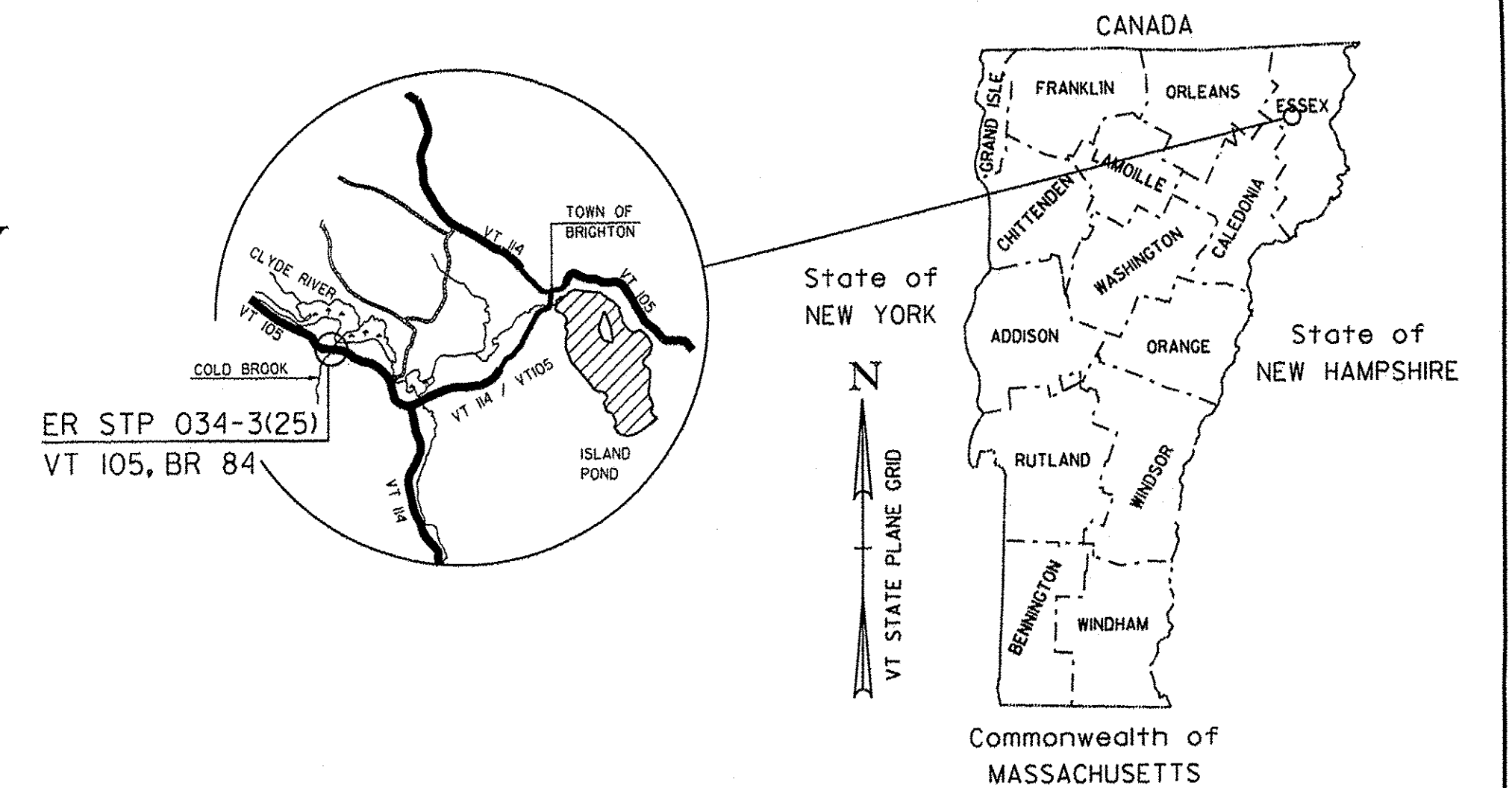


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT BRIDGE PROJECT TOWN OF BRIGHTON, ESSEX COUNTY ROUTE NO : VT 105 (MINOR ARTERIAL) BRIDGE 84

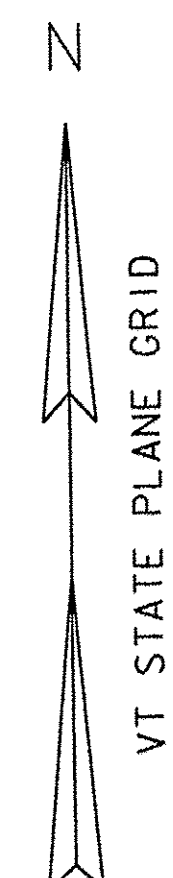
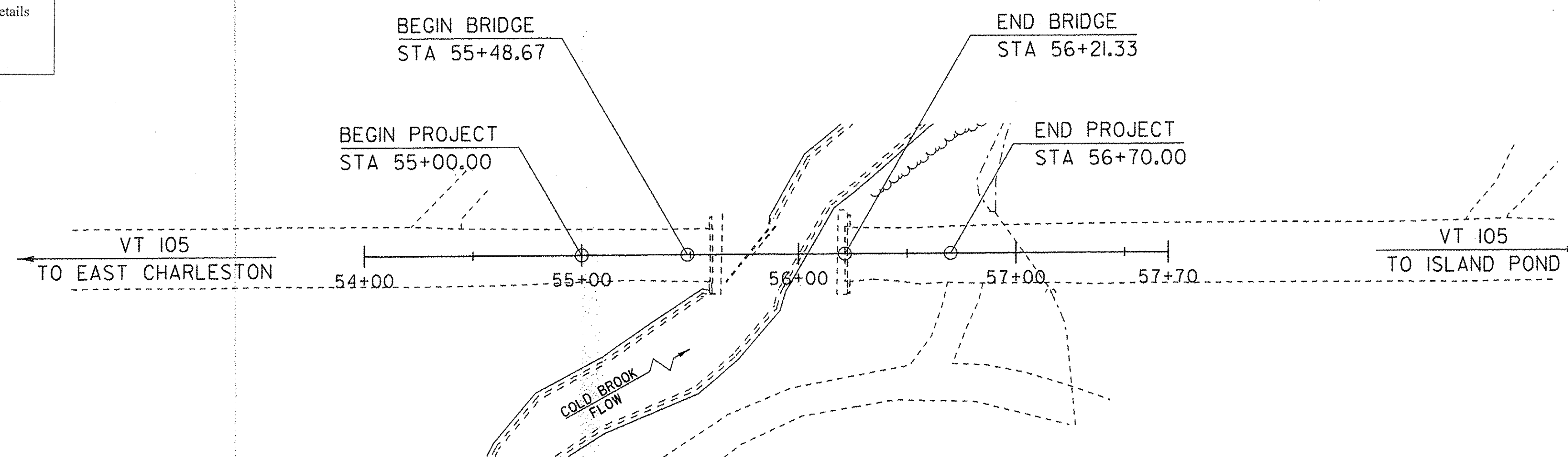


PROJECT LOCATION: BEGINNING AT A POINT ON VT. ROUTE 105 APPROXIMATELY 1.058 MILES SOUTH EASTERLY OF THE CHARLESTON / BRIGHTON TOWN LINE AND EXTENDING EASTERLY 0.031 MILES.

PROJECT DESCRIPTION: REPLACEMENT OF BRIDGE 84 WITH A NEW CONCRETE STRUCTURE ON NEW ABUTMENTS, INCLUDING RELATED APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 72.66 FEET
 LENGTH OF ROADWAY : 97.34 FEET
 LENGTH OF PROJECT : 170.00 FEET

RECORD PLANS	
CONTRACTOR:	J. A. MCDONALD INC. - LYNDON CENTER, VT
RESIDENT ENGINEER:	DOUG BUMPS
CONSTRUCTION BEGAN:	JUNE 28, 2013
CONSTRUCTION COMPLETE:	NOVEMBER 11, 2013
RECORD PLANS BY:	DOUG BUMPS & CRAIG PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY <i>Doug Bumps</i>	RESIDENT ENGINEER
DATE <u>4/3/14</u>	
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.	



QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
 SURVEYED DATE : 10/14/11

DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83 (07)

SCALE 1" = 40'-0"

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED <i>Richard J. Farnsworth</i>	DATE <u>9-12-13</u>
PROJECT MANAGER : K. HIGGINS	
PROJECT NAME : BRIGHTON	
PROJECT NUMBER : ER STP 034-3(25)	
SHEET 1 OF 36 SHEETS	

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

INDEX OF SHEETS						FINAL HYDRAULIC REPORT																																																																																																			
PLAN SHEETS						STANDARDS LIST						HYDROLOGIC DATA						PROPOSED STRUCTURE																																																																																							
1	TITLE SHEET	E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004	<p>HYDROLOGIC DATA Date: March 2012</p> <p>DRAINAGE AREA : 5.0 sq. mi.</p> <p>CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested land cover</p> <p>STREAM CHARACTERISTICS : Sinuous, alluvial, bend coming into the bridge</p> <p>NATURE OF STREAMBED : Sand, gravel and cobbles</p> <p>PEAK FLOW DATA</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>Q 2.33 = 190 cfs</td> <td>Q 50 = 675 cfs</td> </tr> <tr> <td>Q 10 = 420 cfs</td> <td>Q 100 = 825 cfs</td> </tr> <tr> <td>Q 25 = 560 cfs</td> <td>Q 500 = 1150 cfs</td> </tr> </table> <p>DATE OF FLOOD OF RECORD : Unknown</p> <p>ESTIMATED DISCHARGE : Unknown</p> <p>WATER SURFACE ELEV. : Unknown</p> <p>NATURAL STREAM VELOCITY : @ Q50 = 9.4 fps</p> <p>ICE CONDITIONS : Moderate</p> <p>DEBRIS : Moderate</p> <p>DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes</p> <p>IS ORDINARY RISE RAPID? Yes</p> <p>IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No</p> <p>IF YES, DESCRIBE:</p> <p>WATERSHED STORAGE: 2% HEADWATERS: X</p> <p>UNIFORM: _____</p> <p>IMMEDIATELY ABOVE SITE: _____</p> <p>EXISTING STRUCTURE INFORMATION</p> <p>STRUCTURE TYPE: Single span concrete slab bridge</p> <p>YEAR BUILT: Built 1928, reconstructed 1972</p> <p>CLEAR SPAN(NORMAL TO STREAM): Approximately 20' *</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED: Approximately 3.5' *</p> <p>WATERWAY OF FULL OPENING: Unknown *</p> <p>DISPOSITION OF STRUCTURE: It has already been removed.</p> <p>TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>Q2.33 = *</td> <td>VELOCITY = *</td> </tr> <tr> <td>Q10 = _____</td> <td>" _____</td> </tr> <tr> <td>Q25 = _____</td> <td>" _____</td> </tr> <tr> <td>Q50 = _____</td> <td>" _____</td> </tr> <tr> <td>Q100 = _____</td> <td>" _____</td> </tr> </table> <p>LONG TERM STREAMBED CHANGES: Unknown</p> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: *</p> <p>FREQUENCY: *</p> <p>RELIEF ELEVATION: 1173.5'</p> <p>DISCHARGE OVER ROAD @Q100: *</p> <p>UPSTREAM STRUCTURE</p> <p>TOWN: None DISTANCE: _____</p> <p>HIGHWAY #: _____ STRUCTURE #: _____</p> <p>CLEAR SPAN: _____ CLEAR HEIGHT: _____</p> <p>YEAR BUILT: _____ FULL WATERWAY: _____</p> <p>STRUCTURE TYPE: _____</p> <p>DOWNSTREAM STRUCTURE</p> <p>TOWN: N.A. - confluence with Clyde River DISTANCE: _____</p> <p>HIGHWAY #: _____ STRUCTURE #: _____</p> <p>CLEAR SPAN: _____ CLEAR HEIGHT: _____</p> <p>YEAR BUILT: _____ FULL WATERWAY: _____</p> <p>STRUCTURE TYPE: _____</p> <p>STRUCTURES DETAILS</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>SD-501.00</td> <td>CONCRETE DETAILS AND NOTES</td> <td>05-07-2010</td> </tr> <tr> <td>SD-502.00</td> <td>CONCRETE DETAILS AND NOTES</td> <td>06-04-2010</td> </tr> <tr> <td>SD-516.10</td> <td>BRIDGE JOINT ASPHALTIC PLUG</td> <td>05-07-2010</td> </tr> </table>						Q 2.33 = 190 cfs	Q 50 = 675 cfs	Q 10 = 420 cfs	Q 100 = 825 cfs	Q 25 = 560 cfs	Q 500 = 1150 cfs	Q2.33 = *	VELOCITY = *	Q10 = _____	" _____	Q25 = _____	" _____	Q50 = _____	" _____	Q100 = _____	" _____	SD-501.00	CONCRETE DETAILS AND NOTES	05-07-2010	SD-502.00	CONCRETE DETAILS AND NOTES	06-04-2010	SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	05-07-2010	<p>PROPOSED STRUCTURE</p> <p>STRUCTURE TYPE: Single span prestressed concrete beam bridge</p> <p>CLEAR SPAN(NORMAL TO STREAM): 54' max., 30' min. effective</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED: 6.5'</p> <p>WATERWAY OF FULL OPENING: 180 sq. ft.</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>Q2.33 = 1168.6'</td> <td>VELOCITY = 5.3 fps</td> </tr> <tr> <td>Q10 = 1170.0'</td> <td>" 7.4 fps</td> </tr> <tr> <td>Q25 = 1170.7'</td> <td>" 8.4 fps</td> </tr> <tr> <td>Q50 = 1171.2'</td> <td>" 9.1 fps</td> </tr> <tr> <td>Q100 = 1171.8'</td> <td>" 10.0 fps</td> </tr> </table> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: No</p> <p>FREQUENCY: Above Q100</p> <p>RELIEF ELEVATION: 1173.5'</p> <p>DISCHARGE OVER ROAD @Q100: None</p> <p>AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 1172.3'</p> <p>VERTICAL CLEARANCE: @ Q50 = 1.1'</p> <p>SCOUR: 4' of contraction scour up to Q500.</p> <p>REQUIRED CHANNEL PROTECTION: Stone Fill, Type III</p> <p>PERMIT INFORMATION</p> <p>AVERAGE DAILY FLOW: 10 cfs DEPTH OR ELEVATION:</p> <p>ORDINARY LOW WATER: 5 cfs Depth = 0.5'</p> <p>ORDINARY HIGH WATER: 80 cfs Depth = 2.0'</p> <p>TEMPORARY BRIDGE REQUIREMENTS</p> <p>STRUCTURE TYPE: No temporary bridge required.</p> <p>CLEAR SPAN (NORMAL TO STREAM): _____</p> <p>VERTICAL CLEARANCE ABOVE STREAMBED: _____</p> <p>WATERWAY AREA OF FULL OPENING: _____</p> <p>ADDITIONAL INFORMATION</p> <p>* The existing bridge was destroyed in a flood and removed. We do not have accurate information on that bridge, so no hydraulics was done for it. The new bridge is longer and higher and has a larger waterway area than the previous bridge, so it will be better hydraulically.</p> <p>TRAFFIC MAINTENANCE NOTES</p> <ol style="list-style-type: none"> MAINTAIN TRAFFIC ON AN OFF SITE DETOUR. TRAFFIC SIGNALS ARE NOT NECESSARY. SIDEWALKS ARE NOT NECESSARY <p>DESIGN VALUES</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>1. DESIGN LIVE LOAD</td> <td>HL-93</td> </tr> <tr> <td>2. FUTURE PAVEMENT</td> <td>dp: 3.0 INCH</td> </tr> <tr> <td>3. DESIGN SPAN</td> <td>L: 70.00 FT</td> </tr> <tr> <td>4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)</td> <td>Δ: 3.86 INCH</td> </tr> <tr> <td>5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX)</td> <td>f_y: 270 KSI</td> </tr> <tr> <td>6. PRESTRESSED CONCRETE STRENGTH</td> <td>f'_c: 10.0 KSI</td> </tr> <tr> <td>7. 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GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE 2007 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THEIR LATEST REVISIONS.
2. ALL PRECAST CONCRETE ELEMENTS TO BE FABRICATED TO THE SPECIFIED DIMENSIONS WITHIN THE TOLERANCES DICTATED IN THE PRECAST/PRESTRESSED CONCRETE INSTITUTE TOLERANCE MANUAL FOR PRECAST AND PRESTRESSED CONCRETE CONSTRUCTION, MNL 135-00, AND ITS LATEST REVISIONS.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE.
4. NO ADJUSTMENTS TO THE BITUMINOUS WEARING SURFACE ON THE BRIDGE SHALL BE MADE TO ACCOUNT FOR THE DIFFERENCE BETWEEN BEAM CAMBER AND THE THEORETICAL ROADWAY PROFILE. THE WEARING SURFACES SHALL BE SHIMMED TRANSVERSELY AS NECESSARY TO ACCOUNT FOR POTENTIAL DIFFERENTIAL CAMBER OF THE ADJACENT BEAMS.
5. THERE ARE AERIAL ELECTRIC AND TELEPHONE LINES THAT RUN PARALLEL TO VT 105 ON THE NORTH SIDE OF THE PROJECT. NO PROVISION HAS BEEN MADE TO RELOCATE THESE LINES. THE CONTRACTOR SHALL WORK AROUND AND PROTECT THESE LINES. SEE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
6. NO SUBSTITUTION FOR PRECAST CONCRETE WILL BE PERMITTED.

TRAFFIC CONTROL

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING THE LOCAL TRAFFIC CONTROL PACKAGE IDENTIFYING THE CONSTRUCTION PROJECT BEFORE, DURING, AND AFTER THE BRIDGE CLOSURE PERIOD. THE CONTRACTOR SHALL SUBMIT A DETAILED TRAFFIC CONTROL PLAN TO THE RESIDENT ENGINEER FOR ALL STAGES OF CONSTRUCTION, FOR APPROVAL PER SUBSECTION 105.03. ALL COSTS SHALL BE INCLUDED IN ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE). SEE SPECIAL PROVISIONS.
8. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN. FOR ADDITIONAL SIGNING INSTRUCTIONS SEE THE E SERIES OF THE STANDARDS.
9. ALL ITEMS REQUIRED TO IMPLEMENT THE CONTRACTOR'S TRAFFIC CONTROL PLAN WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCLUDED IN THE BID PRICE FOR ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).

EARTHWORK

10. REMOVAL OF THE EXISTING, FAILED STRUCTURE SHALL BE UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE". THIS WORK SHALL INCLUDE REMOVAL OF ANY PORTIONS OF THE EXISTING ABUTMENTS THAT FALL OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION.
11. EXCAVATION OF SOILS TO THE LIMITS SHOWN ON THE TYPICAL ABUTMENT SECTION SHALL BE PAID FOR UNDER ITEM 204.25, "STRUCTURE EXCAVATION". ALL NECESSARY EXCAVATION OUTSIDE OF THESE LIMITS SHALL BE PAID FOR UNDER ITEM 203.27, "UNCLASSIFIED CHANNEL EXCAVATION".
12. THE "STONE FILL, TYPE IIF" UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEW BEAMS ARE SET.

CONCRETE

13. ITEM 514.10, "WATER REPELLENT, SILANE", SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE, WITH THE EXCEPTION OF THE BOTTOM OF THE PRECAST NEXT BEAMS BETWEEN THE DRIP NOTCHES.
14. ALL CONCRETE PLACED INTEGRALLY WITH THE SUPERSTRUCTURE SHALL BE ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)". ALL PRECAST SUBSTRUCTURE AND APPROACH SLAB CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION 540 - PRECAST CONCRETE.
15. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE".

-  16. ALL REINFORCING STEEL SHALL MEET THE REQUIREMENTS FOR REINFORCING STEEL, LEVEL 1, EPOXY COATED.

PRECAST ABUTMENTS AND POST-TENSIONING

17. IF VERTICAL CONSTRUCTION JOINTS ARE REQUIRED BY THE CONTRACTOR FOR SHIPMENT OF THE ABUTMENTS, THEN THE SECTIONS SHALL BE KEYED AND MATCH CAST. A JOINT DETAIL SHALL BE SHOWN ON THE FABRICATION DRAWINGS.
18. POST-TENSIONING AND ASSOCIATED ITEMS ARE ONLY REQUIRED IF THE PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT. ANY POST-TENSIONING STRANDS AND CONDUIT SHALL ADHERE TO THE REQUIREMENTS OF SECTION 510 - PRESTRESSED CONCRETE. GALVANIZED ANCHOR ASSEMBLIES, CONDUIT, AND POST-TENSIONING STRANDS SHALL BE INCLUDED UNDER ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT #1) AND/OR "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)" AS APPROPRIATE. POST-TENSIONING STRANDS SHALL BE COVERED WITH SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITOR GREASE BETWEEN SHEATH AND STRAND) FOR THE LENGTH OF THE STRAND, EXCEPT AT ANCHORAGE LOCATIONS.
19. GALVANIZE ANCHOR ASSEMBLIES AFTER FABRICATION ACCORDING TO AASHTO M232M/M 232.
20. DESIGN VALUES
 - a. CONCRETE COMPRESSIVE STRENGTH: $f_c = 5000$ PSI.
 - b. POST-TENSIONING STRANDS: 0.5 INCH DIAMETER, 270 KSI, LOW RELAXATION 7-WIRE STRANDS.
 - c. ASSUMED MODULUS OF ELASTICITY IS 28,500 KSI.
 - d. THERE SHALL BE 2 STRANDS PER CONDUIT.
 - e. THE JACKING FORCE PER STRAND = 32 KIPS
21. THE CONCRETE FOR THE ABUTMENT #1 AND ABUTMENT #2 PILE CAVITIES SHALL MEET THE REQUIREMENTS OF ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)".
22. THE CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF SUBSECTION 711.01. ALL COSTS ASSOCIATED WITH PLACING THE CORRUGATED STEEL PIPE, SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT #1)" AND ITEM 540.10, "PRECAST CONCRETE STRUCTURE (ABUTMENT #2)".
23. PROPOSED SEQUENCE OF CONSTRUCTION:
 - a. PREPARE AND GRADE FOUNDATION TO REQUIRED ELEVATION.
 - b. DRIVE PILES.
 - c. PLACE PRECAST ABUTMENTS AND INSTALL TRANSVERSE STRANDS (IF MORE THAN ONE UNIT).
 - d. APPLY EPOXY TO MATCH CAST FACES OF VERTICAL CONSTRUCTION JOINT.
 - e. USE A CALIBRATED JACK TO TENSION TO 3 KIPS TO REMOVE SAG IN STRANDS.
 - f. CHECK ALIGNMENT OF PILE CAP ELEMENTS.
 - g. STRESS POST-TENSIONING STRANDS USING A CALIBRATED JACK OPERATED BY QUALIFIED PERSONNEL WHO HAVE PREVIOUS EXPERIENCE IN POST-TENSIONING.
 - h. FILL PILE CAVITIES WITH ITEM 900.608, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, RAPID SET)".
 - i. PLACE PRECAST WINGWALLS AND GROUT SPLICE CONNECTORS.
 - j. BACKFILL MAY BE COMPLETED AFTER SPLICE CONNECTOR GROUT HAS REACHED 85% OF 5,000 PSI.
24. ALTERNATE SEQUENCE OF CONSTRUCTION MAY BE SUBMITTED FOR APPROVAL BY THE PROJECT MANAGER.

NEXT D BEAMS

25. NEXT D BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST (PCINE). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT <http://www.pcine.org>.
26. DESIGN VALUES
 - a. CONCRETE COMPRESSIVE STRENGTH: $f_c = 10,000$ PSI.
 - b. CONCRETE COMPRESSIVE STRENGTH AT RELEASE: $f_{ci} = 8,000$ PSI
 - c. PRESTRESSING STRANDS: 0.6 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS
 - d. ASSUMED MODULUS OF ELASTICITY = 28,500 KSI.
 - e. THE JACKING FORCE PER STRAND = 47 KIPS
 - f. SERVICE LOADS

MEMBER MOMENT	857 K-FT
SUPERIMPOSED DEAD LOAD MOMENT	341 K-FT
LIVE LOAD AND IMPACT MOMENT	1,320 K-FT
DEAD LOAD REACTION	72 KIPS
LIVE LOAD AND IMPACT REACTION	98 KIPS
TOTAL REACTION	170 KIPS
FINAL CAMBER	1 5/16 INCHES
27. ENDS OF FLANGES IN CONTACT WITH GROUT SHALL BE SANDBLASTED PRIOR TO DELIVERY AND POWER WASHED WITH WATER PRIOR TO ERECTION OF THE BEAMS.
28. FILL FLANGE CONNECTION WITH TYPE IV MORTAR ACCORDING TO SECTION 510. MORTAR SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7000 PSI AND SHALL BE EXTENDED WITH AGGREGATE. ALL OTHER MATERIAL PROPERTIES SHALL REMAIN IN ACCORDANCE WITH SUBSECTION 707.03(c). GROUTING SHALL BE PAID FOR UNDER ITEM 510.24, "GROUTING SHEAR KEYS". THE CONTRACTOR SHALL SUBMIT A MIX DESIGN FOR THIS ITEM FOR APPROVAL BY THE PROJECT MANAGER.

29. METHOD OF FORMING FLANGE CONNECTION SHALL BE DETERMINED BY THE CONTRACTOR. THE FORMS SHALL BE REMOVABLE AND ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER. FORM SUPPORTS SHALL NOT PENETRATE THROUGH THE TOP OF POUR UNLESS APPROVED BY THE ENGINEER.
30. THE FABRICATOR MAY ALTER THE DESIGN AS DETAILED IN THESE PLANS TO ACCOMMODATE THEIR SPECIFIC OPERATION. THIS ALTERATION MUST BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET THE ABOVE CRITERIA AND SHALL BE APPROVED BY THE PROJECT MANAGER.
31. PROPOSED SEQUENCE OF CONSTRUCTION
 - a. LAY OUT WORKING LINES THE ENTIRE WIDTH OF THE BRIDGE ALONG CENTERLINE OF BEARING, MEASURED FROM A SINGLE WORKING POINT. THE WORKING LINES SHALL BE BASED ON THE NOMINAL BEAM WIDTHS.
 - b. VERIFY THE BEAM SEAT ELEVATIONS AND TAKE CORRECTIVE ACTION IF NECESSARY.
 - c. INSTALL BEARINGS
 - d. ERECT THE BEAMS TO FIT WITHIN THE WORKING LINES.
 - e. ADJUST FASCIA BEAM TO FIT SNUG AGAINST 1/2" CORK ON INTERIOR OF CHEEK WALL
 - f. CONSTRUCT FORMS FOR THE FLANGE AND CURTAIN WALL CONNECTION POURS.
 - g. GROUT CONNECTIONS BETWEEN BEAM FLANGE AND CURE.
 - h. BACKFILL AND PREPARE GRADE FOR APPROACH SLABS.
 - i. COMPLETE BEAM-END CLOSURE POUR TO BOTTOM OF DECK ALLOWING FOR APPROACH SLAB BRACKET.
 - j. COMPLETE PLACEMENT OF BACKFILL AND PLACE APPROACH SLAB.
 - k. GROUT REBAR DOWELS IN APPROACH SLAB.
 - l. COMPLETE LONGITUDINAL CLOSURE POURS OF APPROACH SLAB.
 - m. COMPLETE BEAM-END CLOSURE POUR TO TOP OF DECK AND APPROACH SLABS.
32. ALTERNATE SEQUENCE OF CONSTRUCTION MAY BE SUBMITTED FOR APPROVAL BY THE PROJECT MANAGER.

H-PILES

33. TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04 (f).
34. THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE ($R_{D(0)}$) OF 286 KIPS, PROVIDED A MINIMUM PENETRATION OF 25 FEET BELOW THE BOTTOM OF PILE CAP HAS BEEN ACHIEVED.
35. A MINIMUM OF THREE DYNAMIC TESTS ARE REQUIRED DURING PILE INSTALLATION. NO LESS THAN ONE DYNAMIC PILE TEST SHALL BE CONDUCTED AT EACH ABUTMENT. PAYMENT IS ITEM 505.45, "DYNAMIC PILE LOADING TEST".
36. THE TOPS OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE TO THE SATISFACTION OF THE ENGINEER HOW THE TOLERANCES WILL BE MET. THESE MEASUREMENTS SHALL BE DEMONSTRATED IN A SUBMITTAL TO BE ACCEPTED BEFORE PILE DRIVING COMMENCES.
37. FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.

MISCELLANEOUS

38. ITEM 520.10, "MEMBRANE WATERPROOFING, SPRAY APPLIED" SHALL BE APPLIED TO THE BRIDGE DECK AS PER THE MANUFACTURER'S INSTRUCTIONS AND EXTEND ONTO THE APPROACH SLABS TWO FEET BEYOND THE BEGIN BRIDGE/END OF BRIDGE.
39. A TEMPORARY BRIDGE IS IN PLACE OVER THE EXISTING, FAILED STRUCTURE. REMOVAL OF THIS TEMPORARY BRIDGE SHALL BE PAID FOR UNDER ITEM 900.645, "SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)". THE TEMPORARY BRIDGE IS THE PROPERTY OF VTRANS AND SHALL BE RETURNED TO THE VTRANS MAINTENANCE FACILITY IN MIDDLES EX, VT. CONTACT BILL SARGENT AT (802) 828-2699 TO MAKE NECESSARY ARRANGEMENTS AS PER THE SPECIAL PROVISIONS.

 REVISED 10-12-12

- REVISED NOTE 16

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

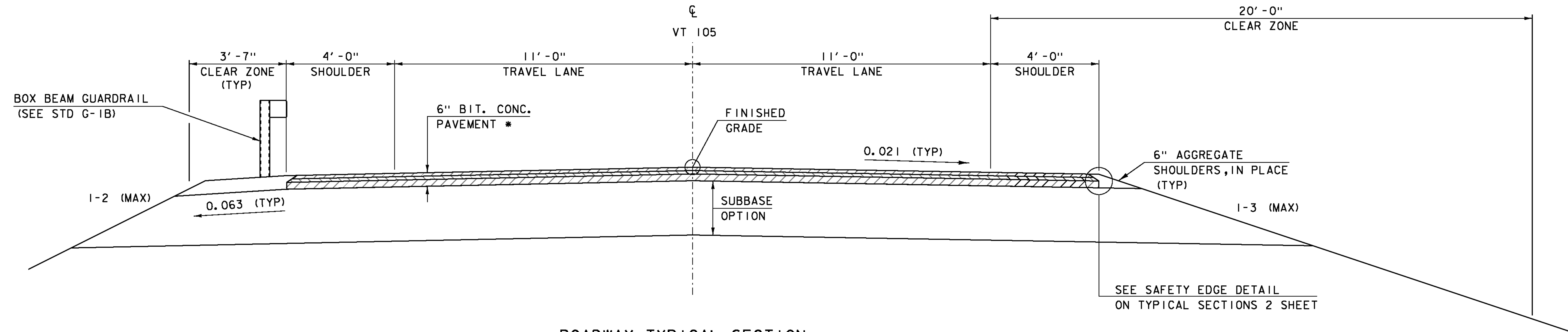
FILE NAME: s11b208gen.dgn	PLOT DATE: 12-OCT-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: W. LAMMER
DESIGNED BY: W. LAMMER	CHECKED BY: J. SALVATORI
GENERAL NOTES	SHEET 3 OF 36

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
						ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
						740				740		LF	4 INCH WHITE LINE	646.20				
						740				740		LF	4 INCH YELLOW LINE	646.21				
								470		470		SY	GEOTEXTILE UNDER STONE FILL	649.31				
							275			275		SY	GEOTEXTILE FOR SILT FENCE	649.51				
							81			81		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61				
							10			10		LB	SEED	651.15				
							100			100		LB	FERTILIZER	651.18				
							1			1		TON	AGRICULTURAL LIMESTONE	651.20				
							1			1		TON	HAY MULCH	651.25				
							75			75		CY	TOPSOIL	651.35				
								120		120		SY	GRUBBING MATERIAL	651.40				
							1			1		LS	EPSC PLAN	652.10				
							40			40		HR	MONITORING EPSC PLAN	652.20				
							1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
							425			425		SY	TEMPORARY EROSION MATTING	653.20				
							60			60		CY	VEHICLE TRACKING PAD	653.35				
							605			605		LF	PROJECT DEMARCATION FENCE	653.55				
						0.66				0.66		SF	TRAFFIC SIGNS, TYPE A	675.20				
						16				16		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
								32		32		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE RAPID SET)(FPQ)	900.608				
								284		284		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT D BEAM)(NEXT 28 D)	900.640				
								1		1		LS	SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES)	900.645				
								1		1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645				
								1		1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE)(N.A.B.I.)	900.650				
								1		1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650				
								1		1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650				
							285			285		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)
 FILE NAME: slb208qs.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: W. LAMMER
 QUANTITY SHEET 2
 PLOT DATE: 18-SEP-2012
 DRAWN BY: W. LAMMER
 CHECKED BY: J. SALVATORI
 SHEET 5 OF 36

* 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
 3" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IIS
 VARIES SUBBASE OPTION



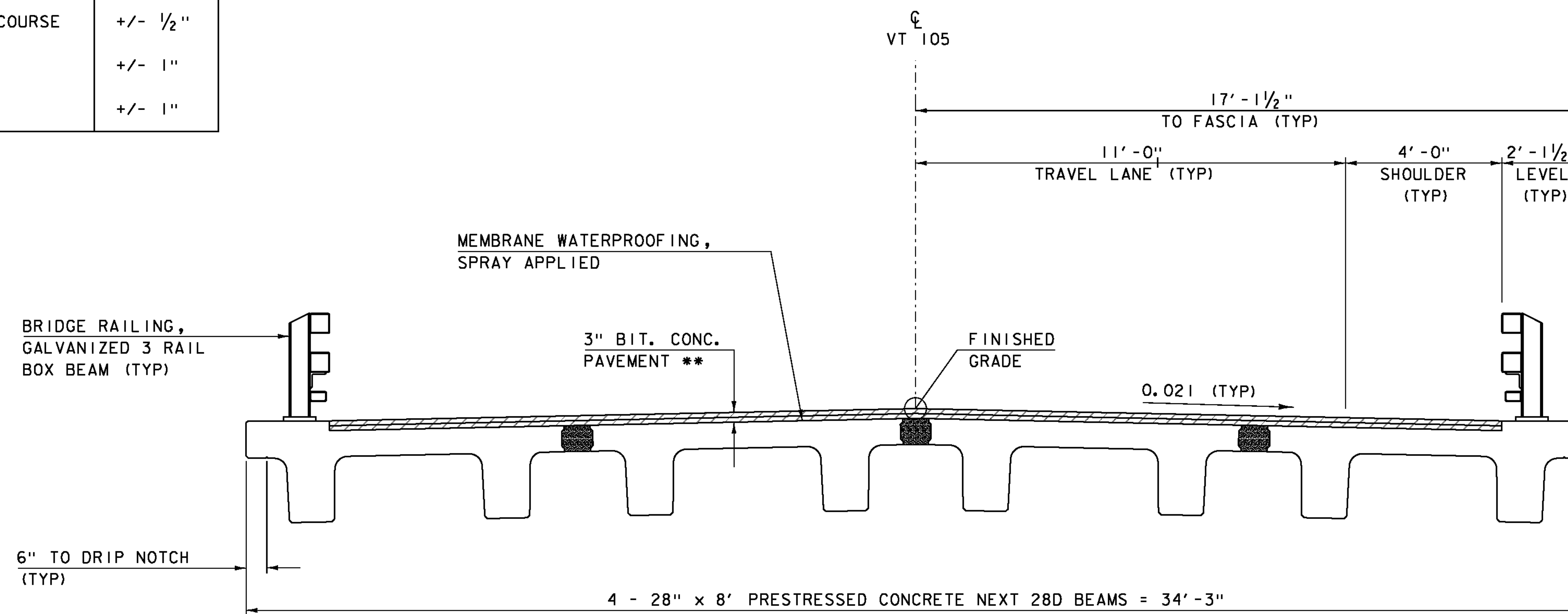
ROADWAY TYPICAL SECTION

SCALE 1/2" = 1'-0"

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"



BRIDGE TYPICAL SECTION

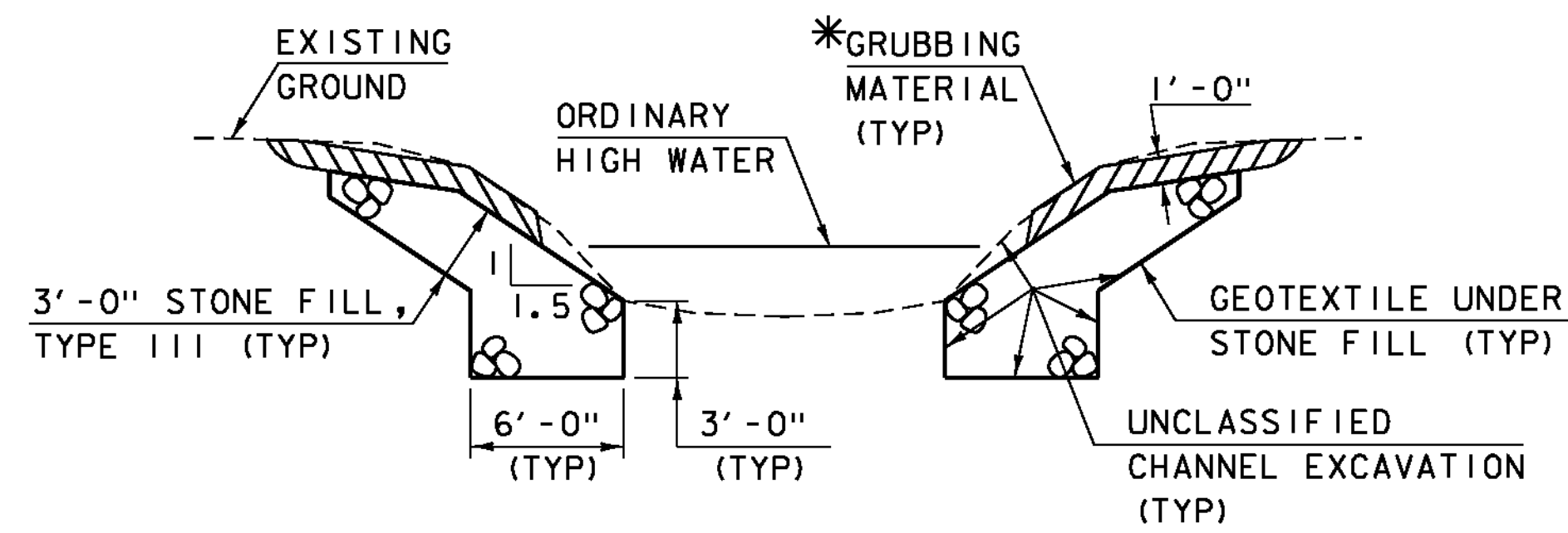
SCALE 1/2" = 1'-0"

** 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS
 1 1/2" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT, TYPE IVS

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)

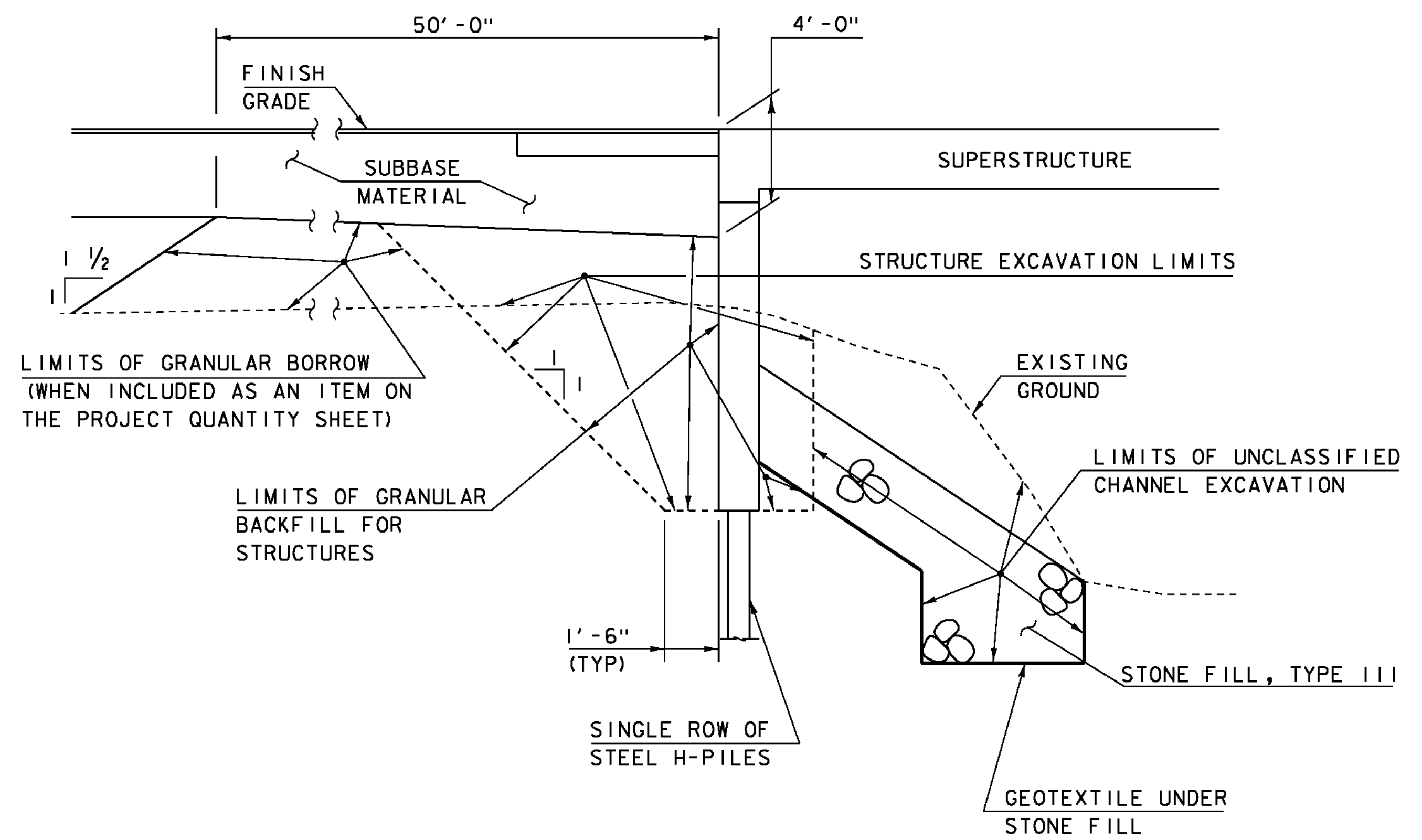
FILE NAME: s11b208typ.dgn
 PROJECT LEADER: K.HIGGINS
 DESIGNED BY: J. SALVATORI
 TYPICAL SECTIONS 1

PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 6 OF 36



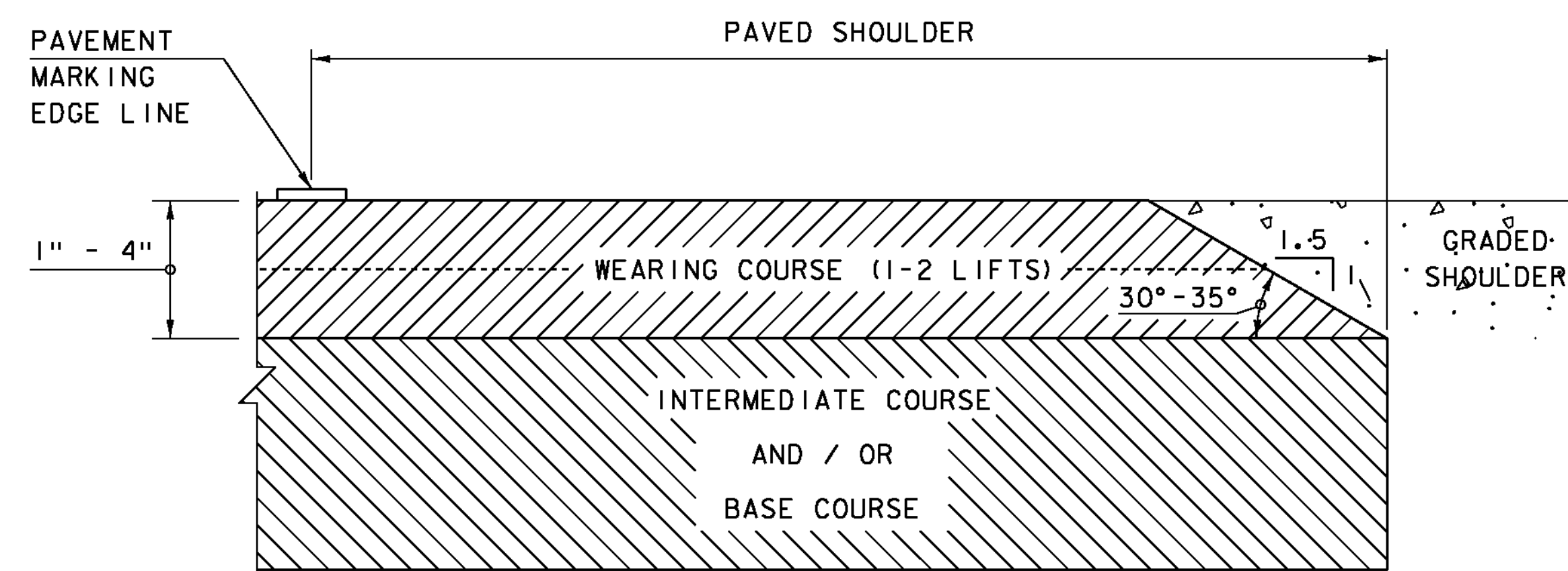
TYPICAL CHANNEL SECTION
NOT TO SCALE

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



TYPICAL INTEGRAL ABUTMENT SECTION
NOT TO SCALE

ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.



SAFETY EDGE DETAIL
NOT TO SCALE

NOTE: LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: s1b208typ.dgn
PROJECT LEADER: K.HIGGINS
DESIGNED BY: J. SALVATORI
TYPICAL SECTIONS 2

PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 7 OF 36

GPS CONTROL POINTS

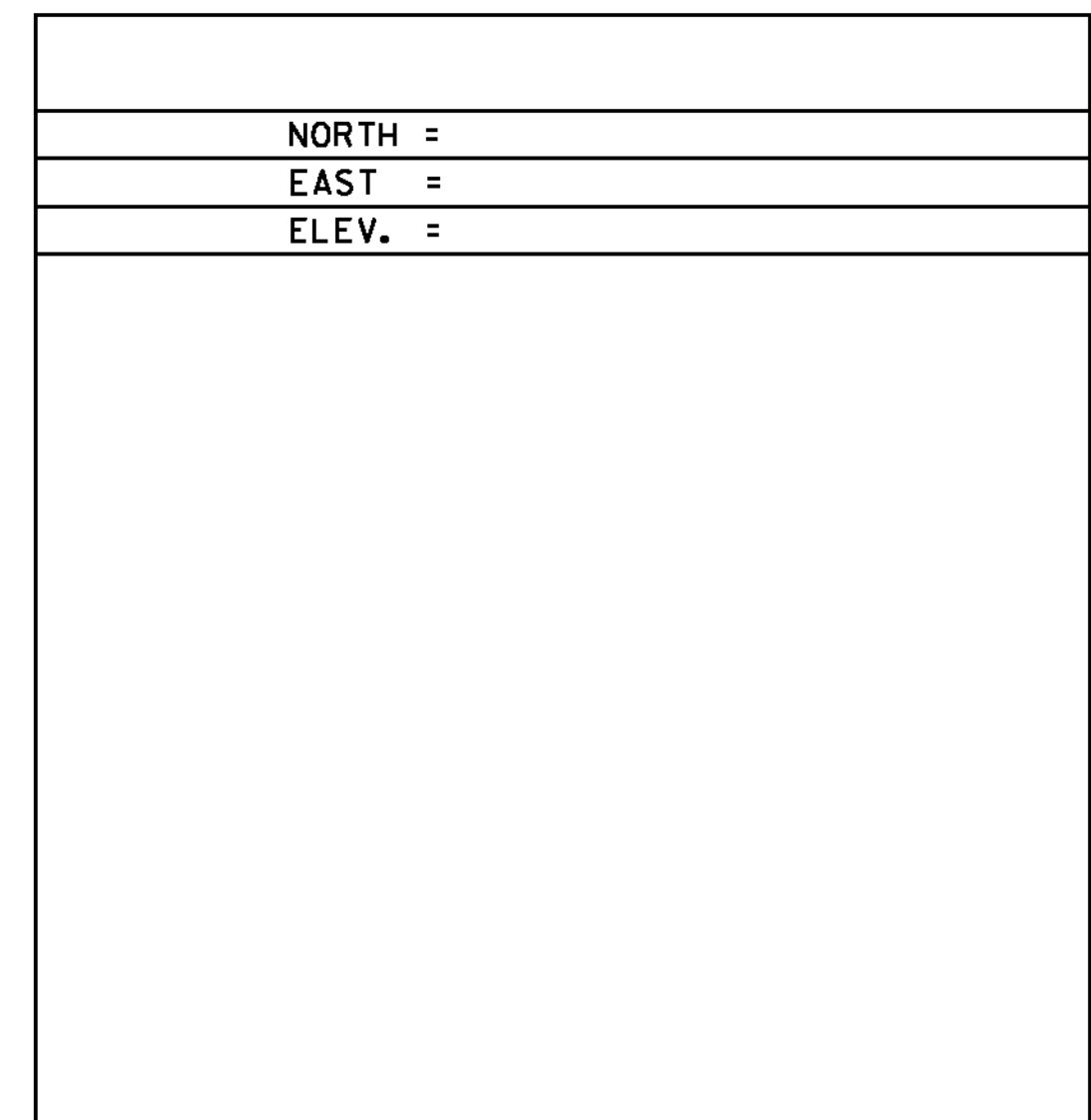
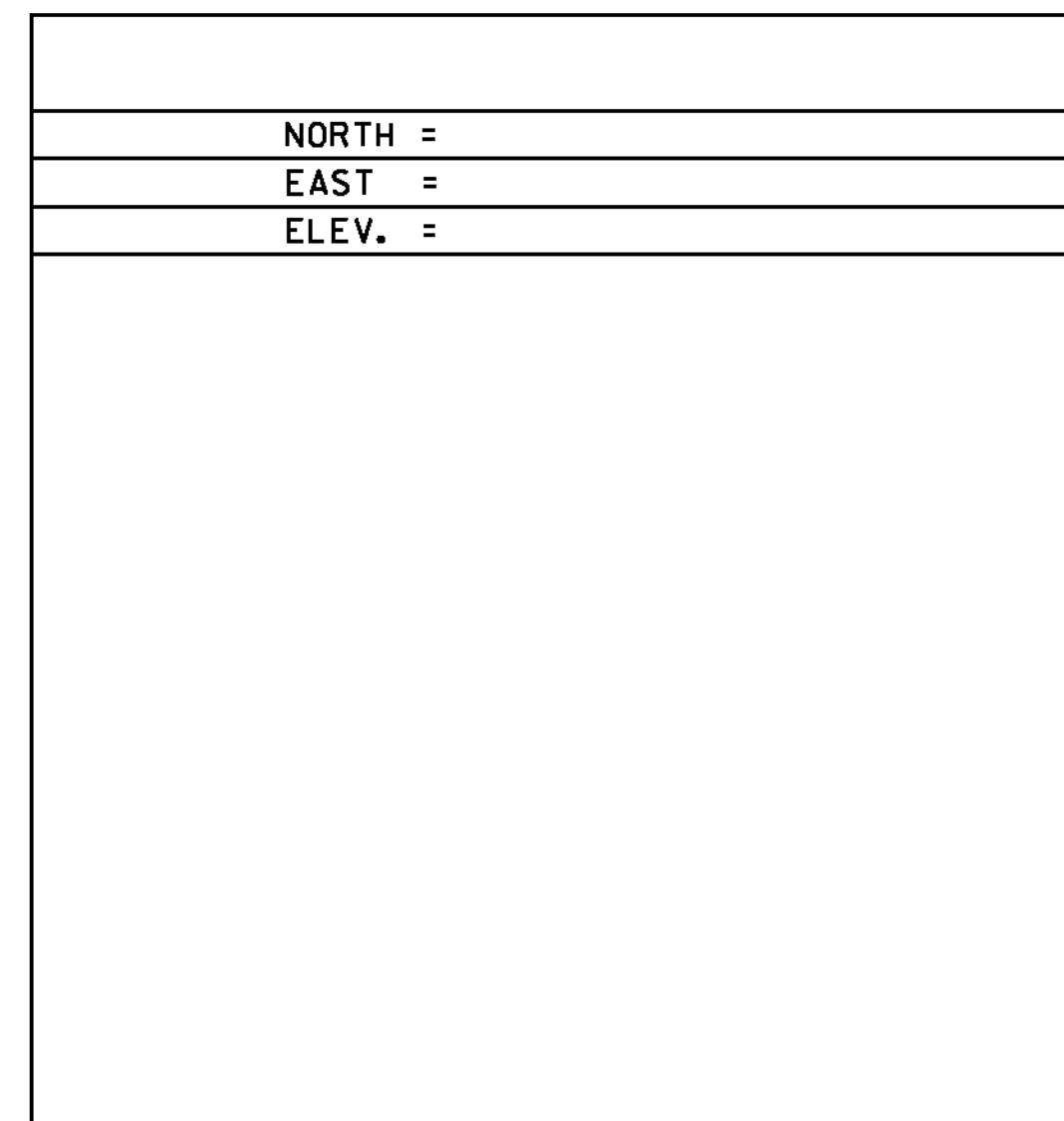
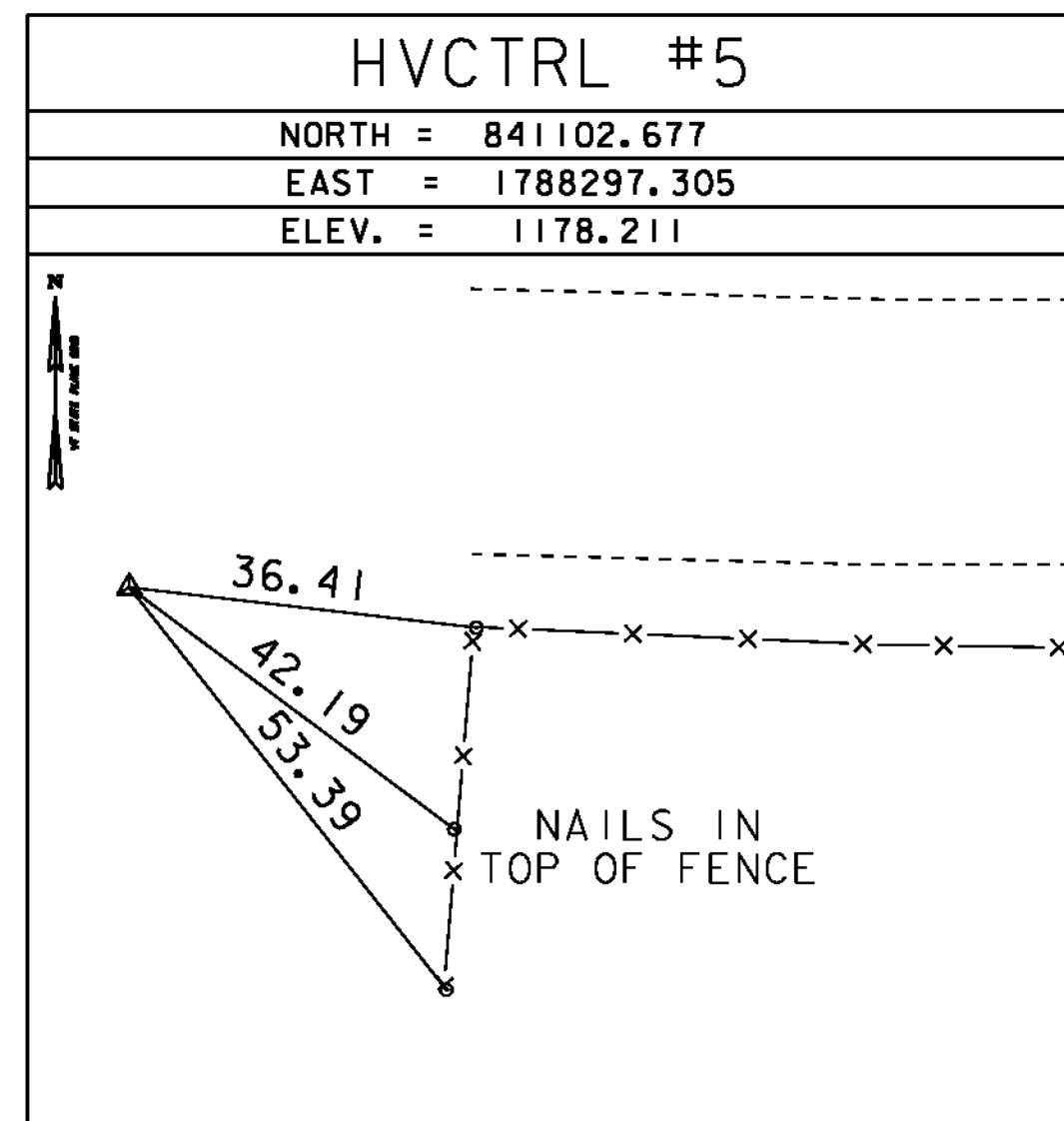
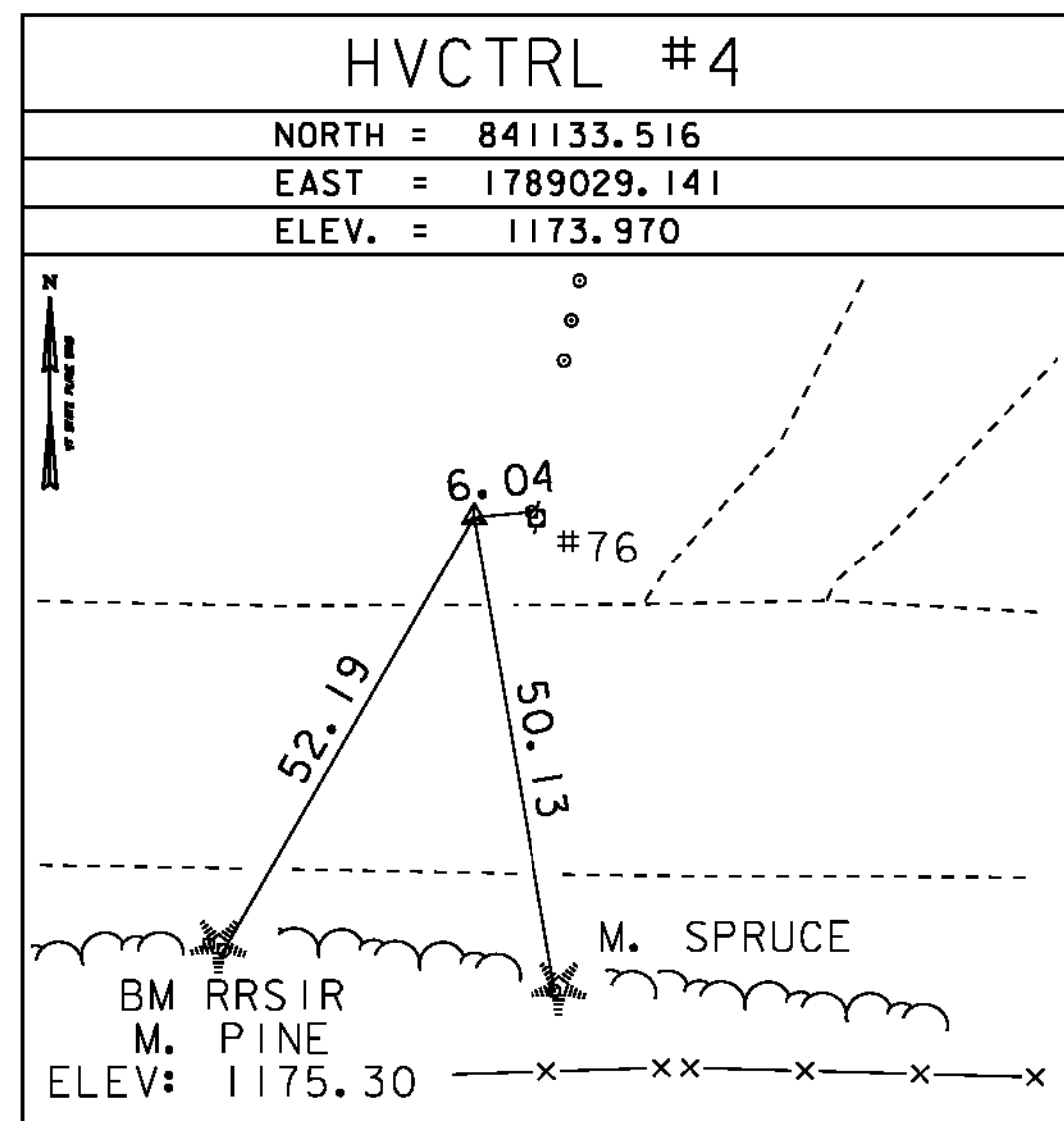
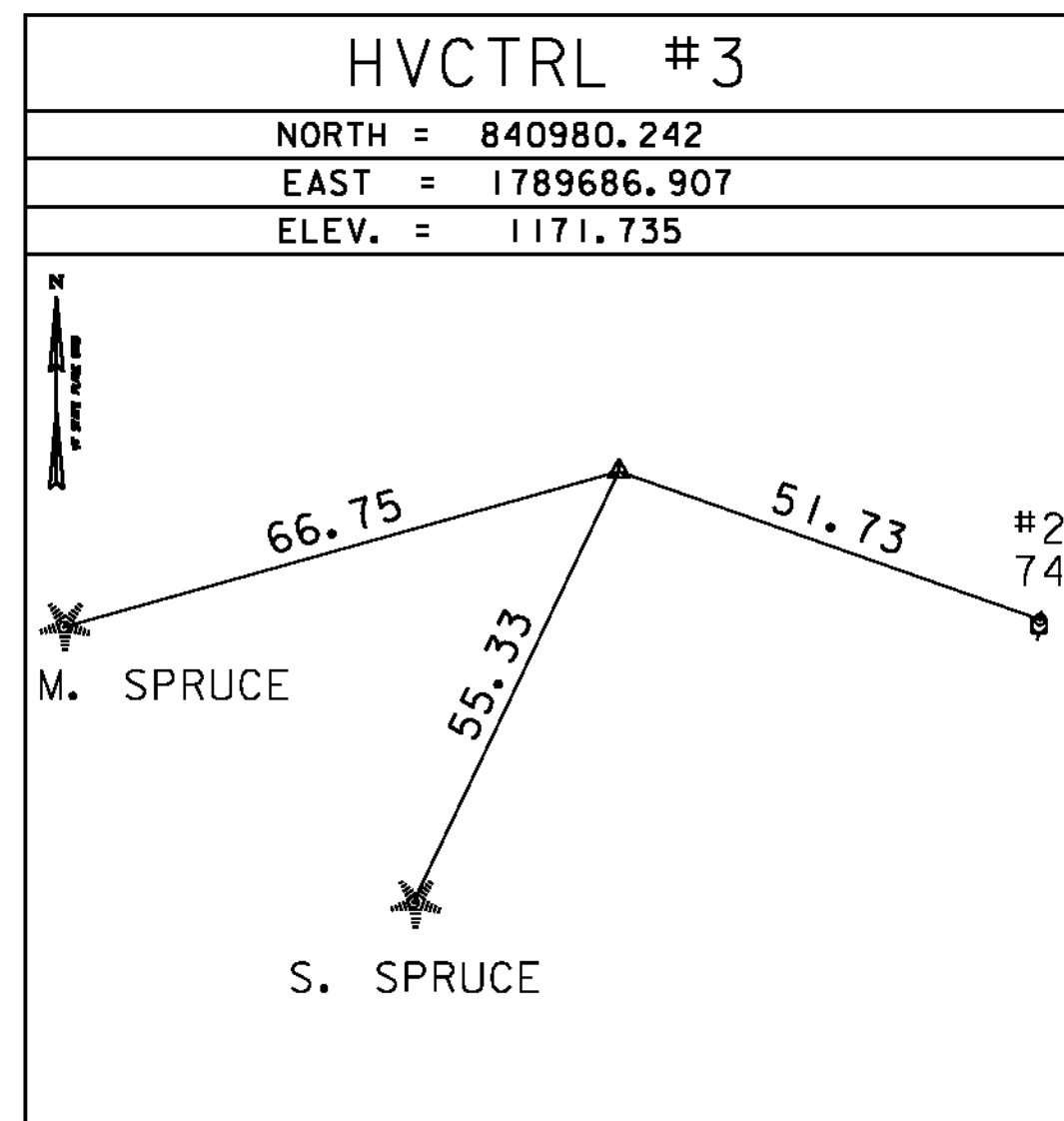
HVCTRL #1
 PORTER AZ MK
 NORTH = 839791.546
 EAST = 1791829.618
 ELEV. = 1189.855

TO REACH FROM THE INTERSECTION OF VT 114 SOUTH AND VT 105, GO NORTHWEST ALONG VT 105 FOR 0.4 MI TO THE SITE OF THE MARK ON THE LEFT. THE MARK IS SET 4" BELOW GROUND SURFACE IN THE TOP OF A 12" DIAMETER CONCRETE MONUMENT. IT IS 22.3' WEST-SOUTHWEST OF AND 3.3' LOWER THE CENTERLINE OF VT 105, 110' NORTH-NORTHWEST OF THE CENTERLINE OF A GRAVEL DRIVE LEADING TO THE GOODHILE RESIDENCE, 41.7' SOUTH OF A METAL ROAD SIGN, 87.6' EAST-NORTHEAST OF A 16" PINE, 154.5' NORTHEAST OF THE NORTH CORNER OF A 2 BAY GARAGE, 12' NORTH OF A LILAC BUSH, 88.6' EAST OF A METAL POST FOR A SATELLITE DISH, AND 1' EAST-NORTHEAST OF A FIBERGLASS WITNESS POST.

HVCTRL #2
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 EAST = 1790457.251
 ELEV. = 1200.817

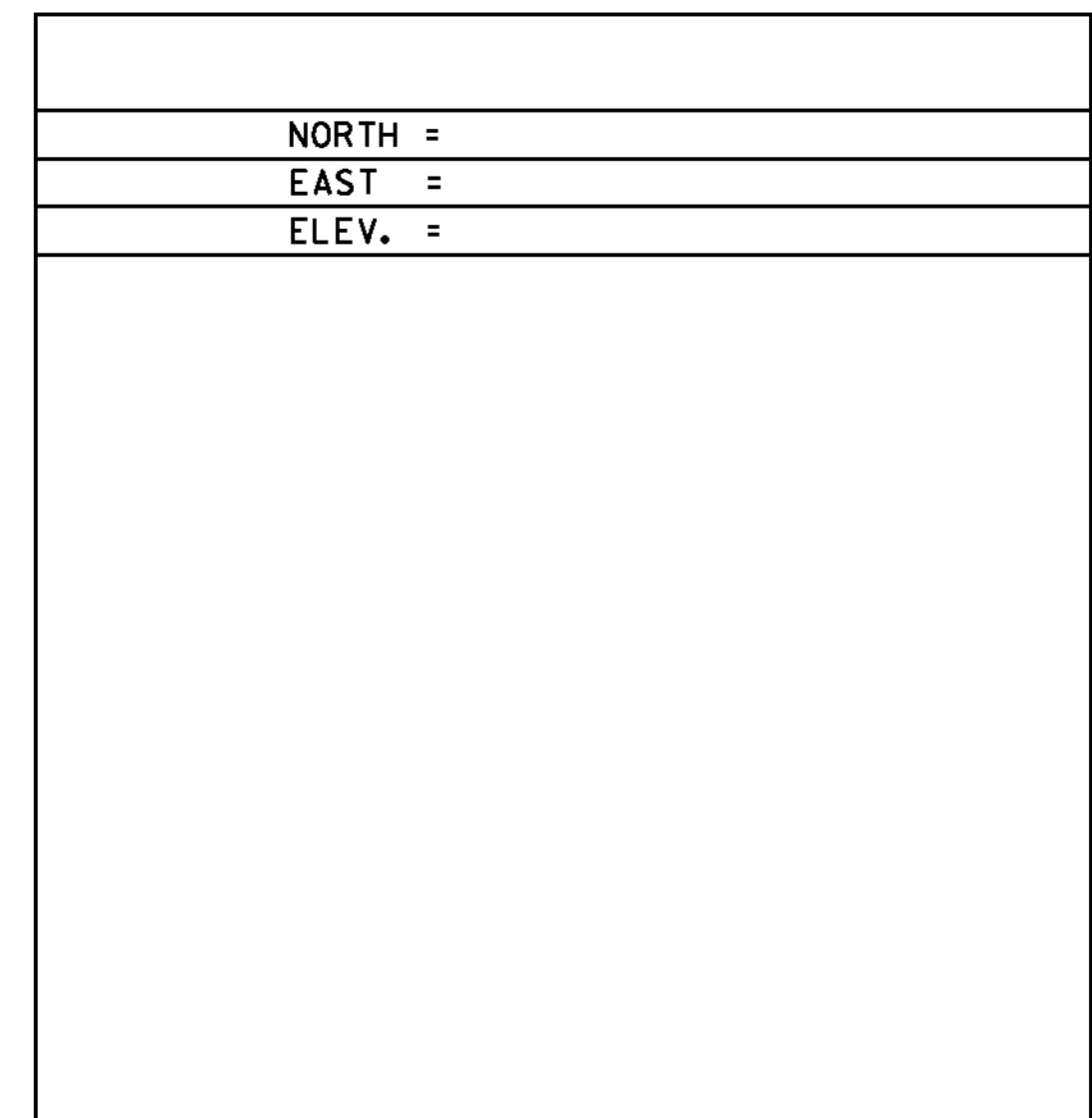
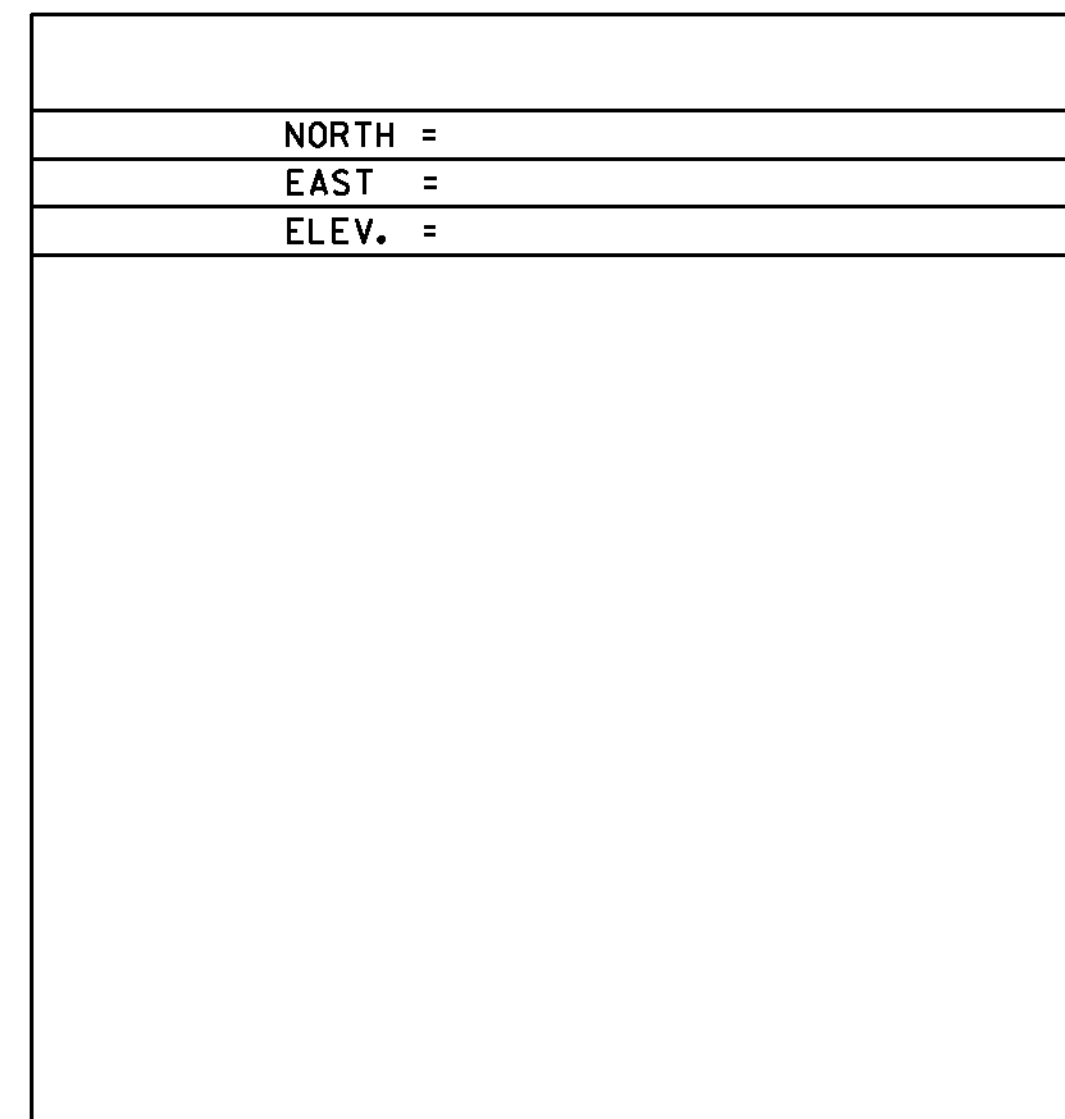
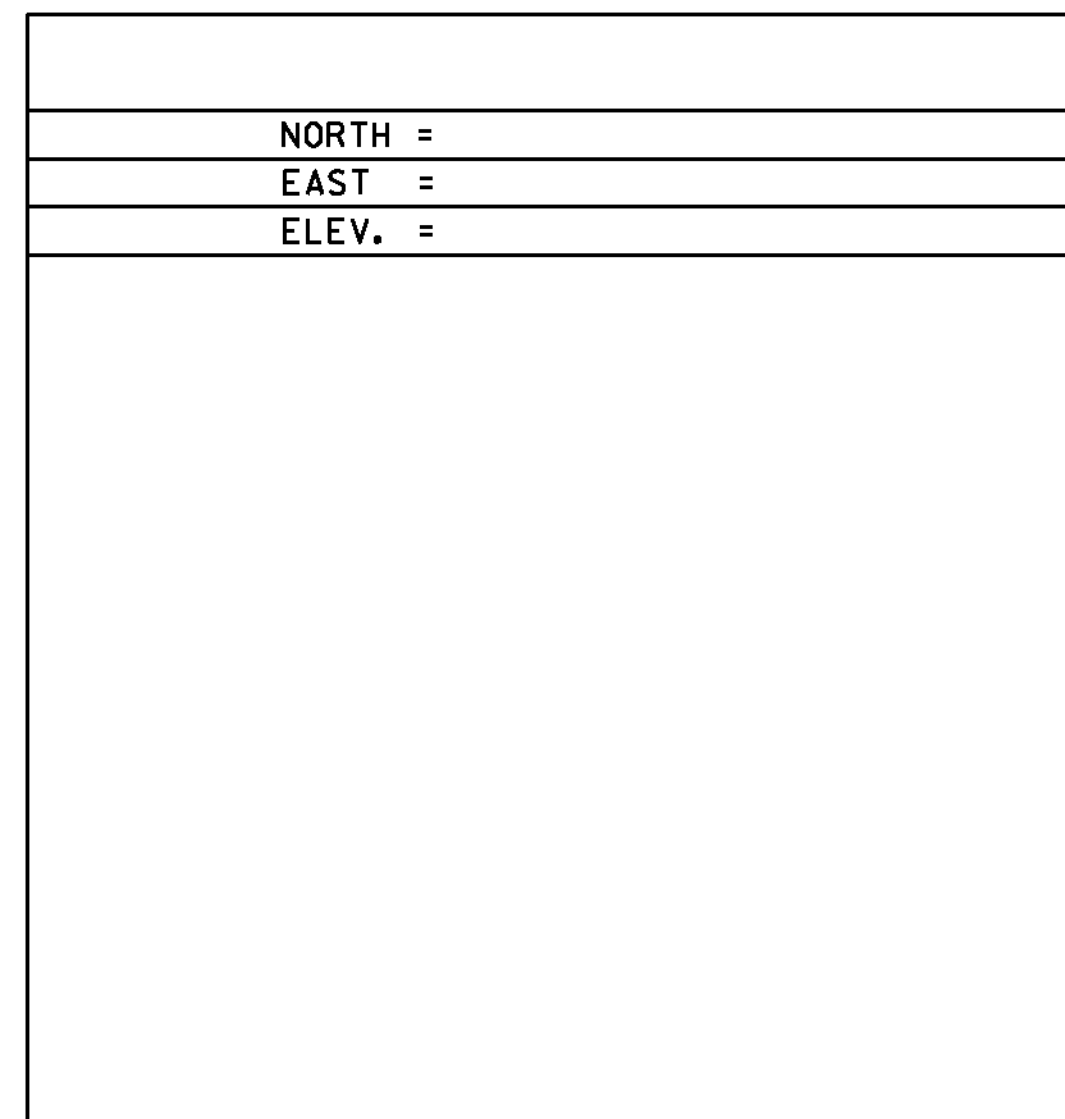
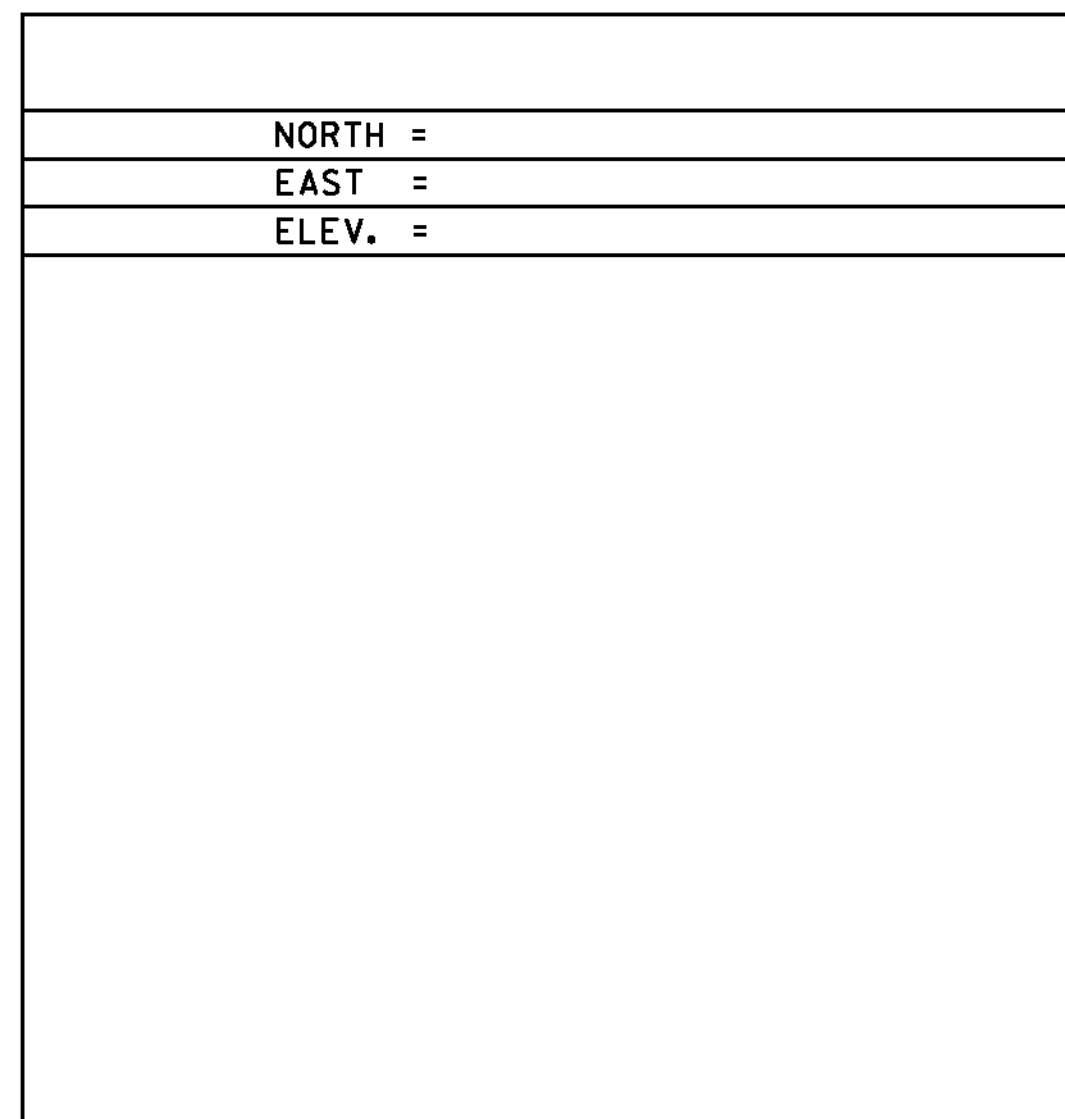
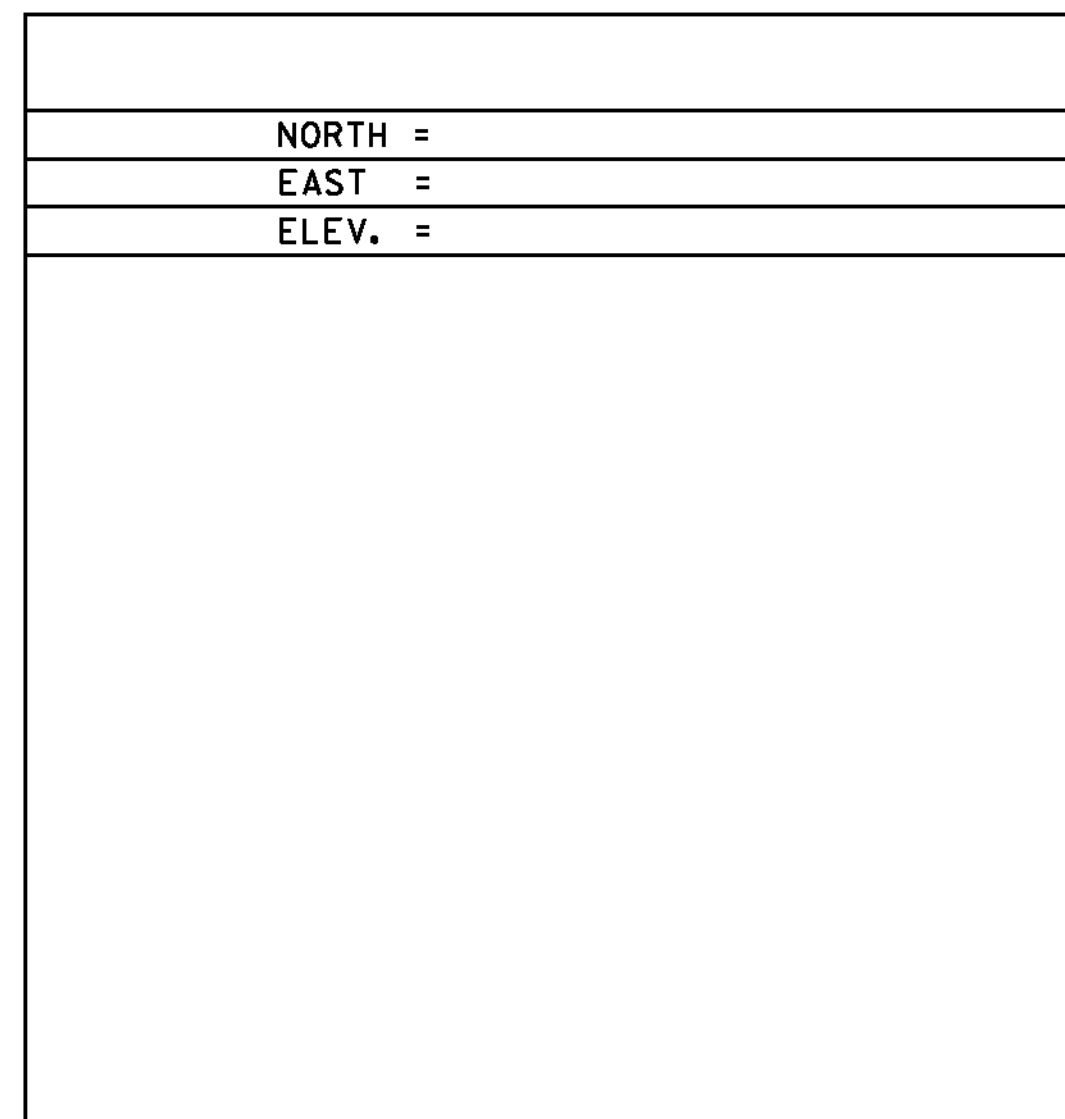
TO REACH FROM THE INTERSECTION OF VT 114 SOUTH AND VT 105, GO NORTHWEST ALONG VT 105 FOR 0.8 MI TO THE SITE OF THE MARK ON THE LEFT. THE MARK IS SET 2" BELOW GROUND SURFACE IN THE TOP OF A 12" DIAMETER CONCRETE MONUMENT. IT IS 27.6' SOUTH-SOUTHWEST OF AND ABOUT 2.6' HIGHER THAN THE CENTERLINE OF VT 105, 89.2' WEST-NORTHWEST OF THE NORTH CORNER OF A SMALL WOODEN STORAGE BUILDING, 115' EAST-SOUTHWEST OF A 20" ELM, 74.5' WEST-SOUTHWEST OF AND ACROSS THE ROAD FROM THE SOUTH CORNER OF THE PORTER FARM BARN, 75.5' SOUTH-SOUTHWEST OF AND ACROSS THE ROAD FROM THE SOUTH CORNER OF THE ENCLOSED PORCH OF A 2 STORY HOUSE, 21' WEST OF THE CENTERLINE OF A FARM DRIVE, AND 1' NORTH-NORTHEAST OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES



*TRAVERSE COMPLETED 10/14/2011 BY R. GILMAN P.C. & P. WINTERS

ALIGNMENT TIES



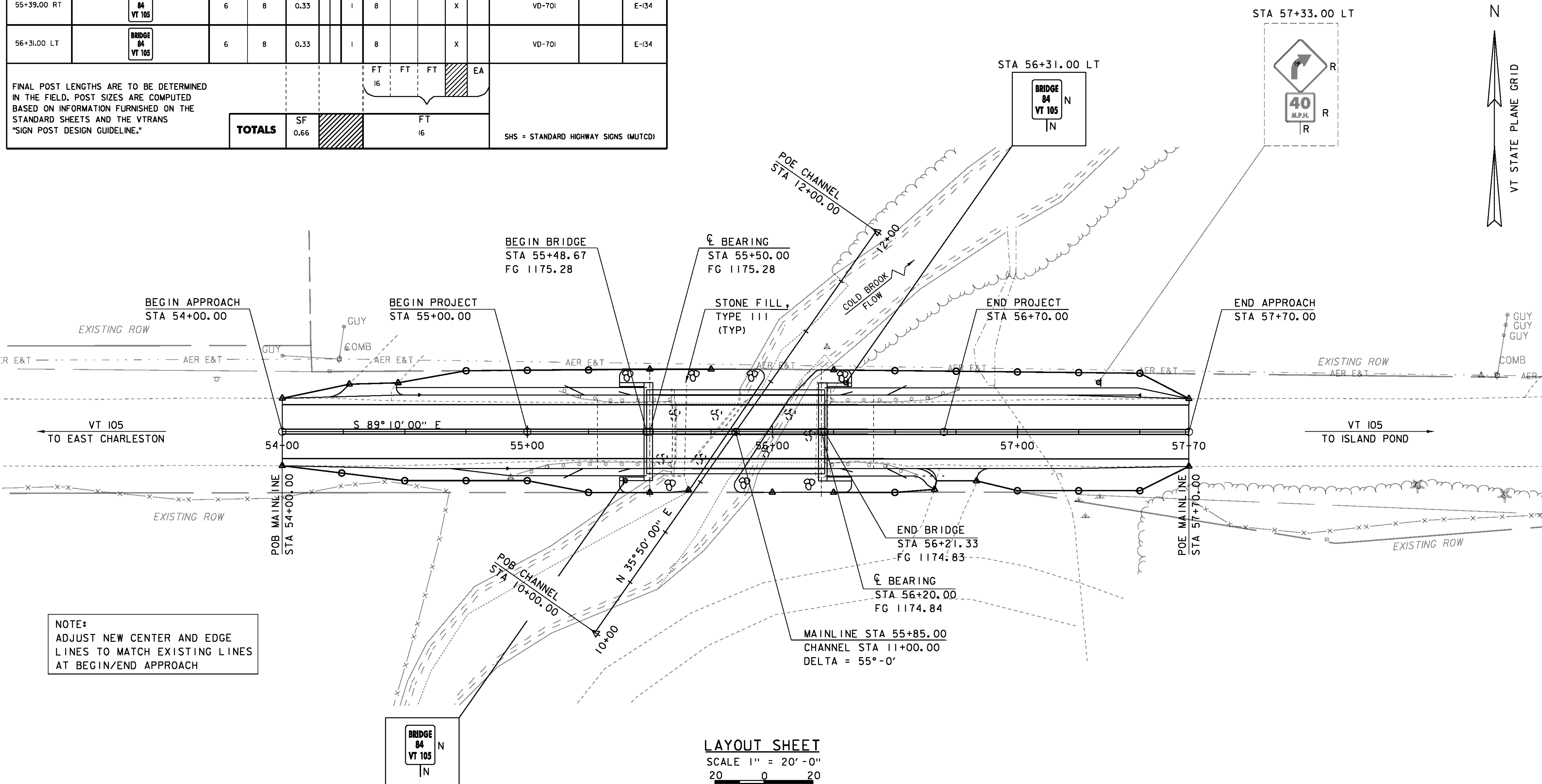
DATUM
 VERTICAL NAVD 88
 HORIZONTAL NAD 83 (07)
 ADJUSTMENT COMPASS

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)
 FILE NAME: s11b208+1.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: W. LAMMER
 TIE SHEET
 PLOT DATE: 12-SEP-2012
 DRAWN BY: W. LAMMER
 CHECKED BY: J. SALVATORI
 SHEET 8 OF 36

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW SIGN "A"	EXIST. SIGN	NO. OF POSTS	NEW SIGN POSTS SQUARE STEEL (in)			REMARKS	SIGN DETAIL	
		WIDTH (in)	HEIGHT (in)				1.75	2.0	2.5		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
							1.88	2.42	3.35			
55+39.00 RT	BRIDGE 84 VT 105	6	8	0.33		1	8		X	VD-701	E-134	
56+31.00 LT	BRIDGE 84 VT 105	6	8	0.33		1	8		X	VD-701	E-134	
		TOTALS		SF 0.66			FT 16		EA	SHS = STANDARD HIGHWAY SIGNS (MUTCD)		

SIGN LEGEND
 N = NEW
 R = RETAIN

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

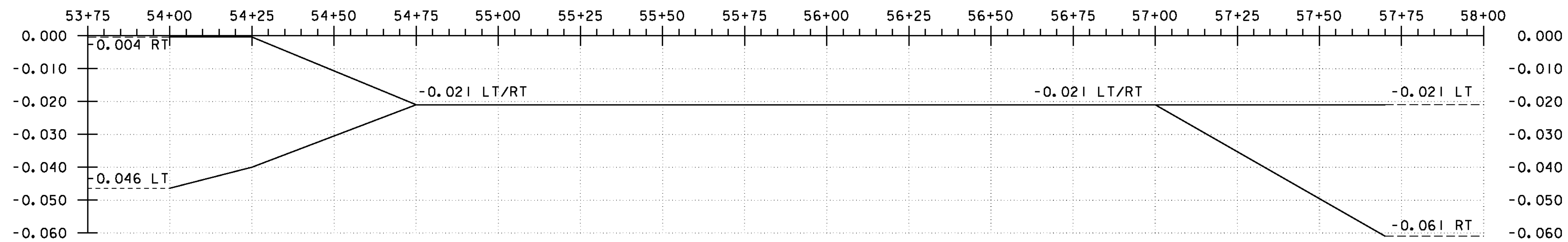


NOTE:
 ADJUST NEW CENTER AND EDGE LINES TO MATCH EXISTING LINES AT BEGIN/END APPROACH

LAYOUT SHEET
 SCALE 1" = 20'-0"
 20 0 20

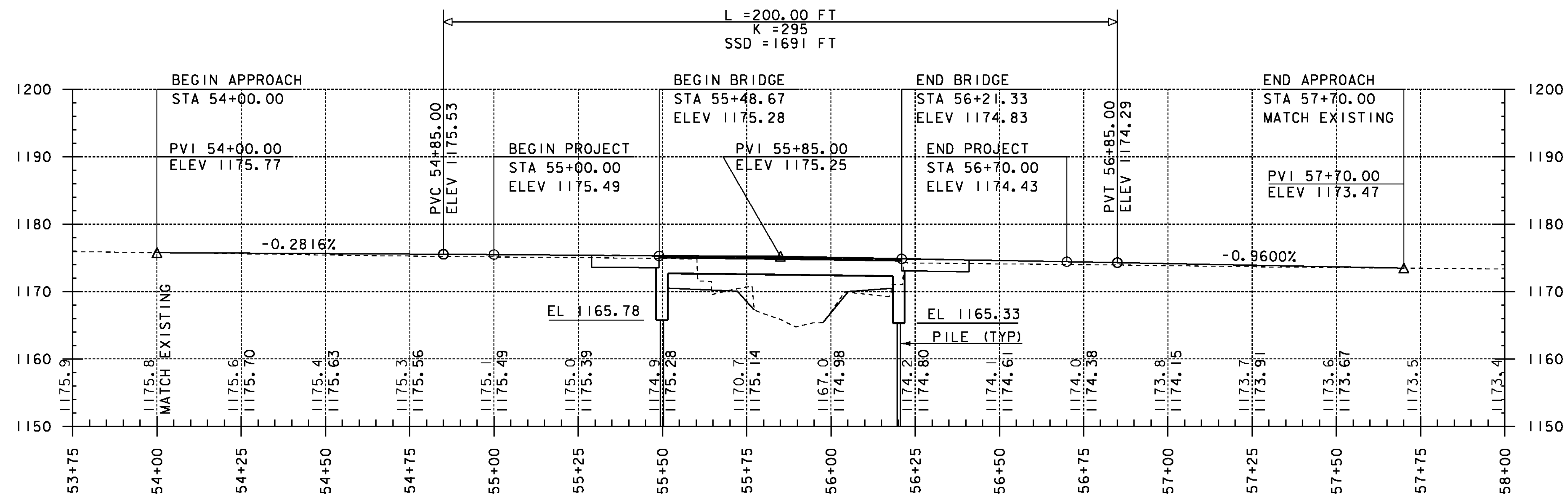
- CONSTRUCT PAVED APRON (5 FT) STA 54+18.00 - 54+50.00 LT STA 56+62.00 - 56+88.00 RT
- SPECIAL PROVISION (REMOVAL OF TEMPORARY BRIDGE AND APPROACHES) STA 55+00.00 - 57+00.00
- TRAFFIC SIGNS, TYPE A STA 55+39.00 (RT) STA 56+31.00 (LT)
- 4" WHITE LINE (LT & RT) STA 54+00.00 - 57+70.00
- 4" YELLOW LINE (DOUBLE) STA 54+00.00 - 57+70.00

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)
 FILE NAME: s1lb208bdr.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 LAYOUT SHEET
 PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 9 OF 36



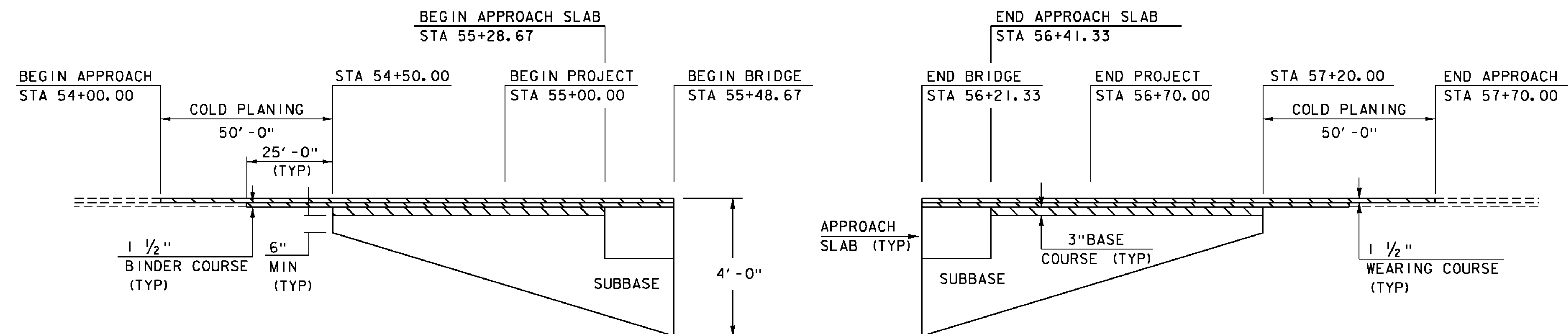
BANKING DIAGRAM

HORIZONTAL SCALE 1" = 20'-0"
 VERTICAL SCALE 1" = 10'-0"



MAINLINE PROFILE

HORIZONTAL SCALE 1" = 20'-0"
 VERTICAL SCALE 1" = 10'-0"



MATERIAL TRANSITION

HORIZONTAL SCALE 1" = 20'-0"
 VERTICAL SCALE 1/2" = 1'-0"

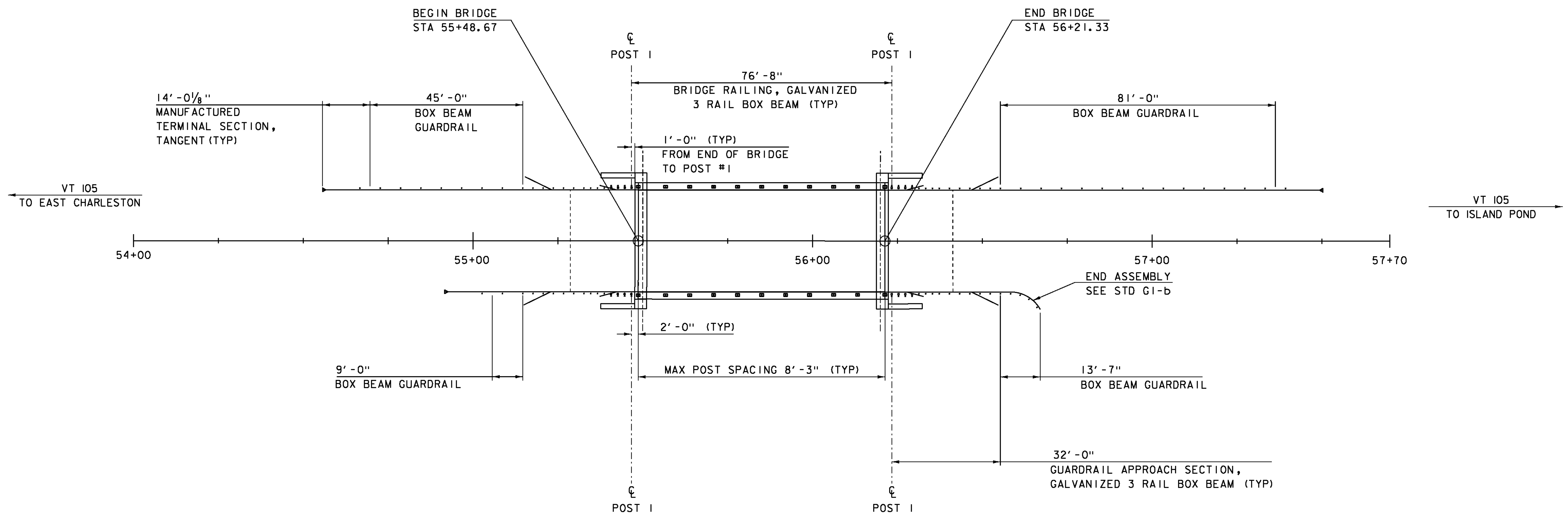
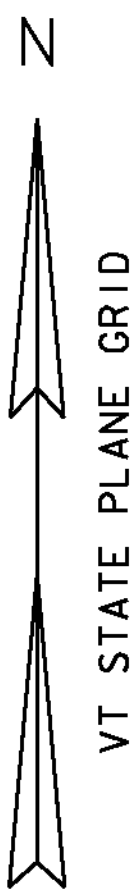
PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: sllb208pro.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 10 OF 36
DESIGNED BY: J. SALVATORI	
MAINLINE PROFILE	

BOX BEAM GUARDRAIL
 STA 54+69.67 - 55+14.67 LT
 STA 55+05.66 - 55+14.67 RT
 STA 56+55.33 - 57+36.34 LT
 STA 56+55.33 - 56+67.05 RT

MANUFACTURED TERMINAL SECTION, TANGENT
 STA 54+55.66 - 54+69.67 LT
 STA 54+91.65 - 55+05.66 RT
 STA 57+36.34 - 57+50.35 LT

BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM
 STA 55+48.67 - 56+21.33 LT/RT

GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM
 STA 55+14.67 - 55+48.67 LT/RT
 STA 56+21.33 - 56+55.33 LT/RT



RAIL LAYOUT SHEET
 SCALE 1" = 15'-0"

PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: s1b208r-all.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET II OF 36
DESIGNED BY: J. SALVATORI	
RAIL LAYOUT SHEET	

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	N	DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

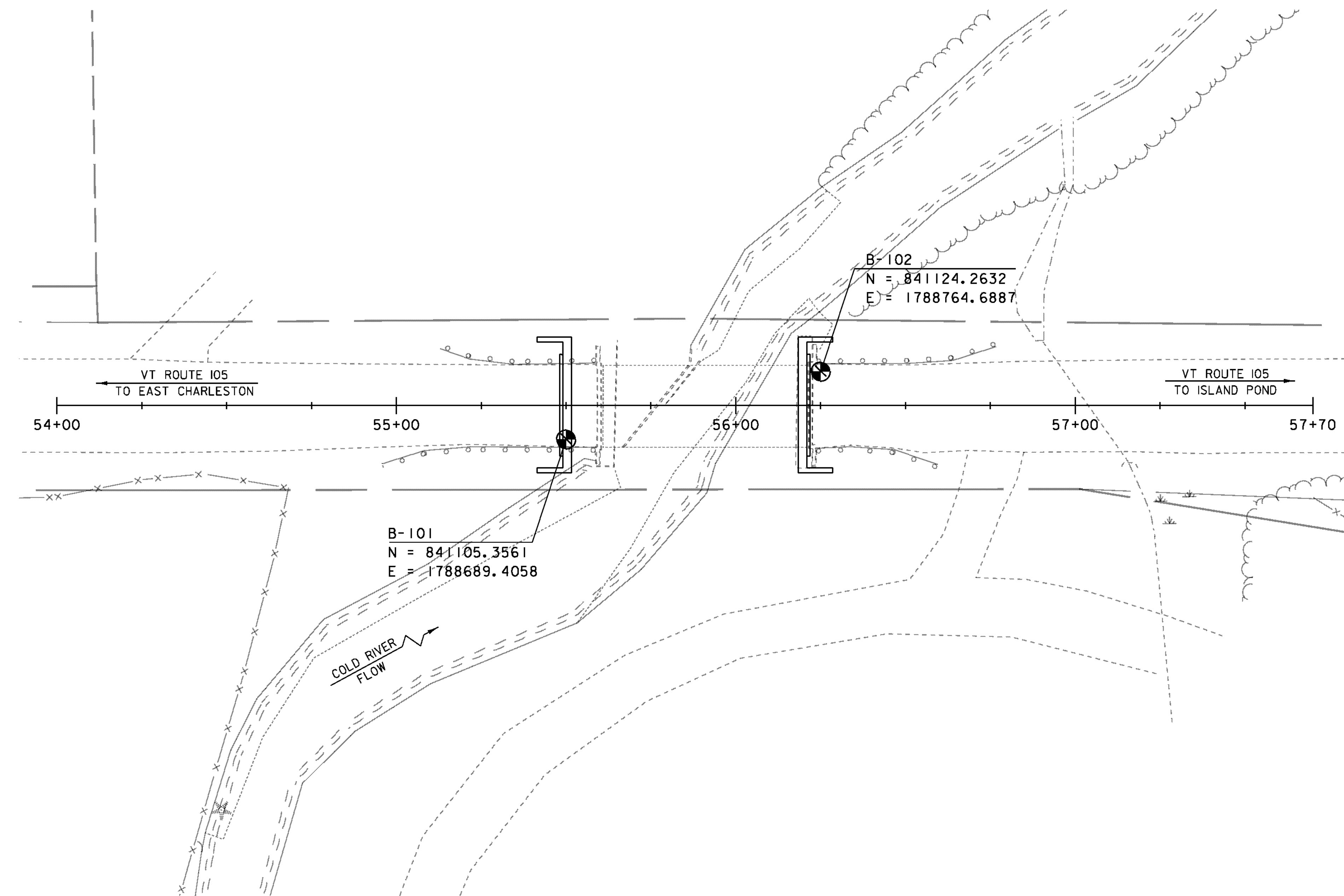
- ▼ Water Elevation
- ⊙ Standard Penetration Boring
- ⊕ Auger Boring
- ⊙ Rod Sounding
- S Sample
- N Standard Penetration Test
- Blow Count Per Foot For:
- 2" O.D. Sampler
- 1 1/2" I.D. Sampler
- Hammer Weight Of 140 Lbs.
- Hammer Fall Of 30"
- YS Field Vane Shear Test
- US Undisturbed Soil Sample
- B Blast
- DC Diamond Core
- MD Mud Drill
- WA Wash Ahead
- HSA Hollow Stem Auger
- AX Core Size 1 1/8"
- BX Core Size 1 3/8"
- NX Core Size 2 1/8"
- M Double Tube Core Barrel Used
- LL Liquid Limit
- PL Plastic Limit
- PI Plasticity Index
- NP Non Plastic
- w Moisture Content (Dry Wgt. Basis)
- D Dry
- M Moist
- MTW Moist To Wet
- W Wet
- Sat Saturated
- Bo Boulder
- Gr Gravel
- Sa Sand
- SI Silt
- Cl Clay
- HP Hardpan
- Le Ledge
- NLTD No Ledge To Depth
- CNPF Can Not Penetrate Further
- TLOB Top of Ledge Or Boulder
- NR No Recovery
- Rec. Recovery
- %Rec. Percent Recovery
- ROD Rock Quality Designation
- CBR California Bearing Ratio
- < Less Than
- > Greater Than
- R Refusal (N > 100)
- VTSPG NAD83 - See Note 7

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gr	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

- BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.
- BOULDER - A rock fragment with an average dimension > 12 inches.
- COBBLE - Rock fragments with an average dimension between 3 and 12 inches.
- GRAVEL - Rounded particles of rock < 3" and > 0.075" (#10 sieve).
- SAND - Particles of rock < 0.075" (#10 sieve) and > 0.0025" (#200 sieve).
- SILT - Soil < 0.0025" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.
- CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.
- VARVED - Alternate layers of silt and clay.
- HARDPAN - Extremely dense soil, cemented layer, not softened when wet.
- MUCK - Soft organic soil (containing > 10% organic material).
- MOISTURE CONTENT - Weight of water divided by dry weight of soil.
- FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.
- STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.
- DIP - Inclination of bed with a horizontal plane.



BORING LAYOUT
SCALE 1" = 20'-0"
20 0 20

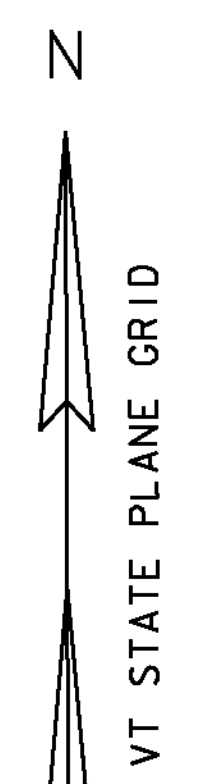
BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.
B-101	55+50	10' RT	1174.85
B-102	56+25	10' LT	1174.26

GENERAL NOTES

- The subsurface explorations shown herein were made between 04/05/12 and 04/20/12 by the Agency.
- Soil and rock classifications, properties and descriptions are based on available subsurface information from engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variations in subsurface conditions that may be encountered between individual boring or sample locations.
- Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methods of exploration and other factors.
- Engineering judgment was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgment by the Contractor.
- Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
- Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.
- Northing and Easting coordinates are shown in Vermont State Plane Grid North American Datum 1983 in meters and survey feet.

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)
FILE NAME: s1b208bor.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
BORING LAYOUT SHEET
PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 12 OF 36



VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: 8-101				
		BRIGHTON STP 034-3(25) VT-105 BR-84		Page No.: 1 of 2		Pin No.: 11B208				
		Checked By: CCB								
Boring Crew: PORTER, DAVISON, HOLT		Type: WB SS		Groundwater Observations						
Date Started: 4/05/12 Date Finished: 4/16/12		I.D.: 4 in 1.5 in		Date	Depth (ft)	Notes				
VTSPG NAD83: N 841105.36 ft E 1788689.41 ft		Hammer Wt: N.A. 140 lb.		04/16/12	8.5	AM				
Station: 55+50 Offset: 10.00		Hammer Fall: N.A. 30 in.								
Ground Elevation: 1174.85 ft		Hammer/Rod Type: Auto/AWJ								
		Rig: CME 45C SKID CE = 1.33								
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate (min/ft)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.5		Asphalt Pavement, 0.0 ft - 0.5 ft								
5		Visual Description: SiSa with one piece of granite, brn, Moist, Rec. = 0.2 ft, Stone in end of sampler. Insufficient sample for testing.				9-6-6-11 (12)				
10		A-1-a, SaGr, brn, Moist, Rec. = 0.8 ft				8-8-8-5 (16)	17.0	54.2	36.9	8.9
15		Field Note: No Recovery. Trace of silt in sampler				4-1-1-1 (2)				
20		A-2-4, Sa, gry, Moist, Rec. = 1.0 ft				15-12-11-12 (23)	19.0	15.8	72.9	11.3
25		A-1-b, Sa, brn, Moist, Rec. = 1.5 ft				5-6-8-9 (14)	19.2	7.9	86.1	6.0
30		A-2-4, Sa, brn, Moist, Rec. = 1.2 ft, Granite chips were within sample.				7-10-14-16 (24)	15.2	18.1	70.4	11.5
35		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft, Granite chips and broken rock were within sample.				17-17-21-34 (38)	13.7	40.7	44.9	14.4
40		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft, Granite chips and broken rock were within sample.				22-20-14-11 (34)	12.9	38.0	52.8	9.2
45		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft, Granite chips and broken rock were within sample.				14-12-16-15 (28)	12.6	40.2	50.5	9.3
		A-1-b, GrSa, gry-brn, Moist, Rec. = 1.1 ft, Granite chips were within sample.				8-11-18-8 (29)	15.6	38.2	53.8	8.0
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.										

ABUTMENT 1
BOT OF PILE CAP
EL 1165.78

BORING LOG 2 BRIGHTON, STP 034-3(25) (REV.) VERMONT, AGT.GBT 5/21/12

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: 8-101				
		BRIGHTON STP 034-3(25) VT-105 BR-84		Page No.: 2 of 2		Pin No.: 11B208				
		Checked By: CCB								
Boring Crew: PORTER, DAVISON, HOLT		Type: WB SS		Groundwater Observations						
Date Started: 4/05/12 Date Finished: 4/16/12		I.D.: 4 in 1.5 in		Date	Depth (ft)	Notes				
VTSPG NAD83: N 841105.36 ft E 1788689.41 ft		Hammer Wt: N.A. 140 lb.		04/16/12	8.5	AM				
Station: 55+50 Offset: 10.00		Hammer Fall: N.A. 30 in.								
Ground Elevation: 1174.85 ft		Hammer/Rod Type: Auto/AWJ								
		Rig: CME 45C SKID CE = 1.33								
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate (min/ft)	Blows/ft (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
55		A-1-b, GrSa, gry-brn, Moist, Rec. = 1.0 ft, Small Granite chips within size.				6-5-8-9 (13)	18.9	32.5	62.6	4.9
60		A-1-b, GrSa, gry-brn, Moist, Rec. = 1.1 ft				6-8-9-18 (17)	17.2	28.9	57.5	13.6
65		A-1-b, Sa, gry-brn, Moist, Rec. = 1.0 ft				9-10-21-32 (31)	18.3	17.3	78.6	4.1
		A-4, Si, brn, Moist, Rec. = 0.6 ft					26.2	0.5	3.4	96.1
70		A-4, Si, gry, Moist, Rec. = 1.3 ft				19-31-35-43 (66)	20.0	0.1	11.8	88.1
75		A-2-4, GrSa, gry, Moist, Rec. = 1.2 ft				22-25-35-27 (60)	11.6	22.3	58.6	19.1
80		Field Note: Cored ahead Field Note: Cobbles				R02.5"				
85		A-2-4, GrSiSa (HP), gry, Moist, Rec. = 0.2 ft				61-R02.5"	7.1	24.7	45.3	30.0
87.0 - 92.0		Field Note: Advanced casing to 87 feet. Cleaned out casing. 1.8 feet of rock inside bottom of casing. 87.0 ft - 92.0 ft, Light gray, With dark green splotches Diorite, Hard, Unweathered, Very good rock, BXMDC, RMR = 92	1 (?)	92 (90)	7					Top of Bedrock @ 87.0 ft
92.0 - 97.0		92.0 ft - 97.0 ft, Light gray, With dark green splotches Diorite, Hard, Unweathered, Very good rock, BXMDC, Healed near vertical fracture from 95.0-97.0 feet. RMR = 92	2 (?)	100 (94)	5					
95										
Hole stopped @ 97.0 ft										
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.										

ABUTMENT 1
PILE TIP
EL 1087.85

BORING LOG 2 BRIGHTON, STP 034-3(25) (REV.) VERMONT, AGT.GBT 5/21/12

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: s11b208bor.dgn PLOT DATE: 12-SEP-2012
PROJECT LEADER: K. HIGGINS DRAWN BY: J. SALVATORI
DESIGNED BY: W. LAMMER CHECKED BY: W. LAMMER
BORING LOG 1 SHEET 13 OF 36

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-102		
		BRIGHTON STP 034-3(25) VT-105 BR-84		Page No.: 1 of 2		Pin No.: 11B208		
		Checked By: CCB						
Boring Crew: PORTER, DAVIDSON		Casing Sampler		Groundwater Observations				
Date Started: 4/17/12 Date Finished: 4/20/12		Type: WB SS		Date	Depth (ft)	Notes		
VTSPG NAD83: N 841124.26 ft E 1788764.69 ft		I.D.: 4 in 1.5 in		04/20/12	9.5	AM		
Station: 56+25 Offset: -10.00		Hammer Wt: N.A. 140 lb.						
Ground Elevation: 1174.26 ft		Hammer Fall: N.A. 30 in.						
		Hammer/Rod Type: Auto/AWJ						
		Rig: CME 45C SKID CE = 1.33						
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.5 ft						
		A-1-b, GrSa, brn, Moist, Rec. = 1.0 ft		7-7-8-7 (15)	9.9	35.5	49.3	15.2
		A-1-a, SaGr, brn, Moist, Rec. = 0.9 ft		4-4-8-9 (12)	12.1	53.0	39.2	7.8
10		A-1-b, GrSa, brn, Moist, Rec. = 0.6 ft		2-2-3-2 (5)	18.4	30.6	58.6	10.8
		A-1-a, SaGr, brn-gry, Moist, Rec. = 0.8 ft		14-14-18-20 (32)	12.0	52.5	37.5	10.0
20		A-2-4, Sa, brn, Moist, Rec. = 1.0 ft		6-6-8-9 (14)	20.6	9.7	76.5	13.8
		A-3, Sa, brn, Moist, Rec. = 0.8 ft		6-6-7-7 (13)	16.9	9.0	81.5	9.5
30		A-1-b, GrSa, brn, Moist, Rec. = 0.8 ft		7-16-17-12 (33)	16.7	42.4	53.9	3.7
		A-1-b, GrSa, brn, Moist, Rec. = 0.7 ft		8-7-6-7 (13)	16.4	30.9	61.1	8.0
40		Field Note: No Recovery. Trace of sand		8-11-11-10 (22)				
		Visual Description: Broken Granite pieces with silty sand, brn, Moist, Rec. = 0.3 ft, Insufficient sample for testing.		27-25-17-15 (42)	17.7			
50		A-3, Sa, brn, Moist, Rec. = 0.7 ft		5-9-13-19 (22)	6.7	0.5	91.3	8.2
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.								

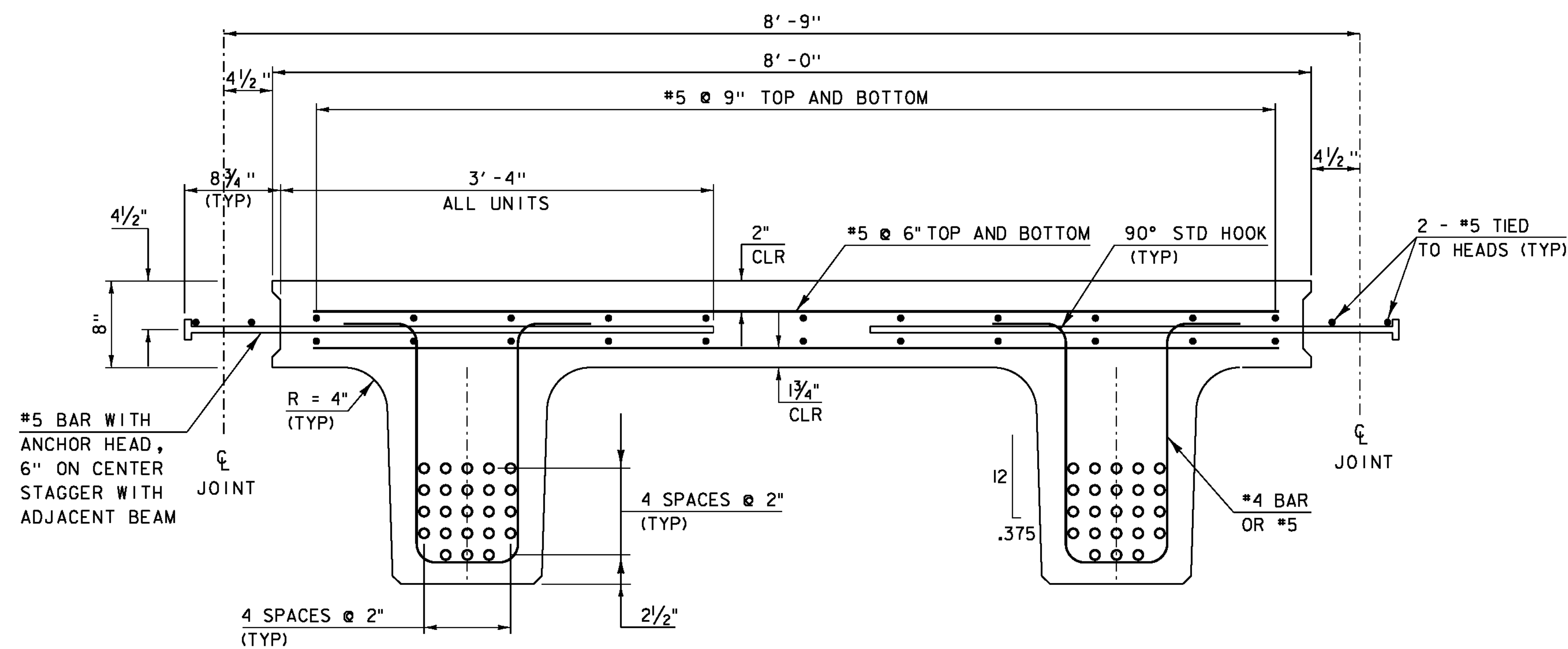
ABUTMENT 2
BOT OF PILE CAP
EL 1165.33

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING LOG		Boring No.: B-102		
		BRIGHTON STP 034-3(25) VT-105 BR-84		Page No.: 2 of 2		Pin No.: 11B208		
		Checked By: CCB						
Boring Crew: PORTER, DAVIDSON		Casing Sampler		Groundwater Observations				
Date Started: 4/17/12 Date Finished: 4/20/12		Type: WB SS		Date	Depth (ft)	Notes		
VTSPG NAD83: N 841124.26 ft E 1788764.69 ft		I.D.: 4 in 1.5 in		04/20/12	9.5	AM		
Station: 56+25 Offset: -10.00		Hammer Wt: N.A. 140 lb.						
Ground Elevation: 1174.26 ft		Hammer Fall: N.A. 30 in.						
		Hammer/Rod Type: Auto/AWJ						
		Rig: CME 45C SKID CE = 1.33						
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)		Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		A-1-b, Sa, brn, Moist, Rec. = 1.0 ft		9-11-12-12 (23)	22.5	10.5	82.5	7.0
60		A-4, Si, brn, Moist, Rec. = 1.6 ft		14-16-18-20 (34)	22.0	0.5	17.3	82.2
		A-1-b, GrSa, brn, Moist, Rec. = 1.5 ft		16-13-27-46 (40)	12.2	29.6	52.7	17.7
70		Field Note: Cobbles. Pieces of Granite		(R)				
		A-4, SaSi, gry, Moist, Rec. = 0.5 ft, Lab Note: (HP)		R06.0"	11.9	15.0	39.8	45.2
80		Visual Description: Broken Rock with sand, gry, Moist, Rec. = 0.2 ft, Insufficient sample for testing.		R02.5"	7.3			
		Visual Description: Broken Rock, gry, Moist, Rec. = 0.2 ft, Insufficient sample for testing.		R02.5"				
90		A-1-b, GrSa, gry, Moist, Rec. = 0.4 ft, Advanced casing to 99 ft.		R05.0"	8.1	38.7	43.6	17.7
100		Field Note: Granite Boulder						
Hole stopped @ 109.0 ft								
Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual. 2. N Values have not been corrected for hammer energy. CE is the hammer energy correction factor. 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.								

ABUTMENT 2
PILE TIP
EL 1087.33

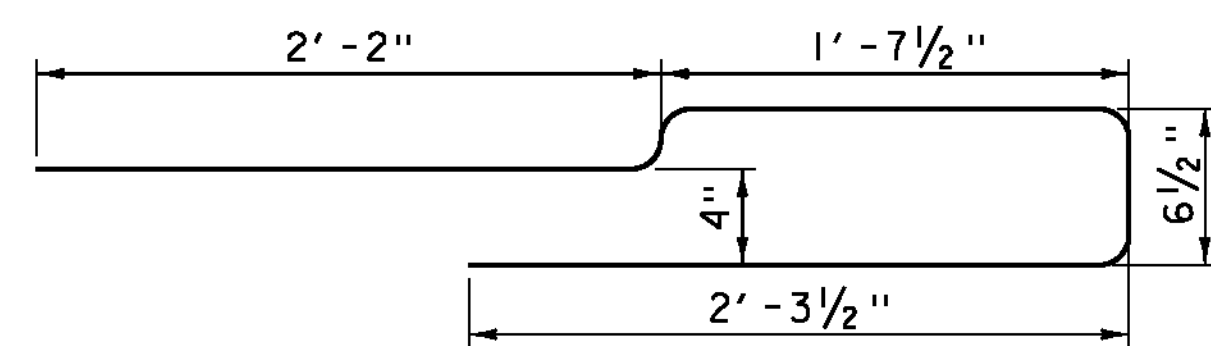
PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slb208bor.dgn PLOT DATE: 12-SEP-2012
 PROJECT LEADER: K. HIGGINS DRAWN BY: J. SALVATORI
 DESIGNED BY: W. LAMMER CHECKED BY: W. LAMMER
 BORING LOG 2 SHEET 14 OF 36



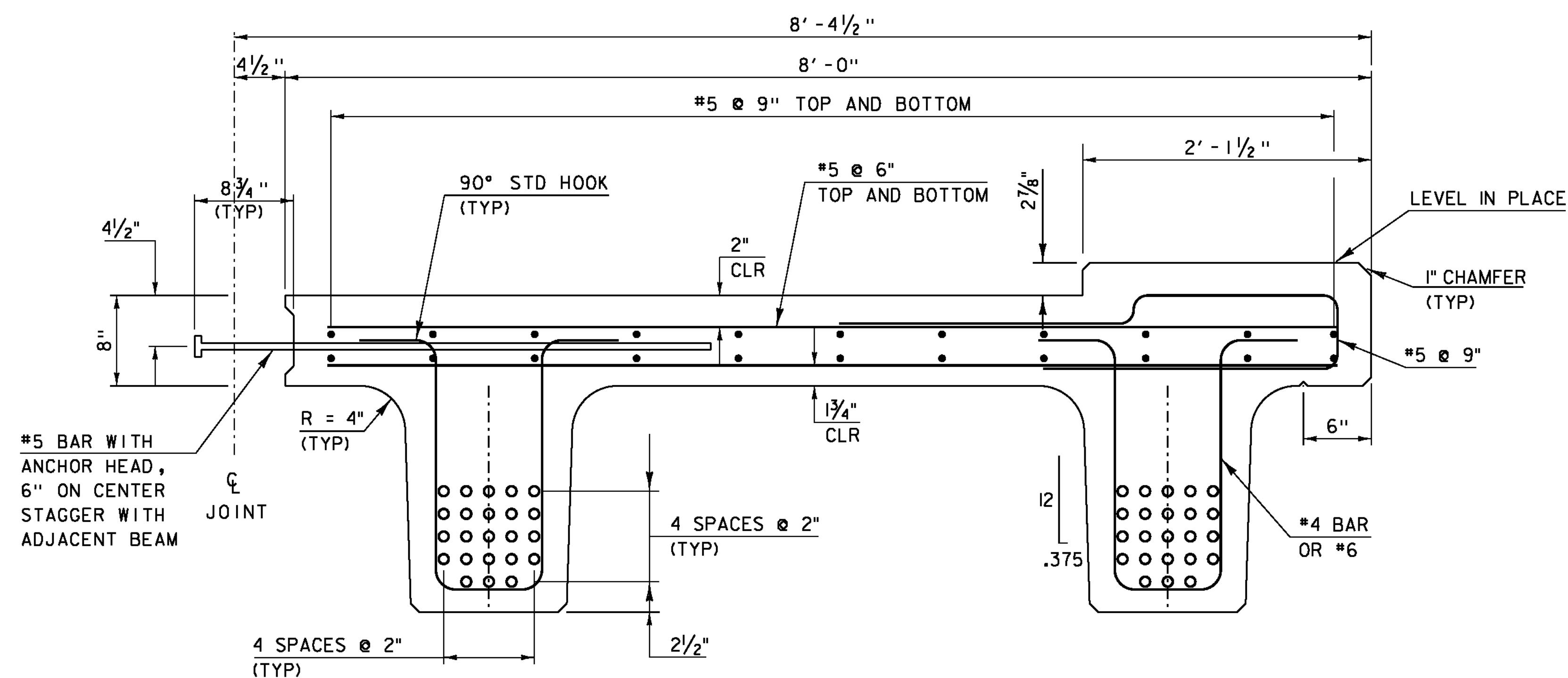
UNITS 2 & 3

SCALE: 1/2" = 1'-0"



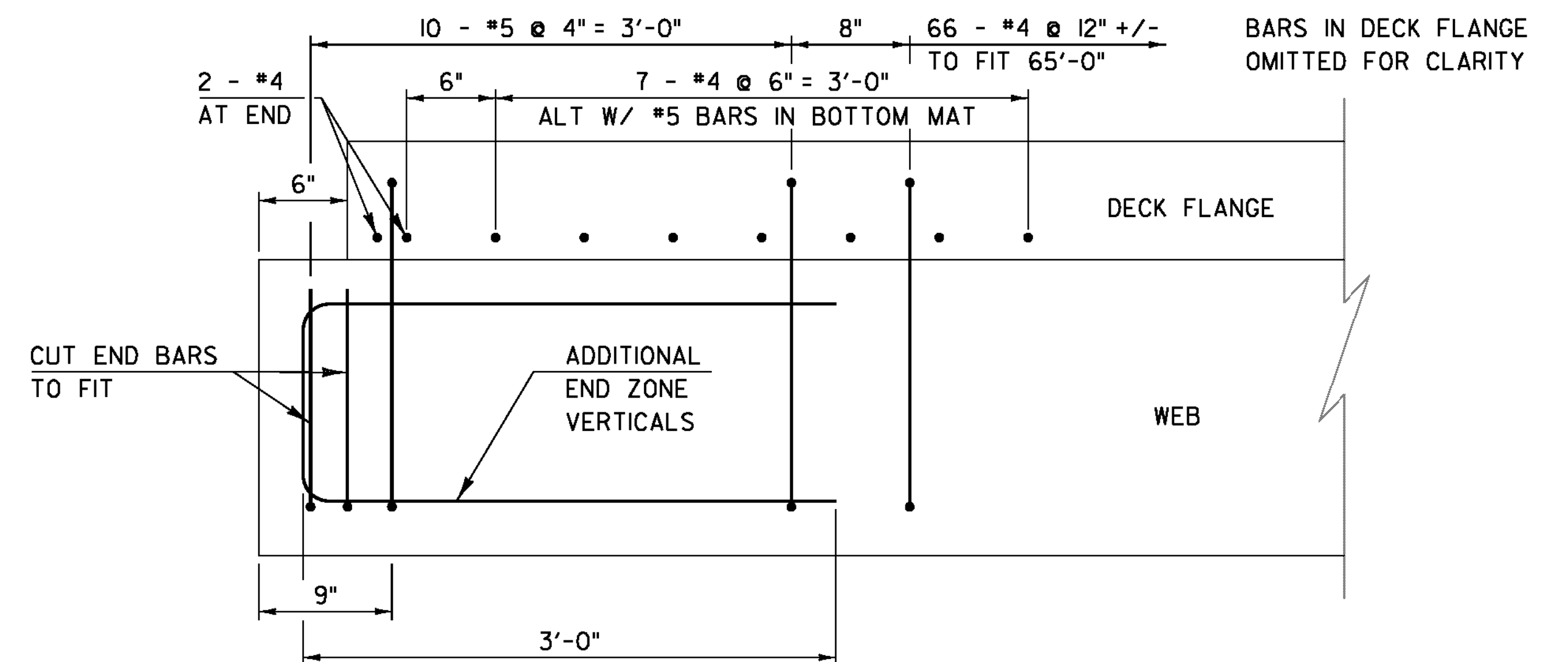
CURB BAR

SCALE: 1/2" = 1'-0"



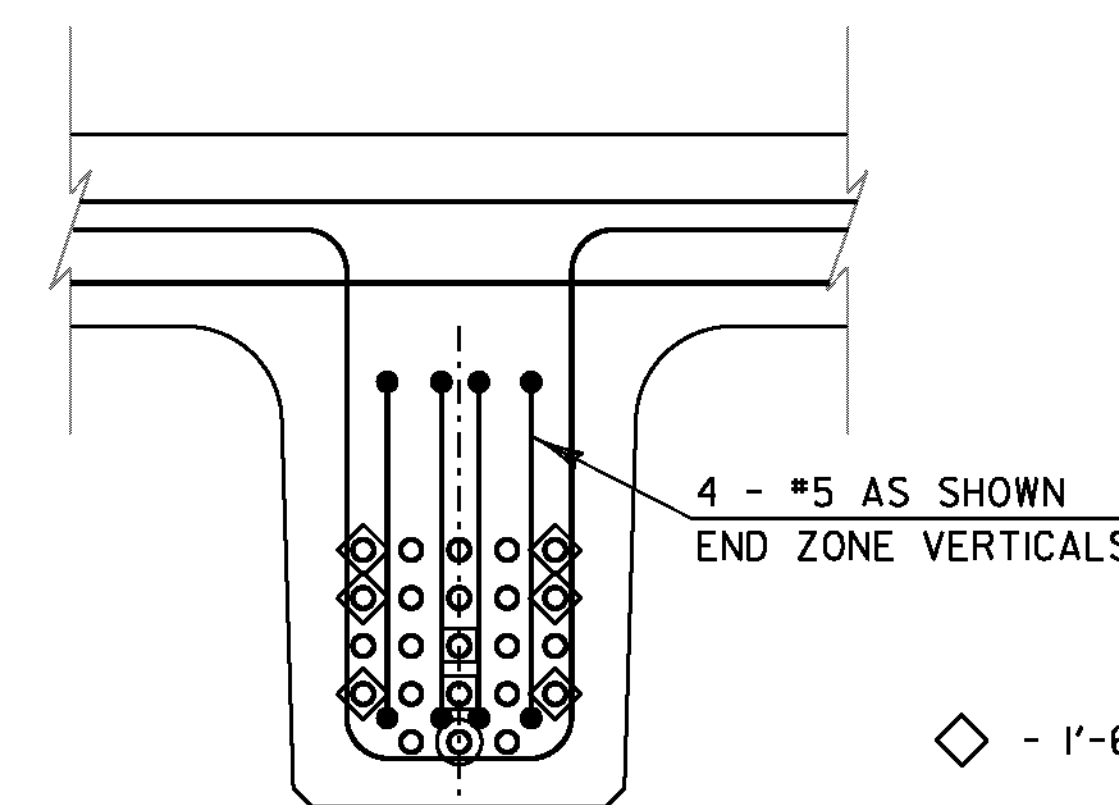
UNITS 1 & 4

SCALE: 1/2" = 1'-0"



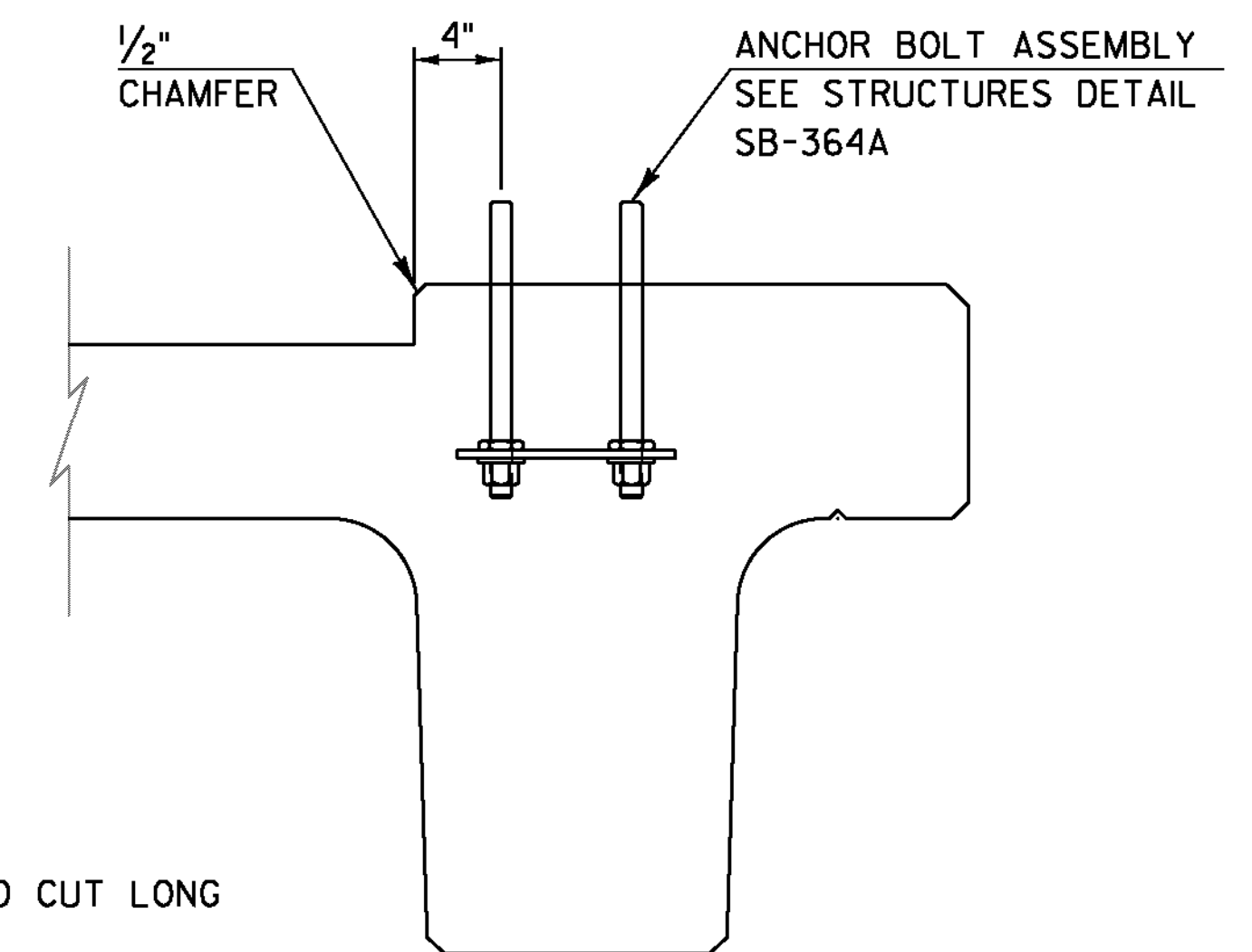
**ADDITIONAL END BEAM REINFORCING
LONGITUDINAL SECTION**

SCALE: 1/2" = 1'-0"



BEAM SECTION

SCALE: 1/2" = 1'-0"



END SECTION

SCALE: 1/2" = 1'-0"

**L_{NEXT} = 71 FT.
SKEW = 90°**

NOTES:

1. LEAVE SIX STRANDS 1'-6" LONG AS INDICATED. TIE STRANDS TO HORIZONTAL #5 REINFORCING IN DECK CLOSURE POUR.

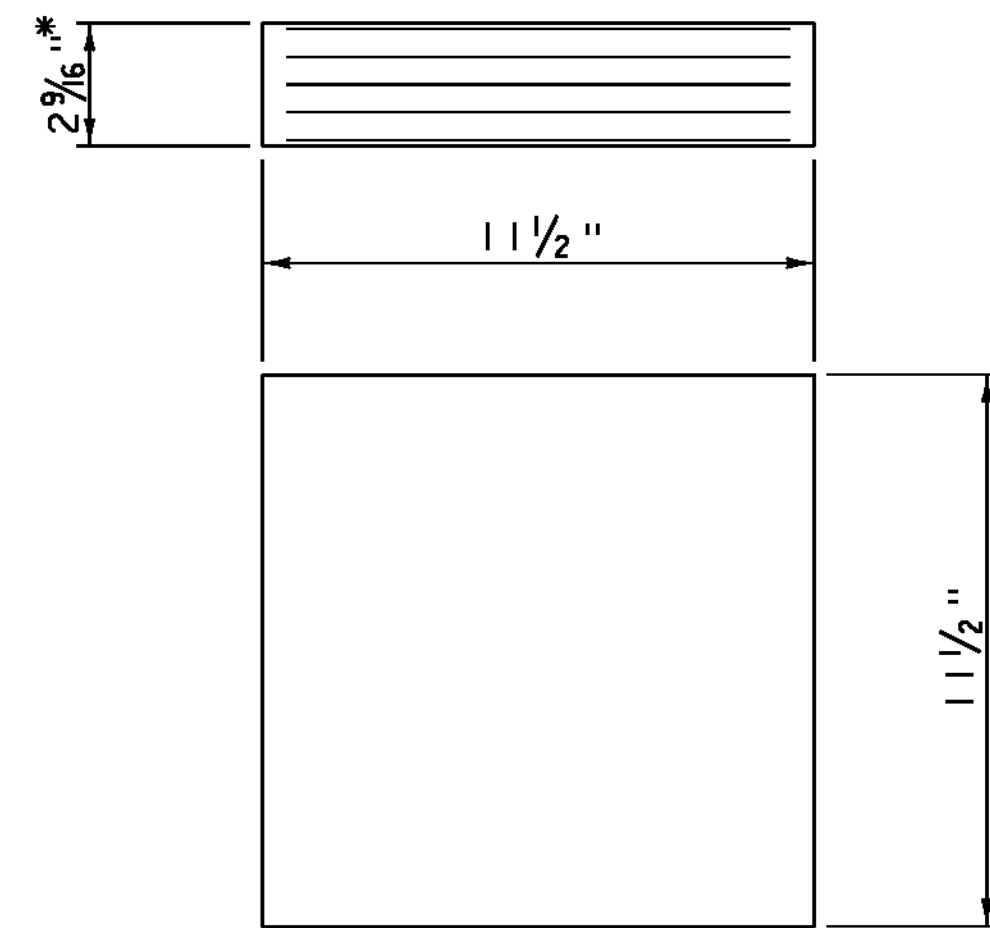
REVISI 10-12-12

- REMOVED NOTE 2

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slib208sup.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: W. LAMMER
NEXT BEAM TYPICAL SECTIONS

PLOT DATE: 12-OCT-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 16 OF 36



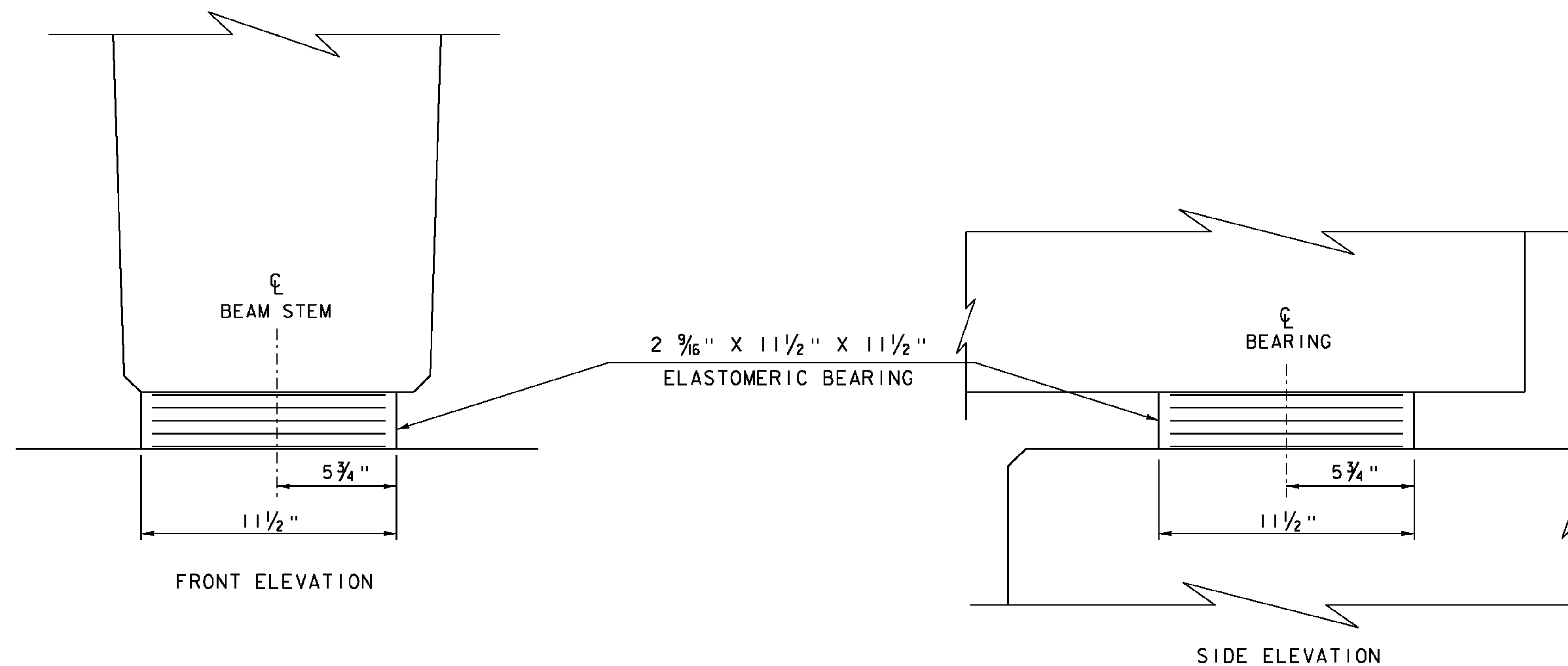
ELASTOMERIC BEARING DETAIL

SCALE 3" = 1'-0"

- * 2 - 1/8" EXTERIOR LAYERS OF ELASTOMER
- 4 - 1/2" INTERIOR LAYERS OF ELASTOMER
- 5- 1/16" STEEL REINFORCING PLATES

BEARING NOTES

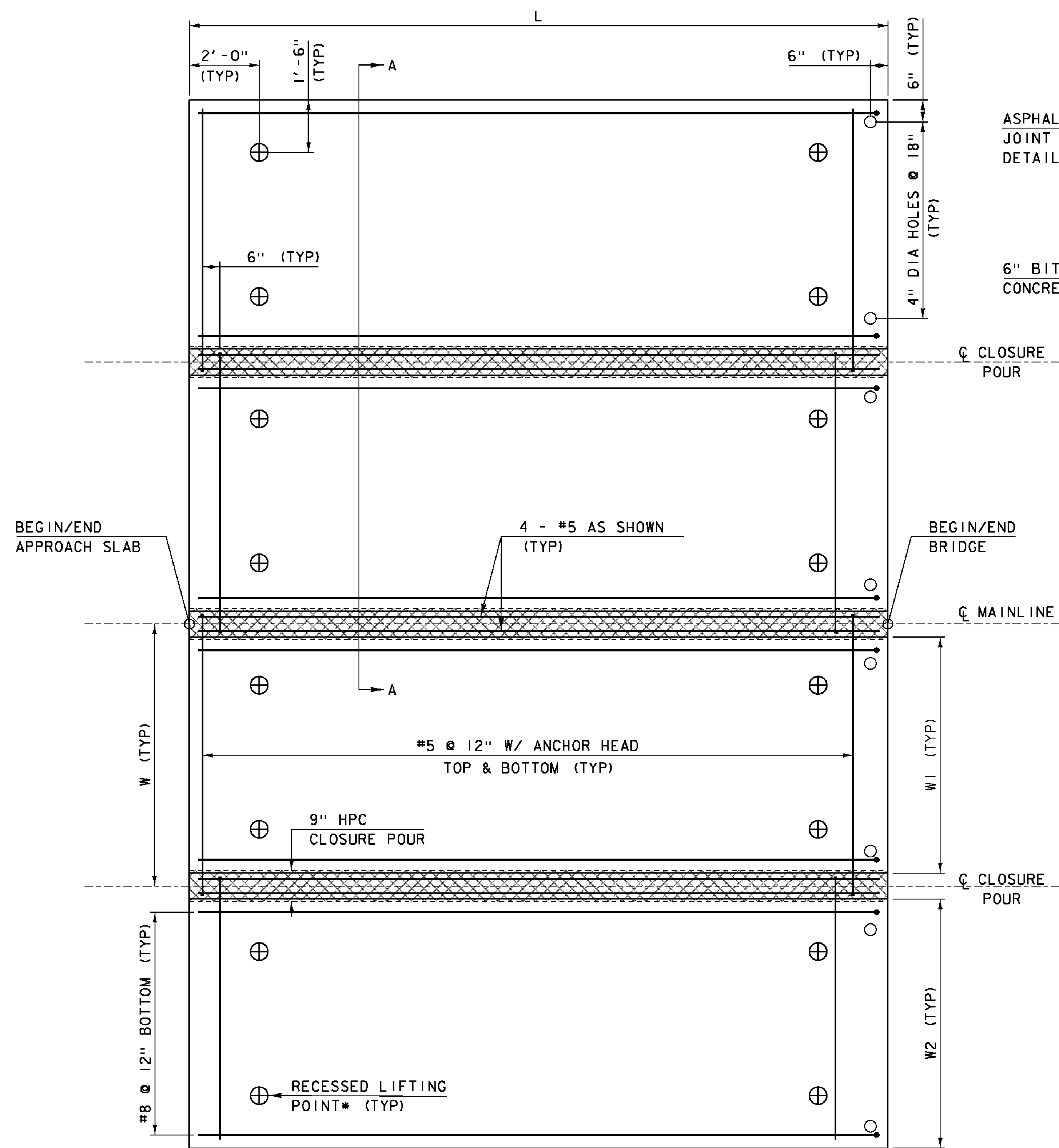
1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL MEETING THE REQUIREMENTS OF SUBSECTION 714.02. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 100 PSI +/- 15%.
5. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.
6. THE CONTRACTOR IS ADVISED TO HAVE A MINIMUM OF 16 - 1/4"x12 1/2"x12 1/2" GALVANIZED STEEL SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED UNDER ITEM 531.17, "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".



ELASTOMERIC BEARING DETAILS

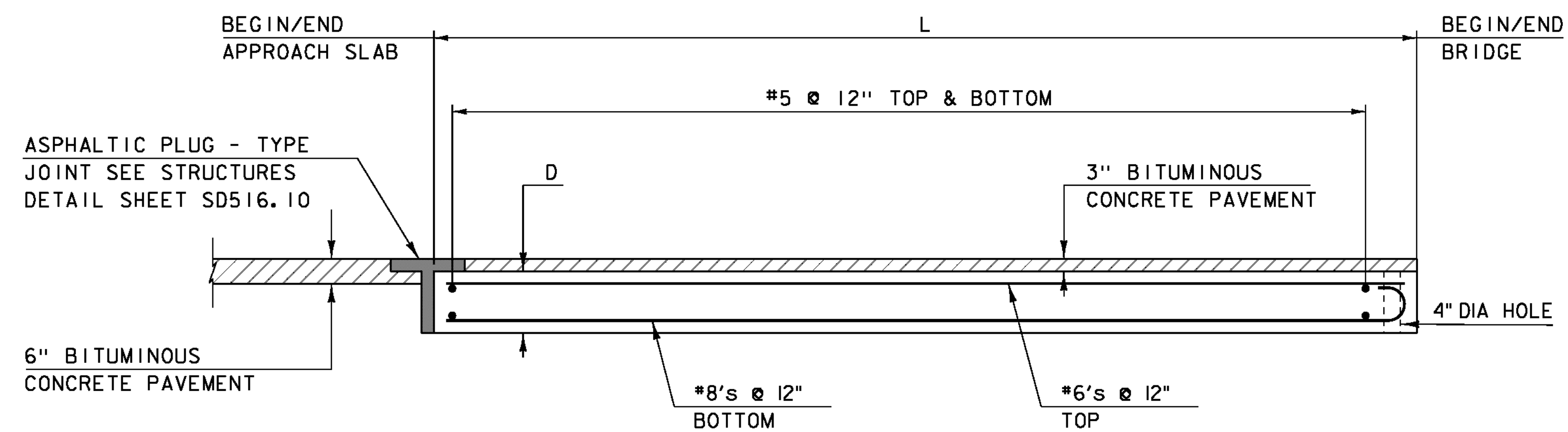
SCALE 3" = 1'-0"

PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: slb208brg.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 17 OF 36
DESIGNED BY: W. LAMMER	
BEARING DETAILS	

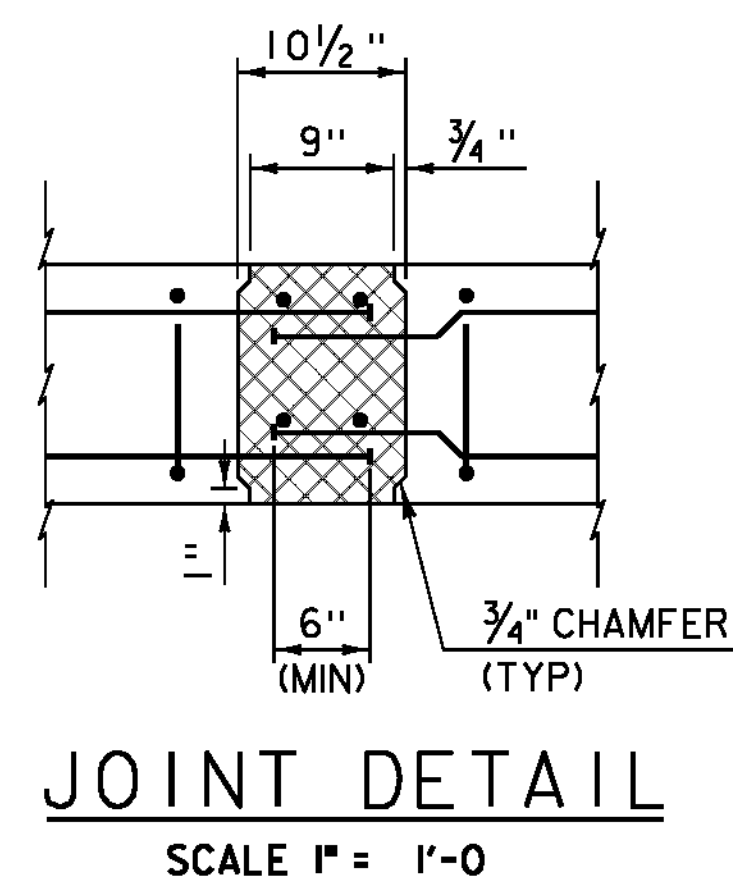


APPROACH SLAB PLAN VIEW
SCALE 1/2" = 1'-0"

* ALTERNATE LIFTING POINTS MAY BE SUBMITTED WITH CALCULATIONS FOR NEW LOCATIONS.



APPROACH SLAB ELEVATION VIEW
SCALE 1/2" = 1'-0"

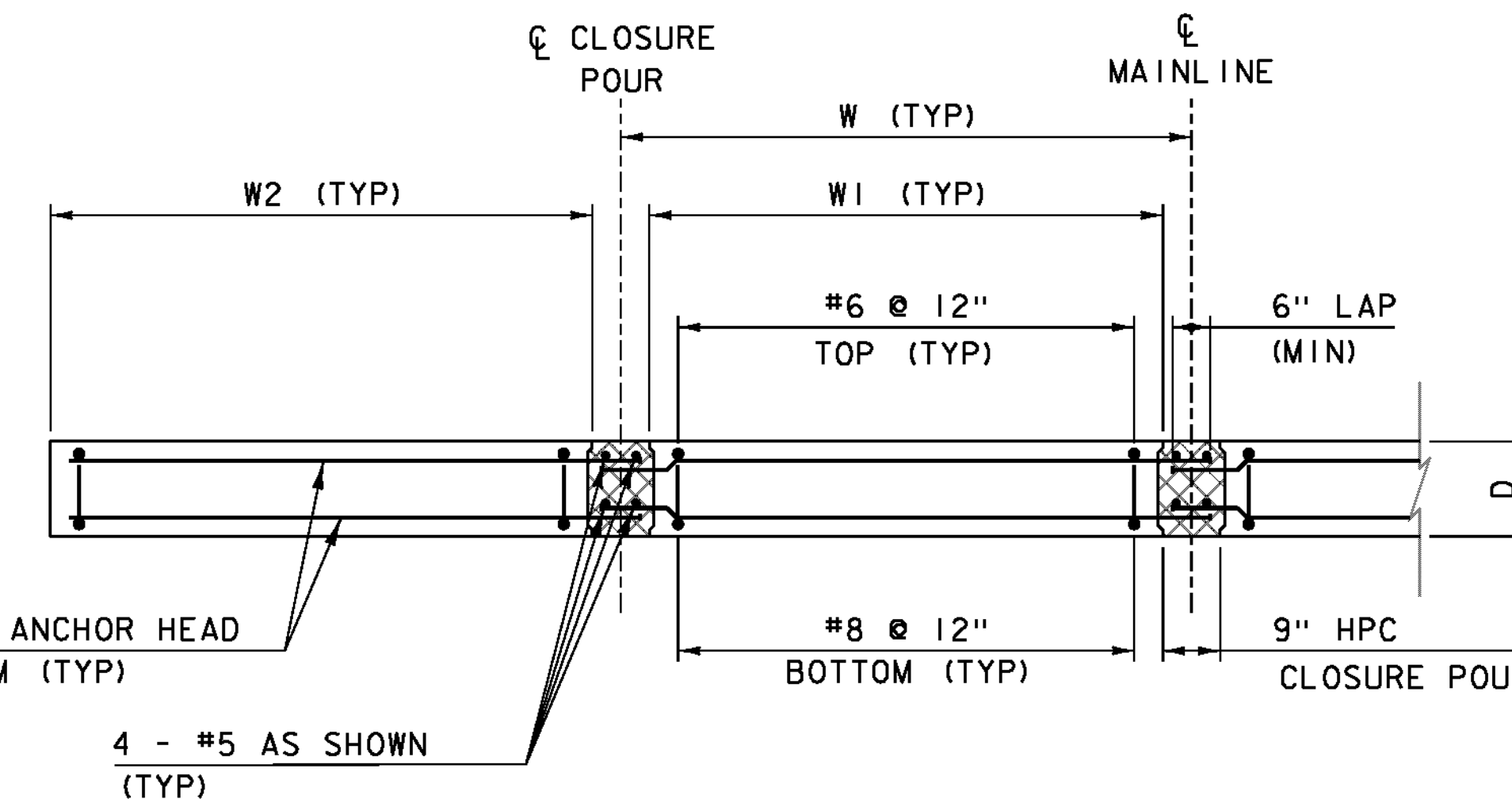


APPROACH SLAB DIMENSIONS

D	1'-3"
L	20'-0"
W	7'-6"
W1	6'-9"
W2	7'-1 1/2"

NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.



SECTION A-A
SCALE 1/2" = 1'-0"

APPROACH SLAB ELEVATIONS

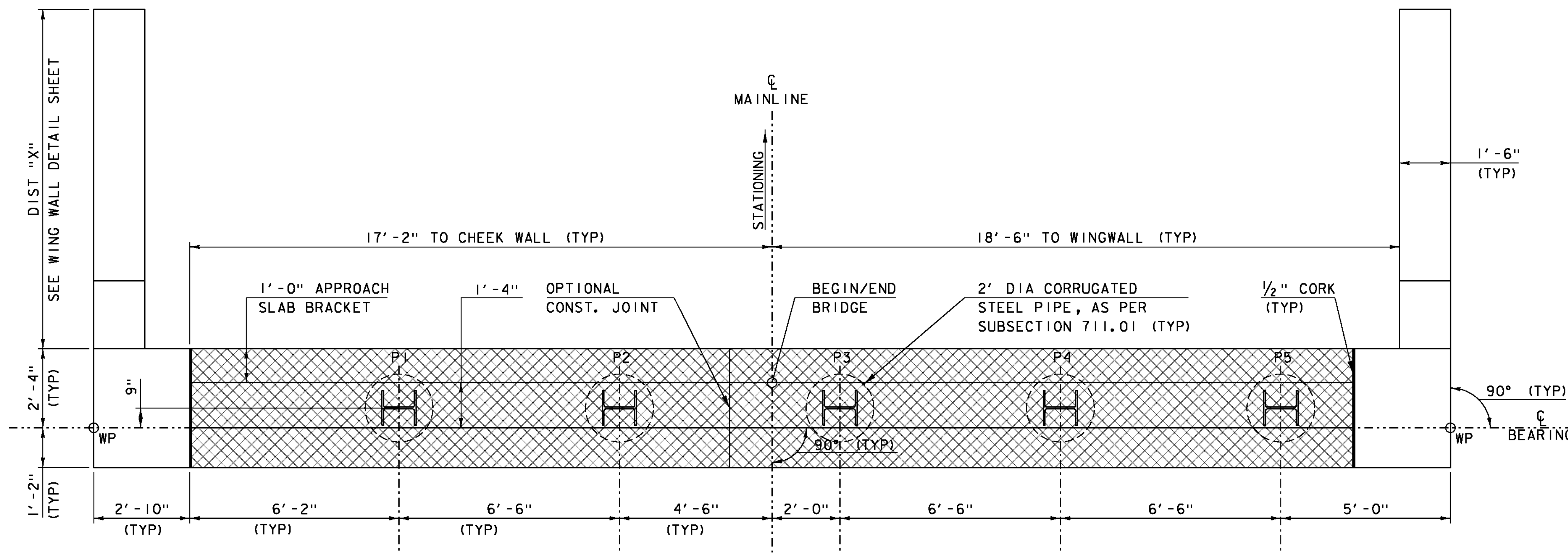
ALL ELEVATIONS ARE TOP OF SLAB

	STATION	15'-0" LT	CL	15'-0" RT
BEGIN AP#1	55+28.67	1174.81	1175.13	1174.81
END AP#1	55+48.67	1174.71	1175.03	1174.71
BEGIN AP#2	56+21.33	1174.26	1174.58	1174.26
END AP#2	56+41.33	1174.11	1174.43	1174.11

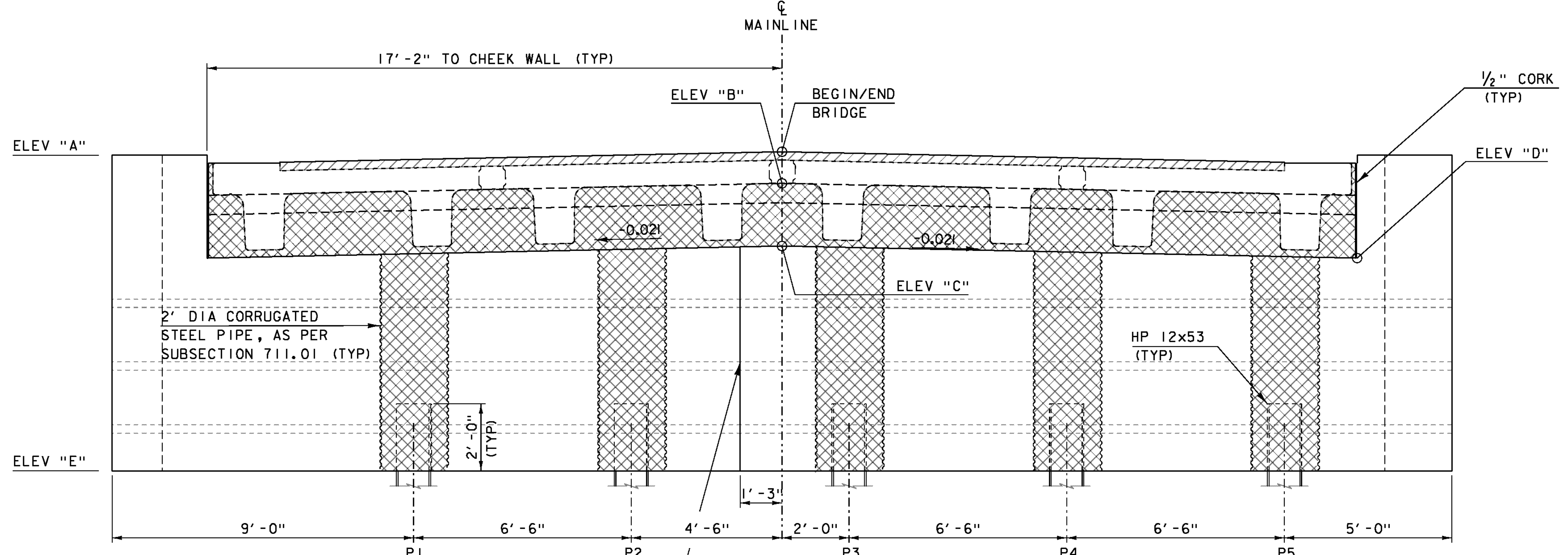
PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slb208sup.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: W. LAMMER
 APPROACH SLAB DETAILS

PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 18 OF 36



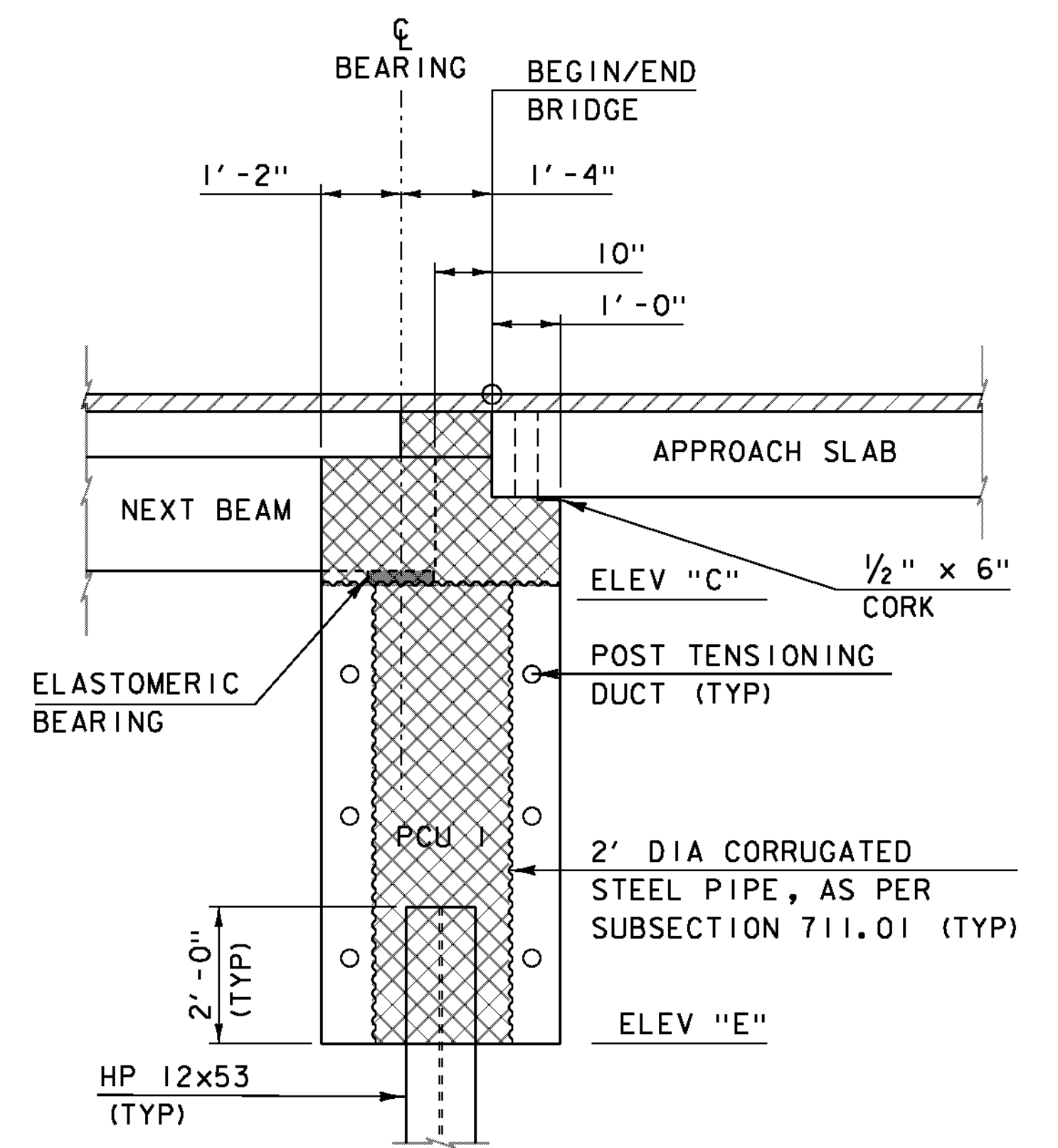
PCU I PLAN
SCALE 1/2" = 1'-0"



PCU I ELEVATION
SCALE 1/2" = 1'-0"

PCU I ELEVATIONS

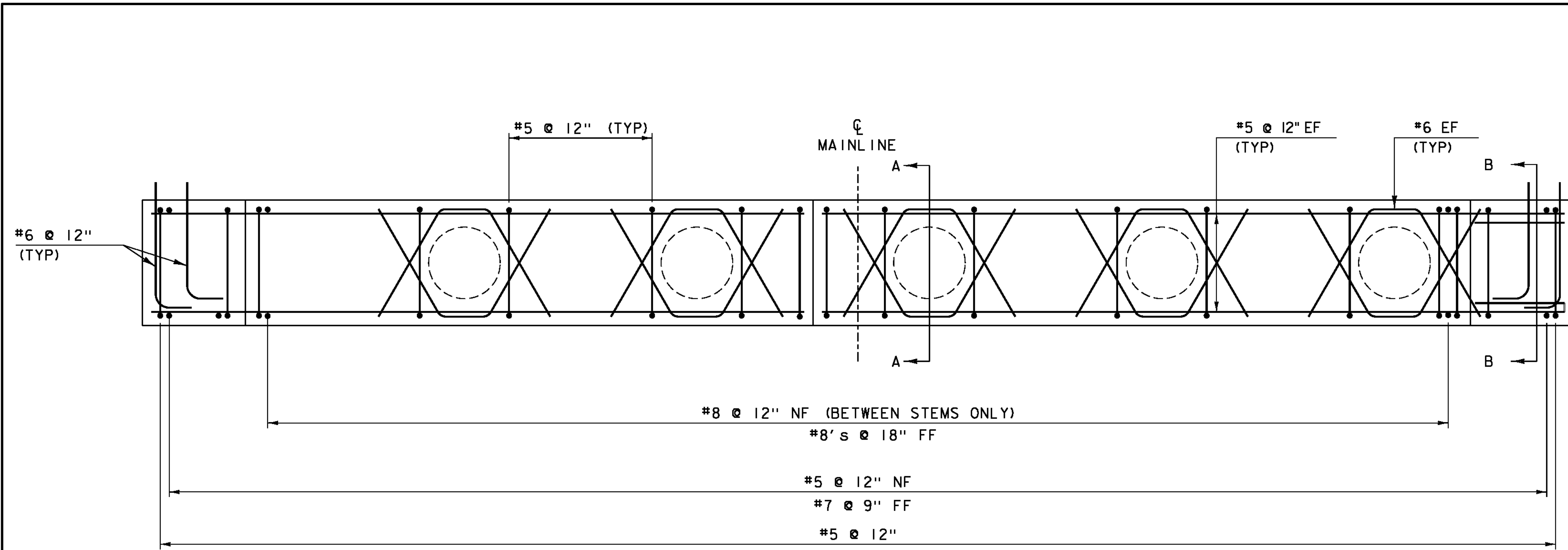
	AB1	AB2
ELEV "A"	1175.25	1174.75
ELEV "B"	1174.36	1173.91
ELEV "C"	1172.49	1172.04
ELEV "D"	1172.13	1171.68
ELEV "E"	1165.78	1165.33



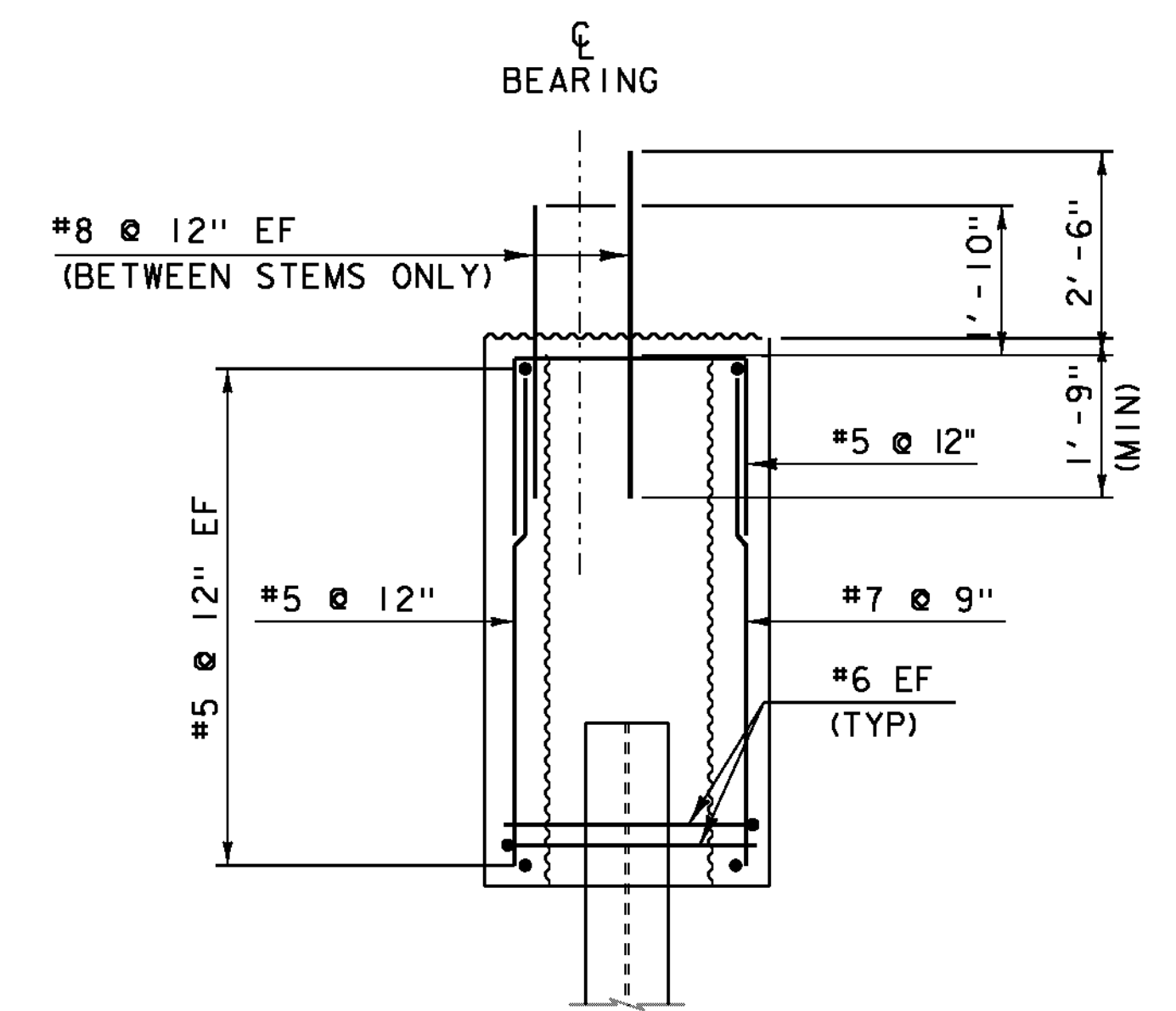
PCU I TYPICAL
SCALE 1/2" = 1'-0"

NOTE: POST-TENSIONING AND ASSOCIATED ITEMS ONLY REQUIRED IF PILE CAP IS CONSTRUCTED OF MORE THAN ONE UNIT.

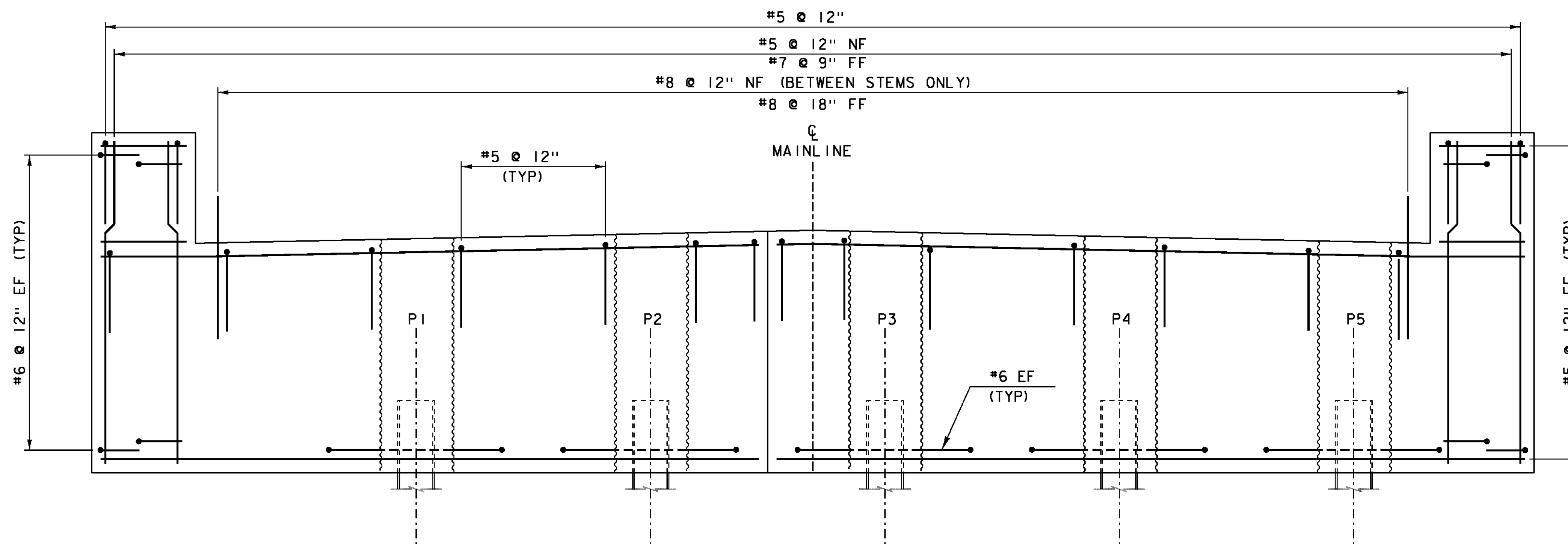
PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: sllb208sub.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 19 OF 36
DESIGNED BY: W. LAMMER	
ABUTMENT PLAN	



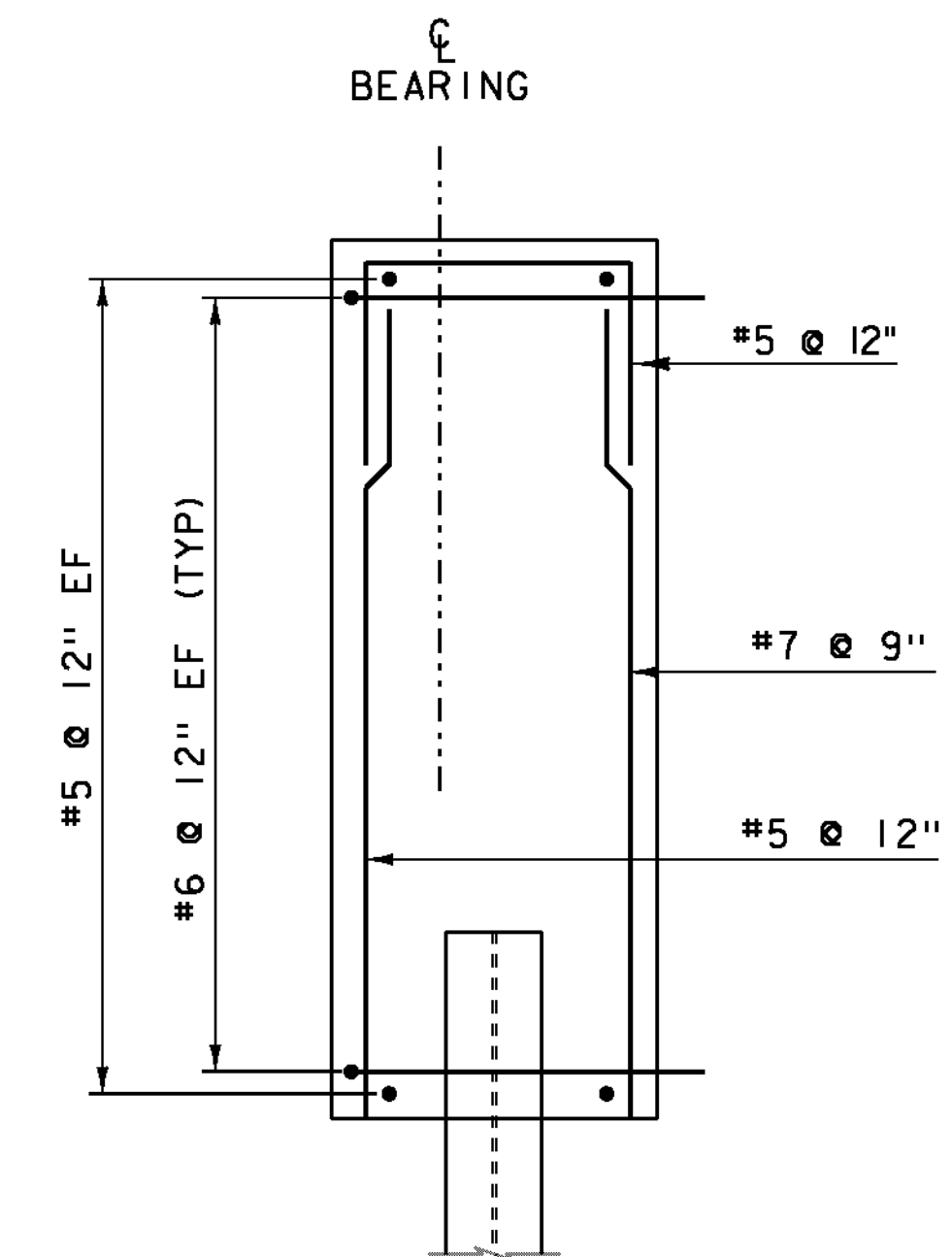
PCU I REINFORCING PLAN
SCALE 1/2" = 1'-0"



SECTION A-A
SCALE 1/2" = 1'-0"



PCU I REINFORCING ELEVATION
SCALE 1/2" = 1'-0"



SECTION B-B
SCALE 1/2" = 1'-0"

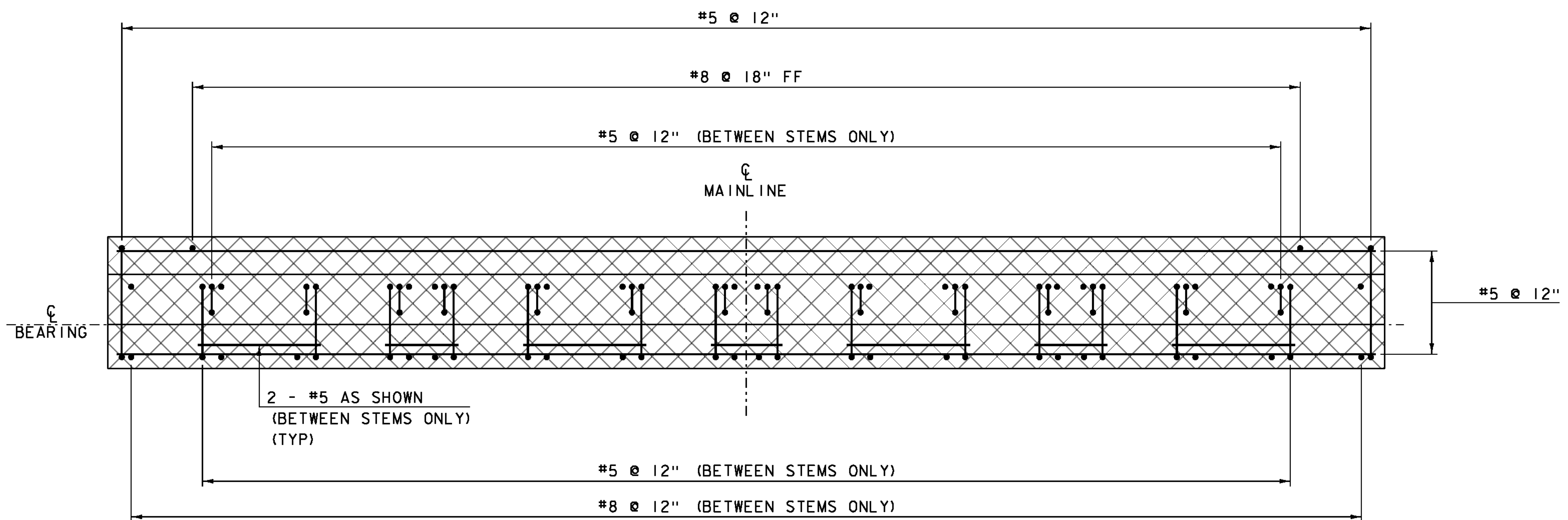
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SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

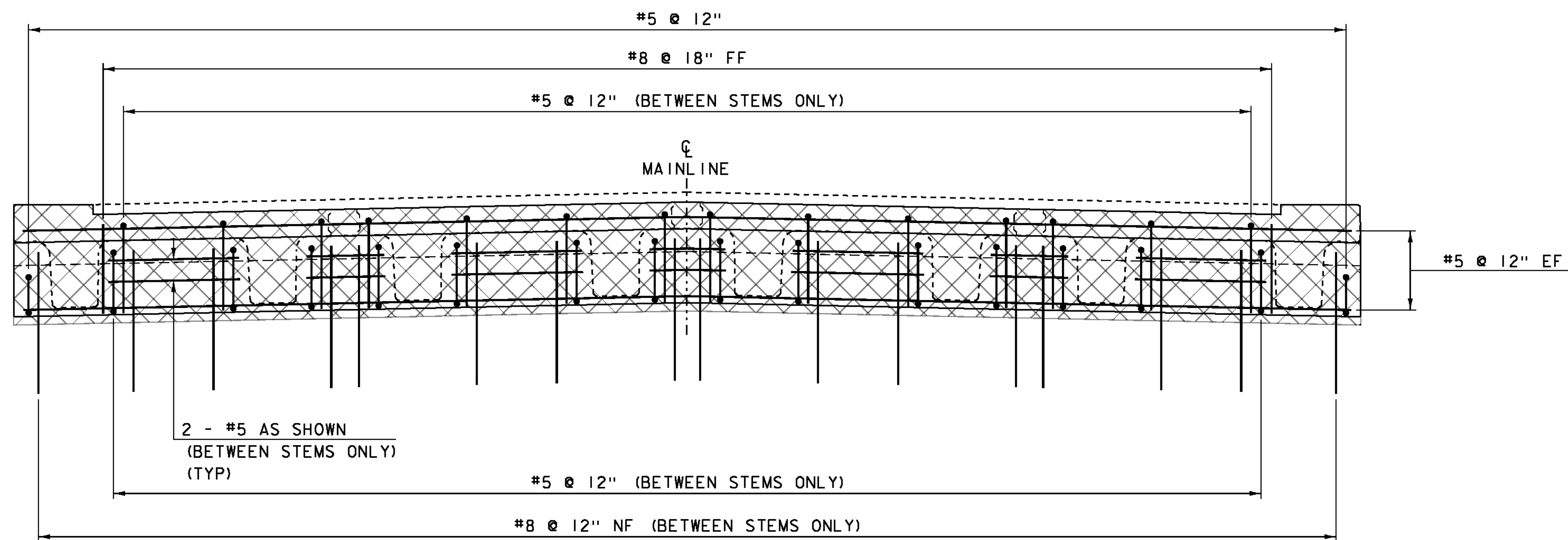
PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: sllb208sub.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: W. LAMMER
ABUTMENT REINFORCING

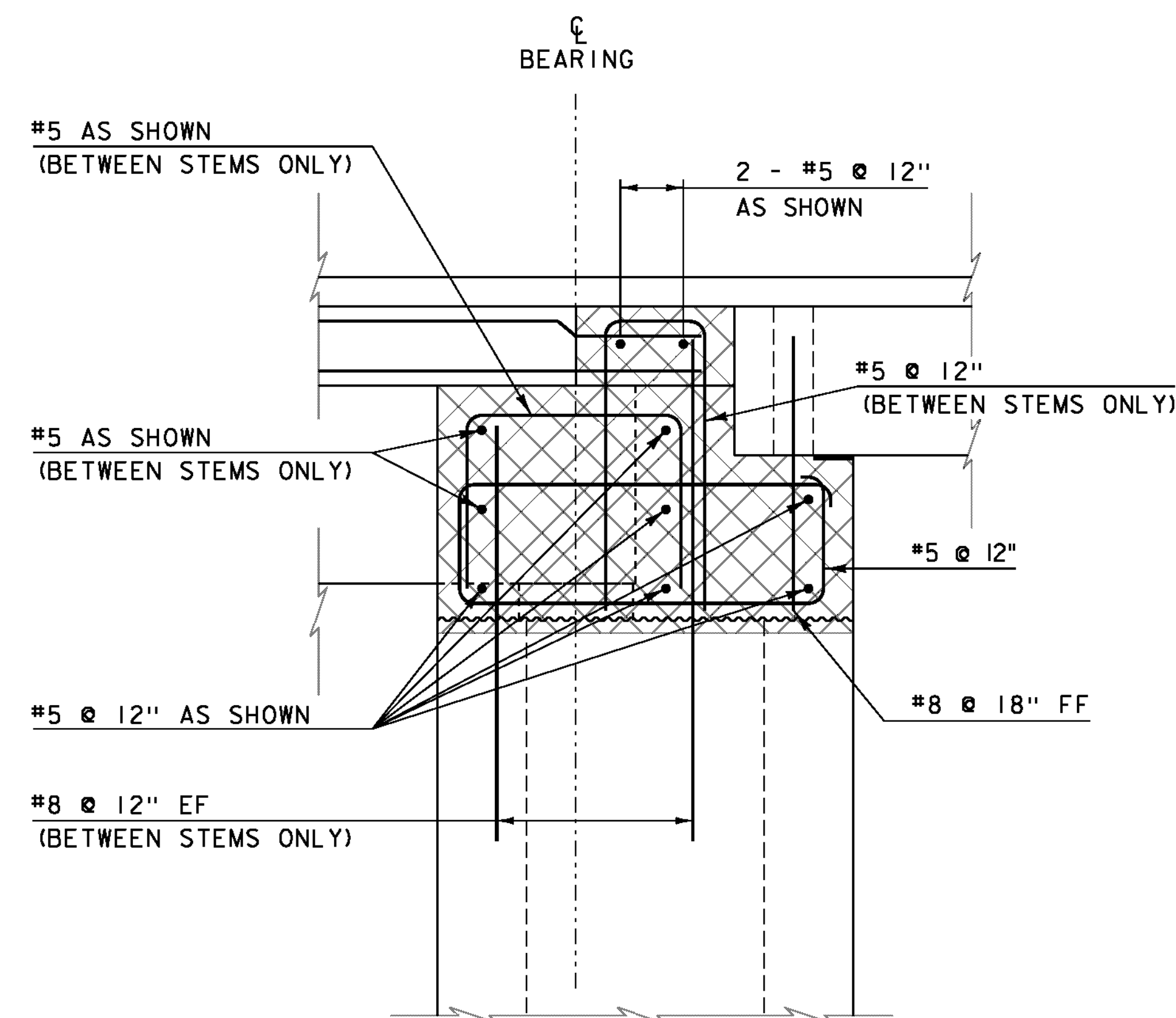
PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 20 OF 36



**DECK CLOSURE POUR
REINFORCING PLAN**
SCALE 1/2" = 1'-0"



**DECK CLOSURE POUR
REINFORCING ELEVATION**
SCALE 1/2" = 1'-0"



REINFORCING TYPICAL
SCALE 1" = 1'-0"

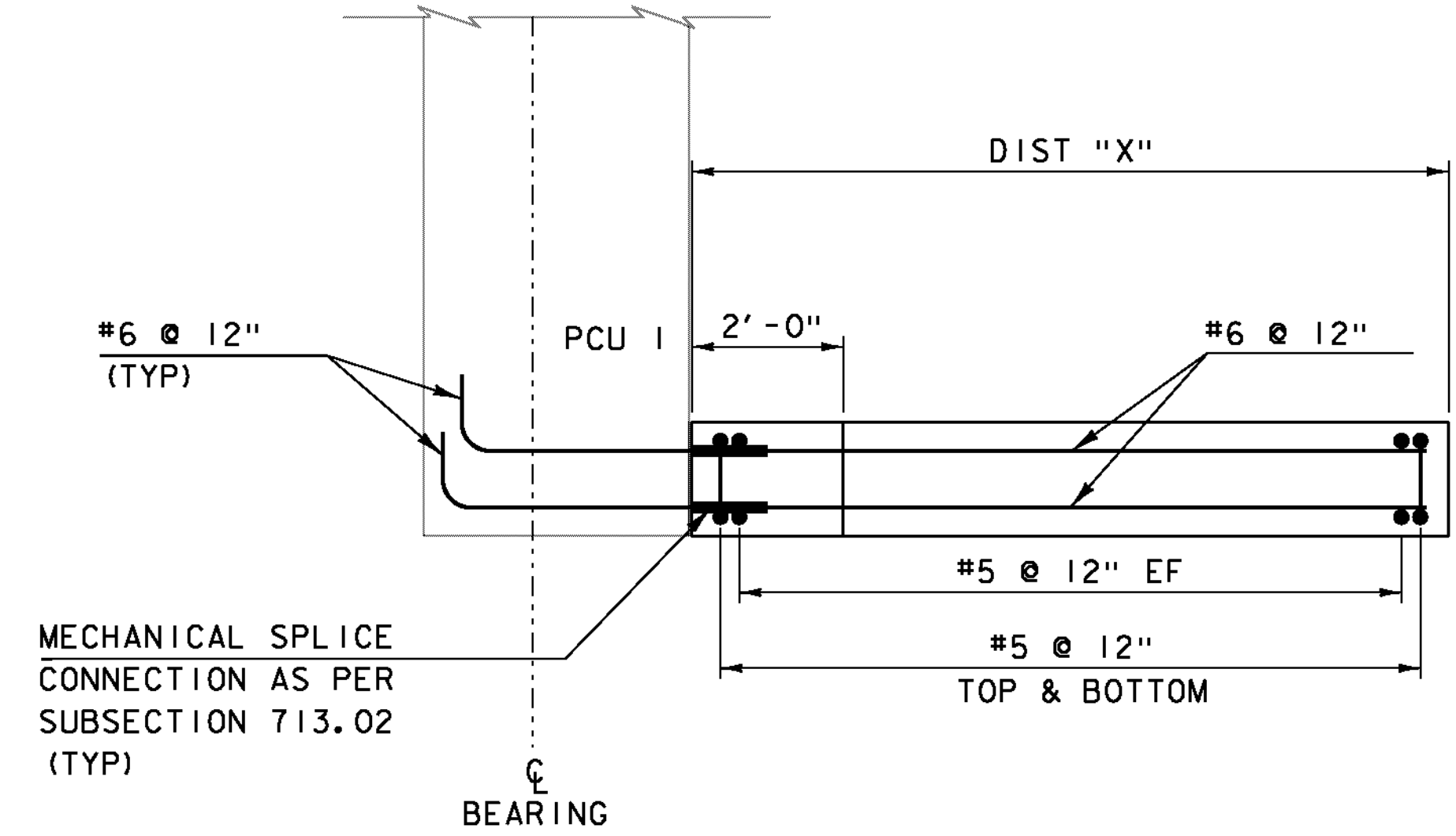
NOTE:

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- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slb208sub.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: W. LAMMER
DECK CLOSURE POUR DETAILS

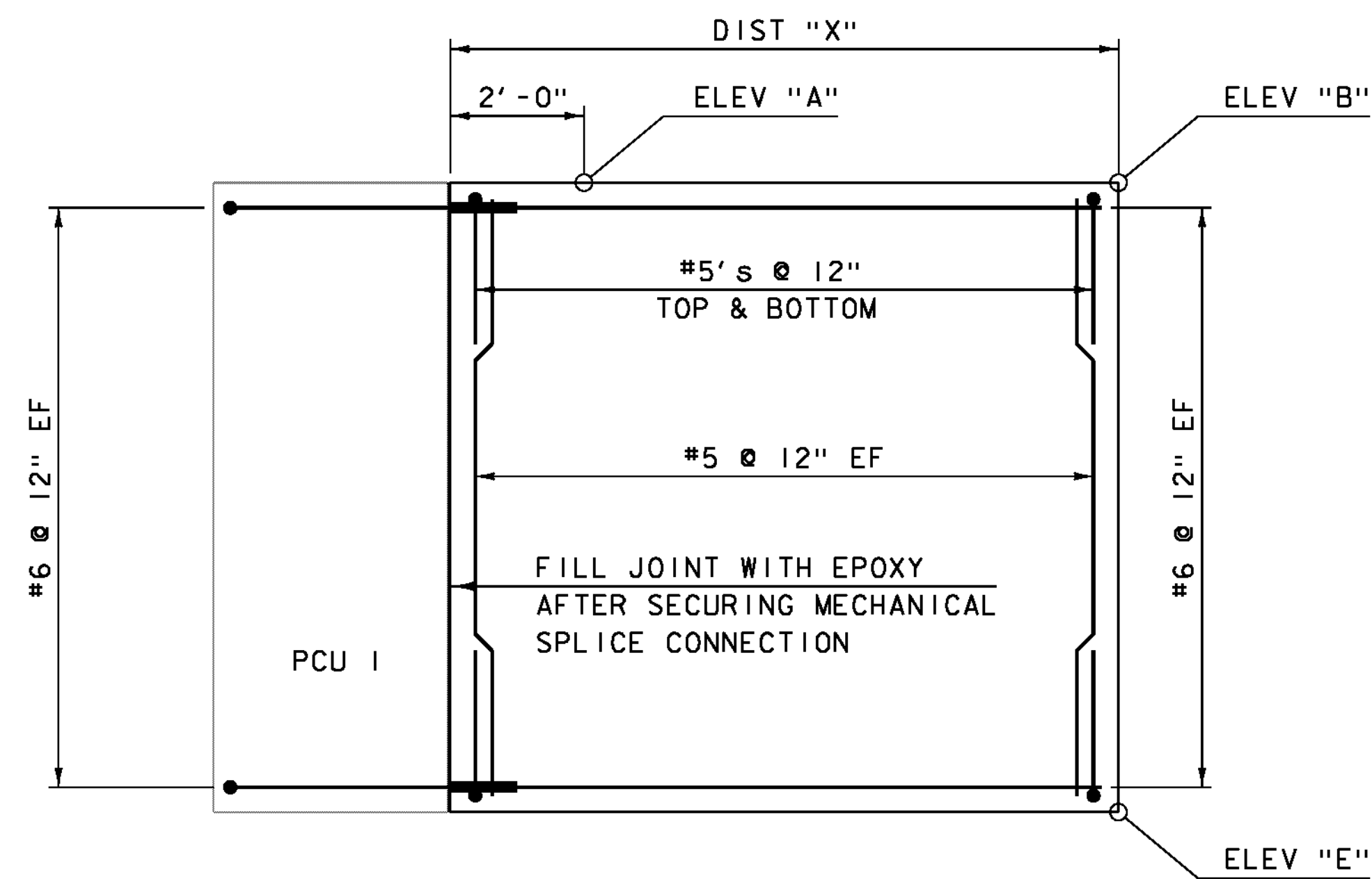
PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 21 OF 36



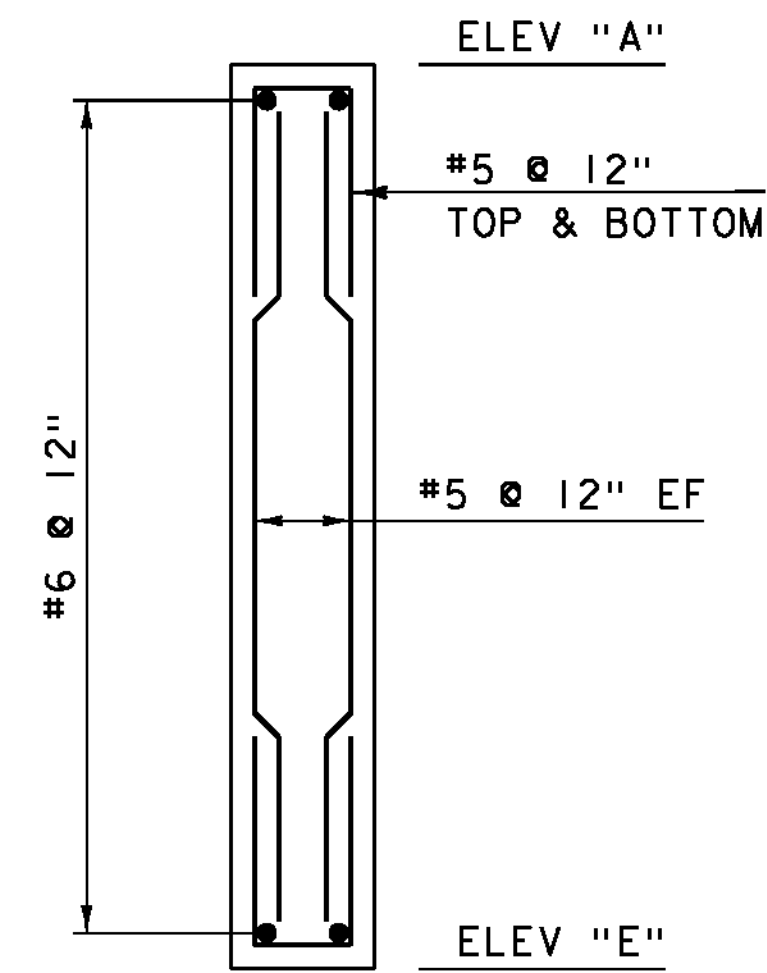
PCU 2 PLAN
SCALE 1" = 1'-0"

PCU 2 ELEVATIONS

	WW1	WW2	WW3	WW4
ELEV "A"	1175.25	1175.25	1174.75	1174.75
ELEV "B"	1175.25	1175.25	1174.75	1174.75
ELEV "E"	1165.78	1165.78	1165.33	1165.33
DIST "X"	10'-0"	10'-0"	10'-0"	10'-0"



PCU 2 ELEVATION
SCALE 1/2" = 1'-0"



PCU 2 TYPICAL
SCALE 1/2" = 1'-0"

NOTE:

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- FF = FAR FACE
- EF = EACH FACE
- ▲ = CUT TO FIT IN FIELD
- 3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

NOTES:

1. EPOXY SHALL BE INCIDENTAL TO THE PRECAST CONCRETE STRUCTURE.

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: sllb208sub.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: W. LAMMER
WINGWALL DETAILS

PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 22 OF 36

V	T	1	0	5	
C	L	O	S	E	D

PORTABLE CHANGEABLE SIGN - PHASE 1

W	E	S	T		O	F
I	S	L	A	N	D	
P	O	N	D			

PORTABLE CHANGEABLE SIGN - PHASE 2

*	M	M	M		D	D	-
*	M	M	M		D	D	

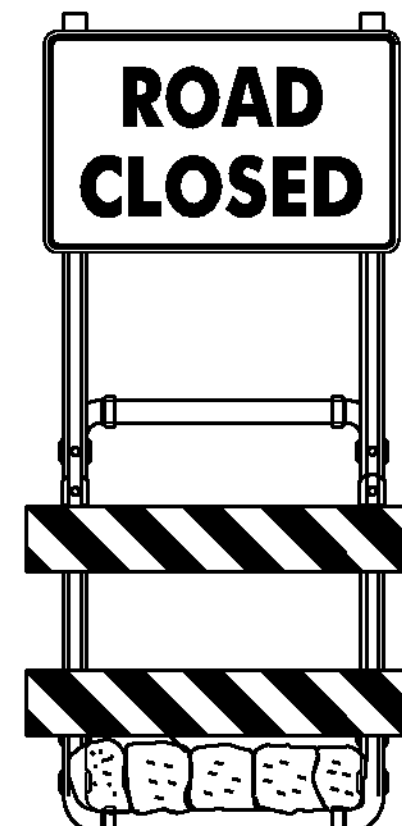
PORTABLE CHANGEABLE SIGN - PHASE 3

* M=MONTH
D=DAY

(S)

NOTES:

1. THE PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE FULLY OPERATIONAL A MINIMUM OF TWO WEEKS PRIOR TO THE CLOSURE OF VT 105.
2. DURING ACTUAL CLOSURE, ELIMINATE PHASE 3 ONLY.
3. DETOUR SIGNS SHALL BE LOCATED ADJACENT TO EXISTING INTERSECTION ROUTE MARKER ASSEMBLIES WHERE APPLICABLE.
4. DETOUR SIGNING IS THE RESPONSIBILITY OF THE CONTRACTOR. PAYMENT FOR ALL TEMPORARY TRAFFIC CONTROL DEVICES FOR IMPLEMENTING THE DETOUR, INCLUDING BUT NOT LIMITED TO SIGNS, BARRICADES AND MESSAGE BOARDS, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.645 SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE).
5. THIS DETOUR PLAN IS AN OUTLINE ONLY AND THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN OF EACH INTERSECTION SHOWING DETOUR SIGN LOCATIONS IN RELATION TO EXISTING SIGNS.

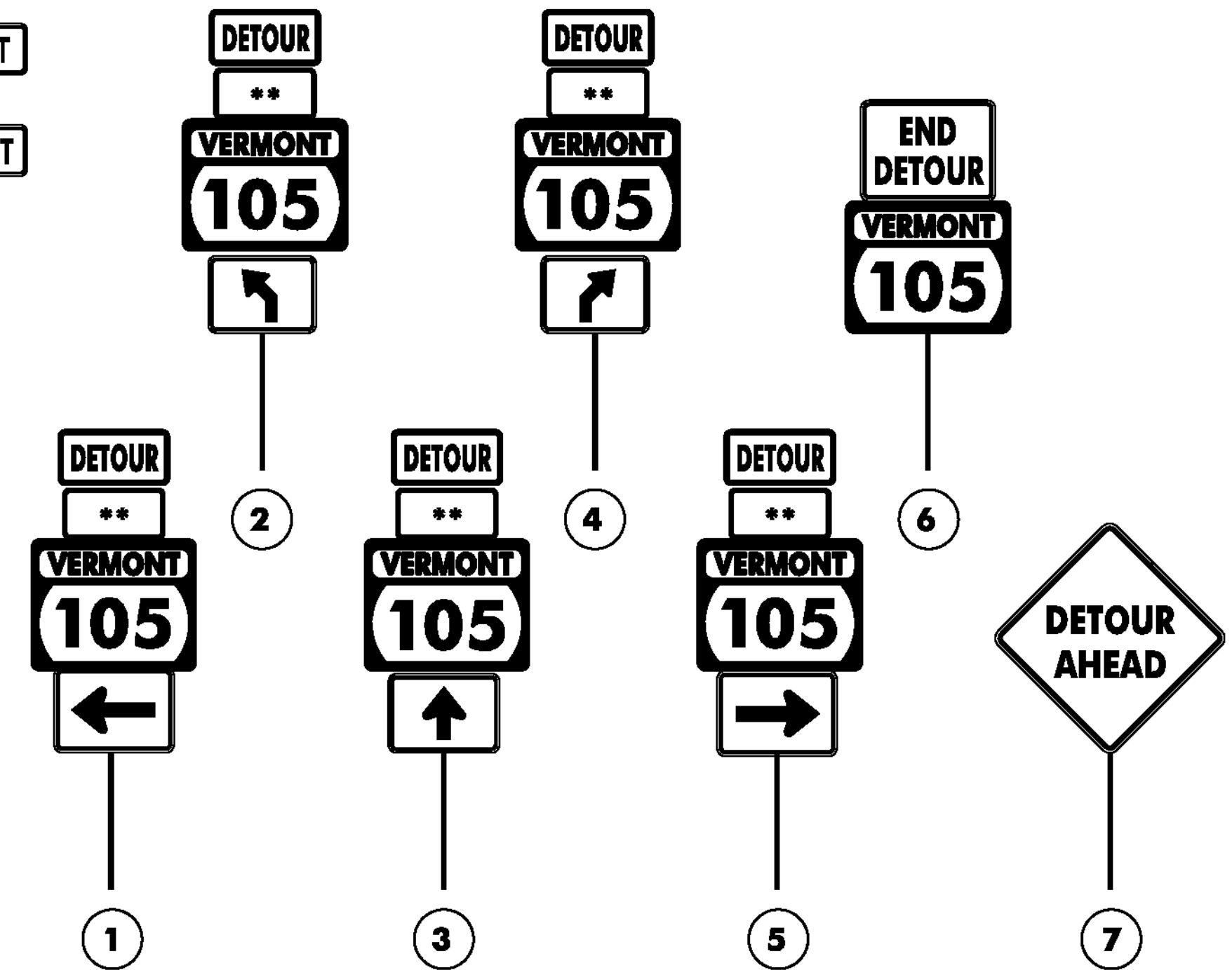


SIGN MOUNTING ON TYPE III BARRICADE (MODIFIED)
A



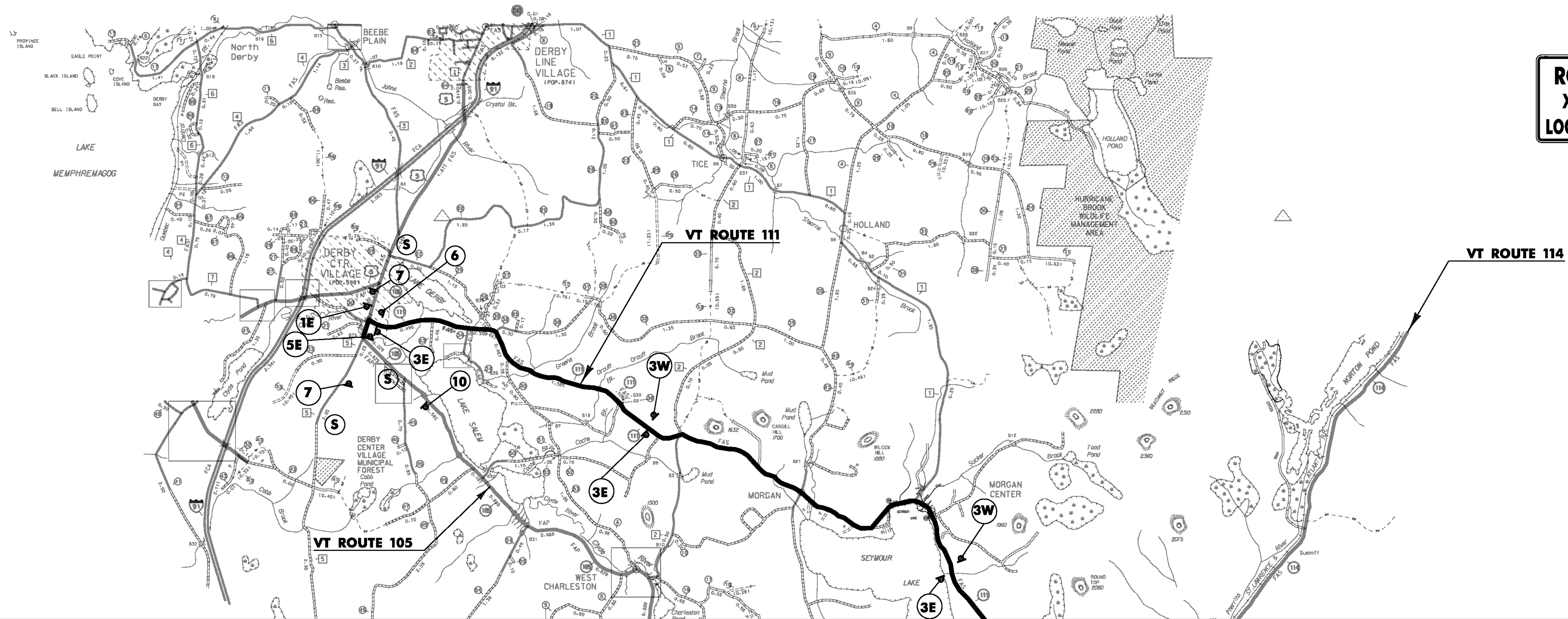
SIGN MOUNTING ON TYPE III BARRICADE (MODIFIED)
B

**E= EAST
OR
W= WEST



ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY

(10)



MATCHLINE

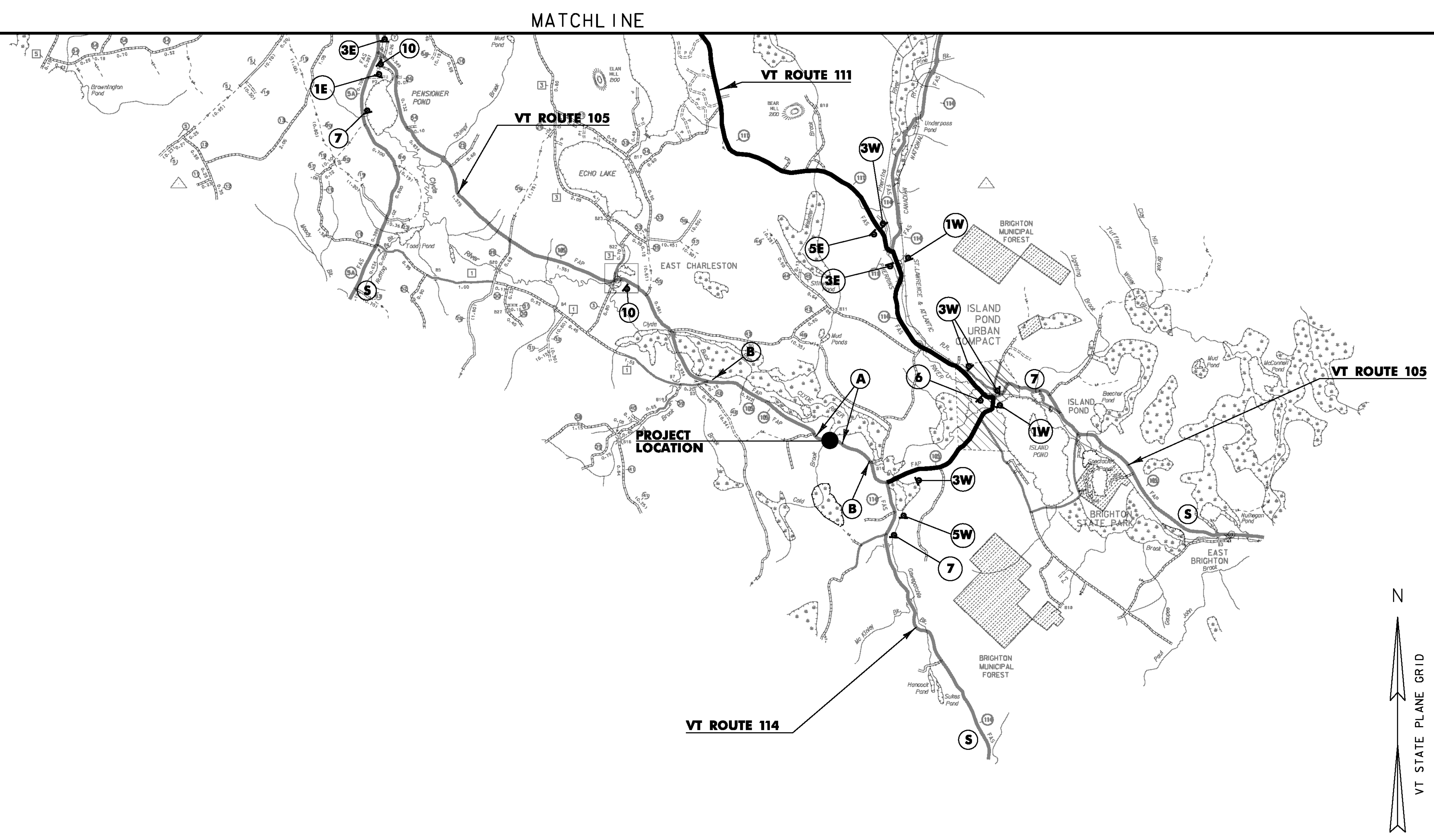
DETOUR PLAN - I

NOT TO SCALE

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3 (25)

FILE NAME: slb208detour.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
DETOUR PLAN I

PLOT DATE: 12-SEP-2012
DRAWN BY: K. FRIEDLAND
CHECKED BY: W. LAMMER
SHEET 23 OF 36



DETOUR PLAN - 2
NOT TO SCALE

PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3 (25)	DRAWN BY: K. FRIEDLAND
FILE NAME: slb208detour.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 24 OF 36
DESIGNED BY: J. SALVATORI	
DETOUR PLAN 2	

EPSC NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF BRIDGE 84 AND RELATED APPROACH AND CHANNEL WORK.

THE BRIDGE IS APPROXIMATELY 1.058 MILES SOUTH EASTERLY OF THE CHARLESTON/BRIGHTON TOWN LINE ALONG VT 105.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.39 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT AREA IS RELATIVELY FLAT, WITH THE ROADWAY RAISED SLIGHTLY FROM THE SURROUNDING TERRAIN.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE COLD RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE RIVER IS CLASSIFIED AS SINUOUS, ALLUVIAL, WITH A BEND COMING IN TO THE BRIDGE. THE STREAM BED CONSISTS OF SAND, GRAVEL AND COBBLES. THERE IS AN EXISTING CULVERT AT STATION 57+00 THAT WILL NOT BE IMPACTED AS PART OF THIS PROJECT.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS MOSTLY FORESTED LAND COVER. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DIRECTLY AFFECTED BY REPLACEMENT OF THE EXISTING CULVERT. UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE III AS SPECIFIED ON THE PLANS. DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF ESSEX, VERMONT.

SOILS ON THE PROJECT SITE ARE:

3A – CHARLES SILTY LOAM, 0% TO 2% SLOPES, "K FACTOR" = 0.32. THE SOIL IS CONSIDERED FREQUENTLY FLOODED.

6B – ADAMS LOAMY FINE SAND, 3% TO 8% SLOPES, "K FACTOR" = 0.17

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:

0.0-0.23 = LOW EROSION POTENTIAL

0.24-0.36 = MODERATE EROSION POTENTIAL

0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO

HISTORICAL OR ARCHEOLOGICAL AREAS: NO

PRIME AGRICULTURAL LAND: NO

THREATENED AND ENDANGERED SPECIES: NO

WATER RESOURCE: COLD RIVER

WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES AS SHOWN ON THE PLANS.

1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTORS PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSION POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

IT IS NOT ANTICIPATED THAT STONE CHECK DAMS WILL BE NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

THERE ARE NO PERMANENT STORMWATER TREATMENT DEVICES ANTICIPATED ON THIS PROJECT.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS.

BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

IT IS NOT ANTICIPATED THAT DEWATERING WILL BE NECESSARY.

1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29.

PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)

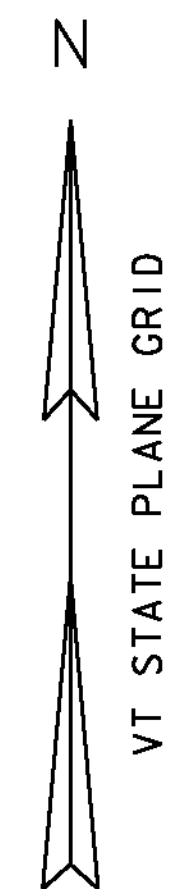
FILE NAME: slb208epsc_nar.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC NARRATIVE

PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 25 OF 36

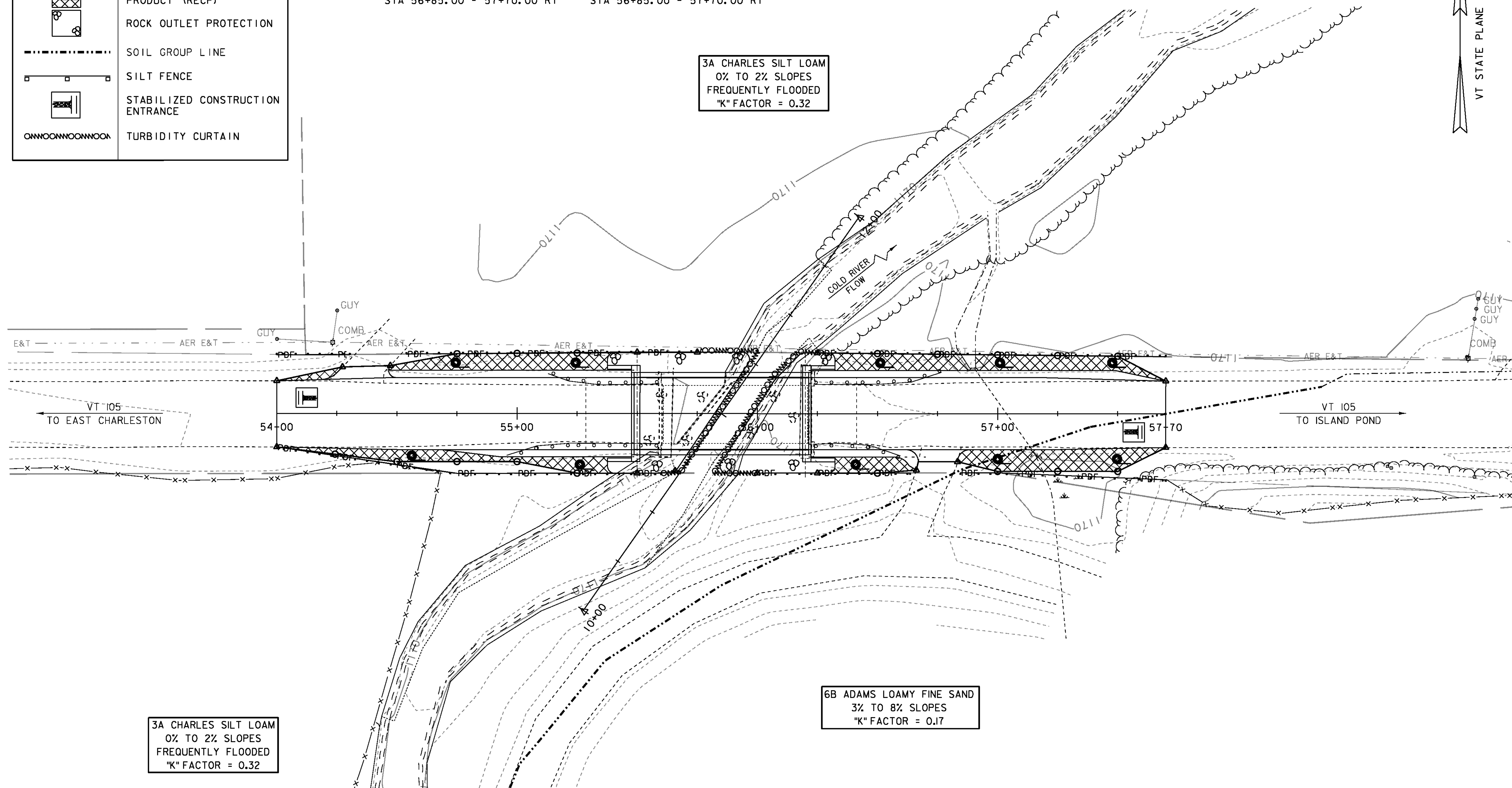
	CUT/FILL LIMITS
	PROJECT DEMARCATION FENCE
	ROLLED EROSION CONTROL PRODUCT (RECP)
	ROCK OUTLET PROTECTION
	SOIL GROUP LINE
	SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE
	TURBIDITY CURTAIN

GEOTEXTILE FOR SILT FENCE
 STA 54+00.00 - 54+25.00 LT
 STA 54+00.00 - 55+60.00 RT
 STA 54+50.00 - 55+75.00 LT
 STA 56+00.00 - 56+65.00 RT
 STA 56+25.00 - 57+70.00 LT
 STA 56+85.00 - 57+70.00 RT

PROJECT DEMARCATION FENCE
 STA 54+00.00 - 54+25.00 LT
 STA 54+00.00 - 55+60.00 RT
 STA 54+50.00 - 55+75.00 LT
 STA 56+00.00 - 56+65.00 RT
 STA 56+25.00 - 57+70.00 LT
 STA 56+85.00 - 57+70.00 RT



3A CHARLES SILT LOAM
 0% TO 2% SLOPES
 FREQUENTLY FLOODED
 "K" FACTOR = 0.32



3A CHARLES SILT LOAM
 0% TO 2% SLOPES
 FREQUENTLY FLOODED
 "K" FACTOR = 0.32

6B ADAMS LOAMY FINE SAND
 3% TO 8% SLOPES
 "K" FACTOR = 0.17

NOTES:

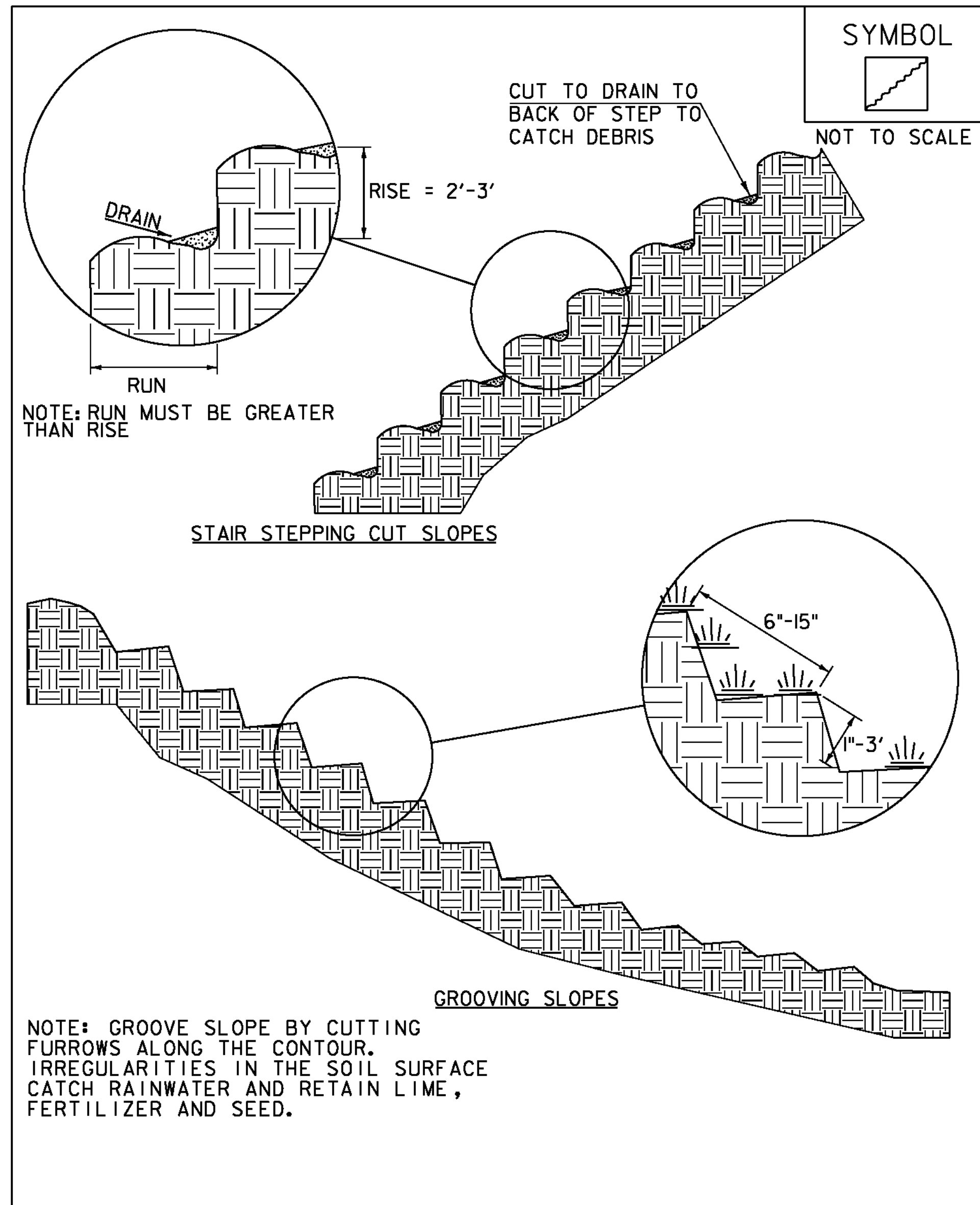
- EXISTING CONTOURS SHOWN. SEE CROSS SECTIONS FOR FINAL CONDITIONS.
- FOR CLARITY, AREAS TO BE SEEDED AND MULCHED HAVE NOT BEEN INDICATED. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED AS APPLICABLE.

EPSC PLAN
 SCALE 1" = 20'-0"
 20 0 20

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slb208epsc.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 EPSC PLAN

PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 26 OF 36



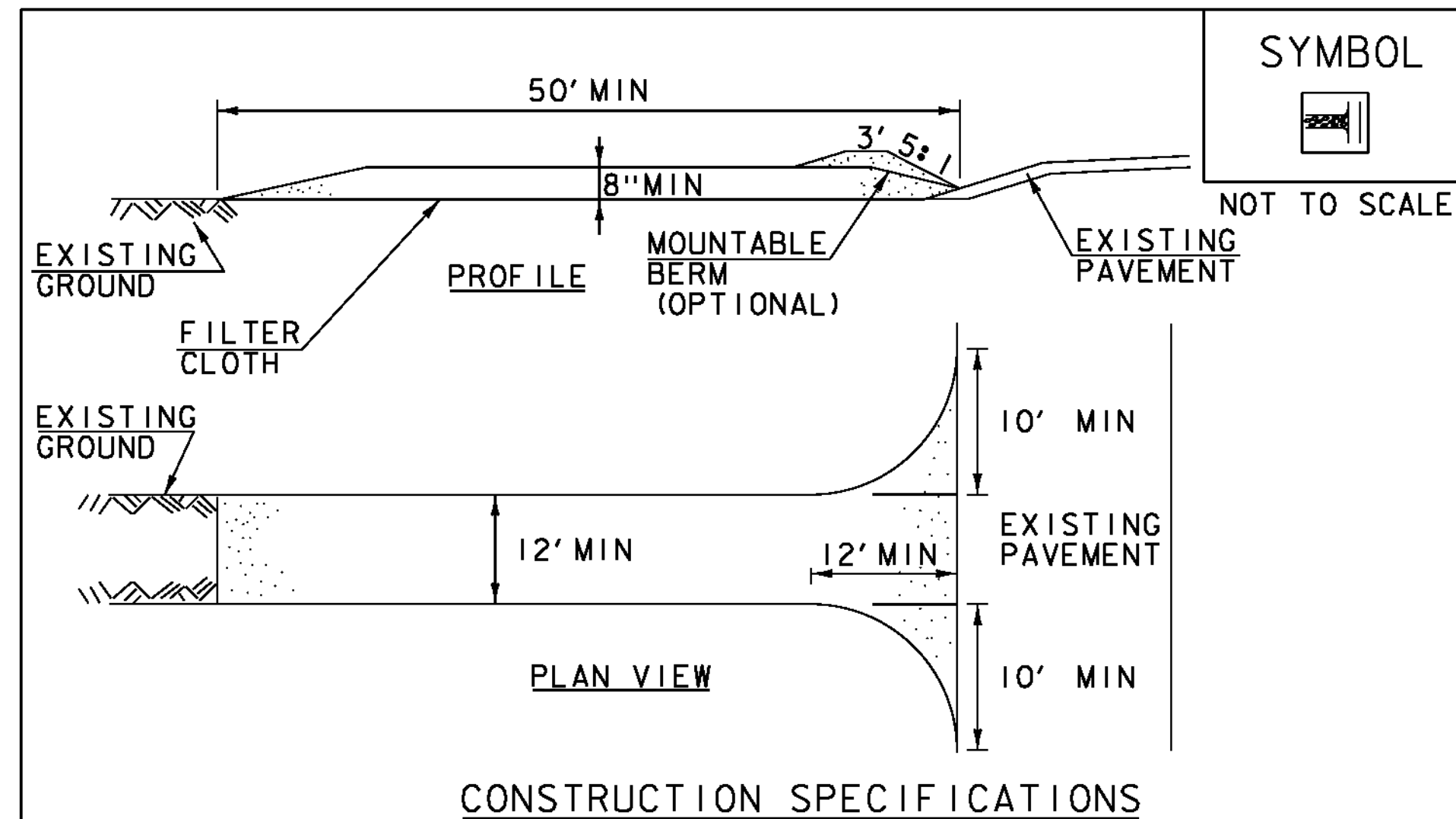
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SURFACE ROUGHENING

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE
CONTRACT

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



- CONSTRUCTION SPECIFICATIONS
1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
 3. THICKNESS- NOT LESS THAN 8".
 4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
 5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
 6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STABILIZED CONSTRUCTION ENTRANCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35)
OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX					
	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE			
FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	FOLLOW	PELLETIZED	FOLLOW
500 LBS/AC	MANUFACTURER	2 TONS/AC	MANUFACTURER

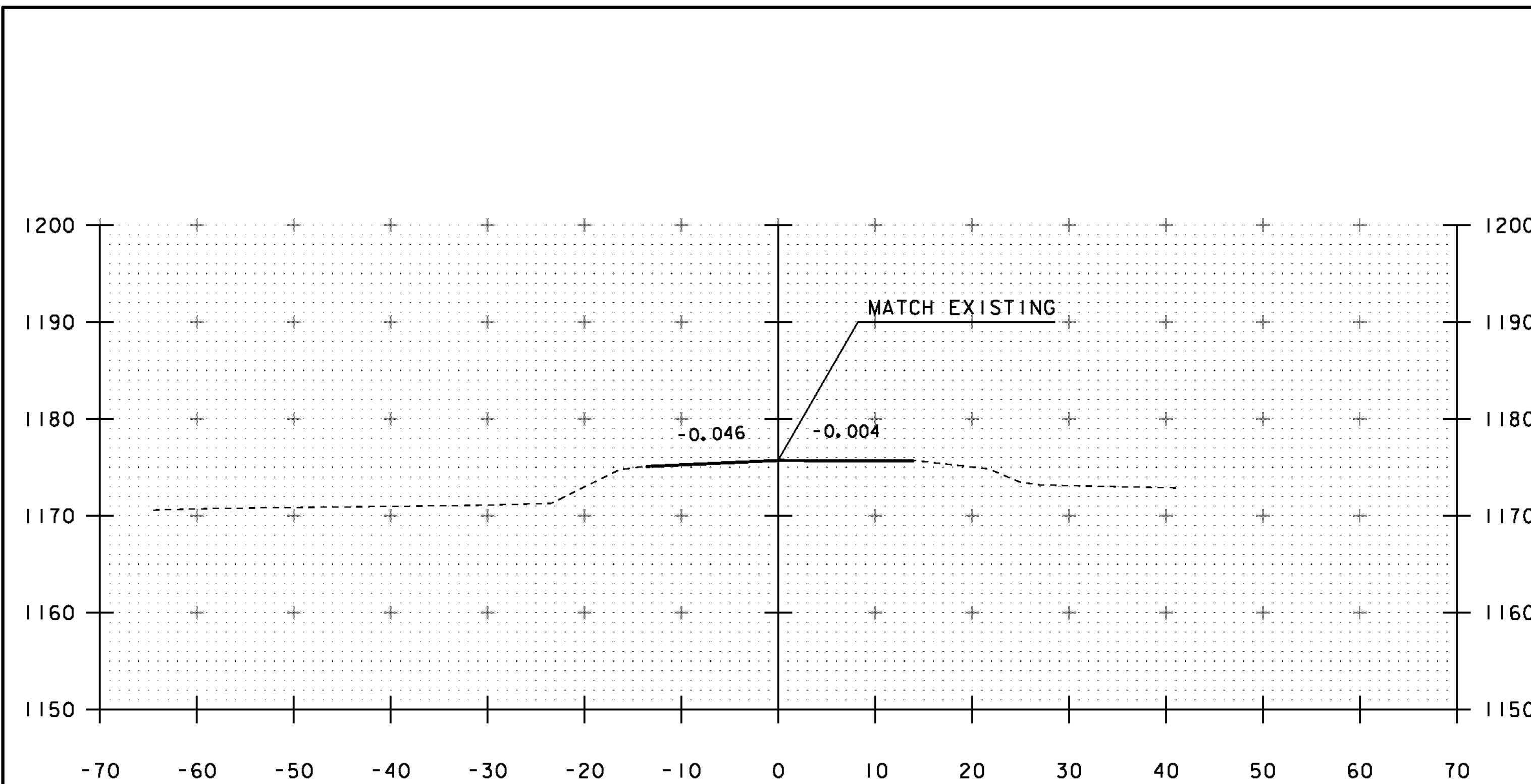
- CONSTRUCTION GUIDANCE
1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
 2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
 3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
 4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
 5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
 6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
 7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
 8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

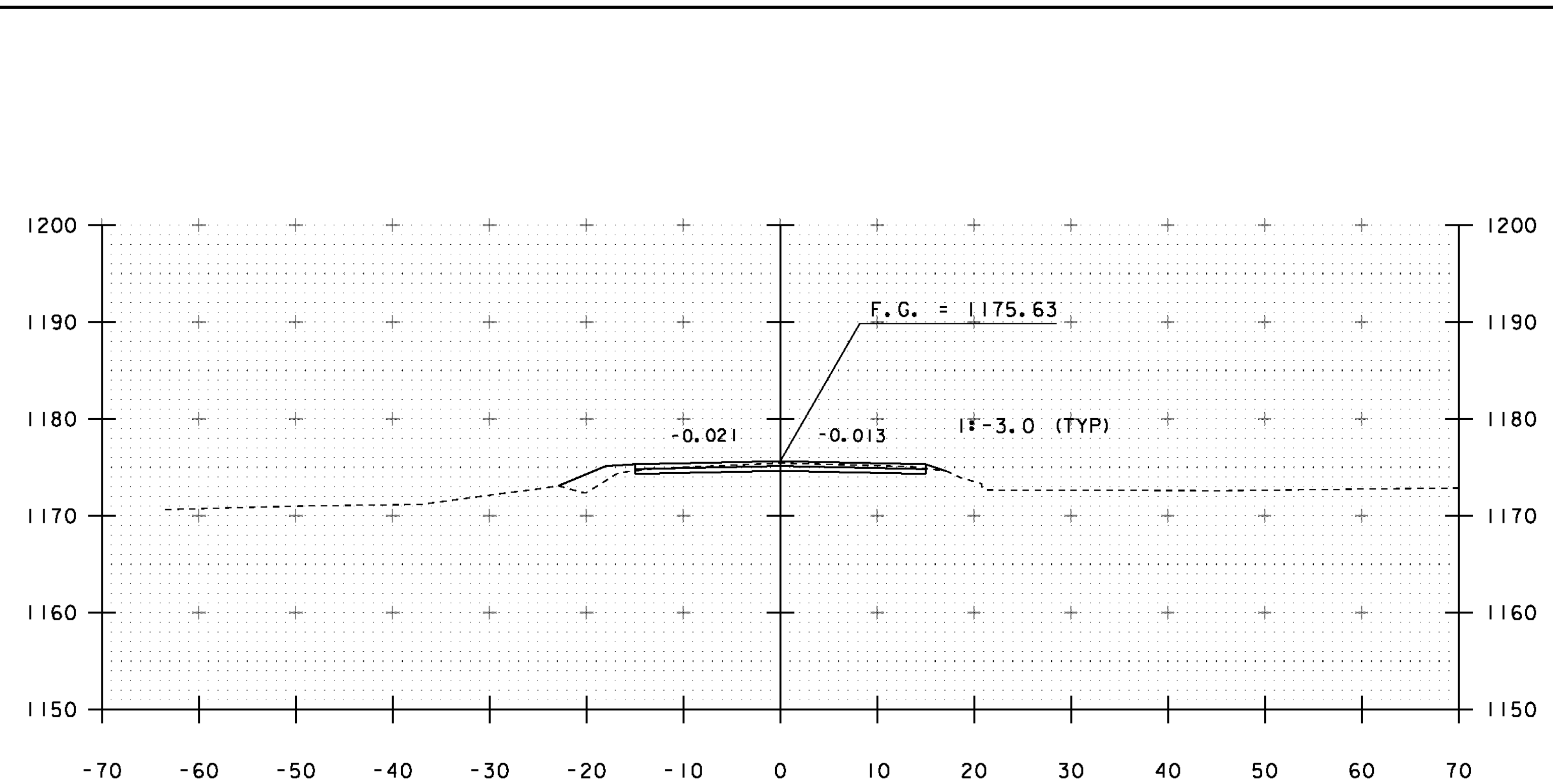
TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

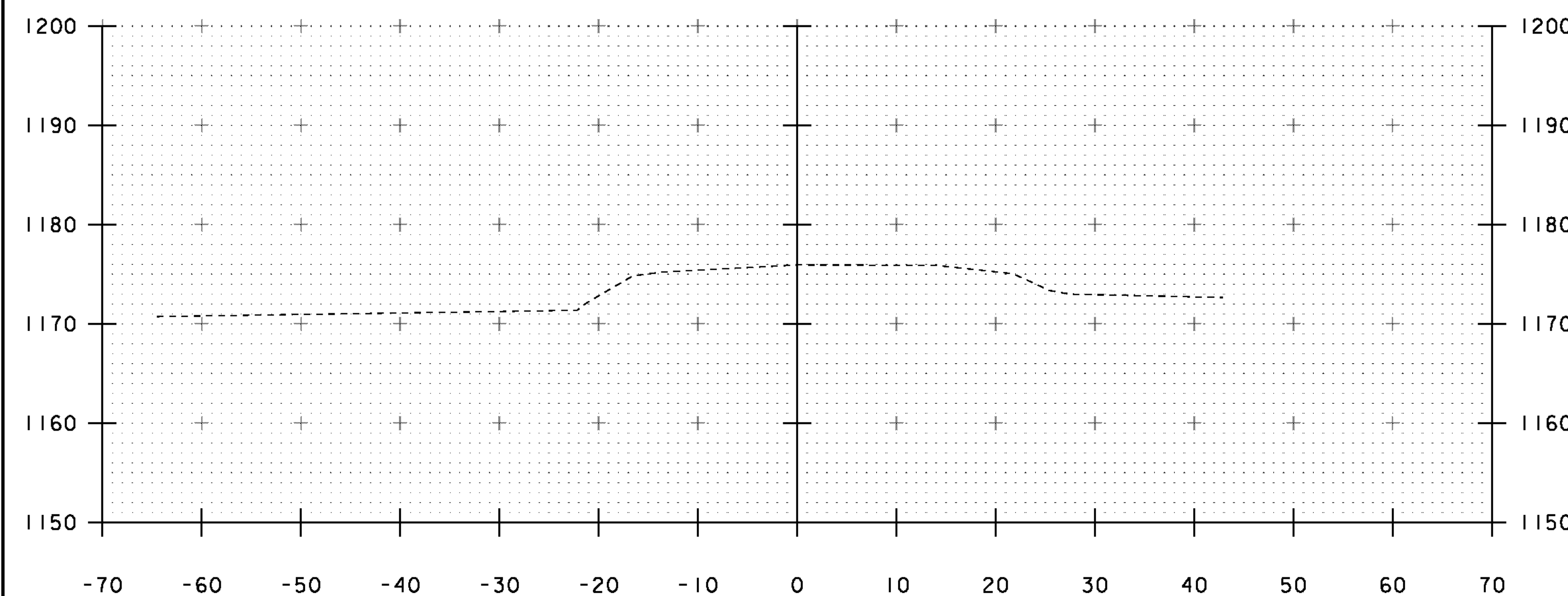
PROJECT NAME: BRIGHTON
PROJECT NUMBER: ER STP 034-3(25)
FILE NAME: slb208epsc_det.dgn
PROJECT LEADER: K. HIGGINS
DESIGNED BY: J. SALVATORI
EPSC DETAILS SHEET 2
PLOT DATE: 12-SEP-2012
DRAWN BY: J. SALVATORI
CHECKED BY: W. LAMMER
SHEET 28 OF 36



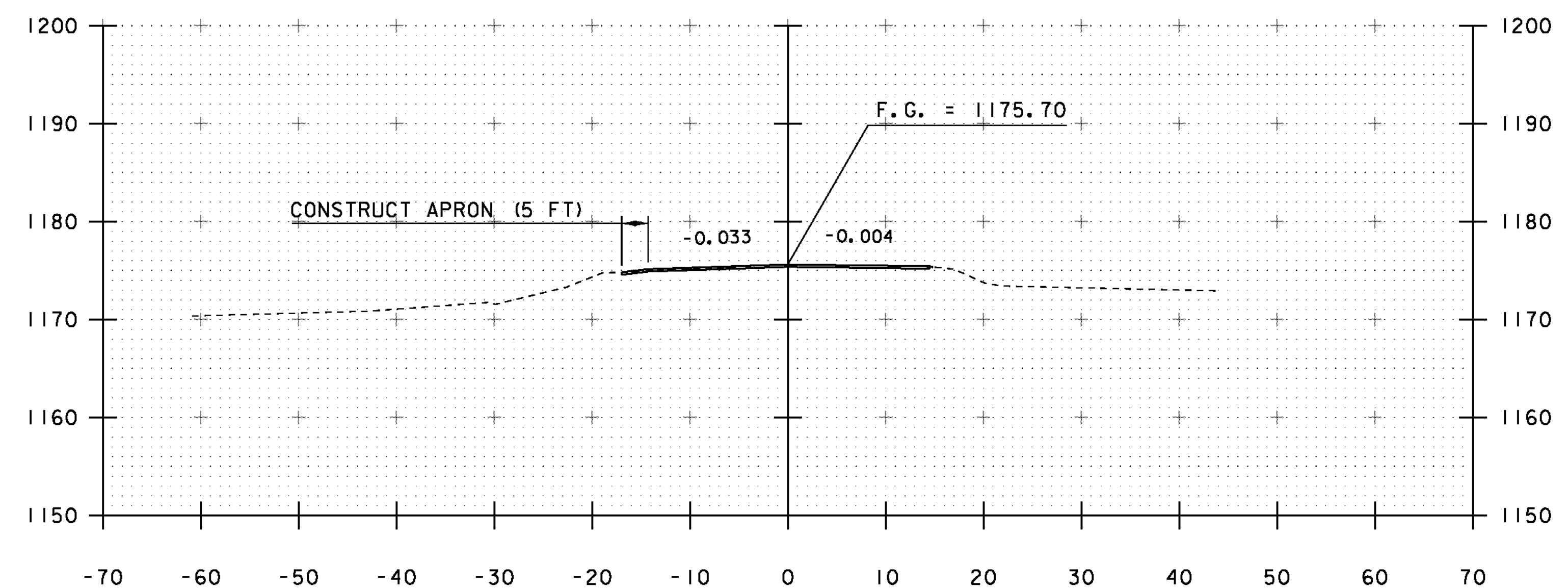
54+00
BEGIN APPROACH



54+50



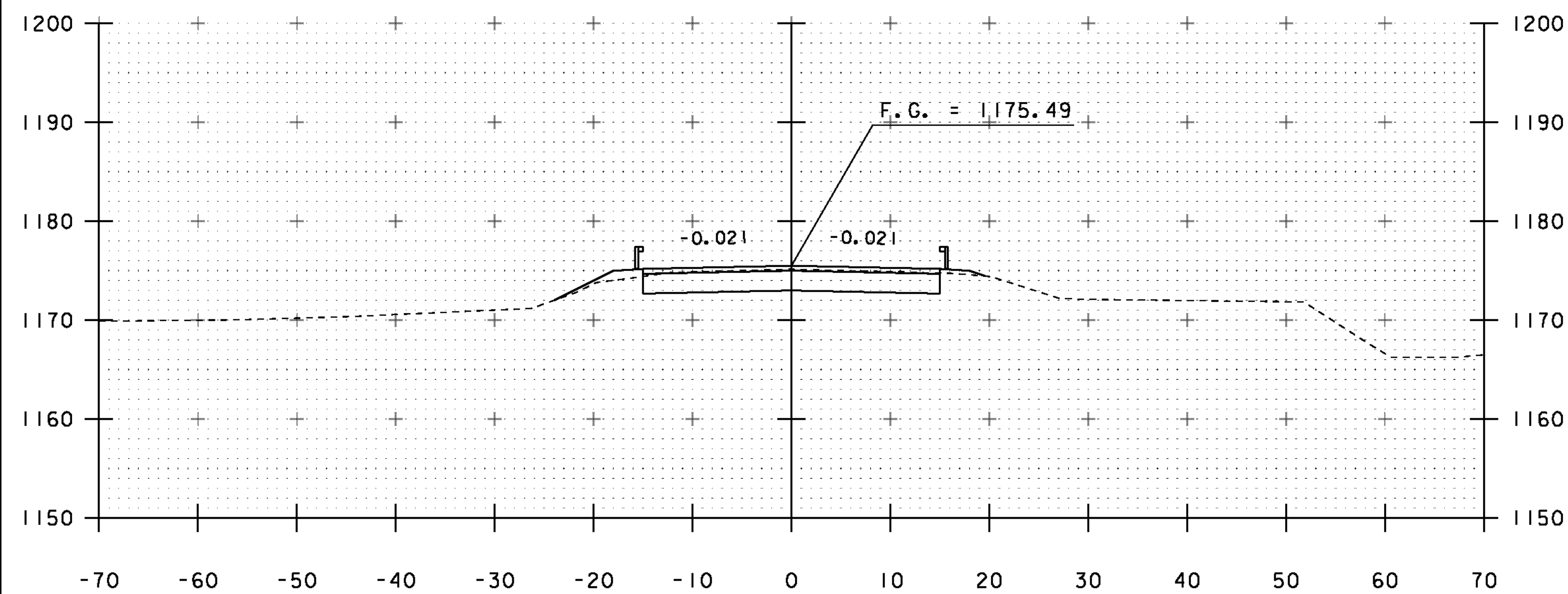
53+75



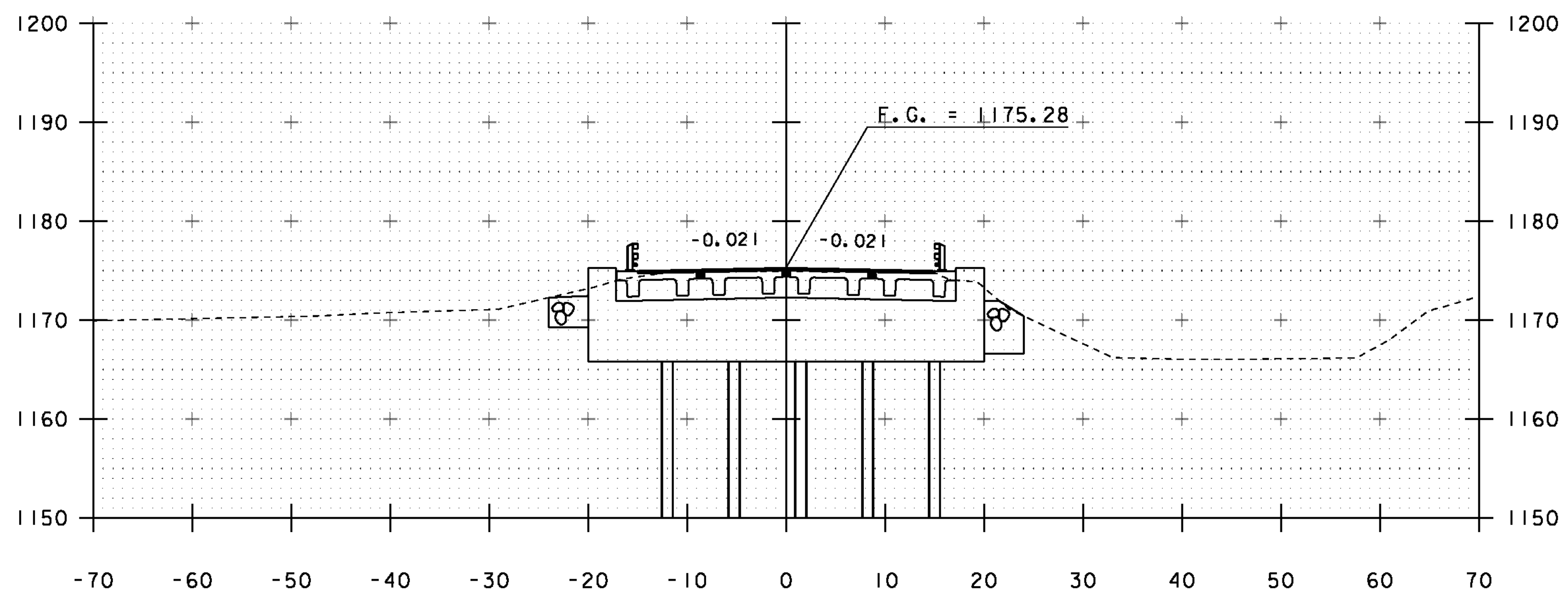
54+25

STA. 53+75 TO STA. 54+50

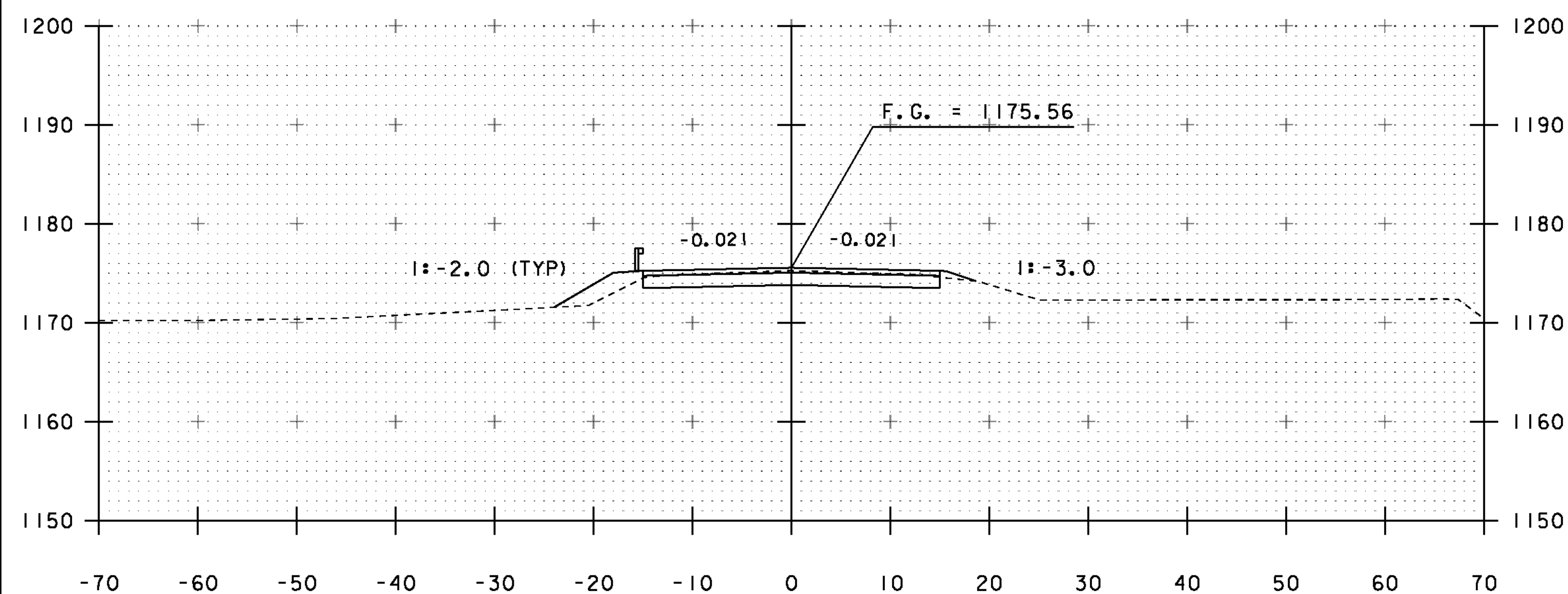
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PROJECT NUMBER: ER STP 034-3(25)	
FILE NAME: s1b208xs.dgn	PLOT DATE: 12-SEP-2012
PROJECT LEADER: K. HIGGINS	DRAWN BY: J. SALVATORI
DESIGNED BY: J. SALVATORI	CHECKED BY: W. LAMMER
MAINLINE SECTIONS	SHEET 29 OF 36



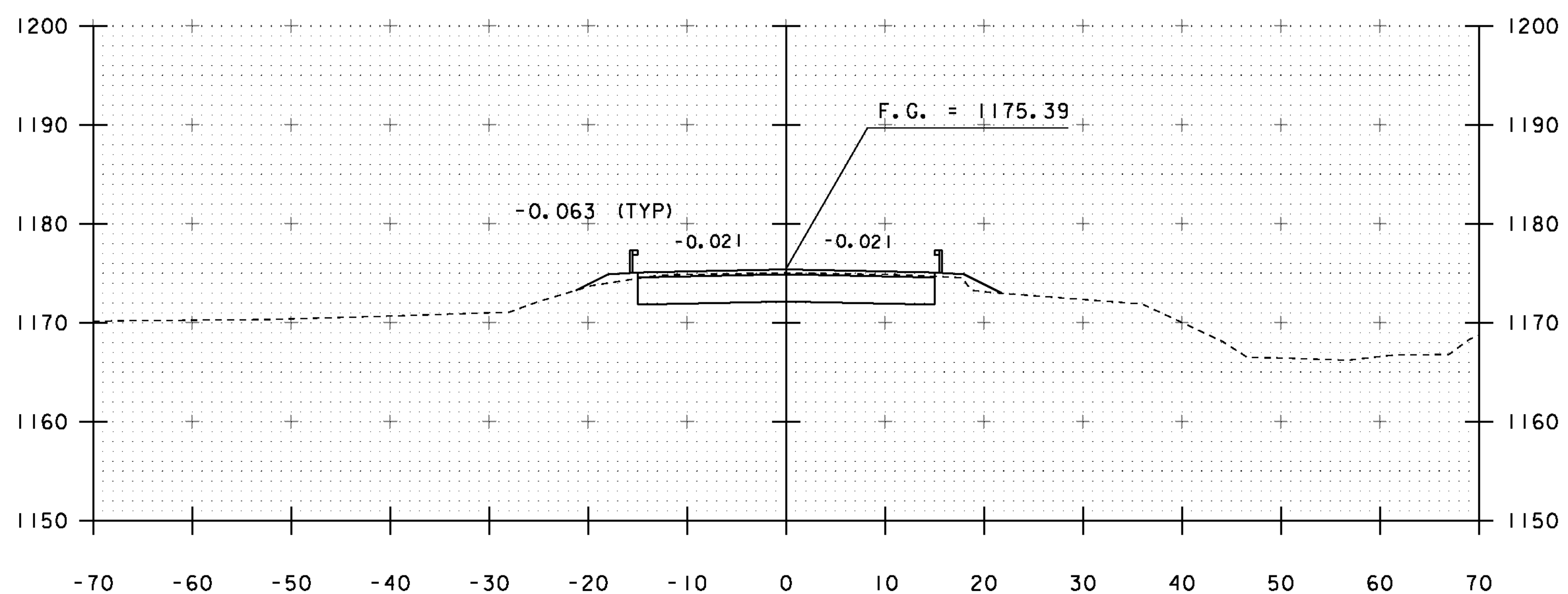
55+00
BEGIN PROJECT
END APPROACH



55+50
BEGIN BRIDGE STA 55+48.67



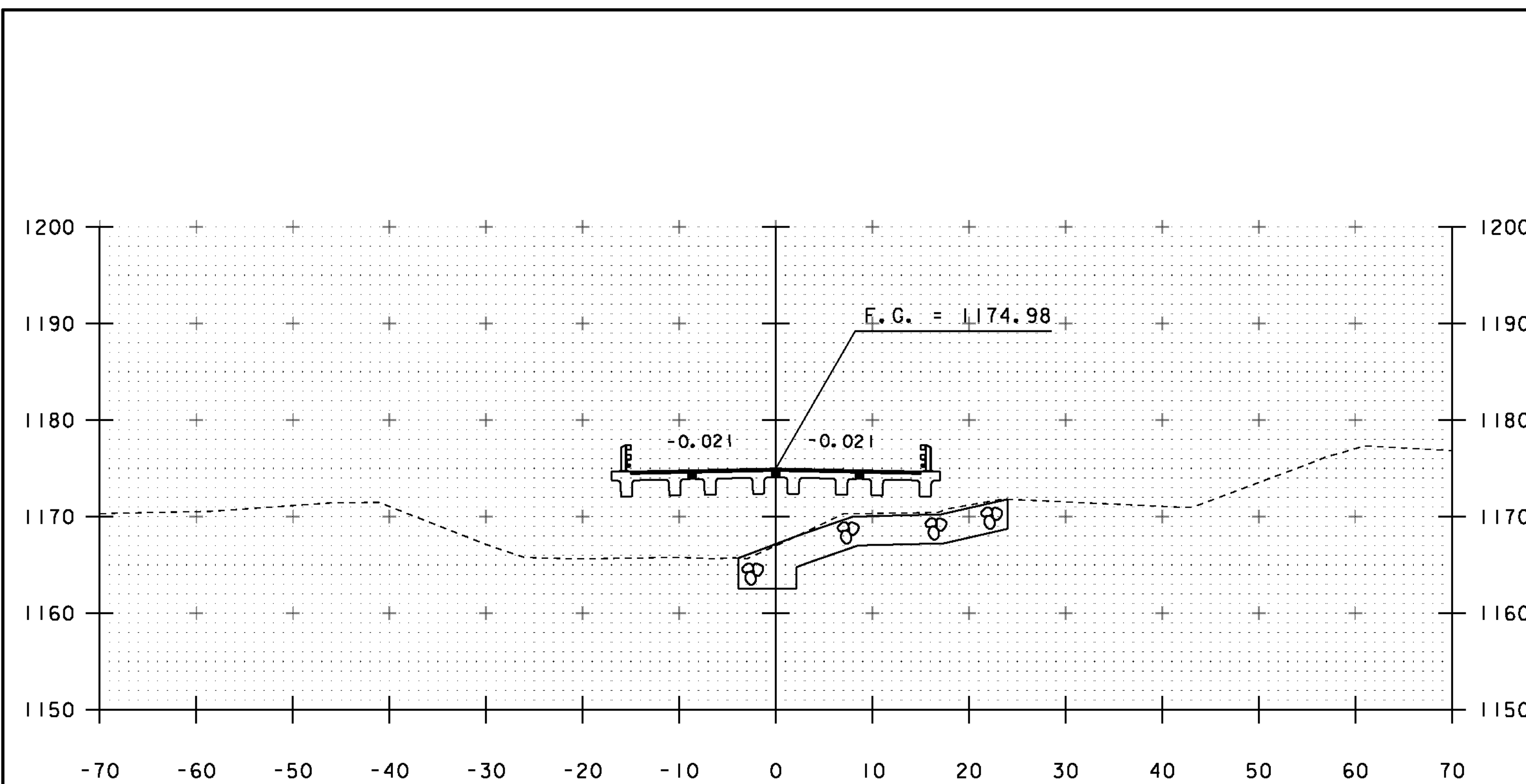
54+75



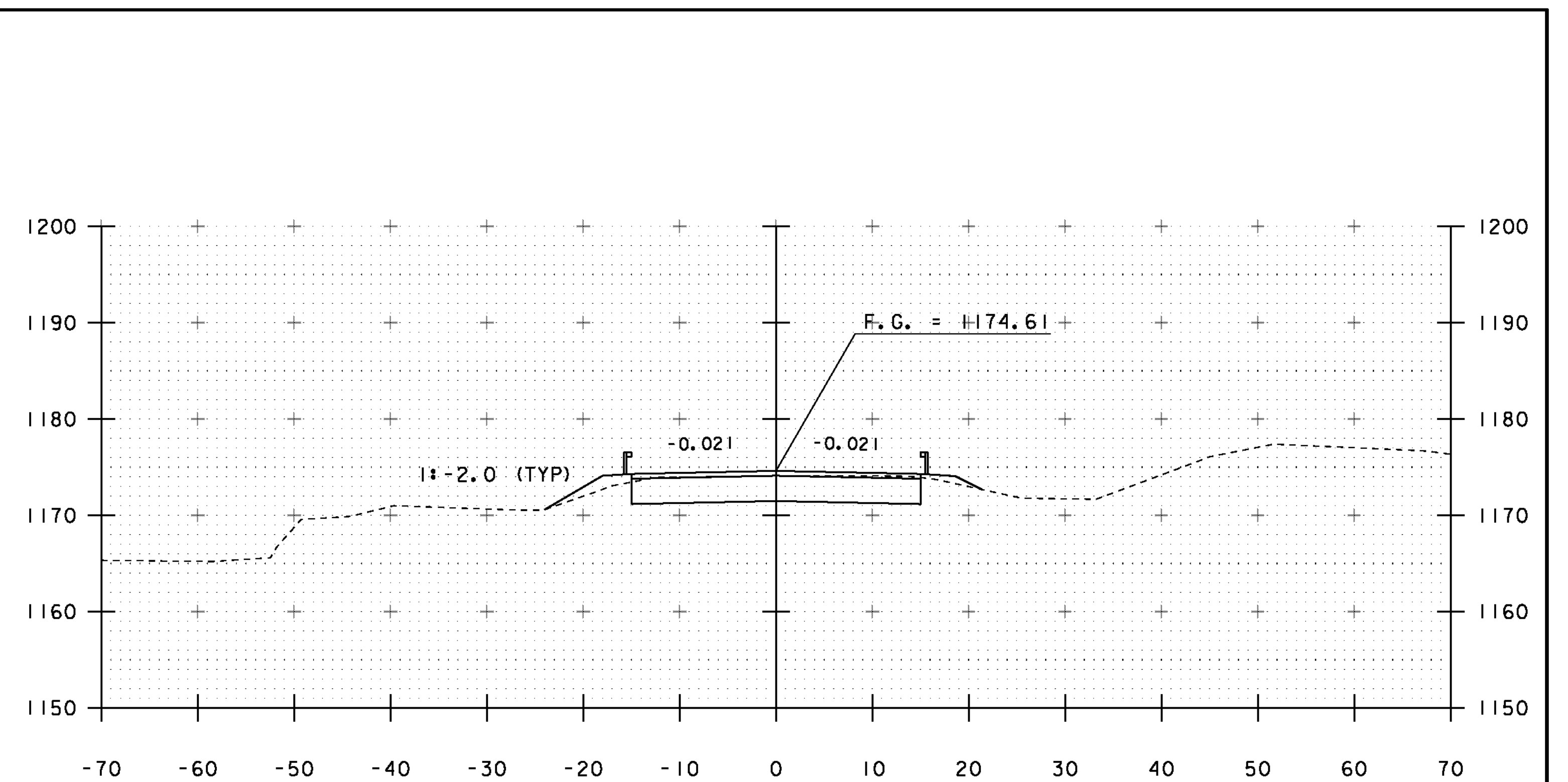
55+25

PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: s11b208xs.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 30 OF 36
DESIGNED BY: J. SALVATORI	
MAINLINE SECTIONS	

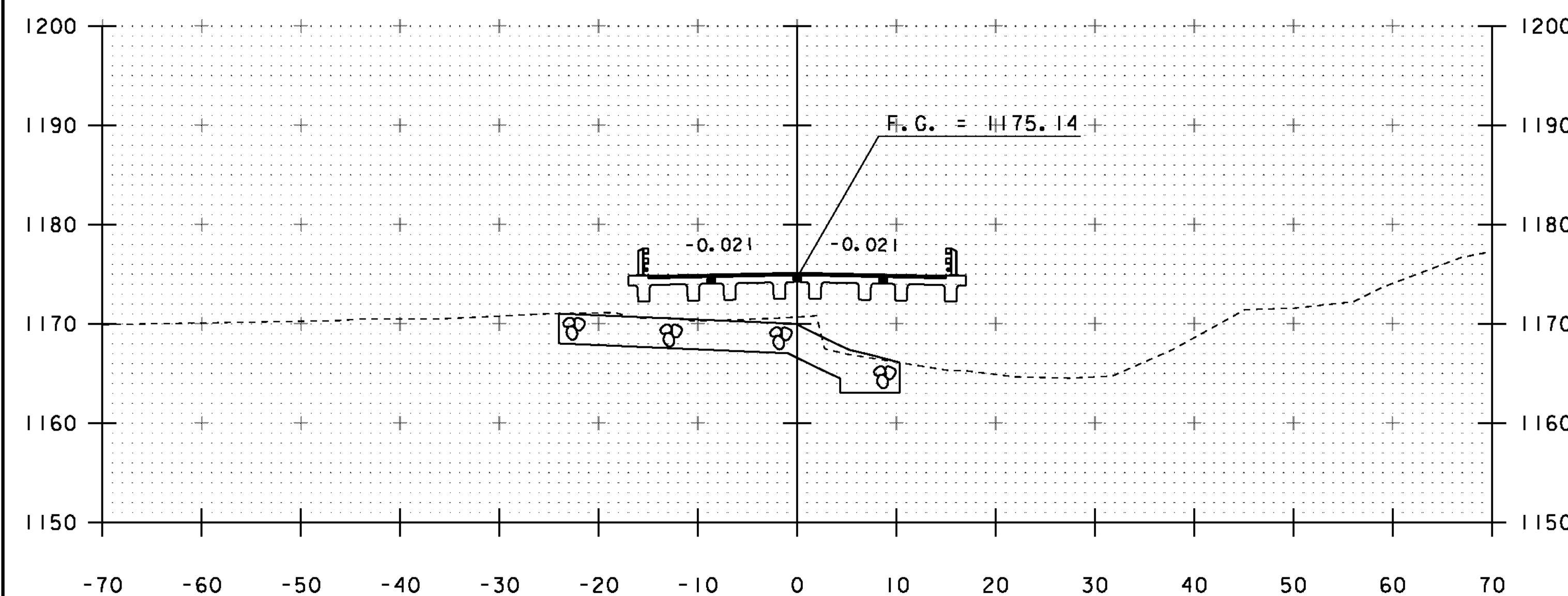
STA. 54+75 TO STA. 55+50



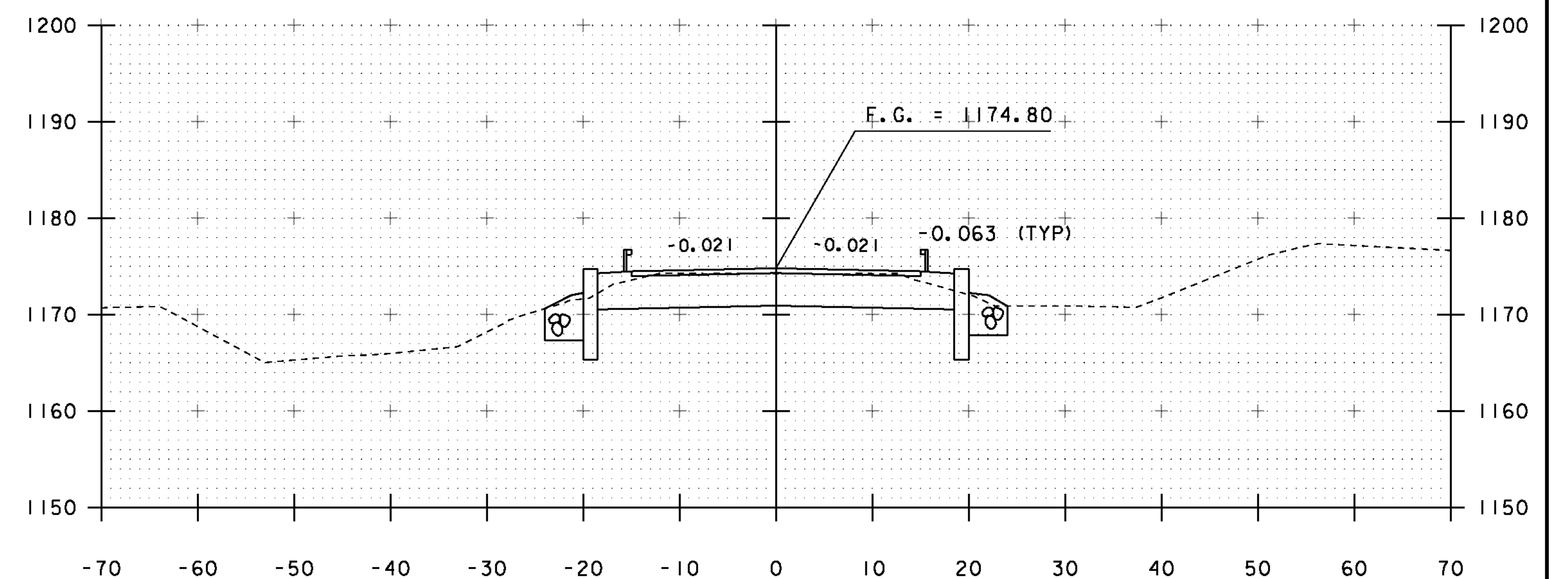
56+00



56+50



55+75

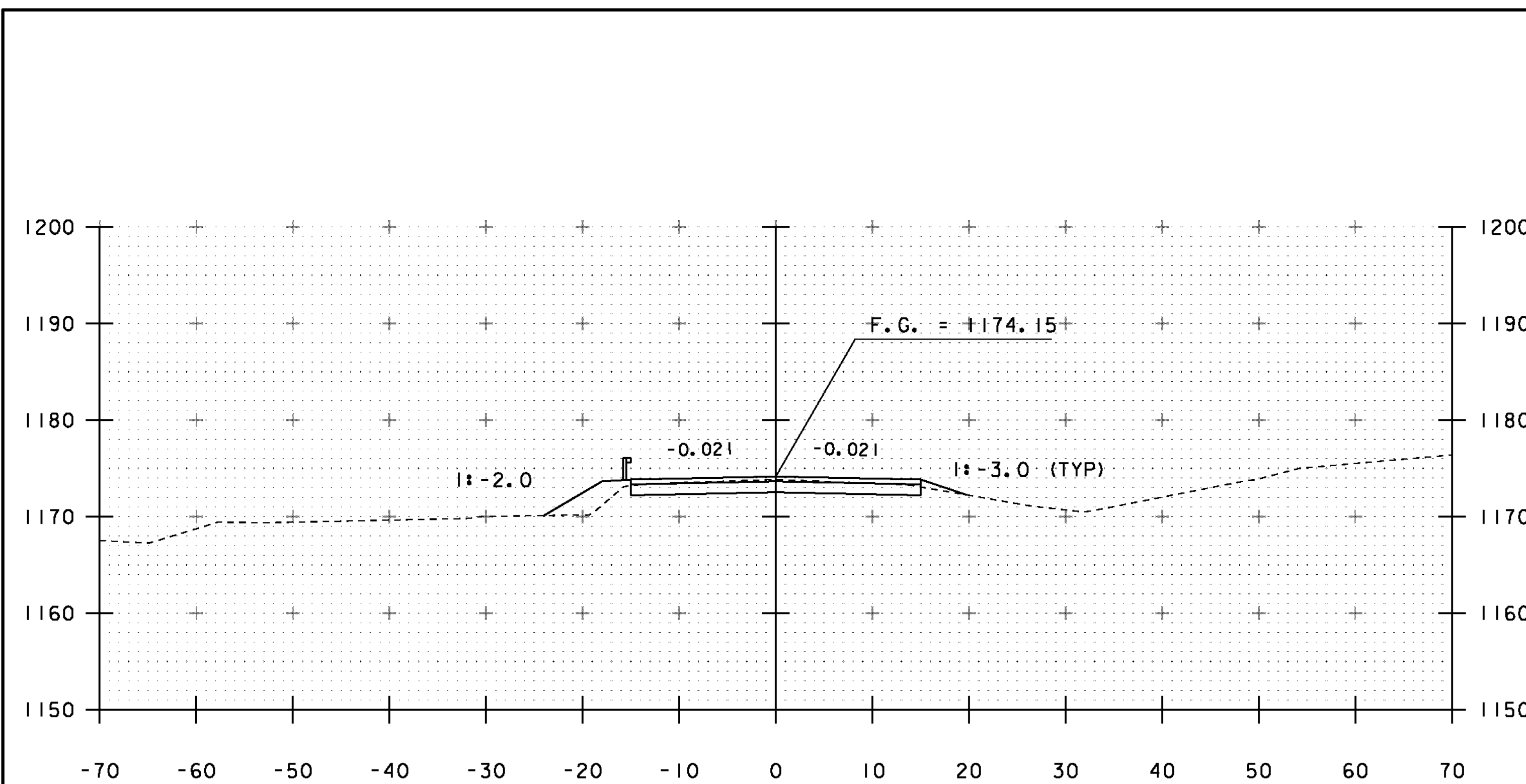


56+25

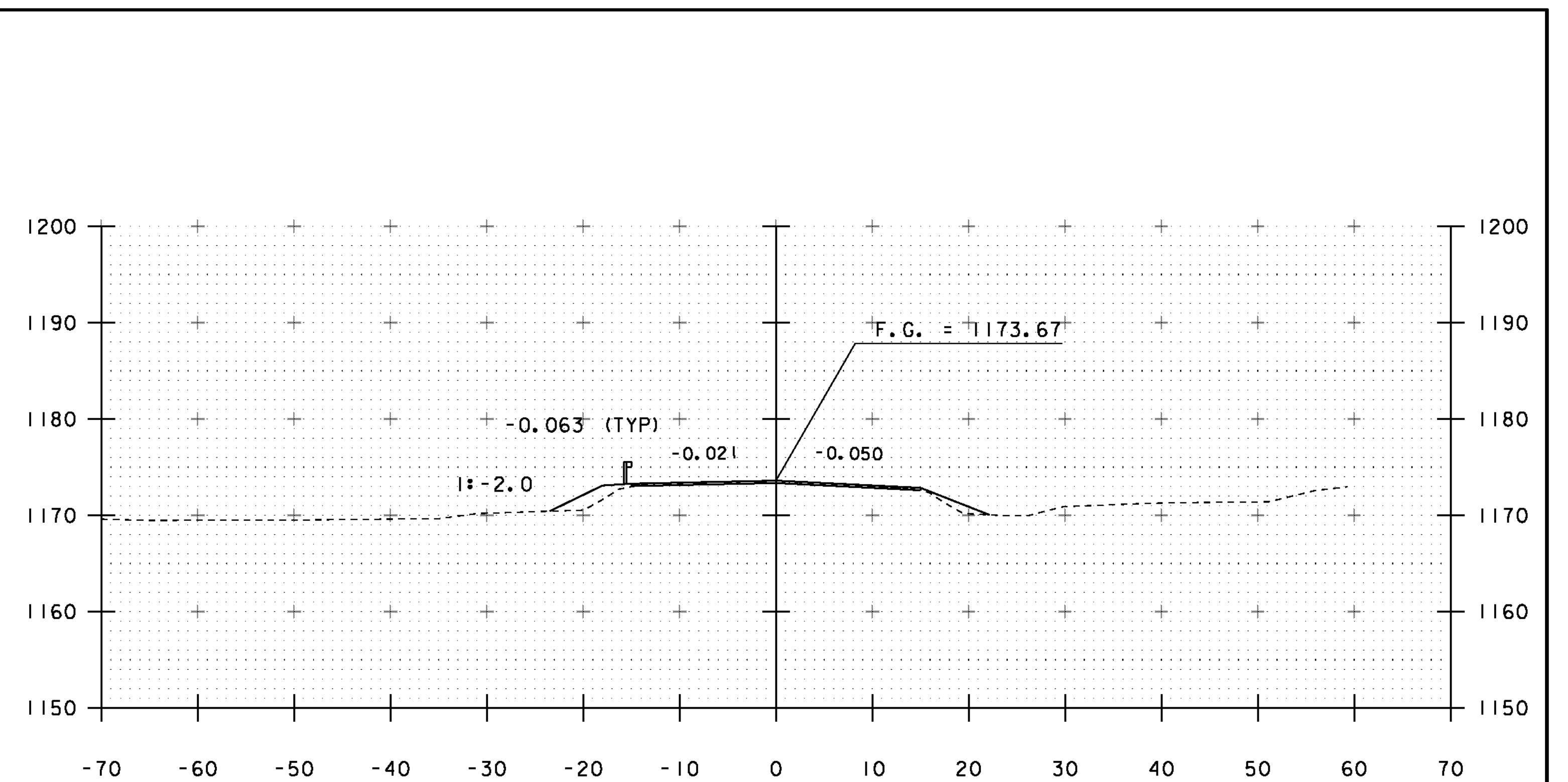
END BRIDGE STA 56+21.33

PROJECT NAME:	BRIGHTON
PROJECT NUMBER:	ER STP 034-3(25)
FILE NAME:	slb208xs.dgn
PROJECT LEADER:	K. HIGGINS
DESIGNED BY:	J. SALVATORI
MAINLINE SECTIONS	
PLOT DATE:	12-SEP-2012
DRAWN BY:	J. SALVATORI
CHECKED BY:	W. LAMMER
SHEET	31 OF 36

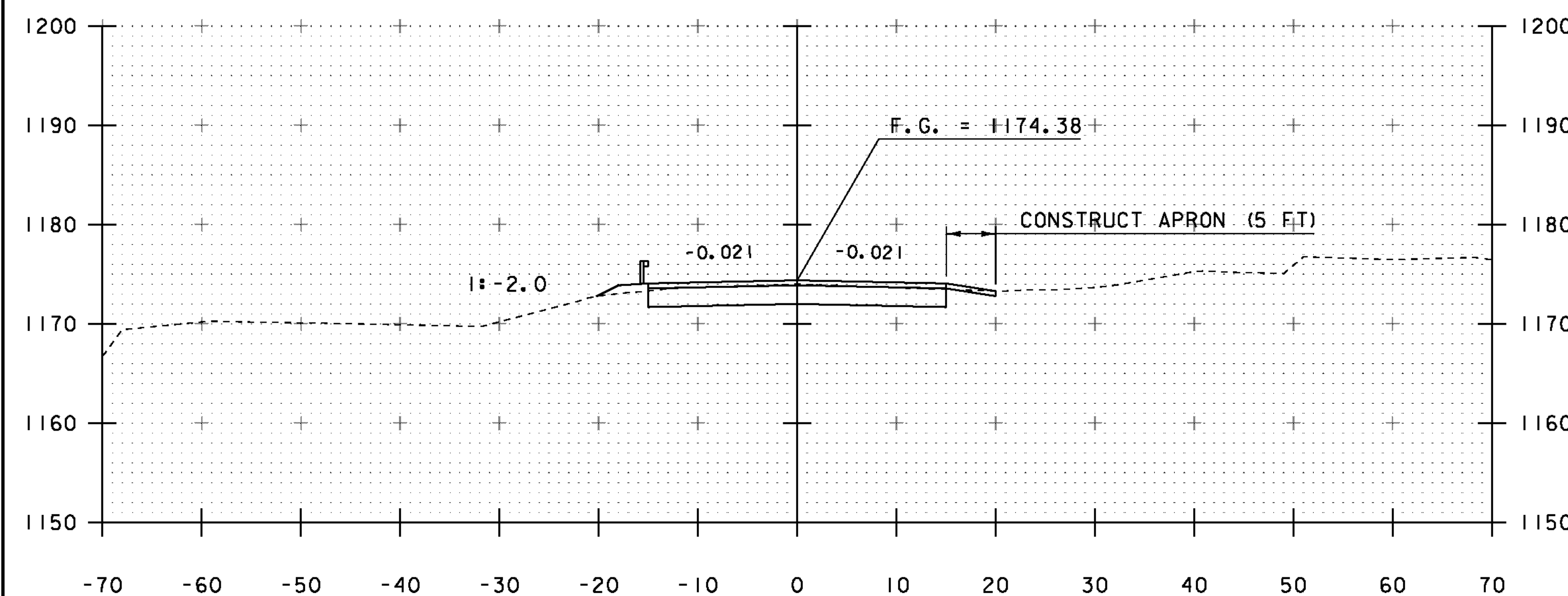
STA. 55+75 TO STA. 56+50



57+00

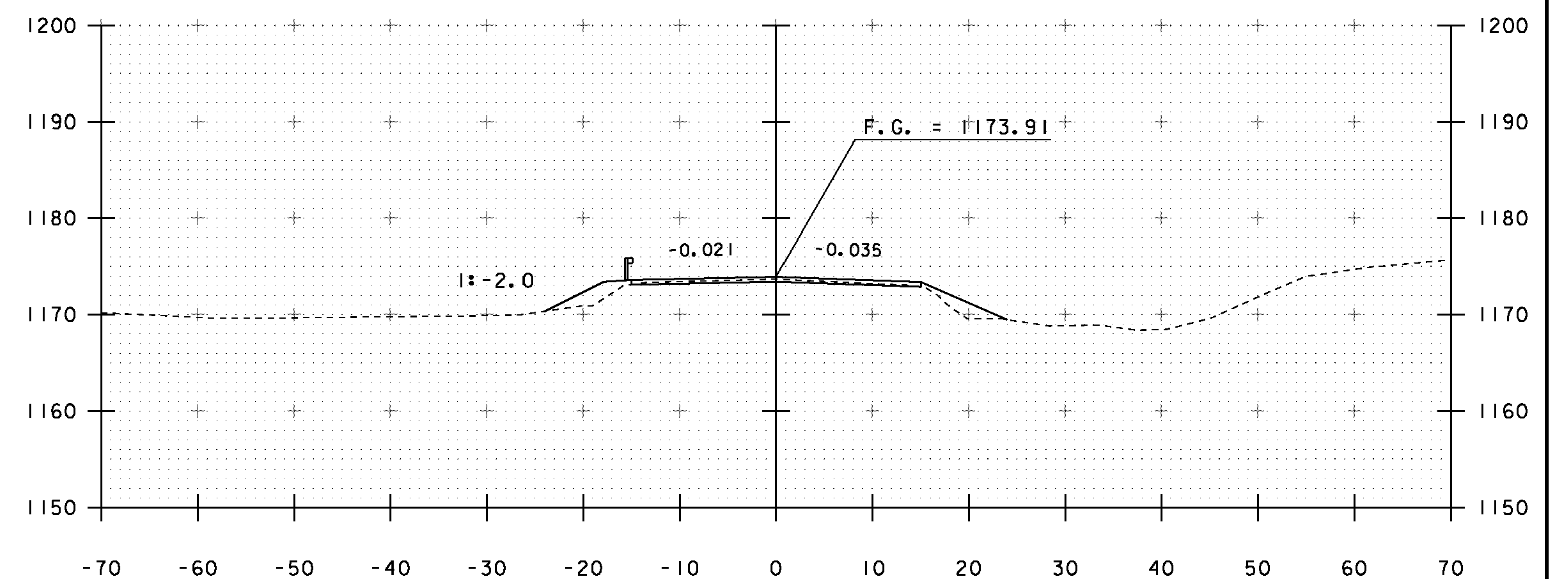


57+50



56+75

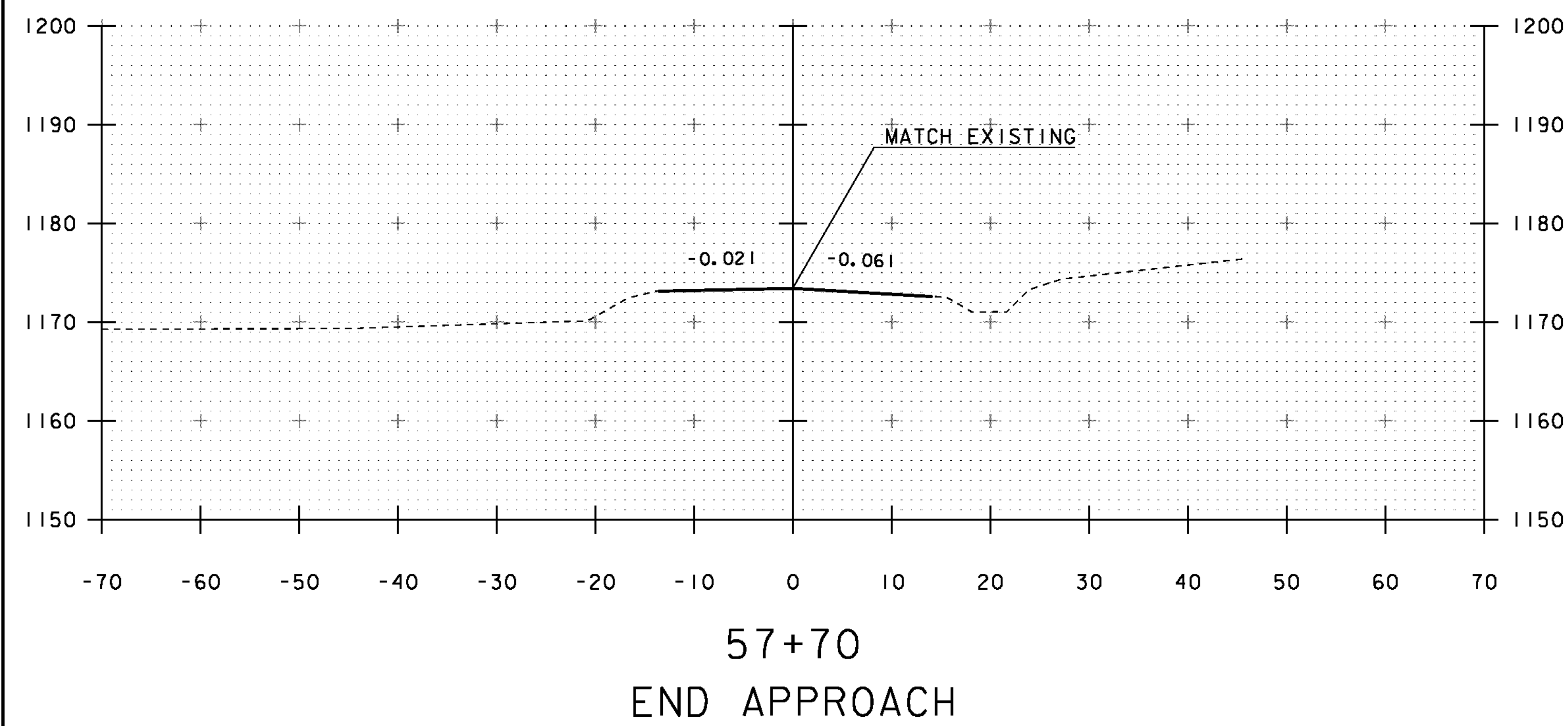
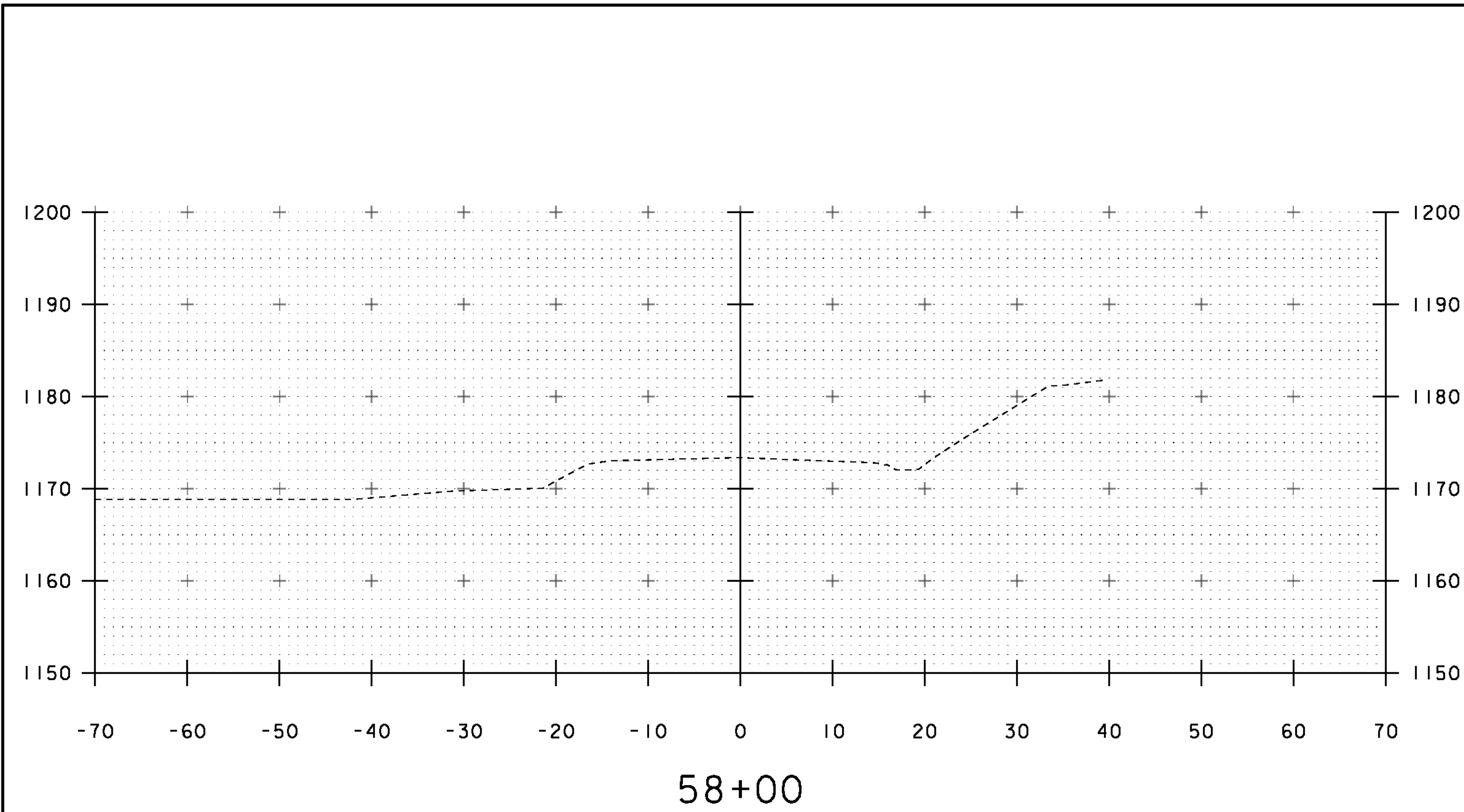
END PROJECT 56+70
BEGIN APPROACH



57+25

STA. 56+75 TO STA. 57+50

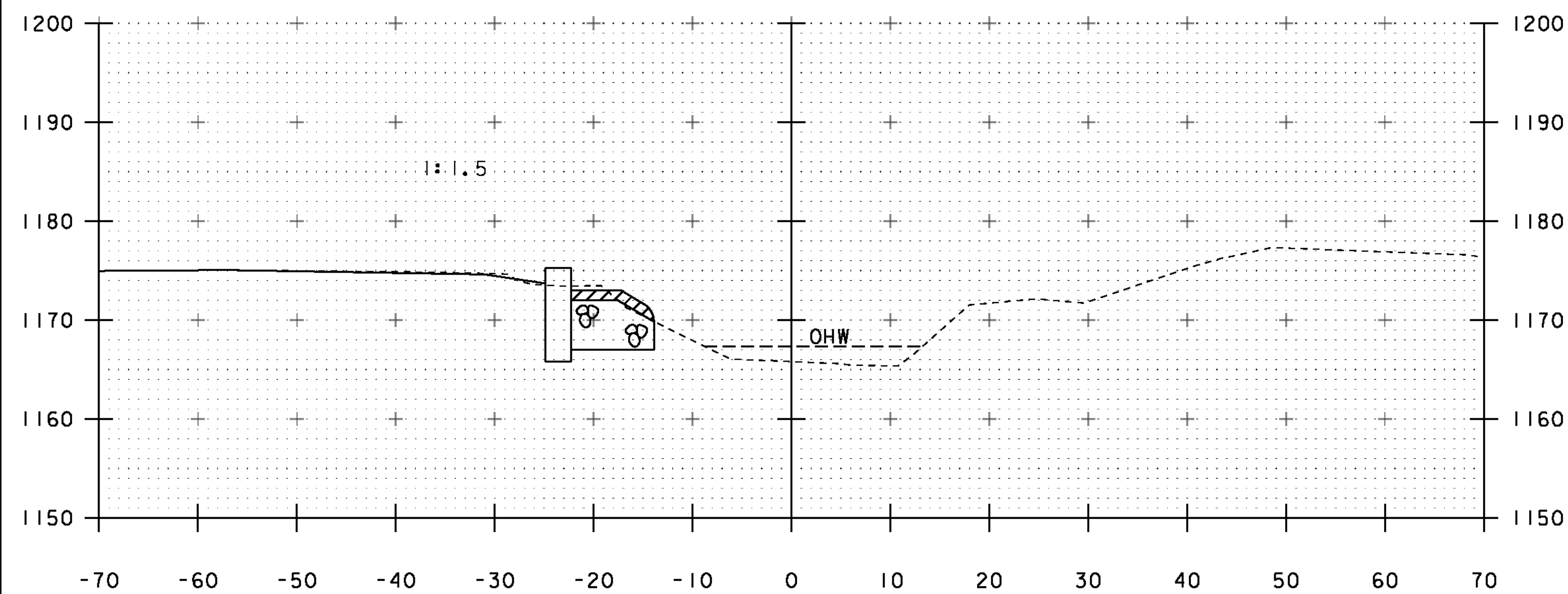
PROJECT NAME: BRIGHTON	PLOT DATE: 12-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: s11b208xs.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 32 OF 36
DESIGNED BY: J. SALVATORI	
MAINLINE SECTIONS	



STA. 57+75 TO STA. 58+00

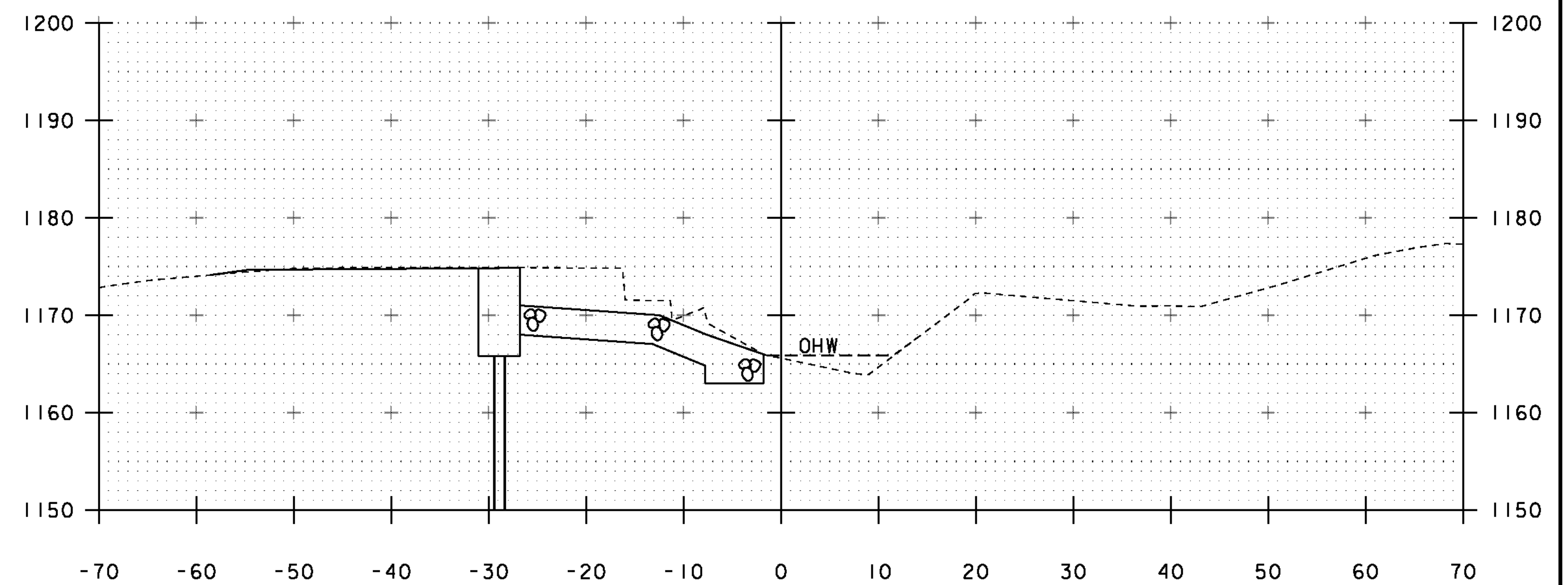
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PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: s1b208xs.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 33 OF 36
DESIGNED BY: J. SALVATORI	MAINLINE SECTIONS

STA 10+56 LT
 BEGIN CHANNEL EXCAVATION
 BEGIN GEOTEXTILE FABRIC UNDER STONE FILL
 BEGIN STONE FILL, TYPE III
 BEGIN GRUBBING MATERIAL



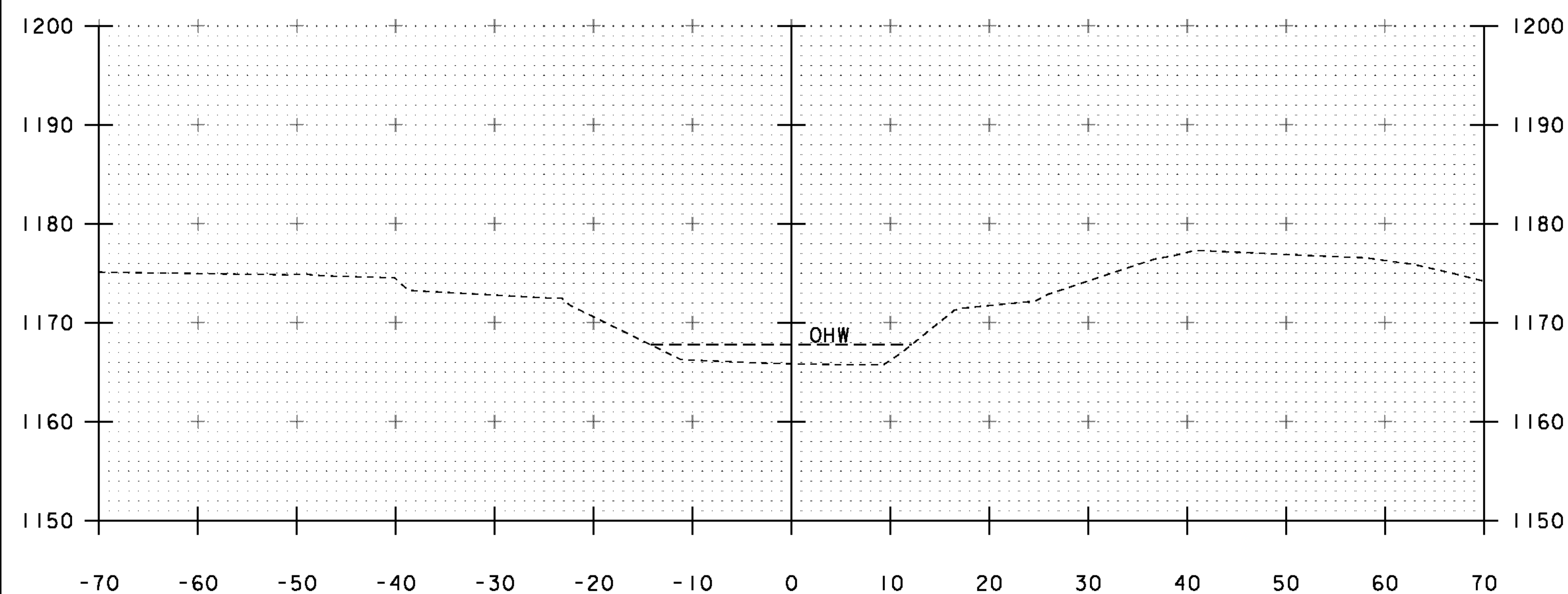
10+60

STA 10+81 RT
 BEGIN CHANNEL EXCAVATION
 BEGIN GEOTEXTILE FABRIC UNDER STONE FILL
 BEGIN STONE FILL, TYPE III
 BEGIN GRUBBING MATERIAL

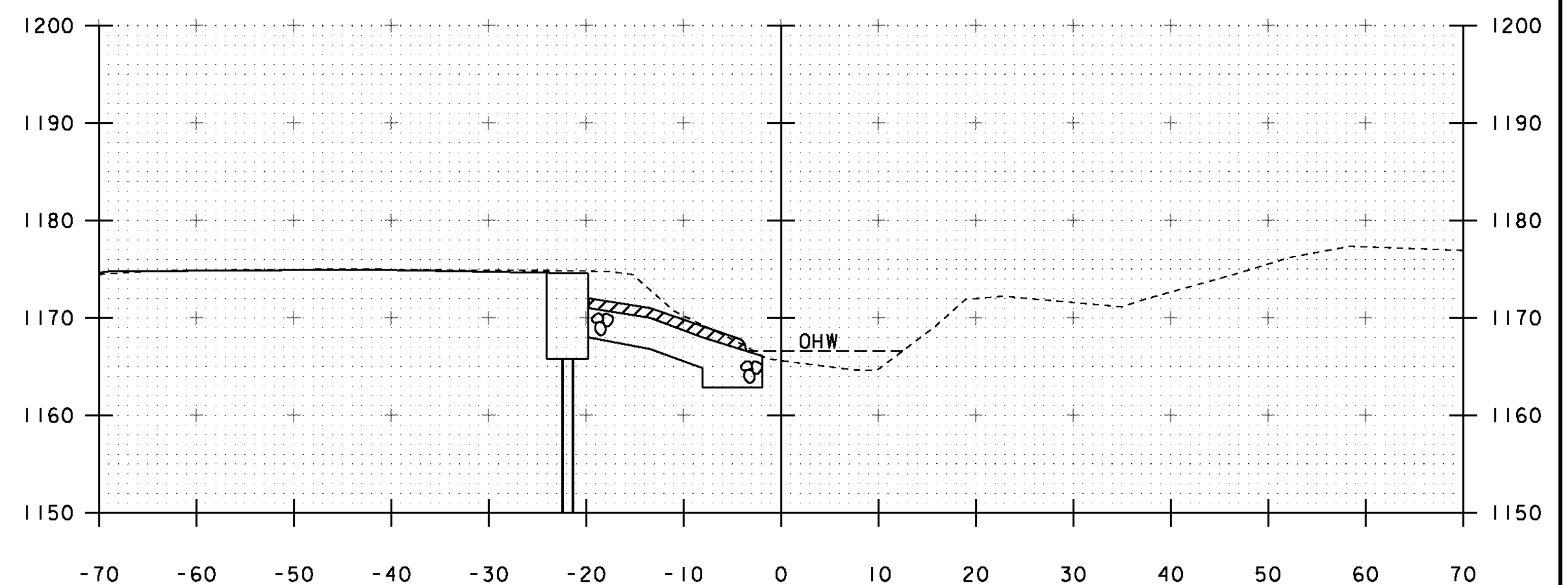


10+80

STA 10+74 LT
 END GRUBBING MATERIAL



10+50



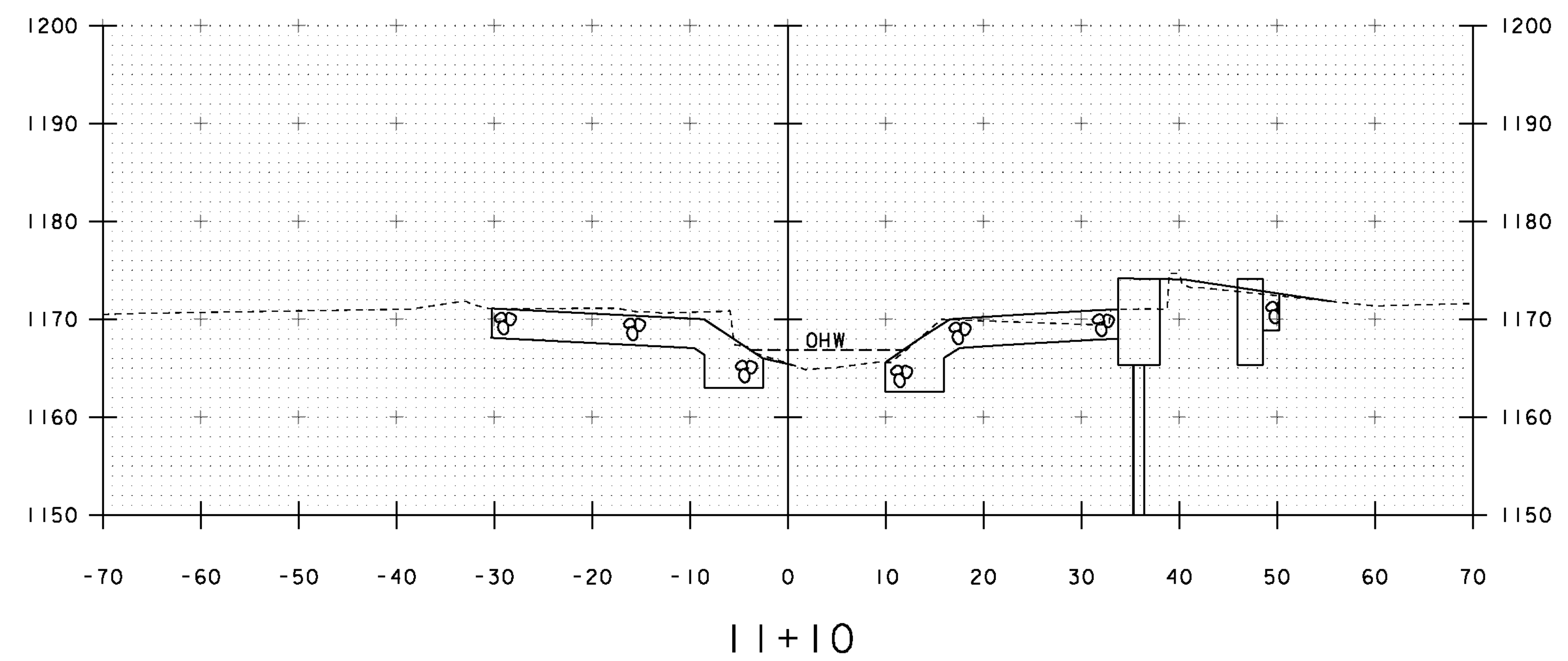
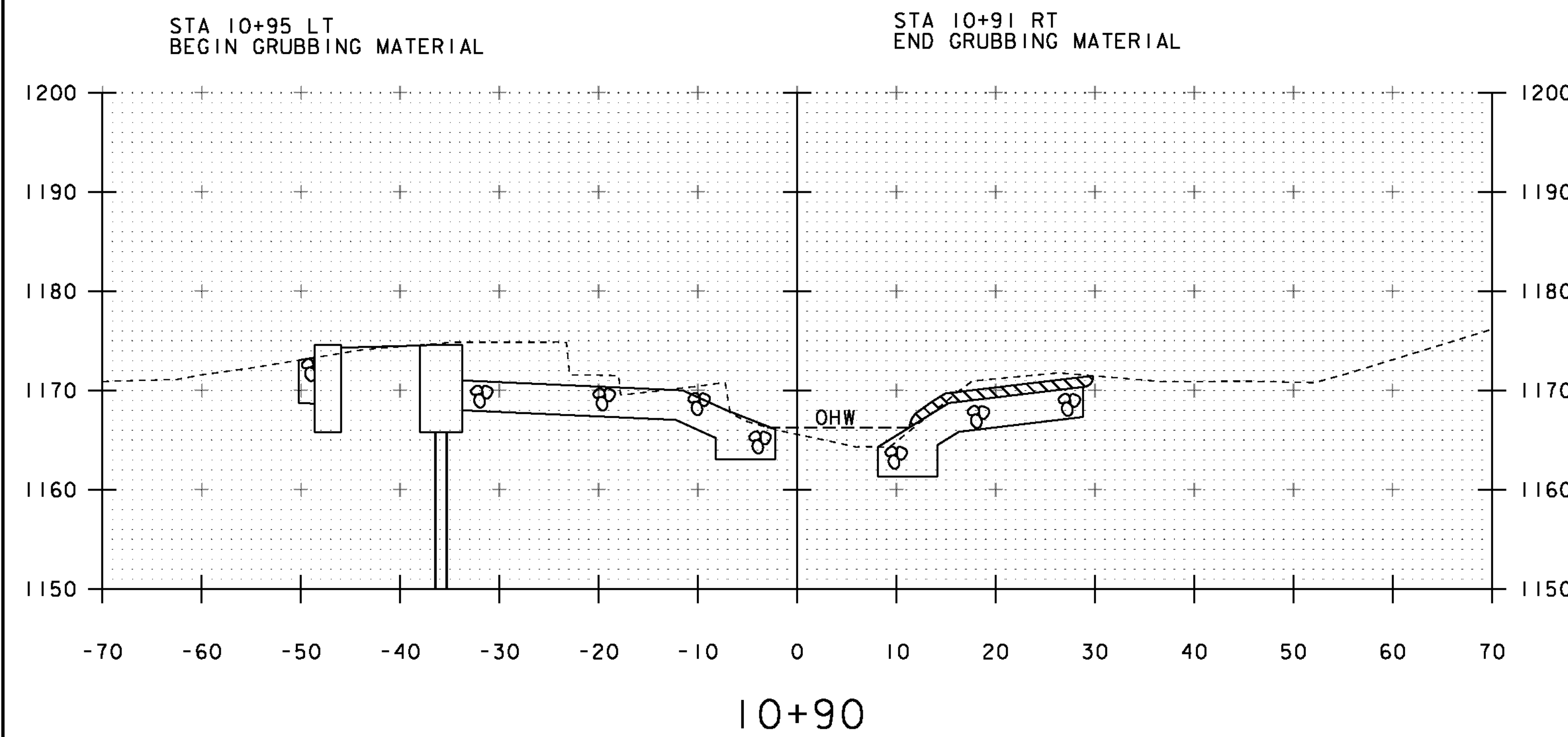
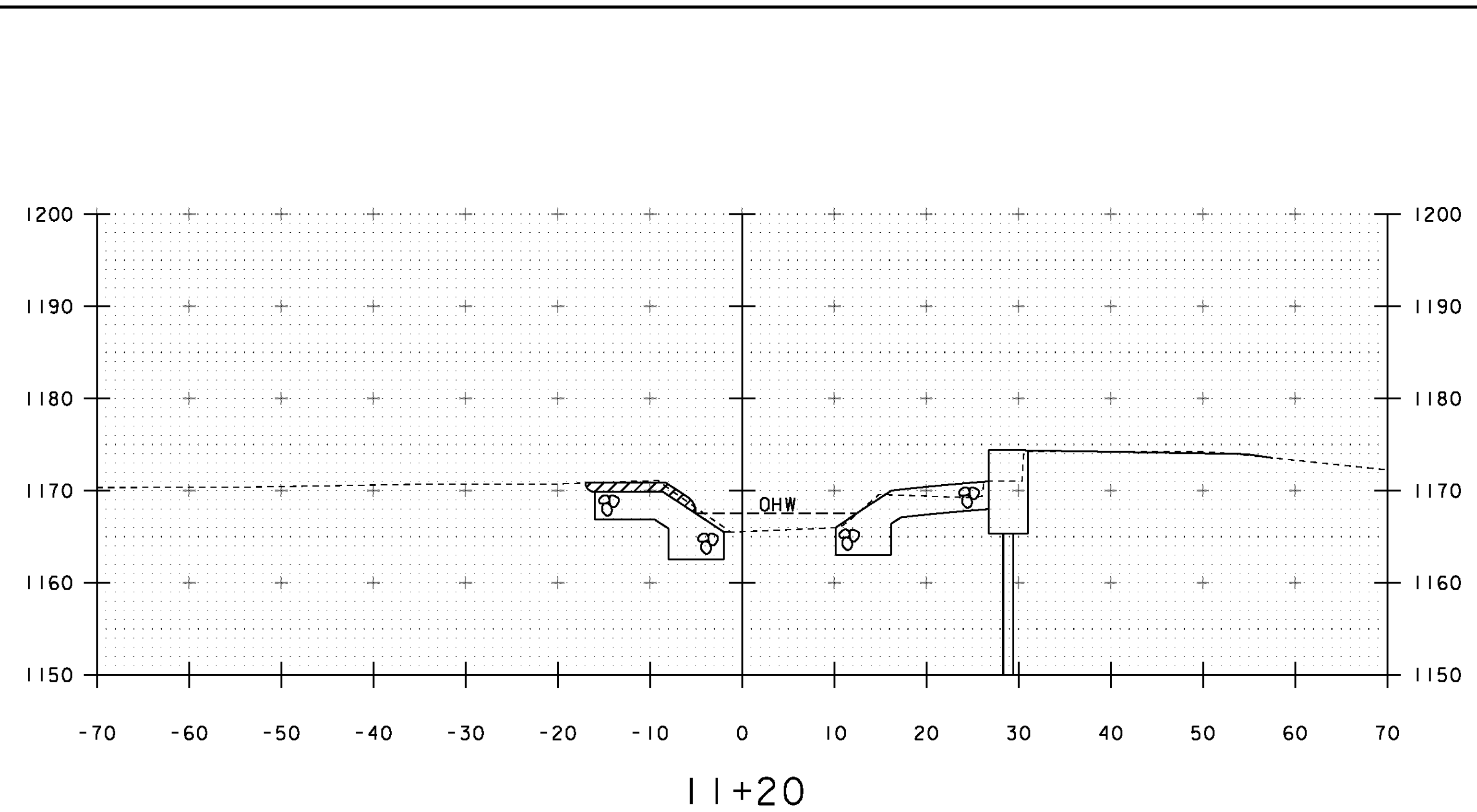
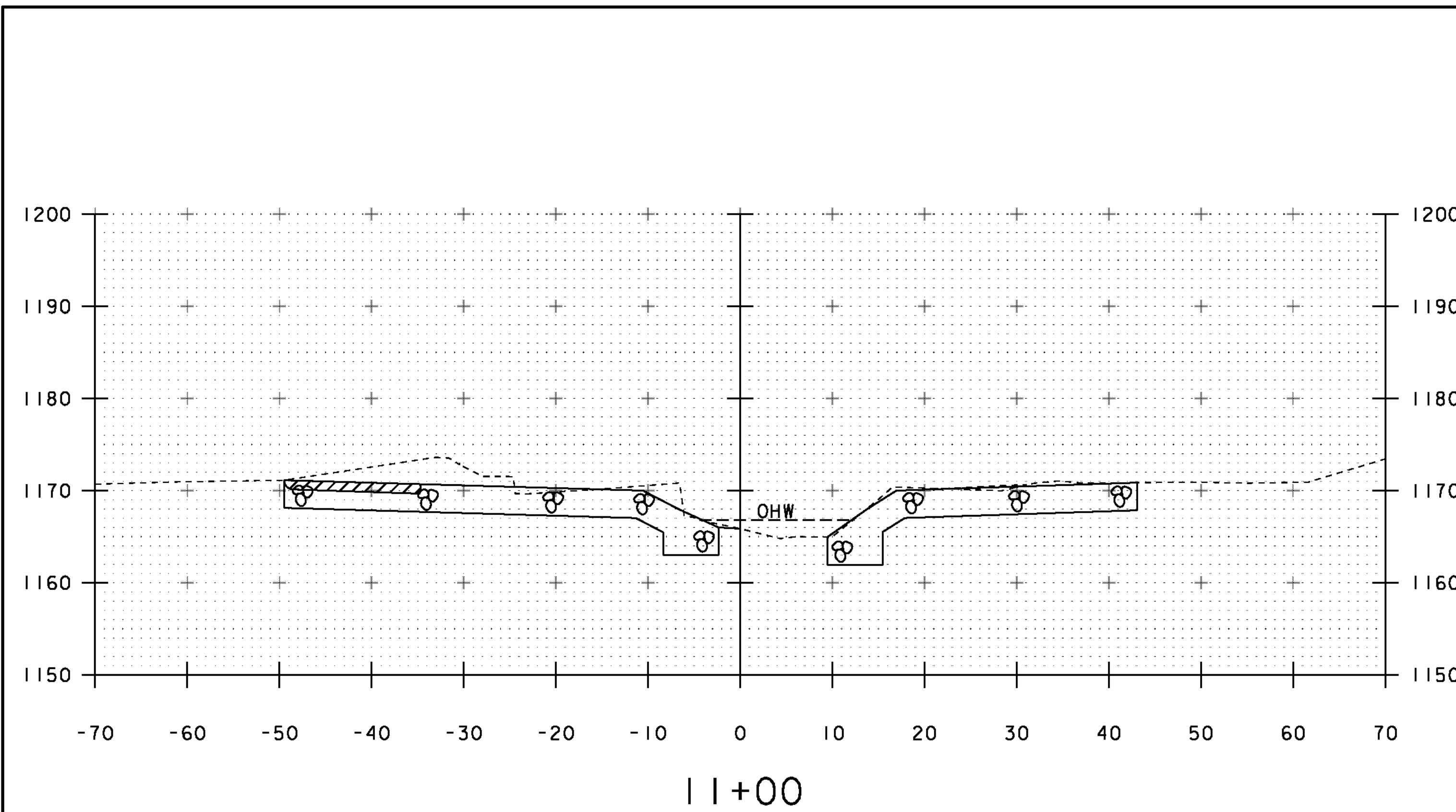
10+70

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: s1b208xs.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 CHANNEL SECTIONS

PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 34 OF 36

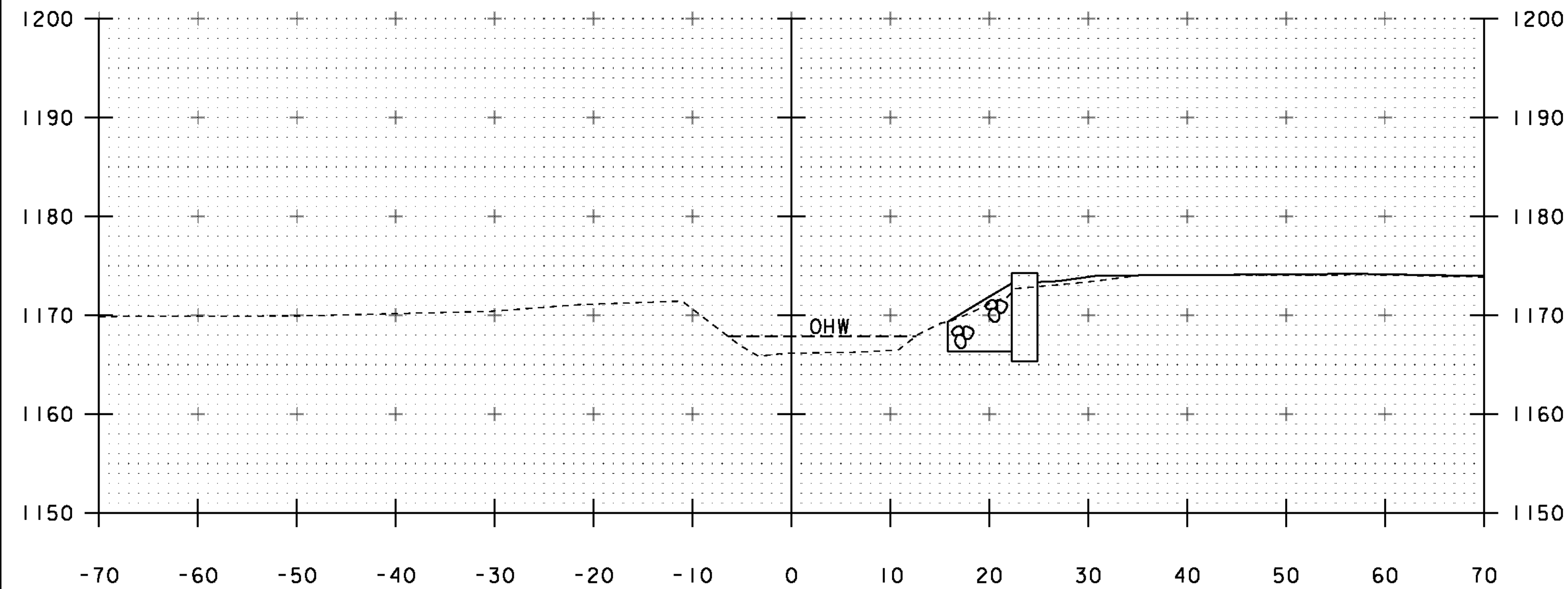
STA. 10+50 TO STA. 10+80



STA. 10+90 TO STA. 11+20

PROJECT NAME: BRIGHTON	PLOT DATE: 13-SEP-2012
PROJECT NUMBER: ER STP 034-3(25)	DRAWN BY: J. SALVATORI
FILE NAME: s11b208xs.dgn	CHECKED BY: W. LAMMER
PROJECT LEADER: K. HIGGINS	SHEET 35 OF 36
DESIGNED BY: J. SALVATORI	
CHANNEL SECTIONS	

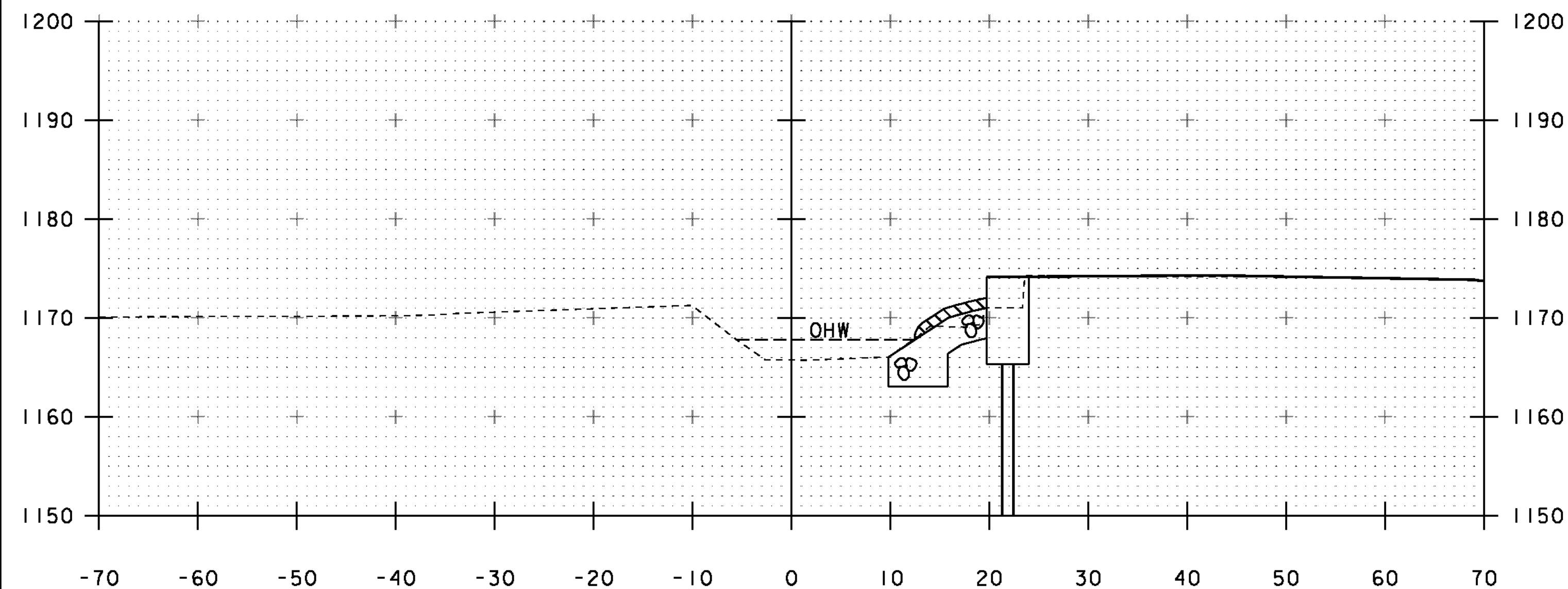
STA 11+44 RT
 END CHANNEL EXCAVATION
 END GEOTEXTILE FABRIC UNDER STONE FILL
 END STONE FILL, TYPE III
 END GRUBBING MATERIAL



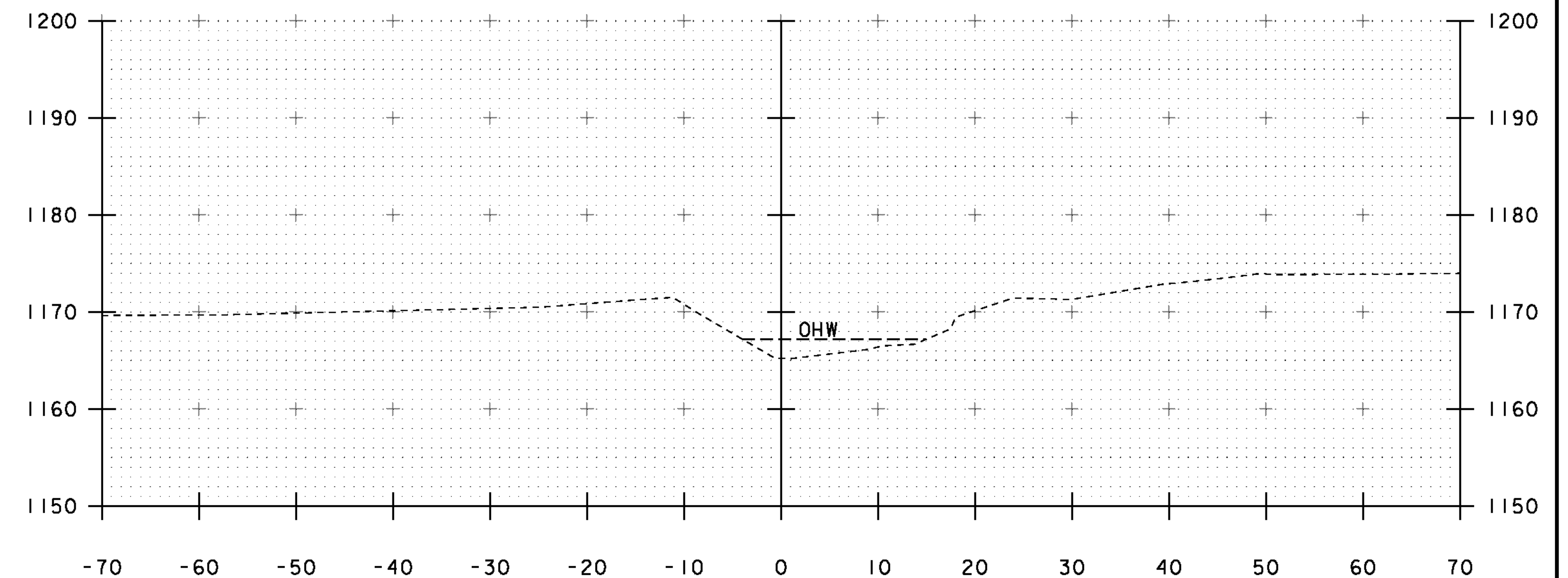
11+40

STA 11+27 LT
 END CHANNEL EXCAVATION
 END GEOTEXTILE FABRIC UNDER STONE FILL
 END STONE FILL, TYPE III
 END GRUBBING MATERIAL

STA 11+28 RT
 BEGIN GRUBBING MATERIAL



11+30



11+50

PROJECT NAME: BRIGHTON
 PROJECT NUMBER: ER STP 034-3(25)

FILE NAME: slb208xs.dgn
 PROJECT LEADER: K. HIGGINS
 DESIGNED BY: J. SALVATORI
 CHANNEL SECTIONS

PLOT DATE: 12-SEP-2012
 DRAWN BY: J. SALVATORI
 CHECKED BY: W. LAMMER
 SHEET 36 OF 36

STA. 11+30 TO STA. 11+50

WELDING PROCEDURE SPECIFICATION

Material Specification A500 GR B
 Welding Process FCAW
 Manual or Machine SEMAUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.20 - 95
 Filler Metal Classification E71T-1H8 E71T-9H8 LINCOLN ULTRACORE
 Flux N/A
 Shielding Gas CO 2 Dew Point -40DEG F Flow Rate 50CFH
 Single or Multiple Pass SINGLE
 Single or Multiple Arc SINGLE
 Welding Current DC
 Polarity REVERSE ELECTRODE POSITIVE
 Welding Progression STRINGER
 Root Treatment CLEAN AS PER SECTION 603 OF THE NYSSCM
 Preheat and Interpass Temperature PREHEAT AS PER TABLE 708 OF THE NYSSCM
 Postheat Temperature NONE
 Heat Input Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	1/16	300	26	14	
Variable	LIMITS	270	24	12.6	
		TO 330	TO 28	TO 15.4	

Vermont Agency of Transportation
RECEIVED
 CK'D BY RMK OK'D BY JWC
January 4th, 2013
 RESUBMIT X APPROVED X
 BY KMH DATE 1-8-13

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3007 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 3/23/2011

WELDING PROCEDURE SPECIFICATION

Material Specification A572 GRD. 50 /A992-06a
 Welding Process FCAW
 Manual or Machine SEMI-AUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.20
 Filler Metal Classification E70 LINCOLN OUTERSHEILD
 Flux N/A
 Shielding Gas CO 2 Dew Point -40DEG F Flow Rate 50 CFM
 Single or Multiple Pass SINGLE (45 TO 63 CFM)
 Single or Multiple Arc N/A
 Welding Current DC
 Polarity DCEP
 Welding Progression STRINGER
 Root Treatment CLEAN AS PER SECTION 603 OF THE NYSSCM
 Preheat and Interpass Temperature PREHEAT AS PER TABLE 708 OF THE NYSSCM
 Postheat Temperature NONE
 Heat Input Min Max

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	3/32	390	27	12	
Variable	LIMITS	351 TO 429	25 TO 29	11 TO 13	
<p>Vermont Agency of Transportation RECEIVED CK'D BY <u>RMK</u> OK'D BY <u>JWC</u> January 4th, 2013 RESUBMIT <u>APPROVED X</u> BY <u>KMH</u> DATE <u>1-8-13</u></p>					

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3008 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 10/18/2011

WELDING PROCEDURE SPECIFICATION

Material Specification A709 TO A500 GR B
 Welding Process FCAW
 Manual or Machine SEMI-AUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.20 - 95
 Filler Metal Classification E71T-1H8 E71T-9H8 LINCOLN ULTRACORE
 Flux N/A
 Shielding Gas CO 2 Dew Point -40DEG F Flow Rate 50CFH
 Single or Multiple Pass SINGLE
 Single or Multiple Arc SINGLE
 Welding Current DC
 Polarity REVERSE ELECTRODE POSITIVE
 Welding Progression STRINGER
 Root Treatment CLEAN AS PER SECTION 603 OF THE NYSSCM
 Preheat and Interpass Temperature PREHEAT AS PER TABLE 708 OF THE NYSSCM
 Postheat Temperature NONE
 Heat Input Min Max

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	1/16	300	26	14	
Variable	LIMITS	270	24	12.6	
		300 TO 330	28	15.4	
<p>Vermont Agency of Transportation RECEIVED CK'D BY <u>RMK</u> OK'D BY <u>JWC</u> January 4th, 2013 RESUBMIT <u>X</u> APPROVED <u>X</u> BY <u>KMH</u> DATE <u>1-8-13</u></p>					

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3009 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 10/18/2011

WELDING PROCEDURE SPECIFICATION

Material Specification ASTM-A36 A709 GR 36 CVN
 Welding Process FCAW
 Manual or Machine SEMAUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.20-95
 Filler Metal Classification E71T-1H8 E71T-9H8 LINCOLN ULTRACORE
 Flux N/A
 Shielding Gas CO 2 Dew Point -40DEG F Flow Rate 50CFH
 Single or Multiple Pass SINGLE
 Single or Multiple Arc SINGLE
 Welding Current DC
 Polarity REVERSE
 Welding Progression STRINGER
 Root Treatment PER D1.5
 Preheat and Interpass Temperature PER D1.5
 Postheat Temperature NONE
 Heat Input Min Max

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	1/16	300	26	14	
Variable	LIMITS	270	24	12.6	
		300	28	15.4	

Vermont Agency of Transportation
RECEIVED
 CK'D BY RMK OK'D BY JWC
January 4th, 2013
 RESUBMIT BY KMH APPROVED BY X
 BY KMH DATE 1-8-13

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3016 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 1/3/2013

WELDING PROCEDURE SPECIFICATION

Material Specification ASTM A572 GR. 50 CVN A500 GR B
 Welding Process FCAW
 Manual or Machine SEMI-AUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.20 - 95
 Filler Metal Classification E71T-1H8 E71T-9H8 LINCOLN ULTRACORE
 Flux N/A
 Shielding Gas CO 2 Dew Point -40DEG F Flow Rate _____
 Single or Multiple Pass SINGLE
 Single or Multiple Arc SINGLE
 Welding Current DC
 Polarity REVERSE ELECTRODE POSITIVE
 Welding Progression STRINGER
 Root Treatment PER D1.5
 Preheat and Interpass Temperature PER D1.5
 Postheat Temperature NONE
 Heat Input Min _____ Max _____

WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	1/16	300	26	14	
Variable	LIMITS	270	24	12.6	
		TO 330	TO 28	TO 15.4	
<p>Vermont Agency of Transportation RECEIVED CK'D BY <u>RMK</u> OK'D BY <u>JWC</u> January 4th, 2013 RESUBMIT <u>X</u> APPROVED _____ BY <u>KMH</u> DATE <u>1-8-13</u></p>					

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3037 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 12/20/2011

WELDING PROCEDURE SPECIFICATION

Material Specification A36
 Welding Process GMAW
 Manual or Machine SEMI-AUTOMATIC
 Position of Welding FLAT
 Filler Metal Specification A5.18
 Filler Metal Classification L-50.052 LINCOLN
 Flux N/A
 Shielding Gas 90% ARGON /10% CO2 Dew Point -40DEG F Flow Rate 50 CFM
 Single or Multiple Pass SINGLE
 Single or Multiple Arc SINGLE
 Welding Current DC
 Polarity REVERSE
 Welding Progression STRINGER
 Root Treatment PER D1.5
 Preheat and Interpass Temperature PER D1.5
 Postheat Temperature NONE
 Heat Input Min Max

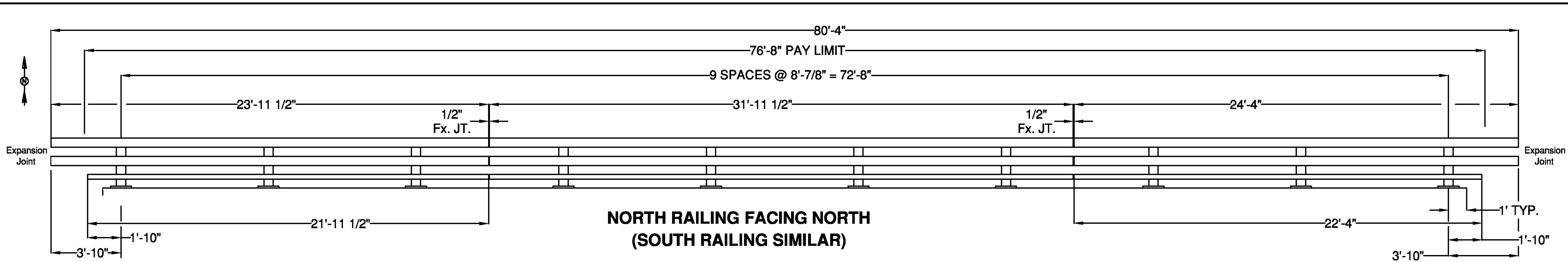
WELDING PROCEDURE

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
Variable	LIMITS	430	32	13	
		TO	TO	TO	
		473	34	14	

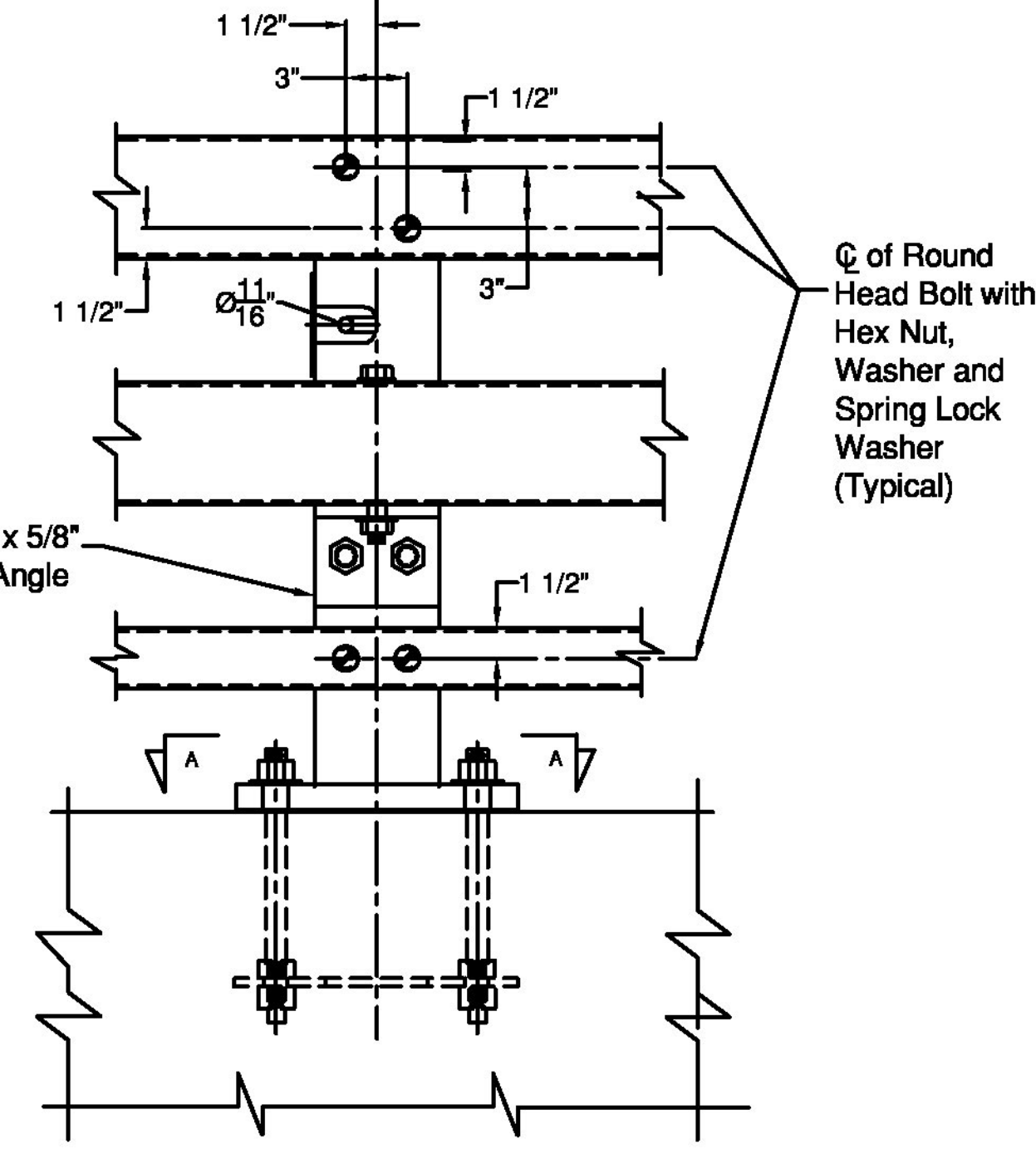
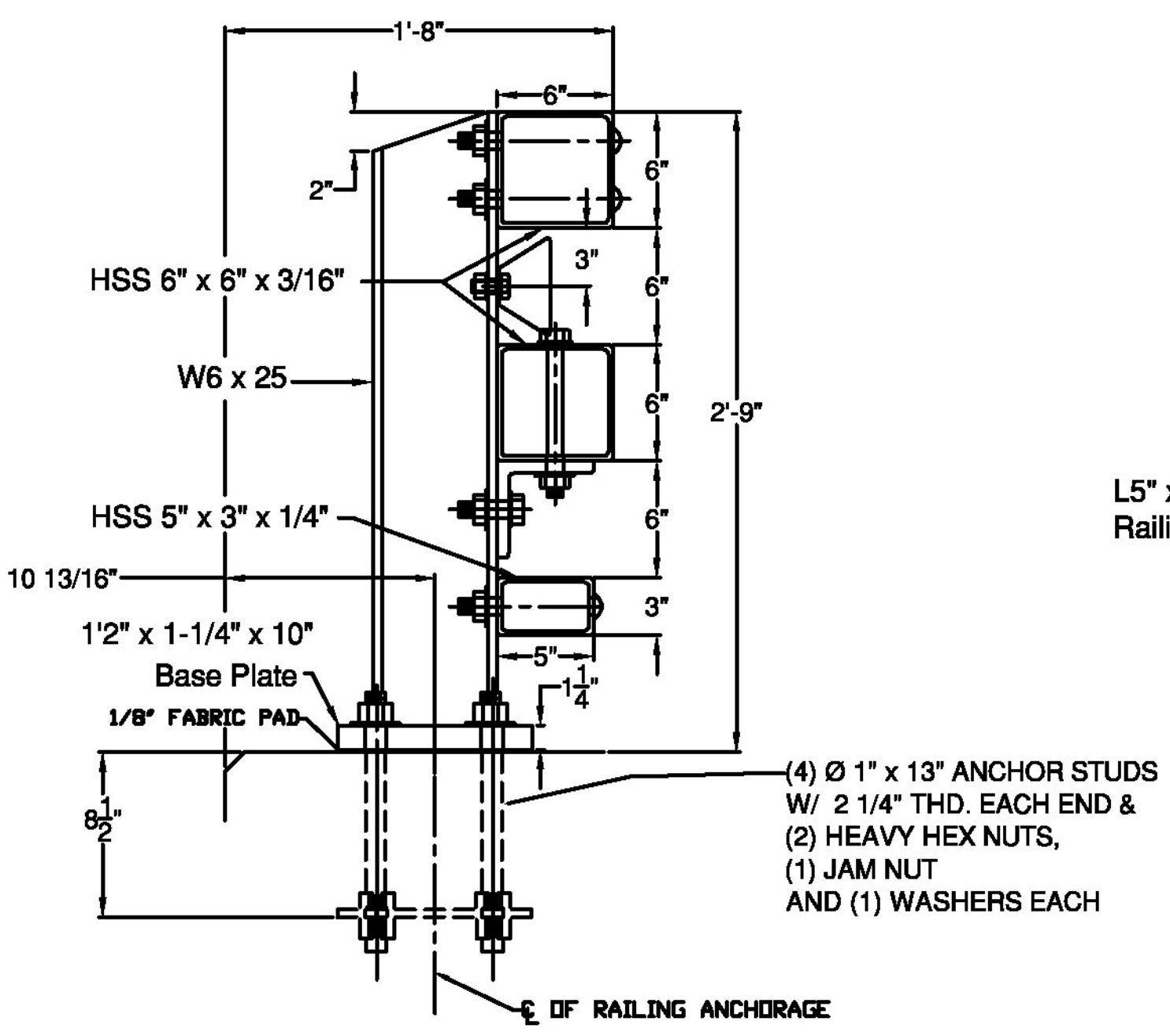
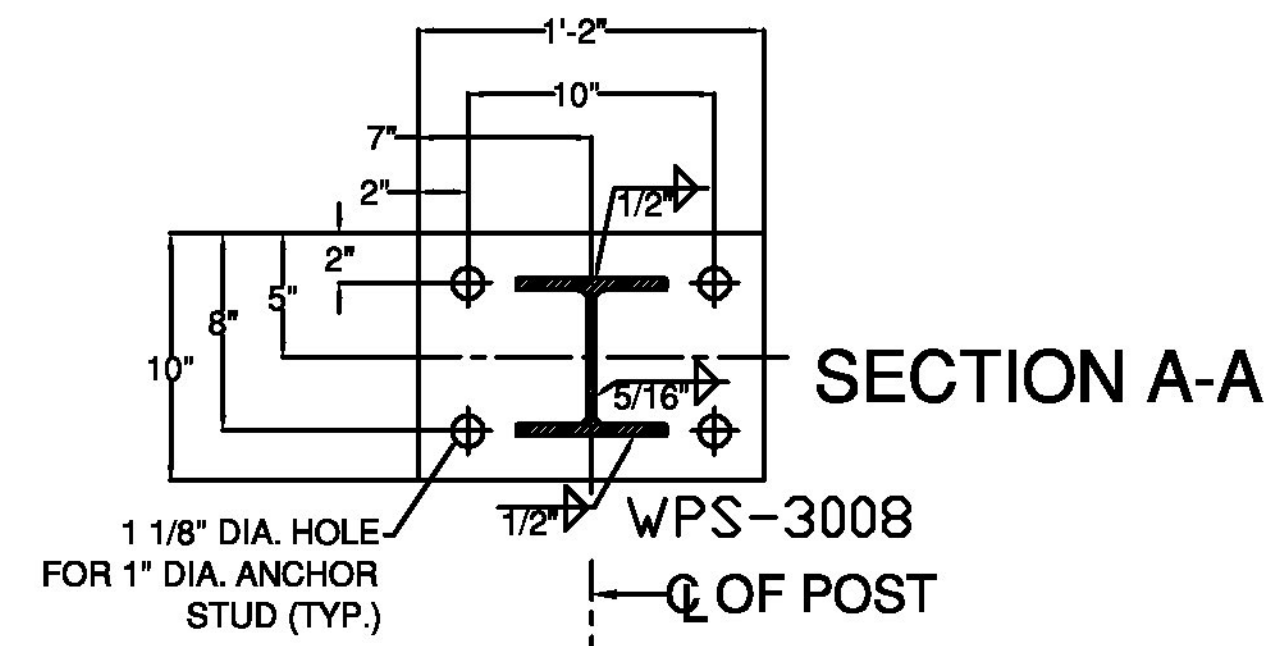
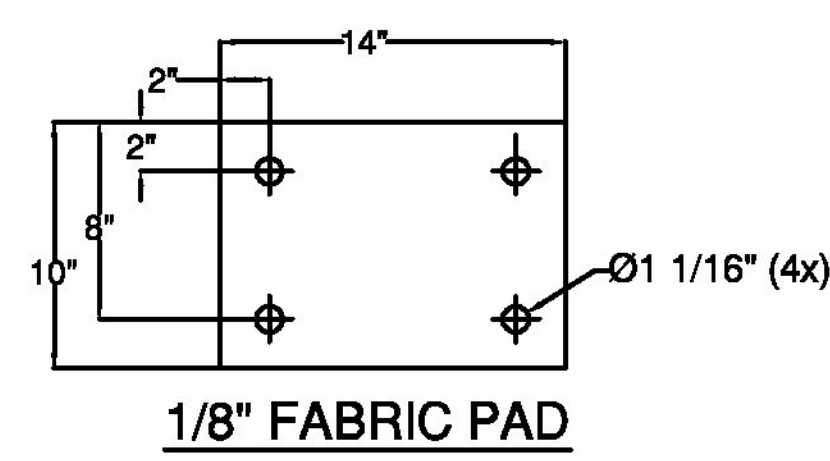
Vermont Agency of Transportation
RECEIVED
 CK'D BY RMK OK'D BY JWC
January 4th, 2013
 RESUBMIT APPROVED
 BY KMH DATE 1-8-13

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3040 Contractor Elderlee, Inc.
 Revision No. _____ Authorized By RANDY SCOTT
 Date 12/20/2011



**NORTH RAILING FACING NORTH
(SOUTH RAILING SIMILAR)**

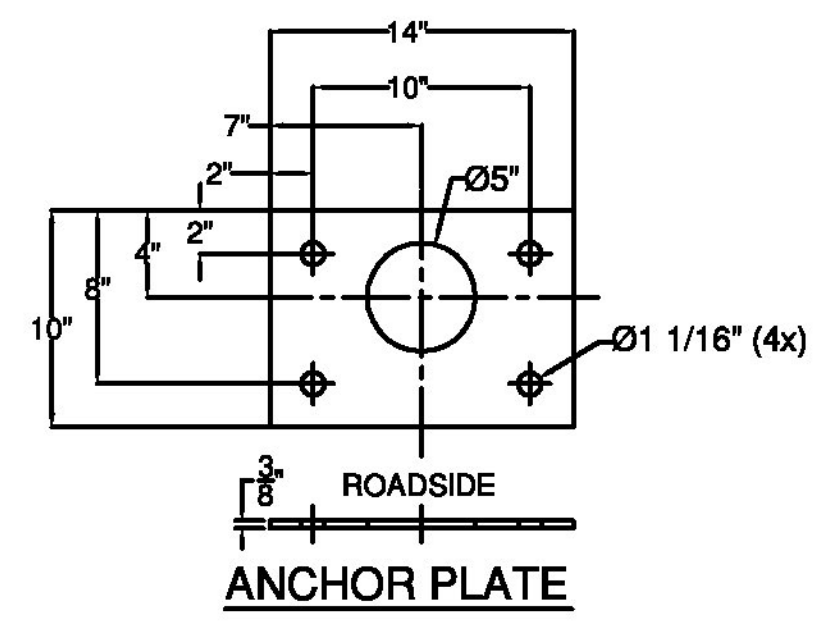


**SECTION
STEEL BRIDGE RAILING**

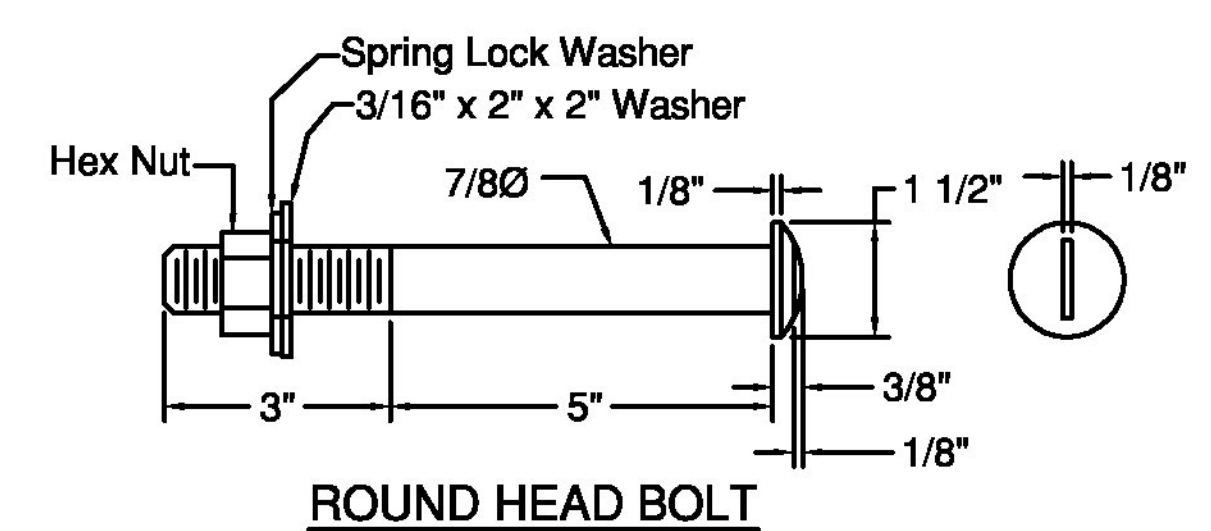
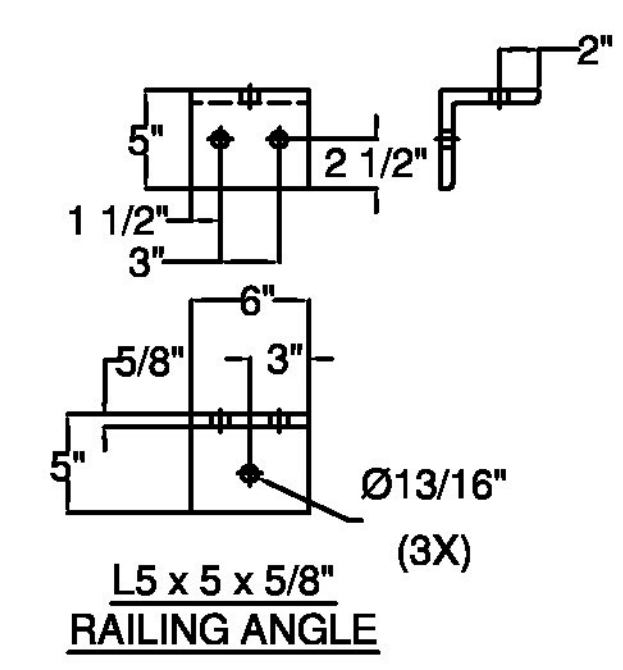
Vermont Agency of Transportation
RECEIVED
CK'D BY R. Klinefelter OK'D BY J. Salvatori
February 14, 2013
RESUBMIT Approved X
BY K. Higgins DATE 02/19/13

- GENERAL NOTES:**
- 1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
 - 2) PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
 - 3) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
 - 4) RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPER STRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" @ 68°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
 - 5) RETROREFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE A .063" ALUMINUM BACKING WHITE OR YELLOW REFLECTOR. WHITE IS TO BE INSTALLED ON THE DRIVERS RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVERS LEFT.
 - 6) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
 - 7) THE MINIMUM DISTANCE FROM THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
 - 8) ALL POST SHALL BE SET NORMAL TO GRADE. THE MAXIMUM CENTER TO CENTER SPACING OF BRIDGE RAIL POST IS 8' 3".
 - 9) ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
 - 10) STD. SPLICE HOLES ONLY IN BRIDGE RAIL TUBES. REST TO BE DRILLED BY CUSTOMER. FIELD DRILLED HOLES TO BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
 - 11) THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

RAIL BENDING PROCEDURE:
RADI GREATER THAN 16' TO BE CURVED ON A TUBE BENDING MACHINE, RADI LESS THAN 16' TO BE 'PIE CUT' AND WELDED.



BILL OF MATERIAL		
QTY	DESCRIPTION	ASTM DESIGNATION
20	W6x25, THREE RAIL POST @ 2'-9" DA ON 1 1/4x10x1'-2" B.P.	A572 Gr. 50
2	HSS 3" X 5" X 1/4" RAIL @ 21'-11 1/2"	A500 Gr. B
2	HSS 3" X 5" X 1/4" RAIL @ 31'-11 1/2"	A500 Gr. B
2	HSS 3" X 5" X 1/4" RAIL @ 22'-4"	A500 Gr. B
4	HSS 6" X 6" X 3/16" RAIL @ 23'-11 1/2"	A500 Gr. B
4	HSS 6" X 6" X 3/16" RAIL @ 31'-11 1/2"	A500 Gr. B
4	HSS 6" X 6" X 3/16" RAIL @ 24'-4"	A500 Gr. B
4	2-1/8" X 4-1/4" FIX. SPLICE BAR @ 2'-3"	A572 Gr. 50
8	HSS 5" X 5" X 5/16" FIX. SPLICE TUBE @ 2'-3"	A500 Gr. B, A572 Gr. 50
20	3/8" X 10" X 14" ANCHOR PLATES (END POST)	A572 Gr. 50
20	1/8" X 10" X 14" FABRIC PAD	AASHTO M251
80	Ø 1" X 13" ANCHOR STUDS, W/ 2 1/4" THD. EACH END	A449 Gr. 1, CLASS B.B
160	Ø 1" HEAVY HEX NUTS & FLAT WASHERS	A563 & F436
80	Ø 1" HEX JAM NUTS	A563
80	Ø 7/8" X 8" ROUND HEAD BOLT, NUT, SQ. WASHER, L.W.	A449, A563, F436, ASME B18.21.1
20	Ø 3/4" X 8" HEX BOLT, NUT, (2) F.W., & L.W.	A325, A563, F436, & ASME B18.21.1
40	Ø 3/4" X 2-3/4" HEX BOLT, NUT, (2) F.W., & L.W.	A325, A563, F436, & ASME B18.21.1
32	Ø 3/4" X 7-1/2" HEX BOLT, NUT, & (2) F.W.	A325, A563, & F436
16	Ø 3/4" X 4-1/2" HEX BOLT, NUT, & (2) F.W.	A325, A563, & F436
20	Ø 5/8" X 1-1/2" HEX BOLT, NUT, & (2) F.W.	A325, A563, & F436
20	L5" X 5" X 5/8" RAILING ANGLE @ 6"	A572 Gr. 50
TBD	DELINEATORS	(SUPPLIED BY F.R. LAFAYETTE)



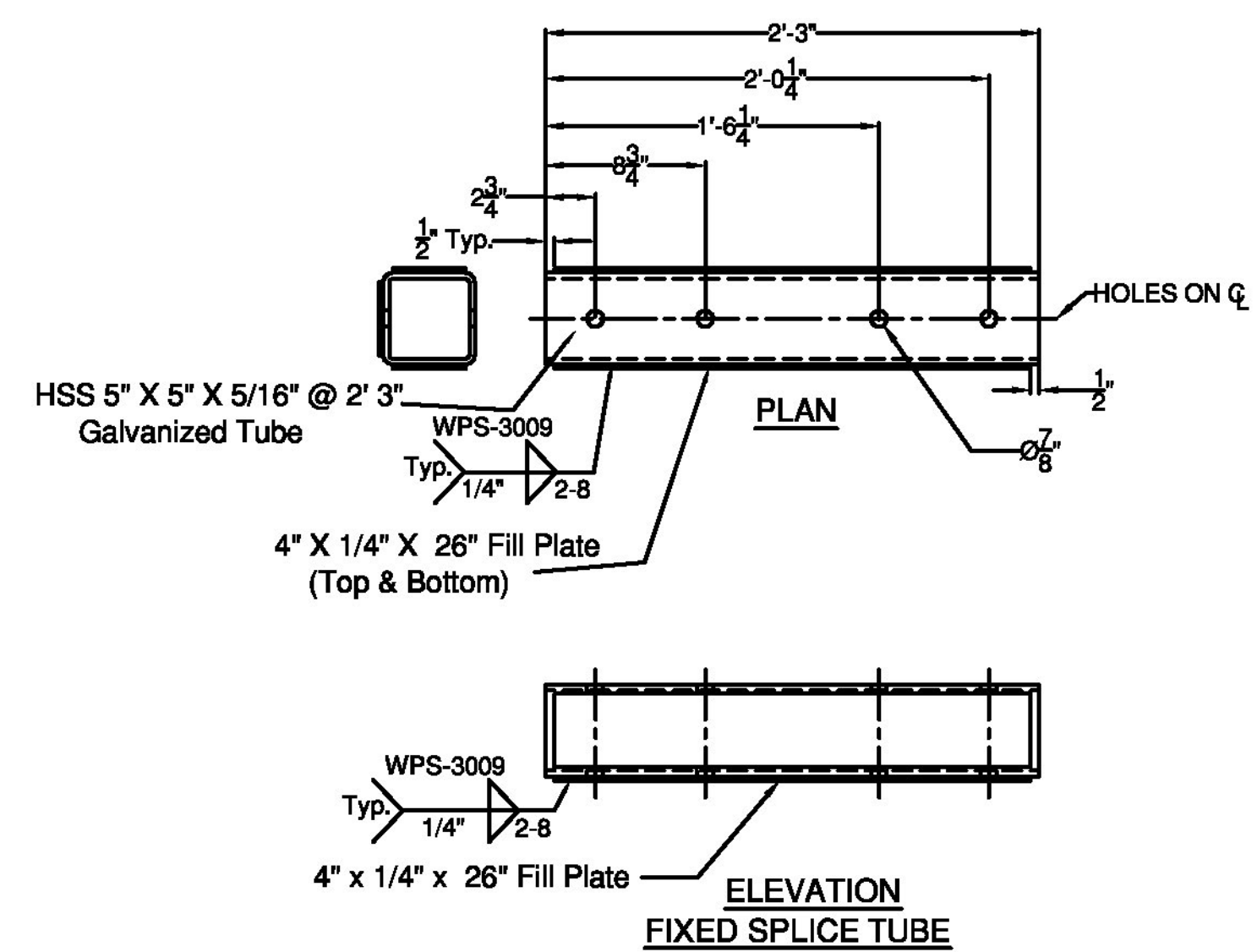
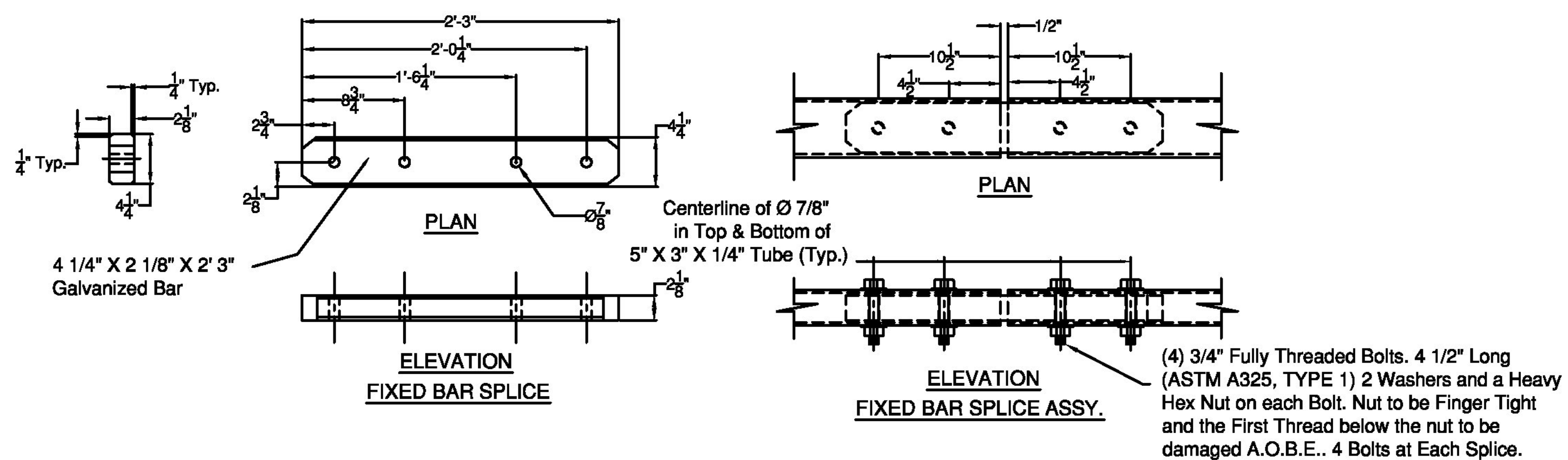
ITEM #: 525.335
APPROVED BY: _____
F.R. LAFAYETTE, P.O. 27399
BRIDGE RAIL DETAILS SHEET
PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
TOWN OF BRIGHTON, ESSEX COUNTY, VT.
SHEET 1 OF 2

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/26/12	REVISED PER 12/26/12 EMAIL E.P.	E	3	1/30/13	MADE IN #P TO 1 1/8" FOR RAIL 1/20/13 E.P.	E.P.
V 2	1/9/13	REVISED PER 1/9/13 EMAIL E.P.	V				

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

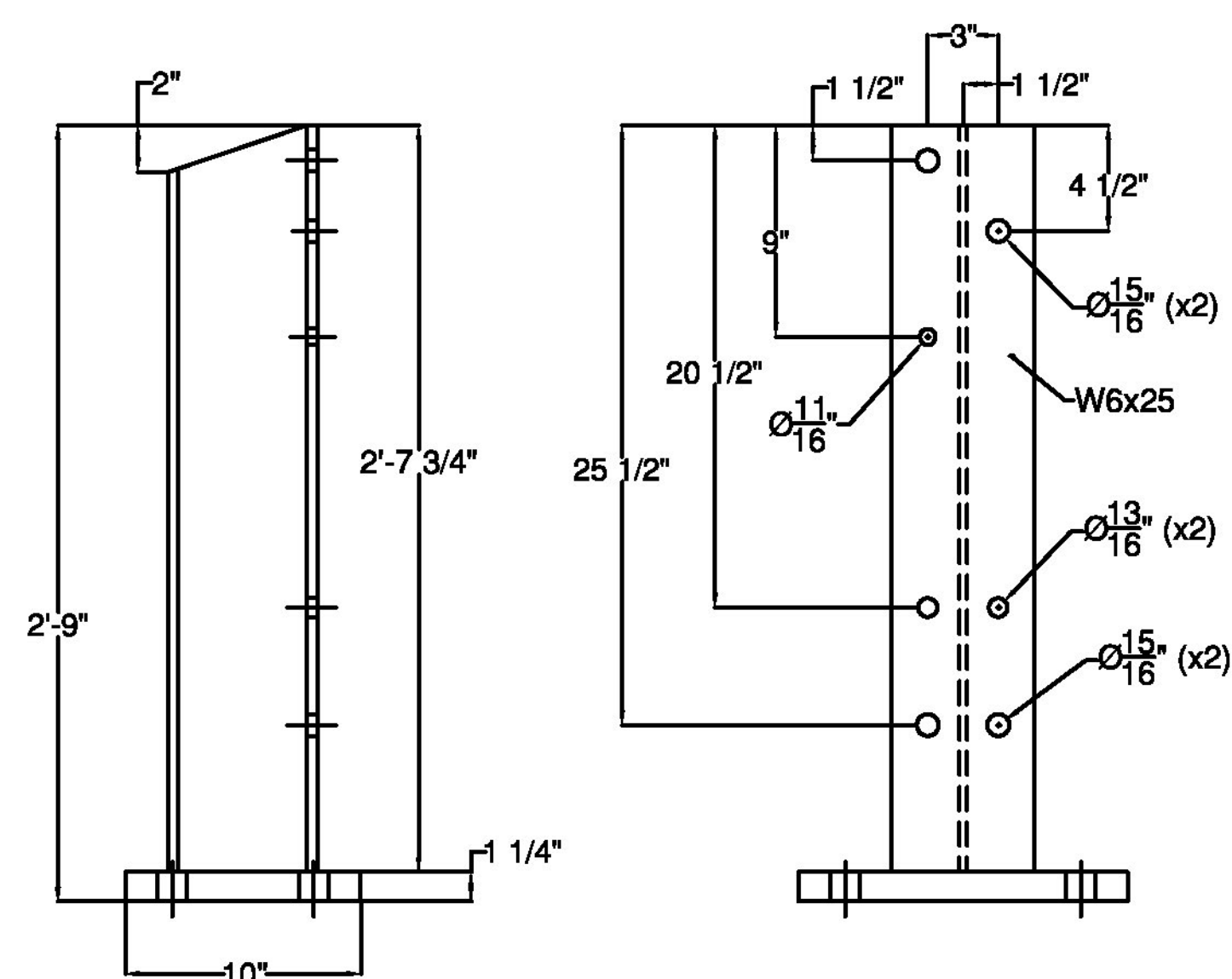
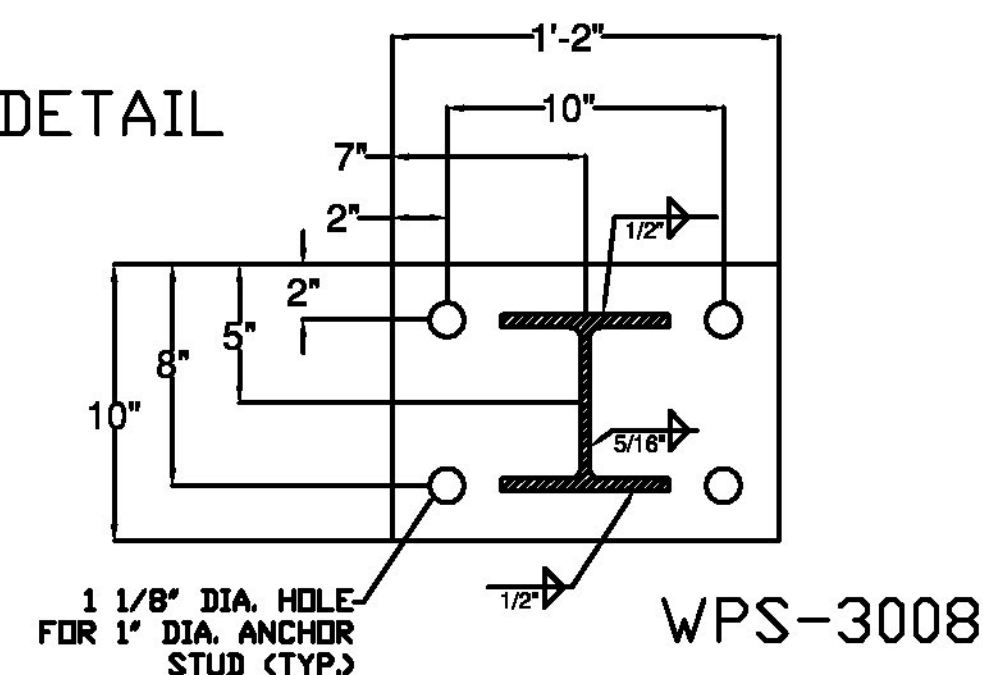
CERTIFIED FABRICATOR
DRAWN E.P. 12/03/12
CHECKED D.L. 12/03/12
APPROVED _____
SCALE SCHEMATIC
DRAWING NO. F.R. LAFAYETTE BRIGHTON

SPLICE BAR - FIXED



SPLICE TUBE - FIXED

BRIDGE POST DETAIL



ITEM #: 525.335

Vermont Agency of Transportation

RECEIVED

CK'D BY R. Klinefelter OK'D BY J. Salvatori

February 14, 2013

RESUBMIT Approved X

BY K. Higgins DATE 02/19/13

F.R. LAFAYETTE, P.O. 27399

SHEET 2 OF 2

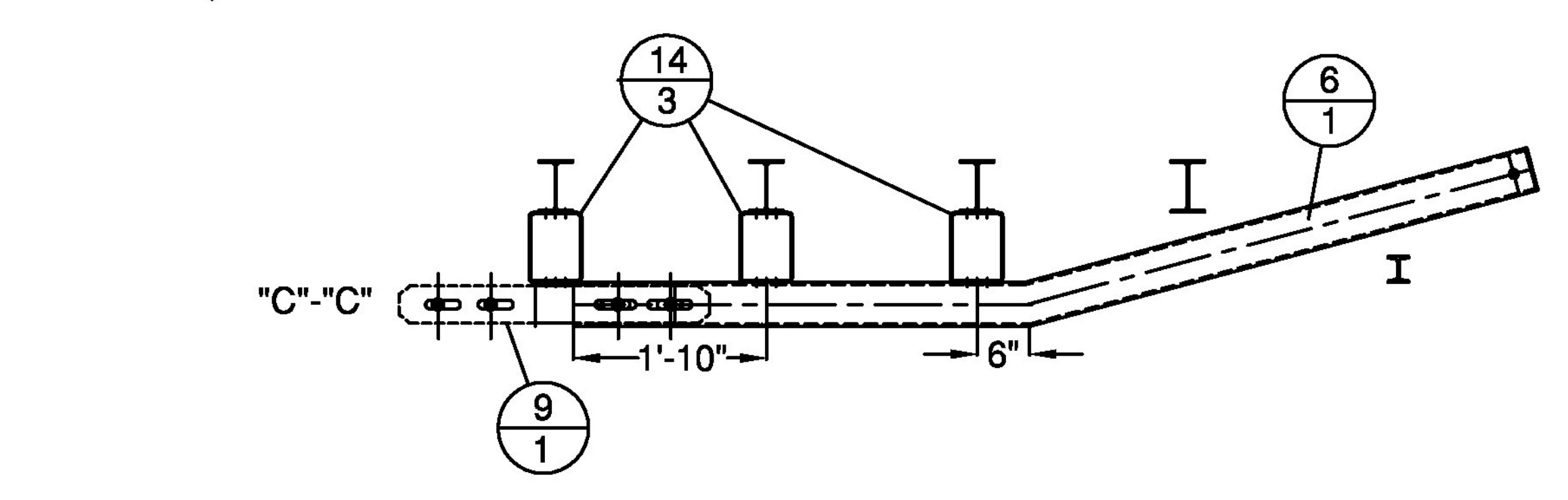
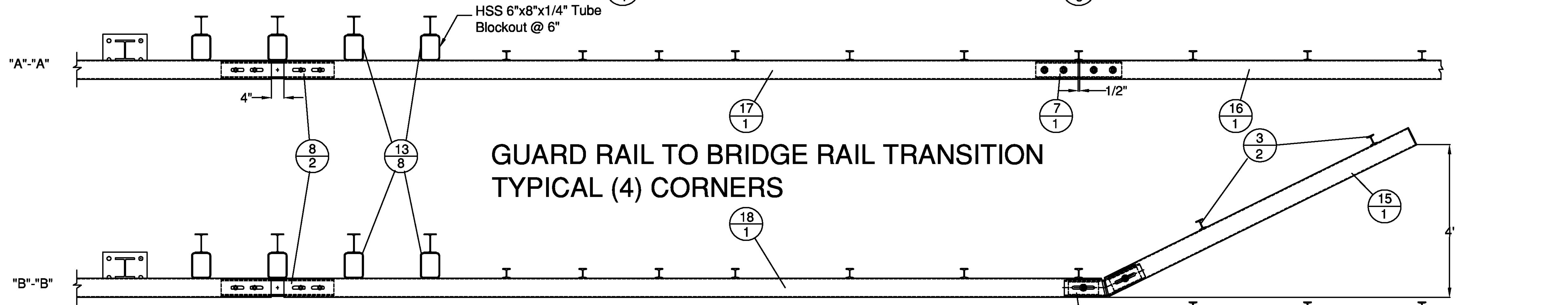
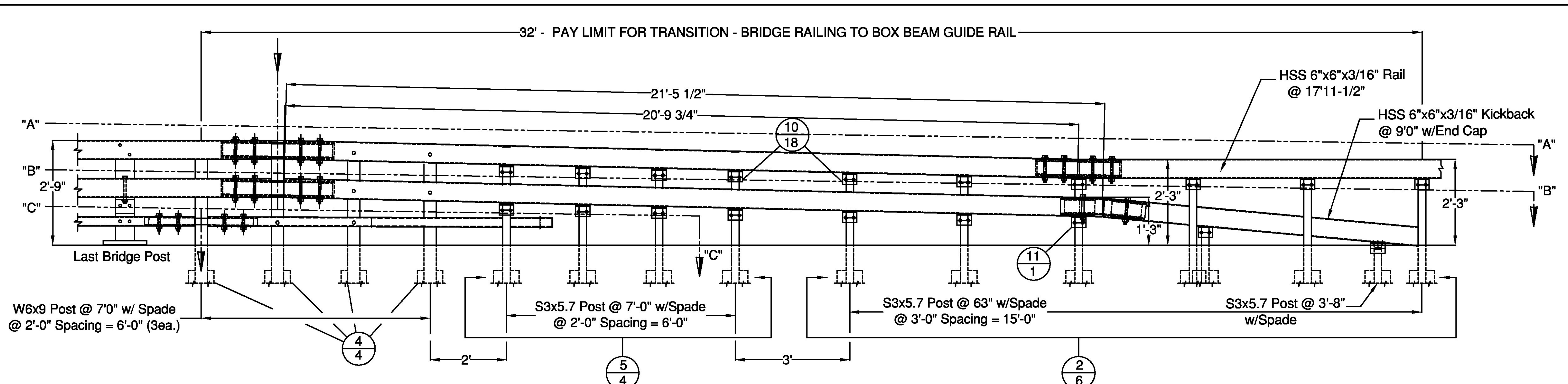
BRIDGE RAIL DETAILS SHEET

PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
TOWN OF BRIGHTON, ESSEX COUNTY, VT.

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/26/12	REVISED PER 12/26/12 EMAIL	E.P.	E 3	1/30/13	MADE IN MP TO 1 1/8" PER KAMA 1/20/13	E.P.
V 2	1/9/13	REVISED PER 1/9/13 EMAIL	E.P.	V			

DRAWN	E.P.	12/03/12
CHECKED	D.L.	12/03/12
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO. F.R. LAFAYETTE BRIGHTON		

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615



**GUARD RAIL TO BRIDGE RAIL TRANSITION
TYPICAL (4) CORNERS**

BILL OF MATERIALS, EACH OF (4) CORNERS

ITEM #	QTY.	DESCRIPTION	MATERIAL (ASTM)
2	6	3" I-POST, PUNCH 8", & 20" W/SPD @ 63" LG	A572 Gr. 50
3	2	3" I-END POST W/SPD @ 3'-8" LG	A572 Gr. 50
4	4	W6x9 POST @ 7' W/SPD @ 5/8" HOLES	A572 Gr. 50
5	4	3" I-POST, PUNCH 8" & 20", W/8x32" SPADE @ 7"	A572 Gr. 50
6	1	HSS 3x5" BTH TRANS RAIL W/5'-0" KB, EXP END	A500 Gr. B
7	1	HSS 5x5 TUBE SPLICE @ 27" LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr 50
8	2	HSS 5x5 EXP TUBE SPLICE @ 36" LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr 50
9	1	BR EXP BAR SPLICE 2-1/8" X 4-1/4" @ 36" LG	A572 Gr. 50
10	18	REG BB SHELF ANGLES @ 4-1/2"	A572 Gr. 50
11	1	DVY BB SHELF ANGLES @ 4-1/2"	A572 Gr. 50
12	1	HSS 5x5 DBL BEND TUBE SPL @ 28" LG	A500 Gr. B / A572 Gr 50
13	8	HSS 6x8" TRANS. TUBE B/D @ 6" LG	A500 Gr. B
14	3	HSS 6x8" TRANS. TUBE B/D @ 3" LG	A500 Gr. B
15	1	HSS 6x6" BB @ 9'-0" KICKBACK, W/ CAP	A500 Gr. B / A36
16	0.5	HSS 6x6" BB @ 17'-11 1/2", DRILL 3" CG	A500 Gr. B
17	1	HSS 6x6" BB TOP TRANS @ 20'-9 3/4" LG W/EXP END	A500 Gr. B
18	1	HSS 6x6" BB BTH TRANS @ 21'-5 1/2" LG W/EXP END	A500 Gr. B
19	18	3/8" X 7 1/2" BOLT, NUT, & 2 FW	A307, A563, F436
20	19	1/2" X 1-1/2" BOLT, NUT, & FW	A307, A563, F436
21	22	1/2" X 1-1/2" BOLT, NUT, 2 FW & LV	A307, A563, F436
22	4	3/4" X 4-1/2" BOLT, NUT, 2 FW	A325, A563, F436
23	12	3/4" X 7-1/2" BOLT, NUT, 2 FW	A325, A563, F436
24	6	3/4" X 8" CARR BOLT, NUT, FW & LV	A307, A563, F436
25	2	3/4" X 8" BOLT, NUT, 2 FW, & LV	A325, A563, F436

HARDWARE NOTES

ITEM #	FUNCTION
19	BOLT RAIL TO SHELF ANGLE (ITEM #10)
20	BOLT SHELF ANGLE (ITEM #'S 10 & 11) TO POST
21	BOLT BLOCK-OUTS (ITEM #'S 13 & 14) TO HEAVY POST
22	(4) PER SPLICE BAR (ITEM #9)
23	(4) PER SPLICE TUBING (ITEM #'S 7 & 8)
24	BOLT RAIL (ITEMS #'S 6,17, & 18 TO BLOCK-OUTS (ITEM #'S 13 & 14) [WHERE FASTENED])
25	BOLT DOUBLE BEND SPLICE TUBE (ITEM #12) TO RAIL (ITEM #18) & KICKBACK (ITEM #15) & ITEM #11)

7/8" BOLT

Vermont Agency of Transportation
RECEIVED
CK'D BY R. Kliefelder OK'D BY J. Salvatori
February 14, 2013
RESUBMIT Approved AS NOTED
BY K. Higgins DATE 02/19/13

ITEM #: 525.335 F.R. LAFAYETTE, P.O. 27399 SHEET 1 OF 4

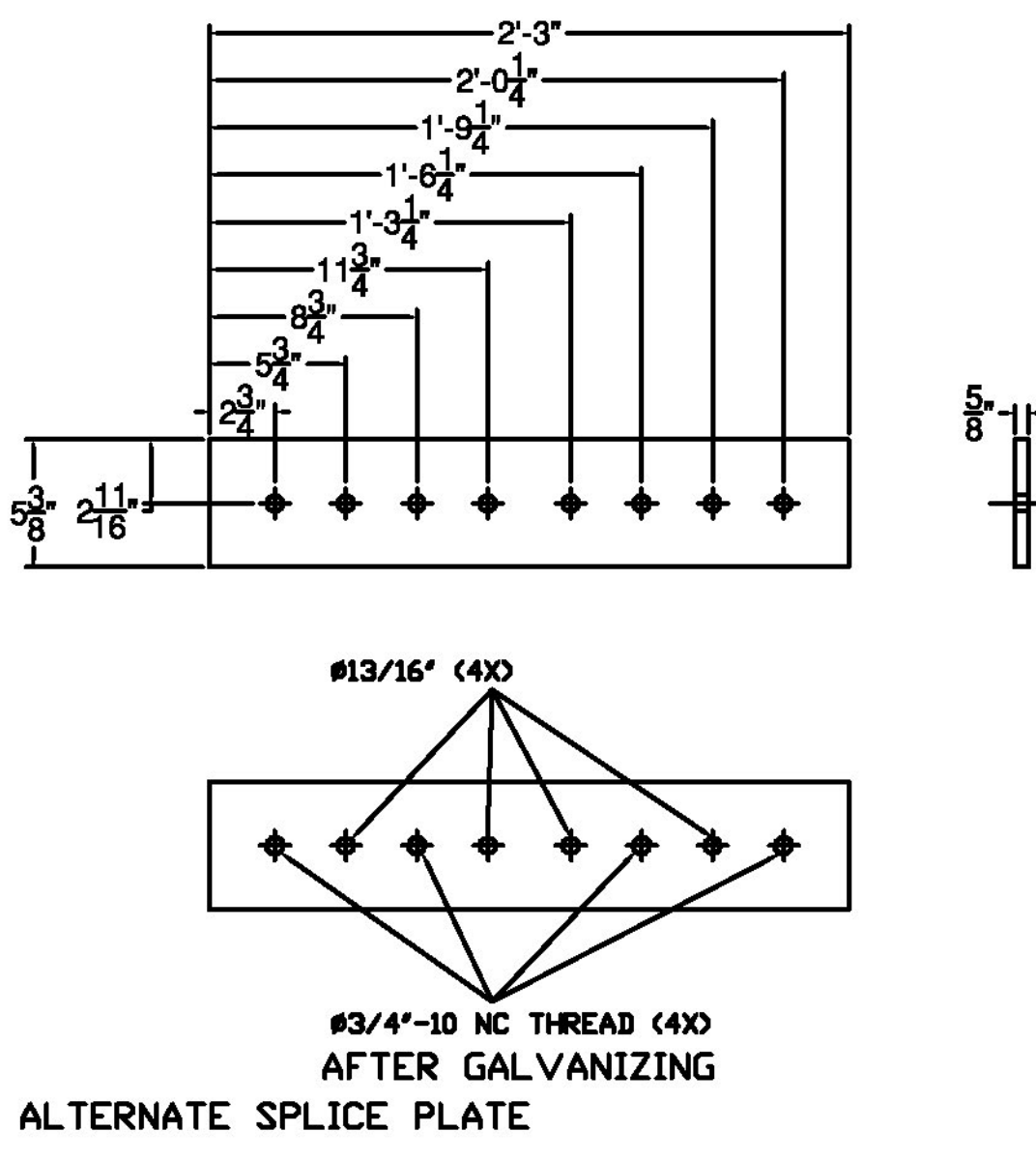
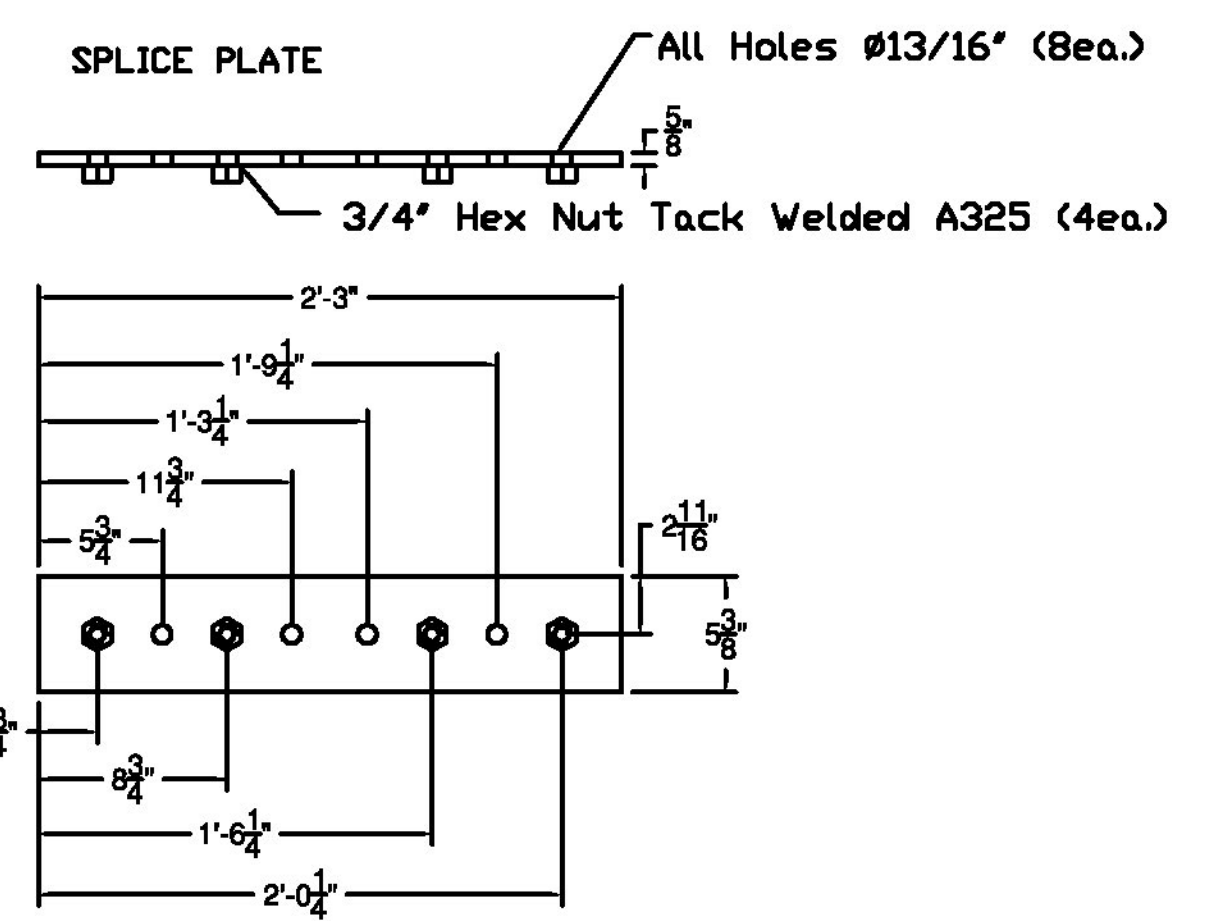
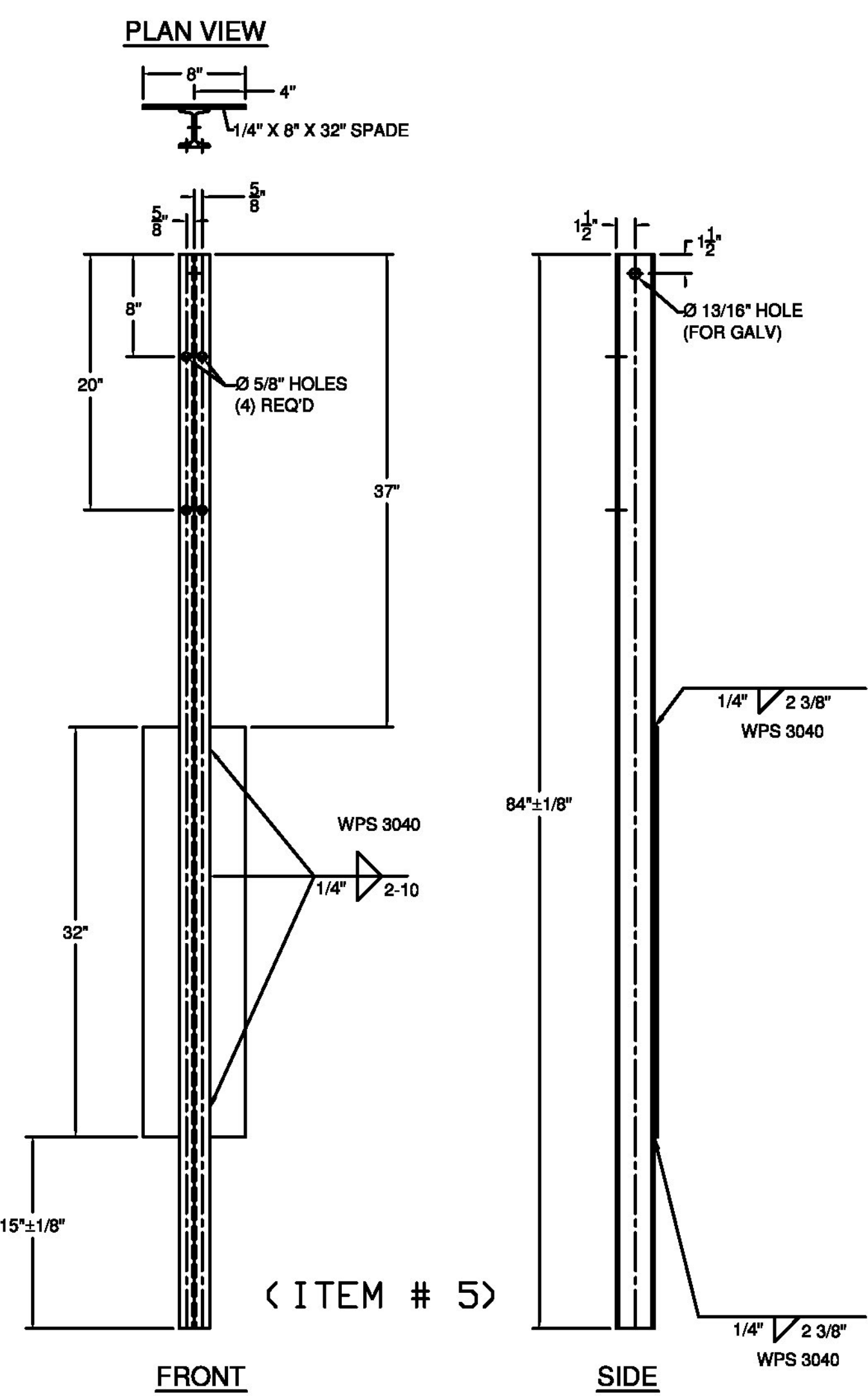
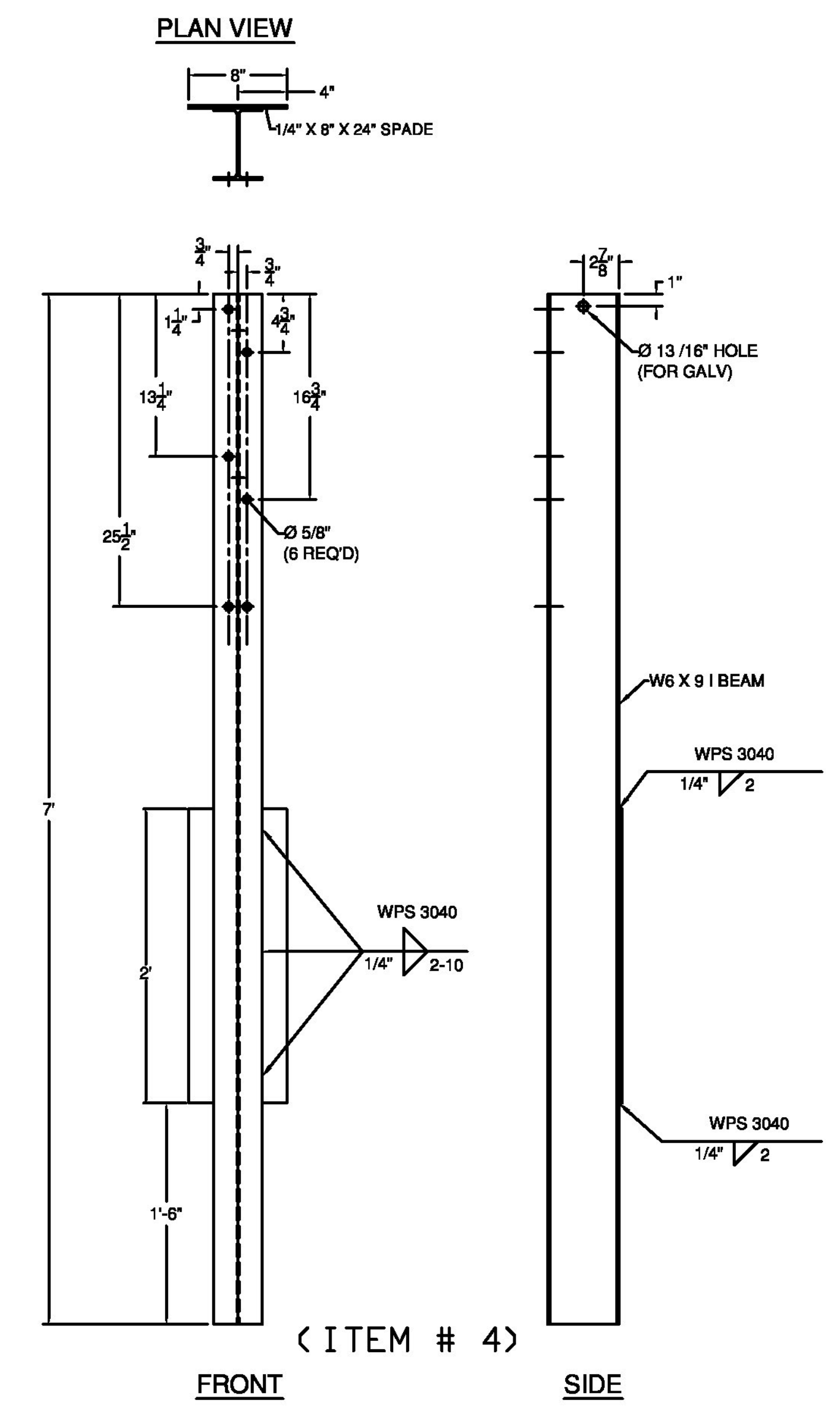
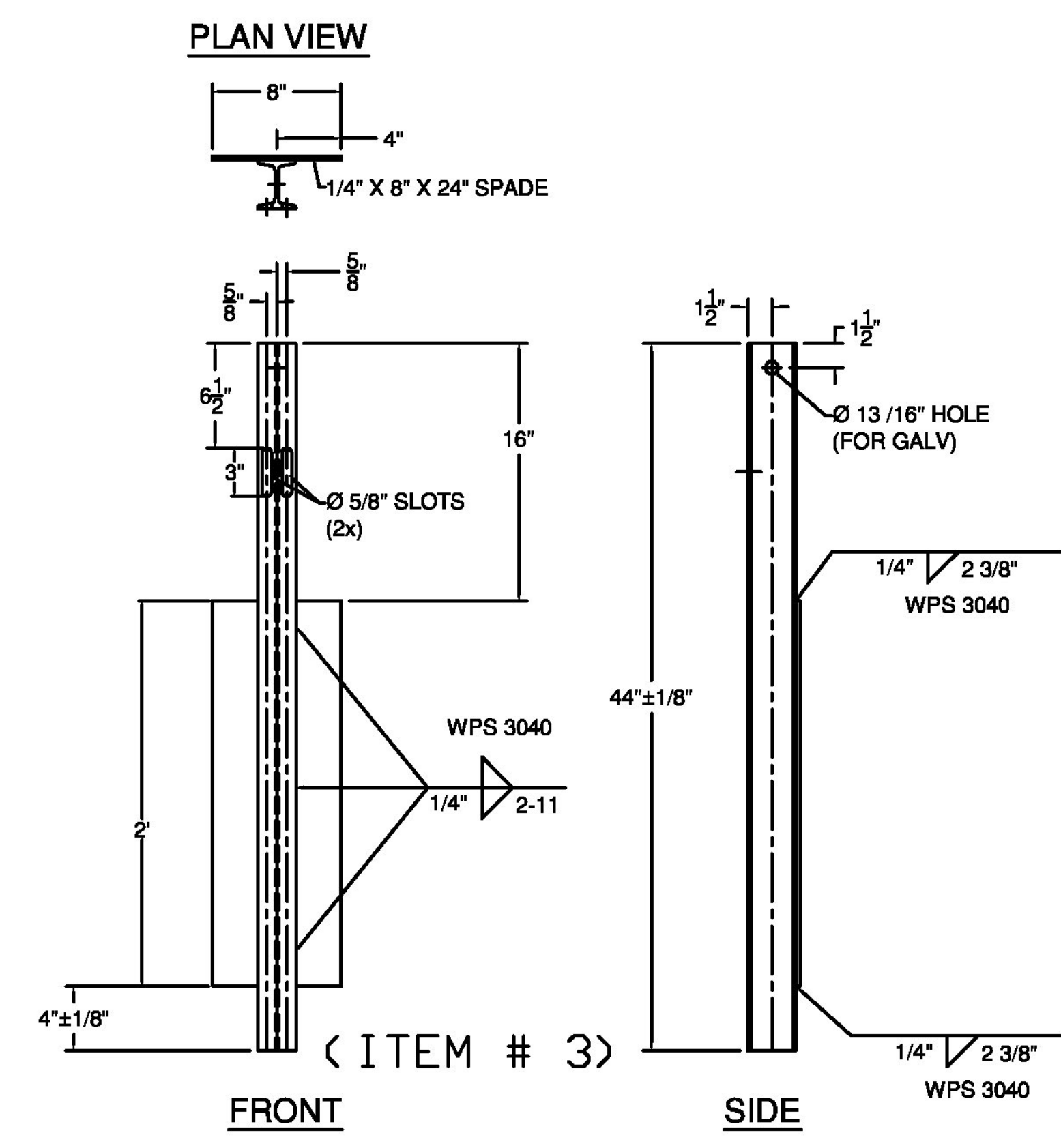
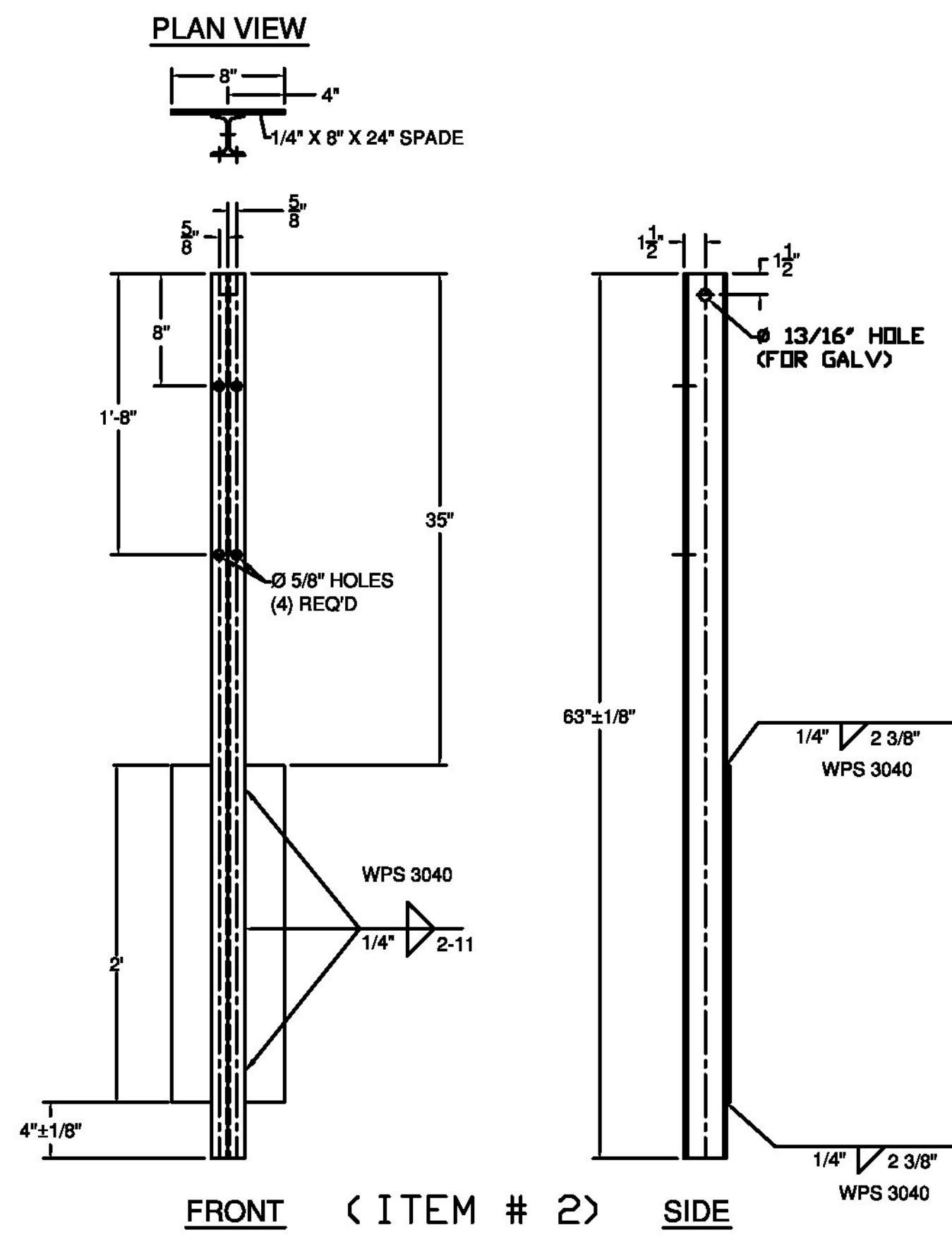
GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET
PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
TOWN OF BRIGHTON, ESSEX COUNTY, VT.

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/2/12	REVISED PER 12/26/12 EMAIL	E.P.	E			
V 2	1/9/13	REVISED PER 1/9/13 EMAIL	E.P.	V			

APPROVED BY: _____

ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615

SCALE SCHEMATIC
DRAWING NO. F.R. LAFAYETTE BRIGHTON



ITEM #: 525.335

F.R. LAFAYETTE, P.O. 27399

SHEET 2 OF 4

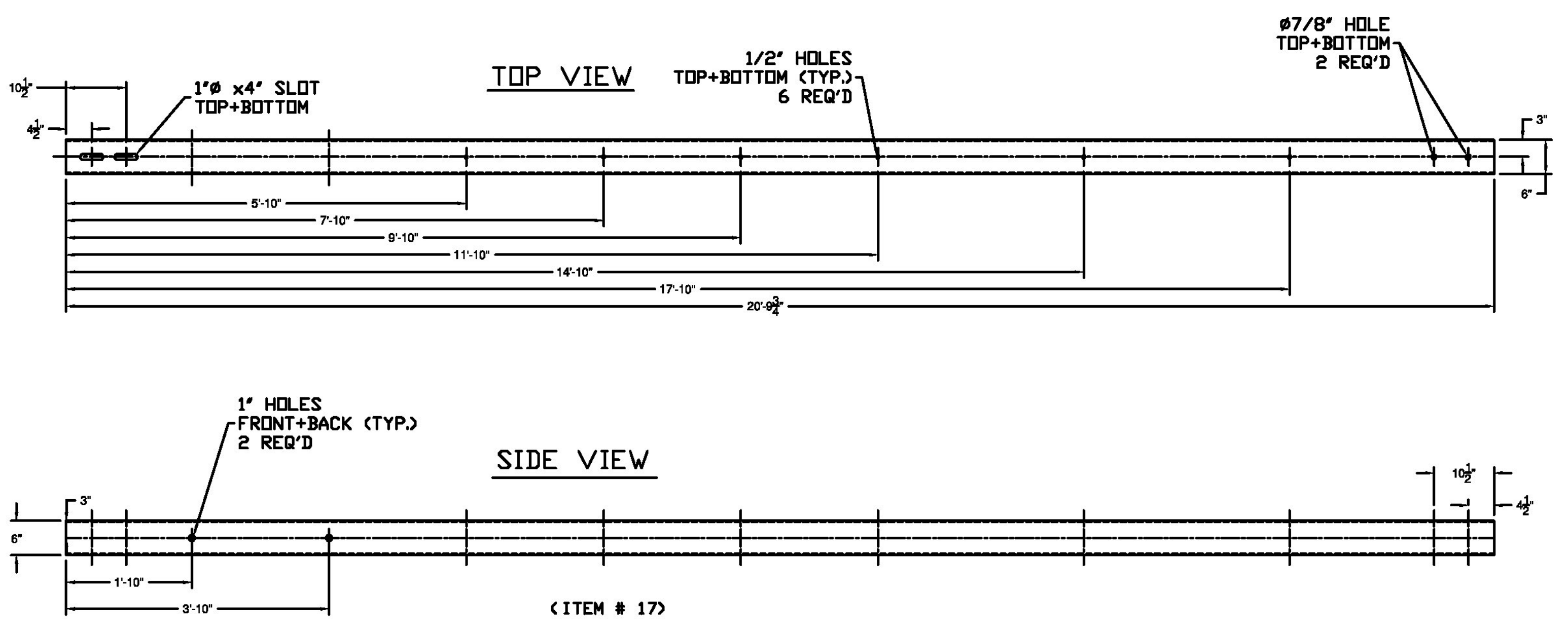
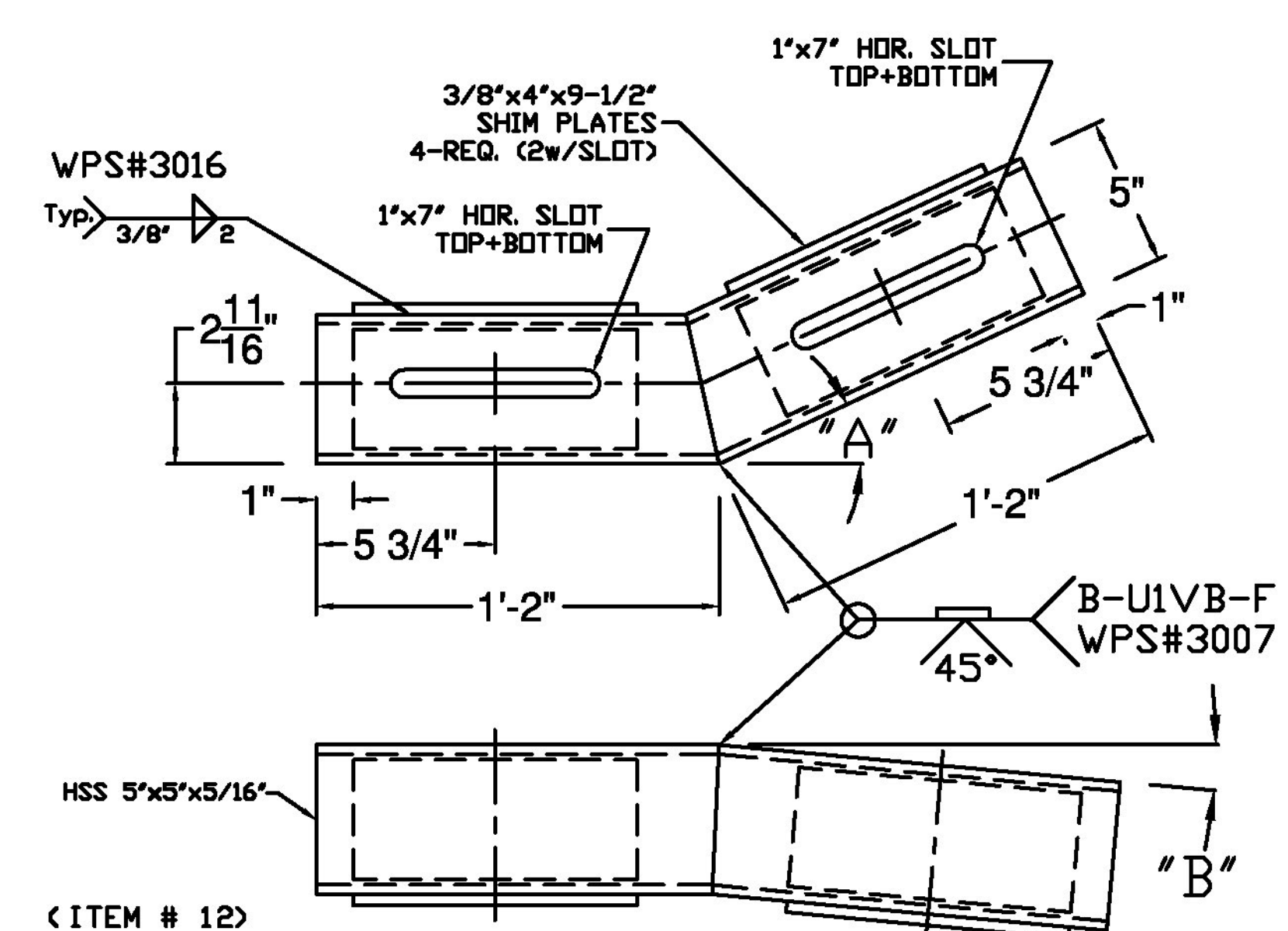
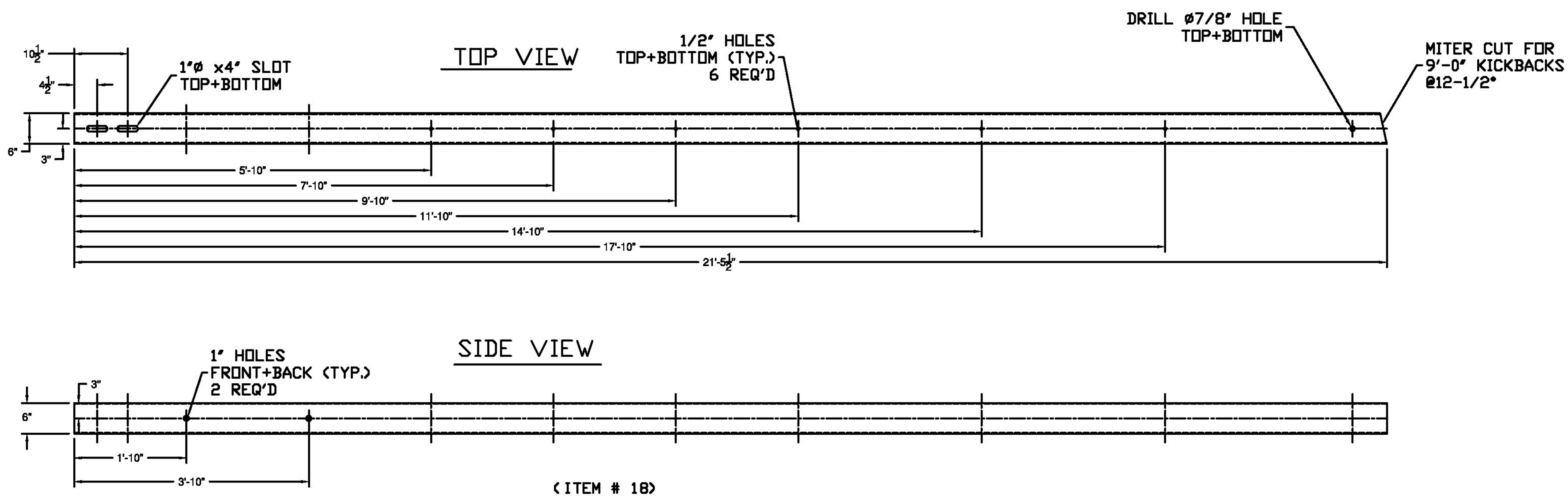
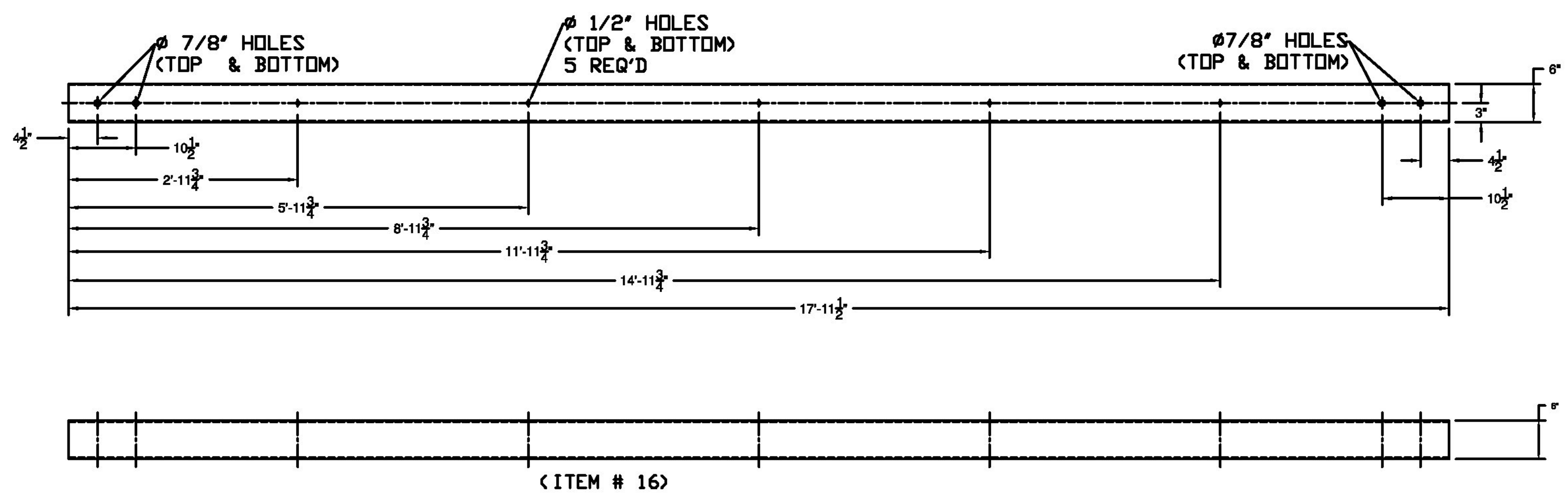
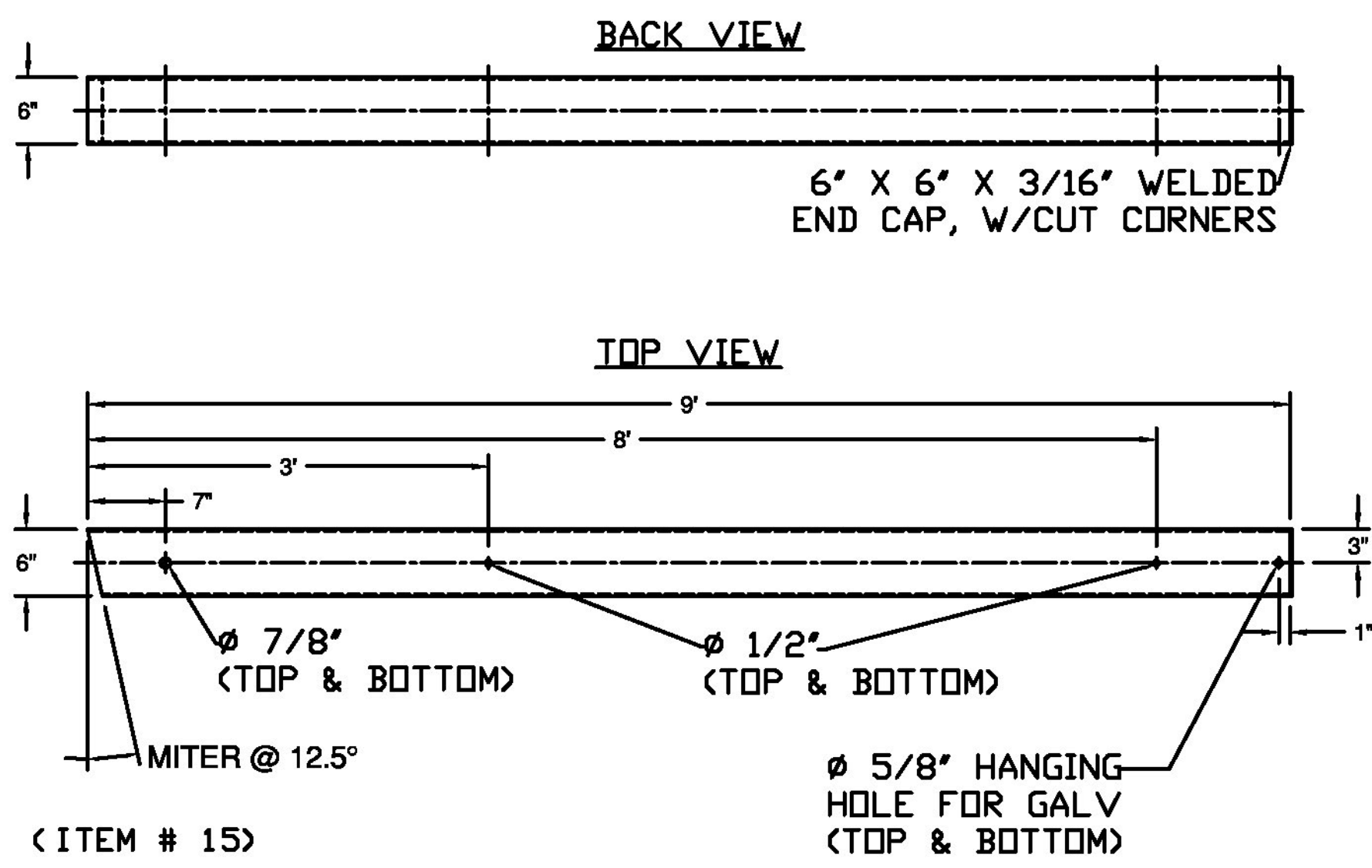
Vermont Agency of Transportation
RECEIVED
 CK'D BY R. Klinefelter OK'D BY J. Salvatori
 February 14, 2013
 RESUBMIT Approved X
 BY K. Higgins DATE 02/19/13

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET
 PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
 TOWN OF BRIGHTON, ESSEX COUNTY, VT.

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/26/12	REVISED PER 12/26/12 EMAIL	E.P.	E			
V 2	1/9/13	REVISED PER 1/9/13 EMAIL	E.P.	V			

DRAWN	E.P.	12/03/12
CHECKED	D.L.	12/03/12
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE BRIGHTON	

ELDERLEE, INC.
 OAKS CORNERS, NEW YORK 14518
 E-Mail: dlong@elderlee.com
 Tel: 315-789-6670 Fax: 315-789-6615



"A" - SEE PLAN FOR TURN BACK DISTANCE, SET ANGLE ACCORDINGLY.
 "B" - TURN DOWN ANGLE SET BY THE 9" MEASUREMENT AT THE END OF THE BOX BEAM.

- GENERAL NOTES:
- 1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
 - 2) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
 - 3) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
 - 4) BOX BEAM TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.

ITEM #: 525.335

F.R. LAFAYETTE, P.O. 27399

SHEET 3 OF 4

APPROVED BY:

Vermont Agency of Transportation
RECEIVED
 CK'D BY R. Klinefelter OK'D BY J. Salvatori
 February 14, 2013
 RESUBMIT Approved X
 BY K. Higgins DATE 02/19/13

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
 TOWN OF BRIGHTON, ESSEX COUNTY, VT.

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/26/12	REVISED PER 12/26/12 EMAIL	E.P.	E			
V 2	1/9/13	REVISED PER 1/9/13 EMAIL	E.P.	V			

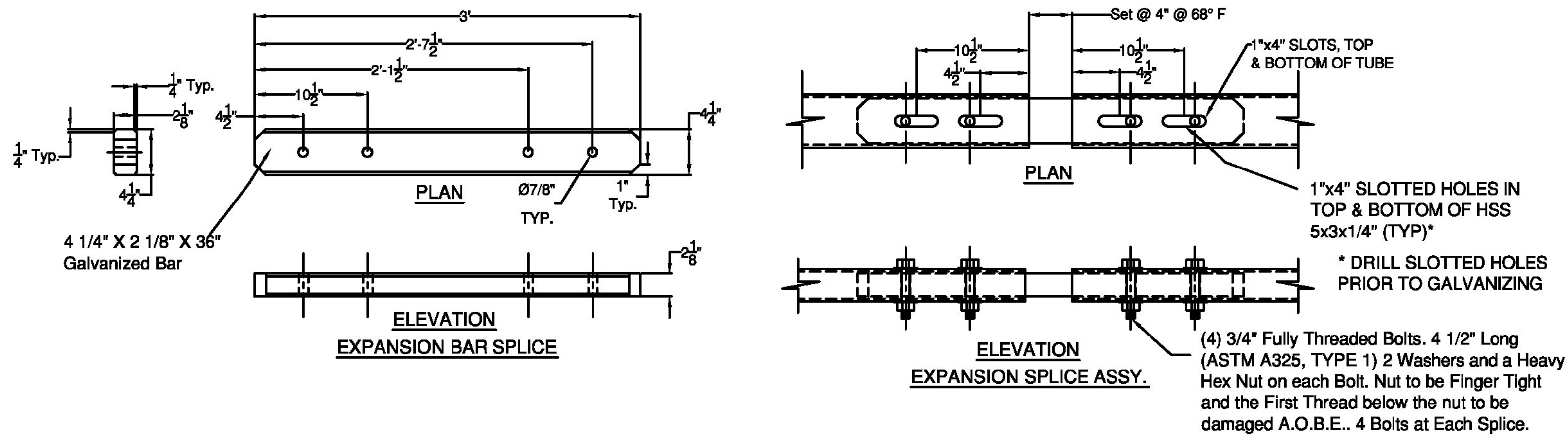
DRAWN	E.P.	12/03/12
CHECKED	D.L.	12/03/12
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO. F.R. LAFAYETTE BRIGHTON		



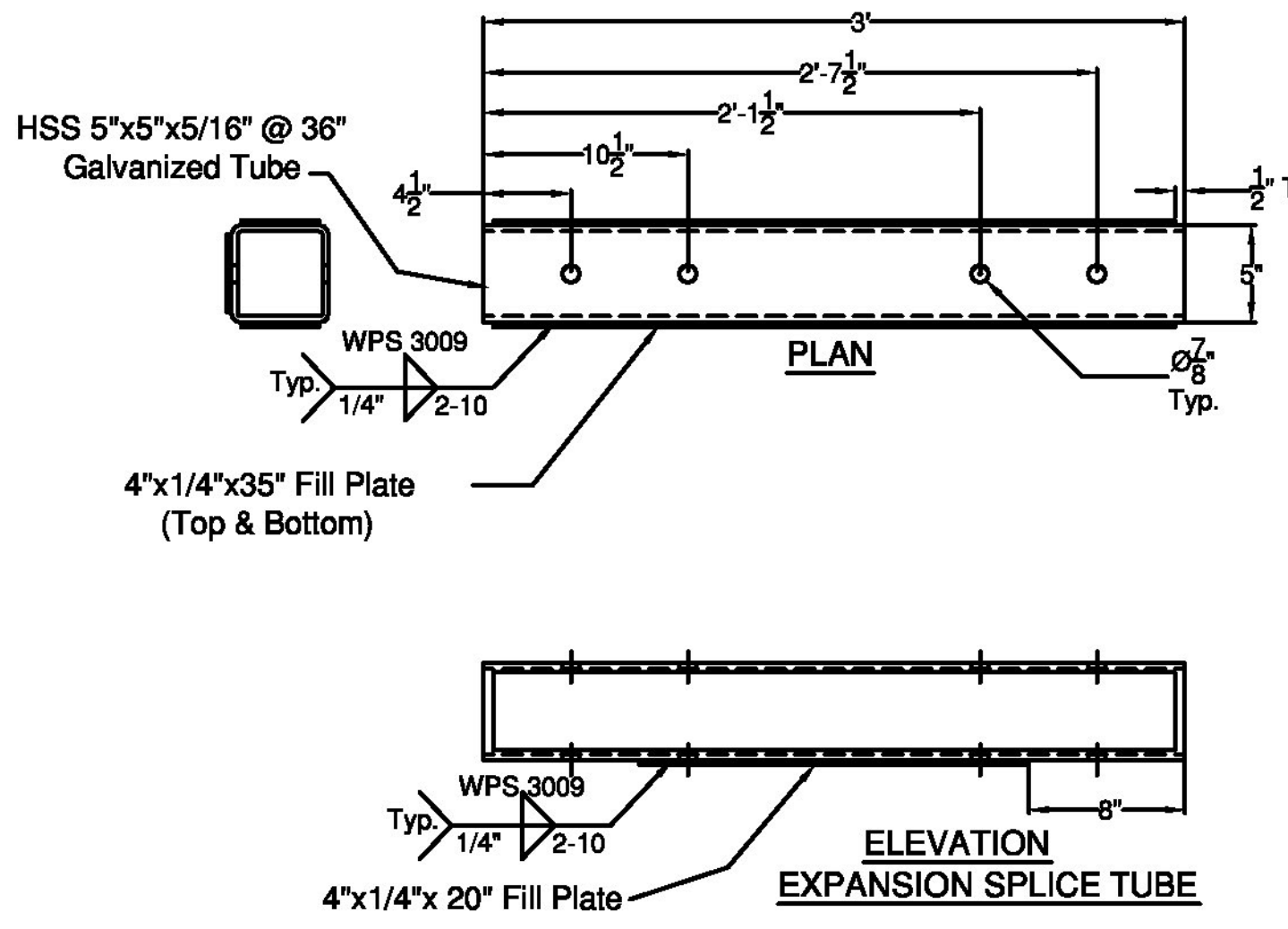
ELDERLEE, INC.
 OAKS CORNERS, NEW YORK 14518
 E-Mail: dlong@elderlee.com
 Tel: 315-789-6670 Fax: 315-789-6615



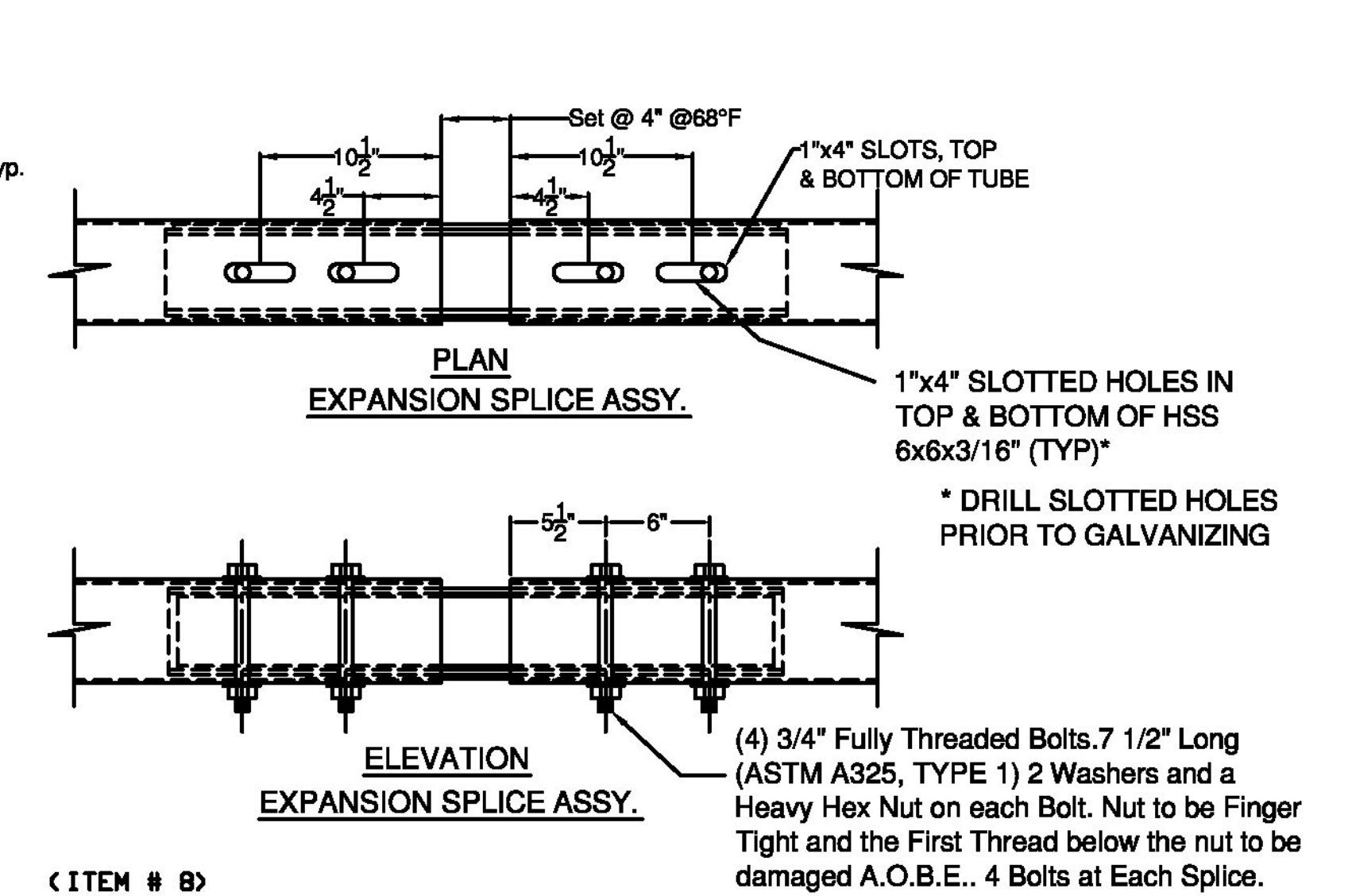
SPLICE BAR - EXPANSION



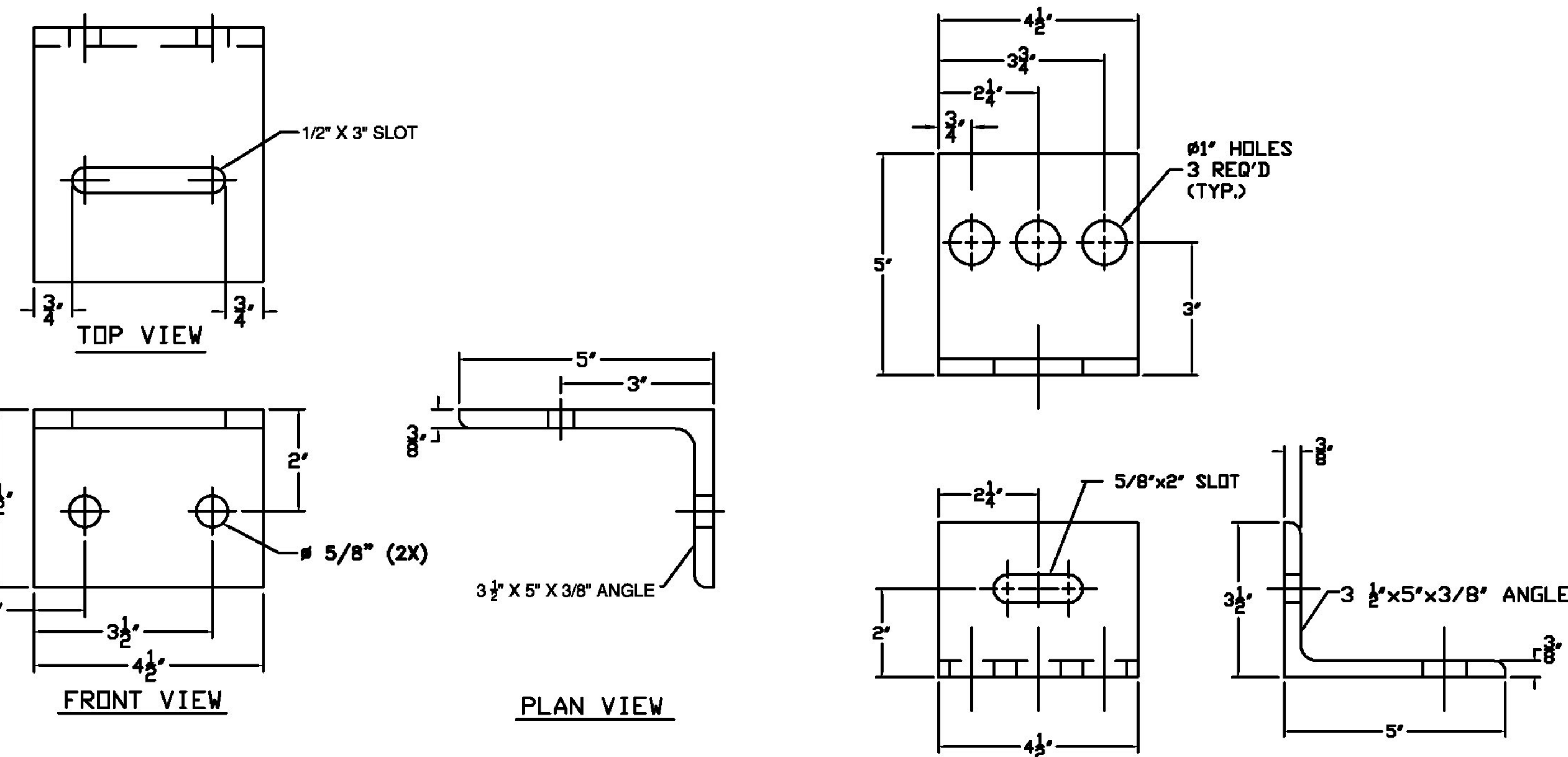
(ITEM # 9)



SPLICE TUBE - EXPANSION

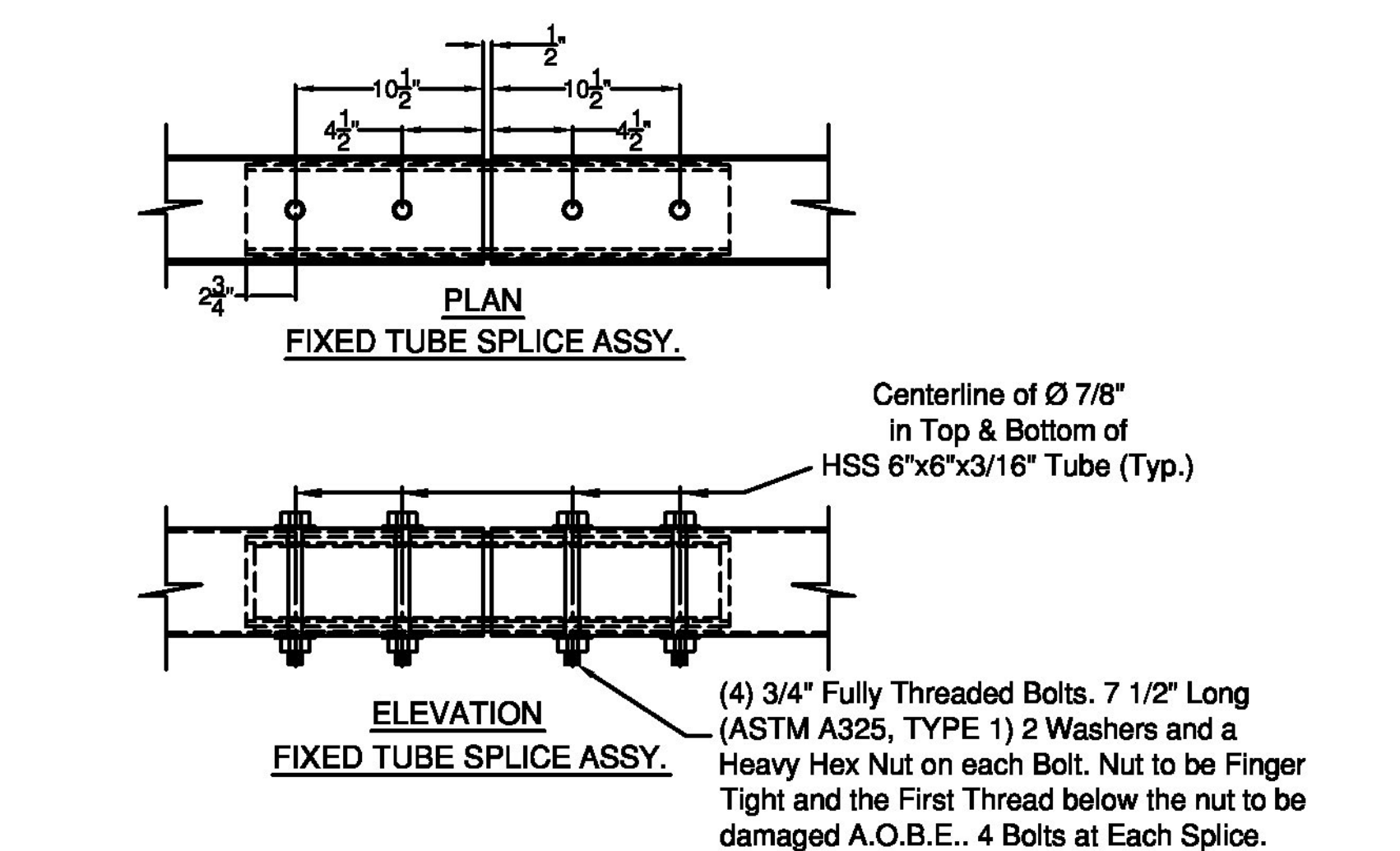
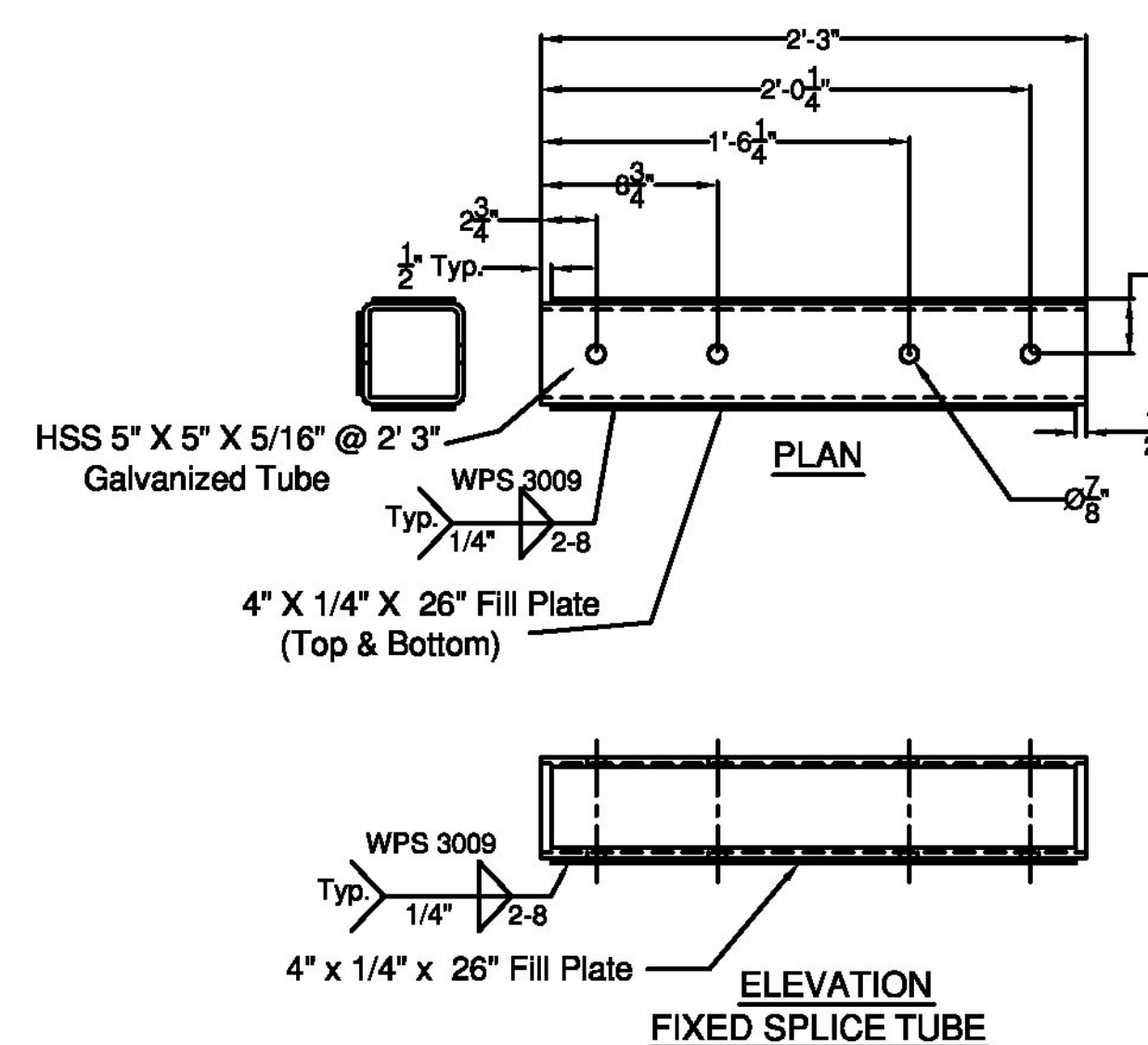


(ITEM # 8)



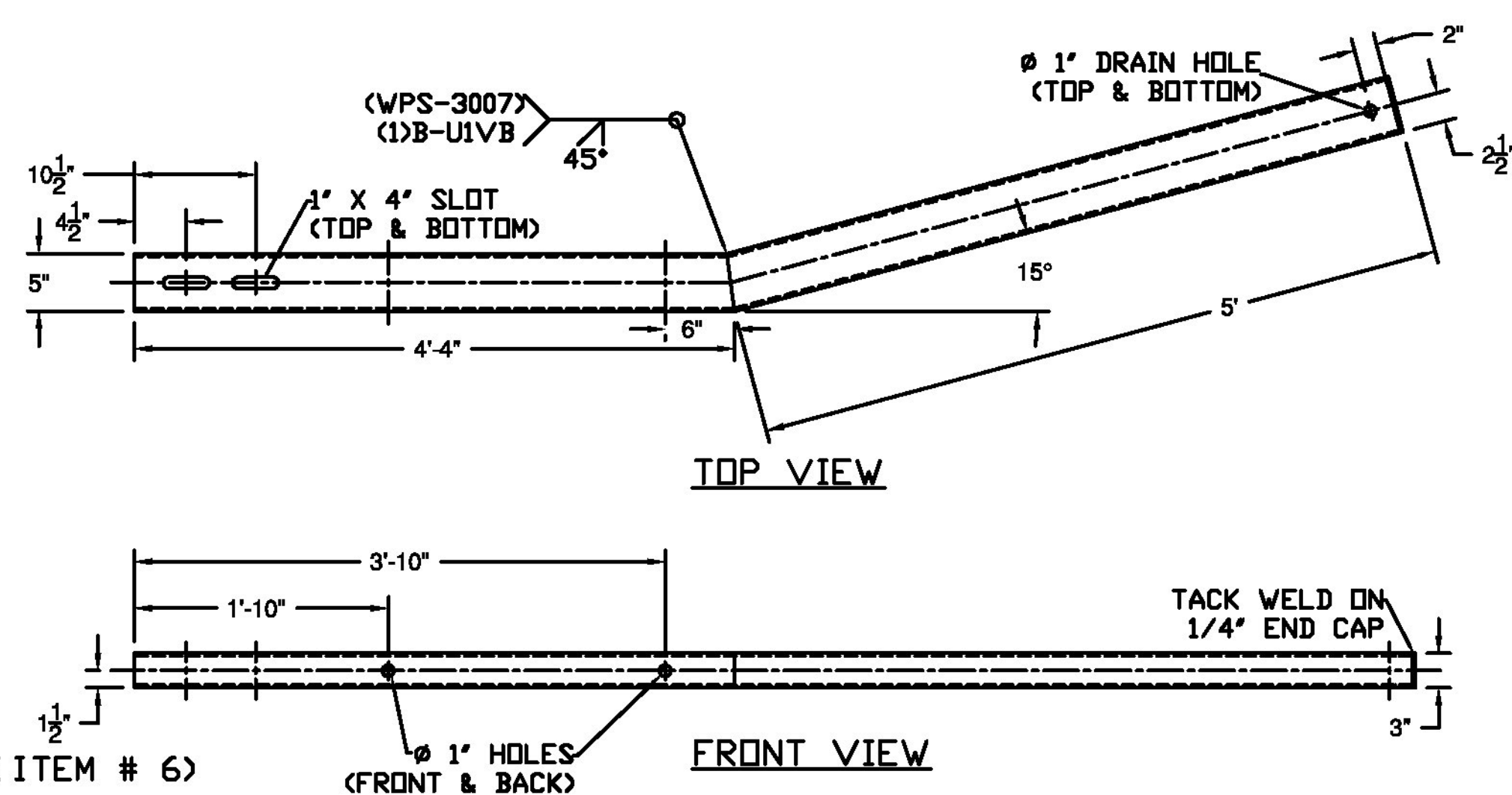
(ITEM # 10)

(ITEM # 11)

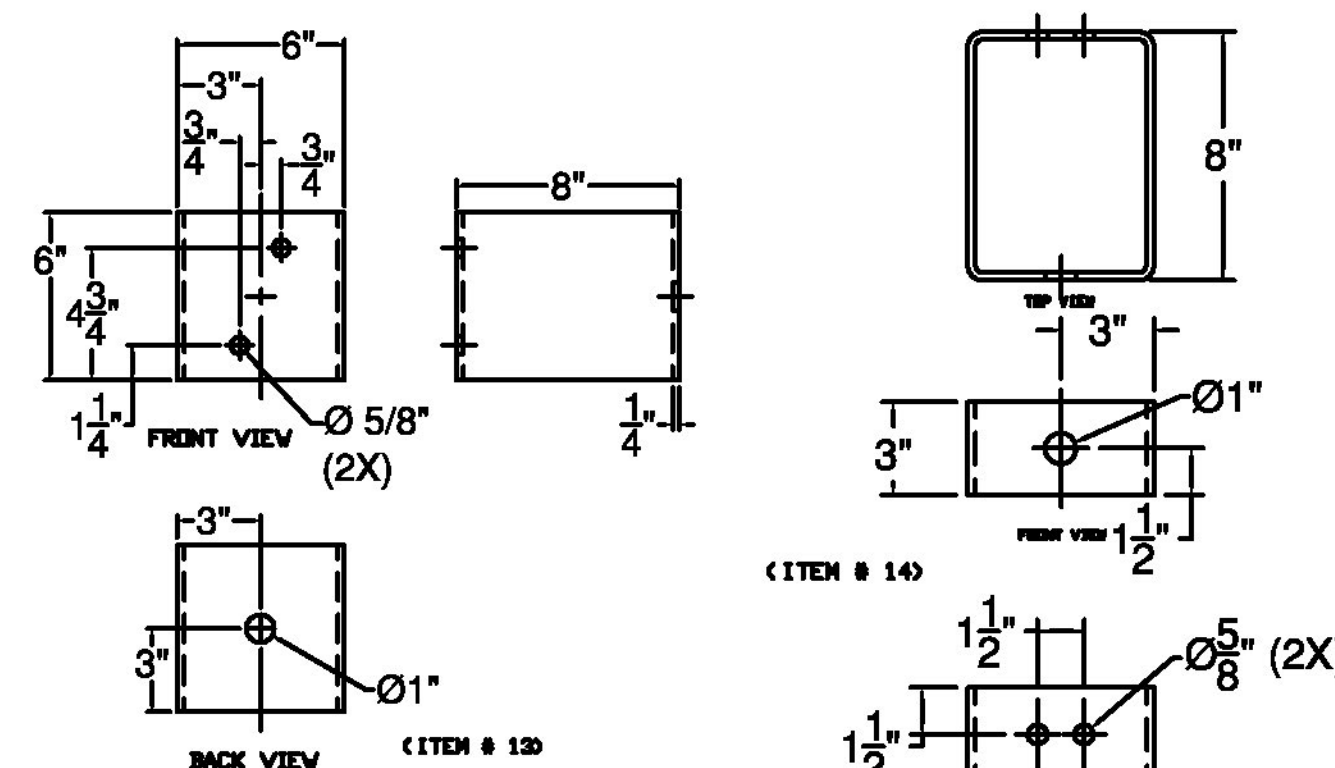


(ITEM # 7)

SPLICE TUBE - FIXED

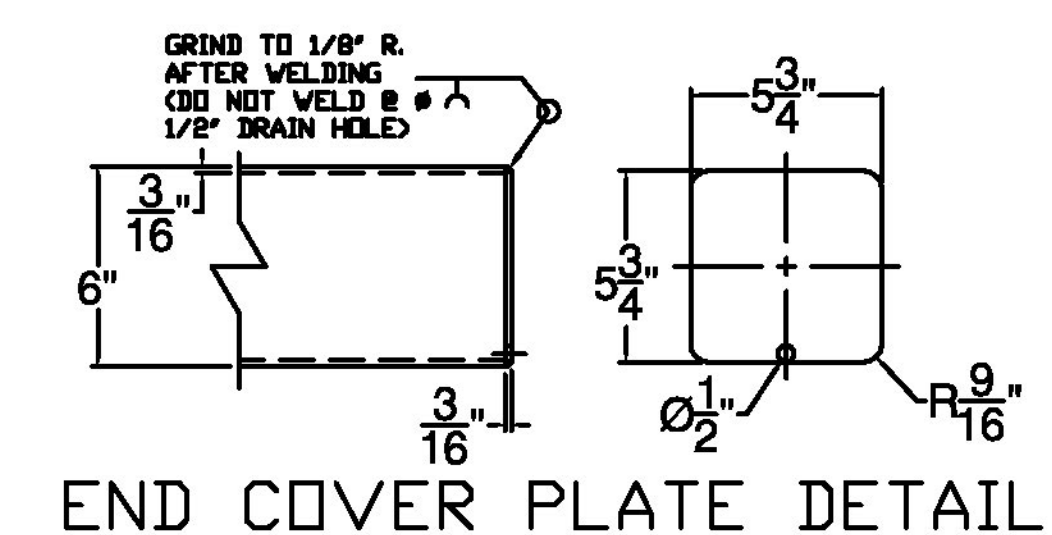


(ITEM # 6)



(ITEM # 14)

(ITEM # 12)



ITEM #: 525.335

Vermont Agency of Transportation
RECEIVED

CK'D BY R. Klinefelter OK'D BY J. Salvatori

February 14, 2013

RESUBMIT Approved X
BY K. Higgins DATE 02/19/13

F.R. LAFAYETTE, P.O. 27399

SHEET 4 OF 4

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET
PROJECT: BRIGHTON, PROJECT # ER STP 034-3(25), MINOR ARTERIAL, BRIDGE # 84
TOWN OF BRIGHTON, ESSEX COUNTY, VT.

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY
E 1	12/26/12	REVISED PER 12/26/12 EMAIL	E.P.				
V 2	1/9/13	REVISED PER 1/9/13 EMAIL	V				

DRAWN	E.P.	12/03/12
CHECKED	D.L.	12/03/12
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R. LAFAYETTE BRIGHTON	



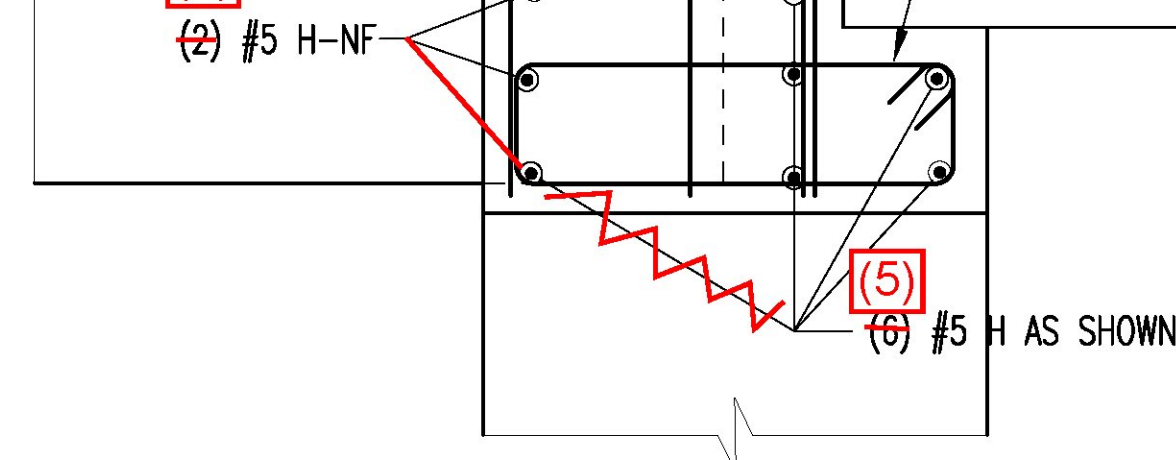
ELDERLEE, INC.
OAKS CORNERS, NEW YORK 14518
E-Mail: dlong@elderlee.com
Tel: 315-789-6670 Fax: 315-789-6615



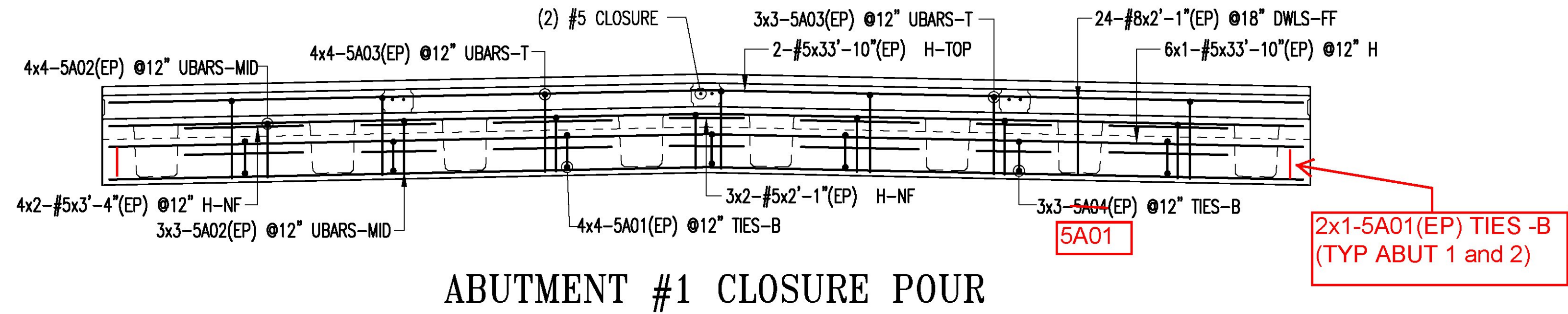
SCALE SCHEMATIC
DRAWING NO. F.R. LAFAYETTE BRIGHTON

APPROACH SLAB CLOSURE

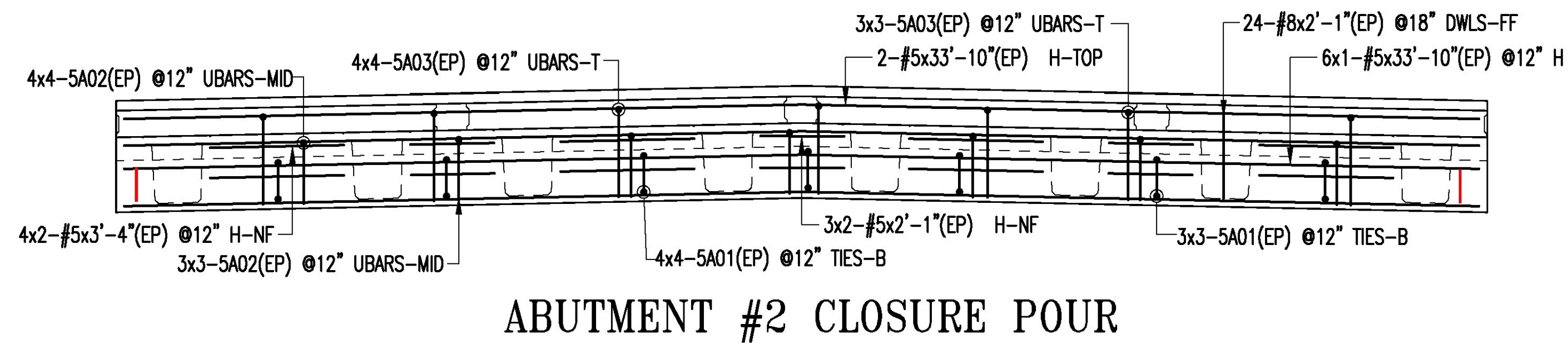
MAIN DECK CLOSURE



ABUTMENT CLOSURE POUR SECTION



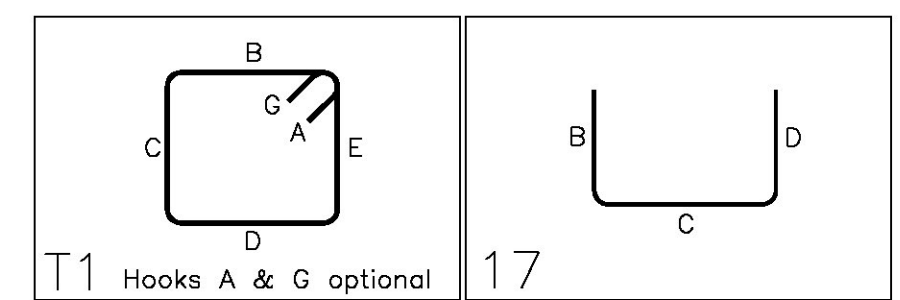
ABUTMENT #1 CLOSURE POUR



ABUTMENT #2 CLOSURE POUR

Drawing Sheet : R01

Bar Mark	Qty	Size	Total Length	Type	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'
5A01	4	#5	9'-0"	T1	5 1/2"	11 1/2"	3'-1"	11 1/2"	3'-1"								
5A02	50	#5	5'-2"	T7		1'-6 1/2"	2'-1"	1'-6 1/2"									
5A03	50	#5	5'-4"	T7		2'-2 1/2"	11"	2'-2 1/2"									
5A04	9	#5	8'-10"	T1	5 1/2"	10 1/2"	3'-1"	10 1/2"	3'-1"								



Vermont Agency of Transportation
RECEIVED

CK'D BY WDL OK'D BY GML

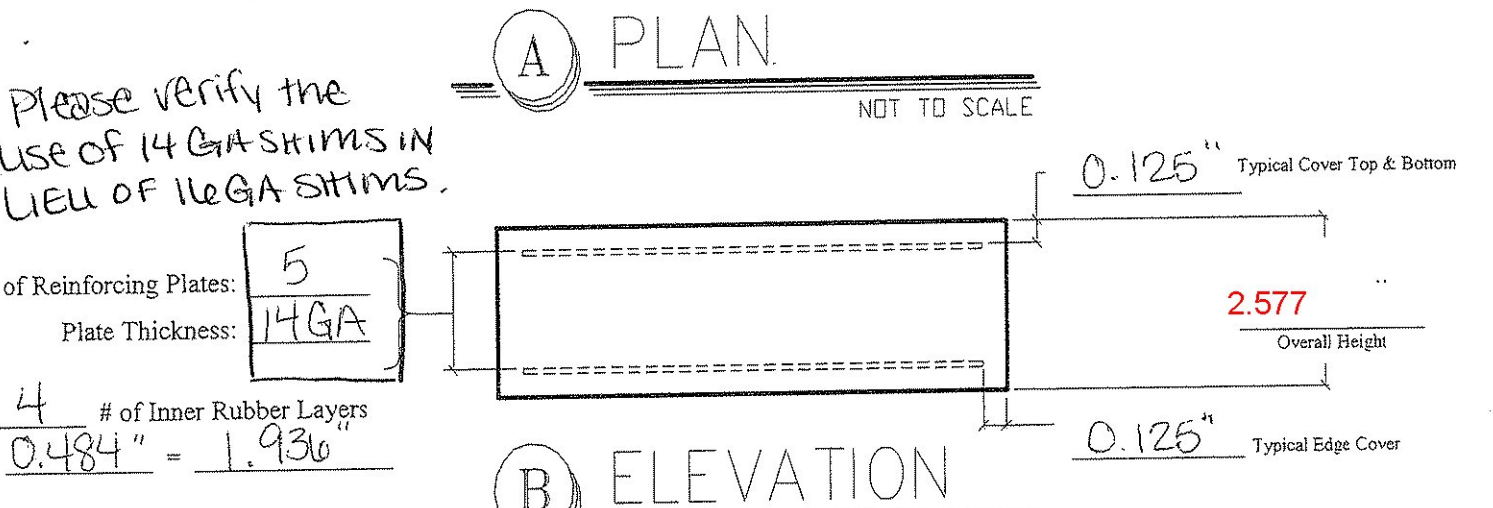
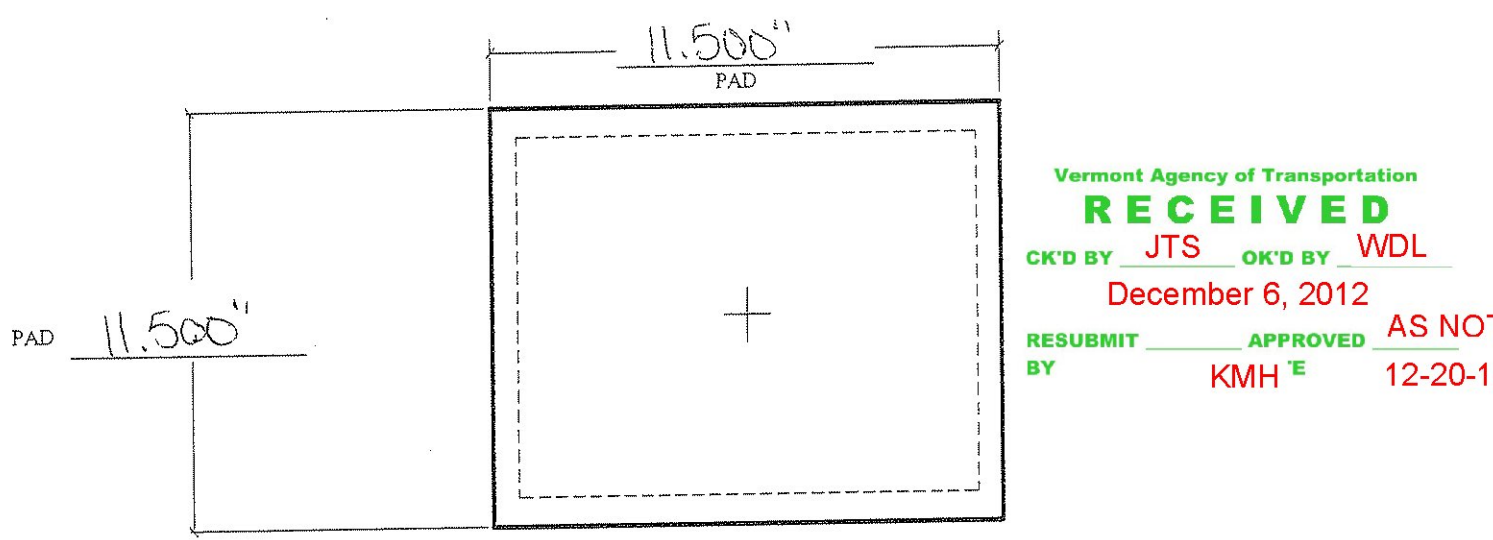
January 17, 2013

RESUBMIT NO Approved AsNoted
BY KMH DATE 01/22/13

1	APPROVAL PRINT	01/14/13	CPS
No.	Description	Date	By
Revisions and Issue Record			
The full intent and purpose of this drawing is the placing of reinforcing steel bars ONLY. It is NOT to be used as a means of communication between the Architect, Engineer, Contractor or any other Sub-trades.			
THIS DRAWING IS NOT TO BE SCALED.			
DETAILED AT:			
BARKER STEEL LLC <small>a HarrisRebar company</small>		CANAAN NEW HAMPSHIRE	
Project: BRIGHTON ER STP 034-(25) BRIGHTON VT 05451			
Drawing: POUR CLOSURES REINFORCEMENT			
Customer: J.A. MCDONALD			
Engineer:			
Refer to Release:			
Date	Drawn	Chkd.	JOB No.
01/14/13	CPS		10049037
			Dwg. No.
			R01

REINFORCED ELASTOMERIC BEARING FABRICATION SHEET 1103- Page #: 1

Project #: 38760-1103-1 (16 of 16) Customer: J.A. McDONALD (PD # 101912)
 County: ESSEX State: VT Structure: BRIDGE 84
 Pad I.D./Loc.: ABUTMENTS Quantity (Including Full Size Sample(s) - If Req'd): 16
 Certifications Are Required: Testing Req'd: YES, see below NO, random in-house only YES - (If not full size, create another sheet) Sample Req'd: YES NO
 State D.O.T. Spec. Number (If Specified): SEC 6314.731 Project # (req'd for cert.s): ER STP 034-S(25)
 Special Notes: _____
 Shim Steel Spec. (Circle One): A709 GR.36(250) A1011 GR.36(250)-Type 1 Other: _____
 Durometer Requirement (Circle One): 50±5 60±5 Other: _____ Shear Modulus Requirement: 100psi ± 15%
 Neoprene Grade (Circle One): 3 Other Grade or Natural Rubber: NATURAL RUBBER



Name: Norma Davis Date: 12-5-12
 This shop drawing was prepared in accordance with the contract plans and specifications. The D.S. Brown Company does not accept liability for the design of the products detailed in the shop drawings.

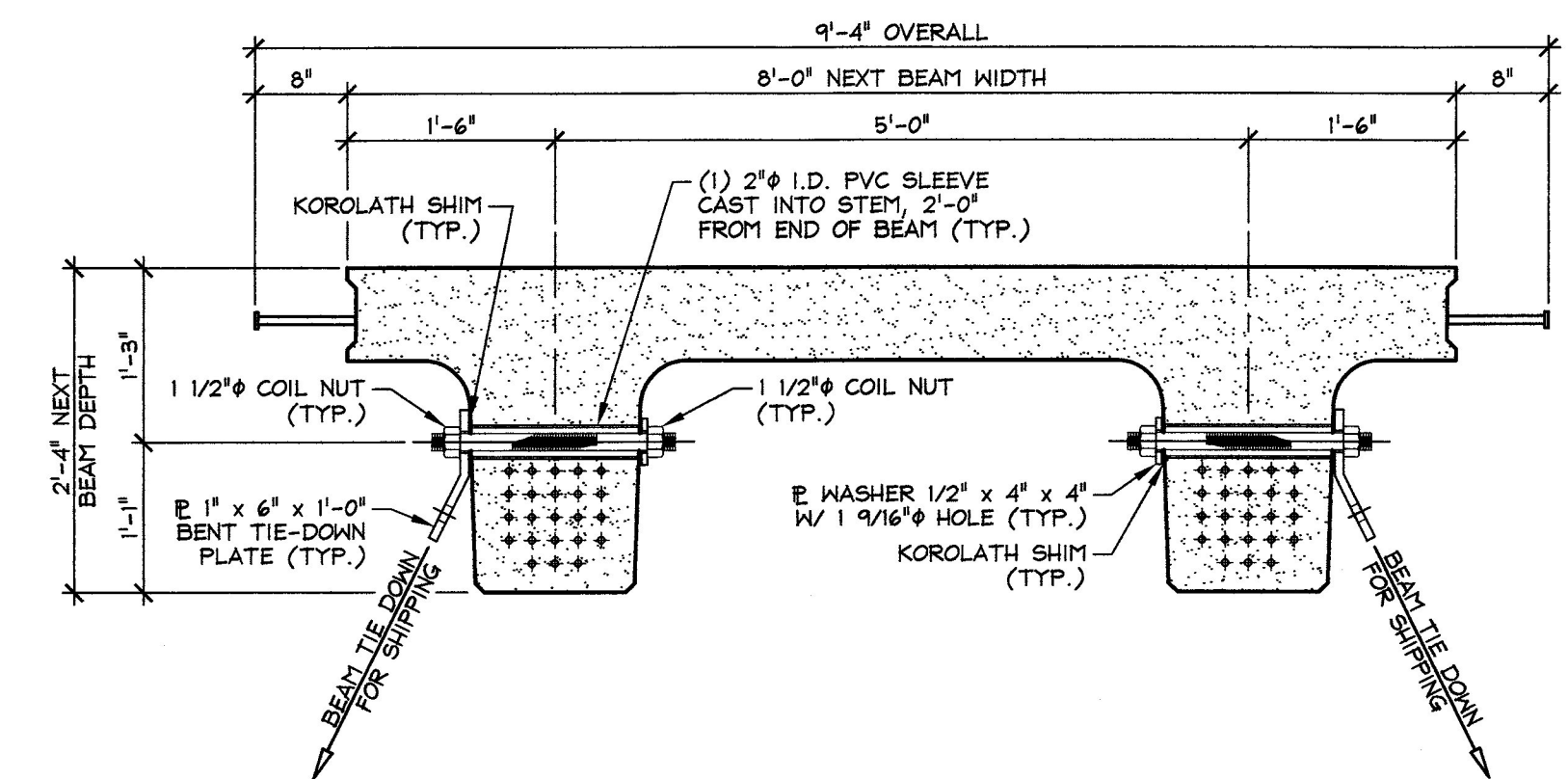
ABUTMENT & WING WALL GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 5,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 3,500 PSI.
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) EPOXY COATED.
- THE TOP OF ABUTMENTS SHALL RECEIVE A RAKE FINISH ROUGHENED TO 1/4" AMPLITUDE (UNLESS NOTED OTHERWISE).
- THE TOP OF WING WALLS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE BLASTED CLEAN.
- PRECAST CONCRETE UNITS SHALL BE HANDLED AND ERECTED USING THE LIFTING INSERTS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. NON-PRESTRESSED UNITS SHALL BE STORED & TRANSPORTED WITH TIMBER SUPPORTS AT 5ft POINTS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. PS10.02 AND PS10.05 RESPECTIVELY.
DESIGN MIX:
WING WALLS: J.P.C. BRIDGE MIX #425M NO DCI
APPROACH SLABS: J.P.C. BRIDGE MIX #425M NO DCI
ABUTMENTS: J.P.C. BRIDGE MIX #445M
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF PRECAST CONCRETE UNITS ARE FINISHED, A COVER OF RIGID INSULATION AND POLY WILL BE PLACED OVER THE UNIT. NATURAL CURE WITH NO EXTERNAL HEAT APPLIED.
- ABUTMENT POST-TENSIONING SEQUENCE:
 - ERECT PRECAST CONCRETE ABUTMENTS, AND POST-TENSION CENTER TENDON TO APPROXIMATELY 5,000 LBS.
 - GROUT SHEAR KEY.
 - ONCE SHEAR KEY GROUT HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI; POST-TENSION TENDONS TO 32,000 LBS.

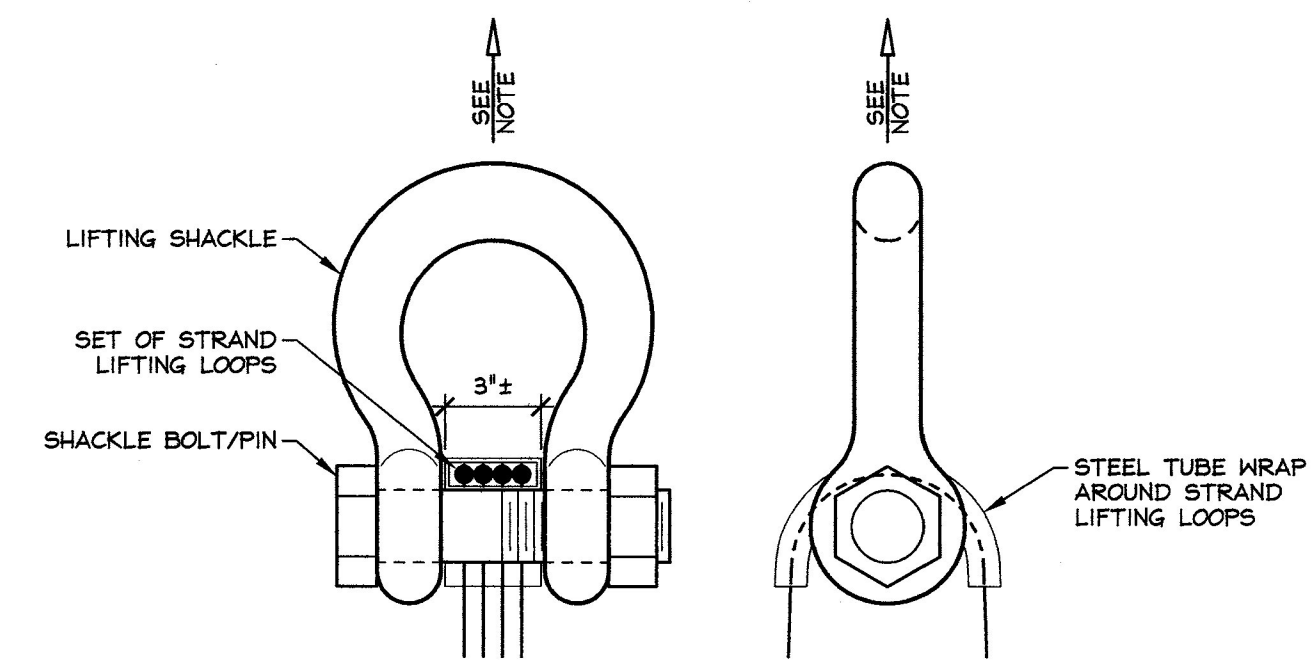
NEXT BEAM GENERAL NOTES

- MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 10,000 PSI.
- MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 8,000 PSI.
- REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) EPOXY COATED.
- PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M203) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
- PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
- ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF NEXT BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
- THE TOP OF BEAMS SHALL RECEIVE A SMOOTH FLOAT FINISH (UNLESS NOTED OTHERWISE).
- SHEAR KEY SURFACES SHALL BE BLASTED CLEAN.
- BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH OF THE TWO LIFTING LOOPS AT EACH END OF THE BEAM. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET. BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
- MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. PS10.02 AND PS10.05 RESPECTIVELY.
DESIGN MIX: J.P.C. BRIDGE MIX #430M (5 GAL./CY DCI)
- QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
- CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF INSULATED POLY. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°F. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 100' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED. EACH CHART SHALL BE MARKED WITH THE CASTING DATED AND LOCATION OF THE RECORDER. IF NECESSARY TO MAINTAIN CASTING BED TEMPERATURE PRIOR TO CONCRETE PLACEMENT OR TO ACCELERATE EARLY AGE STRENGTH GAIN, EXTERNAL RADIANT HEAT MAY BE EMPLOYED VIA HOT WATER DUCTS BENEATH AND WITHIN THE PERIPHERY OF THE CASTING BED. MAXIMUM CURING TEMPERATURE SHALL NOT EXCEED PCI SPECIFIED LIMITS.
- OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED SHEAR KEYS.

DRAWING INDEX			
SHT. #	DRAWING TITLE	REV. #	REV. DATE
C1	COVER SHEET		
F1	SUPERSTRUCTURE PLANS	1	12-10-12
F2	ABUTMENT ELEVATIONS	1	12-10-12
F3	ABUTMENT DETAILS		
F4	TRANSVERSE SECTIONS & DETAILS	1	12-10-12
NB1	PRESTRESSED NEXT BEAM DETAILS "B-NB2"	1	12-10-12
NB2	PRESTRESSED NEXT BEAM DETAILS "B-NB1"	1	12-10-12
NB3	PRESTRESSED NEXT BEAM DETAILS "B-NB3"	1	12-10-12
AS1	PRECAST APPROACH SLAB DETAILS "B-AS1" & "B-AS2"		
AS2	PRECAST APPROACH SLAB DETAILS "B-AS3" & "B-AS4"		
AB1	PRECAST ABUTMENT DETAILS "B-AB1"	1	12-10-12
AB2	PRECAST ABUTMENT DETAILS "B-AB3"	1	12-10-12
AB3	PRECAST ABUTMENT DETAILS "B-AB4"	1	12-10-12
AB4	PRECAST ABUTMENT DETAILS "B-AB2"	1	12-10-12
W1	PRECAST WING WALL DETAILS	1	12-10-12
M1	MATERIALS LIST	1	12-10-12



NEXT BEAM 28D HOLD-DOWN DETAIL FOR SHIPPING
3/4" = 1'-0"



LIFTING SHACKLE DETAILS
N.T.S.

NOTE: BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. RIGGING SHALL BE CONFIGURED SUCH THAT EQUAL FORCES ARE APPLIED TO EACH SET OF LIFTING LOOPS AT EACH END OF THE BEAM. SHACKLE BOLT/PIN SHALL BE PLACED UNDER LIFT LOOPS AS SHOWN. DESIGN AND CONFIGURATION OF RIGGING BY PURCHASER.

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING
(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI
AREA: 0.217 IN²
TENSION: 44,000 LB. EACH STRAND
GRIP-TO-GRIP: 252'-0" = 252.00'
E_s = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)

EXAMPLE:
$$\Delta = \frac{PL}{AE} = \frac{(44,000 - 3,000) \times 252.00 \times 12}{0.217 \times 28,600,000} = 19.977'$$

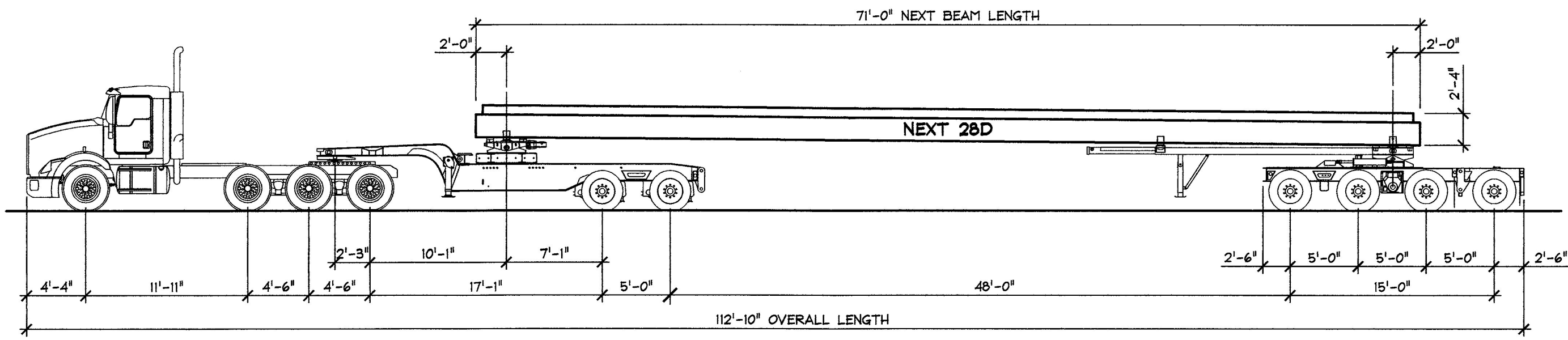
THEREFORE: (TOLERANCES ± 5%)
 Δ UPPER LIMIT = 1.05 x 19.977' = 20.98' = 21'
 Δ LOWER LIMIT = 0.95 x 19.977' = 18.98' = 19'

EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:
$$\Delta P = \frac{0.5 \times 41,000}{19.977} = 1,026 \text{ LBS.}$$

TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

STRAND TENSIONING PROCEDURE:

- PULL EACH STRAND INITIALLY TO 3,000* LBS. AND MARK STRAND.
 - THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026* LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 19* AND 21*.
- *NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.



SHIPPING ELEVATION
N.T.S.

APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT APPROVED
BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX

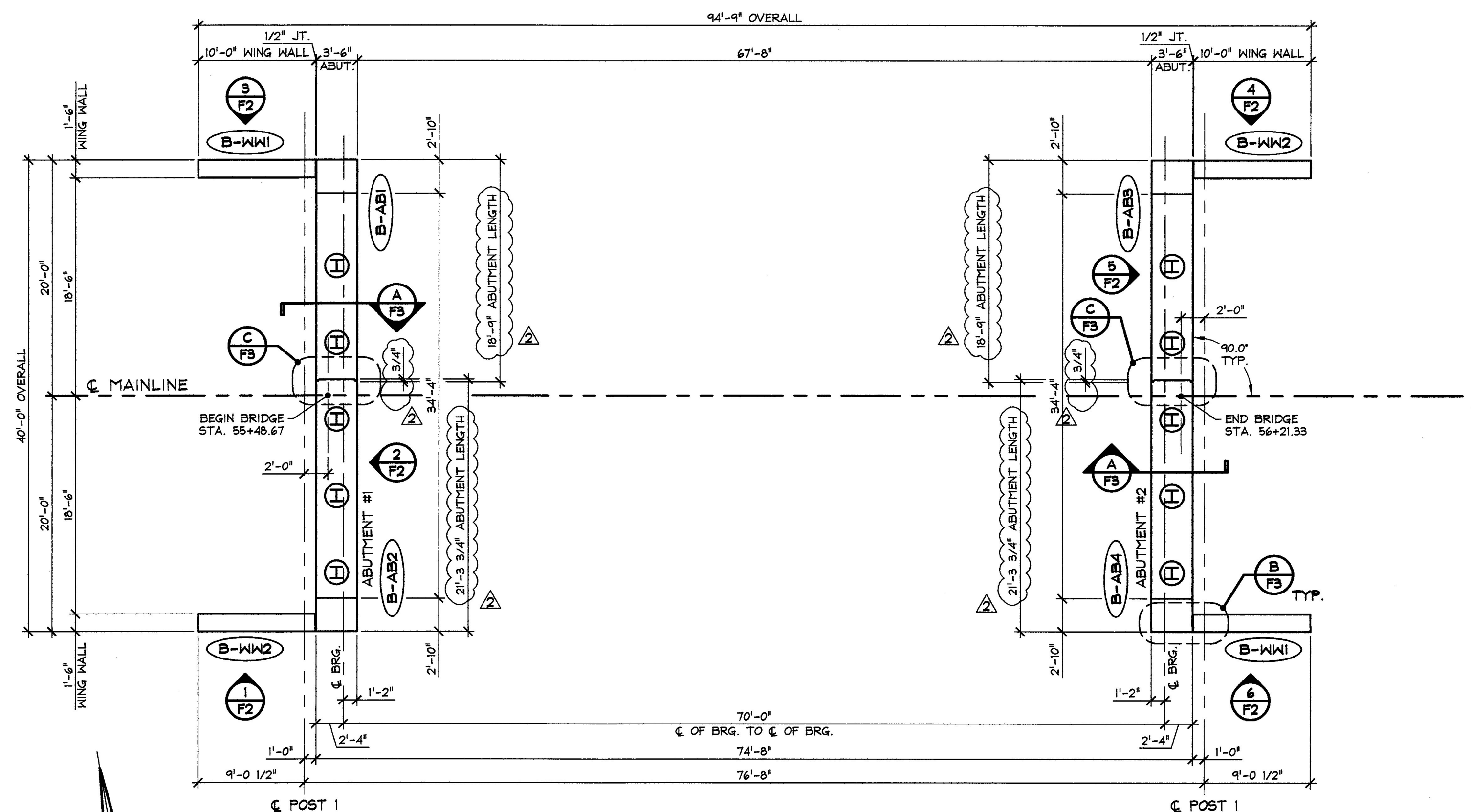
DATE: OCT. 30, 2012
SCALE: NOTED
CHKD: B.C. DFTM: B.L.
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)
JOB NO: 23384-012

TOWN OF BRIGHTON
PROJECT NO.: ER STP 034-3(25)

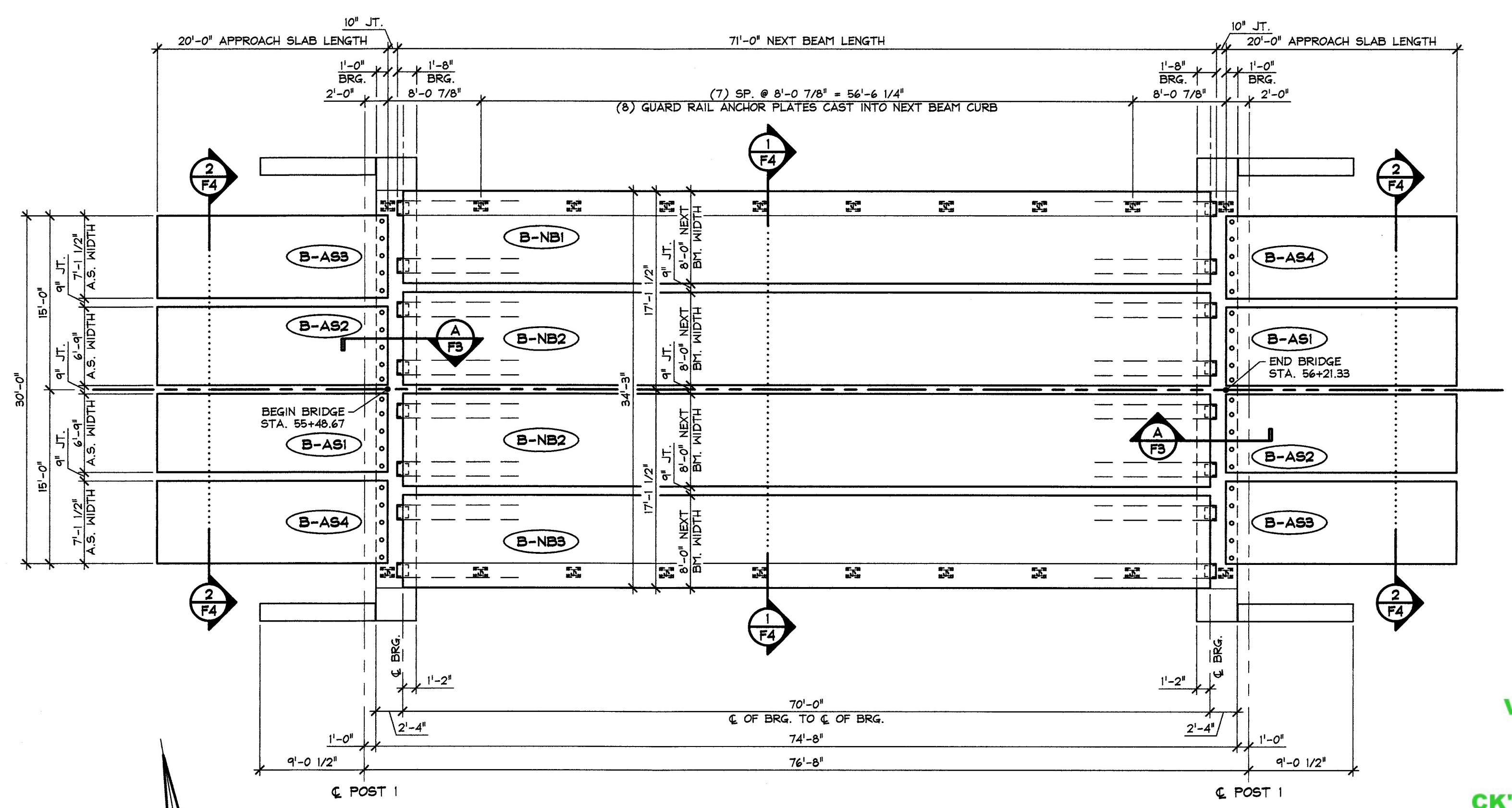
COVER SHEET

DWG. NO: **C1**

SUBMITTED
JAN 9 2013
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753



1 PRECAST CONCRETE ABUTMENT & WING WALL LAYOUT
 1/8" = 1'-0"



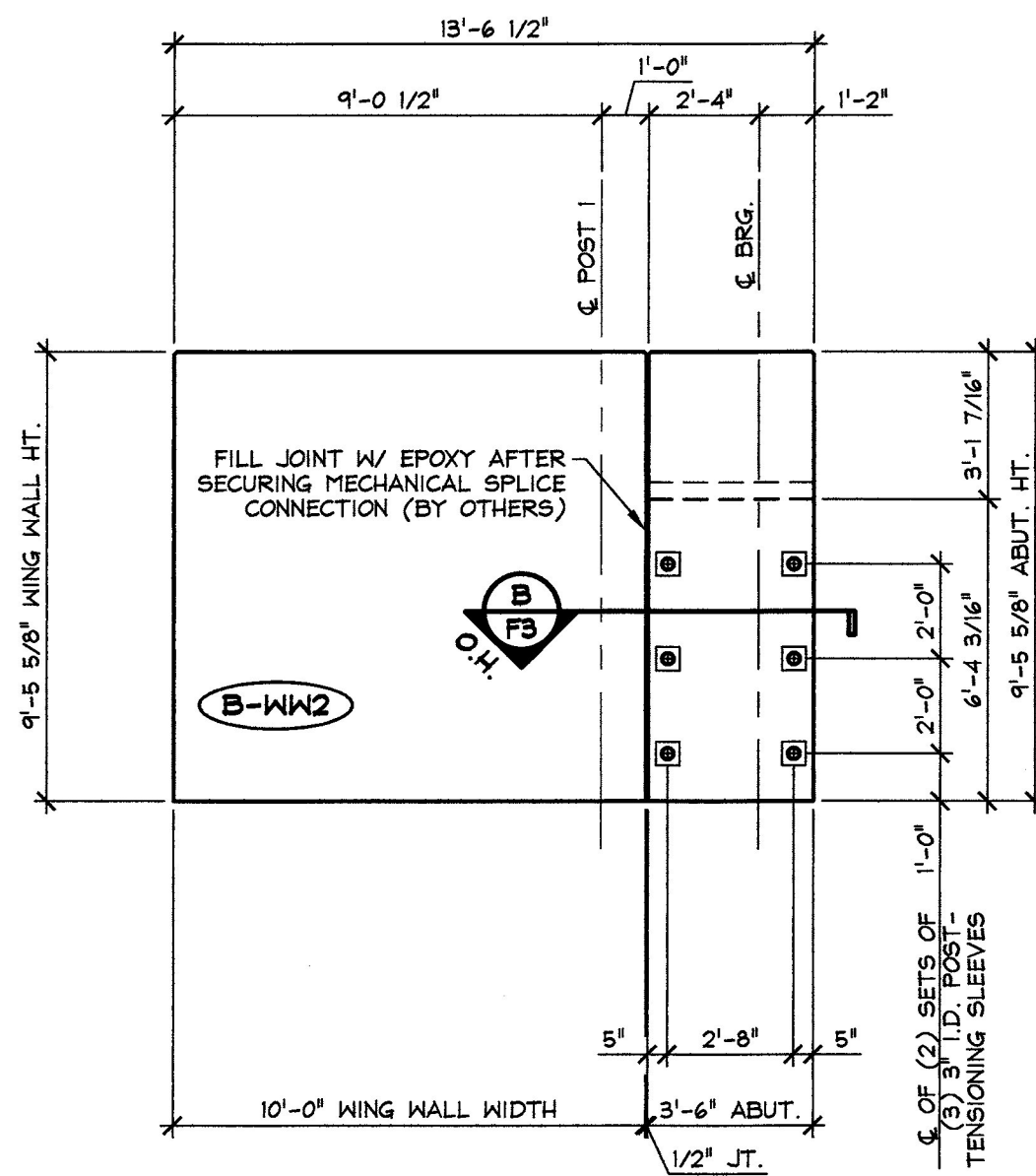
2 PRESTRESSED APPROACH SLAB & NEXT BEAM LAYOUT
 1/8" = 1'-0"

- 1-3-13 REVISED AS NOTED
- 12-10-12 REVISE ABUTMENT #1 & WING WALL PIECE NUMBERS

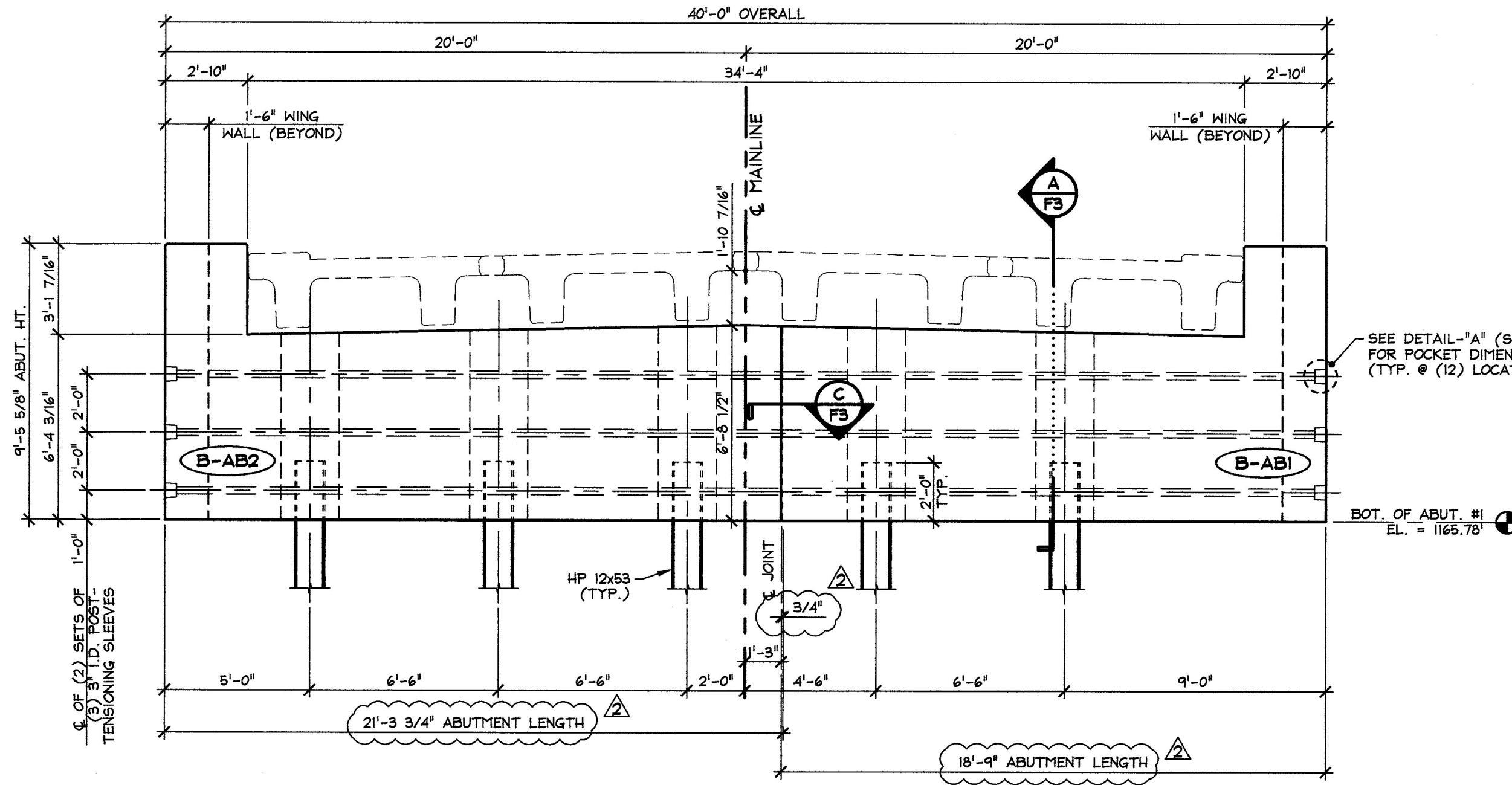
Vermont Agency of Transportation
RECEIVED
 CK'D BY WDL OK'D BY JTS
 January 9th, 2013
 RESUBMIT APPROVED
 BY KMH DATE 1-10-13

SUBMITTED
 JAN 9 2013
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

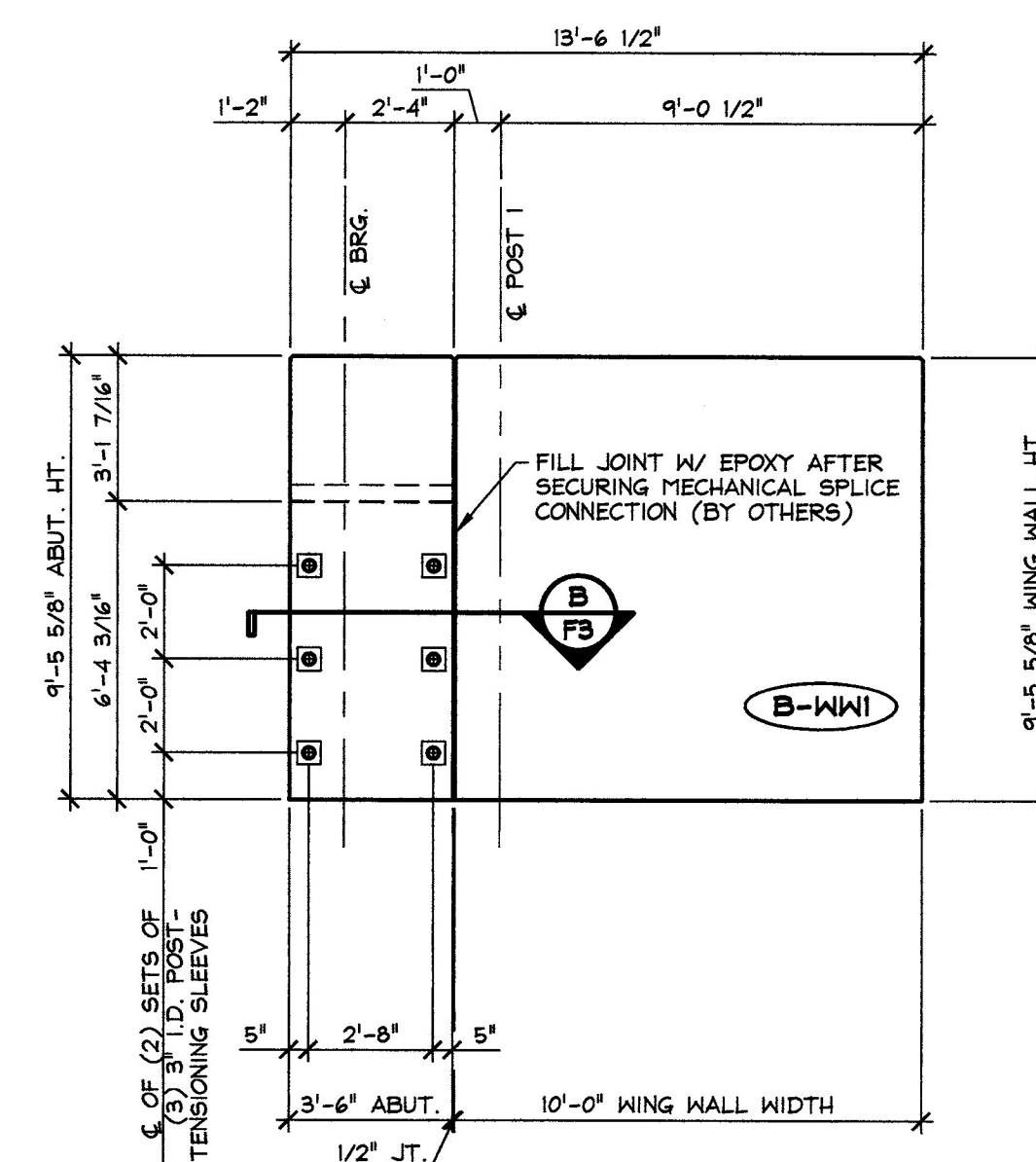
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer <small>2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010</small>		J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX		DATE: OCT. 30, 2012 SCALE: NOTED	
TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)		CHKD: B.C. DFTM: B.L. JOB NO: 23384-012	
SUPERSTRUCTURE PLANS		DWG. NO: F1	



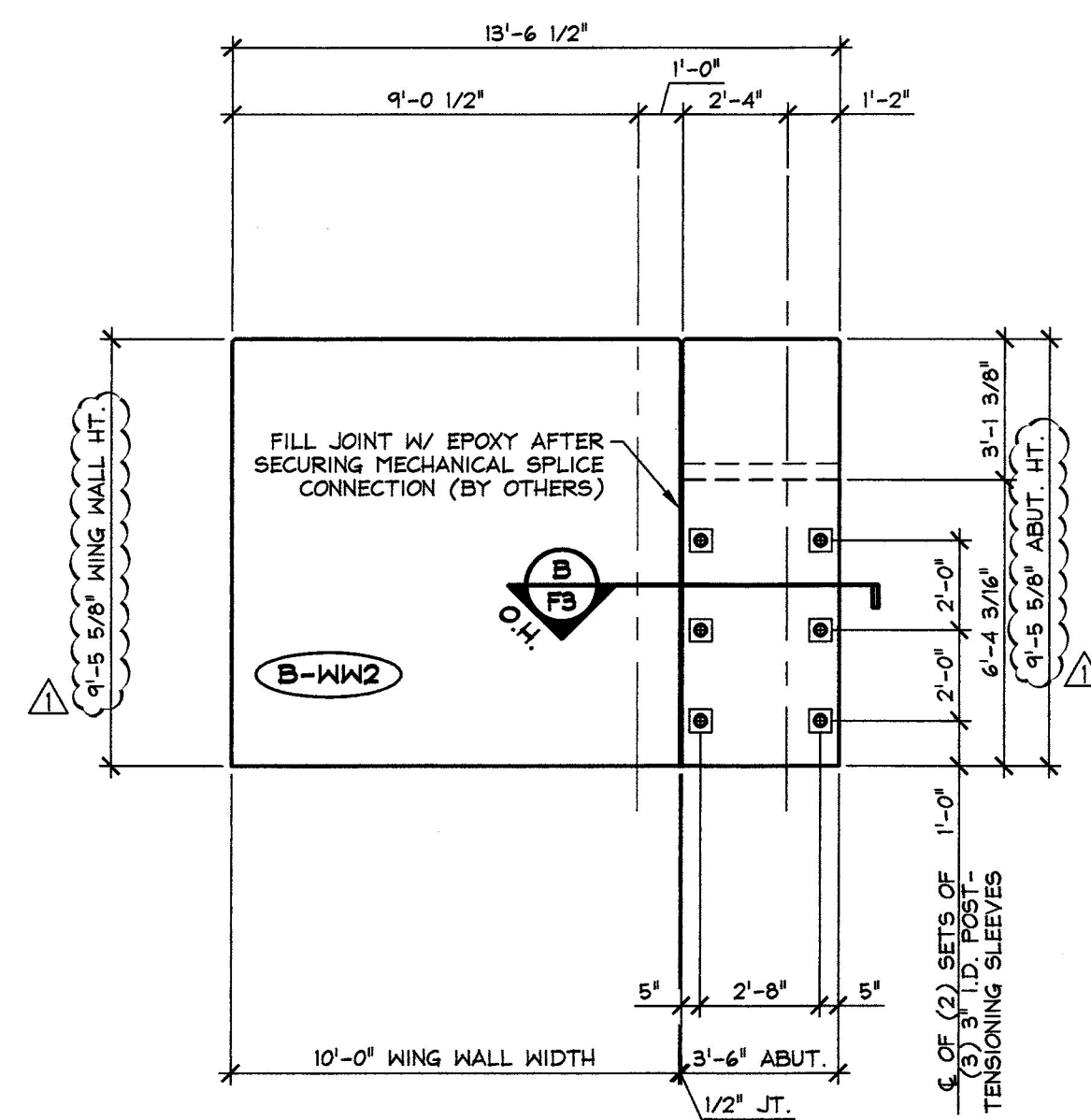
1 WING WALL #2 - SOUTH
F2 ELEVATION 1/4" = 1'-0"



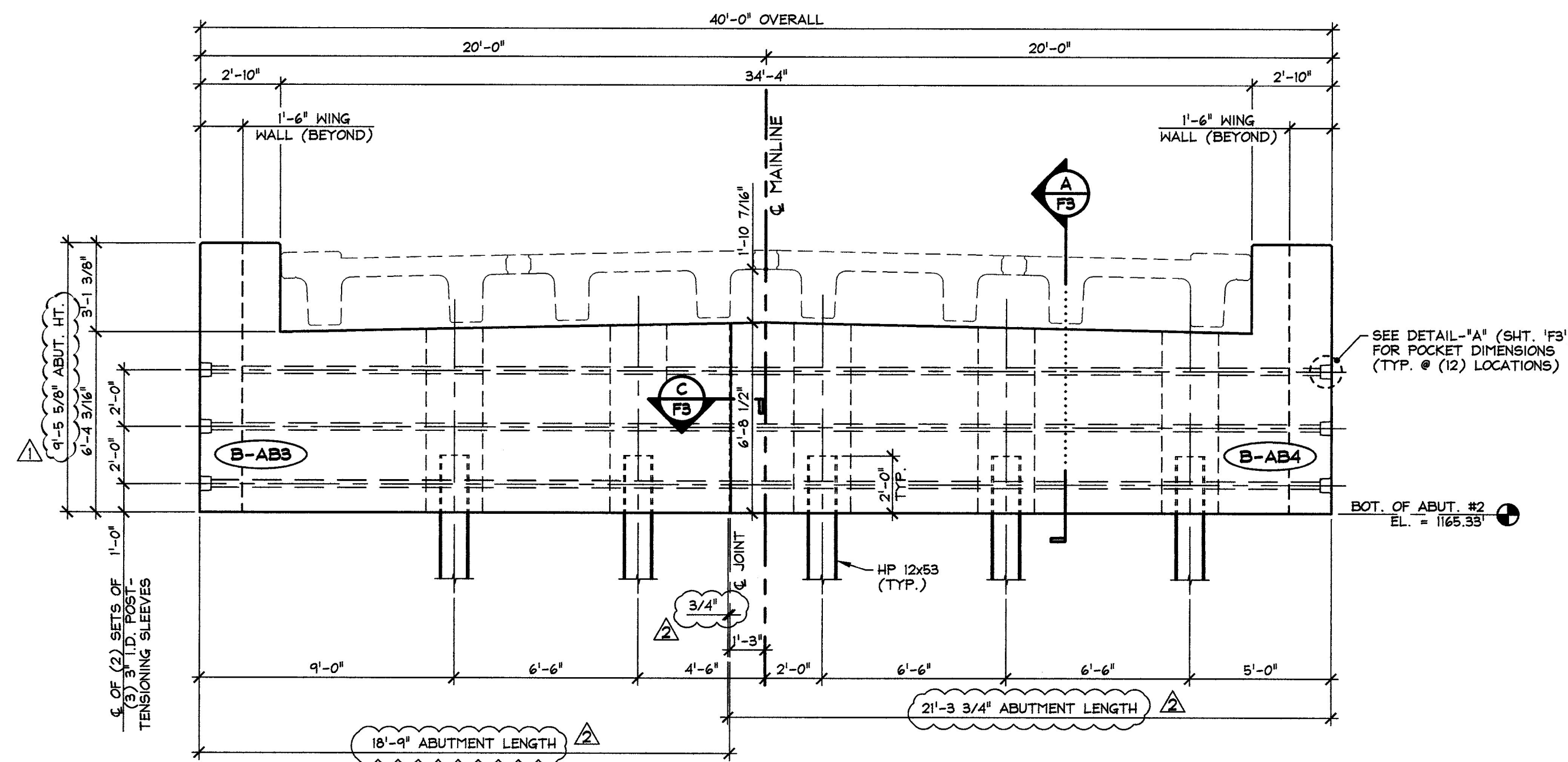
2 ABUTMENT #1 - EAST ELEVATION
F2 1/4" = 1'-0"



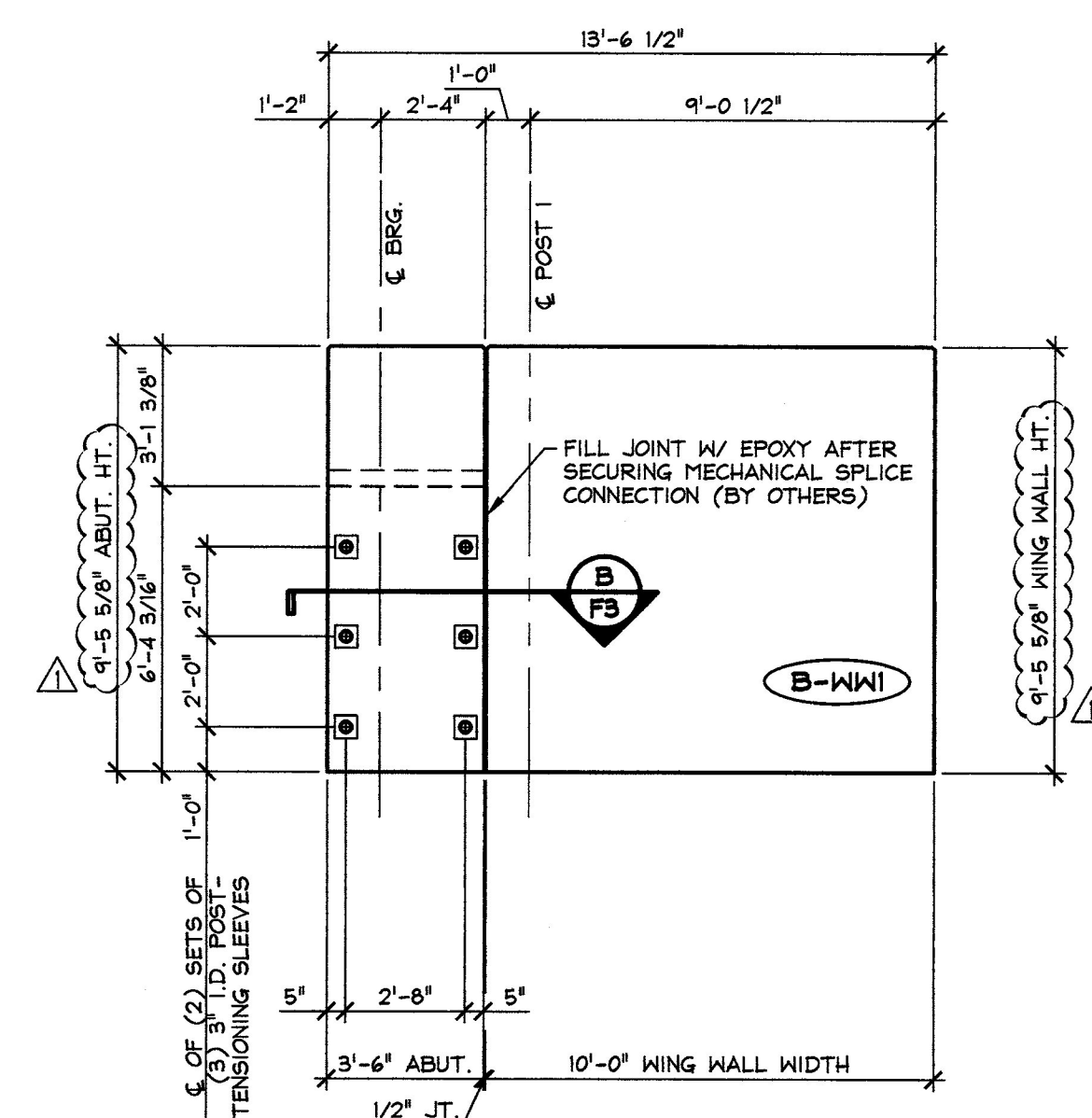
3 WING WALL #1 - NORTH
F2 ELEVATION 1/4" = 1'-0"



4 WING WALL #3 - NORTH
F2 ELEVATION 1/4" = 1'-0"



5 ABUTMENT #2 - WEST ELEVATION
F2 1/4" = 1'-0"



6 WING WALL #4 - SOUTH
F2 ELEVATION 1/4" = 1'-0"

- △ 1-3-13 REVISED AS NOTED
- △ 12-10-12 REVISE ABUTMENT #1 LAYOUT & ABUTMENT #2 ELEVATIONS

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT _____ APPROVED X
BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OISE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-8010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX
TOWN OF BRIGHTON
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

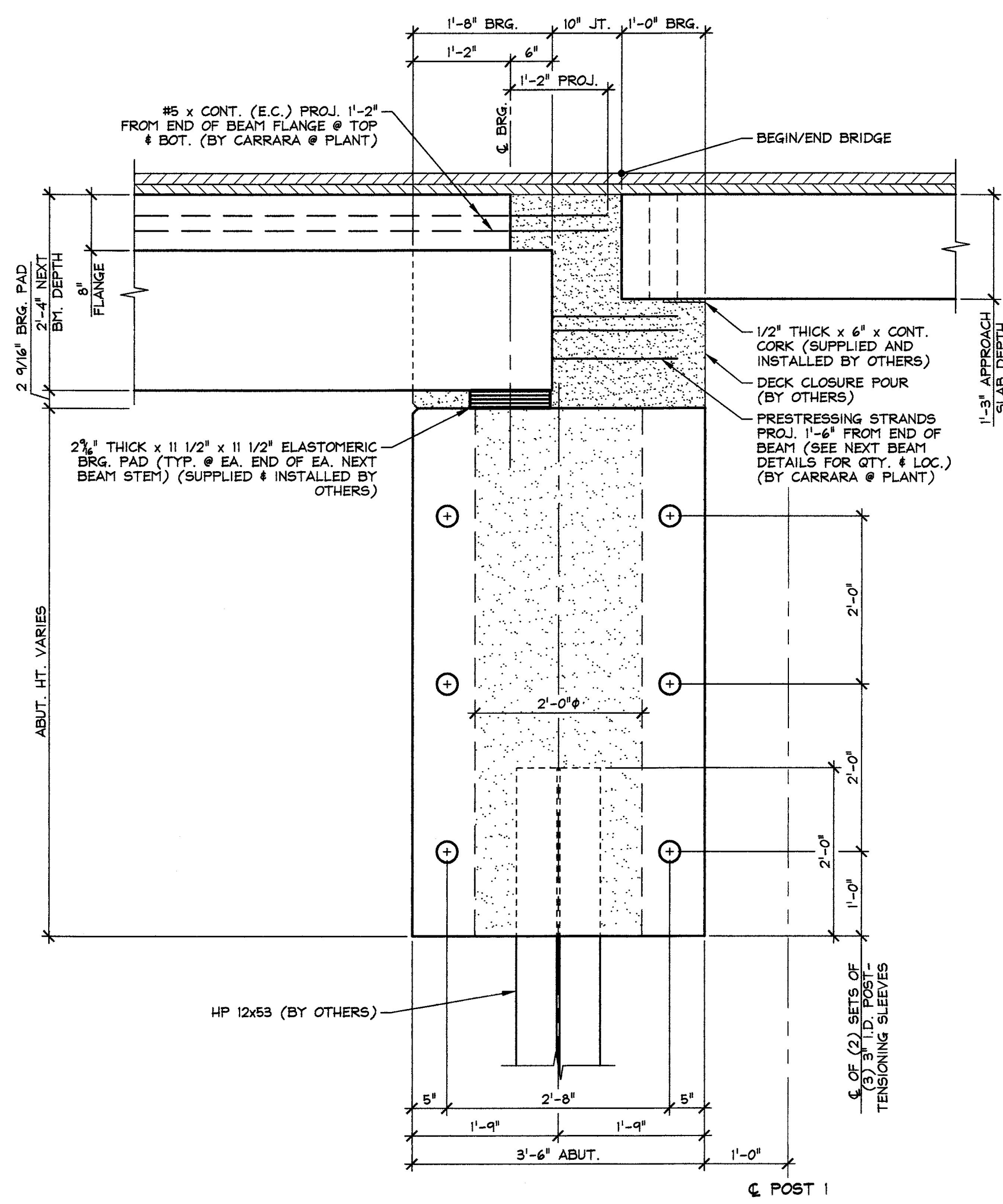
DATE: OCT. 30, 2012
SCALE: NOTED
CHKD: B.C. DFTM: B.L.
JOB NO: 23384-012

ABUTMENT ELEVATIONS

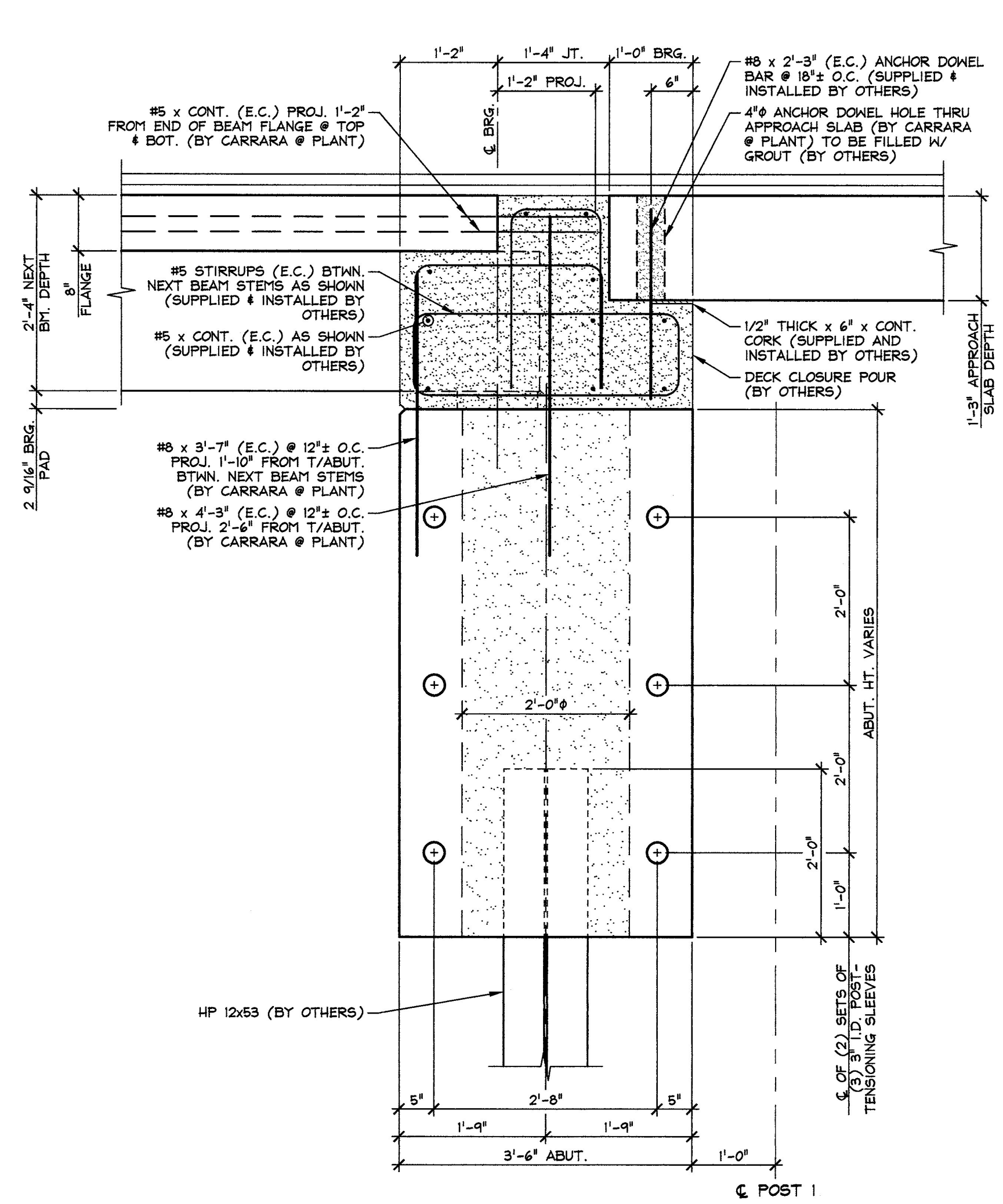
DWG. NO: **F2**

SUBMITTED
JAN 9 2013
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

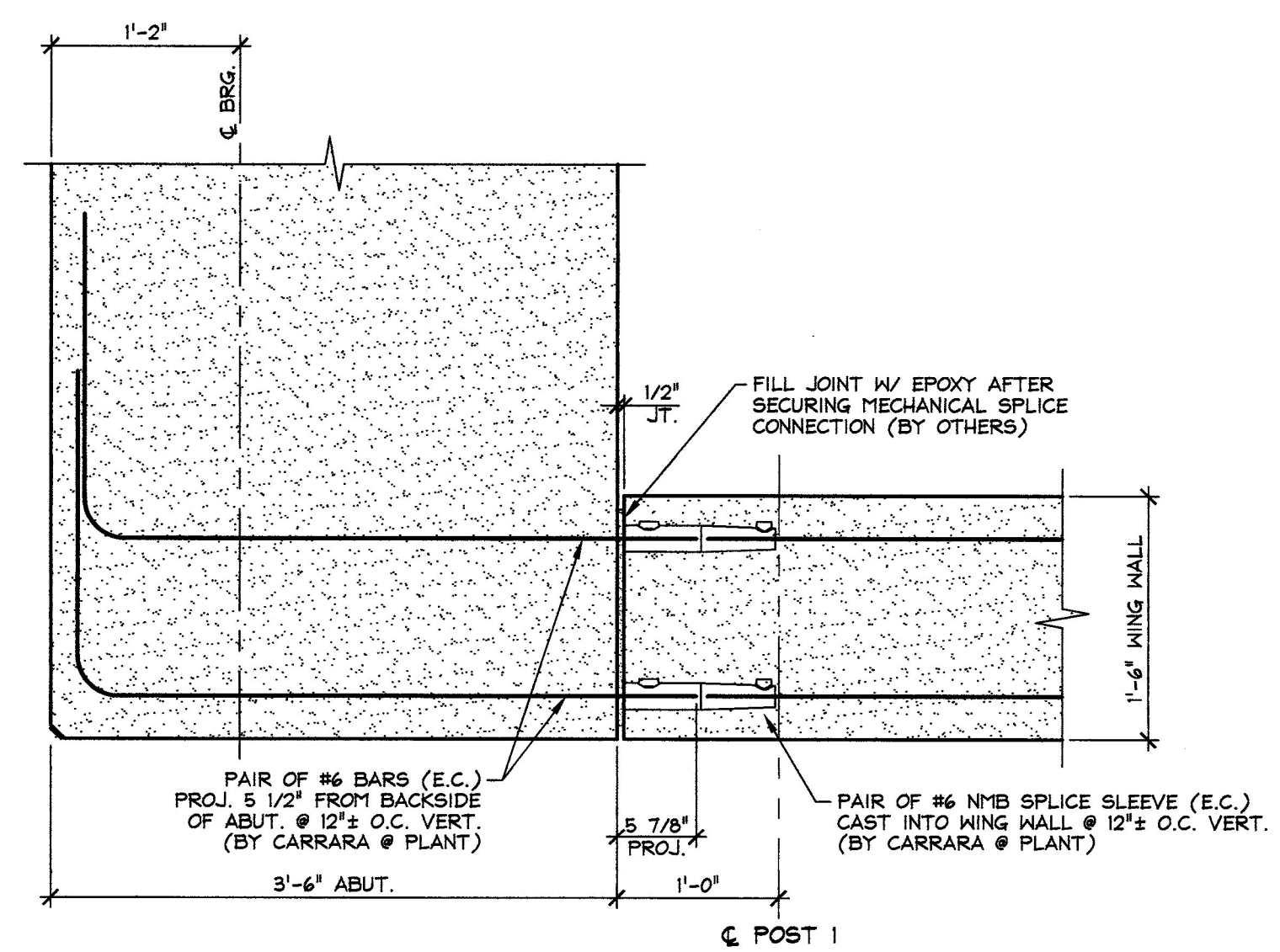
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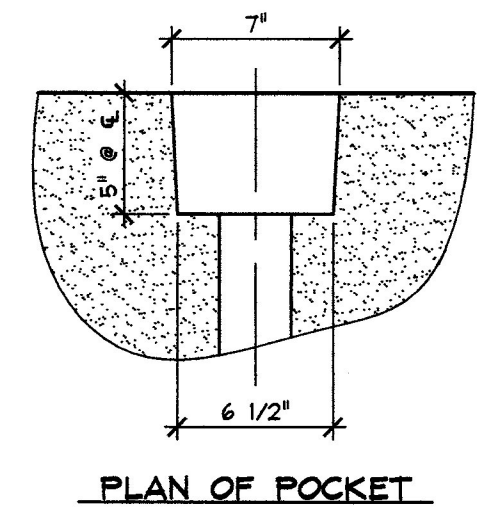
A BEARING SECTION
F3 NEXT BEAM STEM BEARING 3/4" = 1'-0"



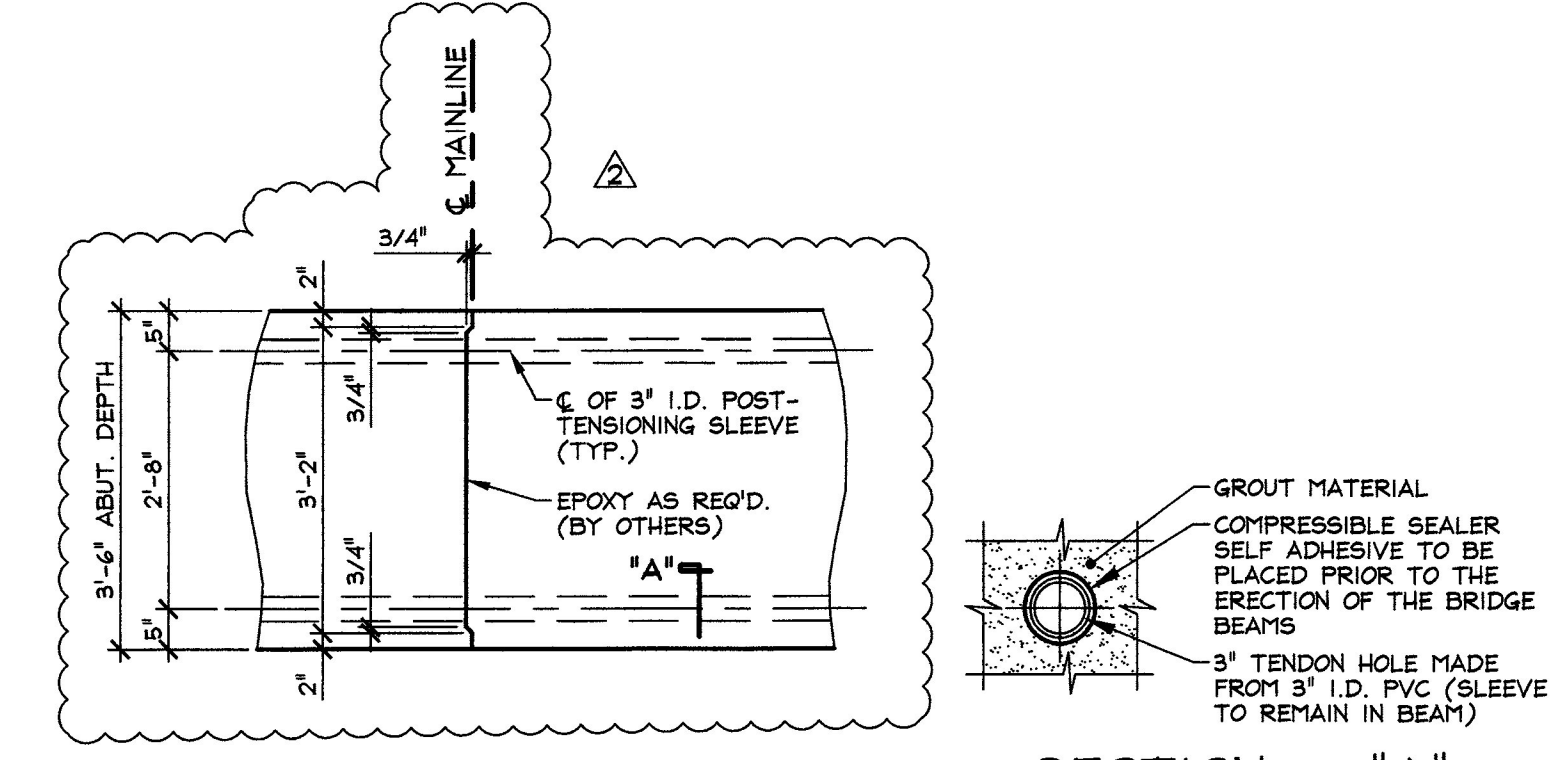
A.1 BEARING SECTION
F3 BETWEEN NEXT BEAM STEM BEARING 3/4" = 1'-0"



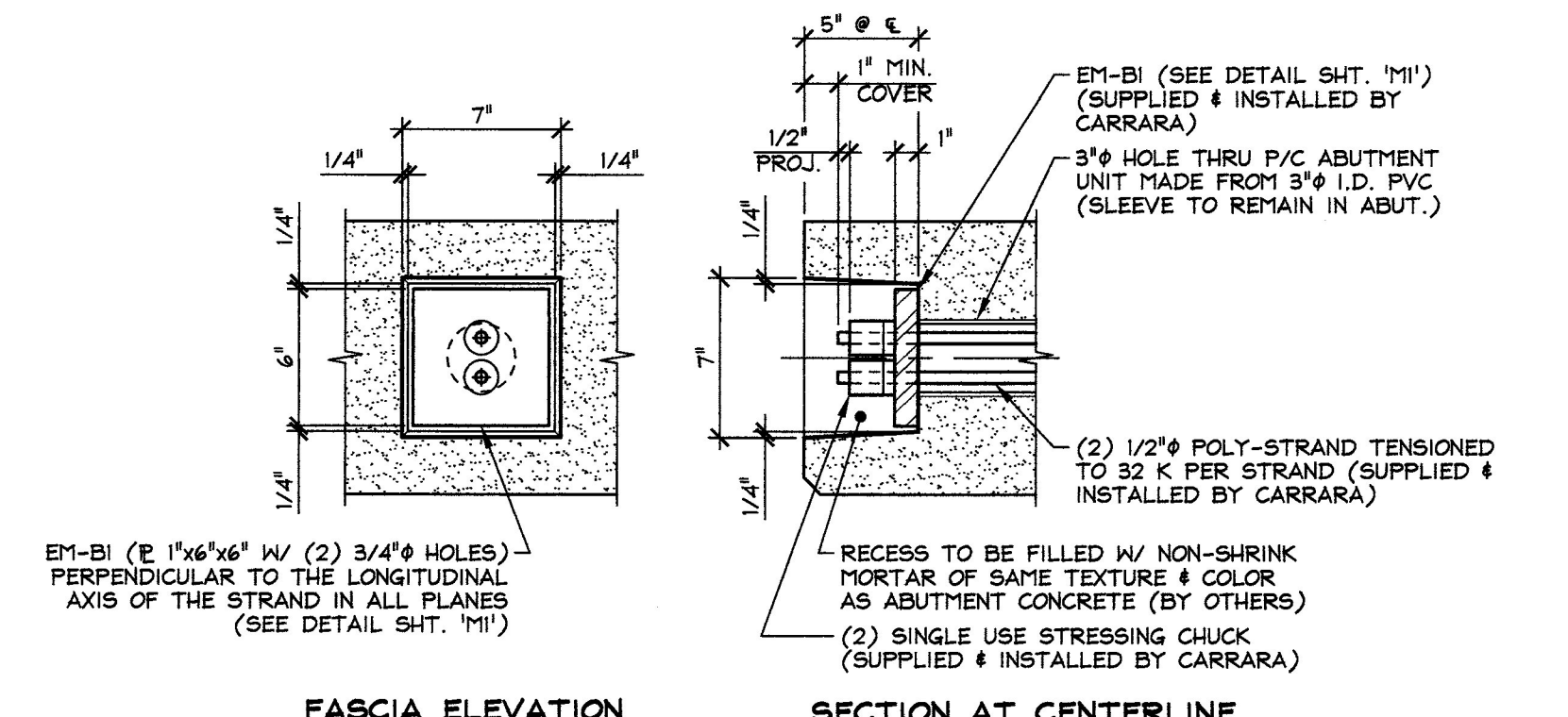
B WING WALL CONNECTION DETAIL
F3 1" = 1'-0"



PLAN OF POCKET



C SHEAR KEY SECTION @ P.T. SLEEVE
F3 1/2" = 1'-0"

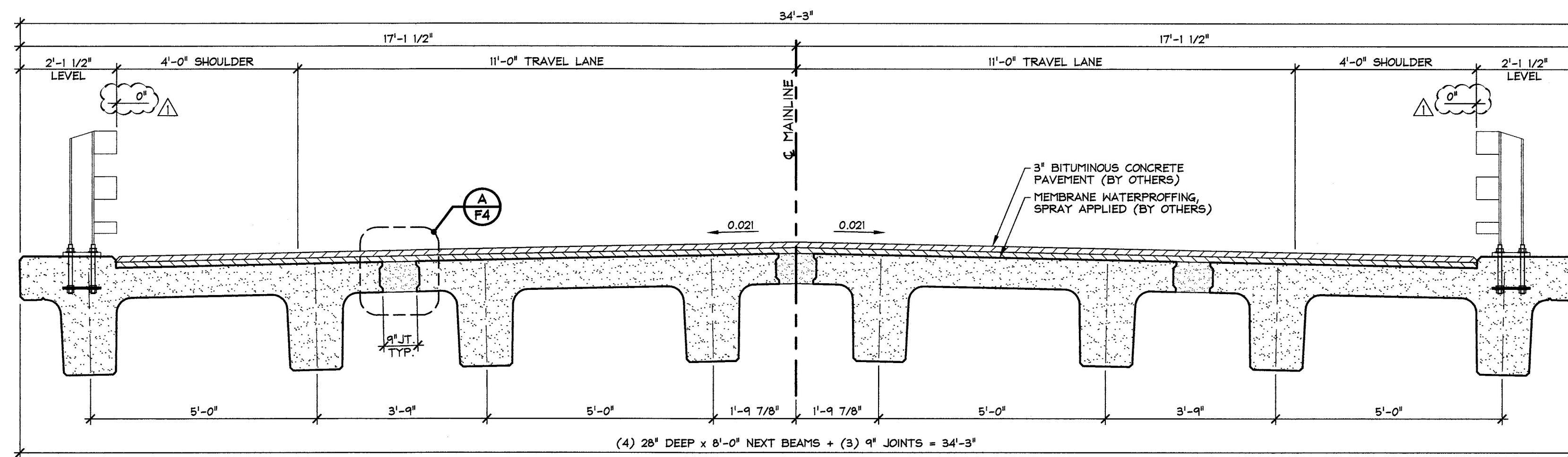


FASCIA ELEVATION **SECTION AT CENTERLINE DETAIL**
F3 1 1/2" = 1'-0"

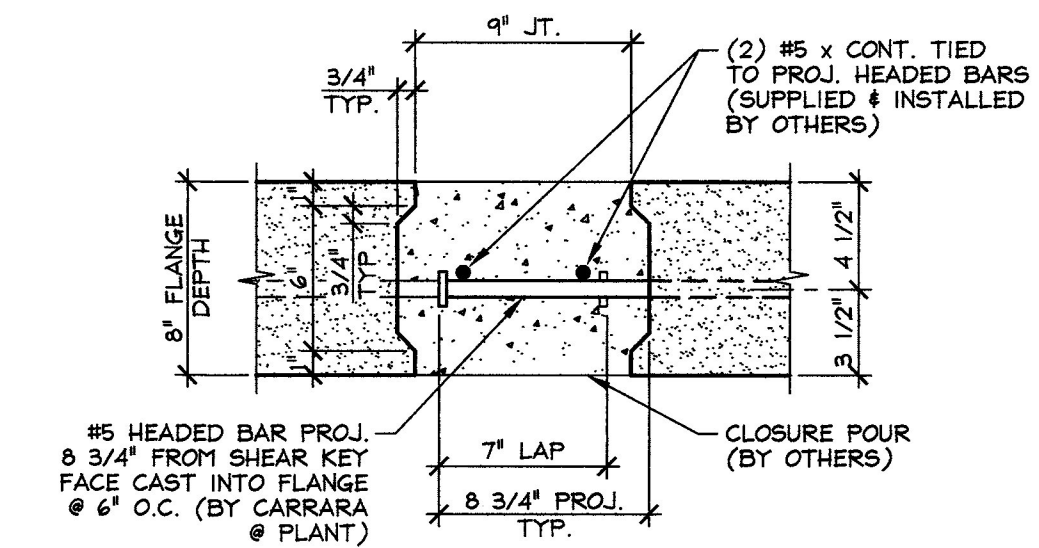
Vermont Agency of Transportation
RECEIVED
 CK'D BY WDL OK'D BY JTS
 January 9th, 2013
 RESUBMIT BY KMH APPROVED DATE 1-10-13

SUBMITTED
 JAN 9 2013
 J. P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

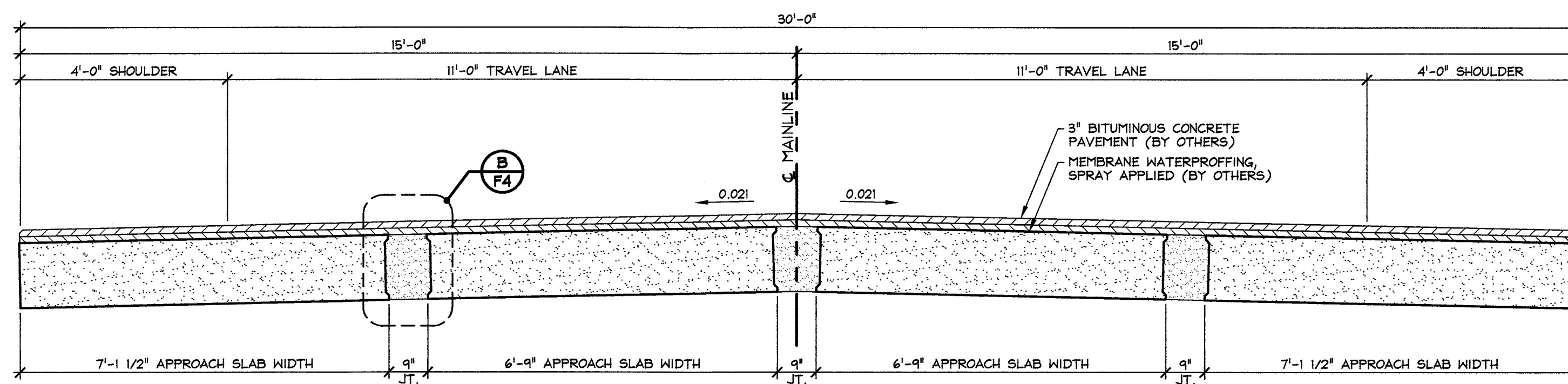
1-3-13 GENERAL REVISIONS		APPROVAL STAMP:	
J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX		DATE: OCT. 30, 2012	
TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)		SCALE: NOTED	
ABUTMENT DETAILS		CHKD: B.C. DFTM: B.L. JOB NO: 23384-012	
		DWG. NO: F3	



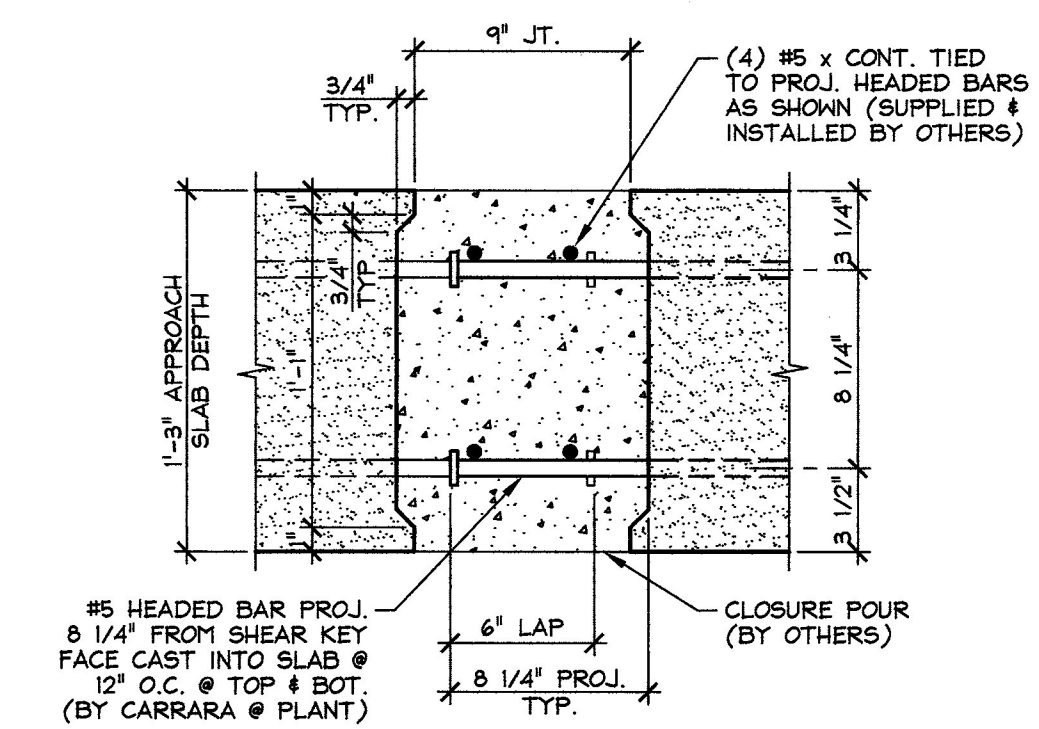
1 NEXT BEAM TRANSVERSE SECTION
F4 1/2" = 1'-0"



A NEXT BEAM CLOSURE POUR
F4 1 1/2" = 1'-0"



2 APPROACH SLAB TRANSVERSE SECTION
F4 1/2" = 1'-0"



B APPROACH SLAB CLOSURE POUR
F4 1 1/2" = 1'-0"

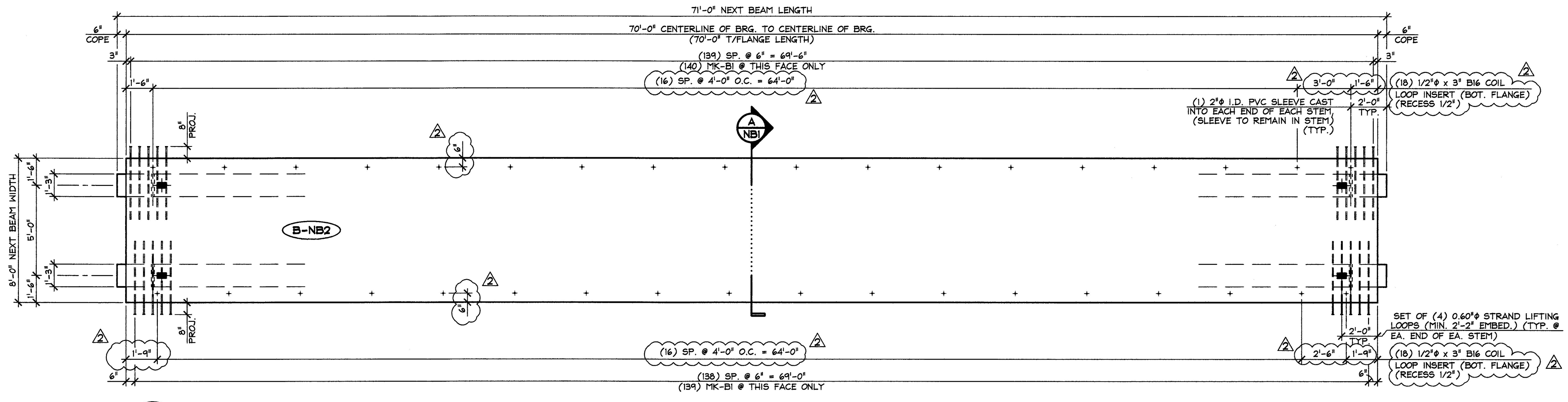
12-10-12 REVISE GUARD RAIL LOCATIONS

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT APPROVED X
BY KMH DATE 1-10-13

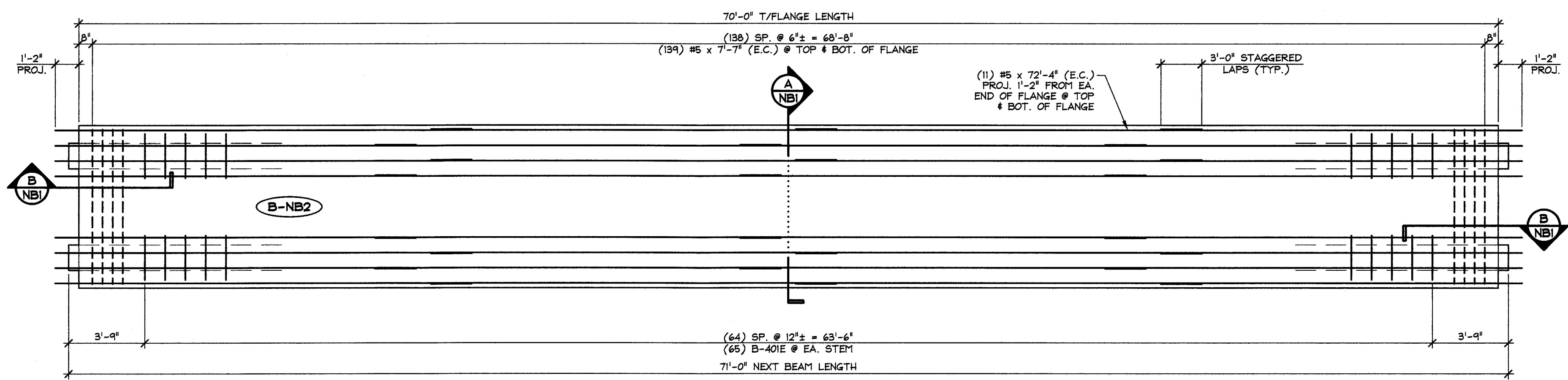
SUBMITTED
JAN 9 2013
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 244 GASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010	J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX	DATE: OCT. 30, 2012 SCALE: NOTED
TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)	CHKD: B.C. DFTM: B.L. JOB NO: 23384-012
TRANSVERSE SECTIONS & DETAILS	DWG. NO: F4

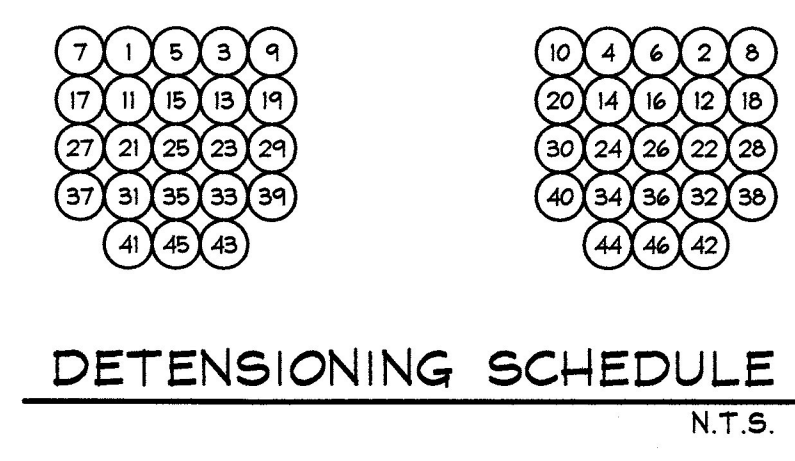
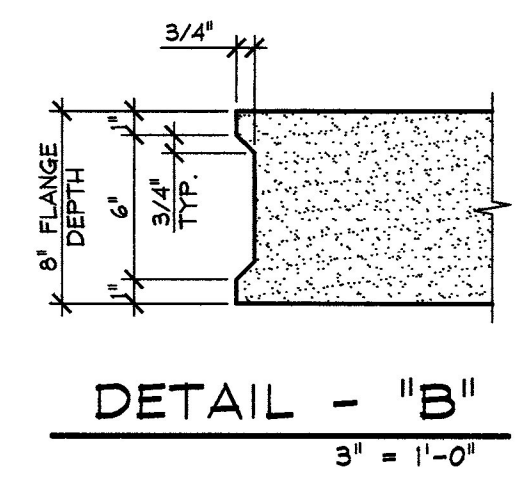
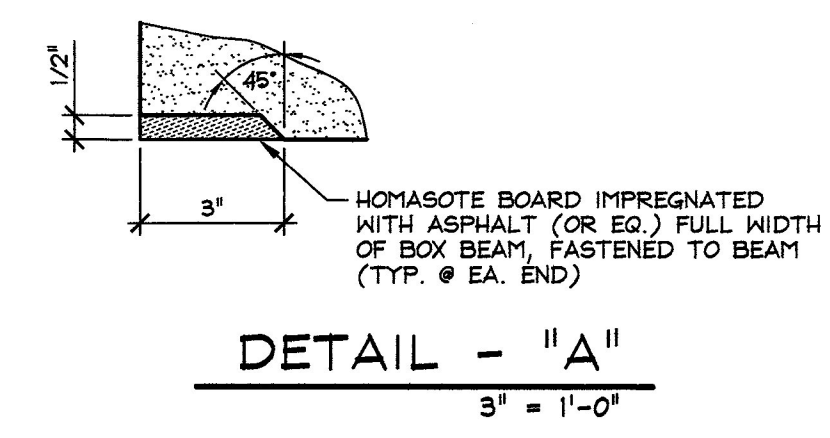
F:\VT-Bridges\23384-12 Brighton\23384-F4.dwg, 12/10/2012 4:02:04 PM



1 DIMENSIONAL PLAN VIEW IN FORM
1/4" = 1'-0"

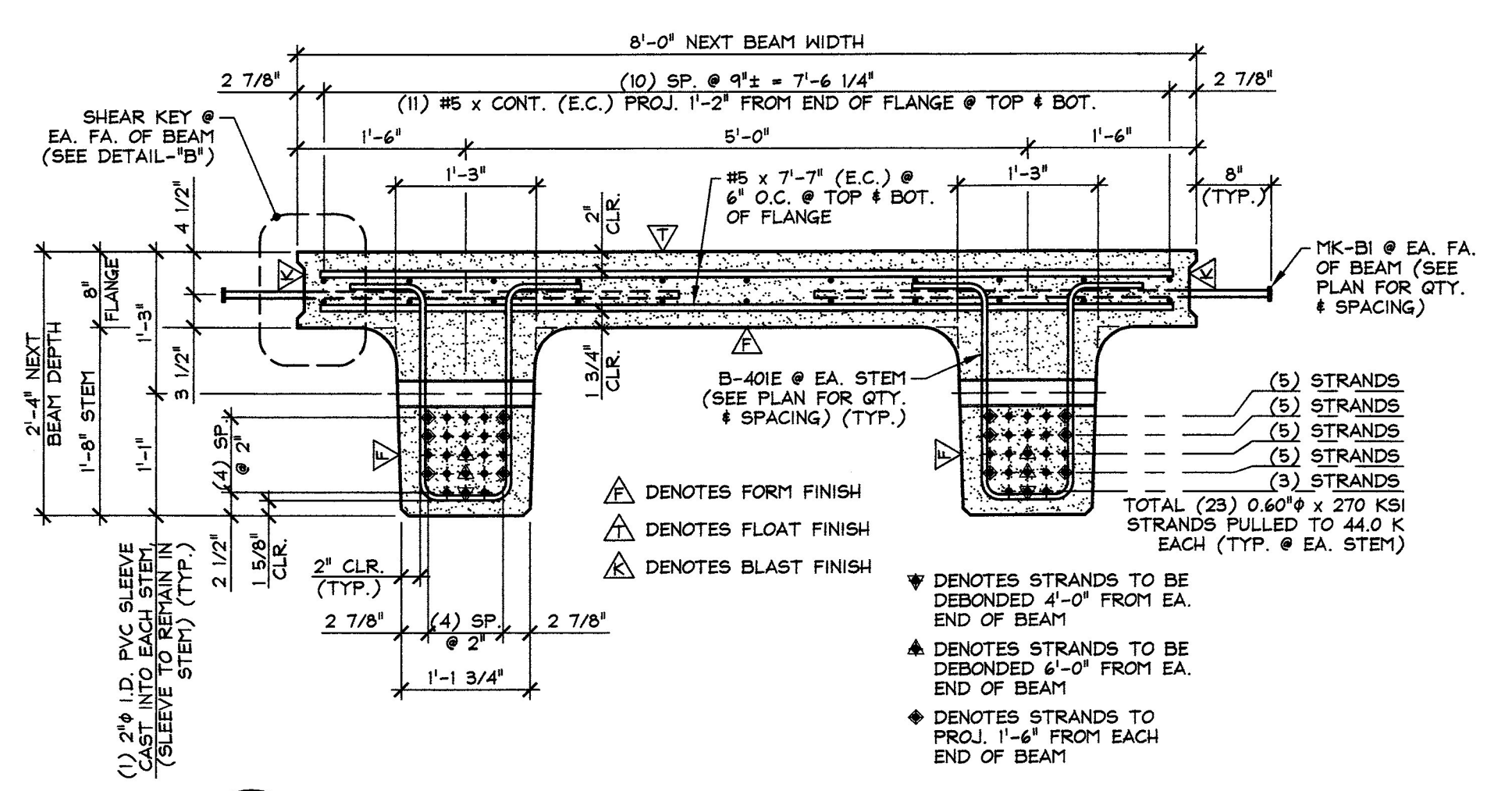


2 REINFORCING PLAN VIEW IN FORM
1/4" = 1'-0"

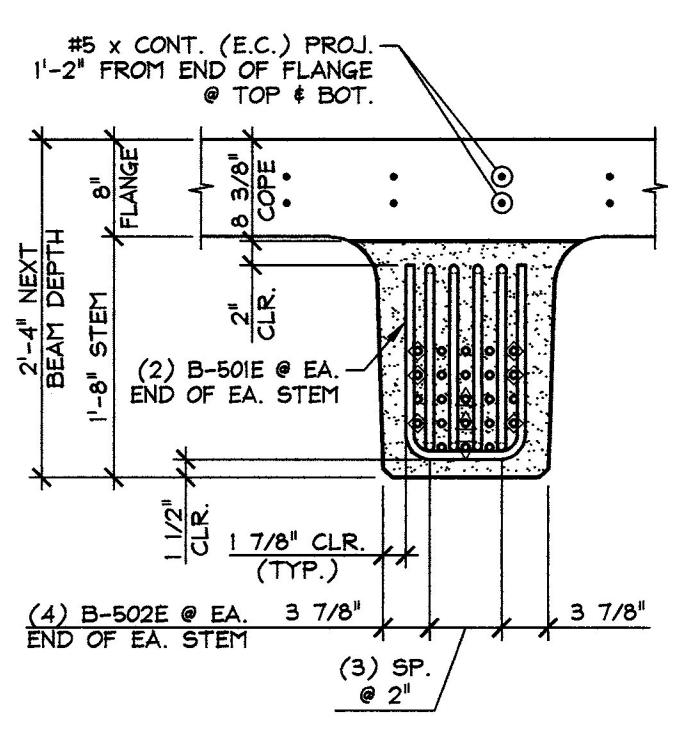


MARK:	B-NB2	QTY.:	2	WT.:	49.41 T	VOL.:	24.40 cy
MATERIAL LIST / BOX BEAM							
ITEM	MARK	DESCRIPTION	QTY.				
1	B-401E	#4 BENT BAR (EPOXY COATED)	130				
2		#4 x 7'-7" (EPOXY COATED)	18				
3							
4	B-501E	#5 BENT BAR (EPOXY COATED)	8				
5	B-502E	#5 BENT BAR (EPOXY COATED)	16				
6	B-503E	#5 BENT BAR (EPOXY COATED)	32				
7		#5 x 7'-7" (EPOXY COATED)	(282)				
8		#5 x 7'-4" (W/ (3) 3'-0" STAGGERED LAPS) (EPOXY COATED)	22				
9							
10							
11	MK-BI	#5 x 4'-11" HRC 555 HEADED REBAR (EPOXY COATED)	274				
12							
13		1/2" x 3" B16 COIL LOOP INSERT (ELECTRO-PLATED FINISH)	36				
14		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	4				
15							

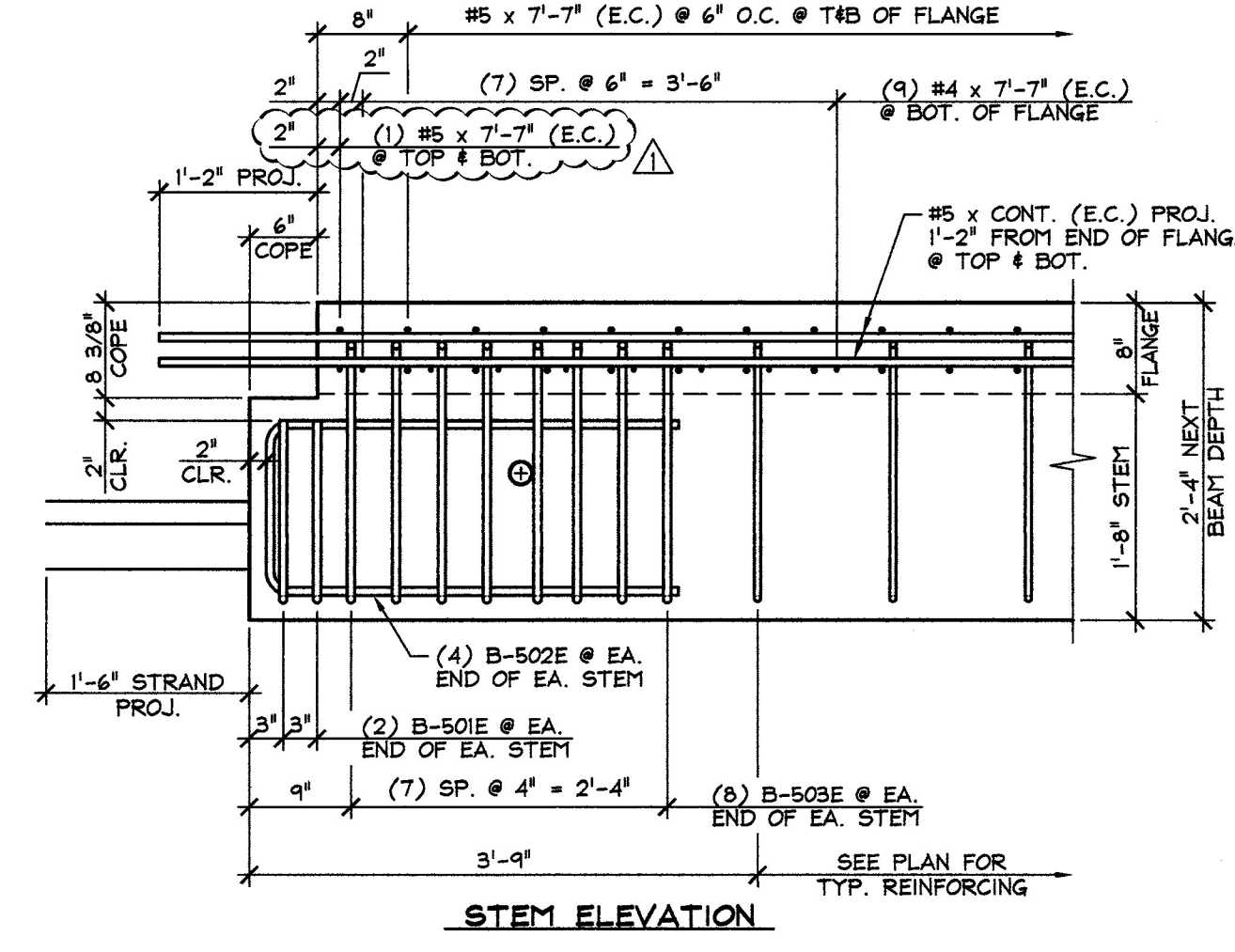
SUBMITTED
JAN 9 2013
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753



A DIMENSIONAL & REINFORCING SECTION
3/4" = 1'-0"

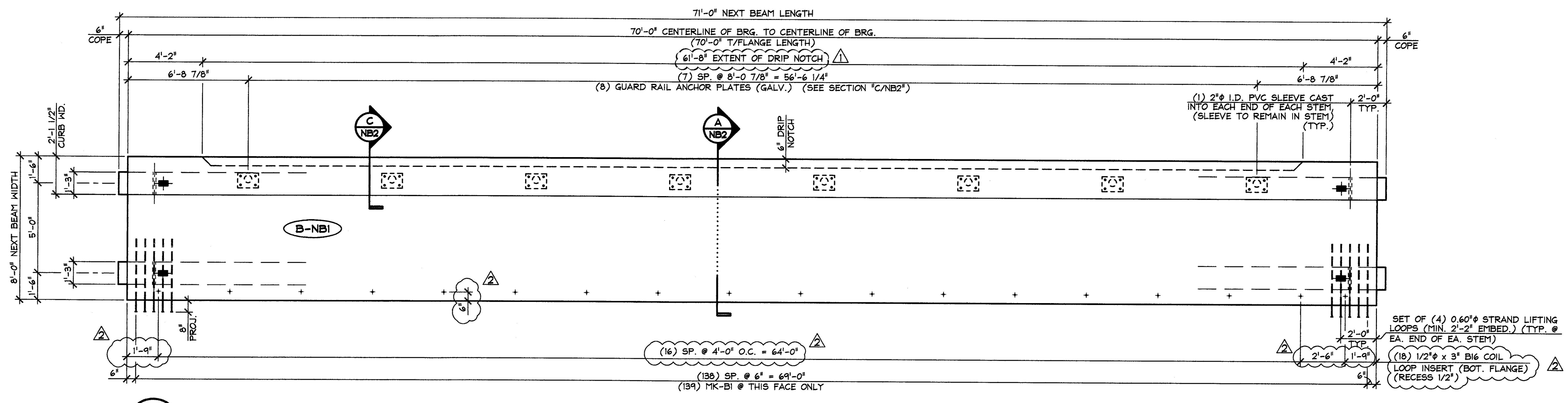


B END BLOCK STEM REINFORCING DETAILS
3/4" = 1'-0"

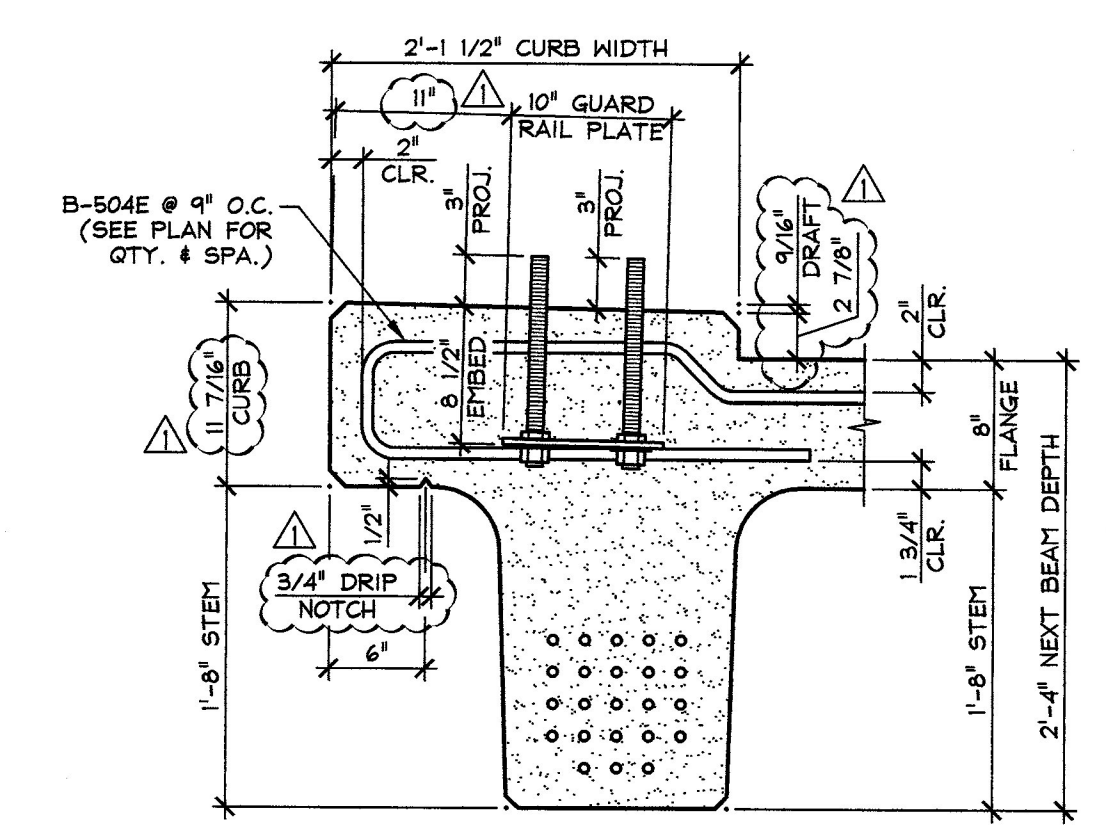


1-3-13 REVISED AS NOTED
12-10-12 REVISED AS NOTED

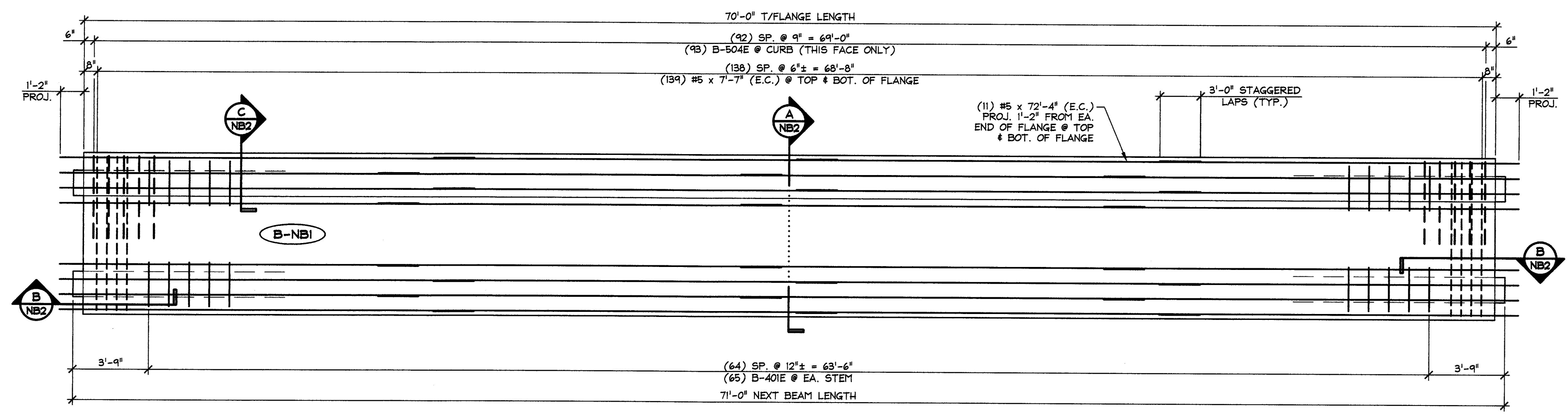
APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 OSG STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010	J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX	DATE: OCT. 30, 2012 SCALE: NOTED	CHKD: B.C. DFTM: B.L. JOB NO: 23384-012
TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)	PRESTRESSED NEXT BEAM DETAILS	
DWG. NO: NB1		



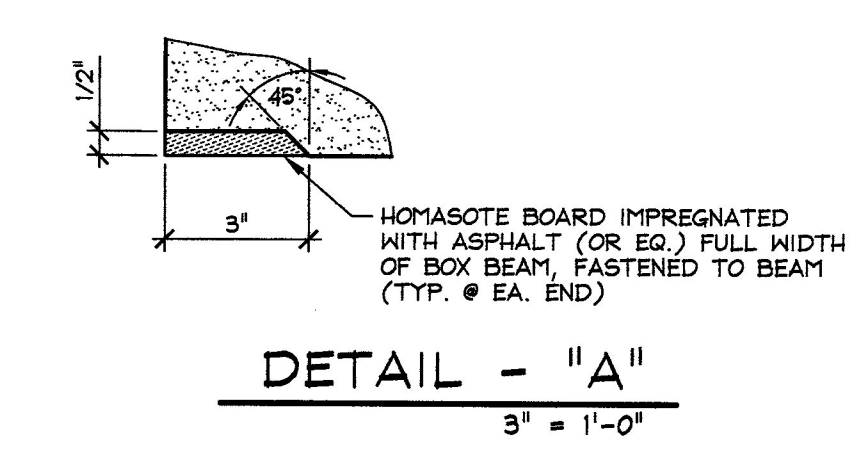
1 DIMENSIONAL PLAN VIEW IN FORM
NB2
1/4" = 1'-0"



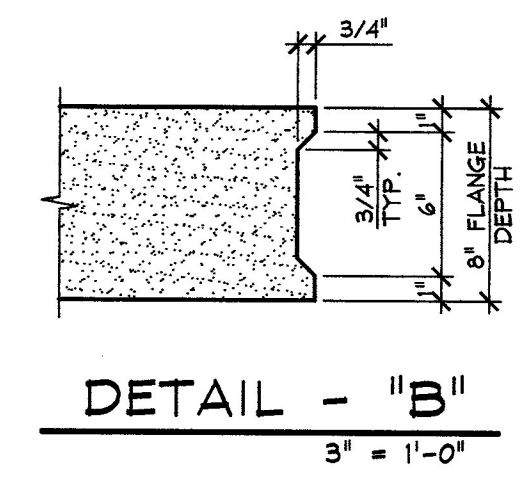
C CURB & GUARD RAIL ANCHOR
NB2
1" = 1'-0"



2 REINFORCING PLAN VIEW IN FORM
NB2
1/4" = 1'-0"



DETAIL - "A"
3" = 1'-0"



DETAIL - "B"
3" = 1'-0"

Vermont Agency of Transportation
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January 9th, 2013
RESUBMIT X APPROVED
BY KMH DATE 1-10-13

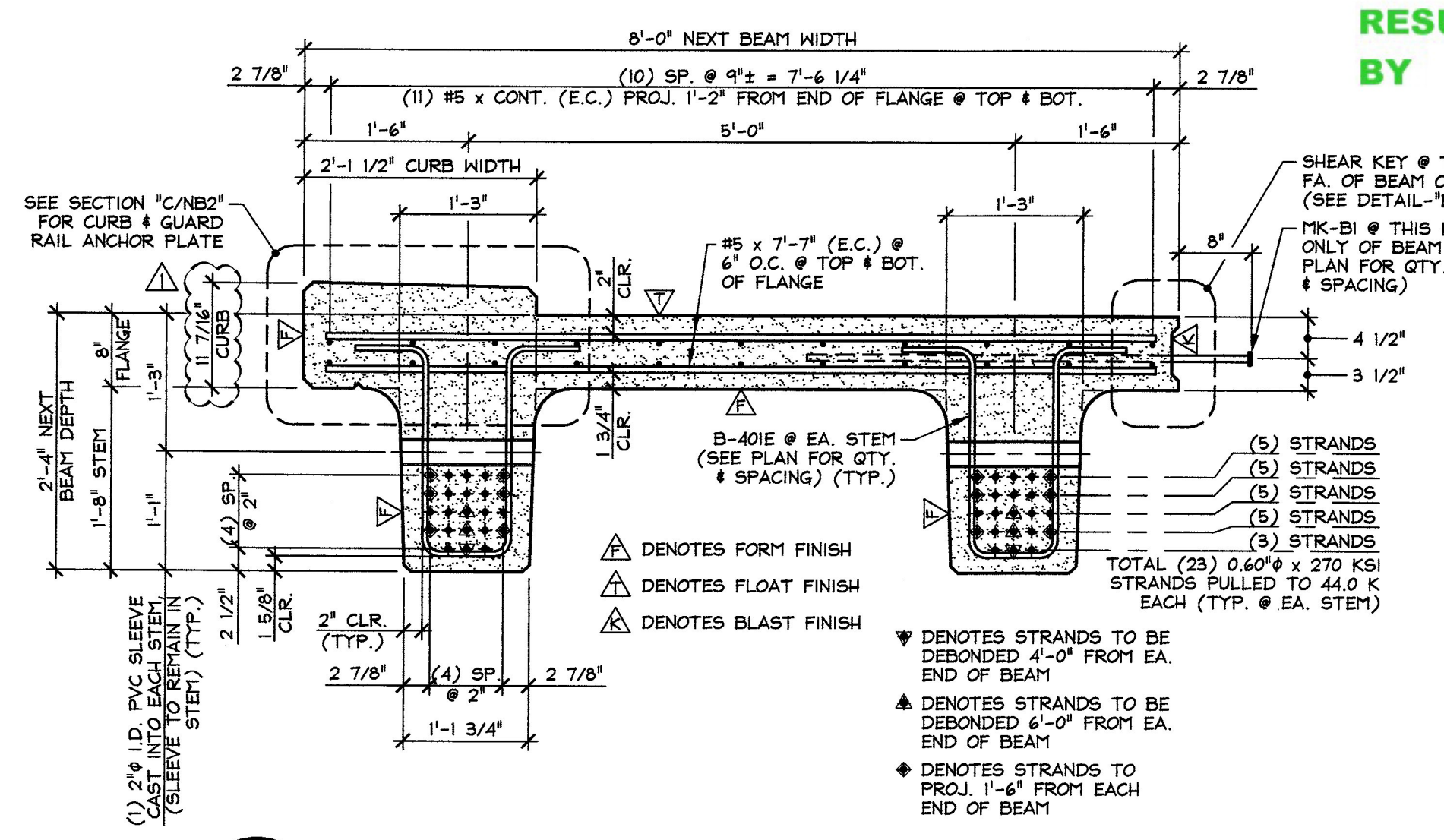
SUBMITTED
JAN 9 2013
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK:	B-NB1	QTY.:	1	WT.:	52.52 T	VOL.:	25.94 cy
MATERIAL LIST / BOX BEAM							
ITEM	MARK	DESCRIPTION	QTY.				
1	B-401E	#4 BENT BAR (EPOXY COATED)	130				
2		#4 x 7'-7" (EPOXY COATED)	18				
3							
4	B-501E	#5 BENT BAR (EPOXY COATED)	8				
5	B-502E	#5 BENT BAR (EPOXY COATED)	16				
6	B-503E	#5 BENT BAR (EPOXY COATED)	32				
7	B-504E	#5 BENT BAR (EPOXY COATED)	93				
8		#5 x 7'-7" (EPOXY COATED)	(282)				
9		#5 x 72'-4" (W/ (3) 3'-0" STAGGERED LAPS) (EPOXY COATED)	22				
10							
11	MK-B1	#5 x 4'-1" HRC 555 HEADED REBAR (EPOXY COATED)	139				
12		1/2" x 3" BIG COIL LOOP INSERT (ELECTRO-PLATED FINISH)	18				
13		GUARD RAIL ANCHOR PLATE (GALV.)	8				
14		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	4				
15							

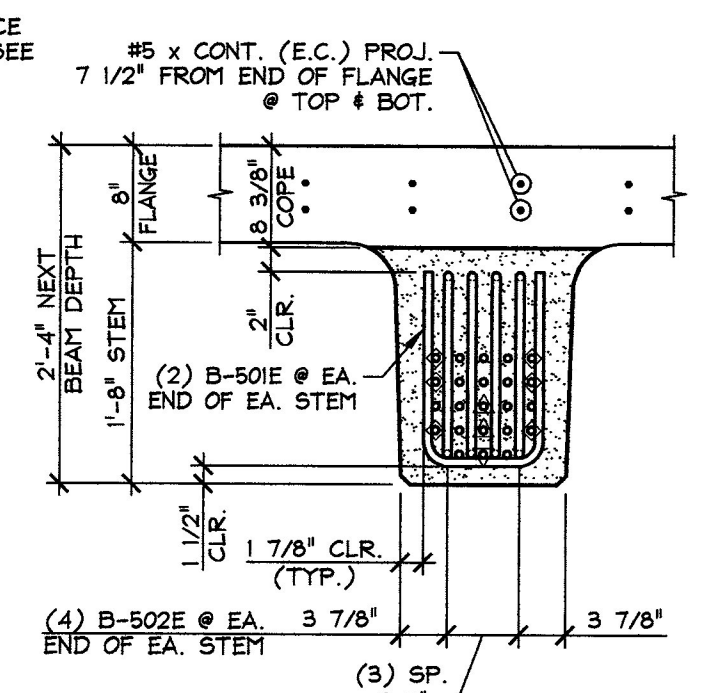
DETENSIONING SCHEDULE
N.T.S.

7	1	5	9
17	11	15	19
27	21	25	29
37	31	35	39
47	41	45	49

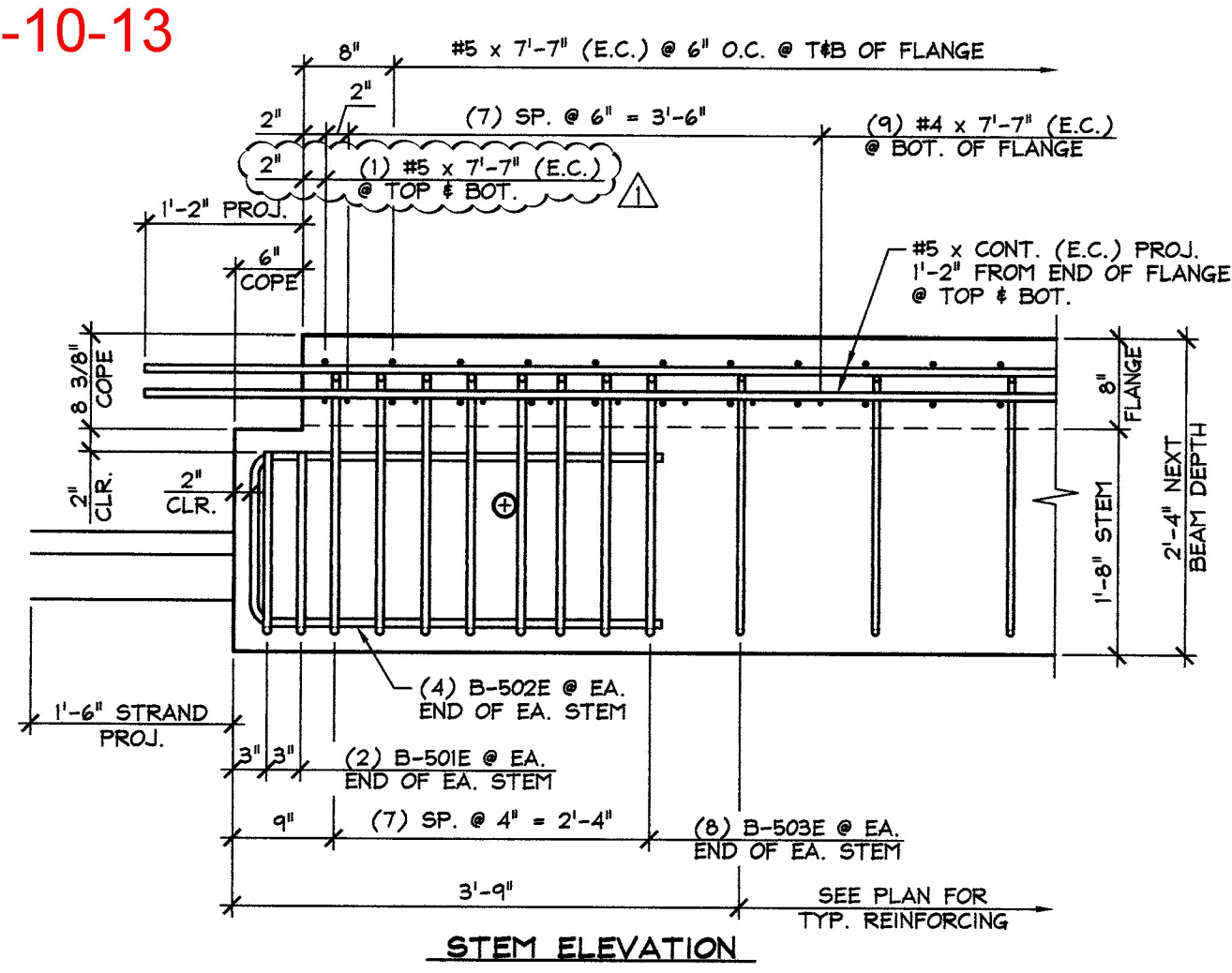
10	4	2	8
20	14	12	18
30	24	22	28
40	34	32	38
50	44	42	48



A DIMENSIONAL & REINFORCING SECTION
NB2
3/4" = 1'-0"



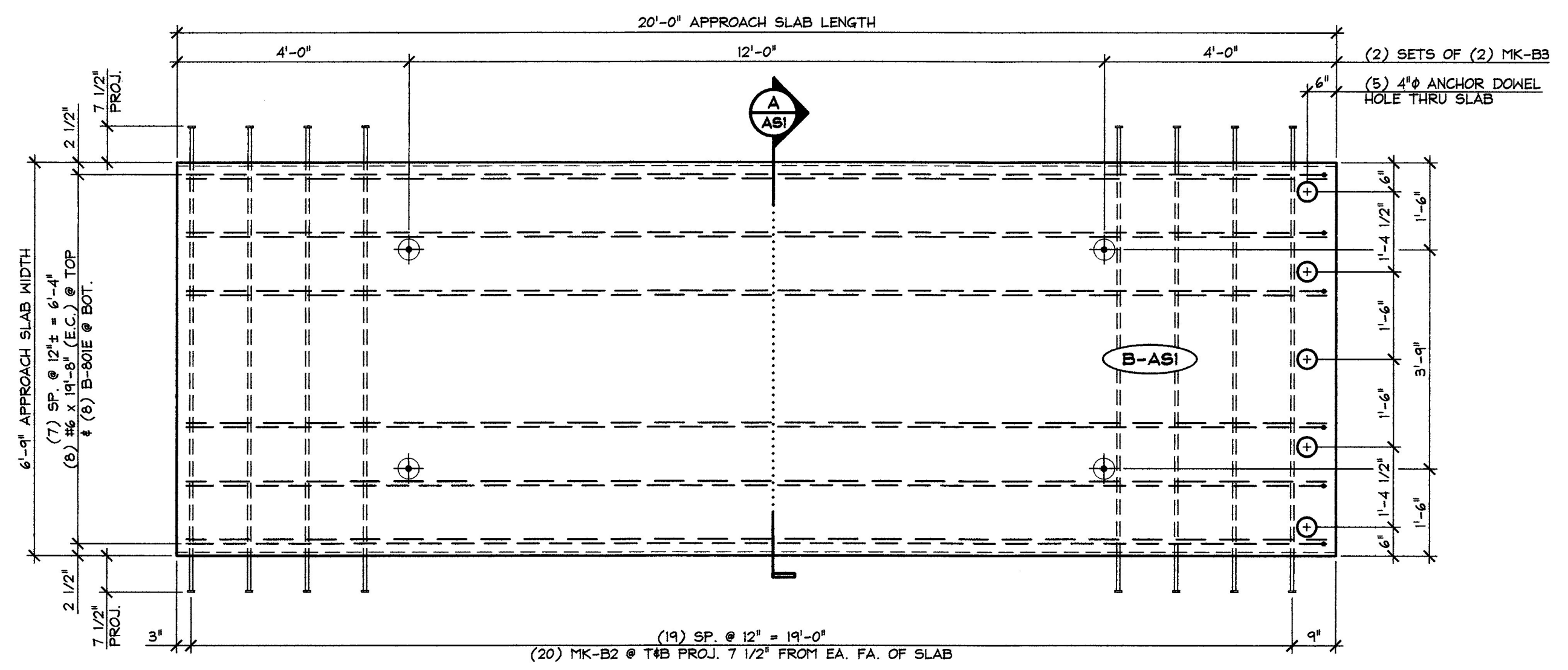
B END BLOCK STEM REINFORCING DETAILS
NB2
3/4" = 1'-0"



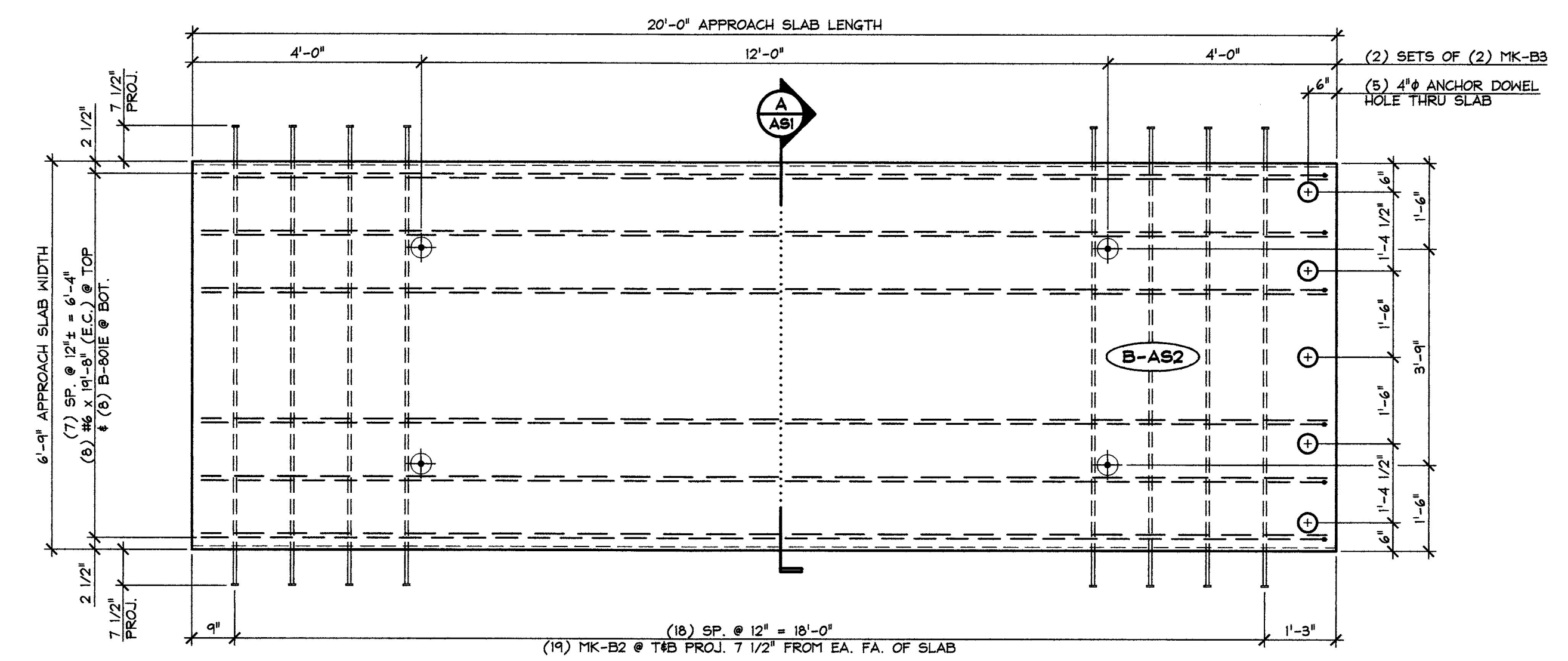
STEM ELEVATION

1-3-13 REVISED AS NOTED
12-10-12 REVISED AS NOTED

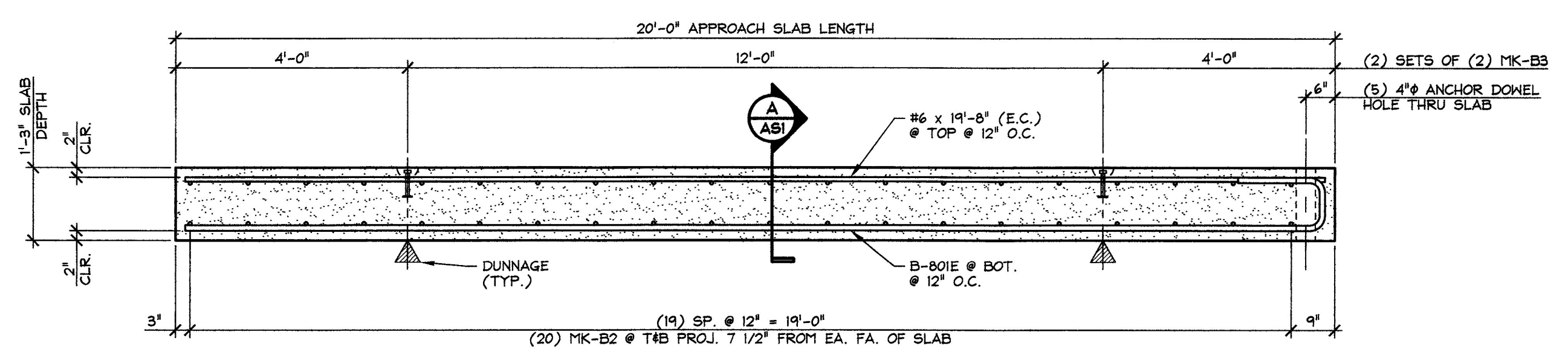
APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 264 CARR ST., MIDDLEBURY, VERMONT 05753 Phone: (802) 388-8361 Fax: (802) 388-9010	J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX	DATE: OCT. 30, 2012 SCALE: NOTED
	TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)	CHKD: B.C. DFTM: B.L. JOB NO: 23984-012
	PRESTRESSED NEXT BEAM DETAILS	DWG. NO: NB2



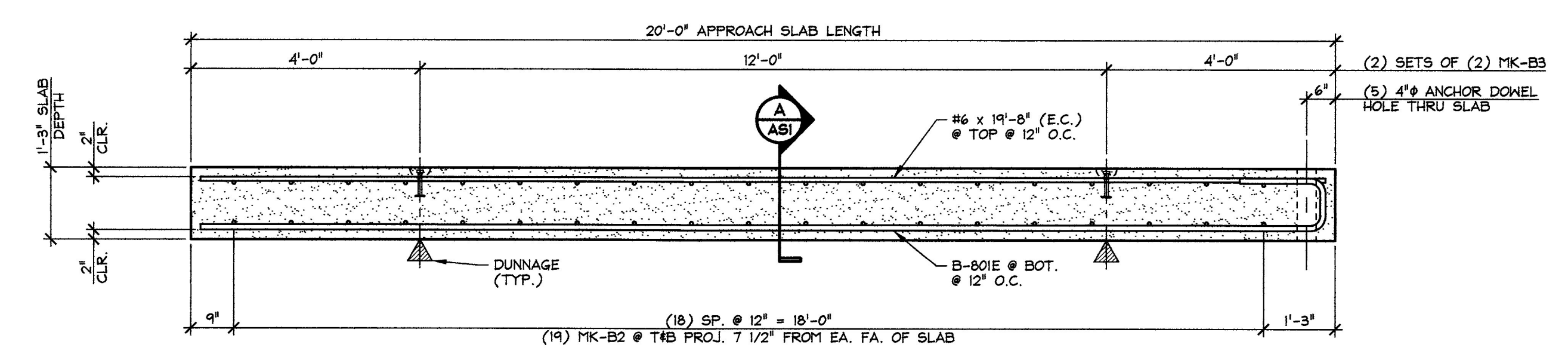
1 PLAN VIEW IN FORM
ASI 1/2" = 1'-0"



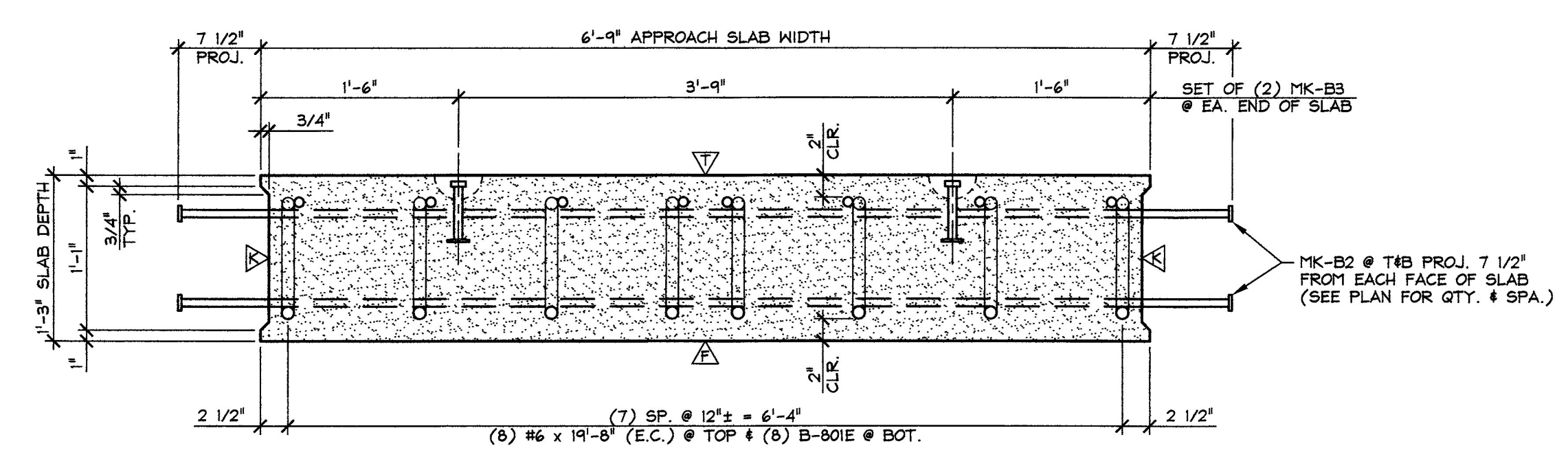
3 PLAN VIEW IN FORM
ASI 1/2" = 1'-0"



2 ELEVATION
ASI 1/2" = 1'-0"



4 ELEVATION
ASI 1/2" = 1'-0"



A APPROACH SLAB SECTION
ASI 1" = 1'-0"

▲ DENOTES FORM FINISH
▲ DENOTES FLOAT FINISH
▲ DENOTES BLAST FINISH

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JAN 9 2013
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AS1	QTY.: 2	WT.: 12.46 T	VOL.: 6.16 cy
MARK: B-AS2	QTY.: 2	WT.: 12.46 T	VOL.: 6.16 cy

MATERIAL LIST / APPROACH SLAB				
ITEM	MARK	DESCRIPTION	QTY./SLAB	
			B-AS1	B-AS2
1		#6 x 19'-8" (EPOXY COATED)	8	8
2				
3	B-801E	#8 BENT BAR (EPOXY COATED)	8	8
4				
5				
6				
7	MK-B2	#5 x 8'-0" HRC 555 DOUBLE-HEADED REBAR (EPOXY COATED)	40	38
8	MK-B3	4T x 5 1/2" SWIFT LIFT LIFTER	4	4
9				
10				

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT APPROVED X
BY KMH DATE 1-10-13

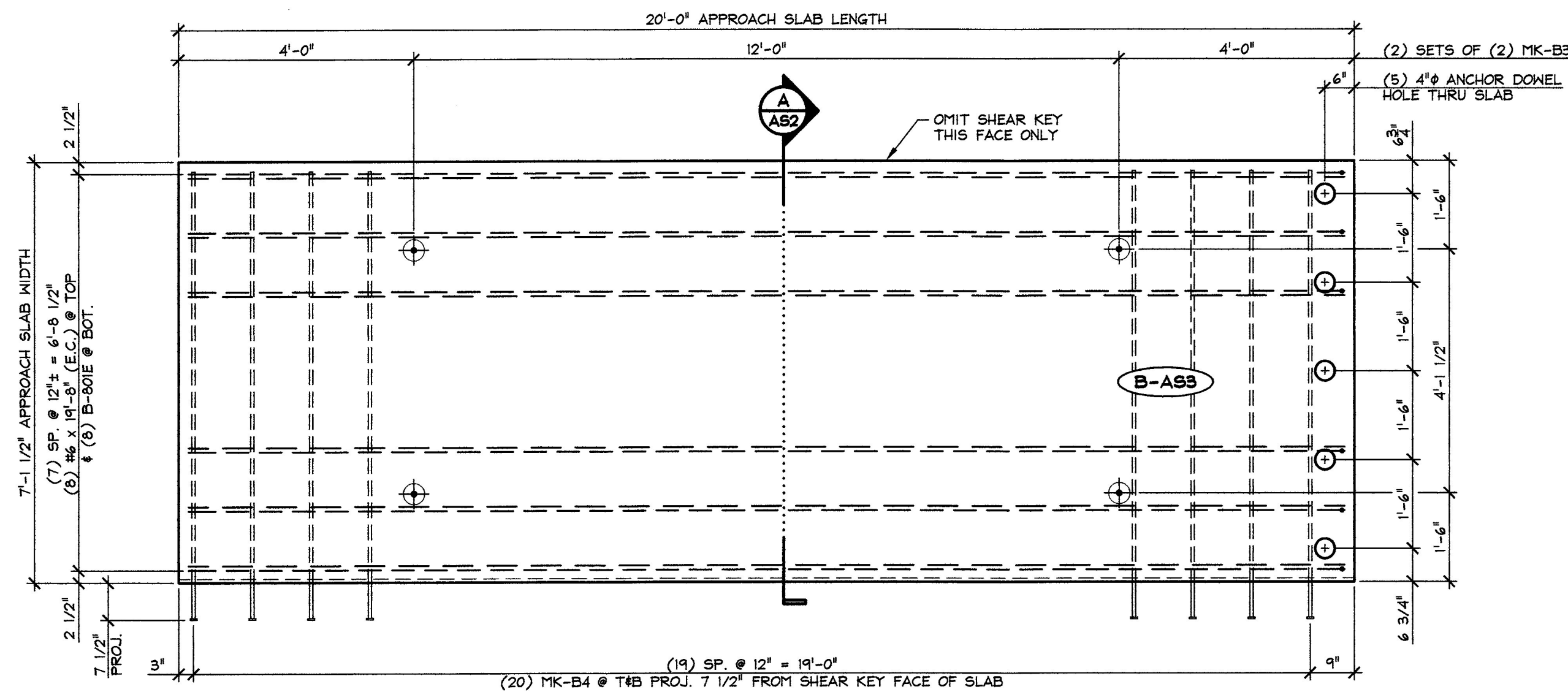
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
246A GAGE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

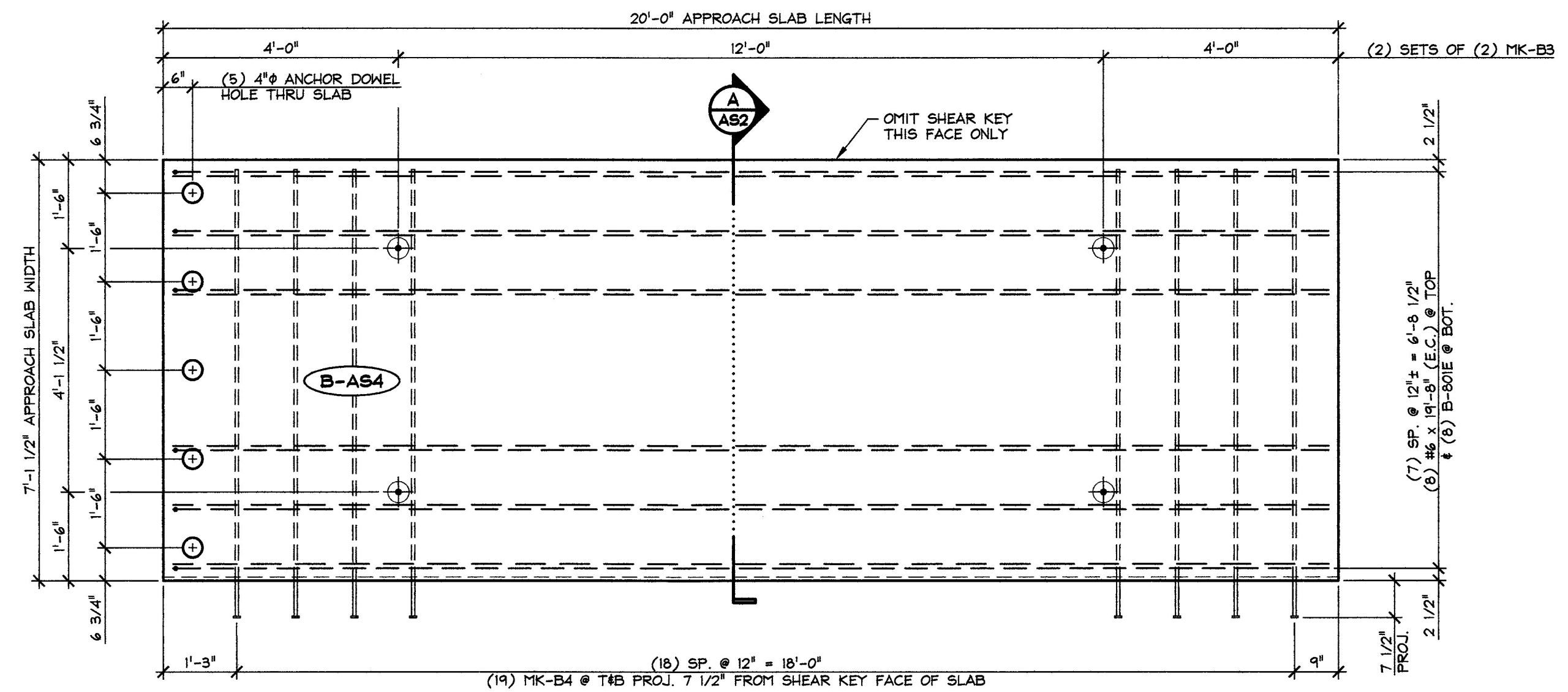
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX
DATE: OCT. 30, 2012
SCALE: NOTED

TOWN OF BRIGHTON
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)
CHKD: B.C. DFTM: B.L.
JOB NO: 23984-012

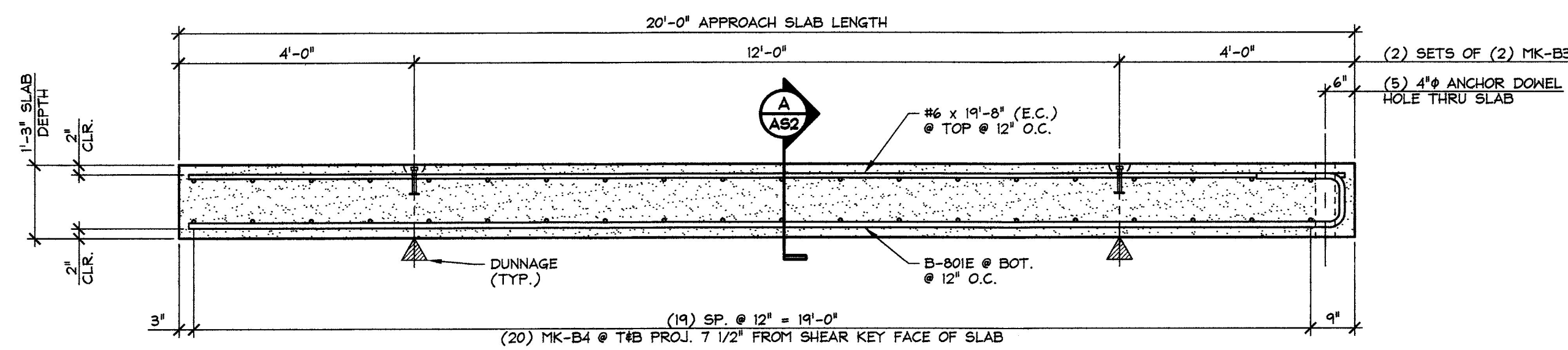
PRECAST APPROACH SLAB DETAILS
DWG. NO: ASI



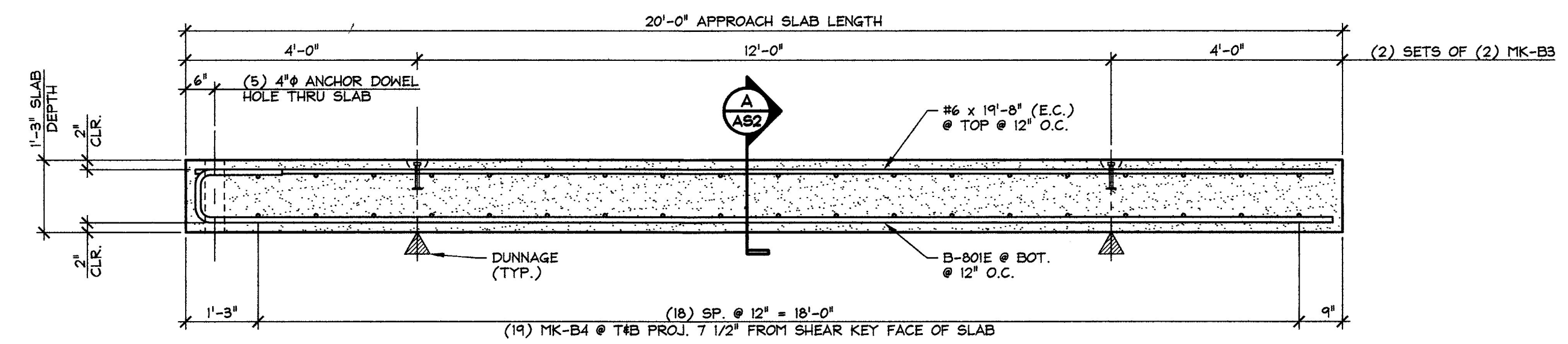
1 PLAN VIEW IN FORM
AS2 1/2" = 1'-0"



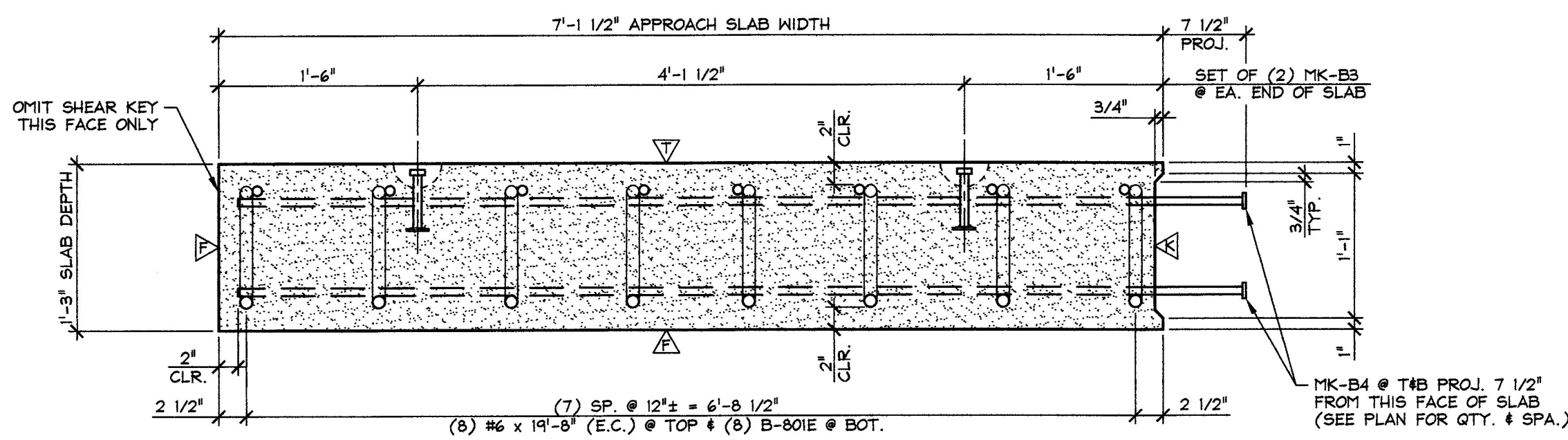
3 PLAN VIEW IN FORM
AS2 1/2" = 1'-0"



2 ELEVATION
AS2 1/2" = 1'-0"



4 ELEVATION
AS2 1/2" = 1'-0"



A APPROACH SLAB SECTION
AS2 1" = 1'-0"

▲ DENOTES FORM FINISH
▲ DENOTES FLOAT FINISH
▲ DENOTES BLAST FINISH

SUBMITTED
JAN 9 2013
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK: B-AS3	QTY.: 2	WT.: 13.26 T	VOL.: 6.55 cy	
MARK: B-AS4	QTY.: 2	WT.: 13.26 T	VOL.: 6.55 cy	
MATERIAL LIST / APPROACH SLAB				
ITEM	MARK	DESCRIPTION	QTY./SLAB	
			B-AS3	B-AS4
1		#6 x 19'-8" (EPOXY COATED)	8	8
2				
3	B-801E	#8 BENT BAR (EPOXY COATED)	8	8
4				
5				
6				
7				
8	MK-B3	4T x 5 1/2" SWIFT LIFT LIFTER	4	4
9	MK-B4	#5 x 7'-7" HRC 555 HEADED REBAR (EPOXY COATED)	40	38
10				

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT _____ APPROVED X
BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2484 DISE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

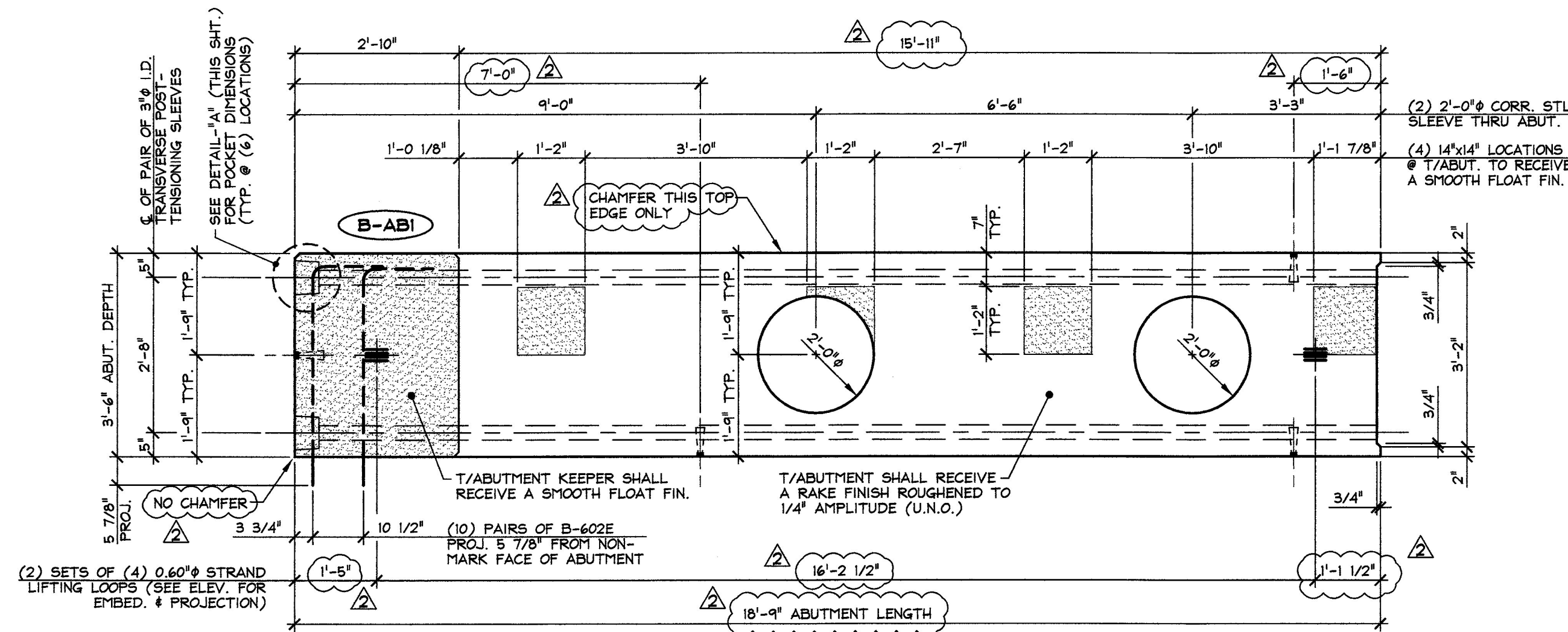
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX

DATE: OCT. 30, 2012
SCALE: NOTED

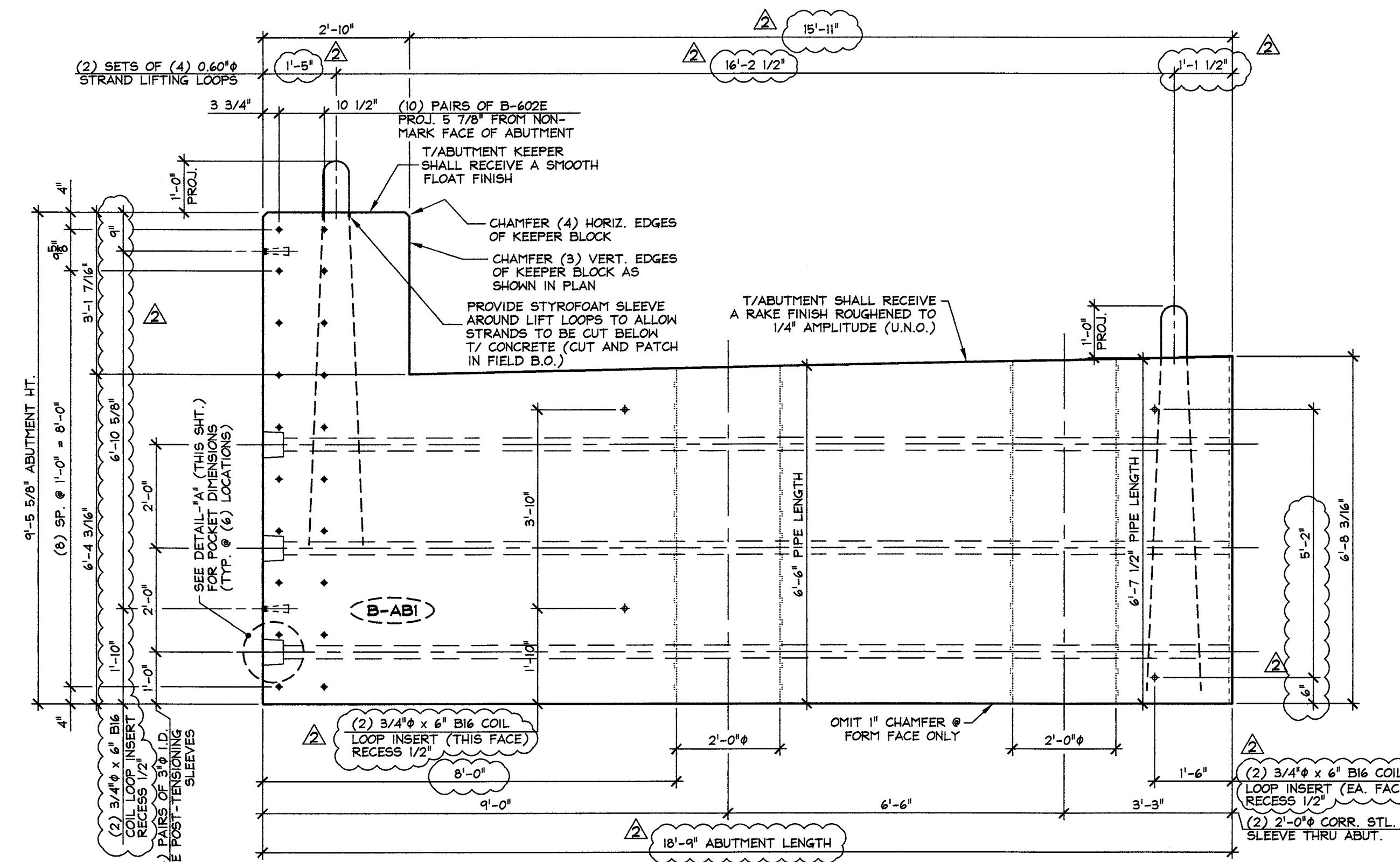
TOWN OF BRIGHTON
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

CHKD: B.C. DFTM: B.L.
JOB NO: 23384-012

PRECAST APPROACH SLAB DETAILS
DWG. NO: AS2

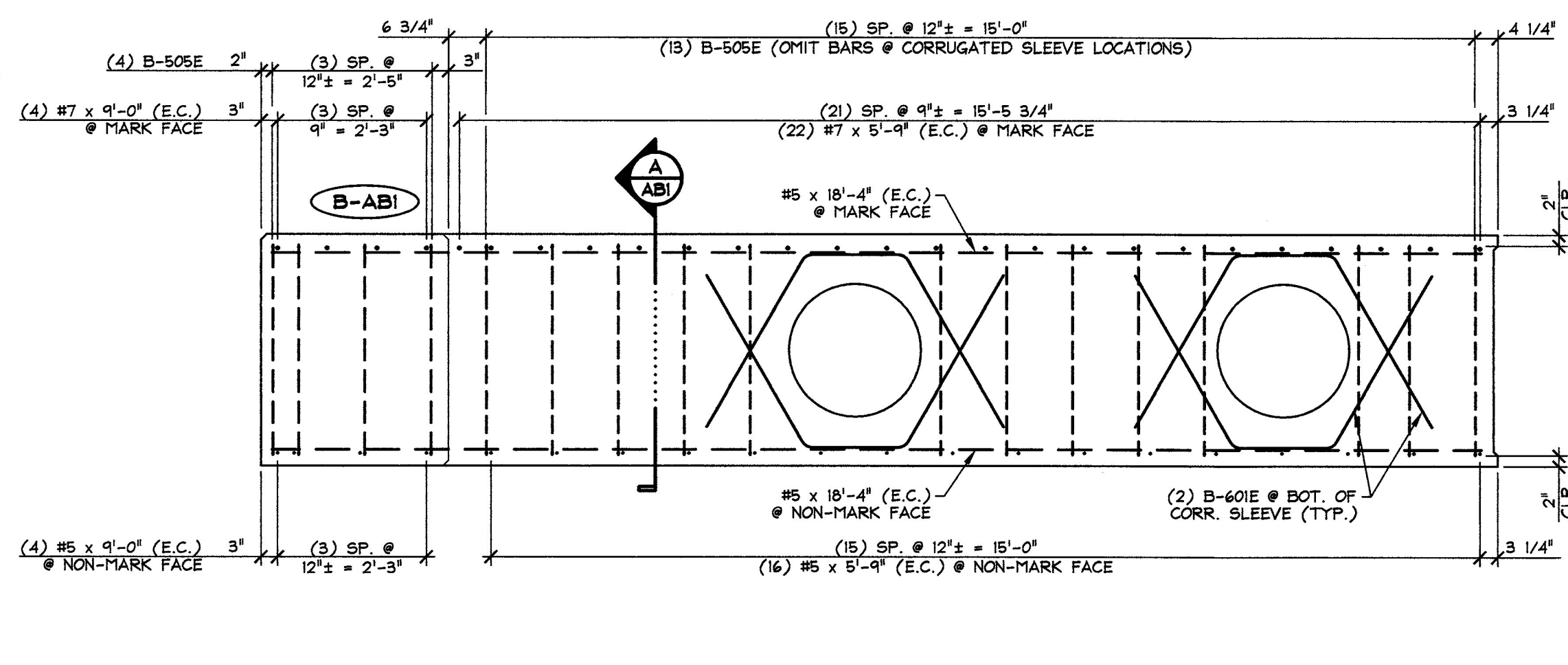


1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
 1/2" = 1'-0"

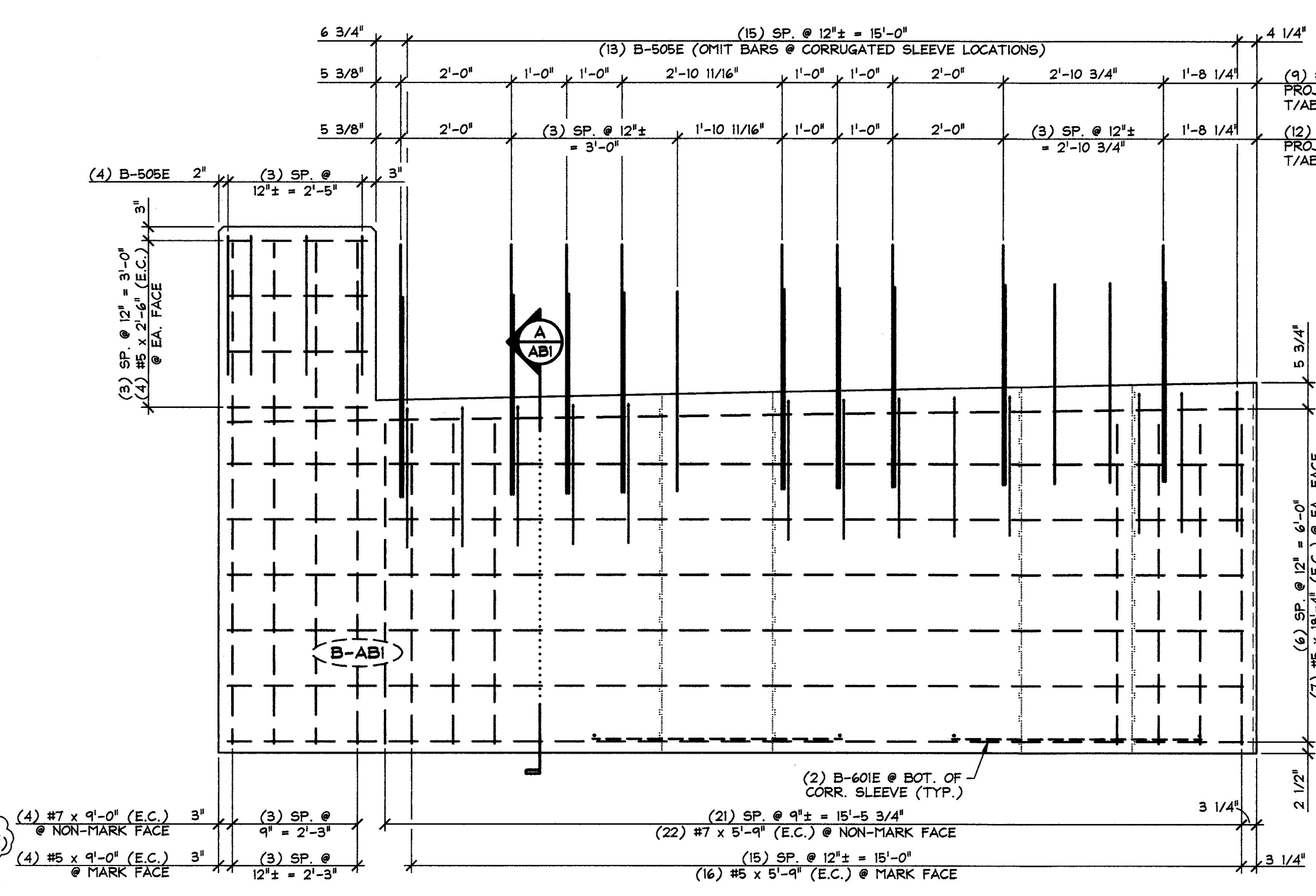


2 ABUTMENT DIMENSIONAL NON-MARK FACE ELEVATION
 1/2" = 1'-0"

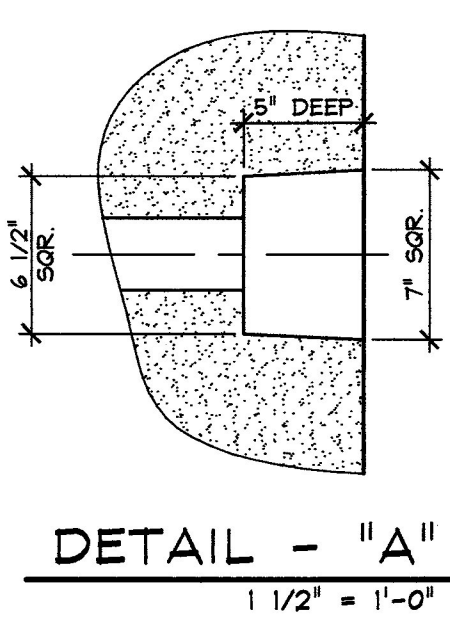
SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)



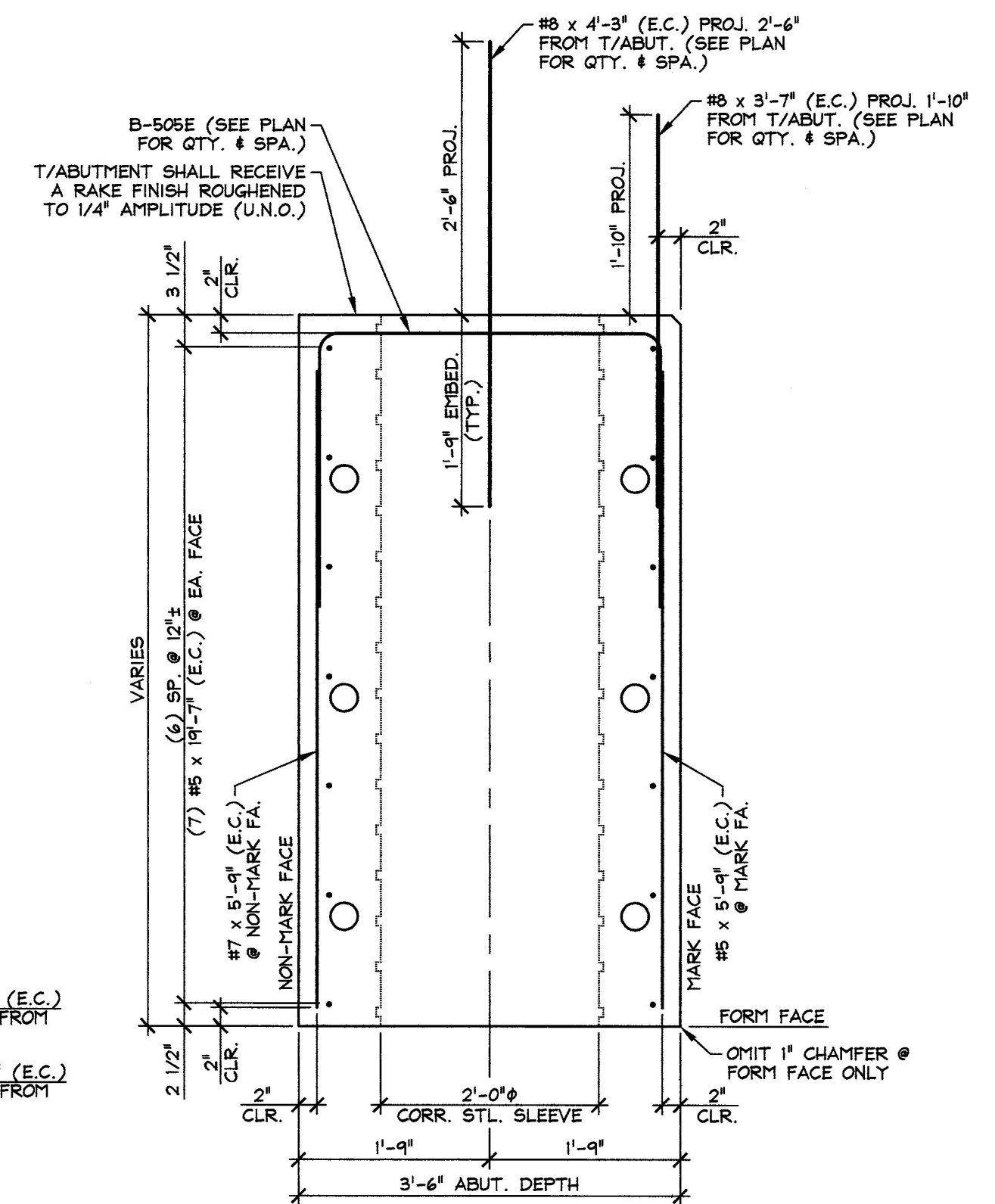
3 ABUTMENT REINFORCING PLAN VIEW IN FORM
 1/2" = 1'-0"



4 ABUTMENT REINFORCING NON-MARK FACE ELEVATION
 1/2" = 1'-0"



DETAIL - "A"
 1 1/2" = 1'-0"



A ABUTMENT SECTION
 3/4" = 1'-0"

SUBMITTED
 JAN 9 2013
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	B-505E	#5 BENT BAR (EPOXY COATED)	17
2		#5 x 2'-6" (EPOXY COATED)	8
3		#5 x 5'-9" (EPOXY COATED)	16
4		#5 x 9'-0" (EPOXY COATED)	4
5		#5 x 18'-4" (EPOXY COATED)	14
6			
7	B-601E	#6 BENT BAR (EPOXY COATED)	4
8	B-602E	#6 BENT BAR (EPOXY COATED)	20
9			
10		#7 x 5'-9" (EPOXY COATED)	22
11		#7 x 9'-0" (EPOXY COATED)	4
12			
13		#8 x 3'-7" (EPOXY COATED)	12
14		#8 x 4'-3" (EPOXY COATED)	9
15		3/4" x 6" B16 COIL INSERT (ELECTRO-PLATED FINISH)	8
16		2'-0" x 6'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	1
17		2'-0" x 6'-6" CORRUGATED STEEL PIPE (GALV.)	1
18		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	2
19			
20			

RECEIVED
 WDL OK'D BY JTS
 January 9th, 2013
 RESUBMIT APPROVED X
 BY KMH DATE 1-10-13

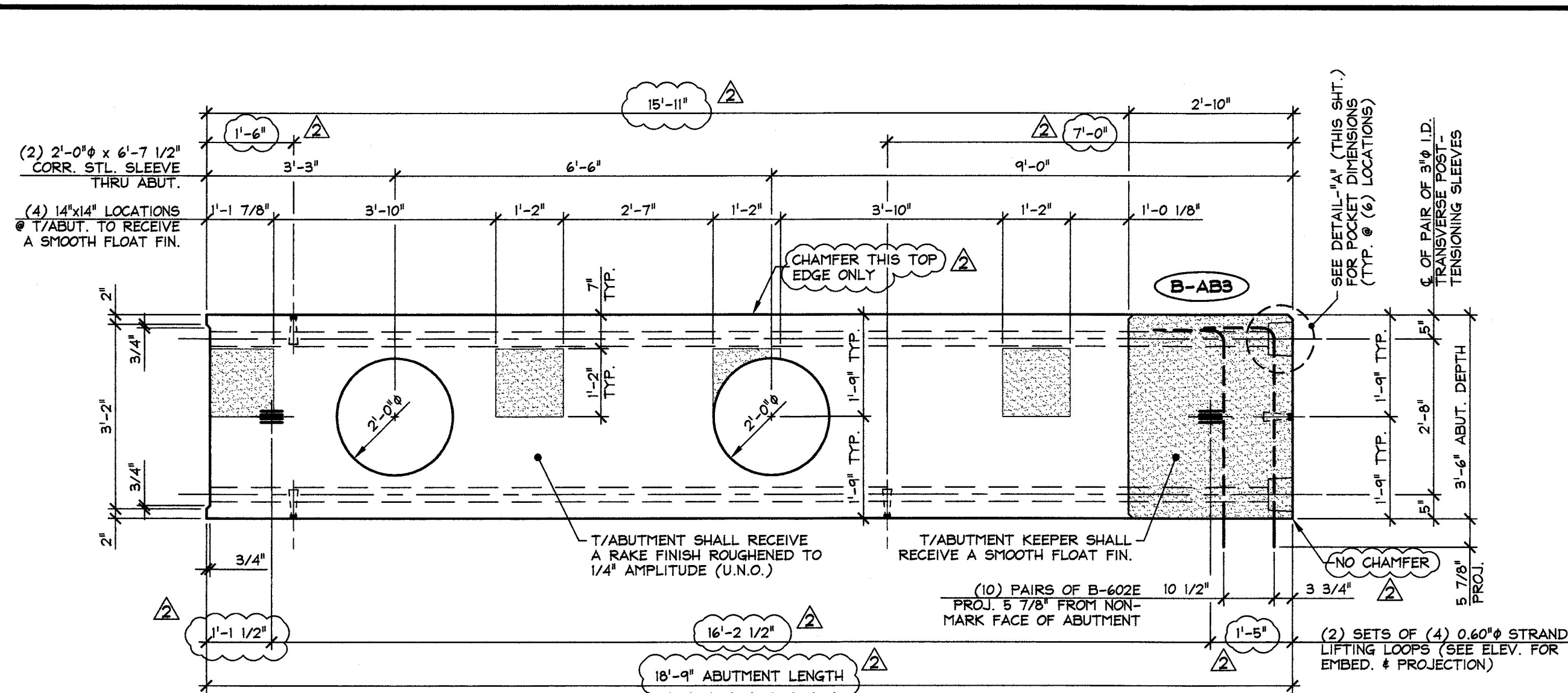
J.P. CARRARA & SONS INC.
 Precast & Prestress Manufacturer
 2464 ONE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.A. McDONALD, INC.
 CONTRACTOR
 LYNDON CENTER, VERMONT

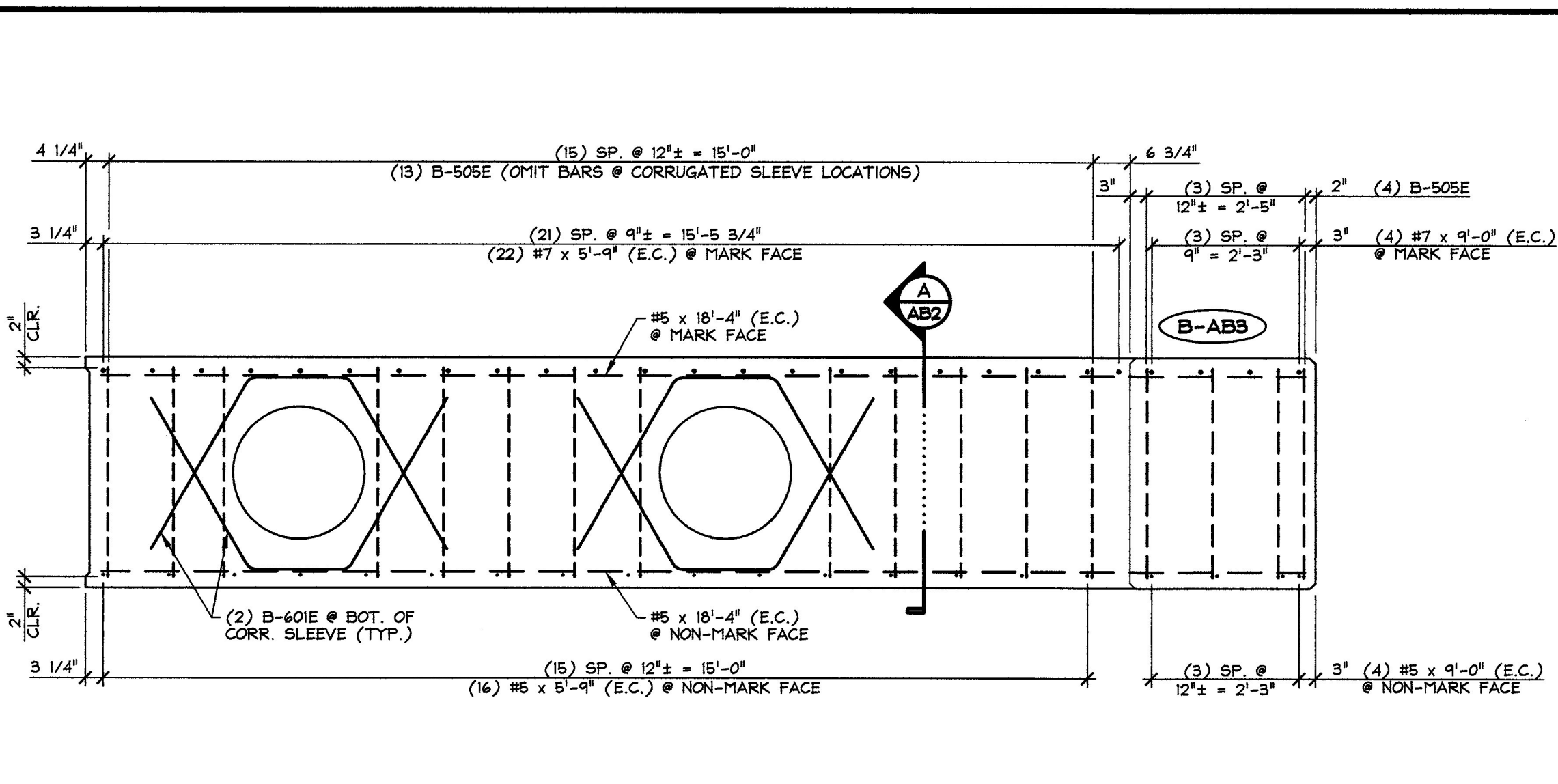
STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ESSEX

TOWN OF BRIGHTON
 ROUTE NO. VT 105, MINOR ARTERIAL
 BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

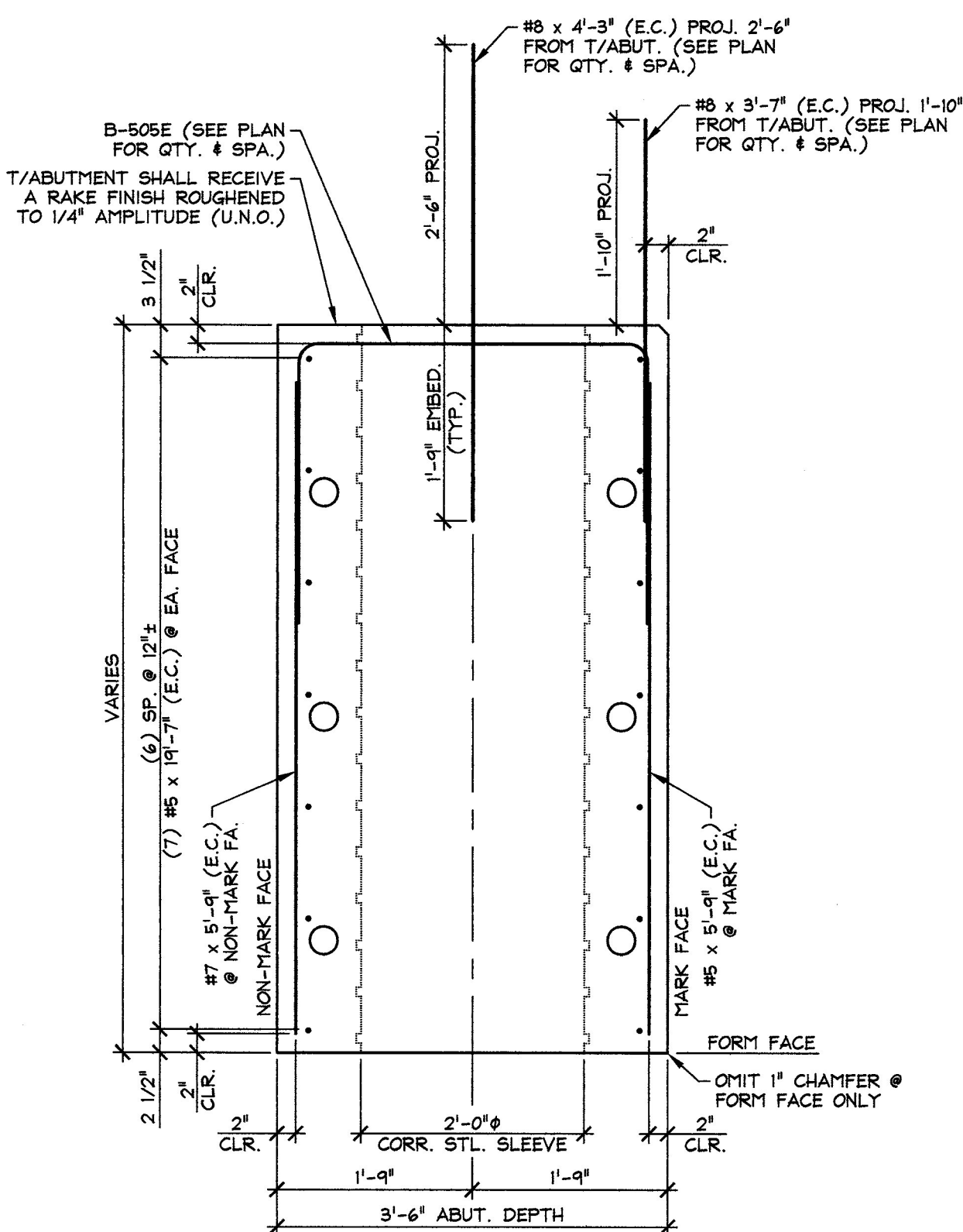
DATE: OCT. 30, 2012
 SCALE: NOTED
 CHKD: B.C. DFTM: B.L.
 JOB NO: 23384-012
 DWG. NO: ABI



1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
AB2
1/2" = 1'-0"

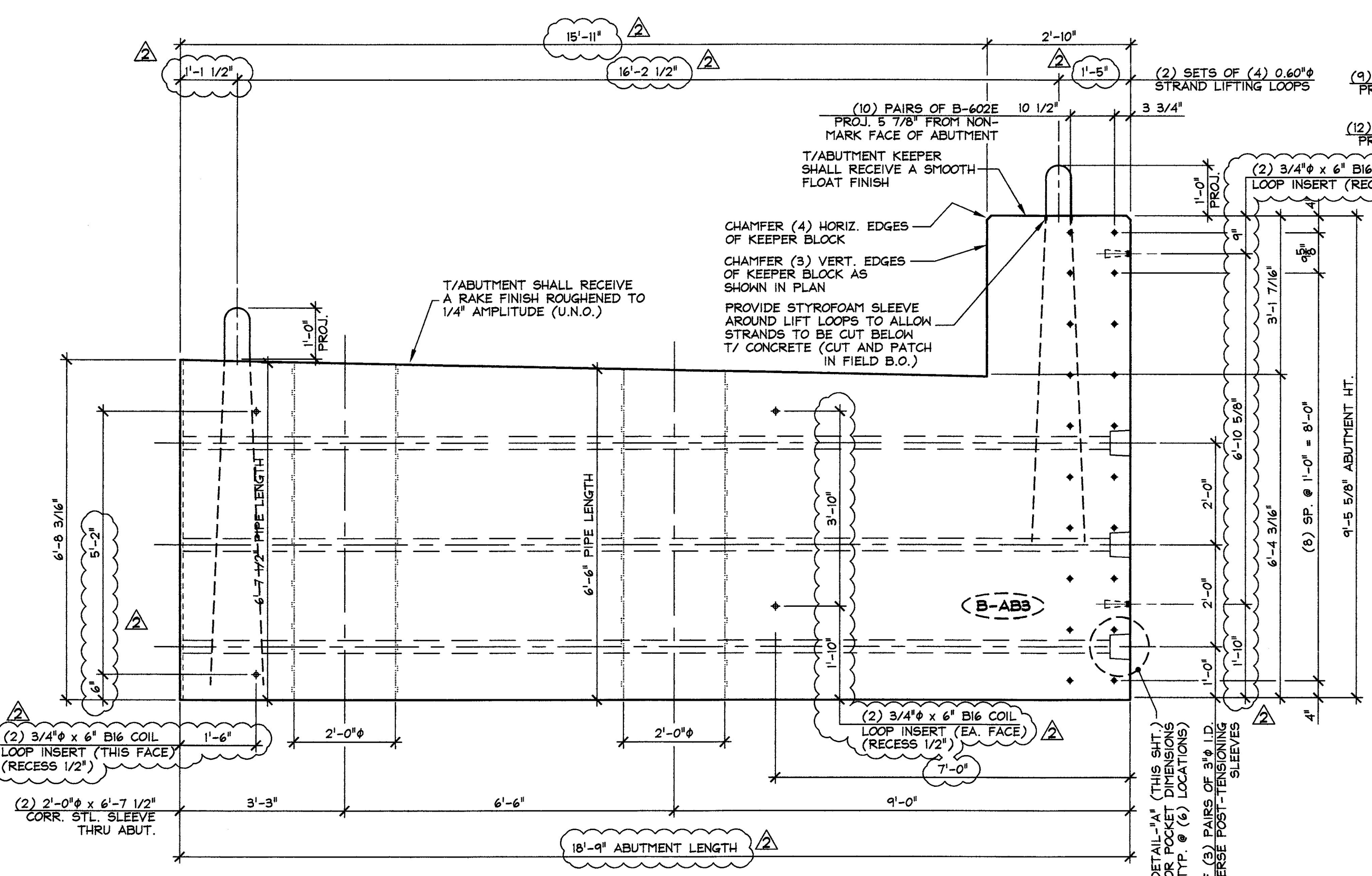


3 ABUTMENT REINFORCING PLAN VIEW IN FORM
AB2
1/2" = 1'-0"

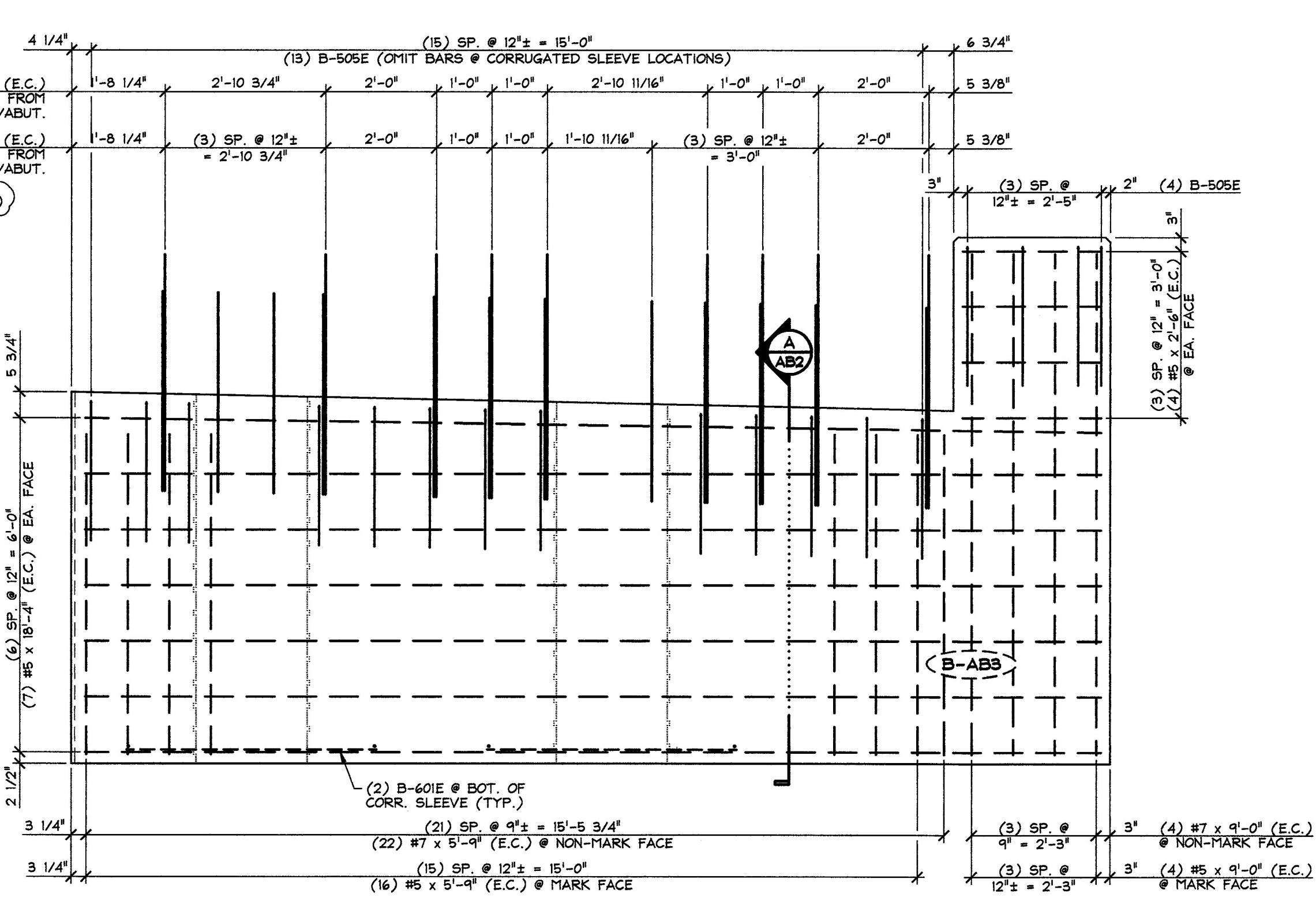


A ABUTMENT SECTION
AB2
3/4" = 1'-0"

SUBMITTED
JAN 9 2013
J.P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

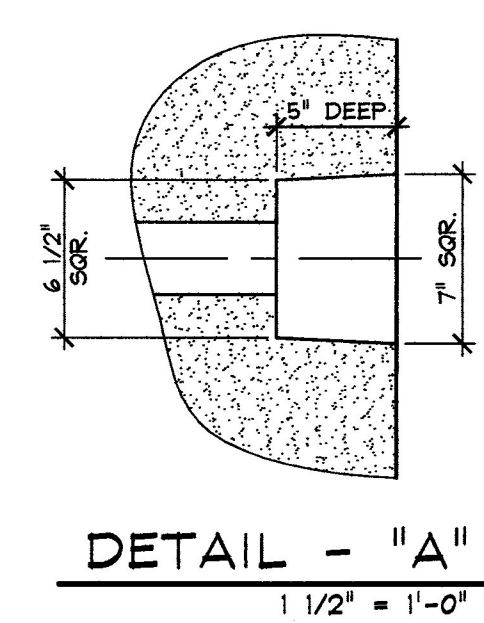


2 ABUTMENT DIMENSIONAL NON-MARK FACE ELEVATION
AB2
1/2" = 1'-0"



4 ABUTMENT REINFORCING NON-MARK FACE ELEVATION
AB2
1/2" = 1'-0"

SHOP NOTE:
ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)



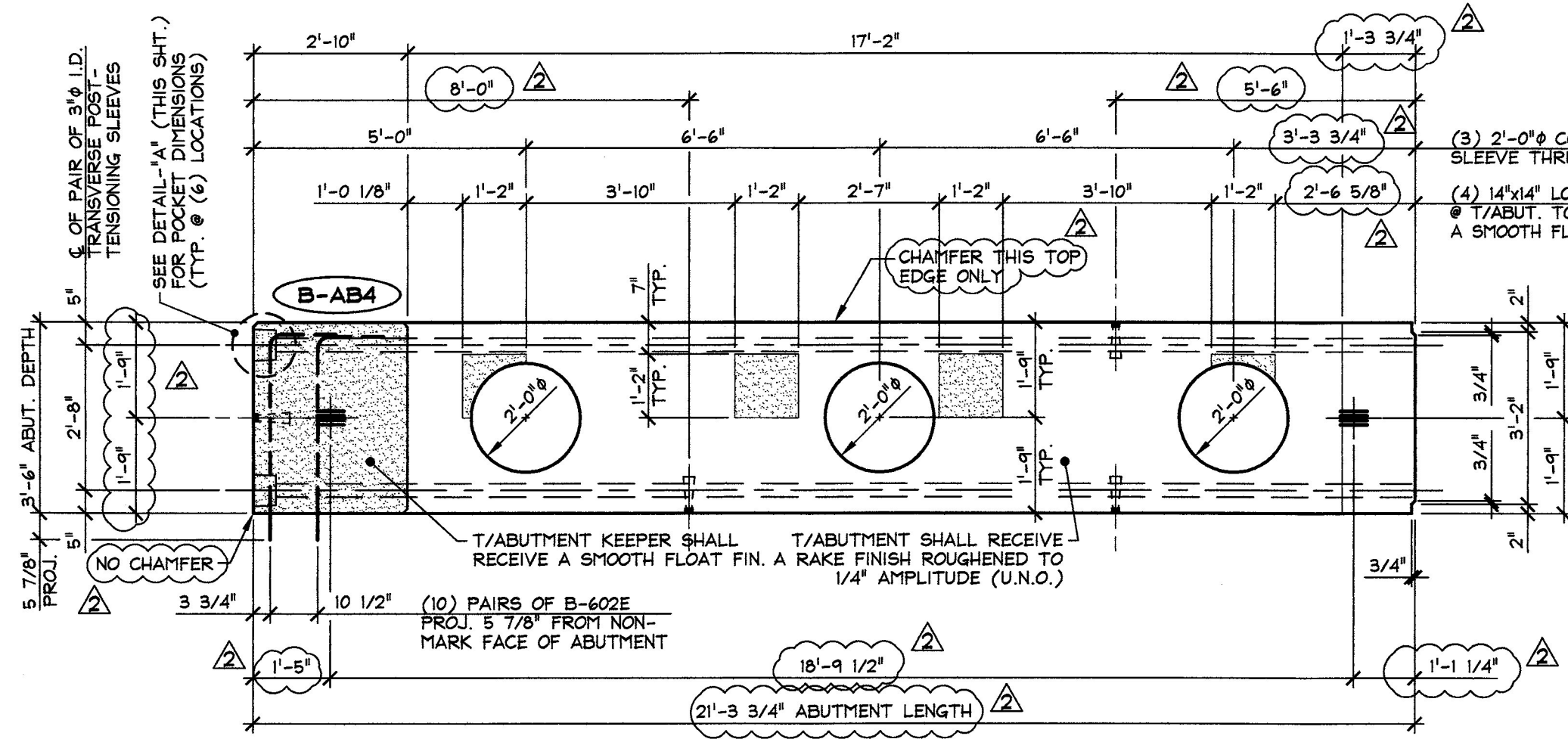
DETAIL - "A"
1 1/2" = 1'-0"

1-3-13 GENERAL REVISIONS
12-10-12 GENERAL REVISIONS

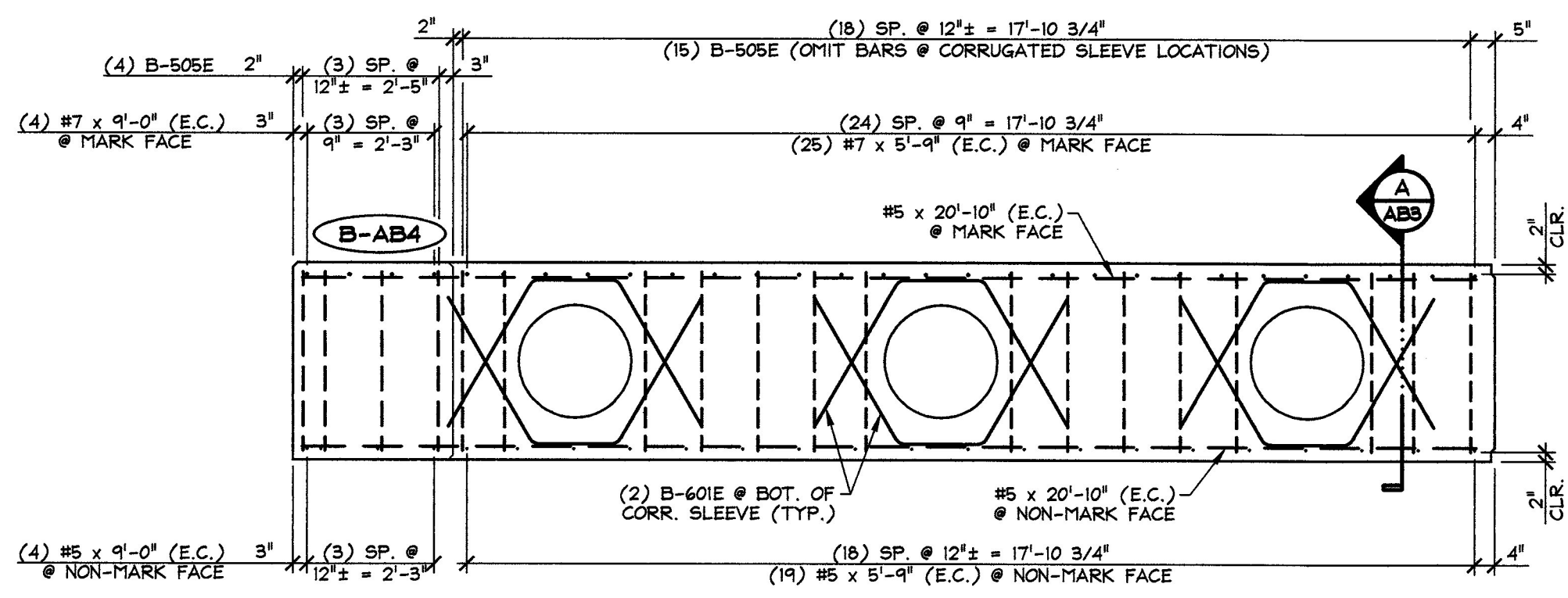
Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
January 9th, 2013
RESUBMIT APPROVED X
BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2484 CASE STR. MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-8010		J.A. McDONALD, INC. CONTRACTOR LYNDON CENTER, VERMONT	
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF ESSEX		DATE: OCT. 30, 2012 SCALE: NOTED	
TOWN OF BRIGHTON ROUTE NO. VT 105, MINOR ARTERIAL BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)		CHKD: B.C. DFTM: B.L. JOB NO: 23384-012	
PRECAST ABUTMENT DETAILS		DWG. NO: AB2	

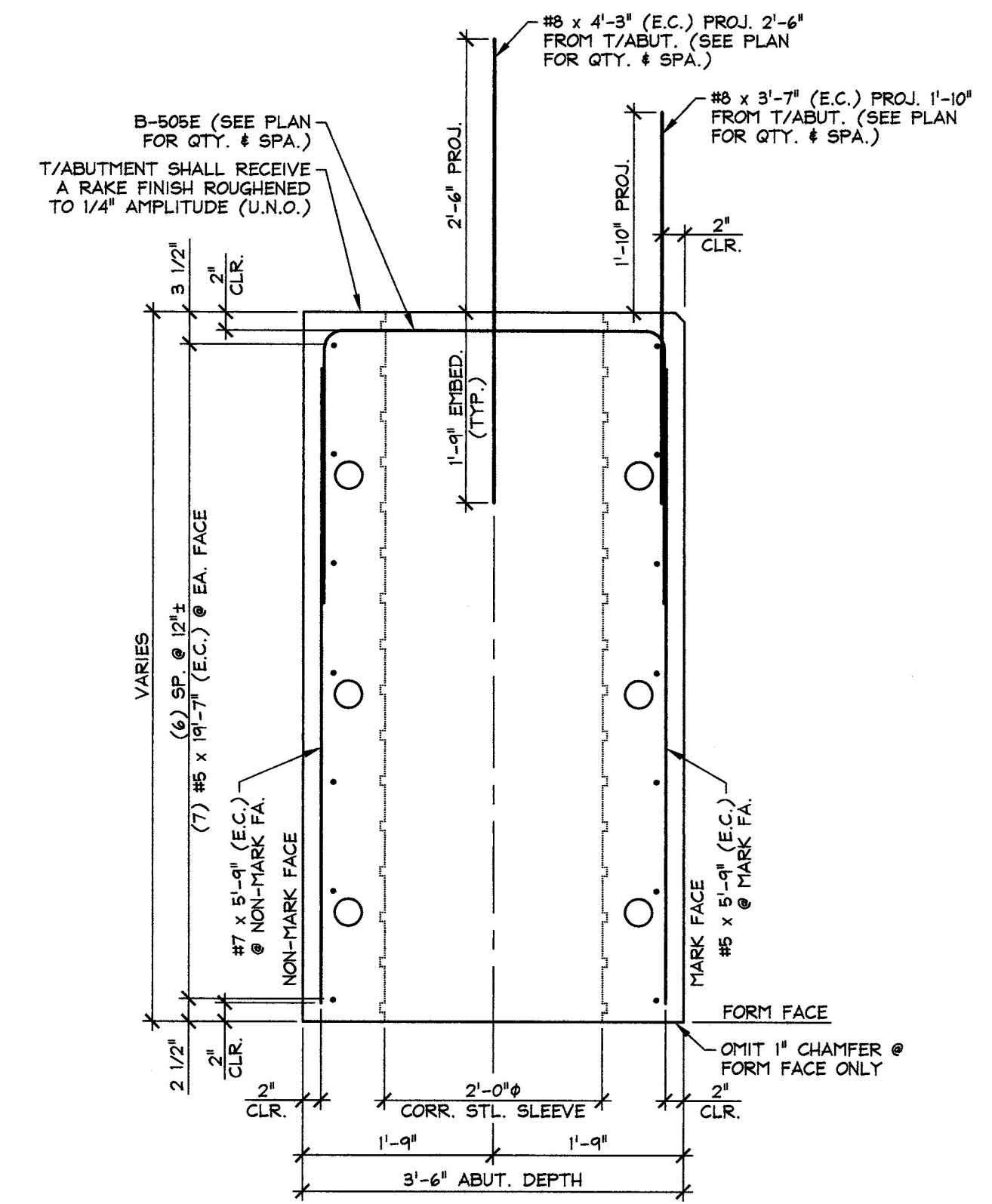
MARK: B-AB3	QTY.: 1	WT.: 31.15 T	VOL.: 15.38 cy
MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	B-505E	#5 BENT BAR (EPOXY COATED)	17
2		#5 x 2'-6" (EPOXY COATED)	8
3		#5 x 5'-9" (EPOXY COATED)	16
4		#5 x 9'-0" (EPOXY COATED)	4
5		#5 x 18'-4" (EPOXY COATED)	14
6			
7	B-601E	#6 BENT BAR (EPOXY COATED)	4
8	B-602E	#6 BENT BAR (EPOXY COATED)	20
9			
10		#7 x 5'-9" (EPOXY COATED)	22
11		#7 x 9'-0" (EPOXY COATED)	4
12			
13		#8 x 3'-7" (EPOXY COATED)	12
14		#8 x 4'-3" (EPOXY COATED)	9
15		3/4" x 6" BIG COIL INSERT (ELECTRO-PLATED FINISH)	8
16		2'-0" x 6'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	1
17		2'-0" x 6'-6" CORRUGATED STEEL PIPE (GALV.)	1
18		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	2
19			
20			



1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
 AB3
 3/8" = 1'-0"

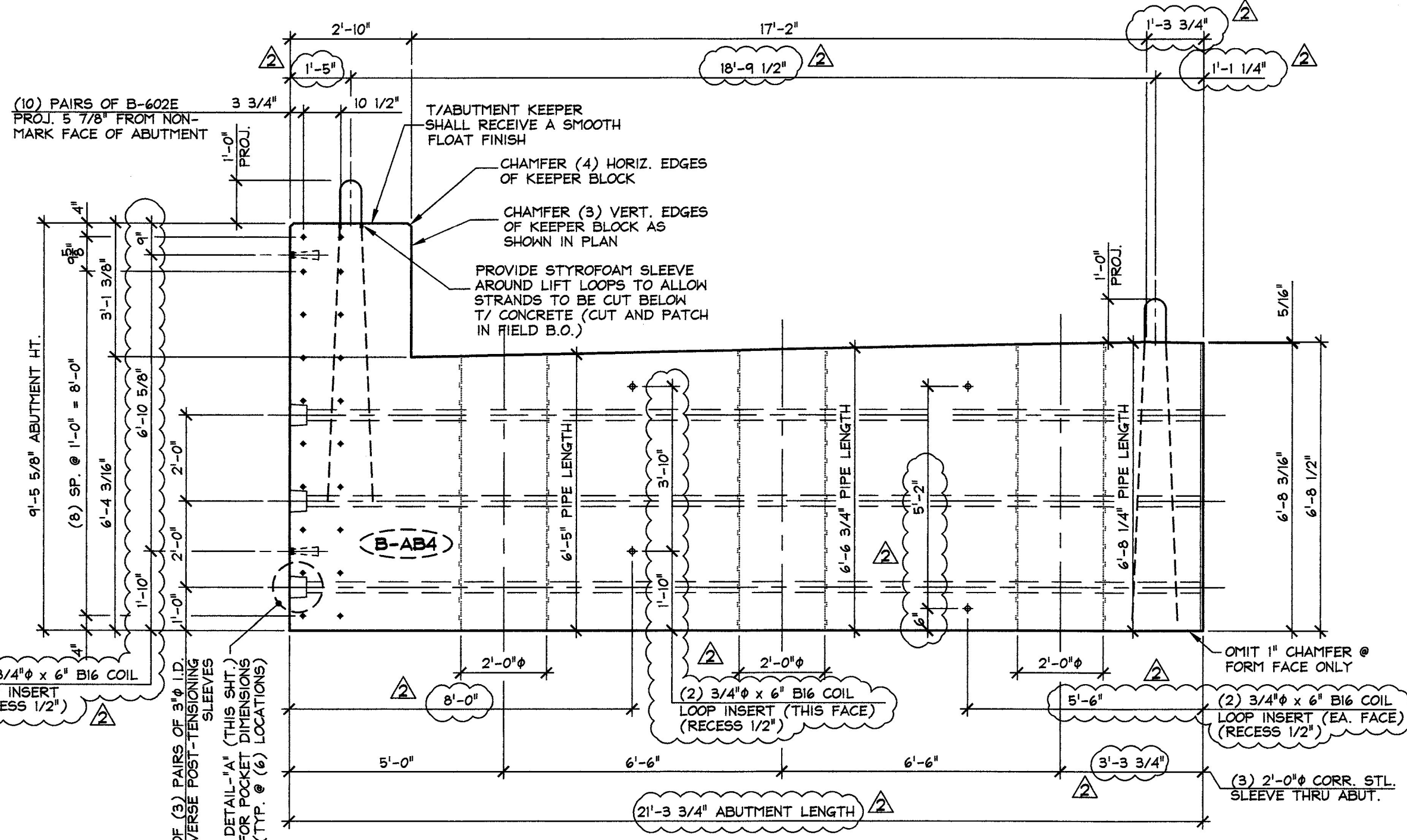


4 ABUTMENT REINFORCING PLAN VIEW IN FORM
 AB3
 3/8" = 1'-0"



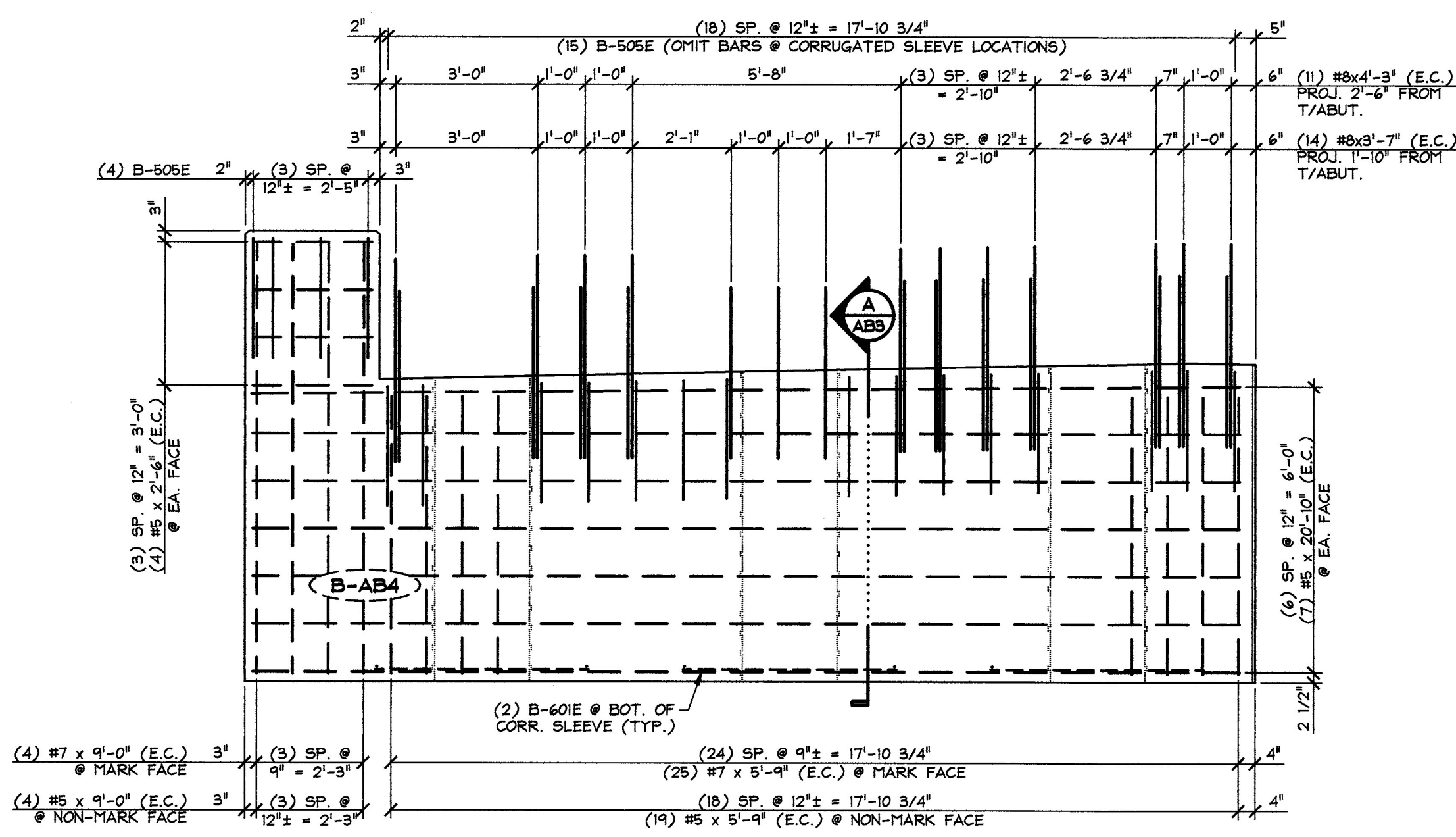
A ABUTMENT SECTION
 AB3
 3/4" = 1'-0"

SUBMITTED
 JAN 9 2013
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



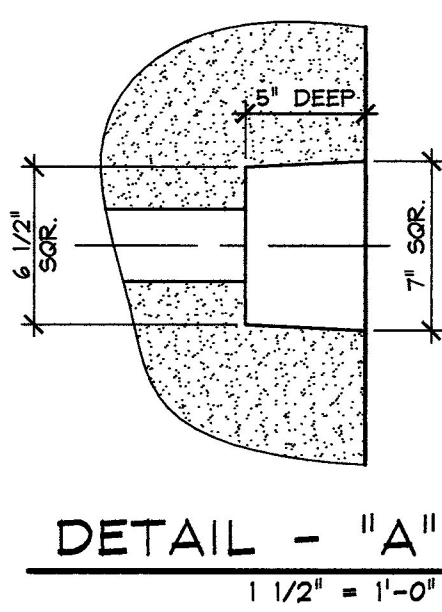
2 ABUTMENT DIMENSIONAL NON-MARK FACE ELEVATION
 AB3
 3/8" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL RECEIVE A 1" CHAMFER (U.N.O.)



3 ABUTMENT REINFORCING NON-MARK FACE ELEVATION
 AB3
 3/8" = 1'-0"

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	B-505E	#5 BENT BAR (EPOXY COATED)	19
2		#5 x 2'-6" (EPOXY COATED)	8
3		#5 x 5'-9" (EPOXY COATED)	19
4		#5 x 9'-0" (EPOXY COATED)	4
5		#5 x 20'-10" (EPOXY COATED)	14
6			
7	B-601E	#6 BENT BAR (EPOXY COATED)	6
8	B-602E	#6 BENT BAR (EPOXY COATED)	20
9			
10		#7 x 5'-9" (EPOXY COATED)	25
11		#7 x 9'-0" (EPOXY COATED)	4
12			
13		#8 x 3'-7" (EPOXY COATED)	14
14		#8 x 4'-3" (EPOXY COATED)	11
15		(3/4)" x 6" BIG COIL INSERT (ELECTRO-PLATED FINISH)	8
16		2'-0" x 6'-5" CORRUGATED STEEL PIPE (GALV.)	1
17		2'-0" x 6'-6 3/4" CORRUGATED STEEL PIPE (GALV.)	1
18		2'-0" x 6'-8 1/4" CORRUGATED STEEL PIPE (GALV.)	1
19		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	2
20			



DETAIL - "A"
 1 1/2" = 1'-0"

Vermont Agency of Transportation
RECEIVED
 CK'D BY WDL OK'D BY JTS
 January 9th, 2013
 RESUBMIT APPROVED X
 BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
 Precast & Prestress Manufacturer
 2444 CASE ST., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

J.A. McDONALD, INC.
 CONTRACTOR
 LYNDON CENTER, VERMONT

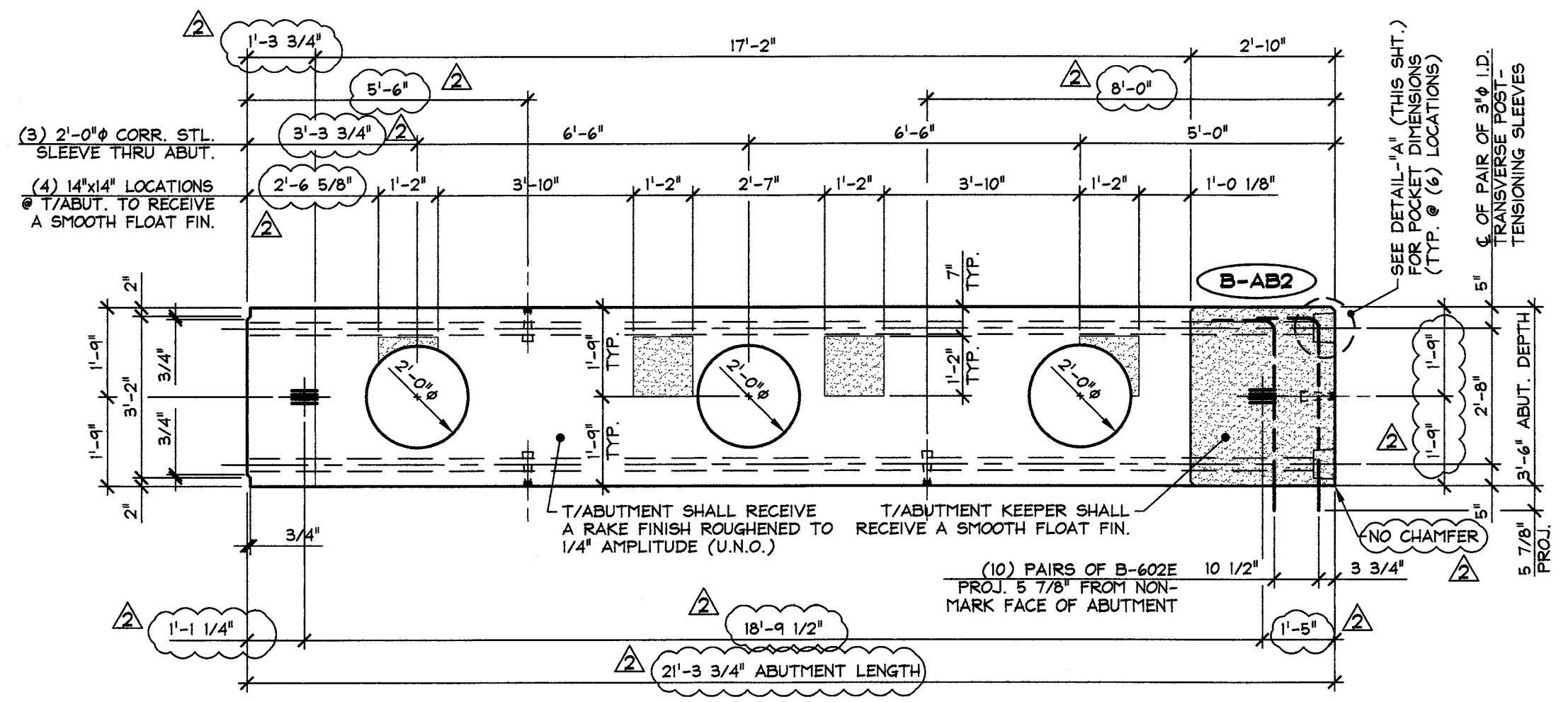
STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ESSEX

TOWN OF BRIGHTON
 ROUTE NO. VT 105, MINOR ARTERIAL
 BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

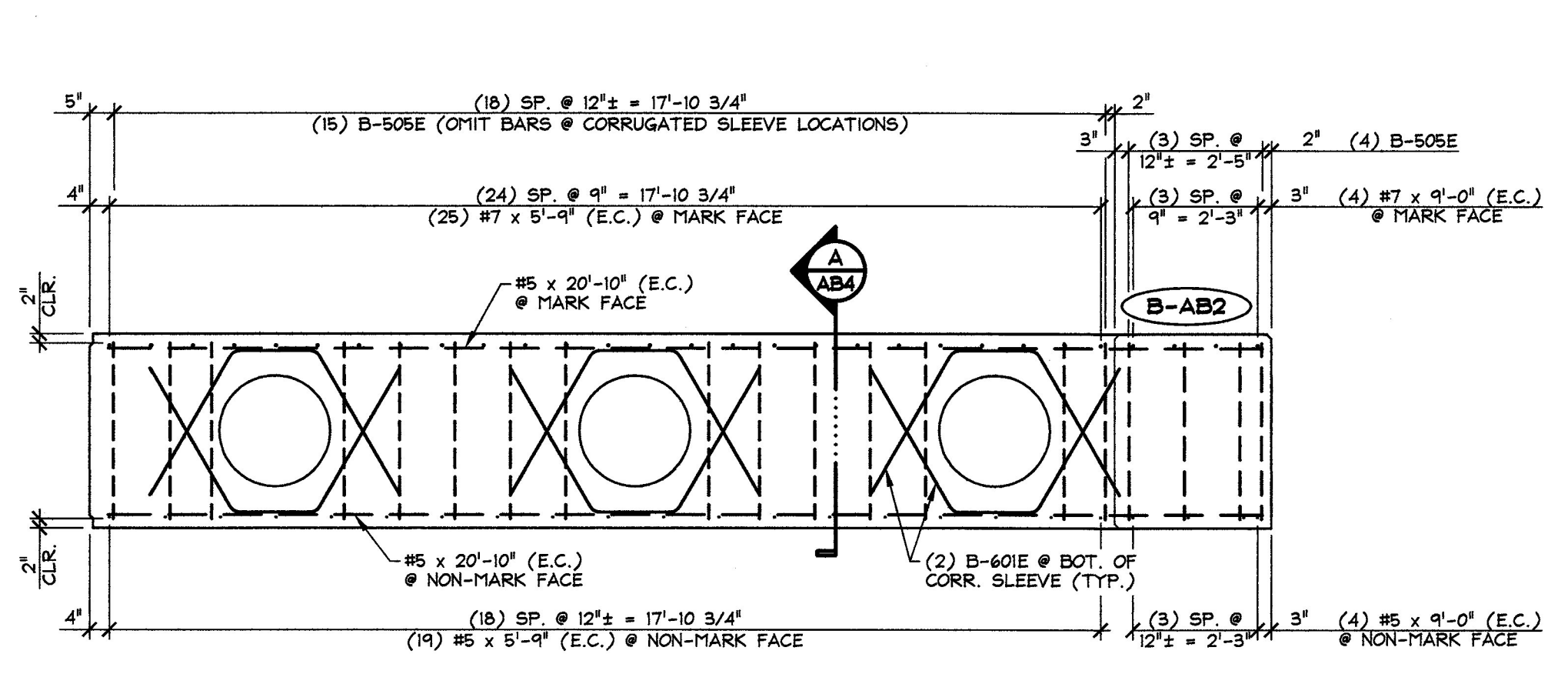
DATE: OCT. 30, 2012
 SCALE: NOTED
 CHKD: B.C. DFTM: B.L.
 JOB NO: 23384-012
 DWG. NO: **AB3**

1-3-13 GENERAL REVISIONS

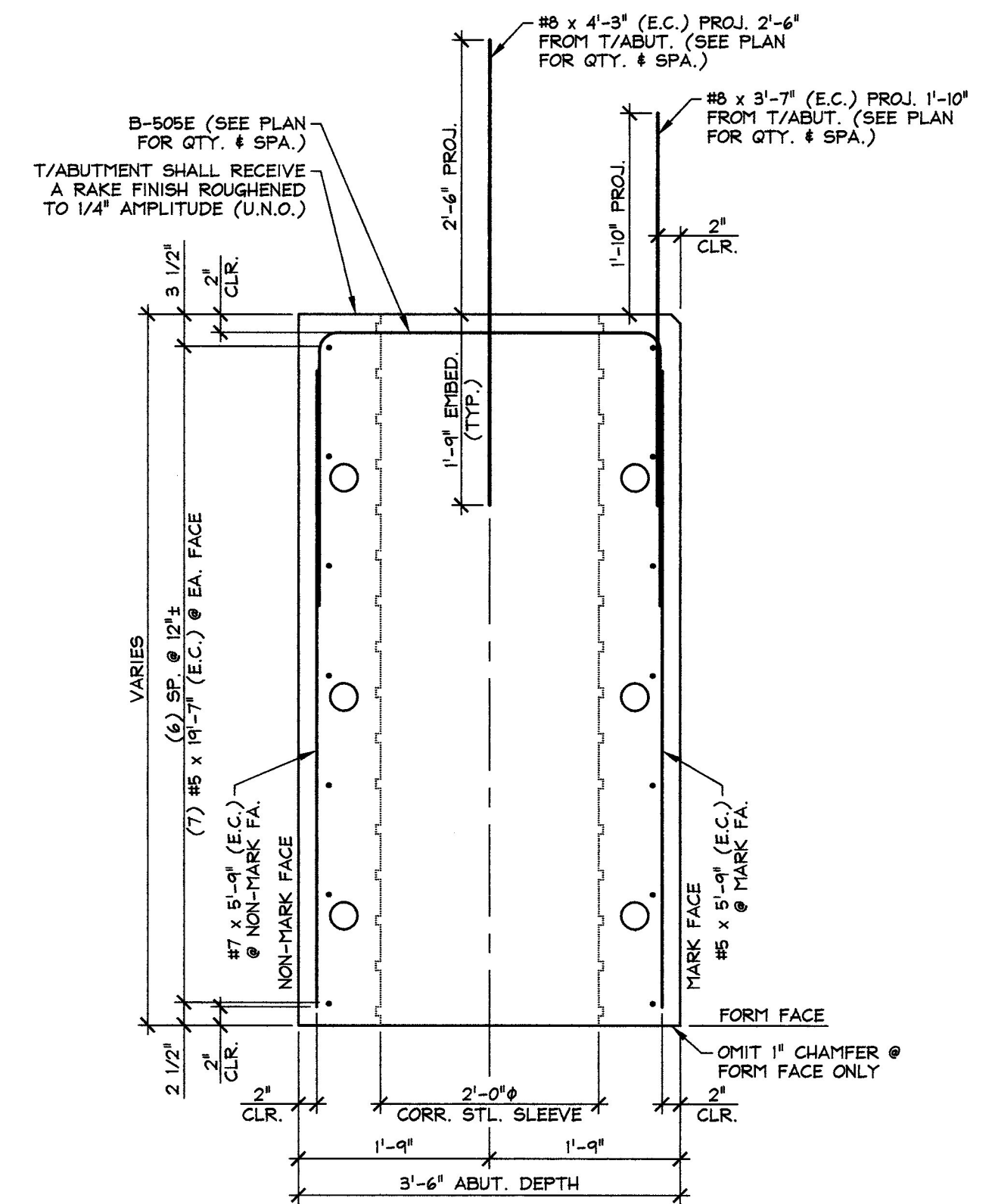
PRECAST ABUTMENT DETAILS



1 ABUTMENT DIMENSIONAL PLAN VIEW IN FORM
 AB4 3/8" = 1'-0"

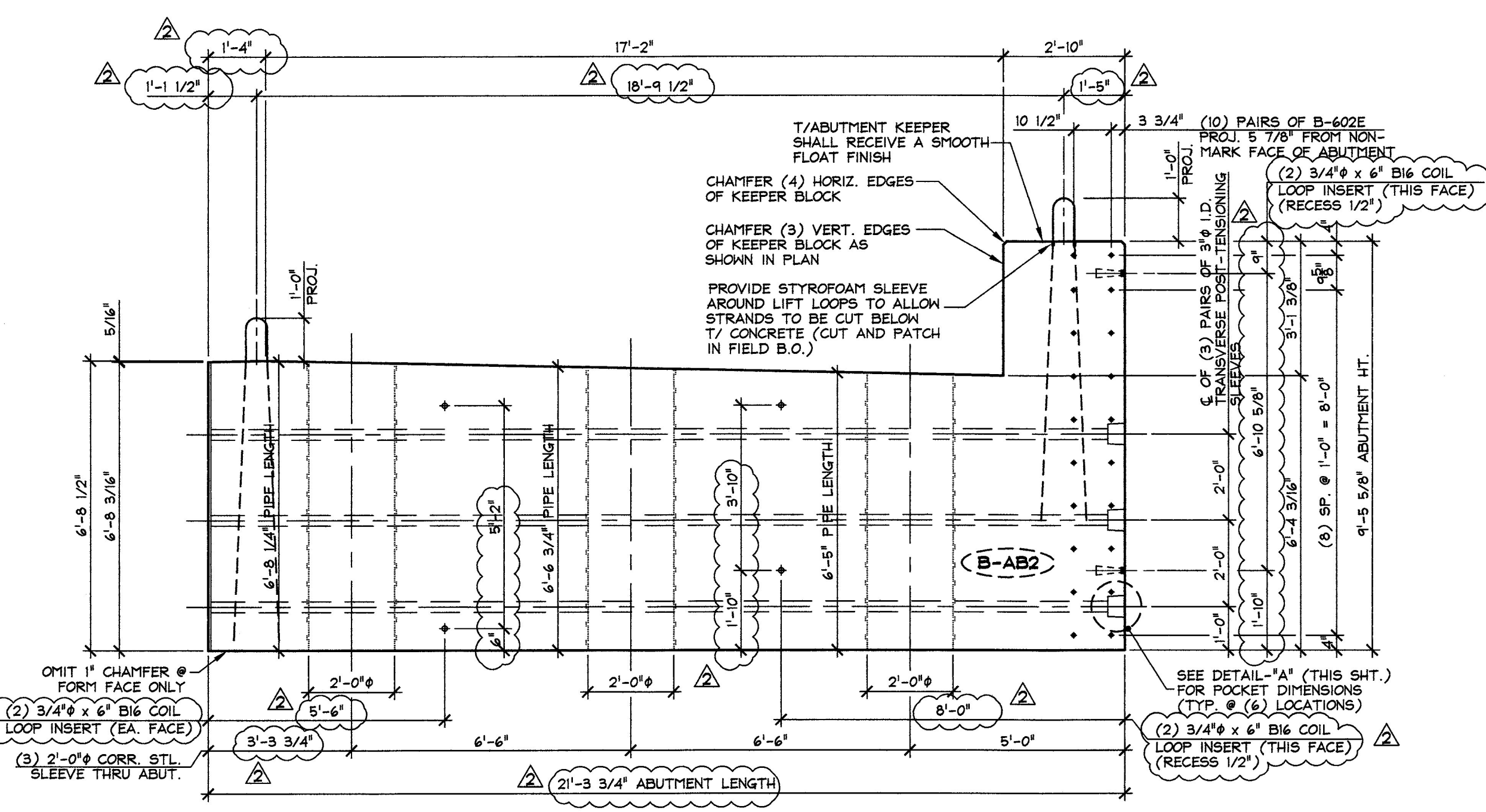


4 ABUTMENT REINFORCING PLAN VIEW IN FORM
 AB4 3/8" = 1'-0"



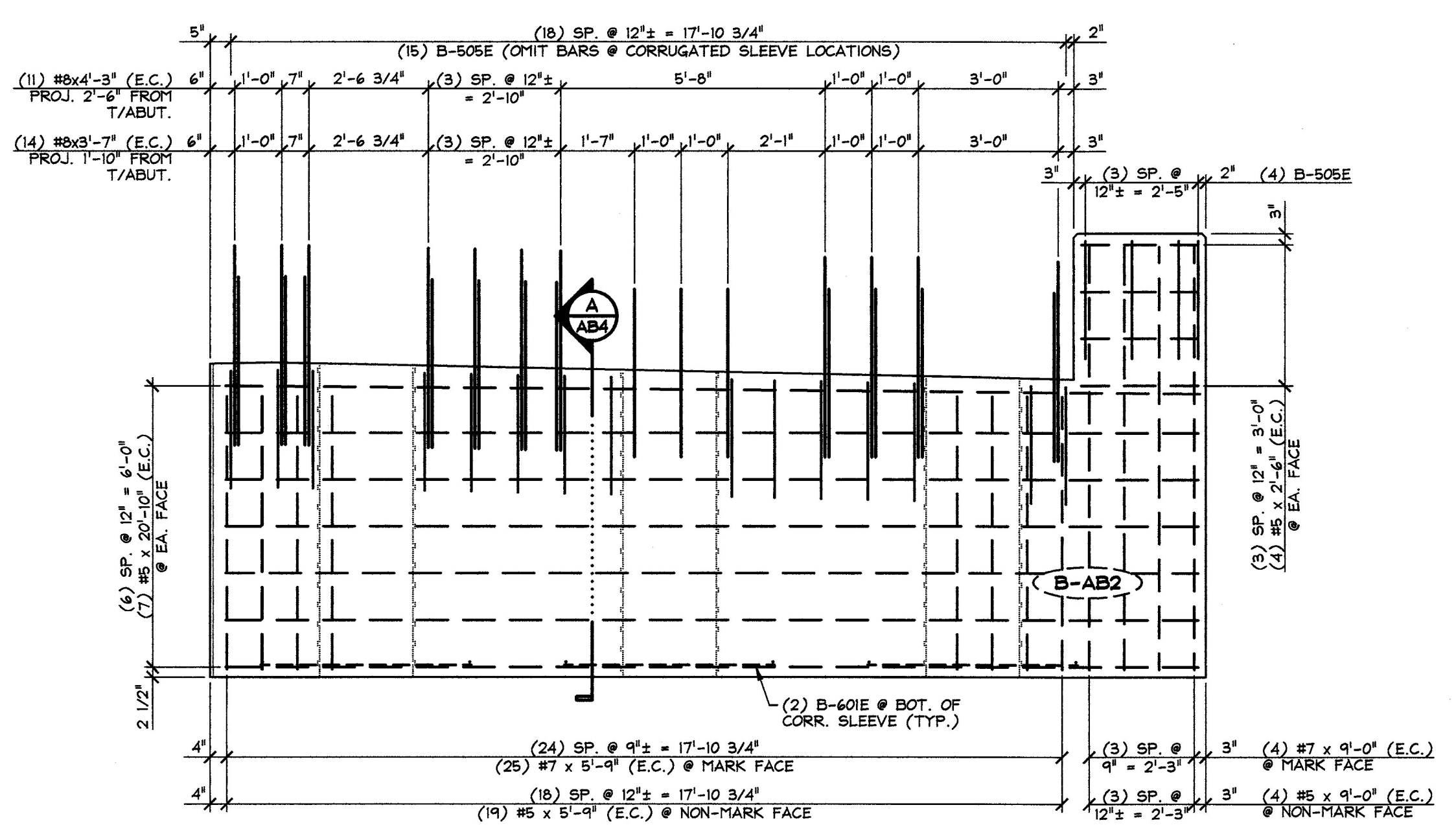
A ABUTMENT SECTION
 AB4 3/4" = 1'-0"

SUBMITTED
 JAN 9 2013
 J.P. CARRARA & SONS, INC.
 MIDDLEBURY, VT 05753



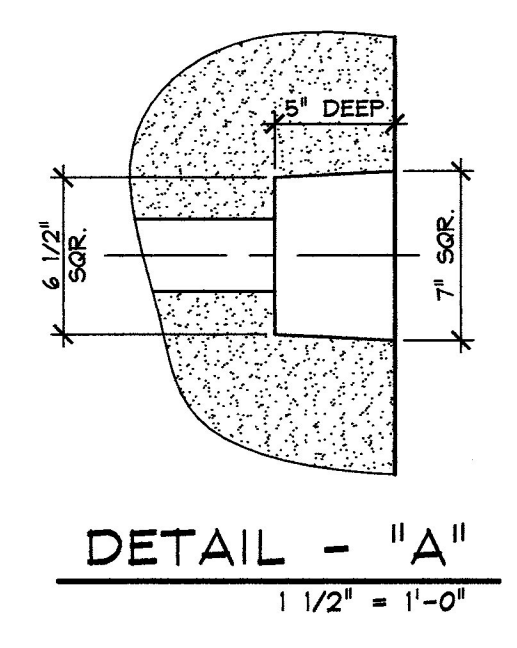
3 ABUTMENT DIMENSIONAL NON-MARK FACE ELEVATION
 AB4 3/8" = 1'-0"

SHOP NOTE:
 ALL EDGES OF ABUTMENT SHALL
 RECEIVE A 1" CHAMFER (U.N.O.)



3 ABUTMENT REINFORCING NON-MARK FACE ELEVATION
 AB4 3/8" = 1'-0"

MATERIAL LIST / ABUTMENT			
ITEM	MARK	DESCRIPTION	QTY.
1	B-505E	#5 BENT BAR (EPOXY COATED)	19
2		#5 x 2'-6" (EPOXY COATED)	8
3		#5 x 5'-9" (EPOXY COATED)	19
4		#5 x 9'-0" (EPOXY COATED)	4
5		#5 x 20'-10" (EPOXY COATED)	14
6			
7	B-601E	#6 BENT BAR (EPOXY COATED)	6
8	B-602E	#6 BENT BAR (EPOXY COATED)	20
9			
10		#7 x 5'-9" (EPOXY COATED)	25
11		#7 x 9'-0" (EPOXY COATED)	4
12			
13		#8 x 3'-7" (EPOXY COATED)	14
14		#8 x 4'-3" (EPOXY COATED)	11
15		3/4" x 6" BIG COIL INSERT (ELECTRO-PLATED FINISH)	8
16		2'-0" x 6'-5" CORRUGATED STEEL PIPE (GALV.)	1
17		2'-0" x 6'-6 3/4" CORRUGATED STEEL PIPE (GALV.)	1
18		2'-0" x 6'-8 1/4" CORRUGATED STEEL PIPE (GALV.)	1
19		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	2
20			



DETAIL - "A"
 1 1/2" = 1'-0"

1-3-13 GENERAL REVISIONS
 APPROVAL STAMP:
Vermont Agency of Transportation
RECEIVED
 CK'D BY WDL OK'D BY JTS
 January 9th, 2013
 RESUBMIT APPROVED X
 BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
 Precast & Prestress Manufacturer
 2464 OSG STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010

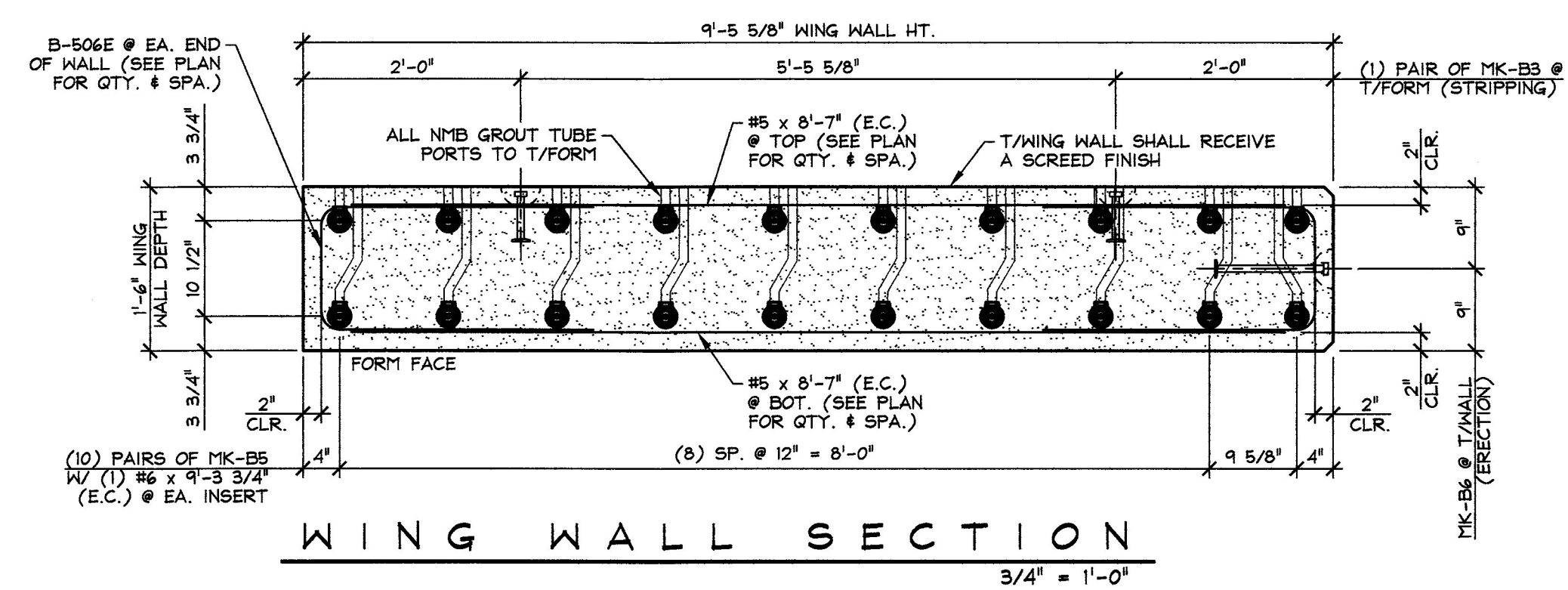
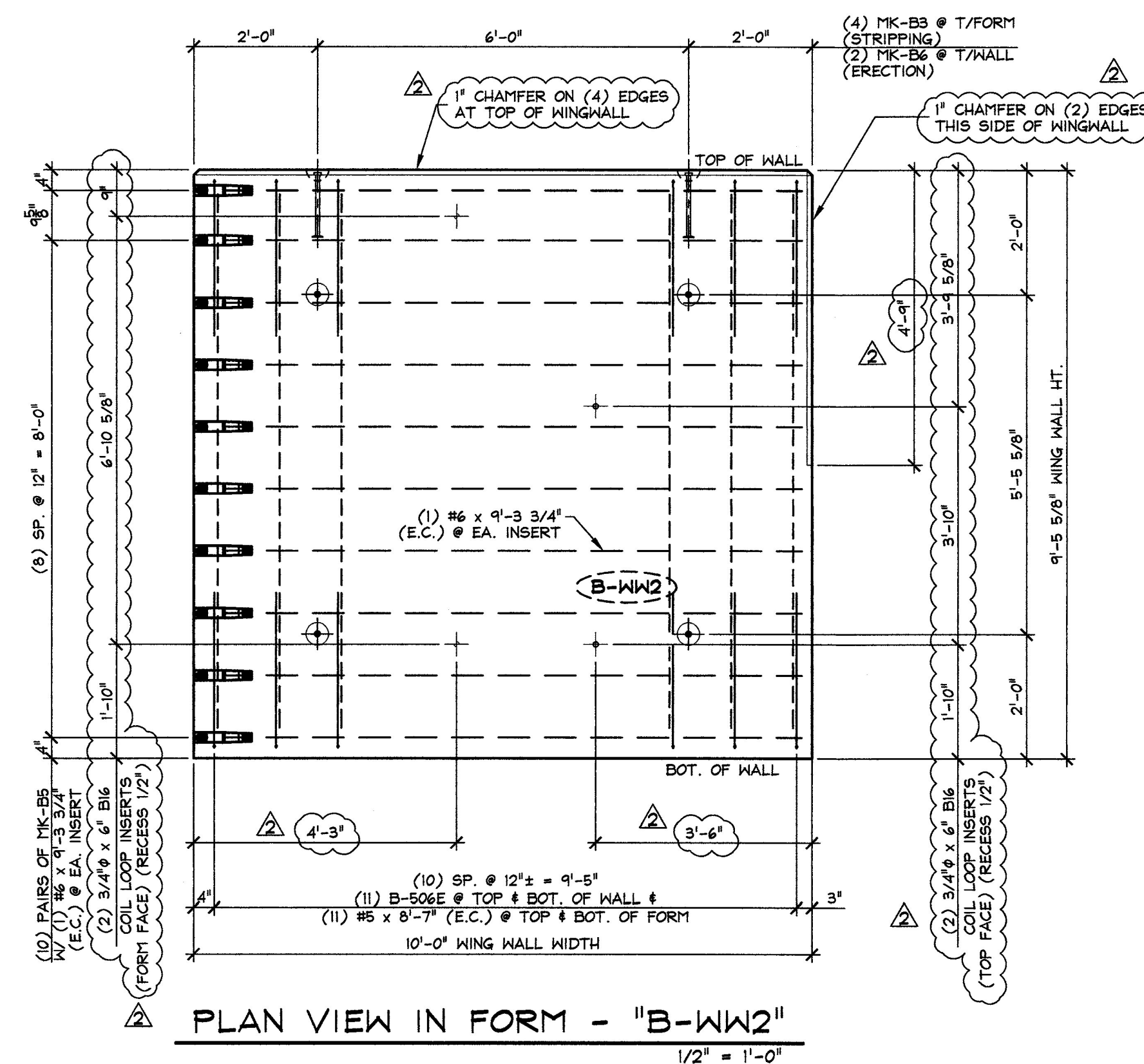
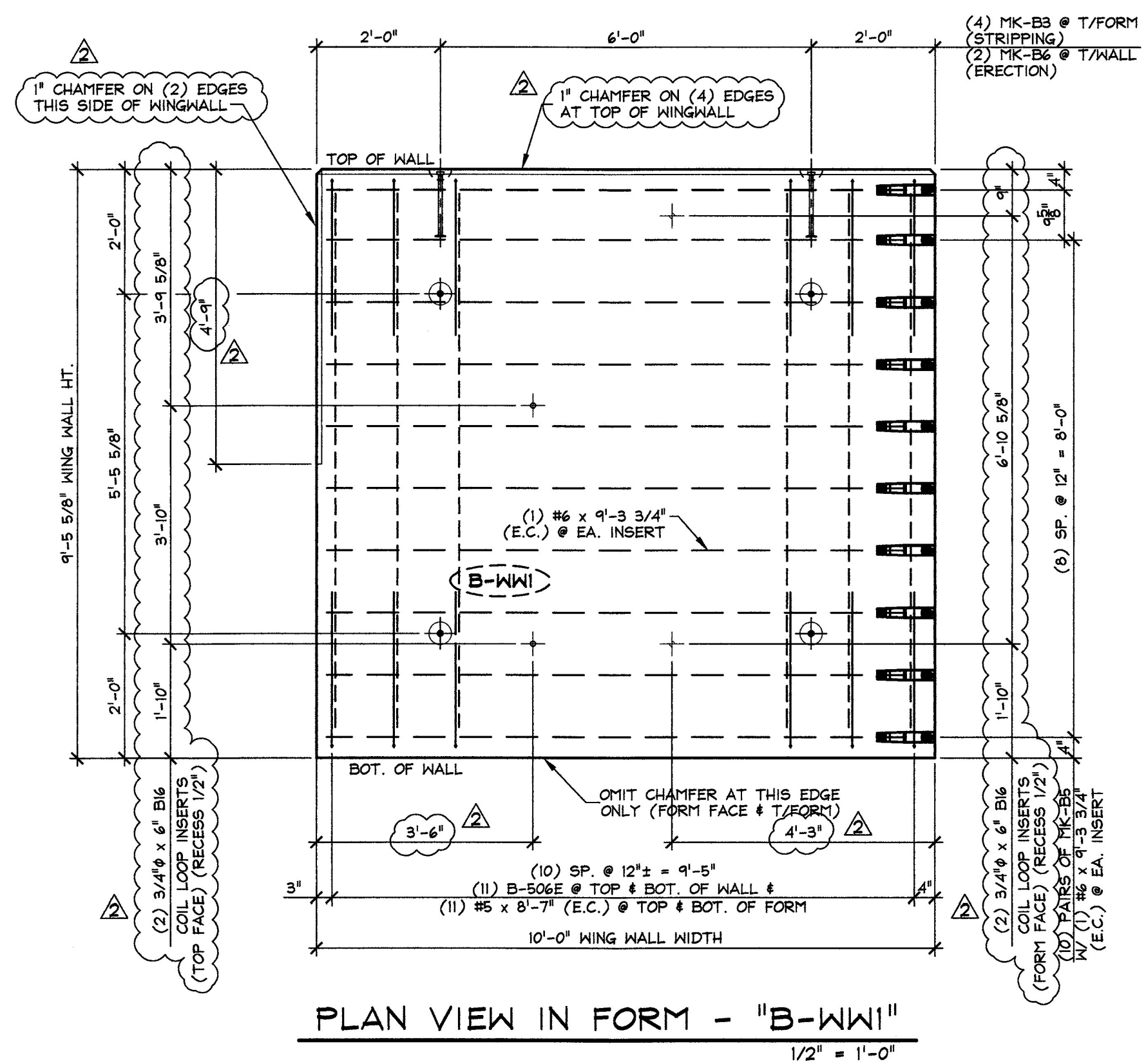
J.A. McDONALD, INC.
 CONTRACTOR
 LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
 COUNTY OF ESSEX

TOWN OF BRIGHTON
 ROUTE NO. VT 105, MINOR ARTERIAL
 BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

DATE: OCT. 30, 2012
 SCALE: NOTED
 CHKD: B.C. DFTM: B.L.
 JOB NO: 23384-012

PRECAST ABUTMENT DETAILS
 DWG. NO: **AB4**



SHOP NOTE:
ALL EDGES OF WING WALLS, FORM FACE & T/WALL FACE, SHALL RECEIVE A 1" CHAMFER (UNLESS NOTED OTHERWISE)

1-3-13 REVISED AS NOTED
12-10-12 REVISED AS NOTED

SUBMITTED
JAN 9 2013
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753

MARK:	B-WW1	QTY.:	2	WT.:	10.65 T	VOL.:	5.26 cy
MARK:	B-WW2	QTY.:	2	WT.:	10.65 T	VOL.:	5.26 cy
MARK:	B-WW3	QTY.:	0	WT.:	-	VOL.:	-
MARK:	B-WW4	QTY.:	0	WT.:	-	VOL.:	-

MATERIAL LIST / WING WALL						
ITEM	MARK	DESCRIPTION	QTY./WING WALL			
			B-WW1	B-WW2	B-WW3	B-WW4
1	B-506E	#5 BENT BAR (EPOXY COATED)	22	22		
2		#5 x 8'-7" (EPOXY COATED)	22	22		
3						
4		#6 x 9'-3 3/4" (EPOXY COATED)	20	20		
5						
6	MK-B5	4T x 5 1/2" SWIFT LIFT LIFTER	4	4		
7	MK-B5	NMB SPLICE SLEEVE 6U-X(PG) (EPOXY COATED)	20	20		
8	MK-B6	8T x 83 3/83 SWIFTSWIFT LIFTERFTER	2	2		
9	△	3/4" x 6" B16 COIL LOOP INSERT (ELECTRO-PLATED FIN.)	4	4		
10						

Vermont Agency of Transportation
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RESUBMIT APPROVED X
BY KMH DATE 1-10-13

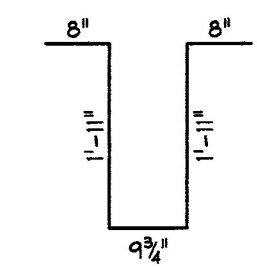
J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
2464 OGE STR., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010

J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

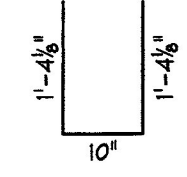
STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX
DATE: OCT. 30, 2012
SCALE: NOTED

TOWN OF BRIGHTON
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)
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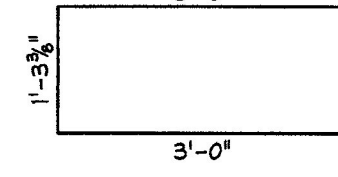
PRECAST WING WALL DETAILS
DWG. NO: **WW1**



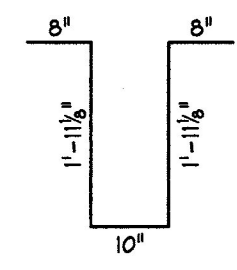
B-401E
#4 BENT BAR
(EPOXY COATED)
(520) REQ'D.



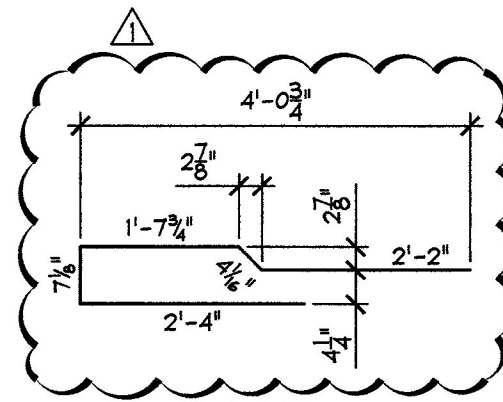
B-501E
#5 BENT BAR
(EPOXY COATED)
(32) REQ'D.



B-502E
#5 BENT BAR
(EPOXY COATED)
(64) REQ'D.

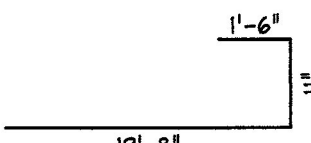


B-503E
#5 BENT BAR
(EPOXY COATED)
(128) REQ'D.



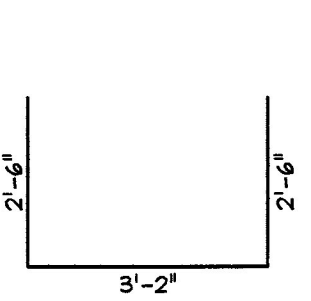
B-504E
#5 BENT BAR
(EPOXY COATED)
(186) REQ'D.

PRESTRESSED NEXT BEAMS

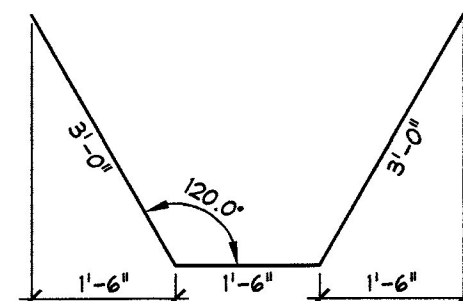


B-801E
#8 BENT BAR
(EPOXY COATED)
(64) REQ'D.

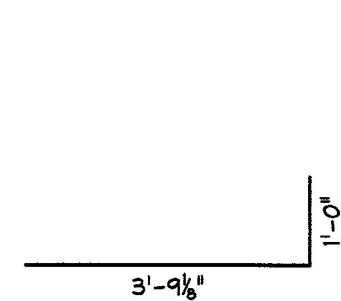
PRECAST APPROACH SLABS



B-605E
#5 BENT BAR
(EPOXY COATED)
(72) REQ'D.

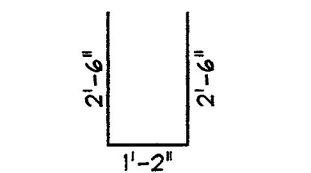


B-601E
#6 BENT BAR
(EPOXY COATED)
(20) REQ'D.



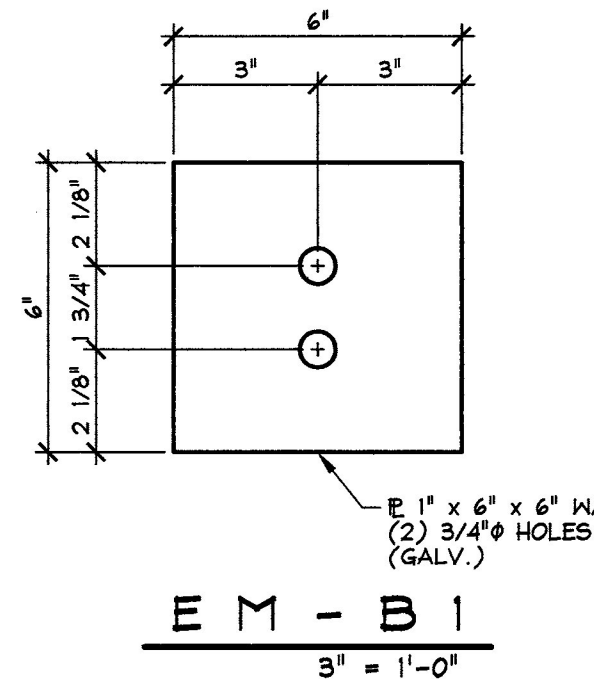
B-602E
#6 BENT BAR
(EPOXY COATED)
(80) REQ'D.

PRECAST ABUTMENTS



B-506E
#5 BENT BAR
(EPOXY COATED)
(88) REQ'D.

PRECAST WING WALLS



MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		72	#4 x 7'-7" (EPOXY COATED)	
2				
3		1,128	#5 x 7'-7" (EPOXY COATED)	
4		88	#5 x 7'-2"-4" (W/ (3) 3'-0" STAGGERED LAPS) (EPOXY COATED)	
5				
6	MK-BI	837	#5 x 4'-1" HRC 555 HEADED REBAR	EPOXY COATED
7				
8		18	GUARD RAIL ANCHOR PLATE (GALV.)	SUPPLIED BY OTHERS
9		16	SET OF (4) 0.60φ x 270 KSI STRAND LIFTING LOOPS	
10		108	1/2"φ x 3" B16 COIL INSERTS (ELECTRO-PLATE FINISH)	
11		64	#6 x 19'-8" (EPOXY COATED)	
12				
13	MK-B2	156	#5 x 8'-0" HRC 555 DOUBLE-HEADED REBAR	EPOXY COATED
14	MK-B5	32	4T x 5 1/2" SWIFT LIFT LIFTER	
15	MK-B4	156	#5 x 7'-7" HRC 555 HEADED REBAR	EPOXY COATED
16				
17				
18				
19				
20				
21		32	#5 x 2'-6" (EPOXY COATED)	
22		70	#5 x 5'-9" (EPOXY COATED)	
23		16	#5 x 9'-0" (EPOXY COATED)	
24		28	#5 x 18'-4" (EPOXY COATED)	
25		28	#5 x 20'-10" (EPOXY COATED)	
26				
27		94	#7 x 5'-9" (EPOXY COATED)	
28		16	#7 x 9'-0" (EPOXY COATED)	
29				
30		52	#8 x 3'-7" (EPOXY COATED)	
31		40	#8 x 4'-3" (EPOXY COATED)	
32				
33		8	SET OF (4) 0.60φ x 270 KSI STRAND LIFTING LOOPS	
34				
35		2	2'-0"φ x 6'-7 1/2" CORRUGATED STEEL PIPE (GALV.)	
36		2	2'-0"φ x 6'-6" CORRUGATED STEEL PIPE (GALV.)	
37		2	2'-0"φ x 6'-5" CORRUGATED STEEL PIPE (GALV.)	
38		2	2'-0"φ x 6'-6 3/4" CORRUGATED STEEL PIPE (GALV.)	
39		2	2'-0"φ x 6'-8 1/4" CORRUGATED STEEL PIPE (GALV.)	
40				
41	EM-B1	24	E 1" x 6" x 6" W/ (2) 3/4" HOLES (GALV.)	FOR ERECTION; SEE DETAIL THIS SHEET
42		24	1/2"φ x 42'-9" POLY-STRAND	FOR ERECTION
43		48	1/2"φ SINGLE USE STRESSING CHUCK	FOR ERECTION
44		12	COMPRESSIBLE SEALER SELF ADHESIVE	FOR ERECTION
45		32	3/4"φ x 6" B16 COIL INSERTS (ELECTRO-PLATE FINISH)	
46		88	#5 x 8'-7" (EPOXY COATED)	
47				
48		80	#6 x 9'-3 3/4" (EPOXY COATED)	
49				
50	MK-H5	16	4T x 5 1/2" SWIFT LIFT LIFTER	
51	MK-B5	80	NMB SPLICE SLEEVE 6U-X(PG) (EPOXY COATED) W/ GROUT TUBES	GROUT TUBE LENGTH AS REQ'D.
52	MK-H6	8	8T x 13 3/8" SWIFT LIFT LIFTER	
53		16	3/4"φ x 6" B16 COIL INSERTS (ELECTRO-PLATE FINISH)	
54				
55				

1-3-13 REVISED AS NOTED
12-10-12 REVISED AS NOTED

Vermont Agency of Transportation
RECEIVED
CK'D BY WDL OK'D BY JTS
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RESUBMIT _____ APPROVED X
BY KMH DATE 1-10-13

J.P. CARRARA & SONS INC.
Precast & Prestress Manufacturer
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J.A. McDONALD, INC.
CONTRACTOR
LYNDON CENTER, VERMONT

STATE OF VERMONT AGENCY OF TRANSPORTATION
COUNTY OF ESSEX

TOWN OF BRIGHTON
ROUTE NO. VT 105, MINOR ARTERIAL
BRIDGE NO.: 84 PROJECT NO.: ER STP 034-3(25)

MATERIALS LIST

DATE: OCT. 30, 2012
SCALE: NOTED
CHKD: B.C. DFTM: B.L.
JOB NO: 23384-012
DWG. NO: M1

SUBMITTED
JAN 9 2013
J. P. CARRARA & SONS, INC.
MIDDLEBURY, VT 05753