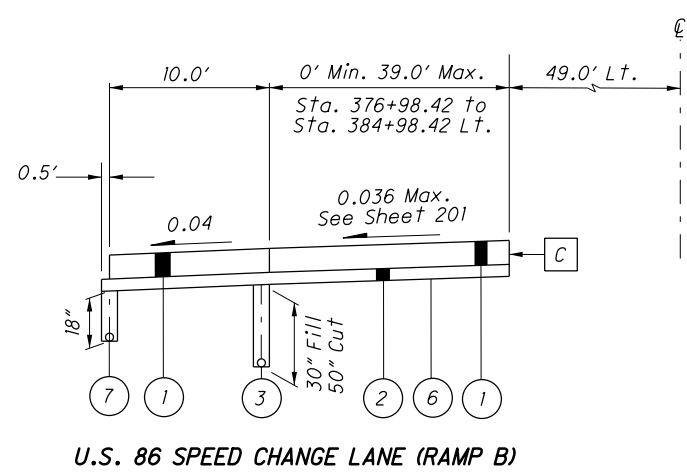
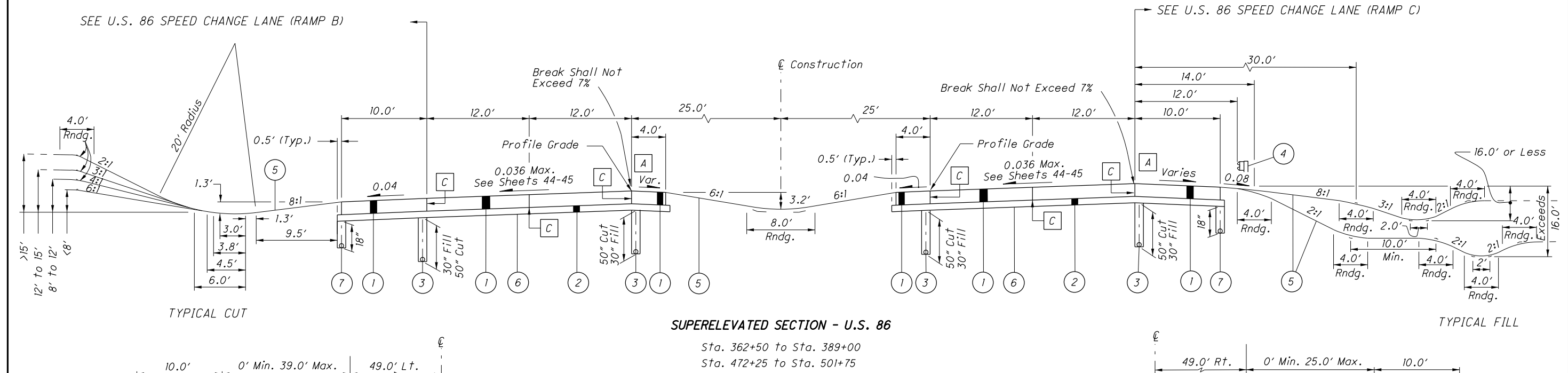
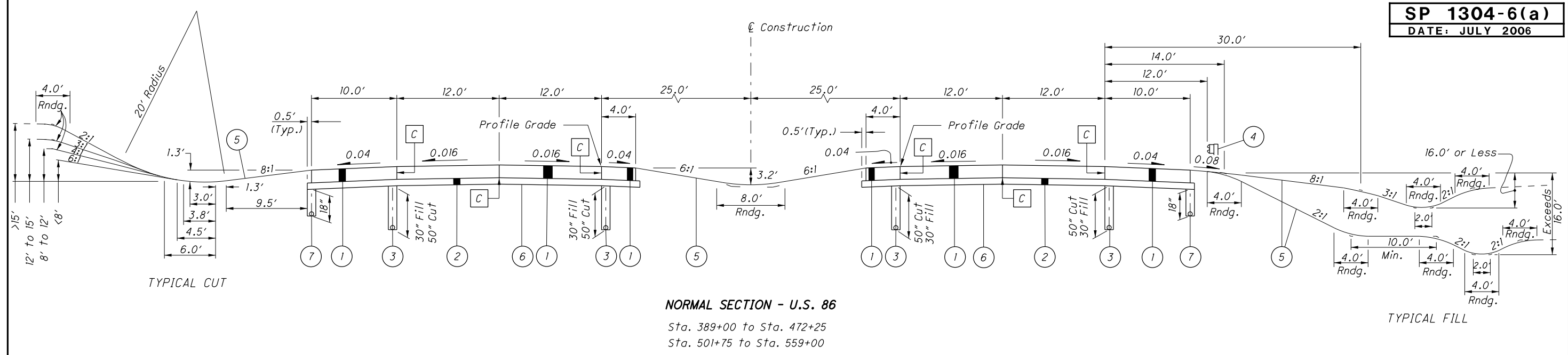
- ① ITEM 441 - 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446) PG64-22
- ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
- ③ ITEM 301 - 10" ASPHALT CONCRETE BASE, PG64-22
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 204 - SUBGRADE COMPACTION
- ⑥ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS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



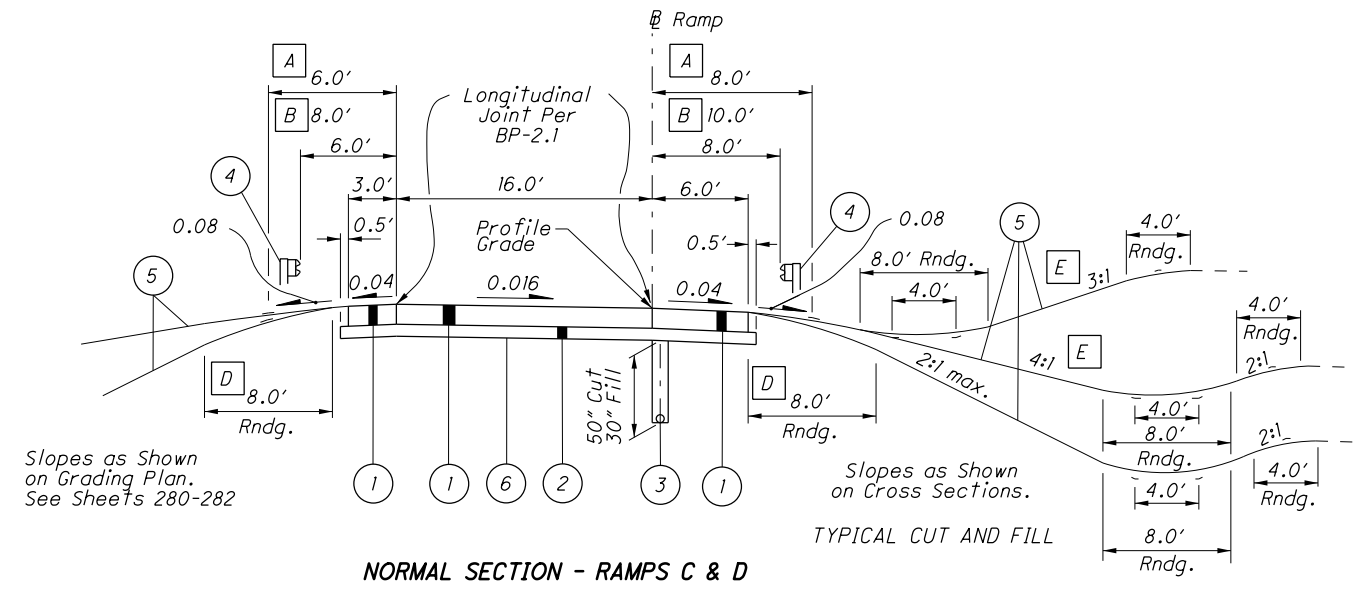
WIDENING AND RESURFACING - S.R. 389
 STA. 130+00.00 TO STA. 133+00.00

NOTES:

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

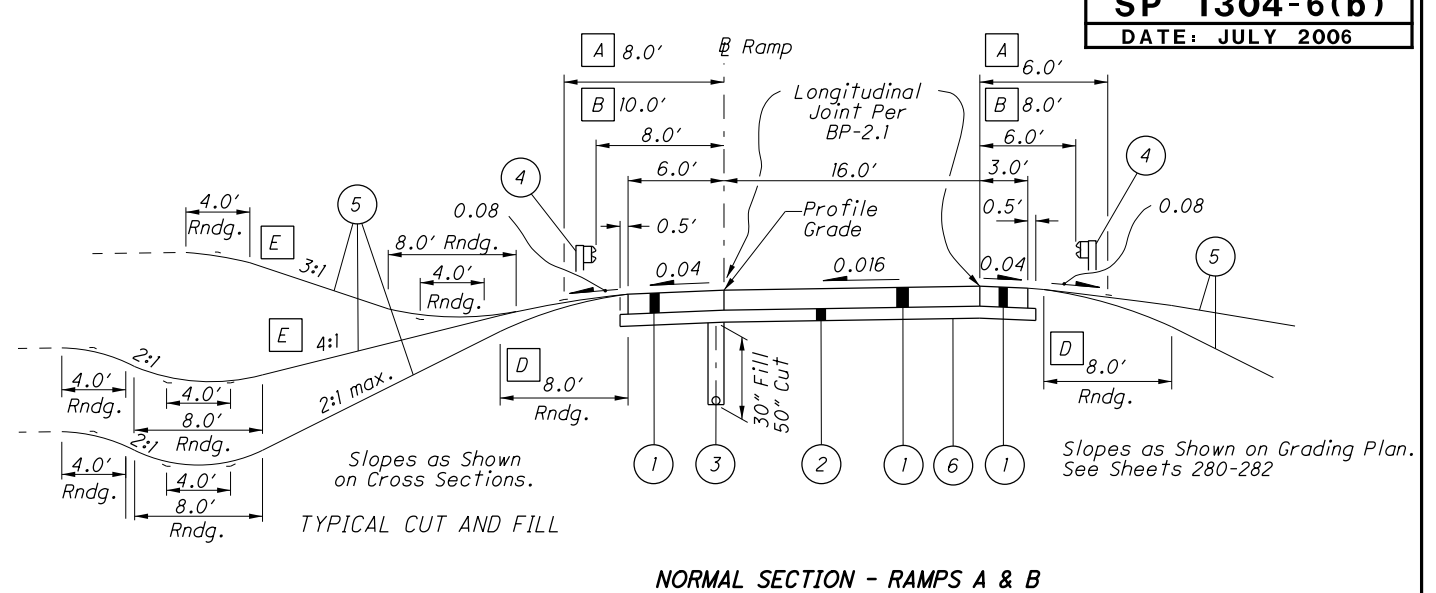


- LEGEND**
- (1) ITEM 452 - 12" Non-Reinforced Concrete Pavement
 - (2) ITEM 304 - 6" Aggregate Base
 - (3) ITEM 605 - 6" Deep Pipe Underdrains
 - (4) ITEM 606 - Guardrail, Type MGS
 - (5) ITEM 659 - Seeding and Mulching
 - (6) ITEM 204 - Subgrade Compaction
 - (7) ITEM 605 - 6" Base Pipe Underdrains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



NORMAL SECTION - RAMPS C & D

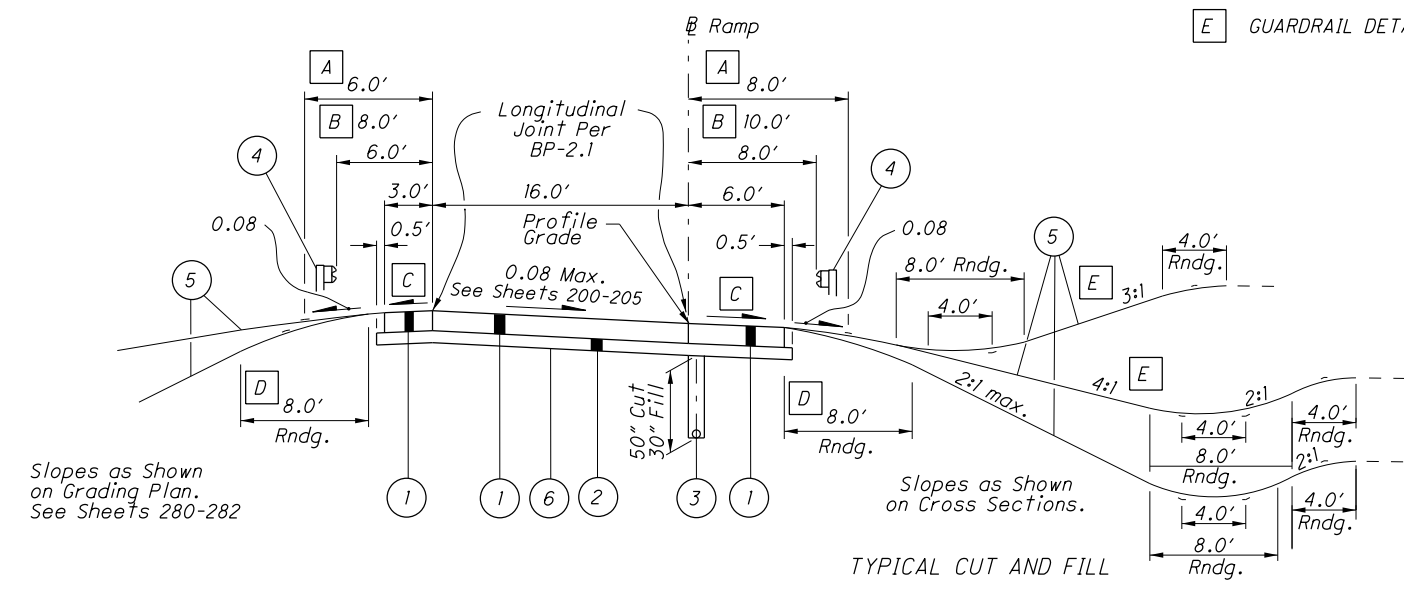
Sta. 465+49.13 to Sta. 477+25.00 Ramp C
Sta. 557+00.00 to Sta. 566+96.94 Ramp D



NORMAL SECTION - RAMPS A & B

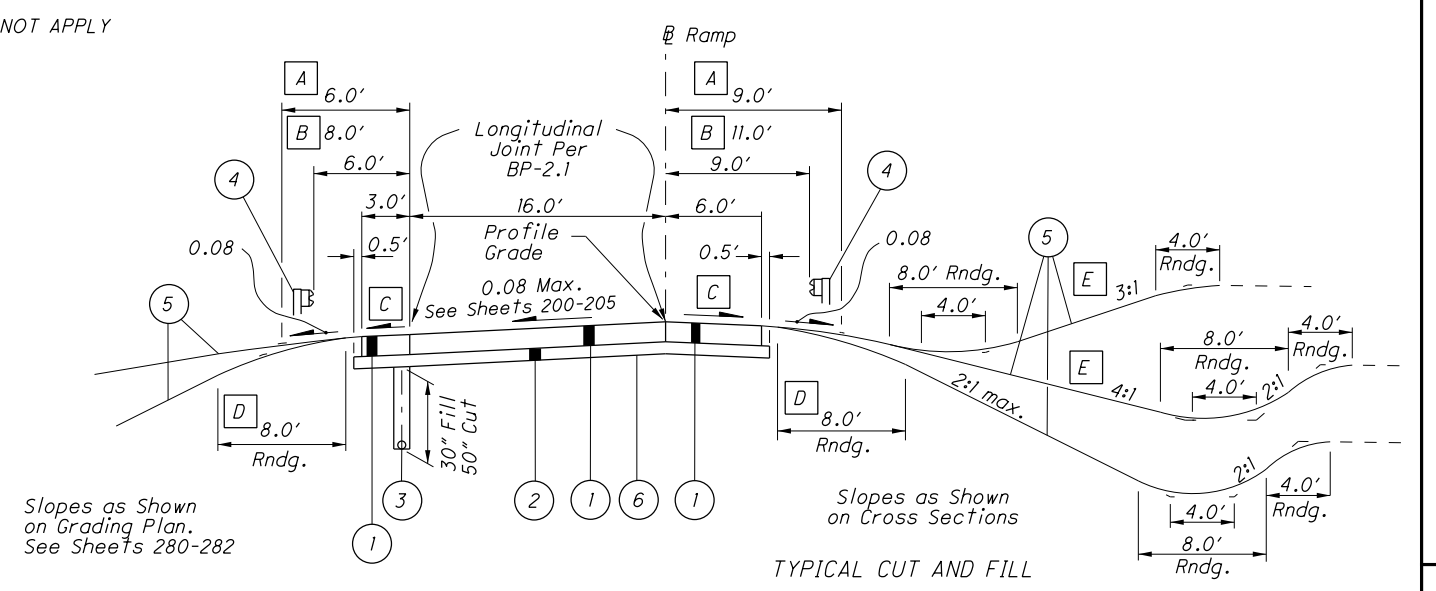
Sta. 160+75.00 to Sta. 166+65.18 Ramp A
Sta. 266+17.10 to Sta. 271+50.00 Ramp B

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



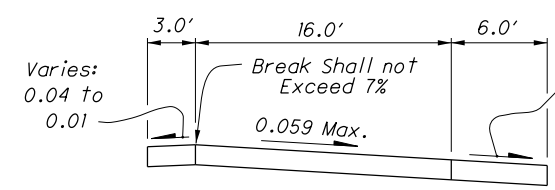
SUPERELEVATED SECTION (RIGHT) - RAMPS C & D

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

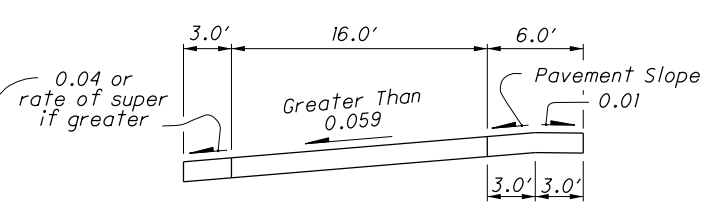


SUPERELEVATED SECTION (LEFT) - RAMPS E & F

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



DETAIL A

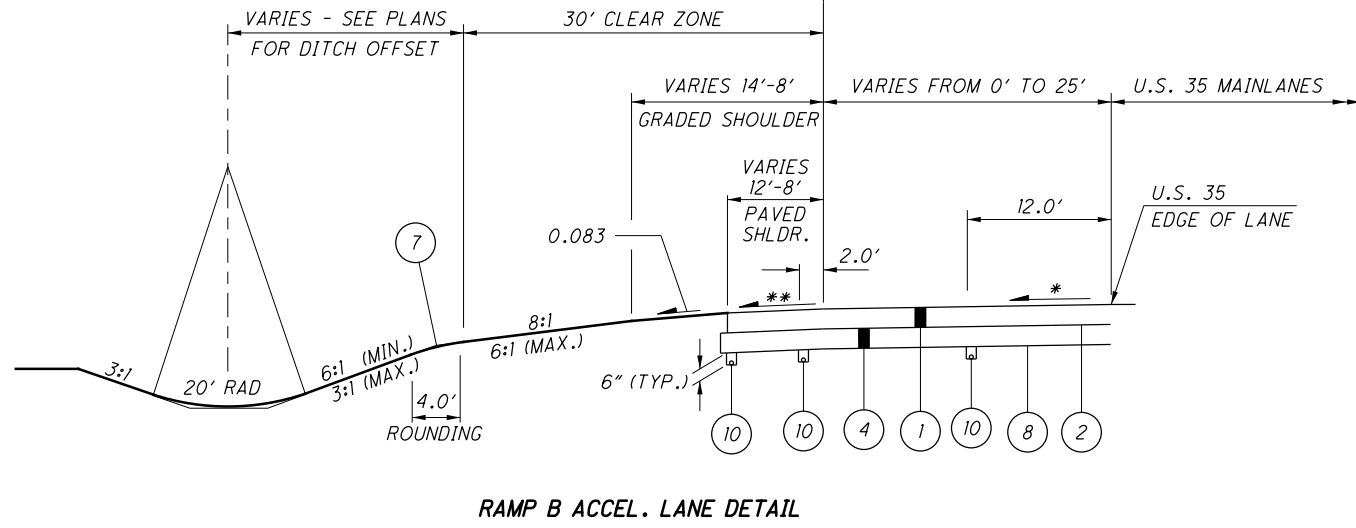
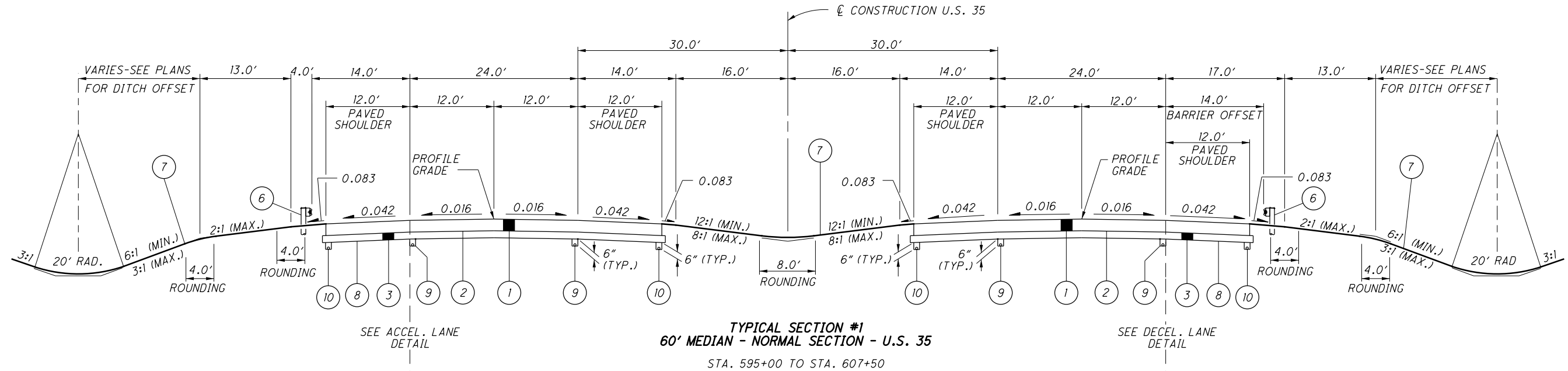


DETAIL B

FOR LEGEND, SEE SHEET 9

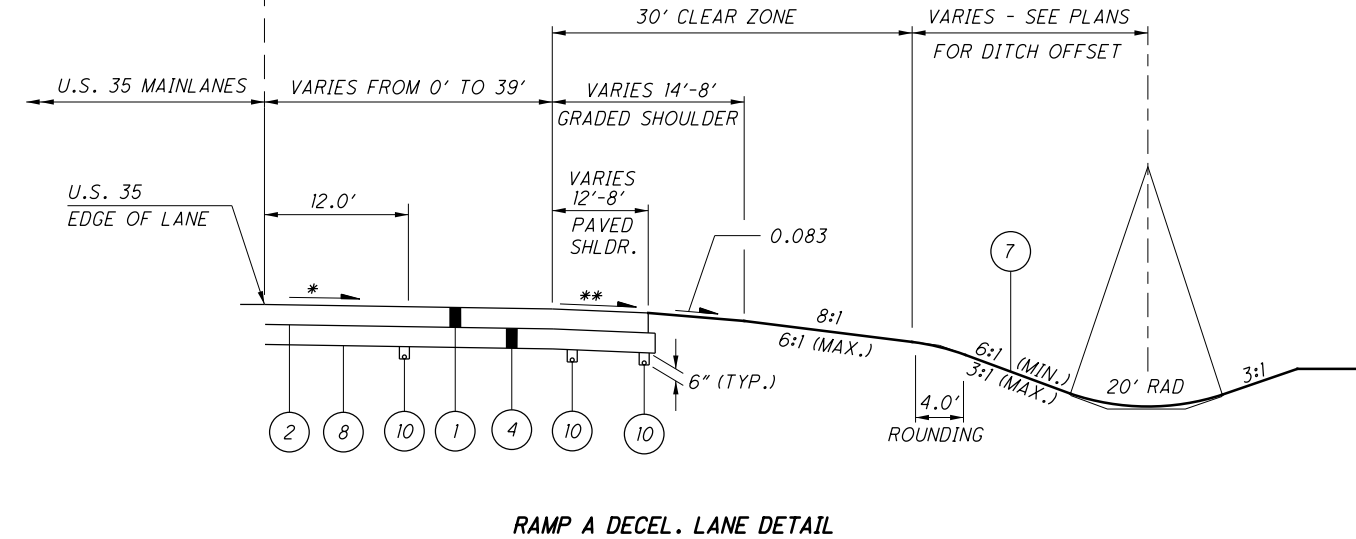
LEGEND

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



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

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

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

SEQUENCE OF CONSTRUCTION

INITIAL DETOUR PHASE

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

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

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

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

- CONSTRUCT A TEMPORARY BRIDGE AT EACH LOCATION.

- COMPLETE SHORING AND BRACING.

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

- COMPLETE DRIVE TO #3753-55 BEECHMONT COURT.

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

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

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

PHASE I AND II

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

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

PHASE I

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

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

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

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

PHASE II

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

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

COMPLETE WORK ON BEECHMONT COURT.

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

FINAL DETOUR PHASE

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

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

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

- COMPLETE THE PLACEMENT OF FULL DEPTH PAVEMENT BASE COURSES.

REMOVE TRAFFIC SIGNAL FOR MAINTAINING TRAFFIC.

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

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

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

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

MAINTENANCE OF TRAFFIC GENERAL NOTES

FAY-86-7.39

SEQUENCE OF CONSTRUCTION

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

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

PHASE ONE

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

AREAS OF SHOULDER REPLACEMENT:

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

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

EASTBOUND AREA

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

WESTBOUND AREA

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

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

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

PHASE TWO

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

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

PHASE THREE

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

PHASE FOUR

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

BRIDGES

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

SIDE ROAD STRUCTURES OVER FREEWAY

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

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

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

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

FREEWAY STRUCTURES OVER SIDE ROADS

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

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

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

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

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

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

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

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN

THE PAVEMENT BUILDUP SHALL BE:

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

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

NOTICE OF CLOSURE SIGNS

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

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

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

WILL BE
CLOSED
FOR _____ DAYS
OHIO DEPT. OF TRANSPORTATION

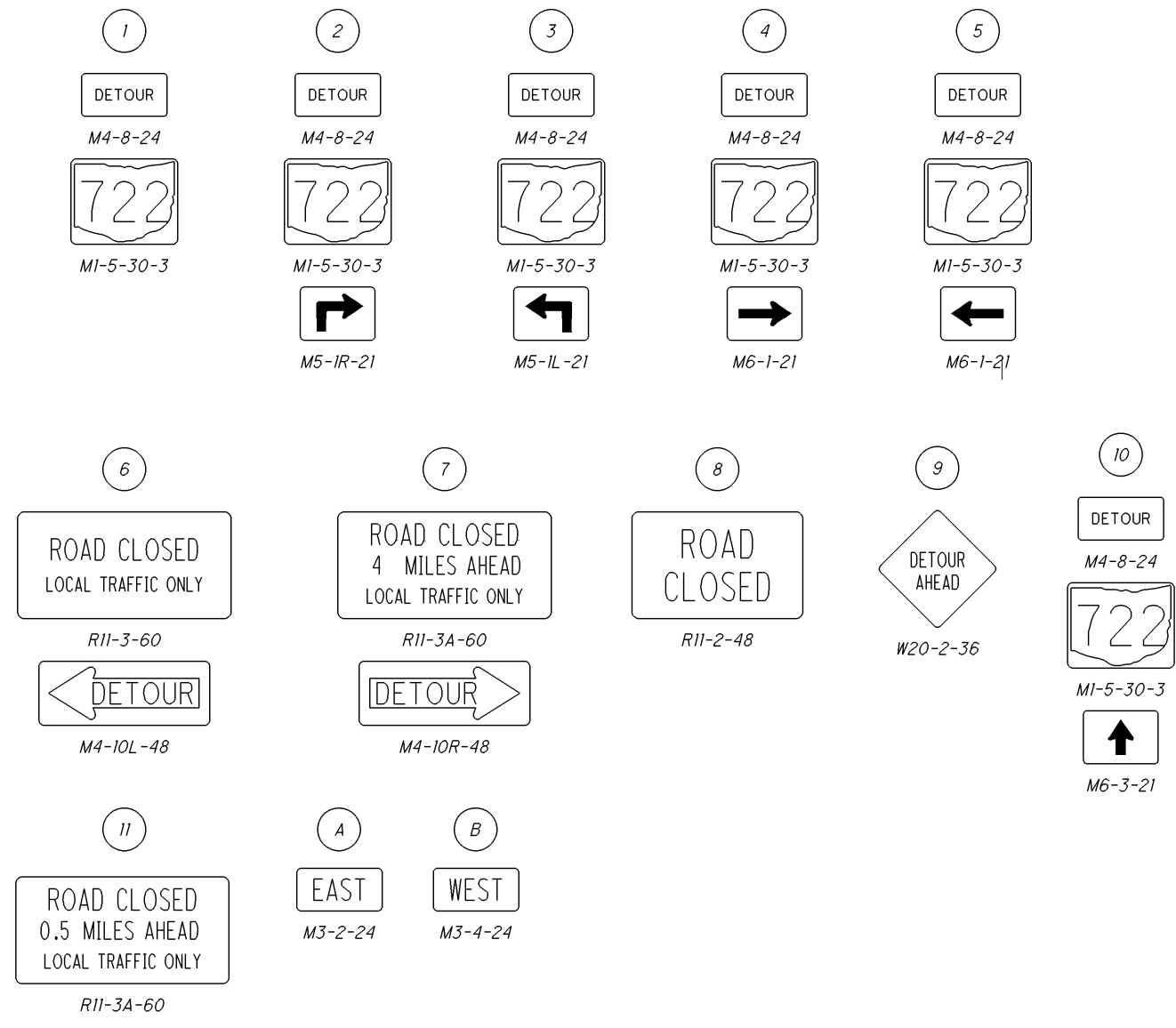
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MAINTENANCE OF TRAFFIC GENERAL NOTES

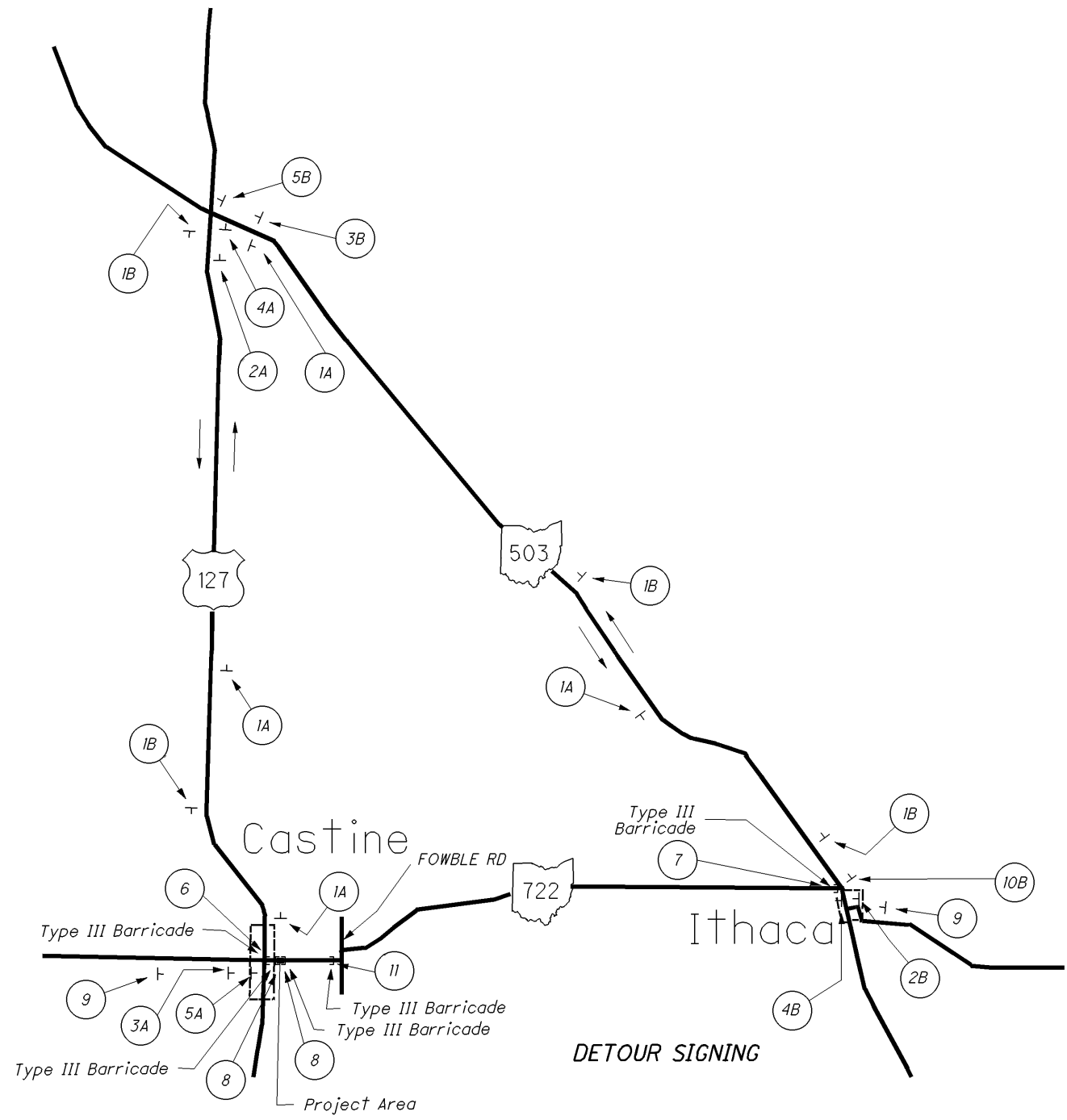
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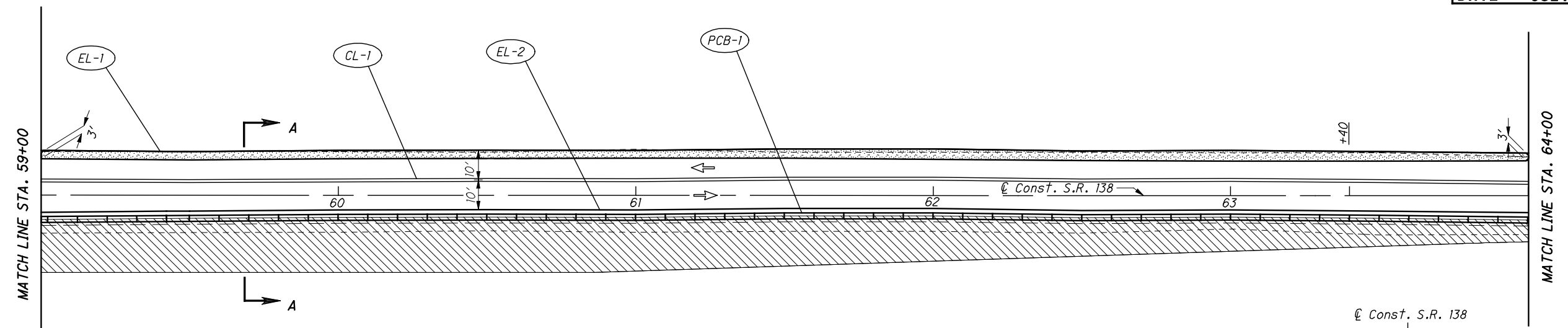


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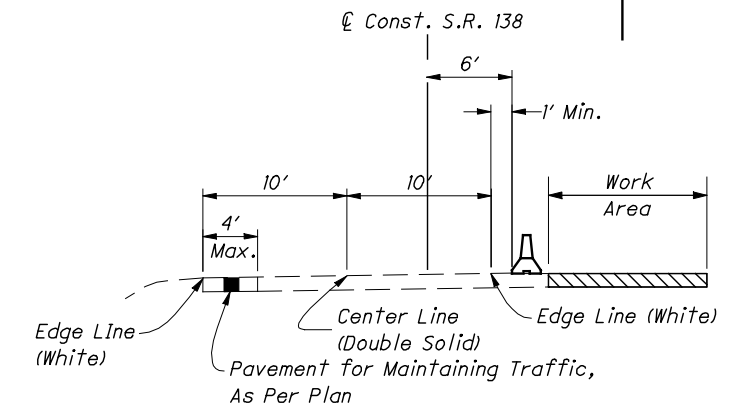


For Maintenance of Traffic Notes, see Sheet 7.

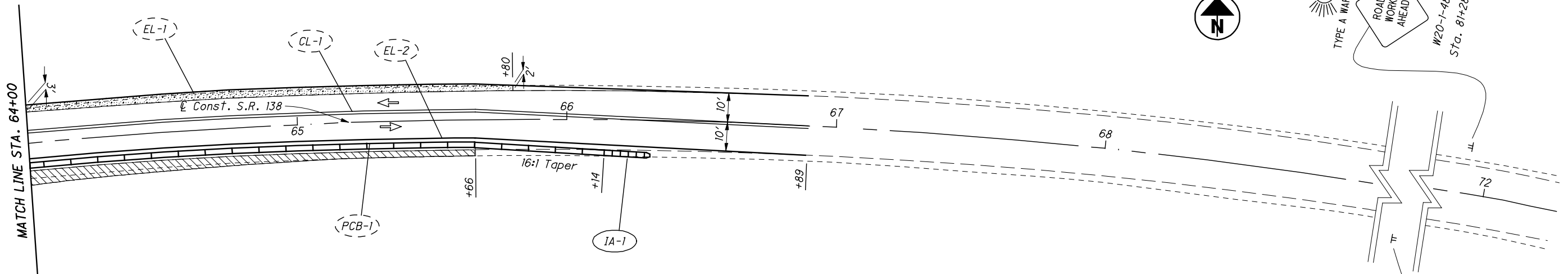




ESTIMATED QUANTITIES								
REF No.	Station to Station	Side	614				622	
			WORK ZONE IMPACT ATTENUATOR	BARRIER REFLECTOR, TYPE B2	OBJECT MARKER, TWO WAY	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 704.06, TYPE I (WHITE)	PORTABLE CONCRETE BARRIER, 32"
			EACH	EACH	EACH	MILE	MILE	FT
CL-1	59+00 to 66+89	Lt.				0.15		
EL-1	59+00 to 66+89	Lt.					0.15	
EL-2	59+00 to 66+89	Rt.					0.15	
PCB-1	59+00 to 66+14	Lt.		15	15		714	
IA-1	66+14 to 66+39	Lt.	1					
TOTALS CARRIED TO SUB-SUMMARY			1	15	15	0.15	0.30	714

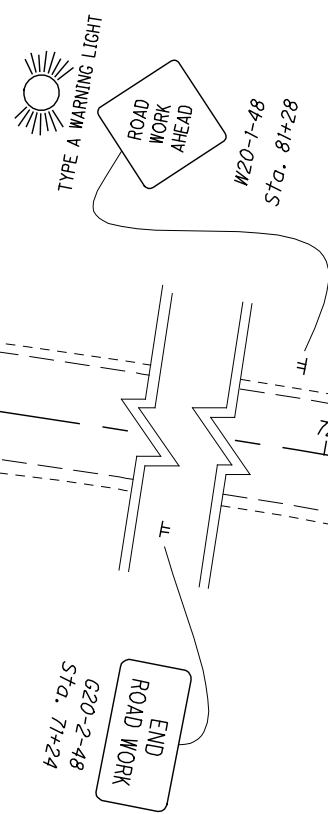


SECTION A-A



LEGEND

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

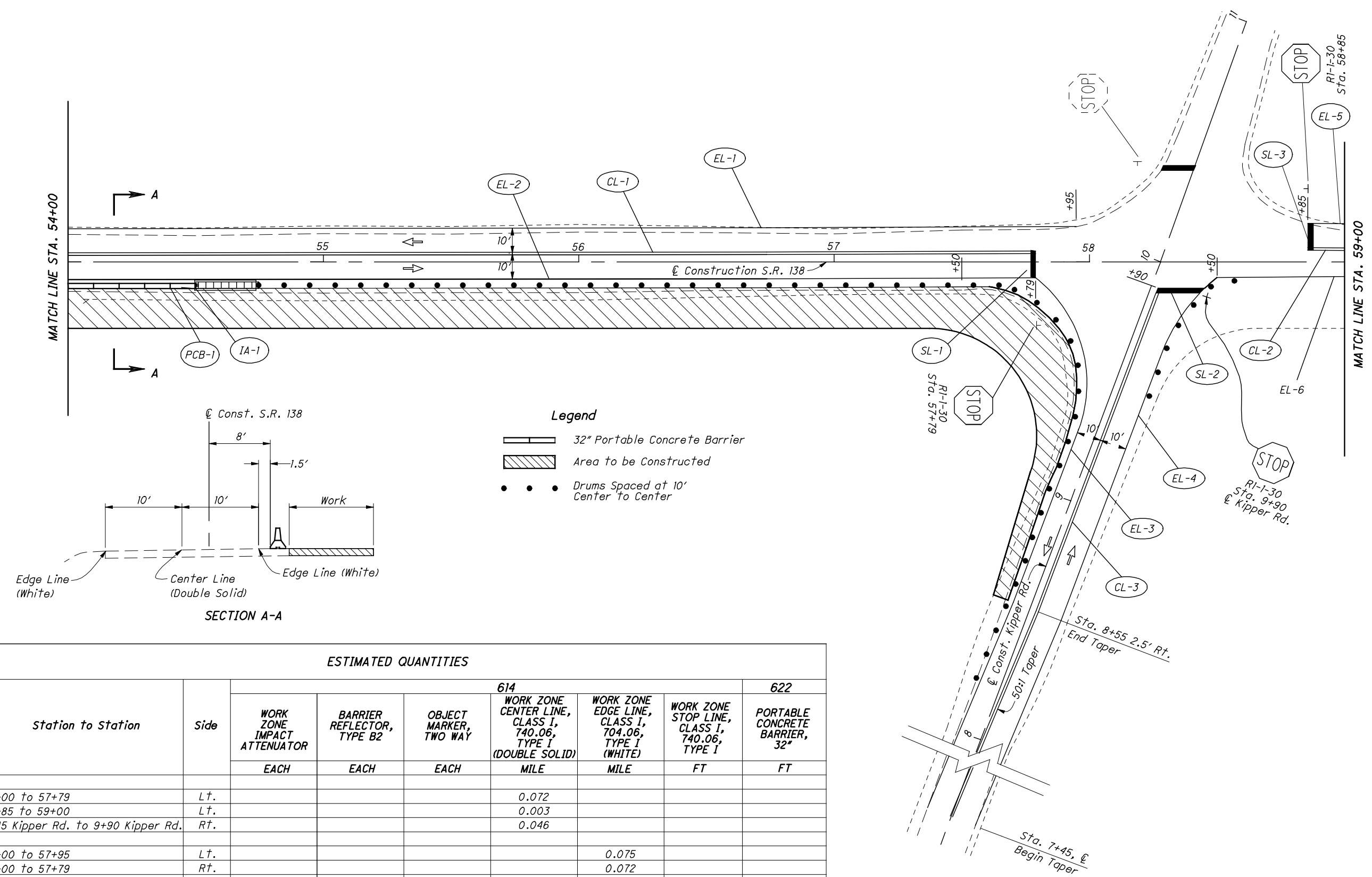




CALCULATED
DAN
CHECKED
DEK

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

SCI-138-11.44



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
CL-1	54+00 to 57+79	Lt.				0.072				
CL-2	58+85 to 59+00	Lt.				0.003				
CL-3	7+45 Kipper Rd. to 9+90 Kipper Rd.	Rt.				0.046				
EL-1	54+00 to 57+95	Lt.					0.075			
EL-2	54+00 to 57+79	Rt.					0.072			
EL-3	57+79 to 7+45 Kipper Rd.	Rt.					0.051			
EL-4	7+45 Kipper Rd. to 58+50	Rt.					0.049			
EL-5	58+85 to 59+00	Lt.					0.003			
EL-6	58+50 to 59+00	Rt.					0.009			
SL-1	57+79	Rt.						15		
SL-2	9+90 Kipper Rd.	Rt.						18		
SL-3	58+85	Rt.						10	50	
PCB-1	54+00 to 54+50	Rt.		2	2					
IA-1	54+50 to 54+75	Rt.	1							
TOTALS CARRIED TO SUBSUMMARY			1	2	2	0.05	0.10	43	50	



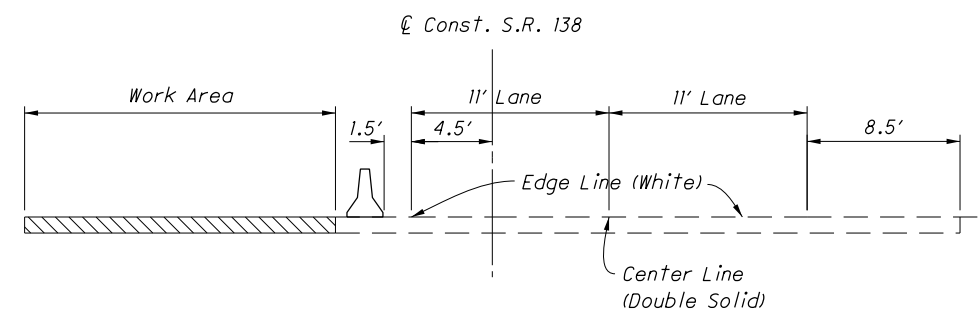
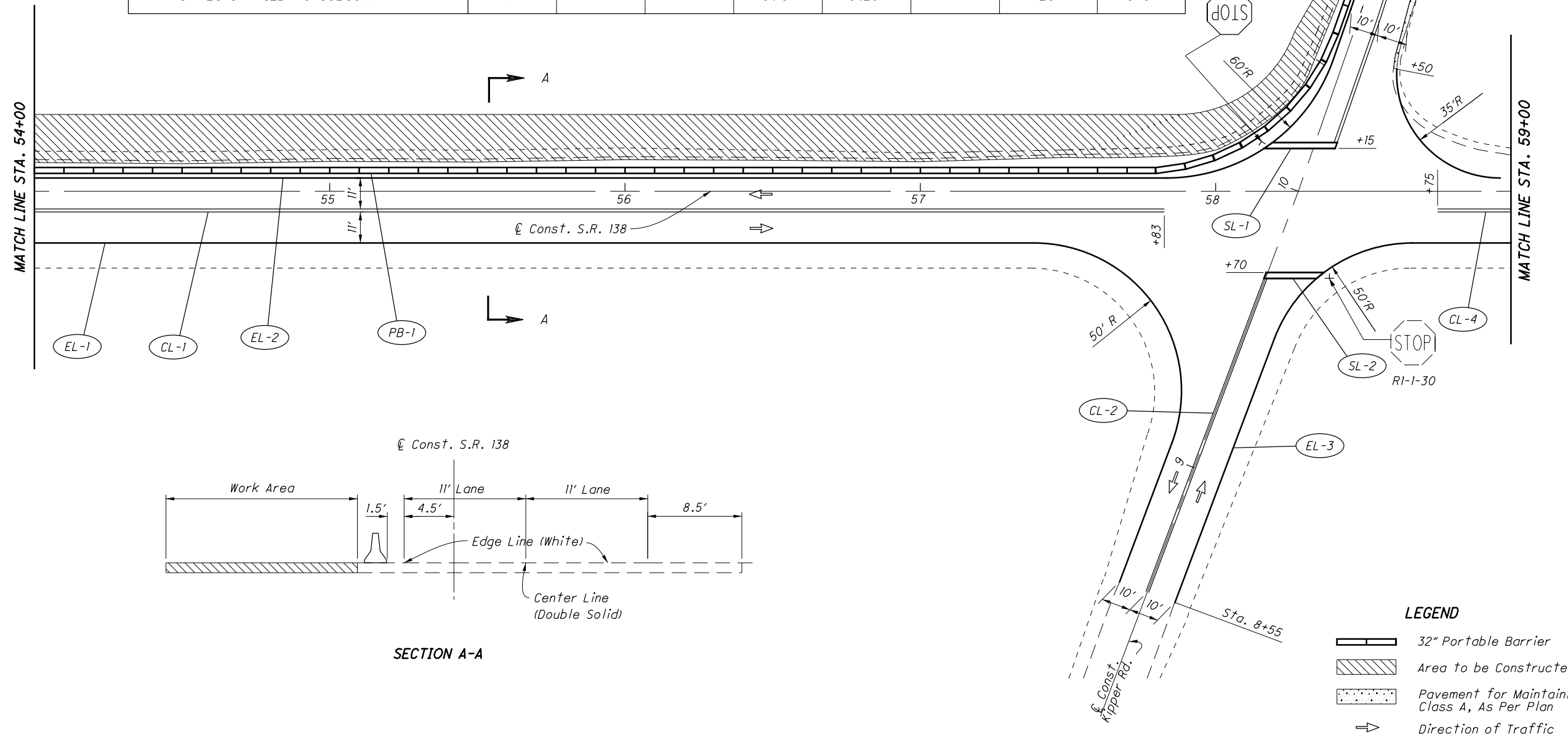
0 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CAN
CHECKED
DEK

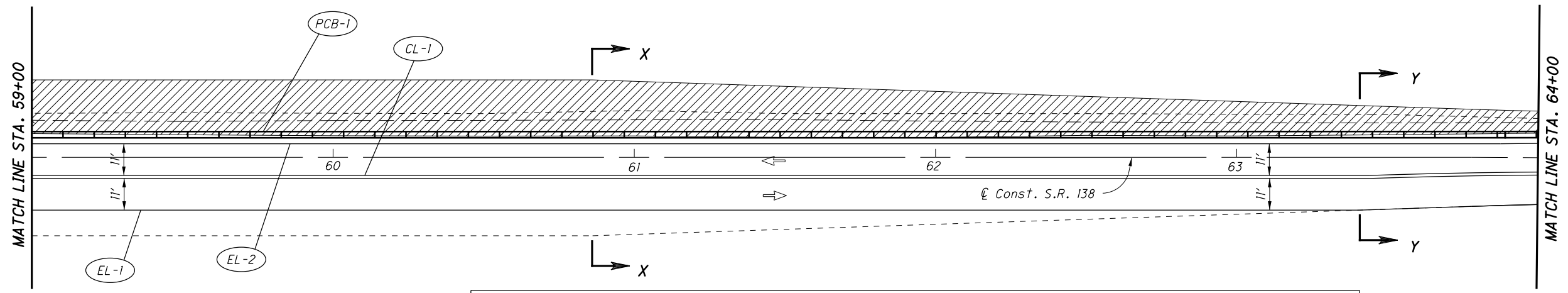
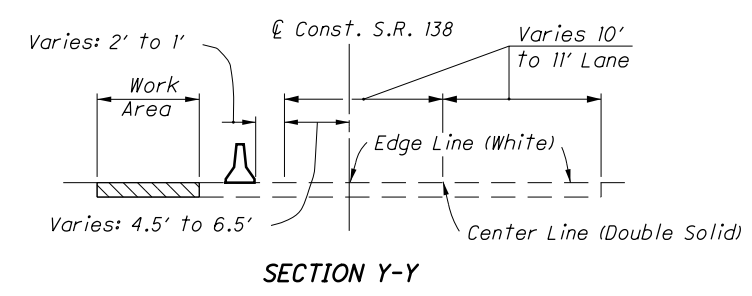
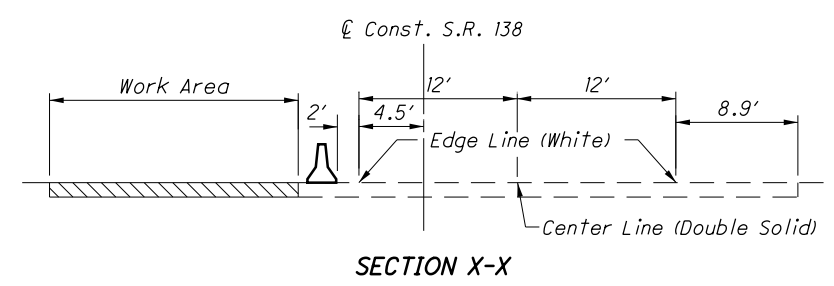
MAINTENANCE OF TRAFFIC PHASE FOUR
STA. 54+00 TO STA. 59+00

SCI-138-11.44

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

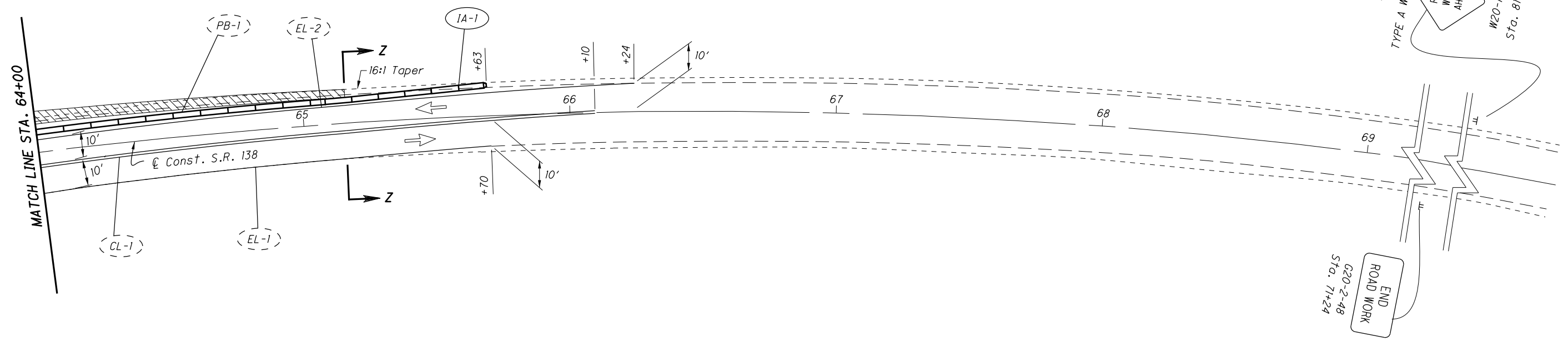
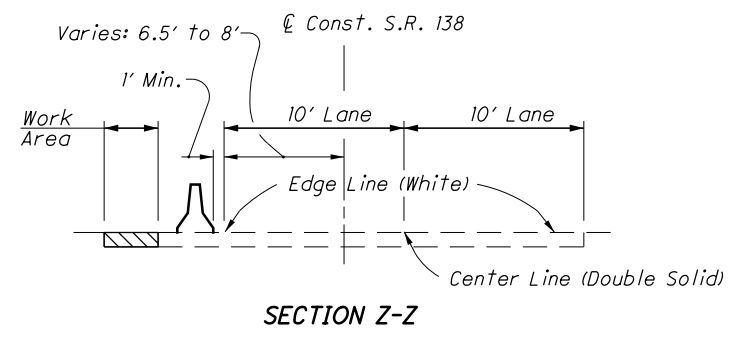


SECTION A-A



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

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



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

MAINTENANCE OF TRAFFIC SUBSUMMARY



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

**TEMPORARY ROAD
PLAN AND PROFILE**

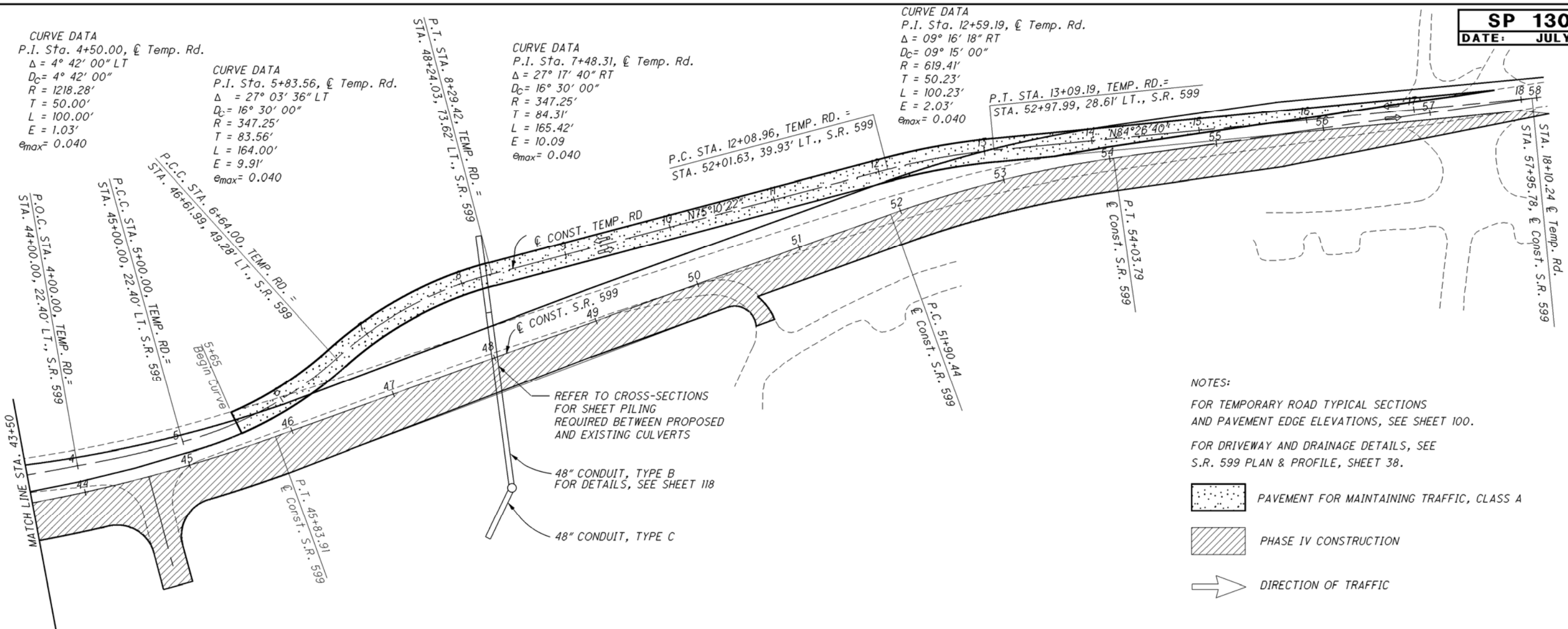
LIC-599-8.54

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

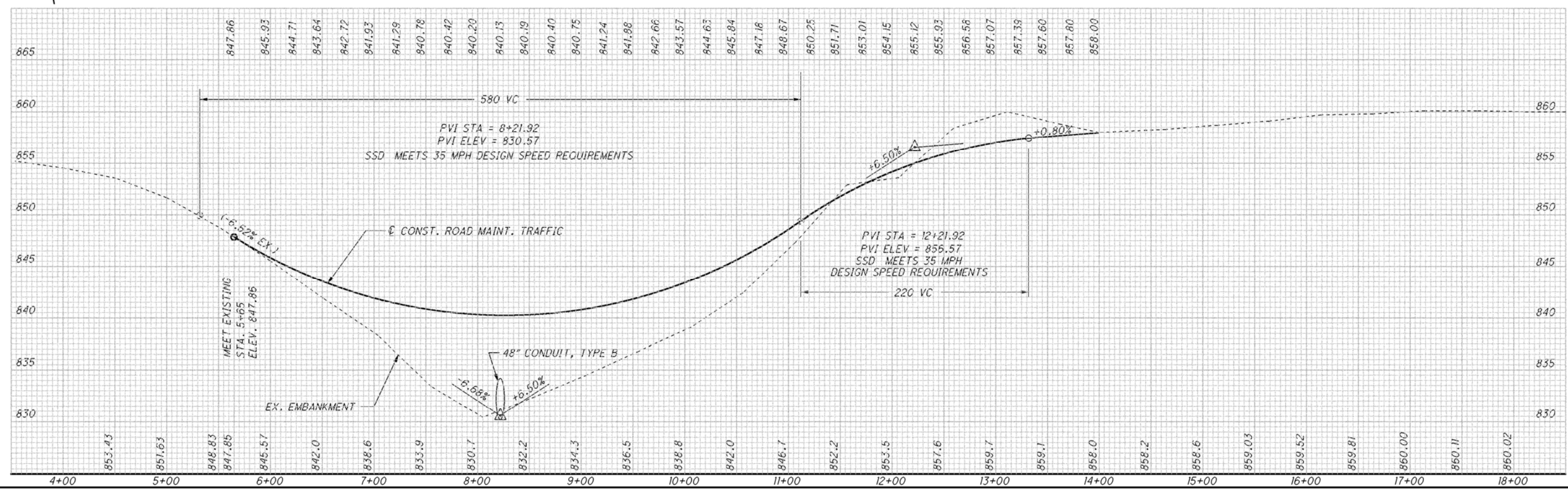
CURVE DATA
P.I. Sta. 5+83.56, $\text{\textcircled{C}}$ Temp. Rd.
 $\Delta = 27^\circ 03' 36''$ LT
 $D_C = 16^\circ 30' 00''$
 $R = 347.25'$
 $T = 83.56'$
 $L = 164.00'$
 $E = 9.91'$
 $e_{max} = 0.040$

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

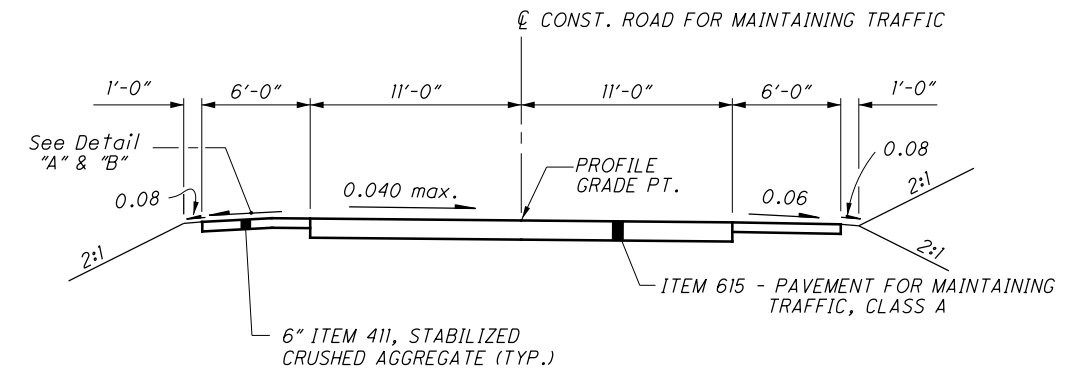
CURVE DATA
P.I. Sta. 12+59.19, $\text{\textcircled{C}}$ Temp. Rd.
 $\Delta = 09^\circ 16' 18''$ RT
 $D_C = 09^\circ 15' 00''$
 $R = 619.41'$
 $T = 50.23'$
 $L = 100.23'$
 $E = 2.03'$
 $e_{max} = 0.040$



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

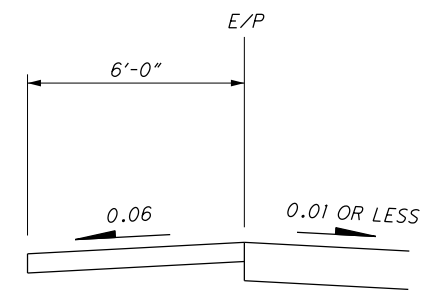


ROAD FOR MAINTAINING TRAFFIC PAVEMENT EDGE ELEVATIONS		
11' LEFT	STATION	11' RIGHT
MEET EXISTING	5+65	MEET EXISTING
846.84	5+75	847.72
845.60	6+00	846.23
844.52	6+25	844.90
843.57	6+50	843.71
842.75	6+75	842.67
842.06	7+00	841.78
841.51	7+25	841.05
841.10	7+50	840.45
840.84	7+75	839.99
840.54	8+00	839.85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

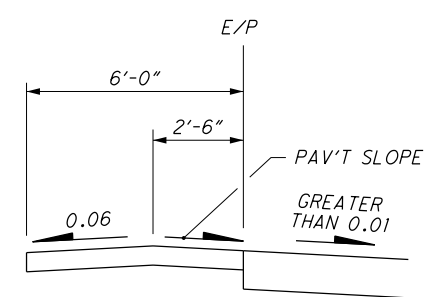


SUPERELEVATED SECTION

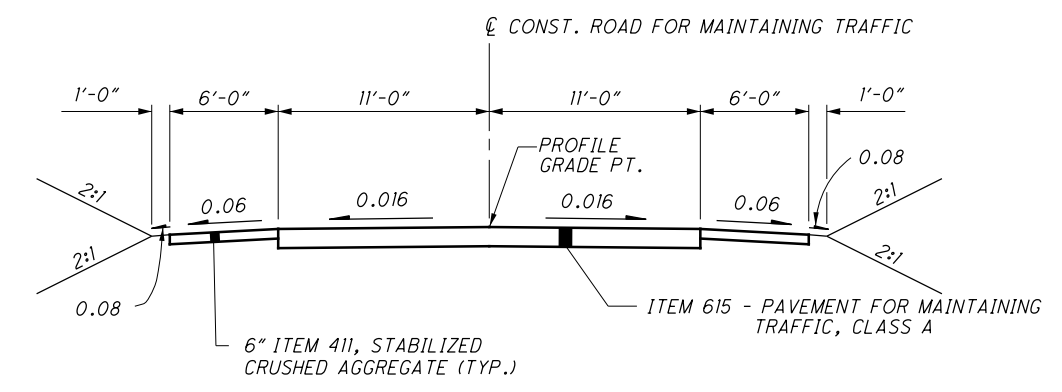
STA. 5+65.00 TO STA. 6+64.00
STA. 6+64.00 TO STA. 9+20.00 (OPPOSITE HAND)
STA. 11+40.00 TO STA. 13+50.00



DETAIL "A"

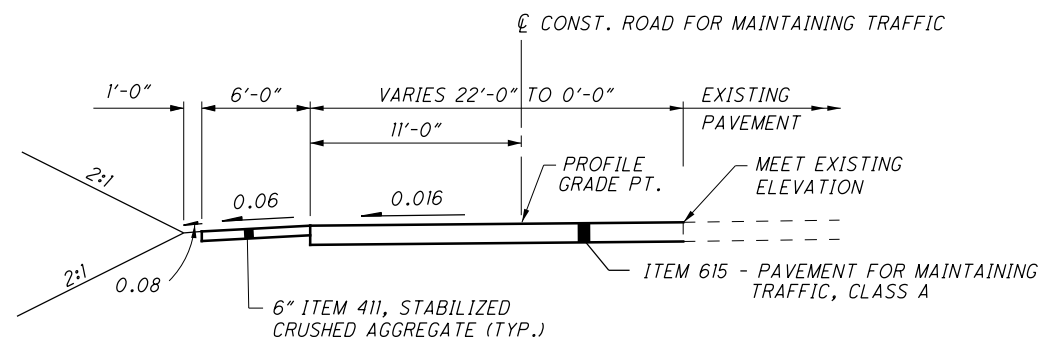


DETAIL "B"



NORMAL SECTION

STA. 9+20.00 TO STA. 11+40.00



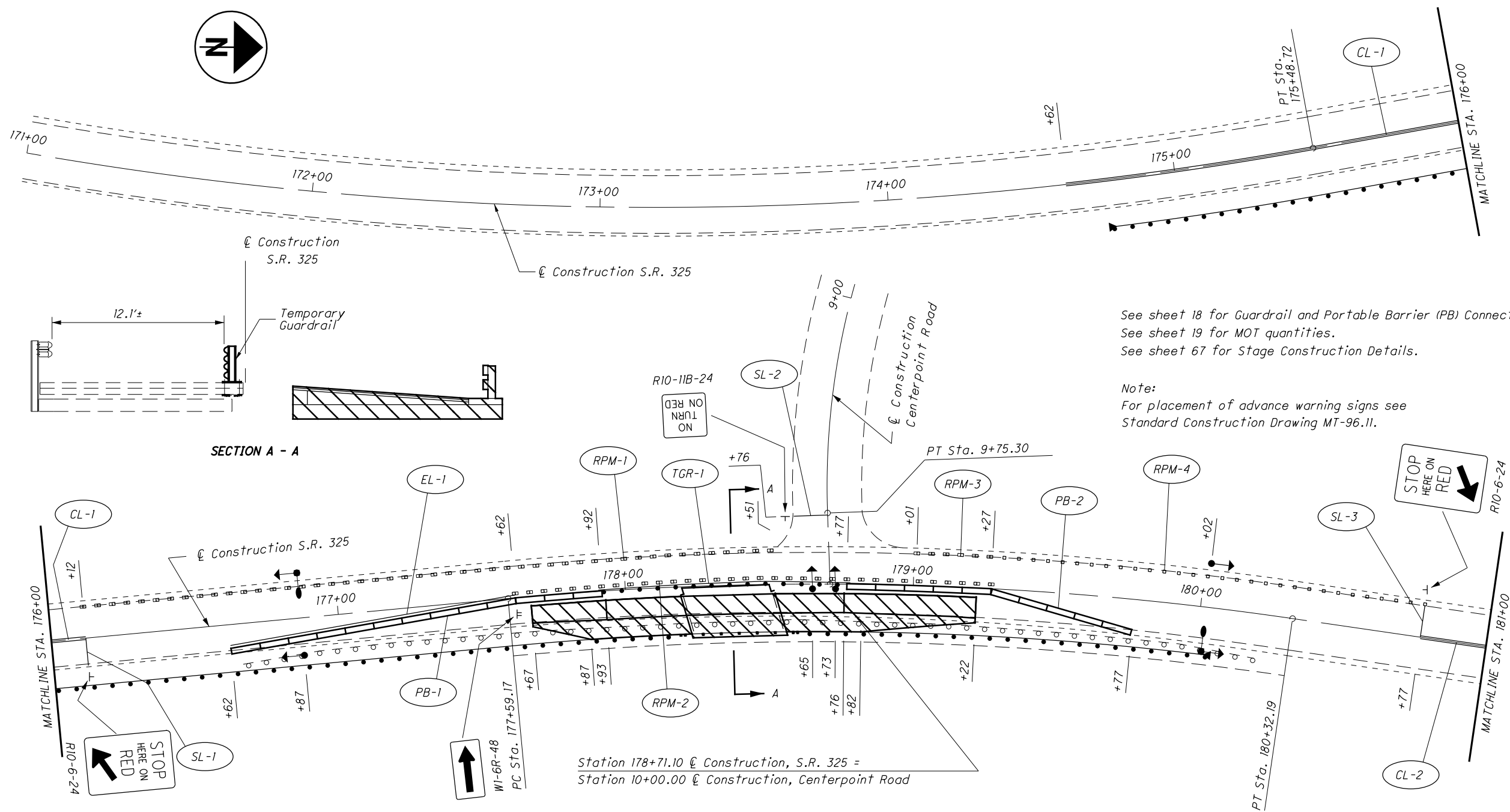
TAPER SECTION

STA. 13+50.00 TO STA. 18+10.24

TEMPORARY ROAD
TYPICAL SECTIONS AND ELEVATIONS

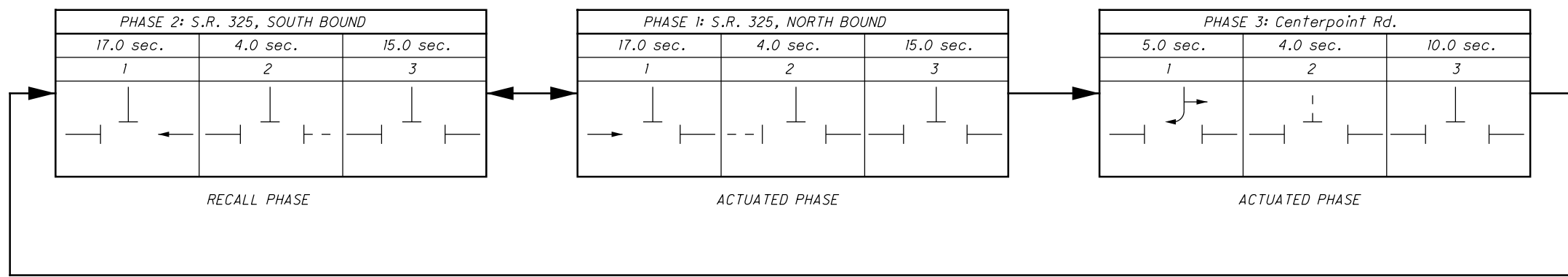
LIC-599-8.54

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



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

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



Legend

▬ 32" Concrete Barrier

▨ Area to be constructed

PHASE 1 - SIGNAL TIMING DIAGRAM

SHEET NO.	202		601		611										605					SP 1307-1 DATE: APRIL 2013					CALCULATED JKP CHECKED FGW																		
	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	BENDS AND BRANCHES FOR INFORMATION ONLY																							
																				EACH	CY	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							160	1					2	4071				5	2	3																						
127				108																																							
128								113						1	3650	350				4																							
129	1				107			196						4	4000					4		3																					
130			25					188	1					4	4000					4		2																					
131								130						1	4000					4	2	2	1	1																			
132								198						4	4000					2	2	2																					
133								123						2	4000					2			2																				
134								144						3	4000					2	2	2		1																			
135							27	171			1			3	4577					4	2	3	1																				
135A			50					156						1	2024					2	2	2																					
136								60						3			928					2																					
137								26						1			836	47			2																						
138								24						1			542	50			1		1																				
139								40				1		2			958				2			1																			
142								56						3			1122				3																						
143								18						1			720	50			2		1																				
144								38						2			814					2																					
145								38						2			1218				4																						
146								40						2			822				2	2	1																				
147								34						2			720				2			1																			
TOTALS CARRIED TO GENERAL SUMMARY	3	23	100	215	105	6	6	163	3196	3	1	5	2	56	63317	633	8680	147	9087						86 267																		

DRAINAGE SUBSUMMARY

STA - 6 - 18.84

REF NO.	STORM SEWER PROFILE SHEET NO.	STATION		SIDE	202		601	602	611										605	670	SP 1307-2		
					PIPE REMOVED, 24" AND UNDER	CATCH BASIN REMOVED	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	CONCRETE MASONRY	6" CONDUIT, TYPE F	12" CONDUIT, TYPE B	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	24" CONDUIT, TYPE B	42" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 4	CATCH BASIN, NO. 4A	CATCH BASIN, NO. 5	CATCH BASIN, NO. 5A	4" SHALLOW PIPE UNDERDRAINS	DITCH EROSION PROTECTION	DATE: JULY 2016		
																					BENDS AND BRANCHES		
																					FOR INFORMATION ONLY		
FT	EACH	CY	CY	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	SY	6"X6" TEE	6"X6" CROSS	6"X90° BEND				
FROM	TO																EACH	EACH	EACH				
D1	209 & 210	360+00	364+00	℄						400				1					125				
D2	210		364+00	RT						200									250				
D3	154		363+60	LT&RT					160														
D4	154		364+00	LT															125				
D5	154		364+00	℄																			
D6	154		364+00	RT			6																
D7	154		364+00	LT																			
D8	210	364+00	365+00	RT						100									197				
D9	210	364+00	365+35	℄															226				
D10	210	364+00	365+75	LT						175									259				
D11	157		368+20	℄									64										
D12	157		368+20	LT									68										
D13	157		368+20	RT			1	0.4															
D14	212	368+20	371+00	LT															125				
D15	212	368+20	371+00	℄						280									125				
D16	212	368+20	371+00	RT						280									125				
R1			368+00	RT	20	1																	
U1		359+90	363+97	RT						20									407		1		
U2		359+90	363+97	LT						20									407		1		
U3		359+90	363+97	LT						22									814	1	1		
U4		359+90	363+97	RT						22									814	1	1		
U5		364+03	368+18	RT						20									415	1			
U6		364+03	368+18	RT						22									830	1	1		
U7		364+03	368+18	LT						22									830	1	1		
U8		364+03	368+18	LT						20									415	1			
U9		368+22	371+00	LT						22									556	1	1		
U10		368+22	371+00	RT						22									556	1	1		
U11		368+22	371+00	RT						20									278		1		
U12		368+22	371+00	LT						20									278		1		
U13		371+00	373+50	LT															500	2			
U14		371+00	373+50	LT															250	1			
U15		371+00	373+50	RT															500	2			
U16		371+00	373+50	RT															250	1			
ALL QUANTITIES FROM PLAN & PROFILE SHEET 81																							
TOTALS CARRIED TO GENERAL SUMMARY					20	1	7	0.4	252	160	1850	68	141	144	4	1	7	2	8100	1557			

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

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	FIG. 1307-3(b) DATE: JANUARY 2017	SEE SHEET NO.	CALCULATED JKP	CHECKED FGW
OFFICE	CALCS												196									
														PAVEMENT								
312														251	01000	312	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)				
4140														253	01000	4140	SY	PAVEMENT REPAIR				
9005														255	10011	9005	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS OC1, AS PER PLAN	16			
2894														255	10161	2894	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS OC MS, AS PER PLAN	16			
34828														255	20000	34828	FT	FULL DEPTH PAVEMENT SAWING				
17759														304	20000	17759	CY	AGGREGATE BASE				
3892														305	13010	3892	SY	9" CONCRETE BASE, CLASS OC1				
127														407	10000	127	GAL	TACK COAT				
5813														408	10000	5813	GAL	PRIME COAT				
1029														451	14011	1029	SY	9" REINFORCED CONCRETE PAVEMENT, CLASS OC1, AS PER PLAN	12			
31690														451	15011	31690	SY	10" REINFORCED CONCRETE PAVEMENT, CLASS OC1, AS PER PLAN	12			
6783														452	13011	6783	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS OC1, AS PER PLAN	12			
50342														452	19001	50342	SY	VARIABLE THICKNESS NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN	12			
														WATER WORK								
														3649	638	02504	3649	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, MECHANICAL JOINTS AND FITTINGS			
														2481	638	02604	2481	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 53, BOLTLESS-RESTRAINED JOINTS AND FITTINGS			
														2107	638	02700	2107	FT	12" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 55, BALL AND SOCKET JOINTS AND FITTINGS			
														1142	638	02730	1142	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, AWWA C900, DR18			
														1608	638	02800	1608	FT	12" WATER MAIN POLYVINYL CHLORIDE PIPE AND FITTINGS, ASTM SDR 26			
														438	638	04800	438	FT	3/4" COPPER SERVICE BRANCH			
														464	638	05300	464	FT	3/4" POLYETHYLENE SERVICE BRANCH			
														212	638	06704	212	FT	20" STEEL PIPE ENCASEMENT, OPEN CUT			
														310	638	07310	310	FT	24" STEEL PIPE ENCASEMENT, BORED OR JACKED			
														18	638	08100	18	EACH	12" GATE VALVE AND VALVE BOX			
														16	638	09200	16	EACH	12" CUTTING-IN SLEEVE, VALVE AND VALVE BOX			
														12	638	09700	12	EACH	12" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX			
														36	638	10200	36	EACH	6" FIRE HYDRANT			
														10	638	10300	10	EACH	FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE			
														8	638	10500	8	EACH	FIRE HYDRANT REMOVED AND RESET			
														8	638	10600	8	EACH	FIRE HYDRANT AND GATE VALVE REMOVED AND RESET			
														12	638	10800	12	EACH	VALVE BOX ADJUSTED TO GRADE			
														6	638	10900	6	EACH	SERVICE BOX ADJUSTED TO GRADE			
														4	638	11100	4	EACH	METER AND CHAMBER REMOVED AND RESET			

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP. 1307-3(c)		SEE SHEET NO.	CALCULATED	JKP CHECKED	FGW	
16	18	23	55	192	262	DATE: JULY 2018																		
													RETAINING WALLS OPTION A: REINFORCED EARTH WALL											
								1710					203	20000	1710	CY	EMBANKMENT							
								3474					203	35000	3474	CY	GRANULAR EMBANKMENT							
								LS					503	11100	LS		COFFERDAMS AND EXCAVATION BRACING							
								1124					503	21101	1124	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN						108	
								4766					SPECIAL	61050010	4766	SF	RETAINING WALL, MISC.: REINFORCED EARTH WALL SYSTEM						190	
													RETAINING WALLS OPTION B: RETAINED EARTH WALL											
								1636					203	20000	1636	CY	EMBANKMENT							
								3584					203	35000	3584	CY	GRANULAR EMBANKMENT							
								LS					503	11100	LS		COFFERDAMS AND EXCAVATION BRACING							
								1150					503	21101	1150	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN						108	
								4738					SPECIAL	61050010	4738	SF	RETAINING WALL, MISC.: RETAINED EARTH WALL SYSTEM						190	
													BUILDING DEMOLITION											
								LS					202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 11-WD-1, 1 STORY BRICK BUILDING							
								LS					202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-T, 1 STORY BLOCK BUILDING							
								LS					202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 13-WL, 2 STORY BRICK BUILDING							
								LS					202	56000	LS		BUILDING DEMOLISHED: PARCEL NO. 19-T, 1 STORY METAL BUILDING							
													STRUCTURES OVER 20 FOOT SPAN											
																	STRUCTURE TRU-99-1924 GENERAL SUMMARY						229	
																	STRUCTURE TRU-99-2056 GENERAL SUMMARY						236	
								878					SPECIAL	51272000	878	SY	EPOXY WATERPROOFING OVERLAY (1/4" THICK)						190	
													MAINTENANCE OF TRAFFIC											
	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							
								1528					614	12800	1528	EACH	WORK ZONE RAISED PAVEMENT MARKER							
						1201							614	13310	1201	EACH	BARRIER REFLECTOR, TYPE I (BIDIRECTIONAL)							
	14.00												614	20300	14.00	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE II							
						0.11							614	21300	0.11	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE II							
	0.26												614	21700	0.26	MILE	WORK ZONE CENTER LINE, CLASS II, 740.06, TYPE II							
						4.33							614	22000	4.33	MILE	WORK ZONE EDGE LINE, CLASS I, 4"							
						7.34							614	22300	7.34	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE II							
						48							614	26600	48	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE II							
	5692												614	28600	5692	FT	WORK ZONE GORE MARKING, CLASS II, 740.06, TYPE II							
						LS							615	10000	LS		ROADS FOR MAINTAINING TRAFFIC							
						944							615	20001	944	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN						17	
	30												616	10000	30	M GAL	WATER							
	10												616	20000	10	TON	CALCIUM CHLORIDE							
						30280							622	41001	30280	FT	PORTABLE BARRIER, 32", AS PER PLAN							58
													INCIDENTALS											
													614	11000	LS		MAINTAINING TRAFFIC							
													619	16020	8	MNTH	FIELD OFFICE, TYPE C							
													623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING							
													624	10000	LS		MOBILIZATION							

GENERAL SUMMARY

TRU-99-13.48

SHEET NUMBER				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SP 1307-5 DATE: JANUARY 2017	SEE SHEET NO.	CALCULATED JKP	CHECKED FGW
87	96			01/NHS/PV	02/SK2/PV/ATB									
										TRAFFIC CONTROL				
	161				161	621	00100	161	EACH	RPM				
	146				146	630	02100	146	FT	GROUND MOUNTED SUPPORT, NO. 2 POST				
	229				229	630	03100	229	FT	GROUND MOUNTED SUPPORT, NO. 3 POST				
	4				4	630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED				
	96				96	630	80100	96	SF	SIGN, FLAT SHEET				
	11				11	630	85000	11	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE				
	14				14	630	86002	14	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				
	3.29				2.49	644	00100	3.29	MILE	EDGE LINE, 4"				
	1.36				1.06	644	00200	1.36	MILE	LANE LINE, 4"				
	1.25				0.98	644	00300	1.25	MILE	CENTER LINE				
	1368				430	644	00400	1368	FT	CHANNELIZING LINE, 8"				
	146				146	644	00500	146	FT	STOP LINE				
	313				313	644	00600	313	FT	CROSSWALK LINE				
	450				180	644	00700	450	FT	TRANSVERSE/DIAGONAL LINE				
	24				24	644	00900	24	SF	ISLAND MARKING				
	9				2	644	01300	9	EACH	LANE ARROW				
	8				2	644	01410	8	EACH	WORD ON PAVEMENT, 96"				
										TRAFFIC SIGNALS				
		122			122	625	25400	122	FT	CONDUIT, 2", 725.04				
		180			180	625	25500	180	FT	CONDUIT, 3", 725.04				
		182			182	625	29000	182	FT	TRENCH				
		120			120	625	29600	120	FT	TRENCH IN PAVED AREA, TYPE B				
		2			2	625	30706	2	EACH	PULL BOX, 725.08, 24"				
		7			7	625	32000	7	EACH	GROUND ROD				
		4			4	632	04910	4	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, ALUMINUM				
		1			1	632	04916	1	EACH	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 2-WAY, ALUMINUM				
		2			2	632	05080	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, ALUMINUM				
		8			8	632	25000	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD				
		2			2	632	27004	2	EACH	LOOP DETECTOR UNIT				
		3			3	632	27008	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE				
		139			139	632	30200	139	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES				
		823			823	632	40300	823	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG				
		1168			1168	632	40500	1168	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG				
		100			100	632	62810	100	FT	INTERCONNECT CABLE, MISC.: INTEGRAL MESSENGER WIRE TYPE, 7 CONDUCTOR, NO. 12 AWG		95		
		1601			1601	632	65200	1601	FT	LOOP DETECTOR LEAD-IN CABLE				
		25			25	632	67200	25	FT	POWER CABLE, 2 CONDUCTOR, NO. 8 AWG				
		1			1	632	70001	1	EACH	POWER SERVICE, AS PER PLAN		95		
		2			2	632	85000	2	EACH	COMBINATION STRAIN POLE, TYPE TC-81.10, DESIGN 10				
		5			5	632	89900	5	EACH	PEDESTAL, 8', TRANSFORMER BASE				
		1			1	632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION				
		1			1	633	01661	1	EACH	CONTROLLER UNIT, TYPE 2070E WITH SEPAC SOFTWARE, WITH CABINET, TYPE 332, AS PER PLAN		95		
		1			1	633	67100	1	EACH	CABINET FOUNDATION				
		1			1	633	67200	1	EACH	CONTROLLER WORK PAD				

GENERAL SUMMARY

ATB-208-13.43

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						
													TRAFFIC CONTROL	
	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"	
LS									642	20000	LS		TWO WAY RADIO EQUIPMENT	
													MAINTENANCE OF TRAFFIC	
240									614	11110	240	HOUR	LAW ENFORCEMENT WITH PATROL CAR FOR ASSISTANCE	
													INCIDENTALS	
LS									614	11000	LS		MAINTAINING TRAFFIC	
LS									614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	4
LS									624	10001	LS		MOBILIZATION, AS PER PLAN	4



CALCULATED JOH
CHECKED JDH

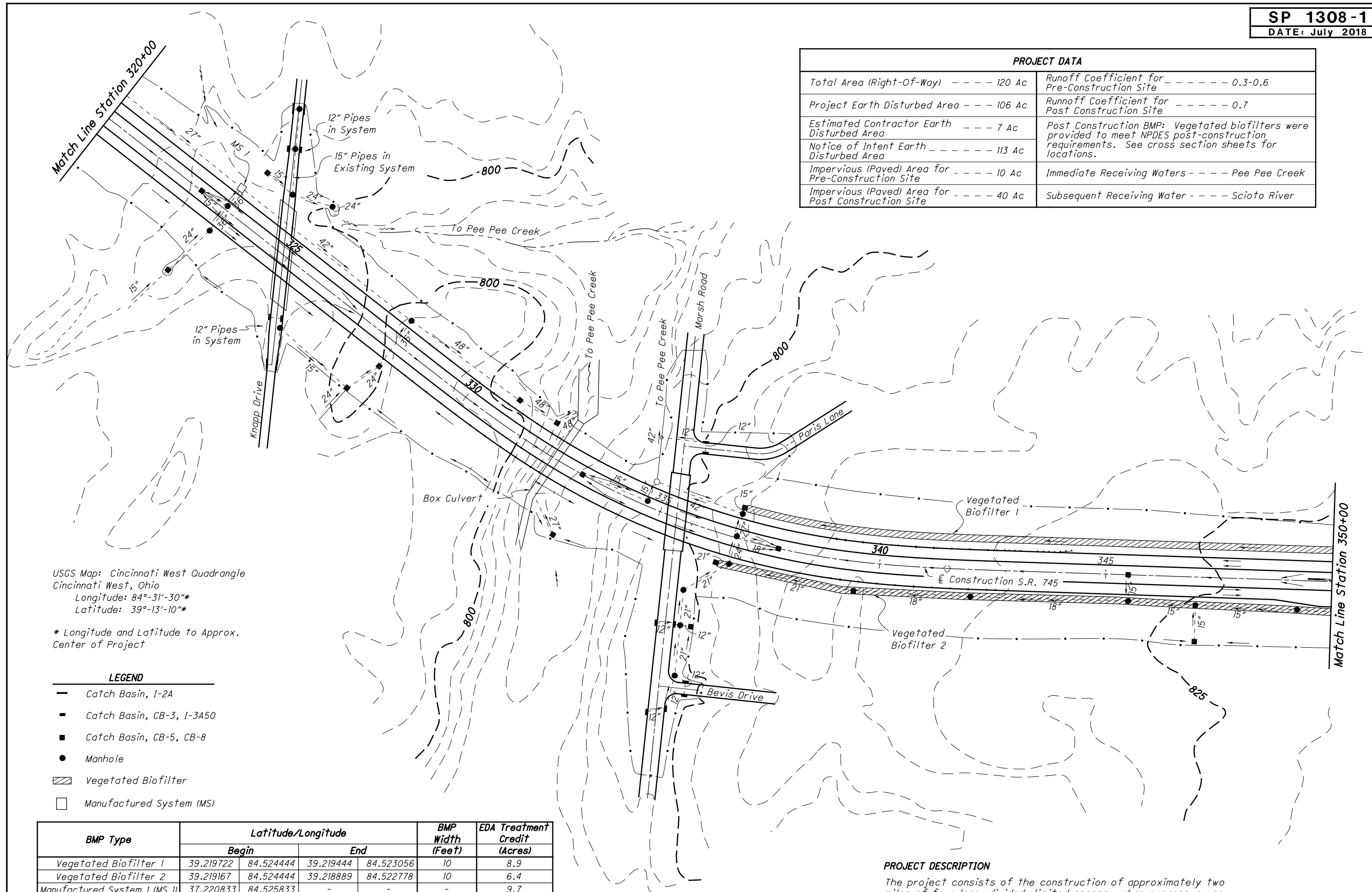
0 100 200
HORIZONTAL SCALE IN FEET

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

HAM-745-18.36

40
484

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



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

* Longitude and Latitude to Approx. Center of Project

LEGEND

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

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

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

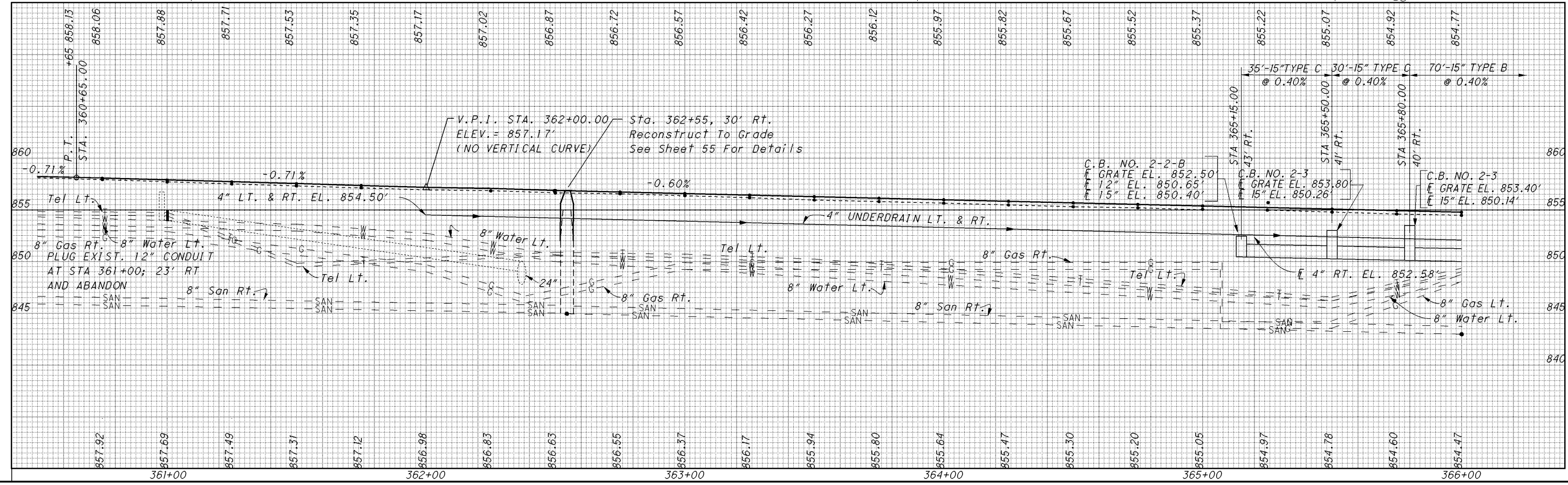
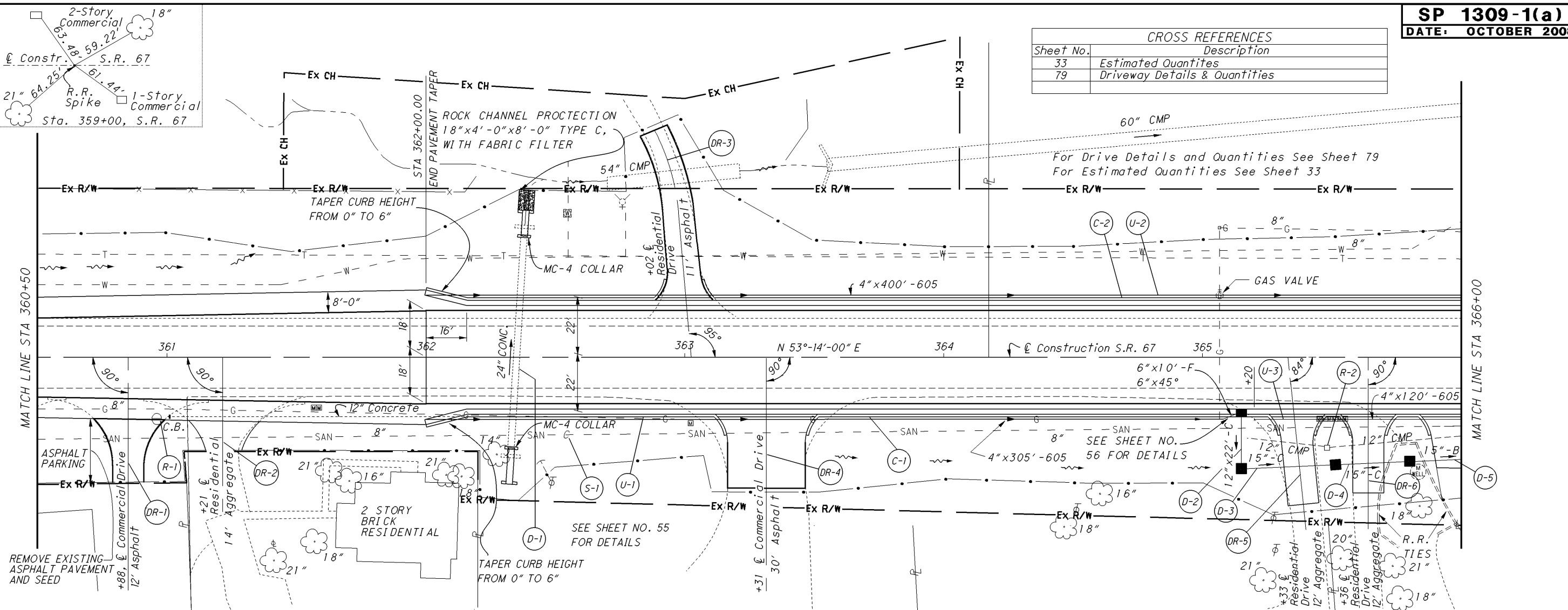
PROJECT DESCRIPTION

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



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

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0 20 40
HORIZONTAL
SCALE IN FEET

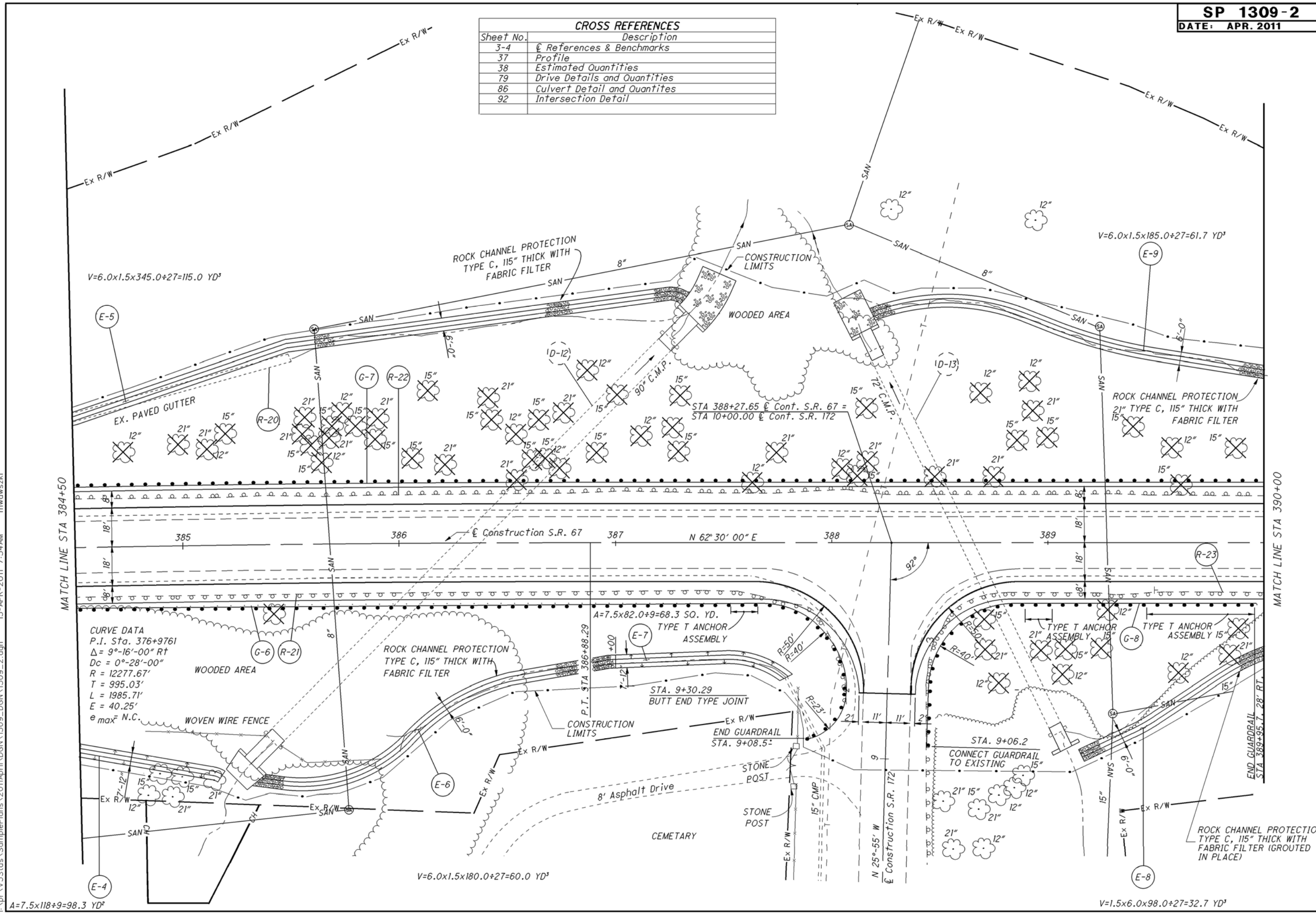
CALCULATED
M/JG
CHECKED
DSN

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
 $\Delta = 9^\circ-16'-00'' \text{ Rt}$
 $D_c = 0^\circ-28'-00''$
 $R = 12277.67'$
 $T = 995.03'$
 $L = 1985.71'$
 $E = 40.25'$
 $e \text{ max} \text{ N.C.}$

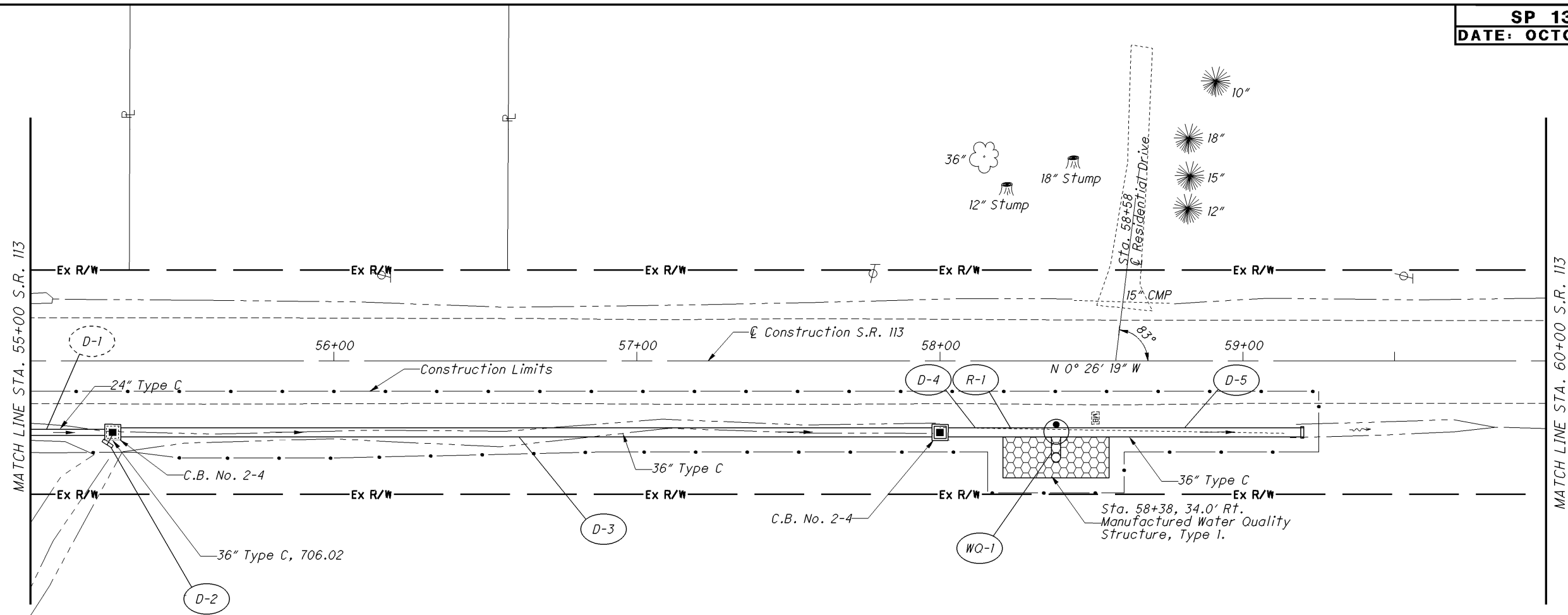
$V=6.0 \times 1.5 \times 180.0 \div 27 = 60.0 \text{ YD}^3$

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

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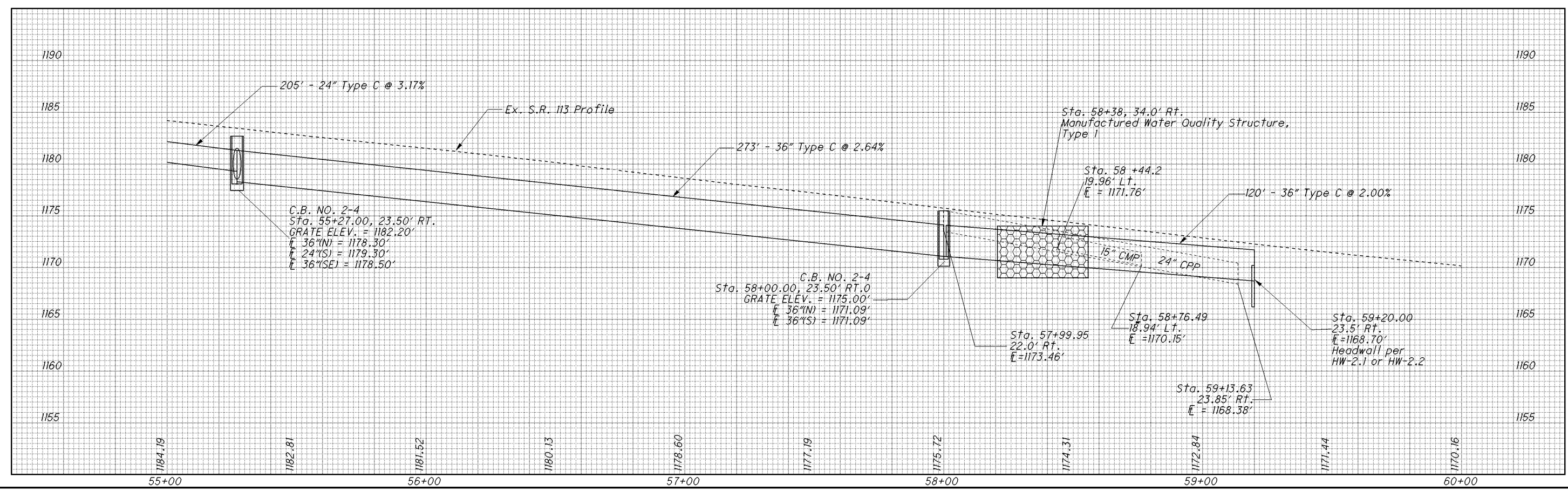


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DRT
CHECKED
TGH



For Quantities, See Sheet 20.

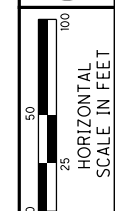
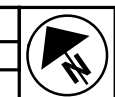
AREA FOR MANUFACTURED SYSTEM



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

NOB-113-0.58

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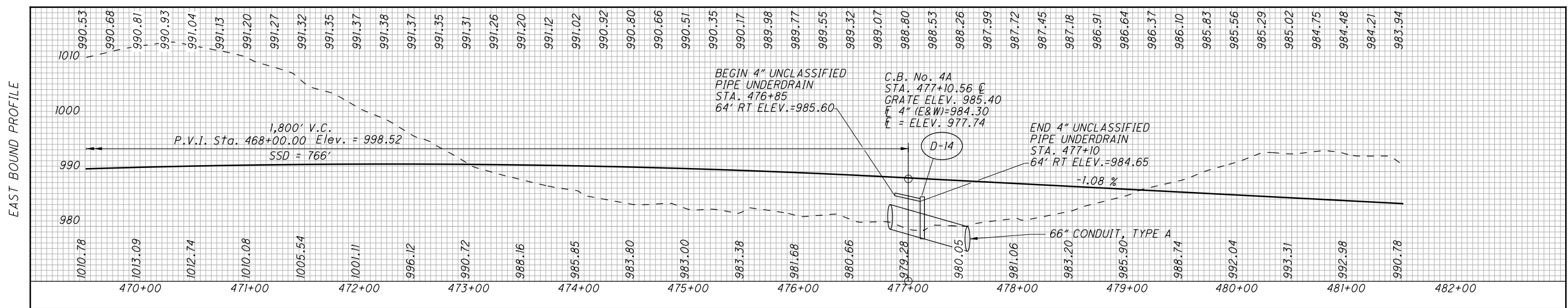
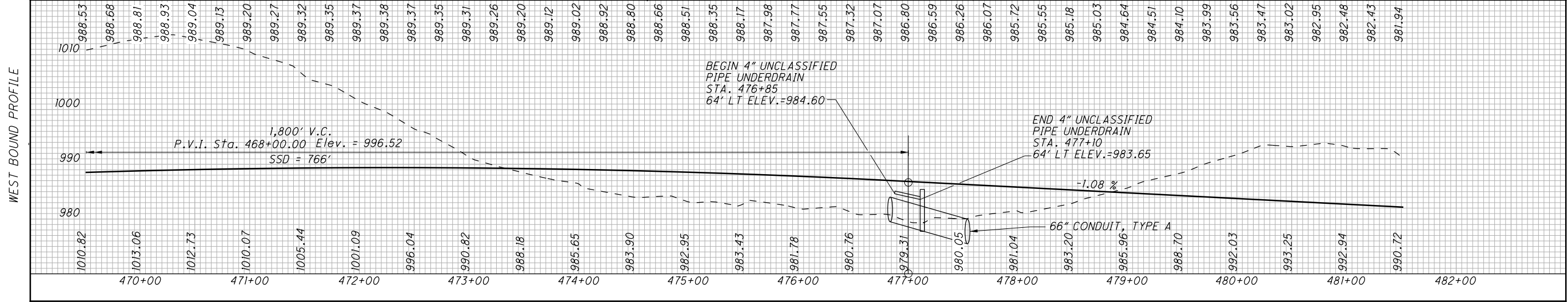
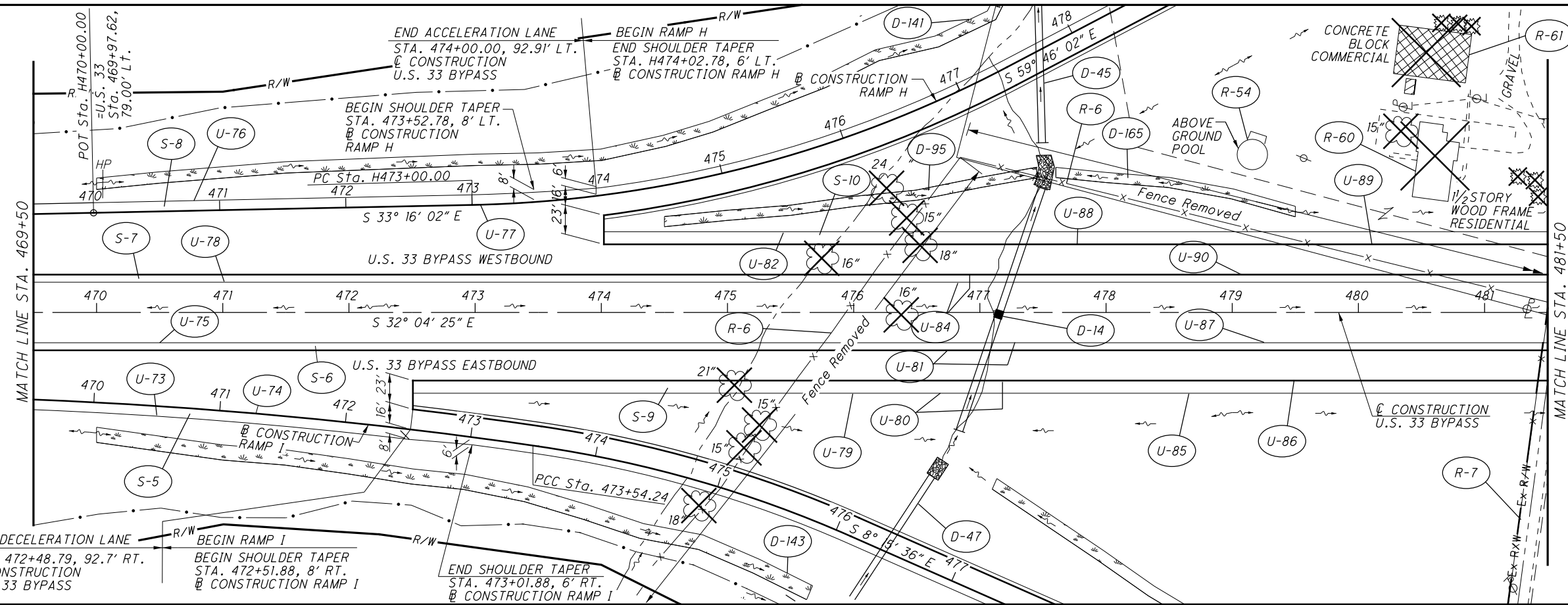


CALCULATED
CHG
CHECKED
LJS

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

FAI-33-13.25

Sheet No.	CROSS REFERENCES	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	

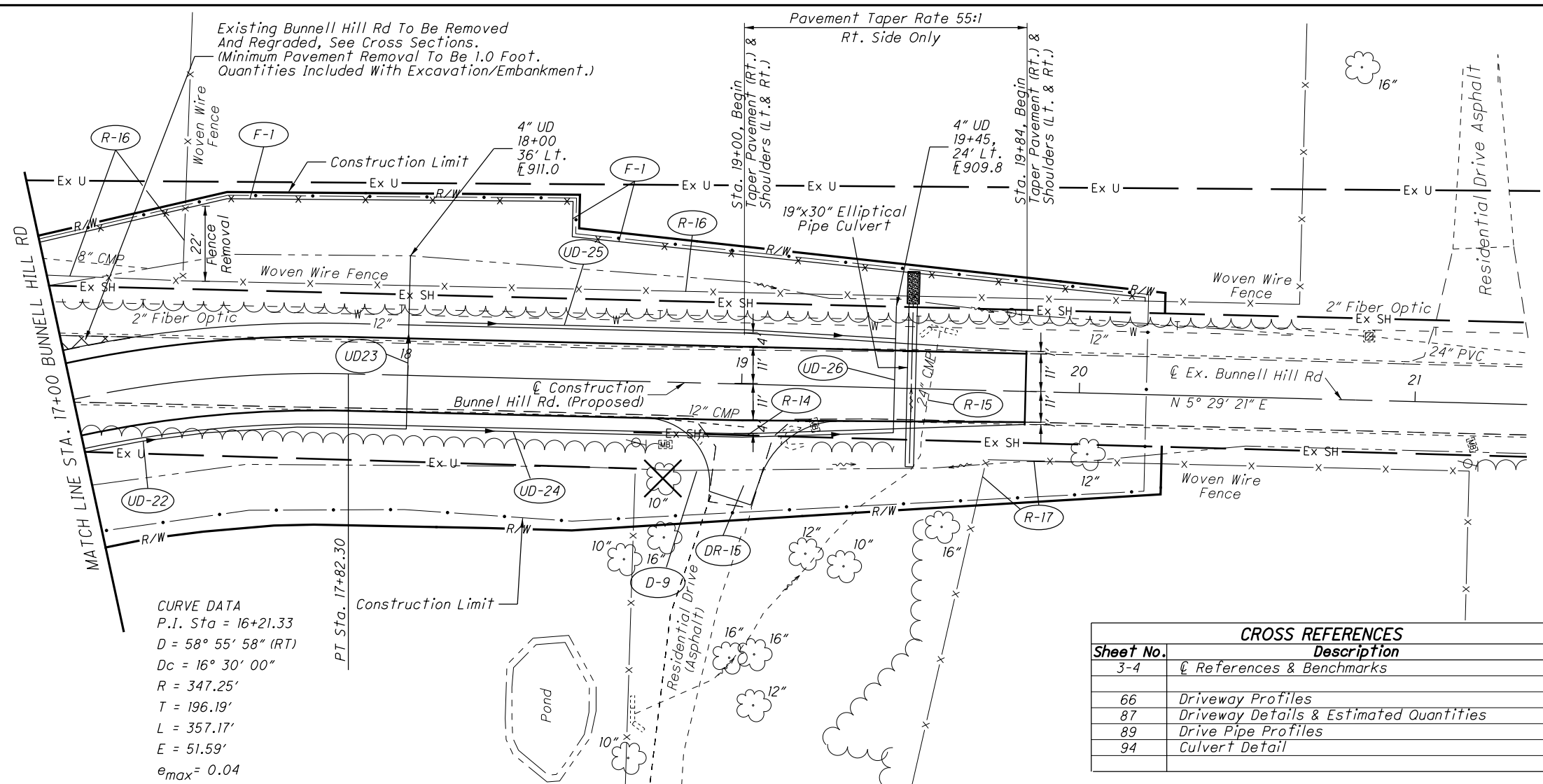




CALCULATED MSO
CHECKED JAD

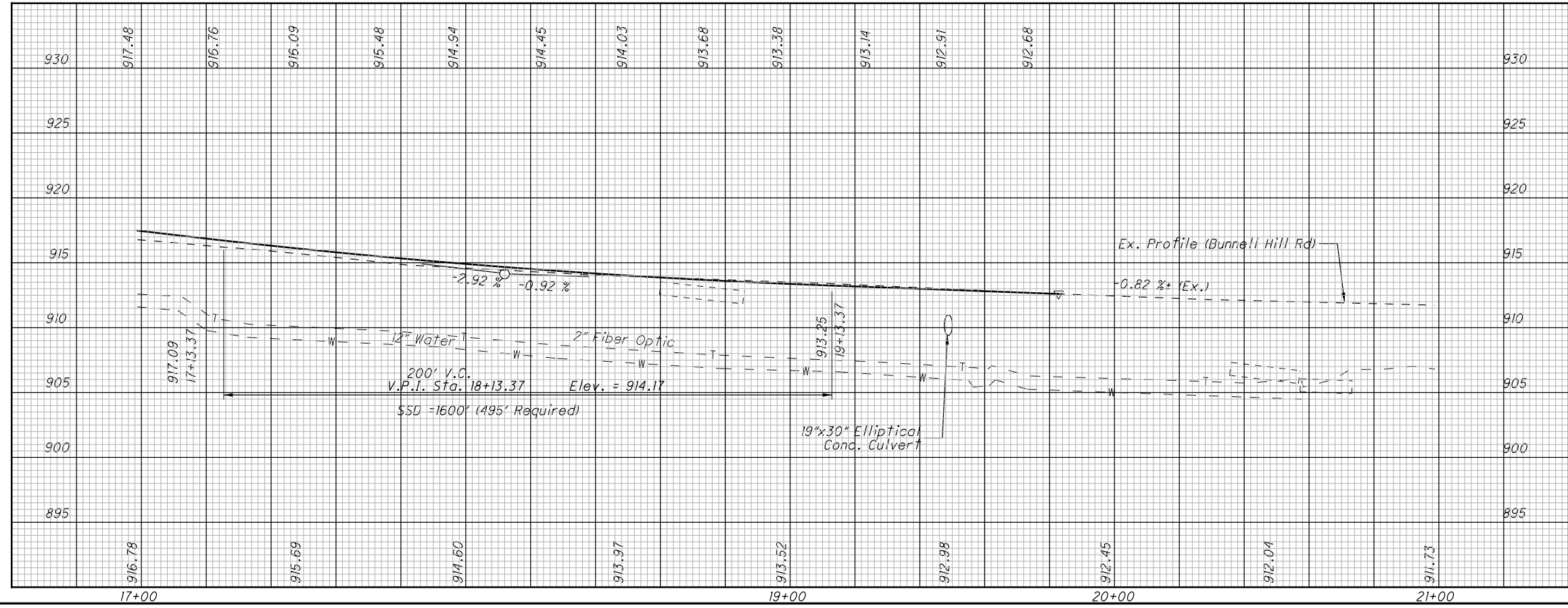
PLAN AND PROFILE - BUNNELL HILL RD
STA. 17+00 TO STA 21+00

WAR-48.19.40



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

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

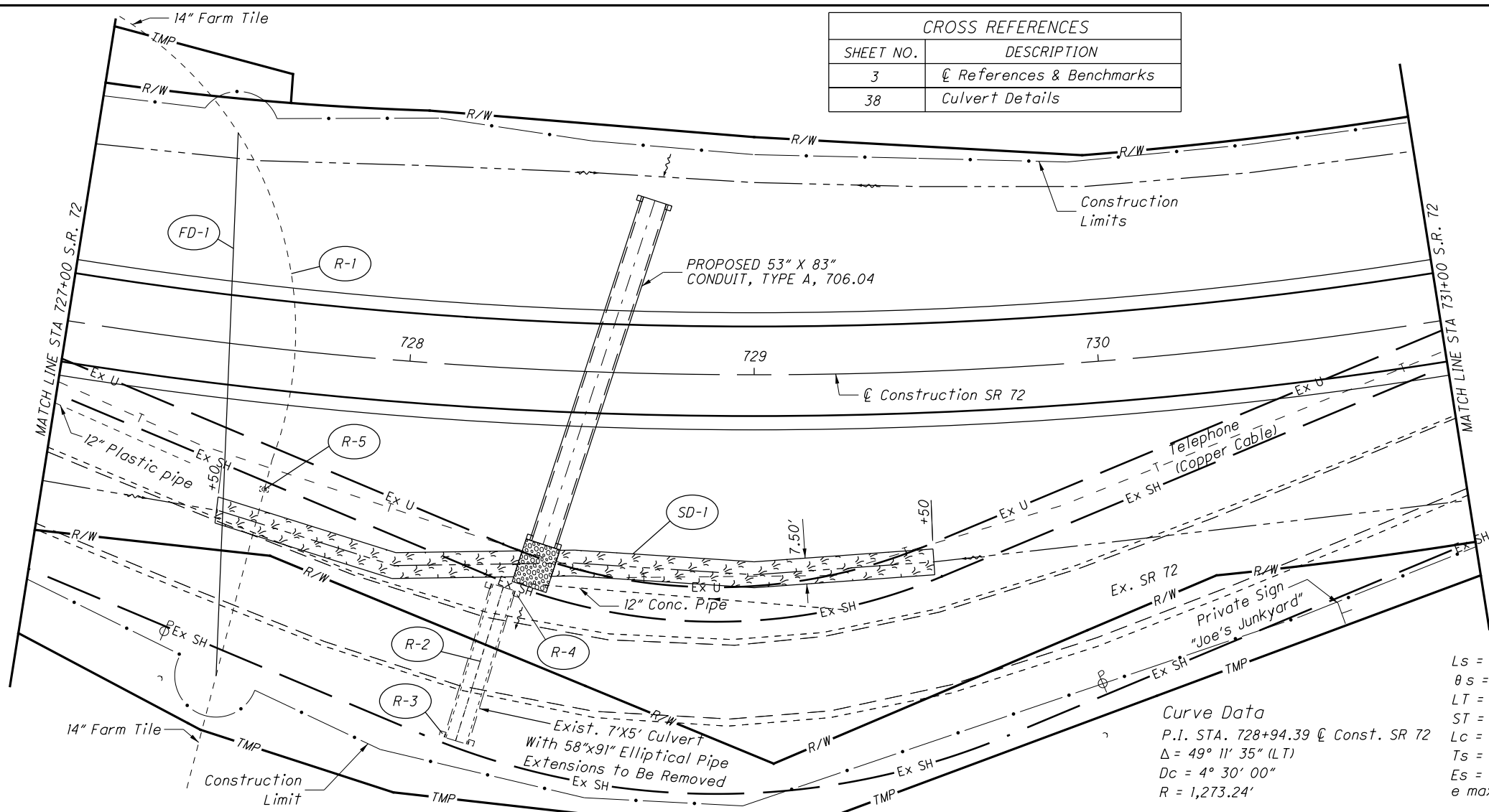


REF NO.	STATION		SIDE	DESCRIPTION	QUANTITY	BENDS & BRANCHES FOR INFO. ONLY
	FROM	TO				
R-14	18+86	19+20	Rt.			
R-15	19+52	19+55	Center			
R-16	16+60	20+20	Lt.			
R-17	19+70	20+19	Rt.			
UD-22	17+00	18+00	Rt.			
UD-23	18+00		Center		96	
UD-24	18+05	19+45	Rt.		140	
UD-25	18+05	19+45	Lt.		140	
UD-26	19+45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

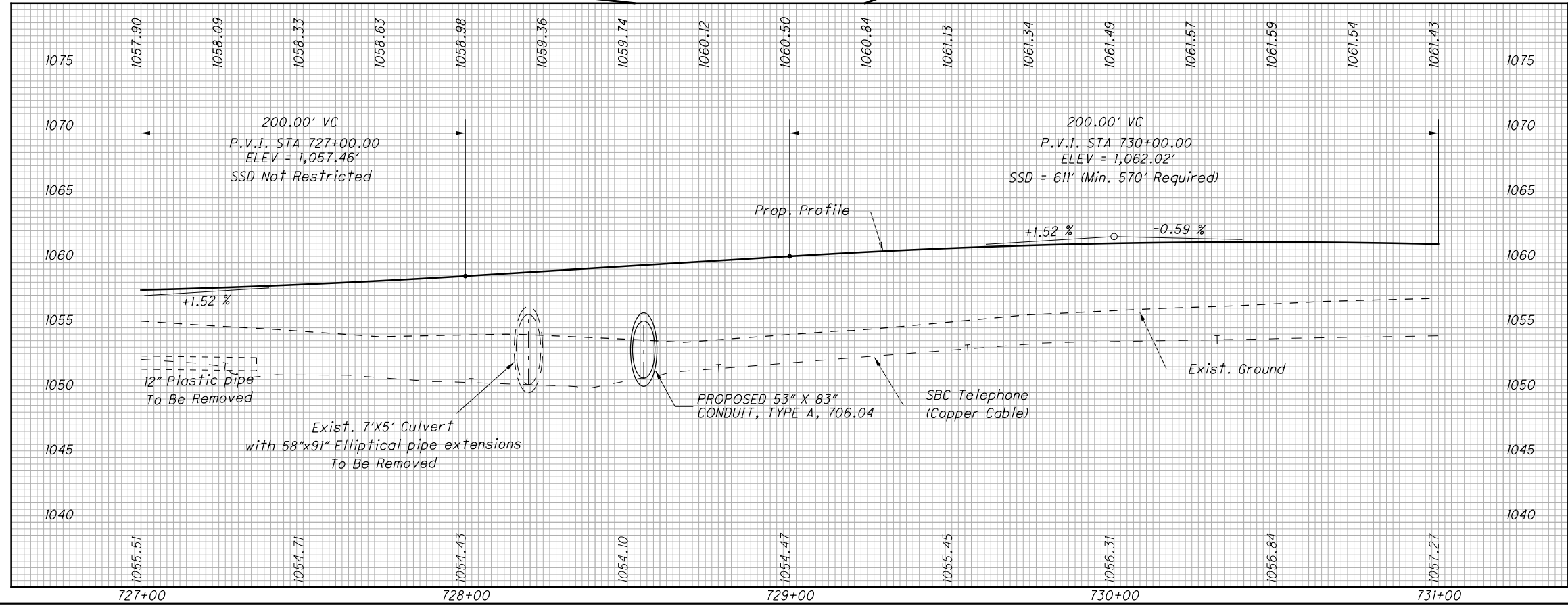
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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
3	☉ References & Benchmarks
38	Culvert Details



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



REF NO.	STATION		SIDE	DESCRIPTION	QTY	UNIT	REMARKS
	FROM	TO					
R-1	727+43	727+56	RT & LT				
R-2	728+15	728+22	RT				
R-3	728+17	728+23	RT		1		
R-4	728+27	728+35	RT		1		
R-5	728+51	728+53	RT				
FD-1	727+43	727+56	RT & LT				
SD-1	727+50	729+50	RT				
TOTALS CARRIED TO GENERAL SUMMARY							
202			EACH	HEADWALL REMOVED	2		
202			FT	PIPE REMOVED, 24\"/>			

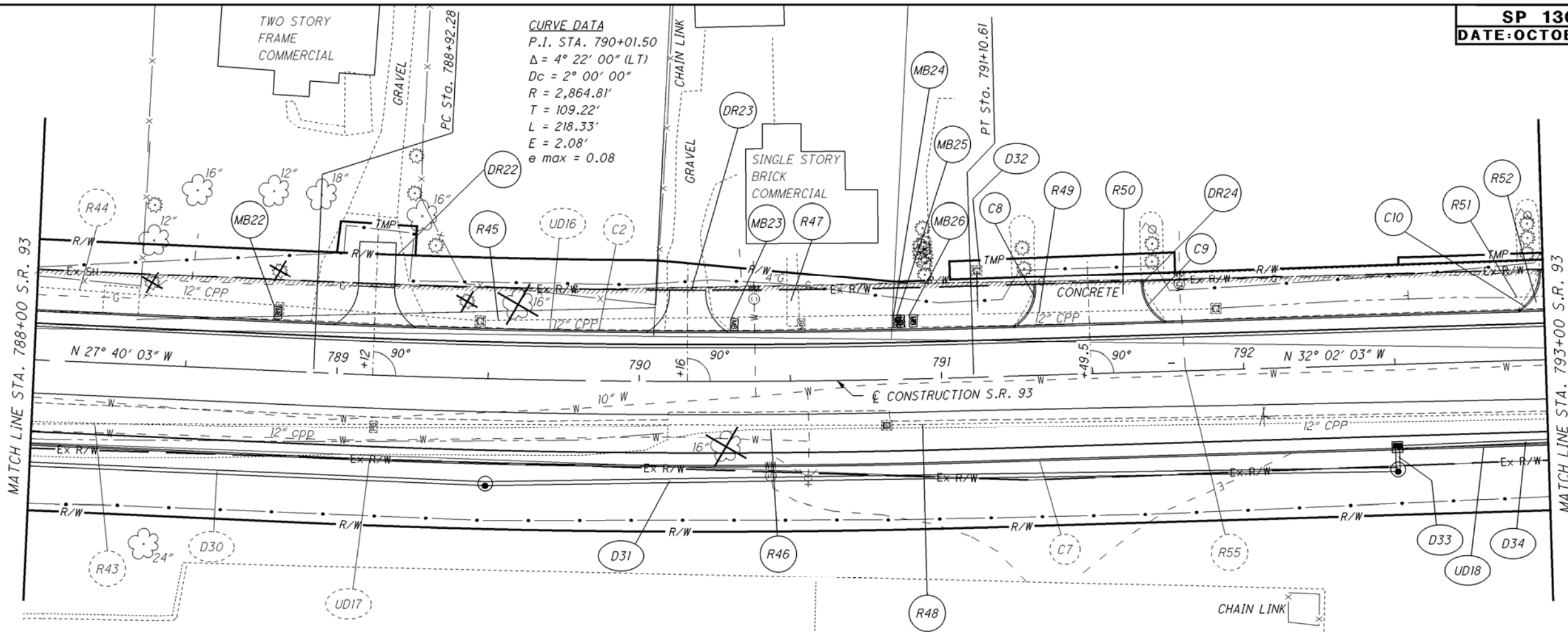


PLAN AND PROFILE
 STA 727+00 TO 731+00

GRE-72-13.67

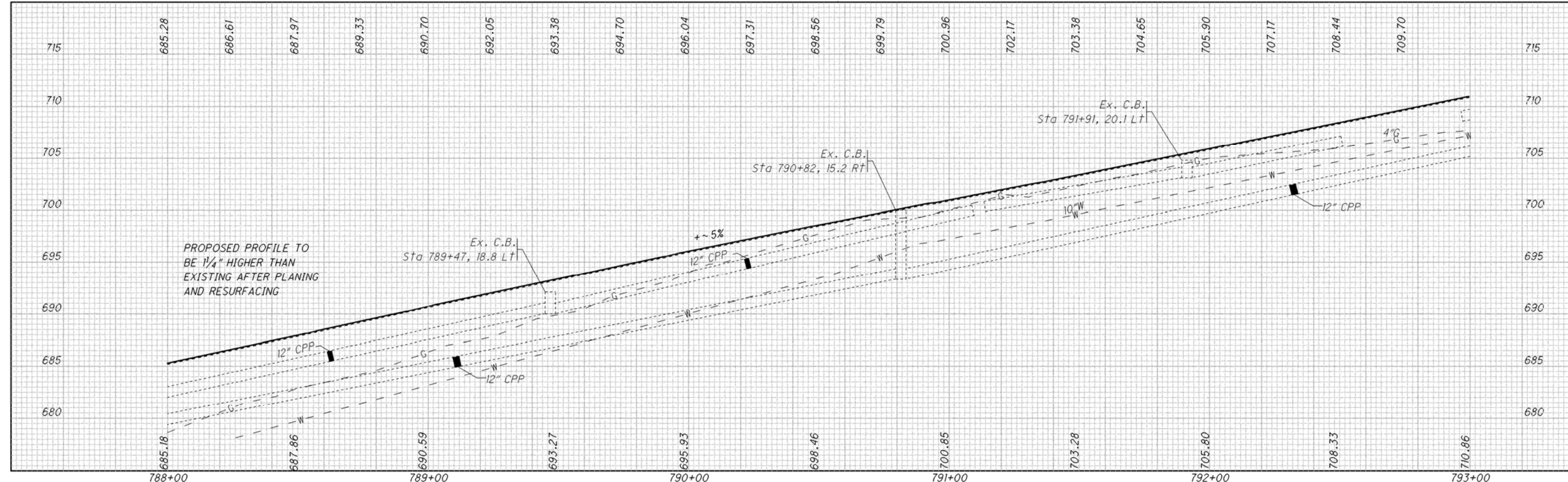


CALCULATED MSO
CHECKED JAD



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

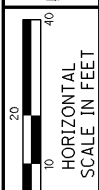
FOR ESTIMATED QUANTITIES SEE SHEETS 20 - 24
 FOR DRIVEWAY DETAILS AND QUANTITIES SEE SHEET 83
 FOR STORM SEWER PROFILES SEE SHEETS 89 - 92
 FOR ϵ REFERENCES AND BENCH MARKS SEE SHEETS 2 & 3



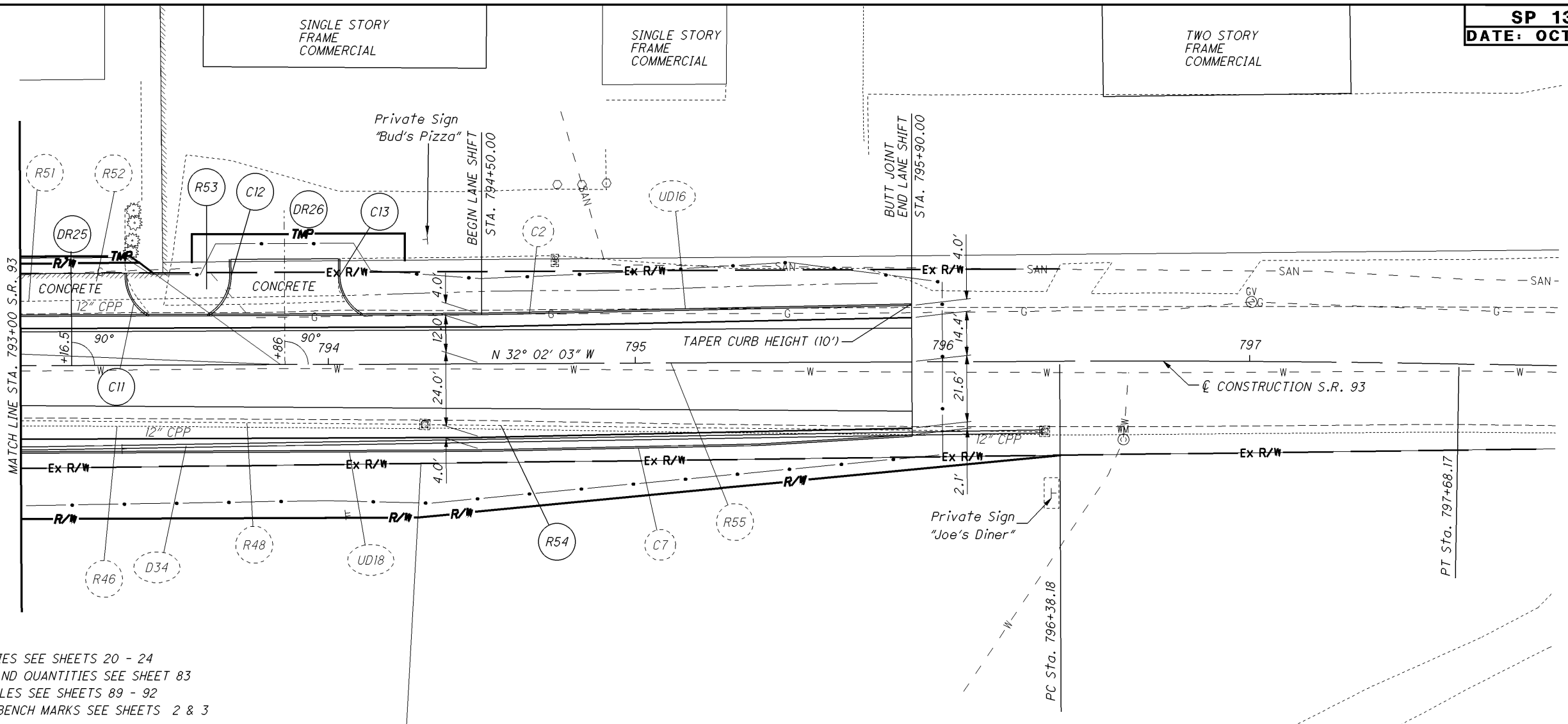
PLAN AND PROFILE
STA. 788+00 TO STA. 793+00

MOE-93-22.35

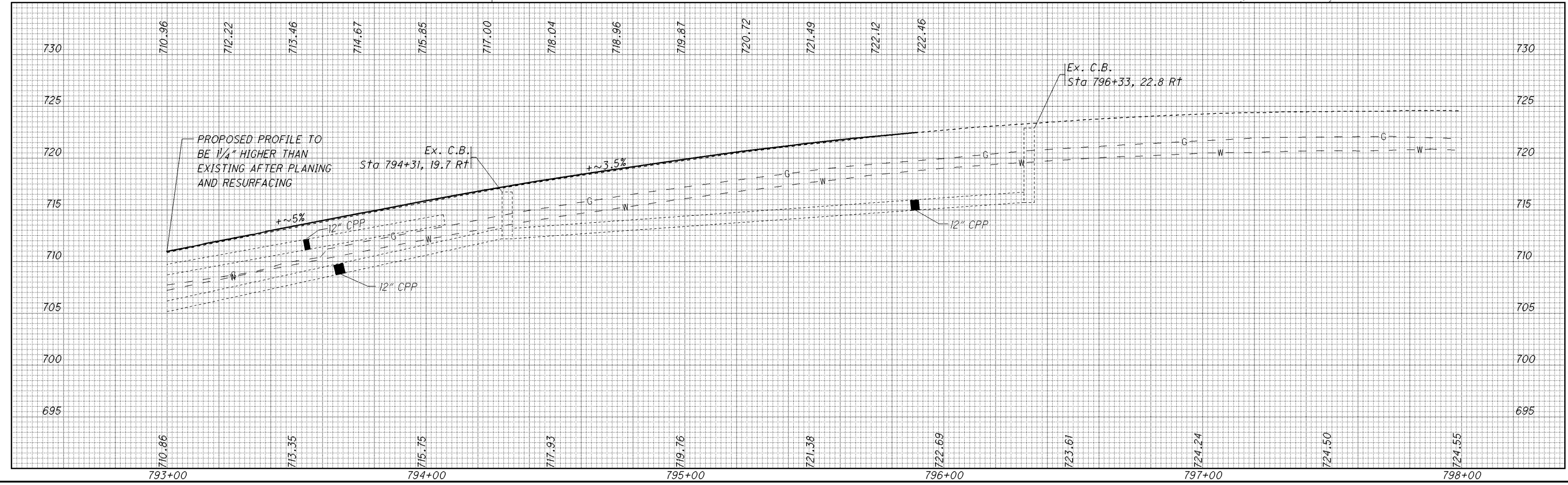
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CALCULATED MSO
CHECKED JAD



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



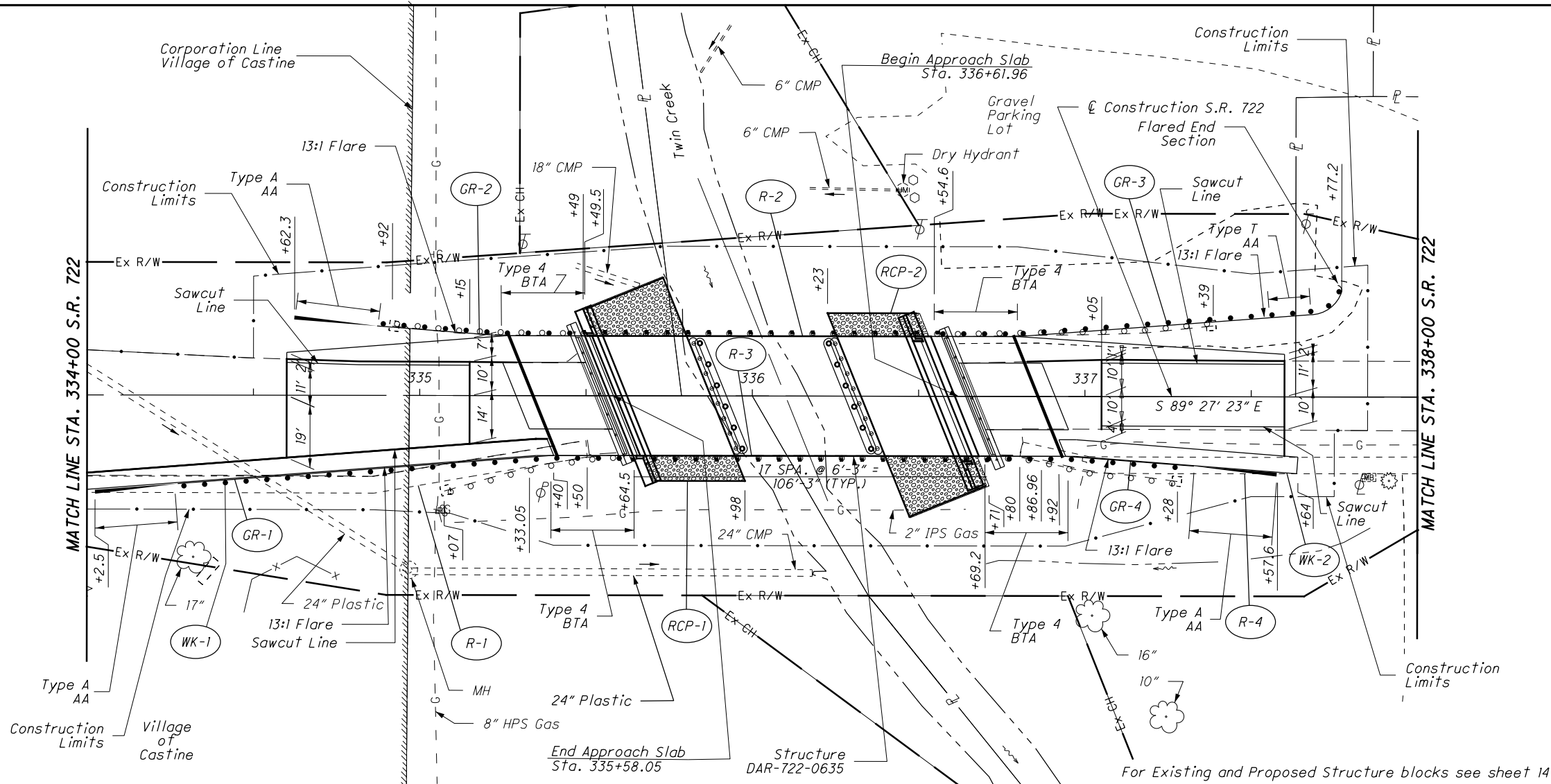
PLAN AND PROFILE
STA. 793+00 TO STA. 798+00

MOE-93-22.35

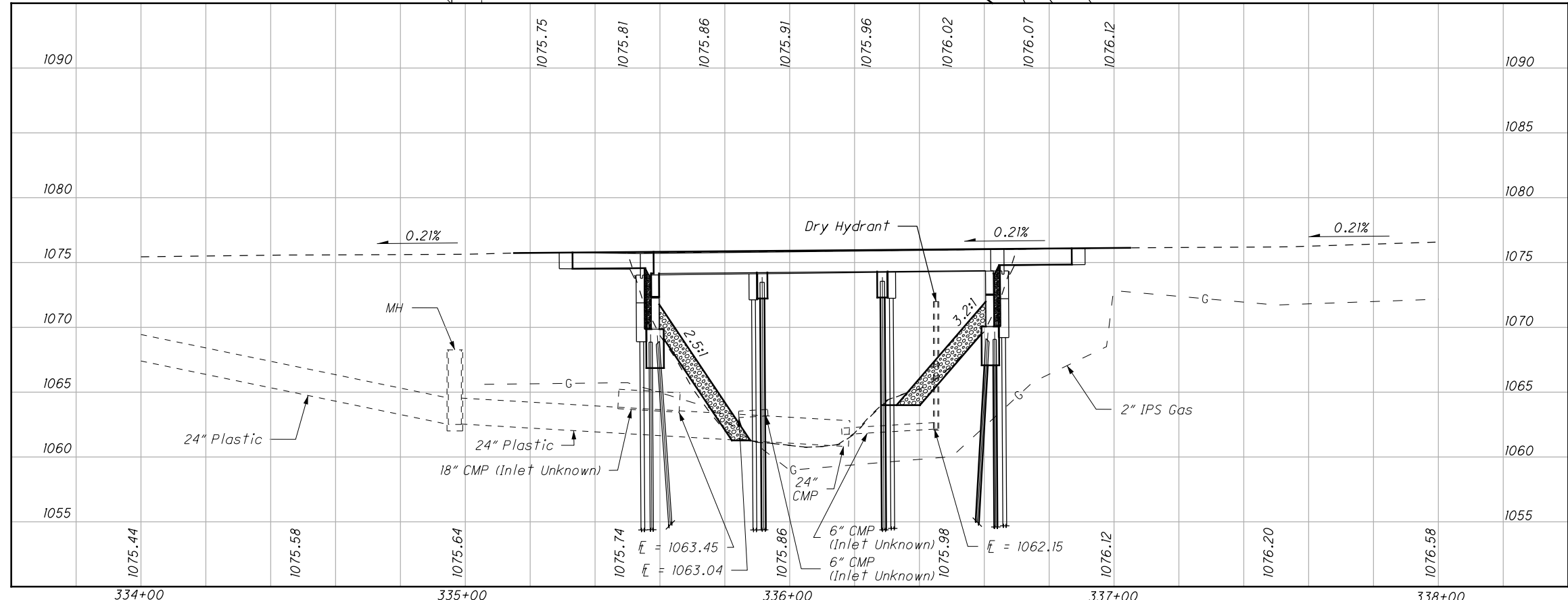
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0 10 20 30 40
HORIZONTAL SCALE IN FEET



For Existing and Proposed Structure blocks see sheet 14.



REF NO.	STATION		SIDE	QUANTITY	UNIT		
	FROM	TO					
GR-1	334+02.5	335+49.5	RT.	1	EACH		
GR-2	334+62.3	335+64.5	LT.	1	EACH		
GR-3	336+54.6	337+77.2	LT.	1	EACH		
GR-4	336+69.2	337+67.6	RT.	1	EACH		
R-2	334+92	337+39	LT.	1	EACH		
R-3	335+07	337+28	RT.	1	EACH		
R-4	336+80	337+64	RT.	1	EACH		
RPC-1	335+49	335+98	LT/RT	1	EACH		
RPC-2	336+23	336+71	LT/RT	1	EACH		
WK-2	336+92	337+64	RT.	1	EACH		
TOTALS CARRIED TO GENERAL SUMMARY				387.5	3		
606	GUARDRAIL, TYPE 5	FT	137.5	62.5	125	50.0	387.5
606	ANCHOR ASSEMBLY, TYPE A	EACH	1	1	1	1	3
606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	1	1	1
606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	EACH	1	1	1	1	4
608	4" CONCRETE WALK	SF					354
601	ROCK CHANNEL PROTECTION TYPE C WITH FILTER	CY					120
							130
							250
202	WALK REMOVED	SF					405
202	GUARDRAIL REMOVED	FT					475

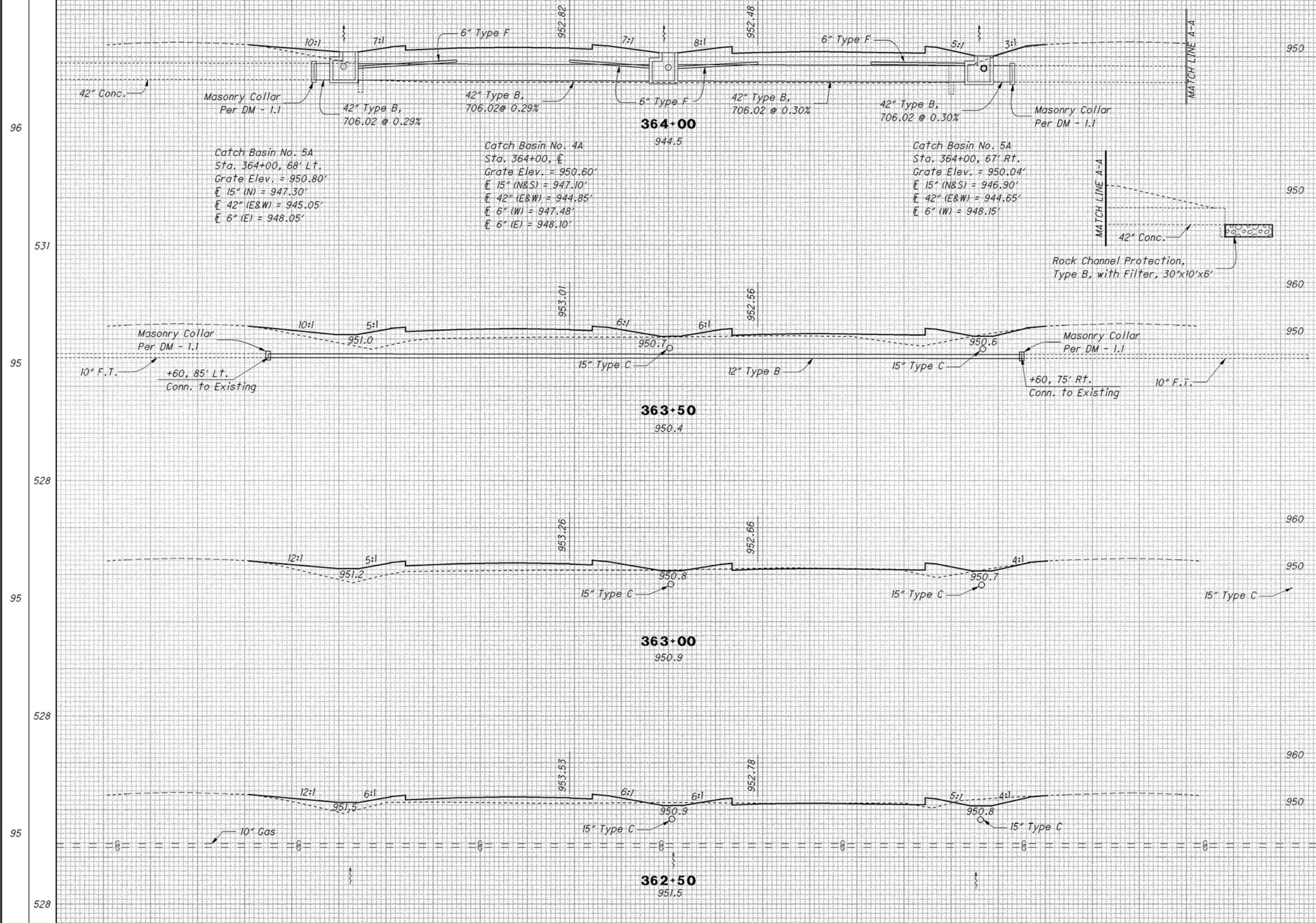
PLAN AND PROFILE - S.R. 722
STA. 334+00 TO STA. 338+00

DAR-722-6.34

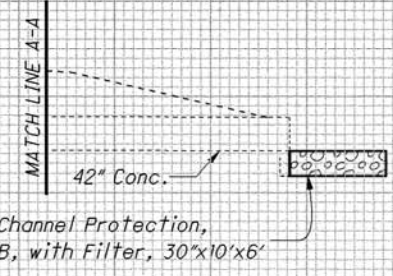
SEEDING
END WIDTH SO. YDS.

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	80	60	40	20	0	20	40	60	80	100	SHEET TOTAL	138	1837



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

LUC-76-31.48

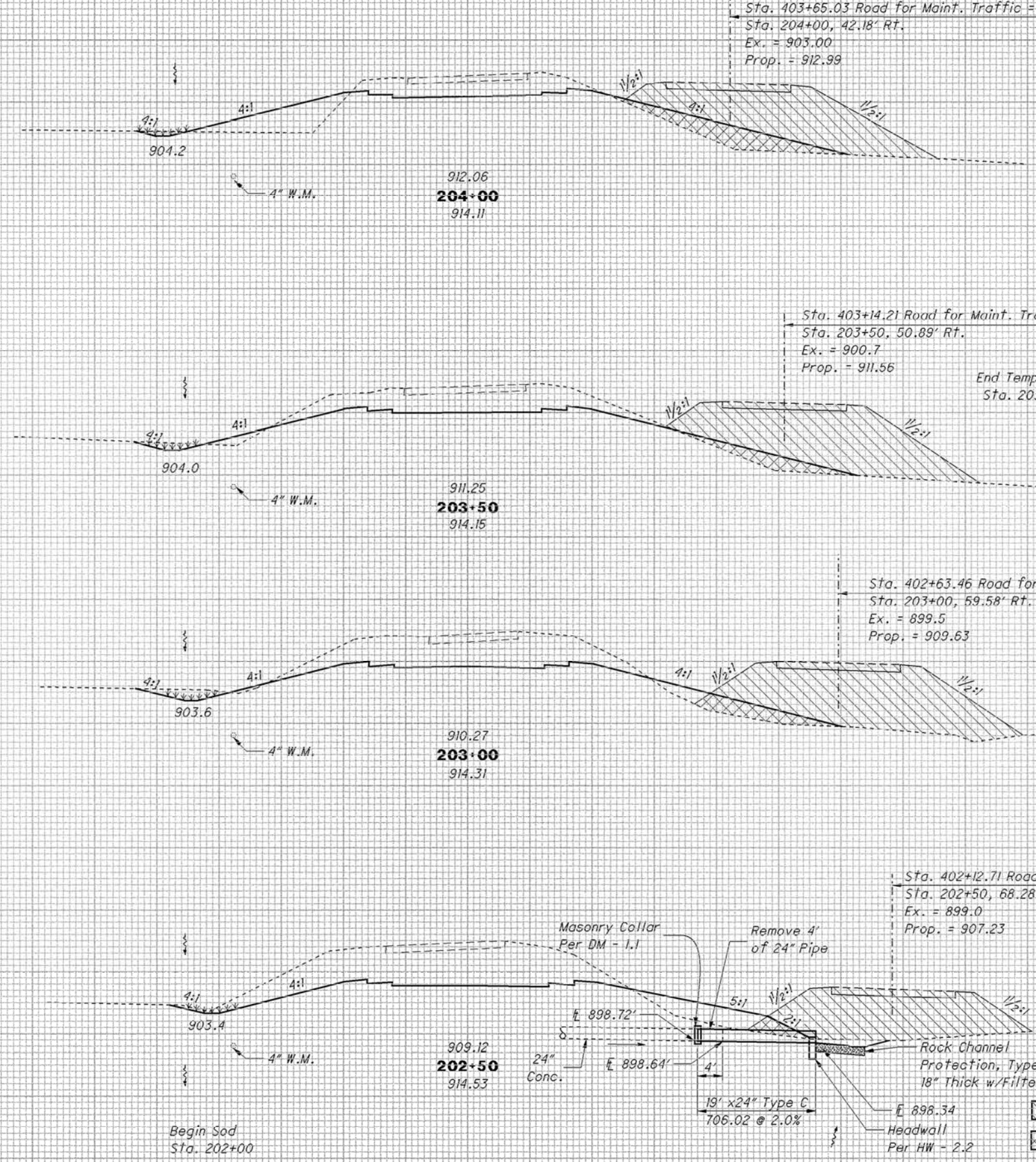
154
488

SEEDING
END WIDTH SQ. YDS.

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

CALCULATED RDN CHECKED PDG

517
104
583
106
586
105
581
104
2267 SHEET TOTAL



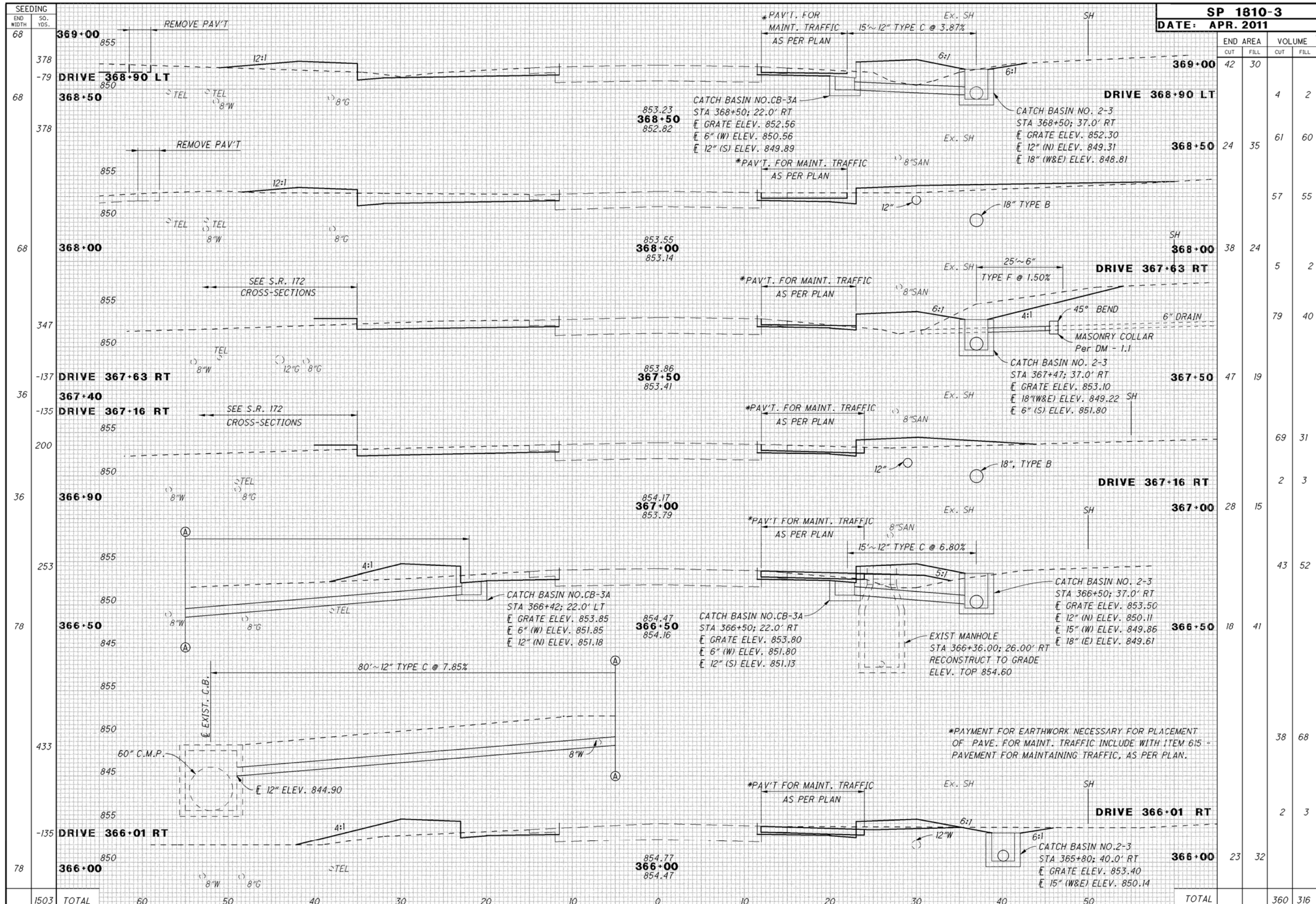
END AREA		VOLUME		END AREA		VOLUME	
CUT	FILL	CUT	FILL	CUT	FILL	CUT	FILL
0	332			95	136	156	171
		0	645			241	169
		0	364			165	46
		6	703			367	94
7	395			231	56		
		6	616			509	96
0	270			319	48		
		7	297				
SHEET TOTAL		*19	*2261			1273	530

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

MED - 130-1.23

74
103

*For Information Only



END STA	AREA	VOLUME	
		CUT	FILL
369+00	42	30	
368+50	24	35	61
368+00	38	24	
367+50	47	19	
367+00	28	15	
366+50	18	41	
366+00	23	32	
TOTAL		360	316

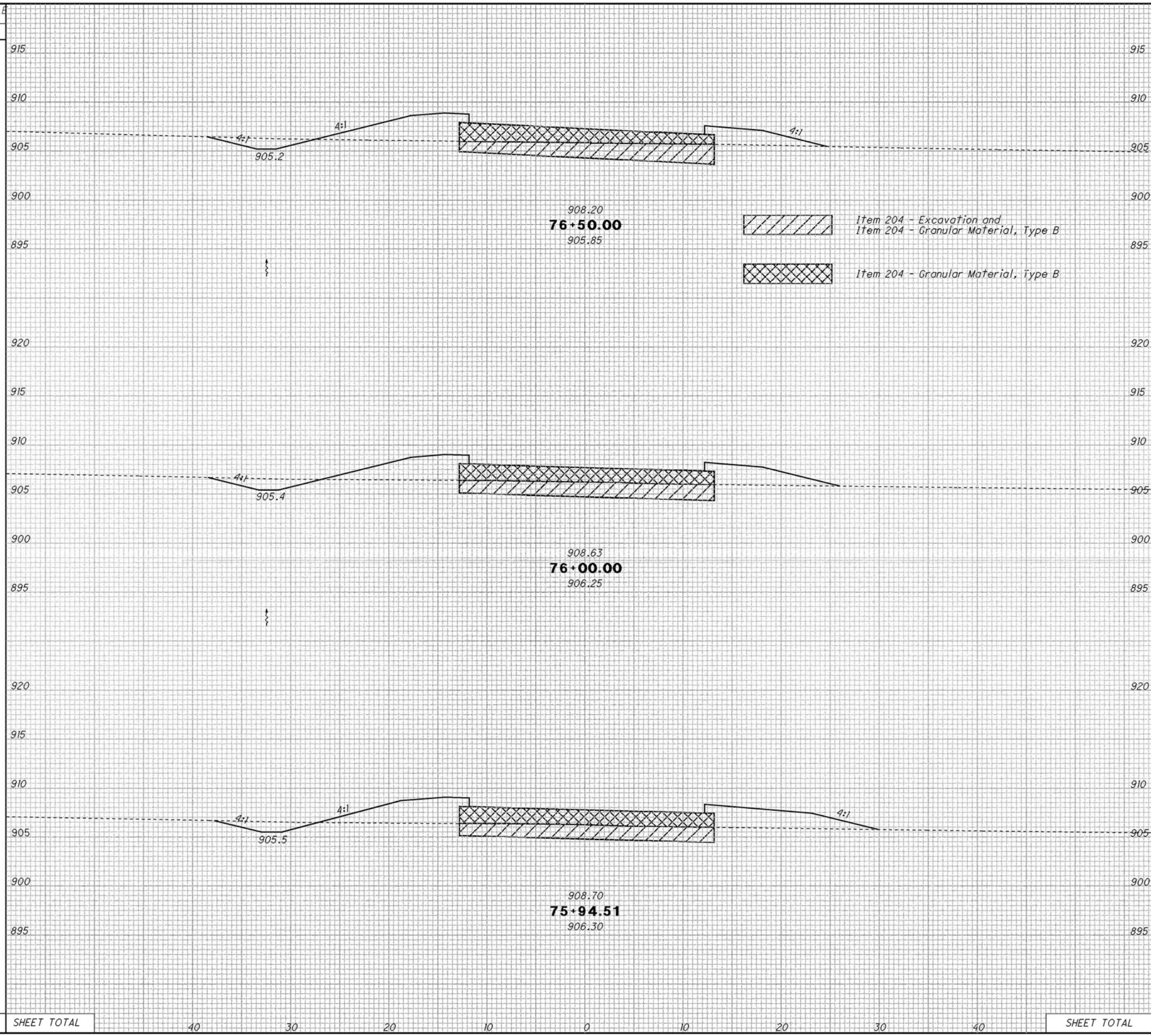
CROSS SECTIONS - S.R. 67
STA. 366+00 TO STA. 368+50

CLI-67-16.86

57
97

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



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

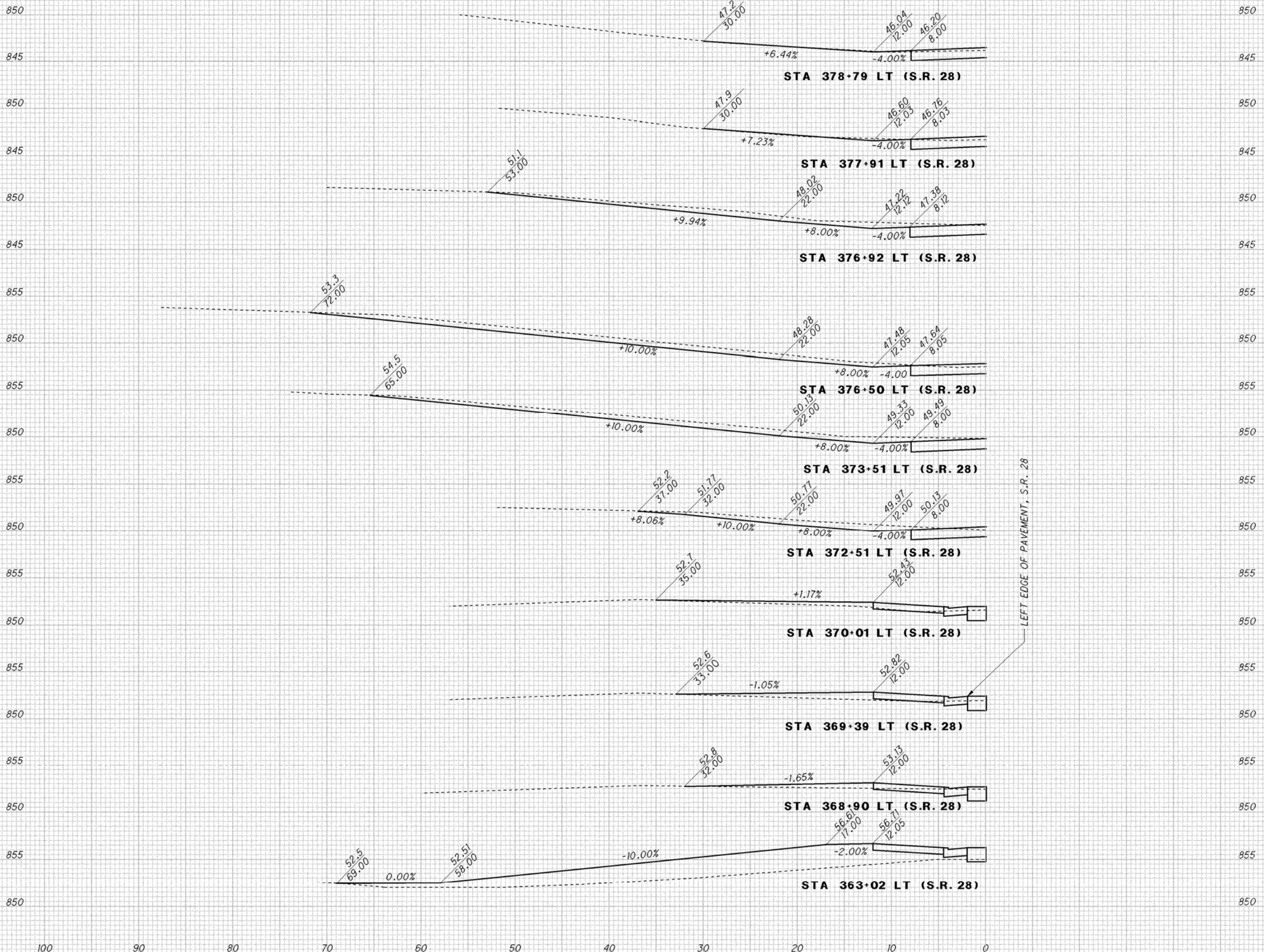
CALCULATED GFR CHECKED JAD

CROSS SECTIONS - RELOCATED BOUNDARIES RD (C.R. 9)

STA. 75+92.89 TO STA. 76+50

PER / LIC-13-28.73 / 0.00

(210 / 310)



DRIVEWAY PROFILES

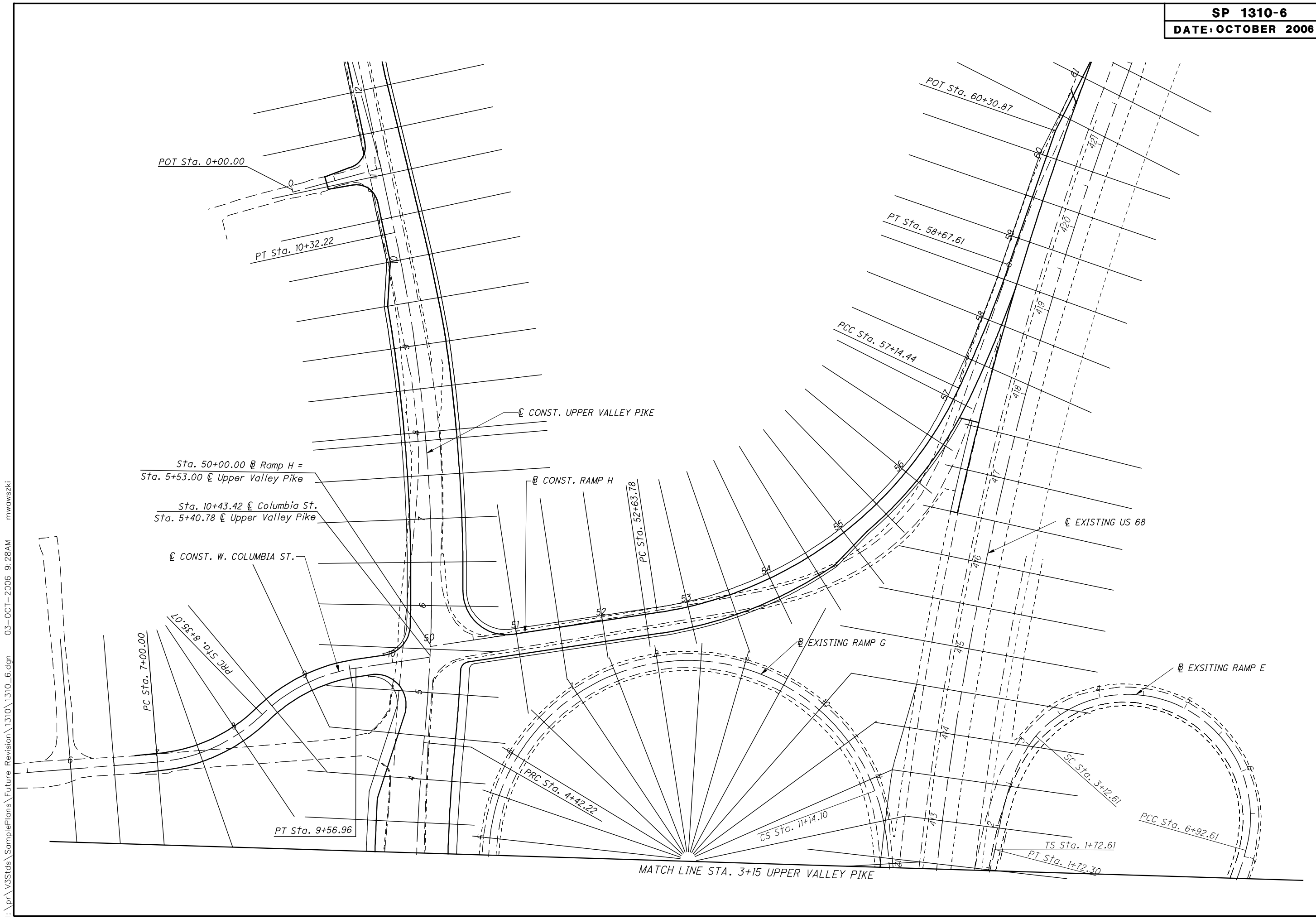
HUR - 28 - 6.86



CALCULATED MSO
CHECKED JAD

CROSS SECTION LAYOUT

CLA-40-10.18




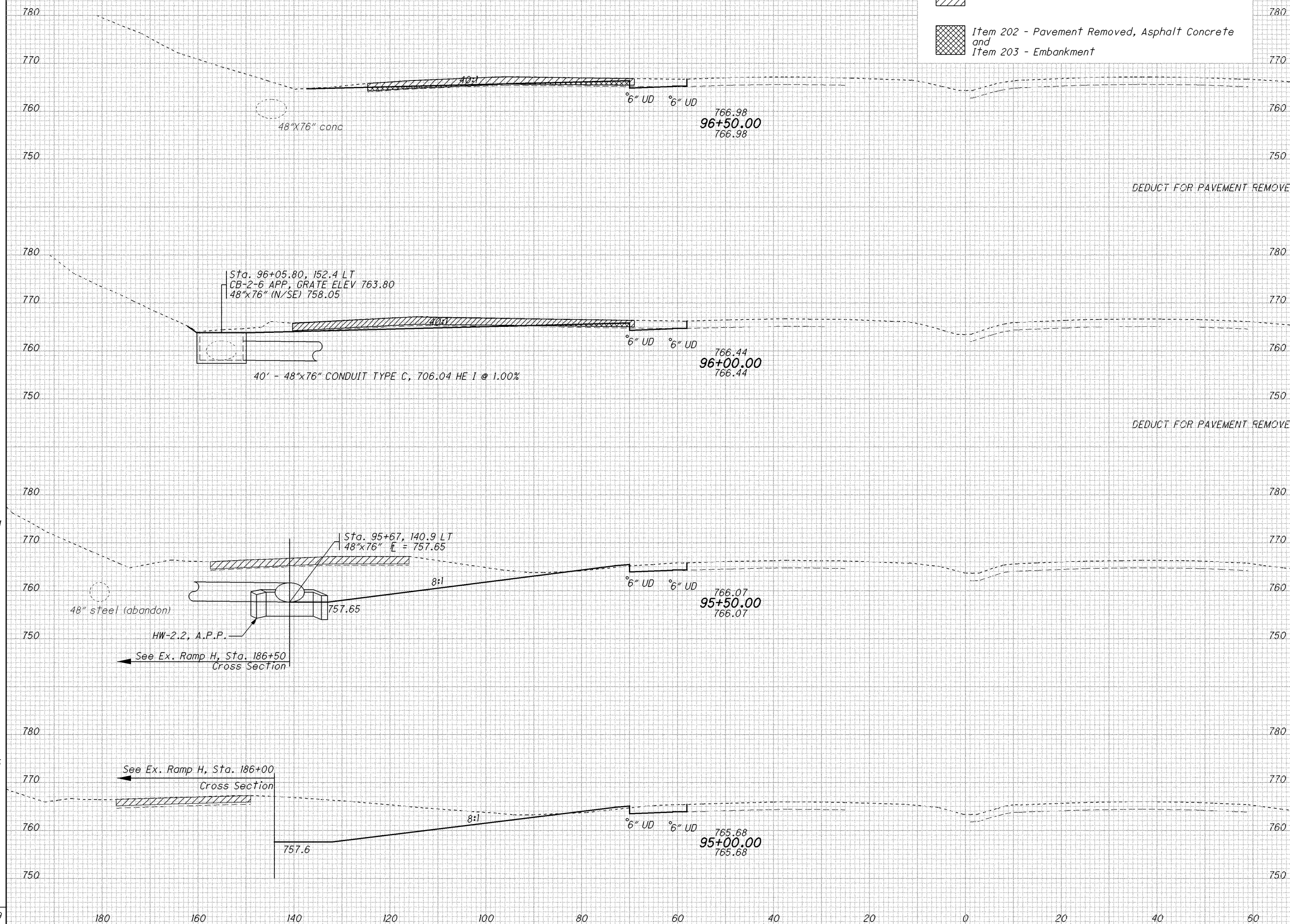
I:\pr\35\35\SamplePlans\Future Revision\1310\1310_6.dgn 03-OCT-2006 9:28AM mwawski

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	CHECKED	MDC
81	26				
	224				
	-157				
160	9				
	459				
	-124				
335	4				
	602				
315	5				
	605				
	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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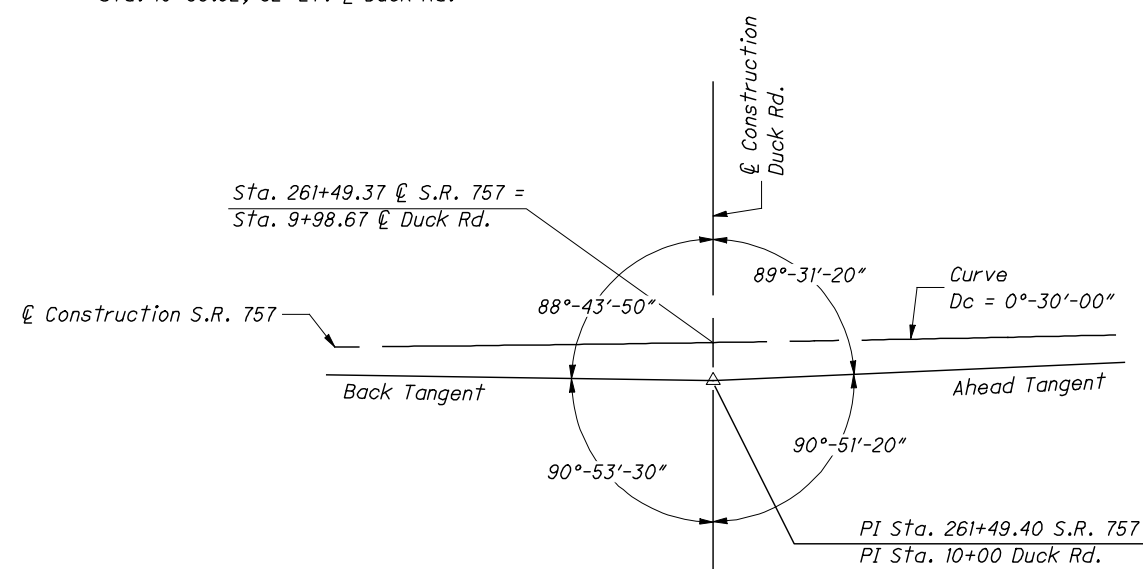
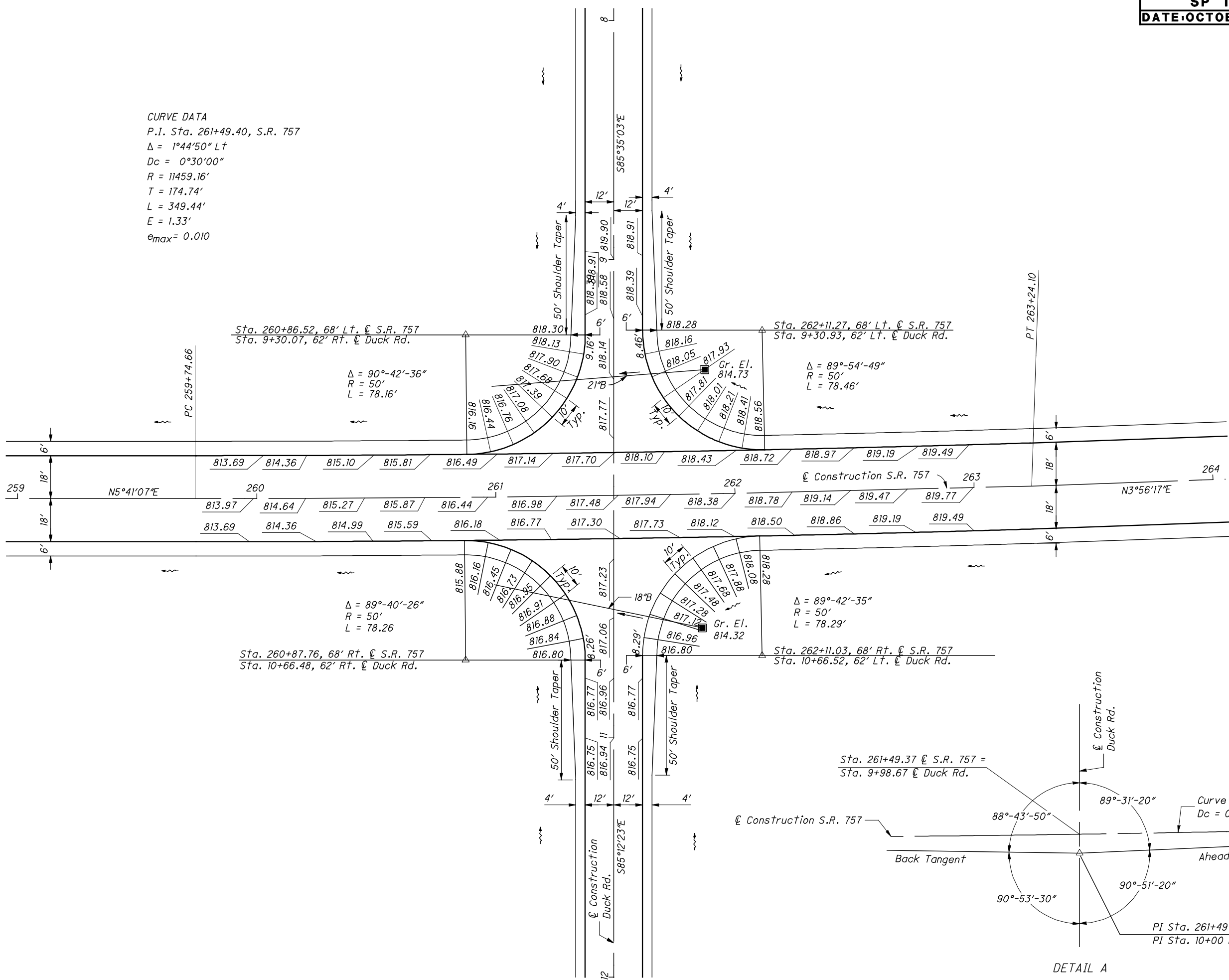
CALCULATED
VHW
CHECKED
TLH

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



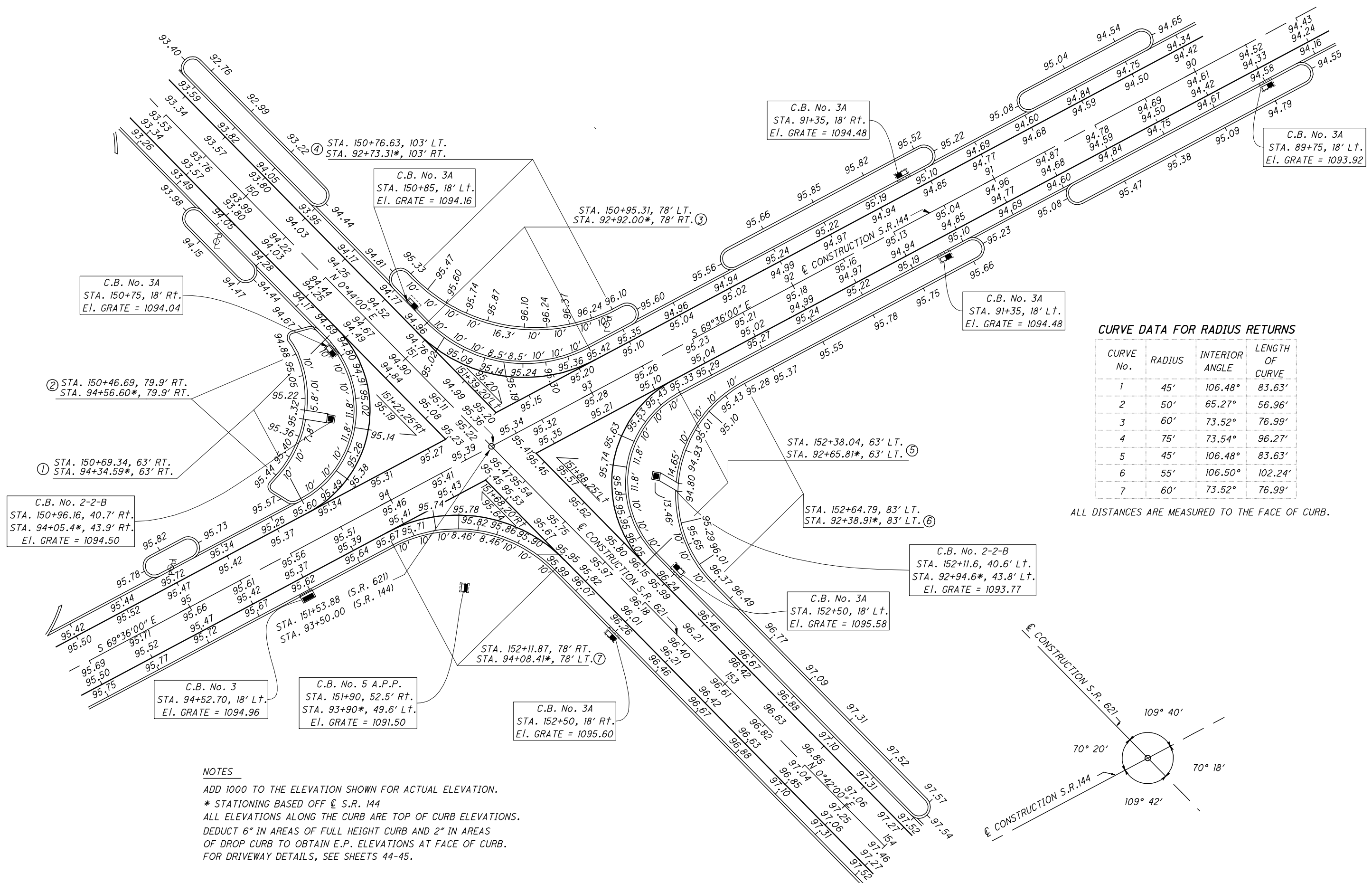
DETAIL A



CALCULATED
WSR
CHECKED
SUB

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

BEL-621-5.29



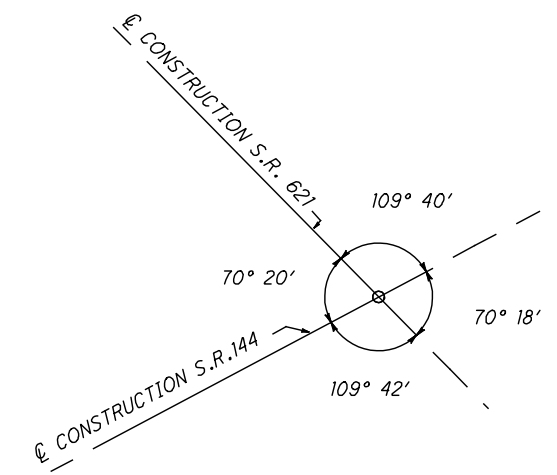
CURVE DATA FOR RADIUS RETURNS

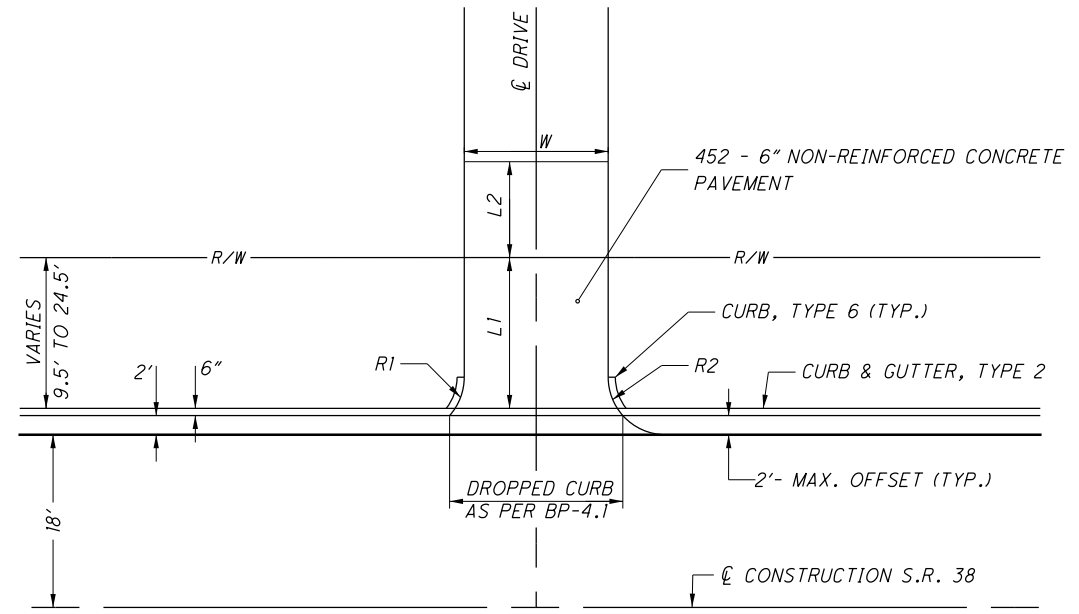
CURVE No.	RADIUS	INTERIOR ANGLE	LENGTH OF CURVE
1	45'	106.48°	83.63'
2	50'	65.27°	56.96'
3	60'	73.52°	76.99'
4	75'	73.54°	96.27'
5	45'	106.48°	83.63'
6	55'	106.50°	102.24'
7	60'	73.52°	76.99'

ALL DISTANCES ARE MEASURED TO THE FACE OF CURB.

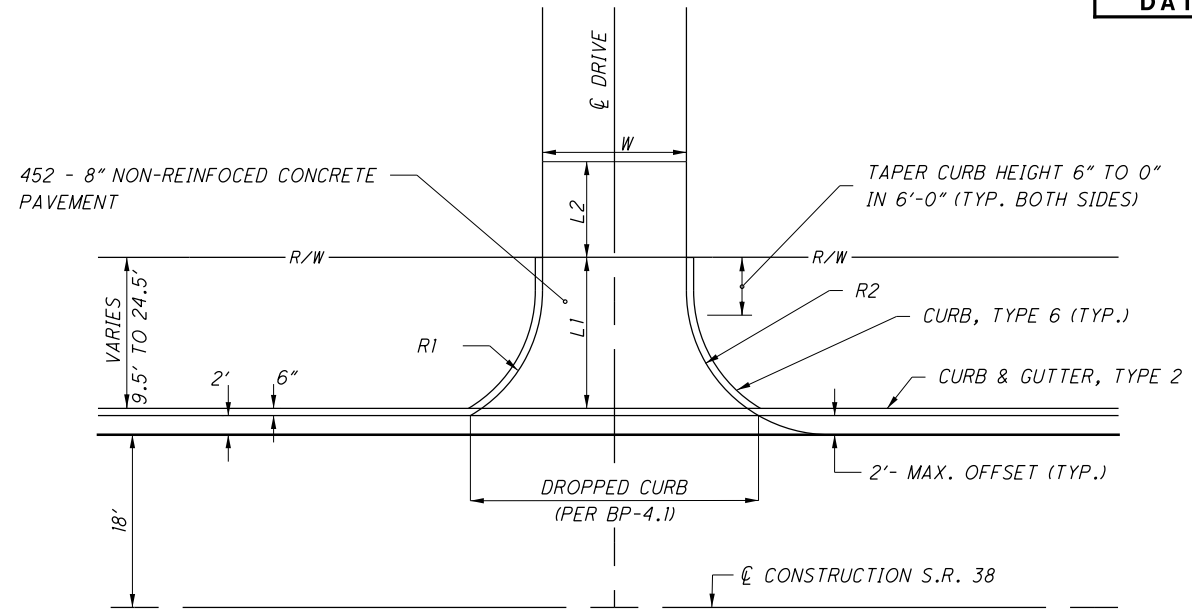
NOTES

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

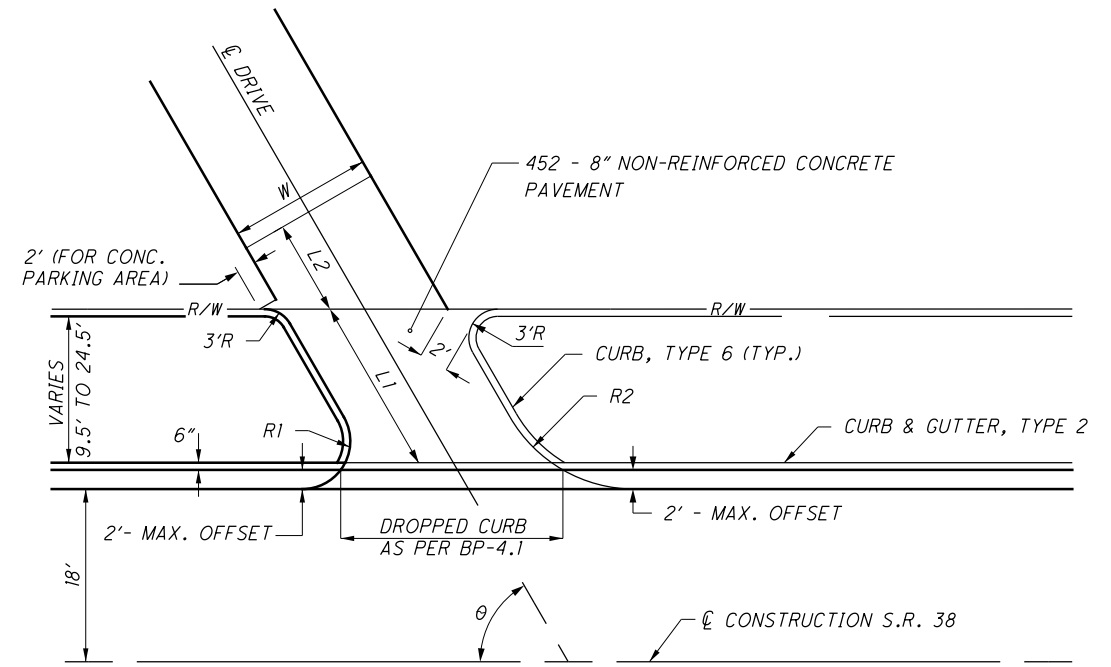




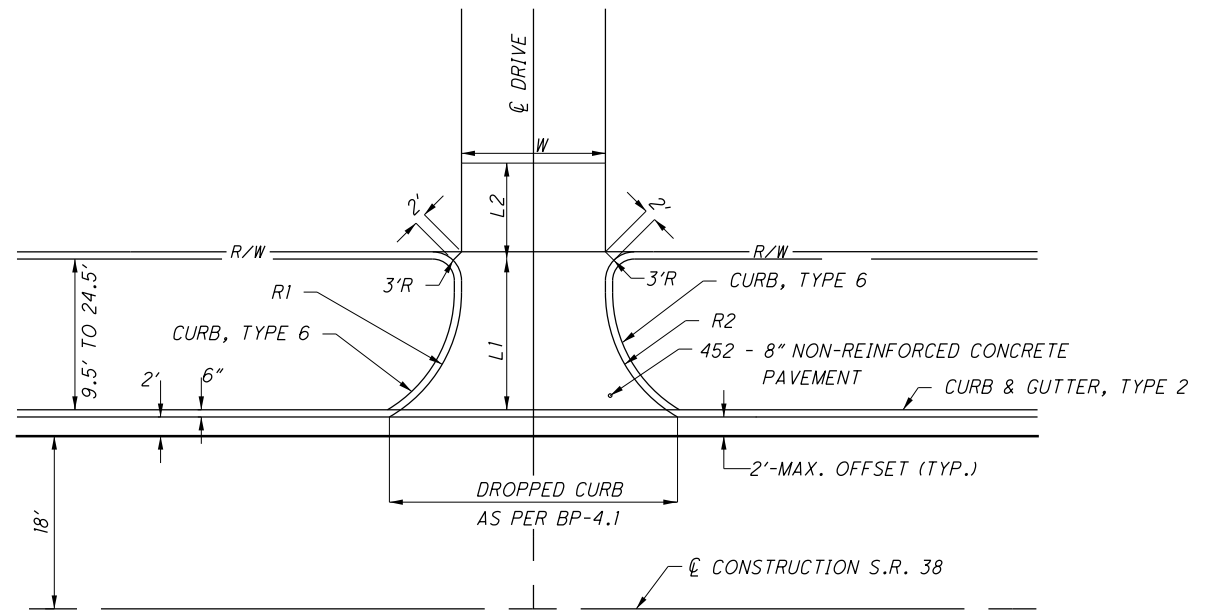
RESIDENTIAL DRIVES



COMMERCIAL DRIVES WITHOUT WRAP-AROUND CURB



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



COMMERCIAL DRIVES WITH WRAP-AROUND CURB

RESIDENTIAL DRIVES

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

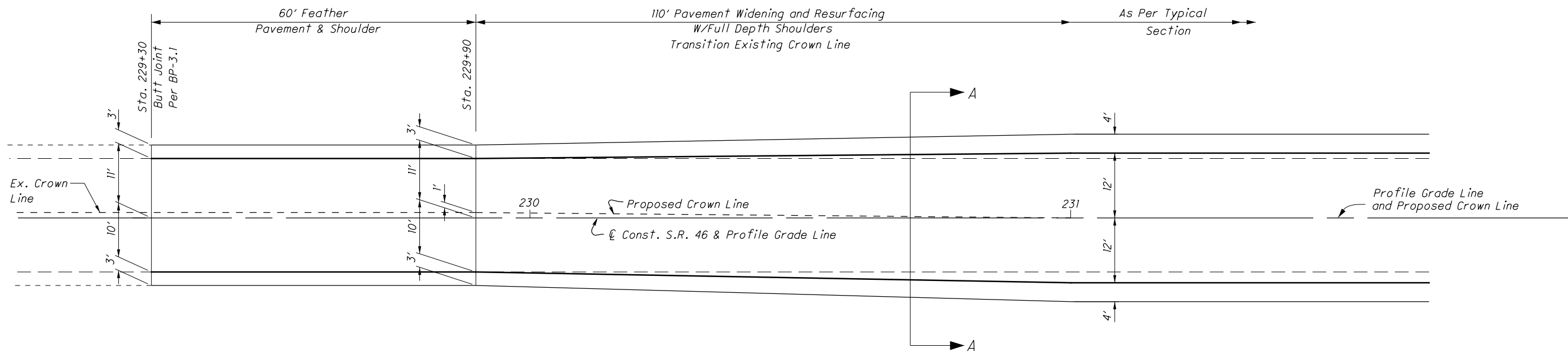
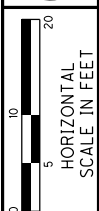
COMMERCIAL AND SERVICE STATION DRIVES

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

SEE SHEET 41 FOR DRIVEWAY QUANTITIES.

DRIVEWAY DETAILS

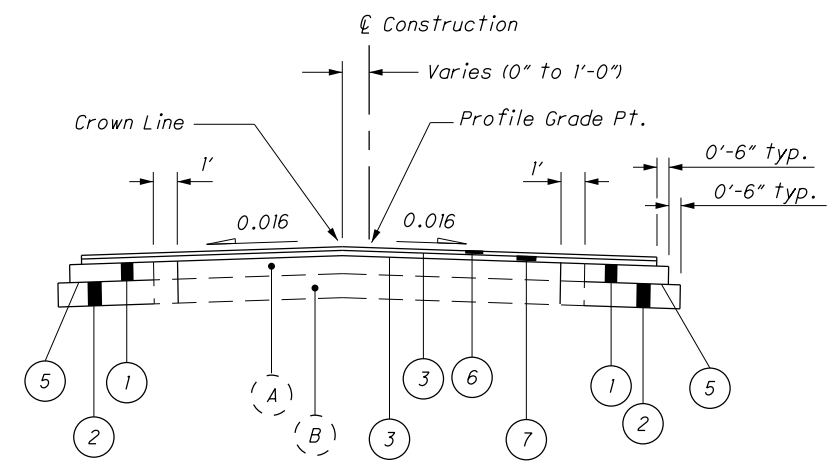
CAR-38-22.56



PAVEMENT TRANSITION DETAIL

LEGEND

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



SECTION A-A

PAVEMENT TRANSITION DETAILS

PIC-46-27.22



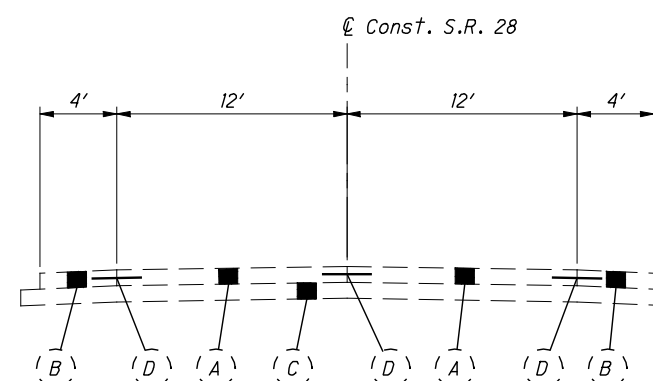
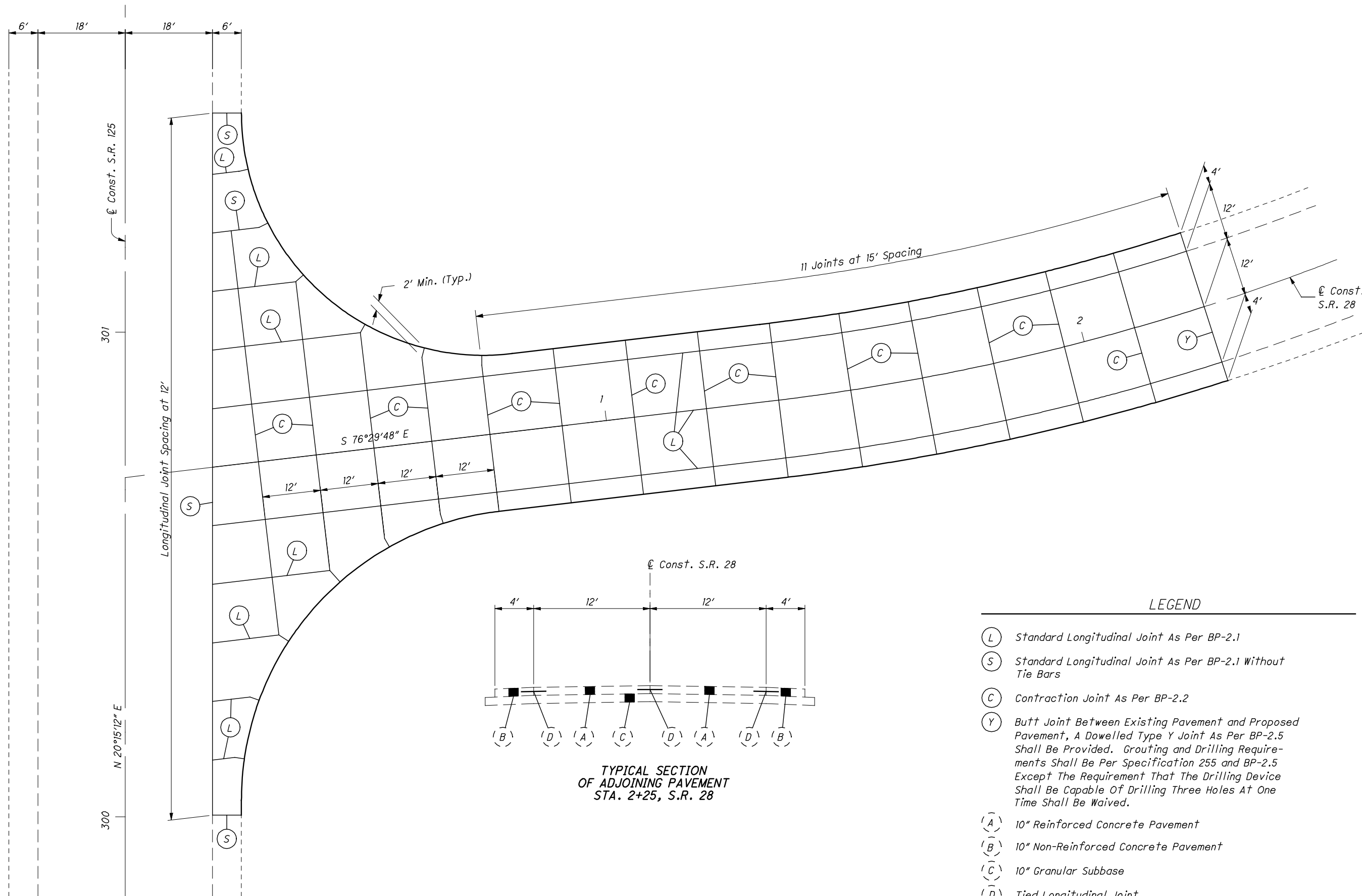
0 5 10 20
HORIZONTAL
SCALE IN FEET

CALCULATED
AAM
CHECKED
DEM

PAVEMENT JOINT DETAIL
S.R. 28

LOR-28-0.00

48
96



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

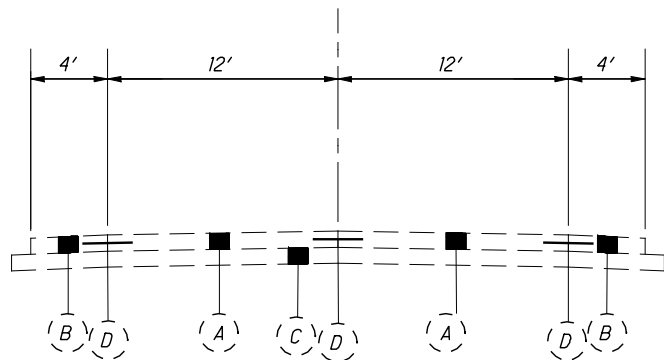


CALCULATED
VHW
CHECKED
TLH

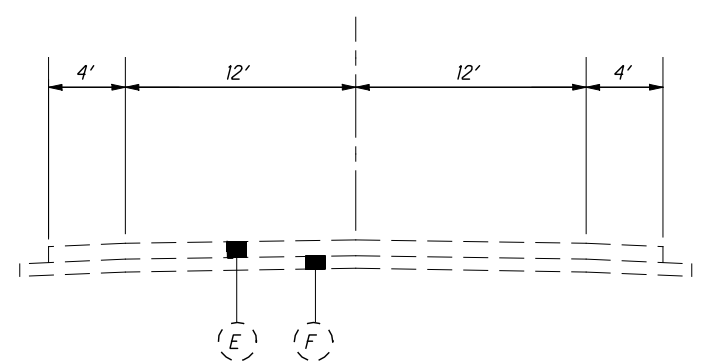
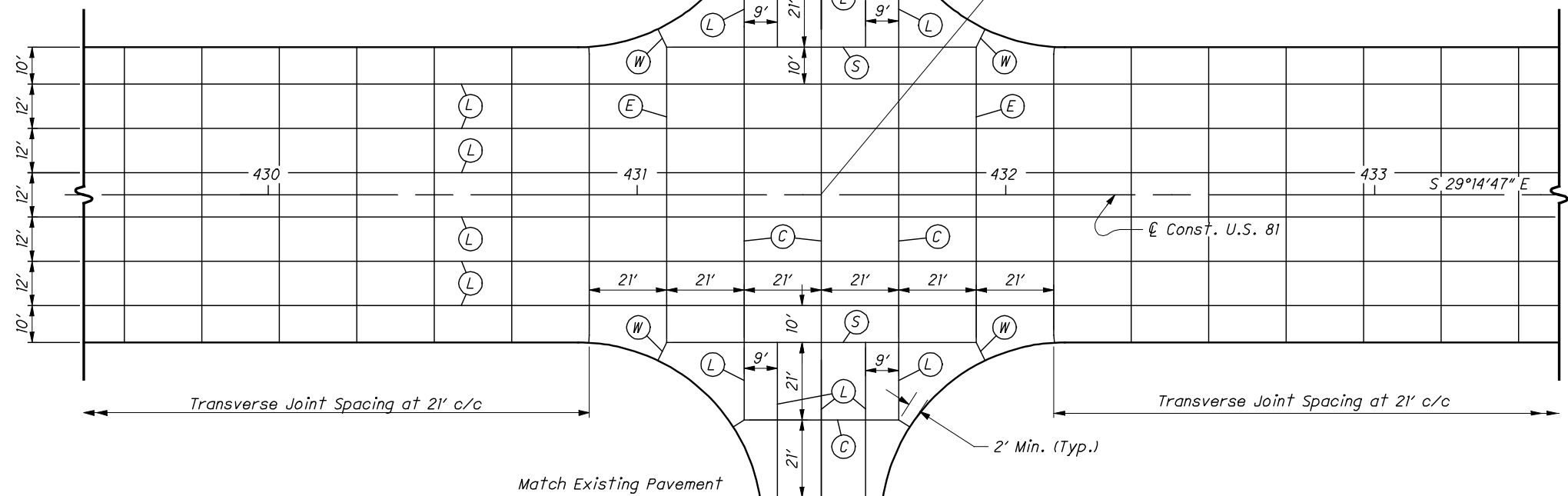
0 20 40
HORIZONTAL
SCALE IN FEET

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

HOC-81-18.58



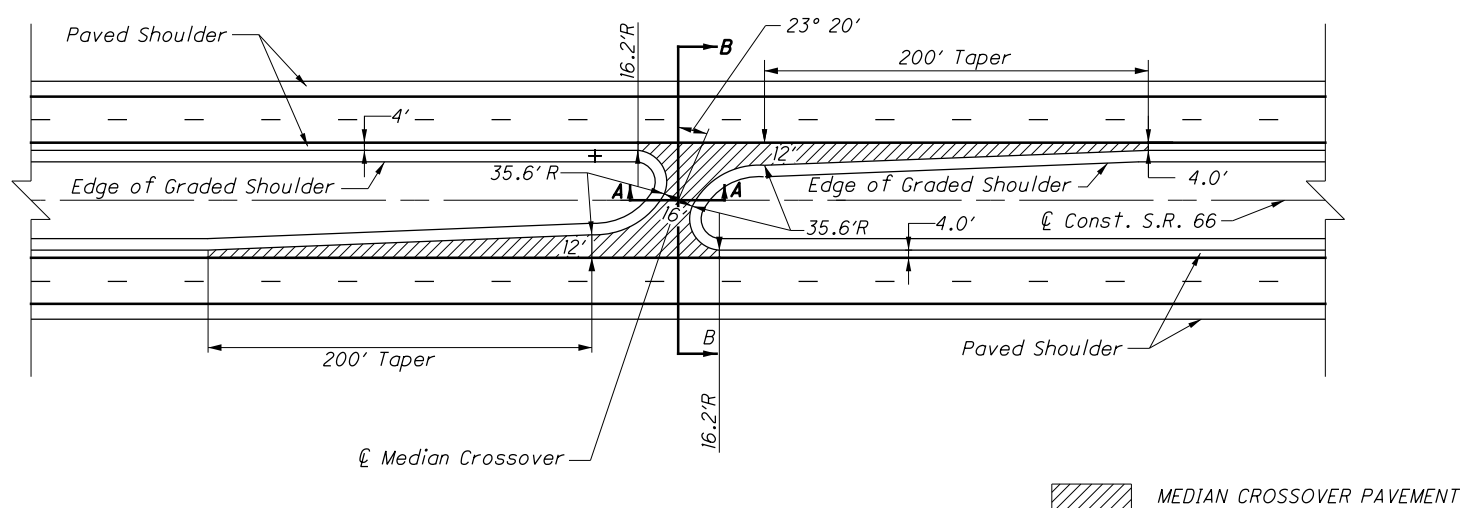
TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 10+82



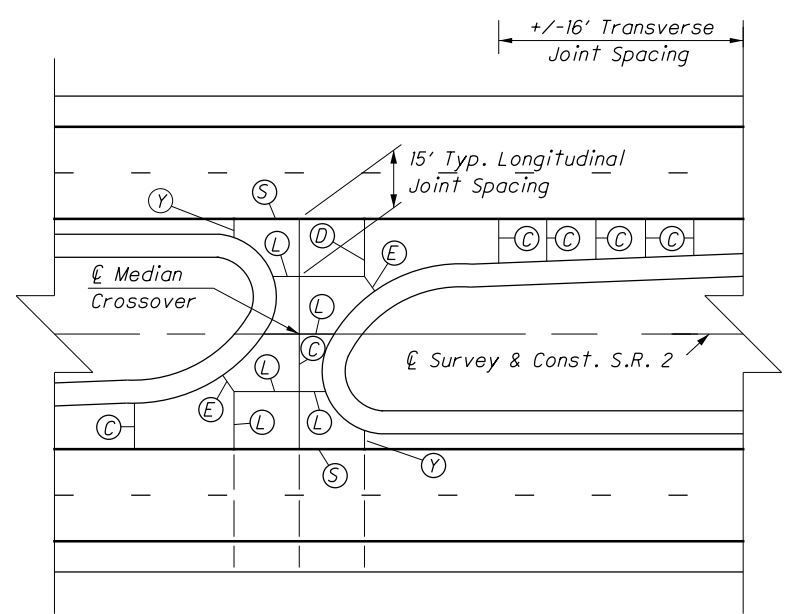
TYPICAL SECTION OF
ADJOINING PAVEMENT S.R. 329
Sta. 9+18

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 |



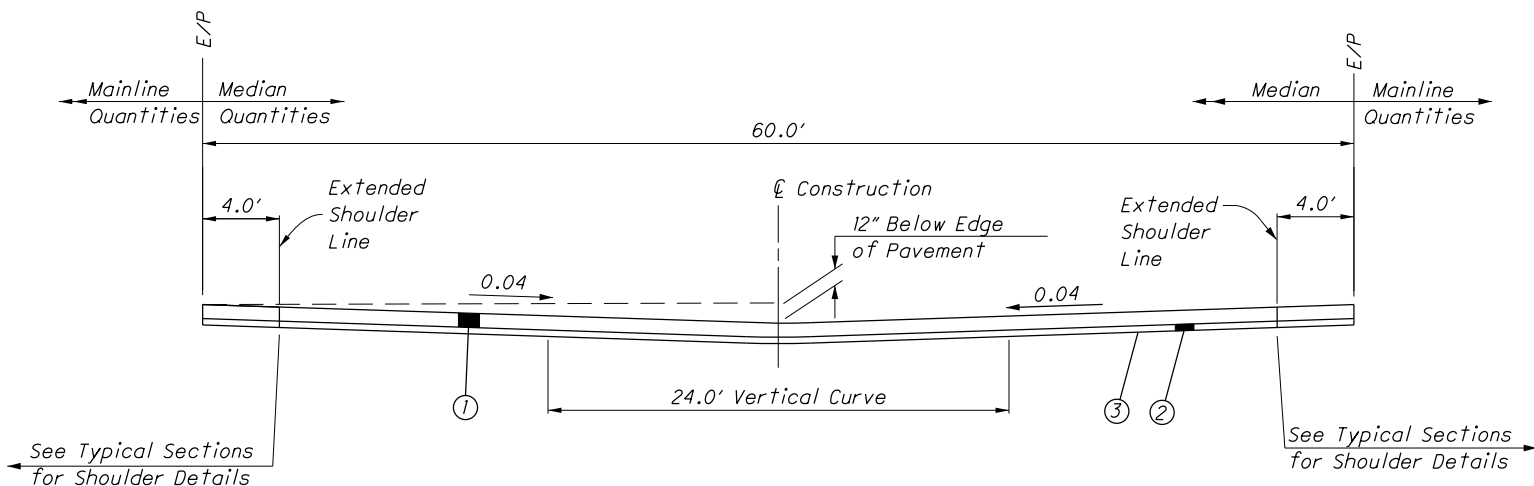
TYPICAL MEDIAN CROSSOVER DETAIL
Applies: Sta. 5+00 and Sta. 124+00



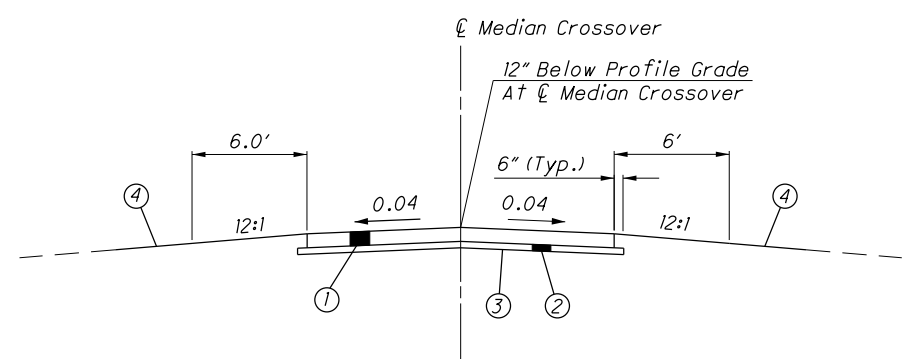
MEDIAN CROSSOVER JOINT DETAIL

*Align Transverse Joints in Median Crossover and Proposed Pavement.

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



Section B-B



Section A-A

LEGEND

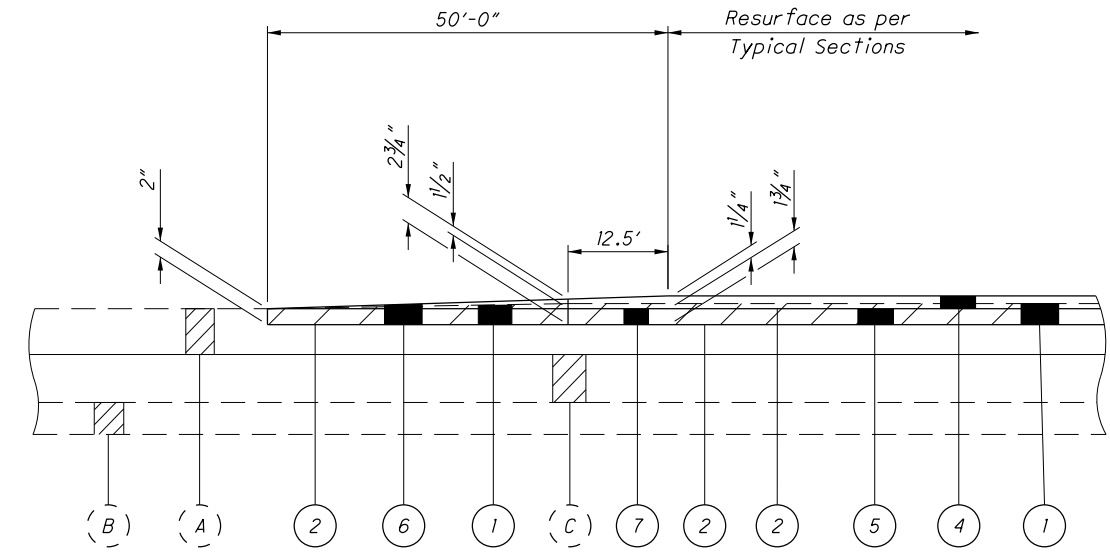
- ① ITEM 452 - 9" Non-Reinforced Concrete Pavement, Class QC1, As Per Plan
- ② ITEM 304 - 6" Aggregate Base
- ③ ITEM 204 - Subgrade Compaction
- ④ ITEM 659 - Seeding And Mulching
- ⓐ Contraction Joint As Per BP-2.2
- ⓓ Transverse Joint (With Dowels), As Per BP-2.2
- ⓔ Expansion Joint (Without Dowels), As Per BP-2.2
- Ⓢ Standard Longitudinal Joint, As Per BP-2.1 without Tie Bar 3
- Ⓛ Longitudinal Joint, As Per BP-2.1
- Ⓨ Contraction Joint (Type Y) As Per BP-2.5

MEDIAN CROSSOVER DETAILS

OTT-66-4.33

PROPOSED LEGEND

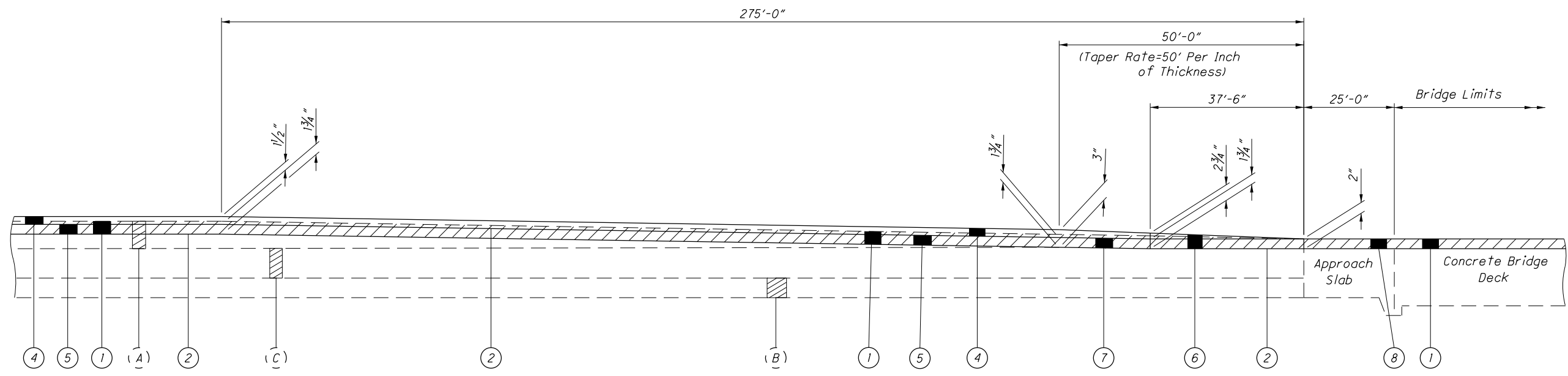
- ① ITEM 254 Pavement Planing, Asphalt Concrete (Depth As Shown)
- ② ITEM 407 Tack Coat
- ③ NOT USED
- ④ ITEM 441 1 1/4" Asphalt Concrete Surface Course, Type 1, (446) PG64-22
- ⑤ ITEM 441 1 3/4" Asphalt Concrete Intermediate Course, Type 1, (446)
- ⑥ ITEM 441 Var. Thickness Asphalt Concrete Surface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



EXISTING LEGEND

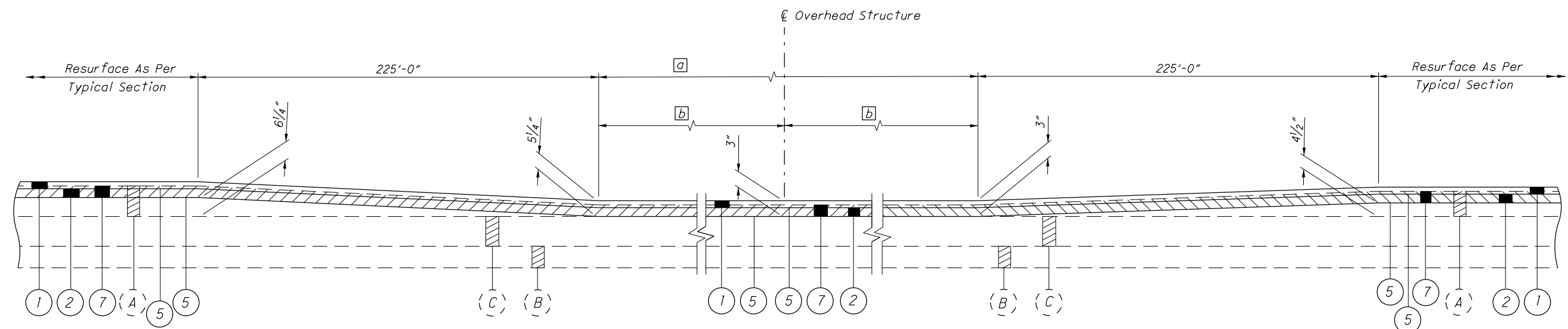
- (A) ± 6 1/2" Asphalt Concrete
 - (B) ± 6" Subbase
 - (C) ± 9" Reinforced Portland Cement Concrete Pavement
- = Item 254 Pavement Planing, Asphalt Concrete

PAVEMENT TRANSITION AT BEGIN/END PAVEMENT



TRANSITION AT STRUCTURES

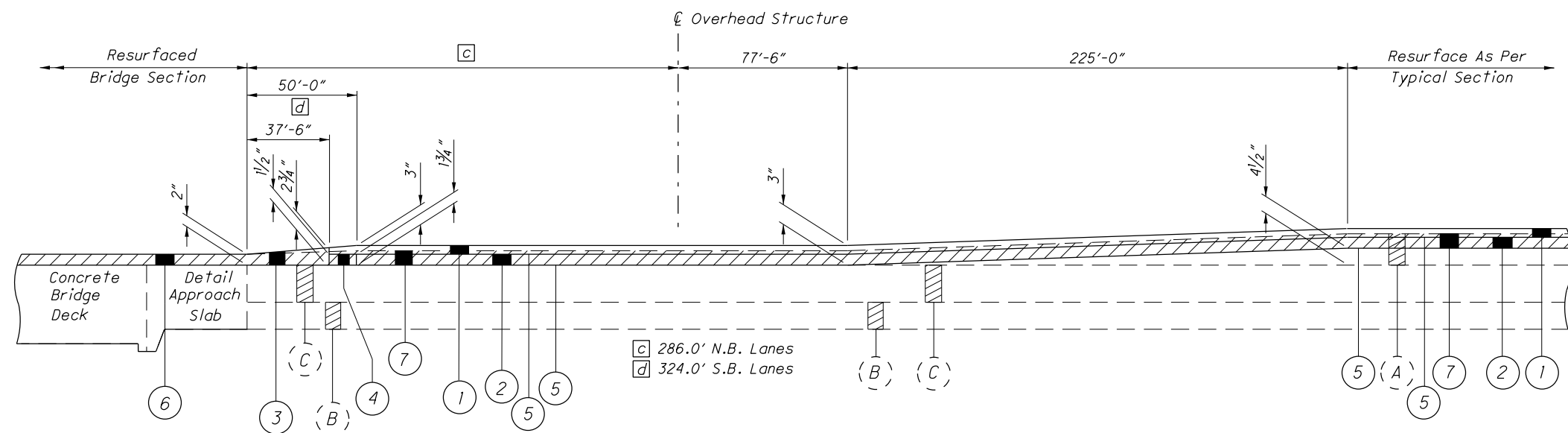
DETAIL APPLIES AT:
VAN-277-0585 Lt. & Rt. (North & South End)
VAN-277-1041 Lt. & Rt. (South Only)
VAN-277-1246 Lt. & Rt. (North Only)



PAVEMENT TRANSITION AT OVERHEAD BRIDGE

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

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



PAVEMENT TRANSITION AT OVERHEAD AND MAINLINE BRIDGES

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

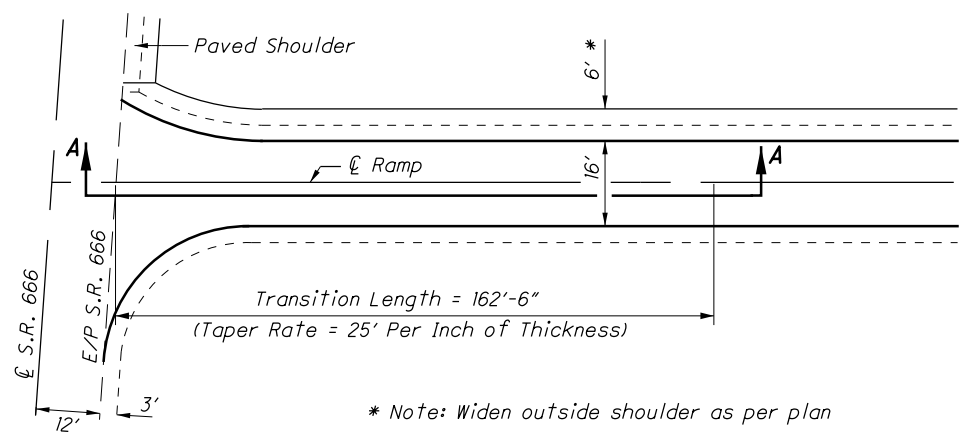
c 286.0' N.B. Lanes
 d 324.0' S.B. Lanes

PROPOSED LEGEND

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

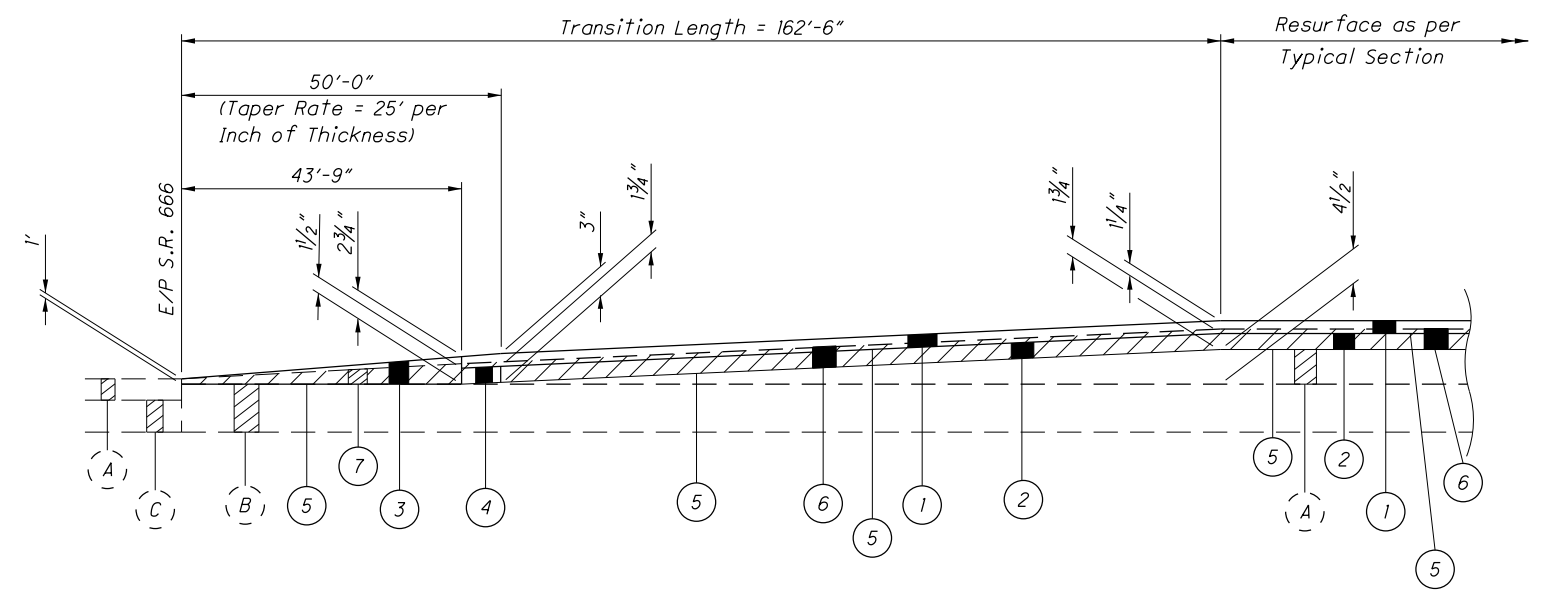
EXISTING LEGEND

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



* Note: Widen outside shoulder as per plan

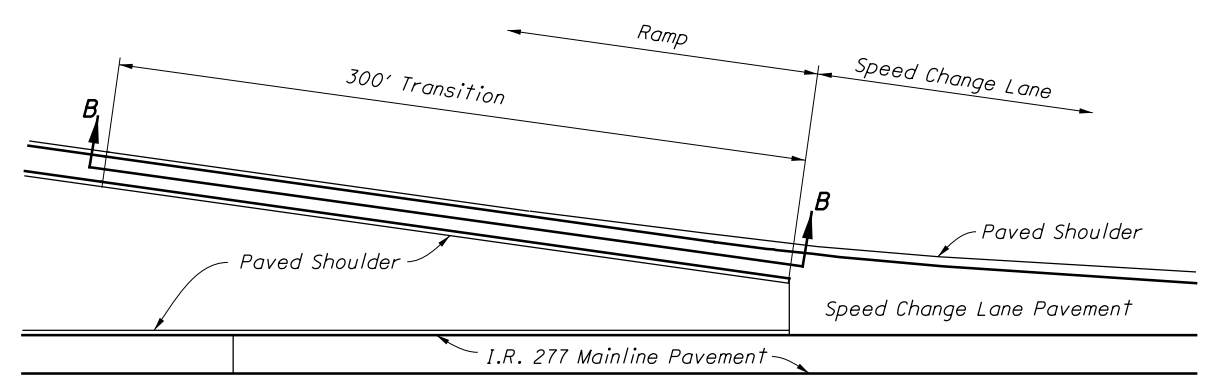
PLAN VIEW



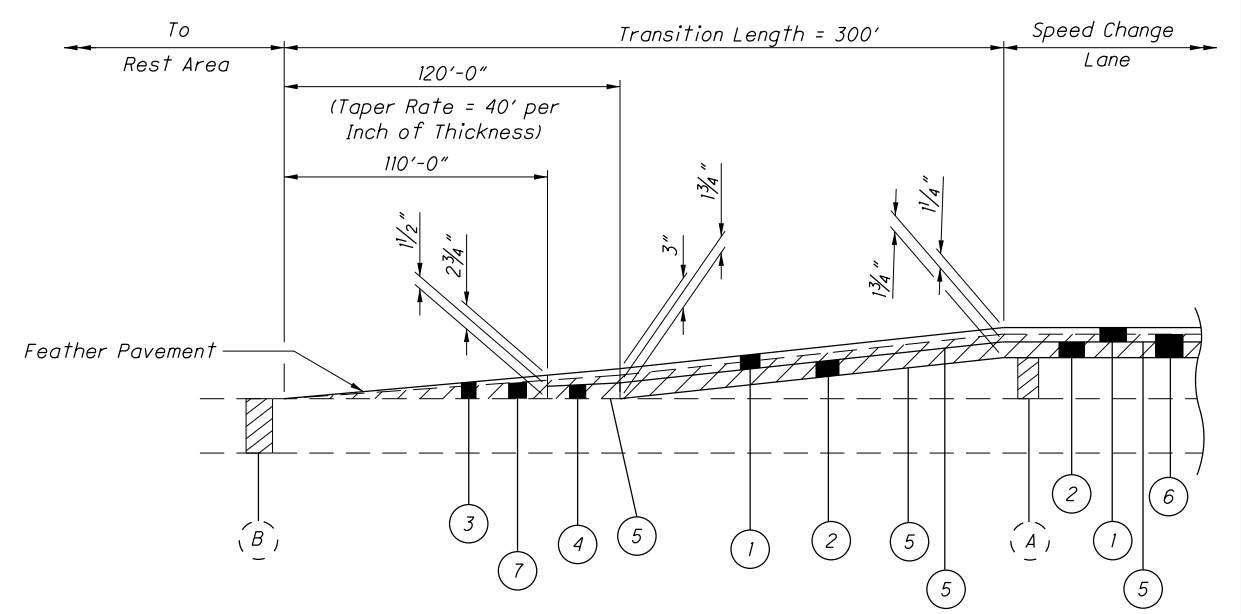
SECTION A-A

TRANSITION AT RAMP/CROSSROAD INTERSECTION

DETAIL APPLIES AT:
S.R. 666 Interchange



PLAN VIEW



SECTION B-B

TRANSITION AT REST AREA ENTRANCE/EXIT RAMP DETAIL

PROPOSED LEGEND

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

ITEM 254 Pavement Planing, Asphalt Concrete

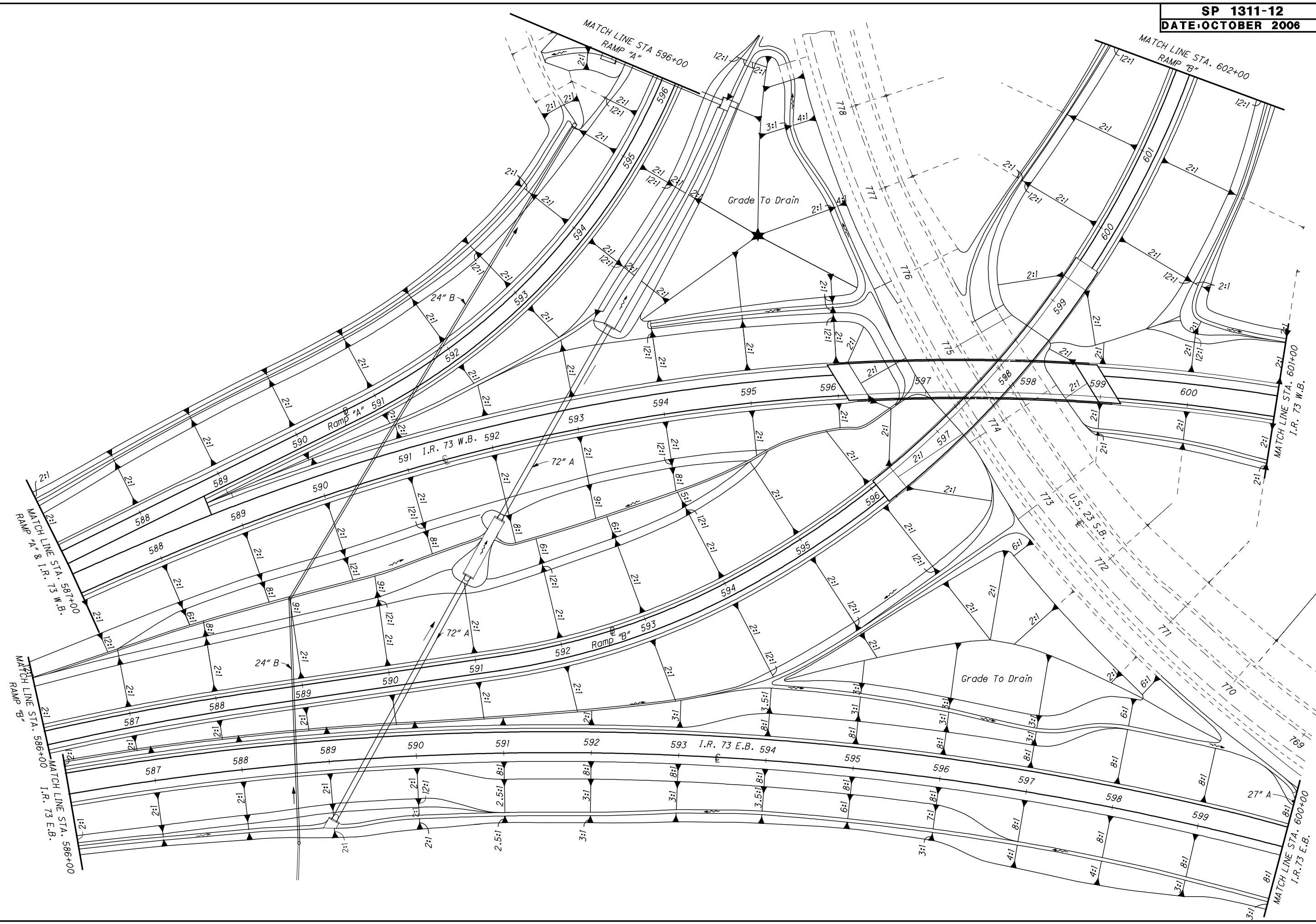
EXISTING LEGEND

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



0 25 50 100
HORIZONTAL
SCALE IN FEET

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

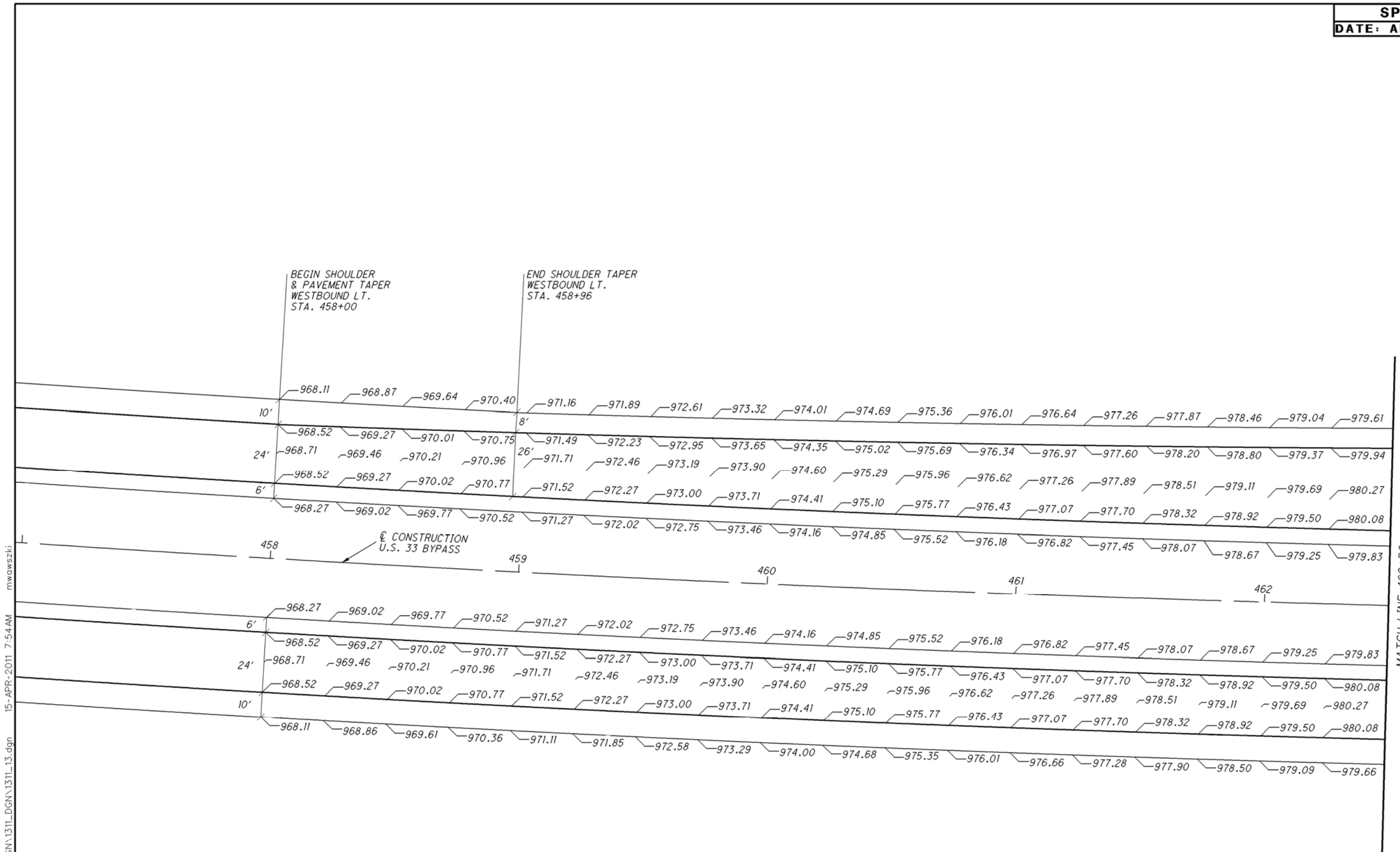
HAN-73-19.11



CALCULATED
CHG
CHECKED
LJS

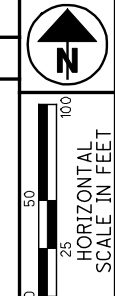
**WEST RAMP TERMINAL DETAILS
STA. 458+00 TO STA. 462+50**

FAI-33-13.25



NOTE: ELEVATIONS SHOWN AT 25' INTERVALS

I:\pr\35\tds\SamplePlans\2011\April\1311\1311_DGN\1311_13.dgn 15-APR-2011 7:54 AM mwowszki



ROUNDABOUT GEOMETRIC LAYOUT

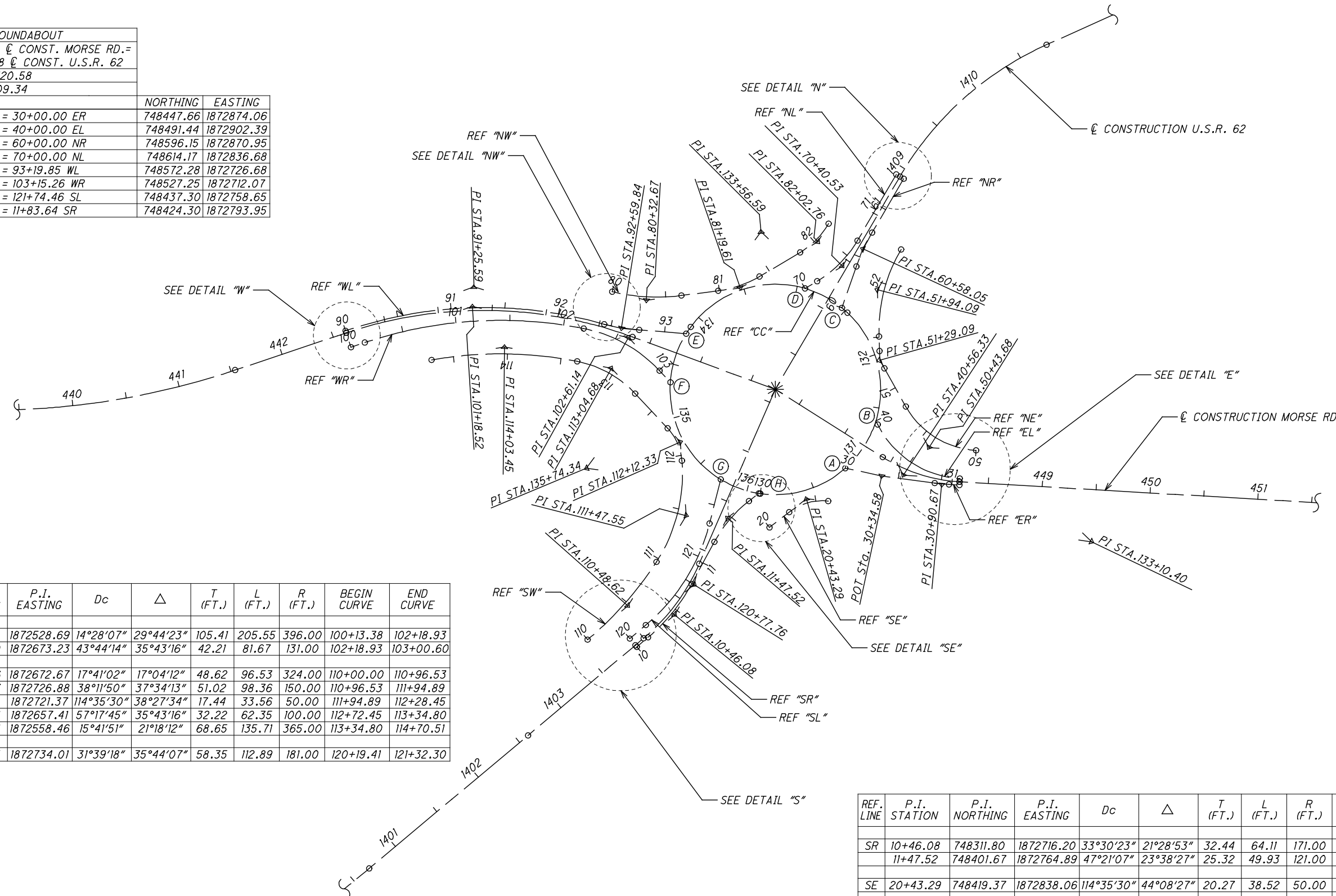
FRA - 62 - 26.34

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

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

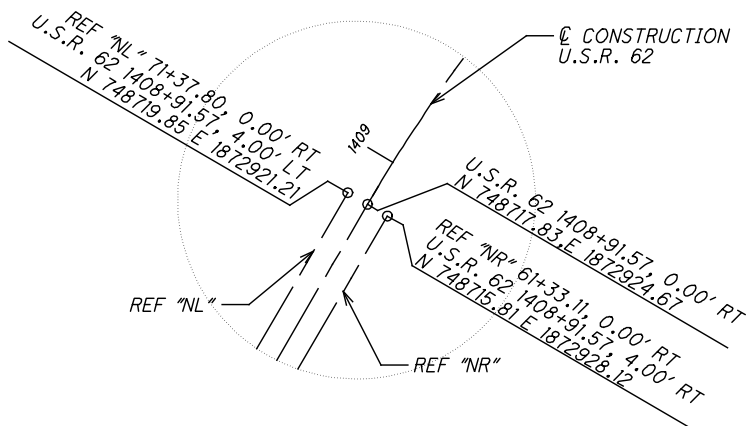
* CENTER OF ROUNDABOUT
 STA. 446+23.93 @ CONST. MORSE RD. =
 STA. 1406+63.08 @ CONST. U.S.R. 62
 NORTHING= 748520.58
 EASTING= 1872809.34
 RADIUS= 97.50'

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

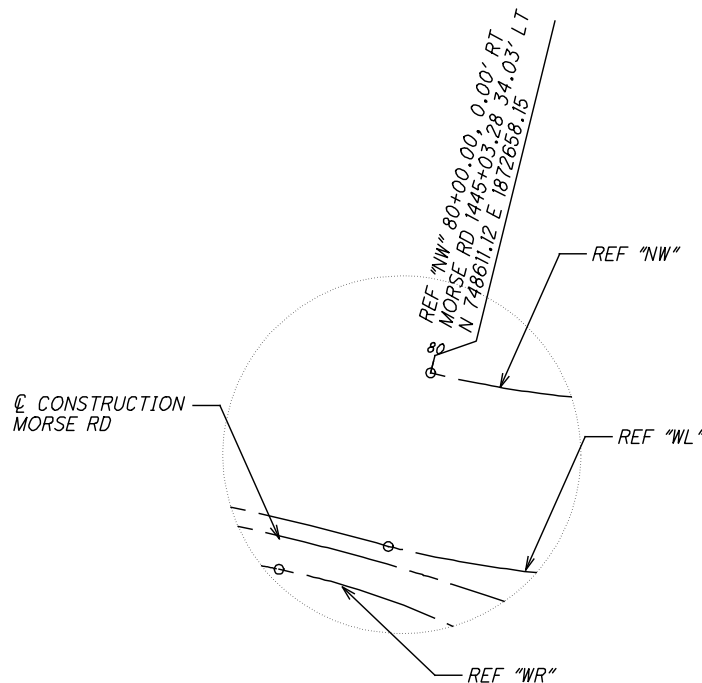


REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Dc	Δ	T (FT.)	L (FT.)	R (FT.)	BEGIN CURVE	END CURVE
SR	10+46.08	748311.80	1872716.20	33°30'23"	21°28'53"	32.44	64.11	171.00	10+13.64	10+77.75
	11+47.52	748401.67	1872764.89	47°21'07"	23°38'27"	25.32	49.93	121.00	11+22.20	11+72.12
SE	20+43.29	748419.37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

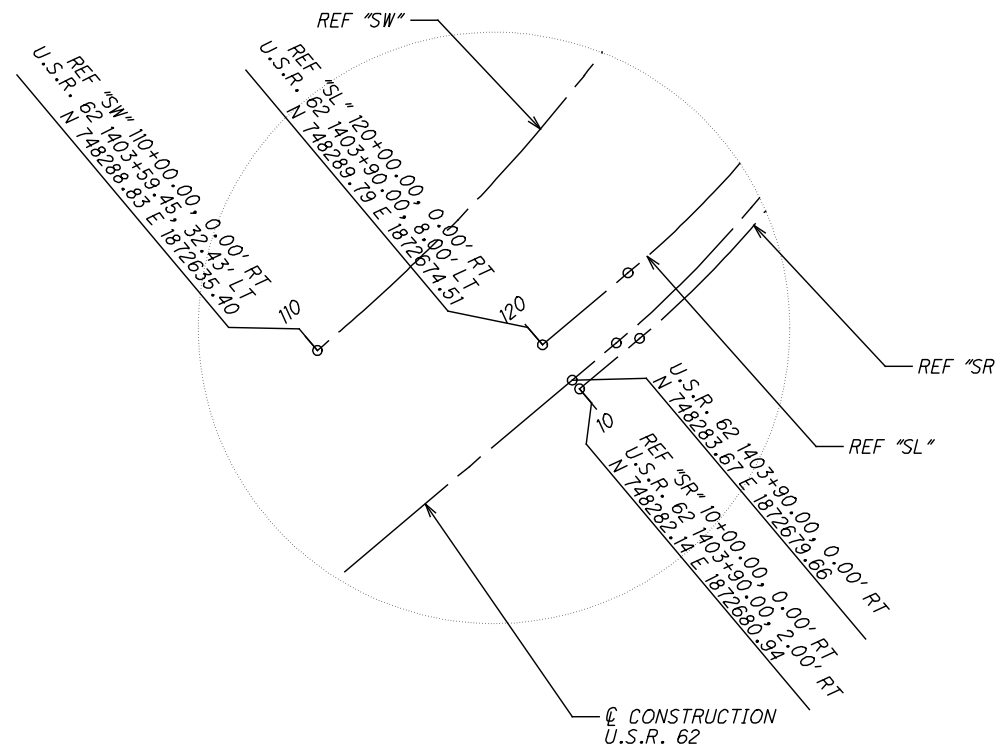
FOR DETAILS "N", "E", "S", "W", "SE" AND "NW" SEE SHEET 4
 FOR U.S.R.62 AND MORSE ROAD DETAILS SEE SHEET 2



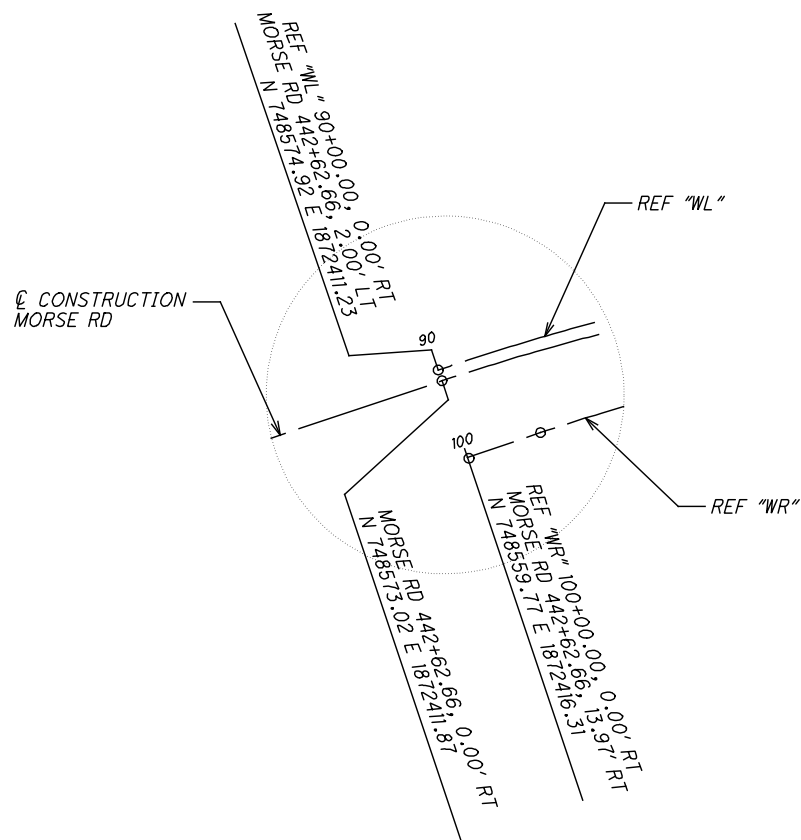
DETAIL "N"
NOT TO SCALE



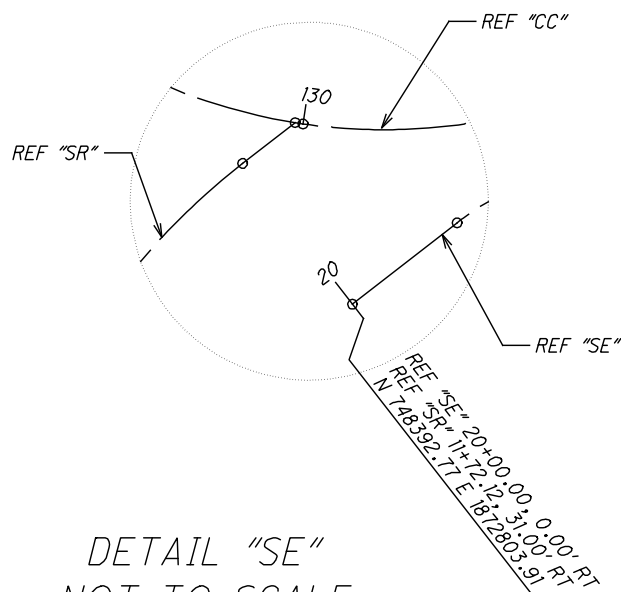
DETAIL "NW"
NOT TO SCALE



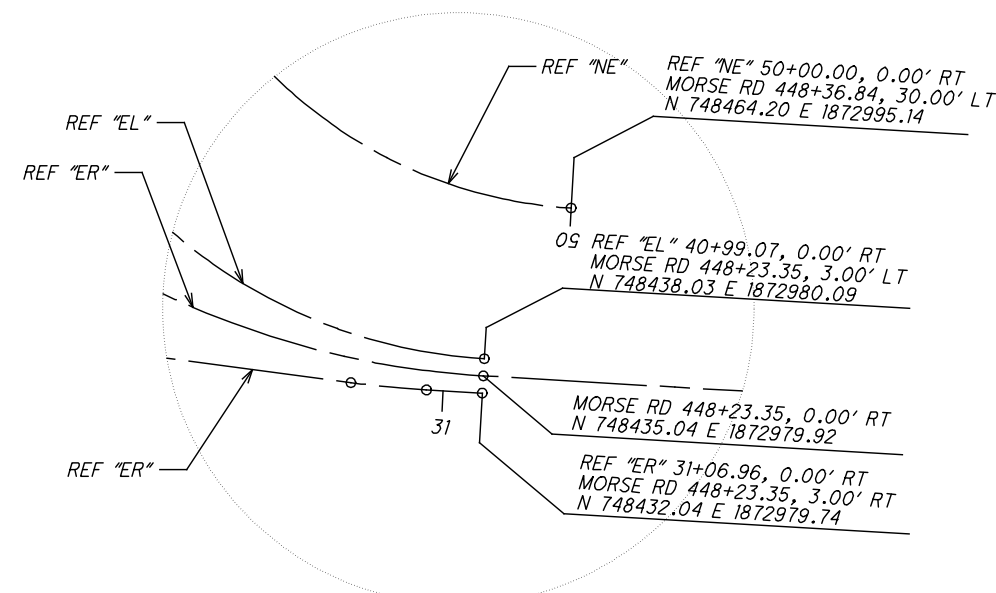
DETAIL "S"
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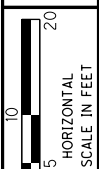
DETAIL "W"
NOT TO SCALE



DETAIL "SE"
NOT TO SCALE

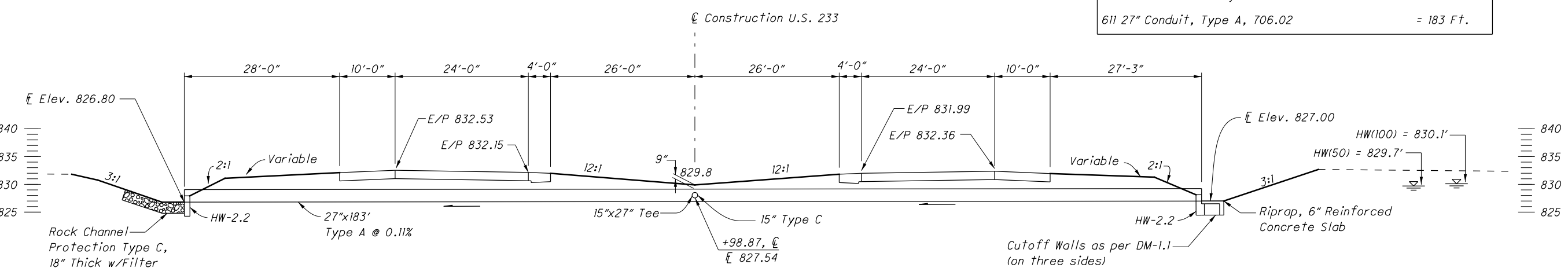
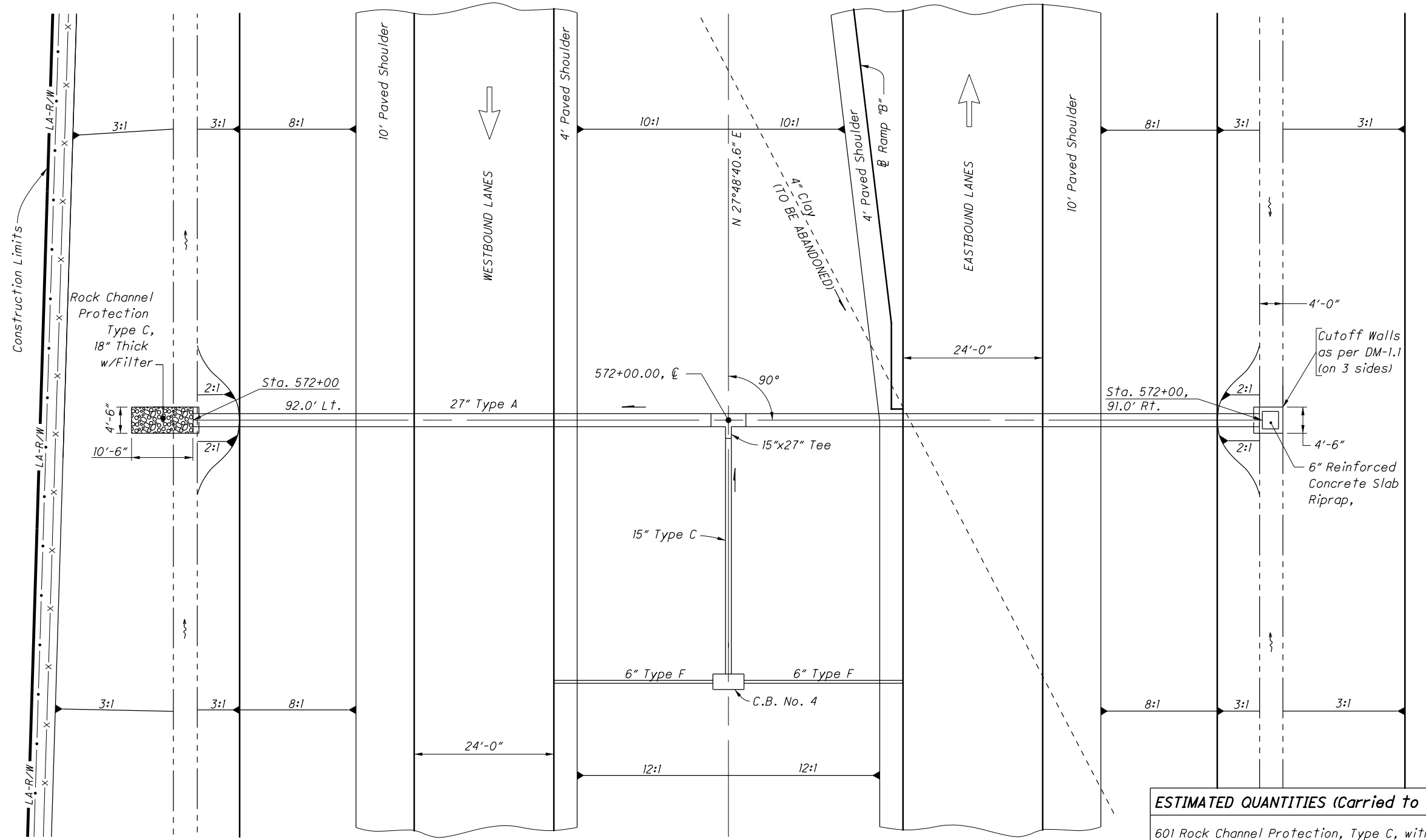


DETAIL "E"
NOT TO SCALE



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	= 75 Yr.
pH	= 7.8
Abrasion Level: 4	
CFN	= 1234567



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

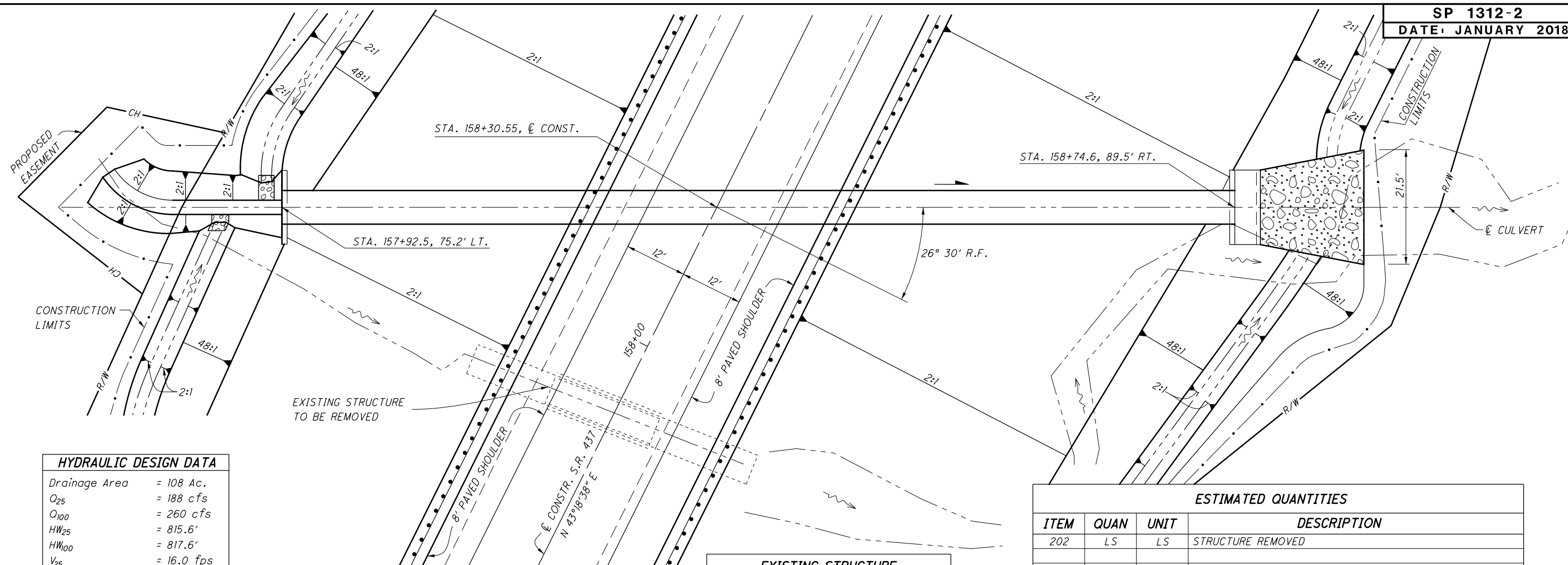
CULVERT DETAILS
U.S. 233 - STA. 572+00

ALL-233-22.69



0 5 10 20
HORIZONTAL
SCALE IN FEET

CALCULATED JOH
CHECKED JDH



HYDRAULIC DESIGN DATA

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

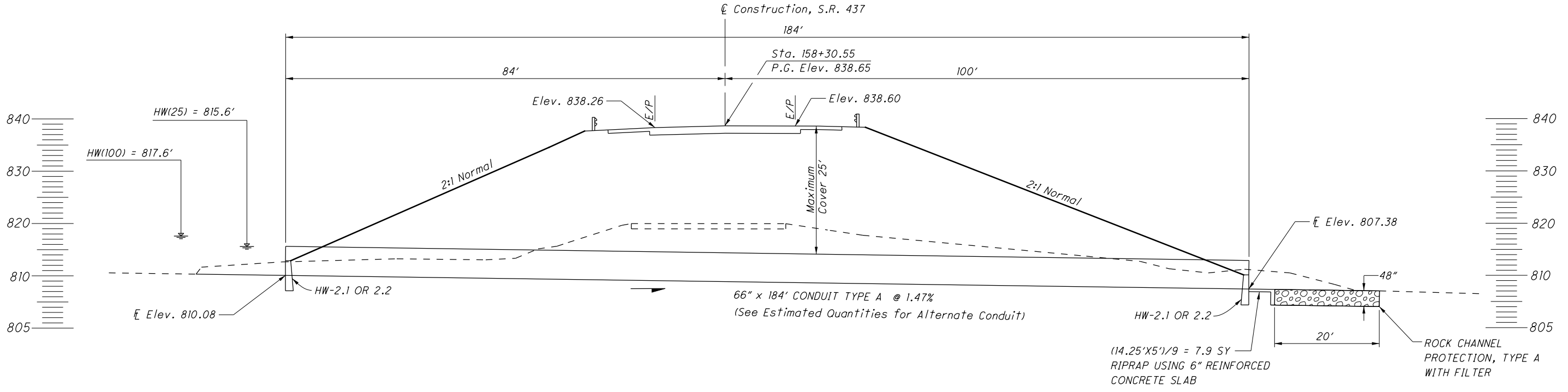
EXISTING STRUCTURE

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

ESTIMATED QUANTITIES

ITEM	QUAN	UNIT	DESCRIPTION
202	LS	LS	STRUCTURE REMOVED
601	60	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
601	8	SY	RIPRAP
602	5.9	CY	CONCRETE MASONRY
611	184	FT	66" CONDUIT, TYPE A, 706.02; OR 78" 707.02 (0.28) GALVANIZED, 707.02 (0.064) ALUMINIZED, 707.03 (0.138) W/CFP, 707.04 (1") (0.064), 707.05 (0.064), 707.07 (0.109)
670	72	SY	DITCH EROSION PROTECTION MAT TYPE C

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 37

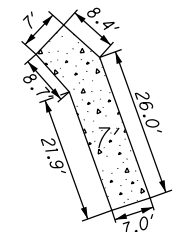
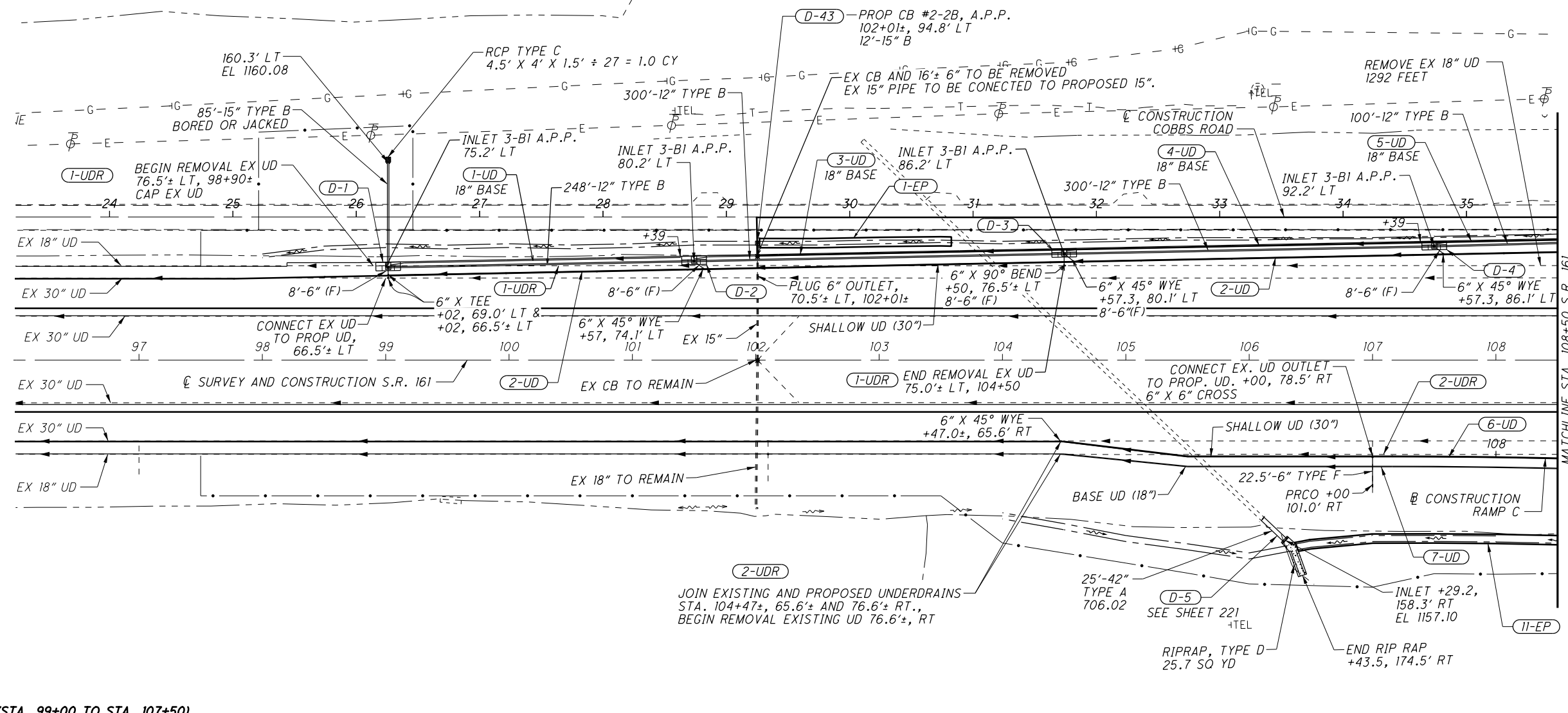


CULVERT DETAIL
S.R. 437 STA. 158+30

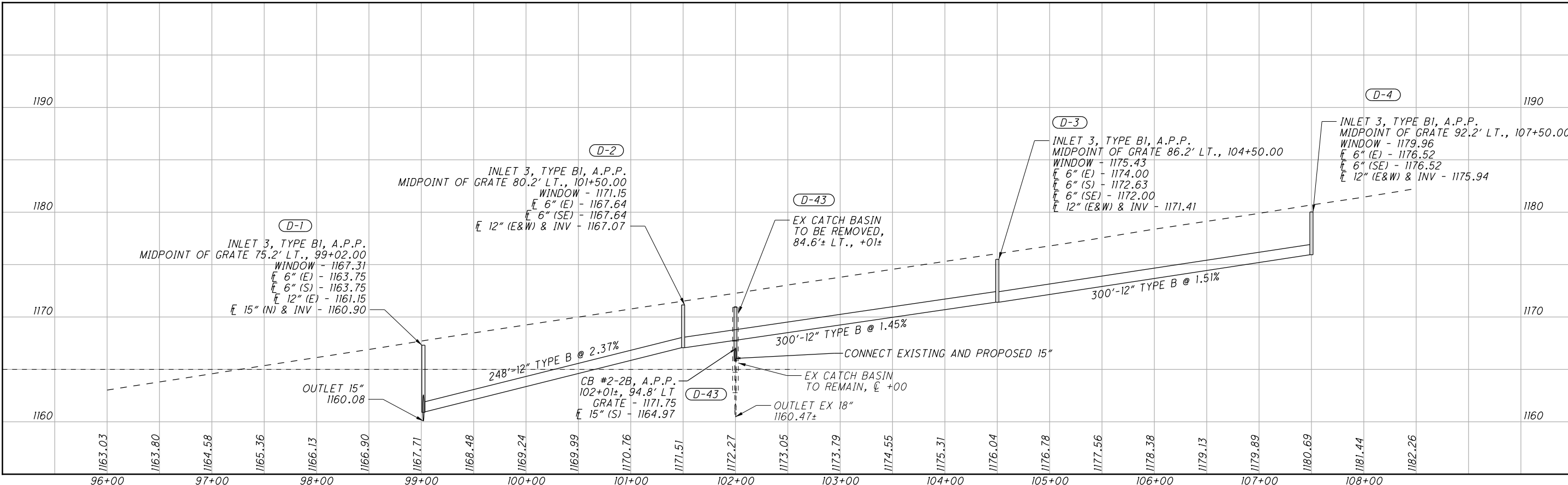
PRE-437-2.65



CALCULATED
R/JG
CHECKED
HAG

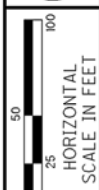


CFN = 1234567 (STA. 99+00 TO STA. 107+50)



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

LIC-161-1.83



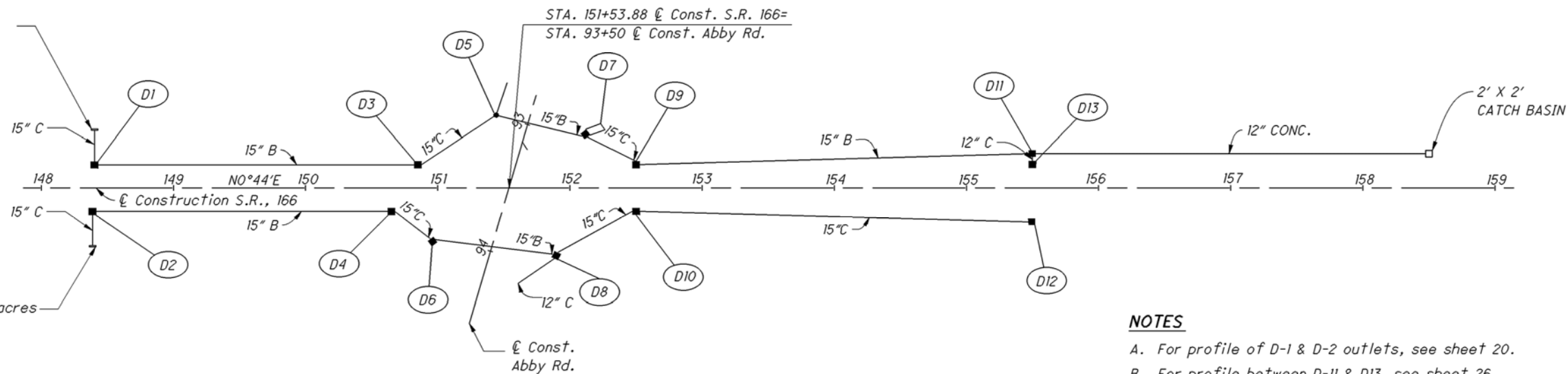
CALCULATED MSO
CHECKED PDC

S.R. 166 DRAINAGE PROFILE

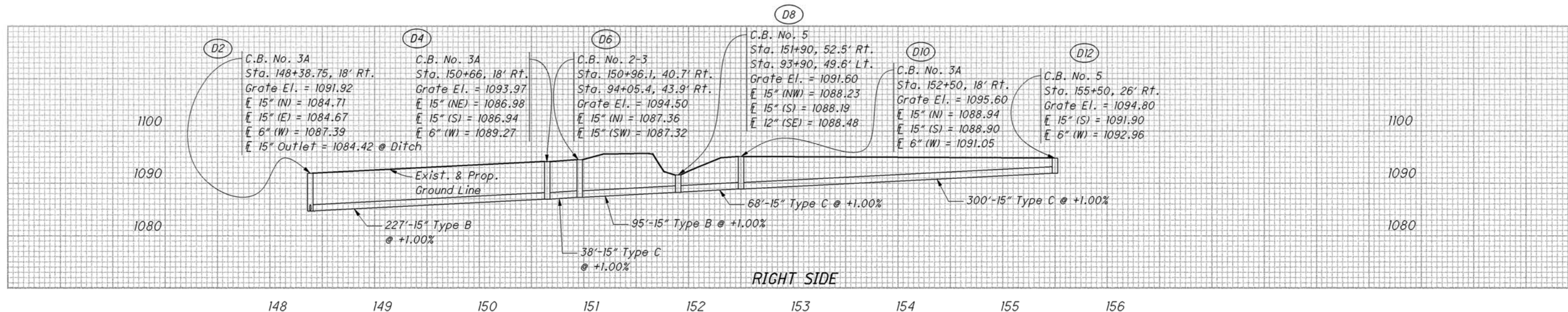
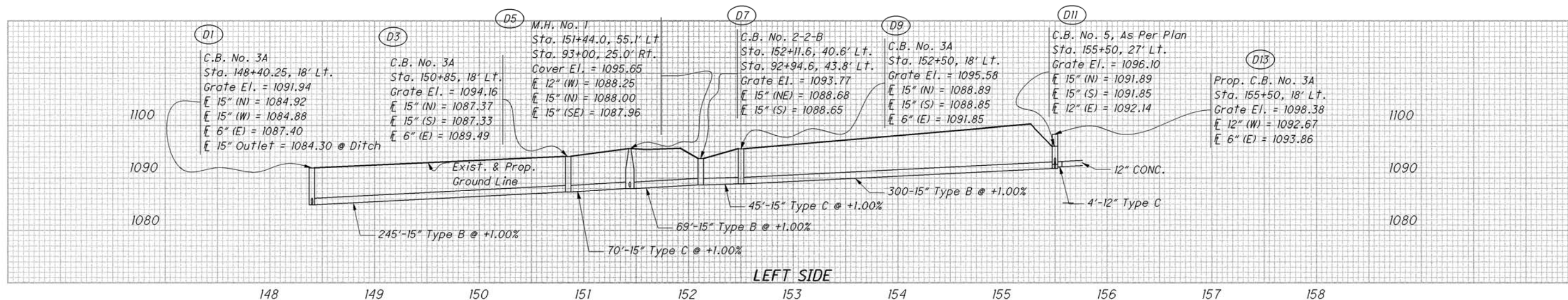
RIC-166-8.37

Outlet:
Drainage Area = 4.3 acres
 $Q_{10} = 7.3$ cfs
 $Q_{25} = 8.9$ cfs
HGL₁₀ = 1087.1
HGL₂₅ = 1087.9

Outlet:
Drainage Area = 3.6 acres
 $Q_{10} = 5.8$ cfs
 $Q_{25} = 6.7$ cfs
HGL₁₀ = 1086.8
HGL₂₅ = 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

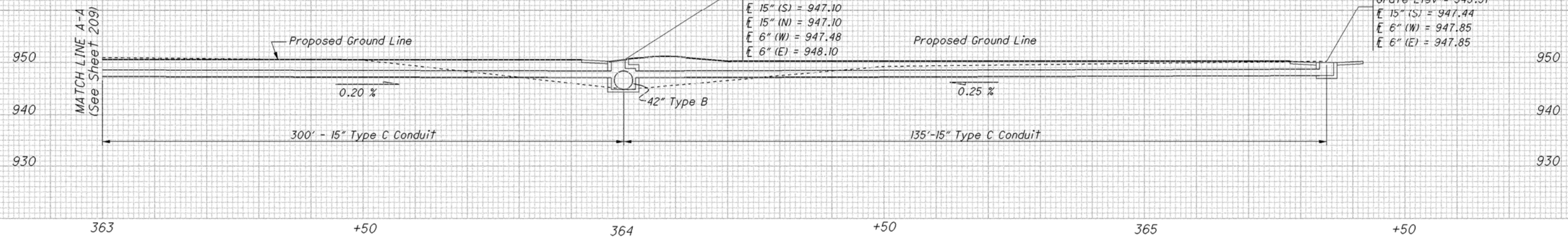
LONGITUDINAL SEWER PROFILE

LUC-76-31.48

MEDIAN SEWER PROFILE

Catch Basin No. 4A
Sta. 364+00, 0'
Grate Elev = 950.60
E 42" (W) = 944.85
E 42" (E) = 944.85
E 15" (S) = 947.10
E 15" (N) = 947.10
E 6" (W) = 947.48
E 6" (E) = 948.10

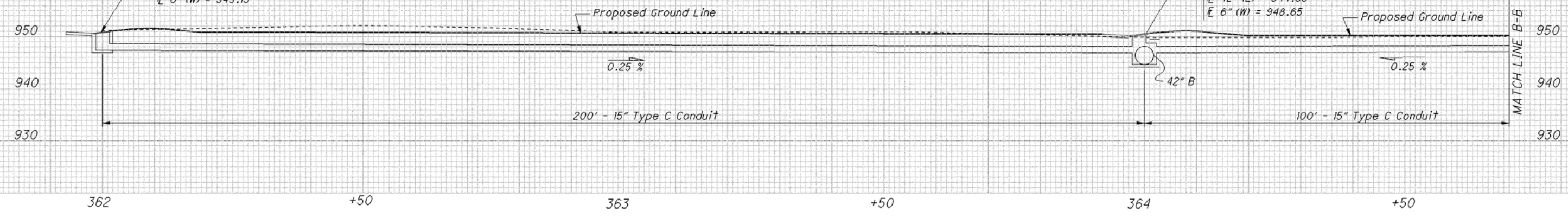
Catch Basin No. 4
Sta. 365+35, 1' Lt.
Grate Elev = 949.91
E 15" (S) = 947.44
E 6" (W) = 947.85
E 6" (E) = 947.85



NORTHBOUND SEWER PROFILE

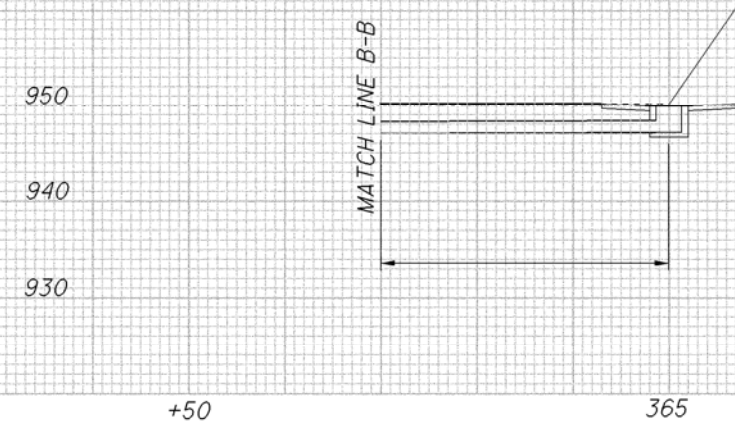
Catch Basin No. 5
Sta. 362+00, 66' Rt.
Grate Elev = 950.66
E 15" (N) = 947.40
E 6" (W) = 949.15

Catch Basin No. 5A
Sta. 364+00, 67' Rt.
Grate Elev = 950.40
E 15" (S) = 946.90
E 15" (N) = 946.90
E 42" (W) = 944.65
E 42" (E) = 944.65
E 6" (W) = 948.65



NORTHBOUND SEWER PROFILE

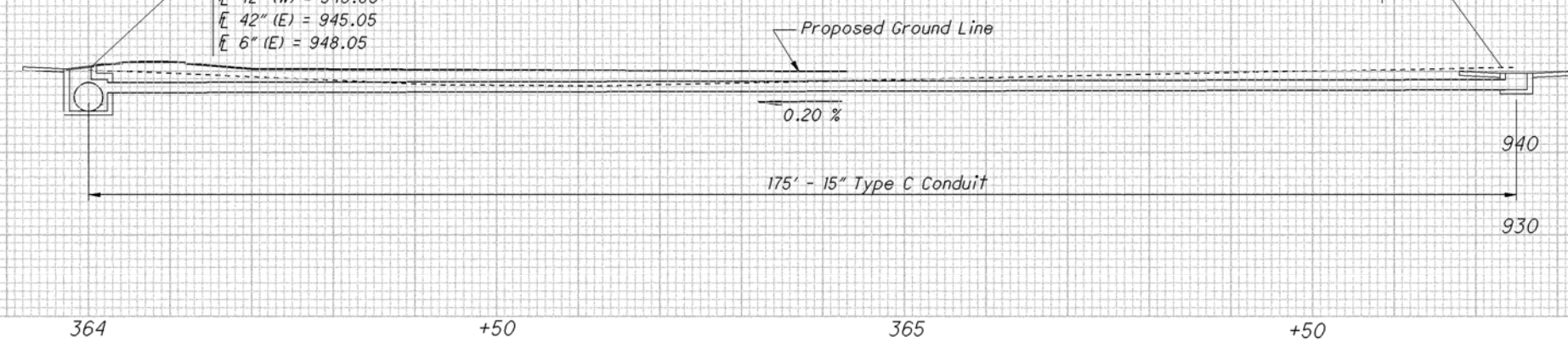
Catch Basin No. 5
Sta. 365+00, 66' Rt.
Grate Elev = 949.94
E 15" (S) = 947.15
E 6" (W) = 948.40
E 6" (E) = 947.90



SOUTHBOUND SEWER PROFILE

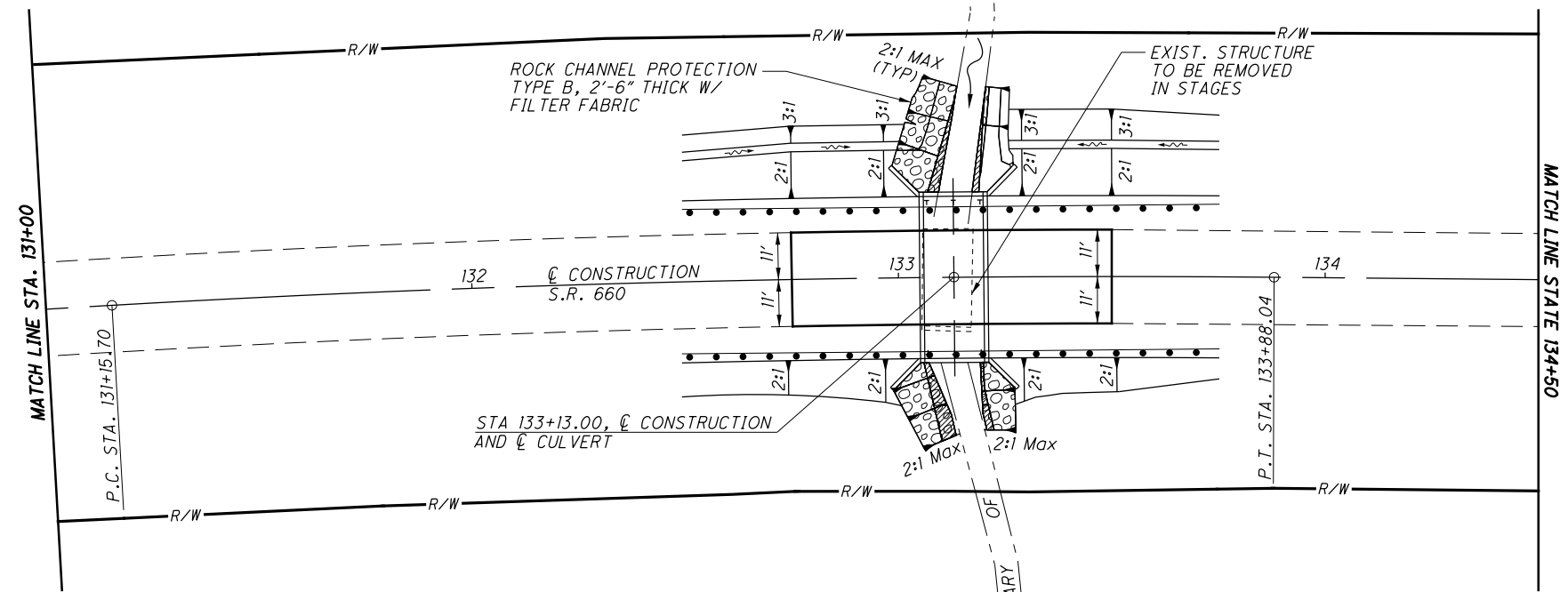
Catch Basin No. 5A
Sta. 364+00, 69' Lt.
Grate Elev = 950.80
E 15" (N) = 947.30
E 42" (W) = 945.05
E 42" (E) = 945.05
E 6" (E) = 948.05

Catch Basin No. 5
Sta. 365+75, 68' Lt.
Grate Elev = 949.68
E 15" (S) = 947.65
E 6" (E) = 948.15
E 6" (W) = 948.15





CALCULATED KEW
CHECKED JOH



HYDRAULIC DATA	
DRAINAGE AREA: 0.79 SQ.MI.	
EXISTING WATERWAY OPENING: 60.0 SF	
PROPOSED WATERWAY OPENING: 70.0 SF	
ORDINARY HIGH WATER MARK: 822.9 FT	
SFN: 3006914	
DESIGN SERVICE LIFE: 75 YRS	
pH: 7.4	
Abrasion Level: 3	
$Q_{10} = 297$ CFS	$Q_{100} = 518$ CFS
$V_{10} = 6.9$ FPS	$V_{100} = 7.9$ FPS
$HW_{10} = 827.8$	$HW_{100} = 829.9$

EXISTING STRUCTURE

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

PROPOSED STRUCTURE

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

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

CULVERT PLAN AND PROFILE
STA. 133+13.00

GUE-660-2.52

DESIGN SPECIFICATIONS:

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

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING.

DESIGN STRESSES:

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

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

REMOVAL OF EXISTING STRUCTURE:

PORTIONS OF THE EXISTING STRUCTURE SHALL BE REMOVED AS INDICATED.

FOUNDATION BEARING PRESSURE:

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

THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS

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

ITEM 512, TYPE 2 WATERPROOFING

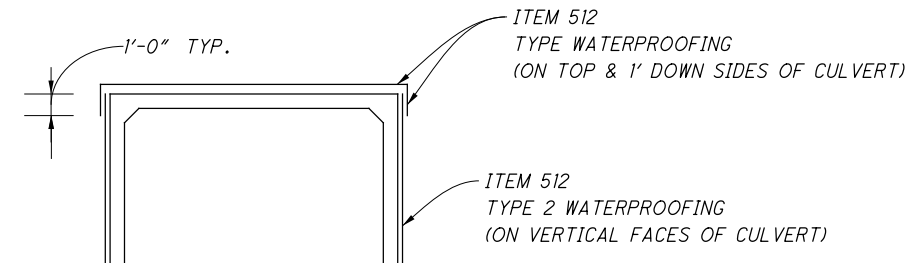
MEMBRANE WATERPROOFING (SHEET TYPE 2) SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FORTH PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS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

PRECAST WINGWALLS, HEADWALLS AND FOOTERS

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

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

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



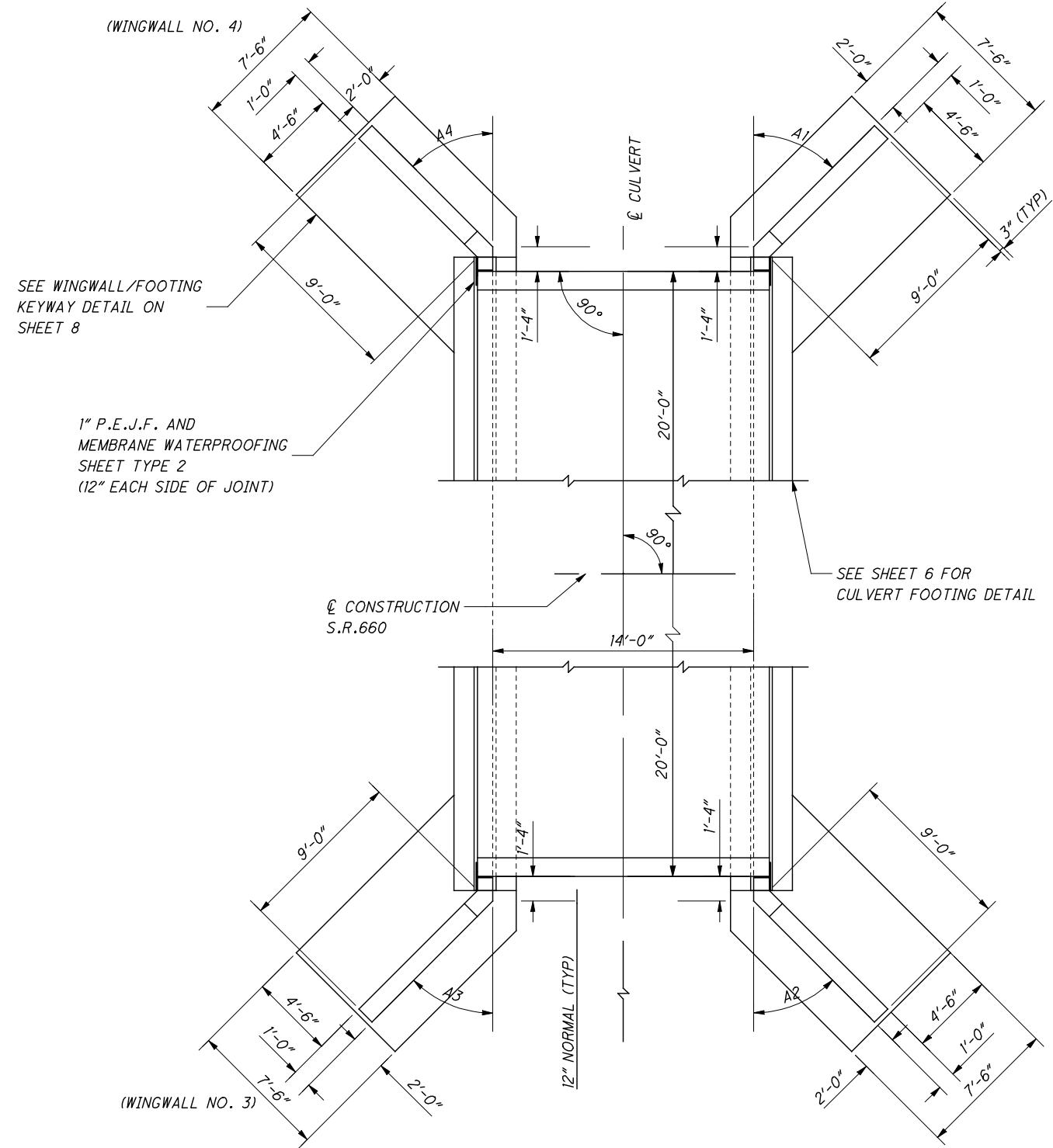
GENERAL SUMMARY (GUE - 660 - 2.52)				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
202	11000	LS		STRUCTURE REMOVED
503	21100	67	CY	UNCLASSIFIED EXCAVATION
509	10000	6015	LB	EPOXY COATED REINFORCING STEEL
511	46000	12	CY	CLASS QC MISC. CONCRETE, WINGWALL
511	46500	54	CY	CLASS QC MISC. CONCRETE, FOOTING
511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

CULVERT ESTIMATED QUANTITIES
STA. 133+13.00

GUE - 660 - 2.52

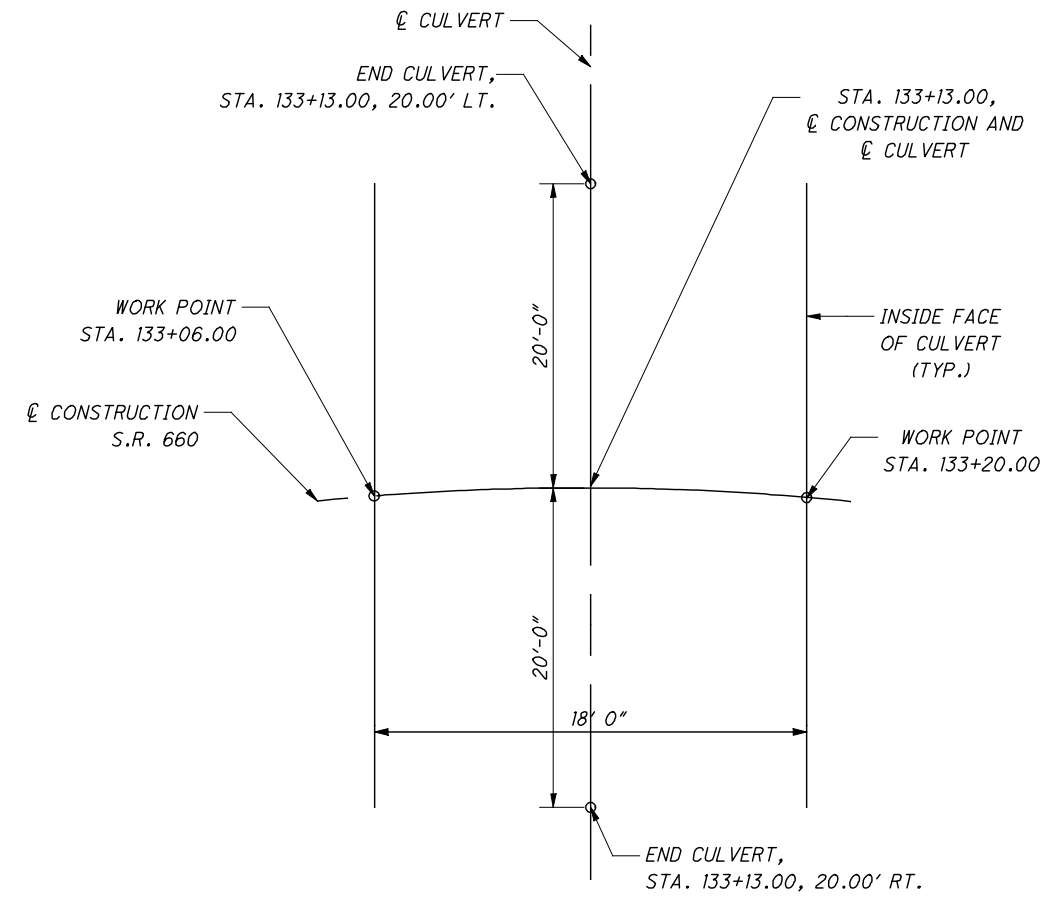


CALCULATED
KEW
CHECKED
JOH



(WINGWALL NO. 1)

(WINGWALL NO. 2)



REFERENCE DIAGRAM

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

CULVERT & WINGWALL LAYOUT

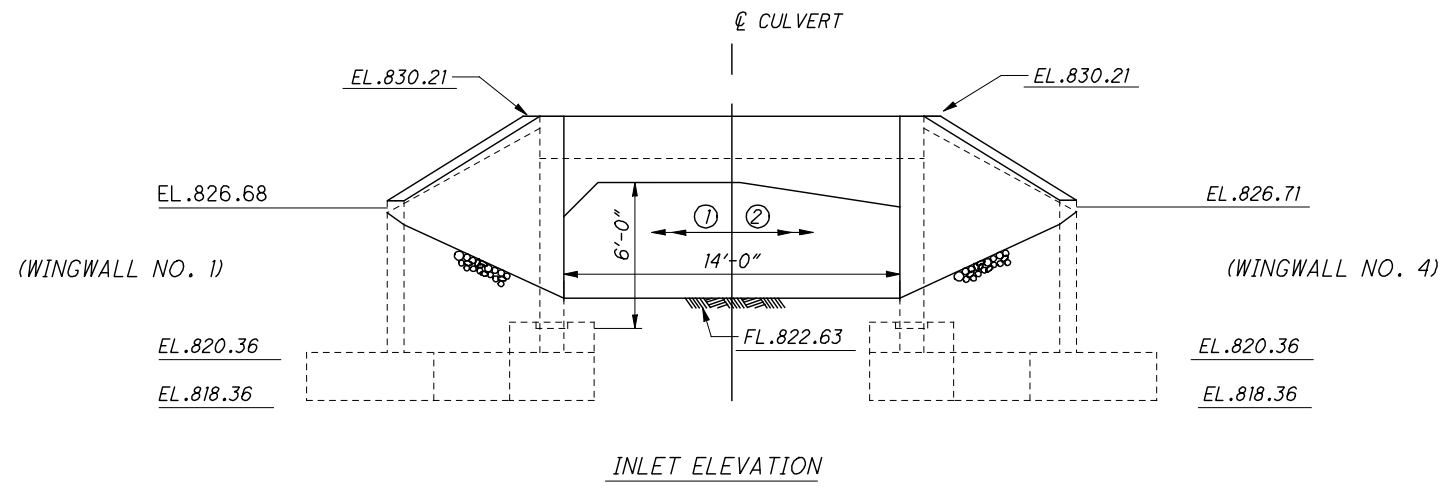
NOTE: SEE TABLE THIS SHEET FOR VALUES OF A1,A2,A3,A4

CULVERT LAYOUT
STA. 133+13.00

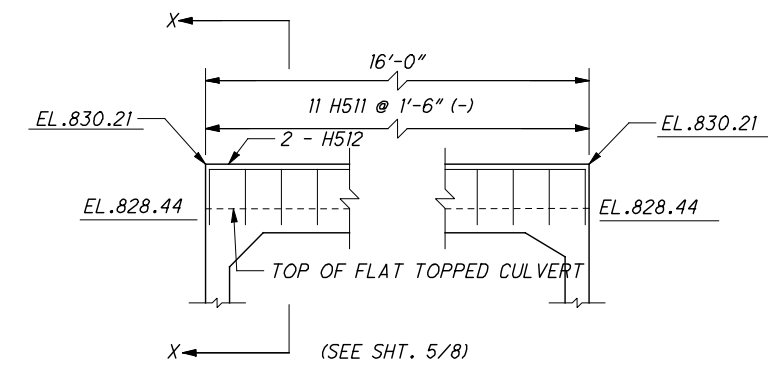
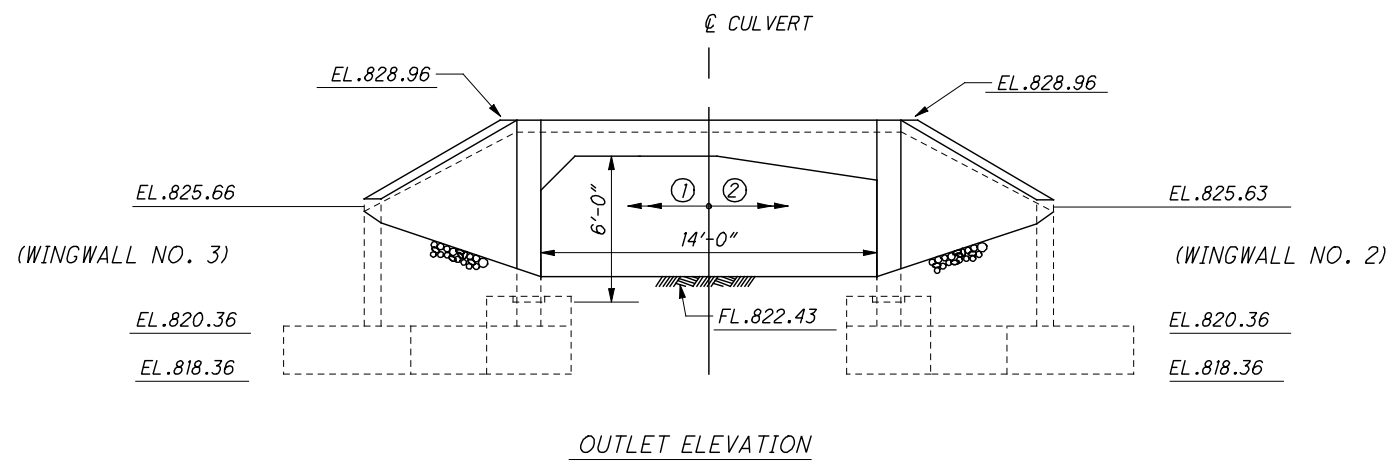
GUE-660-2.52

3 / 8

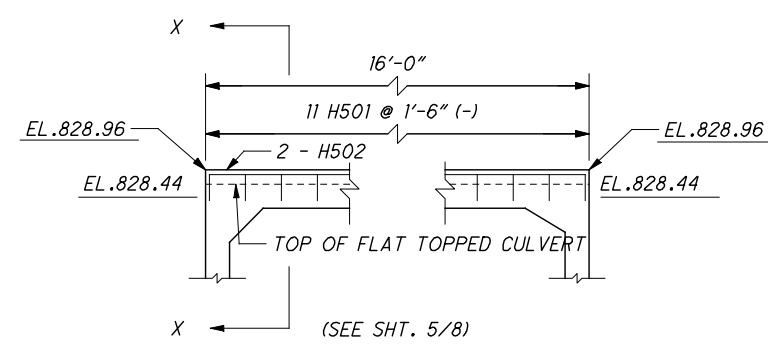
102
125



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



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

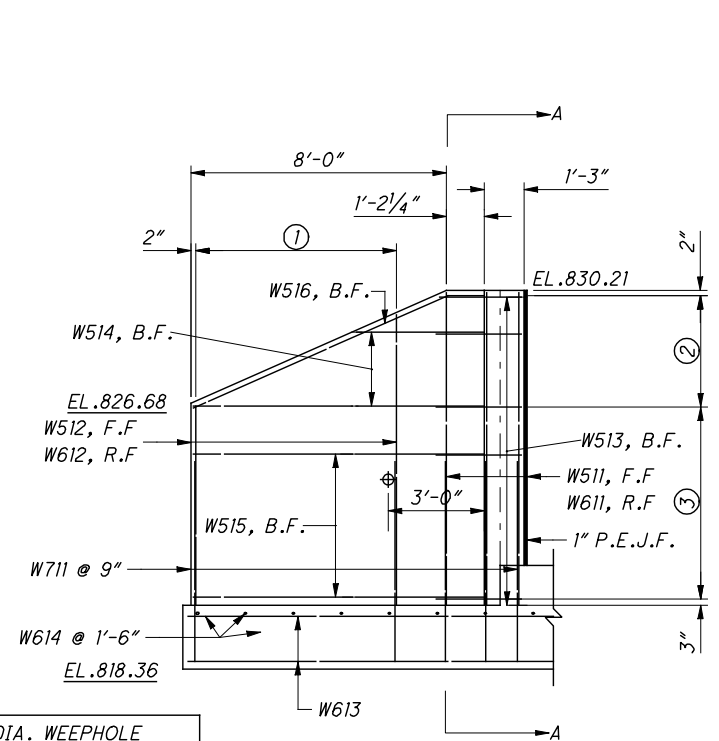


OUTLET HEADWALL REINFORCING DETAIL
(FOR FLAT-TOPPED CULVERTS ONLY)

CULVERT ELEVATION
STA. 133+13.00

GUE-660-2.52

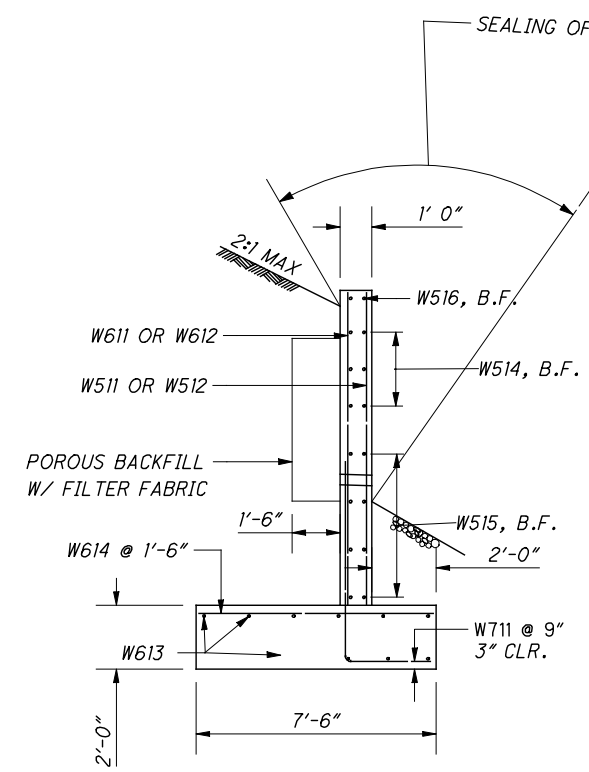
LEGEND
F.F. - FRONT FACE
R.F. - REAR FACE
B.F. - BOTH FACE



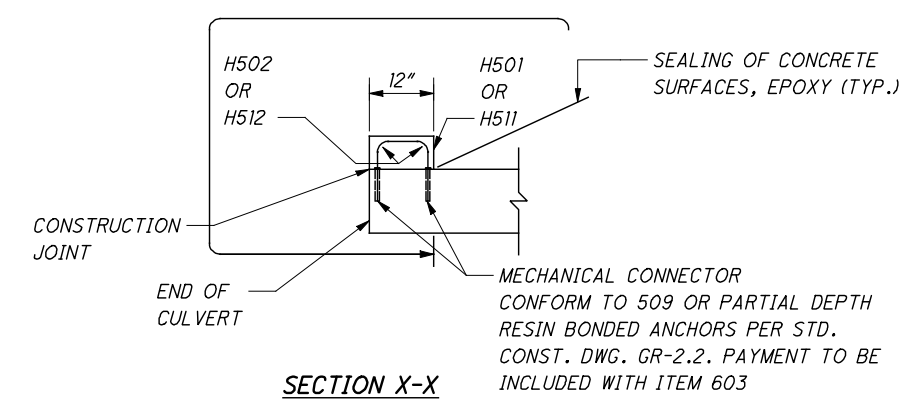
NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.13

WINGWALL 1 ELEVATION

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

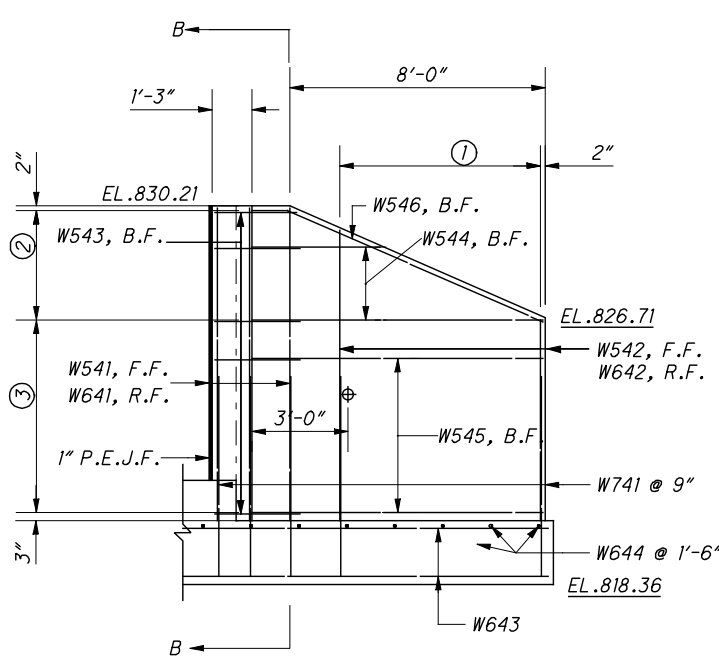


SECTION A-A



SECTION X-X

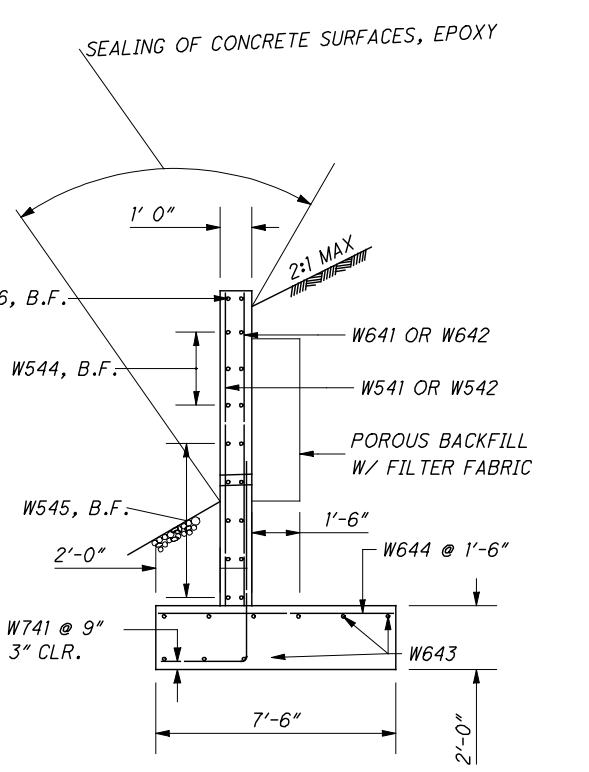
MECHANICAL CONNECTOR
CONFORM TO 509 OR PARTIAL DEPTH
RESIN BONDED ANCHORS PER STD.
CONST. DWG. GR-2.2. PAYMENT TO BE
INCLUDED WITH ITEM 603



NOTE: 4" DIA. WEEPHOLE
ELEV. = 824.14

WINGWALL 4 ELEVATION

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

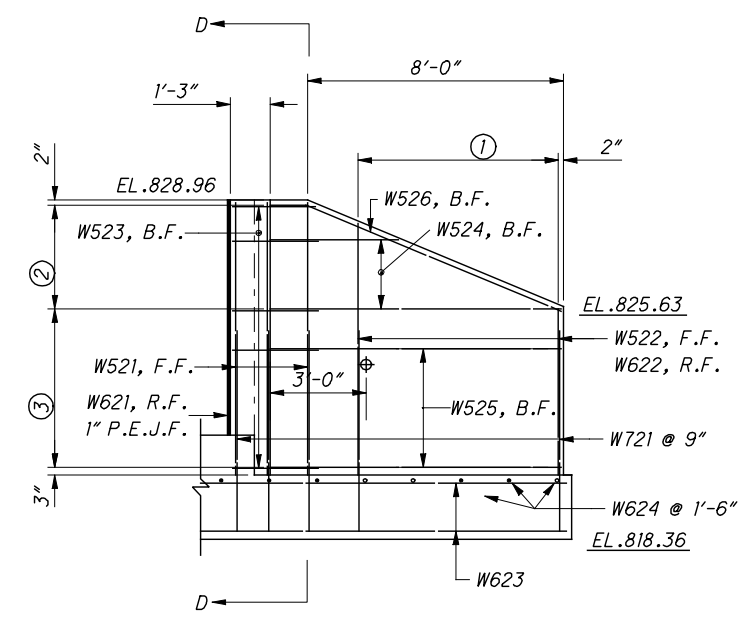


SECTION B-B

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

LEGEND

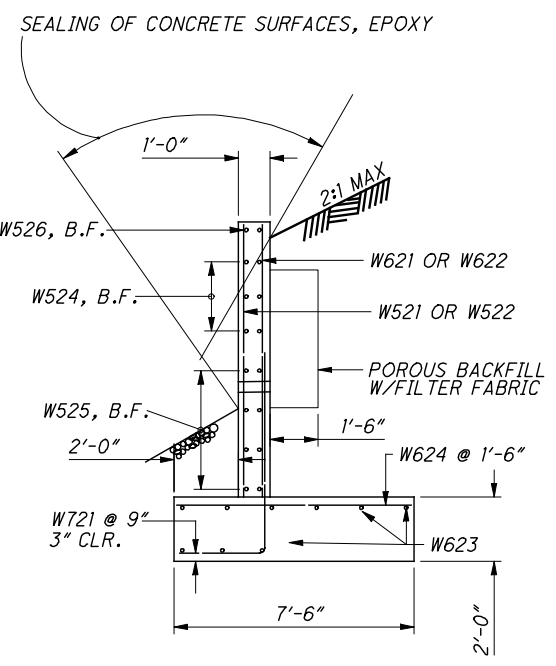
F.F. - FRONT FACE
R.F. - REAR FACE
B.F. - BOTH FACE



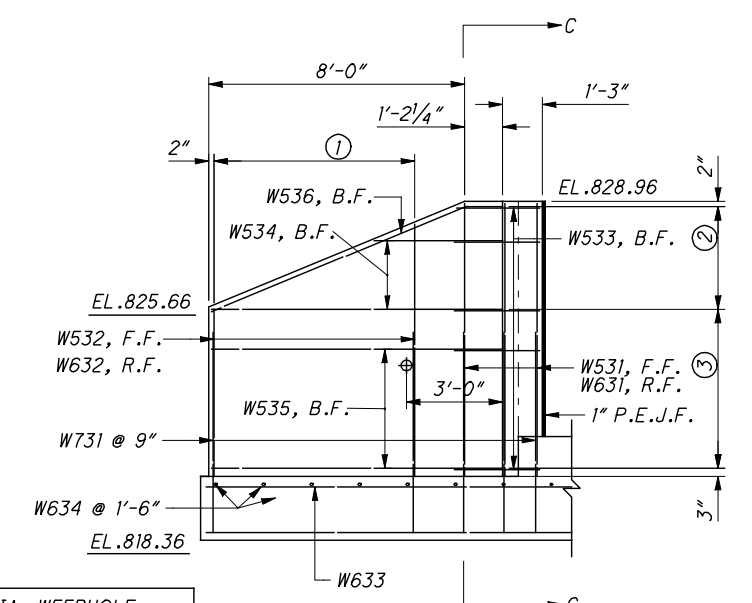
WINGWALL 2 ELEVATION

NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.65

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



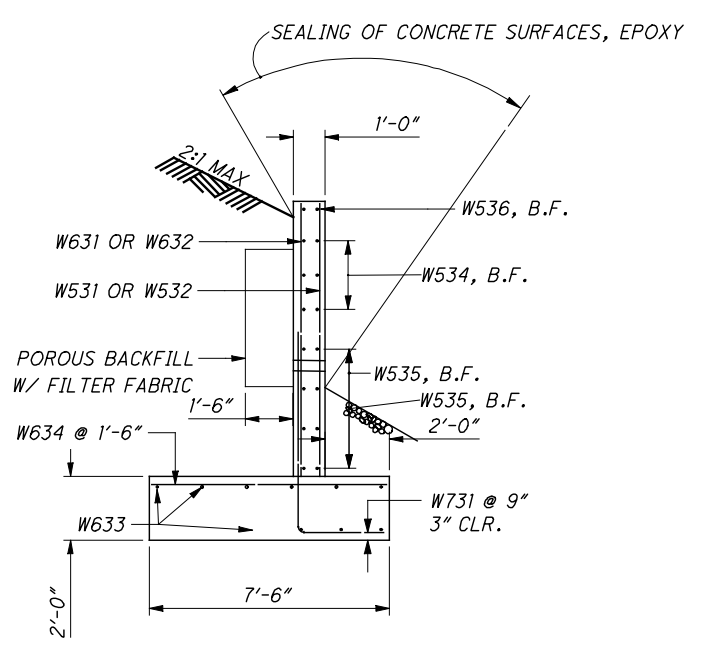
SECTION D-D



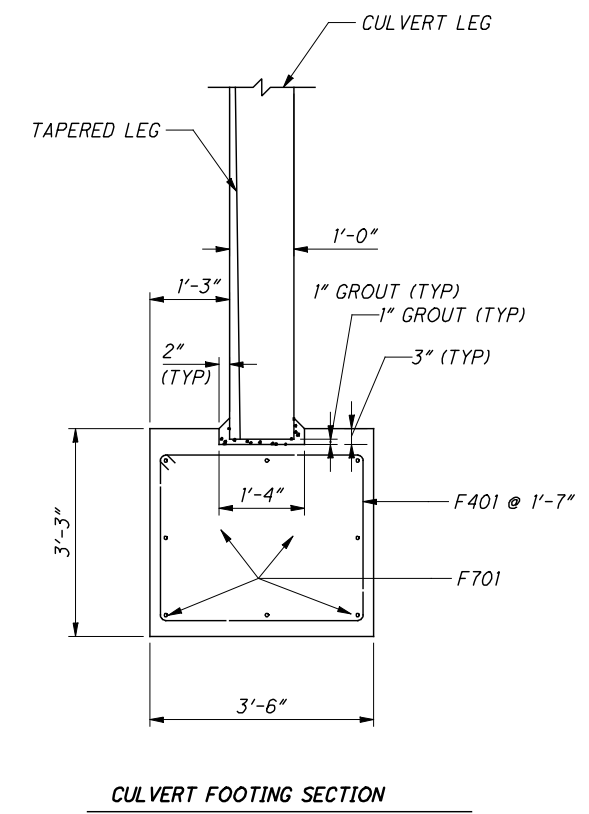
WINGWALL 3 ELEVATION

NOTE: 4" DIA. WEEPHOLE
ELEV. = 823.66

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



SECTION C-C



CULVERT FOOTING SECTION



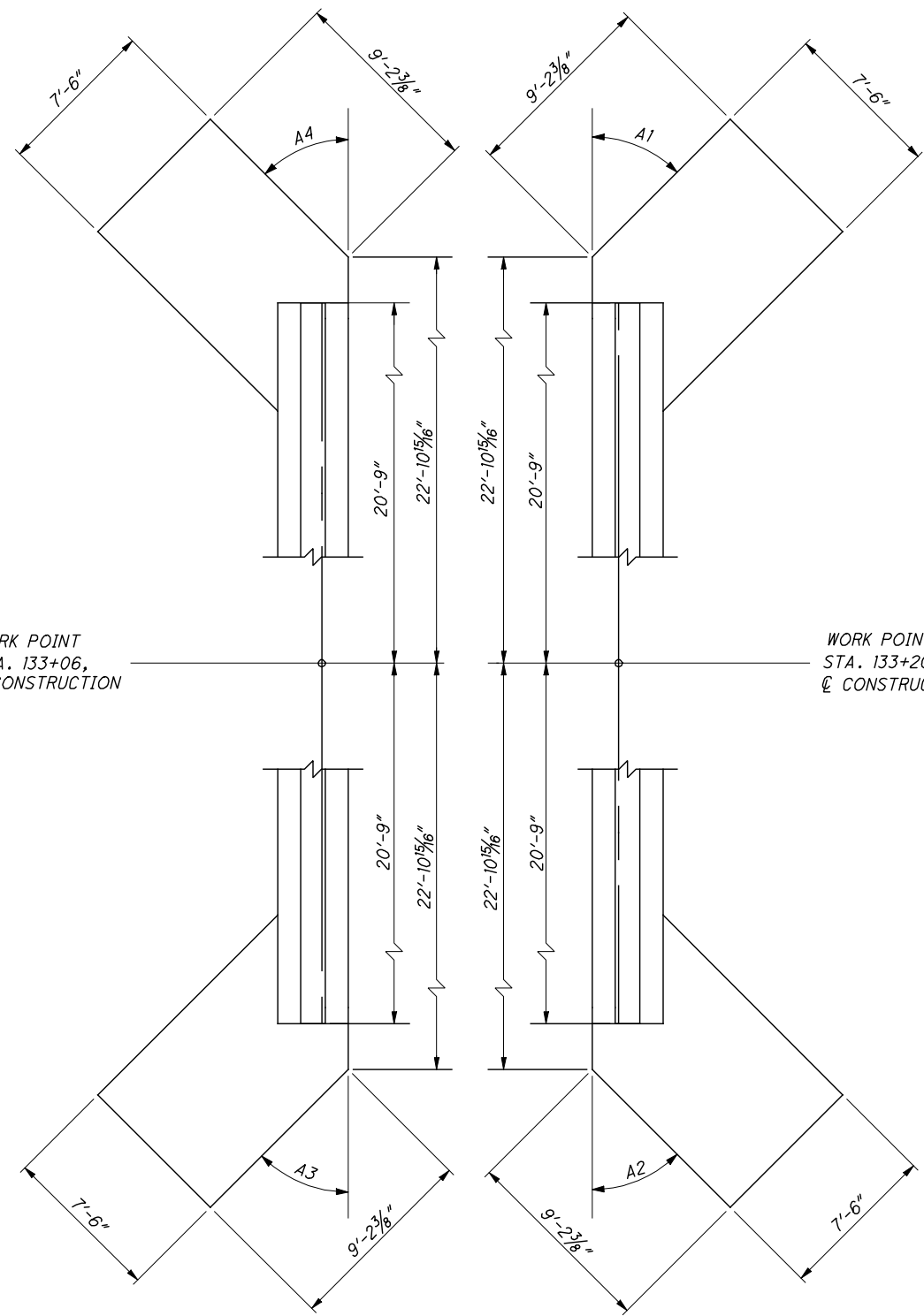
CALCULATED
KEW
CHECKED
JOH

FOOTING DETAILS
STA. 133+13.00

GUE-660-2.52

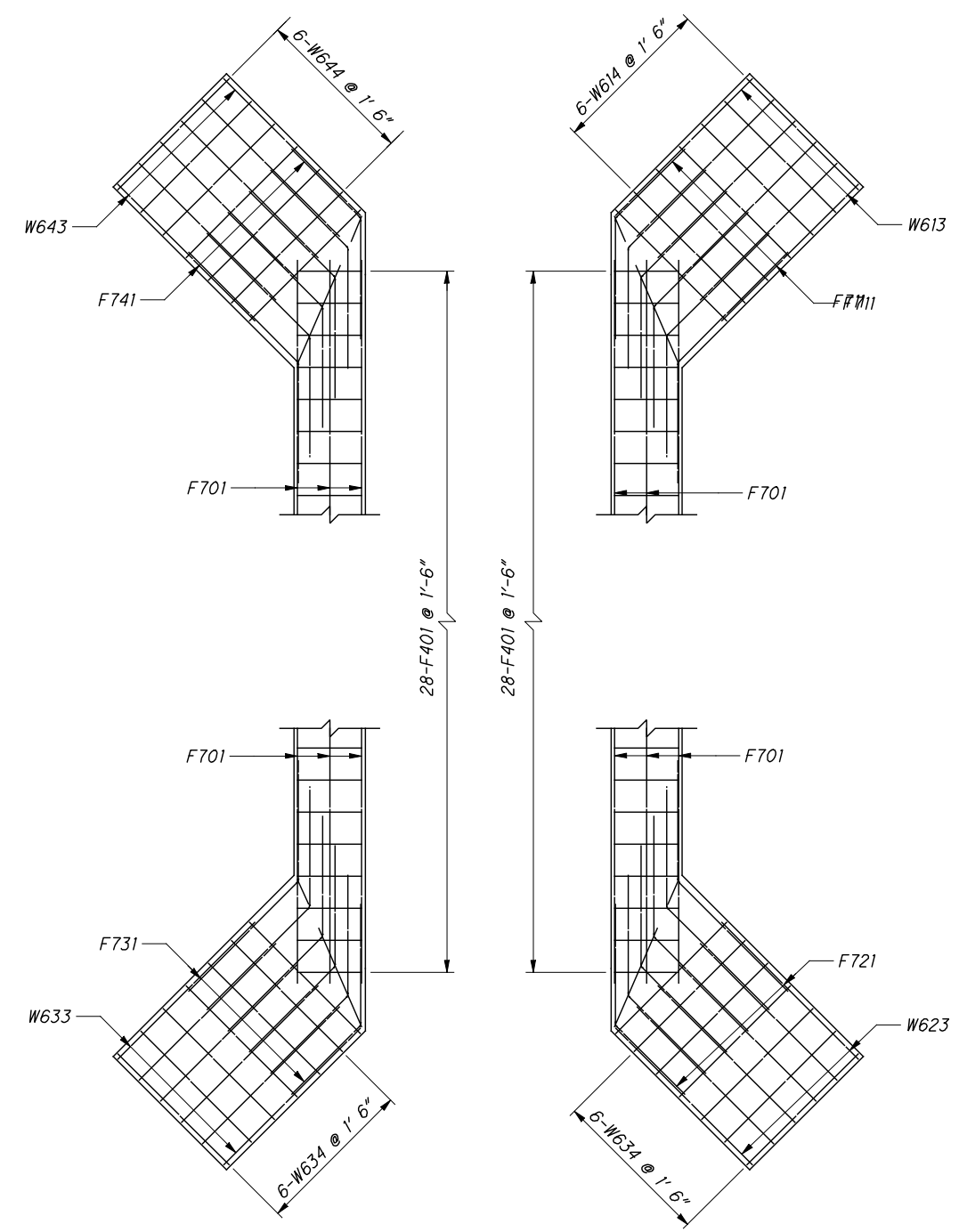
7/8

106
125



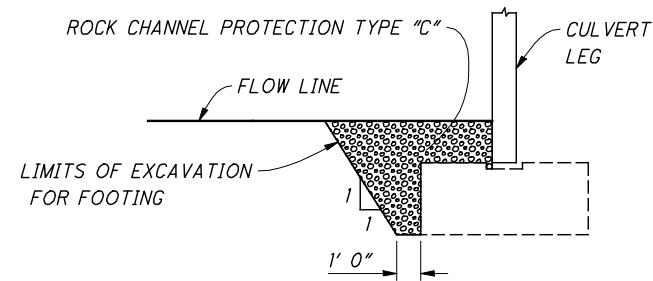
FOOTING LAYOUT

SEE TABLE ON SHEET 3 FOR VALUES OF A1 THRU A4

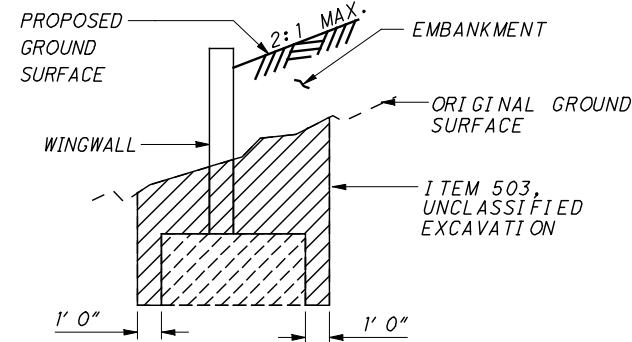


FOOTING REINFORCING PLAN

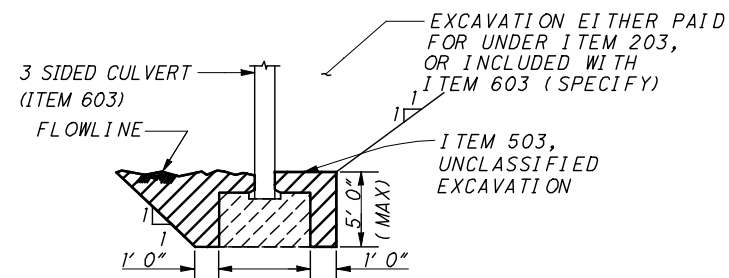
REINFORCING STEEL LIST



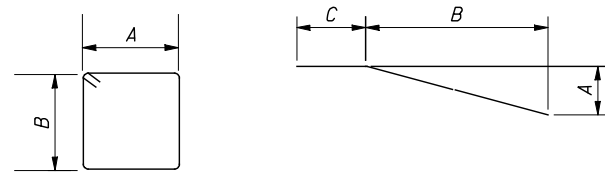
ROCK CHANNEL PROTECTION INSIDE CULVERT



LIMITS OF UNCLASSIFIED EXCAVATION (WINGWALL)

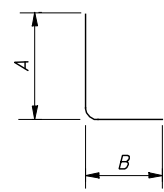


LIMITS OF UNCLASSIFIED EXCAVATION (CULVERT)

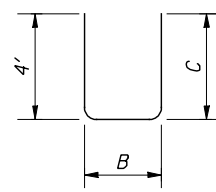


TYPE 1

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"		
W611	3	9'-9"	44	STR					
	1	6'-3"							
W612	S.O.	TO	58	STR				0'-9"	
	5	9'-1"							
W613	9	9'-0"	122	STR					
W614	6	7'-4"	66	STR					
W711	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 2									
W521	3	8'-6"	27	STR					
	1	5'-2"							
W522	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W523	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-1"							
W524	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W525	8	9'-1"	76	STR					
W526	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
W621	3	8'-6"	38	STR					
	1	5'-2"							
W622	S.O.	TO	49	STR				0'-8"	
	5	7'-10"							
W623	9	9'-0"	122	STR					
W624	6	7'-4"	66	STR					
W721	14	8'-9"	250	3	6'-3"	2'-8"			
WINGWALL 3									
W531	3	8'-6"	27	STR					
	1	5'-3"							
W532	S.O.	TO	34	STR				0'-8"	
	5	7'-10"							
W533	16	2'-4"	39	2	0'-10"	0'-10"	1'-2"		
	2	4'-0"							
W534	S.O.	TO	41	STR				2'-6"	
	3	9'-1"							
W535	8	9'-1"	76	STR					
W536	2	9'-8"	20	2	3'-2"	7'-11"	1'-2"		
SUBTOTAL			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"		
W641	3	9'-9"	44	STR					
	1	6'-3"							
W642	S.O.	TO	58	STR				0'-8"	
	5	9'-1"							
W643	9	9'-0"	122	STR					
W644	6	7'-4"	66	STR					
W741	14	8'-9"	250	3	6'-3"	2'-8"			
CULVERT FOOTING									
F401	56	12'-0"	449	1	3'-2"	2'-7"			
F701	32	21'-11"	1434	STR					
	1	10'-3"			3'-3"	3'-3"			
F711	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F721	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F731	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
	1	10'-3"			3'-3"	3'-3"			
F741	S.O.	TO	214	2	TO	TO	5'-8"	0'-4"	
	9	13'-0"			5'-2"	5'-2"			
HEADWALL									
H501	11	2'-7"	30	4	1'-1"	0'-8"	1'-1"		
H502	2	15'-10"	33	STR					
H511	11	5'-1"	58	4	2'-4"	0'-8"	2'-4"		
H512	2	15'-10"	33	STR					
SUBTOTAL			4229						
TOTAL CARRIED TO SHEET 2 OF 8									



0 5 10 20
HORIZONTAL SCALE IN FEET

CALCULATED
MRV
CHECKED
MLC

CULVERT DETAIL
STA 781+16.50

JAC-93-14.35

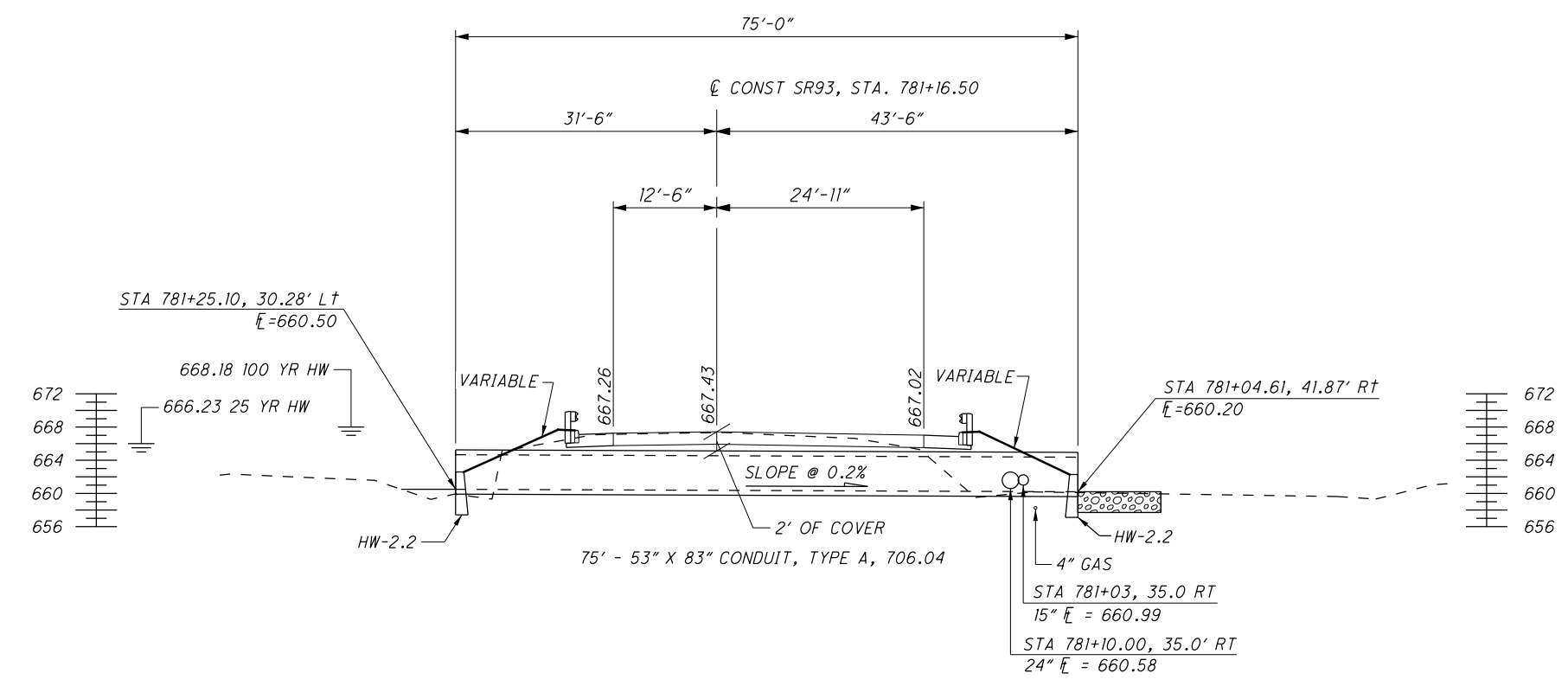
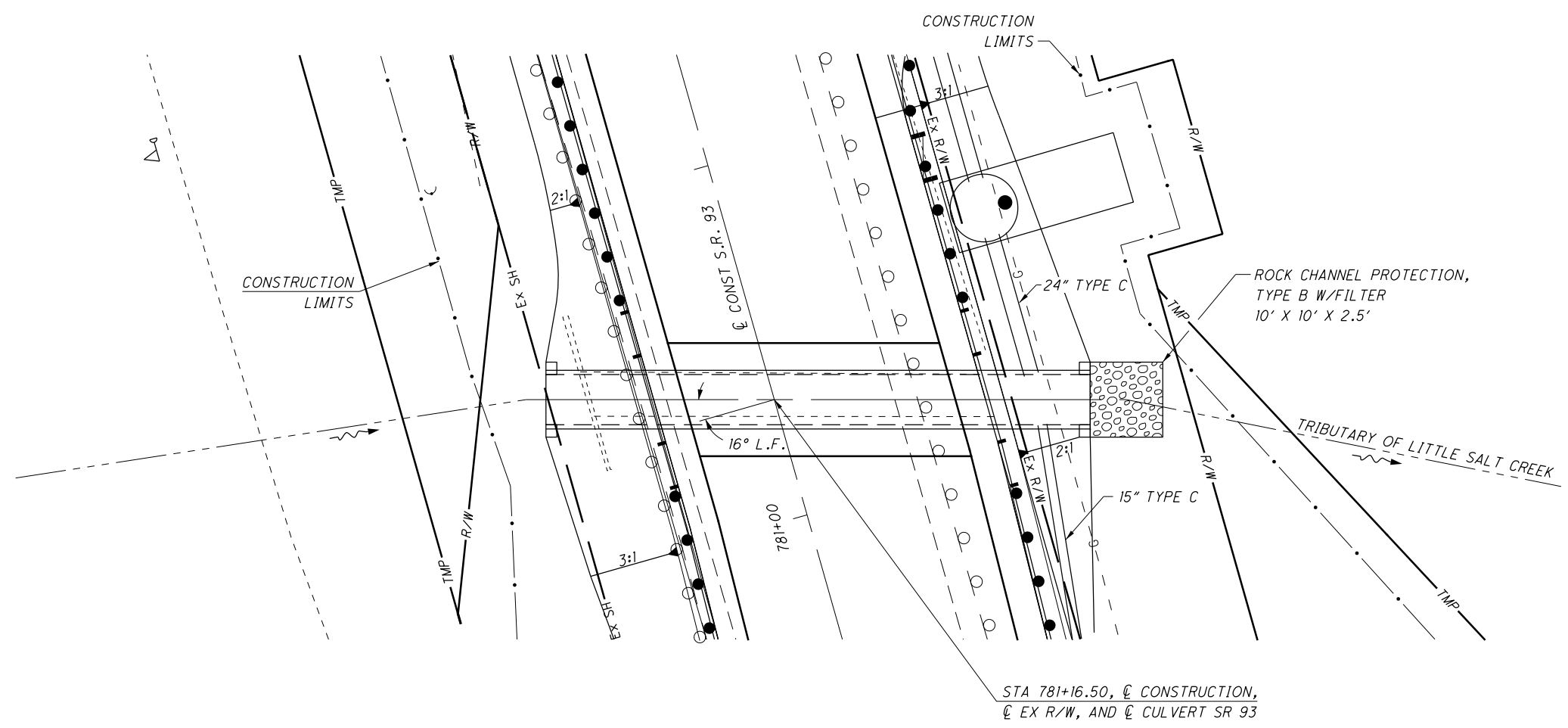
EXISTING STRUCTURE
TYPE: 48" AND 54" CORRUGATED METAL PIPES
SKEW: 16° L.F.
ALIGNMENT: TANGENT
CFN: 7654321

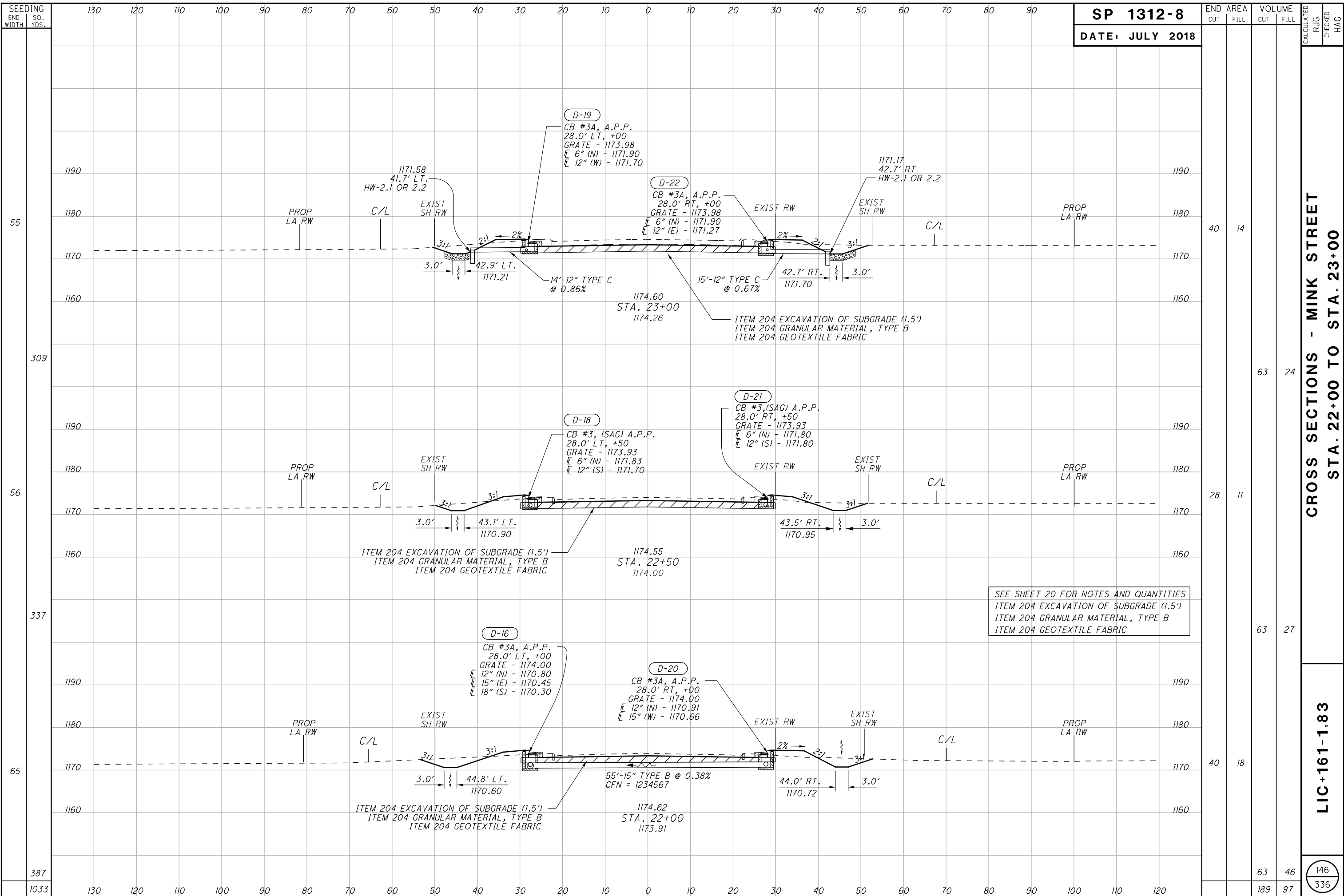
PROPOSED STRUCTURE
TYPE: 53"X83" ELLIPTICAL CONCRETE PIPE
SKEW: 16° L.F.
ALIGNMENT: TANGENT

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

ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

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



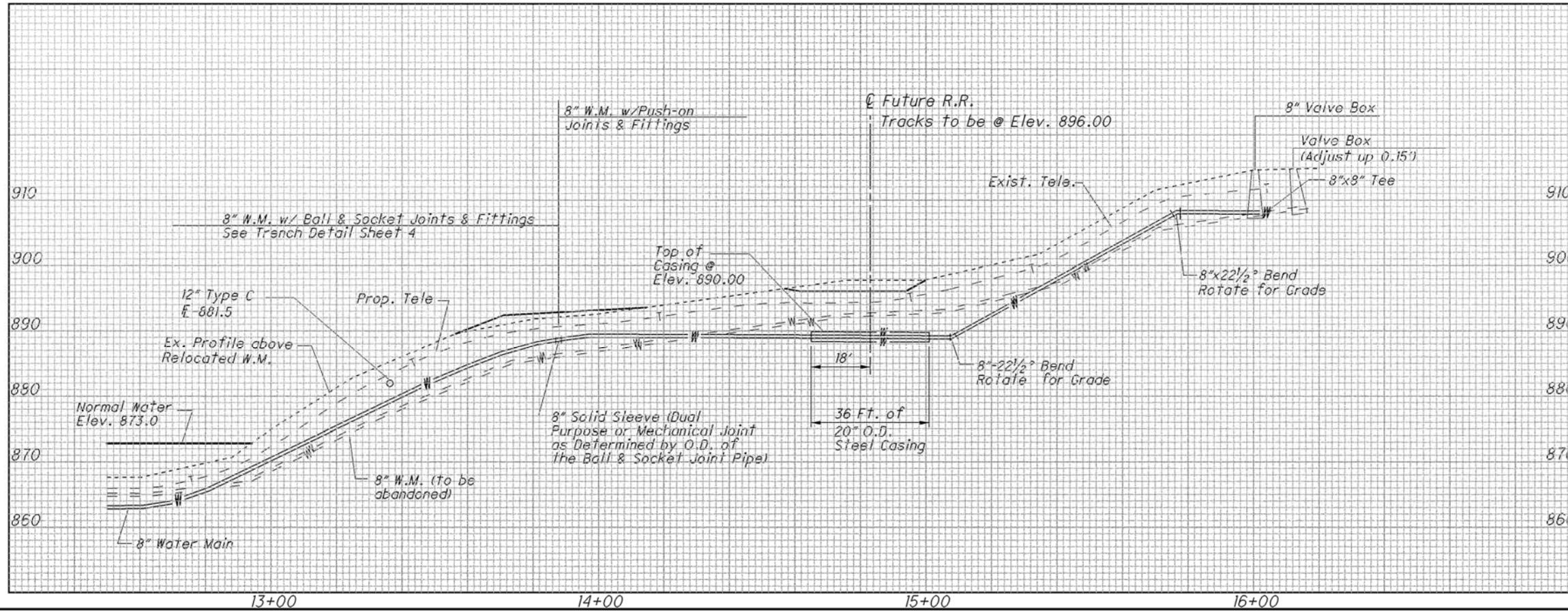
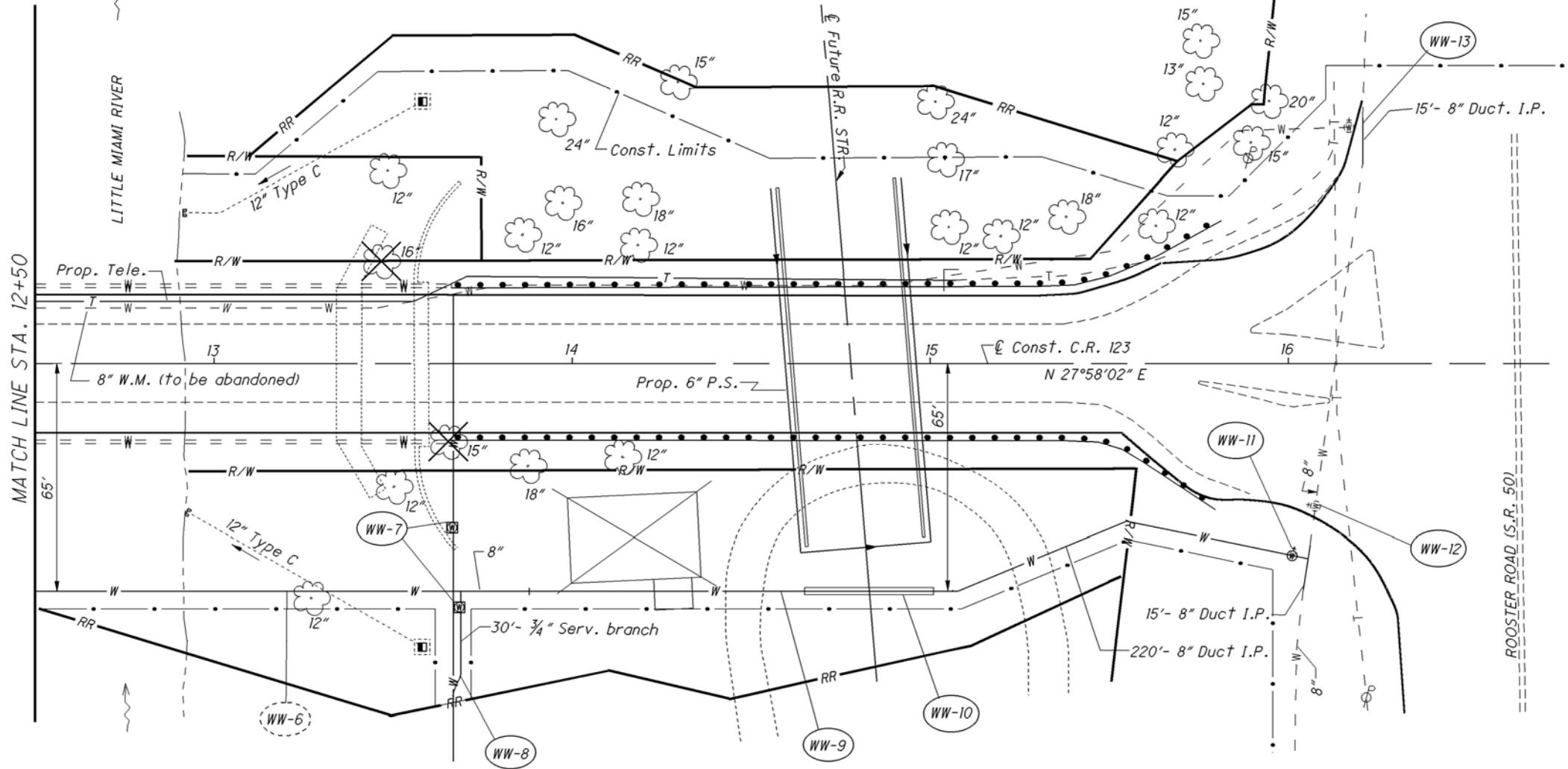


CROSS SECTIONS - MINK STREET
STA. 22+00 TO STA. 23+00

LIC+161-1.83

146
336

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



SP. 1313-1
DATE: OCTOBER 2006

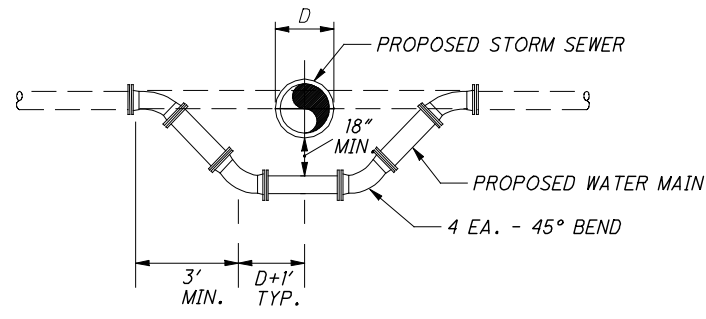


CALCULATED
GJB
CHECKED
DJK

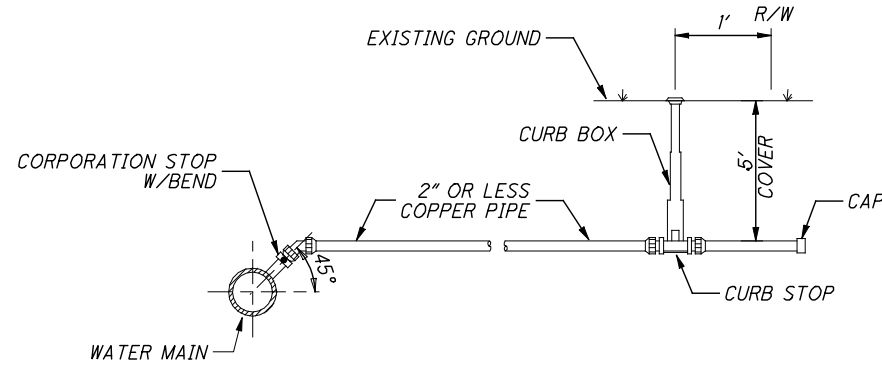
REF NO.	STATION		SIDE	20" Steel Pipe Encasement Open Cut	Valve Box Adjusted To Grade	3/4" Copper Service Branch	Meter and Chamber Removed and Reset	Sheeting and Bracing Ordered and Left in Place	8" Gate Valve & Valve Box
	FROM	TO							
WW-7	13+66	13+70	RT				1		EACH
WW-8	13+67	13+70	RT			30			
WW-9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

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

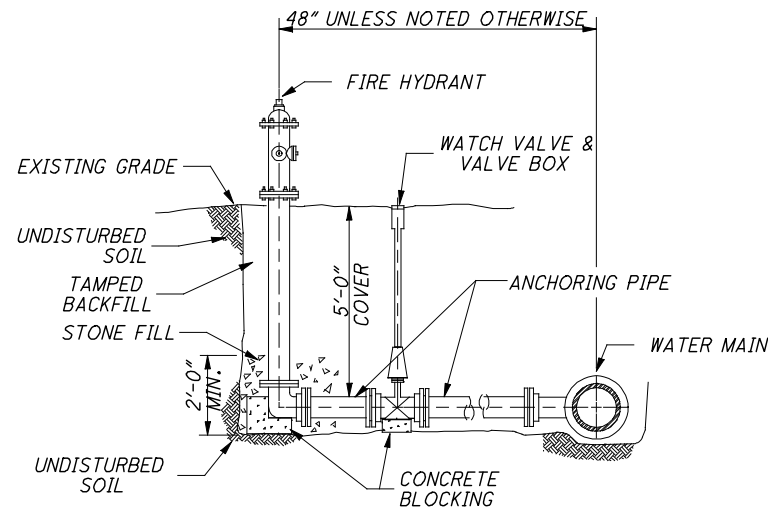
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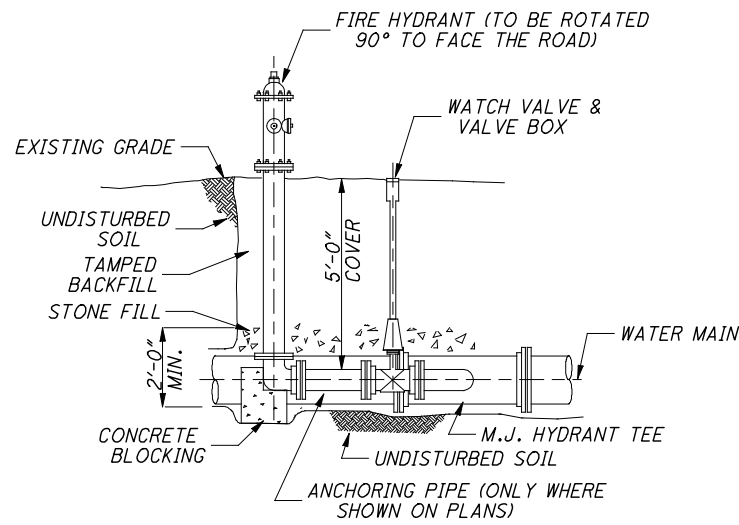
DETAIL "A"
 EXISTING WATER MAIN RELOCATION
 UNDER PROPOSED UTILITY LINE
 (ELEVATION)



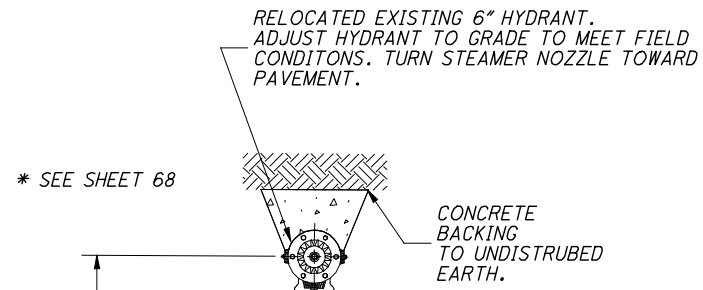
DETAIL "B"
 TYPICAL 2" OR LESS SERVICE CONNECTION
 (ELEVATION)



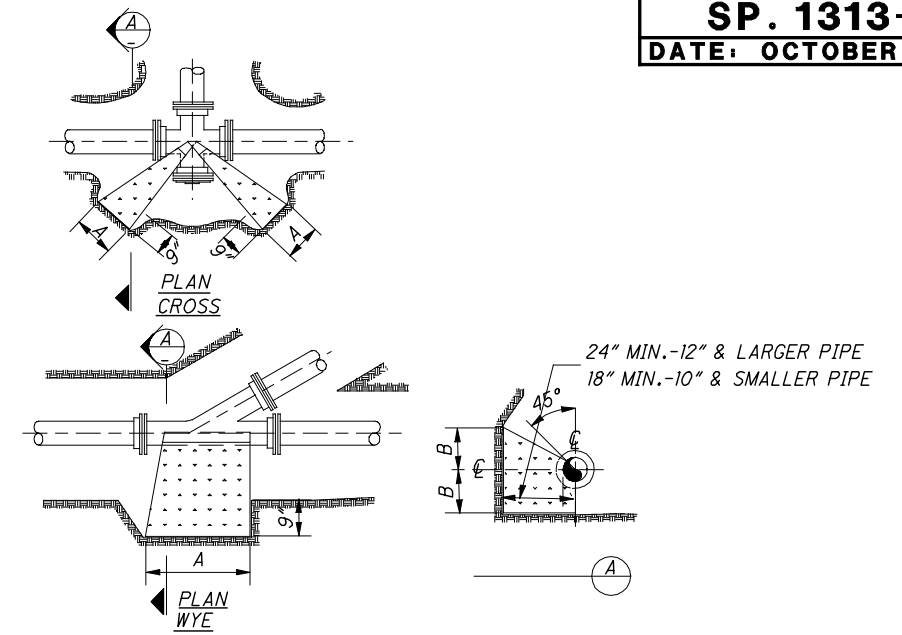
DETAIL "C"
 HYDRANT ASSEMBLY
 PERPENDICULAR TO WATER
 (ELEVATION)



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



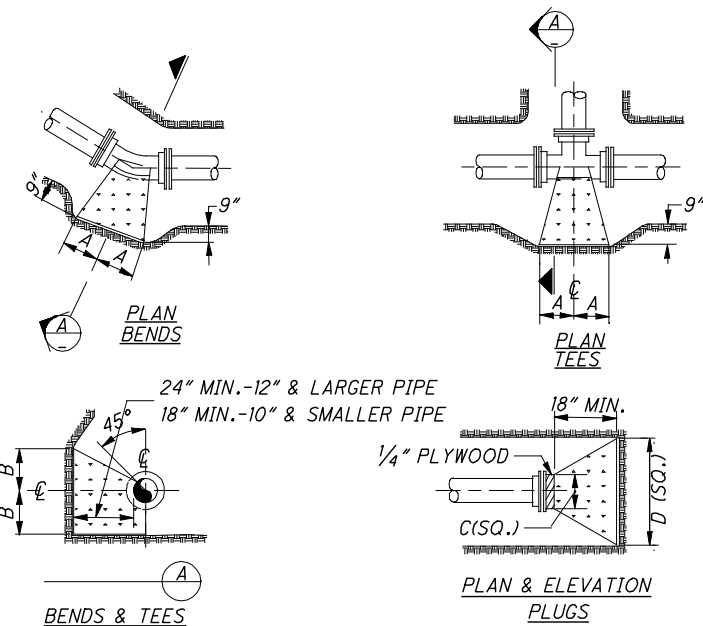
DETAIL "E"
 FIRE HYDRANT EXTENDED AND ADJUSTED TO GRADE
 (PLAN)



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	℄	4	5				0.014							
57	CL-12	Const. MEYERS RD.	8+55	9+41	℄	5	6				0.016							
58	CL-13	Const. S.R. 17	59+25	60+39	RT.	6	1				0.022							
58	CL-14	Const. S.R. 17	64+16	65+00	℄	1	1				0.016							
58	CL-15	Const. S.R. 17	65+00	65+66	℄	2					0.013							
56	EL-1	Const. RAMP A	10+25	10+65	RT.	2			0.009									
56	EL-2	Const. S.R. 17	45+52	48+00	LT.	12	2			0.047								
56	EL-3	Const. S.R. 17	45+30	48+00	RT.	14	12			0.051								
56	EL-4	Const. RAMP B	9+18	9+75	RT.	3	14		0.011									
56	EL-5	Const. S.R. 17	48+00	53+00	LT.	14	3			0.095								
56	EL-6	Const. S.R. 17	48+00	53+00	RT.	14	14			0.095								
57	EL-7	Const. MEYERS RD.	53+00	11+00	LT.	24	14			0.113								
57	EL-8	Const. MEYERS RD.	53+00	8+55	RT.	23	24			0.111								
57	EL-9	Const. MEYERS RD.	11+15	59+25	LT.	8	23			0.029								
57	EL-10	Const. MEYERS RD.	8+55	59+25	RT.	11	8			0.041								
58	EL-11	Const. S.R. 17	59+25	65+00	LT.	21	11			0.109								
58	EL-12	Const. S.R. 17	59+25	65+00	RT.	16	22			0.109								
58	EL-13	Const. S.R. 17	65+00	65+66	LT.	1	29			0.013								
58	EL-14	Const. S.R. 17	65+00	65+66	RT.	1				0.013								
56	CH-1	Const. S.R. 17	45+52	47+70	LT.						218							
57	CH-2	Const. S.R. 17	56+20	57+86	RT.		11				166							
57	CH-3	Const. S.R. 17	58+68	59+25	LT.		9				57							
58	CH-4	Const. S.R. 17	59+25	60+20	LT.		3				95							
56	IM-1	Const. S.R. 17	44+51	45+09	RT.		5			0.019	110							
56	IM-2	Const. S.R. 17	45+52	46+73	RT.	6	6			0.046	10							
58	IM-3	Const. S.R. 17	60+39	64+16	LT&RT	11	12			0.143								
56	SL-1	Const. RAMP A	10+28		LT&RT		19					29						
56	SL-2	Const. S.R. 17	50+07	50+27	LT.							20			108			
57	SL-3	Const. MEYERS RD.	9+41		LT.							12			26			
57	SL-4	Const. MEYERS RD.	10+40		RT.							14			255			
56		Const. S.R. 17	45+62									2						
56		Const. S.R. 17	46+62										2		2			
56		Const. S.R. 17	47+60										2					
56		Const. S.R. 17	52+11										1					
56		Const. S.R. 17	52+25										1					
57		Const. S.R. 17	56+98											1				
57		Const. S.R. 17	56+20											1				
57		Const. S.R. 17	57+76											1				
57		Const. S.R. 17	58+78											1				
SUBTOTALS						240		112	204	0.020		0.663	656	75	9	3	389	
TOTALS CARRIED TO GENERAL SUMMARY						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										
					R2-1-30	30" x 30"	6.25			13.5-13.5									
57	S19		58+65	RT.	R5-H2b-24														
					R2-1-30	30" x 30"	6.25			13.5-13.5									
57	S20		59+47	RT.	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							
SUBTOTALS							170.25	14.5	311.5	35.5	3	13	7	1	96	2	2		
TOTALS CARRIED TO GENERAL SUMMARY							170	15	312	36	3	13	7	1	96	2	2		

SIGNING SUBSUMMARY

UNI-17-3.14



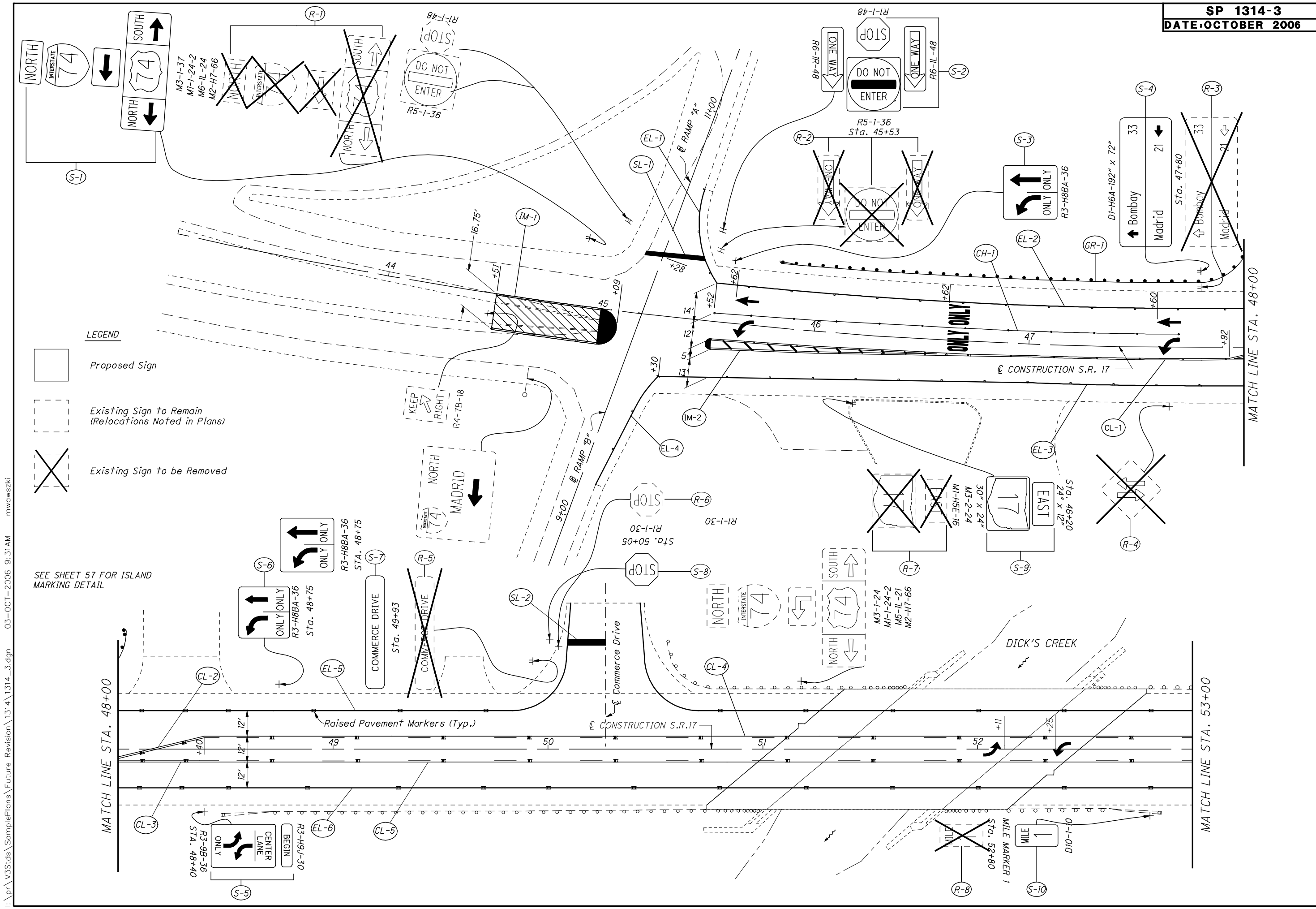
0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED DAM CHECKED JAG



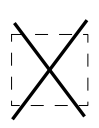
SIGN AND PAVEMENT MARKING PLAN

UNI-17-3.14

56
65

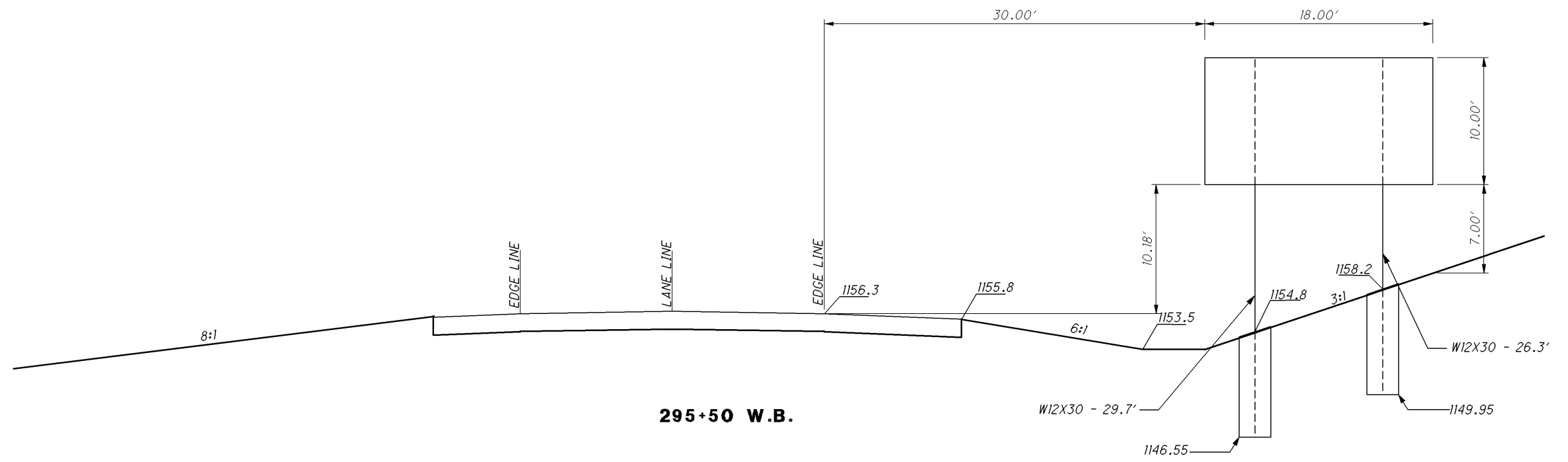
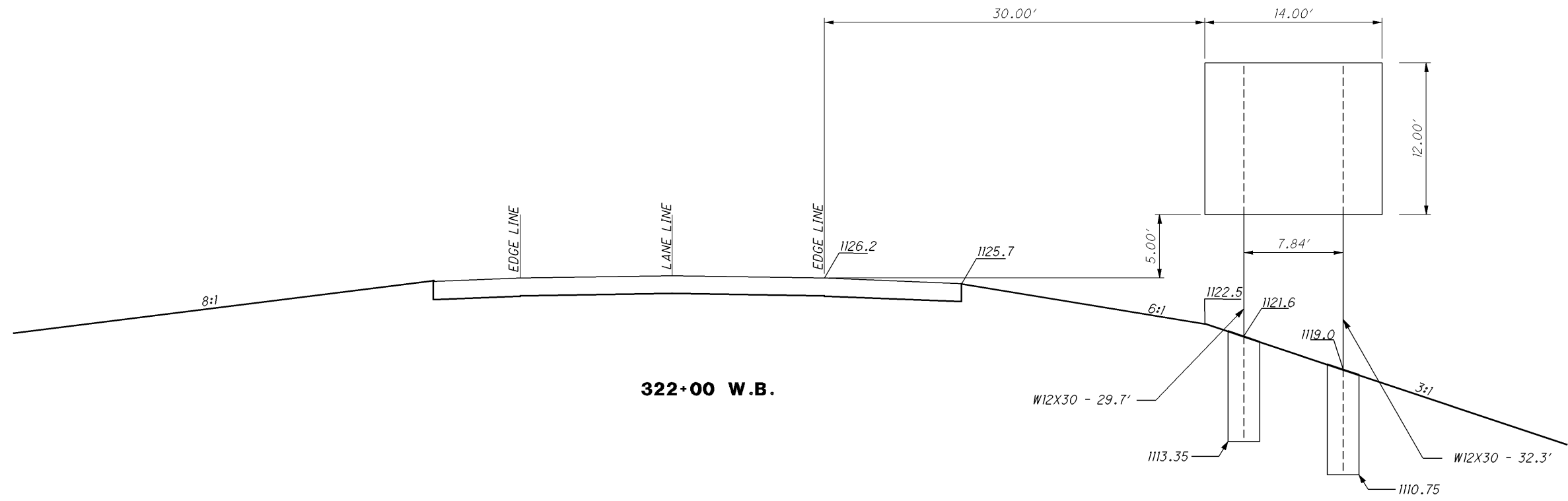


LEGEND

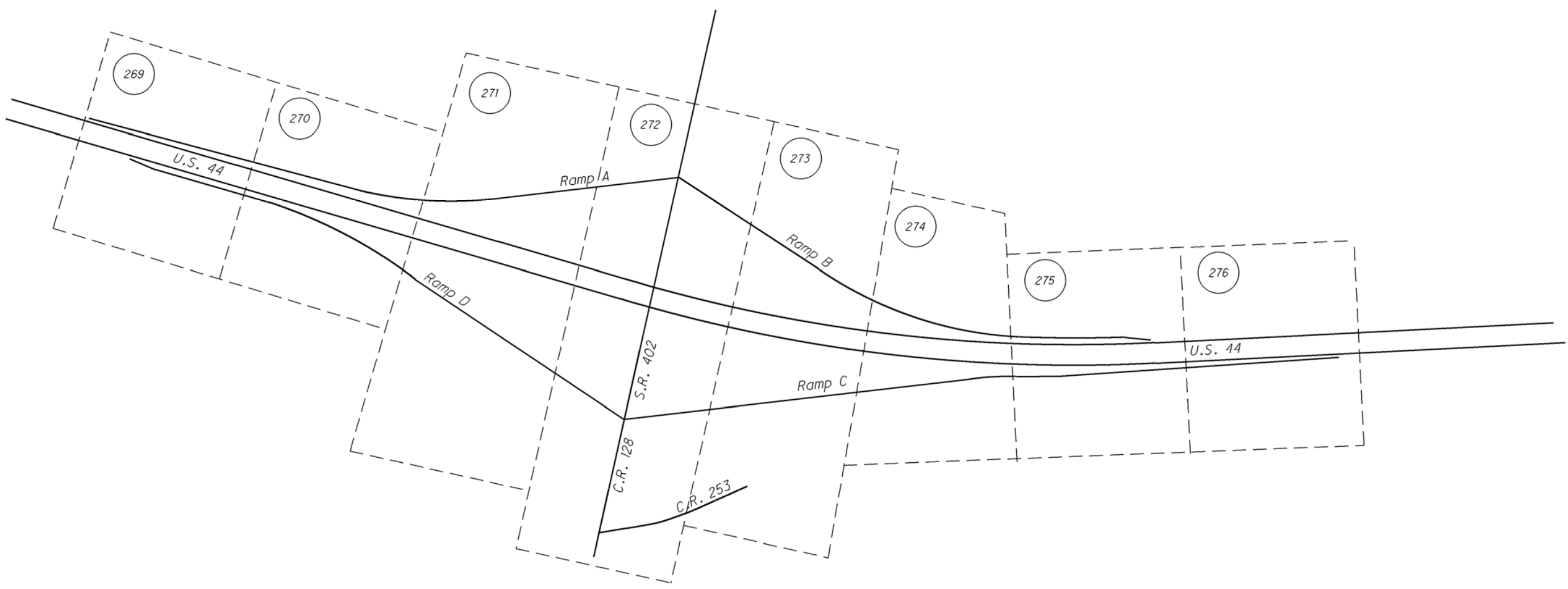
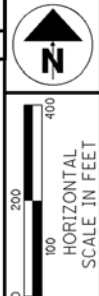
-  Proposed Sign
-  Existing Sign to Remain (Relocations Noted in Plans)
-  Existing Sign to be Removed

SEE SHEET 57 FOR ISLAND MARKING DETAIL

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



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LEGEND

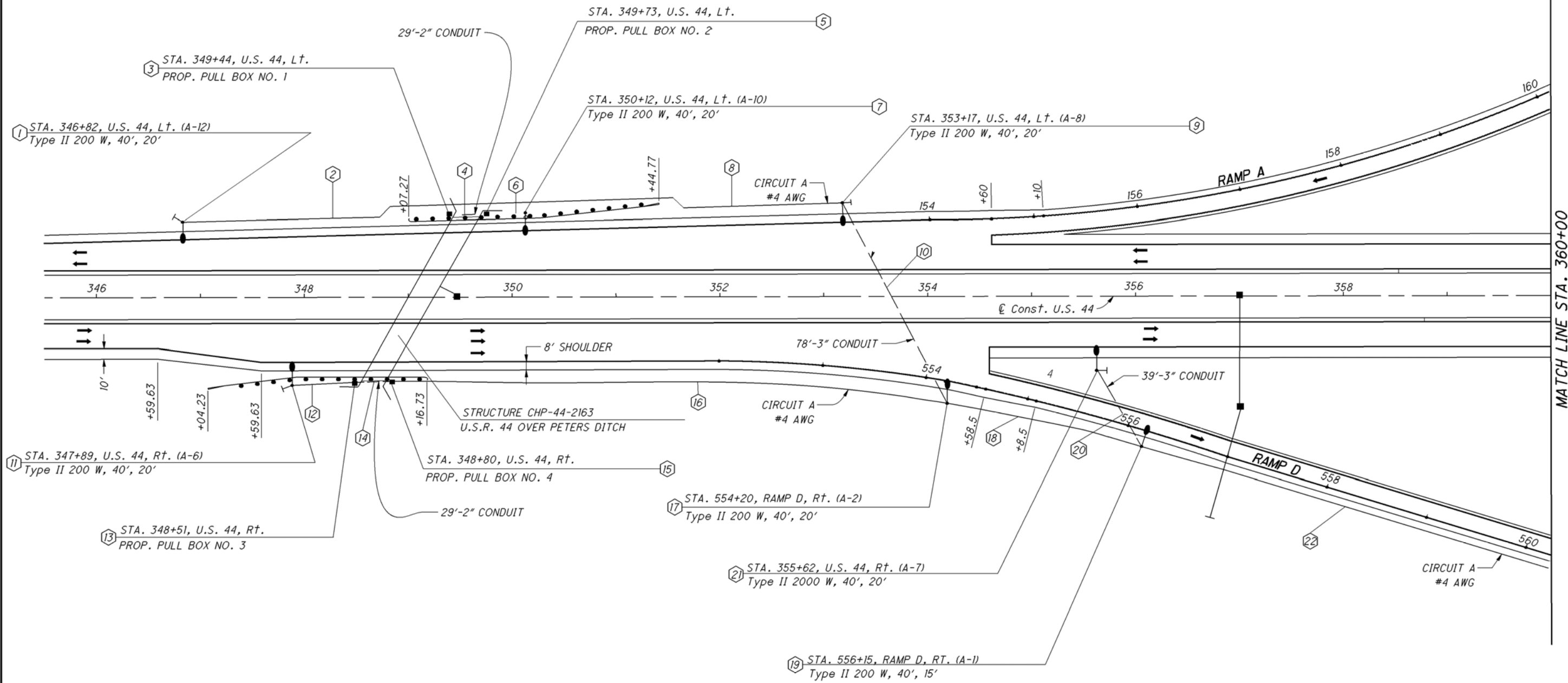
- PROPOSED GUARDRAIL
- SUB-SUMMARY REFERENCE NUMBER
- LIGHTING CIRCUIT
CONDUIT OR DUCT CABLE (AS LABELED)
WITH CONDUCTORS (AS INDICATED)
- CATCH BASIN, PIPE AND HEADWALL
- LIGHT POLE AND LUMINAIRE, INITIAL INSTALLATION
- CONTROL CENTER
- PULL BOX
- CIRCUIT STUB AND CAP

POLE LEGEND

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



CALCULATED
RMM
CHECKED
CWR



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

CHP - 44 - 11.29

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

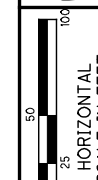
625

CALCULATED
RNM
CHECKED
CWR

REFERENCE NUMBER	SHEET No.	SIDE	ROADWAY	STATION TO STATION	Luminaire, Style B, Type II, 200 W H.P.S., 480V	Luminaire, Style B, Type III, 200 W H.P.S., 480V	Light Pole, Design AT15B40	Light Pole, Design AT20B40	Light Pole Foundation, 24" x 8' Deep	Pull Box, 725.08, 18"	Trench, 24"	Conduit, 2", 725.04	Conduit, 3", 725.04	No. 4 AWG 5000 V Distribution Cable	No. 10 AWG Pole & Bracket Cable	1/2" Duct Cable W/3 No. 4 AWG 5000 V Cables	Connection, Fused Pull-Apart	Connection, Unfused Pull-Apart	Connection, Unfused Bolted	Connection, Unfused Permanent	Power Service, As Per Plan	Ground Rod	Structure Grounding System	Plastic Caution Tape		
					EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SHEET 269																										
1	269	L†	US-44	346+82		1		1							124		2									
2	269	L†	US-44	346+82 to 349+44							262					272						1		262		
3	269	L†	US-44	349+44						1										2						
4	269	L†	US-44	349+44 to 349+73								29		117												
5	269	L†	US-44	349+73						1										2						
6	269	L†	US-44	349+73 to 350+12							39					49								39		
7	269	L†	US-44	350+12		1		1	1						124		2									
8	269	L†	US-44	350+12 to 353+17							305					315						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			222						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					72						1		62		
13	269	R†	US-44	348+51						1										2						
14	269	R†	US-44	348+51 to 348+80								29		117												
15	269	R†	US-44	348+80						1										2						
16	269	R†	44/D	348+80 to 554+20							540					550								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					205						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			95						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					425						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			198						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					266								256		
27	270	L†	SR-402	51+32						1										2						
28	270	L†	SR-402	48+78 to 51+32							20	254		792									1	20		
29	270	L†	SR-402	48+78						1										2						
30	270	L†	128/402	45+10 to 48+78							368		80			378								368		
31	270	L/R	D/128	560+30 to 45+20							660					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			180						1		170		
34	270	R†	128/C	45+20 to 475+86							1030					1040								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					110								100		
37	270	L†	CR-128	44+10																		1				
38	270	L†	CR-128	44+10 to 45+20							110					110								110		
39	270	L/R	CR-128	44+10 to 45+20							159		49			169								159		
40	270	L†	RAMP B	275+49		1		1	1						114		2									
41	270	L†	USR-44	357+98																			1			
42	270	L†	RAMP B	275+49 to 276+01							52					62							1		52	
43	270	L/R	B/44	275+49 to 357+98							83		83			93								83		
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

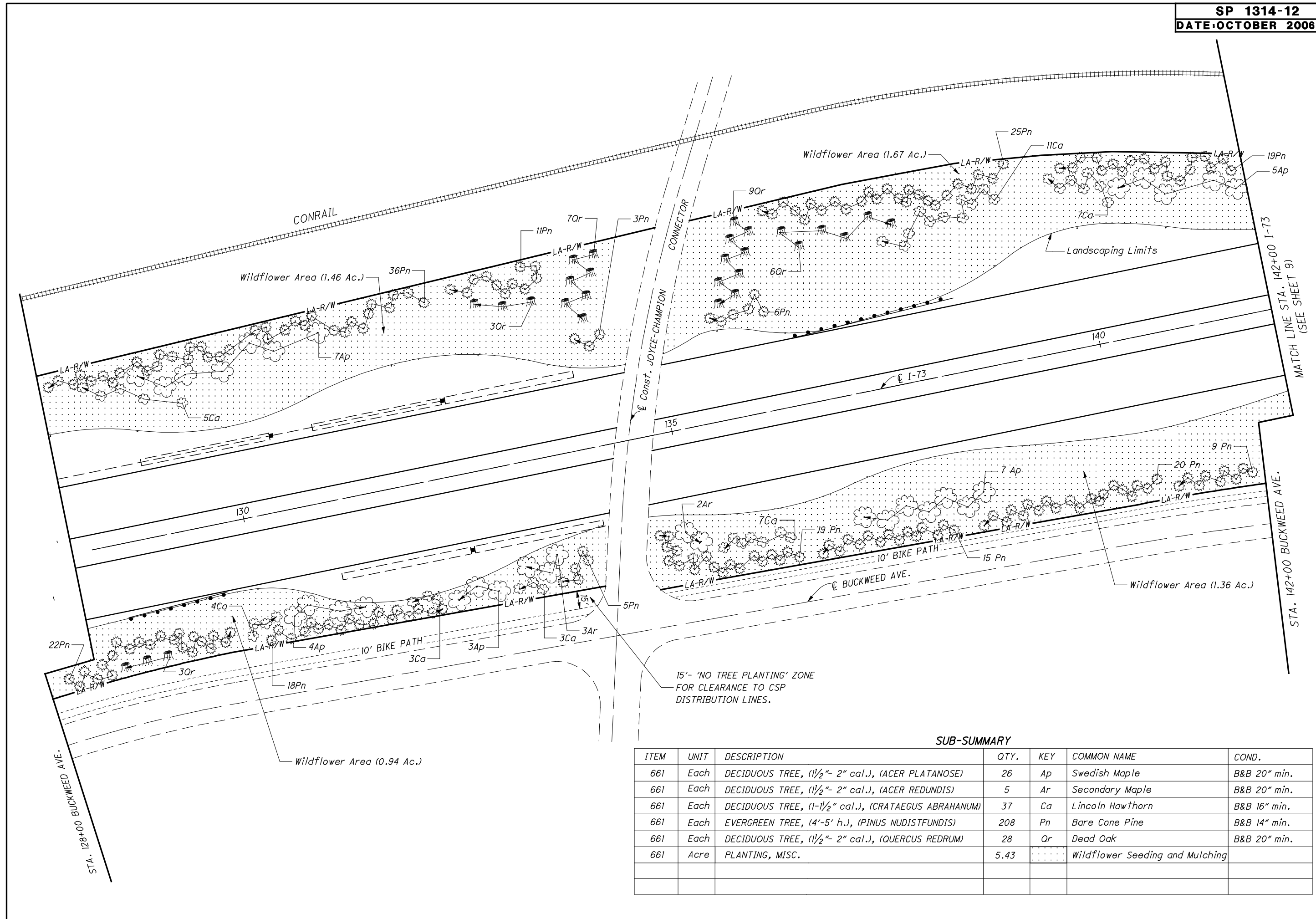
CHP - 44 - 11.29



CALCULATED
MTG
CHECKED
CJM

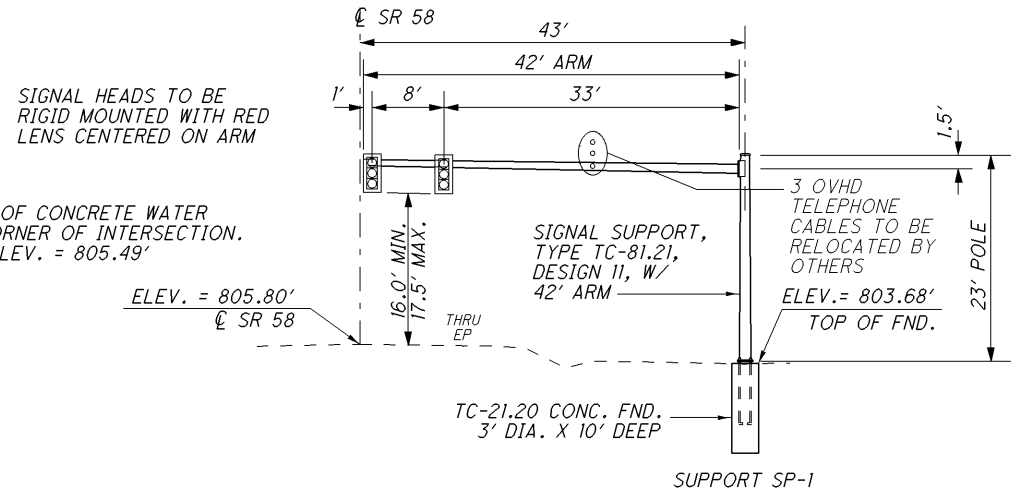
LANDSCAPING PLAN

LUC-73-3.93



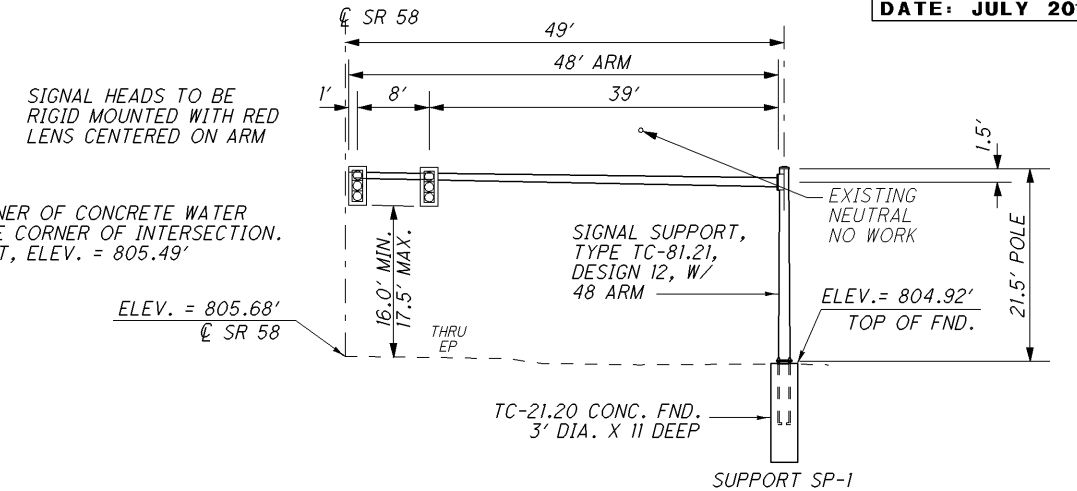
SUB-SUMMARY

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	



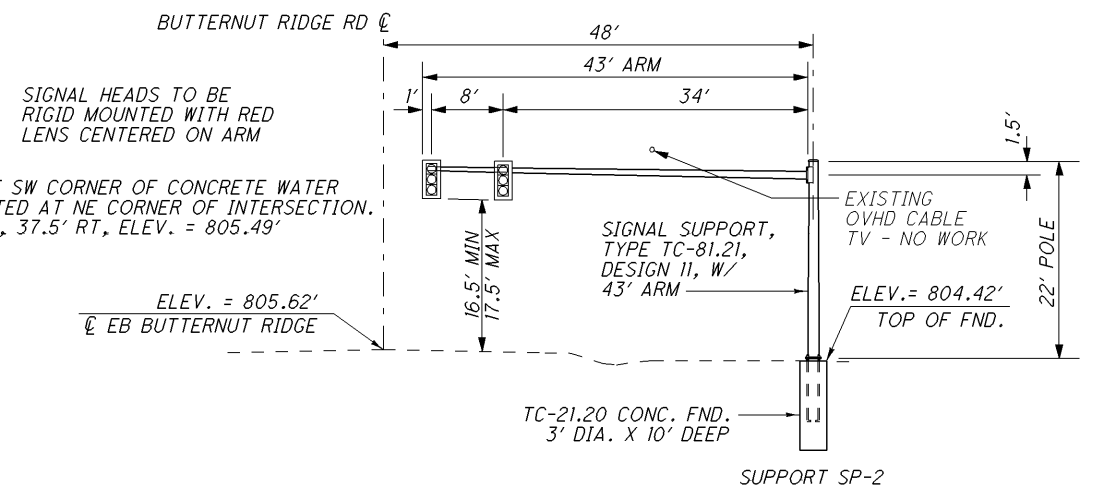
**SIGNAL SUPPORT SP-1
ELEVATION VIEW**

STA 898+69.9, 43' LT
LOOKING SOUTH



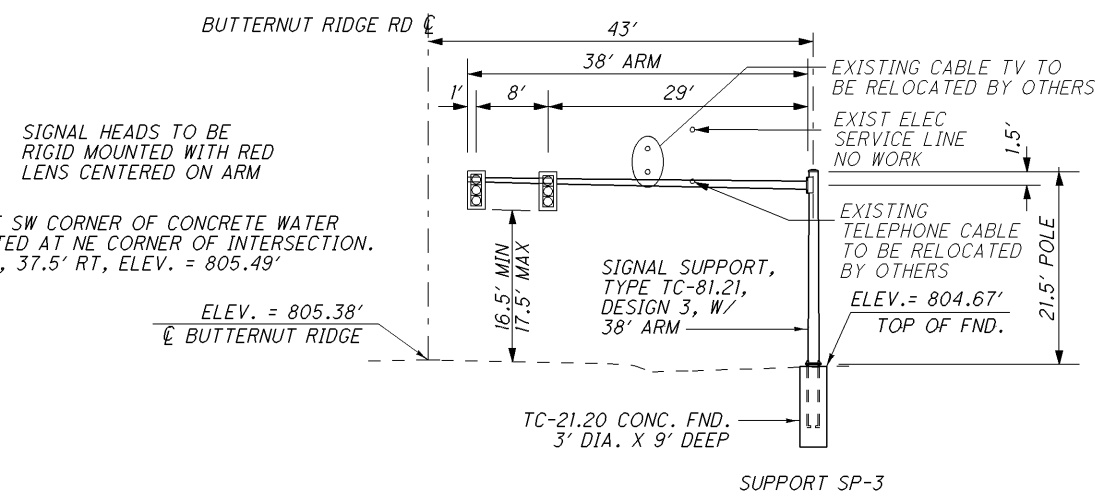
**SIGNAL SUPPORT SP-4
ELEVATION VIEW**

STA 899+60.6, 49' RT
LOOKING NORTH



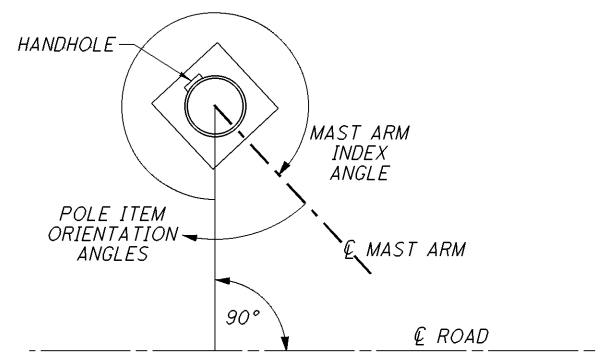
**SIGNAL SUPPORT SP-2
ELEVATION VIEW**

STA 550+43.4, 48' RT
LOOKING EAST



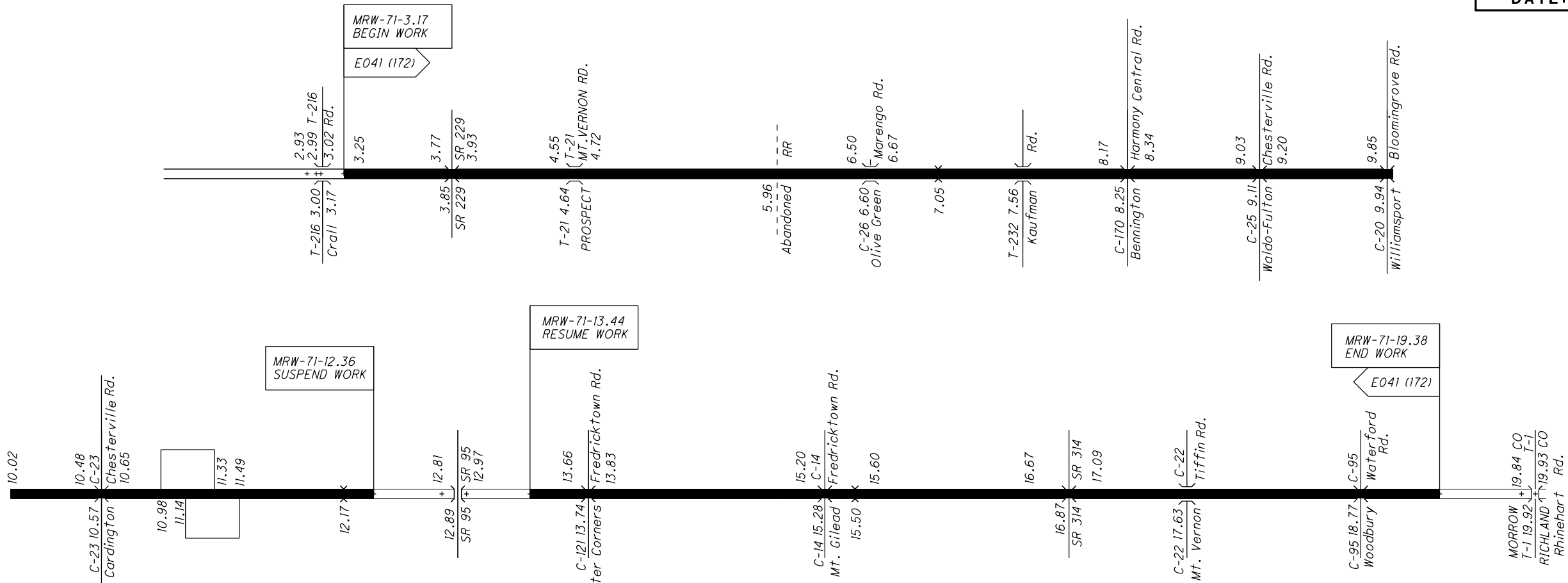
**SIGNAL SUPPORT SP-3
ELEVATION VIEW**

STA 49+65.1, 43' LT
LOOKING WEST

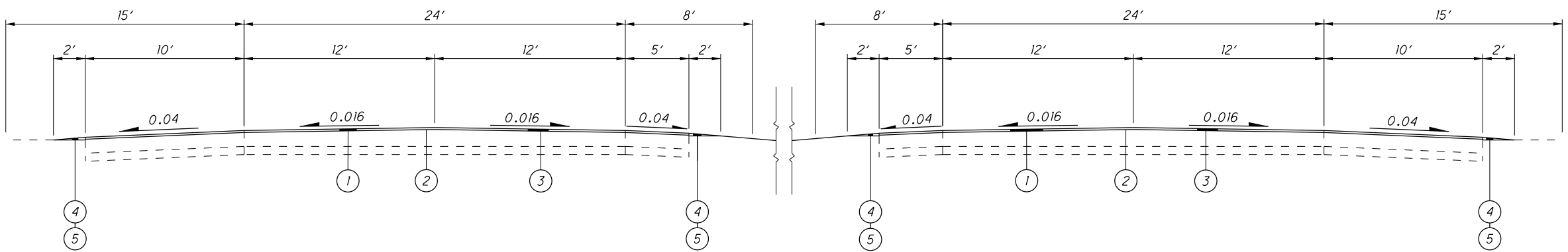


SUPPORT NO.	MAST ARM INDEX ANGLE	ORIENTATION ANGLES (DEG.) FROM MAST ARM					
		POWER SERVICE	CONTROLLER	HANDHOLE	3" CONDUIT	2" CONDUIT	2" CAPPED CONDUIT
SP-1	0°			180°	270°	90°	
SP-2	0°			180°	283°	180°	
SP-3	0°			180°	240°	90°	
SP-4	0°	90°		180°	180°	90°	

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.



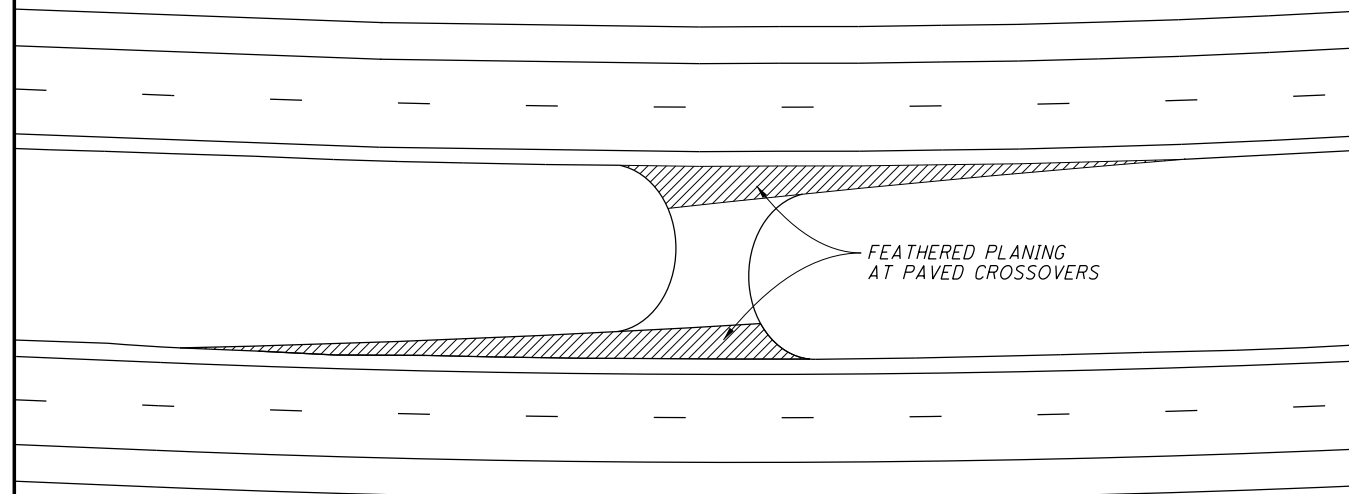
LEGEND

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

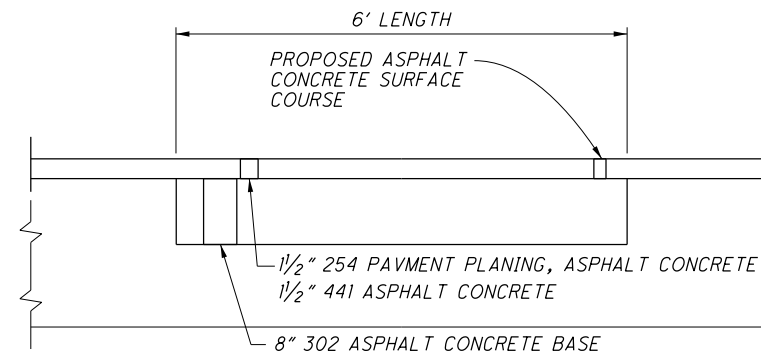
RESURFACING

MRW-71-3.17

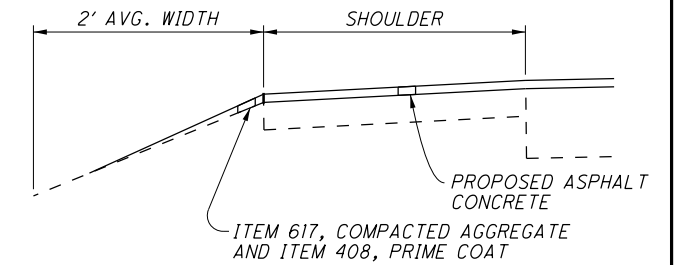
CROSSOVER DETAIL



PARTIAL DEPTH PAVEMENT REPAIR AS PER PLAN



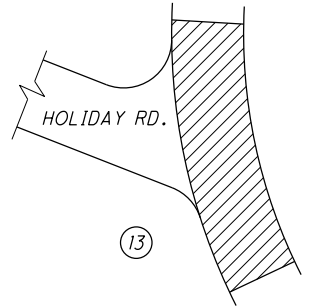
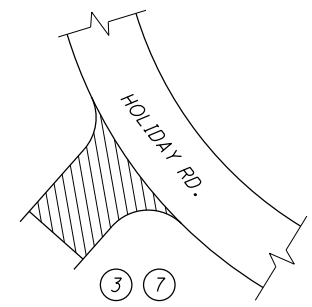
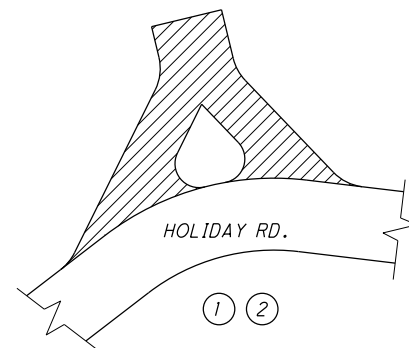
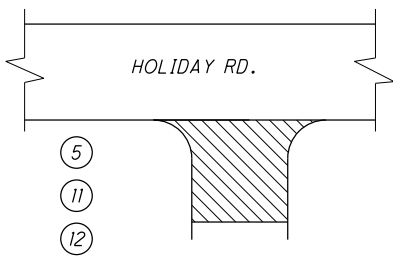
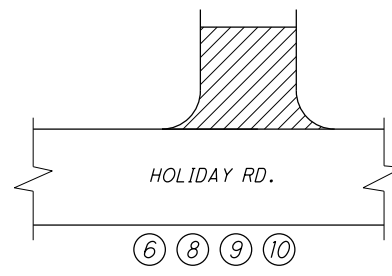
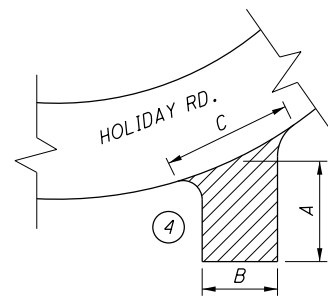
SHOULDER DETAIL



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

PAVEMENT SUBSUMMARY AND DETAILS

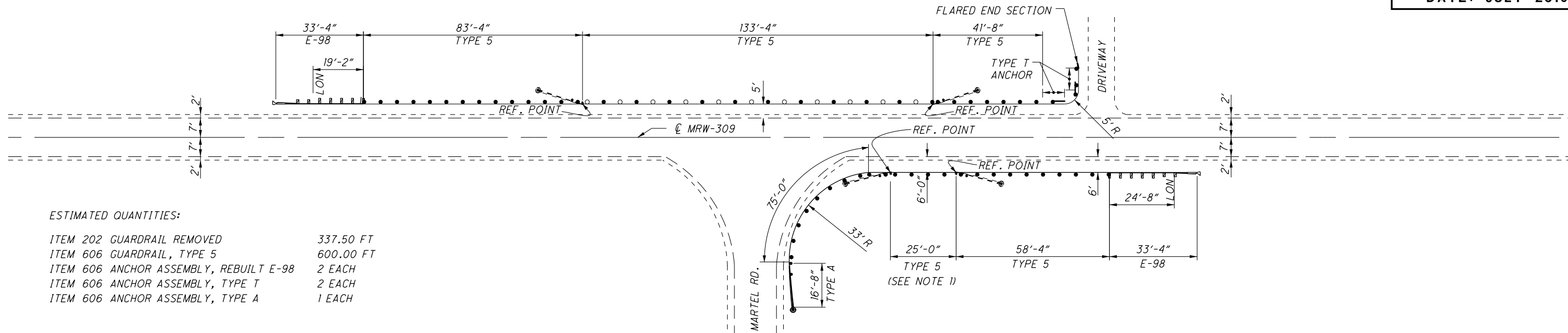
MRW - 71 - 3.17



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

CALCULATIONS

KNO - 444 - 0.00



ESTIMATED QUANTITIES:

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

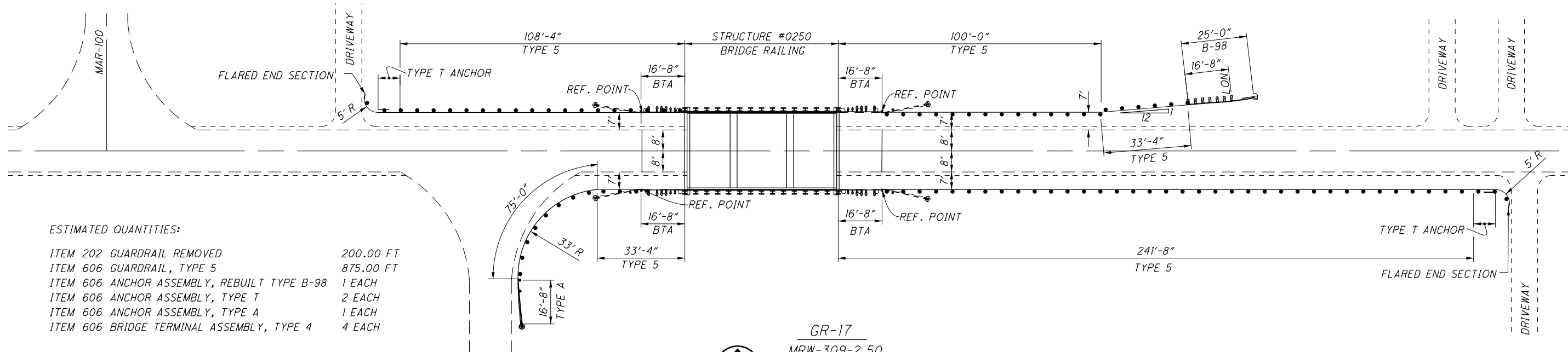
ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.



GR-16
MRW-309-2.37

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



ESTIMATED QUANTITIES:

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

ALL QUANTITIES CARRIED TO SUBSUMMARY SHEET 8.

ALL QUANTITIES CARRIED TO GENERAL SUMMARY SHEET 7.



GR-17
MRW-309-2.50