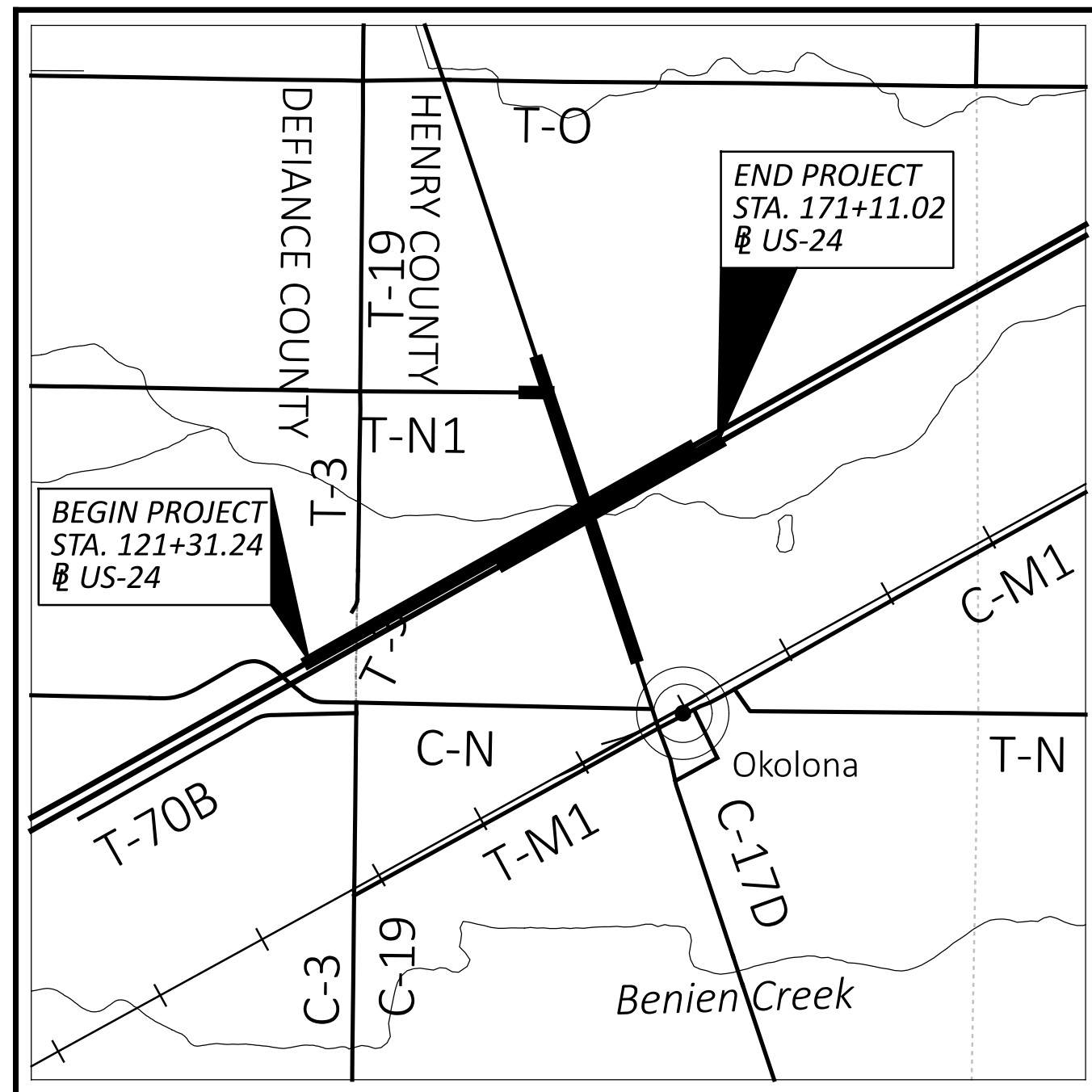


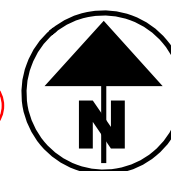
STATE OF OHIO DEPARTMENT OF TRANSPORTATION

HEN-24-0.43 NAPOLEON TOWNSHIP HENRY COUNTY



LOCATION MAP

LATITUDE: 41°21'34.70" LONGITUDE: 84°13'13.70"



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

DESIGN DESIGNATION

SEE SHEET 2

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

INDEX OF SHEETS:

TITLE SHEET	1	SUPERELEVATION TABLES	133 - 139
DESIGN DESIGNATIONS	2	INTERSECTION DETAILS	140 - 142
SCHEMATIC PLAN	3	RAMP TERMINAL DETAILS	143 - 152
TYPICAL SECTIONS	4 - 11	DRIVE DETAILS	153 - 155
GENERAL NOTES	12 - 14	CULVERTS:	
MAINTENANCE OF TRAFFIC	15 - 30	HEN-00024-0029 AND HEN-00024-0053	156 - 167
GENERAL SUMMARY	31 - 33	EXTENDED DETENTION DETAILS	168
SUBSUMMARIES	34 - 43	WATER QUALITY STRUCTURE DETAILS	169
PROJECT SITE PLAN	44	UNDERDRAIN DETAILS	170
PLAN AND PROFILE:		PAVEMENT JOINT DETAILS	171 - 175
US-24	45 - 53	TRAFFIC CONTROL	176 - 198
CR-17D	54 - 62	SIGN ELEVATION DETAILS	199 - 208
TR-N1	63	LIGHTING	209 - 218
RAMP A	64 - 66	STRUCTURES (OVER 20 FOOT SPAN):	
RAMP B	67 - 69	HEN-0017D-2.756	219 - 248
RAMP C	70 - 72	MSE WALLS:	
RAMP D	73 - 75	WALL NO. 2 AND WALL NO. 3	249 - 254
CROSS SECTIONS:		FENCE PLAN	255 - 259
CROSS SECTION LAYOUT	76	RIGHT-OF-WAY	RW.1 - RW.23
US-24	77 - 99	GEOTECHNICAL PROFILES	1 - 56
CR-17D	100 - 112		
RAMP A	113 - 116		
RAMP B	117 - 121		
RAMP C	122 - 127		
RAMP D	128 - 132		

FEDERAL PROJECT NUMBER

E220 (680)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REPLACING AT-GRADE INTERSECTION ON US-24 AT CR-17D IN HENRY COUNTY WITH A NEW DIAMOND INTERCHANGE, INCLUDING A NEW BRIDGE OVER US-24.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	43.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	12.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	55.9 ACRES

LIMITED ACCESS

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

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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

Pat McColley, P.E., S.I.
District 02 Deputy Director

Pamela Boratyn
Director, Department of Transportation

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

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

PLAN PREPARED BY: BURGESS & NIPLE, INC.
330 RUSH ALLEY, SUITE 700
COLUMBUS, OH 43215

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS			
BP-2.1	1/21/2022	DM-1.1	7/17/2020	MGS-5.3	7/15/2016	TC-65.11	1/19/2024	MT-101.60	4/21/2023	HL-50.21	7/15/2022	800	7/19/2024	WATERWAY PERMIT SPECIAL PROVISIONS 3/8/2024	
BP-2.2	1/15/2021	DM-1.2	7/16/2021	MGS-6.2	7/19/2019			MT-102.10	7/21/2023	HL-60.11	7/21/2017	846	4/17/2015		
BP-3.1	1/19/2024	DM-2.1	1/18/2013					MT-95.30	7/19/2019	MT-105.10	1/17/2020	800-2019	7/21/2023		
BP-4.1	7/19/2013	DM-4.1	7/17/2020	RM-4.5	7/21/2017	RM-4.6	7/19/2013	MT-95.40	7/21/2023	AS-1-15	1/20/2023	PSID-1-13	1/20/2023	840	7/21/2023
BP-5.1	7/15/2022			RM-7.1	7/18/2014	TC-42.31	4/15/2022	MT-95.45	7/21/2023	AS-2-15	7/21/2023	SICD-1-21	1/19/2024	878	1/21/2022
		WQ-1.2	1/15/2016	RM-7.1	7/18/2014	TC-42.31	4/15/2022	MT-95.50	7/21/2017	AS-2-15	7/21/2023	SICD-2-14	1/15/2021	808	1/18/2019
CB-2-2B	1/20/2023			MT-97.12	1/20/2017			MT-97.12	1/20/2017	HL-10.12	7/21/2023	VPF-1-90	7/21/2023	832	7/21/2023
CB-2-3	1/20/2023	F-2.1	7/20/2018	TC-21.21	1/20/2023	TC-41.20	10/18/2013	MT-99.20	4/19/2019	HL-10.11	7/21/2023			908	10/20/2017
CB-2-4	7/19/2024	F-3.4	7/19/2013	TC-41.10	7/19/2013	MT-99.30	1/17/2020	HL-10.12	7/21/2023	HL-10.12	7/21/2023			807	1/21/2022
				TC-41.20	10/18/2013	MT-99.60	7/19/2024	HL-10.13	1/20/2023					813	7/21/2023
I-3D	7/15/2022	MGS-1.1	7/16/2021	TC-41.25	7/17/2015	MT-101.70	1/19/2024	HL-20.11	7/21/2023					821	4/20/2012
		MGS-2.1	1/19/2018	TC-41.30	4/21/2023	MT-101.75	7/21/2023	HL-30.11	7/21/2023					850	7/21/2023
MH-3	1/19/2024	MGS-2.4	7/19/2019	TC-42.10	10/18/2013	MT-101.90	7/21/2023	HL-30.21	4/17/2020					905	4/17/2020
		MGS-3.1	1/19/2018	TC-42.20	10/18/2013	MT-102.20	7/15/2022	HL-30.22	1/15/2021					921	4/20/2012
HW-2.2	7/20/18	MGS-4.2	7/19/2013	TC-51.11	1/15/2016	MT-103.10	1/21/2022	HL-30.31	7/19/2024					AASHTO M 168	1/01/2012
		MGS-5.2	7/15/2016	TC-65.10	1/17/2014	MT-104.10	1/19/2024	HL-40.20	7/19/2024					CMS 712.06	11/15/2022

ENGINEER'S SEAL:	ENGINEER'S SEAL:
SIGNED:	SIGNED:
DATE:	DATE:

ENGINEER'S SEAL:	ENGINEER'S SEAL:	ENGINEER'S SEAL:
SIGNED:	SIGNED:	SIGNED:
DATE:	DATE:	DATE:

TITLE SHEET

DESIGN AGENCY

B&N
burgessniple.com

DESIGNER
NJL

REVIEWER
MRT 10-14-24

PROJECT ID
117712

SHEET TOTAL
1 | 259

HEN-24-0.43

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/6/25 TIME: 4:04:47 PM USER: binder pvc:\bnpw\benley.com\bnpw\01\Documents\117712\400-Engineering\Roadway\Sheets\117712_G1001.dgn

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.

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

GAS
ANR PIPELINE
6357 SR 66
DEFIANCE, OH 43512
419.783.3135

TELECOMMUNICATIONS
BRIGHTSPEED COMMUNICATIONS
1120 SOUTH TRYON STREET
SUITE 700
CHARLOTTE, NC 28203

TELECOMMUNICATIONS
FARMERS MUTUAL TELEPHONE
N012 CR 17D
NAPOLEON, OH 43545
419.758.3322

SEWER & WATER
NORTHWESTERN WATER & SEWER
PO BOX 348
BOWLING GREEN, OH 43402
419.354.9090

GAS
OHIO GAS COMPANY
PO BOX 528
BRYAN, OH 43506
800.331.7396

ELECTRIC
TOLEDO EDISON
6099 ANGOLA ROAD
HOLLAND, OH 43528
419.249.5218

EXISTING PLANS

EXISTING PLANS ENTITLED DEF/HEN-24-12.03/0.00 MAY BE INSPECTED IN THE ODOT DISTRICT 2 OFFICE IN BOWLING GREEN, OH.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 3 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT REAL TIME NETWORK (2011) & DIFFERENTIAL LEVELING

MONUMENT TYPE: 3/4" IRON PINS & CAPS SET (TYPE B)

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) EPOCH 2010.00
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: HENRY COUNTY
COMBINED SCALE FACTOR: 1.000027
ORIGIN OF COORDINATE SYSTEM:
CENTRAL LATITUDE: N 40d03'00"
FALSE NORTHING: 0 METERS
FALSE EASTING: 50,000 METERS

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

UNITS ARE IN 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

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

FENCE LENGTHS

THE LENGTHS OF FENCE AND FENCE REMOVED SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607 AND ITEM 202 RESPECTIVELY.

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

ITEM 202 – FENCE REMOVED

PAYMENT FOR ALL LABOR AND MATERIALS ASSOCIATED WITH REMOVAL AND DISPOSAL OF ALL EXISTING CORNER, INTERMEDIATE, AND END ANCHOR POST ASSEMBLIES, STREAM CROSSINGS, AND SUBSURFACE CONCRETE EASEMENTS FOR FENCE POSTS SHOWN WITHIN LIMITS OF FENCE REMOVAL IN THE FENCE PLANS TO BE INCLUDED IN BID PRICE FOR ITEM 202 - FENCE REMOVED

ITEM 606 – ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH REBOUNDABLE RETROREFLECTIVE SHEETING, PER CMS 730.191.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 607 – FENCE, TYPE 47

PAYMENT FOR ALL MATERIALS AND LABOR ASSOCIATED WITH INSTALLING CORNER, INTERMEDIATE, AND END ANCHOR POST ASSEMBLIES AND STREAM CROSSINGS PER ODOT SCD F-3.4 AS APPROVED BY THE ENGINEER TO BE INCLUDED IN BID PRICE FOR ITEM 607 - FENCE, TYPE 47.

ITEM 609 – REMOVAL MISC. : METAL POLE

CONTRACTOR TO FOLLOW REQUIREMENTS LAID OUT IN ODOT CSM 202. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL COMPONENTS OF THE METAL POLES QUANTIFIED IN THE PLANS, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR THIS ITEM INCLUDES ALL LABOR, MATERIALS. AND EQUIPMENT NEEDED FOR REMOVAL AND DISPOSAL.

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN

IN ADDITION TO THE REQUIRMENTS OF 659, THE CONTRACTOR SHALL NOT PERFORM ANY FINAL SEEDING AND MULCHING IF SUBSTANTIAL RAIN IS FORECASTED WITHIN 48 HOURS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL NOT PERFORM SEEDING AND MULCHING WITHOUT WRITTEN APPROVAL IDENTIFYING THE AREAS APPROVED FOR SEEDING BY STATION RANGE OR BY PROPERTY ADDRESS.

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

ITEM 659, SOIL ANALYSIS TEST	2	EACH
ITEM 659, TOPSOIL	11469	CY
ITEM 659, COMMERCIAL FERTILIZER	13.95	TONS
ITEM 659, LIME	21.35	ACRES
ITEM 659, REPAIR SEEDING AND MULCHING	5166	SY
ITEM 659, INTER-SEEDING	5166	SY
ITEM 659, WATER	558	M. GAL.
ITEM 659, MOWING	232	M. SF

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 SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

SEE THIS SHEET FOR EARTHWORK SUBSUMMARY.

ITEM SPECIAL - MAILBOX REMOVED AND RESET

CONTRACTOR TO REMOVE AND RESET ALL MAILBOXES QUANTIFIED IN THE PLANS FOLLOWING THE REQUIREMENTS OF ODOT CMS 202. CONTRACTOR SHALL STORE MAILBOXES TEMPORARILY DURING CONSTRUCTION.

PAYMENT FOR THIS ITEM INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NEEDED FOR REMOVAL, STORAGE, AND RESETTING OF THE MAILBOXES. ANY DAMAGE TO EXISTING MAILBOXES DURING REMOVAL, STORAGE, OR INSTALLATION SHALL BE PAID FOR BY THE CONTRACTOR.

EARTHWORK SUBSUMMARY

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

	ITEM 203 - EXCAVATION	ITEM 203 - EMBANKMENT	ITEM 659 - SEEDING & MULCHING
BANNER SCHOOL RD (NORTH)	0 CU. YD.	88 CU. YD.	396 SQ. YD.
BANNER SCHOOL RD (SOUTH)	0 CU. YD.	340 CU. YD.	1,531 SQ. YD.
US-24	10,621 CU. YD.	5,694 CU. YD.	27,153 SQ. YD.
CR-17D	3,921 CU. YD.	91,859 CU. YD.	28,442 SQ. YD.
RAMP A	2,713 CU. YD.	11,448 CU. YD.	9,433 SQ. YD.
RAMP B	5,607 CU. YD.	17,592 CU. YD.	12,892 SQ. YD.
RAMP C	3,089 CU. YD.	18,935 CU. YD.	13,556 SQ. YD.
RAMP D	1,400 CU. YD.	20,055 CU. YD.	9,921 SQ. YD.
DETENTION BASIN	7,027 CU. YD.		
TOTALS CARRIED TO GENERAL SUMMARY	34,378 CU. YD.	166,011 CU. YD.	103,324 SQ. YD.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. (PREVIOUS CONSTRUCTION PLANS, PROJECT NO. 19047, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 2 OFFICE). PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO AND TIED TO EXISTING CONCRETE, THE CONTRACTION JOINT SPACING REQUIRED IN STANDARD CONSTRUCTION DRAWING BP-2.2 WILL BE WAIVED. CONSTRUCT CONTRACTION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL CONTRACTION JOINTS IN THE EXISTING CONCRETE PAVEMENT. INSTALL EXPANSION JOINTS IN THE NEW CONCRETE PAVEMENT TO FORM A CONTINUOUS LINE WITH ALL EXPANSION JOINTS IN THE EXISTING CONCRETE PAVEMENT.

ROUNDING

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

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE RIGHT OF WAY LIMITS WITH ITEM 611, CONDUIT, TYPE E, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PLUG EXISTING FARM DRAINS WITHIN THE RIGHT OF WAY, AS INDICATED ON THE PLANS. PAYMENT FOR THE FARM DRAIN PLUGS IS INCLUDED IN ITEM 602 BELOW.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 602, CONCRETE MASONRY	2 CU. YD.
ITEM 611, 8" CONDUIT, TYPE E	5,900 FT
ITEM 611, 8" CONDUIT, TYPE F	200 FT
ITEM 601, ROCK CHANNEL PROTECTION TYPE C WITH FILTER	6 CU. YD.

ITEM 609, CURB, TYPE 4-C, AS PER PLAN

THIS ITEM SHALL FOLLOW ALL SPECIFICATIONS AND REQUIREMENTS IN CMS 609 AND ODOT STANDARD CONSTRUCTION DRAWING BP-5-1 EXCEPT THE HEIGHT AND WIDTH WILL MATCH THE HEIGHT AND WIDTH OF EXISTING CURB ON DRIVE 1.

DESIGN AGENCY



DESIGNER

NJL

REVIEWER

MRT 10-14-24

PROJECT ID

117712

SHEET

12

TOTAL

259

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 611, 6" CONDUIT, TYPE F	100 FT.
ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS	100 FT.

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM SPECIAL-SETTLEMENT PLATFORMS:

DESCRIPTION: THIS ITEM CONSISTS OF FURNISHING, CONSTRUCTING, AND MAINTAINING SETTLEMENT PLATFORMS AND OBTAINING SETTLEMENT READINGS AS REQUIRED BY THE PLANS OR AS DIRECTED BY THE ENGINEER. AT THE OPTION AND EXPENSE OF THE CONTRACTOR, ADDITIONAL SETTLEMENT PLATFORMS MAY BE INSTALLED AT LOCATIONS APPROVED BY THE ENGINEER. SETTLEMENT READINGS SHALL BE TAKEN WEEKLY DURING CONSTRUCTION AND DURING ANY SPECIFIED WAITING PERIOD. THE READINGS SHALL BE PLOTTED ON GRAPH PAPER PRESENTING DEFORMATION (ON THE NEGATIVE Y-AXIS) AND FILL HEIGHT (ON THE POSITIVE Y-AXIS) VERSUS TIME (ON THE X-AXIS). A COPY OF EACH CUMULATIVE PLOT SHALL BE SENT TO THE DISTRICT GEOTECHNICAL ENGINEER AND THE OFFICE OF GEOTECHNICAL ENGINEER, ATTENTION: GEOTECHNICAL DESIGN COORDINATOR, AFTER EACH SETTLEMENT READING IS RECORDED.

THE DEPARTMENT WILL CONSIDER VIBRATING WIRE SETTLEMENT MONITORING PLATFORMS IN LIEU OF THE CONVENTIONAL SETTLEMENT PLATFORMS. THE CONTRACTOR SHOULD PROVIDE DETAILS OF THE PROPOSED VIBRATING WIRE SETTLEMENT PLATFORMS AS WELL AS DESIGN DRAWINGS OF THE PROPOSED PLATFORMS AND CABLING LAYOUT TO THE ENGINEER AT LEAST 30 DAYS PRIOR TO CONSTRUCTION. THE DEPARTMENT WILL REQUIRE 10 WORKING DAYS FOR REVIEW AND APPROVAL. THE DESIGN DRAWINGS SHOULD ILLUSTRATE THE PROPOSED SETTLEMENT VIBRATING WIRE SETTLEMENT PLATFORM LOCATIONS WITH ALL EXISTING AND PROPOSED SITE FEATURES TO VERIFY THE PROPOSED CABLING WILL NOT CONFLICT WITH EXISTING FACILITIES, PROPOSED FACILITIES OR UTILITIES. NO ADDITIONAL PAYMENT WILL BE PROVIDED IF THE CONTRACTOR ELECTS TO UTILIZE VIBRATING WIRE SETTLEMENT PLATFORMS.

ITEM SPECIAL-SETTLEMENT PLATFORMS CONT. :

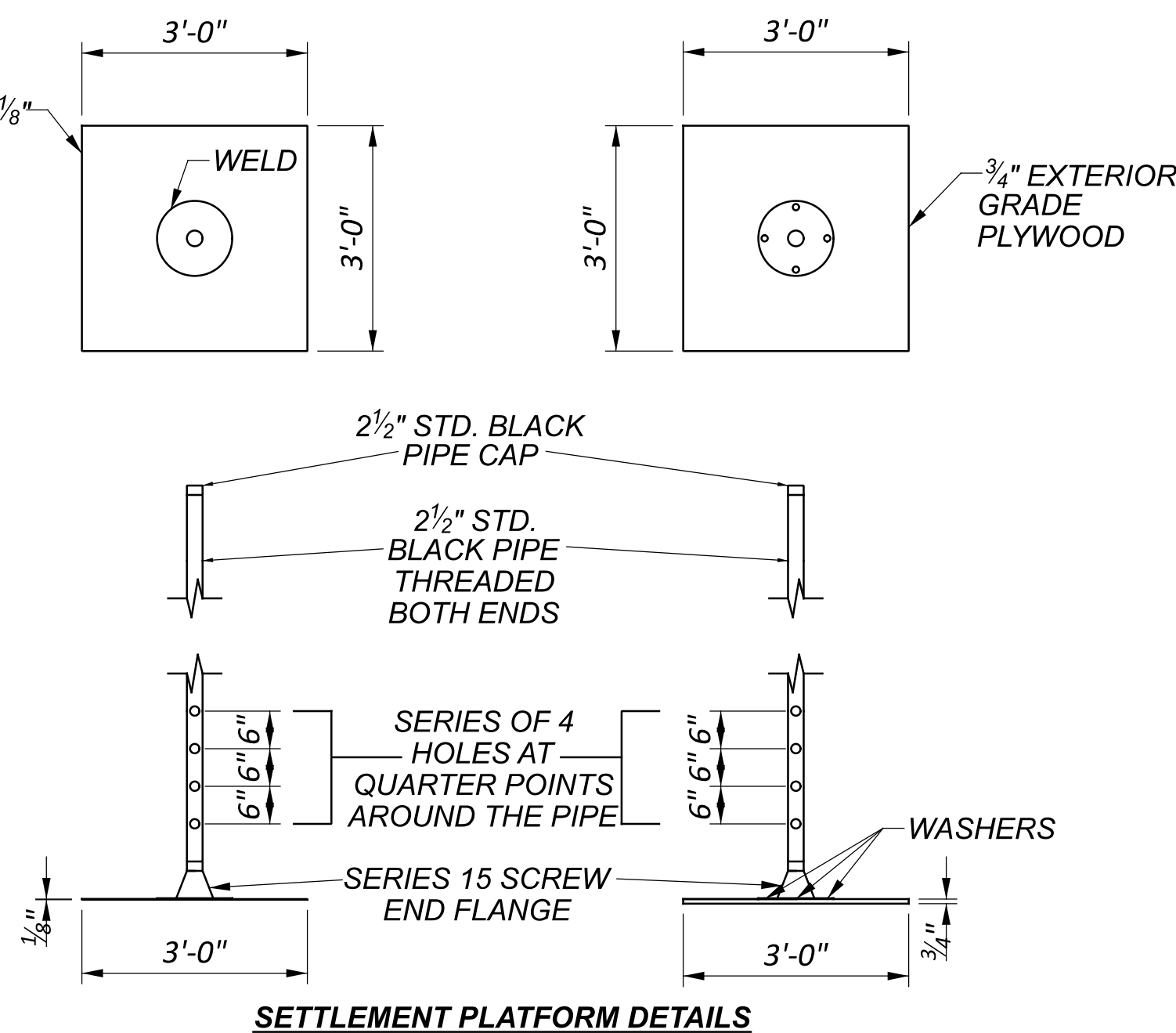
MATERIALS: SOUND LUMBER SUCH AS 3/4 INCH EXTERIOR GRADE PLYWOOD SHALL BE USED FOR THE BASE. THE PIPE SHALL BE 2 1/2" STANDARD BLACK PIPE WITH THREADED FITTINGS AS SHOWN ON THE PLANS. A STEEL PLATE 36"x36"x1/8" MAY BE SUBSTITUTED FOR THE LUMBER FOR THE PLATFORMS, AT CONTRACTORS OPTION.

CONSTRUCTION REQUIREMENTS: THE 36"x36" PLATFORM SHALL BE CONFORM TO THE DETAILS SHOWN ON THE PLANS. THE PLATFORM SHALL BE SET ON A LEVEL SURFACE. THE PIPES FALL BE FIRMLY SECURED TO THE PLATFORMS AND SHALL BE MAINTAINED IN PLUMB POSITION DURING THE PLACEMENT OF THE EMBANKMENT. PIPES SHALL BE MARKED AT INTERVALS BY THE CONTRACTOR TO FACILITATE MEASUREMENT OF THE DEPTH OF FILL. THE CONTRACTOR SHALL STOP WORK IN ANY LOCATION WHERE A SETTLEMENT PLATFORM HAS BEEN DISTURBED OR DAMAGED UNTIL THE NECESSARY CORRECTIONS OR REPLACEMENT HAS BEEN PERFORMED.

PRIOR TO PAVING, THE TOP OF THE SETTLEMENT PLATFORM PIPE SHALL BE CUT OFF 2 FEET BELOW THE FINISHED SURFACE OF THE SUBGRADE OR TOPSOIL SURFACE, WHICHEVER IS APPLICABLE.

METHOD OF MEASUREMENT: THE NUMBER OF SETTLEMENT PLATFORMS TO BE PAID FOR WILL BE THE ACTUAL NUMBER OF SETTLEMENT PLATFORMS COMPLETED, MAINTAINED, AND ACCEPTED BY THE ENGINEER.

BASIS OF PAYMENT: PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH FOR "ITEM SPECIAL, SETTLEMENT PLATFORMS" WHICH IS COMPENSATED FOR CONSTRUCTION, MAINTAINING AND MONITORING THE SETTLEMENT PLATFORMS WHICH BECOME USELESS BECAUSE OF DAMAGE INFLICTED BY THE CONTRACTOR'S OPERATIONS.



SETTLEMENT PLATES SHALL BE PLACED AT THE LOCATIONS INDICATED IN THE FOLLOWING SCHEDULE. UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CONTRACTOR HAS OPTION OF USING EITHER STEEL OR PLYWOOD PLATFORM BASE.

SETTLEMENT PLATFORMS SHALL BE ANCHORED BY STAKES DRIVEN AT EACH CORNER TO PREVENT OVERTURNING.

CLEARLY MARK THE VERTICAL PIPE IN 1 FT. ELEVATION INTERVALS FROM THE BOTTOM OF THE PLATFORM TO THE TOP OF THE PLATFORM. MAINTAIN ELEVATION DESIGNATIONS MARKS THROUGHOUT CONSTRUCTION.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203, SETTLEMENT PLATFORM	4	EACH
-------------------------------	---	------

SETTLEMENT PLATFORM SCHEDULE			
RELATIVE LOCATION	STATION	OFFSET	BASE ELEVATION (FEET)
RAMP A & RAMP B INTERSECTION	213+25	5' RT	702± (EXISTING SUBGRADE)
REAR (SOUTH) ABUTMENT	216+94	5' LT	704± (EXISTING SUBGRADE)
FORWARD (NORTH) ABUTMENT	219+65	5' RT	704± (EXISTING SUBGRADE)
RAMP B & RAMP C INTERSECTION	223+50	5' LT	700± (EXISTING SUBGRADE)

**ITEM 630 - SIGNING, MISC.: SOLID WOOD POST, 4X6
 ITEM 630 - SIGNING, MISC.: SOLID WOOD POST, 6X8**

PROVIDE AND INSTALL WOOD POSTS, OF DIMENSIONS SHOWN ON SIGN ELEVATIONS, AS SUPPORTS FOR SIGNS. SAID POSTS SHALL BE TREATED DIMENSIONAL LUMBER CONFORMING WITH AASHTO M 168 AND CMS 712.06. POSTS SHALL BE MODIFIED PER TEM FIGURE 298-26 TO ENSURE BREAKAWAY CHARACTERISTICS.

WOOD POST SHALL BE PRESSURE TREATED WITH CHROMATED-COPPER-ARSENATE (CCA) PRESERVATIVE. RETENTION SHALL BE A MINIMUM OF 0.40 LBS/FT.

LAG SCREWS SHALL BE USED TO ATTACH FLATSHEET SIGNS TO WOOD POSTS.

ITEM 630, GROUND MOUNTED NO. 3 POST, AS PER PLAN

THIS ITEM SHALL CONSIST OF INSTALLING A GROUND MOUNTED NO. 3 POST WITH THE EMBEDMENT DEPTH OF A MINIMUM OF 48". ADDITIONAL EMBEDMENT DEPTH IS INCLUDED IN THE PLAN QUANTITY PRICE FOR:

ITEM 630, GROUND MOUNTED NO. 3 POST, AS PER PLAN.

ITEM 630, SIGN POST REFLECTOR, AS PER PLAN

IN ADDITION TO THE POST SUPPORT, THE CONTRACTOR SHALL PROVIDE SIGN POST REFLECTORS IN ACCORDANCE WITH STD. DWG. TC 41.30 AS PART OF THIS PAY ITEM. THE SIGN POST SHALL BE REFLECTORIZED WITHIN 1" BELOW THE SIGN TO WITHIN 1' OF THE GROUND ELEVATION BELOW THE SIGN. THE REFLECTIVE SHEETING, TYPE AND MANUFACTURER, SHALL MATCH THAT OF THE PROPOSED SIGN TO ENSURE THE REFLECTIVITY IS CONSISTENT. ONLY 24" AND 36" LENGTH STRIPS SHALL BE USED.

ITEM SPECIAL - PIEZOMETER

PART 1 - GENERAL

1.1 DESCRIPTION: PORE PRESSURES SHALL BE MEASURE DURING CONSTRUCTION BY THE USE OF VIBRATING WIRE PEIZOMETERS. FURNISH VIBRATING WIRE PIEZOMETERS AT THE LOCATIONS AND MINIMUM TIP ELEVATIONS SPECIFIED IN THE PLANS.

PART 2 - SUBMITTALS

2.1 PRIOR TO THE INSTALLATION SUBMIT TO THE ENGINEER A PLAN ILLUSTRATING THE LOCATION OF THE VIBRATING WIRE PEIZOMETERS, THE PROPOSED CABLE LAYOUT AND READOUT BOX LOCATION.

A. VERIFY THAT THE VIBRATING WIRE PIEZOMETERS HARDWARE WILL NOT CONFLICT WITH EXISTING FACILITIES OR PROPOSED WORK.

2.2 SUBMIT THE PLAN FOR THE ENGINEER'S ACCEPTANCE AT LEAST 14 DAYS PRIOR TO PIEZOMETER INSTALLATION. INCLUDE EQUIPMENT SPECIFICATIONS OF THE SELECTED PIEZOMETER.

2.3 PROVIDE PROCEDURES AND DETAILS OF THE PROPOSED PIEZOMETER INSTALLATION METHODS. INCLUDE ALL EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE WORK.

PIEZOMETER SCHEDULE					
RELATIVE LOCATION	STATION	OFFSET	BASE ELEVATION (FEET)	BOTTOM ELEVATION (FEET)	MAX. PORE PRESSURE OVER INITIAL PRESSURE
RAMP A & RAMP B INTERSECTION	213+25	5' RT	702± (EXISTING SUBGRADE)	654±	60 PSI
REAR (SOUTH) ABUTMENT	216+94	5' LT	704± (EXISTING SUBGRADE)	654±	60 PSI

PART 3 - INSTALLATION

- 3.1 INSTALL PIEZOMETERS AT LEAST 14 DAYS PRIOR TO THE PROPOSED COMMENCEMENT OF THE MSE WALL/EMBANKMENT CONSTRUCTION.
- 3.2 SELECT A PIEZOMETER OF ADEQUATE ACCURACY FOR THE PRESSURES AND INSTALLATION METHOD SELECTED.
- 3.3 A MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO DIRECT AND OBSERVE THE VIBRATING WIRE PIEZOMETER INSTALLATION.
- 3.4 THE PIEZOMETERS SHALL PROVIDE PORE WATER PRESSURE READINGS AT ABOUT 5-FOOT INTERVALS FROM 5 FEET TO 50 FEET BELOW EXISTING GRADES (APPROXIMATE ELEV. 699 TO 654).
- 3.5 INSTALL THE VIBRATING WIRE PIEZOMETERS IN MINIMUM 6-INCH DIAMETER BOREHOLES PER THE MANUFACTURER'S RECOMMENDATIONS. THE PIEZOMETER CAN BE INSTALLED BY THE SAND METHOD, DIRECT GROUTING OR DIRECT PUSHING AS RECOMMENDED BY THE MANUFACTURER. UTILIZE THE INSTALLATION METHOD THAT WILL LEAST LIKELY DAMAGE THE PIEZOMETER DURING INSTALLATION AND THAT WILL PROVIDE THE MOST ACCURATE READINGS. THE VIBRATING WIRE CABLE SHALL BE OF SUFFICIENT LENGTH TO EXTEND THE CABLE TO A CONVENIENT MONITORING LOCATION THAT IS PROTECTED FROM DAMAGE.

PART 4 - MONITORING

- 4.1 OBTAIN BASELINE PIEZOMETER READINGS THREE DAYS AFTER COMPLETION AND EVERY THREE DAYS UNTIL MSE WALL/EMBANKMENT CONSTRUCTION BEGINS. INSTRUMENTS MUST COME TO EQUILLIBRIUM BEFORE CONSTRUCTION BEGINS.
- 4.2 DATA COLLECTION WILL BE COORDINATED SUCH THAT ALL DATA READINGS MADE DURING SPECIFIED INTERVALS ARE OBTAINED WITHIN A TWO-DAY PERIOD.
- 4.3 SUBMIT THE PIEZOMETER DATA RESULTS TO THE ENGINEER AND THE DISTRICT GEOTECHNICAL ENGINEER IN PDF FORMAT ON THE SAME DAY THE READING IS OBTAINED.
- 4.4 DURING ACTIVE MSE WALL/EMBANKMENT CONSTRUCTION, OBTAIN PIEZOMETER READINGS DAILY.
- 4.5 CRITICAL PORE PRESSURES/PIEZOMETER LEVELS SHALL BE PROVIDED BY THE GEOTECHNICAL ENGINEER OF RECORD PRIOR TO INSTALLATION. IMMEDIATELY HALT CONSTRUCTION IF PORE PRESSURES/PIEZOMETER LEVELS ARE EXCEEDED AND INCREASE MONITORING TO TWICE DAILY (AM/PM).
- 4.6 FOLLOWING INSTALLATION OF THE PIEZOMETERS, READOUT CABLES SHALL BE ROUTED TO THE PROPOSED READOUT BOX LOCATION. BACKFILL THE TRENCH FOR THE CABLE WITH SAND CONFORMING TO 703.02.A. THE CABLES SHALL BE BEDDED IN AT LEAST 6 INCHES OF SAND AND COVERED WITH 6 INCHES OF SAND. THE TRENCH DEPTH SHALL BE SUFFICIENT TO PROVIDE ADEQUATE PROTECTION OF THE CABLES IN THE EVENT CONSTRUCTION TRAFFIC TRAVELS OVER THE TRENCH AREAS.

PART 5 - BASIS OF PAYMENT

5.1 PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH ITEM SPECIAL - PIEZOMETER WHICH IS COMPENSATION FOR MATERIALS, INSTALLATION, MAINTAINING AND MONITORING DURING MSE WALL/ EMBANKMENT CONSTRUCTION AND THE DESIGNATED WAITING PERIODS. NO PAYMENT WILL BE MADE FOR THE PIEZOMETERS THAT BECOME DAMAGED BY THE CONTRACTOR'S OPERATIONS. PIEZOMETERS THAT BECOME DAMAGED OR INOPERABLE THROUGH NO FAULT OF THE CONTRACTOR SHALL, IF DIRECTED BY THE ENGINEER, BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THIS BID ITEM. SEVENTY-FIVE (75) PERCENT OF THE PIEZOMETER UNIT PRICE SHALL BE PAID UPON ACCEPTANCE AND THE REMAINDER UPON COMPLETION OF MONITORING

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. RW.3

ITEM 619 – FIELD OFFICE, TYPE C, AS PER PLAN

THIS ITEM SHALL BE IN ACCORDANCE WITH ITEM 619 OF THE 2023 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS EXCEPT AS MODIFIED BY THE FOLLOWING:

1. THE FIELD OFFICE WILL BE LOCATED AT 6655 PROVIDENCE STREET, WHITEHOUSE, OHIO 43571.
 2. THIS IS THE CURRENT FIELD OFFICE WHICH IS OCCUPIED AND FURNISHED.
 3. IT WILL BE USED DAILY BY ODOT PERSONNEL FOR VARIOUS PROJECTS IN THE AREA.
 4. THE FIELD OFFICE WILL NOT REQUIRE THE FOLLOWING ITEMS FROM TABLE 619.02-1 (CMS 1/1/2023): TELEPHONE SERVICE, CALCULATOR WITH TAPE, DESK WITH CHAIR SET, WORKTABLE, LOCKABLE METAL FILE CABINET, AND PLAN RACK.
 5. THE CONTRACTOR IS RESPONSIBLE FOR SETTING UP A LEASE WITH THE LANDLORD WITHIN 30 DAYS OF THE AWARD OF THE CONTRACT.
 6. THE CONTRACTOR SHALL PROVIDE CLEANING SERVICES FOR THE FIELD OFFICE A MINIMUM OF 1 TIME/EVERY TWO WEEKS.
 7. BOTTLED WATER SERVICE SHALL BE PROVIDED FOR THE OFFICE.
 8. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR ADDITIONAL REQUIREMENTS STATE ABOVE.
 9. THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED.
- LANDLORD:
 JEFFREY L. CHAMBERLAIN
 (419) 356-6620

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 619 – FIELD OFFICE, TYPE C, AS PER PLAN 20 MONTHS

ITEM SPECIAL - DRILLED WATER WELL ABANDONED

FOLLOW RULES SET FOURTH PER OAC CHAPTER 3701-28-071 REGARDING DRILLED WATER WELL ABANDONMENT. IN ADDITION TO THE OAC, THE STATE OF OHIO TECHNICAL GUIDANCE FOR SEALING UNUSED WELLS BY THE STATE COORDINATING COMMITTEE ON GROUNDWATER, DATED 1996 IS AVAILABLE FOR REFERENCE.

REMOVE AND DISPOSE OF THE EXISTING CONCRETE OR STONE SLAB WELL COVER, PUMPING EQUIPMENT AND ANY OTHER OBSTRUCTIONS. RIP OR PERFORATE THE WELL CASING. DISINFECT THE WELL TO PREVENT BACTERIAL CONTAMINATION OF THE GROUNDWATER. CUT OFF THE CASING AT LEAST 3' BELOW THE PROPOSED FINISH GRADE OUTSIDE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS. FILL THE WELL FROM THE BOTTOM TO THE TOP WITH BENTONITE SLURRY, PELLETS, CHIPS, OR CONCRETE MEETING ASTM C 150 TYPE 1, PORTLAND CEMENT WITH NO AIR ENTRAINMENT, AND THEN CAP IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS DRAWING.

REGISTRATION AS PRIVATE WATER SYSTEMS CONTRACTOR WITH THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) AS REQUIRED BY THE OHIO REVISED CODE. IF ONLY SEALING ONE WELL, A WELL LOG IS NOT REQUIRED IN ADDITION TO THE WATER WELL SEALING REPORT. ANY ADDITIONAL MATERIALS REQUIRED BY ODNR SHALL BE CONSIDERED INCIDENTAL. ODNR'S ADDRESS IS AS FOLLOWS:

OHIO DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF WATER
 2045 MORSE ROAD, BUILDING B-2
 COLUMBUS, OHIO 43229-6605
 TELEPHONE (614) 265-6739
 FAX (614) 265-6767

THE CONTRACT UNIT PRICE FOR ITEM SPECIAL, DRILLED WATER WELL ABANDONED, SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

302 ASPHALT CONCRETE BASE, AS PER PLAN, 25.0 MM GYRATORY MIX REVISED: 1/23/2025

MIX DESIGN - FOLLOW THE REQUIREMENTS OF 302.02 EXCEPT AS MODIFIED BELOW:

- THE TSR TEST PER SUPPLEMENT 1051 IS REQUIRED AND THE MINIMUM TSR IS 0.80 FOLLOWING THE 150 MM GYRATORY COMPACTED SPECIMEN PROCEDURE. USE ANTISTRIP ADDITIVE AS SPECIFIED IN 440.06.
- USE 150 MM DIAMETER SUPERPAVE GYRATORY COMPACTOR MOLDS. FILL MOLDS DURING COMPACTION IN ONE LIFT AND NOT TWO AS YOU WOULD DO WITH 302 MIXES. DO NOT SPADE. VOLUMETRIC PILL HEIGHTS OF 110 TO 120 MM. USE A PILL HEIGHT OF 95 MM FOR STABILITY AND FLOW AND CONVERT, IF NEEDED, USING TABLE 302-02-2.
- REPLACE TABLE 302-02-1 WITH THE FOLLOWING Table 403.06-1

MIX CHARACTERISTIC	OUT OF SPECIFICATION LIMITS ⁽¹⁾
ASPHALT BINDER CONTENT ⁽¹⁾	-0.30% to 0.30%
1/2 INCH (12.5 mm) SIEVE ⁽¹⁾	-6% to 6%
NO. 4 (4.75 mm) SIEVE ⁽¹⁾	-5% to 5%
NO. 8 (2.36 mm) SIEVE ⁽¹⁾	-4% to 4%
NO. 200 (75 µm) SIEVE ⁽¹⁾	-2.0% to 2.0%
AIR VOIDS ⁽²⁾	2.5% to 4.5%
MSG ⁽³⁾	-0.012 to 0.012
F/A ⁽⁴⁾	1.2 max
VMA	11.5 min

- [1] DEVIATION FROM THE JMF.
- [2] FOR DESIGN AIR VOIDS OF 3.5%. USE A GYRATORY COMPACTOR.
- [3] DEVIATION FROM THE MTD.
- [4] CALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.
- [5] DO NOT FOLLOW THE MINIMUM 7% RETAINED DURING PRODUCTION PER 403.06.F.5.

QUALITY CONTROL AND ACCEPTANCE

FOLLOW THE REQUIREMENTS AS SPECIFIED IN 403 USING 446 ACCEPTANCE EXCEPT AS MODIFIED BELOW:
 RUN MSG AND AIR VOIDS AND FOLLOW 403.06.G INSTEAD OF 403.06.F.

Table 403.06-1

MIX CHARACTERISTIC	OUT OF SPECIFICATION LIMITS ⁽¹⁾
ASPHALT BINDER CONTENT ⁽¹⁾	-0.30% to 0.30%
1/2 INCH (12.5 mm) SIEVE ⁽¹⁾	-6% to 6%
NO. 4 (4.75 mm) SIEVE ⁽¹⁾	-5% to 5%
NO. 8 (2.36 mm) SIEVE ⁽¹⁾	-4% to 4%
NO. 200 (75 µm) SIEVE ⁽¹⁾	-2.0% to 2.0%
AIR VOIDS ⁽²⁾	2.5% to 4.5%
MSG ⁽³⁾	-0.012 to 0.012
F/A ⁽⁴⁾	1.2 max
VMA	11.5 min

- [1] DEVIATION FROM THE JMF.
- [2] FOR DESIGN AIR VOIDS OF 3.5%. USE A GYRATORY COMPACTOR.
- [3] DEVIATION FROM THE MTD.
- [4] CALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.
- [5] DO NOT FOLLOW THE MINIMUM 7% RETAINED DURING PRODUCTION PER 403.06.F.5.

- FOLLOW REQUIREMENTS OF 446 AND REPLACE MSG COMPARISON IN TABLE 403.10-1 WITH 0.012.
- FOR INFORMATION ONLY AND WHEN REQUESTED BY THE DEPARTMENT UP TO FIVE DIFFERENT PRODUCTION DAYS, HOT-COMPACT 10 GYRATORY SPECIMENS PER SUPPLEMENT 1033. DO NOT TEST THESE PILLS.
- NOTIFY ERIC BIEHL - OMM 614-275-1380 AND JULIA MILLER - OCA 614-466-3165 TWO WEEKS PRIOR TO PLANNED BEGINNING PRODUCTION AND PLACEMENT. YOU MAY EMAIL THEM AS WELL.

PLACEMENT

ENSURE THE COMPACTION DEPTH OF ANY ONE LAYER IS A MINIMUM OF 4.0 INCHES AND A MAXIMUM OF 6.0 INCHES. IF THE PLAN THICKNESS IS 6.0 TO 7.75 INCHES, THE 302 MAY BE PLACED IN TWO LIFTS IF REQUESTED BY THE CONTRACTOR.

DENSITY ACCEPTANCE - FOLLOW THE REQUIREMENTS OF 446 ASPHALT CONCRETE CORE DENSITY ACCEPTANCE, INCLUDING JOINT CORES, EXCEPT AS MODIFIED BELOW:

OBTAIN 6-INCH DIAMETER CORES ON EACH LIFT PLACED. OBTAIN JOINT CORES AT COLD LONGITUDINAL JOINTS SUCH THAT THE CORE'S CLOSEST EDGE IS 6 INCHES (152 MM) FROM THE EDGE OF THE MAT. PAY FACTORS FOR EACH LIFT OF 302 APP WILL BE AS SPECIFIED IN THE FOLLOWING TABLE.

MEAN OF LOT CORE DENSITY ⁽¹⁾	PAY FACTOR
	302, APP
>98.0%	[2]
>97.0% to 98.0%	[3]
93.0% to 97.0%	1.00
92.0% to 92.9%	0.9
91.0% to 91.9%	0.8
90.0% to 90.9%	0.7
<90.0%	[4]

- [1] MEAN OF CORES AS PERCENT OF AVERAGE MSG FOR THE PRODUCTION DAY.
- [2] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.
- [3] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.70.
- [4] THE DISTRICT WILL DETERMINE WHETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

IF MATERIAL IS REMOVED AND REPLACED THE CONTRACTOR WILL REMOVE AND REPLACE THIS COURSE AND ALL COURSES PAVED ON THIS COURSE.

DESIGN AGENCY



DESIGNER

NJL

REVIEWER

MRT 10-14-24

PROJECT ID

117712

SHEET TOTAL

14 | 259

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).
FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND
AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC. WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED. IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
THE ACTIVE WORK AREA LATERALLY CLOSEST TO THE OPEN TRAVELED LANE; OR
OTHER LOCATION AS APPROVED BY THE ENGINEER.

THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS, CONT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 100 HOURS.

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

WORK ZONE SPEED ZONES (WZSZ)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISIONS HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

Table with 3 columns: WZSZ REVISION NUMBER(S), COUNTY-ROUTE-SECTION(S), DIRECTION(S). Row 1: WZ -15247, HEN-24-0.43-1.37-14.75, EB/WB

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

[WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WORK ZONE SPEED ZONES (WZSZ), CONT.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRE-CONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

Table with 5 columns: ORIGINAL POSTED SPEED LIMIT, WITH POSITIVE PROTECTION (WORKERS PRESENT, WORKERS NOT PRESENT), WITHOUT POSITIVE PROTECTION (WORKERS PRESENT, WORKERS NOT PRESENT). Rows for 70, 65, 60, 55 mph.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY [ASSUMING 4 DSL SIGN ASSEMBLY (IES) FOR 16 MONTHS 64 MONTH SIGN]

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

- 1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:


- A. COLLABORATE WITH ODOT AND SAFETY FORCES;
B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

- A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
B. FOLLOWING AN INCIDENT/CRASH:
I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
II. RECOMMEND ROADWAY REPAIR NEEDS.
III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.


SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE	12	13	15	34	35	39	40	43	44	01/SAF/04		EXT	TOTAL			
															ROADWAY	
	LS			19,080						LS	201	11000	LS		CLEARING AND GRUBBING	
				719						19,080	202	23000	19,080	SY	PAVEMENT REMOVED	
				146						719	202	35100	719	FT	PIPE REMOVED, 24" DIAMETER AND UNDER	
				1						146	202	35200	146	FT	PIPE REMOVED, OVER 24" DIAMETER	
										1	202	58000	1	EACH	MANHOLE REMOVED	
				3						3	202	58100	3	EACH	CATCH BASIN REMOVED	
				1						1	SPECIAL	20266000	1	EACH	DRILLED WATER WELL ABANDONED	34
					8,453					8,453	202	75000	8,453	FT	FENCE REMOVED	
				3						3	202	98100	3	EACH	REMOVAL MISC.:METAL POST	12
		1								1	SPECIAL	20307510	1	EACH	PIEZOMETER	13
	166,011									166,011	203	20000	166,011	CY	EMBANKMENT	
		4								4	SPECIAL	20365000	4	EACH	SETTLEMENT PLATFORM	13
	34,378			2,518						36,896	203	10000	36,896	CY	EXCAVATION	
				2,518						2,518	203	35120	2,518	CY	GRANULAR MATERIAL, TYPE C	
						15,041				15,041	204	10000	15,041	SY	SUBGRADE COMPACTION	
							9			9	204	45000	9	hour	PROOF ROLLING	
	LS						617			LS	206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
							23,793			617	206	10500	617	TON	CEMENT	
							20,214			23,793	206	11000	23,793	SY	CURING COAT	
										20,214	206	15010	20,214	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
							3,579			3,579	206	15020	3,579	SY	CEMENT STABILIZED SUBGRADE, 14 INCHES DEEP	
				2,213						2,213	606	15050	2,213	FT	GUARDRAIL, TYPE MGS	
				5						5	606	26050	5	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
				6						6	606	26150	6	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
				7						7	606	26550	7	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
				4						4	606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
					8,587					8,587	607	15000	8,587	FT	FENCE, TYPE 47	
				4						4	622	25000	4	EACH	CONCRETE BARRIER END SECTION, TYPE D	
				4						4	622	25050	4	EACH	CONCRETE BARRIER END ANCHORAGE, REINFORCED, TYPE D	
				2						2	625	75400	2	EACH	LIGHT POLE REMOVED	34
				1						1	SPECIAL	69050350	1	EACH	MAILBOX REMOVED AND RESET	12
		2								2	623	38550	2	EACH	MONUMENT ASSEMBLY, TYPE D	13
															EROSION CONTROL	
								46		46	601	21050	46	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
							250			250	601	21060	250	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
	6						153			159	601	32200	159	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
							984			984	601	45030	984	SY	DETENTION BASIN FILTER	
			600							600	616	10000	600	MGAL	WATER, DUST CONTROL	
	2									2	659	00100	2	EACH	SOIL ANALYSIS TEST	
	11,469									11,469	659	00300	11,469	CY	TOPSOIL	
	103,324									103,324	659	10000	103,324	SY	SEEDING AND MULCHING	
	5,166									5,166	659	14000	5,166	SY	REPAIR SEEDING AND MULCHING	
	5,166									5,166	659	15000	5,166	SY	INTER-SEEDING	
	13.95									13.95	659	20000	13.95	TON	COMMERCIAL FERTILIZER	
	21.35									21.35	659	31000	21.35	ACRE	LIME	
	558									558	659	35000	558	MGAL	WATER	
	232									232	659	40000	232	MSF	MOWING	
							2,013			2,013	670	00500	2,013	SY	SLOPE EROSION PROTECTION	
									LS	LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
									LS	LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
									LS	LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
									303,734	303,734	832	30000	303,734	EACH	EROSION CONTROL	
															DRAINAGE	
	2						11.2	0.6		13.8	602	20000	13.8	CY	CONCRETE MASONRY	
								16,570		16,570	605	11100	16,570	FT	6" SHALLOW PIPE UNDERDRAINS	
		100						3,552		3,652	605	13300	3,652	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
								283		283	605	13301	283	FT	6" UNCLASSIFIED PIPE UNDERDRAINS, AS PER PLAN	169
								3,470		3,470	605	14000	3,470	FT	6" BASE PIPE UNDERDRAINS	
		100								100	611	01500	100	FT	6" CONDUIT, TYPE F	
	5,900									5,900	611	02500	5,900	FT	8" CONDUIT, TYPE E	
	200									200	611	02600	200	FT	8" CONDUIT, TYPE F	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER RPD
 REVIEWER
 MRT 10-14-24
 PROJECT ID 117712
 SHEET TOTAL
 31 | 259


SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
14	15	20	21	176	177	178	179	180	181	OFFICE	01/SAF/04	EXT	TOTAL				
				2	10						12	630	97700	12	EACH	SIGNING, MISC.;SOLID WOOD POST, 4X6	13
				4	2						6	630	97700	6	EACH	SIGNING, MISC.;SOLID WOOD POST, 6X8	13
				119	175	106					400	630	07500	400	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22	
				6	12	6					24	630	09000	24	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
				1	2						3	630	72330	3	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10	
				128	274	35					437	630	80100	437	SF	SIGN, FLAT SHEET	
				346	625	132					1,103	630	80200	1,103	SF	SIGN, GROUND MOUNTED EXTRUSHEET	
				6	16	6					28	630	84500	28	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
				27	10	28					65	630	84900	65	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				3							3	630	85400	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
				32	12	55					99	630	86002	99	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
				10							10	630	86102	10	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
									92		92	644	00500	92	FT	STOP LINE	
								351			351	644	00700	351	FT	TRANSVERSE/DIAGONAL LINE	
									96		96	644	00900	96	SF	ISLAND MARKING	
									18		18	644	01300	18	EACH	LANE ARROW	
									6		6	646	20300	6	EACH	LANE ARROW	
									4		4	646	20320	4	EACH	WRONG WAY ARROW	
						0.98					0.98	807	12010	0.98	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", WHITE	
						0.81					0.81	807	12010	0.81	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6", YELLOW	
							0.05				0.05	807	12200	0.05	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, CENTER LINE	
							197				197	807	12310	197	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
							4				4	807	14010	4	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6", WHITE	
							4				4	807	14010	4	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6", YELLOW	
								3			3	807	14110	3	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"	
								1			1	807	14200	1	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CENTER LINE	
								4,785			4,785	807	14310	4,785	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"	
								2,454			2,454	807	14410	2,454	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 6"	
																MAINTENANCE OF TRAFFIC	
			4	4							8	614	12380	8	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
			5								4	614	12470	4	EACH	WORK ZONE SPEED LIMIT SIGN	
			5								5	614	12500	5	EACH	REPLACEMENT SIGN	
			166								5	614	12600	5	EACH	REPLACEMENT DRUM	
											166	614	13310	166	EACH	BARRIER REFLECTOR, TYPE 1, BI-DIRECTIONAL	
											14	614	13318	14	EACH	BARRIER REFLECTOR, TYPE 5, ONE-WAY	
											14	614	13350	14	EACH	OBJECT MARKER, ONE WAY	
											166	614	13360	166	EACH	OBJECT MARKER, TWO WAY	
											16	614	18601	16	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	15
											2.48	614	22056	2.48	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT, WHITE	
											1.72	614	22056	1.72	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807 PAINT, YELLOW	
											689	614	23110	689	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807 PAINT	
											19	614	26000	19	FT	WORK ZONE STOP LINE, CLASS I	
											7	614	30200	7	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT, TYPE 1	
											5,383	622	41110	5,383	FT	PORTABLE BARRIER, ANCHORED	
											2,799	622	41110	2,799	FT	PORTABLE BARRIER, ANCHORED, 32"	
			64								64	808	18700	64	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																INCIDENTALS	
										LS	LS	614	11000	LS		MAINTAINING TRAFFIC	
											20	619	16021	20	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	14
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LS	624	10000	LS		MOBILIZATION	
																SEE SHEET 157 FOR CULVERT QUANTITIES (HEN-00024-0029 AND HEN-00024-0053)	
																SEE SHEET 221 FOR BRIDGE QUANTITIES (HEN-0017D-2.756)	
																SEE SHEET 250 FOR WALL QUANTITIES (WALL NO. 2 AND WALL NO. 3)	

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
 RPD
 REVIEWER
 MRT 10-14-24
 PROJECT ID
 117712
 SHEET TOTAL
 33 | 259

REF NO.	SHEET NO.	STATION TO STATION		202	202	202	202	202	202	606	606	606	606	609	606	622	SPECIAL	622	609	203	203	625	SPECIAL
				PAVEMENT REMOVED SY	PIPE REMOVED, 24" AND UNDER FT	PIPE REMOVED, OVER 24" FT	MANHOLE REMOVED EACH	CATCH BASIN REMOVED EACH	REMOVAL MISC.:METAL POST EACH	GUARDRAIL, TYPE MGS FT	ANCHOR ASSEMBLY, MGS TYPE B EACH	ANCHOR ASSEMBLY, MGS TYPE E EACH	ANCHOR ASSEMBLY, MGS TYPE T EACH	CURB, TYPE 4-C FT	BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	CONCRETE BARRIER END SECTION, TYPE D EACH	MAILBOX REMOVED AND RESET EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D EACH	CURB, TYPE 4-C, AS PER PLAN FT	EXCAVATION CY	GRANULAR MATERIAL, TYPE C CY	LIGHT POLE REMOVED EACH	DRILLED WATER WELL ABANDONED EACH
R1	45	109+84.33, 28.00' RT	TO 124+11.01, 24.00' LT	3278																			
R2	46	116+22.26, 63.00' LT	117+11.26, 63.00' LT	396																			
R3	46	116+87.67, 67.00' RT	121+38.50, 455.46' RT	1531																			
R4	46	121+31.24, 52.00 LT	TO 136+56.7, 52.00 LT	1865																			
R5	47	127+77.40, 66.02 RT	135+72.65, 55.00 RT	972																			
R6	47	138+97.00 RT	153+71.00 LT	3168																			
GR1	47	138+98.69, 68.00' RT	145+86.19, 67.00' RT																			1	
UG1	47	128+29.15, 91.75' RT	138+60.03, 87.00' RT																			1	
R9	49	215+08.33, 174.87' LT																					1
R10	49	213+97.57, 168.74' LT																		433	433		
R11	56	213+36.74, 90.00' LT				146														433	433		
UG2	47	123+99.94, 91.80' LT	138+66.31, 88.60' LT																				
DR4	49	145+46.74, 98.55' RT	146+91.99, 105.55' RT			146																	
GR2	49	146+04.66, 22.50' LT	148+66.41, 14.39' LT							225	1		1										
GR3	49	143+96.20, 16.50' RT	146+67.03, 25.00' RT							225	1		1										
GR4	49	146+94.41, 65.00' LT	148+19.41, 65.00' LT							62.5	1		1										
R7	50	156+78.63, 53.00 LT	164+73.99, 53.00 LT	928																			
R8	50	156+08.89, 54.00 RT	171+11.02, 54.00 RT	1752																			
UG3	50	153+53.66, 95.40' RT	165+07.22, 92.80' RT																				
UG4	50	153+77.55, 91.40' LT	159+98.14, 87.30 LT																	378	378		
R20	54	207+88.00 RT/LT	217+89.47 RT/LT	2406																323	323		
R21	54	209+31.14, 9.93' LT	209+52.16, 45.86' LT	73																			
C1	54	209+35.53, 22.66' LT	209+35.33, 46.00' LT																23				
C2	54	209+51.84, 23.57' LT	209+52.03, 45.76' LT																23				
MB1	54	209+29.09, 14.20' LT															1						
UG5	54	209+77.17, 14.40' RT	210+00.00, 22.65' RT																	7	7		
DR22	56	209+90.00, 19.35' LT	210+53.29, 19.92' LT			64																	
DR23	56	210+53.29, 19.92' LT	212+48.43, 18.81' LT			196																	
DR24	56	212+48.43, 18.81' LT	214+32.20, 60.32' LT			189																	
R25	56	213+87.17, 75.85' LT																					
R26	56	214+23.94, 76.73' LT																					
UG6	56	210+00.00, 14.68' RT	212+79.40, 15.30' RT																				
GR19	56	211+63.77, 22.50' RT	213+11.22, 34.51' RT							87.5		1	1							83	83		
DR27	57	214+32.20, 60.32' LT	216+78.40, 70.92' LT			244																	
DR28	57	216+78.40, 70.92' LT	217+05.29, 72.35' LT			26																	
R29	57	216+68.68, 98.63' LT																					
R30	57	218+71.20 LT	229+96.00 RT	2711																			
GR20	57	215+00.20, 25.50' LT	216+64.35, 20.50' LT							87.5		1		20	1	1				1			
GR21	57	215+00.32, 25.50' RT	216+64.47, 20.50' RT							87.5		1		20	1	1				1			
UG7	57	215+24.48, 15.50' RT	217+29.58, 73.00' RT																	65	65		
UG8	57	215+33.33, 19.00' LT	216+79.46, 66.70' RT																	43	43		
UG9	57	219+36.86, 92.50' RT	220+00.00, 23.02' RT																	35	35		
UG10	57	219+19.76, 96.80' LT	220+00.00, 30.62' LT																	40	40		
GR22	59	220+01.08, 20.50' LT	222+02.73, 25.50' LT							125		1		18.4	1	1				1			
GR23	59	220+01.20, 20.50' RT	222+02.85, 25.50' RT							125		1		18.4	1	1				1			
UG11	59	220+00.00, 15.02' RT	225+00.00, 21.05' RT																				
UG12	59	220+00.00, 14.91' LT	225+00.00, 26.13' LT																				
GR24	59	223+93.90, 27.41' LT	225+42.83, 22.50' LT							87.5		1	1							148	148		
UG13	60	225+00.00, 13.05' RT	229+96.00, 20.81' RT																				
UG14	60	225+00.00, 10.76' LT	228+69.03, 17.70' LT																	147	147		
UG15	60	229+16.72, 17.01' LT	229+96.04, 17.54' LT																	109	109		
GR40	74	707+36.58, 8.00' LT	712+38.32, 14.00' LT							450		1								24	24		
TOTALS CARRIED TO GENERAL SUMMARY				19080	719	292	1	3	3	1563	4	6	6	77	4	4	1	4	46	2416	2416	2	1

ROADWAY SUBSUMMARY

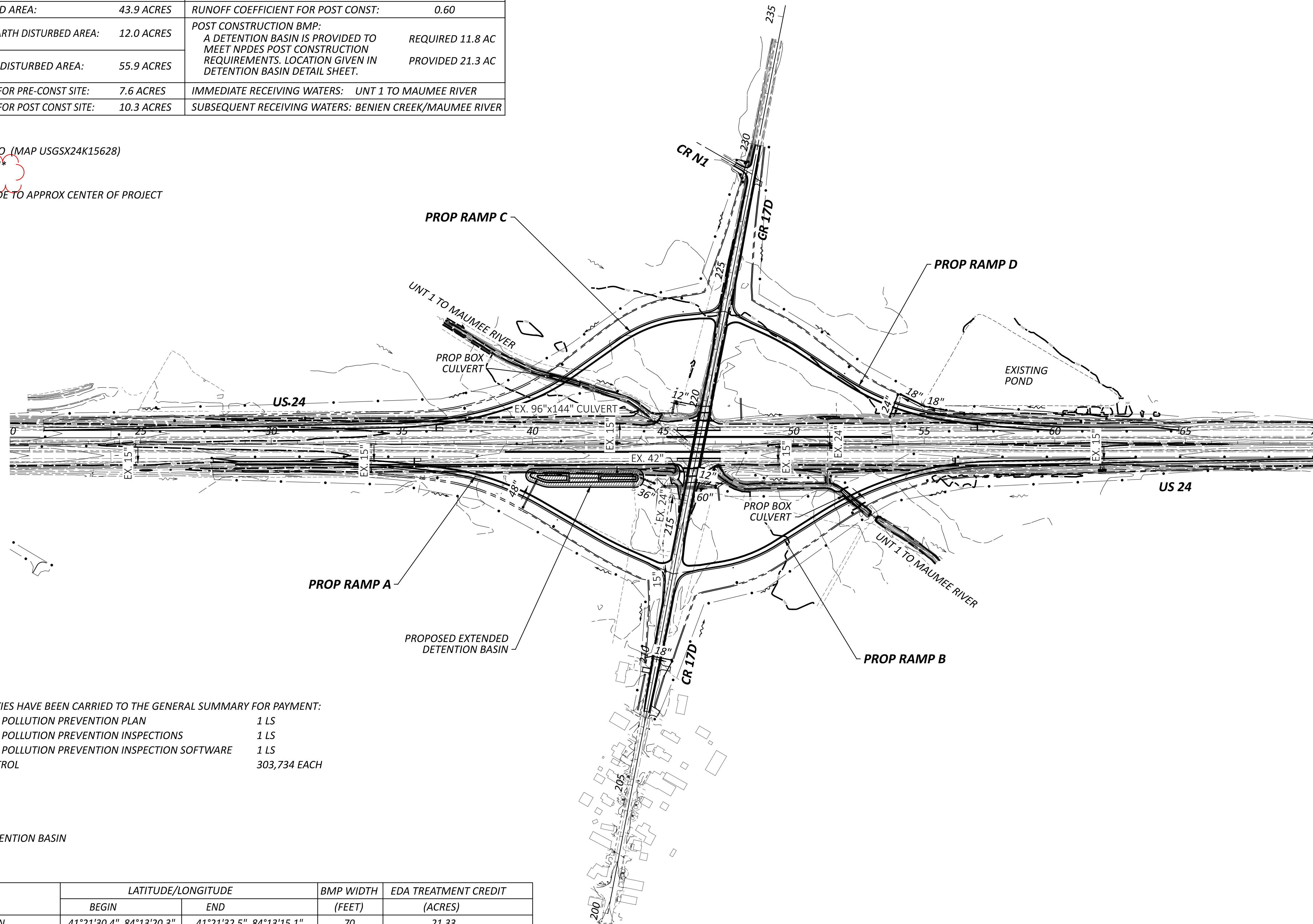
DESIGN AGENCY

 DESIGNER
ENR
 REVIEWER
MRT 10-14-24
 PROJECT ID
117712
 SHEET TOTAL
34 259

PROJECT DESCRIPTION

REPLACING AT-GRADE INTERSECTION ON US-24 AT CR-17D IN HENRY COUNTY WITH A NEW DIAMOND INTERCHANGE, INCLUDING A NEW BRIDGE OVER US-24.

TOTAL AREA (RIGHT OF WAY):	62.9 ACRES	RUNOFF COEFFICIENT FOR PRE-CONST:	0.53
PROJECT EARTH DISTURBED AREA:	43.9 ACRES	RUNOFF COEFFICIENT FOR POST CONST:	0.60
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	12.0 ACRES	POST CONSTRUCTION BMP:	A DETENTION BASIN IS PROVIDED TO MEET NPDES POST CONSTRUCTION REQUIREMENTS. LOCATION GIVEN IN DETENTION BASIN DETAIL SHEET.
NOTICE OF INTENT EARTH DISTURBED AREA:	55.9 ACRES	REQUIRED 11.8 AC	PROVIDED 21.3 AC
IMPERVIOUS (PAVED) AREA FOR PRE-CONST SITE:	7.6 ACRES	IMMEDIATE RECEIVING WATERS:	UNT 1 TO MAUMEE RIVER
IMPERVIOUS (PAVED) AREA FOR POST CONST SITE:	10.3 ACRES	SUBSEQUENT RECEIVING WATERS:	BENIEN CREEK/MAUMEE RIVER

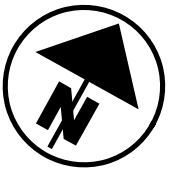
USGS MAP: FLORIDA, OHIO (MAP USGSX24K15628)
 LONGITUDE: 84°13'13.70"*
 LATITUDE: 41°21'34.70"*
 *LONGITUDE AND LATITUDE TO APPROX CENTER OF PROJECT



NOTE:
 THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR PAYMENT:
 ITEM 832 - STORM WATER POLLUTION PREVENTION PLAN 1 LS
 ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTIONS 1 LS
 ITEM 832 - STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE 1 LS
 ITEM 832 - EROSION CONTROL 303,734 EACH

LEGEND
 □ CATCH BASIN
 EXTENDED DETENTION BASIN

BMP TYPE	LATITUDE/LONGITUDE		BMP WIDTH (FEET)	EDA TREATMENT CREDIT (ACRES)
	BEGIN	END		
EXTENDED DETENTION BASIN	41°21'30.4", 84°13'20.3"	41°21'32.5", 84°13'15.1"	70	21.33

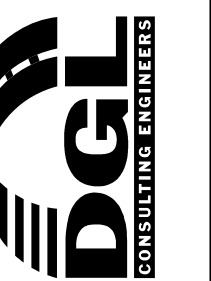


PROJECT SITE PLAN
 STA 120+00 TO STA 170+00

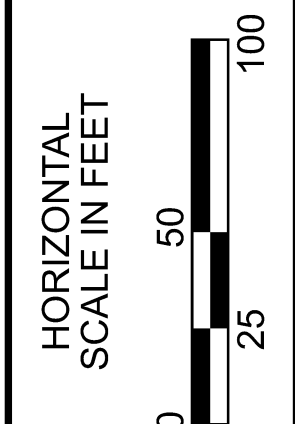
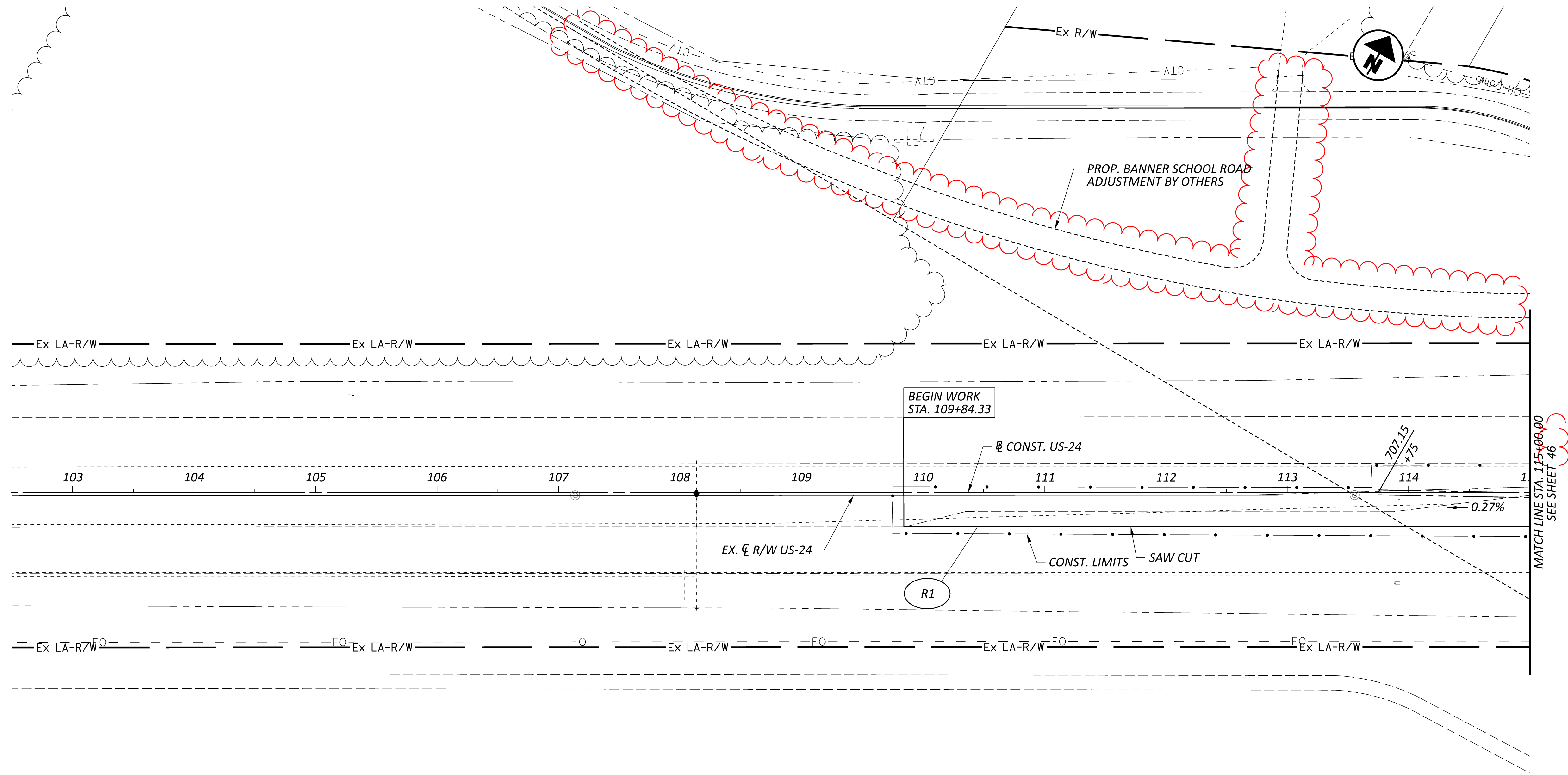
HEN-24-0-43

MODEL: 117712_DE001_Sheet PAPER SIZE: 34x42 (in.) DATE: 2/5/25 TIME: 3:15:06 PM USER: binder pw:\bnpw-bentley.com:bn-pw-01\Documents\117712\400-Engineering\Drawings\Sheets\117712_DE001.dgn

DESIGN AGENCY



DESIGNER
 AMD
 REVIEWER
 ALZ 10/08/24
 PROJECT ID
 117712
 SHEET TOTAL
 44 259



PLAN - US-24
BEGIN WORK TO STA. 115+00.00

DESIGN AGENCY



DESIGNER
NJL

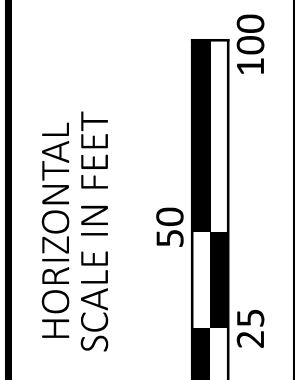
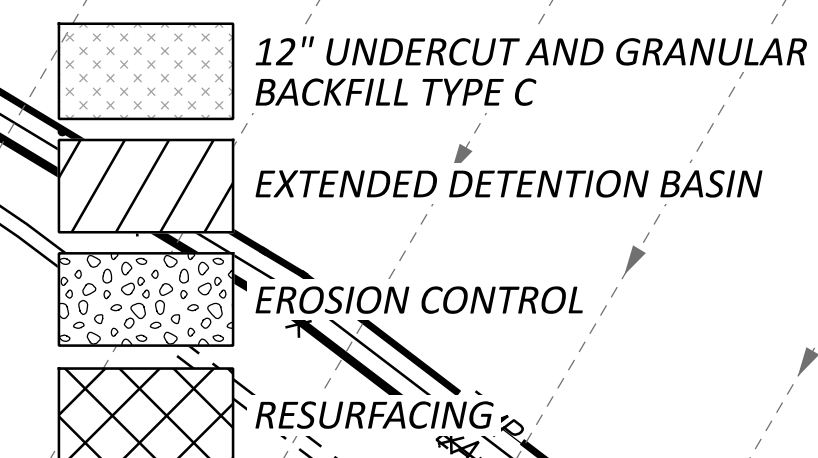
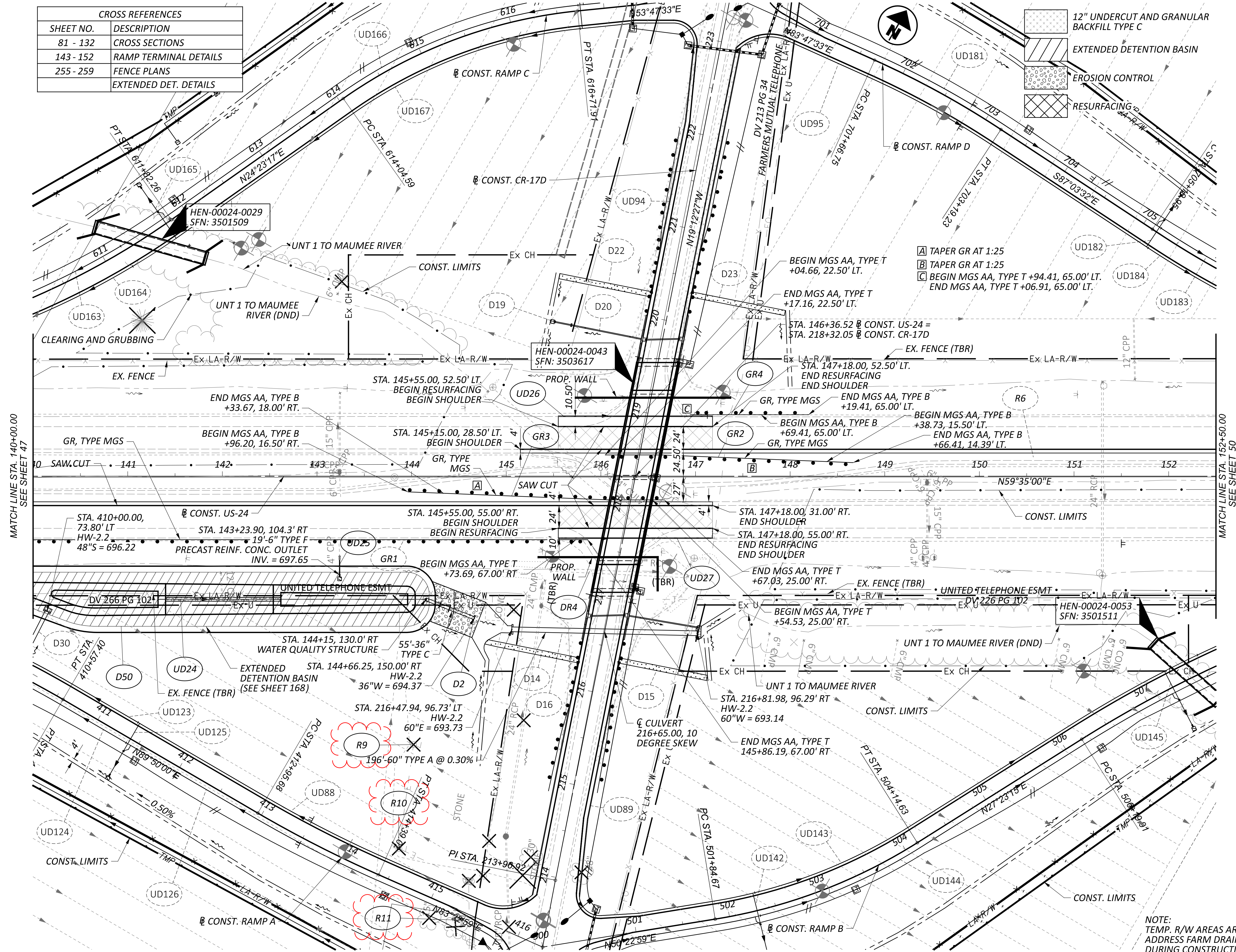
REVIEWER

MRT 10-14-24

PROJECT ID
117712

SHEET	TOTAL
45	259

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
81 - 132	CROSS SECTIONS
143 - 152	RAMP TERMINAL DETAILS
255 - 259	FENCE PLANS
	EXTENDED DET. DETAILS



PLAN - US-24
STA. 140+00.00 TO STA. 152+50.00

NOTE: TEMP. R/W AREAS ARE RESERVED TO ADDRESS FARM DRAINS ENCOUNTERED DURING CONSTRUCTION.

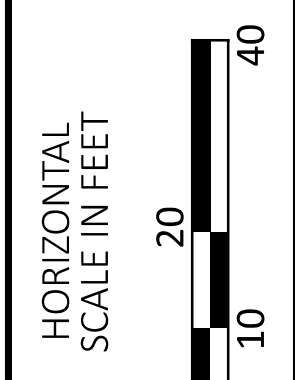
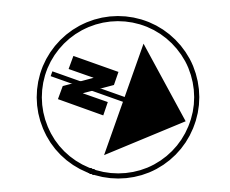
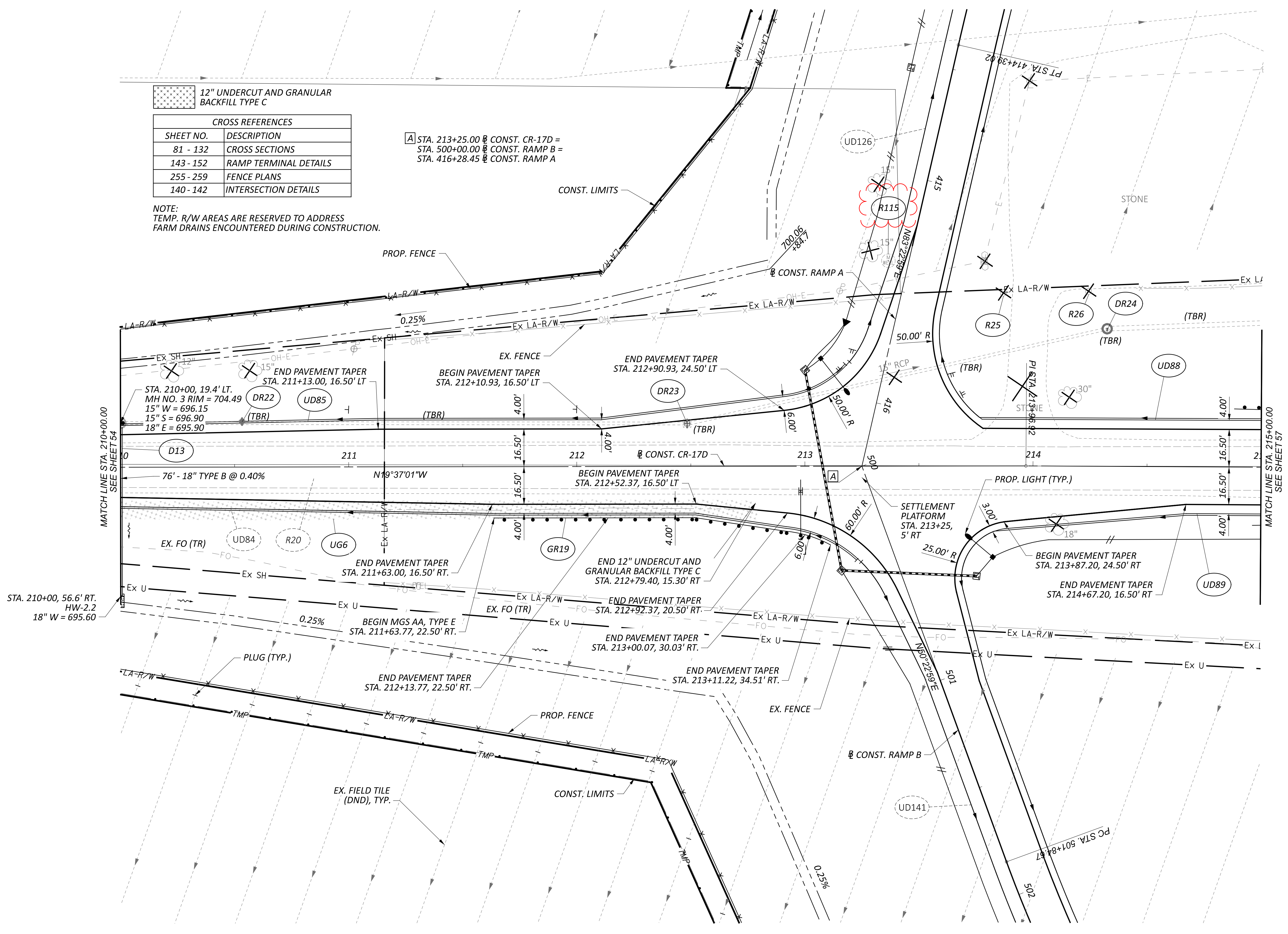
DESIGN AGENCY	B&N burgessniple.com
DESIGNER	NJL
REVIEWER	MRT
PROJECT ID	117712
SHEET	49
TOTAL	259

12" UNDERCUT AND GRANULAR BACKFILL TYPE C

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
81 - 132	CROSS SECTIONS
143 - 152	RAMP TERMINAL DETAILS
255 - 259	FENCE PLANS
140 - 142	INTERSECTION DETAILS

NOTE:
 TEMP. R/W AREAS ARE RESERVED TO ADDRESS FARM DRAINS ENCOUNTERED DURING CONSTRUCTION.

Ⓐ STA. 213+25.00 @ CONST. CR-17D =
 STA. 500+00.00 @ CONST. RAMP B =
 STA. 416+28.45 @ CONST. RAMP A

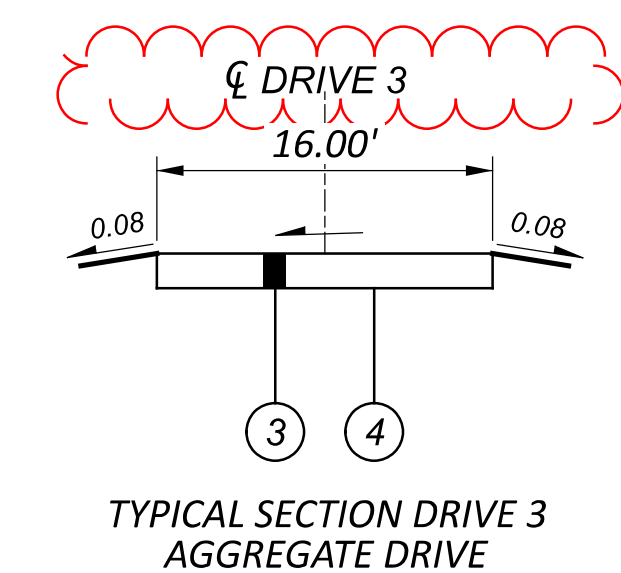
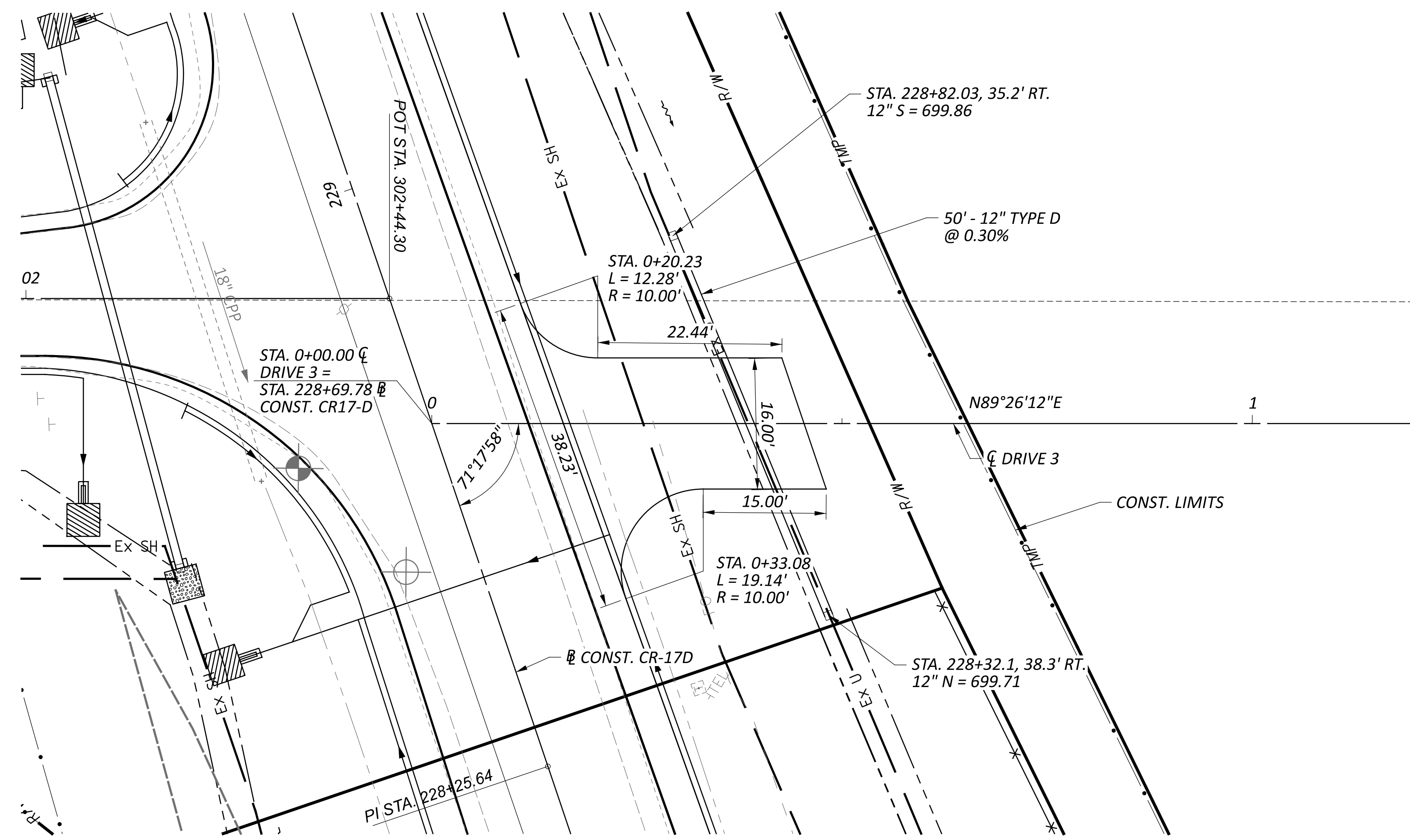


PLAN - CR-17D
 STA. 210+00.00 TO STA. 215+00.00

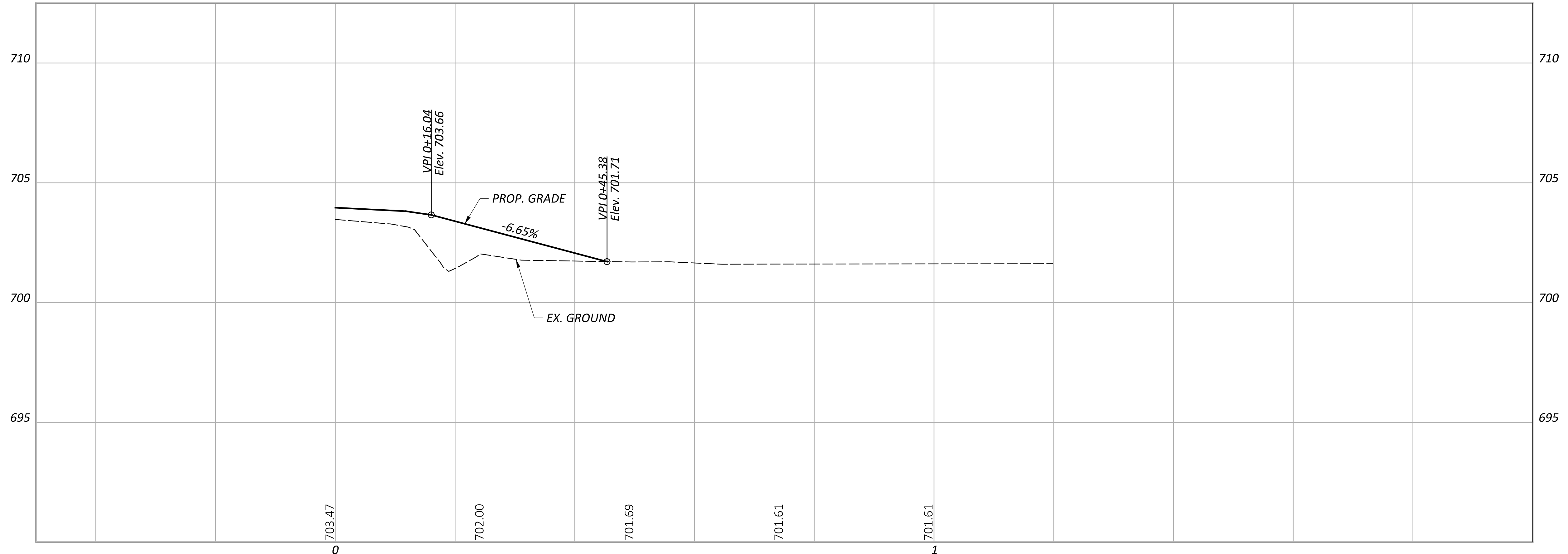
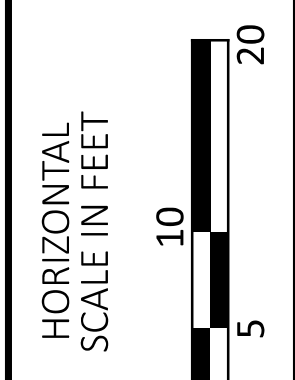
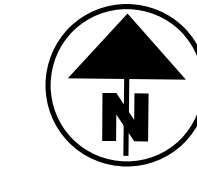
DESIGN AGENCY



DESIGNER	NJL
REVIEWER	MRT
PROJECT ID	10-14-24
	117712
SHEET	TOTAL
56	259



- LEGEND**
- ③ ITEM 304 - 6" AGGREGATE BASE
 - ④ ITEM 204 - SUBGRADE COMPACTION



DRIVE DETAIL
 DRIVE 3

DESIGN AGENCY



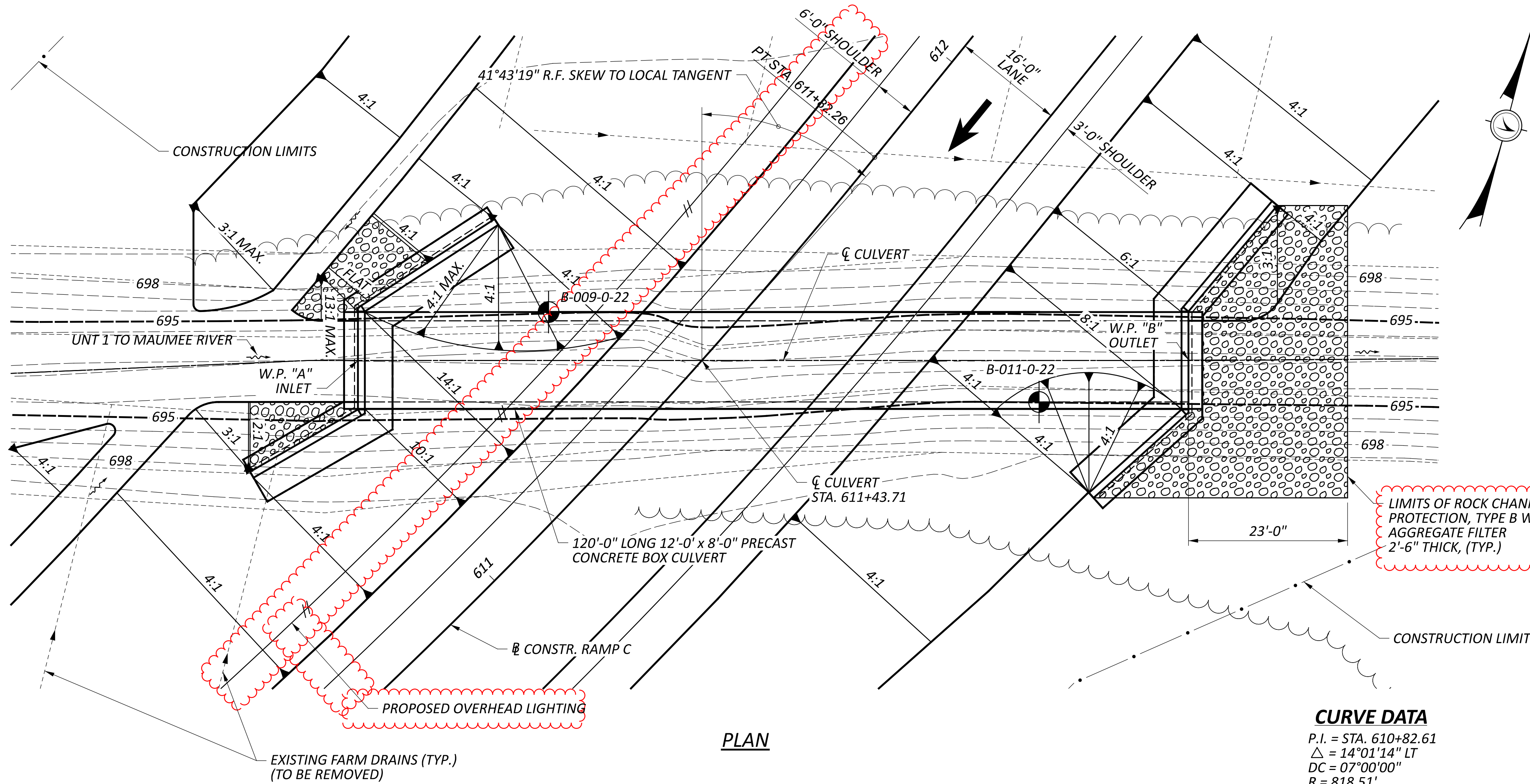
DESIGNER
 NJL

REVIEWER

MRT 10-14-24

PROJECT ID
 117712

SHEET TOTAL
 154 | 259



PLAN

CURVE DATA
 P.I. = STA. 610+82.61
 $\Delta = 14^{\circ}01'14''$ LT
 DC = $07^{\circ}00'00''$
 R = 818.51'
 T = 100.65'
 L = 200.29'
 E = 6.17'

BENCHMARK DATA

BM: #1 STA. 144+85.83, OFFSET 94.07' LT., CONST US-24,
 NORTHING 477180.887', EASTING 130797.485', ELEVATION 700.336',
 SQ CUT SE CORNER OF HW

FOR ADDITIONAL BENCHMARK INFORMATION,
 SEE ROADWAY PLAN SHEET 3 OF 259

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

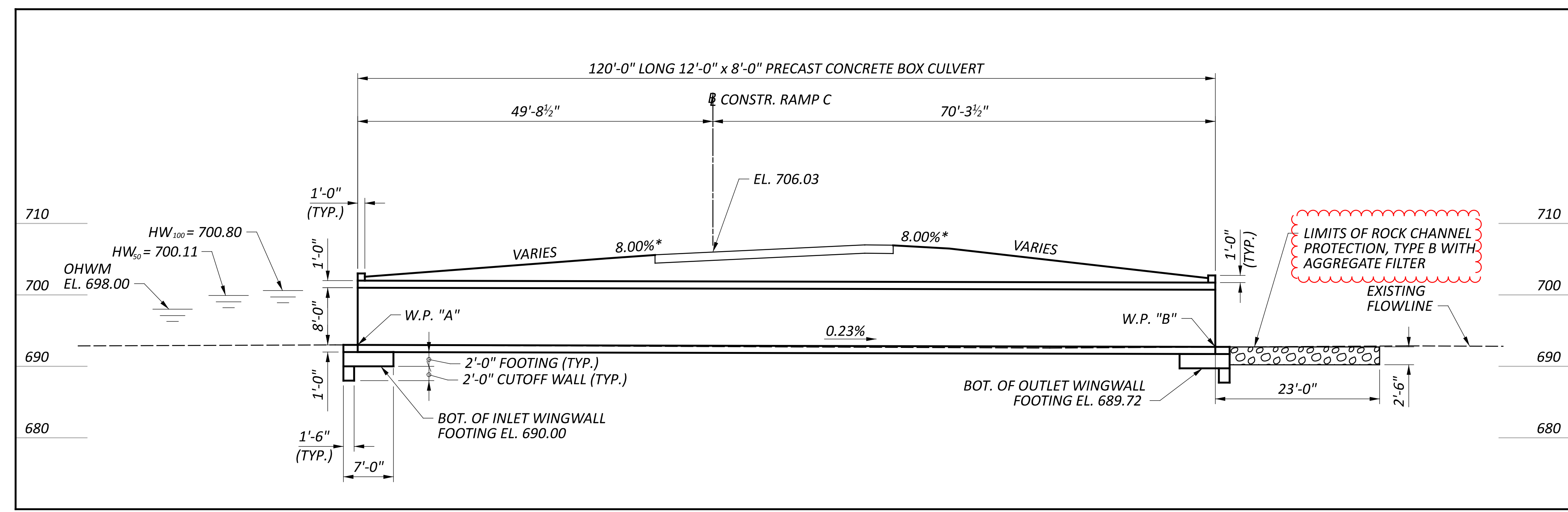
DESIGN TRAFFIC:
 2025 ADT = 300 2025 ADTT = 30
 2045 ADT = 310 2045 ADTT = 31
 DIRECTIONAL DISTRIBUTION = 100%

- LEGEND**
- = PROJECT BORING LOCATION
 - W.P. "A" = STA. 611+09.08
 OFFSET = 36.40' LT
 INLET EL. 693.00
 - W.P. "B" = STA. 611+87.99
 OFFSET = 53.70' RT
 OUTLET EL. 692.72
 - * = SLOPE NORMAL TO ROADWAY

SOIL BORING INFORMATION

BORING	STATION	OFFSET	ROCK ELEV.
B-009-0-22	611+33.93	21.15' LT.	NOT ENCOUNTERED
B-011-0-22	611+70.33	40.80' RT.	657.00

HYDRAULIC DATA
 DRAINAGE AREA = 1773 ACRE
 Q (50) = 572 CFS V (50) = 10.14 FT/S
 Q (100) = 657 CFS V (100) = 10.79 FT/S
 STRUCTURE CLEARS THE 50 YEAR
 DESIGN HW BY 1.02 FEET.



PROFILE ALONG ϕ CULVERT

EXISTING STRUCTURE- NONE

PROPOSED STRUCTURE

TYPE: PROPOSED 12'-0" WIDE x 8'-0" HIGH PRECAST CONCRETE BOX
 CULVERT WITH CAST-IN-PLACE REINFORCED CONCRETE
 HEADWALLS AND WINGWALLS

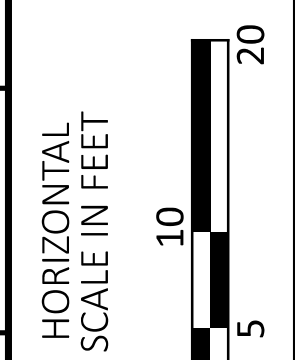
SPAN: 12'-0" F/F WALL
 ROADWAY: 16'-0" ROADWAY
 6'-0" LEFT SHOULDER, 3'-0" RIGHT SHOULDER

LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE

SKEW: 41°43'19" R.F. SKEW TO LOCAL TANGENT

ALIGNMENT: TANGENT
 SUPERELEVATION: VARIES

COORDINATES: LATITUDE 41°21'34.01" N
 LONGITUDE 84°13'21.80" W



SITE PLAN
 BRIDGE NO. HEN-0024-0029
 UNDER C.R. 17D RAMP C TO U.S. ROUTE 24 WB

SFN 3501509

DESIGN AGENCY

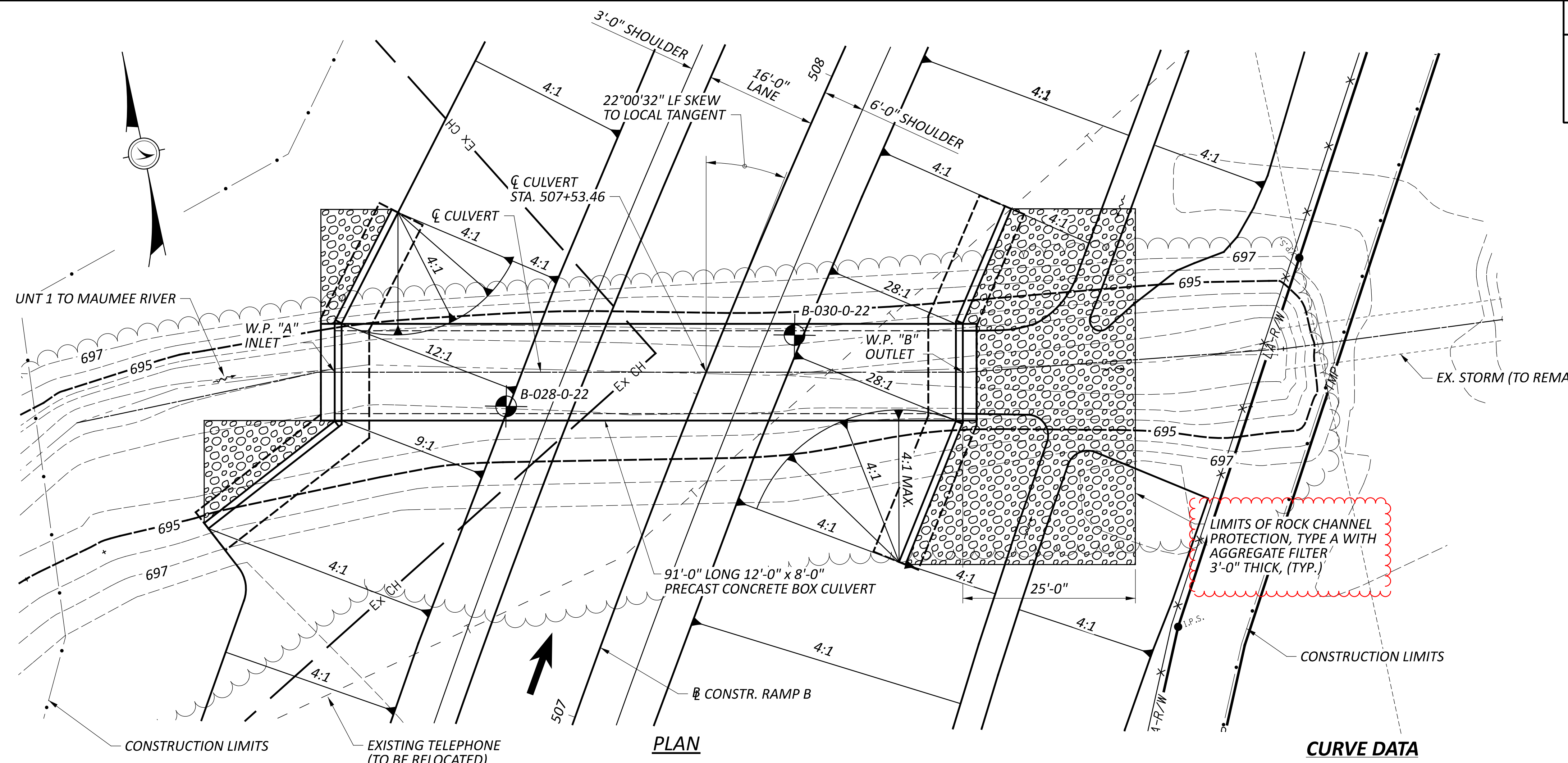
B&N
 burgessniple.com

DESIGNER: JHL CHECKER: BWC/XAC

REVIEWER: MAB 8/9/23

PROJECT ID: 117712

SUBSET	TOTAL
3	12
SHEET	TOTAL
158	259



PLAN

CURVE DATA

P.I. = STA. 509+20.31
 $\Delta = 26^{\circ}33'00''$ RT
 DC = $04^{\circ}30'00''$
 R = 1273.24'
 T = 300.39'
 L = 590.00'
 E = 34.96'

BENCHMARK DATA

BM: #6 STA. 151+30.02, OFFSET 104.71' RT., @ CONST US-24,
 NORTHING 477335.610', EASTING 131453.652', ELEVATION 695.088',
 CUT + ON CONC PIPE

FOR ADDITIONAL BENCHMARK INFORMATION,
 SEE ROADWAY PLAN SHEET 3 OF 259

NOTES

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

DESIGN TRAFFIC:
 2025 ADT = 700 2025 ADTT = 35
 2045 ADT = 750 2045 ADTT = 38
 DIRECTIONAL DISTRIBUTION = 100%

LEGEND

- = PROJECT BORING LOCATION
- W.P. "A" = STA. 507+34.05
 OFFSET= 50.05' LT
 INLET EL. 692.06
- W.P. "B" = STA. 507+67.78
 OFFSET= 34.39' RT
 OUTLET EL. 691.69

SOIL BORING INFORMATION

BORING	STATION	OFFSET	ROCK ELEV.
B-028-0-22	507+38.31	25.11' LT.	648.90
B-030-0-22	507+63.31	9.83' RT.	648.40

HYDRAULIC DATA

DRAINAGE AREA = 1773 ACRE
 Q (50) = 572 CFS V (50) = 12.82 FT/S
 Q (100) = 657 CFS V (100) = 13.34 FT/S
 STRUCTURE CLEARS THE 50 YEAR
 DESIGN HW BY 1.03 FEET

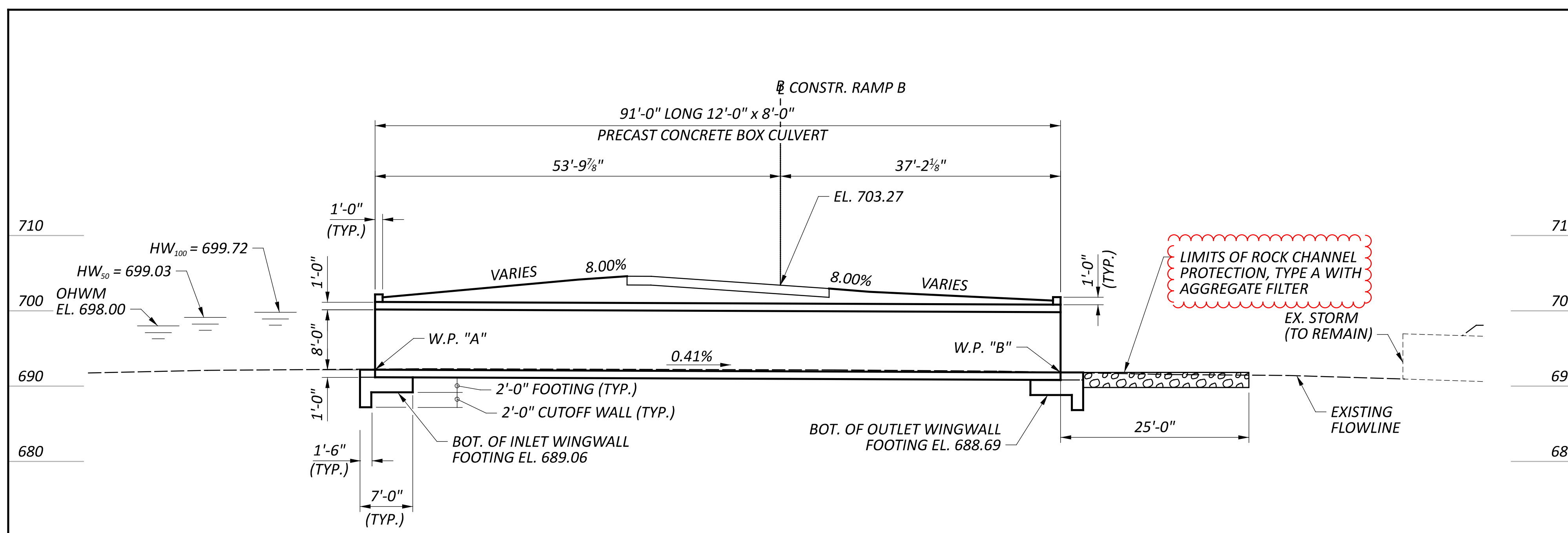
EXISTING STRUCTURE- NONE

PROPOSED STRUCTURE

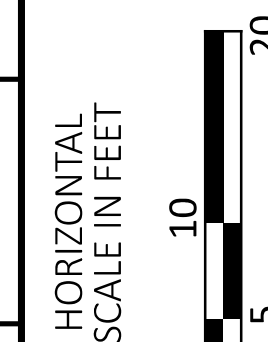
TYPE: PROPOSED 12'-0" WIDE x 8'-0" HIGH PRECAST CONCRETE BOX
 CULVERT WITH CAST-IN-PLACE REINFORCED CONCRETE
 FORESLOPE AND WINGWALLS

SPAN: 12'-0" F/F WALL
 ROADWAY: 16'-0" ROADWAY
 3'-0" LEFT SHOULDER, 6'-0" RIGHT SHOULDER
 LOADING: HL-93 AND 60 PSF FUTURE WEARING SURFACE
 SKEW: 21°16'56" LF SKEW (TO LOCAL TANGENT)
 ALIGNMENT: TANGENT
 SUPERELEVATION: 0.068 FT/FT

COORDINATES: LATITUDE 41°21'35.88" N
 LONGITUDE 84°13'06.21" W

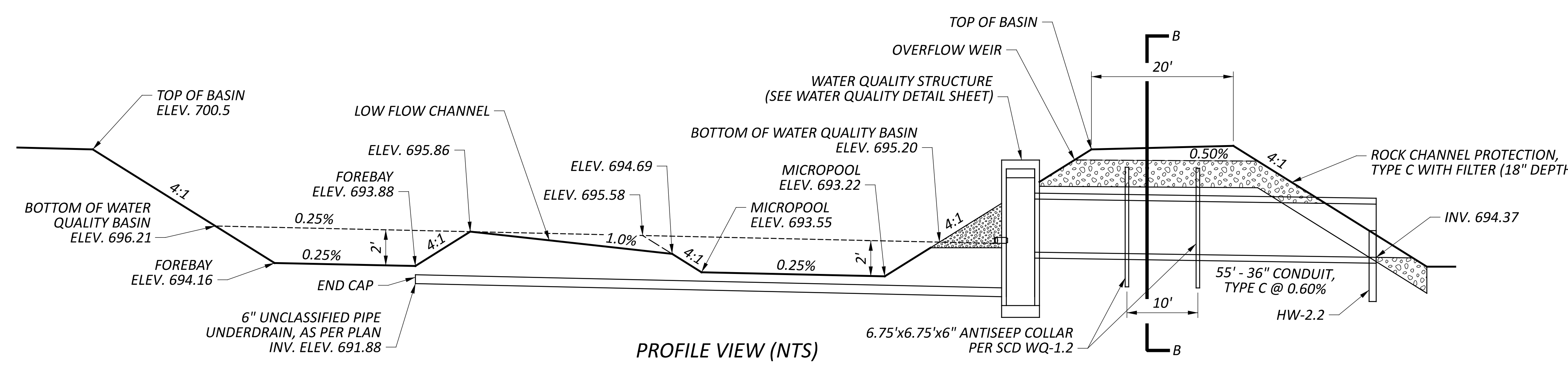
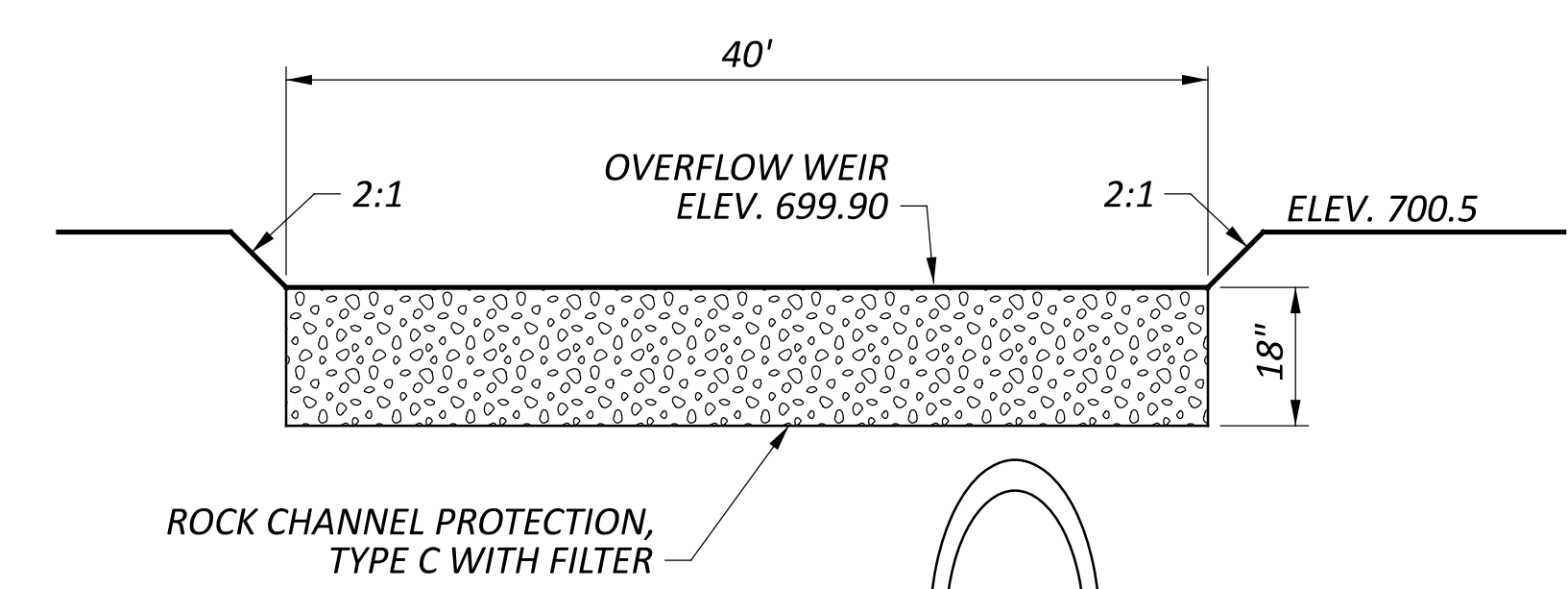
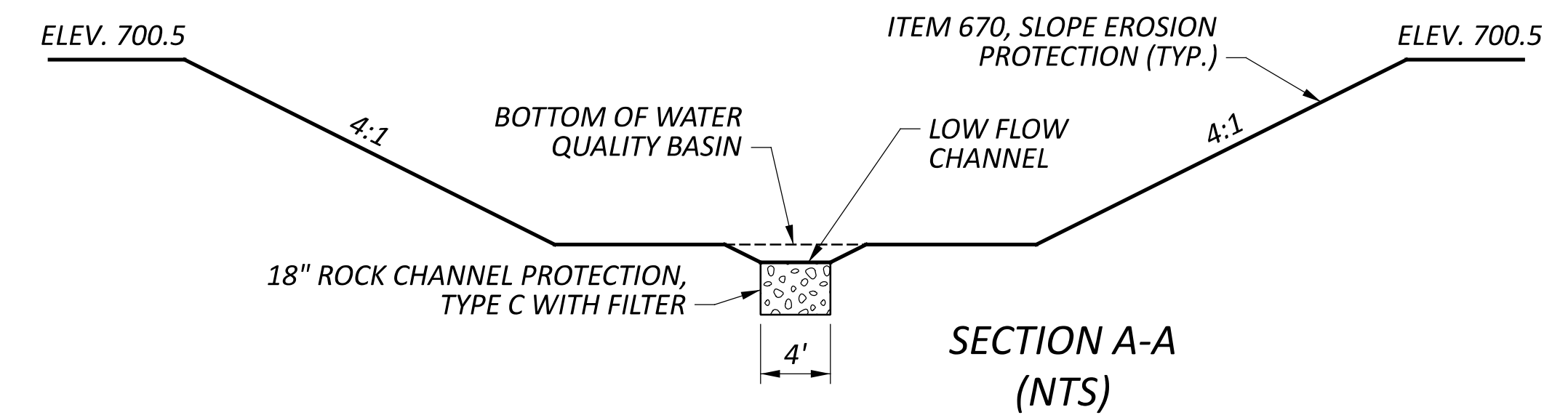
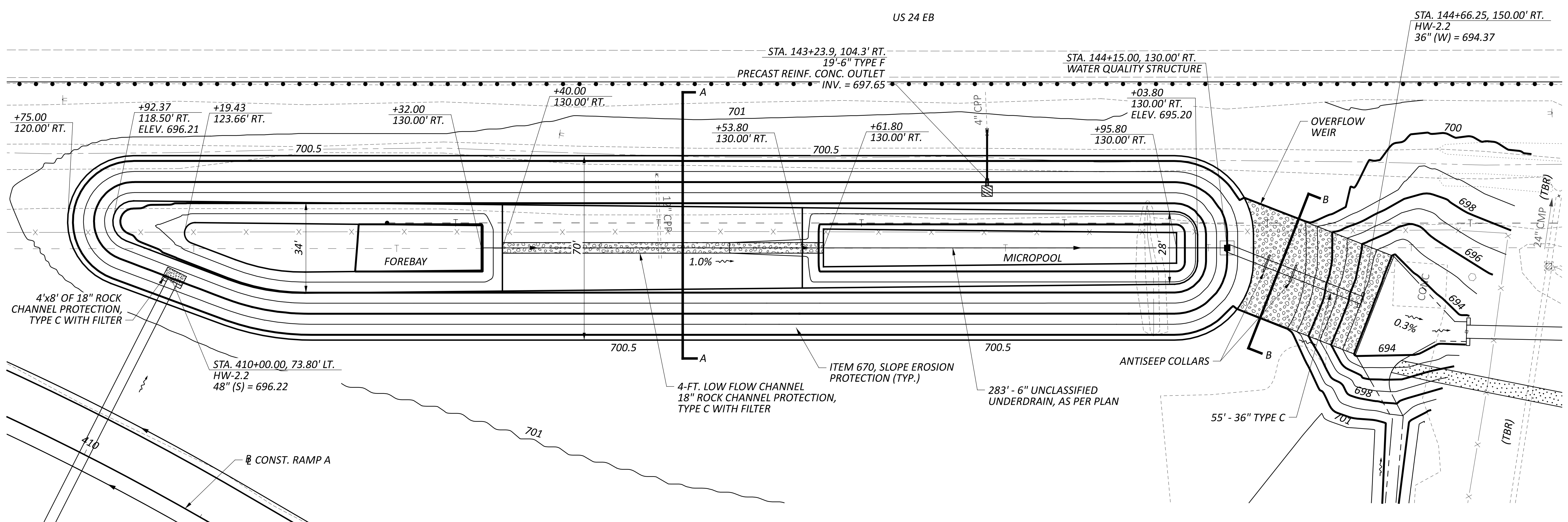
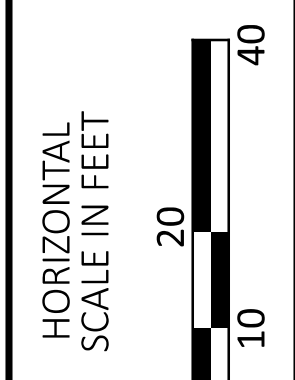
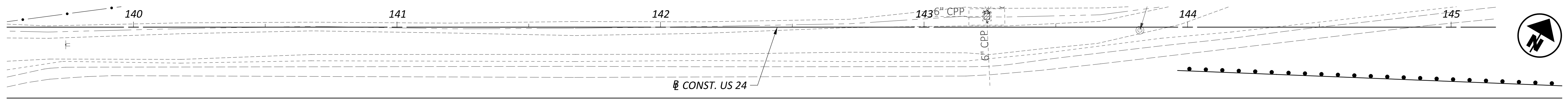


PROFILE ALONG ϕ CULVERT



SITE PLAN
 BRIDGE NO. HEN-0024-0053
 UNDER C.R. 17D RAMP B TO U.S. ROUTE 24 EB

SFN	3501511
DESIGN AGENCY	B&N burgessniple.com
DESIGNER	JHL
CHECKER	BWC/XAC
REVIEWER	MAB
PROJECT ID	117712
SUBSET	7
TOTAL	12
SHEET	162
TOTAL	259



18" ROCK CHANNEL PROTECTION, TYPE C WITH FILTER

NOTES:
PROVIDE ITEM 670, SLOPE EROSION PROTECTION ON SLOPES ABOVE THE WATER QUALITY ELEV. WITHIN THE DETENTION BASIN.

SEE SHEET 169 FOR WATER QUALITY STRUCTURE DETAILS.

EXTENDED DETENTION DETAIL

DESIGN AGENCY

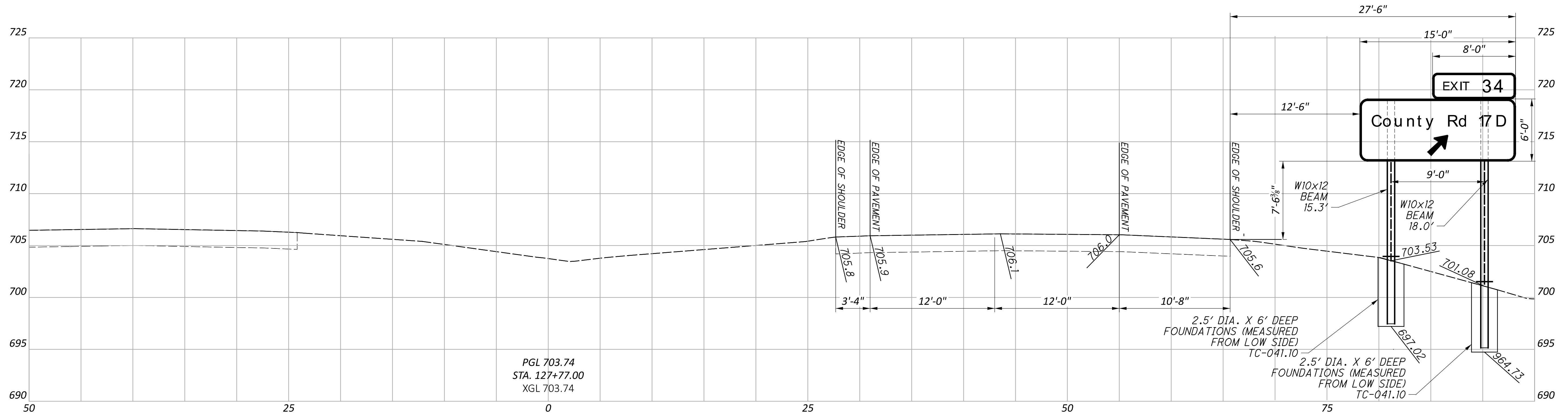


DESIGNER
AMD

REVIEWER
ALZ 10/08/24

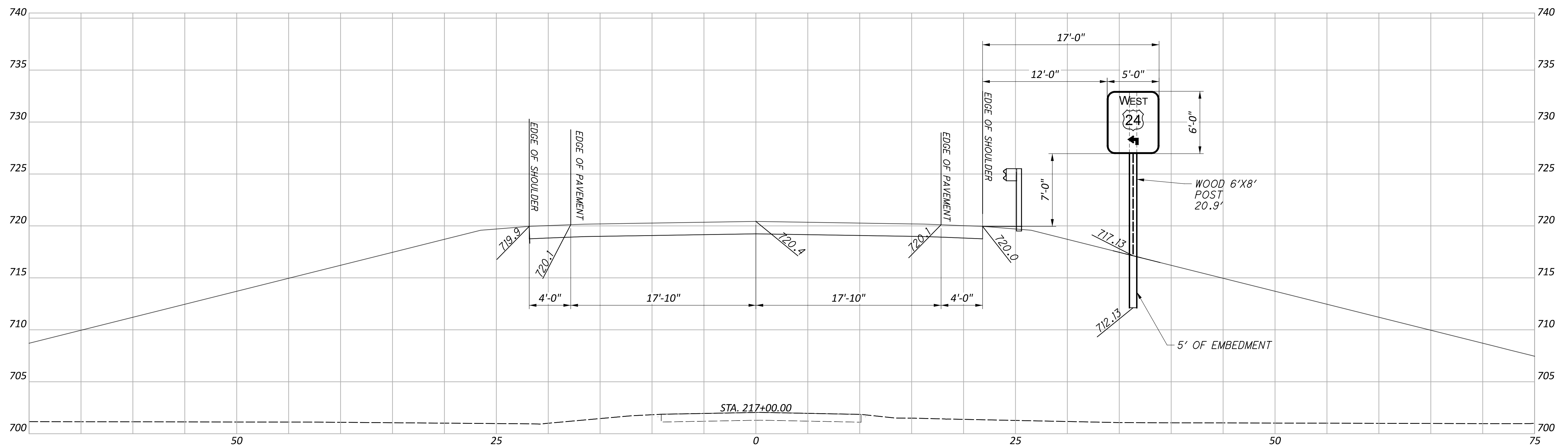
PROJECT ID
117712

SHEET TOTAL
168 259



GROUND MOUNTED SIGN
SIGN CODES: TOP - E1-H5P
BOTTOM - E7-H2
STA. 127+77, 85.7' RT. E.B. US-24
2-W10X14 BEAMS 15.7'/18.0' LONG

S-6



GROUND MOUNTED SIGN
CUSTOM GUIDE SIGN
STA. 217+00, 36.6' RT. N.B. CR-17D
6'X8' WOOD POST 20.9' LONG

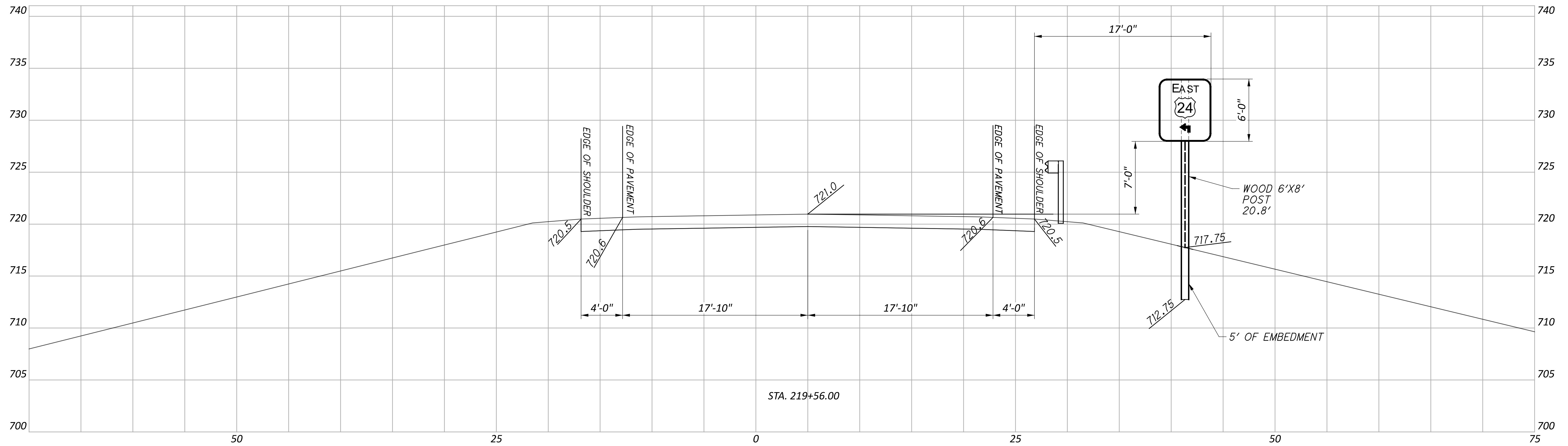
S-34

SIGN ELEVATION DETAILS
STA. 127+77 & STA. 217+00

DESIGN AGENCY

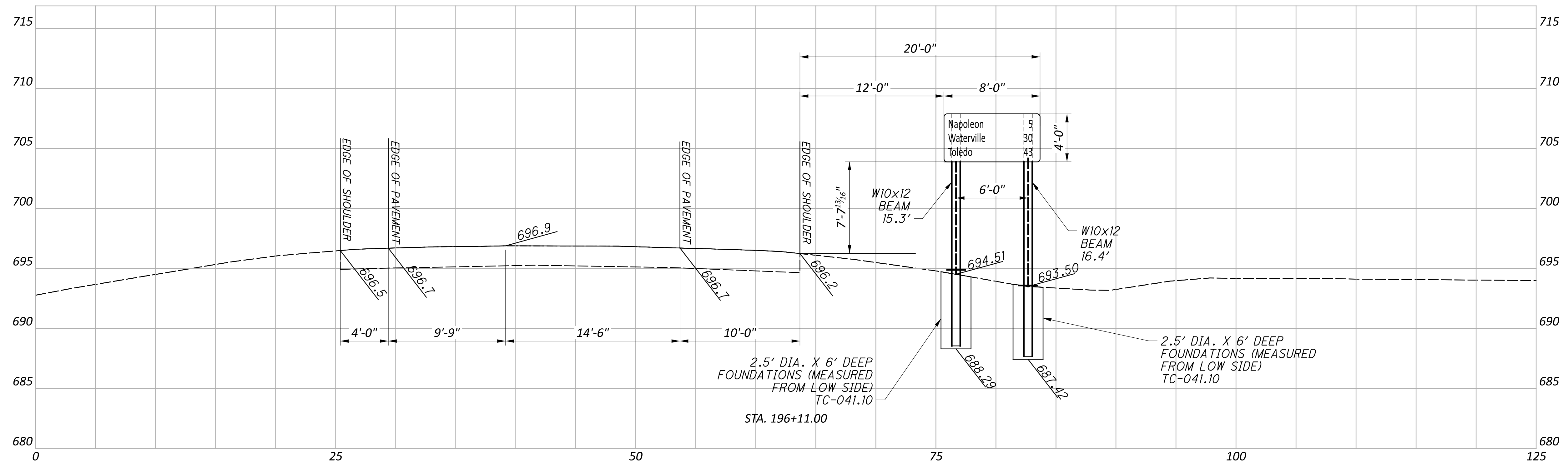


DESIGNER	ZSP
REVIEWER	
PROJECT ID	117712
SHEET	TOTAL
202	259



GROUND MOUNTED SIGN
 CUSTOM GUIDE SIGN
 STA. 219+56, 41.3' LT. S.B. CR-17D
 6'X8' WOOD POST 20.8' LONG

S-37



GROUND MOUNTED SIGN
 SIGN CODE: D2-H3
 STA. 196+11, 81.0' RT. E.B. US-24
 2-W10X14 BEAMS 15.3'/16.4' LONG

S-24

SIGN ELEVATION DETAILS
 STA. 219+56 & STA. 196+11

DESIGN AGENCY

B&N
 burgessniple.com

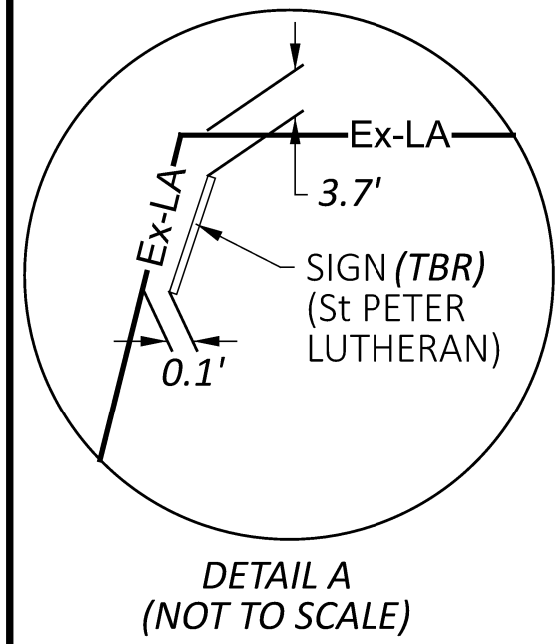
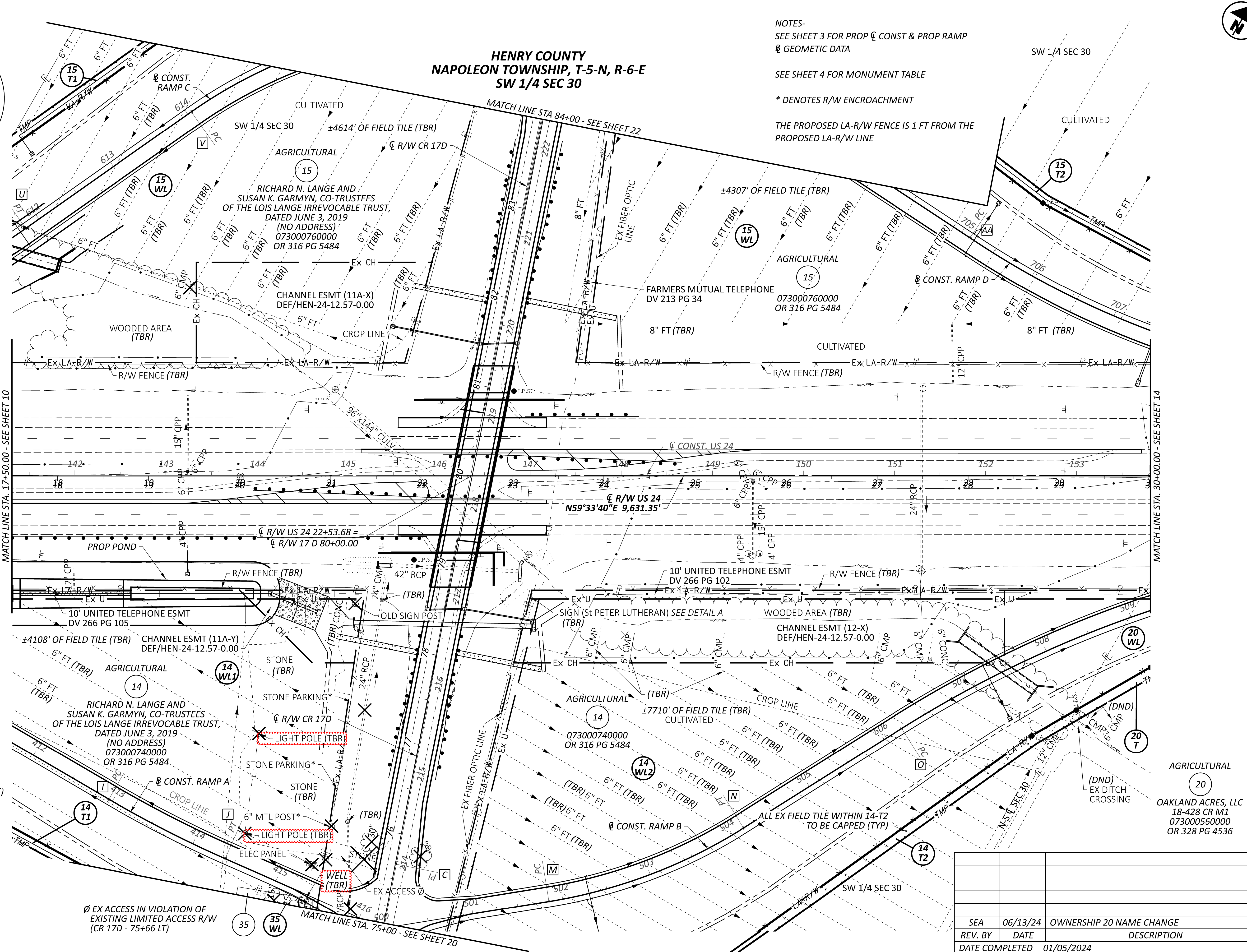
DESIGNER
 ZSP

REVIEWER
 DWO 10-14-24

PROJECT ID
 117712

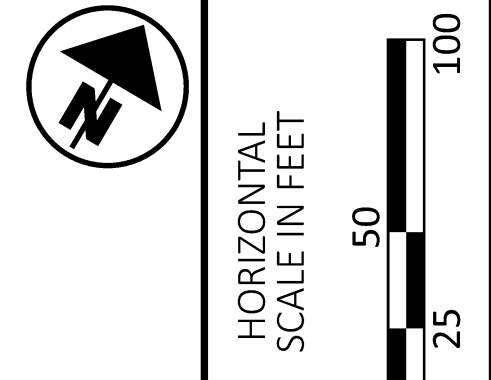
SHEET TOTAL
 203 259

RESIDENTIAL (35)
 JOHN R. SCHROEDER,
 MATTHEW S. SCHROEDER,
 MARCA SCHROEDER,
 SUSAN R. MAVIS AND
 JULIE A. LAWTON
 HARRIET E. SCHROEDER (LE)
 N-151 CR 17D
 073000800000
 OR 327 PG 5226



HENRY COUNTY
 NAPOLEON TOWNSHIP, T-5-N, R-6-E
 SW 1/4 SEC 30

NOTES-
 SEE SHEET 3 FOR PROP C CONST & PROP RAMP
 GEOMETIC DATA
 SEE SHEET 4 FOR MONUMENT TABLE
 * DENOTES R/W ENCROACHMENT
 THE PROPOSED LA-R/W FENCE IS 1 FT FROM THE
 PROPOSED LA-R/W LINE



RIGHT OF WAY TOPO SHEET
 STA 17+50 TO STA 30+00

MATCH LINE STA. 17+50.00 - SEE SHEET 10

MATCH LINE STA. 30+00.00 - SEE SHEET 14

Ø EX ACCESS IN VIOLATION OF
 EXISTING LIMITED ACCESS R/W
 (CR 17D - 75+66 LT)

AGRICULTURAL (20)
 OAKLAND ACRES, LLC
 18-428 CR M1
 073000560000
 OR 328 PG 4536

REV. BY	DATE	DESCRIPTION
SEA	06/13/24	OWNERSHIP 20 NAME CHANGE
SEA	01/05/24	REVIEWER
RJL	01/05/24	REVIEWER
SEA	06/13/24	DATE COMPLETED
01/05/2024		

DESIGN AGENCY	DGL CONSULTING ENGINEERS
DESIGNER	SEA
REVIEWER	RJL
PROJECT ID	117712
SUBSET	TOTAL
RW.12	RW.23