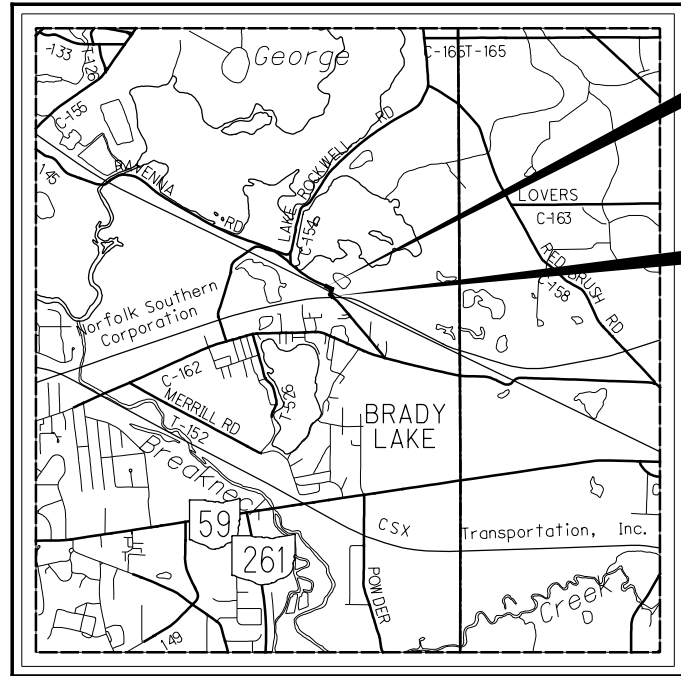


P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge 248\055556\400-Engineering\Roadway\Sheets\0055556_GT001.dgn 1/24/2024 12:21:02 PM adesimone



LOCATION MAP

LATITUDE: 41°10'20" LONGITUDE: 81°18'46"



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

DESIGN DESIGNATION

CURRENT ADT (2018)	1377
DESIGN YEAR ADT (2038)	2047
DIRECTIONAL DISTRIBUTION	50%
TRUCKS (24 HOUR B&C)	2%
DESIGN SPEED	40 MPH
LEGAL SPEED	40 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR (RURAL)	
NHS PROJECT	N/A

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

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

PLAN PREPARED BY:


8415 PULSAR PLACE, SUITE 300
COLUMBUS, OHIO 43240

STATE OF OHIO
PORTAGE COUNTY ENGINEER'S OFFICE
POR-145-52.85
FRANKLIN TOWNSHIP
PORTAGE COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
TYPICAL SECTIONS	2 -3
GENERAL NOTES	4
MAINTENANCE OF TRAFFIC	5 -8
GENERAL SUMMARY	9 -10
SUBSUMMARIES	11 -12
PLAN AND PROFILE	13-15
CROSS SECTIONS	16-23
DRIVE DETAILS	24
TRAFFIC CONTROL	25
STRUCTURE	26-51
RIGHT-OF-WAY PLANS	52-61

PROJECT DESCRIPTION

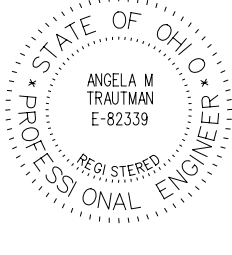
REPLACEMENT OF BRIDGE POR-145-52.85 OVER NORFOLK SOUTHERN RAILROAD AT MILEPOST 88.58 (AAR/DOT CROSSING NUMBER 503551Y) WITH APPROACH ROADWAY WORK. WORK INVOLVES RAISING THE PROFILE TO OBTAIN THE MINIMUM REQUIRED VERTICAL CLEARANCE OVER A FUTURE TRACK AND ADDING A SHARED USE PATH ON EAST SIDE OF THE BRIDGE.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.79 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.18 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A

2019 SPECIFICATIONS

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

ENGINEERS SEAL	STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
	BP-3.1	1/19/24	TC-41.20	10/18/13	MT-101.70	4/21/23	800	01/19/24
	BP-4.1	7/19/13	TC-41.30	4/21/23	MT-101.75	7/21/23	832	07/21/23
	BP-5.1	7/15/22	TC-41.40	10/18/13	MT-101.90	7/17/20	846	04/17/15
			TC-42.20	10/18/13	MT-105.10	1/17/20		
	DM-1.1	7/17/20	TC-52.10	10/18/13				
	DM-4.3	1/15/16	TC-52.20	1/15/21	AS-1-15	1/20/23		
	DM-4.4	1/15/16	TC-61.10	4/21/23	AS-2-15	1/20/23		
			TC-61.30	7/19/19	BD-1-11	7/20/18		
	MGS-1.1	7/16/21	TC-65.10	1/17/14	PSBD-2-07	7/20/18		
	MGS-2.1	1/19/18	TC-65.11	1/19/24	SBR-1-20	7/21/23		
	MGS-3.1	1/19/18	TC-71.10	4/21/23	VPF-1-90	7/21/23		
	MGS-3.2	1/18/13	TC-74.10	7/21/23				
	MGS-4.2	7/19/13						
	MGS-4.3	1/18/13	MT-95.50	7/21/17				
			MT-99.20	4/19/19				
		RM-4.2	4/17/20	MT-101.60	4/21/23			
SIGNED: _____								
DATE: _____								

APPROVED _____
DATE _____ PORTAGE COUNTY ENGINEER

FEDERAL PROJECT NO.
E180 (204)

PID NO.
105556

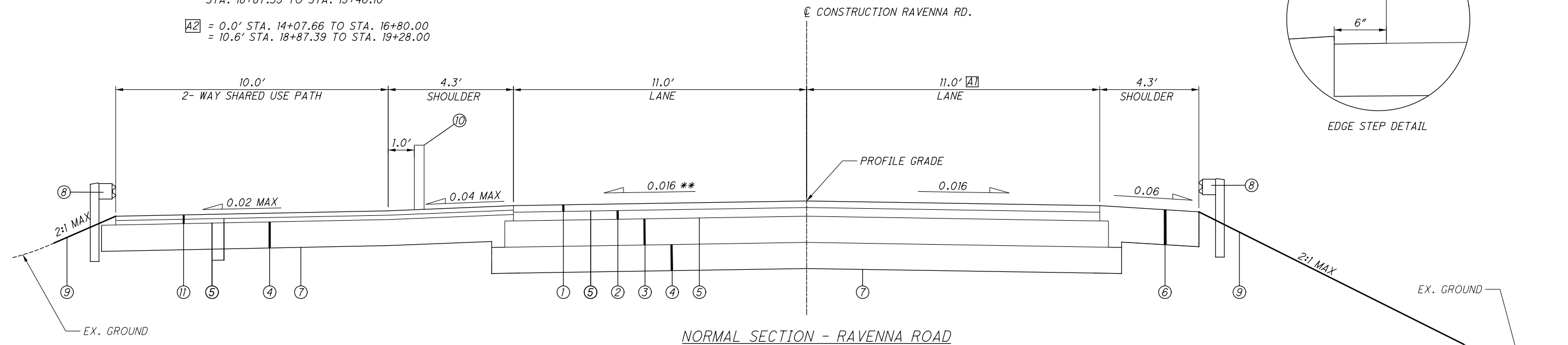
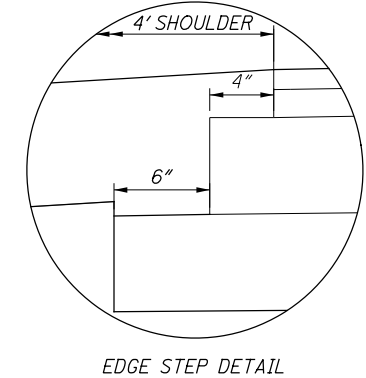
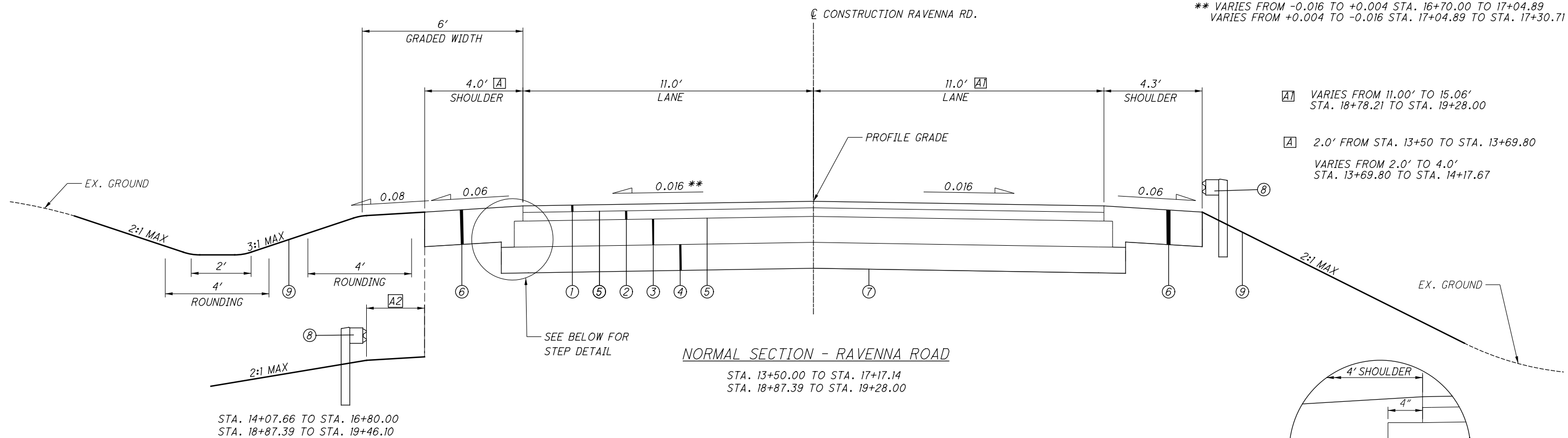
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NORFOLK SOUTHERN RAILWAY

POR-145-52.85

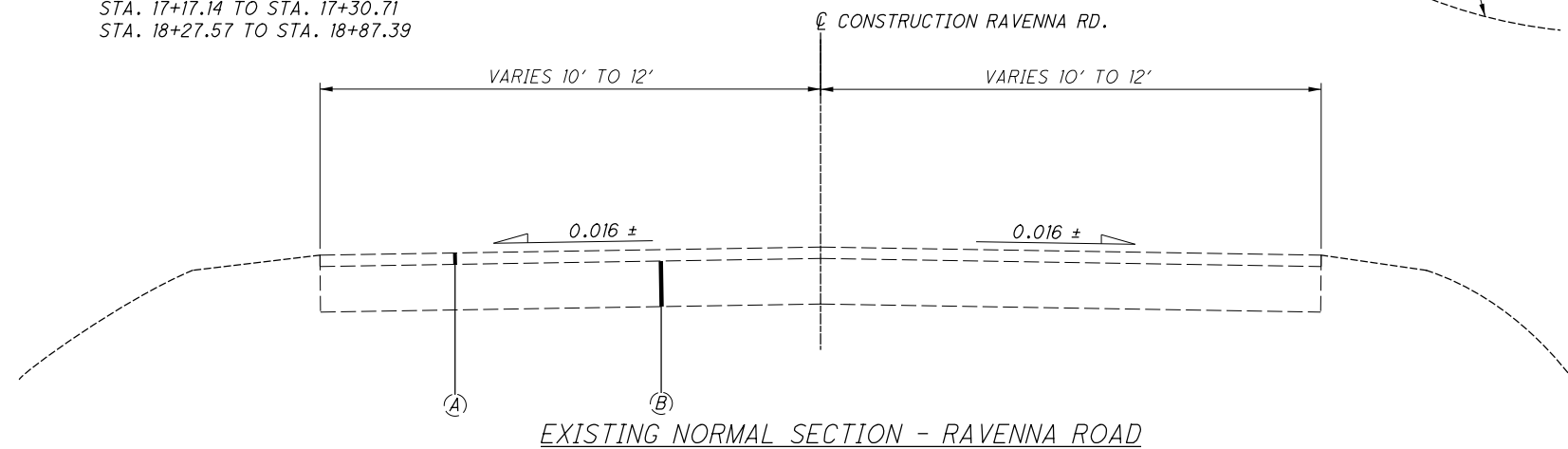


P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge 248\05556\400-Engineering\Roadway\Sheets\005556_GY001.dgn 1/24/2024 12:21:23 PM adesimone



LEGEND:

- ① ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (446), 1 1/4"
- ② ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446), 1 3/4"
- ③ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (449), 6"
- ④ ITEM 304 - AGGREGATE BASE, 6"
- ⑤ ITEM 407 - NON-TRACKING TACK COAT
- ⑥ ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN, 8"
- ⑦ ITEM 204 - SUBGRADE COMPACTION
- ⑧ ITEM 606 - GUARDRAIL, TYPE MGS (LONG POST)
- ⑨ ITEM 659 - SEEDING AND MULCHING
- ⑩ ITEM 620 - DELINEATOR, MISC.: PAVEMENT MOUNTED, TYPE D
- ⑪ ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (446), 2" (PLACED IN TWO LIFTS)
- ⑫ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 2"
- ⑬ ITEM 526 - REINFORCED CONCRETE APPROACH SLAB, 12"
- [A] 2"± ASPHALT CONCRETE
- [B] 6"± BITUMINOUS AGGREGATE BASE



CALCULATED
AA
CHECKED
MCK

TYPICAL SECTIONS - RAVENNA ROAD

POR-145-52.85

2
61

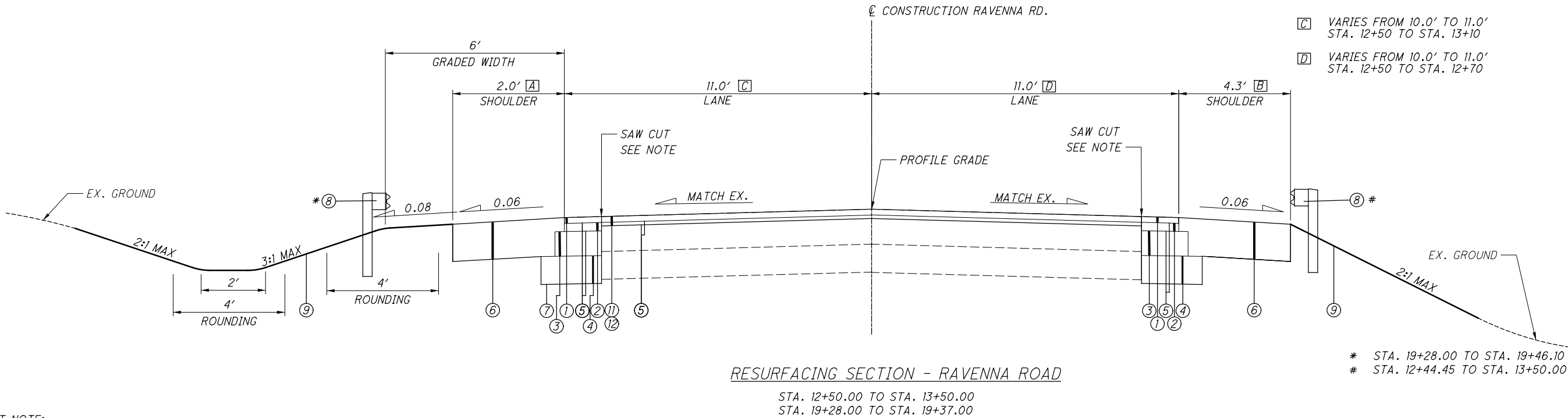
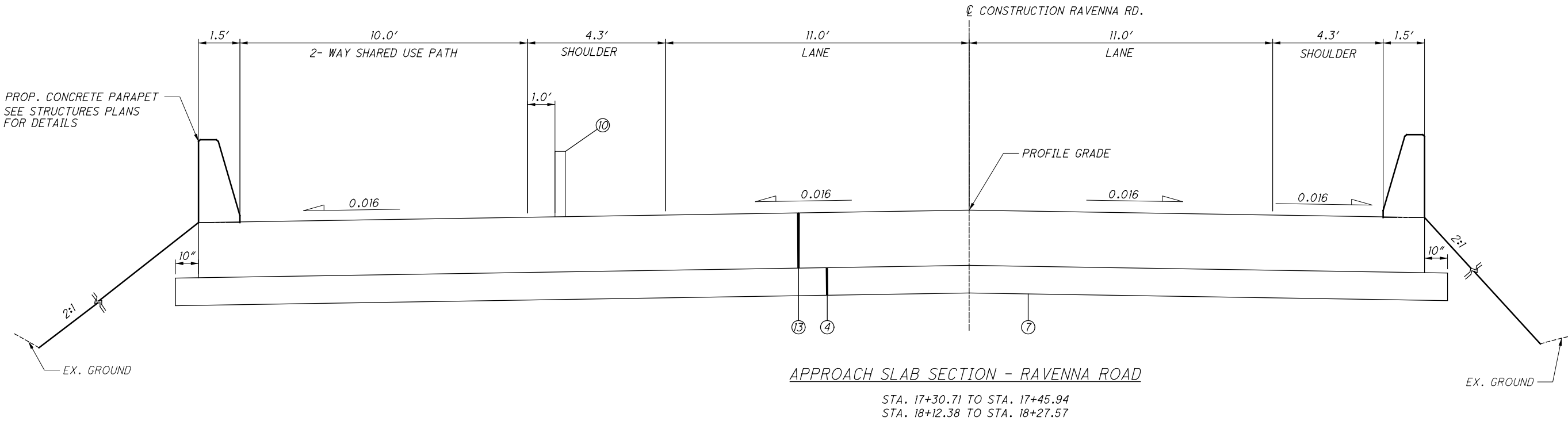
P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineering\Roadway\Sheets\005556_GY001.dgn 1/24/2024 12:24 PM adesimone

FOR LEGEND, SEE SHEET 2

CALCULATED	AA
CHECKED	MCK

TYPICAL SECTIONS - RAVENNA ROAD

POR-145-52.85



- [A] VARIES FROM 4.0' TO 2.3' STA. 19+28 TO STA. 19+54
- [B] VARIES FROM 2.4' TO 4.3' STA. 12+50 TO STA. 12+70
- [C] VARIES FROM 10.0' TO 11.0' STA. 12+50 TO STA. 13+10
- [D] VARIES FROM 10.0' TO 11.0' STA. 12+50 TO STA. 12+70

- * STA. 19+28.00 TO STA. 19+46.10
- # STA. 12+44.45 TO STA. 13+50.00

SAW CUT NOTE:
THE EXISTING PAVEMENT EDGE SHALL BE SAWCUT TO LOCATE A SOUND PAVEMENT EDGE A MINIMUM OF 6" AND MAXIMUM OF 2'.

P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineer\ng\Roadway\Sheets\005556_GN001.dgn 1/24/2024 12:21:26 PM adesimone

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:

OHIO EDISON
ATTN: DAVID STONE
1910 W MARKET ST.
AKRON, OH 44313
TEL: 330-388-5821
EMAIL: DSTONE@FIRSTENERGYCORP.COM

AT&T
THE OHIO BELL TELEPHONE COMPANY
50 W BOWERY ST.
6TH FLOOR
AKRON, OH 44308
STEVEN HYLTON
TEL: 330-384-3055
CELL: 330-631-7485
SH1513@ATT.COM

NORFOLK SOUTHERN RAILWAY
MR. E.W.CHAMBERS
ENGINEER PUBLIC IMPROVEMENTS
BRIDGES AND STRUCTURES
NORFOLK SOUTHERN CORPORATION
650 WEST PEACHTREE STREET NW, BOX 45
ATLANTA, GA 30308
TEL: 470-463-6307
EMAIL: ELDRIDGE.CHAMBERS@NSCORP.COM

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.

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

PROJECT CONTROL
POSITIONING METHOD: RTK
MONUMENT TYPE: IRON REBAR

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 12B

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC TWO PARALLEL
COORDINATE SYSTEM: OHIO STATE PLANE, NORTH ZONE
COMBINED SCALE FACTOR: .999856175
ORIGIN OF COORDINATE
SYSTEM: N 550593.770, E 2295093.432

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.

CLEARING AND GRUBBING

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

WORK LIMITS

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

ITEM 617 – COMPACTED AGGREGATE, AS PER PLAN

THE MATERIAL USED FOR THIS ITEM SHALL BE RECYCLED ASPHALT PAVEMENT (RAP) WITH A MINIMUM PG CONTENT OF 4.5% ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE INSPECTOR FOR APPROVAL TWO (2) WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617.

THE CONTRACTOR WILL APPLY “MC-70” AT A RATE OF 0.3 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE INSPECTOR, TO COMPLETED COMPACTED AGGREGATE SHOULDER, AS PER ITEM 408 – BITUMINOUS PRIME COAT.

THE CONTRACTOR SHALL PROVIDE A SHIELD TO PREVENT THE SPRAYING OR DRIFTING OF THE LIQUID PRIME COAT MATERIAL ONTO THE EDGE OF THE PAVEMENT OR EDGELINE. CARE SHALL ALSO BE TAKEN TO AVOID SPRAYING LIQUID PRIME COAT MATERIAL ONTO DRIVEWAY APRONS, MAILBOX APPROACHES, OR ANY PEDESTRIAN AREAS. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO 107.10 OF THE SPECIFICATIONS.

ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 – COMPACTED AGGREGATE, AS PER PLAN.

SEEDING AND MULCHING

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

659, TOPSOIL 150 CU. YD.
659, SEEDING AND MULCHING 1350 SQ. YD.
659, REPAIR SEEDING AND MULCHING 68 SQ. YD.
659, INTER-SEEDING 68 SQ. YD.
659, SOIL ANALYSIS TEST 1 EACH
659, COMMERCIAL FERTILIZER 0.19 TON
659, LIME 0.28 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.

ITEM 204 – PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 – PROOF ROLLING 1 HOUR.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

ITEM 620 – DELINEATOR, MISC.: PAVEMENT MOUNTED, TYPE D

DELINEATORS SHALL BE INSTALLED IN THE PAVEMENT ALONG THE SHARED USE PATH AT THE LOCATIONS SHOWN IN THE PLANS. TYPE D REFLECTIVE SHEETING SHALL BE ADDED TO THE DELINEATOR POSTS. THE DELINEATORS SHALL BE PLACED AT 2.0’ SPACING. PAYMENT FOR ALL THE MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR INSTALLING THE DELINEATORS SHALL BE INCLUDED WITH :

ITEM 620 – DELINEATOR, MISC. : PAVEMENT MOUNTED, TYPE D

NORFOLK SOUTHERN RAILWAY NOTES

ALL WORK TO BE PERFORMED ON, OVER, UNDER, OR ADJACENT TO THE RAILROAD RIGHT-OF-WAY SHALL COMPLY WITH THE NORFOLK SOUTHERN RAILWAY COMPANY (“RAILROAD”, “NSR” OR “NS”) PUBLIC PROJECTS MANUAL (APPENDIX E, SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS, AND APPENDIX HI, OVERHEAD GRADE SEPARATION DESIGN CRITERIA). WHEN IN CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THE MOST STRINGENT ONE SHALL APPLY.

“ONE CALL” SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD S REPRESENTATIVE 2 DAYS IN ADVANCE OF WORK AT THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE THE RAILROAD’S UNDERGROUND FACILITIES. UPON REQUEST FROM THE CONTRACTOR OR SPONSOR, RAILROAD FORCES WILL LOCATE AND PAINT MARK OR FLAG THE RAILROAD’S UNDERGROUND FACILITIES. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE FACILITIES. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD FACILITY, THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD TO HAVE THE FACILITY POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION. THE FACILITY SHALL BE PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF THE RAILROAD’S REPRESENTATIVE. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E, SECTION 3.D).

ALL UTILITY INSTALLATIONS OR RELOCATIONS 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 PROJECT CONTRACTOR OR PROJECT CONTRACTOR’S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO RAILPROS 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 > RAILPROS. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

THE CONTRACTOR SHALL NOT COMMENCE ANY WORK ON RAILROAD RIGHTS-OF-WAY UNTIL HE HAS COMPLIED WITH THE CONDITIONS PRESENTED ON NS PUBLIC PROJECTS MANUAL (SEE APPENDIX E, NORFOLK SOUTHERN – SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS).

THE CONTRACTOR SHALL SO ARRANGE AND CONDUCT HIS WORK THAT THERE WILL BE NO INTERFERENCE WITH RAILROAD’S OPERATIONS. WHENEVER WORK IS LIABLE TO AFFECT THE OPERATIONS OR SAFETY OF TRAINS, THE METHODS OF DOING SUCH WORK SHALL FIRST BE SUBMITTED TO THE RAILROAD ENGINEER FOR APPROVAL, BUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY.

THE RAILROAD WILL BE PROVIDED AS-BUILT DRAWINGS SHOWING THE ACTUAL CLEARANCES AS CONSTRUCTED. DEPTH, SIZE, AND LOCATION OF ALL FOUNDATION COMPONENTS SHALL BE SHOWN ON THE DRAWINGS. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX HI, SECTION 8A)

FOR PROJECTS REQUIRING MORE THAN 30 CONSECUTIVE DAYS OF FLAGGING, CONTRACTOR SHALL PROVIDE THE FLAGMAN A SMALL WORK AREA WITH A DESK/COUNTER AND CHAIR WITHIN THE FIELD/SITE TRAILER, INCLUDING THE USE OF BATHROOM FACILITIES, WHERE THE FLAGMAN CAN CHECK IN/OUT WITH THE PROJECT, AS WELL AS TO THE FLAGMAN S HOME TERMINAL. THE WORK AREA SHOULD PROVIDE ACCESS TO TWO (2) ELECTRICAL OUTLETS FOR RECHARGING RADIO(S), AND A LAPTOP COMPUTER; AND HAVE THE ABILITY TO PRINT OFF NEEDED DOCUMENTATION AND ORDERS AS NEEDED AT THE FIELD/SITE TRAILER. THIS SHOULD AID IN MAXIMIZING THE FLAGMAN S TIME AND EFFICIENCY ON THE PROJECT.

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, & SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL – MAILBOX REMOVED AND RESET

THIS WORK SHALL CONSIST OF REMOVING AND RE-ERECTING THE EXISTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AT LOCATIONS SPECIFIED IN THE PLANS, 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 RESPONSIBLE 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 PERMANENT 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 REMOVED AND RESET.

P:\Projects\2020\20H03TD-20335_POR_Ravenna_Road_Bridge_248\05556\400-Engineering\MOT\Sheets\005556_MN001.dgn 1/24/2024 12:21:28 PM adesimone

ITEM 614, MAINTAINING TRAFFIC, AS PER PLAN

THE EXISTING BRIDGE ON RAVENNA ROAD (S.R.145) ACROSS THE NORFOLK SOUTHERN RAILWAY HAS BEEN CLOSED TO TRAFFIC. ALL TRAFFIC IS BEING DETOURED AND THIS DETOUR SHALL REMAIN IN PLACE UNTIL ALL THE PROPOSED WORK IS COMPLETED AND THE BRIDGE CAN BE OPENED FOR THRU TRAFFIC. ACCESS TO TOWNER’S WOODS PARKING LOT SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS SHOWN ON SHEET 7 .

LENGTH AND DURATION OF ADDITIONAL LANE CLOSURES AND RESTRICTIONS SHALL BE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS. 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.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

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

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

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 LOCATIONS CALLED OUT IN THE PLANS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

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.

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).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

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

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:
THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
THE ACTIVE WORK AREA Laterally CLOSEST TO THE OPEN TRAVELED LANE; OR
OTHER LOCATION AS APPROVED BY THE ENGINEER.
THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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

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

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

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

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

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

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 20 HOURS

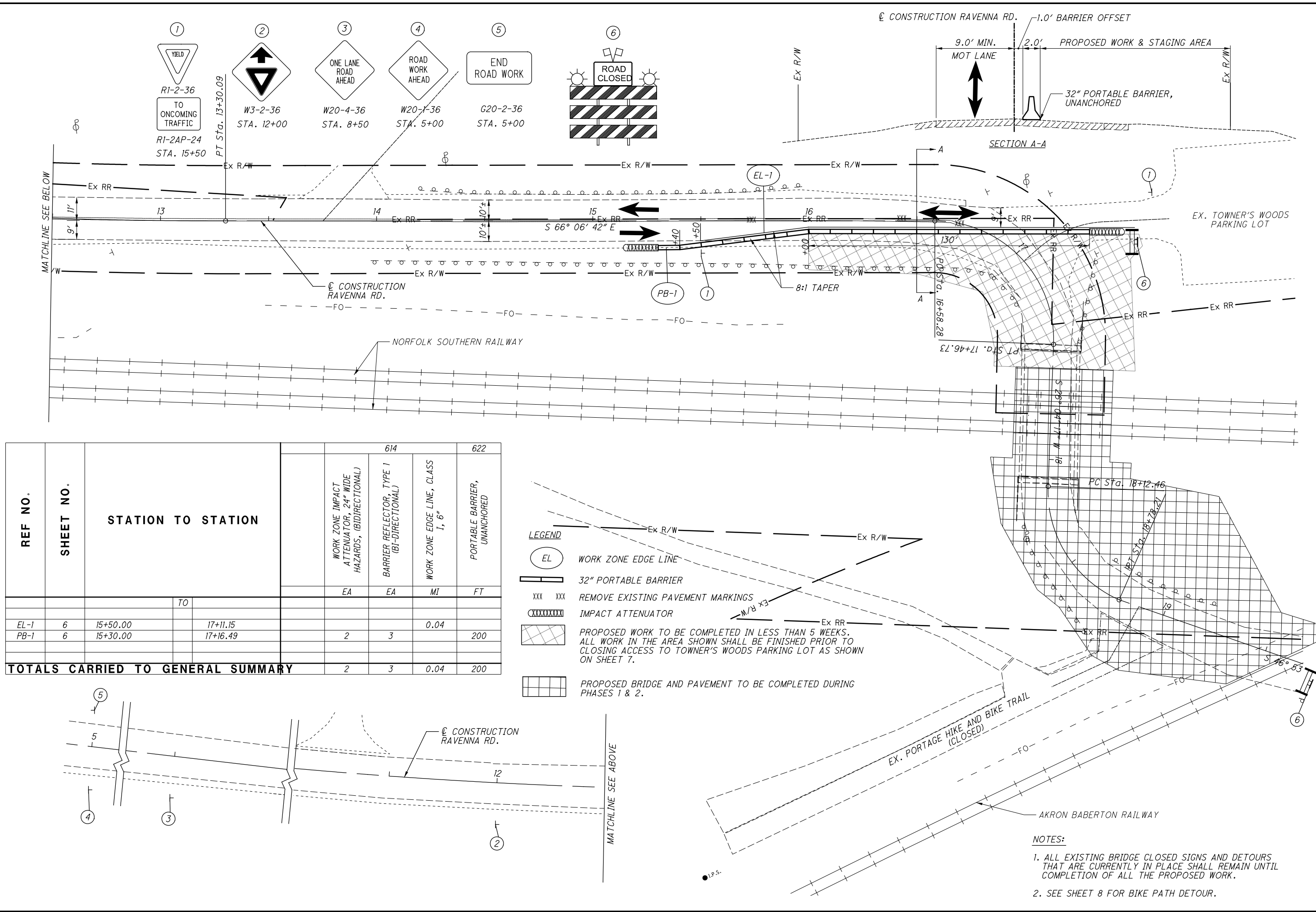
THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

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

PROPOSED CENTERLINE REFERENCE - GROUND COORDINATES SR 145				
STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
10+00.00	℄	551,114.01	2,294,721.70	P.O.T.
10+40.09	℄	551,093.65	2,294,756.23	P.C.
11+85.25	4.21, RT	551,019.89	2,294,881.26	P.I.
13+30.09	℄	550,961.11	2,295,013.99	P.T.
16+58.28	℄	550,828.21	2,295,314.06	P.C.
17+15.39	24.30, LT	550,805.08	2,295,366.28	P.I.
17+46.73	℄	550,753.78	2,295,341.18	P.T.
18+12.46	℄	550,694.73	2,295,312.29	P.C.
18+49.90	11.53, RT	550,661.10	2,295,295.84	P.I.
18+78.21	℄	550,633.46	2,295,321.09	P.T.
20+55.31	℄	550,512.44	2,295,450.39	P.C.
21+88.39	5.05, LT	550,423.47	2,295,549.37	P.I.
23+20.97	℄	550,320.56	2,295,633.76	P.T.
24+64.05	℄	550,211.22	2,295,726.05	P.O.T.

P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineering\MOT\Sheets\05556_MP001.dgn 1/24/2024 12:21:35 PM adesimone

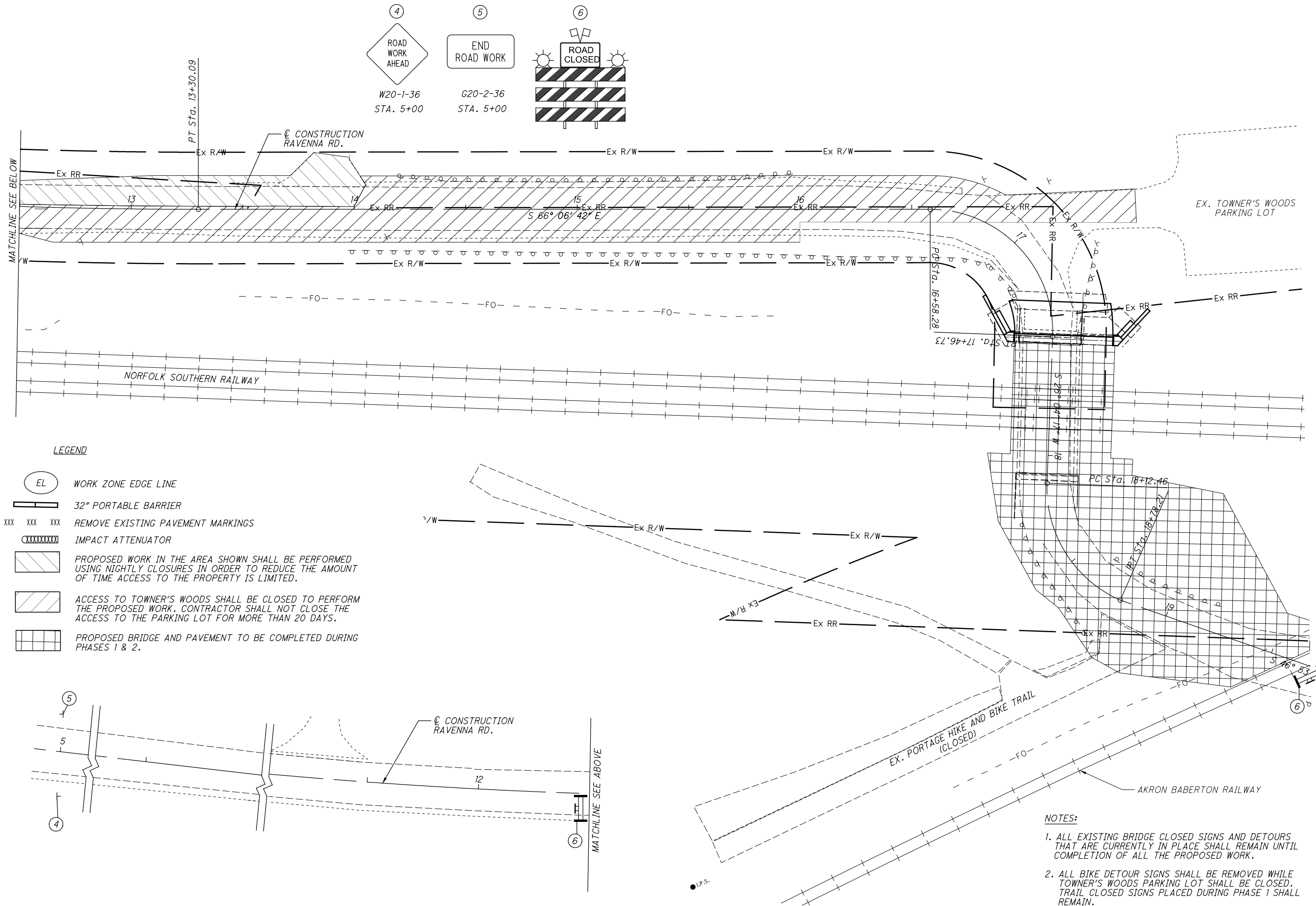
REF NO.	SHEET NO.	STATION TO STATION		614		622	
			TO	EA	EA	MI	FT
EL-1	6	15+50.00	17+11.15			0.04	
PB-1	6	15+30.00	17+16.49	2	3		200
TOTALS CARRIED TO GENERAL SUMMARY				2	3	0.04	200



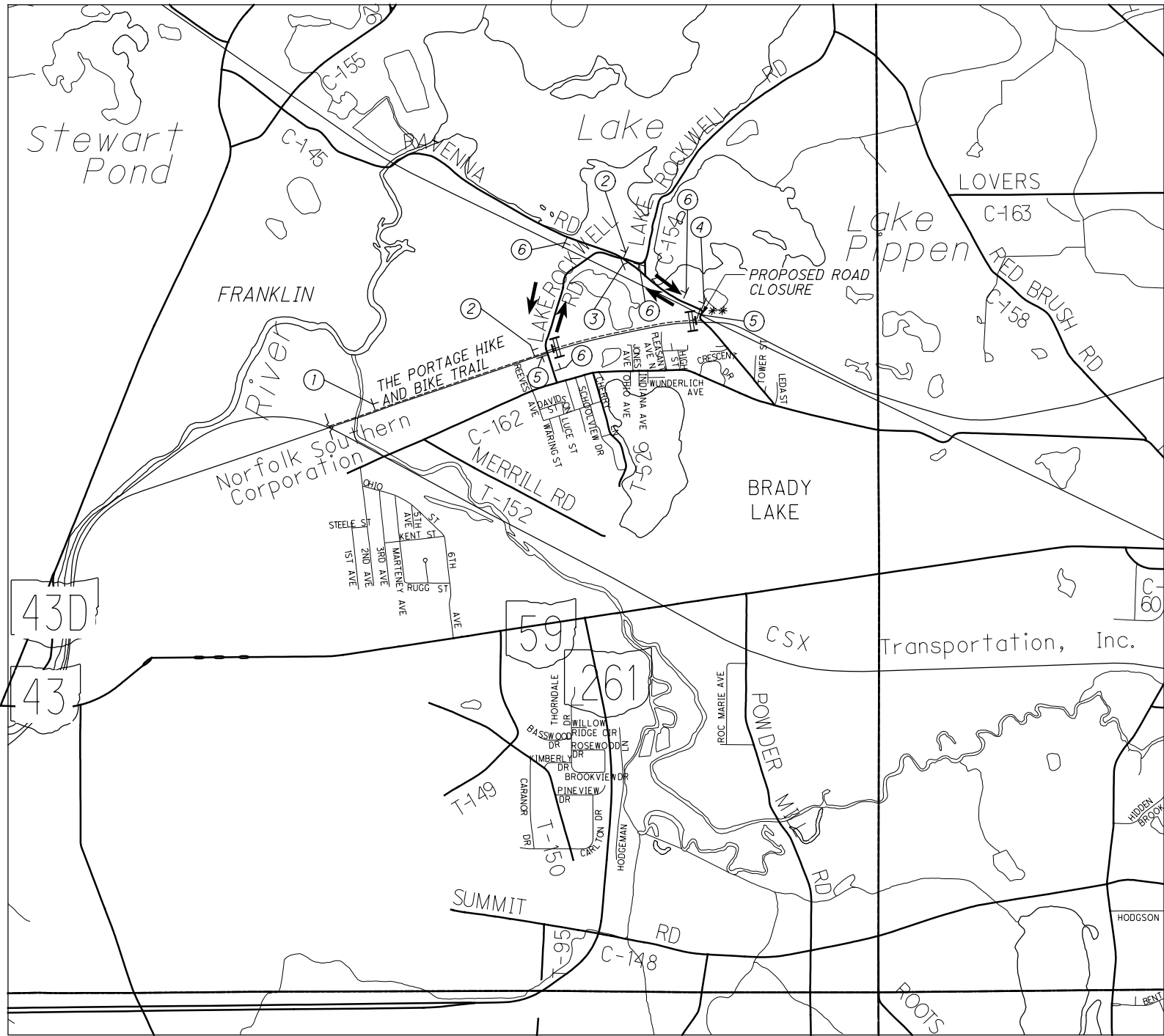
LEGEND

- EL WORK ZONE EDGE LINE
- 32" PORTABLE BARRIER
- XXX XXX REMOVE EXISTING PAVEMENT MARKINGS
- IMPACT ATTENUATOR
- PROPOSED WORK TO BE COMPLETED IN LESS THAN 5 WEEKS. ALL WORK IN THE AREA SHOWN SHALL BE FINISHED PRIOR TO CLOSING ACCESS TO TOWNER'S WOODS PARKING LOT AS SHOWN ON SHEET 7.
- PROPOSED BRIDGE AND PAVEMENT TO BE COMPLETED DURING PHASES 1 & 2.

- NOTES:**
- ALL EXISTING BRIDGE CLOSED SIGNS AND DETOURS THAT ARE CURRENTLY IN PLACE SHALL REMAIN UNTIL COMPLETION OF ALL THE PROPOSED WORK.
 - SEE SHEET 8 FOR BIKE PATH DETOUR.



P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge 248\055556\400-Engineering\MOT\Sheets\055556_MD001.dgn 1/24/2024 12:21:42 PM adesimone



- LEGEND**
- THE PORTAGE HIKE AND BIKE TRAIL
 - T PROPOSED SIGN
 - BARRICADE TYPE III ACROSS THE TRAIL
 - ** TOWNER'S WOODS PARKING LOT
 - ← DIRECTION OF TRAVEL

①

TRAIL
CLOSED
AHEAD

W20-3-36

②

DETOUR
←

M4-9A-L-30

③

DETOUR
→

M4-9A-R-30

④

DETOUR
M4-8-30
↑
M6-3-30

W11-15-30

⑤

END
DETOUR

M4-8A-24

⑥

BIKES
USING
ROADWAY
AHEAD

W11-H1A-30

P:\Projects\2020\20H031D-20335_POR Ravenna Road Bridge 248\05556\400-Engineering\Roadway\Sheets\05556_cg001.dgn 1/24/2024 12:21:44 PM adesimone

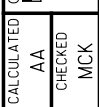
SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED AA	CHECKED MCK
4	11	12		23		53				OFFICE CALCS		01/BRO/B R	02/ENH/O T/PCPD								
LS												LS		201	11000	LS		ROADWAY			
	1,110											1,110		202	23000	1,110	SY	CLEARING AND GRUBBING			
	652											652		202	38000	652	FT	PAVEMENT REMOVED			
				322								322		203	10000	322	CY	GUARDRAIL REMOVED			
				1,668								1,668		203	20000	1,668	CY	EXCAVATION			
																		EMBANKMENT			
										1,988		1,841	147	204	10000	1,988	SY	SUBGRADE COMPACTION			
1												1		204	45000	1	hour	PROOF ROLLING			
	737.5											737.5		606	15100	737.5	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS			
	3											3		606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E			
	3											3		606	26550	3	EACH	ANCHOR ASSEMBLY, MGS TYPE T			
	3											3		606	35002	3	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1			
	1											1		606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2			
	57											57		609	24510	57	FT	CURB, TYPE 4-C			
						7						7		623	38500	7	EACH	MONUMENT ASSEMBLY			
	1											1		SPECIAL	69050350	1	EACH	MAILBOX REMOVED AND RESET	4		
																		EROSION CONTROL			
	13											13		601	32204	13	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC			
1												1		659	00100	1	EACH	SOIL ANALYSIS TEST			
150												150		659	00300	150	CY	TOPSOIL			
1,350												1,350		659	10000	1,350	SY	SEEDING AND MULCHING			
68												68		659	14000	68	SY	REPAIR SEEDING AND MULCHING			
68												68		659	15000	68	SY	INTER-SEEDING			
0.19												0.19		659	20000	0.19	TON	COMMERCIAL FERTILIZER			
0.28												0.28		659	31000	0.28	ACRE	LIME			
8												8		659	35000	8	MGAL	WATER			
												7,500		832	30000	7,500	EACH	EROSION CONTROL			
																		DRAINAGE			
	59											59		611	04900	59	FT	12" CONDUIT, TYPE D			
1												1		611	98450	1	EACH	CATCH BASIN, NO. 2-2A			
																		PAVEMENT			
										229		229		254	01000	229	SY	PAVEMENT PLANING, ASPHALT CONCRETE (2")			
										238		238		301	56000	238	CY	ASPHALT CONCRETE BASE, PG64-22, (449)			
										321		297	24	304	20000	321	CY	AGGREGATE BASE			
										224		208	16	407	20000	224	GAL	NON-TRACKING TACK COAT			
										72		64	8	441	10000	72	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22			
										68		68		441	10200	68	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)			
										66		66		452	12010	66	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P			
										99		99		617	10101	99	CY	COMPACTED AGGREGATE, AS PER PLAN	4		
																		TRAFFIC CONTROL			
	29												29	620	70000	29	EACH	DELINEATOR, MISC.: PAVEMENT MOUNTED, TYPE D	4		
		9										9		621	00100	9	EACH	RPM			
	4											2	2	626	00102	4	EACH	BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)			
	12											6	6	626	00110	12	EACH	BARRIER REFLECTOR, TYPE 2 (BIDIRECTIONAL)			
		89										89		630	02100	89	FT	GROUND MOUNTED SUPPORT, NO. 2 POST			
		92										92		630	03100	92	FT	GROUND MOUNTED SUPPORT, NO. 3 POST			
		10										10		630	08600	10	EACH	SIGN POST REFLECTOR (YELLOW)			
		2										2		630	08600	2	EACH	SIGN POST REFLECTOR (RED)			
		102										102		630	80100	102	SF	SIGN, FLAT SHEET			
		15										15		630	84900	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
		15										15		630	86002	15	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
		0.24										0.24		644	00104	0.24	MILE	EDGE LINE, 6"			
		0.12										0.12		644	00300	0.12	MILE	CENTER LINE			
		36										36		644	00500	36	FT	STOP LINE			
		45										45		644	00630	45	FT	CROSSWALK LINE, 24"			
		1										1		644	01000	1	EACH	RAILROAD SYMBOL MARKING			
		0.04										0.04		646	10010	0.04	MILE	EDGE LINE, 6"			
		0.02										0.02		646	10200	0.02	MILE	CENTER LINE			

GENERAL SUMMARY

POR-145-52.85

$$\frac{10}{61}$$

11
61



P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\055556\400-Engineering\Roadway\Sheets\0055556_GPO02.dgn 1/24/2024 12:22:06 PM adesimone

C2
P.I. Sta. 17+15.39
Δ = 92° 10' 59" (RT)
Dc = 104° 13' 22"
R = 54.97'
T = 57.11'
L = 88.45'
E = 24.30'
C = 79.21'
C.B. = S 20° 01' 12" E
eMAX = NC

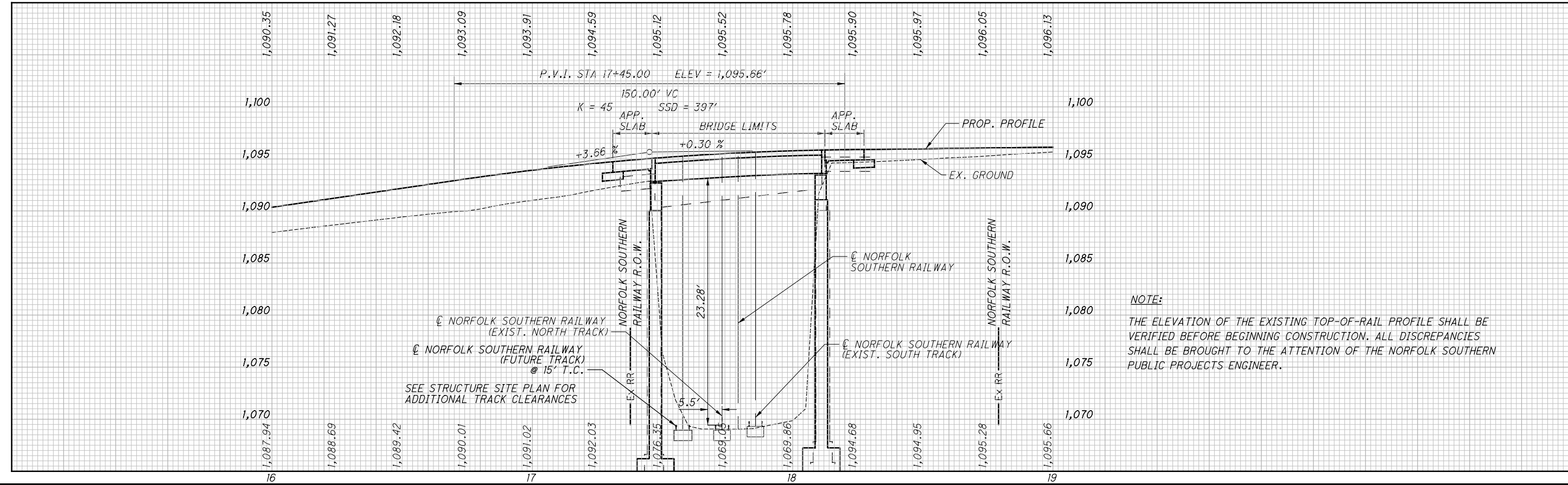
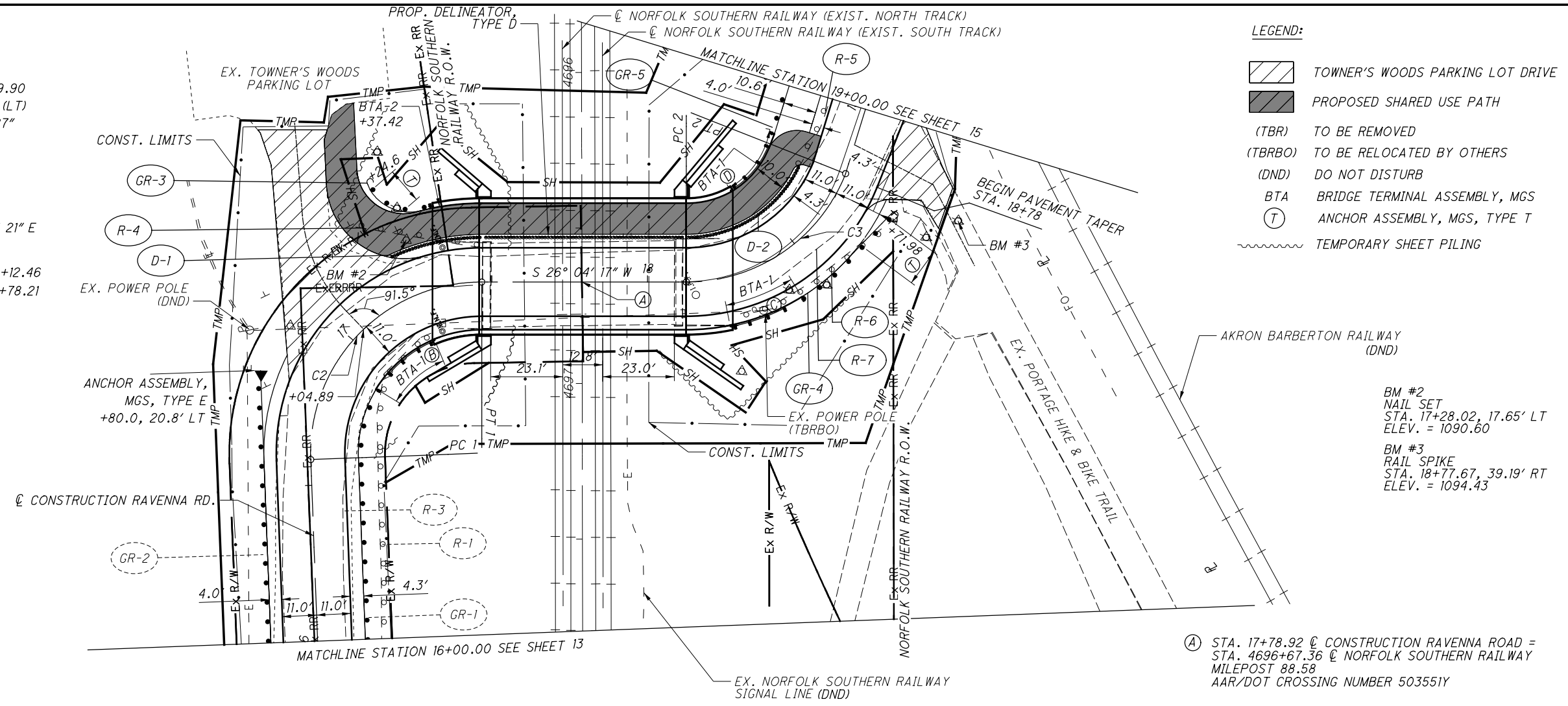
PC 1 - Sta. 16+58.28
PT 1 - Sta. 17+46.73

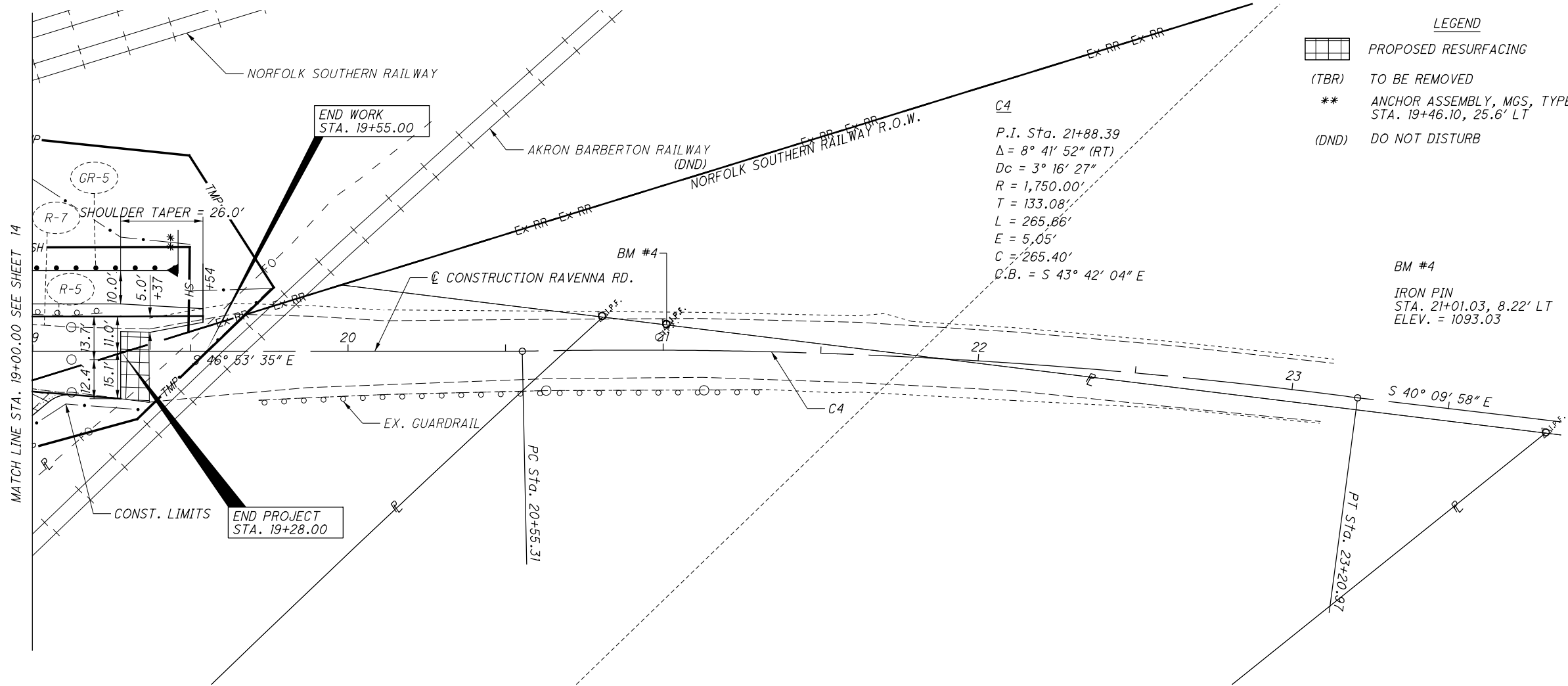
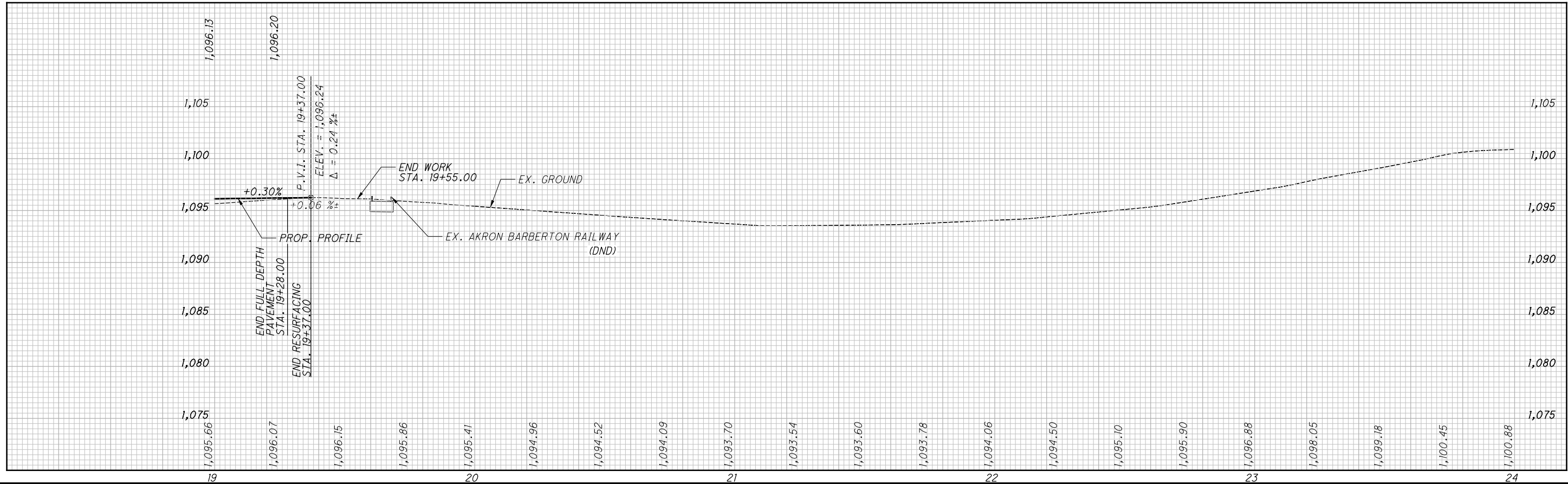
C3
P.I. Sta. 18+49.90
Δ = 68° 29' 16" (LT)
Dc = 104° 10' 27"
R = 55.00'
T = 37.44'
L = 65.74'
E = 11.53'
C = 61.90'
C.B. = S 8° 10' 21" E
eMAX = NC

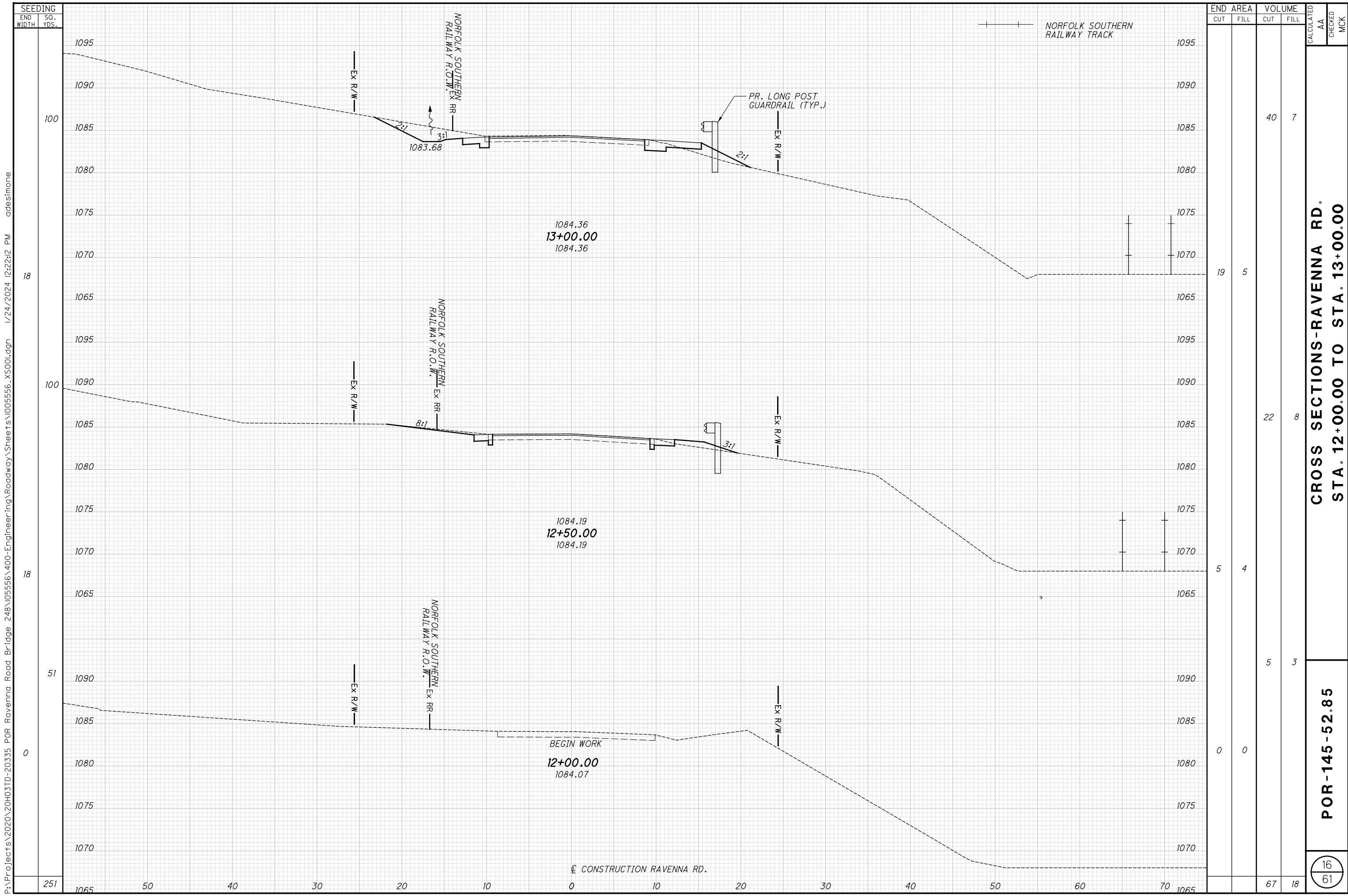
PC 2 - Sta. 18+12.46
PT 2 - Sta. 18+78.21

- Ⓑ BTA-1 : STA. 16+90.39 TO STA. 17+25.05
- Ⓒ BTA-1 : STA. 18+23.50 TO STA. 18+43.06
- Ⓓ BTA-1 : STA. 18+40.33 TO STA. 18+83.60

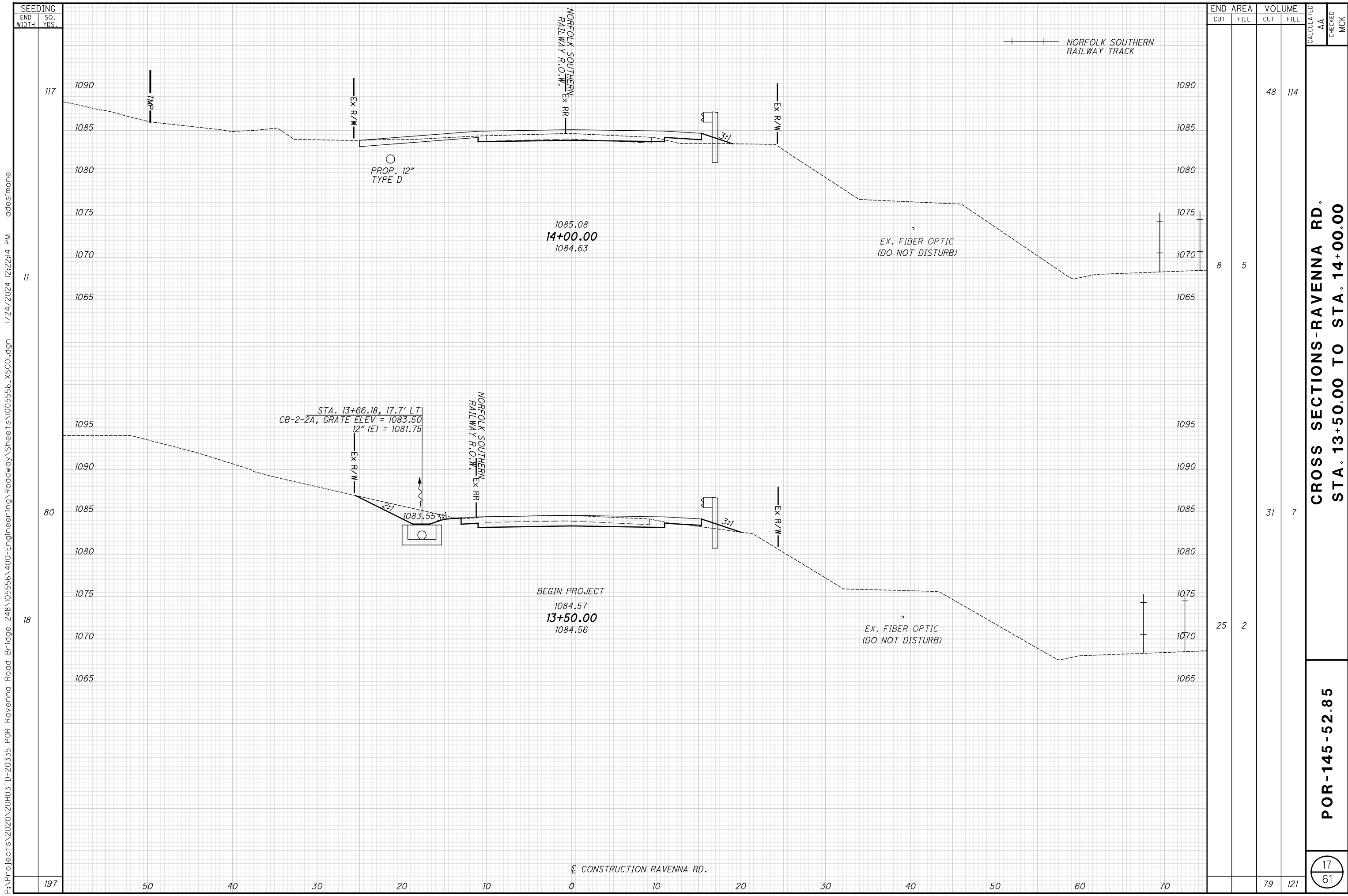
APPROACH SLAB LIMITS	
STA. 17+30.71 (BEGIN)	
STA. 17+45.94 (END)	
STA. 18+12.38 (BEGIN)	
STA. 18+27.57 (END)	

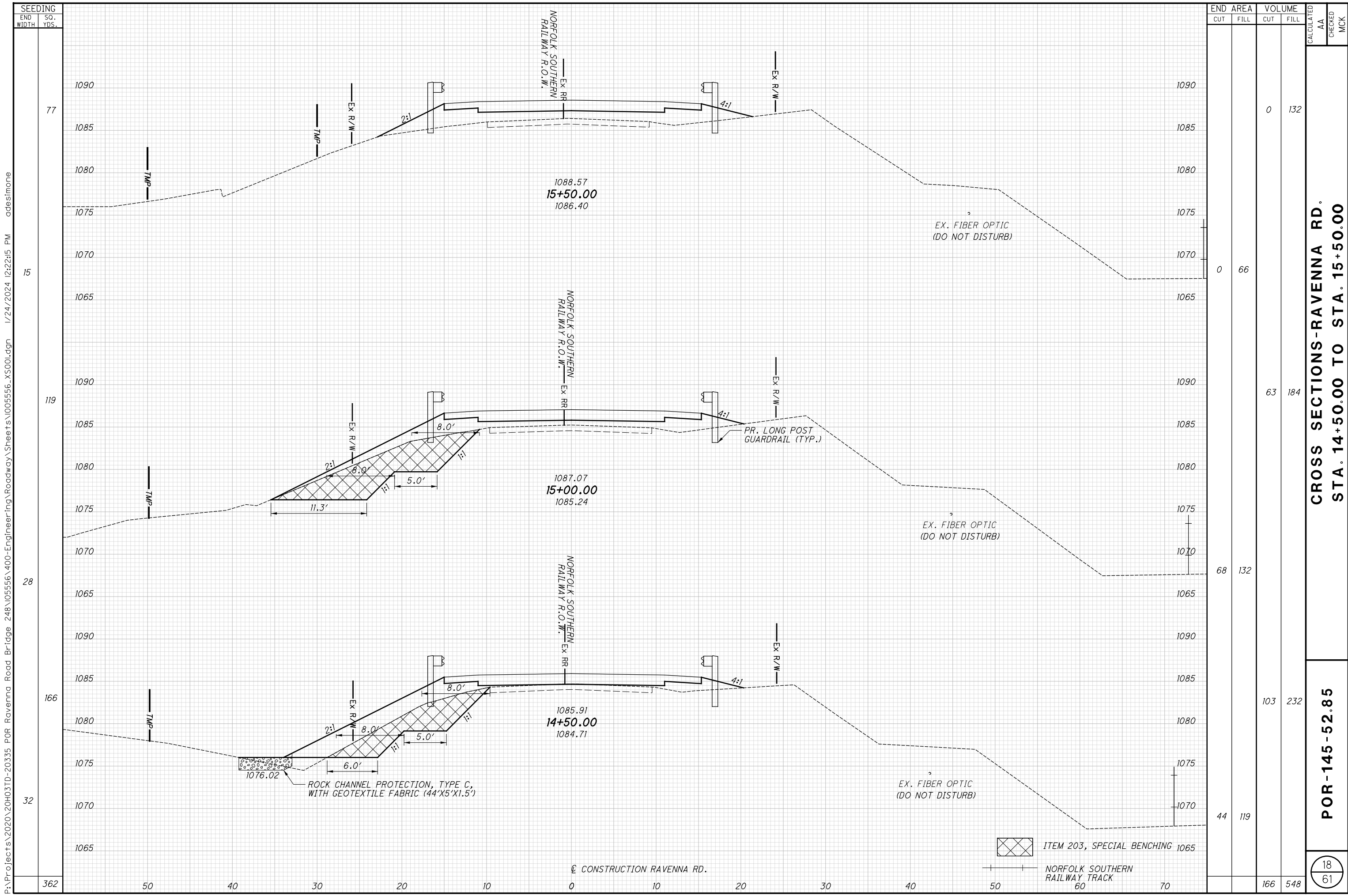






P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\055556\400-Engineering\Roadway\Sheets\0055556_XS001.dgn 1/24/2024 12:22:12 PM adesimone



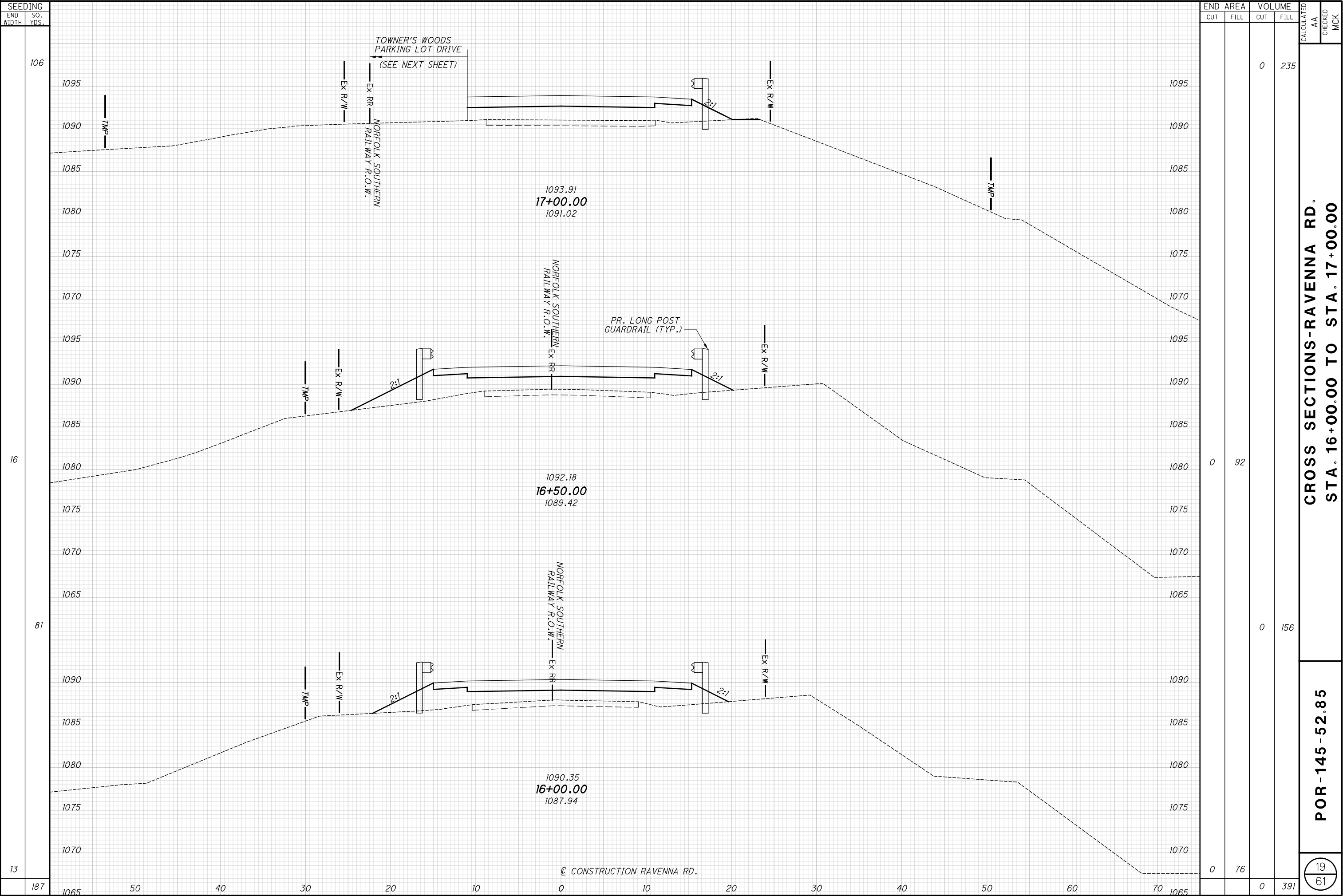


SEEDING		END AREA		VOLUME		CALCULATED		CHECKED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	AA	AA	MCK	MCK
77	15	0	66	0	132				
119	28	68	132	63	184				
166	32	44	119	103	232				
362				166	548				

CROSS SECTIONS-RAVENNA RD.
STA. 14+50.00 TO STA. 15+50.00

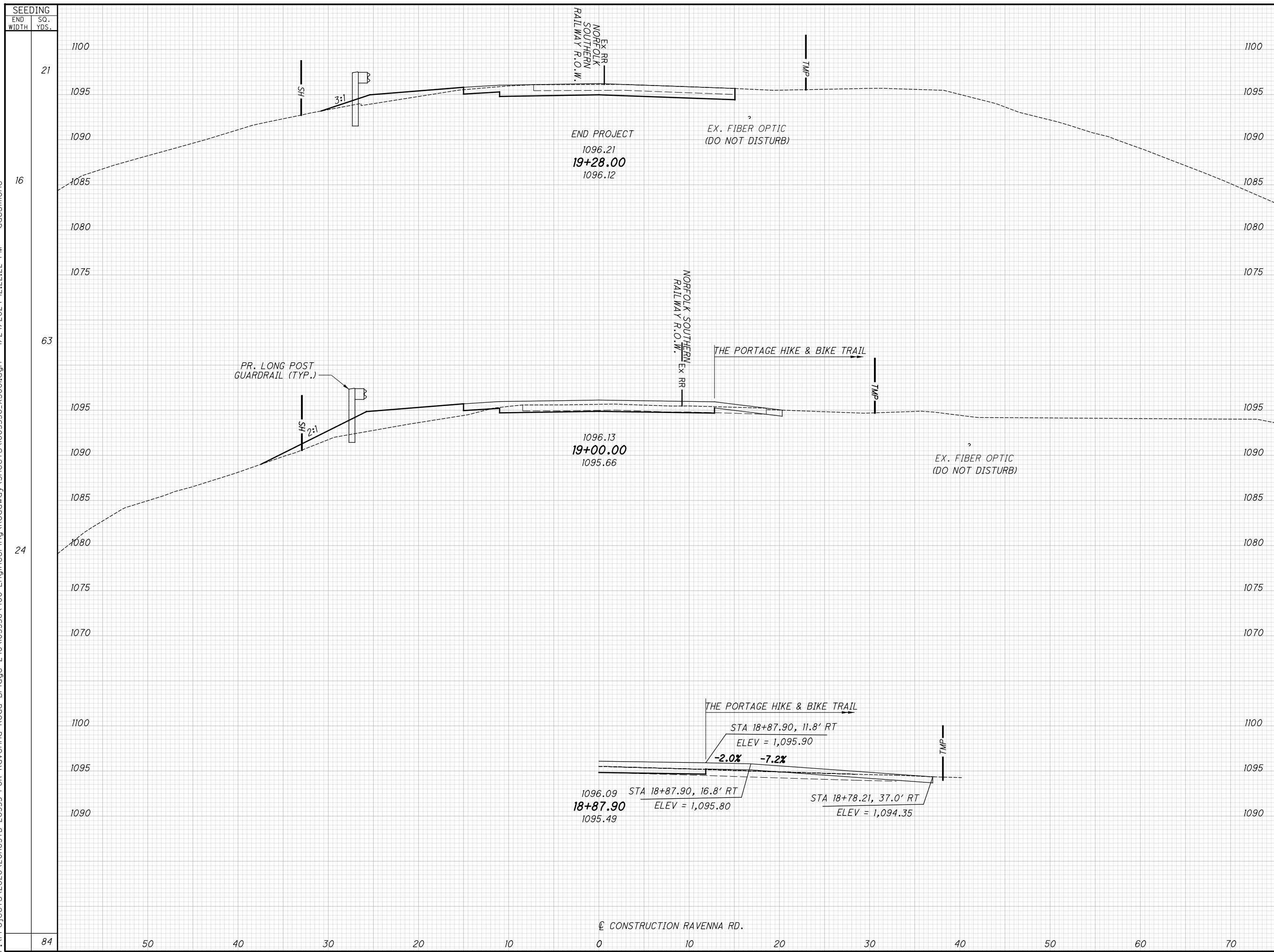
POR-145-52.85

P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineering\Roadway\Sheets\005556_XS001.dgn 1/24/2024 12:22:17 PM adesimone





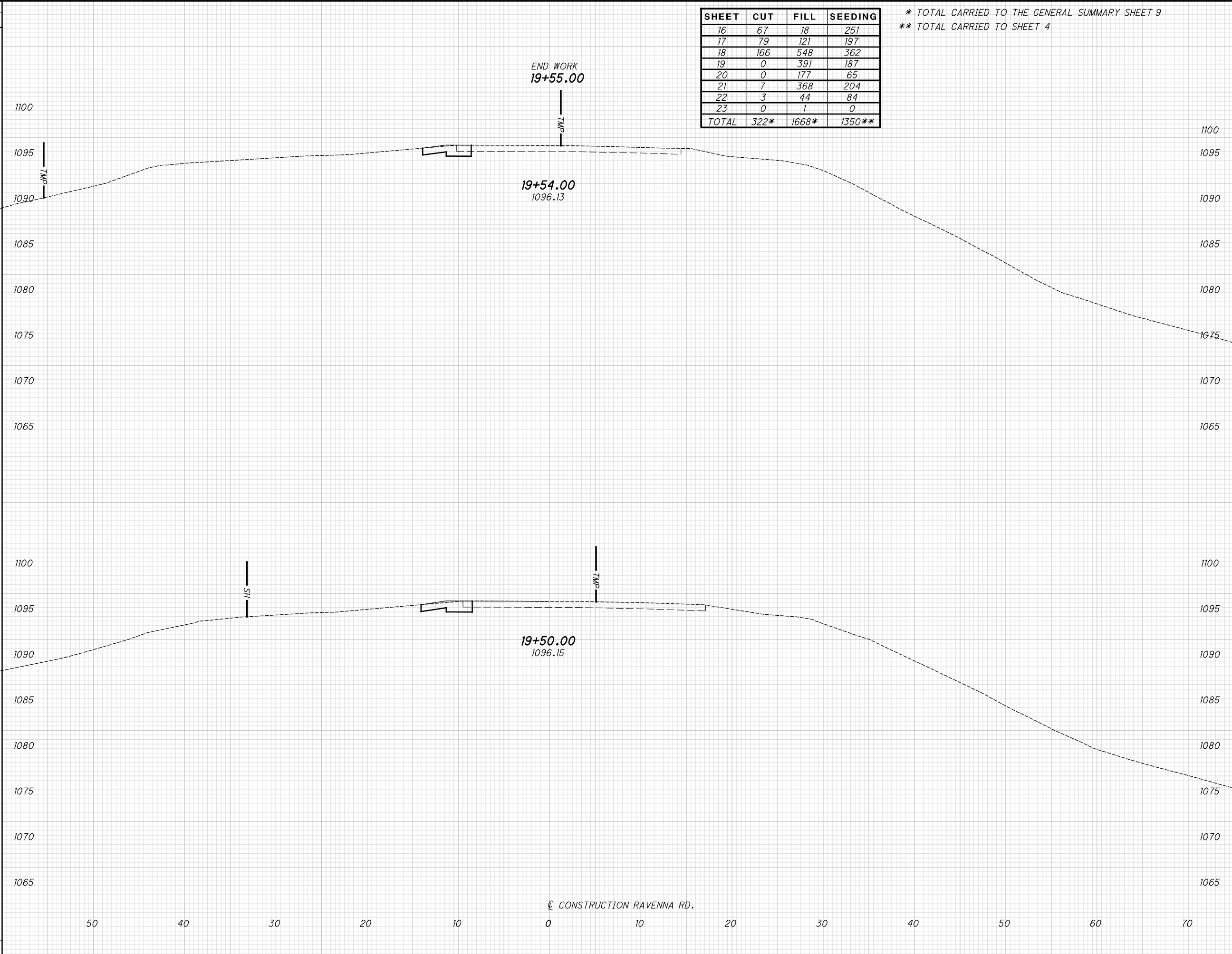
21
61



END AREA		VOLUME		CALCULATED	CHECKED	EAK
CUT	FILL	CUT	FILL			
0	28	0	13	CROSS SECTIONS-RAVENNA RD. STA. 18+87.90 TO STA. 19+28.00	AA	
5	33	3	31			
		3	44			

I:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineering\Roadway\Sheets\005556_XS000.dgn 1/24/2024 12:22:23 PM adesimone

SEEDING	
END WIDTH	SO. YDS.
0	
0	
1	
0	

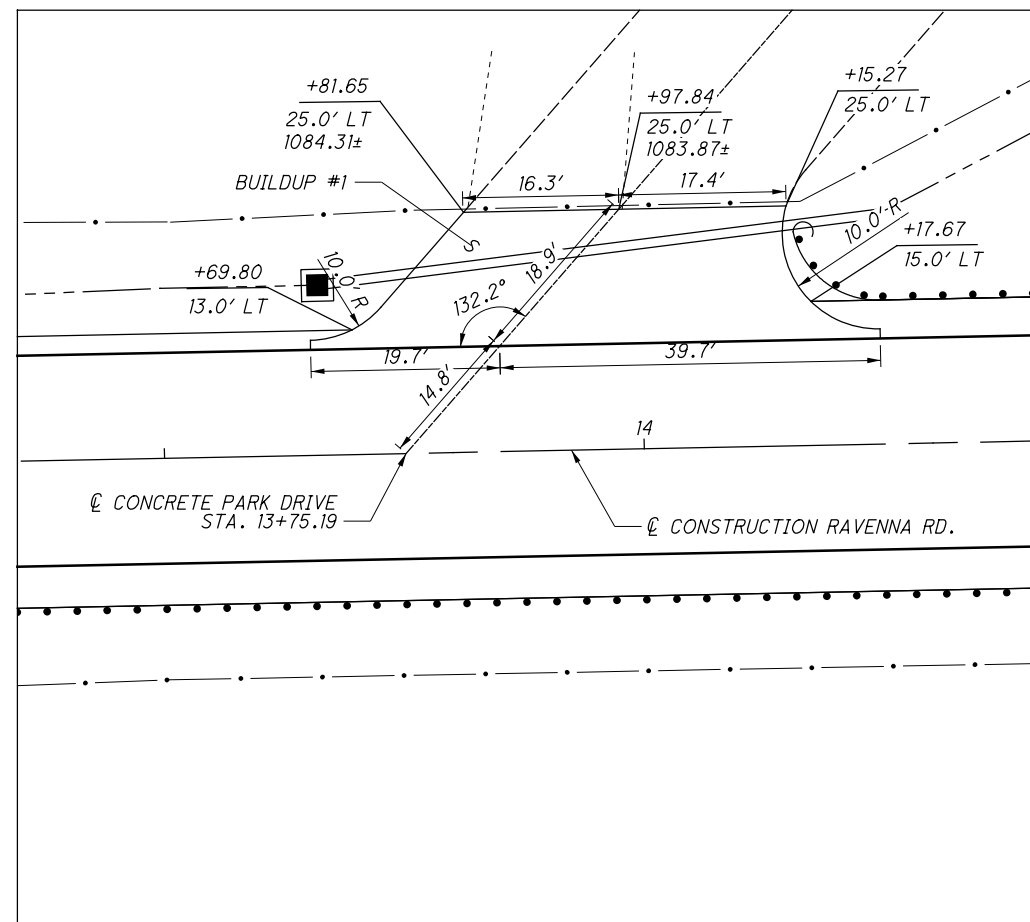


SHEET	CUT	FILL	SEEDING
16	67	18	251
17	79	121	197
18	166	548	362
19	0	391	187
20	0	177	65
21	7	368	204
22	3	44	84
23	0	1	0
TOTAL	322*	1668*	1350**

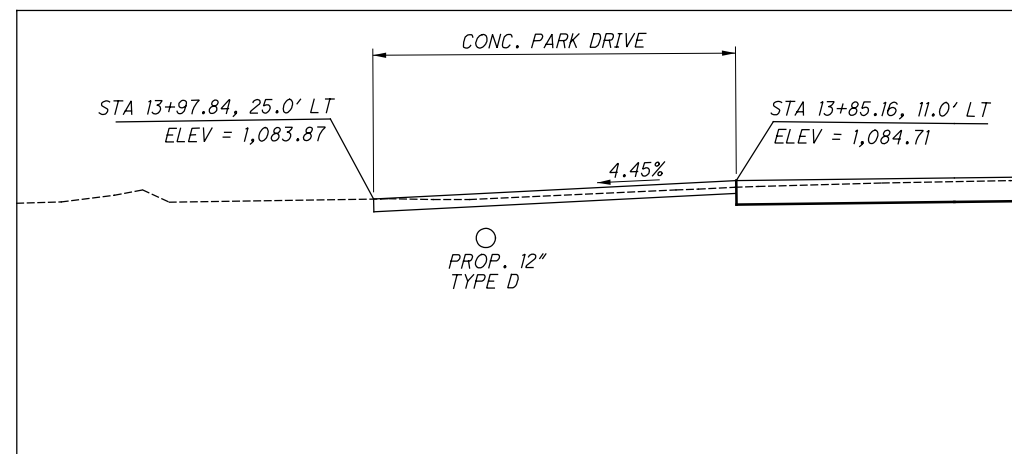
* TOTAL CARRIED TO THE GENERAL SUMMARY SHEET 9
** TOTAL CARRIED TO SHEET 4

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	4	0	1

CALCULATED	CHECKED
AA	MCK
CROSS SECTIONS-RAVENNA RD. STA. 19+50.00 TO STA. 19+54.00	
POR-145-52.85	
23	



CONC. PARK DR. STA. 13+75.19



STA 13+85.16, 11.0' LT
ELEV = 1,084.71

PROP. 12"
TYPE D

CONC. PARK DR. STA. 13+75.19

PAVEMENT BUILDUPS

BUILDUP #1 - CONCRETE

ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QCMS

BUILDUP #2 - ASPHALT

ITEM 441 - 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22

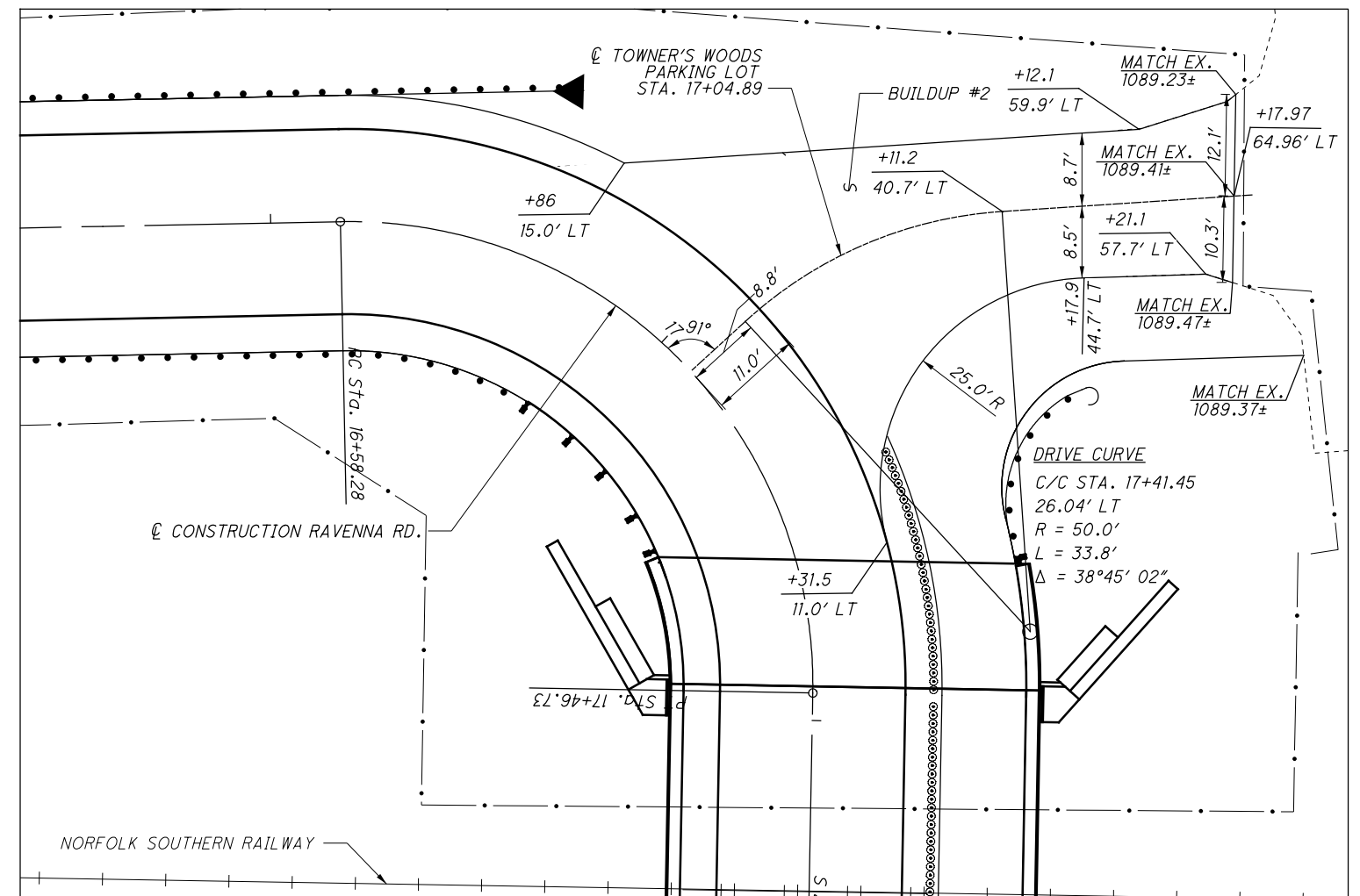
ITEM 441 - 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)

ITEM 304 - 8" AGGREGATE BASE

BUILDUP #3 - SHARED USE PATH

ITEM 441 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22

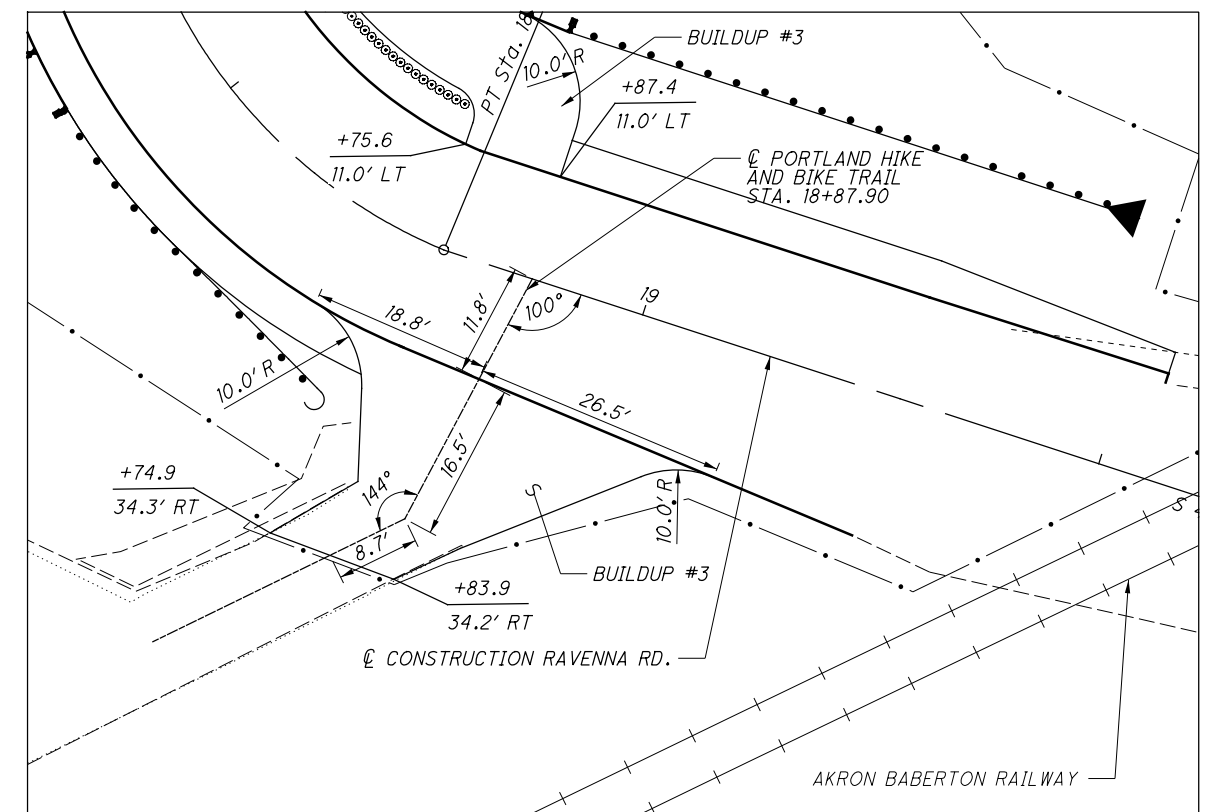
ITEM 304 - 6" AGGREGATE BASE



© CONSTRUCTION RAVENNA RD.

NORFOLK SOUTHERN RAILWAY

TOWNER'S WOODS PARKING LOT ACCESS RD



— C PORTLAND HIKE
AND BIKE TRAIL
STA. 18+87.90

€ CONSTRUCTION RAVENNA RD.

AKRON BABERTON RAILWAY —

NOTES:

REFER TO CROSS SECTION SHEETS FOR
PROPOSED DRIVE PROFILE.

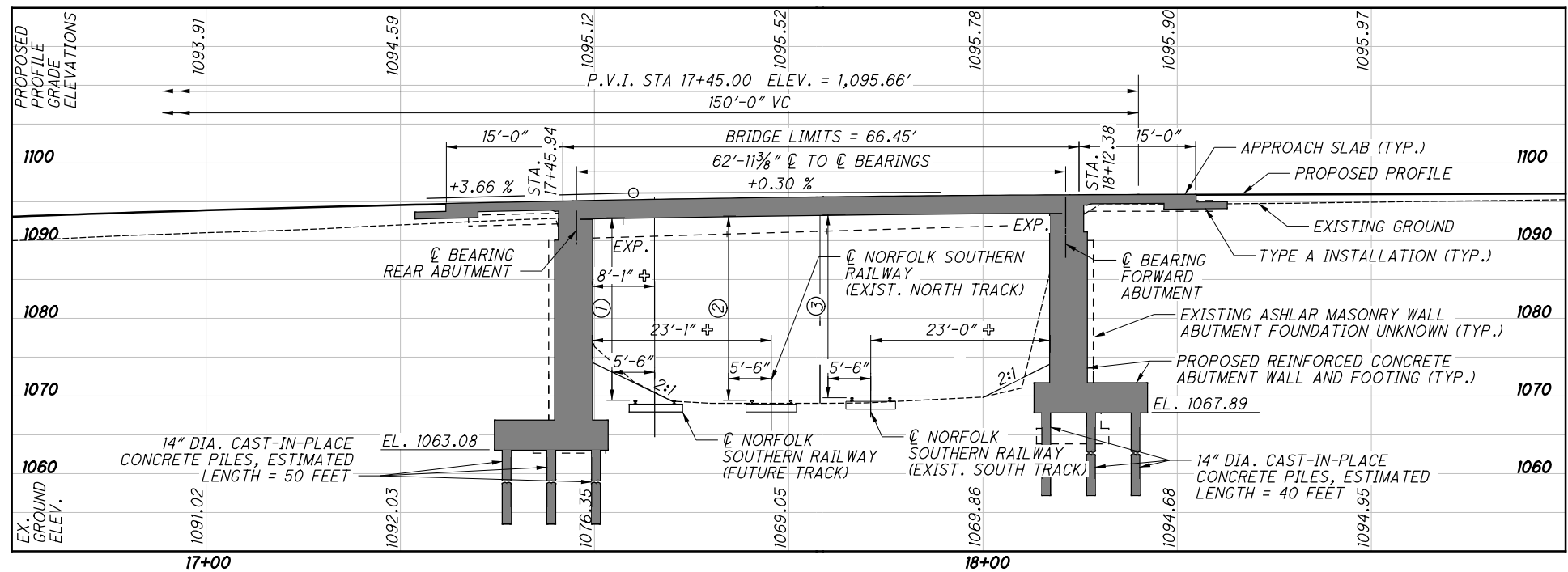
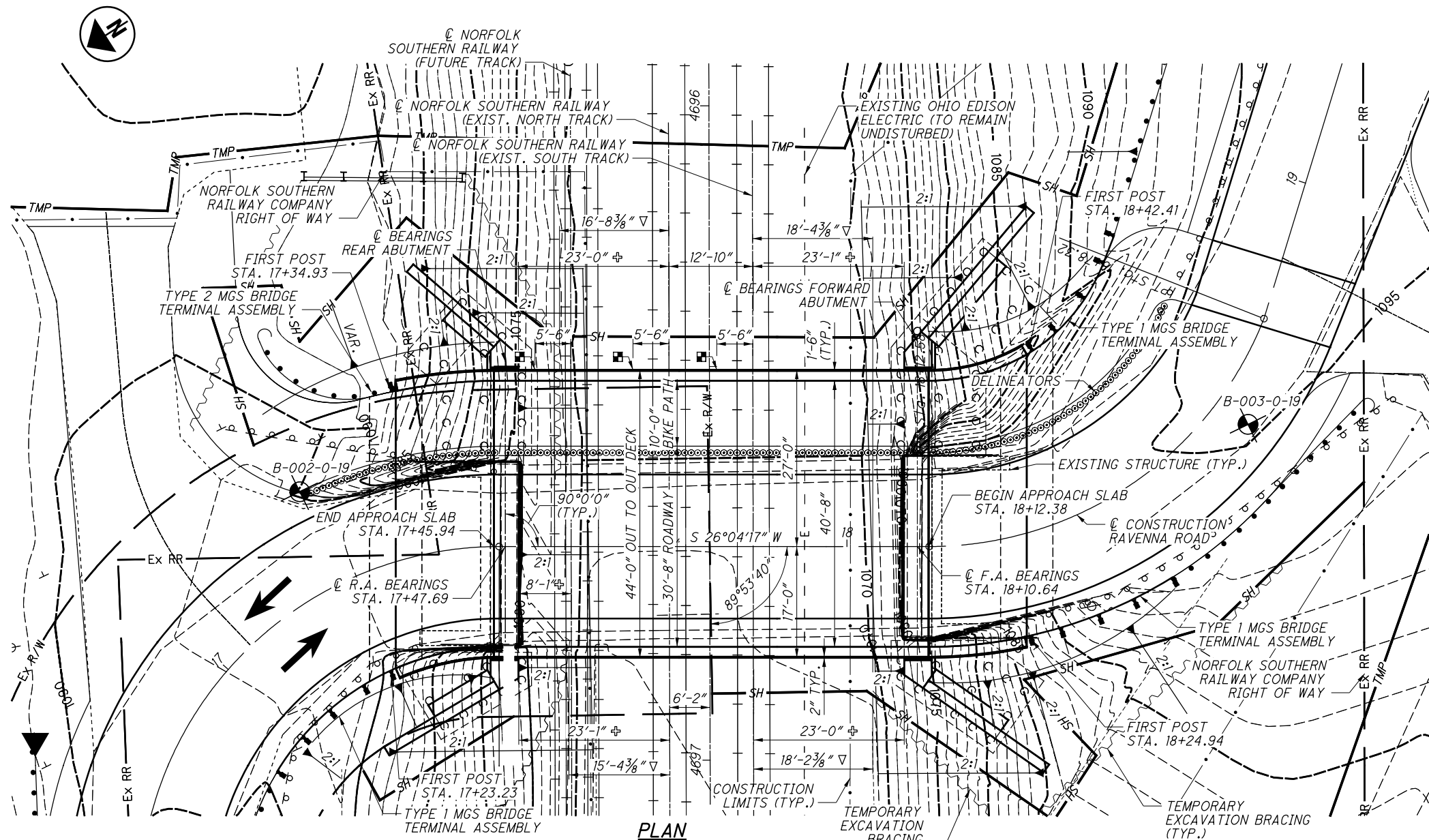
THE PORTAGE HIKE & BIKE TRAIL ACCESS



* SIGN TO BE MOUNTED PERPENDICULAR
TO DIRECTION OF TRAFFIC

$$\frac{25}{61}$$

P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\05556\400-Engineering\Structures\Sheets\C145G-5285CSP001.dgn 1/24/2024 12:22:52 PM adesimone



BENCHMARK DATA

BM #1 STA. 14+12.24, EL. 1084.80, OFFSET 0.70' LT
BM #2 STA. 17+28.02, EL. 1090.60, OFFSET 17.65' LT
BM #3 STA. 18+77.67, EL. 1094.43, OFFSET 39.19' RT
BM #4 STA. 21+01.03, EL. 1093.03, OFFSET 8.22' LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEETS 13/61 TO 15/61.

NOTES:

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

DESIGN TRAFFIC:

2018 ADT = 1,377 2018 ADTT = 28
2038 ADT = 2,047 2038 ADTT = 41
DIRECTIONAL DISTRIBUTION = 0.50

MINIMUM VERTICAL CLEARANCE

① EXISTING = N/A
REQUIRED = 23.00'
PROPOSED = 23.04'
STA. 17+52.25

② EXISTING = 21.53'
REQUIRED = 23.00'
PROPOSED = 23.28'
STA. 17+67.25

③ EXISTING = 21.55'
REQUIRED = 23.00'
PROPOSED = 23.10'
STA. 17+79.56

MINIMUM HORIZONTAL CLEARANCE

THE MINIMUM EXISTING HORIZONTAL CLEARANCE = 23'-0"±
THE MINIMUM PROPOSED HORIZONTAL CLEARANCE = 23'-0"

AT THE RIGHT FORWARD ABUTMENT AND AT THE LEFT REAR ABUTMENT CORNERS.

MINIMUM STATE REQUIRED HORIZONTAL CLEARANCE = 8'-0"

LEGEND

- INDICATES SOIL BORING
- INDICATES MINIMUM HORIZONTAL CLEARANCE LOCATION
- INDICATES MINIMUM VERTICAL CLEARANCE LOCATION
- INDICATES MINIMUM HORIZONTAL CLEARANCE TO TEMPORARY SHEET PILING (10'-0" MINIMUM)

EXISTING STRUCTURE

TYPE: SINGLE SPAN, NON-COMPOSITE ADJACENT BOX BEAM BRIDGE ON REINFORCED CONCRETE AND STONE WALL TYPE ABUTMENTS ON UNKNOWN FOUNDATIONS

SPANS: 63'-0"± C/C BEARINGS ALONG C CONSTRUCTION

ROADWAY: 24'-0"± F/F CURBS W/ 1'-6" PARAPETS

LOADING: HS20-40 AND ALT. MILITARY LOADING (SUPERSTRUCTURE)

SKEW: 0°06' 20"± LEFT FORWARD

APPROACH SLABS: SPECIAL DESIGN (12'-2" LONG REAR, AND 17'-2" LONG FORWARD)

ALIGNMENT: TANGENT

CROWN: FROM C ROADWAY; 0.016

STRUCTURAL FILE NUMBER: 6740448

DATE BUILT: 1983

WEARING SURFACE: 2½" ASPHALT

DISPOSITION: MAJOR REHABILITATION

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING SUPERSTRUCTURE AND DECK WITH COMPOSITE ADJACENT CONCRETE BOX BEAM. REMOVE PORTIONS OF EXISTING ABUTMENT, WIDEN AND RAISE ABUTMENTS AND REPLACE ELASTOMERIC BEARINGS.

SPANS: 63'-0" C/C BEARINGS ALONG C CONSTRUCTION

ROADWAY: 40'-8" TOE-TO-TOE OF SBR-1-20 PARAPETS INCLUDING 10'-0" WIDE MULTI-USE TRAIL

LOADING: HL-93 AND 0.060 KSF FWS

SKEW: 0° 00' 00"

APPROACH SLABS: 15'-0" LONG (AS-1-15 MODIFIED); TYPE A INSTALLATION

ALIGNMENT: TANGENT

CROWN: 0.016

WEARING SURFACE: 1" MONOLITHIC CONCRETE

COORDINATES: LATITUDE N 41°10'20.18" LONGITUDE W 81°18'45.85"

DECK AREA: 2995 SQUARE FEET

DESIGN AGENCY	DATE	REVIEWED	DRAWN	DESIGNED	PORTAGE COUNTY	SITE PLAN	BRIDGE NO. POR-C145G-5285	PID No. 105556	1/26
PRIMEITY 845 East Main Street Columbus, Ohio 43240	04/20/22	AMT	BTJ	BTJ	STA. 17+45.94 STA. 18+12.38				
					STRUCTURE FILE NUMBER		RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY		26/61
					6740448				
					CHECKED	HM			

P:\Projects\2020\20H03TD-20335_POR_Ravenna Road Bridge_24B\105556\400-Engineering\Structures\C145G_5285\CSN001.dgn 1/24/2024 12:22:56 PM adesimone

STRUCTURE GENERAL NOTES

STANDARD DRAWINGS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
AS-1-15 REVISED 1-20-23
AS-2-15 REVISED 1-20-23
BD-1-11 REVISED 7-20-18
PSBD-2-07 REVISED 7-20-18
SBR-1-20 REVISED 7-21-23
VPF-1-90 REVISED 7-21-23
TC-61.10 REVISED 4-21-23

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
SS800
SS846

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS : THIS STRUCTURE CONFORMS TO 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

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.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.
PEDESTRIAN LIVE LOAD OF 0.075 KIPS/SQ. FT.

DESIGN STRESSES:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60 KSI, EPOXY COATED

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 8,000 PSI
COMPRESSIVE STRENGTH (RELEASE) - 6,000 PSI
PRESTRESSING STRAND:
AREA = 0.167 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

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 PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON 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 DIMENSION THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 30,000 FOOT-POUNDS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 31,500 POUNDS PER SQUARE INCH.

VANDAL PROTECTION FENCING:

VANDAL PROTECTION FENCING IS REQUIRED OVER RAILROAD RIGHT-OF-WAY.

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT.

THE PROPOSED WORK CONSISTS OF REMOVING PORTIONS OF THE EXISTING STRUCTURES AS SHOWN IN THE PLANS AND CONSTRUCTING THE PROPOSED BRIDGE.

THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED FOR ANY DEMOLITION OF EXISTING STRUCTURES. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 352 KIPS PER PILE FOR THE REAR ABUTMENT PILES.
THE ULTIMATE BEARING VALUE IS 358 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:

14" DIAMETER PILES 55 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

FORWARD ABUTMENT PILES:

14" DIAMETER PILES 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEMS

RAILROAD REQUIREMENTS:

ALL CONSTRUCTION WORK ON, OVER, UNDER OR ADJACENT TO THE NORFOLK-SOUTHERN (NS) RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE NORFOLK-SOUTHERN "SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS" (NS SPECIAL PROVISIONS).

TEMPORARY CONSTRUCTION CLEARANCE - ENSURE ALL FALSEWORK, BRACING OR FORMS HAVE A MINIMUM HORIZONTAL CLEARANCE OF 12'-0" MEASURED PERPENDICULAR TO THE CENTERLINE OF THE NEAREST TRACK. ANY TEMPORARY VERTICAL CLEARANCE LESS THAN 22', OVER THE TRACKS, WILL REQUIRE SPECIAL PERMISSION, WITH NO GUARANTEE OF APPROVAL FROM NS.

THE MINIMUM ALLOWABLE TEMPORARY CLEARANCES ARE SHOWN ON THE SITE PLAN AND ELEVATION. A TEMPORARY MINIMUM VERTICAL CLEARANCE OF 22'-0" ABOVE TOP OF HIGHEST RAIL AND A MINIMUM STATE REQUIRED HORIZONTAL CLEARANCE OF 8'-0" SHALL BE MAINTAINED AT ALL TIMES.

MEANS AND METHODS - THE CONTRACTOR SHALL DEVELOP A DETAILED SUBMISSION INDICATING THE PROGRESSION OF WORK WITH SPECIFIC TIMES WHEN TASKS WILL BE PERFORMED FOR WORK ACTIVITIES THAT ARE ON OR IN THE VICINITY OF THE NS PROPERTY. THIS SUBMISSION MAY REQUIRE A WALKTHROUGH AT WHICH TIME NS AND/OR THE REPRESENTATIVE WILL BE PRESENT. WORK WILL NOT BE PERMITTED TO COMMENCE UNTIL THE CONTRACTOR HAS PROVIDED NS WITH A SATISFACTORY PLAN THAT THE PROJECT WILL BE UNDERTAKEN WITHOUT SCHEDULING, PERFORMANCE OR SAFETY RELATED ISSUES. PROVIDE A LISTING OF THE ANTICIPATED EQUIPMENT TO BE USED, THE LOCATION OF ALL EQUIPMENT TO BE USED AND ENSURE A CONTINGENCY PLAN OF ACTION IS IN PLACE SHOULD A PRIMARY PIECE OF EQUIPMENT MALFUNCTION. ALL WORK IN THE VICINITY OF NS PROPERTY THAT HAS THE POTENTIAL OF AFFECTING NS TRAIN OPERATIONS MUST BE SUBMITTED AND APPROVED BY NS PRIOR TO WORK BEING PERFORMED. THIS SUBMISSION WILL ALSO INCLUDE A DETAILED NARRATIVE DISCUSSING THE COORDINATION OF PROJECT SAFETY ISSUES BETWEEN CONTRACTOR, NS AND THE REPRESENTATIVE. THE NARRATIVE SHALL ADDRESS PROJECT LEVEL COORDINATION AND DAY TO DAY, SPECIFIC WORK OPERATIONS INCLUDING CRANE AND EQUIPMENT OPERATIONS, ERECTION PLANS AND TEMPORARY WORKS.

RAILROAD REQUIREMENTS (CONTINUED):

DEMOLITION PROCEDURES, ERECTION PROCEDURES, AND SEALING CONTAINMENT PROCEDURES ARE REQUIRED TO BE SUBMITTED TO NS , OR THE REPRESENTATIVE, IN ACCORDANCE WITH THE NS CONSTRUCTION SUBMISSION CRITERIA, LAST REVISED [APRIL 14, 2015]. THE NS CONSTRUCTION SUBMISSION CRITERIA SHOULD BE REFERRED TO AND COMPLIED WITH PRIOR TO THE PREPARATION OF SUBMISSIONS, AS IT CONTAINS SPECIFIC REQUIREMENTS THAT COULD IMPACT THE CONTRACTOR'S MATERIAL SELECTION AND METHODS OR OPERATIONS FOR WORK NEAR THE RAILROAD. REVISIONS TO CONTRACTOR SUBMISSIONS MAY NOT BE FIELD APPROVED. ANY DEVIATION(S) FROM A PREVIOUSLY ACCEPTED PLAN INCLUDING EQUIPMENT SUBSTITUTIONS WILL REQUIRE A FORMAL RESUBMISSION OF THE PROCEDURE FOR REVIEW AND ACCEPTANCE PRIOR TO PERFORMING ANY WORK. A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO MUST SIGN AND SEAL THE PLANS. UP TO THIRTY (30) DAYS WILL BE REQUIRED TO REVIEW ALL CONSTRUCTION SUBMISSIONS. UP TO AN ADDITIONAL THIRTY (30) DAYS WILL BE REQUIRED TO REVIEW ANY SUBSEQUENT SUBMISSIONS RETURNED NOT APPROVED.

EMERGENCY ACTION PLAN - SUBMIT AN EMERGENCY ACTION PLAN INDICATING THE LOCATION OF THE SITE, CONTACT NUMBERS, ACCESS TO THE SITE, INSTRUCTIONS FOR EMERGENCY RESPONSE AND LOCATION OF THE NEAREST HOSPITALS. THIS PLAN SHOULD COVER ALL ITEMS REQUIRED IN THE EVENT OF AN EMERGENCY AT THE SITE INCLUDING FIRE SUPPRESSION. COORDINATE THE EMERGENCY ACTION PLAN WITH THE SAFETY RELATED DISCUSSION OF THE MEANS AND METHODS SUBMISSION DISCUSSED ABOVE. THE PLAN SHOULD ALSO INCLUDE A METHOD TO PROVIDE THIS INFORMATION TO EACH PROJECT WORKER FOR EACH DAY ON SITE.

CONTRACTOR ACCESS WILL BE LIMITED TO THE IMMEDIATE PROJECT AREA ONLY. THE NS RIGHT-OF-WAY OUTSIDE THE PROJECT AREA MAY NOT BE USED FOR CONTRACTOR ACCESS TO THE PROJECT SITE AND NO TEMPORARY AT-GRADE CROSSINGS WILL BE ALLOWED.

"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.

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 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, AND FIBER OPTICS PROJECTS. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

DESIGN AGENCY
PRIMEITY
8415 Rouse Place
Columbus Ohio 43240

DATE
04/20/22

REVIEWED
AMT

DRAWN
JAT

DESIGNED
JAT

GENERAL NOTES (1 OF 2)
BRIDGE NO. POR-C145G-5285
RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY

POR-145-52.85
PID No. 105556

2 / 26

27
61

STRUCTURE FILE NUMBER
6740448

CHECKED
BTJ

REVISED

P:\Projects\2020\20H03ID-20335 POR Ravenna Road Bridge 24B\105556\400-Engineering\Structures\Sheets\C145G_5285CSN002.dgn 1/24/2024 12:22:58 PM odesimone

STRUCTURE GENERAL NOTES

RAILROAD REQUIREMENTS (CONTINUED):

FOR PROJECTS REQUIRING MORE THAN 30 CONSECUTIVE DAYS OF FLAGGING, CONTRACTOR SHALL PROVIDE THE FLAGMAN A SMALL WORK AREA WITH A DESK/COUNTER AND CHAIR WITHIN THE FIELD/SITE TRAILER, INCLUDING THE USE OF BATHROOM FACILITIES, WHERE THE FLAGMAN CAN CHECK IN/OUT WITH THE PROJECT, AS WELL AS TO THE FLAGMAN'S HOME TERMINAL. THE WORK AREA SHOULD PROVIDE ACCESS TO TWO (2) ELECTRICAL OUTLETS FOR RECHARGING RADIO(S), AND A LAPTOP COMPUTER; AND HAVE THE ABILITY TO PRINT OFF NEEDED DOCUMENTATION AND ORDERS AS NEEDED AT THE FIELD/SITE TRAILER. THIS SHOULD AID IN MAXIMIZING THE FLAGMAN'S TIME AND EFFICIENCY ON THE PROJECT.

THE ELEVATIONS OF THE EXISTING TOP-OF-RAIL PROFILE SHALL BE VERIFIED TO MATCH THE APPROVED FINAL PLANS BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF NORFOLK SOUTHERN PUBLIC PROJECTS ENGINEER.

RAILROAD EXCAVATION REQUIREMENTS:

THERE SHALL BE NO EXCAVATION ON OR AT THE TOE OF THE NORFOLK SOUTHERN TRACK STRUCTURE SLOPES WITHOUT REVIEW AND COMPLIANCE WITH THE NORFOLK SOUTHERN "SHORING REQUIREMENTS".

ITEM 509 - UNCOATED REINFORCING STEEL, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD DRILL DOWEL HOLES INTO THE EXISTING ASHLAR STONE MASONRY ABUTMENTS AS SHOWN IN THE PLANS. DOWEL HOLES SHALL BE FILLED WITH A HILTI RE-500 V3 EPOXY ANCHOR OR APPROVED EQUAL. INSTALL ANCHORS ACCORDING TO MANUFACTURER'S INSTALLATION PROCEDURES. THE DIAMETER OF THE DOWEL HOLE SHOULD BE 1/8" LARGER THAN THAT OF THE DOWEL BAR. IF THE LOCATION OF THE DOWEL HOLE IS WITHIN 6" OF A FREE EDGE, MOVE THE DOWEL HOLE TO PROVIDE AT LEAST 6" CLEARANCE.

ALL COSTS FOR LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL DOWEL HOLES IS INCLUDED IN THE UNIT BID PRICE OF ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.

ITEM 620 - DELINEATOR, MISC.: TYPE D, AS PER PLAN:

INSTALL 48" HIGH, TYPE D DELINEATORS WITH FRONT AND REAR REFLECTORS AS SHOWN IN THE PLANS PER ITEM 620. FILL DRILLED HOLES IN THE PROPOSED DECK WITH AN APPROVED EPOXY-URETHANE GROUT OR APPROVED EQUAL. THE DIAMETER OF THE HOLE SHOULD BE 1/8" LARGER THAN THAT OF THE ANCHOR BOLT.

ALL COSTS FOR LABOR, MATERIAL, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL THE TYPE D DELINEATORS IS INCLUDED IN THE UNIT BID PRICE OF ITEM 620 - DELINEATOR, MISC.: TYPE D, AS PER PLAN.

ITEM 900 - RAILROAD FLAGGING SERVICES:

FLAGGING FOR WORK ON RAILROAD RIGHT OF WAY SHALL BE COORDINATED, OBTAINED AND PAID FOR BY THE CONTRACTOR. FLAGGING SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER REQUIRED BY THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTEREST. NORFOLK SOUTHERN SHALL APPROVE THE FLAGGING SERVICE PROVIDER AND THEIR STAFF.

NORFOLK SOUTHERN HAS THE SOLE AUTHORITY TO DETERMINE THE NEED FOR PROTECTION SERVICES TO PROTECT ITS OPERATIONS IN GENERAL. THE REQUIREMENTS OF SUCH SERVICES WILL BE WHENEVER THE CONTRACTOR'S PERSONNEL OR EQUIPMENT ARE OR ARE LIKELY TO BE, WORKING ON THE RAILROAD'S RIGHT OF WAY, OR ACROSS, OVER, ADJACENT TO, OR UNDER A TRACK, OR WHEN SUCH WORK HAS DISTURBED OR IS LIKELY TO DISTURB A RAILROAD STRUCTURE OR THE RAILROAD ROADBED OR SURFACE AND ALIGNMENT OF ANY TRACK TO SUCH EXTENT THAT THE MOVEMENT OF TRAINS MUST BE CONTROLLED BY FLAGGING.

THE TOTAL DOLLARS IN THE ESTIMATED QUANTITIES IS BASED UPON AN ESTIMATE OF TOTAL FLAGGING DOLLARS NEEDED TO COMPLETE THE PLANNED WORK.

ONLY THE FOLLOWING CERTIFIED FLAGGING PROVIDERS ARE ACCEPTABLE BY NORFOLK SOUTHERN:

RAILROAD CONSULTANTS
STEVE LLOYD (VP BUSINESS DEVELOPMENT)
(615) 542-8901

RAILPROS
1320 GREENWAY DR., SUITE 490
IRVING, TX 75038
(877) 315-0513
HTTP://WWW.RAILPROS.COM/SERVICES-CATEGORY/FIELD-SERVICES/

PAYMENT FOR CERTIFIED FLAGGING PROVIDERS WILL BE MADE PER ITEM 900E00100 EACH - RAILROAD FLAGGING SERVICES BASED UPON THE INVOICES RECEIVED FROM THE FLAGGING SERVICE FOR THE DOLLARS USED, INCLUDING A FIVE PERCENT MARKUP FOR CONTRACTOR OVERHEAD FOR ADMINISTERING THE CONTRACT WITH THE FLAGGING SERVICE.

IN THE EVENT THE PROJECT IS DELAYED DUE TO RAILROAD FLAGGER AVAILABILITY, THE CONTRACTOR WILL PROVIDE DOCUMENTATION SUPPORTING THEIR EFFORTS TO SCHEDULE A FLAGGER FROM THE FLAGGING SERVICE.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- AASHTO - AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
- ABUT. - ABUTMENT
- ADT - AVERAGE DAILY TRAFFIC
- ADTT - AVERAGE DAILY TRUCK TRAFFIC
- ASTM - AMERICAN SOCIETY OF TESTING MATERIALS
- BL - BASELINE
- CL - CENTERLINE
- C/C - CENTER TO CENTER
- C.J. - CONSTRUCTION JOINT
- CMS - CONSTRUCTION MATERIAL SPECIFICATIONS
- CLR. - CLEAR
- CY- CUBIC YARD
- DIA./φ - DIAMETER
- DIM. - DIMENSION
- E.F. - EACH FACE
- EL. - ELEVATION
- EQ. - EQUAL
- EX. - EXISTING
- EXP. - EXPANSION
- F.A. - FORWARD ABUTMENT
- F.F. - FAR FACE
- FT - FEET
- FWD. - FORWARD
- FWS - FUTURE WEARING SURFACE
- LB - POUND LOCATION
- LT. - LEFT
- MAX. - MAXIMUM
- MID. - MIDDLE
- MIN. - MINIMUM
- MISC. - MISCELLANEOUS
- MGS - MIDWEST GUARDRAIL SYSTEM
- NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
- N.F. - NEAR FACE
- NO./# - NUMBER
- O/O - OUT TO OUT
- PL - PLATE
- PC - POINT OF CURVATURE
- PCPP - PERFORATED CORRUGATED PLASTIC PIPE
- PEJF - PREFORMED EXPANSION JOINT FILLER
- PI - POINT OF INTERSECTION
- PT - POINT OF TANGENCY
- PVC - POINT OF VERTICAL CURVATURE
- PVI - POINT OF VERTICAL INTERSECTION
- PVT - POINT OF VERTICAL TANGENCY
- R.A. - REAR ABUTMENT
- RT. - RIGHT
- SER. - SERIES
- SPA. - SPACES OR SPACING
- SQ. FT. - SQUARE FEET
- SQ. YD. - SQUARE YARD
- STA. - STATION
- STD. - STANDARD
- STR. - STRAIGHT
- TYP. - TYPICAL
- VC - VERTICAL CURVE

DESIGN AGENCY
PRIMEITY
8415 Rouse Place, Suite 300
Columbus, Ohio 43240

DATE
04/20/22

REVIEWED
AMT

DRAWN
JAT

DESIGNED
JAT

STRUCTURE FILE NUMBER
6740448

REVISED
BTJ

GENERAL NOTES (2 OF 2)

BRIDGE NO. POR-C145G-5285

RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY

POR-145-52.85

PID No. 105556

3 / 26

28
61

P:\Projects\2020\20H03ID-20335_POR_Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285CS0001.dgn 1/24/2024 12:22:59 PM adesimone

ESTIMATED QUANTITIES							MADE BY: HM		CHKD BY: BTJ	
							DATE: 02/04/2022		DATE: 02/09/2022	
ITEM	ITEM EXTENSION	TOTAL	UNITS	DESCRIPTION	POR-C145G-5285					
					ABUTMENTS	SUPERSTRUCTURE	GENERAL	SHT. REF.		
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP	2 / 26		
202	22900	97	SY	APPROACH SLAB REMOVED			97			
202	23500	261	SY	WEARING COURSE REMOVED		164	97			
503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	LUMP					
503	21100	848	CY	UNCLASSIFIED EXCAVATION	848					
505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION			LUMP			
507	00600	2840	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	2840					
507	00650	3160	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	3160					
509	10000	73269	LB	EPOXY COATED REINFORCING STEEL	56627	12135	4507			
509	25001	855	LB	UNCOATED REINFORCING STEEL, AS PER PLAN	855			3 / 26		
510	10000	180	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	180					
511	34444	75	CY	CLASS QC2 CONCRETE, BRIDGE DECK		75				
511	34448	30	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)		21	9			
511	44112	363	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	363					
511	46512	150	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	150					
512	10100	469	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	309	160				
512	33000	88	SY	TYPE 2 WATERPROOFING	88					
515	12050	11	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48		11				
516	13600	17	SF	1" PREFORMED EXPANSION JOINT FILLER			17			
516	13900	127	SF	2" PREFORMED EXPANSION JOINT FILLER	127					
516	14020	95	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	95					
516	43100	44	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (10"x12"x1.35") (NEOPRENE)		44				
518	21200	195	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	195					
518	40000	231	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	231					
518	40010	42	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	42					
523	20000	2	EACH	DYNAMIC LOAD TESTING	2					
526	10000	150	SY	REINFORCED CONCRETE APPROACH SLAB, (T=12")			150			
526	90010	86	FT	TYPE A INSTALLATION			86			
607	40000	129	FT	SPECIAL - VANDAL PROTECTION FENCE		129		20 / 26		
620	70001	50	EACH	DELINEATOR, MISC.: TYPE D, AS PER PLAN		34	16	3 / 26		
846	00110	39	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			39			
900	00100	20,000	EACH	RAILROAD FLAGGING SERVICES			20,000			

DESIGN AGENCY
PRIME
845 Park Plaza
Columbus Ohio 43240

DESIGNED
HM
BTJ

DRAWN
HM
REVISED

REVIEWED
AMT
STRUCTURE FILE NUMBER
6740448

DATE
04/20/22

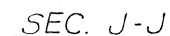
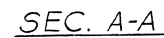
ESTIMATED QUANTITIES
BRIDGE NO. POR-C145G-5285
RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY

POR-145-52.85
PID No. 105556

4 / 26

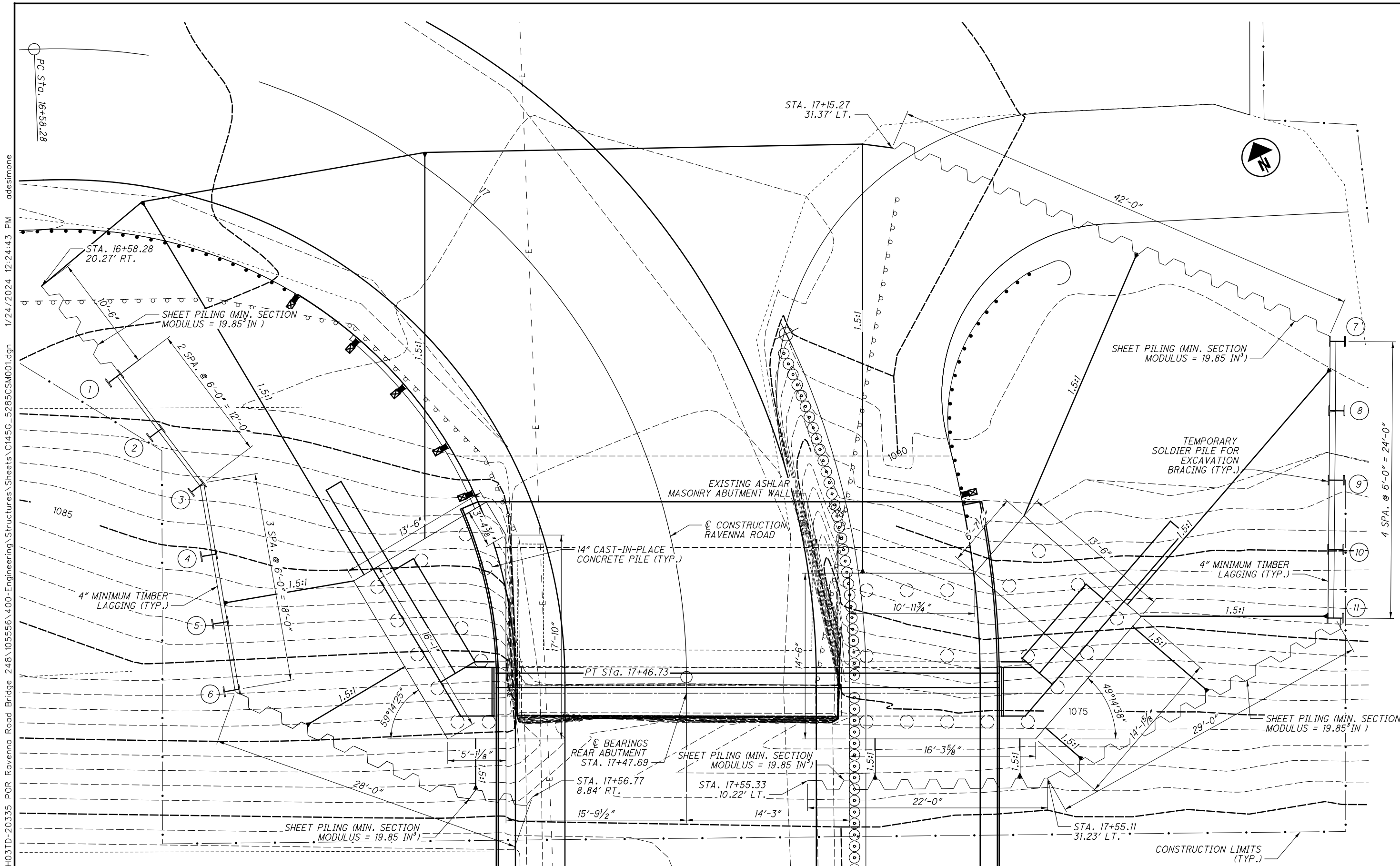
29

61



30
61

P:\Projects\2020\20H03TD-20335 POR Ravenna Road Bridge 248\105556\400-Engineering\Structures\C145G_5285CSM001.dgn 1/24/2024 12:24:43 PM adesimone



LEGEND:

- 24 - TEMPORARY SOLDIER PILE NUMBER
- I - TEMPORARY SOLDIER PILE (TYP.)
- 1.5:1 - TEMPORARY GRADING FOR EXCAVATION

TEMPORARY SHEETING (TYP.)

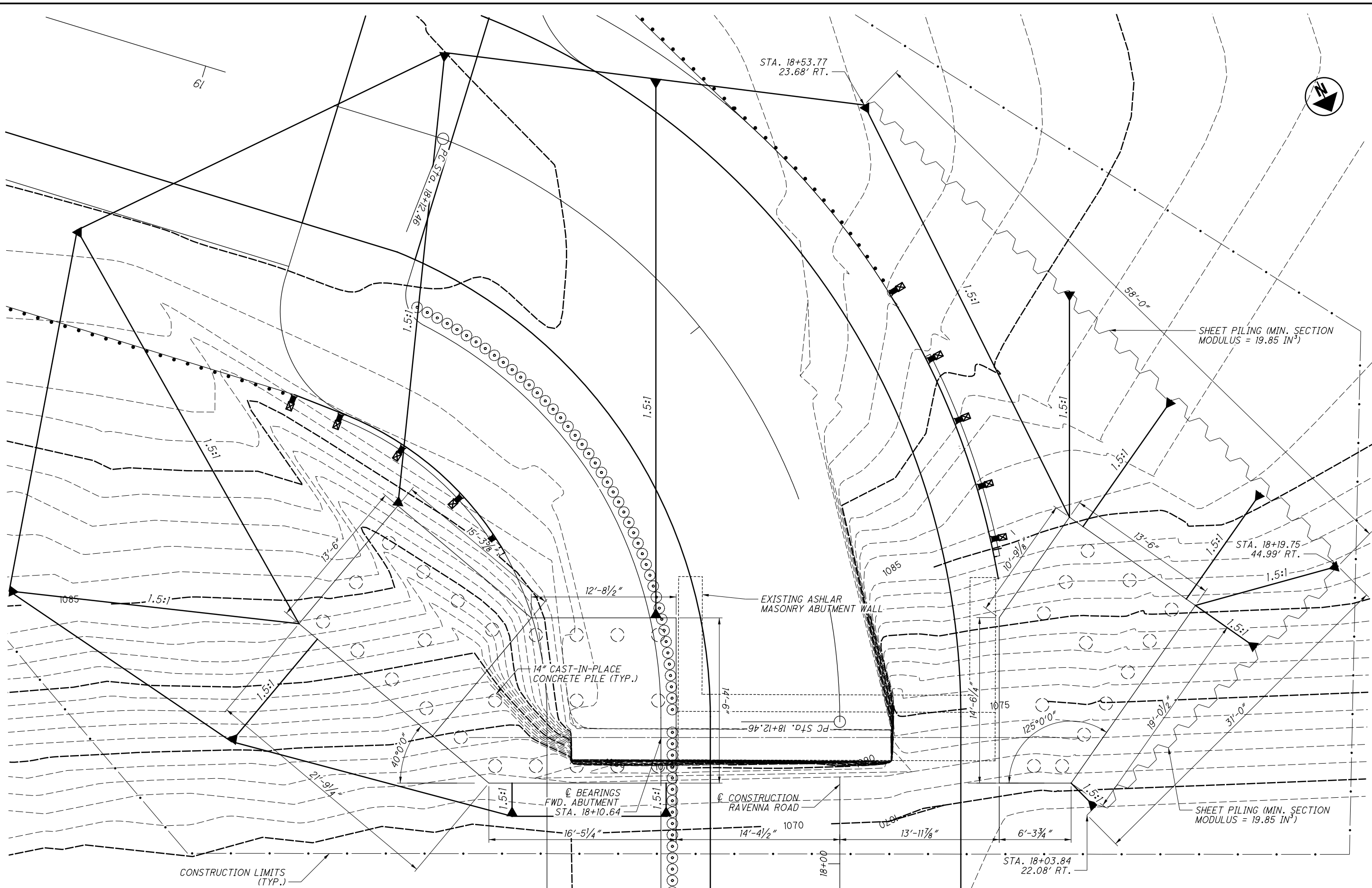
REAR ABUTMENT TEMPORARY EXCAVATION BRACING PLAN

NOTES:

- FOR PILE INFORMATION AND ADDITIONAL DETAILS, SEE SHEET 8/26.

DESIGN AGENCY PRIME 8455 Ridge Road, Suite 300 Columbus, Ohio 43240	DATE	04/20/22
	REVIEWED	AMT
DESIGNED	DRAWN	JAT
	CHECKED	BTJ
REAR ABUTMENT TEMPORARY EXCAVATION BRACING BRIDGE NO. POR-C145G-5285 RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY	STRUCTURE FILE NUMBER	6740448
	POR-145-52.85	PID No. 105556
	31	61

P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285CSM002.dgn 1/24/2024 12:24:48 PM odesimone



LEGEND:

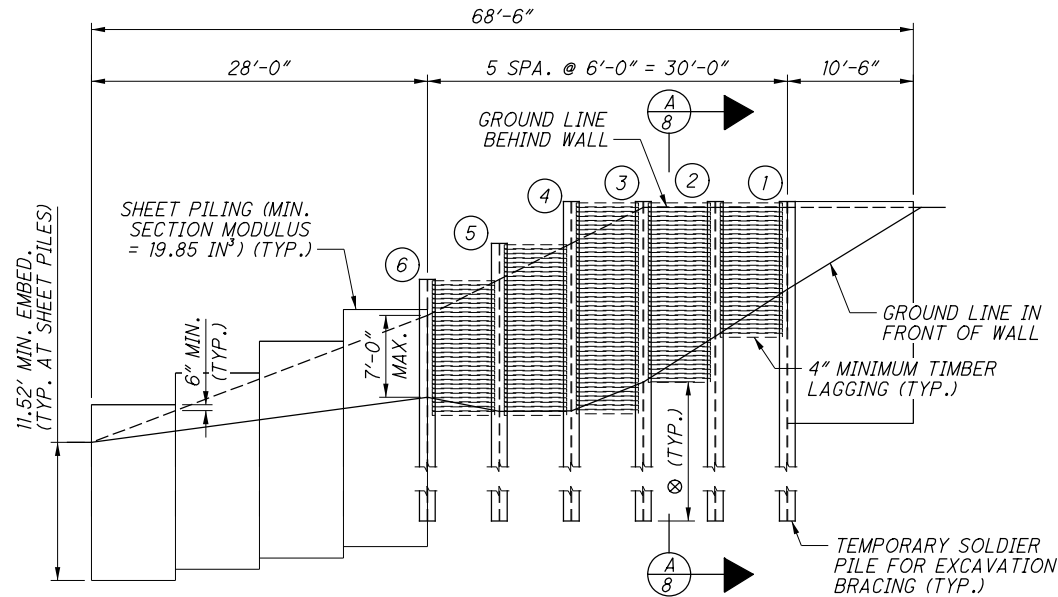
- 1.5:1 - TEMPORARY GRADING FOR EXCAVATION
- TEMPORARY SHEETING (TYP.)

FORWARD ABUTMENT TEMPORARY EXCAVATION BRACING PLAN

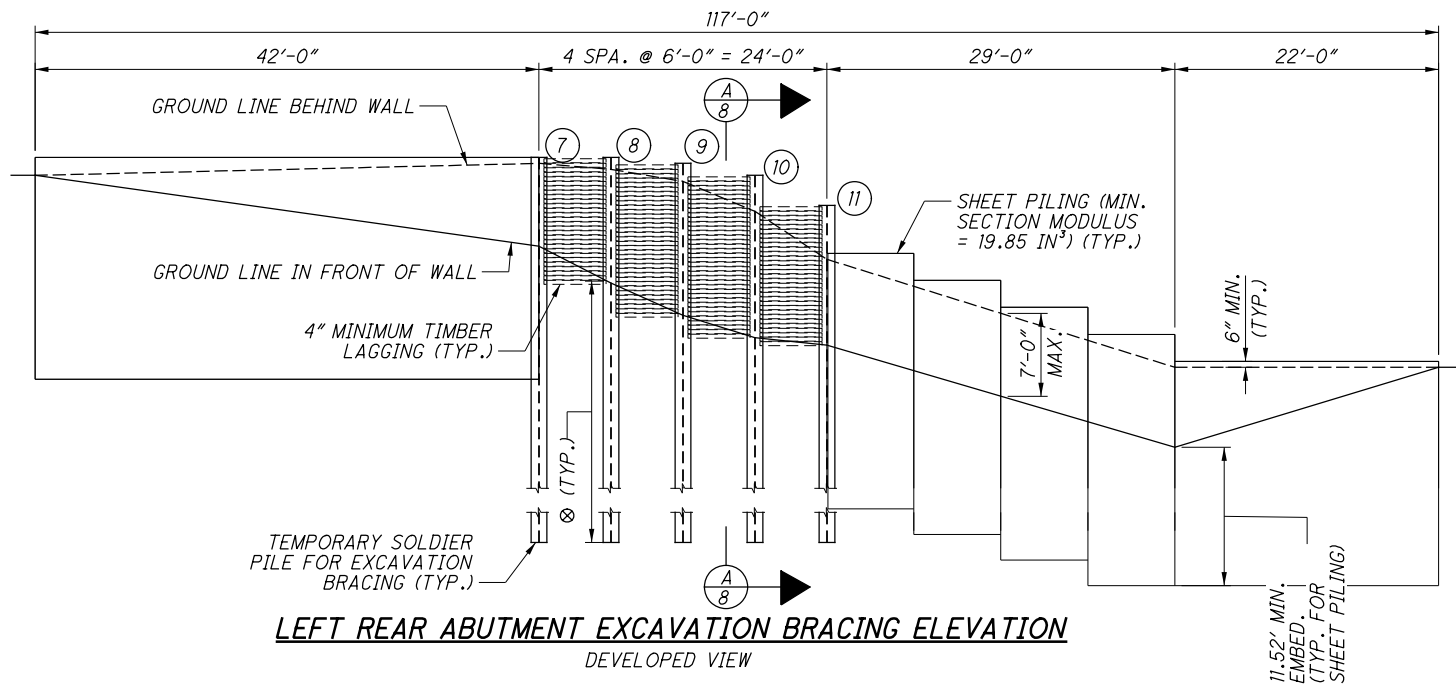
NOTES:

- FOR PILE INFORMATION AND ADDITIONAL DETAILS, SEE SHEET 8/26.

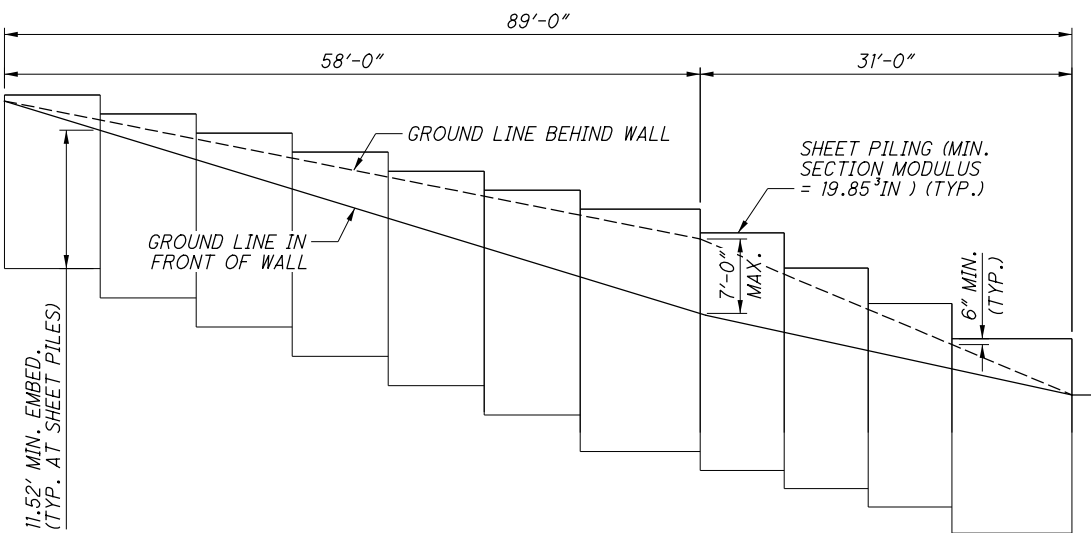
DESIGN AGENCY PRIME 845 Ross Place Columbus Ohio 43240	DATE	04/20/22
	REVIEWED	AMT
DESIGNED JAT	DRAWN	JAT
	CHECKED	BTJ
FORWARD ABUTMENT TEMPORARY EXCAVATION BRACING BRIDGE NO. POR-C145G-5285 RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY	STRUCTURE FILE NUMBER	6740448
	PID No. 105556	
POR-145-52.85	7 / 26	32 61



RIGHT REAR ABUTMENT EXCAVATION BRACING ELEVATION
DEVELOPED VIEW



LEFT REAR ABUTMENT EXCAVATION BRACING ELEVATION
DEVELOPED VIEW



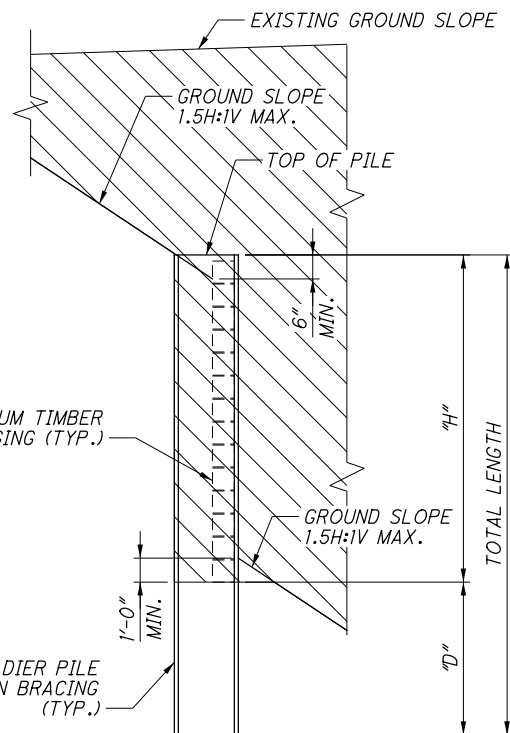
RIGHT FORWARD ABUTMENT EXCAVATION BRACING ELEVATION
DEVELOPED VIEW

PILE AND WALL INFORMATION TABLE									
EXCAVATION RIGHT OF REAR ABUTMENT									
PILE NO.	STATION	OFFSET	GROUND EL. BEHIND WALL	TOP OF PILE EL.	GROUND ELEV. IN FRONT OF WALL	HEIGHT, "H" (FT)	SECTION	EMBEDMENT, "D" (FT)	TOTAL HEIGHT (FT)
SHEET PILE	-	-	VARIES	VARIES	VARIES	7.00 MAX	SHEET PILE	11.52	18.52
1	16+97.76	28.00 RT	1088.00	1088.50	1081.19	7.31	W14x22	12.24	19.55
2	16+80.10	31.69 RT	1088.00	1088.50	1077.27	11.23	W16x100	13.69	24.92
3	16+93.70	34.26 RT	1088.00	1088.50	1073.45	15.05	W33x201	19.36	34.41
4	17+07.46	38.02 RT	1085.00	1088.50	1071.04	17.46	W33x201	19.36	36.82
5	17+26.97	40.22 RT	1082.00	1085.50	1070.65	14.85	W27x146	17.56	32.41
6	14+47.45	40.15 RT	1078.00	1082.50	1071.83	10.67	W16x100	13.69	24.36
SHEET PILE	-	-	VARIES	VARIES	VARIES	7.00 MAX	SHEET PILE	11.52	18.52
EXCAVATION LEFT OF REAR ABUTMENT									
PILE NO.	STATION	OFFSET	GROUND EL. BEHIND WALL	TOP OF PILE EL.	GROUND ELEV. IN FRONT OF WALL	HEIGHT, "H" (FT)	SECTION	EMBEDMENT, "D" (FT)	TOTAL HEIGHT (FT)
SHEET PILE	-	-	VARIES	VARIES	VARIES	7.00 MAX	SHEET PILE	11.52	18.52
7	17+32.37	60.50 LT	1089.00	1089.50	1082.10	7.40	W14x22	12.24	19.64
8	17+35.12	59.03 LT	1088.50	1089.50	1079.03	10.47	W16x100	13.69	24.16
9	17+38.09	57.88 LT	1087.50	1089.00	1076.33	12.67	W27x146	17.56	30.23
10	17+41.02	57.04 LT	1085.00	1088.00	1074.47	13.53	W27x146	17.56	31.09
11	17+43.96	56.53 LT	1081.00	1085.50	1073.85	11.65	W16x100	13.69	25.34
SHEET PILE	-	-	VARIES	VARIES	1065.50	7.00 MAX	SHEET PILE	11.52	18.52

NOTE: FOR ANY GIVEN SHEET PILING, THE DEPTH OF RETAINED EARTH SHALL BE LIMITED TO A MAXIMUM OF 7'-0" AND THE MINIMUM DEPTH OF EMBEDMENT SHALL BE 11.52 FEET.

PROCEDURE OF CONSTRUCTION OF TEMPORARY EXCAVATION BRACING

- EXCAVATE GROUND TO TOP OF PILE ELEVATION AT THE RESPECTIVE PILE LOCATIONS, RETAINING A MAXIMUM OF A 1.5:1 HORIZONTAL TO VERTICAL SLOPE.
- DRIVE SOLDIER PILE 1 IN GROUND UNTIL THE TOP OF THE SOLDIER PILE IS AT THE CORRECT ELEVATION ACCORDING TO THE SOLDIER PILE ELEVATION TABLES.
- REPEAT STEP 2. FOR PILES 2 THROUGH 11.
- PLACE TIMBER LAGGING BETWEEN THE SOLDIER PILES AT THE RIGHT REAR ABUTMENT USING A TOP-DOWN METHOD, EXCAVATING BENEATH LAGGING AS NEEDED.
- REPEAT STEP 4 FOR LEFT REAR, RIGHT FORWARD, AND LEFT FORWARD SOLDIER PILES.
- ADJUST ANY GROUND ELEVATIONS TO ABIDE BY PILE ELEVATION TABLES.
- PLACE SHEET PILING PER SHEETS **6/26** AND **7/26**.



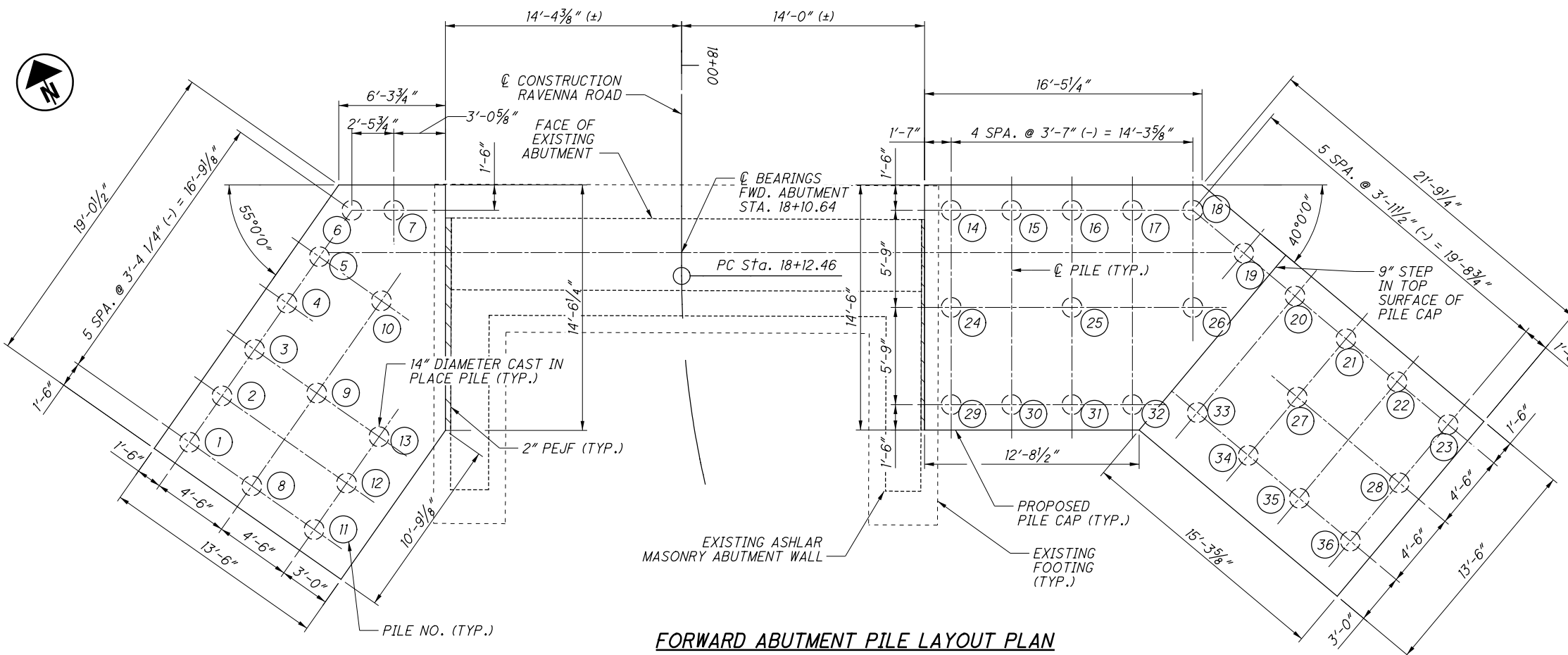
SECTION THRU SOLDIER PILE WALL

LEGEND:

- LIMITS OF EXCAVATION
- SEE PILE AND WALL INFORMATION TABLE FOR EMBEDMENT LENGTH AND PILE INFORMATION

NOTES:

- FOR TEMPORARY EXCAVATION PLANS, SEE SHEETS **6/26** AND **7/26**.



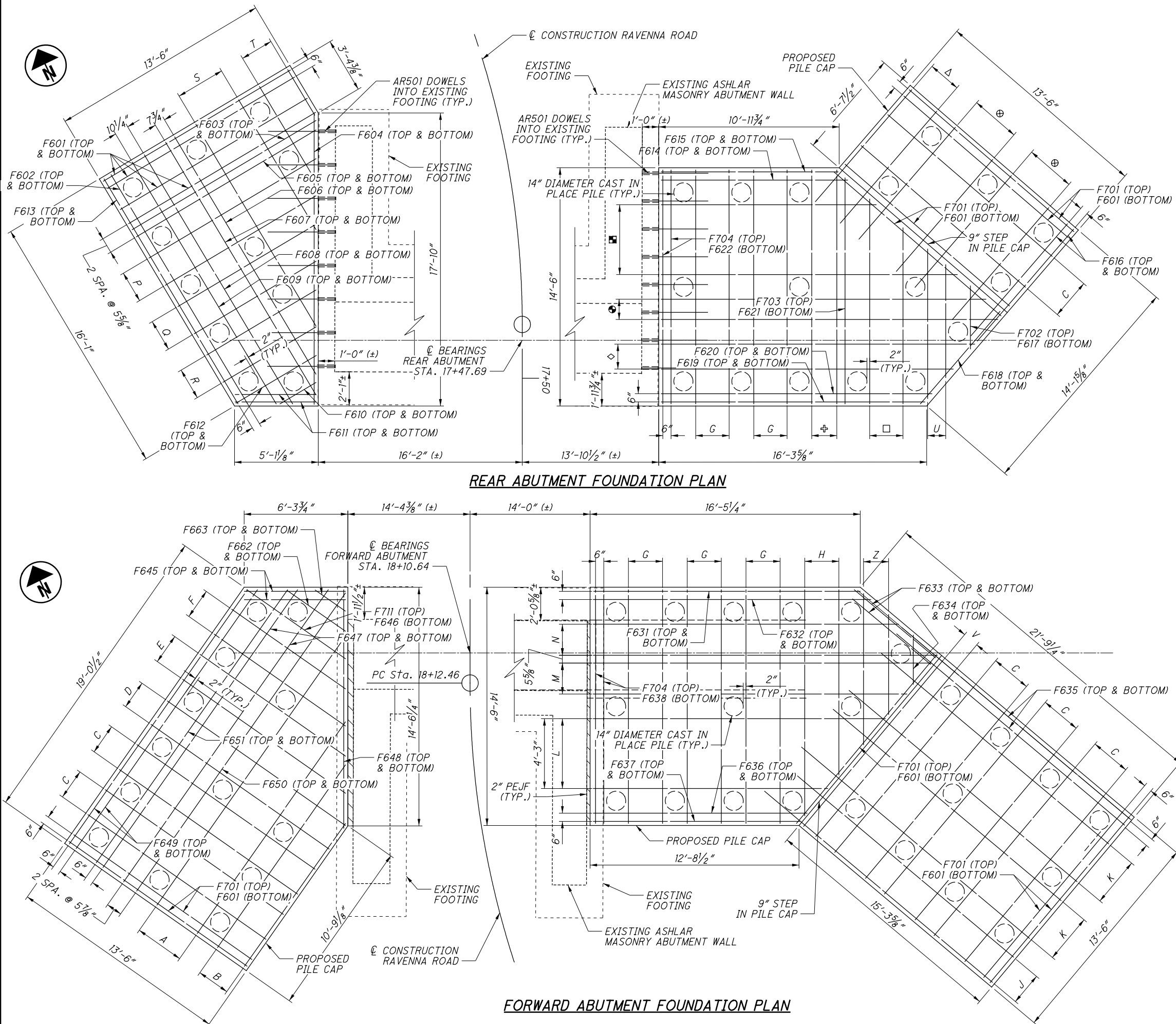
FORWARD ABUTMENT PILE LAYOUT PLAN

REAR ABUTMENT PILE LOCATIONS		
PILE NO.	STATION	OFFSET
37	17+50.19	17.66' R
38	17+50.19	20.40' R
39	17+47.24	22.17' R
40	17+42.42	23.82' R
41	17+36.73	25.18' R
42	17+30.58	26.20' R
43	17+43.93	18.29' R
44	17+39.31	19.73' R
45	17+28.77	21.81' R
46	17+32.24	16.62' R
47	17+27.40	17.40' R
48	17+50.19	15.38' L
49	17+50.19	18.91' L
50	17+50.19	22.44' L
51	17+50.19	25.97' L
52	17+50.19	29.49' L
53	17+47.17	32.09' L
54	17+45.15	34.73' L
55	17+43.40	37.46' L
56	17+44.94	15.42' L
57	17+45.10	22.47' L
58	17+45.24	29.52' L
59	17+41.47	34.29' L
60	17+40.47	15.84' L
61	17+40.77	19.34' L
62	17+41.04	22.85' L
63	17+41.14	28.31' L
64	17+39.40	31.24' L

②③ - PILE NUMBER

○ - 14" DIAMETER CAST IN PLACE PILE

1. NO PLAN OR SURVEY INFORMATION ON STRUCTURE BELOW GRADE. CURRENT DIMENSIONS ARE BASED OFF 1'-0" BUMPOUT OF FOOTING.
2. FOR TEMPORARY EXCAVATION BRACING, SEE SHEETS 6/26 THRU 8/26.

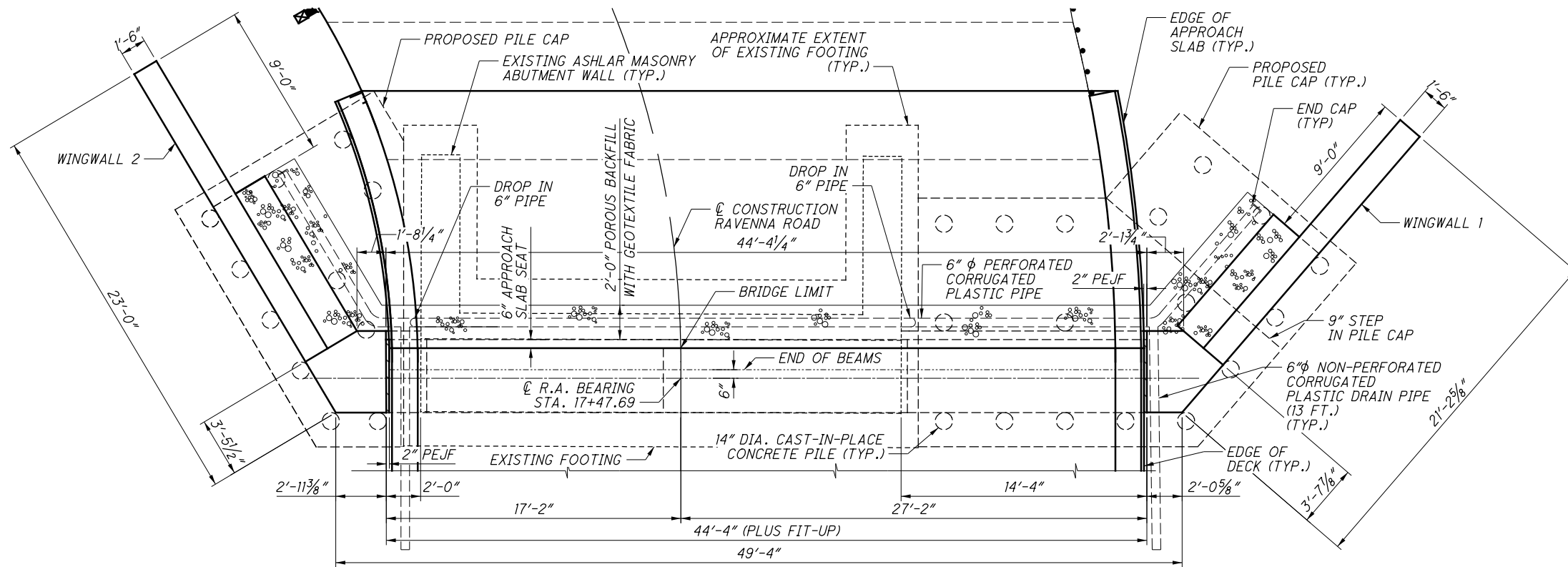


LEGEND:

- A - 1 SER. OF 4-F653 @ 12" (TOP & BOTTOM)
B - 1 SER. OF 3-F652 @ 12" (TOP & BOTTOM)
C - 5-F701 @ EQ. SPA. (TOP)
& 3-F601 @ EQ. SPA. (BOTTOM)
D - 1 SER. OF 5-F712 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F654 @ EQ. SPA. (BOTTOM)
E - 1 SER. OF 5-F713 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F655 @ EQ. SPA. (BOTTOM)
F - 1 SER. OF 5-F714 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F656 @ EQ. SPA. (BOTTOM)
G - 5-F708 @ EQ. SPA. (TOP)
& 3-F627 @ EQ. SPA. (BOTTOM)
H - 1 SER. OF 5-F709 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F639 @ EQ. SPA. (BOTTOM)
J - 3-F642 SPA. @ 12" (TOP & BOTTOM)
K - 4-F641 SPA. @ 12" (TOP & BOTTOM)
L - 1 SER. OF 6-F660 @ EQ. SPA. (TOP & BOTTOM)
M - 1 SER. OF 3-F643 @ EQ. SPA. (TOP & BOTTOM)
N - 1 SER. OF 3-F644 @ EQ. SPA. (TOP & BOTTOM)
P - 1 SER. OF 5-F715 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F657 @ EQ. SPA. (BOTTOM)
Q - 1 SER. OF 5-F716 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F658 @ EQ. SPA. (BOTTOM)
R - 1 SER. OF 5-F717 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F659 @ EQ. SPA. (BOTTOM)
S - 1 SER. OF 4-F660 SPA. @ 12" (TOP & BOTTOM)
T - 1 SER. OF 3-F661 SPA. @ 12" (TOP & BOTTOM)
U - 1 SER. OF 4-F705 SPA. @ EQ. SPA. (TOP)
& 1 SER. OF 3-F624 @ EQ. SPA. (BOTTOM)
V - 3-F701 SPA. @ EQ. SPA. (TOP)
2-F601 @ EQ. SPA. (BOTTOM)
Z - 1 SER. OF 4-F710 SPA. @ EQ. SPA. (TOP)
& 1 SER. OF 3-F640 @ EQ. SPA. (BOTTOM)
Δ - 3-F623 SPA. @ 12" (TOP & BOTTOM)
□ - 1 SER. OF 5-F706 @ EQ. SPA. (TOP)
& 1 SER. OF 3-F625 @ EQ. SPA. (BOTTOM)
⊗ - 4-F623 SPA. @ 12" (TOP & BOTTOM)
⊕ - 4-F707 SPA. @ 6" MAX. (TOP)
& 3-F626 SPA. @ 12" MAX. (BOTTOM)
◇ - 1 SER. OF 3-F628 SPA. @ 12" MAX. (TOP & BOTTOM)
⬢ - 1 SER. OF 3-F629 SPA. @ 12" MAX. (TOP & BOTTOM)
■ - 1 SER. OF 6-F630 SPA. @ 12" MAX. (TOP & BOTTOM)

NOTES:

- NO PLAN OR SURVEY INFORMATION ON STRUCTURE BELOW GRADE. CURRENT DIMENSIONS ARE BASED OFF 1'-0" BUMPOUT OF REAR ABUTMENT FOOTING ONLY.
- FOR TEMPORARY EXCAVATION BRACING, SEE SHEETS 6/26 THRU 8/26.
- FOR WALL REINFORCING INSTALLED IN FOOTINGS SEE SHEETS 11/26 THROUGH 16/26



REAR ABUTMENT PLAN

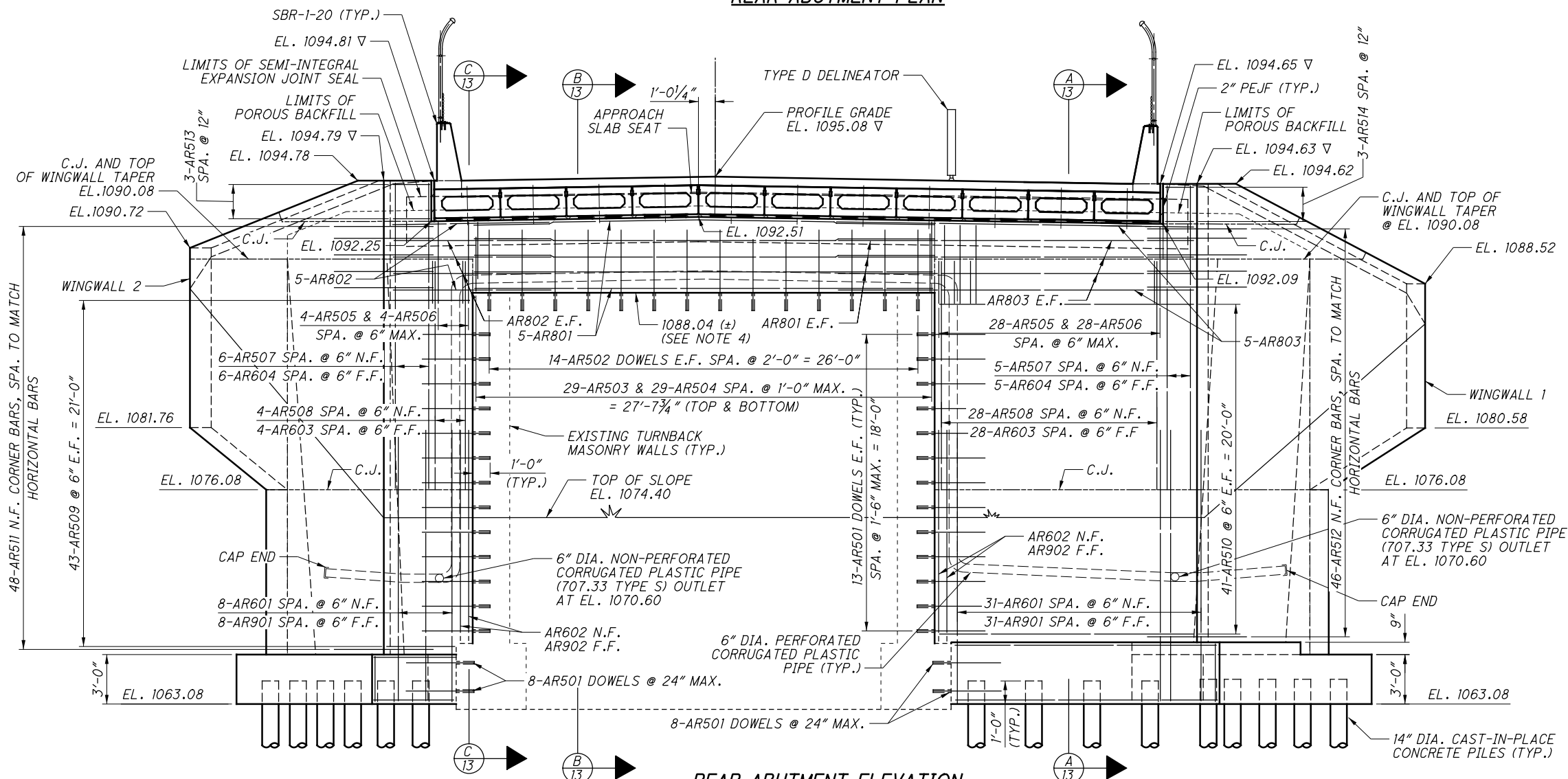
LEGEND:

▽ - INDICATES THAT ELEVATION IS TAKEN AT THE ∇ BEARING AT REAR ABUTMENT.

C.J. - CONSTRUCTION JOINT

NOTES:

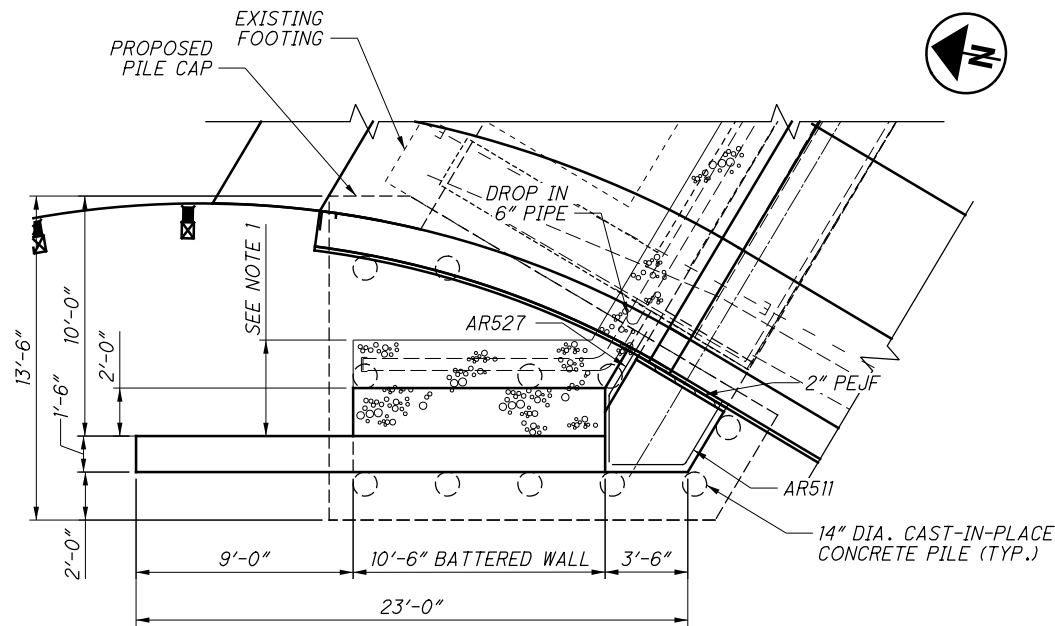
1. SEE SHEET 10/26 FOR FOOTING REINFORCING.
2. SEE SHEET 22/26 FOR APPROACH SLAB DETAILS.
3. SEE SHEET 9/26 FOR PILE LAYOUT PLAN.
4. ELEVATION GIVEN IS ASSUMED TO BE THE TOP OF THE EXISTING ASHLAR MASONRY WALL AFTER REMOVING THE EXISTING CONCRETE BEAM SEAT PLUS THE EXISTING TOP COURSE OF ASHLAR BLOCK.
5. SEE SHEETS 12/26 AND 13/26 FOR REAR ABUTMENT WINGWALL DETAILS AND REINFORCING.
6. ADJUST BARS AS NECESSARY TO AVOID CONFLICT WITH EXISTING FOOTING.
7. FOR REAR ABUTMENT TEMPORARY EXCAVATION BRACING, SEE SHEETS 6/26 AND 8/26.
8. DO NOT PLACE WINGWALL CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT UNTIL THE PRESTRESSED BOX BEAMS HAVE BEEN ERECTED
9. THE BEAM SEAT ELEVATIONS SHOWN ON THIS SHEET ARE ADJUSTED FOR BEAM CAMBER DUE TO CREEP FROM PRESTRESS. SEE DEFLECTION AND CAMBER DIAGRAM, SHEET 16/26 FOR MORE INFORMATION.



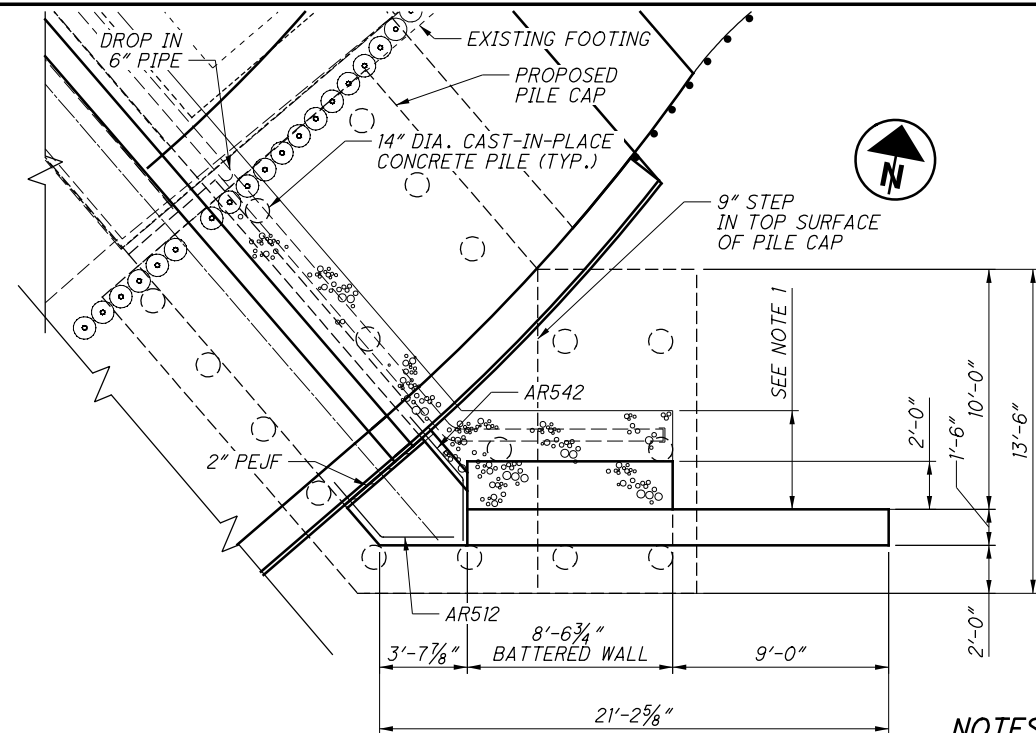
REAR ABUTMENT ELEVATION

MINIMUM BAR LAP LENGTHS

- #5 BAR = 3'-1" (HORIZONTAL)
- #5 BAR = 2'-5" (VERTICAL)
- #6 BAR = 3'-7"
- #8 BAR = 4'-9"
- #9 BAR = 5'-10"



WINGWALL 2 PLAN
RIGHT REAR



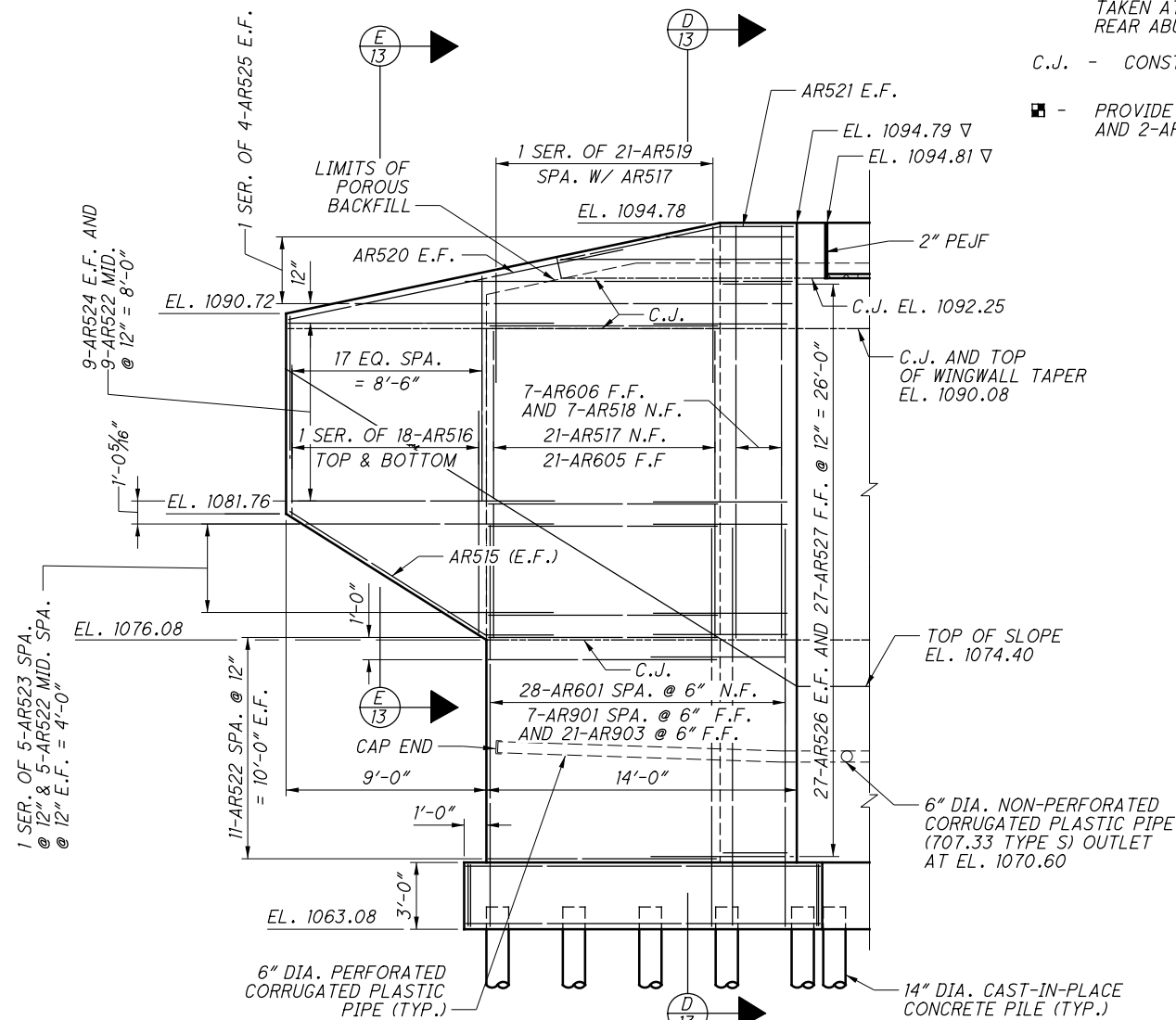
WINGWALL 1 PLAN
LEFT REAR

NOTES:

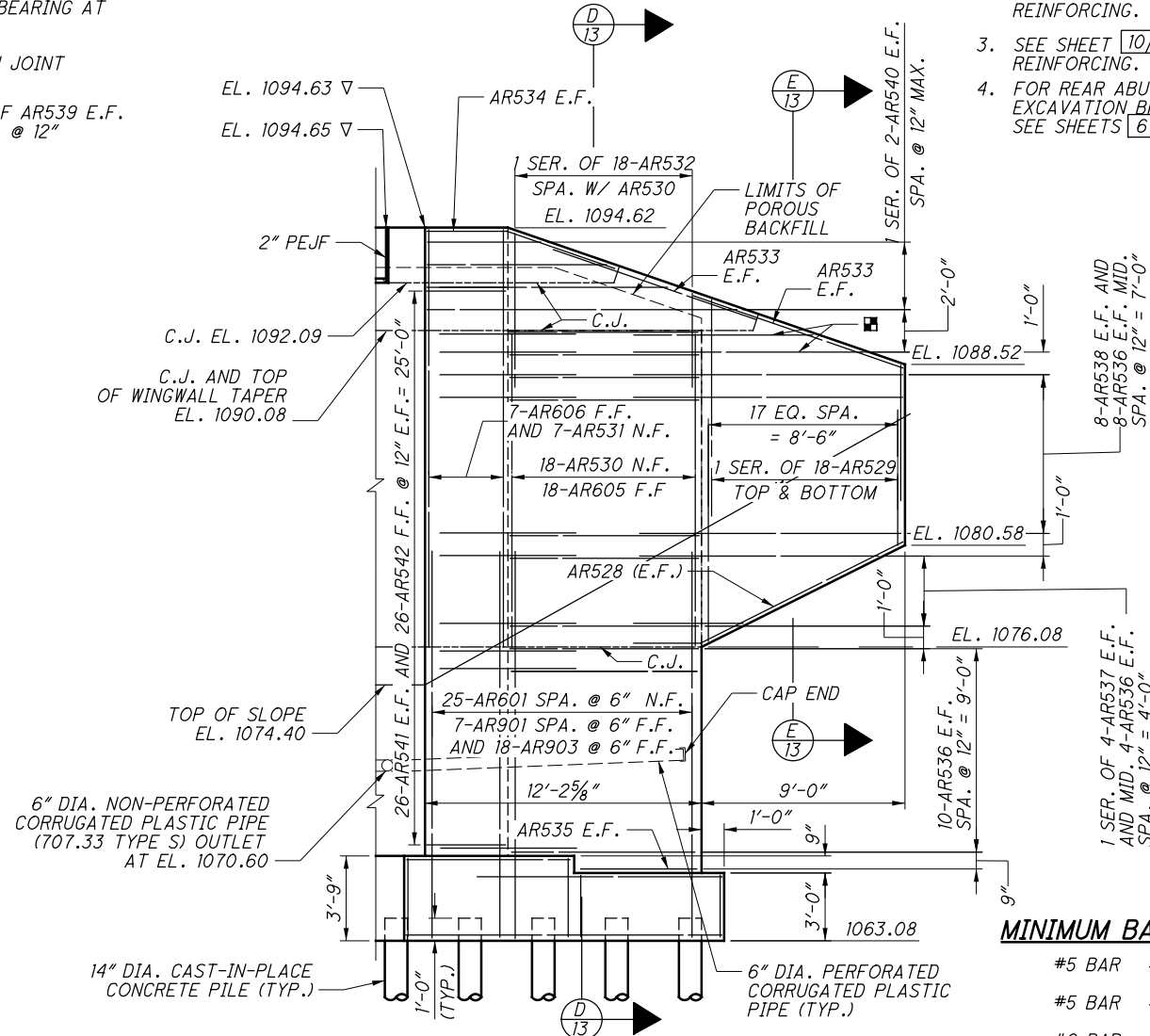
1. POROUS BACKFILL 2'-0" WIDE MINIMUM WITH GEOTEXTILE FABRIC.
2. SEE SHEET 11/26 FOR REAR ABUT. REINFORCING.
3. SEE SHEET 10/26 FOR FOOTING REINFORCING.
4. FOR REAR ABUTMENT TEMPORARY EXCAVATION BRACING, SEE SHEETS 6/26 AND 8/26.

LEGEND:

- ▽ - INDICATES THAT ELEVATION IS TAKEN AT THE @ BEARING AT REAR ABUTMENT.
- C.J. - CONSTRUCTION JOINT
- - PROVIDE 1 SER. OF AR539 E.F. AND 2-AR536 E.F. @ 12"



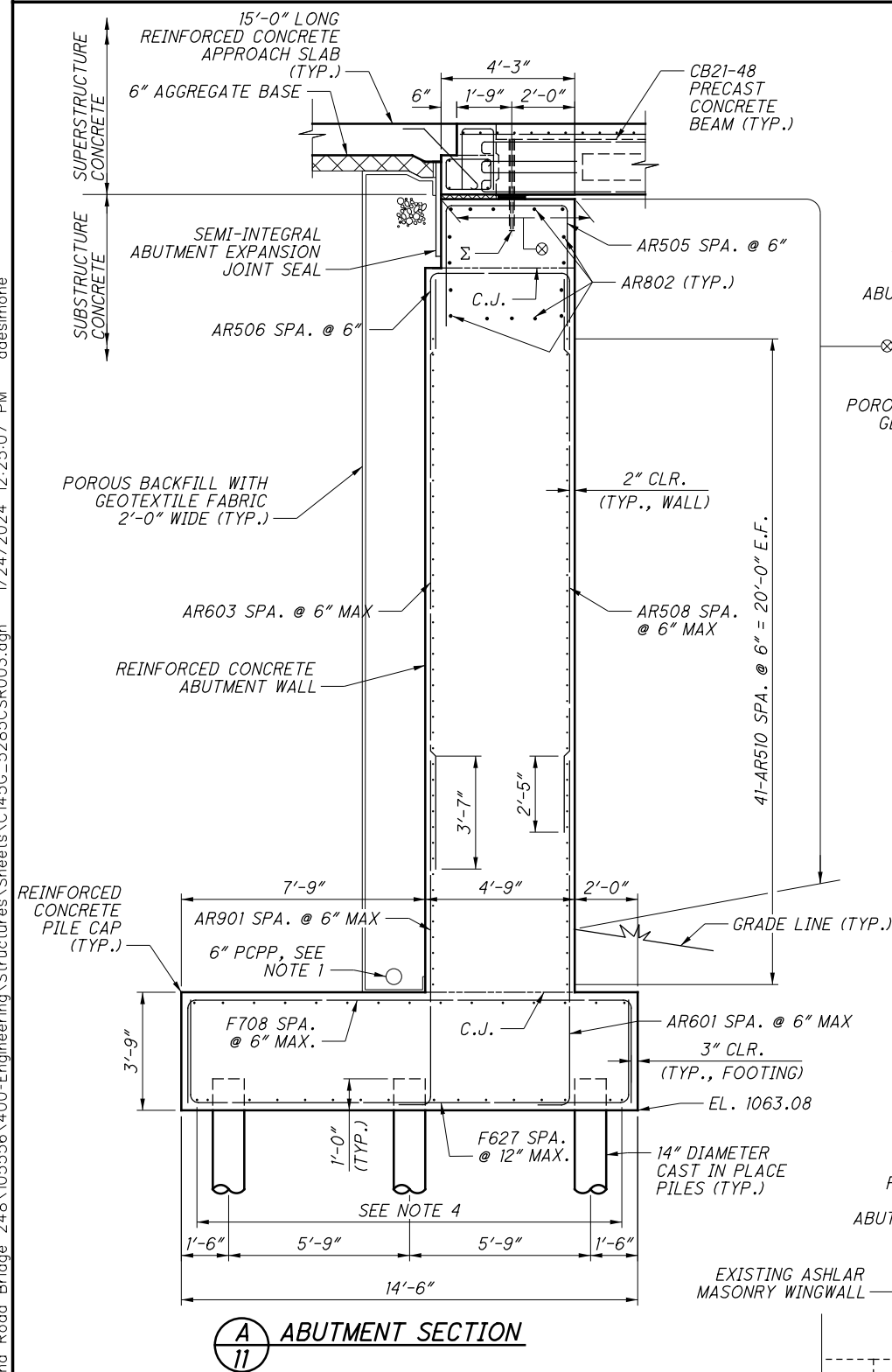
ELEVATION



ELEVATION

MINIMUM BAR LAP LENGTHS:

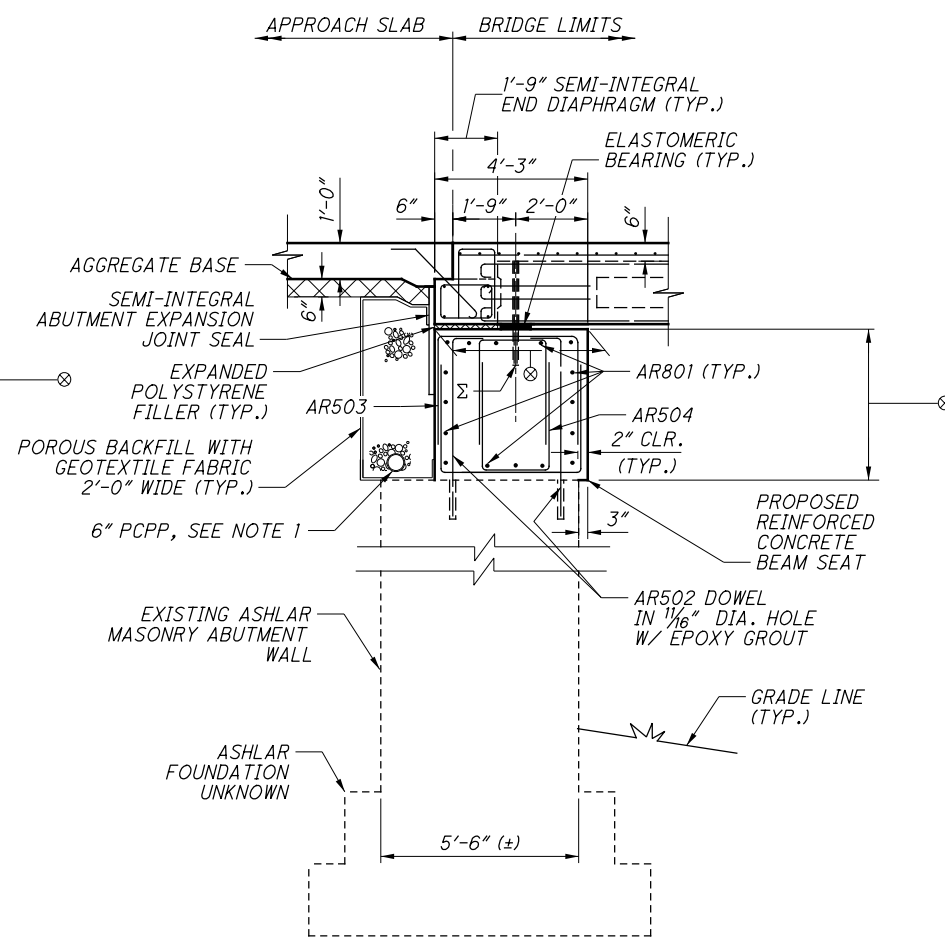
- #5 BAR = 3'-1" (HORIZONTAL)
- #5 BAR = 2'-5" (VERTICAL)
- #6 BAR = 3'-7"
- #9 BAR = 5'-10"



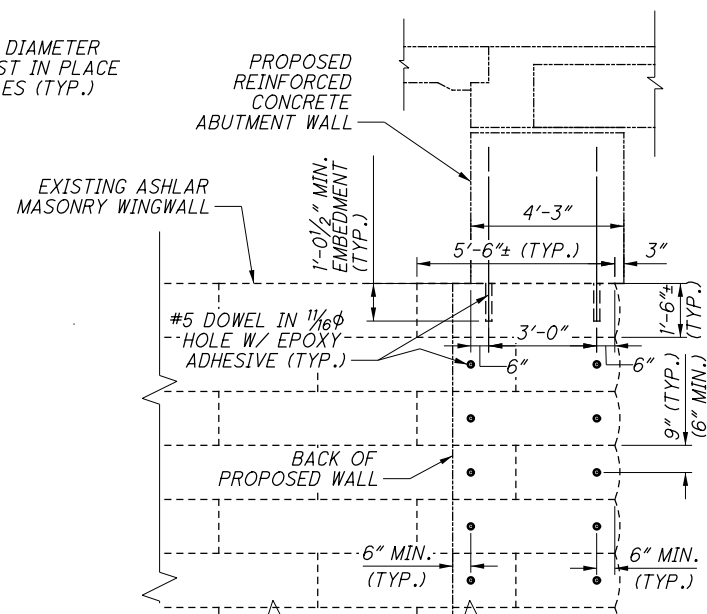
ABUTMENT SECTION

LEGEND:

- C.J. CONSTRUCTION JOINT
- ⊗ LIMITS OF SEALING CONCRETE SURFACES
(EPOXY URETHANE) (TYP.)
- ⊕ SEE REAR WINGWALL DETAILS ON SHEET 12/26
- Σ 1"Ø DOWEL BAR WITH 12" EMBEDMENT FOR
EXPANSION TYPE BEARING ANCHOR PER PSBD-2-07
(TYP. BOTH ABUTMENTS), SEE NOTE 3

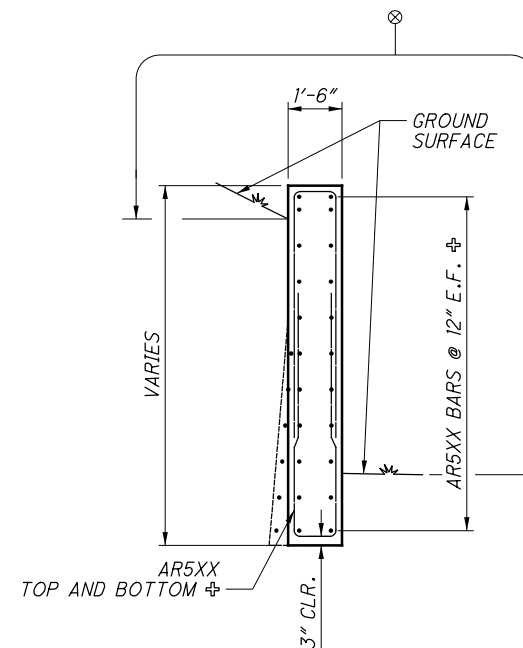


ABUTMENT SECTION

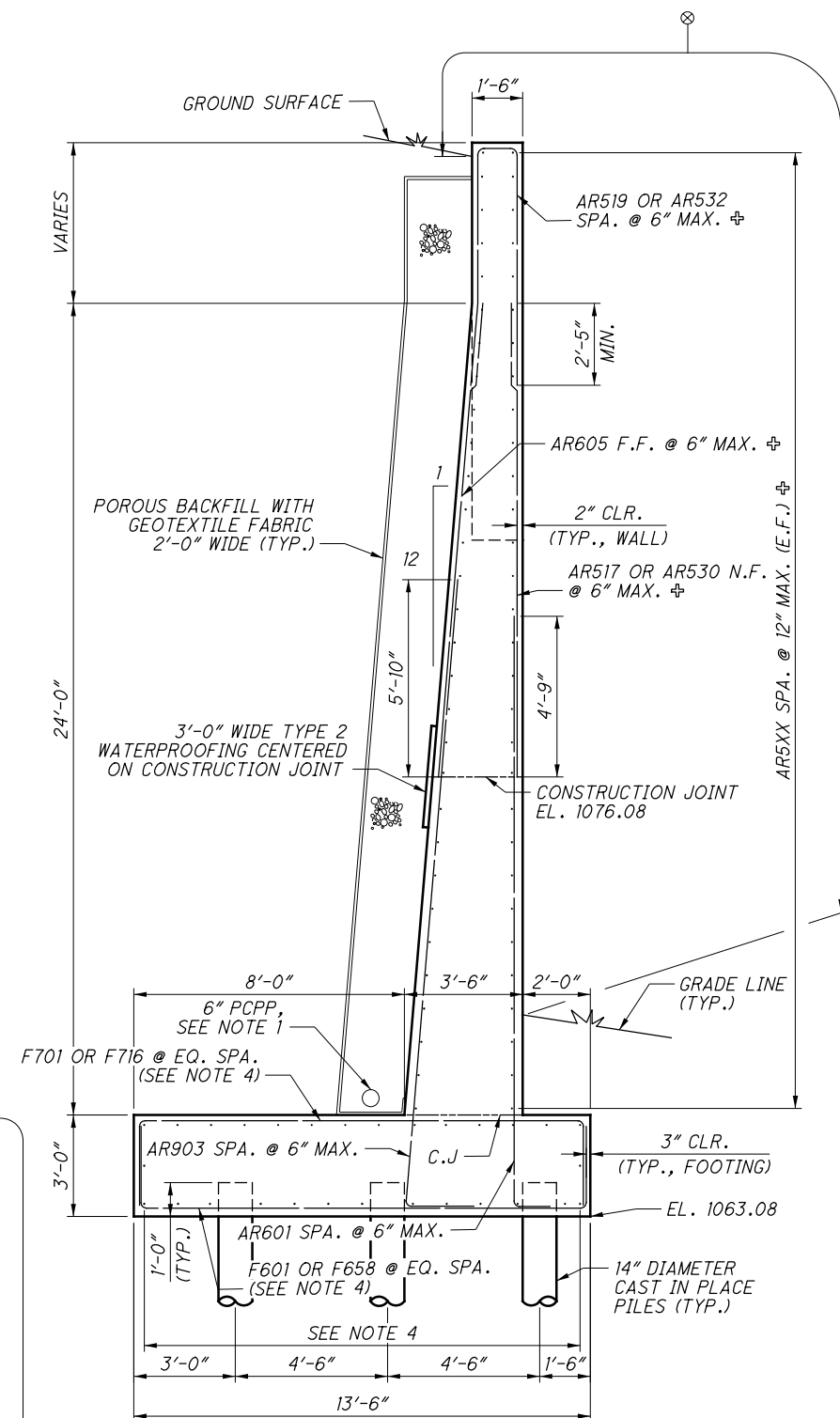


C DOWEL BAR INSTALLATION DETAIL
11

RIGHT REAR ABUTMENT SHOWN, OTHERS SIMILAR (SEE NOTE 2)



E/12 CANTILEVER WINGWALL SECTION

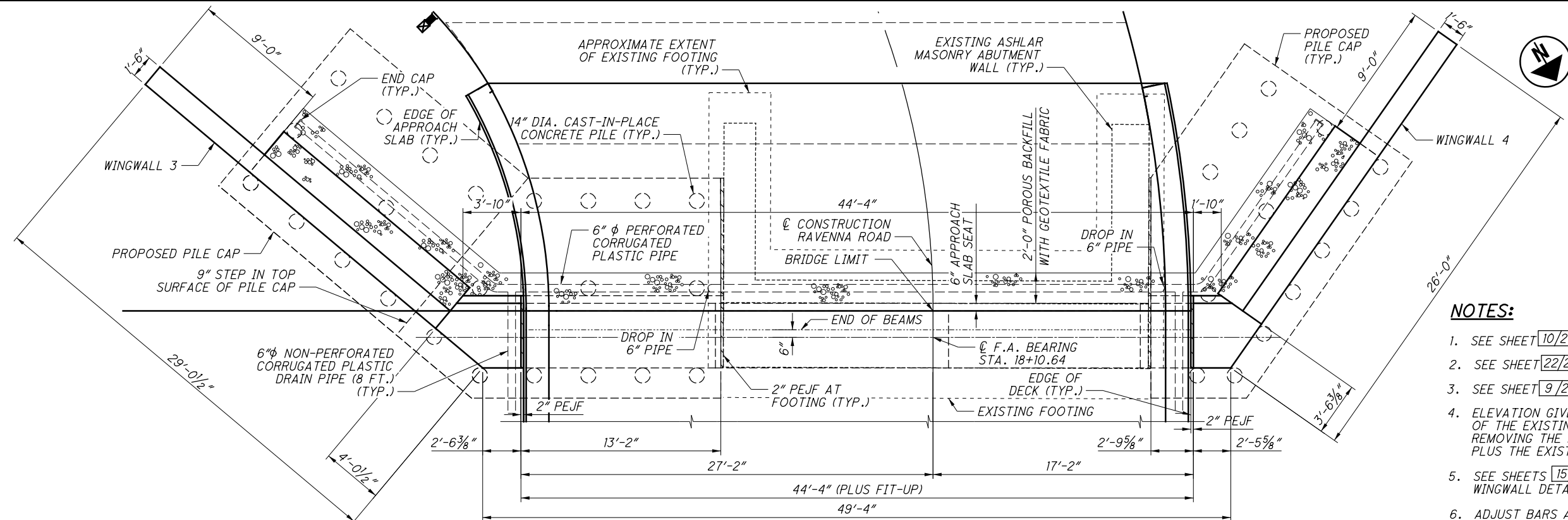


WINGWALL SECTION

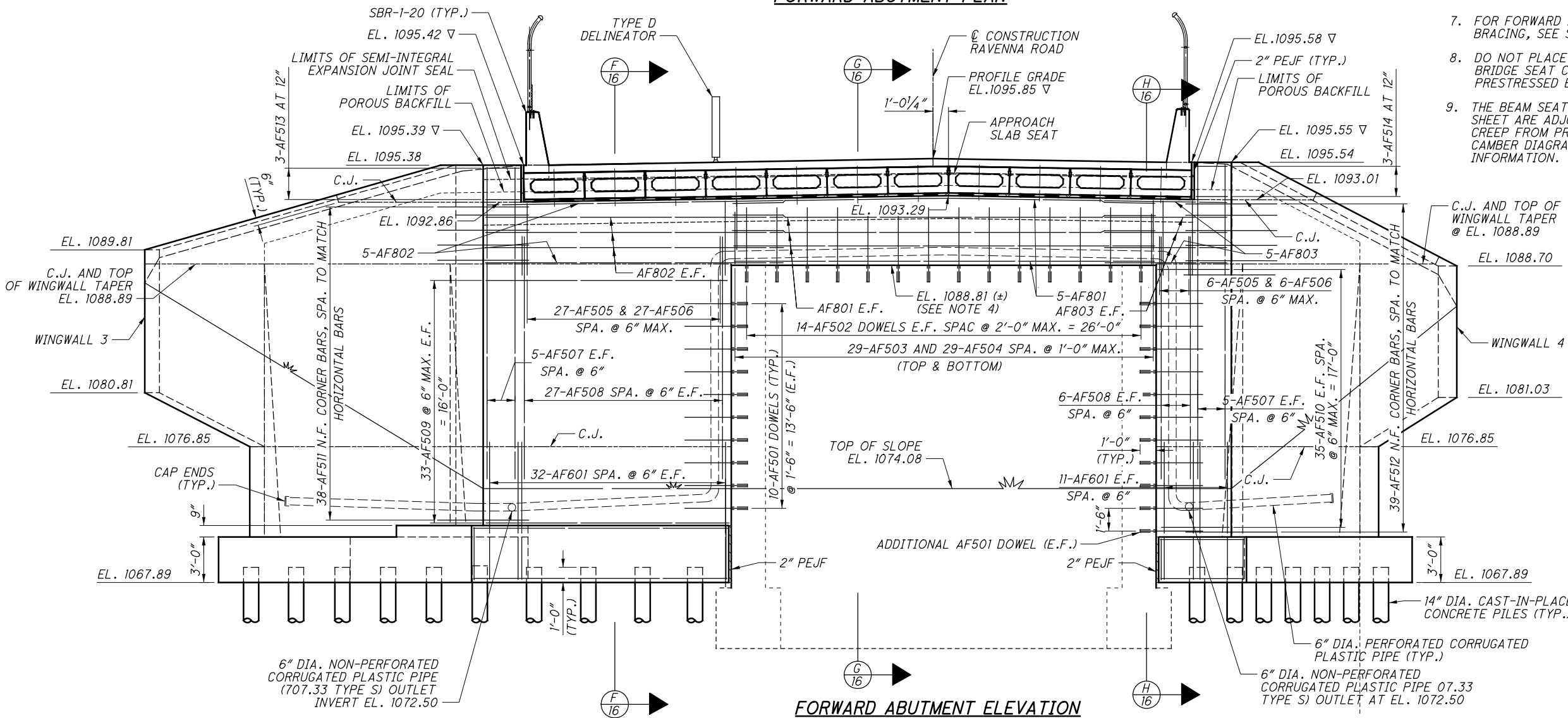
NOTES:

1. PERFORATED, CORRUGATED, POLYETHYLENE PIPE SHALL CONFORM TO C&MS 518.07. DRAINAGE PIPE SHALL HAVE A MINIMUM SLOPE OF 1% TO ALLOW FOR DRAINAGE.
2. DIMENSIONS OF EXISTING ASHLAR MASONRY ABUTMENT BLOCKS ARE APPROXIMATE. FURTHER FIELD MEASUREMENTS REQUIRED TO DETERMINE LOCATION OF HORIZONTAL DOWELS. DOWEL BARS SHALL NOT BE INSTALLED IN THE JOINTS BETWEEN THE ASHLAR MASONRY BLOCKS.
3. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.
4. FOOTING REINFORCING VARIES BY LOCATION. SEE SHEET 10/26.

P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285C5F001.dgn 1/24/2024 12:25:10 PM adesimone



FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION

NOTES:

1. SEE SHEET 10/26 FOR FOOTING REINFORCING.
2. SEE SHEET 22/26 FOR APPROACH SLAB DETAILS.
3. SEE SHEET 9/26 FOR PILE LAYOUT PLAN.
4. ELEVATION GIVEN IS ASSUMED TO BE THE TOP OF THE EXISTING ASHLAR MASONRY WALL AFTER REMOVING THE EXISTING CONCRETE BEAM SEAT PLUS THE EXISTING TOP COURSE OF ASHLAR BLOCK.
5. SEE SHEETS 15/26 AND 16/26 FOR FORWARD ABUTMENT WINGWALL DETAILS AND REINFORCING.
6. ADJUST BARS AS NECESSARY TO AVOID CONFLICT WITH EXISTING FOOTING.
7. FOR FORWARD ABUTMENT TEMPORARY EXCAVATION BRACING, SEE SHEETS 7/26 AND 8/26.
8. DO NOT PLACE WINGWALL CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT UNTIL THE PRESTRESSED BOX BEAMS HAVE BEEN ERECTED.
9. THE BEAM SEAT ELEVATIONS SHOWN ON THIS SHEET ARE ADJUSTED FOR BEAM CAMBER DUE TO CREEP FROM PRESTRESS. SEE DEFLECTION AND CAMBER DIAGRAM, SHEET 16/26 FOR MORE INFORMATION.

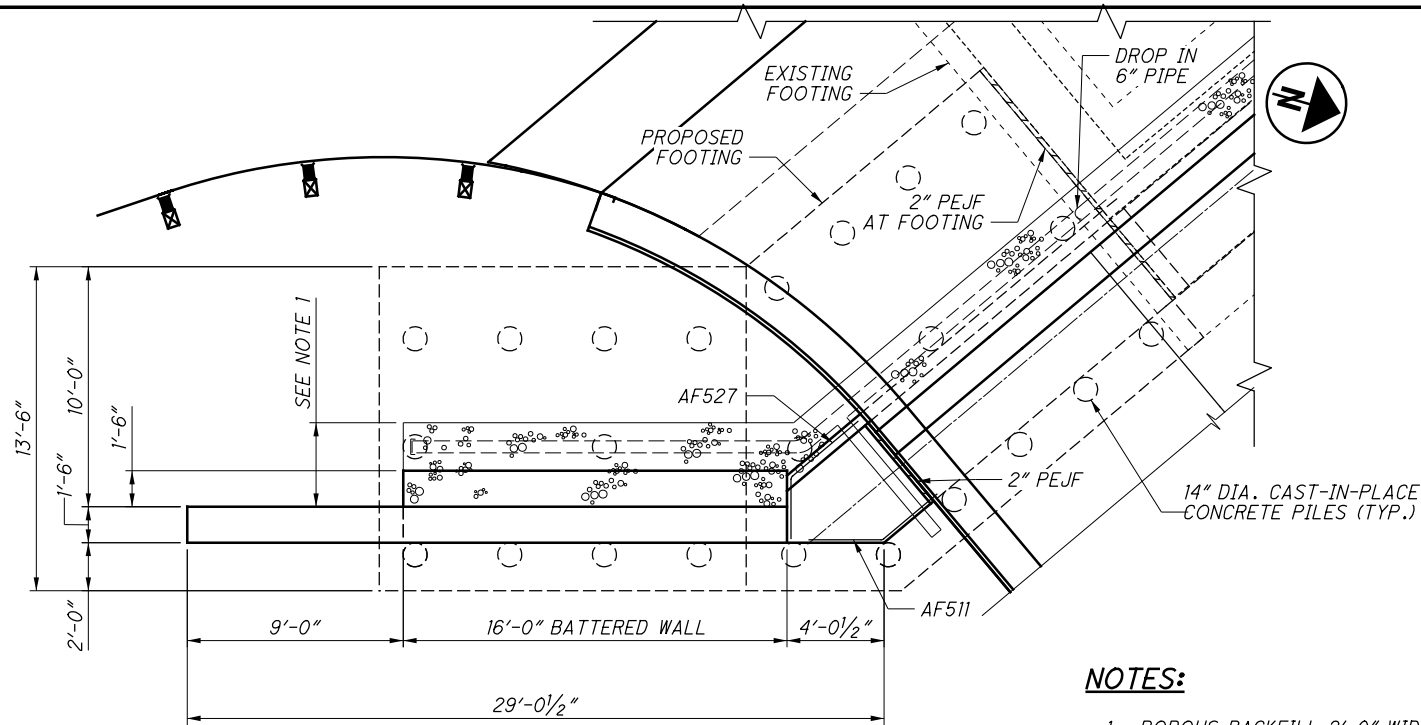
LEGEND:

▽ - INDICATES THAT ELEVATION IS TAKEN AT THE ϕ BEARING AT FORWARD ABUTMENT.

C.J. - CONSTRUCTION JOINT

MINIMUM BAR LAP LENGTHS

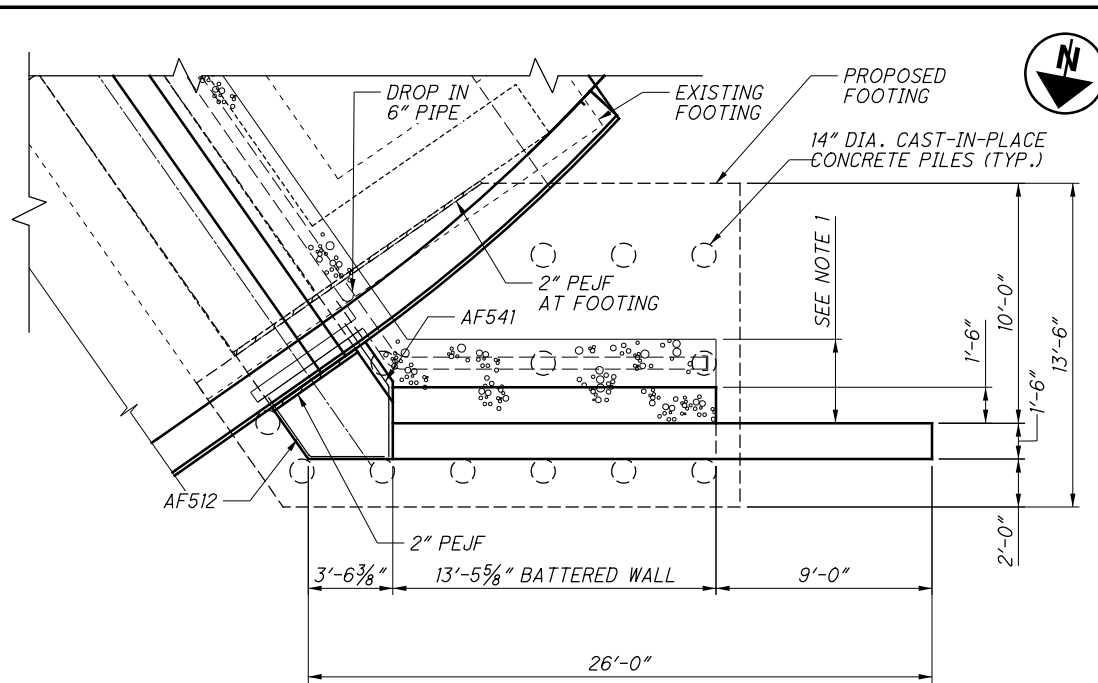
- | | |
|--------|----------------------|
| #5 BAR | = 3'-1" (HORIZONTAL) |
| #5 BAR | = 2'-5" (VERTICAL) |
| #6 BAR | = 3'-7" |



WINGWALL 3 PLAN
LEFT FORWARD

NOTES:

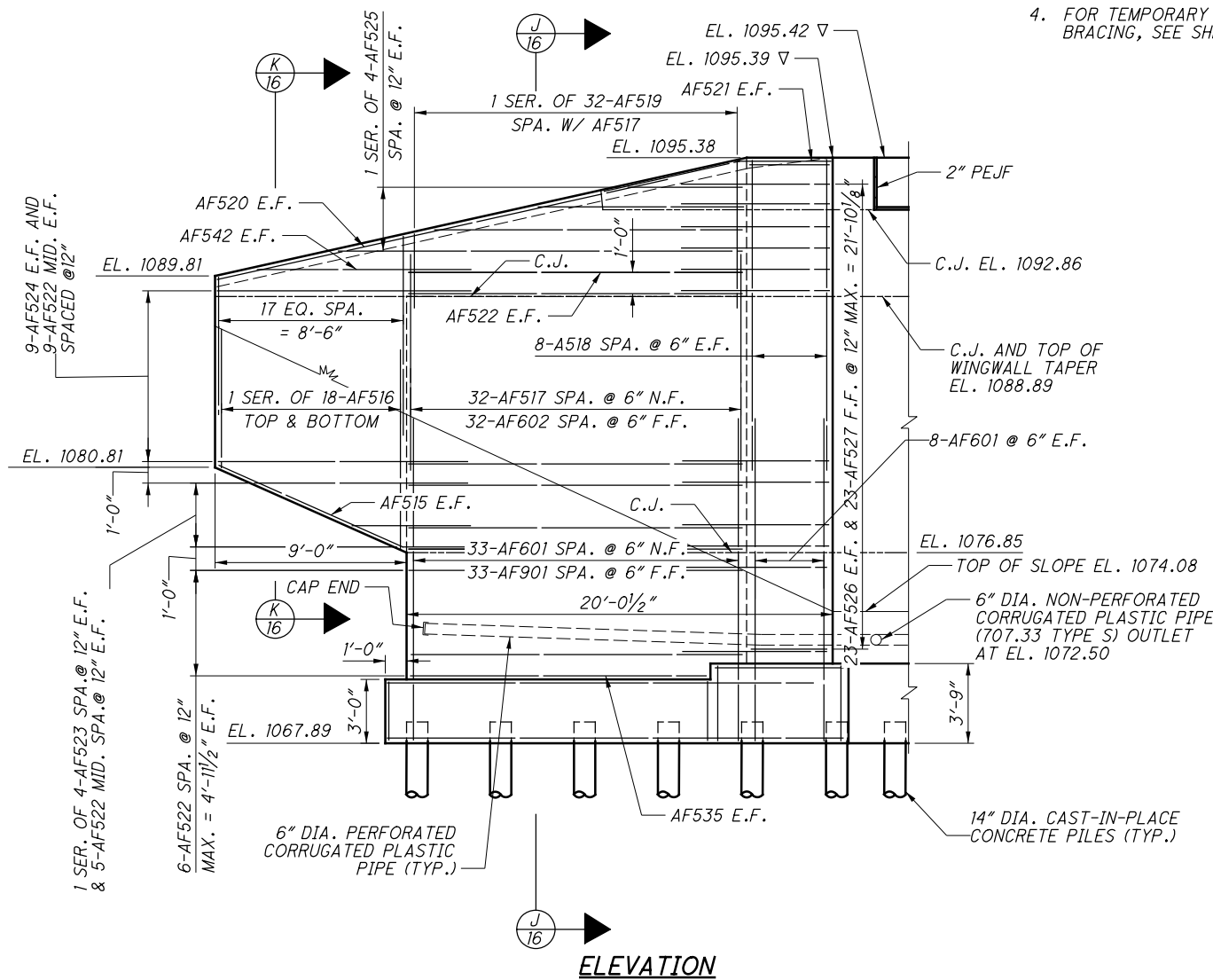
1. POROUS BACKFILL 2'-0" WIDE MINIMUM WITH GEOTEXTILE FABRIC.
2. SEE SHEET 14/26 FOR FORWARD ABUTMENT REINFORCING.
3. SEE SHEET 10/26 FOR FOOTING REINFORCING.
4. FOR TEMPORARY EXCAVATION BRACING, SEE SHEETS 7/26 AND 8/26.



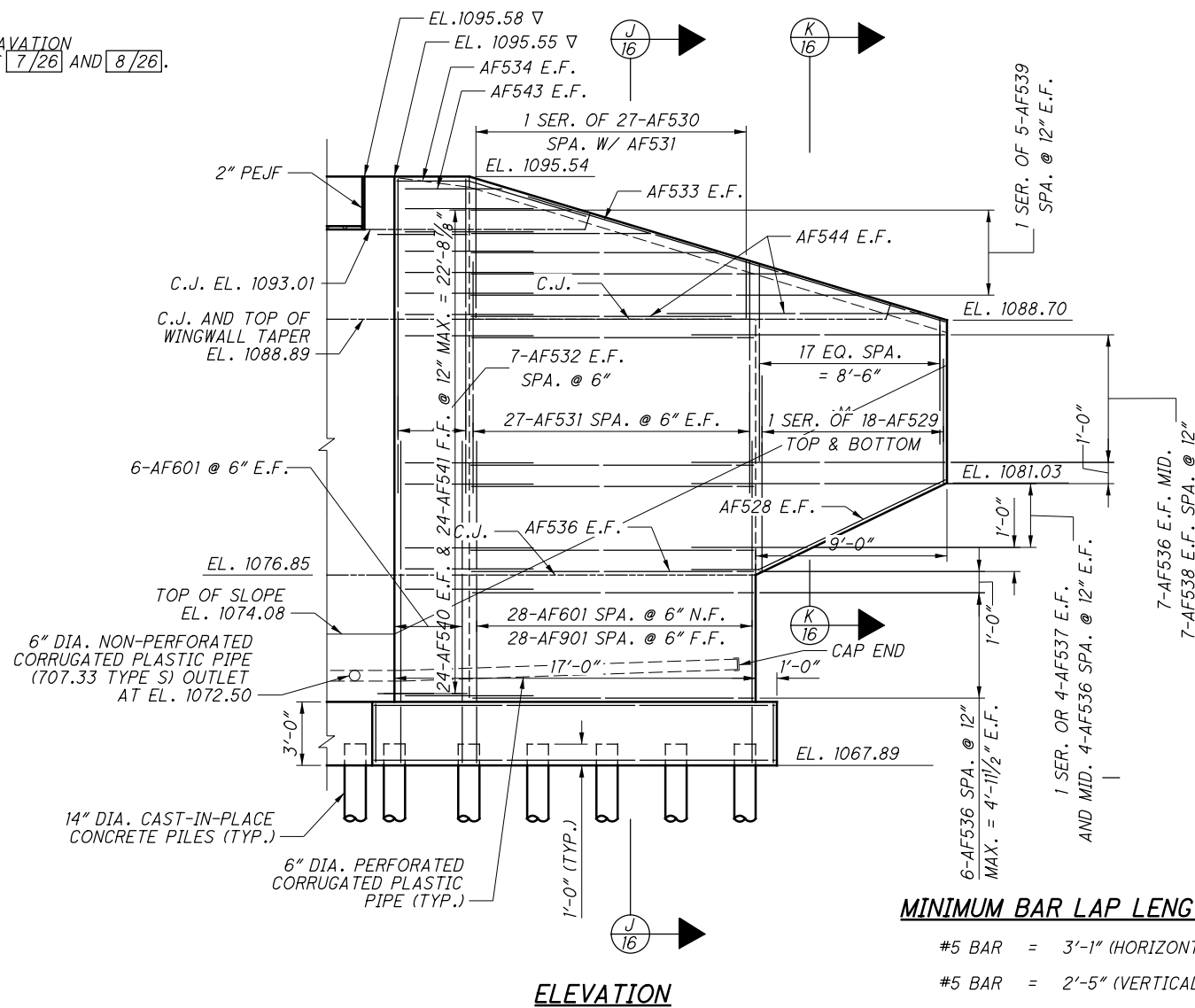
WINGWALL 4 PLAN
RIGHT FORWARD

LEGEND:

- ▽ - INDICATES THAT ELEVATION IS TAKEN AT THE C BEARING AT FORWARD ABUTMENT.
- C.J. - CONSTRUCTION JOINT



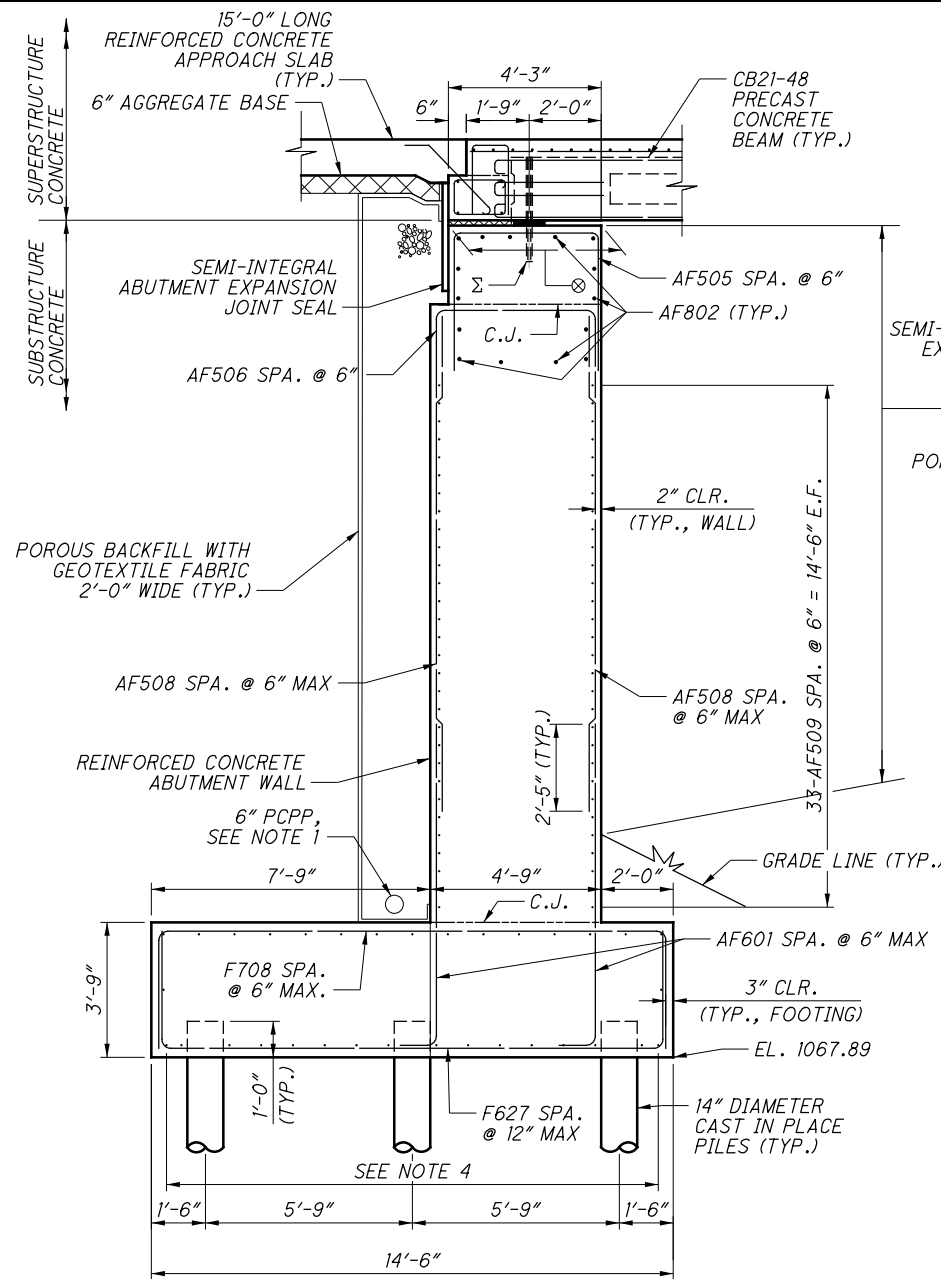
ELEVATION



ELEVATION

MINIMUM BAR LAP LENGTHS:

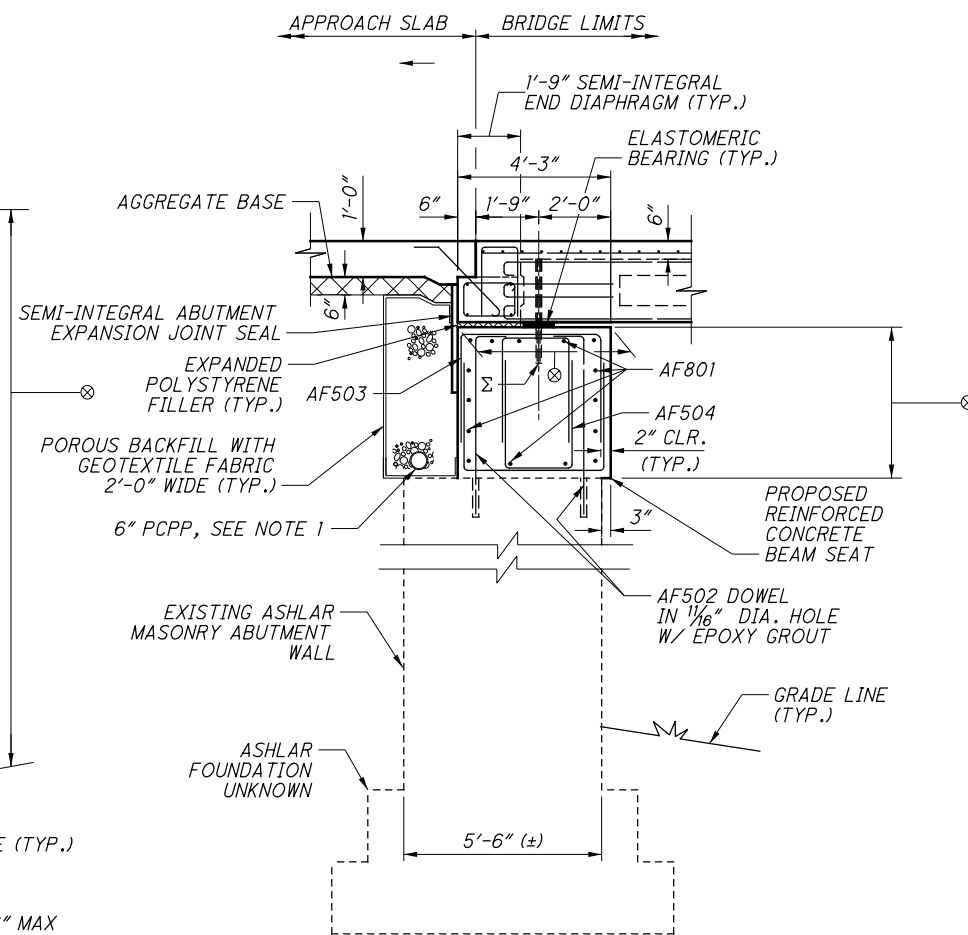
- #5 BAR = 3'-1" (HORIZONTAL)
- #5 BAR = 2'-5" (VERTICAL)
- #6 BAR = 3'-7" (VERTICAL)



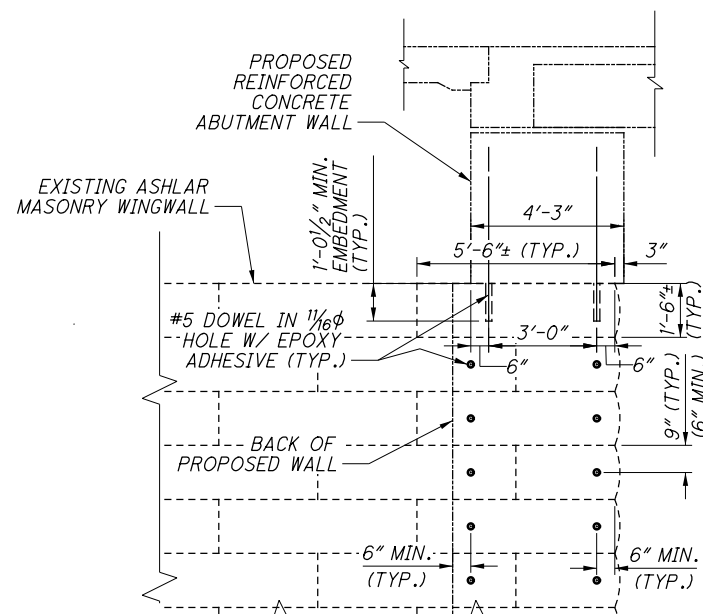
F ABUTMENT SECTION
14

LEGEND:

- C.J. CONSTRUCTION JOINT
- ⊗ LIMITS OF SEALING CONCRETE SURFACES
(EPOXY URETHANE) (TYP.)
- ⊕ SEE FORWARD WINGWALL DETAILS ON SHEET 15/26
- Σ 1"Ø DOWEL BAR WITH 12" EMBEDMENT FOR
EXPANSION TYPE BEARING ANCHOR PER PSBD-2-07
(TYP. BOTH ABUTMENTS), SEE NOTE 3

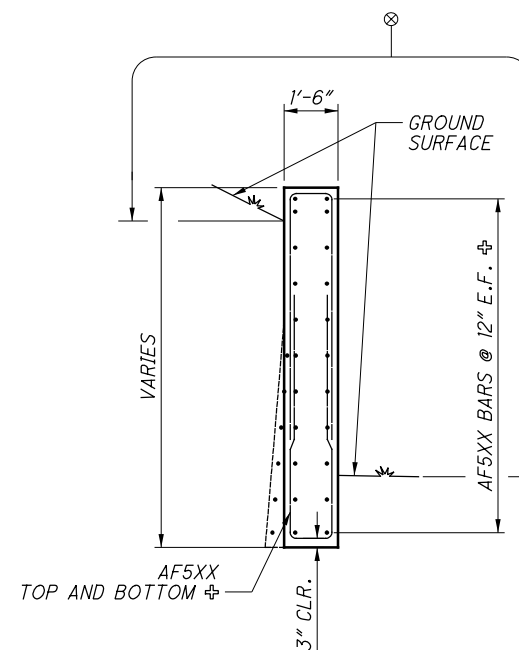


ABUTMENT SECTION

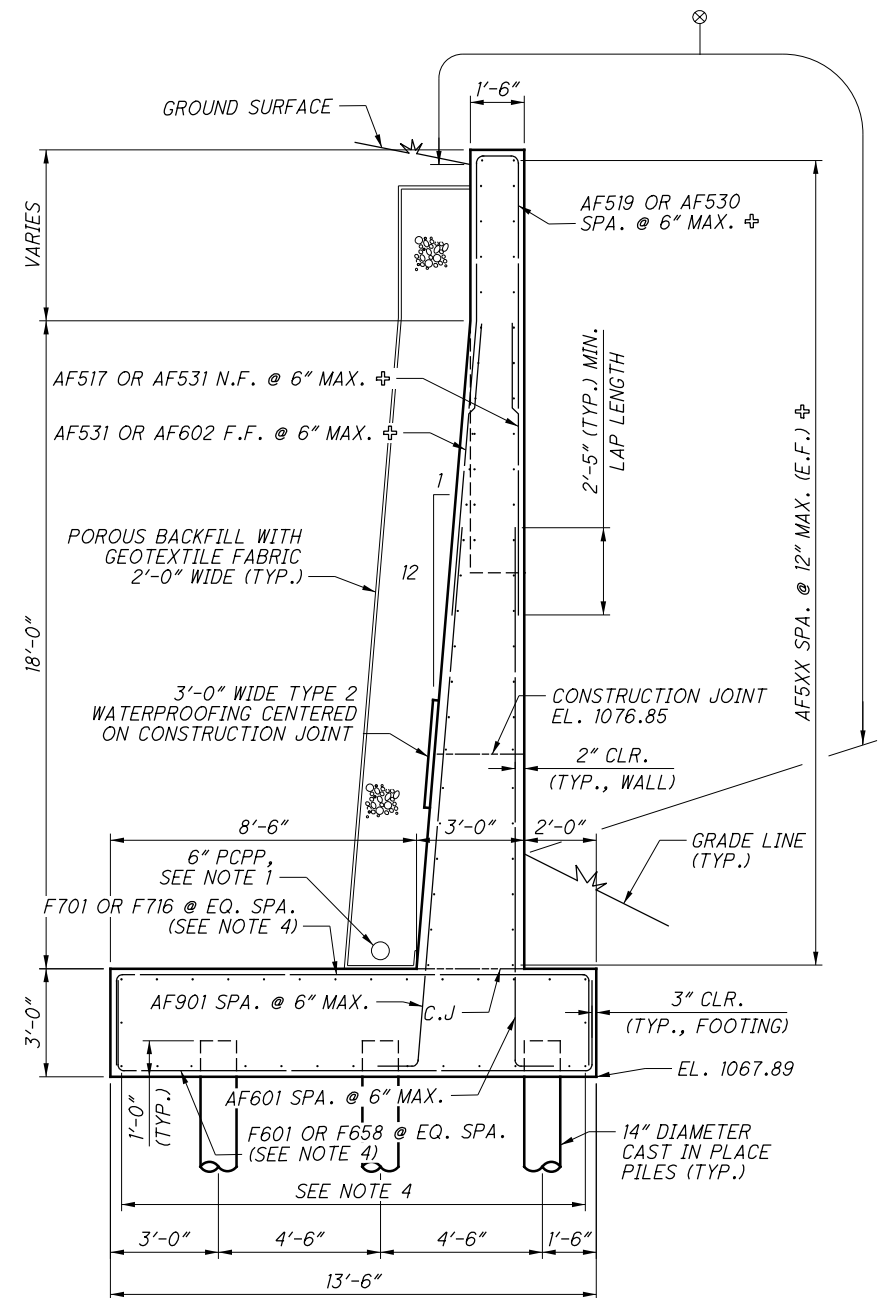


H DOWEL BAR INSTALLATION DETAIL
14

RIGHT REAR ABUTMENT SHOWN, OTHERS SIMILAR (SEE NOTE 2)



K CANTILEVER WINGWALL SECTION

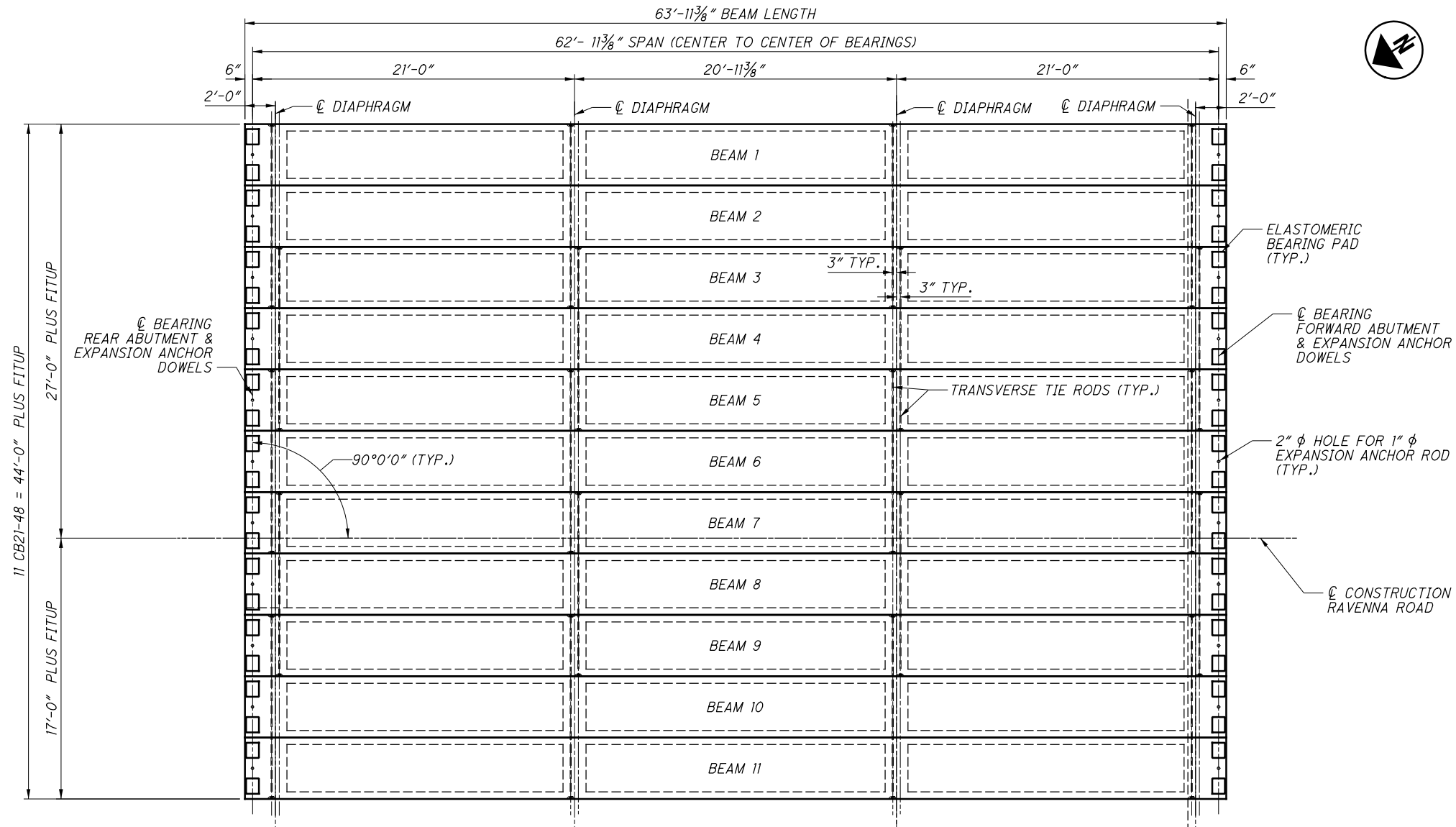


WINGWALL SECTION

NOTES:

1. PERFORATED, CORRUGATED, POLYETHYLENE PIPE SHALL CONFORM TO C&MS 518.07. DRAINAGE PIPE SHALL HAVE A MINIMUM SLOPE OF 1% TO ALLOW FOR DRAINAGE.
2. DIMENSIONS OF EXISTING ASHLAR MASONRY ABUTMENT BLOCKS ARE APPROXIMATE. FURTHER FIELD MEASUREMENTS REQUIRED TO DETERMINE LOCATION OF HORIZONTAL DOWELS. DOWEL BARS SHALL NOT BE INSTALLED IN THE JOINTS BETWEEN THE ASHLAR MASONRY BLOCKS.
3. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.
4. FOOTING REINFORCING VARIES BY LOCATION. SEE SHEET 10/26.

P:\Projects\2020\20H03TD-20335_POR_Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285\SS001.dgn 1/24/2024 12:25:19 PM adesimone

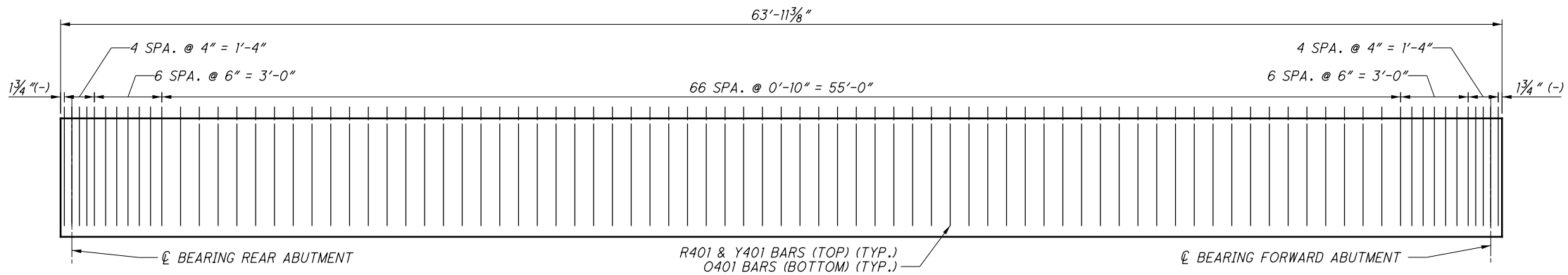


FRAMING PLAN

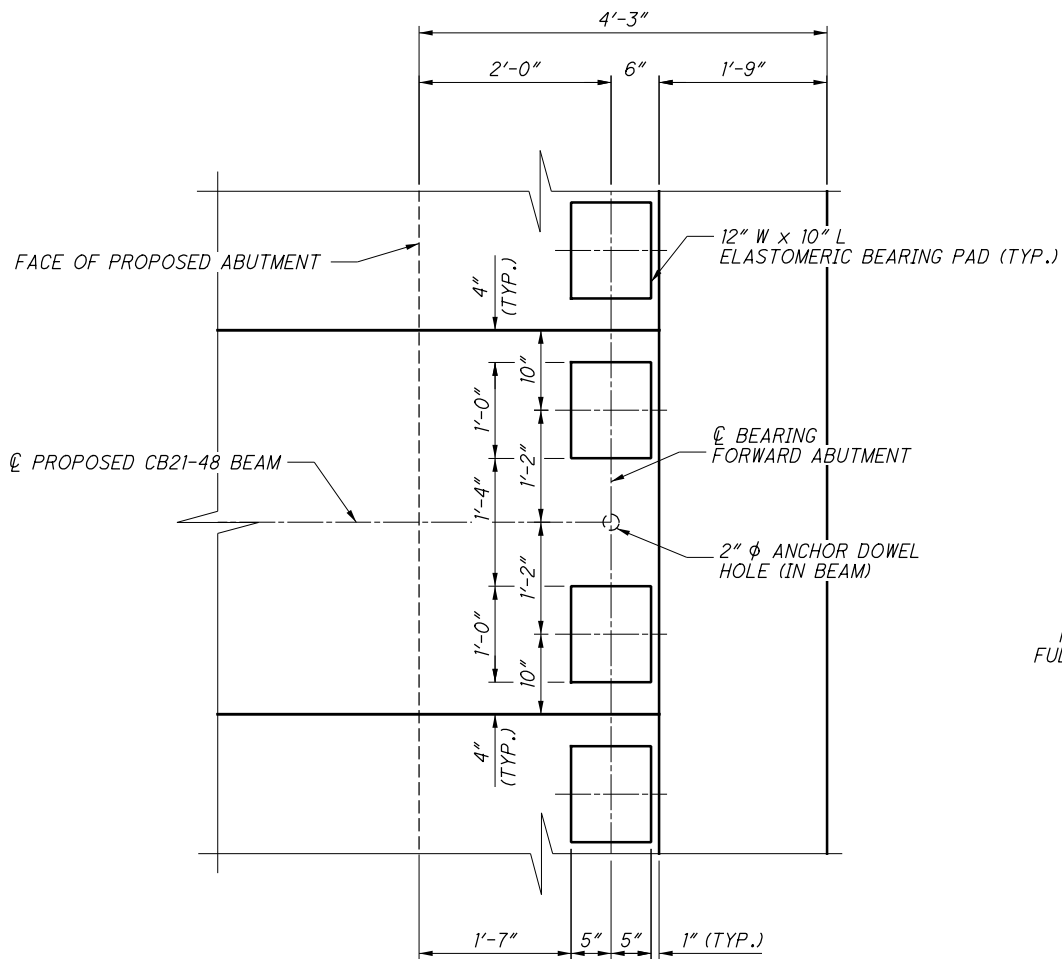
NOTES:

- FOR DECK REINFORCING, SEE SHEET 19/26.
- FOR BEAM DETAILS, SEE SHEET 18/26.
- FOR CAMBER DIAGRAM, SEE SHEET 21/26.

P:\Projects\2020\20H03TD-20335_POR_Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285\CS002.dgn 1/24/2024 12:25:21 PM adesimone

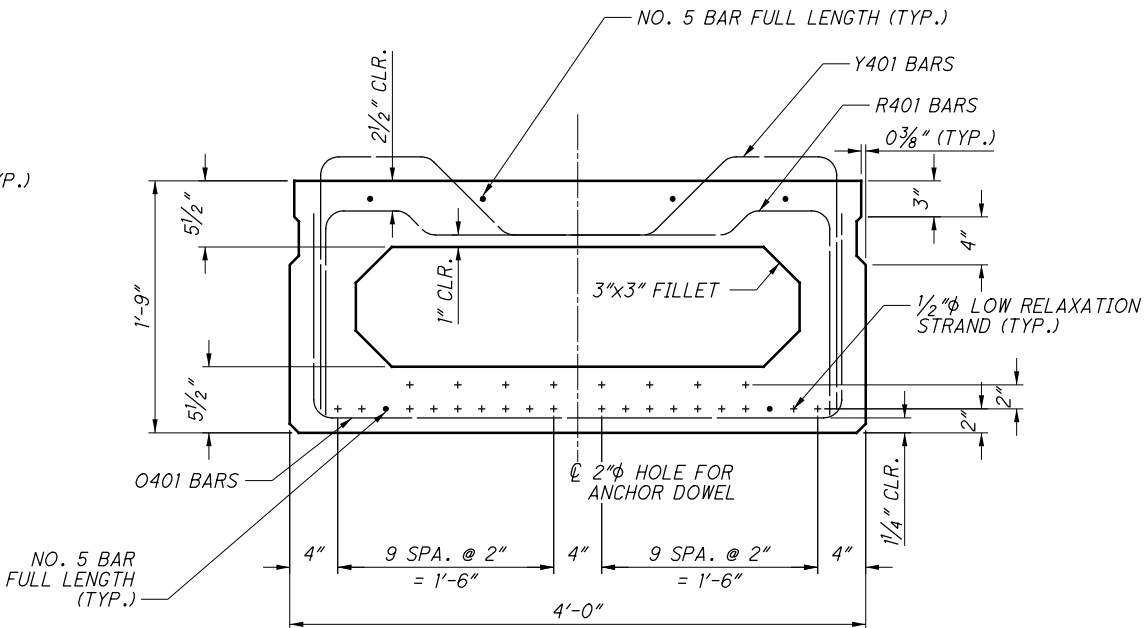


ELEVATION OF CB21-48 BEAM
STIRRUP SPACING

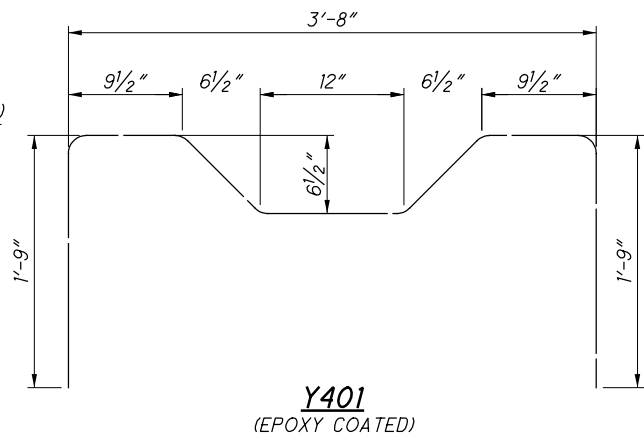


BEARING PLAN
(FORWARD ABUTMENT SHOWN,
REAR ABUTMENT SIMILAR)

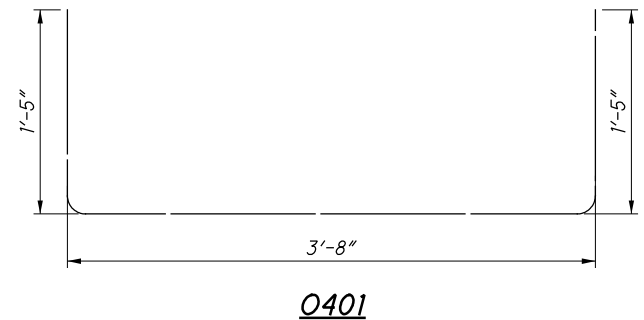
BEARING DETAIL TABLE											
LOCATION	BEARING								SERVICE REACTIONS (WITHOUT IMPACT)		
	TYPE	NO.	L (IN)	W (IN)	Te (IN)	Ti (IN)	NO. OF INTERNAL LAMINATES (14 GAGE)	T (IN)	RDL (KIPS)	RLL (KIPS)	R TOTAL (KIPS)
ALL BEARINGS FOR ALL LOCATIONS	EXP.	44	10"	12"	0.25"	0.44"	2	1.28"	20.64	61.88	82.52



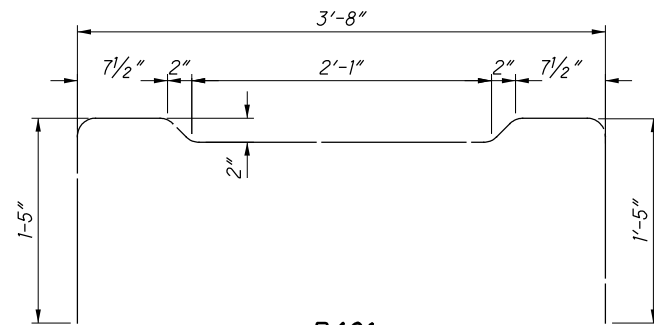
BOX BEAM DETAILS (CB21x48)
26 STANDS



Y401
(EPOXY COATED)



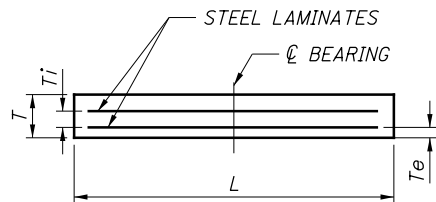
O401



R401

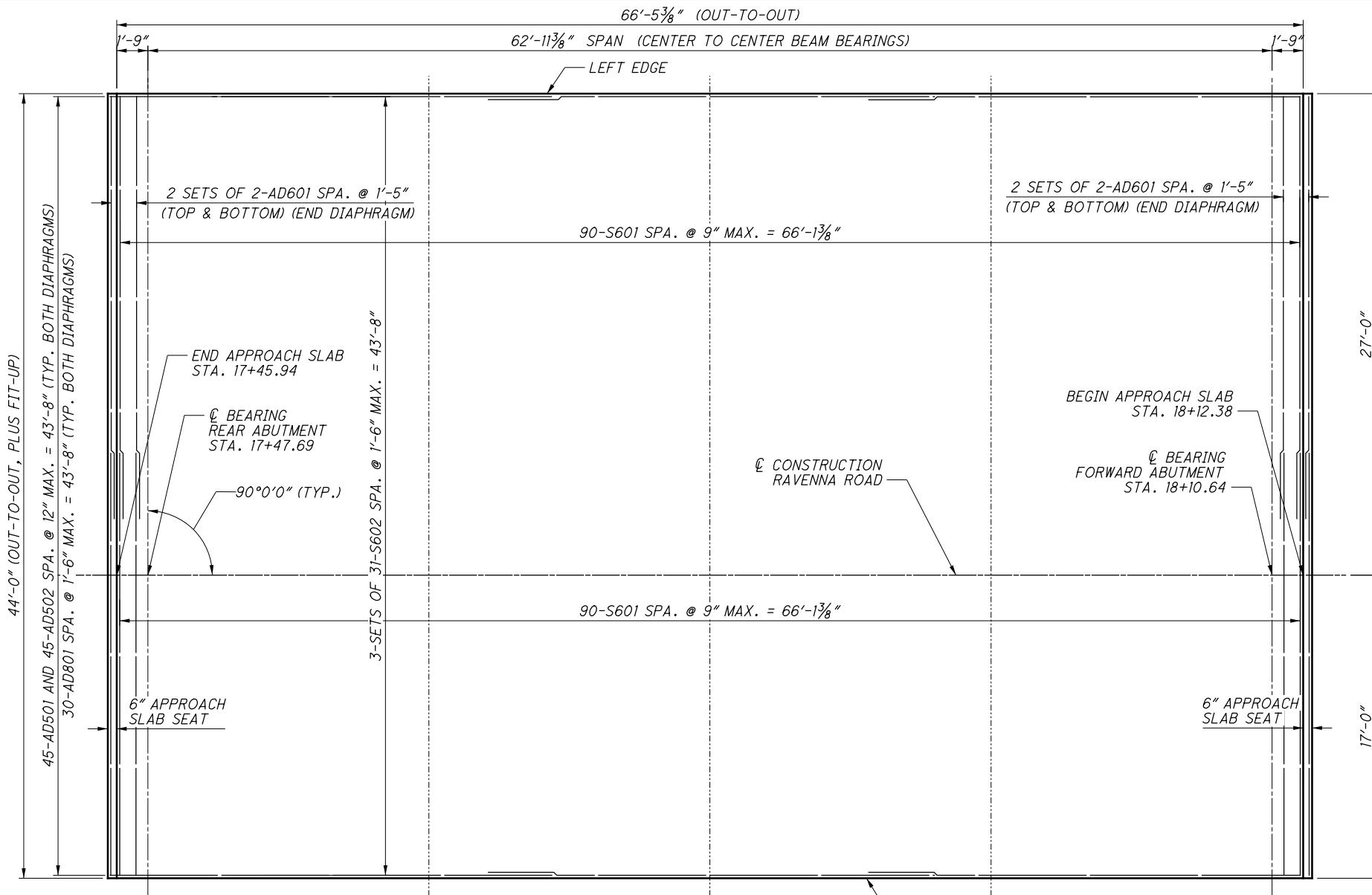
NOTES:

- FOR MORE DETAILS, SEE STANDARD DRAWINGS BD-1-11 & PSBD-2-07.
- THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- SEE STANDARD DRAWING PSBD-2-07 FOR DETAILS OF REINFORCEMENT AT BEAM ENDS.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND VISABLE AFTER THE BEARING IS INSTALLED.
- FOR EXPANSION DOWEL DETAILS, SEE PSBD-2-07.

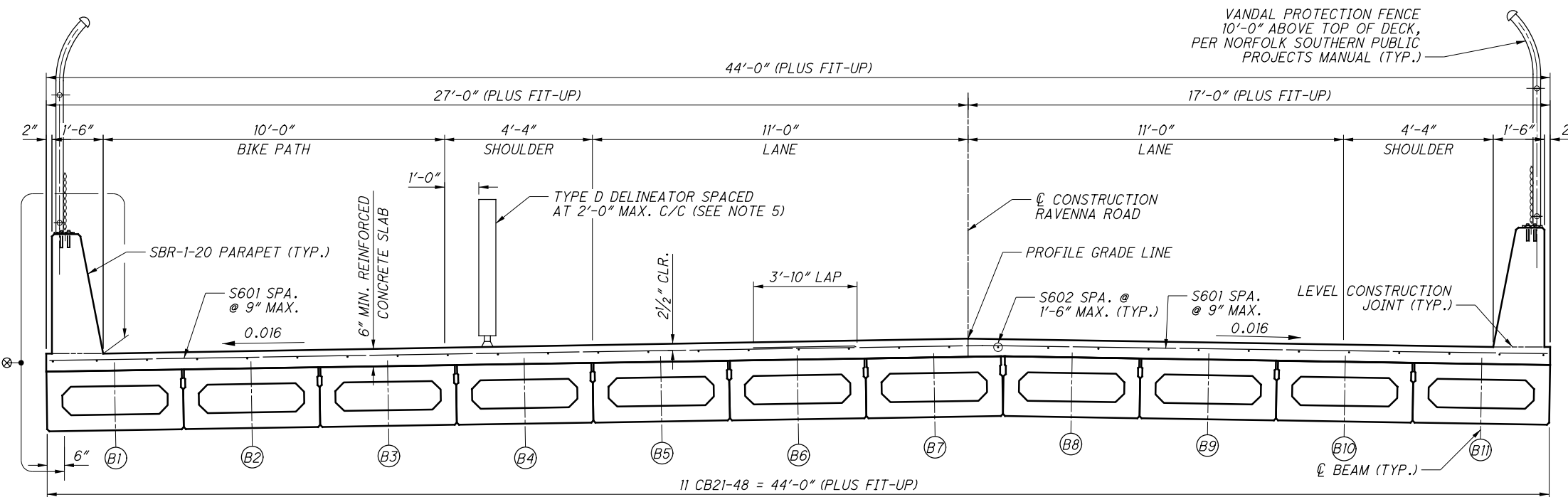


LAMINATED ELASTOMERIC BEARING

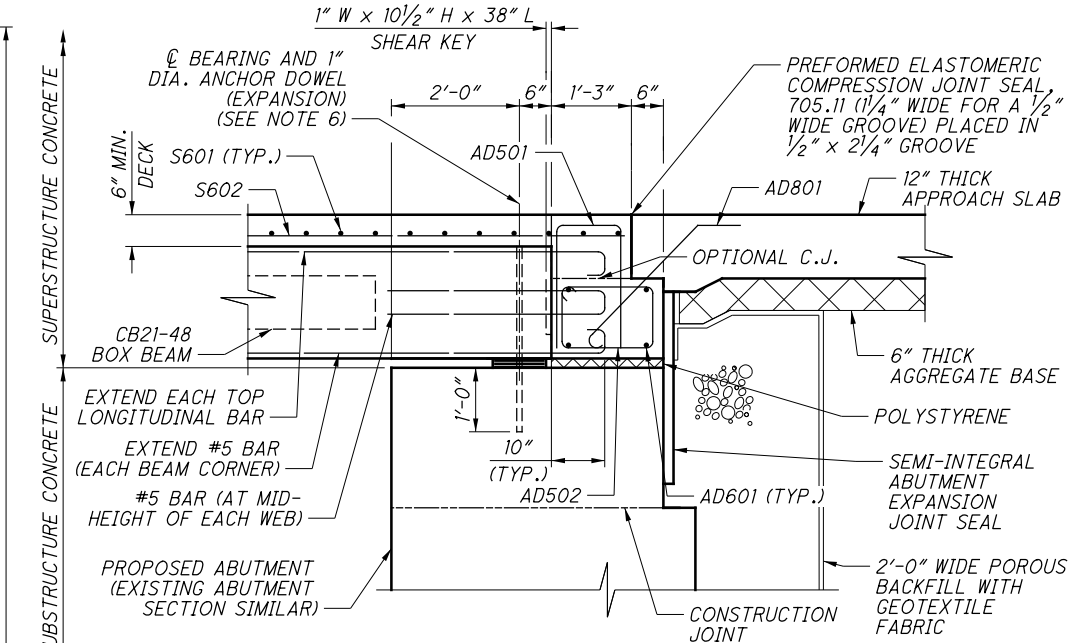
P:\Projects\2020\20H03ID-20335_POR Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285\CS001.dgn 1/24/2024 12:25:23 PM adesimone



SLAB PLAN



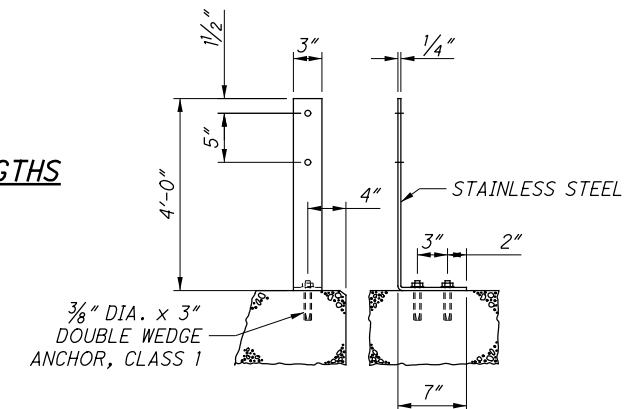
TRANSVERSE SECTION



SEMI-INTEGRAL DIAPHRAGM DETAIL

MINIMUM LAP LENGTHS

#6 BAR - 3'-10"



DELINEATOR ANCHORAGE DETAIL

LEGEND:

⊗ - LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (TYP.)

NOTES:

- SEE STANDARD DRAWING PSBD-2-07 FOR ADDITIONAL BOX BEAM DETAILS.
- BEFORE PLACEMENT OF THE SLAB CONCRETE, THE TOPS OF ALL BEAMS SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST AND OTHER FOREIGN MATTER. THE SURFACE SHALL BE FLUSHED WITH CLEAR WATER AND SHALL BE WET WITHOUT FREE WATER WHERE THE CONCRETE IS PLACED.
- FOR BEAM DETAILS, SEE SHEET 18/26.
- FOR CAMBER DETAILS, SEE SHEET 21/26.
- FOR ADDITIONAL TYPE D DELINEATOR DETAILS, SEE STANDARD DRAWING TC-61.10.
- FURNISHING AND PLACEMENT OF ANCHOR DOWELS SHALL BE INCLUDED WITH ITEM 515 - PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB21-48.

POR-145-52.85
PID No. 105556

19 / 26

44
61

SLAB PLAN
BRIDGE NO. POR-C145G-5285
RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY

DESIGNED
BTJ
CHECKED
JAT

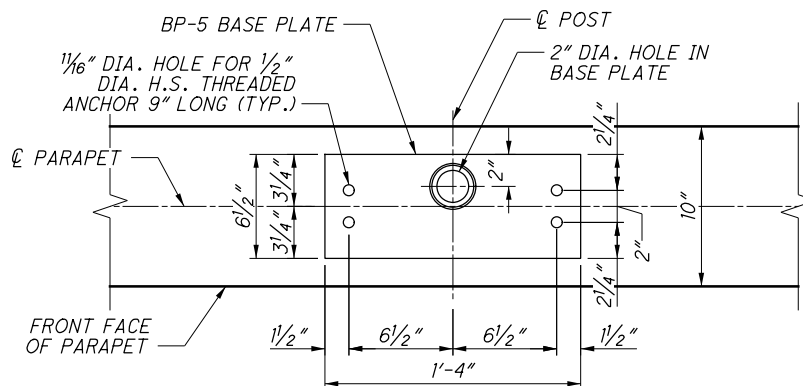
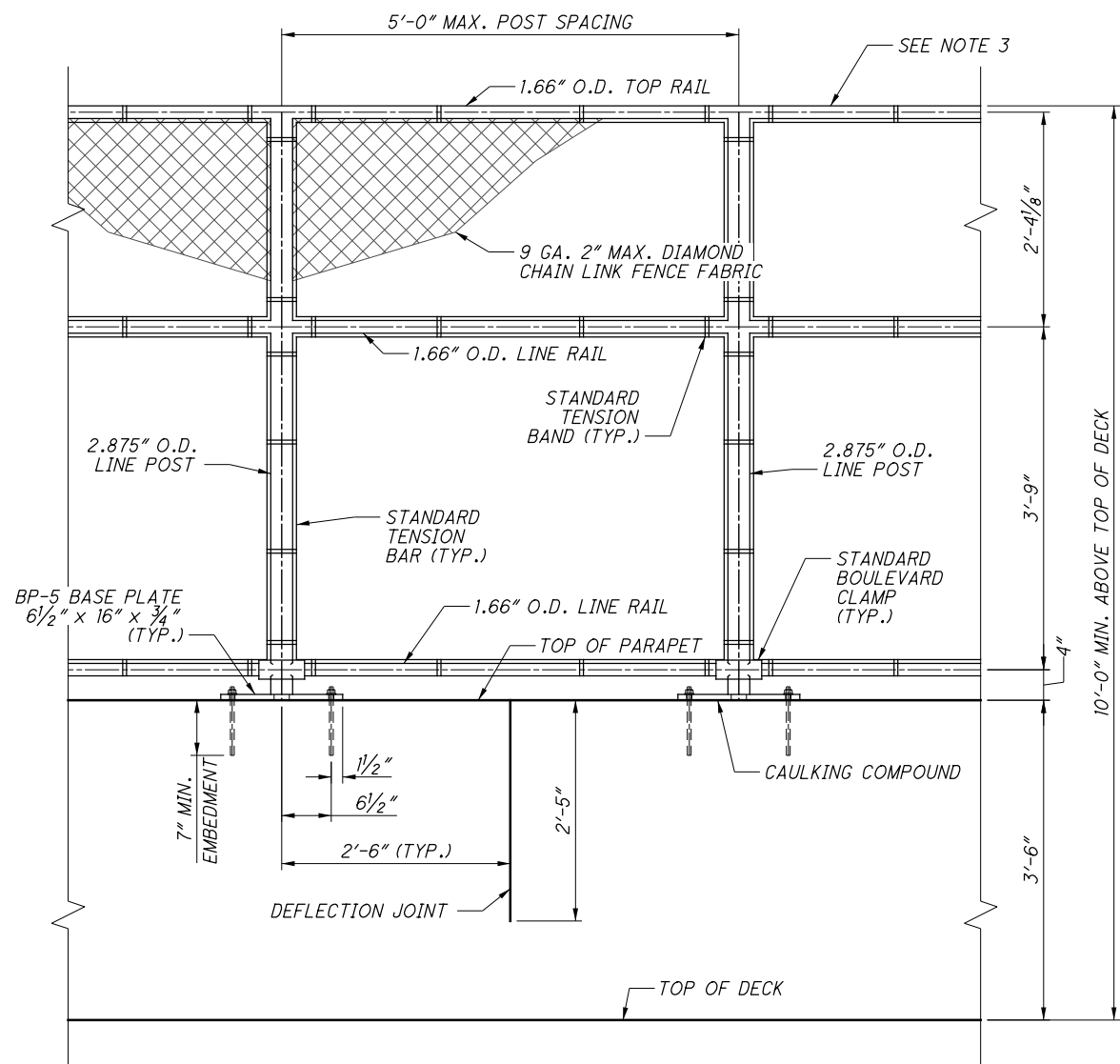
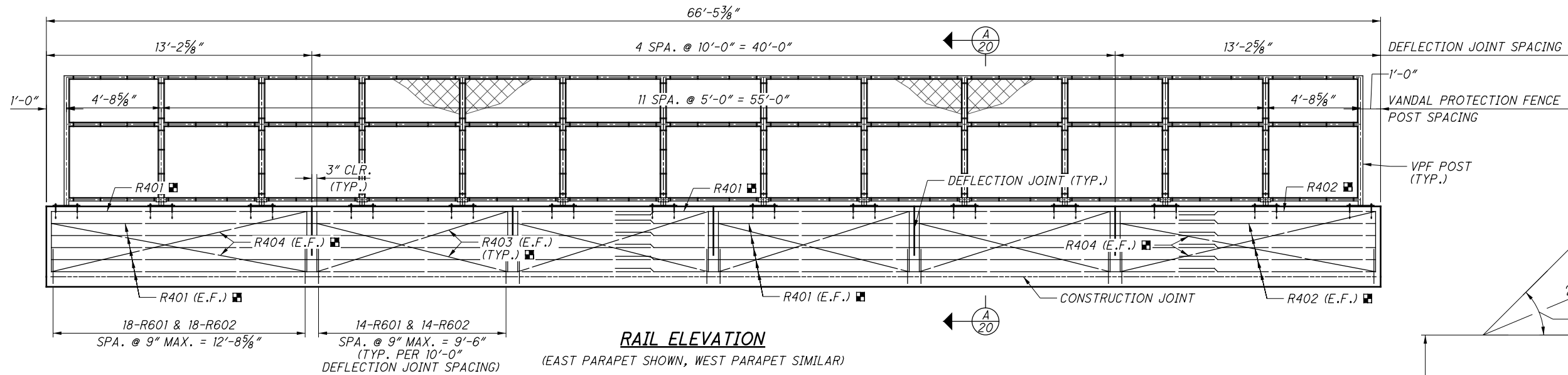
DRAWN
BTJ
REVISED

REVIEWED
AMT
DATE
04/20/22

STRUCTURE FILE NUMBER
6740448

DESIGN AGENCY
PRIME
8415 Rouse Place
Columbus, Ohio 43240

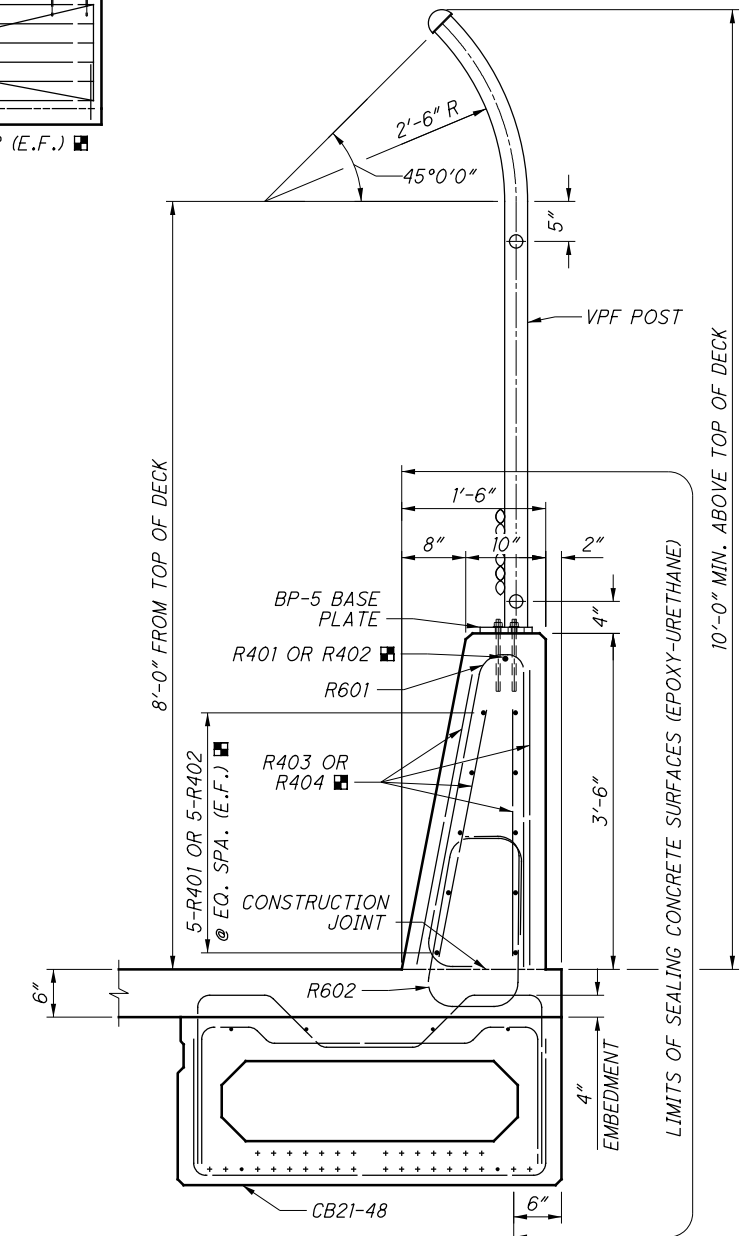
P:\Projects\2020\20H03ID-20335_POR Ravenna Road Bridge_248\105556\400-Engineering\Structures\C145G_5285CSA002.dgn 1/24/2024 12:25:25 PM odesimone



LEGEND:

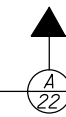
■ GFRP REINFORCEMENT

PARAPET LAP LENGTHS	
BAR	MIN. LAP
NO. 4 GFRP	1'-11"

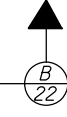


NOTES:

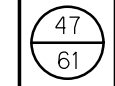
- FOR REINFORCING STEEL LIST, SEE SHEET 26/26.
- FOR ADDITIONAL PARAPET DETAILS, SEE STANDARD DRAWING SBR-1-20.
- FOR ADDITIONAL VANDAL PROTECTION FENCE DETAILS, SEE STANDARD DRAWING VPF-1-90 & NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL DRAWING NO. 3.
- PAYMENT FOR 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BARS IS INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.



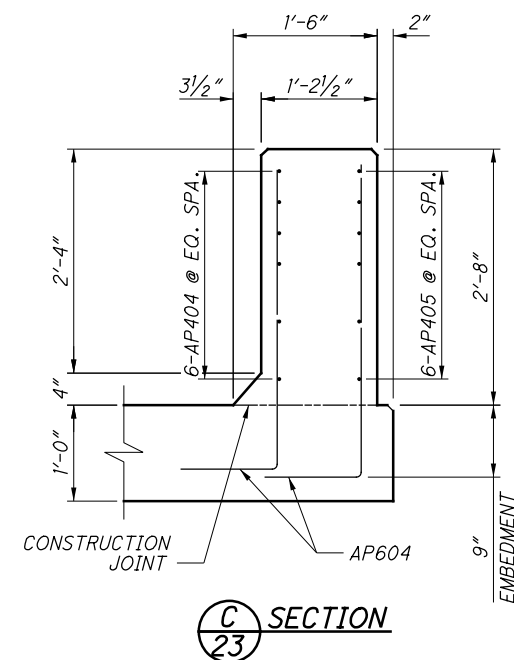
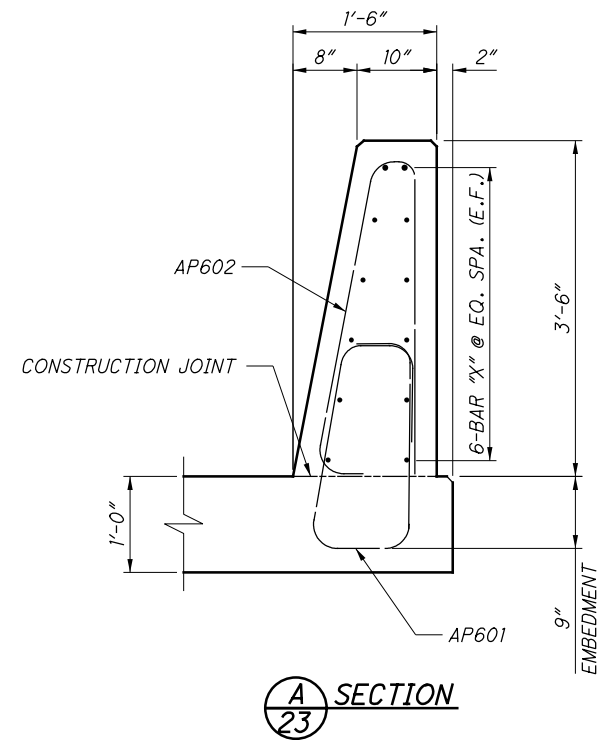
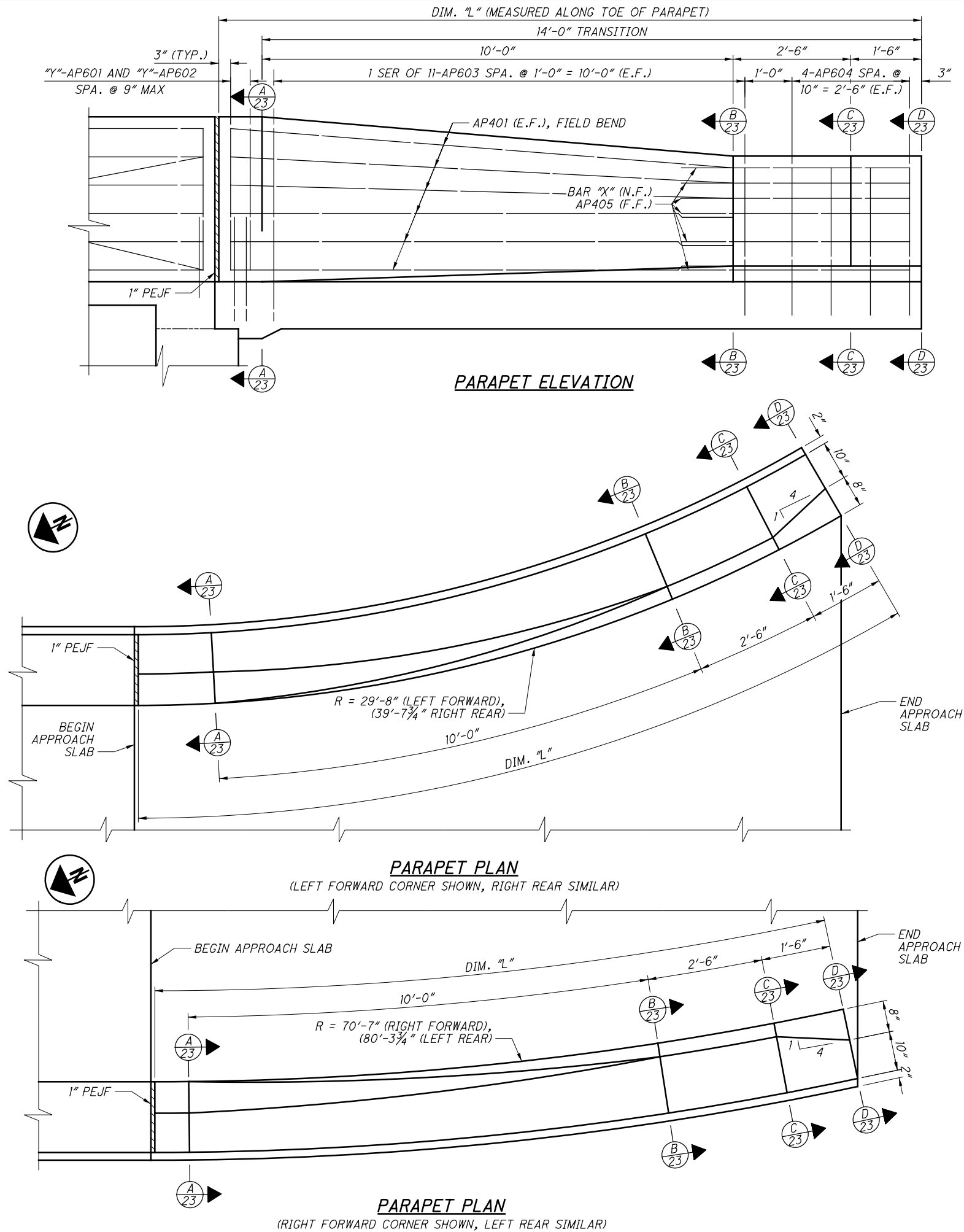
REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN



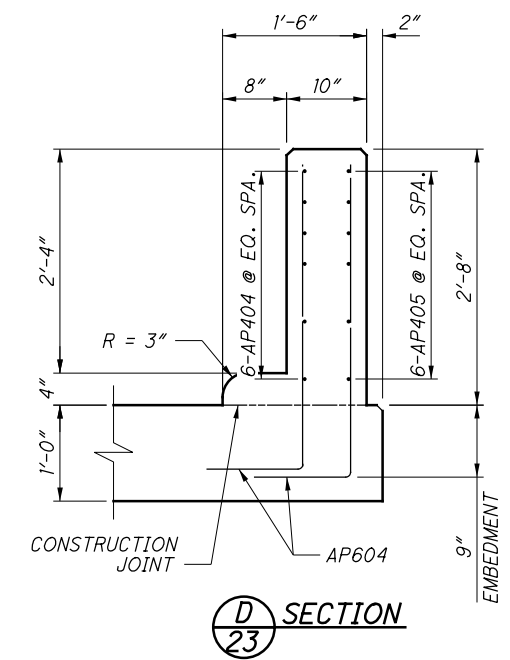
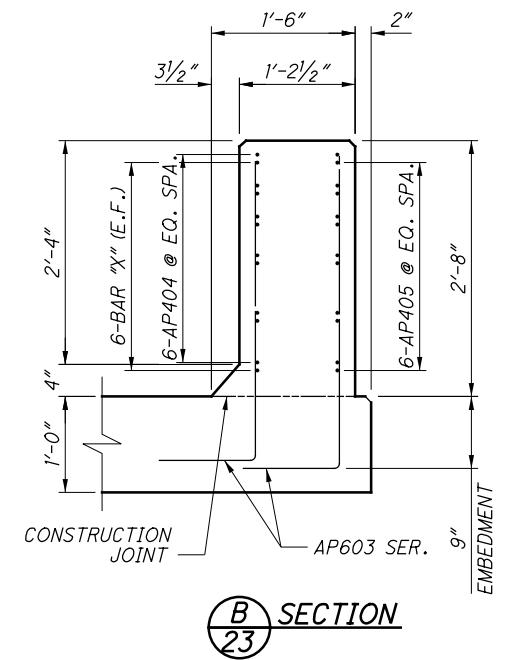
P:\Projects\2020\20H03TD-20335_POR Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285CSA001.dgn 1/24/2024 12:25:34 PM adesimone



NOTES:

1. FOR DETAILS NOT SHOWN, SEE STD. DWG. SBR-1-20.
2. FOR PARAPET REINFORCING ON BRIDGE DECK, SEE SHEET 20/26.
3. SEE ROADWAY PLANS FOR BRIDGE TERMINAL ASSEMBLY DETAILS.
4. PAYMENT FOR 1/2" DIAMETER GLASS FIBER REINFORCED POLYMER (GFRP) BARS IS INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL.

APPROACH PARAPET REINFORCEMENT			
LOCATION	DIM. "L"	BAR "X"	"Y"
LEFT REAR	14'-8 3/4"	AP402	2
RIGHT REAR	15'-4 3/8"	AP403	3
LEFT FORWARD	15'-7 1/2"	AP403	3
RIGHT FORWARD	14'-8 5/8"	AP402	2

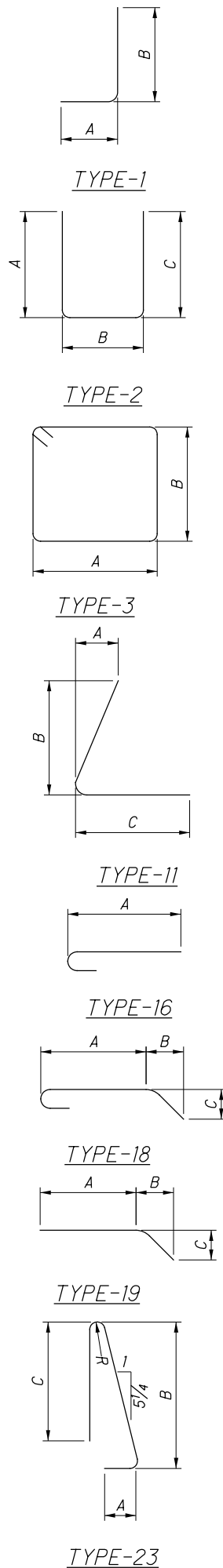


MINIMUM LAP LENGTHS:

#4 BAR = 1'-11"

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
FOOTING REINFORCEMENT											
F601	35	17'-10"	938	2	2'-7"	13'-0"	2'-7"				
F602	2	16'-0"	48	STR							
F603	2	12'-10"	39	STR							
F604	2	17'-6"	53	STR							
F605	2	17'-4"	52	2	2'-7"	12'-6"	2'-7"				
F606	2	16'-6"	50	STR							
F607	2	17'-7"	53	STR							
F608	2	17'-5"	52	STR							
F609	2	16'-11"	51	STR							
F610	2	7'-0"	21	2	2'-7"	2'-2"	2'-7"				
F611	4	4'-8"	28	STR							
F612	2	10'-4"	31	2	2'-7"	5'-5 1/2"	2'-7"				
F613	2	15'-8"	47	STR							
F614	2	11'-3"	34	STR							
F615	2	10'-8"	32	STR							
F616	4	8'-11"	53	STR							
F617	1	9'-9"	15	2	3'-4"	3'-5 1/4"	3'-4"				
F618	2	7'-1"	21	STR							
F619	2	15'-9"	47	STR							
F620	2	16'-2"	49	STR							
F621	1	19'-9"	30	2	3'-4"	13'-5"	3'-4"				
F622	2	20'-4"	61	2	3'-4"	14'-0"	3'-4"				
F623	22	8'-11"	295	STR							
	1 SR	12'-10"				6'-5 1/2"					
F624	OF	TO	63	2	3'-4"	TO	3'-4"				1'-1 1/2"
	3	15'-0"				8'-8 1/4"					
	1 SR	16'-9"				10'-4 1/2"					
F625	OF	TO	79	2	3'-4"	TO	3'-4"				0'-10 1/2"
	3	18'-6"				12'-1 1/2"					
F626	3	20'-4"	92	2	3'-4"	14'-0"	3'-4"				
F627	9	20'-4"	275	2	3'-4"	14'-0"	3'-4"				
	2 SR	17'-6"									
F628	OF	TO	164	STR							0'-7 3/4"
	3	18'-10"									
	2 SR	19'-5"									
F629	OF	TO	179	STR							0'-5"
	3	20'-3"									
	2 SR	13'-0"									
F630	OF	TO	278	STR							0'-11 3/4"
	6	17'-11"									
F631	2	15'-10"	48	STR							
F632	2	16'-6"	49	STR							
F633	4	6'-3"	37	STR							
F634	2	9'-2"	28	2	3'-4"	2'-9 1/2"	3'-4"				
F635	4	18'-0"	108	STR							
F636	2	12'-9"	38	STR							
F637	2	12'-4"	37	STR							
F638	2	18'-10"	57	2	2'-7"	14'-0"	2'-7"				
	1 SR	17'-7"				11'-2 1/2"					
F639	OF	TO	84	2	3'-4"	TO	3'-4"				1'-1 3/4"
	3	19'-10"				13'-6"					
	1 SR	12'-1"				5'-8 3/4"					
F640	OF	TO	62	2	3'-4"	TO	3'-4"				1'-7"
	3	15'-3"				8'-10 1/2"					
F641	16	18'-0"	433	STR							
F642	6	18'-0"	162	STR							
	1 SR	18'-9"									
F643	OF	TO	88	STR							0'-9 1/2"
	3	20'-4"									
SUB-TOTAL			4461								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
FOOTING REINFORCEMENT (CONT.)											
	1 SR	18'-3"									
F644	OF	TO	88	STR							1'-2 1/2"
	3	20'-8"									
F645	4	5'-11"	36	STR							
F646	1	12'-0"	18	2	2'-7"	7'-2"	2'-7"				
	2 SR	20'-5"									
F647	OF	TO	126	STR							1'-0 3/4"
	2	21'-6"									
F648	2	14'-3"	43	STR							
F649	4	18'-9"	113	STR							
F650	2	21'-10"	66	STR							
F651	2	20'-1"	60	STR							
	2 SR	10'-4"									
F652	OF	TO	107	STR							1'-5 1/2"
	3	13'-3"									
	2 SR	15'-5"									
F653	OF	TO	211	STR							1'-5"
	4	19'-9"									
F654	3	17'-11"	81	2	2'-7"	13'-0 1/2"	2'-7"				
	1 SR	15'-5"				10'-6 3/4"					
F655	OF	TO	72	2	2'-7"	TO	2'-7"				0'-7 3/4"
	3	16'-9"				11'-10 1/4"					
	1 SR	13'-1"				8'-2 3/4"					
F656	OF	TO	62	2	2'-7"	TO	2'-7"				0'-7 3/4"
	3	14'-4"				9'-6 1/4"					
	1 SR	15'-3"				10'-5 1/4"					
F657	OF	TO	71	2	2'-7"	TO	2'-7"				0'-7"
	3	16'-5"				11'-7"					
	1 SR	13'-3"				8'-4 1/2"					
F658	OF	TO	62	2	2'-7"	TO	2'-7"				0'-7"
	3	14'-5"				9'-6 1/4"					
	1 SR	11'-2"				6'-4"					
F659	OF	TO	53	2	2'-7"	TO	2'-7"				0'-7"
	3	12'-4"				7'-6"					
	2 SR	13'-11"									
F660	OF	TO	282	STR							0'-8 1/2"
	6	17'-5"									
F701	42	17'-9"	1524	2	2'-7"	13'-0"	2'-7"				
F702	1	9'-9"	20	2	3'-4"	3'-5 1/4"	3'-4"				
F703	1	19'-8"	40	2	3'-4"	13'-5"	3'-4"				
F704	4	20'-3"	166	2	3'-4"	14'-0"	3'-4"				
	1 SR	12'-9"				6'-5 1/2"					
F705	OF	TO	113	2	3'-4"	TO	3'-4"				0'-9"
	4	15'-0"				8'-8 1/4"					
	1 SR	16'-8"				10'-4 1/2"					
F706	OF	TO	179	2	3'-4"	TO	3'-4"				0'-5 1/4"
	5	18'-5"				12'-1 1/2"					
F707	4	20'-3"	166	2	3'-4"	14'-0"	3'-4"				
F708	25	20'-3"	1035	2	3'-4"	14'-0"	3'-4"				
	1 SR	17'-4"				11'-0 1/4"					
F709	OF	TO	190	2	3'-4"	TO	3'-4"				0'-7 1/2"
	5	19'-9"				13'-6"					
	1 SR	12'-2"				5'-10 1/4"					
F710	OF	TO	112	2	3'-4"	TO	3'-4"				1'-0 1/2"
	4	15'-3"				8'-11 1/2"					
F711	1	11'-10"	24	2	2'-7"	7'-0 1/4"	2'-7"				
F712	5	17'-9"	181	2	2'-7"	13'-0"	2'-7"				
	1 SR	15'-4"				10'-6 3/4"					
F713	OF	TO	164	2	2'-7"	TO	2'-7"				0'-3 3/4"
	5	16'-8"				11'-10 1/4"					
	1 SR	13'-0"				8'-2 3/4"					
F714	OF	TO	140	2	2'-7"	TO	2'-7"				0'-4"
	5	14'-4"				9'-6 1/4"					
SUB-TOTAL			5,605								



P:\Projects\2020\20H03ID-20335_POR_Ravenna Road Bridge_248\105556\400-Engineering\Structures\Sheets\C145G_5285CSL002.dgn 1/24/2024 12:25:39 PM adesimone

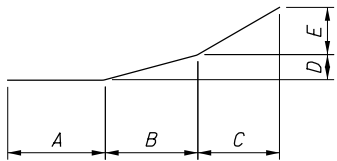
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
FOOTING REINFORCEMENT (CONT.)											
F715	1 SR	15'-3"				10'-5 1/4"					
	OF	TO	162	2	2'-7"	TO	2'-7"				0'-3 1/2"
	5	16'-4"				11'-7"					
F716	1 SR	13'-2"				8'-4 1/2"					
	OF	TO	141	2	2'-7"	TO	2'-7"				0'-3 1/2"
	5	14'-4"				9'-6 1/2"					
F717	1 SR	11'-2"				6'-4"					
	OF	TO	120	2	2'-7"	TO	2'-7"				0'-3 1/2"
	5	12'-3"				7'-6"					
SUB-TOTAL			423								

REAR ABUTMENT REINFORCING											
*AR501	84	4'-0"	350	STR							
*AR502	28	5'-8"	165	1	0'-10"	5'-0"					
AR503	58	9'-8"	585	2	3'-0"	3'-11"	3'-0"				
AR504	58	7'-5"	449	2	2'-11"	1'-10"	2'-11"				
AR505	32	11'-4"	378	2	3'-10"	3'-11"	3'-10"				
AR506	32	9'-0"	300	2	2'-5"	4'-5"	2'-5"				
AR507	11	18'-2"	208	STR							
AR508	32	14'-10"	456	STR							
AR509	86	5'-1"	452	STR							
AR510	82	15'-7"	1333	STR							
AR511	48	5'-11"	296	19	3'-0"	1'-6 1/2"	2'-7"				
AR512	46	6'-0"	288	19	3'-0"	1'-11 1/2"	2'-3 1/4"				
AR513	3	14'-10"	47	40							
AR514	3	14'-11"	44	41							
AR515	2	13'-5"	28	19	10'-4 3/4"	2'-6 3/4"	1'-7 1/4"				
AR516	2 SR	13'-8"			6'-4 3/4"		6'-4 3/4"				
	OF	TO	651	2	TO	1'-2"	TO				0'-2 1/2"
AR517	18	21'-0"			10'-0 3/4"		10'-0 3/4"				
	21	13'-8"	299	STR							
AR518	7	18'-5"	134	STR							
AR519	1 SR	10'-9"			4'-11"		4'-11"				
	OF	TO	279	2	TO	1'-2"	TO				0'-1 1/4"
AR520	21	14'-9"			6'-11"		6'-11"				
	2	15'-6"	32	STR							
AR521	2	10'-7"	22	19	7'-4 1/4"	3'-2 1/4"	0'-8"				
AR522	52	10'-2"	551	STR							
AR523	2 SR	4'-8"									
	OF	TO	82	STR							1'-7"
AR524	5	11'-0"									
	18	11'-10"	222	STR							
AR525	2 SR	5'-6"									
	OF	TO	103	STR							4'-7"
AR526	4	19'-3"									
	54	3'-0"	169	STR							
AR527	27	6'-1"	171	19	3'-0"	2'-8 3/4"	1'-6 1/2"				
AR528	2	12'-11"	27	19	10'-0"	2'-7 3/4"	1'-3 3/4"				
AR529	2 SR	12'-7"			5'-10"		5'-10"				
	OF	TO	607	2	TO	1'-2"	TO				0'-2 1/2"
AR530	18	19'-9"			9'-5"		9'-5"				
	18	13'-8"	257	STR							
AR531	7	18'-3"	133	STR							
AR532	1 SR	8'-11"			4'-0"		4'-0"				
	OF	TO	221	2	TO	1'-2"	TO				0'-2"
AR533	18	14'-7"			6'-10"		6'-10"				
	4	9'-8"	40	STR							
AR534	2	8'-7"	18	19	5'-0 1/2"	3'-4"	1'-1 3/4"				
AR535	2	5'-3"	11	STR							
AR536	48	8'-3"	412	STR							
AR537	2 SR	4'-9"									
	OF	TO	63	STR							1'-10 3/4"
AR538	4	10'-5"									
	16	11'-5"	191	STR							
SUB-TOTAL			10,074								

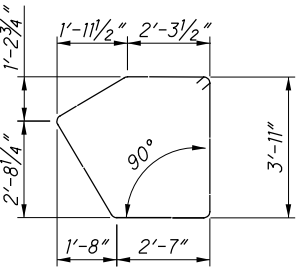
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
REAR ABUTMENT REINFORCING (CONT.)											
AR539	2 SR	7'-9"	37	STR							
	OF	TO									2'-2"
	2	9'-11"									
AR540	2 SR	4'-10"	38	STR							
	OF	TO									8'-9"
	2	13'-7"									
AR541	72	3'-0"	163	STR							
AR542	26	6'-0"	163	19	3'-3 3/4"	2'-0 3/4"	1'-8 3/4"				
AR601	92	17'-10"	2464	1	1'-0"	17'-0"					
AR602	4	12'-8"	76	STR							
AR603	32	13'-8"	657	STR							
AR604	11	18'-3"	301	STR							
AR605	39	13'-8"	801	STR							
AR606	14	18'-5"	387	STR							
AR801	16	27'-8"	1182	STR							
AR802	16	9'-6"	406	STR							
AR803	16	21'-7"	922	STR							
AR901	53	20'-2"	3634	1	1'-7"	18'-10"					
AR902	4	16'-6"	224	1	1'-7"	15'-2"					
AR903	39	20'-7"	2729	11	1'-6 1/4"	18'-10"	2'-0"				
SUB-TOTAL			14,184								

FORWARD ABUTMENT REINFORCING											
*AF501	42	4'-0"	175	STR							
*AF502	28	5'-8"	165	1	0'-10"	5'-0"					
AF503	58	9'-8"	585	2	3'-0"	3'-11"	3'-0"				
AF504	58	7'-5"	449	2	2'-11"	1'-10"	2'-11"				
AF505	33	11'-4"	390	2	3'-10"	3'-11"	3'-10"				
AF506	33	9'-0"	310	2	2'-5"	4'-5"	2'-5"				
AF507	20	20'-6"	428	STR							
AF508	66	15'-11"	1096	STR							
AF509	66	16'-0"	1101	STR							
AF510	70	4'-7"	334	STR							
AF511	38	6'-0"	238	19	3'-0"	2'-4"	1'-11"				
AF512	39	6'-0"	244	19	3'-0"	1'-9 1/2"	2'-6"				
AF513	3	16'-4"	51	42							
AF514	3	14'-3"	45	43							
AF515	2	12'-8"	26	19	9'-5 1/2"	2'-11"	1'-4"				
AF516	2 SR	6'-2"									
	OF	TO	288	STR							0'-2"
AF517	18	9'-2"									
	32	10'-2"	339	STR							
AF518	16	14'-6"	242	STR							
AF519	1 SR	7'-7"			3'-4"		3'-4"				
	OF	TO	367	2	TO	1'-2"	TO				0'-1 1/4"
AF520	32	14'-5"			6'-9"		6'-9"				
	2	21'-5"	45	STR							
AF521	2	10'-11"	23	19	6'-8"	4'-2"	0'-11"				
AF522	42	15'-8"	686	STR							
AF523	2 SR	4'-5"									
	OF	TO	59	STR							1'-9 1/4"
AF524	4	9'-9"									
	18	11'-10"	222	STR							
AF525	2 SR	6'-11"									
	OF	TO	108	STR							4'-0"
AF526	4	18'-11"									
	46	3'-8"	176	STR							
AF527	23	6'-2"	148	19	3'-8"	1'-8"	1'-11"				
AF528	2	12'-10"	27	19	9'-9"	2'-9"	1'-5"				
AF529	2 SR	15'-7"									
	OF	TO	585	2	5'-8"	1'-2"	9'-0"				
AF529	18	15'-7"									
SUB-TOTAL			8,952								

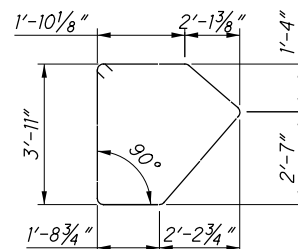
* - INDICATES DOWEL BAR, TO BE ITEM 509E2500 - UNCOATED REINFORCING STEEL



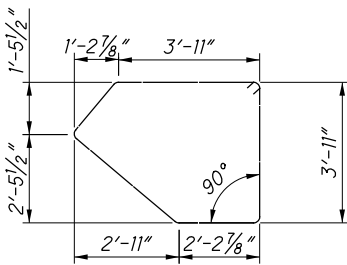
TYPE-25



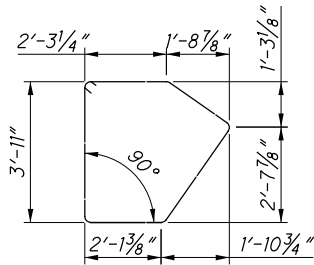
TYPE-40



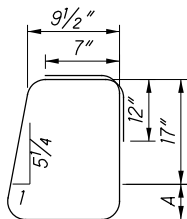
TYPE-41



TYPE-42



TYPE-43



TYPE-44

P:\Projects\2020\20H03ID-20335 POR Ravenna Road Bridge 248\105556\400-Engineering\Structures\Sheets\C145G_5285CSL003.dgn 1/24/2024 12:25:41 PM adesimone

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
FORWARD ABUTMENT (CONT.)											
	1 SR	5'-9"			2'-5"		2'-5"				
AF530	OF	TO	270	2	TO	1'-2"	TO				0'-1 3/4"
	27	13'-5"			6'-3"		6'-3"				
AF531	54	10'-10"	610	STR							
AF532	14	14'-8"	214	STR							
AF533	2	20'-6"	43	STR							
AF534	2	9'-2"	19	19	5'-9"	3'-3"	1'-0"				
AF535	2	13'-11"	29	STR							
AF536	38	13'-0"	515	STR							
	2 SR	5'-4"									
AF537	OF	TO	72	STR							2'-2"
	4	11'-10"									
AF538	14	11'-10"	173	STR							
	2 SR	4'-8"									
AF539	OF	TO	118	STR							3'-4"
	5	18'-0"									
AF540	48	3'-0"	150	STR							
AF541	24	6'-1"	152	19	3'-2"	2'-4 3/4"	1'-8"				
AF542	2	10'-3"	21	STR							
AF543	2	4'-6"	9	STR							
AF544	4	12'-2"	51	STR							
AF601	175	15'-10"	4162	1	1'-0"	15'-0"					
AF602	32	10'-2"	489	STR							
AF801	16	27'-8"	1182	STR							
AF802	16	19'-6"	833	STR							
AF803	16	8'-0"	342	STR							
AF901	61	16'-9"	3474	11	1'-6 1/4"	15'-0"	2'-0"				
SUB-TOTAL			12,928								

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
PARAPETS											
R401	44	30'-0"	882	STR							
R402	22	9'-9"	143	STR							
R403	32	10'-0"	214	STR							
R404	16	13'-0"	139	STR							
R601	184	7'-4"	1407	23	0'-11"	3'-3"	3'-0"			0'-3"	
R602	184	8'-5"	88	44	0'-5"						
AP401	48	15'-3"	489	STR							
AP402	12	6'-10"	55	25	2'-6"	2'-5"	0'-4"	1'-2"	1'-8"		
AP403	12	5'-6"	44	25	2'-6"	2'-6"	0'-1"	1'-3"	0'-3"		
AP404	24	5'-8"	91	STR							
AP601	10	8'-5"	88	44	0'-9"						
AP602	10	7'-4"	76	23	0'-11"	3'-3"	3'-0"			0'-3"	
	8 SR	4'-1"				3'-3"					
AP603	OF	TO	595	1	1'-0"	TO					0'-1"
	11	4'-11"				4'-1"					
AP604	32	4'-1"	196	1	1'-0"	3'-3"					
SUB-TOTAL			4,507								

NOTES:

1. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
2. BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK. THE MARK BEGINS WITH TWO OR THREE LETTERS OR NUMBERS THAT IDENTIFY THE BAR LOCATION. THE NEXT ONE OR TWO DIGITS INDICATE THE BAR SIZE, AND THE REMAINING TWO DIGITS ARE THE SEQUENCE NUMBER.

EXAMPLE: SA1001
SA = SUPERSTRUCTURE BAR
10 = #10 BAR
01 = BAR SEQUENCE NUMBER 1

3. BAR DIMENSIONS SHOWN ARE OUT-TO-OUT UNLESS OTHERWISE INDICATED.
4. STR. IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.
5. RAD INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
6. INCR. INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

7. STD. WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF A BAR.
8. FIELD BEND BARS AS NECESSARY TO MATCH CURVATURE OF ROADWAY.

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
SUPERSTRUCTURE											
AD501	90	4'-6"	422	2	1'-11"	0'-11"	1'-11"				
AD502	90	5'-4"	501	3	1'-5"	0'-11"					
AD601	16	23'-9"	571	STR							
AD801	60	4'-10"	774	18	2'-8"	1'-0"	1'-0"				
S601	180	23'-9"	6421	STR							
S602	93	24'-8"	3446	STR							
SUB-TOTAL			12,135								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
APPROACH SLABS													
AS501	33	33	66	25'-0"	1720	STR							
AS502	33	33	66	24'-0"	1652	STR							
AS503	30	29	59	14'-6"	893	STR							
AS504	41	41	82	7'-6"	641	STR							
AS505	8	8	16	24'-4"	406	STR							
AS506	8	8	16	22'-4"	373	STR							
AS507	1		1	5'-4"	6	STR							
AS508	1		1	2'-11"	4	STR							
AS509	1	1	2	7'-7"	16	STR							
AS510	1		1	13'-6"	14	STR							
AS511	1		1	10'-0"	10	STR							
AS512	2	2	4	14'-7"	60	STR							
	1 SR		1 SR	1'-2"									
AS514	OF		OF	TO	14	STR						1'-5 3/4"	
	4		4	5'-7"									
AS515	1		1	8'-2"	9	STR							
AS516	2	2	4	3'-11"	16	19	2'-6"	1'-3"	0'-9"				
AS517	2	2	4	14'-5"	60	STR							
	2 SR		2 SR	2'-0"									
AS518	OF		OF	TO	45	STR						2'-3 1/4"	
	4		4	8'-10"									
		1 SR	1 SR	0'-11"									
AS519		OF	OF	TO	18	STR						1'-2 3/4"	
		5	5	5'-10"									
AS520		1	1	5'-4"	6	STR							
AS521		1	1	2'-11"	3	STR							
AS522		1	1	12'-11"	13	STR							
AS523		1	1	9'-3"	10	STR							
AS524		1	1	8'-8"	9	STR							
AS525		1	1	9'-6"	10	STR							
		2 SR	2 SR	2'-0"									
AS526		OF	OF	TO	49	STR						1'-4"	
		5	5	7'-4"									
AS1001	52	51	103	15'-11"	7054	16	14'-6"						
AS1002	1		1	14'-11"	64	16	13'-6"						
AS1003	1		1	11'-5"	49	16	10'-0"						
AS1004		1	1	14'-5"	62	16	13'-0"						
AS1005		1	1	10'-8"	46	16	9'-3"						
AS1006		1	1	10'-11"	47	16	9'-6"						
SUB-TOTAL				**	** - FOR INFORMATION ONLY. INCLUDED WITH ITEM 526								

DESIGN AGENCY
PRIMEITY
845 Park Plaza
Columbus Ohio 43240

DATE
04/20/22
AMT
STRUCTURE FILE NUMBER
6740448

DRAWN
HM
REVIEWED
HM

DESIGNED
HM
CHECKED
BTJ

REINFORCING LIST (3 OF 3)
BRIDGE NO. POR-C145G-5285
RAVENNA ROAD OVER NORFOLK SOUTHERN RAILWAY

POR-145-52.85
PID No. 105556

26/26

51
61