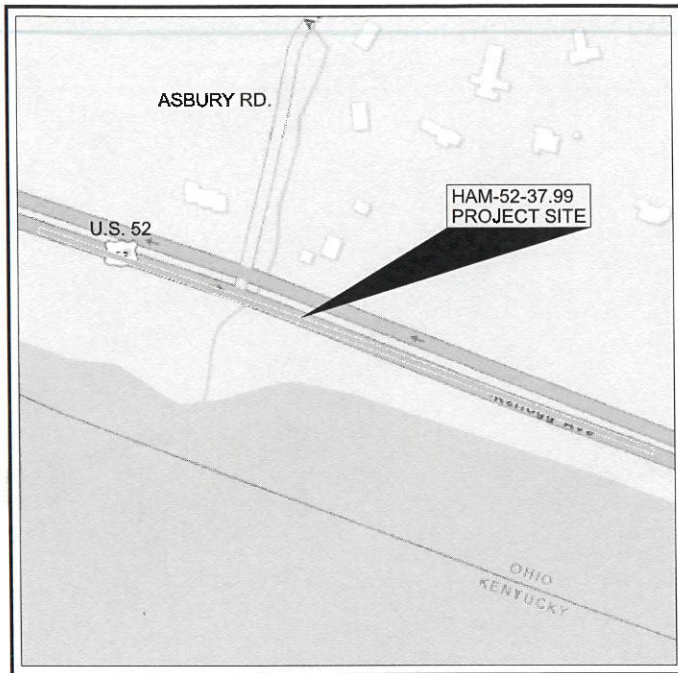


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## HAM-52-37.99

ANDERSON TOWNSHIP  
HAMILTON COUNTY



**LOCATION MAP**

LATITUDE: 39°02'24" LONGITUDE: -84°21'09"



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

**DESIGN DESIGNATION**

CURRENT ADT (2022)	19,000
DESIGN YEAR ADT (2034)	23,500
DESIGN HOURLY VOLUME (2034)	3,100
DIRECTIONAL DISTRIBUTION	70%
TRUCKS (24 HOUR B&C)	4%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
URBAN PRINCIPAL ARTERIAL	
NHS PROJECT	NO

**DESIGN EXCEPTIONS**

NONE

**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:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 8 - ENGINEERING DEPARTMENT  
505 S S.R. 741  
LEBANON, OHIO 45036

**ENGINEER'S SEAL:**



SIGNED: *Joseph A. Smithson*  
DATE: 11/24/21

**INDEX OF SHEETS:**

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STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/17/20	TC-65.10	1/17/14	800-2019 01/21/22	
		TC-65.11	7/21/17	832 10/19/18	
DM-4.3	1/15/16			878 4/16/21	
DM-4.4	1/15/16	MT-95.45	1/17/20	807 1/21/22	
		MT 95.50	7/21/17	821 4/20/12	
MGS-1.1	7/16/21				
MGS-2.1	1/19/18				
MT-95.30	7/19/19				
MT-95.40	1/17/20				
MT-98.20	4/19/19				
MT-101.70	1/17/20				
MT-101.90	7/17/20				
MT-105.10	1/17/20				
TC-61.30	7/19/19				

**FEDERAL PROJECT NUMBER**

E191623

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

EROSION OF THE EMBANKMENT TOE BY THE OHIO RIVER HAS CAUSED DISTRESS TO GUARDRAIL AND PAVEMENT SHOULDER ON THE SOUTH SIDE OF US 52 AT ASBURY ROAD. PROJECT WILL INSTALL A DRILLED PIER WALL TO RE-ESTABLISH THE ROADWAY.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0.62 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.37 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A

**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.

**2019 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.

APPROVED *Tony K. Campbell*  
DATE 11-24-2021 DISTRICT DEPUTY DIRECTOR

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

TITLE SHEET

DESIGN AGENCY



DESIGNER	AWS
REVIEWER	JAS 11-24-21
PROJECT ID	99962
SHEET TOTAL	P.1 16

HAM-52-37.99

MODEL: Sheet PAPER SIZE: 17x11 (in.) DATE: 11/24/2021 TIME: 12:28:01 PM USER: asadovsk p:\v\h\td\p\w\beniley.com\ohio\paw-d2\Documents\01\Active Projects\District 08\Hamilton\99962\000-Engineering\Roadway\Sheet\99962\_G1001.dgn

**ITEM 614, MAINTAINING TRAFFIC**

MAINTAIN A MINIMUM OF 1 - 12' LANE OF TRAFFIC AT ALL TIMES BY USE OF THE EXISTING AND COMPLETED PAVEMENT. SHORT TERM LANE CLOSURES ARE NOT PERMITTED DURING OR WITHIN 2 HOURS FOLLOWING EVENTS AT RIVERBEND MUSIC CENTER. SEE THE EXISTING TRAFFIC CONTROL AND SEQUENCE OF CONSTRUCTION NOTE FOR ADDITIONAL MAINTAINING TRAFFIC REQUIREMENTS.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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.

**EXISTING TRAFFIC CONTROL AND SEQUENCE OF CONSTRUCTION**

EXISTING SHOULDER CLOSURE SIGNS, PORTABLE CONCRETE BARRIER AND ATTENUATORS ARE ODOT OWNED AND WILL BECOME THE RESPONSIBILITY AND PROPERTY OF THE CONTRACTOR WHEN THE CONTRACT IS SIGNED, UNLESS STATED OTHERWISE IN THIS NOTE.

WITHIN 30 CALENDAR DAYS OF THE SIGNED CONTRACT, THE PROPOSED MOT SIGNS SHOWN ON SHEET XX SHALL BE INSTALLED AND THE EXISTING SHOULDER CLOSURE SIGNS INCLUDING SUPPORTS SHALL BE REMOVED. SIGNS FURNISHED BY THE CONTRACTOR SHALL BE NEW AND UNUSED AT THE TIME OF ARRIVAL ON THE PROJECT. ANY SIGNS BROUGHT ON THE PROJECT, WHICH HAVE PREVIOUSLY BEEN USED ELSEWHERE, WILL NOT BE ACCEPTED. THE EXISTING SHOULDER CLOSURE SIGNS ARE NOT PERMITTED TO BE REUSED.

WITHIN 30 CALENDAR DAYS OF THE SIGNED CONTRACT PERFORM WORK AT THE HAM-52-36.85 SLIDE AREA AND THE HAM-52-37.76 SLIDE AREA AS SHOWN ON SHEET XX.

PORTABLE CONCRETE BARRIER FURNISHED BY THE CONTRACTOR AT THESE TWO LOCATIONS SHALL BE IN A LIKE NEW AND ACCEPTABLE CONDITION; THE PROJECT ENGINEER SHALL APPROVE THE BARRIER BEFORE BRINGING IT TO THE PROJECT SITE. ONCE THIS WORK, EXCLUDING MOT SIGNS, IS ACCEPTED BY THE PROJECT ENGINEER, THESE ITEMS BECOME THE PROPERTY OF ODOT AND THE CONTRACTOR IS RELIEVED OF MAINTENANCE RESPONSIBILITY.

\*HAM-52-36.85: MODIFY BIKE LANE MARKINGS AS SHOWN; REMOVAL OF CONFLICTING MARKINGS SHALL BE PERFORMED USING A DIAMOND HEAD GRINDING TOOL/APPARATUS TO MINIMIZE DAMAGE OF THE EXISTING ROADWAY. RELOCATE EXISTING BIKE LANE SIGNS AS SHOWN AND INSTALL PROPOSED PORTABLE CONCRETE BARRIER.

\*HAM-52-37.76: REMOVE MARGINAL AND UNACCEPTABLE PIECES OF EXISTING PORTABLE BARRIER AND INSTALL PROPOSED PORTABLE CONCRETE BARRIER.

WITHIN 30 CALENDAR DAYS OF THE SIGNED CONTRACT INSTALL THE LONG TERM LANE CLOSURE INCLUDING PORTABLE BARRIER NECESSARY TO PERFORM THE SLIDE REPAIR WORK DETAILED IN THESE PLANS. THIS EXISTING PORTABLE CONCRETE BARRIER MAY BE REUSED AT THIS LOCATION IF IT IS IN ACCEPTABLE CONDITION. MARGINAL AND UNACCEPTABLE BARRIER SHALL BE REMOVED.

UPON COMPLETION OF THE WORK, REMOVE THE LANE CLOSURE AND ALL TEMPORARY TRAFFIC CONTROL DEVICES. MOT SIGNS FOR SHOULDER CLOSURE SHALL REMAIN AS NOTED IN THE MOT PLAN. THESE SIGNS SHALL BE IN ACCEPTABLE CONDITION, ANY MARGINAL SIGNS SHALL BE REPLACED.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,000 PER DAY FOR EACH CALENDAR DAY ANY OF THE ABOVE SPECIFIED WORK IS NOT COMPLETED BEYOND THE SPECIFIED LIMIT. 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.

**WORK ZONE MARKINGS AND SIGNS**

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

**ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

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

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

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:

- ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
- AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
- AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:

- THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
  - THE ACTIVE WORK AREA Laterally CLOSEST TO THE OPEN TRAVELED LANE; OR
  - OTHER LOCATION AS APPROVED BY THE ENGINEER.
- THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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

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

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

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

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

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 72 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.

DESIGN AGENCY



DESIGNER  
AWS

REVIEWER  
16 MM-DD-YY

PROJECT ID  
99962

SHEET TOTAL  
P.4A 16

**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.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) \_\_\_\_\_ OF THE PLAN. 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 \_\_\_\_\_ 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.

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.

(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 2 SIGN MONTH ASSUMING 1 PCMS SIGN(S) FOR 2 MONTH(S)

**DELINEATION OF PORTABLE AND PERMANENT BARRIER**

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.]

[THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

**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 VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

**NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE**

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR 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.

DESIGN AGENCY

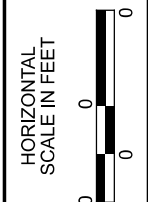
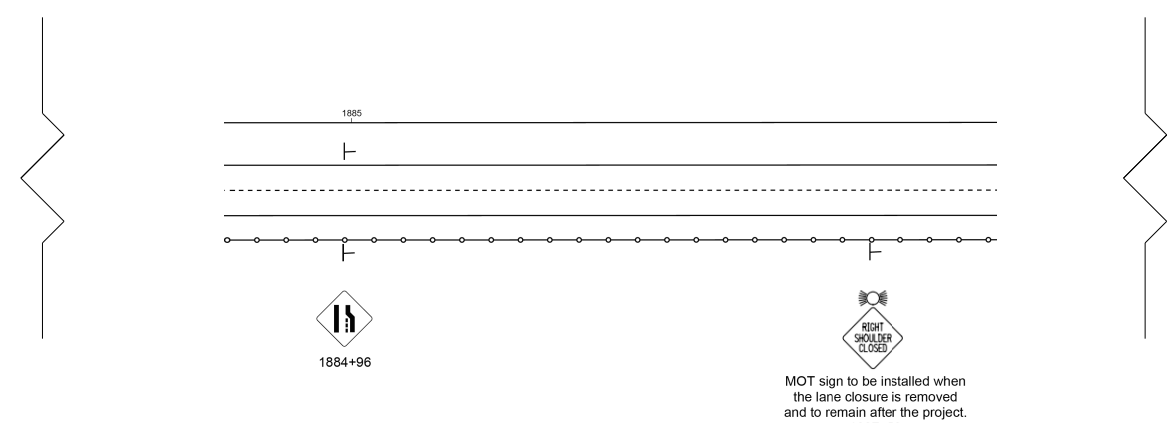
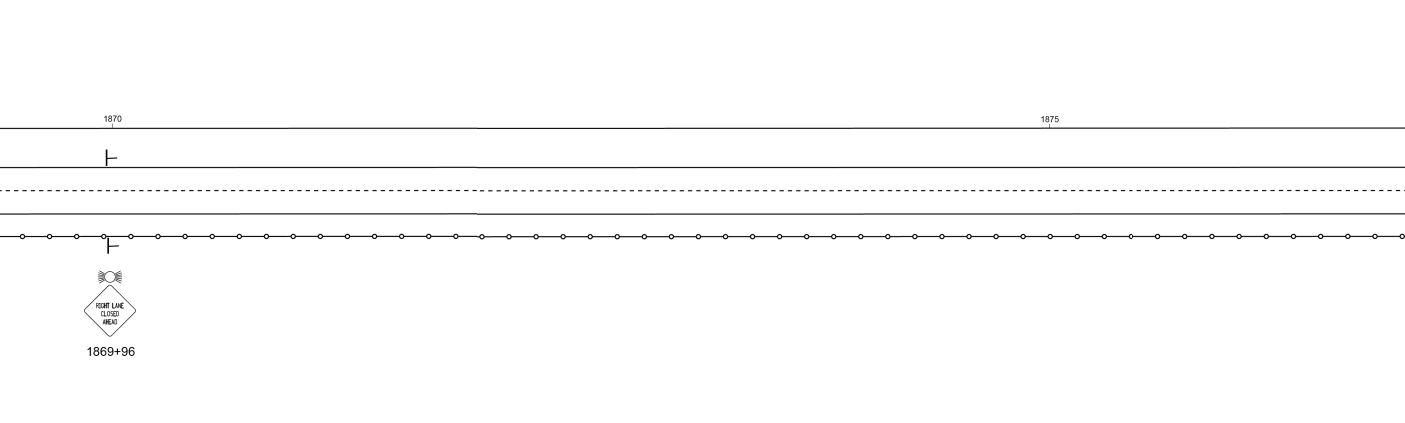
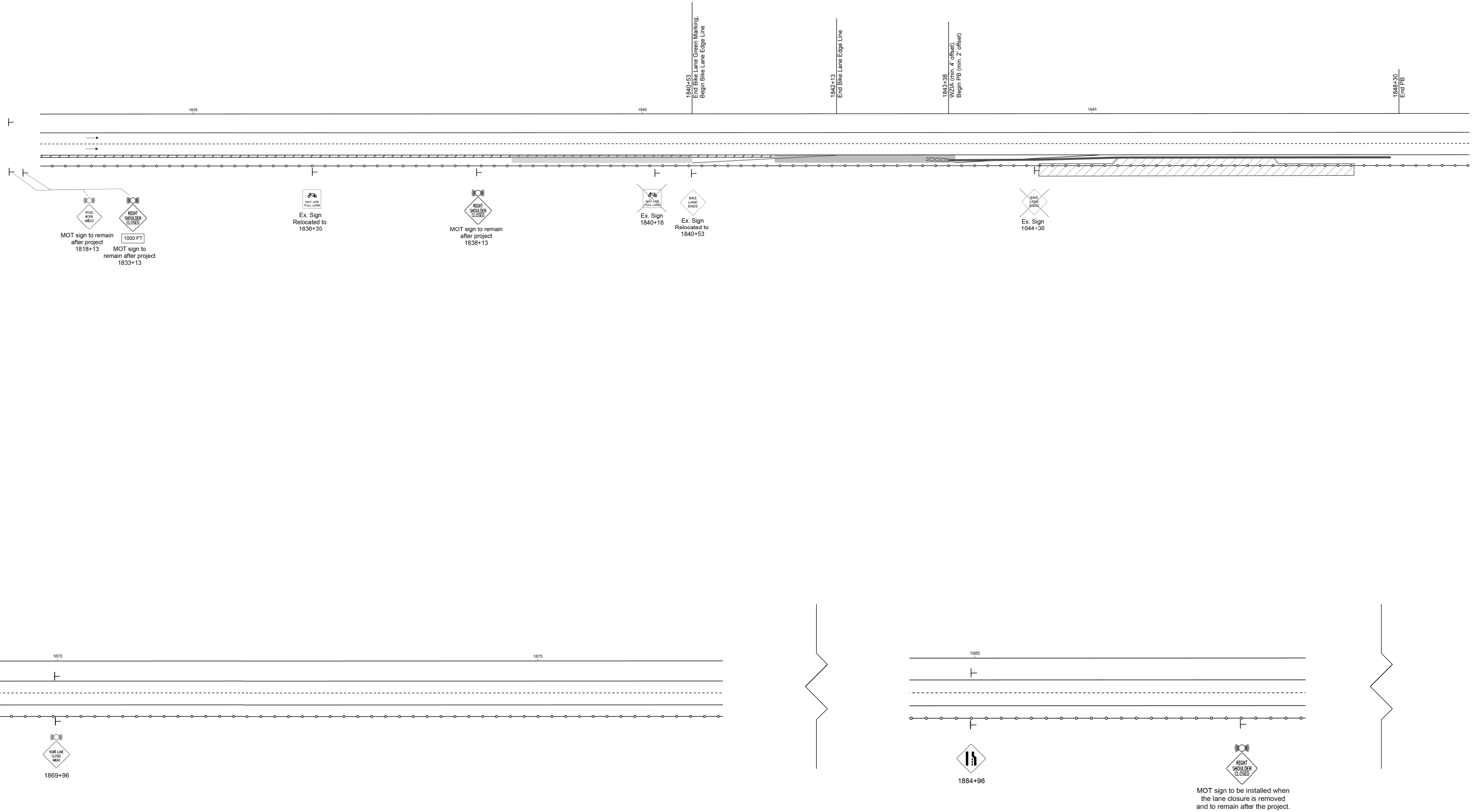


DESIGNER  
AWS

REVIEWER  
SK 01-07-22

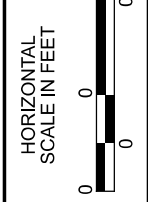
PROJECT ID  
99962

SHEET TOTAL  
P.4B | 16



MAINTENANCE OF TRAFFIC

DESIGN AGENCY	
DESIGNER	AWS
REVIEWER	SK 01-07-22
PROJECT ID	99962
SHEET	TOTAL
P.4C	16



MAINTENANCE OF TRAFFIC

DESIGN AGENCY

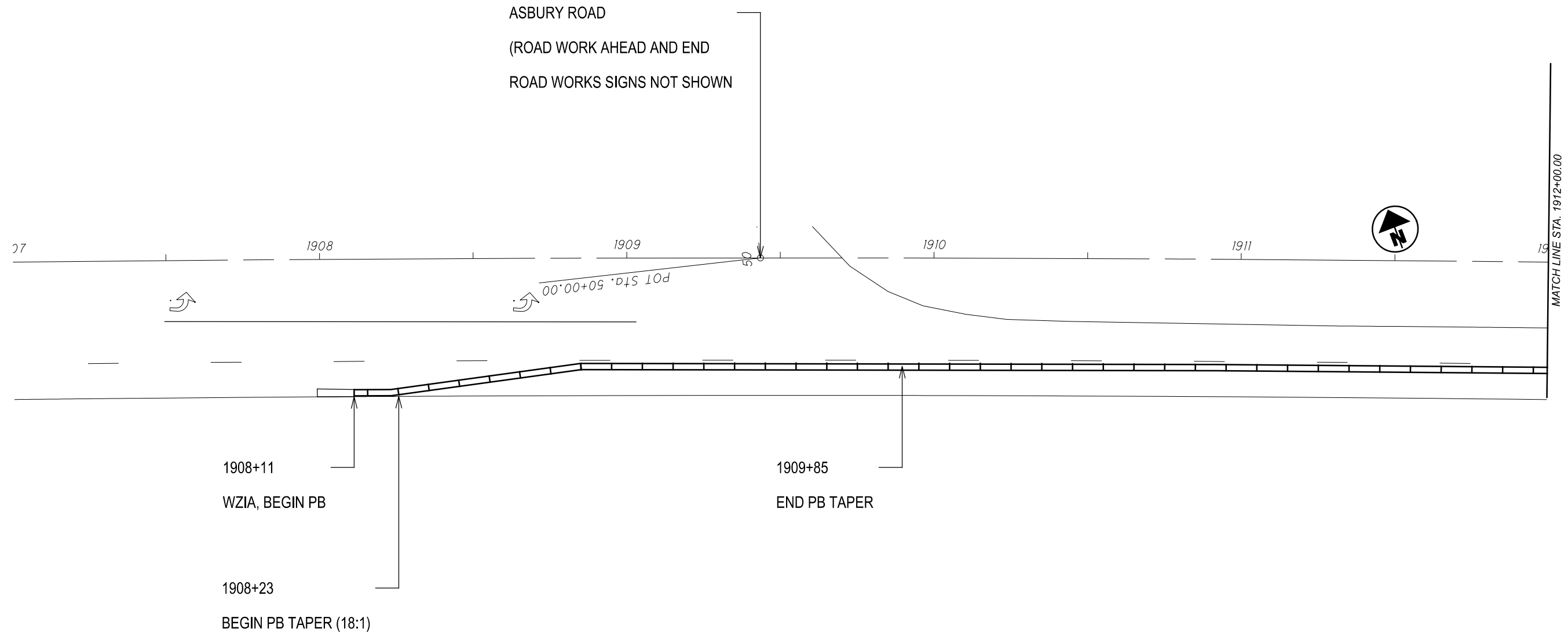


DESIGNER  
AWS

REVIEWER  
SK 01-07-22

PROJECT ID  
99962

SHEET	TOTAL
P.4D	16



MAINTENANCE OF TRAFFIC  
SCHEME

DESIGN AGENCY

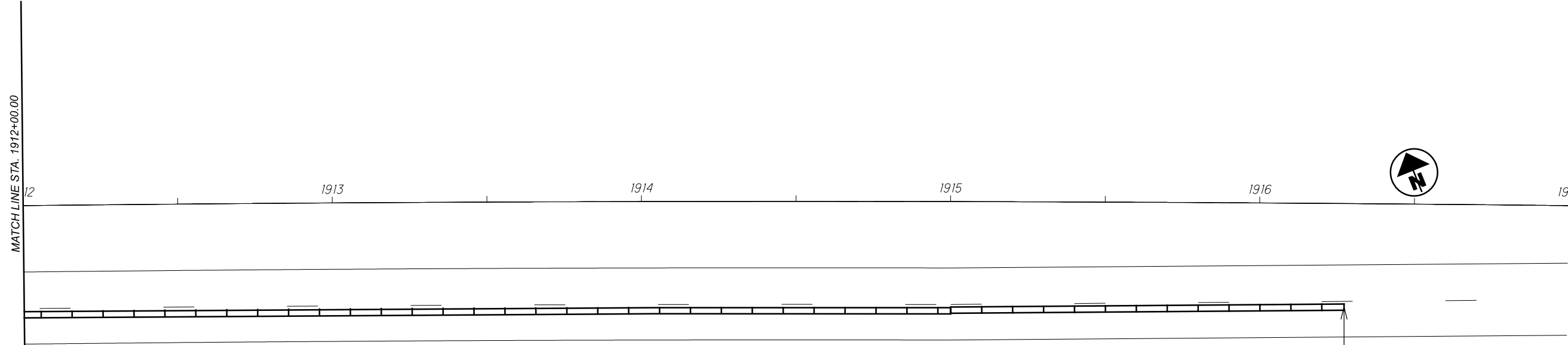


DESIGNER  
AWS

REVIEWER  
SK 01-07-22

PROJECT ID  
99962

SHEET	TOTAL
4E	16



MATCH LINE STA. 1912+00.00

1913

1914

1915

1916

1919

1916+27  
END PB

1917+31  
BEGIN WZEL TAPER

1917+81  
END WZEL

MAINTENANCE OF TRAFFIC  
SCHEME



DESIGN AGENCY



DESIGNER  
AWS

REVIEWER  
SK 01-07-22

PROJECT ID  
99962


SHEET	TOTAL
4F	16



SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	8	9	12						01/NHS/OT	EXT	TOTAL				
															<b>ROADWAY</b>	
										LS	201	11000	LS		CLEARING AND GRUBBING	
										396	202	23000	396	SY	PAVEMENT REMOVED	
						446				446	202	38000	446	FT	GUARDRAIL REMOVED	
						1,000				1,000	203	20001	1,000	CY	EMBANKMENT, AS PER PLAN	3
						396				396	204	10000	396	SY	SUBGRADE COMPACTION	
						1				1	204	45000	1	hour	PROOF ROLLING	
						446				446	606	15250	446	FT	GUARDRAIL, TYPE MGS QUARTER POST SPACING	
										LS	878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
															<b>EROSION CONTROL</b>	
						2				2	659	00100	2	EACH	SOIL ANALYSIS TEST	
						147				147	659	00300	147	CY	TOPSOIL	
						1,333				1,333	659	10000	1,333	SY	SEEDING AND MULCHING	
						67				67	659	14000	67	SY	REPAIR SEEDING AND MULCHING	
						67				67	659	15000	67	SY	INTER-SEEDING	
						0.18				0.18	659	20000	0.18	TON	COMMERCIAL FERTILIZER	
						0.28				0.28	659	31000	0.28	ACRE	LIME	
						1,200				1,200	659	35000	1,200	MGAL	WATER	
										10,000	832	30000	10,000	EACH	EROSION CONTROL	
															<b>PAVEMENT</b>	
						462				462	252	01500	462	FT	FULL DEPTH PAVEMENT SAWING	
						595				1,190	254	01000	1,190	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.75" DEEP	
						100				100	301	46000	100	CY	ASPHALT CONCRETE BASE, PG64-22	
						66				66	304	20000	66	CY	AGGREGATE BASE	
						24				24	407	20000	24	GAL	NON-TRACKING TACK COAT	
						62				92	441	50000	92	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
															<b>TRAFFIC CONTROL</b>	
						0.09				0.09	644	00100	0.09	MILE	EDGE LINE, 4"	
						0.09				0.09	644	00200	0.09	MILE	LANE LINE, 4"	
															<b>RETAINING WALLS</b>	
										LS	503	21300	LS		UNCLASSIFIED EXCAVATION	
						352			3,625	3,625	507	00400	3,625	FT	STEEL PILES, MISC.: W24X192	9
										352	518	21101	352	CY	POROUS BACKFILL, AS PER PLAN	9
										310	518	40000	310	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
								2,800		2,800	524	94703	2,800	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	9
										700	524	94705	700	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN	9
										440	524	95000	440	FT	DRILLED SHAFTS, MISC.: PLUG PILE 24" DIA. UNREINFORCED	9
										3,168	SPECIAL	53051010	3,168	SF	RETAINING WALL, PRECAST CONCRETE LAGGING PRECAST CONCRETE PANEL	9
										LS	SPECIAL	69098400	LS		SPECIAL - CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION	3
															<b>MAINTENANCE OF TRAFFIC</b>	
															HAM-52-36.85	
										1	606	60002	1	EACH	IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL)	
										492	622	41100	492	FT	PORTABLE BARRIER, UNANCHORED	
										10	614	13310	10	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
										10	614	13350	10	EACH	OBJECT MARKER, ONE WAY	
										0.3	614	22326	0.3	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 873	
										36	622	41100	36	FT	PORTABLE BARRIER, UNANCHORED	
															HAM-52-37.76	
										1	614	12380	1	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
										17	614	13310	17	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
										17	614	13350	17	EACH	OBJECT MARKER, ONE WAY	
										0.43	614	22350	0.43	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
										0.14	614	24612	0.14	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT	
										816	622	41100	816	FT	PORTABLE BARRIER, UNANCHORED	
										2	896	00020	2	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
															<b>INCIDENTALS</b>	
										LS	614	11000	LS		MAINTAINING TRAFFIC	
										LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
										LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER  
AWS

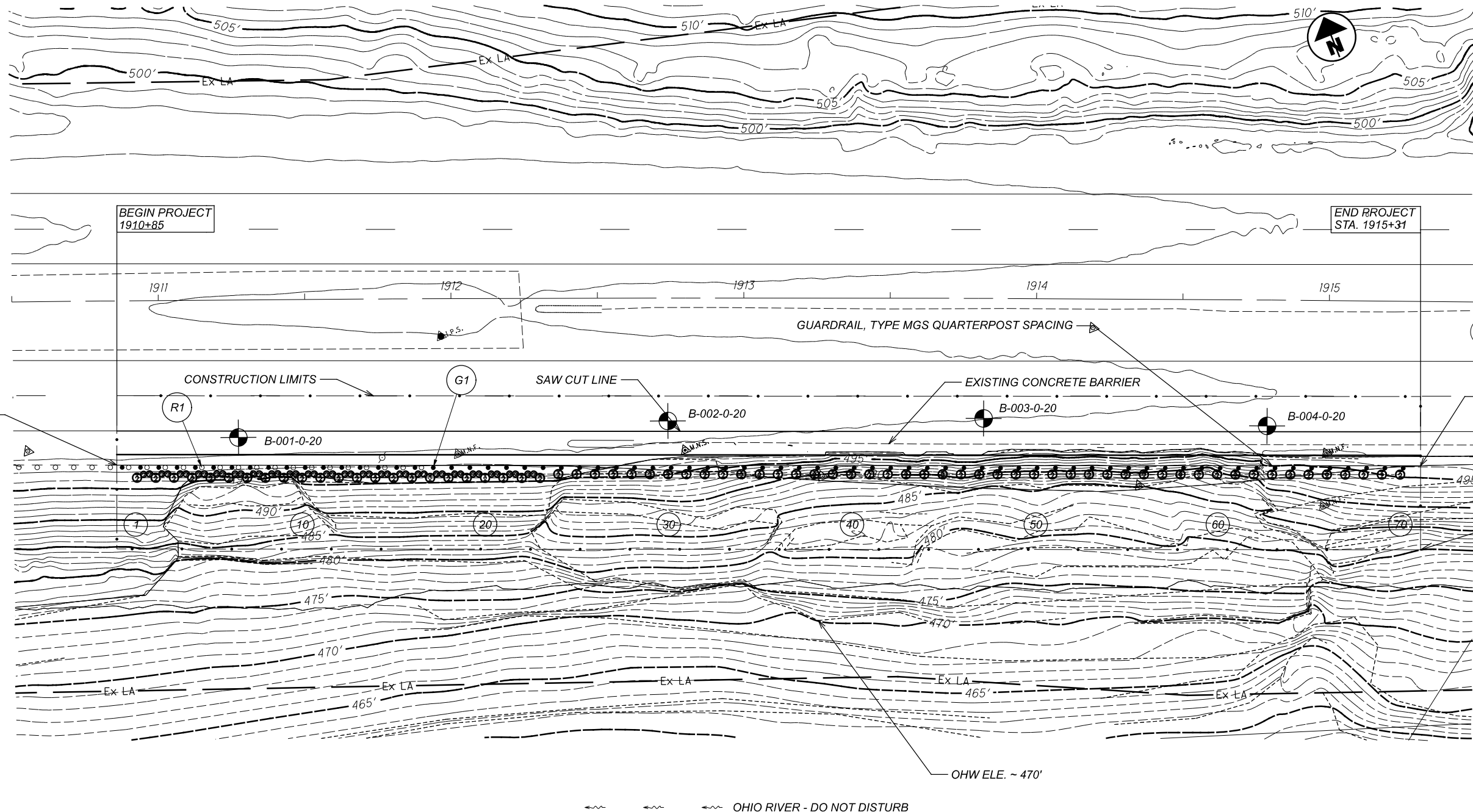
REVIEWER  
JAS 11-24-21

PROJECT ID  
99962

SHEET TOTAL  
P.5 | 16



MONUMENT INFORMATION				
MONUMENT	MONUMENT COORDINATES	NORTHING	EASTING	ELEVATION
VA1	U.S. SURVEY FT (GRID)	384392.7717	1441935.1115	498.455
VA2	U.S. SURVEY FT (GRID)	384297.0135	1442288.5990	497.556
VA3	U.S. SURVEY FT (GRID)	384155.9675	1442638.8539	496.750
VA4	U.S. SURVEY FT (GRID)	383995.6429	1442929.6143	495.809
VA5	U.S. SURVEY FT (GRID)	384309.8294	1442143.7279	497.757
VA6	U.S. SURVEY FT (GRID)	384284.2066	1442183.9148	489.123
VA7	U.S. SURVEY FT (GRID)	384241.2349	1442283.2713	485.134



TIE TO EX. GUARDAIL  
STA. 1910+85, 56.08' RT

7 MILE CREEK - DND

BEGIN PROJECT  
1910+85

END PROJECT  
STA. 1915+31

GUARDRAIL, TYPE MGS QUARTERPOST SPACING

CONSTRUCTION LIMITS

SAW CUT LINE

EXISTING CONCRETE BARRIER

TIE TO EX. GUARDAIL  
STA. 1915+31, 56.17' RT

CONSTRUCTION LIMITS

OHV ELE. ~ 470'

OHIO RIVER - DO NOT DISTURB

# STRUCTURAL SOLDIER PILE NUMBER

NOTES

1. FOR QUANTITIES SEE SHEET 8.
2. FOR RETAINING WALL DETAILS SEE SHEETS 9-12.
3. FOR RETAINING WALL PROFILE SEE SHEET 7.
4. NO WORK IS TO BE PERFORMED BELOW THE THE OHW ELEVATION.

PLAN  
STA. 1910+85 TO STA. 1915+31

DESIGN AGENCY



DESIGNER  
AWS

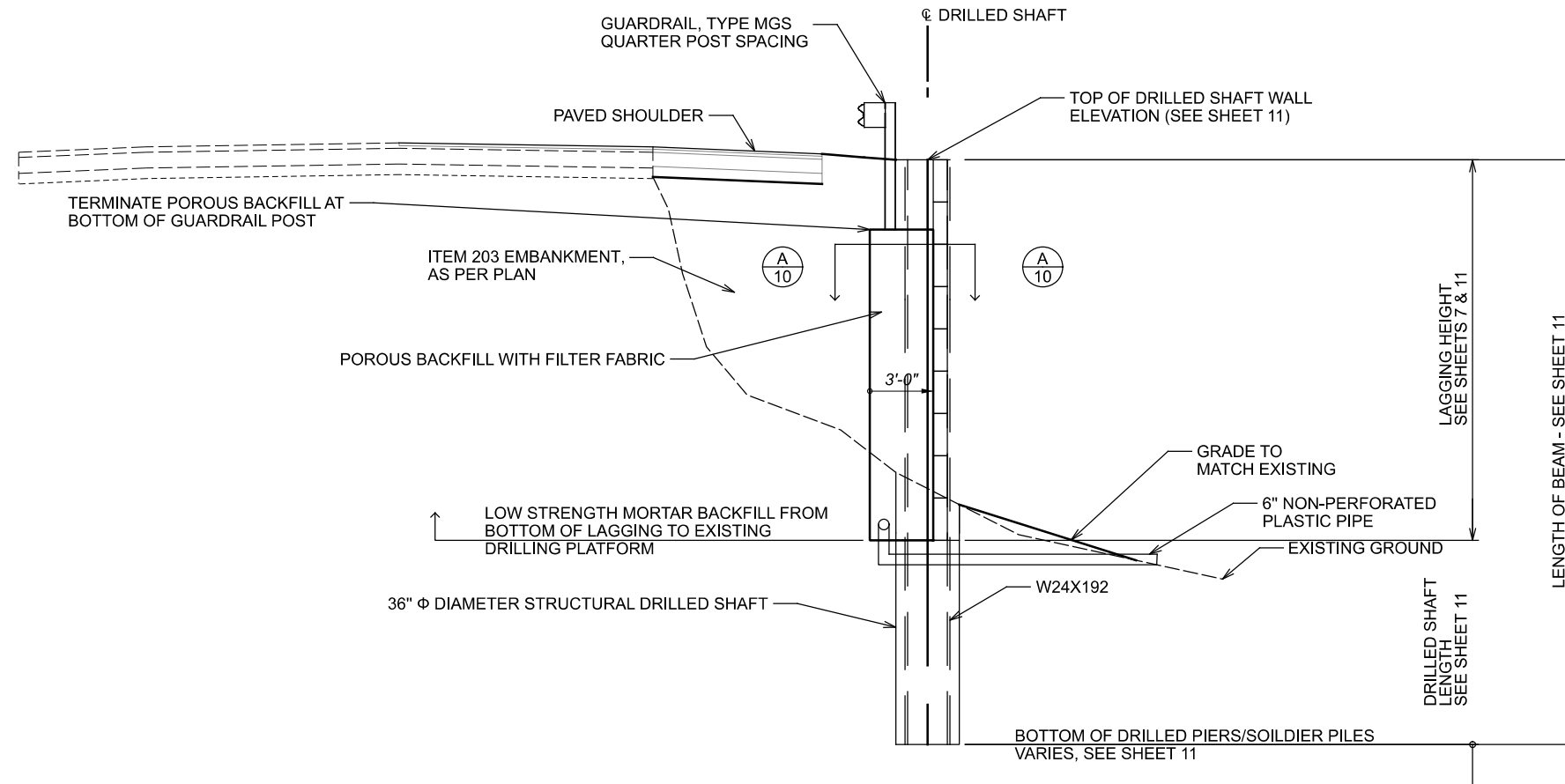
REVIEWER  
JAS

PROJECT ID  
11-24-21

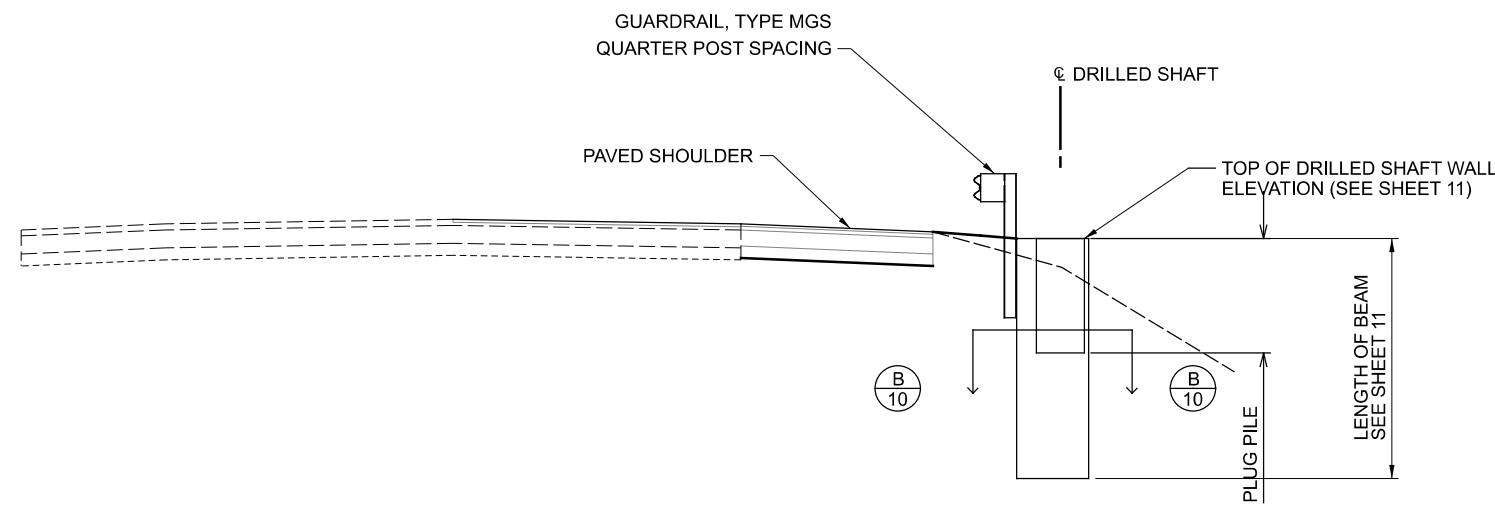
99962

SHEET TOTAL

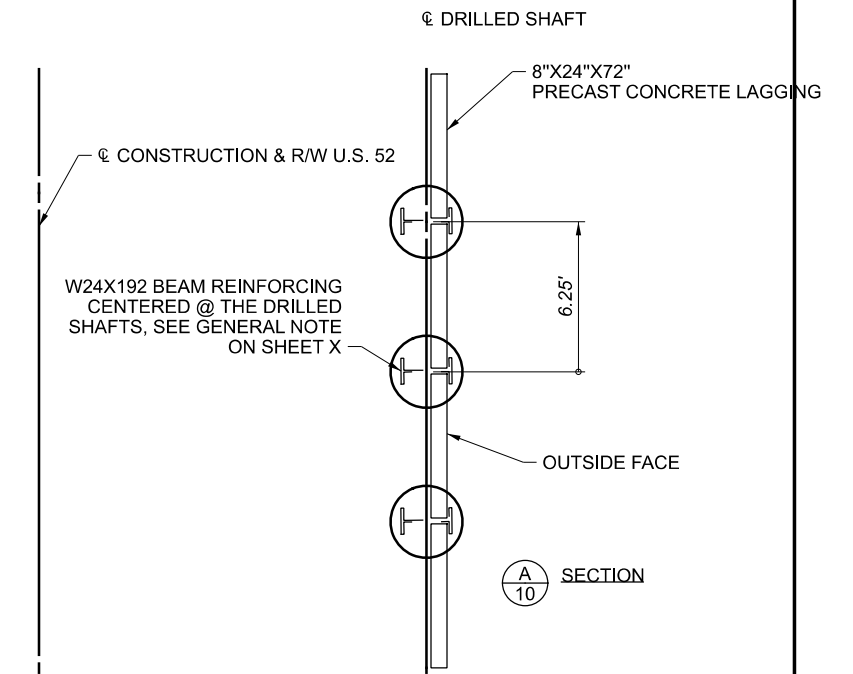
P.6 16



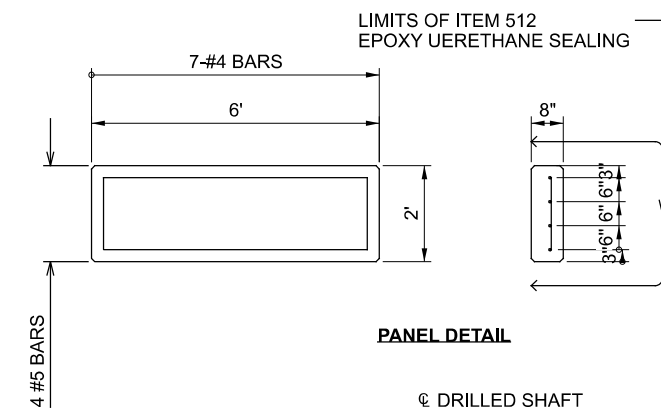
**SOLDIER PILE WALL SECTION DETAIL**  
NOT TO SCALE



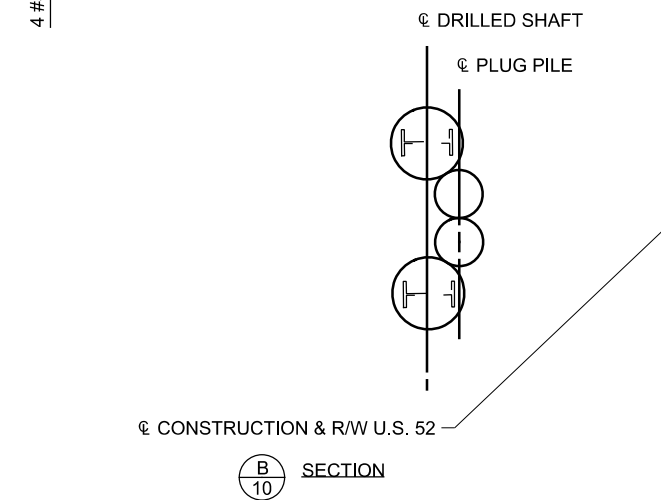
**PLUG PILE WALL SECTION DETAIL**  
NOT TO SCALE



**SECTION A**  
A/10



**PANEL DETAIL**



**SECTION B**  
B/10



SHAFT NO.	STA.	OFFSET (RIGHT)	TOP ELEVATION (FT.)	BEAM	BEAM LENGTH (FT.)	BOTTOM SHAFT ELEVATION (FT)	BOTTOM OF LAGGING (FT)	MIN. ROCK EMBED (FT.)	DIAMETER (IN.)
DS1	1910+92.23	60.45	498.75	W24 X 192	49	449.75	-	10	36
DS2	1910+98.61	60.51	498.74	W24 X 192	49	449.74	-	10	36
DS3	1911+04.87	60.57	498.73	W24 X 192	49	449.73	-	10	36
DS4	1911+11.14	60.62	498.71	W24 X 192	49	449.71	-	10	36
DS5	1911+17.41	60.68	498.70	W24 X 192	49	449.70	-	10	36
DS6	1911+23.67	60.73	498.69	W24 X 192	49	449.69	-	10	36
DS7	1911+29.94	60.78	498.68	W24 X 192	49	449.68	-	10	36
DS8	1911+36.20	60.83	498.67	W24 X 192	49	449.67	-	10	36
DS9	1911+42.47	60.88	498.66	W24 X 192	49	449.66	-	10	36
DS10	1911+48.74	60.92	498.65	W24 X 192	49	449.65	-	10	36
DS11	1911+55.00	60.97	498.64	W24 X 192	50	448.64	-	10	36
DS12	1911+61.27	61.01	498.63	W24 X 192	50	448.63	-	10	36
DS13	1911+67.54	61.05	498.62	W24 X 192	50	448.62	-	10	36
DS14	1911+73.80	61.09	498.61	W24 X 192	50	448.61	-	10	36
DS15	1911+80.07	61.13	498.60	W24 X 192	50	448.60	-	10	36
DS16	1911+86.34	61.16	498.58	W24 X 192	50	448.58	-	10	36
DS17	1911+92.56	61.22	498.57	W24 X 192	50	448.57	-	10	36
DS18	1911+98.87	61.23	498.56	W24 X 192	50	448.56	-	10	36
DS19	1912+05.14	61.26	498.55	W24 X 192	50	448.55	-	10	36
DS20	1912+11.44	61.29	498.54	W24 X 192	50	448.54	-	10	36
DS21	1912+17.67	61.31	498.53	W24 X 192	51	447.53	-	10	36
DS22	1912+23.94	61.34	498.52	W24 X 192	51	447.52	-	10	36
DS23	1912+30.20	61.36	498.51	W24 X 192	51	447.51	489.60	10	36
DS24	1912+36.48	60.08	498.50	W24 X 192	51	447.50	489.60	10	36
DS25	1912+42.74	60.10	498.49	W24 X 192	51	447.49	489.60	10	36
DS26	1912+49.01	60.12	498.48	W24 X 192	51	447.48	489.60	10	36
DS27	1912+55.27	60.13	498.47	W24 X 192	51	447.47	489.60	10	36
DS28	1912+61.54	60.15	498.45	W24 X 192	51	447.45	489.60	10	36
DS29	1912+67.81	60.16	498.44	W24 X 192	52	446.44	489.60	10	36
DS30	1912+74.07	60.17	498.43	W24 X 192	52	446.43	489.60	10	36
DS31	1912+80.34	60.18	498.42	W24 X 192	52	446.42	489.60	10	36
DS32	1912+86.61	60.19	498.41	W24 X 192	52	446.41	487.60	10	36
DS33	1912+92.87	60.20	498.40	W24 X 192	52	446.40	487.60	10	36
DS34	1912+99.14	60.20	498.39	W24 X 192	52	446.39	487.60	10	36
DS35	1913+05.41	60.21	498.38	W24 X 192	52	446.38	487.60	10	36
DS36	1913+11.67	60.21	498.37	W24 X 192	52	446.37	485.60	10	36
DS37	1913+17.94	60.21	498.36	W24 X 192	52	446.36	485.60	10	36
DS38	1913+24.21	60.21	498.35	W24 X 192	52	446.35	485.60	10	36
DS39	1913+30.47	60.20	498.34	W24 X 192	52	446.34	485.60	10	36
DS40	1913+36.74	60.20	498.32	W24 X 192	52	446.32	485.60	10	36
DS41	1913+43	60.19	498.31	W24 X 192	52	446.31	483.60	10	36
DS42	1913+49.27	60.18	498.30	W24 X 192	52	446.30	483.60	10	36
DS43	1913+55.54	60.17	498.29	W24 X 192	52	446.29	483.60	10	36
DS44	1913+61.80	60.16	498.28	W24 X 192	52	446.28	483.60	10	36
DS45	1913+68.07	60.14	498.27	W24 X 192	52	446.27	483.60	10	36
DS46	1913+74.34	60.13	498.26	W24 X 192	52	446.26	483.60	10	36
DS47	1913+80.60	60.11	498.25	W24 X 192	52	446.25	483.60	10	36
DS48	1913+86.87	60.09	498.24	W24 X 192	52	446.24	483.60	10	36
DS49	1913+93.14	60.07	498.23	W24 X 192	53	445.23	483.60	10	36
DS50	1913+99.40	60.05	498.22	W24 X 192	53	445.22	483.60	10	36
DS51	1914+05.67	60.02	498.21	W24 X 192	53	445.21	483.60	10	36
DS52	1914+11.94	60.00	498.19	W24 X 192	53	445.19	483.60	10	36
DS53	1914+18.20	59.97	498.18	W24 X 192	53	445.18	483.60	10	36
DS54	1914+24.47	59.94	498.17	W24 X 192	53	445.17	483.60	10	36
DS55	1914+30.73	59.91	498.16	W24 X 192	53	445.16	483.60	10	36
DS56	1914+37	59.88	498.15	W24 X 192	53	445.15	483.60	10	36
DS57	1914+43.27	59.84	498.14	W24 X 192	54	444.14	483.60	10	36
DS58	1914+49.53	59.80	498.13	W24 X 192	54	444.13	483.60	10	36
DS59	1914+55.83	59.77	498.12	W24 X 192	54	444.12	483.60	10	36
DS60	1914+62.07	59.73	498.11	W24 X 192	54	444.11	483.60	10	36
DS61	1914+68.33	59.69	498.10	W24 X 192	54	444.10	485.60	10	36
DS62	1914+74.60	59.64	498.09	W24 X 192	54	444.09	485.60	10	36
DS63	1914+80.86	59.60	498.08	W24 X 192	54	444.08	487.60	10	36
DS64	1914+87.13	59.55	498.06	W24 X 192	55	443.06	487.60	10	36
DS65	1914+93.40	59.50	498.05	W24 X 192	55	443.05	487.60	10	36
DS66	1914+99.66	59.45	498.04	W24 X 192	55	443.04	487.60	10	36
DS67	1915+05.93	59.40	498.03	W24 X 192	55	443.03	487.60	10	36
DS68	1915+12.19	59.35	498.02	W24 X 192	55	443.02	487.60	10	36
DS69	1915+18.46	59.29	498.01	W24 X 192	55	443.01	487.60	10	36
DS70	1915+24.73	59.24	498.00	W24 X 192	55	443.00	487.60	10	36

SHAFT NO.	STA.	OFFSET (RIGHT)	TOP ELEVATION (FT.)	LENGTH (FT.)	BOTTOM ELEVATION (FT)	DIAMETER (IN.)
PP1	1910+94.48	59.32	498.75	10.00	488.75	24
PP2	1910+96.49	59.18	498.75	10.00	488.75	24
PP3	1911+00.75	59.22	498.74	10.00	488.75	24
PP4	1911+02.75	59.24	498.74	10.00	488.75	24
PP5	1911+07.02	59.28	498.73	10.00	488.75	24
PP6	1911+09.02	59.30	498.73	10.00	488.75	24
PP7	1911+13.28	59.34	498.72	10.00	488.75	24
PP8	1911+15.29	59.35	498.72	10.00	488.75	24
PP9	1911+19.55	59.39	498.71	10.00	488.75	24
PP10	1911+21.55	59.41	498.71	10.00	488.75	24
PP11	1911+25.81	59.44	498.7	10.00	488.75	24
PP12	1911+27.82	59.46	498.7	10.00	488.75	24
PP13	1911+32.08	59.49	498.69	10.00	488.75	24
PP14	1911+34.08	59.51	498.69	10.00	488.75	24
PP15	1911+38.35	59.54	498.68	10.00	488.75	24
PP16	1911+40.40	59.48	498.68	10.00	488.75	24
PP17	1911+44.61	59.59	498.67	10.00	488.75	24
PP18	1911+46.62	59.60	498.67	10.00	488.75	24
PP19	1911+50.88	59.63	498.66	10.00	488.75	24
PP20	1911+52.88	59.65	498.66	10.00	488.75	24
PP21	1911+57.14	59.68	498.65	10.00	488.75	24
PP22	1911+59.15	59.69	498.65	10.00	488.75	24
PP23	1911+63.41	59.72	498.64	10.00	488.75	24
PP24	1911+65.42	59.73	498.64	10.00	488.75	24
PP25	1911+69.68	59.76	498.63	10.00	488.75	24
PP26	1911+71.68	59.77	498.63	10.00	488.75	24
PP27	1911+75.94	59.80	498.62	10.00	488.75	24
PP28	1911+77.95	59.81	498.62	10.00	488.75	24
PP29	1911+82.21	59.83	498.61	10.00	488.75	24
PP30	1911+84.21	59.84	498.61	10.00	488.75	24
PP31	1911+88.47	59.87	498.6	10.00	488.75	24
PP32	1911+90.48	59.88	498.6	10.00	488.75	24
PP33	1911+94.74	59.90	498.59	10.00	488.75	24
PP34	1911+96.75	59.91	498.59	10.00	488.75	24
PP35	1912+01.01	59.93	498.58	10.00	488.75	24
PP36	1912+03.01	59.94	498.58	10.00	488.75	24
PP37	1912+07.27	59.96	498.57	10.00	488.75	24
PP38	1912+09.28	59.97	498.57	10.00	488.75	24
PP39	1912.13.54	59.99	498.56	10.00	488.75	24
PP40	1912+15.55	60.00	498.56	10.00	488.75	24
PP41	1912+19.81	60.02	498.55	10.00	488.75	24
PP42	1912+21.81	60.03	498.55	10.00	488.75	24
PP43	1912+26.07	60.04	498.54	10.00	488.75	24
PP44	1912+28.08	60.05	498.54	10.00	488.75	24

ITEM	DESCRIPTION	UNIT	QUANTITY
507	STEEL PILES, MISC.: W24X192	FT	3625
524	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN	FT	2800
524	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK, AS PER PLAN	FT	700
524	DRILLED SHAFTS, MISC.: PLUG PILE 24" DIA. UNREINFORCED	FT	440
530	RETAINING WALL, PRECAST CONCRETE LAGGING PANEL	SF	3168

PLUG PILE SCHEDULE

DESIGN AGENCY



DESIGNER  
AWS  
 REVIEWER  
JAS 11-24-21  
 PROJECT ID  
99962  
 SHEET TOTAL  
P.12 | 16