

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

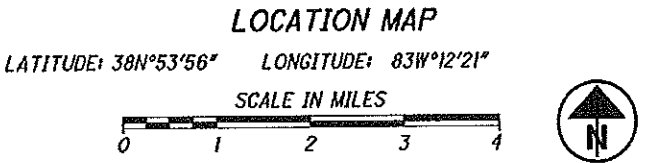
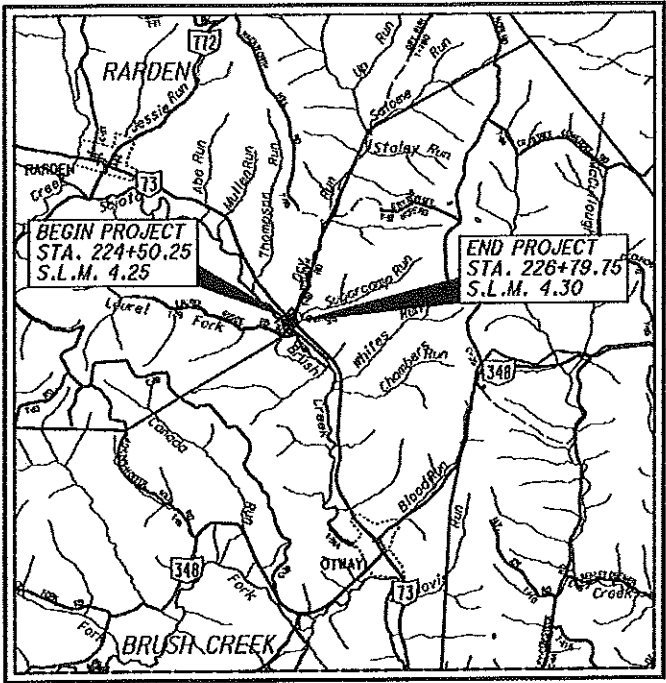
SCI-73-4.25

BRUSH CREEK AND RARDEN TOWNSHIPS
SCIOTO COUNTY

PROJECT DESCRIPTION
IMPROVEMENT OF 0.05 MILES OF S.R. 73 IN
SCIOTO COUNTY BY REPLACEMENT OF THE DEFICIENT
BRIDGE NO. SCI-73-0428 AND THE NECESSARY
ROADWAY APPROACH WORK ALONG S.R. 73.

EARTH DISTURBED AREAS
PROJECT EARTH DISTURBED AREA: 0.95 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.12 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 4.90 ACRES

2016 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.



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

DESIGN DESIGNATION

CURRENT ADT (2019)	1,900
DESIGN YEAR ADT (2039)	2,400
DESIGN HOURLY VOLUME (2039)	240
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	22%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS
NONE REQUIRED

UNDERGROUND UTILITIES

Contact 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:
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DISTRICT 9 ENGINEERING

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ENGINEERS SEAL:

STRUCTURES OVER 20'

SHANE THOMAS
KALINOSKI
73569

SIGNED: *Shane Kalinoski*
DATE: 3-4-19

ENGINEERS SEAL:

MATTHEW C
MCCELLAN
E-77959

SIGNED: *Matthew C McCellan*
DATE: 3/5/19

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	7/18/14	AS-1-15	7/17/15	MT-96.11	1/18/19	800	4/19/19
BP-4.1	7/19/13	AS-2-15	1/18/19	MT-96.20	7/15/16	832	10/19/18
RM-1.1	7/18/14	CPA-1-08	7/18/08	MT-97.10	7/18/14	902	12/31/12
RM-4.2	4/18/14	CPP-1-08	7/21/17	MT-101.60	1/20/17		DATED 2/14/19
		CS-1-08	1/19/18	MT-101.70	7/20/18		
HW-2.1	7/20/18	DS-1-92	7/18/03	MT-101.90	7/21/17		
HW-2.2	7/20/18	PCB-91	1/18/13	MT-105.10	7/19/13		
DM-4.3	1/15/16	TST-1-99	7/20/18				
DM-4.4	1/15/16			TC-41.20	10/18/13		
				TC-41.30	10/18/13		
				TC-42.20	10/18/13		
MGS-1.1	1/19/18			TC-52.10	10/18/13		
MGS-2.1	1/19/18			TC-61.30	1/20/17		
MGS-3.1	1/19/18			TC-65.10	1/17/14		
MGS-4.2	7/19/13			TC-65.11	7/21/17		
MGS-5.3	7/15/16						

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

APPROVED: *Matthew C McCellan*
DATE: 03-05-2019 DISTRICT DEPUTY DIRECTOR

APPROVED: *John Mackenbach*
DATE: 3/14/19 DIRECTOR, DEPARTMENT OF
TRANSPORTATION

SCI - SR 73-4.25
190349 PID - 20742
Dist 9 6/6/2019

Contract Proposal Available @
www.contracts.dot.state.oh.us/home

Conformed Set

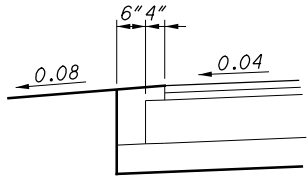
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SCHEMATIC PLAN

SCI-73-4.25

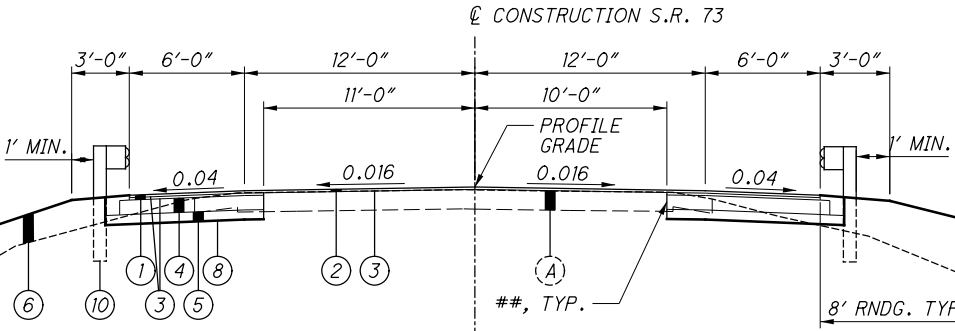
- SEE CROSS SECTIONS
- FULL DEPTH PAVEMENT SAWING, SEE C&MS 203.04E



EDGE DETAIL

APPLIES TO ALL EDGES UNLESS OTHERWISE NOTED

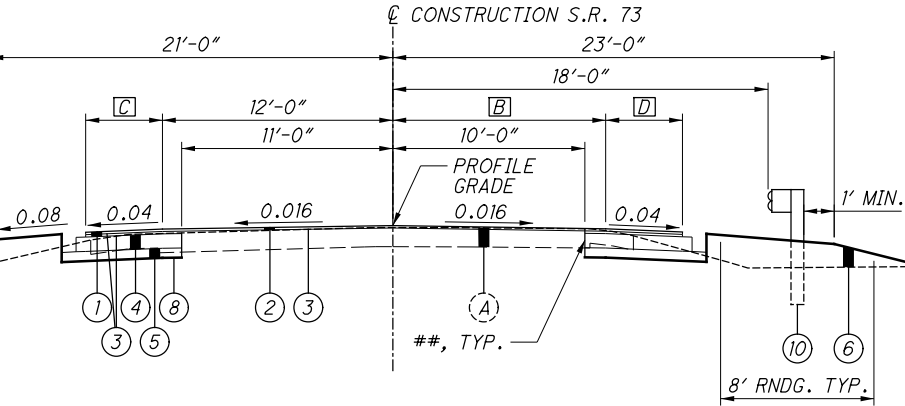
NOTE: LEFT SHOULDER BEGINS AFTER
INTERSECTION WITH DRY RUN ROAD



PROPOSED TYPICAL SECTION

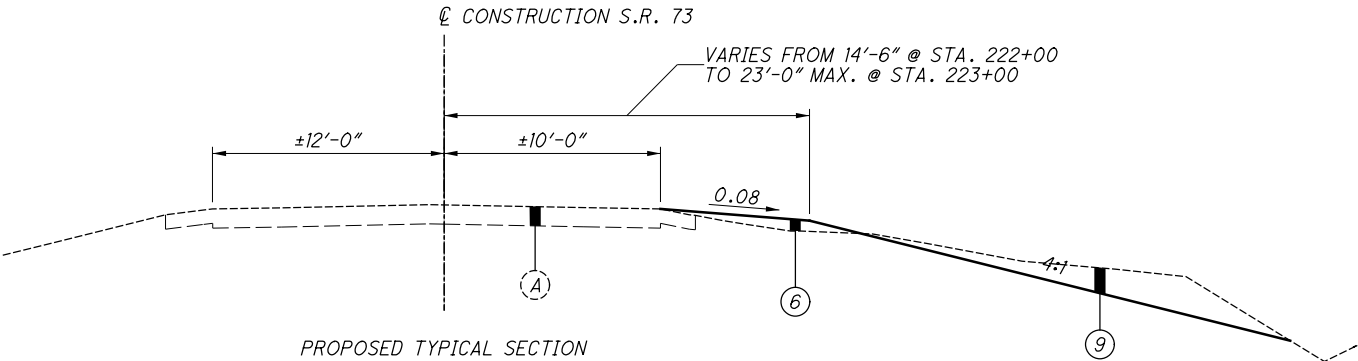
STA. 224+00 TO STA. 224+50.25 = 50.25 FT.

- VARIES FROM 10'-2" @ STA. 223+00
TO 12'-0" @ 224+00
- VARIES FROM 4'-0" @ STA. 223+50
TO 6'-0" @ 224+00
- VARIES FROM 2'-0" @ STA. 223+00
TO 6'-0" @ 224+00



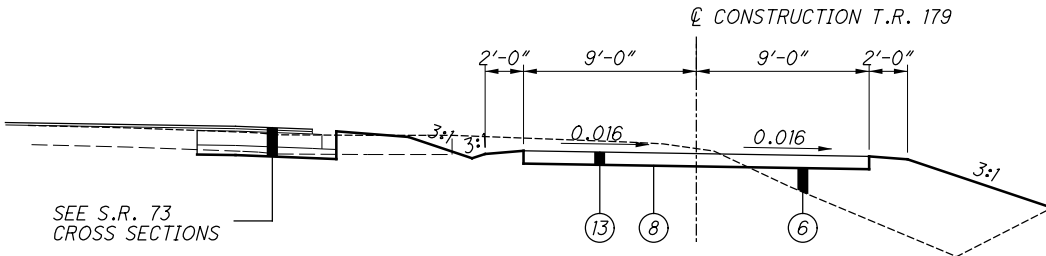
PROPOSED TYPICAL SECTION

STA. 223+00 TO STA. 224+00 = 100.0 FT.



PROPOSED TYPICAL SECTION

STA. 222+00 TO STA. 223+00 = 100.0 FT.



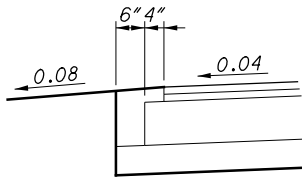
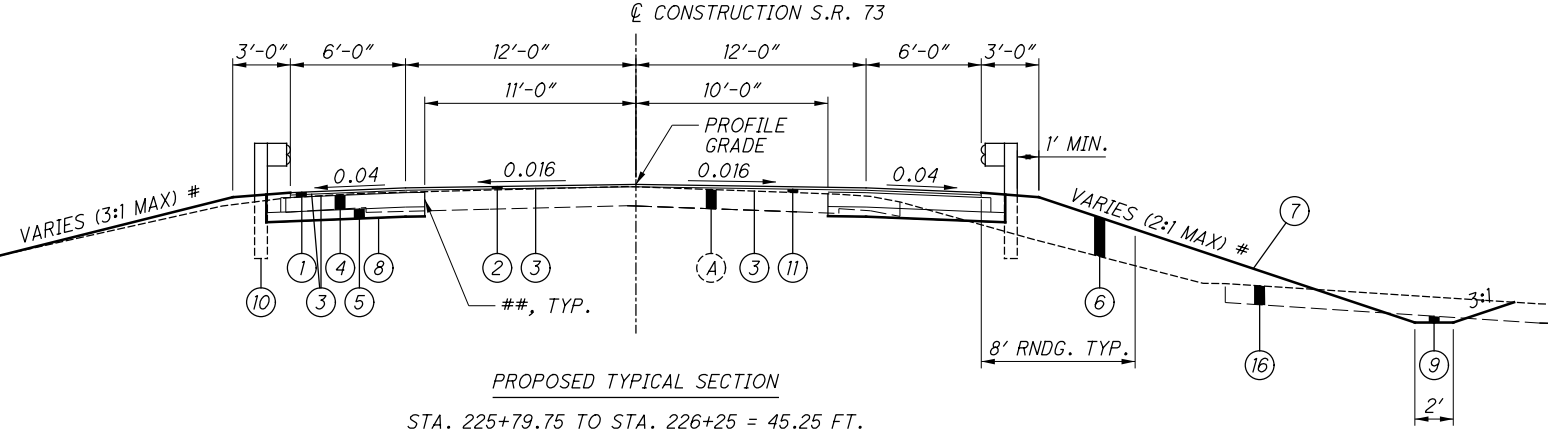
PROPOSED TYPICAL SECTION

STA. 20+60.00 TO STA. 22+29.53 = 169.53 FT.

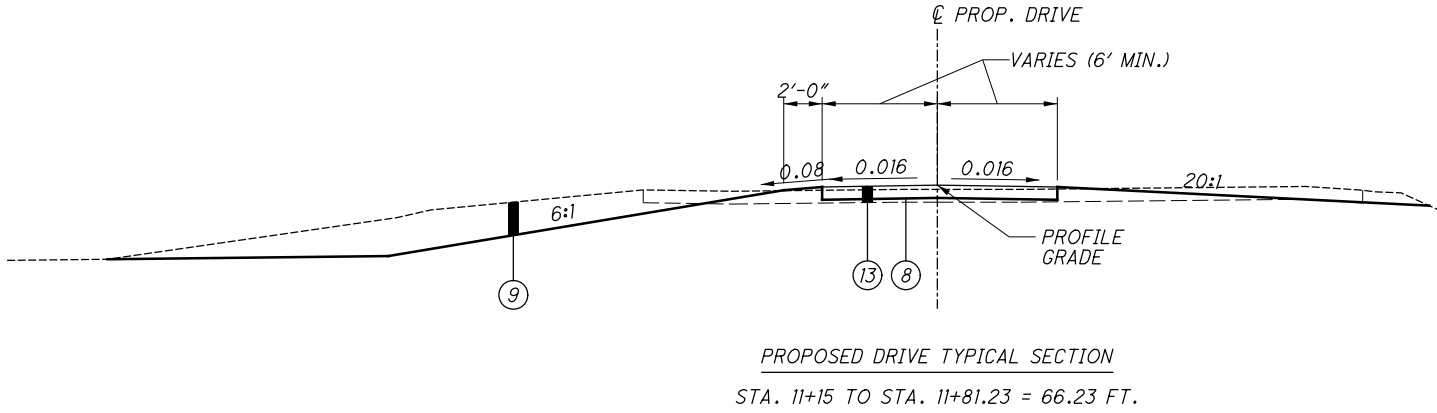
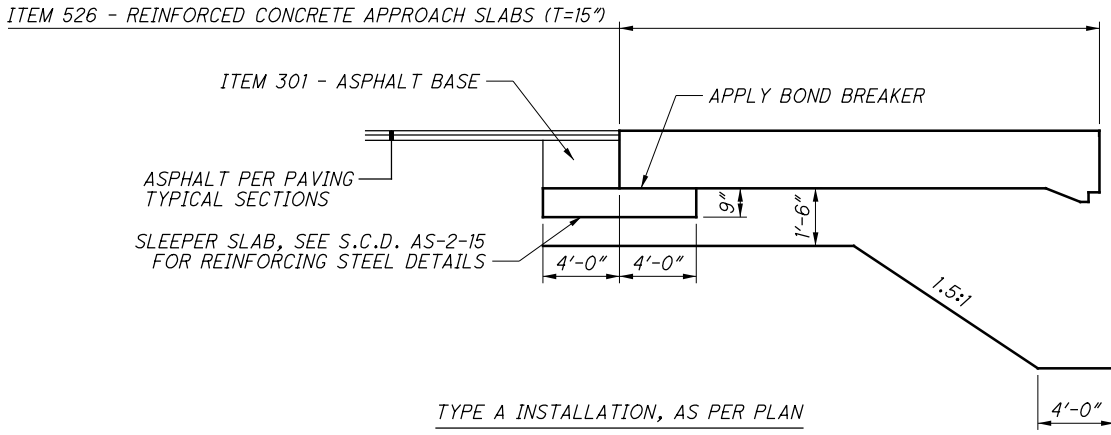
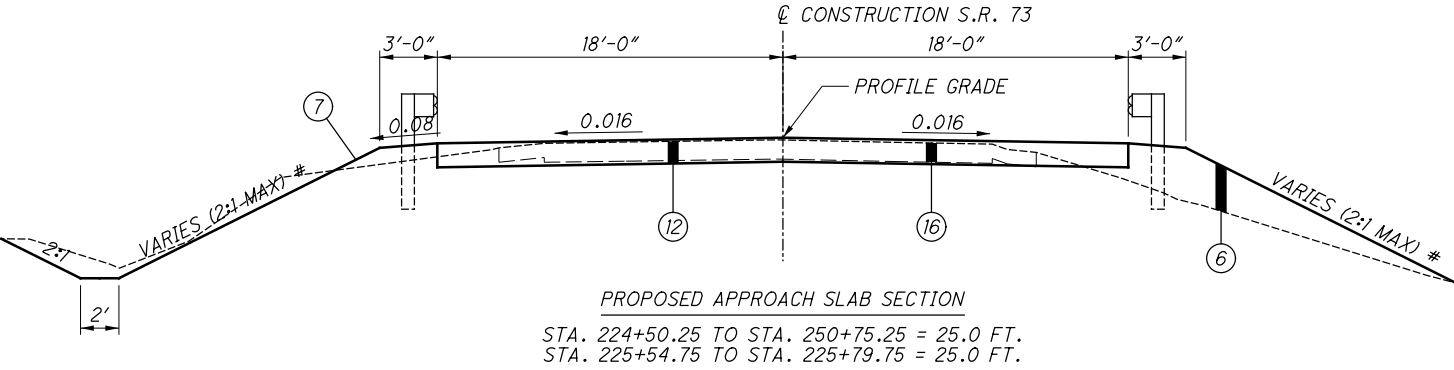
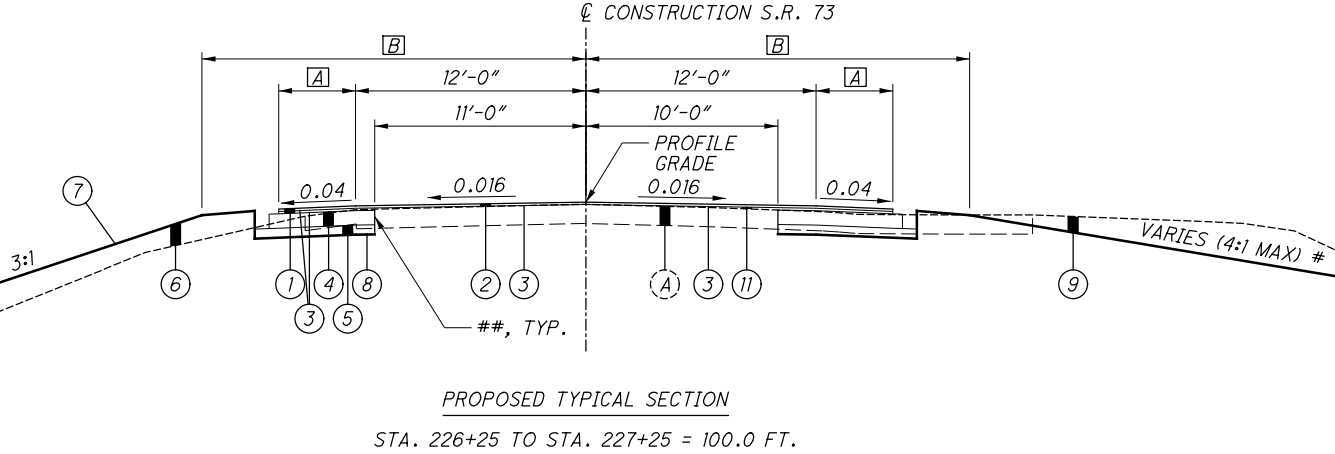
- ① ITEM 441 - 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448)
② ITEM 441 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448)
③ ITEM 407 - TACK COAT @ 0.075 GAL/SQ YD
④ ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
⑤ ITEM 304 - 6" AGGREGATE BASE
⑥ ITEM 203 - EMBANKMENT
- ⑦ ITEM 659 - SEEDING AND MULCHING
⑧ ITEM 204 - SUBGRADE COMPACTION
⑨ ITEM 203 - EXCAVATION
⑩ ITEM 606 - GUARDRAIL, TYPE MGS
⑪ ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448) (WEDGE COURSE)
⑫ ITEM 526 - REINFORCED CONCRETE APPROACH SLAB
- ⑬ ITEM 304 - 8" AGGREGATE BASE
⑭ ITEM 659 - TOPSOIL
⑮ ITEM 254 - PAVEMENT PLANING
⑯ ITEM 202 - PAVEMENT REMOVED
- Ⓐ EX. ASPHALT AND SUBBASE (±10" THICK)

- SEE CROSS SECTIONS
- FULL DEPTH PAVEMENT SAWING, SEE C&MS 203.04E

- [A] VARIES FROM 6'-0" @ STA. 226+25
TO 2'-0" @ 227+25
[C] VARIES FROM 21'-0" @ STA. 226+50
TO 18'-0" @ 227+25



APPLIES TO ALL EDGES UNLESS OTHERWISE NOTED



NOTE: FOR LEGEND SEE SHEET 3.

TYPICAL SECTIONS

SCI-73-4.25

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SEEDING AND MULCHING

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

659, SEEDING AND MULCHING 1,545 SQ. YD.

659, REPAIR SEEDING AND MULCHING 77 SQ. YD

659, COMMERCIAL FERTILIZER 0.21 TON

659, LIME 0.32 ACRES

659, WATER 8 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.

ROUNDING

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

UTILITIES

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

AEP (DISTRIBUTION) MR. PAUL PAXTON 850 TECH CENTER DRIVE GAHANNA, OHIO 43230 (614) 883-6831	AEP (TRANSMISSION) MR. MICHAEL CARR 700 MORRISON ROAD GAHANNA, OHIO 43230 (614) 552-1893
---	--

FRONTIER COMMUNICATIONS MS. DENA MARTIN 1315 ALBERT STREET PORTSMOUTH, OHIO 45662 (740) 354-0521	NORTH WEST REGIONAL WATER MR. TERRY ALTMAN P.O. BOX 158 MCDERMOTT, OHIO 45652 (740) 259-2789
--	--

HORIZON NETWORK PARTNERS
MR. ROGER STEELE, Jr.
500 S. FRONT STREET, SUITE 850
COLUMBUS, OHIO 43215
(740) 804-7333

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.

CONSTRUCTION DATES

CONSTRUCTION OF THIS PROJECT SHALL NOT BEGIN UNTIL APRIL 1ST, 2020 UNLESS OTHERWISE APPROVED BY THE DISTRICT CONSTRUCTION ENGINEER.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITION-ING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: Odot V.R.S.
MONUMENT TYPE: Iron pin & odot cap (set)

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: N.A.V.D. 88
GEOID: Geoid12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83/2011 (Epoch 2010)
ELLIPSOID: GRS80
MAP PROJECTION: Lambert Conformal Conic
COORDINATE SYSTEM: Ohio State Plane, South Zone (3402)
COMBINED SCALE FACTOR: 1.000051953
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. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

REMOVE ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18"	3		3
30"			
48"			
60"			

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.

RAILROAD REQUIREMENTS

1. "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

2. ALL UTILITY INSTALLATIONS OR RELOCATIONS ON NORFOLK SOUTHERN RIGHT-OF-WAY THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE UTILITY OWNER, PROJECT CONTRACTOR, OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO AECOM FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO: WWW.NSCORP.COM > REAL ESTATE > NS SERVICES > WIRE, PIPELINE, & FIBER OPTIC PROJECTS > AECOM. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARD-WARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RE-SPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PER-MANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE).

CALCULATED
MCM
CHECKED
XXX

GENERAL NOTES

SCI-73-4.25

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ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF ONE 10 FOOT LANE OF TRAFFIC SHALL BE MAINTAINED ON S.R. 73 AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEM 614.

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON T.R. 179 (LAUREL FORK RD) EXCEPT FOR A PERIOD NOT TO EXCEED 5 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7. A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON CR 75 (DRY RUN RD.) EXCEPT FOR A PERIOD NOT TO EXCEED 120 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7.

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.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST TWO WEEKS IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. 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 SHALL BE ERECTED AT THE FOLLOWING LOCATIONS:

STA. 19+00 @ CONST. T.R. 179
STA. 20+00 @ CONST. T.R. 179

TR 179 WILL BE
CLOSED XX/XX/XXXX
FOR 5 DAYS
INFO: (740)774-8834

W20-H13-60

AT THE INTERSECTION WITH S.R. 73
AT THE INTERSECTION WITH EUCLID AVE.

CR 75 WILL BE
CLOSED XX/XX/XXXX
FOR 120 DAYS
INFO: (740)774-8834

W20-H13-60

ITEM 614 - MAINTAINING TRAFFIC, CONT.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

ON T.R. 179 AT STA. 19+00
ON C.R. 75 JUST EAST OF S.R. 73

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC:

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 25 CU. YD.

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.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUB-BASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UN-COMPLETED BASE WIDENING SHALL BE BACK-FILLED AT THE DIRECTION OF THE ENGINEER.

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 M. GAL

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 43 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 141 CU. YD.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (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 WEB PAGE FOR ROADWAY STANDARDS 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.

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS 9 & 10 AND TRAFFIC SCDS MT-96.11, 96.20 AND 96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

	1 S.R. 73 WESTBOUND	2 S.R. 73 EASTBOUND	3 T.R. 179	4 RESIDENTIAL DRIVE
MIN. GREEN	20	20	12	10
EXTENSION	4	4	4	4
MAX. GREEN	40	40	20	15
YELLOW	5	5	5	5
ALL RED	21	21	21	21

SIGNAL WILL REST ON RED WHEN NO VEHICLES ARE DETECTED.

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

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 CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS AND 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.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL) 15 EACH
ITEM 614, OBJECT MARKER, TWO-WAY 15 EACH
ITEM 614, INCREASED BARRIER DELINEATION 330 FEET

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.

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DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 3, (BI-DIRECTIONAL) 9 EACH
ITEM 614, OBJECT MARKER, TWO WAY 9 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

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

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

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

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

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).

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.

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

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.

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH 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 8 HOURS

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

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

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 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 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 DRIVEABLE 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
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 CALENDAR DAYS PRIOR TO CLOSURE
START OF CONST. & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO CLOSURE

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

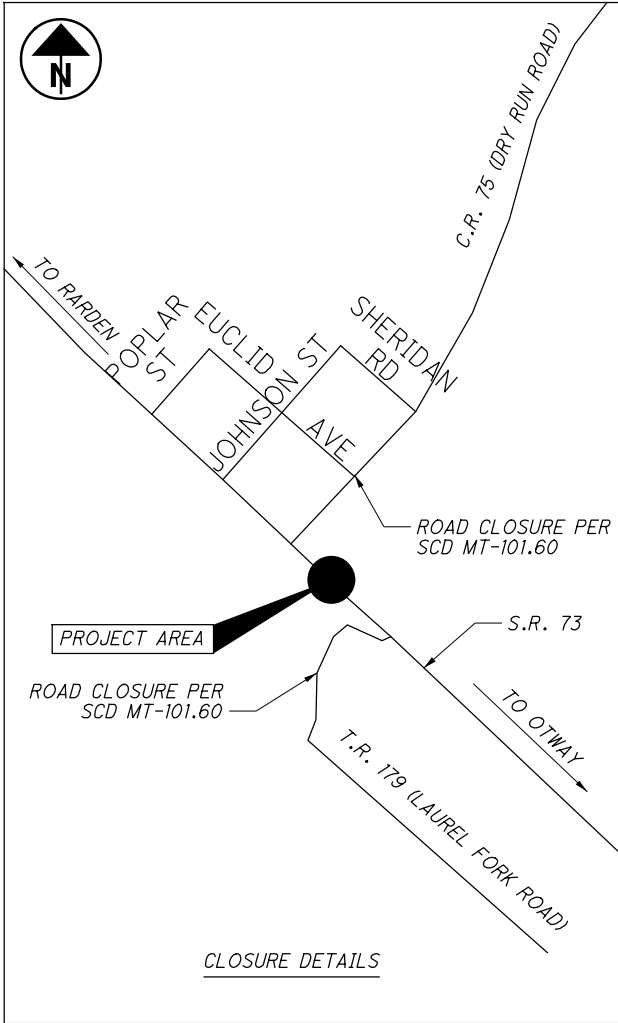
CONSTRUCTION PHASING

PHASE 1:
CLOSE T.R. 179 IN ACCORDANCE WITH SCD MT-101.60 AND AS SHOWN BELOW. CONSTRUCT AS MUCH OF THE RE-LOCATION OF TR-179 AS POSSIBLE AS SHOWN ON SHEET 18. THIS CLOSURE IS LIMITED TO 5 CONSECUTIVE CALENDAR DAYS. CONSTRUCT THE TEMPORARY DRIVE AS DETAILED ON SHEETS 11 & 12.

PHASE 2:
CLOSE C.R. 75 IN ACCORDANCE WITH SCD MT-101.60 AND AS SHOWN BELOW. SET UP TRAFFIC CONTROL AS SHOWN ON SHEET 9 AND IN ACCORDANCE WITH SCDs MT-96.11 AND MT-96.20. COMPLETE ALL PHASE 1 CONSTRUCTION OF BRIDGE NO. SCI-73-0428 AND ASSOCIATED ROADWORKY WORK WITH THE EXCEPTION OF THE LAST 1.5" OF SURFACE COURSE.

PHASE 3:
SET UP TRAFFIC CONTROL AS SHOWN ON SHEET 10 AND IN ACCORDANCE WITH SCDs MT-96.11 AND MT-96.20. COMPLETE THE REMAINING CONSTRUCTION OF BRIDGE NO. SCI-73-0428 AND REMAINING ROADWORKY WORK WITH THE EXCEPTION OF THE LAST 1.5" OF SURFACE COURSE.

PHASE 4:
SET UP TRAFFIC CONTROL WITH FLAGGERS IN ACCORDANCE WITH SCD MT-97.10 TO PLACE THE FINAL LIFT OF ASPHALT AND ALL PERMANENT PAVEMENT MARKINGS.



CLOSURE DETAILS

$$\frac{8}{52}$$

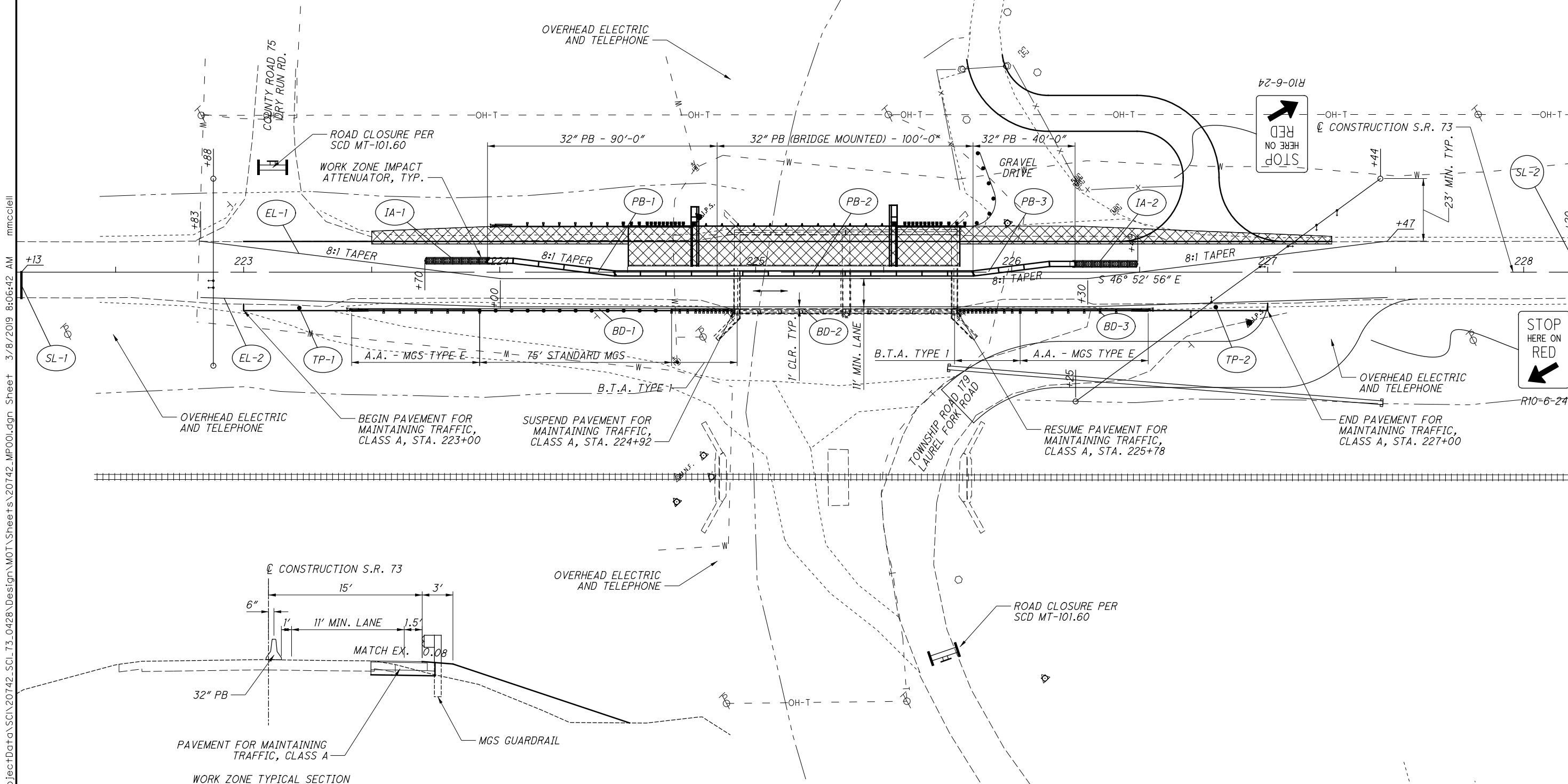
1. FOR DETAILS OF THE TEMPORARY DRIVE, SEE SHEETS 11,12.
2. FOR ESTIMATED MOT QUANTITIES, SEE SHEET 8.
3. FOR A TYPICAL SECTION THROUGH THE STRUCTURE, SEE SHEETS 33,34.
4. FOR ADDITIONAL DETAILS NOT SHOWN, SEE SCDs MT-96.11 & MT-96.20.



ALCULATED	
MCM	
CHECKED	
DATE	

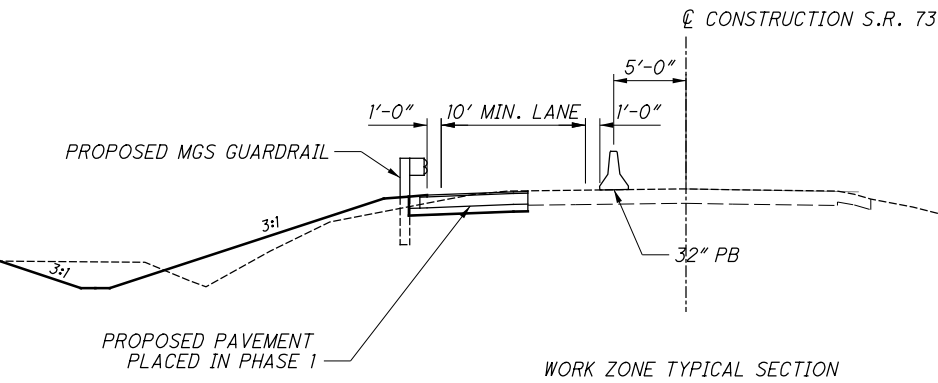
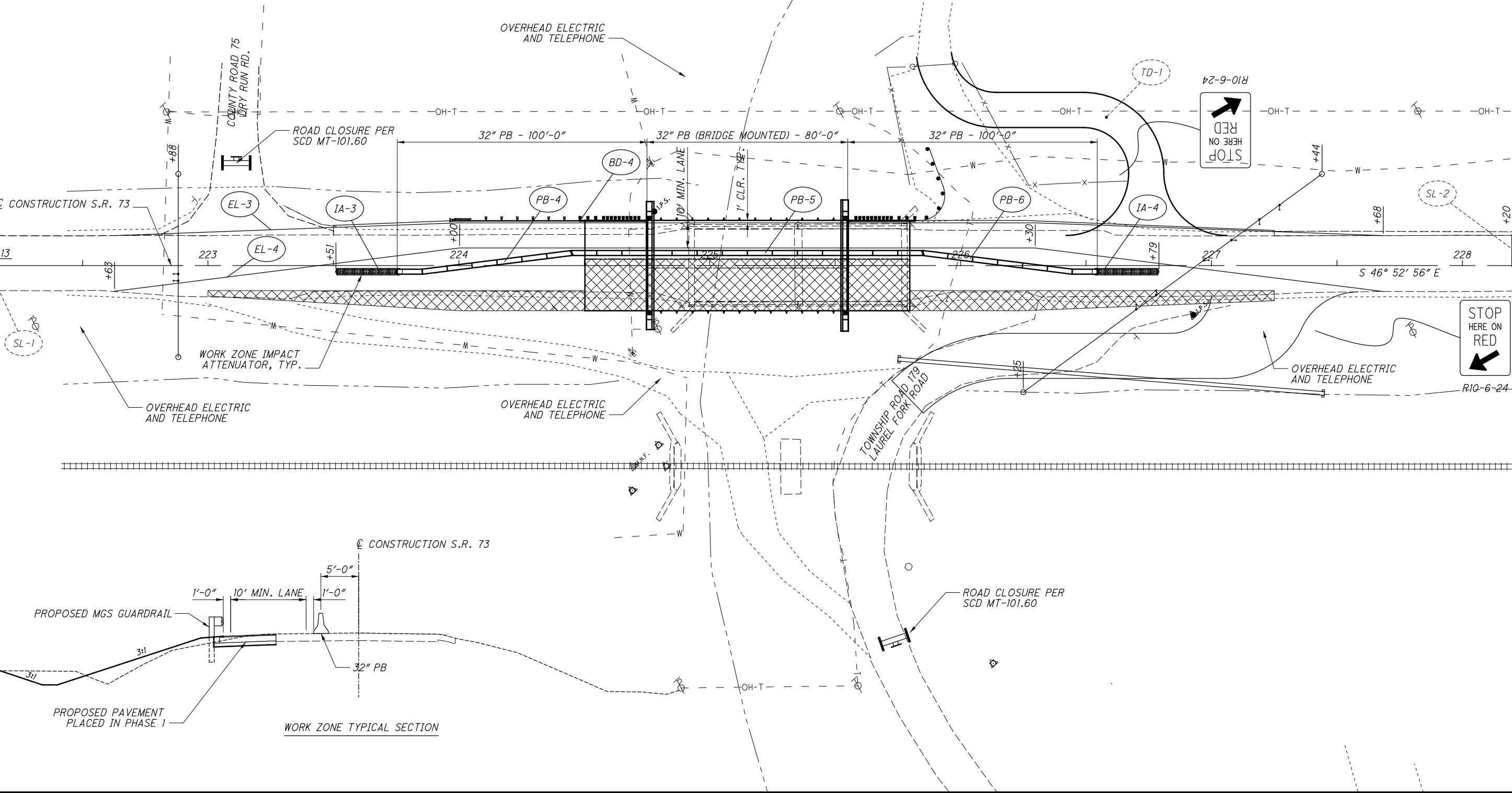
MAINTENANCE OF TRAFFIC - PHASE I
STA. 222+10 TO STA. 228+20

SCI-73-4.25

$$\frac{9}{52}$$


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- NOTES:
1. FOR DETAILS OF THE TEMPORARY DRIVE, SEE SHEETS 11,12.
 2. FOR ESTIMATED MOT QUANTITIES, SEE SHEET 8.
 3. FOR A TYPICAL SECTION THROUGH THE STRUCTURE, SEE SHEETS 33,34.
 4. FOR ADDITIONAL DETAILS NOT SHOWN, SEE SCDs MT-96.11 & MT-96.20.



PHASE 2 WORK AREA

10
52

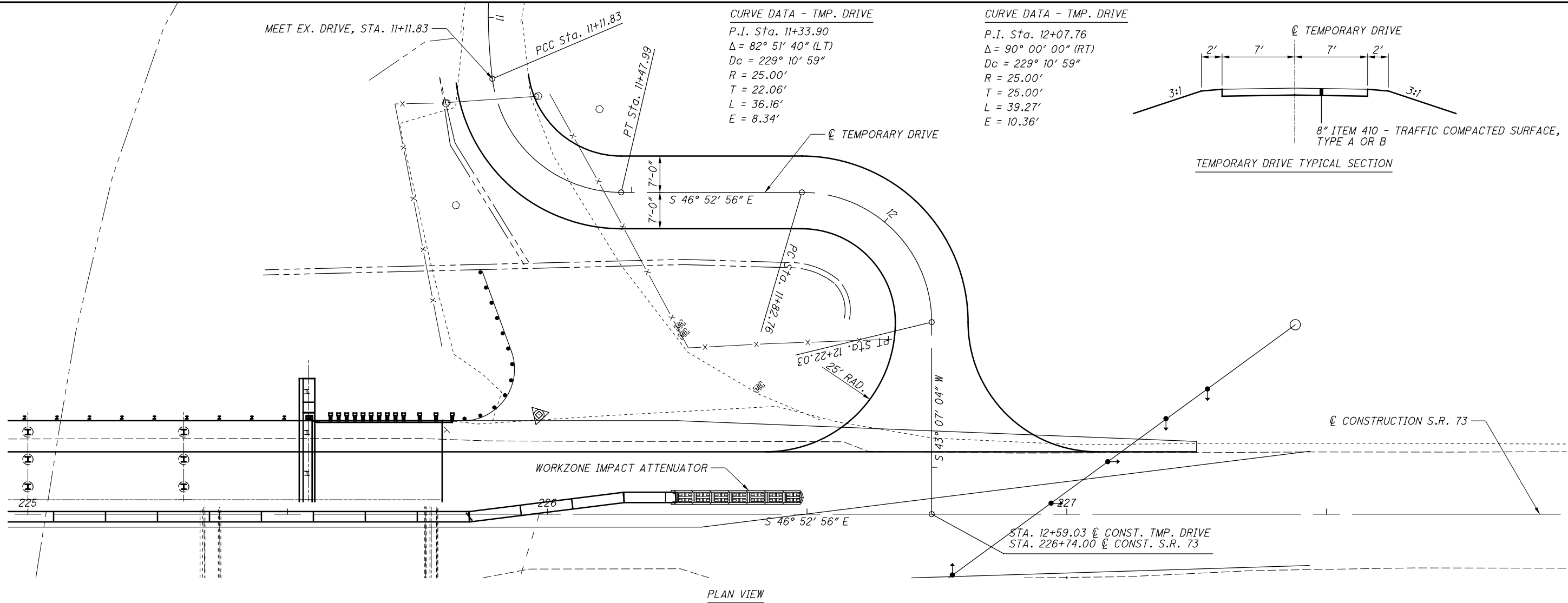
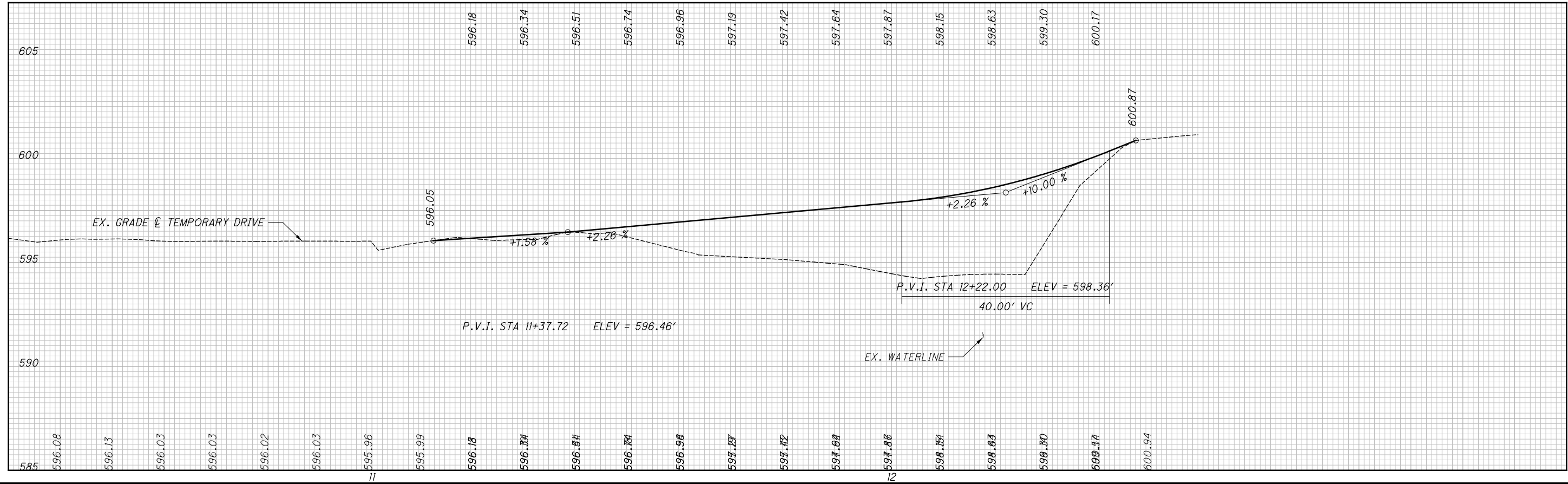
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MAINTENANCE OF TRAFFIC - PHASE II
STA. 222+10 TO STA. 228+20

CALCULATED
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XXX

0 20 40
HORIZONTAL
SCALE IN FEET

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	GENERAL SUMMARY
5	6	7	8	15	16	24	32	48					01/STR/BR							
LS													LS	201	11000	LS		CLEARING AND GRUBBING		
					171								171	202	23000	171	SY	PAVEMENT REMOVED		
				151									151	202	75000	151	FT	FENCE REMOVED		
					171	564							735	203	10000	735	CY	EXCAVATION		
					6	675							681	203	20000	681	CY	EMBANKMENT		
					1,216								1,216	204	10000	1,216	SY	SUBGRADE COMPACTION		
				200									200	606	15050	200	FT	GUARDRAIL, TYPE MGS		
				3									3	606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E		
				1									1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T		
								4					4	623	40500	4	EACH	REFERENCE MONUMENT		
				4									4	606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I		
				3									3	SPECIAL	69050000	3	EACH	MAILBOX SUPPORT	5	
																		EROSION CONTROL		
1,545													1,545	659	10000	1,545	SY	SEEDING AND MULCHING		
77													77	659	14000	77	SY	REPAIR SEEDING AND MULCHING		
0.21													0.21	659	20000	0.21	TON	COMMERCIAL FERTILIZER		
0.32													0.32	659	31000	0.32	ACRE	LIME		
8													8	659	35000	8	MGAL	WATER		
													LS	832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
													LS	832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS		
													LS	832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE		
													10,914	832	30000	10,914	EACH	EROSION CONTROL		
																		DRAINAGE		
				0.7									0.7	602	20000	0.7	CY	CONCRETE MASONRY		
				170									170	611	07200	170	FT	18" CONDUIT, TYPE A		
																		PAVEMENT		
					541								541	252	01500	541	FT	FULL DEPTH PAVEMENT SAWING		
					98								98	301	46000	98	CY	ASPHALT CONCRETE BASE, PG64-22		
					238								238	304	20000	238	CY	AGGREGATE BASE		
					108								108	407	10000	108	GAL	TACK COAT		
					60								60	441	50000	60	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22		
					19								19	441	50200	19	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)		
																		TRAFFIC CONTROL		
				6									6	621	00100	6	EACH	RPM		
				6									6	621	54000	6	EACH	RAISED PAVEMENT MARKER REMOVED		
				9									9	626	00112	9	EACH	BARRIER REFLECTOR, TYPE 3 (BIDIRECTIONAL)		
				27									27	630	02100	27	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
				3									3	630	08600	3	EACH	SIGN POST REFLECTOR		
				2									2	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION		
				7									7	630	86002	7	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
				0.16									0.16	642	00094	0.16	MILE	EDGE LINE, 6"		
				0.08									0.08	642	00290	0.08	MILE	CENTER LINE		
																		STRUCTURE OVER 20 FOOT SPAN (SCI-73-0426)		
								LS					LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	31	
								273					273	202	23500	273	SY	WEARING COURSE REMOVED		
								LS					LS	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	31	
								LS					LS	503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	31	
								LS					LS	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION		
								630					630	507	00100	630	FT	STEEL PILES HP10X42, FURNISHED		
								560					560	507	00150	560	FT	STEEL PILES HP10X42, DRIVEN		
								700					700	507	00200	700	FT	STEEL PILES HP12X53, FURNISHED		
								630					630	507	00250	630	FT	STEEL PILES HP12X53, DRIVEN		
								161					161	SPECIAL	50771200	161	FT	PILE ENCASEMENT	31	
								28					28	507	93300	28	EACH	STEEL POINTS OR SHOES		
								49,565					49,565	509	10000	49,565	LB	EPOXY COATED REINFORCING STEEL		
								175					175	511	33312	175	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE		
								61					61	511	43510	61	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING		
								81					81	512	10100	81	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		

1352

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SHEET NUM.													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED MPG CHECKED XXX	GENERAL SUMMARY	SCI-73-4.25	14 52		
5	6	7	8	15	16	24	32	48					01/STR/BR												
							51							51	512	33000	51	SY	TYPE 2 WATERPROOFING						
							59							59	516	13200	59	SF	1/2" PREFORMED EXPANSION JOINT FILLER						
							80							80	516	13600	80	SF	1" PREFORMED EXPANSION JOINT FILLER						
							102							102	516	14014	102	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL						
							167							167	517	70000	167	FT	RAILING (TWIN STEEL TUBE)						
							54							54	518	21200	54	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC						
							188							188	SPECIAL	51822300	188	FT	STEEL DRIP STRIP	31					
							104							104	518	40000	104	FT	6" PERFORATED CORRUGATED PLASTIC PIPE						
							67							67	518	40010	67	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS						
							200							200	526	25010	200	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")						
							72							72	526	90011	72	FT	TYPE A INSTALLATION, AS PER PLAN	31					
							195							195	601	32204	195	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC						
							254							254	613	41250	254	CY	LOW STRENGTH MORTAR BACKFILL (TYPE 1)						

SUBSUMMARY

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STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	202	203	203	204	252	301	304	304	407			441	441	441				
									PAVEMENT REMOVED	EXCAVATION	EMBANKMENT	SUBGRADE COMPACTION	FULL DEPTH PAVEMENT SAWING	ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE	AGGREGATE BASE	TACK COAT			ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448)				
					FT	FT	SY	SY	SY	CY	CY	SY	FT	CY	CY	CY	GAL			CY	CY	CY				
CL CONSTRUCTION S.R. 73																										
LEFT SHOULDER:																										
223+50.00	TO	224+00.00		LT	50.00	6.00	33.33						50.00				2.50			2.78						
223+50.00	TO	224+00.00		LT	50.00	6.33	35.17							8.79			2.50									
223+50.00	TO	224+00.00		LT	50.00	6.83	37.94								6.32											
223+50.00	TO	224+00.00		LT	50.00	7.50	41.67					41.67														
224+00.00	TO	224+50.25		LT	50.25	7.00	39.08						50.25				2.93			3.26						
224+00.00	TO	224+50.25		LT	50.25	7.33	40.93							10.23			2.93									
224+00.00	TO	224+50.25		LT	50.25	7.83	43.72								7.29											
224+00.00	TO	224+50.25		LT	50.25	8.50	47.46					47.46														
225+79.75	TO	226+25.00		LT	45.25	7.00	35.19						45.25				2.64			2.93						
225+79.75	TO	226+25.00		LT	45.25	7.33	36.85							9.21			2.64									
225+79.75	TO	226+25.00		LT	45.25	7.83	39.37								6.56											
225+79.75	TO	226+25.00		LT	45.25	8.50	42.74					42.74														
226+25.00	TO	227+25.00		LT	100.00	5.00	55.56						100.00				4.17			4.63						
226+25.00	TO	227+25.00		LT	100.00	5.33	59.22							14.81			4.17									
226+25.00	TO	227+25.00		LT	100.00	5.83	64.78								10.80											
226+25.00	TO	227+25.00		LT	100.00	6.50	72.22					72.22														
RIGHT SHOULDER:																										
223+00.00	TO	224+00.00		RT	100.00	5.00	55.56						100.00				4.17			4.63						
223+00.00	TO	224+00.00		RT	100.00	5.33	59.22							14.81			4.44									
223+00.00	TO	224+00.00		RT	100.00	5.83	64.78								10.80											
223+00.00	TO	224+00.00		RT	100.00	6.50	72.22					72.22														
224+00.00	TO	224+50.25		RT	50.25	8.00	44.67						50.25				3.35			3.72						
224+00.00	TO	224+50.25		RT	50.25	8.33	46.51							11.63			3.35									
224+00.00	TO	224+50.25		RT	50.25	8.83	49.30								8.22											
224+00.00	TO	224+50.25		RT	50.25	9.50	53.04					53.04														
225+79.75	TO	226+25.00		RT	45.25	8.00	40.22						45.25				3.02			3.35						
225+79.75	TO	226+25.00		RT	45.25	8.33	41.88							10.47			3.02									
225+79.75	TO	226+25.00		RT	45.25	8.83	44.40								7.40											
225+79.75	TO	226+25.00		RT	45.25	9.50	47.76					47.76														
226+25.00	TO	227+25.00		RT	100.00	6.00	66.67						100.00				5.00			5.56						
226+25.00	TO	227+25.00		RT	100.00	6.33	70.33							17.58			5.00									
226+25.00	TO	227+25.00		RT	100.00	6.83	75.89								12.65											
226+25.00	TO	227+25.00		RT	100.00	7.50	83.33					83.33														
LANES:																										
223+00.00	TO	224+50.25		LT&RT	150.25	21.00	350.58										26.29			14.61						
225+79.75	TO	227+25.00		LT&RT	145.25	21.00	338.92										25.42			14.12		18.83				
224+50.25	TO	224+92.91		LT&RT	42.66	36.00	170.64		170.64																	
CL CONSTRUCTION T.R. 179																										
20+60.00	TO	22+69.42		LT&RT	209.42	18.00	418.84					418.84				93.08										
21+69.42	TO	22+29.53		LT&RT	60.11			161.88				161.88				35.97										
CL DRIVEWAY STA. 226+17.29 LT																										
11+11.83	TO	11+81.51		LT&RT	69.68			174.03		171	6	174.03				38.67										
SUBTOTALS									170.64	171	6	1215.19	541.00	97.53	70.03	167.72	107.53			28.73	30.86	18.83				
TOTALS CARRIED TO GENERAL SUMMARY									171	171	6	1,216	541	98	238		108			60		19				

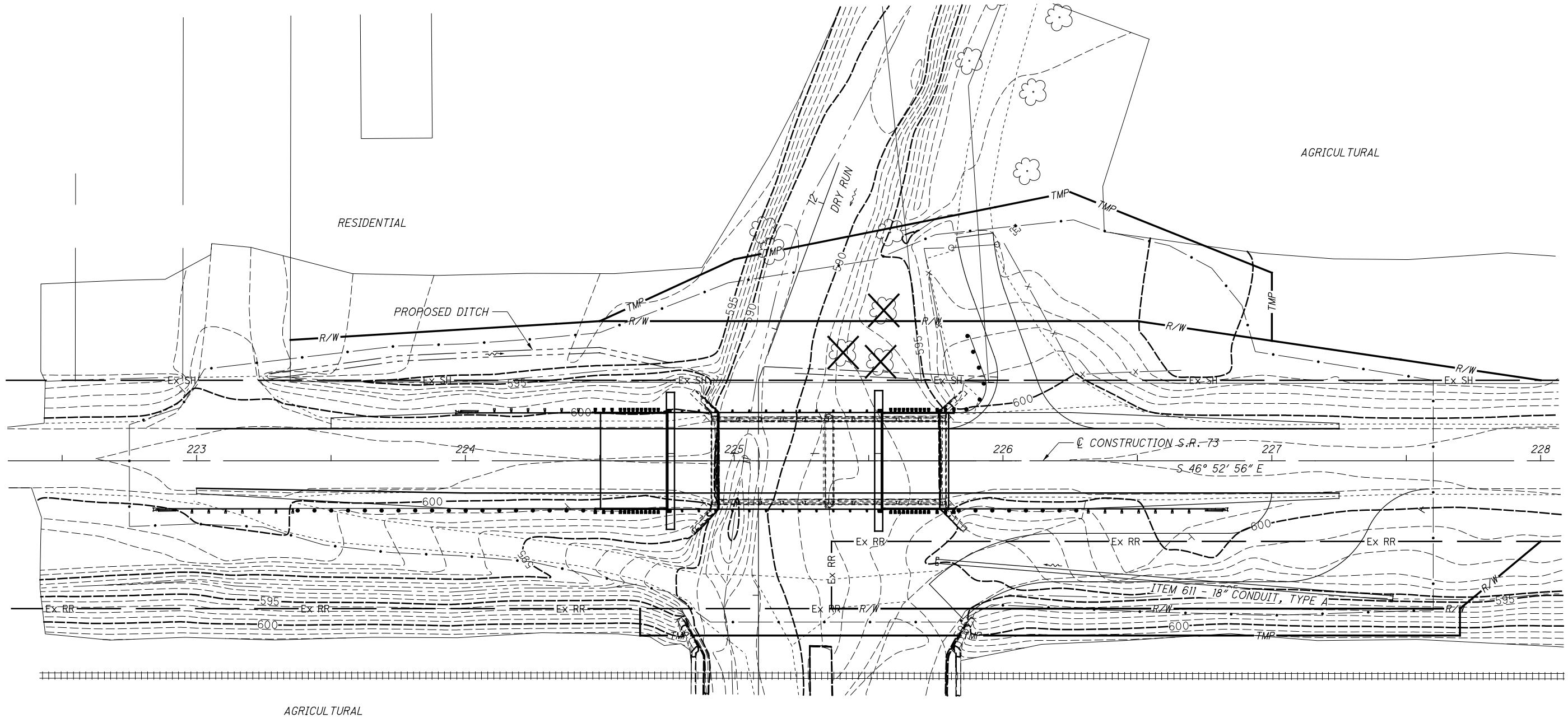
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PAVEMENT CALCULATIONS

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PROJECT DATA			
TOTAL AREA (RIGHT OF WAY)	1.20 ACRE	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.70
PROJECT EARTH DISTURBED AREA	0.95 ACRE	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.73
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	0.12 ACRE	IMMEDIATE RECEIVING WATERS	DRY RUN
NOTICE OF INTENT EARTH DISTURBED AREA	4.90 ACRE	SUBSEQUENT RECEIVING WATERS	BRUSH CREEK
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	0.33 ACRE		
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE	0.38 ACRE		

USGS MAP: RARDEN, OHIO

LATITUDE: 38N°53'56" *
LONGITUDE: 83W°12'21" *

* LATITUDE AND LONGITUDE TO
APPROX. CENTER OF PROJECT.

PROJECT DESCRIPTION

IMPROVEMENT OF 0.05 MILES OF S.R. 73 IN
SCIOTO COUNTY BY REPLACEMENT OF THE DEFICIENT
BRIDGE NO. SCI-73-0428 AND THE NECESSARY

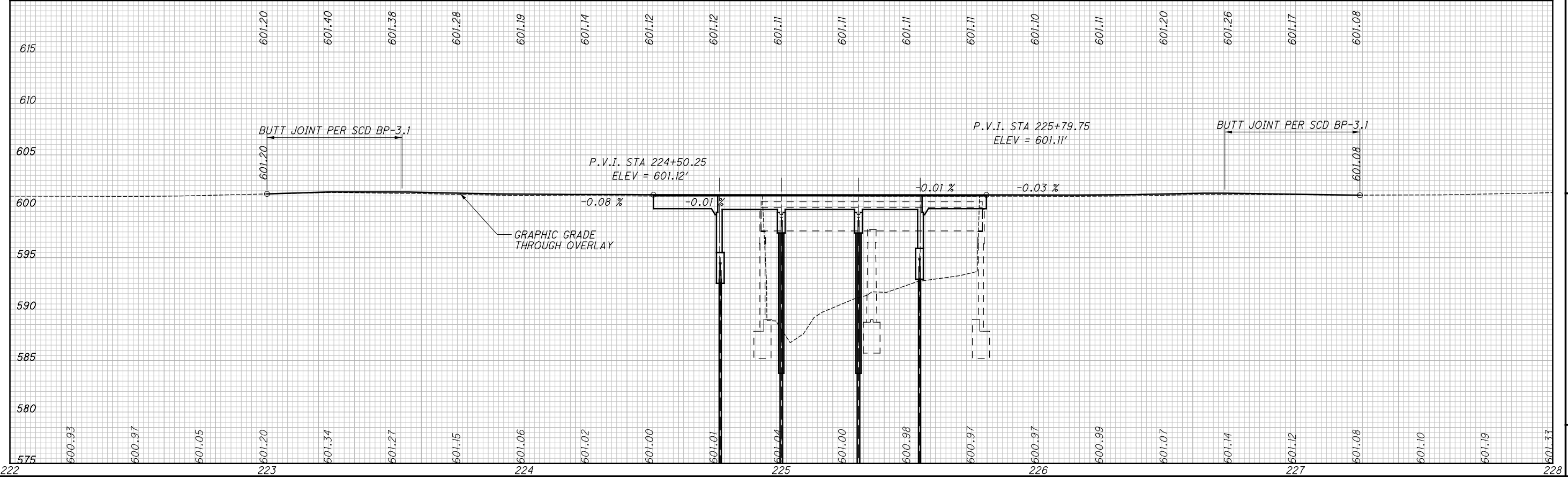
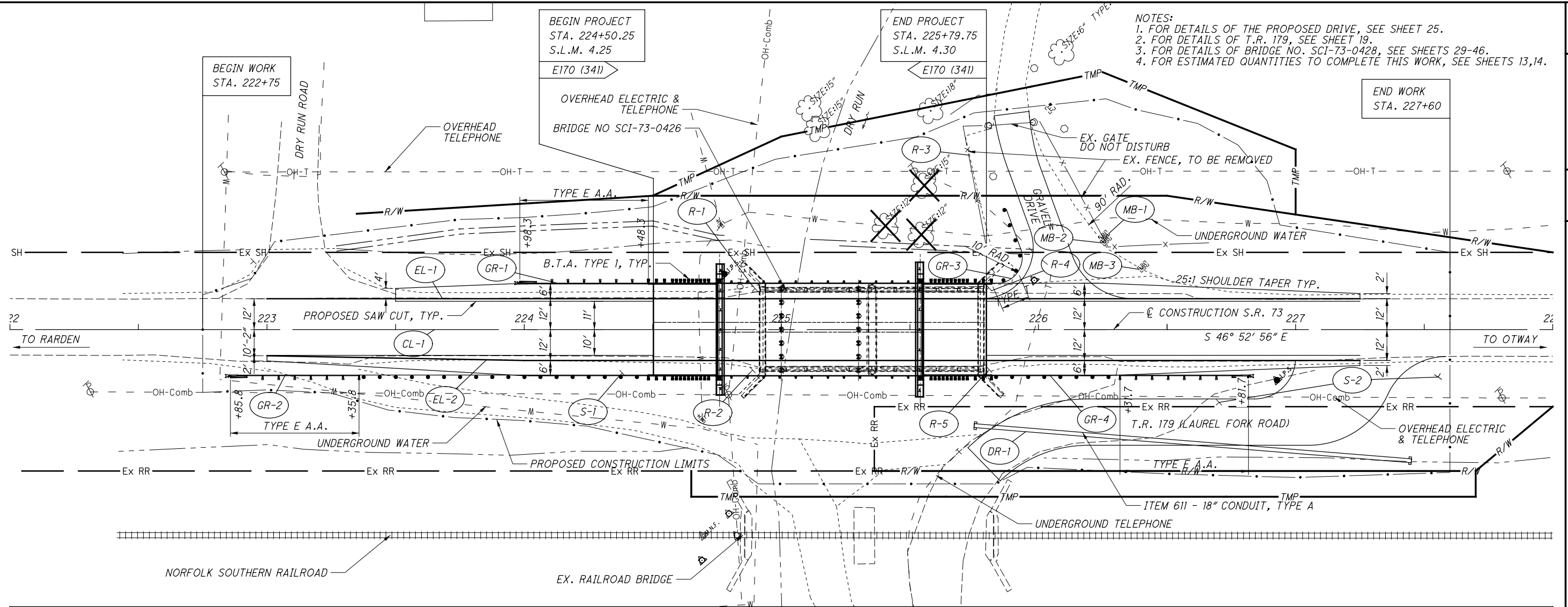


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PROJECT SITE PLAN
STA. 222+50.00 TO STA. 228+00.00

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HORIZONTAL
SCALE IN FEET

CALCULATED

MCM

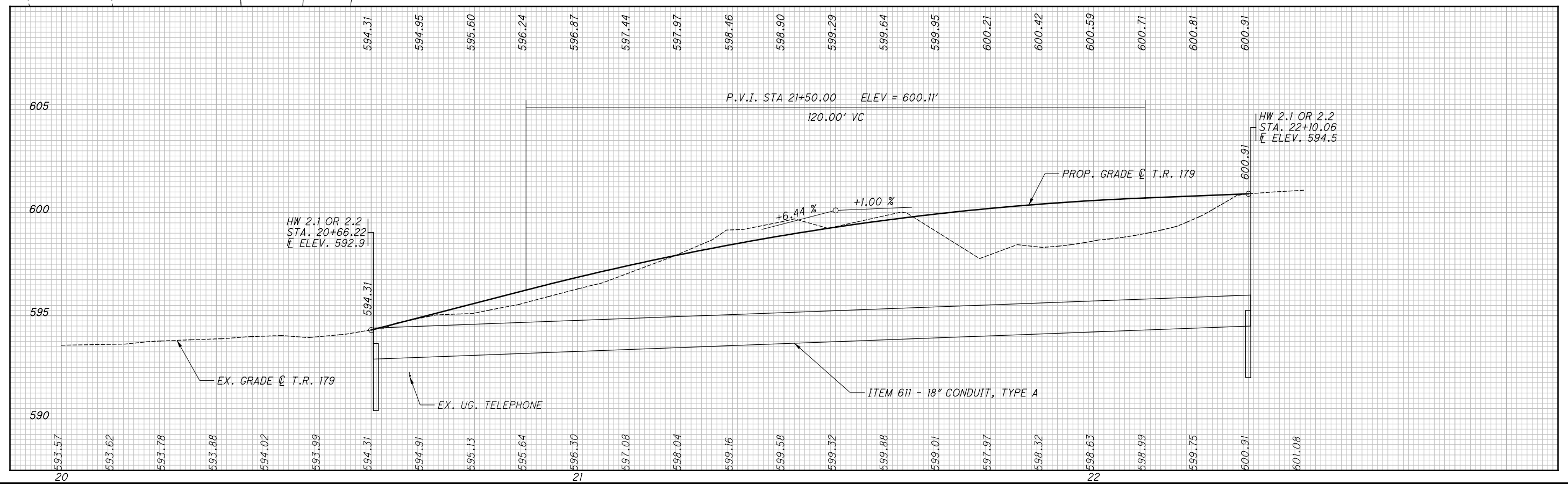
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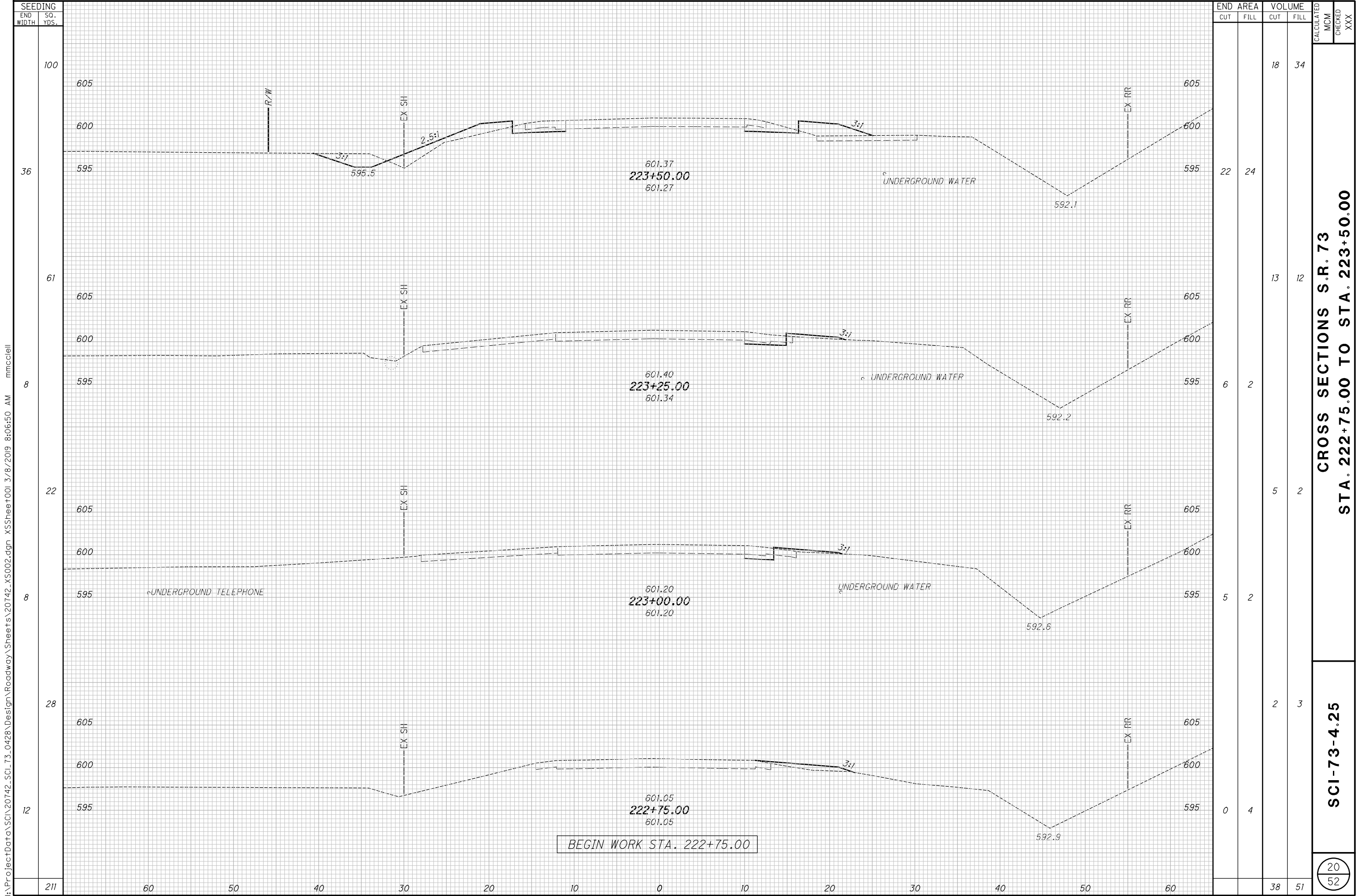
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PLAN AND PROFILE
STA. 222+00 TO STA. 228+00

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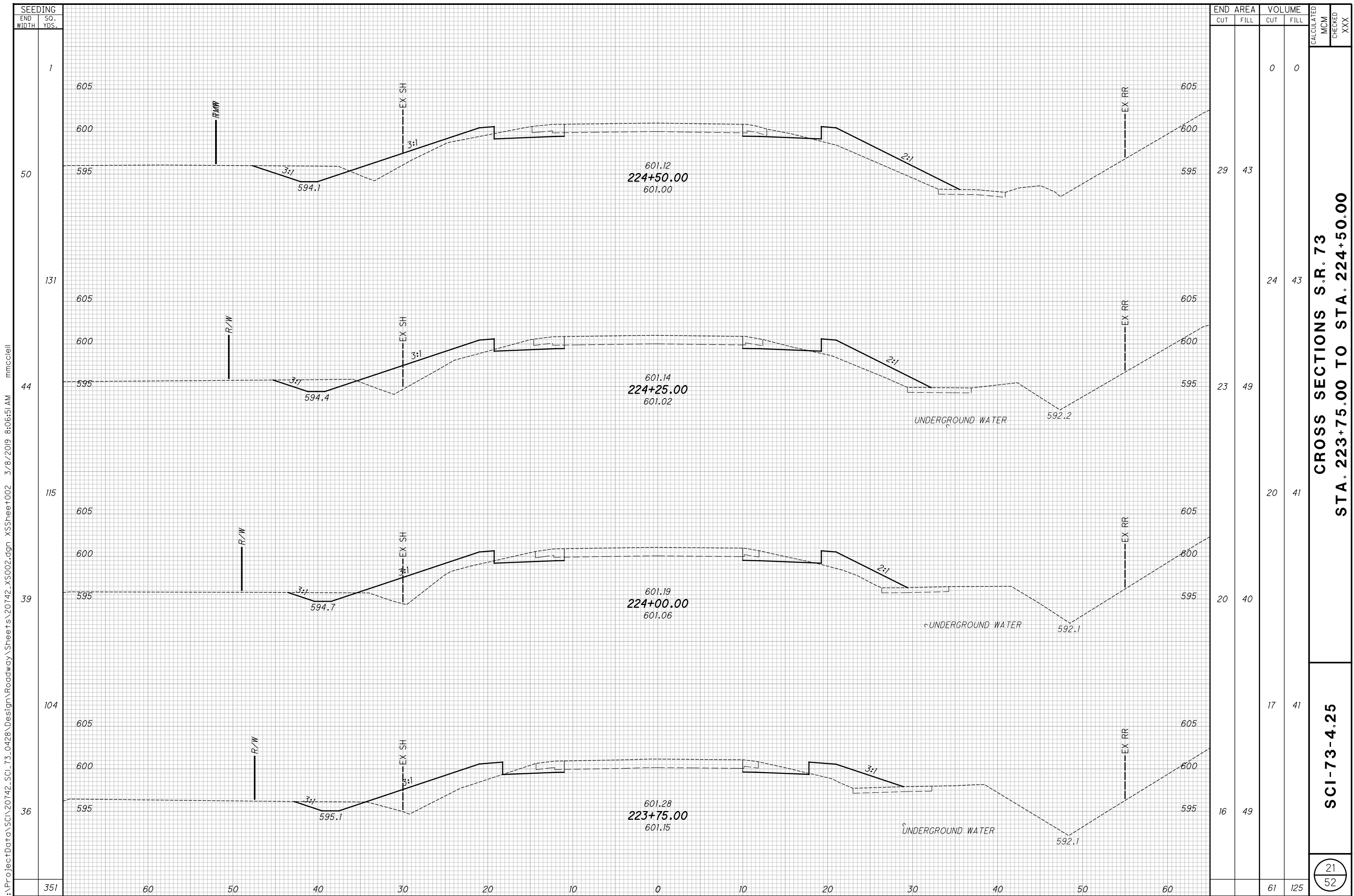


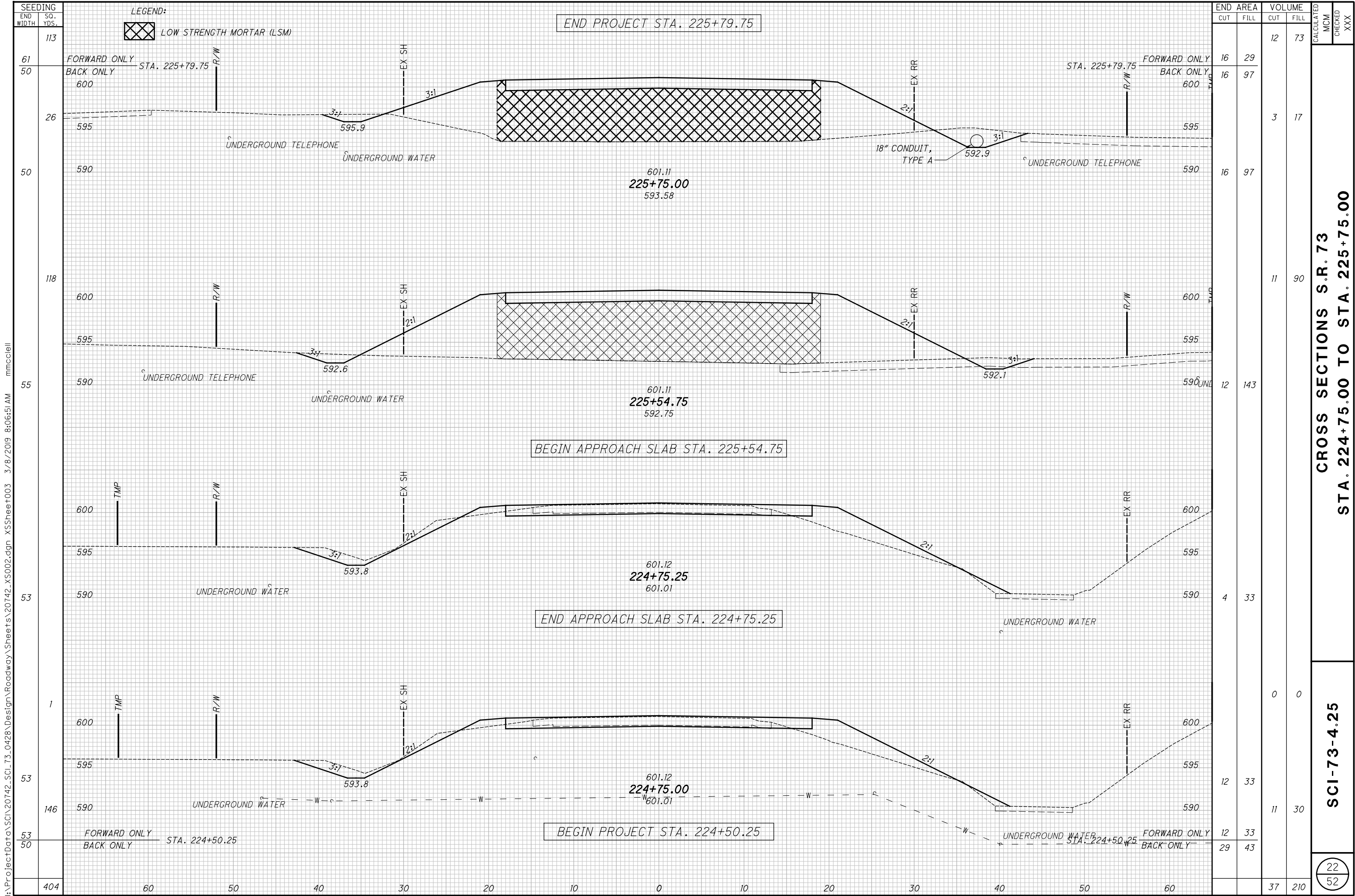


CROSS SECTIONS S.R. 73
STA. 222+75.00 TO STA. 223+50.00

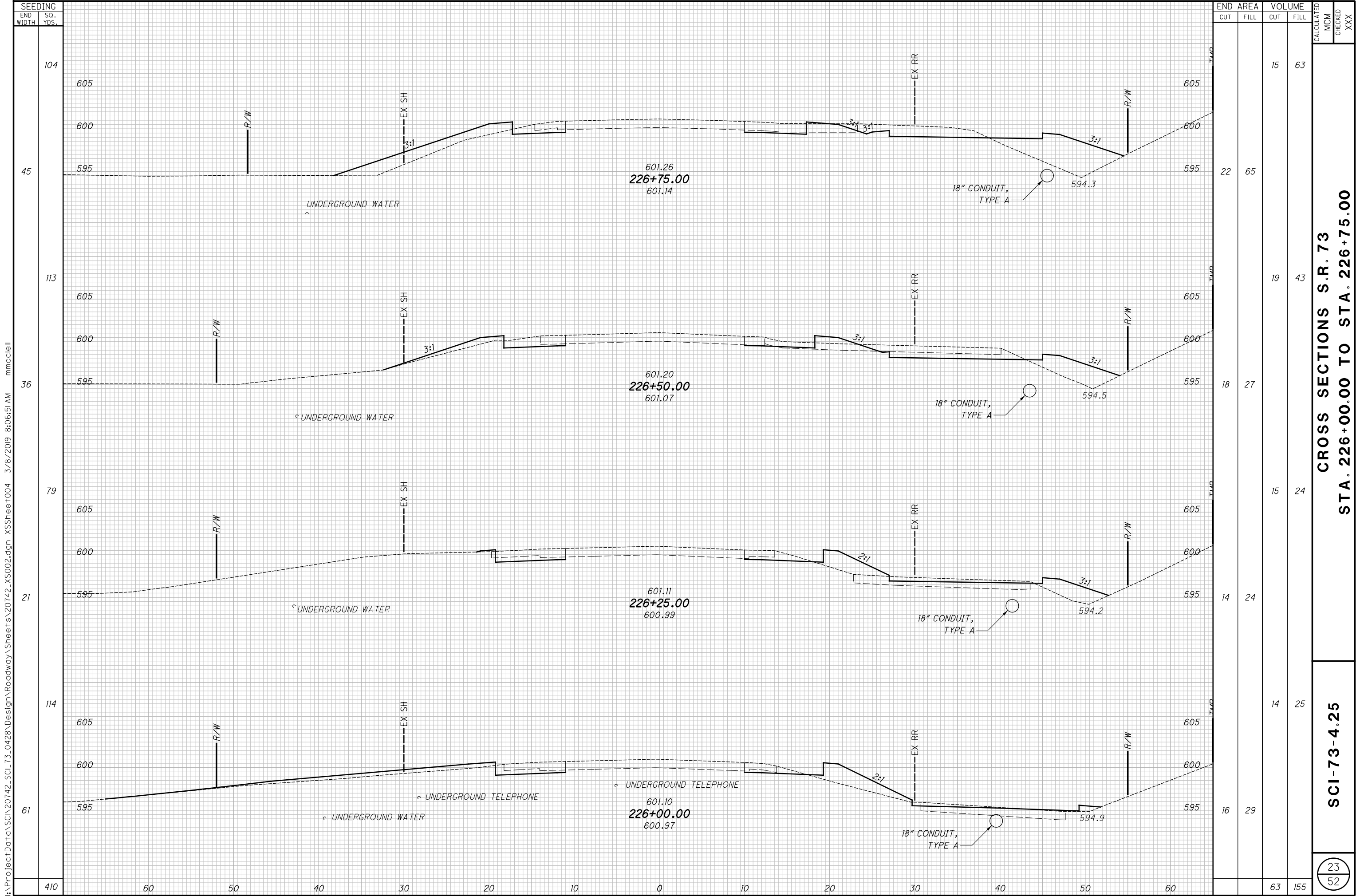
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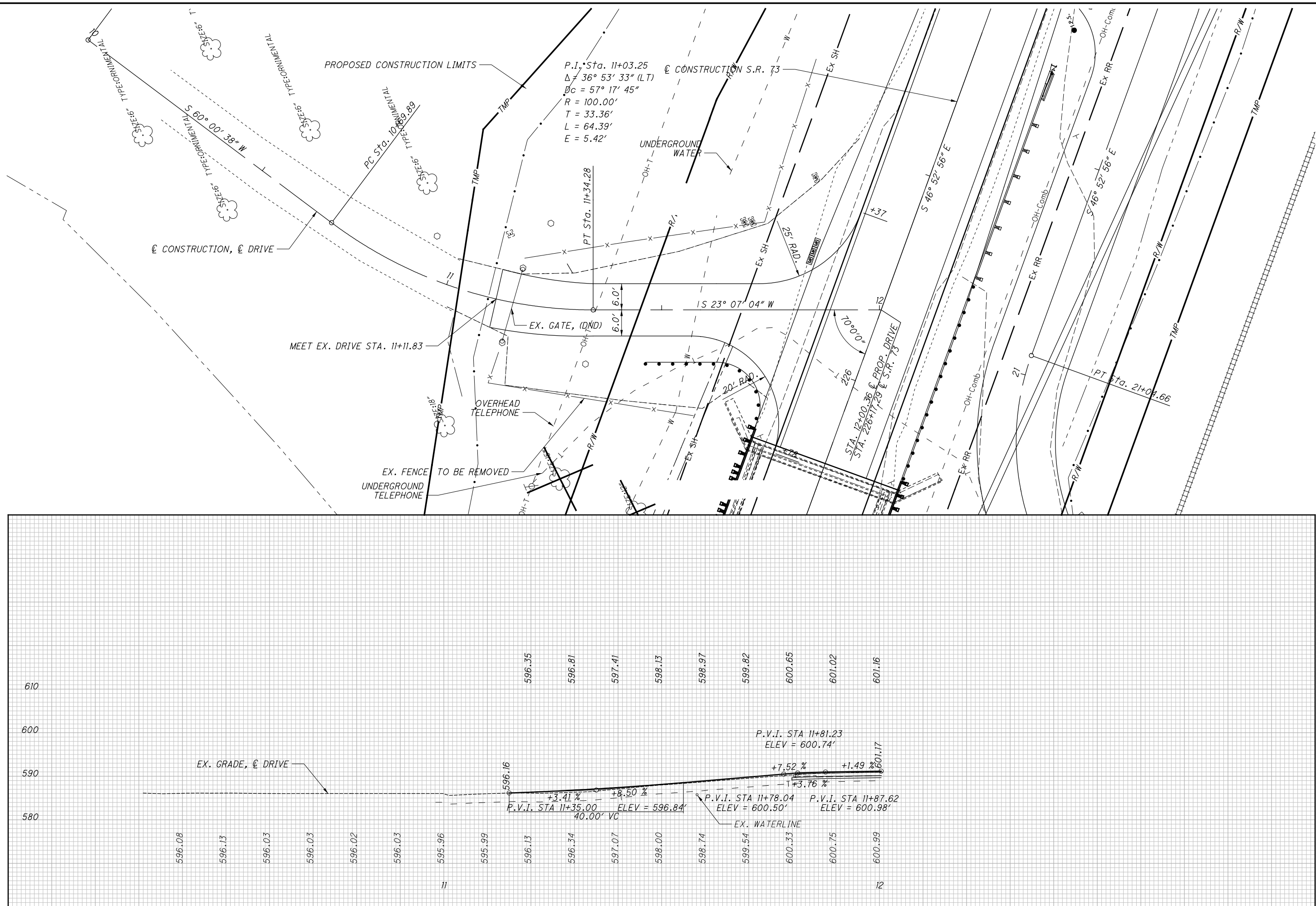




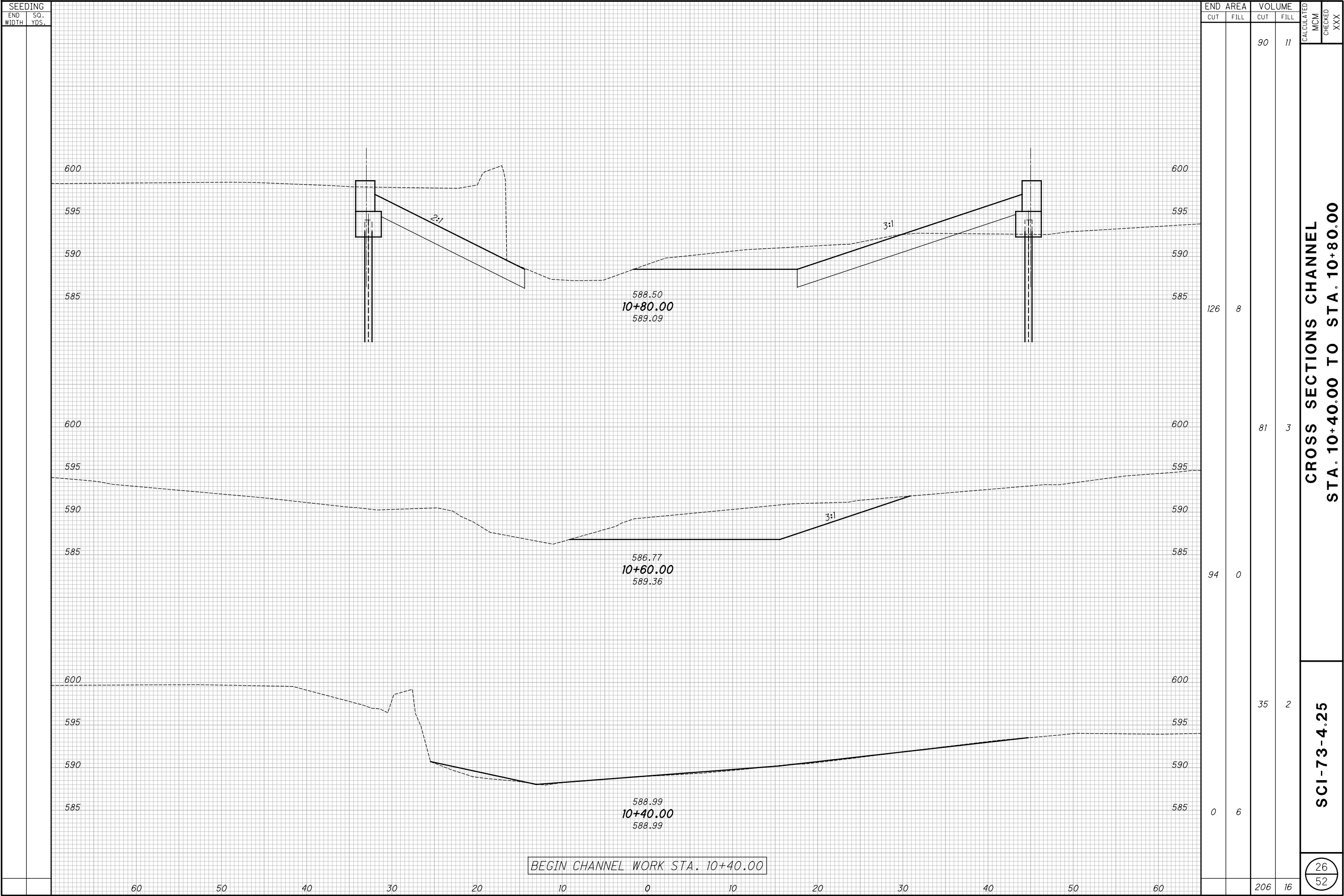
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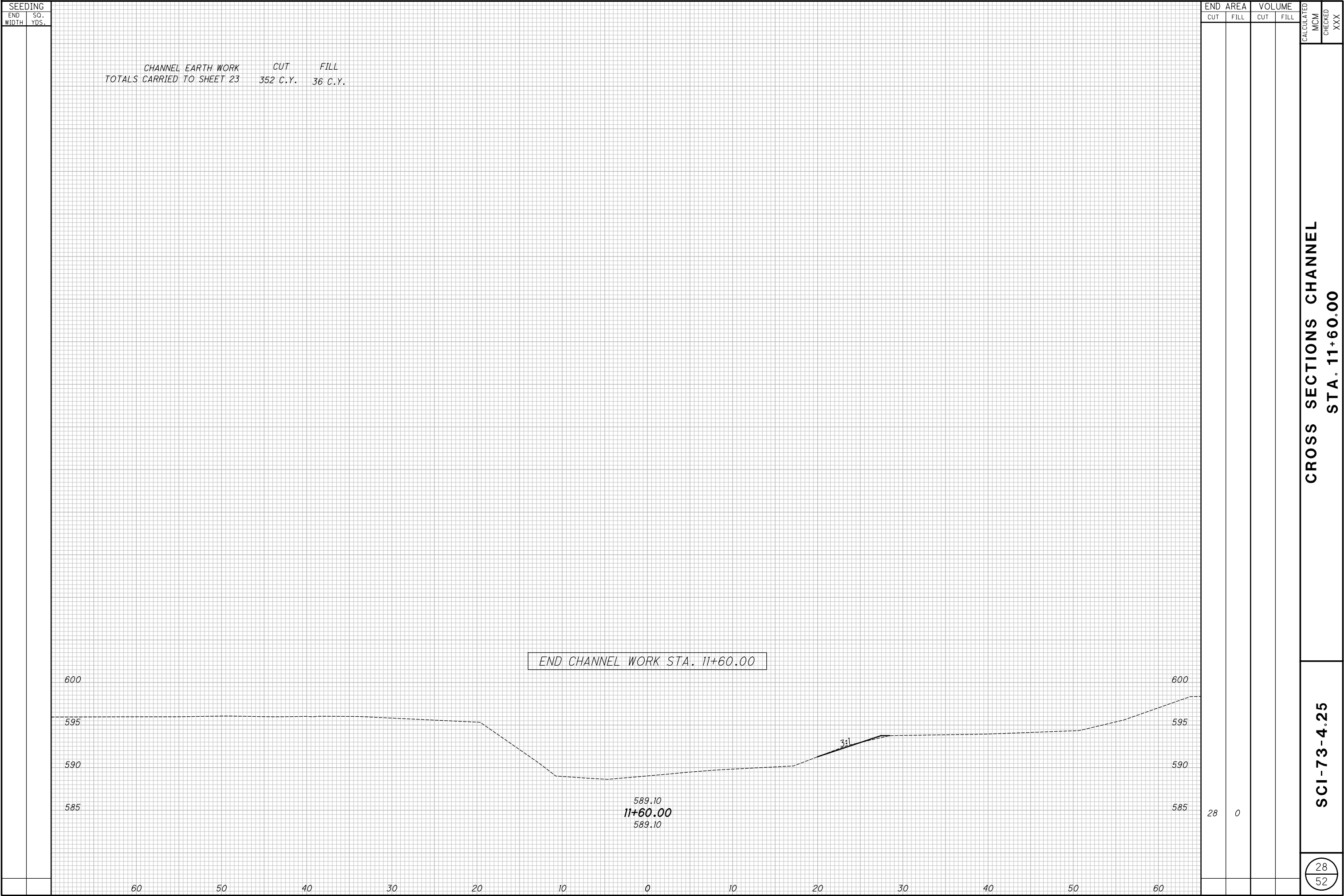
CROSS SECTIONS CHANNEL
STA. 10+40.00 TO STA. 10+80.00

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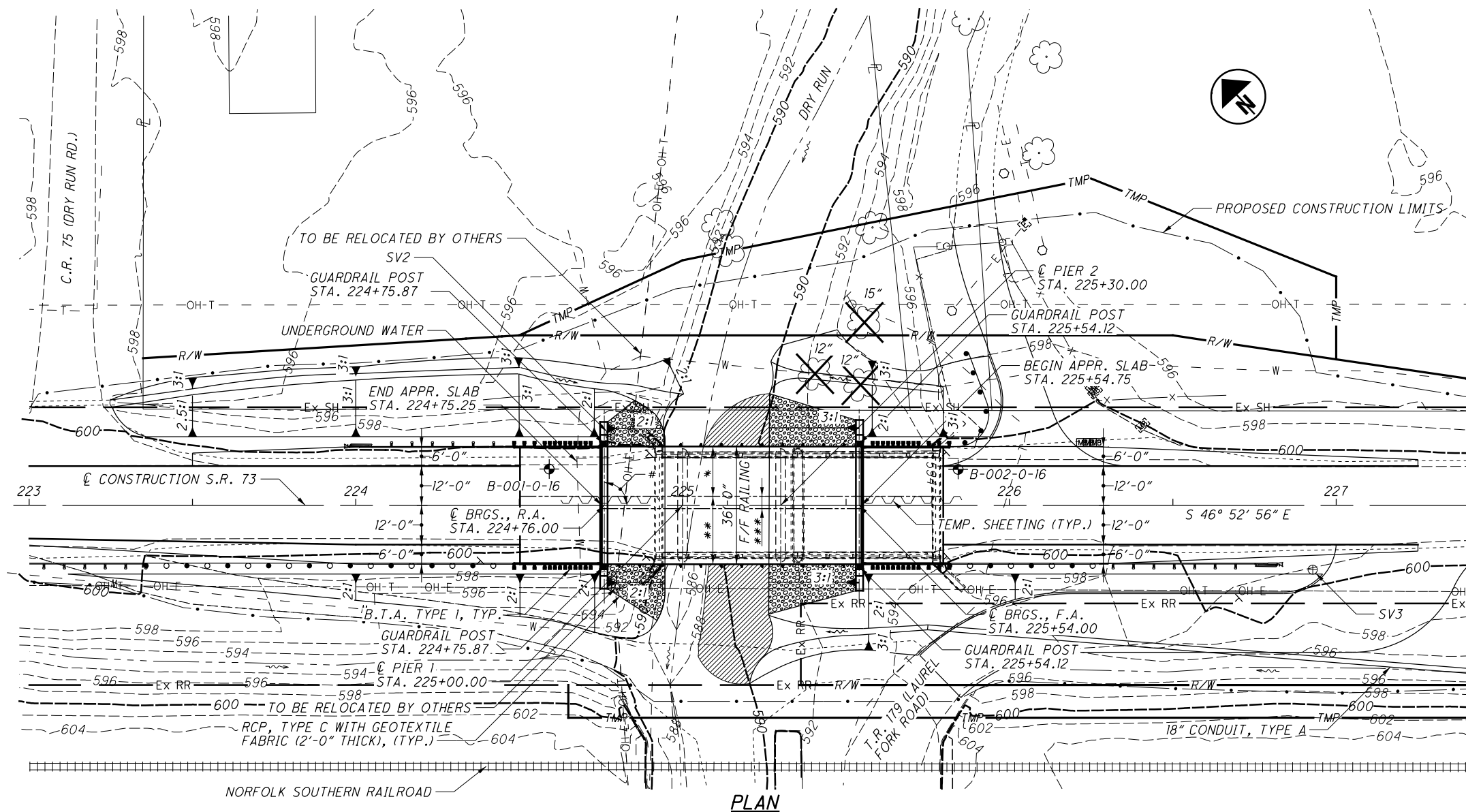
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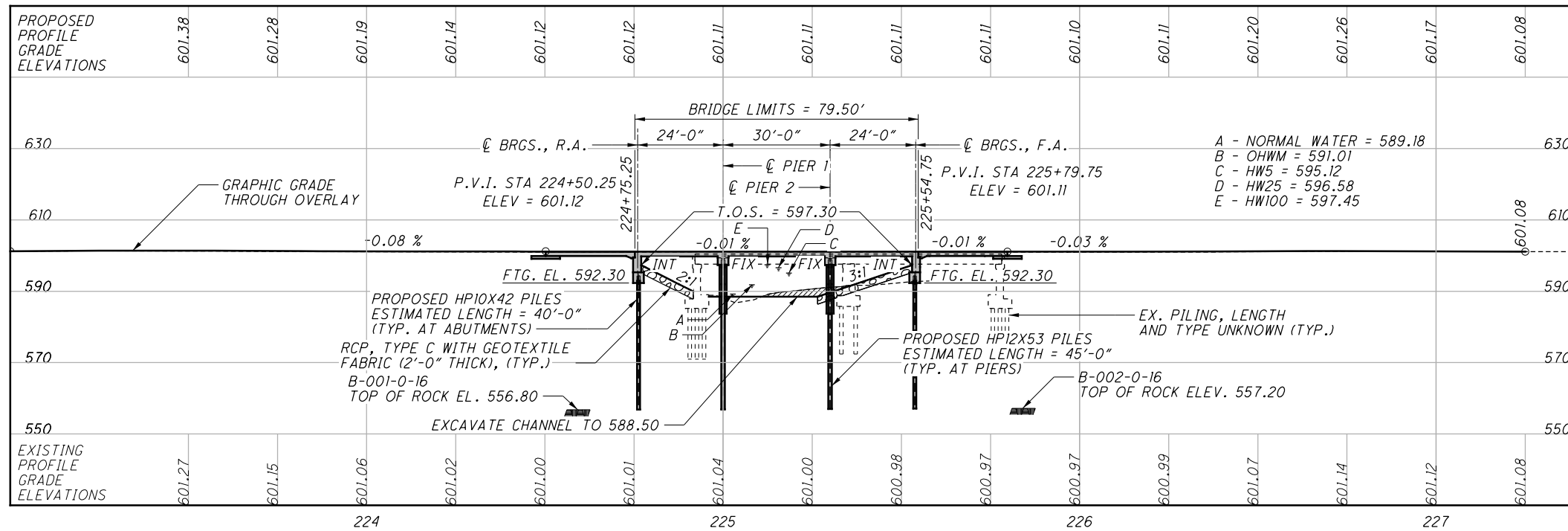
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PLAN



PROFILE ALONG C CONSTRUCTION S.R. 73

BENCHMARK DATA

SV1 STA. 220+47.82, ELEV. 598.83, OFFSET 27.883', LT.
SV2 STA. 224+77.87, ELEV. 599.74, OFFSET 21.564', LT.
SV3 STA. 226+92.79, ELEV. 600.63, OFFSET 19.686', RT.

FOR ADDITIONAL BENCHMARK INFORMATION SEE ROADWAY PLAN SHEET $\frac{2}{52}$

NOTES

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

DESIGN TRAFFIC:

2019 ADT = 1,900 2019 ADTT = 418
2039 ADT = 2,400 2039 ADTT = 528
DIRECTIONAL DISTRIBUTION = 52%

LEGEND

⊕ BORING LOCATION

⊕ BENCHMARK

▨ - CHANNEL EXCAVATION

* - PHASE 1 CONSTRUCTION = 15'-3"

** - PHASE 2 CONSTRUCTION = 20'-9"

*** - 3'-9" CLOSURE POUR

- 90°00'00" (TYP.)

HYDRAULIC DATA

DRAINAGE AREA = 7.14 SQ. MILES

Q (25) = 1,920 CFS V (25) = 4.9 FT/S

Q (100) = 2,690 CFS V (100) = 6.0 FT/S

STRUCTURE CLEARS THE 25 YEAR DESIGN HW BY 2.74 FEET.

EXISTING STRUCTURE

TYPE: 2 SPAN CONCRETE T BEAM WITH REINFORCED CONCRETE DECK ON CONCRETE SUBSTRUCTURE

SPANS: 42'-6"±, 42'-6"± C/C BRGS.

ROADWAY: 29'-0"± F/F CONCRETE RAILING

LOADING: H15

SKEW: NONE

WEARING SURFACE: ASPHALT CONCRETE

APPROACH SLABS: NONE

ALIGNMENT: TANGENT

CROWN: NORMAL

STRUCTURAL FILE NUMBER: 7302347

DATE BUILT: 1930

DISPOSITION: REPLACEMENT

PROPOSED STRUCTURE

TYPE: 3 SPAN CONTINUOUS SLAB BRIDGE WITH CAPPED PILE ABUTMENTS AND PIERS.

SPANS: 24'-0", 30'-0", 24'-0" C/C BRGS.

ROADWAY: 36'-0" F/F RAILING

LOADING: HL-93 AND FUTURE WEARING SURFACE OF 0.06 KSF

SKEW: NONE

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0" LONG (AS-1-15 & AS-2-15)

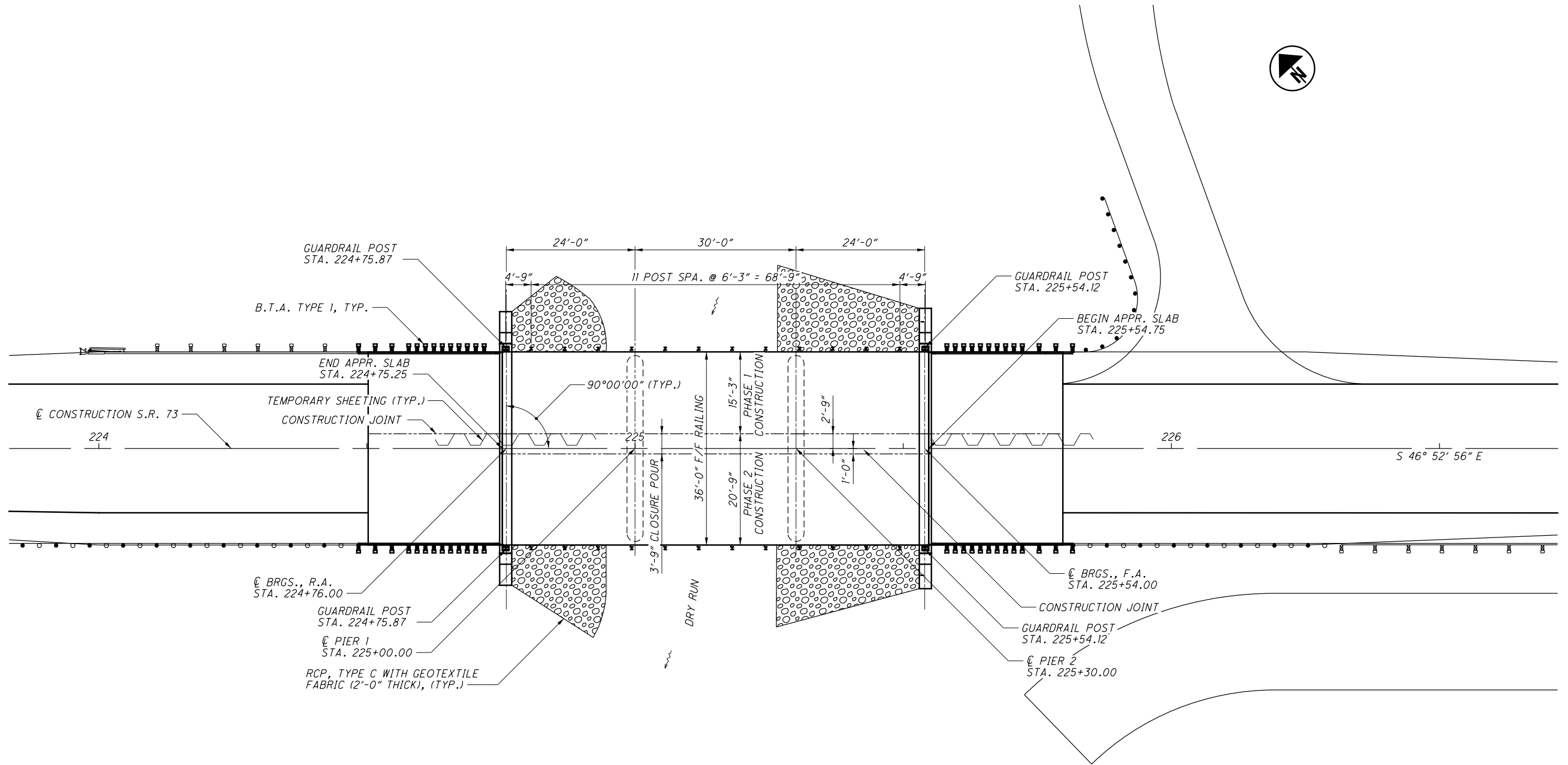
ALIGNMENT: TANGENT

CROWN: NORMAL, 0.016 FT./FT.

COORDINATES: LATITUDE 38°53'55.43" N

LONGITUDE 83°12'19.65" W

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GENERAL PLAN

PROPOSED WORK

THE DECK, CONCRETE BEAMS, REAR ABUTMENT, PIER AND PORTIONS OF THE FORWARD ABUTMENT OF THE EXISTING STRUCTURE WILL BE REMOVED. A NEW THREE SPAN REINFORCED CONCRETE SLAB WILL BE CONSTRUCTED ON NEW CAPPED PILE ABUTMENTS AND PIERS. APPROACH SLABS AND TWIN STEEL TUBE RAILINGS WILL BE INSTALLED.

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	7-17-15
AS-2-15	REVISED	1-18-19
CPA-1-08	DATED	7-18-08
CPP-1-08	REVISED	7-21-17
CS-1-08	REVISED	1-19-18
DS-1-92	REVISED	7-18-03
PCB-91	REVISED	1-18-13
TST-1-99	REVISED	7-20-18

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

LRFD LOAD MODIFIERS:

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING:

HL -93
FUTURE WEARING SURFACE (FWS) OF 0.06 KIPS/FT²

DESIGN DATA:

CONCRETE CLASS QC2 WITH QC/OA - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE AND PIER CAPS)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER
STEEL DRIP STRIP

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

REMOVE REAR ABUTMENT TO ELEV. 590.0±.
REMOVE PIER TO ELEV. 588.8±.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 94 KIPS PER PILE FOR THE ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 113 KIPS PER PILE FOR THE PIER PILES.

ABUTMENT PILES:
HP10X42 PILES 45 FEET LONG, ORDER LENGTH

PIER PILES:
HP12X53 PILES 50 FEET LONG, ORDER LENGTH

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

ITEM SPECIAL - PILE ENCASEMENT

ENCASE ALL STEEL H-PILES FOR THE CAPPED PILE PIERS IN CONCRETE CONFORMING TO C&MS 511 (F'c = 4.0 KSI). PROVIDE A CONCRETE SLUMP BETWEEN 6 TO 8 INCHES WITH THE USE OF A SUPERPLASTICIZER. PLACE THE CONCRETE WITHIN A FORM THAT CONSISTS OF POLYETHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP. POSITION THE PIPE SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

IN LIEU OF ENCASING THE PILE IN CONCRETE, GALVANIZE THE PILES ACCORDING TO 711.02. THE GALVANIZING SHALL BE CONTINUOUS FROM A MINIMUM OF 3 FEET BELOW THE FINISH GROUND SURFACE UP TO THE CONCRETE PIER CAP. THE GALVANIZED COATING THICKNESS SHALL BE A MINIMUM OF 4 MILS. REPAIR ALL GOUGES, SCRAPES, SCRATCHES OR OTHER SURFACE IMPERFECTIONS CAUSED BY THE HANDLING OR THE DRIVING OF THE PILE TO THE SATISFACTION OF THE ENGINEER.

THE DEPARTMENT WILL MEASURE PILE ENCASEMENT BY THE NUMBER OF FEET. THE DEPARTMENT WILL DETERMINE THE SUM AS THE LENGTH MEASURED ALONG THE AXIS OF EACH PILE FROM THE BOTTOM OF THE ENCASEMENT TO THE BOTTOM OF THE PIER CAP. THE DEPARTMENT WILL NOT PAY FOR GALVANIZING PROVIDED BEYOND THE PROJECT REQUIREMENTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM - SPECIAL, PILE ENCASEMENT.

ITEM 503. COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 503. UNCLASSIFIED EXCAVATION, AS PER PLAN

THIS ITEM SHALL CONSIST OF REMOVING MATERIALS FROM BEHIND THE EXISTING AND PROPOSED ABUTMENTS TO ALLOW FOR THE PROPOSED CONSTRUCTION. LIMITS OF THIS EXCAVATION SHALL BE LIMITED BETWEEN THE WINGWALLS AND EXTEND TO THE END OF THE PROPOSED APPROACH SLABS AS DETAILED ON SHEET 9/18.

THE BACKFILL MATERIAL FOR ALL EXCAVATION BEHIND THE PROPOSED REAR ABUTMENT AND UNDER THE REAR APPROACH SLAB SHALL BE LOW STRENGTH MORTAR BACKFILL (LSM). LSM, TYPE 1 SHALL CONFORM TO C&MS SECTION 613 AND BE PLACED WITHIN THE LIMITS OF THE APPROACH SLABS AND IT MAY ALSO BE USED TO CONSTRUCT THE SLOPES IN THIS SAME AREA IF IT IS COVERED WITH ONE FOOT OF SOIL TO MATCH EXISTING GRADE. THE AREA FOR THE POROUS BACKFILL WITH GEOTEXTILE FABRIC SHALL BE FORMED PRIOR TO THE PLACEMENT OF THE LSM, TYPE 1 BACKFILL AND THE GEOTEXTILE FABRIC SHALL BE PLACED AFTER THE LSM HAS CURED AND THE FORMS HAVE BEEN REMOVED.

PAYMENT TO PERFORM ALL OF THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK UNLESS SEPERATELY ITEMIZED IN THE PLANS.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING STEEL BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. MANUFACTURER'S STANDARD CAP OR PLUG SHALL BE USED TO PREVENT CONCRETE FROM ENTERING THE MECHANICAL CONNECTOR.

MECHANICAL CONNECTORS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL THAT MEETS THE SPECIFICATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT. THE MECHANICAL CONNECTOR SYSTEM USED SHALL BE ABLE TO DEVELOP 125 PERCENT OF THE FULL YIELD STRENGTH OF THE REINFORCING STEEL AS A MINIMUM.

ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE MECHANICAL REINFORCING STEEL CONNECTORS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 509, EPOXY COATED REINFORCING STEEL. SEE SHEET 18/18 FOR TOTAL.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 526. TYPE A INSTALLATION, AS PER PLAN

THIS ITEM CONSISTS OF PROVIDING THE TYPE A INSTALLATION AS SHOWN IN SCD AS-2-15 EXCEPT IT WILL BE MODIFIED AS SHOWN ON SHEET 4 OF 52 IN THE PLANS. INSTALLATION OF THE DRAINAGE ITEMS, GRANULAR MATERIAL, AND POLYMER MODIFIED EXPANSION JOINT AS SHOWN ON SCD AS-2-15 WILL NOT BE REQUIRED. SEE BASIS OF PAYMENT NOTE ON SHEET 14 OF SCD AS-2-15 AND INCLUDE PAYMENT FOR THE ASPHALT BASE COURSE SHOWN ON SHEET 4 OF 52 IN THIS ITEM OF WORK.

GENERAL NOTES

BRIDGE NO. SCI-73-0426
OVER DRY RUN

SCI-73-4-25
PID No. 20742

3 / 18

31
52



DATE 6-26-18
REVIEWED GDU
STRUCTURE FILE NUMBER 7302355

DRAWN STK
CHECKED AMR
REVISED

ESTIMATED QUANTITIES						DESIGN: AMR DATE: 3-4-19		CHECK: STK DATE: 3-4-19	
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	3
202	23500	273	SY	WEARING COURSE REMOVED			273		
503	11101	LS	-	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	3, 9
503	21301	LS	-	UNCLASSIFIED EXCAVATION, AS PER PLAN	LS				9
505	11100	LS	-	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
507	00100	630	FT	STEEL PILES HP10X42, FURNISHED	630				
507	00150	560	FT	STEEL PILES HP10X42, DRIVEN	560				
507	00200	700	FT	STEEL PILES HP12X53, FURNISHED		700			
507	00250	630	FT	STEEL PILES HP12X53, DRIVEN		630			
SPECIAL	50771200	161	FT	PILE ENCASEMENT		161			3
507	93300	28	EACH	STEEL POINTS OR SHOES	14	14			
509	10000	49565	LB	EPOXY COATED REINFORCING STEEL	6984	2732	39849		
511	33312	175	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE		17	158		
511	43510	61	CY	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING	61				
512	10100	81	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	20	10	51		
512	33000	51	SY	TYPE 2 WATERPROOFING	51				
516	13200	59	SF	1/2" PREFORMED EXPANSION JOINT FILLER	59				
516	13600	80	SF	1" PREFORMED EXPANSION JOINT FILLER	80				
516	14014	102	FT	INTEGRAL ABUTMENT EXPANSION JOINT SEAL	102				
517	70000	167	FT	RAILING (TWIN STEEL TUBE)			167		
518	21200	54	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	54				
SPECIAL	51822300	188.00	FT	STEEL DRIP STRIP			188.00		
518	40000	104	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	104				
518	40010	67	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	67				
526	25010	200	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15")				200	
526	90011	72	FT	TYPE A INSTALLATION, AS PER PLAN				72	3
601	32204	195	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	195				
613	41250	254	CY	LOW STRENGTH MORTAR BACKFILL (TYPE I)	254				

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LEGEND



WEARING COURSE REMOVED

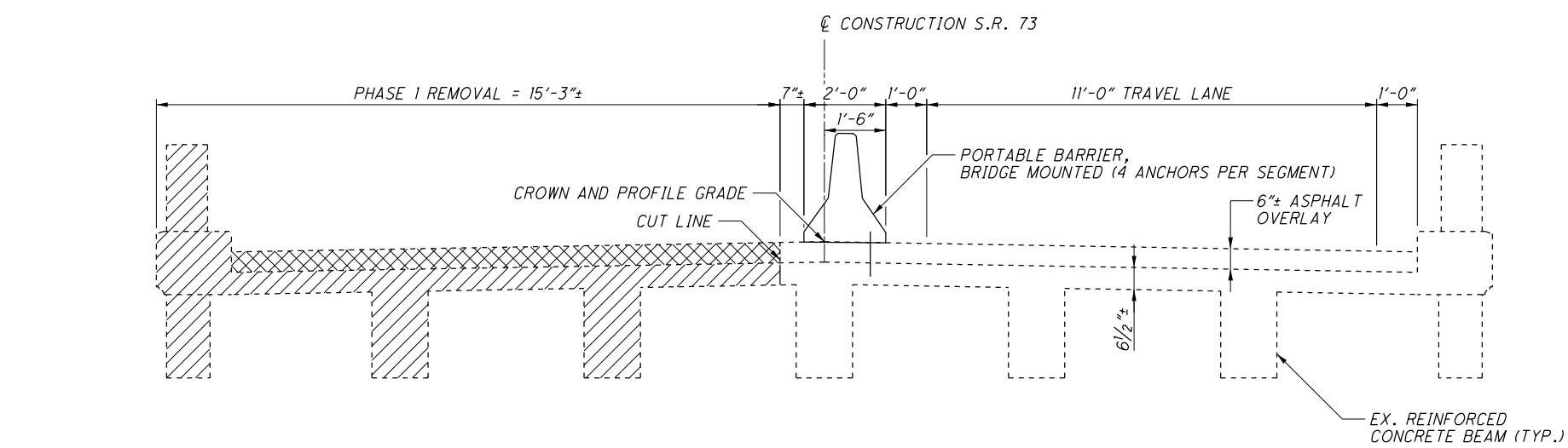


PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

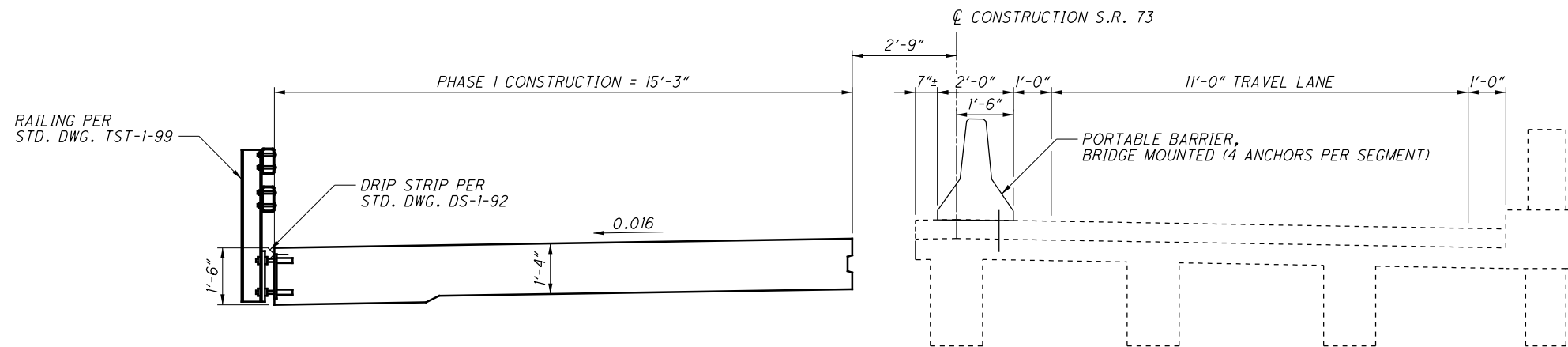
RAILING PER
STD. DWG. TST-1-99

DRIP STRIP PER
STD. DWG. DS-1-92

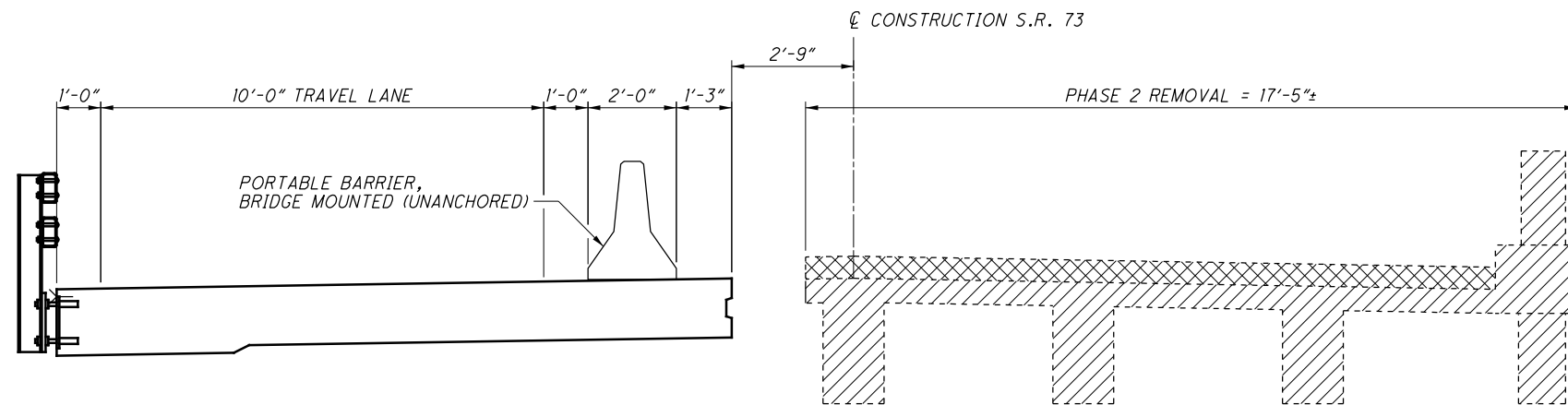
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PHASE 1 MAINTENANCE OF TRAFFIC AND REMOVAL

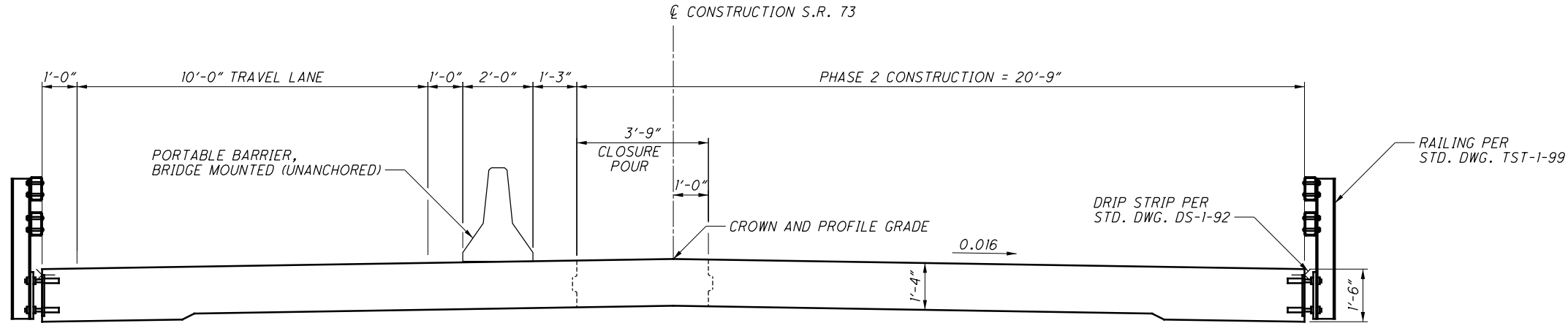


PHASE 1 CONSTRUCTION

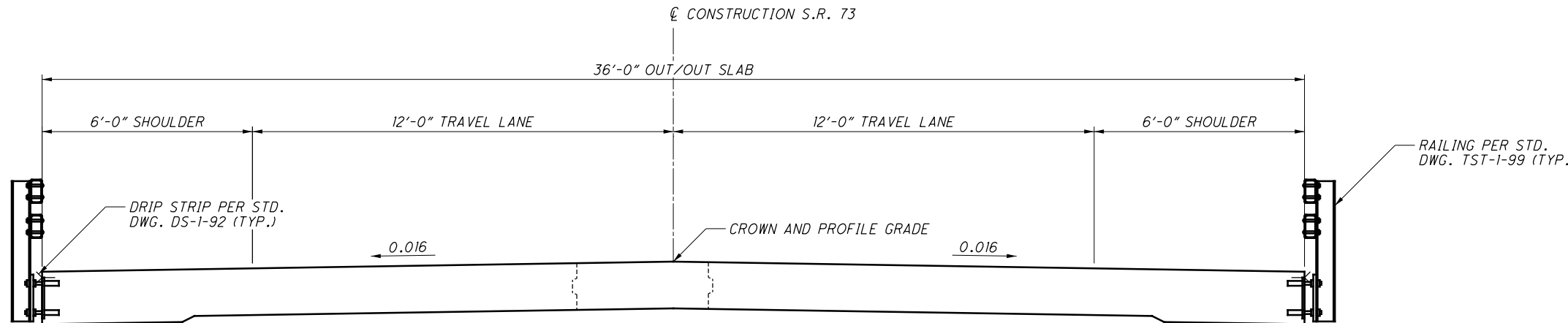


PHASE 2 MAINTENANCE OF TRAFFIC AND REMOVAL

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PHASE 2 CONSTRUCTION



FINAL CONFIGURATION

PHASE 1 MAINTENANCE OF TRAFFIC AND REMOVAL

1. ERECT THE PORTABLE BARRIER ON THE EXISTING STRUCTURE AS SHOWN ON SHEET 5/18 TO PROVIDE FOR ONE LANE, TWO-WAY TRAFFIC DURING PHASE 1 CONSTRUCTION.
2. REMOVE PORTIONS OF THE EXISTING ABUTMENTS, PIER AND SUPERSTRUCTURE NOT NEEDED TO MAINTAIN TRAFFIC AS NECESSARY TO ACCOMODATE PHASE 1 CONSTRUCTION.

PHASE 1 CONSTRUCTION

1. CONSTRUCT PORTIONS OF THE REINFORCED CONCRETE SLAB, PIERS AND ABUTMENTS AS SHOWN ON THE PLANS.

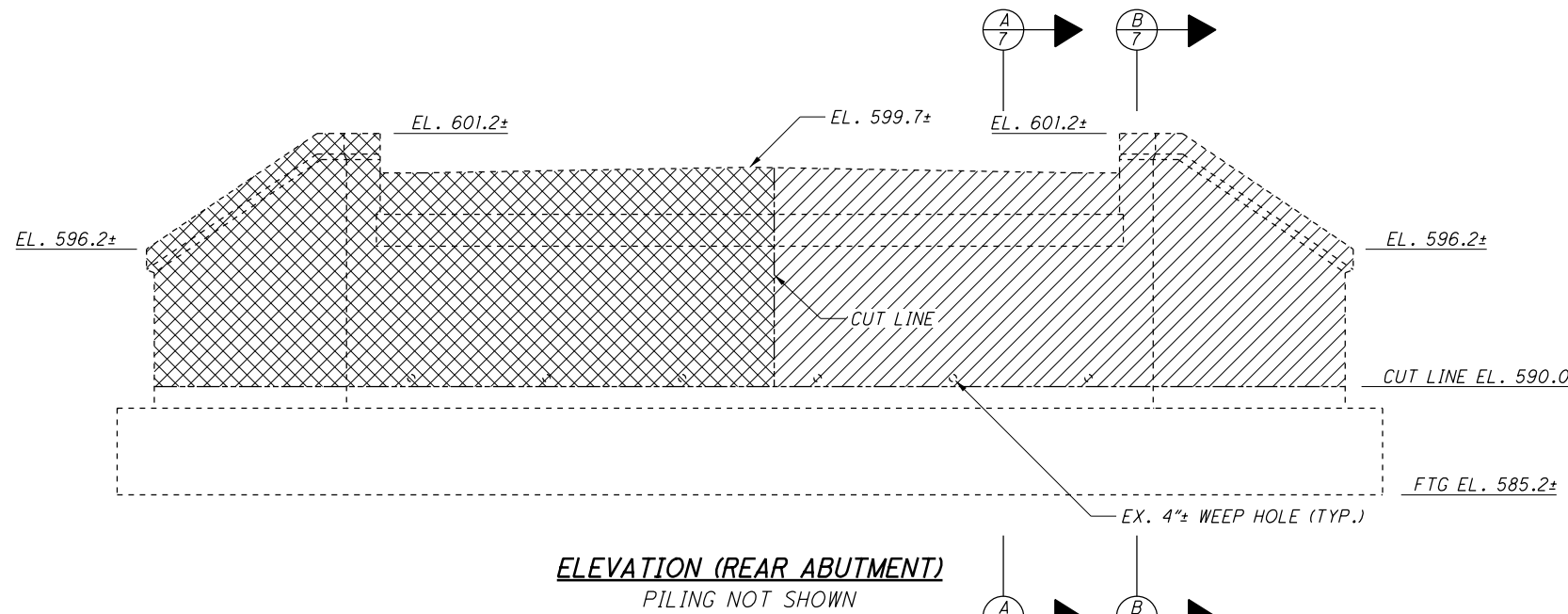
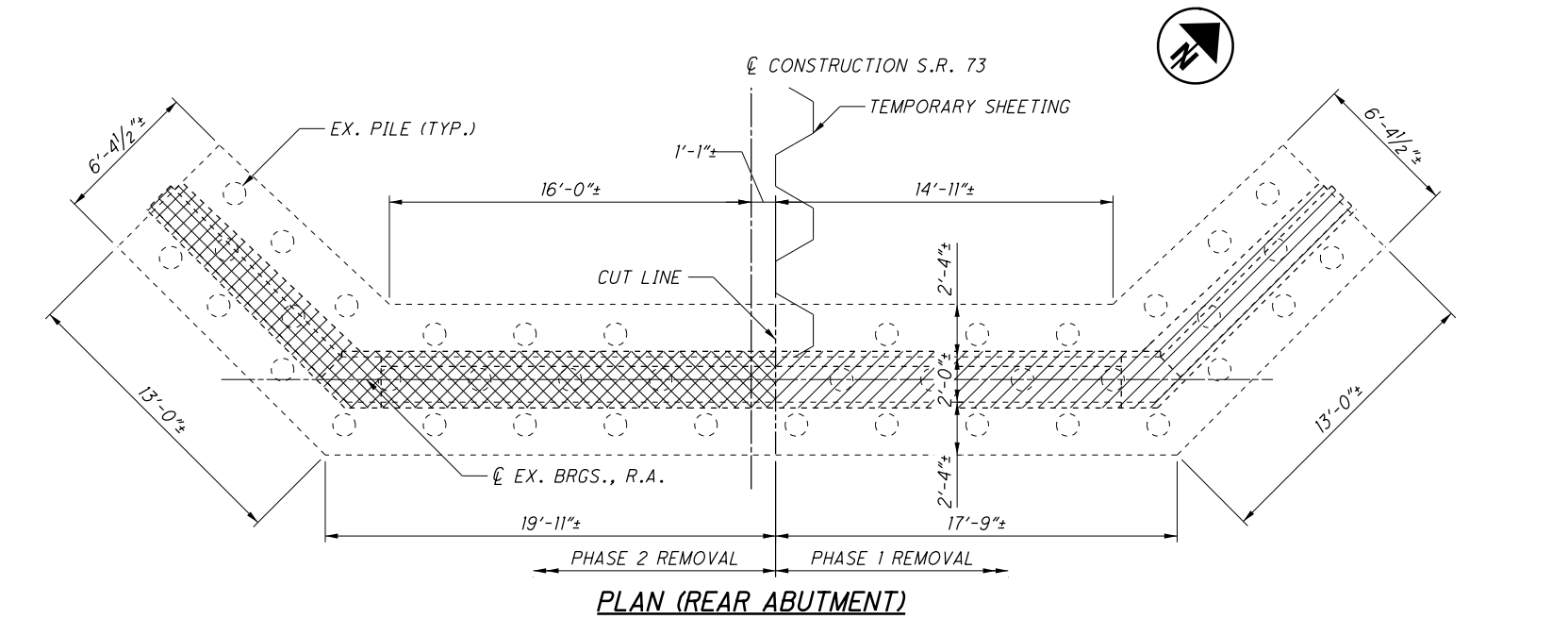
PHASE 2 MAINTENANCE OF TRAFFIC AND REMOVAL

1. ERECT THE PORTABLE BARRIER ON THE NEWLY CONSTRUCTED SIDE AS SHOWN TO PROVIDE FOR ONE LANE, TWO-WAY TRAFFIC DURING PHASE 2 CONSTRUCTION.
2. REMOVE REMAINING PORTIONS OF THE EXISTING SUPERSTRUCTURE, PIER AND ABUTMENTS.

PHASE 2 CONSTRUCTION

1. CONSTRUCT THE REMAINING PORTIONS OF THE REINFORCED CONCRETE SLAB, PIERS AND ABUTMENTS AS SHOWN ON THE PLANS.
2. CONSTRUCT SLAB CLOSURE POUR.

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LEGEND



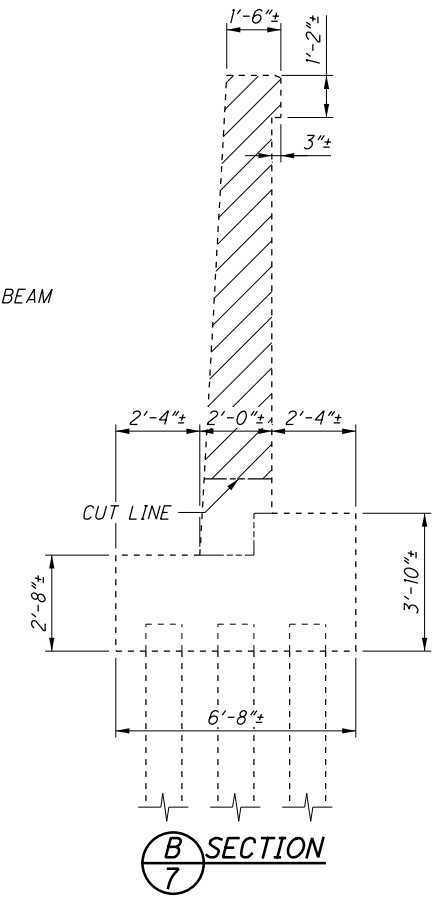
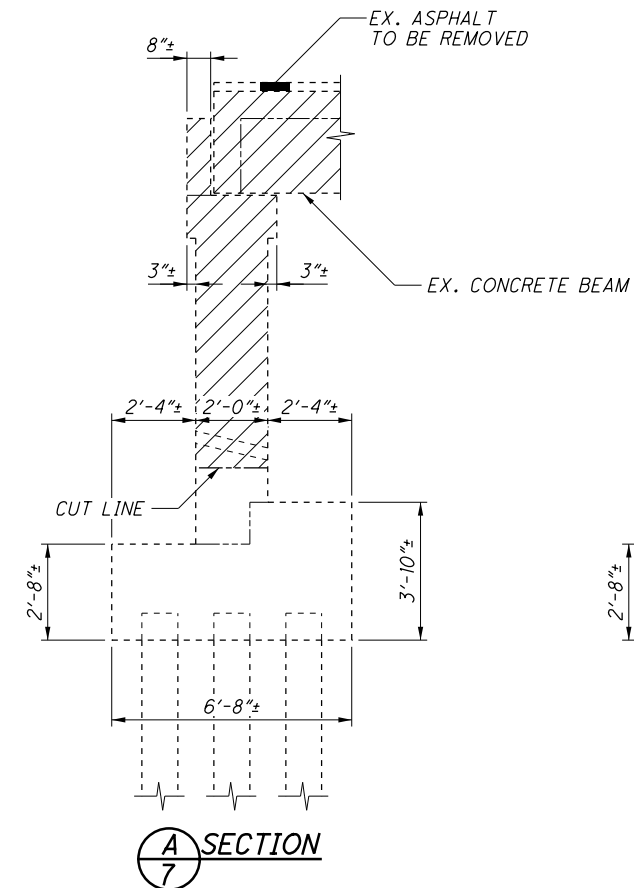
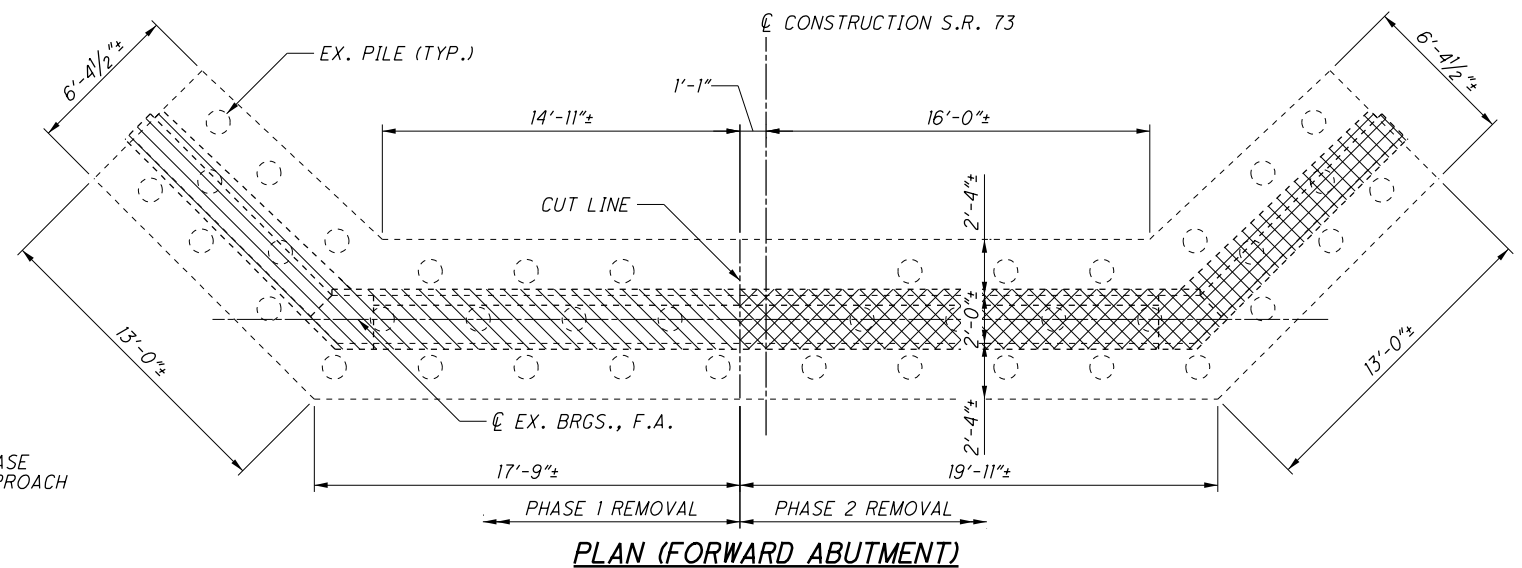
PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 1 REMOVAL



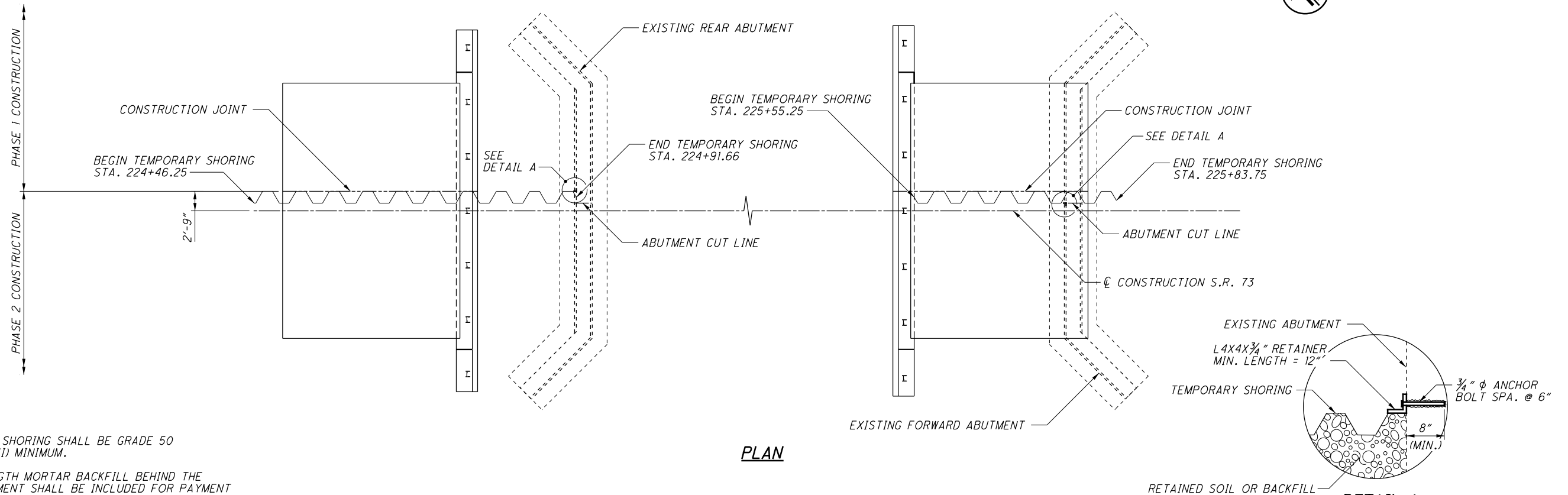
PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - PHASE 2 REMOVAL

NOTES

1. PORTIONS OF THE FORWARD ABUTMENT SHALL BE REMOVED DURING EACH PHASE PER C&MS 202.03 TO ALLOW FOR THE CONSTRUCTION OF THE FORWARD APPROACH SLAB AND TERMINAL ASSEMBLIES.
2. PILING INFORMATION NOT PROVIDED IN EXISTING PLANS.



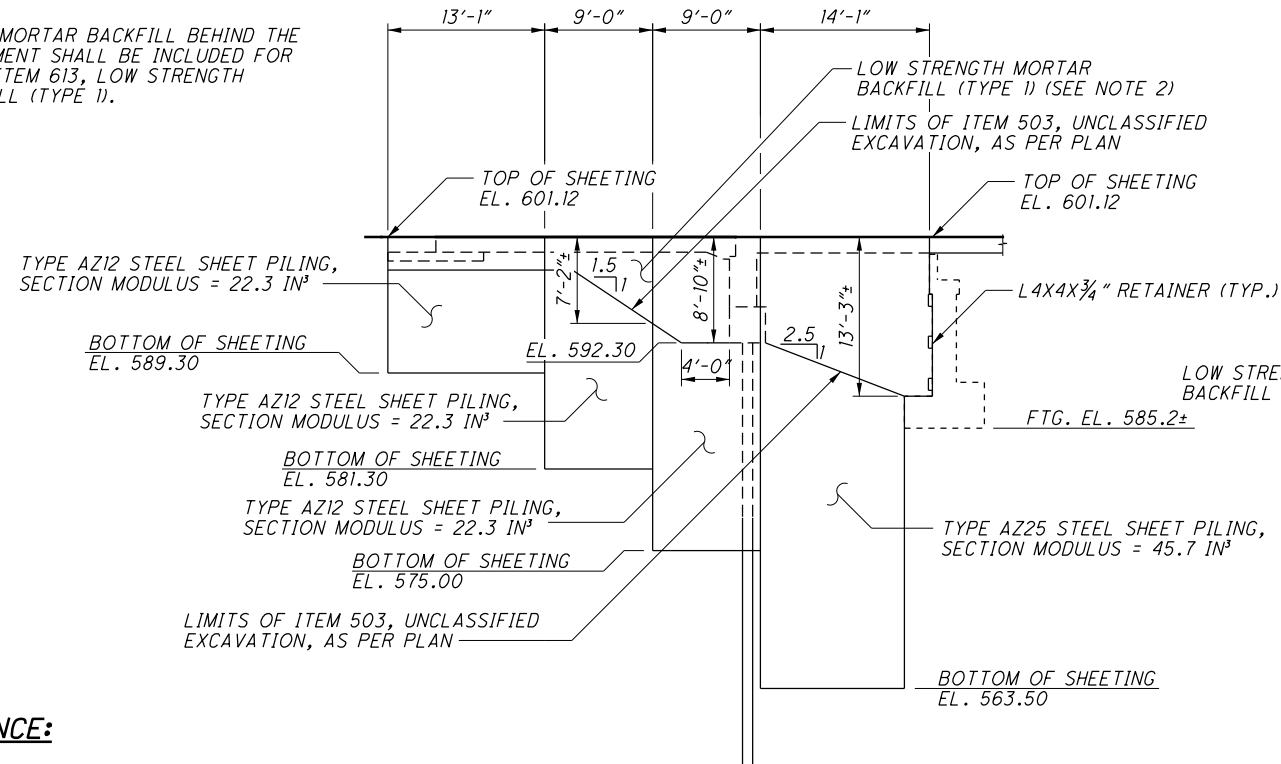
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PLAN

NOTES

1. TEMPORARY SHORING SHALL BE GRADE 50 (Fy = 50 KSI) MINIMUM.
2. LOW STRENGTH MORTAR BACKFILL BEHIND THE REAR ABUTMENT SHALL BE INCLUDED FOR PAYMENT WITH ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN.
3. LOW STRENGTH MORTAR BACKFILL BEHIND THE FORWARD ABUTMENT SHALL BE INCLUDED FOR PAYMENT WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL (TYPE 1).

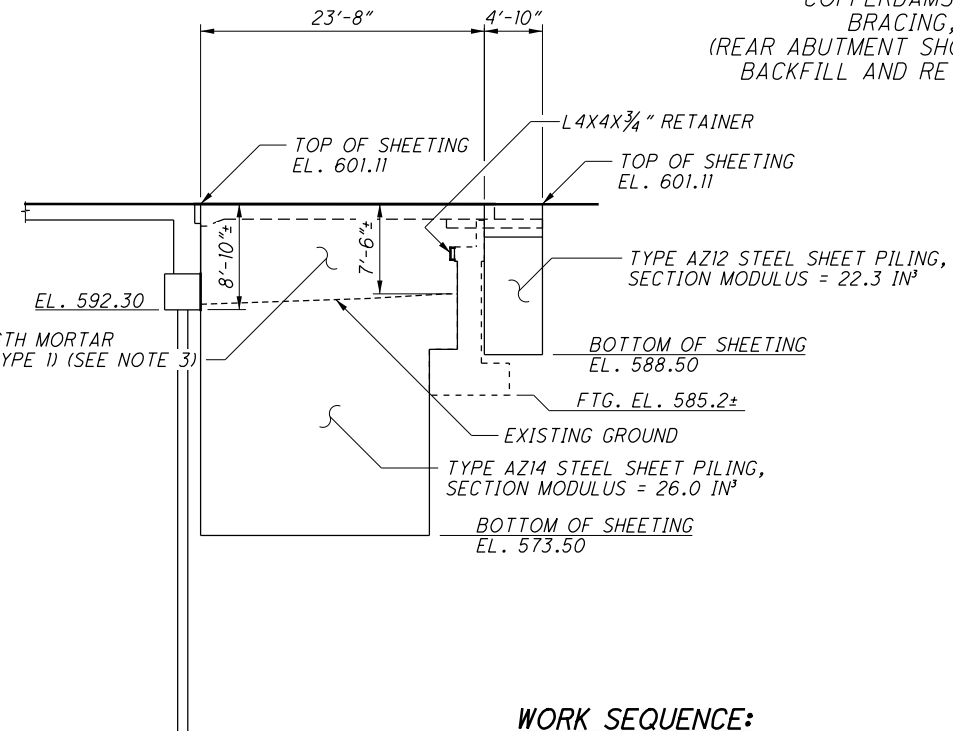


ELEVATION

WORK SEQUENCE:

REAR ABUTMENT

1. REMOVE PORTIONS OF EXISTING PAVEMENT, DECK AND EMBANKMENT TO ALLOW FOR INSTALLATION OF SHORING.
2. INSTALL SHORING BEHIND EXISTING ABUTMENT.
3. EXCAVATE TO LIMITS SHOWN AND REMOVE PORTIONS OF THE EXISTING STRUCTURE AS SHOWN IN THE PLAN SET.
4. CONSTRUCT PORTIONS OF PROPOSED STRUCTURE AS SHOWN IN THE PLAN SET FOR PHASE 1.



ELEVATION

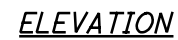
WORK SEQUENCE:

FORWARD ABUTMENT

1. REMOVE PORTIONS OF EXISTING PAVEMENT, DECK AND EMBANKMENT TO ALLOW FOR PHASE 1 CONSTRUCTION OF THE ABUTMENT AS SHOWN IN THE PLANS.
2. INSTALL SHORING BEHIND THE NEW ABUTMENT.
3. BACKFILL AREA BEHIND NEW ABUTMENT TO LIMITS OF APPROACH SLAB.
4. CONSTRUCT PORTIONS OF APPROACH SLAB AS SHOWN IN THE PLAN SET.

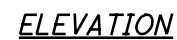


1. REFER TO STD. DWGS. CPA-1-08 AND TST-1-99 FOR ADDITIONAL DETAILS.
2. 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT. INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE.
3. OPTIONAL CONSTRUCTION JOINT. REFER TO STD. DWG. TST-1-99.



% - BAR TO UTILIZE A MECHANICAL CONNECTOR
E.F. - EACH FACE
F - ELEVATION TAKEN AT BRIDGE LIMITS
A - 5-A801, 5-S503 & 2 SETS OF 5-S504 @ 4 EQ. SPA. = 3'-5"
B - 4-D801, 3 SPA. @ 1'-1" = 3'-3"
(X) - PILE NUMBER

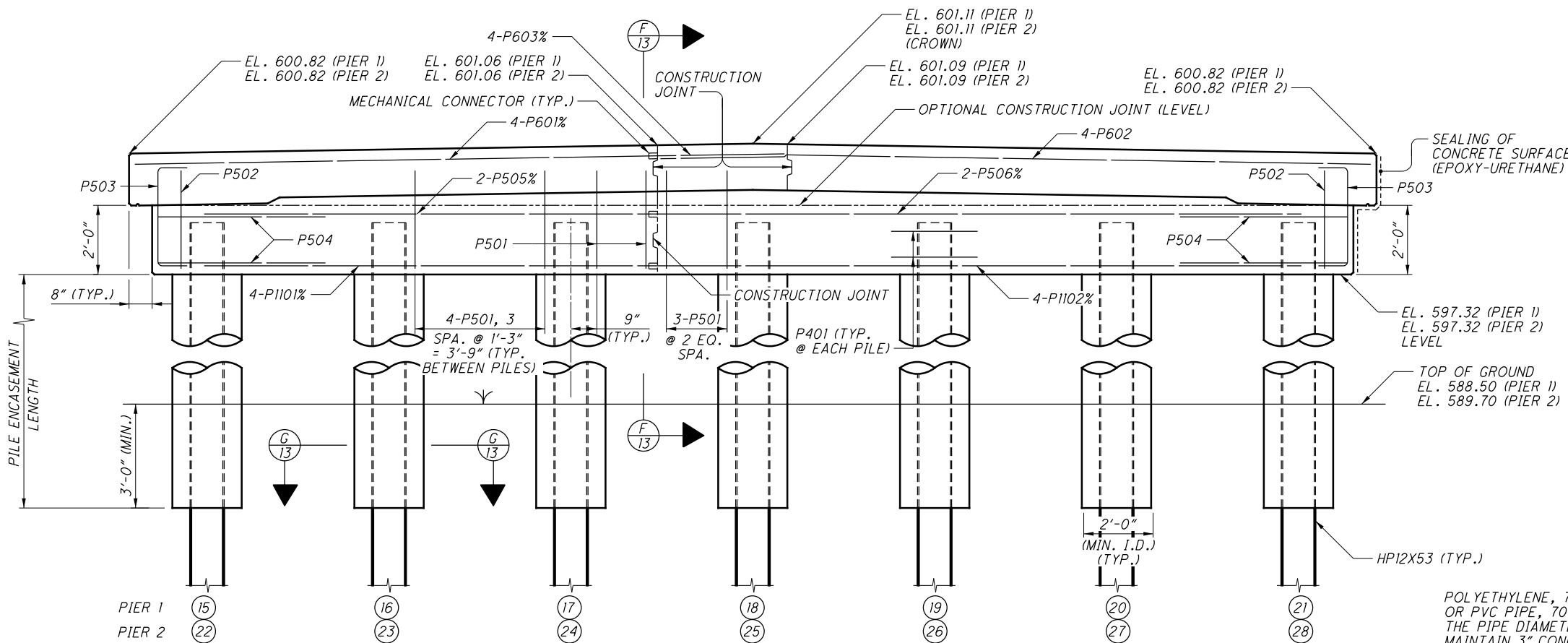
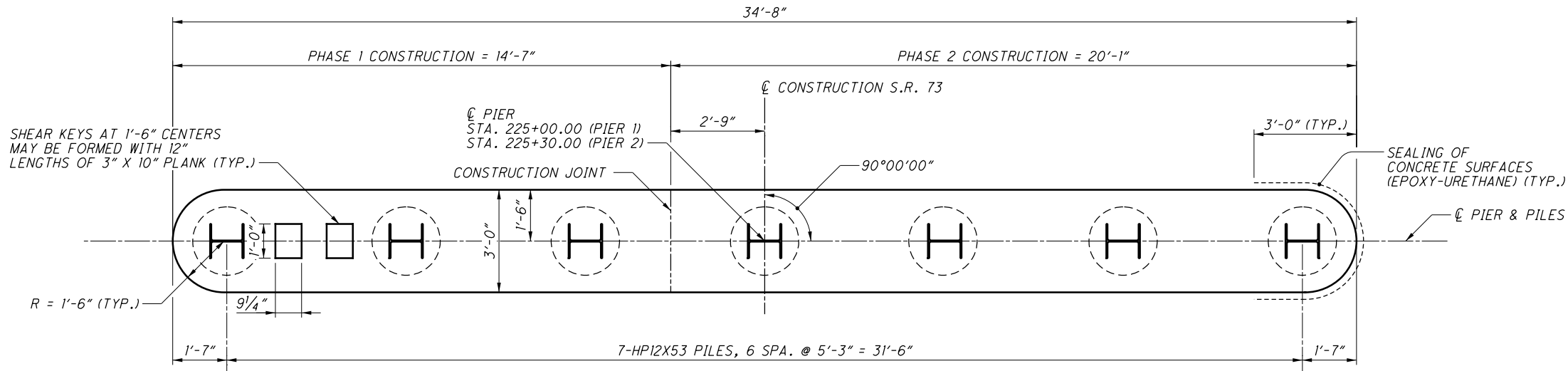
1. REFER TO STD. DWGS. CPA-1-08 AND TST-1-99 FOR ADDITIONAL DETAILS.
2. 2'-0" WIDE HMWM RESIN CENTERED ON CONSTRUCTION JOINT.
INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE
WITH QC/QA, SUPERSTRUCTURE.
3. OPTIONAL CONSTRUCTION JOINT. REFER TO STD. DWG. TST-1-99.



% - BAR TO UTILIZE A MECHANICAL CONNECTOR
E.F. - EACH FACE
F - ELEVATION TAKEN AT BRIDGE LIMITS
A - 5-A801, 5-S503 & 2 SETS OF 5-S504 @ 4 EQ. SPA. = 3'-5"
B - 4-D801, 3 SPA. @ 1'-1" = 3'-3"
(X) - PILE NUMBER



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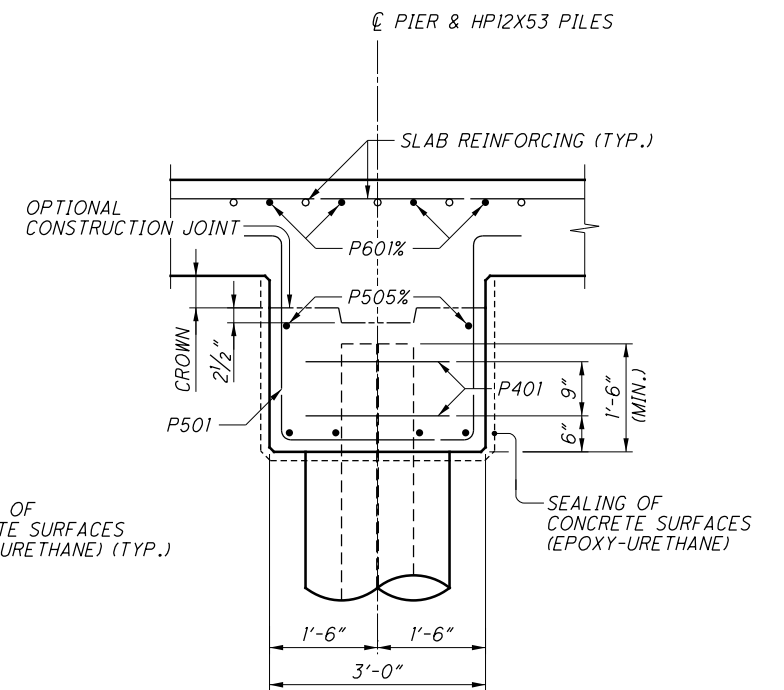
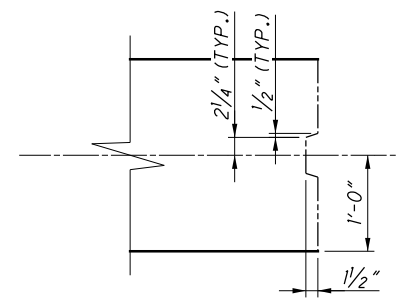


NOTES

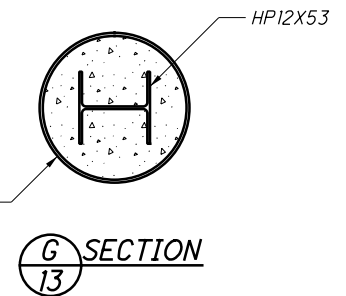
1. REFER TO STD. DWG. CPP-1-08 FOR ADDITIONAL NOTES AND DETAILS.
2. ELEVATIONS SHOWN ARE TAKEN AT CL OF PIER & PILES.
3. REFER TO SHEET 15/18 FOR SLAB KEYWAY DETAILS.

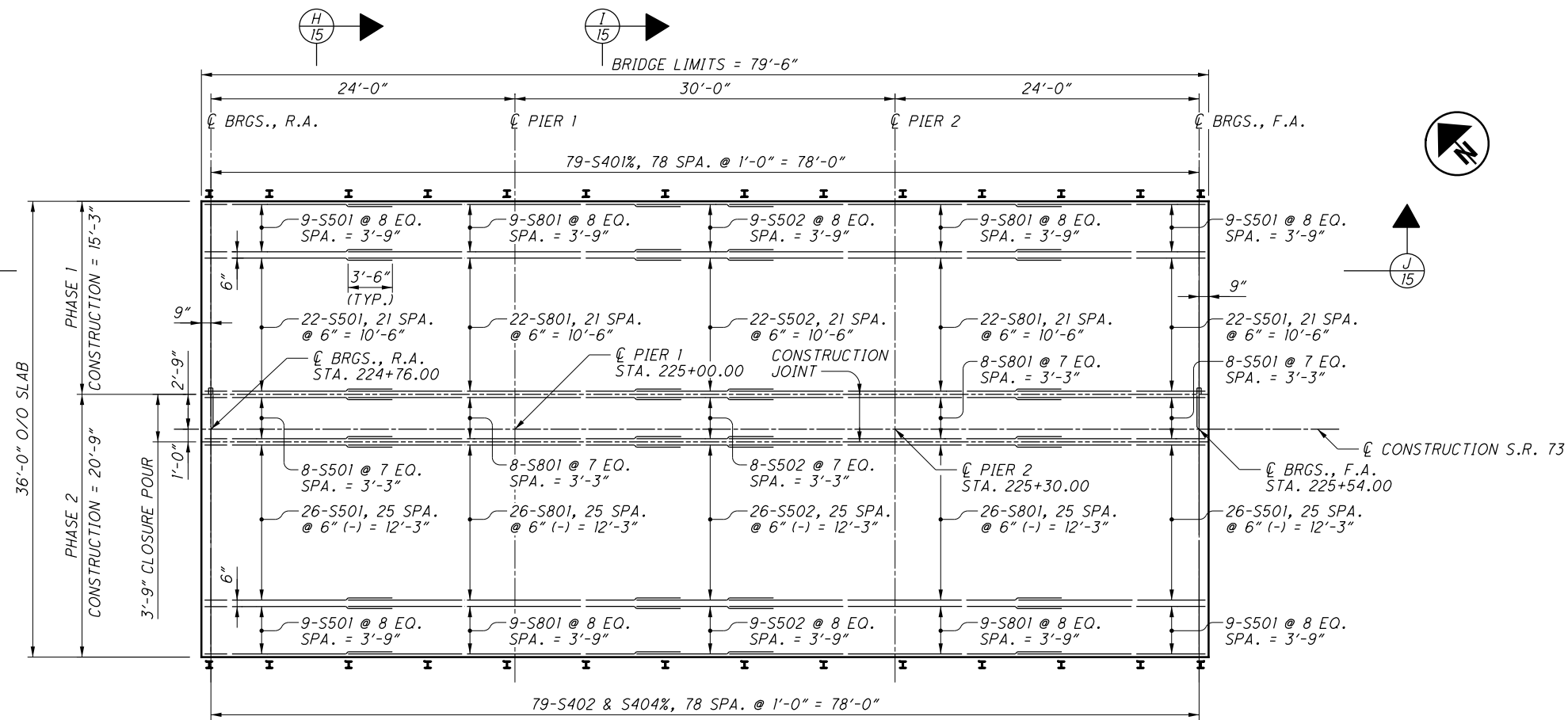
LEGEND

- % - BAR TO UTILIZE A MECHANICAL CONNECTOR
- (X) - PILE NUMBER

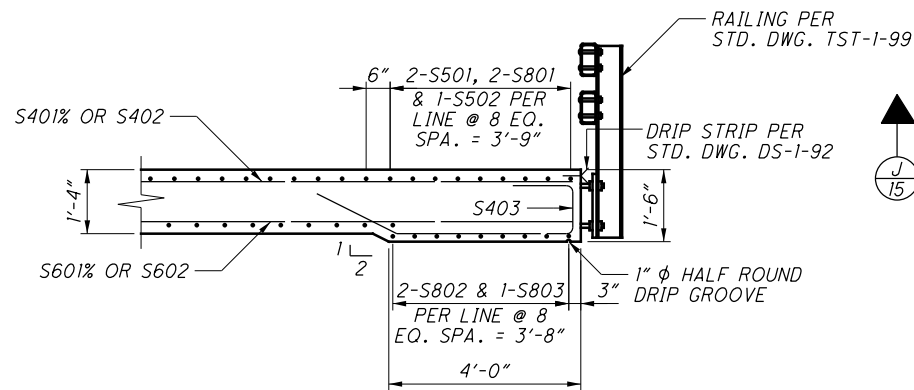


SECTION F
BARS NOT LABELED ARE P1101%

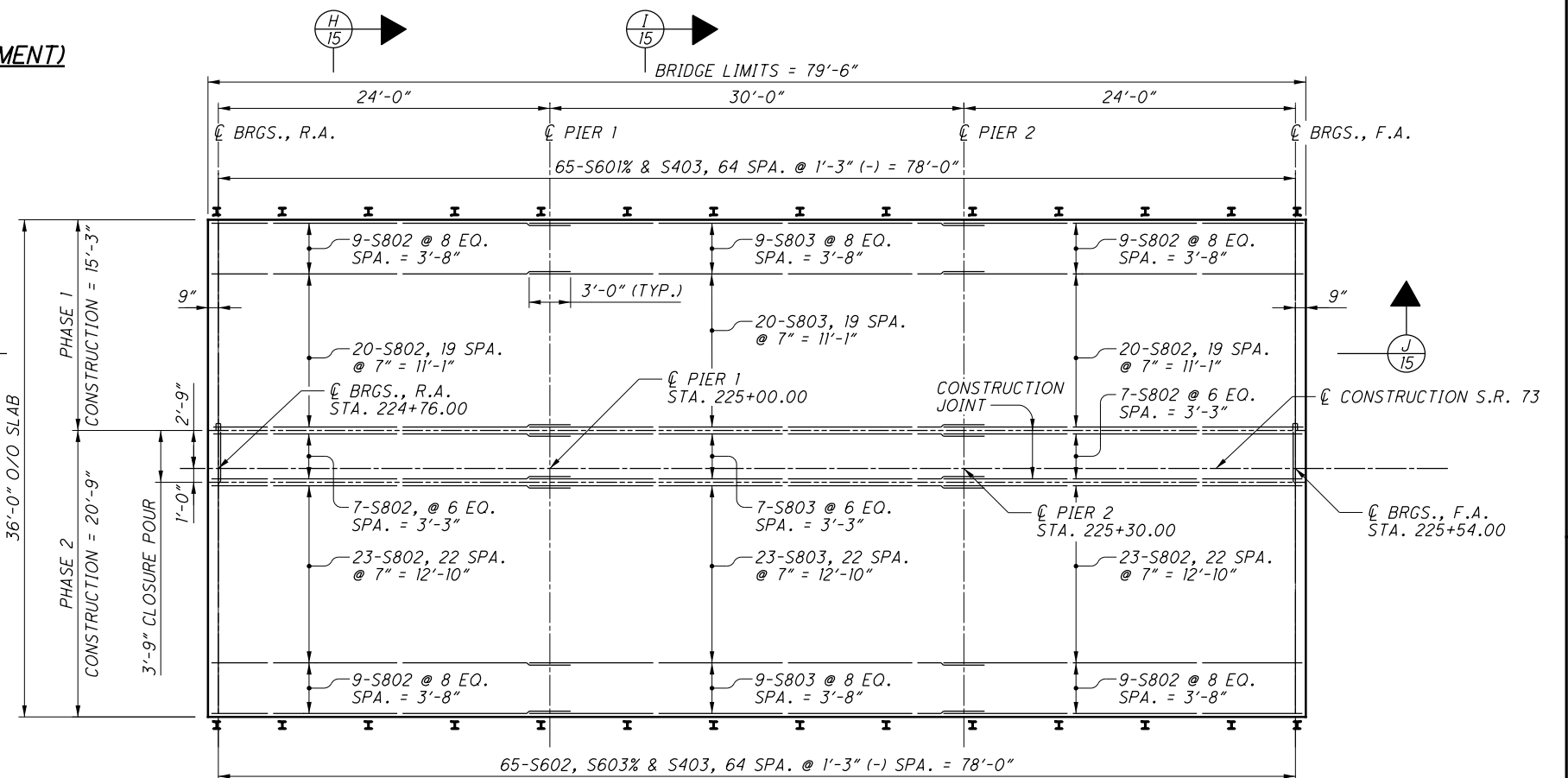




PLAN (TOP REINFORCEMENT)



EDGE BEAM DETAIL



PLAN (BOTTOM REINFORCEMENT)

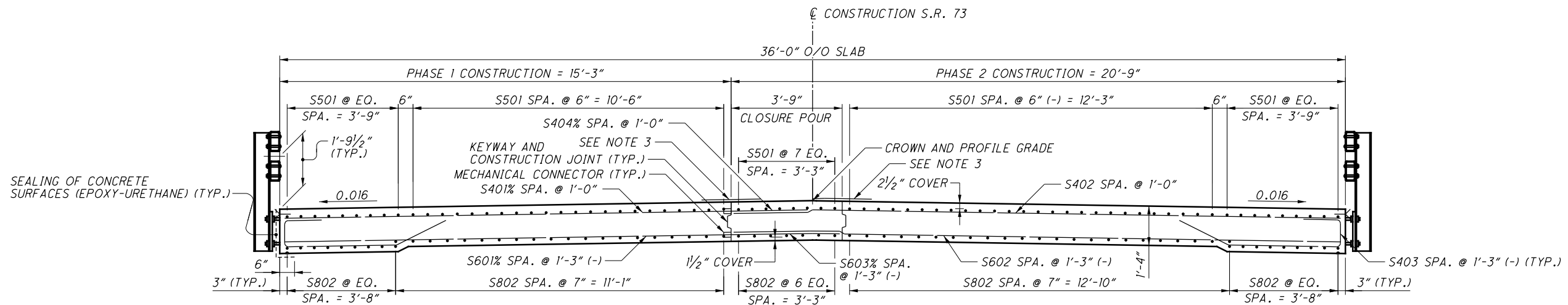
LEGEND

% - BAR TO UTILIZE A MECHANICAL CONNECTOR

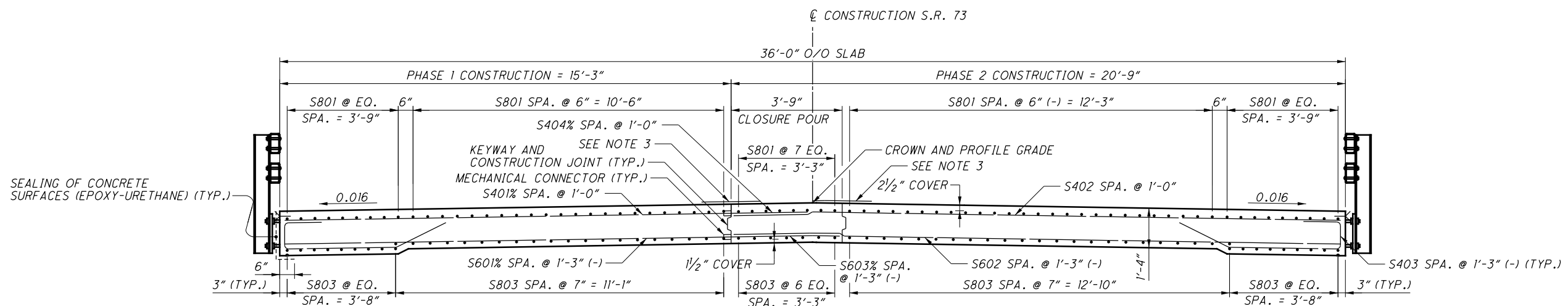
NOTES

1. REFER TO STD. DWG. CS-1-08 FOR ADDITIONAL DETAILS.
2. REFER TO SHEET 2/18 FOR RAILING POST SPACINGS.

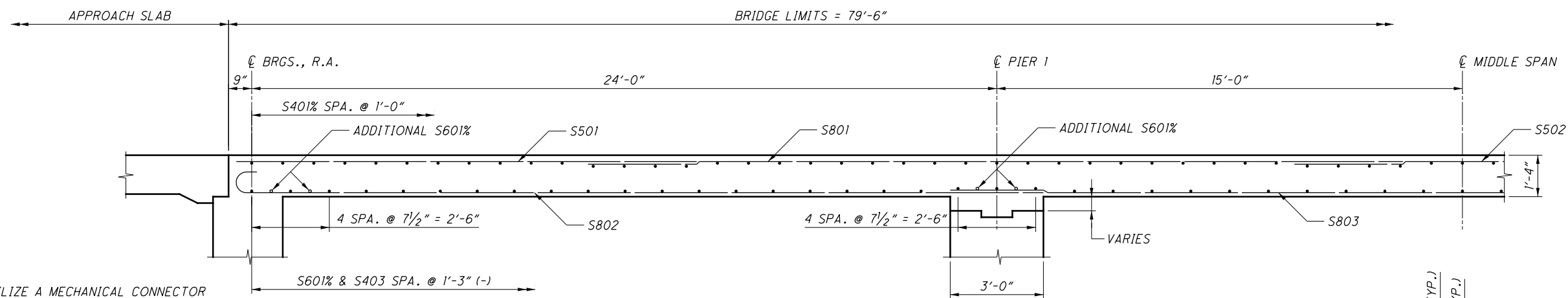
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H 14 TRANSVERSE SECTION



I 14 TRANSVERSE SECTION



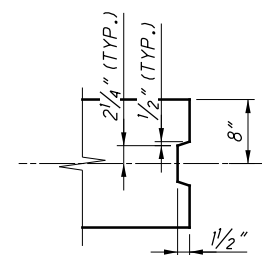
LEGEND

% - BAR TO UTILIZE A MECHANICAL CONNECTOR

NOTES

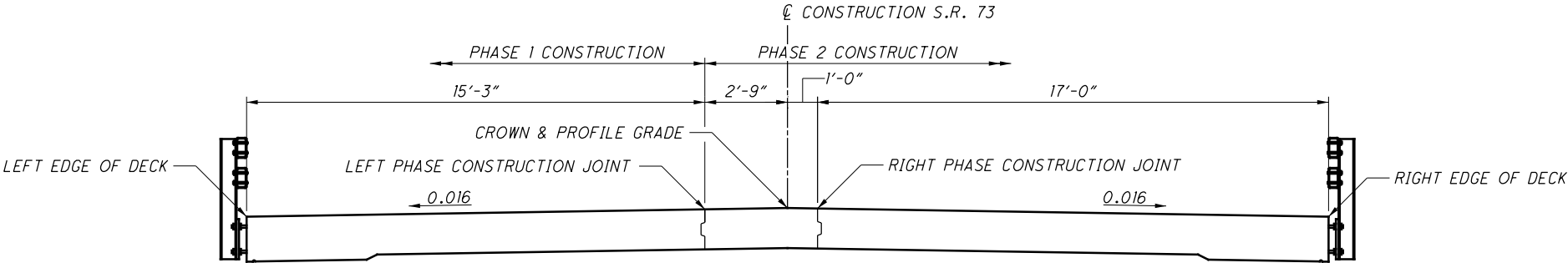
1. REFER TO SHEET 14/18 FOR EDGE BEAM DETAILS.
2. REFER TO STD. DWG. CS-I-08 FOR ADDITIONAL DETAILS.
3. 2'-0" WIDE HMMW RESIN CENTERED ON TOP OF DECK CONSTRUCTION JOINT. PAYMENT INCLUDED WITH ITEM 511, CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE.

J 14 LONGITUDINAL SECTION
SYMMETRICAL ABOUT CL MIDDLE SPAN



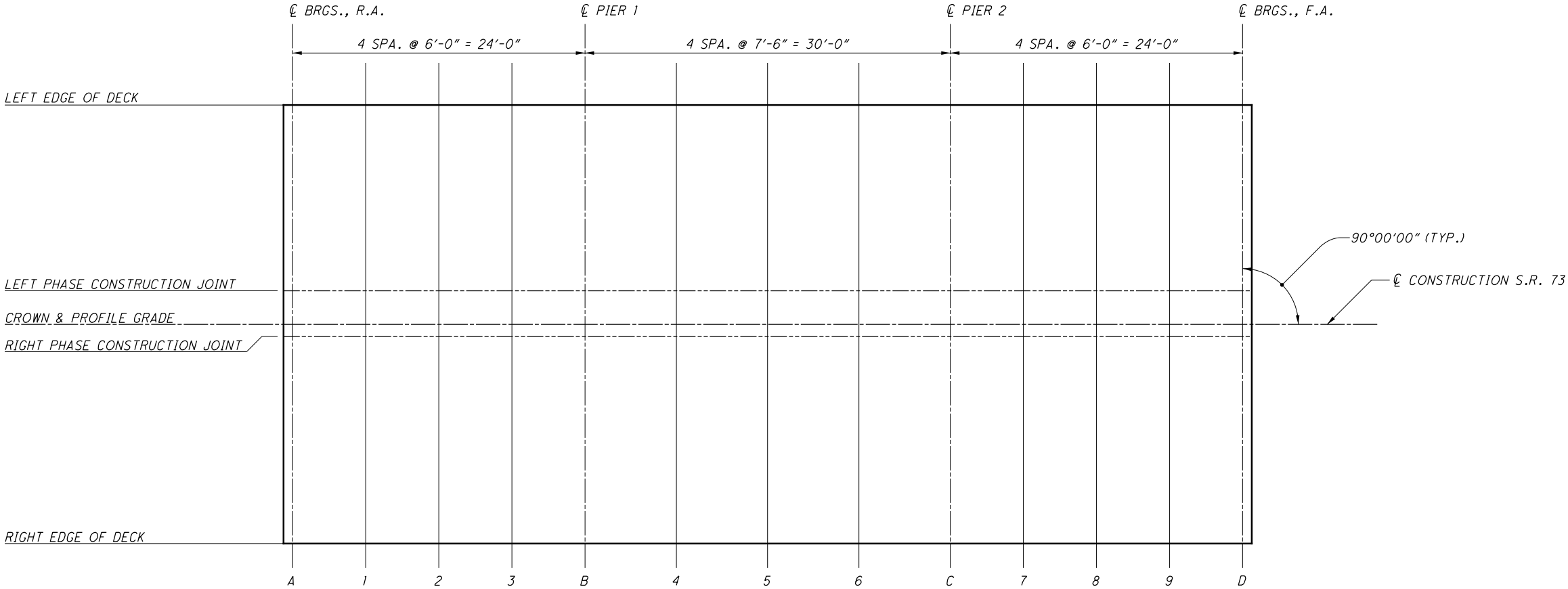
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FINAL DECK SURFACE ELEVATIONS TABLE (FT.)														
LOCATION	DESCRIPTION	A	1	2	3	B	4	5	6	C	7	8	9	D
LEFT EDGE OF DECK	STATION	224+76.00	224+82.00	224+88.00	224+94.00	225+00.00	225+07.50	225+15.00	225+22.50	225+30.00	225+36.00	225+42.00	225+48.00	225+54.00
	ELEVATION	600.83	600.83	600.83	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82
LEFT PHASE CONSTRUCTION JOINT	STATION	224+76.00	224+82.00	224+88.00	224+94.00	225+00.00	225+07.50	225+15.00	225+22.50	225+30.00	225+36.00	225+42.00	225+48.00	225+54.00
	ELEVATION	601.07	601.07	601.07	601.06	601.06	601.06	601.06	601.06	601.06	601.06	601.06	601.06	601.06
CROWN & PROFILE GRADE	STATION	224+76.00	224+82.00	224+88.00	224+94.00	225+00.00	225+07.50	225+15.00	225+22.50	225+30.00	225+36.00	225+42.00	225+48.00	225+54.00
	ELEVATION	601.12	601.12	601.12	601.11	601.11	601.11	601.11	601.11	601.11	601.11	601.11	601.11	601.11
RIGHT PHASE CONSTRUCTION JOINT	STATION	224+76.00	224+82.00	224+88.00	224+94.00	225+00.00	225+07.50	225+15.00	225+22.50	225+30.00	225+36.00	225+42.00	225+48.00	225+54.00
	ELEVATION	601.10	601.10	601.10	601.10	601.10	601.10	601.10	601.10	601.09	601.09	601.09	601.09	601.09
RIGHT EDGE OF DECK	STATION	224+76.00	224+82.00	224+88.00	224+94.00	225+00.00	225+07.50	225+15.00	225+22.50	225+30.00	225+36.00	225+42.00	225+48.00	225+54.00
	ELEVATION	600.83	600.83	600.83	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82	600.82



NOTE
FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

TRANSVERSE SECTION



PLAN

DESIGN AGENCY
CARPENTER MARTY
TRANSPORTATION CONSULTANTS

REVIEWED
GDJ

DRAWN
AMR

DESIGNED
AMR

DATE
6-25-18

STRUCTURE FILE NUMBER
7302355

REVISED

CHECKED
STK

FINAL DECK SURFACE ELEVATIONS

BRIDGE NO. SCI-73-0426
OVER DRY RUN

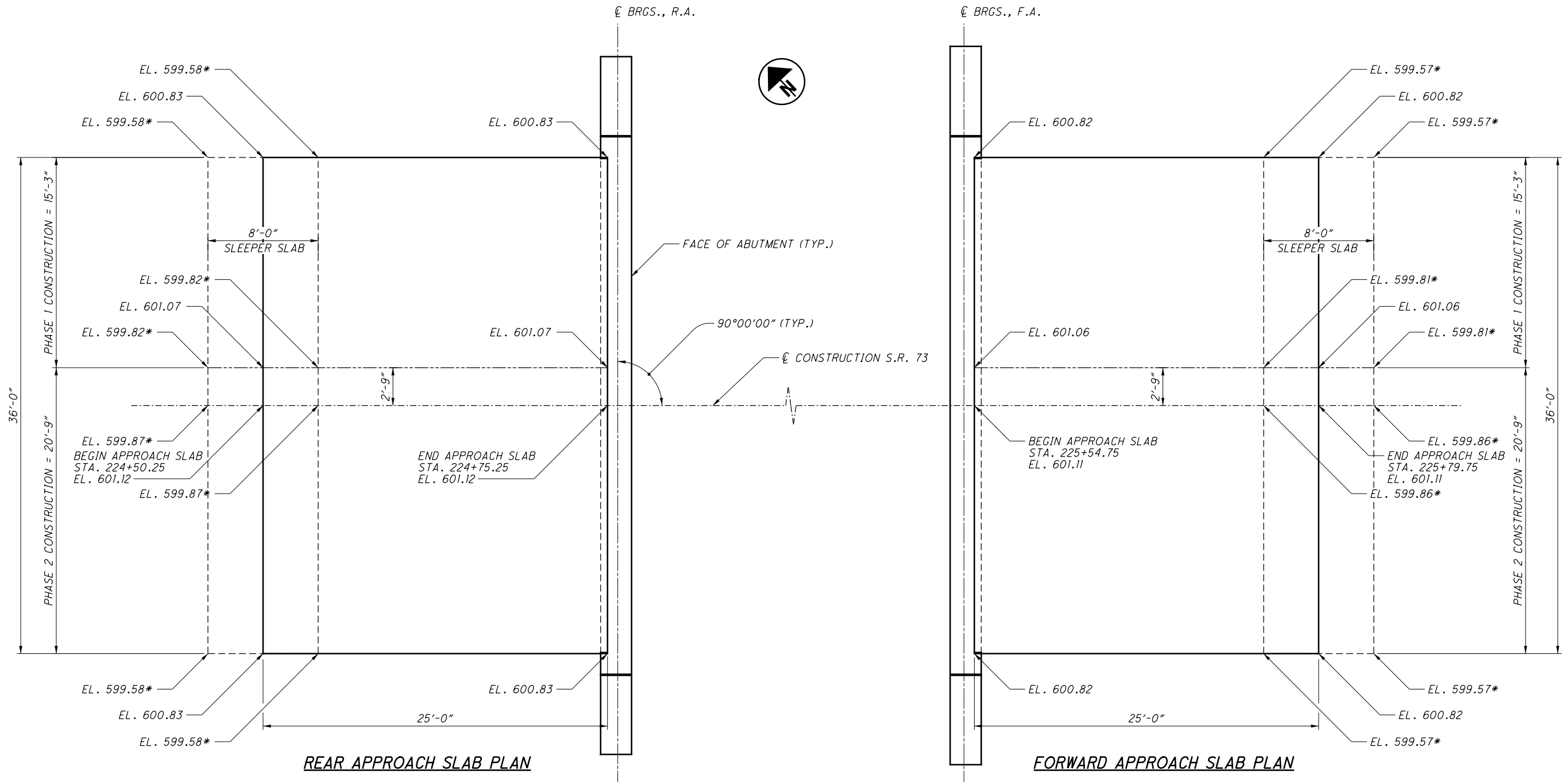
SCI-73-4.25

PID No. 20742

16 / 18

44
52

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LEGEND

* - SLEEPER SLAB ELEVATION

NOTES

1. REFER TO STD. DWGS. AS-1-15 AND AS-2-15 FOR ADDITIONAL NOTES AND DETAILS.
2. SLEEPER SLAB ELEVATIONS ARE TAKEN AT THE TOP OF THE SLEEPER SLAB.
3. REFER TO ROADWAY PLANS FOR TYPE A INSTALLATION DETAILS.

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS			
	REAR	FWD	TOTAL				A	B	C	INC
ABUTMENTS										
A401	14	14	28	8'-10"	166	3	1'-9"	2'-6"		
A501	41	43	84	11'-2"	979	3	2'-8"	2'-7"		
A502	31	31	62	12'-6"	809	3	1'-11"	4'-0"		
A503%	6		6	28'-1"	176	STR				
A504%	6		6	22'-7"	142	STR				
A505	4	6	10	18'-6"	193	3	1'-11"	7'-0"		
A506	2 SERIES OF 3		2 SERIES OF 3	15'-0" TO 17'-10"	103	3	1'-11"	5'-3" TO 6'-8"		1'-5"
A507	8		8	5'-7"	47	STR				
A508	4		4	3'-8"	16	STR				
A509	4		4	5'-11"	25	19	4'-2"	1'-7"	9"	
A510%		6	6	23'-2"	145	STR				
A511%		6	6	28'-8"	180	STR				
A512		2 SERIES OF 3	2 SERIES OF 3	14'-2" TO 17'-2"	99	3	1'-11"	4'-10" TO 6'-4"		1'-6"
A513		4	4	6'-2"	26	STR				
A514		4	4	5'-4"	23	STR				
A515		4	4	3'-7"	15	STR				
A516		4	4	6'-8"	28	19	4'-11"	1'-7"	9"	
A801	41	41	82	3'-10"	840	17	2'-0"			
A802%	8		8	28'-1"	600	STR				
A803%	8		8	22'-7"	483	STR				
A804%		8	8	23'-2"	495	STR				
A805%		8	8	28'-8"	613	STR				
D801	27	27	54	5'-5"	781	18	3'-3"	1'-0"	1'-0"	
SUB-TOTAL					6984					

NOTES

1. THE BAR NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

2. ALL REINFORCING STEEL TO BE EPOXY COATED.

LEGEND

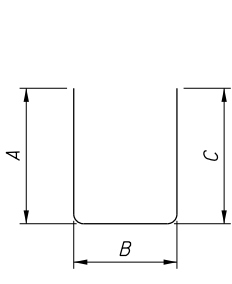
% - BARS TO UTILIZE A MECHANICAL CONNECTOR

MECHANICAL CONNECTORS		
LOCATION	BAR SIZE	TOTAL
ABUTMENTS	5	12
	8	16
PIERS	5	4
	6	8
	11	8
SUPERSTRUCTURE	4	79
	6	73
	8	20

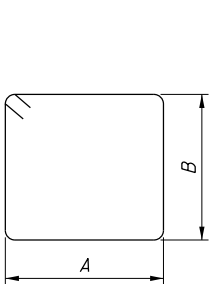
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS				
					A	B	C	D	E
SUPERSTRUCTURE									
S401%	79	15'-1"	796	STR					
S402	79	20'-6"	1082	STR					
S403	130	7'-7"	659	12	10"	1'-8"	3'-8"	1'-0"	1'-3"
S404%	79	2'-7"	137	STR					
S501	148	14'-10"	2290	STR					
S502	74	10'-10"	837	STR					
S503	78	6'-8"	543	3	1'-11"	1'-1"			
S504	156	6'-0"	977	2	2'-5"	1'-5"	2'-5"		
S505	8	9'-8"	81	3	1'-11"	2'-7"			
S601%	73	15'-1"	1654	STR					
S602	73	20'-6"	2248	STR					
S603%	73	3'-8"	403	STR					
S801	148	26'-3"	10373	STR					
S802	136	26'-11"	9774	16	26'-0"				
S803	68	33'-0"	5992	STR					
S804%	8	20'-7"	440	STR					
S805%	8	15'-1"	323	STR					
S806%	12	22'-1"	708	STR					
S807%	12	16'-7"	532	STR					
SUB-TOTAL				39849					

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS		
	PIER 1	PIER 2	TOTAL				A	B	C
PIERS									
P401	14	14	28	9'-5"	177	3	2'-6"	2'-0"	
P501	25	25	50	8'-10"	461	6	2'-8"	2'-8"	8"
P502	2	2	4	7'-11"	34	6	1'-9"	2'-8"	8"
P503	2	2	4	3'-9"	16	2	8"	2'-8"	8"
P504	4	4	8	10'-9"	90	24	2'-6"	3'-5"	
P505%	2	2	4	13'-1"	55	STR			
P506%	2	2	4	18'-7"	78	STR			
P601%	4	4	8	15'-1"	182	STR			
P602	4	4	8	20'-6"	247	STR			
P603%	4	4	8	3'-8"	45	STR			
PII01%	4	4	8	13'-1"	557	STR			
PII02%	4	4	8	18'-7"	790	STR			
SUB-TOTAL					2732				

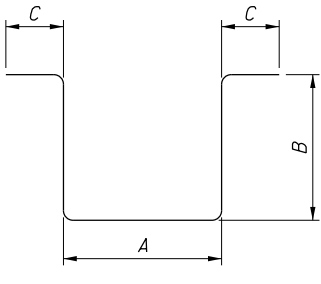
BENDING DIAGRAM



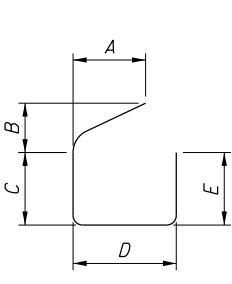
TYPE-2



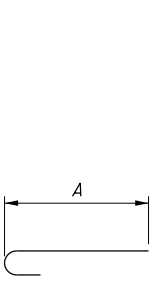
TYPE-3



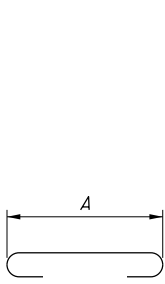
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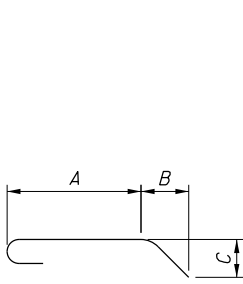
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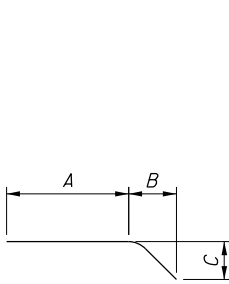
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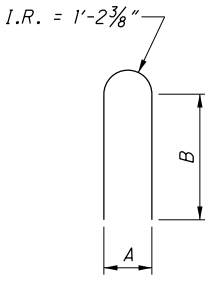
TYPE-17



TYPE-18



TYPE-19



TYPE-24

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UTILITIES

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

NORTH WEST REGIONAL WATER
P.O. BOX 158
McDERMOTT, OHIO 45652
740-259-2789

FRONTIER COMMUNICATIONS
1315 ALBERT STREET
PORTSMOUTH, OHIO 45662
740-354-0521

HORIZON NETWORK PARTNERS
500 S. FRONT STREET
SUITE 850
COLUMBUS, OHIO 43215
740-701-3337

AEP (DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
614-883-6831

AEP (TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OHIO 43230
614-552-1893

RIGHT OF WAY
LEGEND SHEET
SCI-73-4.28

V.M.S. No. 2802
BRUSH CREEK AND RARDEN TWPS.
SCIOTO COUNTY, OHIO

PROJECT DESCRIPTION

IMPROVEMENT OF 0.05 MILES OF S.R. 73 IN
SCIOTO COUNTY BY REPLACEMENT OF THE DEFICIENT
BRIDGE No. SCI-73-0428 AND THE NECESSARY
ROADWAY APPROACH WORK ALONG S.R. 73.

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2
PROPERTY MAP	3
SUMMARY OF ADDITIONAL R/W	4
R/W DETAIL SHEET	5
RAILROAD PLAT	6

PLANS PREPARED BY:

FIRM NAME : O.D.O.T. DISTRICT 9
R/W DESIGNER: MJW
R/W REVIEWER: MJW
FIELD REVIEWER: MJW
PRELIMINARY FIELD REVIEW DATE: 10/31/17
TRACINGS FIELD REVIEW DATE: 4/23/28
OWNERSHIP UPDATED BY: MJW
DATE COMPLETED: 4/23/18
PLAN COMPLETION DATE: 4/23/18

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

TYPES OF TITLE LEGEND:
WL = FEE SIMPLE WITH LIMITATION OF ACCESS
WD = WARRANTY DEED
PRW = PROPERTY RIGHT FEE SIMPLE
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
A = AERIAL EASEMENT
SL = SLOPE EASEMENT
PRE = PROPERTY RIGHT EASEMENT

CONVENTIONAL SYMBOLS

County Line	Ditch / Creek (Ex)
Township Line	Ditch / Creek (Pr)
Section Line	Tree Line (Ex)
Corporation Line	Ownership Hook Symbol
Fence Line (Ex)	Property Line Symbol
Center Line	Break Line Symbol
Right of Way (Ex)	Tree (Pr)
Right of Way (Pr)	Tree (Ex)
Standard Highway Ease.(Ex)	Shrub (Ex)
Temporary Right of Way	Tree (Remove)
Channel Ease. (Pr)	Shrub (Remove)
Utility Ease. (Ex)	Evergreen (Ex)
Railroad	Stump
Guardrail (Ex)	Evergreen (Remove)
Construction Limits	Stump (Remove)
Edge of Pavement (Ex)	Wetland (Pr)
Edge of Pavement (Pr)	Grass (Pr)
Edge of Shoulder (Ex)	Aerial Target
Edge of Shoulder (Pr)	Post (Ex)
	Mailbox (Ex)
	Mailbox (Pr)
	Light (Ex)
	Telephone Marker (Ex)
	TEL
	Fire Hydrant (Ex)
	Water Meter (Ex)
	Water Valve (Ex)
	Utility Valve Unknown (Ex)
	Telephone Pole (Ex)
	Power Pole (Ex)
	Light Pole (Ex)

I, Michael James Ware, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in October 2017. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System, South Zone on NAD83/2011 (Epoch2010) datum. The Project Coordinates (US Survey feet) are relative to State Plane Grid Coordinates (meters or US Survey feet) by a Project Adjustment Factor multiplier of 1.000051953. As a part of this project I have reestablished the locations of the existing property lines and centerline of existing Right of Way for property takes contained herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Michael James Ware

Michael James Ware, Professional Land Surveyor No. 8054

Date: 2/15/2018

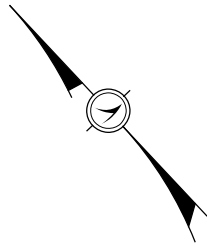
SURVEYORS SEAL



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SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.



SCI-73-4.28
VIRGINIA MILITARY SURVEY
V.M.S. No. 2802
BRUSH CREEK AND RARDEN TOWNSHIPS
SCIOTO COUNTY, OHIO

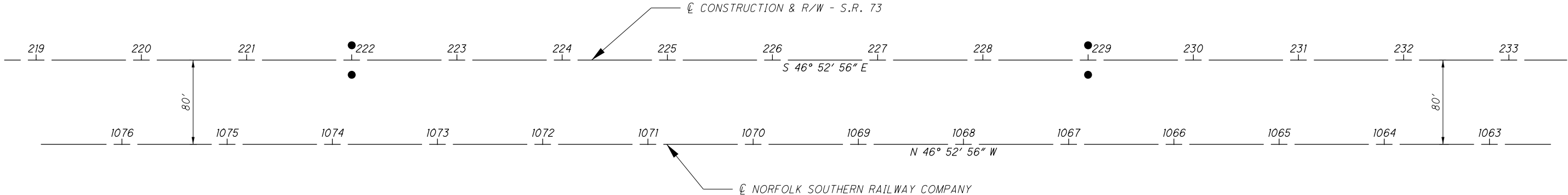
MONUMENT TABLE							
C of CONST. & R/W S.R. 73		PROJECT COORDINATES SEE SURVEY CERTIFICATION		MONUMENTS TO BE SET DURING CONSTRUCTION		R/W MON. EXPECTED TO BE DISTURBED	
STATION	OFFSET	NORTH (Y)	EAST (X)	MON. ASSY.	REF. MON.	R/W MON.	DESCRIPTION
222+00	14' LT	328423.3959	1767523.6320		1		C REF. MON. TYPE A DESIGN 6
222+00	14' RT	328402.9573	1767504.4939		1		.
229+00	14' LT	327944.9445	1768034.5960		1		.
229+00	14' RT	327924.5060	1768015.4580		1		C REF. MON. TYPE A DESIGN 6
TOTAL CARRIED TO GENERAL SUMMARY SHEET					4		ITEM 623E 40500

NOTE: TO OBTAIN OHIO STATE PLANE COORDINATES, DIVIDE EACH NORTHING/EASTING BY THE PROJECT ADJUSTMENT FACTOR.

NOTE: THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED USING:
S.H. (I.C.H.) 123 SEC C1 (1930)
NORFOLK AND WESTERN RAILWAY
VALUATION MAP V-18-0/100

BASIS FOR BEARINGS:

BEARINGS ARE BASED UPON OHIO STATE PLANE NAD83 (2011/EPOCH2010), OHIO SOUTH ZONE COORDINATES. A PROJECT ADJUSTMENT FACTOR (P.A.F.) OF 1.000051593 HAS BEEN USED TO PROVIDE GROUND COORDINATES FOR THIS PROJECT. TO OBTAIN STATE PLANE GRID COORDINATES, DIVIDE EACH NORTHING AND EASTING BY THE PROVIDED P.A.F.



MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- IRON PIN FOUND
- IRON PIN FOUND W/ ID CAP
- 5/8" x 30" IRON PIN SET W/ ID CAP
- IRON PIPE FOUND
- IRON PIPE SET
- P.K. NAIL FOUND
- P.K. NAIL SET

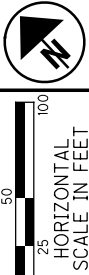
I, Michael James Ware, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in October 2017. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System South Zone on NAD83 / 2011 (Epoch 2010) datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (US Survey Feet) by a Project Adjustment Factor of 1.000051593. As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

Michael James Ware

Michael James Ware, Professional Land Surveyor S-8054

Date: 4/23/18

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
COUNTY RECORDER



PID NO. 20742

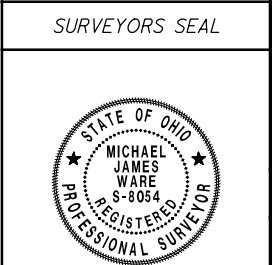
R/W DESIGNER M/JW
R/W REVIEWER M/JW

CENTERLINE PLAT

SCI-73-4.25

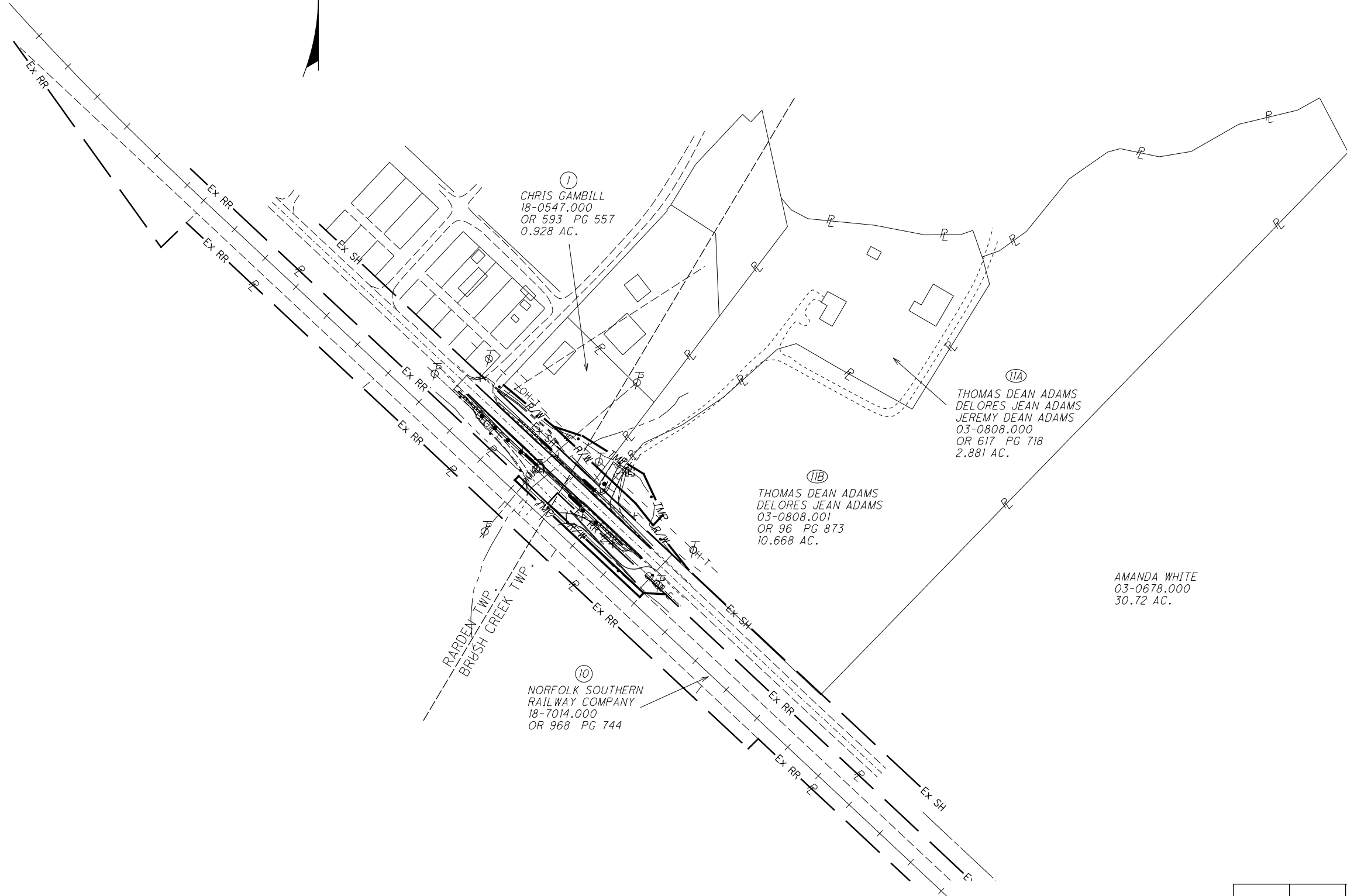
2 / 6

48
52



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VIRGINIA MILITARY SURVEY
V.M.S. No. 2802
BRUSH CREEK AND RARDEN TOWNSHIPS
SCIOTO COUNTY, OHIO



MJW	12/20/18	UPDATED OWNER - PARCEL 11A
MJW	09/10/18	UPDATED OWNER - PARCEL 1
REV. BY	DATE	DESCRIPTION
DATE COMPLETED: 4/23/18		

PID NO.

20742

R/W DESIGNER

MJW

R/W REVIEWER

MJW

PROPERTY MAP

SCI-73-4.25

3 / 6

49

52

0

50

100

200

HORIZONTAL

SCALE IN FEET

4 OWNERSHIPS	0 TOTAL TAKES
8 PARCELS	0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET TAKE = GROSS TAKE - PRO IN TAKE
NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
STATE OF OHIO, DEPARTMENT OF TRANSPORTATION
UNLESS OTHERWISE SHOWN.

50 52 4 / 6	SCI-73-4.25	SUMMARY OF ADDITIONAL RIGHT OF WAY	R/W DESIGNER MJW	R/W REVIEWER MJW	STATE JOB NO. 491890	PID NO. 20742	FEDERAL PROJECT NO. E170(341)

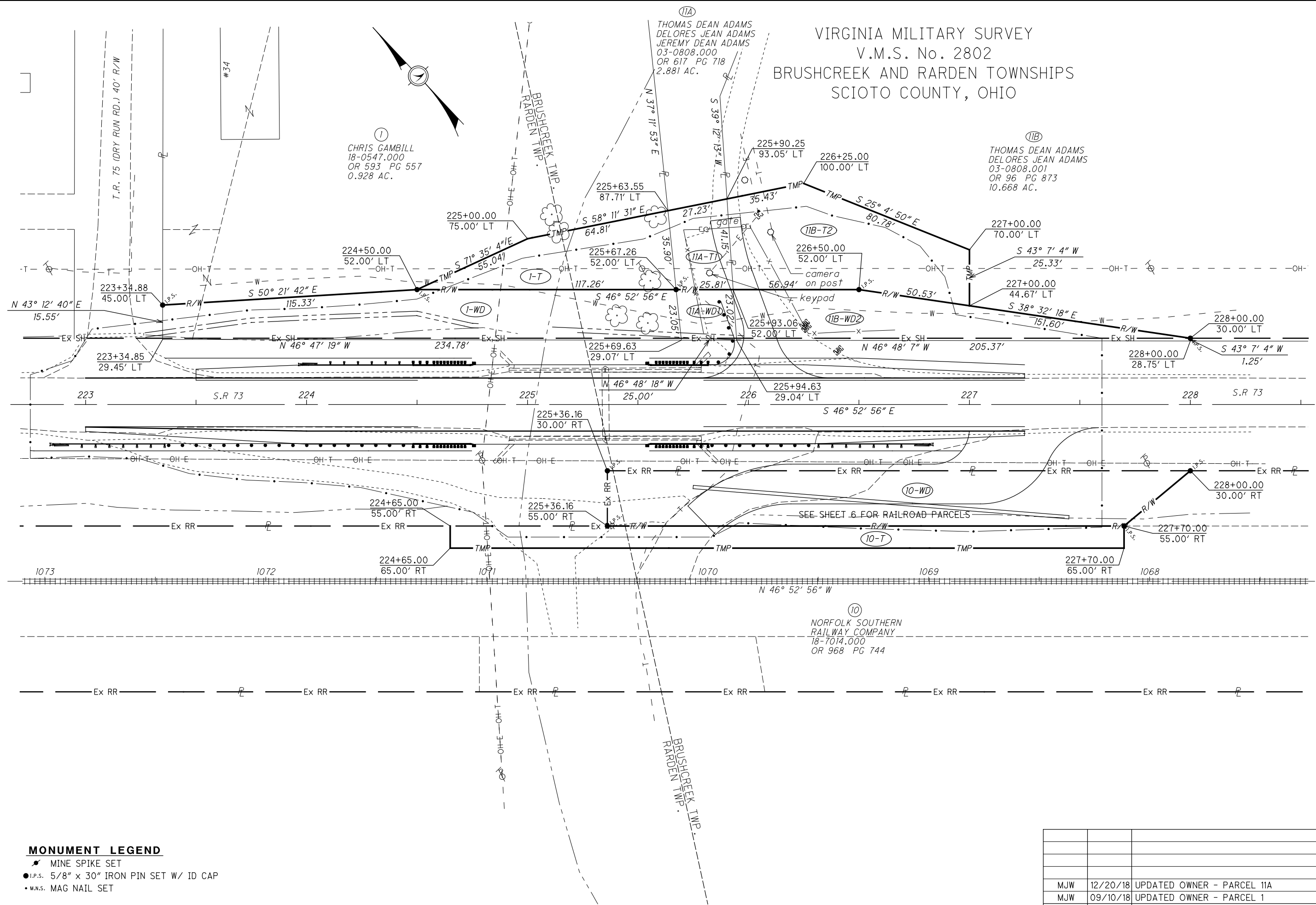
NOTE: ALL TEMPORARY PARCELS TO
BE OF 12 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

* DENOTES RIGHT OF WAY ENCROACHMENT
+ DENOTES REMOVAL ITEMS
SEE CORRESPONDING RIGHT
OF WAY PLAN SHEET FOR
DESCRIPTION

MJW	12/20/18	UPDATED OWNER - PARCEL 11A
MJW	09/10/18	UPDATED OWNER - PARCEL 1
REV. BY	DATE	DESCRIPTION
FIELD REVIEW BY : MJW		DATE: 9/27/17
OWNERSHIP VERIFIED BY : MJW		DATE: 9/27/17
DATE COMPLETED : 4/23/18		

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0

10

20

40

HORIZONTAL SCALE IN FEET

PID NO. 20742

R/W DESIGNER MJW
R/W REVIEWER MJW

5 / 6

51
52

VIRGINIA MILITARY SURVEY
V.M.S. No. 2802
BRUSHCREEK AND RARDEN TOWNSHIPS
SCIOTO COUNTY, OHIO



PID NO.
20742

R/W DESIGNER	MJW
R/W REVIEWER	MJW

RAILROAD PLAT

SCI-73-4.25

6	/	6
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MJW	12/20/18	UPDATED OWNER - PARCEL 11A
MJW	09/10/18	UPDATED OWNER - PARCEL 1
REV. BY	DATE	DESCRIPTION
DATE COMPLETED: 4/23/18		

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PROJECT DESCRIPTION

IMPROVEMENT OF 0.05 MILES OF S.R. 73 IN SCIOTO COUNTY BY REPLACEMENT OF THE DEFICIENT BRIDGE NO. SCI-73-0428 AND THE NECESSARY ROADWAY APPROACH WORK ALONG S.R. 73.

HISTORIC RECORDS

NO HISTORIC RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE SHAWNEE-MISSISSIPPIAN PLATEAU WHICH IS TYPIFIED AS A HIGHLY DISSECTED PLATEAU WITH RELATIVELY FLAT BOTTOM VALLEYS FILLED WITH LACUSTRINE DEPOSITED SILTS AND CLAYS OF TEAYS-AGE AND GLACIAL OUTWASH DEPOSITS CONSISTING OF SAND AND GRAVEL. HILLSIDES ARE PREDOMINATELY COMPRISED OF RESIDUAL SOILS FORMED FROM THE UNDERLYING PARENT BEDROCK, AND AT THE BASE OF THE HILLSIDE COLLUVIUM DEPOSITS ARE COMMON. THE UNDERLYING BEDROCKS ARE TYPICALLY DEVONIAN AGED OHIO SHALE WITHIN THE STREAM VALLEYS AND THE HILLSIDES ARE UNDERLAIN BY DEVONIAN AND MISSISSIPPIAN AGED SHALE AND SANDSTONE.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED ON JULY 27, 2016 BY DISTRICT PERSONNEL. THE ASPHALT PAVEMENT WAS NOTED AS BEING IN FAIR CONDITION WITH CRACK SEALING DUE TO AGE. THE EXISTING STRUCTURE WAS NOTED AS BEING POOR CONDITION WITH AREAS OF HEAVY SPALLING. THE DRY RUN STREAM BED WAS NOTED AS HAVING MINOR EROSION ALONG THE BANKS WITH SIGNIFICANT SAND AND GRAVEL DEPOSITS BETWEEN THE FORWARD PIER AND ABUTMENT. THE STREAM WAS NOTED STRIKING THE REAR ABUTMENT. THE ADJACENT LAND USAGE WAS NOTED AS BEING WOODED AND RESIDENTIAL.

SUBSURFACE EXPLORATION

TWO (2) BORINGS, B-001-0-16 AND B-002-0-16 WERE PERFORMED AS PART OF THE SUBSURFACE EXPLORATION BETWEEN OCTOBER 4 AND 11, 2016. THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED CME 55 ROTARY DRILL RIG, USING 3-1/4 INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 2.5-FOOT AND CONTINUOUS INTERVALS WITH THE OVERBURDEN SOILS. THE HAMMER SYSTEM WAS CALIBRATED ON MAY 27, 2015, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) WAS 85%. THE BORINGS WERE ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

BOTH BORINGS WERE COMPLETED WITHIN THE EXISTING ROADWAY AND ENCOUNTERED 10 INCHES OF ASPHALT PAVEMENT. BENEATH THE PAVEMENT THE BORINGS ENCOUNTERED COHESIVE SOILS CONSISTING OF SANDY SILTY (A-4a) AND SILT AND CLAY (A-6a) WHICH RANGED FROM MEDIUM STIFF TO VERY STIFF IN CONSISTENCY AND DAMP TO MOIST IN CONDITION. BORING B-001 ENCOUNTERED NON-COHESIVE SOILS BETWEEN ELEVATION 592.5 AND 567.5 FEET CONSISTING OF GRAVEL AND STONE FRAGMENTS WITH SAND (A-1-b), GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT (A-2-4) AND GRAVEL AND STONE FRAGMENTS WITH SAND, SILT AND CLAY (A-2-6) WHICH RANGED FROM MEDIUM DENSE TO VERY DENSE IN COMPACTNESS AND DAMP TO WET IN CONDITION. BELOW ELEVATION 567.5 FEET COHESIVE SOILS WERE ENCOUNTERED CONSISTING OF SILT (A-4b) AND SILT AND CLAY (A-6a) WHICH RANGED FROM STIFF TO VERY STIFF IN CONSISTENCY AND MOIST TO WET IN CONDITION EXTENDING TO TOP OF ROCK. B-002 ENCOUNTERED NON-COHESIVE SANDY SILT (A-4a) WHICH RANGED FROM LOOSE TO MEDIUM DENSE COMPACTNESS AND IN VERY DENSE COMPACTNESS FROM ELEVATION 562.3 TO TOP OF BEDROCK. A STIFF SILT (A-4b) WAS ENCOUNTERED BETWEEN ELEVATION 564.8 AND 562.3 FEET. BEDROCK ENCOUNTERED CONSISTED OF BLACK SHALE WHICH WAS SLIGHTLY WEATHERED, SLIGHTLY STRONG AND CARBONACEOUS WITH UNIT ROD VALUES BETWEEN 52% AND 69% AND UNIT RECOVERY OF 99%.

A WATER LEVEL WAS RECORDED IN B-001 AND B-002 WITH FREE WATER NOTED AT ELEVATION 584.0 AND 584.8 FEET, RESPECTIVELY AND AT COMPLETION AT ELEVATION 579.2 AND 576.3 FEET, RESPECTIVELY.

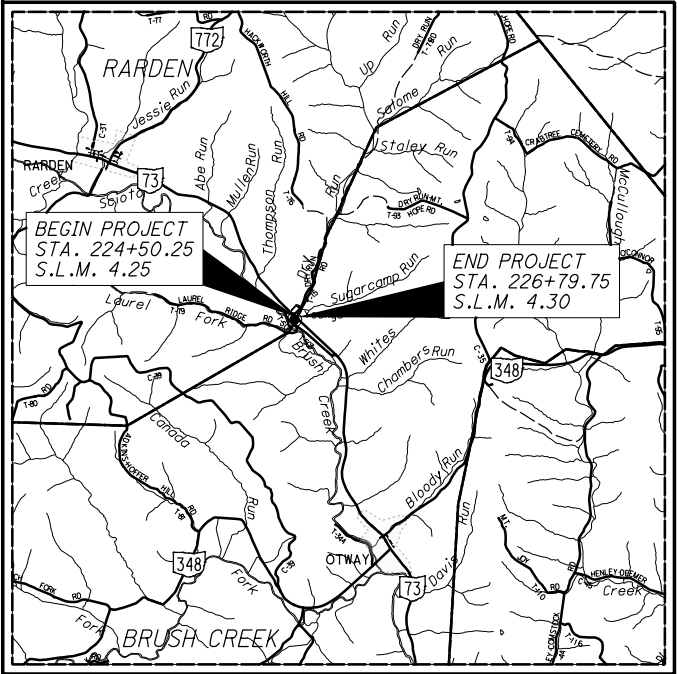
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2016.

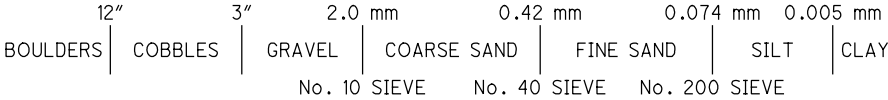
AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND				
	DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
	GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	1	4
	GRAVEL AND/OR STONE FRAGS. WITH SAND & SILT	A-2-4	5	1
	GR. AND/OR ST. FRAGS. WITH SAND, SILT & CLAY	A-2-6	1	-
	SANDY SILT	A-4a	8	7
	SILT	A-4b	2	1
	SILT AND CLAY	A-6a	3	3
		TOTAL	20	16
	SHALE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	BORING LOCATION - PLAN VIEW.			
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.			
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
X/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.			
	INDICATES STATIC WATER ELEVATION.			
	INDICATES FREE WATER ELEVATION.			
	INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.			
NP	INDICATES A NON-PLASTIC SAMPLE.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
TR	INDICATES TOP OF ROCK ELEVATION.			



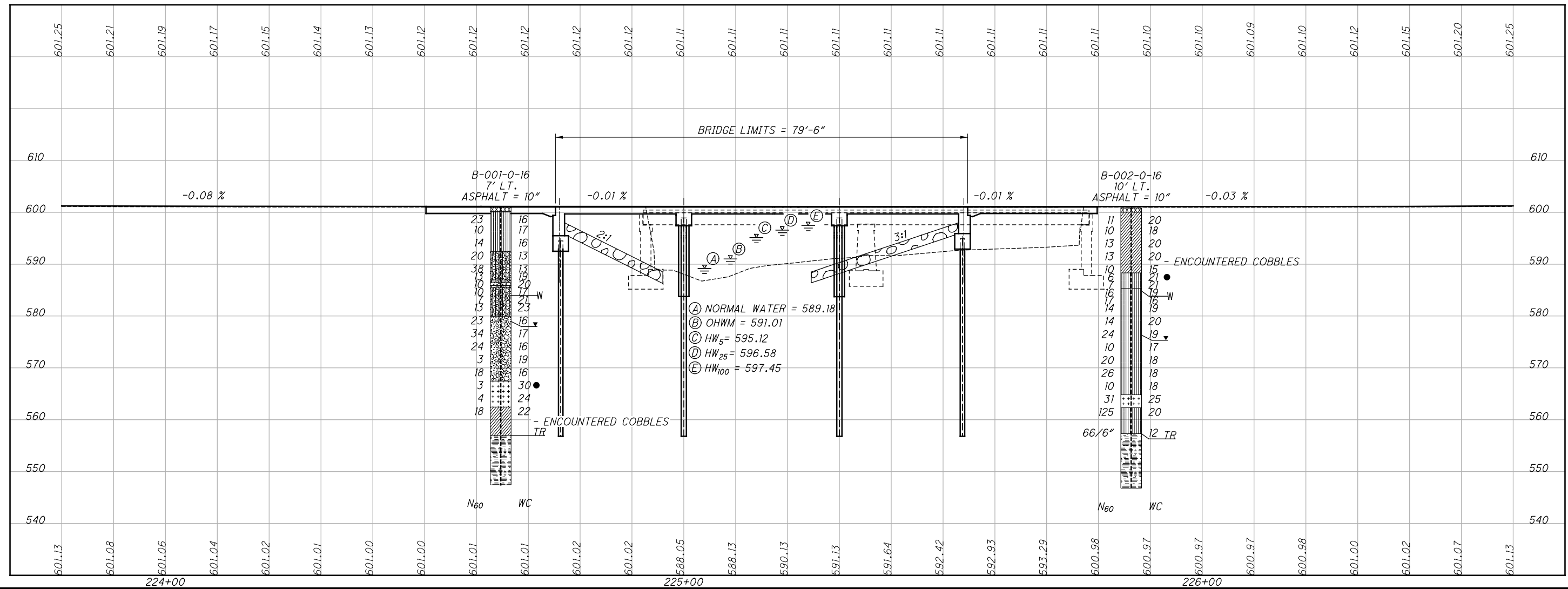
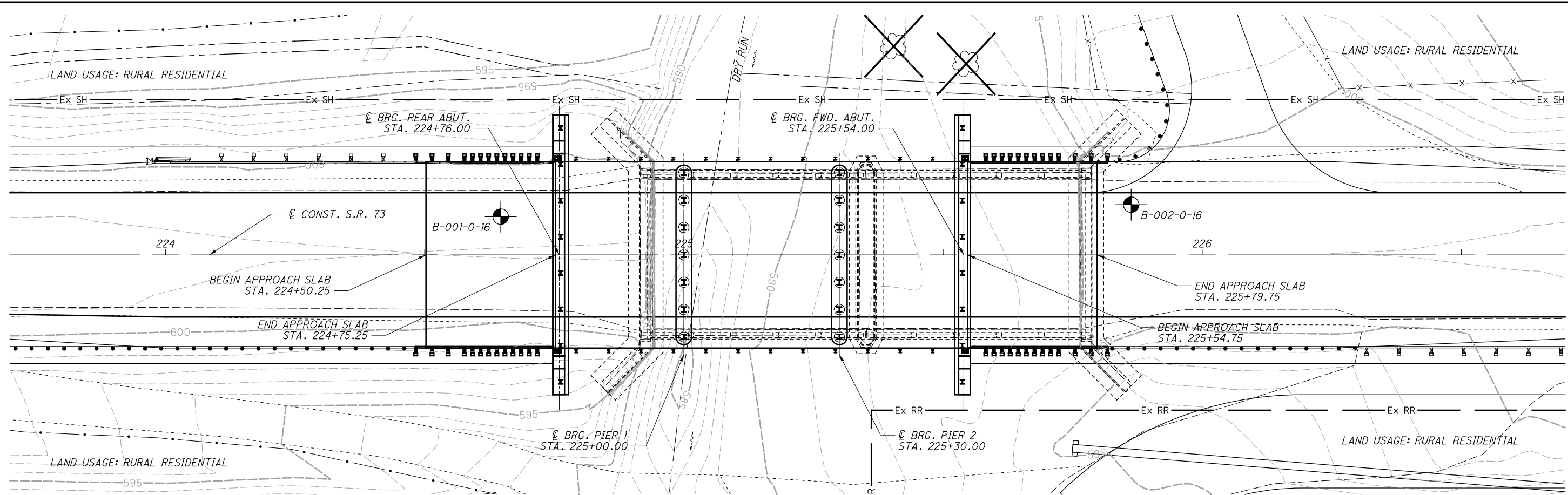
PARTICLE SIZE DEFINITIONS



D ₅₀ VALUES			
BRIDGE NO. SCI-73-0426			
BORING NO.	SAMPLE NO.	ELEVATION	D ₅₀ VALUE
B-001-0-16	SS-6A	588.5' - 587.0'	1.501 mm
	SS-7A	587.0' - 585.5'	3.192 mm
	SS-8A	585.5' - 584.0'	2.635 mm
	SS-9A	584.0' - 582.5'	1.99 mm
B-002-0-16	SS-6A	588.3' - 586.8'	0.041 mm
	SS-8A	585.3' - 583.8'	0.162 mm
	SS-9A	583.8' - 582.3'	0.214 mm
	SS-10A	582.3' - 580.8'	0.353 mm

RECON. - CWP 07/27/16
DRILLING - KAM 10/04-11/16
DRAWN - AR 02/19
REVIEWED - JAG 02/19

I:\Project\Bata\SCI\20742_SCI_73_0428\Design\Geotechnical\Sheets\20742_ZP001.dgn Sheet 2/25/2019 2:12:05 PM cross3



PROJECT: SCI-73-04.28			DRILLING FIRM / OPERATOR: ODOT / CAREY			DRILL RIG: CME 55 TRUCK			STATION / OFFSET: 224+65, 7' LT.			EXPLORATION ID: B-001-O-16								
TYPE: BRIDGE			SAMPLING FIRM / LOGGER: ODOT / MCLEISH			HAMMER: CME AUTOMATIC			ALIGNMENT: CL SR 73											
PID: 20742 SFN: 7302347 (E)			DRILLING METHOD: 3.25" HSA / NQ2			CALIBRATION DATE: 5/27/15			ELEVATION: 601.0 (NAVD88) EOB: 53.5 ft.			PAGE								
START: 10/5/16 END: 10/11/16			SAMPLING METHOD: SPT / NQ2			ENERGY RATIO (%): 85			LAT / LONG: 38.899011, -83.205833			1 OF 1								
MATERIAL DESCRIPTION AND NOTES			ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)					ATTERBERG			ODOT CLASS (gl)	BACK FILL		
									GR	CS	FS	SI	CL	LL	PL	PI			WC	
ASPHALT (10") VERY STIFF, BROWN, SANDY SILT, "AND" STONE FRAGMENTS, SOME CLAY, FILL, DAMP			601.0																	
			600.2	1																
				2	7 8 8	23	56	SS-1A	3.00	39	7	7	26	21	27	17	10	16	A-4a (2)	
				3																
				4	2 3 4	10	56	SS-2A	2.00	-	-	-	-	-	-	-	-	17	A-4a (V)	
				5																
				6																
				7	3 5 5	14	67	SS-3A	3.00	-	-	-	-	-	-	-	-	16	A-4a (V)	
				8																
				9	6 8 6	20	100	SS-4A	-	42	13	10	25	10	24	20	4	13	A-2-4 (0)	
MEDIUM DENSE TO DENSE, BROWN, GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, FILL, DAMP @11.0': BROWN AND REDDISH BROWN, WITH BRICK FRAGMENTS VERY DENSE, BROWN, GRAVEL AND STONE FRAGMENTS WITH SAND, SILT, AND CLAY, MOIST LOOSE BROWN, GRAVEL AND STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, MOIST TO WET @18.5': MEDIUM DENSE			592.5																	
				10																
				11	12 9 18	38	89	SS-5A	-	51	8	8	23	10	23	18	5	13	A-2-4 (0)	
				12	6 4 5	13	33	SS-6A	-	49	5	12	24	10	NP	NP	NP	19	A-2-4 (0)	
				13	4 3 4	10	78	SS-7A	-	54	7	6	17	16	30	19	11	20	A-2-6 (0)	
				14																
				15	4 4 5	10	56	SS-8A	-	53	8	7	19	13	25	19	6	17	A-2-4 (0)	
				16	2 4 1	7	33	SS-9A	-	50	13	8	17	12	25	19	6	21	A-2-4 (0)	
				17	4 4 5	13	67	SS-10A	-	-	-	-	-	-	-	-	-	23	A-2-4 (V)	
				18																
MEDIUM DENSE, BROWN, GRAVEL AND STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, MOIST TO WET @23.5' - 25.0': DENSE @26.0': BROWN AND GRAY @28.5': VERY LOOSE, WET @31.0': MEDIUM DENSE			580.0																	
				19	5 8 8	23	78	SS-11A	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
				20																
				21	7 12 12	34	89	SS-12A	-	54	14	9	16	7	NP	NP	NP	17	A-1-b (0)	
				22																
				23																
				24	5 8 9	24	100	SS-13A	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
				25																
				26	1 1 1	3	17	SS-14A	-	-	-	-	-	-	-	-	-	19	A-1-b (V)	
				27	4 5 8	18	44	SS-15A	-	-	-	-	-	-	-	-	-	16	A-1-b (V)	
STIFF, GRAY, SILT, SOME CLAY, TRACE SAND, WET @36.0': MEDIUM STIFF VERY STIFF, GRAY, SILT AND CLAY, TRACE SAND, MOIST @42.0': COBBLES ENCOUNTERED SHALE, BLACK, SLIGHTLY WEATHERED, SLIGHTLY STRONG, THINLY LAMINATED, CARBONACEOUS; RQD 52%, REC 99%. @46.0' - 47.3': DARK GREENISH GRAY, MODERATELY WEATHERED @46.8' - 47.3': VERTICAL FRACTURE @51.1' - 52.7': DARK GREENISH GRAY, MODERATELY WEATHERED, WITH CLAY LAYERS			567.5																	
				28																
				29	3 1 1	3	100	SS-16A	1.50	0	3	3	70	24	27	22	5	30	A-4b (8)	
				30																
				31	1 1 2	4	100	SS-17A	1.00	-	-	-	-	-	-	-	-	24	A-4b (V)	
				32																
				33																
				34	5 6 7	18	100	SS-18A	2.00	0	1	3	59	37	31	19	12	22	A-6a (9)	
				35																
				36																
CORE CORE			557.0																	
				37																
				38																
				39																
				40																
				41																
				42																
				43																
				44																
				45																
CORE																				
				46	32	90	NQ2-1													
				47																
				48																
				49																
				50																
				51	67	98	NQ2-2													
				52																
				53																
				54																

STANDARD ODOT BORING LOG (11 X 17) - OH DOT GDT - 2/20/19 09-10 - X:\GINT\PROJ\ECTS\2016 COMP\FTF60270.GPJ

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: SOIL MIXED WITH 150 LB. BENTONITE CHIPS

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: SCI-SR 73-4.28

PID: 20742

Date: 02/14/2019

1. Waterway Permit Time Restrictions:

A Nationwide Permit #3 (Maintenance) (NWP #3) is authorized for SCI-SR 73-4.28, PID 20742. A copy of the NWP shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: February 12, 2019. The permit expires: March 18, 2022.

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities:

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or working drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions:

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Dry Run	STA 225+00	None

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection and temporary work pads.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources on this project for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources:

If archeological sites or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section (614-466-7100). In the event of human remains are identified by OES-Cultural Resources Section the Engineer shall also contact the Scioto County Sheriff's Office (740-355-8277).

6. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. The table below provides detailed amounts of impact/fill quantities that are permitted within the aquatic resources. The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

Resource ID	Impact Location	Permanent Impact Amount	Temporary Impact Amount
Dry Run	STA 225+00	65 feet (0.029 acre)	106 feet (0.146 acre)

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

10. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

11. Temporary Access Fills

Definitions:

Hydraulic Opening
The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge
Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (<https://water.usgs.gov/osw/streamstats/ohio.html>).

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:

"These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents."

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design of the Contractor's TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).***

If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (as defined in SS 832) or the peak discharge from the 2-year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument is incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

- Furnish culverts on the existing stream bottom.
- Avoid a drop-in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
- Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost. Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.
<u>12. Excavation Activities:</u> Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into jurisdictional waters of the U.S. is permitted during the excavation process. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).
<u>13. Demolition Debris:</u> The temporary discharge of demolition debris into Dry Run is conditionally authorized for this project. Demolition debris may not remain in the waterway for more than 72 hours and must be removed in its entirety. If removal of debris material cannot be achieved within 72 hours, notify the Engineer in writing and contact ODOT-OES-WPU at 614-466-7100.