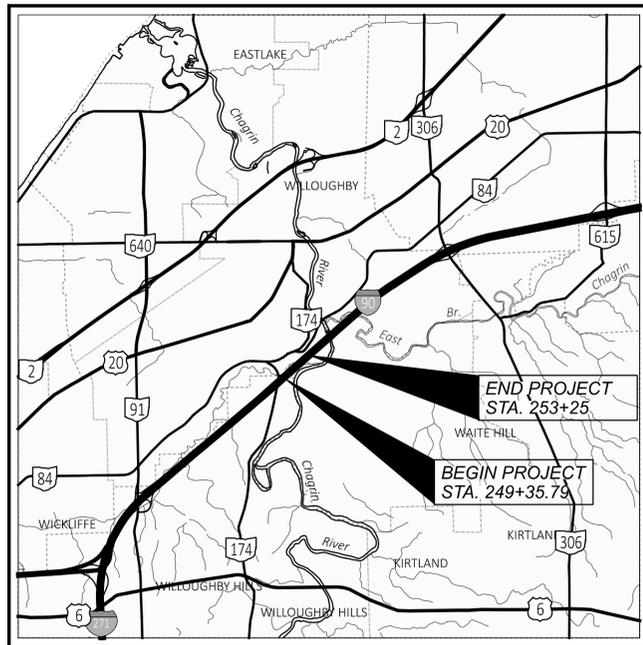


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

LAK-90-5.57

VILLAGE OF WAITE HILL LAKE COUNTY



LOCATION MAP

LATITUDE: 41°37'23"N LONGITUDE: 81°24'19"W



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

DESIGN DESIGNATION

CURRENT ADT (2023)	71,828
DESIGN YEAR ADT (2043)	74,522
DESIGN HOURLY VOLUME (2043)	7,452
DIRECTIONAL DISTRIBUTION	0.65
TRUCKS (24 HOUR B&C)	0.11
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	

NHS PROJECT N/A

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

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

PLAN PREPARED BY:

8235 Mohawk Dr. | Cleveland, OH 44136

ENGINEERS, ARCHITECTS & PLANNERS
200 E. FEDERAL STREET
YOUNGSTOWN, OHIO 44603
PHONE (330) 744-0581

INDEX OF SHEETS:

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STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-2.1	01-21-22	MT-95.45	01-17-20	800 SEE PROPOSAL	SPECIAL FLOOD
BP-2.2	01-15-22	MT-101.70	01-17-20	832 07-15-22	HAZARD AREA DEVELOPMENT PERMIT
BP-2.5	01-21-22	MT-102.10	01-17-20		06-20-23
BP-3.1	01-21-22	MT-105.10	01-17-20		
BP-8.1	07-18-08				
BP-9.1	01-18-19	TC-41.10	07-19-13		
		TC-42.10	10-18-13		
MGS-1.1	07-16-21	TC-65.10	01-17-14		
MGS-2.1	01-19-18	TC-65.11	07-15-22		
DM-1.1	07-17-20	RM-4.2	04-17-20		
DM-1.2	01-19-18				

FEDERAL PROJECT NUMBER

NON-FEDERAL

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT INVOLVES APPROXIMATELY 400' OF SLOPE REPAIR USING A DRILLED SHAFT PILE WALL ALONG I-90 EASTBOUND IN WAITE HILL.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.27 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

LIMITED ACCESS

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

2023 SPECIFICATIONS

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

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

John Picuri, P.E., S.I.
District 12 Deputy Director

Jack Marchbanks, PhD
Director, Department of Transportation

<p>ENGINEER'S SEAL</p>	<p>ENGINEER'S SEAL RETAINING WALLS</p>
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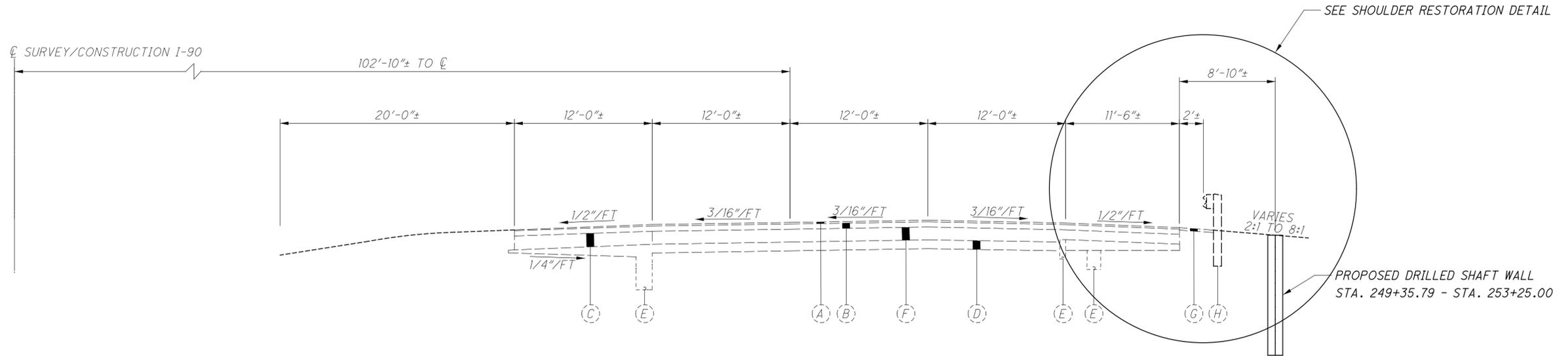
TITLE SHEET

DESIGN AGENCY
EUTHENICS
8235 Mohawk Dr. | Cleveland, OH 44136

DESIGNER	ESM
REVIEWER	DTB
PROJECT ID	06/20/23
SHEET	115152
TOTAL	49

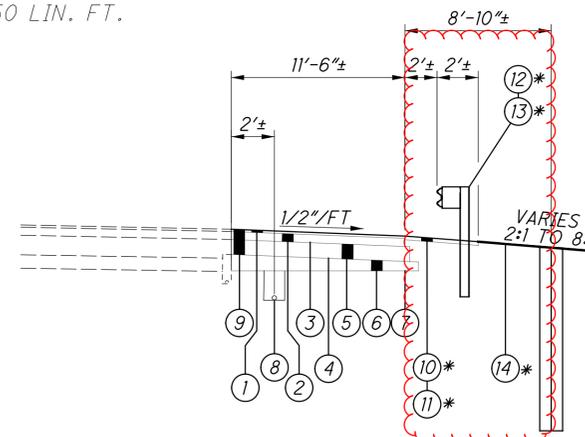
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MODEL: Sheet PAPER: SIZE: 34x22 (in.) DATE: 8/6/2023 TIME: 8:05:19 PM USER: esmccasin F:\Jobs\1180 - Districts 3 & 12 GES\115152\400-Engineering\Roadway\Sheets\115152_GT001.dgn



TYPICAL EXISTING 3 LANE SECTION (EASTBOUND)

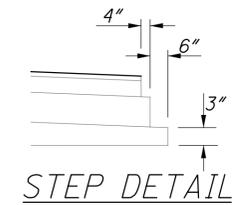
STA. 249+25 TO STA. 253+37.50 = 412.50 LIN. FT.



SHOULDER RESTORATION DETAIL

STA. 250+96± TO STA. 251+16±

* STA. 249+25.00 TO STA. 253+37.50



EXISTING LEGEND

- | | |
|---|---|
| (A) 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE | (G) 3" ASPHALT CONCRETE INTERMEDIATE COURSE |
| (B) 2 1/4" BITUMINOUS AGGREGATE BASE | (H) GUARDRAIL |
| (C) 12" CONCRETE BASE | |
| (D) SUBBASE | |
| (E) UNDERDRAIN | |
| (F) 10" PORTLAND CEMENT CONCRETE PAVEMENT | |

PROPOSED LEGEND

- | | |
|---|---|
| (1) ITEM 442 - 1.75" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449) | (8) ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC |
| (2) ITEM 442 - 2.25" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (449) | (9) ITEM 202 - PAVEMENT REMOVED |
| (3) ITEM 407 - NON-TRACKING TACK COAT | (10) ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN (UNDER GUARDRAIL) |
| (4) ITEM 407 - TACK COAT, 702.13 (FOR CONCRETE BASE) | (11) ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN |
| (5) ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QCIP WITH QC/QA | (12) ITEM 202 - GUARDRAIL REMOVED |
| (6) ITEM 304 - AGGREGATE BASE | (13) ITEM 606 - GUARDRAIL, TYPE MGS |
| (7) ITEM 204 - SUBGRADE COMPACTION | (14) ITEM 659 - SEEDING AND MULCHING, CLASS 3B |

PAVEMENT RESTORATION FOR 21" STORM SEWER

THE FOLLOWING QUANTITIES ARE PROVIDED AND CARRIED TO THE GENERAL SUMMARY FOR PAVEMENT RESTORATION WORK RELATED TO THE REMOVAL AND REPLACEMENT OF THE 21"STORM SEWER:

ITEM 442 1.75" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449)	1 CY
ITEM 442 2.25" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (449)	1 CY
ITEM 407 NON-TRACKING TACK COAT	2 GAL
ITEM 407 TACK COAT, 702.13 (FOR CONCRETE BASE)	2 GAL
ITEM 452 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1P WITH QC/QA	26 SY
ITEM 304 AGGREGATE BASE	5 CY
ITEM 204 SUBGRADE COMPACTION	29 SY
ITEM 605 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	20 FT
ITEM 202 PAVEMENT REMOVED	26 SY
ITEM 202 PIPE REMOVED, 24" AND UNDER (FOR UNDERDRAIN)	20 FT
ITEM 618 RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	.01 MILE

MAINTENANCE DURING CONSTRUCTION

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO THE EXISTING PAVEMENT SURFACE DURING THE CONSTRUCTION OF THE PROPOSED DRILLED SHAFT WALL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE BY THEIR EQUIPMENT.

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL) AS PER PLAN

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL) AS PER PLAN.

HERBICIDE SHALL BE EPA APPROVED FOR PAVING UNDER GUARDRAIL. IT SHALL BE APPLIED TO THE PREPARED AREA AFTER FINAL LEVELING AND GRADING HAS BEEN COMPLETED. THE APPLICATION SHALL BE JUST PRIOR TO PAVING AND SHALL STRICTLY ADHERE TO THE MANUFACTURER'S INSTRUCTIONS.

EACH SUCCESSFUL BIDDER MUST BE LICENSED BY THE OHIO DEPARTMENT OF AGRICULTURE AS A COMMERCIAL APPLICATOR AND ALL PERSONS INVOLVED IN THE ACTUAL SPRAYING SHALL BE LICENSED AS COMMERCIAL OPERATORS IN THE APPROPRIATE SPRAY CATEGORY.

HERBICIDE LABEL, MATERIAL SAFETY DATA SHEET AND COPY OF APPLICATORS LICENSES SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION PRIOR TO COMMENCING WORK.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO A DEPTH OF 3" AND A MAXIMUM WIDTH OF 4' USING ONE OF THE FOLLOWING METHODS:

METHOD A:

1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPE TO DRAIN AWAY FROM THE POSTS.

ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL) AS PER PLAN.

THE FOLLOWING QUANTITIES ARE PROVIDED AND CARRIED TO THE GENERAL SUMMARY FOR RESHAPING UNDER GUARDRAIL AND FURNISHING AND INSTALLING ASPHALT INTERMEDIATE COURSE UNDER GUARDRAIL:

ITEM 202 PAVEMENT REMOVED	183 SY
ITEM 209 RESHAPING UNDER GUARDRAIL, AS PER PLAN	4.1 STA.
ITEM 441 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN (UNDER GUARDRAIL)	16 CY

ITEM 611 - CONDUIT MISC.: MONITOR CONDITION OF EXISTING 168" CMP

THE CONTRACTOR SHALL ACTIVELY MONITOR THE SHAPE AND CONDITION OF THE EXISTING 168" CMP CULVERT DURING THE INSTALLATION OF THE ADJACENT DRILLED SHAFTS.

THE CONTRACTOR SHALL FURNISH, INSTALL, AND SUBSEQUENTLY REMOVE ANY TEMPORARY BRACING NEEDED TO ENSURE THAT THE DRILLED SHAFT OPERATIONS DO NOT DAMAGE THE EXISTING 168" CMP CULVERT. IF ANY SHAPE CHANGE OR DAMAGE IS DETECTED, THE CONTRACTOR MUST IMMEDIATELY CEASE THE DRILLED SHAFT CONSTRUCTION OPERATIONS.

REPAIR, AS DIRECTED AND APPROVED BY THE ENGINEER, ANY DAMAGE CAUSED TO THE EXISTING 168" CMP CULVERT DUE TO THE CONTRACTOR'S OPERATIONS AT NO COST TO THE STATE.

THE CONTRACTOR SHALL PERFORM A VIDEO INSPECTION OF THE BEFORE CONSTRUCTION CONDITION AND AFTER CONSTRUCTION CONDITION OF THE PIPE. VIDEO TO BE PROVIDED TO THE ENGINEER.

ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 611 - CONDUIT MISC.: MONITOR CONDITION OF EXISTING 168" CMP.

REVIEW OF DRAINAGE FACILITIES

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

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

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL PERFORM AN INSPECTION OF THE EXISTING 168" CMP CULVERT AND DOCUMENT THE CONDITION OF THE STRUCTURE. THE RECORD OF THESE INSPECTIONS ARE TO BE MAINTAINED BY ODOT DISTRICT 12.

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

FEDERALLY ENDANGERED SPECIES INDIANA BAT AND NORTHERN LONG-EARED BAT

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

ITEM 614 - MAINTAINING TRAFFIC

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, LATEST REVISION.

THE EXISTING NUMBER OF TRAVEL LANES FOR EB SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS PER THE D-12 PERMITTED LANE CLOSURE CHARTS LISTED HERE: [HTTPS://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX](https://www.dot.state.oh.us/districts/d12/highwaymanagement/pages/permittedlane closures.aspx).

WHEN LANE CLOSURES ARE PERMITTED, WORK ZONE MAY BE ESTABLISHED SUCH THAT I-90 EB MAY BE REDUCED BY 1 LANE. TWO LANES SHALL BE MAINTAINED DURING THE RUMBLE STRIPS REMOVAL AND REPLACEMENT OPERATIONS.

SIGNS FURNISHED SHALL BE IN NEW OR LIKE NEW CONDITIONS. LIKE NEW SIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS, AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS/HER WORK AT THE LOCATIONS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS AND PROVISIONS OF THE ODOTCD AND THE FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

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

ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS, FOURTH OF JULY, NEW YEAR'S EVE, LABOR DAY, MEMORIAL DAY, AND THANKSGIVING.

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY/EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

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 DISTRICT 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 WIDTH OF DRIVABLE PAVEMENT, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMPS & ROAD 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 PATTERN 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.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER - 3.4 MGAL

FLOODLIGHTING

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

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

SEQUENCE OF CONSTRUCTION

PHASE 1

1. USING LANE AND SHOULDER CLOSURES IN ACCORDANCE WITH MT-102.10 AND D-12 PERMITTED LANE CLOSURES, REMOVE THE EXISTING RUMBLE STRIPS ALONG THE INSIDE SHOULDER OF EASTBOUND I-90 AND INSTALL ASPHALT SURFACE COURSE BETWEEN STA. 235+00 AND STA. 259+00.

2. SHIFT THE EASTBOUND LANES OF I-90 IN ACCORDANCE WITH MT- 102.10 AND PLACE PORTABLE BARRIER TO THE LIMITS INDICATED IN THE PLANS.

3. REMOVE 10' OF THE EXISTING 21" PIPE AT THE OUTLET END AT STA. 251+05, RT. DRILL THE KING PILES ADJACENT TO THE LATERAL AND FILL THE PLUG PILE TO THE APPROXIMATE PIPE INVERT. INSTALL THE NEW CONDUIT THROUGH THE WALL AND FORM ABOVE THE CONDUIT. FILL THE PILE TO THE FINAL HEIGHT.

4. LOCATE THE EXISTING 6" UNDERDRAIN. REMOVE OUTLET END AS INDICATED ON THE PLANS AND INSTALL WALL AND PROPOSED UNDERDRAIN OUTLET AS INDICATED IN THE PREVIOUS STEP.

5. FINISH CONSTRUCTING THE PROPOSED WALL IN ACCORDANCE WITH THE PLANS.

PHASE 2

1. REMOVE WORK ZONE ALONG I-90 EASTBOUND LANES.

2. INSTALL PERMANENT PAVEMENT MARKINGS AND RUMBLE STRIPS USING LANE AND SHOULDER CLOSURES IN ACCORDANCE WITH MT-102.10 AND THE D-12 PERMITTED LANE CLOSURE AND RESUME NORMAL TRAFFIC OPERATIONS.

RUMBLE STRIPS REMOVED AND REPLACED

ALL EXISTING RUMBLE STRIPS ON THE INSIDE SHOULDER THAT ARE IN CONFLICT WITH THE PROPOSED MOVEMENT OF TRAFFIC DURING THE MOT OPERATIONS SHALL BE REMOVED BY PAVEMENT PLANING. THE REMOVED RUMBLE STRIP AREAS SHALL BE FILLED WITH ASPHALT CONCRETE SURFACE COURSE. THE RUMBLE STRIP REMOVAL AND REPLACEMENT AREA SHALL BE 2.5 FEET WIDE AND 1.5 INCHES DEEP, CENTERED ON THE RUMBLE STRIP. THE PAVEMENT PLANING AND PLACEMENT OF ASPHALT CONCRETE SURFACE COURSE SHOULD BE COMPLETED IN THE SAME OPERATION. THE ESTIMATED REMOVAL AND REPLACEMENT LENGTH IS 2400 FT.

IMMEDIATELY FOLLOWING COMPLETION OF MOT OPERATIONS AND RESTORING THE TRAFFIC TO ITS ORIGINAL POSITION, NEW RUMBLE STRIPS SHALL BE INSTALLED AT THE LOCATION WHERE THE EXISTING RUMBLE STRIPS WERE REMOVED. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

- ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1.5" DEPTH) _____ 668 SQ. YD.
- ITEM 407 - NON-TRACKING TACK COAT _____ 60 GAL.
- ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG76-22M, 1-1/2" _____ 28 CU. YD.
- ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN _____ 0.45 MILE.

ITEM 622 - PORTABLE BARRIER, UNANCHORED

DURING THE PLACEMENT OF THE PORTABLE BARRIER, TRAFFIC WILL BE PROHIBITED FROM OCCUPYING THE TRAVEL LANE ADJACENT TO THE BARRIER. THE BARRIER WILL BE PLACED AT NIGHT PER THE WORK HOUR RESTRICTION NOTE AND IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE MAP. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-102.10.

THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 PORTABLE BARRIER, UNANCHORED.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, 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.

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 12 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

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.

NOTES:

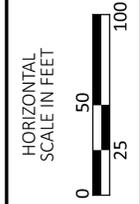
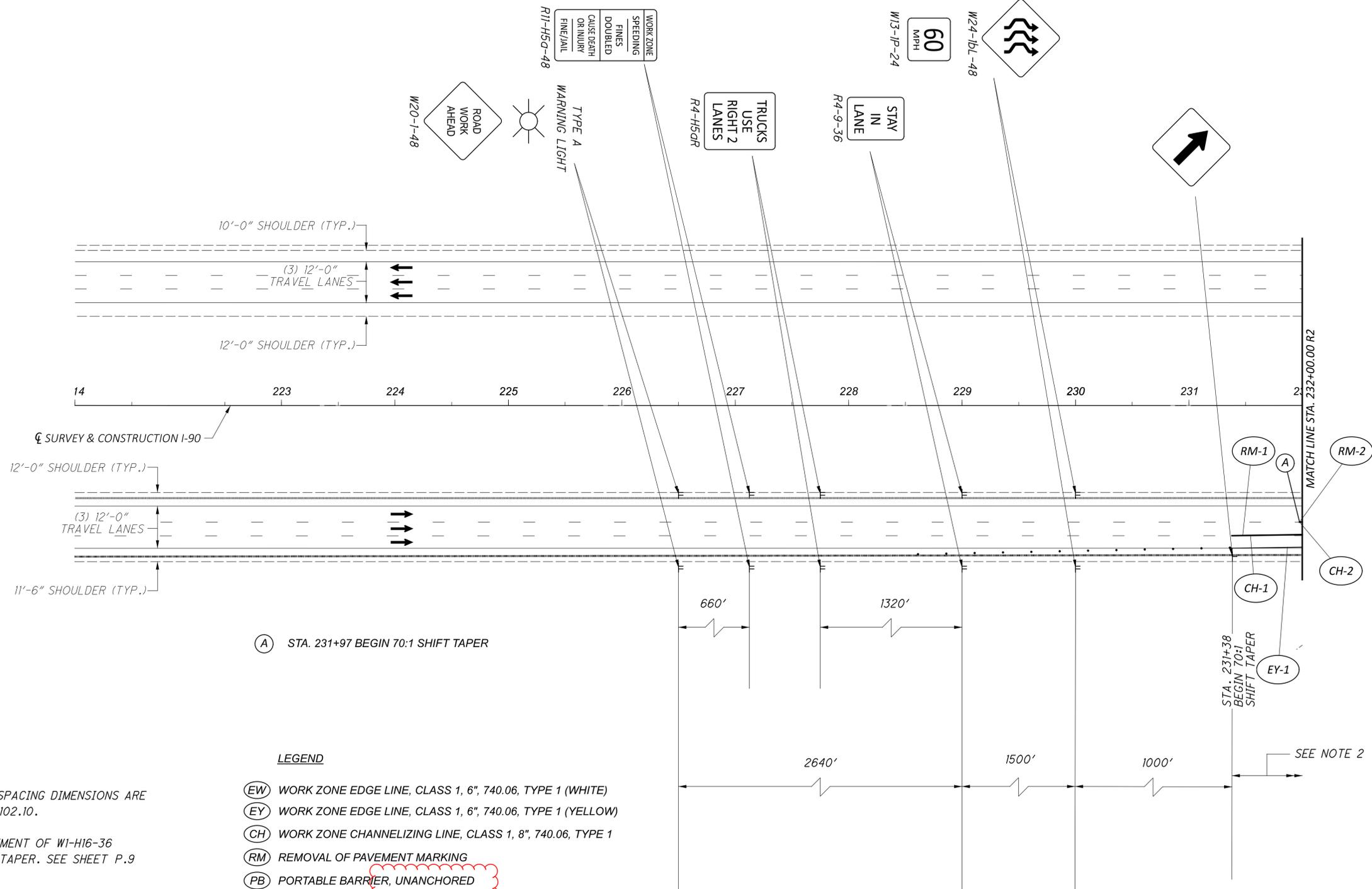
1. SIGN SPACING IS NOT TO SCALE. SPACING DIMENSIONS ARE SHOWN IN ACCORDANCE WITH SCD MT-102.10.

2. THE REQUIRED SPACING AND PLACEMENT OF W1-H16-36 SIGNS IS 100 FEET ALONG THE SHIFT TAPER. SEE SHEET P.9 FOR CONTINUATION.

3. PER SCD MT-102.10:
 -SHIFT TAPER RATE IS 70:1
 -SHOULDER TAPER RATE IS 24:1
 -TAPER SECTION DRUM SPACING IS 70'
 -TANGENT SECTION DRUM SPACING IS 120'

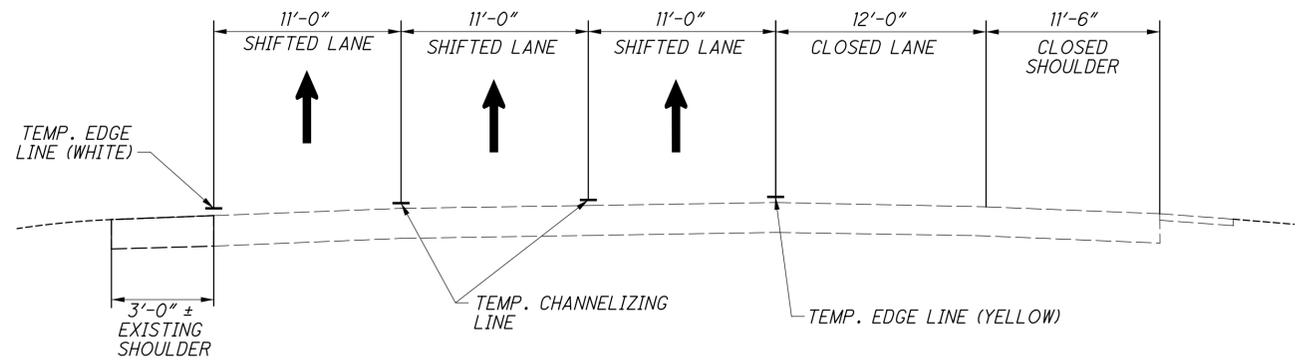
LEGEND

- (EW) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (WHITE)
- (EY) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (YELLOW)
- (CH) WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
- (RM) REMOVAL OF PAVEMENT MARKING
- (PB) PORTABLE BARRIER, UNANCHORED

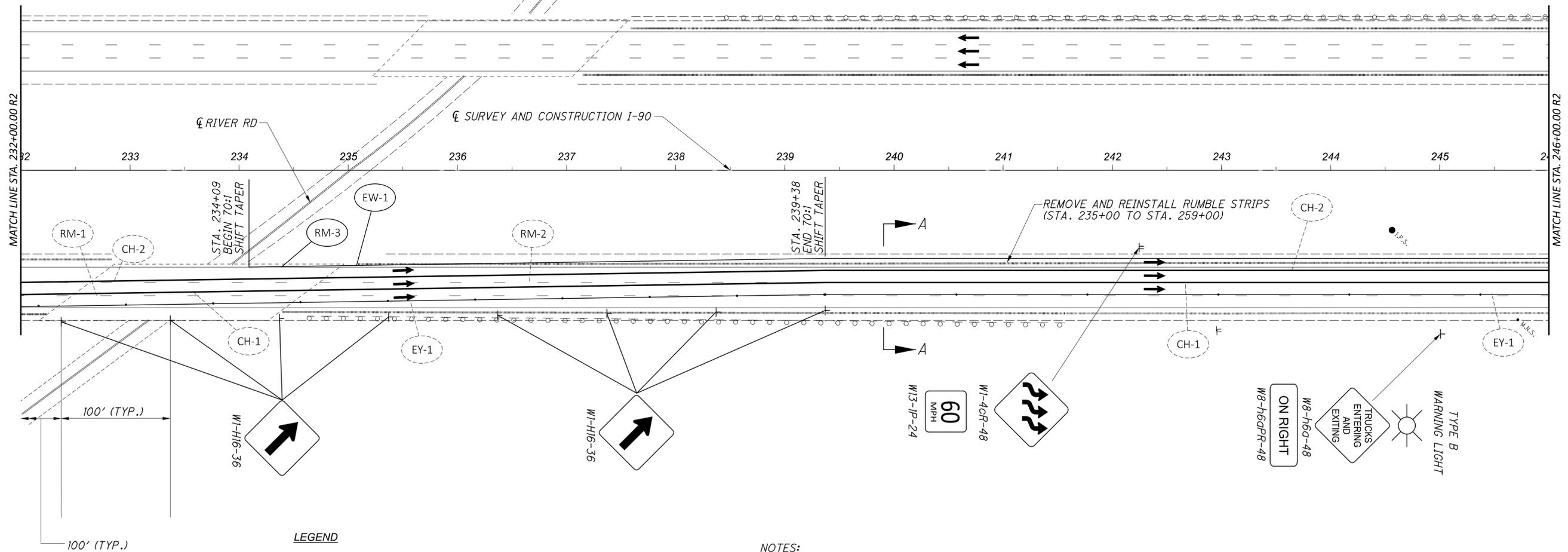


MAINTENANCE OF TRAFFIC PLAN
 STA. 174+00 TO STA. 232+00

DESIGN AGENCY	
EUTHENICS 8335 Mohawk Dr. Cleveland, OH 44135	
DESIGNER	ESM
REVIEWER	DTB
DATE	08/06/23
PROJECT ID	115152
SHEET	TOTAL
9	49



TYPICAL MOT 3 LANE SECTION A-A
 PHASE 1
 (NOT TO SCALE)

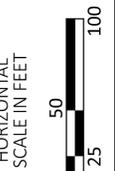


LEGEND

- (EW) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (WHITE)
- (EY) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (YELLOW)
- (CH) WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
- (RM) REMOVAL OF PAVEMENT MARKING
- (PB) PORTABLE BARRIER, UNANCHORED

NOTES:

1. SIGN SPACING IS NOT TO SCALE. SPACING DIMENSIONS ARE SHOWN IN ACCORDANCE WITH SCD MT-102.10.
2. PER SCD MT-102.10:
 - SHIFT TAPER RATE IS 70:1
 - SHOUDLER TAPER RATE IS 24:1
 - TAPER SECTION DRUM SPACING IS 70'
 - TANGENT SECTION DRUM SPACING IS 120'



MAINTENANCE OF TRAFFIC PLAN
 STA. 232+00 TO STA. 246+00

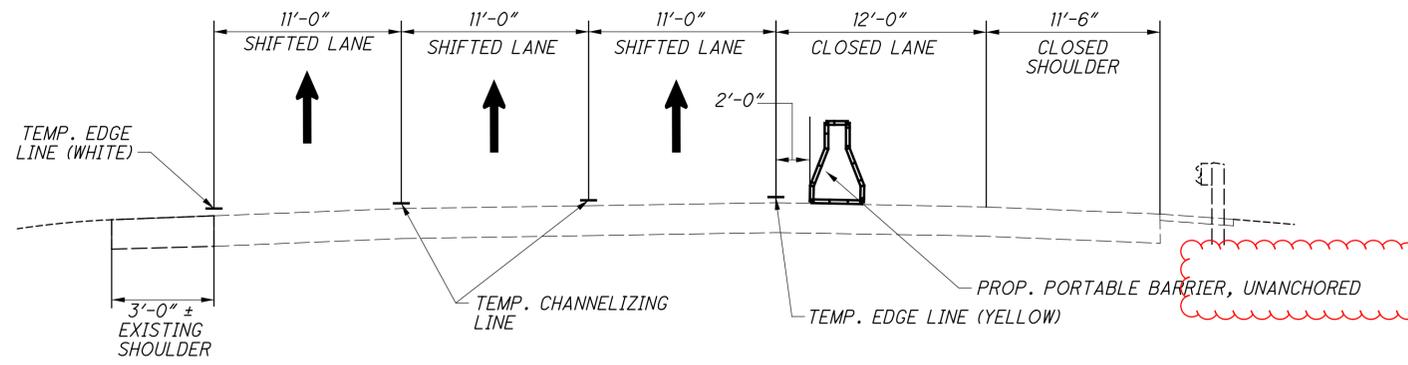
DESIGN AGENCY
EUTHENICS
 8235 Mahan Dr., Cleveland, OH 44132

DESIGNER
 ESM

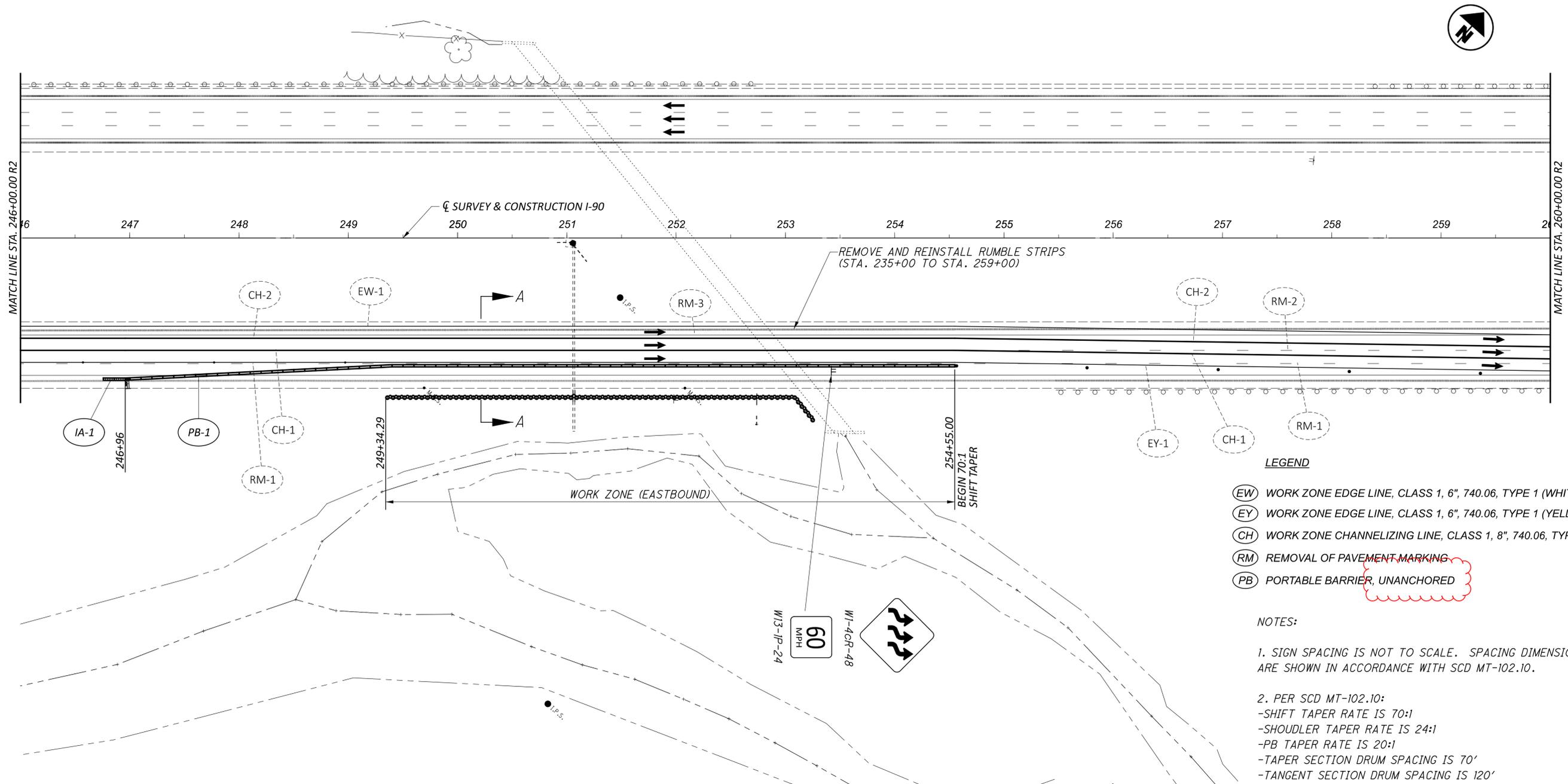
REVIEWER
 DTB 08/06/23

PROJECT NO.
 115152

SHEET	TOTAL
10	49



TYPICAL MOT 3 LANE SECTION A-A
 PHASE 1
 (NOT TO SCALE)

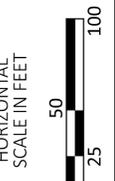


LEGEND

- (EW) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (WHITE)
- (EY) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (YELLOW)
- (CH) WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
- (RM) REMOVAL OF PAVEMENT MARKING
- (PB) PORTABLE BARRIER, UNANCHORED

NOTES:

1. SIGN SPACING IS NOT TO SCALE. SPACING DIMENSIONS ARE SHOWN IN ACCORDANCE WITH SCD MT-102.10.
2. PER SCD MT-102.10:
 - SHIFT TAPER RATE IS 70:1
 - SHOULDER TAPER RATE IS 24:1
 - PB TAPER RATE IS 20:1
 - TAPER SECTION DRUM SPACING IS 70'
 - TANGENT SECTION DRUM SPACING IS 120'



MAINTENANCE OF TRAFFIC PLAN
 STA. 246+00 TO STA. 260+00

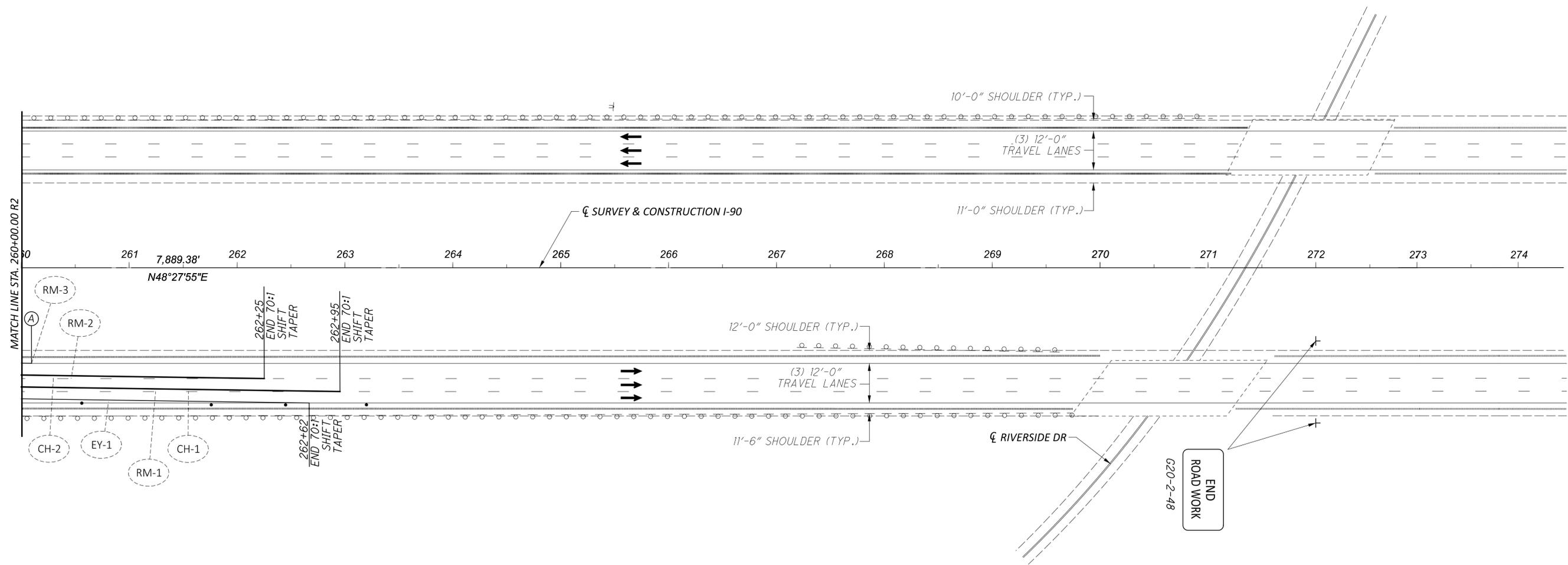
DESIGN AGENCY
EUTHENICS
 8225 Mahoning Dr., Cleveland, OH 44132

DESIGNER
 ESM

REVIEWER
 DTB 8/06/23

PROJECT NO.
 115152

SHEET	TOTAL
11	49



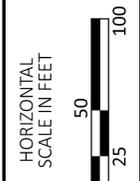
(A) 260+10

LEGEND

- (EW) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (WHITE)
- (EY) WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 (YELLOW)
- (CH) WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1
- (RM) REMOVAL OF PAVEMENT MARKING
- (PB) PORTABLE BARRIER, UNANCHORED

NOTES:

1. SIGN SPACING IS NOT TO SCALE. SPACING DIMENSIONS ARE SHOWN IN ACCORDANCE WITH SCD MT-102.10.
2. PER SCD MT-102.10:
 - SHIFT TAPER RATE IS 70:1
 - SHOUDLER TAPER RATE IS 24:1
 - TAPER SECTION DRUM SPACING IS 70'
 - TANGENT SECTION DRUM SPACING IS 120'



**MAINTENANCE OF TRAFFIC PLAN
 STA. 260+00 TO STA. 274+00**

DESIGN AGENCY	
EUTHENICS 8235 Mahan Dr., Cleveland, OH 44132	
DESIGNER	ESM
REVIEWER	DTB
DATE	08/06/23
PROJECT NO.	115152
SHEET	TOTAL
12	49

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	6	7	8	15	01/NFP /06	EXT	TOTAL								
ROADWAY																	
LS							LS	201	11000	LS		CLEARING AND GRUBBING					
	209						209	202	23000	209	SY	PAVEMENT REMOVED					
						20	20	202	35100	20	FT	PIPE REMOVED, 24" AND UNDER					
	20						20	202	35100	20	FT	PIPE REMOVED, 24" AND UNDER (FOR UNDERDRAIN)					
						412.5	412.5	202	38000	412.5	FT	GUARDRAIL REMOVED					
	29						29	204	10000	29	SY	SUBGRADE COMPACTION					
	4.1						4.1	209	15001	4.1	STA	RESHAPING UNDER GUARDRAIL, AS PER PLAN	3				
						412.5	412.5	606	15050	412.5	FT	GUARDRAIL, TYPE MGS					
EROSION CONTROL																	
2							2	659	00100	2	EACH	SOIL ANALYSIS TEST					
139							139	659	00300	139	CY	TOPSOIL					
1,253							1,253	659	00530	1,253	SY	SEEDING AND MULCHING, CLASS 3B					
63							63	659	14000	63	SY	REPAIR SEEDING AND MULCHING					
63							63	659	15000	63	SY	INTER-SEEDING					
0.17							0.17	659	20000	0.17	TON	COMMERCIAL FERTILIZER					
0.26							0.26	659	31000	0.26	ACRE	LIME					
7							7	659	35000	7	MGAL	WATER					
5,000							5,000	832	30000	5,000	EACH	EROSION CONTROL					
DRAINAGE																	
	20						20	605	14020	20	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC					
						10	10	611	01501	10	FT	6" CONDUIT, TYPE F, AS PER PLAN, 707.45	3				
						10	10	611	08900	10	FT	21" CONDUIT, TYPE B, 706.02					
	LS						LS	611	97300	LS		CONDUIT, MISC.: MONITOR CONDITION OF EXISTING 168" CMP	4				
PAVEMENT																	
	5						5	304	20000	5	CY	AGGREGATE BASE					
	2						2	407	13900	2	GAL	TACK COAT, 702.13 (FOR CONCRETE BASE)					
	2						2	407	20000	2	GAL	NON-TRACKING TACK COAT					
	16						16	441	70801	16	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL), AS PER PLAN	4				
	1						1	442	22100	1	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449)					
	1						1	442	22400	1	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449)					
	26						26	452	14020	26	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P WITH QC/QA					
	0.01						0.01	618	40601	0.01	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	3				
TRAFFIC CONTROL																	
52							52	621	00100	52	EACH	RPM					
52							52	621	54000	52	EACH	RAISED PAVEMENT MARKER REMOVED					
						5	5	626	00112	5	EACH	BARRIER REFLECTOR, TYPE 3, ONE-WAY					
						39	39	630	06500	39	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9					
						2	2	630	84500	2	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION					
						1	1	630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION					
						2	2	630	86102	2	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL					
0.6							0.6	642	00114	0.6	MILE	EDGE LINE, 6", TYPE 1A					
1.2							1.2	642	00214	1.2	MILE	LANE LINE, 6", TYPE 1A					

GENERAL SUMMARY

DESIGN AGENCY
EUTHENICS
 8235 Mahoning Dr., Cleveland, OH 44133

DESIGNER
ESM
 REVIEWER
DTB 08/06/23
 PROJECT ID
115152
 SHEET TOTAL
 13 49

