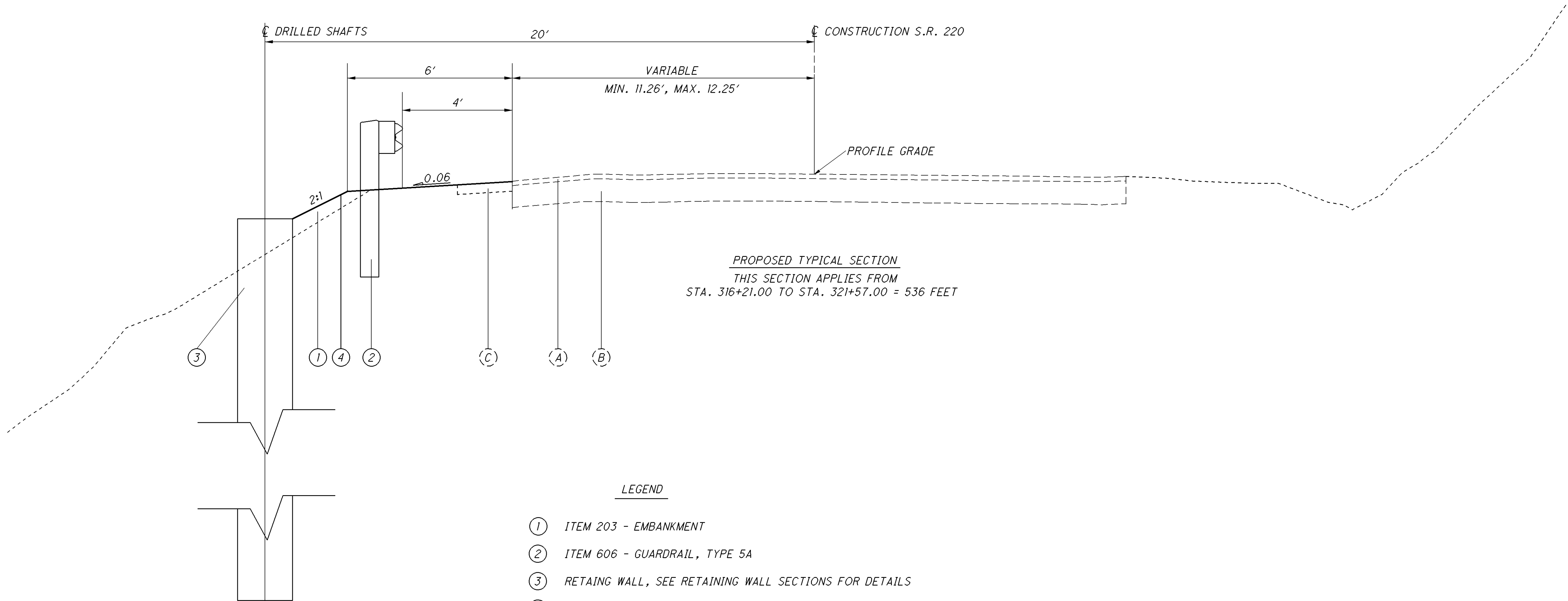


$$\frac{1}{25}$$



LEGEND

- ① ITEM 203 - EMBANKMENT
- ② ITEM 606 - GUARDRAIL, TYPE 5A
- ③ RETAINING WALL, SEE RETAINING WALL SECTIONS FOR DETAILS
- ④ ITEM 659 - SEEDING AND MULCHING
- (A) EXISTING ASPHALT CONCRETE (VARIES)
- (B) EXISTING BASE (VARIES)
- (C) EXISTING STABILIZED AGGREGATE (VARIES)

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UTILITIES

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

AMERICAN ELECTRIC POWER
MR. PAUL PAXTON (DISTRIBUTION)
850 TECH CENTER DRIVE
GAHANNA, OHIO 43230
PHONE : (614) 883-6831
E-MAIL : ptpaxton@aep.com

TIME WARNER CABLE
MR. STEPHEN RAY
3760 INTERCHANGE DRIVE
COLUMBUS, OHIO 43204
PHONE : (614) 255-6340
E-MAIL : stephen.ray@twcable.com

MS. TINA HAIRSTON (TRANSMISSION)
700 MORRISON ROAD
GAHANNA, OHIO 43230
PHONE : (614) 552-1801
E-MAIL : tlhairston@aep.com

UTILITIES

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

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.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

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 IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

DUST CONTROL

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

ITEM 616, WATER 0.2 M. GAL

ITEM 507 - STEEL PILES, MISC.: W12X45 STEEL BEAM, FURNISHED

THIS WORK SHALL CONSIST OF FURNISHING STRUCTURAL STEEL MEMBERS THAT CONFORM TO ASTM A572, GRADE 50 AND CMS 711.01. DO NOT FIELD WELD OR SPLICE THOSE PARTS OF THE STRUCTURAL STEEL MEMBERS THAT WILL BE ABOVE GROUND.

THE INDIVIDUAL LENGTHS SHOWN IN THE DRILLED SHAFT SUMMARY TABLES ON SHEETS 22 THROUGH 25 AND THE TOTAL LENGTHS SHOWN IN THE ESTIMATED QUANTITIES ARE CALCULATED FROM THE ESTIMATED TOP OF ROCK ELEVATIONS AND THE ACTUAL LENGTH OF EACH STEEL BEAM MAY VARY. THE CONTRACTOR SHOULD ANTICIPATE THAT THE STEEL BEAMS WILL NEED TO BE TRIMMED OR SPLICED TO THE ACTUAL TOP OF THE ROCK. THE CONTRACTOR MAY WANT TO ORDER ADDITIONAL LENGTH OF EACH TYPE OF STEEL BEAM FOR SPLICING.

THE DEPARTMENT WILL MEASURE STEEL BEAMS ALONG THE AXIS OF THE STEEL BEAM FROM THE TOP OF SHAFT ELEVATION TO THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR STEEL BEAMS AT THE CONTRACT UNIT PRICE PER FOOT ITEM 507, STEEL PILES, MISC.: W12X45 STEEL BEAM, FURNISHED.

SEEDING AND MULCHING

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

659, SEEDING AND MULCHING 477 SQ. YD.
QUANTITY CARRIED FROM SHEET 20.

659, REPAIR SEEDING AND MULCHING 24 SQ. YD
5% OF 477 SQ YD

659, COMMERCIAL FERTILIZER 0.06 TON
477 SY x 9 SF/SY @ 20 LBS PER 1000 SF = 85.9 LBS.
2nd APP. @ 10 PER 1000 SF = 42.9 LBS.
TOTAL = 128.8 LBS. ÷ 2000 LBS. PER TON = 0.06 TON

659, LIME 0.10 ACRES
477 SY = 0.10 ACRE

659, WATER 2.58 M. GAL.
477 x 9 SF/SY @ 300 GAL. PER 1000 SF = 1287.9 GAL.
2nd APP. @ 300 GAL PER 1000 SQ.FT. = 1287.9 GAL.
TOTAL = 2575.80 GAL. ÷ 1000 M GAL. PER M GAL. = 2.58 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 524 - DRILLED SHAFTS, 24" DIAMETER, ABOVE BEDROCK, AS PER PLAN
ITEM 524 - DRILLED SHAFTS, 24" DIAMETER, INTO BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF INSTALLING DRILLED SHAFTS FOR SLOPE STABILIZATION. THE INSTALLATION SHALL BE PER ITEM 524 EXCEPT THE DRILLED SHAFTS ARE TO BE REINFORCED WITH STRUCTURAL STEEL MEMBERS INSTEAD OF REINFORCING CAGES.

PLACE THE STRUCTURAL MEMBERS IN THE PRE-BORED SHAFTS. ORIENTATE THE STRUCTURAL MEMBER SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF ROADWAY. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. PLUMB THE STRUCTURAL MEMBERS SO THEY ARE VERTICAL AND NOT INCLINED MORE THAN 1/8 INCH PER FOOT FROM VERTICAL. EACH STRUCTURAL MEMBER SHALL BE CENTERED WITHIN THE SHAFT. SUPPORT THE STRUCTURAL MEMBER SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

PLACE ITEM 511 CLASS QC 1 CONCRETE IN EACH HOLE AS BACKFILL MATERIAL.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE STRUCTURAL MEMBER IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET ABOVE TOLERANCES.

THE DEPARTMENT WILL MEASURE DRILLED SHAFTS ALONG THE AXIS OF THE DRILLED SHAFT ELEVATION TO THE DEPTH SPECIFIED IN THE PLANS.

PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE FOOT CONTRACT PRICE FOR ITEM 524, DRILLED SHAFTS, 24" DIAMETER ABOVE BEDROCK, AS PER PLAN, AND ITEM 524, DRILLED SHAFTS, 24" DIAMETER INTO BEDROCK, AS PER PLAN.

ITEM 524 - DRILLED SHAFTS, MISC.: PLUG PILE, 24" DIAMETER, UNREINFORCED

THESE SHAFTS ARE TO BE UNREINFORCED NON-STRUCTURAL"PLUG PILES" SERVING THE PURPOSE OF LAGGING.

THIS WORK SHALL BE AS PER ITEM 524 EXCEPT A REINFORCING CAGE WILL NOT BE USED IN THE SHAFT. EACH PLUG PILE SHALL BE OFFSET 20 FEET FROM ROADWAY CENTER-LINE AND CENTERED BETWEEN EACH REINFORCED 24" DIAMETER DRILLED SHAFT. EACH PLUG PILE SHALL BE DRILLED TO A DEPTH OF 14 FEET BELOW GRADE AS SHOWN ON SHEET 21, AND BACKFILLED WITH UNREINFORCED CLASS QC 1 CONCRETE.

PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE FOOT CONTRACT PRICE FOR ITEM 524, DRILLED SHAFTS, MISC.: PLUG PILE, 24" DIAMETER, UNREINFORCED.

ITEM 524 - DRILLED SHAFTS, AS PER PLAN

SEQUENCE OF INSTALLATION:

THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN AN ALTERNATING SEQUENCE OR ANY SEQUENCE THAT MEETS THIS CRITERION IS PERMISSIBLE.

PROTECTION OF UNATTENDED OPEN SHAFTS:

CARE SHALL BE EXERCISED AS TO COVER UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PROTECT A PERSON OR ANIMAL FROM FALLING IN.

LOADING OF PILES:

THE PILES SHALL NOT BE LOADED NOR ANY EXCAVATION PERFORMED IN FRONT OF THE WALL FOR 14 DAYS AFTER THE PLACING OF CONCRETE.

ACCESS:

ANY TEMPORARY GRADING, AGGREGATE, DRAINAGE, ETC., NEEDED FOR ACCESS TO THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR DRILLED SHAFTS.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITION- ING ON ODOT PROJECTS. SEE SHEET 6 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: GPS
MONUMENT TYPE: CAPPED IRON PIN SET

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID09

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (CORS96) EPOCH 2002
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE 3402
COMBINED SCALE FACTOR: 1.0000845470
ORIGIN OF COORDINATE SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

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

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ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT.

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

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

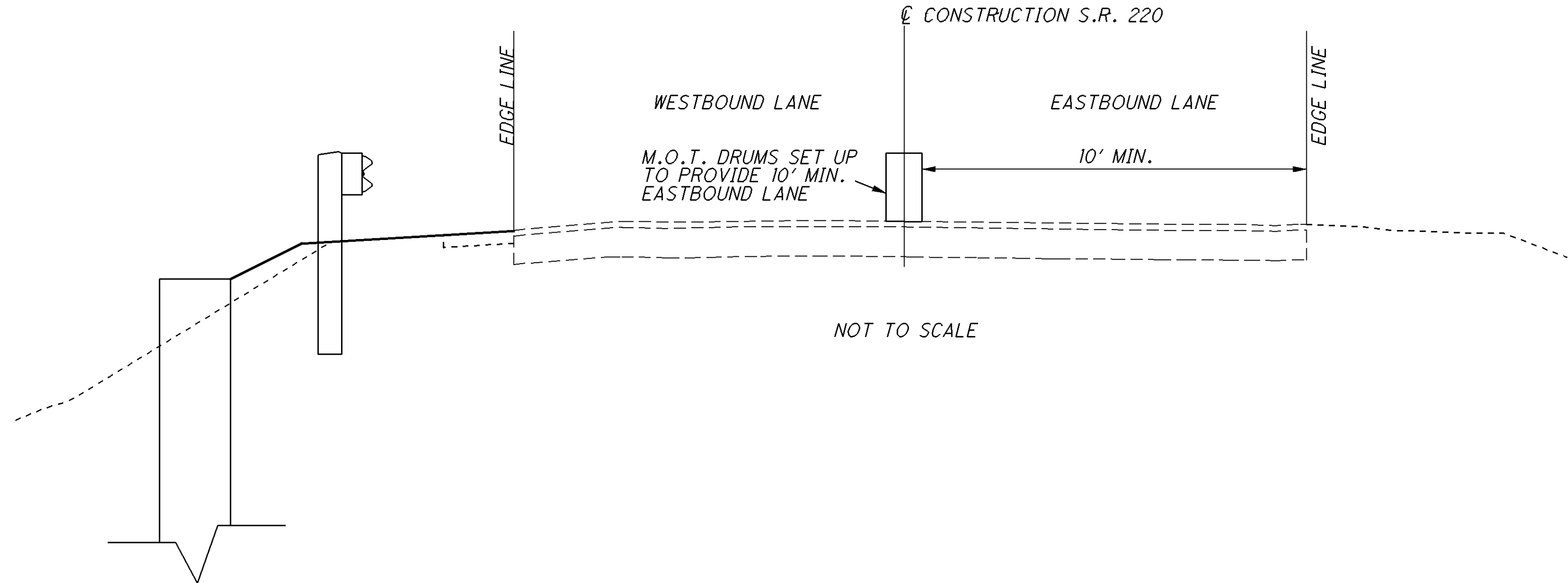
THE CONTRACTOR WILL ADVISE THE DISTRICT PUBLIC INFORMATION OFFICER AT (740)774-8834, OR FAX (740)7732710 SEVEN (7) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PROJECT ENGINEER WILL PROVIDE ASSISTANCE/CLARIFICATION FOR ANY QUESTIONS.

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

SUGGESTED MAINTENANCE OF TRAFFIC FOR PROJECT CONSTRUCTION

PRIOR TO SET UP OF CONSTRUCTION AREA, INSTALL TRAFFIC SIGNALS AS PER STANDARD DRAWING MT-96.11, MT96.20, MT-96.26 AND SS 961.

SET UP TRAFFIC CONTROL TO CLOSE THE WESTBOUND LANE AND TO MAINTAIN TRAFFIC IN A 10 FOOT MINIMUM LANE USING THE EASTBOUND LANE, USING DRUMS IN ACCORDANCE WITH THE REQUIREMENTS OF STANDARD CONSTRUCTION DRAWING MT-96.11.



WORK ZONE MARKINGS

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

ITEM 614, WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE 1 .06 MI.
ITEM 614, WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1 .16 MI.
ITEM 614, WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE 1 20 FT.

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

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

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

PHASE *		
	1	2
DIRECTION	E.B. S.R. 220	W.B. S.R. 220
INITIAL	15	15
VEHICLE	4	4
MAXIMUM	30	30
YELLOW	5	5
ALL RED	33	33
RECALL	OFF	OFF

* SIGNAL TO REST IN RED

*PHASES AS SHOWN ON SCD MT-96.20 FOR ACTUATED CONTROL.

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

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 PER- MITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTCD INTENDS THAT FLAGGERS BE USED.

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

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

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

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

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

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 16 HOURS

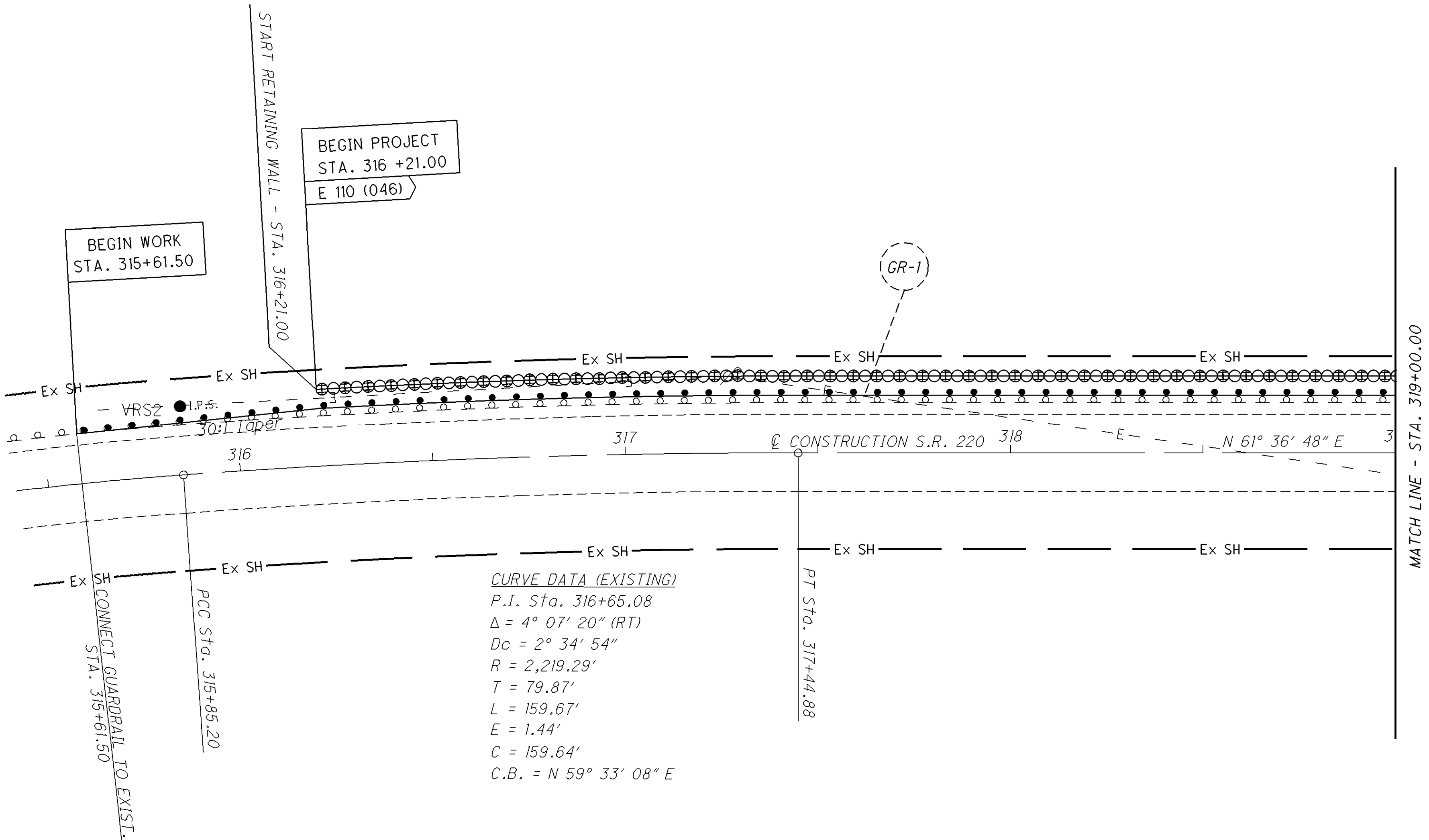
THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

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

[illegible]

BENCHMARK	ELEVATION	DESCRIPTION
VRS2	687.556	1/2" IP&C SET BEHIND GUARDRAIL ON NORTH SIDE OF S.R. 220
VRS3	744.436	1/2" IP&C SET ON KNOLL NEAR DECK SOUTH OF S.R. 220

POINT	STATION	OFFSET	TYPE	NORTHING	EASTING
SV1	309+59.58	15.25' RT.	IRON PIN	411017.1340	1819448.2680
SV2	315+85.47	17.82' LT.	IRON PIN	411450.7587	1819902.6748
SV3	323+97.67	41.07' RT.	IRON PIN	411842.3224	1820608.6400
SV4	326+33.93	16.34' RT.	SPIKE	411962.9529	1820814.2389



QUANTITIES FOR GR-1

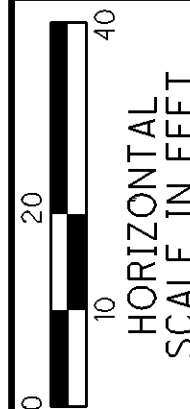
202 - GUARDRAIL REMOVED

SHEET 6 - STA. 315+61.50 TO 319+00 = 338.50 FEET
SHEET 7 - STA. 319+00 TO STA. 322+24 = 324.00 FEET
TOTAL = 662.50 FEET

606 - GUARDRAIL, TYPE 5A

SHEET 6 - STA. 315+61.50 TO 319+00 = 338.50 FEET
SHEET 7 - STA. 319+00 TO STA. 322+24 = 324.00 FEET
TOTAL = 662.50 FEET

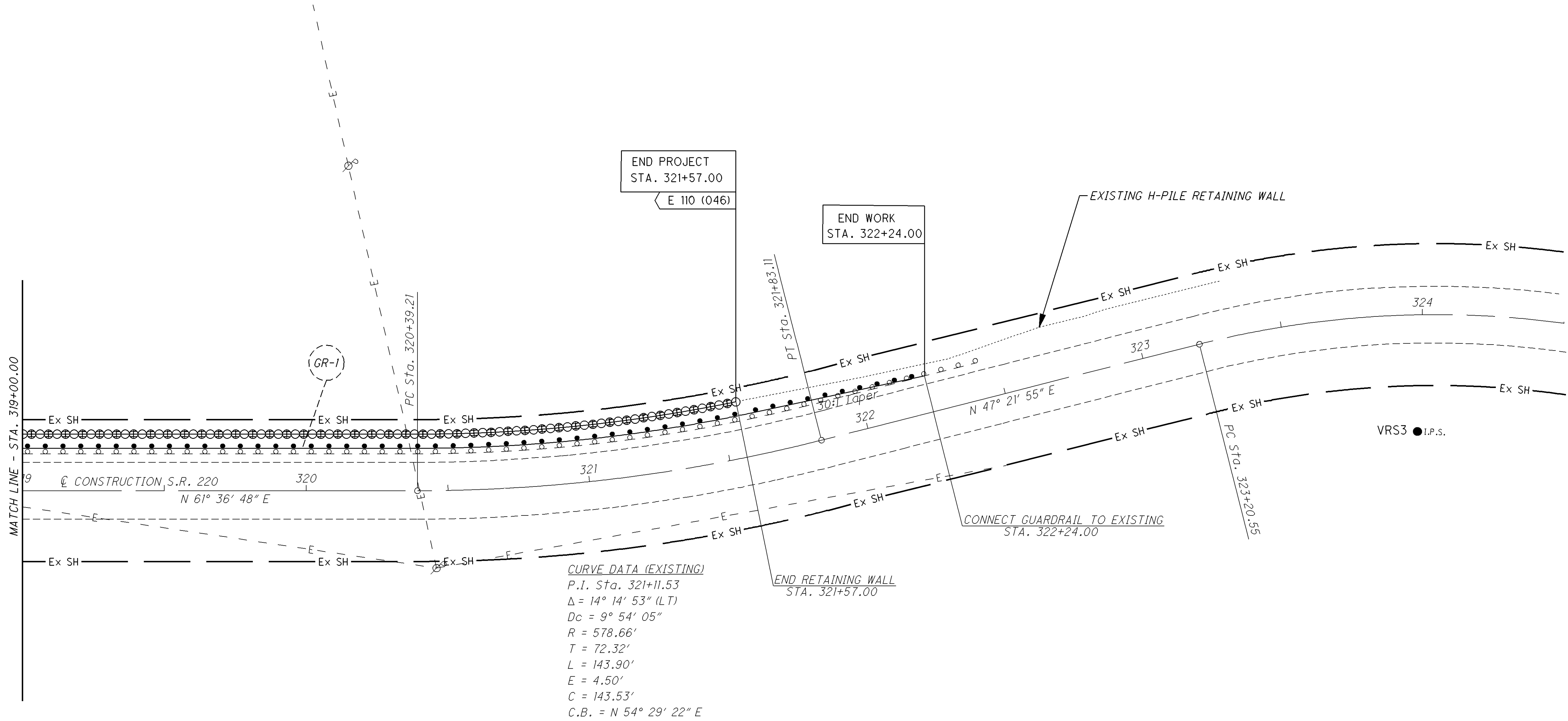
TOTALS CARRIED TO GENERAL SUMMARY, SHEET 5



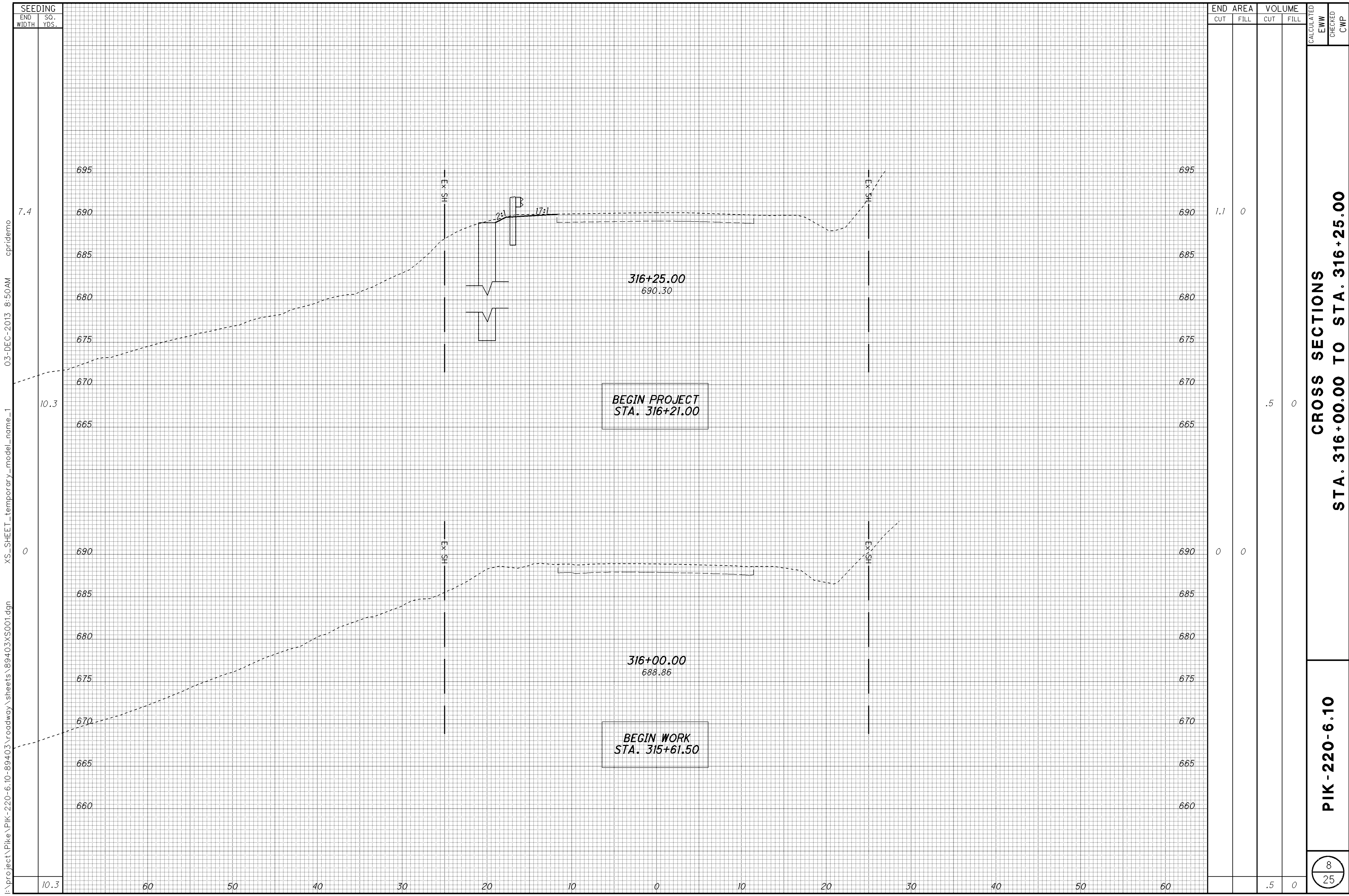
CALCULATED
EWW
CHECKED
GWP

PLAN SHEET
STA. 315+50.00 TO STA. 319+00.00

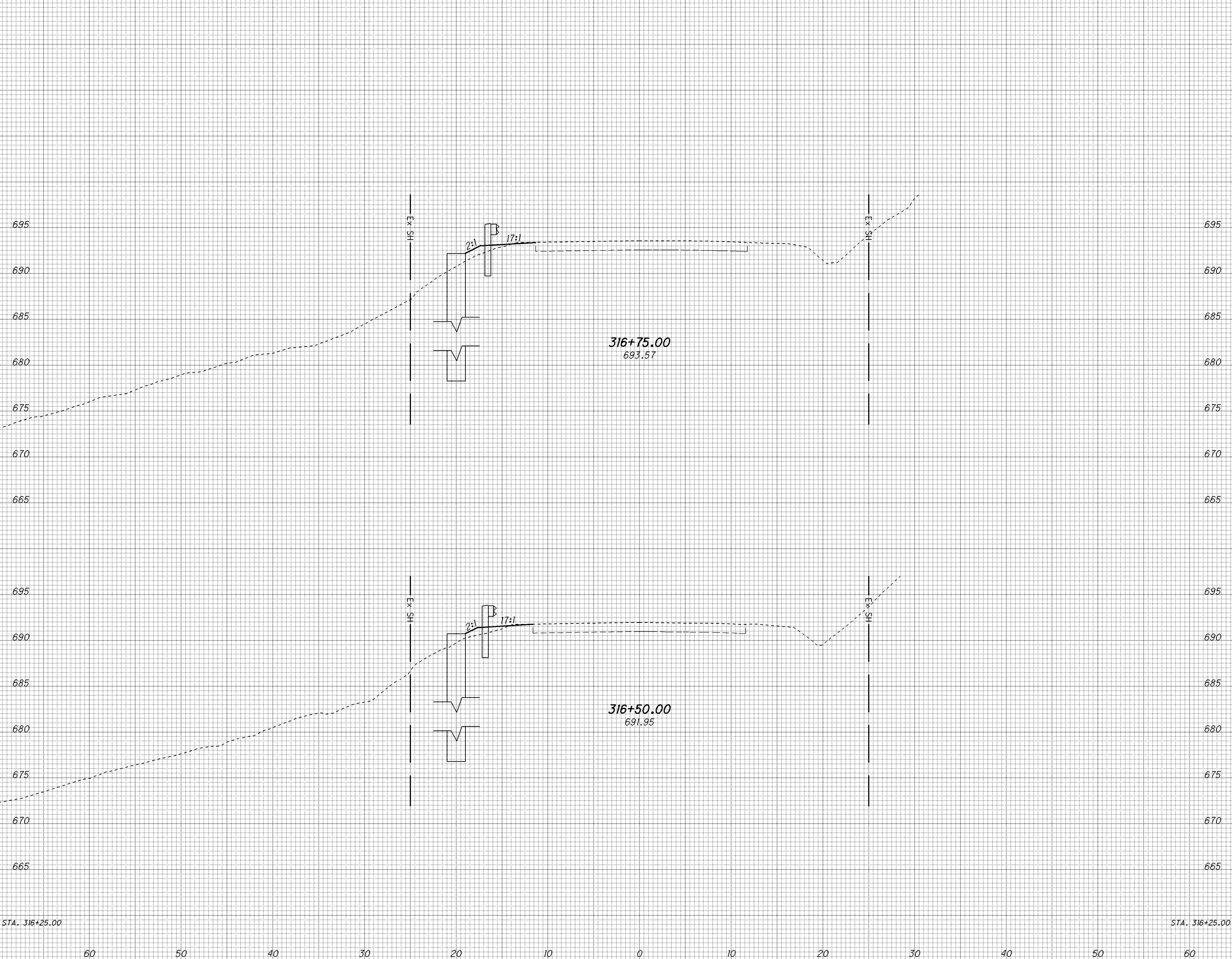
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FOR GR-1 QUANTITIES SEE SHEET 6.



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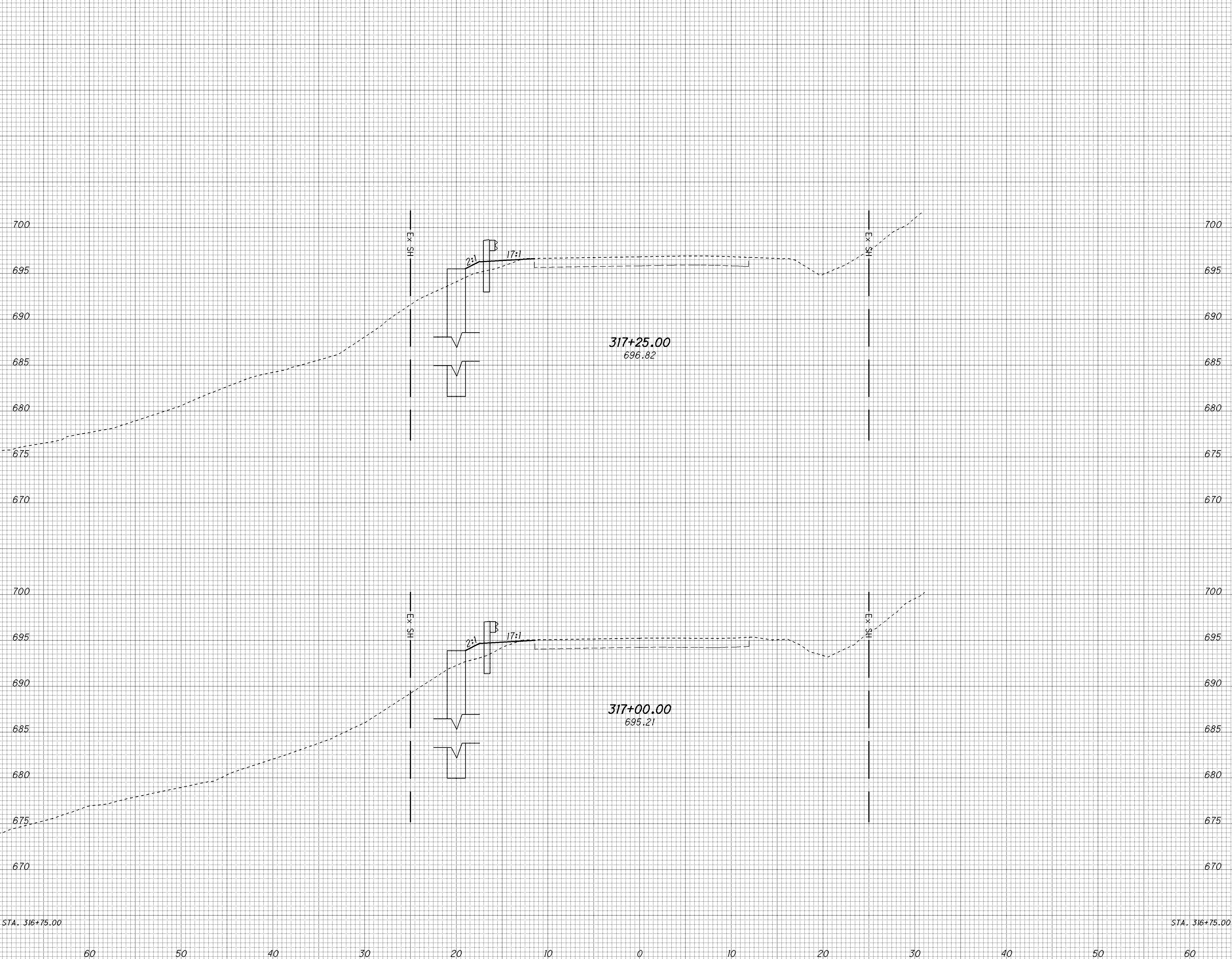
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CUT	FILL	CUT	FILL		
1.1	0	.7	3.8		
.1	2.7	.6	1.2		
.1	3	.1	2.6		

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9/25

CROSS SECTIONS

STA. 316+50.00 TO STA. 316+75.00



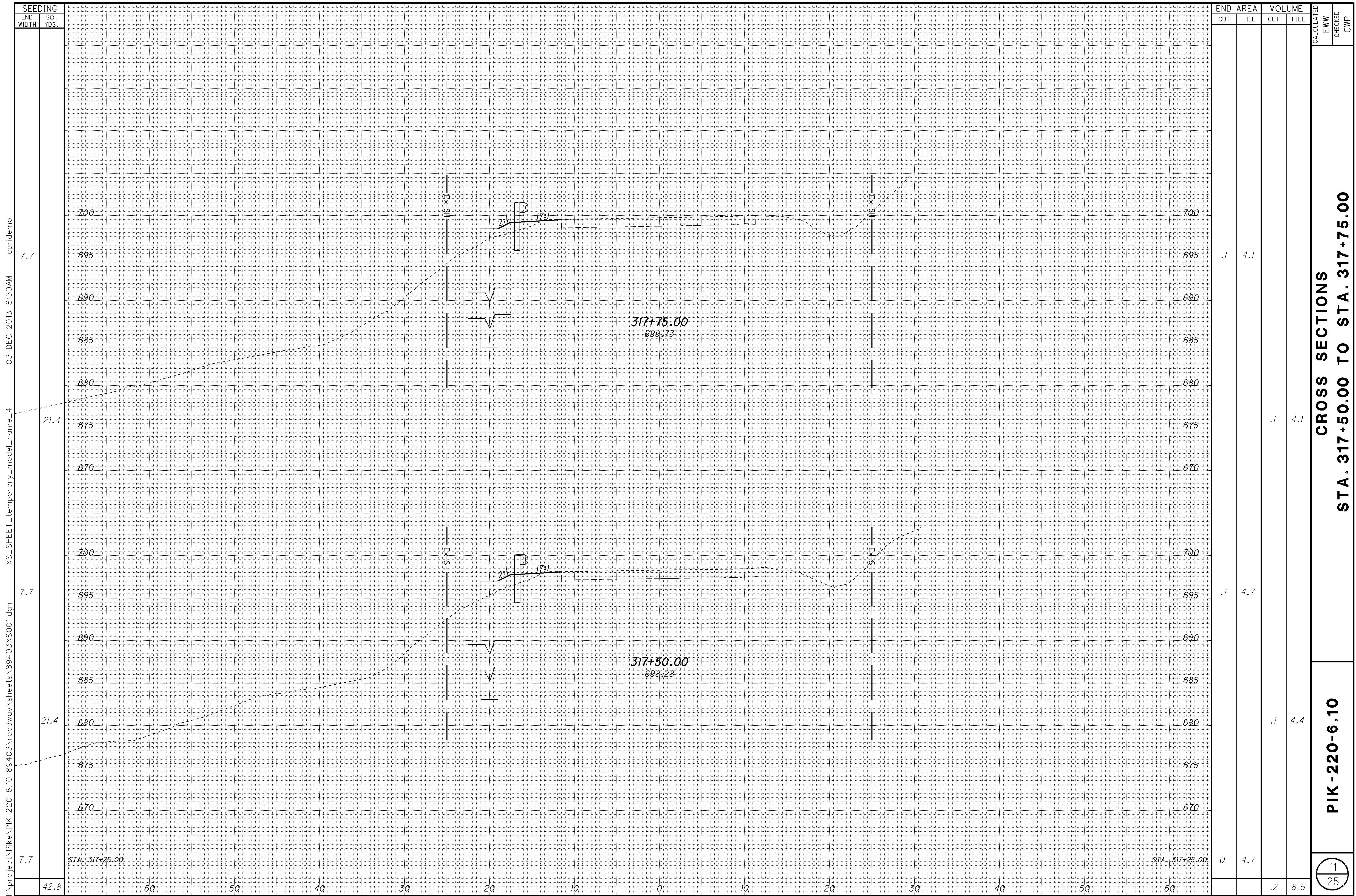
END AREA		VOLUME		CALCULATED EWW	CHECKED CWP
CUT	FILL	CUT	FILL		
0	4.7				
.1	5.7	.1	4		
.1	3	.2	8.8		

CROSS SECTIONS

STA. 317+00.00 TO STA. 317+25.00

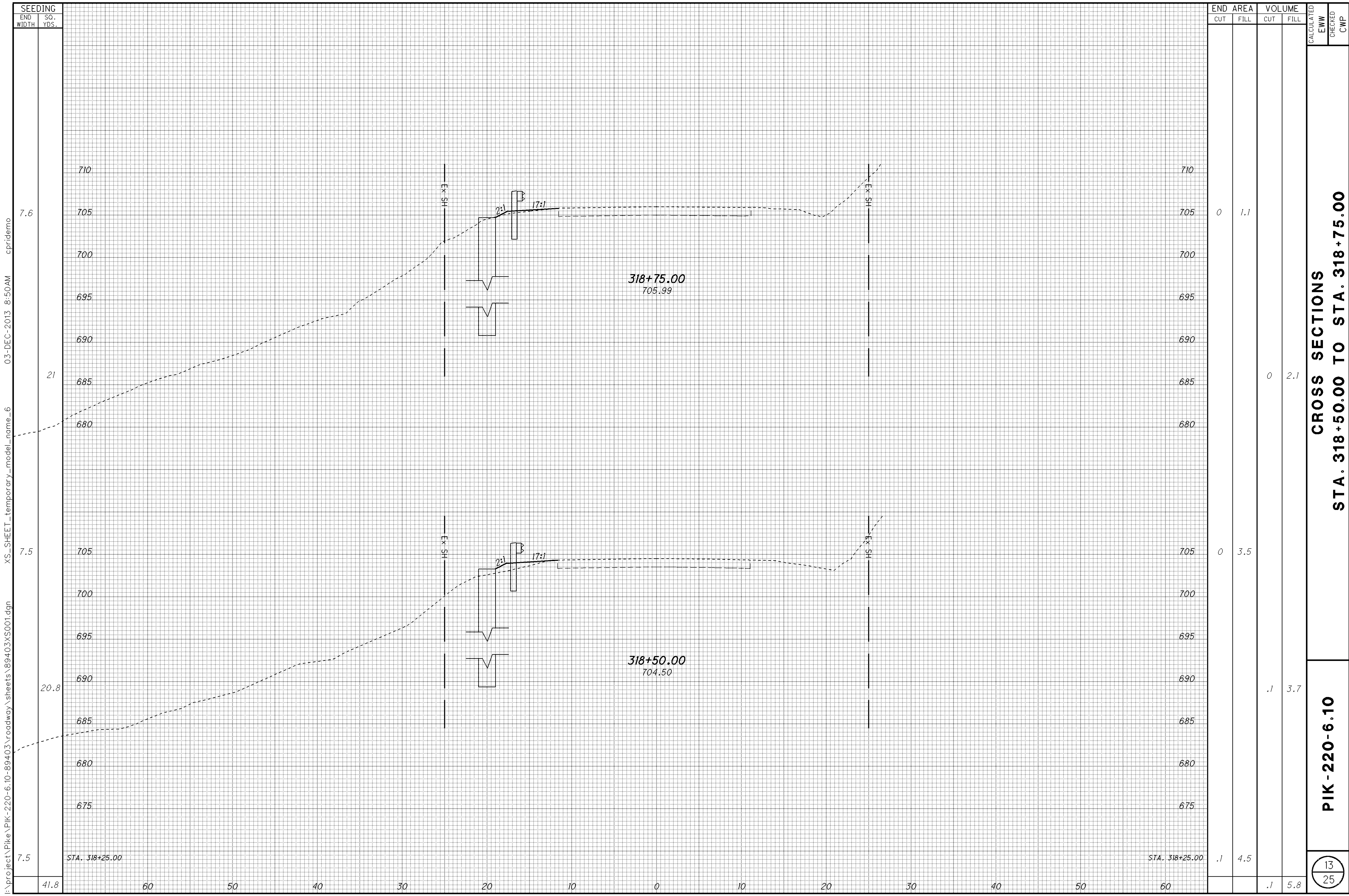
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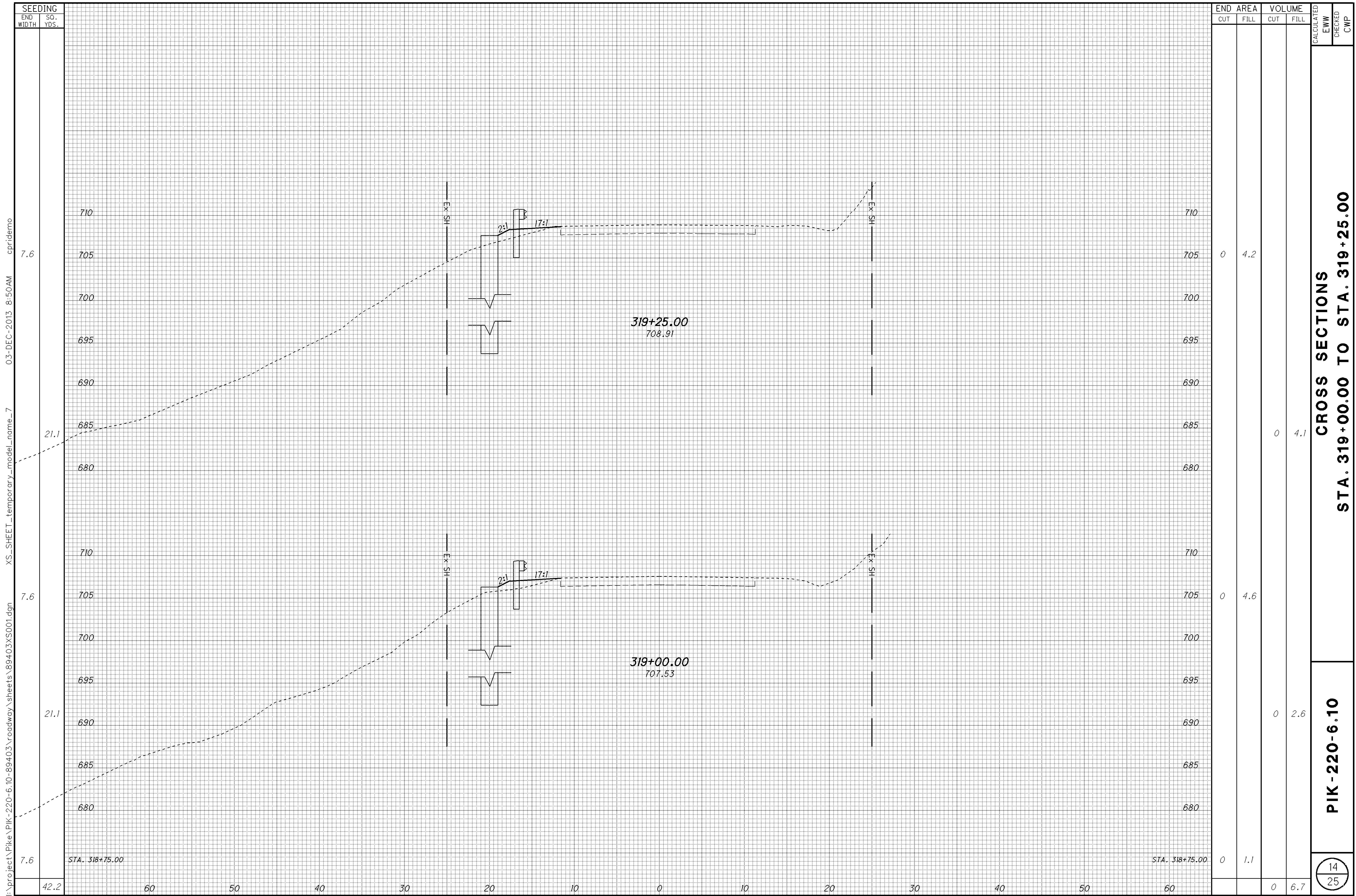
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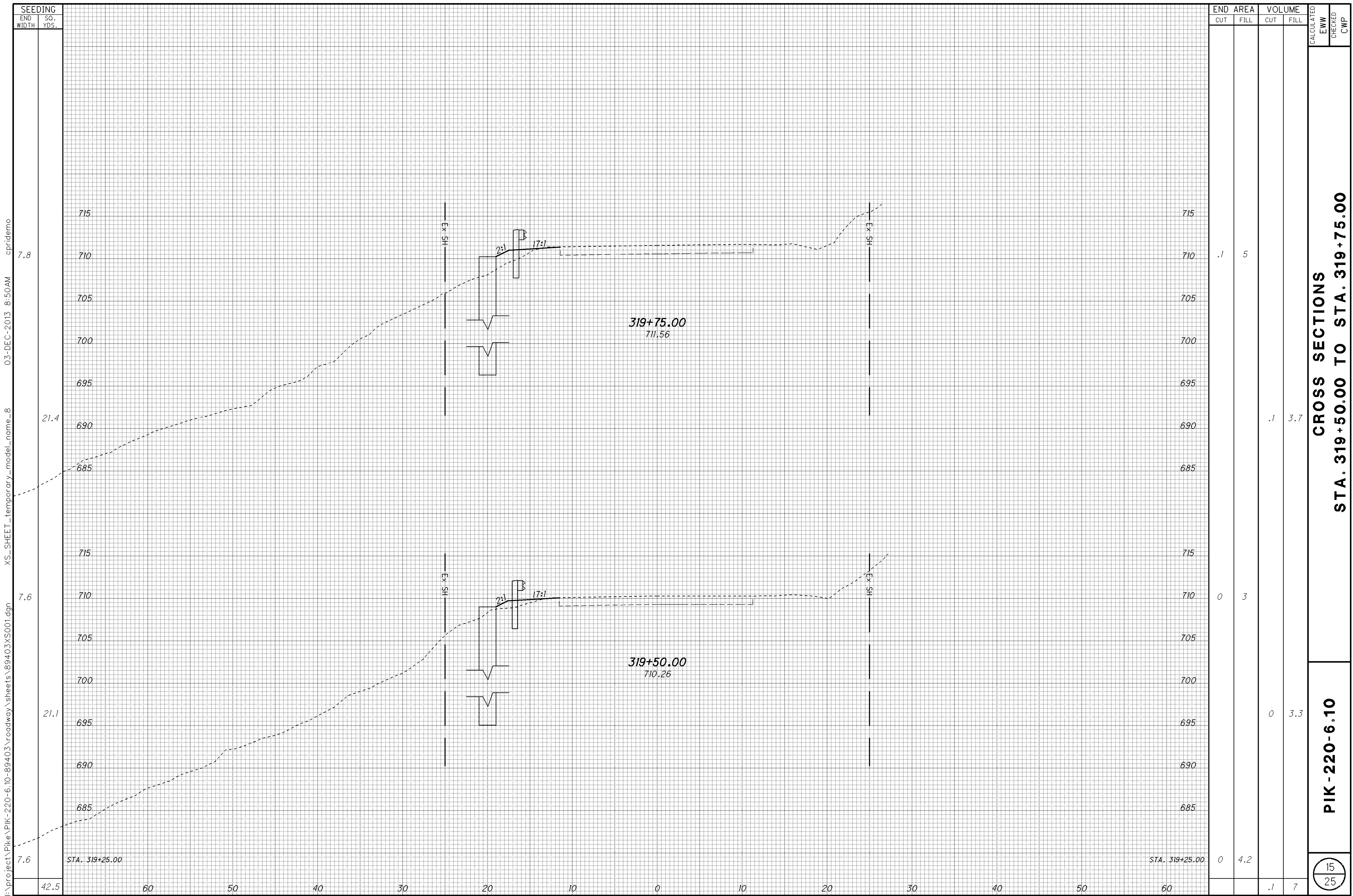


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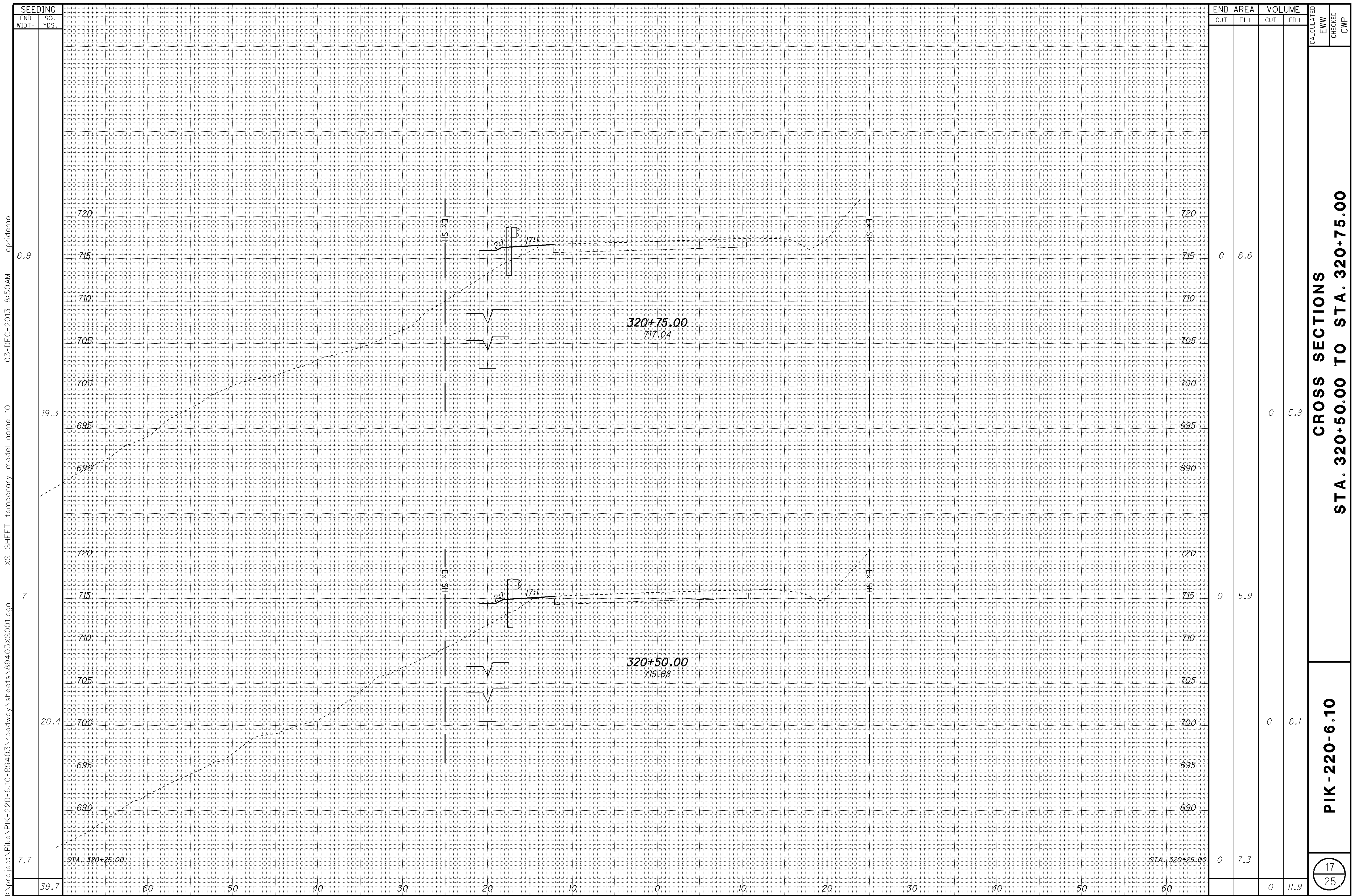
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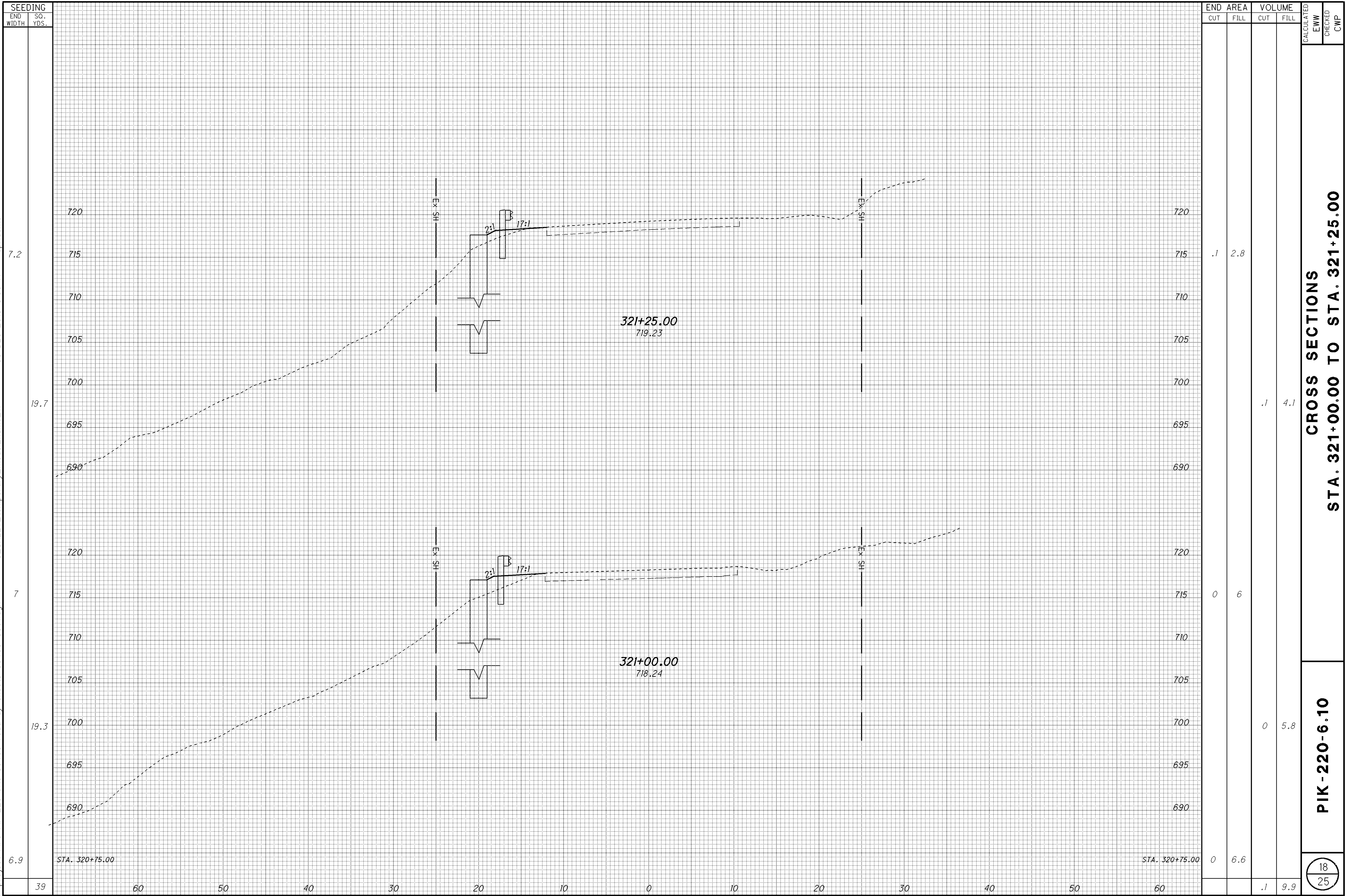


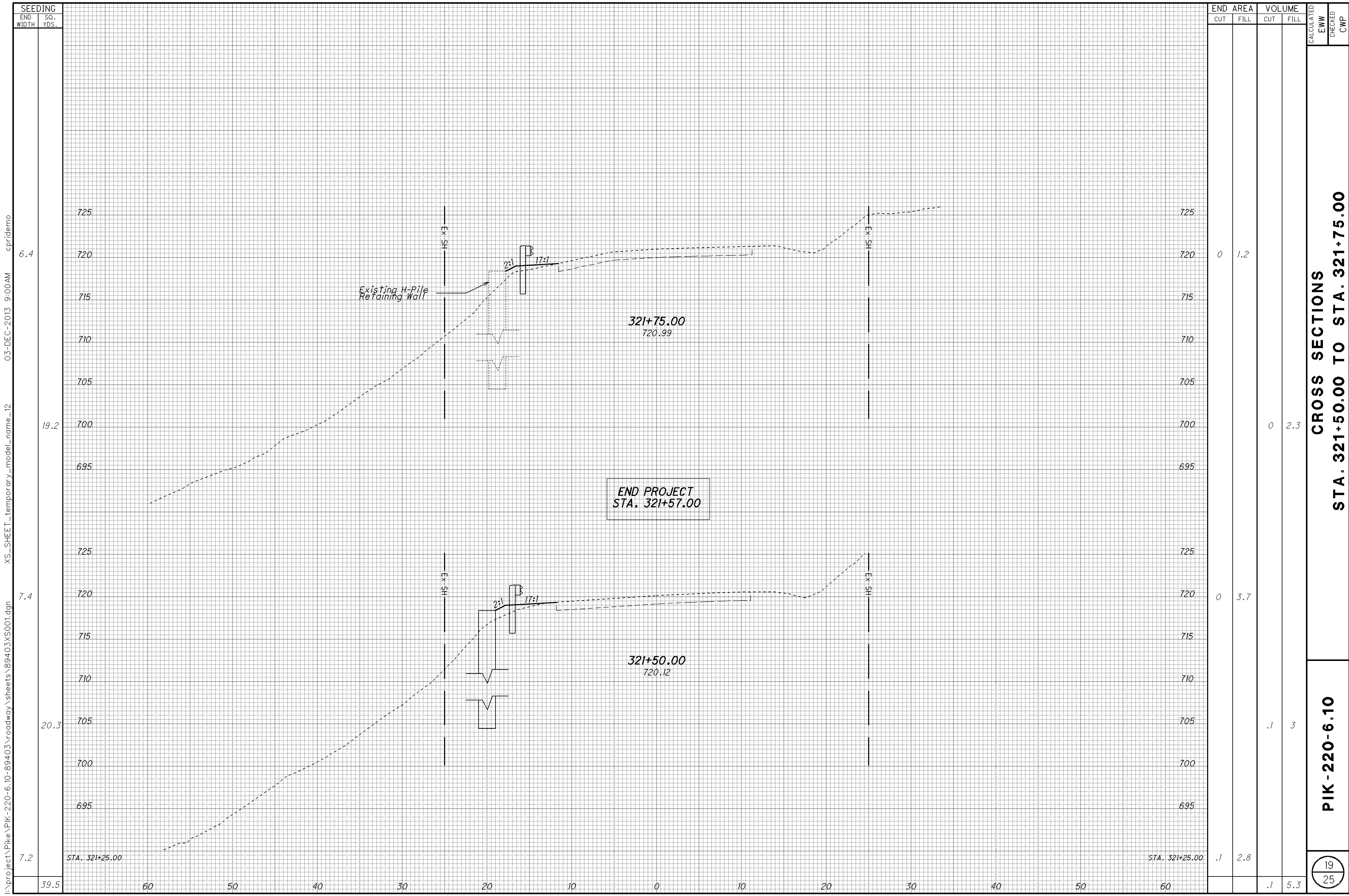




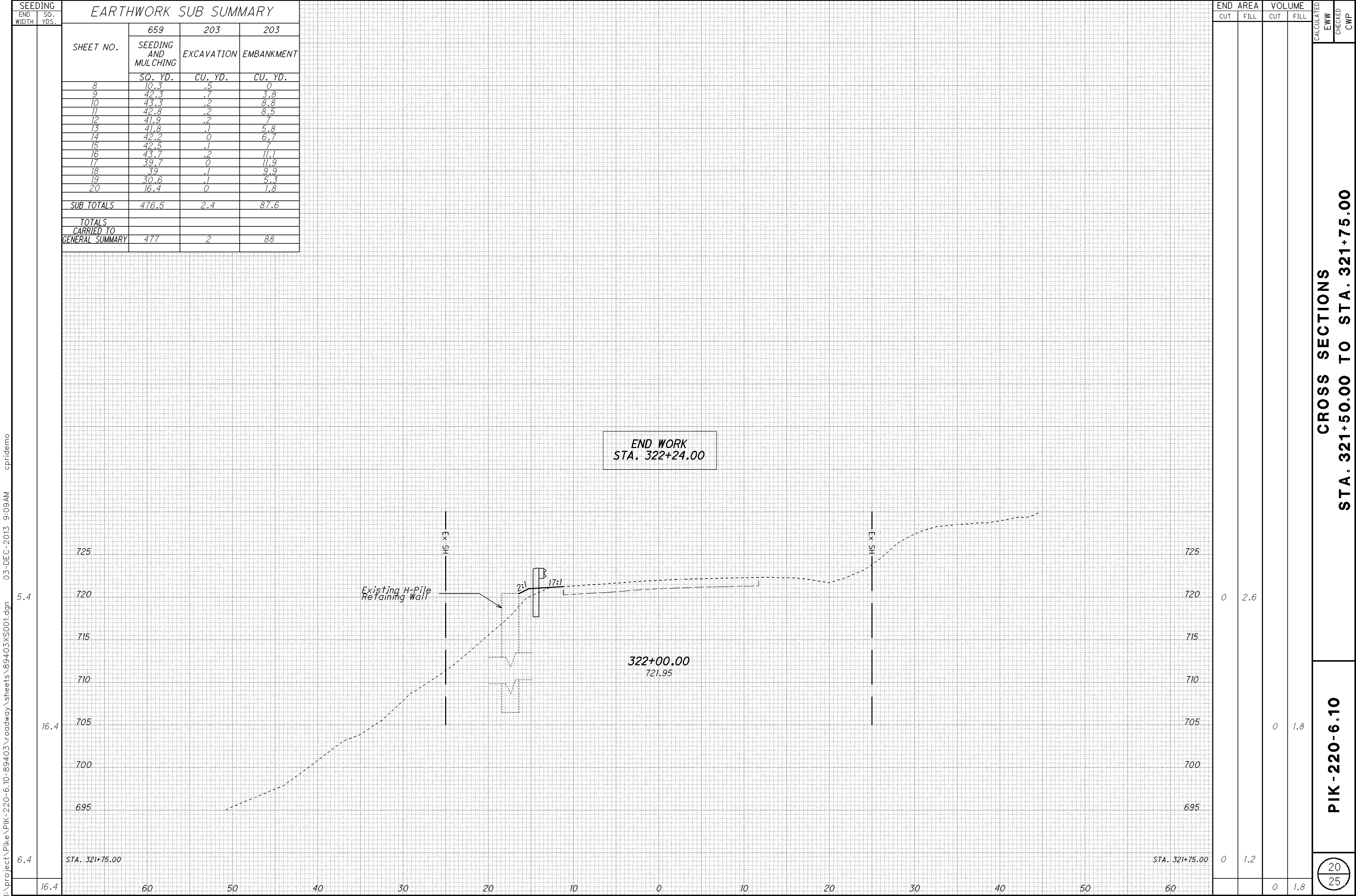


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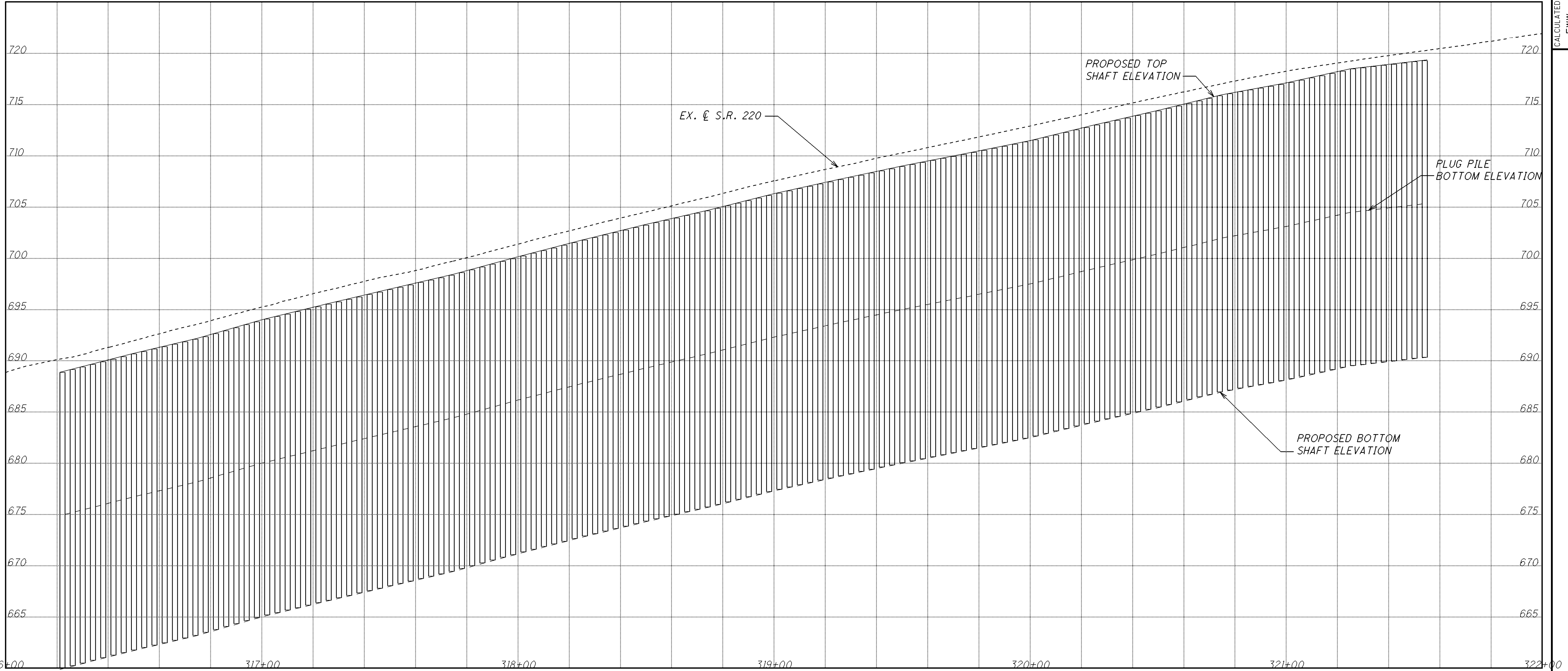


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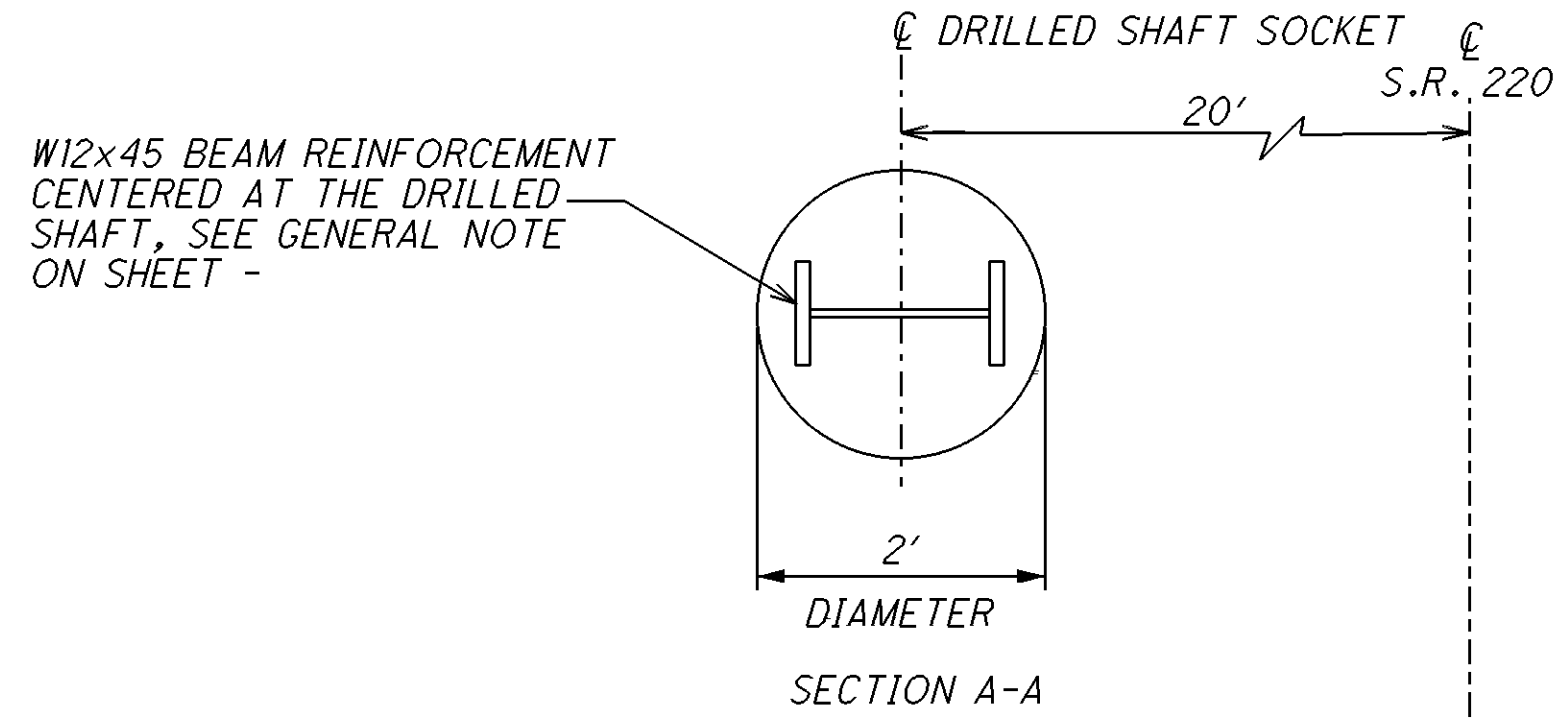
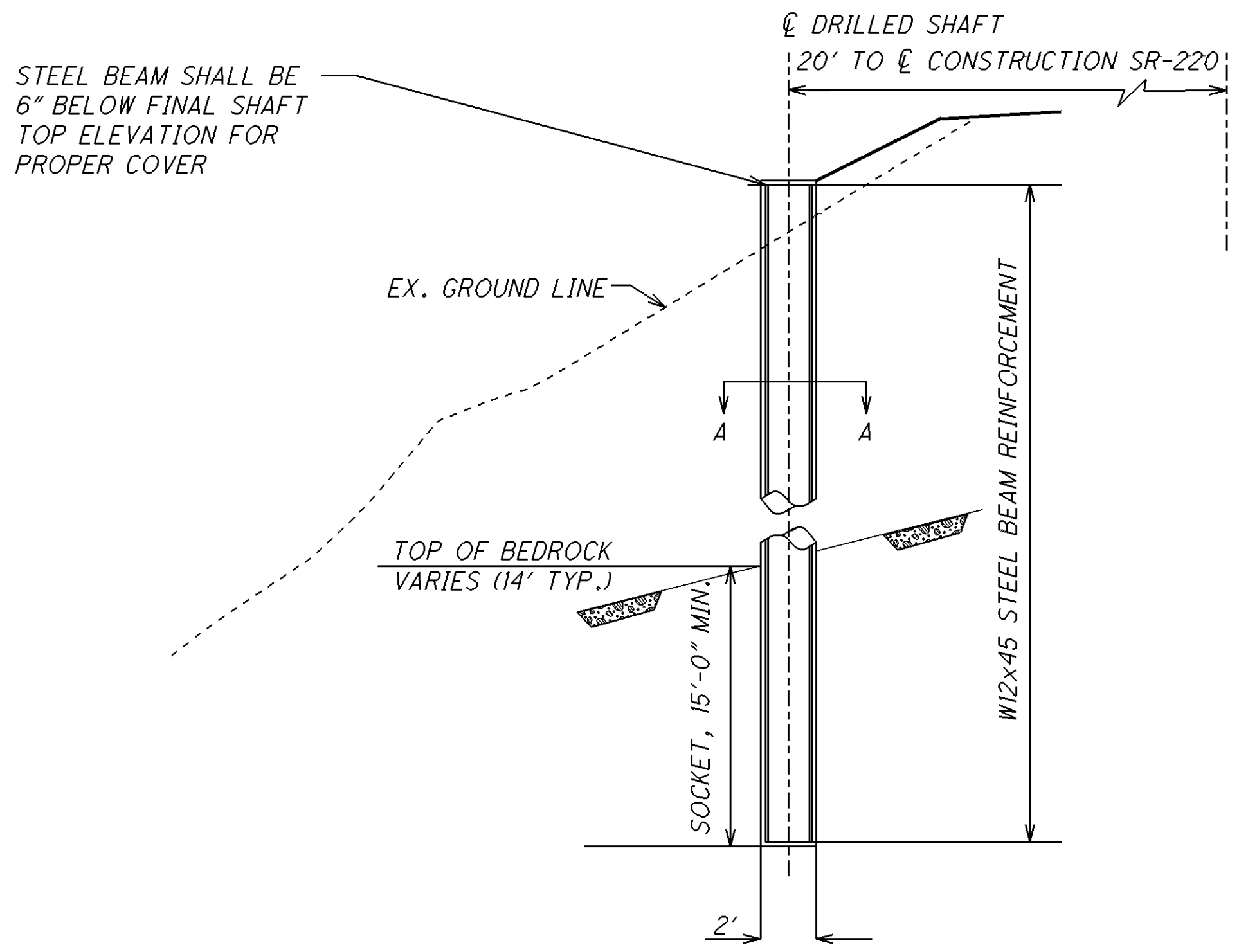


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- NOTES:
- DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2010, AND THE ODOT BRIDGE MANUAL.
 - DESIGN DATA:
CONCRETE CLASS QC 1 - COMPRESSIVE STRENGTH 4,000 PSI (DRILLED SHAFT)
STRUCTURAL STEEL, - A572 GRADE 50 - YIELD STRENGTH 50,000 PSI
 - DURING THE INSTALLATION OF THE W-BEAM REINFORCING, CARE SHOULD BE TAKEN TO ALIGN THE CENTERLINE OF THE W-BEAM PERPENDICULAR TO THE CENTERLINE OF CONSTRUCTION WITH THE ORIENTATION AS SHOWN IN SECTION A-A.



SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.	FT.	TYPE	FT.
1	316+20.81	20	689.9	660.9	29.0	15	14.0		W12X45	28.5
2	316+22.79	20	690.1	676.1	14.0	0		14.0		0
3	316+24.78	20	690.2	661.2	29.0	15	14.0		W12X45	28.5
4	316+26.76	20	690.3	676.3	14.0	0		14.0		0
5	316+28.74	20	690.4	661.4	29.0	15	14.0		W12X45	28.5
6	316+30.72	20	690.6	676.6	14.0	0		14.0		0
7	316+32.71	20	690.7	661.7	29.0	15	14.0		W12X45	28.5
8	316+34.69	20	690.8	676.8	14.0	0		14.0		0
9	316+36.67	20	690.9	661.9	29.0	15	14.0		W12X45	28.5
10	316+38.65	20	691.0	677.0	14.0	0		14.0		0
11	316+40.63	20	691.2	662.2	29.0	15	14.0		W12X45	28.5
12	316+42.62	20	691.3	677.3	14.0	0		14.0		0
13	316+44.60	20	691.4	662.4	29.0	15	14.0		W12X45	28.5
14	316+46.58	20	691.5	677.5	14.0	0		14.0		0
15	316+48.56	20	691.6	662.6	29.0	15	14.0		W12X45	28.5
16	316+50.54	20	691.7	677.7	14.0	0		14.0		0
17	316+52.53	20	691.9	662.9	29.0	15	14.0		W12X45	28.5
18	316+54.51	20	692.0	678.0	14.0	0		14.0		0
19	316+56.49	20	692.1	663.1	29.0	15	14.0		W12X45	28.5
20	316+58.47	20	692.2	678.2	14.0	0		14.0		0
21	316+60.46	20	692.3	663.3	29.0	15	14.0		W12X45	28.5
22	316+62.44	20	692.5	678.5	14.0	0		14.0		0
23	316+64.42	20	692.6	663.6	29.0	15	14.0		W12X45	28.5
24	316+66.40	20	692.8	678.8	14.0	0		14.0		0
25	316+68.38	20	692.9	663.9	29.0	15	14.0		W12X45	28.5
26	316+70.37	20	693.0	679.0	14.0	0		14.0		0
27	316+72.35	20	693.2	664.2	29.0	15	14.0		W12X45	28.5
28	316+74.33	20	693.3	679.3	14.0	0		14.0		0
29	316+76.31	20	693.4	664.4	29.0	15	14.0		W12X45	28.5
30	316+78.29	20	693.6	679.6	14.0	0		14.0		0
31	316+80.28	20	693.7	664.7	29.0	15	14.0		W12X45	28.5
32	316+82.26	20	693.8	679.8	14.0	0		14.0		0
33	316+84.24	20	694.0	665.0	29.0	15	14.0		W12X45	28.5
34	316+86.22	20	694.1	680.1	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.	FT.	TYPE	FT.
35	316+88.21	20	694.2	665.2	29.0	15	14.0		W12x45	28.5
36	316+90.19	20	694.3	680.3	14.0	0		14.0		0
37	316+92.17	20	694.5	665.5	29.0	15	14.0		W12X45	28.5
38	316+94.15	20	694.6	680.6	14.0	0		14.0		0
39	316+96.13	20	694.7	665.7	29.0	15	14.0		W12X45	28.5
40	316+98.12	20	694.9	680.9	14.0	0		14.0		0
41	317+00.10	20	695.0	666.0	29.0	15	14.0		W12X45	28.5
42	317+02.08	20	695.1	681.1	14.0	0		14.0		0
43	317+04.06	20	695.3	666.3	29.0	15	14.0		W12X45	28.5
44	317+06.04	20	695.4	681.4	14.0	0		14.0		0
45	317+08.03	20	695.5	666.5	29.0	15	14.0		W12X45	28.5
46	317+10.01	20	695.6	681.6	14.0	0		14.0		0
47	317+11.99	20	695.7	666.7	29.0	15	14.0		W12X45	28.5
48	317+13.97	20	695.9	681.9	14.0	0		14.0		0
49	317+15.96	20	696.0	667.0	29.0	15	14.0		W12X45	28.5
50	317+17.94	20	696.1	682.1	14.0	0		14.0		0
51	317+19.92	20	696.2	667.2	29.0	15	14.0		W12X45	28.5
52	317+21.90	20	696.3	682.3	14.0	0		14.0		0
53	317+23.88	20	696.4	667.4	29.0	15	14.0		W12X45	28.5
54	317+25.87	20	696.6	682.6	14.0	0		14.0		0
55	317+27.85	20	696.7	667.7	29.0	15	14.0		W12X45	28.5
56	317+29.83	20	696.8	682.8	14.0	0		14.0		0
57	317+31.81	20	696.9	667.9	29.0	15	14.0		W12X45	28.5
58	317+33.79	20	697.0	683.0	14.0	0		14.0		0
59	317+35.78	20	697.1	668.1	29.0	15	14.0		W12X45	28.5
60	317+37.76	20	697.3	683.3	14.0	0		14.0		0
61	317+39.74	20	697.4	668.4	29.0	15	14.0		W12X45	28.5
62	317+41.72	20	697.5	683.5	14.0	0		14.0		0
63	317+43.71	20	697.6	668.6	29.0	15	14.0		W12X45	28.5
64	317+45.69	20	697.7	683.7	14.0	0		14.0		0
65	317+47.69	20	697.8	668.8	29.0	15	14.0		W12X45	28.5
66	317+49.69	20	698.0	684.0	14.0	0		14.0		0
67	317+51.69	20	698.1	669.1	29.0	15	14.0		W12X45	28.5
68	317+53.69	20	698.2	684.2	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
SHEET TOTAL - CARRIED TO SHEET 25						510.0	476.0	476.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.		FT.	TYPE	FT.
69	317+55.69	20	698.3	669.3	29.0	15	14.0		W12X45	28.5
70	317+57.69	20	698.4	684.4	14.0	0		14.0		0
71	317+59.69	20	698.6	669.6	29.0	15	14.0		W12X45	28.5
72	317+61.69	20	698.7	684.7	14.0	0		14.0		0
73	317+63.69	20	698.8	669.8	29.0	15	14.0		W12X45	28.5
74	317+65.69	20	699.0	685.0	14.0	0		14.0		0
75	317+67.69	20	699.1	670.1	29.0	15	14.0		W12X45	28.5
76	317+69.69	20	699.2	685.2	14.0	0		14.0		0
77	317+71.69	20	699.4	670.4	29.0	15	14.0		W12X45	28.5
78	317+73.69	20	699.5	685.5	14.0	0		14.0		0
79	317+75.69	20	699.6	670.6	29.0	15	14.0		W12X45	28.5
80	317+77.69	20	699.8	685.8	14.0	0		14.0		0
81	317+79.69	20	699.9	670.9	29.0	15	14.0		W12X45	28.5
82	317+81.69	20	700.1	686.1	14.0	0		14.0		0
83	317+83.69	20	700.2	671.2	29.0	15	14.0		W12X45	28.5
84	317+85.69	20	700.3	686.3	14.0	0		14.0		0
85	317+87.69	20	700.4	671.4	29.0	15	14.0		W12X45	28.5
86	317+89.69	20	700.6	686.6	14.0	0		14.0		0
87	317+91.69	20	700.7	671.7	29.0	15	14.0		W12X45	28.5
88	317+93.69	20	700.8	686.8	14.0	0		14.0		0
89	317+95.69	20	701.0	672.0	29.0	15	14.0		W12X45	28.5
90	317+97.69	20	701.1	687.1	14.0	0		14.0		0
91	317+99.69	20	701.2	672.2	29.0	15	14.0		W12X45	28.5
92	318+01.69	20	701.4	687.4	14.0	0		14.0		0
93	318+03.69	20	701.5	672.5	29.0	15	14.0		W12X45	28.5
94	318+05.69	20	701.6	687.6	14.0	0		14.0		0
95	318+07.69	20	701.8	672.8	29.0	15	14.0		W12X45	28.5
96	318+09.69	20	701.9	687.9	14.0	0		14.0		0
97	318+11.69	20	702.0	673.0	29.0	15	14.0		W12X45	28.5
98	318+13.69	20	702.1	688.1	14.0	0		14.0		0
99	318+15.69	20	702.2	673.2	29.0	15	14.0		W12X45	28.5
100	318+17.69	20	702.4	688.4	14.0	0		14.0		0
101	318+19.69	20	702.5	673.5	29.0	15	14.0		W12X45	28.5
102	318+21.69	20	702.6	688.6	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.		FT.	TYPE	FT.
103	318+23.69	20	702.7	673.7	29.0	15	14.0		W12X45	28.5
104	318+25.69	20	702.8	688.8	14.0	0		14.0		0
105	318+27.69	20	703.0	674.0	29.0	15	14.0		W12X45	28.5
106	318+29.69	20	703.1	689.1	14.0	0		14.0		0
107	318+31.69	20	703.2	674.2	29.0	15	14.0		W12X45	28.5
108	318+33.69	20	703.3	689.3	14.0	0		14.0		0
109	318+35.69	20	703.4	674.4	29.0	15	14.0		W12X45	28.5
110	318+37.69	20	703.5	689.5	14.0	0		14.0		0
111	318+39.69	20	703.7	674.7	29.0	15	14.0		W12X45	28.5
112	318+41.69	20	703.8	689.8	14.0	0		14.0		0
113	318+43.69	20	703.9	674.9	29.0	15	14.0		W12X45	28.5
114	318+45.69	20	704.0	690.0	14.0	0		14.0		0
115	318+47.69	20	704.1	675.1	29.0	15	14.0		W12X45	28.5
116	318+49.69	20	704.2	690.2	14.0	0		14.0		0
117	318+51.69	20	704.4	675.4	29.0	15	14.0		W12X45	28.5
118	318+53.69	20	704.5	690.5	14.0	0		14.0		0
119	318+55.69	20	704.6	675.6	29.0	15	14.0		W12X45	28.5
120	318+57.69	20	704.7	690.7	14.0	0		14.0		0
121	318+59.69	20	704.8	675.8	29.0	15	14.0		W12X45	28.5
122	318+61.69	20	705.0	691.0	14.0	0		14.0		0
123	318+63.69	20	705.1	676.1	29.0	15	14.0		W12X45	28.5
124	318+65.69	20	705.2	691.2	14.0	0		14.0		0
125	318+67.69	20	705.3	676.3	29.0	15	14.0		W12X45	28.5
126	318+69.69	20	705.5	691.5	14.0	0		14.0		0
127	318+71.69	20	705.6	676.6	29.0	15	14.0		W12X45	28.5
128	318+73.69	20	705.7	691.7	14.0	0		14.0		0
129	318+75.69	20	705.8	676.8	29.0	15	14.0		W12X45	28.5
130	318+77.69	20	706.0	692.0	14.0	0		14.0		0
131	318+79.69	20	706.1	677.1	29.0	15	14.0		W12X45	28.5
132	318+81.69	20	706.2	692.2	14.0	0		14.0		0
133	318+83.69	20	706.3	677.3	29.0	15	14.0		W12X45	28.5
134	318+85.69	20	706.4	692.4	14.0	0		14.0		0
135	318+87.69	20	706.5	677.5	29.0	15	14.0		W12X45	28.5
136	318+89.69	20	706.7	692.7	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
SHEET TOTAL - CARRIED TO SHEET 25						510.0	476.0	476.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.		TYPE	FT.
137	318+91.69	20	706.8	677.8	29.0	15	14.0		W12X45	28.5
138	318+93.69	20	706.9	692.9	14.0	0		14.0		0
139	318+95.69	20	707.0	678.0	29.0	15	14.0		W12X45	28.5
140	318+97.69	20	707.1	693.1	14.0	0		14.0		0
141	318+99.69	20	707.2	678.2	29.0	15	14.0		W12X45	28.5
142	319+01.69	20	707.3	693.3	14.0	0		14.0		0
143	319+03.69	20	707.4	678.4	29.0	15	14.0		W12X45	28.5
144	319+05.69	20	707.5	693.5	14.0	0		14.0		0
145	319+07.69	20	707.7	678.7	29.0	15	14.0		W12X45	28.5
146	319+09.69	20	707.8	693.8	14.0	0		14.0		0
147	319+11.69	20	707.9	678.9	29.0	15	14.0		W12X45	28.5
148	319+13.69	20	708.0	694.0	14.0	0		14.0		0
149	319+15.69	20	708.1	679.1	29.0	15	14.0		W12X45	28.5
150	319+17.69	20	708.2	694.2	14.0	0		14.0		0
151	319+19.69	20	708.3	679.3	29.0	15	14.0		W12X45	28.5
152	319+21.69	20	708.4	694.4	14.0	0		14.0		0
153	319+23.69	20	708.5	679.5	29.0	15	14.0		W12X45	28.5
154	319+25.69	20	708.6	694.6	14.0	0		14.0		0
155	319+27.69	20	708.7	679.7	29.0	15	14.0		W12X45	28.5
156	319+29.69	20	708.8	694.8	14.0	0		14.0		0
157	319+31.69	20	708.9	679.9	29.0	15	14.0		W12X45	28.5
158	319+33.69	20	709.0	695.0	14.0	0		14.0		0
159	319+35.69	20	709.1	680.1	29.0	15	14.0		W12X45	28.5
160	319+37.69	20	709.2	695.2	14.0	0		14.0		0
161	319+39.69	20	709.3	680.3	29.0	15	14.0		W12X45	28.5
162	319+41.69	20	709.4	695.4	14.0	0		14.0		0
163	319+43.69	20	709.5	680.5	29.0	15	14.0		W12X45	28.5
164	319+45.69	20	709.6	695.6	14.0	0		14.0		0
165	319+47.69	20	709.7	680.7	29.0	15	14.0		W12X45	28.5
166	319+49.69	20	709.8	695.8	14.0	0		14.0		0
167	319+51.69	20	709.9	680.9	29.0	15	14.0		W12X45	28.5
168	319+53.69	20	710.0	696.0	14.0	0		14.0		0
169	319+55.69	20	710.1	681.1	29.0	15	14.0		W12X45	28.5
170	319+57.69	20	710.2	696.2	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.		TYPE	FT.
171	319+59.69	20	710.3	681.3	29.0	15	14.0		W12X45	28.5
172	319+61.69	20	710.4	696.4	14.0	0		14.0		0
173	319+63.69	20	710.5	681.5	29.0	15	14.0		W12X45	28.5
174	319+65.69	20	710.6	696.6	14.0	0		14.0		0
175	319+67.69	20	710.7	681.7	29.0	15	14.0		W12X45	28.5
176	319+69.69	20	710.8	696.8	14.0	0		14.0		0
177	319+71.69	20	710.9	681.9	29.0	15	14.0		W12X45	28.5
178	319+73.69	20	711.0	697.0	14.0	0		14.0		0
179	319+75.69	20	711.1	682.1	29.0	15	14.0		W12X45	28.5
180	319+77.69	20	711.2	697.2	14.0	0		14.0		0
181	319+79.69	20	711.3	682.3	29.0	15	14.0		W12X45	28.5
182	319+81.69	20	711.4	697.4	14.0	0		14.0		0
183	319+83.69	20	711.5	682.5	29.0	15	14.0		W12X45	28.5
184	319+85.69	20	711.6	697.6	14.0	0		14.0		0
185	319+87.69	20	711.8	682.8	29.0	15	14.0		W12X45	28.5
186	319+89.69	20	711.9	697.9	14.0	0		14.0		0
187	319+91.69	20	712.0	683.0	29.0	15	14.0		W12X45	28.5
188	319+93.69	20	712.1	698.1	14.0	0		14.0		0
189	319+95.69	20	712.2	683.2	29.0	15	14.0		W12X45	28.5
190	319+97.69	20	712.4	698.4	14.0	0		14.0		0
191	319+99.69	20	712.5	683.5	29.0	15	14.0		W12X45	28.5
192	320+01.69	20	712.6	698.6	14.0	0		14.0		0
193	320+03.69	20	712.7	683.7	29.0	15	14.0		W12X45	28.5
194	320+05.69	20	712.9	698.9	14.0	0		14.0		0
195	320+07.69	20	713.0	684.0	29.0	15	14.0		W12X45	28.5
196	320+09.69	20	713.1	699.1	14.0	0		14.0		0
197	320+11.69	20	713.2	684.2	29.0	15	14.0		W12X45	28.5
198	320+13.69	20	713.3	699.3	14.0	0		14.0		0
199	320+15.69	20	713.4	684.4	29.0	15	14.0		W12X45	28.5
200	320+17.69	20	713.5	699.5	14.0	0		14.0		0
201	320+19.69	20	713.7	684.7	29.0	15	14.0		W12X45	28.5
202	320+21.69	20	713.8	699.8	14.0	0		14.0		0
203	320+23.69	20	713.9	684.9	29.0	15	14.0		W12X45	28.5
204	320+25.69	20	714.0	700.0	14.0	0		14.0		0
SUB TOTAL						255.0	238.0	238.0		
SHEET TOTAL - CARRIED TO SHEET 25						510.0	476.0	476.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.	FT.	TYPE	FT.
205	320+27.69	20	714.1	685.1	29.0	15	14.0		W12X45	28.5
206	320+29.69	20	714.2	700.2	14.0	0		14.0		0.0
207	320+31.69	20	714.3	685.3	29.0	15	14.0		W12X45	28.5
208	320+33.69	20	714.5	700.5	14.0	0		14.0		0.0
209	320+35.69	20	714.6	685.6	29.0	15	14.0		W12X45	28.5
210	320+37.69	20	714.7	700.7	14.0	0		14.0		0.0
211	320+39.71	20	714.8	685.8	29.0	15	14.0		W12X45	28.5
212	320+41.78	20	715.0	701.0	14.0	0		14.0		0.0
213	320+43.86	20	715.1	686.1	29.0	15	14.0		W12X45	28.5
214	320+45.93	20	715.2	701.2	14.0	0		14.0		0.0
215	320+48.00	20	715.3	686.3	29.0	15	14.0		W12X45	28.5
216	320+50.07	20	715.5	701.5	14.0	0		14.0		0.0
217	320+52.14	20	715.6	686.6	29.0	15	14.0		W12X45	28.5
218	320+54.21	20	715.7	701.7	14.0	0		14.0		0.0
219	320+56.28	20	715.9	686.9	29.0	15	14.0		W12X45	28.5
220	320+58.36	20	716.0	702.0	14.0	0		14.0		0.0
221	320+60.43	20	716.1	687.1	29.0	15	14.0		W12X45	28.5
222	320+62.50	20	716.2	702.2	14.0	0		14.0		0.0
223	320+64.57	20	716.3	687.3	29.0	15	14.0		W12X45	28.5
224	320+66.64	20	716.4	702.4	14.0	0		14.0		0.0
225	320+68.71	20	716.4	687.4	29.0	15	14.0		W12X45	28.5
226	320+70.79	20	716.5	702.5	14.0	0		14.0		0.0
227	320+72.86	20	716.6	687.6	29.0	15	14.0		W12X45	28.5
228	320+74.93	20	716.7	702.7	14.0	0		14.0		0.0
229	320+77.00	20	716.8	687.8	29.0	15	14.0		W12X45	28.5
230	320+79.07	20	716.9	702.9	14.0	0		14.0		0.0
231	320+81.14	20	717.0	688.0	29.0	15	14.0		W12X45	28.5
232	320+83.22	20	717.1	703.1	14.0	0		14.0		0.0
233	320+85.29	20	717.1	688.1	29.0	15	14.0		W12X45	28.5
234	320+87.36	20	717.2	703.2	14.0	0		14.0		0.0
235	320+89.43	20	717.2	688.2	29.0	15	14.0		W12X45	28.5
236	320+91.50	20	717.3	703.3	14.0	0		14.0		0.0
237	320+93.57	20	717.3	688.3	29.0	15	14.0		W12X45	28.5
238	320+95.65	20	717.4	703.4	14.0	0		14.0		0.0
SUB TOTAL						255.0	238.0	238.0		
TOTALS FOR EACH BEAM TYPE									W12X45	484.5

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILL SHAFT ELEVATION	APPROX. BOTTOM OF DRILL SHAFT ELEVATION	TOTAL DRILL SHAFT LENGTH	524	524	524	BEAM SIZE	APPROX. LENGTH OF BEAM
						SHAFT LENGTH BELOW ROCK	SHAFT LENGTH ABOVE ROCK	PLUG PILE LENGTH		
		FT.	FT.	FT.	FT.	FT.	FT.	FT.	TYPE	FT.
239	320+97.72	20	717.4	688.4	29.0	15	14.0		W12X45	28.5
240	320+99.79	20	717.5	703.5	14.0	0		14.0		0.0
241	321+01.86	20	717.5	688.5	29.0	15	14.0		W12X45	28.5
242	321+03.93	20	717.6	703.6	14.0	0		14.0		0.0
243	321+06.00	20	717.6	688.6	29.0	15	14.0		W12X45	28.5
244	321+08.07	20	717.6	703.6	14.0	0		14.0		0.0
245	321+10.15	20	717.7	688.7	29.0	15	14.0		W12X45	28.5
246	321+12.22	20	717.8	703.8	14.0	0		14.0		0.0
247	321+14.29	20	717.8	688.8	29.0	15	14.0		W12X45	28.5
248	321+16.36	20	717.9	703.9	14.0	0		14.0		0.0
249	321+18.43	20	718.0	689.0	29.0	15	14.0		W12X45	28.5
250	321+20.50	20	718.0	704.0	14.0	0		14.0		0.0
251	321+22.58	20	718.1	689.1	29.0	15	14.0		W12X45	28.5
252	321+24.65	20	718.1	704.1	14.0	0		14.0		0.0
253	321+26.72	20	718.2	689.2	29.0	15	14.0		W12X45	28.5
254	321+28.79	20	718.3	704.3	14.0	0		14.0		0.0
255	321+30.86	20	718.3	689.3	29.0	15	14.0		W12X45	28.5
256	321+32.93	20	718.4	704.4	14.0	0		14.0		0.0
257	321+35.01	20	718.4	689.4	29.0	15	14.0		W12X45	28.5
258	321+37.08	20	718.5	704.5	14.0	0		14.0		0.0
259	321+39.15	20	718.6	689.6	29.0	15	14.0		W12X45	28.5
260	321+41.22	20	717.1	703.1	14.0	0		14.0		0.0
261	321+43.29	20	716.6	687.6	29.0	15	14.0		W12X45	28.5
262	321+45.36	20	716.5	702.5	14.0	0		14.0		0.0
263	321+47.44	20	716.6	687.6	29.0	15	14.0		W12X45	28.5
264	321+49.51	20	716.7	702.7	14.0	0		14.0		0.0
265	321+51.58	20	716.5	687.5	29.0	15	14.0		W12X45	28.5
266	321+53.65	20	716.0	702.0	14.0	0		14.0		0.0
267	321+55.72	20	715.7	686.7	29.0	15	14.0		W12X45	28.5
SUB TOTAL						225.0	210.0	196.0		
SHEET TOTAL						480.0	448.0	434.0	W12X45	427.5
FROM SHEET 22						510.0	476.0	476.0		
FROM SHEET 23						510.0	476.0	476.0		
FROM SHEET 24						510.0	476.0	476.0		
TOTALS OF ALL SHEETS						2010.0	1876.0	1862.0		
TOTALS CARRIED TO GENERAL SUMMARY						2010	1876	1862		
TOTALS FOR EACH BEAM TYPE CARRIED TO GENERAL SUMMARY									W12X45	3819

PROJECT DESCRIPTION

A 0.1 MILE LANDSLIDE REMEDIATION PROJECT CONSISTING OF A DRILLED SHAFT RETAINING WALL, GUARDRAIL, AND MINOR EMBANKMENT.

HISTORIC RECORDS

NO HISTORIC RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE UNGLACIATED SHAWNEE-MISSISSIPPIAN PLATEAU, WHICH IS CHARACTERIZED BY HIGH RELIEF, HIGHLY DISSECTED PLATEAU. GENERALLY, THE THIN RESIDUAL SOILS LIE ALONG THE RIDGELINES AND UPPER HILLSIDE AND THIN TO THICK COLLUVIAL SOILS AT THE BASE OF THE HILLSIDES. THE OVERBURDEN SOILS ARE UNDERLAIN BY DEVONIAN AND MISSIPIAN AGED SHALE, SILTSTONE AND SANDSTONE. LANDSLIDES ARE COMMON WITHIN THE HILLSIDES.

RECONNAISSANCE

THE SITE RECONNAISSANCE WAS COMPLETED BY CHRIS PRIDEMORE FROM THE DISTRICT ON APRIL 16, 2012. THE ROADWAY IS CONSTRUCTED THROUGH SIDE-HILL CUT AND FILL. THE PAVEMENT WAS NOTED AS BEING IN MODERATE CONDITION WITH AREAS OF PATCHING EVIDENT. TENSION CRACKING WAS NOTED WITHIN THE ROADWAY WITH SIGNS, SUCH AS HUMMOCKY GROUND SURFACE, LEANING TREES AND TOE BULGES, WERE EVIDENT OF THE SLOPE INSTABILITY IN THE DOWNSLOPE HILLSIDE. SANDSTONE AND SHALE BEDROCK WAS NOTED IN THE UPSLOPE DITCH LINE WHICH WAS ALSO WET WITHOUT ANY RECENT RAINFALL. AN EXISTING POST AND PANEL WALL IS PRESENT ALONG THE UP STATION END OF THE PROJECT. SURROUNDING LAND USAGE WAS NOTED AS BEING A MIX OF WOODED LOTS AND RURAL RESIDENTIAL.

SUBSURFACE EXPLORATION

TWO (2) BORINGS, B-001-0-12 AND B-002-0-12, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION WITH A TRUCK MOUNTED ROTARY DRILL RIG USING 3 1/4 -INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL OVERBURDEN. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT CONTINUOUS INTERVALS FOR THE FULL DEPTH OF THE SOIL. THE HAMMER SYSTEM USED WITH THE TRUCK RIG WAS LAST CALIBRATED ON MAY 17, 2011, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 91.3%. ALL BORINGS WERE ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

THE BORING ENCOUNTERED PREDOMINATELY COHESIVE SOILS ABOVE RELATIVELY SHALLOW BEDROCK. THE COHESIVE SOILS ENCOUNTERED WERE EITHER SILT AND CLAY (A-6A) OR CLAY (A-7-6) IN VERY STIFF CONSISTENCY AND DAMP TO MOIST IN CONDITION. B-002 ENCOUNTERED VERY LOOSE SANDY SILT (A-4A) FROM BENEATH THE PAVEMENT TO ELEVATION 712.0 FEET. B-001 ENCOUNTERED SHALE BEDROCK AT ELEVATION 703.2 FEET WHICH WAS WEAK AND HIGHLY WEATHERED IN CONDITION. AT ELEVATION 689.4 FEET THE SHALE BECAME MODERATELY WEATHERED. B-002 ENCOUNTERED SANDSTONE BEDROCK AT ELEVATION 708.5 FEET WHICH WAS MODERATELY STRONG AND HIGHLY WEATHERED IN CONDITION. AT ELEVATION 701.0 FEET THE BORING ENCOUNTERED SHALE WHICH WAS WEAK AND HIGHLY WEATHERED.

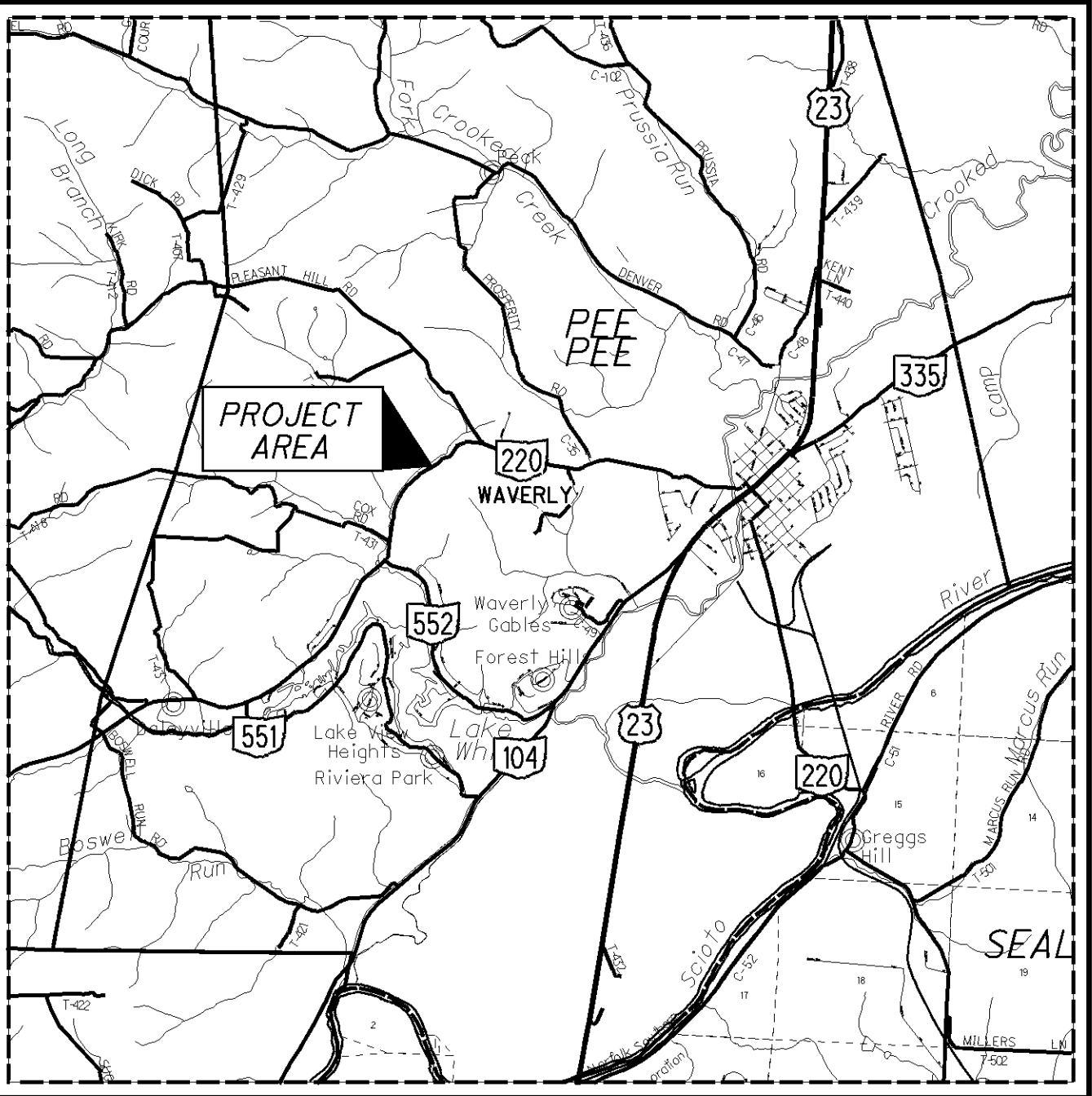
SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2007.

AVAILABLE INFORMATION

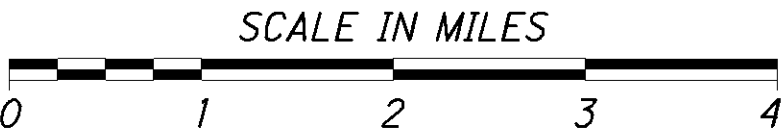
ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECTS OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S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

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	SANDY SILT	A-4a	1	1
	SILT AND CLAY	A-6a	2	2
	CLAY	A-7-6	1	2
		TOTAL	4	5
	SHALE	VISUAL		
	WEATHERED SHALE	VISUAL		
	WEATHERED SANDSTONE	VISUAL		
	PAVEMENT OR BASE = X = APPROXIMATE THICKNESS	VISUAL		
	BORING LOCATION - PLAN VIEW			
	DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
<i>N₆₀</i>	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
<i>WC</i>	INDICATES WATER CONTENT IN PERCENT.			
<i>W</i>	INDICATES FREE WATER ELEVATION.			
<i>NP</i>	INDICATES A NON-PLASTIC SAMPLE.			
<i>SS</i>	INDICATES A SPLIT SPOON SAMPLE, STANDARD PENETRATION TEST.			
<i>TR</i>	INDICATES TOP OF ROCK.			

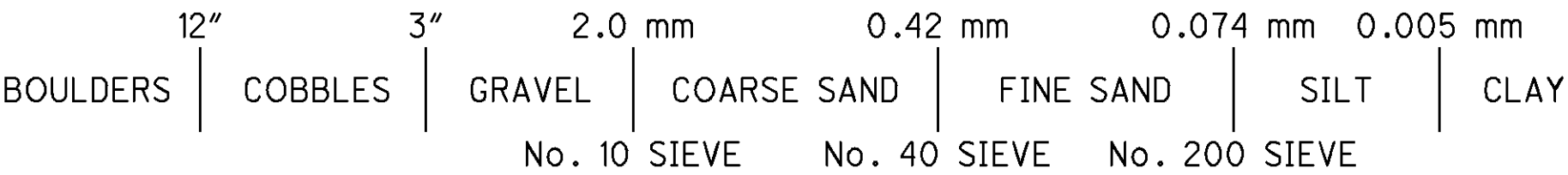


LOCATION MAP

LATITUDE: 39°07'44" LONGITUDE: 83°01'23"

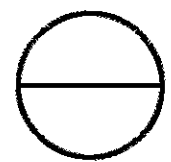


PARTICLE SIZE DEFINITIONS

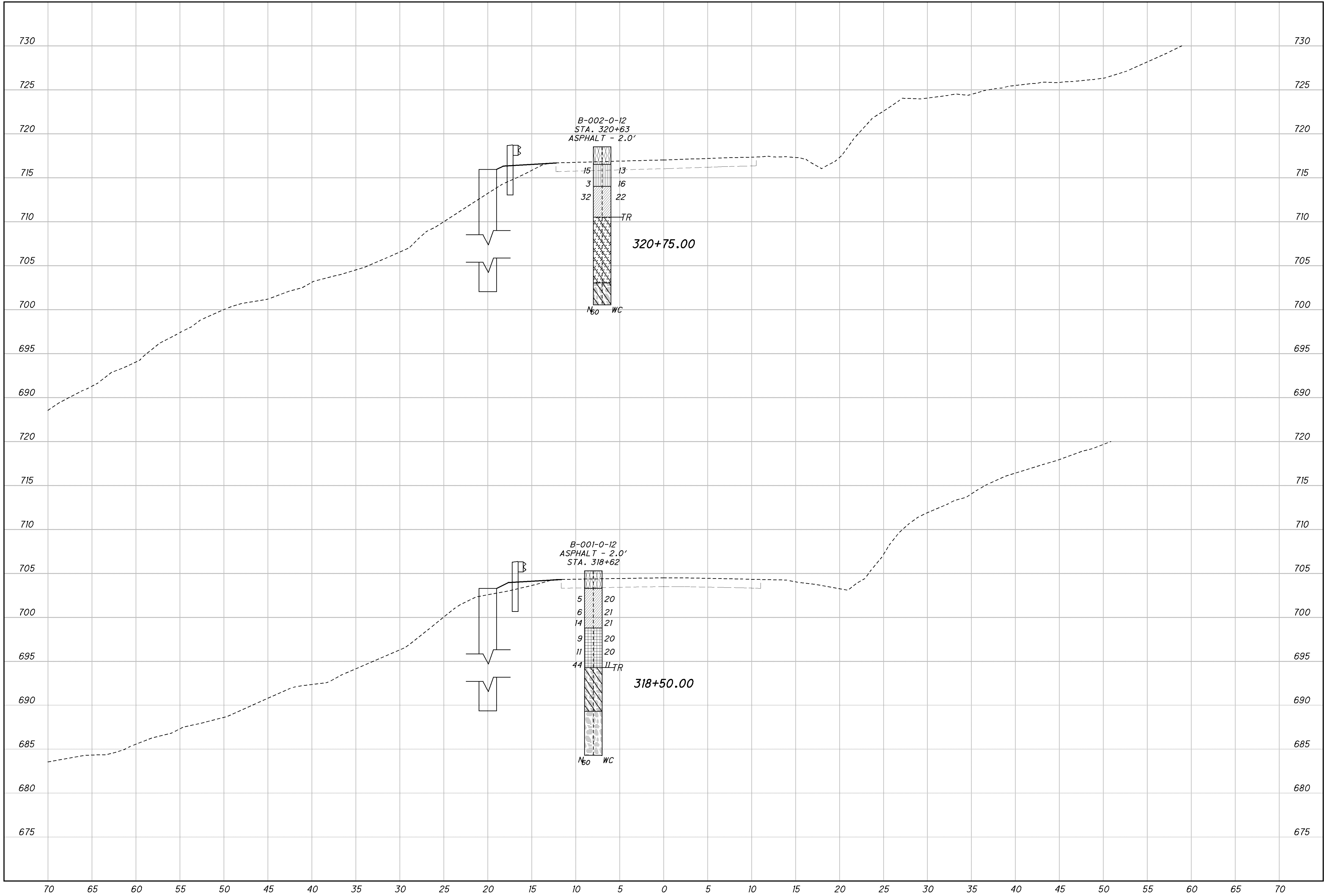


RECON. - PRIDEMORE 04/16/2012
DRILLING - CAREY 07/09/12 - 07/10/12
DRAWN - DLZ: MDK 12/09/13 - 12/13/13
REVIEWED - DLZ: HJH 12/12/13 - 12/13/13

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DRAWN MDK		CHECKED HJH	
LANDSLIDE EXPLORATION CROSS SECTION STA. 318+50 AND STA. 320+75			
PIK-220-6.10			
3 / 4			

