

LOCATION MAP



DESIGN EXCEPTIONS	APPROVAL DATES	SHEET NUMBERS
POR-43-3.956		
LANE WIDTH	5/2/24	P.19
SHOULDER WIDTH	5/2/24	P.19
POR-225-7.775		
SHOULDER WIDTH	5/2/24	P.28
STA-44-21.874		
SHOULDER WIDTH	5/14/24	P.37

ADA DESIGN WAIVERS

NONE

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:
ODOT DISTRICT 4 - CAPITAL PROGRAMS
2088 S. ARLINGTON RD
AKRON, OH 44306

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

D04-CULVERTS-FY2025

PALMYRA TOWNSHIP, SUFFIELD TOWNSHIP, AND
RAVENNA TOWNSHIP, PORTAGE COUNTY

MARLBORO TOWNSHIP AND
LEXINGTON TOWNSHIP, STARK COUNTY

RICHFIELD TOWNSHIP, SUMMIT COUNTY

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STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-1.1	7/8/00	MGS-1.1	7/16/21	TC-41.20	10/18/13		800-2023	TBD
BP-3.1	1/21/22	MGS-2.1	1/19/18	TC-42.20	10/18/13		832	7/21/23
BP-4.1	7/19/13	MGS-2.3	1/20/23	TC-52.10	10/18/13			
BP-5.1	7/15/22	MGS-4.2	7/19/13	TC-52.20	1/15/21			
		MGS-4.3	1/18/13	TC-61.30	7/19/19			
CB-2-2A	1/20/23			TC-65.10	1/17/14			
CB-2-6	7/16/21	HW-1.1	7/20/18	TC-65.11	7/15/22			
		HW-2.1	7/15/22					
DM-1.1	7/17/20	HW-2.2	7/20/18					
DM-2.1	1/18/13							
DM-4.2	7/20/12	MH-3	1/19/24					
DM-4.3	1/15/16							
DM-4.4	1/15/16	MT-95.45	7/21/23					
		MT-97.10	4/19/19					
F-1.1	7/19/13	MT-101.60	4/21/23					
		MT-105.10	1/17/20					

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

DISTRICT 4 CULVERT REPLACEMENTS:
POR-5-3.896, POR-43-3.956, POR-225-7.775,
STA-44-21.874, AND SUM-303-3.589

BEST MANAGEMENT PRACTICE REVISION:
STA-619-13.170


EARTH DISTURBED AREAS


SEE SHEET P.2 FOR EARTH DISTURBED AREAS.

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 REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS P.6-P.9.


Arthur G. Noirot Jr., P.E.
District 04 Deputy Director


Jack Marchbanks, PhD
Director, Department of Transportation

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

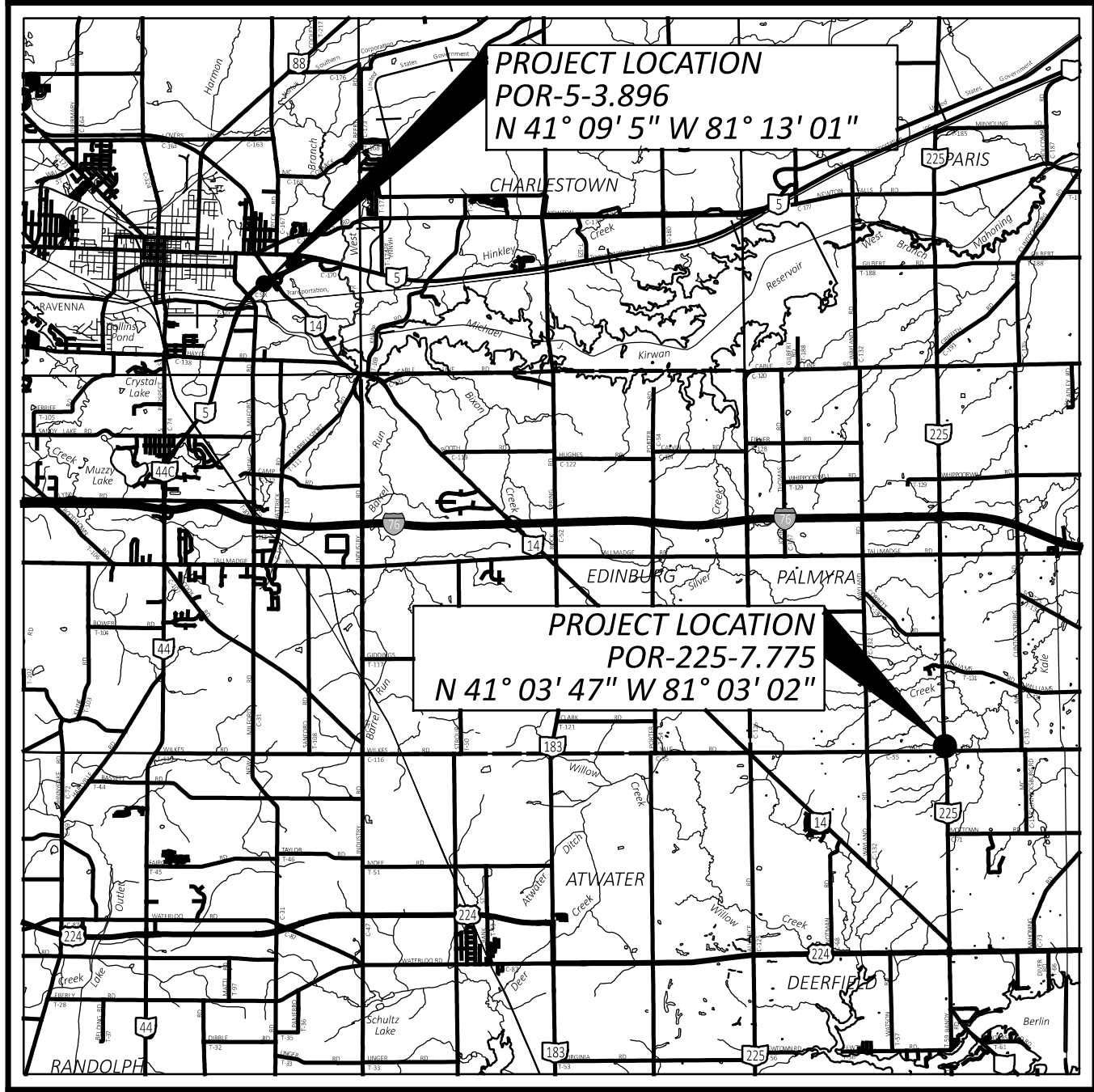
109452

SHEET

P.1

TOTAL

58



LOCATION MAP

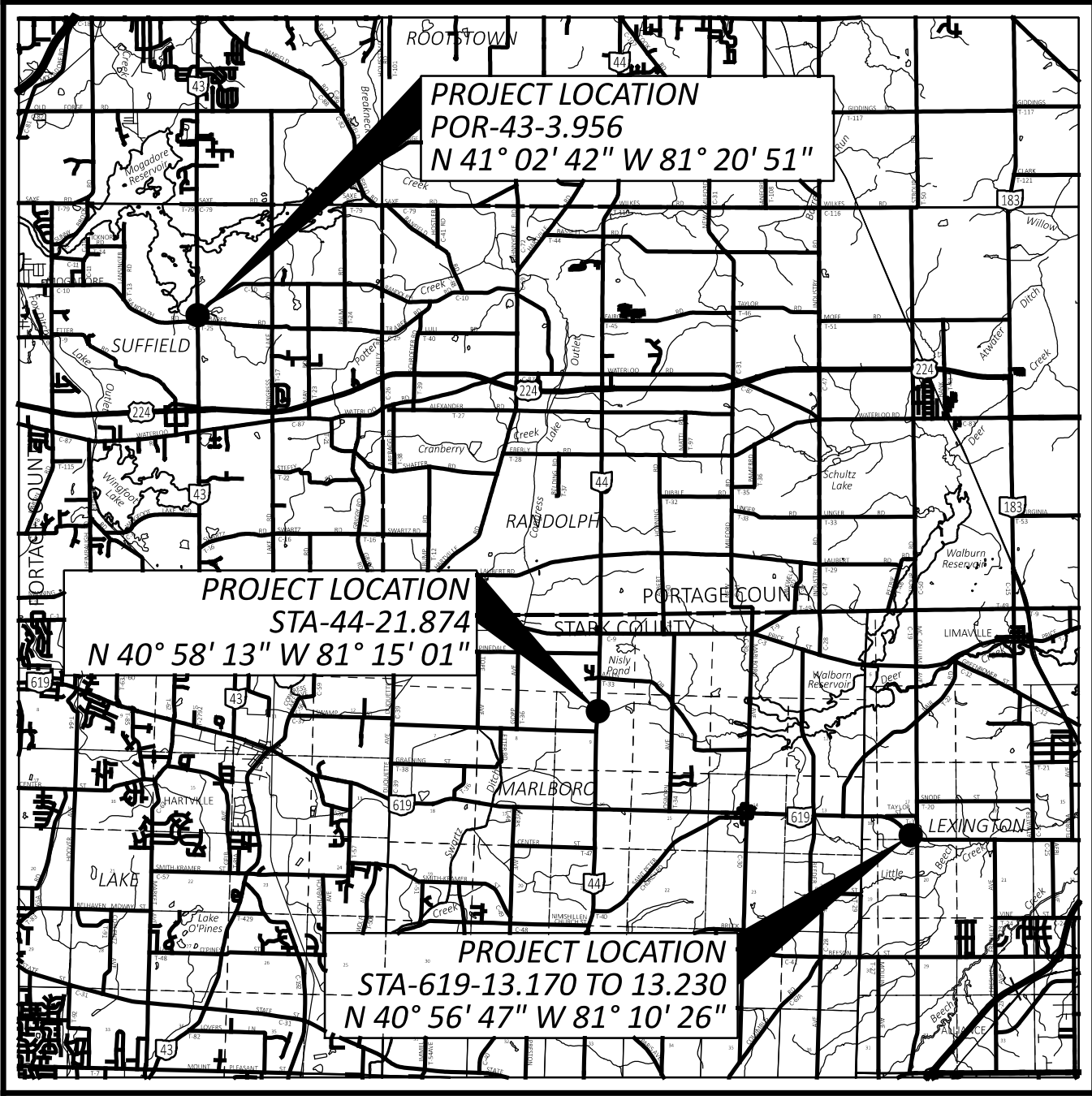


PORTION TO BE IMPROVED	●
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	=====

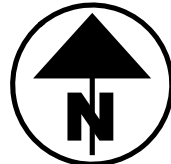
DESIGN DESIGNATION*	POR-5	POR-225
CURRENT ADT (2025)	5,239	4,146
DESIGN YEAR ADT (2045)	5,239	4,146
DESIGN HOURLY VOLUME (2045)	487	372
DIRECTIONAL DISTRIBUTION	51%	56%
TRUCKS (24 HOUR B&C)	9%	16%
DESIGN SPEED	60 MPH	60 MPH
LEGAL SPEED	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	OTHER PRINCIPAL ARTERIAL - URBAN	RURAL - MAJOR COLLECTOR
NHS PROJECT	YES	NO

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.18 ACRES (POR-5), 0.25 ACRES (POR-225)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES



LOCATION MAP

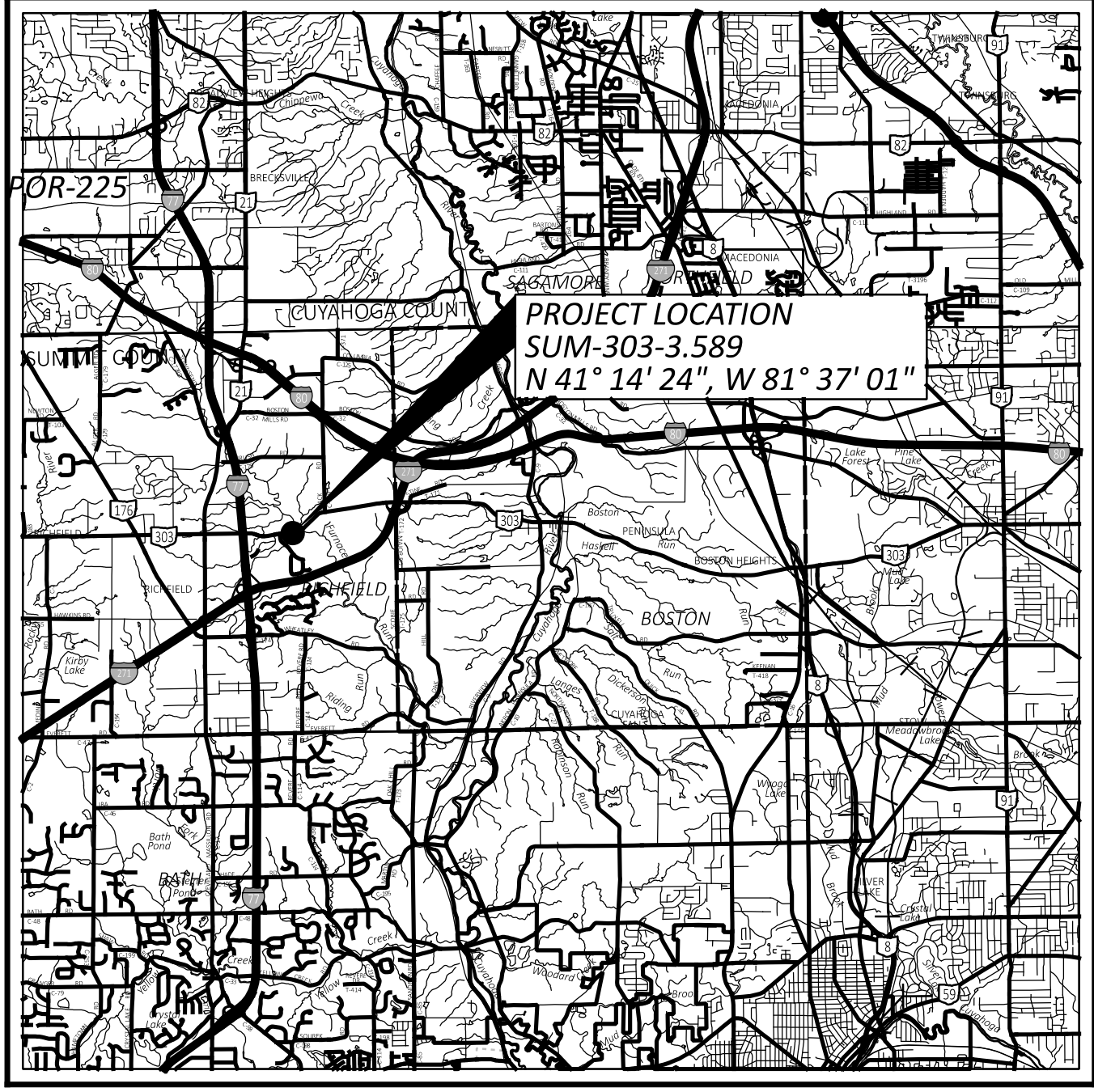


PORTION TO BE IMPROVED	●
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	=====

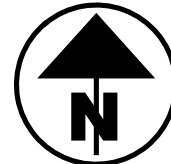
DESIGN DESIGNATION*	POR-43	STA-44	STA-619
CURRENT ADT (2025)	8,984	6,067	3,036
DESIGN YEAR ADT (2045)	8,984	6,067	3,036
DESIGN HOURLY VOLUME (2045)	981	573	306
DIRECTIONAL DISTRIBUTION	59%	58%	56%
TRUCKS (24 HOUR B&C)	3%	12%	3%
DESIGN SPEED	50 MPH	60 MPH	60 MPH
LEGAL SPEED	45 MPH	55 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	OTHER PRINCIPAL ARTERIAL - RURAL	RURAL - MINOR ARTERIAL	RURAL - MINOR ARTERIAL
NHS PROJECT	YES	NO	NO

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.20 ACRES (POR-43), 0.27 ACRES (STA-44)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES



LOCATION MAP



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

DESIGN DESIGNATION*	SUM-303
CURRENT ADT (2025)	6,726
DESIGN YEAR ADT (2045)	6,726
DESIGN HOURLY VOLUME (2045)	761
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	3%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	RURAL - MAJOR COLLECTOR
NHS PROJECT	NO

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.14 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A ACRES

* DISCLAIMER: DESIGN DESIGNATION VALUES ARE REFERENCED
FROM THE TRAFFIC MONITORING MANAGMENT SYSTEM (TMMS)



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.

ITEM SPECIAL - AS-BUILT CONSTRUCTION PLANS

PRIOR TO FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL FURNISH THE DEPARTMENT FORMAL AS-BUILT CONSTRUCTION PLANS. THE FORMAL AS-BUILT CONSTRUCTION PLANS SHALL INCLUDE ALL RED-LINED CHANGES. RED-LINE CHANGE SHALL BE DENOTED UTILIZING CLOUDING IN MICROSTATION (OR OTHER CAD SOFTWARE OR CLOUDING IN PDF EDITING SOFTWARE. THE AS-BUILT CONSTRUCTION PLANS SHALL HAVE A SIGNED VERIFICATION ON THE TITLE SHEET FROM THE CONTRACTOR INDICATING THAT ALL RED-LINED AND FIELD CHANGES HAVE BEEN INCORPORATED INTO AS-BUILT CONSTRUCTION PLANS.

THE CONTRACTOR'S VERIFICATION STATEMENT INDICATES ALL KNOWN FIELD MODIFICATIONS MADE HAVE BEEN INCLUDED IN THE FORMAL AS-BUILT CONSTRUCTION PLANS. THE CONTRACTORS VERIFICATION STATMENT SHALL BE SIGNED BY THE CONTRACTOR'S PROJECT MANAGER (OR ACCEPTABLE REPRESENTATIVE).

IN ADDITION TO THE INFORMATION SHOWN ON THE CONSTRUCTION PLANS, THE AS-BUILT CONSTRUCTION PLANS SHALL SHOW THE FOLLOWING:

- ALL DEVIATIONS FROM THE ORIGINAL APPROVED CONSTRUCTION PLANS WHICH RESULT IN A CHANGE OF LOCATION, MATERIAL, TYPE OR SIZE OF WORK.
- ANY UTILITIES, PIPES, WELLHEADS, ABANDONED PAVEMENTS, FOUNDATIONS OR OTHER MAJOR OBSTRUCTIONS DISCOVERED AND REMAINING IN PLACE WHICH ARE NOT SHOWN, OR DO NOT CONFORM TO LOCATIONS OR DEPTHS SHOWN IN THE PLANS. UNDERGROUND FEATURES SHALL BE SHOWN AND LABELED ON THE AS-BUILT CONSTRUCTION PLANS IN TERMS OF STATION, OFFSET AND ELEVATION.
- THE FINAL OPTION AND SPECIFICATION NUMBER SELECTED FOR THOSE ITEMS WHICH ALLOW SEVERAL MATERIAL OPTIONS UNDER THE SPECIFICATION (E.G., CONDUIT).
- CHANGES TO THE PAY ITEMS AND FINAL QUANTITIES AS PAID SHALL BE SHOWN ON THE GENERAL SUMMARY AND SUBSUMMARIES.
- ADDITIONAL PLAN SHEETS MAY BE NEEDED IF NECESSARY TO SHOW WORK NOT INCLUDED IN THE CONSTRUCTION PLANS. IF ADDITIONAL PLAN SHEETS ARE NEEDED, THEY ARE REQUIRED TO BE PREPARED IN CONFORMANCE WITH THE LOCATION AND DESIGN MANUAL VOLUME 3, SECTION 1200 - PLAN PREPARATION.

NOTATION SHALL ALSO BE MADE OF LOCATIONS AND THE EXTENT OF USE OF MATERIALS, OTHER THAN SOIL, FOR EMBANKMENT CONSTRUCTION (ROCK, BROKEN CONCRETE WITHOUT REINFORCING STEEL, ETC.).

THE PLAN INDEX SHALL SHOW THE PLAN SHEETS WHICH HAVE CHANGES APPEARING ON THEM.

TWO COPIES OF THE AS-BUILT CONSTRUCTION PLANS SHALL BE DELIVERED TO THE PROJECT ENGINEER FOR APPROVAL UPON COMPLETION OF THE PHYSICAL WORK BUT PRIOR TO THE REQUEST FOR FINAL PAYMENT. AFTER THE DEPARTMENT HAS APPROVED THE AS-BUILT CONSTRUCTION PLANS, THE ASSOCIATED ELECTRONIC FILES SHALL BE DELIVERED TO THE DISTRICT CAPITAL PROGRAMS ADMINISTRATOR. ACCEPTANCE OF THESE PLANS AND DELIVERY OF THE ASSOCIATED ELECTRONIC FILES IS REQUIRED PRIOR TO THE WORK BEING ACCEPTED AND THE FINAL ESTIMATE APPROVED.

PAYMENT FOR ALL THE ABOVE SHALL BE LUMP SUM UPON PROPER EXECUTION OF ALL WORK OF THIS ITEM AS DETERMINED BY THE PROJECT ENGINEER.

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 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.

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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 A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

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

SQUARE POSTS, CMS 730.016, SHALL NOT BE PERMITTED TO BE USED.

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452

SHEET

P.3

TOTAL

58

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.
4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.
5. FOR ROUTES NOT ON THE PERMITTED LANE CLOSURE CHART, ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
6. A QUANTITY OF 15 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.
7. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRIC PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

DETOUR NOTIFICATION [ODOT]

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT...)

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 8 SIGN MONTH ASSUMING 2 PCMS SIGN(S) FOR 4 MONTH(S)

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTICE OF CLOSURE SIGN TIME TABLE		
ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
ROAD & RAMP CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

AJN 04-24-24

PROJECT ID

109452

SHEET

P.4

TOTAL

58

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 OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMTCD, 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.

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).

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 50 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 A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON
A DETOUR) POR-43-3.956

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET P.7. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$3,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON
A DETOUR) POR-225-7.775

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET P.8. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$3,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON
A DETOUR) STA-44-21.874

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET P.9. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$3,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON
A DETOUR) SUM-303-3.589

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 21 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET P.10. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$3,000 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

DRIVEWAY ACCESS (POR-225-7.775)

CONTRACTOR SHALL PROVIDE ACCESS TO THE DRIVES LOCATED ON SR 225 (STA. 137+15 LT) & (STA. 140+25 LT) THROUGHOUT THE ENTIRE DURATION OF THE POR-225-7.775 CULVERT REPLACEMENT.

ALL COSTS ASSOCIATED WITH MAINTAINING THIS DRIVE ACCESS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

DRIVEWAY ACCESS (STA-44-21.874)

CONTRACTOR SHALL PROVIDE ACCESS TO THE DRIVES LOCATED ON SR 44 (STA. 449+75 LT) & (STA. 449+00 RT) THROUGHOUT THE ENTIRE DURATION OF THE STA-44-21.874 CULVERT REPLACEMENT.

ALL COSTS ASSOCIATED WITH MAINTAINING THIS DRIVE ACCESS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

DRIVEWAY ACCESS (SUM-303-3.589)

CONTRACTOR SHALL PROVIDE ACCESS TO THE DRIVE LOCATED ON SR 303 (STA. 104+00 RT) THROUGHOUT THE ENTIRE DURATION OF THE SUM-303-3.589 CULVERT REPLACEMENT.

ALL COSTS ASSOCIATED WITH MAINTAINING THIS DRIVE ACCESS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

DESIGN AGENCY

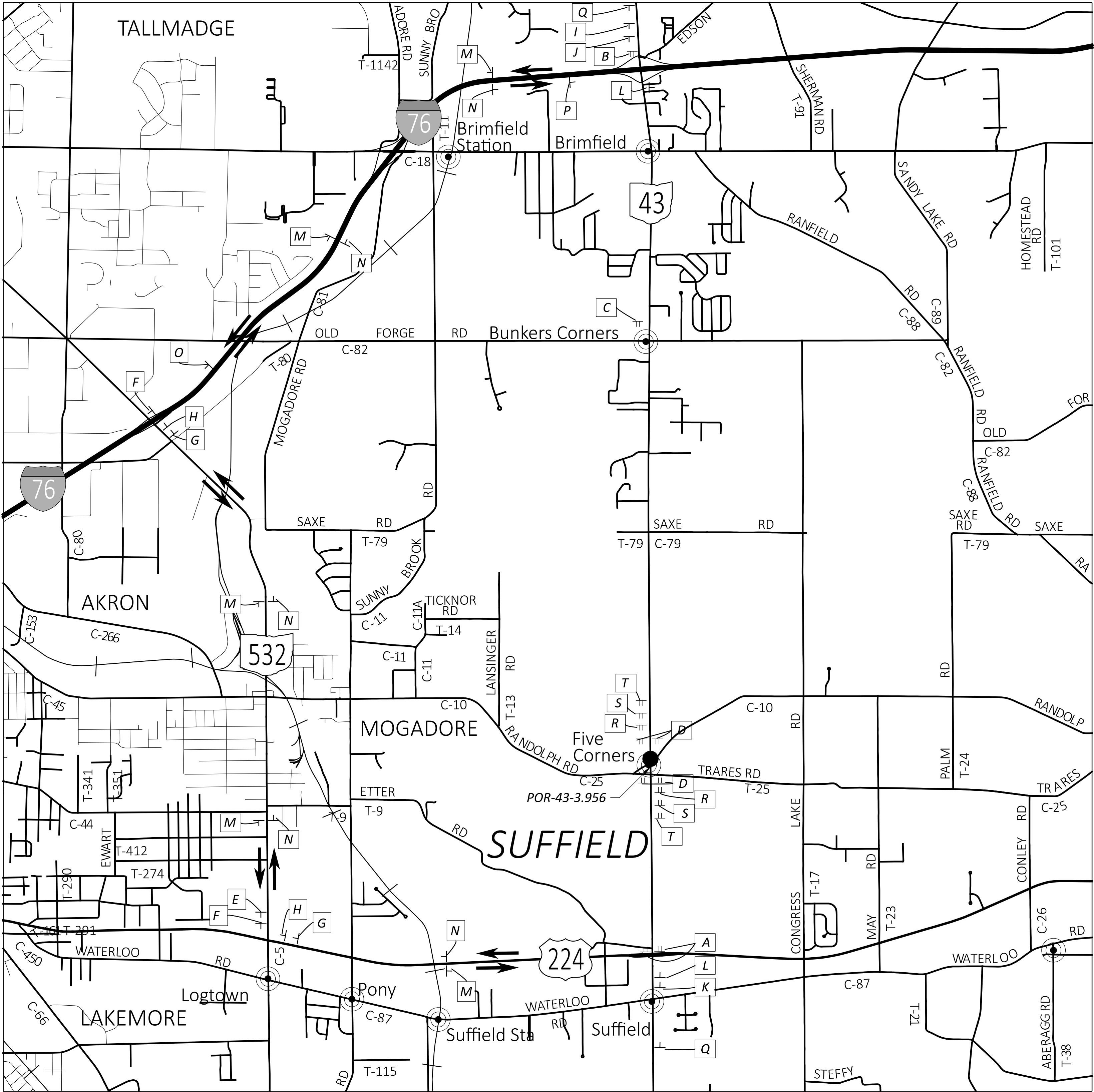


DESIGNER
NKF

REVIEWER
AJN 04-24-24

PROJECT ID
109452

SHEET	TOTAL
P.5	58



DETOUR ROUTE FOR: POR-43-3.956

DETOUR ROUTE: SR 224 / SR 532 / I 76

● CLOSE STRUCTURE POR-44-17.02 PER STANDARD CONSTRUCTION DRAWING MT-101.60

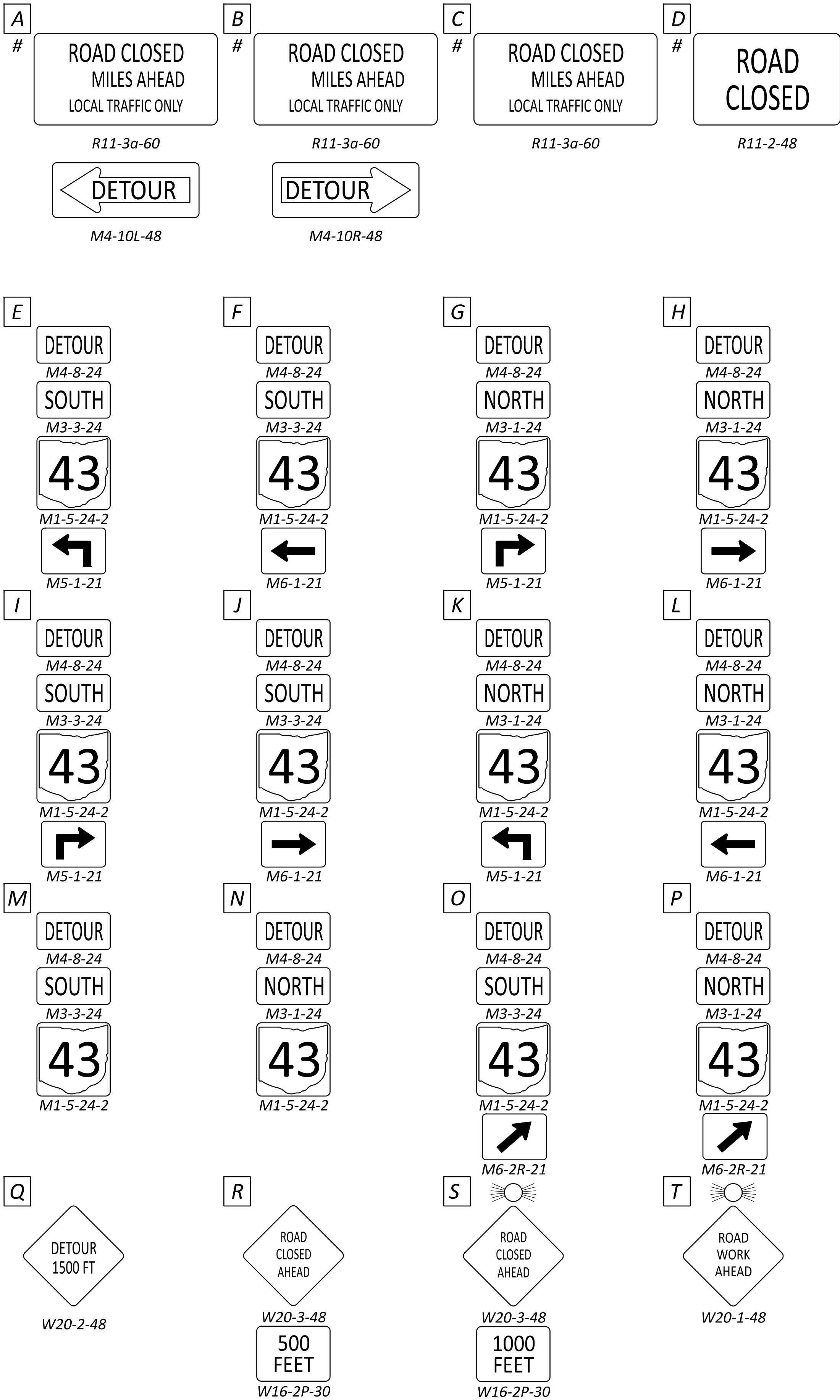
ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-101.60

TYPE A WARNING LIGHT

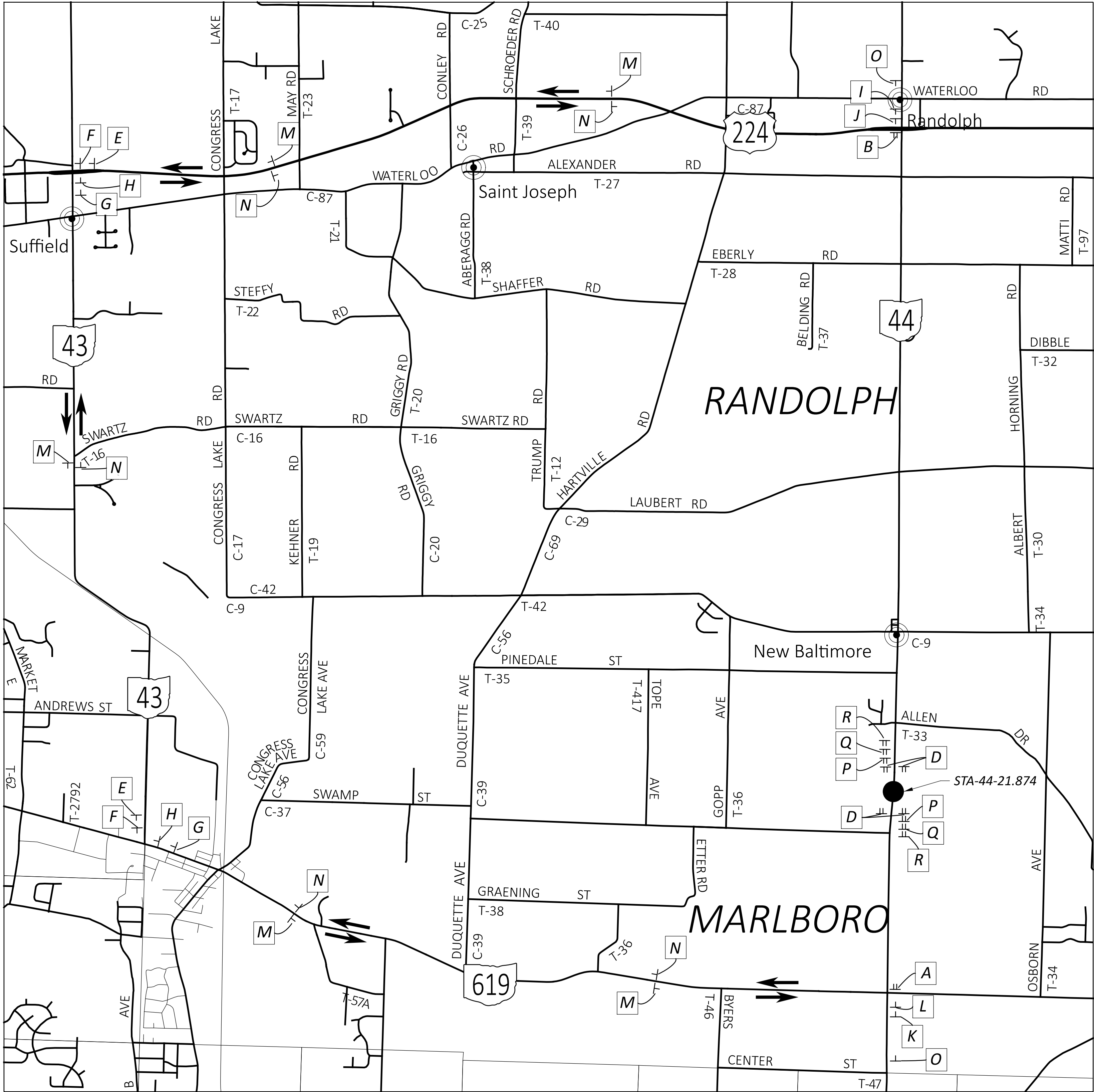
REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,
FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



NOT TO SCALE



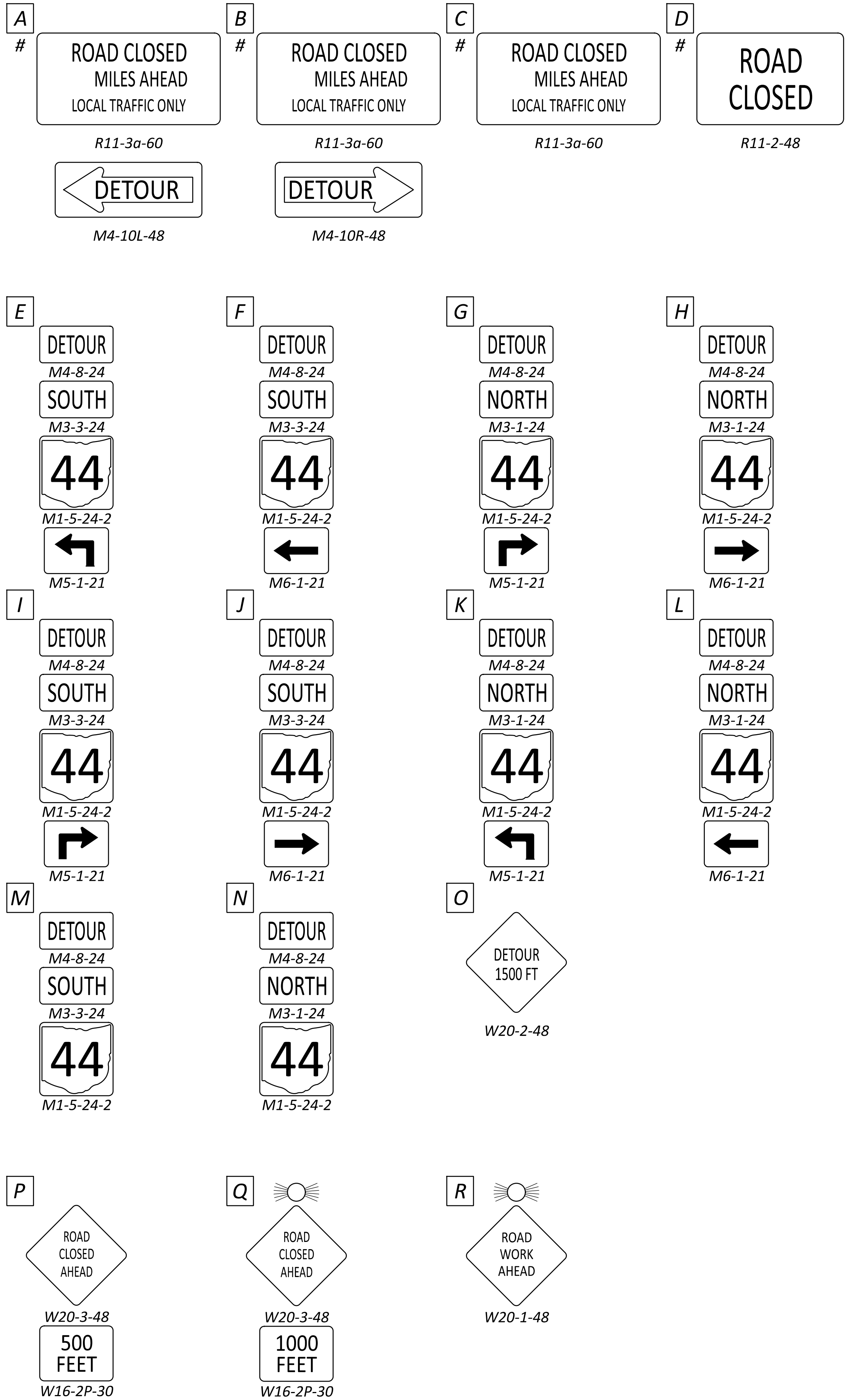


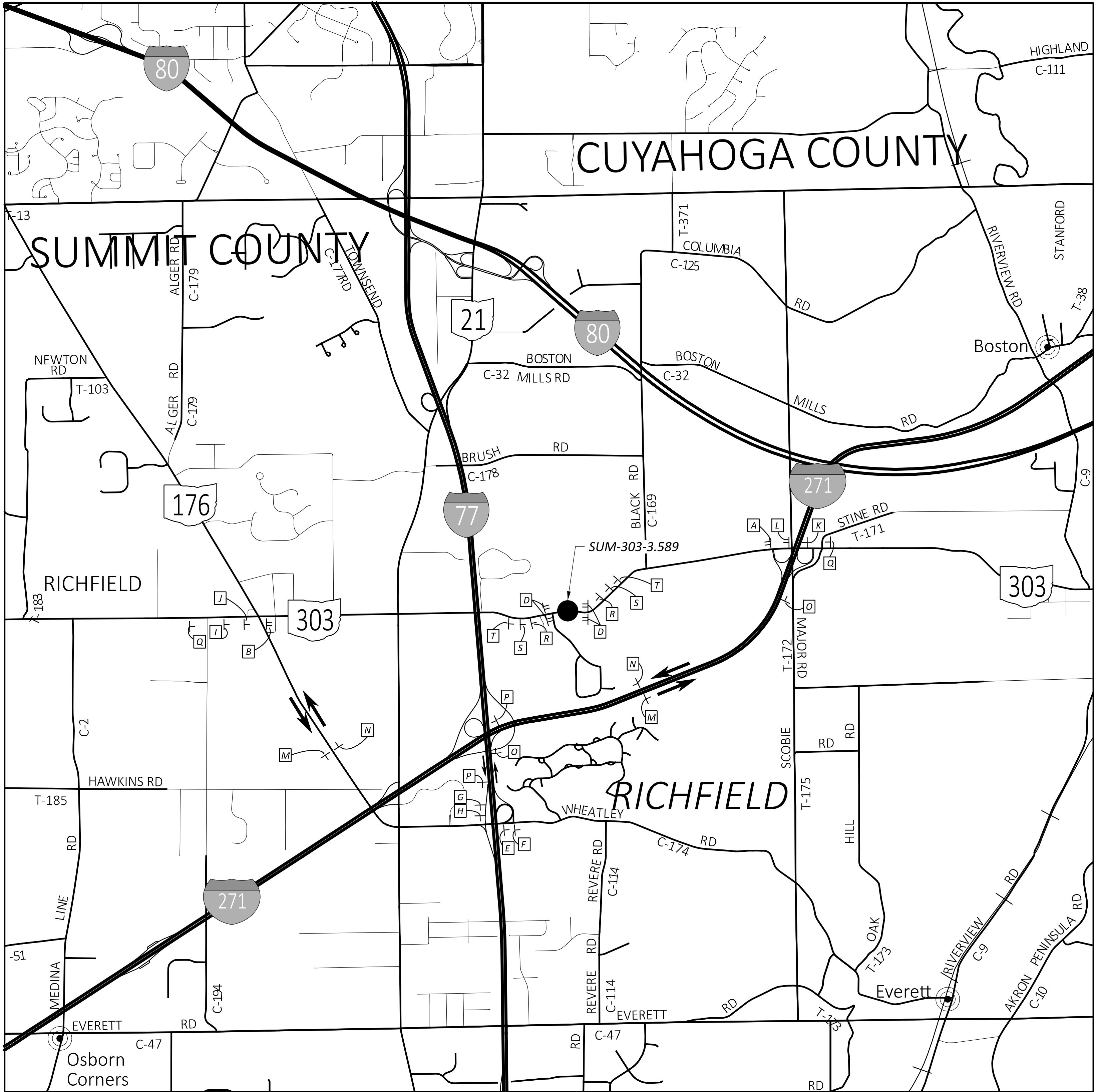


DETOUR ROUTE FOR: STA-44-21.874

- DETOUR ROUTE: SR 619 / SR 43 / SR 224
- CLOSE STRUCTURE STA-44-21.874 PER STANDARD CONSTRUCTION DRAWING MT-101.60
- ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-101.60
- TYPE A WARNING LIGHT

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,
FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.





DETOUR ROUTE FOR: SUM-303-3.589

DETOUR ROUTE: SR 176 / I 77 / I 271

● CLOSE STRUCTURE SUM-303-3.589 PER STANDARD CONSTRUCTION DRAWING MT-101.60

ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-101.60

TYPE A WARNING LIGHT

REFER TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,
FIGURE 6H-8 (TYPICAL APPLICATION 8), FOR SIGN SPACING.



NOT TO SCALE

<div>A</div> <div>#</div> <div>ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3a-60</div> <div> DETOUR</div> <div>M4-10L-48</div>	<div>B</div> <div>#</div> <div>ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3a-60</div> <div> DETOUR</div> <div>M4-10R-48</div>	<div>C</div> <div>#</div> <div>ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY</div> <div>R11-3a-60</div> <div></div> <div></div>	<div>D</div> <div>#</div> <div>ROAD CLOSED</div> <div>R11-2-48</div> <div></div> <div></div>
<div>E</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M5-1-21</div>	<div>F</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-1-21</div>	<div>G</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M5-1-21</div>	<div>H</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-1-21</div>
<div>I</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M5-1-21</div>	<div>J</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-1-21</div>	<div>K</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M5-1-21</div>	<div>L</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-1-21</div>
<div>M</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-2R-21</div>	<div>N</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-2R-21</div>	<div>O</div> <div>DETOUR</div> <div>M4-8-24</div> <div>EAST</div> <div>M3-2-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-2R-21</div>	<div>P</div> <div>DETOUR</div> <div>M4-8-24</div> <div>WEST</div> <div>M3-4-24</div> <div></div> <div>M1-5-24-3</div> <div></div> <div>M6-2R-21</div>
<div>Q</div> <div></div> <div>DETOUR 1500 FT</div> <div>W20-2-48</div>	<div>R</div> <div></div> <div>ROAD CLOSED AHEAD</div> <div>500 FEET</div> <div>W16-2P-30</div>	<div>S</div> <div></div> <div>ROAD CLOSED AHEAD</div> <div>1000 FEET</div> <div>W16-2P-30</div>	<div>T</div> <div></div> <div>ROAD WORK AHEAD</div> <div>W20-1-48</div>



SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.3	P.12	P.13	P.20	P.21	P.29	P.30	P.37	P.38	P.46	P.48	P.55		01/NFP/04						
																		ROADWAY	
					LS								LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-225-7.775)	P.29
													LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-43-3.956)	P.20
	LS		LS										LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-5-3.896)	P.12
							LS						LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (STA-44-21.874)	P.37
									LS				LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (SUM-303-3.589)	P.46
				LS									LS	202	11000	LS		STRUCTURE REMOVED, (POR-43-3.956)	
											4		4	202	20010	4	EACH	HEADWALL REMOVED	
				1		2							2	202	20010	2	EACH	HEADWALL REMOVED, (POR-225-7.775)	
								2					1	202	20010	1	EACH	HEADWALL REMOVED, (POR-43-3.956)	
													2	202	20010	2	EACH	HEADWALL REMOVED, (STA-44-21.874)	
										2			2	202	20010	2	EACH	HEADWALL REMOVED, (SUM-303-3.589)	
			167		133		133		159				599	202	23000	599	SY	PAVEMENT REMOVED	
										130			130	202	32000	130	FT	CURB REMOVED	
		25		10			14			54	128		231	202	35100	231	FT	PIPE REMOVED, 24" AND UNDER	
				64		60	62			51			237	202	35200	237	FT	PIPE REMOVED, OVER 24"	
				163		532		517					1,212	202	38000	1,212	FT	GUARDRAIL REMOVED	
								4					4	202	42040	4	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
				1									1	202	58100	1	EACH	CATCH BASIN REMOVED, (POR-43-3.956)	
	84		63		133		144		53				477	203	10000	477	CY	EXCAVATION	
											775		775	203	20000	775	CY	EMBANKMENT	
			146		155		132		181				614	204	10000	614	SY	SUBGRADE COMPACTION	
	39		51		118		35		21				264	204	20000	264	CY	EMBANKMENT	
				138		565		519					1,222	606	15050	1,222	FT	GUARDRAIL, TYPE MGS	
				1		2		2					5	606	26150	5	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
						2		2					4	606	26550	4	EACH	ANCHOR ASSEMBLY, MGS TYPE T, MASH 2016	
		80											80	607	35000	80	FT	FENCE REMOVED AND REBUILT	
LS													LS	SPECIAL	69091000	LS		AS-BUILT CONSTRUCTION PLANS	P.3
					LS								LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION, (POR-225-7.775)	P.29
			LS										LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION, (POR-43-3.956)	P.20
	LS												LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION, (POR-5-3.896)	P.12
							LS						LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION, (STA-44-21.874)	P.37
								LS					LS	SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION, (SUM-303-3.589)	P.46
																		EROSION CONTROL	
								4					4	601	10000	4	SY	RIPRAP, TYPE D	
						5		4					9	601	11000	9	SY	RIPRAP, TYPE D	
				8		9		9					26	601	32104	26	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
		1								20			21	601	32204	21	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
		96								74			170	601	37500	170	FT	PAVED GUTTER, TYPE 1-2	
	96		106		132		143		74		80		631	659	00300	631	CY	TOPSOIL	
	863		952		1,194		1,289		668		710		5,676	659	10000	5,676	SY	SEEDING AND MULCHING	
	43		48		60		64		33				248	659	14000	248	SY	REPAIR SEEDING AND MULCHING	
	0.12		0.13		0.16		0.17		0.09				0.67	659	20000	0.67	TON	COMMERCIAL FERTILIZER	
	0.18		0.2		0.25		0.27		0.14				1.04	659	31000	1.04	ACRE	LIME	
	5		5		6		7		4				27	659	35000	27	MGAL	WATER	
											179		179	670	00700	179	SY	DITCH EROSION PROTECTION	
													5,000	832	30000	5,000	EACH	EROSION CONTROL	
																		DRAINAGE	
		1		2		3		4		18			28	602	20000	28	CY	CONCRETE MASONRY	
								20					20	611	04600	20	FT	12" CONDUIT, TYPE C	
				8									8	611	05900	8	FT	15" CONDUIT, TYPE B	
		15								56	129		200	611	06100	200	FT	15" CONDUIT, TYPE C	
		20											20	611	06700	20	FT	15" CONDUIT, TYPE F - 707.05 TYPE C, 707.21, OR 707.33	
				12									216	611	07400	216	FT	18" CONDUIT, TYPE B	
				70									12	611	22200	12	FT	54" CONDUIT, TYPE A, 706.02	
													70	611	23600	70	FT	60" CONDUIT, TYPE A, 706.02	
								66					66	611	23600	66	FT	60" CONDUIT, TYPE A, 707.01, 707.02, 707.33	
										53			53	611	52700	53	FT	29" X 45" CONDUIT, TYPE A, 706.04	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID


109452

SHEET

P.10

TOTAL

58

GENERAL SUMMARY	
DESIGN AGENCY	
	
DESIGNER	NKF
REVIEWER	MJP
PROJECT ID	04-24-24
109452	
SHEET	TOTAL
P.11	58

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: PORTAGE COUNTY LDP
COMBINED SCALE FACTOR: 1.000043
ORIGIN OF COORDINATE SYSTEM: N 39-48-00, E 278-54-00

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

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

AT&T	Dominion Energy
ATTN: Steven Hylton	ATTN: Kyle J. McCall
50 W. Bowery St., 6th Floor	Supervisor - Gas Operations
Akron, OH 44308	Distribution Design
330-384-3055	320 Springside Drive
330-631-7485 (cell)	Akron, OH 44333
sh1513@att.com	330-801-8299 (cell)
	Kyle.J.McCall@dominionenergy.com
	relocation@dominionenergy.com

UTILITIES (CONT...)

Ohio Edison	Portage County Water Resources
ATTN: Phillip Rawson	Engineer Manager
730 South Avenue	ATTN: Jonathan Vence
Youngstown, OH 44502	449 South Meridian Street
724-255-1332 (cell)	P.O. Box 1217
prawson@firstenergycorp.com	Ravenna, OH 44266
	330-297-3677
	jvence@portageco.com

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
- IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

CONTROL POINT (U.S. SURVEY FEET GROUND)					
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV.
CP10	491838.644	131060.463	573.+47.87	49.78' RT.	1084.69
CP20	492406.807	131872.721	583+53.22	51.21' RT.	1082.00
CP21	492316.369	131921.905	583+53.59	154.15' RT.	
CP30	492799.844	132861.606	594+17.39	128.80' RT.	1089.60
CENTERLINE ALIGNMENT					
28	489989.749	129801.191	550+71.71		
35	493297.299	133601.960	603+00.00		
37	492908.625	132790.220	594+00.01	0.14' LT.	
103	486540.439	128692.042	514+48.46		
BENCHMARK					
BM1	492439.474	132058.507	585+36.88	106.81' RT.	1080.67

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

PROVIDE CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. FURNISH A STUB MEETING THE REQUIREMENTS OF 707 WITH A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THOROUGHLY CLEAN AND REGALVANIZE OR OTHERWISE SUITABLY REPAIR THE FIELD WELDED JOINT, IF USED. MEET WELDING REQUIREMENTS OF 513.21.

PROVIDE A MASONRY COLLAR PER STANDARD CONSTRUCTION DRAWING DM-1.1, TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS USED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, IS INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

SEEDING AND MULCHING

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

659, TOPSOIL	96 CU. YD.
659, SEEDING AND MULCHING	863 SQ. YD.
659, REPAIR SEEDING AND MULCHING	43 SQ. YD.
659, COMMERCIAL FERTILIZER	0.12 TON
659, LIME	0.18 ACRES
659, WATER	5 M. GAL.

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.

EXCAVATION AND EMBANKMENT

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION	84 CY
ITEM 204 - EMBANKMENT	39 CY

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-5-3.896)

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS, AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS.

CONDUIT IDENTIFICATION SIGNS

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR POR-5-3.986

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

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, 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, NOTIFY THE ENGINEER 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, NOTIFY THE ENGINEER 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 IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.



D04-CULVERTS-FY2025

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[illegible]

ROADWAY AND DRAINAGE SUBSUMMARY - POR-5-3.896

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

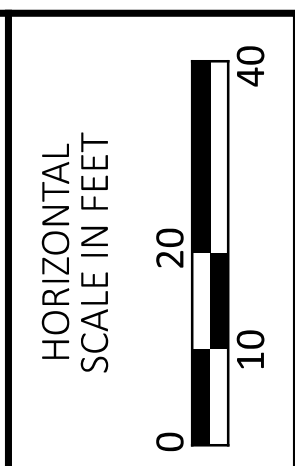
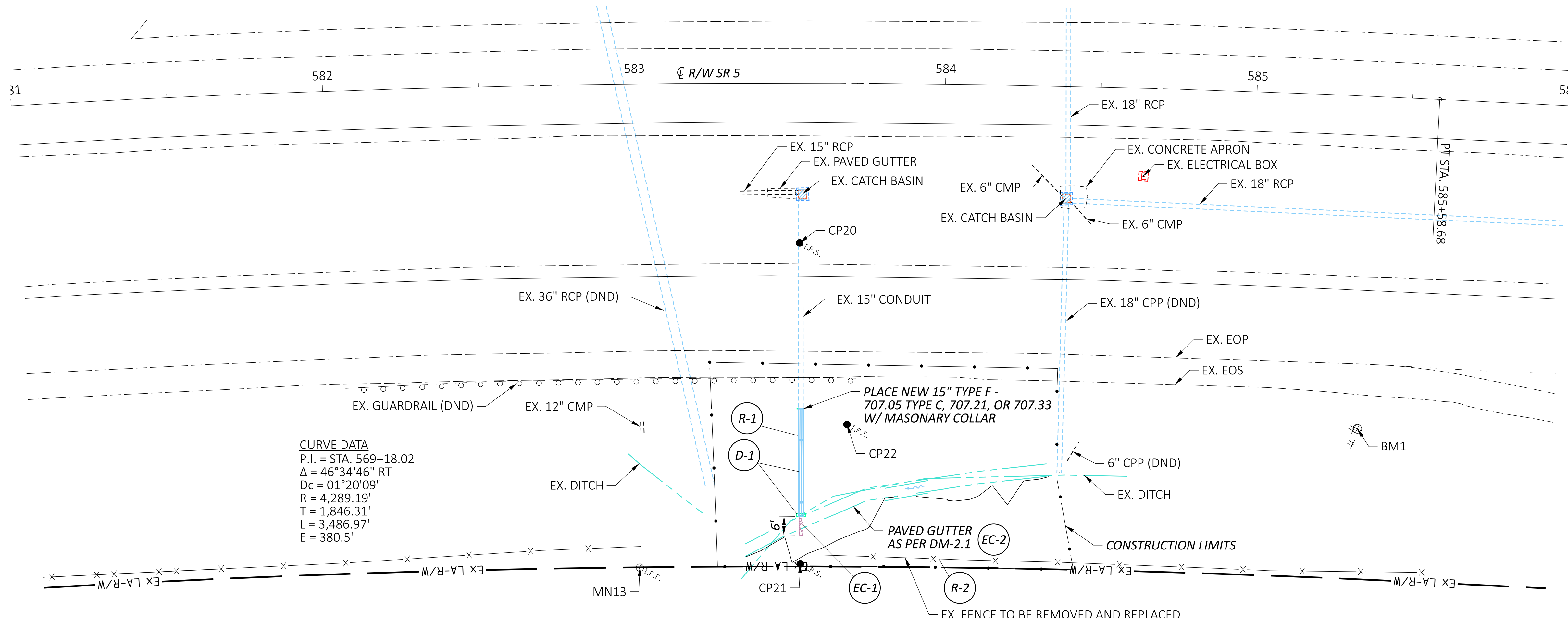
PROJECT ID

109452


SHEET TOTAL

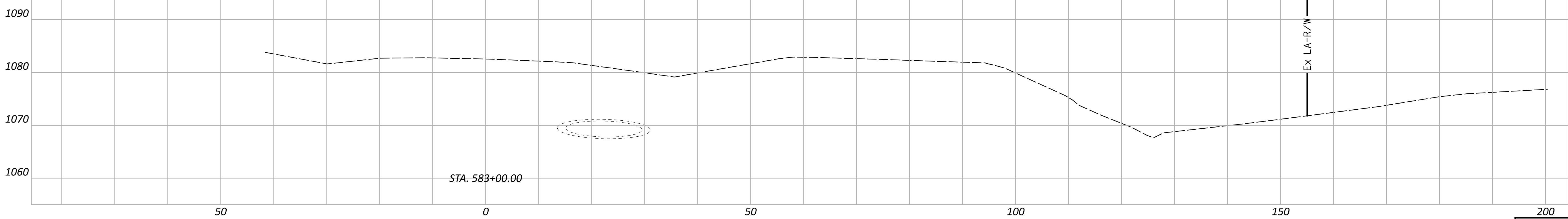
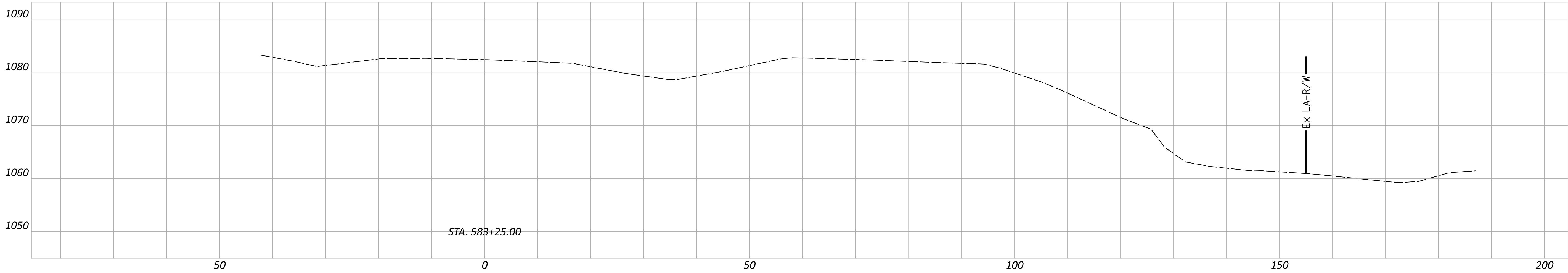
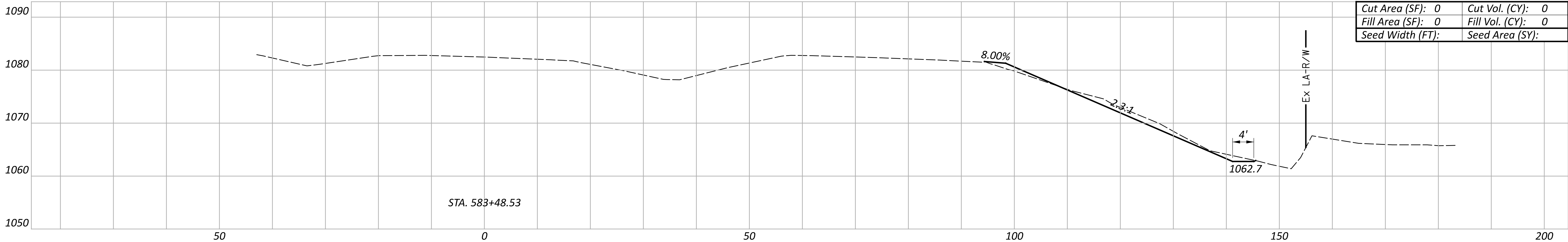
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PLAN AND PROFILE - POR-5-3.896
STA. 584+00 TO STA. 586+00

DESIGN AGENCY	
	
DESIGNER	
NKF	
REVIEWER	
MJP	04-24-24
PROJECT ID	
109452	
SHEET	TOTAL
P.14	58



Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - POR-5-3.896
STA. 583+00 TO STA. 583+48.53

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

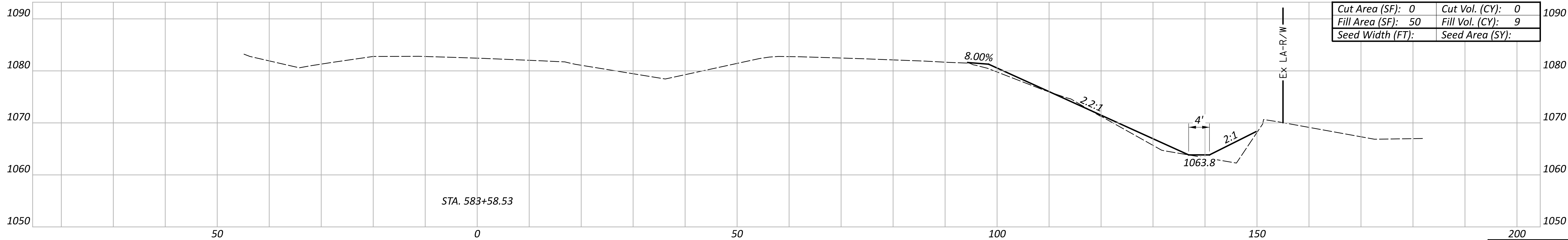
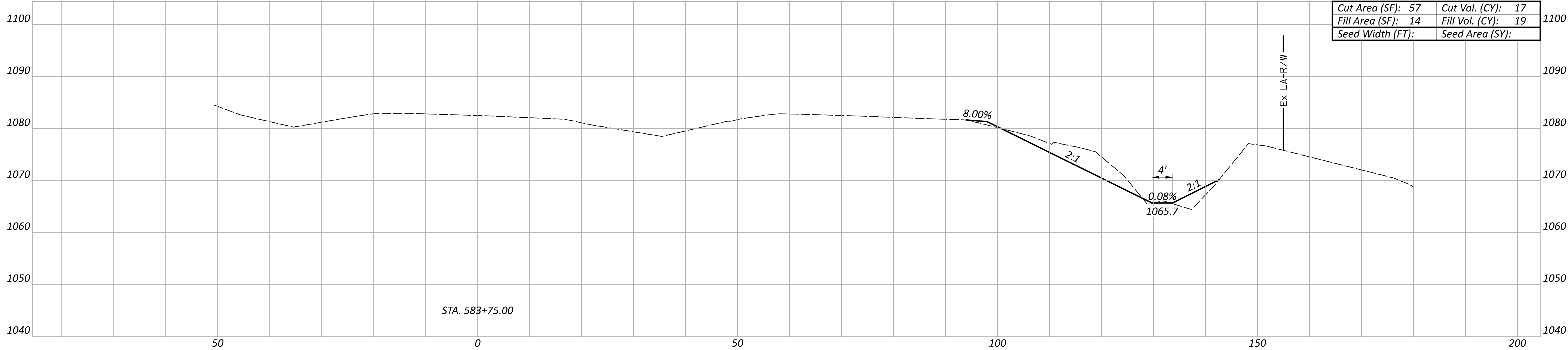
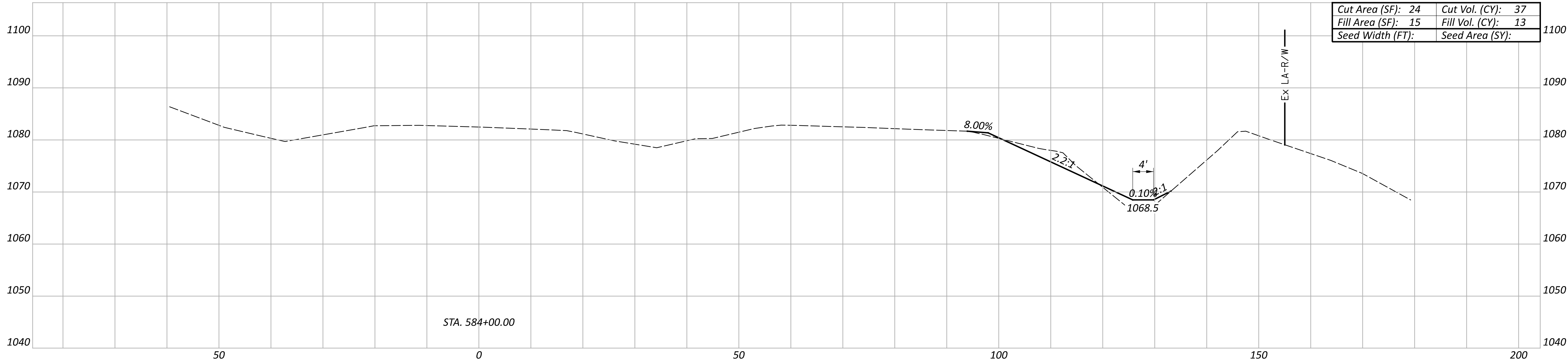
109452

SHEET

P.15

TOTAL

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Sheet Totals			SHEET TOTAL	
Seeding	Cut	Fill	P.16	58
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CROSS SECTIONS - POR-5-3.896
STA. 583+58.53 TO STA. 584+00

DESIGN AGENCY

DESIGNER

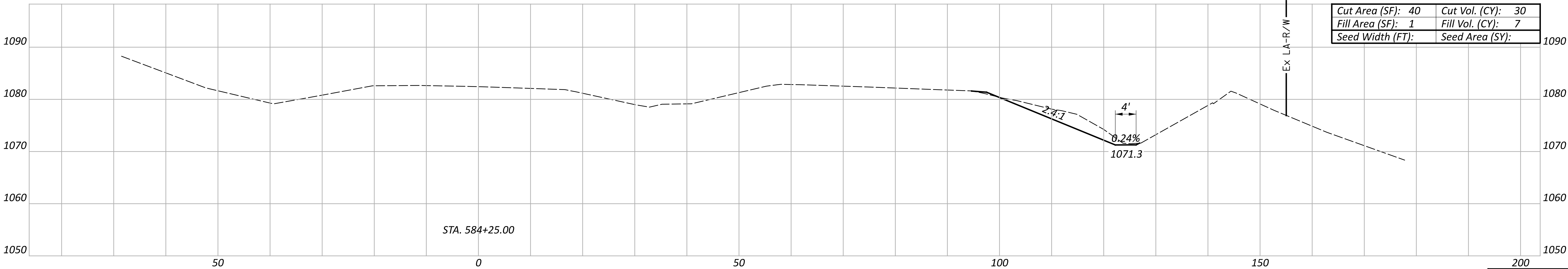
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REVIEWER

MJP 04-24-24

PROJECT ID

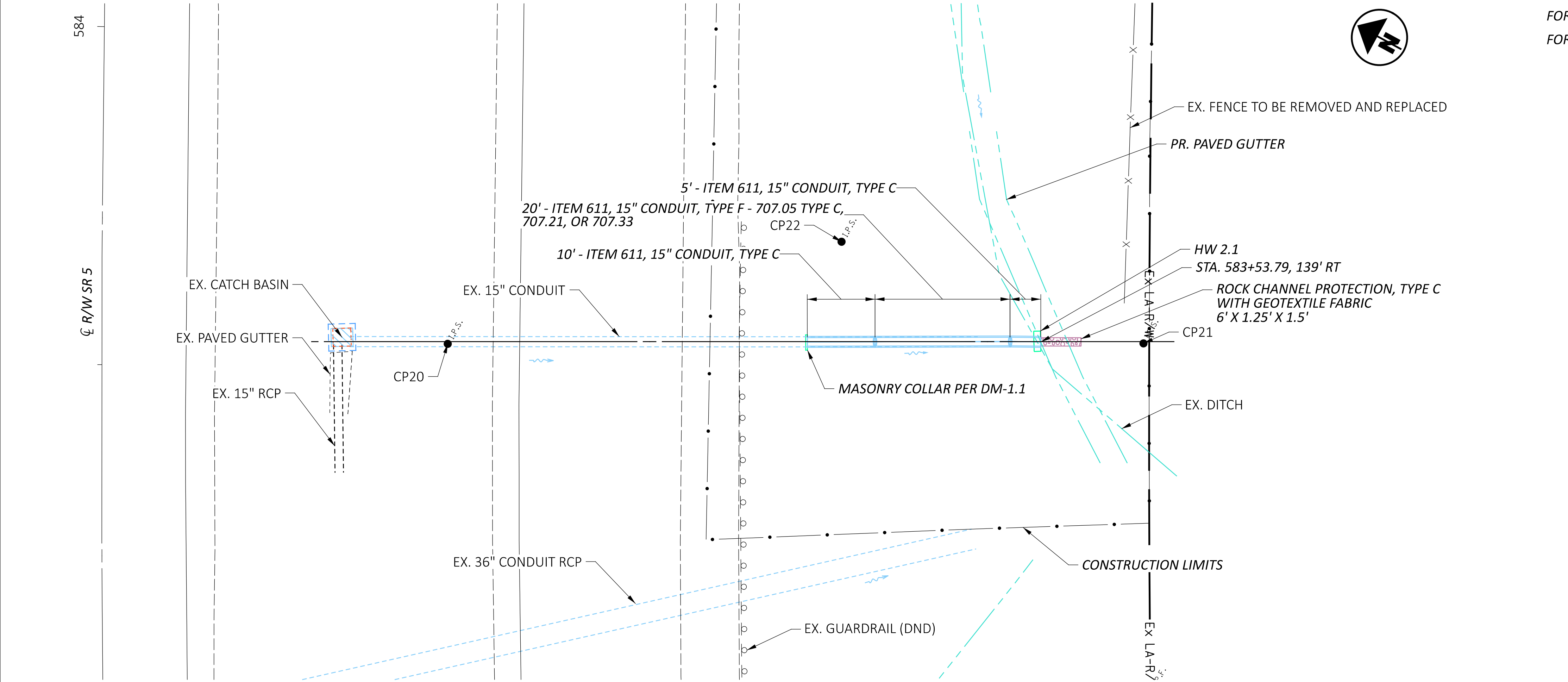
109452



Cut Area (SF):	40	Cut Vol. (CY):	30
Fill Area (SF):	1	Fill Vol. (CY):	7
Seed Width (FT):		Seed Area (SY):	

Sheet Totals			PROJECT ID	
Seeding	Cut	Fill	SHEET	TOTAL
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FOR BENCHMARK INFORMATION, SEE SHEET P.12
FOR ESTIMATED QUANTITIES, SEE SHEET P.13

OUTLET HYDRAULIC DATA

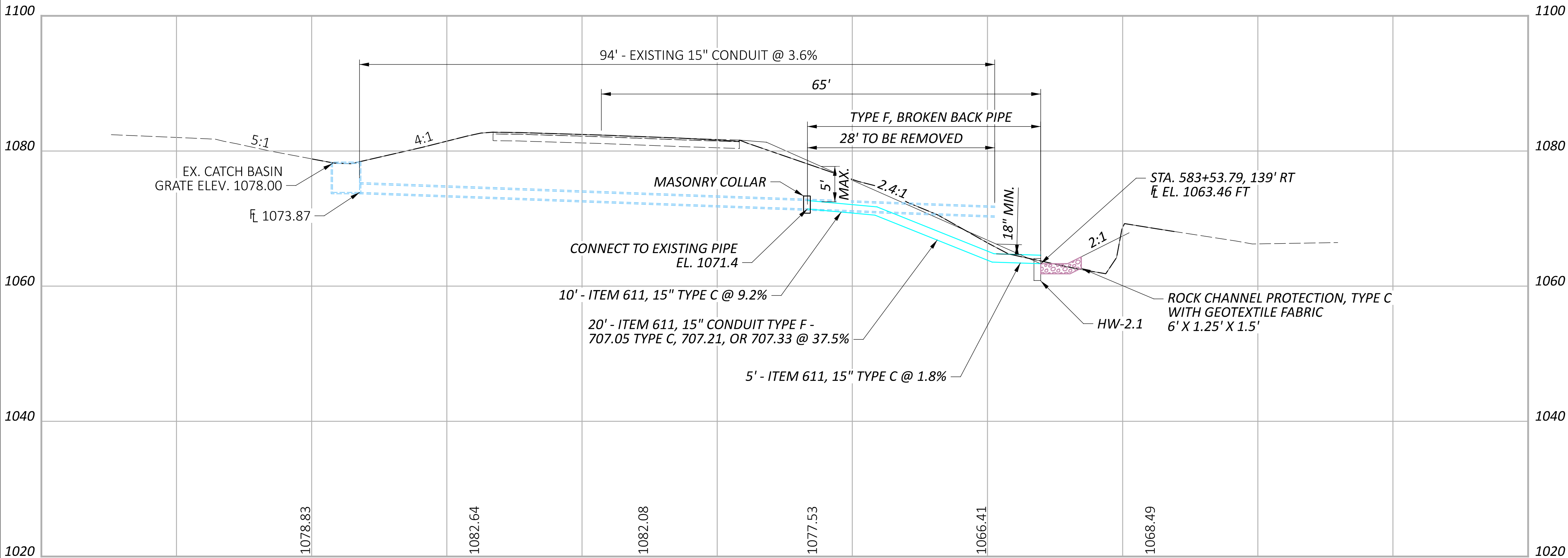
DRAINAGE AREA = 2.6 ACRES
Q (10%) = 8.2 CFS V (10%) = 11.3 FT/S
Q (4%) = 9.4 CFS V (4%) = 7.7 FT/S
DESIGN SERVICE LIFE: 75 YEARS
ABRASION LEVEL: 2.0
pH: 7.0

EXISTING CONDUIT

TYPE: REINFORCED CONCRETE
SIZE: 15"
SKEW: NONE
ALIGNMENT: TANGENT
DATE BUILT: UNKNOWN
CONDITION: FAILED END SECTION
CFN: 1824173

PROPOSED CONDUIT

TYPE: 15" CONDUIT, TYPE F, BROKEN BACK PIPE
SKEW: NONE
ALIGNMENT: TANGENT
CFN:
CONDITION: REPLACE FAILED END SECTION



CULVERT DETAILS - POR-5-3.896
STA. 583+50

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

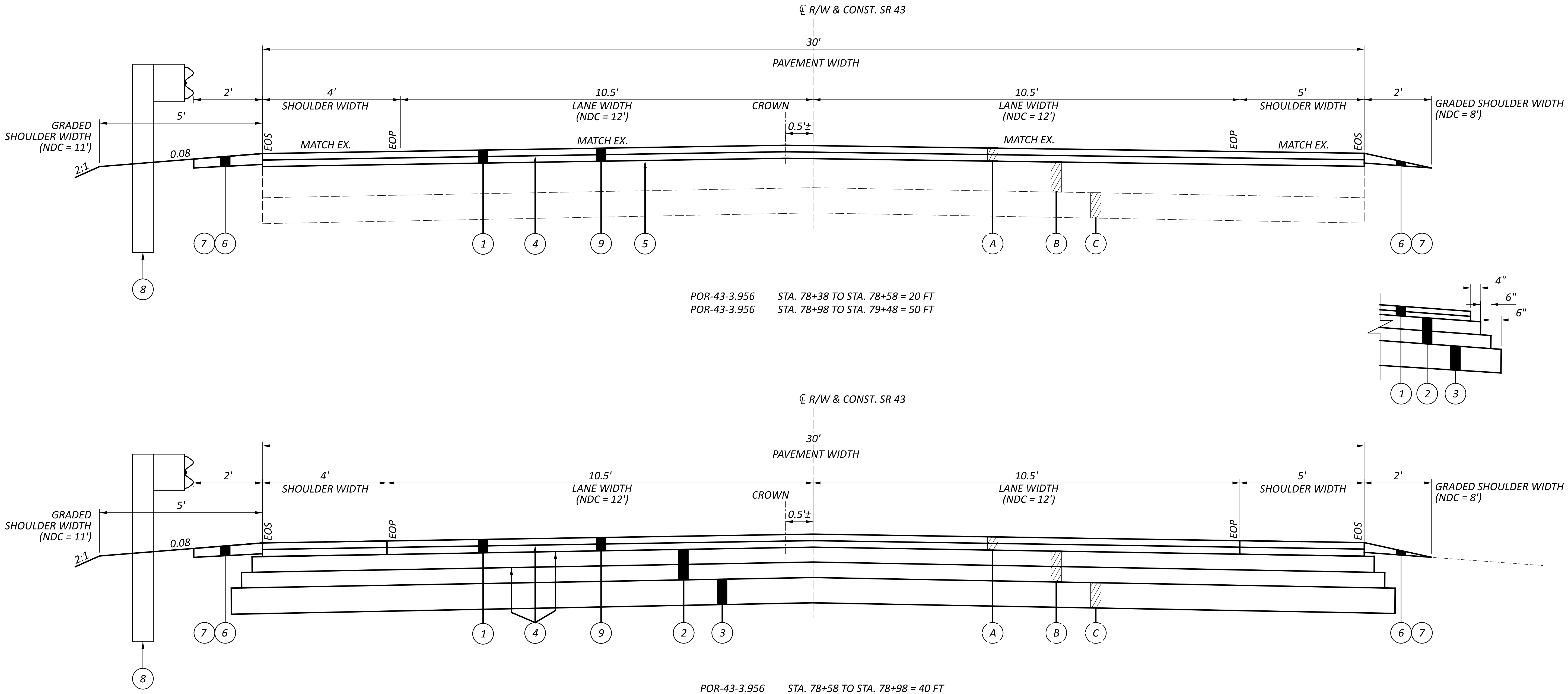
109452

SUBSET TOTAL

1 1

SHEET TOTAL

P.18 58



SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: PORTAGE COUNTY LDP
COMBINED SCALE FACTOR: 1.000043
ORIGIN OF COORDINATE SYSTEM: N 39-48-00, E 278-54-00

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

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

Akron Water - City of AT&T
ATTN: Bob Geiser, P.E. ATTN: Steven Hylton
1460 Triplett Blvd 50 W. Bowery St., 6th Floor
Akron, OH 44306 Akron, OH 44308
330-375-2791 330-384-3055
bgeiser@akronohio.gov 330-631-7485 (cell)
sh1513@att.com

UTILITIES (CONT.)

Dominion Energy Ohio Edison
ATTN: Kyle J. McCall ATTN: Phillip Rawson
Supervisor - Gas Operations 730 South Avenue
Distribution Design Youngstown, OH 44502
320 Springside Drive 724-255-1332 (cell)
Akron, OH 44333 prawson@firstenergycorp.com
330-801-8299 (cell)
Kyle.J.McCall@dominionenergy.com
relocation@dominionenergy.com

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
- IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

CONTROL POINT (U.S. SURVEY FEET GROUND)					
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV.
CP10	453247.692	95798.083	74+72.94	20.28' LT.	1134.19
CP20	454560.961	95852.768	87+86.42	29.32' RT.	1155.05
CP30	455374.522	95846.402			1103.70
CENTERLINE ALIGNMENT					
MN1	453174.661	95818.042	74+00		
MN13	453542.080	95819.665	77+67.42		
MN100	453686.635	95993.769	79+12.62	173.57' RT.	
MN108	452423.468	95774.525			
MN112	454152.815	95791.574	83+78.05	30.06' LT.	
MN141	454051.049	95791.487	82+76.28	30.07' LT.	
MN144	455013.418	95855.200	92+38.88	30.07' RT.	
MN145	455143.349	95855.611	93+68.81	30.00' RT.	
BENCHMARK					
BM1	453655.889	95846.543	1186+51.63	22.76' LT.	1114.83

CONDUIT IDENTIFICATION SIGNS

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR POR-43-3.956

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ.FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 642 - EDGE LINE, 6", TYPE 1, LANE WIDTH 10.5 FT 0.04 MI
ITEM 642 - CENTER LINE, 6", TYPE 1, LANE WIDTH 10.5 FT 0.02 MI

SEEDING AND MULCHING

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

659, TOPSOIL 106 CU. YD.
659, SEEDING AND MULCHING 952 SQ. YD.
659, REPAIR SEEDING AND MULCHING 48 SQ. YD.
659, COMMERCIAL FERTILIZER 0.13 TON
659, LIME 0.20 ACRES
659, WATER 5 M. GAL.

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.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-43-3.956)

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS, AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS.

PAVEMENT RESTORATION AND RESURFACING FOR CONDUITS

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION 63 CY
ITEM 204 - EMBANKMENT 51 CY

PAVEMENT RESTORATION AND RESURFACING FOR CONDUITS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 78+58 TO STA. 78+98
ITEM 202 - PAVEMENT REMOVED, 167 SQ. YDS.
ITEM 204 - SUBGRADE COMPACTION, 146 SQ. YDS.
ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449), 31 CU YDS.
ITEM 304 - AGGREGATE BASE, 25 CU YDS.
ITEM 407 - NON-TRACKING TACK COAT, 26 GAL.
ITEM 408 - PRIME COAT, 15 GAL.
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), PG64-22 (T=3"), 12 CU. YDS.
(PLACED IN 2 LIFTS)
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (T=1.0"), 1 CU. YDS.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 78+38 TO STA. 78+58
STA. 78+98 TO STA. 79+48
ITEM 254 - PAVEMENT PLANING (T=3"), 234 SQ. YDS.
ITEM 407 - NON-TRACKING TACK COAT, 22 GAL.
ITEM 408 - PRIME COAT, 26 GAL.
ITEM 301 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (T=3"), 20 CU. YDS.
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (T=1.0"), 2 CU. YDS.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

DESIGN AGENCY



DESIGNER
NKF

REVIEWER

MJP 04-24-24

PROJECT ID
109452

SHEET TOTAL
P.20 58

D04-CULVERTS-FY2025

MODEL: Steel_SurvFI PAPERSIZE: 34x22 (in.) DATE: 9/12/2024 TIME: 12:47:05 PM USER: nrlfcky
 pw:\vhohido-pw.bentley.com:ohido-pw-02\Documents\01 Active Projects\District 04\ _D04\109452\400-Engineering\Roadway\Sheets\109452_GS200.dgn

REF NO.	SHEET NO.	STATION TO STATION				202	202	202	202	202	202	503	601	602	606	606	611	611	611	611	614					
						PIPE REMOVED, OVER 24"	CATCH BASIN REMOVED, (POR-43-3.956)	PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	STRUCTURE REMOVED, (POR-43-3.956)	HEADWALL REMOVED, (POR-43-3.956)	COFFERDAMS AND EXCAVATION BRACING, (POR-43-3.956)	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	CONCRETE MASONRY	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	GUARDRAIL, TYPE MGS	60" CONDUIT, TYPE A, 706.02	54" CONDUIT, TYPE A, 706.02	15" CONDUIT, TYPE B	CATCH BASIN, NO. 2-6	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL					
						FT	EACH	FT	FT	LS	EACH	LS	CY	CY	EACH	FT	FT	FT	FT	EACH	EACH					
			TO																							
R-1	P.22	78+70.50	RT		78+79.72	RT																				
R-2	P.22	78+79.72	RT		78+82.87	RT		1																		
R-3	P.22	78+82.87	RT		78+88.95	RT	6																			
R-4	P.22	78+76.44	LT		78+81.23	RT	58			LS																
R-5	P.22	78+73.61	LT		78+79.04	LT				1																
R-6	P.22	78+17.65	LT		81+08.12	LT					163				1											
D-1	P.22	78+77.37	RT		78+77.37	LT							8				70									
D-2	P.22	78+73.11	RT		78+82.31	RT													1							
D-3	P.22	78+70.50	RT		78+77.55	RT												8								
D-4	P.22	78+80.17	RT		78+89.01	RT					LS						12									
D-5	P.22	78+72.80	LT		78+82.05	LT							1.32													
EC-1	P.22	78+72.80	LT		78+82.05	LT																				
GR-1	P.22	78+14.94	LT		81+12.76	LT										138					3					
																					</					

ROADWAY AND DRAINAGE SUBSUMMARY - POR-43-3.596

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

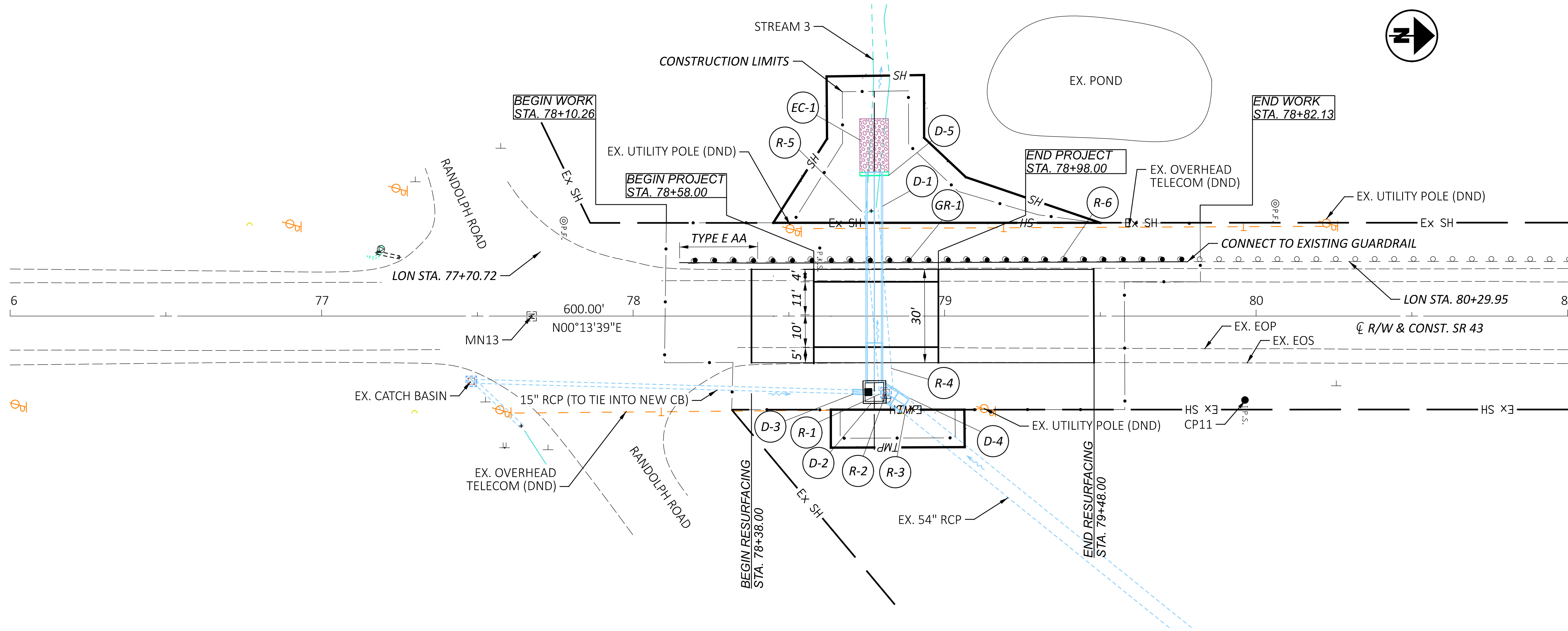
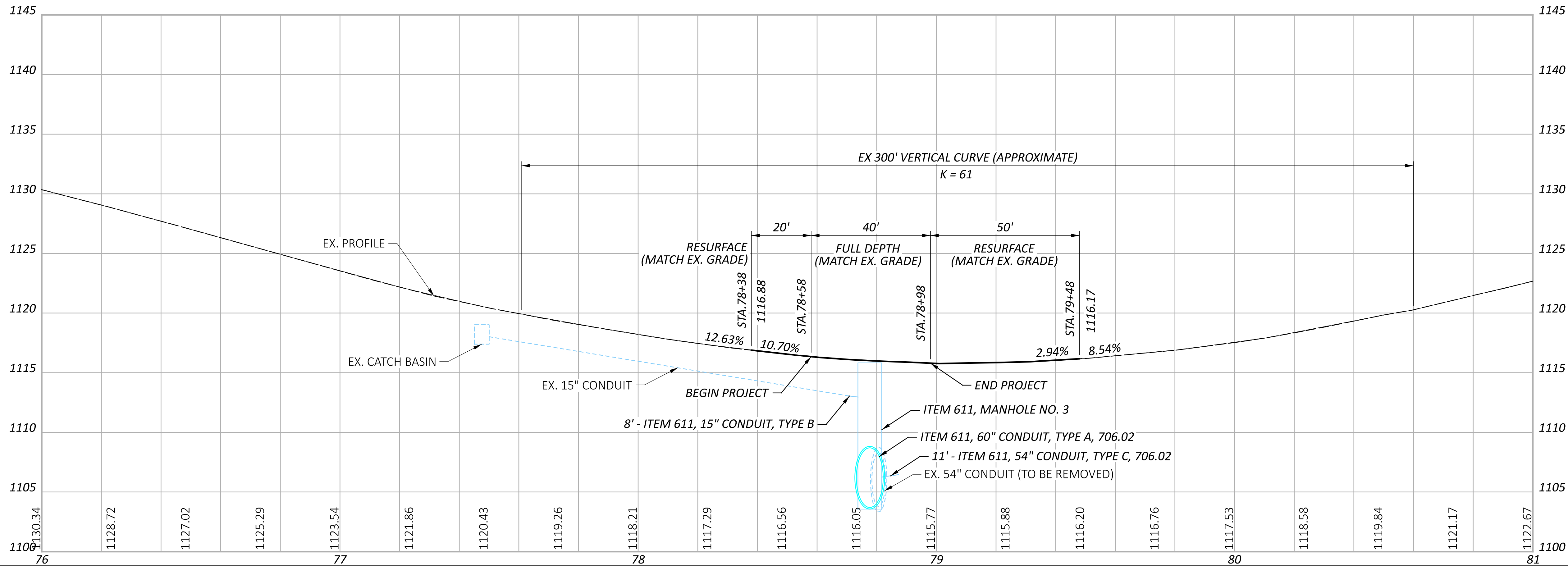
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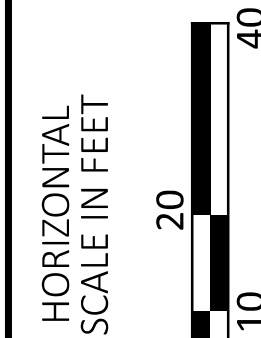
SHEET	TOTAL
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P.21 | □

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PLAN AND PROFILE - POR-43-3.596
STA. 76+00 TO 81+00



DESIGN AGENCY

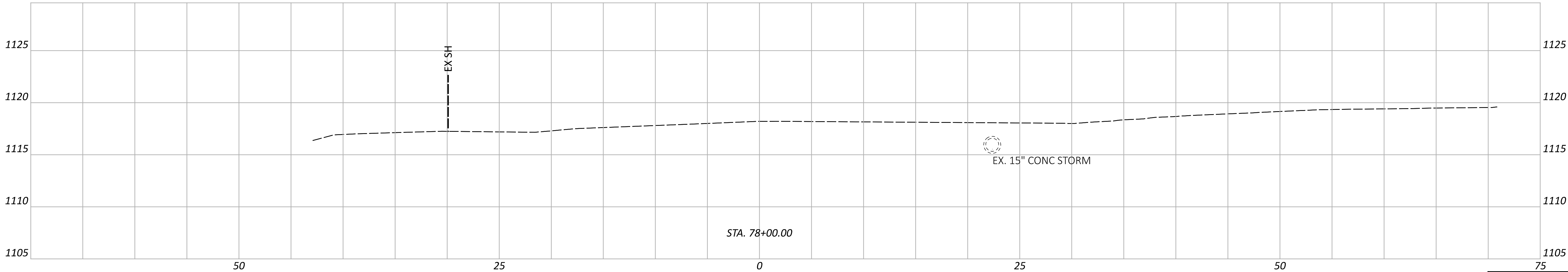
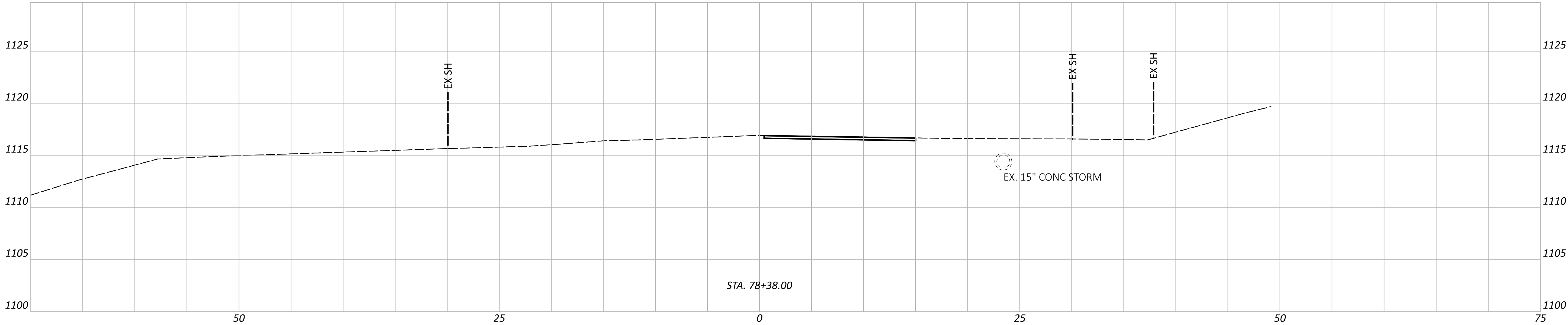
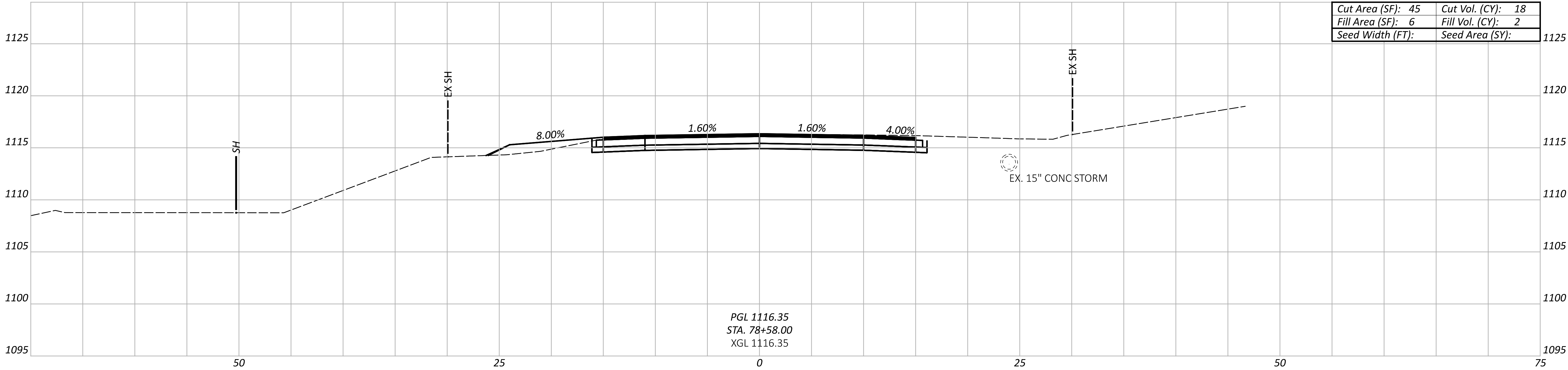


DESIGNER
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REVIEWER
MJP 04-24-24

PROJECT ID
109452

SHEET TOTAL
P.22 58



Sheet Totals				PROJECT ID	
Seeding	Cut	Fill		SHEET	TOTAL
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CROSS SECTIONS - POR-43-3.596
STA. 78+00.00 TO STA. 78+58.00

DESIGN AGENCY



DESIGNER

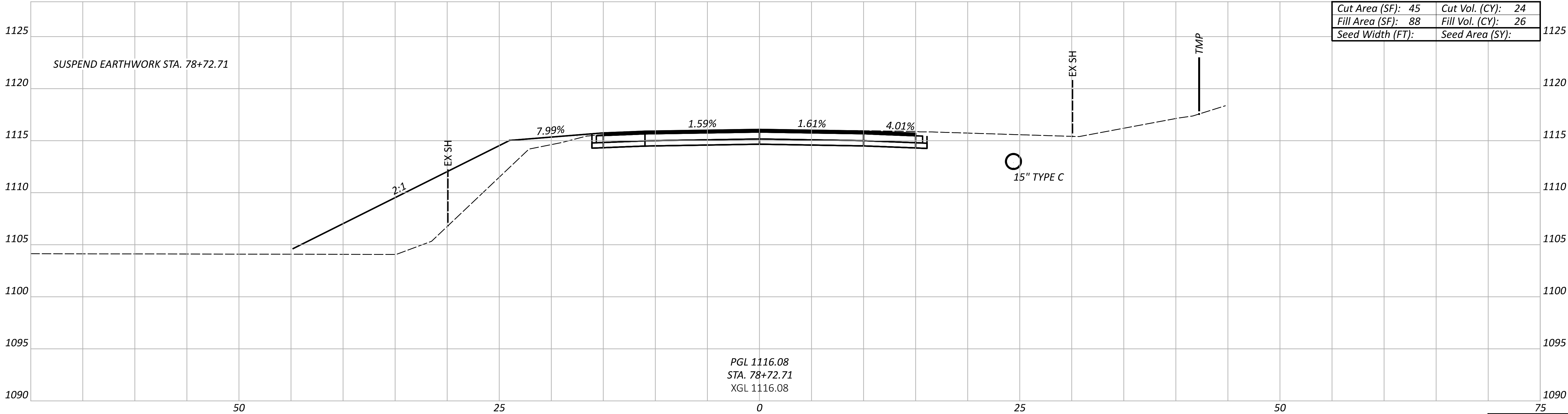
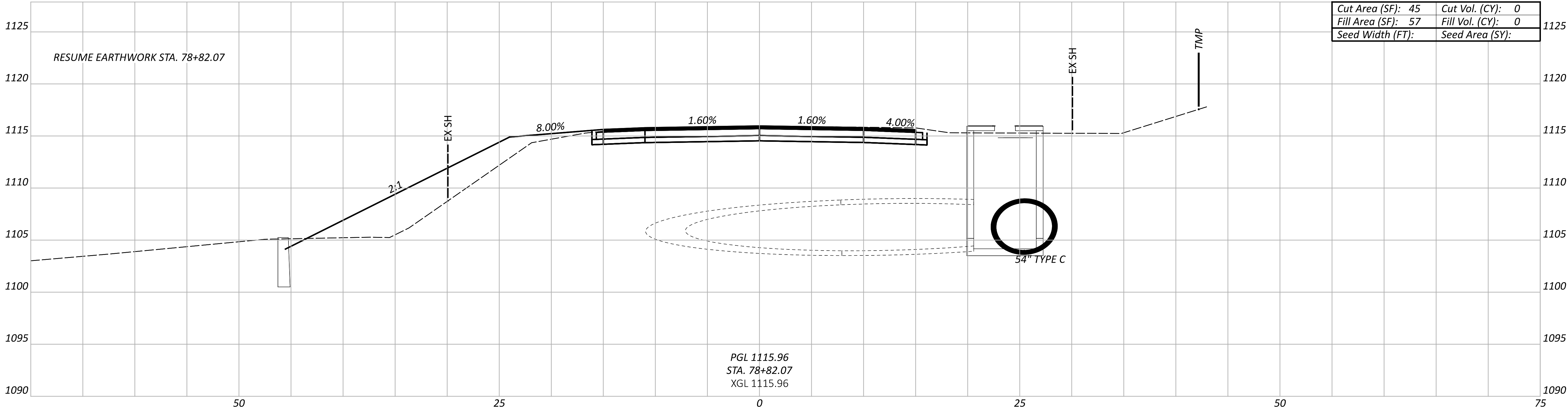
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REVIEWER

MJP 04-24-24

PROJECT ID

109452



Sheet Totals				PROJECT ID	
Seeding	Cut	Fill		SHEET	TOTAL
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CROSS SECTIONS - POR-43-3.596
STA. 78+72.71 TO STA. 78+82.07

DESIGN AGENCY



DESIGNER

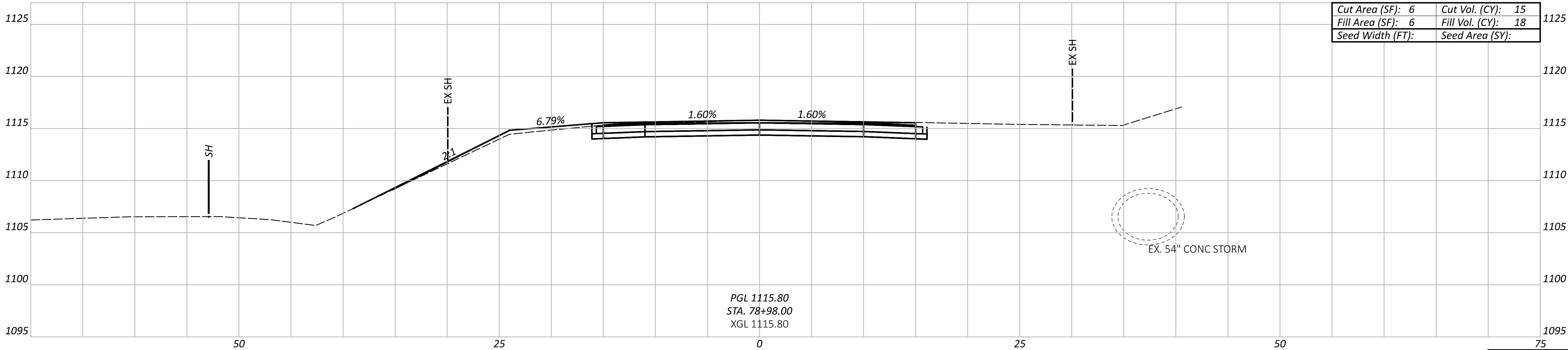
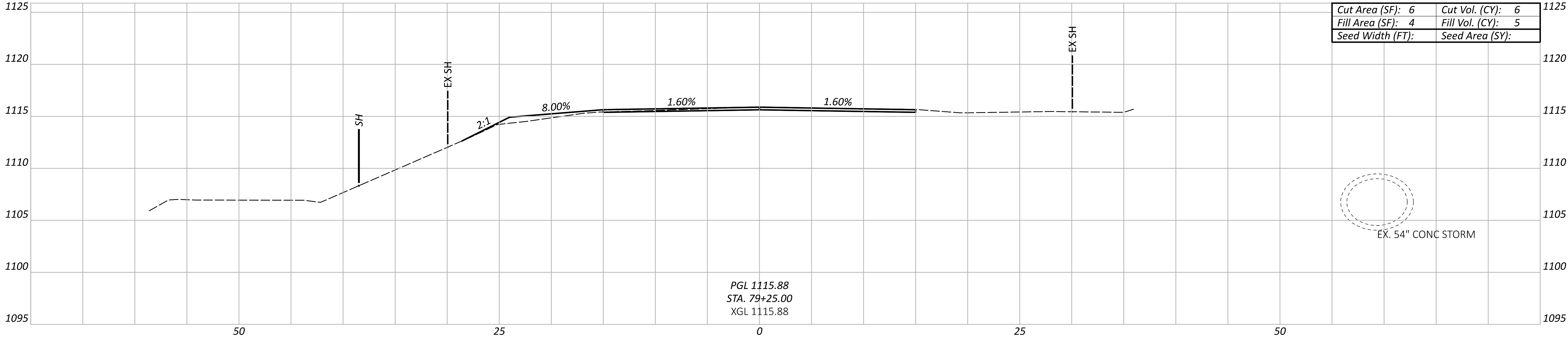
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REVIEWER

MJP 04-24-24

PROJECT ID

109452



Sheet Totals			PROJECT ID	
Seeding	Cut	Fill	SHEET	TOTAL
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CROSS SECTIONS - POR-43-3.596
STA. 78+98.00 TO STA. 79+25.00

DESIGN AGENCY



DESIGNER

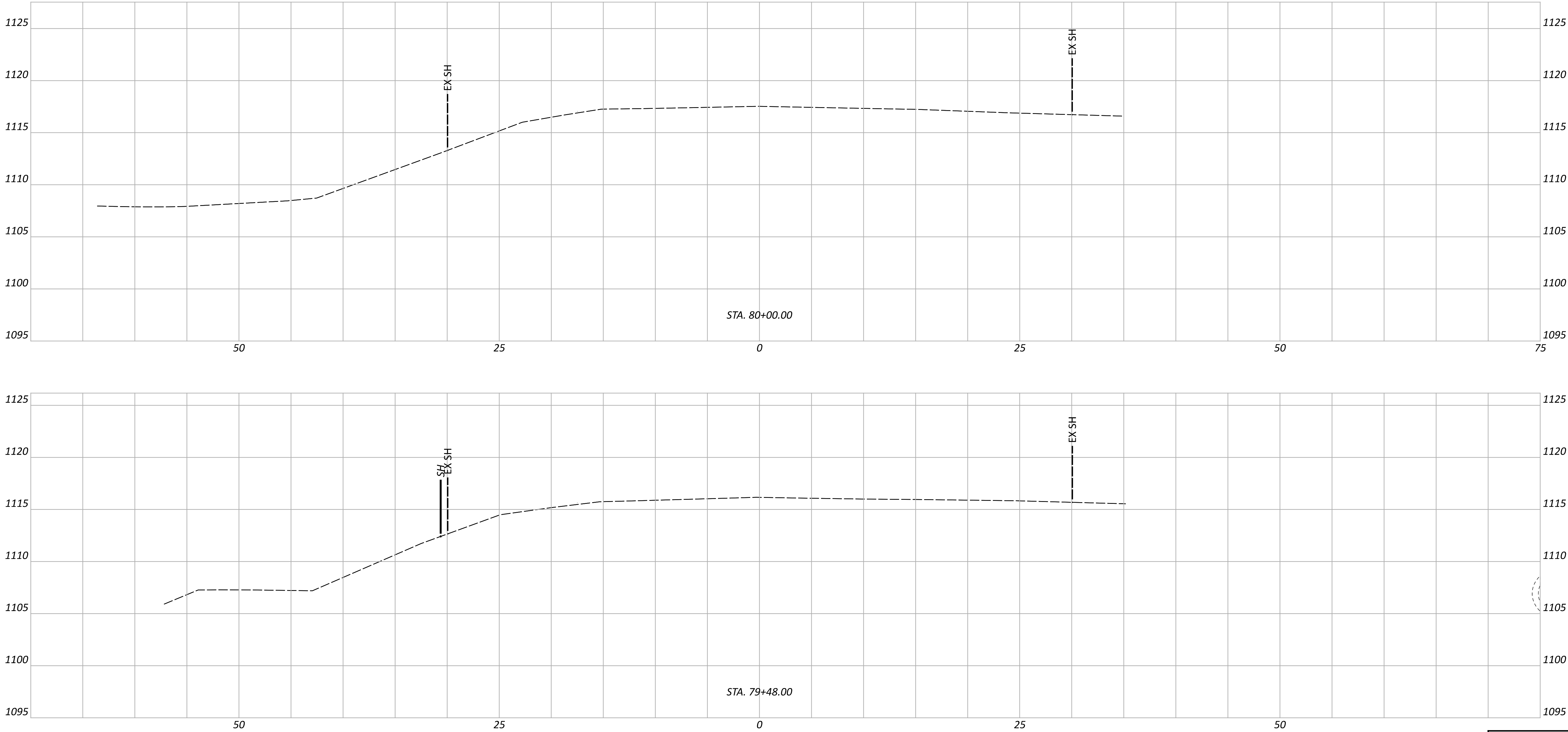
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REVIEWER

MJP 04-24-24

PROJECT ID

109452



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DESIGN AGENCY

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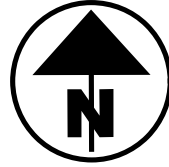
NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452



FOR ESTIMATED QUANTITIES, SEE SHEET P.21

<i>PROPOSED STRUCTURE</i>	
<i>TYPE:</i>	<i>60" CONDUIT TYPE B, 706.02</i>
<i>SKEW:</i>	<i>NONE</i>
<i>ALIGNMENT:</i>	<i>TANGENT</i>
<i>CFN:</i>	<i>1995679</i>

DESIGN AGENCY



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MJP 04-24-24

0945

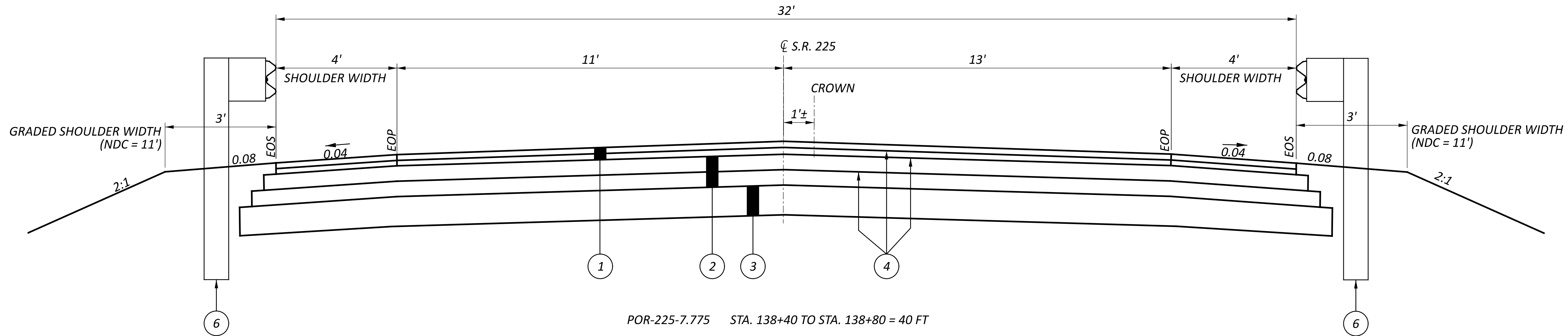
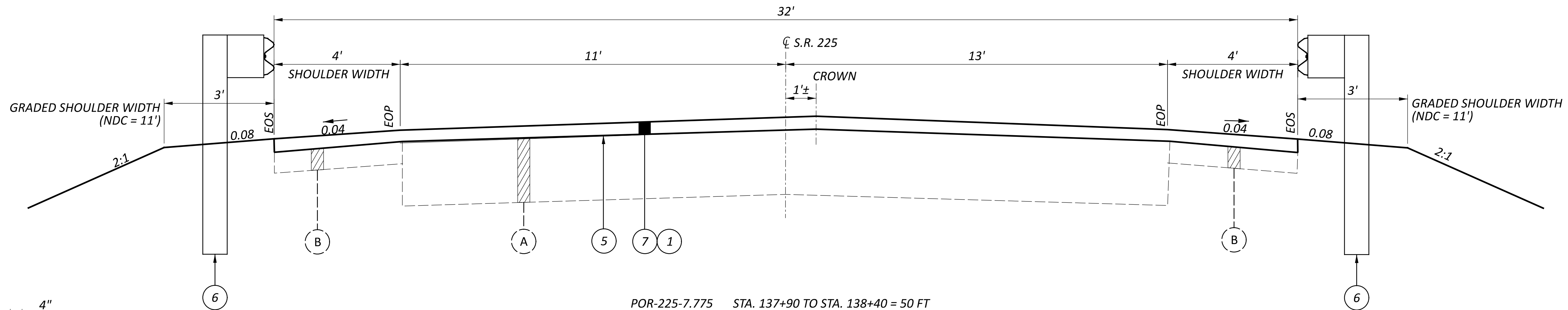
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TOTAL

P.27

CULVERT DETAILS - POR-43-3.956
STA. 78+77.37

HORIZONTAL
SCALE IN FEET

**LEGEND**

- ① ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (T=3") - 2 LIFTS
- ② ITEM 301, ASPHALT CONCRETE BASE, (449), PG64-22 (T=9") - 2 LIFTS
- ③ ITEM 304, AGGREGATE BASE (T=6")
- ④ ITEM 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
- ⑤ ITEM 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
- ⑥ ITEM 606, GUARDRAIL, TYPE MGS
- ⑦ ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")

- Ⓐ EXISTING PAVEMENT ASPHALT
- Ⓑ EXISTING ASPHALT SHOULDER

NDC - NORMAL DESIGN CRITERIA

DESIGN AGENCY



DESIGNER

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MJP 04-24-24

PROJECT ID

109452

SHEET

P.28

TOTAL

58

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: PORTAGE COUNTY LDP
COMBINED SCALE FACTOR: 1.000043
ORIGIN OF COORDINATE
SYSTEM: N 39-48-00, E 278-54-00

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

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (POR-225-7.775)

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS, AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS.

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

1. IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
2. IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

CONTROL POINT (U.S. SURVEY FEET GROUND)					
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV.
CP200	459280.612	177731.941	129+41.41	28.35' RT.	1027.58
CP300	459927.650	177607.329	135+95.43	51.95' LT.	1023.37
CP400	460900.140	177624.273	145+64.52	31.11' RT.	1034.38
CENTERLINE ALIGNMENT					
M1	453174.661	95818.042	135+30.88	1.61' RT.	
SV30	453542.080	95819.665	145+31.27	33.44' LT.	
SV31	453686.635	95993.769	142+96.97	33.03' RT.	
SV32	452423.468	95774.525	141+07.97	31.57' RT.	
SV33	454152.815	95791.574	139+52.90	31.01' RT.	
SV34	454051.049	95791.487	138+05.45	34.11' RT.	
SV35	455013.418	95855.200	138+96.66	32.84' LT.	
SV36	455143.349	95855.611	141+29.59	33.00' LT.	
BENCHMARK					
BM1	460197.506	177614.275	138+64.19	26.67' LT.	1012.60

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

Charter Communications ATTN: Ron Ickes 5520 Whipple Ave. NW North Canton, OH 44720 330-494-9200 216-392-7964 (cell) Ron.Ickes@charter.com	Diversified Gas & Oil Plc ATTN: Matt Postlethwait Pipeline Technician - Ohio 1026A Cookson Ave SE New Philadelphia, OH 44663 330-417-1397 (cell) MPostlethwait@dgoc.com
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Ohio Edison
ATTN: Phillip Rawson
730 South Avenue
Youngstown, OH 44502
724-255-1332 (cell)
prawson@firstenergycorp.com

CONDUIT IDENTIFICATION SIGNS

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR POR-225-7.775

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ.FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 642 - EDGE LINE, 6", TYPE 1	0.05 MI
ITEM 642 - CENTER LINE, 6", TYPE 1	0.03 MI

SEEDING AND MULCHING

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

659, TOPSOIL	132 CU. YD.
659, SEEDING AND MULCHING	1,194 SQ. YD.
659, REPAIR SEEDING AND MULCHING	60 SQ. YD.
659, COMMERCIAL FERTILIZER	0.16 TON
659, LIME	0.25 ACRES
659, WATER	6 M. GAL.

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.

EXCAVATION AND EMBANKMENT

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION	133 CY
ITEM 204 - EMBANKMENT	118 CY

PAVEMENT RESTORATION AND RESURFACING FOR CONDUITS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 138+40 TO STA.138+80
ITEM 202 - PAVEMENT REMOVED, 133 SQ. YDS.
ITEM 204 - SUBGRADE COMPACTION, 155 SQ. YDS.
ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449), 38 CU YDS.
ITEM 304 - AGGREGATE BASE, 26 CU YDS.
ITEM 407 - NON-TRACKING TACK COAT, 27 GAL.
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), AS PER PLAN, PG64-22 (T=3"), 12 CU. YDS.
(PLACED IN 2 LIFTS)

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 137+90 TO STA. 138+40
STA. 138+80 TO STA. 139+30
ITEM 254 - PAVEMENT PLANING (T=3"), 356 SQ. YDS.
ITEM 407 - NON-TRACKING TACK COAT, 33 GAL.
ITEM 301 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22 (T=3"), 30 CU. YDS.

DESIGN AGENCY



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REVIEWER
MJP 04-24-24

PROJECT ID
109452

SUBSET	TOTAL
1	1

SHEET	TOTAL
P.29	58

D04-CULVERTS-FY2025

MODEL: Steel_SurvFI PAPERSIZE: 34x22 (in.) DATE: 9/12/2024 TIME: 12:47:51 PM USER: nrlfcky
 pw:\vhohido-pw.bentley.com:ohido-pw-02\Documents\01 Active Projects\District 04\ _D04\109452\400-Engineering\Roadway\Sheets\109452_GS300.dgn

REF NO.	SHEET NO.	STATION TO STATION				202	202	202	503	601	601	602	606	606	611	626												
						HEADWALL REMOVED, (POR-225-7.775)	PIPE REMOVED, OVER 24"	GUARDRAIL REMOVED	COFFERDAMS AND EXCAVATION BRACING, (POR-225-7.775)	RIPRAP, TYPE D	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	CONCRETE MASONRY	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	ANCHOR ASSEMBLY, MGS TYPE T, MASH 2016	GUARDRAIL, TYPE MGS	43" X 68" CONDUIT, TYPE A, 706.04	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL											
						EACH	FT	FT	LS	SY	CY	CY	EACH	EACH	FT	FT	EACH											
				TO																								
R-1	P.31	138+46.49	LT		138+59.48	LT	1																					
R-2	P.31	138+50.19	RT		138+63.17	RT	1																					
R-3	P.31	138+56.82	LT		138+56.70	RT		60																				
R-4	P.31	137+38.36	LT		140+04.29	LT																						
R-5	P.31	137+19.67	RT		138+85.63	RT																						
D-1	P.31	138+52.87	LT		138+56.69	RT				LS	5					66												
D-2	P.31	138+46.49	LT		138+59.48	LT						1.01																
D-3	P.31	138+50.19	LT		138+63.17	LT						1.01																
EC-1	P.31	138+53.75	RT		138+60.97	RT						9																
EC-2	P.31	138+49.60	LT		138+55.67	RT																						
GR-1	P.31	137+38.36	LT		140+04.29	LT							2			267		3										
GR-2	P.31	137+19.67	RT		138+85.63	RT								2		298		3										

ROADWAY AND DRAINAGE SUBSUMMARY - POR-225-7.775

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

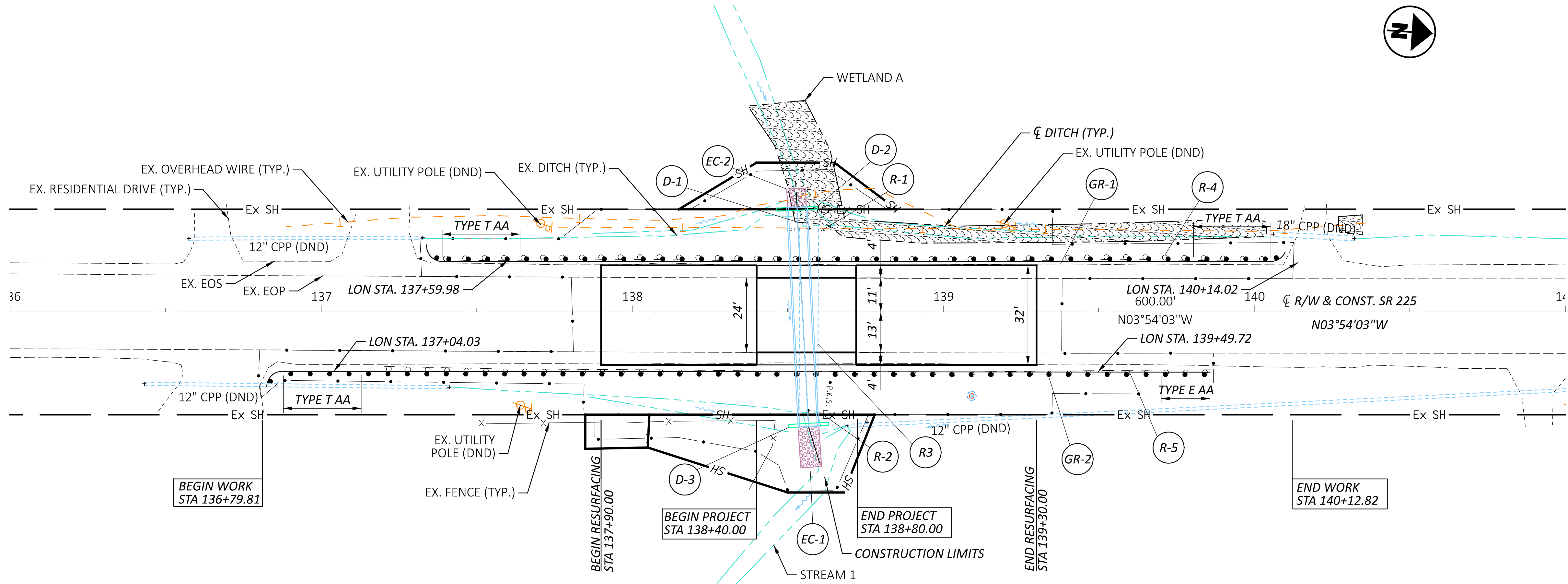
MJP 04-24-24

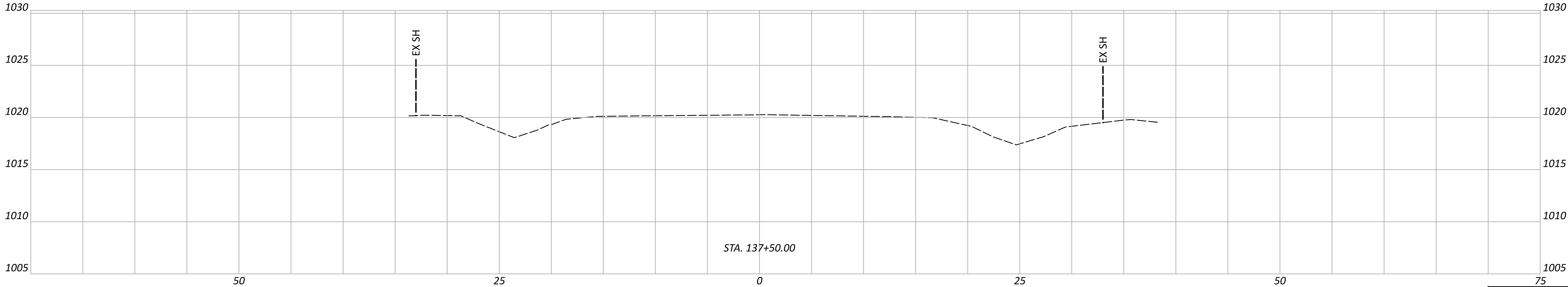
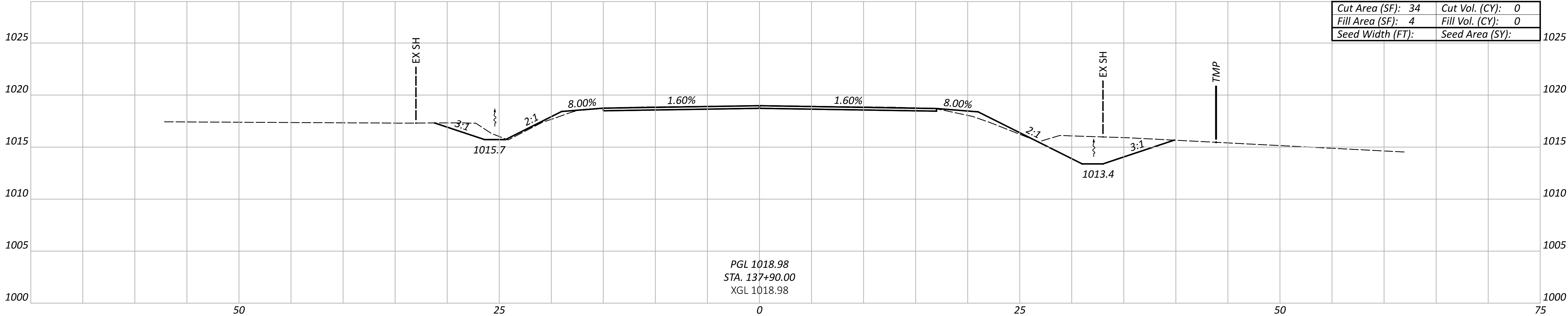
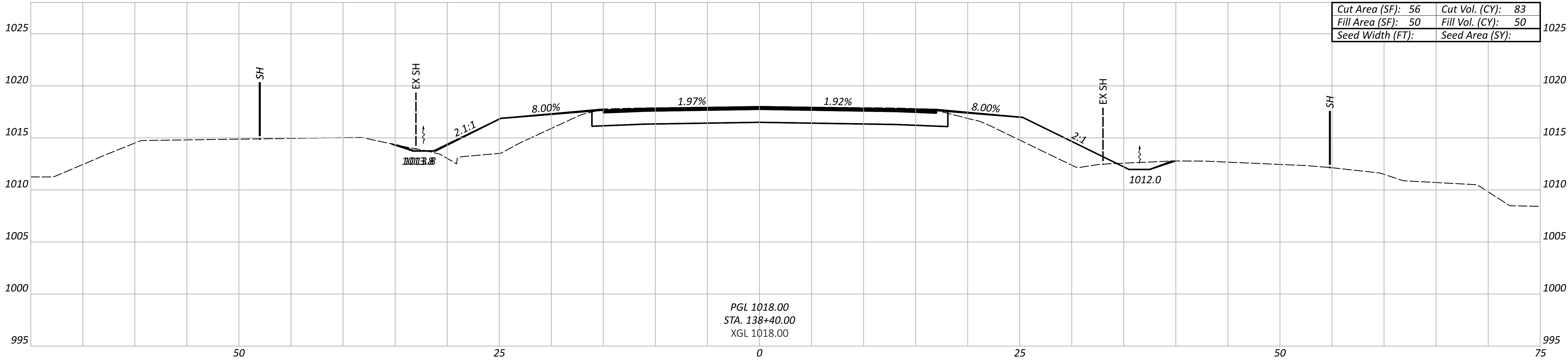
PROJECT ID

109452

SHEET	TOTAL
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Sheet Totals				SHEET TOTAL	
Seeding	Cut	Fill		P.32	58
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CROSS SECTIONS - POR-225-7.775
STA. 137+50.00 TO STA. 138+40.00

DESIGN AGENCY



DESIGNER

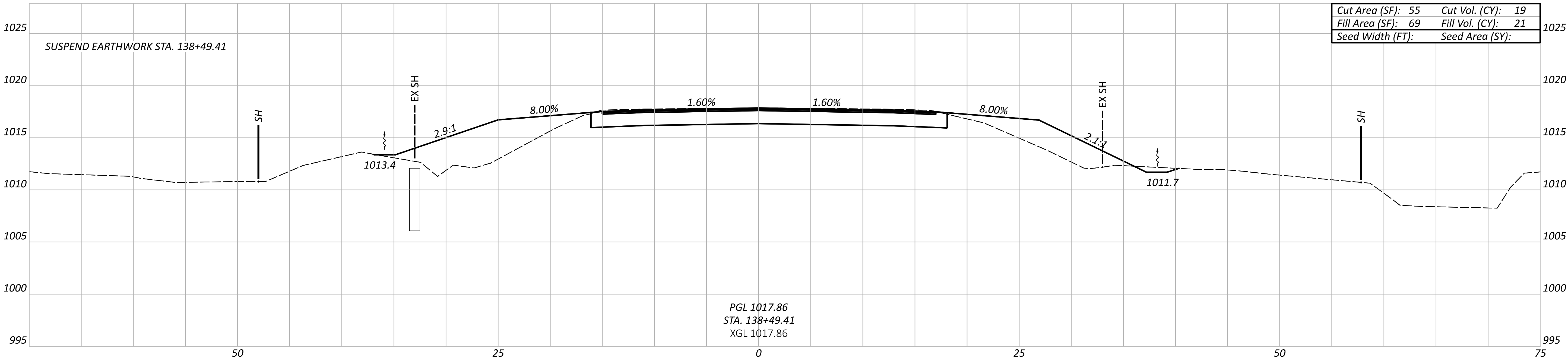
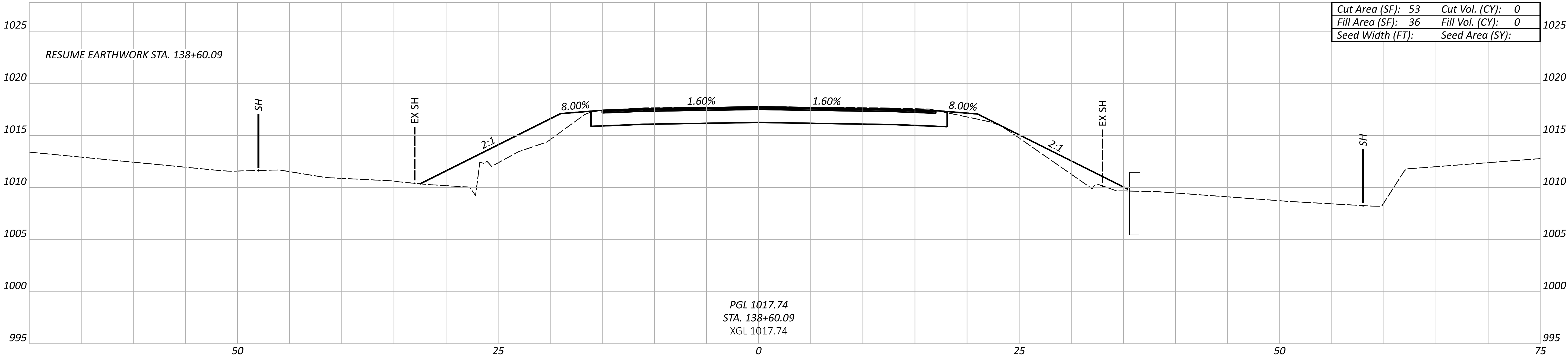
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REVIEWER

MJP 04-24-24

PROJECT ID

109452



Sheet Totals		
Seeding	Cut	Fill
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DESIGN AGENCY

DESIGNER

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REVIEWER

MJP 04-24-24

PROJECT ID

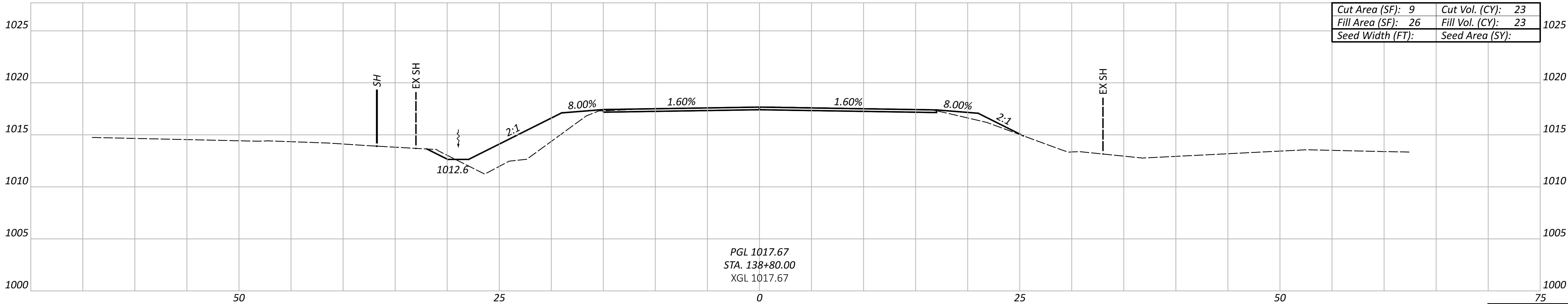
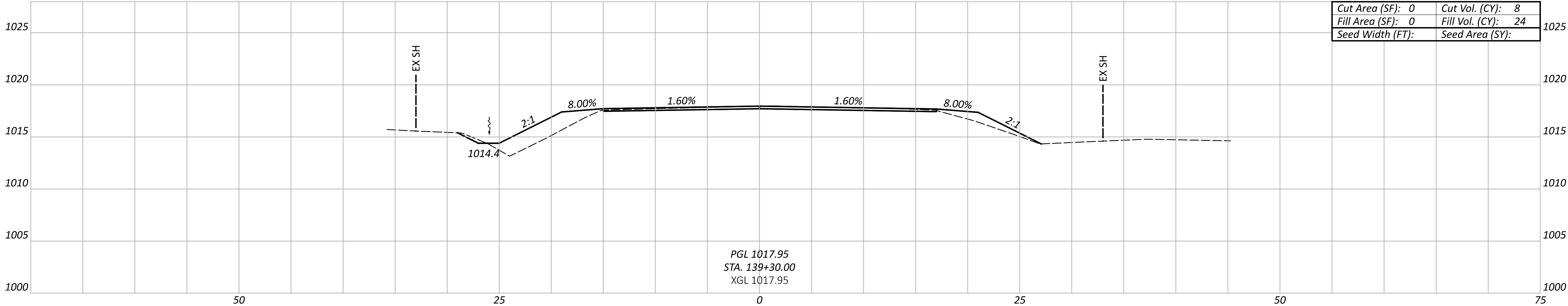
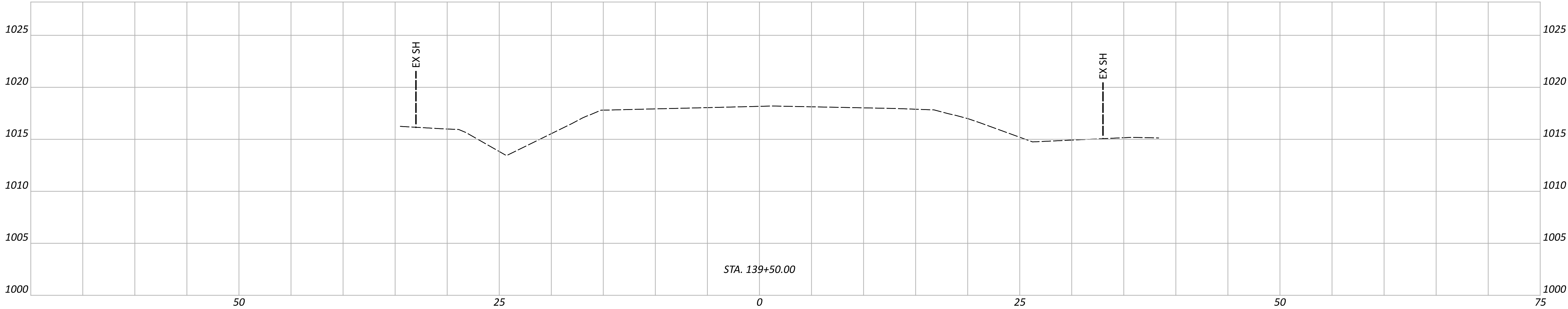
109452

SHEET

P.33

TOTAL

58



CROSS SECTIONS - POR-225-7.775
STA. 138+80.00 TO STA. 139+50.00

DESIGN AGENCY

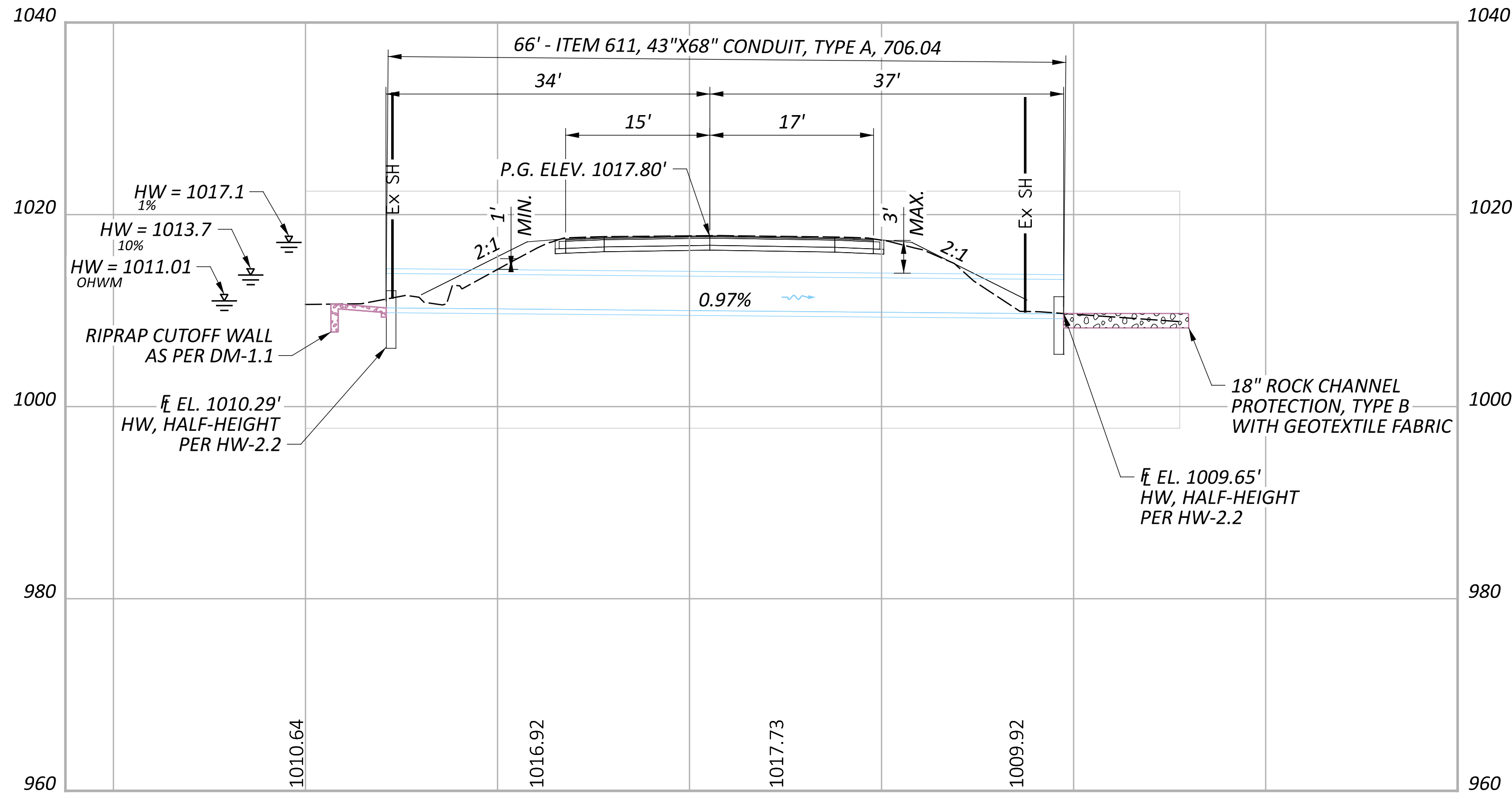
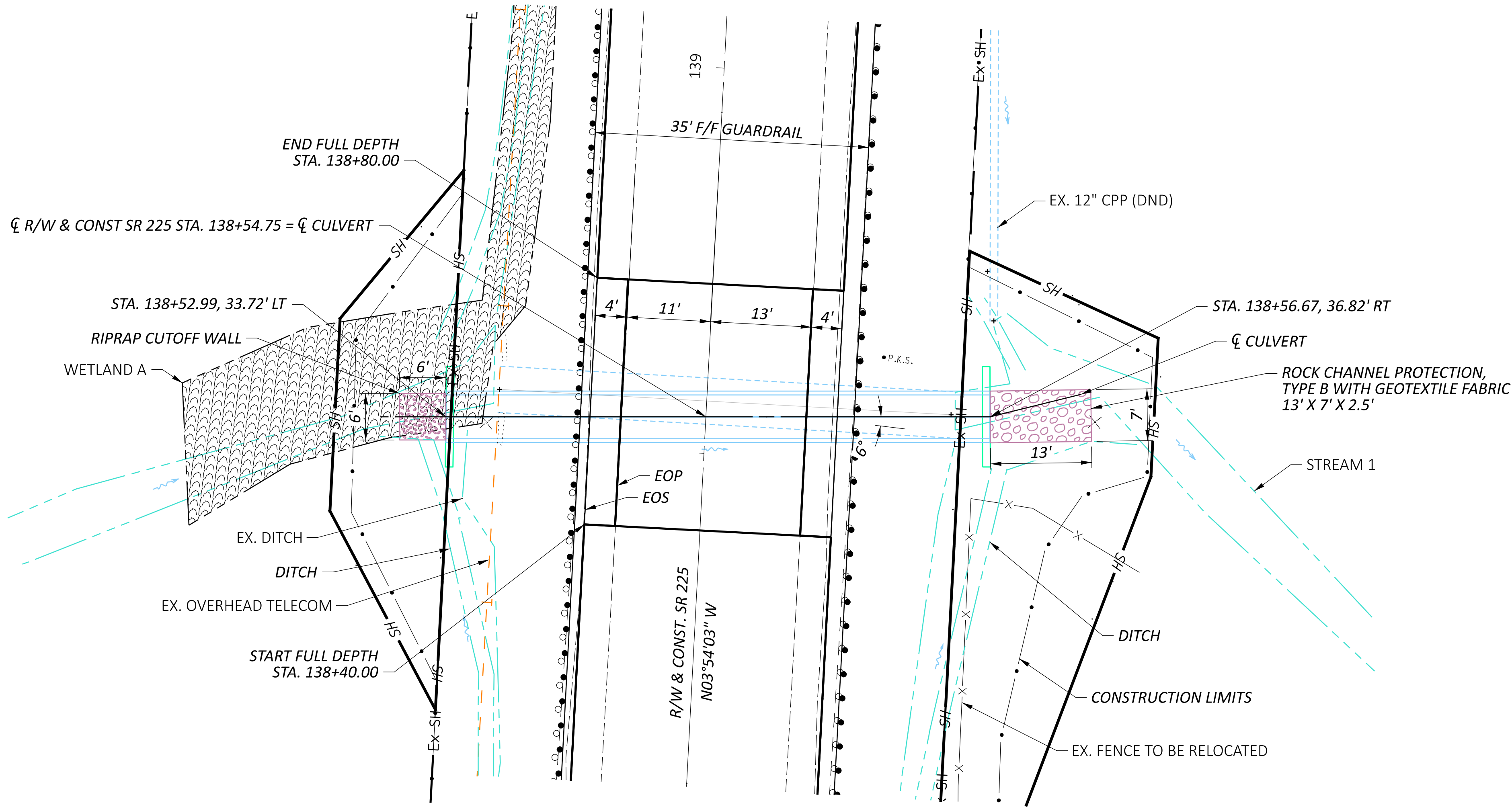


DESIGNER
NKF

REVIEWER
MJP 04-24-24

PROJECT ID
109452

Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
	31	47	P.34	58

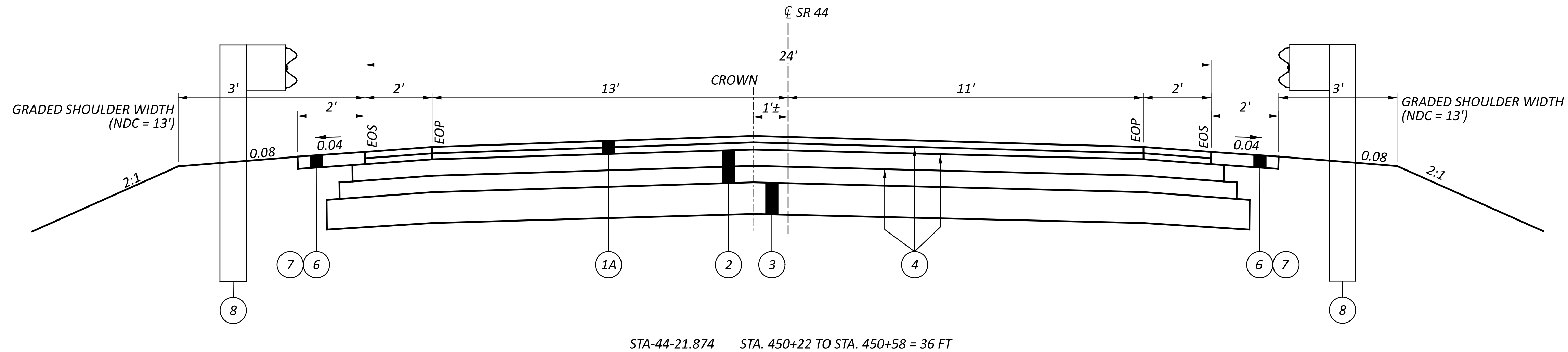
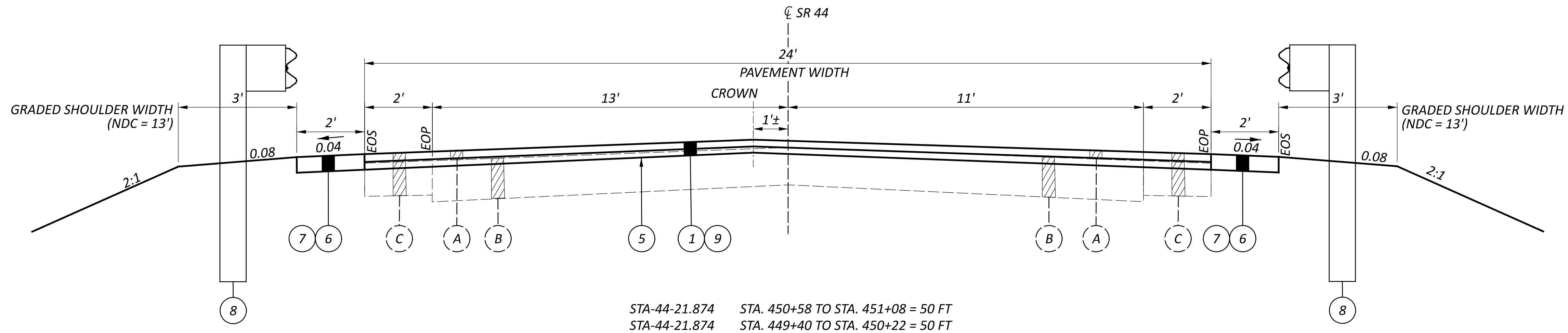


FOR BENCHMARK INFORMATION, SEE SHEET P.29
FOR ESTIMATED QUANTITIES, SEE SHEET P.30

HYDRAULIC DATA		
DRAINAGE AREA = 160 ACRES		
Q (10%) = 83 CFS	V (10%) = 12.1 FT/S	HW (10%) = 1013.5 FT
Q (1%) = 171 CFS	V (1%) = 14.7 FT/S	HW (1%) = 1016.1 FT
ORDINARY HIGH WATER MARK: 1011.01 FT		
DESIGN SERVICE LIFE: 75 YEARS		
ABRASION LEVEL: 2.0		
pH: 7.0		

EXISTING CONDUIT	
TYPE:	CORRUGATED METAL PIPE ARCH
SIZE:	66" X 51"
SKEW:	NONE
ALIGNMENT:	TANGENT
DATE BUILT:	UNKNOWN
CONDITION:	TO BE REMOVED AND REPLACED
CFN:	1823982

PROPOSED CONDUIT	
TYPE:	706.04, REINFORCED CONCRETE ELLIPTICAL CULVERT
	43" X 68"
SKEW:	6° RF
ALIGNMENT:	TANGENT
CFN:	1995676

**LEGEND**

- ① ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (T=3") - 2 LIFTS
② ITEM 301, ASPHALT CONCRETE BASE, (449), PG64-22 (T=8") - 2 LIFTS
③ ITEM 304, AGGREGATE BASE (T=6")
④ ITEM 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
⑤ ITEM 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
⑥ ITEM 617, COMPACTED AGGREGATE, AS PER PLAN (T=1" AVG.)
⑦ ITEM 408, PRIME COAT, AS PER PLAN @ 0.40 GAL/SY
⑧ ITEM 606, GUARDRAIL, TYPE MGS
⑨ ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3")

- Ⓐ EXISTING ASPHALT CONCRETE (T=3"±)
Ⓑ EXISTING ASPHALT CONCRETE BASE (T=8"±)
Ⓒ EXISTING SHOULDER

NDC - NORMAL DESIGN CRITERIA



SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: STARK COUNTY LDP
COMBINED SCALE FACTOR: 1.000045
ORIGIN OF COORDINATE SYSTEM: N 39-24-00 E 278-39-00

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.
1 METER = 3.28083333333 U.S. SURVEY FEET

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

AT&T	Ohio Edison
ATTN: Steven Hylton	ATTN: Phillip Rawson
50 W. Bowery St., 6th Floor	730 South Avenue
Akron, OH 44308	Youngstown, OH 44502
330-384-3055	724-255-1332 (cell)
330-631-7485 (cell)	prawson@firstenergycorp.com
sh1513@att.com	

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
- IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
 - PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

CONTROL POINT (U.S. SURVEY FEET GROUND)					
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV.
CP10	570864.465	191452.783	437+82.97	16.27' RT.	1140.88
CP20	571962.345	191566.216	448+86.69	17.58' RT.	1130.75
CP30	572641.459	191625.056	455+67.28	22.63' RT.	1138.49
CENTERLINE ALIGNMENT					
MN436	570731.034	191422.80	436+47.18		
MN453	572408.684	191594.122	453+33.55		
MN462	573361.023	191628.020	462+86.50		
MN20	570736.362	191282.939			
BENCHMARK					
BM1	572124.789	191544.067	450+46.04	20.96' RT.	1129.78

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (STA-44-21.874)

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS, AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS.

CONDUIT IDENTIFICATION SIGNS

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR POR-44-21.874

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ.FT
ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 642 - EDGE LINE, 6", TYPE 1	0.06 MI
ITEM 642 - CENTER LINE, 6", TYPE 1	0.03 MI

SEEDING AND MULCHING

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

659, TOPSOIL	143 CU. YD.
659, SEEDING AND MULCHING	1,289 SQ. YD.
659, REPAIR SEEDING AND MULCHING	64 SQ. YD.
659, COMMERCIAL FERTILIZER	0.17 TON
659, LIME	0.27 ACRES
659, WATER	7 M. GAL.

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.

EXCAVATION AND EMBANKMENT

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION	144 CY
ITEM 204 - EMBANKMENT	35 CY

PAVEMENT RESTORATION AND RESURFACING FOR CONDUITS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 450+22 TO STA. 450+58
ITEM 202 - PAVEMENT REMOVED, 133 SQ. YDS.
ITEM 204 - SUBGRADE COMPACTION, 132 SQ. YDS.
ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449), 23 CU YDS.
ITEM 304 - AGGREGATE BASE, 22 CU YDS.
ITEM 407 - NON-TRACKING TACK COAT, 19 GAL.
ITEM 408 - PRIME COAT, 13 GAL.
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), AS PER PLAN, PG64-22 (T=3"), 8 CU. YDS. (PLACED IN 2 LIFTS OF 1.5")
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (T=1.0"), 1 CU. YDS.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 449+40 TO STA. 450+22
STA. 450+58 TO STA. 451+08
ITEM 254 - PAVEMENT PLANING (T=3"), 353 SQ. YDS.
ITEM 407 - NON-TRACKING TACK COAT, 32 GAL.
ITEM 408 - PRIME COAT, 48 GAL.
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22 (T=3"), 30 CU. YDS.
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (T=1.0"), 4 CU. YDS.

DESIGN AGENCY



DESIGNER
NKF

REVIEWER
MJP 04-24-24

PROJECT ID
109452

SHEET	TOTAL
P.37	58

D04-CULVERTS-FY2025

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ROADWAY AND DRAINAGE SUBSUMMARY - STA-44-21.874

DESIGN AGENCY



DESIGNER

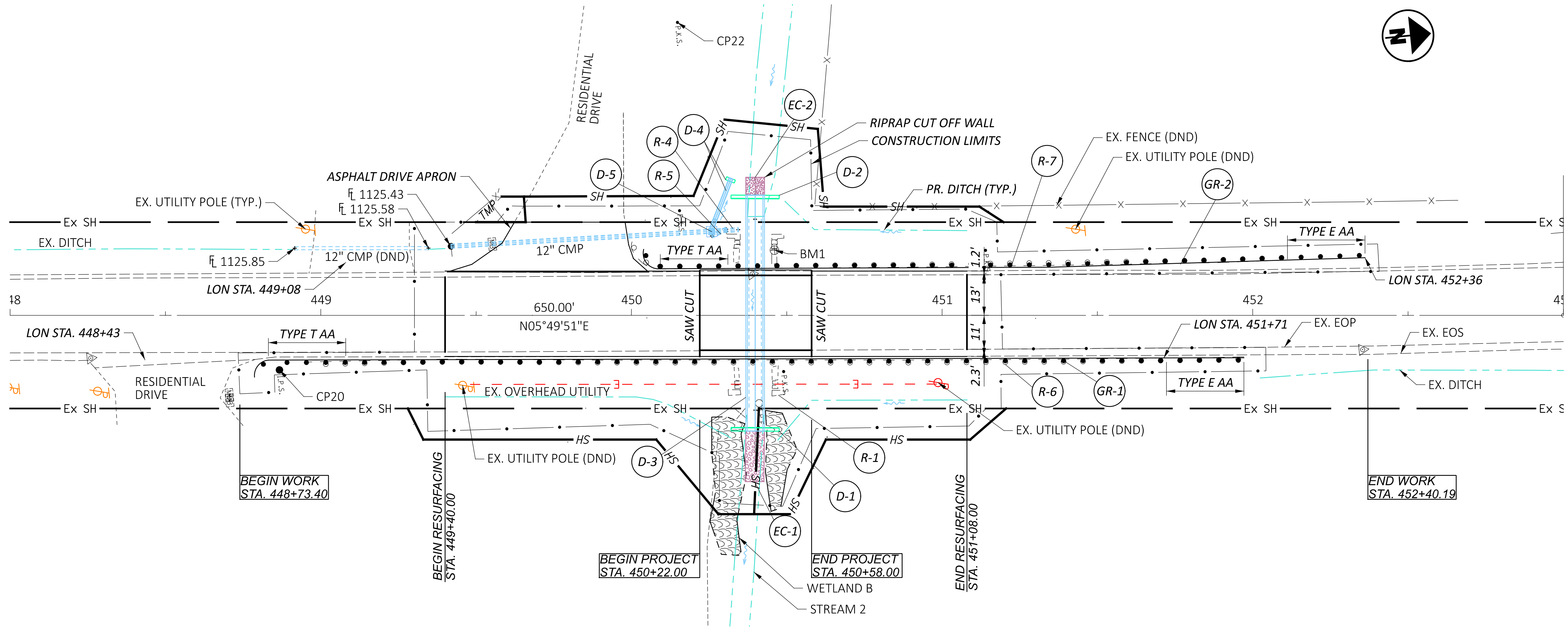
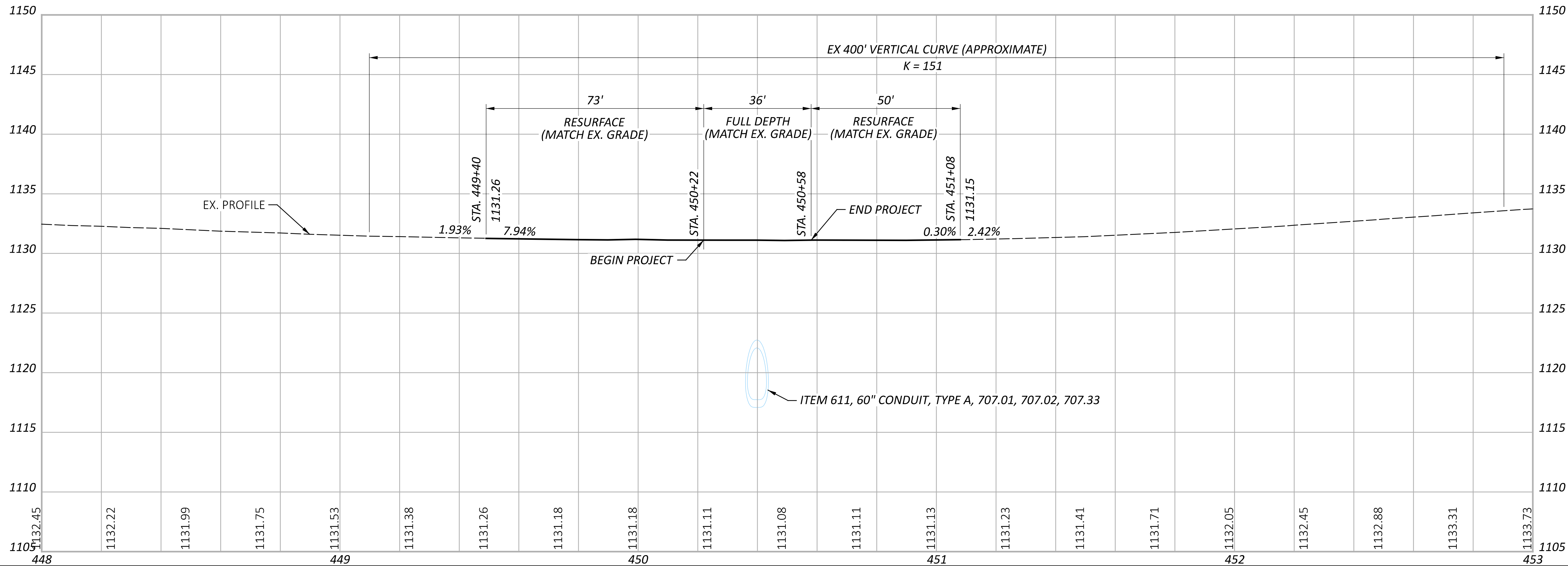
NKF

REVIEWER

MJP 04-24-24

PROJECT ID	109452
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SHEET	TOTAL
P.38	5



PLAN AND PROFILE - STA-44-21.874
STA. 448+00 TO STA. 453+00

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452

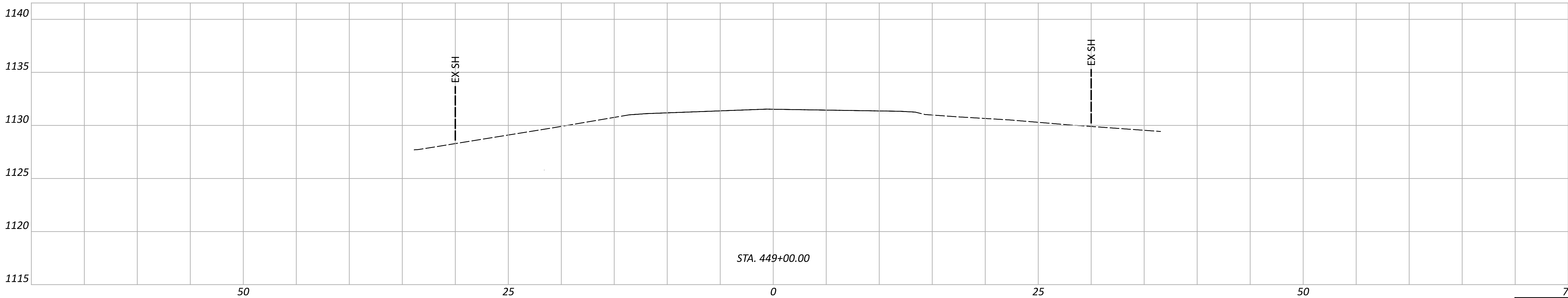
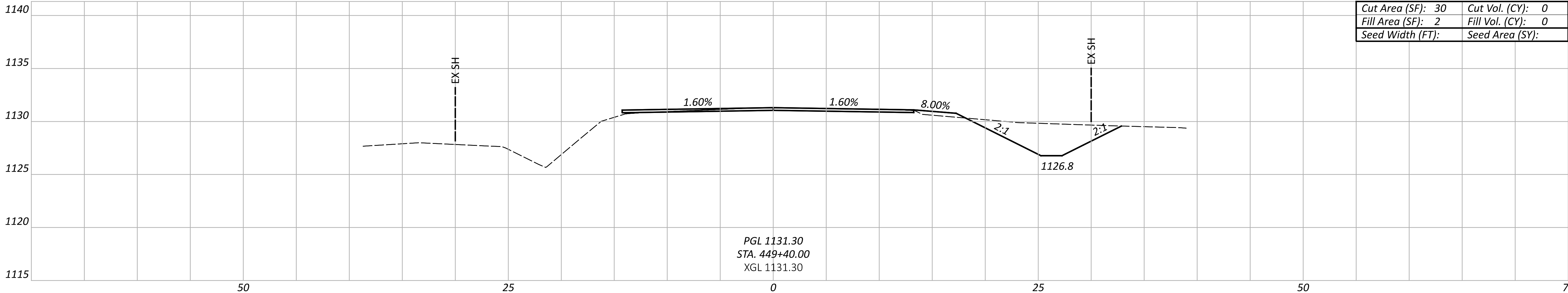
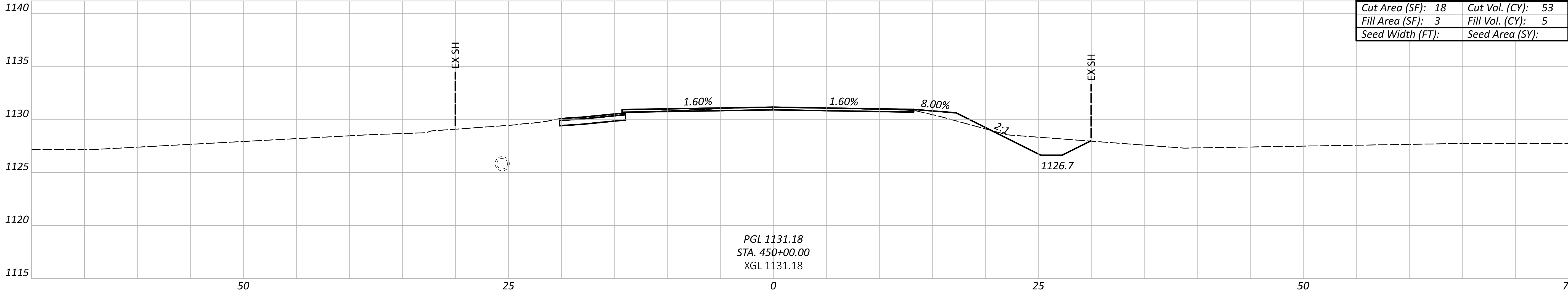
SHEET

P.39

TOTAL

58





CROSS SECTIONS - STA-44-21.874
STA. 449+00.00 TO STA. 450+00.00

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452

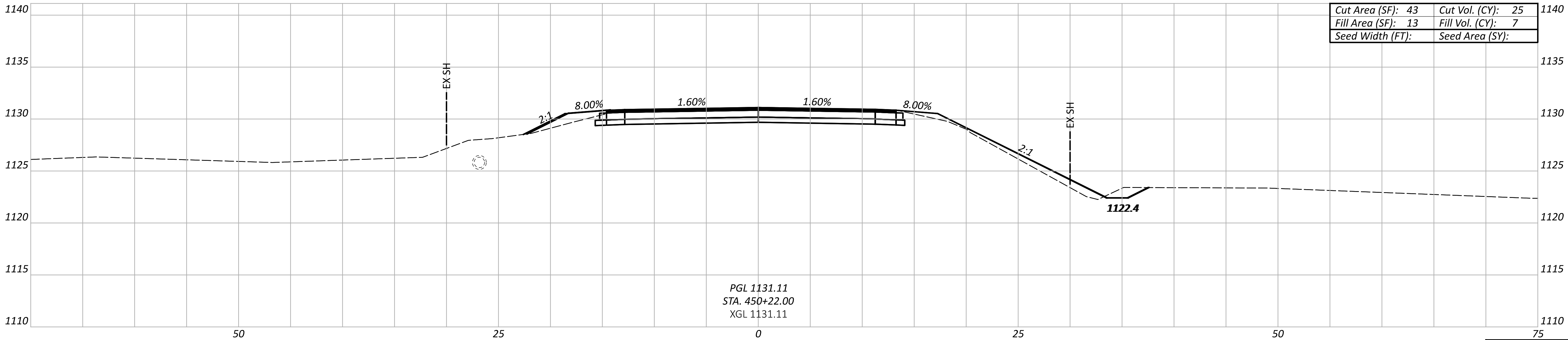
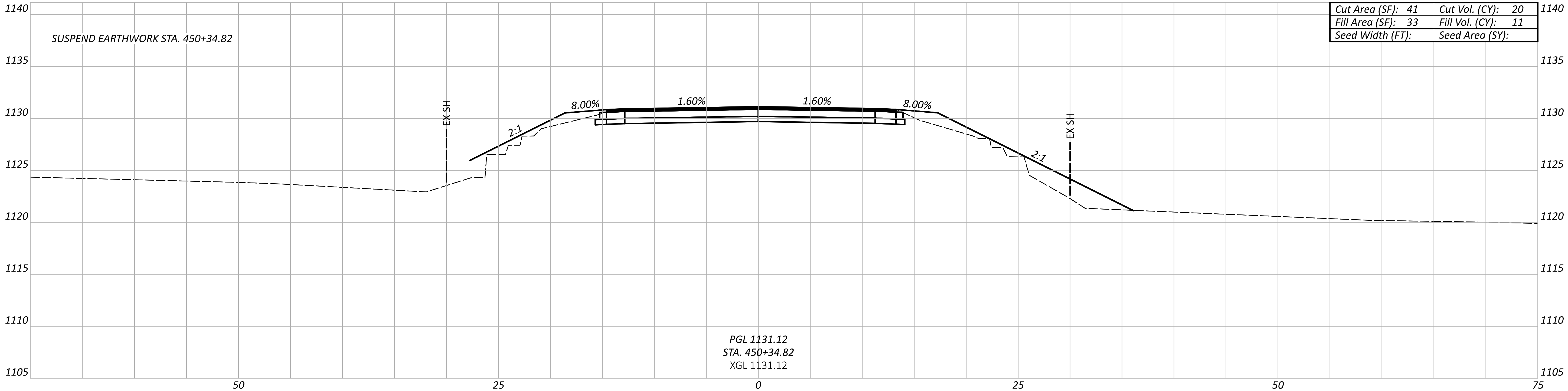
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Seeding Cut Fill

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SHEET TOTAL

P.40 58



Sheet Totals				PROJECT ID	
Seeding	Cut	Fill	TOTAL	SHEET	TOTAL
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CROSS SECTIONS - STA-44-21.874
STA. 450+22.00 TO STA. 450+34.82

DESIGN AGENCY

DESIGNER

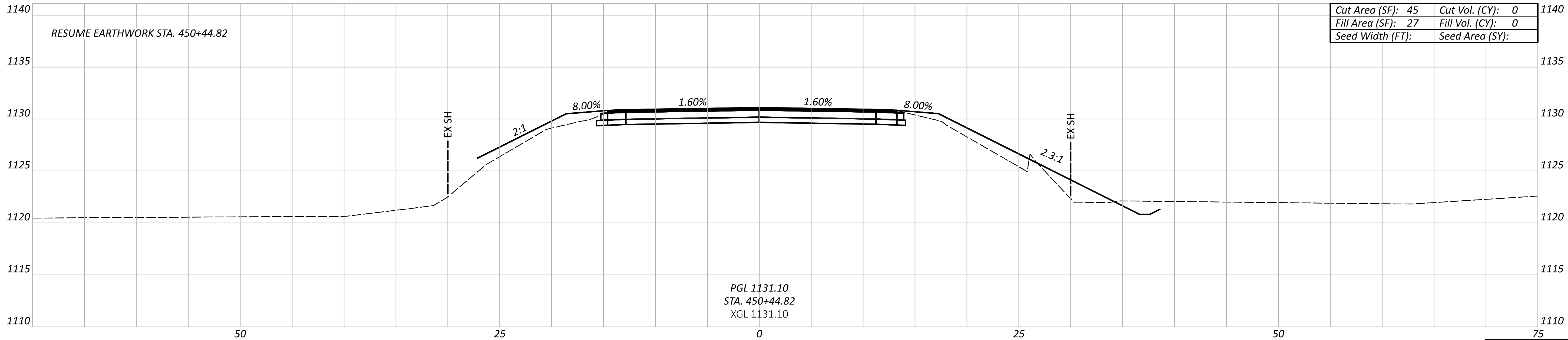
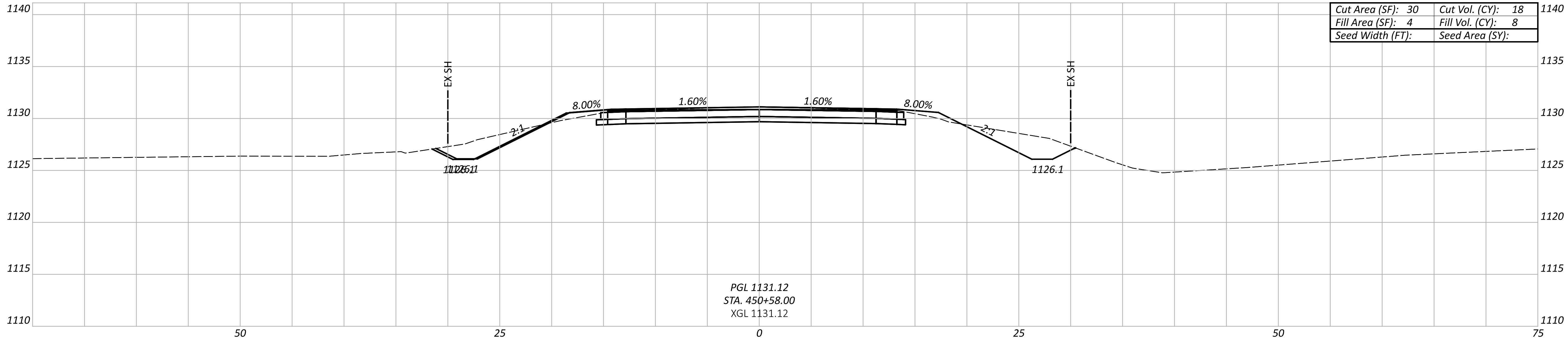
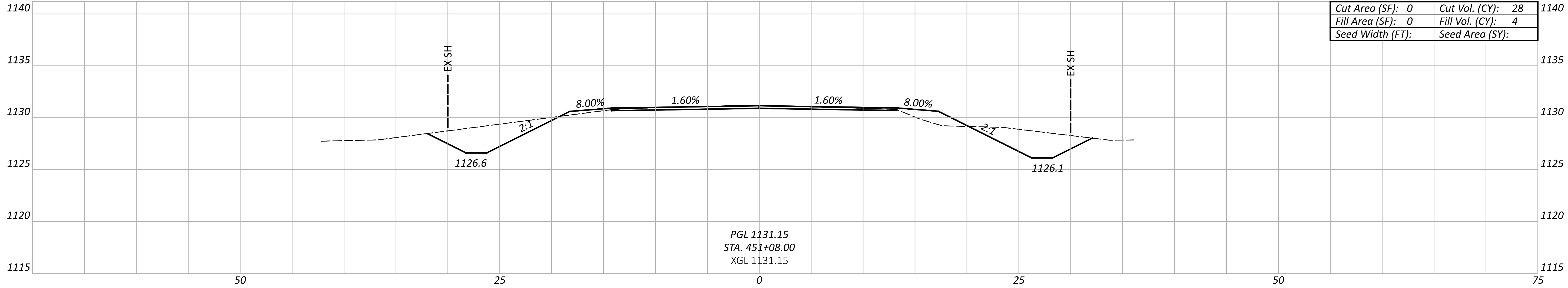
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REVIEWER

MJP 04-24-24

PROJECT ID

109452



CROSS SECTIONS - STA-44-21.874
STA. 450+44.82 TO STA. 451+08.00

DESIGN AGENCY

DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452

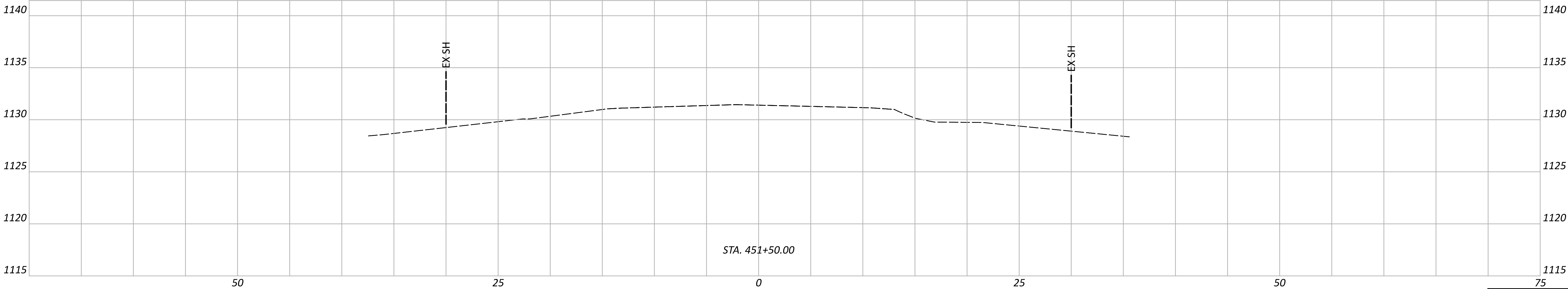
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SHEET	TOTAL
P.42	58

D04-CULVERTS-FY2025

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Sheet Totals		
Seeding	Cut	Fill

SHEET	TOTAL
P.43	58

DESIGN AGENCY



DESIGNER

NKF

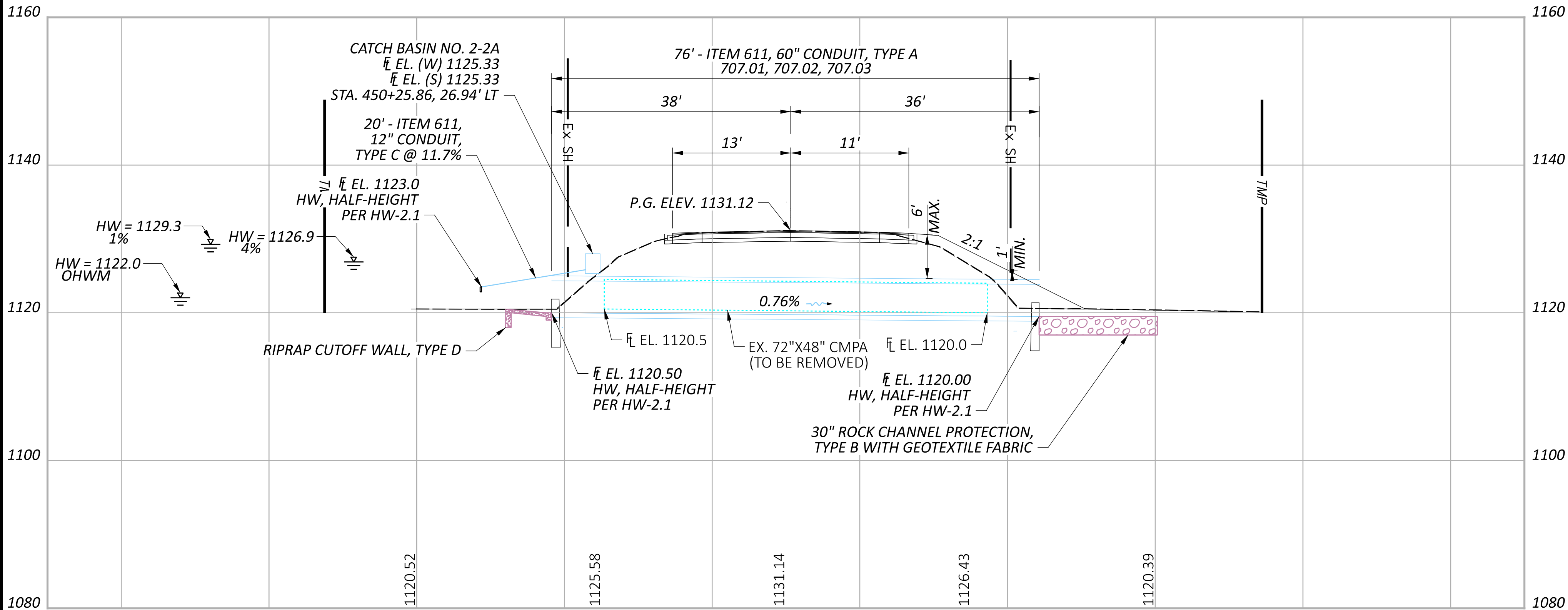
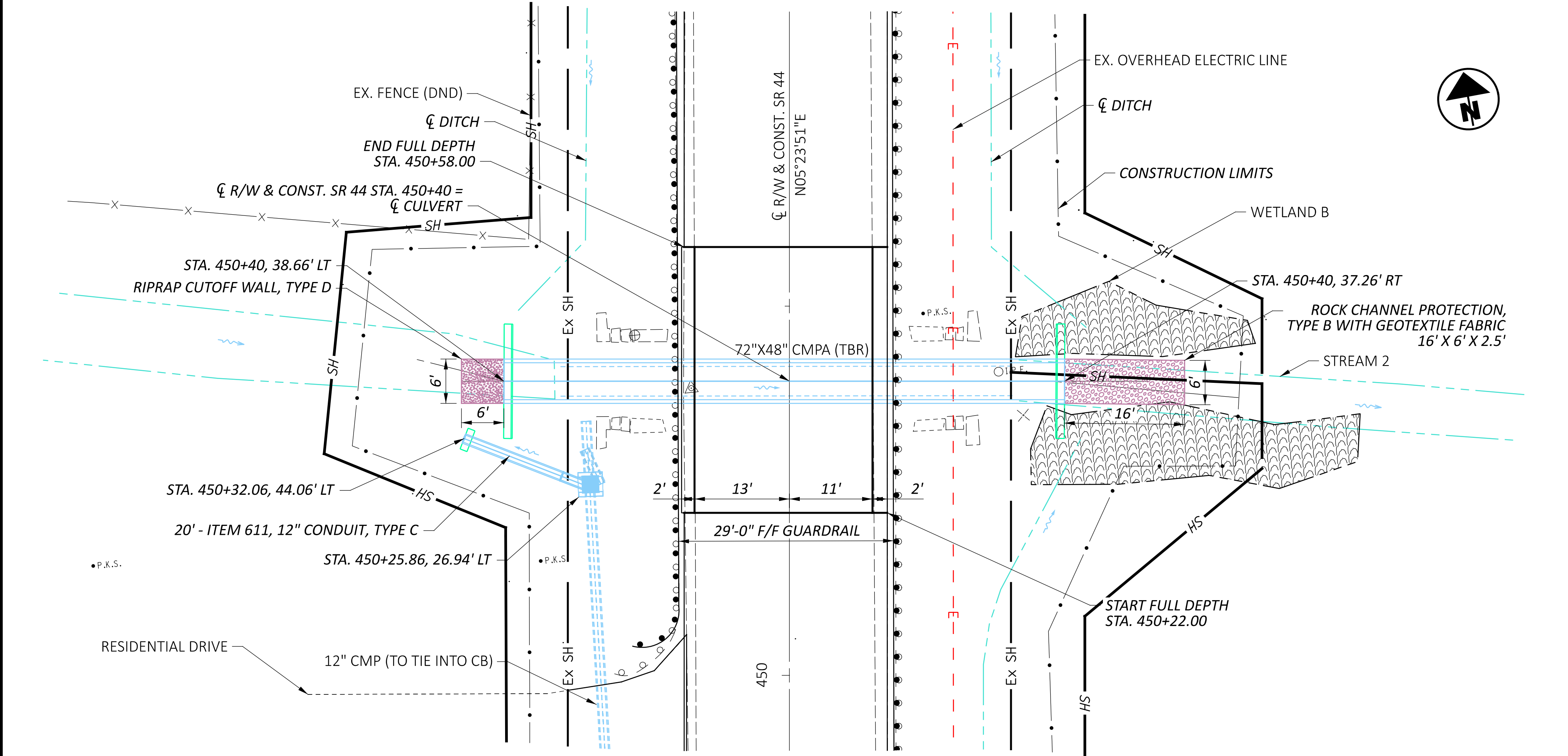
REVIEWER

MJP 04-24-24

PROJECT ID

109452

CROSS SECTIONS - STA-44-21.874
STA. 451+50.00



FOR BENCHMARK INFORMATION, SEE SHEET P.37
FOR ESTIMATED QUANTITIES, SEE SHEET P.38

HYDRAULIC DATA			
DRAINAGE AREA =	427 ACRES		
Q (4%) =	148 CFS	V (4%) =	13.1 FT/S
Q (1%) =	199 CFS	V (1%) =	13.9 FT/S
ORDINARY HIGH WATER MARK:	1122.0 FT	HW (4%) =	1125.7 FT
DESIGN SERVICE LIFE:	75 YEARS	HW (1%) =	1127.1 FT
ABRASION LEVEL:	1.0		
pH:	7.6		

EXISTING CONDUIT	
TYPE:	CORRUGATED METAL PIPE ARCH
SIZE:	72" X 48"
SKEW:	NONE
ALIGNMENT:	TANGENT
DATE BUILT:	UNKNOWN
CONDITION:	TO BE REMOVED AND REPLACED
CFN:	1847130

PROPOSED CONDUIT	
TYPE:	CIRCULAR TYPE A, 707.01, 707.02, 707.03
SIZE:	60" DIAMETER
SKEW:	NONE
ALIGNMENT:	TANGENT
CFN:	1995680
HEADWALLS:	HALF-HEIGHT, PER HW-2.1 OR HW-2.2

HORIZONTAL
SCALE IN FEET
0 5 10 20

CULVERT DETAILS - STA-44-21.874
STA. 450+40

DESIGN AGENCY

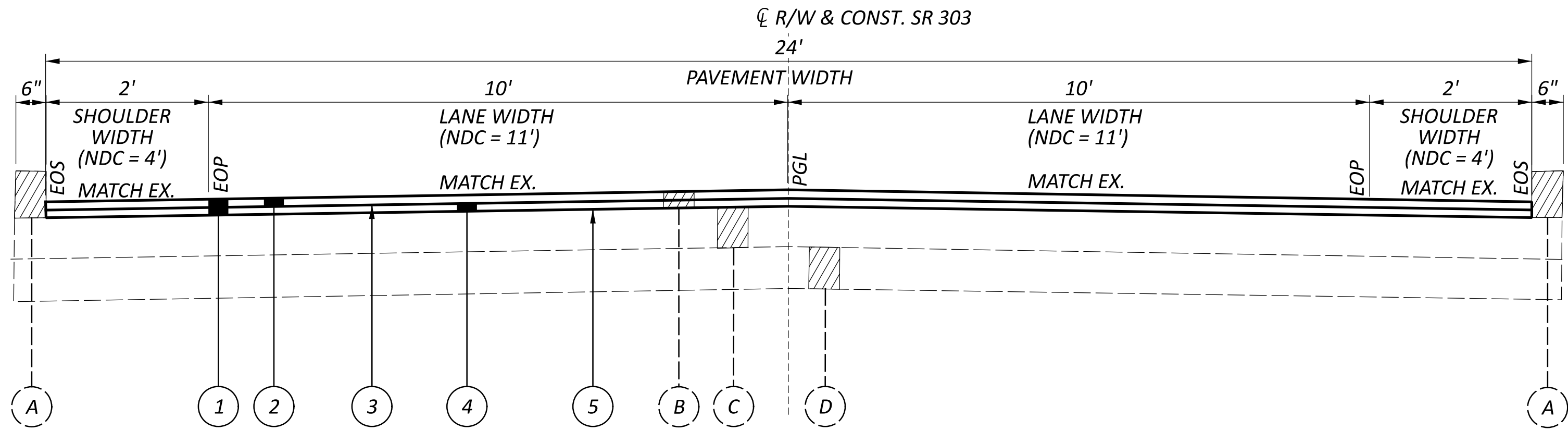
DESIGNER
NKF

REVIEWER
MJP 04-24-24

PROJECT ID
109452

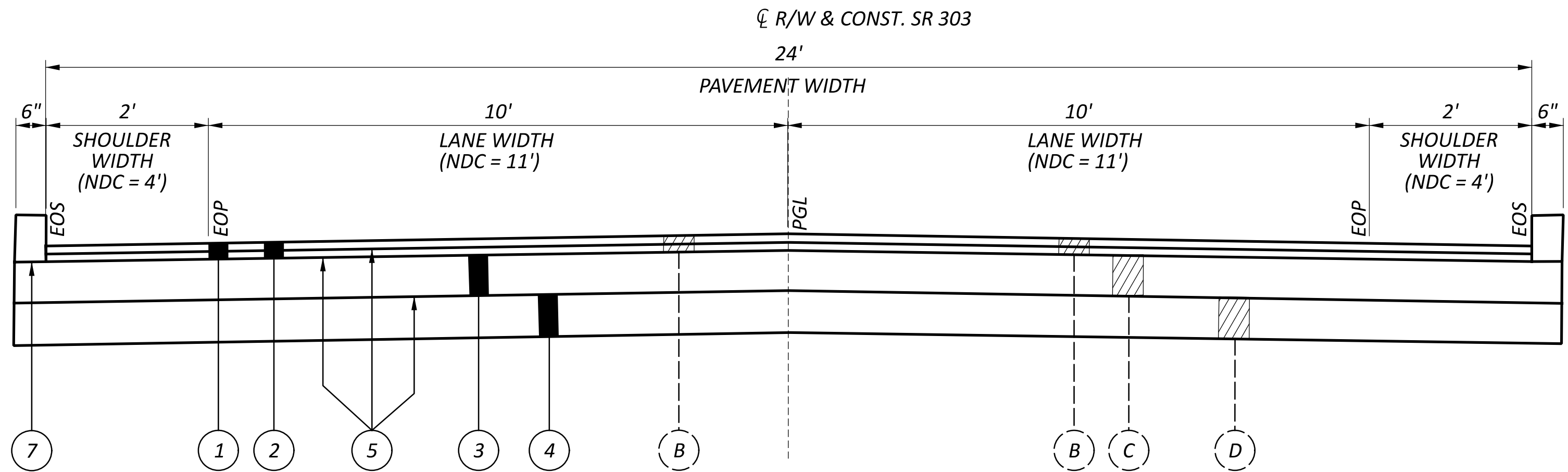
SUBSET
1 TOTAL
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SHEET
P.44 TOTAL
58



TYPICAL SECTION 1 - RESURFACING

SUM-303-3.589 STA. 104+25 TO STA. 104+40 = 15 FT
SUM-303-3.589 STA. 105+05 TO STA. 105+26 = 26 FT



TYPICAL SECTION 1 - FULL DEPTH

SUM-303-3.589 STA. 104+40 TO STA. 105+05 = 55 FT

LEGEND

- 1 ITEM 254, PAVEMENT PLANING ASPHALT CONCRETE (T=3")
- 2 ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22M (T=3") - 2 LIFTS
- 3 ITEM 301, ASPHALT CONCRETE BASE, (449), PG64-22 (T=7") - 2 LIFTS
- 4 ITEM 304, AGGREGATE BASE (T=6")
- 5 ITEM 407, NON-TRACKING TACK COAT @ 0.06 GAL/SY
- 6 ITEM 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
- 7 ITEM 609, CONCRETE CURB, TYPE 6

- A EXISTING CONCRETE CURB
- B EXISTING ASPHALT CONCRETE (T=3")
- C EXISTING BASE (T=7")
- D EXISTING AGGREGATE BASE (T=6")

NDC - NORMAL DESIGN CRITERIA



SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: TRANSVERSE MERCATOR
COORDINATE SYSTEM: SUMMIT COUNTY LDP
COMBINED SCALE FACTOR: 1.000042
ORIGIN OF COORDINATE SYSTEM: N 39-48-00, E 278-24-00

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

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

1. IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
2. IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

CONTROL POINT (U.S. SURVEY FEET GROUND)					
POINT	NORTHING	EASTING	STATION	OFFSET	ELEV.
CP200	524494.869	158645.305	96+70.29	23.61' RT.	1012.63
CP300	524640.038	159242.551	102+78.68	31.33' LT.	986.68
CP400	524551.932	159542.848	105+84.78	20.86' RT.	972.56
CP500	524605.540	160098.287	111+31.91	47.18' RT.	920.54
CENTERLINE ALIGNMENT					
MN3	525960.410	161923.935			
MN42	524519.043	159935.315	109+62.84	53.03' RT.	
MN103	525916.738	161435.659	129+94.43	18.74' LT.	
MN41	524670.549	160135.197	111+97.66	19.73' RT.	
BENCHMARK					
SV100	524613.603	159439.628	104+74.11	26.15' LT.	978.87

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS (SUM-303-3.589)

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS, AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN, AROUND CULVERTS.

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

City of Cleveland
Department of Public Works
ATTN: Fred Roberts
1201 Lakeside Ave. East, 2nd Floor
Cleveland, OH 44114
216-664-2444 ext. 75590
Fred_Roberts@ClevelandWater.com

Village of Richfield
ATTN: Scott Waldemarson
4410 W. Streesboro Road
Richfield, OH 44286
330-659-9201 ext. 500
swaldermarson@richfieldvillageohio.org

Ohio Edison (Summit)
ATTN: David Miller
1910 W. Market Street, Building #1
Akron, OH 44313
330-436-4055, 330-715-4340 (cell)
millerd1@firstenergycorp.com

Dominion Energy
ATTN: Kyle J. McCall, Supervisor - Gas Operations
Distribution Design
320 Springside Drive
Akron, OH 44333
330-801-8299 (cell)
Kyle.J.McCall@dominionenergy.com
relocation@dominionenergy.com

CONDUIT IDENTIFICATION SIGNS

CONDUIT IDENTIFICATION SIGNS (I-H25b) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR SUM-303-3.589

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT

ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH

ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS THAT ARE REMOVED DURING THE CULVERT REPLACEMENT WILL BE REPLACED WITH ITEM 642 - TRAFFIC PAINT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 642 - EDGE LINE, 6", TYPE 1 0.04 MI
ITEM 642 - CENTER LINE, 6", TYPE 1 0.02 MI

SEEDING AND MULCHING

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

659, TOPSOIL 74 CU. YD.
659, SEEDING AND MULCHING 668 SQ. YD.
659, REPAIR SEEDING AND MULCHING 33 SQ. YD.
659, COMMERCIAL FERTILIZER 0.09 TON
659, LIME 0.14 ACRES
659, WATER 4 M. GAL.

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.

EXCAVATION AND EMBANKMENT

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION 53 CY
ITEM 204 - EMBANKMENT 21 CY

PAVEMENT RESTORATION AND RESURFACING FOR CONDUITS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 104+40 TO STA. 105+05

ITEM 202 - PAVEMENT REMOVED, 159 SQ. YDS.

ITEM 204 - SUBGRADE COMPACTION, 181 SQ. YDS.

ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449), 36 CU YDS.

ITEM 304 - AGGREGATE BASE, 31 CU YDS.

ITEM 407 - NON-TRACKING TACK COAT, 22 GAL.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), AS PER PLAN, PG64-22 (T=3"), 15 CU. YDS.
(PLACED IN 2 LIFTS)

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED TO RESURFACE THE ROADWAY AFTER THE INSTALLATION AND/OR REMOVAL OF CONDUITS

STA. 104+25 TO STA. 104+40

STA. 105+05 TO STA. 105+26

ITEM 254 - PAVEMENT PLANING (T=1.5"), 96 SQ. YDS.

ITEM 407 - NON-TRACKING TACK COAT, 9 GAL.

ITEM 301 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22 (T=3"), 8 CU. YDS.

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

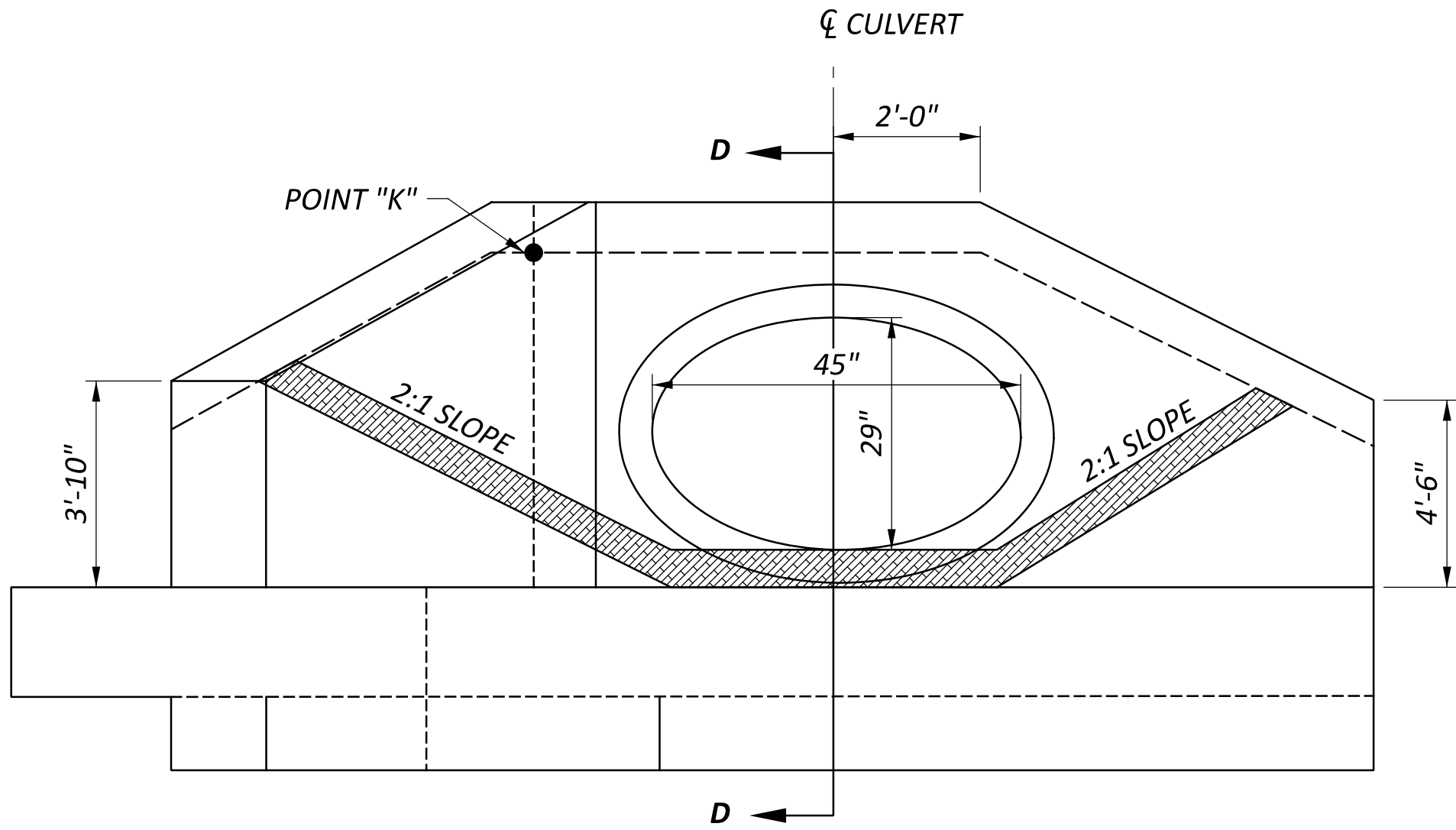
109452

SHEET

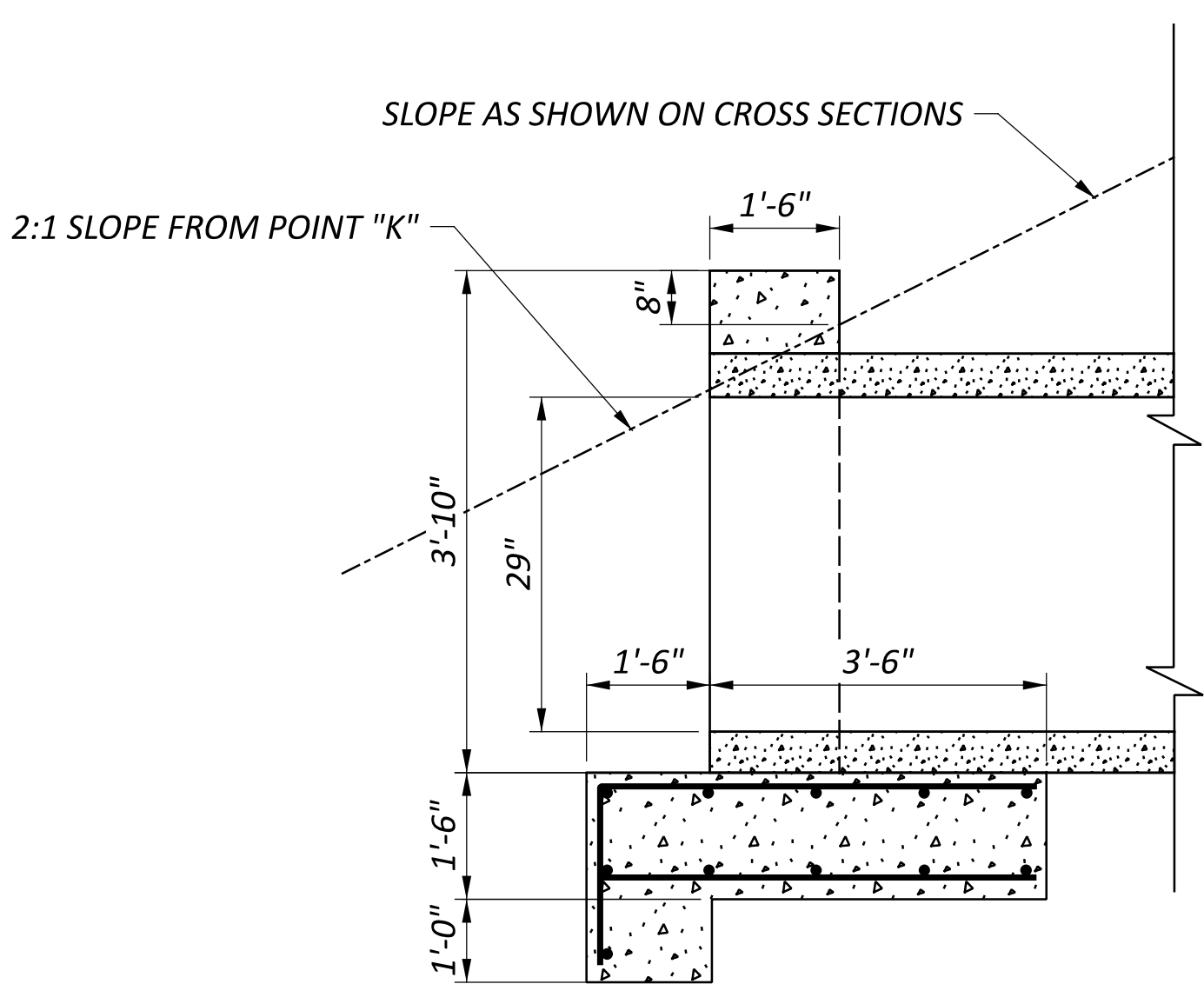
P.46

TOTAL

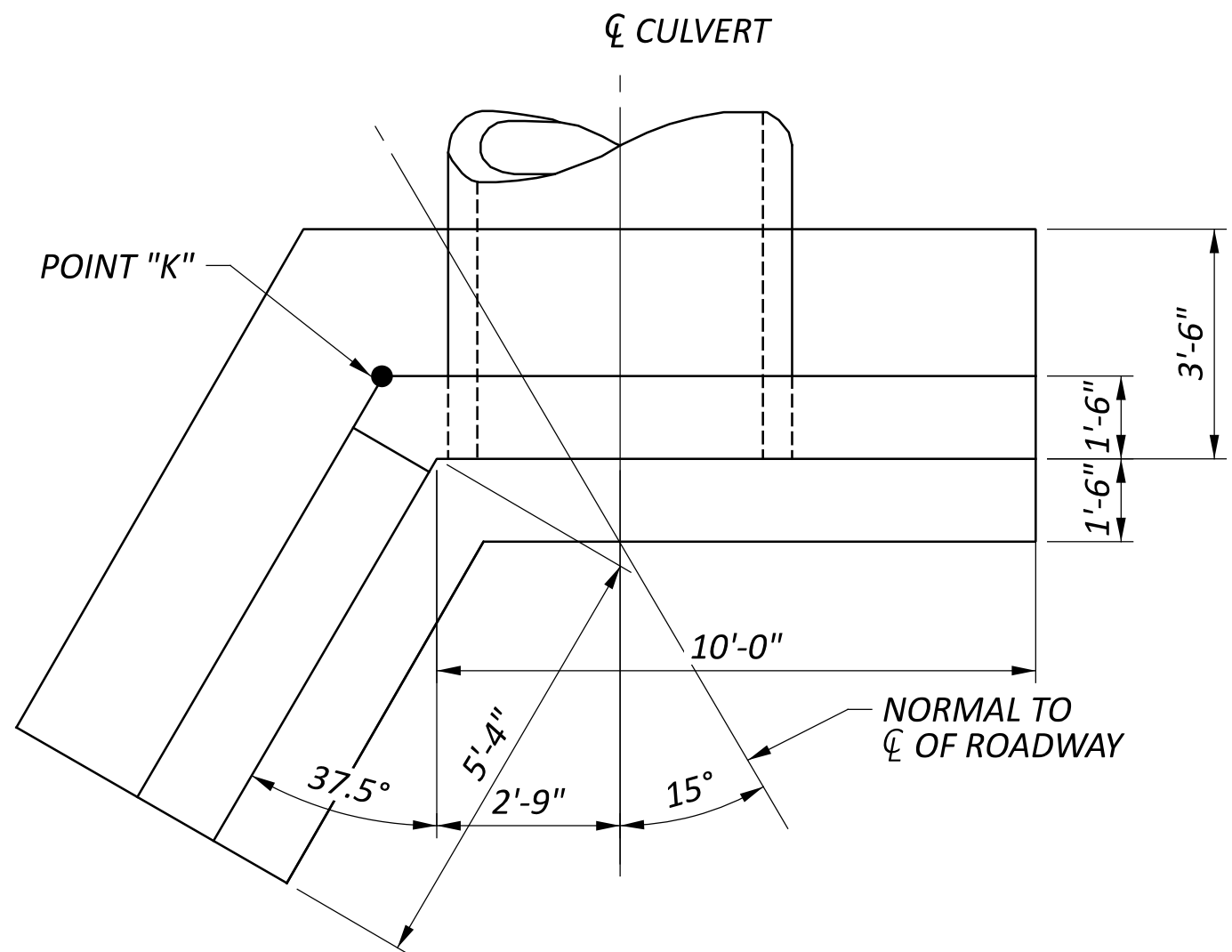
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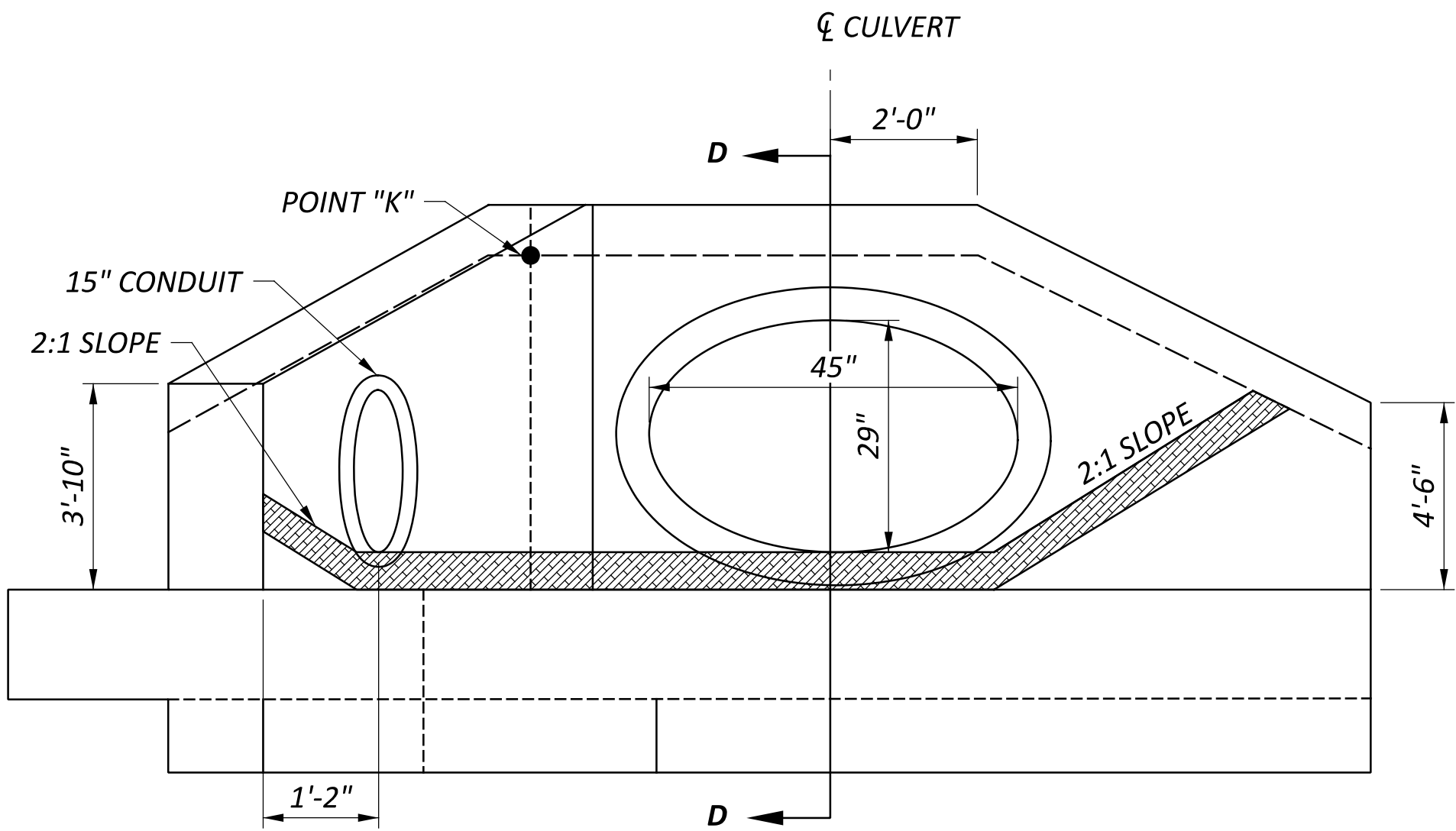
ELEVATION VIEW, TYPE B
INLET HEADWALL



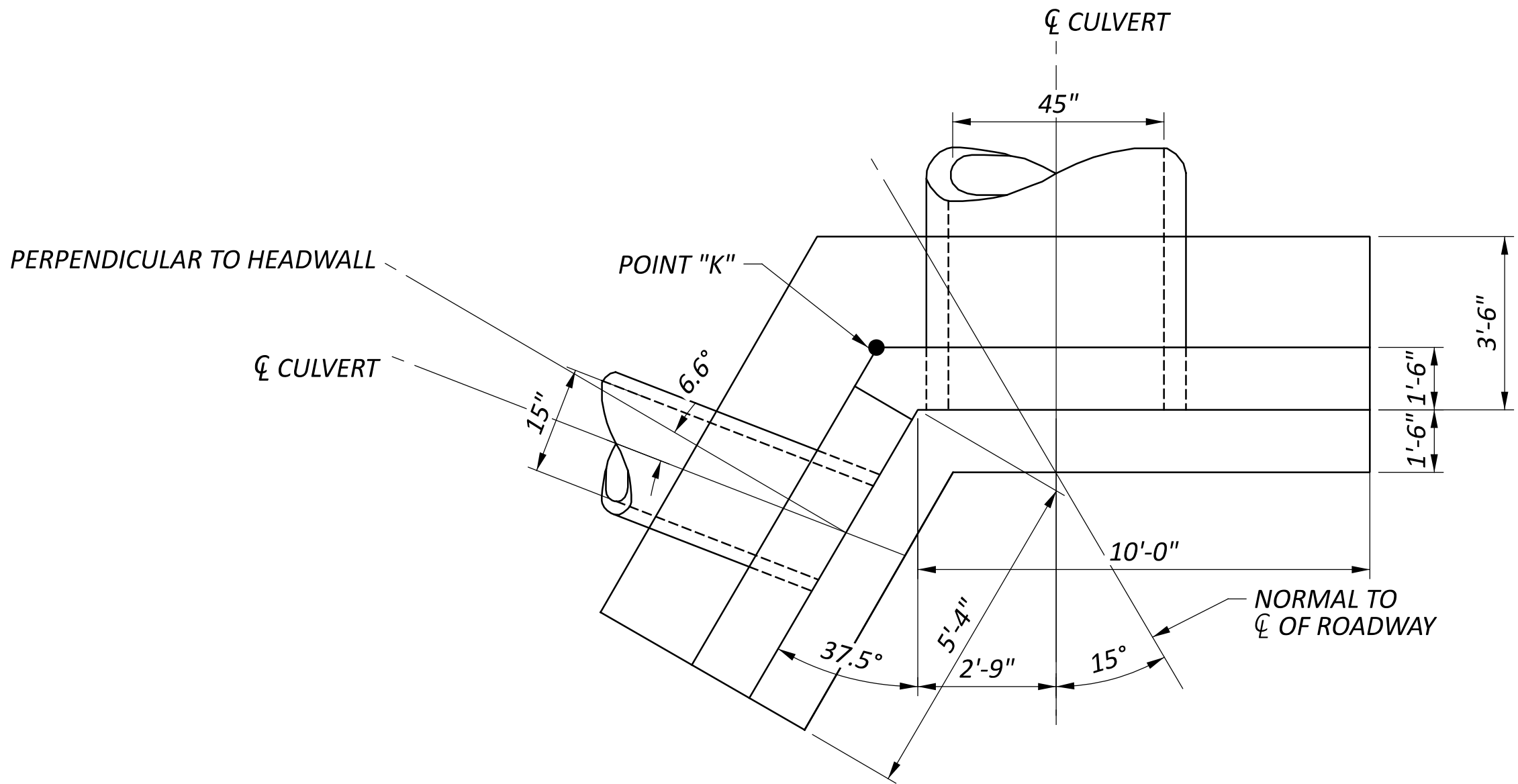
HALF SECTION D-D



PLAN VIEW, TYPE B
INLET HEADWALL



ELEVATION VIEW, TYPE B
OUTLET HEADWALL



PLAN VIEW, TYPE B
OUTLET HEADWALL

Elliptical Rise x Span (in.)	H	a	b	c	ts	Bar# d	θ = 15°						
							L1	L2	h1	h2	CONC. CMP (cy)	CONC. RCP (cy)	STEEL (lbs.)
29"x45"	3'-10"	3'-6"	1'-6"	2'-9"	1'-6"	#5	10'-0"	5'-4"	4'-6"	3'-10"	9.3	9.1	806

REFER TO STANDARD CONSTRUCTION DRAWING HW-1.1 FOR MORE DETAILS



D04-CULVERTS-FY2025

MODEL: Steel_SurvFI PAPER SIZE: 34x22 (in.) DATE: 9/12/2024 TIME: 12:49:25 PM USER: nrlflicky
 pw:\vhobiddo-pw.bentley.com:chiodo-pw-02 Documents\01 Active Projects\District 04\ _D04\109452\400-Engineering\Roadway\Sheets\109452_GS600.dgn

REF NO.	SHEET NO.	STATION TO STATION				202	202	202	202	503	601	601	602	609	611	611											
						HEADWALL REMOVED, (SUM-303-3.589)	PIPE REMOVED, 24" AND UNDER	PIPE REMOVED, OVER 24"	CURB REMOVED	COFFERDAMS AND EXCAVATION BRACING, (SUM-303-3.589)	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	PAVED GUTTER, TYPE 1-2	CONCRETE MASONRY	CURB, TYPE 6	28" X 45" CONDUIT, TYPE A, 706.04	15" CONDUIT, TYPE C	CATCH BASIN, NO. 2-2B										
																		EACH	FT	FT	FT	LS	CY	FT	CY	FT	FT
				TO																							
R-1	P.47	104+73.66	LT		104+83.51	LT	1																				
R-2	P.47	104+54.97	RT		104+74.06	RT	1																				
R-3	P.47	104+22.89	LT		104+75.96	LT		54																			
R-4	P.47	104+70.91	RT		104+78.68	LT			51																		
R-5	P.47	104+40.00	LT		105+04.98	LT				65																	
R-6	P.47	104+40.00	RT		105+04.98	RT				65																	
D-1	P.47	104+22.89	LT		104+28.88	LT					4					7											
D-2	P.47	104+28.88	LT		104+30.87	LT										1											
D-3	P.47	104+30.87	LT		104+78.55	LT					4					49											
D-4	P.47	104+74.92	LT		104+85.60	LT						9															
D-5	P.47	104+66.66	RT		104+76.97	RT					13																
D-6	P.47	103+96.19	RT		104+56.08	RT					61																
D-7	P.47	104+56.44	RT		104+68.87	RT						9															
D-8	P.47	104+62.58	RT		104+81.38	LT				LS	8				53												
EC-1	P.47	104+79.73	LT		104+89.16	LT					1.67																
EC-2	P.47	104+56.02	RT		104+63.74	RT					1.89																
GR-1	P.47	104+40.00	LT		105+04.98	LT							65														
GR-2	P.47	104+40.00	RT		105+04.98	RT							65														
																	</										

ROADWAY AND DRAINAGE SUBSUMMARY - SUM-303-3.589

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

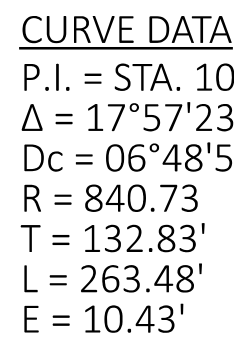
MJP 04-24-24

PROJECT ID

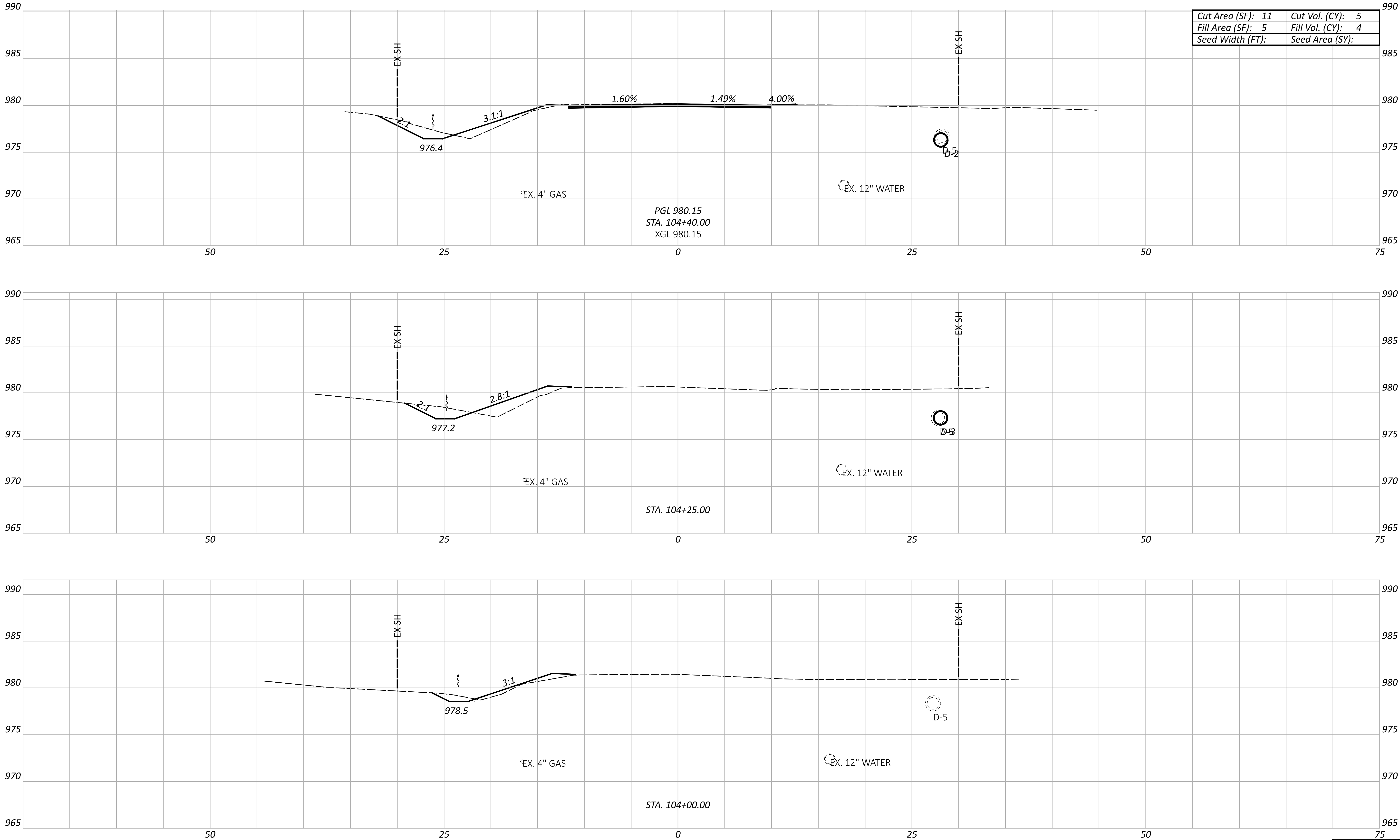
109452

SHEET	TOTAL
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48 | 5



DESIGNER	
NKF	
REVIEWER	
MJP	04-24-
PROJECT ID	
109452	
SHEET	TOTAL
P.49	59



Cut Area (SF):	11	Cut Vol. (CY):	5
Fill Area (SF):	5	Fill Vol. (CY):	4
Seed Width (FT):		Seed Area (SY):	

CROSS SECTIONS - SUM-303-3.589
STA. 104+00.00 TO STA. 104+40.00

DESIGN AGENCY



DESIGNER

NKF

REVIEWER

MJP 04-24-24

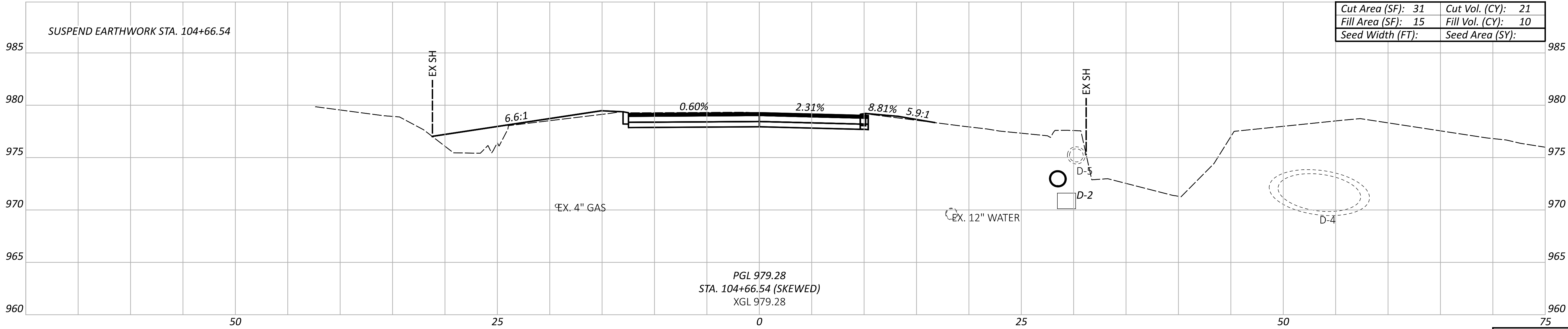
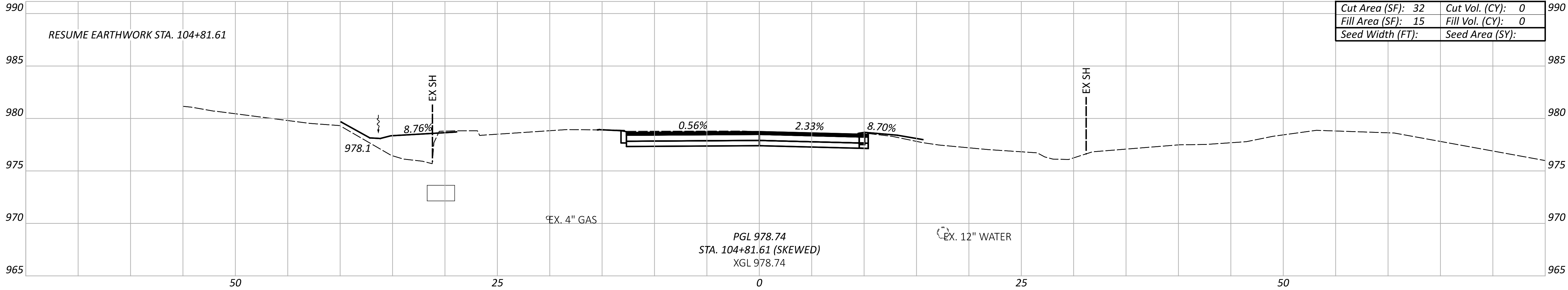
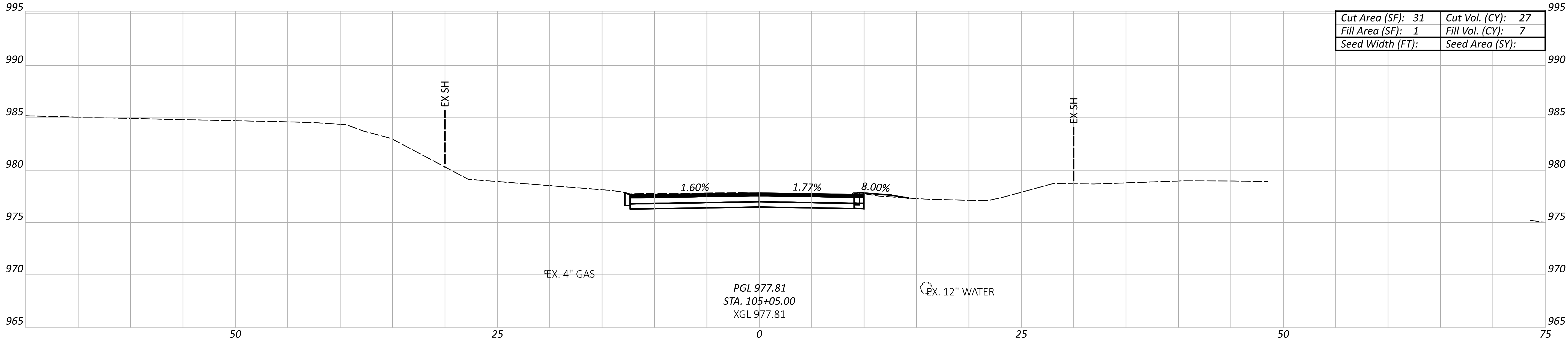
PROJECT ID

109452

Sheet Totals

Seeding	Cut	Fill
	5	4

SHEET	TOTAL
P.50	58



Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
	48	17	P.51	58

CROSS SECTIONS - SUM-303-3.589
STA. 104+66.54 TO STA. 105+05.00

DESIGN AGENCY



DESIGNER

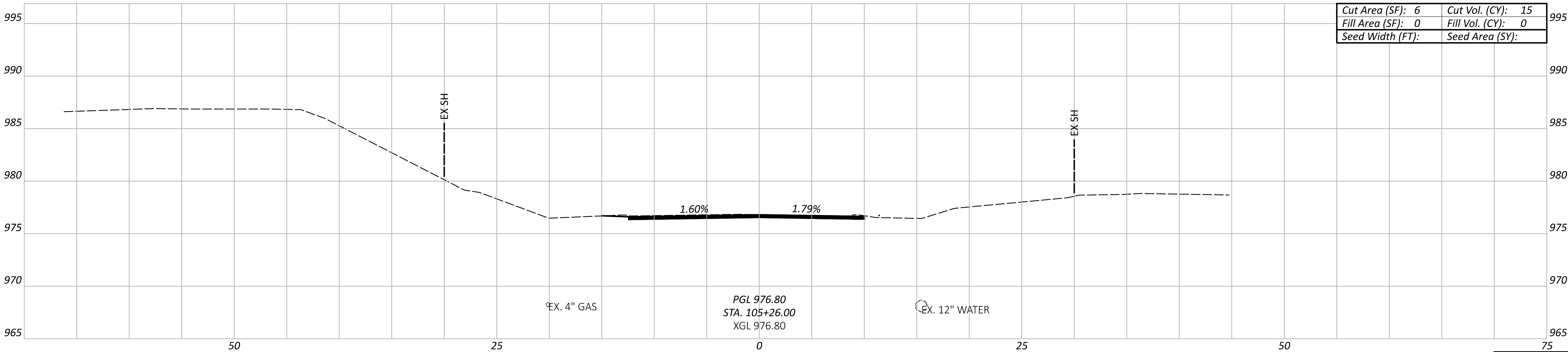
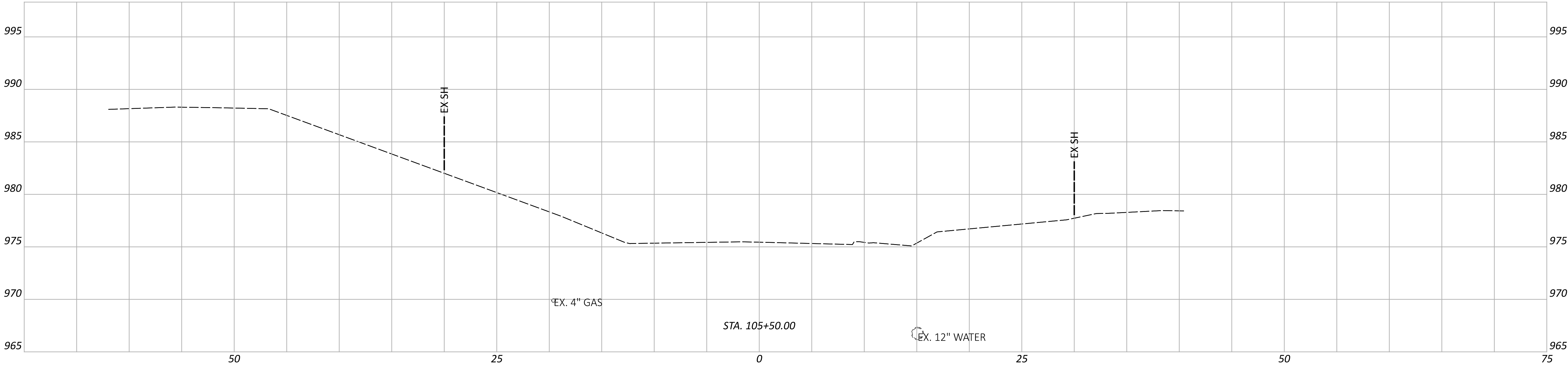
NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452



Cut Area (SF):	6	Cut Vol. (CY):	15
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):		Seed Area (SY):	

Sheet Totals		
Seeding	Cut	Fill
	15	

DESIGN AGENCY

DESIGNER

NKF

REVIEWER

MJP 04-24-24

PROJECT ID

109452

SHEET

P.52

TOTAL

58



HORIZONTAL
SCALE IN FEET

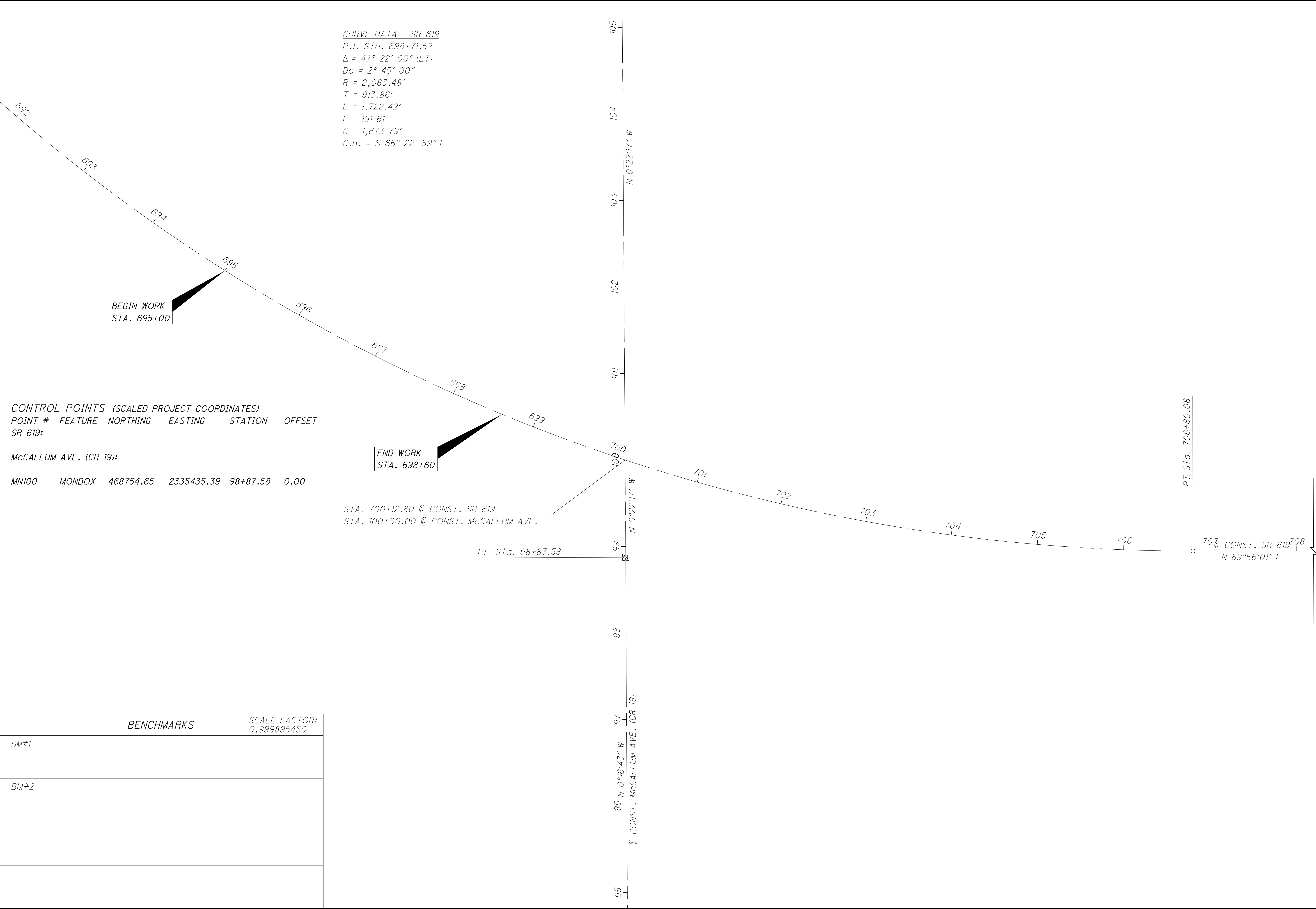
A horizontal scale bar with alternating black and white segments. The segments are labeled 0, 5, 10, and 20, indicating distances in feet.

DESIGN AGENCY



DESIGNER
NKF
REVIEWER
MJP 04-24-2004
PROJECT ID
109452
SUBSET TOTAL
1 1
SHEET TOTAL
P.53 58

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BENCHMARKS		SCALE FACTOR: 0.999895450
BM#1		
BM#2		

54
58

STA - 619 - 13.15

SCHEMATIC PLAN

CALCULATED
EMS

CHECKED
MJP

0 25 50 100

HORIZONTAL
SCALE IN FEET

N

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 2012A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR: 0.99989545003
ORIGIN OF COORDINATE SYSTEM: (0,0)

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.
1 METER = 3.28083333333 U.S. SURVEY FEET

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811, THE OHIO DEPARTMENT OF TRANSPORATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATION IN ALL AREAS.

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:

ENBRIDGE GAS OHIO
ATTN: MICAH RISACHER
320 SPRINGSIDE DRIVE
AKRON, OHIO 44333
330.664.2638

ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

1. IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLAN AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
2. IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
- a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
- b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDED IN THE PLAN.
- c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

SEEDING AND MULCHING

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

659, TOPSOIL (FOR FORESLOPE) 80 CU. YD.
659, SEEDING AND MULCHING 710 SQ. YD.

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.

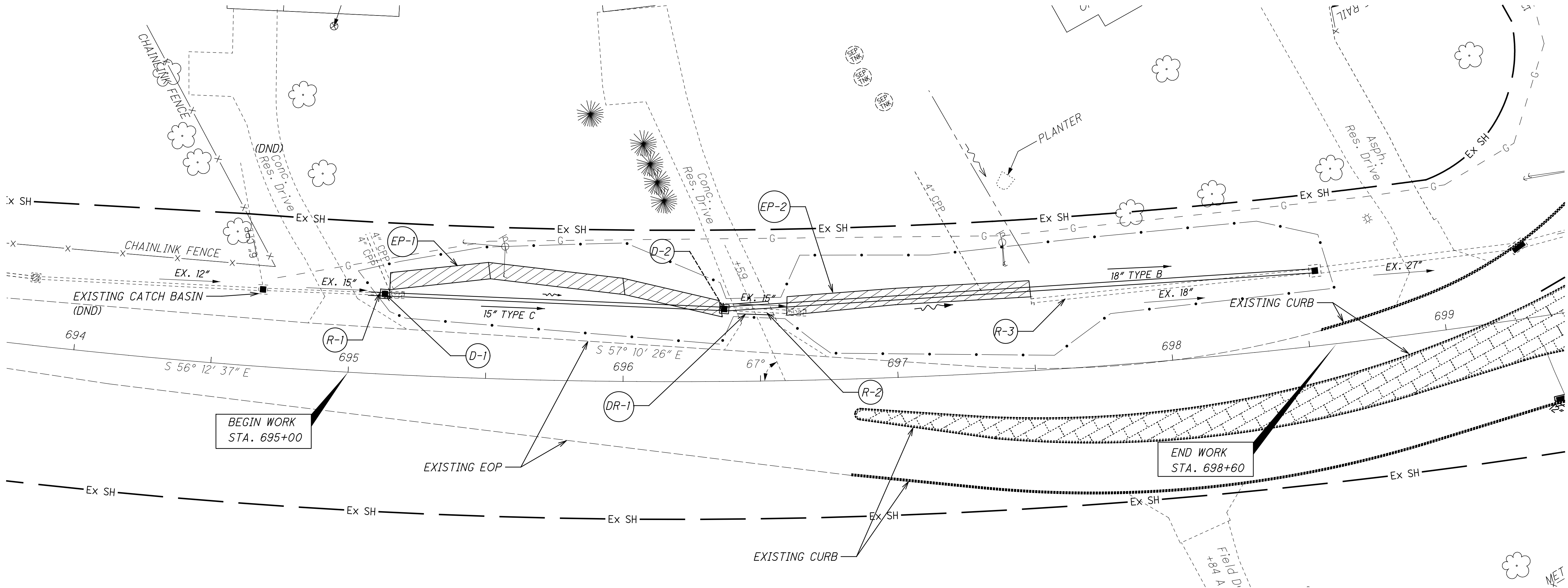
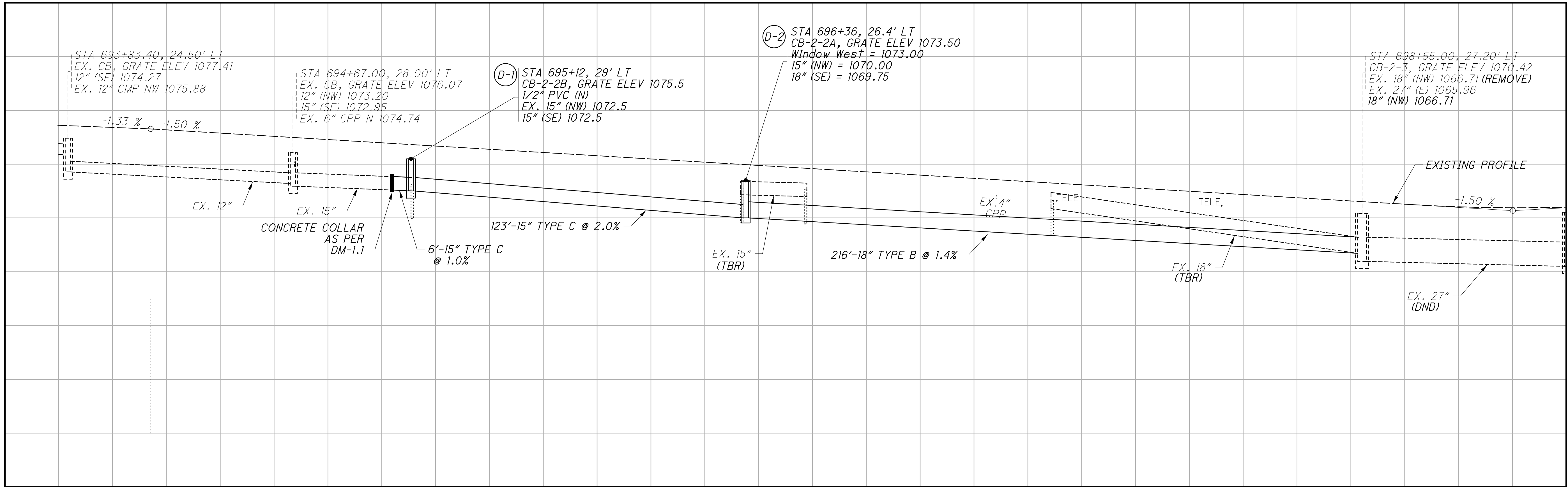
EMBANKMENT

THE FOLLOWING QUANTITIES HAVE BEEN TAKEN FROM THE CROSS SECTION SHEETS AND CARRIED TO THE GENERAL SUMMARY:

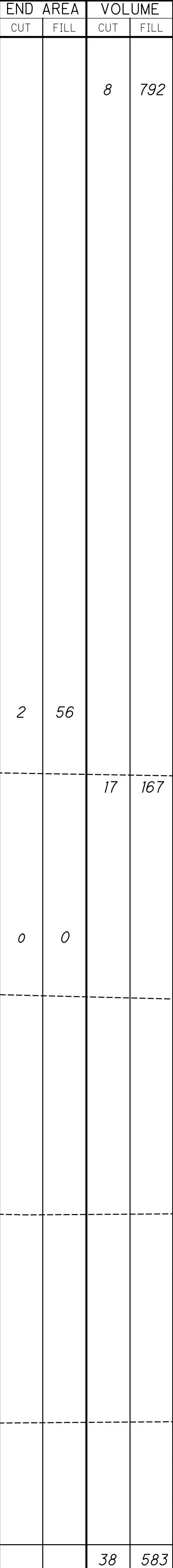
ITEM 203, EXCAVATION 46 CU. YD.
ITEM 203, EMBANKMENT 1375 CU. YD.

REF NO.	SHEET NO.	STATION TO STATION				202	202	202	452	611	611	611	611	670	
						HEADWALL REMOVED	PAVEMENT REMOVED	PIPE REMOVED, 24" AND UNDER	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	15" CONDUIT, TYPE C	18" CONDUIT, TYPE B	CATCH BASIN, NO. 2-2A	CATCH BASIN, NO. 2-2B	DITCH EROSION PROTECTION	
															EACH
D-1	P.55	695+12.00	LT	TO	696+36.00	LT				129			1		
D-2	P.55	696+36.00	LT		698+55.00	LT				216	1				
EP-1	P.55	695+12.00	LT		696+36.00	LT								104	
EP-2	P.55	696+60.00	LT		697+50.00	LT								75	
R-1	P.55	695+12.00	LT		695+12.00	LT	1								
R-2	P.55	696+36.00	LT		696+60.00	LT	2	24							
R-3	P.55	697+50.00	LT		698+55.00	LT	1	104							
DR-1	P.55	696+40	LT		696+55	LT		7	7						
TOTALS CARRIED TO GENERAL SUMMARY							4	7	128	7	129	216	1	1	179





MODEL: SHEET 1 PAPERSIZE: 34x22 (in.) DATE: 9/12/2024 TIME: 12:50:21 PM USER: n.flicky
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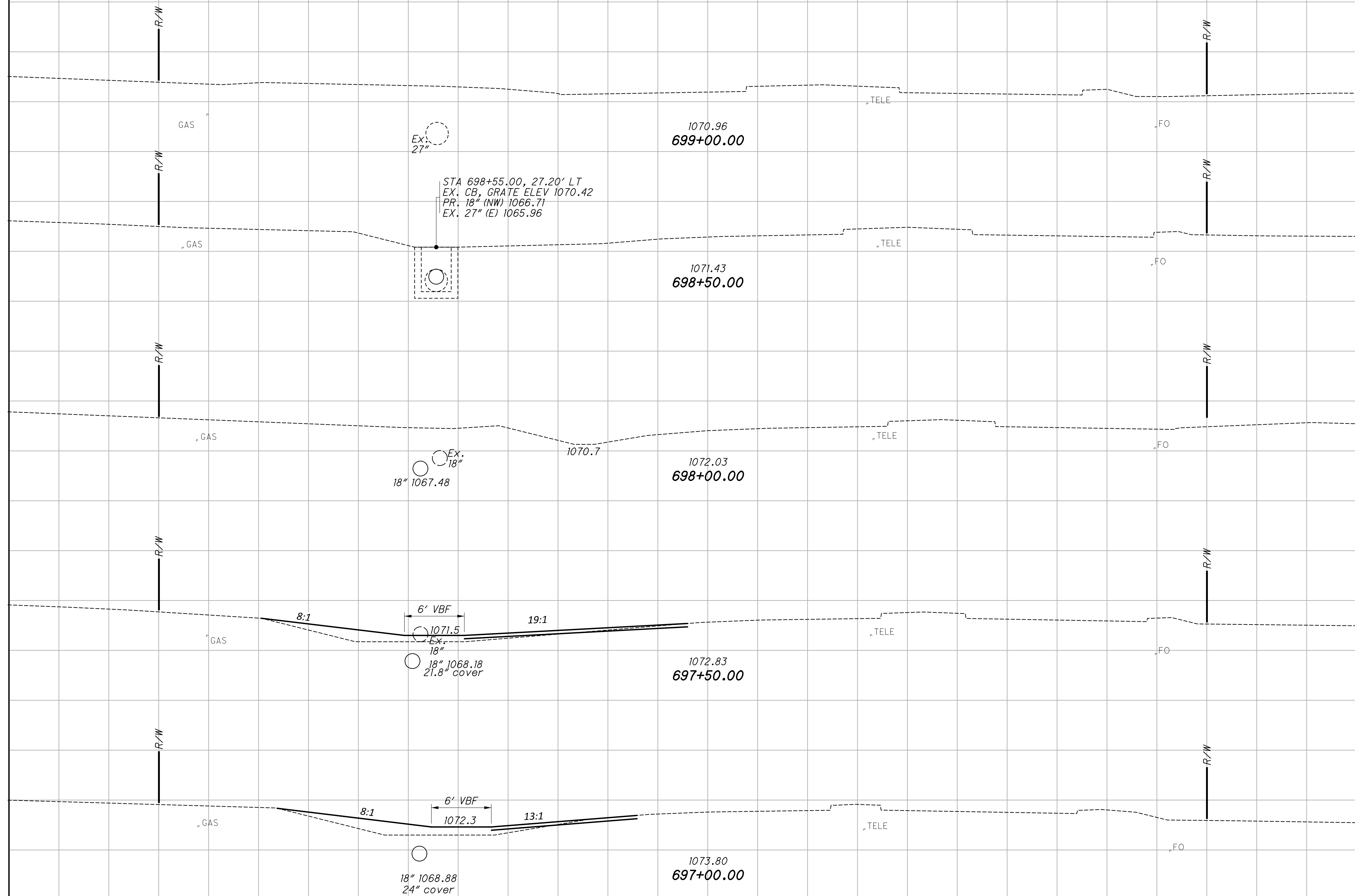


DESIGNER	EMS
REVIEWER	MJP 04-24-
PROJECT ID	109452

SHEET	TOTAL
P.57	58

D04-CULVERTS-FY2025

MODEL: SHEET 2 PAPER SIZE: 34x22 (in.) DATE: 9/12/2024 TIME: 12:50:22 PM USER: nfflicky
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END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0		
2	17	2	324
2	20	6	264
		6	204
		8	792

CROSS SECTIONS - STA-619-13.170
STA. 697+00 TO STA. 699+00

DESIGN AGENCY



DESIGNER	
EMS	
REVIEWER	
MJP	04-24-
PROJECT ID	
109452	
SHEET	TOTAL
P.58	58