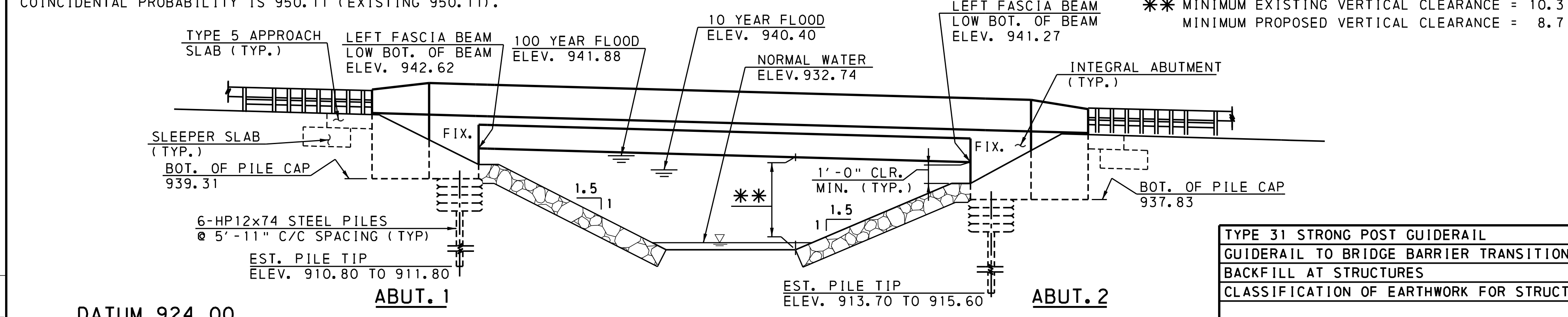


JACKS RUN IS A TRIBUTARY TO SEWICKLEY CREEK. THE BRIDGE IS LOCATED WITHIN THE FLOODPLAIN OF SEWICKLEY CREEK. THE WATER SURFACE ELEVATION INDICATED ASSUMES NO INFLUENCE FROM SEWICKLEY CREEK FLOODING. THE 10 YEAR WATER SURFACE ELEVATION UPSTREAM OF THE BRIDGE USING COINCIDENTAL PROBABILITY IN ACCORDANCE WITH PUB. 584 IS 943.84 FT. (EXISTING 943.85 FT.). THE 100 YEAR WATER SURFACE ELEVATION UPSTREAM OF THE BRIDGE USING COINCIDENTAL PROBABILITY IS 950.11 (EXISTING 950.11).

PLAN
2 0 4 8 FEET

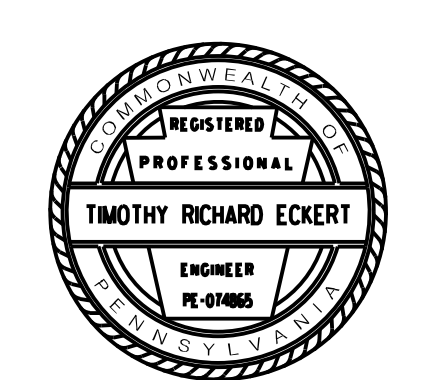


ELEVATION
2 0 4 8 FEET

DATUM 924.00

STRUCTURE BORING			
BORING NO.	STATION	OFFSET	ELEV.
SB-1	4+19.5	5.6' RT.	945.8
SB-2	4+16.1	22.2' LT.	943.8
SB-3	4+68.8	17.3' RT.	942.3
SB-4	4+71.4	8.7' LT.	943.9

OFFSETS MEASURED FROM CONSTRUCTION C.
 ● DENOTES AS-DRILLED BORING LOCATION.



Pennoni
 PREPARED BY
PENNONI ASSOCIATES INC.
 680 PITTSBURGH ROAD,
 SUITE 2
 UNIONTOWN, PA 15401

Timothy R. Eckert
 01-09-20

**VERTICAL CURVE DATA
 EAST HILLIS STREET**

-1.00% Δ -4.00%
 P.V.I. STA. 4+45.00
 ELEV. 946.02
 VC = 50.00'
 MO = -0.19'
 SSD = 385'
 P.V.T. STA. 4+70.00
 ELEV. 945.02
 P.V.C. = 5+30.00

**HORIZONTAL CURVE DATA
 EAST HILLIS STREET**

P.I. STA. 5+73.98
 DELTA = 10°-11'-14.15" LT.
 D = 4°-24'-26.52"
 T = 115.88'
 L = 231.14'
 R = 1300.00'
 E = 5.15'
 SE = NC

HYDRAULIC DATA:

DRAINAGE AREA = 28.77 SQ. MI.
 EXISTING STRUCTURE DATA:
 MAGNITUDE = 2980 C.F.S.
 FREQUENCY = 10 YEARS
 VELOCITY = 3.71 F.P.S.
 W.S. ELEV. = 940.71
 LOW BOTTOM OF ORIGINAL BEAM ELEV. = 943.17
 100 YEAR FLOOD:
 MAGNITUDE = 5600 C.F.S.
 VELOCITY = 3.13 F.P.S.
 W.S. ELEV. = 942.27
 PROPOSED STRUCTURE DATA:
 MAGNITUDE = 2980 C.F.S.
 FREQUENCY = 10 YEARS
 VELOCITY = 4.35 F.P.S.
 W.S. ELEV. = 940.40
 100 YEAR FLOOD:
 MAGNITUDE = 5600 C.F.S.
 VELOCITY = 3.60 F.P.S.
 W.S. ELEV. = 941.88
 FLOOD OF RECORD: UNKNOWN

LEGEND

- F.F. - FRONT FACE
- T.B.D. - TO BE DETERMINED
- P.G. - PROFILE GRADE
- 230- - PROPOSED CONTOUR
- 230- - EXISTING CONTOUR
- E- - PROPOSED UTILITIES
- E- - EXISTING UTILITIES

INDEX OF DRAWINGS	
SHEET NO.	TITLE
1	GENERAL PLAN & ELEVATION
2	GENERAL NOTES
3	QUANTITIES
4	RATINGS
5	TYPICAL SECTION & ELEVATION CHART
6	STAKE-OUT PLAN
7	ABUTMENT 1 PLAN
8	ABUTMENT 1 ELEVATION
9	ABUTMENT 1 SECTIONS
10	ABUTMENT 1 DETAILS
11	ABUTMENT 1 WINGWALL A
12	ABUTMENT 1 WINGWALL B
13	ABUTMENT 1 BEARING DETAILS
14	ABUTMENT 1 REINFORCEMENT BAR SCHEDULE
15	ABUTMENT 2 PLAN
16	ABUTMENT 2 ELEVATION
17	ABUTMENT 2 SECTIONS
18	ABUTMENT 2 DETAILS
19	ABUTMENT 2 WINGWALL C
20	ABUTMENT 2 WINGWALL D
21	ABUTMENT 2 BEARING DETAILS
22	ABUTMENT 2 REINFORCEMENT BAR SCHEDULE
23	BOX BEAM DETAILS
24	BEAM FABRICATION DETAILS 1
25	BEAM FABRICATION DETAILS 2
26	STRAND TABLES
27	FRAMING PLAN
28	DIAPHRAGM DETAILS AT ABUTMENT 1
29	DIAPHRAGM DETAILS AT ABUTMENT 2
30	SLAB REINFORCEMENT PLAN
31	SLAB SECTION
32	DECK PLACEMENT SEQUENCE PLAN
33	BARRIER AND MISCELLANEOUS DETAILS 1
34	BARRIER AND MISCELLANEOUS DETAILS 2
35	BARRIER AND MISCELLANEOUS DETAILS 3
36	APPROACH SLAB DETAILS ABUTMENT 1
37	APPROACH SLAB DETAILS ABUTMENT 2
38	APPROACH SLAB DETAILS
39	SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE
40	STRUCTURE BORINGS
41	STRUCTURE BORINGS
42	STRUCTURE BORINGS
43	STRUCTURE BORINGS

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR RATING TABLE, SEE SHEET 4.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

TYPE 31 STRONG POST GUIDERAIL	RC-51M	12-17-19
GUIDERAIL TO BRIDGE BARRIER TRANSITIONS	RC-50M	02-08-19
BACKFILL AT STRUCTURES	RC-12M	02-08-19
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11M	06-01-10
TYPICAL WATERPROOFING AND EXPANSION DETAILS	BC-788M	01-31-19
MISCELLANEOUS PRESTRESS DETAILS	BC-775M	09-30-16
PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS	BC-766M	01-31-19
STANDARD STEEL PILE TIP REINFORCEMENT AND SPLICES	BC-757M	09-30-16
BEARINGS	BC-755M	01-31-19
CONCRETE DECK SLAB DETAILS	BC-752M	09-30-16
BRIDGE DRAINAGE	BC-751M	01-31-19
BRIDGE BARRIER TO GUIDE RAIL TRANSITION	BC-739M	01-31-19
REINFORCEMENT BAR FABRICATION DETAILS	BC-736M	01-31-19
WALL CONSTRUCTION & EXPANSION JOINT DETAILS	BC-735M	09-30-16
ANCHOR SYSTEMS	BC-734M	01-31-19
PERMANENT METAL DECK FORMS	BC-732M	01-31-19
DESCRIPTION	DWG. NO.	RECM'D DATE

SUPPLEMENTAL DRAWINGS

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
GENERAL PLAN & ELEVATION

APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

Jessy Hughes
 DISTRICT BRIDGE ENGINEER

SHEET 1 OF 43

L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: \\NFAL\DESIGN\01-160104E.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 10:58:00 AM
 PLOT SCALE: 1"=40'-0"
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 1/29/2020 10:58:00 AM
 USER NAME: bhugock
 OFFICE LOCATION: PHT+sbu@pennoni.com

DES: TE CKD: MP DWG: NCC CKD: TE

GENERAL NOTES:

DESIGN SPECIFICATIONS:

1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 2014, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, APRIL 2015.
2. LIVE LOAD DISTRIBUTION TO BEAMS IS BASED UPON DM-4 DISTRIBUTION FACTOR METHOD.
3. DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

DESIGN LIVE LOADS:

1. PHL-93 OR P-82 (204K PERMIT LOAD).
2. FATIGUE DESIGN IS BASED ON THE FOLLOWING:
PRESTRESSED CONCRETE: ADTT 354 (2038)
3. MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE:
 $0.0948 \sqrt{f'_c}$

DEAD LOADS:

1. INCLUDES A SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.
2. INCLUDES A SURFACE AREA DENSITY OF 0.0150 KSF FOR PERMANENT METAL DECK FORMS WHICH TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.

GENERAL:

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS PUBLICATION 408/2016 AND THE CONTRACT SPECIAL PROVISIONS.
2. STATIONS AND ELEVATIONS ARE GIVEN IN FEET UNLESS OTHERWISE NOTED.
3. PROVIDE 3" CONCRETE COVER ON REINFORCEMENT BARS FOR THE INTEGRAL ABUTMENTS.
4. PROVIDE 2 INCH CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.
5. USE CLASS AAAP CEMENT CONCRETE IN:
DECK SLAB
END DIAPHRAGMS ABOVE CONSTRUCTION JOINT
APPROACH SLABS
WINGWALLS ABOVE CONSTRUCTION JOINTS
6. USE CLASS AA CEMENT CONCRETE IN:
CURBS
BARRIERS
SAFETY WINGS
7. USE CLASS A CEMENT CONCRETE IN:
CAP BEAM BELOW CONSTRUCTION JOINT
WINGWALLS BELOW CONSTRUCTION JOINT
8. A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.
9. PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M, OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN BRIDGE ABUTMENTS, BEAMS, BARRIERS OR WHERE BENDING OR WELDING OF THE REINFORCEMENT BARS IS INDICATED.
10. EPOXY-COAT ALL STEEL REINFORCEMENT BARS.
11. WELDING OF REINFORCEMENT BARS DURING FABRICATION OR CONSTRUCTION IS NOT PERMITTED UNLESS SPECIFIED.
12. GALVANIZED REINFORCEMENT BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCEMENT BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.
13. RAKE FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.
14. FOR INTEGRAL ABUTMENTS (I.E. ABUTMENT PILE CAP, END DIAPHRAGM, AND WINGWALLS) USE THE FOLLOWING MINIMUM REINFORCEMENT SPLICE LENGTHS UNLESS OTHERWISE NOTED:
#4 - 2'-1" #6 - 3'-1" #8 - 5'-1" #10 - 8'-2"
#5 - 2'-7" #7 - 3'-10" #9 - 6'-5" #11 - 10'-0"
15. PLACE ALL GIRDERS WITH THEIR WEBS VERTICAL.
16. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SAFE ERECTION OF ALL STRUCTURES AND SHALL PROVIDE ALL NECESSARY BRACING AND SUPPORTS.
17. SEISMIC SITE CLASS IS NOT CLASS E.
18. CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.
19. USE PERMANENT METAL FORMS TO CONSTRUCT THE DECK SLAB.
20. CHAMFER ALL EXPOSED CONCRETE EDGES 1 IN BY 1 IN, EXCEPT AS NOTED.
21. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
22. PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWINGS BC-736M, UNLESS OTHERWISE INDICATED.
23. DECK SLAB THICKNESS INCLUDES A 0.5" INTEGRAL WEARING SURFACE.
24. SUPERSTRUCTURE DIMENSIONS SHOWN ARE A NORMAL TEMPERATURE OF 68 DEGREES F.
25. THE SUPERSTRUCTURE MUST BE ERECTED AND CONNECTED TO THE ABUTMENTS PRIOR TO PLACING BACKFILL BEHIND THE ABUTMENTS.

26. NOTIFY THE REGIONAL HEADQUARTERS OF THE FISH & BOAT COMMISSION PRIOR TO CONSTRUCTION AND COOPERATE WITH THE FISH COMMISSION DURING CONSTRUCTION. THE WATERWAY CONSERVATION OFFICE FO THIS PROJECT IS:

PA FISH AND BOAT COMMISSION
SOUTHWEST REGION OFFICE
236 LAKE ROAD
SOMERSET, PA 15501
(814) 445-8947

26. USE CORROSION RESISTANT CONCRETE WITH TYPE II CEMENT AND A MAXIMUM WATER/CEMENT RATIO OF 0.45 FOR ALL SUBSTRUCTURE CONCRETE.

UTILITY NOTES:

1. COORDINATE, LOCATE AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.
2. NOTIFY FACILITY OWNERS THROUGH THE PENNSYLVANIA ONE CALL SYSTEM NO LESS THAN THREE (3) DAYS PRIOR TO CONSTRUCTION.
3. TAKE PRECAUTIONS WHILE WORKING NEAR AERIAL UTILITY LINES TO NOT CAUSE ANY DAMAGE AND ADHERE TO ALL CLEARANCE REQUIREMENTS SET FORTH BY THE UTILITY COMPANIES.

PILES:

1. BEFORE DRIVING PILES, PLACE AND COMPACT, TO FOOTING ELEVATION, SPECIFICALLY SELECTED MATERIAL WHICH CONTAINS NO ROCK TO INTERFERE WITH PILE DRIVING. AUGURING OR PRE-BORING WILL BE PERMITTED TO THE ORIGINAL GROUND.
2. FOR ALL H-PILES PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M 270/M 270M GRADE 50 (ASTM A709 GRADE 50) DESIGNATION.
3. INSTALL H-PILES WITH THEIR FLANGES ORIENTED PARALLEL TO THE CENTERLINE OF THE GIRDERS.
4. NO CUTTING OF PILES IS PERMITTED UNLESS OBTAINED EXPRESSED WRITTEN PERMISSION BY DISTRICT STRUCTURAL CONTROL ENGINEER.
5. DO NOT CUT PILE WEB, FLANGES OR FOOTING REINFORCEMENT BARS TO ACCOMMODATE REINFORCEMENT BAR PLACEMENT, UNLESS DIRECTED BY THE ENGINEER.
6. DRIVING METHOD ABUTMENTS 1 & 2:
 - METHOD A - USE WHEN BEARING PILES ARE DRIVEN TO ABSOLUTE REFUSAL.
 - DYNAMIC FORMULA ONLY - CONTROL PILE DRIVING BY THE DYNAMIC FORMULA IN PUBLICATION 408/2016, SECTION 1005.
 - WAVE EQUATION ONLY - CONTROL PILE DRIVING BY THE WAVE EQUATION ANALYSIS.
 - DYNAMIC FORMULA OR WAVE EQUATION - DRIVE TEST PILES TO ABSOLUTE REFUSAL. THE ENGINEER SHALL VERIFY, FROM THE TEST PILE DRIVING RESULTS, THE CAPABILITY OF THE PILE HAMMER SELECTED BY THE CONTRACTOR. DRIVE BEARING PILES TO ABSOLUTE REFUSAL INTO THE STRATUM DEFINED BY A TIP ELEVATION WHICH IS PREDETERMINED BY THE ENGINEER FROM TEST PILES. THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE BEARING PILES WHICH ATTAIN ABSOLUTE REFUSAL ABOVE THE PREDETERMINED TIP ELEVATIONS.

FOUNDATION:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.
2. ALL STREAM DIVERSIONS/DEWATERING IS TO BE IN ACCORDANCE WITH REGULATIONS FOR JACKS RUN AND THE APPROVED E&S PLANS.
3. REMOVE PORTIONS OF THE EXISTING FOUNDATIONS THAT INTERFERE WITH THE CONSTRUCTION OF THE PROPOSED FOUNDATIONS AND BACKFILL IN ACCORDANCE WITH RC-12M.
4. BLASTING IS NOT PERMITTED FOR FOUNDATION EXCAVATIONS OR ABUTMENT REMOVAL.
5. FOUNDATION EXCAVATION AND PILE INSTALLATIONS ARE TO BE INSPECTED AND APPROVED BY THE DISTRICT GEOTECHNICAL ENGINEER. PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE DISTRICT GEOTECHNICAL ENGINEER.
6. PREDRILL PILES TO A MINIMUM ELEVATION OF 913.8 TO 914.8 AT ABUTMENT 1 AND 916.7 TO 918.6 AT ABUTMENT 2 ACCORDING WITH THE "MANDATORY PRE-DRILLING FOR DRIVEN PILES" SPECIAL PROVISION AND THE "PREDRILLED PILE DETAIL".
7. PROVIDE NORMAL DUTY PILE TIP REINFORCEMENT ON ALL PILES IN ACCORDANCE WITH BC-757M.
8. PERFORM ONE (1) TEST PILE PER SUBSTRUCTURE.
9. INSTALL SIX (6) HP 12X74 50 KSI STEEL H-PILES AT EACH SUBSTRUCTURE.
10. DRIVE PILES TO CASE 2 ABSOLUTE REFUSAL AS DEFINED IN PUBLICATION 408, SECTION 1005.3(b).4, USING DRIVING METHOD A, AS DESCRIBED IN DM-4, PART A, SECTION 1.7.5.
11. CONSTRUCT SCOUR PROTECTION WITH AGGREGATE WRAPPED IN GEOTEXTILE TO THE BOTTOM OF THE PILE CAP ELEVATION. PROVIDE 30 INCH DIAMETER CASING AROUND PILE THE ENTIRE LENGTH OF THE SCOUR PROTECTION. PROVIDE ADDITIONAL CASING AS NECESSARY TO MAINTAIN AN OPEN HOLE PRIOR TO PREDRILLING AND PLACING THE PILE.
12. WHEN ORDERING PILE LENGTHS FOR INTEGRAL ABUTMENT PILES AND TO HELP PREVENT SPLICING OF INTEGRAL ABUTMENT PILES, FOR DRIVEN INTEGRAL ABUTMENT PILES PROVIDE PILE LENGTHS OF 25 FEET OR 10 FEET BELOW THE ESTIMATED PILE TIP ELEVATIONS, WHICHEVER IS GREATER.
13. GALVANIZE THE TOP 15' -0" OF THE PILES.

NOTES FOR PILE INSTALLATION INFORMATION						
SUBSTRUCTURE UNIT	PILE TYPE	PILE TIP (NONE/NORMAL/HEAVY DUTY)	PILE TIP ELEVATION	FACTORED DESIGN LOAD (KIP)	ULTIMATE PILE CAPACITY AT END OF DRIVING (KIP)	WEAP OR PDA

THIS TABLE IS TO BE COMPLETED FOR THE TEST PILES AFTER INSTALLATION ON THE "AS-BUILT" PLANS.

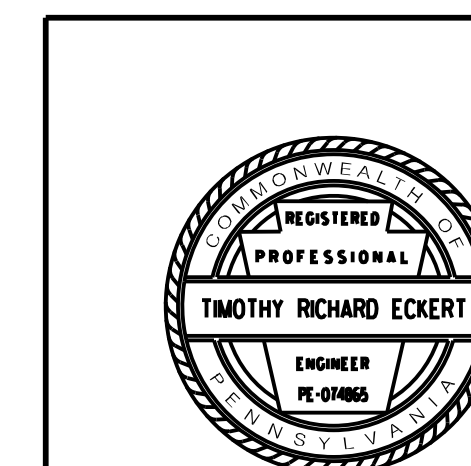
NOTES:

- FOR QUANTITIES, SEE SHEET 3.
- FOR RATING TABLES, SEE SHEET 4.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
GENERAL NOTES



APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 2 OF 43

L-45

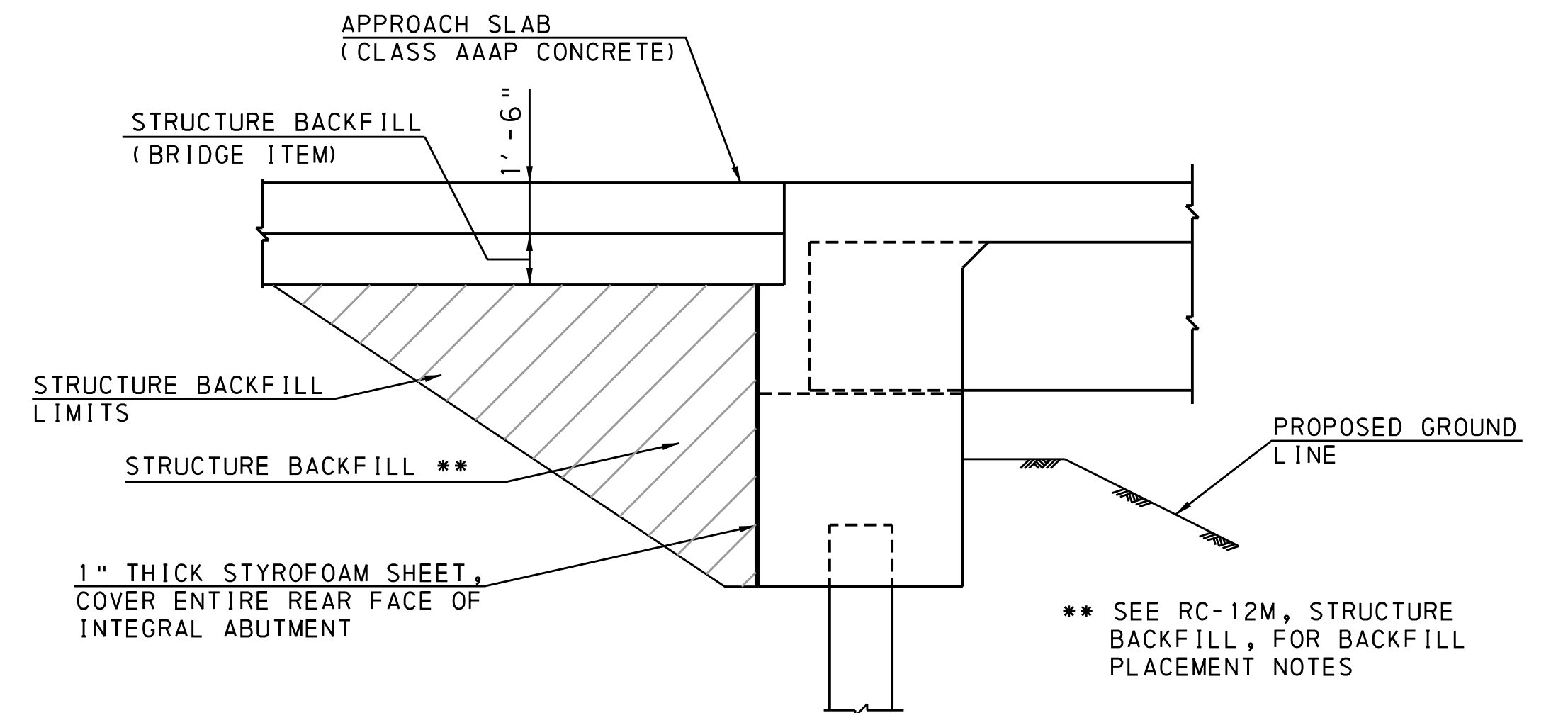
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DATE PLOTTED: 02/19/2019 @ 12:49:58 PM
USER NAME: blurock OFFICE LOCATION: PIT-Suburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

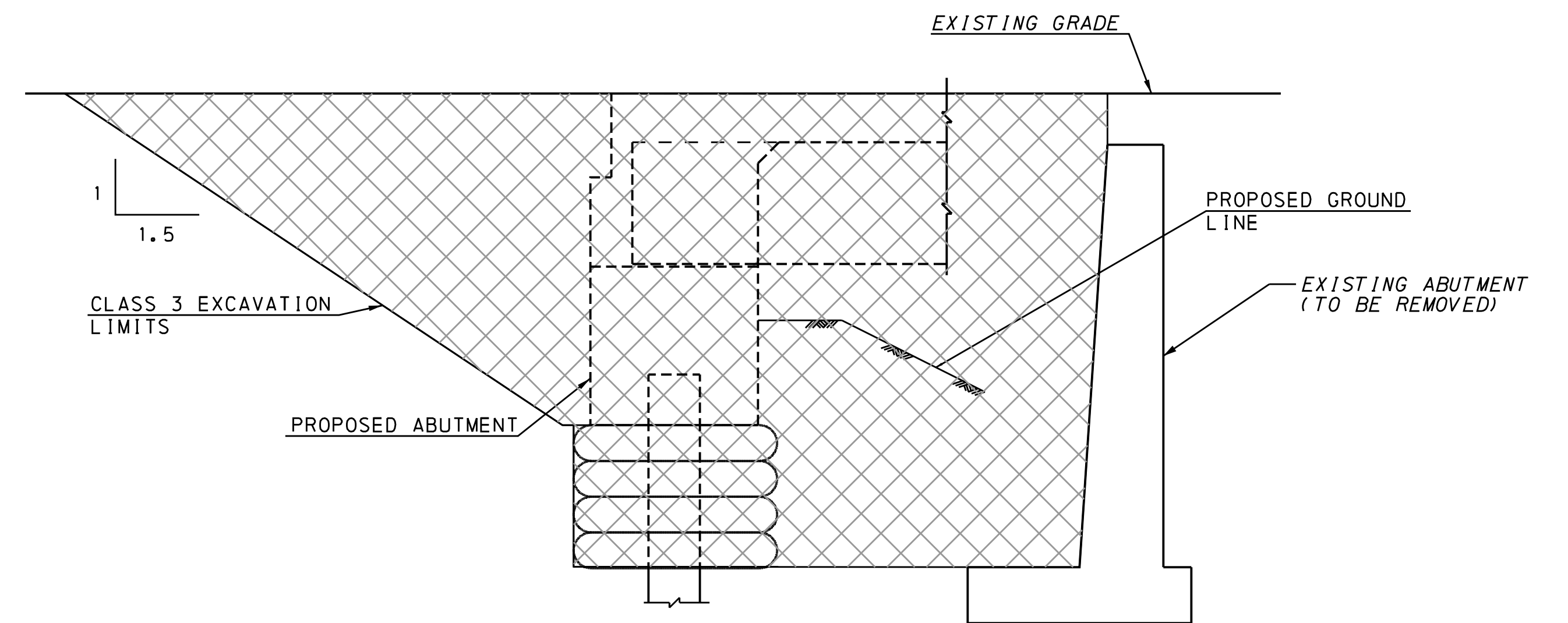
ALTERNATE STRUCTURE ITEMS			
ITEM NO.	ITEM	UNIT	TOTAL
8010-0001	BRIDGE STRUCTURE, AS DESIGNED, L-45	LS	LUMP SUM
8020-0001	PRESTRESSED CONCRETE BRIDGE STRUCTURE	LS	LUMP SUM
8030-0001	STEEL BRIDGE STRUCTURE	LS	LUMP SUM

APPROXIMATE QUANTITIES - BRIDGE STRUCTURE AS DESIGNED							
ITEM NO.	ITEM	UNIT	ABUT. 1	ABUT. 2	SUPER.	APPR. SLAB	TOTAL
8010-0001	BRIDGE STRUCTURE, AS DESIGNED, L-45 *	LS					
(1)	CLASS 3 EXCAVATION	CY	250	252			502
(1)	MEMBRANE WATERPROOFING SYSTEM INSTALLED ON OTHER SURFACES	SY	11	10			21
(1)	NO. 57 COARSE AGGREGATE	CY	25	26			51
(1)	CLASS AAAP CEMENT CONCRETE (2)	CY	14	15	57	54	140
(1)	CLASS AA CEMENT CONCRETE (3)	CY	2	3	19	12	36
(1)	CLASS A CEMENT CONCRETE	CY	24	25			49
(1)	SELECTED BORROW EXCAVATION, STRUCTURE BACKFILL	CY	57	57			114
(1)	PRESTRESSED CONCRETE SPREAD BOX BEAMS, 48"x30"	LF			233		233
(1)	GEOTEXTILE, CLASS 4, TYPE A	SY	257	241			498
(1)	6" PVC PIPE (SCHEDULE 40) (6)	LF	45	45			90
(1)	6" STRUCTURE FOUNDATION DRAIN (6)	LF	45	45			90
(1)	SELECTED BORROW EXCAVATION ROCK, R-8	CY	271	231			502
(1)	SELECTED BORROW EXCAVATION ROCK, R-4	CY	41	35			76
AND							
1002-0053	REINFORCEMENT BARS, EPOXY COATED (5)	LB	5,057	5,402	15,549	15,519	41,526
AND							
1005-0500	STEEL BEAM TEST PILES, HP12x74	LS	1@29'	1@26'			LS
AND							
1005-1104	STEEL BEAM BEARING PILES, HP12x74	LF	150	129			279
AND							
1005-1211	STEEL BEAM (NORMAL DUTY) PILE TIP REINFORCEMENT, HP12x74	EA	6	6			12
AND							
9000-0500	MANDATORY PRE-DRILLING FOR DRIVEN PILES *	LF	153	127			280
AND							
1019-0050	PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALER, BRIDGE SUPERSTRUCTURE)	SY			329	107	436
1018-0001	REMOVAL OF EXISTING BRIDGE	LS					LS

- (1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8010-0001 - GIVEN FOR INFORMATION ONLY.
- (2) INCLUDES CLASS AAAP CONCRETE IN DECK SLAB AND APPROXIMATELY 6 CUBIC YARDS OF CLASS AAAP CONCRETE TO ACCOUNT FOR STAY-IN-PLACE FORM TROUGHS.
- (3) INCLUDES CLASS AA CONCRETE IN SHEAR BLOCKS, CHEEKWALLS, DIAPHRAGMS, CURBS AND BARRIERS ABOVE THE HORIZONTAL CONSTRUCTION JOINT NEAR THE BRIDGE SEAT. INCLUDES ALL OF SAFETY WING.
- (4) QUANTITY TO BE USED FOR CLASS AA CONCRETE UNDER THE DECK COLUMN HEADING ON THE STRUCTURE COST DATA FORM.
- (5) FOR AS DESIGNED STRUCTURE, INCLUDED IN BRIDGE BID ITEMS.
FOR ALTERNATE DESIGNS, INCLUDED IN BRIDGE STRUCTURE LUMP SUM BID ITEM.
- (6) FOR ABUTMENT FOUNDATION DRAIN DETAILS, SEE SHEET 15.
- * SEE CONTRACT SPECIAL PROVISIONS

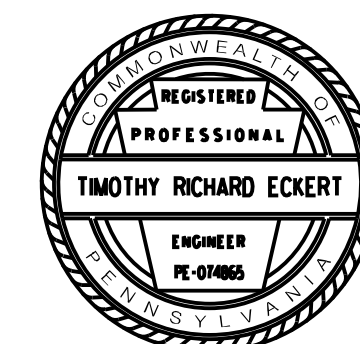


STRUCTURE BACKFILL LIMITS
NOT TO SCALE



CLASS 3 EXCAVATION LIMITS
NOT TO SCALE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
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SPREAD BOX BEAM BRIDGE

QUANTITIES

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 3 OF 43
L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...031501 QUANTITIES.dgn
MIDPOINT: ...031501 QUANTITIES.dgn
PLOT DATE: 1/30/2020 2:28:59 PM
OFFICE LOCATION: Pittsburgh, Pennsylvania

FASCIA BEAM WITH FUTURE WEARING SURFACE		P/S SPREAD BOX BEAM 48/30					
		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.829	0.829	0.829	0.870	N/A	0.829
	LOCATION (ft)	28.00	28.00	28.00	19.60	N/A	28.00
	LIMIT STATE	SERV-III	SERV-III	SERV-III	STR-I	N/A	SERV-III
	RATING FACTOR	1.76M	1.22M	1.01M	1.07V	N/A	1.06M
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.870	0.870	0.870	0.870	0.870	0.870
	LOCATION (ft)	3.36	19.60	19.60	19.60	3.36	19.60
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.52V	1.81V	1.54V	1.38V	1.04V	1.59V
MAXIMUM MOMENT CAPACITY (kip-ft)		3449.12		SPAN LENGTH (ft) = 56.00			
LOCATION (ft)		16.80					
MAXIMUM SHEAR CAPACITY (kips)		297.47					
LOCATION (ft)		8.40					

INTERIOR BEAM WITHOUT FWS		P/S SPREAD BOX BEAM 48/30					
SIMPLE SPAN		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.819	0.819	0.641	0.819	N/A	0.819
	LOCATION (ft)	3.44	3.44	28.00	3.44	N/A	3.44
	LIMIT STATE	STR-I	STR-I	SERV-III	STR-I	N/A	STR-I
	RATING FACTOR	2.19V	1.58V	1.41M	1.29V	N/A	1.40V
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.819	0.819	0.819	0.819	0.819	0.819
	LOCATION (ft)	3.44	3.44	3.44	3.44	3.44	3.44
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.84V	2.05V	1.84V	1.67V	1.17V	1.82V
MAXIMUM MOMENT CAPACITY (kip-ft)		3456.92		SPAN LENGTH (ft) = 56.00			
LOCATION (ft)		16.80					
MAXIMUM SHEAR CAPACITY (kips)		267.38					
LOCATION (ft)		8.40					

LEFT FASCIA BEAM WITHOUT FWS		P/S SPREAD BOX BEAM 48/30					
SIMPLE SPAN		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.829	0.829	0.829	0.870	N/A	0.829
	LOCATION (ft)	28.00	28.00	28.00	19.60	N/A	28.00
	LIMIT STATE	SERV-III	SERV-III	SERV-III	STR-I	N/A	SERV-III
	RATING FACTOR	1.93M	1.33M	1.10M	1.12V	N/A	1.17V
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.870	0.870	0.870	0.870	0.870	0.870
	LOCATION (ft)	3.40	19.60	19.60	19.60	3.40	19.60
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.66V	1.90V	1.62V	1.45V	1.09V	1.67V
MAXIMUM MOMENT CAPACITY (kip-ft)		3449.12		SPAN LENGTH (ft) = 56.00			
LOCATION (ft)		16.80					
MAXIMUM SHEAR CAPACITY (kips)		255.08					
LOCATION (ft)		5.60					

BEAM PROPERTIES USED FOR RATINGS:

BASIC BEAM SECTION PROPERTIES - I = 75,444 IN⁴
 NEUTRAL AXIS TO BOTTOM OF BEAM = 13.44 IN
 NEUTRAL AXIS TO TOP OF BEAM = 16.56 IN

COMPOSITE BEAM GROSS SECTION (EXTERIOR) - I = 197,452 IN⁴
 NEUTRAL AXIS TO BOTTOM OF BEAM = 22.62 IN
 NEUTRAL AXIS TO TOP OF BEAM = 7.38 IN

COMPOSITE BEAM TRANSFORMED SECTION (EXTERIOR) - I = 206,512 IN⁴
 NEUTRAL AXIS TO BOTTOM OF BEAM = 22.21 IN
 NEUTRAL AXIS TO TOP OF BEAM = 7.79 IN

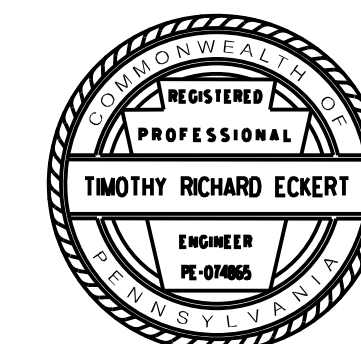
INTERIOR BEAM WITH FWS		P/S SPREAD BOX BEAM 48/30					
SIMPLE SPAN		H20	HS20	ML-80	PHL-93	P-82	TK527
INVENTORY RATING (IR)	DISTRIBUTION FACTOR	0.819	0.819	0.641	0.819	N/A	0.819
	LOCATION (ft)	3.42	3.42	28.00	3.42	N/A	3.42
	LIMIT STATE	STR-I	STR-I	SERV-III	STR-I	N/A	STR-I
	RATING FACTOR	2.08V	1.50V	1.28M	1.22V	N/A	1.33V
OPERATING RATING (OR)	DISTRIBUTION FACTOR	0.819	0.819	0.819	0.819	0.819	0.819
	LOCATION (ft)	3.42	3.42	3.42	3.42	3.42	3.42
	LIMIT STATE	STR-II	STR-II	STR-II	STR-IA	STR-II	STR-II
	RATING FACTOR	2.70V	1.94V	1.74V	1.58V	1.11V	1.73V
MAXIMUM MOMENT CAPACITY (kip-ft)		3456.92		SPAN LENGTH (ft) = 56.00			
LOCATION (ft)		16.80					
MAXIMUM SHEAR CAPACITY (kips)		260.92					
LOCATION (ft)		8.40					

NOTES:
 GIVEN DISTRIBUTION FACTOR IS THE VEHICULAR LIVE LOAD DISTRIBUTION FACTOR USED TO PRODUCE THE GIVEN RATING. FOR THE STR-IP LIMIT STATE, THE VEHICULAR LIVE LOAD DISTRIBUTION FACTOR ACCOUNTS FOR THE PRESENCE OF PEDESTRIAN LOADS, IF APPLICABLE.

SYMBOL DESIGNATION FOR RATING FACTORS:
 M - MOMENT RATING FACTOR CONTROLS
 V - SHEAR RATING FACTOR CONTROLS

NOTES:
 • FOR GENERAL NOTES, SEE SHEET 2.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
RATINGS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

SHEET 4 OF 43

L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: ...04.1501.RATINGS.dwg
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 09:10:11 AM
 PLOT DRIVER: PENNONI-PLOT-PENNONI-FULL-PDF-PLT.CFG
 DATE PLOTTED: 02/19/2019 08:34:49 PM
 USER NAME: Bhubock OFFICE LOCATION: PHT+EBURGH, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

TABLE OF TOP OF DECK ELEVATIONS AT 10TH POINTS ALONG CENTERLINE OF BEAM				
LOCATION	BEAM NUMBER			
	1	2	3	4
CL BRG. ABUT. 1	945.97	946.21	946.24	946.03
5.600	945.91	946.16	946.18	945.98
11.200	945.83	946.08	946.11	945.91
16.800	945.73	945.99	946.03	945.83
22.400	945.61	945.88	945.92	945.73
28.000	945.47	945.75	945.80	945.62
33.600	945.32	945.60	945.65	945.48
39.200	945.14	945.43	945.49	945.32
44.800	944.95	945.24	945.31	945.15
50.400	944.74	945.04	945.11	944.95
CL BRG. ABUT. 2	944.52	944.82	944.89	944.74

DECK ELEVATIONS ARE GIVEN AT THE CL OF EACH BEAM. LOCATIONS GIVEN ARE THE DISTANCE (FT.) ALONG THE CL OF EACH BEAM TO EACH 10TH POINT AS MEASURED FROM THE CL OF BEARING AT ABUTMENT 1.

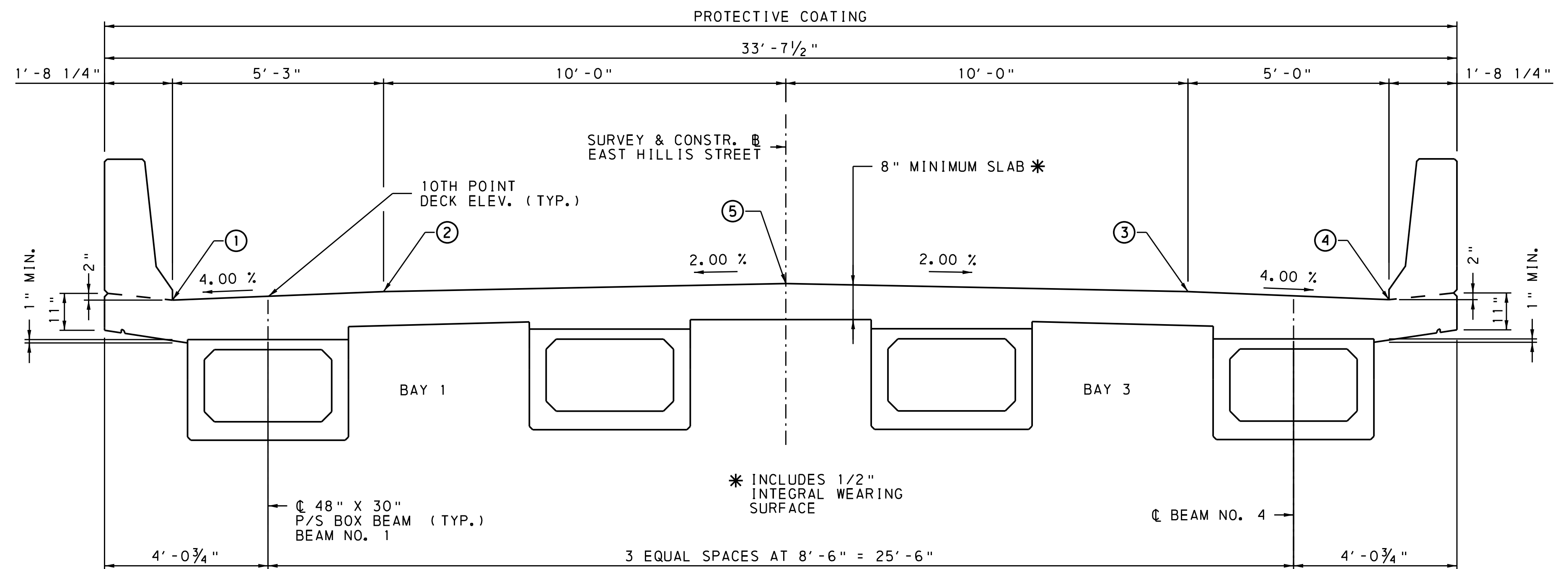
TABLE OF TOP OF BEAM ELEVATIONS AT 10TH POINTS ALONG CENTERLINE OF BEAM				
LOCATION	BEAM NUMBER			
	1	2	3	4
CL BRG. ABUT. 1	945.17	945.46	945.48	945.24
5.600	945.06	945.35	945.38	945.14
11.200	944.94	945.23	945.27	945.03
16.800	944.81	945.11	945.15	944.92
22.400	944.68	944.98	945.03	944.81
28.000	944.54	944.85	944.90	944.68
33.600	944.39	944.71	944.76	944.55
39.200	944.23	944.55	944.61	944.41
44.800	944.07	944.39	944.46	944.26
50.400	943.89	944.23	944.30	944.11
CL BRG. ABUT. 2	943.72	944.06	944.14	943.95

NOTE: THE TOP OF BEAM ELEVATIONS SHOWN IN THE TABLE ARE THE DESIGN VALUES COMPUTED INCLUDING THE EFFECT OF THE DESIGN BEAM CAMBER.

TABLE OF BOTTOM OF BEAM ELEVATIONS AT 10TH POINTS ALONG CENTERLINE OF BEAM				
LOCATION	BEAM NUMBER			
	1	2	3	4
CL BRG. ABUT. 1	942.67	942.96	942.98	942.74
5.600	942.56	942.85	942.88	942.64
11.200	942.44	942.73	942.77	942.53
16.800	942.31	942.61	942.65	942.42
22.400	942.18	942.48	942.53	942.31
28.000	942.04	942.35	942.40	942.18
33.600	941.89	942.21	942.26	942.05
39.200	941.73	942.05	942.11	941.91
44.800	941.57	941.89	941.96	941.76
50.400	941.39	941.73	941.80	941.61
CL BRG. ABUT. 2	941.22	941.56	941.64	941.45

NOTE: THE BOTTOM OF BEAM ELEVATIONS SHOWN IN THE TABLE ARE THE DESIGN VALUES COMPUTED INCLUDING THE EFFECT OF THE DESIGN BEAM CAMBER AND IS BASED SOLELY ON THE NOMINAL BEAM DEPTH.

FOR PRESTRESSED CONCRETE BEAMS, AS PER DM-4, THESE VALUES SHOULD NOT BE USED FOR CALCULATING THE VERTICAL CLEARANCE TO THE BOTTOM OF THE BEAM. IN THAT CASE, A STRAIGHT LINE VARIATION BETWEEN THE BOTTOM OF BEAM ELEVATION AT EACH BEARING SHOULD BE USED.



TYPICAL SECTION
LOOKING AHEAD STATIONS



NOTES: 1/2" MINIMUM HAUNCH

ELEVATION TABLE TOP OF SLAB ELEVATION					
STATION	PT. ①	PT. ②	PT. ⑤	PT. ③	PT. ④
4+12.81	—	—	—	—	945.94
4+13.87	—	—	—	946.13	945.93
4+16.00	—	—	946.31	946.11	945.91
4+18.13	—	946.09	946.29	946.09	945.89
4+19.24	945.87	946.08	946.28	946.08	945.88
4+20.00	945.86	946.07	946.27	946.07	945.87
4+30.00	945.73	945.94	946.14	945.94	945.74
4+40.00	945.54	945.75	945.95	945.75	945.55
4+50.00	945.29	945.50	945.70	945.50	945.30
4+60.00	944.98	945.19	945.39	945.19	944.99
4+68.81	944.66	944.87	945.07	944.87	944.67
4+69.87	944.62	944.83	945.02	944.83	—
4+70.00	944.61	944.82	945.02	—	—
4+72.00	944.53	944.74	944.94	—	—
4+74.13	944.45	944.65	—	—	—
4+75.24	944.40	—	—	—	—

ELEVATIONS GIVEN AT THE FIRST AND LAST STATIONS LISTED FOR EACH POINT ARE LOCATED AT THE CL OF BEARING.

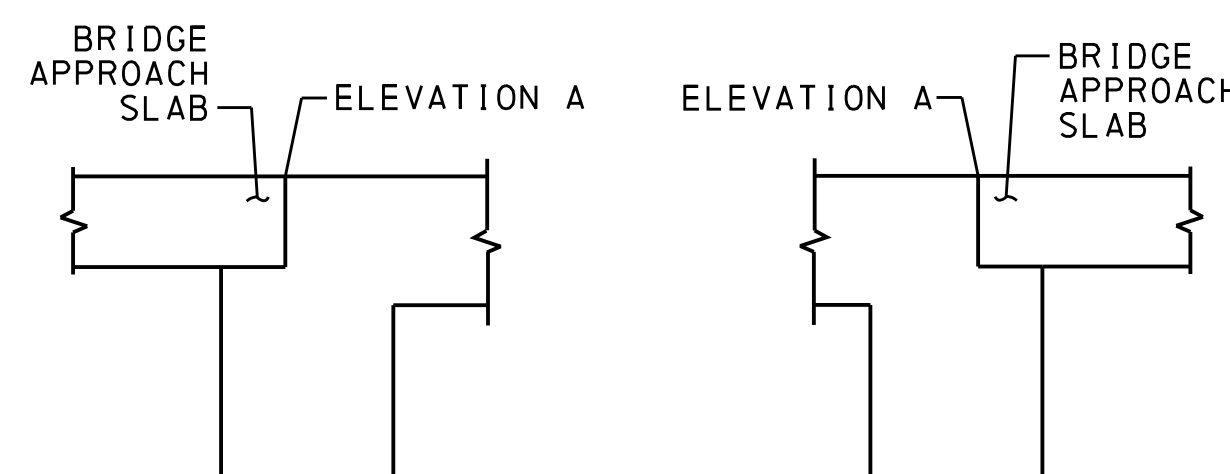


TABLE OF DECK SLAB THICKNESSES		
BEAM NO.	SLAB THICKNESS	
	CL BRG. ABUT. 1	CL BRG. ABUT. 2
1	9 1/2"	9 1/2"
2	9"	9"
3	9"	9"
4	9 1/2"	9 1/2"

NOTE: LOCATION OF DECK SLAB THICKNESSES IS WHERE THE CL OF BEAM INTERSECTS THE CL OF BEARING.

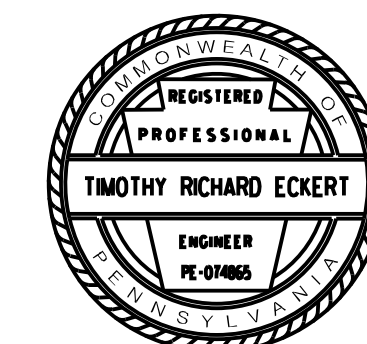
NOTE: DECK SLAB THICKNESS IS MEASURED FROM THE TOP OF DECK TO THE TOP OF BEAM.

	TRANSVERSE LOCATION	STATION	ELEVATION
ABUT. 1 ELEVATION A	PT. ①	4+17.71	945.88
	PT. ②	4+16.59	946.10
	PT. ⑤	4+14.47	946.33
	PT. ③	4+12.34	946.15
	PT. ④	4+11.28	945.96
ABUT. 2 ELEVATION A	PT. ①	4+76.77	944.34
	PT. ②	4+75.66	944.59
	PT. ⑤	4+73.53	944.88
	PT. ③	4+71.41	944.76
	PT. ④	4+70.35	944.61

NOTES:

- FOR GENERAL PLAN, SEE SHEET 1.
- FOR GENERAL NOTES, SEE SHEET 2.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE

TYPICAL SECTION & ELEVATION CHART

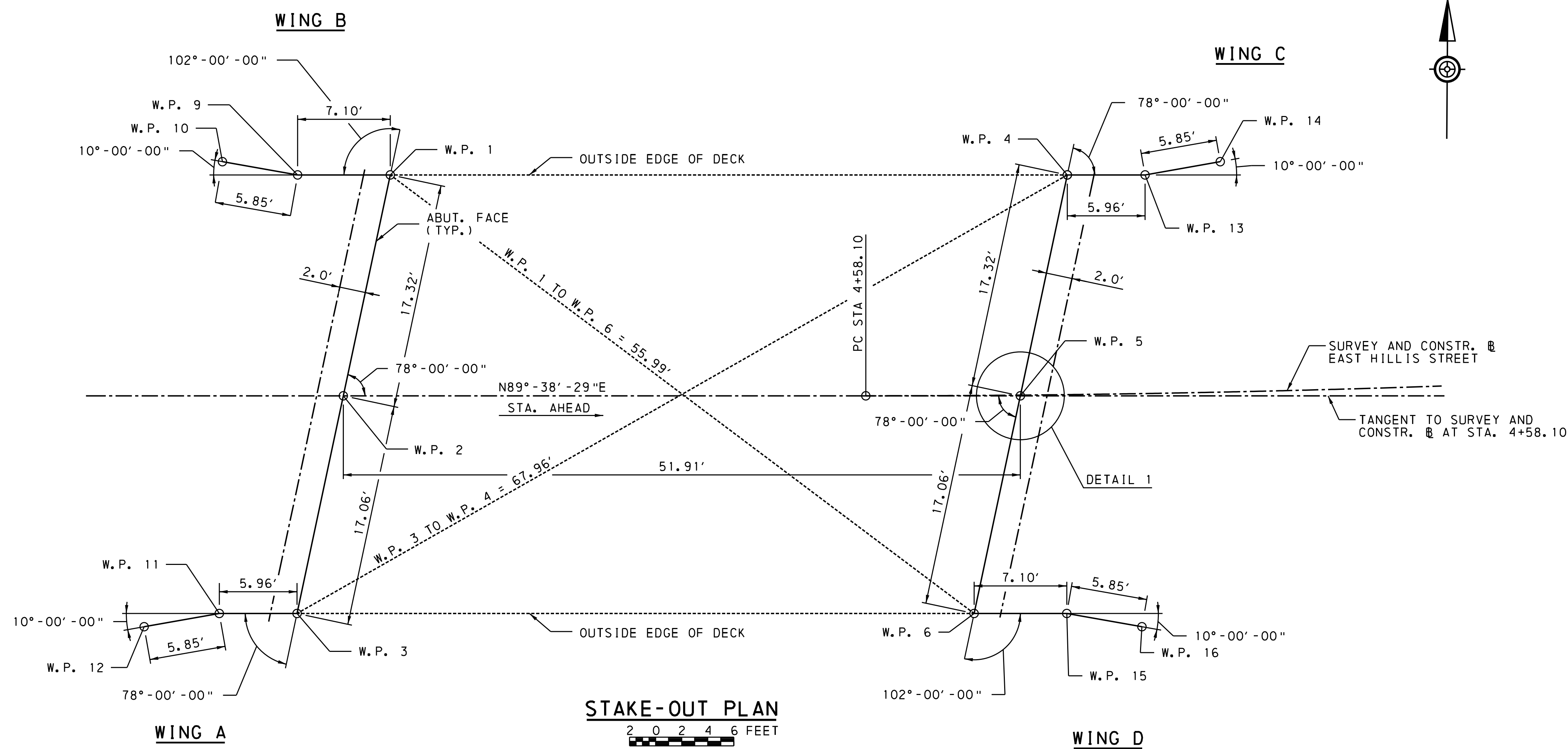
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 5 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...051501.TYPICAL SECTION.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JACQUES PENNONI
CHECKED BY: JACQUES PENNONI
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 10:47 PM
USER NAME: Jburdock OFFICE LOCATION: PHT+Edinburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

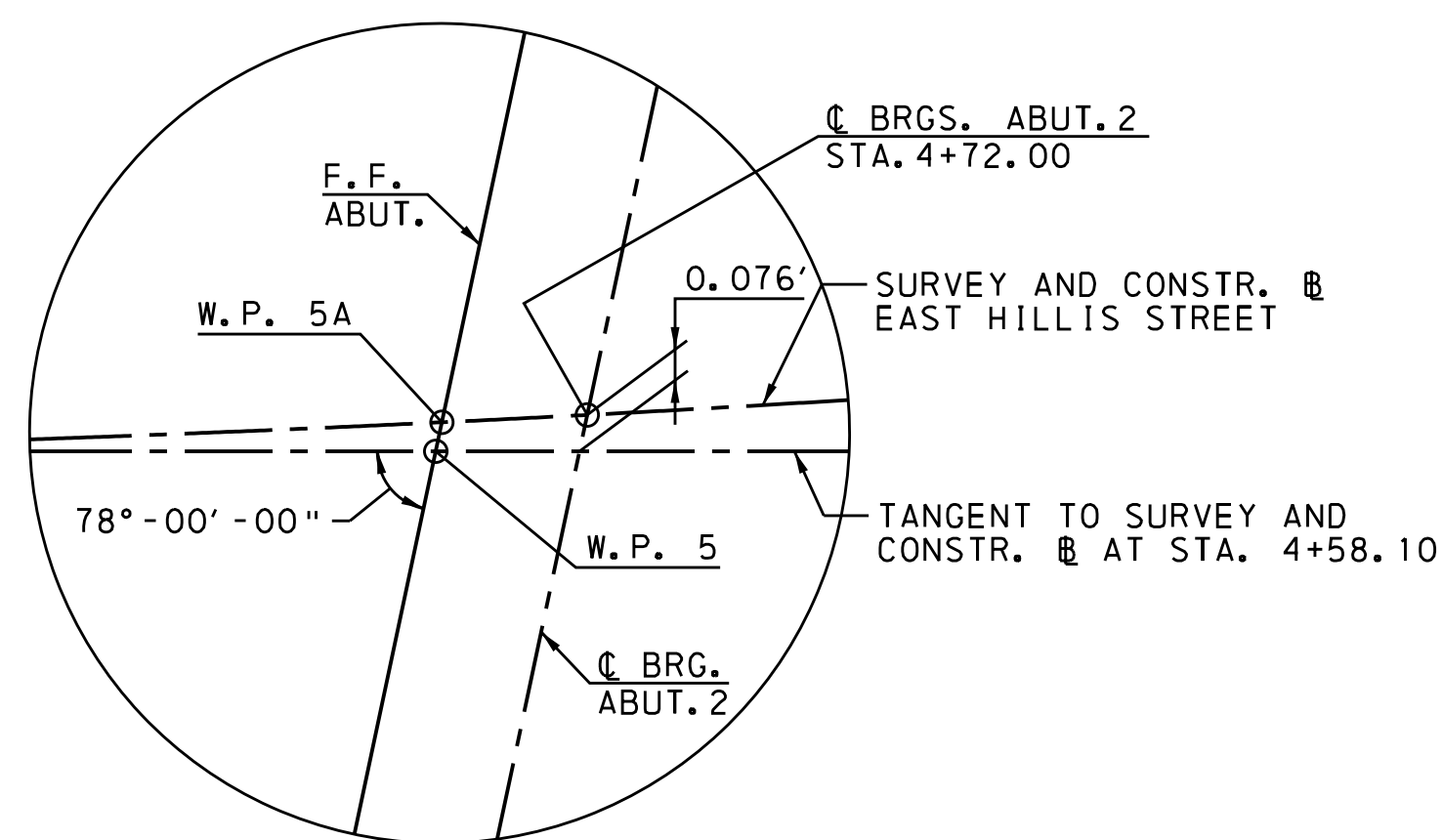


WORK POINTS				
NUMBER	Y (NORTHING) (ft)	X (EASTING) (ft)	STATION	OFFSET
1	332805.6214	1457161.3278	4+21.64	-16.94
2	332788.6617	1457157.8339	4+18.04	0.00
3	332771.9524	1457154.3984	4+14.50	16.69
9	332805.5770	1457154.2279	4+14.54	-16.94
10	332806.5572	1457148.4617	4+08.78	-17.95
11	332771.9151	1457148.4385	4+08.54	16.69
12	332770.8627	1457142.6750	4+02.77	17.70
4	332805.9464	1457213.2468	4+73.56	-16.94
5	332788.9867	1457209.7529	4+69.96	0.00
5A	332806.9906	1457225.6290	4+69.97	0.05
6	332772.2773	1457206.3074	4+66.41	16.69
13	332805.9837	1457219.2067	4+79.52	-16.94
14	332807.0360	1457224.9602	4+85.28	-17.95
15	332772.3217	1457213.4072	4+73.51	16.69
16	332771.3416	1457219.1835	4+79.28	17.70

NOTE: OFFSET IS MEASURED PERPENDICULAR TO CL ROADWAY AND WORKING TANGENT LINE STARTING @ STA. 4+58.10, LOOKING STATIONS AHEAD.

FOUR DECIMAL PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

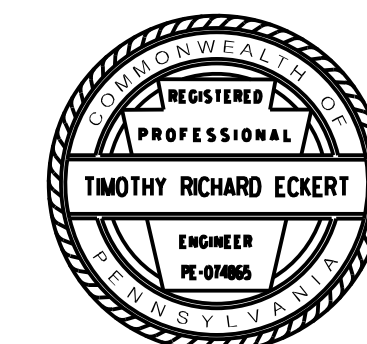
HORIZONTAL DISTANCE BETWEEN WORK POINTS	
W.P. 3 TO W.P. 4	67.96'
W.P. 1 TO W.P. 6	55.99'



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
STAKE-OUT PLAN



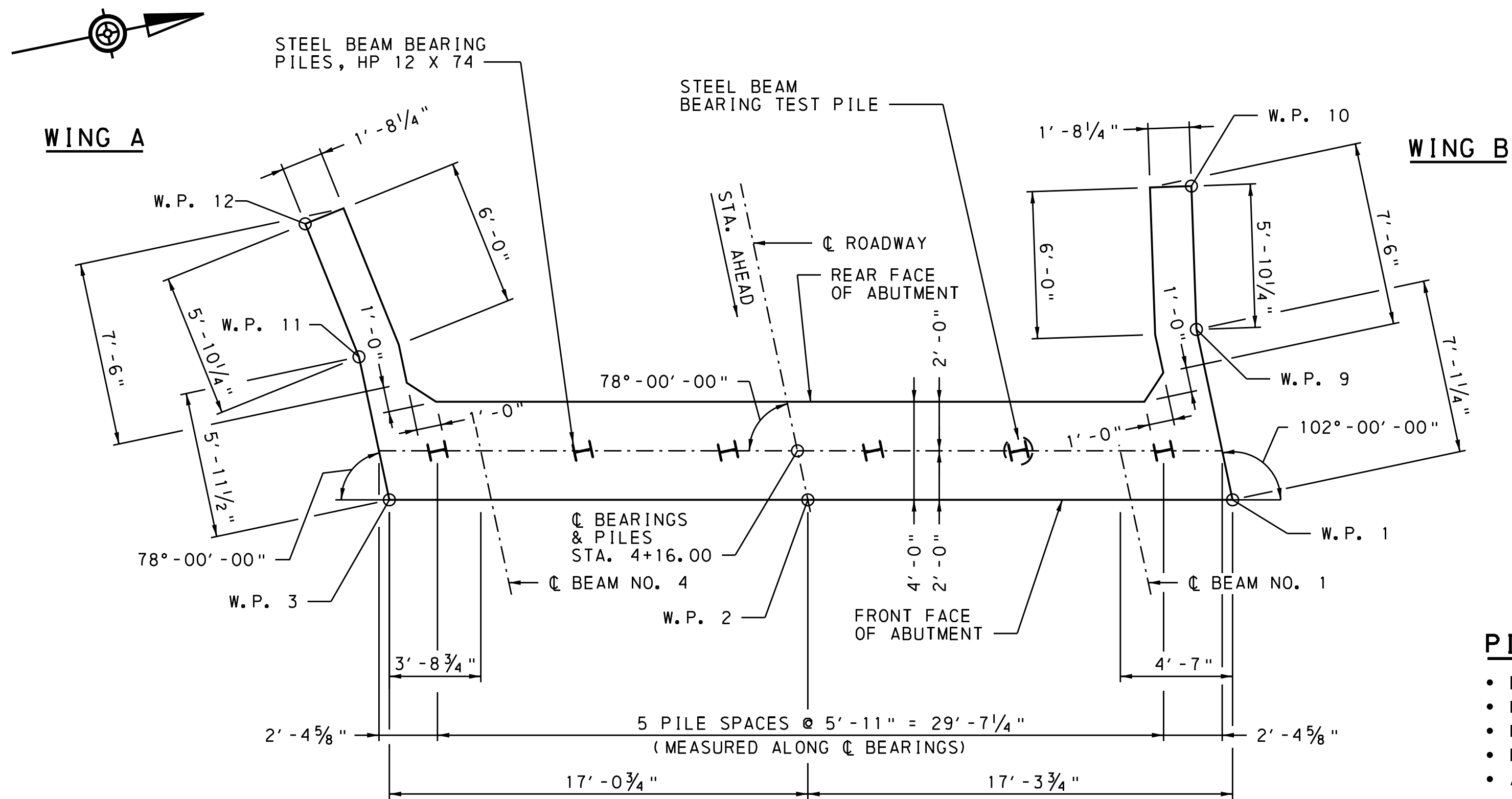
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 6 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: \\S01501-STAKE-OUT-PLAN.dwg
MICROSTATION VERSION: MicroStation V8i
PROJECT NUMBER: 18-001-1581
DRAWING NUMBER: 18-001-1581-01
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 10:45:54 PM
USER NAME: Bhubock OFFICE LOCATION: PHT+@bhubock.com

DES: TE CKD: MP DWG: NCC CKD: TE

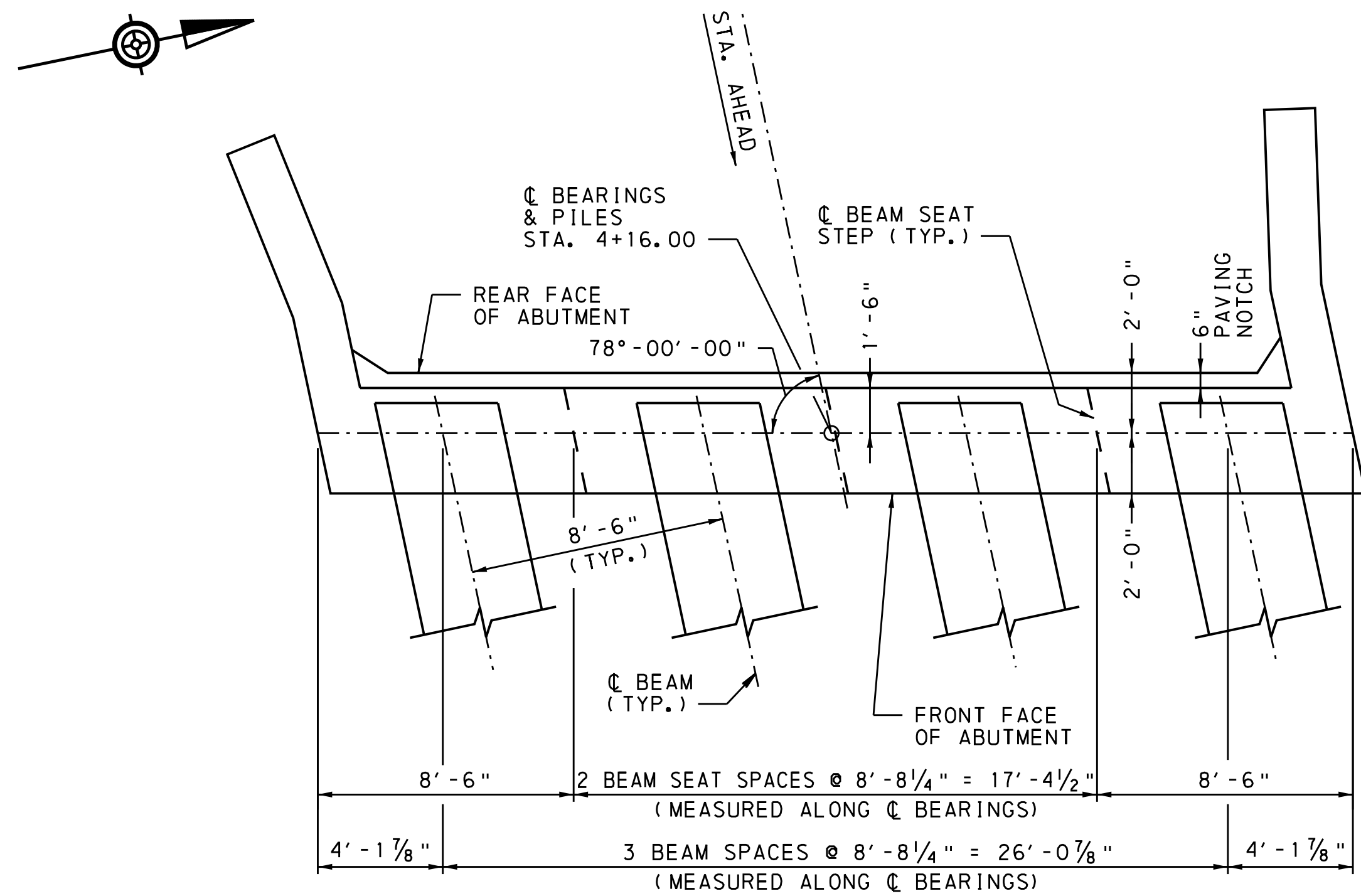


ABUTMENT 1 PLAN

2 0 2 4 FEET

PILE NOTES:

- ESTIMATED PILE TIP ELEVATIONS FOR ABUTMENT 1= VARIES 910.8 TO 911.8
- MAXIMUM STRENGTH AXIAL CAPACITY FOR ABUTMENT 1 = 197.5K
- MAXIMUM VERTICAL LOAD PER PILE, ABUTMENT 1 = 176.2K
- PILE SIZE: HP 12x74
- ALL DIMENSIONS ARE TO CENTER OF PILE.



ABUTMENT 1 PLAN @ TOP OF BEAM

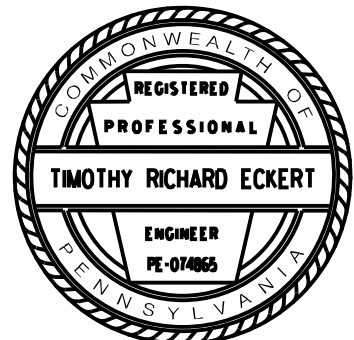
2 0 2 4 FEET

DECK AND APPROACH SLAB NOT SHOWN FOR CLARITY

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.
- FOR BEAM SEAT ELEVATIONS, SEE SHEET 13.
- FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
ABUTMENT 1 PLAN

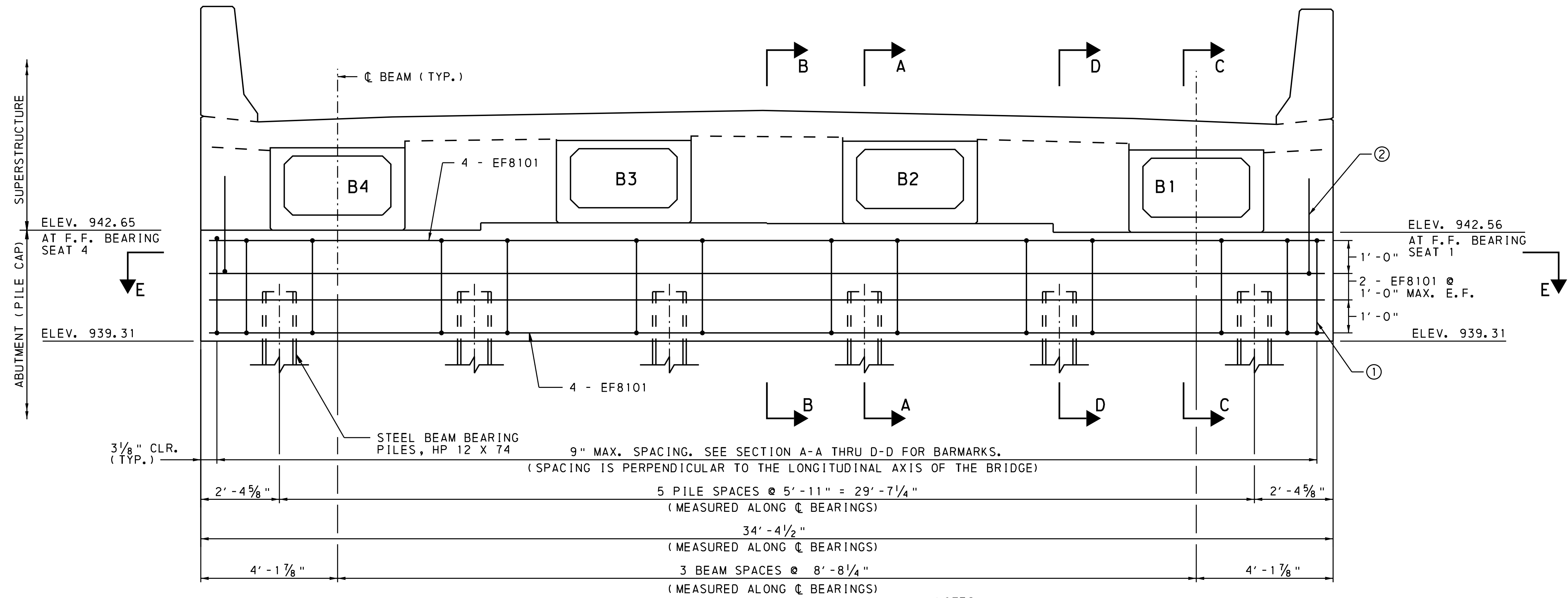
APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

SHEET 7 OF 43

L-45

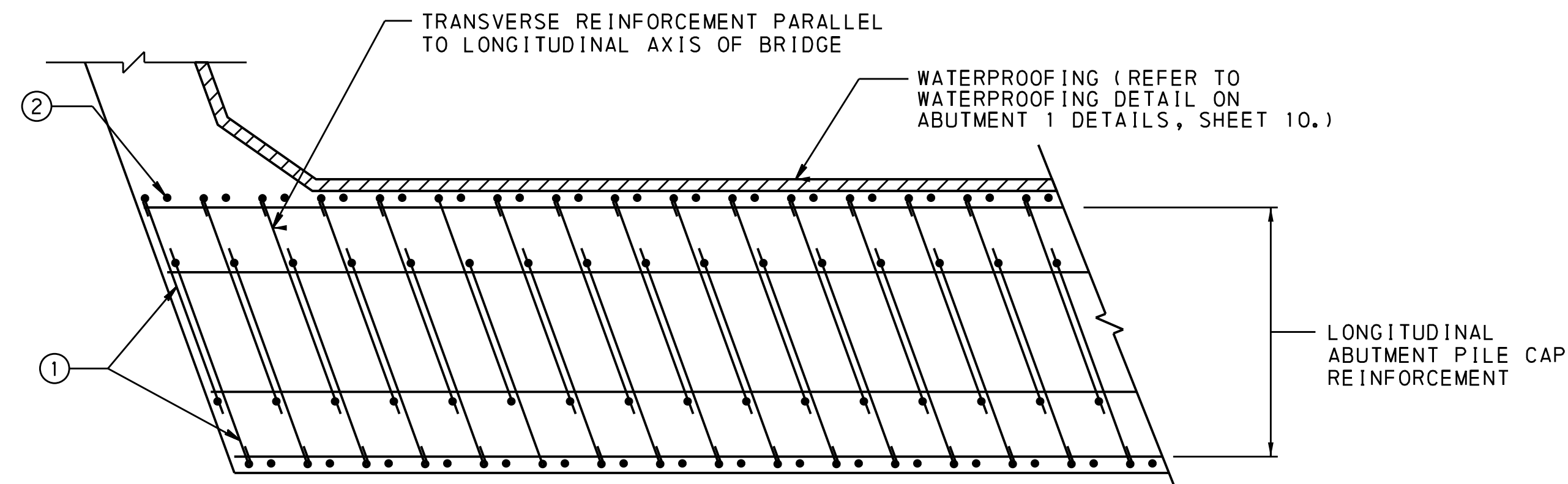
PENNONI ASSOCIATES, INC.
 FILE NAME: ...071501.ABUT1.PLAN.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 10:58:42 AM
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 01/30/2020 10:58:42 PM
 USER NAME: Bhubock OFFICE LOCATION: PITT-SBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE



ABUTMENT 1 ELEVATION
(LOOKING STATIONS BACK)
1 0 1 2 FEET

- NOTES:
- ① TRANSVERSE REINFORCEMENT IN ABUTMENT PILE CAP
 - ② TRANSVERSE REINFORCEMENT TYING ABUTMENT TO SUPERSTRUCTURE



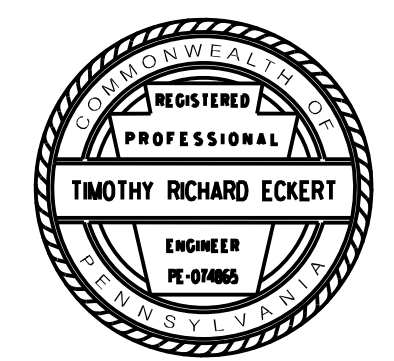
SECTION E-E
NOT TO SCALE

- NOTES:
- ① TRANSVERSE REINFORCEMENT IN ABUTMENT
 - ② TRANSVERSE REINFORCEMENT TYING ABUTMENT TO SUPERSTRUCTURE

- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 1 PLAN, SEE SHEET 7.
 - FOR SECTIONS A-A, B-B, C-C AND D-D, SEE SHEET 9.
 - FOR BEAM SEAT ELEVATIONS, SEE SHEET 13.
 - FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND
F.F. = FRONT FACE
E.F. = EACH FACE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 ELEVATION

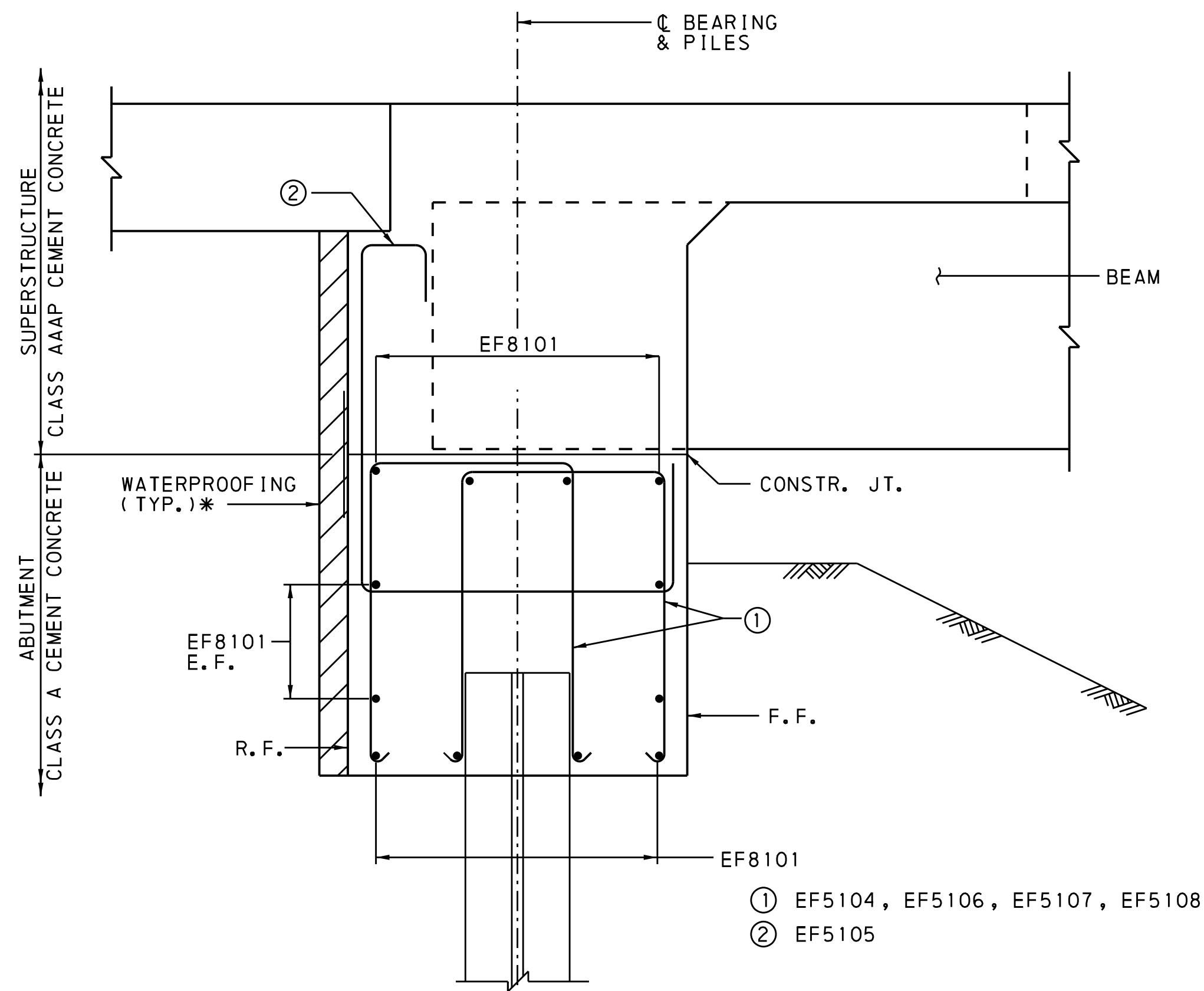
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 8 OF 43

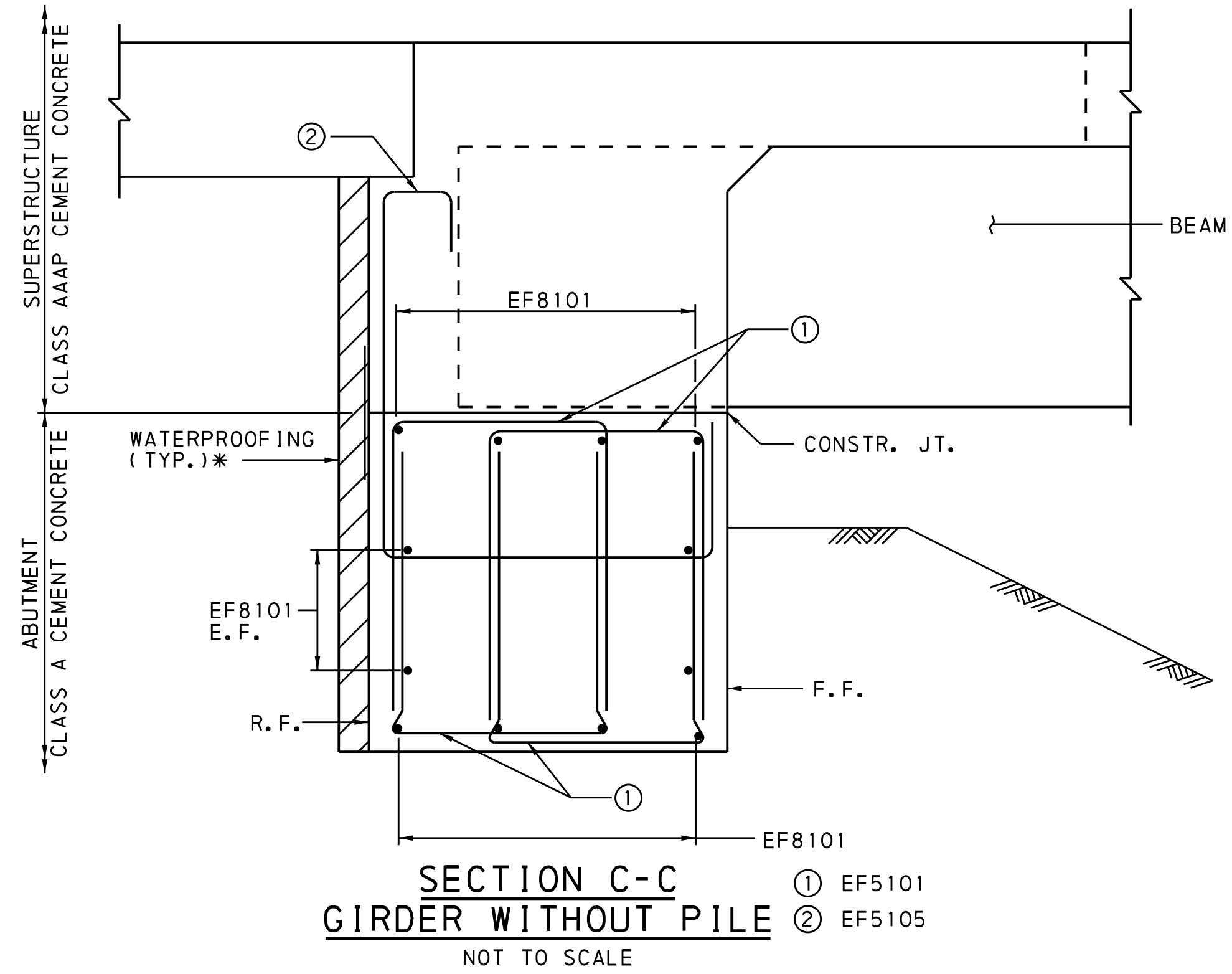
L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...08_1501_ABT1_ELEV.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT DATE: 01/30/2020 11:00 AM
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 8:16:08 PM
USER NAME: Bhubock OFFICE LOCATION: PHT+BBurgph, Pennsylvania

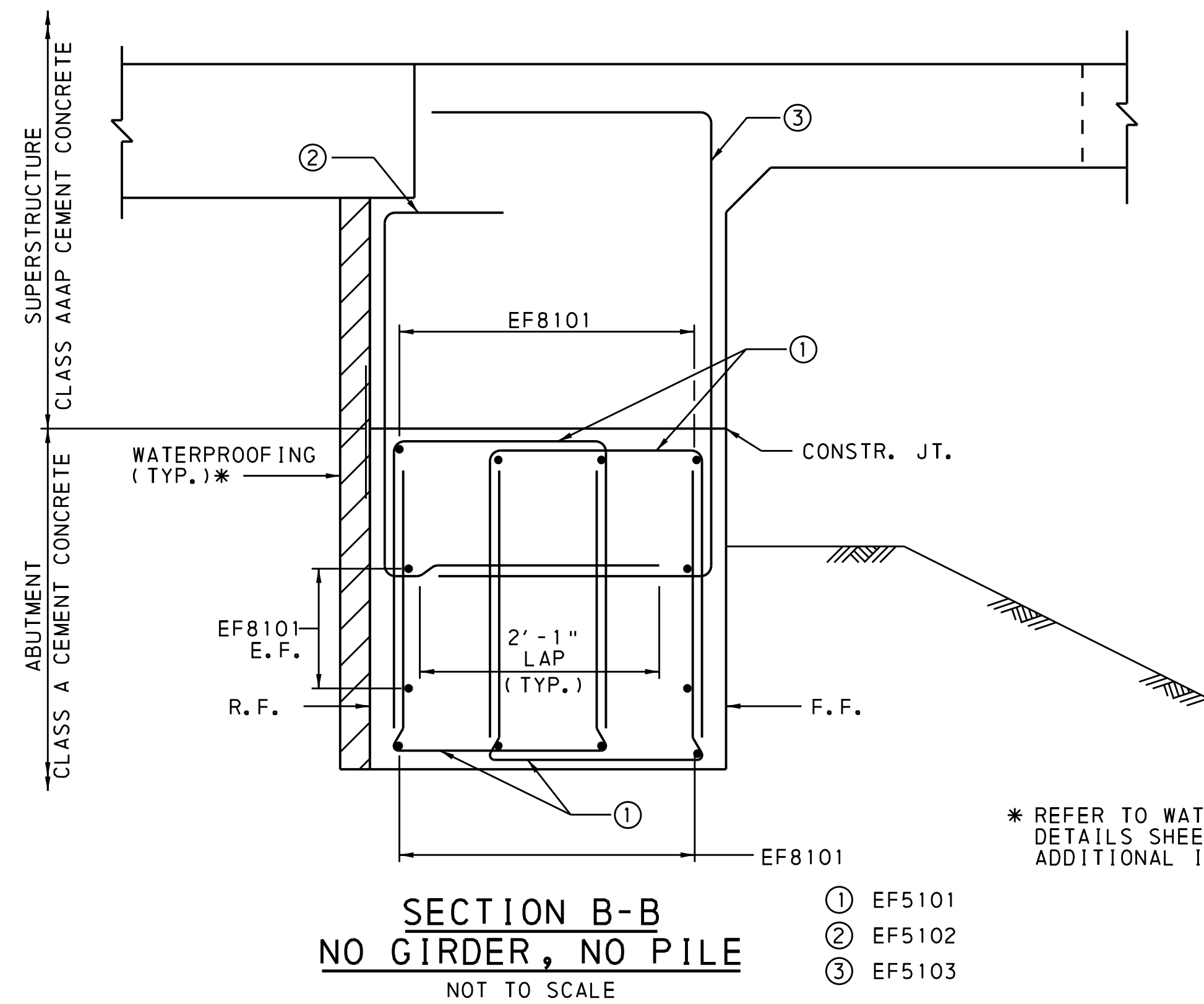
DES: TE CKD: MP DWG: NCC CKD: TE



SECTION A-A
GIRDER WITH PILE
NOT TO SCALE

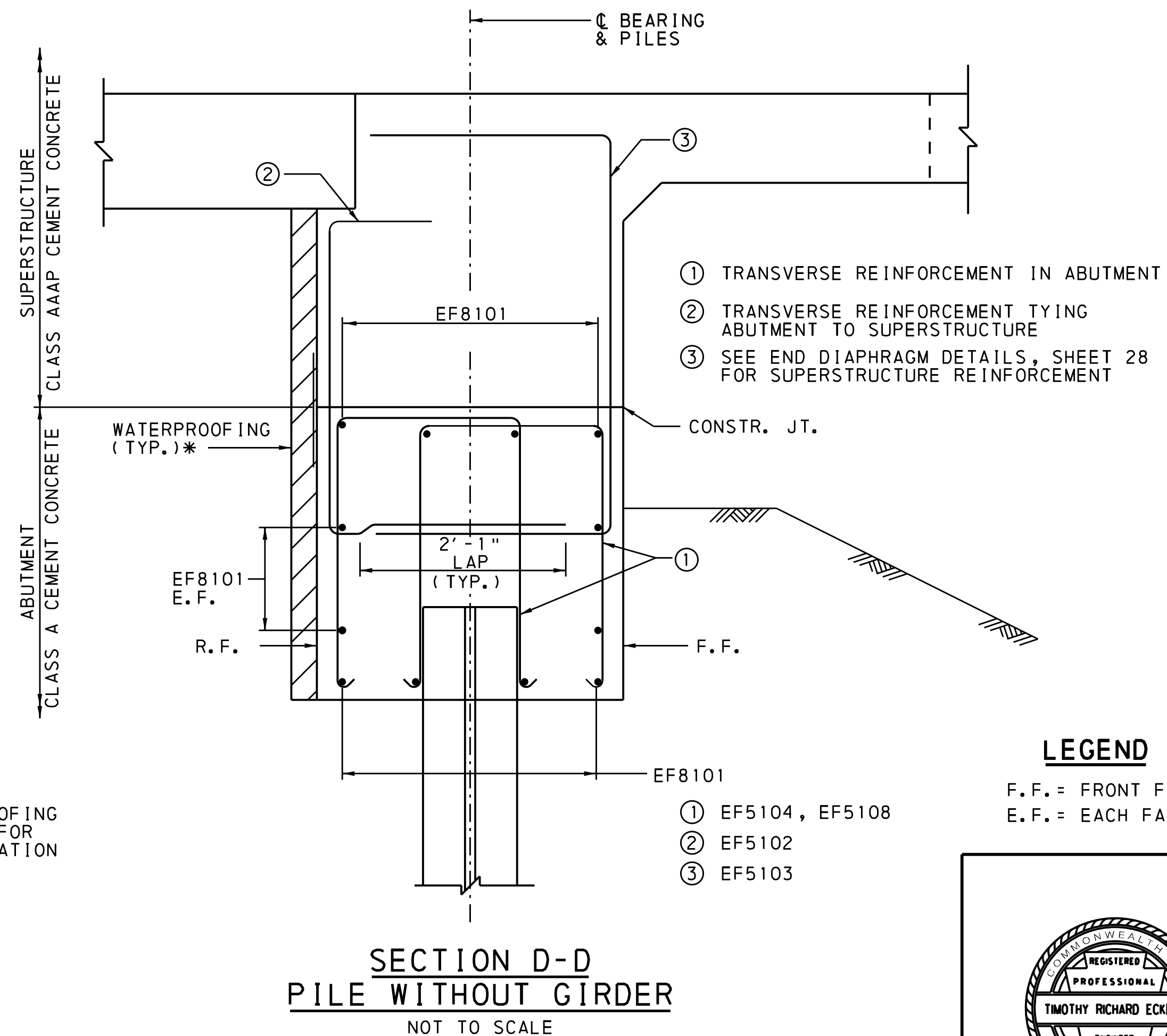


SECTION C-C
GIRDER WITHOUT PILE
NOT TO SCALE



SECTION B-B
NO GIRDER, NO PILE
NOT TO SCALE

* REFER TO WATERPROOFING
DETAILS SHEET 10 FOR
ADDITIONAL INFORMATION



SECTION D-D
PILE WITHOUT GIRDER
NOT TO SCALE

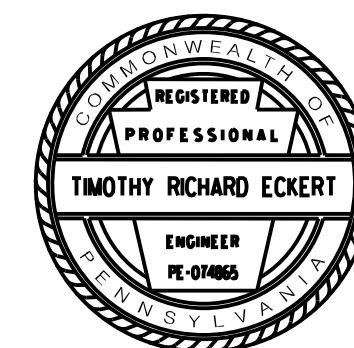
NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 PLAN, SEE SHEET 7.
- FOR LOCATION OF SECTIONS A-A, B-B, C-C AND D-D, SEE SHEET 8.
- FOR ABUTMENT 1 DETAILS, SEE SHEET 10.
- FOR BEAM SEAT ELEVATIONS, SEE SHEET 13.
- FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 SECTIONS

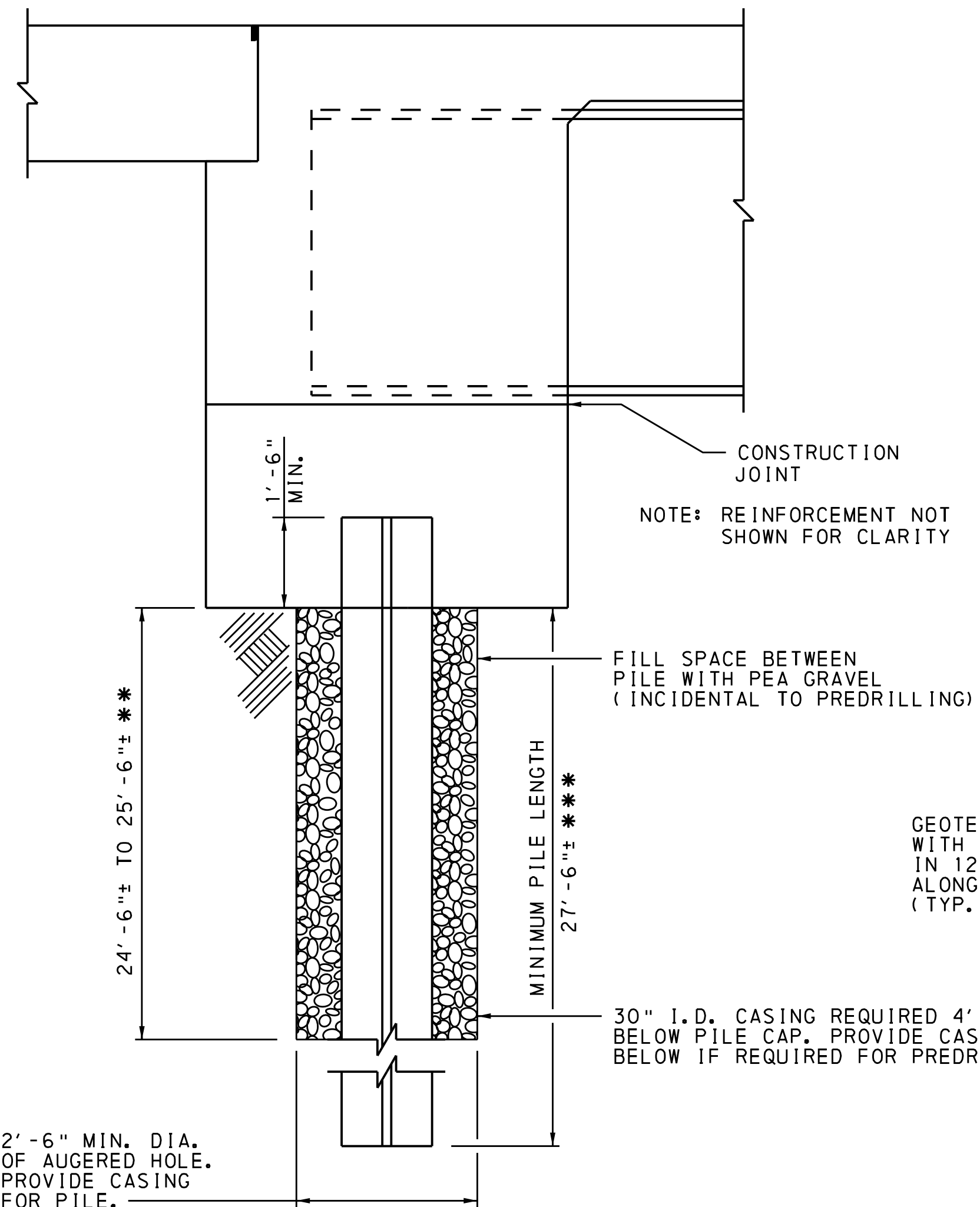
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 9 OF 43

L-45

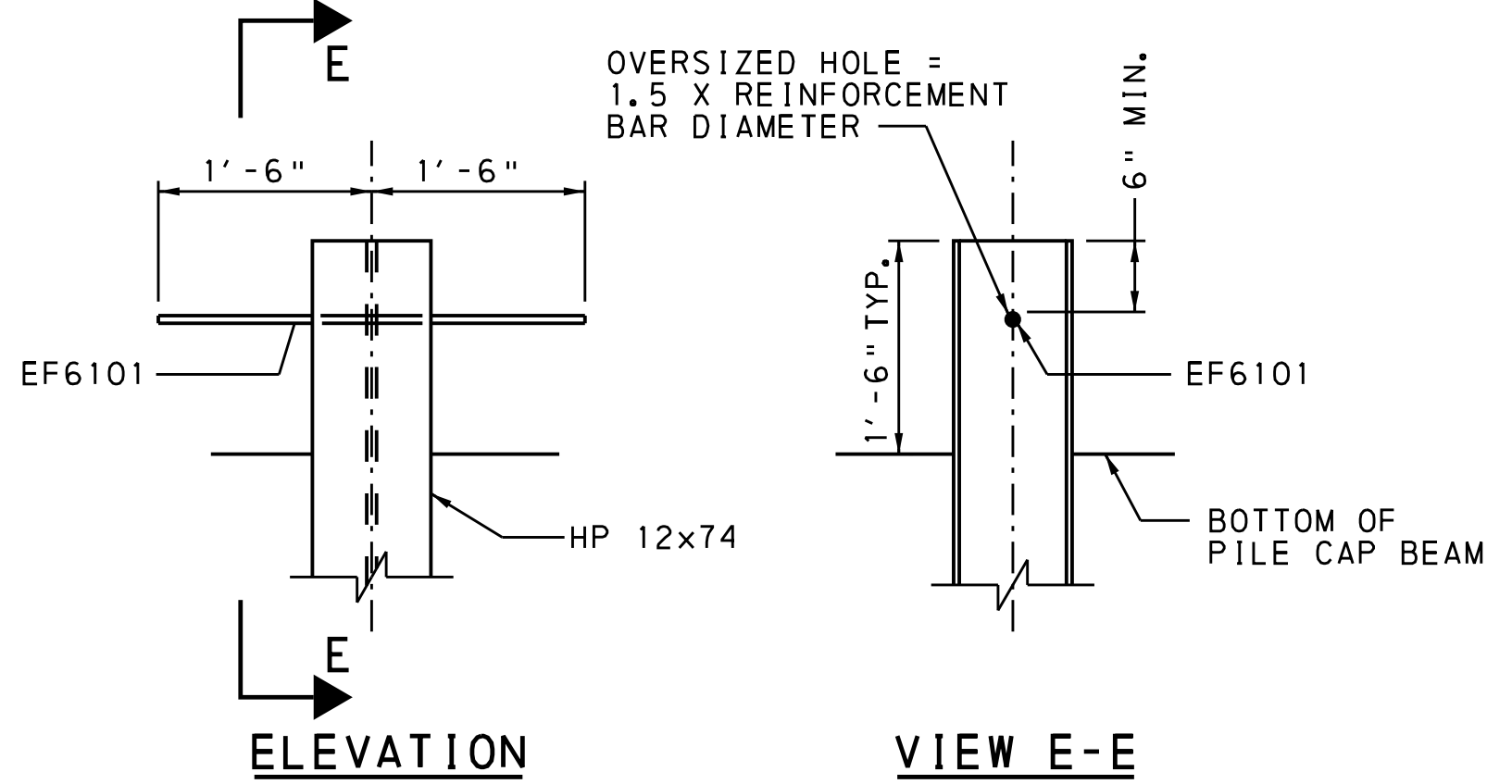
PENNONI ASSOCIATES, INC.
FILE NAME: ...091501.ABUT1 SECTIONS.dgn
PROSTATION: ...MicroStation V8i
PLOT DATE: ...1/30/2020
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 12/19/2019 4:16:57 PM
USER NAME: Bhubock OFFICE LOCATION: PHT+sburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

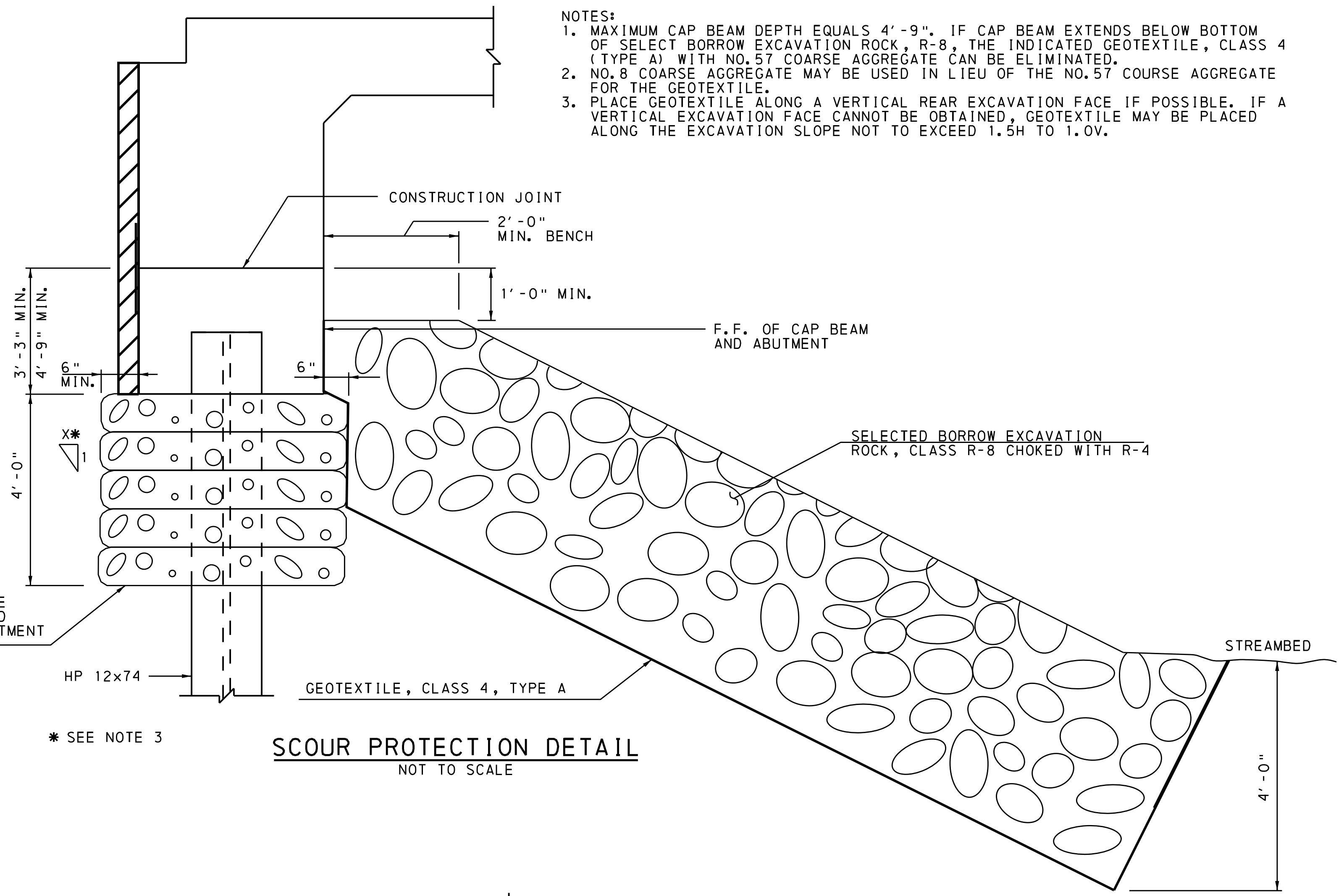


INTEGRAL ABUTMENT PILE INSTALLATION DETAIL
NOT TO SCALE

- *** PRE-DRILLING OF HOLES TO ELEVATION OF 913.80 TO 914.80 BELOW BOTTOM ELEVATION OF PILE CAP. BACKFILL WITH AASHTO #10 IN ACCORDANCE WITH SPECIAL PROVISION, PREDRILLED PILE DETAIL.
- *** PILES MUST BE DRIVEN TO A MINIMUM PILE TIP ELEVATION 910.80 TO 911.80.

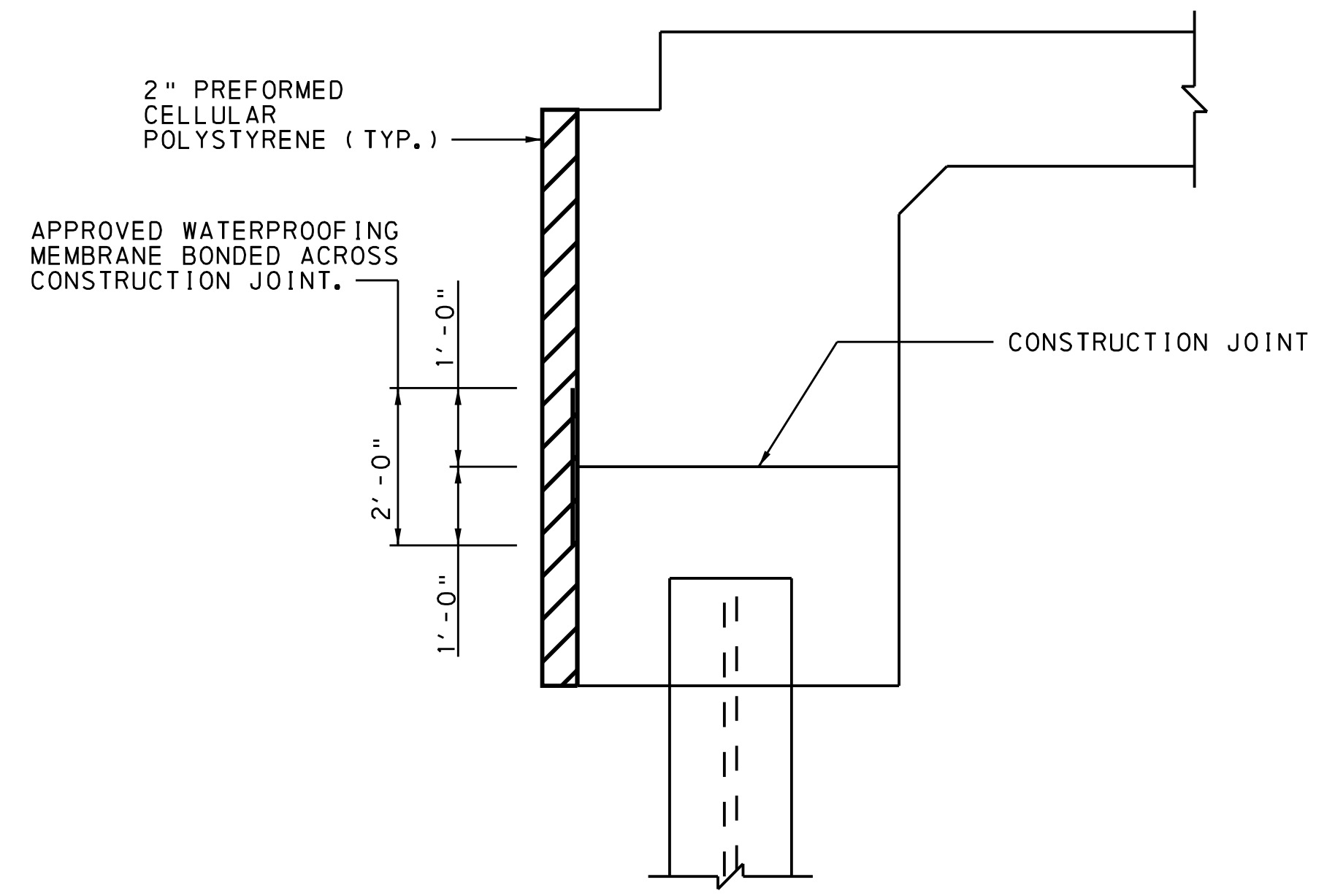


H-PILE-TO-PILE CAP CONNECTION DETAIL
NOT TO SCALE



SCOUR PROTECTION DETAIL
NOT TO SCALE

- NOTES:
- MAXIMUM CAP BEAM DEPTH EQUALS 4'-9". IF CAP BEAM EXTENDS BELOW BOTTOM OF SELECT BORROW EXCAVATION ROCK, R-8, THE INDICATED GEOTEXTILE, CLASS 4 (TYPE A) WITH NO. 57 COARSE AGGREGATE CAN BE ELIMINATED.
 - NO. 8 COARSE AGGREGATE MAY BE USED IN LIEU OF THE NO. 57 COARSE AGGREGATE FOR THE GEOTEXTILE.
 - PLACE GEOTEXTILE ALONG A VERTICAL REAR EXCAVATION FACE IF POSSIBLE. IF A VERTICAL EXCAVATION FACE CANNOT BE OBTAINED, GEOTEXTILE MAY BE PLACED ALONG THE EXCAVATION SLOPE NOT TO EXCEED 1.5H TO 1.0V.

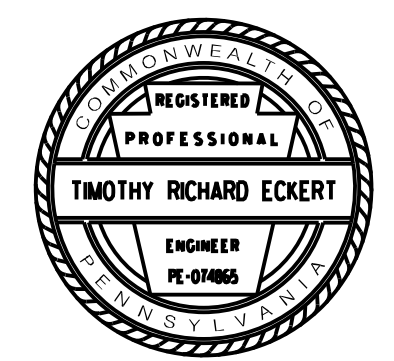


WATERPROOFING DETAIL
NOT TO SCALE

- NOTE:
- PROVIDE WATERPROOFING MEMBRANE IN ACCORDANCE WITH PUBLICATION 408, SECTION 680.2(D) ADHESIVE BACKED PREFORMED MEMBRANE.

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 DETAILS

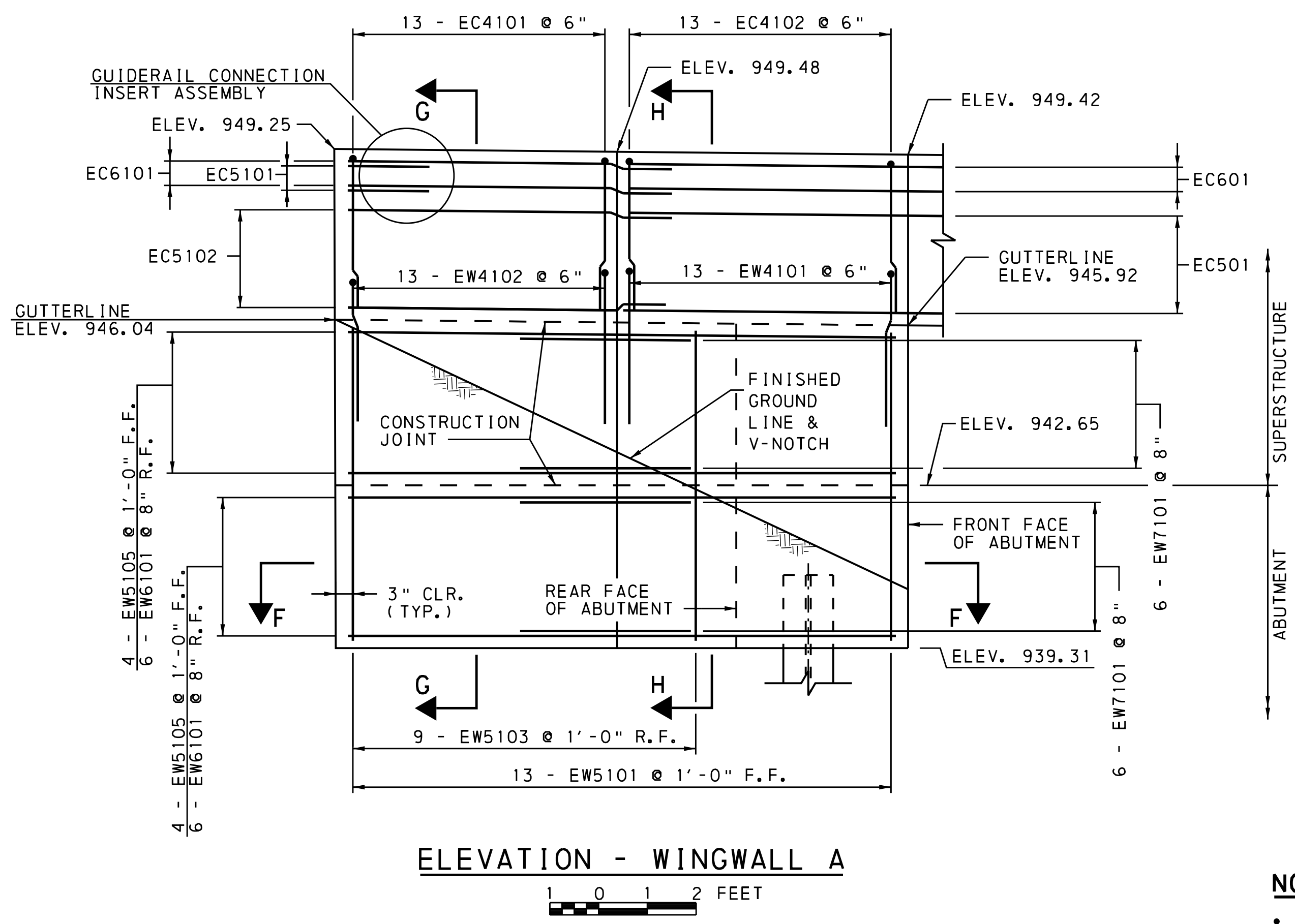
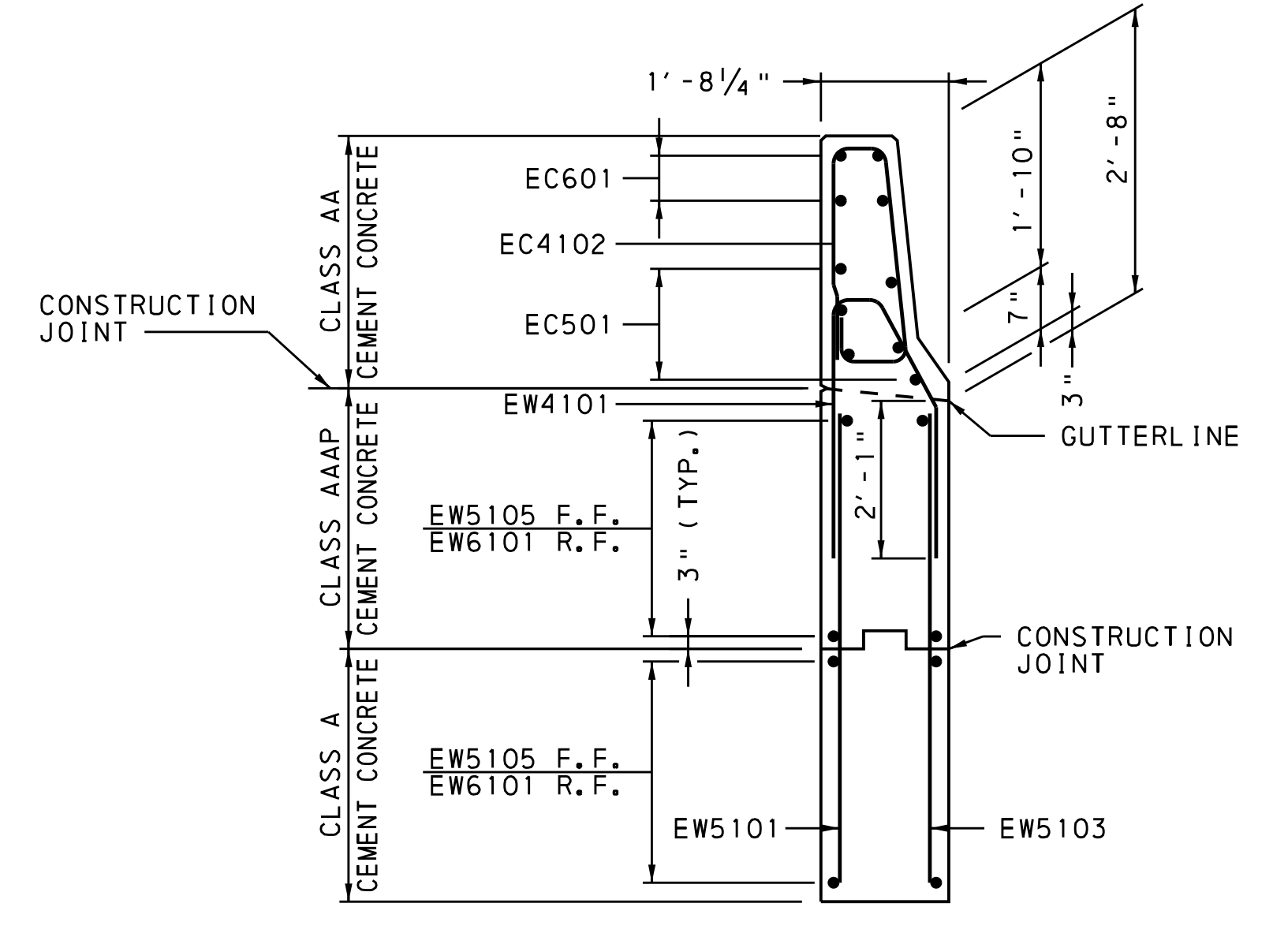
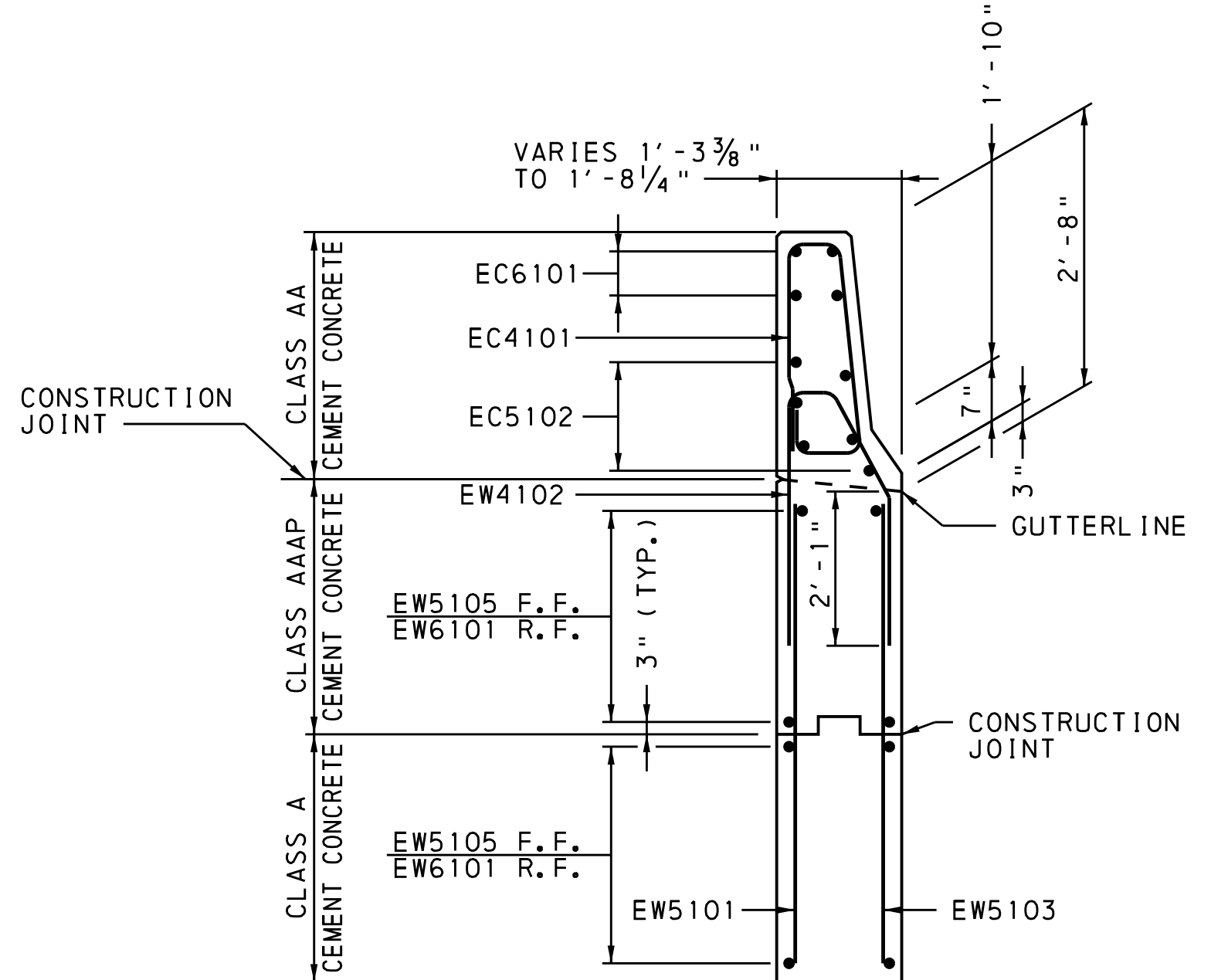
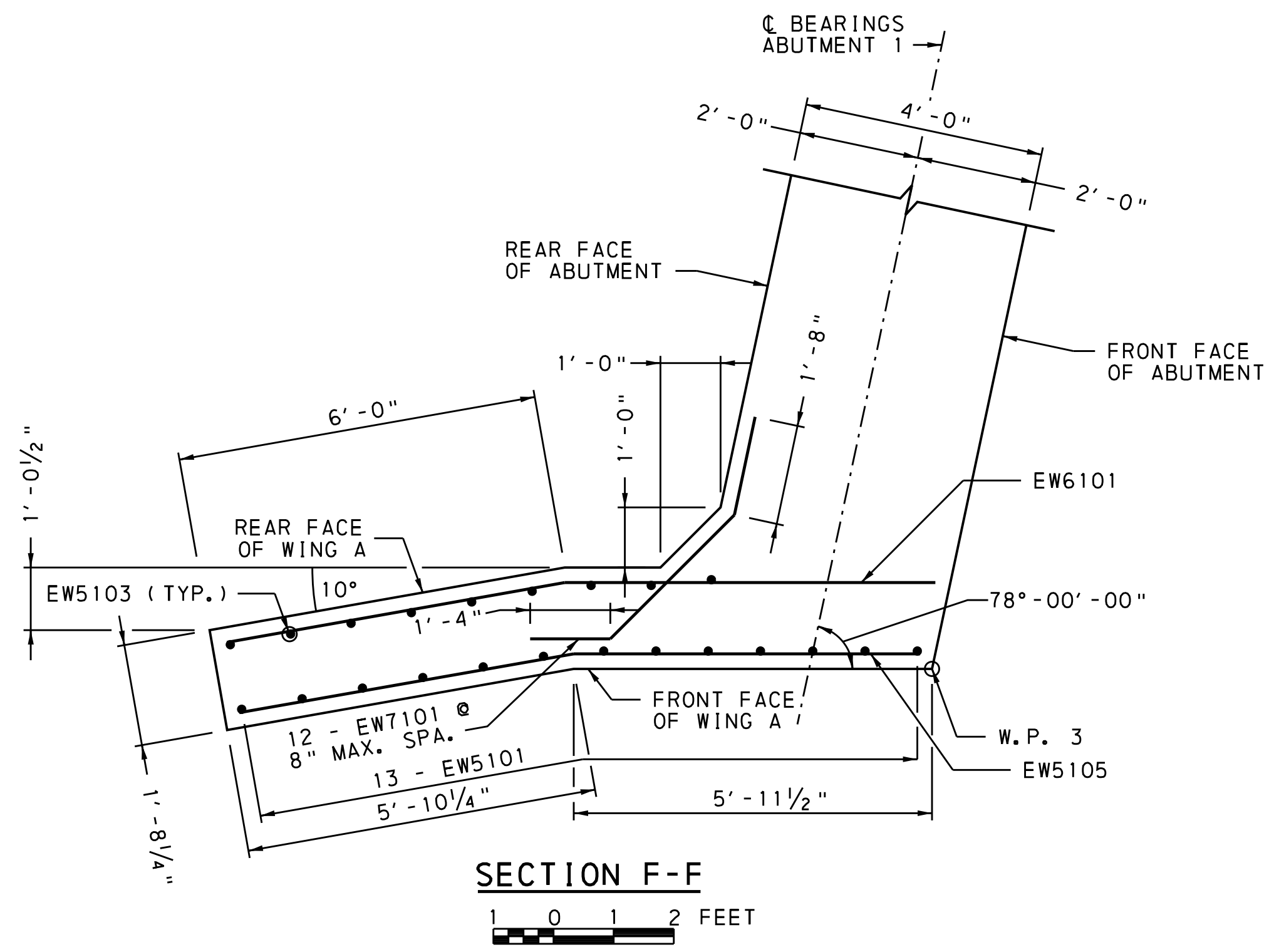
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 10 OF 43

L-45

- NOTES:
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 1 PLAN, SEE SHEET 7.
 - FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.
 - FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

PENNON ASSOCIATES, INC.
FILE NAME: ...NO.1501.ABUT.DETAILS.dwg
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: ...
CHECKED BY: ...
DATE: 01/30/2020 12:19:20 PM
USER: ...
OFFICE LOCATION: Pittsburgh, Pennsylvania



- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 1 PLAN, SEE SHEET 7.
 - FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.
 - FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 WINGWALL A

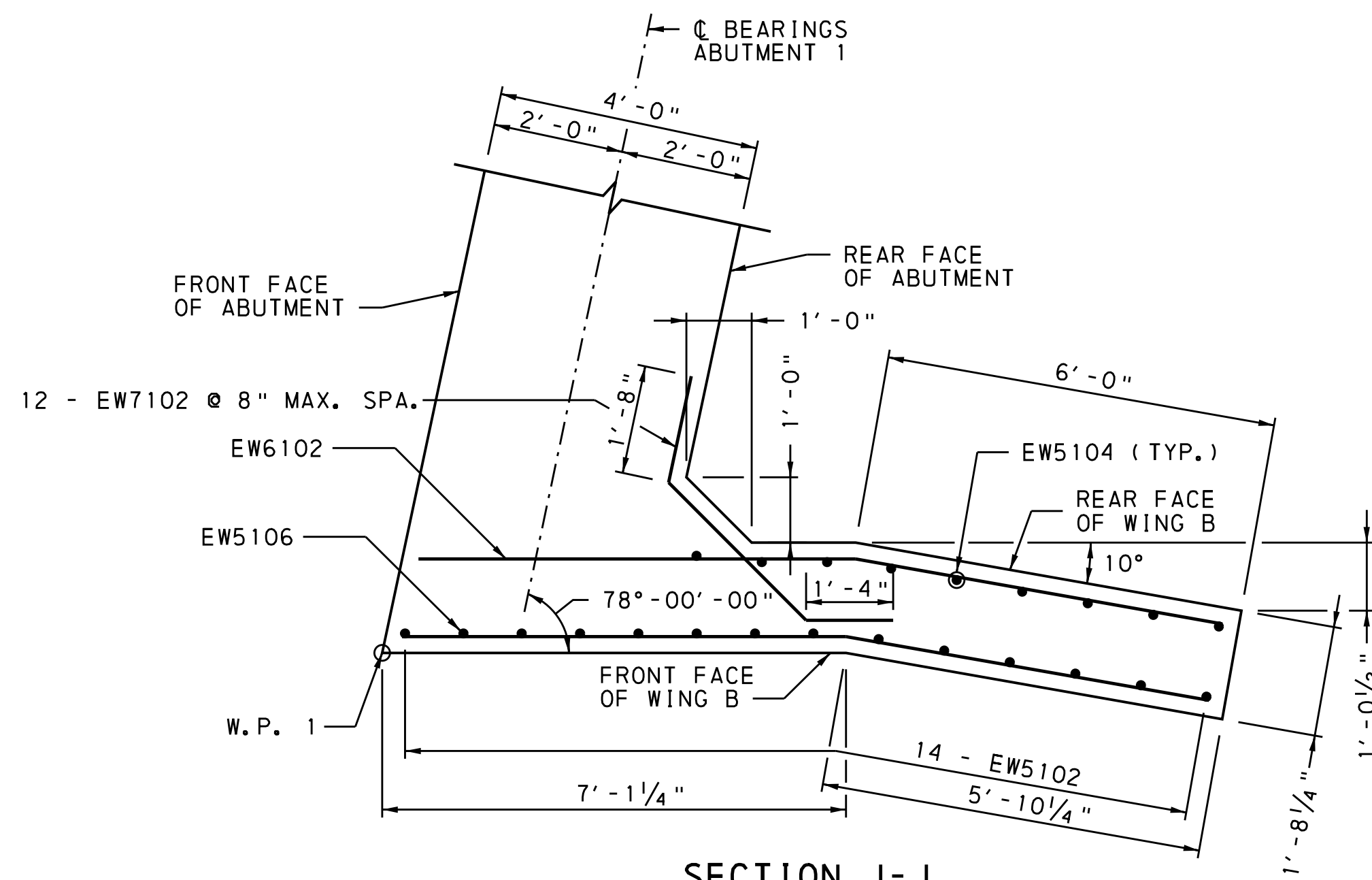
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 11 OF 43

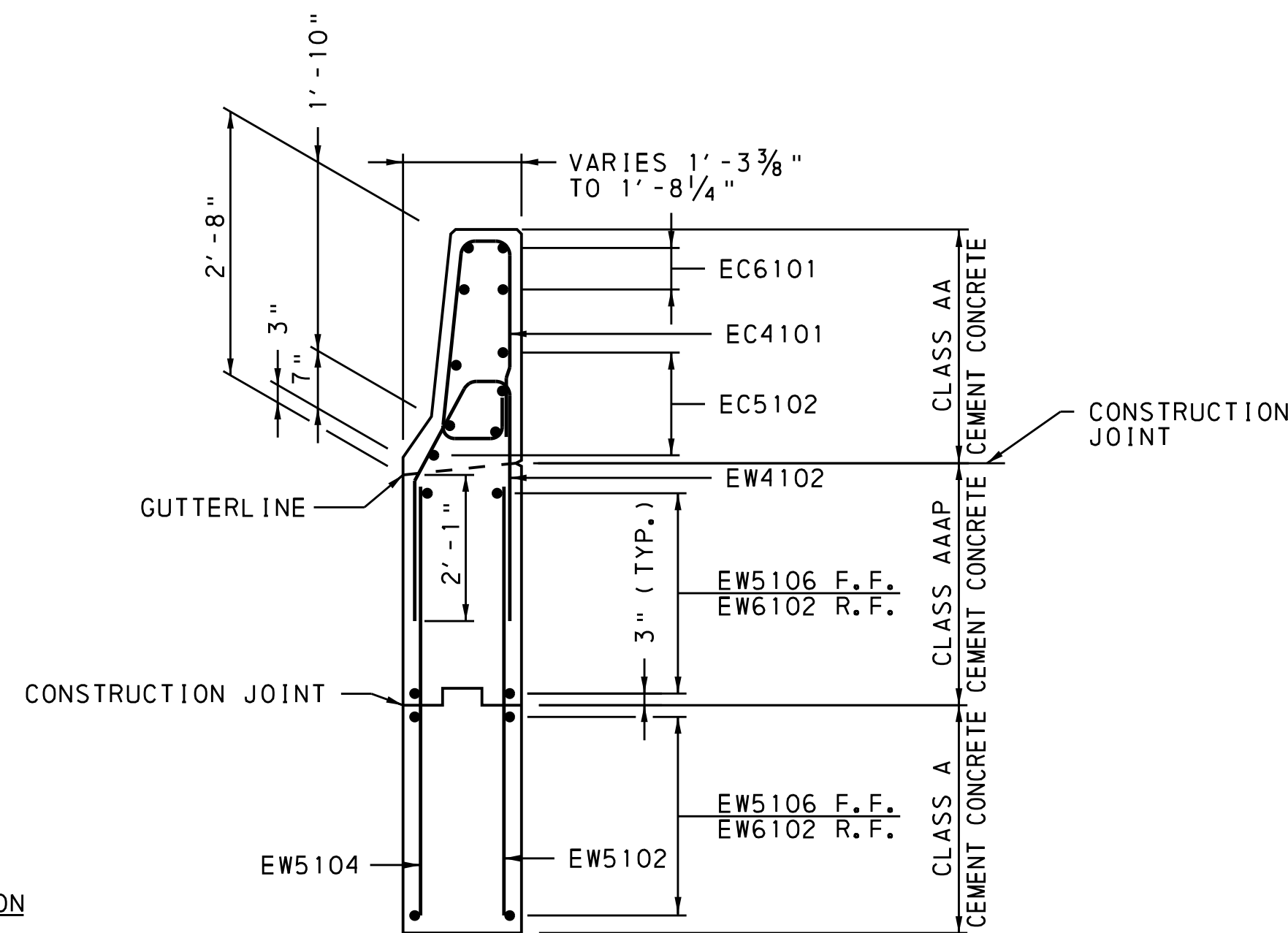
L-45

PENNSYLVANIA ASSOCIATES, INC.
FILE NAME: ...N1501.ABUT1.WINGWALL.A.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT FOR: PENNSYLVANIA
PLOT DATE: 1/30/2020 11:48 AM
PLOT DRIVER: PENNSYLVANIA
DATE PLOTTED: 1/30/2020 11:48 AM
USER NAME: Bhuback OFFICE LOCATION: Pittsburgh, Pennsylvania

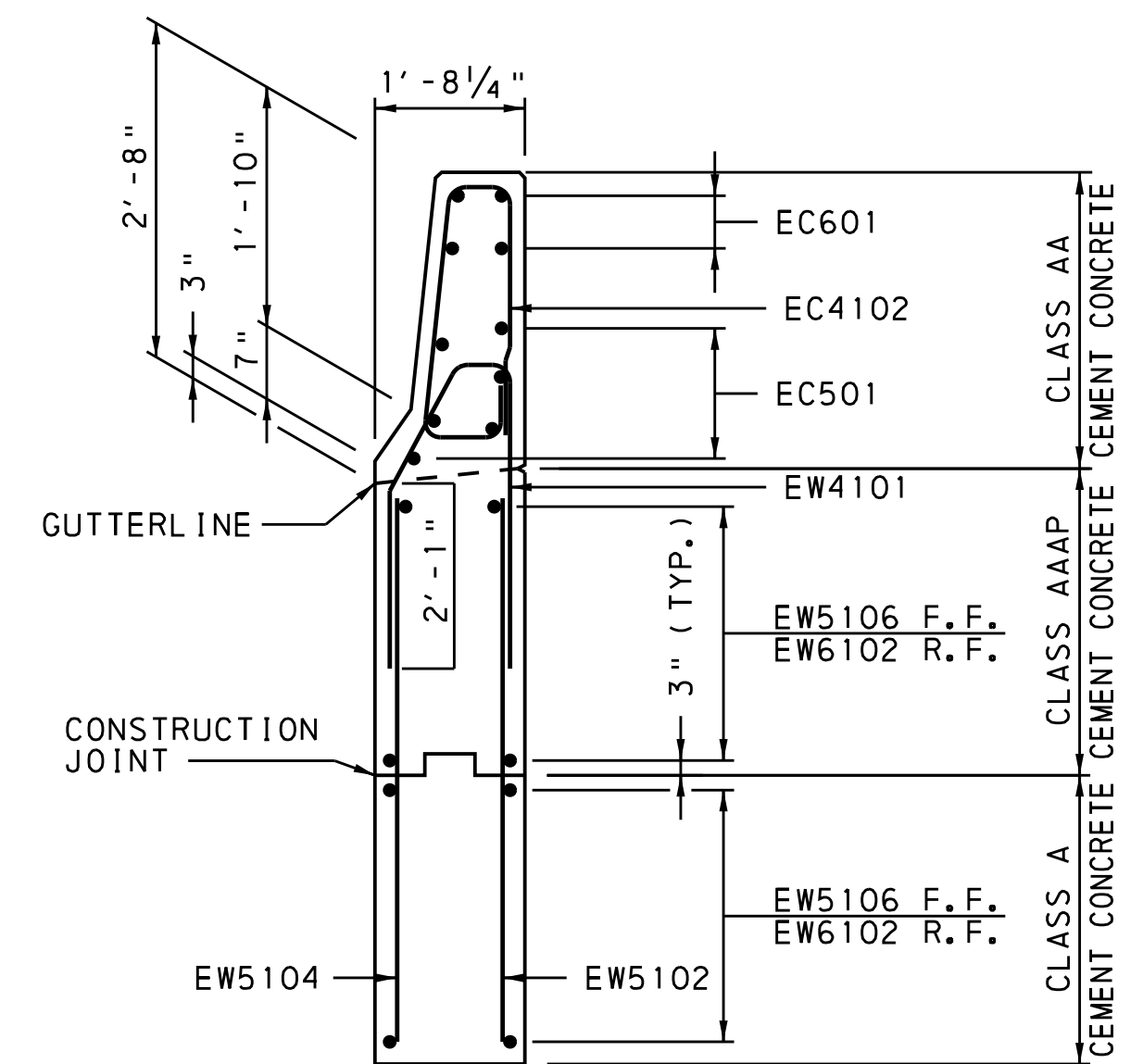
DES: TE CKD: MP DWG: NCC CKD: TE



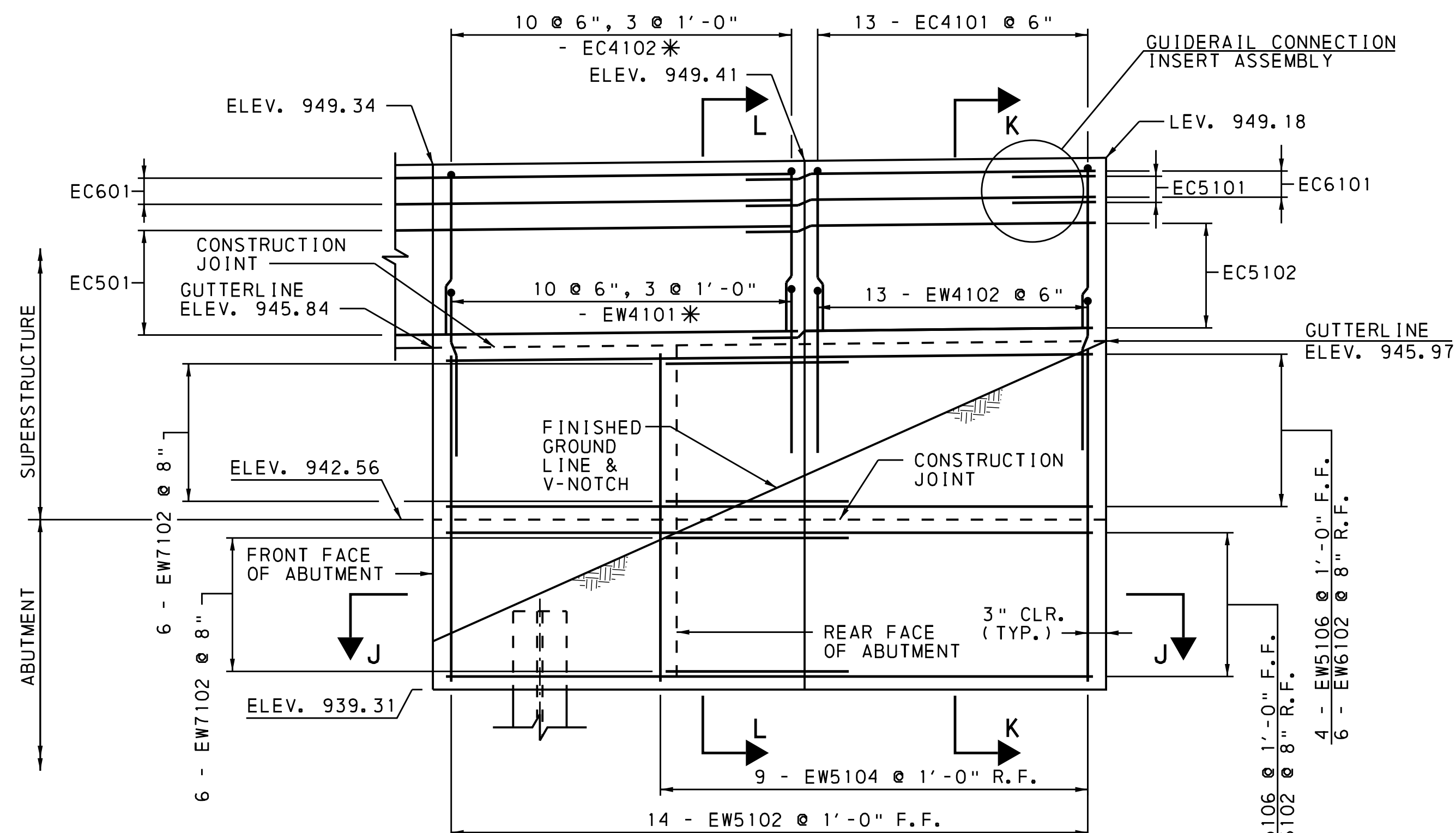
SECTION J-J
1 0 1 2 FEET



SECTION K-K
1 0 1 2 FEET



SECTION L-L
1 0 1 2 FEET



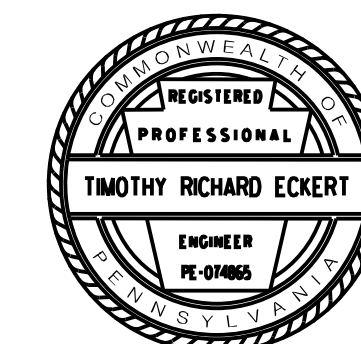
ELEVATION - WINGWALL B
1 0 1 2 FEET

* WITHIN 10'-0" OF THE END OF U-WING AND WITHIN 10'-0" OF THE U-WING JOINT, THE #4 BARRIER REINFORCEMENT BARS ARE SPACED AT 6" MAX.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 WINGWALL B

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 12 OF 43

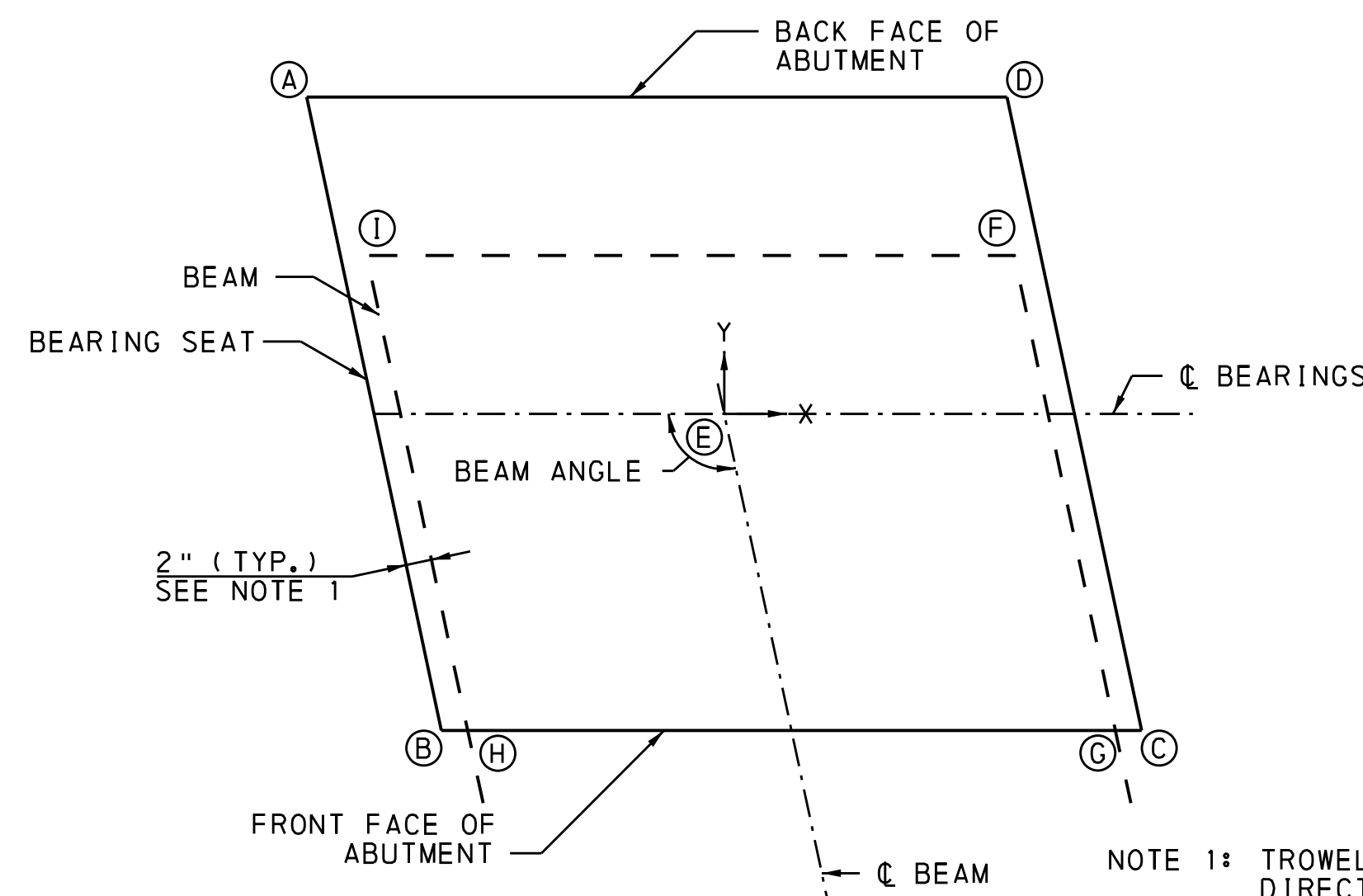
L-45

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 PLAN, SEE SHEET 7.
- FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.
- FOR ABUTMENT 1 REINFORCEMENT BAR SCHEDULE, SEE SHEET 14.

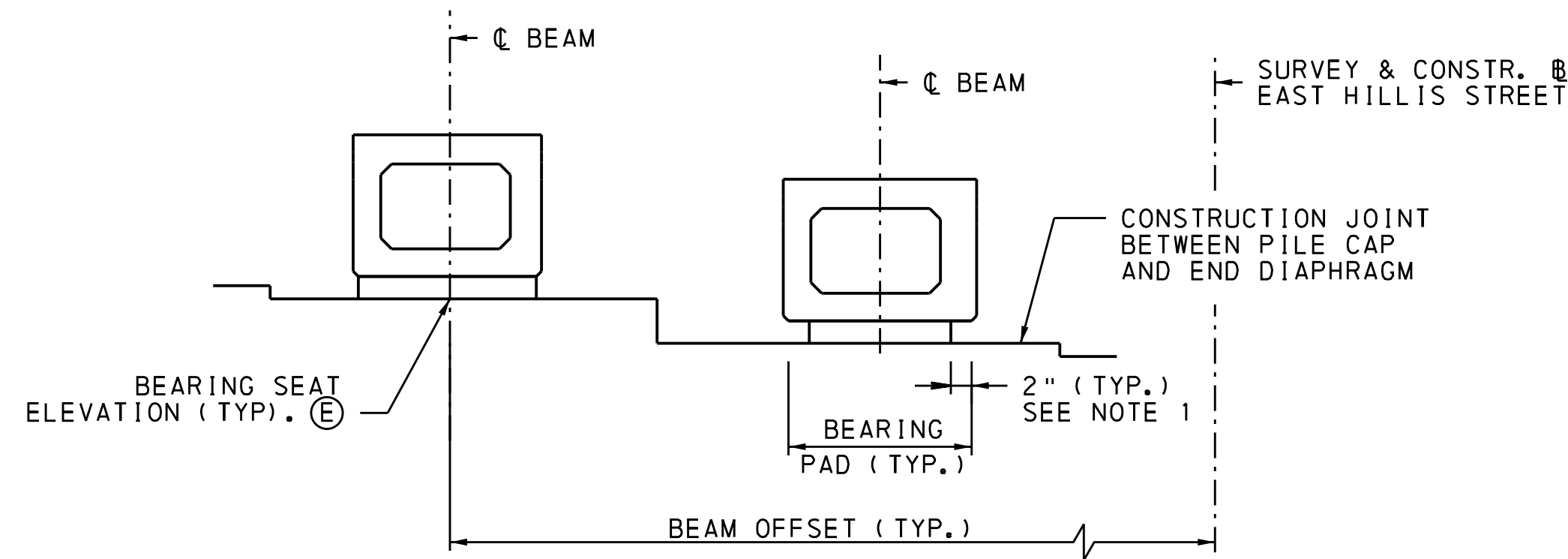
PENNONI ASSOCIATES, INC.
FILE NAME: \\12.1501.ABUT1.WINGWALL_B.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JACQUES
CHECKED BY: JACQUES
DATE: 12/12/2009 11:33:17 AM
USER: JACQUES
OFFICE LOCATION: Pittsburg, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



BEARING SEAT PLAN VIEW
NOT TO SCALE

NOTE 1: TROWEL SMOOTH SURFACE OF CONSTRUCTION JOINT DIRECTLY UNDER BEAM AND EXTENDING 2" OUTSIDE THE BEARING AREA. PROVIDE A RAKED FINISH FOR THE REMAINDER OF THE CONSTRUCTION JOINT.



BEARING SEAT ELEVATION VIEW
NOT TO SCALE

NOTE: SEE BEARING SEAT PLAN VIEW DETAIL FOR FURTHER DETAILS.

ABUTMENT 1 BEARING SEAT LOCATION AND ELEVATION TABLE																			
BEAM NO.	C BEAM OFFSET	BEAM ANGLE	BRG. SEAT SLOPE		A			B			C			D			E		
			X	Y	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.
1	13' - 2"	102° - 00' - 00"	-0.432%	2.030%	-2' - 7 5/8"	2' - 0"	942.66	-1' - 9 1/2"	-2' - 0"	942.58	2' - 7 5/8"	-2' - 0"	942.56	1' - 9 1/2"	2' - 0"	942.64	0"	0"	942.61
2	4' - 5 5/8"	102° - 00' - 00"	-0.413%	1.942%	-2' - 7 5/8"	2' - 0"	942.95	-1' - 9 1/2"	-2' - 0"	942.86	2' - 7 5/8"	-2' - 0"	942.85	1' - 9 1/2"	2' - 0"	942.93	0"	0"	942.90
3	-4' - 2 5/8"	102° - 00' - 00"	-0.393%	1.848%	-2' - 7 5/8"	2' - 0"	942.97	-1' - 9 1/2"	-2' - 0"	942.89	2' - 7 5/8"	-2' - 0"	942.87	1' - 9 1/2"	2' - 0"	942.95	0"	0"	942.92
4	-12' - 10 7/8"	102° - 00' - 00"	-0.371%	1.746%	-2' - 7 5/8"	2' - 0"	942.72	-1' - 9 1/2"	-2' - 0"	942.65	2' - 7 5/8"	-2' - 0"	942.63	1' - 9 1/2"	2' - 0"	942.70	0"	0"	942.68

NOTE:

C BEAM OFFSET IS MEASURED ALONG THE C BEARING.
C BEAM OFFSET IS MEASURED FROM THE C OF ROADWAY TO THE C OF BEAM AT THE BEARING SEAT POINT (E).
NEGATIVE OFFSETS ARE MEASURED TO THE LEFT OF THE C OF ROADWAY, FACING THE ABUTMENT.

POSITIVE "BEARING SEAT SLOPE Y" REPRESENTS AN INCREASE IN ELEVATION FROM FRONT TO BACK FACE OF ABUTMENT, IN THE DIRECTION OF THE POSITIVE Y-AXIS SHOWN IN THE BEARING SEAT PLAN VIEW.

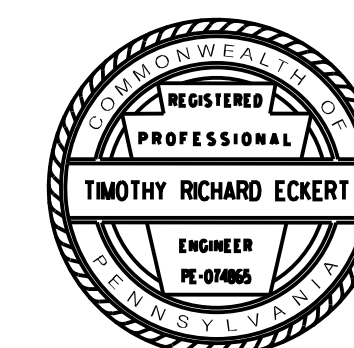
POSITIVE "BEARING SEAT SLOPE X" REPRESENTS AN INCREASE IN ELEVATION IN THE DIRECTION OF THE POSITIVE X-AXIS SHOWN IN THE BEARING SEAT PLAN VIEW.

ABUTMENT 1 BEARING SEAT LOCATION AND ELEVATION TABLE																
BEAM NO.	C BEAM OFFSET	BEAM ANGLE	BRG. SEAT SLOPE		A			B			C			D		
			X	Y	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.
1	13' - 2"	102° - 00' - 00"	-0.432%	2.030%	1' - 10"	1' - 0"	942.62	2' - 5 5/8"	-2' - 0"	942.56	-1' - 7 3/8"	-2' - 0"	942.58	-2' - 3 1/8"	1' - 0"	942.64
2	4' - 5 5/8"	102° - 00' - 00"	-0.413%	1.942%	1' - 10"	1' - 0"	942.91	2' - 5 5/8"	-2' - 0"	942.85	-1' - 7 3/8"	-2' - 0"	942.86	-2' - 3 1/8"	1' - 0"	942.92
3	-4' - 2 5/8"	102° - 00' - 00"	-0.393%	1.848%	1' - 10"	1' - 0"	942.93	2' - 5 5/8"	-2' - 0"	942.87	-1' - 7 3/8"	-2' - 0"	942.89	-2' - 3 1/8"	1' - 0"	942.95
4	-12' - 10 7/8"	102° - 00' - 00"	-0.371%	1.746%	1' - 10"	1' - 0"	942.69	2' - 5 5/8"	-2' - 0"	942.63	-1' - 7 3/8"	-2' - 0"	942.65	-2' - 3 1/8"	1' - 0"	942.70

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 PLAN, SEE SHEET 7.
- FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE

ABUTMENT 1 BEARING DETAILS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 13 OF 43

L-45

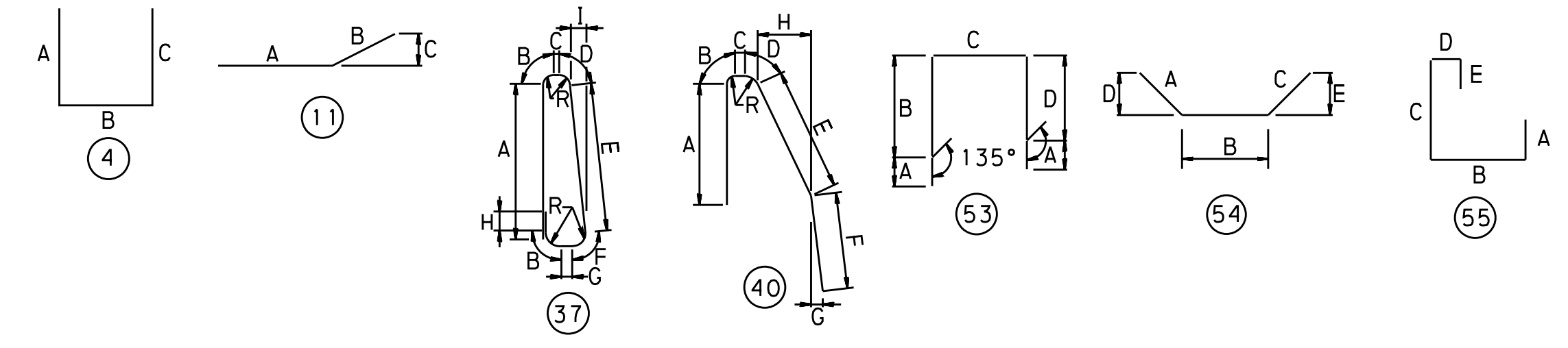
PENNONI ASSOCIATES, INC.
FILE NAME: ...N3.B501.ABUT.1.BEARING.dwg
MICROSTATION VERSION: MicroStation V8i
PLOT SCALE: 1/8"=1'-0"
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 10:01 AM
USER NAME: bludock OFFICE LOCATION: PITTSBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE

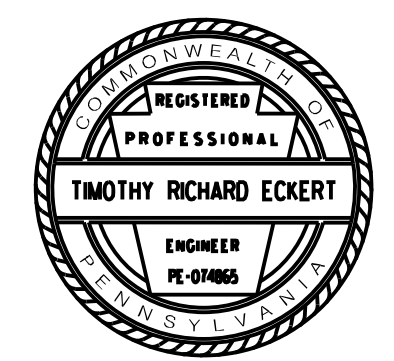
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT PILE CAP											
EF5101	5	136	7'-8 1/4"	4	2'-6 3/4"	2'-6 1/2"	2'-6 7/8"				
EF5102	5	22	7'-5 5/8"	4	1'-6"	3'-1 3/8"	2'-10"				
EF5103	5	22	10'-5 5/8"	4	3'-0"	4'-7 5/8"	2'-10"				
EF5104	5	8	9'-1"	53	5 1/2"	2'-9 3/4"	2'-6 1/2"	2'-9 3/4"			
EF5105	5	24	8'-10 5/8"	55	10"	3'-7"	3'-1 5/8"	8"	8"		
EF5106	5	4	9'-7"	53	5 1/2"	3'-0 3/4"	2'-6 1/2"	3'-0 3/4"			
EF5107	5	4	9'-6 1/4"	53	5 1/2"	3'-0 3/8"	2'-6 1/2"	3'-0 3/8"			
EF5108	5	8	8'-11 1/2"	53	5 1/2"	2'-9"	2'-6 1/2"	2'-9"			
EF6101	6	6	3'-0"	STR							
EF8101	8	12	33'-10 1/2"	STR							
WINGWALL STEM											
EW4101	4	26	7'-7"	40	3'-3"	4"	4"	2 3/4"	1'-4 1/4"	2"	F=2'-1" ; G=0" ; H=7 3/8"
EW4102	4	26	7'-7"	40	3'-3"	4"	4"	2 3/4"	1'-4 1/4"	2"	2 SETS OF 13; H VARIES 7 3/8" TO 2 1/2" VARY EA. BAR IN SET BY 3/8" F=2'-1" ; G=0"
EW5101	5	13	6'-1 3/8" TO 6'-2 3/4"	STR							VARIES 1 EA. BY 1/8"
EW5102	5	14	6'-0 3/8" TO 6'-1 1/8"	STR							VARIES 1 EA. BY 1/8"
EW5103	5	9	6'-1 7/8" TO 6'-2 3/4"	STR							VARIES 1 EA. BY 1/8"
EW5104	5	9	6'-1" TO 6'-1 7/8"	STR							VARIES 1 EA. BY 1/8"
EW5105	5	8	11'-4 5/8"	11	5'-9 1/4"	5'-7 3/8"	11 5/8"				
EW5106	5	8	12'-5 1/8"	11	6'-9 3/4"	5'-7 3/8"	11 5/8"				
EW6101	6	12	11'-10 1/4"	11	6'-1 5/8"	5'-8 5/8"	11 1/8"				
EW6102	6	12	12'-4 5/8"	11	6'-8"	5'-8 5/8"	11 7/8"				
EW7101	7	12	6'-3 1/4"	54	1'-4"	3'-3 1/4"	1'-8"	11 1/4"	10 7/8"		
EW7102	7	12	6'-3 3/8"	54	1'-4"	3'-3 3/8"	1'-8"	11 1/4"	1'-4 3/4"		
BARRIER											
EC4101	4	26	5'-11 1/8" TO 7'-7 1/8"	37	VARIES	4"	3 3/8"	3 5/8"	VARIES	2"	2 SETS OF 13; A VARIES 2'-9 1/2" TO 1'-11 1/2" VARY EA. BAR IN SET BY 1/8" E VARIES 2'-7 3/4" TO 1'-9 3/4" VARY EA. BAR IN SET BY 1/8" I VARIES 3 3/8" TO 2 1/4" VARY EA. BAR IN SET BY 1/8" F=4 1/8" ; G=6 3/4" ; H=5" F=4 1/8" ; G=6 3/4" ; H=5" I=3 3/8"
EC4102	4	26	7'-7 1/8"	37	2'-4 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	2"	
EC5101	5	8	5'-8"	4	2'-6"	8"	2'-6"				
EC5102	5	12	7'-5"	11	1'-7"	5'-10"	1'-0 1/8"				
EC6101	6	8	7'-9"	11	1'-11"	5'-10"	1'-0 1/8"				

NOTES:

- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY IT PRIOR TO BIDDING AND FABRICATION.
- "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLES SHOW TYPES.
- "E" - INDICATES EPOXY COATED REBARS.
- FOR ALL BAR TYPES SHOWN, DIMENSIONS A-H AND LENGTH ARE MEASURED ALONG OUTSIDE OF BAR. R IS MEASURED ALONG INSIDE OF BAR.
- BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:
SUPERSTRUCTURE: 01 THROUGH 99
ABUTMENT 1: 101 THROUGH 199
ABUTMENT 2: 201 THROUGH 299



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

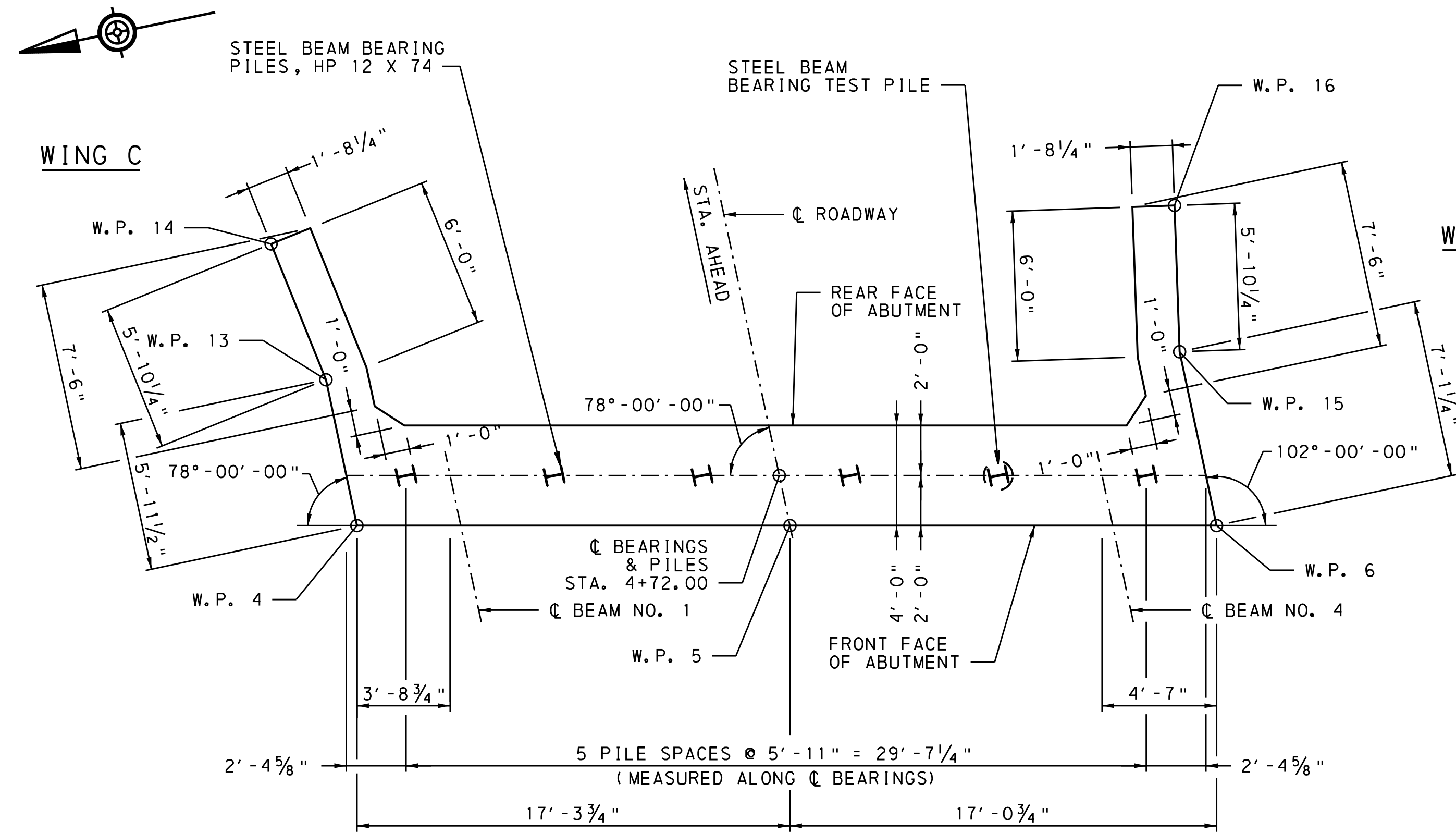
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 1 REINFORCEMENT BAR SCHEDULE

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

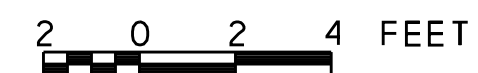
SHEET 14 OF 43
L-45

PENNON ASSOCIATES, INC.
 FILE NAME: ...N4.1501.ABUT.1.TREBAR.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 1/30/2020 10:58:00 AM
 PLOT DRIVER: PENNON-PLOT-PENNOT-FULL-PDF-PLT.CFG
 USER: PLOT.TECH.12/19/2019 8:49:26 PM
 OFFICE LOCATION: PHT+sbu@pgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



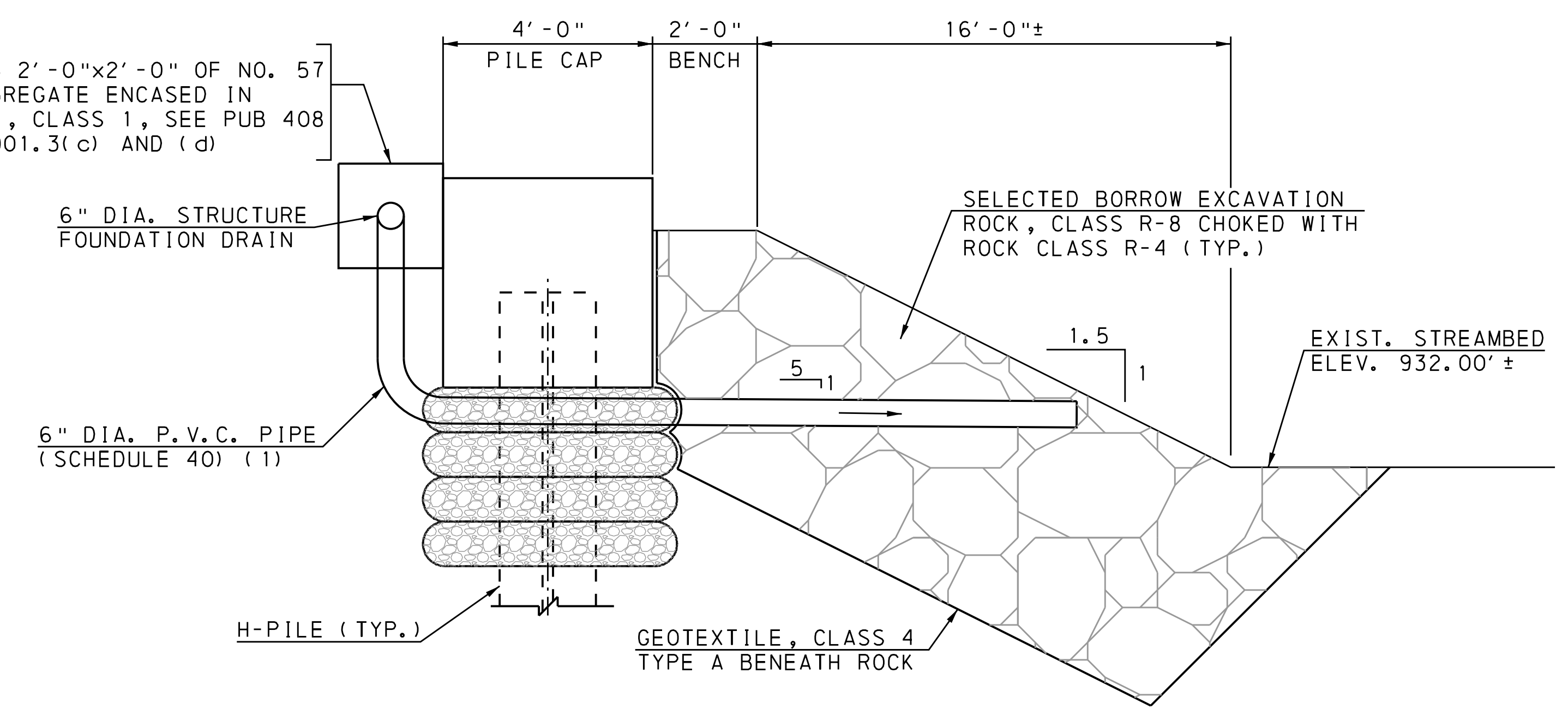
ABUTMENT 2 PLAN



PILE NOTES:

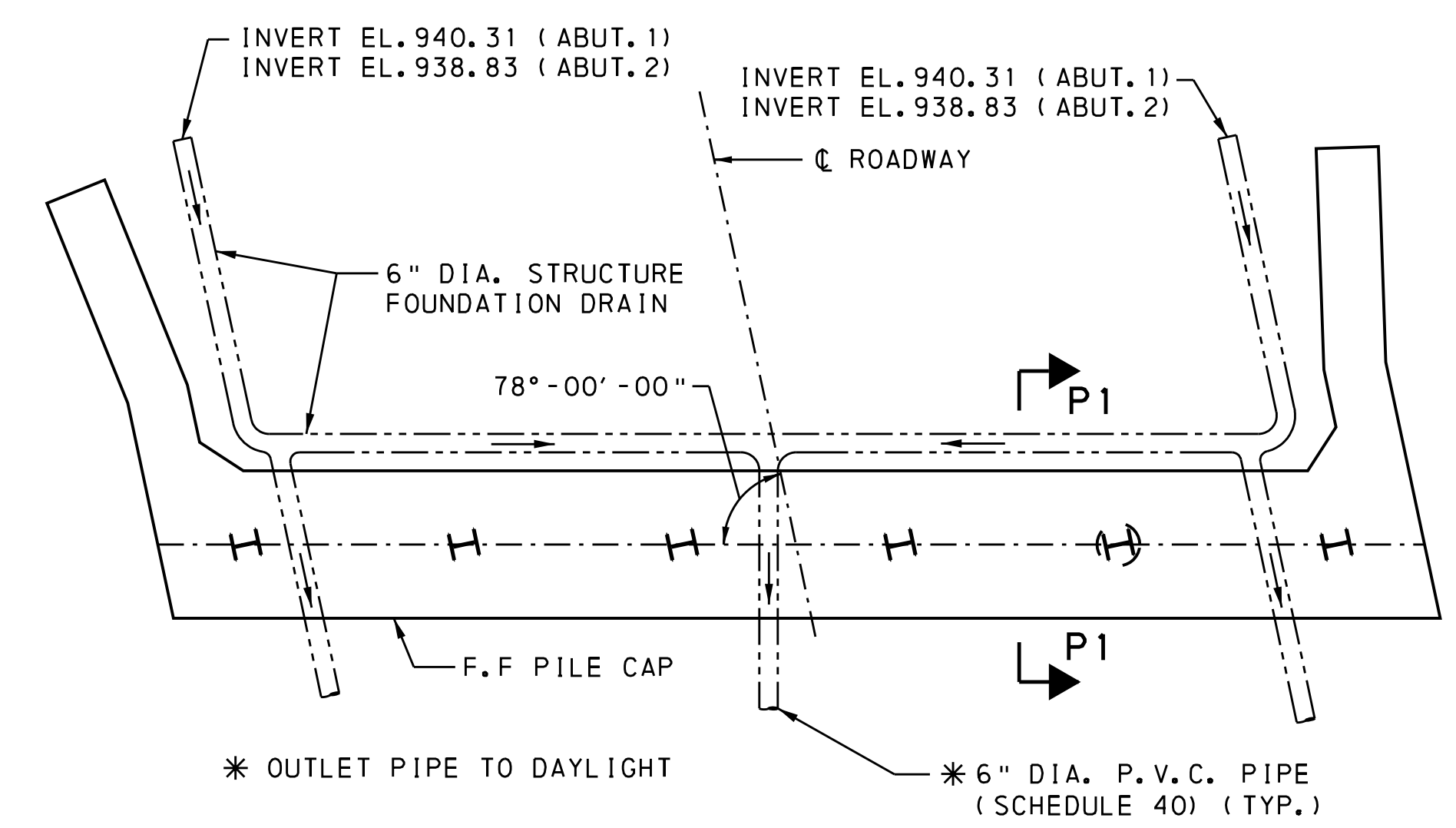
- ESTIMATED PILE TIP ELEVATIONS FOR ABUTMENT 2 = VARIES 913.70 TO 915.60
- MAXIMUM STRENGTH AXIAL CAPACITY FOR ABUTMENT 2 = 197.5K
- MAXIMUM VERTICAL LOAD PER PILE, ABUTMENT 2 = 176.2K
- PILE SIZE: HP 12x74
- ALL DIMENSIONS ARE TO CENTER OF PILE.

CONTINUOUS 2'-0"x2'-0" OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1, SEE PUB 408 SECTION 1001.3(c) AND (d)



SECTION P1-P1
NOT TO SCALE

(1) OUTLET PIPE TO GRADE 1'-0" MINIMUM ABOVE NORMAL WATER ELEVATION. SLOPE PIPE A MINIMUM OF 1/4" PER FOOT

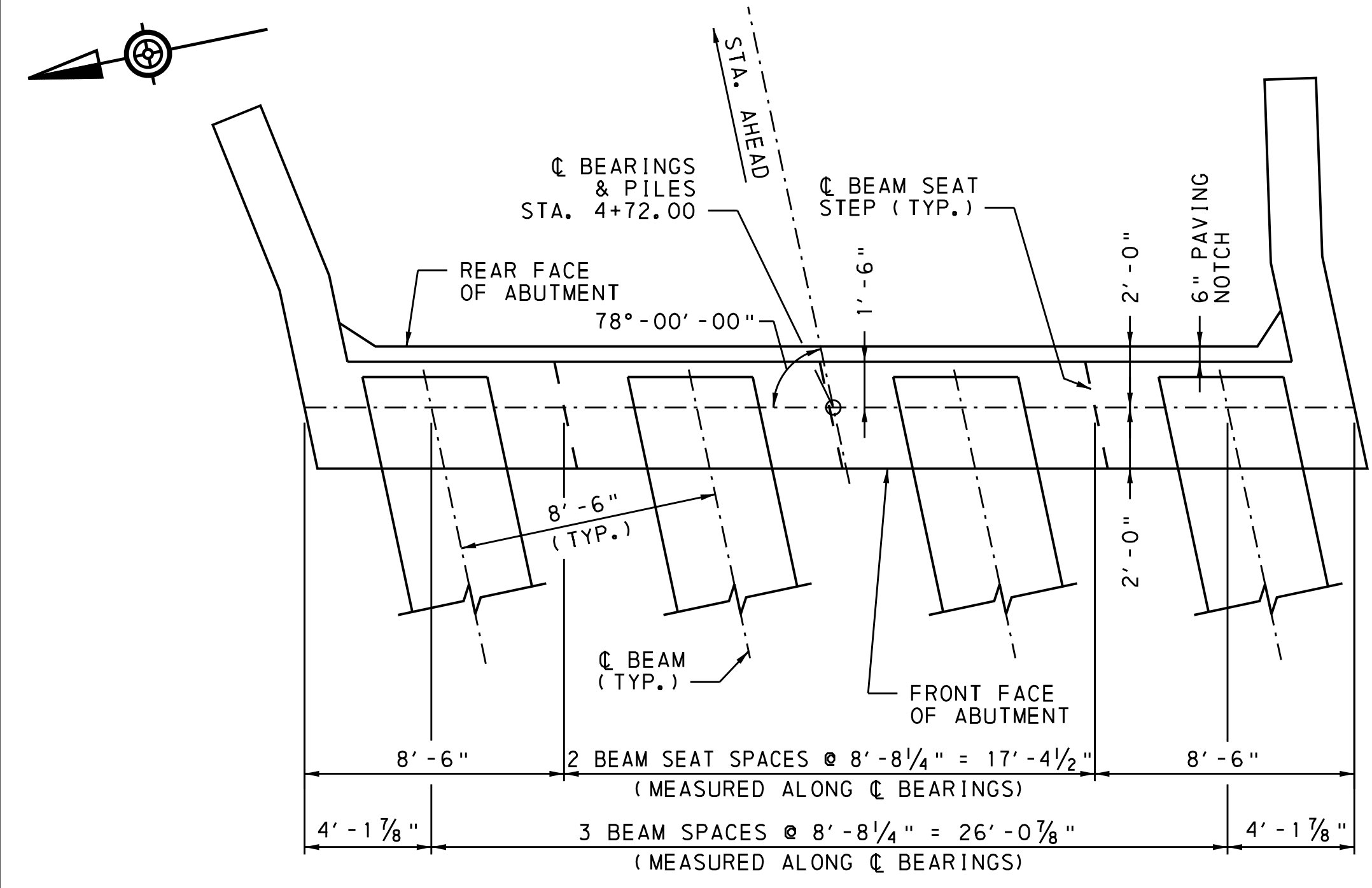


PILE CAP FOUNDATION DRAIN

NOT TO SCALE

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
- FOR BEAM SEAT ELEVATIONS, SEE SHEET 21.
- FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.
- SEE BC-751M FOR ADDITIONAL ABUTMENT DRAINAGE DETAILS.



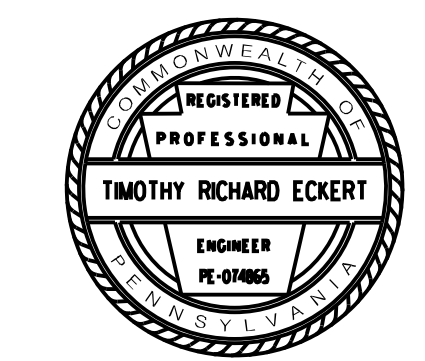
ABUTMENT 2 PLAN @ TOP OF BEAM



DECK AND APPROACH SLAB NOT SHOWN FOR CLARITY

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 PLAN



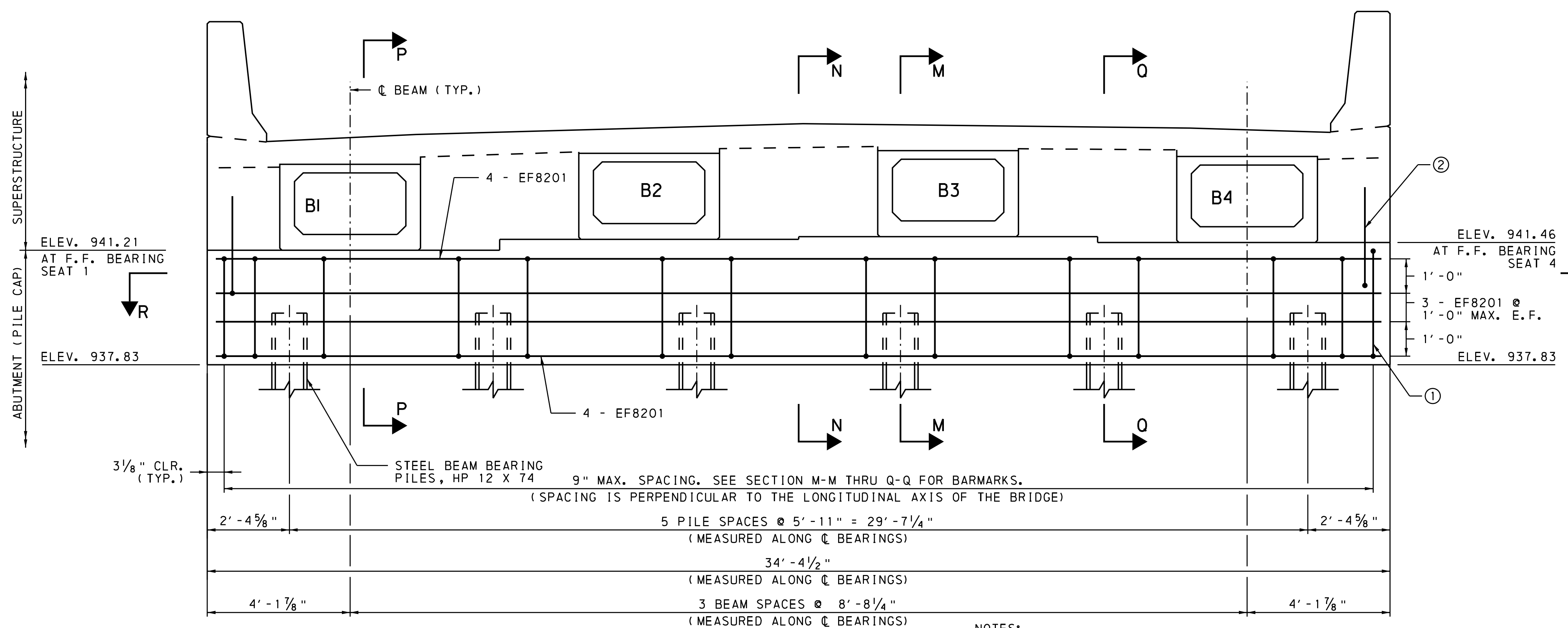
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 15 OF 43

L-45

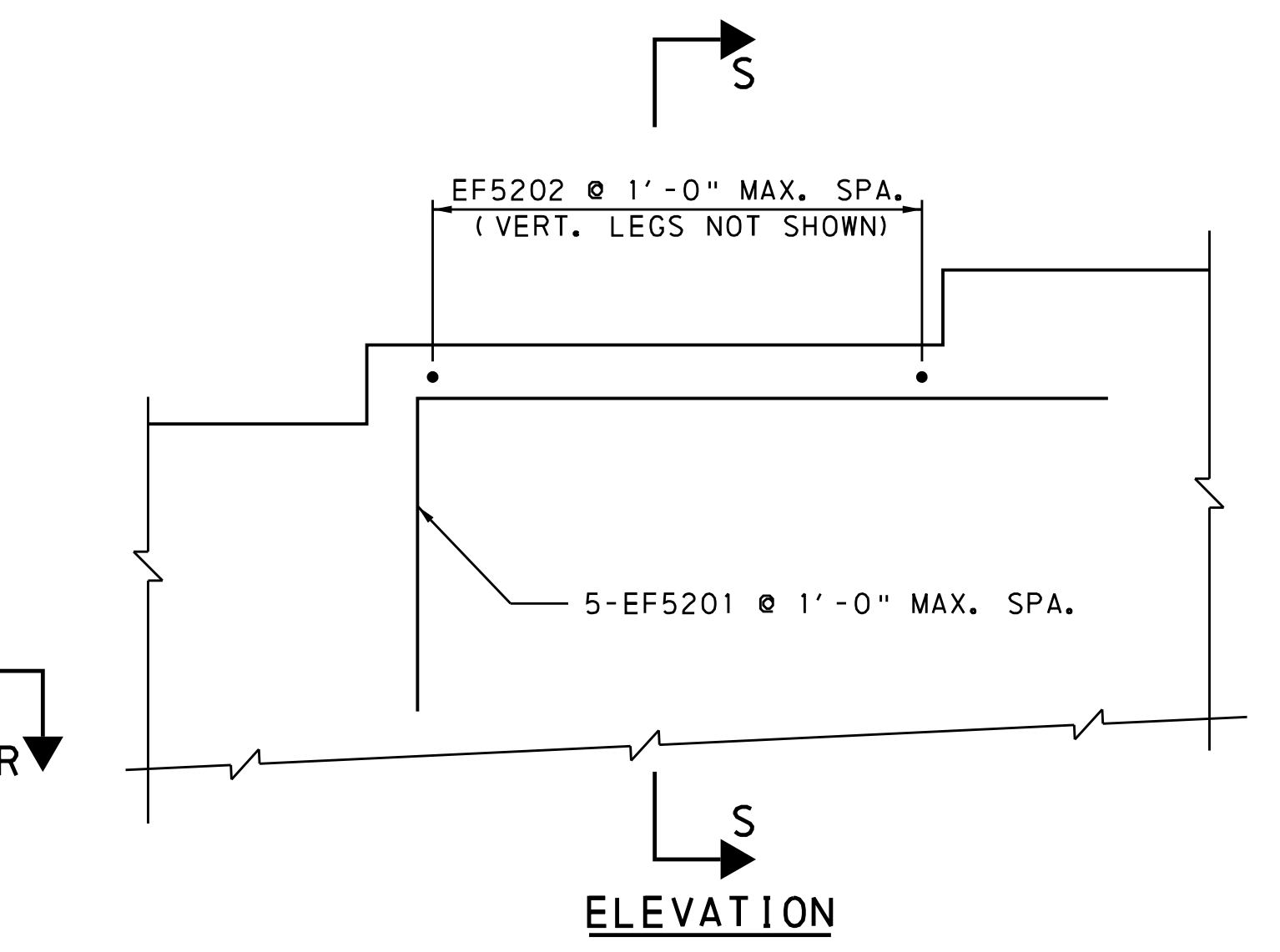
PENNSYLVANIA ASSOCIATES, INC.
 FILE NAME: N:\1501 ABUT 2 PLAN.DWG
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 10:00 AM
 PLOT DRIVER: PENN-PT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 02/19/2019 10:00 AM
 USER NAME: bludock OFFICE LOCATION: Pittsburg, Pennsylvania

PENNSYLVANIA ASSOCIATES, INC.
 FILE NAME: ...ABUT 2 ELEV.dwg
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 02/19/2019 12:04:42 PM
 PLOT DRIVER: PENNON-PIT-PENNOT-FULL-PDF-PLT.CFG
 USER NAME: Bhdock OFFICE LOCATION: PHT+sburg, Pennsylvania



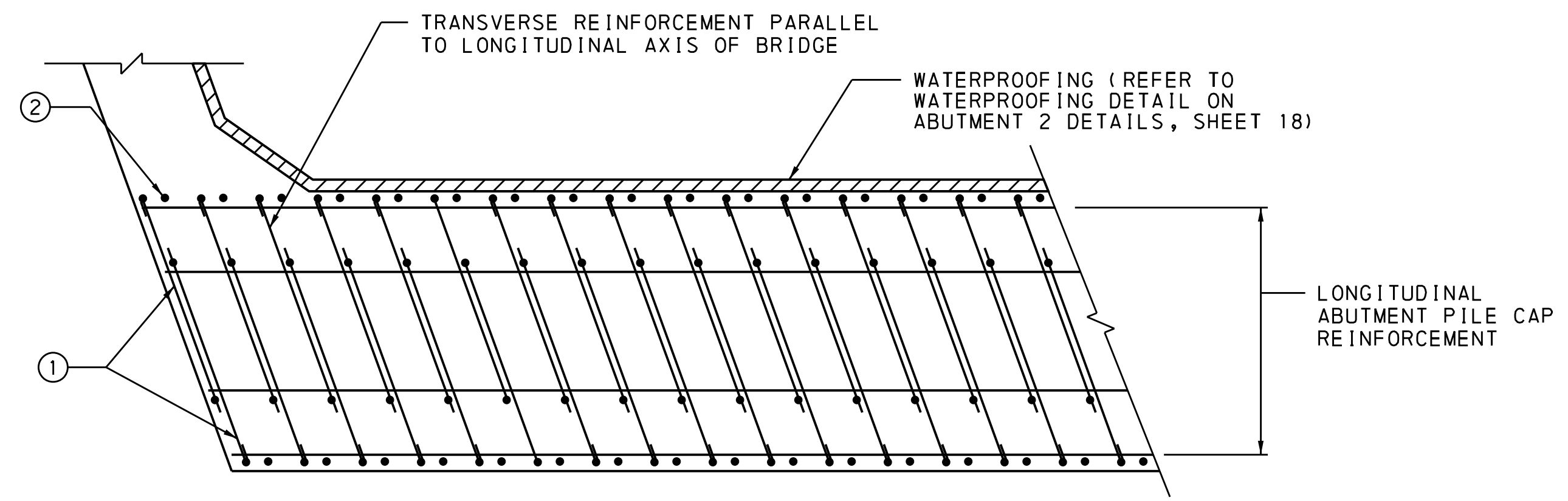
ELEVATION
 (LOOKING AHEAD STATIONS)
 0 1 2 FEET

- NOTES:
- ① TRANSVERSE REINFORCEMENT IN ABUTMENT PILE CAP
 - ② TRANSVERSE REINFORCEMENT TYING ABUTMENT TO SUPERSTRUCTURE



SECTION S-S
BEARING SEAT REINFORCEMENT
 NOT TO SCALE

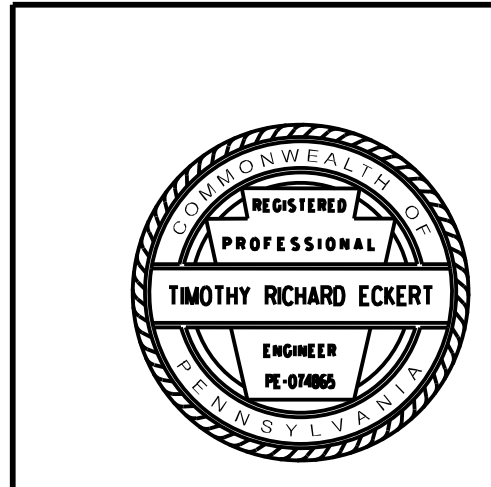
- NOTES:
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 2 PLAN, SEE SHEET 15.
 - FOR SECTIONS M-M, N-N, P-P AND Q-Q, SEE SHEET 17.
 - FOR BEAM SEAT ELEVATIONS, SEE SHEET 21.
 - FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.



SECTION R-R
 NOT TO SCALE

- NOTES:
- ① TRANSVERSE REINFORCEMENT IN ABUTMENT
 - ② TRANSVERSE REINFORCEMENT TYING ABUTMENT TO SUPERSTRUCTURE

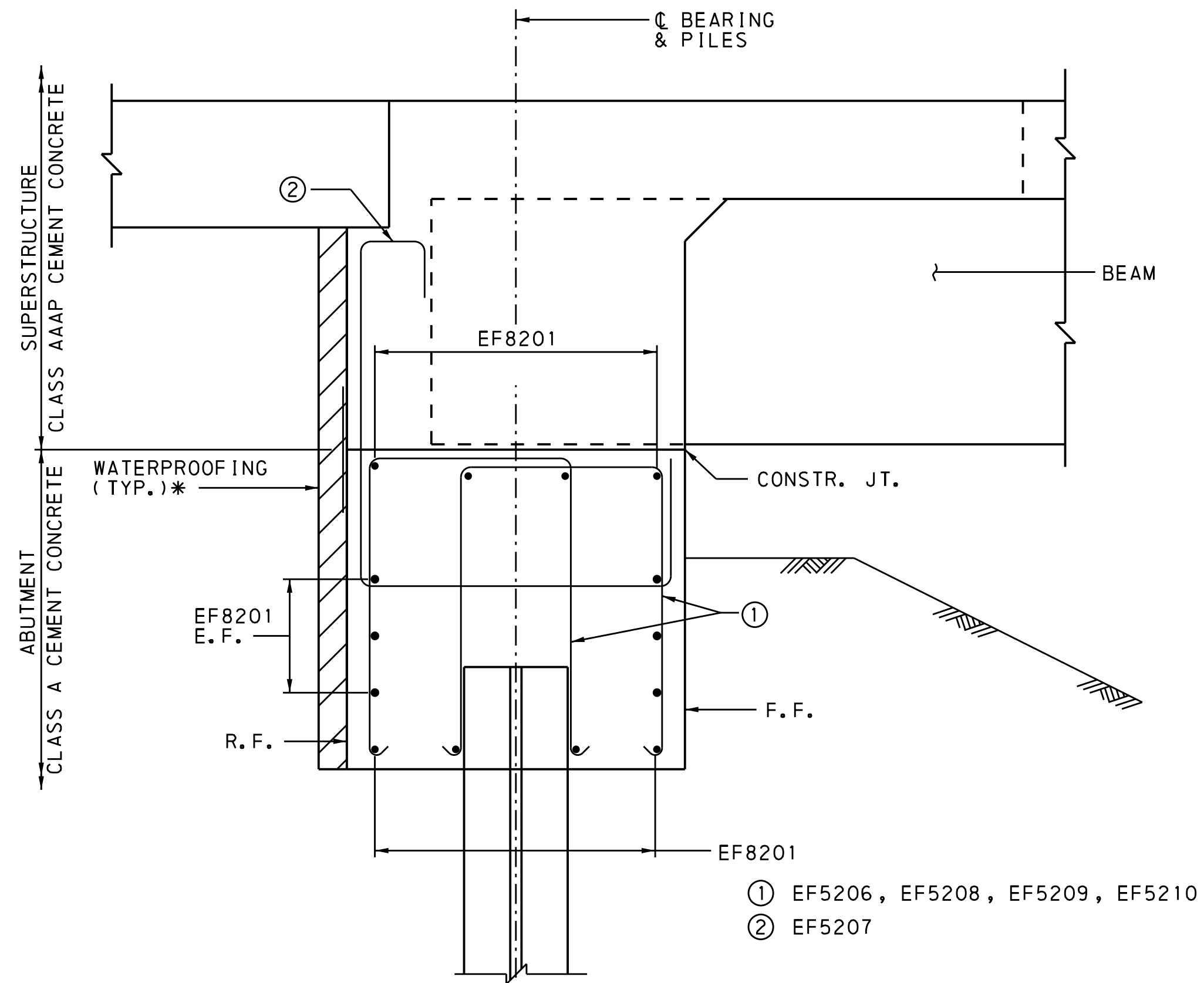
Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

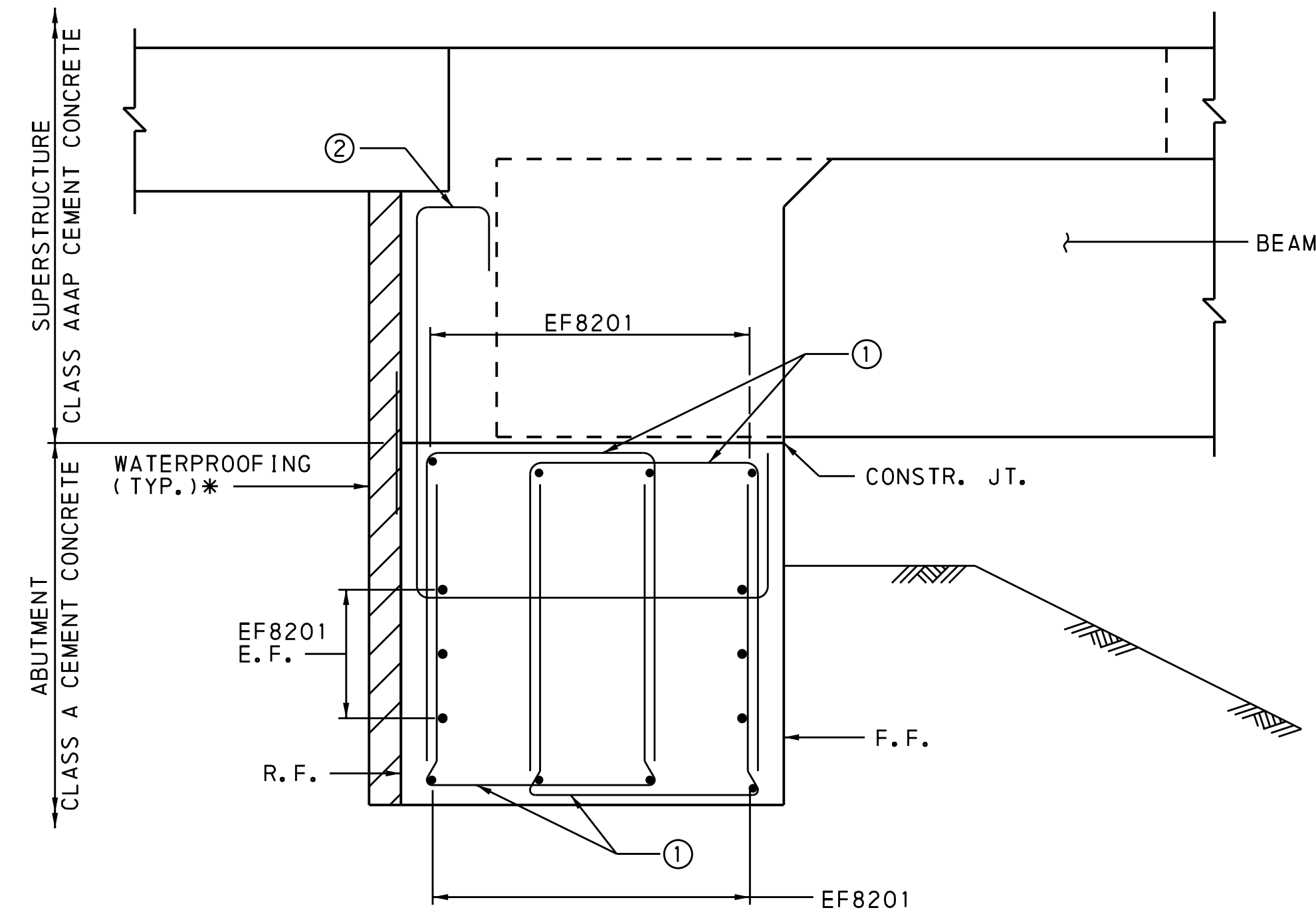
WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
ABUTMENT 2 ELEVATION

APPROVED FOR STRUCTURAL ADEQUACY ONLY DATE 1-30-2020	SHEET 16 OF 43
L-45	



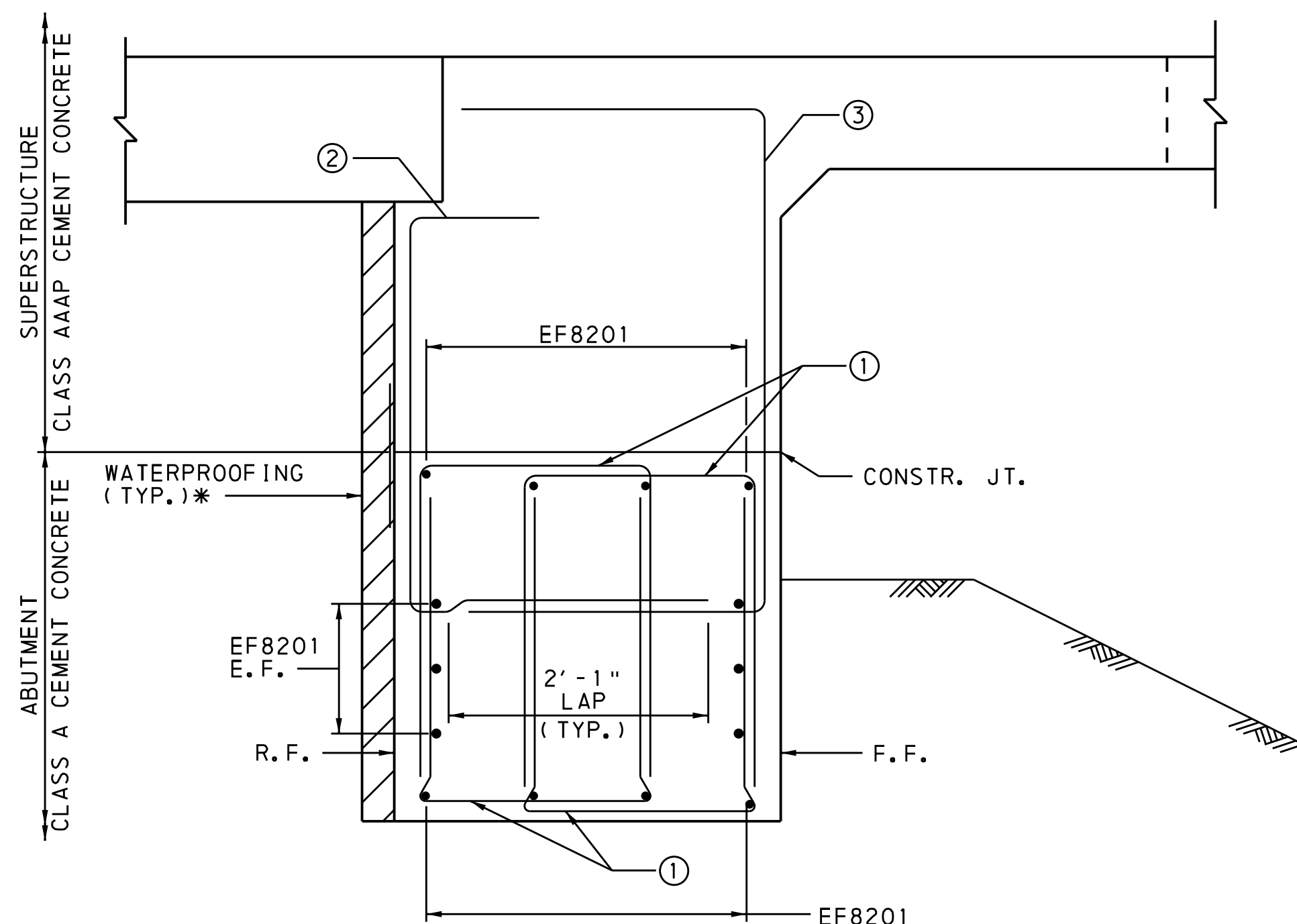
**SECTION M-M
GIRDER WITH PILE**
NOT TO SCALE

- ① EF5206, EF5208, EF5209, EF5210
- ② EF5207



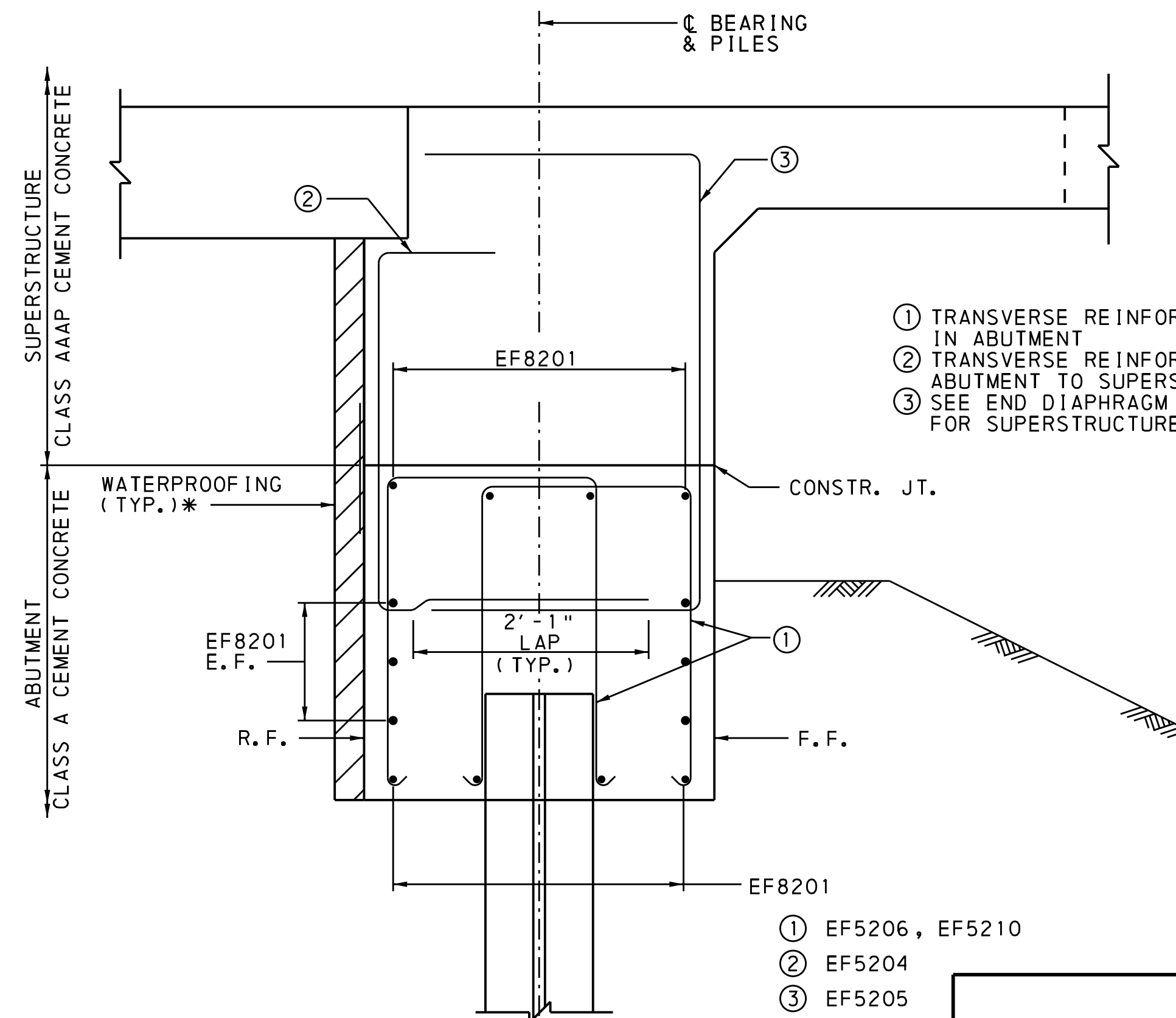
**SECTION P-P
GIRDER WITHOUT PILE**
NOT TO SCALE

- ① EF5203
- ② EF5207



**SECTION N-N
NO GIRDER, NO PILE**
NOT TO SCALE

- ① EF5203
- ② EF5204
- ③ EF5205



**SECTION Q-Q
PILE WITHOUT GIRDER**
NOT TO SCALE

- ① EF5206, EF5210
- ② EF5204
- ③ EF5205

- ① TRANSVERSE REINFORCEMENT IN ABUTMENT
- ② TRANSVERSE REINFORCEMENT TYING ABUTMENT TO SUPERSTRUCTURE
- ③ SEE END DIAPHRAGM DETAILS, SHEET 29, FOR SUPERSTRUCTURE REINFORCEMENT

NOTES:

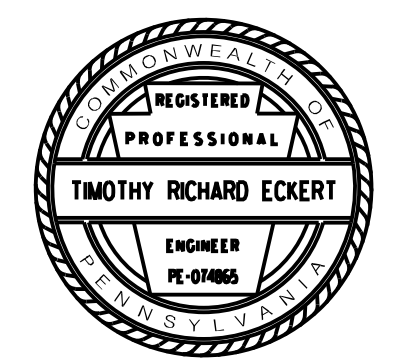
- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 PLAN, SEE SHEET 15.
- FOR LOCATION OF SECTIONS M-M, N-N, Q-Q AND P-P, SEE SHEET 16.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
- FOR ABUTMENT 2 DETAILS, SEE SHEET 18.
- FOR BEAM SEAT ELEVATIONS, SEE SHEET 21.
- FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

* REFER TO WATERPROOFING DETAILS ON THE ABUTMENT 2 DETAILS SHEET 18 FOR ADDITIONAL INFORMATION.

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



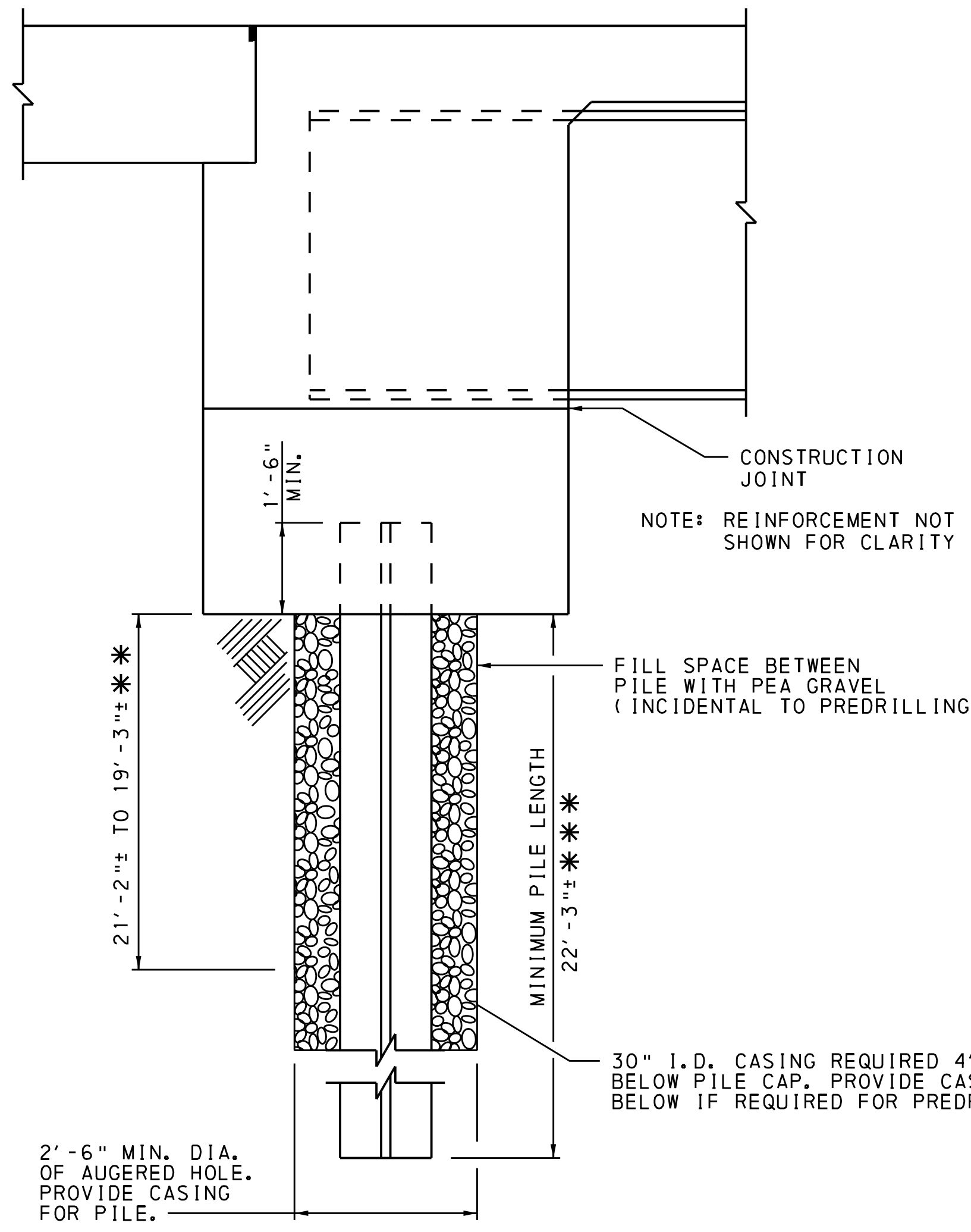
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 SECTIONS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 17 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...NT_ABLT_2_SECTIONS.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT DATE: 01/30/2020 11:42:18 AM
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 12:42:18 PM
USER NAME: Bludock OFFICE LOCATION: PHT+sburgh, Pennsylvania



CONSTRUCTION JOINT
NOTE: REINFORCEMENT NOT SHOWN FOR CLARITY

FILL SPACE BETWEEN PILE WITH PEA GRAVEL (INCIDENTAL TO PREDRILLING)

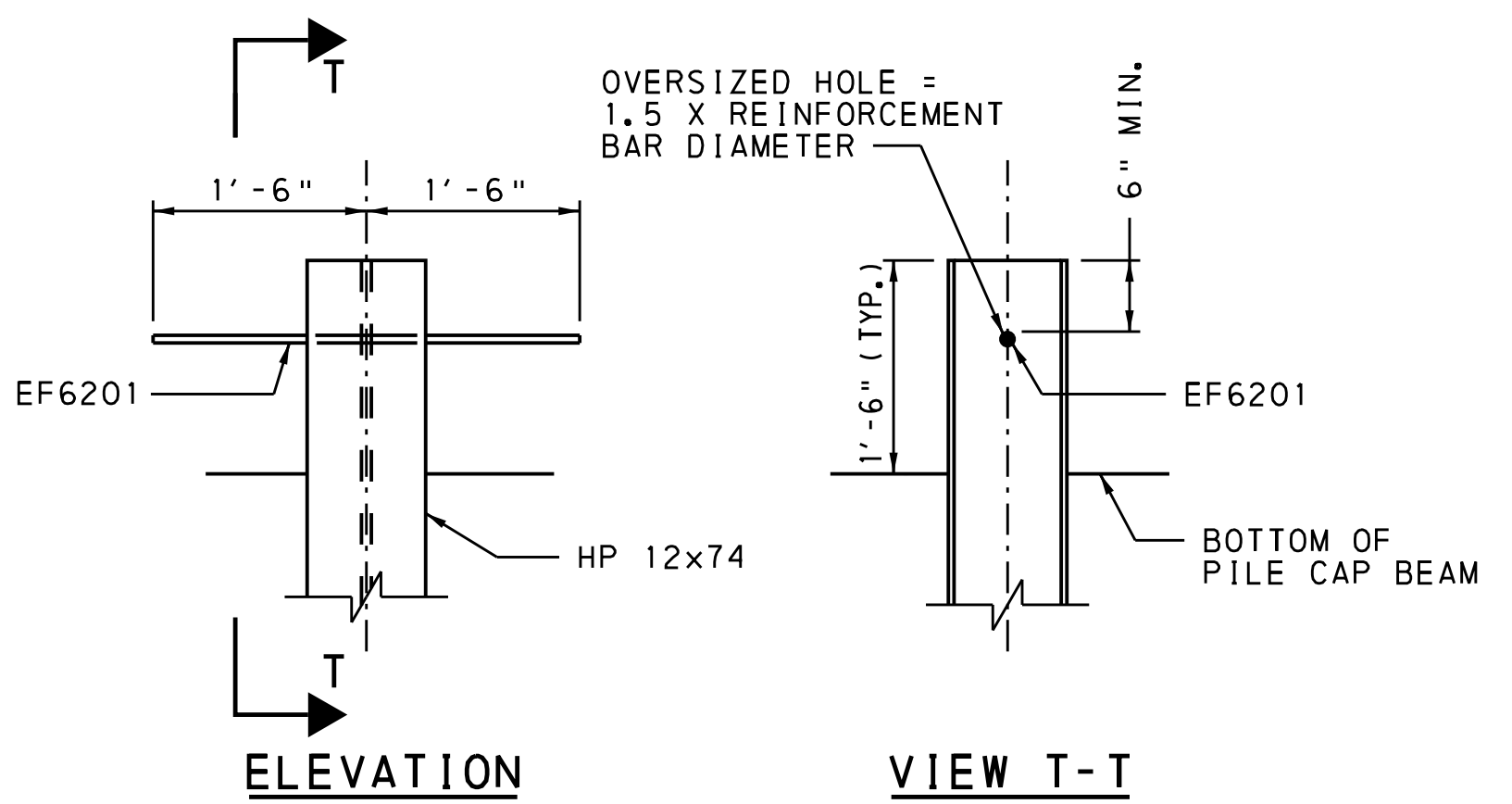
MINIMUM PILE LENGTH
22'-3" ***

30" I.D. CASING REQUIRED 4'-0" MIN. BELOW PILE CAP. PROVIDE CASING BELOW IF REQUIRED FOR PREDRILLING.

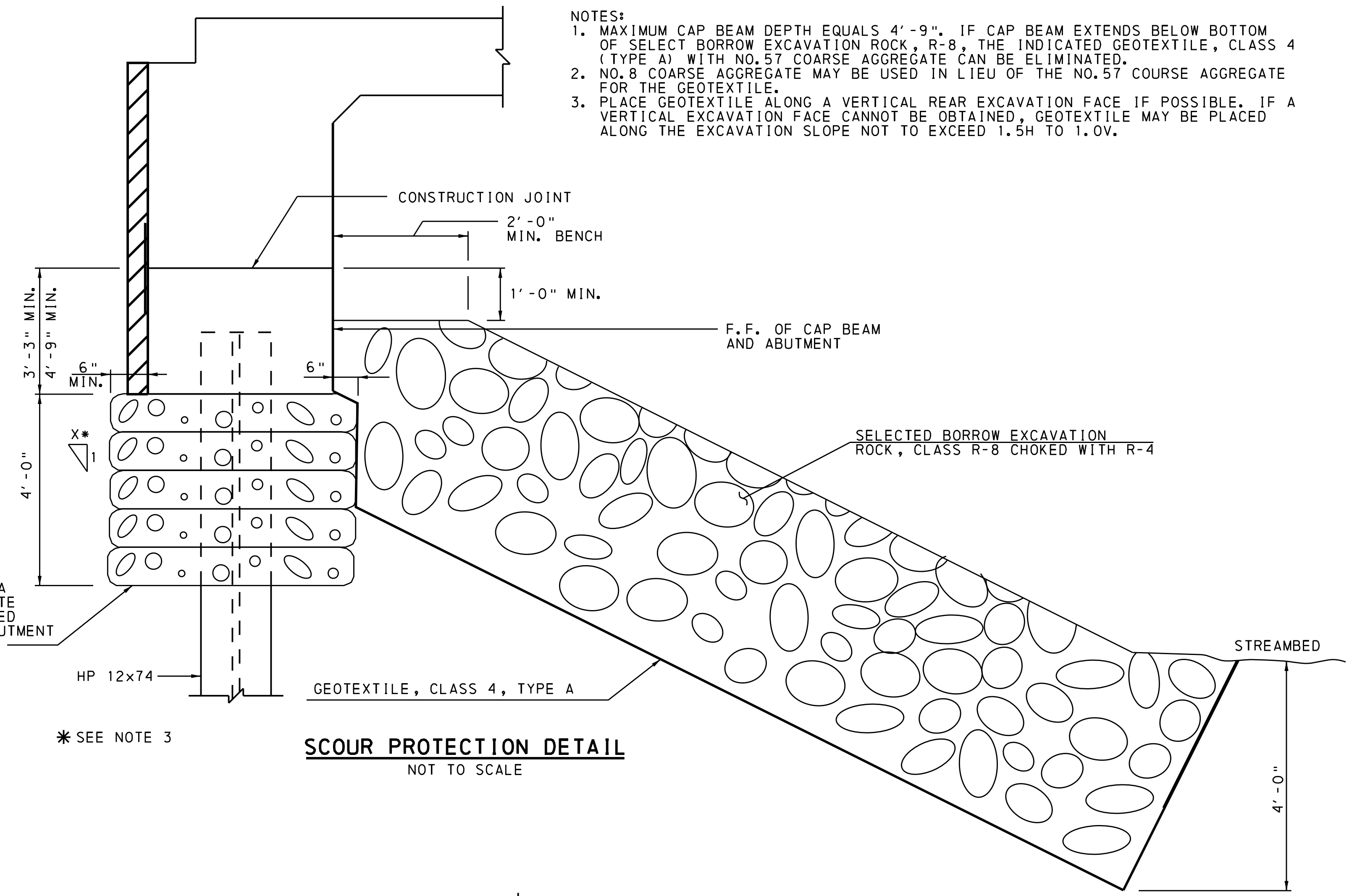
2'-6" MIN. DIA. OF AUGERED HOLE. PROVIDE CASING FOR PILE.

INTEGRAL ABUTMENT PILE INSTALLATION DETAIL
NOT TO SCALE

- *** PRE-DRILLING OF HOLES TO ELEVATION OF 916.70 TO 918.60 BELOW BOTTOM ELEVATION OF PILE CAP. BACKFILL WITH AASHTO #10 IN ACCORDANCE WITH SPECIAL PROVISION, PREDRILLED PILE DETAIL.
- *** PILES MUST BE DRIVEN TO A MINIMUM PILE TIP ELEVATION 913.70 TO 915.60.



H-PILE-TO-PILE CAP CONNECTION DETAIL
NOT TO SCALE

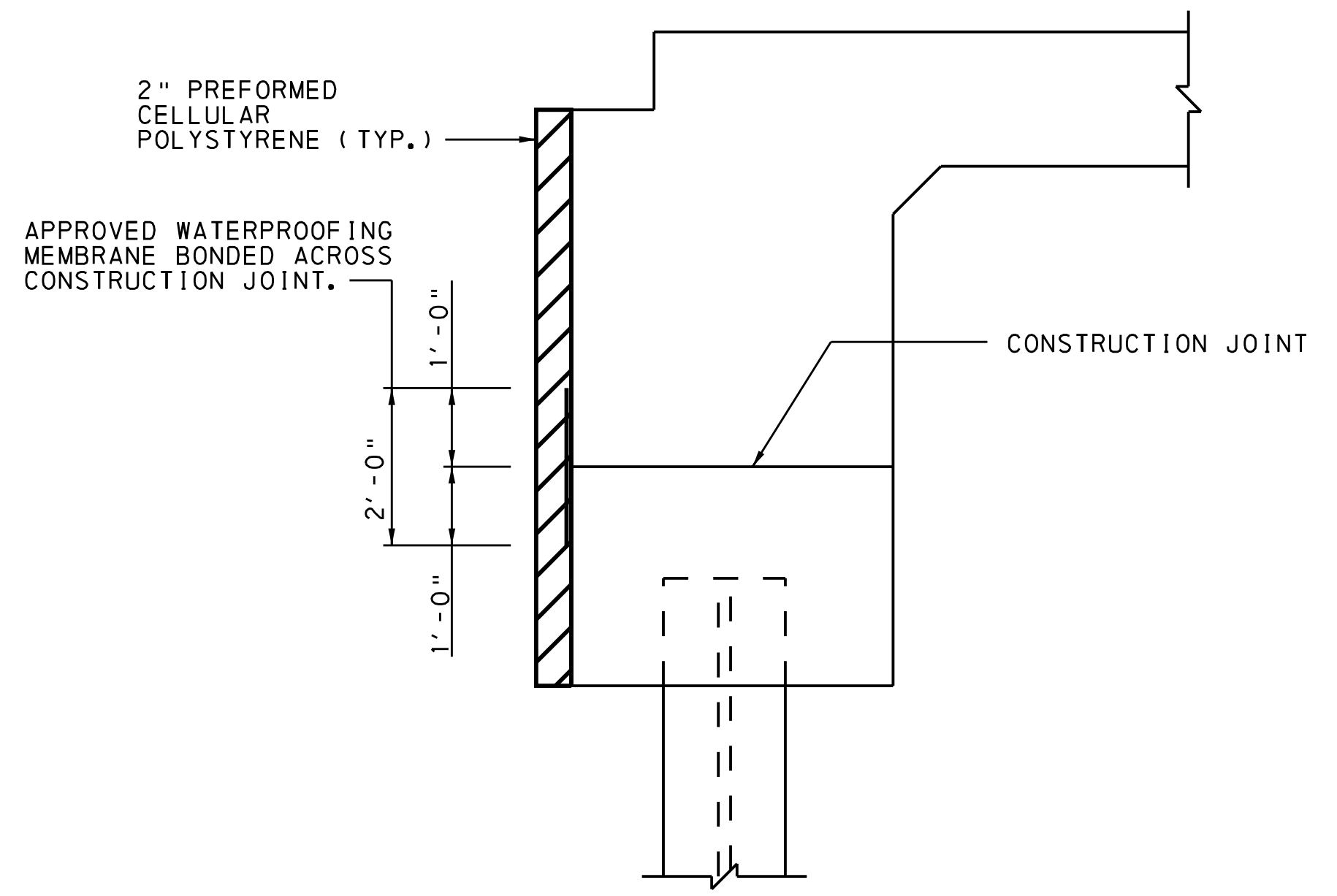


- NOTES:
1. MAXIMUM CAP BEAM DEPTH EQUALS 4'-9". IF CAP BEAM EXTENDS BELOW BOTTOM OF SELECT BORROW EXCAVATION ROCK, R-8, THE INDICATED GEOTEXTILE, CLASS 4 (TYPE A) WITH NO.57 COARSE AGGREGATE CAN BE ELIMINATED.
 2. NO.8 COARSE AGGREGATE MAY BE USED IN LIEU OF THE NO.57 COARSE AGGREGATE FOR THE GEOTEXTILE.
 3. PLACE GEOTEXTILE ALONG A VERTICAL REAR EXCAVATION FACE IF POSSIBLE. IF A VERTICAL EXCAVATION FACE CANNOT BE OBTAINED, GEOTEXTILE MAY BE PLACED ALONG THE EXCAVATION SLOPE NOT TO EXCEED 1.5H TO 1.0V.

GEOTEXTILE CLASS 4, TYPE A WITH NO.57 COARSE AGGREGATE IN 12" LAYERS (MAX.) PLACED ALONG ENTIRE LENGTH OF ABUTMENT (TYP.) (SEE NOTES 1 & 2).

* SEE NOTE 3

SCOUR PROTECTION DETAIL
NOT TO SCALE



NOTE: PROVIDE WATERPROOFING MEMBRANE IN ACCORDANCE WITH PUBLICATION 408, SECTION 680.2(b) ADHESIVE BACKED PREFORMED MEMBRANE.

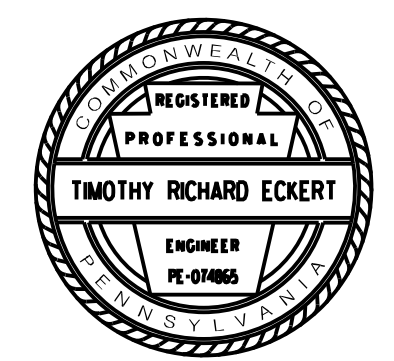
WATERPROOFING DETAIL
NOT TO SCALE

- NOTES:
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 2 PLAN, SEE SHEET 15.
 - FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
 - FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



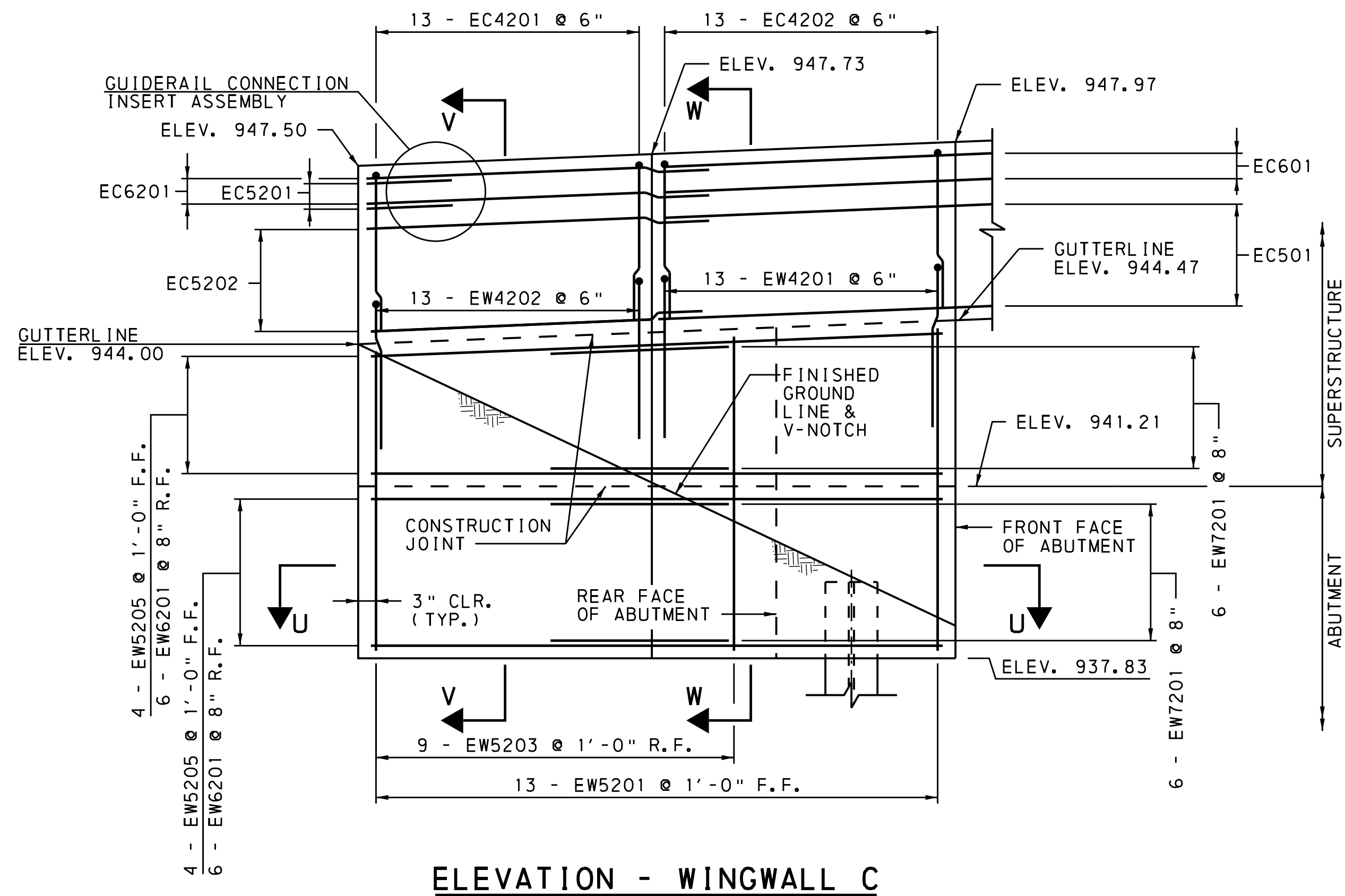
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 DETAILS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

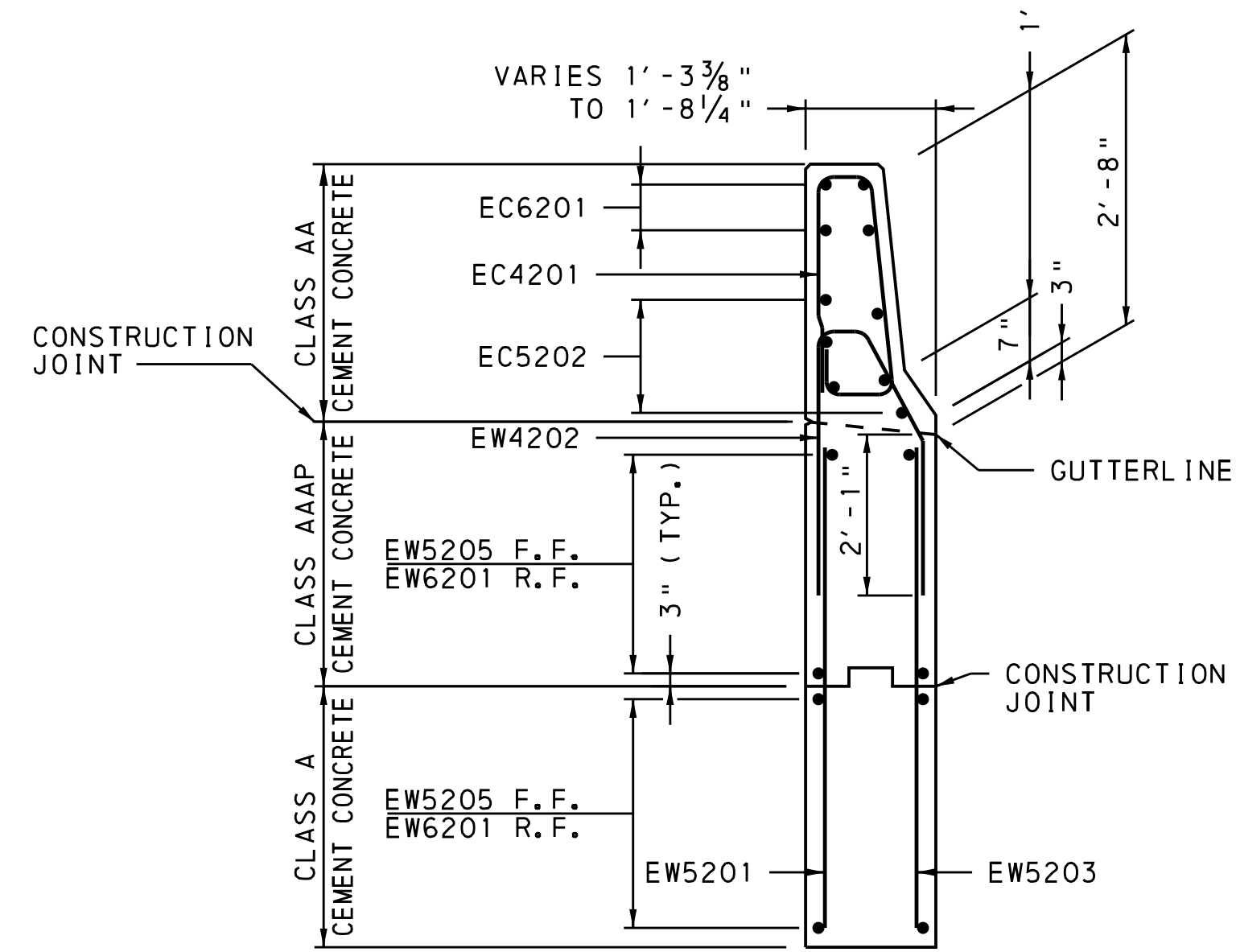
SHEET 18 OF 43

L-45

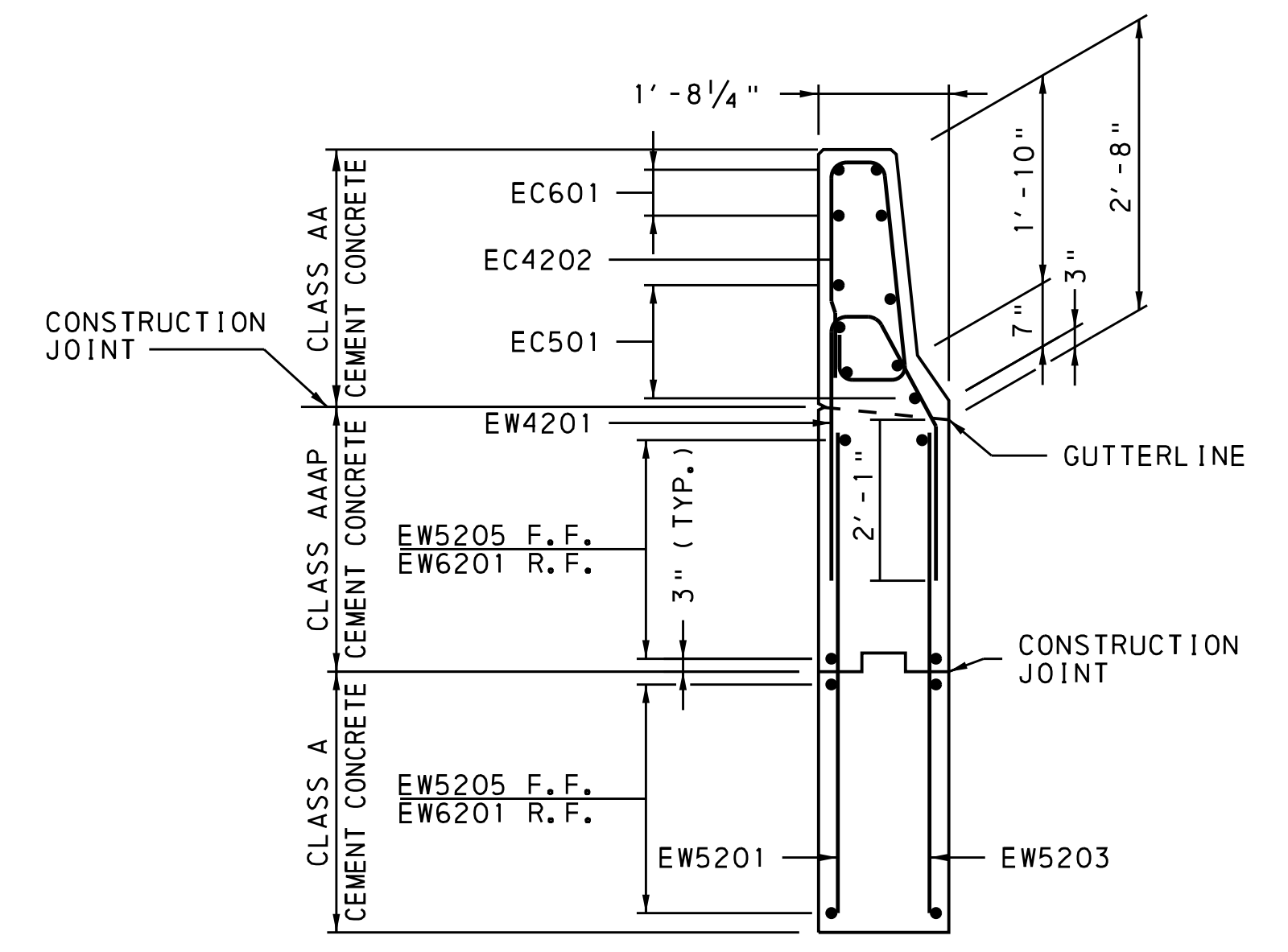
PENNONI ASSOCIATES, INC.
FILE NAME: \\S:\BOL\ABUT_2_DET.DWG
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JACOB PENNONI (1748)
CHECKED BY: JACOB PENNONI (1748)
PLOT DRIVER: PENNONI-PLOT-PENNONI-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 12:43:31 PM
USER NAME: jacob
OFFICE LOCATION: Pittsburgh, Pennsylvania



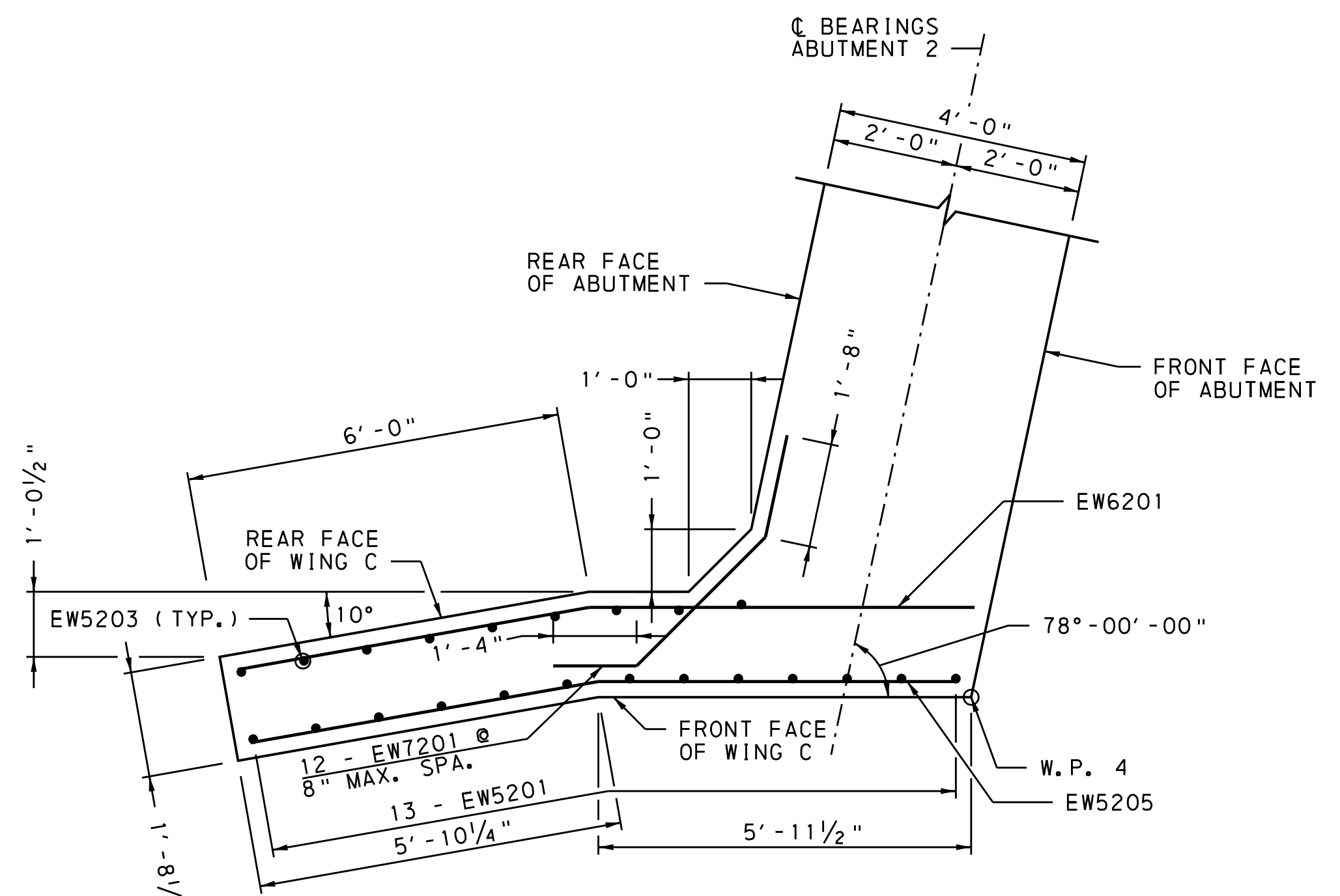
1 0 1 2 FEET



1 0 1 2 FEET



1 0 1 2 FEET

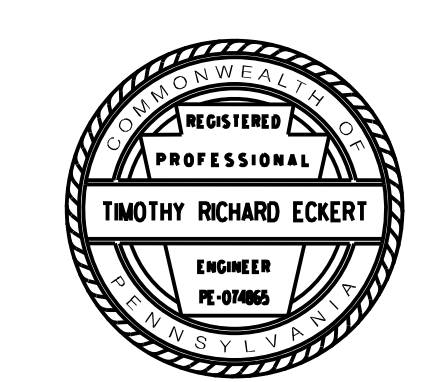


1 0 1 2 FEET

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 2 PLAN, SEE SHEET 15.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
- FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 WINGWALL C

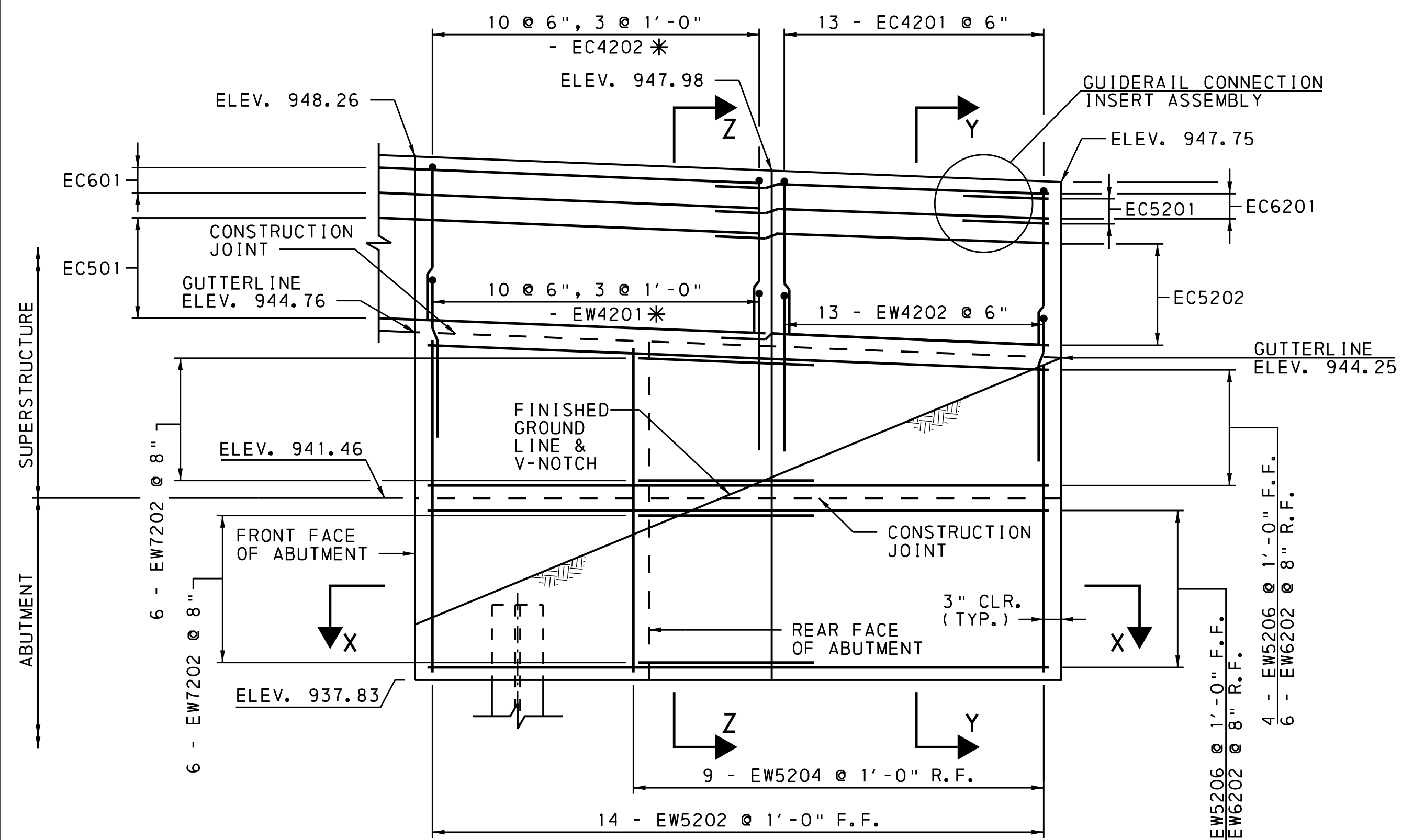
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 19 OF 43

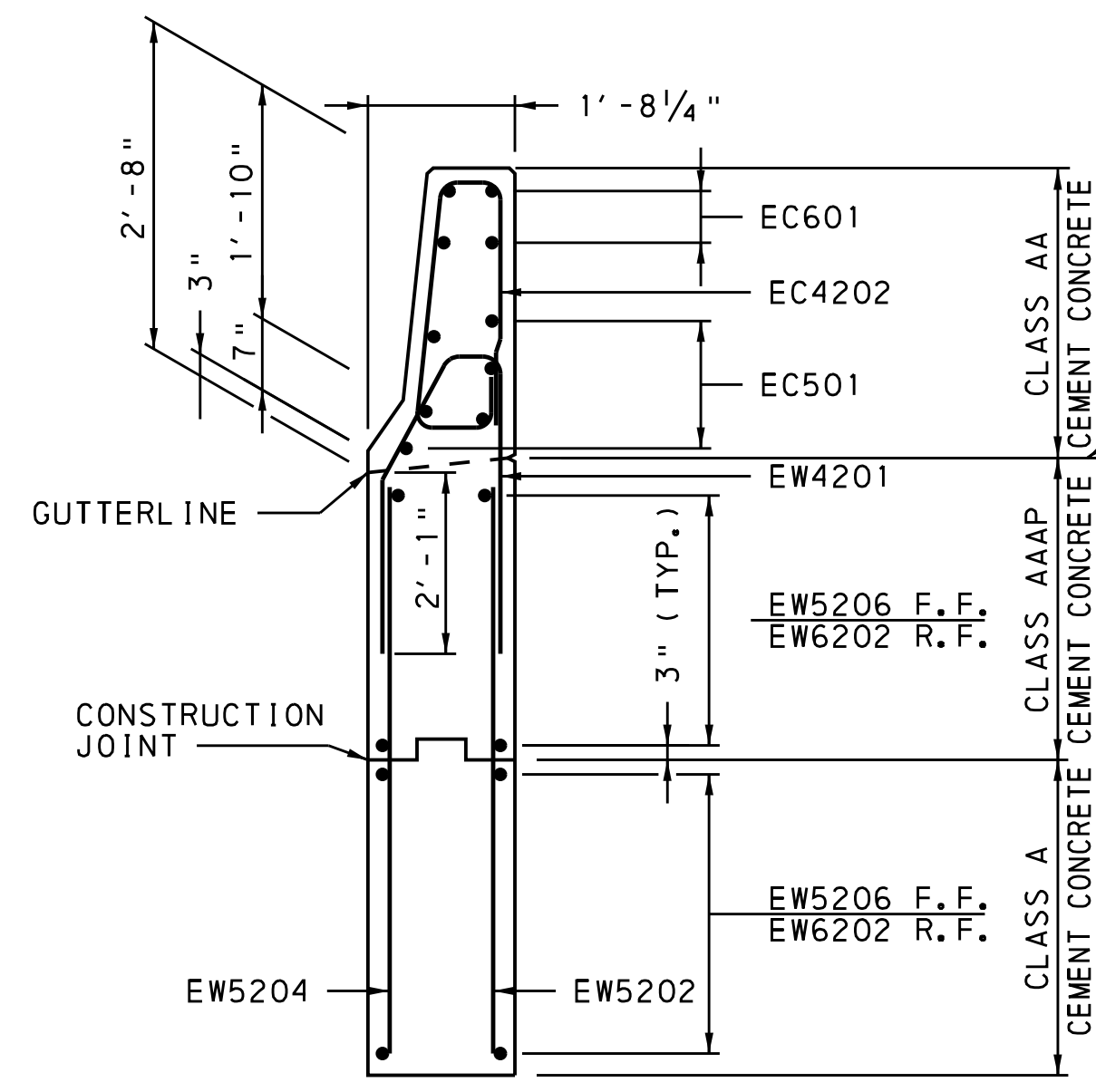
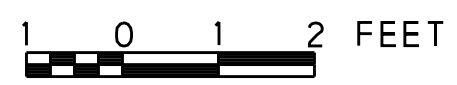
L-45

PENNONI ASSOCIATES, INC.
FILE NAME: N:\BOL\ABUT 2 WINGWALL C.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JAC
CHECKED BY: JAC
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2009 @ 10:20:09 PM
USER NAME: jburdick OFFICE LOCATION: Pittsburg, Pennsylvania

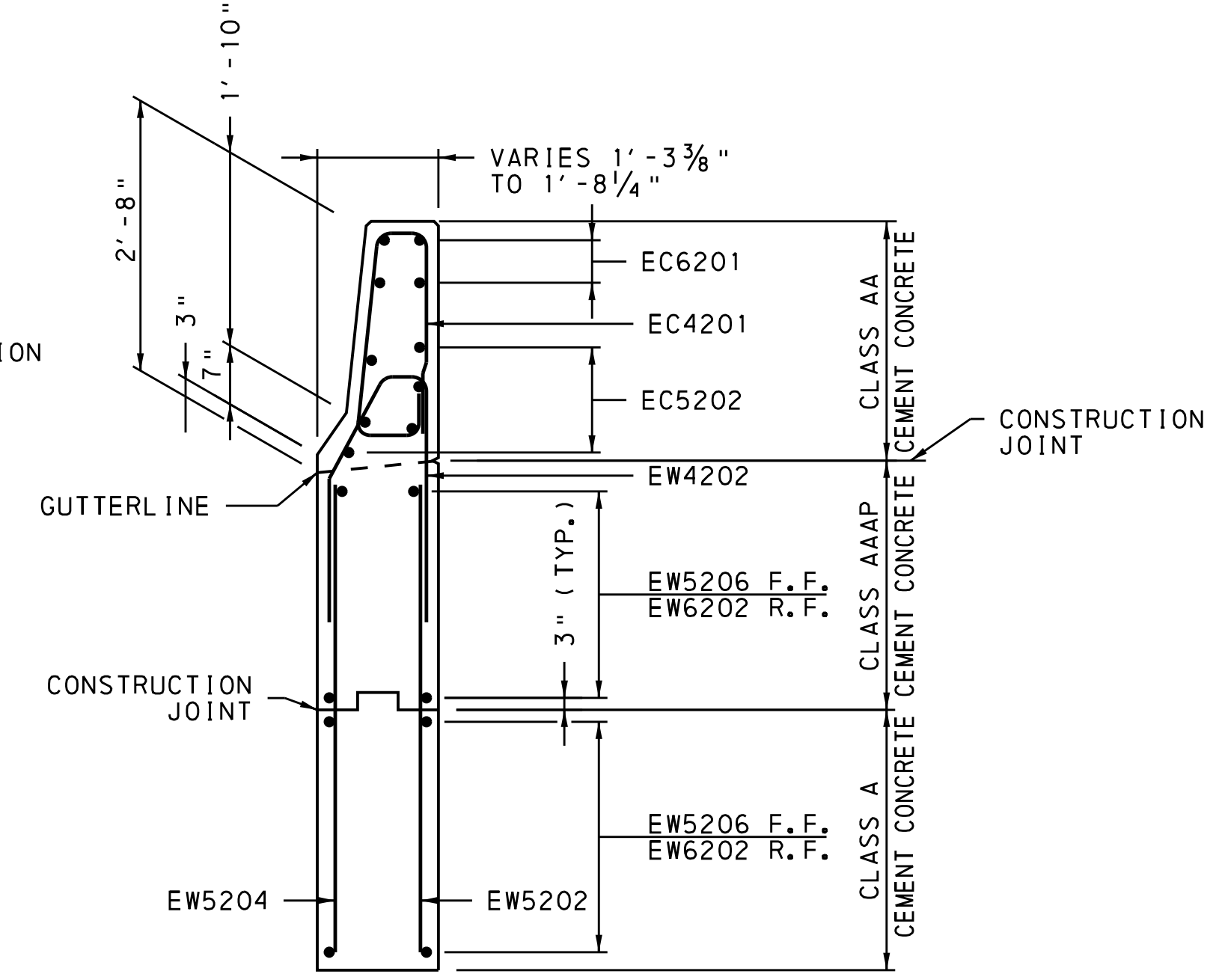
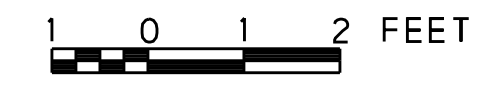
DES: TE CKD: MP DWG: NCC CKD: TE



ELEVATION - WINGWALL D



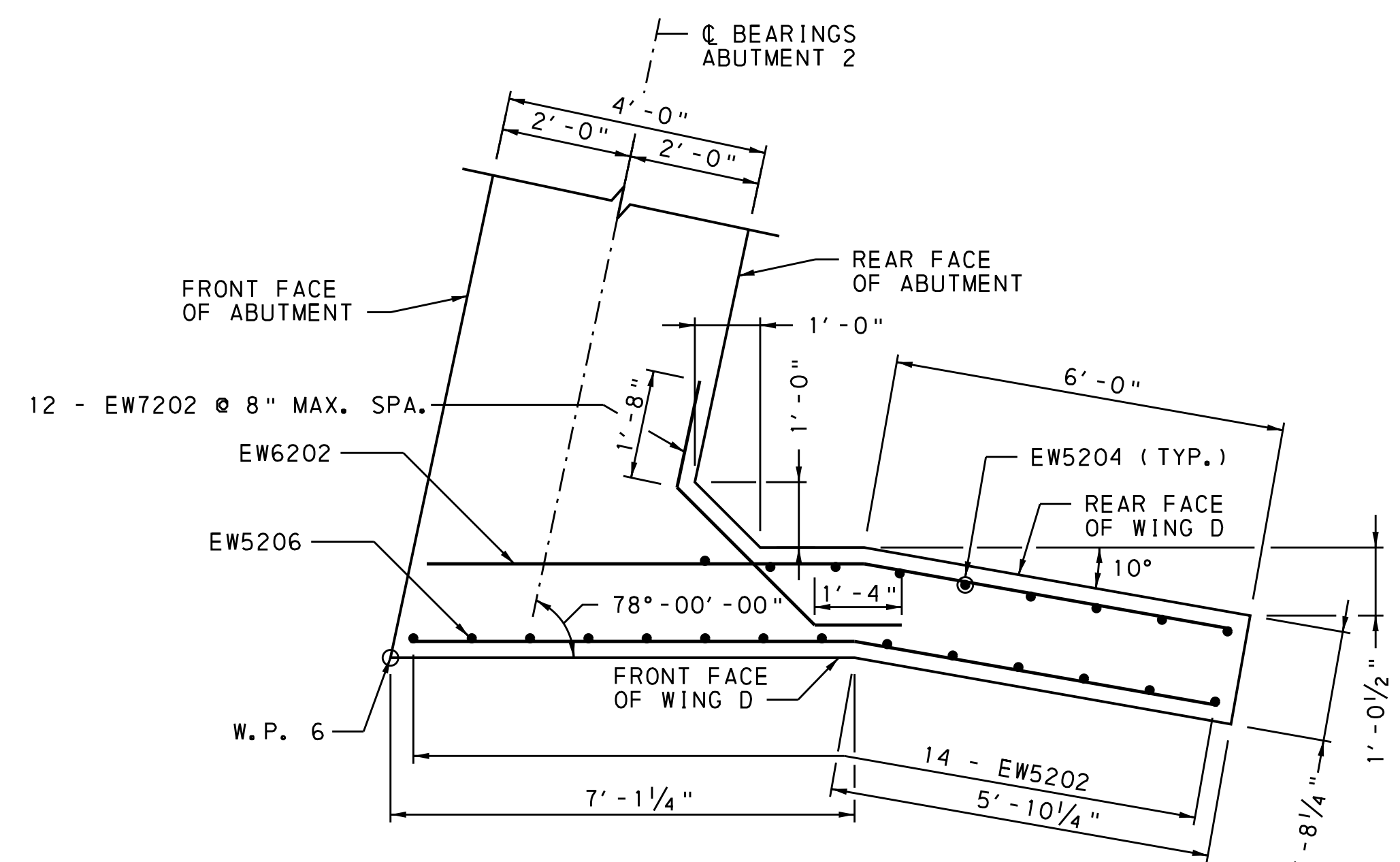
SECTION Z-Z



SECTION Y-Y



* WITHIN 10'-0" OF THE END OF U-WING AND WITHIN 10'-0" OF THE U-WING JOINT, THE #4 BARRIER REINFORCEMENT BARS ARE SPACED AT 6" MAX.



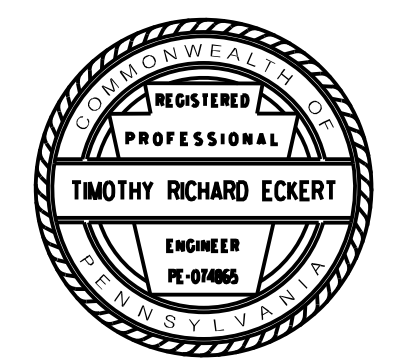
SECTION X-X



Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 WINGWALL D

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 20 OF 43

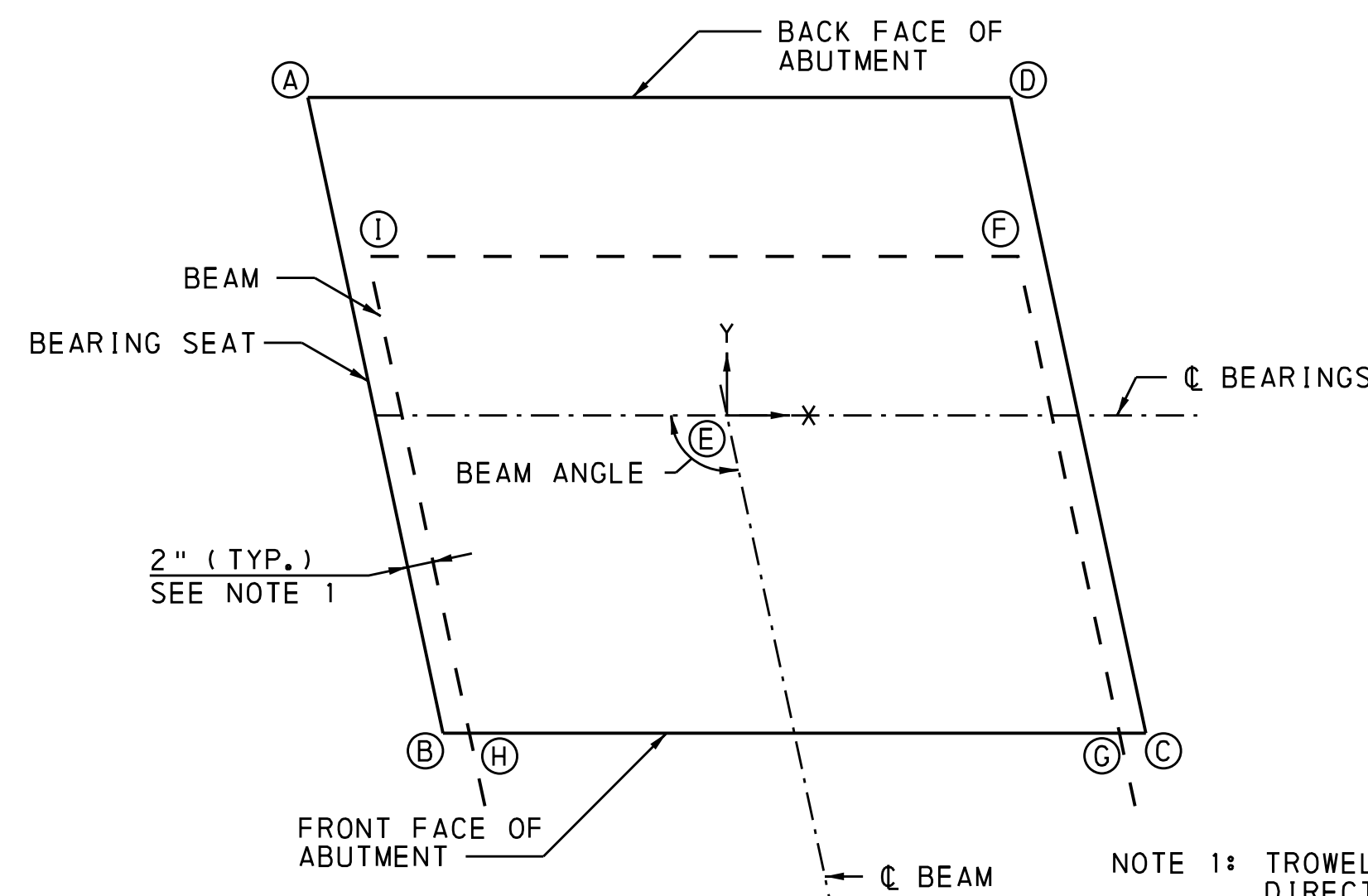
L-45

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 2 PLAN, SEE SHEET 15.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
- FOR ABUTMENT 2 REINFORCEMENT BAR SCHEDULE, SEE SHEET 22.

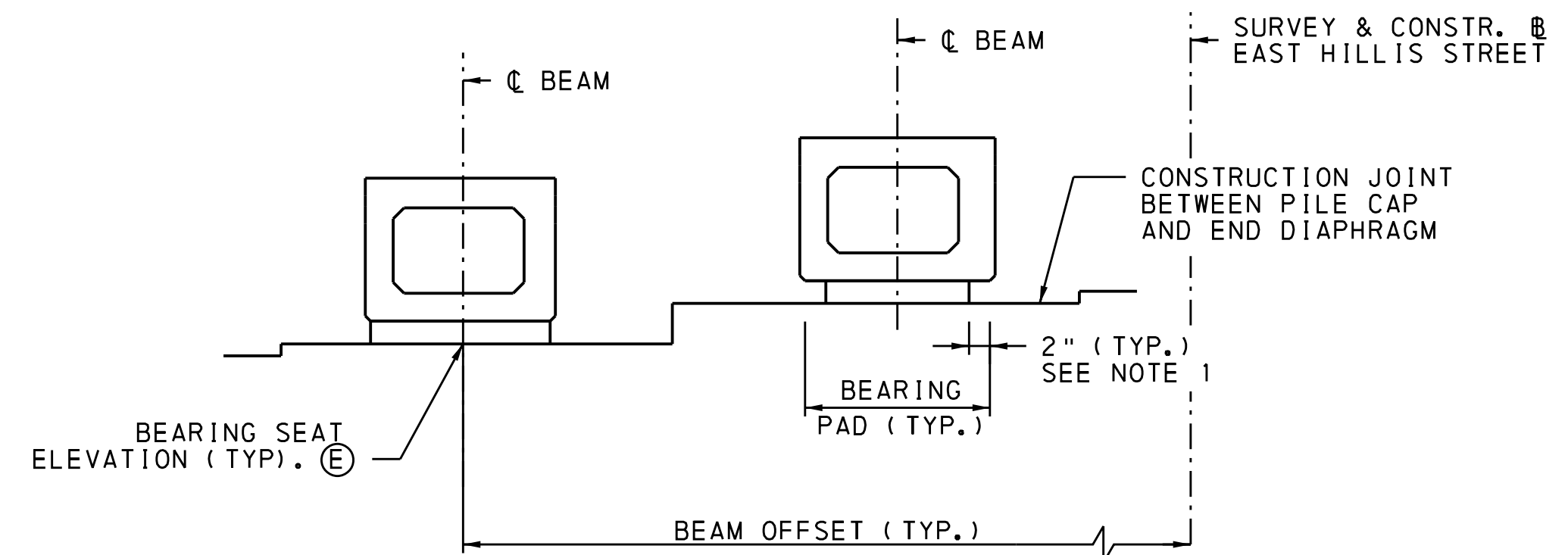
PENNONI ASSOCIATES, INC.
FILE NAME: ...201501.ABUT 2 WINGWALL D.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT DATE: 01/30/2020 11:01:58 AM
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 04:22:57 PM
USER NAME: Bhubock OFFICE LOCATION: PHT+SBurgph, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



BEARING SEAT PLAN VIEW
NOT TO SCALE

NOTE 1: TROWEL SMOOTH SURFACE OF CONSTRUCTION JOINT DIRECTLY UNDER BEAM AND EXTENDING 2" OUTSIDE THE BEARING AREA. PROVIDE A RAKED FINISH FOR THE REMAINDER OF THE CONSTRUCTION JOINT.



BEARING SEAT ELEVATION VIEW
NOT TO SCALE

NOTE: SEE BEARING SEAT PLAN VIEW DETAIL FOR FURTHER DETAILS.

ABUTMENT 2 BEARING SEAT LOCATION AND ELEVATION TABLE																			
BEAM NO.	C BEAM OFFSET	BEAM ANGLE	BRG. SEAT SLOPE		A			B			C			D			E		
			X	Y	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.
1	-13' -2"	102° -00' -00"	0.647%	-3.043%	-2' -7 5/8"	2' -0"	941.08	-1' -9 1/2"	-2' -0"	941.21	2' -7 5/8"	-2' -0"	941.24	1' -9 1/2"	2' -0"	941.11	0"	0"	941.16
2	-4' -5 5/8"	102° -00' -00"	0.625%	-2.941%	-2' -7 5/8"	2' -0"	941.42	-1' -9 1/2"	-2' -0"	941.55	2' -7 5/8"	-2' -0"	941.57	1' -9 1/2"	2' -0"	941.45	0"	0"	941.50
3	4' -2 5/8"	102° -00' -00"	0.605%	-2.846%	-2' -7 5/8"	2' -0"	941.50	-1' -9 1/2"	-2' -0"	941.62	2' -7 5/8"	-2' -0"	941.65	1' -9 1/2"	2' -0"	941.53	0"	0"	941.58
4	12' -10 7/8"	102° -00' -00"	0.586%	-2.759%	-2' -7 5/8"	2' -0"	941.32	-1' -9 1/2"	-2' -0"	941.43	2' -7 5/8"	-2' -0"	941.46	1' -9 1/2"	2' -0"	941.34	0"	0"	941.39

NOTE:

C BEAM OFFSET IS MEASURED ALONG THE C BEARING.
C BEAM OFFSET IS MEASURED FROM THE C OF ROADWAY TO THE C OF BEAM AT THE BEARING SEAT POINT (E).
NEGATIVE OFFSETS ARE MEASURED TO THE LEFT OF THE C OF ROADWAY, FACING THE ABUTMENT.

POSITIVE "BEARING SEAT SLOPE Y" REPRESENTS AN INCREASE IN ELEVATION FROM FRONT TO BACK FACE OF ABUTMENT, IN THE DIRECTION OF THE POSITIVE Y-AXIS SHOWN IN THE BEARING SEAT PLAN VIEW.

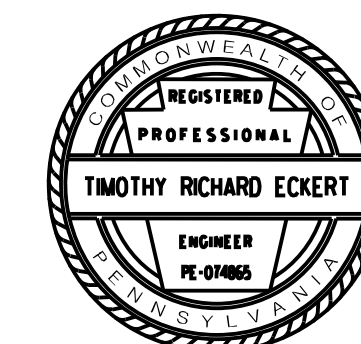
POSITIVE "BEARING SEAT SLOPE X" REPRESENTS AN INCREASE IN ELEVATION IN THE DIRECTION OF THE POSITIVE X-AXIS SHOWN IN THE BEARING SEAT PLAN VIEW.

ABUTMENT 2 BEARING SEAT LOCATION AND ELEVATION TABLE																
BEAM NO.	C BEAM OFFSET	BEAM ANGLE	BRG. SEAT SLOPE		F			G			H			I		
			X	Y	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.	X	Y	ELEV.
1	-13' -2"	102° -00' -00"	0.647%	-3.043%	1' -10"	1' -0"	941.14	2' -5 5/8"	-2' -0"	941.24	-1' -7 3/8"	-2' -0"	941.21	-2' -3 1/8"	1' -0"	941.11
2	-4' -5 5/8"	102° -00' -00"	0.625%	-2.941%	1' -10"	1' -0"	941.48	2' -5 5/8"	-2' -0"	941.57	-1' -7 3/8"	-2' -0"	941.55	-2' -3 1/8"	1' -0"	941.45
3	4' -2 5/8"	102° -00' -00"	0.605%	-2.846%	1' -10"	1' -0"	941.56	2' -5 5/8"	-2' -0"	941.65	-1' -7 3/8"	-2' -0"	941.62	-2' -3 1/8"	1' -0"	941.53
4	12' -10 7/8"	102° -00' -00"	0.586%	-2.759%	1' -10"	1' -0"	941.37	2' -5 5/8"	-2' -0"	941.46	-1' -7 3/8"	-2' -0"	941.43	-2' -3 1/8"	1' -0"	941.35

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 2 PLAN, SEE SHEET 15.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 BEARING DETAILS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 21 OF 43

L-45

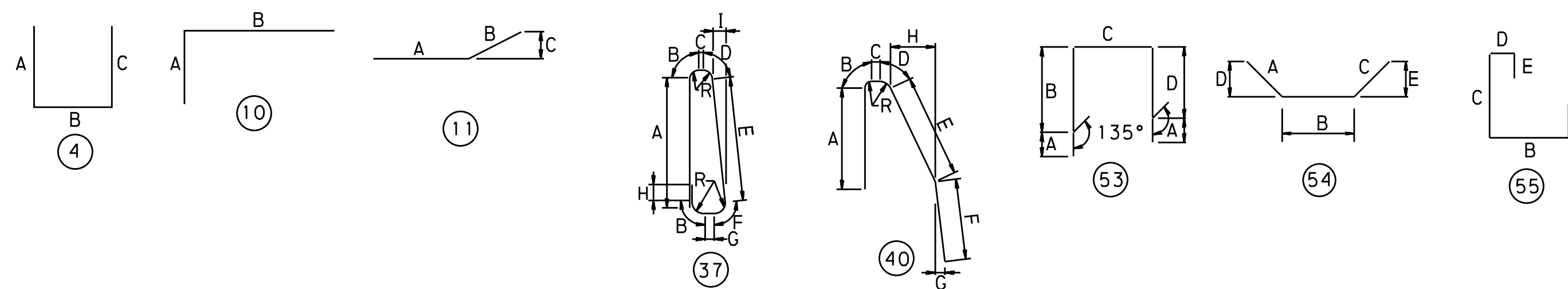
PENNONI ASSOCIATES, INC.
FILE NAME: \\V11501.ABUT.2.BEARING.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JACOB
CHECKED BY: JACOB
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 12:33:35 PM
USER NAME: jburdick OFFICE LOCATION: PITTSBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE

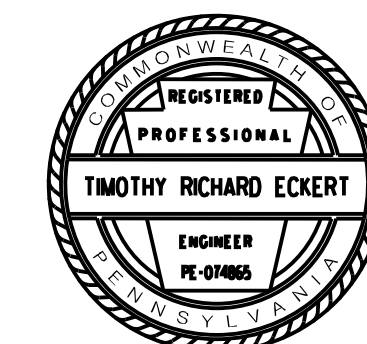
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
ABUTMENT PILE CAP											
EF5201	5	5	11' - 10 1/4"	10	1' - 9"	10' - 1 1/4"					
EF5202	5	10	7' - 0 7/8"	4	1' - 9"	3' - 6 7/8"	1' - 9"				
EF5203	5	136	7' - 9 1/2"	4	2' - 7 1/2"	2' - 6 1/2"	2' - 7 1/2"				
EF5204	5	22	7' - 5 5/8"	4	1' - 6"	3' - 1 5/8"	2' - 10"				
EF5205	5	22	10' - 5 5/8"	4	3' - 0"	4' - 7 5/8"	2' - 10"				
EF5206	5	8	8' - 11 1/2"	53	5 1/2"	2' - 9"	2' - 6 1/2"	2' - 9"			
EF5207	5	24	8' - 10 5/8"	55	10"	3' - 7"	3' - 1 5/8"	8"	8"		
EF5208	5	4	9' - 7 1/2"	53	5 1/2"	3' - 1"	2' - 6 1/2"	3' - 1"			
EF5209	5	4	9' - 9 1/2"	53	5 1/2"	3' - 2"	2' - 6 1/2"	3' - 2"			
EF5210	5	8	9' - 5"	53	5 1/2"	2' - 11 3/4"	2' - 6 1/2"	2' - 11 3/4"			
EF6201	6	6	3' - 0"	STR							
EF8201	8	14	33' - 10 1/2"	STR							
WINGWALL STEM											
EW4201	4	26	7' - 7"	40	3' - 3"	4"	4"	2 3/4"	1' - 4 1/4"	2"	F=2' - 1" ; G=0" ; H=7 3/8"
EW4202	4	26	7' - 7"	40	3' - 3"	4"	4"	2 3/4"	1' - 4 1/4"	2"	2 SETS OF 13: H VARIES 7 3/8" TO 2 1/2" VARY EA. BAR IN SET BY 3/8" F=2' - 1" ; G=0"
EW5201	5	13	5' - 8" TO 6' - 1 5/8"	STR							VARIES 1 EA. BY 1/2"
EW5202	5	14	5' - 11" TO 6' - 5 1/8"	STR							VARIES 1 EA. BY 1/2"
EW5203	5	9	5' - 8" TO 5' - 11 5/8"	STR							VARIES 1 EA. BY 1/2"
EW5204	5	9	5' - 11" TO 6' - 2 5/8"	STR							VARIES 1 EA. BY 1/2"
EW5205	5	8	11' - 4 5/8"	11	5' - 9 1/4"	5' - 7 3/8"	11 5/8"				
EW5206	5	9	12' - 5 1/8"	11	6' - 9 3/4"	5' - 7 3/8"	11 5/8"				
EW6201	6	12	11' - 10 1/4"	11	6' - 1 5/8"	5' - 8 5/8"	11 7/8"				
EW6202	6	12	12' - 4 5/8"	11	6' - 8"	5' - 8 5/8"	11 7/8"				
EW7201	7	12	6' - 3 1/4"	54	1' - 4"	3' - 3 1/4"	1' - 8"	11 1/4"	10 7/8"		
EW7202	7	12	6' - 3 3/8"	54	1' - 4"	3' - 3 3/8"	1' - 8"	11 1/4"	1' - 4 3/4"		
BARRIER											
EC4201	4	26	5' - 11 1/8" TO 7' - 7 1/8"	37	VARIES	4"	3 3/8"	3 5/8"	VARIES	2"	2 SETS OF 13: A VARIES 2' - 9 1/2" TO 1' - 11 1/2" VARY EA. BAR IN SET BY 1/8" E VARIES 2' - 7 3/4" TO 1' - 9 3/4" VARY EA. BAR IN SET BY 1/8" I VARIES 3 3/8" TO 2 1/4" VARY EA. BAR IN SET BY 1/8" F=4 1/8" ; G=6 3/4" ; H=5" F=4 1/8" ; G=6 3/4" ; H=5" I=3 3/8"
EC4202	4	26	7' - 7 1/8"	37	2' - 4 1/2"	4"	3 3/8"	3 5/8"	2' - 7 3/4"	2"	
EC5201	5	8	5' - 8"	4	2' - 6"	8"	2' - 6"				
EC5202	5	12	7' - 5"	11	1' - 7"	5' - 10"	1' - 0 1/8"				
EC6201	6	8	7' - 9"	11	1' - 11"	5' - 10"	1' - 0 1/8"				

NOTES:

- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY IT PRIOR TO BIDDING AND FABRICATION.
- "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLES SHOW TYPES.
- "E" - INDICATES EPOXY COATED REBARS.
- FOR ALL BAR TYPES SHOWN, DIMENSIONS A-H AND LENGTH ARE MEASURED ALONG OUTSIDE OF BAR. R IS MEASURED ALONG INSIDE OF BAR.
- BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:
SUPERSTRUCTURE: 01 THROUGH 99
ABUTMENT 1: 101 THROUGH 199
ABUTMENT 2: 201 THROUGH 299



Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
ABUTMENT 2 REINFORCEMENT BAR SCHEDULE

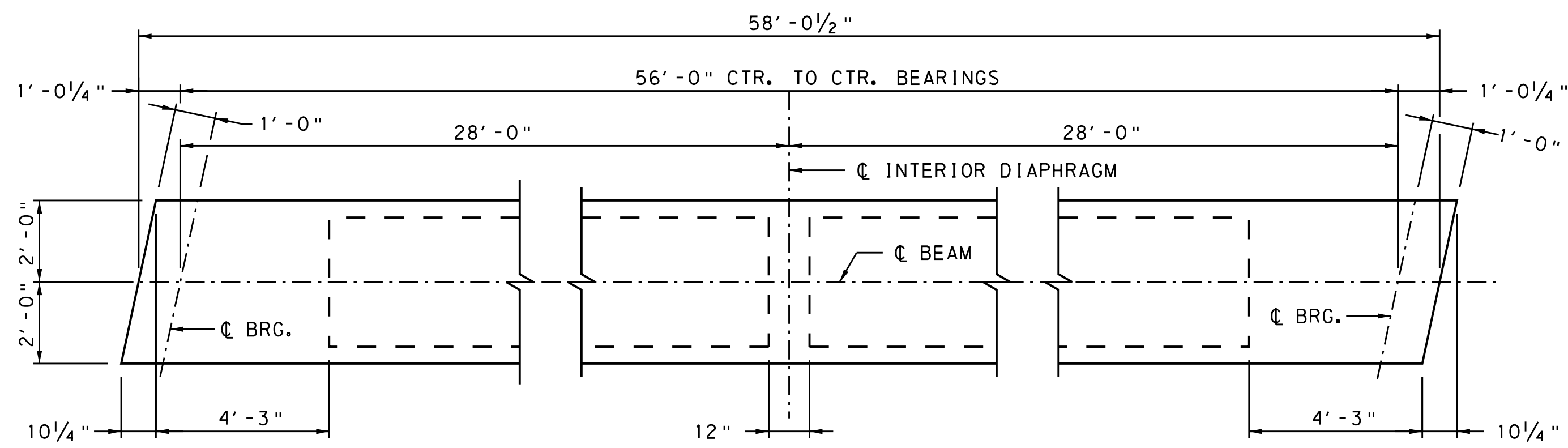
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 22 OF 43

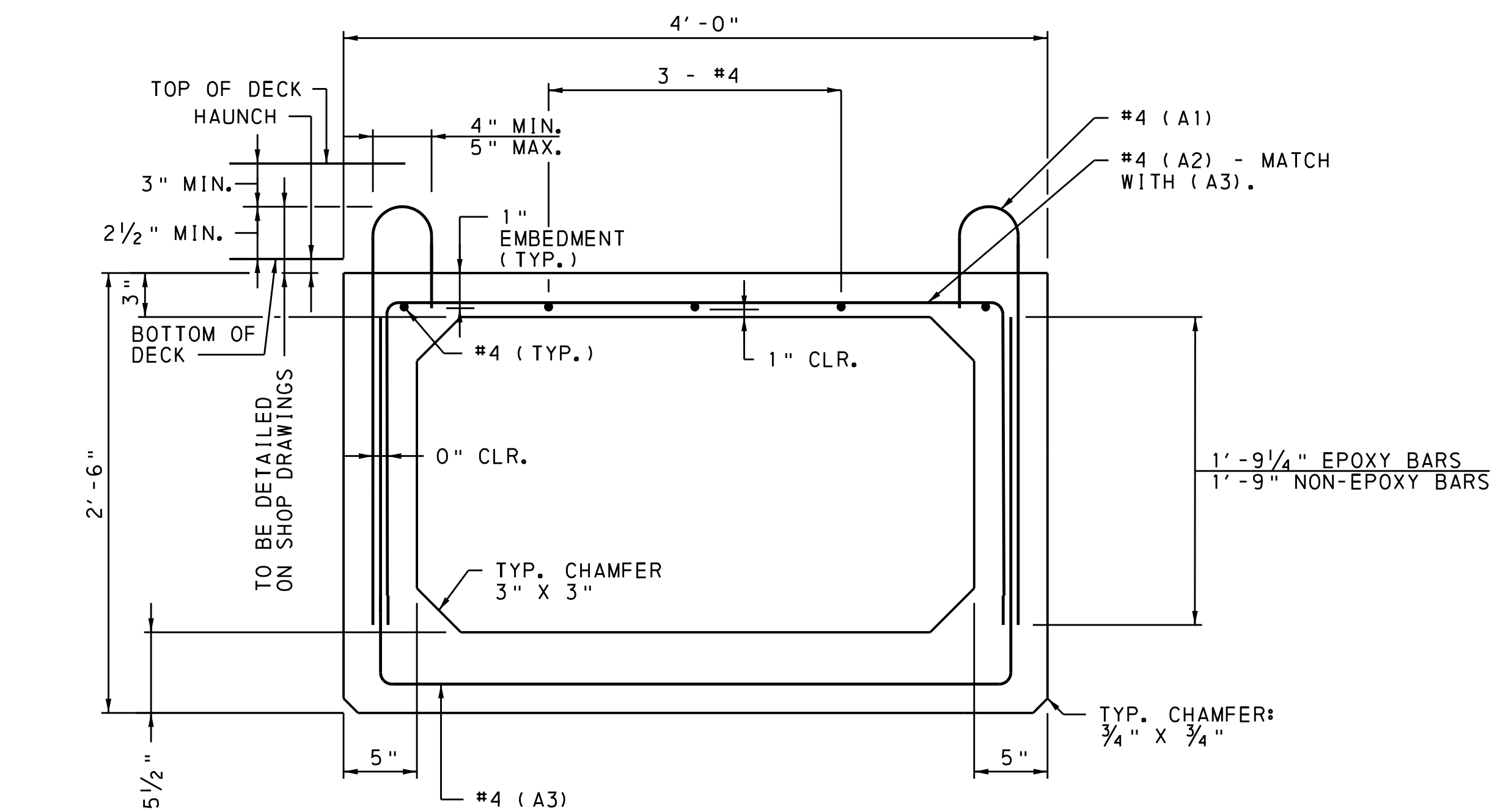
L-45

PENNON ASSOCIATES, INC.
 FILE NAME: \\VZ1501\LAB11_2_REBAR.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 1/30/2020 10:51:01 AM
 PLOT DRIVER: PENNON-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 1/30/2020 10:51:01 AM
 USER NAME: Bhdock OFFICE LOCATION: PIT+EBURG, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

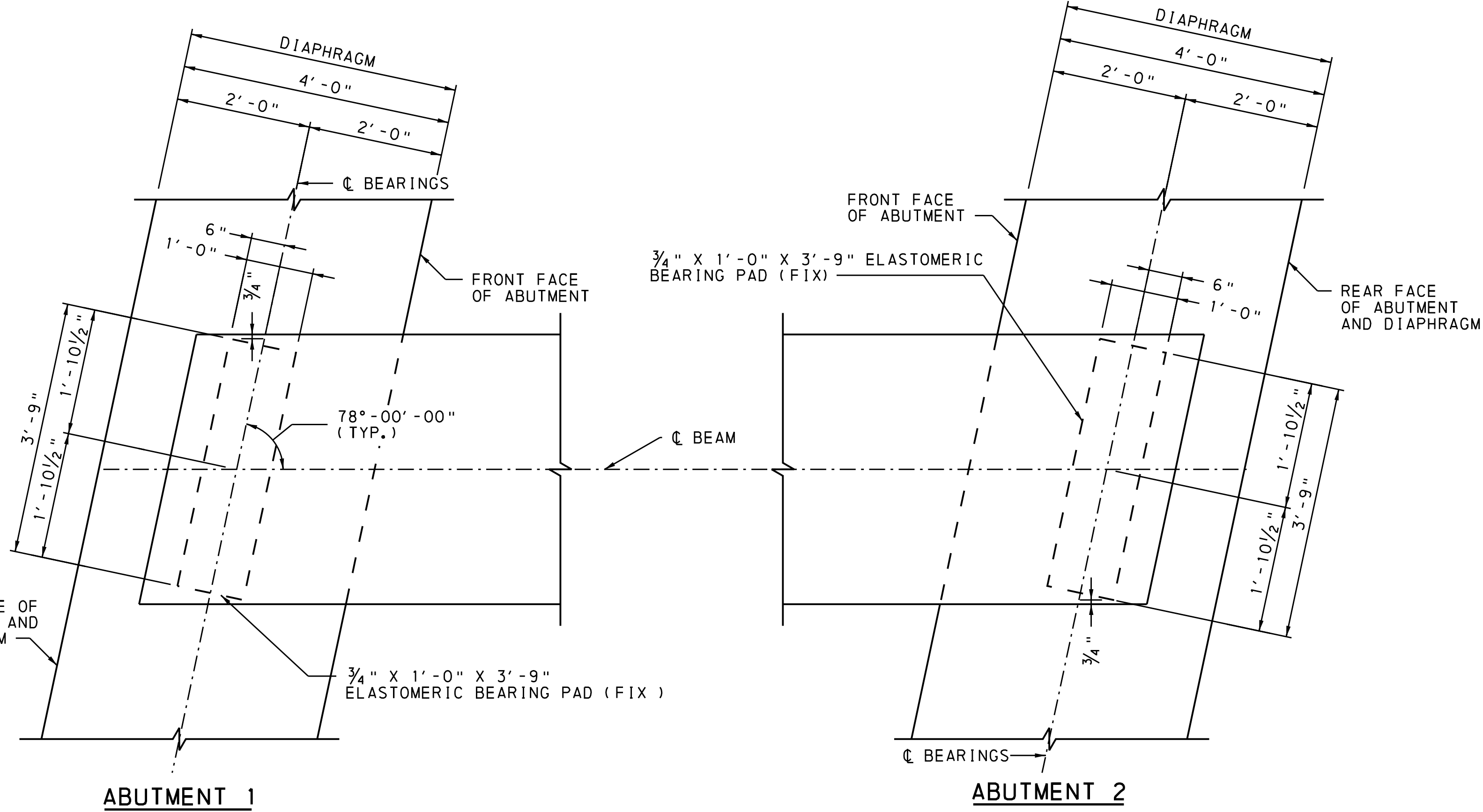


INTERIOR DIAPHRAGMS



NOTE: SEE TYPICAL STRAND CONFINEMENT DETAIL ON THE BEAM FABRICATION DETAILS SHEET FOR CLEARANCES NOT SHOWN.

TYPICAL BEAM SECTION



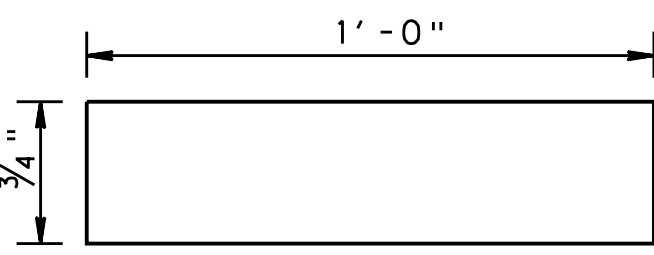
STRUCTURE PLAN AT END OF BEAM



- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR FRAMING PLAN, SEE SHEET 27.
 - FOR BEAM FABRICATION DETAILS, SEE SHEETS 24 AND 25.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

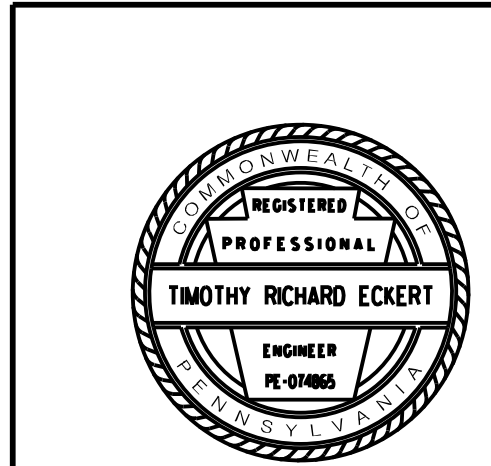
ELASTOMERIC BEARING PADS				
LOCATION	BEARING TYPE	ITEM DESCRIPTION	SIZE (T x L x W)	NUMBER REQUIRED
ABUT. 1	FIXED	PLAIN PADS	3/4" x 1'-0" x 3'-9"	4
ABUT. 2	FIXED	PLAIN PADS	3/4" x 1'-0" x 3'-9"	4



TYPICAL ELASTOMERIC BEARING PAD SECTION

NOT TO SCALE

- NOTES:**
- MANUFACTURE ALL BEARINGS IN ACCORDANCE WITH THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PLANS AND SPECIFICATIONS (PUB. 408) SECTION 1113.02 AND DESIGN MANUAL - PART 4.
 - ALL BEARING PADS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
 - PROVIDE NEOPRENE 50 +/-5 DUROMETER.
 - PROVIDE MINIMUM LOW-TEMPERATURE NEOPRENE GRADE 3.
 - BEARING PADS WILL BE SAMPLED FOR TESTING ACCORDING TO PTM #312.
 - FABRICATOR MAY USE CONTRACT DRAWINGS TO FABRICATE BEARING PADS.
 - BLOCK THE AREAS UNDER THE GIRDERS NOT IN CONTACT WITH THE BEARING PADS USING 1" THICK BACKER RODS.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BOX BEAM DETAILS

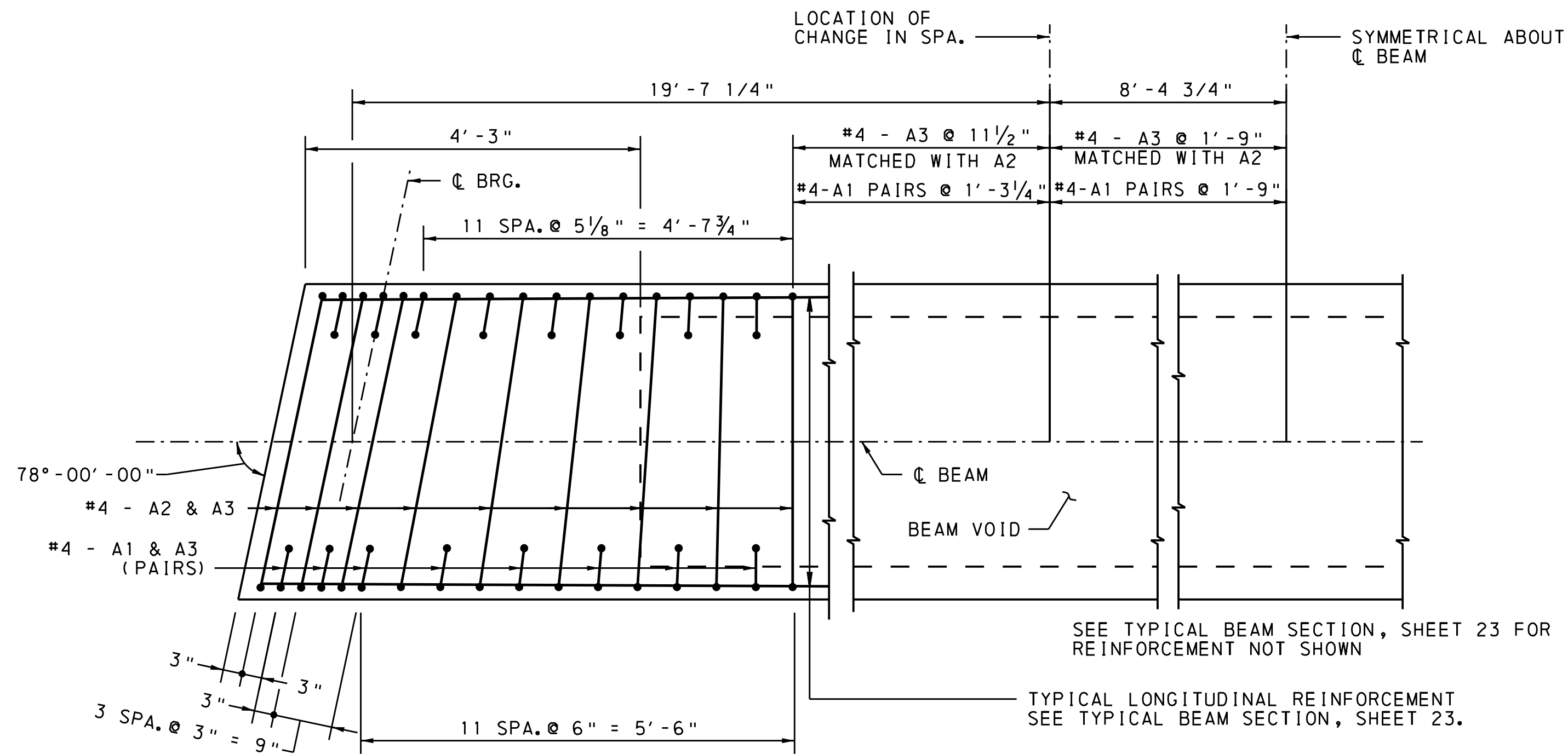
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 23 OF 43

L-45

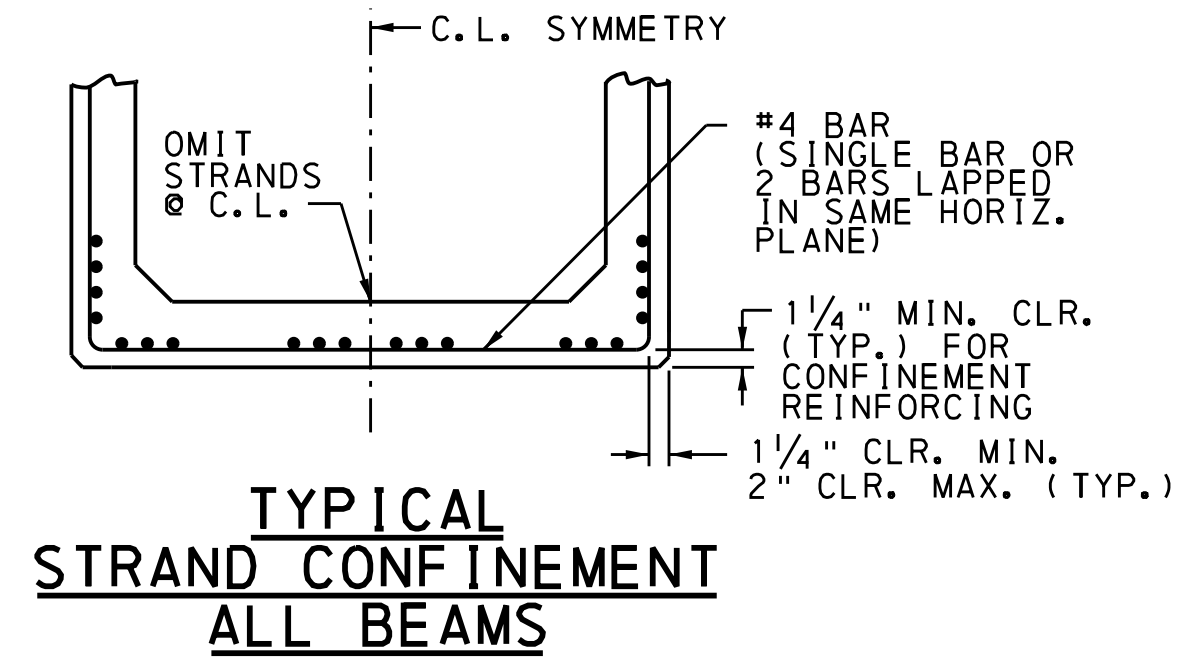
PENNSYLVANIA ASSOCIATES, INC.
FILE NAME: ...23.1501_BOX BEAM DETAILS.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT DATE: 1/30/2020 10:01:58 AM
PLOT DRIVER: PENNON-PTT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 1/30/2020 10:01:58 AM
USER NAME: bludock OFFICE LOCATION: PTT+bludock, Harrisburg, Pa

DES: TE CKD: MP DWG: NCC CKD: TE



BEAM END TRANSVERSE REINFORCEMENT

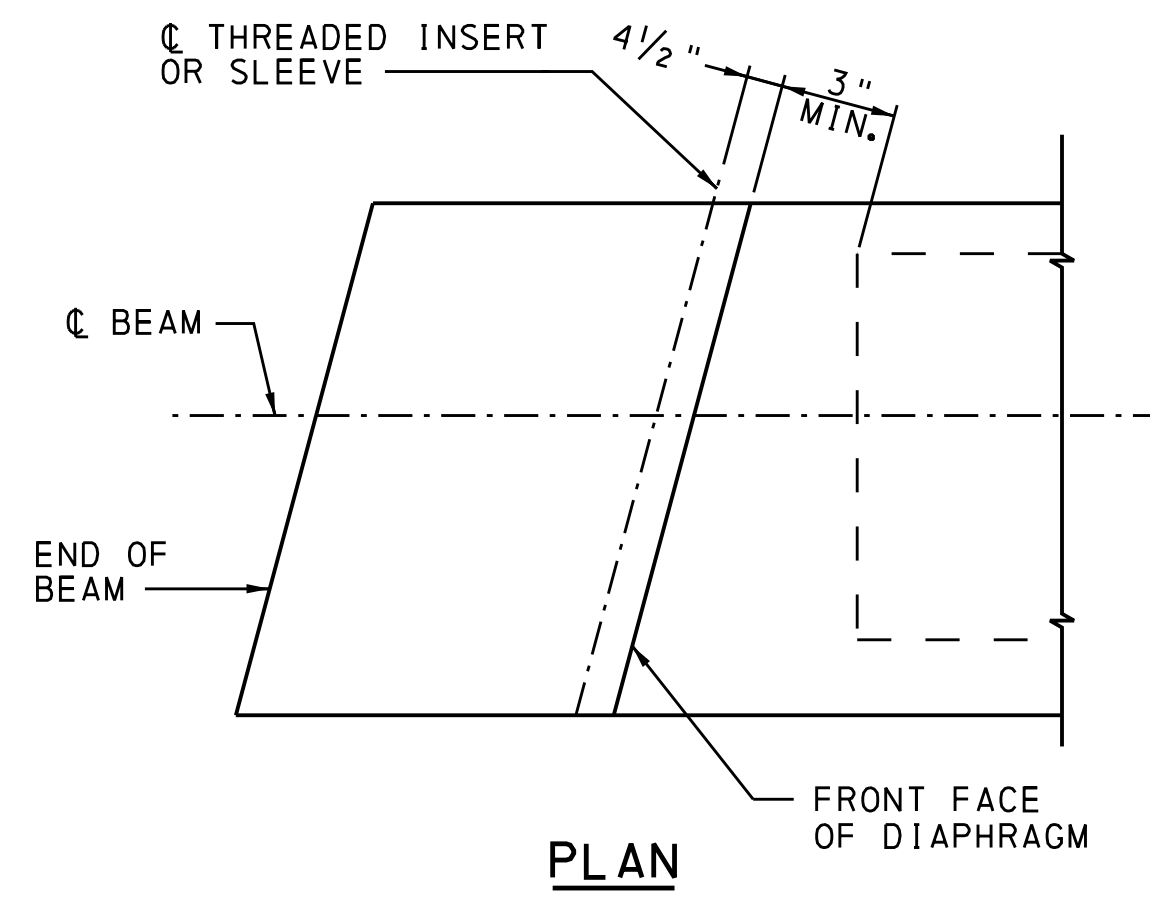
NOT TO SCALE



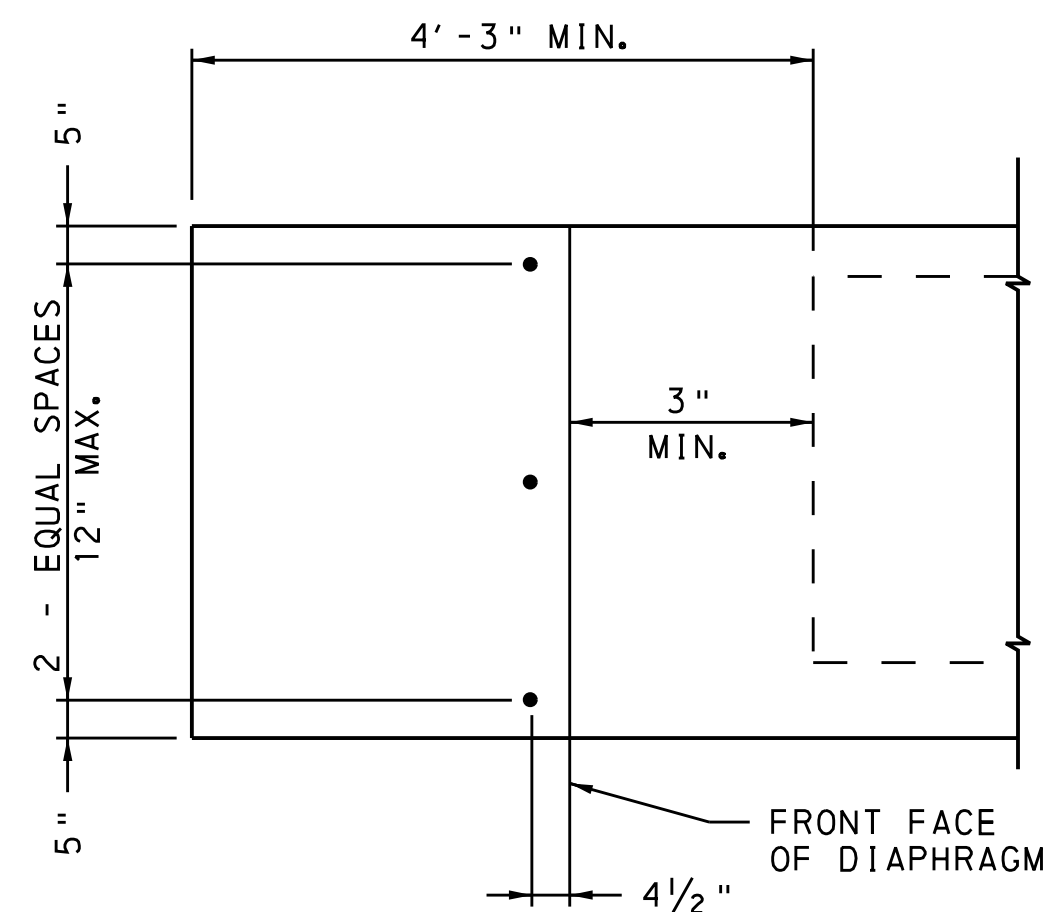
TYPICAL STRAND CONFINEMENT ALL BEAMS

NOTES:

1. EPOXY COAT ALL REBARS FOR A DISTANCE OF 9'-0" FROM BEAM ENDS ADJACENT TO DECK JOINTS.
2. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO BRIDGE DECK FROM TOP OF BEAMS.
3. CALCULATE BEARING SEAT ELEVATION, DAPPING DIMENSIONS, SLOPE AND HAUNCH DEPTH USING THE FINAL NET CAMBER - "C".
4. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING. WIRE MESH OF EQUIVALENT AREA IS PERMISSIBLE FOR CRACK CONTROL REINFORCEMENT.
5. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.
6. MINIMUM COVER ON REINFORCEMENT BARS:
TOP SLAB - 1" MIN.
INSIDE VOID - 1" MIN.
ELSEWHERE - 2" MIN. UNLESS OTHERWISE NOTED
7. FOR TYPICAL CORNER BLOCKOUT DETAIL, SEE BC-775M.
8. DETAIL LIFTING INSERTS ON SHOP DRAWINGS.
9. SPACING OF INSERTS MAY BE MODIFIED TO ACCOMMODATE STRAND PATTERNS.
10. CAST END OF BEAM TRULY VERTICAL.
11. PROVIDE A HEAVY SCORED FINISH ON THE TOP OF BEAM.



PLAN



ELEVATION

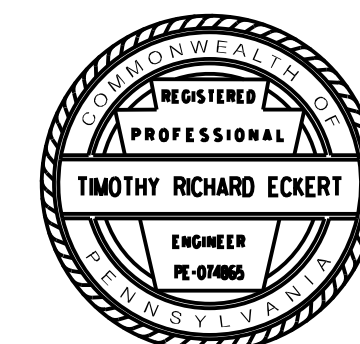
THREADED INSERT LOCATIONS

NOT TO SCALE

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR BOX BEAM DETAILS, SEE SHEET 23.
- FOR FRAMING PLAN, SEE SHEET 27.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BEAM FABRICATION DETAILS 1

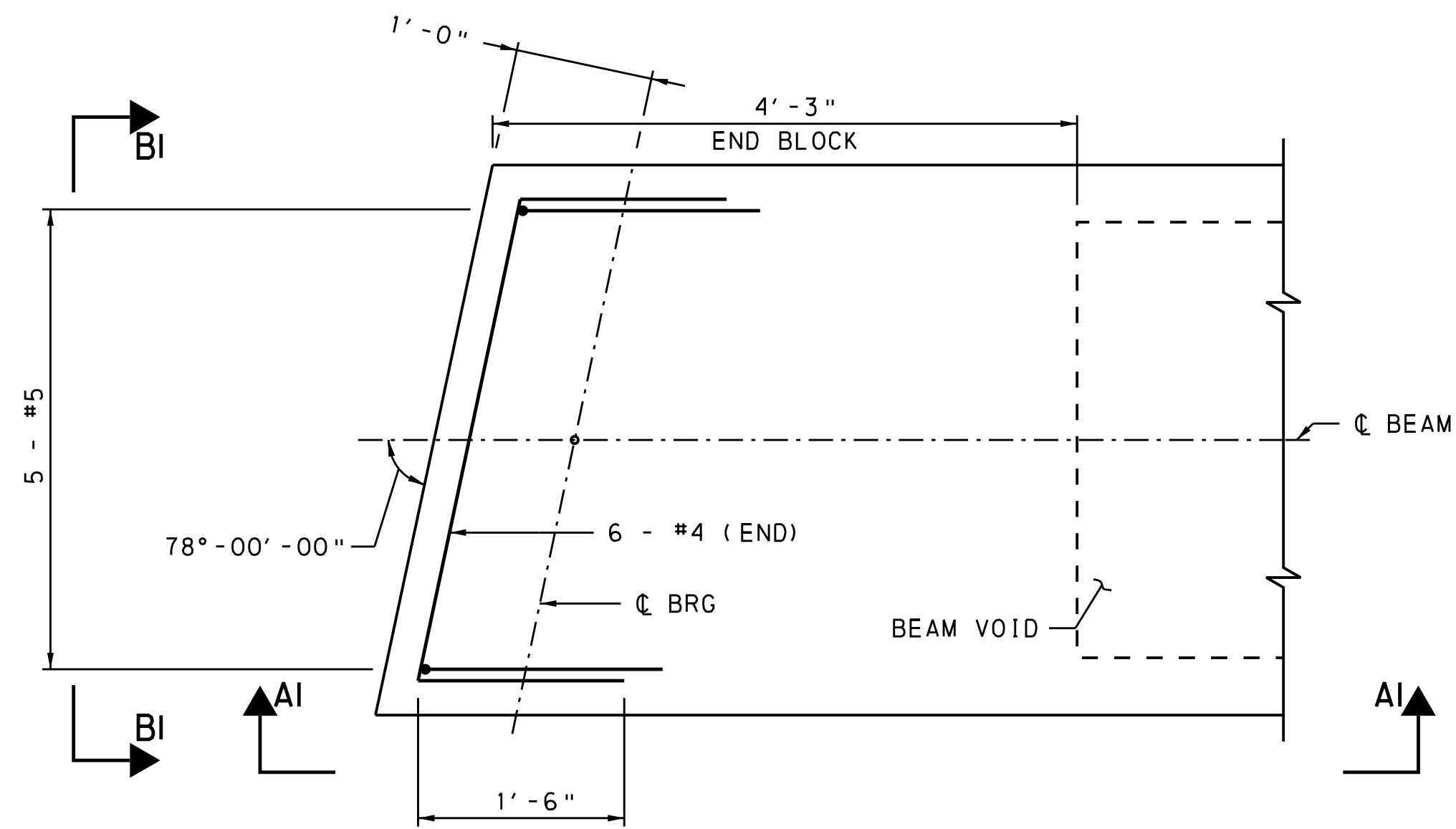
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 24 OF 43

L-45

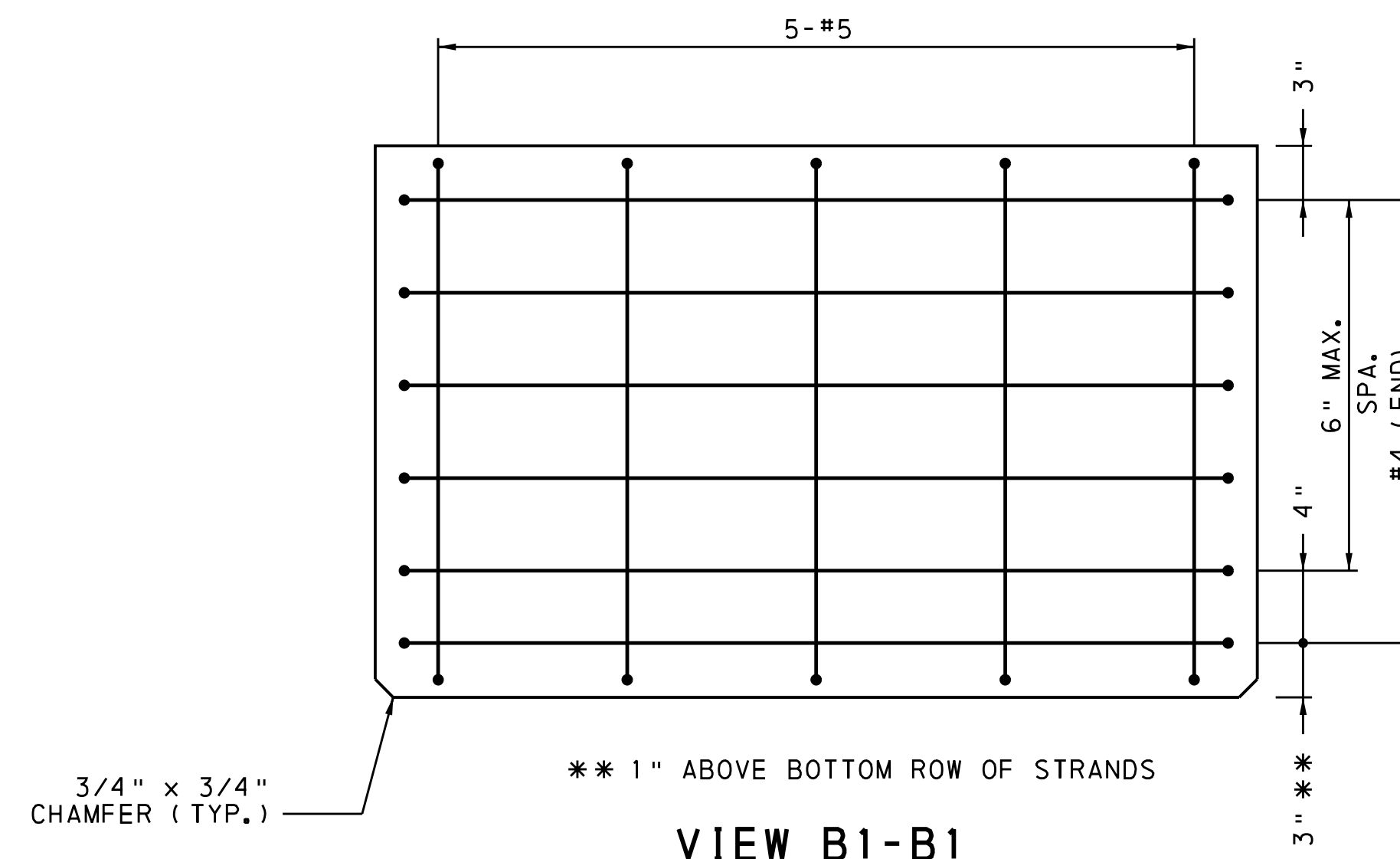
PENNONI ASSOCIATES, INC.
FILE NAME: ...241501.BEAM FABRICATION DETAIL.dgn
MIDPOINT: ...
PLOT DRIVER: PENNONI-PIT-PENNONI-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2020 @ 12:50:03 PM
USER NAME: Bhubock OFFICE LOCATION: PHT+sbu@ph, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



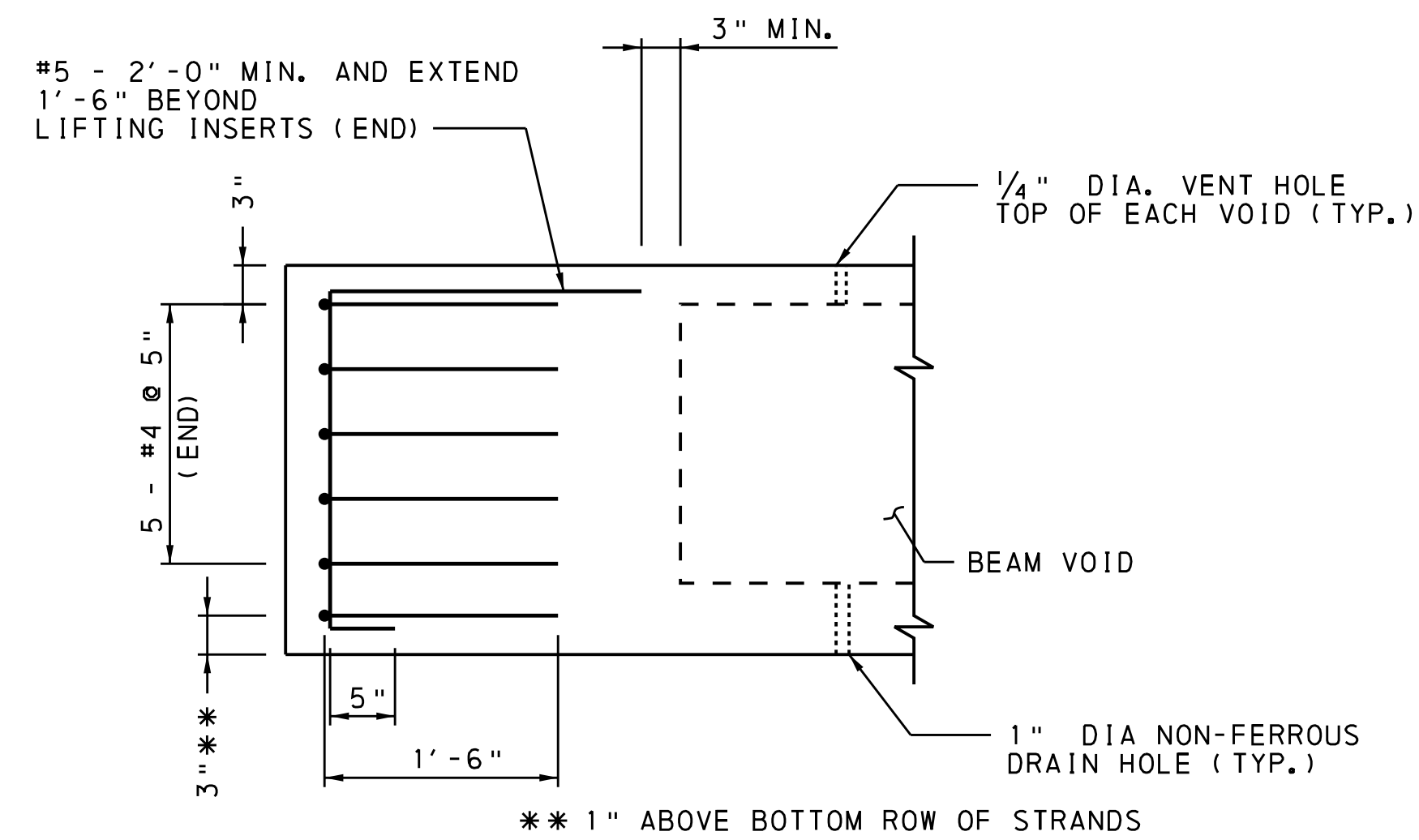
PLAN - BEAM END LONGITUDINAL REIN.

6 0 6 12 INCHES



VIEW B1-B1

6 0 6 INCHES



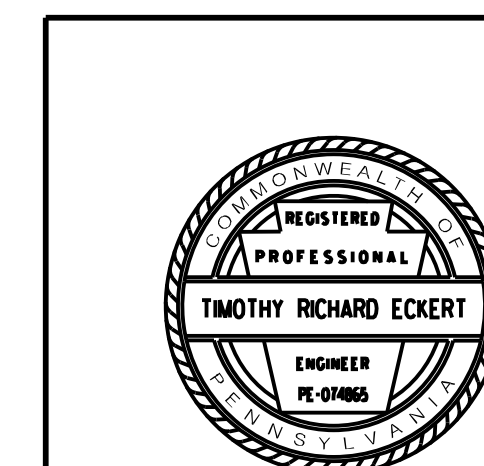
SECTION A1-A1

6 0 6 12 INCHES

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR FRAMING PLAN, SEE SHEET 27.

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BEAM FABRICATION DETAILS 2

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

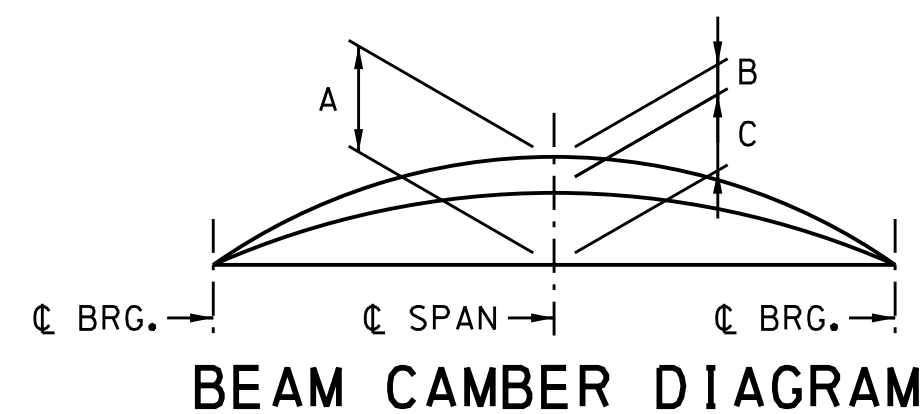
SHEET 25 OF 43

L-45

PENNON ASSOCIATES, INC.
FILE NAME: ...25-1501-BEAM FABRICATION DETAIL.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: ...
CHECKED BY: ...
PLOT DRIVER: PENNON-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 12/19/2019 @ 12:53:33 PM
USER NAME: Bhubock OFFICE LOCATION: PITTsburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

CAMBER AND PRESTRESS TABLE					
BEAM NO.	TOTAL NO. OF STRANDS	JACKING PRESTRESS FORCE	A	B	C
1	32	1082.16 K	1.768 "	0.687 "	1.081 "
2	32	1082.16 K	1.768 "	0.701 "	1.067 "
3	32	1082.16 K	1.768 "	0.701 "	1.067 "
4	32	1082.16 K	1.768 "	0.687 "	1.081 "



- A= ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR (CHECK IN FIELD).
 - B= DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.
 - C= A-B = NET FINAL CAMBER
- THE THICKNESS OF THE CONCRETE HAUNCH SHALL BE VARIED TO ACHIEVE THE REQUIRED VERTICAL GEOMETRY AND TO COMPENSATE FOR ANY INACCURACIES IN BEAM CAMBER.

A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIOUS PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSSES.

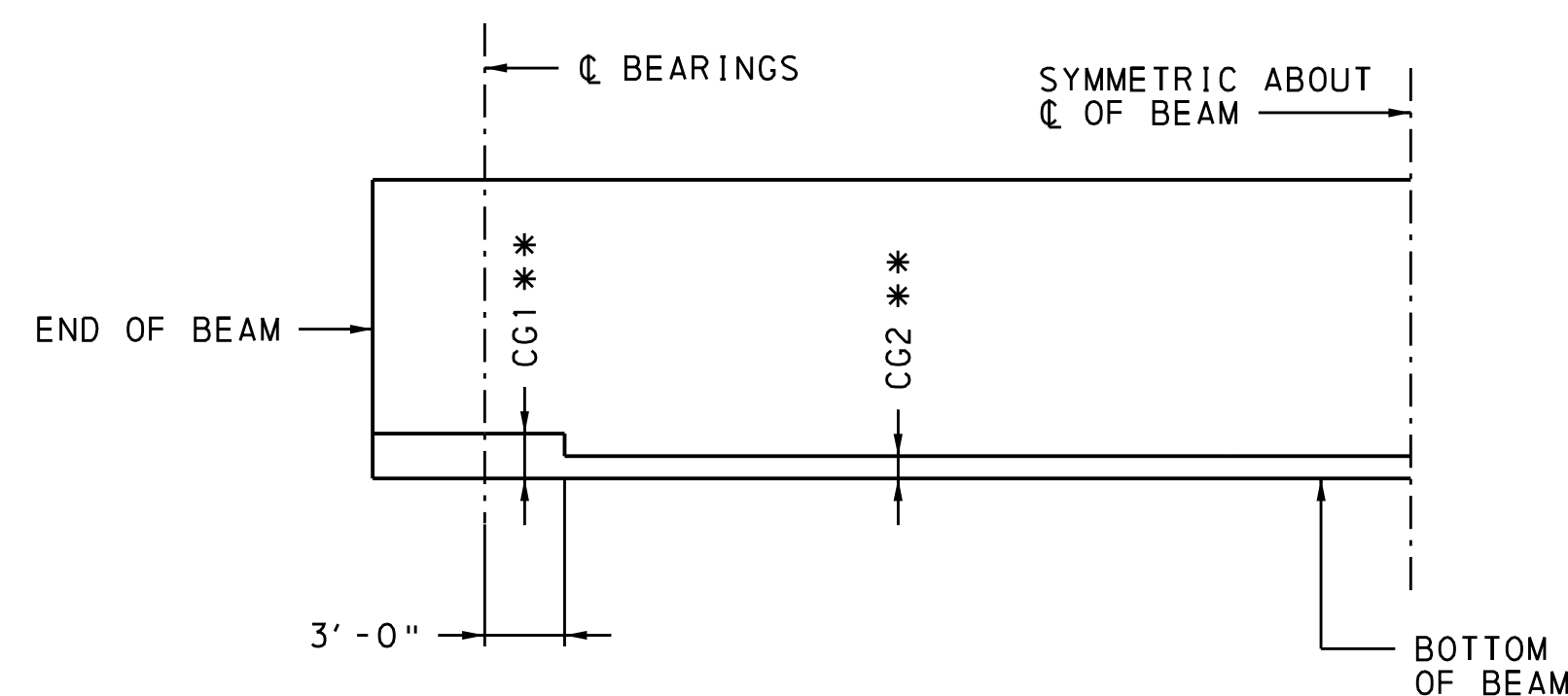
USE A CREEP FACTOR EQUAL TO 1.60 AND P/S LOSS EQUAL TO 10%.

PRESTRESSING DATA

CONCRETE STRENGTH AT STRAND RELEASE 6800 psi
 CONCRETE STRENGTH AT 28 DAYS (F/C) 8000 psi
 JACKING PRESTRESS STRESS 202500 psi
 270 ksi LOW RELAXATION STRANDS,
 1/2" DIA., 0.167 in**2 STRAND AREA

	CG	NO. STRANDS BONDED
CG1	4.462 "	26
CG2	4.000 "	32

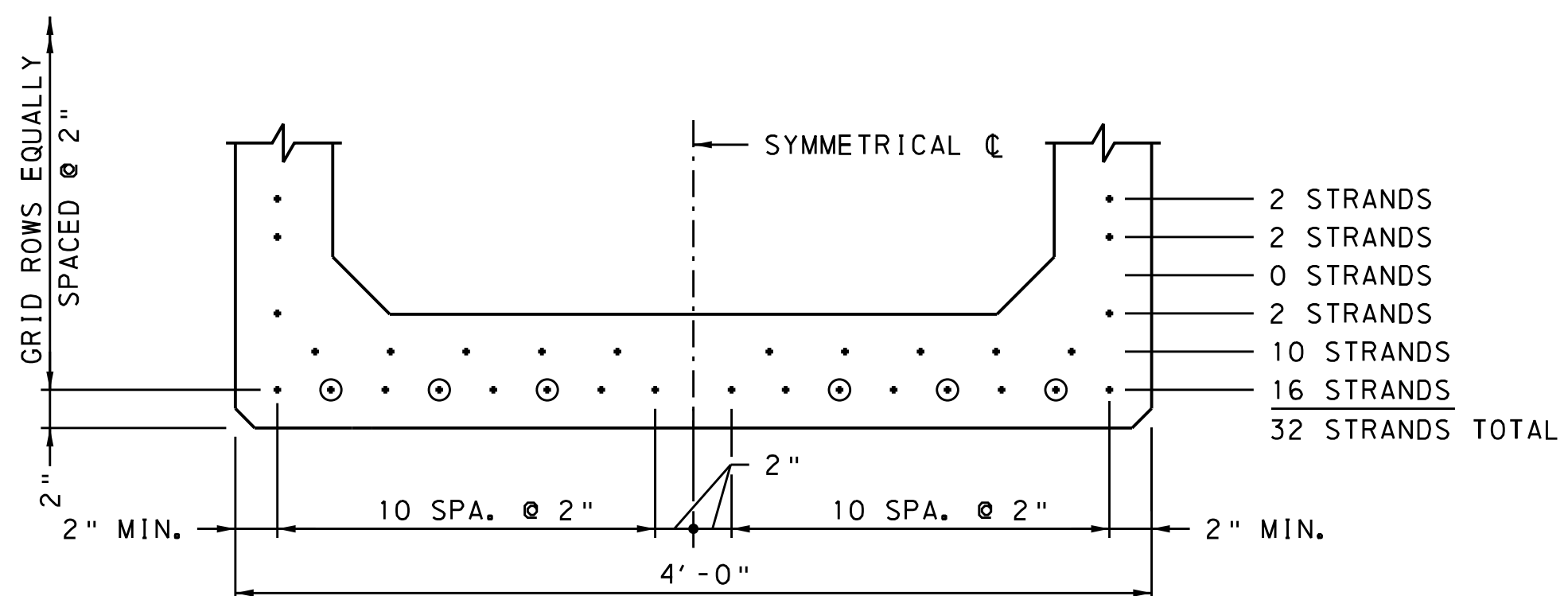
NOTE: NUMBER OF DEBONDED STRANDS DOES NOT INCLUDE CRACK CONTROL DEBONDING



** DISTANCE FROM BOTTOM OF BEAM TO CENTERLINE OF GRAVITY OF STRANDS

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR FRAMING PLAN, SEE SHEET 27.



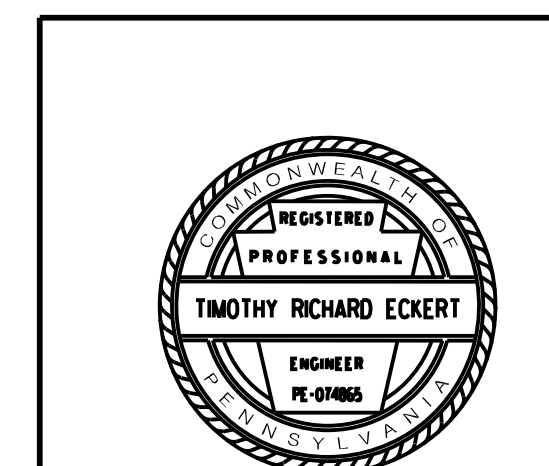
⊙ DENOTES STRAND TO BE DEBONDED FOR 3'-0" FROM BOTH ENDS OF BEAM

TYPICAL STRAND PATTERN



1. DO NOT PLACE MORE THAN ONE COLUMN OF PRESTRESSING STRANDS IN THE WEBS.
2. DO NOT PLACE PRESTRESSING STRANDS AT CORNER LOCATION IN BOTTOM ROW.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE

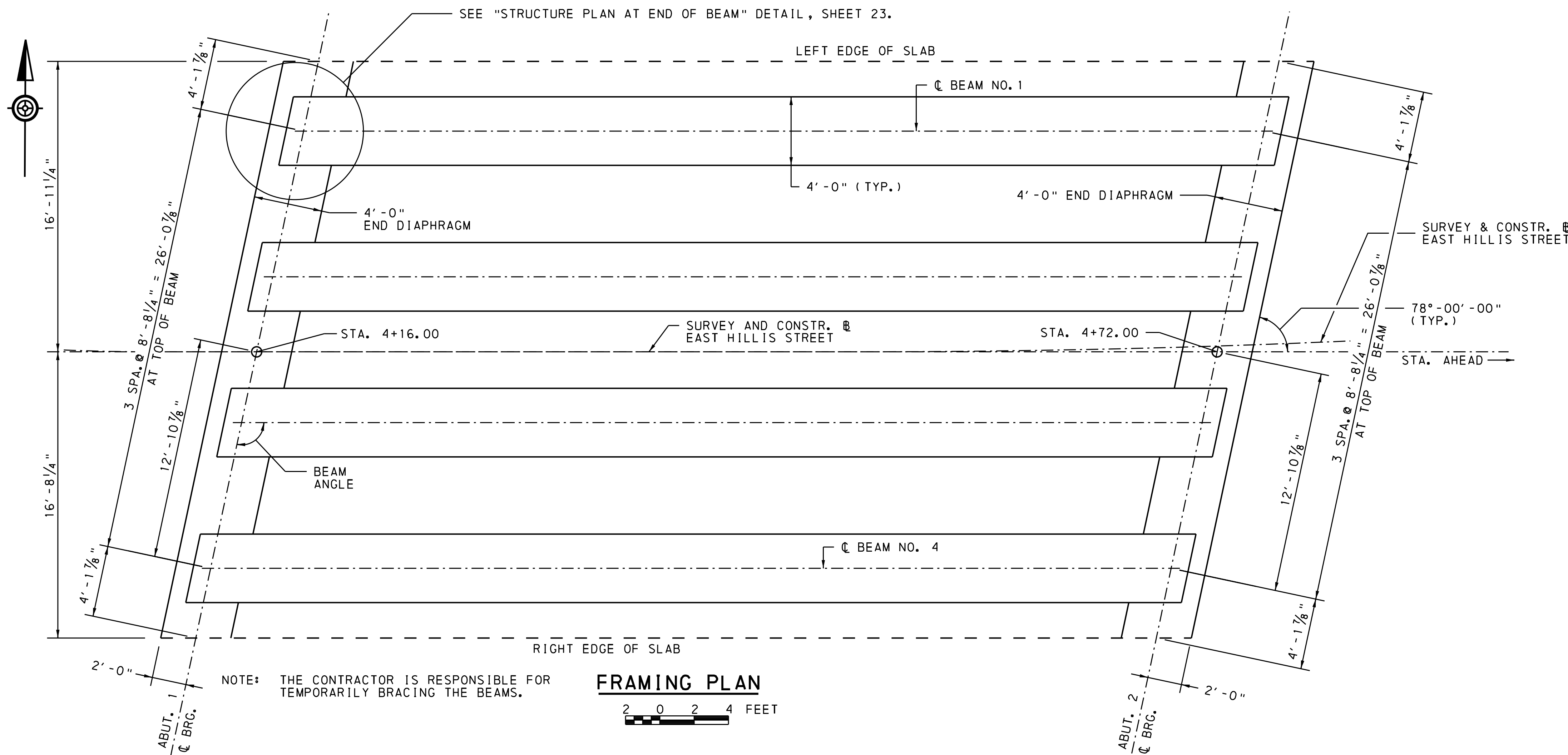
STRAND TABLES

APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

SHEET 26 OF 43

L-45

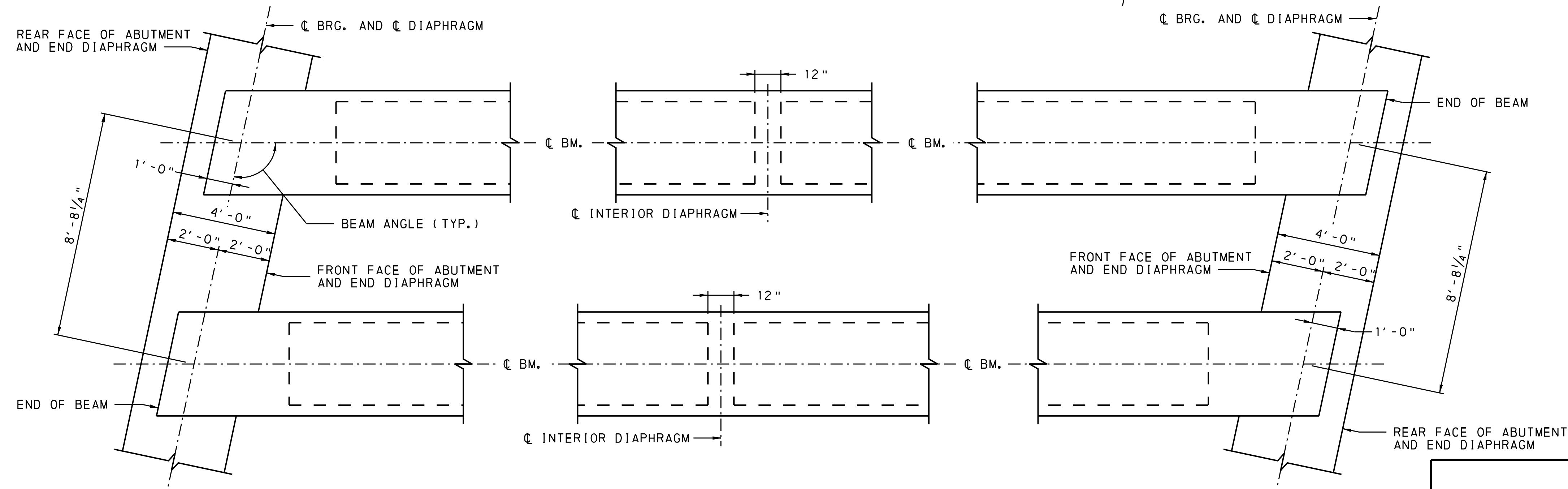
PENNON ASSOCIATES, INC.
 FILE NAME: ...26.1501 STRAND TABLES.dwg
 MICROSTATION VERSION: MicroStation V8i
 PLOT ON: A3
 PLOT SCALE: 1/8"=1'-0"
 PLOT DRIVER: PENNON-PTT-PENNON-FULL-PDF-PLT.CFG
 DATE PLOTTED: 12/19/2009 @ 12:46:03 PM
 USER NAME: Bhubock OFFICE LOCATION: PTT+SBurgch, Pennsylvania



FRAMING PLAN
2 0 2 4 FEET

BEAM NO.	BEAM ANGLE	BEAM LENGTH C-C BRG. *	BEAM LENGTH TOTAL *
1	102°-00'-00"	56'-0"	58'-0½"
2	102°-00'-00"	56'-0"	58'-0½"
3	102°-00'-00"	56'-0"	58'-0½"
4	102°-00'-00"	56'-0"	58'-0½"

* HORIZONTAL DIMENSION ALONG C BEAM
BEAM SCHEDULE
NOTE: BEAM ANGLE MEASURED FROM C BEAM TO C BRG. IN CLOCKWISE DIRECTION.



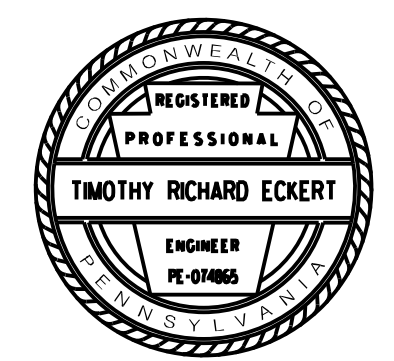
END DIAPHRAGM LAYOUT AT ABUTMENT 1
1 0 1 2 3 FEET

INTERIOR DIAPHRAGM
1 0 1 2 3 FEET

END DIAPHRAGM LAYOUT AT ABUTMENT 2
1 0 1 2 3 FEET

- NOTES:**
- FOR GENERAL PLAN, SEE SHEET 1.
 - FOR GENERAL NOTES, SEE SHEET 2.
 - FOR BOX BEAMS DETAILS, SEE SHEET 23.
 - FOR SLAB REINFORCING PLAN, SEE SHEET 30.
 - FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
FRAMING PLAN

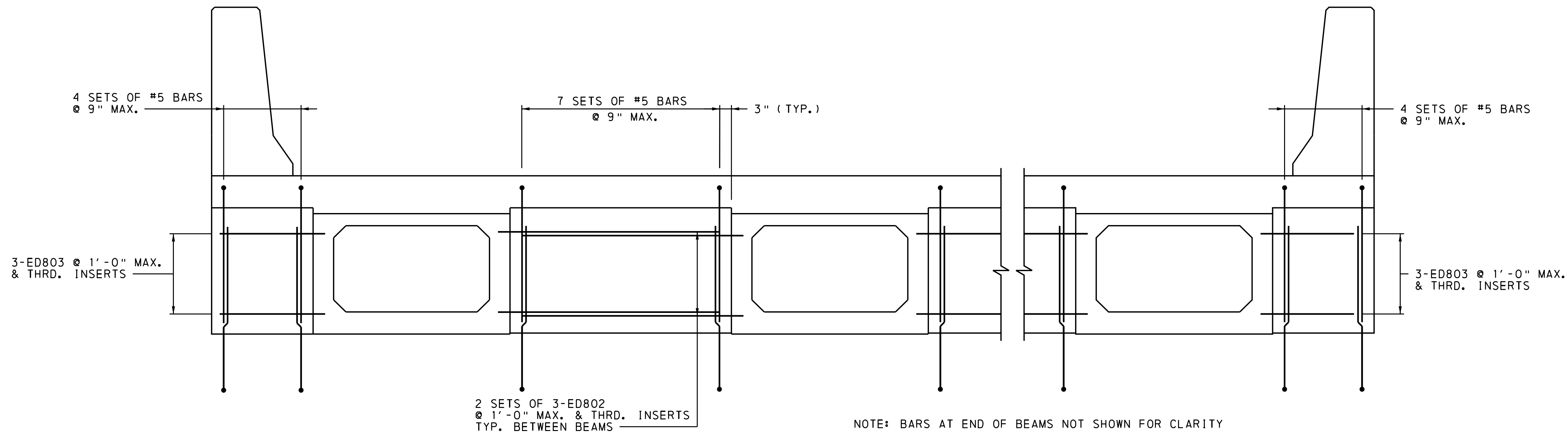
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 27 OF 43

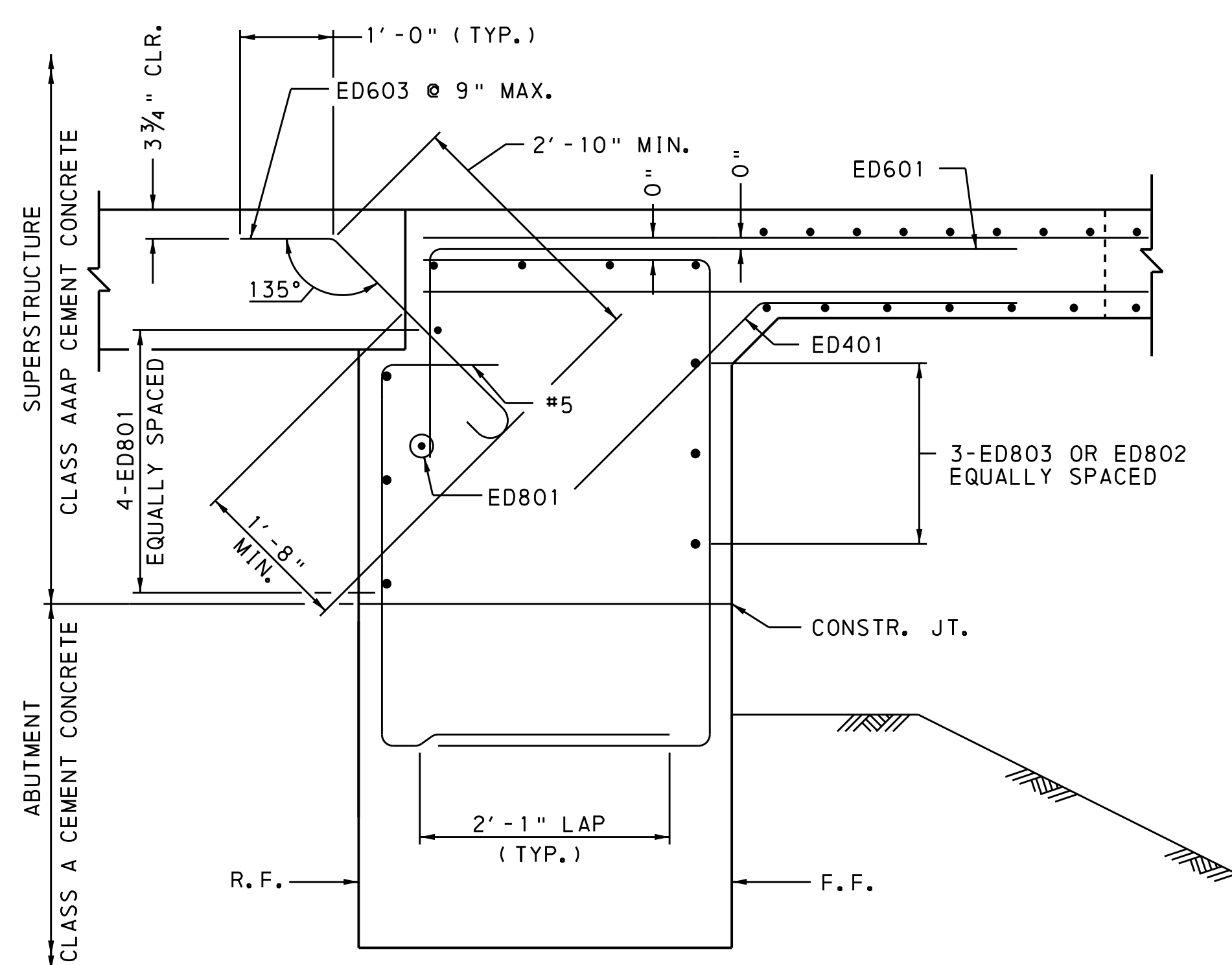
L-45

PENNSYLVANIA ASSOCIATES, INC.
FILE NAME: V271501.FRAMING PLAN.dwg
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JACQUES, PENNDOT-1581
CHECKED BY: JACQUES, PENNDOT-1581
PLOT DRIVER: PENNDOT-PLOT-PENNDOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 12/19/2009 @ 12:43:36 PM
USER NAME: Bburdick OFFICE LOCATION: PHT+sburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE

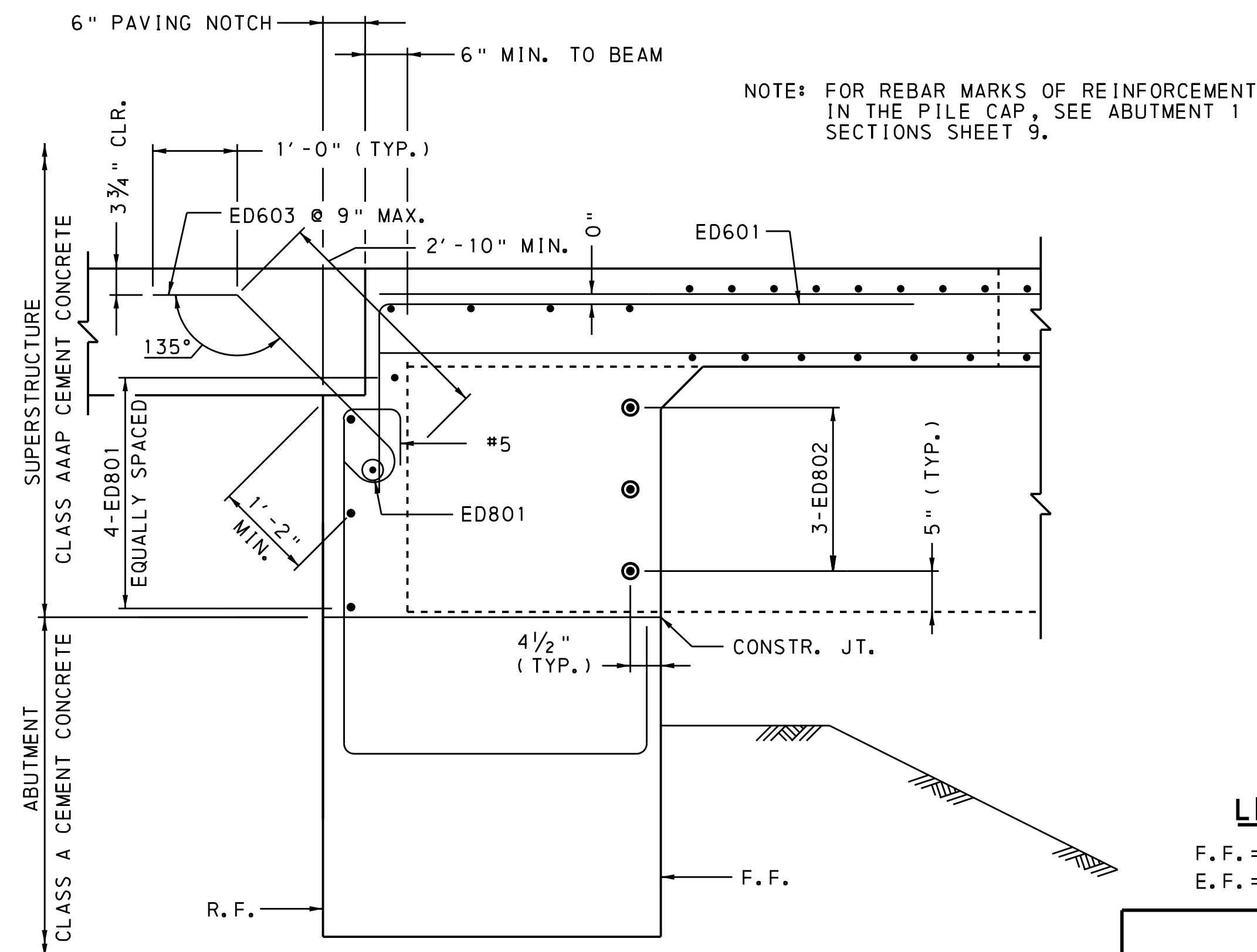


FULL DEPTH END DIAPHRAGM



**SECTION THRU
END DIAPHRAGM BETWEEN BEAMS**

NOT TO SCALE



**SECTION THRU
END DIAPHRAGM AT BEAMS**

NOT TO SCALE

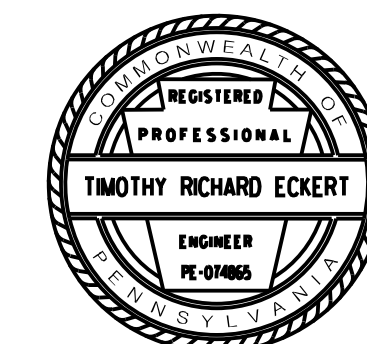
NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 ELEVATION, SEE SHEET 8.
- FOR ABUTMENT 1 SECTIONS, SEE SHEET 9.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

LEGEND

F.F. = FRONT FACE
E.F. = EACH FACE



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
DIAPHRAGM DETAILS AT ABUTMENT 1

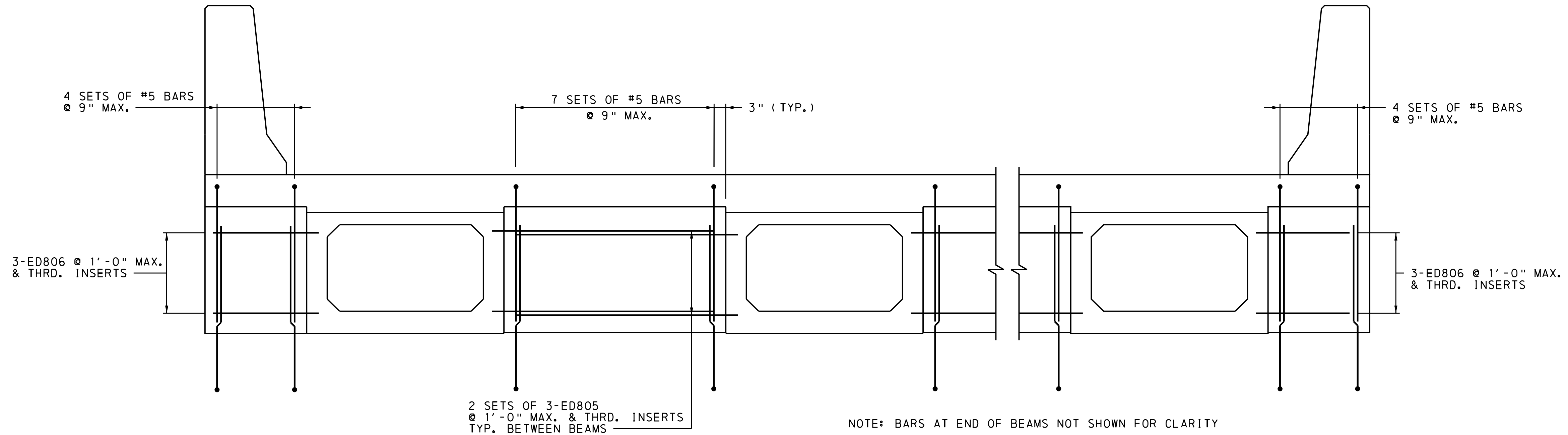
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 28 OF 43

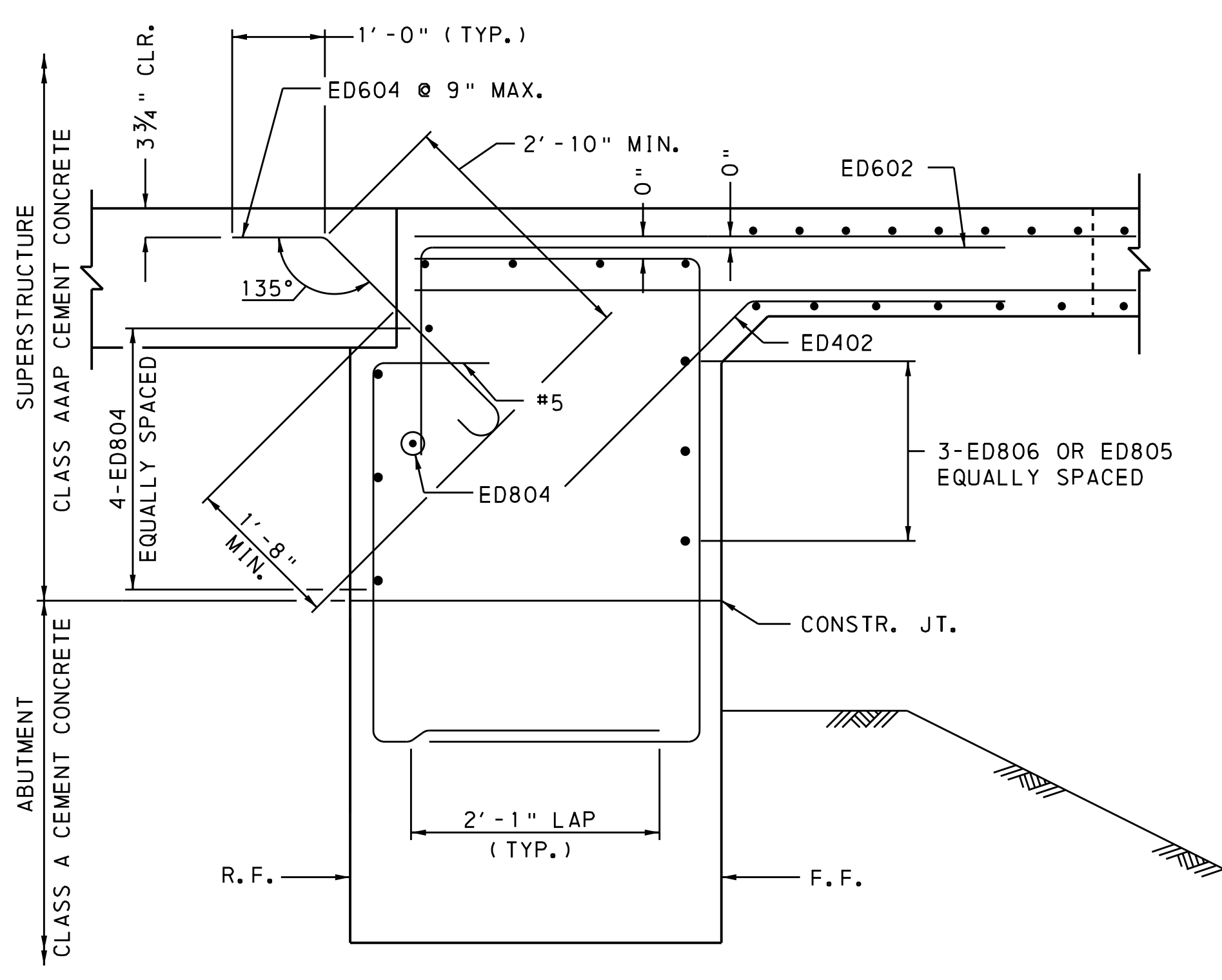
L-45

PENNONI ASSOCIATES, INC.
FILE NAME: \\28150\DIAPHRAGM DETAILS ABUT 1.dgn
PROSTATION: \\28150\MicroStation\Y81
DRAWN: JACQUES PENNONI
CHECKED: JACQUES PENNONI
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 12/19/2019 11:28:08 AM
USER: JACQUES PENNONI
OFFICE LOCATION: Pittsburgh, Pennsylvania

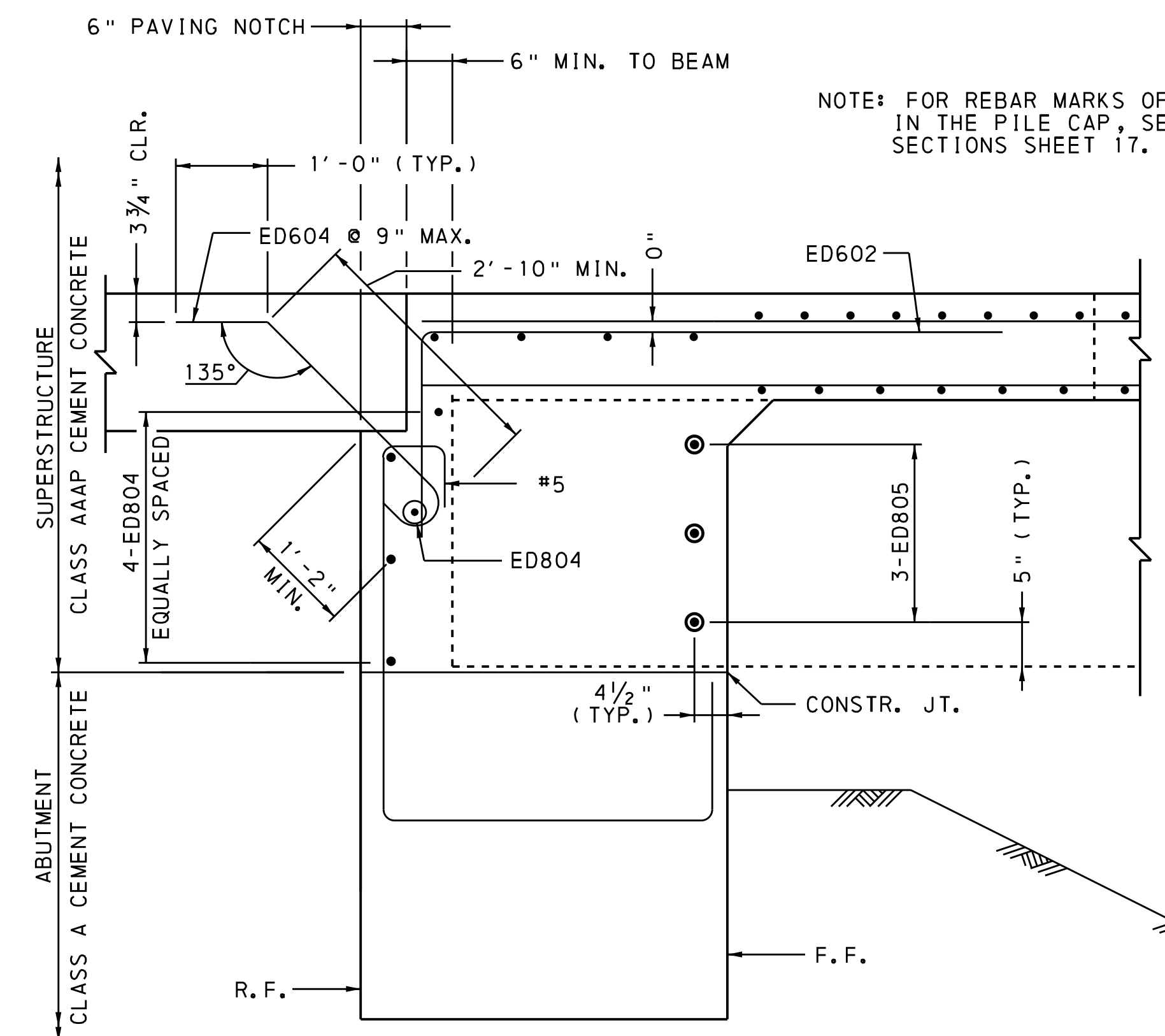
DES: TE CKD: MP DWG: NCC CKD: TE



FULL DEPTH END DIAPHRAGM



**SECTION THRU
END DIAPHRAGM BETWEEN BEAMS**
NOT TO SCALE



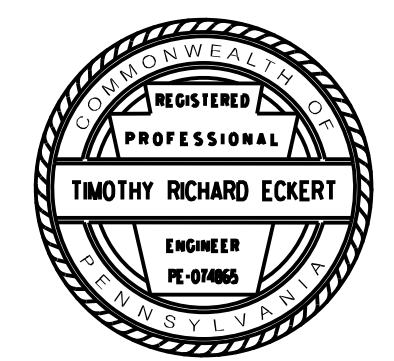
**SECTION THRU
END DIAPHRAGM AT BEAMS**
NOT TO SCALE

NOTE: FOR REBAR MARKS OF REINFORCEMENT
IN THE PILE CAP, SEE ABUTMENT 2
SECTIONS SHEET 17.

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 2 ELEVATION, SEE SHEET 16.
- FOR ABUTMENT 2 SECTIONS, SEE SHEET 17.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



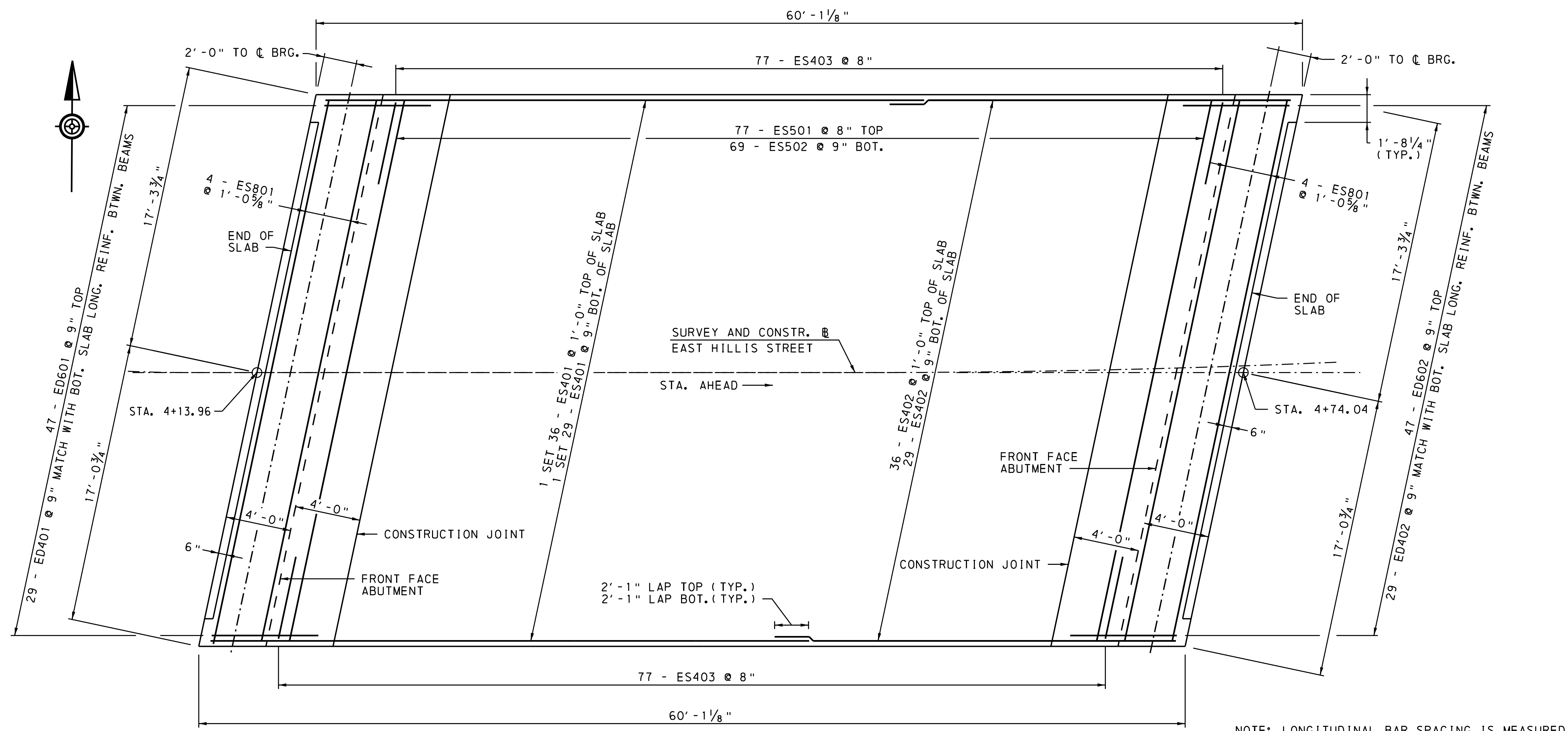
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
DIAPHRAGM DETAILS AT ABUTMENT 2

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 29 OF 43
L-45

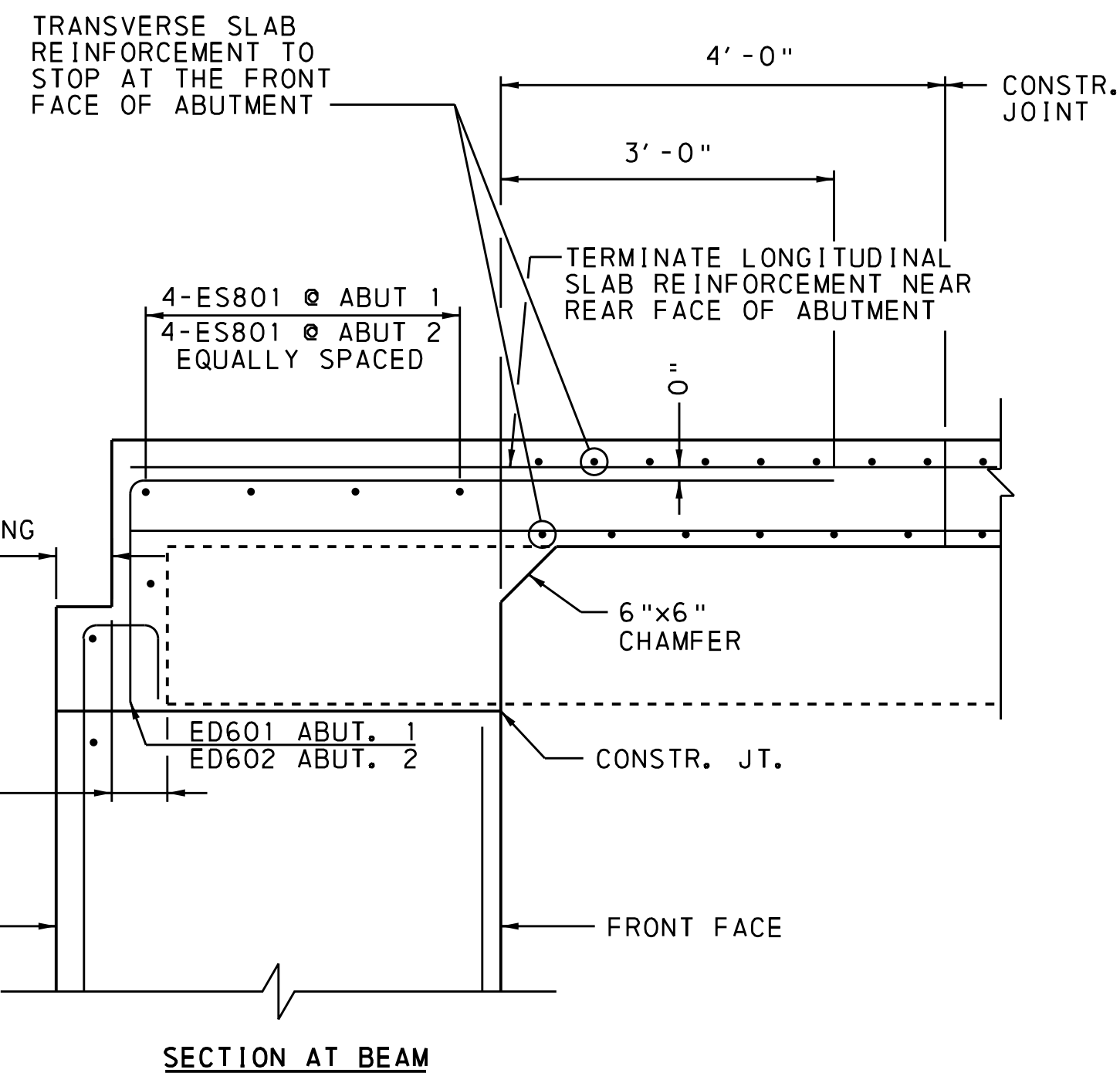
PENNON ASSOCIATES, INC.
 FILE NAME: ...291501.DIAPHRAGM DETAILS ABUT 2.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT SCALE: 1/8" = 1'-0"
 PLOT DRIVER: PENNON-PLOT-PENNON-FULL-PDF-PLT.CFG
 DATE PLOTTED: 12/19/2019 12:29:00 PM
 USER NAME: bludock OFFICE LOCATION: Pittsburg, Pennsylvania



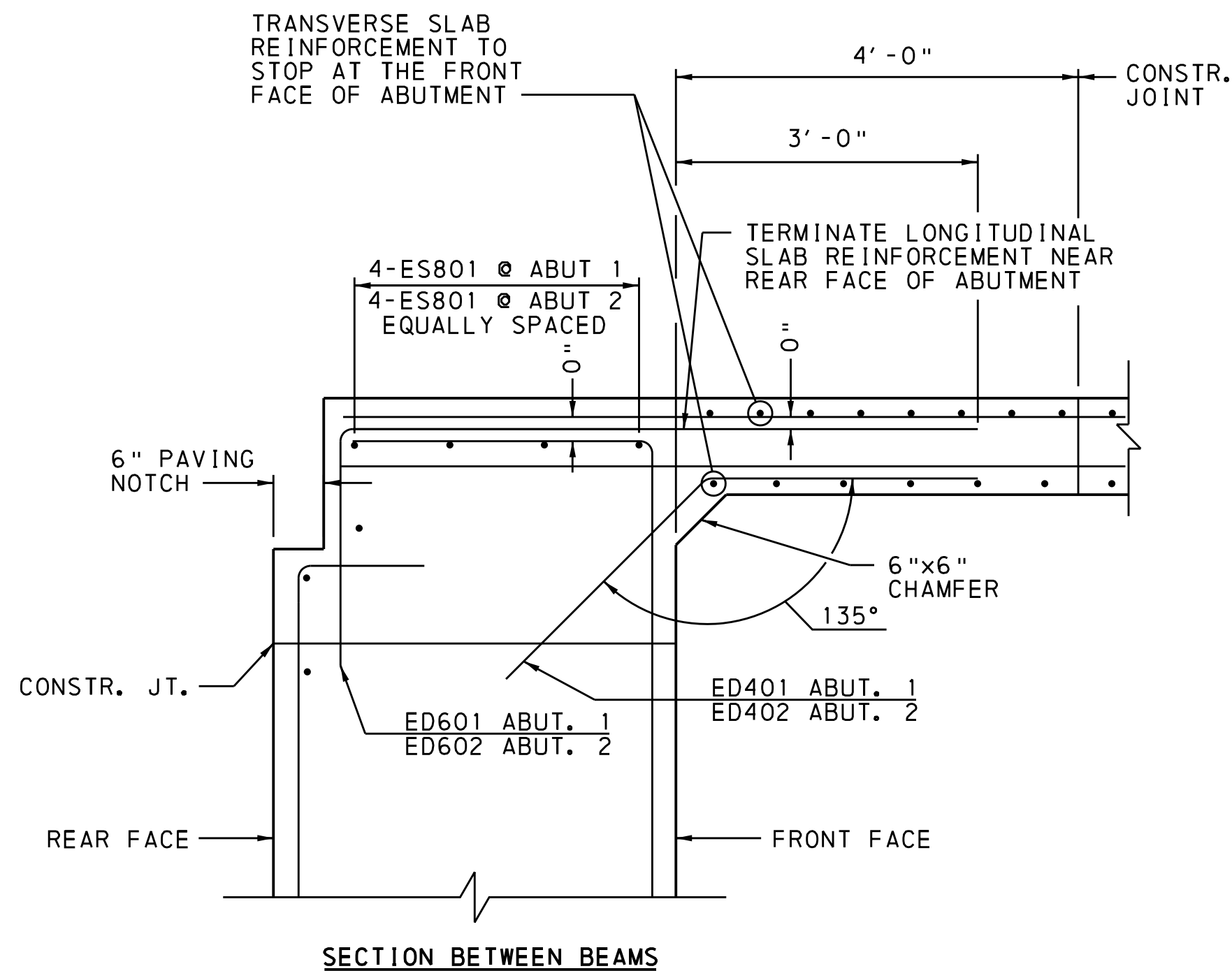
SLAB REINFORCING PLAN

2 0 2 4 FEET

NOTE: LONGITUDINAL BAR SPACING IS MEASURED PERPENDICULAR TO THE REINFORCEMENT



SECTION AT BEAM



SECTION BETWEEN BEAMS

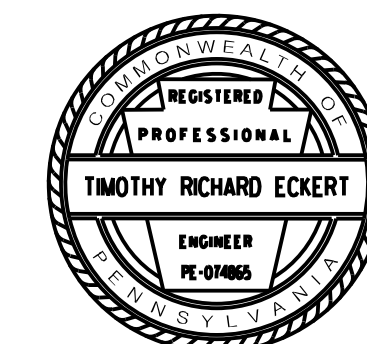
**TRANSVERSE SLAB REINFORCEMENT
PARALLEL TO ABUTMENT**

NOT TO SCALE

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR TYPICAL SECTION, SEE SHEET 4.
- FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
SLAB REINFORCEMENT PLAN

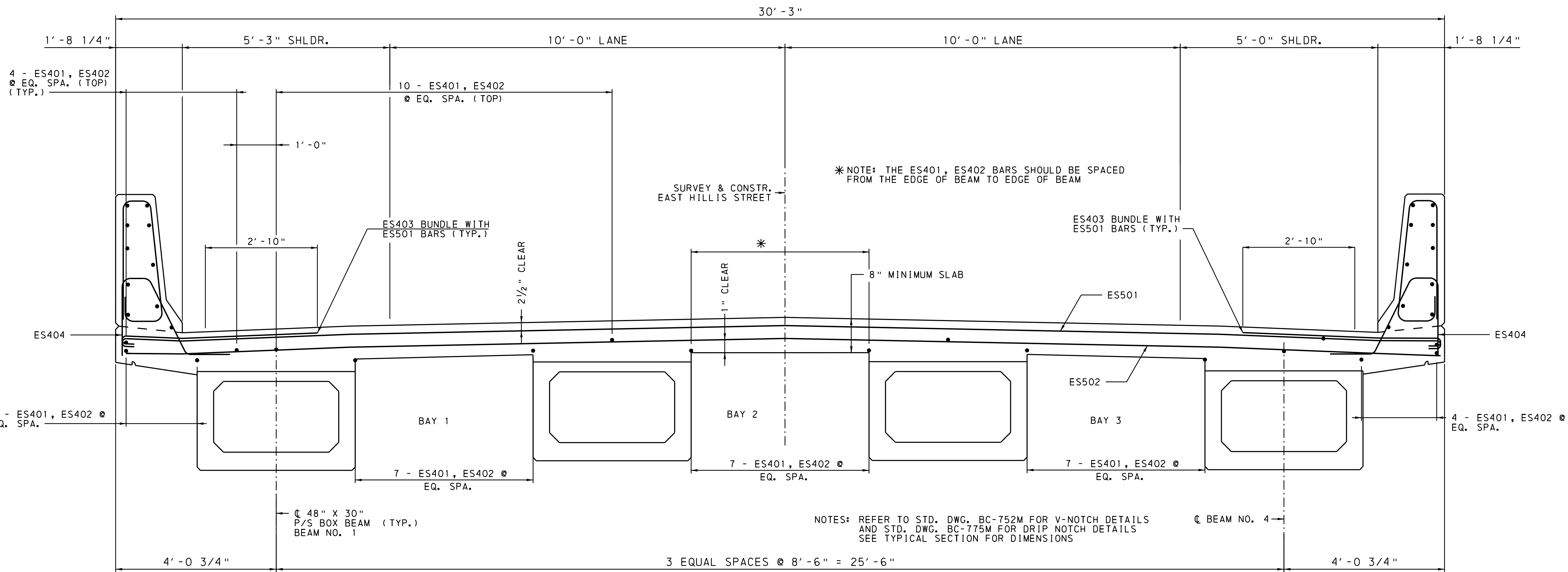
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 30 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...30.1501.SLAB REINFORCING PLAN.dgn
MICROSTATION VERSION: MicroStation V8i
PLOT SCALE: 1/8"=1'-0"
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 12:28:29 PM
USER NAME: Bhubock OFFICE LOCATION: Pittsburgh, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



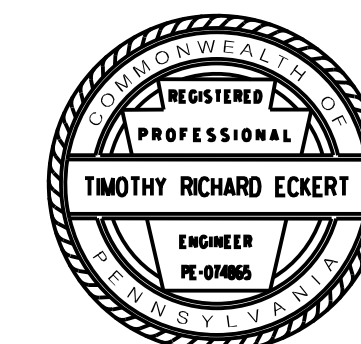
SLAB SECTION



NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR TYPICAL SECTION, SEE SHEET 5.
- FOR FRAMING PLAN, SEE SHEET 27.
- FOR SLAB REINFORCING PLAN, SEE SHEET 30.
- FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



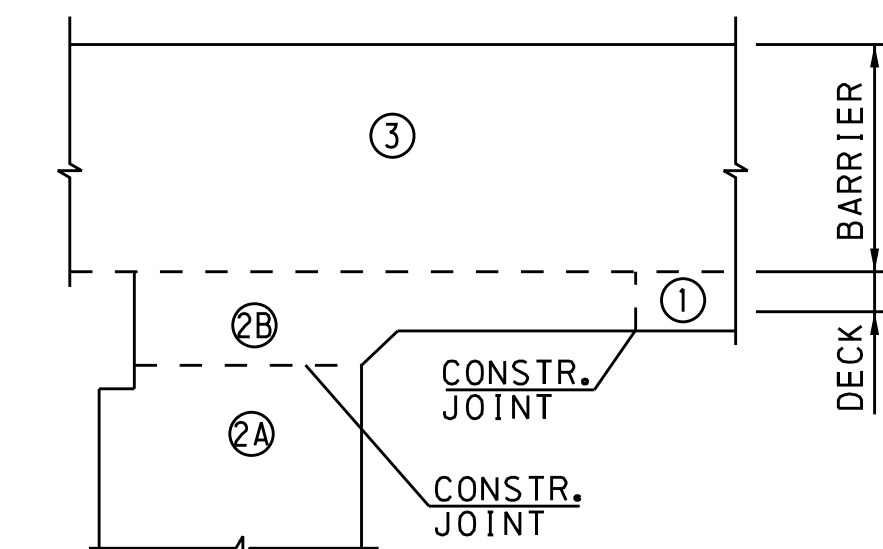
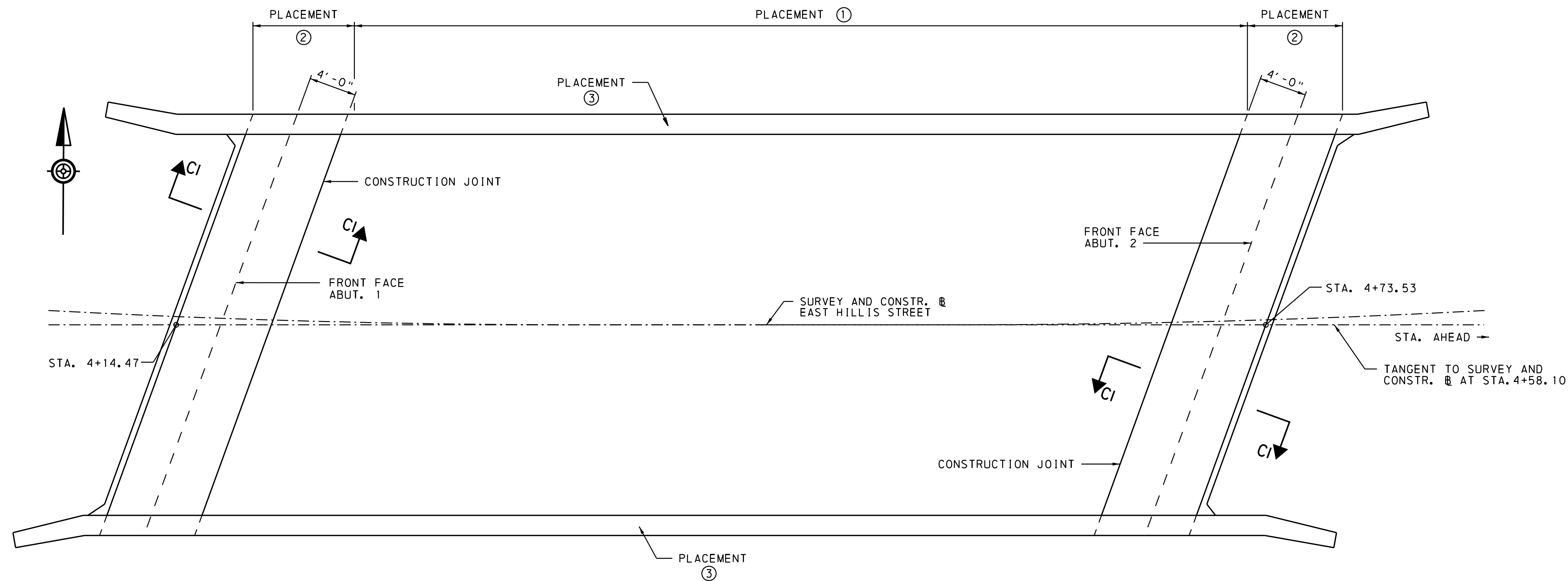
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
SLAB SECTION

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 31 OF 43
L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: ...31.SLAB SECTION.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 10:51:18 AM
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 01/30/2020 10:51:18 AM
 USER NAME: Bludock OFFICE LOCATION: Pittsburg, Pennsylvania



PLACEMENT SEQUENCE PLAN
NOT TO SCALE

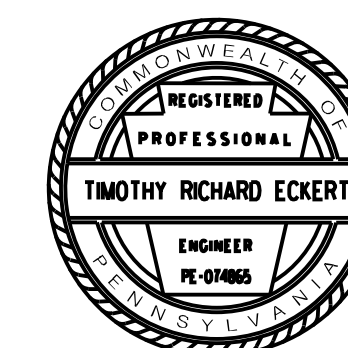
DECK PLACEMENT SEQUENCE

1. POUR THE ENTIRE DECK EXCEPT FOR THE PORTIONS WITHIN 4'-0" FROM THE FRONT FACES OF THE ABUTMENTS (1).
2. DECK SLAB PORTION OVER THE END DIAPHRAGMS (2B) MAY BE POURED MONOLITHICALLY WITH END DIAPHRAGM (2A).
3. CAST PLACEMENT 3 (BARRIERS)

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
DECK PLACEMENT SEQUENCE PLAN

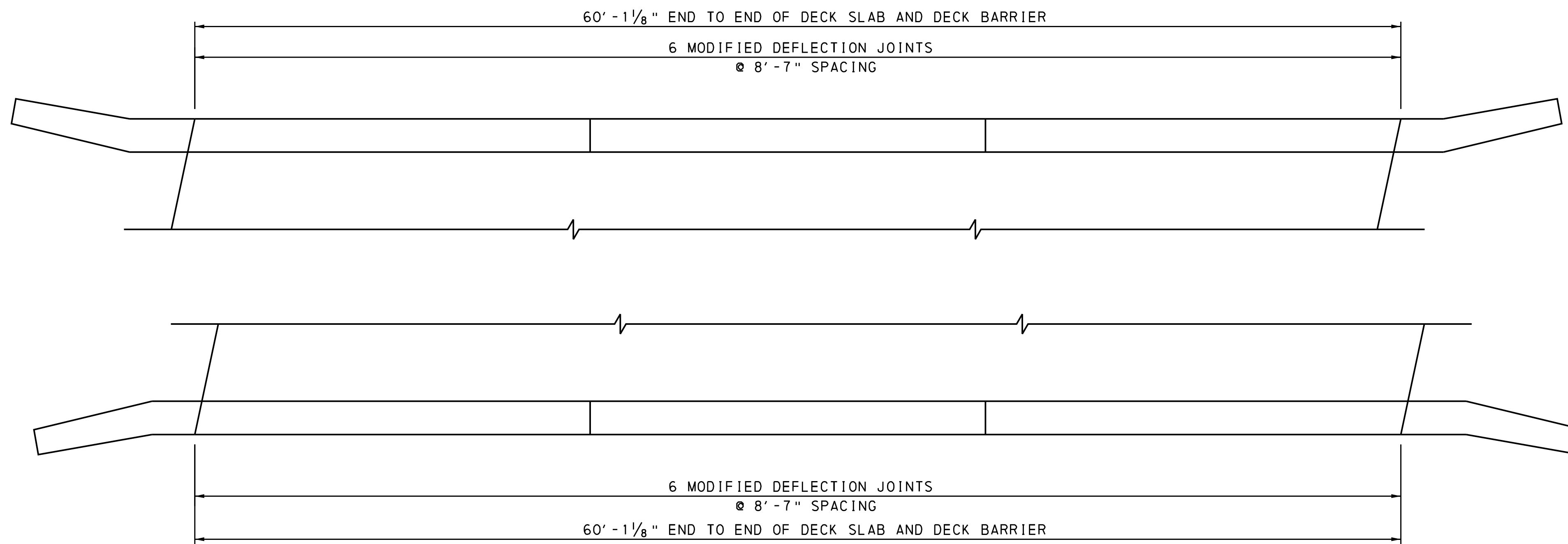
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 32 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...32 DECK PLACEMENT SEQUENCE PLAN.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: ...
CHECKED BY: ...
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 10:02:36 PM
USER NAME: Bhubock OFFICE LOCATION: Pittsburg, Pennsylvania

DES: TE CKD: MP DWG: NCC CKD: TE



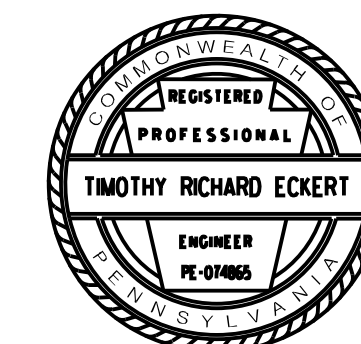
PLAN - BARRIER & SLAB DETAIL

2 0 2 4 FEET

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR DECK PLACEMENT SEQUENCE PLAN, SEE SHEET 32.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BARRIER AND MISCELLANEOUS DETAILS 1

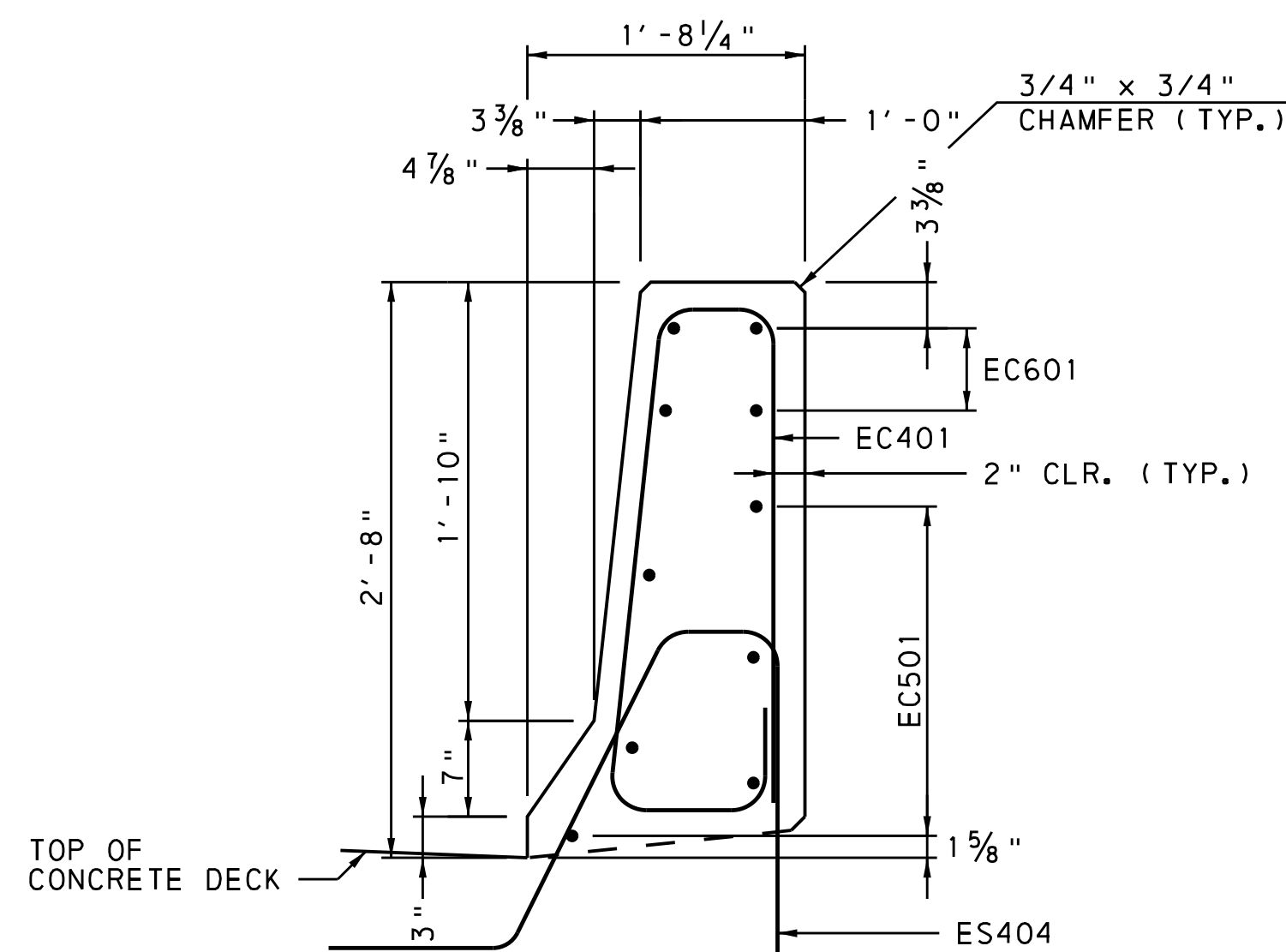
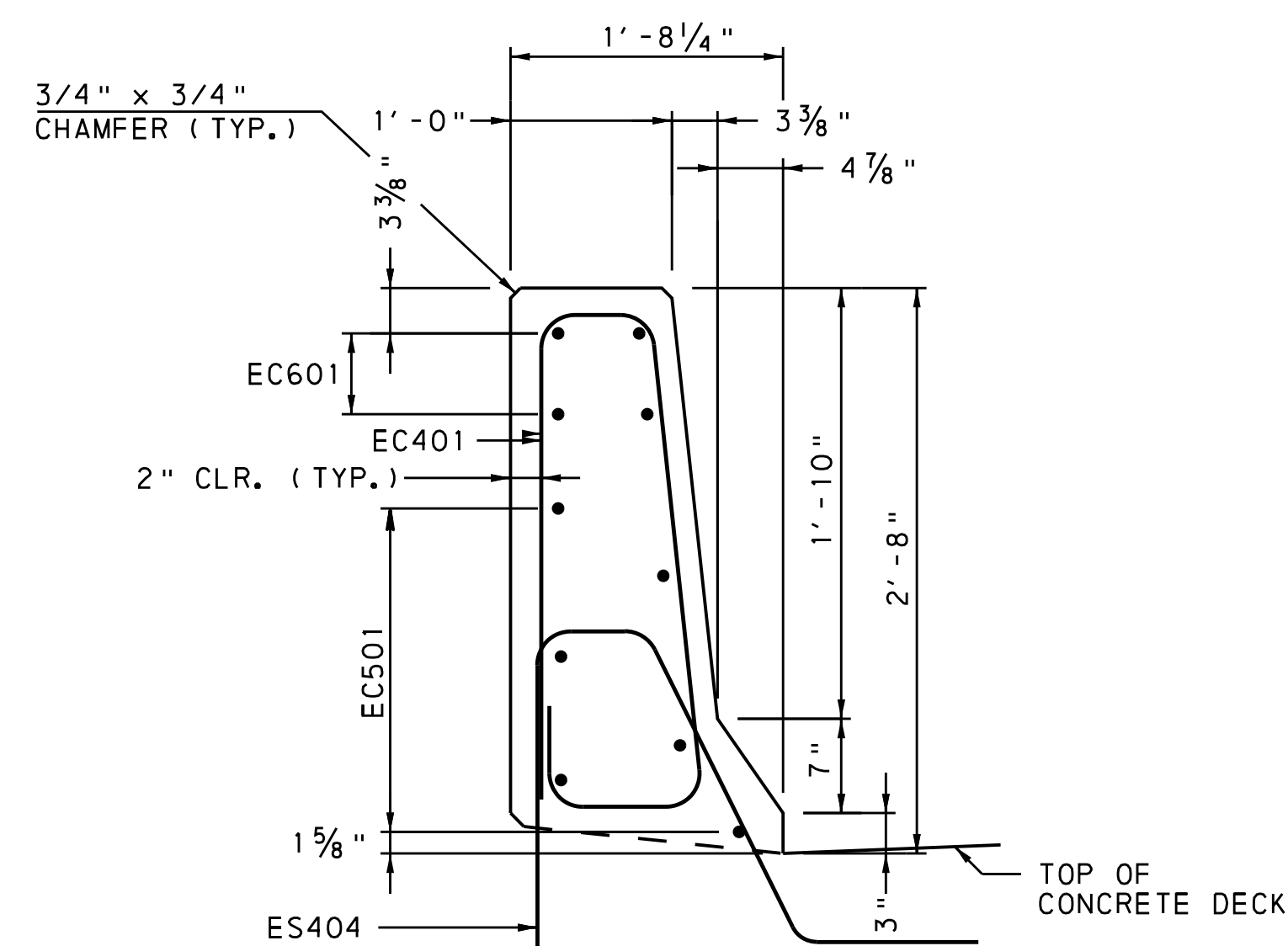
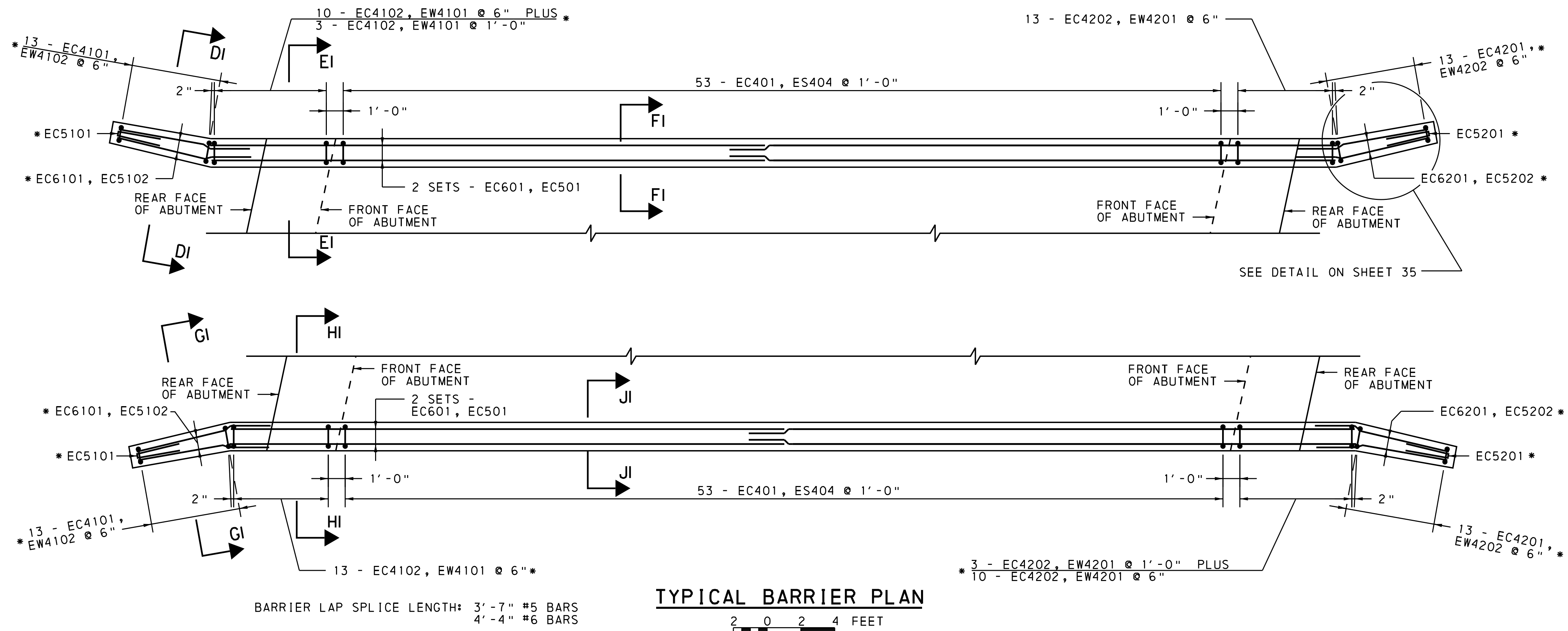
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 33 OF 43

L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: ...33_1501_BARRIER AND MISCELLANEOUS DETAILS 1.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 1/30/2020 11:51:01 AM
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 1/30/2020 11:51:02 AM
 USER NAME: Bhuback OFFICE LOCATION: PITTsburgh, Pennsylvania

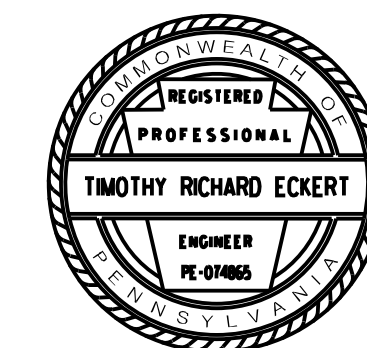
DES: TE CKD: MP DWG: NCC CKD: TE



NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR SECTIONS D1-D1, E1-E1, G1-G1 AND H1-H1, SEE SHEET 35.
- FOR SLAB REINFORCING PLAN, SEE SHEET 30.
- FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.
- * SEE SHEET 14 & 22.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BARRIER AND MISCELLANEOUS DETAILS 2

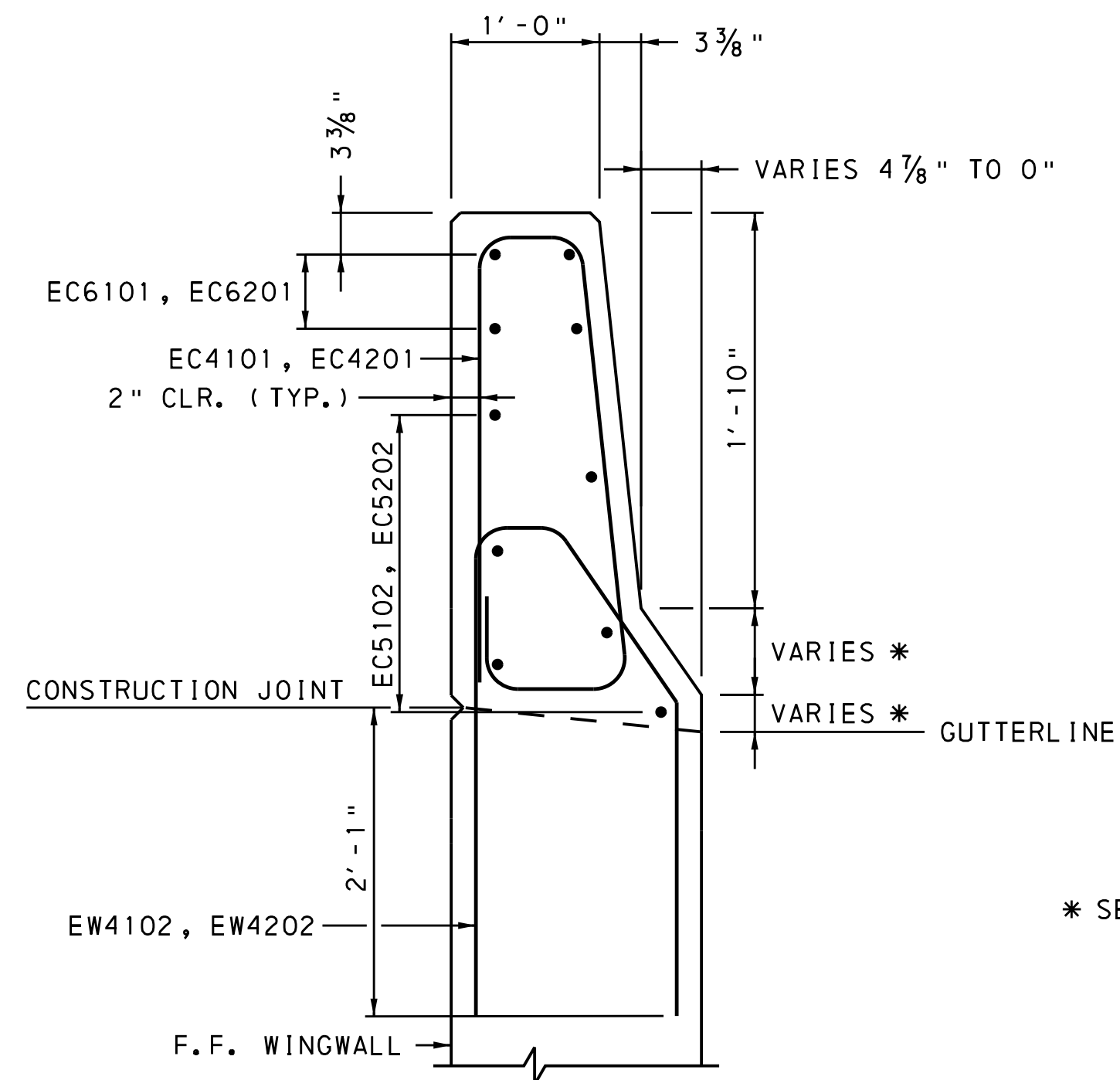
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 34 OF 43

L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: ...3.4.1501.BARRIER AND MISCELLANEOUS DETAILS 2.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 01/30/2020 11:58:11 AM
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 02/19/2019 03:15:53 PM
 USER NAME: Bhubock OFFICE LOCATION: PHT+sburgh, Pennsylvania

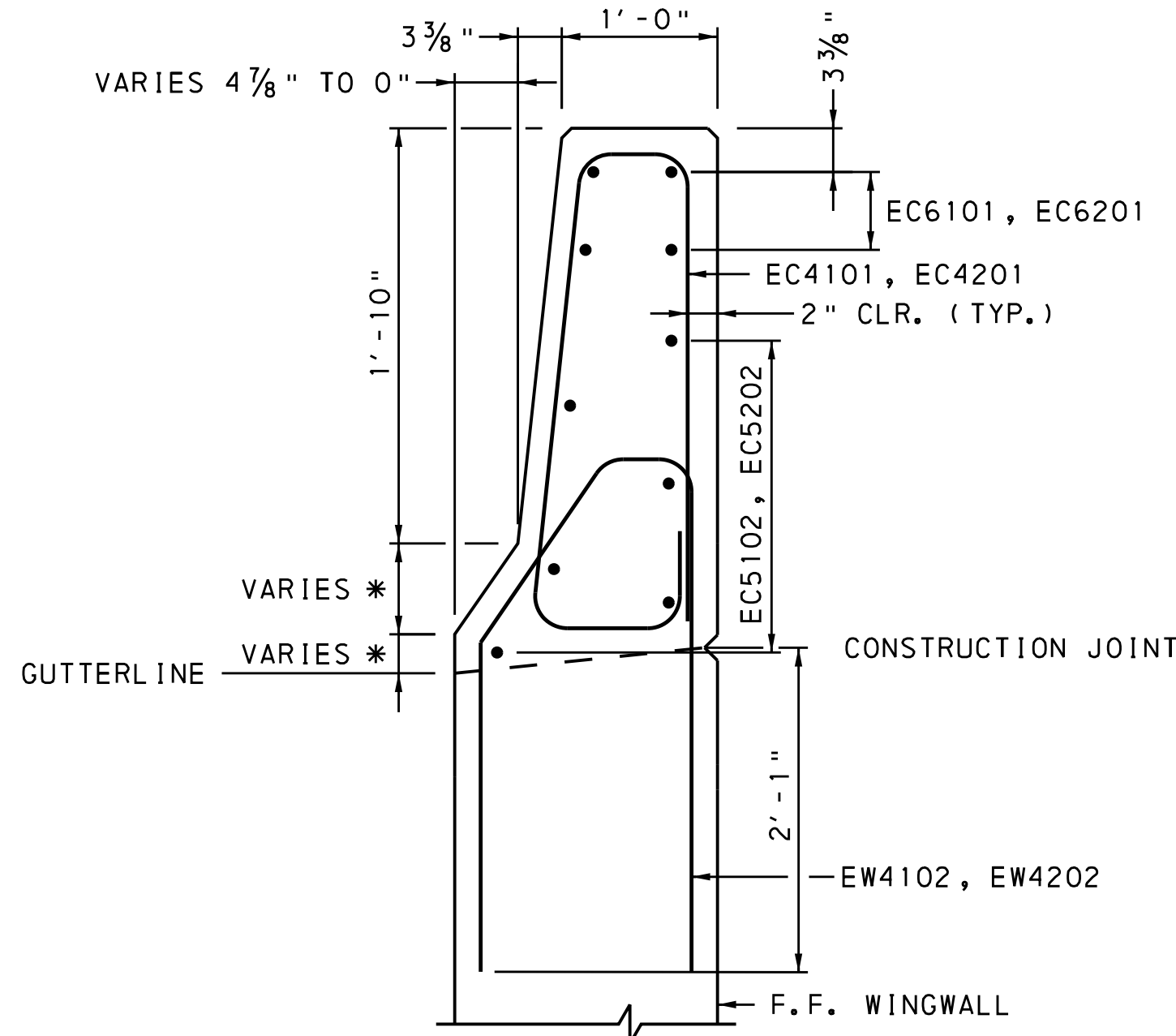
DES: TE CKD: MP DWG: NCC CKD: TE



SECTION D1-D1

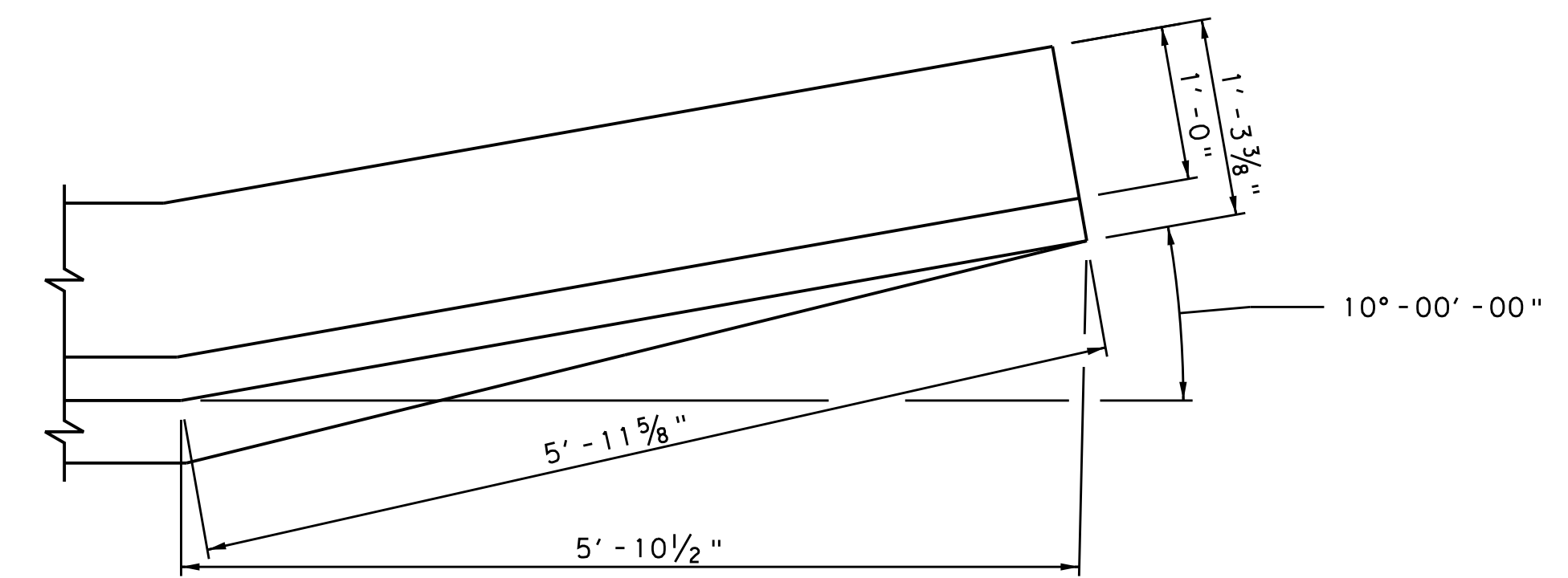
6 0 6 12 INCHES

* SEE BC-739M FOR DETAILS



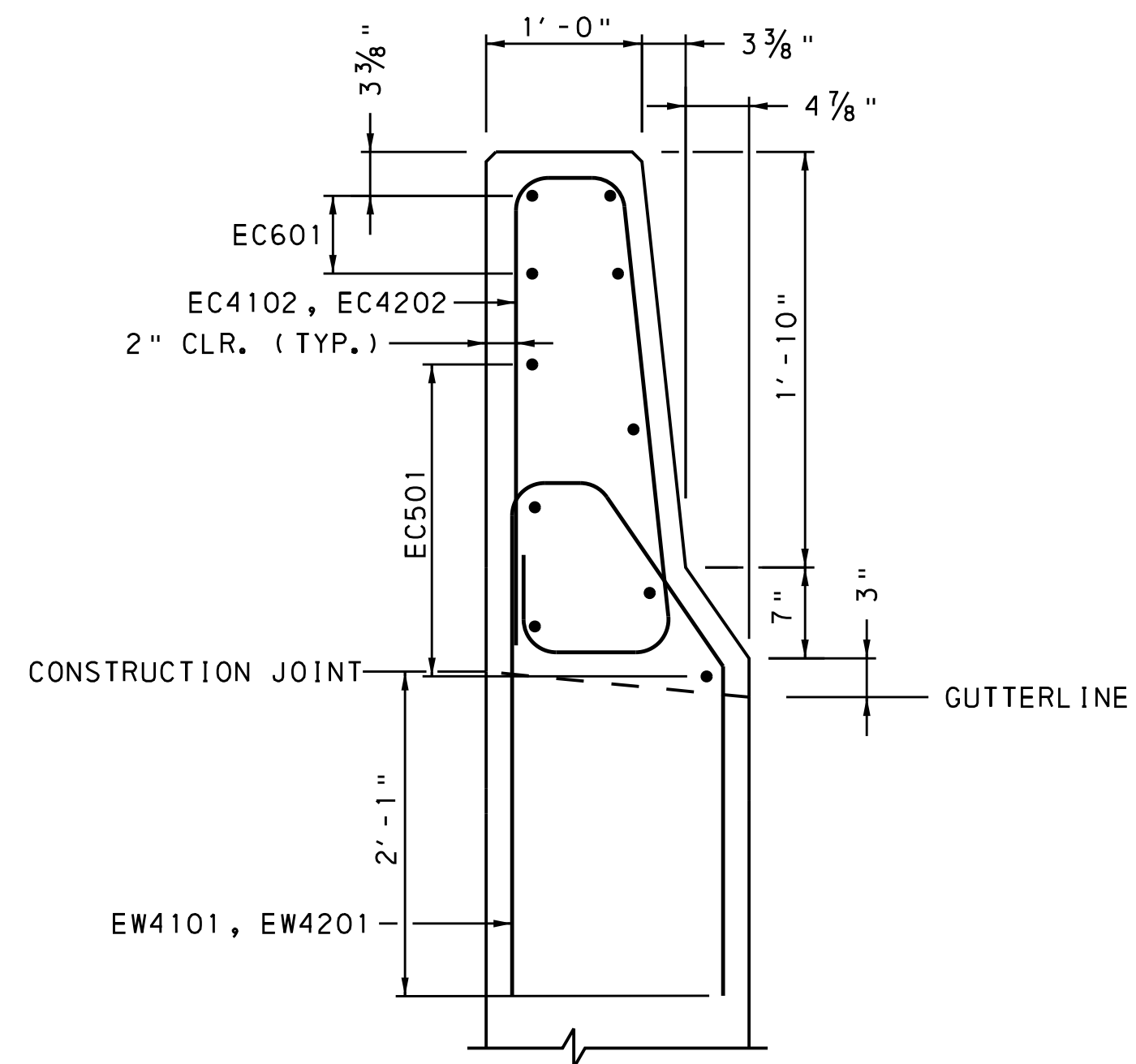
SECTION G1-G1

6 0 6 12 INCHES



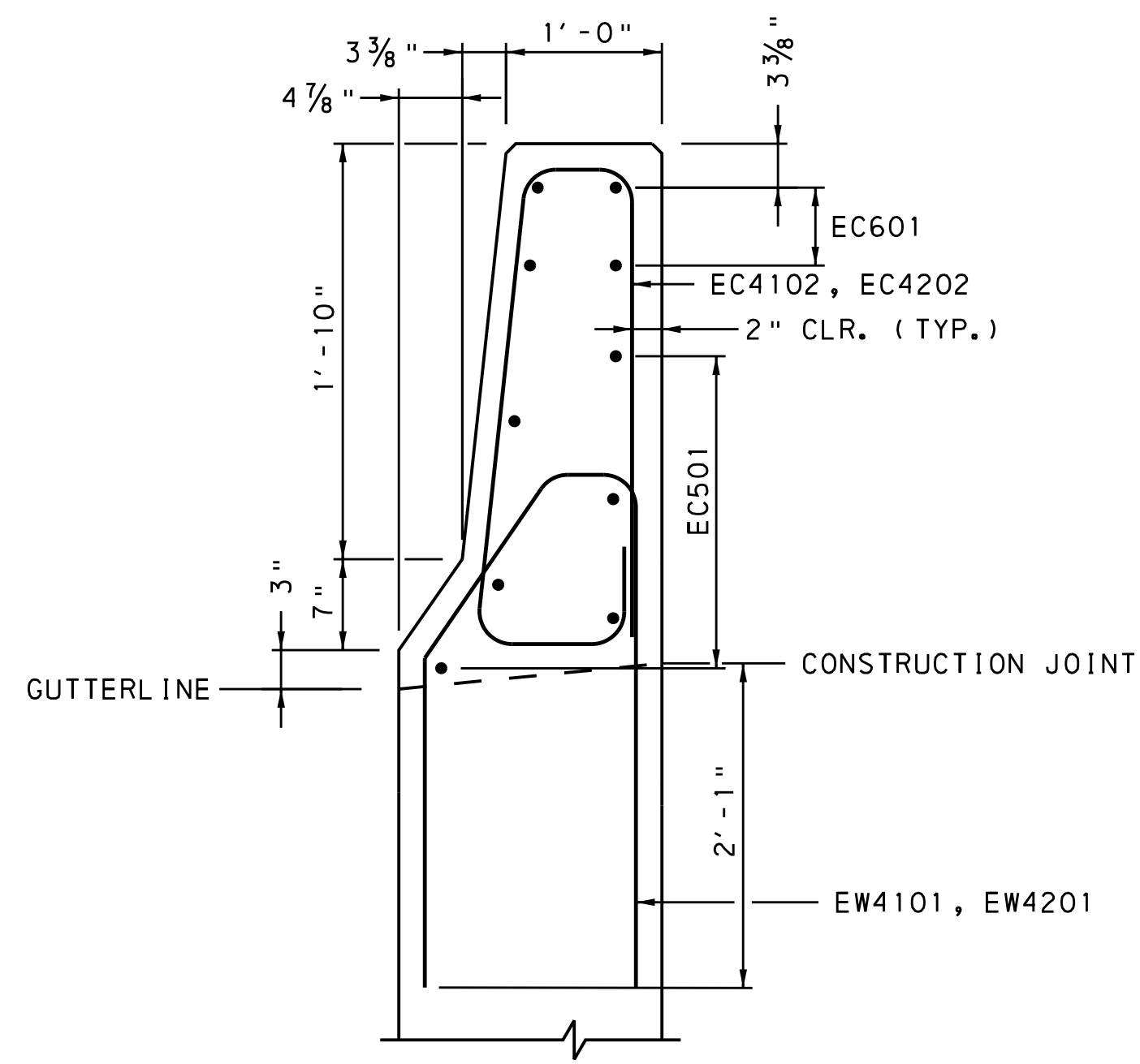
SECTION END OF BARRIER PLAN VIEW

6 0 6 12 INCHES



SECTION E1-E1

6 0 6 12 INCHES



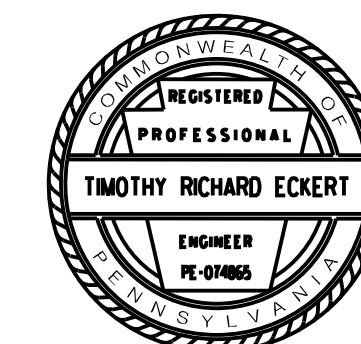
SECTION H1-H1

6 0 6 12 INCHES

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR TYPICAL SECTION, SEE SHEET 5.
- FOR LOCATIONS OF SECTIONS D1-D1, E1-E1, G1-G1 AND H1-H1, SEE SHEET 34.
- FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
BARRIER AND MISCELLANEOUS DETAILS 3

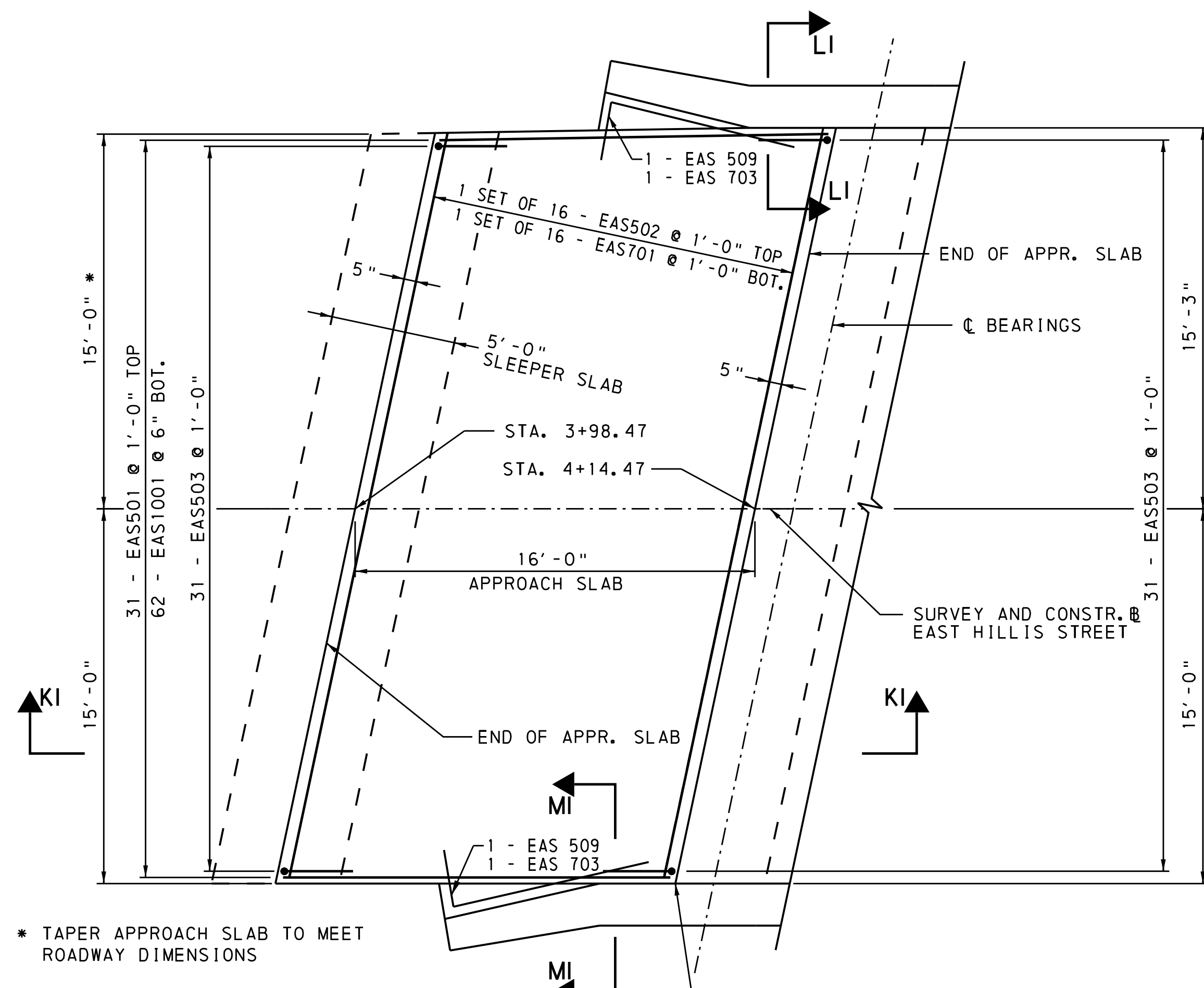
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 35 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...35-1501 BARRIER AND MISCELLANEOUS DETAILS 3.dgn
PRODUCTION VERSION: MicroStation V8i
PLOT DATE: 01/30/2020 10:58:22 AM
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 03:52:22 PM
USER NAME: Bhubock OFFICE LOCATION: PITTSBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE



* TAPER APPROACH SLAB TO MEET ROADWAY DIMENSIONS

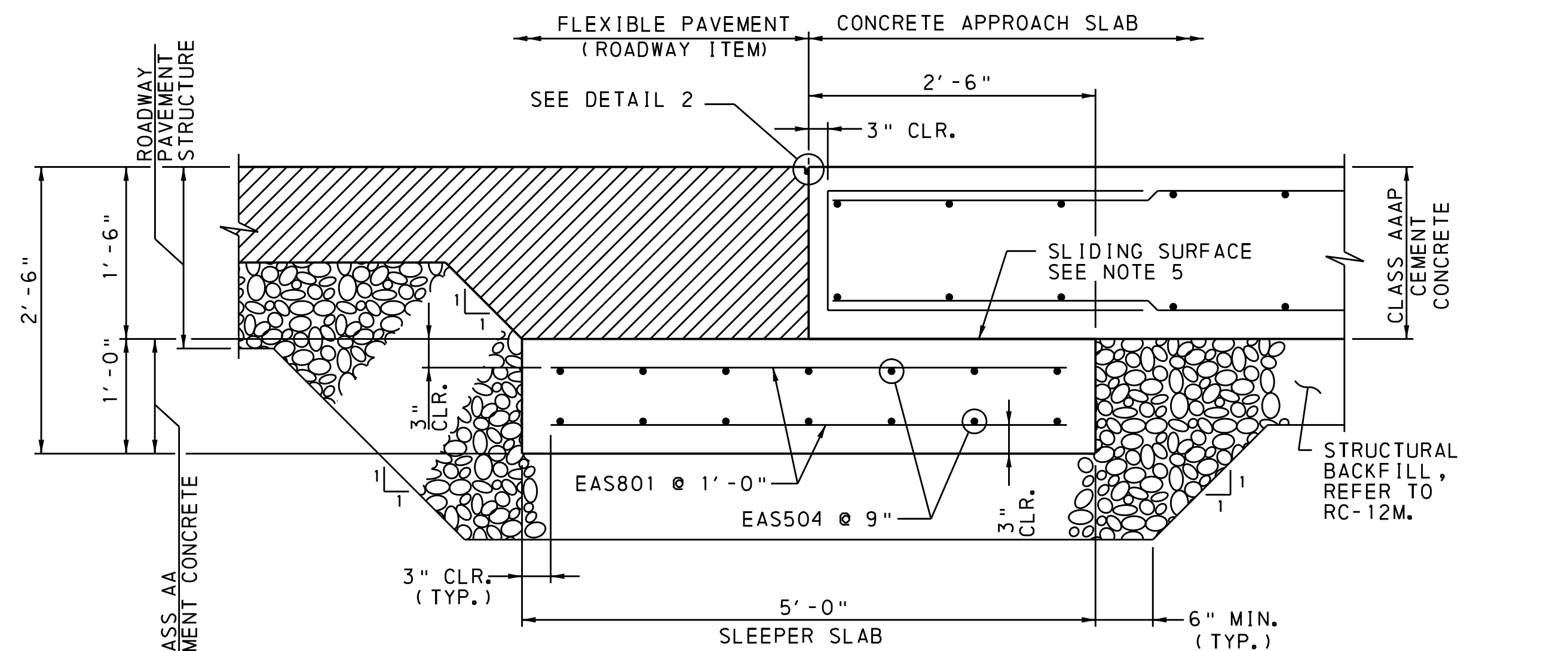
APPROACH SLAB PLAN

2 0 2 4 FEET

BOND END OF JOINT SEAL TO INTEGRAL ABUTMENT (TYP.). (SEAL ENDS OF NEOPRENE COMPRESSION SEAL PER DETAILS ON BC-766M, PRIOR TO INSTALLATION)

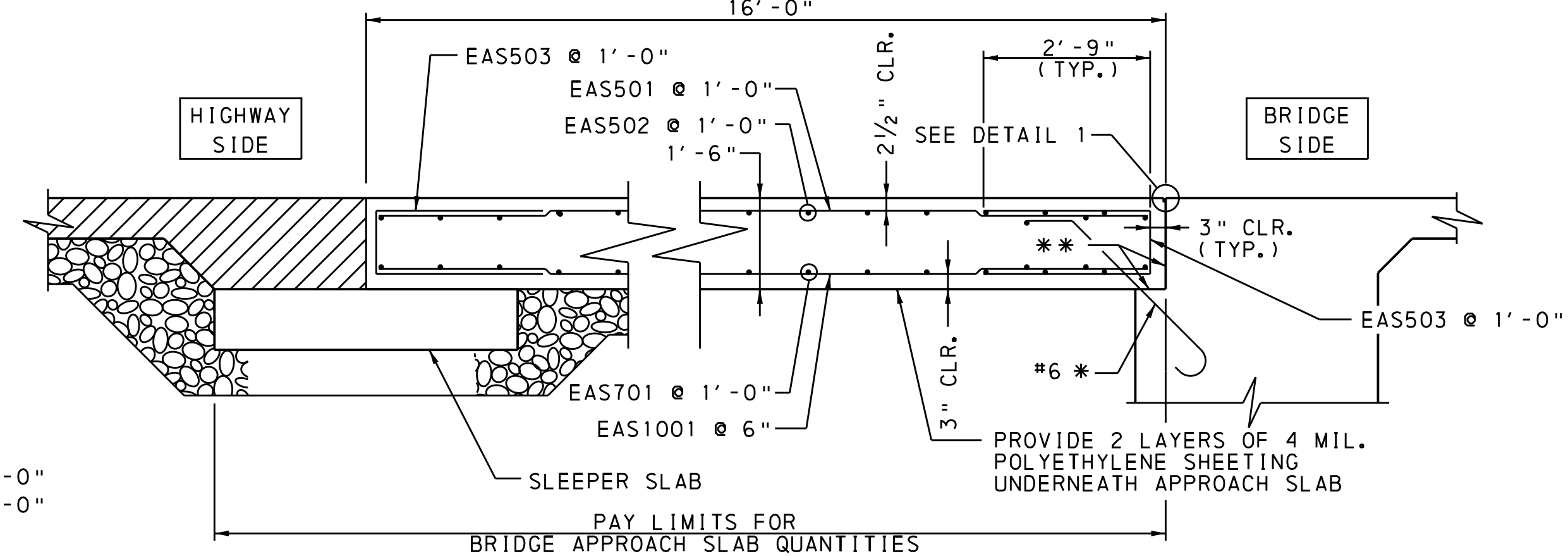
REINFORCEMENT

EAS 509 = TYPE 10 A = 4'-0", B = 7'-0"
EAS 703 = TYPE 10 A = 4'-0", B = 7'-0"



SLEEPER SLAB AT ABUTMENT 1 DETAIL

NOT TO SCALE
END OF APPROACH SLAB ADJACENT TO FLEXIBLE PAVEMENT
16'-0"



SECTION K1-K1

1 0 1 2 FEET

* FOR EXACT SHAPE AND DIMENSION OF REBAR SEE DIAPHRAGM DETAILS AT ABUTMENT 1 SHEET 28
** COAT WITH BOND BREAKER PRIOR TO PLACING APPROACH SLAB CONCRETE

**ABUTMENT 1 APPROACH SLAB ELEVATIONS
LOOKING AHEAD STATIONS**

STATION	PT. ①	PT. ②	PT. ⑤	PT. ③	PT. ④
3+95.28	—	—	—	—	946.12
3+96.34	—	—	—	946.31	946.11
3+98.47	—	—	946.49	946.29	946.09
4+00.00	—	—	946.47	946.27	946.07
4+00.59	—	946.26	946.46	946.26	946.06
4+01.71	946.04	946.25	946.45	946.25	946.05
4+10.00	945.96	946.17	946.37	946.17	945.97
4+11.28	945.95	946.16	946.36	946.16	945.96
4+12.34	945.94	946.15	946.35	946.15	—
4+14.47	945.92	946.13	946.33	—	—
4+16.59	945.89	946.10	—	—	—
4+17.71	945.88	—	—	—	—

NOTE: FOR POINT LOCATIONS, SEE TYPICAL SECTION DETAIL ON THE TYP. SECT. & ELEVATION CHART SHEET.

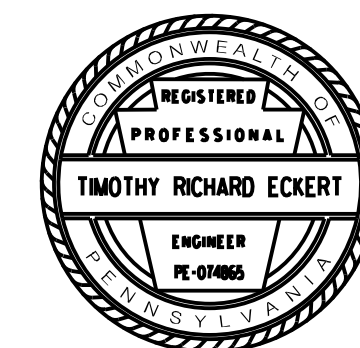
NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE BRIDGE DECK SLAB IS CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE INDICATED OR DIRECTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.
4. APPROACH SLAB ELEVATIONS ARE COMPUTED ASSUMING THE BRIDGE GEOMETRY EXTENDS COMPLETELY ACROSS THE APPROACH SLAB.
5. TROWEL SMOOTH AND PLACE TWO LAYERS OF 4 MIL. POLYETHYLENE SHEETING AS BOND BREAKER.

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR ABUTMENT 1 SECTION, SEE SHEET 9.
- FOR ABUTMENT 1 DIAPHRAGM DETAILS, SEE SHEET 28.
- FOR SECTIONS L1-L1 AND M1-M1, SEE SHEET 38.
- FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.
- FOR DETAILS 1 AND 2, SEE SHEET 38.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
APPROACH SLAB DETAILS ABUTMENT 1

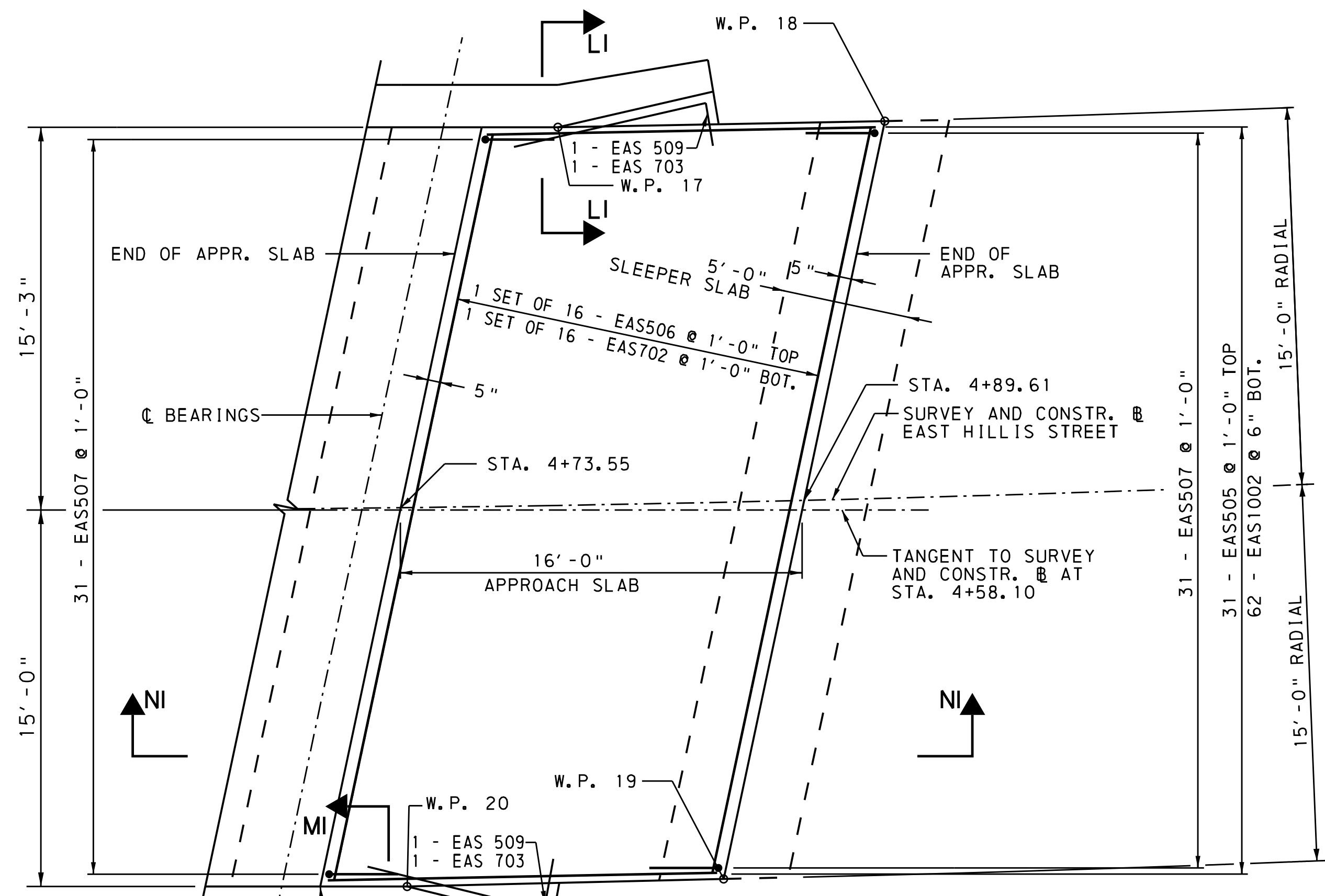
APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 36 OF 43

L-45

PENNONI ASSOCIATES, INC.
FILE NAME: ...3.6.1501 APPROACH SLAB DETAILS ABUT 1.dgn
MICROSTATION VERSION: MicroStation V8i
DRAWN BY: JAMES PENNONI (JXP)
CHECKED BY: JAMES PENNONI (JXP)
PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
DATE PLOTTED: 02/19/2019 @ 13:25:54 PM
USER NAME: JBP@pcc
OFFICE LOCATION: PITTSBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE

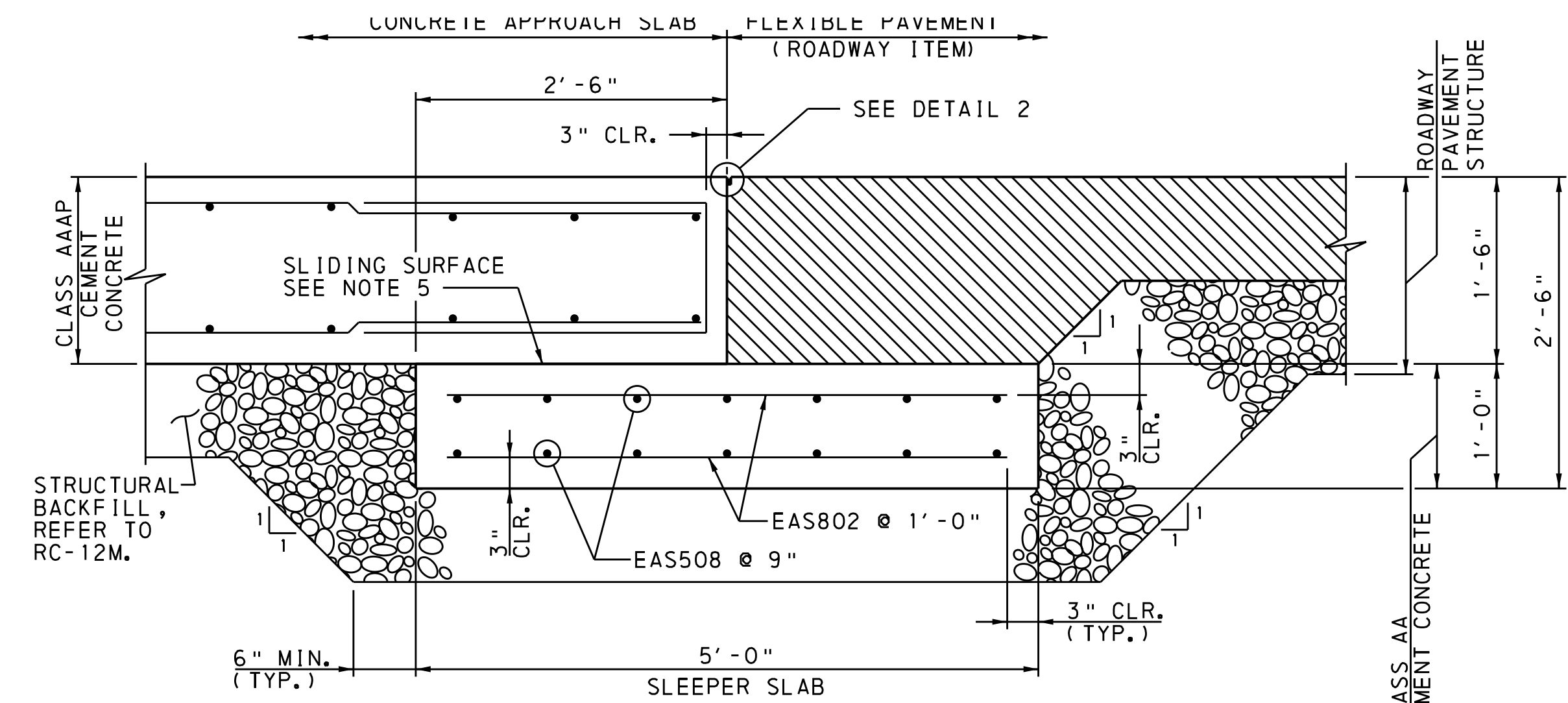


APPROACH SLAB PLAN



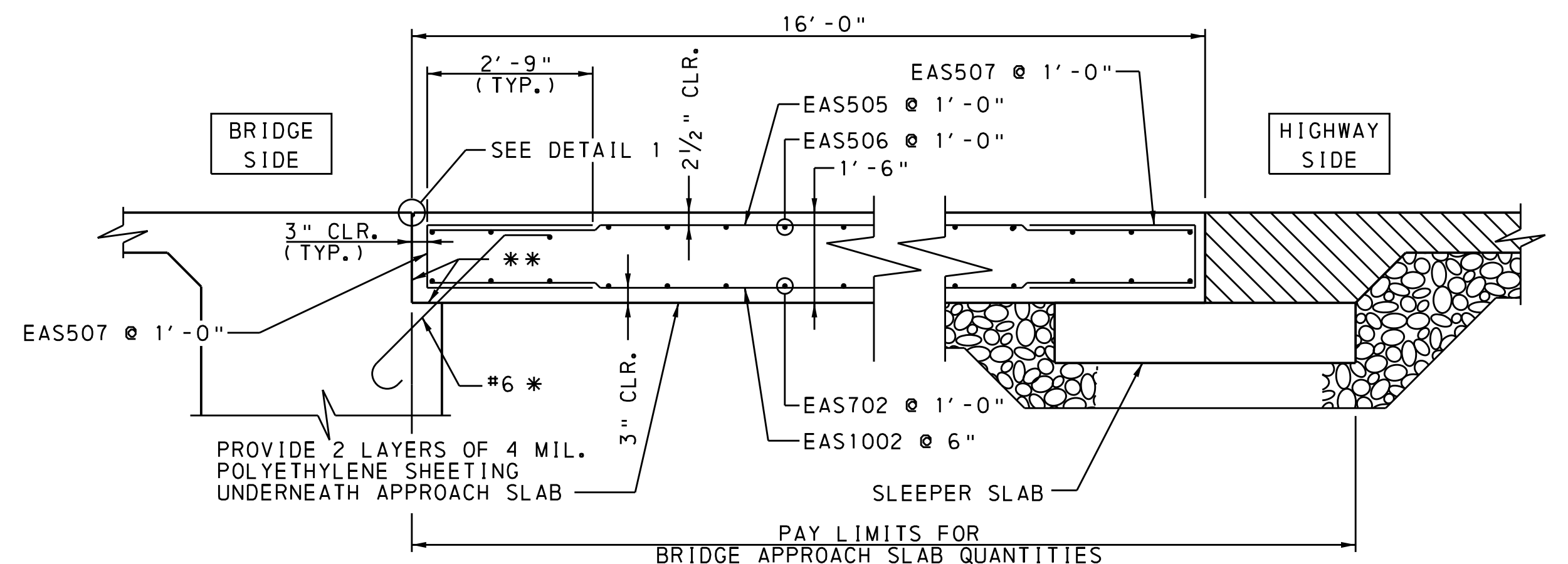
REINFORCEMENT
 EAS 509 = TYPE 10 A = 4'-0", B = 7'-0"
 EAS 703 = TYPE 10 A = 4'-0", B = 7'-0"

- NOTES:**
1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE BRIDGE DECK SLAB IS CONSTRUCTED.
 2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE INDICATED OR DIRECTED.
 3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.
 4. APPROACH SLAB ELEVATIONS ARE COMPUTED ASSUMING THE BRIDGE GEOMETRY EXTENDS COMPLETELY ACROSS APPROACH SLAB.
 5. TROWEL SMOOTH AND PLACE TWO LAYERS OF 4 MIL. POLYETHYLENE SHEETING AS BOND BREAKER.



SLEEPER SLAB AT ABUTMENT 2 DETAIL

NOT TO SCALE
 END OF APPROACH SLAB
 ADJACENT TO FLEXIBLE PAVEMENT



SECTION N1-N1



- NOTES:**
- FOR GENERAL NOTES, SEE SHEET 2.
 - FOR ABUTMENT 2 SECTION, SEE SHEET 17.
 - FOR ABUTMENT 2 DIAPHRAGM DETAILS, SEE SHEET 29.
 - FOR SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE, SEE SHEET 39.
 - FOR SECTIONS L1-L1 AND M1-M1, SEE SHEET 38.
 - FOR DETAILS 1 AND 2, SEE SHEET 38.

**ABUTMENT 2 APPROACH SLAB ELEVATIONS
 LOOKING AHEAD STATIONS**

STATION	PT. ①	PT. ②	PT. ⑤	PT. ③	PT. ④
4+70.21	—	—	—	—	944.61
4+71.33	—	—	—	944.77	944.56
4+73.56	—	—	944.88	944.68	944.48
4+75.85	—	944.61	944.79	944.59	944.38
4+77.00	944.36	944.57	944.74	944.54	944.34
4+80.00	944.27	944.48	944.62	944.42	944.22
4+86.04	944.18	944.39	944.38	944.18	943.98
4+87.26	944.13	944.34	944.33	944.13	—
4+89.62	944.01	944.22	944.24	—	—
4+92.02	943.77	943.98	—	—	—
4+93.30	943.72	—	—	—	—

APPROACH SLAB WORK POINTS

NUMBER	Y (NORTHING) (ft)	X (EASTING) (ft)	STATION	OFFSET
17	332804.2972	1457219.3654	4+79.67	-15.25
18	332804.8507	1457232.5742	4+92.88	-15.72
19	332774.1434	1457226.2478	4+86.36	14.95
20	332774.0102	1457213.5477	4+73.66	15.00

NOTE: OFFSET IS MEASURED PERPENDICULAR TO CL ROADWAY AND WORKING TANGENT LINE STARTING @ STA. 4+58.10, LOOKING STATIONS AHEAD.

FOUR DECIMAL PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

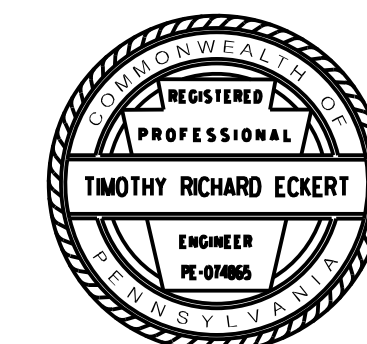
WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN

SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE

APPROACH SLAB DETAILS ABUTMENT 2

APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

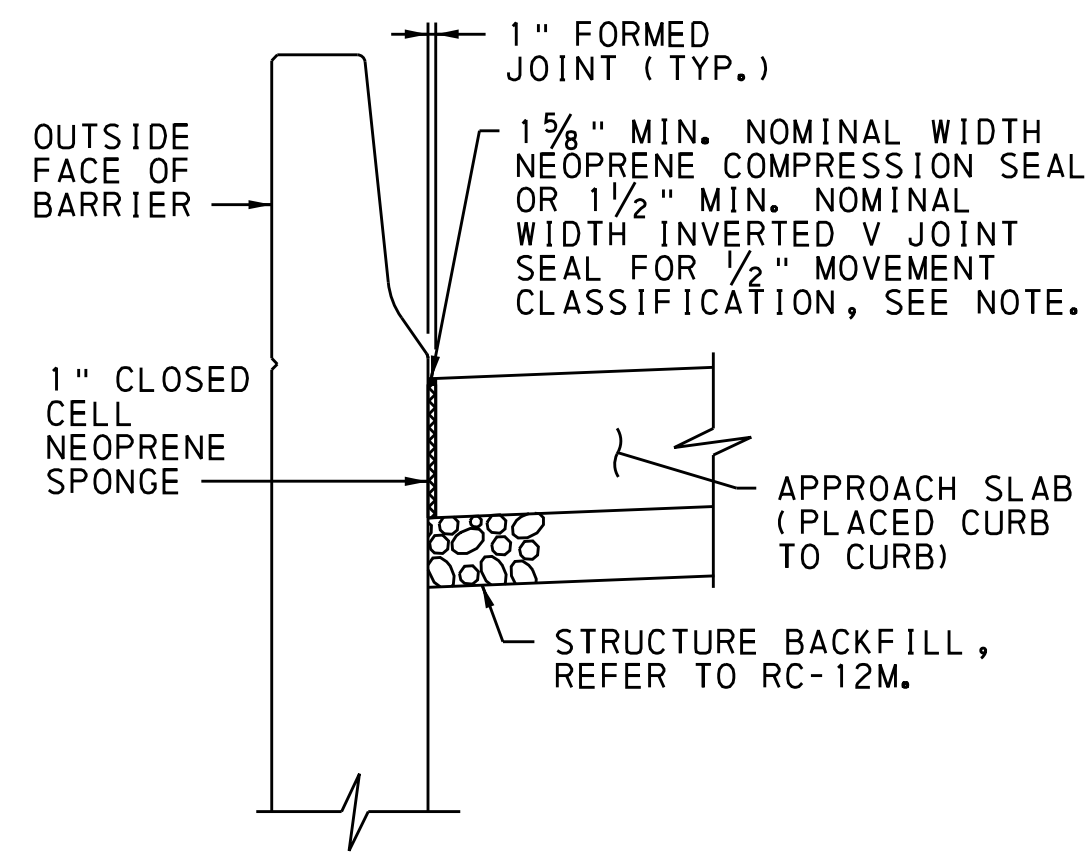
SHEET 37 OF 43



PENNONI ASSOCIATES, INC.
 FILE NAME: \\3171501\APPROACH SLAB DETAILS ABUT 2.dwg
 MICROSTATION VERSION: MicroStation V8i
 PLOT ON: A3
 PLOT SCALE: 1/8"=1'-0"
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 02/19/2009 @ 13:32:28 PM
 USER NAME: Bburdock OFFICE LOCATION: PHT+sburgh, Pennsylvania

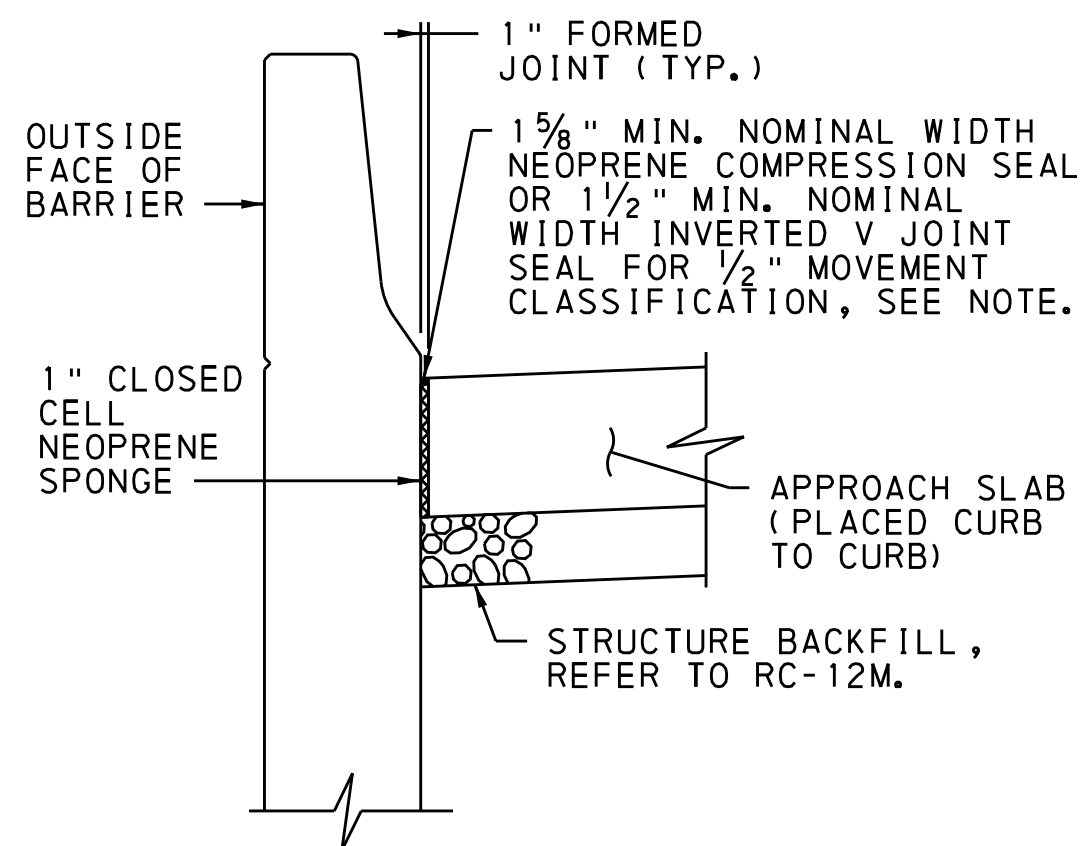
NOTE: FOR POINT LOCATIONS, SEE TYPICAL SECTION DETAIL ON THE TYP. SECT. & ELEVATION CHART SHEET.

DES: TE CKD: MP DWG: NCC CKD: TE



SECTION L1-L1

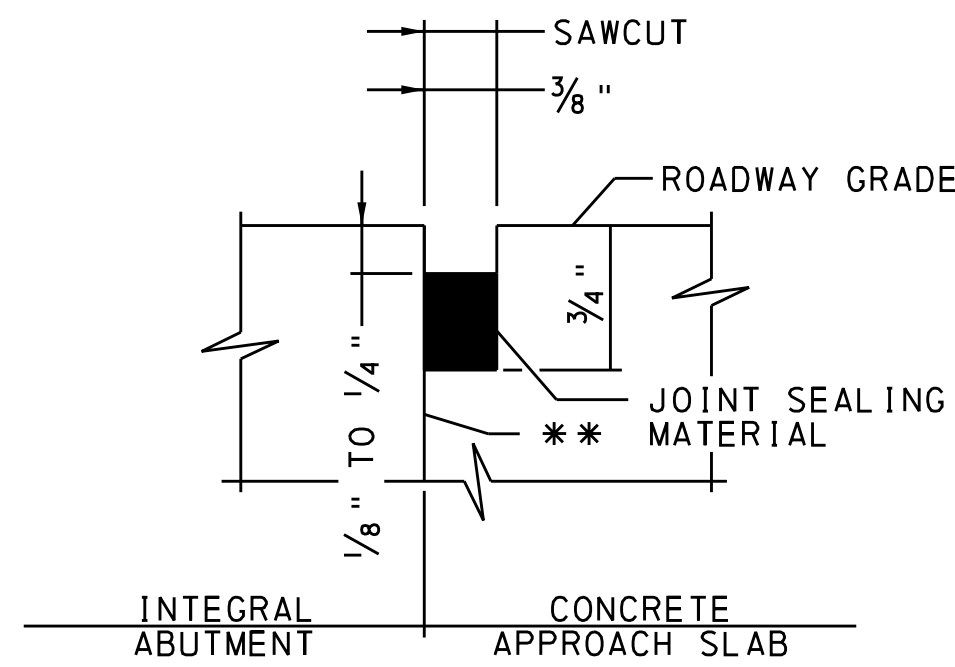
NOT TO SCALE



SECTION M1-M1

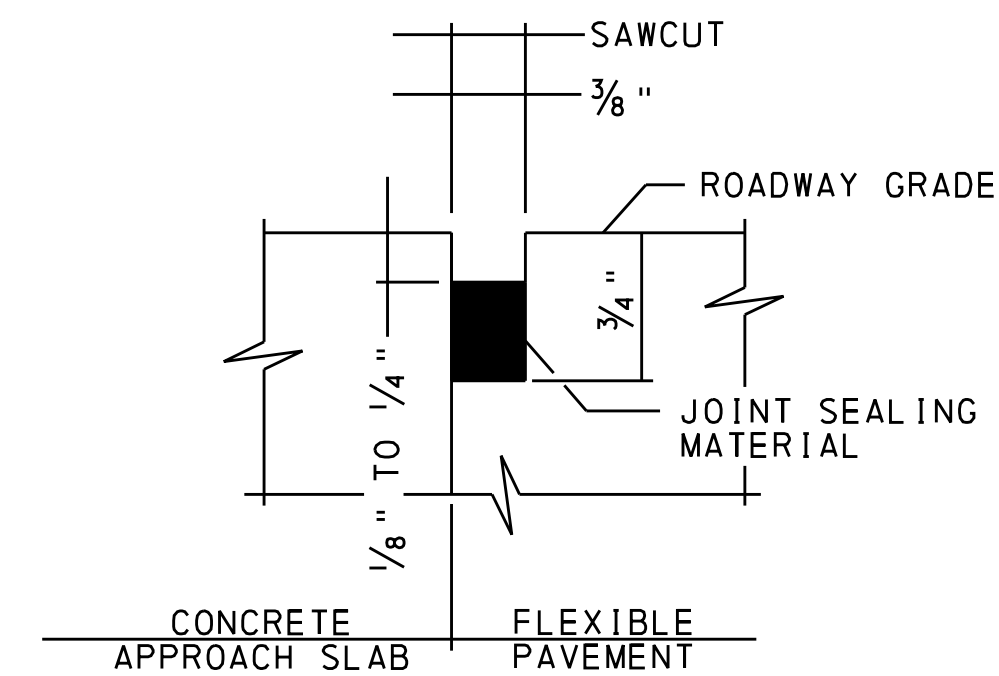
NOT TO SCALE

NOTE:
 USE ONLY APPROVED SEALS, AS LISTED IN BULLETIN 15.
 INSTALL JOINT SEALS TO A UNIFORM DEPTH WITH THE TOP
 OF THE SEAL FROM 1/4" TO 1/2" BELOW THE LEVEL OF
 THE PAVEMENT SURFACE. MAKE THE TOP EDGES OF THE
 CONTACT SURFACES ON BOTH SIDES OF THE SEAL AT THE
 SAME ELEVATION.



DETAIL 1
 NOT TO SCALE

** COAT WITH BOND BREAKER
 PRIOR TO PLACING
 APPROACH SLAB CONCRETE

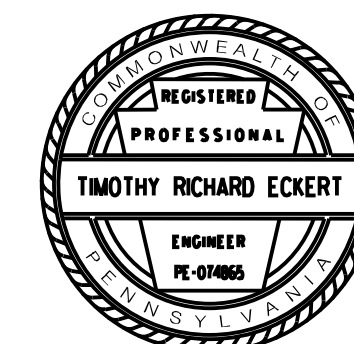


DETAIL 2
 NOT TO SCALE

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR APPROACH SLAB DETAILS AT ABUTMENT 1, SEE SHEET 36.
- FOR APPROACH SLAB DETAILS AT ABUTMENT 2, SEE SHEET 37.
- FOR LOCATION OF L1-L1 AND M1-M1, SEE SHEET 36 AND 37.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
APPROACH SLAB DETAILS

APPROVED FOR STRUCTURAL ADEQUACY ONLY
 DATE 1-30-2020

SHEET 38 OF 43

L-45

PENNONI ASSOCIATES, INC.
 FILE NAME: ...38.1501.APPROACH SLAB DETAILS.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT SCALE: 1"=10'-0"
 PLOT DRIVER: PENNONI-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 02/19/2019 @ 03:35:56 PM
 USER NAME: Bhuback OFFICE LOCATION: PITTSBURGH, PENNSYLVANIA

DES: TE CKD: MP DWG: NCC CKD: TE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
SLAB											
ES401	4	65	40'-0"	STR							
ES402	4	65	21'-9 7/8"	STR							
ES403	4	154	5'-5 1/4"	14	6"	4'-11 1/4"					
ES404	4	106	5'-9 1/2"	36	1'-9"	4"	4"	2 3/4"	1'-11"	2"	F=2 3/4" ; G=1'-0" ; H=10"
ES501	5	77	35'-2 3/8"	15	7"	34'-0 3/8"					
ES502	5	69	34'-0 3/8"	STR							
ES801	8	8	34'-0 1/2"	STR							
SIDEWALK/BARRIER											
EC401	4	106	8'-0 1/8"	37	2'-9 1/2"	4"	3 3/8"	3 5/8"	2'-7 3/4"	2"	F=4 1/8" ; G=6 3/4" ; H=5" ; I=3 3/8"
EC501	5	24	34'-4 1/2"	STR							
EC601	6	16	34'-9"	STR							
END DIAPHRAGM @ ABUTMENT NO. 1											
ED401	4	29	6'-0"	11	3'-0"	3'-0"	2'-1 3/8"				
ED601	6	47	9'-4"	10	3'-0"	6'-4"					
ED603	6	49	4'-6 1/8"	46	2'-10 1/8"	1'-0"	8 3/8"		8"		
ED801	8	5	33'-10 1/2"	STR							
ED802	8	18	4'-7 1/8"	STR							THREADED 3" ON ONE END
ED803	8	6	2'-1 3/4"	STR							THREADED 3" ON ONE END
END DIAPHRAGM @ ABUTMENT NO. 2											
ED402	4	29	6'-0"	11	3'-0"	3'-0"	2'-1 3/8"				
ED602	6	47	9'-4"	10	3'-0"	6'-4"					
ED604	6	49	4'-6 1/8"	46	2'-10 1/8"	1'-0"	8 3/8"		8"		
ED804	8	5	33'-10 1/2"	STR							
ED805	8	18	4'-7 1/8"	STR							THREADED 3" ON ONE END
ED806	8	6	2'-1 3/4"	STR							THREADED 3" ON ONE END
APPROACH SLAB NO. 1											
EAS501	5	31	15'-5 3/4"	STR							
EAS502	5	16	30'-4 7/8"	STR							
EAS503	5	62	6'-6 1/2"	4	2'-9"	1'-0 1/2"	2'-9"				
EAS504	5	14	30'-4 7/8"	STR							2 SETS OF 7
EAS701	7	16	30'-4 7/8"	STR							
EAS801	8	62	4'-7 1/8"	STR							2 SETS OF 31
EAS1001	10	62	15'-5 3/4"	STR							
APPROACH SLAB NO. 2											
EAS505	5	31	15'-5 3/4"	STR							
EAS506	5	16	30'-4 7/8"	STR							
EAS507	5	62	6'-6 1/2"	4	2'-9"	1'-0 1/2"	2'-9"				
EAS508	5	14	30'-4 7/8"	STR							2 SETS OF 7
EAS702	7	16	30'-4 7/8"	STR							
EAS802	8	62	4'-7 1/8"	STR							2 SETS OF 31
EAS1002	10	62	15'-5 3/4"	STR							

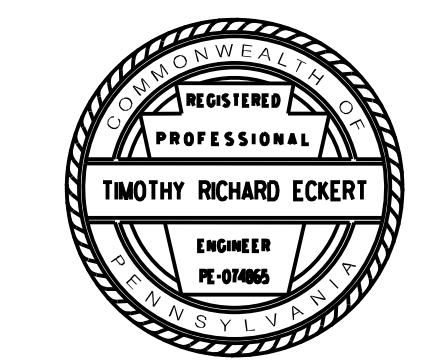
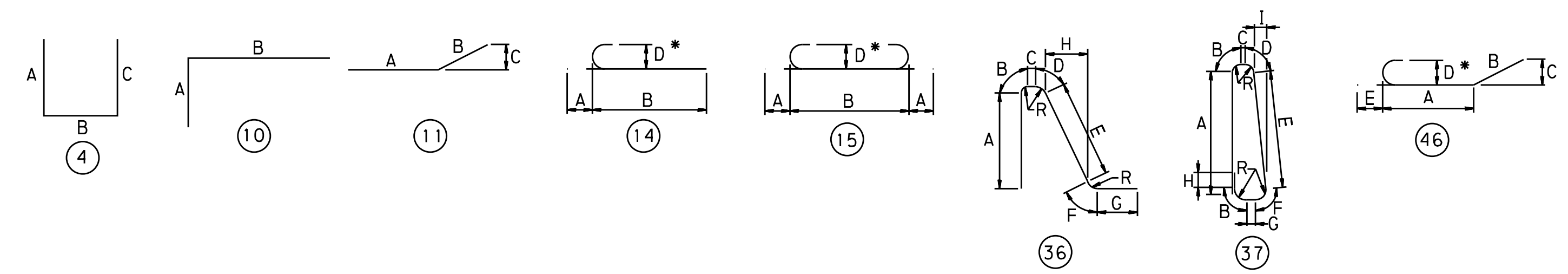
- "*" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLES SHOW TYPES.
- "E" - INDICATES EPOXY COATED REBARS.
- FOR ALL BAR TYPES SHOWN, DIMENSIONS A-H AND LENGTH ARE MEASURED ALONG OUTSIDE OF BAR. R IS MEASURED ALONG INSIDE OF BAR.
- BAR TYPES ARE NUMBERED ACCORDING TO THE FOLLOWING:

SUPERSTRUCTURE:	01 THROUGH 99
ABUTMENT 1:	101 THROUGH 199
ABUTMENT 2:	201 THROUGH 299

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- FOR APPROACH SLAB DETAILS AT ABUTMENT 1, SEE SHEET 36.
- FOR APPROACH SLAB DETAILS AT ABUTMENT 2, SEE SHEET 36.

Mark	Description	By	Chk'd.	Recm'd.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
SUPERSTRUCTURE REINFORCEMENT BAR SCHEDULE

APPROVED FOR STRUCTURAL ADEQUACY ONLY
DATE 1-30-2020

SHEET 39 OF 43
L-45

PENNON ASSOCIATES, INC.
 FILE NAME: \\391501\SUPERS\STRUCTURE\REBAR_SCHEDULE.dgn
 MICROSTATION VERSION: MicroStation V8i
 PLOT DATE: 1/30/2020 11:58:11 AM
 PLOT DRIVER: PENNON-PIT-PENNOT-FULL-PDF-PLT.CFG
 DATE PLOTTED: 2/19/2019 @ 13:43:18 PM
 USER NAME: Bburdick OFFICE LOCATION: PTT+sburcgh, Harrisburg

CORE BORING LOCATION			
NO.	STATION	OFFSET	SURFACE ELEVATION
SB-1	4+19.5	5.6' RT.	945.8'
SB-2	4+16.1	22.2' LT.	943.8'
SB-3	4+68.8	17.3' RT.	942.3'
SB-4	4+71.4	8.7' LT.	943.9'

GENERAL NOTES

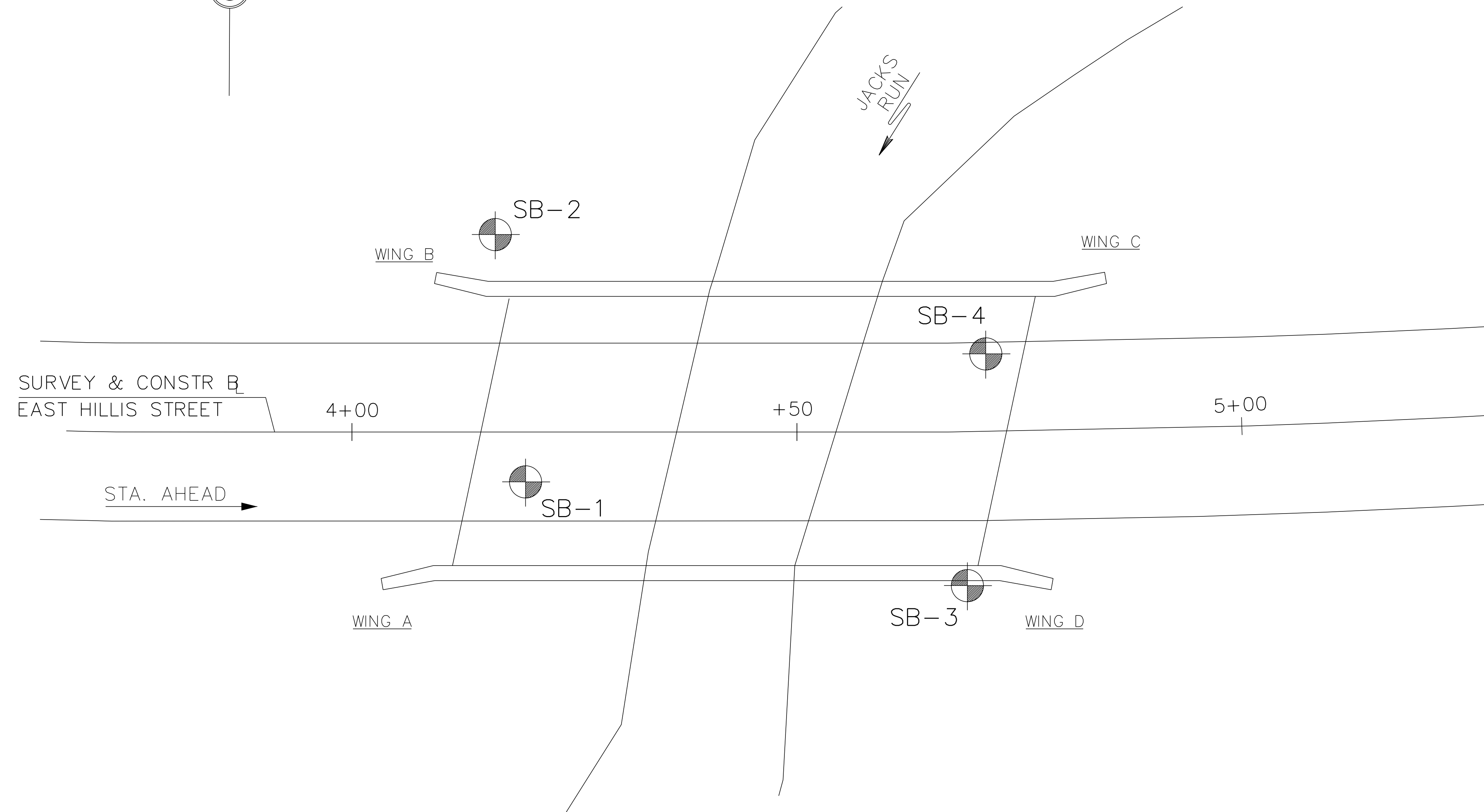
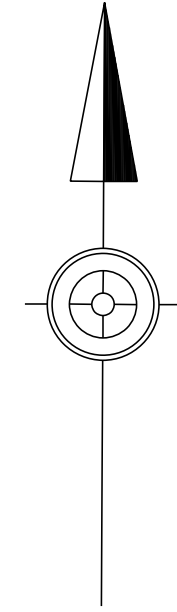
THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BPCE BOTTOM OF PILE CAP ELEVATION IN FEET
- AGE ADJACENT GROUND ELEVATION IN FEET
- TOR TOP OF ROCK ELEVATION IN FEET
- PDE PREDRILL ELEVATION IN FEET
- EPT EPT ESTIMATED PILE TIP ELEVATION IN FEET



BORING LOCATION PLAN



LEGEND

- LOCATION OF CORE BORING

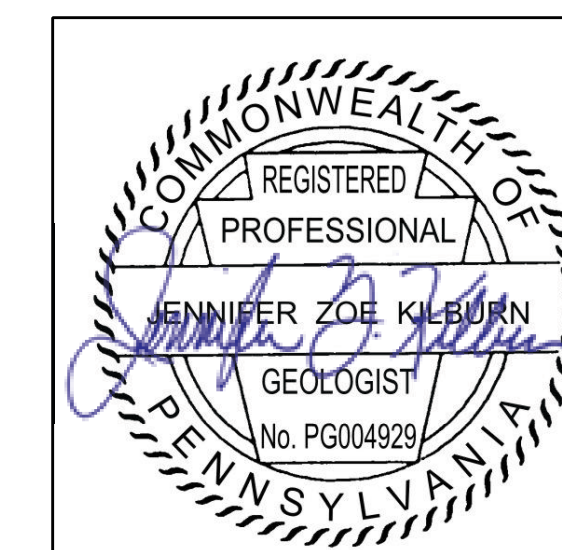
THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
JZK

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

Jennifer Z. Kilburn
 GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST DATE: **2/28/19**

ARMSTRONG DRILLING, INC.
 DRILLER
 NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
 CONSULTANT

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
 WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
 STRUCTURE BORINGS

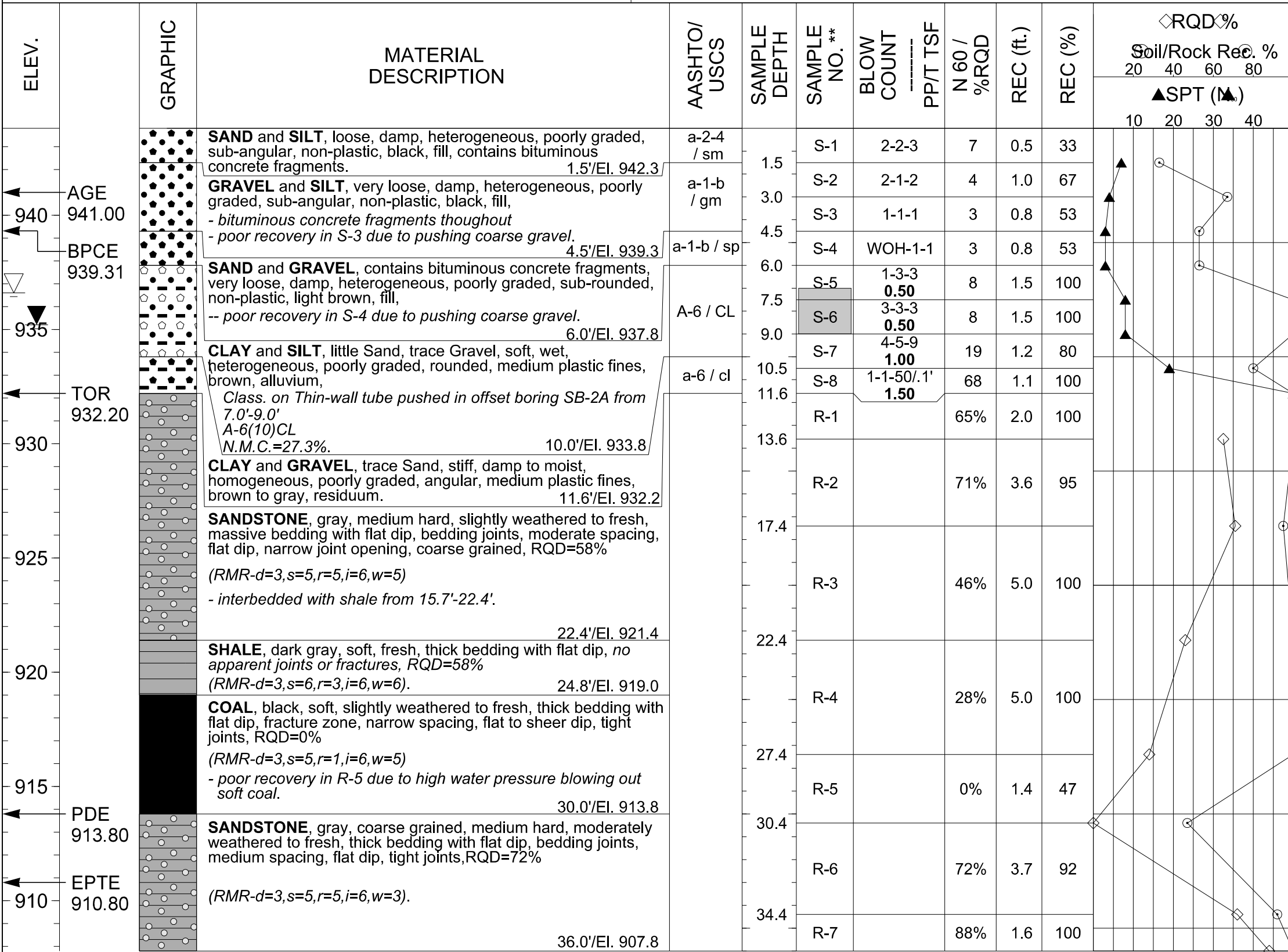
Prog. Q. Paine
 DISTRICT GEOTECHNICAL ENGINEER DATE: **1-21-2020**

SHEET **40** OF **43**
 L - 45

SUBSTRUCTURE UNIT:
ABUTMENT 1, WING B

LOG 1 OF 1

BORING NUMBER: SB-2	BORING LOCATION STATION: 4+16.1 OFFSET: 22.2 FT. LT.	START: 07/05/2017 8:25 AM FINISH: 07/05/2017 11:05 AM	HAMMER: AUTOMATIC EFFICIENCY: 0.8 Era
DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 45 TRACK MOUNT		SIZE OF CORE: 2.000 IN.	VERTICAL SCALE: 0 FT. ██████ 5 FT. TOP OF BORING ELEVATION: 943.8 FT.
DRILLING INSPECTOR: JEREMY BOOZER DRILLER & DRILLING COMPANY: S. KELLEY ARMSTRONG DRILLING, INC.		▽ 0 HR. READING - ELAPSED TIME: El. 936.6 ft. - 0.0 hr. ▼ 24 HR. READING - ELAPSED TIME: El. 935.2 ft. - 21.3 hr.	

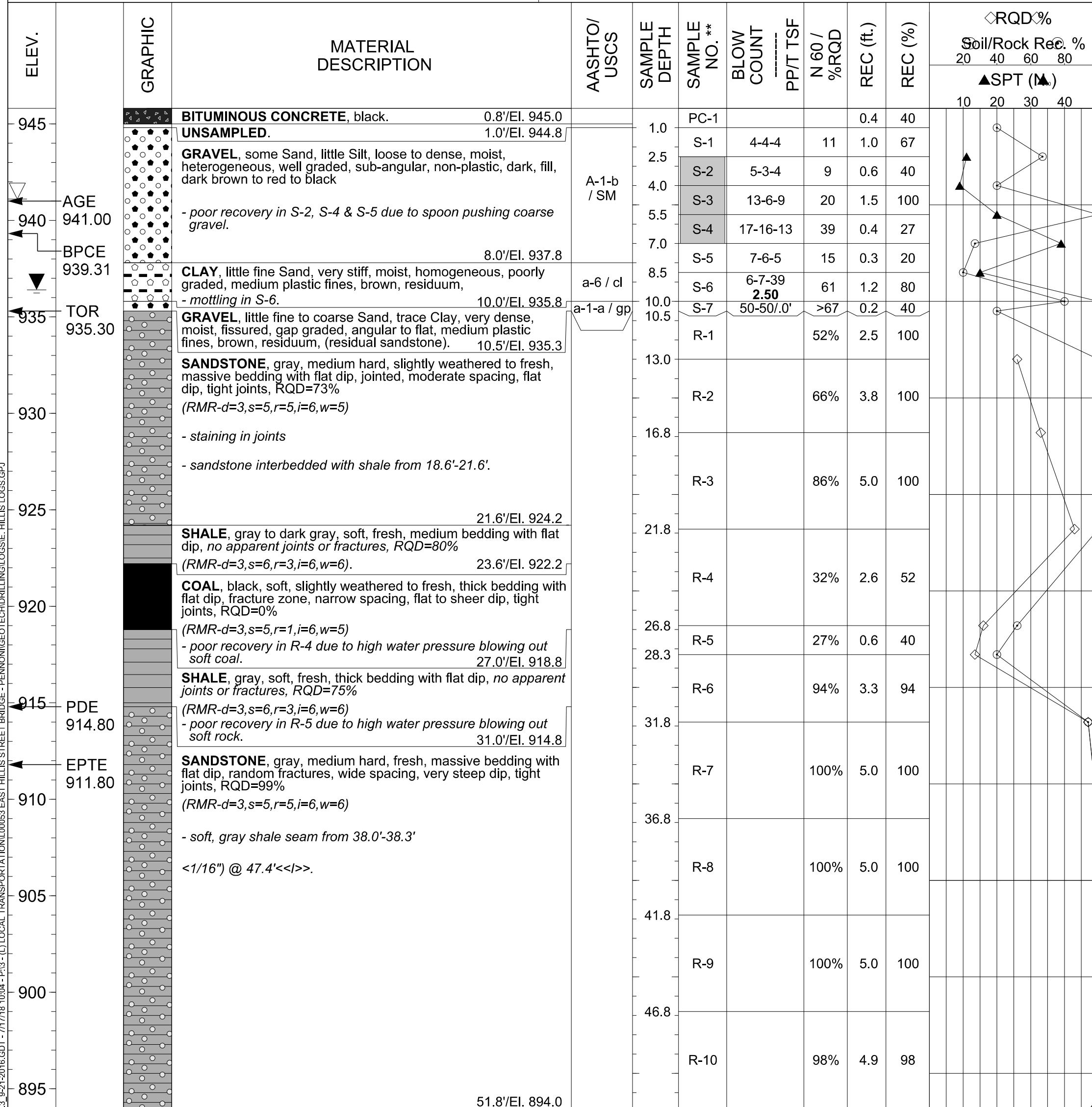


**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT:
ABUTMENT 1, WING A

LOG 1 OF 1

BORING NUMBER: SB-1	BORING LOCATION STATION: 4+19.5 OFFSET: 5.6 FT. RT.	START: 07/03/2017 9:20 AM FINISH: 07/03/2017 1:50 PM	HAMMER: AUTOMATIC EFFICIENCY: 0.8 Era
DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 45 TRACK MOUNT		SIZE OF CORE: 2.000 IN.	VERTICAL SCALE: 0 FT. ██████ 5 FT. TOP OF BORING ELEVATION: 945.8 FT.
DRILLING INSPECTOR: MICHAEL HAENDLER DRILLER & DRILLING COMPANY: S. KELLEY ARMSTRONG DRILLING, INC.		▽ 0 HR. READING - ELAPSED TIME: El. 941.1 ft. - 0.0 hr. ▼ 24 HR. READING - ELAPSED TIME: El. 936.4 ft. - 48.0 hr.	



**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.
FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.
THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

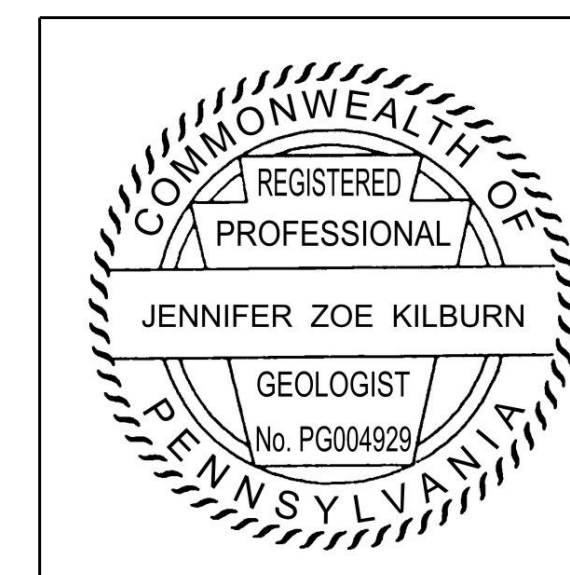
LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BPCE BOTTOM OF PILE CAP ELEVATION IN FEET
- AGE ADJACENT GROUND ELEVATION IN FEET
- TOR TOP OF ROCK ELEVATION IN FEET
- PDE PREDRILL ELEVATION IN FEET
- EPTe ESTIMATED PILE TIP ELEVATION IN FEET

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
JZK

ARMSTRONG DRILLING, INC.
DRILLER
NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
CONSULTANT

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					



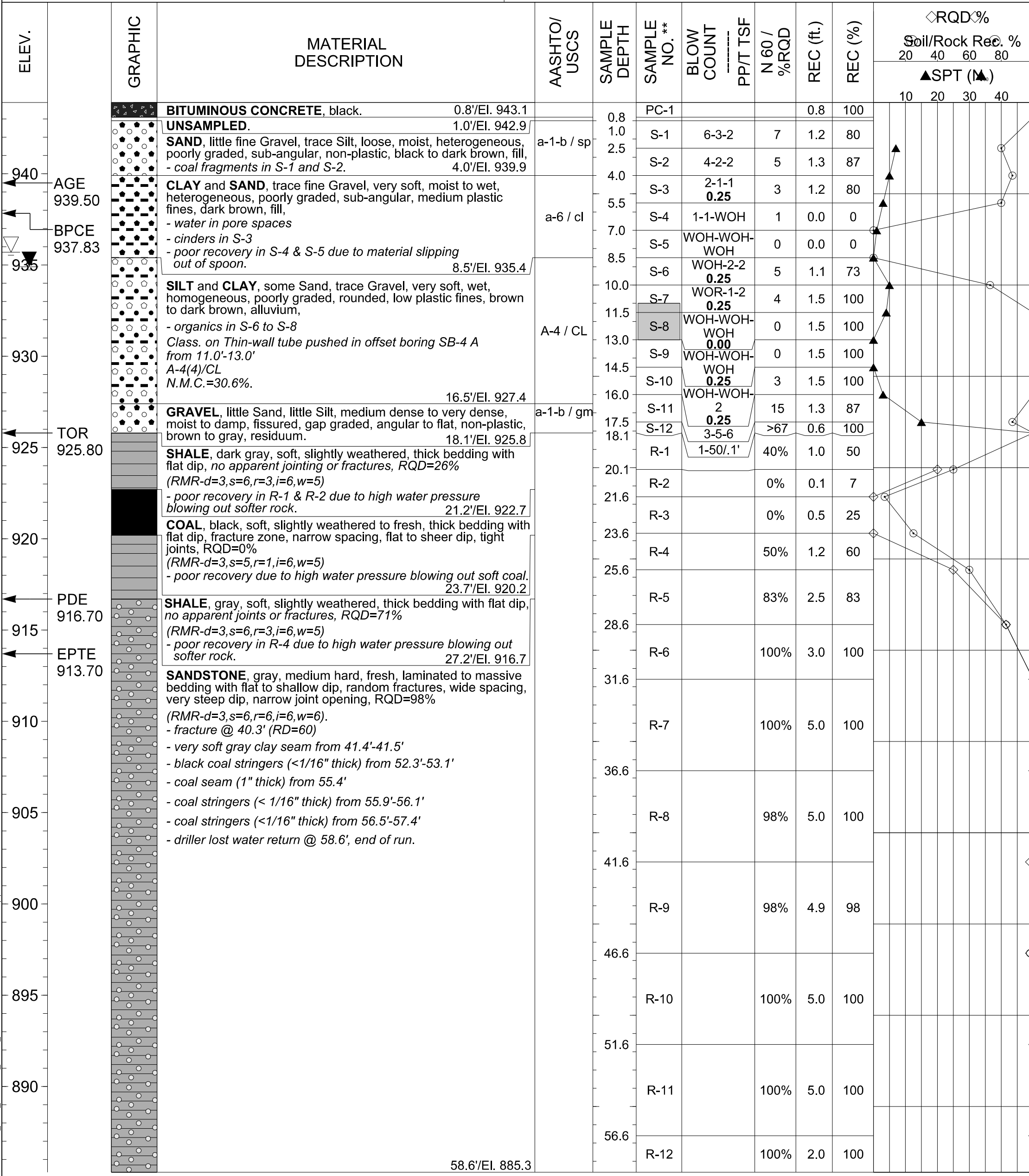
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
WESTMORELAND COUNTY
EAST HILLIS STREET
EAST HILLIS STREET (T-184)
STATION 4+44.00
OVER JACKS RUN
SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
SPREAD BOX BEAM BRIDGE
STRUCTURE BORINGS

1-21-2020

SHEET 41 OF 43

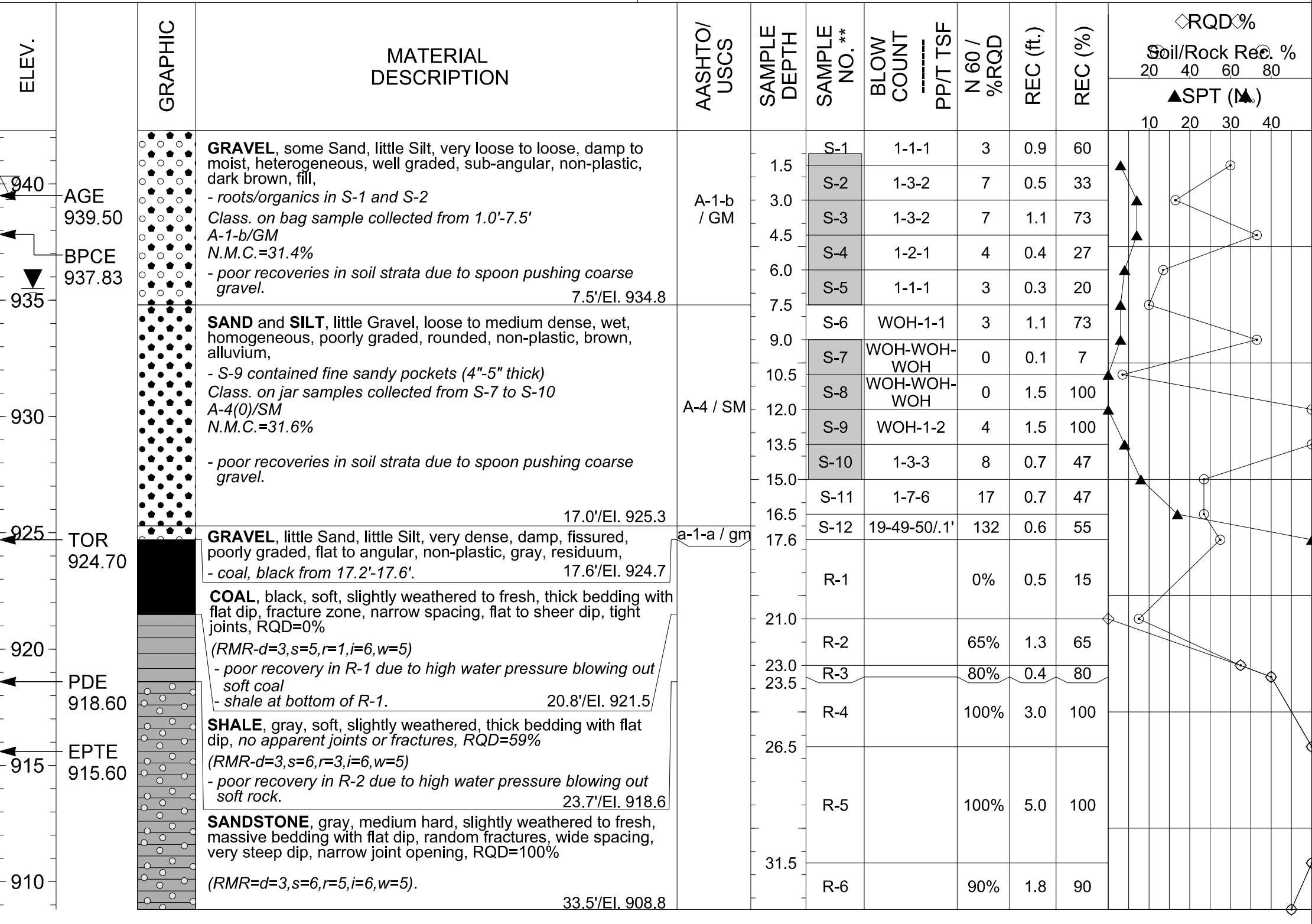
L - 45

LOG 1 OF 1
ABUTMENT 2, WING C
 BORING NUMBER: **SB-4** BORING LOCATION: STATION: 4+71.4 OFFSET: 8.7 FT. LT.
 START: 06/29/2017 9:30 AM HAMMER: AUTOMATIC
 FINISH: 06/29/2017 2:00 PM EFFICIENCY: 0.8 Era
 DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 45 TRACK MOUNT
 SIZE OF CORE: 2.000 IN. VERTICAL SCALE: 0 FT. 5 FT. TOP OF BORING ELEVATION: 943.9 FT.
 DRILLING INSPECTOR: MICHAEL HAENDLER
 DRILLER & DRILLING COMPANY: S. KELLEY ARMSTRONG DRILLING, INC.
 0 HR. READING - ELAPSED TIME: El. 935.7 ft. - 0.0 hr.
 24 HR. READING - ELAPSED TIME: El. 934.9 ft. - 96.5 hr.



**SAMPLE NO. shading indicates lab testing performed.

LOG 1 OF 1
ABUTMENT 2, WING D
 BORING NUMBER: **SB-3** BORING LOCATION: STATION: 4+68.8 OFFSET: 17.3 FT. RT.
 START: 06/30/2017 8:20 AM HAMMER: AUTOMATIC
 FINISH: 06/30/2017 11:00 AM EFFICIENCY: 0.8 Era
 DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, CME 45 TRACK MOUNT
 SIZE OF CORE: 2.000 IN. VERTICAL SCALE: 0 FT. 5 FT. TOP OF BORING ELEVATION: 942.3 FT.
 DRILLING INSPECTOR: MICHAEL HAENDLER
 DRILLER & DRILLING COMPANY: S. KELLEY ARMSTRONG DRILLING, INC.
 0 HR. READING - ELAPSED TIME: El. 939.5 ft. - 0.0 hr.
 24 HR. READING - ELAPSED TIME: El. 935.5 ft. - 74.0 hr.



**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.
 FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.
 THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BPCE BOTTOM OF PILE CAP ELEVATION IN FEET
- AGE ADJACENT GROUND ELEVATION IN FEET
- TOR TOP OF ROCK ELEVATION IN FEET
- PDE PREDRILL ELEVATION IN FEET
- EPTE ESTIMATED PILE TIP ELEVATION IN FEET

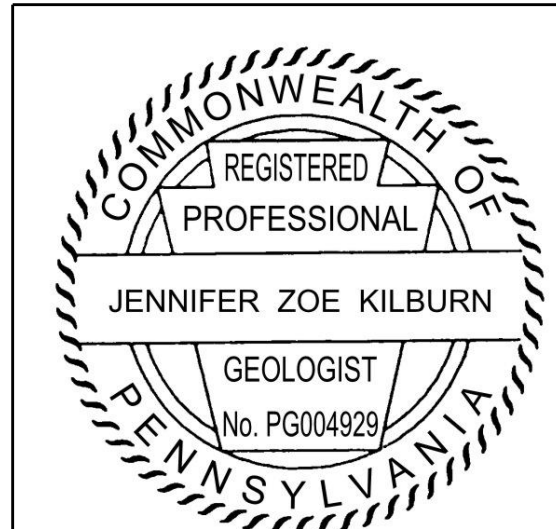
THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
JZK

ARMSTRONG DRILLING, INC.
 DRILLER
 NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
 CONSULTANT

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

WESTMORELAND COUNTY
 EAST HILLIS STREET
 EAST HILLIS STREET (T-184)
 STATION 4+44.00
 OVER JACKS RUN
 SINGLE SPAN COMPOSITE PRESTRESSED CONCRETE
 SPREAD BOX BEAM BRIDGE
 STRUCTURE BORINGS



1-21-2020

SHEET 42 OF 43

L - 45

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BPCE BOTTOM OF PILE CAP ELEVATION IN FEET
- AGE ADJACENT GROUND ELEVATION IN FEET
- TOR TOP OF ROCK ELEVATION IN FEET
- PDE PREDRILL ELEVATION IN FEET
- EPT EPT

LABORATORY TEST SUMMARY - SOILS

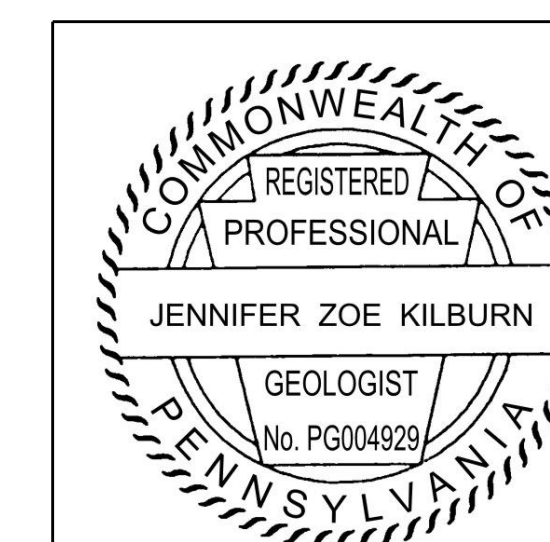
BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	NATURAL MOISTURE %	% GRAIN SIZE DISTRIBUTION (AASHTO)							CLASSIFICATION		PLASTICITY PARAMETERS			MOISTURE DENSITY		CBR	
					GRAVEL %	SAND %	COARSE SAND %	FINE SAND %	FINES %	SILT %	CLAY %	AASHTO	USCS	S.G.	LIQUID LIMIT	PLASTIC LIMIT	P. I.	MAX. DRY DENSITY (PCF)		OPTIMUM MOISTURE %
RB-1	3+55.2 10.3 ft. RT.	S-3 to 4	3.6 to 6.6	18.1	15.4	20.5	12.3	8.2	64.1	45.0	19.1	A-6	CL		38	25	13			
RB-2	5+95.0 8.5 ft. RT.	S-2 to 4	2.5 to 7.0	25.1	36.2	29.6	12.8	16.8	34.2	29.3	4.9	A-2-4	SC-SM	2.52	30	23	7			
RB-2_2A	5+95.4 11.8 ft. RT.	BG-1 to 3	2.5 to 7.0															108.6	13.1	30
SB-1	4+19.5 5.6 ft. RT.	S-2 to 4	2.5 to 7.0	10.0	48.5	34.7	18.9	15.8	16.8	16.3	0.5	A-1-b	SM		NP	NP	NP			
SB-2A	4+18.0 22 ft. LT.	TW-1	7.0 to 9.0	27.3	1.1	14.7	1.0	13.7	84.2	73.6	10.6	A-6	CL	2.68	34	22	12			
SB-3	4+68.8 17.3 ft. RT.	BG-1	1.0 to 7.5	31.4	57.6	24.9	12.4	12.5	17.5	15.2	2.3	A-1-b	GM		NP	NP	NP			
SB-3	4+68.8 17.3 ft. RT.	S-7 to 10	9.0 to 15.0	31.6	12.5	51.9	7.3	44.6	35.6	30.9	4.7	A-4	SM		NP	NP	NP			
SB-4A	4+75.1 11 ft. LT.	TW-1	11.0 to 13.0	30.6	0.8	27.9	1.4	26.5	71.3	58.4	12.9	A-4	CL	2.70	28	20	8			

LABORATORY TEST SUMMARY - ROCK CORE

BORING NUMBER	STATION & OFFSET	SAMPLE #	TEST DEPTH (FT.)	TEST	STRENGTH	JAR SLAKE TEST PERFORMED?	SLAKE DURABILITY INDEX & TYPE	ROCK RECOVERY %	RQD %	BEDROCK LITHOLOGY	STRATIGRAPHIC UNIT
SB-1	4+19.5 5.6 ft. RT.	R-1	10.5 to 13.0	UNCONFINED COMPRESSIVE TEST	11722.0 PSI / 844.0 TSF	NO		100	52	SANDSTONE	FREEPORT FORMATION
SB-1	4+19.5 5.6 ft. RT.	R-6	28.3 to 31.0	POINT LOAD TEST	1543.9 PSI / 111.2 TSF	SLAKE LEVEL 3		94	94	SHALE	FREEPORT FORMATION
SB-1	4+19.5 5.6 ft. RT.	R-6	31.0 to 36.8	UNCONFINED COMPRESSIVE TEST	26446.0 PSI / 1,904.1 TSF	NO		94	94	SANDSTONE	FREEPORT FORMATION
SB-2	4+16.1 22.2 ft. LT.	R-1	11.6 to 13.6	UNCONFINED COMPRESSIVE TEST	11571.0 PSI / 833.1 TSF	NO		100	65	SANDSTONE	FREEPORT FORMATION
SB-2	4+16.1 22.2 ft. LT.	R-4	23.7 to 26.5	UNCONFINED COMPRESSIVE TEST	1656.0 PSI / 119.2 TSF	NO		100	28	SHALE	FREEPORT FORMATION
SB-2	4+16.1 22.2 ft. LT.	R-6	30.4 to 31.5	POINT LOAD TEST	3901.6 PSI / 280.9 TSF	NO		92	72	SANDSTONE	FREEPORT FORMATION
SB-3	4+68.8 17.3 ft. RT.	R-2	21.0 to 23.0	POINT LOAD TEST	2202.5 PSI / 158.6 TSF	SLAKE LEVEL 2		65	65	SHALE	FREEPORT FORMATION
SB-4	4+71.4 8.7 ft. LT.	R-4	23.6 to 27.2	POINT LOAD TEST	1410.1 PSI / 101.5 TSF	SLAKE LEVEL 3		60	50	COAL	FREEPORT FORMATION
SB-4	4+71.4 8.7 ft. LT.	R-5	27.5 to 30.0	UNCONFINED COMPRESSIVE TEST	3322.0 PSI / 239.2 TSF	NO		83	83	SANDSTONE	FREEPORT FORMATION

ARMSTRONG DRILLING, INC.
DRILLER
NAVARRO & WRIGHT CONSULTING ENGINEERS, INC.
CONSULTANT

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