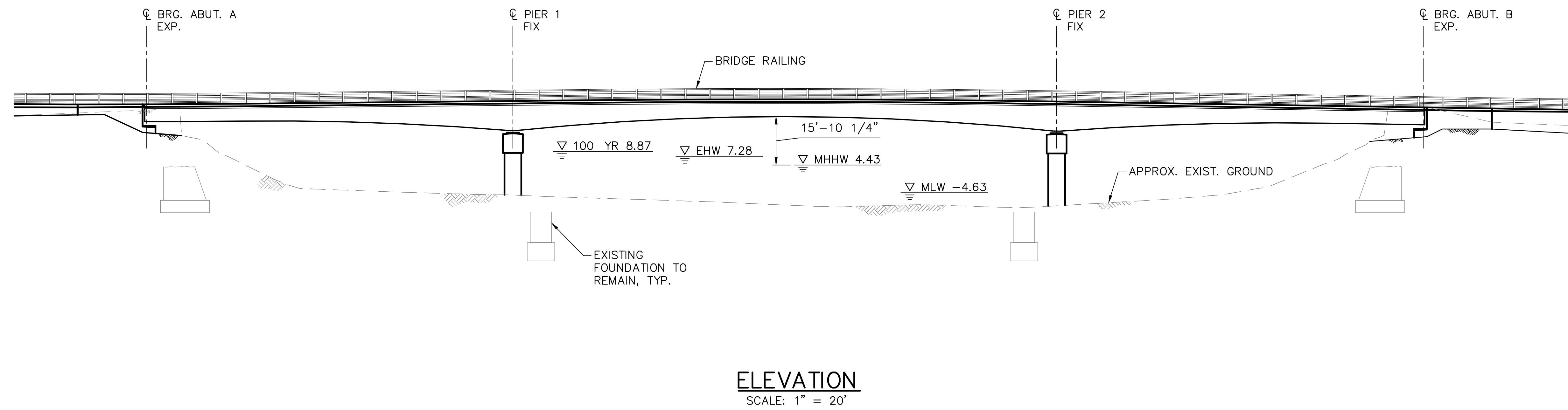


HORIZONTAL CURVE DATA

SAGAMORE AVE. CURVE #C1	SAGAMORE AVE. CURVE #C2
PI STA = 106+70.82	PI STA = 114+65.50
N = 203860.42	N = 203203.02
E = 1229276.08	E = 122923.58
Δ = 08°38'01" RT	Δ = 21°00'11" RT
T = 150.97'	T = 77.85'
R = 2000.00'	R = 420.00'
L = 301.37'	L = 153.96'
E = 5.69'	E = 7.15'



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06	BRIDGE QUANTITIES AND SURVEY LAYOUT
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CITY OF PORTSMOUTH
 DEPARTMENT OF PUBLIC WORKS

TOWN PORTSMOUTH BRIDGE NO. 198/034 STATE PROJECT 14493
 LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK

GENERAL PLAN AND ELEVATION

BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		

FEDERAL PROJECT NO. X-A000(417) SHEET NO. 15 TOTAL SHEETS 91

FAY, SPOFFORD & THORNDIKE, INC
 - BEDFORD, NH -

FILE NAME: R:\VQ-064-Sagamore-Creek\Drawings\05-Structural\01-General-Plan-and-Elevation.dwg PLOTTED: Wednesday, July 24, 2013 - 11:10am USER: CondeLF

GENERAL NOTES

- DESIGN LOADING: HL-93.
- DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD)
- SPECIFICATIONS: AASHTO LRFD 2012 AS AMENDED. NHDOT 2010 STANDARD SPECIFICATIONS AS AMENDED.
- FOUNDATION DATA: ABUTMENTS – CASED DRILLED SHAFTS WITH ROCK SOCKETS
PIERS – CASED DRILLED SHAFTS WITH ROCK SOCKETS
- REINFORCING STEEL: AASHTO M 31 (ASTM A 615) GRADE 60.
DECK, CURBS, SIDEWALKS, ABUTMENTS, WINGWALLS, DRILLED SHAFTS, APPROACH SLABS, AND PIER CAP REINFORCING STEEL SHALL BE EPOXY COATED.
- STRUCTURAL STEEL: AASHTO M 270, GRADE 50 (ASTM A709, GRADE 50), PAINTED, EXCEPT AS NOTED.
- CONCRETE: –DECK SLAB, BRUSH CURB, AND SIDEWALK:
4000 PSI, ITEM 520.70026, CONCRETE BRIDGE DECK (PANEL OPTION) (QC/QA) (F)

–ABUTMENT CAPS AND BACKWALLS, WINGWALLS, RETAINING WALL STEMS, AND PIER CAPS: 4000 PSI, ITEM 520.0102, CONCRETE CLASS AA (QC/QA) (F)

–RETAINING WALL FOOTINGS: 3000 PSI, ITEM 520.213, CONCRETE CLASS B, FOOTINGS (ON SOIL) (F)

–APPROACH SLABS: 4000 PSI, ITEM 520.0302 CONCRETE CLASS AA, APPROACH SLABS (QC/QA) (F)

–DRILLED SHAFTS AND ROCK SOCKETS: 5000 PSI, ITEM 509.2 DRILLED SHAFT, CLASS AAA (MODIFIED)
- SEISMIC: ZONE 1 As=FpGA X PGA=1.6 x 0.098=0.157g SITE CLASS "D"
- ALL EXISTING BRONZE DISCS REPRESENTING STATE BENCHMARKS OR SURVEY TRIANGULATION POINTS MUST NOT BE DISTURBED. WHEN THE WORK CALLED FOR INVOLVES DISTURBING A BRONZE DISC, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT THE STATE TO TEMPORARILY RELOCATE THE AFFECTED MARKER.
- MAINTENANCE OF TRAFFIC: BRIDGE CLOSED DURING CONSTRUCTION. SEE ROADWAY PLANS FOR DETOUR OF SAGAMORE AVENUE.
- FOR SURVEY LAYOUT SEE BRIDGE SHEET 06.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURES AND SHALL BE PREPARED TO MAKE ANY ADJUSTMENTS REQUIRED TO PROPERLY COMPLETE THE CONSTRUCTION OF PROPOSED STRUCTURES.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO INSURE THAT DEBRIS DOES NOT FALL INTO THE WATERWAY BELOW THE EXISTING STRUCTURE. ALL COSTS SHALL BE PAID UNDER ITEM 502 AND SHALL INCLUDE ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH METHODS AS APPROVED.
- NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE WATERWAY, UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
- THE CONTRACTOR HAS THE OPTION TO USE PRECAST PRESTRESSED DECK PANEL STAY-IN-PLACE FORMS.

HYDRAULIC DATA

- DRAINAGE AREA: 3.0 SQ. MILES
- DESIGN FLOOD: Q100 = 6,017 CFS
- DESIGN VELOCITY: 1.7 FPS
- DESIGN FLOOD (SURGE) HEIGHT: ELEVATION 08.87 (NAVD88)
- BRIDGE WATERWAY OPENING: 5,330 SQ. FT. BELOW Q100 ELEVATION

CONSTRUCTION STAGING NOTES

- THE CONTRACTOR SHALL SUBMIT A REMOVAL PLAN AND CONSTRUCTION PLAN SHOWING MEANS AND METHODS OF REMOVING THE EXISTING BRIDGE AND SUBSTRUCTUE, CONSTRUCTING THE NEW BRIDGE AND SUBSTRUCTURE, AND SHALL SHOW ANY TEMPORARY STRUCTURES AND ACCESS.
- SEE PERMITS FOR FURTHER REQUIREMENTS INCLUDING PUBLIC ACCESS TO THE NAVIGATIONAL CHANNEL.


BRIDGE REMOVAL NOTES

- THE CONTRACTOR'S METHOD FOR REMOVAL OF THE EXISTING BRIDGE SHALL BE SUBMITTED FOR DOCUMENTATION IN ACCORDANCE TO 105.02, PRIOR TO THE COMMENCEMENT OF ANY REMOVAL OPERATIONS.
- ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE, SHALL INCLUDE THE FOLLOWING: THE EXISTING BRIDGE SUPERSTRUCTURE SHALL BE REMOVED IN ITS ENTIRETY. THE EXISTING ABUTMENTS AND WINGWALLS SHALL BE REMOVED TO EL. 3.3. THE EXISTING PIERS SHALL BE REMOVED TO EL. -11.5.
- THE CONTRACTOR IS ADVISED THAT EXISTING AERIAL POWER, CABLE AND TELEPHONE LINES WILL REMAIN IN PLACE UNTIL EACH UTILITY HAS FINISHED THEIR RELOCATION EFFORTS. THESE ITEMS SHALL BE BID ACCORDINGLY. SEE THE UTILITIES SECTION OF THE PROSECUTION OF WORK FOR ADDITIONAL INFORMATION.
- PLANS OF THE EXISTING BRIDGE STRUCTURE MAY BE OBTAINED FROM THE CITY OF PORTSMOUTH.
- THE CONTRACTOR SHALL MEET OSHA REQUIREMENTS FOR WORKER PROTECTION FOR WORKING WITH MEMBERS WITH LEAD BASED PAINT.
- THE EXISTING BRIDGE HAS BEEN POSTED FOR A LOAD LIMIT OF 6 TONS BASED ON THE CONDITION OF SOME OF THE EXISTING FLOOR BEAMS. THE CONTRACTOR SHALL VERIFY THE CONDITION OF FLOOR BEAMS THAT WILL BE LOADED BY THE CONSTRUCTION OPERATIONS AND DETERMINE THAT THE PROPOSED CONSTRUCTION LOADING DOES NOT EXCEED THE BEAM CAPACITIES.
- THE CONTRACTOR SHALL NOT PLACE EQUIPMENT OR MATERIALS ON THE EXISTING BRIDGE IN A MANNER THAT COULD OVERLOAD THE EXISTING BRIDGE COMPONENTS (DECK, FLOOR BEAMS, GIRDERS ETC.) AND SHALL CONSIDER THE DETERIORATED CONDITION OF STRUCTURAL ELEMENTS AS NEEDED. IF THE CONTRACTOR'S WORK PLAN INVOLVES PLACEMENT OF EQUIPMENT ON THE BRIDGE, SUCH AS A SMALL CRANE, TO FACILITATE COMPLETION OF THE WORK, THE CONTRACTOR SHALL PLAN HIS WORK IN ADVANCE AND SHALL PROVIDE LAYOUT DRAWINGS OF PROPOSED EQUIPMENT AND LOAD DISTRIBUTION METHODS WITH STRUCTURAL CALCULATIONS PREPARED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE PLAN AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND SHALL BE STAMPED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER.
- EXCAVATION FOR REMOVAL OF EXISTING ABUTMENTS SHALL BE BACKFILLED WITH SUITABLE MATERIAL MEETING THE REQUIREMENTS OF SECTION 209, GRANULAR BACKFILL (BRIDGE), TO THE SUBGRADE LINES SHOWN ON THE PLANS. COST FOR EXCAVATION AND BACKFILL SHALL BE SUBSIDIARY TO ITEM 502. PLACE BACKFILL WHILE TIDE LEVELS ARE LOWER THAN BACKFILL LEVEL.

CONSTRUCTION ACCESS NOTES

- ACCESS FOR BRIDGE CONSTRUCTION MAY BE OPEN STRUCTURES (TEMPORARY TRESTLES OR WORK PLATFORMS) OR BARGES. TEMPORARY STONE FILL CAUSEWAYS MAY NOT BE USED.
- THE LOCATION OF THE TEMPORARY TRESTLES SHOWN ON THE PLANS IS APPROXIMATE. ACTUAL TRESTLE LOCATIONS, IF USED, SHALL BE DETERMINED BY THE CONTRACTOR.
- ALL COSTS FOR THE DESIGN, CONSTRUCTION MAINTENANCE, AND REMOVAL OF TEMPORARY ACCESS SHALL BE INCLUDE IN ITEM 500.02, ACCESS FOR BRIDGE CONSTRUCTION. SEE SECTION 500 SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL COMPLY WITH ALL PERMIT AND ENVIRONMENTAL DOCUMENT REQUIREMENTS.

BORING NOTES

- BORINGS INDICATED THUS  WERE MADE IN MAY OF 2010. FIGURES IN THE "BLOWS PER" COLUMN INDICATE THE NUMBER OF BLOWS REQUIRED TO DRIVE A 2" STANDARD SPLIT SPOON SAMPLER 6", USING A 140 LB. WEIGHT FALLING 30 INCHES.
- BORINGS ARE FOR DESIGN PURPOSES SHOWING CONDITIONS AT BORING POINTS ONLY, AND DO NOT NECESSARILY INDICATE MATERIAL TO BE ENCOUNTERED DURING CONSTRUCTION.
- THE SOILS REPORT IS AVAILABLE AT CITY OF PORTSMOUTH. SEE PROSECUTION OF WORK FOR MORE INFORMATION.
- ROCK CORES WERE MADE USING AN NX 1 7/8" I.D. CORE BARREL.
- THE WATER LEVELS INDICATED WERE MEASURED AT TIME OF EXPLORATION. WATER LEVELS ENCOUNTERED DURING CONSTRUCTION MAY VARY CONSIDERABLY DUE TO PREVAILING CLIMATE, RAINFALL OR OTHER FACTORS.
- THE SURFACE ELEVATION ON EACH BORING LOG IS THE ELEVATION OF THE EXISTING GROUND AT THE TIME THE BORING WAS TAKEN.

DRILLED SHAFT NOTES

- SEE SPECIAL PROVISIONS SECTION 509 FOR CONSTRUCTION REQUIREMENTS RELATED TO THE INSTALLATION OF THE DRILLED SHAFTS.
- THE CONTRACTOR SHALL SUBMIT AN INSTALLATION PLAN AS NOTED IN THE SPECIAL PROVISIONS.
- THE MINIMUM ROCK SOCKET LENGTH MEASURED FROM THE BOTTOM OF THE PERMANENT STEEL CASING/TOP OF ROCK SOCKET SHALL BE AS INDICATED ON THE SUMMARY TABLE ON BRIDGE SHEET 12. LONGER ROCK SOCKET LENGTHS SHALL BE AS DIRECTED. THE TOP OF ROCK SOCKET ELEVATIONS ARE ESTIMATES ONLY. THE TOP OF ROCK SOCKET AND ROCK SOCKET LENGTHS AT EACH DRILLED SHAFT LOCATION SHALL BE APPROVED BY THE ENGINEER.
- CONCRETE FOR DRILLED SHAFTS SHALL BE CLASS AAA – MODIFIED. SEE THE SECTION 509 SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
- CONSTRUCTION PHASE TEST BORINGS ARE REQUIRED AT ABUTMENTS A AND B AND PIERS 1 AND 2. SEE SPECIAL PROVISIONS FOR SECTION 210. THE TEST BORING WORK AT AN INDIVIDUAL PIER SHALL BE COMPLETED A MINIMUM OF 30 DAYS PRIOR TO INITIATING DRILLED SHAFT WORK AT THAT PIER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM 21 DAYS IN ADVANCE OF THE TEST BORING WORK, SO THAT ARRANGEMENTS FOR INSPECTION BY THE ENGINEER CAN BE MADE.
- CROSSHOLE SONIC (CSL) TESTING WILL BE CONDUCTED BY THE CONTRACTOR PER ITEM 509.5.
- DRILLING OF OBSTRUCTIONS AS DEFINED IN SECTION 509 AND ANY BEDROCK ABOVE THE FINAL TIP ELEVATIONS OF THE PERMANENT CASING SHALL BE PAID UNDER ITEM 509.3. DRILLING OF THE ROCK SOCKET BELOW THE TIP OF THE PERMANENT CASING SHALL BE PAID UNDER ITEM 509.4. REFER TO THE 509 SPECIAL PROVISIONS.
- THE FOUNDATION CONTRACTOR SHALL MEET THE PREQUALIFICATION REQUIREMENTS AS COVERED IN SPECIAL PROVISION 509.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUPPORT OF REINFORCING CAGES DURING FABRICATION, ERECTION AND PLACEMENT OF CONCRETE. PLANS SHOWING REINFORCING CAGE SUPPORT METHODS OF ERECTION AND CENTERING DEVICES SHALL BE SUBMITTED TO THE BRIDGE FOUNDATION ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- ANY CONSTRUCTION JOINT NOT SHOWN ON THE PLANS WILL REQUIRE THE APPROVAL OF THE BRIDGE FOUNDATION ENGINEER PRIOR TO CONSTRUCTION.
- 2 INCH I.D. PVC SCHEDULE 40 ELECTRICAL CONDUIT SHALL BE PLACED AS SHOWN IN THE SHAFT SECTIONS FROM 6 INCH ABOVE THE SHAFT BOTTOM TO 12 INCH ABOVE THE TOP OF DRILLED SHAFT CONSTRUCTION JOINT OR 12 INCH ABOVE BOTTOM OF ABUTMENT BEAMS WITH GLUED CAP BOTTOM AND THREADED CAP TOP END. CONDUIT SHALL BE SECURELY FASTENED TO ALTERNATE TIES, TYPICAL. THE CONTRACTOR SHALL ENSURE THAT THE CONDUIT IS TIED IN A PLUMB AND STRAIGHT POSITION TO THE REINFORCING CAGE SO THAT THE ULTRASONIC PROBE MAY BE LOWERED FREELY TO THE BOTTOM OF THE SHAFTS. ALL SHAFTS SHALL HAVE THE CONDUIT INSTALLED AND SHALL BE INCLUDED IN ITEM 509.5. ALL PVC CONDUITS SHALL BE FILLED WITH WATER IMMEDIATELY AFTER CONCRETE PLACEMENT. ADDITIONAL INTEGRITY TESTING REQUIRED DUE TO THE CONTRACTOR NOT FILLING PVC CONDUITS AS SPECIFIED. RESULTING IN INCONCLUSIVE READINGS, OR DUE TO BROKEN OR BLOCKED PVC TUBES WILL BE AT THE CONTRACTOR'S COST.
- PILE INTEGRITY TESTING OF THE DRILLED SHAFTS WILL BE PERFORMED WITHIN 24 HOURS AFTER THE PLACEMENT OF THE CONCRETE. THE CROSSHOLE SONIC TEST WILL BE CONDUCTED THROUGH ALL OF THE 2 INCH PVC CONDUITS. SHOULD THE PILE INTEGRITY TESTING INDICATE A LOSS OF STRUCTURAL INTEGRITY OF THE DRILLED SHAFT DUE TO SLOUGHING OF THE SOIL INTO THE SPECIFIED DIAMETER OF THE SHAFT OR LACK OF CONSOLIDATION OF THE CONCRETE, THE SHAFT SHALL BE CONSIDERED DEFECTIVE. THE CONTRACTOR SHALL PROPOSE REMEDIAL MEASURES TO CORRECT SUCH DEFECTIVE SHAFTS, INCLUDING IF NECESSARY, CONSTRUCTION OF ADDITIONAL SHAFTS ADJACENT TO THE DEFECTIVE SHAFT WITH A TRANSFER BEAM CAST OVER THE SHAFTS BELOW GRADE. ALL ADDITIONAL SHAFTS. STRUCTURAL CONCRETE, AND LABOR SHALL BE AT NO ADDITIONAL COST TO THE CITY AND NO EXTENSION OF THE CONTRACT TIME WILL BE ALLOWED.
- REINFORCEMENT FOR DRILLED SHAFTS IS QUANTIFIED IN ITEM NO. 509.6 – DRILLED SHAFT REINFORCING BARS EPOXY COATED, (CONTRACTOR DETAILED) – AND PAID FOR SEPARATELY. THE CONTRACTOR SHALL ANTICIPATE THE LENGTHENING OR SHORTENING OF DRILLED SHAFT REINFORCEMENT TO ACCOMMODATE SHAFT AND SOCKET FIELD CONDITIONS. SEE SHEET 13 FOR DRILLED SHAFT REINFORCEMENT AND DETAILS.
- THE CONTRACTOR SHALL ANTICIPATE OBSTRUCTIONS IN THE FOUNDATION SOILS, AND SHALL PROPOSE ADEQUATE DRILLING EQUIPMENT.
- PERMANENT DRILLED SHAFT CASINGS AT THE PIERS SHALL BE COATED WITH COAL TAR EPOXY POLYAMIDE (BLACK) SUITABLE FOR WATERFRONT STRUCTURES AND SUBMITTED PER 105.02. COATING SHALL BE APPLIED TO THE CUTOFF TOP SURFACE OF THE CASING, AND THE OUTSIDE OF THE CASING TO A DEPTH OF 10 FEET BELOW MUDLINE. SURFACES TO RECIEVE COATING SHALL BE BLAST CLEANED TO SSPC-10, AND PRIMED WITH A ZINC-RICH PRIMER WITHIN FOUR HOURS OF BLAST CLEANING. APPLY TWO COATS OF COAL TAR EPOXY POLYAMIDE TO A MINIMUM DRY THICKNESS OF 8 MILS PER COAT. PRIOR TO INSTALLATION, TEST FOR HOLIDAYS IN TOTAL COATING SYSTEM, USING A HOLIDAY DETECTOR OF LESS THAN 90 VOLTS. REPAIR ANY HOLIDAY AREAS AND RETEST REPAIRED AREAS. MEASURE DRY FILM THICKNESS OF REPAIRED AREAS PER ASTM D7091 AND ASTM E376. COST OF COATING AND TESTING SHALL BE SUBSIDIARY TO ITEM 509.2.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS										
TOWN		PORTSMOUTH		BRIDGE NO.		198/034		STATE PROJECT		14493
LOCATION		SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK								
BRIDGE NOTES – SHEET 1 OF 3										
		BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE	BRIDGE SHEET	02 OF 41
SHEET SCALE		DESIGNED	TD	5/13	CHECKED	MAB	5/13		FILE NUMBER	
AS NOTED		DRAWN	FLC	5/13	CHECKED	TD	5/13			
		TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
		QUANTITIES	TD	6/13	CHECKED	MAB	6/13	X-A000(417)	16	91

FAY, SPOFFORD & THORNDIKE, INC
– BEDFORD, NH –

ABUTMENT, RET. WALL, AND WINGWALL NOTES

- ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE) (F), SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF RETAINING WALLS ABUTMENTS, WINGWALLS, BACKWALLS, AND BRIDGE SEATS TO 1'-0" BELOW FILL LINES.
- ITEM 538.2, BARRIER MEMBRANE, VERTICAL SURFACES (F), 2' WIDE, SHALL BE PLACED OVER THE BEARING SEAT CONSTRUCTION JOINT, 1'-0" ABOVE AND BELOW THE JOINT.
- CONCRETE CLASS AA (QC/QA) (F), ITEM 520.0102, SHALL BE FORMED INTO 12"x24" BLOCKS ON APPROACH SLAB SEATS TO SUPPORT THE APPROACH CURBS. (QC/QA TESTING REQUIREMENT WAIVED)
- ITEM 585.21, STONE FILL, CLASS B (BRIDGE), SHALL BE 2'-0" THICK, UNLESS OTHERWISE NOTED.
- BLOCKOUTS SHALL BE PROVIDED IN THE ABUTMENT BACKWALLS, BETWEEN GIRDERS 4 AND 5 TO ALLOW FOR THE INSTALLATION OF NEW WATER LINE. SEE BRIDGE SHEET 41 FOR DETAILS.
- PROTRUDING BOULDERS OR COBBLES ENCOUNTERED AT THE FINAL EXCAVATION DEPTH SHALL BE REMOVED OR SPLIT TO PROVIDE A LEVEL BEARING SURFACE AND BACKFILLED.
- ABUTMENT CAP SHALL BE CONSTRUCTED ON A 1'-0" THICK LAYER OF STRUCTURAL FILL.
- TEMPORARY FILL PLACED WITHIN THE CREEK WILL NOT BE ALLOWED.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4".
- ALL CONCRETE IN THE STUB ABUTMENTS, INCLUDING BACKWALLS, SHALL BE ITEM 520.0102, CONCRETE CLASS AA, (QC/QA)(F).
- ANCHOR BOLTS SHALL BE SET BY TEMPLATE PRIOR TO PLACING ABUTMENT CONCRETE. FOR ANCHOR BOLT DETAILS, SEE BRIDGE SHEET 24.
- CONSTRUCT BACKWALL AND WINGWALLS ABOVE APPROACH SLAB SEAT AFTER STRAIGHT GRANITE (APPROACH) CURBING HAS BEEN SECURELY BLOCKED AND SET TO FINISHED GRADE.
- ALL REINFORCING IN THE ABUTMENTS SHALL BE EPOXY COATED AND SHALL BE PAID AS ITEM 544.31, REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED).
- ALL REINFORCING SHALL BE A MINIMUM OF 2 1/2" FROM CONCRETE SURFACES, UNLESS NOTED OTHERWISE.
- EXPOSED WINGWALL AND RETAINING WALL VERTICAL SURFACES SHALL HAVE A FORM LINER AS SHOWN ON THE PLANS. THE FORM LINER SHALL BE ASHLAR STONE P/C 30664, SYMONS DURA-TEX, AS MANUFACTURED BY SYMONS CORPORATION, 200 E. TOUHY AVENUE, DES PLAINES, IL. 60018 (TEL: 1-800-733-7654) OR ASHLAR STONE NO. 330 MULTI-CAST, AS MANUFACTURED BY GREEN STREAK, 3400 TREE COURT INDUSTRIAL BOULEVARD, ST. LOUIS, MO. 63122 (TEL: 1-800-325-9504) OR AN APPROVED EQUAL. THE COST OF THE FORM LINER SHALL BE INCLUDED IN ITEM 520.99.
- BACKFILL FRONT FACES OF ABUTMENT CAPS PRIOR TO BACK FACES. BACKFILL UP TO ABUTMENT BACKWALL JOINT, AND MEASURE DISTANCES BETWEEN ABUTMENT BEARINGS PRIOR TO SETTING THE BEARINGS, TO CHECK THAT THE ABUTMENTS HAVE NOT SHIFTED DURING BACKFILLING. NOTIFY THE ENGINEER IF THE ABUTMENTS ARE NOT SEPARATED BY THE DIMENSIONS ON THE PLANS.

PIER NOTES

- SEE BRIDGE SHEET 25 FOR BEARING DETAILS, ANCHOR BOLT DETAILS, AND ANCHOR BOLT LAYOUT.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4".
- PIER CAP AND COLUMN TIE REINFORCEMENT SHALL BE 2 1/2" FROM CONCRETE SURFACES, UNLESS OTHERWISE NOTED. PIER CAP REINFORCEMENT SHALL BE ADJUSTED TO AVOID ANCHOR BOLTS.
- COAT THE ENTIRE PIER SURFACES INCLUDING THE TOP OF SHAFTS, ENTIRE CAP, BEARING SEATS, AND PEDESTALS, WITH ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE).

ELASTOMERIC BEARING ASSEMBLY NOTES

- BEARING ASSEMBLIES, INCLUDING ELASTOMERIC BEARING PADS, SOLE PLATES, MASONRY PLATES, ANCHOR BOLTS, NUTS AND WASHERS, SHALL BE PAID AS ELASTOMERIC BEARING ASSEMBLIES (F), ITEM 548.21. DESIGN LOADS: (METHOD A AASHTO, LRFD 14.7.6)

	ABUTMENT	PIER
MAXIMUM DEAD LOAD	130 KIPS	340 KIPS
MAXIMUM LIVE LOAD	70 KIPS	130 KIPS

- ELASTOMERIC BEARING PADS SHALL BE VIRGIN NATURAL RUBBER, HARDNESS (SHORE "A" DUROMETER) OF 50, GRADE 3. SHEAR MODULUS RANGE 95 PSI TO 130 PSI.
- ANCHOR RODS SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 550.2.5. ANCHOR BOLTS, NUTS 5. AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION AND CONFORM TO AASHTO M232 ASTM A153.
- STEEL PLATES SHALL CONFORM TO AASHTO M 270 GRADE 50 (ASTM A709 GRADE 50). THE STEEL REINFORCING PLATES SHALL CONFORM TO AASHTO M 270 GRADE 50 (ASTM A709 GRADE 50).
- SOLE PLATES & MASONRY PLATE SHALL BE VULCANIZED TO THE ELASTOMER. ALL SURFACES THAT ARE TO BE BONDED TO THE ELASTOMER SHALL BE BLAST CLEAN AS SPECIFIED IN SSPC-SP 10.
- SOLE AND MASONRY PLATES SHALL BE BLAST CLEANED (SSPC-SP 10) AFTER THE VULCANIZING PROCEDURE PRIOR TO PAINTING BEARING ASSEMBLIES. AFTER WELDING TO THE GIRDER FLANGE, CLEAN AND APPLY FINISH COATS TO THE SOLE PLATES.
- BEARINGS SHALL BE INSTALLED AT TEMPERATURES BETWEEN 20°F AND 70°F. INSTALLATION TEMPERATURES OUTSIDE THIS RANGE WILL REQUIRE ADJUSTMENT.
- THE MANUFACTURER SHALL CLEARLY MARK THE FRONT OF THE BEARINGS TO ENSURE PROPER ORIENTATION IN THE FIELD.
- STEEL REINFORCING FOR ELASTOMERIC BEARING PADS SHALL CONFORM TO SECTION 548.2.3
- THE CONTINUOUS WELD CONNECTING THE BOTTOM FLANGE OF GIRDERS TO THE TOP OF THE SOLE PLATES SHALL BE ALLOWED TO COOL AFTER EACH PASS. THE TEMPERATURE OF THE STEEL ADJACENT TO THE ELASTOMER SHALL NOT EXCEED 200°F (TEMPERATURE SHALL BE CONTROLLED BY WELDING PROCEDURES AND TEMPERATURE INDICATING CRAYON, OR OTHER DEVICES APPROVED BY THE ENGINEER). ALL PLATES SHALL BE FLAT AND TRUE AFTER WELDING.
- THE TOP OF ALL SOLE PLATES SHALL BE BEVELED TO MATCH THE APPROXIMATE ROADWAY GRADE IS AS SHOWN. BEVELED WASHERS SHALL BE REQUIRED BENEATH THE NUTS.

STRUCTURAL STEEL NOTES

- STRUCTURAL STEEL SHALL CONFORM TO AASHTO M 270, GRADE 50 (ASTM A709, GRADE 50) PAINTED (EXCEPT AS NOTED). ALL STRUCTURAL STEEL SHALL BE PAID UNDER ITEM 550.1, STRUCTURAL STEEL (F).
- ALL WELDING AND THE PREPARATION AND ASSEMBLY OF MATERIAL FOR WELDING SHALL CONFORM TO THE NHDOT STANDARD SPECIFICATIONS, THE BRIDGE WELDING CODE (AASHTO/AWS D1.5) AND ALL INTERIM REVISIONS.
- THE LOCATION OF SHOP SPLICES SHALL BE APPROVED BY THE ENGINEER. WEB SPLICES SHALL BE LOCATED A MINIMUM OF 9" FROM WELDED FLANGE SPLICES AND A MINIMUM OF 6" FROM TRANSVERSE STIFFENERS OR CONNECTION PLATES.
- ALL BOLTED FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIA. HIGH STRENGTH BOLTS AASHTO M164 (ASTM A325) TYPE 1 PLACED IN 15/16" DIA. HOLES. BOLTS IN PAINTED AREAS SHALL BE ASTM A325 TYPE 1 GALVANIZED.
- DIRECT TENSION INDICATOR WASHERS SHALL BE INSTALLED WITH HIGH STRENGTH BOLTS.
- HOLES FOR FIELD SPLICES SHALL BE SHOP DRILLED WHILE GIRDERS ARE ASSEMBLED TO FIT BEARING ELEVATIONS.
- TOP FLANGE BOLTS OF THE FIELD SPLICE SHALL BE INSTALLED WITH THE BOLT HEAD ON THE TOP SPLICE PLATE TO AVOID CONFLICTS IF PRECAST CONCRETE DECK PANELS ARE USED.
- GIRDERS SHALL BE CAMBERED FOR THE FULL DEAD LOAD DEFLECTION AND THE EFFECT OF VERTICAL CURVATURE. SEE BRIDGE SHEET 27 FOR CAMBER TABLE.
- SHOP OR FIELD WELDING OF ATTACHMENTS TO, OR PLACEMENT OF HOLES IN ANY EXPOSED PORTION OF THE PLATE GIRDERS FOR CONSTRUCTION PURPOSES, IS NOT PERMITTED. SHOP OR FIELD ATTACHMENTS TO THE TOP FLANGE FOR CONSTRUCTION PURPOSES MUST BE APPROVED BY THE ENGINEER.
- CROSS FRAMES SHALL BE SHOP WELDED WITH 5/16" FILLET WELDS, UNLESS NOTED OTHERWISE. THE GRAVITY AXES OF CROSS FRAME MEMBERS SHOULD INTERSECT AS NEARLY AS PRACTICAL AT THE CENTERLINE OF THE GIRDER.
- BEARING STIFFENERS AND GIRDER ENDS SHALL BE VERTICAL UNDER FULL DEAD LOAD DEFLECTION.
- GIRDERS AND CROSS FRAMES SHALL BE FABRICATED SO THAT GIRDER WEBS ARE PLUMB UNDER FULL DEAD LOAD DEFLECTION.
- SCREED RAIL SUPPORTS REQUIRED FOR THE PLACEMENT OF THE DECK CONCRETE SHALL BE LOCATED AT THE CENTERLINE OF THE GIRDER.
- ALL SHEAR CONNECTORS SHALL BE FIELD WELDED TO THE TOP FLANGE WITH AUTOMATICALLY TIMED STUD WELDING EQUIPMENT. SHEAR CONNECTORS AT FIELD SPLICE LOCATIONS SHALL BE ARRANGED TO CLEAR FASTENERS AND SHALL BE WELDED TO THE SPLICE PLATES. THE TOTAL NUMBER OF SHEAR CONNECTORS IN A GIVEN LENGTH SHALL NOT BE REDUCED.
- STEEL ERECTION SHALL NOT BE PERMITTED UNTIL THE ABUTMENTS HAVE BEEN BACKFILLED TO THE LEVEL OF THE APPROACH SLAB.
- PRIOR TO HANDLING THE STRUCTURAL STEEL, THE CONTRACTOR SHALL SUBMIT DETAILED HANDLING AND ERECTION PLANS IN ACCORDANCE WITH SECTION 550.
- TEMPORARY SHORING TOWERS SHALL NOT BE REMOVED UNTIL ALL STRUCTURAL STEEL IS ERECTED, AND ALL SPLICES AND CROSS FRAME CONNECTIONS ARE FULLY TIGHTENED. ALL TEMPORARY SHORING TOWERS SHALL BE REMOVED PRIOR TO CONSTRUCTING THE DECK.
- ALL STEEL ERECTION COSTS ARE INCLUDED IN ITEM 550.1.
- THE ENGINEER WILL INSPECT THE SHOP FABRICATION OF THE STRUCTURAL STEEL.
- NOTCH TOUGHNESS REQUIREMENTS OF NHDOT STANDARD SPECIFICATIONS SHALL APPLY TO THE WEB AND FLANGES OF GIRDERS AND SPLICE PLATES.
- THE STRUCTURAL STEEL FABRICATOR SHALL ARRANGE FOR NON-DESTRUCTIVE TESTING OF THE WELDS. ALL COSTS TO BE INCLUDED IN ITEM 550.1.
- THE PAINT FINISH COLOR WILL BE DETERMINED BY THE CITY AT A LATER TIME.

FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\03 BRIDGE NOTES - SHEET 2 OF 3.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: Conde_LF

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS										
TOWN		PORTSMOUTH		BRIDGE NO.		198/034		STATE PROJECT		14493
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK										
BRIDGE NOTES - SHEET 2 OF 3										
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL		DATE
SHEET SCALE		DESIGNED		TD		5/13		CHECKED		MAB 5/13
AS NOTED		DRAWN		FLC		5/13		CHECKED		TD 5/13
TRACED		---		---		---		CHECKED		---
QUANTITIES		TD		6/13		CHECKED		MAB		6/13
FAY, SPOFFORD & THORNDIKE, INC - BEDFORD, NH -								FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 17
BRIDGE SHEET 03 OF 41										
FILE NUMBER 91										
TOTAL SHEETS 91										

COFFERDAM NOTES

1. COFFERDAM LIMITS SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE COFFERDAM LIMITS REQUIRED TO SUPPORT EXISTING EMBANKMENTS AND PROPOSED EXCAVATION.
2. ALL COSTS FOR DESIGN, INSTALLATION AND REMOVAL OF COFFERDAMS SHALL BE INCLUDED IN ITEMS 503.201.
3. THE CONTRACTOR SHALL SUBMIT THE COFFERDAM DESIGN AND PROPOSED METHOD OF CONSTRUCTION TO THE ENGINEER IN ACCORDANCE WITH SECTION 105.02 OF THE NHDOT STANDARD SPECIFICATIONS. COFFERDAM SUBMITTALS SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.

DECK REINFORCEMENT NOTES

1. ALL REINFORCING IN THE BRIDGE DECK AND BRUSH CURBS SHALL BE EPOXY COATED AND SHALL BE PAID AS ITEM 544.31, REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED).
2. ALL REINFORCING SHALL BE 2 1/2" FROM CONCRETE SURFACES, UNLESS OTHERWISE NOTED.

DECK SLAB ELEVATION NOTES

1. AFTER THE STEEL GIRDERS ARE ERECTED, ELEVATIONS ON THE TOP FLANGE OF THE GIRDERS ARE TO BE OBTAINED AT THE POINTS INDICATED IN THE TABLE. THE DIFFERENCE BETWEEN THE ELEVATIONS OBTAINED AND THOSE SHOWN IN THE TABLE IS THE ACTUAL BLOCKING DISTANCE FROM THE TOP OF THE GIRDER TO THE BOTTOM OF THE DECK SLAB AT THE CENTERLINE OF THE GIRDER. SEE ELEVATION TABLE AND HAUNCH DETAIL ON BRIDGE SHEET 32.
2. ELEVATIONS SHOWN IN THE TABLE ARE BOTTOM OF SLAB ELEVATIONS ADJUSTED FOR TOTAL DEAD LOAD DEFLECTION, LESS THE DEFLECTION DUE TO GIRDER WEIGHT.
3. THE BRIDGE DECK CONCRETE SHALL REMAIN PLASTIC THROUGHOUT EACH POUR. THE DECK PLACEMENT SHALL PROCEED UP-GRADE. FOR DECK POUR SEQUENCE, SEE BRIDGE SHEET 32.

APPROACH SLAB NOTES

1. CONCRETE FOR THE APPROACH SLABS SHALL BE ITEM 520.0302, CONCRETE CLASS AA, APPROACH SLABS (QC/QA) (PRECAST OPTION) (F). CONCRETE COVER FOR REINFORCING STEEL SHALL NOT BE MEASURED.
2. SYNTHETIC FIBER REINFORCEMENT SHALL BE ADDED TO THE CONCRETE FOR THE APPROACH SLABS AND SHALL BE PAID UNDER ITEM 544.7, SYNTHETIC FIBER REINFORCEMENT (F).
3. REINFORCEMENT IN THE APPROACH SLABS SHALL BE EPOXY COATED, AND PAID UNDER ITEM 544.31, REINFORCING STEEL EPOXY COATED (CONTRACTOR DETAILED).
4. FILL SPACES BETWEEN THE APPROACH CURBS AND APPROACH SLABS WITH ITEM 520.0302 WITH ALL QC/QA REQUIREMENTS WAIVED.
5. APPROACH SLABS SHALL BE PLACED AFTER THE CONCRETE DECK HAS BEEN CONSTRUCTED.

EXPANSION JOINT NOTES

1. EXPANSION JOINT STEEL SHALL CONFORM TO AASHTO M 270, GRADE 50 (ASTM A 709, GR 50) GALVANIZED, EXCEPT AS OTHERWISE ALLOWED. THE ENTIRE ASSEMBLY, INCLUDING THE ELASTOMERIC SEAL, SHALL BE PAID FOR AS ITEM 561.110, PREFABRICATED EXPANSION JOINT, TYPE A (F).
2. SPLICES FOR EXPANSION JOINT STEEL SHALL DEVELOP FULL STRENGTH.
3. THE EXPANSION JOINT SHALL BE PRESET TO THE TEMPERATURE ANTICIPATED AT THE TIME OF INSTALLATION. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE ENGINEER (SEE TEMPERATURE ADJUSTMENT TABLE ON BRIDGE SHEET 37).
4. ELASTOMERIC STRIP SEALS SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICE WILL BE ALLOWED.
5. JOINT SUPPORT PLATES SHALL BE SHOP WELDED TO THE EXPANSION JOINT STEEL AND SHALL BE VERTICAL AFTER THE JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND PROFILE GRADE.
6. THE EXPANSION JOINT ASSEMBLY SHALL BE INSTALLED ONLY AFTER THE ABUTMENT HAS BEEN BACKFILLED TO WITHIN 3'-0" OF FINISHED GRADE.
7. IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGED GALVANIZED SURFACES.
8. PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
9. THE STRIP SEAL SYSTEM SHALL HAVE A MINIMUM RANGE OF MOVEMENT OF 4".
10. ELEVATIONS SHOWN ARE AT TOP OF ANGLES, WHICH ARE SET 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.

MISCELLANEOUS NOTES

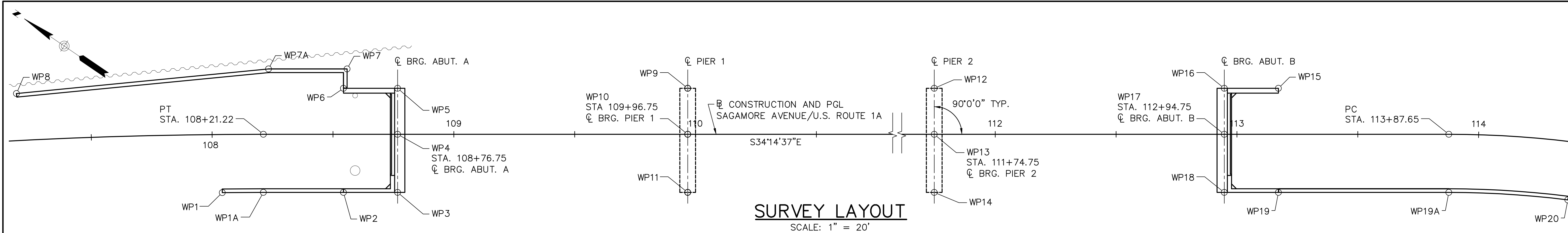
1. A NEW WATER LINE SHALL BE INSTALLED AT THE APPROXIMATE LOCATION SHOWN ON THE SITE PLAN.

FILE NAME: R:\VQ-064-Sagamore-Creek\CAD-Drawings\05-Structural\04-BRIDGE-NOTES - SHEET 3 OF 3.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: Corde_L

CITY OF PORTSMOUTH											
DEPARTMENT OF PUBLIC WORKS											
TOWN		PORTSMOUTH		BRIDGE NO.		198/034		STATE PROJECT		14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK											
BRIDGE NOTES - SHEET 3 OF 3										BRIDGE SHEET 04 OF 41	
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL		DATE	
DESIGNED		TD 5/13		CHECKED		MAB 5/13					
DRAWN		FLC 5/13		CHECKED		TD 5/13					
TRACED		---		---		---		---			
QUANTITIES		TD 6/13		CHECKED		MAB 6/13		FEDERAL PROJECT NO.		SHEET NO.	
								X-A000(417)		18	
										TOTAL SHEETS 91	

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VC-064-Sagamore Creek\CAD Drawings\05-Structural\06-BRIDGE QUANTITIES AND SURVEY LAYOUT.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: Conde_F

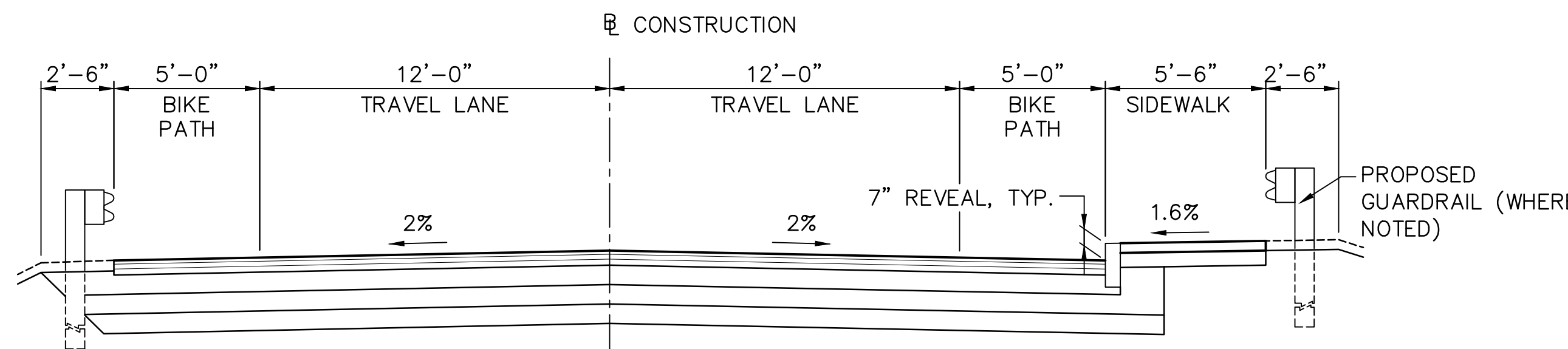


SURVEY LAYOUT
SCALE: 1" = 20'

SUMMARY OF BRIDGE QUANTITIES			
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
209.201	GRANULAR BACKFILL (BRIDGE) (F)	1,323	CY
210.6	MOBILIZATION AND DEMOBILIZATION FOR TEST BORING DRILLING EQUIPMENT	1	U
210.61	ADVANCING CASED BORING HOLE	200	LF
210.62	ADVANCING BORING HOLE BY DIAMOND CORE DRILLING	108	LF
403.911	HOT BITUMINOUS BRIDGE PAVEMENT, 1" BASE COURSE (F)	83	T
500.02	ACCESS FOR BRIDGE CONSTRUCTION	1	U
502	REMOVAL OF EXISTING BRIDGE STRUCTURE	1	U
503.201	COFFERDAMS	1	U
504.1	COMMON BRIDGE EXCAVATION (F)	2,500	CY
508	STRUCTURAL FILL	200	CY
509.1	MOBILIZATION & DEMOBILIZATION OF DRILLED SHAFT DRILLING EQUIP.	1	U
509.2	DRILLED SHAFT	430	LF
509.3	OBSTRUCTION REMOVAL	100	LF
509.4	ROCK SOCKET EXCAVATION	120	LF
509.5	CROSSHOLE SONIC LOGGING (CSL) TESTS	30	EA
509.6	DRILLED SHAFT REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED)	130,000	LB
520.0102	CONCRETE CLASS AA, (QC/QA) (F)	658	CY
520.0302	CONCRETE CLASS AA, APPROACH SLABS (QC/QA) (F)	62	CY
520.213	CONCRETE CLASS B, FOOTINGS (ON SOIL) (F)	181	CY
520.70026	CONCRETE BRIDGE DECK (QC/QA) (PANEL OPTION) (F)	680	CY
520.99	FORM LINER FOR CONCRETE SURFACES	3,000	SF
534.3	WATER REPELLENT (SILANE-SILOXANE)	120	GAL
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	27	SY
538.5	BARRIER MEMBRANE, WELDED BY TORCH (F)	22	SY
538.6	BARRIER MEMBRANE, WELDED BY TORCH MACHINE METHOD (F)	1,586	SY
541.1	PVC WATERSTOPS, NH TYPE 1 (F)	125	LF
541.4	PVC WATERSTOPS, NH TYPE 4 (F)	62	LF
544.3	REINFORCING STEEL (CONTRACTOR DETAILED)	58,000	LB
544.31	REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED)	326,100	LB
544.7	SYNTHETIC FIBER REINFORCEMENT	434	LB
547.1	SHEAR CONNECTORS (F)	5,055	EA
548.21	ELASTOMERIC BEARING ASSEMBLIES (F)	20	EA
550.1	STRUCTURAL STEEL (F)	686,200	LB
556.201	CONTAINMENT AND ENVIRONMENTAL PROTECTION	1	U
556.301	WORKER PROTECTION	1	U
556.401	WASTE MANAGEMENT	1	U
561.11	PREFABRICATED EXPANSION JOINT, TYPE A (F)	86	LF
562.1	SILICONE JOINT SEALANT (F)	62	LF
563.24	BRIDGE RAIL T4	1,112	LF
565.242	BRIDGE APPROACH RAIL, T4 (STEEL POSTS) (F)	3	U
585.21	STONE FILL, CLASS B (BRIDGE)	600	CY
593.411	GEOTEXTILE PERM. EROSION CONTROL, CLASS 1, NON-WOVEN	900	SY
1010.41	QUALITY CONTROL / QUALITY ASSURANCE (QC/QA) FOR CONCRETE	1	\$

WORKING POINT COORDINATES

WORKING POINT NO.	NORTHING	EASTING
WP1	203736.1398	1229331.5543
WP1A	203722.1135	1229341.1908
WP2	203694.7451	1229359.8207
WP3	203676.2120	1229372.4364
WP4	203689.7171	1229392.2761
WP5	203700.4086	1229407.9825
WP6	203718.9418	1229395.3668
WP7	203722.2035	1229402.8241
WP7A	203749.0644	1229384.5395
WP8	203829.5504	1229317.4668
WP9	203601.2103	1229475.5080
WP10	203590.5187	1229459.8015
WP11	203577.0137	1229439.9619
WP12	203454.0661	1229575.6707
WP13	203443.3745	1229559.9643
WP14	203429.8694	1229540.1246
WP15	203336.3346	1229655.8119
WP16	203354.8677	1229643.1962
WP17	203344.1762	1229627.4897
WP18	203330.6711	1229607.6501
WP19	203312.1379	1229620.2658
WP19A	203253.8748	1229659.9262
WP20	203211.4487	1229685.0897

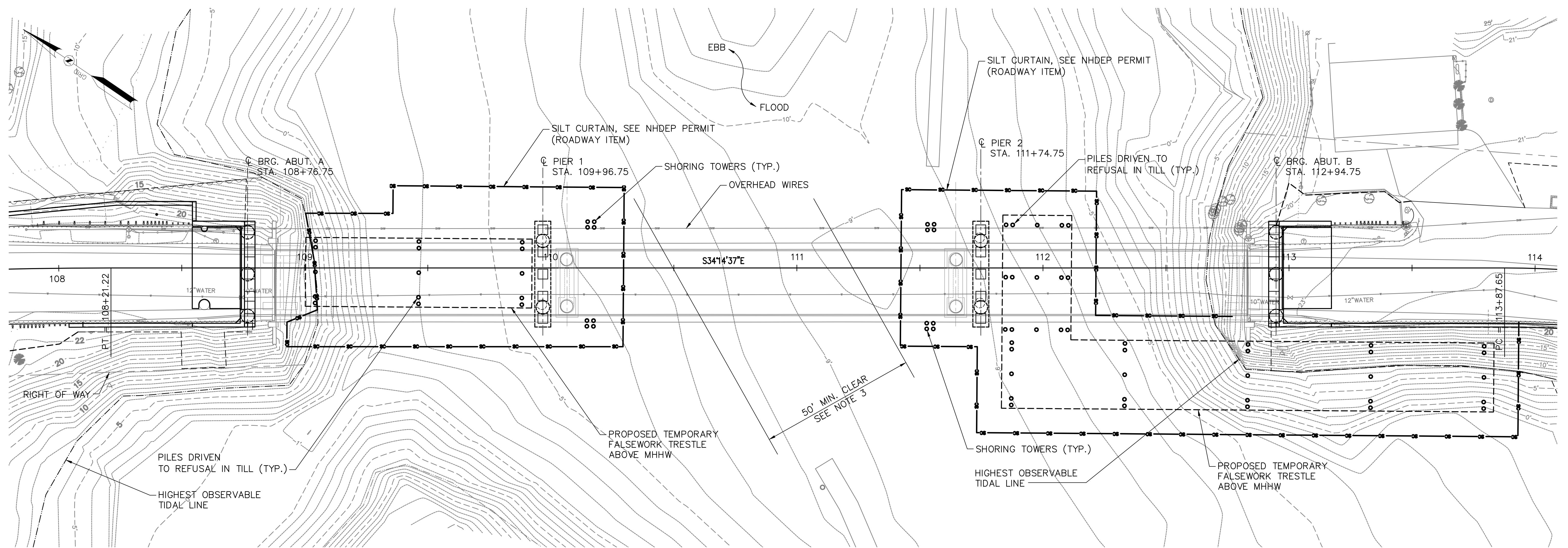


TYPICAL SAGAMORE AVENUE APPROACH SECTION
SCALE 1/4" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS			
TOWN	PORTSMOUTH	BRIDGE NO.	198/034
STATE PROJECT	14493		
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK		
BRIDGE QUANTITIES AND SURVEY LAYOUT			
BY	DATE	BY	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13
DRAWN	FLC 5/13	CHECKED	TD 5/13
TRACED	---	CHECKED	---
QUANTITIES	TD 6/13	CHECKED	MAB 6/13
REVISIONS AFTER PROPOSAL		DATE	
FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
X-A000(417)		20	91
BRIDGE SHEET		06 OF 41	
FILE NUMBER			

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\07 BRIDGE CONSTRUCTION ACCESS PLAN.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: Conde_F



BRIDGE CONSTRUCTION ACCESS PLAN

SCALE: 1" = 20'

NOTES

1. INFORMATION SHOWN FOR IN-WATER ACCESS WAS ASSUMED FOR PERMITTING PURPOSES.
2. CONTRACTOR MAY CHANGE THE ACCESS CONFIGURATION SHOWN, BUT MUST SUBMIT PROPOSED CHANGES TO THE PERMITTING AGENCIES FOR APPROVAL PRIOR TO DISTURBING ANY PROTECTED RESOURCE.
3. MAINTAIN MINIMUM 50 FEET HORIZONTAL CLEARANCE NORMAL TO CHANNEL DURING CONSTRUCTION. SEE COAST GUARD PERMIT FOR ADDITIONAL REQUIREMENTS.
4. PROVIDE 10 FEET MINIMUM VERTICAL CLEARANCE TO BOTTOM OF TRESTLE FRAMING TO MHHW.
5. PLANS FOR TEMPORARY WORKS WITHIN THE LIMITS OF MHHW MUST BE SUBMITTED BY THE CONTRACTOR TO THE U.S. COAST GUARD DISTRICT COMMANDER AND BE APPROVED PRIOR TO THE START OF CONSTRUCTION.
6. TRESTLE WORK SHOWN PAID UNDER ITEM 500.02, ACCESS FOR BRIDGE CONSTRUCTION.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
BRIDGE CONSTRUCTION ACCESS PLAN					BRIDGE SHEET
					07 OF 41
					FILE NUMBER
BY DATE		BY DATE		REVISIONS AFTER PROPOSAL DATE	
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
				FEDERAL PROJECT NO.	SHEET NO.
				X-A000(417)	21
				TOTAL SHEETS	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

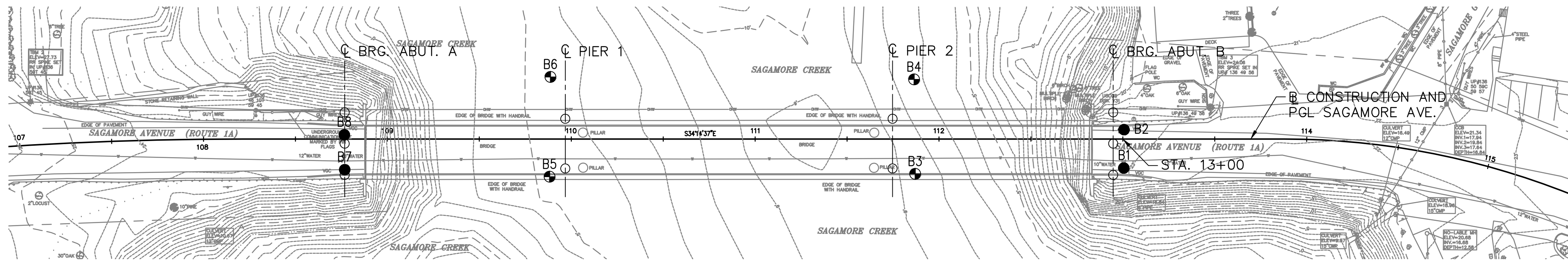
TEST BORING REPORT										BORING NO. B-1								
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										SHEET NO. 1 OF 2								
PROJECT NAME SAGAMORE CREEK 09.0025631.00 BRIDGE NO. N/A										STA. 112+95 OFF. RT. 16								
DESCRIPTION										BASELINE Sagamore Avenue								
										ELEVATION (ft) 23.0								
										START/END S/10/10 / S/11/10								
										DRILLER K. Smith (NHB)								
										INSPECTOR Eric Baron								
										CLASSIFIER Eric Baron								
										EAST/NORTH (ft) 1229614/203336								
GROUNDWATER										EQUIPMENT		SAMPLER		CASING		CORE		
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING (ft)	BOTTOM OF HOLE (ft)	TYPE	SIZE ID. (in.)	S	HW									
										DRILL RIG		DBRILL RIG		MOBILE B-59				
FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL								
DEPTH (ft)	STRATUM CHANGE (ft)	DEPTH (ft)	ELEVATION (ft)	BLOWS PER 0.9 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft)	FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL	
0	0.6	22.4					Asphalt.											
							Medium dense, brown, fine to coarse SAND, little Gravel, trace Silt. (Moist.)											
							S-2, 5' - 5'; No Recovery. Drilled through Boulder from 5' to 9.5'.											
							-FILL-											
							Loose, brown, fine to medium SAND, trace Gravel, trace Silt. (Dry.)											
							Drilling indicates Cobbles and Boulders.											
							Medium dense, brown, fine to medium SAND, little Gravel, little Silt. (Dry.) (A-2)											
							Top 0.3': Medium dense, brown, fine to medium SAND, little Gravel. (Moist.) Bottom 0.9': Medium dense, dark brown, fine to coarse SAND, some Gravel, little Silt. (Wet.)											
							-OUTWASH-											
							Medium dense, brown, fine to coarse SAND, little Gravel, little Silt. (Wet.)											
							Drill cutting indicated brown Sand and Gravel. Increased resistance at approximately 29' below ground surface.											
							-GLACIAL TILL-											
							Dense, brown, fine to coarse SAND, some Gravel, some Silt. (Wet.)											
							Very dense, brown, fine to coarse SAND, some Silt, some Gravel. (Wet.)											
							-BEDROCK-											
							Drill to 43' to set casing. Very hard, fresh, fine grained, gray, GNEISS. Joints are close to wide, low angle, undulating, rough, partially open, fresh. C-1 Core Times (mins): 43-44 (8) 44-45 (9) 45-46 (8) 46-47 (7) 47-48 (10) RQD = 4.4/5.0 = 88%											
							Bottom of Exploration at 48' below ground surface. (El. -25.0)											

TEST BORING REPORT										BORING NO. B-2								
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										SHEET NO. 1 OF 2								
PROJECT NAME SAGAMORE CREEK 09.0025631.00 BRIDGE NO. N/A										STA. 112+95 OFF. LT. 05								
DESCRIPTION										BASELINE Sagamore Avenue								
										ELEVATION (ft) 23.0								
										START/END S/10/10 / S/10/10								
										DRILLER K. Smith (NHB)								
										INSPECTOR Eric Baron								
										CLASSIFIER Eric Baron								
										EAST/NORTH (ft) 1229632/203347								
GROUNDWATER										EQUIPMENT		SAMPLER		CASING		CORE		
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING (ft)	BOTTOM OF HOLE (ft)	TYPE	SIZE ID. (in.)	S	HW									
										DRILL RIG		DBRILL RIG		MOBILE B-59				
FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL								
DEPTH (ft)	STRATUM CHANGE (ft)	DEPTH (ft)	ELEVATION (ft)	BLOWS PER 0.9 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft)	FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL	
0	0.6	22.4					Asphalt.											
							Dense, brown, fine to coarse SAND, some Gravel, trace Silt. (Moist.)											
							Drilling indicates brown Sand and Cobbles/Boulders.											
							Gravel pieces, Bent spoon. (Dry.) Drilling indicates cobbles/boulders to approximately 9' below ground surface with brown sand below.											
							-FILL-											
							Loose, brown, gravelly fine to medium SAND, trace Silt. (Dry.)											
							Loose, brown, fine to medium SAND, little Gravel, trace Silt. (Damp.)											
							Top 0.5': Medium dense, brown, fine to medium SAND, trace Gravel. Piece Asphalt. (Moist.) Bottom 0.5': Dark brown, fine to coarse SAND, some Gravel, trace Silt. (Wet.)											
							-OUTWASH-											
							Loose, brown, fine to coarse SAND, some Gravel, little Silt. (Wet.)											
							Top 0.7': Dense, brown, fine to medium SAND, trace Silt, trace Gravel. (A-3) Bottom 0.7': Very dense, brown, fine to coarse, sandy GRAVEL, some Silt. (Wet.)											
							-GLACIAL TILL-											
							No Recovery.											
							Drill to 38' to set casing for core. Very hard, fresh, fine grained, gray, GNEISS. Primary joints are close to moderate, moderately dipping to high angle, undulating, rough, fresh to slightly weathered, partially open, iron staining. C-1 Core Times (mins): 38-39 (8) 39-40 (12) 40-41 (9) 41-42 (10) 42-43 (12) RQD = 4.3/5.0 = 86%											
							Bottom of Exploration at 43' below ground surface. (El. -20.0)											

TEST BORING REPORT										BORING NO. B-3								
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										SHEET NO. 1 OF 2								
PROJECT NAME SAGAMORE CREEK 09.0025631.00 BRIDGE NO. N/A										STA. 111+83 OFF. RT. 19								
DESCRIPTION										BASELINE Sagamore Avenue								
										ELEVATION (ft) -9.7								
										START/END S/25/10 / S/28/10								
										DRILLER S. Cooley (NHB)								
										INSPECTOR Mrsad A/Mike D.								
										CLASSIFIER Mrsad A/Mike D.								
										EAST/NORTH (ft) 1229592/203426								
GROUNDWATER										EQUIPMENT		SAMPLER		CASING		CORE		
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING (ft)	BOTTOM OF HOLE (ft)	TYPE	SIZE ID. (in.)	S	HW									
										DRILL RIG		CME-45						
FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL								
DEPTH (ft)	STRATUM CHANGE (ft)	DEPTH (ft)	ELEVATION (ft)	BLOWS PER 0.9 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft)	FIELD CLASSIFICATION AND REMARKS										STRATUM SYMBOL	
0	0.5	-10.2					-RIVER BOTTOM DEPOSITS-											
							Very loose, black to gray, fine to coarse SAND, some Silt.											
							-CLAY-											
							Very soft, gray, CLAY, little coarse Sand. (Wet.)											
							Field Vane refusal at 7'. Drilling indicated that gravel was encountered.											
							Dense, gray, GRAVEL, some Silt, little Sand. (Wet.)											
							-GLACIAL TILL-											
							No Recovery. Wash spoils only. Probable Cobble.											
							Very dense, gray/brown, GRAVEL, little Silt, trace fine to coarse Sand. (Wet.)											
							Very dense, gray, SILT, some fine to coarse Sand, little Gravel. (Wet.)											
							Very dense, gray, SILT, little fine to coarse Sand, trace Gravel. (Wet.)											
							-GLACIAL TILL-											
							Very hard, fresh, fine grained, gray, GNEISS. Joints are very close to close, moderate angle, planar, rough, partially open to open. C-1 Core Times (min): 34.9-35.7 (14.0 ft)											
							Very hard, fresh, fine grained, gray, GNEISS. Joints are very close to close, moderate angle, planar, rough, partially open to open. C-2 Core Times (min): 35.7-36.7 (18)											
							RQD = 0.4/1.0 = 40%											
							Set casing header. Clean out hole to 37.0' with roller bit.											
							Very hard, fresh, fine grained, gray, GNEISS. Joints are very close to close, moderate angle, planar, rough, partially open to open. C-3 Core Times (min): 37.0-38.0 (18) 38.0-38.9 (22.0 ft) RQD = 1.5/1.9 = 79%											
							Bottom of Exploration at 38.9' below ground surface. (El. -48.6)											

ABUT. B
TOP OF ROCK SOCKETS
ELEV. VARIES
EL. -11.5
EL. -21.4

PIER 2
TOP OF ROCK SOCKETS
ELEV. VARIES
EL. -39.7
EL. -44.5

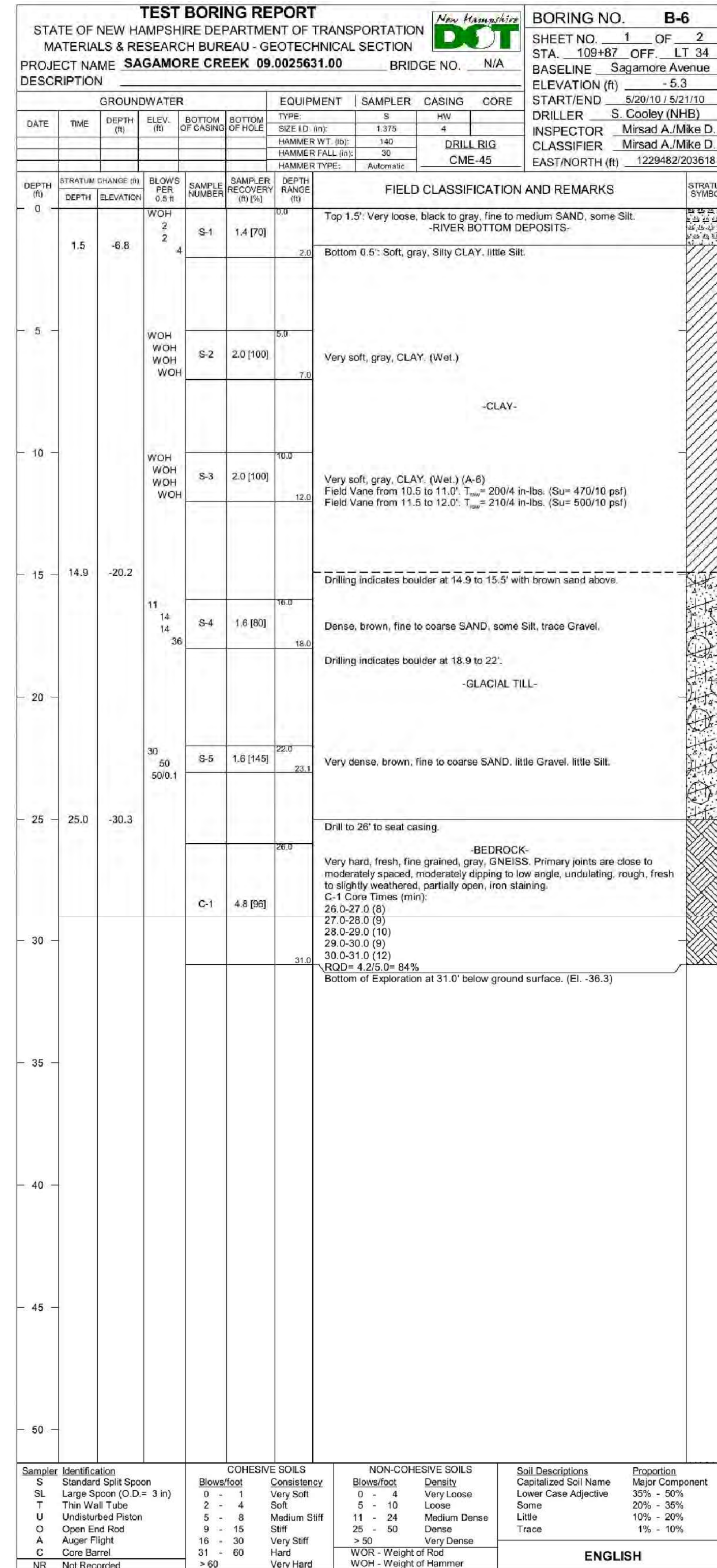
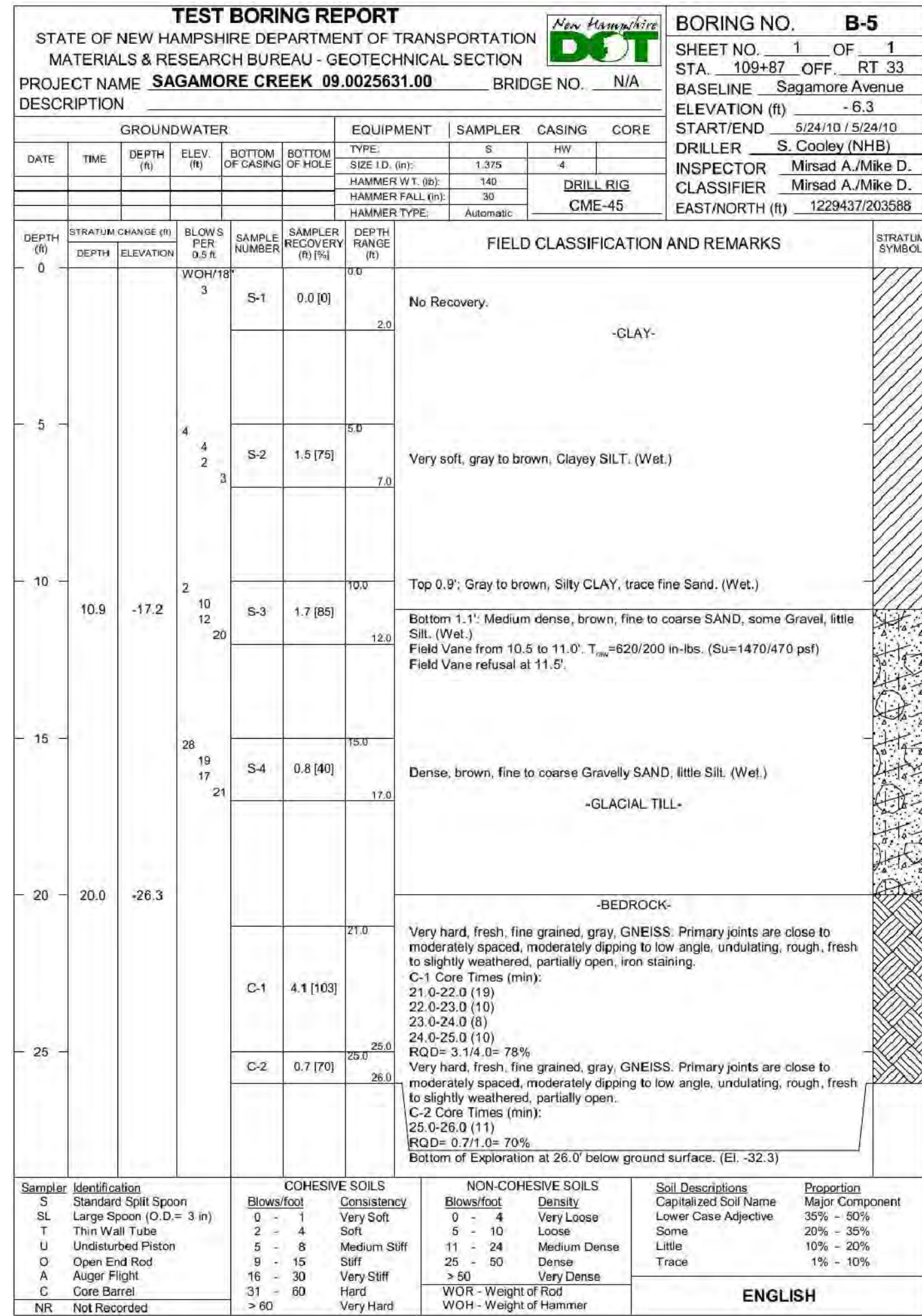
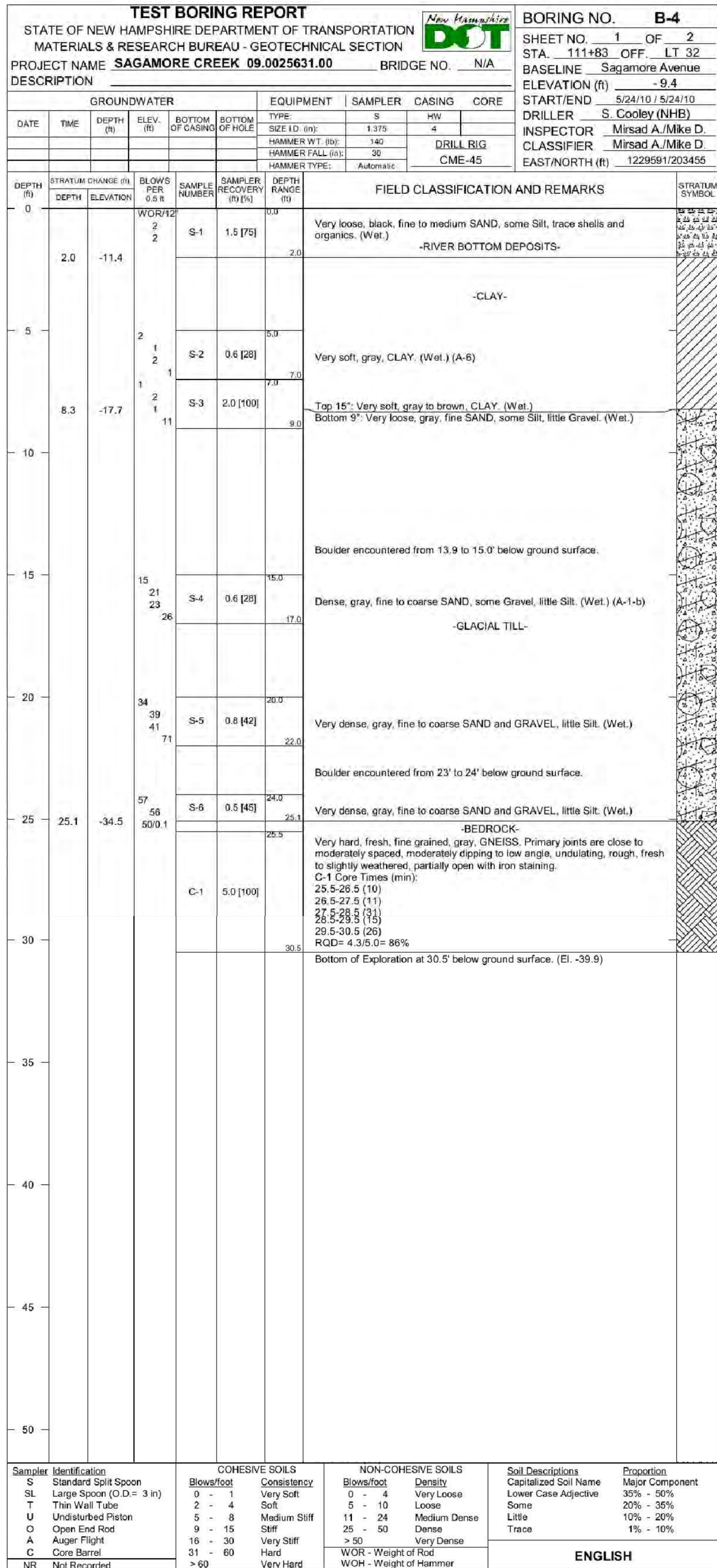


BORING LOCATION PLAN
NOT TO SCALE

- INDICATES WATER BORING
- INDICATES LAND BORING

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493		BRIDGE SHEET		08 OF 41	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
BORING LOGS - SHEET 1 OF 3									
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE	FILE NUMBER			
DESIGNED	TD	5/13	CHECKED	MAB	5/13				
AS NOTED	DRAWN	FLC	5/13	CHECKED	TD	5/13			
TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 22	TOTAL SHEETS 91
QUANTITIES	TD	6/13	CHECKED	MAB	6/13				

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



PIER 1
TOP OF ROCK SOCKETS
ELEV. VARIES
EL. -28.3
EL. -30.1

PIER 2
TOP OF ROCK SOCKETS
ELEV. VARIES
EL. -39.7
EL. -44.5

NOTE: SEE SHEET 8 FOR BORING LOCATION PLAN.

CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS

TOWN **PORTSMOUTH** BRIDGE NO. **198/034** STATE PROJECT **14493**
LOCATION **SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK**

BORING LOGS - SHEET 2 OF 3

BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		

BRIDGE SHEET **09** OF **41**
FILE NUMBER

FEDERAL PROJECT NO. **X-A000(417)** SHEET NO. **23** TOTAL SHEETS **91**

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

TEST BORING REPORT										BORING NO. B-7	
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										SHEET NO. 1 OF 2	
PROJECT NAME SAGAMORE CREEK 09.0025631.00 BRIDGE NO. N/A										STA. 109+76 OFF. RT. 17	
DESCRIPTION										BASELINE Sagamore Avenue	
										ELEVATION (ft) 23.0	
GROUNDWATER										EQUIPMENT	
DATE										START/END 5/8/10 / 5/8/10	
TIME										DRILLER K. Smith (NHB)	
DEPTH (ft)										INSPECTOR Eric Baron	
ELEV. (ft)										CLASSIFIER Eric Baron	
BOTTOM OF CASING										EAST/NORTH (ft) 1229378/203681	
ELEV. (ft)										DRILL RIG Mobile B-59	
ELEV. (ft)										HAMMER TYPE: Automatic	
ELEV. (ft)										HAMMER WT. (lb) 140	
ELEV. (ft)										HAMMER FALL (ft) 20	
ELEV. (ft)										SAMPLER S	
ELEV. (ft)										CASING 4	
ELEV. (ft)										CORE	
FIELD CLASSIFICATION AND REMARKS											
Asphalt											
Medium dense, brown, fine to coarse SAND, some Gravel, trace Silt. (Dry.)											
-FILL-											
Graybrown, GRAVEL, little Sand, trace Silt, angular. (Dry.)											
Drill cuttings indicate presence of brown sand.											
-ROCK FILL-											
Graybrown, GRAVEL, trace Sand, angular. Tip plugged with piece of gravel. (Moist.)											
Drill cutting indicate presence of brown sand.											
Drilled to 16' to penetrate boulder/cobble.											
Medium dense, brown, fine to coarse SAND, some Gravel, little Silt. (Moist.) (A-1-b)											
Dense, brown, fine to coarse SAND, some Gravel, little Silt, mottled. (Wet.)											
-FILL-											
Medium dense, brown/gray, Sandy SILT, little Gravel, Sulfur odor. (Wet.)											
Change in drilling resistance and wash color.											
Very dense, brown, fine to coarse SAND, some Silt, some Gravel, mottled.											
-GLACIAL TILL-											
Drill to 36' to penetrate cobble/boulder.											
Very dense, brown/gray, fine to coarse SAND and GRAVEL, little Silt (A-1-b)											
Very hard, slightly weathered, fine grained, gray, GNEISS. Joints are close to very close, moderately dipping to high angle, undulating, rough, slightly weathered, partially open, iron staining.											
Core Time (mins): 40-41 (7) 41-42 (6.5) 42-43 (8) 43-44 (5) 44-45 (6) RQD = 0/5.0 = 0%											
-BEDROCK-											
Very hard, fresh, fine grained, gray, GNEISS. Primary joints are very close to moderate, low angle, undulating to stepped, rough, fresh to slightly weathered, partially open, iron staining.											
Secondary joints are similar but high angle. RQD = 1.4/5.0 = 28%											
Bottom of Exploration at 50' below ground surface. (EI. -27.0)											

ABUT. A
TOP OF ROCK SOCKETS
ELEV. VARIES
EL. -8.0
EL. -19.2

Sampler Identification		COHESIVE SOILS		NON-COHESIVE SOILS		Soil Descriptions		Proportion	
S	Standard Split Spoon	Blow/ft	Consistency	Blow/ft	Density	Capitalized Soil Name	Major Component		
SL	Large Spoon (O.D. = 3 in)	0 - 1	Very Soft	0 - 4	Very Loose	Lower Case Adjective	35% - 50%		
T	Thin Wall Tube	2 - 4	Soft	5 - 10	Loose	Some	20% - 35%		
U	Undisturbed Piston	5 - 8	Medium Stiff	11 - 24	Medium Dense	Little	10% - 20%		
O	Open End Rod	9 - 15	Stiff	25 - 50	Dense	Trace	1% - 10%		
A	Auger Flight	16 - 30	Very Stiff	>50	Very Dense				
C	Cone Barrel	31 - 60	Hard						
NR	Not Recorded	>60	Very Hard						

ENGLISH

TEST BORING REPORT										BORING NO. B-8	
STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION										SHEET NO. 1 OF 2	
PROJECT NAME SAGAMORE CREEK 09.0025631.00 BRIDGE NO. N/A										STA. 109+76 OFF. LT. 02	
DESCRIPTION										BASELINE Sagamore Avenue	
										ELEVATION (ft) 23.0	
GROUNDWATER										EQUIPMENT	
DATE										START/END	
TIME										DRILLER K. Smith (NHB)	
DEPTH (ft)										INSPECTOR Eric Baron	
ELEV. (ft)										CLASSIFIER Eric Baron	
BOTTOM OF CASING										EAST/NORTH (ft) 1229393/203692	
ELEV. (ft)										DRILL RIG Mobile B-59	
ELEV. (ft)										HAMMER TYPE: Automatic	
ELEV. (ft)										HAMMER WT. (lb) 140	
ELEV. (ft)										HAMMER FALL (ft) 20	
ELEV. (ft)										SAMPLER S	
ELEV. (ft)										CASING 4	
ELEV. (ft)										CORE	
FIELD CLASSIFICATION AND REMARKS											
Asphalt											
Top 0.8': Dense, brown, GRAVEL, some Sand, trace Silt.											
Bottom 0.8': Dense, brown, fine to medium SAND, little Silt, little Gravel. (Moist.) (A-2)											
-FILL-											
Gray, GRAVEL pieces, angular.											
Drilling indicates cobbles/boulders.											
Gray, GRAVEL pieces, angular.											
-ROCK FILL-											
Medium dense, brown, fine to medium SAND, some Gravel, trace Silt. Gravel in tip. (Moist.)											
Drilling indicates brown sand at approximately 18' below ground surface.											
Medium dense, brown/gray, Gravely SAND, little Silt. (Wet.)											
Drill cuttings show consistent dark brown, fine Sand at approximately 22' below ground surface.											
Top 0.3': Gray, fine, Silty SAND, some Gravel. (Wet.)											
Bottom 1.0': Dense, brown/gray, fine to coarse SAND, some Gravel, trace Silt. (Wet.)											
-GLACIAL TILL-											
Brown, fine to coarse SAND, some Gravel, little Silt.											
-GLACIAL TILL-											
Very hard, fresh, fine grained, gray, GNEISS. Joint is low angle, undulating, fresh, partially open, rough, iron staining.											
Core Time (mins): 34-35 (9) RQD = 1.0/1.0 = 100%											
-BEDROCK-											
Very hard, fresh, fine grained, gray, GNEISS. Primary joints are close to moderate, low angle to moderately dipping, undulating, rough, fresh to slightly weathered, tight to partially open, iron staining.											
Secondary joints are similar, moderate, high angle to vertical. RQD = 2.6/4.0 = 65%											
Bottom of Exploration at 38' below ground surface. (EI. -16.0)											

Sampler Identification		COHESIVE SOILS		NON-COHESIVE SOILS		Soil Descriptions		Proportion	
S	Standard Split Spoon	Blow/ft	Consistency	Blow/ft	Density	Capitalized Soil Name	Major Component		
SL	Large Spoon (O.D. = 3 in)	0 - 1	Very Soft	0 - 4	Very Loose	Lower Case Adjective	35% - 50%		
T	Thin Wall Tube	2 - 4	Soft	5 - 10	Loose	Some	20% - 35%		
U	Undisturbed Piston	5 - 8	Medium Stiff	11 - 24	Medium Dense	Little	10% - 20%		
O	Open End Rod	9 - 15	Stiff	25 - 50	Dense	Trace	1% - 10%		
A	Auger Flight	16 - 30	Very Stiff	>50	Very Dense				
C	Cone Barrel	31 - 60	Hard						
NR	Not Recorded	>60	Very Hard						

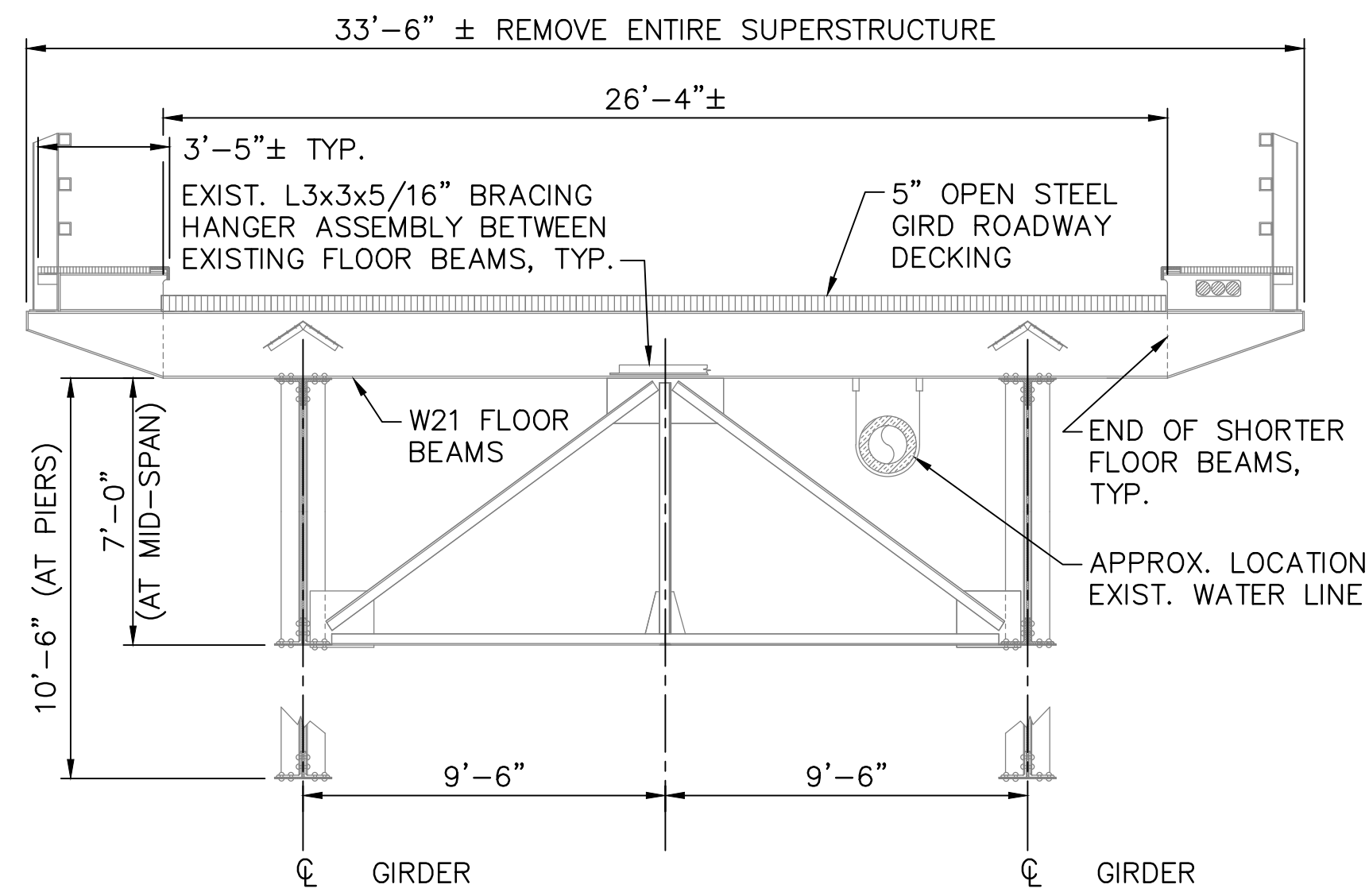
ENGLISH

NOTE: SEE SHEET 8 FOR BORING LOCATION PLAN.

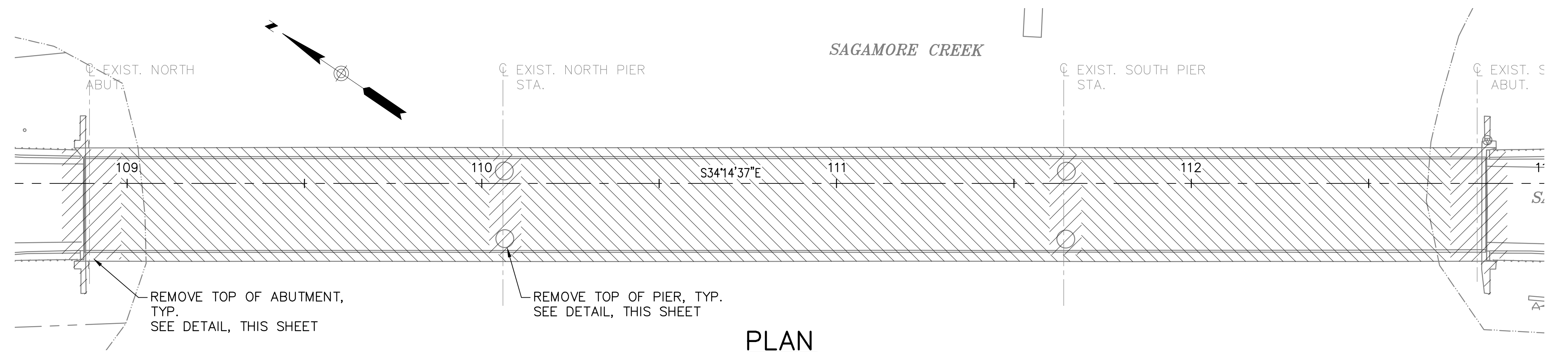
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
BORING LOGS - SHEET 3 OF 3									
BY DATE		BY DATE		REVISIONS AFTER PROPOSAL		DATE			
DESIGNED TD 5/13		CHECKED MAB 5/13							
DRAWN FLC 5/13		CHECKED TD 5/13							
TRACED --- ---		CHECKED --- ---		FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 24		TOTAL SHEETS 91	
QUANTITIES TD 6/13		CHECKED MAB 6/13							

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

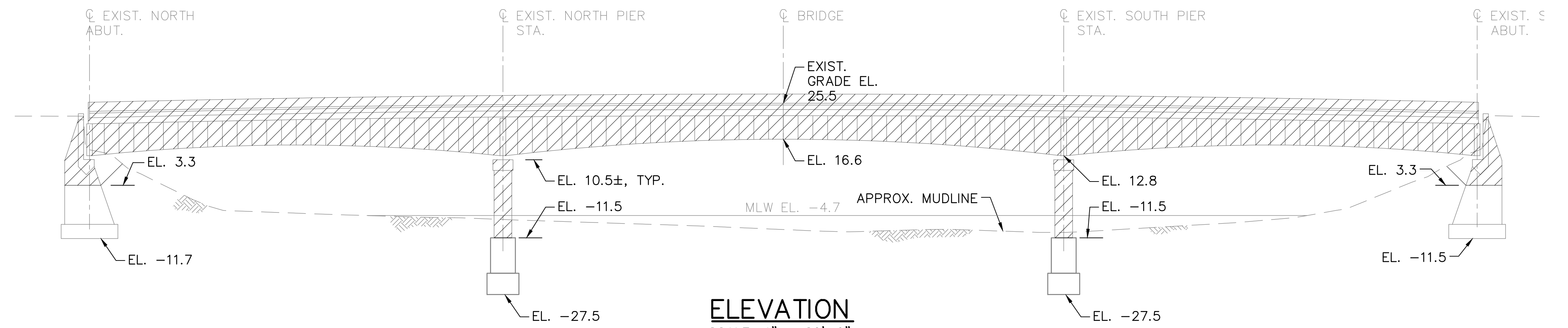
FILE NAME: R:\VO-064-Sagamore Creek\Drawings\05 Structural\11 BRIDGE REMOVAL PLAN AND DETAILS.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: CondeLF



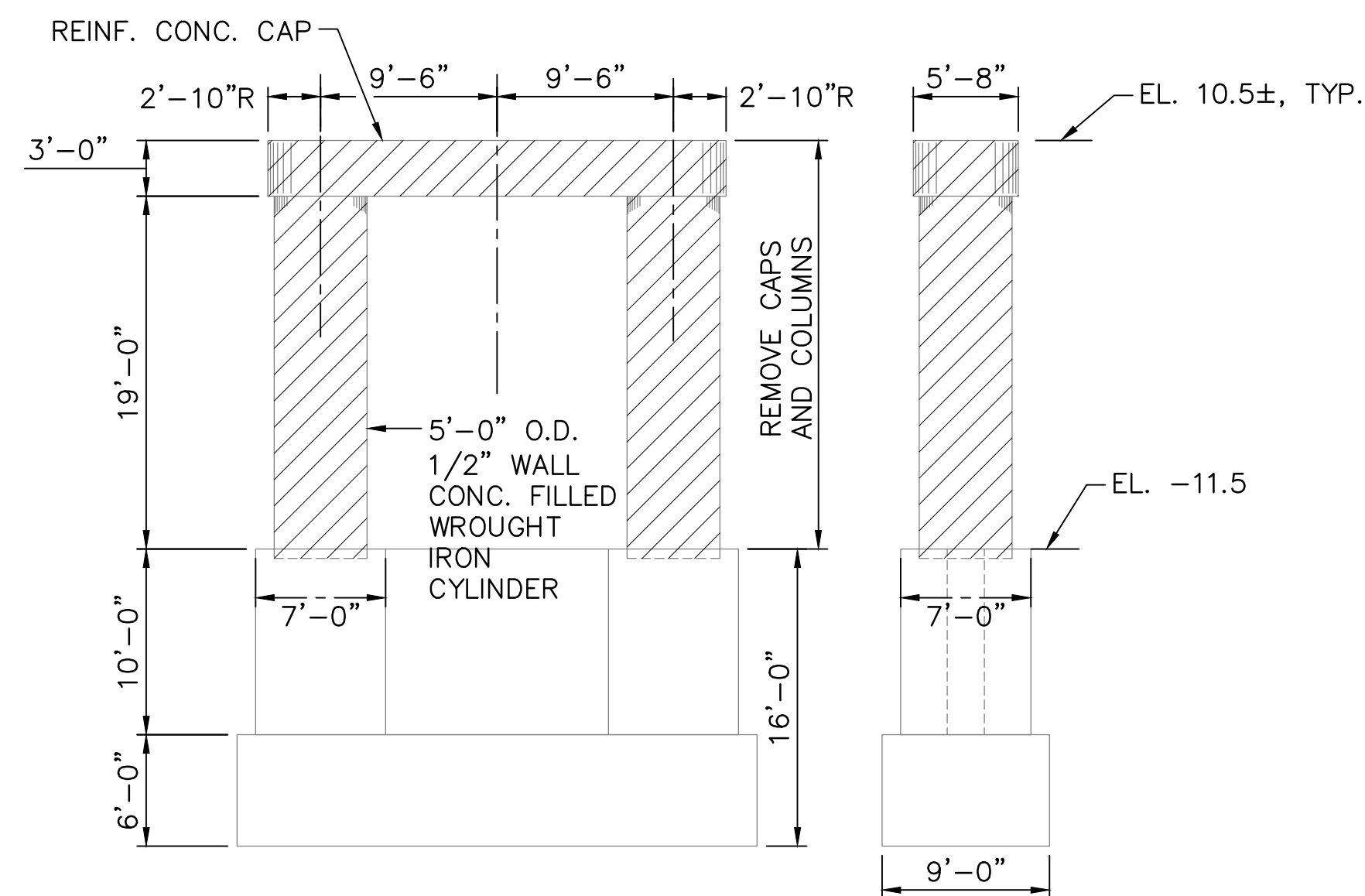
EXISTING BIRDGE SECTION REMOVAL
(LOOKING NORTH)
SCALE: 1/4" = 1'-0"



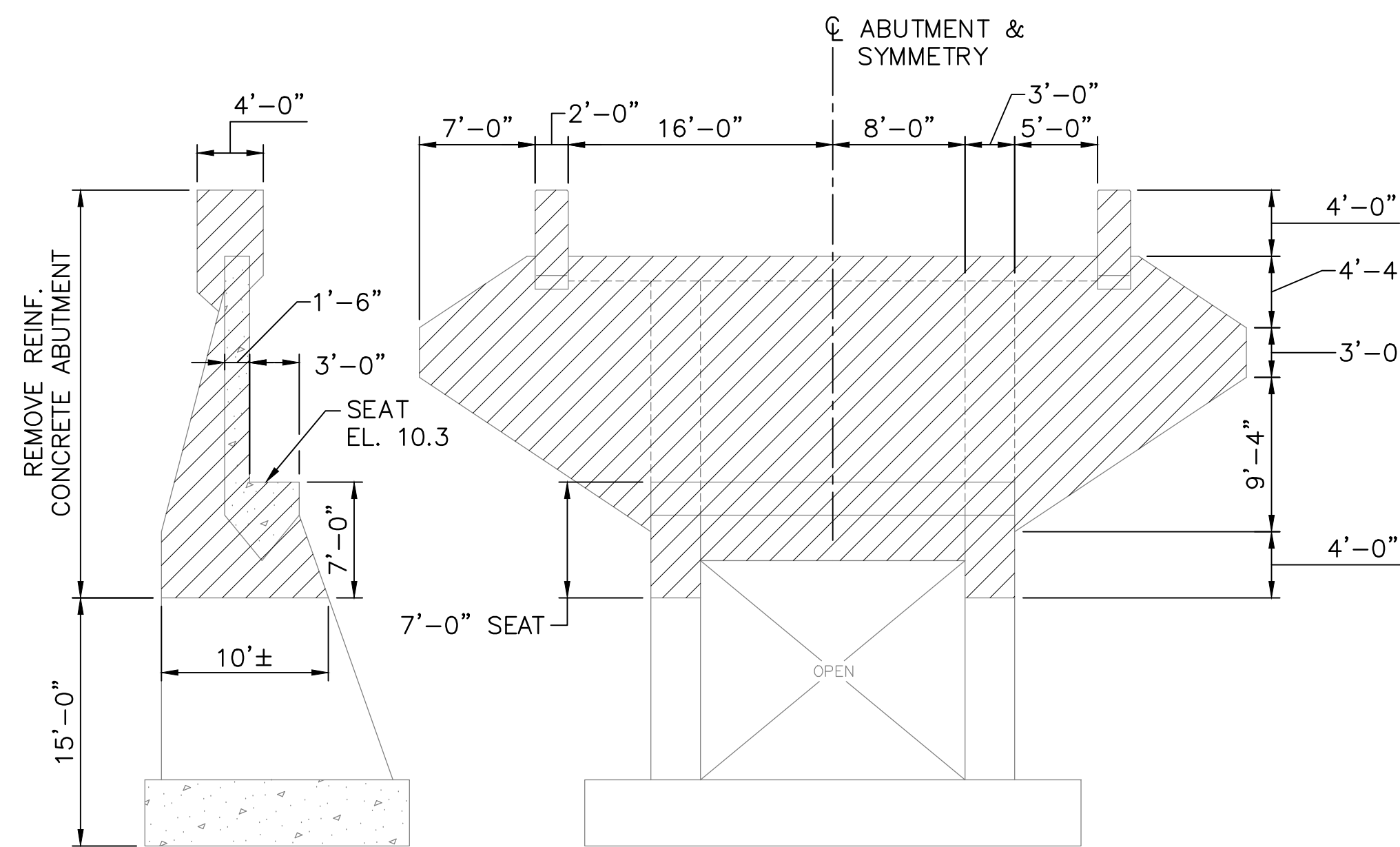
PLAN
SCALE: 1" = 20'-0"



ELEVATION
SCALE: 1" = 20'-0"



PIER ELEVATION
SCALE: 3/16" = 1'-0"



ABUTMENT ELEVATION
SCALE: 3/16" = 1'-0"

NOTES:

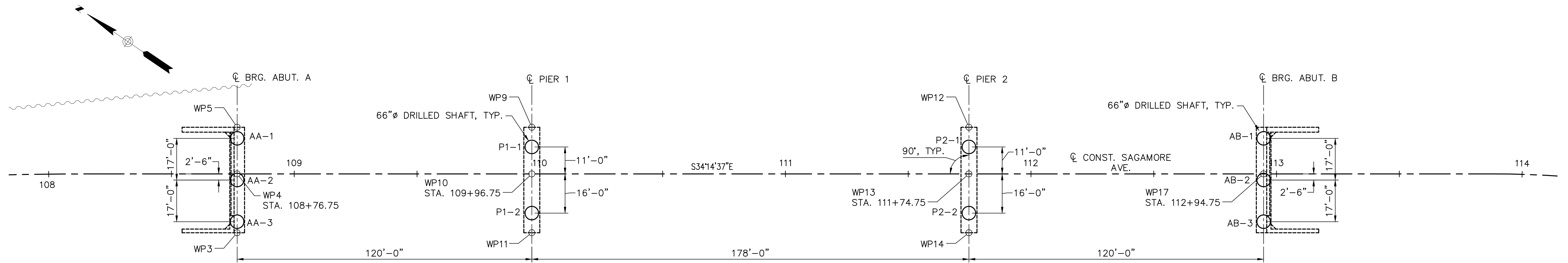
1. INFORMATION SHOWN IS TAKEN FROM ORIGINAL CONSTRUCTIONS PLANS AND ADJUSTED FOR PROJECT DATUM.
2. CONTRACTOR SHALL VERIFY RELEVANT INFORMATION PRIOR TO BEGINNING THE WORK.
3. EXCAVATION TO REMOVE TOP OF EXISTING ABUTMENT SHALL BE BACKFILLED WITH COMPACTED GRANULAR BACKFILL, SUBSIDIARY TO ITEM 502.

LEGEND:

- STRUCTURE REMOVAL
- STRUCTURE TO REMAIN

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493							
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK											
BRIDGE REMOVAL PLAN AND DETAILS										BRIDGE SHEET 11 OF 41	
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE					
AS NOTED		TD	5/13	CHECKED	MAB	5/13					
		FLC	5/13	CHECKED	TD	5/13					
TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS	
QUANTITIES	TD	6/13	CHECKED	MAB	6/13	X-A000(417)		25		91	

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



DRILLED SHAFT LAYOUT PLAN

SCALE: 1" = 20'

DRILLED SHAFT SUMMARY TABLE

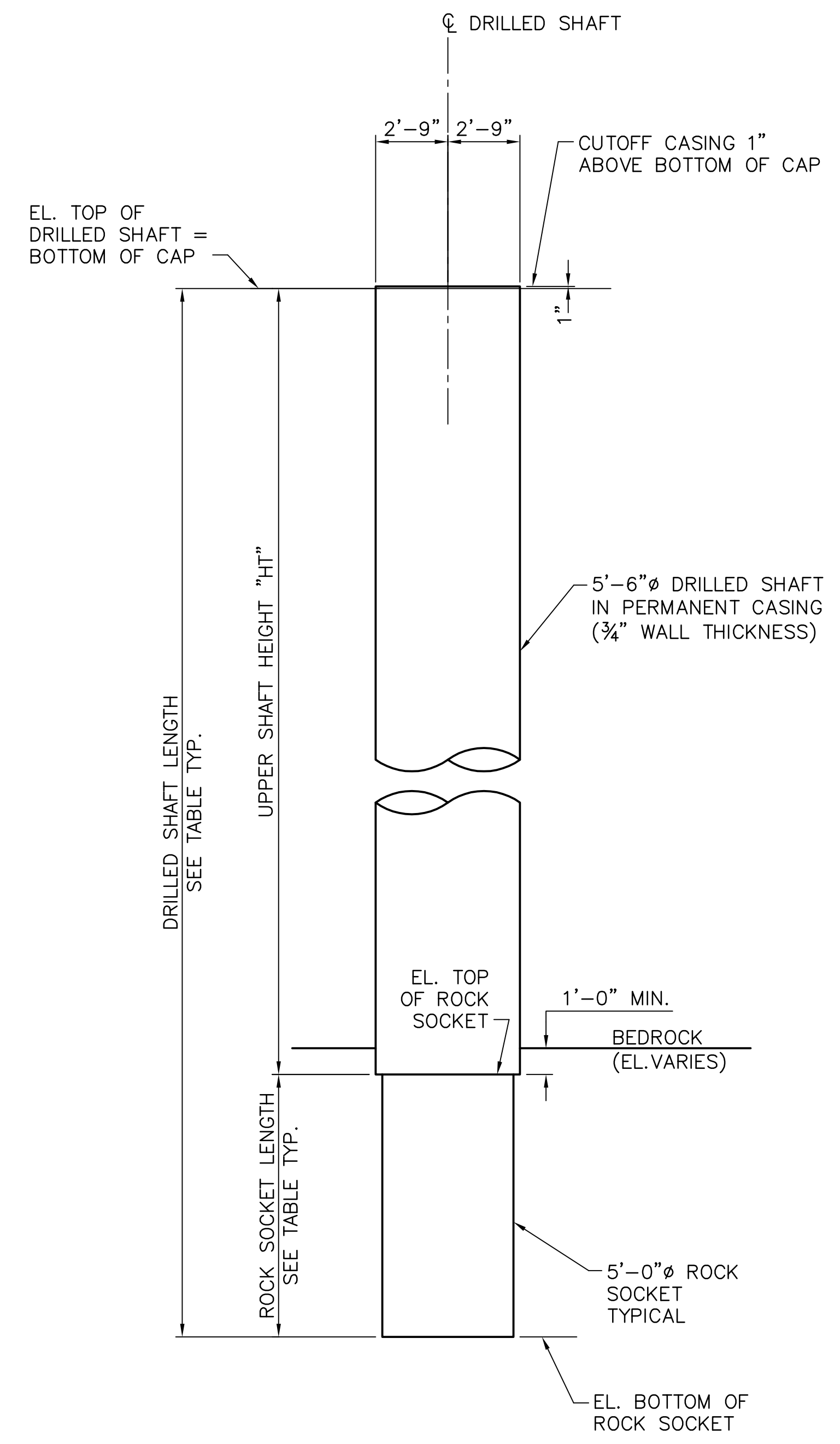
SHAFT	SHAFT DIA. (IN)	ROCK SOCKET DIA. (IN)	TOP OF SHAFT ELEV. (FT)	EST. TOP OF ROCK SOCKET ELEV. (FT)	BOTTOM OF ROCK SOCKET ELEV. (FT)	EST. ROCK SOCKET LENGTH (FT)	EST. UPPER SHAFT LENGTH (FT)	DRILLED SHAFT LENGTH (FT)	VERTICAL BARS, NO. AND SIZE	SERVICE AXIAL LOAD (K)	STRENGTH AXIAL LOAD (K)
AA-1	66	60	7.50	-8.00	-20.00	12.0	15.50	27.50	66-#10	700	920
AA-2	66	60	7.50	-13.60	-25.60	12.0	21.10	33.10	66-#10	700	920
AA-3	66	60	7.50	-19.20	-31.20	12.0	26.70	38.70	66-#10	700	920
P1-1	66	60	8.41	-30.10	-42.10	12.0	38.51	50.51	24-#10	1700	2230
P1-2	66	60	8.41	-28.50	-40.50	12.0	36.91	48.91	24-#10	1700	2230
P2-1	66	60	8.21	-39.70	-51.70	12.0	47.91	59.91	24-#10	1700	2230
P2-2	66	60	8.21	-44.50	-56.50	12.0	52.71	64.71	24-#10	1700	2230
AB-1	66	60	6.5	-11.50	-23.50	12.0	18.00	30.00	66-#10	700	920
AB-2	66	60	6.5	-16.40	-28.50	12.0	22.90	34.90	66-#10	700	920
AB-3	66	60	6.5	-21.40	-33.40	12.0	27.90	39.90	66-#10	700	920

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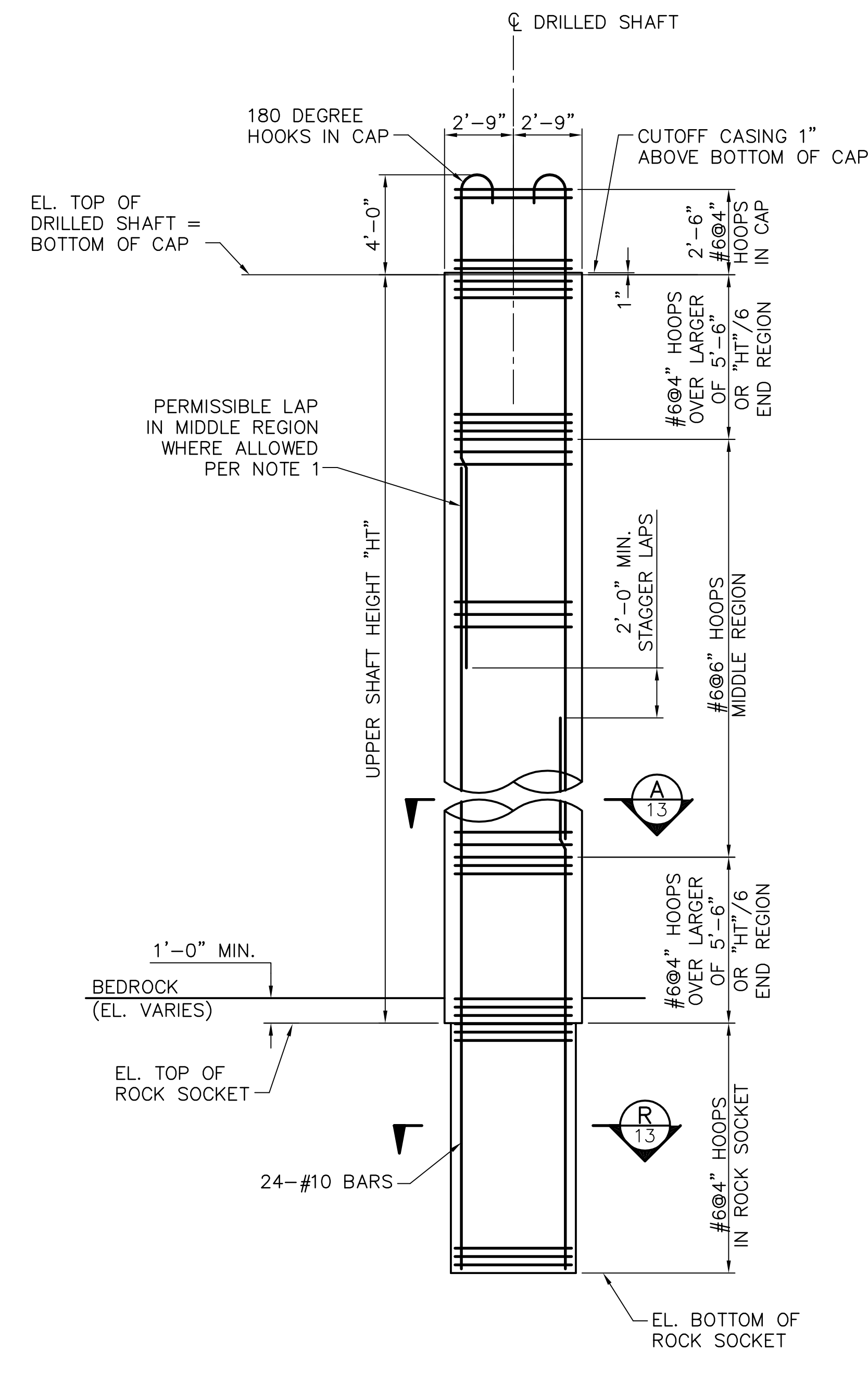
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
DRILLED SHAFT LAYOUT					
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
FEDERAL PROJECT NO. X-A000(417)				SHEET NO. 26	TOTAL SHEETS 91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

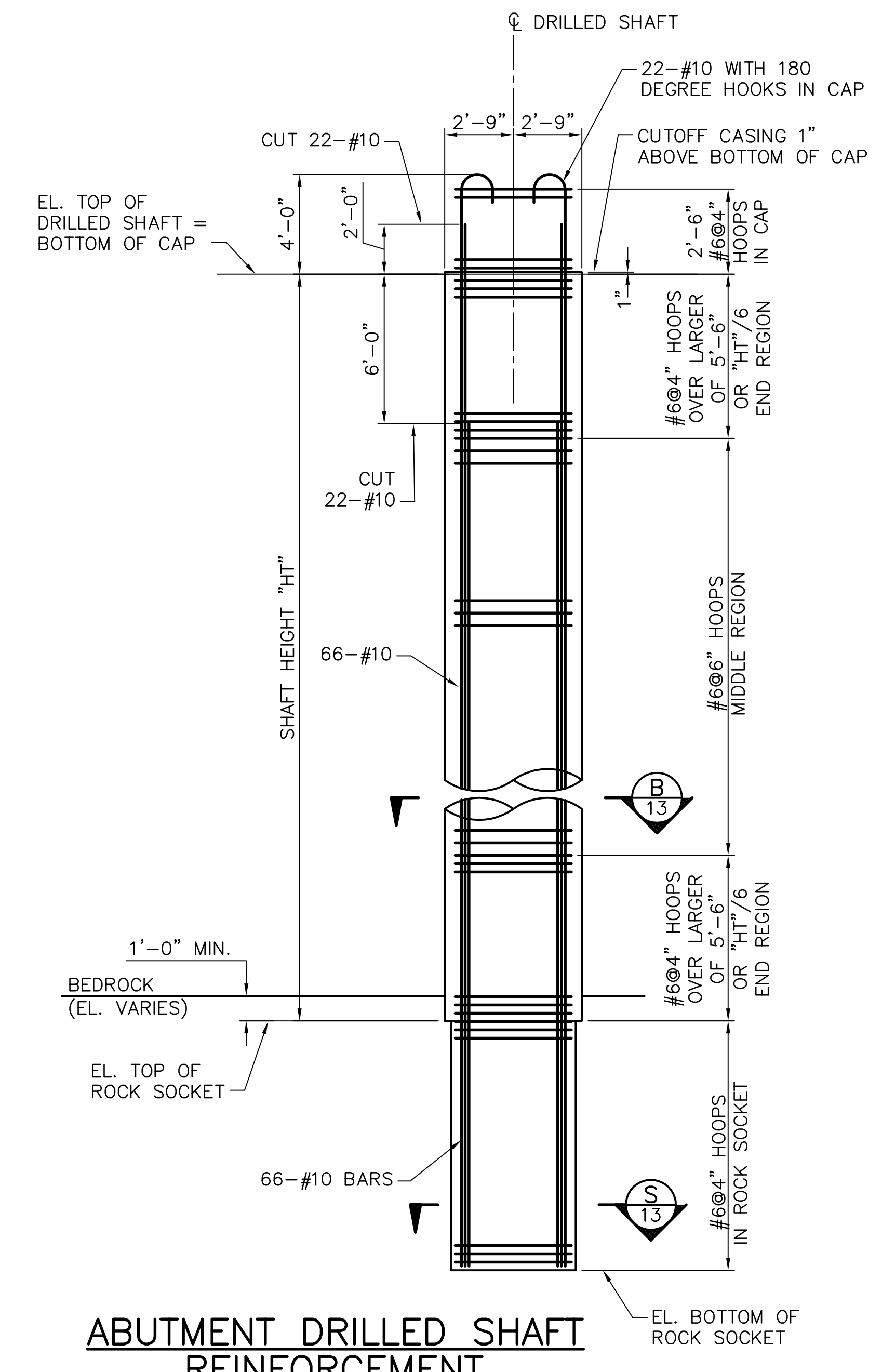
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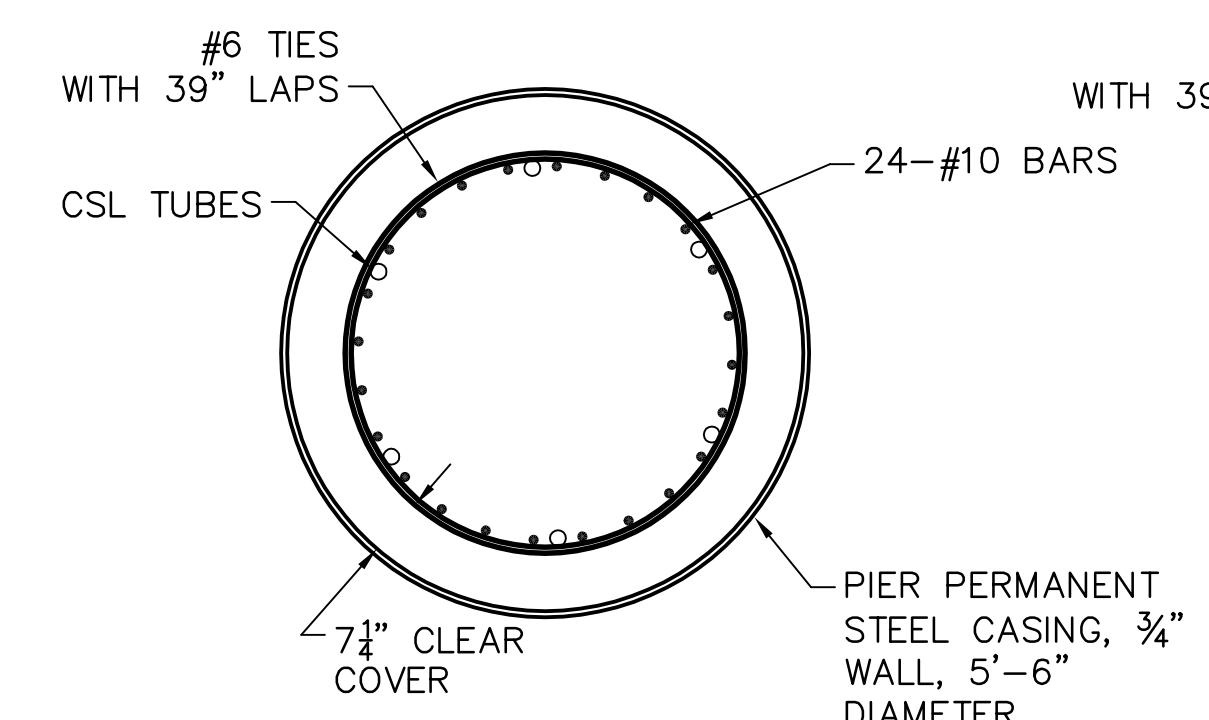
DRILLED SHAFT DETAILS
SCALE: 1/4" = 1'-0"



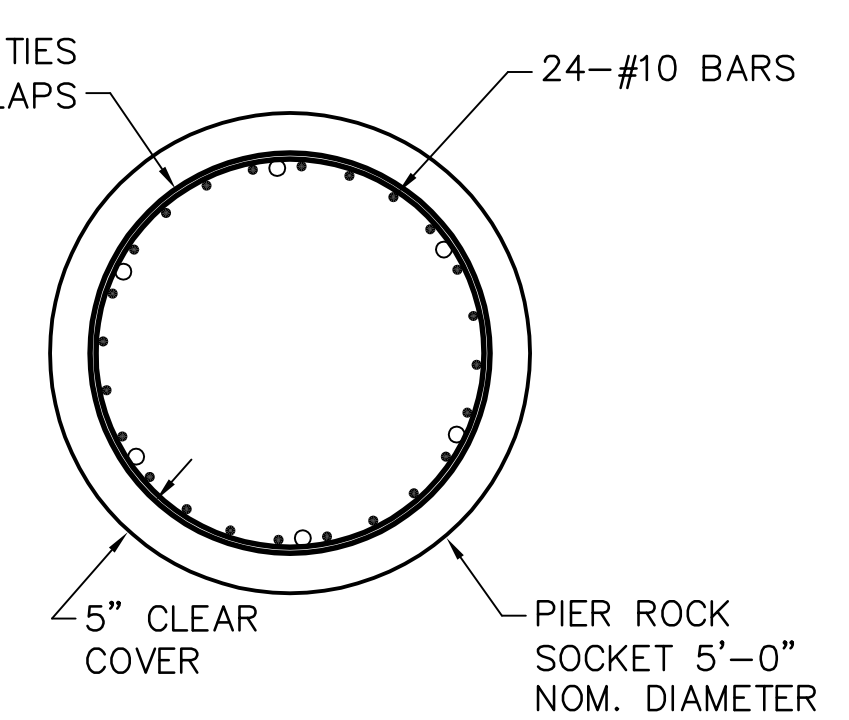
PIER DRILLED SHAFT REINFORCEMENT
SCALE: 1/4" = 1'-0"



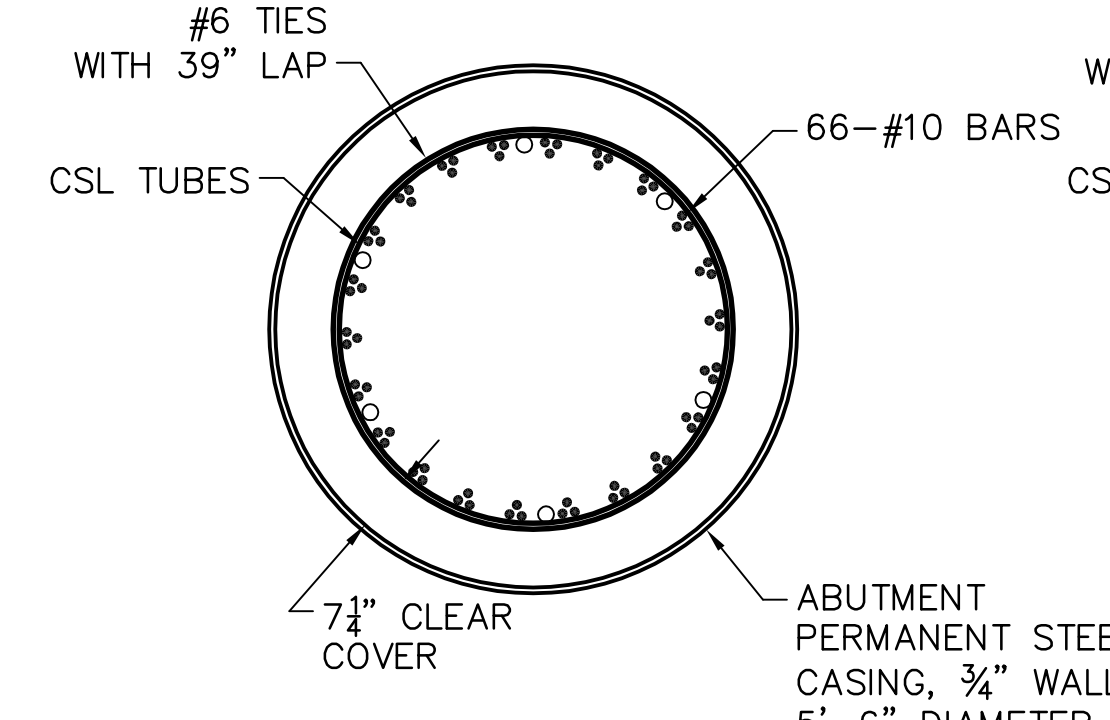
ABUTMENT DRILLED SHAFT REINFORCEMENT
SCALE: 1/4" = 1'-0"



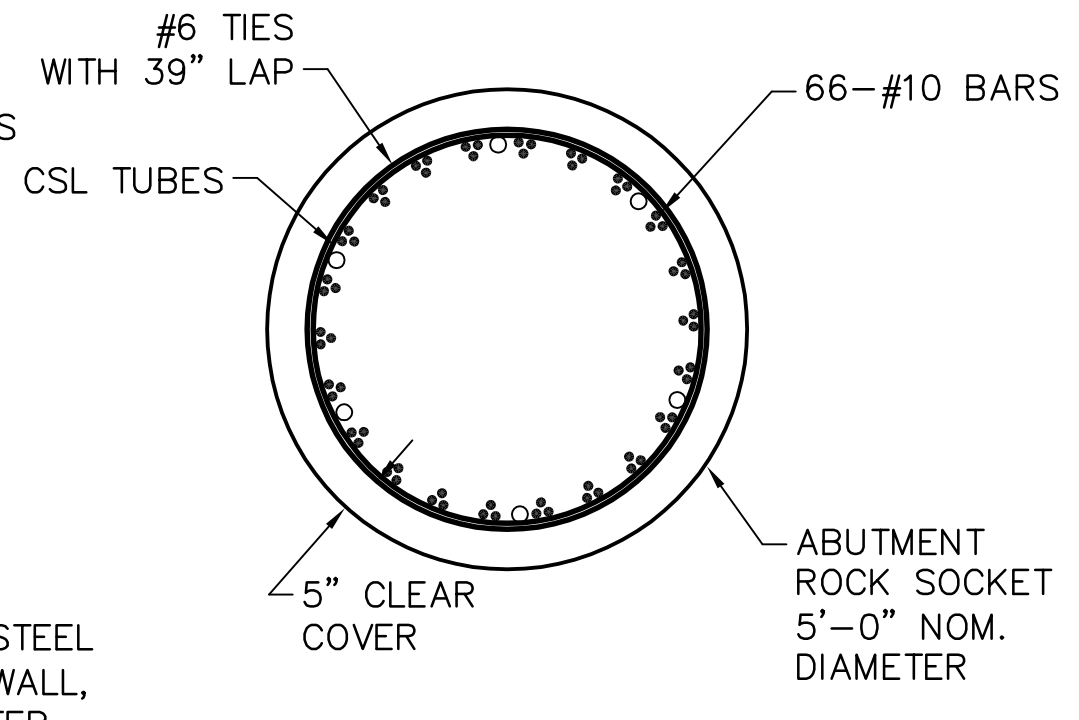
SECTION A
SCALE: 1/2" = 1'-0"



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



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



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

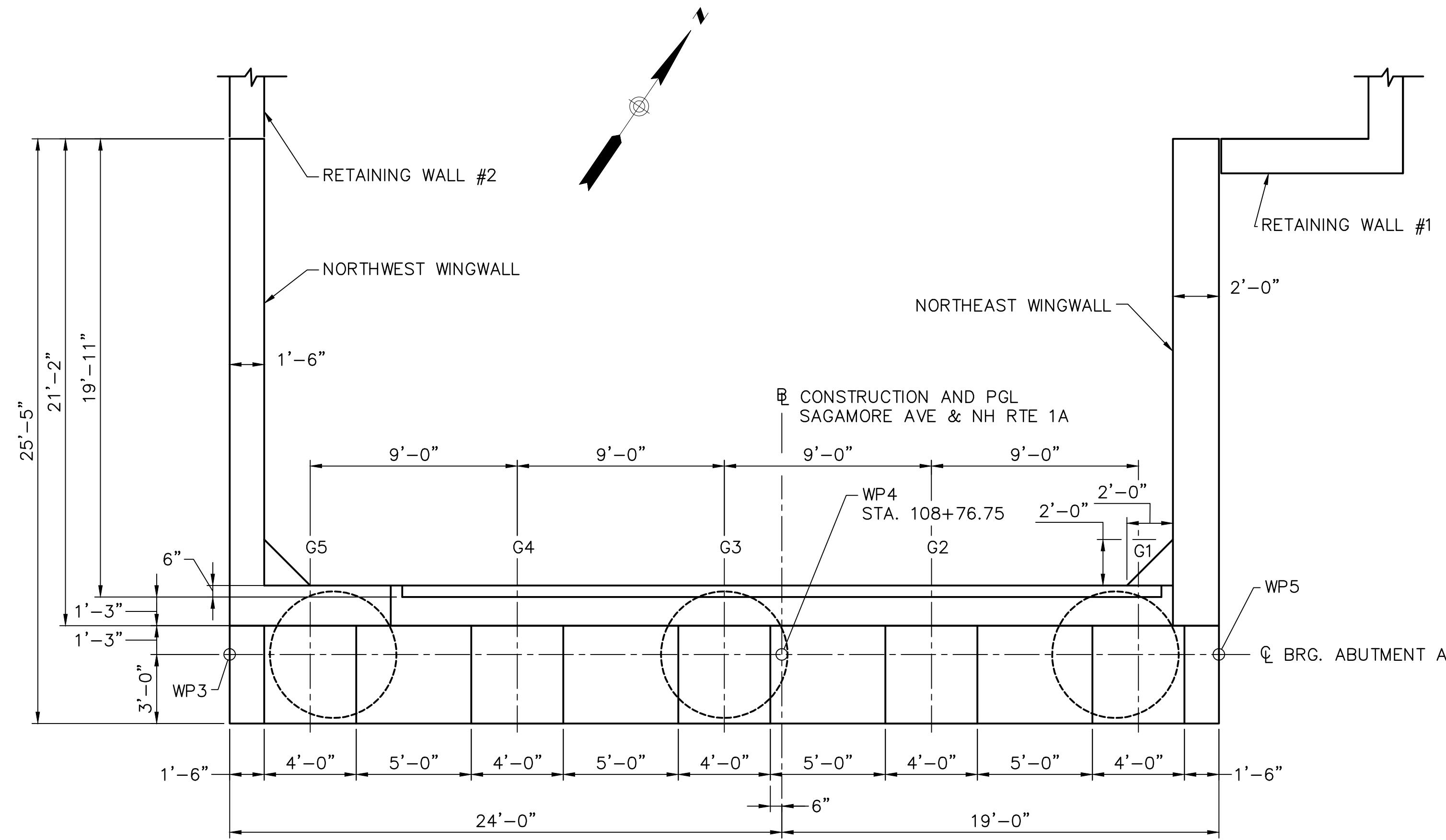
NOTES:

1. SPLICES IN SHAFT LONGITUDINAL BARS ARE PERMISSIBLE IN THE MIDDLE REGION, PROVIDED THAT 8'-0" LAP LENGTHS FOR #10 BARS SHALL BE CONTAINED WITHIN THE MIDDLE REGION, SPLICES SHALL BE STAGGERED, AND OFFSET 2'-0" VERTICALLY.
2. WHERE COLUMN LENGTH IS TOO SHORT TO MEET THE ABOVE SPLICE CRITERIA, BARS SHALL BE CONTINUOUS FULL HEIGHT, OR SPLICED WITH MECHANICAL COUPLERS IN THE MIDDLE REGION, WITH ADJACENT SPLICES STAGGER AND OFFSET 2'-0" VERTICALLY.
3. SPLICES ARE NOT ALLOWED IN THE SHAFT END REGIONS.
4. ALL BARS AND MECHANICAL SPLICES IN DRILLED SHAFTS AND ROCK SOCKETS SHALL BE EPOXY COATED. MECHANICAL SPLICES SHALL BE SUBSIDIARY.
5. DO NOT FABRICATE REINFORCING STEEL UNTIL AFTER THE BOTTOM OF ROCK SOCKET ELEVATION HAS BEEN DETERMINED.

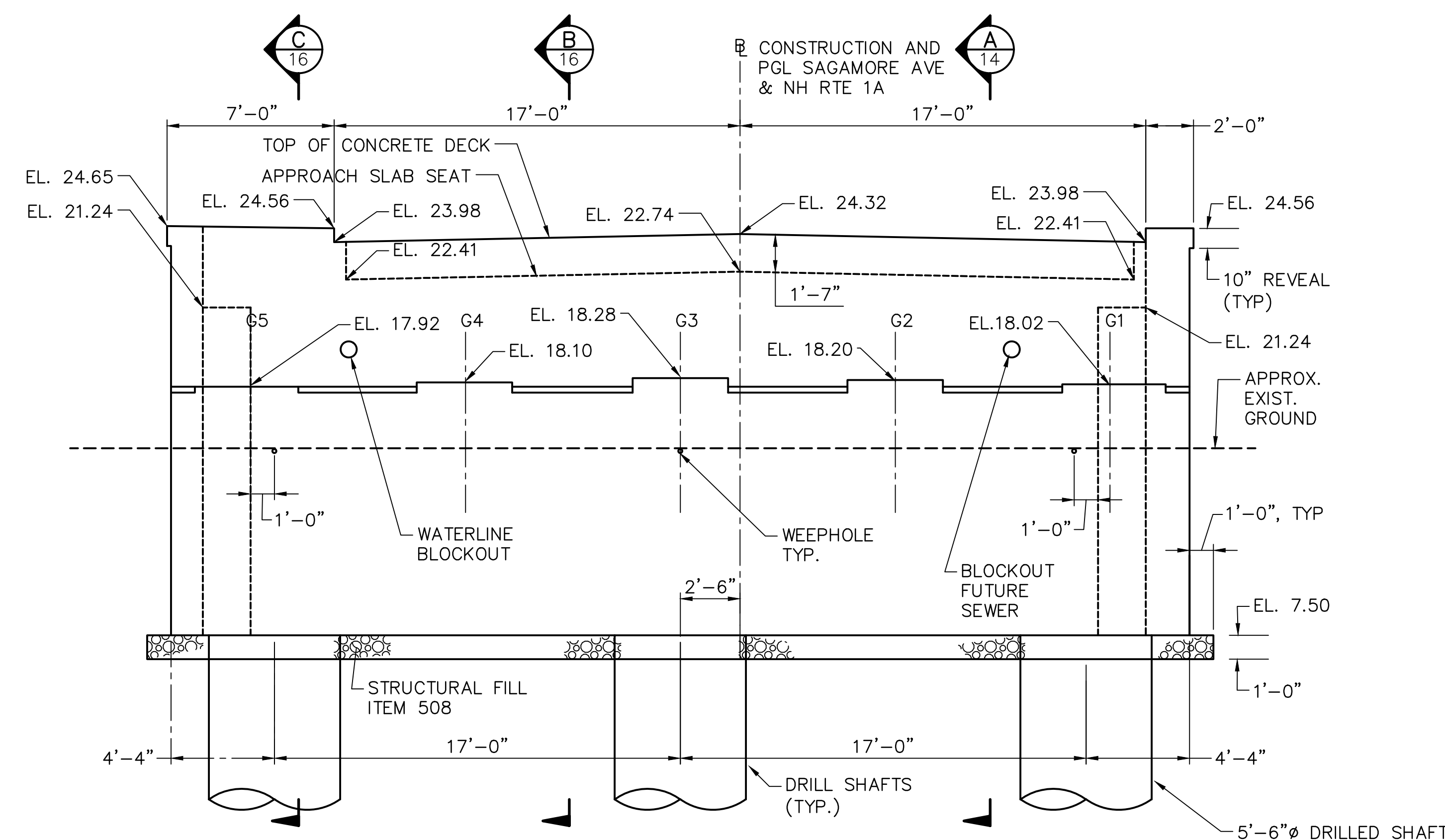
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN		PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493		BRIDGE SHEET			
LOCATION		SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK								13 OF 41	
DRILLED SHAFT DETAILS											
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL		DATE	
DESIGNED		TD 5/13		CHECKED		MAB 5/13					
DRAWN		FLC 5/13		CHECKED		TD 5/13					
TRACED		---		CHECKED		---		FEDERAL PROJECT NO.		SHEET NO.	
QUANTITIES		TD 6/13		CHECKED		MAB 6/13		X-A000(417)		27	
										TOTAL SHEETS	
										91	

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

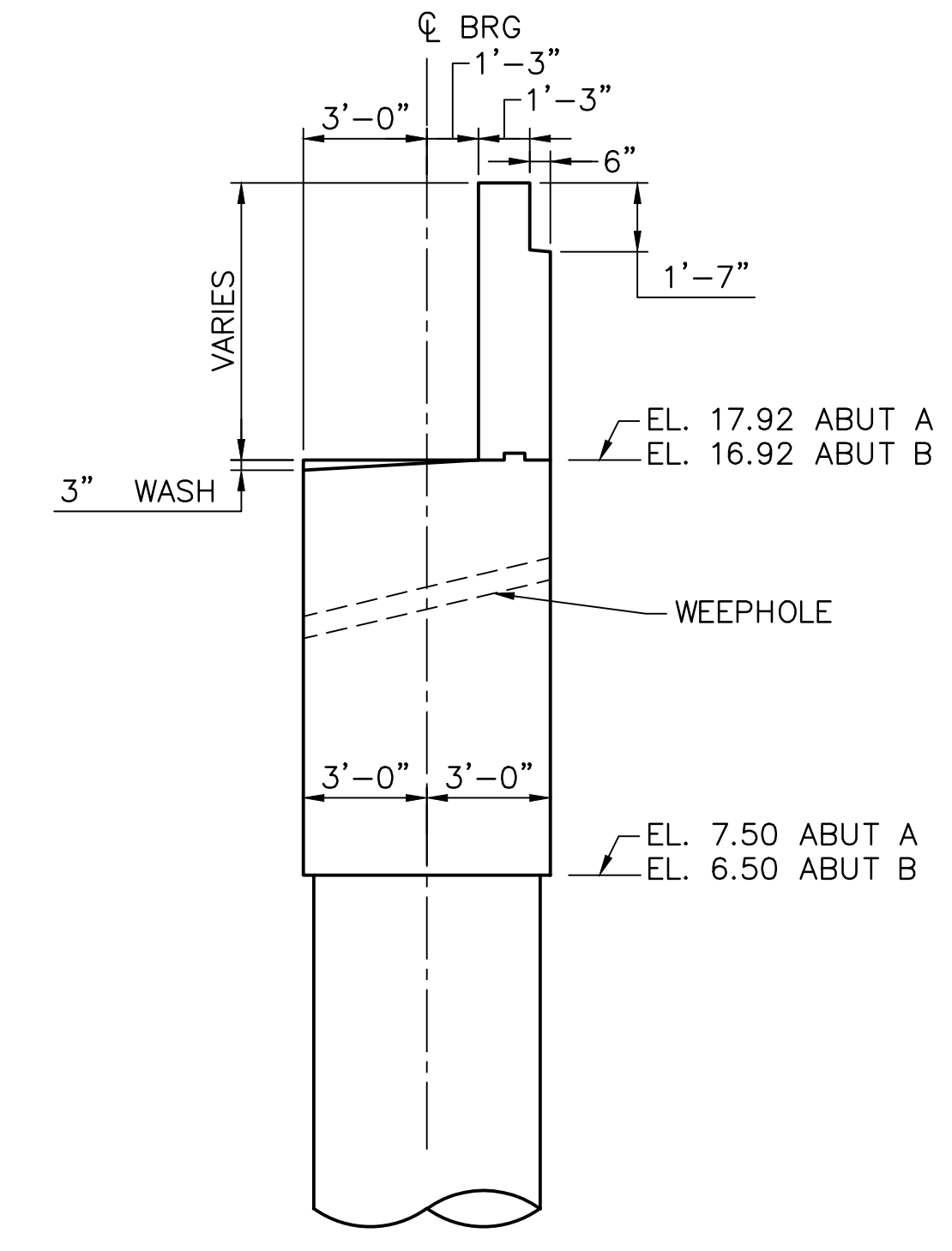
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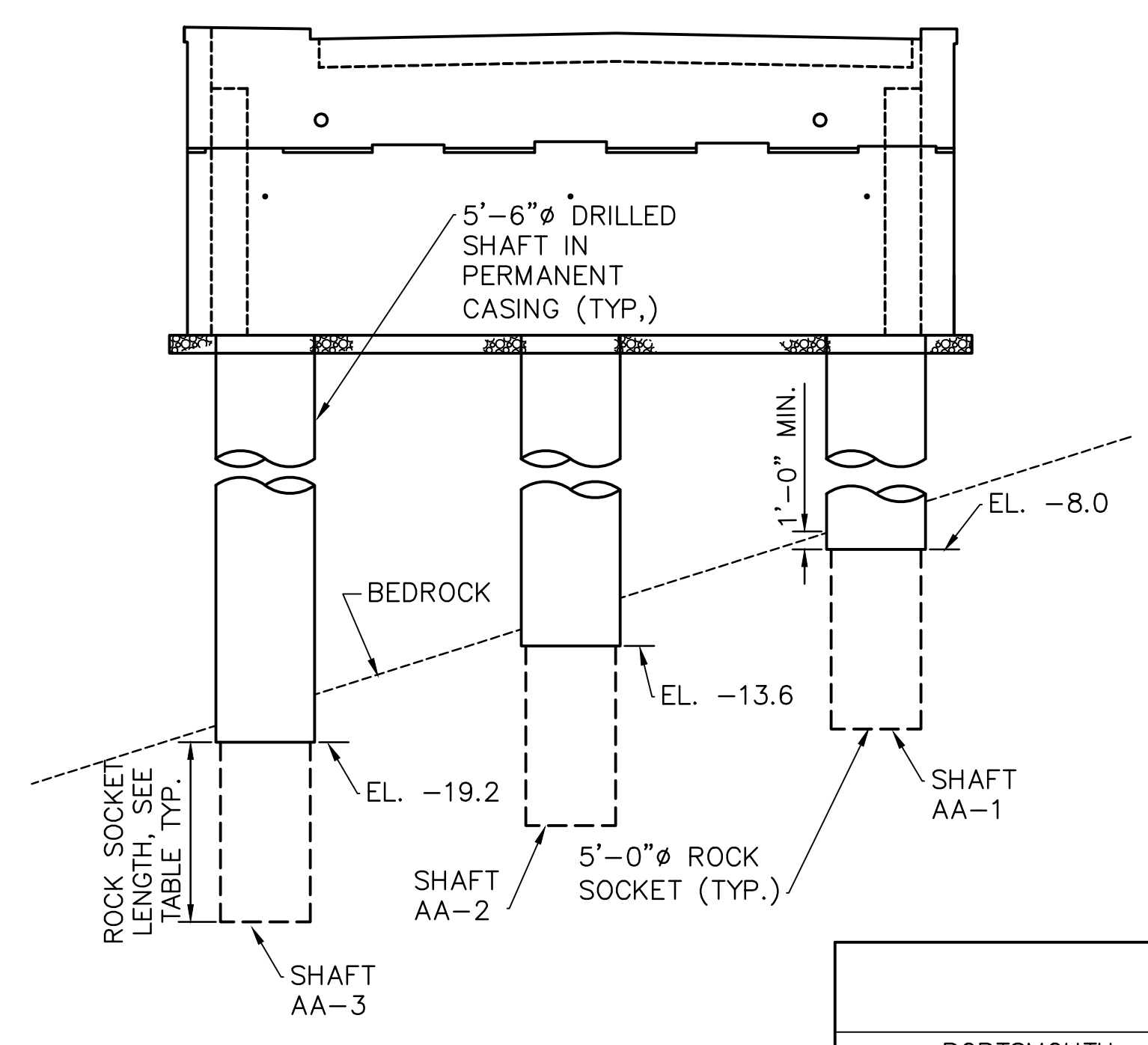
PLAN
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 1/4" = 1'-0"



SECTION
SCALE: 1/4" = 1'-0"



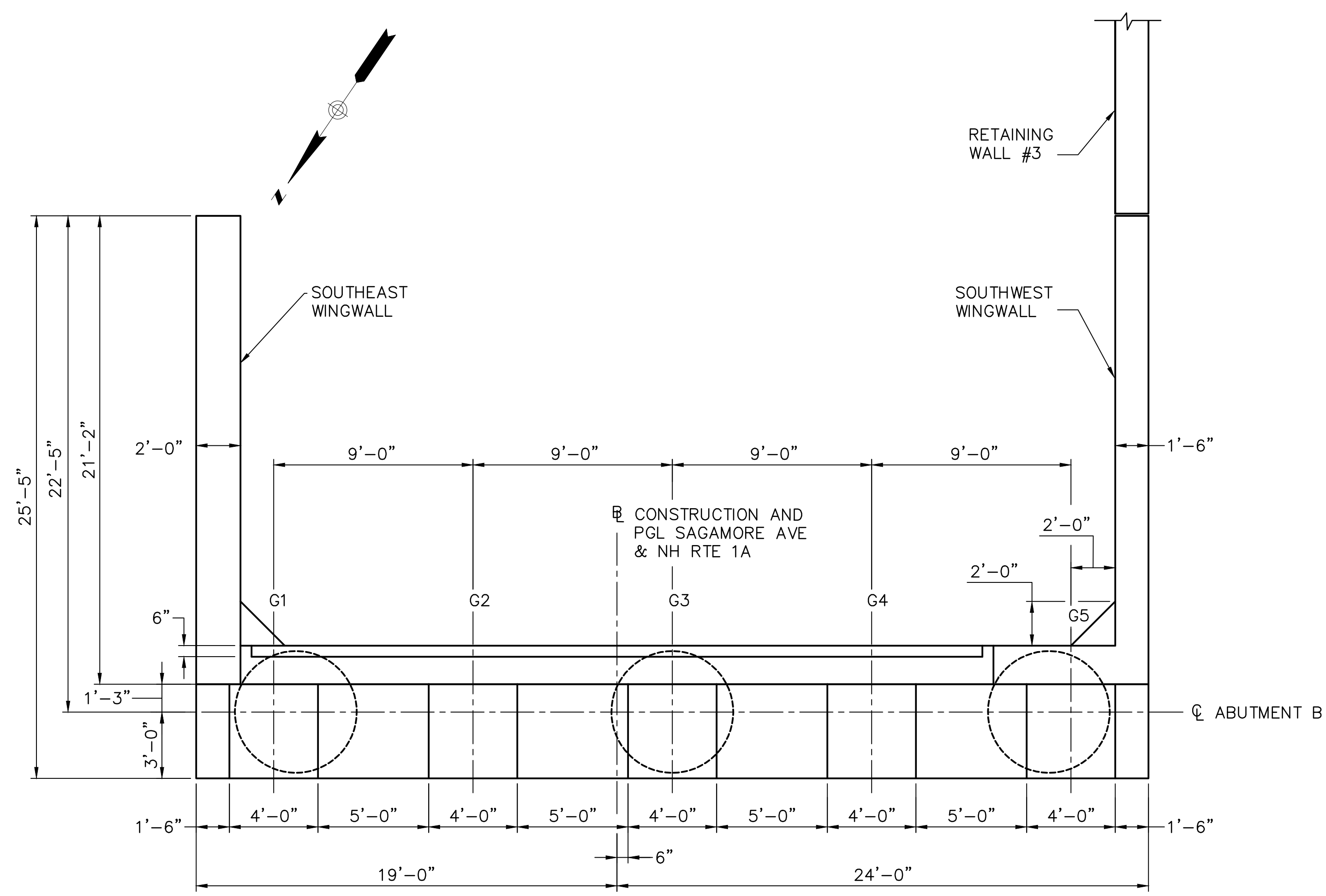
SHAFT ELEVATION
SCALE: 1/4" = 1'-0"

NOTES

- BEDROCK ELEVATIONS INTERPOLATED FROM BORINGS, ACTUAL ELEVATIONS MAY DIFFER. LENGTH OF DRIFT SHAFT AND REINFORCEMENT SHALL BE ADJUSTED FOR ACTUAL FIELD CONDITIONS.

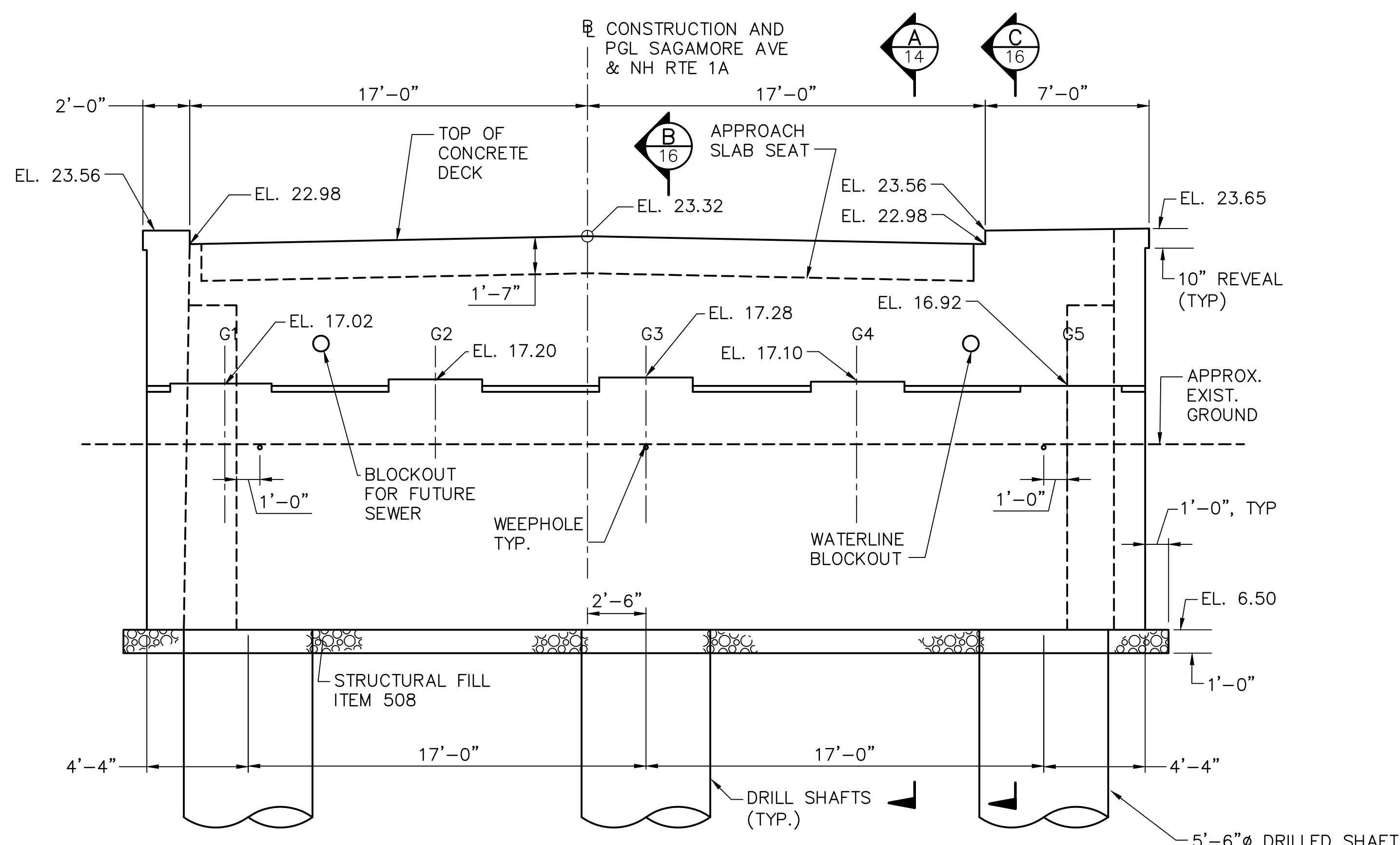
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH			BRIDGE NO. 198/034			STATE PROJECT 14493			BRIDGE SHEET		
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									14 OF 41		
ABUTMENT A PLAN AND ELEVATION											
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE					
DESIGNED	TD	5/13	CHECKED	MAB		5/13					
DRAWN	FLC	5/13	CHECKED	TD		5/13					
TRACED	---	---	CHECKED	---		---	FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS
QUANTITIES	TD	6/13	CHECKED	MAB		6/13	X-A000(417)		28		91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



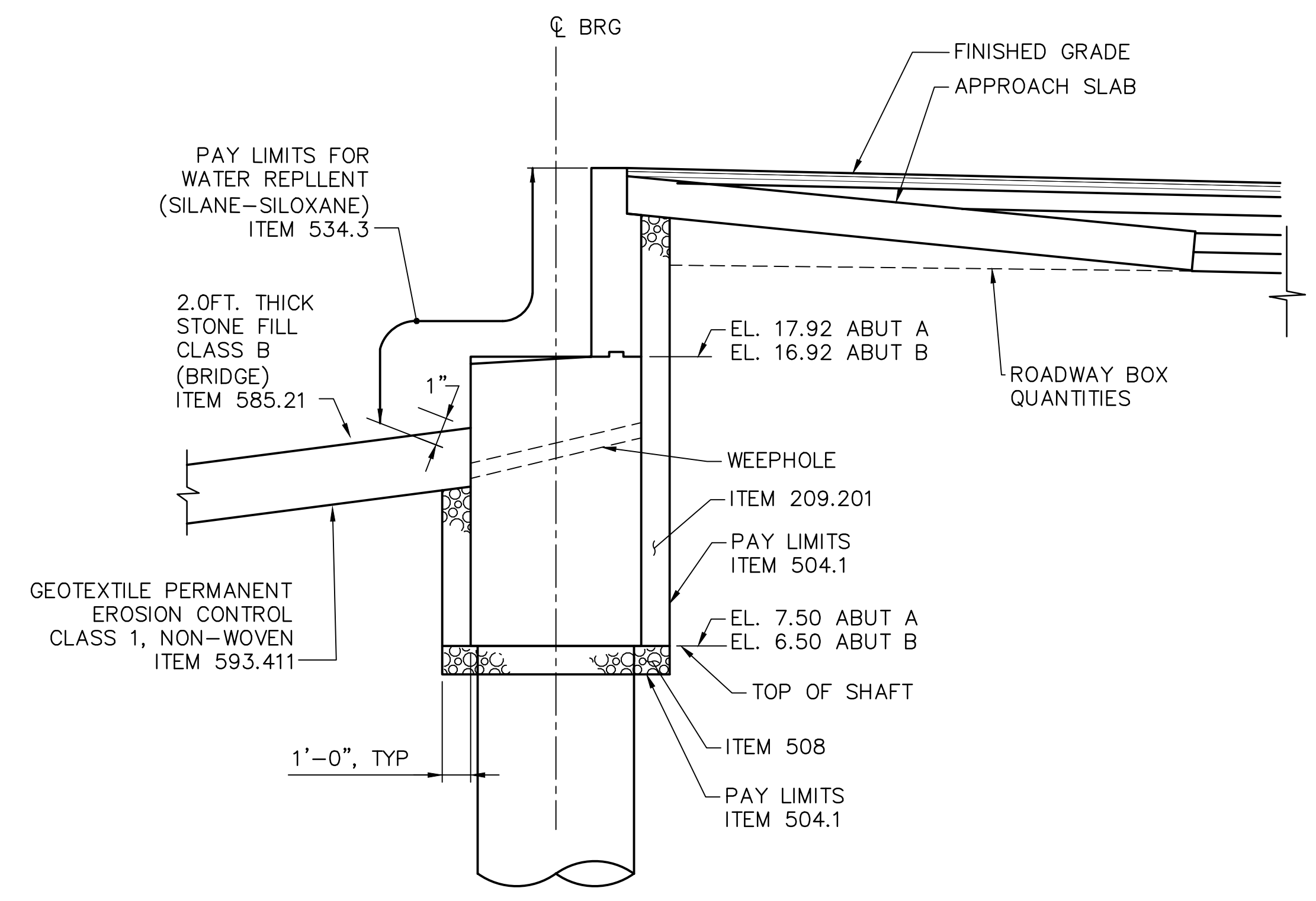
PLAN

SCALE: 1/4" = 1'-0"



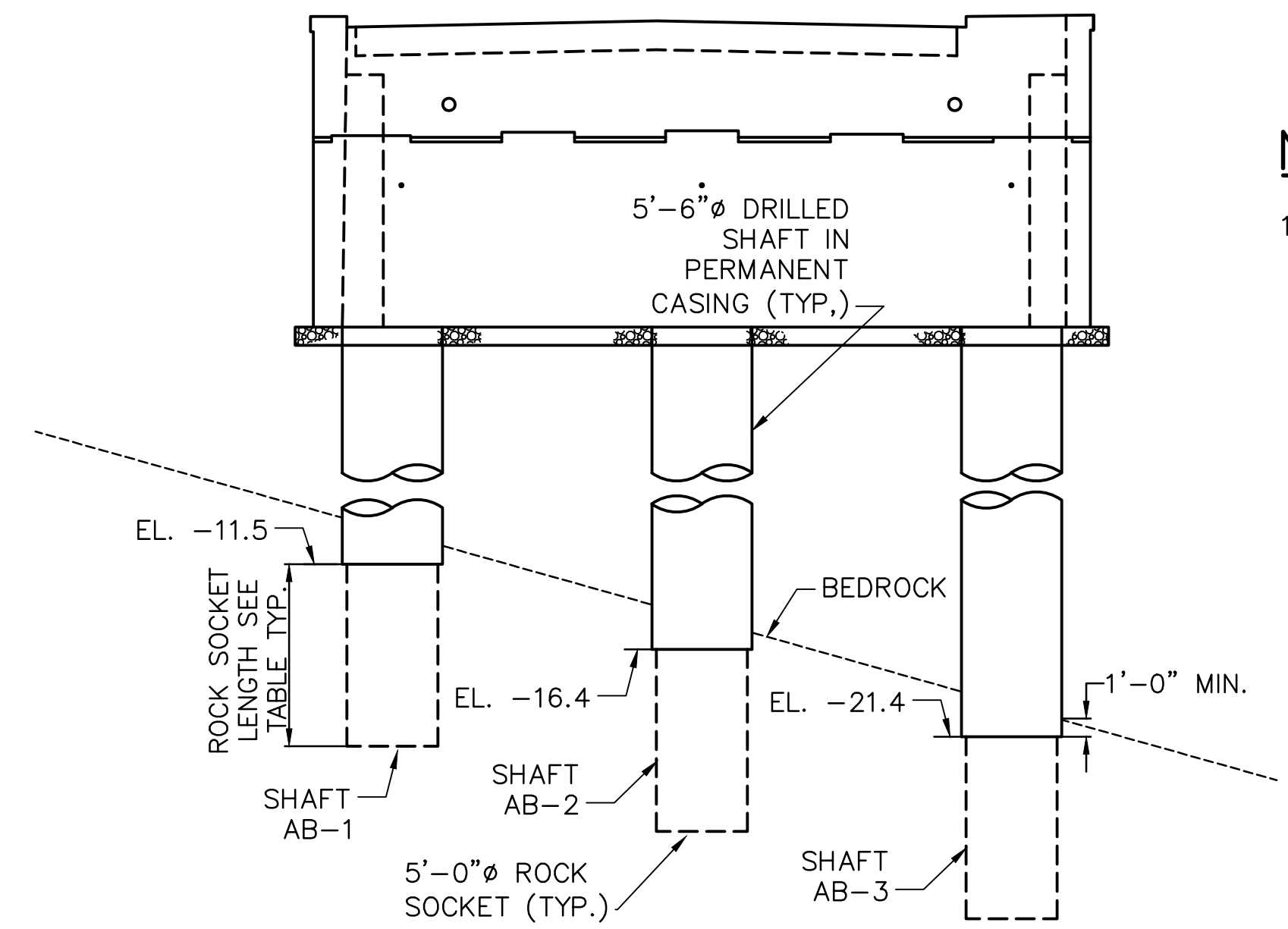
ELEVATION

SCALE: 1/4" = 1'-0"



SECTION

SCALE: 1/4" = 1'-0"



SHAFT ELEVATION

SCALE: 1/8" = 1'-0"

NOTES

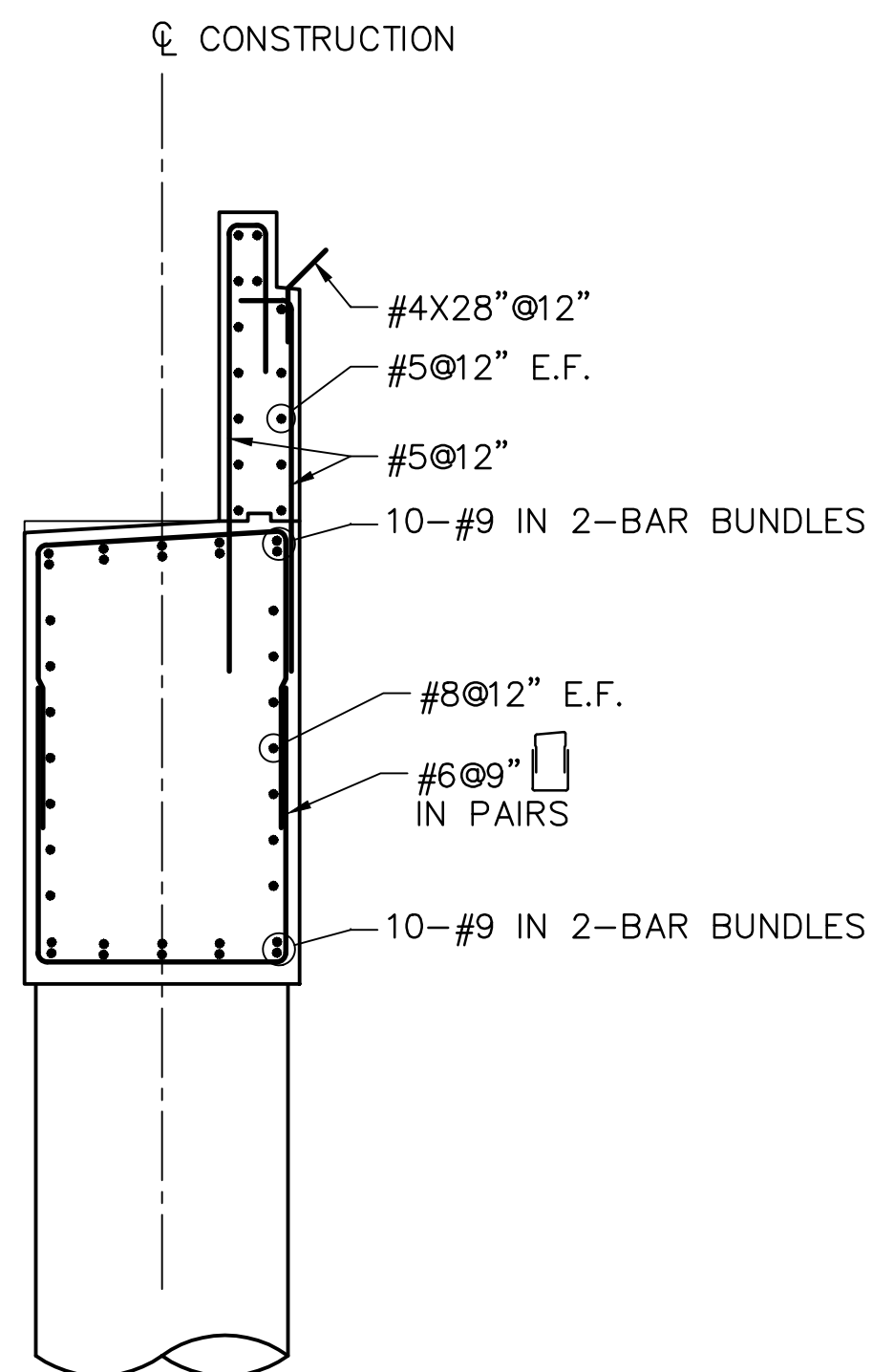
- BEDROCK ELEVATIONS INTERPOLATED FROM BORINGS, ACTUAL ELEVATIONS MAY DIFFER. LENGTH OF DRIFT SHAFT AND REINFORCEMENT SHALL BE ADJUSTED FOR ACTUAL FIELD CONDITIONS.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH			BRIDGE NO. 198/034			STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK											
ABUTMENT B PLAN AND ELEVATION											
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL		DATE	
DESIGNED		TD 5/13		CHECKED		MAB 5/13				BRIDGE SHEET	
DRAWN		FLC 5/13		CHECKED		TD 5/13				15 OF 41	
TRACED		---		CHECKED		---				FILE NUMBER	
QUANTITIES		TD 6/13		CHECKED		MAB 6/13				TOTAL SHEETS	
								FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 29	
										91	

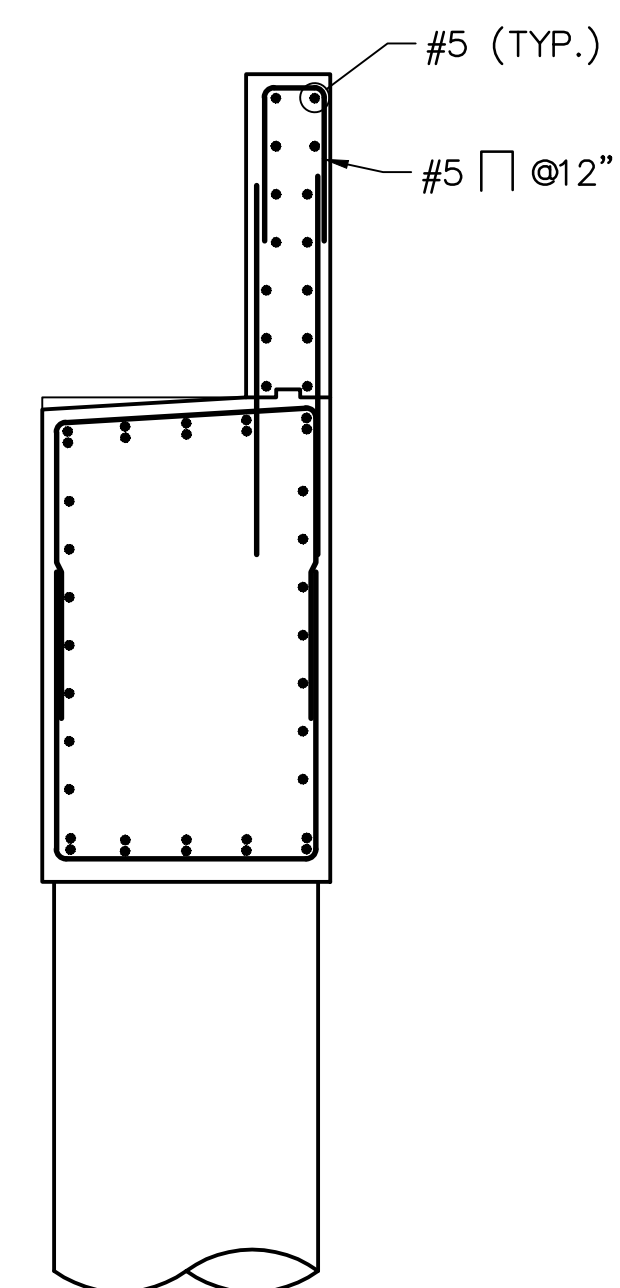
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\00-064-Sagamore Creek\CAD Drawings\05 Structural\15 ABUTMENT B PLAN AND ELEVATION.dwg PLOTTED: Wednesday, July 24, 2013 - 11:11am USER: Conde_F

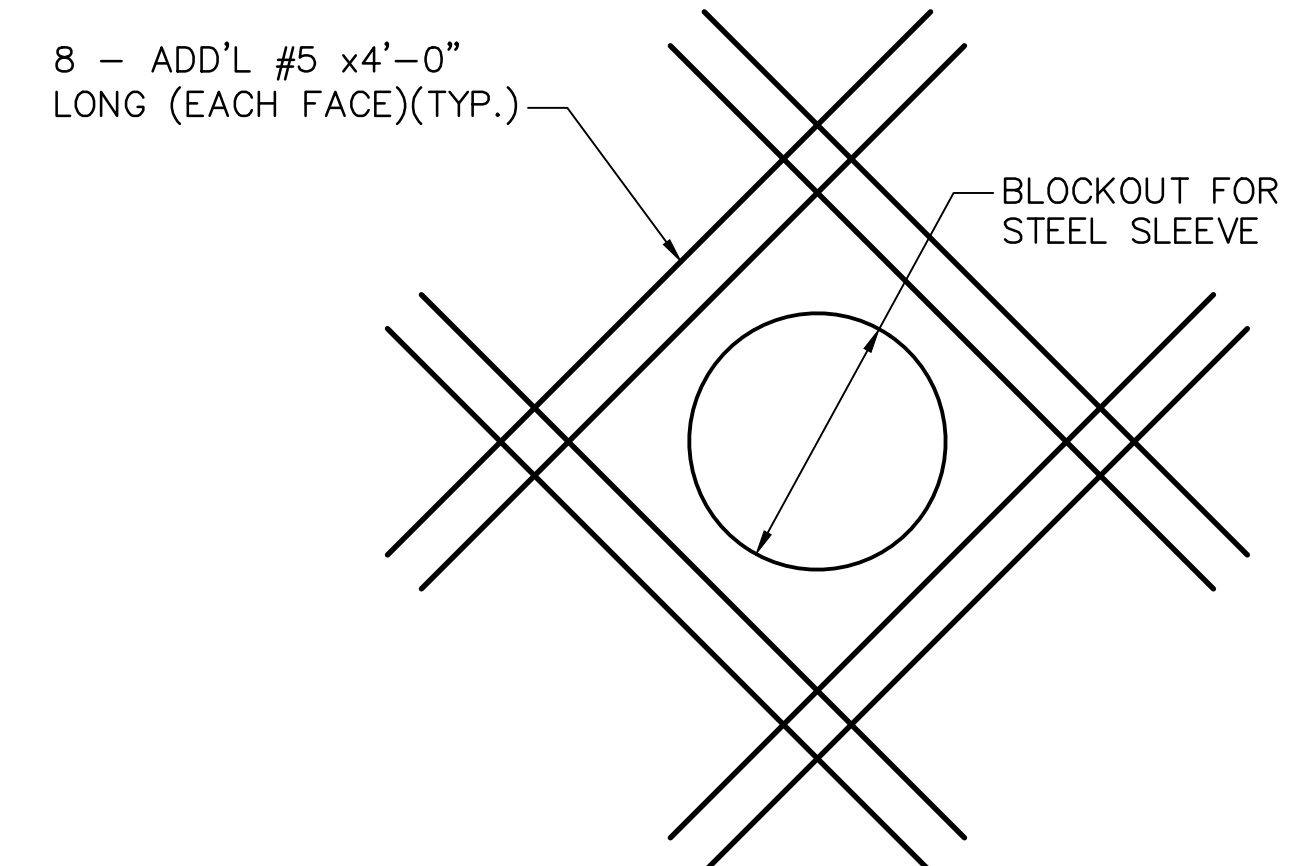
FILE NAME: R:\VC-064-Sagamore-Creek\CAD-Drawings\05-Structural\16-ABUTMENT SECTIONS AND DETAILS.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F



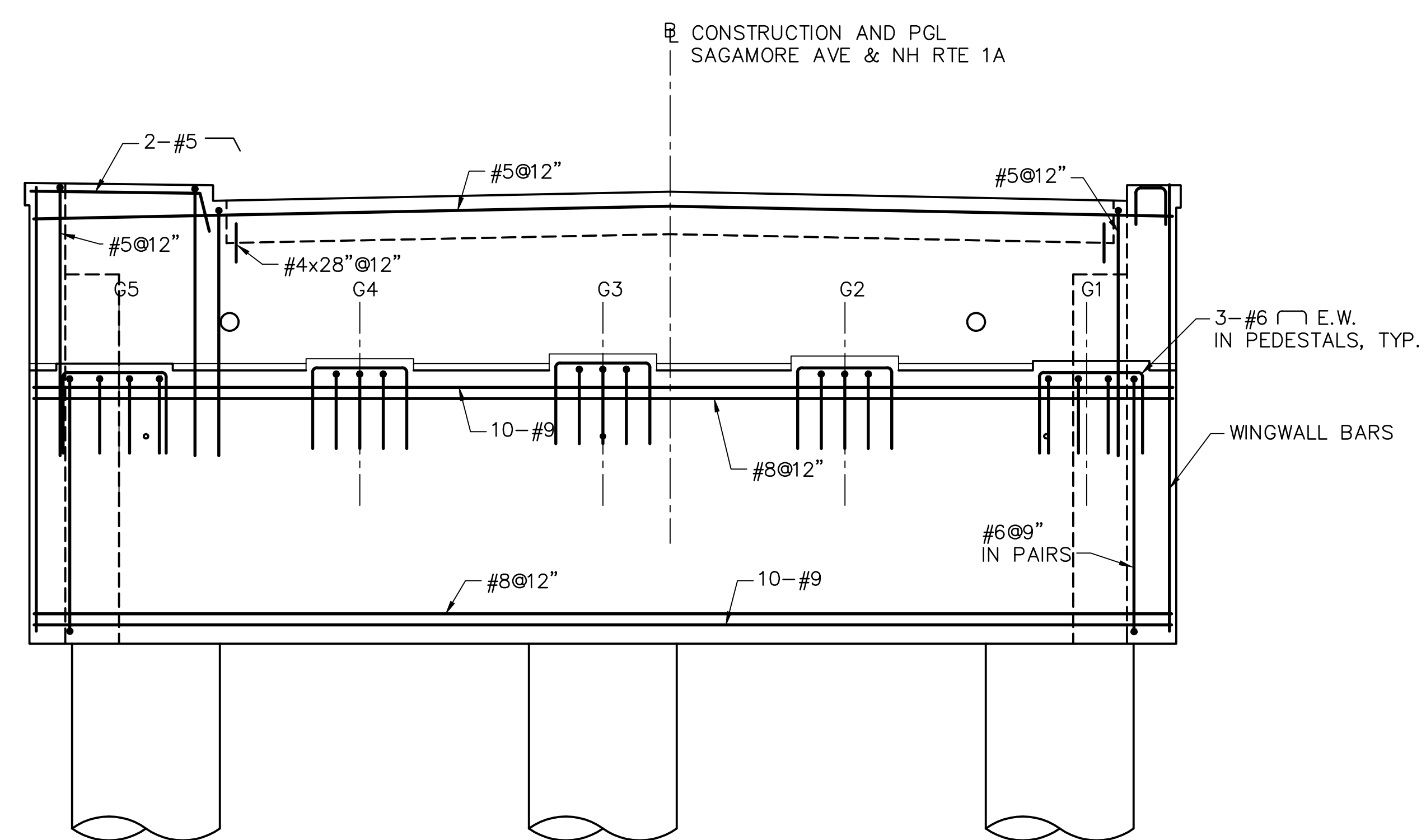
SECTION
SCALE: 1/4" = 1'-0"
B 14 B 15



SECTION
SCALE: 1/4" = 1'-0"
C 14 C 15



UTILITY BLOCK OUT DETAIL
SCALE: 1" = 1'-0"

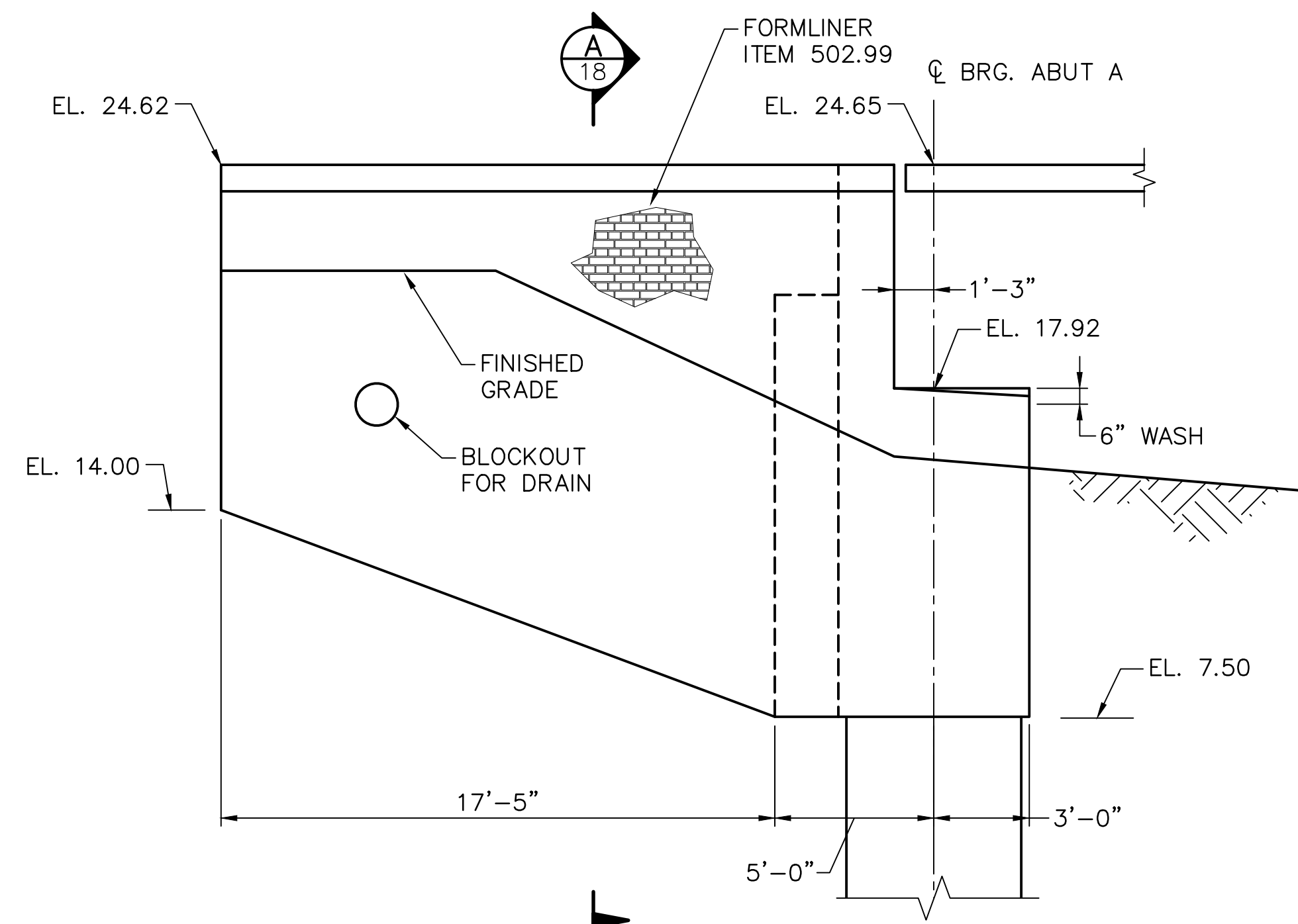


ABUTMENT ELEVATION
SCALE: 1/4" = 1'-0"

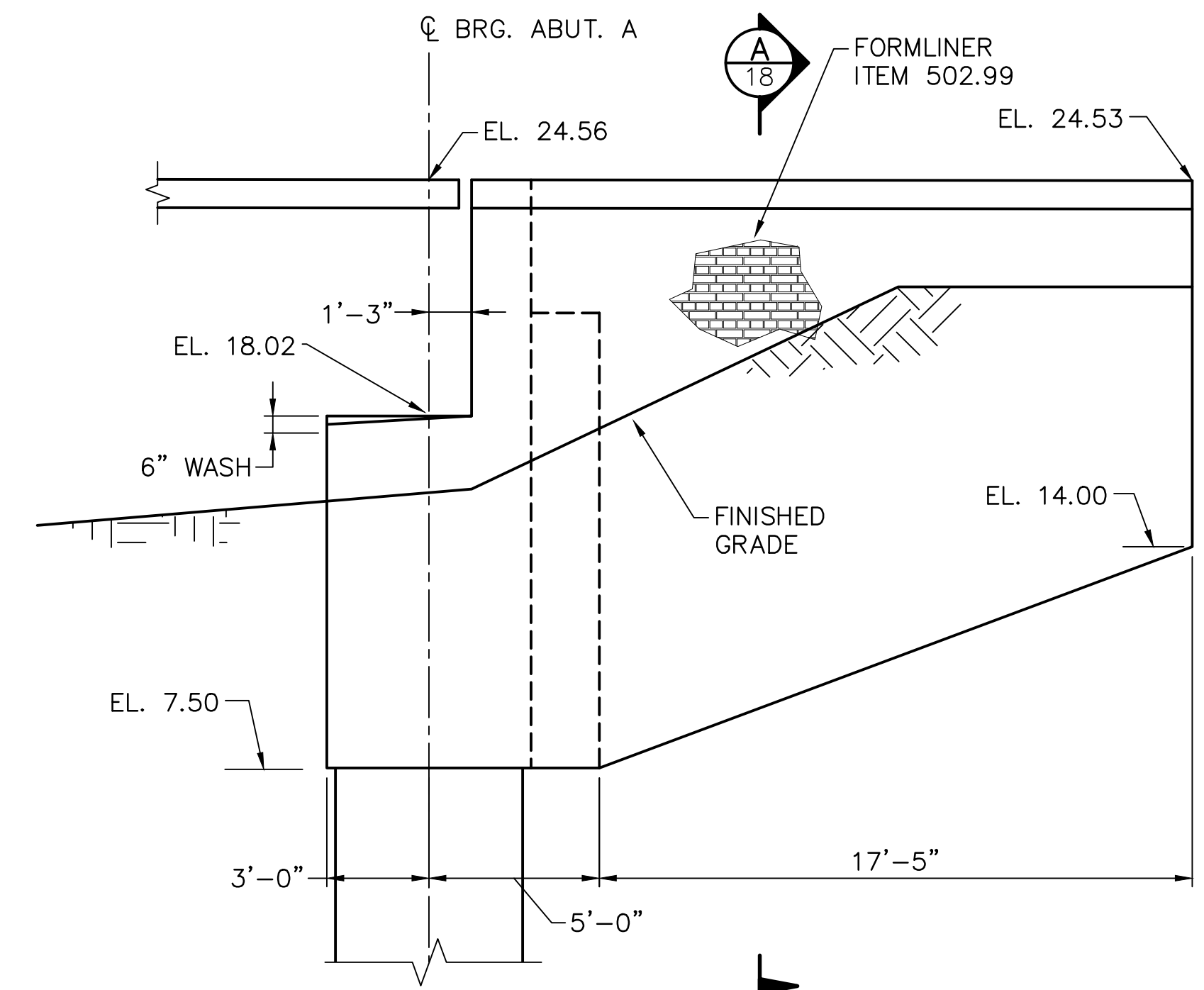
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS										
TOWN		PORTSMOUTH		BRIDGE NO.		198/034		STATE PROJECT		14493
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK										
ABUTMENT SECTIONS AND DETAILS										
		BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE	BRIDGE SHEET	
DESIGNED		TD	5/13	CHECKED	MAB	5/13			16 OF 41	
DRAWN		FLC	5/13	CHECKED	TD	5/13			FILE NUMBER	
TRACED		---	---	CHECKED	---	---				
QUANTITIES		TD	6/13	CHECKED	MAB	6/13		FEDERAL PROJECT NO.	TOTAL SHEETS	
								X-A000(417)	91	
								SHEET NO.	30	

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VG-064-Sagmore Creek\Drawings\05-Structural\17-WINGWALL ELEVATIONS.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Corde_F

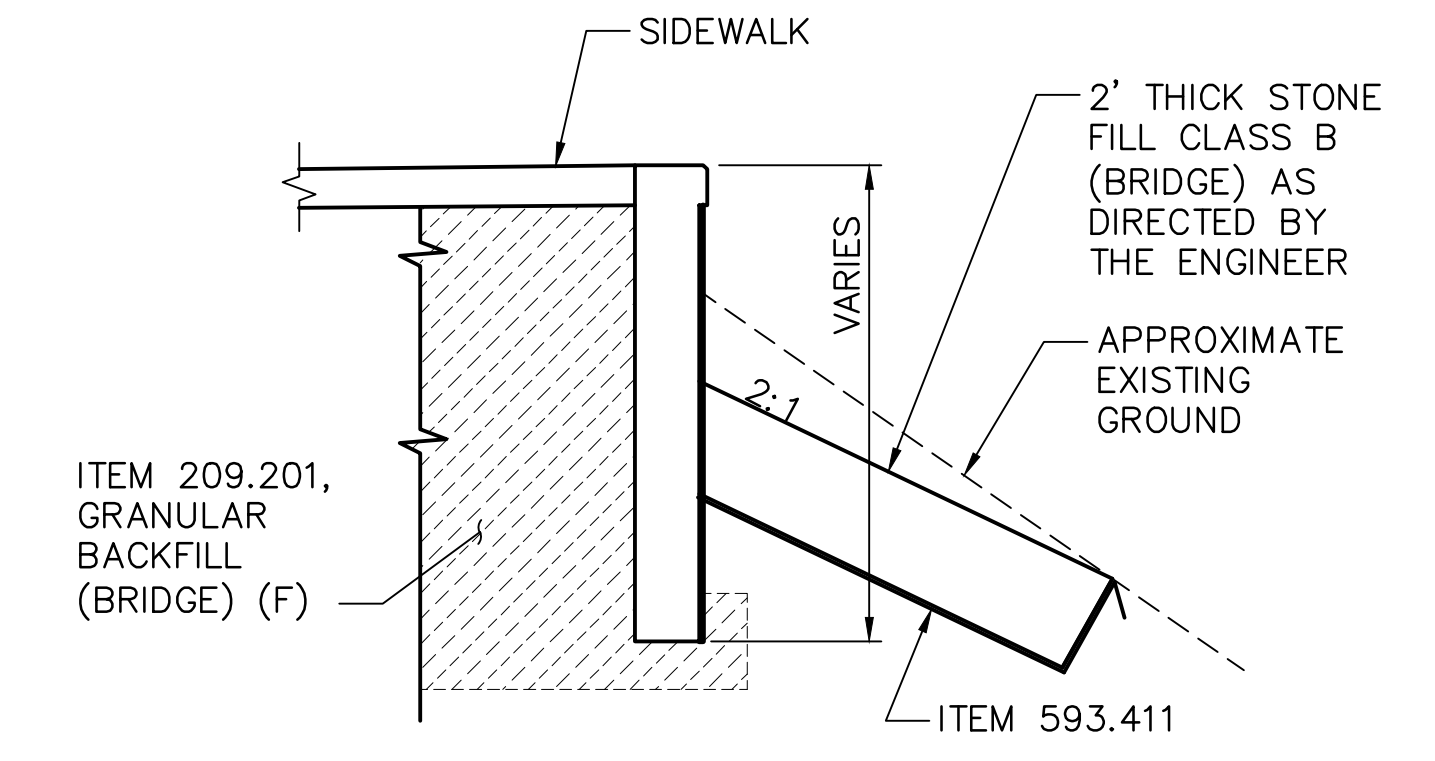


NORTHWEST WINGWALL ELEVATION

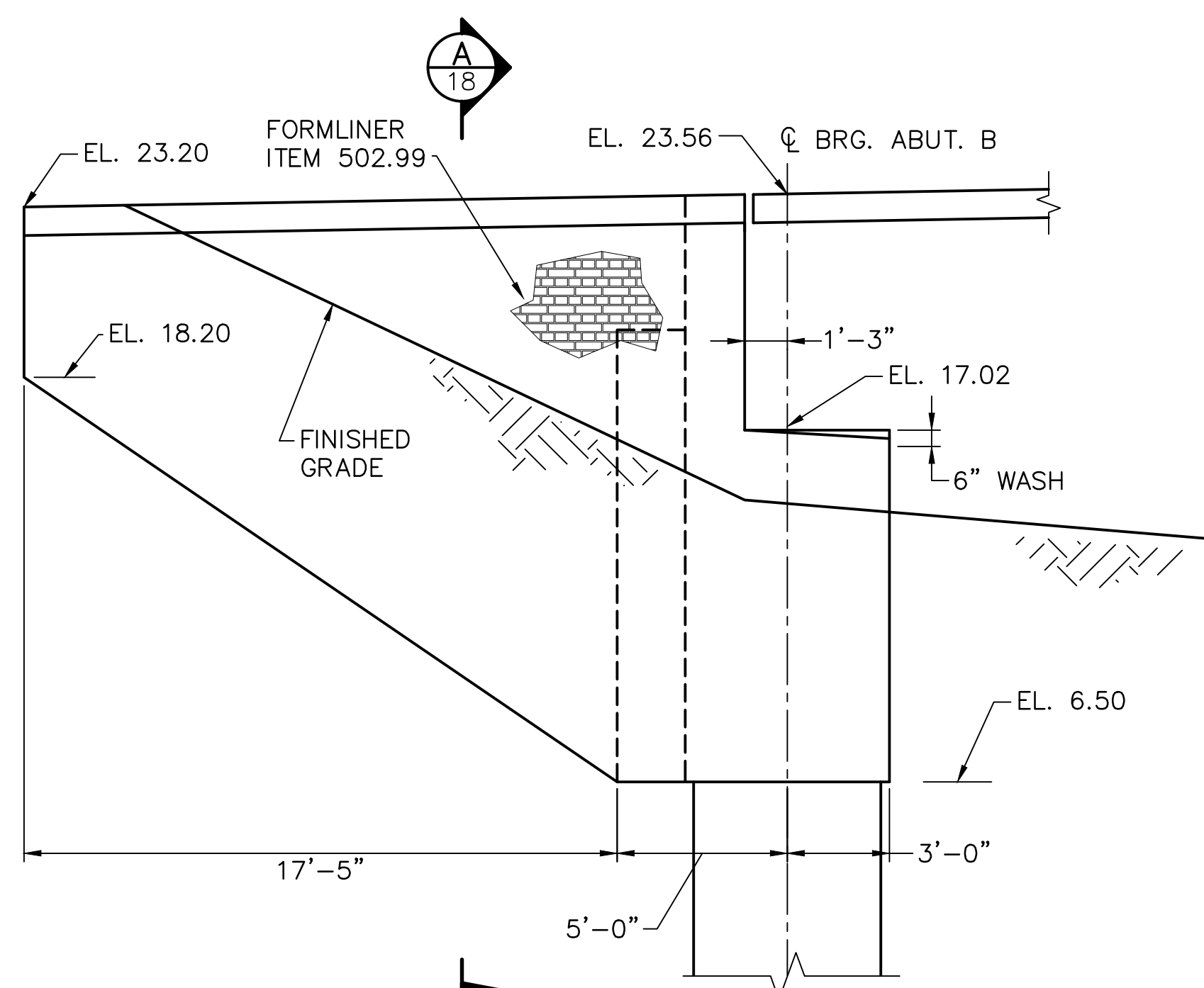


NORTHEAST WINGWALL ELEVATION

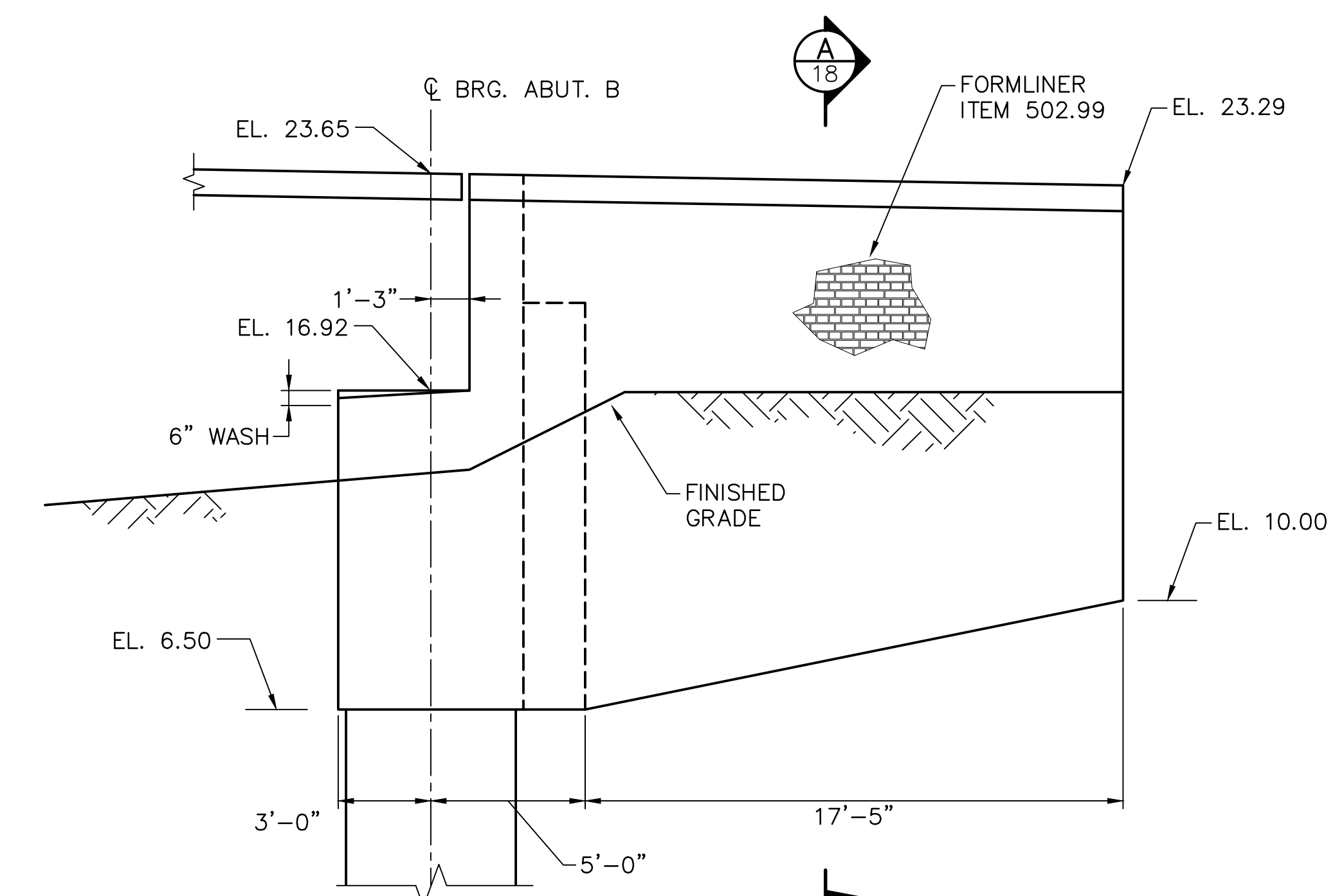
ABUTMENT A WINGWALLS
SCALE: 1/4" = 1'-0"



SECTION - WINGWALL
SCALE: 1/4" = 1'-0"



SOUTHEAST WINGWALL ELEVATION

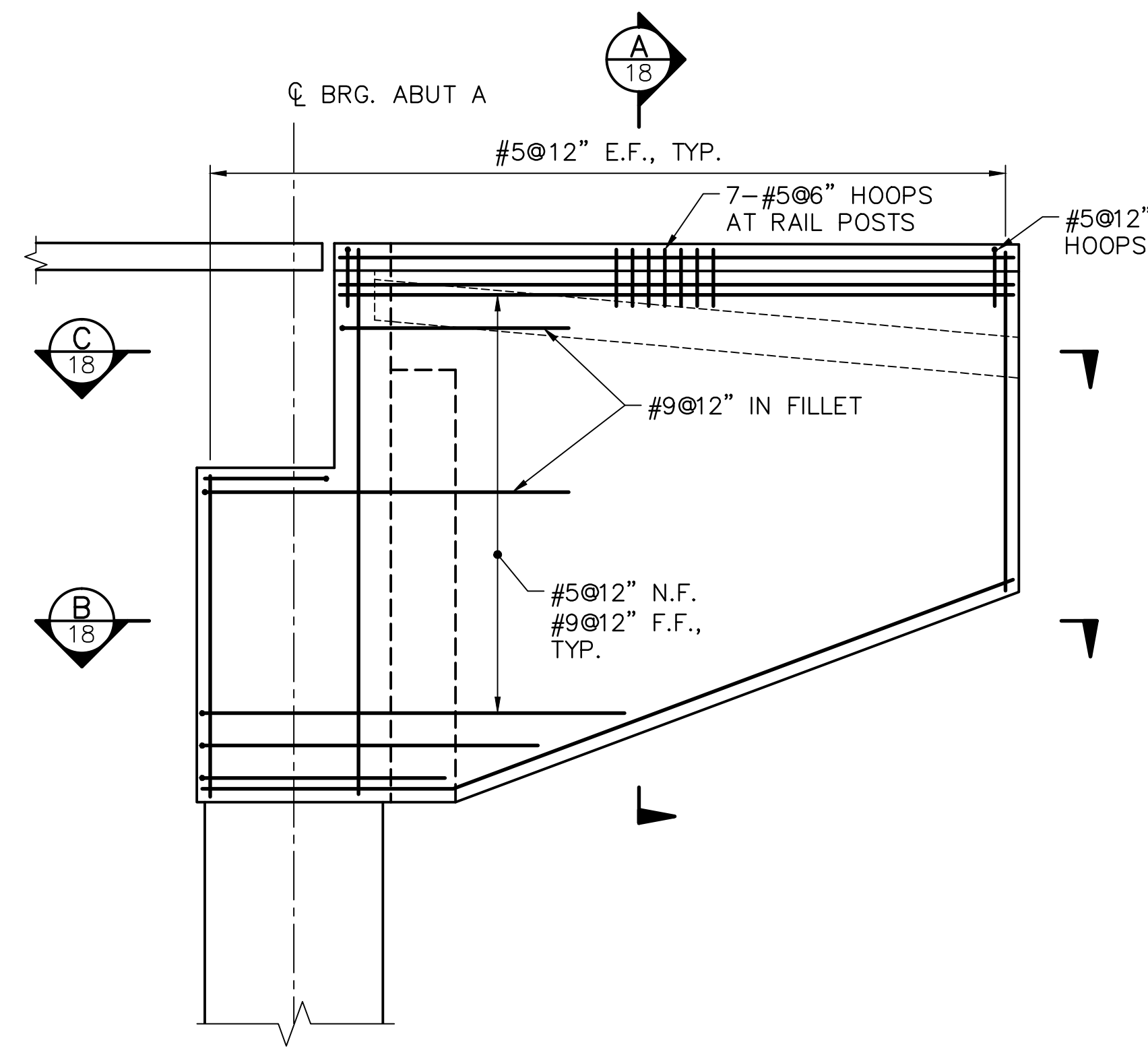


SOUTHWEST WINGWALL ELEVATION

ABUTMENT B WINGWALLS
SCALE: 1/4" = 1'-0"

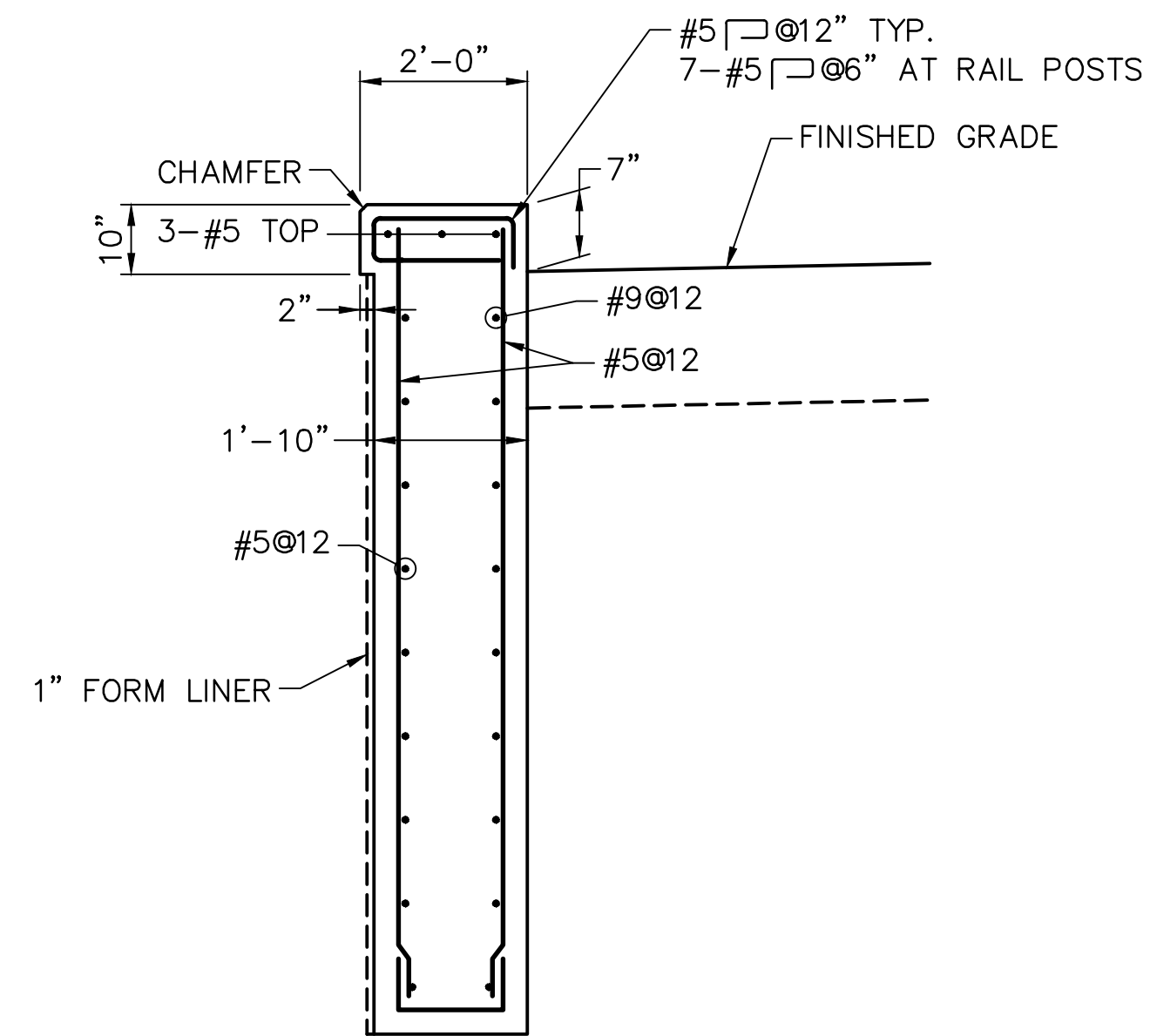
CITY OF PORTSMOUTH									
DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
WINGWALL ELEVATIONS									
	BY	DATE		BY	DATE	REVISIONS AFTER PROPOSAL			
	TD	5/13	CHECKED	MAB	5/13				
	DRAWN	FLC	5/13	CHECKED	TD	5/13			
	TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO.		SHEET NO.
	QUANTITIES	TD	6/13	CHECKED	MAB	6/13	X-A000(417)		31
									BRIDGE SHEET
									17 OF 41
									FILE NUMBER
									TOTAL SHEETS
									91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



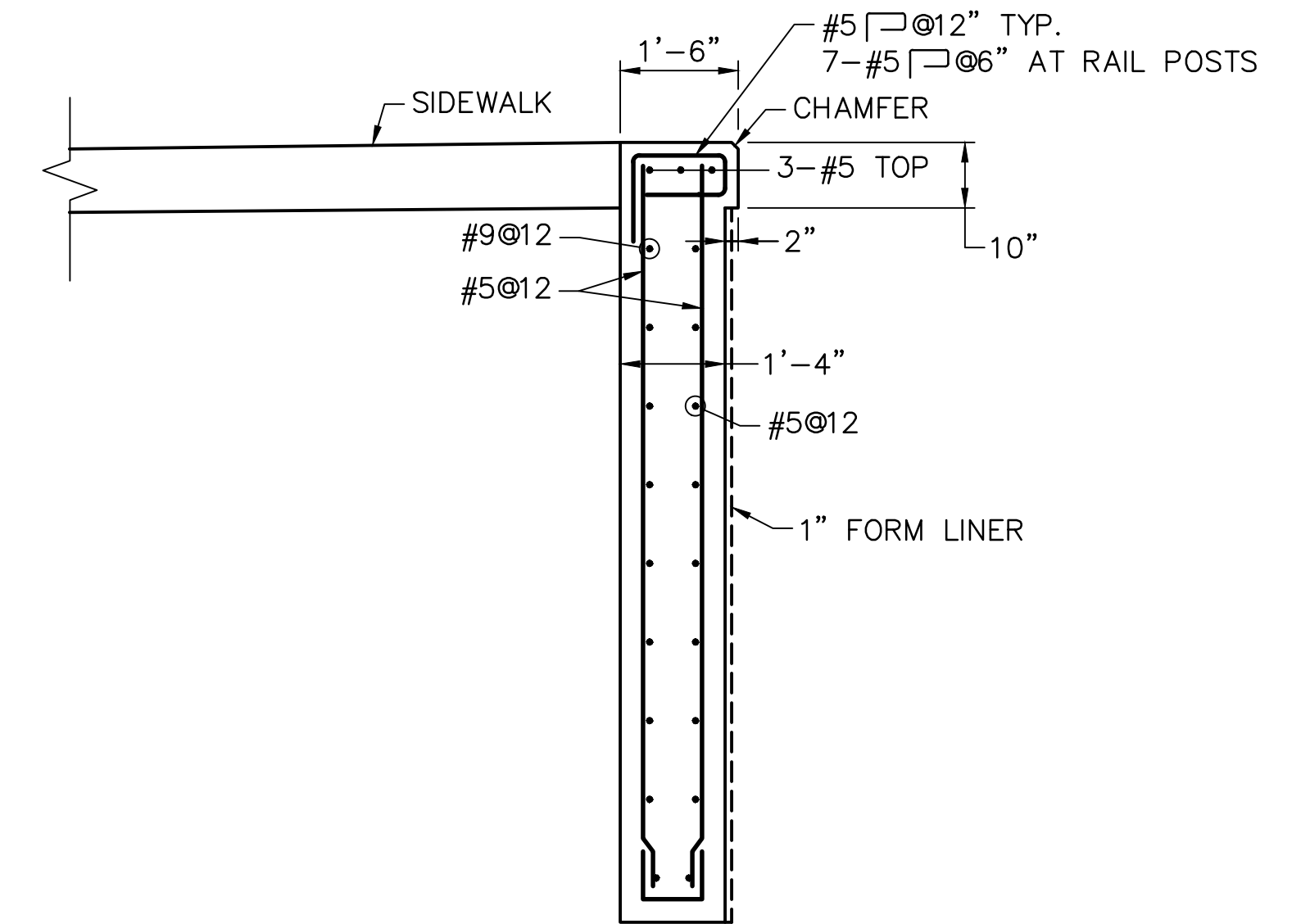
WINGWALL REINFORCEMENT

SCALE: 1/4" = 1'-0"



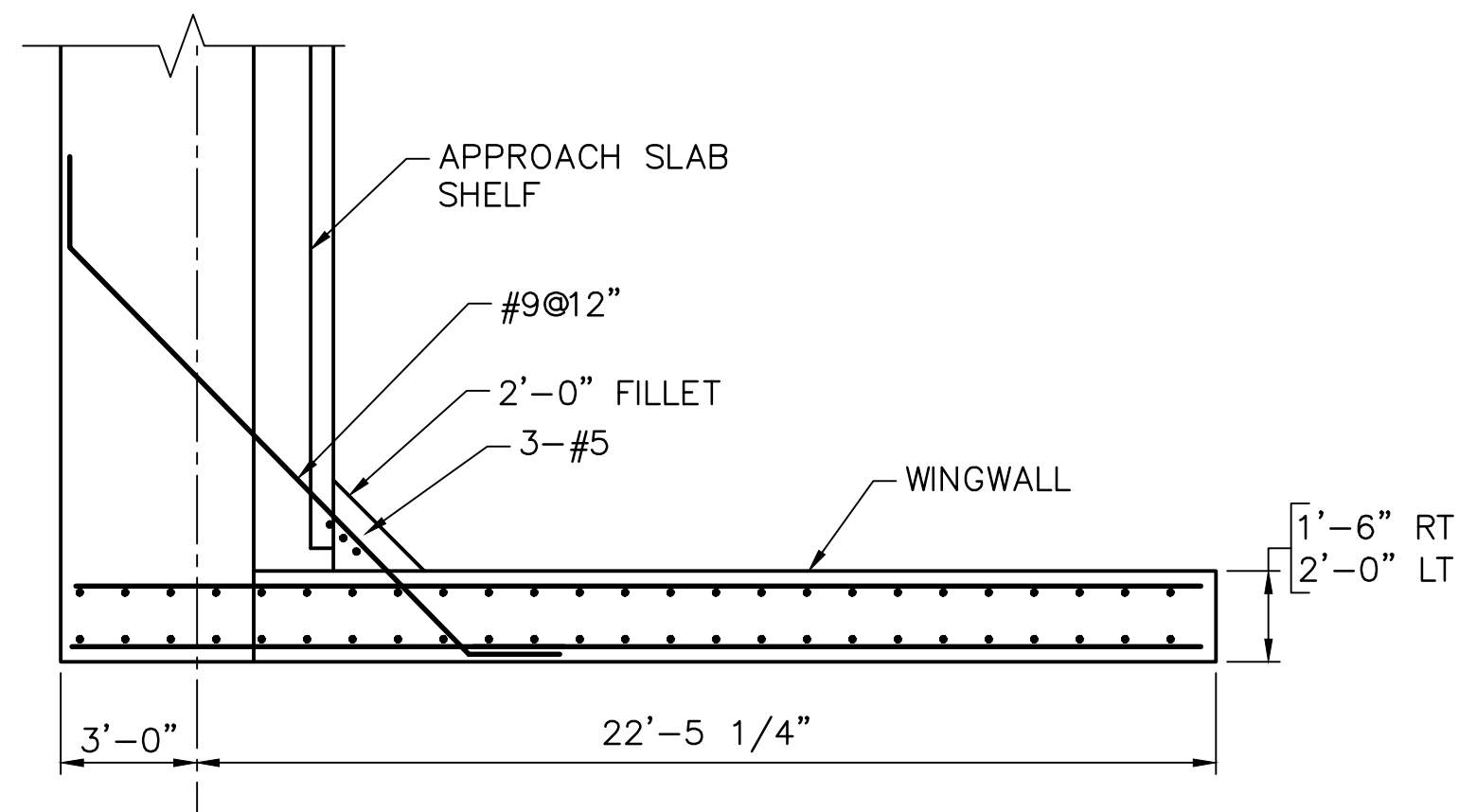
**TYPICAL SECTION A
(AT LEFT WINGWALLS)**

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



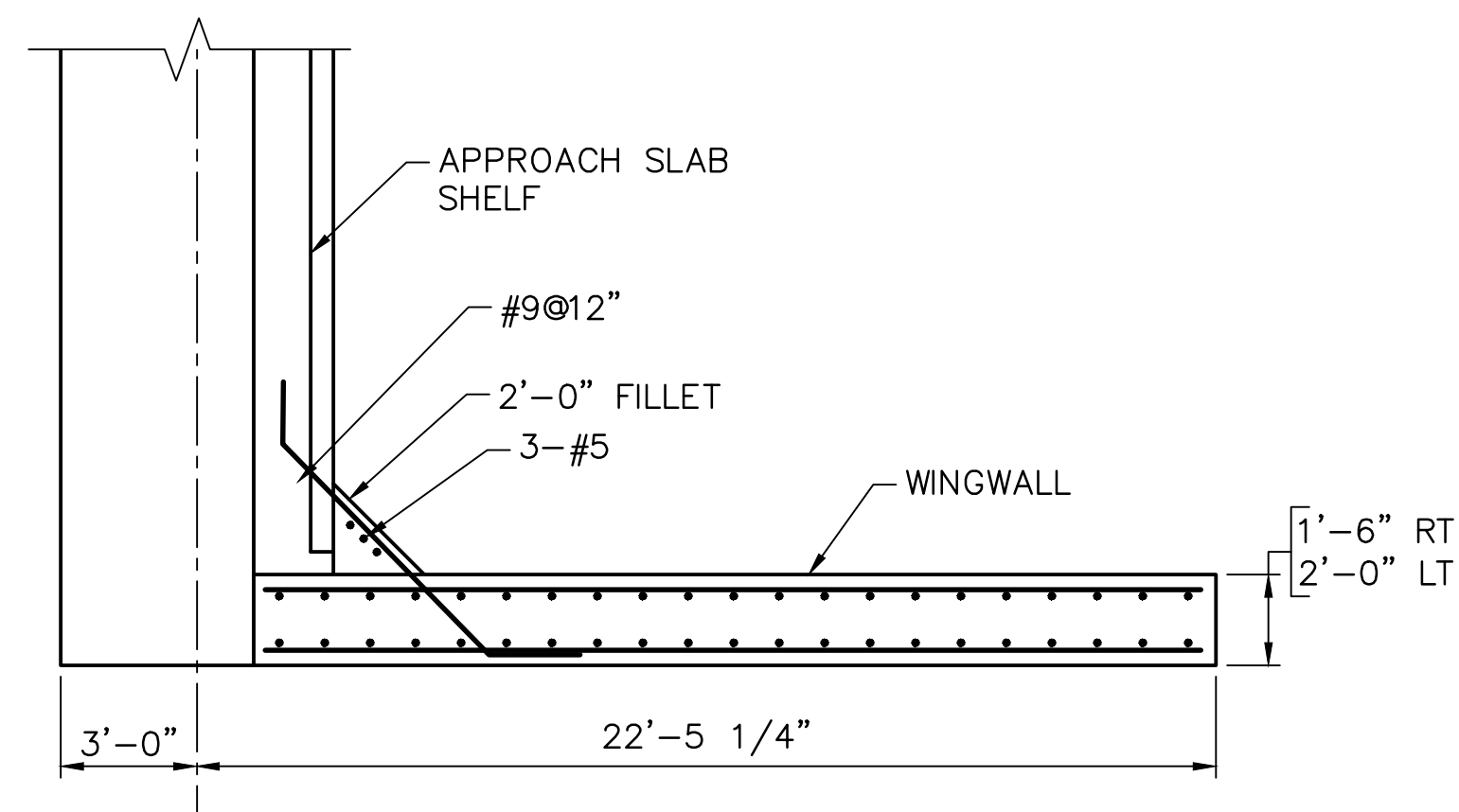
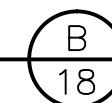
**TYPICAL SECTION A
(AT RIGHT WINGWALLS)**

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



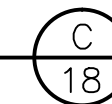
SECTION

SCALE: 1/4" = 1'-0"



SECTION

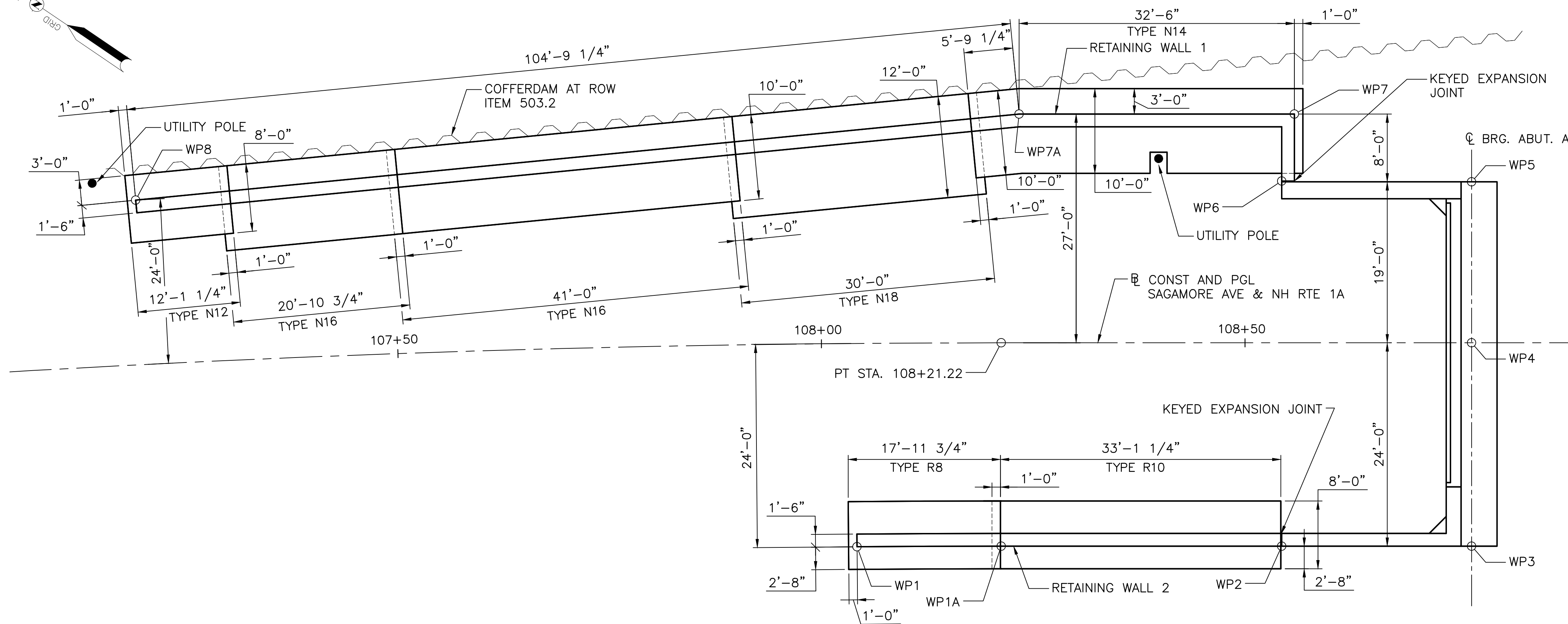
SCALE: 1/4" = 1'-0"



CITY OF PORTSMOUTH											
DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH			BRIDGE NO. 198/034			STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK											
WINGWALL DETAILS											
	BY	DATE		BY	DATE	REVISIONS AFTER PROPOSAL		DATE	BRIDGE SHEET		
	TD	5/13	CHECKED	MAB	5/13				18 OF 41		
	AS NOTED	FLC	5/13	CHECKED	TD				FILE NUMBER		
	---	---	CHECKED	---	---				TOTAL SHEETS		
	TD	6/13	CHECKED	MAB	6/13	FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 32	91		

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VC-064-Sagamore Creek\Drawings\05 Structural\19 RETAINING WALL 1 AND 2 PLAN AND ELEVATION.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F

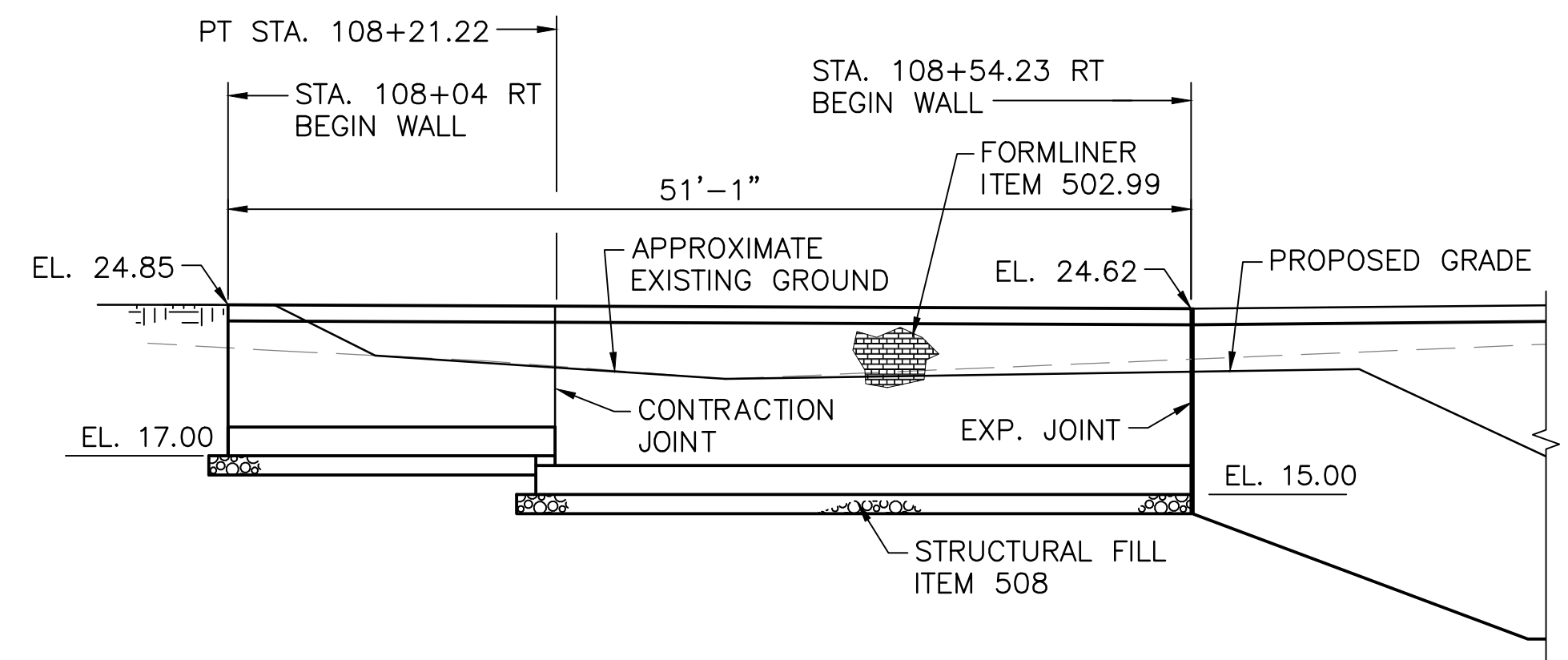


RETAINING WALL 1 & 2 PLAN

SCALE: 1/8" = 1'-0"

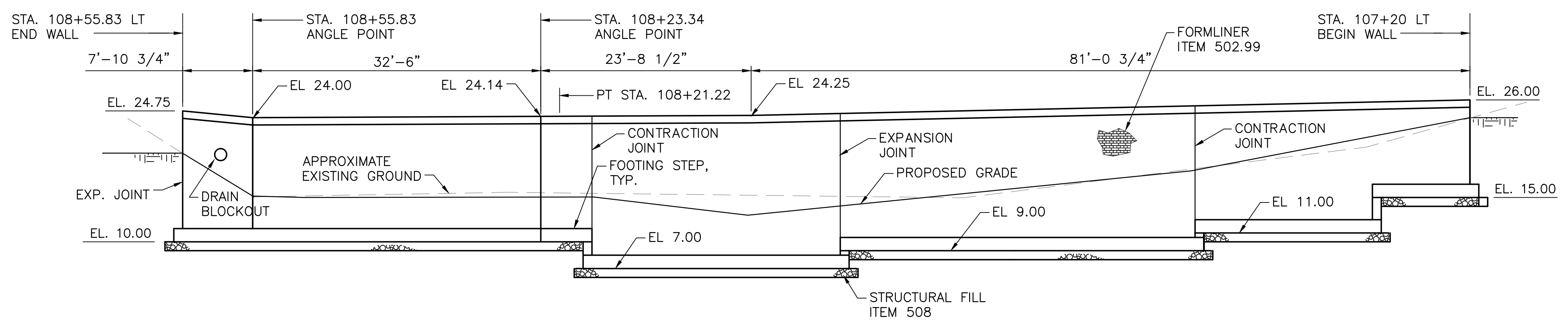
NOTES

- 1. SEE SHEET 21 FOR WALL SECTIONS AND DETAILS.



RETAINING WALL 2 ELEVATION

SCALE: 1/8" = 1'-0"

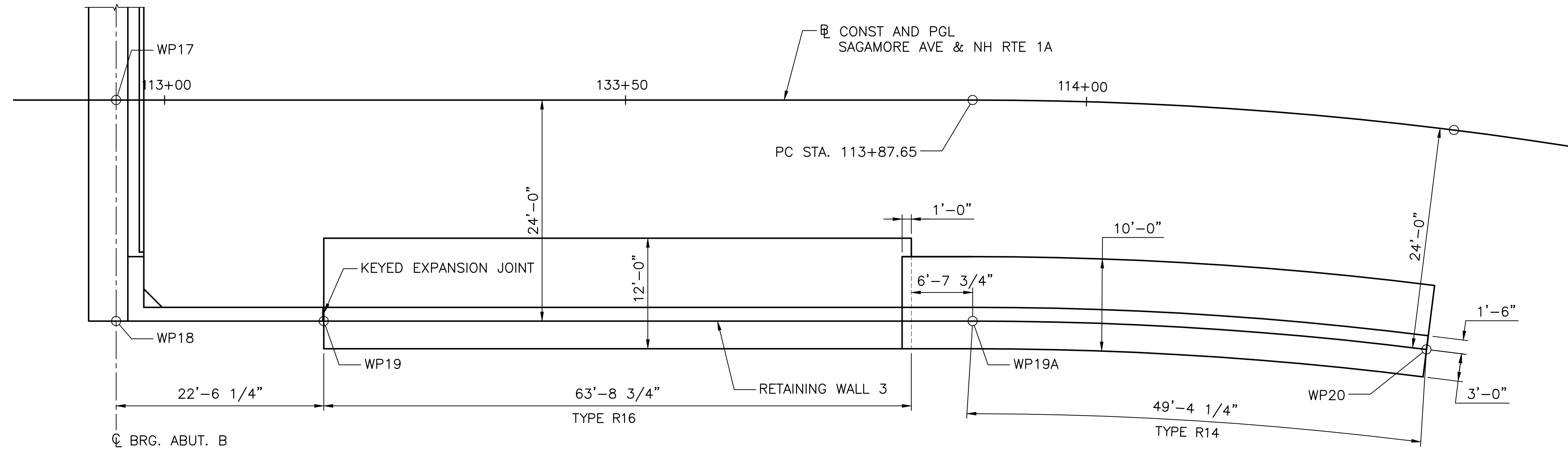
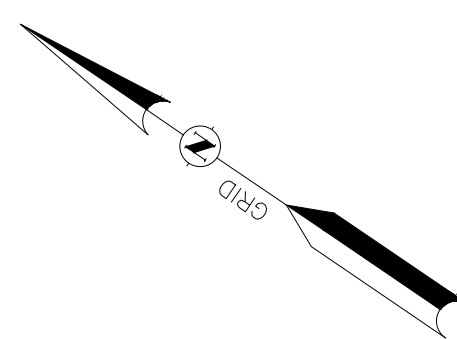


RETAINING WALL 1 DEVELOPED ELEVATION

SCALE: 1/8" = 1'-0"

CITY OF PORTSMOUTH									
DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
RETAINING WALL 1 AND 2 PLAN AND ELEVATION									
BY TD		DATE 5/13		BY MAB		DATE 5/13		REVISIONS AFTER PROPOSAL	
AS NOTED		FLC		TD		5/13		DATE	
TRACED		---		---		---		FEDERAL PROJECT NO.	
QUANTITIES		TD		6/13		CHECKED		MAB 6/13	
SHEET SCALE		DESIGNED		CHECKED		MAB		5/13	
AS NOTED		DRAWN		FLC		TD		5/13	
FAY, SPOFFORD & THORNDIKE, INC		---		---		---		---	
- BEDFORD, NH -		---		---		---		---	
FEDERAL PROJECT NO. X-A000(417)								SHEET NO. 33	
BRIDGE SHEET 19 OF 41								TOTAL SHEETS 91	

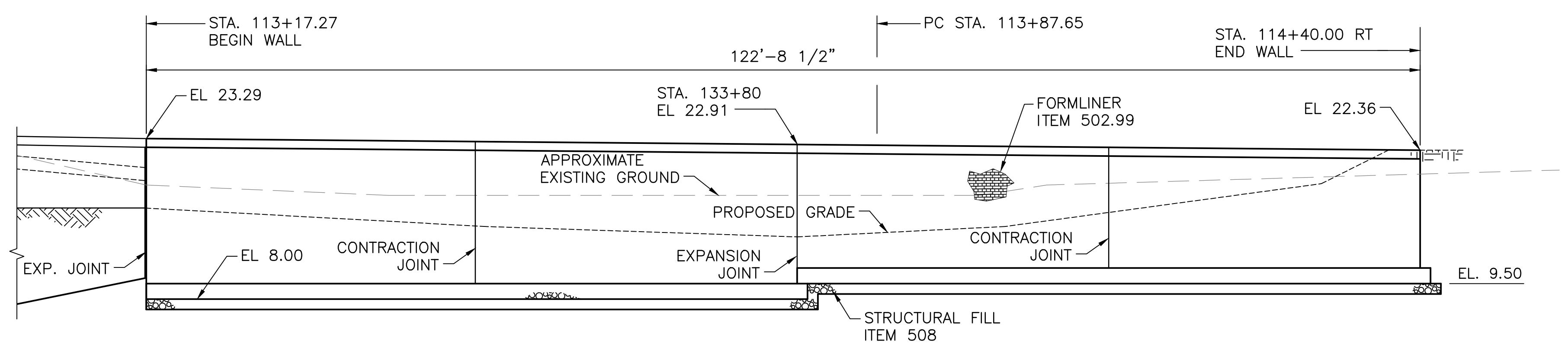
FILE NAME: R:\VC-064-Sagamore Creek\CAD Drawings\05 Structural\20 RETAINING WALL 3 PLAN AND ELEVATION.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F



RETAINING WALL 3 PLAN
SCALE: 1/8" = 1'-0"

NOTES

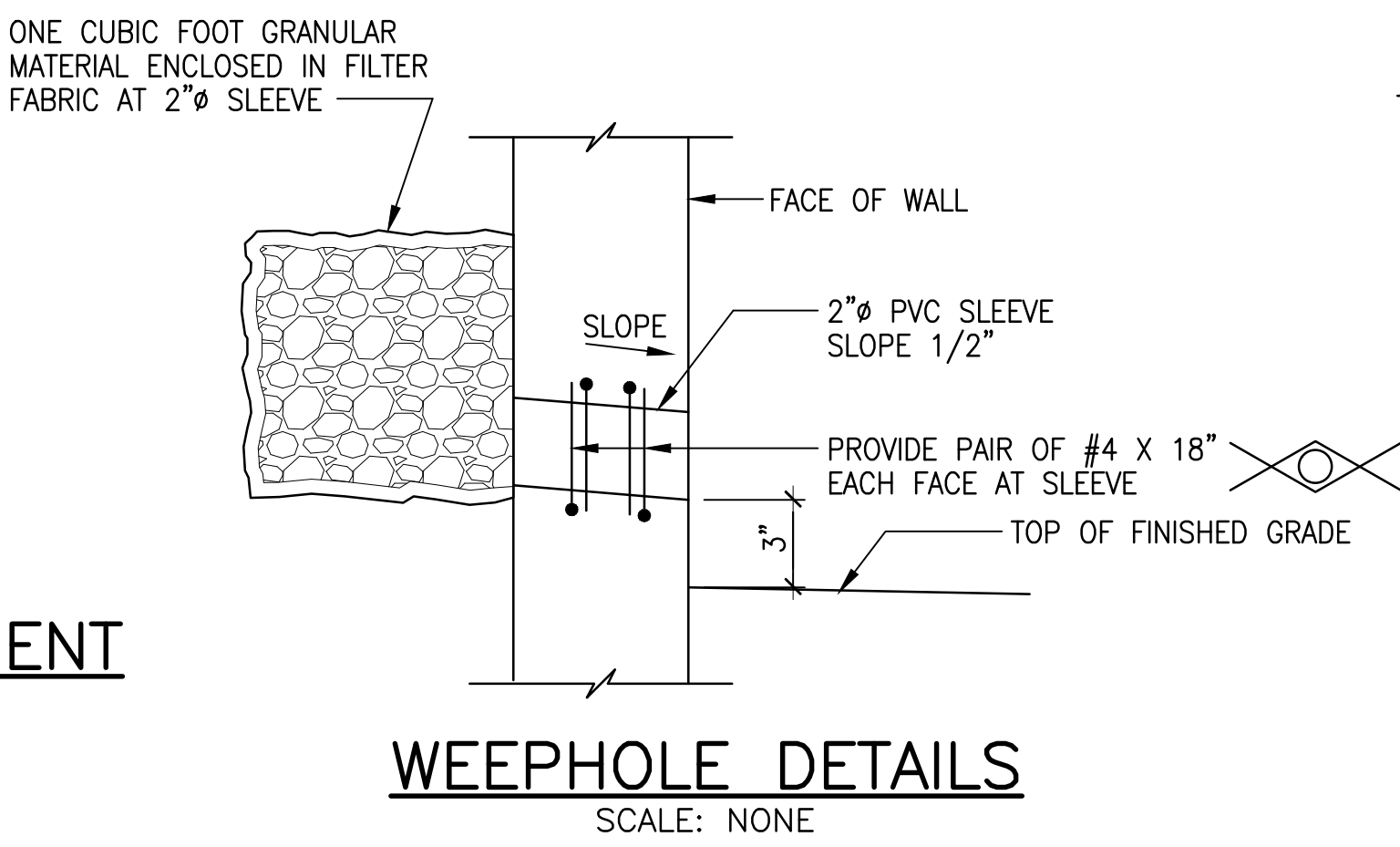
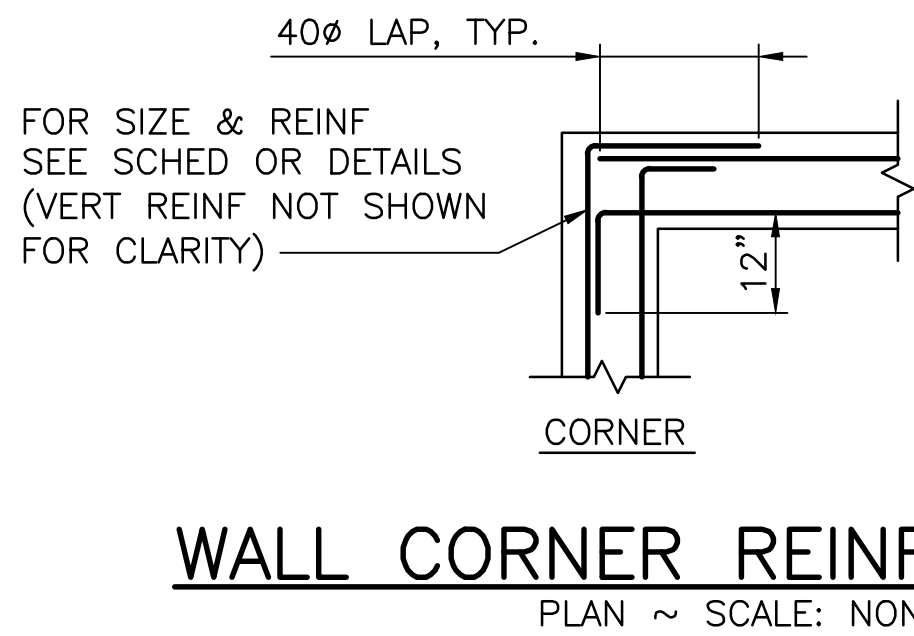
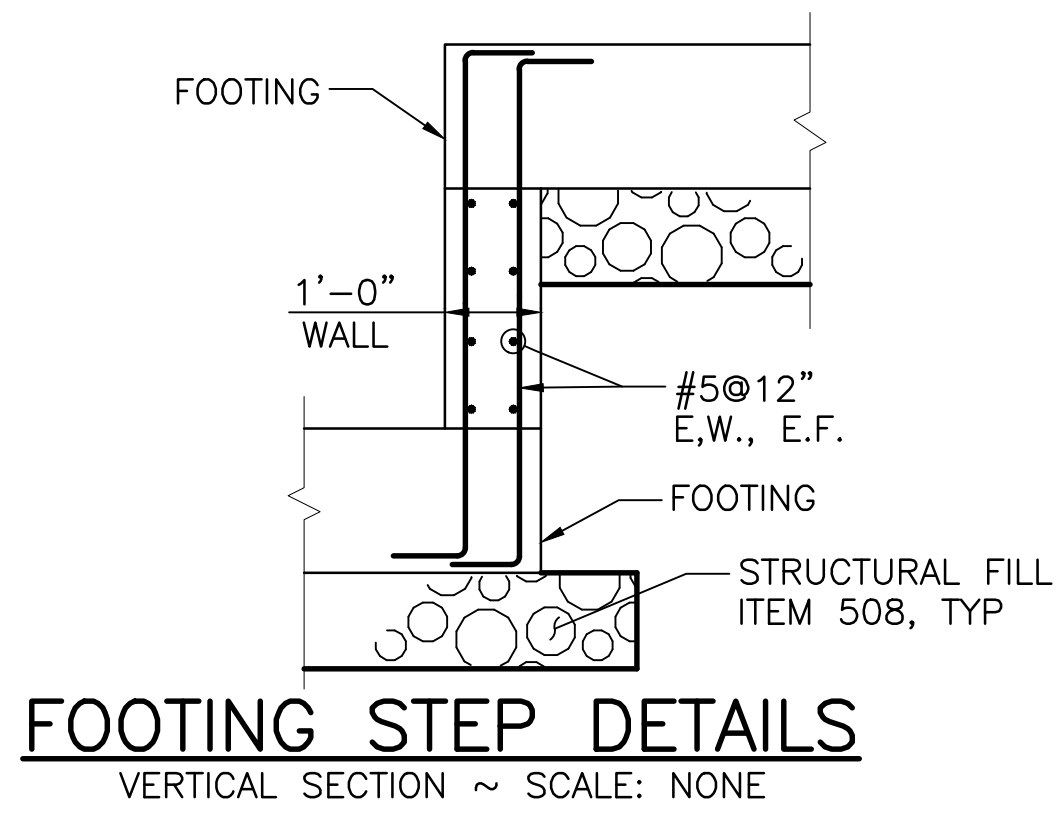
1. SEE SHEET 21 FOR WALL SECTIONS AND DETAILS.



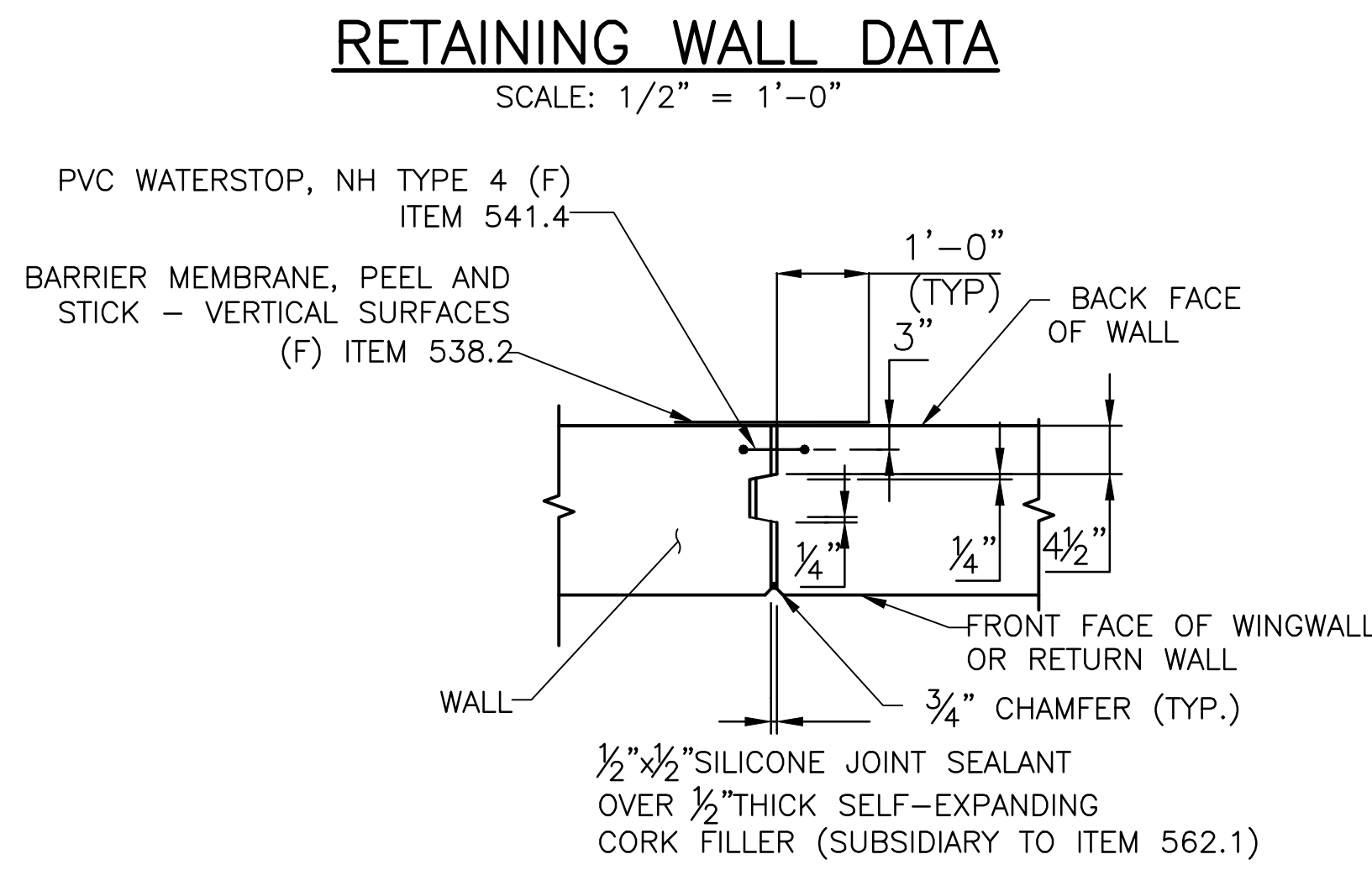
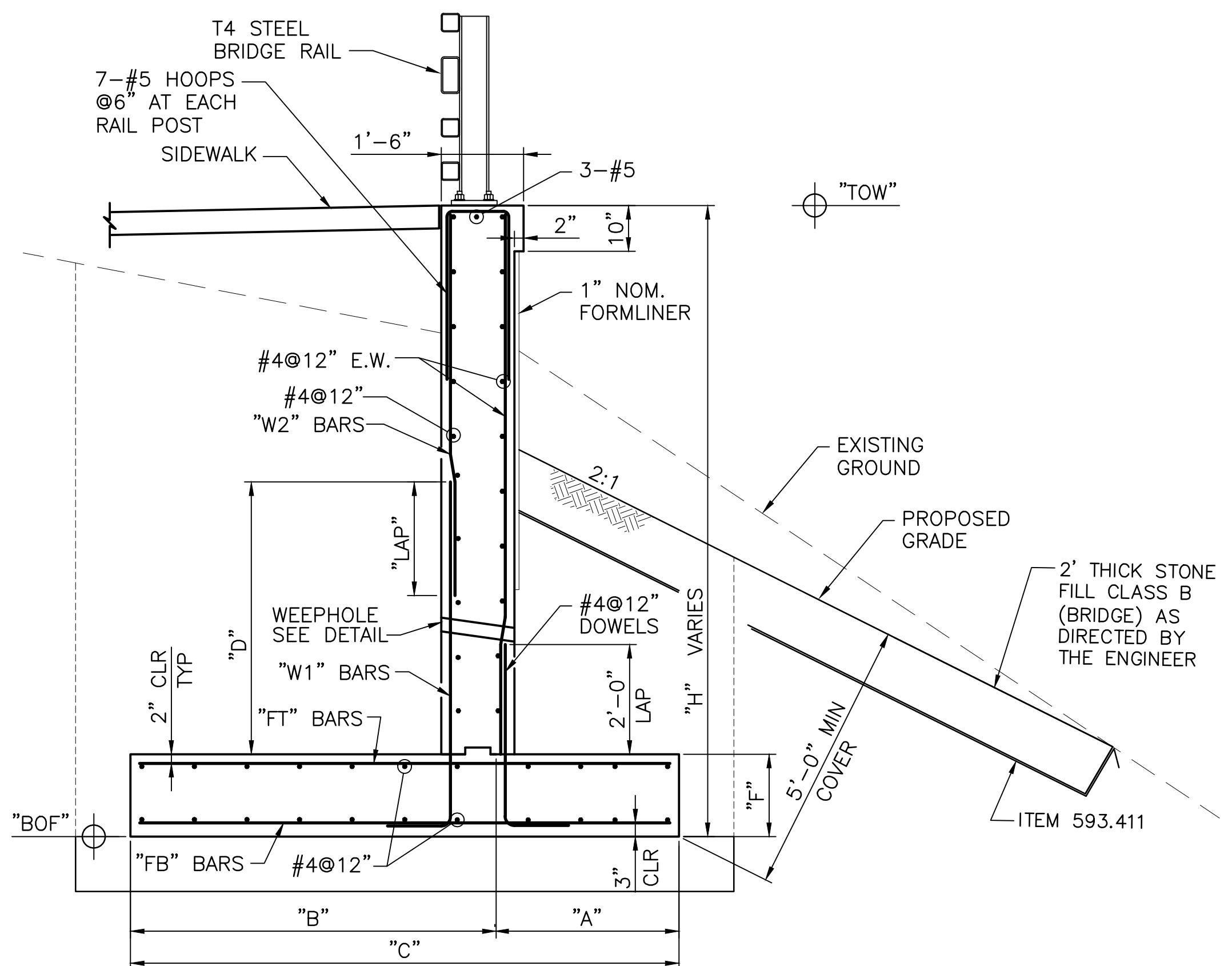
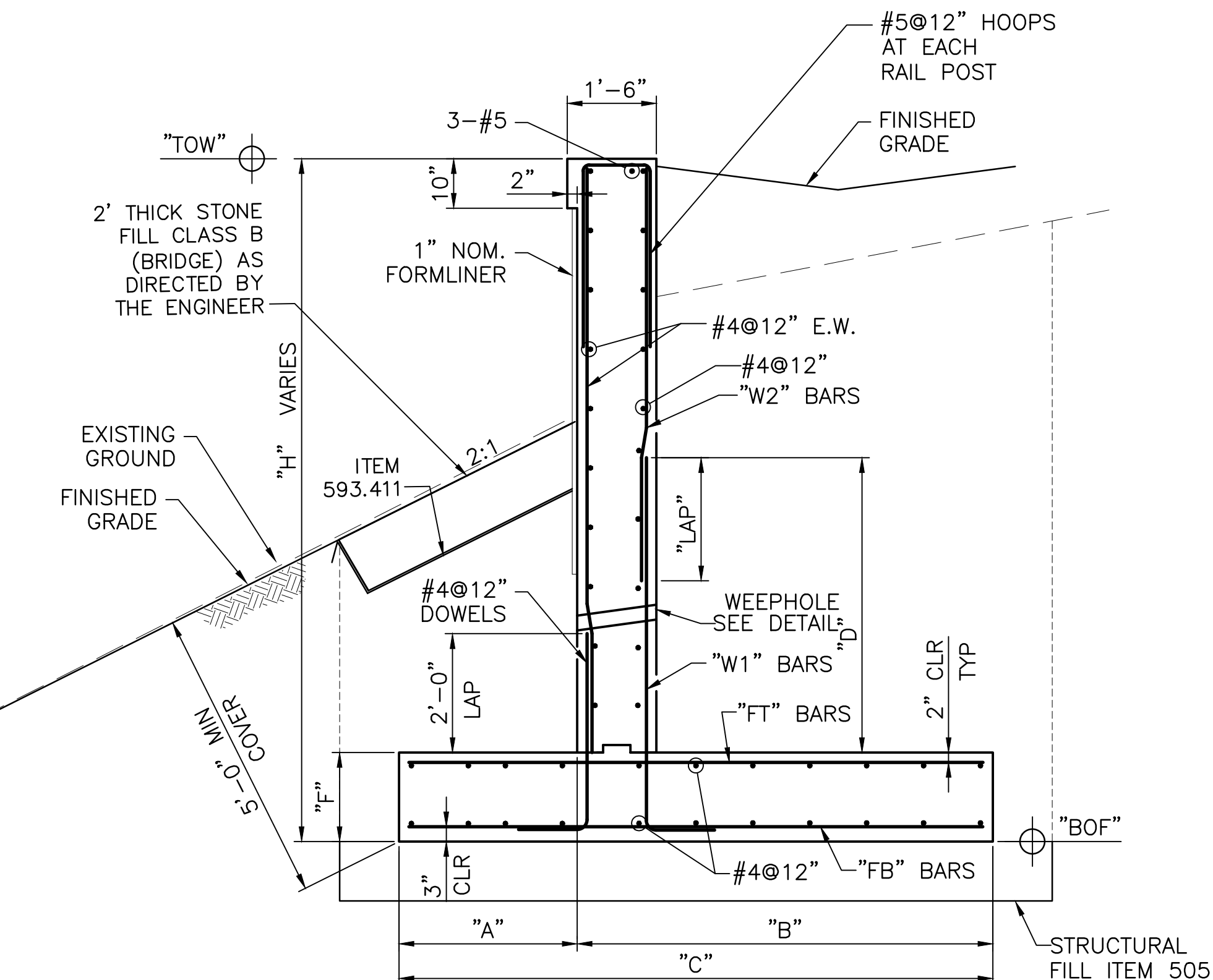
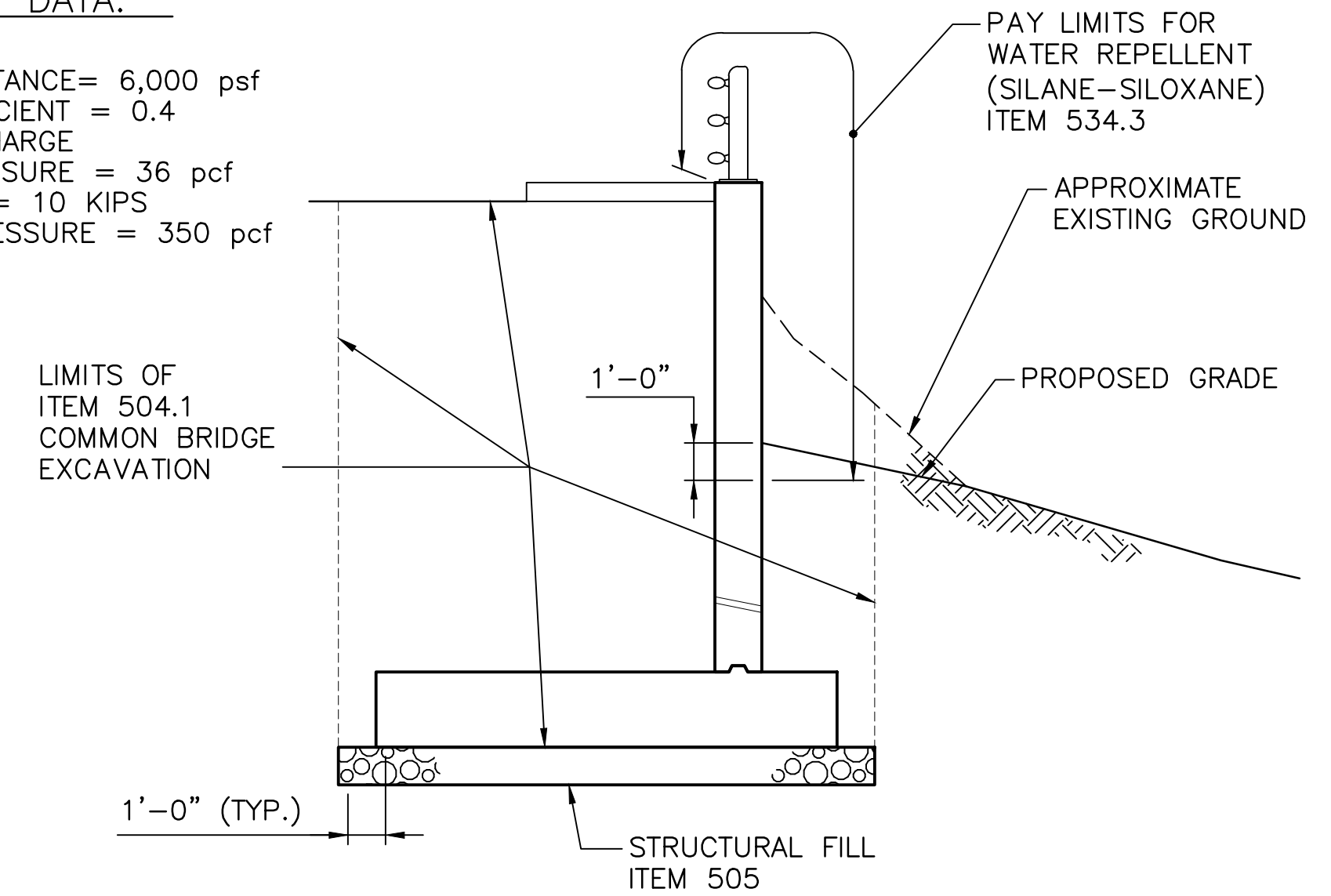
RETAINING WALL 3 ELEVATION
SCALE: 1/8" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
RETAINING WALL 3 PLAN AND ELEVATION									
BY TD		DATE 5/13		BY MAB		DATE 5/13		REVISIONS AFTER PROPOSAL	
AS NOTED		DRAWN FLC		5/13		CHECKED TD		5/13	
TRACED ---		---		CHECKED ---		---		FEDERAL PROJECT NO. X-A000(417)	
QUANTITIES TD		6/13		CHECKED MAB		6/13		SHEET NO. 34	
								BRIDGE SHEET 20 OF 41	
								FILE NUMBER	
								TOTAL SHEETS 91	

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



RETAINING WALL DESIGN DATA:
 MAX FACTORED BEARING RESISTANCE = 6,000 psf
 FOOTING/SOIL FRICTION COEFFICIENT = 0.4
 FLAT BACKSLOPE, 2 FT. SURCHARGE
 ACTIVE EQUIVALENT FLUID PRESSURE = 36 pcF
 RAIL LOAD (WHERE PRESENT) = 10 KIPS
 PASSIVE EQUIVALENT FLUID PRESSURE = 350 pcF
 SOIL UNIT WEIGHT = 125pcf

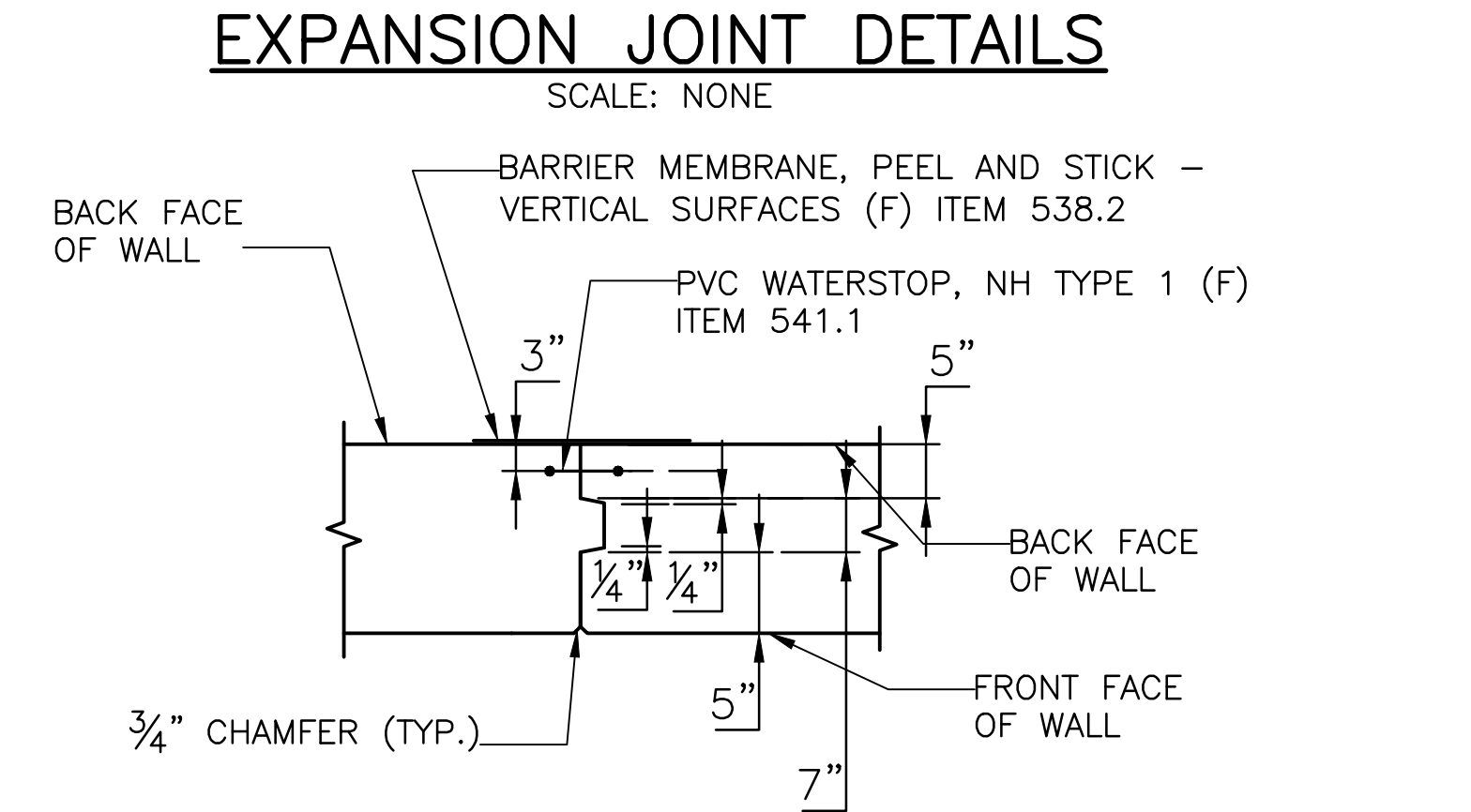


RETAINING WALL DATA (WALL #1, WITHOUT RAIL)

WALL TYPE	"H" MAX (FT.)	"A" (FT.)	"B" (FT.)	"C" (FT.)	"F" (FT.)	"W1" BARS SIZE SPA.	"W2" BARS SIZE SPA.	"FT" BARS SIZE SPA.	"FB" BARS SIZE SPA.
R8	8	2.67	5.33	8.00	1.50	#8 12" 6'-0"	#8 12" 3'-6"	#6 12" 12"	#6 12" 12"
N12	12	3.00	5.00	8.00	1.50	#6 12" 6'-0"	#6 12" 2'-6"	#6 12" 12"	#6 12" 12"
N14	14	3.00	6.00	9.00	1.50	#7 12" 6'-0"	#6 12" 2'-6"	#6 12" 12"	#6 12" 12"
N16	16	3.00	7.00	10.00	1.50	#8 12" 6'-0"	#7 12" 3'-0"	#8 12" 12"	#6 12" 12"
N18	18	3.00	9.00	12.00	1.50	#8 9" 9'-0"	#8 12" 3'-6"	#9 12" 12"	#6 12" 12"

RETAINING WALL DATA (WALLS #2 AND #3, WITH RAIL)

WALL TYPE	"H" MAX (FT.)	"A" (FT.)	"B" (FT.)	"C" (FT.)	"F" (FT.)	"W1" BARS SIZE SPA.	"W2" BARS SIZE SPA.	"FT" BARS SIZE SPA.	"FB" BARS SIZE SPA.
R8	8	2.67	5.33	8.00	1.50	#8 12" 6'-0"	#8 12" 3'-6"	#6 12" 12"	#6 12" 12"
R10	10	2.67	5.33	8.00	1.50	#8 12" 6'-0"	#8 12" 3'-6"	#6 12" 12"	#6 12" 12"
R12	12	3.00	6.00	9.00	1.50	#8 9" 6'-0"	#8 9" 3'-6"	#6 12" 12"	#6 12" 12"
R14	14	3.33	6.67	10.00	1.50	#8 9" 6'-0"	#8 9" 3'-6"	#7 12" 12"	#7 12" 12"
R16	16	4.00	8.00	12.00	1.50	#8 6" 6'-0"	#8 6" 3'-6"	#8 12" 12"	#7 12" 12"
R18	18	4.00	8.00	12.00	1.50	#9 6" 9'-0"	#8 6" 3'-6"	#9 12" 12"	#7 12" 12"



RETAINING WALL #1 DATA
 SCALE: 1/2" = 1'-0"

RETAINING WALLS #2 & #3 DATA
 SCALE: 1/2" = 1'-0"

CITY OF PORTSMOUTH
 DEPARTMENT OF PUBLIC WORKS

TOWN PORTSMOUTH BRIDGE NO. 198/034 STATE PROJECT 14493
 LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK

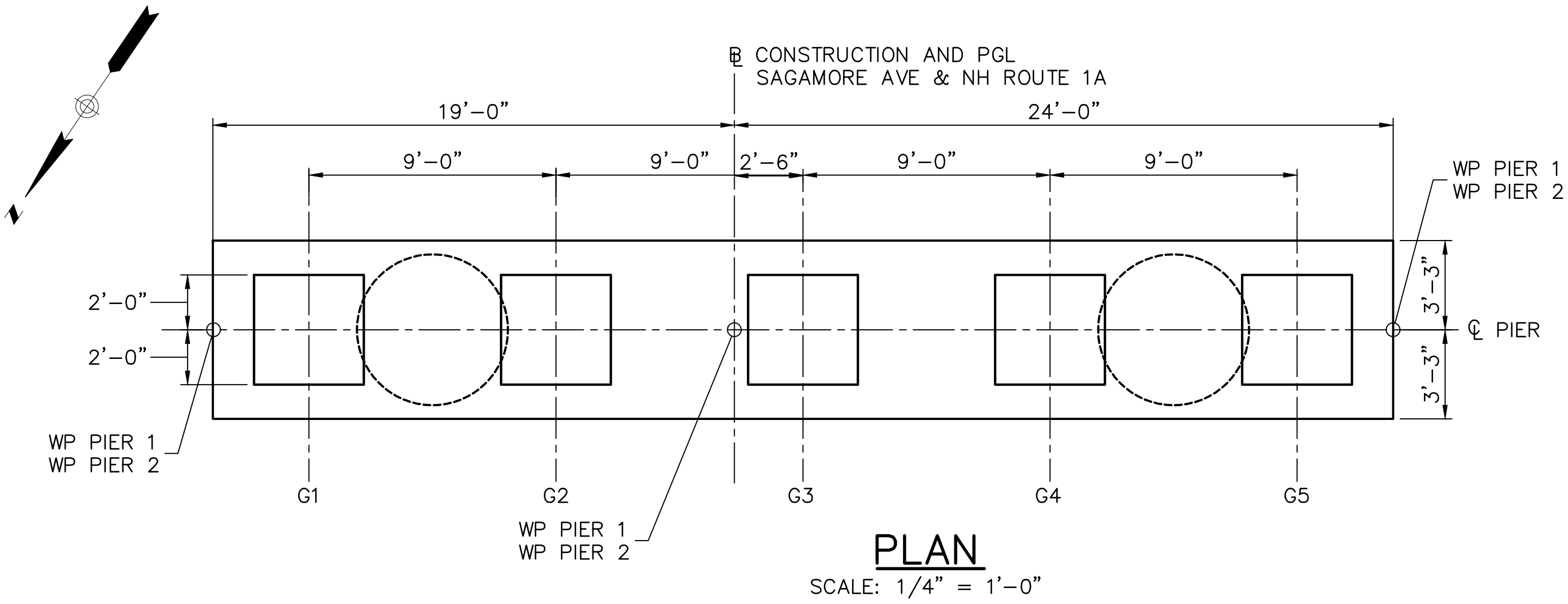
RETAINING WALL DETAILS AND REINFORCING

BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	5/13	CHECKED	MAB	5/13	
DRAWN	FLC	5/13	CHECKED	TD	5/13
TRACED	---	---	CHECKED	---	---
QUANTITIES	TD	6/13	CHECKED	MAB	6/13

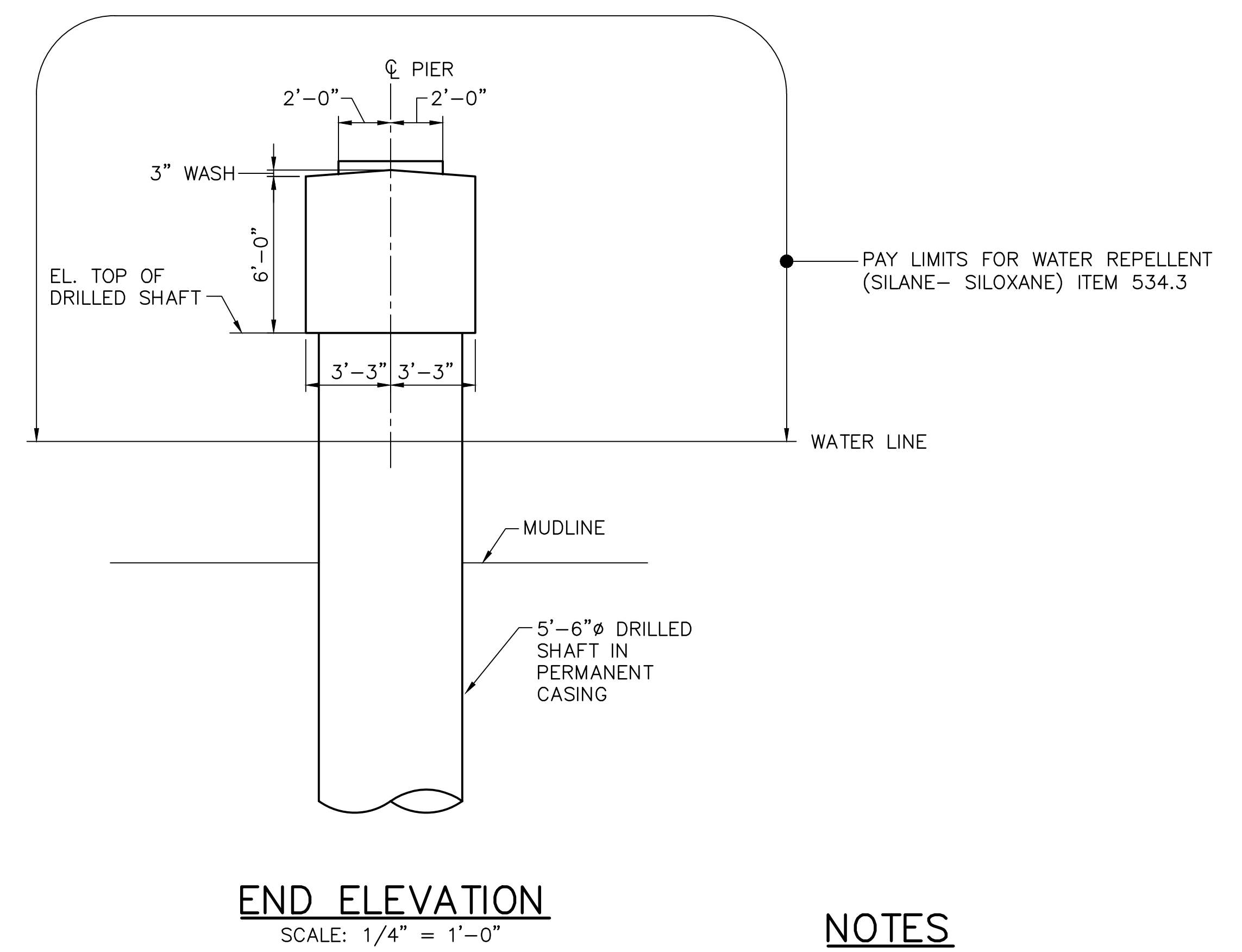
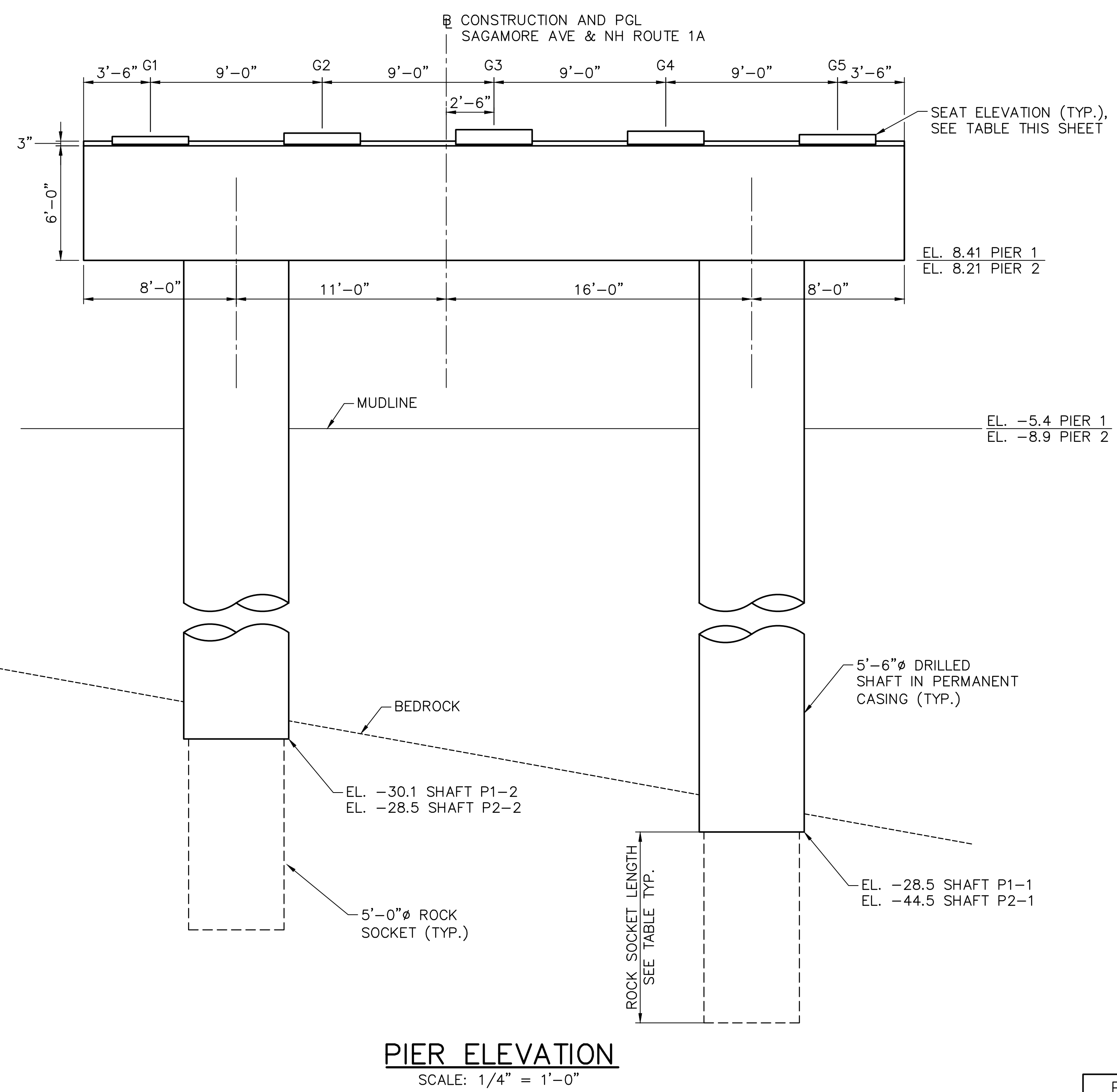
FEDERAL PROJECT NO. X-A000(417) SHEET NO. 35 TOTAL SHEETS 91

FAY, SPOFFORD & THORNDIKE, INC
 - BEDFORD, NH -

FILE NAME: R:\VC-064-Sagamore Creek\Drawings\05 Structural\21 RETAINING WALL DETAILS AND REINFORCING.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F



SEAT ELEVATIONS					
GIRDER	G1	G2	G3	G4	G5
PIER 1 EL.	15.40	15.58	15.66	15.48	15.30
PIER 2 EL.	15.20	15.38	15.46	15.28	15.10

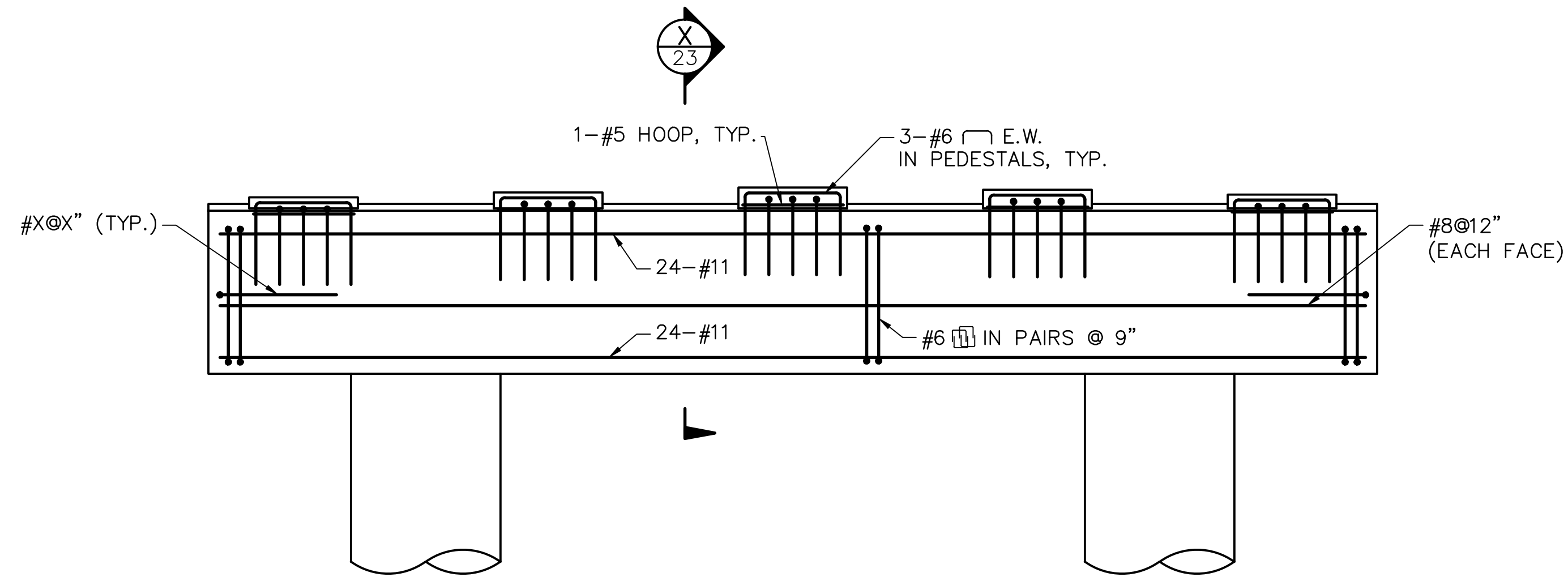


- NOTES**
- BEDROCK ELEVATIONS INTERPOLATED FROM BORINGS, ACTUAL ELEVATIONS MAY DIFFER. LENGTH OF DRIFT SHAFT AND REINFORCEMENT SHALL BE ADJUSTED FOR ACTUAL FIELD CONDITIONS.

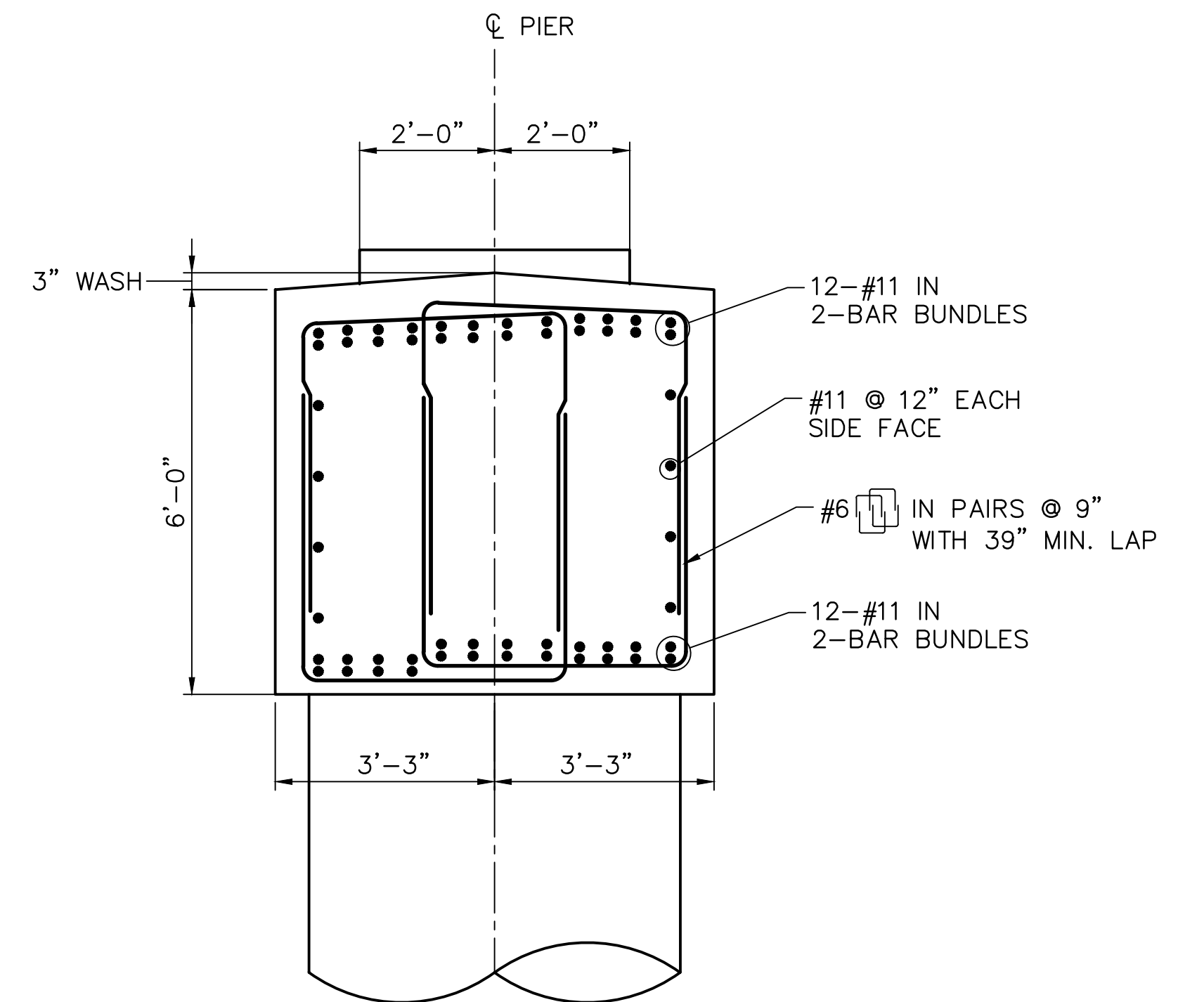
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
PIER PLAN AND ELEVATION					
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
				FEDERAL PROJECT NO.	SHEET NO.
				X-A000(417)	36
				TOTAL SHEETS	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\22-PIER PLAN AND ELEVATION.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde.F



PIER CAP REINFORCEMENT
SCALE: 1/4" = 1'-0"

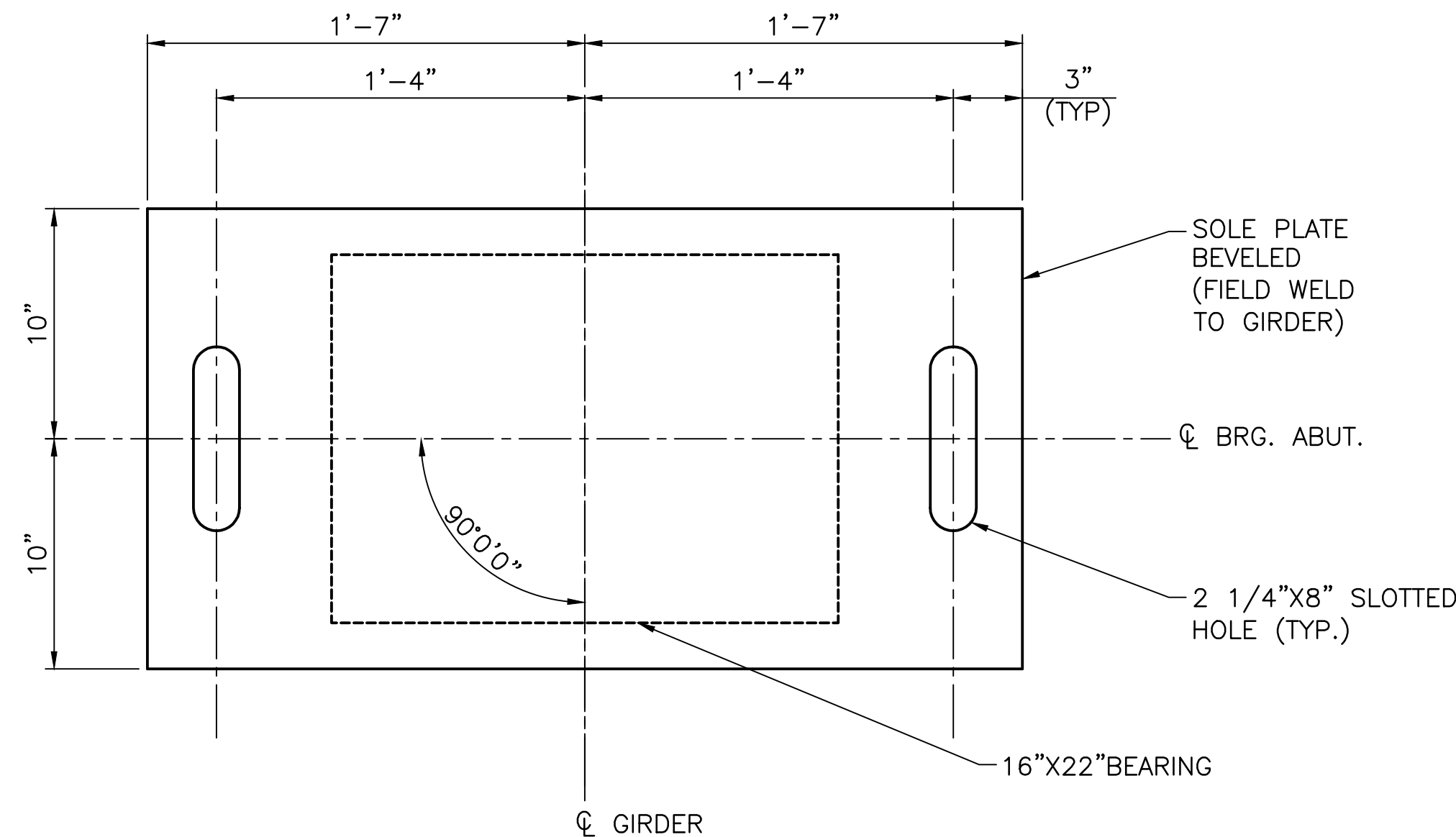


SECTION
SCALE: 1/2" = 1'-0" X 23

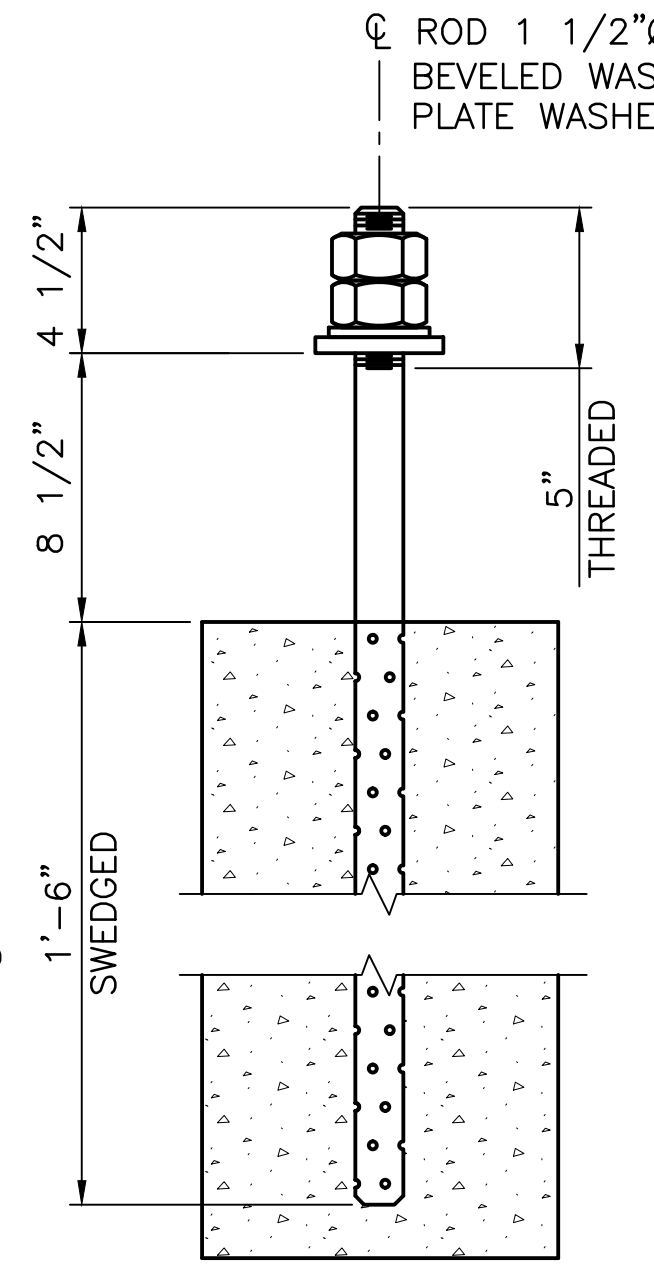
FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\23 PIER DETAILS AND REINFORCING.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
PIER DETAILS AND REINFORCING					BRIDGE SHEET 23 OF 41
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED TD	5/13	CHECKED MAB	5/13		
DRAWN FLC	5/13	CHECKED TD	5/13		
TRACED ---	---	CHECKED ---	---		
QUANTITIES TD	6/13	CHECKED MAB	6/13		
				FEDERAL PROJECT NO. X-A000(417)	SHEET NO. 37
				TOTAL SHEETS 91	

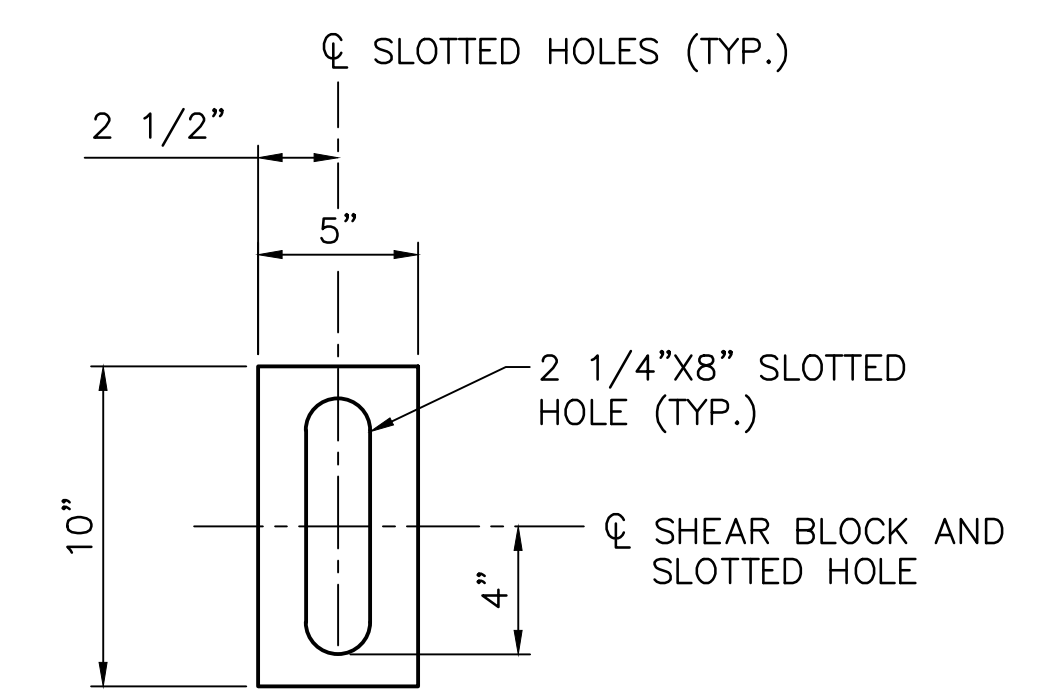
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



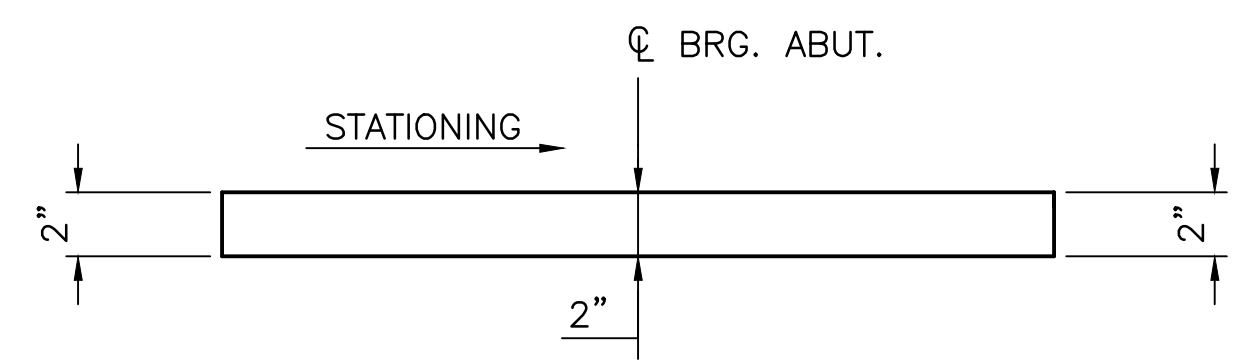
SOLE PLATE PLAN
SCALE: 2" = 1'-0"



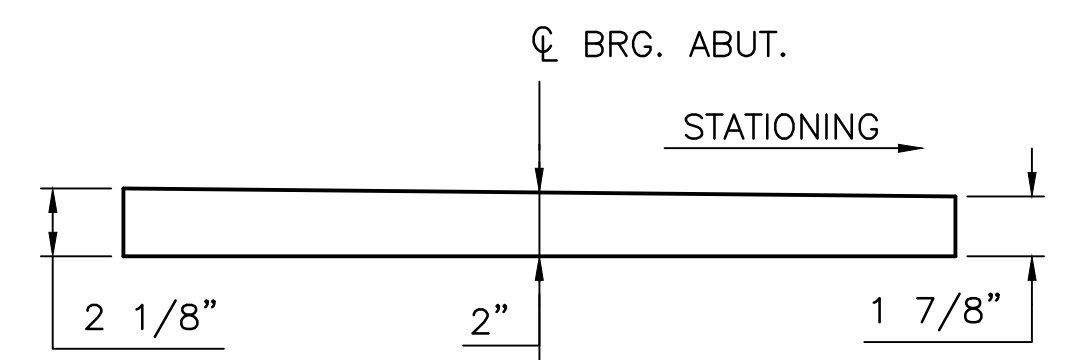
ANCHOR ROD DETAIL
SCALE: 2" = 1'-0"



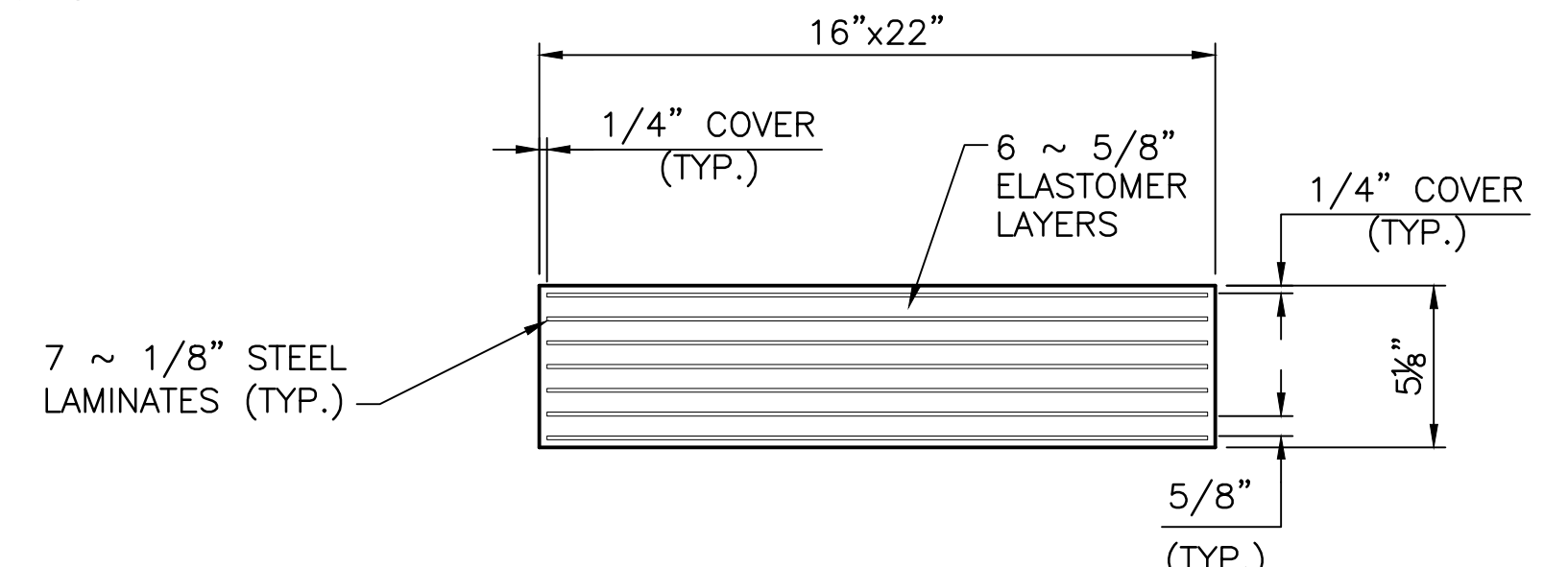
SHEAR BLOCK PLAN
SCALE: 2" = 1'-0"



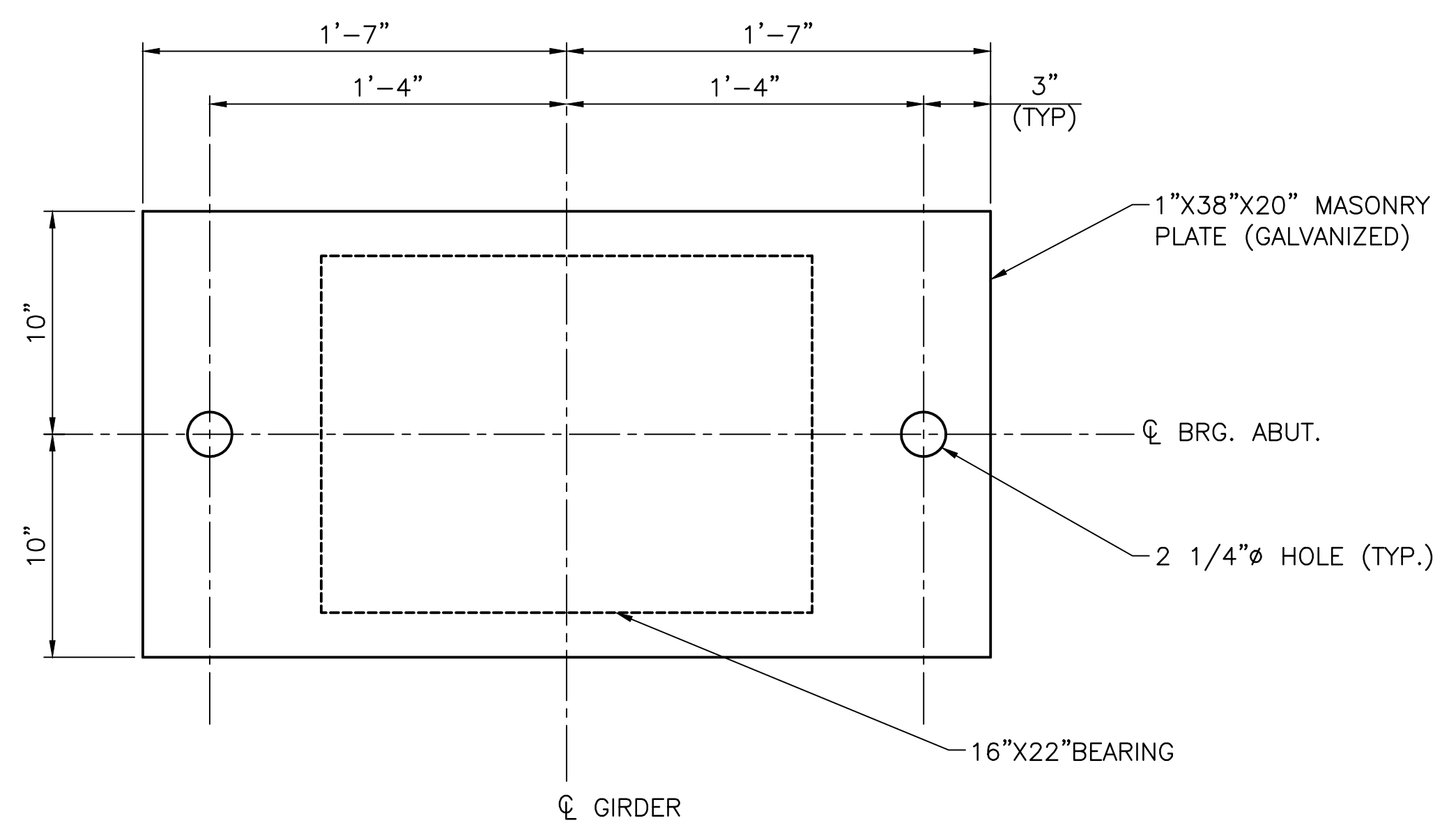
SOLE PLATE SECTION ABUTMENT 1
SCALE: 2" = 1'-0"



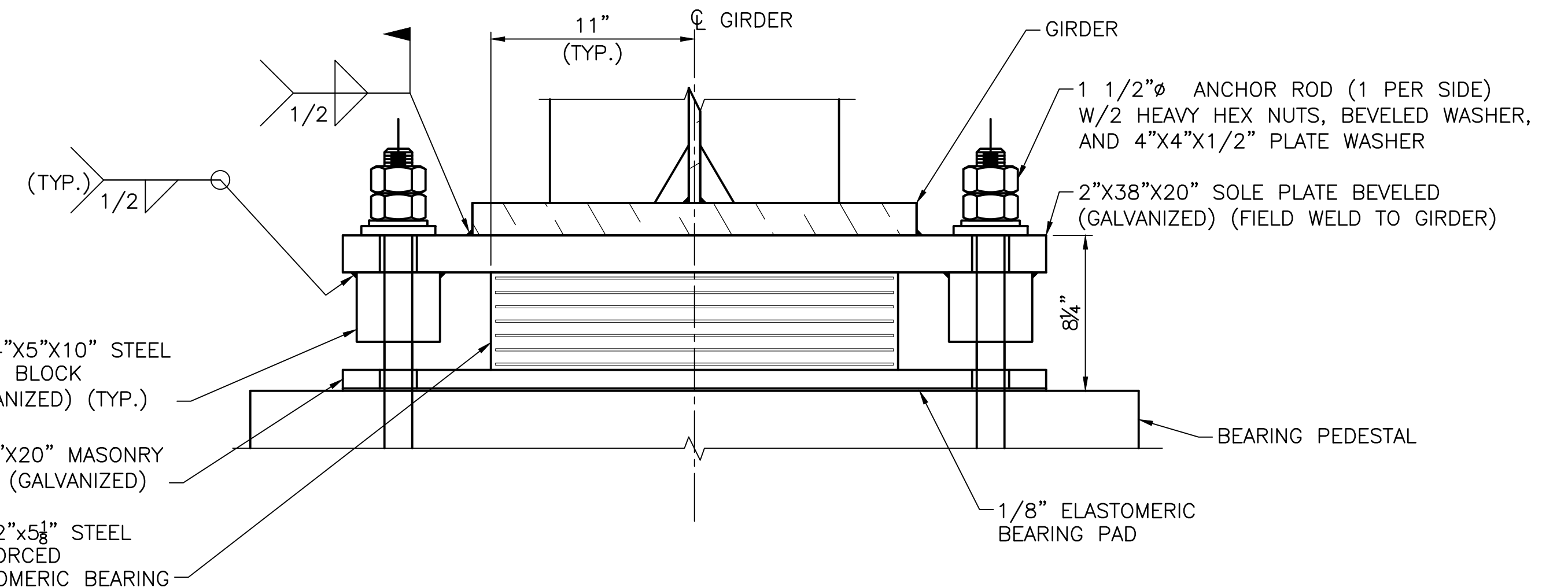
SOLE PLATE SECTION ABUTMENT 2
SCALE: 2" = 1'-0"



BEARING PAD SECTION
SCALE: 2" = 1'-0"



MASONRY PLATE PLAN
SCALE: 2" = 1'-0"

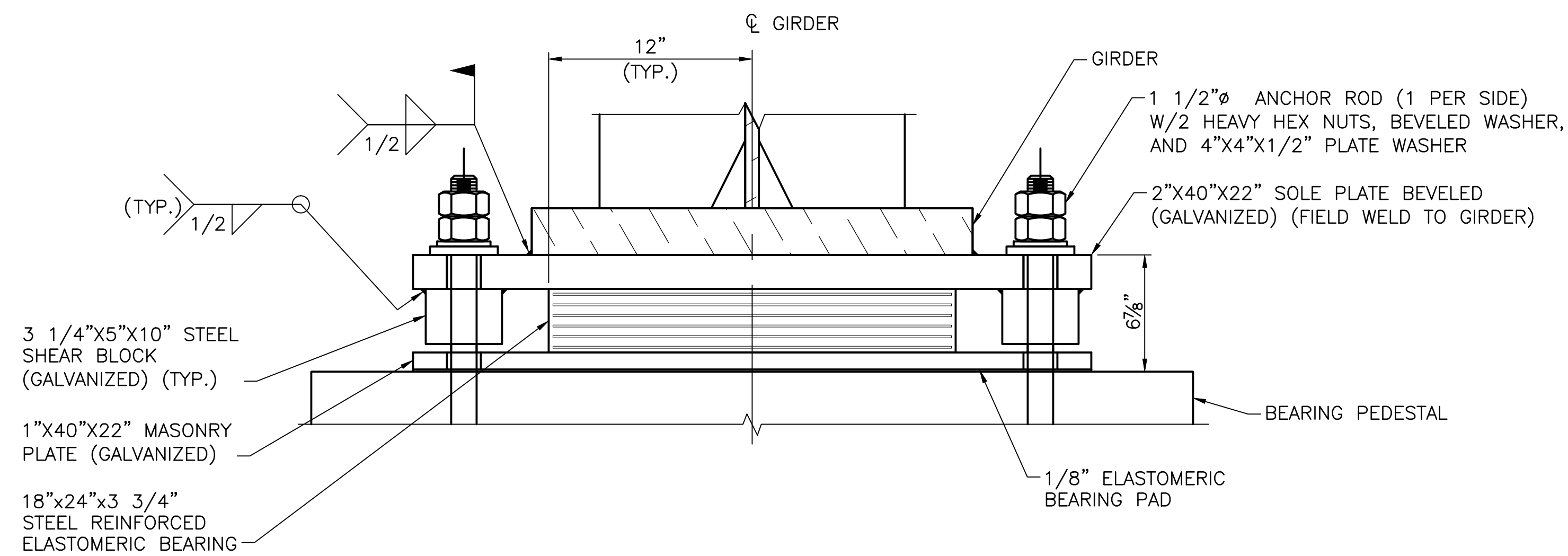


END ELEVATION (10 BEARINGS REQUIRED)
SCALE: 2" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
ABUTMENT BEARING DETAILS									
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE			
DESIGNED	TD 5/13	CHECKED	MAB 5/13						
DRAWN	FLC 5/13	CHECKED	TD 5/13						
TRACED	---	CHECKED	---						
QUANTITIES	TD 6/13	CHECKED	MAB 6/13						
FEDERAL PROJECT NO. X-A000(417)							SHEET NO. 38	TOTAL SHEETS 91	

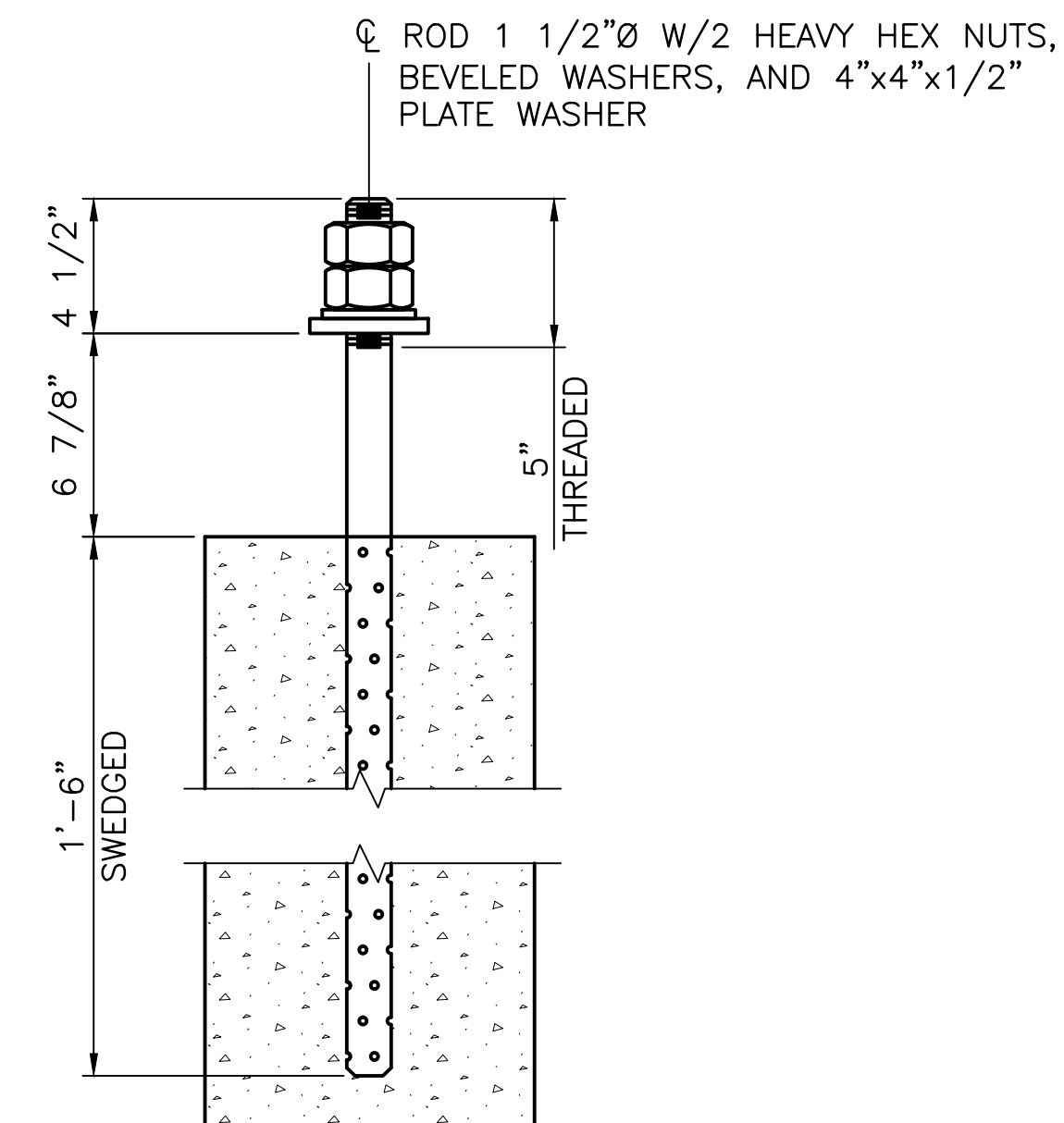
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\24 BEARING DETAILS - SHEET 1 OF 2.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F



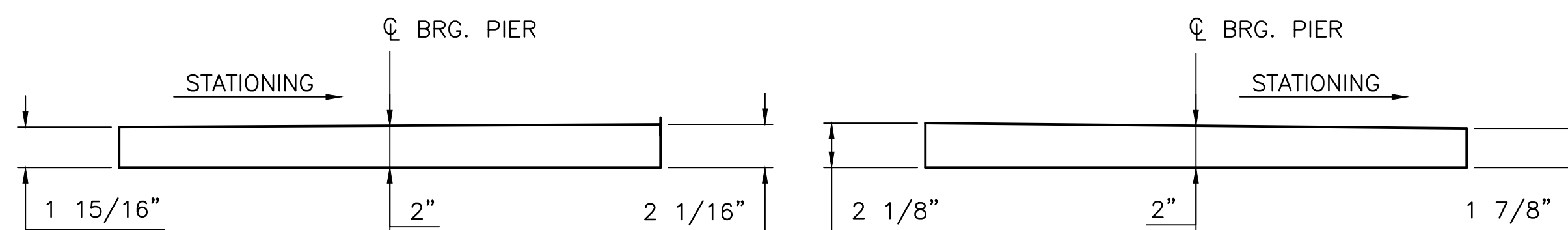
END ELEVATION (10 BEARINGS REQUIRED)

SCALE: 2" = 1'-0"



ANCHOR ROD DETAIL

SCALE: 2" = 1'-0"

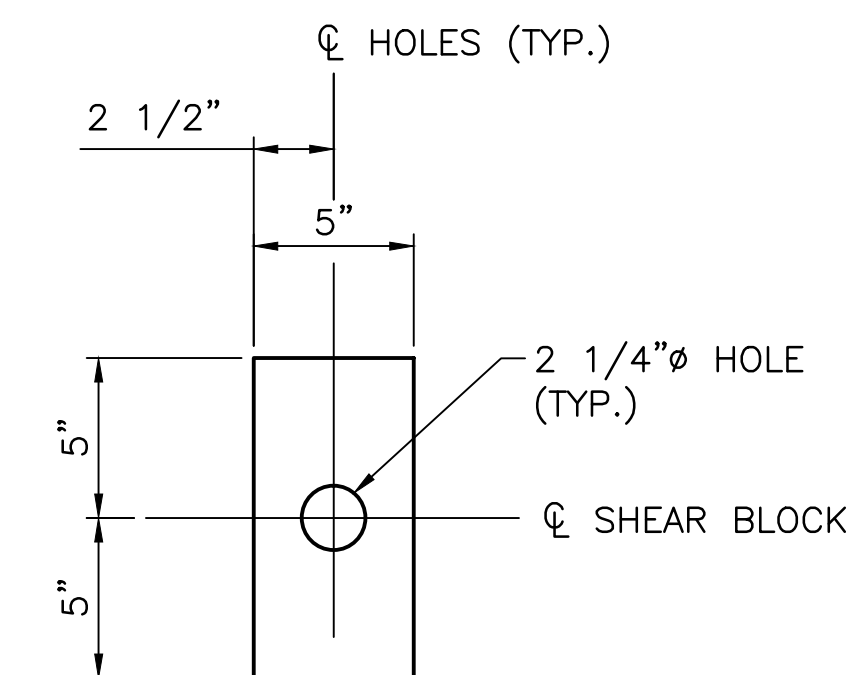


SOLE PLATE SECTION PIER 1

SCALE: 2" = 1'-0"

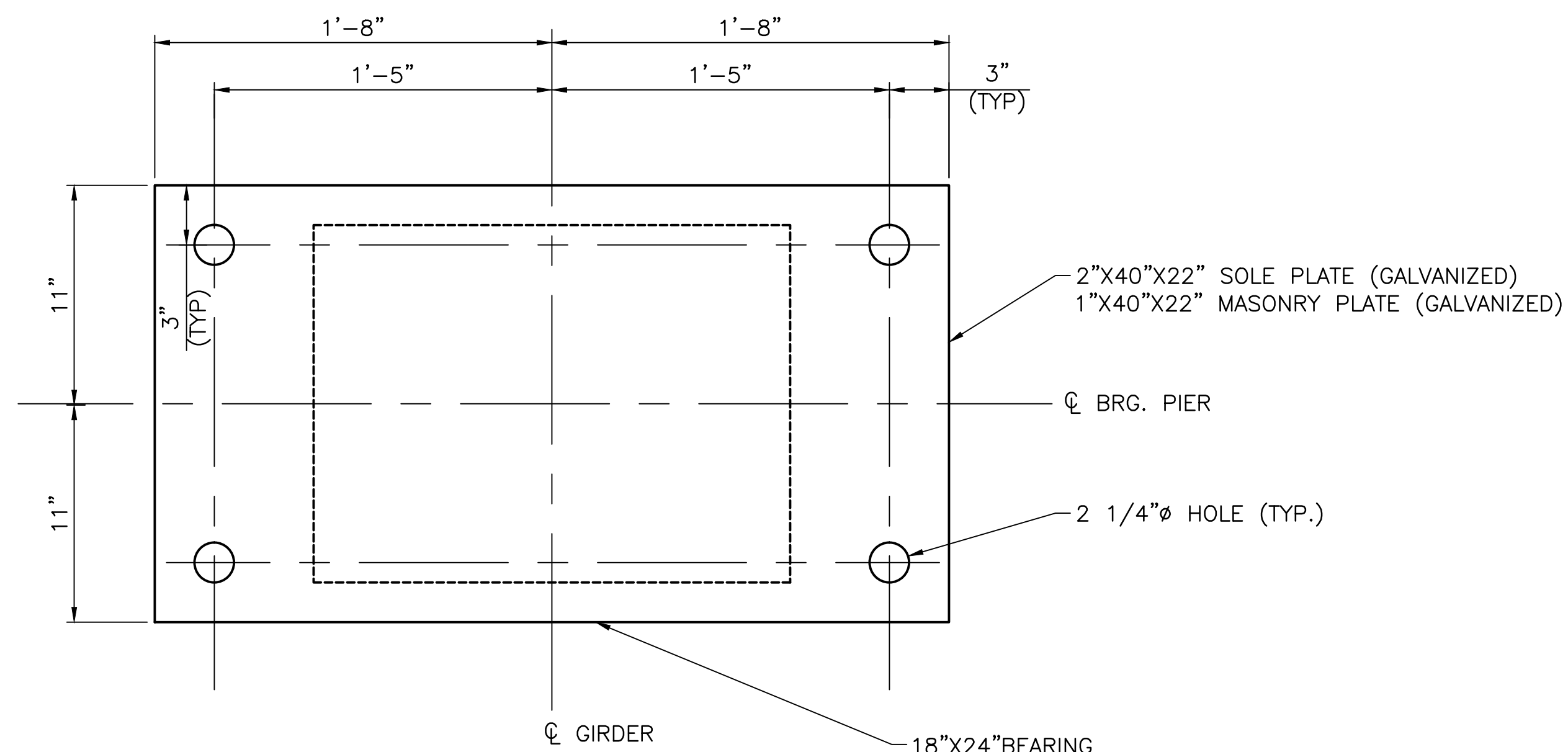
SOLE PLATE SECTION PIER 2

SCALE: 2" = 1'-0"



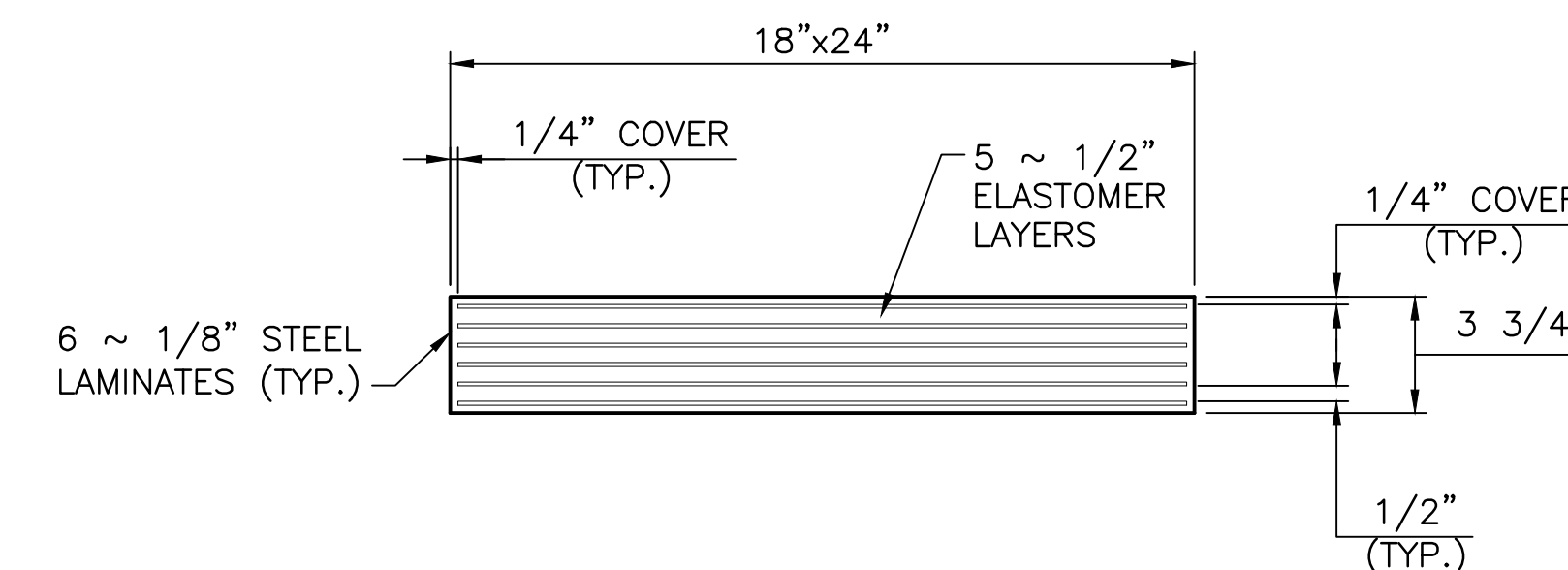
SHEAR BLOCK PLAN

SCALE: 2" = 1'-0"



MASONRY AND SOLE PLATE PLAN

SCALE: 2" = 1'-0"



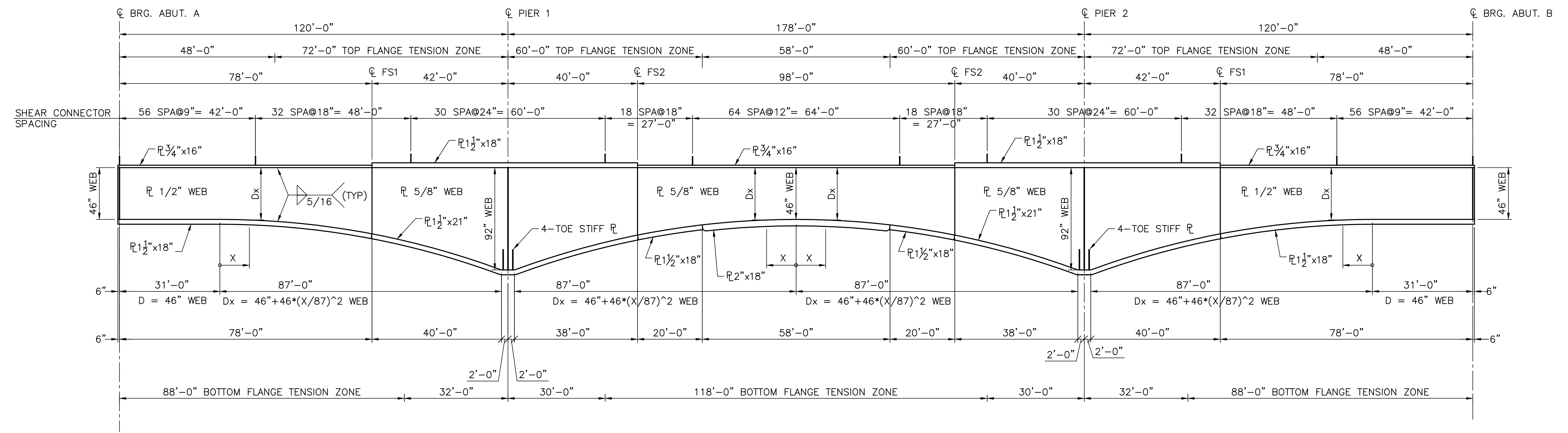
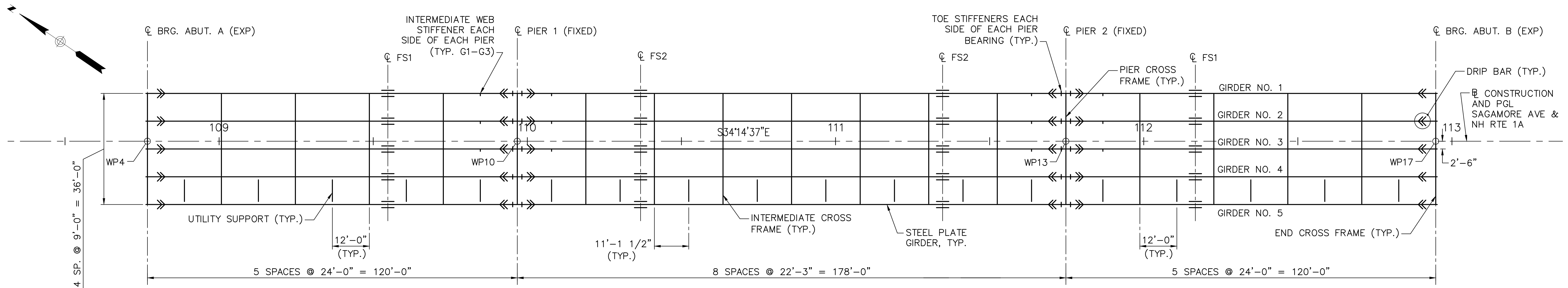
BEARING PAD SECTION

SCALE: 2" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493				
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
PIER BEARING DETAILS								BRIDGE SHEET	25 OF 41
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE			
DESIGNED	TD	5/13	CHECKED	MAB	5/13				
AS NOTED	DRAWN	FLC	5/13	CHECKED	TD	5/13			
TRACED	---	---	CHECKED	---	---		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
QUANTITIES	TD	6/13	CHECKED	MAB	6/13		X-A000(417)	39	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\25 BEARING DETAILS - SHEET 2 OF 2.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde,F



FILE NAME: R:\VC-064-Sagamore Creek\CAD Drawings\05 Structural\26 FRAMING PLAN.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
FRAMING PLAN					
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
				FEDERAL PROJECT NO.	SHEET NO.
				X-A000(417)	40
				TOTAL SHEETS	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

BRIDGE SHEET
26 OF 41
FILE NUMBER

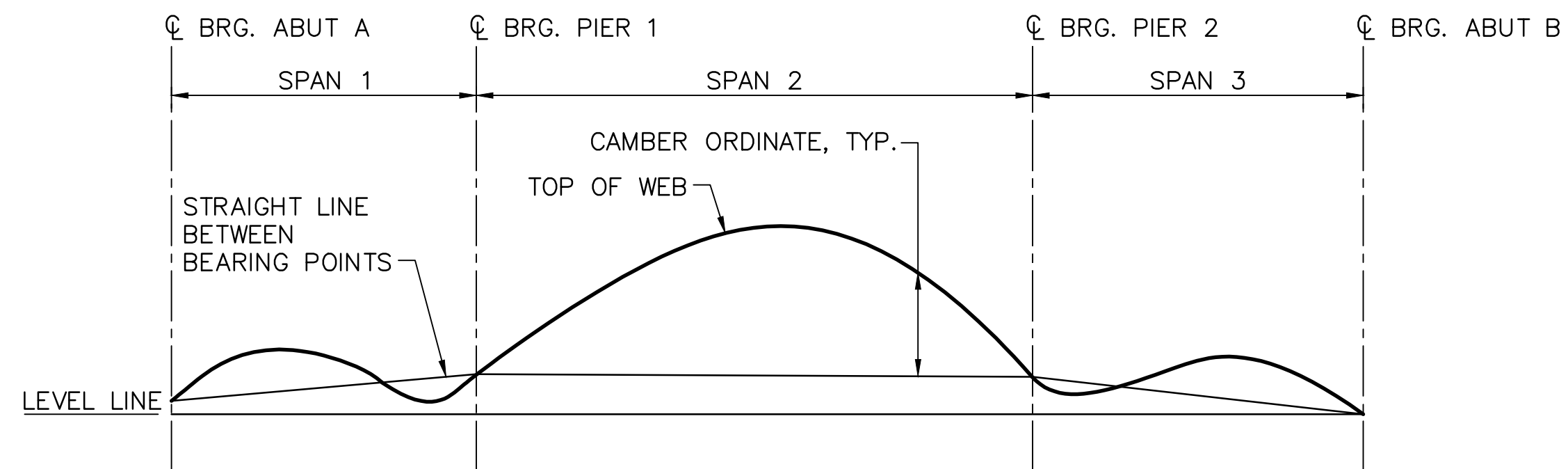
FILE NAME: R:\VO-064-Sagamore Creek\Drawings\05-Structural\27 GIRDER DETAILS - SHEET 1 OF 4.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F

Span 1 Camber Table (Inches)												
Point Along Span	CL. Brg. Abut. No. 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Pier No. 1	
Station	108+76.75	108+88.75	109+00.75	109+12.75	109+24.75	109+36.75	109+48.75	109+60.75	109+72.75	109+84.75	109+96.75	
Girder G1 to G5	Girder DL Deflection	0.00	0.07	0.12	0.14	0.11	0.06	0.00	-0.05	-0.07	-0.05	0.00
	Conc. Slab Deflection	0.00	0.53	0.93	1.11	1.05	0.81	0.47	0.16	-0.05	-0.11	0.00
	Super. DL Deflection	0.00	0.14	0.25	0.30	0.29	0.23	0.14	0.04	-0.03	-0.05	0.00
	Total Deflection	0.00	0.74	1.30	1.54	1.45	1.10	0.61	0.16	-0.14	-0.21	0.00
	VC Ordinate	0.00	-0.63	-0.91	-0.86	-0.73	-0.61	-0.49	-0.37	-0.24	-0.12	0.00
	Total Camber	0.00	0.12	0.39	0.69	0.72	0.48	0.12	-0.21	-0.39	-0.33	0.00

Span 2 Camber Table (Inches)												
Point Along Span	CL. Brg. Pier No. 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Pier No. 2	
Station	109+96.75	110+14.55	110+32.35	110+50.15	110+67.95	110+85.75	111+03.55	111+21.35	111+39.15	111+56.95	111+74.75	
Girder G1 to G5	Girder DL Deflection	0.00	0.16	0.39	0.66	0.87	0.96	0.87	0.66	0.39	0.16	0.00
	Conc. Slab Deflection	0.00	0.49	1.31	2.30	3.13	3.46	3.13	2.29	1.30	0.48	0.00
	Super. DL Deflection	0.00	0.19	0.50	0.84	1.10	1.20	1.10	0.84	0.50	0.19	0.00
	Total Deflection	0.00	0.84	2.21	3.80	5.10	5.61	5.10	3.79	2.20	0.83	0.00
	VC Ordinate	0.00	2.37	4.66	6.37	7.42	7.82	7.57	6.66	5.09	2.87	0.00
	Total Camber	0.00	3.21	6.86	10.16	12.52	13.43	12.66	10.44	7.29	3.71	0.00

Span 3 Camber Table (Inches)												
Point Along Span	CL. Brg. Pier No. 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Abut. No. 2	
Station	111+74.75	111+86.75	111+98.75	112+10.75	112+22.75	112+34.75	112+46.75	112+58.75	112+70.75	112+82.75	112+94.75	
Girder G1 to G5	Girder DL Deflection	0.00	-0.05	-0.07	-0.04	0.01	0.06	0.11	0.14	0.12	0.07	0.00
	Conc. Slab Deflection	0.00	-0.11	-0.04	0.18	0.49	0.81	1.05	1.11	0.93	0.53	0.00
	Super. DL Deflection	0.00	-0.05	-0.03	0.04	0.14	0.23	0.29	0.30	0.25	0.14	0.00
	Total Deflection	0.00	-0.20	-0.13	0.18	0.63	1.10	1.46	1.54	1.30	0.74	0.00
	VC Ordinate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total Camber	0.00	-0.20	-0.13	0.18	0.63	1.10	1.46	1.54	1.30	0.74	0.00

CAMBER TABLE

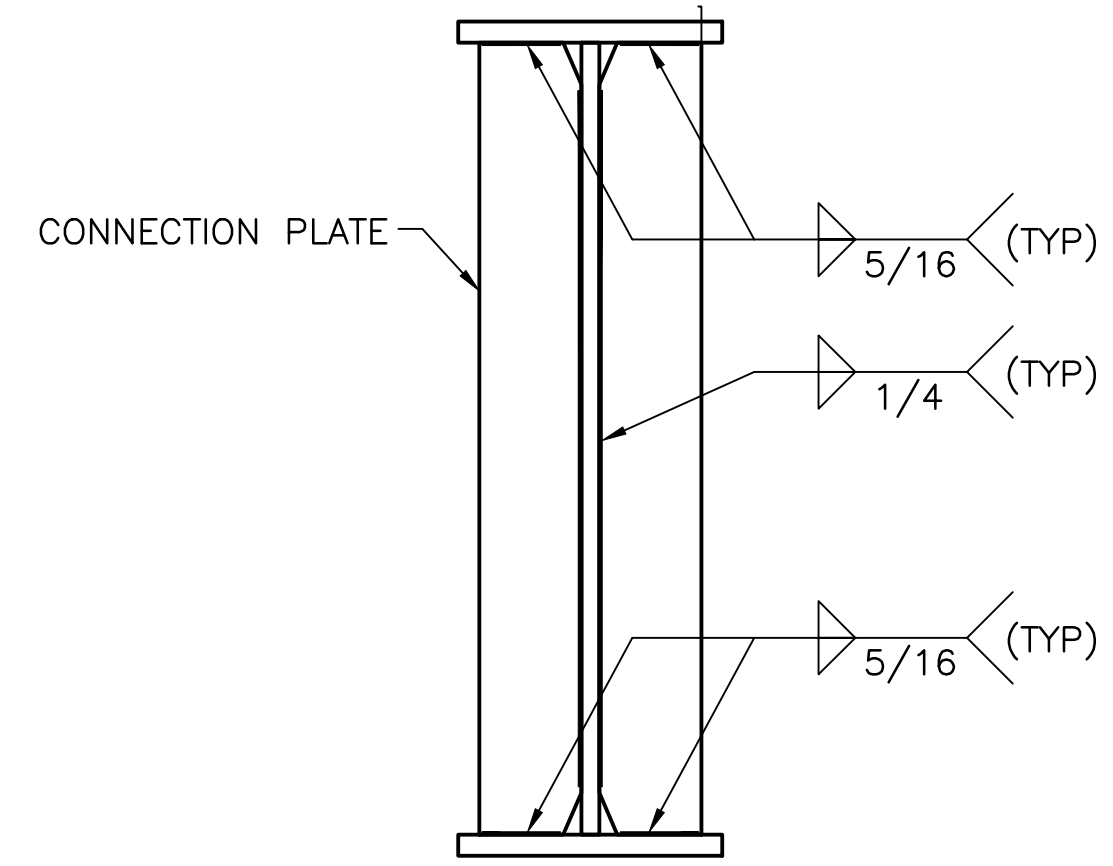


CAMBER DIAGRAM
NOT TO SCALE

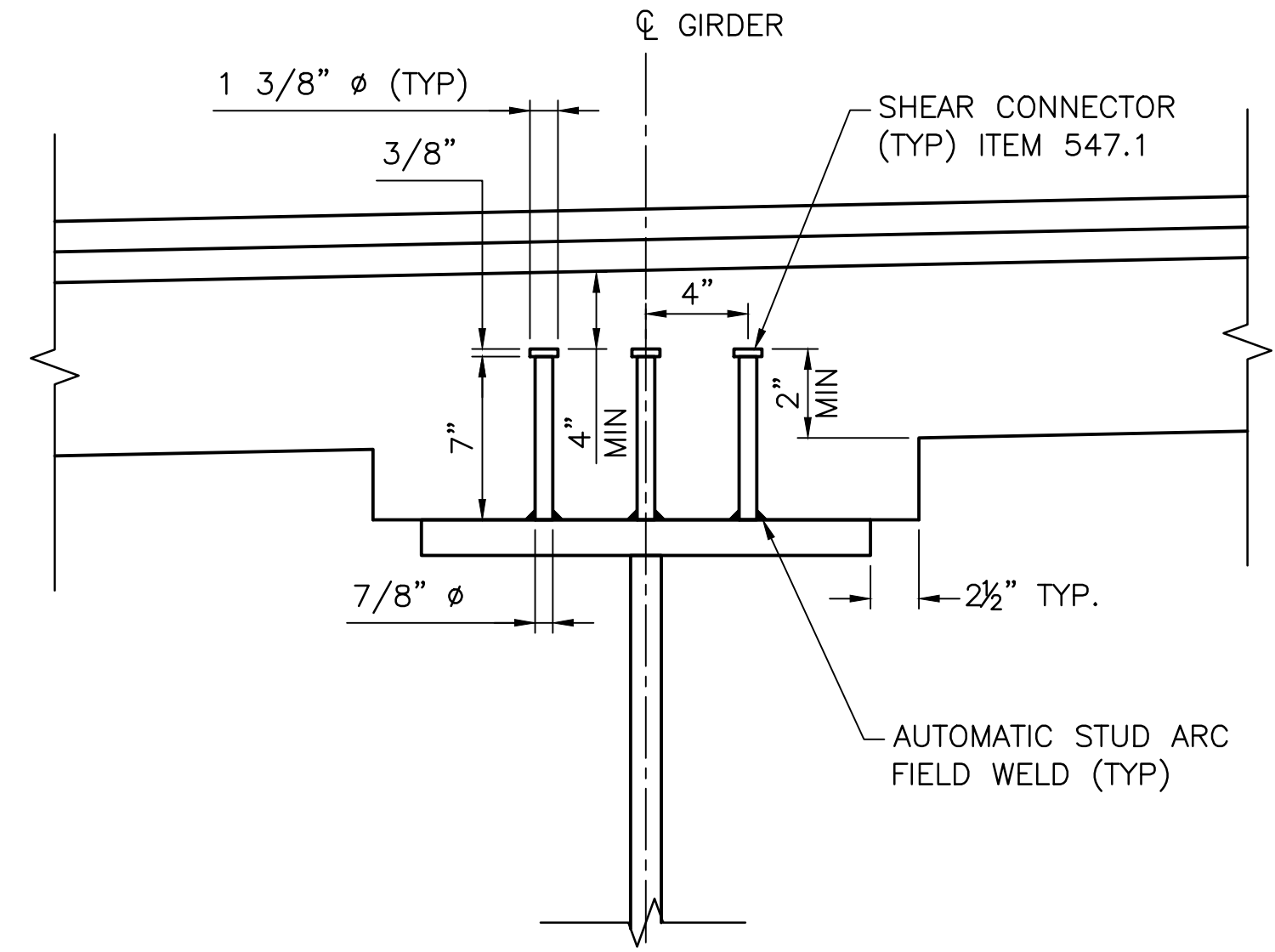
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493	
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK					
GIRDER DETAILS - SHEET 1 OF 4					
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
TD	5/13	CHECKED	MAB	5/13	
DRAWN	FLC	5/13	CHECKED	TD	5/13
TRACED	---	---	CHECKED	---	---
QUANTITIES	TD	6/13	CHECKED	MAB	6/13
FEDERAL PROJECT NO. X-A000(417)				SHEET NO. 41	TOTAL SHEETS 91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

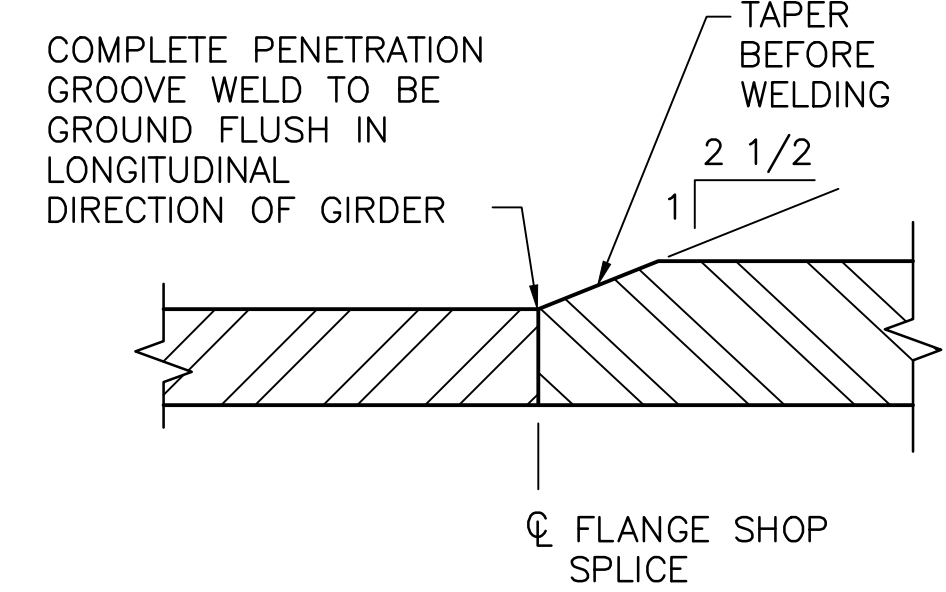
FILE NAME: R:\VO-064-Sagamore Creek\CAD Drawings\05 Structural\28 GIRDER DETAILS - SHEET 2 OF 4.dwg PLOTTED: Wednesday, July 24, 2013 - 11:12am USER: Conde_F



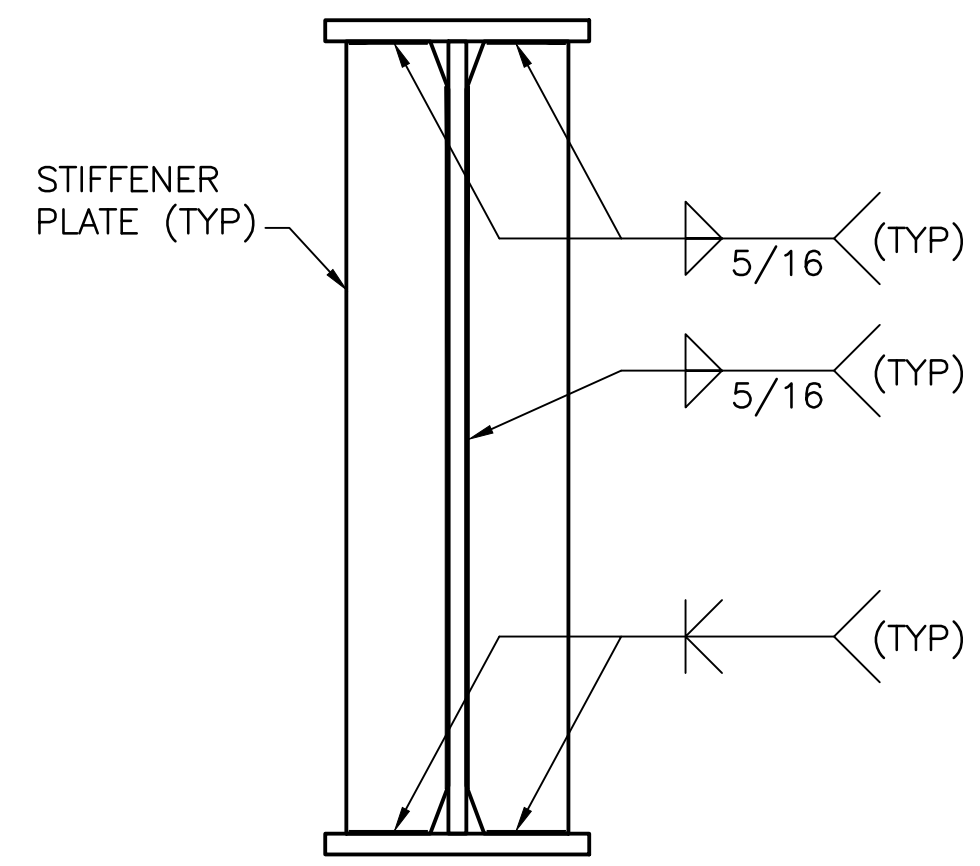
CONNECTION PLATE
SCALE: 3/4" = 1'-0"



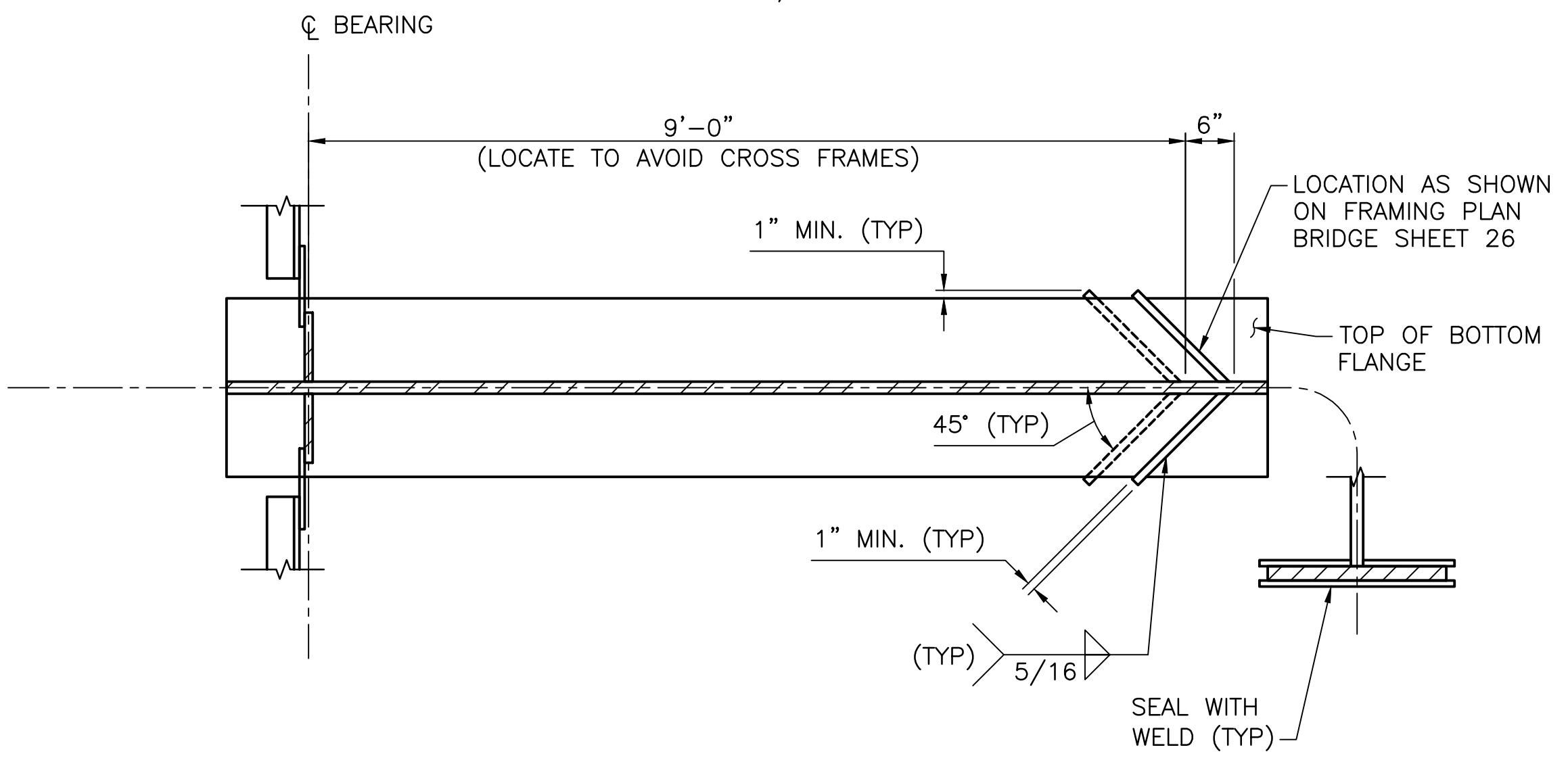
SHEAR CONNECTOR DETAILS
SCALE: 1 1/2" = 1'-0"



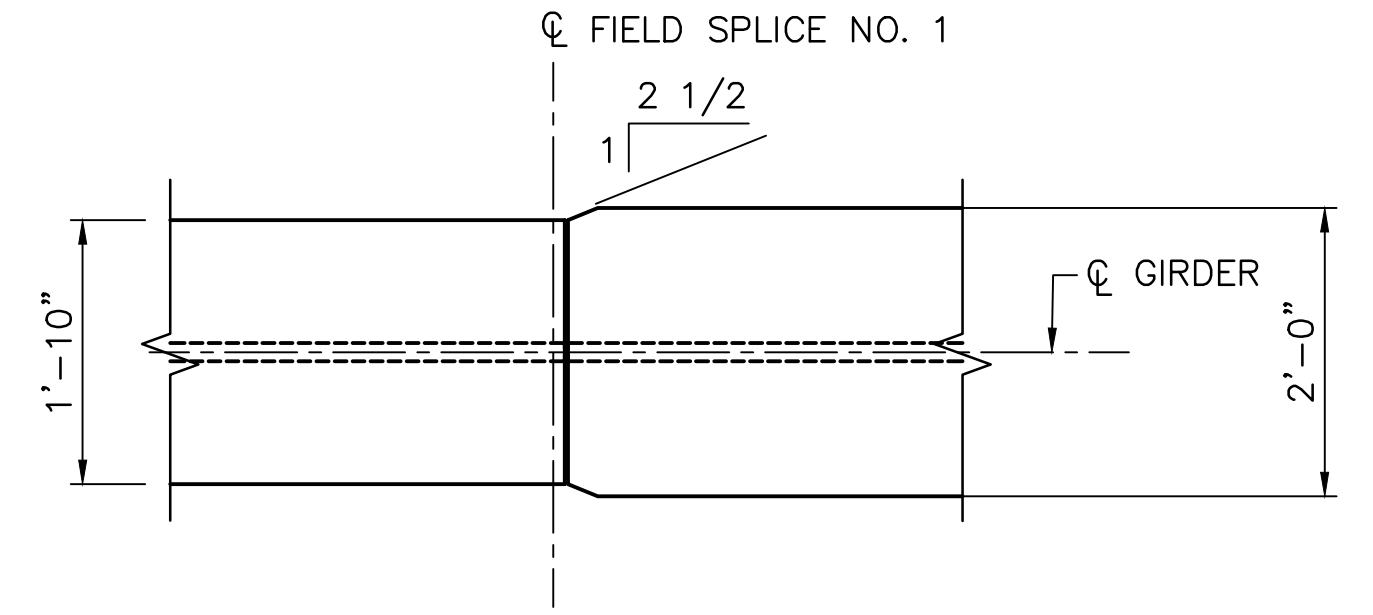
FLANGE THICKNESS TRANSITION DETAIL
NOT TO SCALE



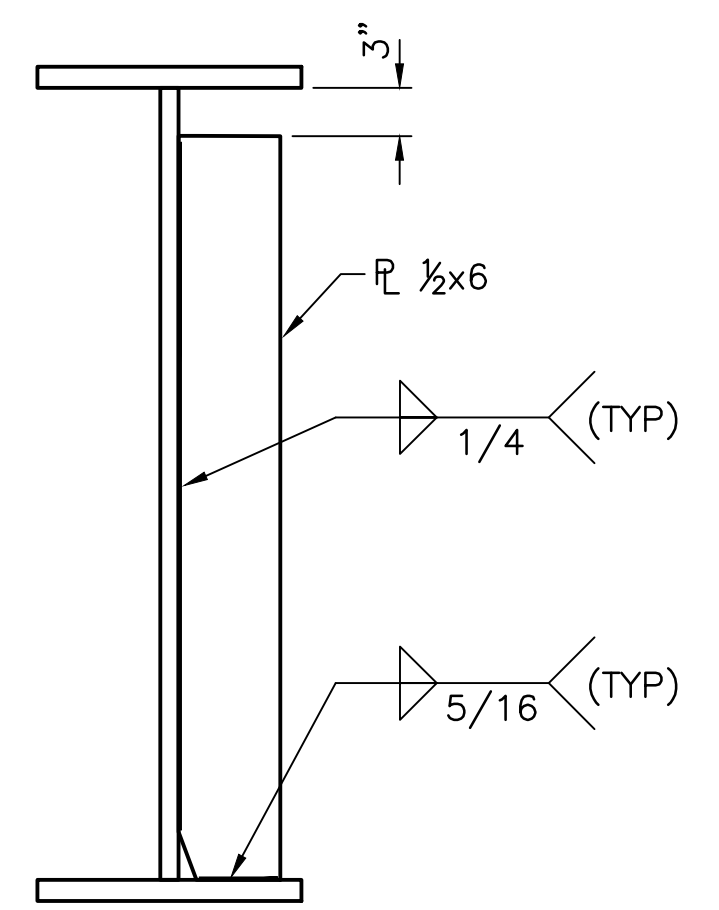
BEARING STIFFENERS
SCALE: 3/4" = 1'-0"



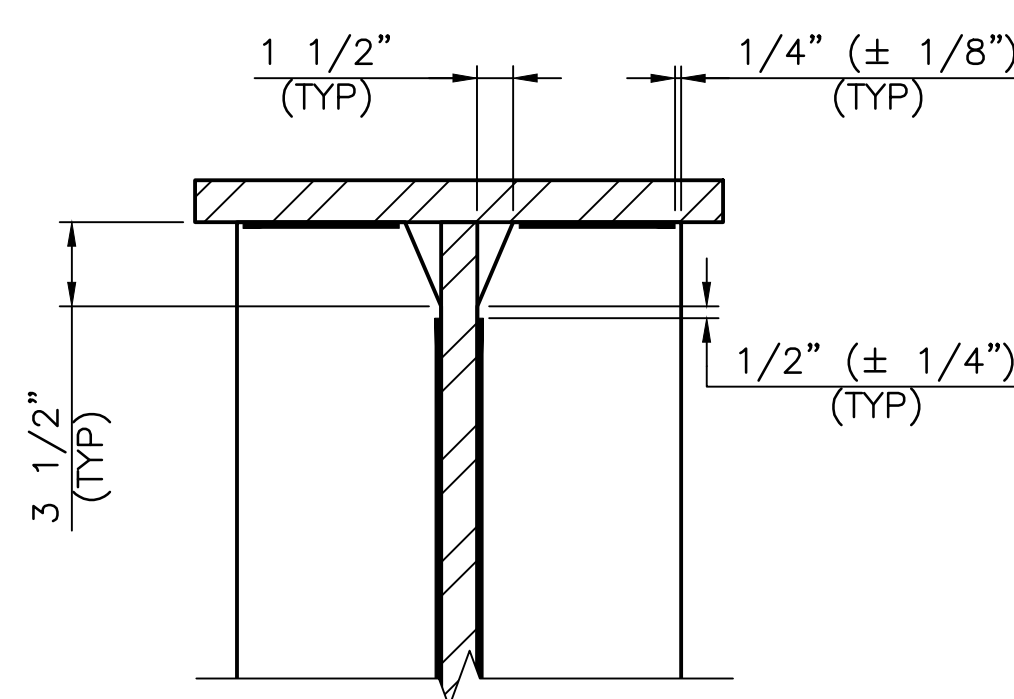
DRIP BAR DETAILS
SCALE: 3/4" = 1'-0"



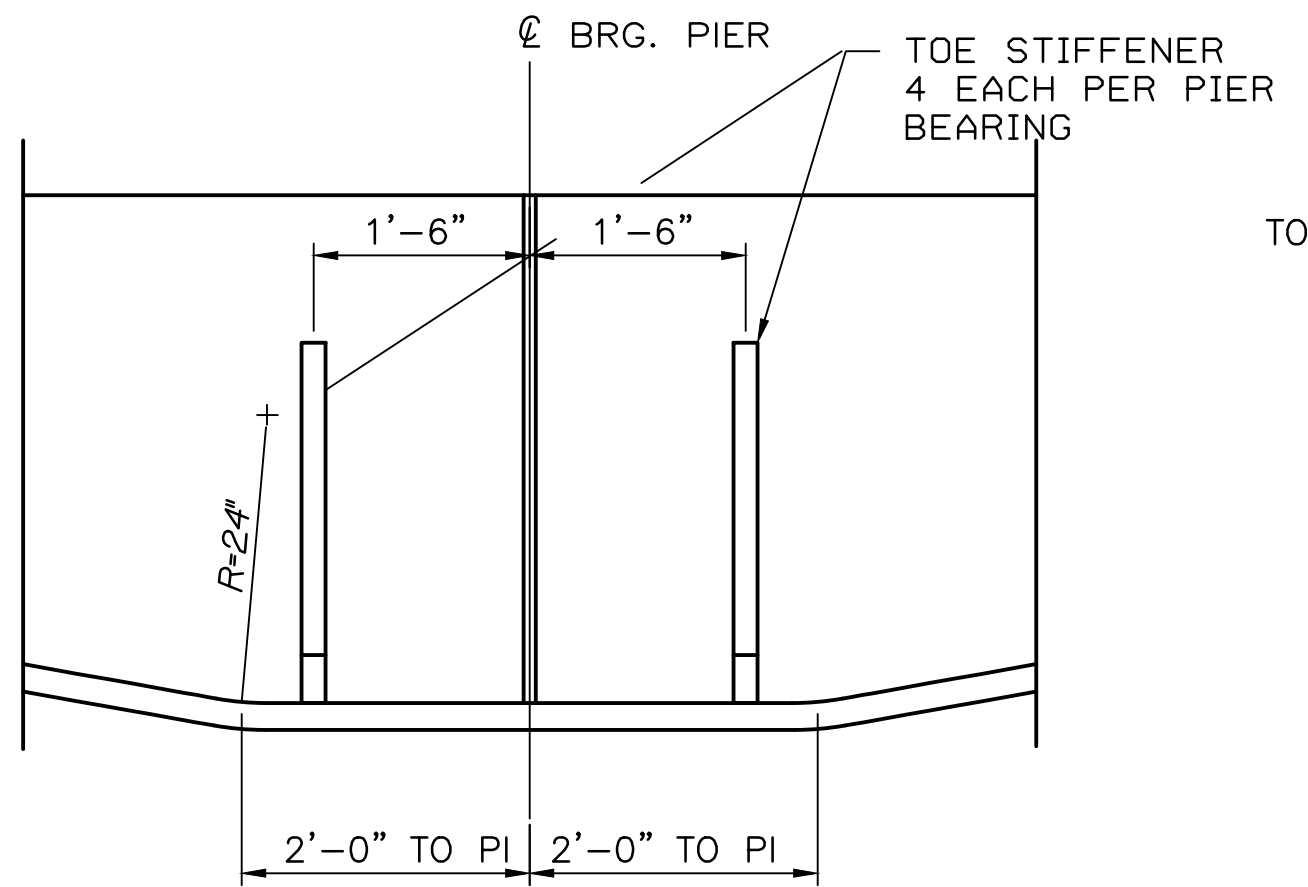
FLANGE WIDTH TRANSITION DETAIL
SCALE: 3/4" = 1'-0"



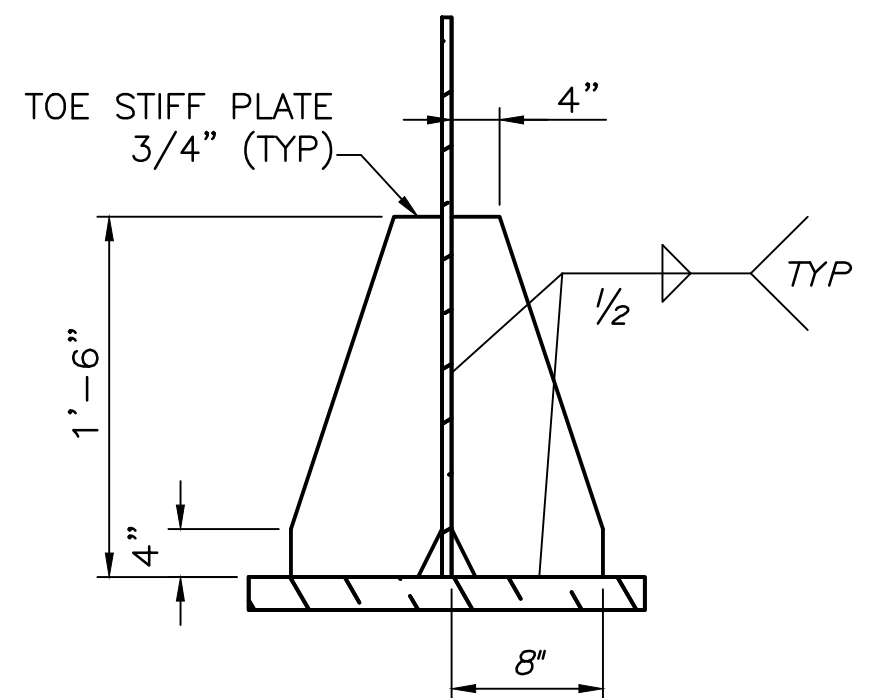
INTERMEDIATE STIFFENER
SCALE: 3/4" = 1'-0"



COPE AND WELD DETAIL
SCALE: 1 1/2" = 1'-0"



TOE STIFFENER ELEVATION
SCALE: 3/4" = 1'-0"

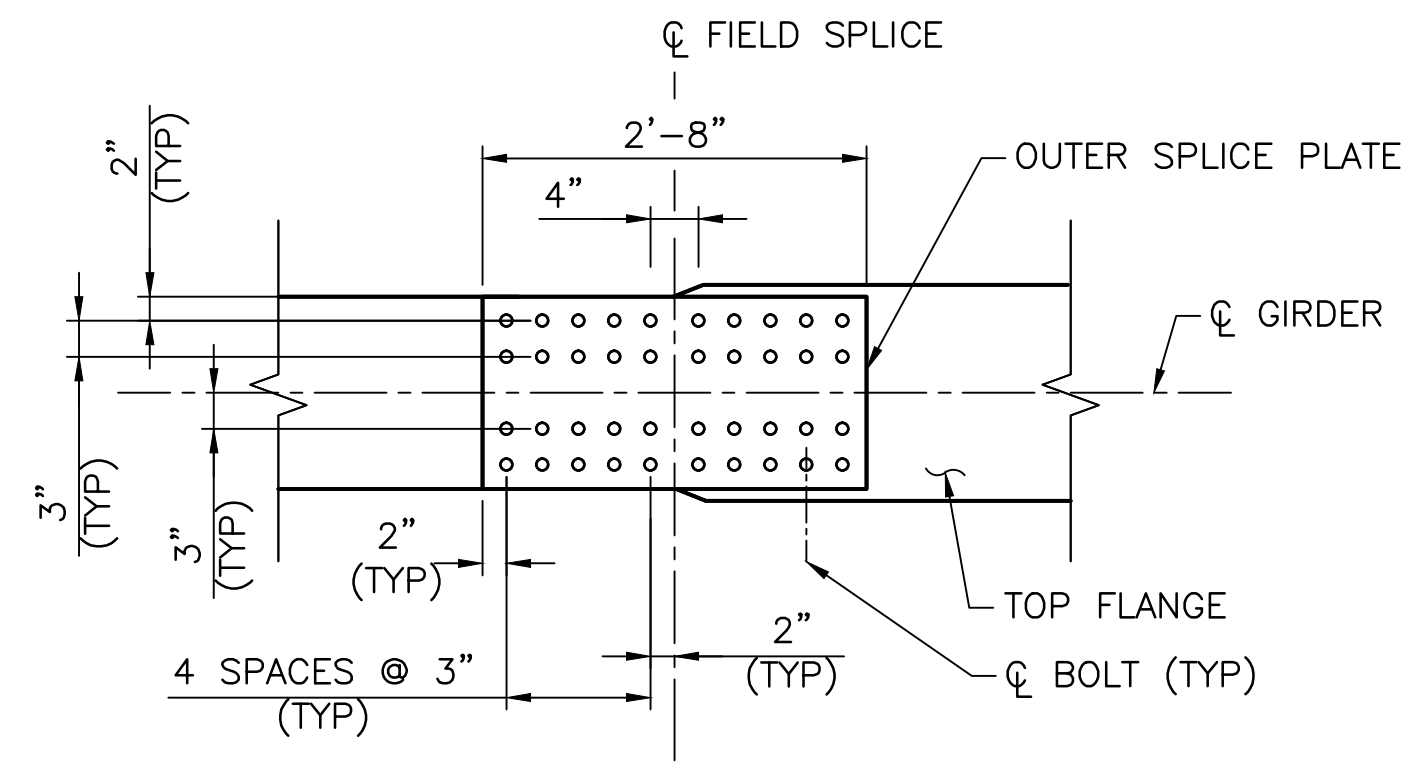


TOE STIFFENER SECTION
SCALE: 3/4" = 1'-0"

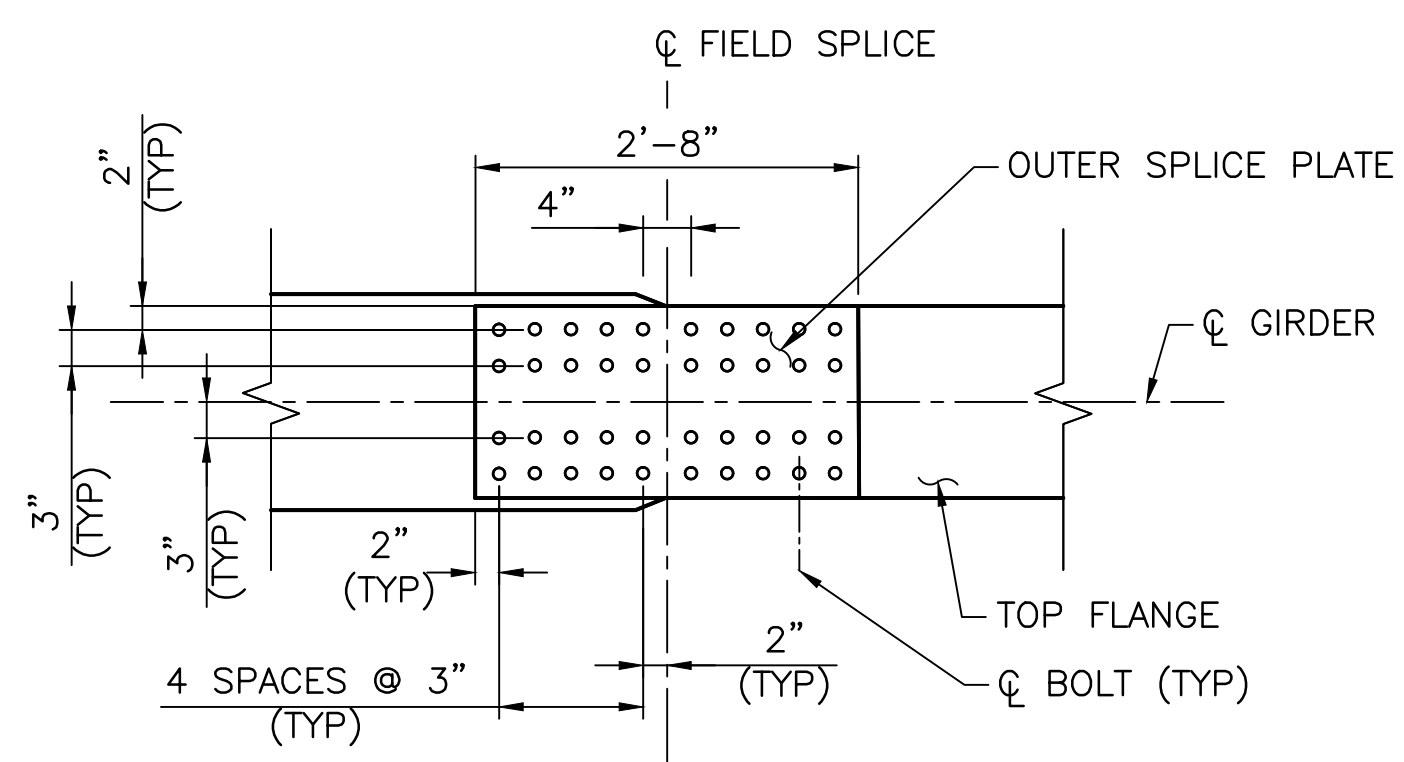
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH			BRIDGE NO. 198/034			STATE PROJECT 14493			BRIDGE SHEET		
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK						GIRDER DETAILS - SHEET 2 OF 4			28 OF 41		
BY	DATE	CHECKED	BY	DATE	REVISIONS AFTER PROPOSAL	DATE	FILE NUMBER				
TD	5/13	5/13	MAB	5/13							
FLC	5/13	5/13	TD	5/13							
TRACED	---	---	CHECKED	---	---		FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 42		TOTAL SHEETS 91
QUANTITIES	TD	6/13	CHECKED	MAB	6/13						

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

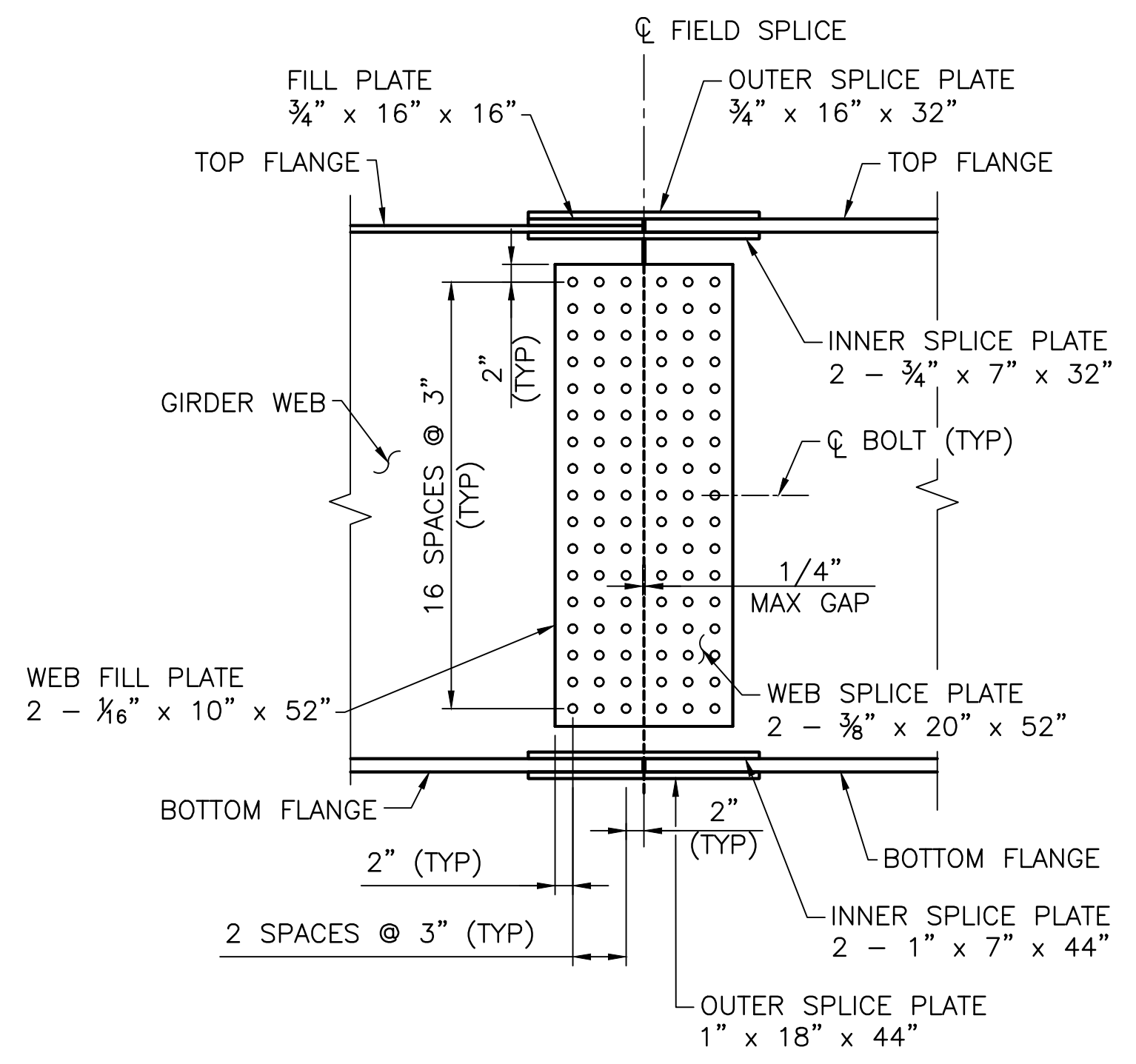
FILE NAME: R:\VG-064-Sagamore Creek\Drawings\05 Structural\29 GIRDER DETAILS - SHEET 3 OF 4.dwg PLOTTED: Wednesday, July 24, 2013 - 11:13am USER: Conde_F



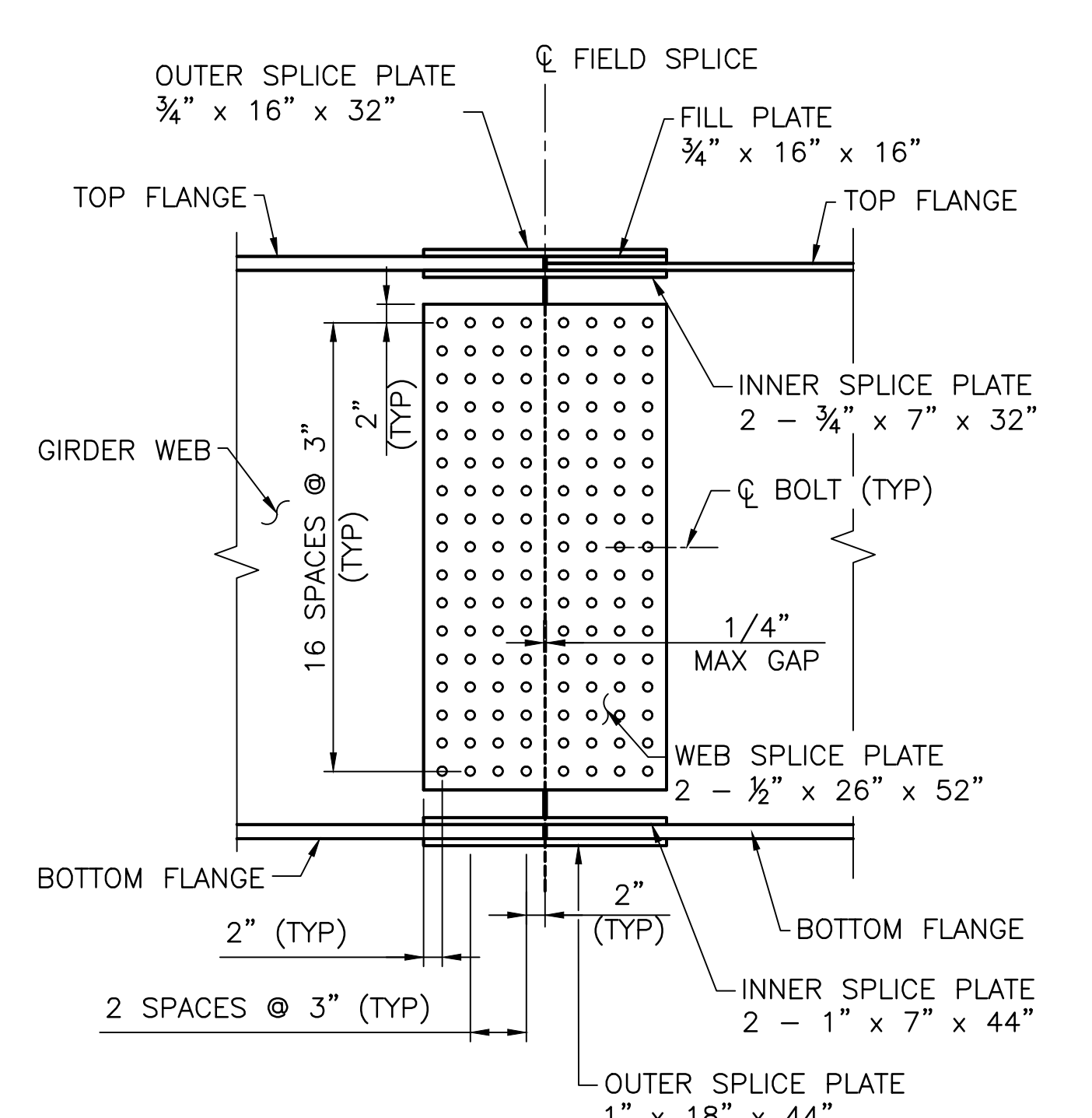
TOP FLANGE



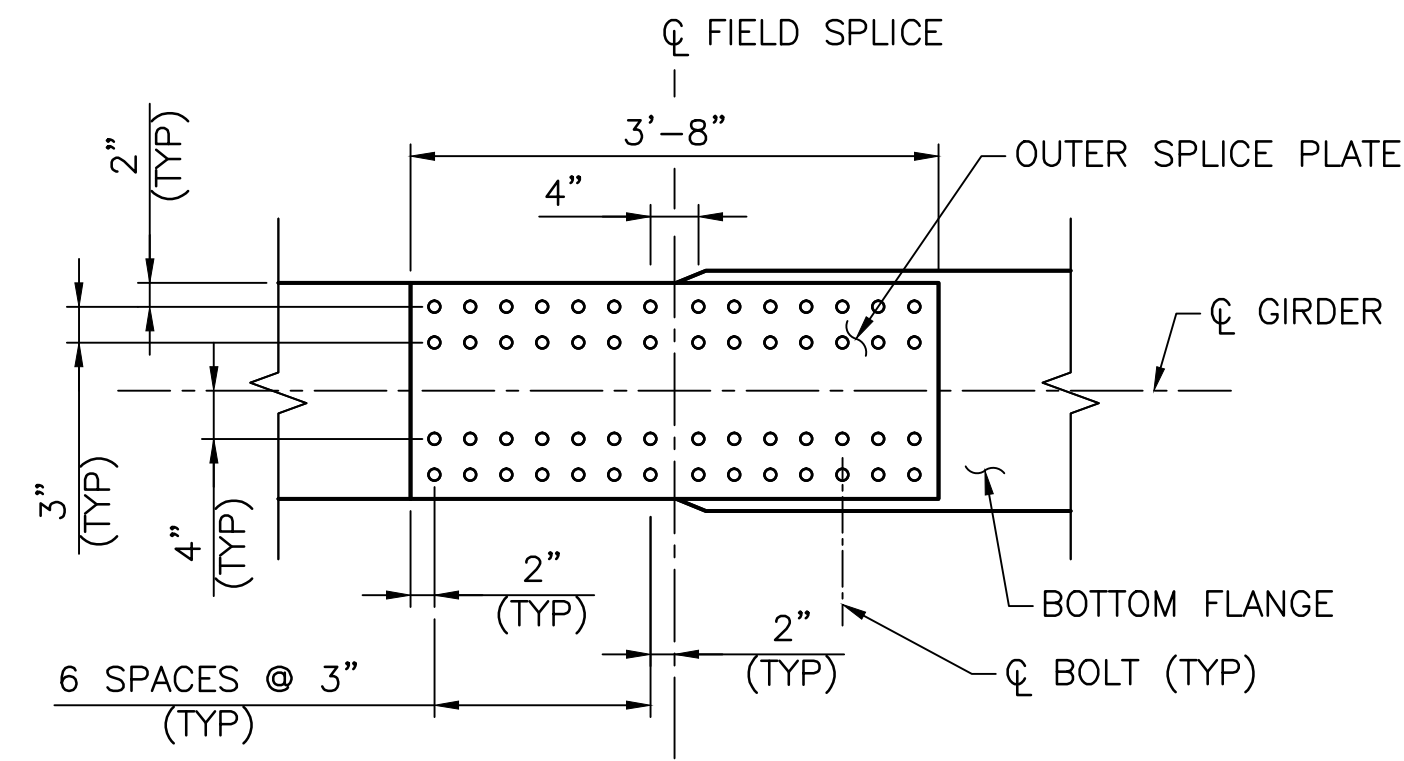
TOP FLANGE



WEB SPLICE



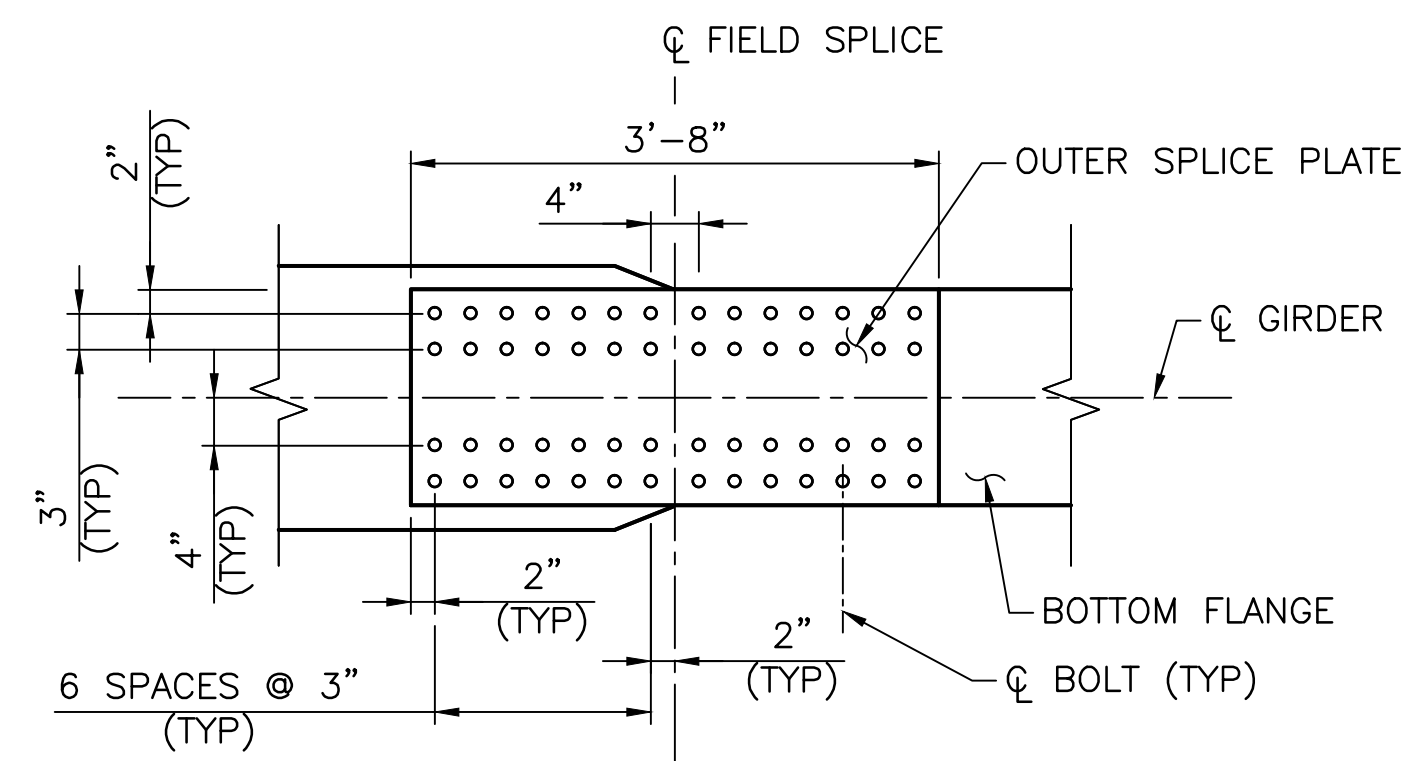
WEB SPLICE



BOTTOM FLANGE

FIELD SPLICE NO. 1

SCALE: 3/4" = 1'-0"



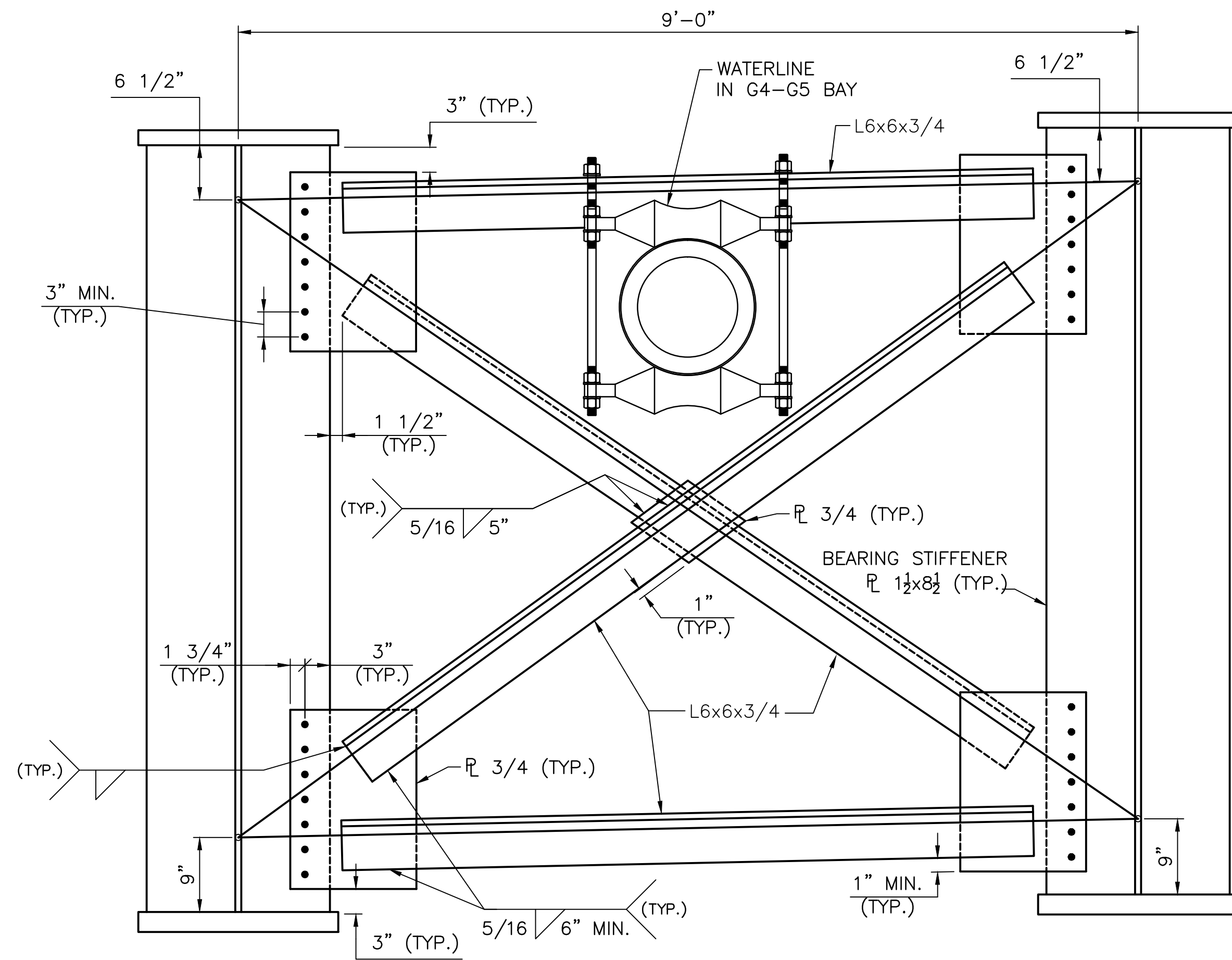
BOTTOM FLANGE

FIELD SPLICE NO. 2

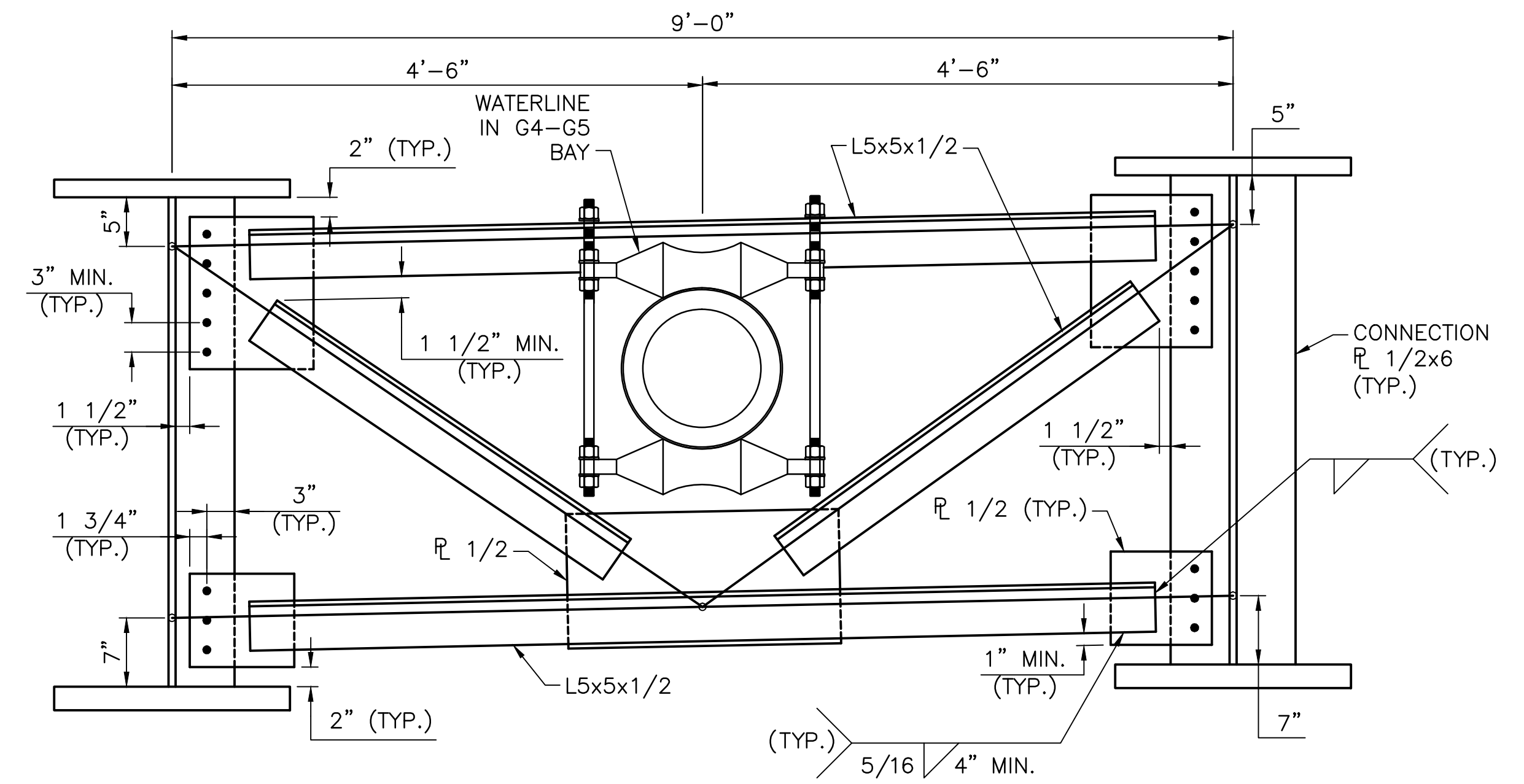
SCALE: 3/4" = 1'-0"

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

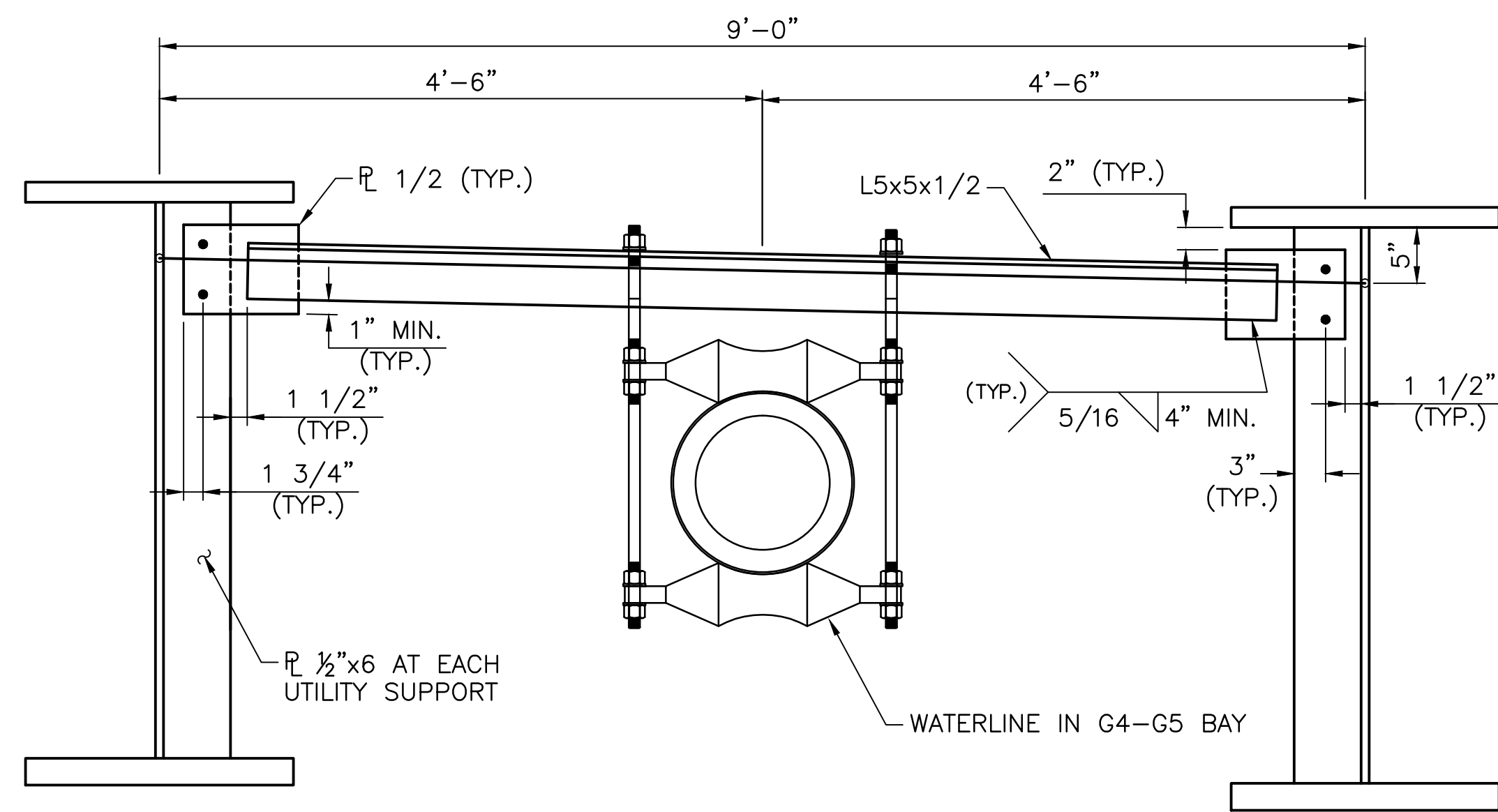
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
GIRDER DETAILS - SHEET 3 OF 4									
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL	
DESIGNED		TD 5/13		CHECKED		MAB 5/13			
DRAWN		FLC 5/13		CHECKED		TD 5/13			
TRACED		---		CHECKED		---		FEDERAL PROJECT NO.	
QUANTITIES		TD 6/13		CHECKED		MAB 6/13		X-A000(417)	
								SHEET NO.	43
								BRIDGE SHEET	29 OF 41
								TOTAL SHEETS	91



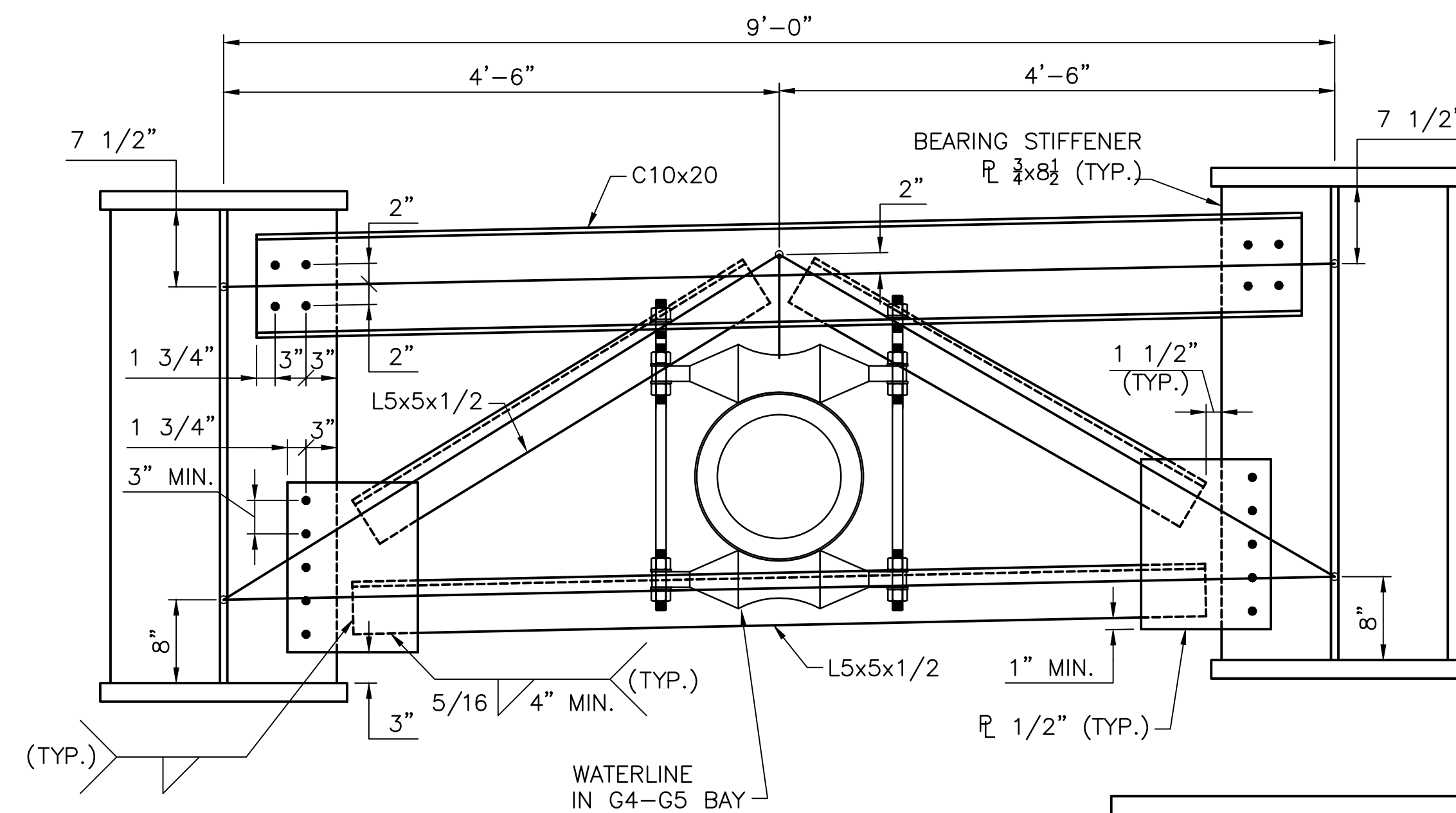
PIER CROSSFRAME DETAILS
SCALE: 1" = 1'-0"



INTERMEDIATE CROSSFRAME DETAILS
SCALE: 1" = 1'-0"



UTILITY SUPPORT DETAILS
SCALE: 1" = 1'-0"



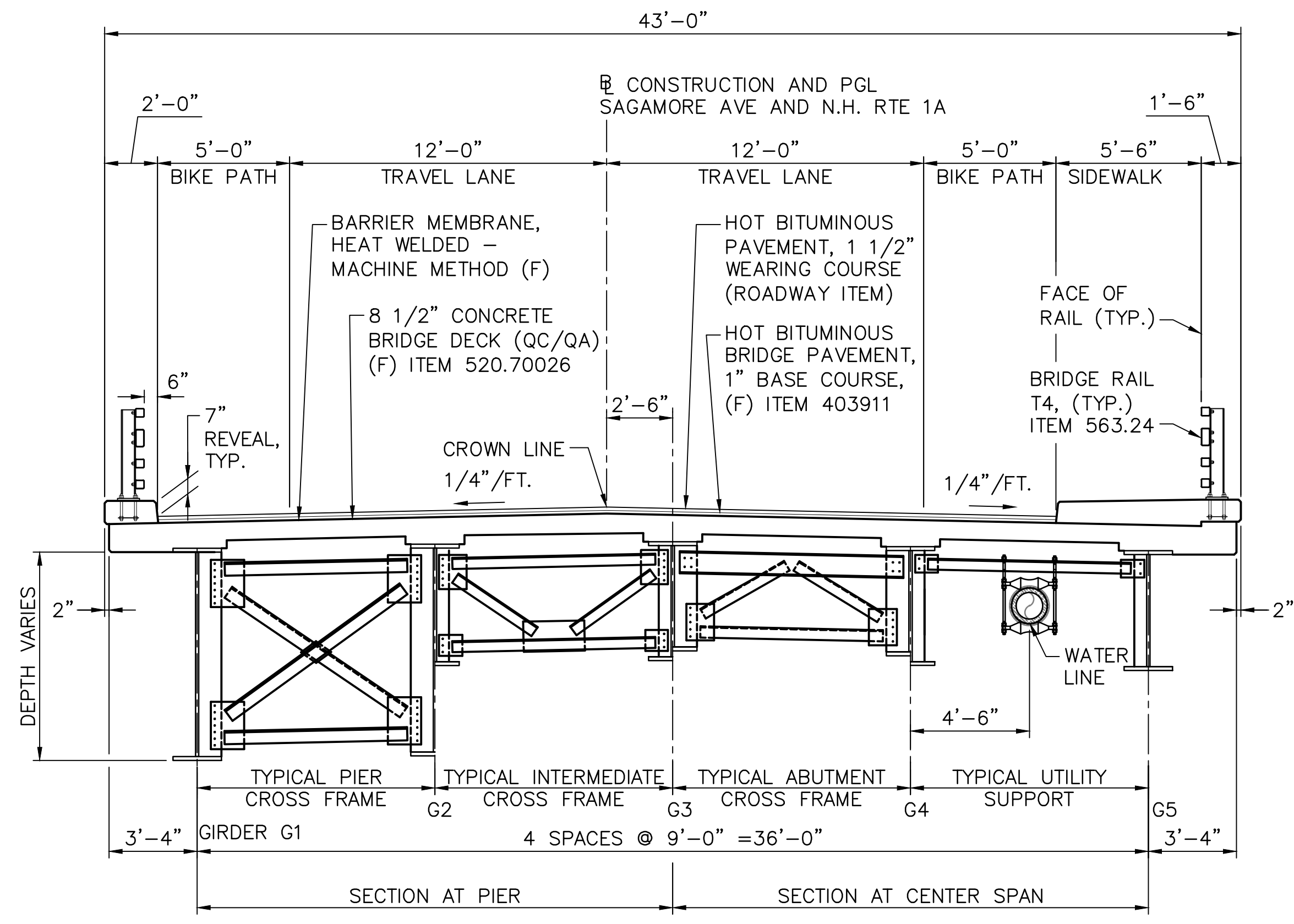
ABUTMENT CROSSFRAME DETAILS
SCALE: 1" = 1'-0"

NOTES

- SEE FRAMING PLAN FOR LOCATIONS OF CROSS FRAMES AND UTILITY SUPPORTS.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
CROSSFRAME DETAILS									
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE	BRIDGE SHEET		
DESIGNED	TD 5/13	CHECKED	MAB 5/13				30 OF 41		
DRAWN	FLC 5/13	CHECKED	TD 5/13				FILE NUMBER		
TRACED	---	CHECKED	---				TOTAL SHEETS		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13	FEDERAL PROJECT NO. X-A000(417)		SHEET NO. 44	91		

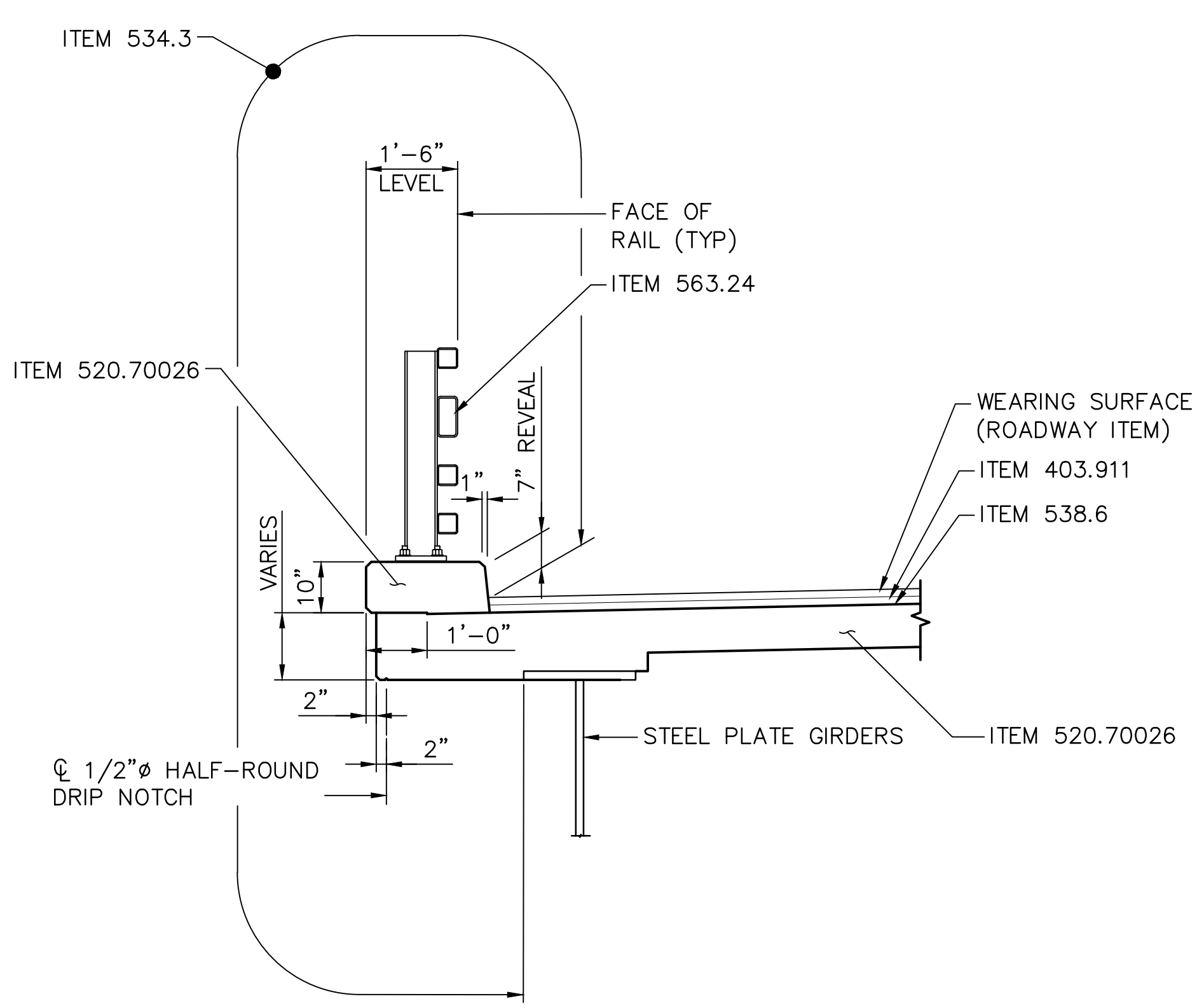
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



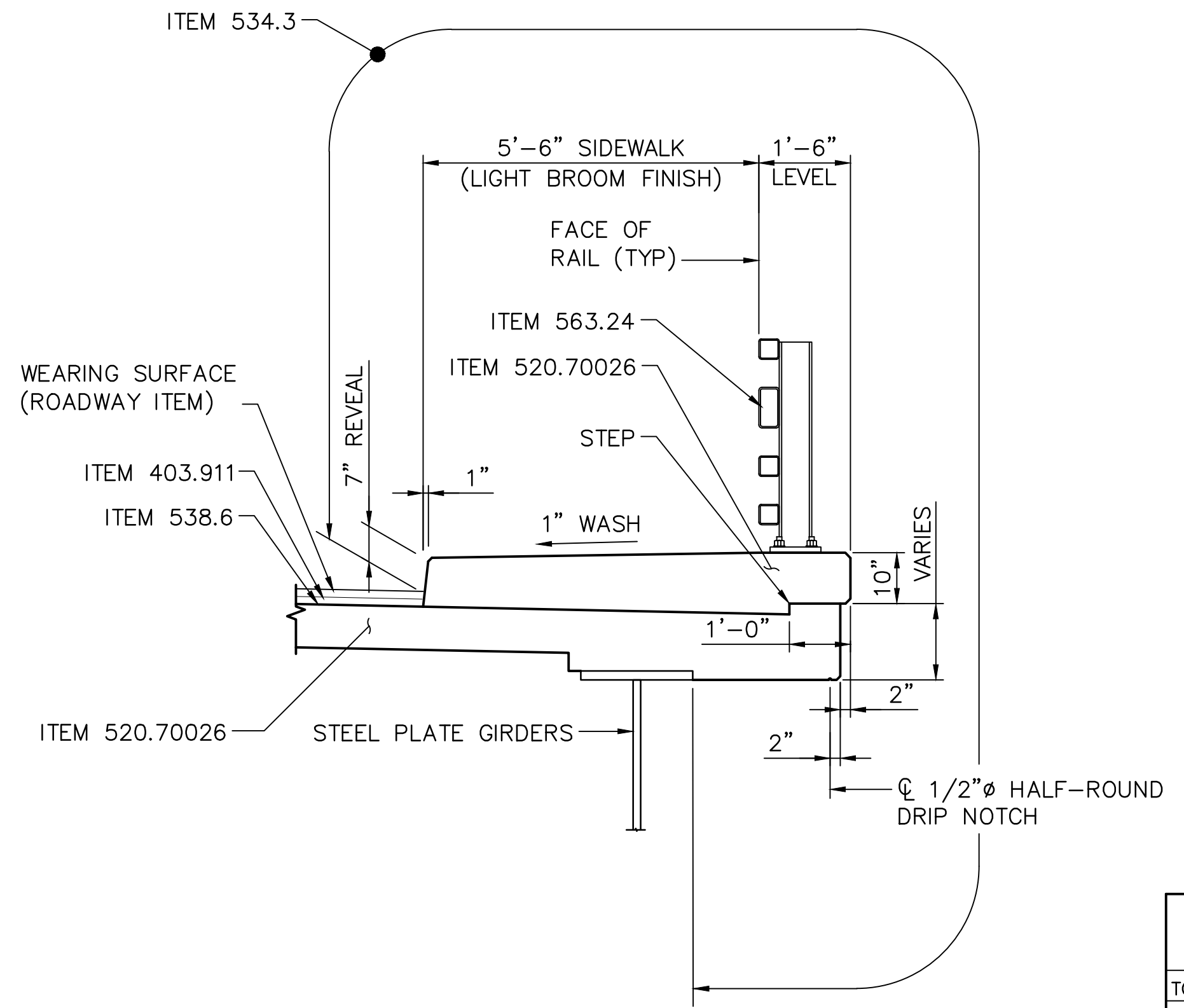
TYPICAL DECK SECTION
SCALE: 1/4" = 1'-0"

NOTES

- SEE FRAMING PLAN FOR LOCATIONS OF CROSSFRAMES AND UTILITY SUPPORTS.



BRUSH CURB FASCIA DETAIL
SCALE: 1/2" = 1'-0"



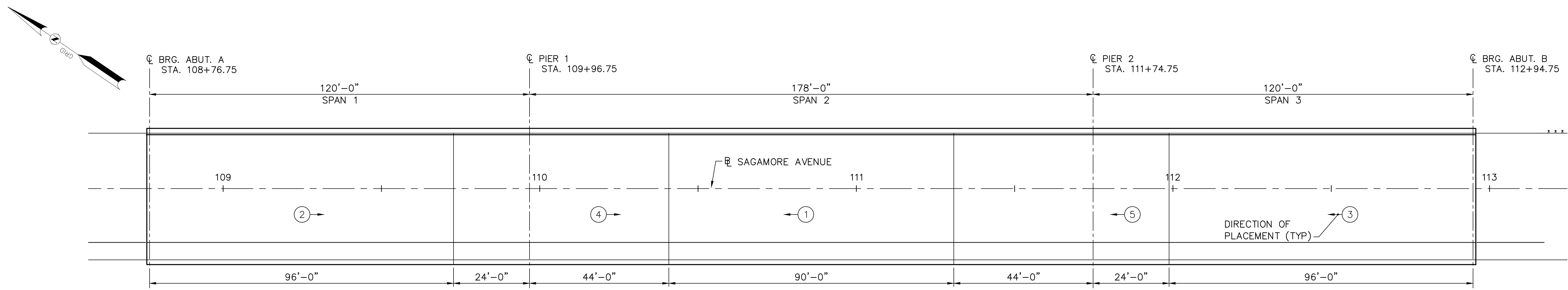
SIDEWALK FASCIA DETAIL
SCALE: 1/2" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS											
TOWN PORTSMOUTH			BRIDGE NO. 198/034			STATE PROJECT 14493			BRIDGE SHEET		
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									31 OF 41		
TYPICAL SECTION AND DECK SLAB DETAILS											
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE	FILE NUMBER				
DESIGNED	TD 5/13	CHECKED	MAB 5/13								
DRAWN	FLC 5/13	CHECKED	TD 5/13								
TRACED	---	---	CHECKED	---	---		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS
QUANTITIES	TD 6/13	CHECKED	MAB 6/13	X-A000(417)		45			91		

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

FILE NAME: R:\VC-064-Sagamore Creek\Drawings\05 Structural\31 TYPICAL SECTION AND DECK SLAB DETAILS.dwg PLOTTED: Wednesday, July 24, 2013 - 11:13am USER: Conde_F

FILE NAME: R:\V0-064-Sagamore Creek\Drawings\05-Structural\32-BOTTOM OF SLAB ELEVATIONS AND DECK SLAB DETAILS.dwg PLOTTED: Wednesday, July 24, 2013 - 11:13am USER: Conde-F



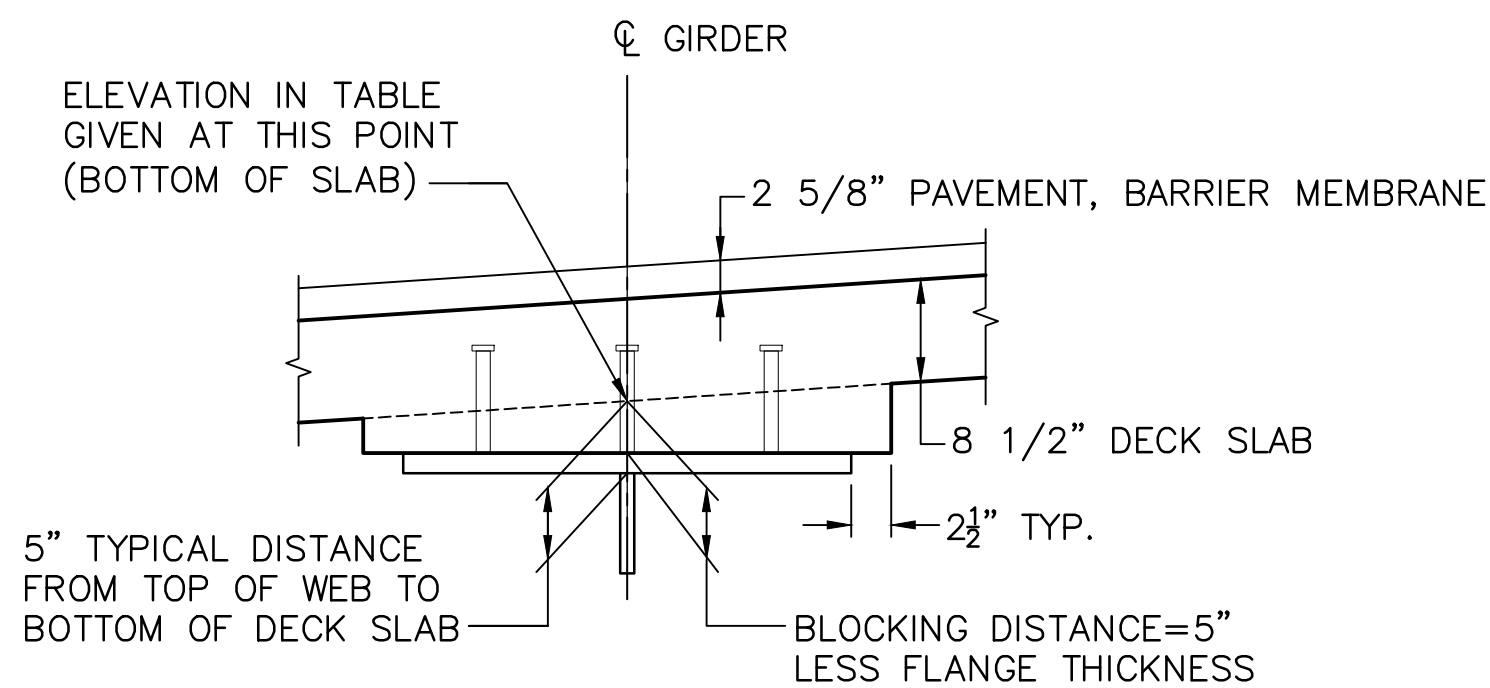
DECK POUR SEQUENCE
NOT TO SCALE

Point Along Span	CL. Brg. Abut. No. 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Pier No. 1
Station	108+76.75	108+88.75	109+00.75	109+12.75	109+24.75	109+36.75	109+48.75	109+60.75	109+72.75	109+84.75	109+96.75
Girder G1	23.08	23.19	23.32	23.45	23.57	23.66	23.75	23.83	23.93	24.04	24.18
Girder G2	23.26	23.37	23.50	23.63	23.75	23.84	23.93	24.01	24.11	24.22	24.36
Girder G3	23.34	23.45	23.58	23.71	23.83	23.92	24.01	24.09	24.19	24.30	24.44
Girder G4	23.16	23.27	23.40	23.53	23.65	23.74	23.83	23.91	24.01	24.12	24.26
Girder G5	22.98	23.09	23.22	23.35	23.47	23.56	23.65	23.73	23.83	23.94	24.08

Point Along Span	CL. Brg. Pier No. 1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Pier No. 2
Station	109+96.75	110+14.55	110+32.35	110+50.15	110+67.95	110+85.75	111+03.55	111+21.35	111+39.15	111+56.95	111+74.75
Girder G1	24.18	24.41	24.68	24.91	25.07	25.12	25.04	24.86	24.60	24.30	23.98
Girder G2	24.36	24.59	24.86	25.09	25.25	25.30	25.22	25.04	24.78	24.48	24.16
Girder G3	24.44	24.67	24.94	25.17	25.33	25.38	25.30	25.12	24.86	24.56	24.24
Girder G4	24.26	24.49	24.76	24.99	25.15	25.20	25.12	24.94	24.68	24.38	24.06
Girder G5	24.08	24.31	24.58	24.81	24.97	25.02	24.94	24.76	24.50	24.20	23.88

Point Along Span	CL. Brg. Pier No. 2	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	CL. Brg. Abut. No. 2
Station	111+74.75	111+86.75	111+98.75	112+10.75	112+22.75	112+34.75	112+46.75	112+58.75	112+70.75	112+82.75	112+94.75
Girder G1	23.98	23.78	23.60	23.43	23.27	23.12	22.95	22.77	22.56	22.33	22.08
Girder G2	24.16	23.96	23.78	23.61	23.45	23.30	23.13	22.95	22.74	22.51	22.26
Girder G3	24.24	24.04	23.86	23.69	23.53	23.38	23.21	23.03	22.82	22.59	22.34
Girder G4	24.06	23.86	23.68	23.51	23.35	23.20	23.03	22.85	22.64	22.41	22.16
Girder G5	23.88	23.68	23.50	23.33	23.17	23.02	22.85	22.67	22.46	22.23	21.98

BOTTOM OF DECK SLAB ELEVATIONS



HAUNCH DETAIL
SCALE: 3/4" = 1'-0"

DECK SLAB ELEVATION NOTES

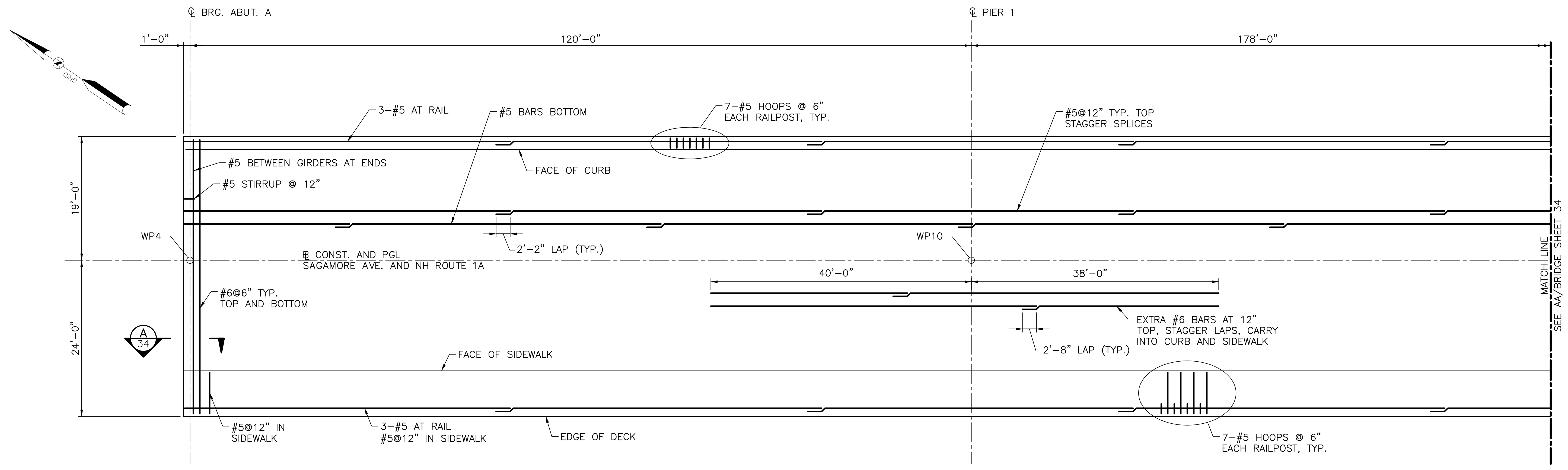
- AFTER THE STRUCTURAL STEEL IS ERECTED BUT BEFORE THE DECK FORMS ARE BUILT, ELEVATIONS ON THE TOP FLANGES OF THE GIRDERS SHALL BE OBTAINED BY THE CONTRACTOR AT THE POINTS INDICATED IN THE TABLE. THE DIFFERENCE BETWEEN THE ELEVATIONS OBTAINED AND THOSE IN THE TABLE IS THE ACTUAL BLOCKING DISTANCE FROM THE TOP OF THE GIRDER TO THE BOTTOM OF THE DECK SLAB AT THE CENTERLINE OF THE GIRDER. SEE ELEVATION TABLE AND HAUNCH DETAIL THIS SHEET.
- ELEVATIONS SHOWN IN THE TABLE ARE FINISHED BOTTOM OF SLAB ELEVATIONS ADJUSTED FOR TOTAL DEAD LOAD DEFLECTION, LESS THE DEFLECTION DUE TO GIRDER WEIGHT.

SHEET SCALE
AS NOTED

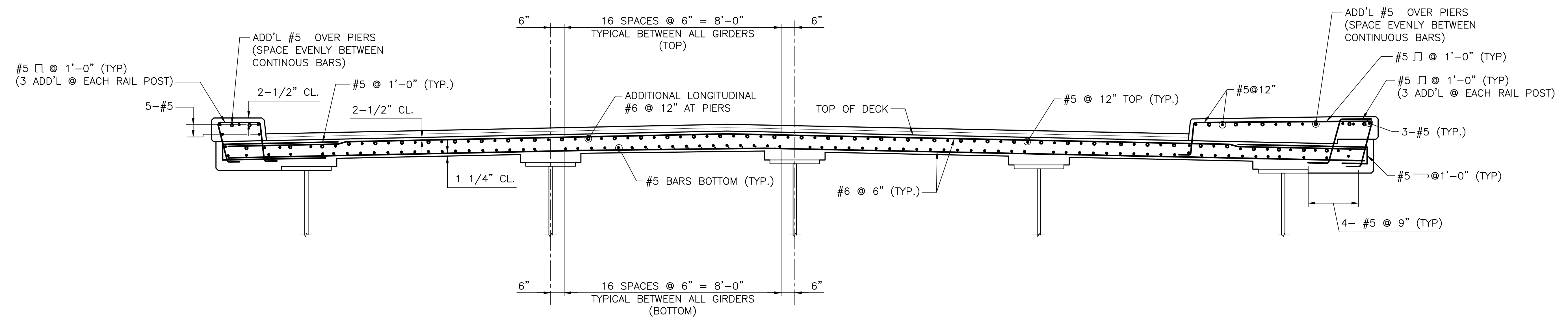
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK				
BOTTOM OF SLAB ELEVATIONS AND DECK SLAB DETAILS					BRIDGE SHEET 32 OF 41
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
				FEDERAL PROJECT NO.	X-A000(417)
				SHEET NO.	46
				TOTAL SHEETS	91

FILE NAME: R:\VC-064-Sagamore Creek\Drawings\05 Structural\33 DECK PLAN AND SECTIONS - SHEET 1 OF 2.dwg PLOTTED: Wednesday, July 24, 2013 - 11:13am USER: Conde_F



DECK REINFORCEMENT PLAN
SCALE: 1/8" = 1'-0"

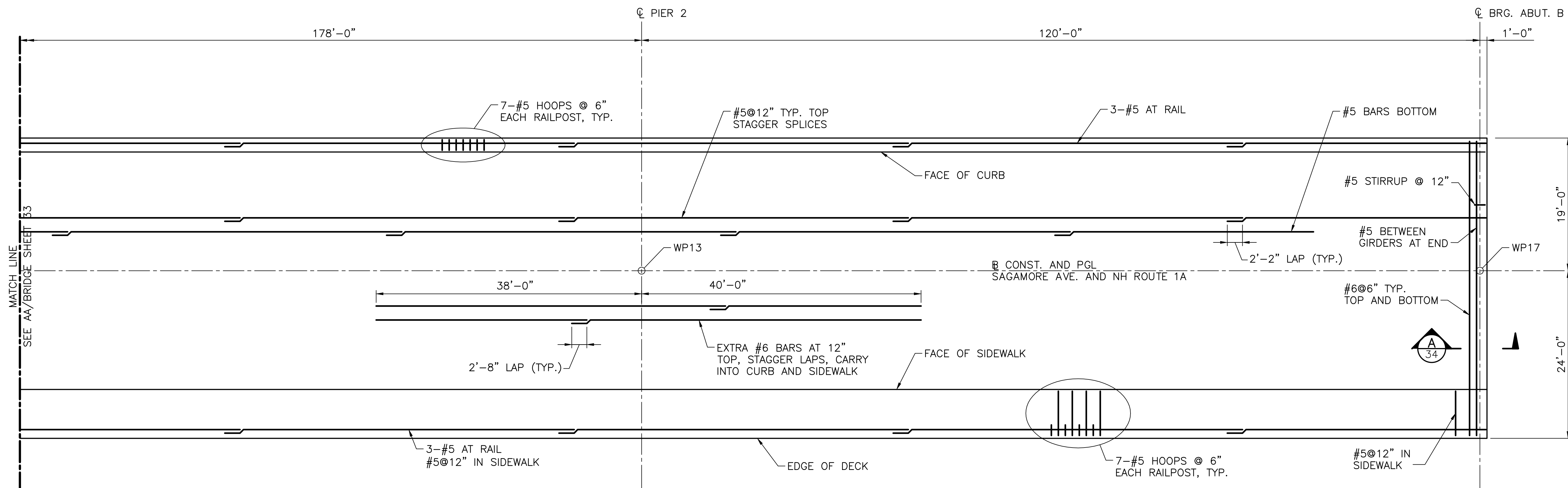
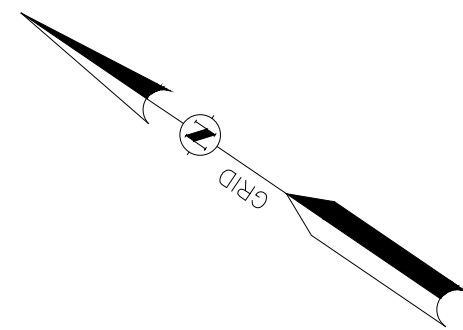


TYPICAL DECK REINFORCING SECTION
SCALE: 1/2" = 1'-0"

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN PORTSMOUTH		BRIDGE NO. 198/034		STATE PROJECT 14493					
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK									
DECK PLAN AND SECTIONS - SHEET 1 OF 2									
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL					
DESIGNED	TD 5/13	CHECKED	MAB 5/13						
DRAWN	FLC 5/13	CHECKED	TD 5/13						
TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
QUANTITIES	TD 6/13	CHECKED	MAB 6/13	X-A000(417)		47	91		

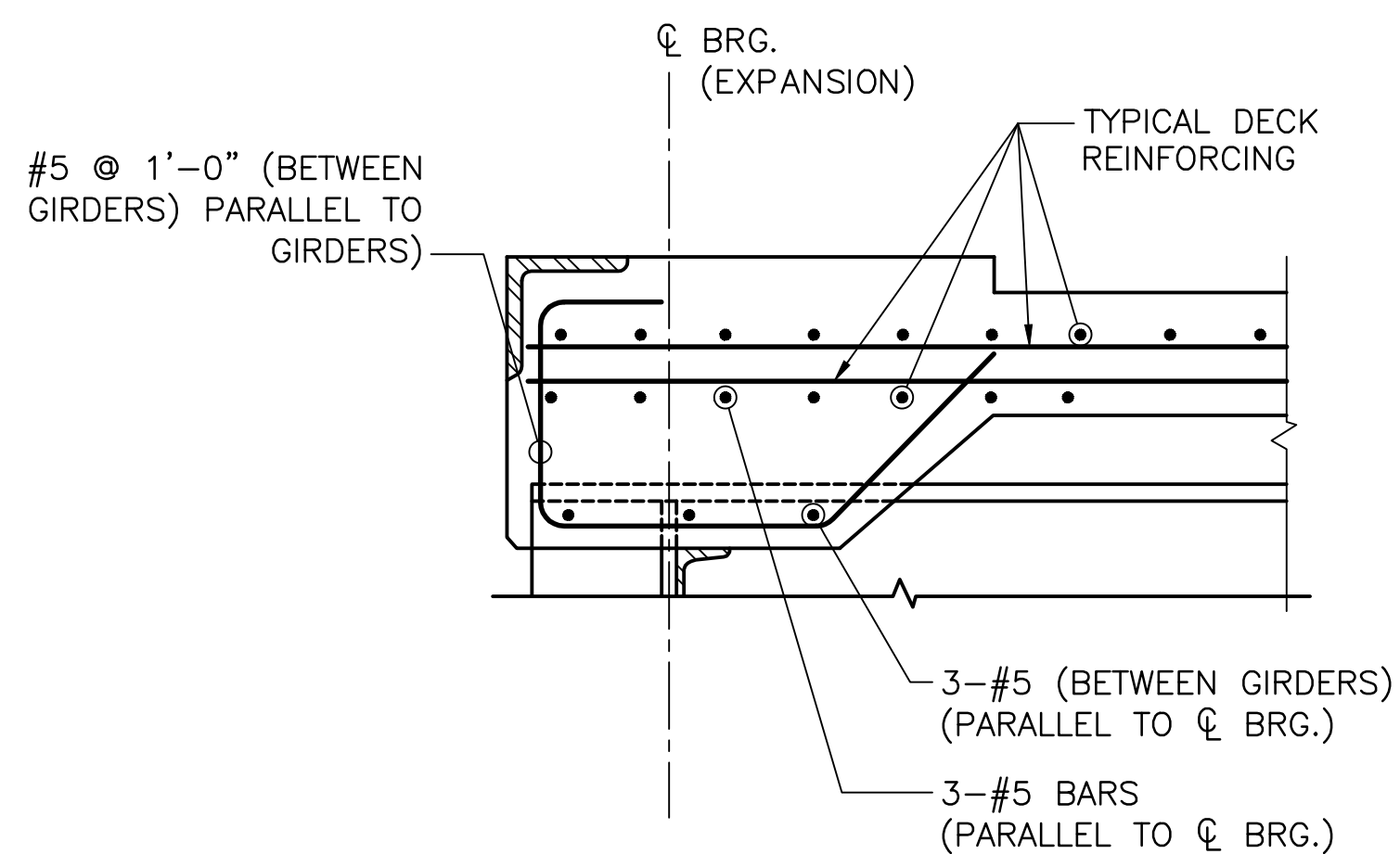
FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

MATCH LINE
SEE AA/BRIDGE SHEET 34



DECK REINFORCEMENT PLAN

SCALE: 1/8" = 1'-0"



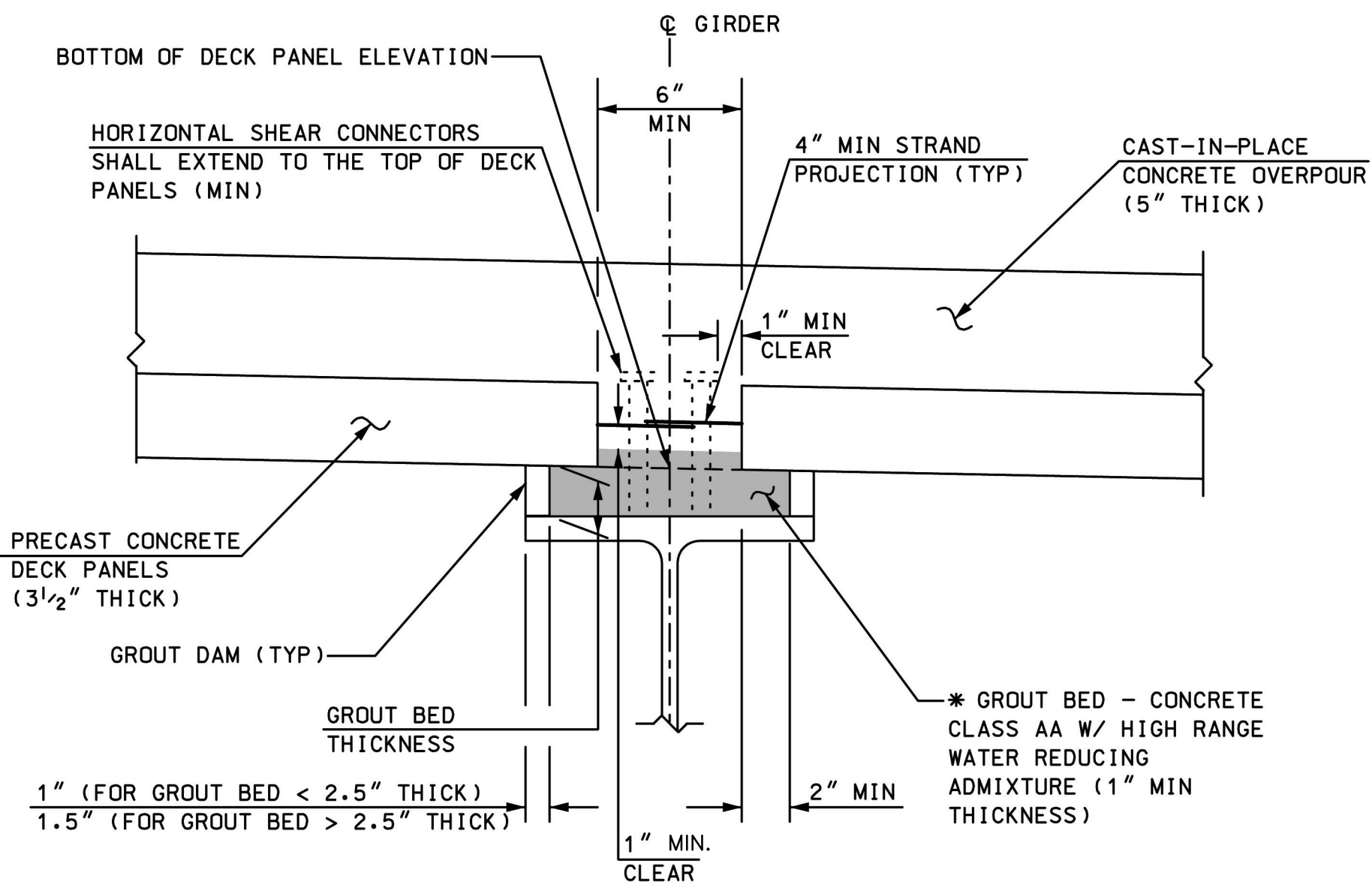
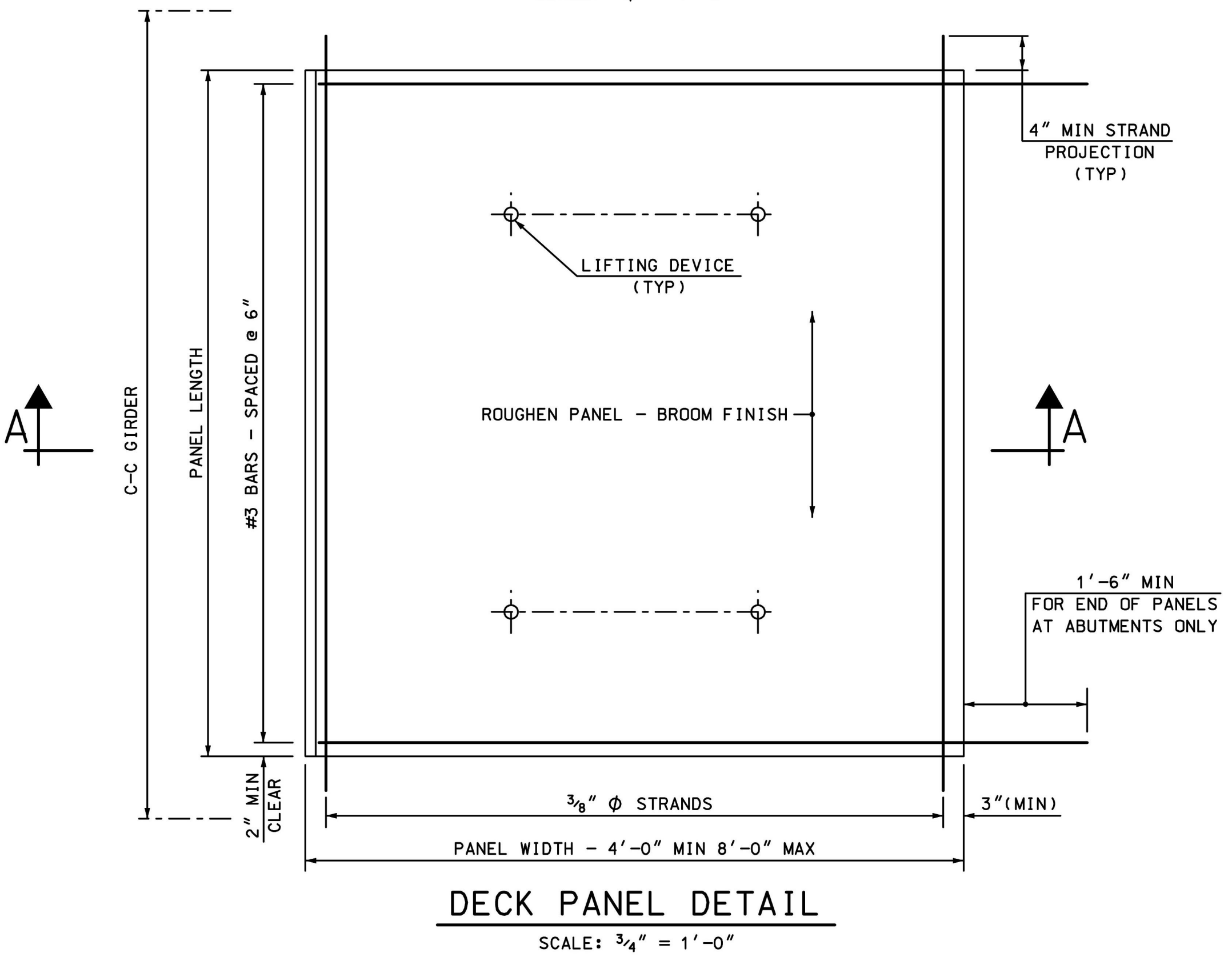
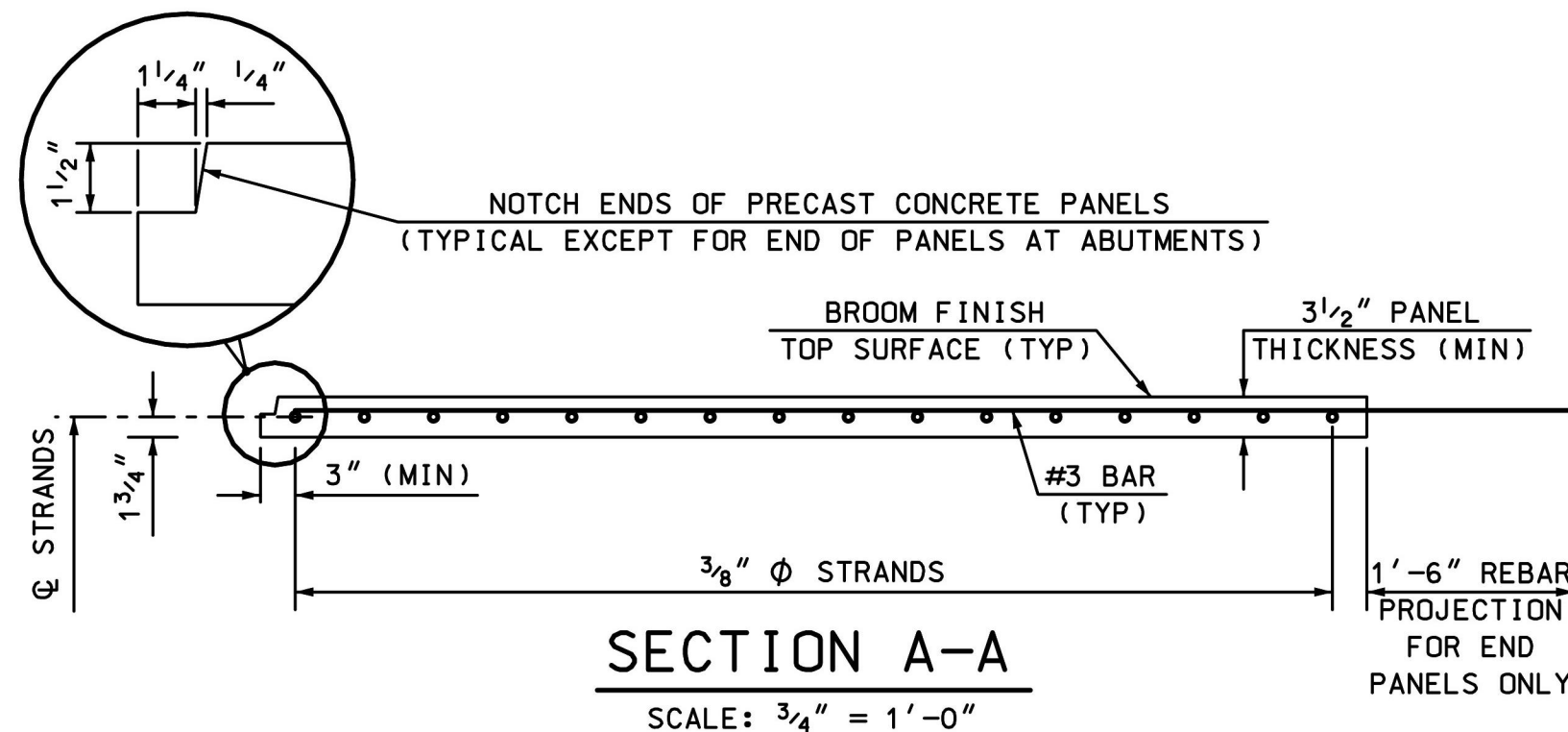
SECTION
SCALE: 1" = 1'-0"

NOTES

1. SEE DECK SECTION FOR REINFORCING BAR SPACING.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS									
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493				
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK								
DECK PLAN AND SECTIONS - SHEET 2 OF 2									
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE			
DESIGNED	TD 5/13	CHECKED	MAB 5/13						
DRAWN	FLC 5/13	CHECKED	TD 5/13						
TRACED	---	---	CHECKED	---	---				
QUANTITIES	TD 6/13	CHECKED	MAB 6/13						
							FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
							X-A000(417)	48	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



C-C GIRDER SPACING	PANEL LENGTH	PANEL THICKNESS	f'ci (PSI)	f'c (PSI)	STRAND SPACING
5'-6"	5'-0"	3 1/2"	4000	6000	8"
6'-0"	5'-6"	3 1/2"	4000	6000	8"
6'-6"	6'-0"	3 1/2"	4000	6000	8"
7'-0"	6'-6"	3 1/2"	4000	6000	8"
7'-6"	7'-0"	3 1/2"	4000	6000	8"
8'-0"	7'-6"	3 1/2"	4000	6000	8"
8'-6"	8'-0"	3 1/2"	4000	6000	6"
9'-0"	8'-6"	3 1/2"	4000	6000	6"
9'-6"	9'-0"	3 1/2"	4000	6000	5"
10'-0"	9'-6"	3 1/2"	5000	6000	4 1/2"

DESIGN CRITERIA:

- LIVE LOAD = HL-93
- ALLOWABLE TENSION IN CONCRETE = $0.19 \sqrt{f'c}$
- MAXIMUM INITIAL COMPRESSION = 0.750 ksi (W/ f'ci = 4 ksi)
- C-I-P DECK THICKNESS = 5"
- PAVEMENT THICKNESS = 2 1/2"
- STEEL FLANGE WIDTH = 12"
- GROUT DAM WIDTH = 1"
- GROUT BED THICKNESS < 2 1/2"

PANEL DESIGN NOTES:

- 1) IF LEVELING SCREWS ARE USED, THEIR LOCATIONS SHALL NOT INTERFERE WITH THE LOCATION OF THE GROUT DAM.
- 2) DECK SLAB THICKNESS IS THE SAME FOR PANEL OPTION OR CAST IN PLACE OPTION (8.5"), THEREFORE ADJUSTMENT IN THE BOTTOM SLAB ELEVATION TABLE IS NOT NEEDED, PER NOTE 2 BELOW.

PRESTRESSED CONCRETE DECK PANEL NOTES

- (1) CONCRETE STRENGTH: f'c = 6,000 PSI MINIMUM AT 28 DAYS } SEE TABLE A & B
f'ci = 4,000 PSI MINIMUM } DECK PANEL DESIGN
- (2) PRESTRESSING STRANDS SHALL BE 3/8 in. DIAMETER, GRADE 270 SEVEN WIRE LOW-RELAXATION TYPE, CONFORMING TO THE REQUIREMENTS OF ASTM A416. ALL STRANDS SHALL BE PULLED TO HAVE A NET TENSION OF 17.2 KIPS PER STRAND AFTER ALLOWING FOR CHUCK SLIPPAGE.
- (3) THE TOP SURFACE OF THE DECK PANELS SHALL BE BROOMED TO A SURFACE ROUGHNESS OF 0.06 in. BROOM THE SURFACE PARALLEL TO THE STRAND.
- (4) IF HIGH DENSITY EXPANDED POLYSTYRENE FOAM IS USED AS A TEMPORARY SUPPORT, IT SHALL BE CUT IN THE FIELD TO THE REQUIRED HEIGHT AND AFFIXED TO THE GIRDERS WITH AN APPROVED HIGH STRENGTH ADHESIVE.
- (5) PANEL LIFTING LOCATIONS SHOWN ARE ADVISORY ONLY. ACTUAL LIFTING LOCATIONS SHALL BE DETERMINED BY THE FABRICATOR AND INDICATED ON THE SHOP DRAWINGS.
- (6) CORROSION INHIBITOR (CALCIUM NITRITE) ADMIXTURE SHALL BE USED.
- (7) SEE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR SECTIONS 520 AND 528 FOR ADDITIONAL INFORMATION.
- (8) IF LEVELING SCREWS ARE USED, THEY SHALL BE COMPLETELY REMOVED AFTER THE GROUTING OPERATIONS AND PRIOR TO DECK PLACEMENT. HOLES LEFT BY LEVELING SCREWS SHALL BE FILLED WITH AN APPROVED GROUT PRIOR TO DECK PLACEMENT.
- (9) TEMPORARY BRACING BETWEEN ENDS OF PANELS SHALL BE SUPPLIED AS REQUIRED TO PREVENT PANEL MOVEMENT TRANSVERSE TO THE GIRDERS.
- (10) THE FOLLOWING DECK PANEL DESIGN INFORMATION SHALL BE USED FOR THIS PROJECT:
C-C GIRDER SPACING = 9'-0"
PANEL LENGTH = 8'-6"
PANEL THICKNESS = 3.5"

CONCRETE STRENGTHS
f'ci = 6,000 PSI
f'c = 4,000 PSI

STRAND SPACING = 6.0"

MULTI SPANS ONLY:
REINFORCEMENT REQUIREMENTS IN TOP MAT OVER PIER TO MEET LRFD 6.10.1.7
BAR SIZE = ALTERNATE #5 AND #6 BARS
BAR SPACING = @ 6" SPACING
- (11) REINFORCING IN PANELS SHALL BE BLACK BAR EXCEPT FOR END PANELS AT ABUTMENTS WHICH SHALL HAVE EPOXY COATED REBAR. CAST-IN-PLACE OVERPOUR SHALL HAVE EPOXY COATED REBAR AND FOLLOW LAYOUT OF TOP MAT OF STEEL SHOWN ON THE DECK REINFORCING SHEET.

DECK SLAB ELEVATION NOTES

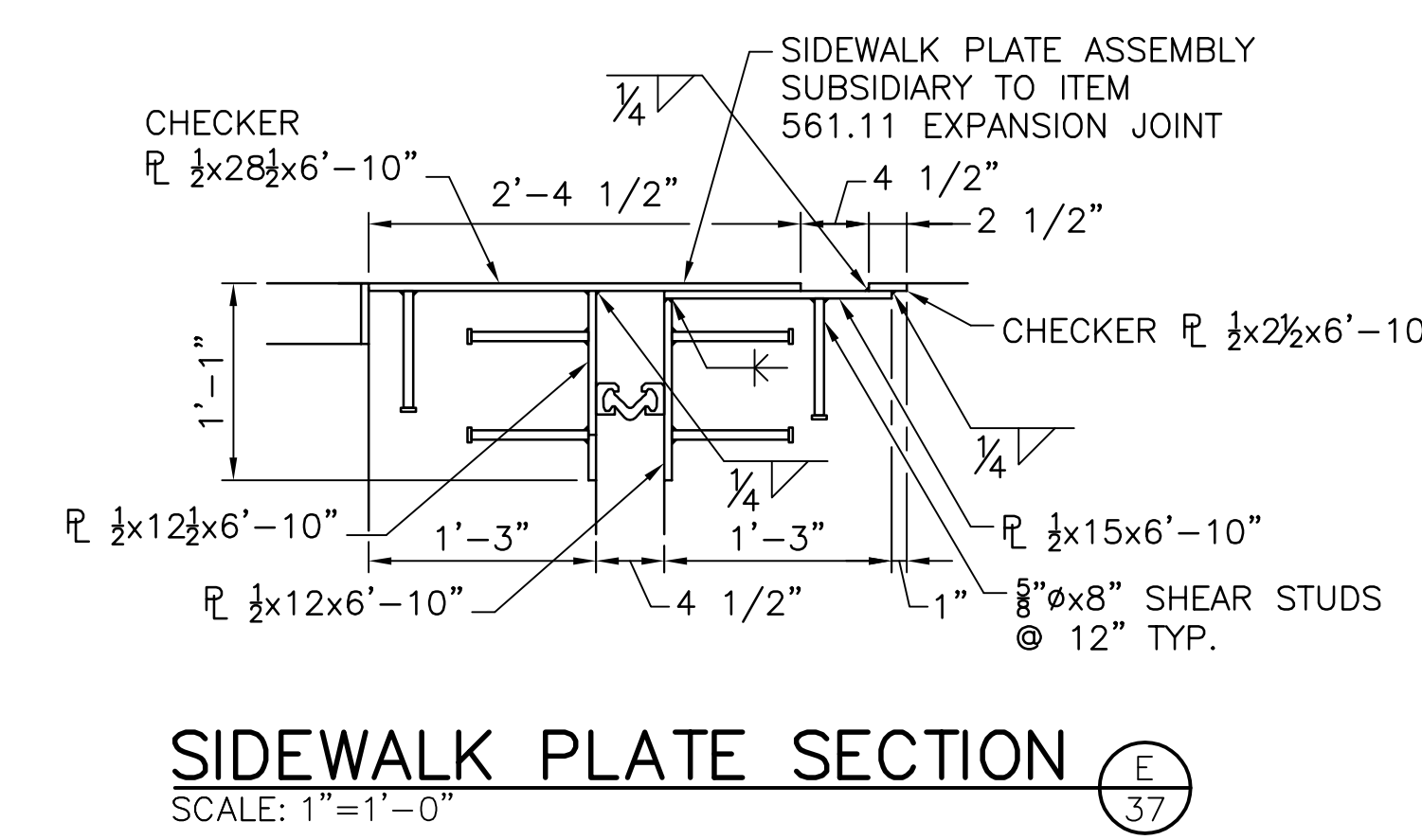
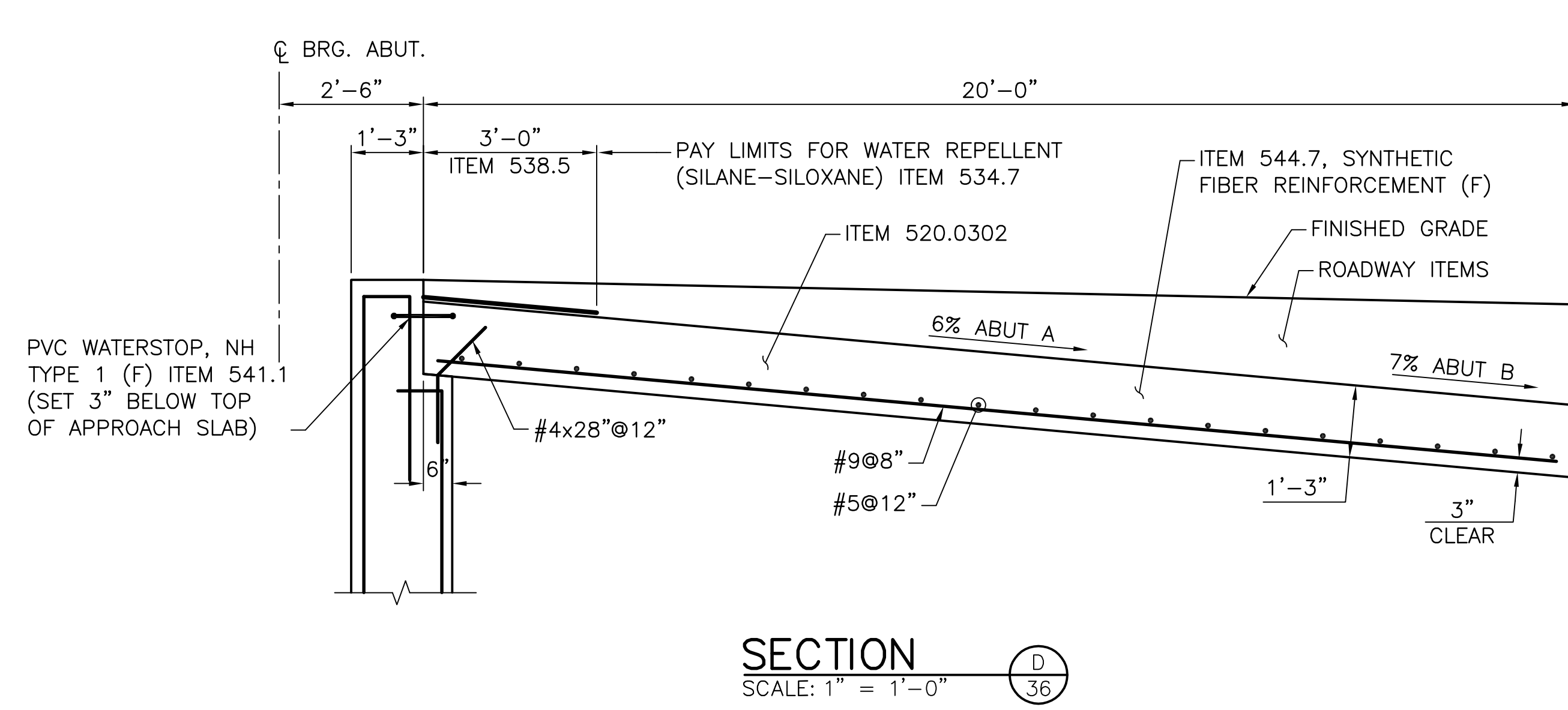
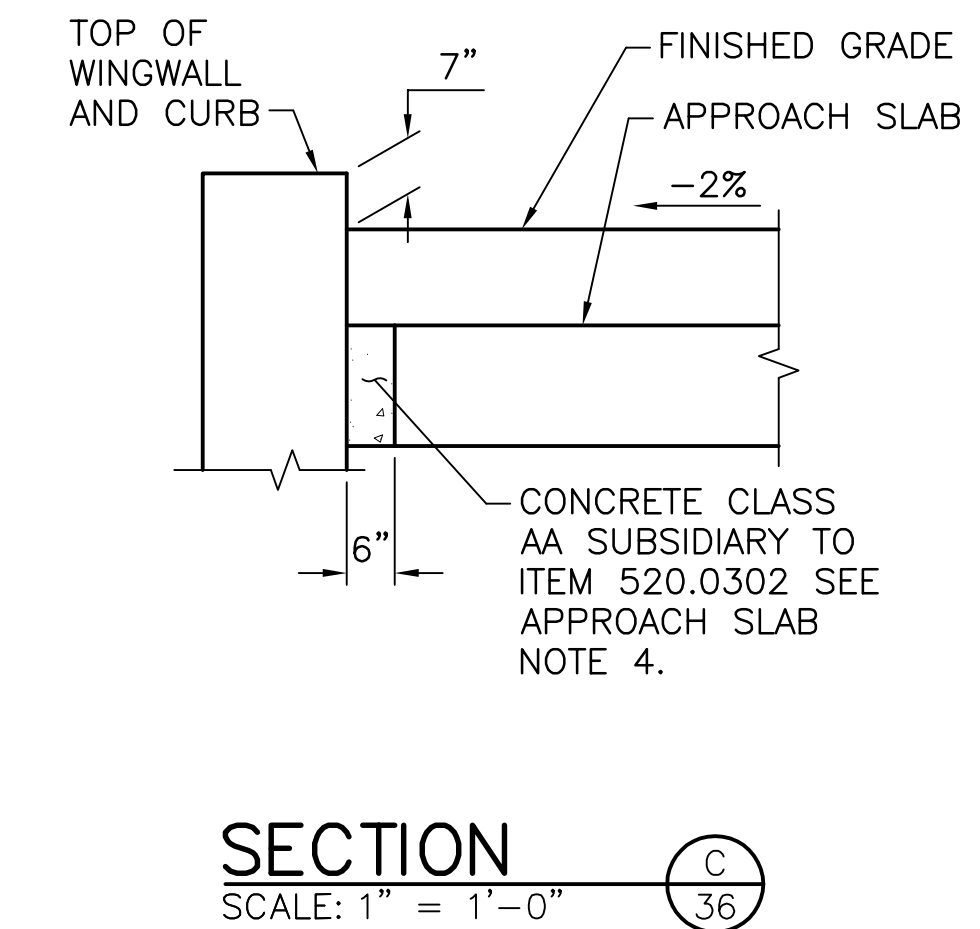
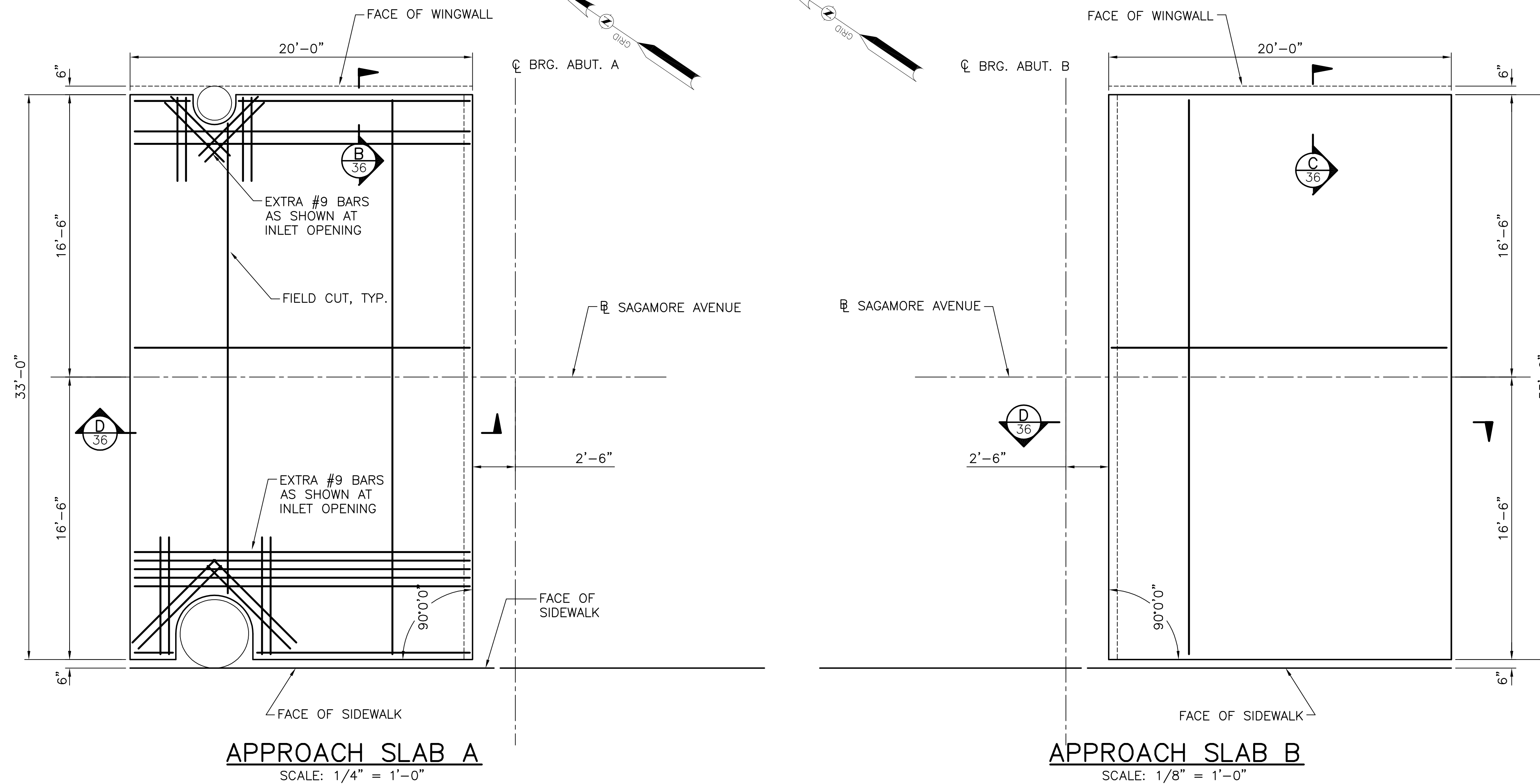
- 1) AFTER THE GIRDERS ARE ERRECTED AND BEFORE PRECAST DECK PANELS ARE SET, ELEVATIONS ON THE TOP FLANGE OF THE GIRDERS ARE TO BE OBTAINED AT THE POINTS INDICATED IN "BOTTOM OF SLAB ELEVATION TABLE" DETAILED IN THE PLANS AND GIRDER HAUNCH DETAILS ON THIS SHEET.
- 2) THE BOTTOM OF SLAB ELEVATIONS SHALL BE ADJUSTED BY THE DIFFERENCE BETWEEN THE CAST-IN-PLACE DECK THICKNESS AND THE TOTAL COMPOSITE DECK THICKNESS.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK				
PRECAST CONCRETE DECK PANEL DETAILS					BRIDGE SHEET
					35 OF 41
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	NHDOT	4/02	CHECKED	NHDOT	4/02
DRAWN	NHDOT	12/10	CHECKED	NHDOT	12/10
TRACED	---	---	CHECKED	---	---
QUANTITIES	---	---	CHECKED	---	---
				FEDERAL PROJECT NO.	X-A000(417)
				SHEET NO.	49
				TOTAL SHEETS	91

FAY, SPOFFORD & THORNDIKE, INC
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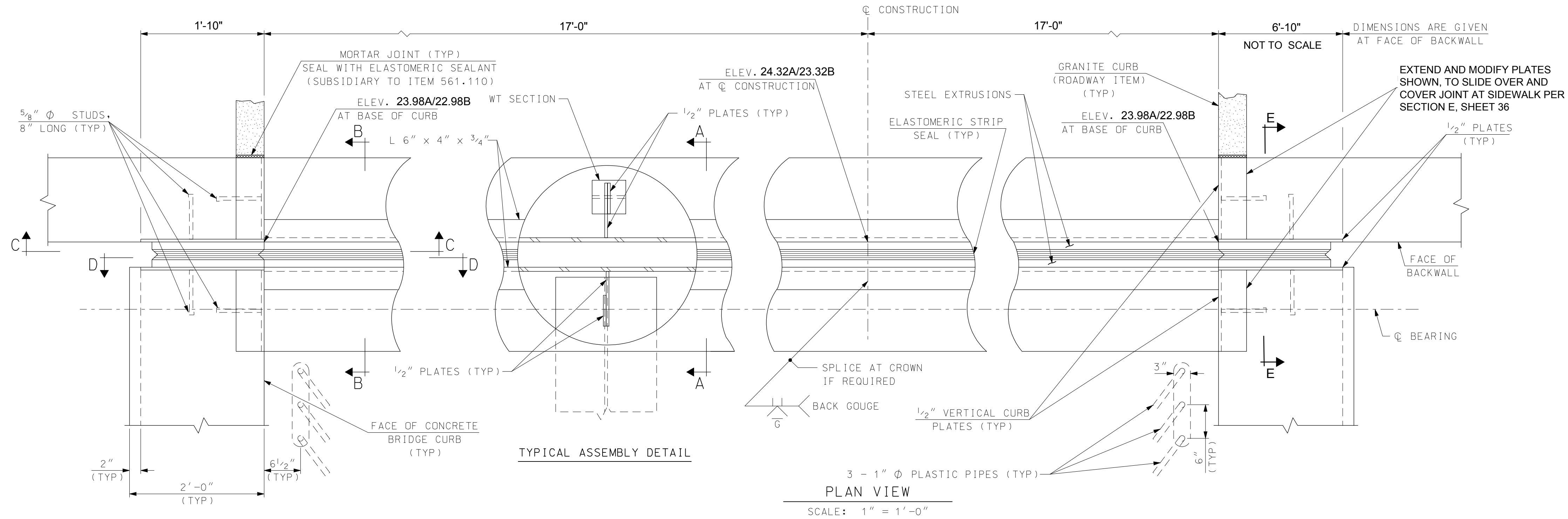
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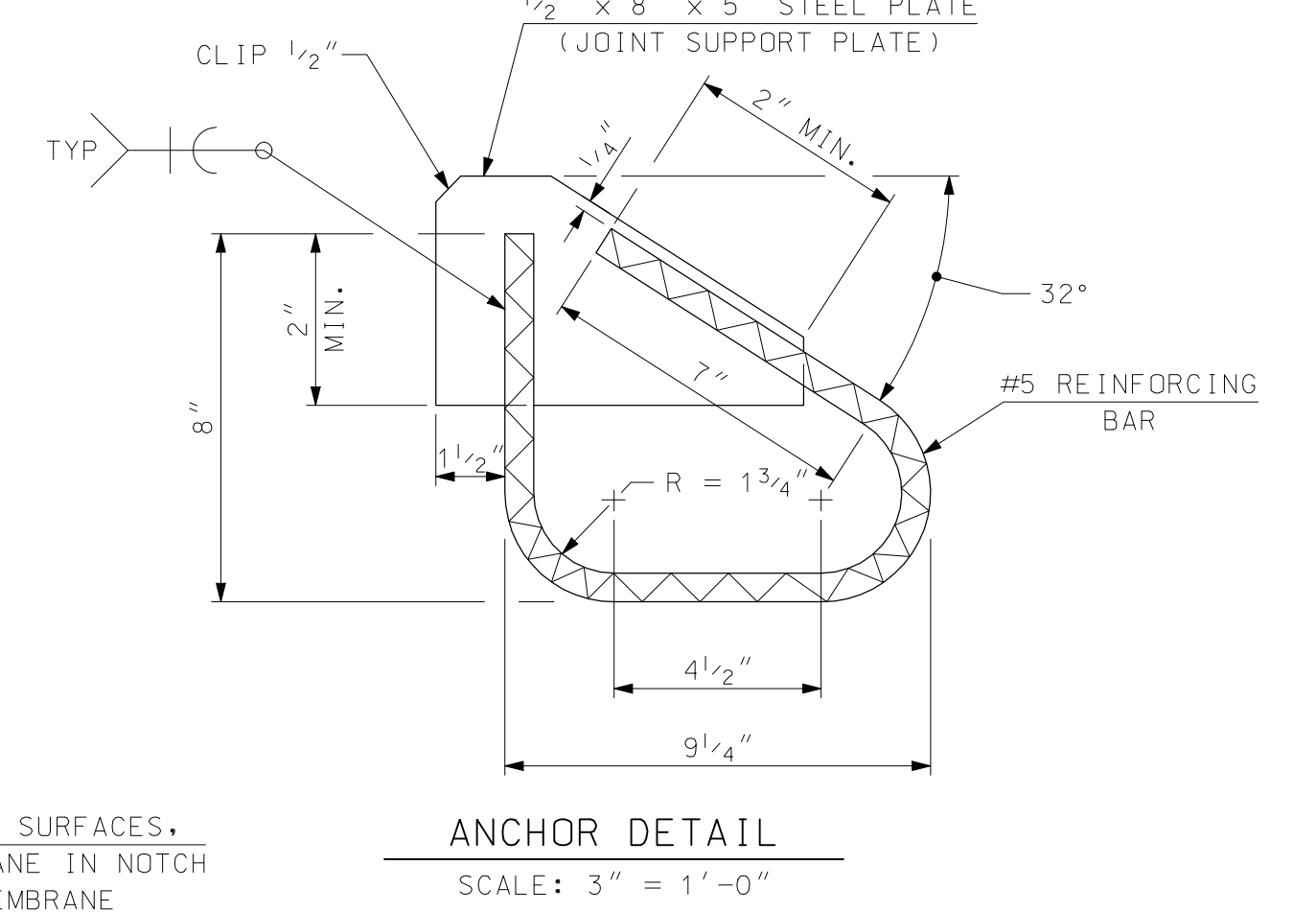
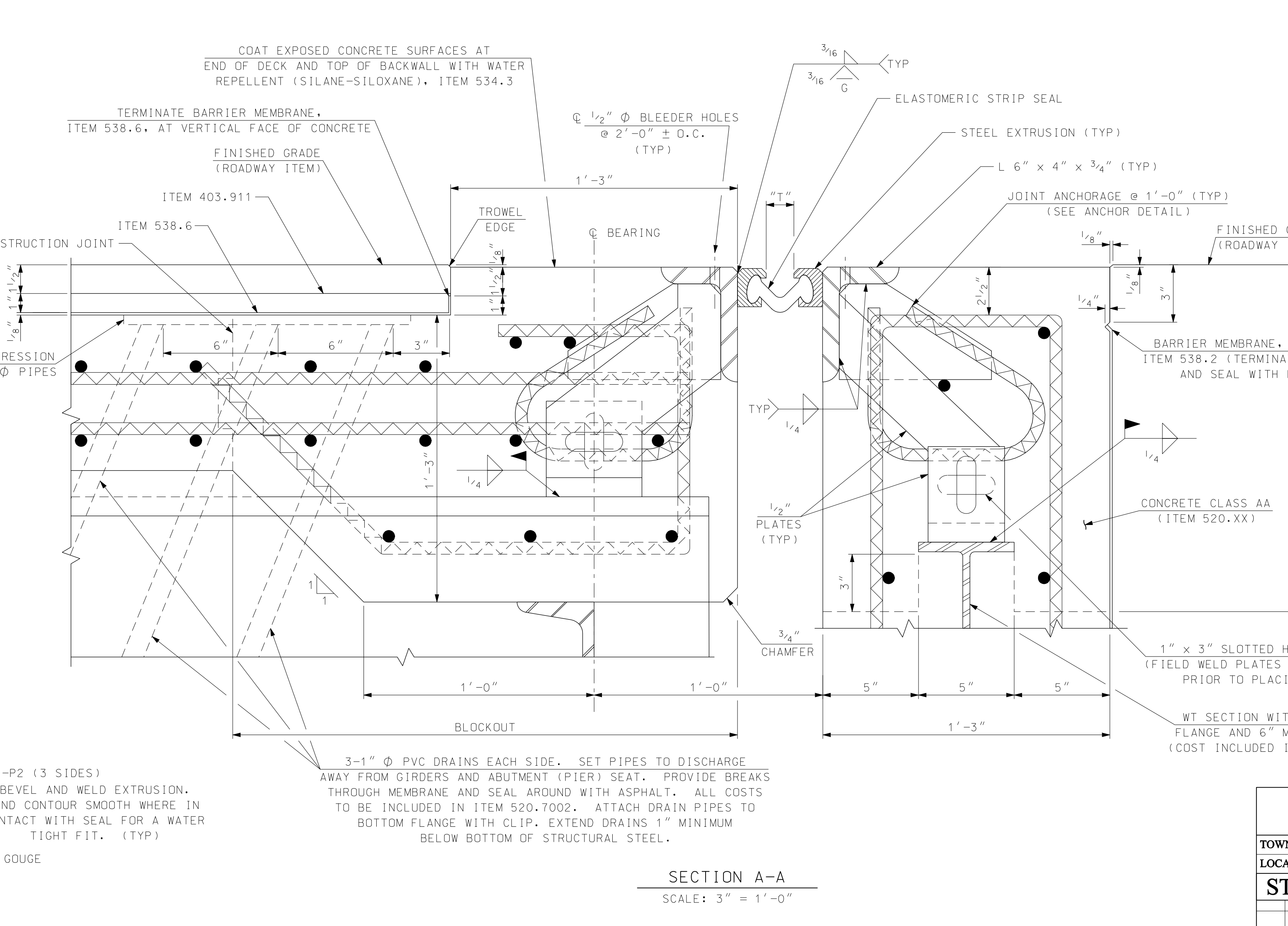
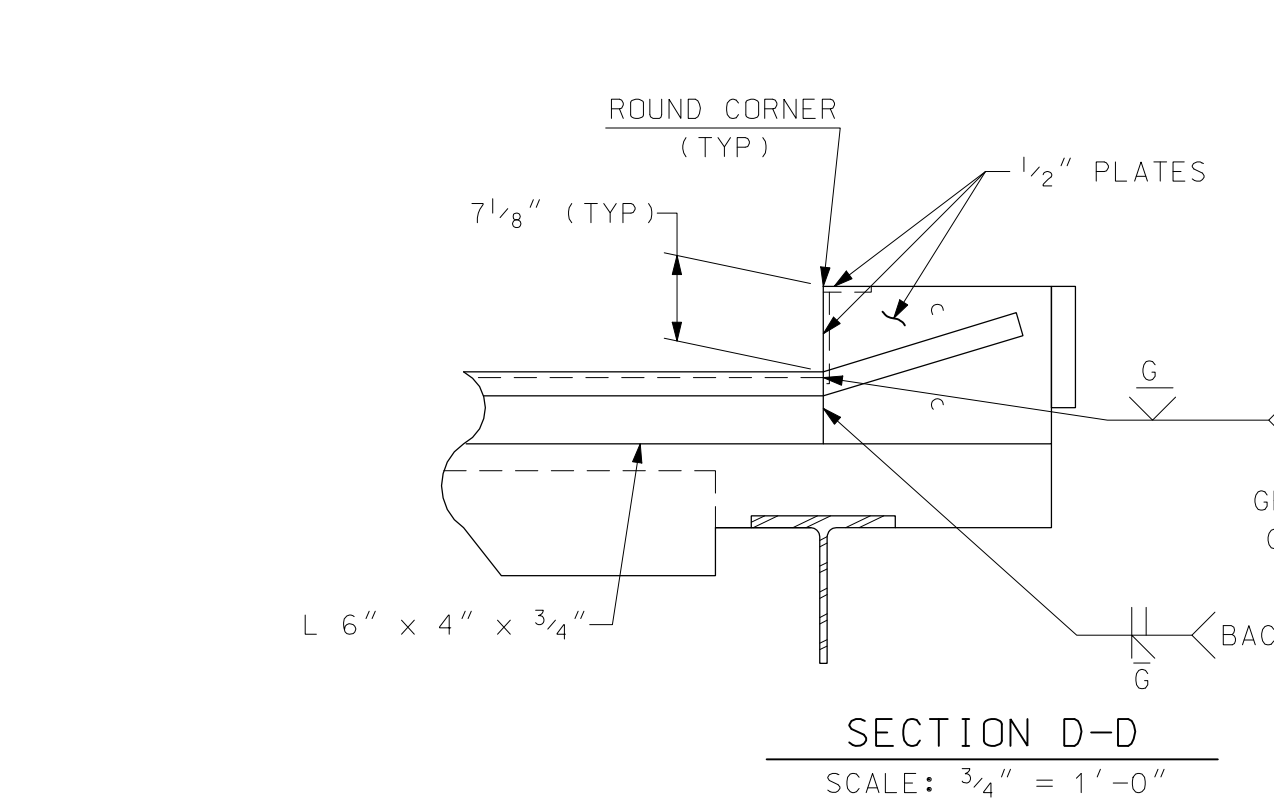
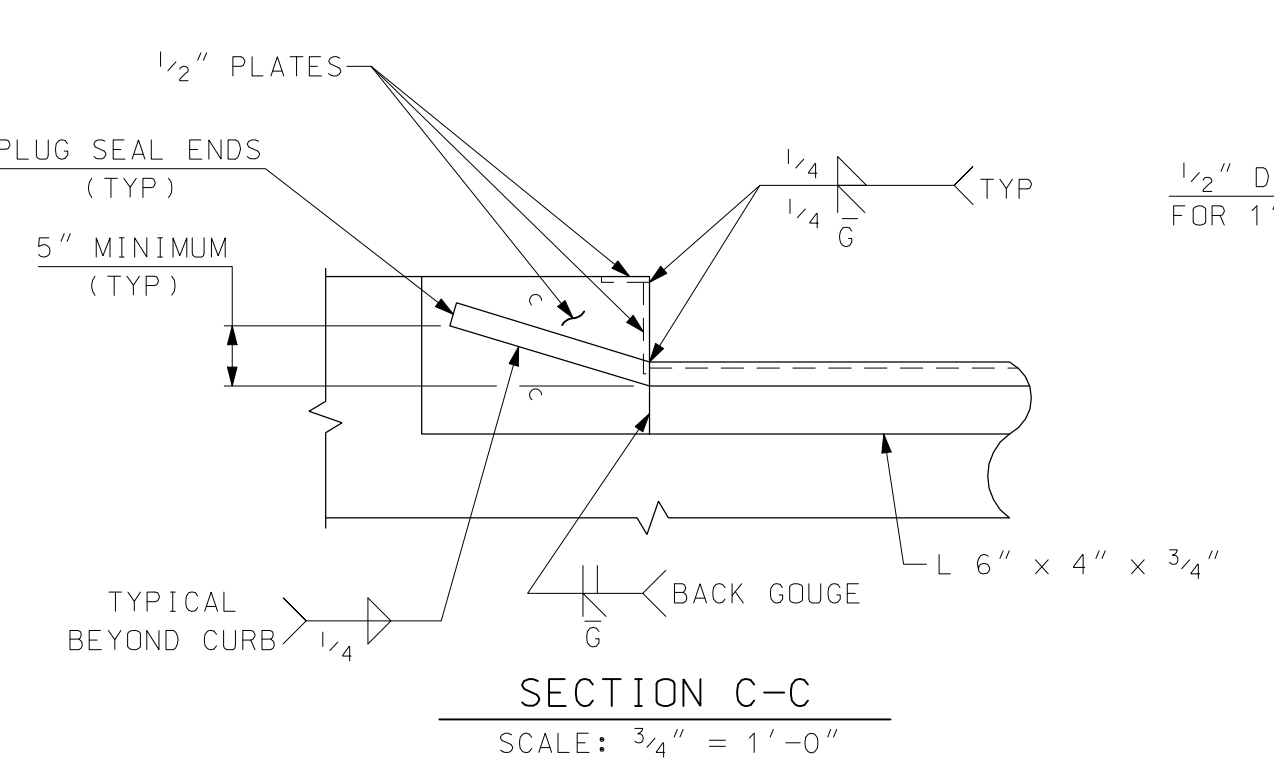
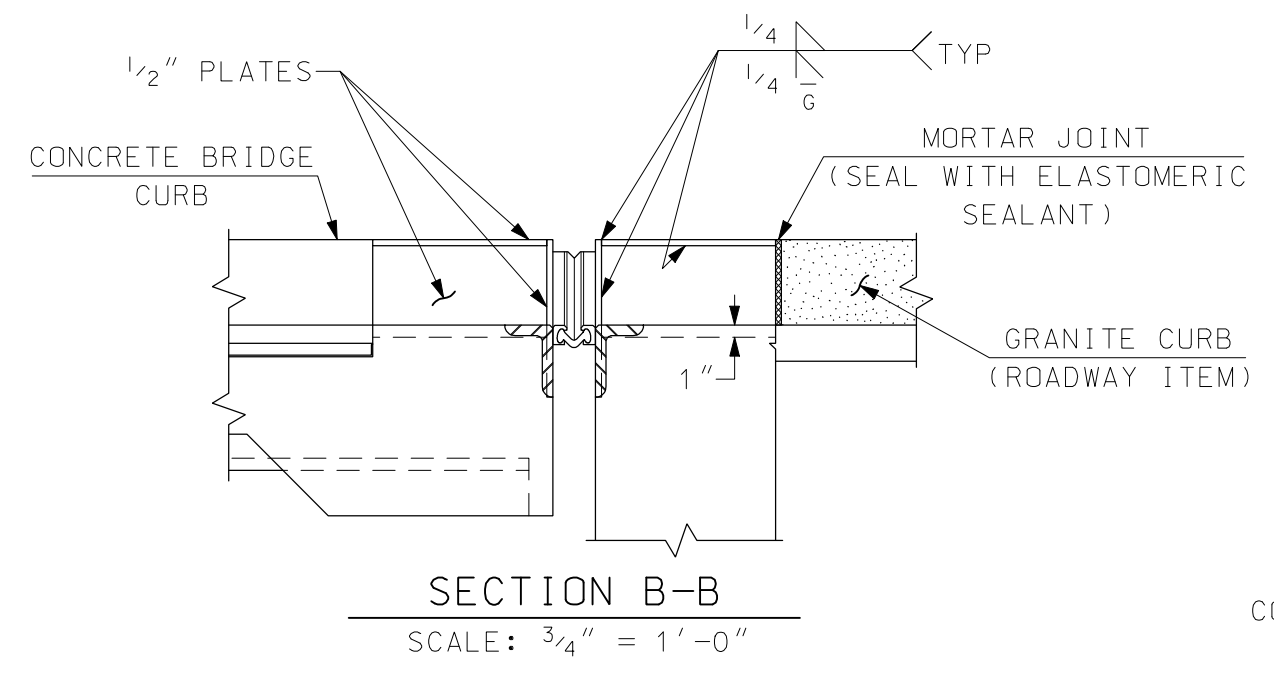


CITY OF PORTSMOUTH											
DEPARTMENT OF PUBLIC WORKS											
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493						
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK										
APPROACH SLABS											BRIDGE SHEET
											36 OF 41
											FILE NUMBER
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL		DATE					
DESIGNED	TD 5/13	CHECKED	MAB 5/13								
DRAWN	FLC 5/13	CHECKED	TD 5/13								
TRACED	---	---	CHECKED	---	---	FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS	
QUANTITIES	TD 6/13	CHECKED	MAB 6/13	X-A000(417)		50		91			

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -



- ### EXPANSION JOINT NOTES
- (1) EXPANSION JOINT STEEL SHALL BE AASHTO M270 GRADE 50W (ASTM A709 GRADE 50W), EXCEPT AS OTHERWISE ALLOWED. THE ENTIRE ASSEMBLY, INCLUDING ELASTOMERIC SEAL, SHALL BE PAID FOR AS ITEM 561.110, PREFABRICATED EXPANSION JOINT, TYPE A (F).
 - (2) SPLICES FOR EXPANSION JOINT STEEL SHALL DEVELOP FULL STRENGTH.
 - (3) THE EXPANSION JOINT SHALL BE PRESET TO THE TEMPERATURE ANTICIPATED AT THE TIME OF INSTALLATION. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR (SEE TEMPERATURE ADJUSTMENT TABLE).
 - (4) ELASTOMERIC STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED.
 - (5) JOINT SUPPORT PLATES SHALL BE SHOP WELDED TO THE EXPANSION JOINT STEEL AND SHALL BE VERTICAL AFTER THE JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE.
 - (6) THE EXPANSION JOINT ASSEMBLY SHALL BE INSTALLED ONLY AFTER BOTH ABUTMENTS HAVE BEEN BACKFILLED TO WITHIN 3'-0" OF FINISHED GRADE.
 - (7) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO EXPOSED PAINTED SURFACES WITH ZINC-RICH PRIMER, N.H. 1.60.
 - (8) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
 - (9) THE ELASTOMERIC STRIP SEAL SHALL HAVE A MINIMUM RANGE OF MOVEMENT OF XX INCHES.
 - (10) NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED.
 - (11) ELEVATIONS SHOWN AT TOP OF ANGLES ARE 1/8" LOWER THAN PROPOSED FINISHED ROADWAY GRADE.



TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
15°F	2.50"
30°F	2.25"
45°F	2.00"
60°F	1.75"
75°F	1.50"
90°F	1.25"

"T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL

CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS

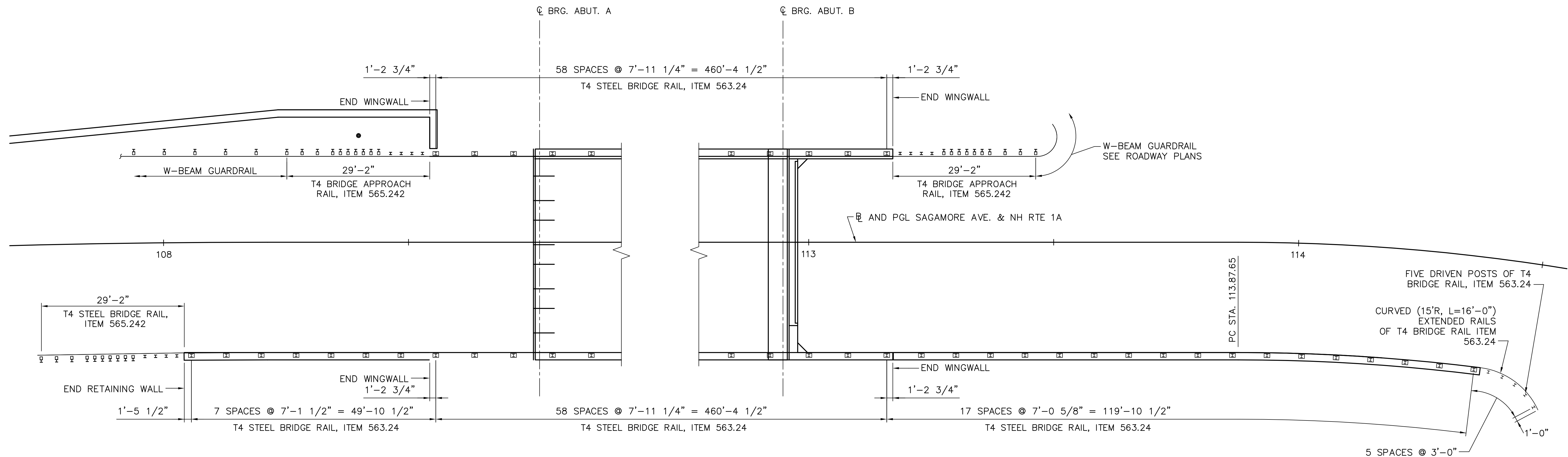
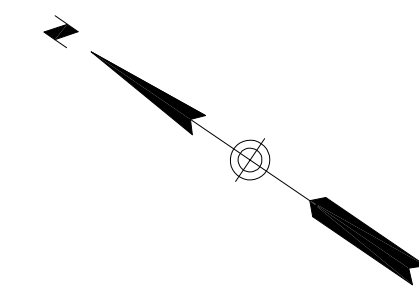
TOWN **PORTSMOUTH** BRIDGE NO. **198/034** STATE PROJECT **14493**

LOCATION **SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK**

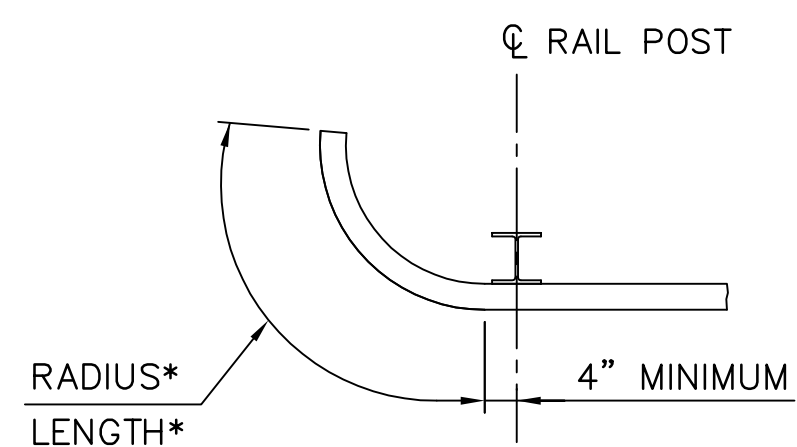
STRIP SEAL EXPANSION JOINT (NORMAL CROSSING)

DESIGNED	NHDOT	CHECKED	NHDOT	BY	DATE	BRIDGE SHEET 37 OF 41
DRAWN	PJP	CHECKED	ACJ		7/07	
QUANTITIES			CHECKED			
ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS 91
REV. DATE				51		

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
English/EXP-JTS	TYPE A-90	AS NOTED



PLAN
SCALE: 1" = 10'

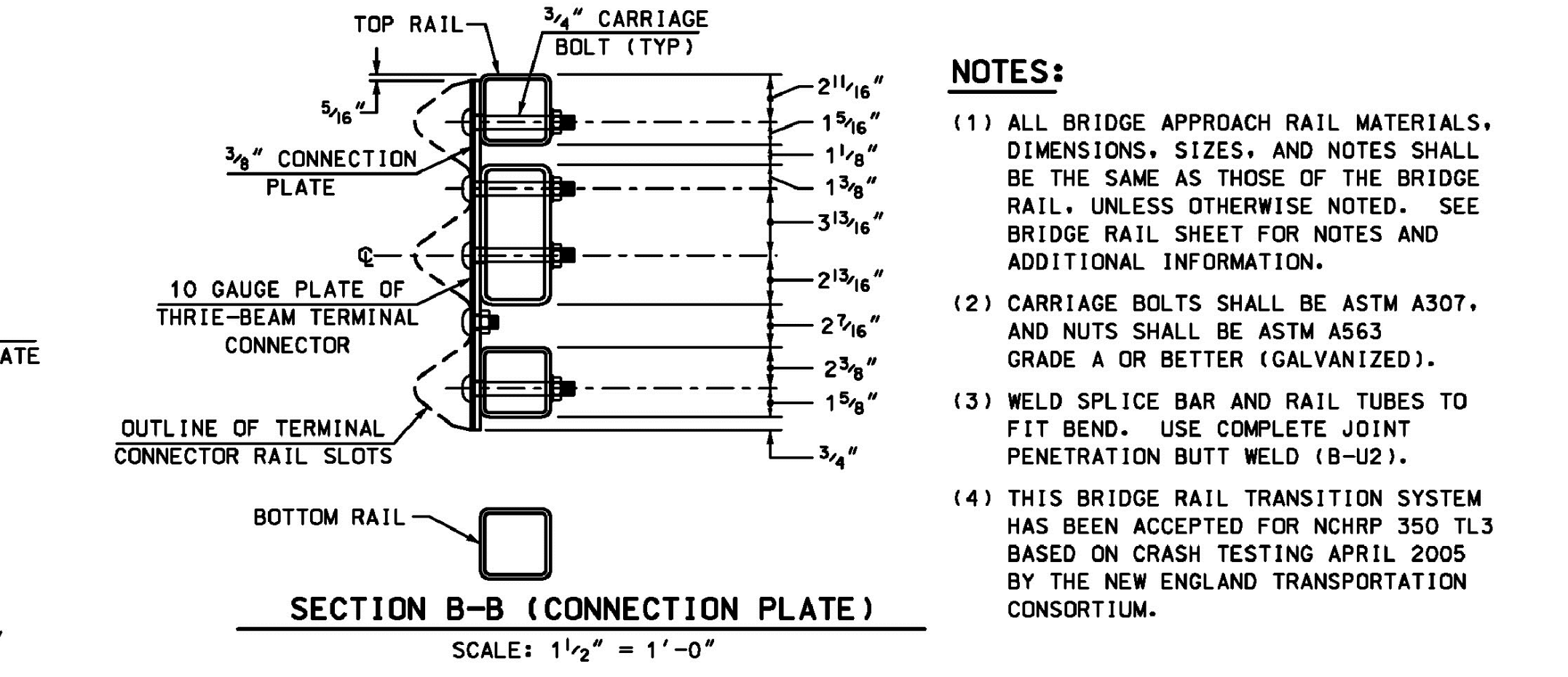
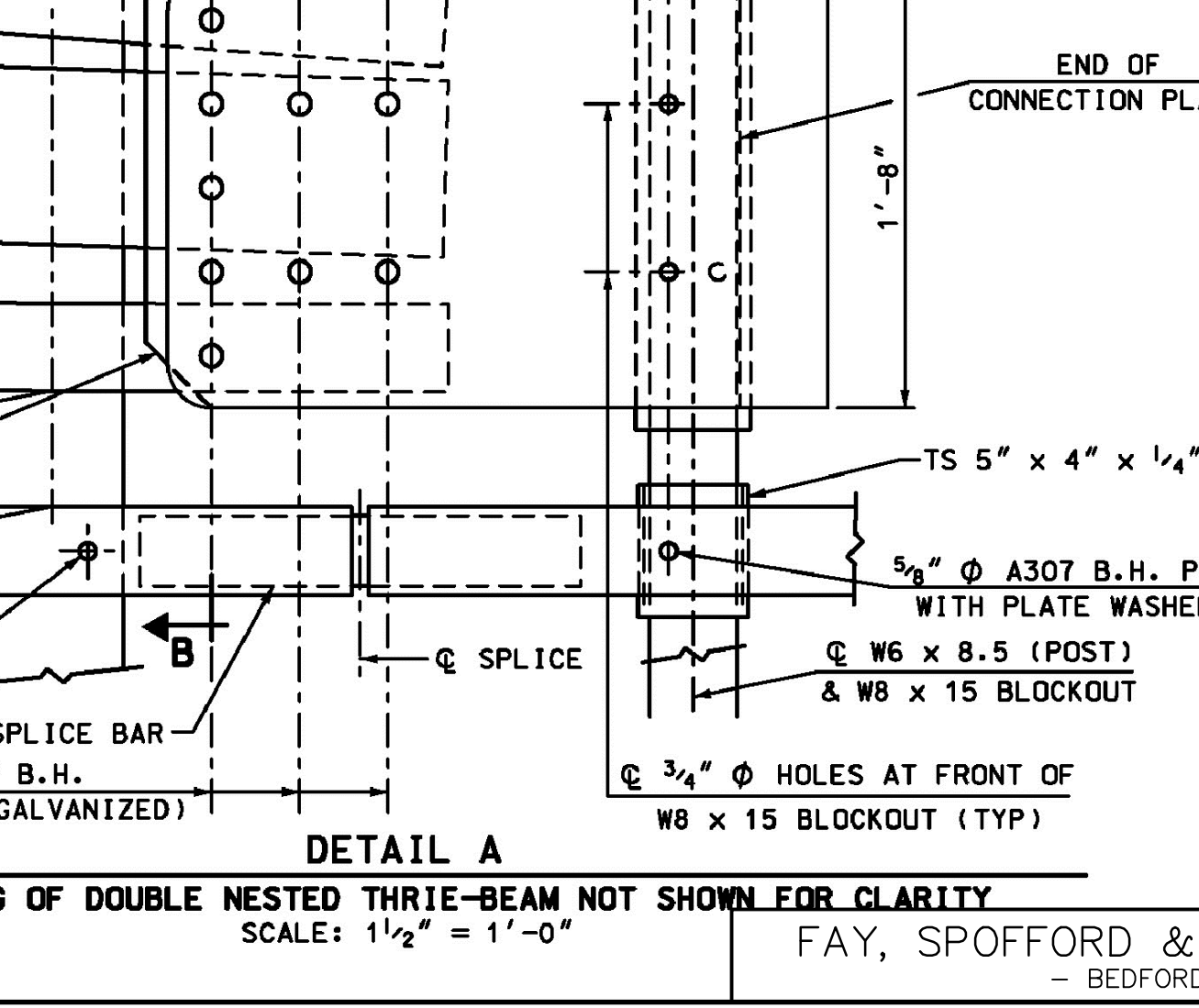
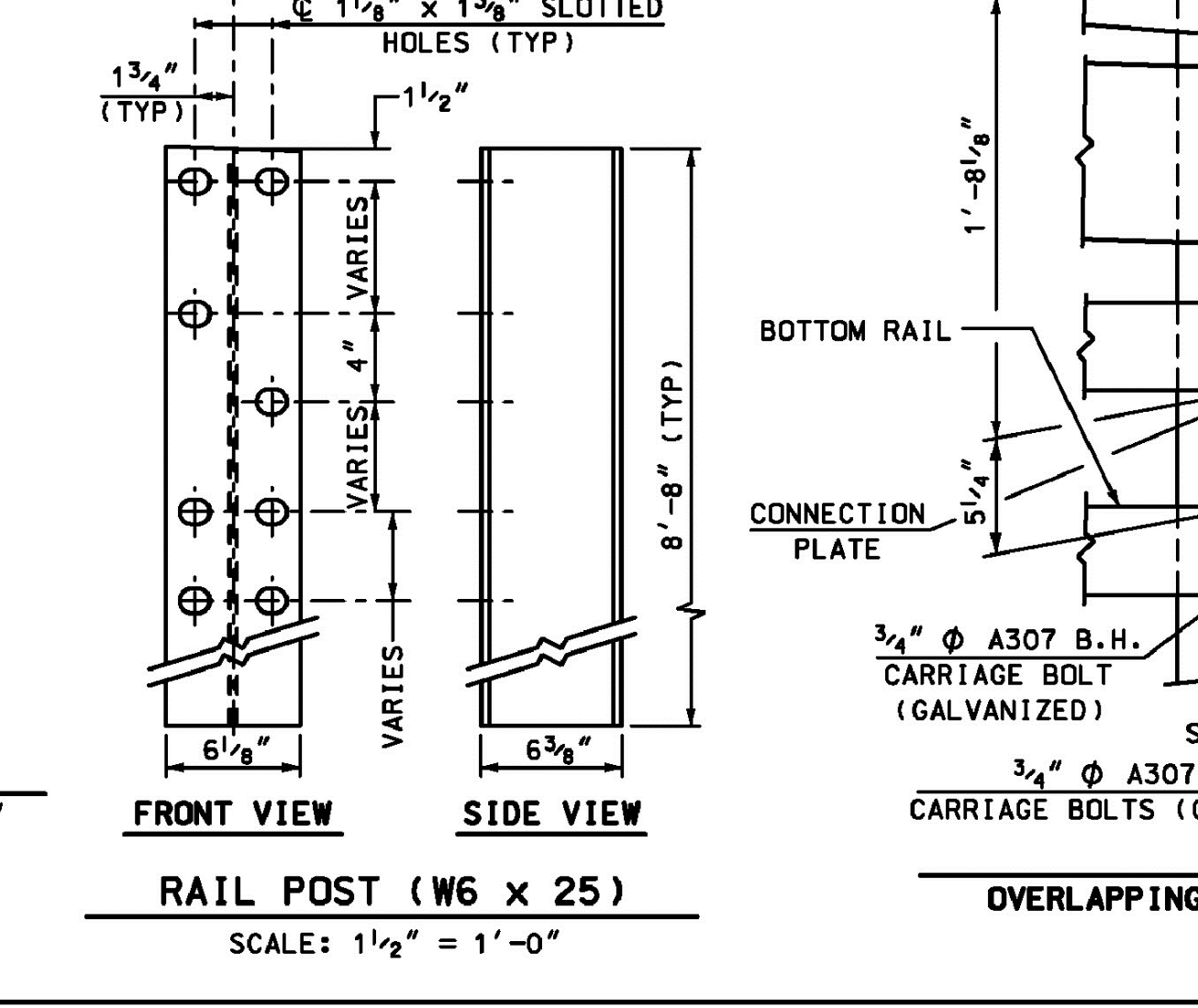
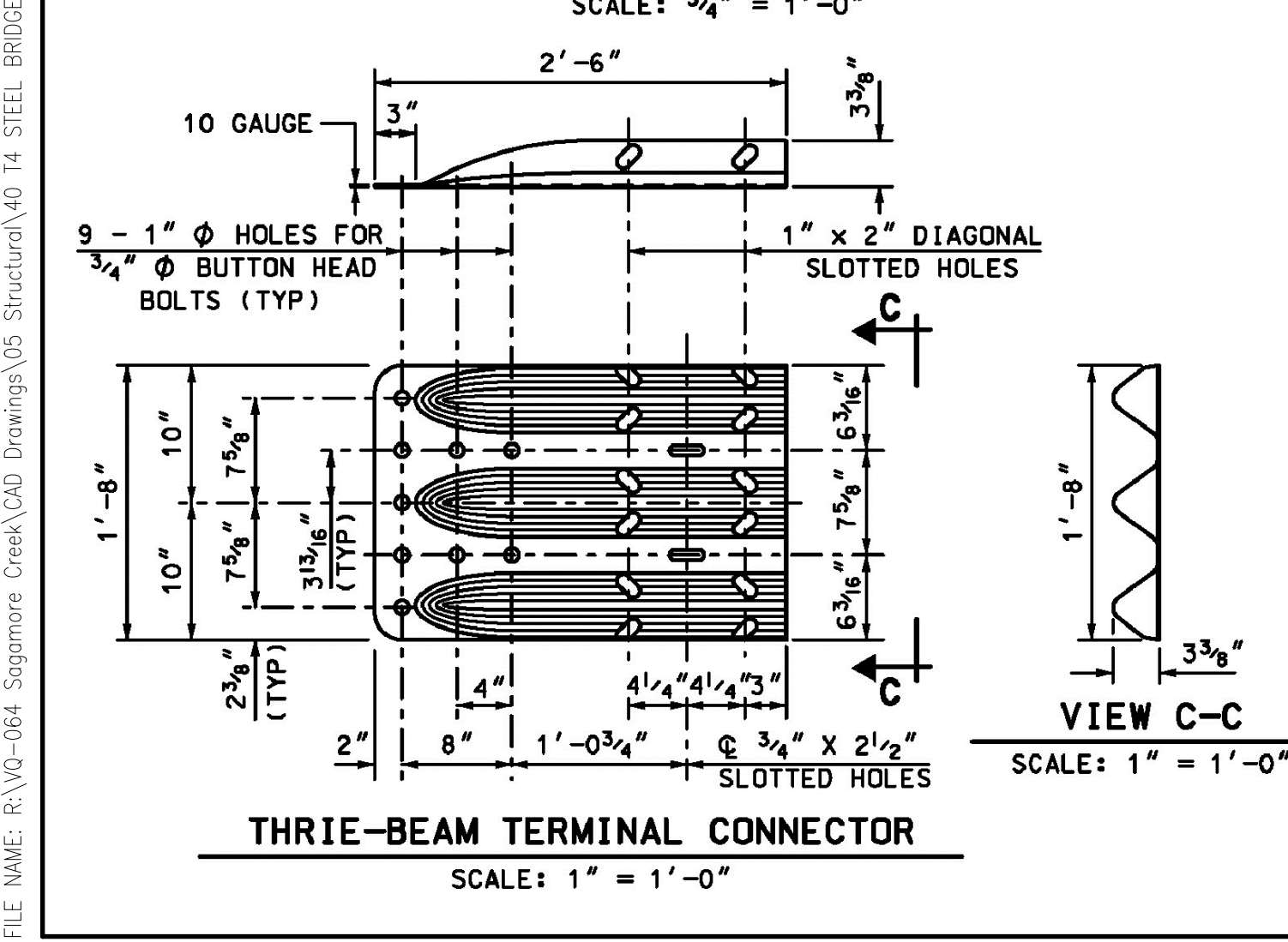
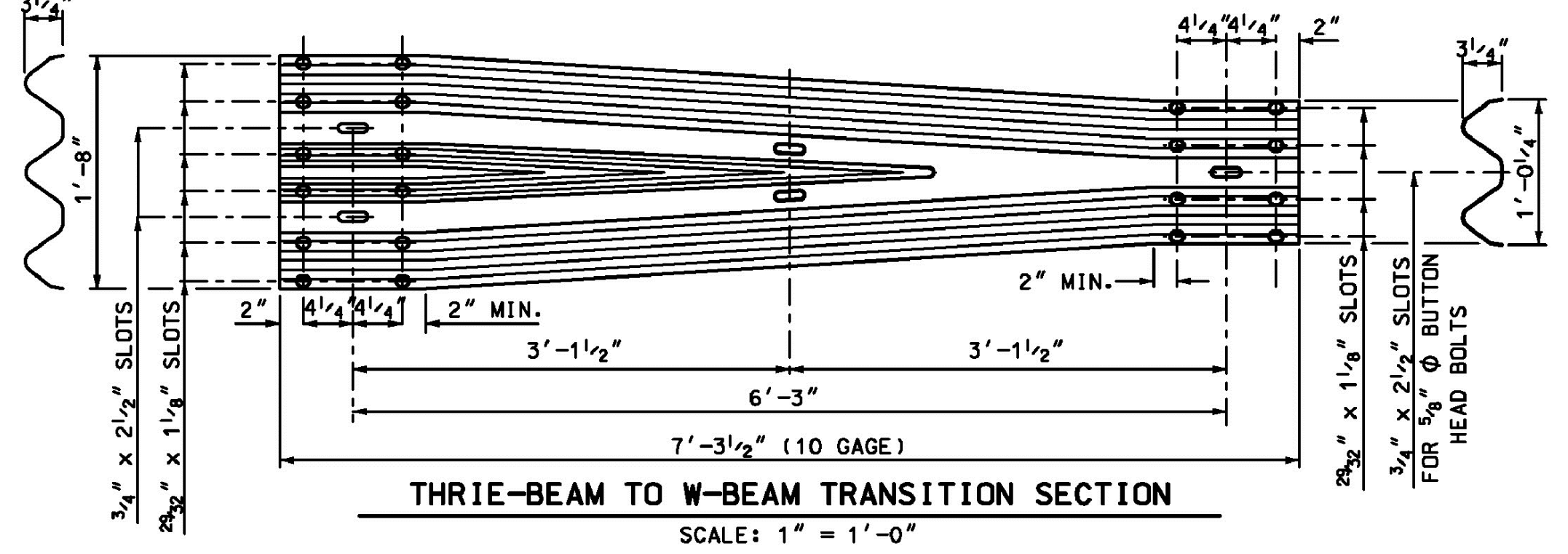
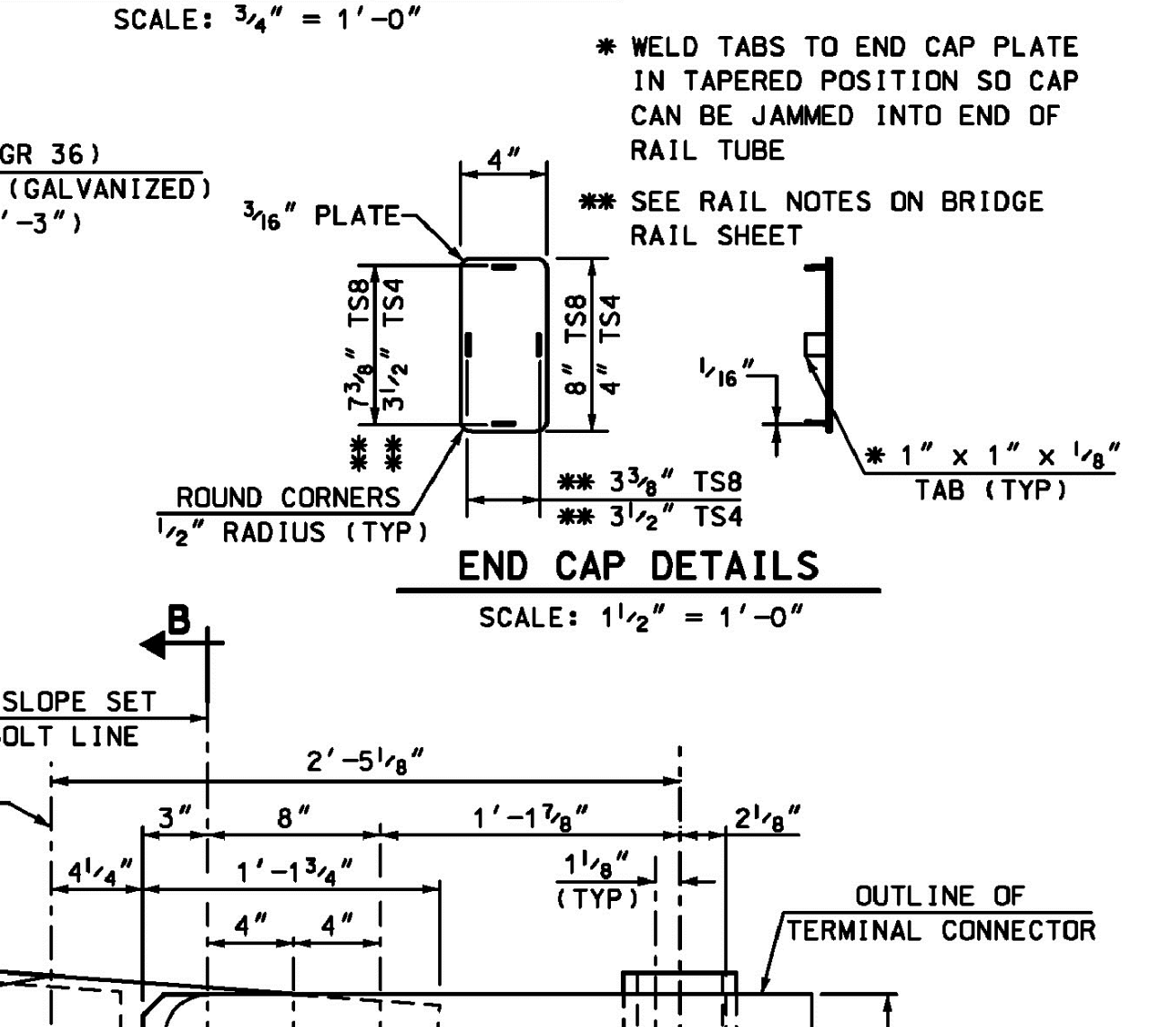
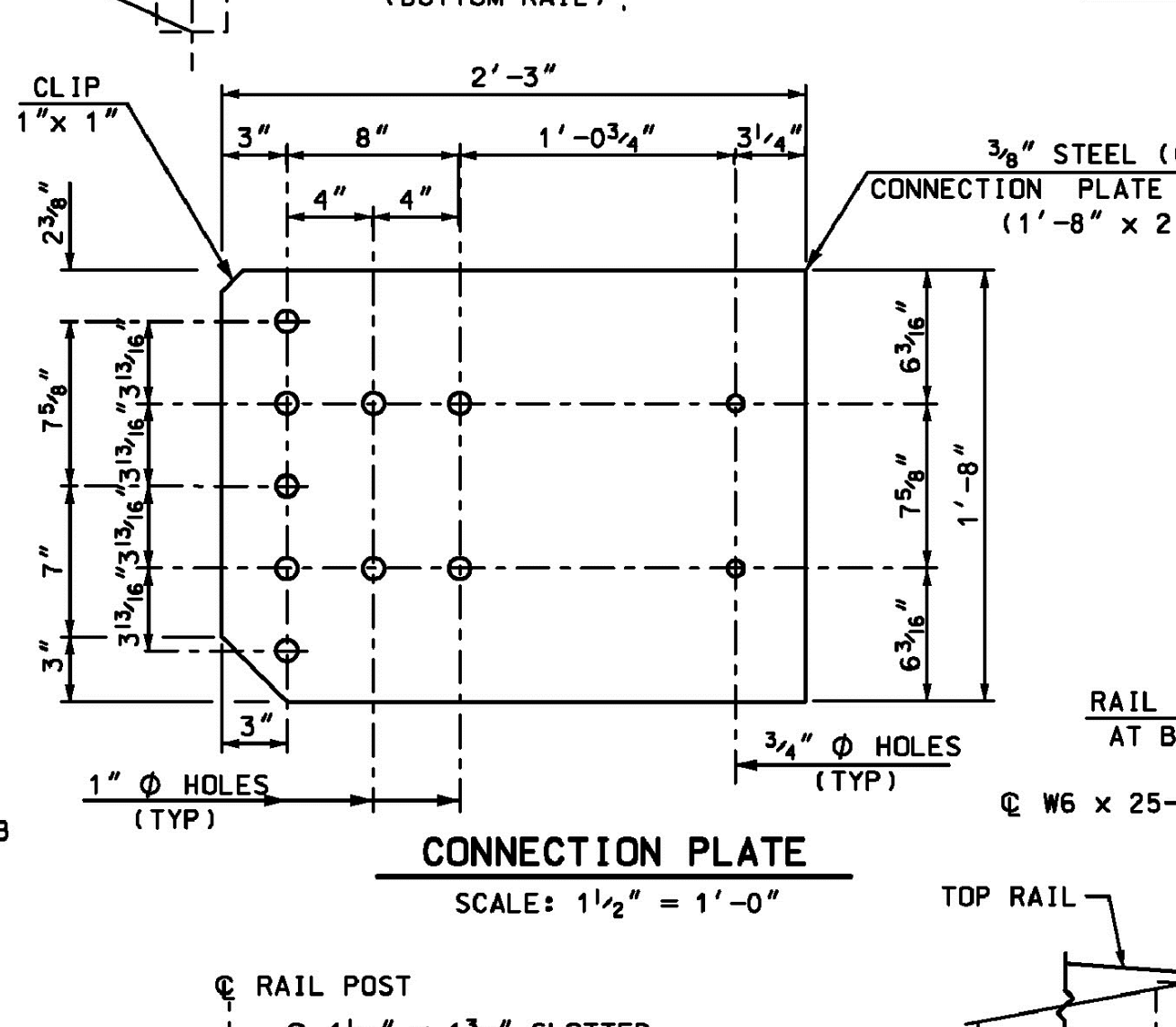
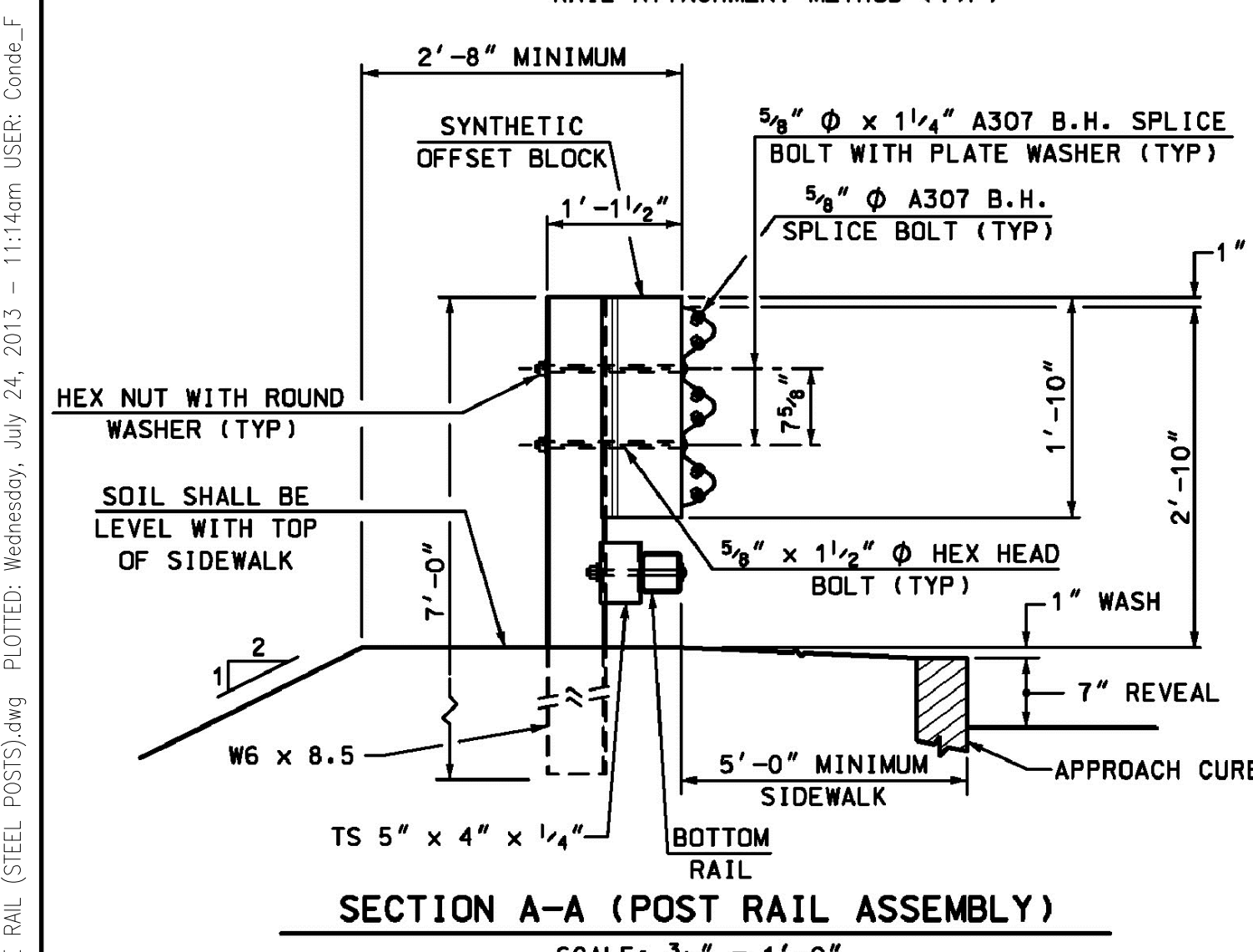
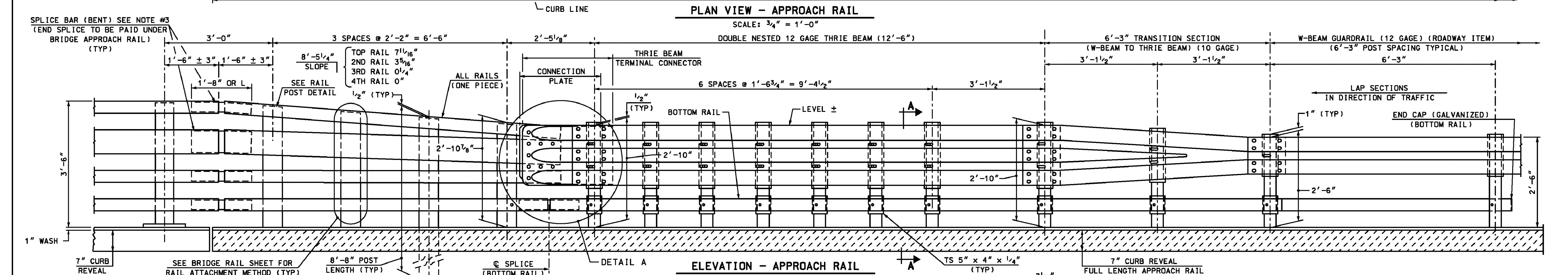
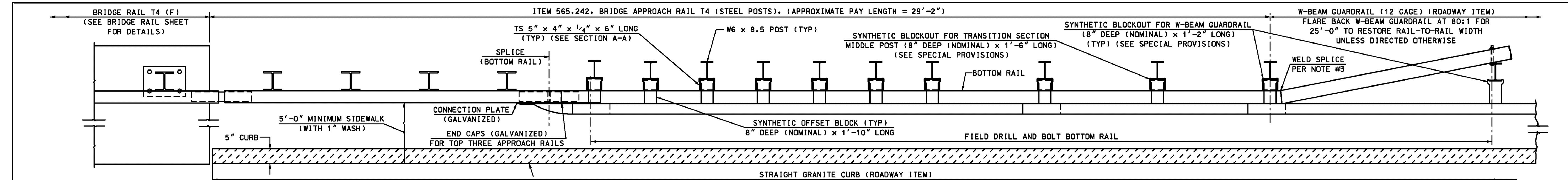


* SEE LAYOUT PLAN FOR BEND RADII AND RAIL LENGTHS

RAIL BEND DETAIL
NOT TO SCALE

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS					
TOWN	PORTSMOUTH	BRIDGE NO.	198/034	STATE PROJECT	14493
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK				
BRIDGE AND APPROACH RAIL LAYOUT					BRIDGE SHEET
BY	DATE	BY	DATE	REVISIONS AFTER PROPOSAL	DATE
DESIGNED	TD 5/13	CHECKED	MAB 5/13		
DRAWN	FLC 5/13	CHECKED	TD 5/13		
TRACED	---	CHECKED	---		
QUANTITIES	TD 6/13	CHECKED	MAB 6/13		
				FEDERAL PROJECT NO.	X-A000(417)
				SHEET NO.	52
				TOTAL SHEETS	91

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

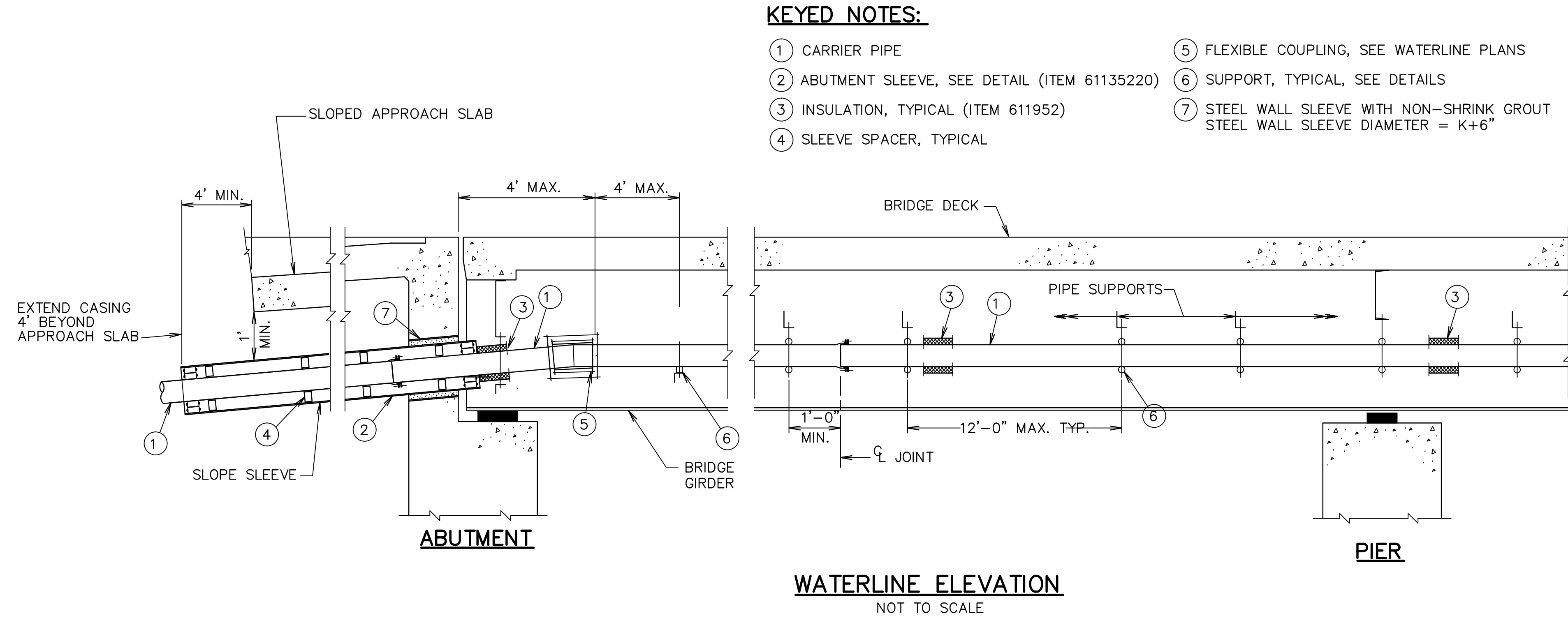


- NOTES:**
- ALL BRIDGE APPROACH RAIL MATERIALS, DIMENSIONS, SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED. SEE BRIDGE RAIL SHEET FOR NOTES AND ADDITIONAL INFORMATION.
 - CARRIAGE BOLTS SHALL BE ASTM A307, AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).
 - WELD SPLICE BAR AND RAIL TUBES TO FIT BEND. USE COMPLETE JOINT PENETRATION BUTT WELD (B-2).
 - THIS BRIDGE RAIL TRANSITION SYSTEM HAS BEEN ACCEPTED FOR NCHRP 350 TL3 BASED ON CRASH TESTING APRIL 2005 BY THE NEW ENGLAND TRANSPORTATION CONSORTIUM.

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS			
TOWN	PORTSMOUTH	BRIDGE NO.	198/034
STATE PROJECT	14493		
LOCATION	SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK		
T4 STEEL BRIDGE APPROACH RAIL (STEEL POSTS)			
BRIDGE SHEET	40 OF 41		
FILE NUMBER			
DESIGNED	NETC/JSZ	3/02	CHECKED
DATE			NHDOT
AS NOTED	PJP	10/05	CHECKED
DATE			JSZ
TRACED	---	---	CHECKED
DATE	---	---	---
QUANTITIES	---	---	CHECKED
DATE	---	---	---
FEDERAL PROJECT NO.	X-A000(417)		
SHEET NO.	54		
TOTAL SHEETS	91		

FILE NAME: R:\VO-064-Sagmore Creek\Drawings\05 Structural\40 T4 STEEL BRIDGE RAIL (STEEL POSTS).dwg PLOTTED: Wednesday, July 24, 2013 11:14am USER: Conde_LF

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -

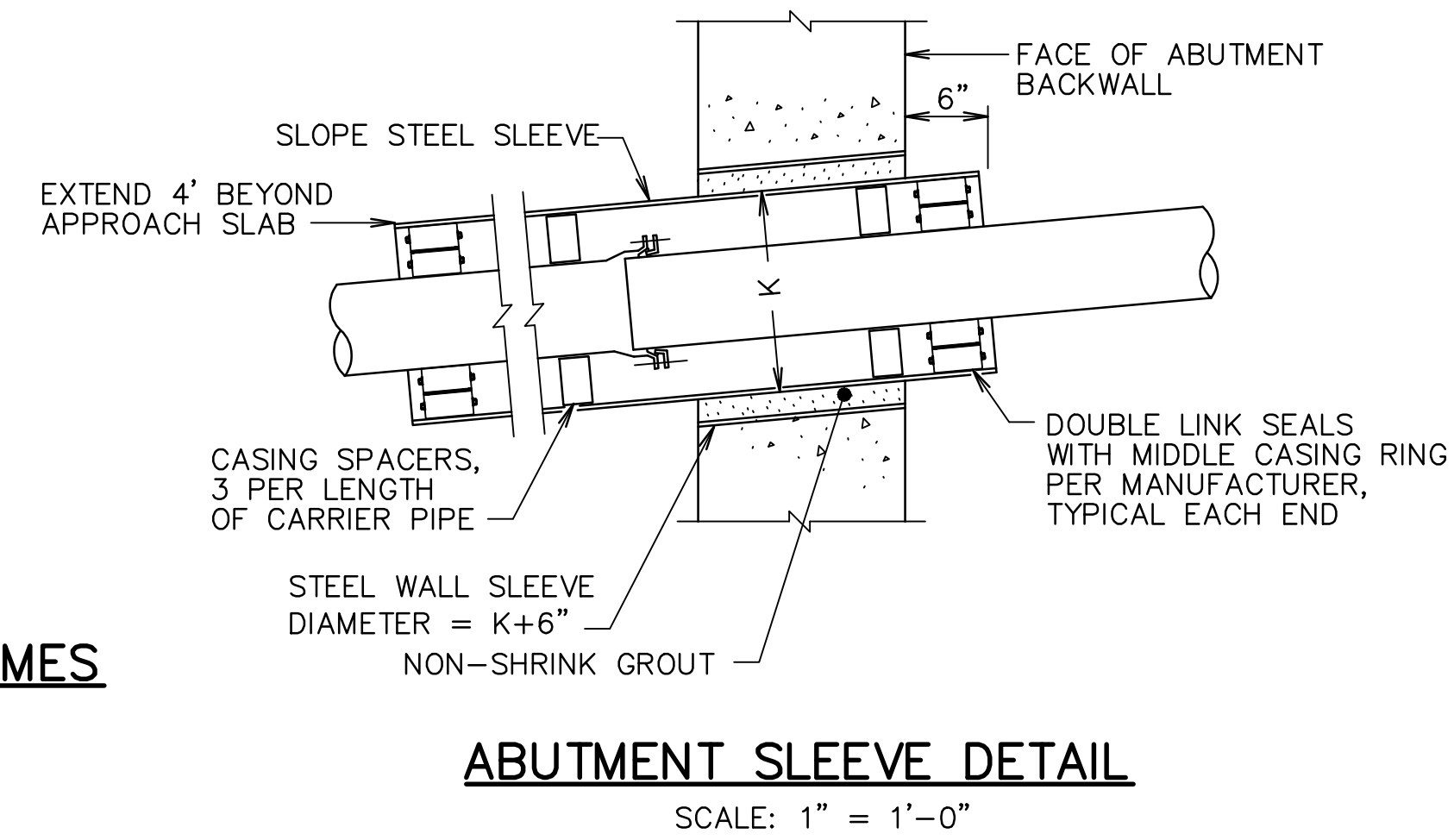
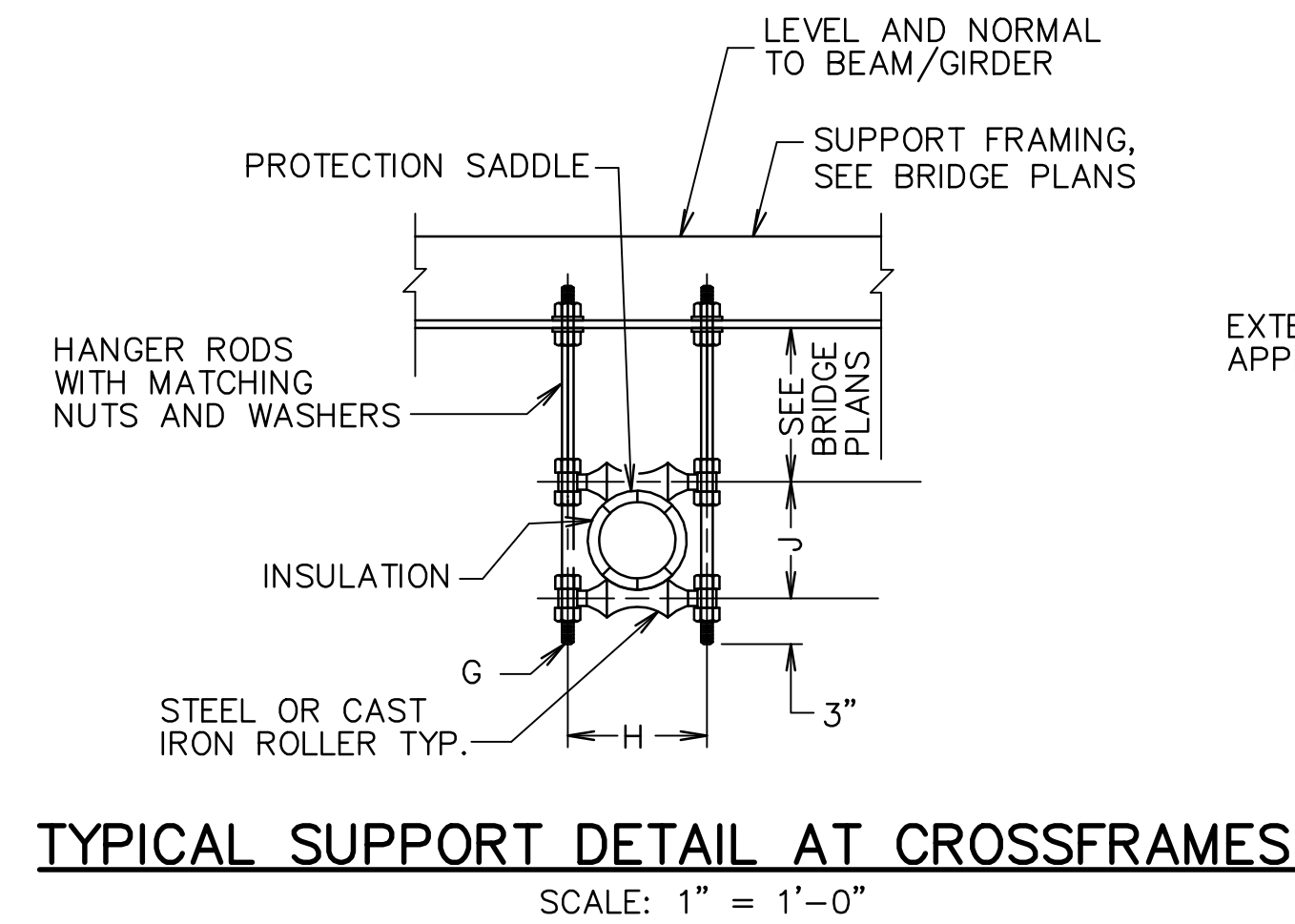


KEYED NOTES:

- ① CARRIER PIPE
- ② ABUTMENT SLEEVE, SEE DETAIL (ITEM 61135220)
- ③ INSULATION, TYPICAL (ITEM 611952)
- ④ SLEEVE SPACER, TYPICAL
- ⑤ FLEXIBLE COUPLING, SEE WATERLINE PLANS
- ⑥ SUPPORT, TYPICAL, SEE DETAILS
- ⑦ STEEL WALL SLEEVE WITH NON-SHRINK GROUT
STEEL WALL SLEEVE DIAMETER = K+6"

NOTES:

1. MATERIALS – HANGER RODS – GALVANIZED ASTM A307 WITH MATCHING NUTS.
2. FOR SUPPORT FRAMING DETAILS SEE BRIDGE PLANS. STRUCTURAL STEEL FOR SUPPORTS SHALL BE THE SAME AS THAT FOR THE GIRDERS AND PAID UNDER ITEM 550.1. IF THE GIRDERS ARE PAINTED, THE ANGLES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
3. ABUTMENT-CASING SLEEVE AS DETAILED TO BE USED AT EACH ABUTMENT. PROVIDE DOUBLE LINK-SEAL AT EACH END OF EACH CASING SLEEVE.
4. EXPANSION JOINT – DRESSER STYLE 63, TYPE 3, PAID AS ITEM 61106210
5. GALVANIZATION – MISCELLANEOUS HARDWARE: RODS, NUTS, ETC. SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. WHEN THE SUPPORTING ANGLES TO WHICH THE RODS ARE ATTACHED ARE WEATHERING STEEL, A NEOPRENE OR VINYL WASHER SHALL BE PLACED BETWEEN THE ANGLE SURFACE (ON BOTH SIDES) AND THE NUT/WASHER TO ISOLATE THE CONTACT BETWEEN THE TWO SURFACES.
6. PROVIDE 2" URETHANE WATERLINE INSULATION WITH 6 GAGE ALUMINUM JACKET THROUGHOUT.
7. PAYMENT – WATER LINE (ITEM 61106210) SHALL INCLUDE FURNISHING AND INSTALLING DUCTILE IRON WATER MAIN, EXPANSION JOINT, TESTING, DISINFECTING (WHEN REQUIRED), INSULATION AND COVER, HANGERS, ROLLERS, RODS, PROTECTION SADDLES, ABUTMENT SLEEVES, LINK SEALS, CASING UNDER APPROACH SLAB AND MISCELLANEOUS HARDWARE AS DETAILED ON THIS DRAWING.



DIMENSIONS				
PIPE Ø	G	H	J	K
6"	7/8"	1'-6"	1'-1"	1'-2"
8"	7/8"	1'-7"	1'-3"	1'-4"
10"	1"	1'-9"	1'-6"	1'-6"
12"	1"	1'-11"	1'-8"	1'-8"
14"	1"	2'-1"	1'-9"	1'-10"
16"	1"	2'-3"	1'-11"	2'-0"
18"	1-1/8"	2'-5"	2'-2"	2'-2"
20"	1-1/4"	2'-8"	2'-4"	2'-4"
24"	1-1/2"	2'-11"	2'-9"	2'-10"

G = DIAMETER OF ROD

WATERLINE SUPPORT DETAILS

CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS										
TOWN		PORTSMOUTH		BRIDGE NO.		198/034		STATE PROJECT		14493
LOCATION SAGAMORE AVE. & N.H. ROUTE 1A OVER SAGAMORE CREEK										
WATERLINE SUPPORT DETAILS										
BY		DATE		BY		DATE		REVISIONS AFTER PROPOSAL		DATE
DESIGNED		TD 5/13		CHECKED		MAB 5/13				
DRAWN		FLC 5/13		CHECKED		TD 5/13				
TRACED		---		CHECKED		---		FEDERAL PROJECT NO.		X-A000(417)
QUANTITIES		TD 6/13		CHECKED		MAB 6/13		SHEET NO.		55
BRIDGE SHEET										
41 OF 41										
FILE NUMBER										
91										

FAY, SPOFFORD & THORNDIKE, INC
- BEDFORD, NH -