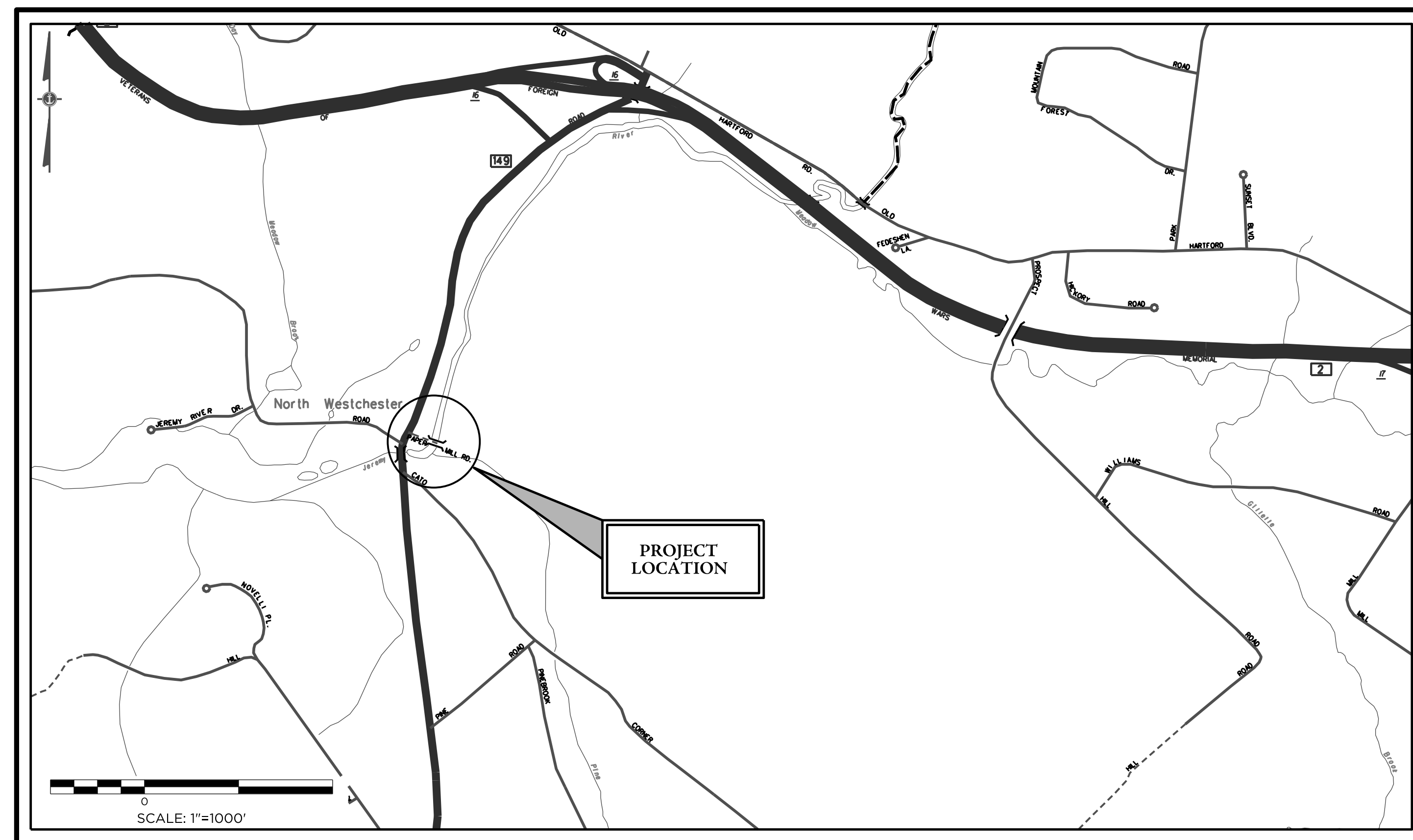


REHABILITATION OF PAPER MILL RD. BRIDGE NO. 05528 OVER JEREMY RIVER COLCHESTER, CT

PREPARED FOR

TOWN OF COLCHESTER
ARTHUR SHILOSKY, FIRST SELECTMAN



LOCATION MAP
SCALE: 1" = 1000'

LIST OF SHEETS

DATE: 06/12/19
REVISED:

ROADWAY PLAN & PROFILE	1
GENERAL PLAN	2
LAYOUT PLAN	3
STRUCTURE DETAILS	4-6
BRIDGE RAIL DETAILS	7
THRIE BEAM TRANSITION DETAILS	8-9

LIST OF CT DOT STANDARD SHEETS

- HW-822_01 TEMPORARY PRECAST CONCRETE BARRIER CURB
- TR-1220_01 SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS
- TR-1220_02 CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES

PREPARED BY:

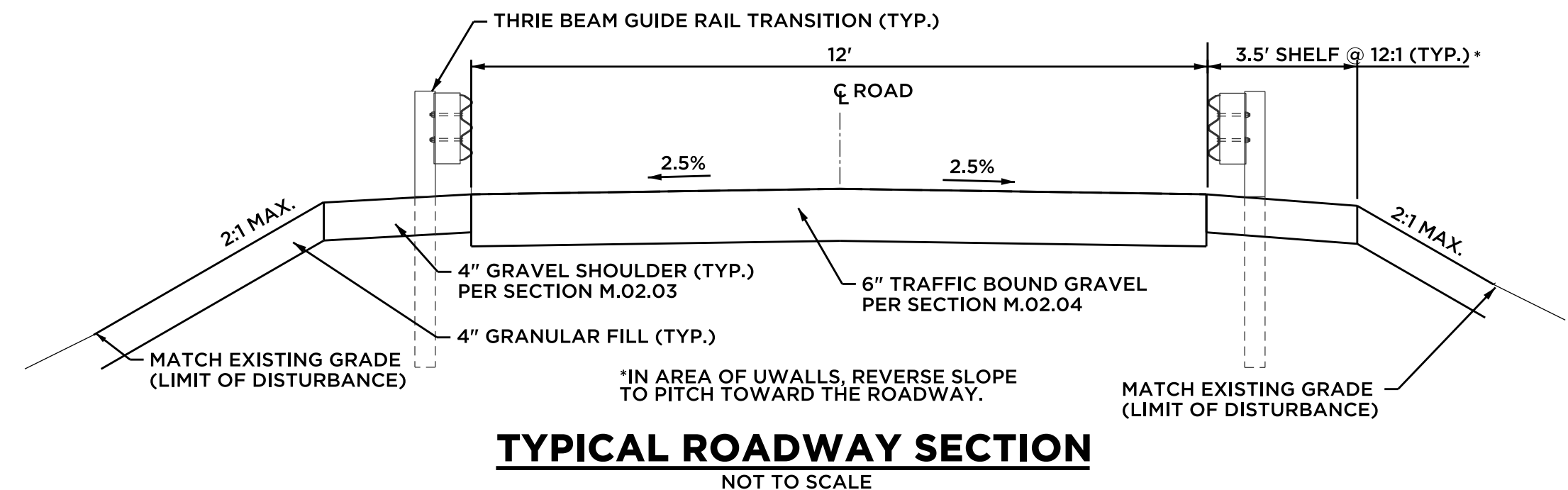
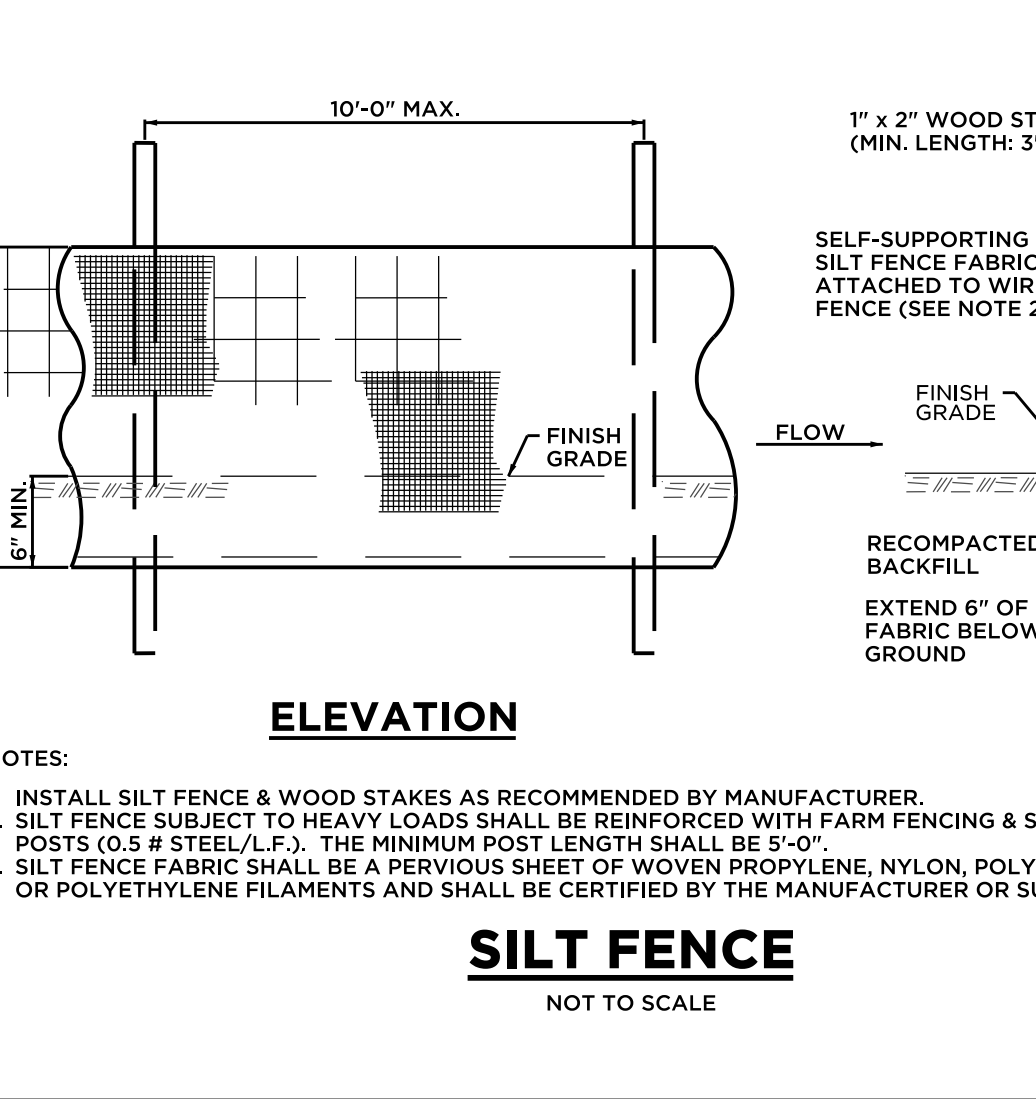
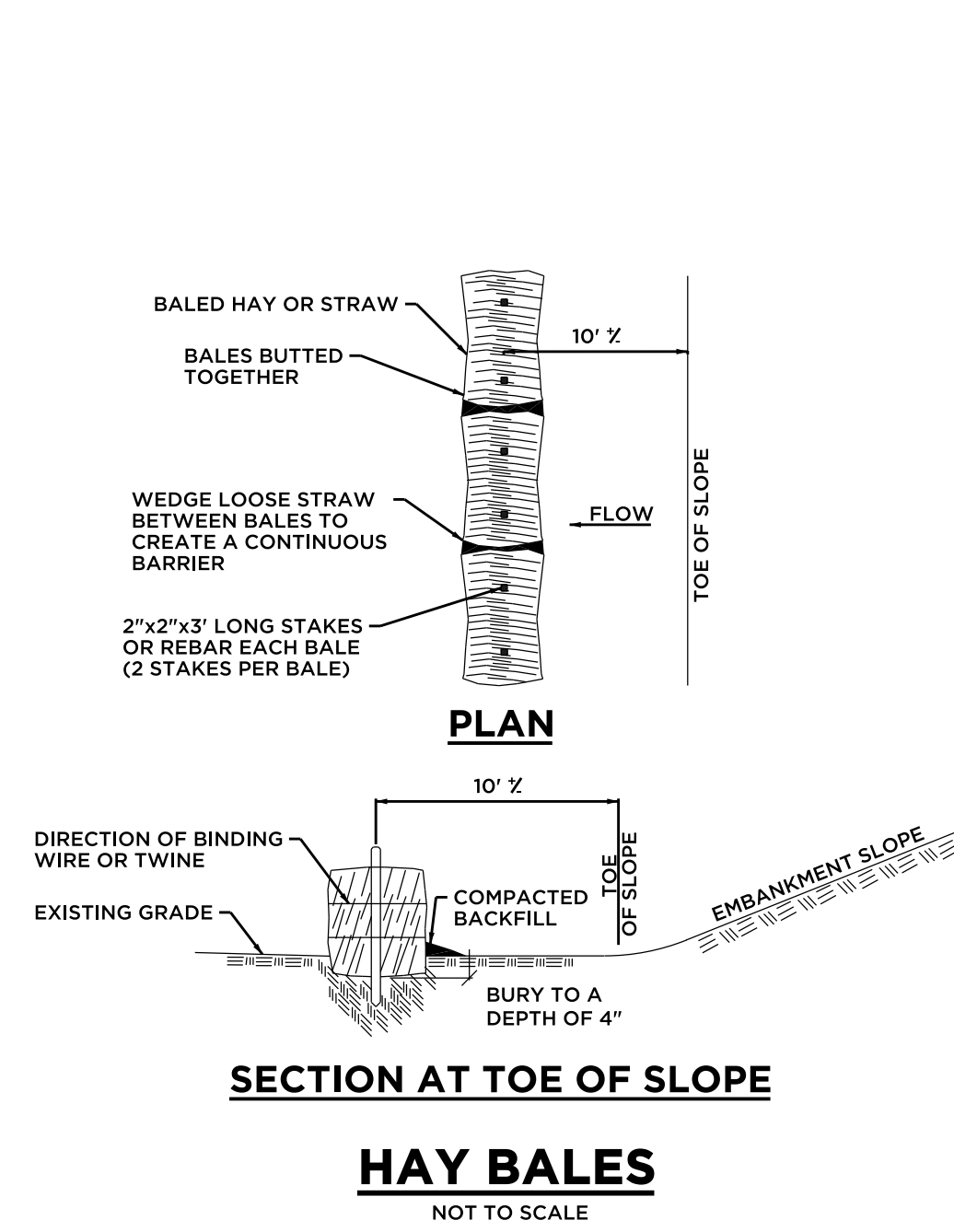
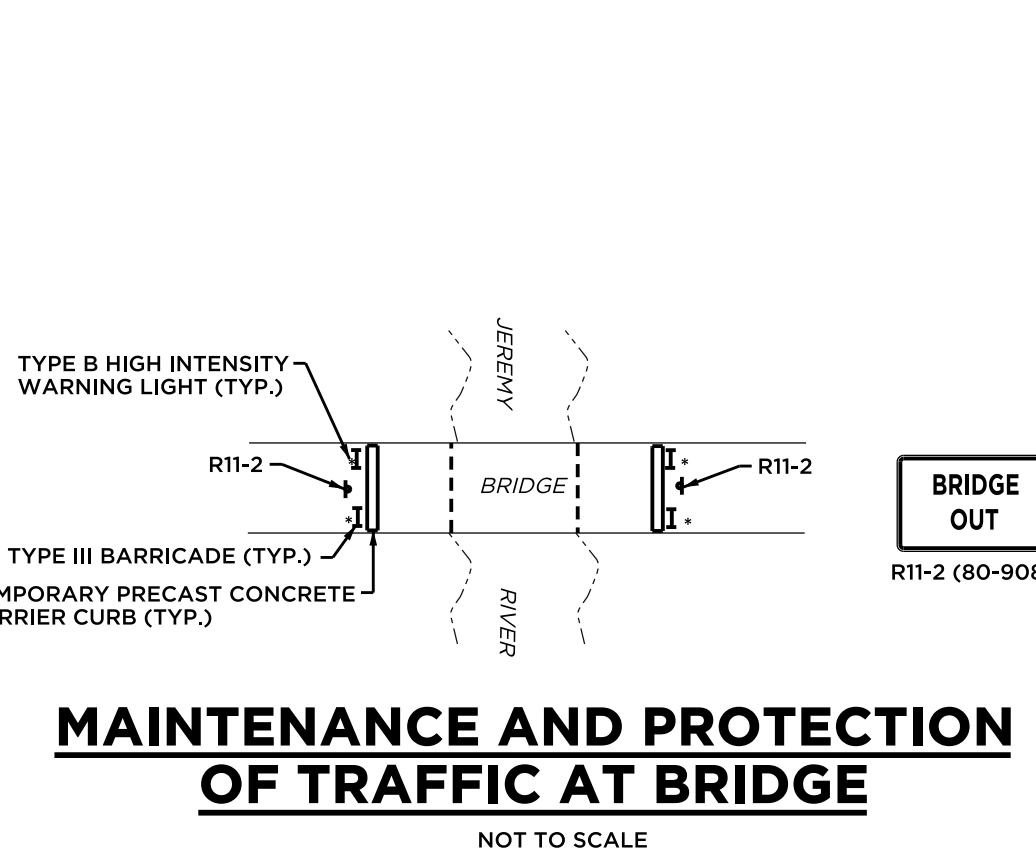
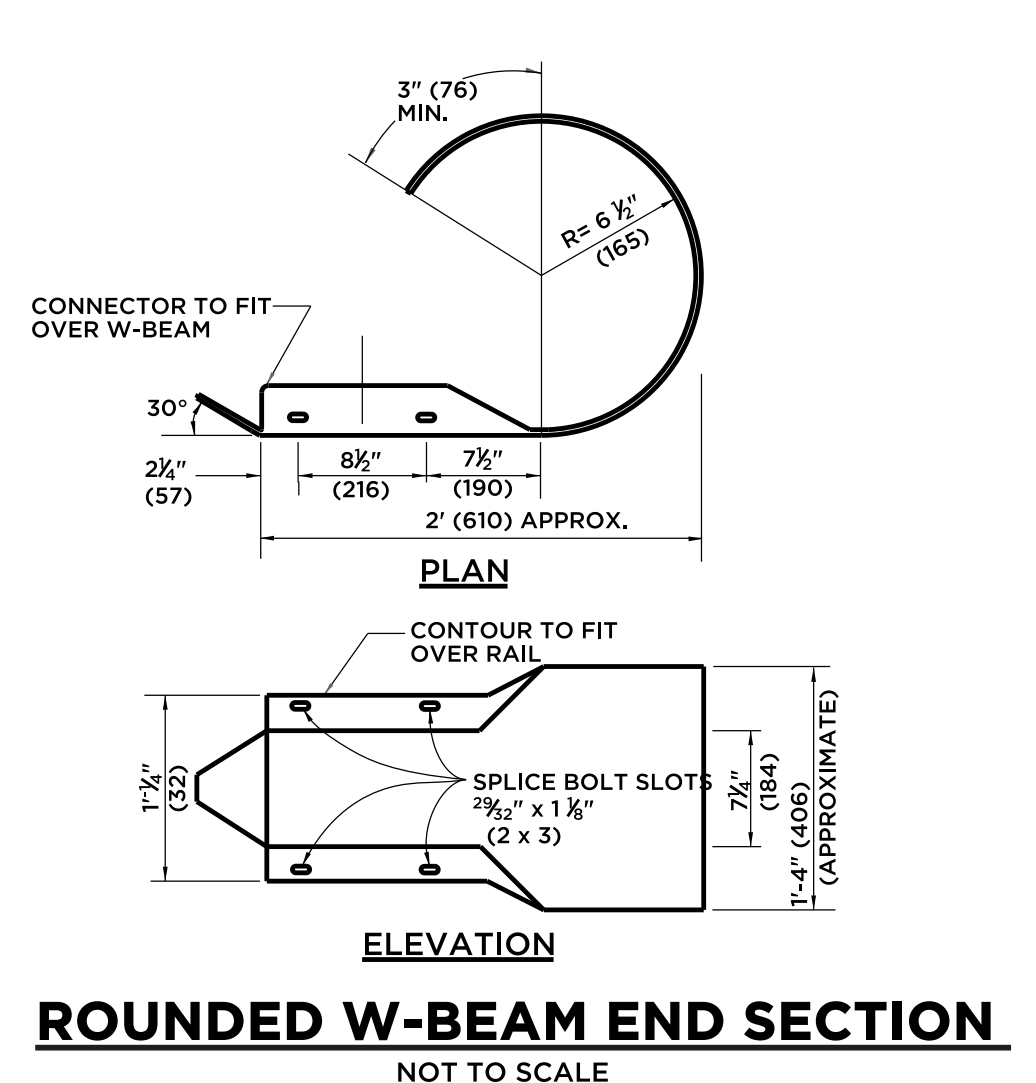
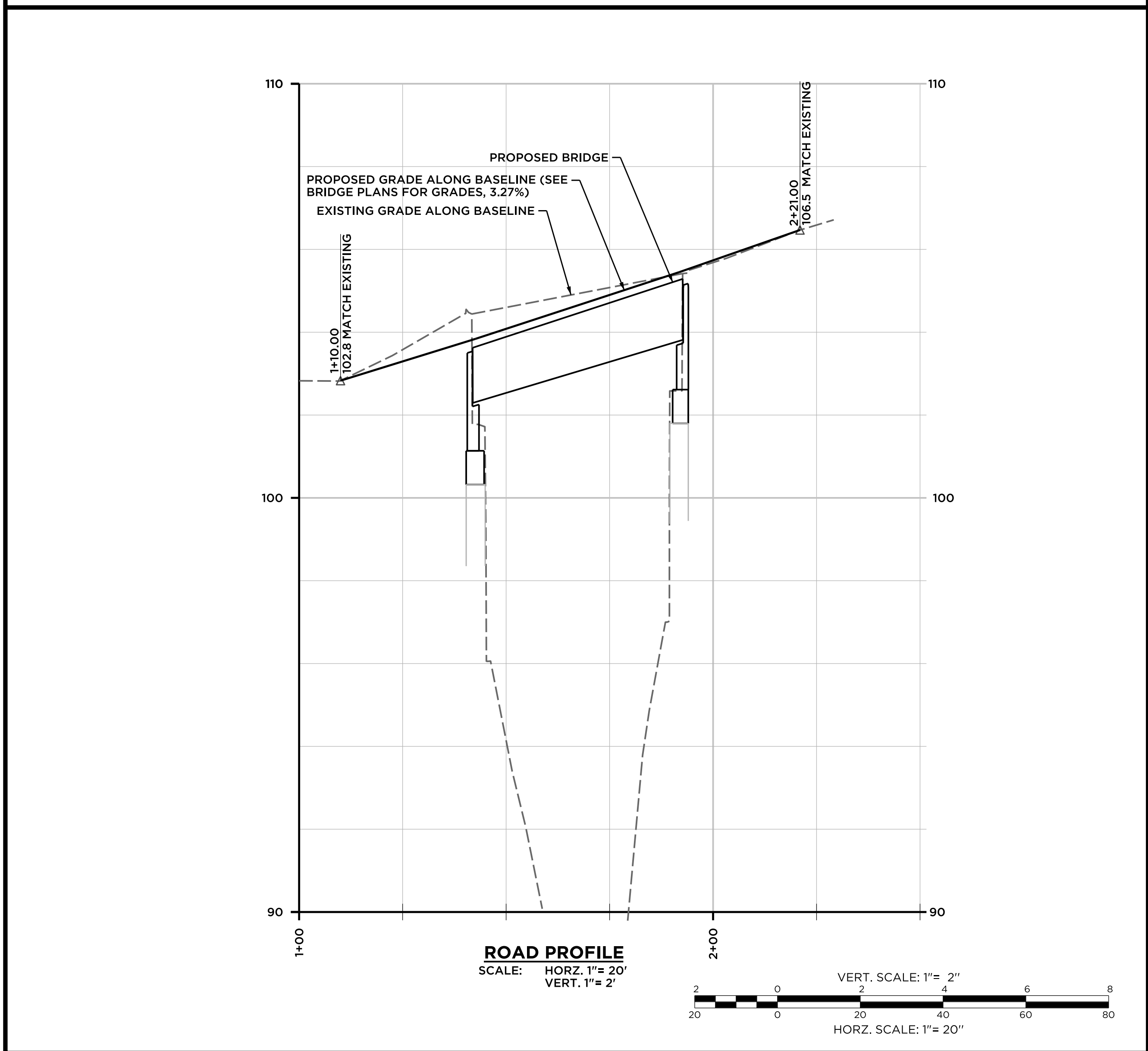
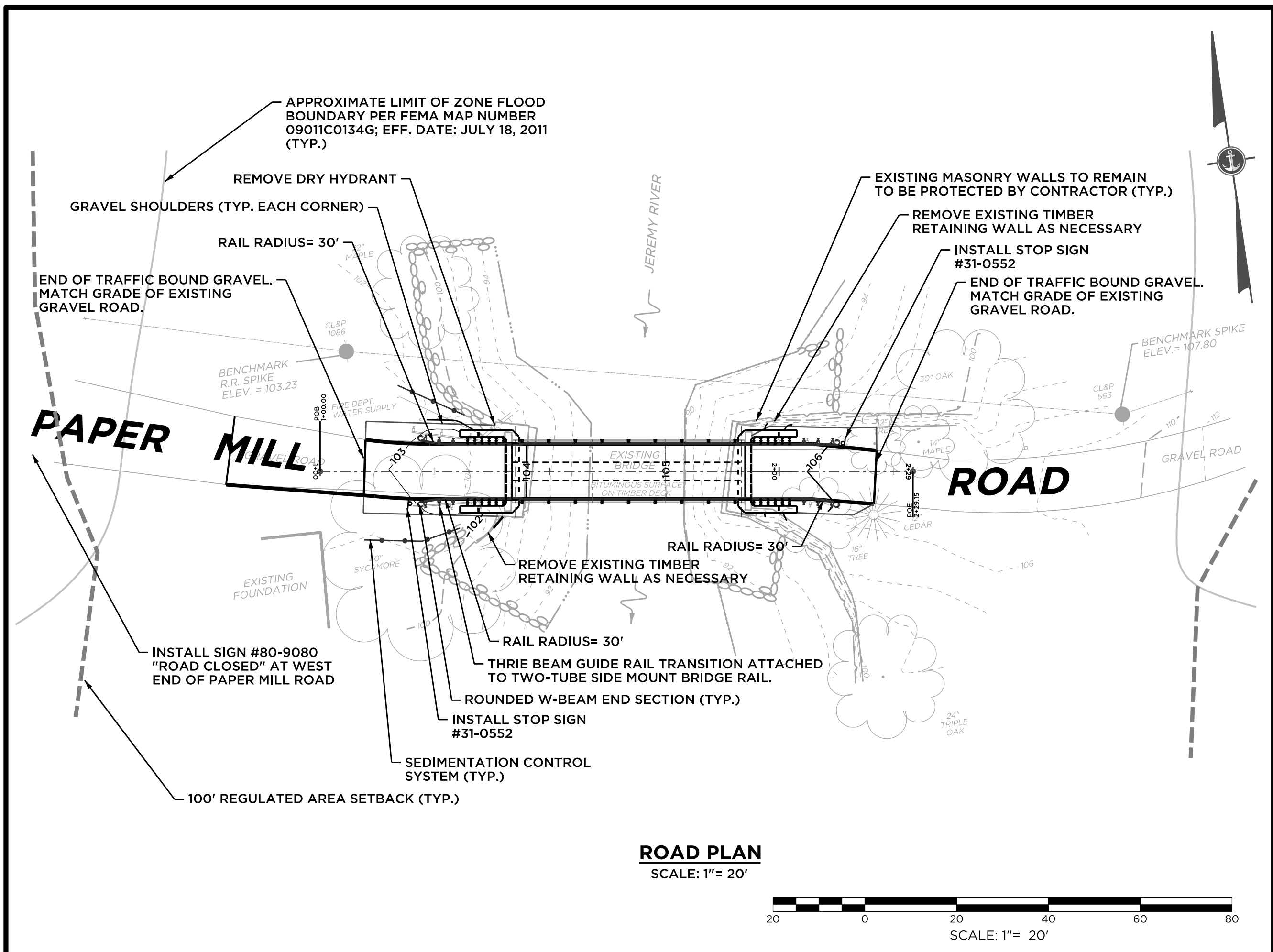


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- GENERAL NOTES**
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE STATE OF CONNECTICUT 2002 "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL".
 - EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLAN, PRIOR TO CLEARING AND GRUBBING.
 - RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION AND SAFE DISPOSAL OF PRECIPITATION. SURROUND SOIL STOCKPILES WITH SILT FENCE. THE BINDING OF SOIL PARTICLES TO MAKE THEM LESS SUSCEPTIBLE TO REMOVAL BY RAIN SPLASH, RUNOFF OR WIND IS SUGGESTED BY THE USE OF NATURAL AND PHYSICAL "BINDERS" SUCH AS MULCH AND FABRICS. HAY, EROSION CONTROL MATTING OR TEMPORARY SEEDING.
 - AFTER EACH STORM EVENT OR ONCE A WEEK, ALL SEDIMENT AND EROSION CONTROLS WILL BE INSPECTED BY THE ENGINEER. ANY CORRECTIVE ACTION TO MITIGATE ENVIRONMENTAL CONCERNS WILL BE ORDERED AT THAT TIME. SEDIMENT FROM THE EROSION CONTROL DEVICES SHALL BE REMOVED, WHEN IT REACHES ONE-HALF ITS HEIGHT. REMOVED SEDIMENT SHALL BE PROPERLY DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THIS PLAN.
 - EROSION CONTROL MEASURES
 - EROSION CONTROL MEASURES ARE DEPICTED ON THE SITE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED MAINTENANCE DURING CONSTRUCTION.
 - FINAL GRADING, SEEDING AND MULCHING SHALL BE DONE WITHIN THE SPECIFIED TIME FRAMES. INSPECTIONS SHALL BE PERFORMED AS SOON AS POSSIBLE FOLLOWING A HEAVY RAIN TO CHECK THE INTEGRITY OF THE BARRIERS, SWALES, SEEDING AND MULCH. ANY REPAIRS OR ADDITIONAL SEED OR MULCH SHALL BE DONE AS SOON AS POSSIBLE.
 - APPROPRIATE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED ON SITE PRIOR TO CONSTRUCTION TO MINIMIZE THE IMPACT OF THE DISTURBED AREAS ON THE WATERCOURSE.
 - CLEARED MATERIALS, SUCH AS BRUSH AND ROAD SPOILS SHALL BE REMOVED AND DISPOSED OF OFF SITE. AREAS TO BE CLEARED (LIMITS OF CLEARING) SHALL BE CONSIDERED THE AREAS ADJACENT TO THE ROADWAY WITHIN THE LIMITS OF CONSTRUCTION.
 - WHERE DEWATERING OF EXCAVATIONS IS REQUIRED THERE SHALL NOT BE A DIRECT DISCHARGE INTO WETLANDS OR WATERCOURSES. PROPER METHODS SHALL BE UTILIZED SUCH AS PUMPING WATER INTO A TEMPORARY SEDIMENTATION BASIN, FLOATING THE INTAKE OF THE PUMP, OR OTHER METHODS TO MINIMIZE AND RETAIN SUSPENDED SOLIDS.

- ANTICIPATED CONSTRUCTION SEQUENCE**
- CONSTRUCTION WILL COMMENCE IN THE SUMMER OF 2019 AND WILL BE COMPLETED IN THE FALL OF 2019, WEATHER PERMITTING.
 - COORDINATE AND COMPLETE A PRE- CONSTRUCTION MEETING WITH THE TOWN/TOWN'S AGENT AND ENGINEER. RESPONSIBLE PARTIES TO BE IDENTIFIED AND EMERGENCY PHONE NUMBERS PROVIDED.
 - CONTACT CALL BEFORE YOU DIG PRIOR TO ANY CONSTRUCTION ACTIVITIES.
 - INSTALL MAINTENANCE & PROTECTION OF TRAFFIC MEASURES FOR ROADWAY DETOUR AND CLOSE THE BRIDGE TO TRAFFIC.
 - INSTALL EROSION CONTROL MEASURES AT THE LOCATIONS INDICATED ON THE PLANS OR AS REQUIRED BY FIELD CONDITIONS. CLEAR & GRUB AS NECESSARY.
 - REMOVE THE EXISTING SUPERSTRUCTURE (DECK, RAILINGS, STEEL BEAMS AND BEARINGS).
 - CONSTRUCT NEW BRIDGE SEAT AT EACH EXISTING ABUTMENT AND BACKFILL. COMPLETE REPAIRS/FILL VOIDS IN EXISTING DRY MASONRY RETAINING WALLS.
 - INSTALL PRESTRESSED DECK UNITS.
 - CONSTRUCT NEW ROADWAY APPROACHES, INSTALL GRAVEL SHOULDERS AND GRANULAR FILL ON SLOPES.
 - INSTALL THRIE BEAM BRIDGE RAIL AND TRANSITIONS WITH W-BEAM END SECTIONS.
 - REMOVE EROSION AND SEDIMENTATION CONTROLS AFTER CONSTRUCTION.

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REHABILITATION OF BRIDGE NO. 05528

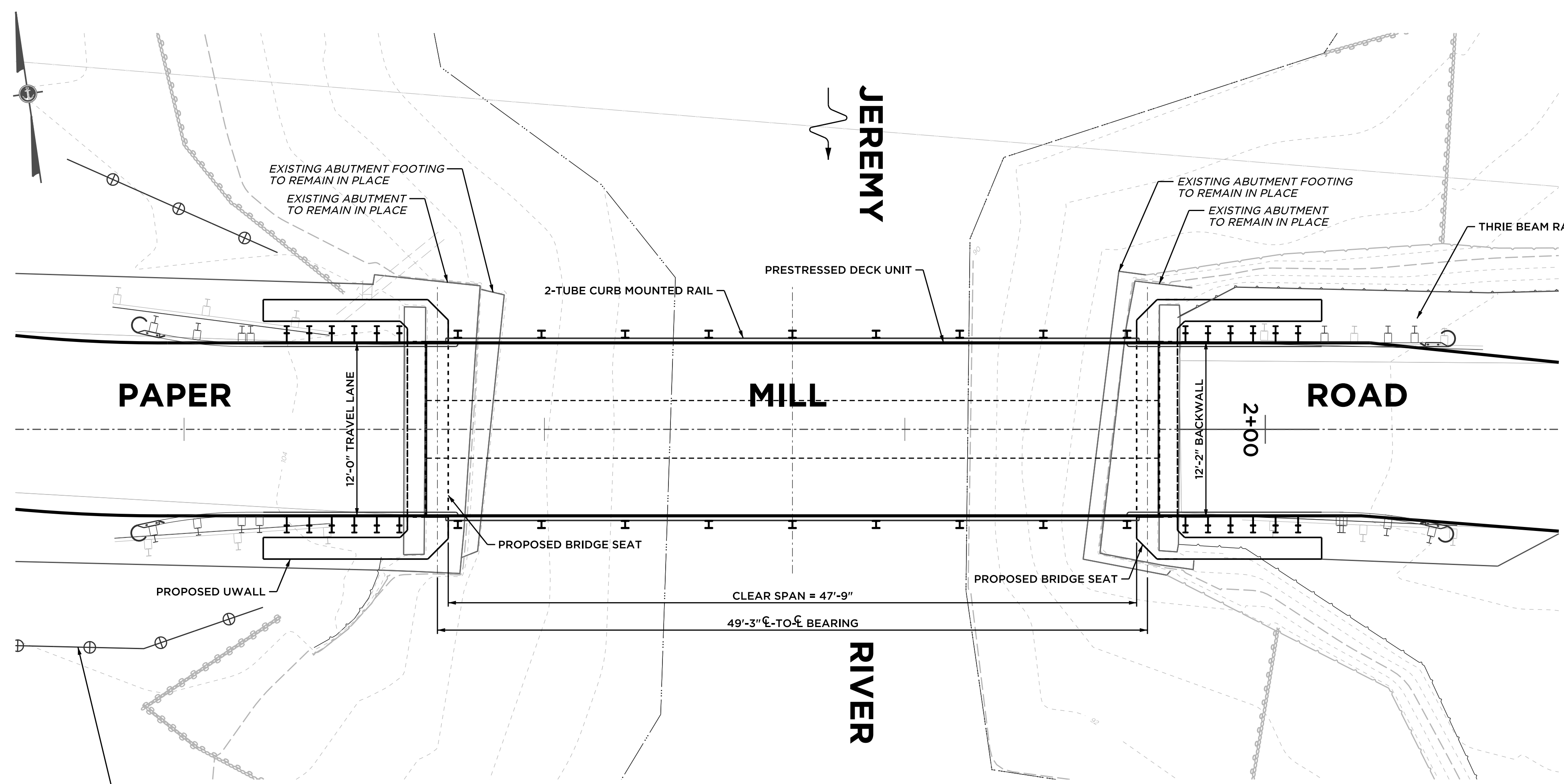
PREPARED FOR
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ROAD PLAN & PROFILE

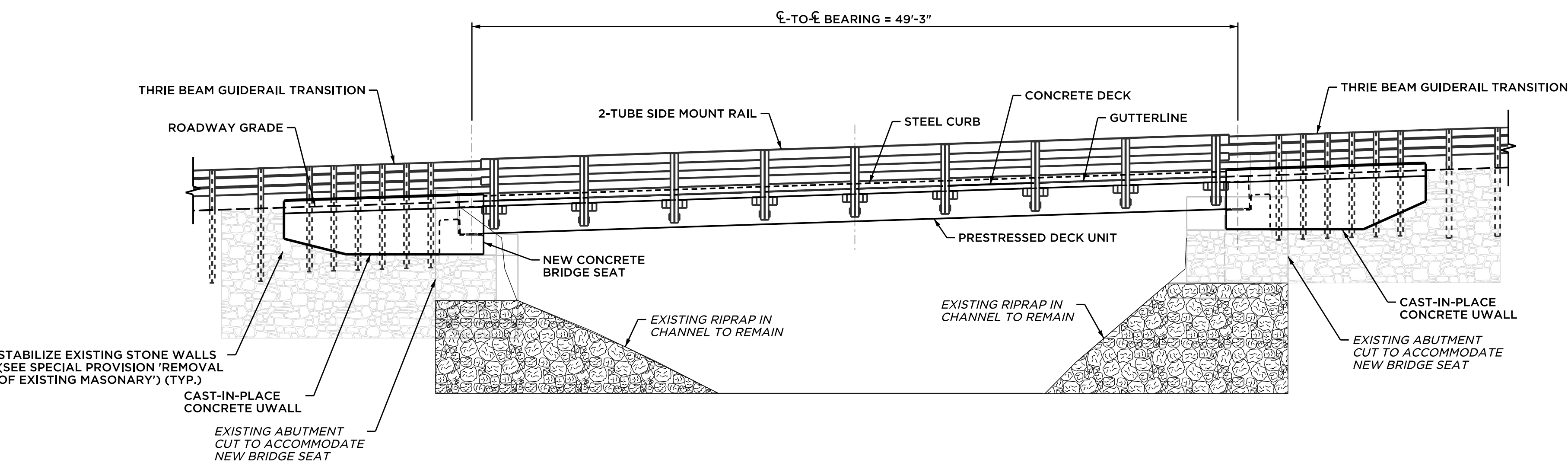
PAPER MILL ROAD COLCHESTER, CT

PROJECT	DATE	SHEET NO.	OF
084-13	06/12/19	1	9

SCALE: AS NOTED

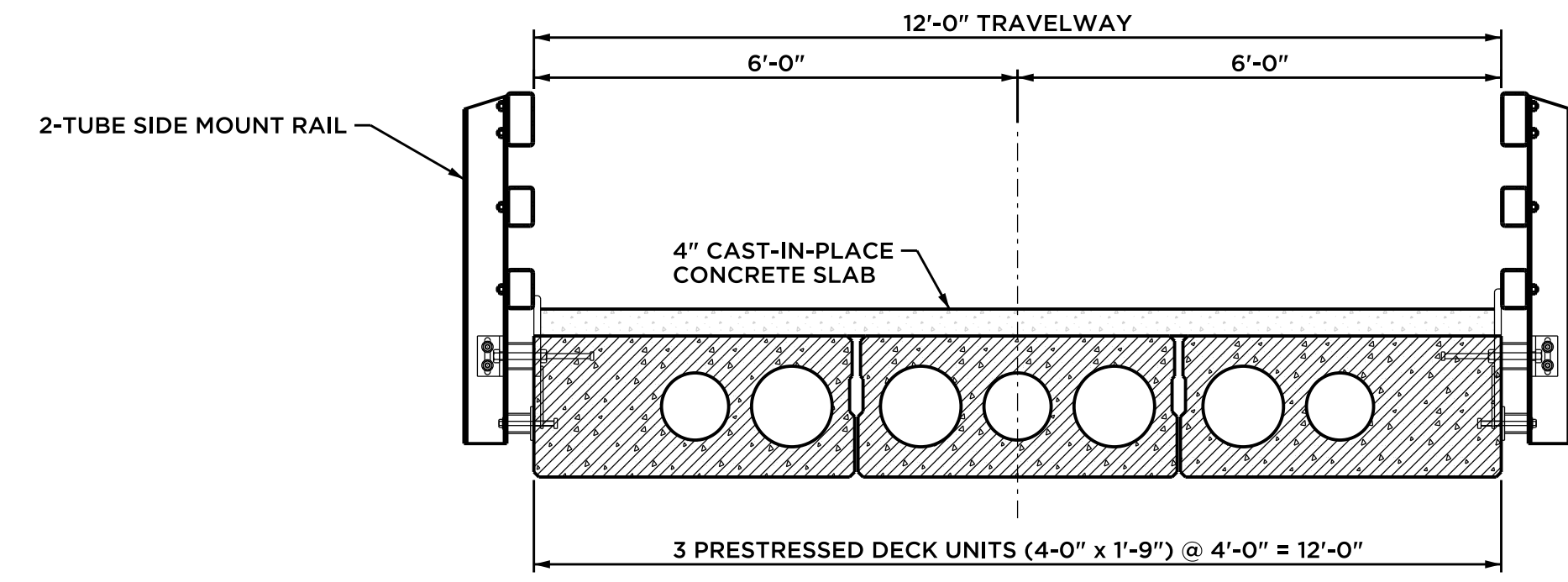


BRIDGE LAYOUT
SCALE: 3/16" = 1'-0"



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

- GENERAL NOTES**
- CONSTRUCTION SPECIFICATIONS:** CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), WITH SUPPLEMENTAL SPECIFICATIONS DATED JULY 2017 AND SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS:** AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS EIGHTH EDITION (AASHTO 2018) WITH THE INTERIM SPECIAL PROVISIONS UP TO AND INCLUDING 2019, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003).
- DESIGN STRESSES:** CLASS "A" CONCRETEBASED ON $f_c = 3340$ PSI
CLASS "F" CONCRETEBASED ON $f_c = 4462$ PSI
PRECAST CONCRETE $f_c = 6500$ PSI (MIN.)
REINFORCING BARS $f_y = 60000$ PSI
- CONCRETE STRENGTH:** THE SPECIFIED CONCRETE STRENGTH USED IN DESIGN, f_c , OF THE CONCRETE COMPONENTS IS NOTED ABOVE. THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE IN THE CONSTRUCTED COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF "SECTION 6.01 CONCRETE FOR STRUCTURES."
- LIVE LOAD:** HL-93
- FUTURE PAVING ALLOWANCE:** NONE
- CLASS "A" CONCRETE:** CLASS "A" CONCRETE SHALL BE USED FOR THE ENTIRE SUBSTRUCTURE.
- CLASS "F" CONCRETE:** CLASS "F" CONCRETE SHALL BE USED FOR DECK.
- EXPOSED EDGES:** EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1" X 1" UNLESS DIMENSIONED OTHERWISE.
- REINFORCEMENT:** ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
- CONCRETE COVER:** ALL REINFORCEMENT SHALL HAVE 2" COVER UNLESS DIMENSIONED OTHERWISE.
- JOINT SEAL:** JOINT SEAL SHALL CONFIRM TO THE CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 817 (2016), WITH SUPPLEMENTAL SPECIFICATIONS DATED JULY 2017.
- CONSTRUCTION JOINTS:** CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- EXISTING DIMENSIONS:** DIMENSIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY ARE NOT GUARANTEED. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.
- DIMENSIONS:** WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.



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

CONCRETE DISTRIBUTION

SUPERSTRUCTURE	C.Y.	5
SUBSTRUCTURE	C.Y.	10
TOTAL	C.Y.	15

DISCLAIMER

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

SHIPPING DATA

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
B1	50'-9"	1'-9"	4'-0"	44 KIPS
B2	50'-9"	1'-9"	4'-0"	38 KIPS
B3	50'-9"	1'-9"	4'-0"	44 KIPS

NOTICE TO BRIDGE INSPECTOR

THE CONNECTICUT DOT'S BRIDGE SAFETY PROCEDURES REQUIRE THIS BRIDGE TO BE INSPECTED FOR, BUT NOT LIMITED TO, ALL APPROPRIATE COMPONENTS INDICATED IN THE GOVERNING MANUALS FOR BRIDGE INSPECTION. ATTENTION MUST BE GIVEN TO INSPECTING THE FOLLOWING SPECIAL COMPONENTS AND DETAILS. (THE LISTING FOR COMPONENTS FOR SPECIFIC ATTENTION SHALL NOT BE CONSTRUED TO REDUCE THE IMPORTANCE OF INSPECTION OF ANY OTHER COMPONENT OF THE STRUCTURE). THE FREQUENCY OF INSPECTION OF THIS STRUCTURE SHALL BE IN ACCORDANCE WITH THE GOVERNING MANUALS FOR BRIDGE INSPECTION, UNLESS OTHERWISE DIRECTED BY CONNECTICUT DOT'S MANAGER OF BRIDGE SAFETY AND EVALUATION.

COMPONENT OR DETAIL	STRUCTURE SHEET REFERENCE

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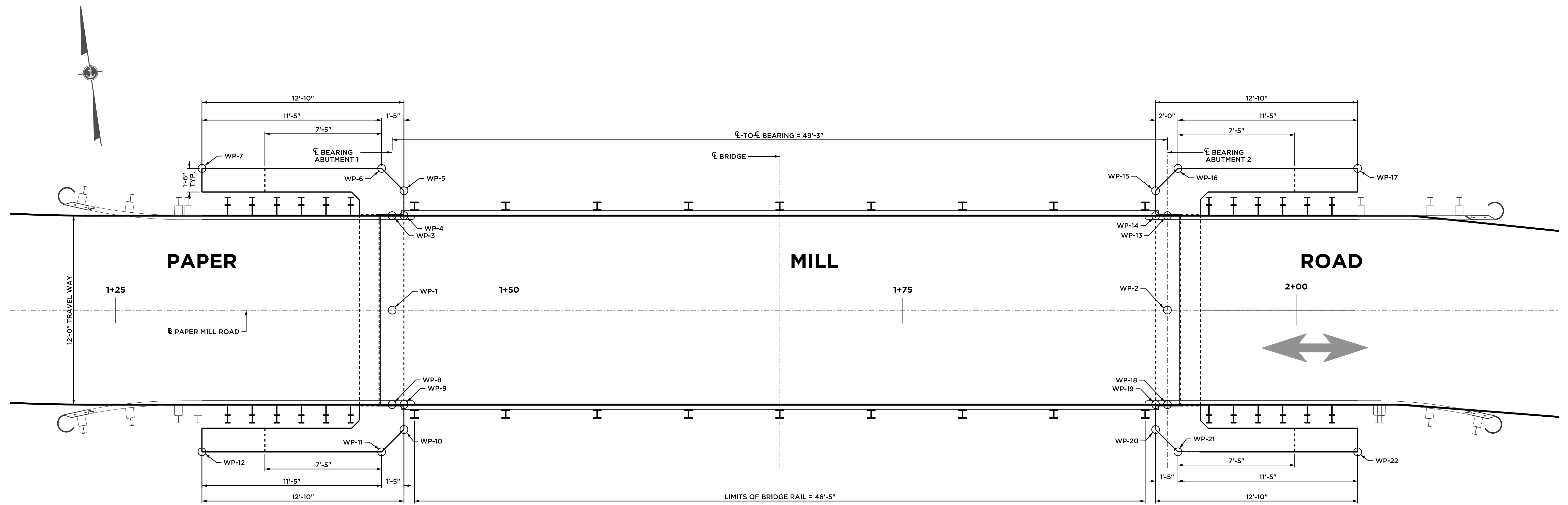
PROJ. ENGINEER KBF
PROJ. MANAGER MMZ
OFFICE REVIEW SMM

REHABILITATION OF BRIDGE NO. 05528
PREPARED FOR
TOWN OF COLCHESTER
GENERAL PLAN

PAPER MILL ROAD COLCHESTER, CT

PROJECT	DATE	SHEET NO.	OF
084-13	06/12/19	2	9

SCALE: AS NOTED



BRIDGE LAYOUT

WORKING POINTS AND COORDINATES

WP NO.	DESCRIPTION	NORTHING	EASTING	STATION	OFFSET
1	BASELINE & CENTERLINE OF BEARING ABUTMENT 1	772453.36	1095538.89	1+42.58	0.00
2	BASELINE & CENTERLINE OF BEARING ABUTMENT 2	772446.14	1095587.61	1+91.83	0.00
3	GUTTERLINE LEFT & CENTERLINE OF BEARING ABUTMENT 1	772459.30	1095539.77	1+42.58	6.00
4	FRONT OF ABUTMENT 1 & GUTTERLINE LEFT	772459.19	1095540.51	1+43.33	6.00
5	FRONT FACE CORNER OF ABUTMENT 1 @ WINGWALL 1A	772460.75	1095540.75	1+43.33	7.58
6	CORNER OF WINGWALL 1A @ ABUTMENT 1	772462.36	1095539.55	1+41.91	9.00
7	CORNER OF WINGWALL 1A @ END OF WALL	772464.01	1095528.26	1+30.49	9.00
8	GUTTERLINE RIGHT & CENTERLINE OF BEARING ABUTMENT 1	772447.43	1095538.01	1+42.58	6.00
9	FRONT OF ABUTMENT 1 & GUTTERLINE RIGHT	772447.32	1095538.75	1+43.33	6.00
10	FRONT FACE CORNER OF ABUTMENT 1 @ WINGWALL 1B	772445.75	1095538.52	1+43.33	7.58
11	CORNER OF WINGWALL 1B @ ABUTMENT 1	772444.56	1095536.91	1+41.91	9.00
12	CORNER OF WINGWALL 1B @ END OF WALL	772446.23	1095525.62	1+30.49	9.00
13	GUTTERLINE LEFT & CENTERLINE OF BEARING ABUTMENT 2	772452.08	1095588.49	1+91.83	6.00
14	FRONT OF ABUTMENT 2 & GUTTERLINE LEFT	772452.19	1095587.75	1+91.08	6.00
15	FRONT FACE CORNER OF ABUTMENT 2 @ WINGWALL 2A	772453.76	1095587.98	1+91.08	7.58
16	CORNER OF WINGWALL 2A @ ABUTMENT 2	772454.95	1095589.59	1+92.49	9.00
17	CORNER OF WINGWALL 2A @ END OF WALL	772453.28	1095600.88	2+03.91	9.00
18	GUTTERLINE RIGHT & CENTERLINE OF BEARING ABUTMENT 2	772440.21	1095586.73	1+91.83	6.00
19	FRONT OF ABUTMENT 2 & GUTTERLINE RIGHT	772440.32	1095585.99	1+91.08	6.00
20	FRONT FACE CORNER OF ABUTMENT 2 @ WINGWALL 2B	772438.75	1095585.76	1+91.08	7.58
21	CORNER OF WINGWALL 2B @ ABUTMENT 2	772437.14	1095586.95	1+92.49	9.00
22	CORNER OF WINGWALL 2B @ END OF WALL	772435.47	1095598.24	2+03.91	9.00

FINISHED ELEVATIONS (AT TOP OF WEARING SURFACE)

STATION	DESCRIPTION	LEFT GUTTER LINE		℄	RIGHT GUTTER LINE	
		ELEVATION	OFFSET	ELEVATION	ELEVATION	OFFSET
1+42.58	CENTERLINE ABUTMENT 1	103.84	6.00	103.84	103.84	6.00
1+67.20	CENTERLINE BRIDGE	104.65	6.00	104.65	104.65	6.00
1+91.83	CENTERLINE ABUTMENT 2	105.45	6.00	105.45	105.45	6.00

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PROJ. MANAGER MMZ
OFFICE REVIEW KBF

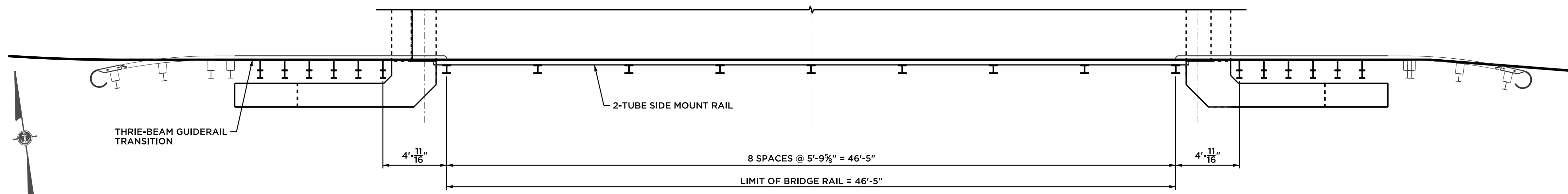
REVISIONS

PREPARED FOR
TOWN OF COLCHESTER
LAYOUT PLAN

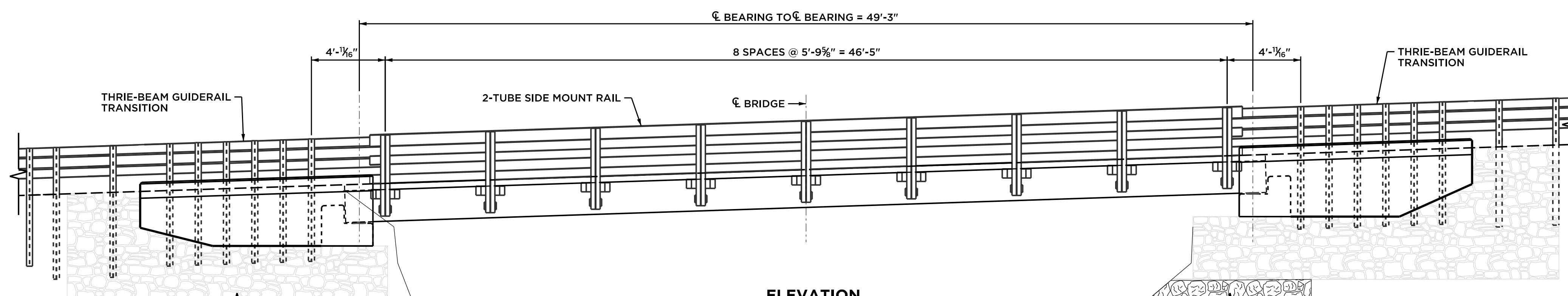
PAPER MILL ROAD COLCHESTER, CT

PROJECT DATE SHEET NO. 3 OF 9
084-13 06/12/19

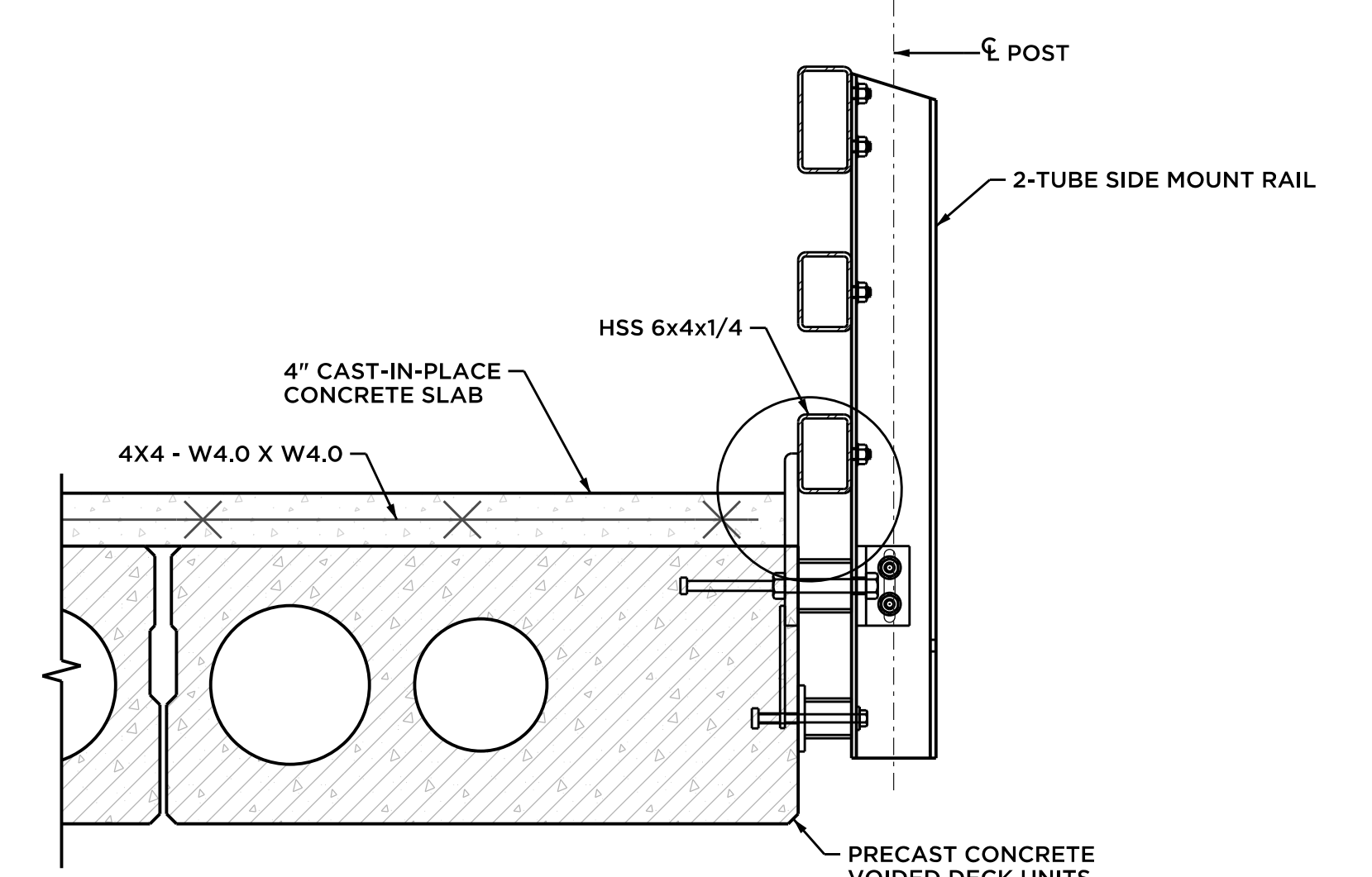
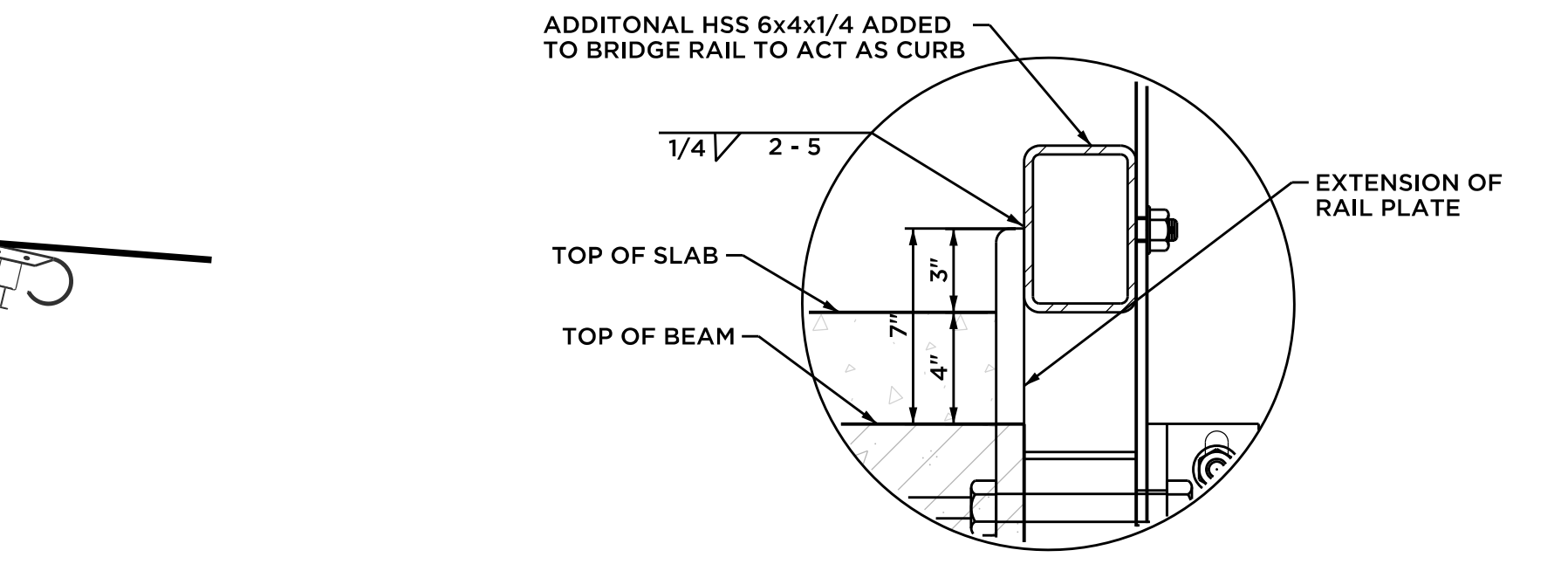
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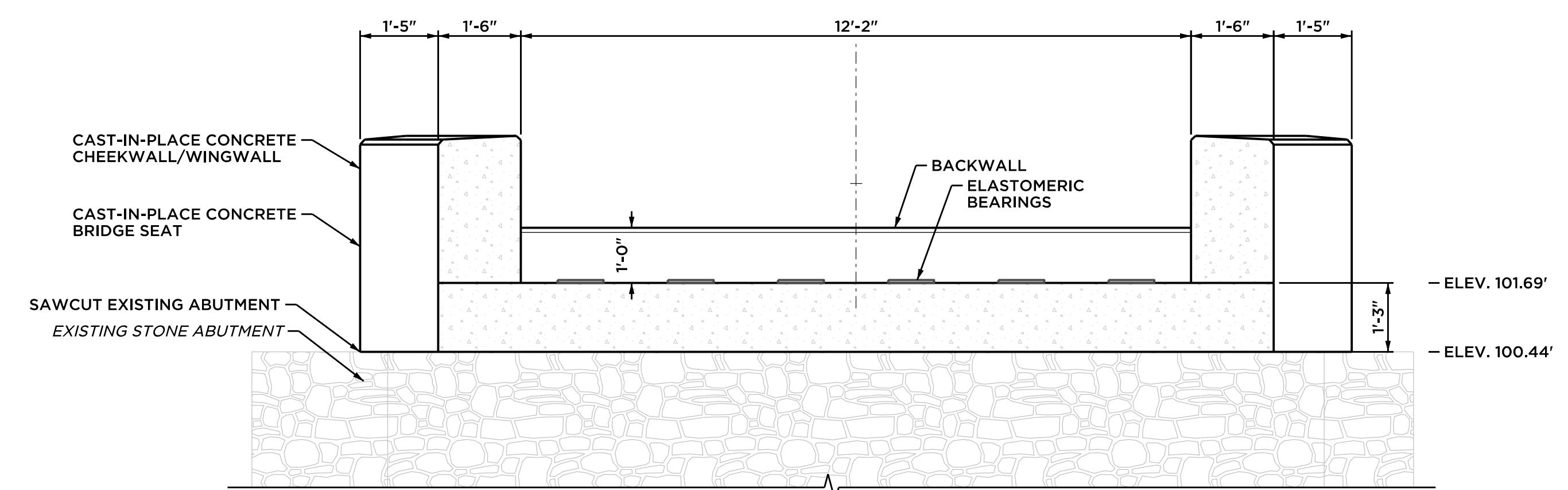
PLAN



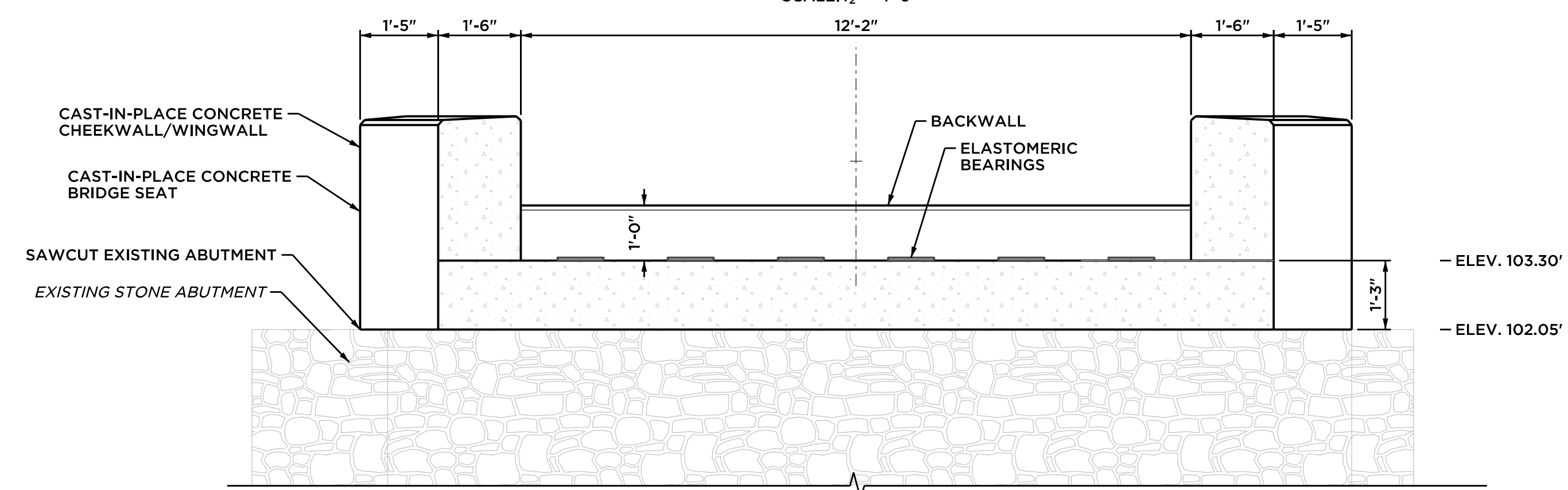
**ELEVATION
BRIDGE RAIL DETAIL**
SCALE: 1/4" = 1'-0"



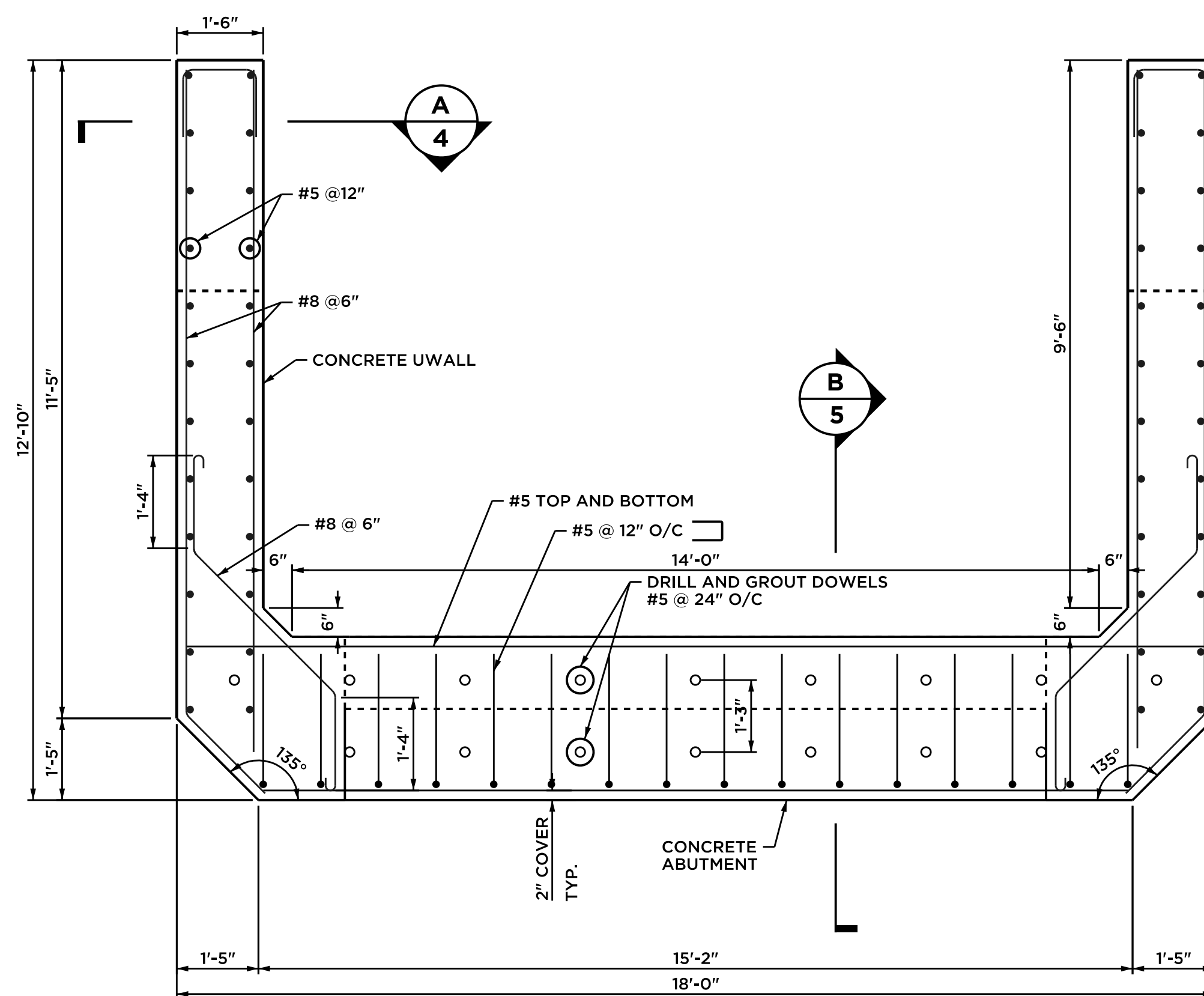
**2-TUBE SIDE MOUNTED RAIL DETAIL
& DECK REINFORCEMENT DETAIL**
NOT TO SCALE



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

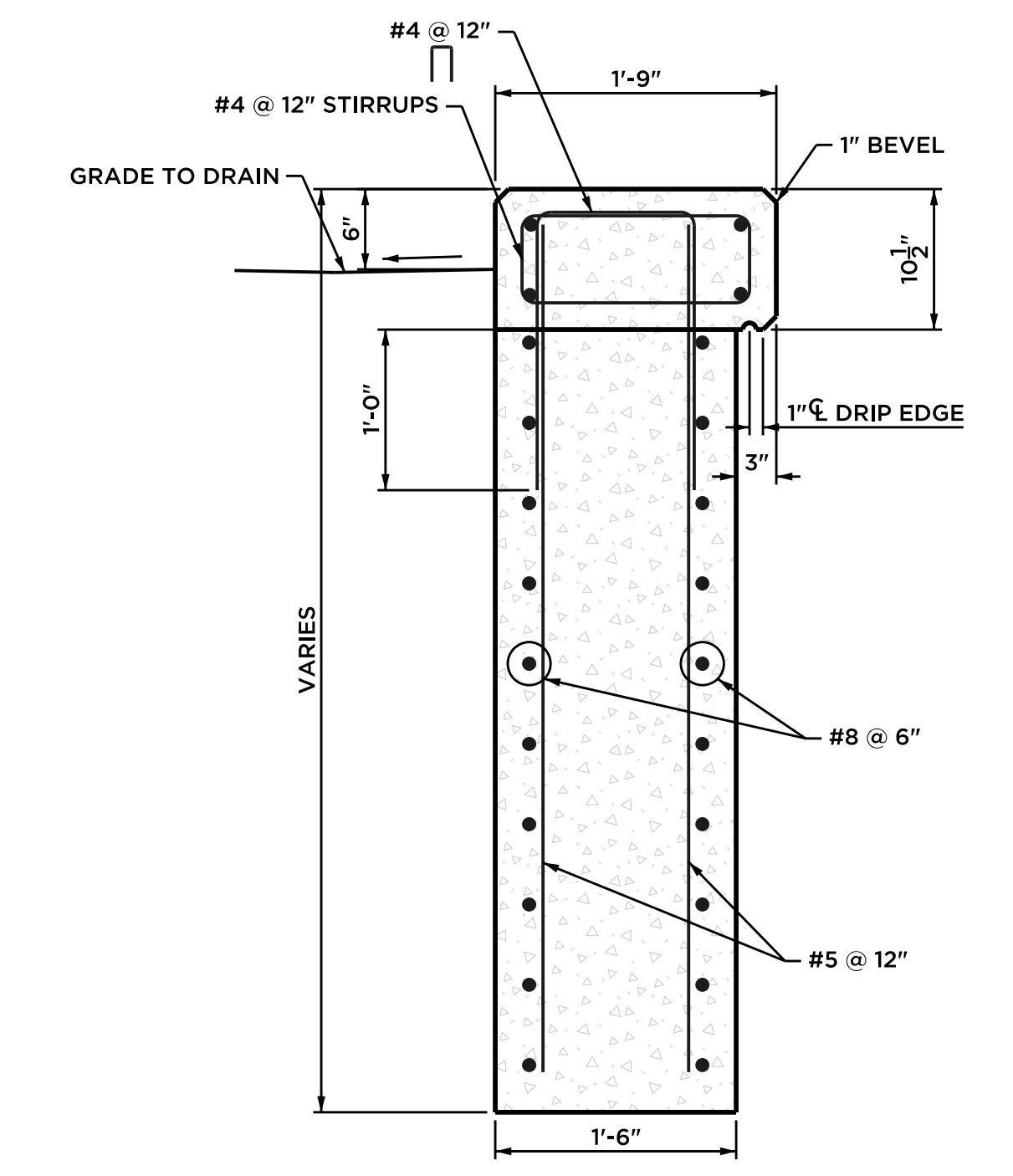


ABUTMENT 2 ELEVATION
SCALE: 1/2" = 1'-0"



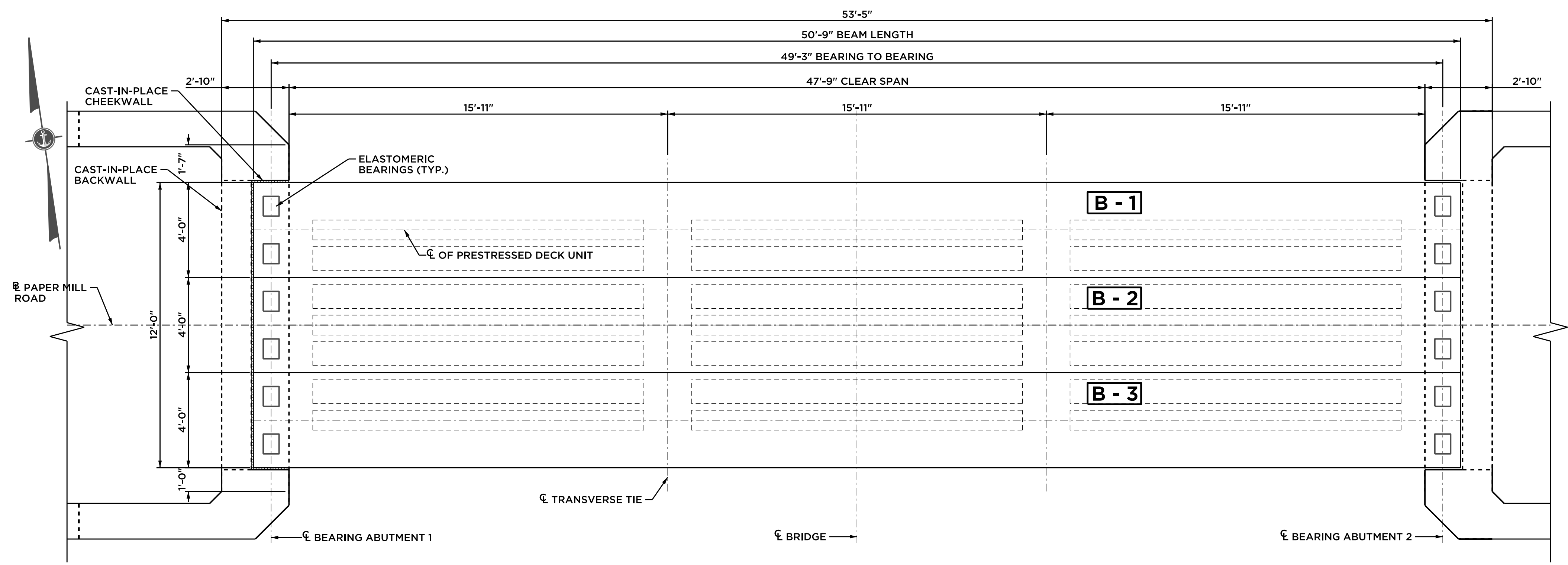
ABUTMENT PLAN
SCALE: 1/2" = 1'-0"

NOTE:
SOME LONGITUDINAL REINFORCEMENT OMITTED FOR CLARITY.
SEE DETAIL ON SHEET 05 FOR MORE INFORMATION.

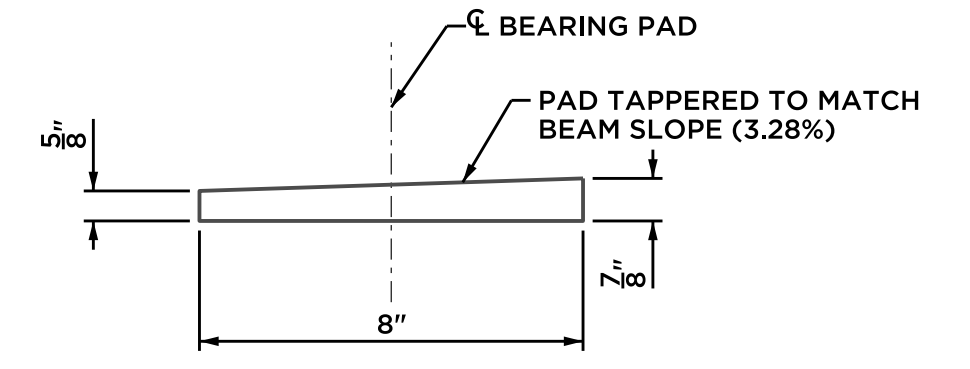


SECTION A-A
SCALE: 1" = 1'-0"

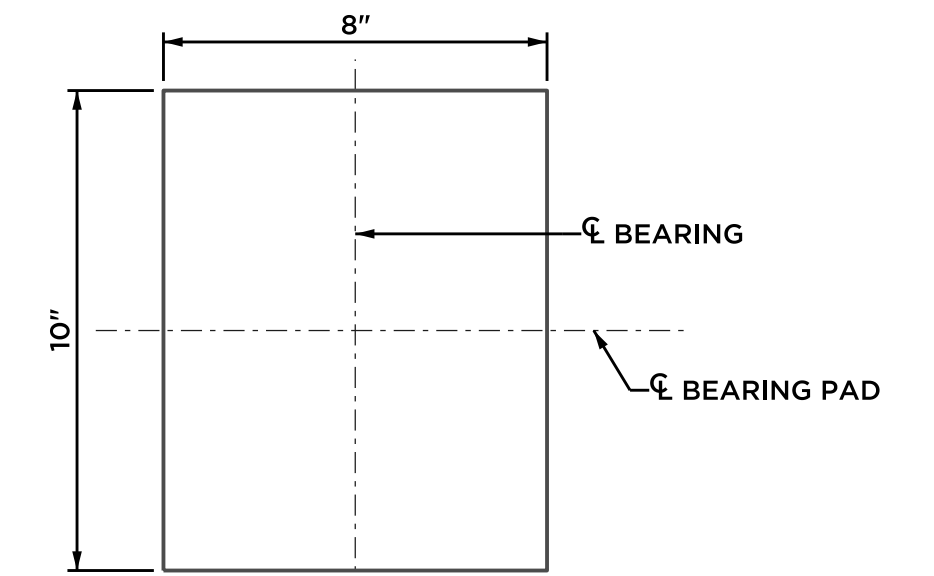
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PROJ. ENGINEER	SMM	REHABILITATION OF BRIDGE NO. 05528 PREPARED FOR TOWN OF COLCHESTER ABUTMENT ELEV. & RAIL DETAILS PAPER MILL ROAD COLCHESTER, CT	
PROJ. MANAGER	MNB		
OFFICE REVIEW	KBF	PROJECT	DATE
REVISIONS		084-13	06/12/19
SCALE: AS NOTED		SHEET NO.	4 OF 9



FRAMING PLAN
SCALE: 1" = 3'-0"



ELEVATION VIEW



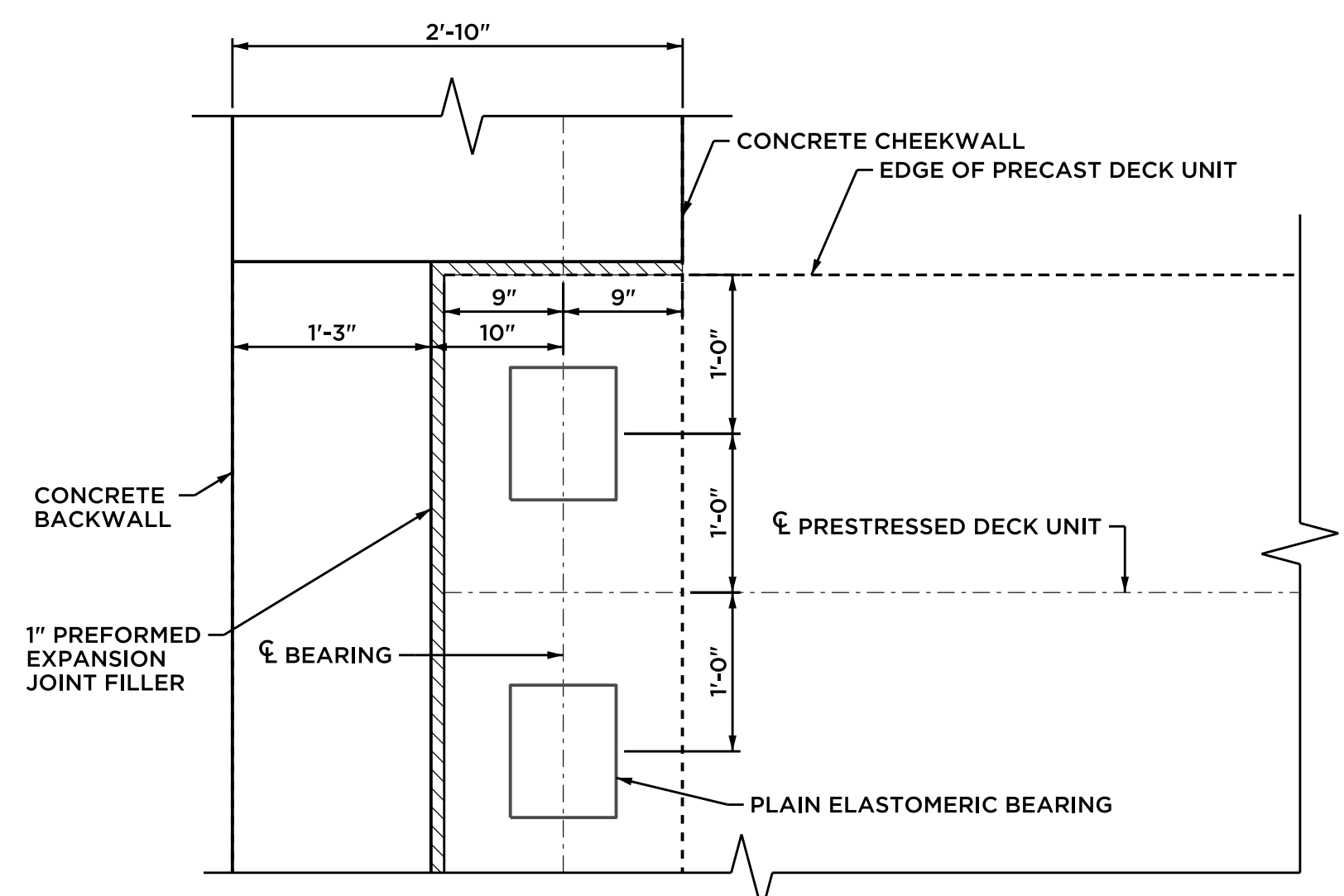
PLAN VIEW

ELASTOMERIC BEARINGS DETAIL

SCALE: 3" = 1'-0"

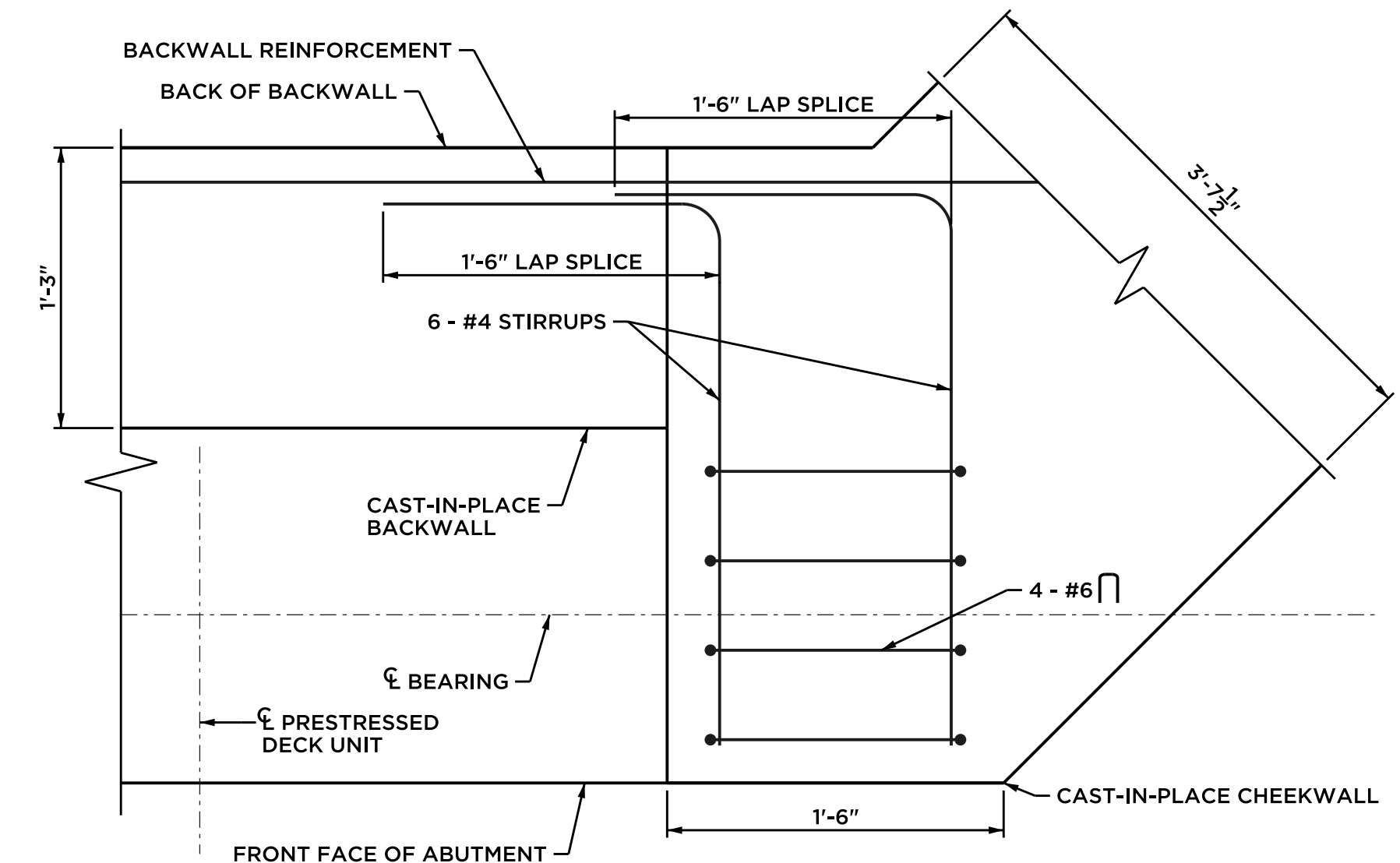
BEARING ASSEMBLY NOTES:

1. THE ELASTOMER SHALL BE TYPE CR, GRADE 3 AS DEFINED BY ASTM D4014 AND SHALL HAVE A SHORE A DUROMETER HARDNESS OF 60+/-5 POINTS AND A SHEAR MODULUS WITHIN THE LIMITS OF 130 TO 175 PSI.
2. THE MAXIMUM DESIGN LOAD (DL+LL W/O IMPACT) FOR ELASTOMERIC BEARING IS 26.31 KIPS. THIS INFORMATION IS PROVIDED FOR THE PROOF LOAD TEST DESCRIBED IN THE SPECIAL PROVISION.
3. THE ELASTOMERIC BEARINGS SHALL BE INSTALLED WHEN THE AMBIENT AIR TEMPERATURE IS BETWEEN 41°F AND 77°F HAS BEEN WITHIN THIS RANGE FOR MORE THAN TWO HOURS.
4. THE CONCRETE ABUTMENT SEAT SHALL BE CAREFULLY FINISHED SMOOTH TO AN EVEN, LEVEL SURFACE AND SHALL SHOW NO VARIATIONS FROM A TRUE PLANE GREATER THAN 1/16".

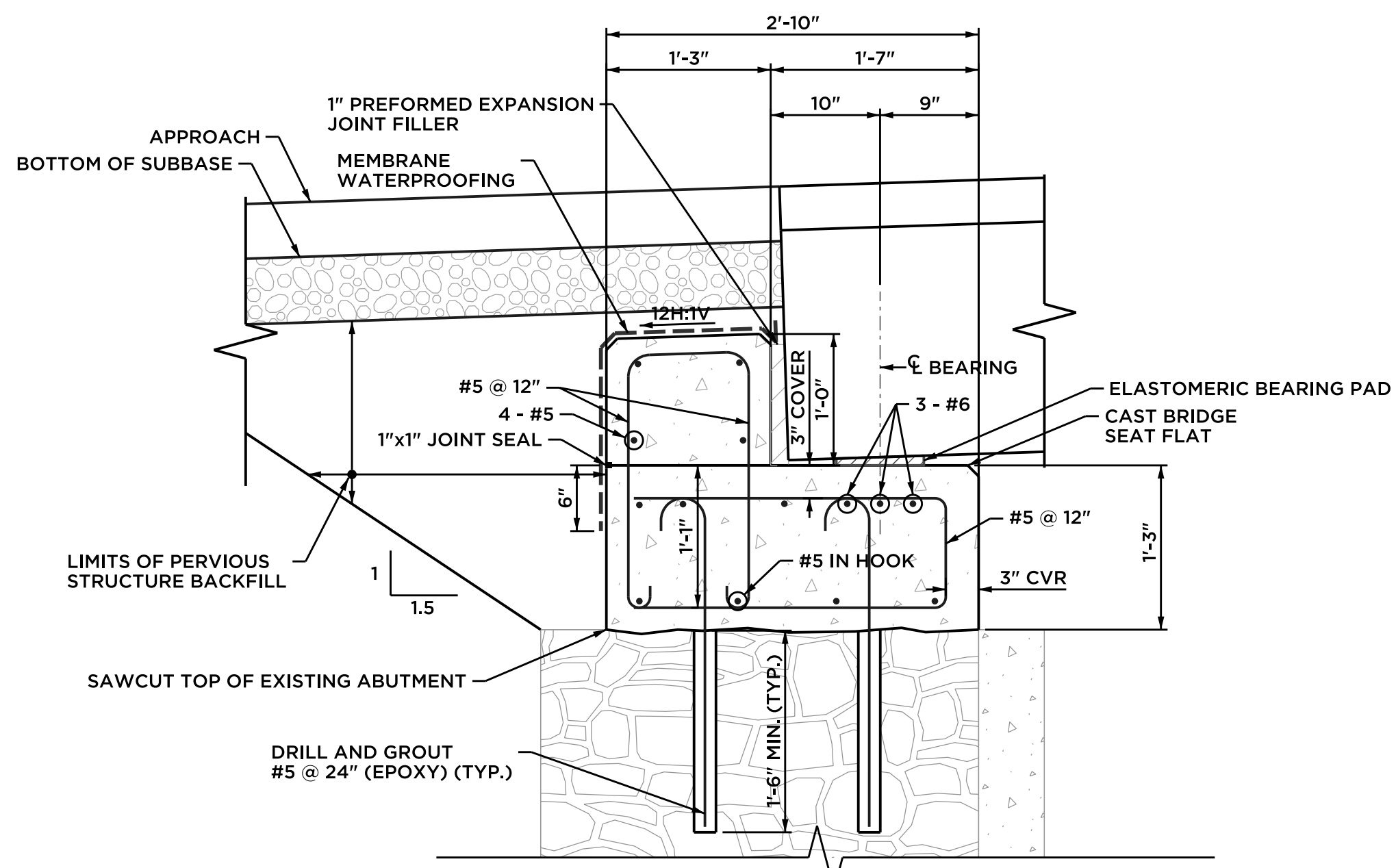


ELASTOMERIC BEARING LAYOUT

SCALE: 1" = 1'-0"

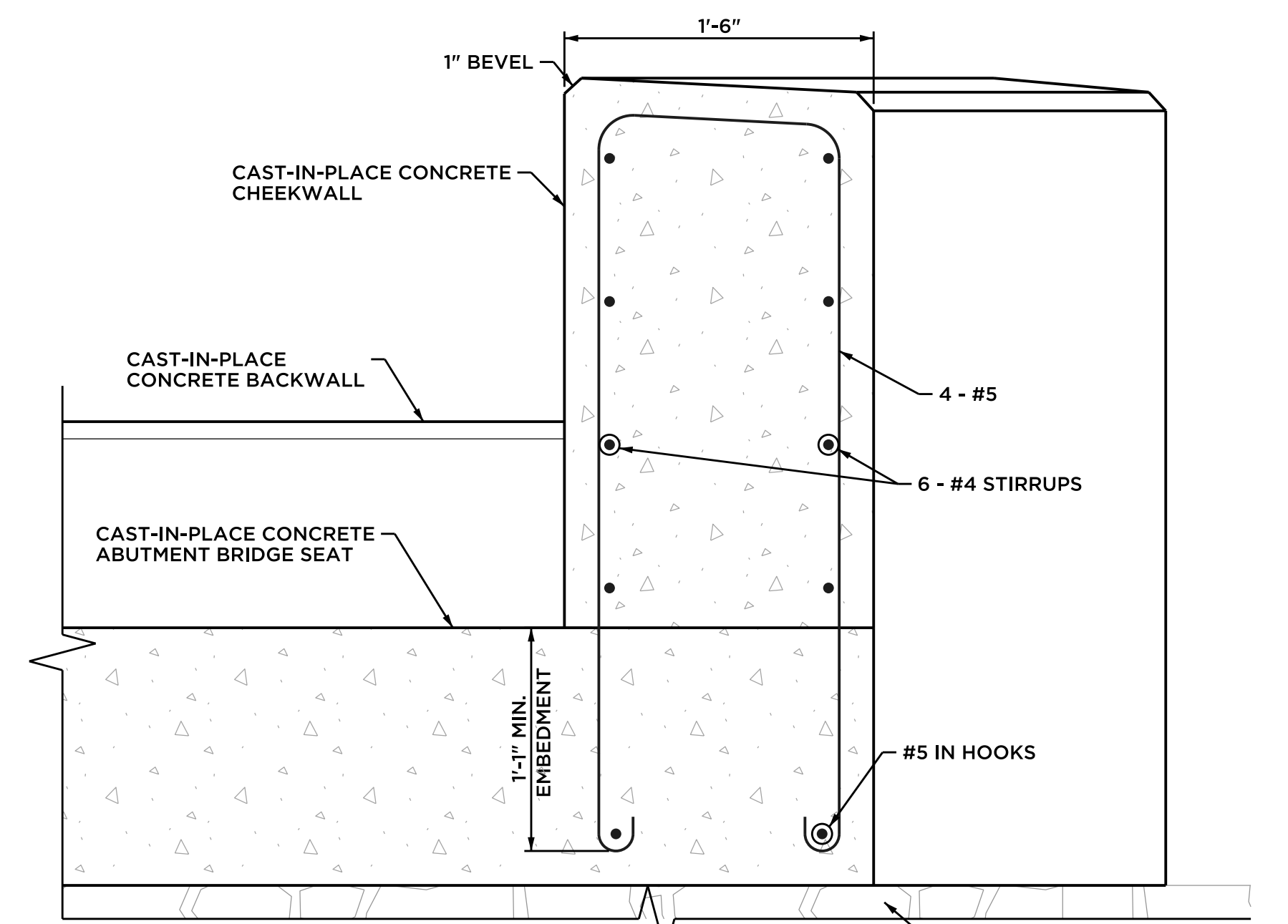


PLAN



CONCRETE BRIDGE SEAT SECTION B-B

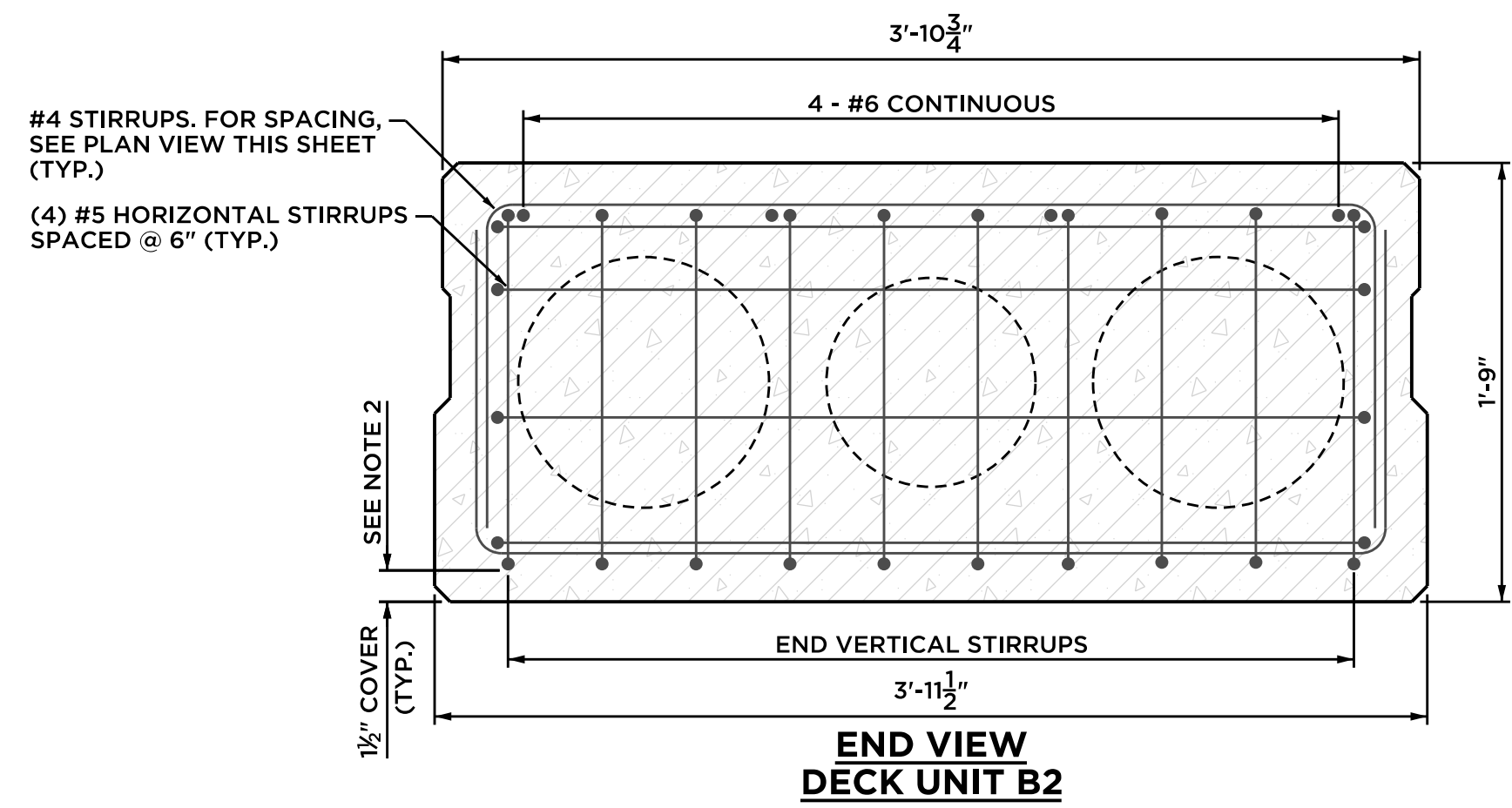
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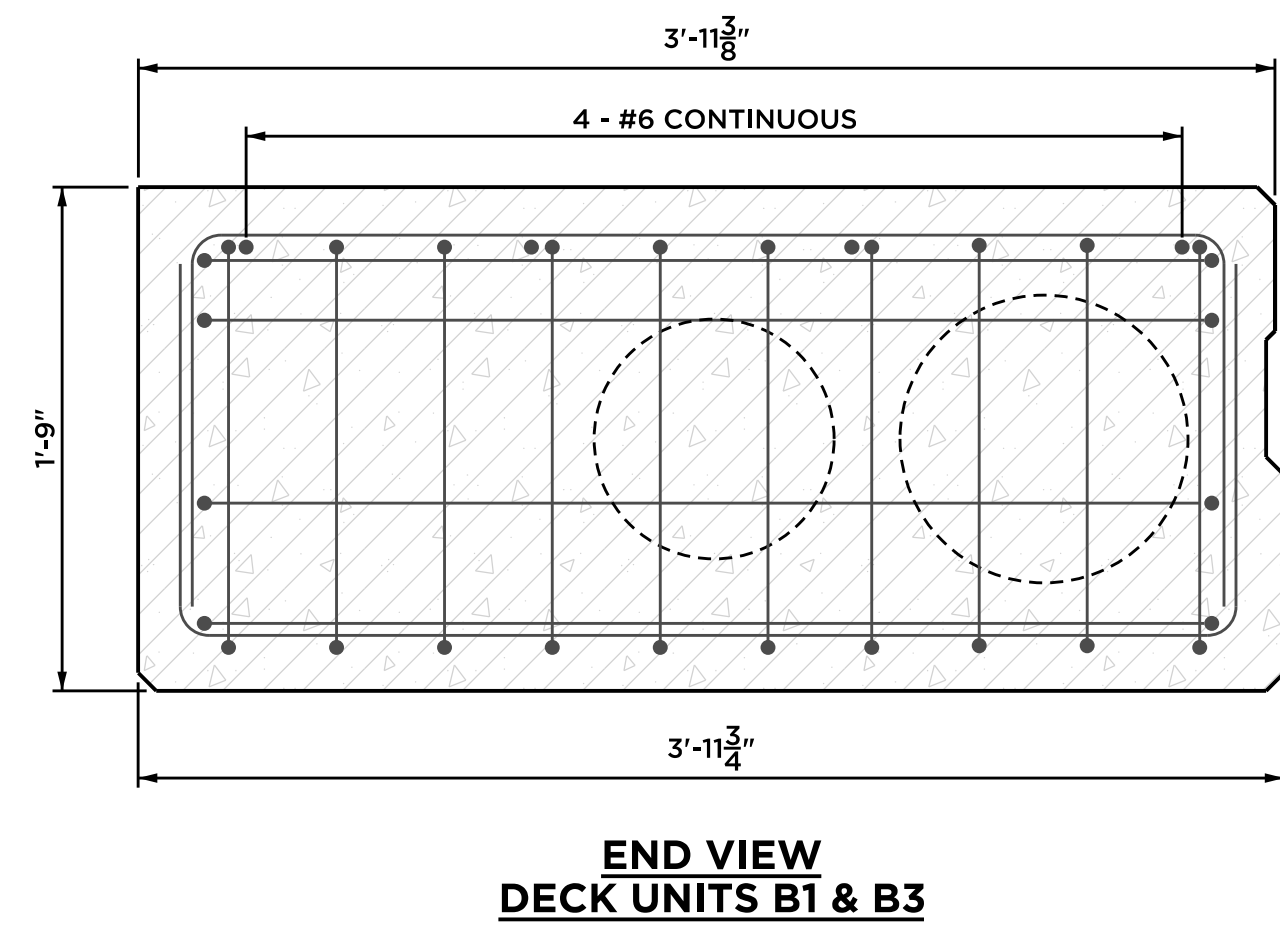
ELEVATION CHEEKWALL DETAIL

SCALE: 1" = 1'-0"

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PROJ. ENGINEER SMM PROJ. MANAGER MMZ OFFICE REVIEW KBF	REHABILITATION OF BRIDGE NO. 05528 PREPARED FOR TOWN OF COLCHESTER FRAMING PLAN		
REVISIONS	PROJECT 084-13 DATE 06/12/19	SHEET NO. 5 OF 9	SCALE: AS NOTED



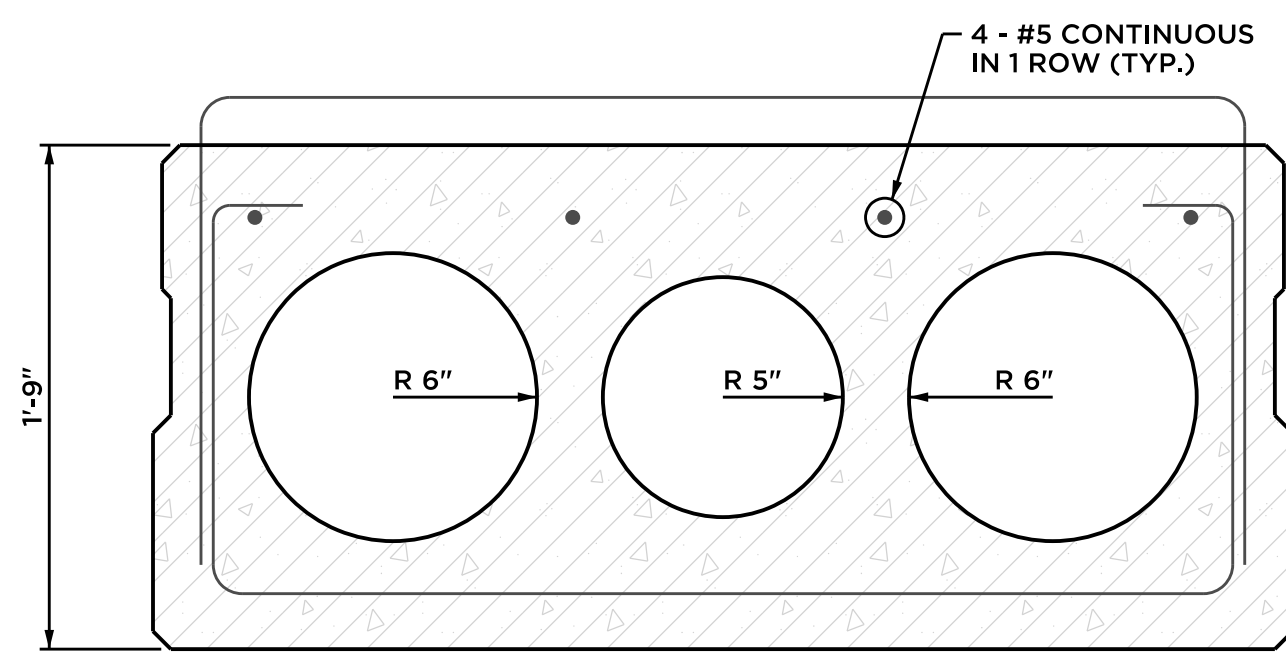
END VIEW DECK UNIT B2



END VIEW DECK UNITS B1 & B3

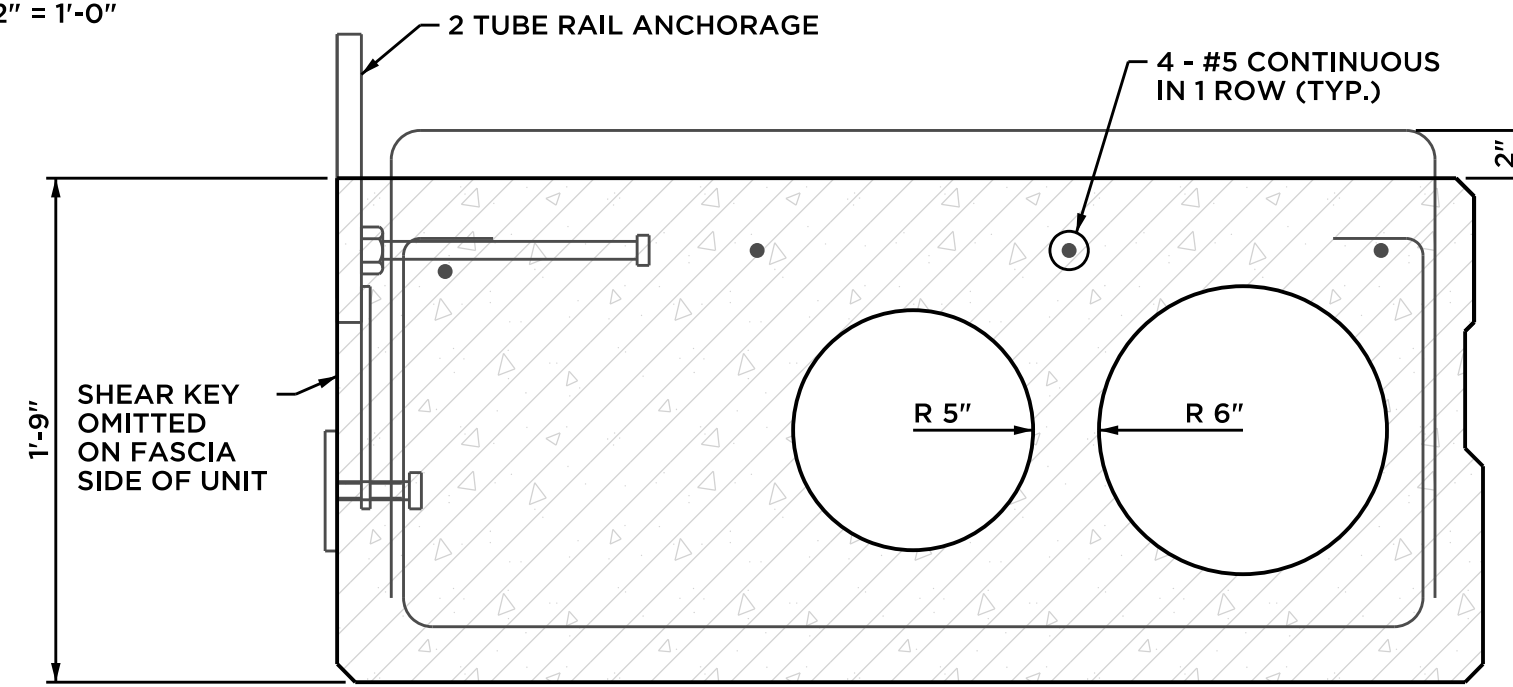
END REINFORCING

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



SECTION @ MIDSPAN DECK UNIT B2

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



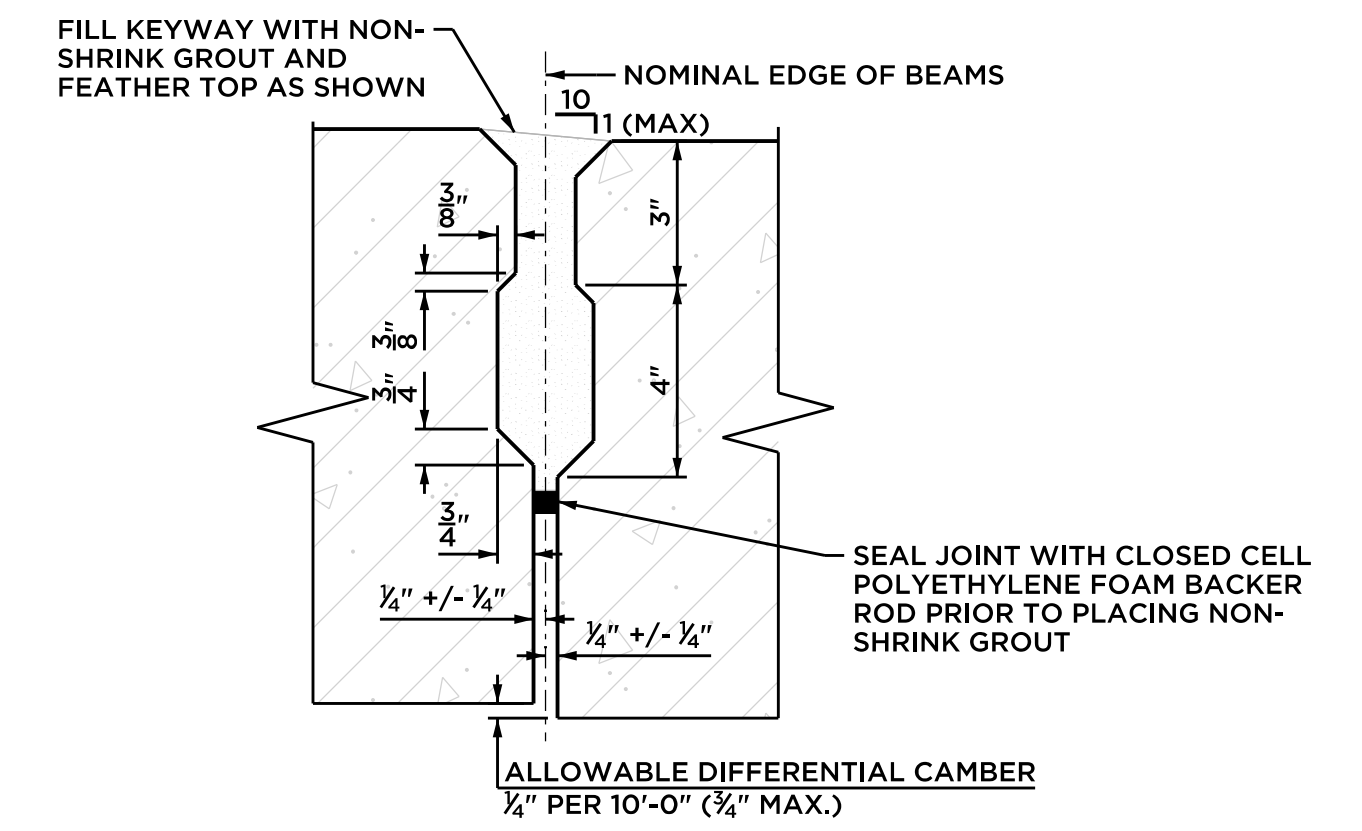
SECTION @ MIDSPAN DECK UNITS B1 & B3

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

STRAND DATA			
MEMBER NUMBER	NUMBER OF STRANS	C.G. OF STRANDS	
		END (A)	MIDSPAN (A)
B1	20	5.200"	5.200"
B2	20	5.200"	5.200"
B3	20	5.200"	5.200"

REINFORCEMENT NOTES:

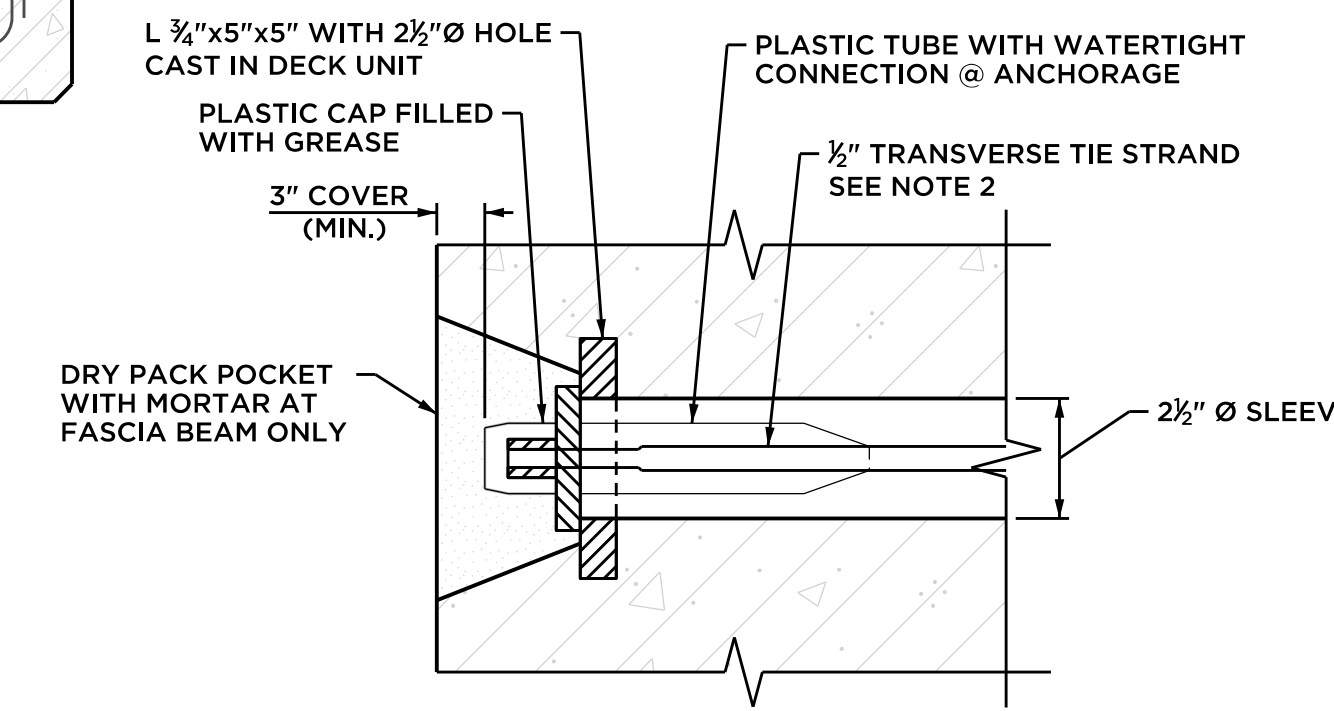
- SPLAY STIRRUPS TO AVOID CONFLICTS WITH TRANSVERSE TIE STRAND HOLES.
- THIS COVER IS REQUIRED TO FACILITATE THE PLACEMENT OF THE BOTTOM PRESTRESSING STRANDS. THE FABRICATOR MAY MODIFY COVER (1/2" MIN.) IF NO CONFLICTS EXIST WITH THE PRESTRESSING STRANDS.



TYPICAL LONGITUDINAL JOINT
NOT TO SCALE

NOTES:

- THE DECK UNITS SHALL BE PLACED AT THE NOMINAL SPACING SHOWN ON THE PLAN WITH A GAP BETWEEN THE UNITS. THE WIDTH OF THE GAPS WILL VARY DUE TO THE SWEEP OF THE UNITS.
- GROUT FOR SHEAR KEYS SHALL BE RODDED OR VIBRATED TO ENSURE THAT ALL VOIDS IN THE SHEAR KEY ARE FILLED.



TRANSVERSE TIE ANCHORAGE DETAIL
NOT TO SCALE

NOTES:

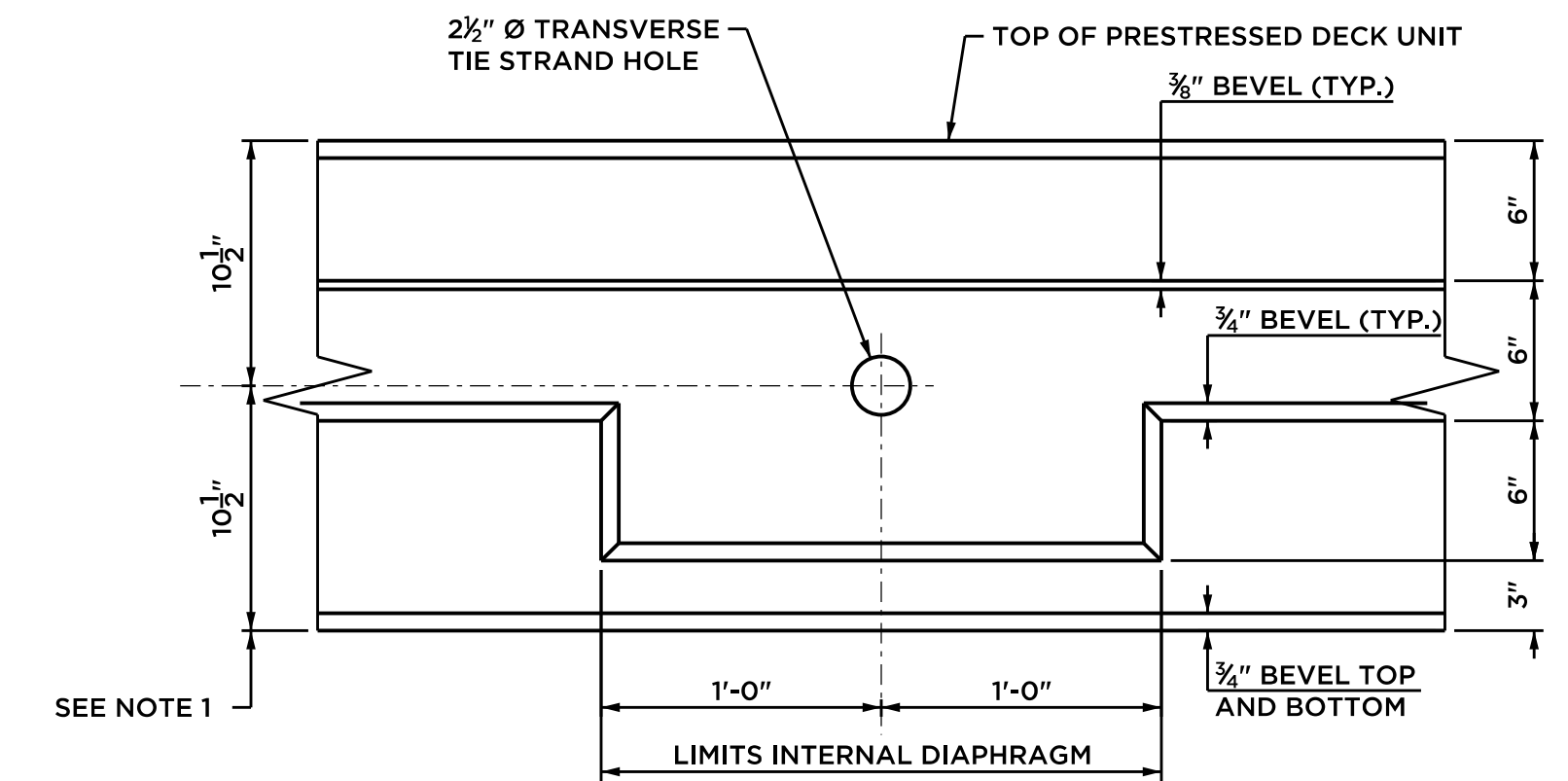
- OTHER ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
- TRANSVERSE TIES SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH WITH CORROSION INHIBITING GREASE BETWEEN THE STRAND AND SHEATH, FOR THE FULL LENGTH OF THE STRAND EXCEPT AT THE ANCHORAGE LOCATION.

TRANSVERSE TIE TENSIONING NOTES:

- AFTER ALL BEAMS IN THE STAGE HAVE BEEN ERECTED, TENSION EACH TRANSVERSE TIE TO 5 KIPS.
- FILL ALL KEYWAYS WITH NON-SHRINK GROUT. THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM THE WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
- AFTER THE GROUT HAS ATTAINED A STRENGTH OF 1500 PSI (BASED ON THE MANUFACTURER'S DIRECTIONS) TENSION EACH TRANSVERSE TIE TO 30 KIPS. NO TRAFFIC OR HEAVY EQUIPMENT WILL BE PERMITTED ON THE BEAMS UNTIL ALL TIES HAVE BEEN FULLY TENSIONED.
- CONCRETE FOR DECK, SIDEWALKS, CURB AND/OR BARRIER SECTIONS SHALL NOT BE PLACED UNTIL THE TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.

PRESTRESSED DECK UNITS NOTES

- CONCRETE DESIGN STRENGTH FOR PRECAST DECK UNITS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
FINAL COMPRESSIVE STRENGTH $f_c = 6,500$ PSI
INITIAL COMPRESSIVE STRENGTH $f_{ci} = 5,500$ PSI
- PRESTRESSING STRANDS SHALL BE 0.6" DIAMETER UNCOATED LOW RELAXATION STRANDS, AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
ULTIMATE TENSILE STRENGTH $F_s = 270,000$ PSI
JACKING FORCE PER STRAND (fp) = 30,980 LB
- PRESTRESSING STRANDS SHALL BE PLACED 2 INCHES (MINIMUM) ON CENTER AND SHALL HAVE A MINIMUM COVER OF 1 1/2".
- ENDS OF PRESTRESSED DECK UNITS SHALL BE VERTICAL AFTER APPLICATION OF FULL DEAD LOADS.
- DRILLING OF HOLES OR USE OF POWER ACTUATED TOOLS ON PRESTRESSED DECK UNITS WILL NOT BE PERMITTED.
- NO SUPERIMPOSED DEAD OR LIVE LOADS SHALL BE APPLIED TO THE BUTTED DECK UNITS UNTIL THE TRANSVERSE TIES HAVE BEEN FULLY TENSIONED AND THE GROUT IN THE LONGITUDINAL SHEAR KEYS HAS REACHED A SEVEN-DAY COMPRESSIVE STRENGTH OF 4,500 PSI.
- ALL REINFORCEMENT IN THE DECK UNITS SHALL BE EPOXY COATED.



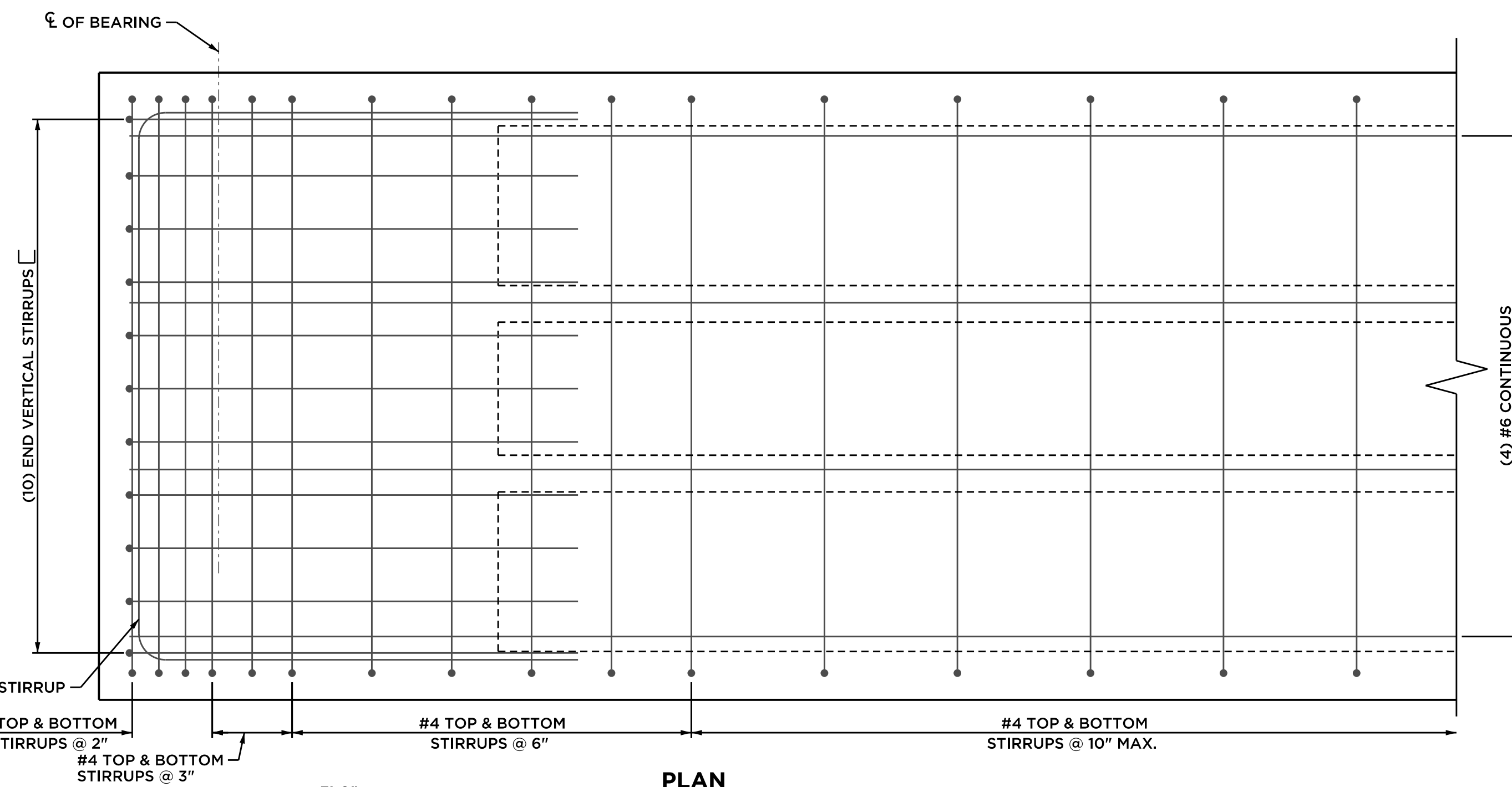
BEAM ELEVATION @ INTERNAL DIAPHRAGM
NOT TO SCALE

NOTES:

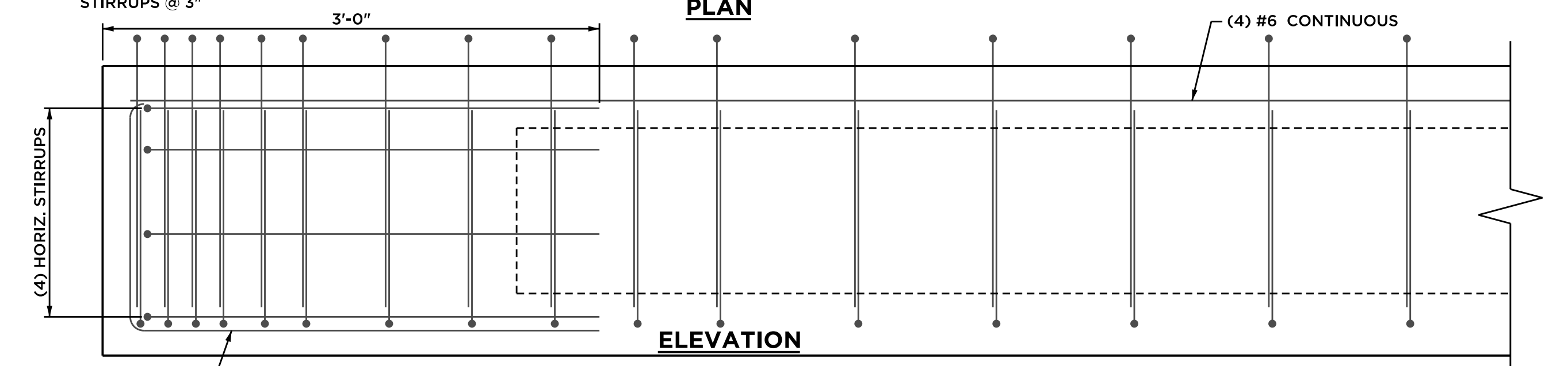
- THE VERTICAL LOCATION OF THE TRANSVERSE TIE STRANDS MUST BE COORDINATED WITH THE LOCATION OF THE PRESTRESSED STRANDS AND ADJUSTED AS NECESSARY BY THE FABRICATOR.

NOTES:

- BEAMS TO BE FURNISHED AND DELIVERED TO SITE BY OTHERS.
- CONTRACTOR RESPONSIBLE FOR INSTALLATION AND FINISHING OF BEAMS.



PLAN



END BLOCK REINFORCING

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

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Glastonbury, CT 06033
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ANCHOR
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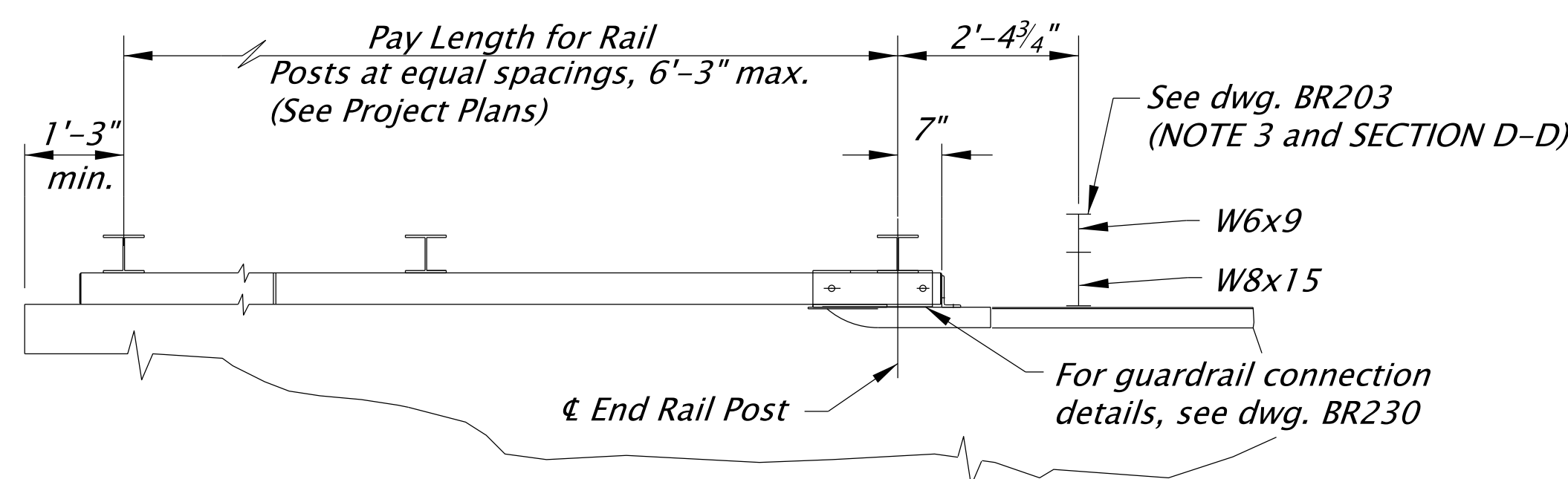
PROJ. ENGINEER SMM
PROJ. MANAGER MMZ
OFFICE REVIEW KBF

REVISIONS

REPLACEMENT OF BRIDGE NO. 0528
PREPARED FOR
TOWN OF COLCHESTER
PRESTRESSED DECK UNIT DETAILS
PAPER MILL ROAD COLCHESTER, CT

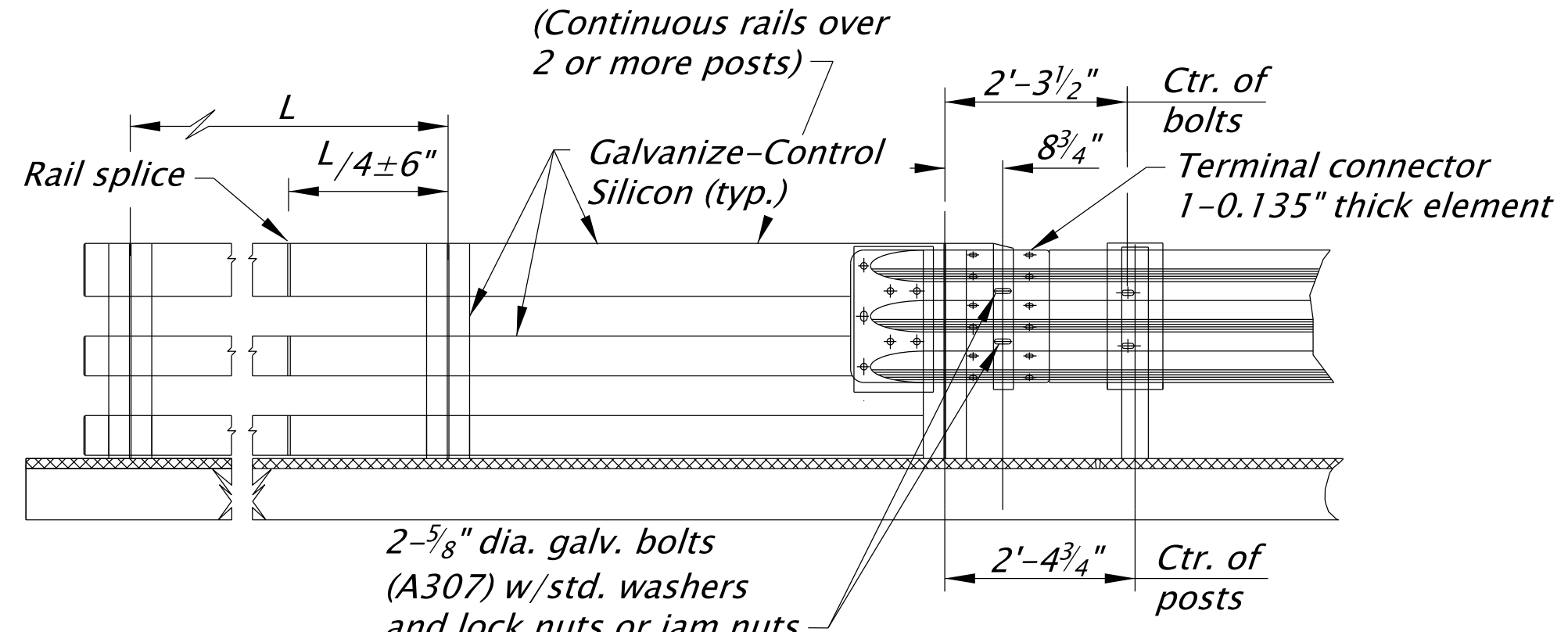
PROJECT 084-13 DATE 06/12/19 SHEET NO. 6 OF 9

SCALE: 1" = 1'-0"

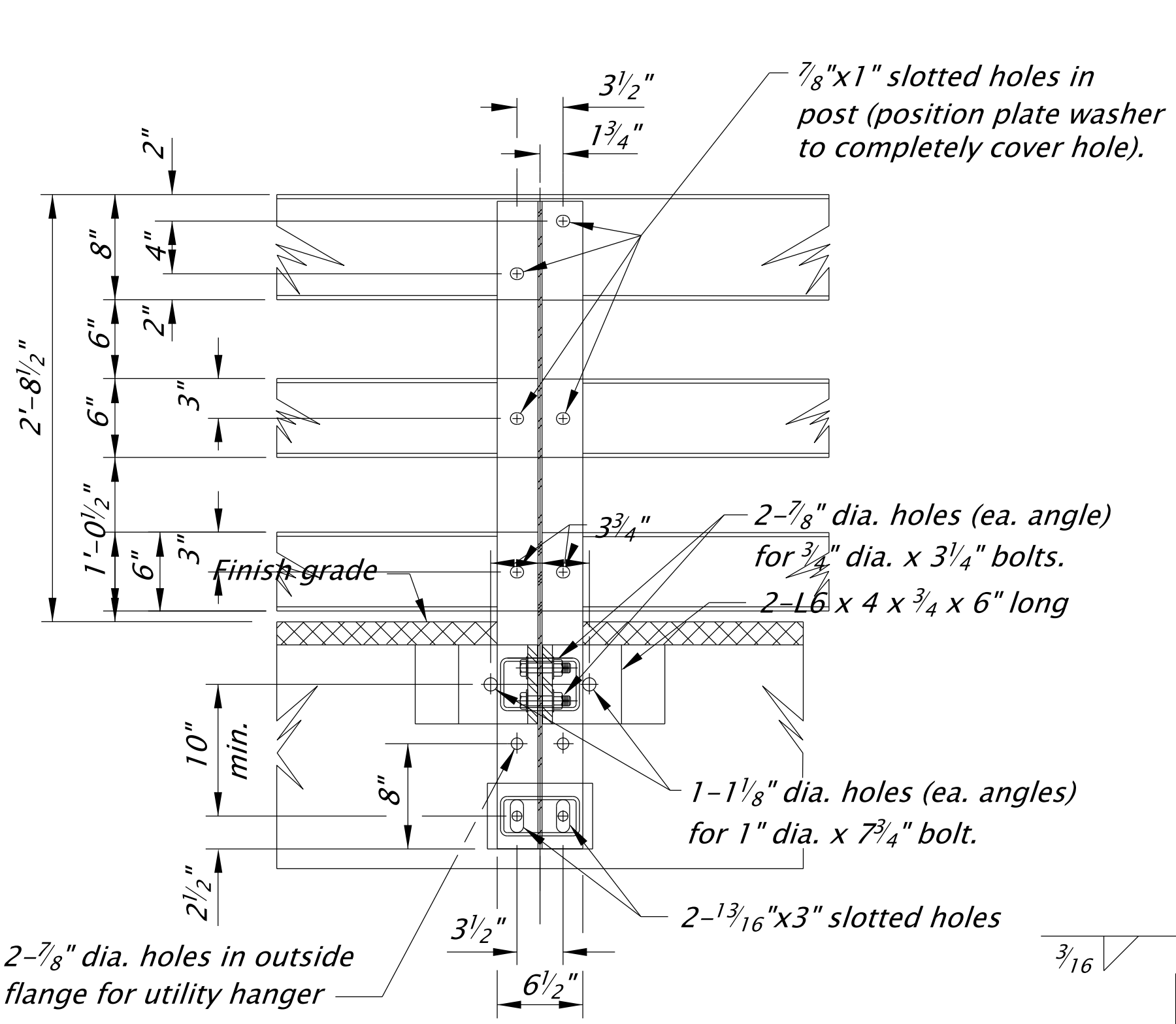


NOTE
Guardrail Connection may be omitted on exit end of one way structures when omitted on detail plans.

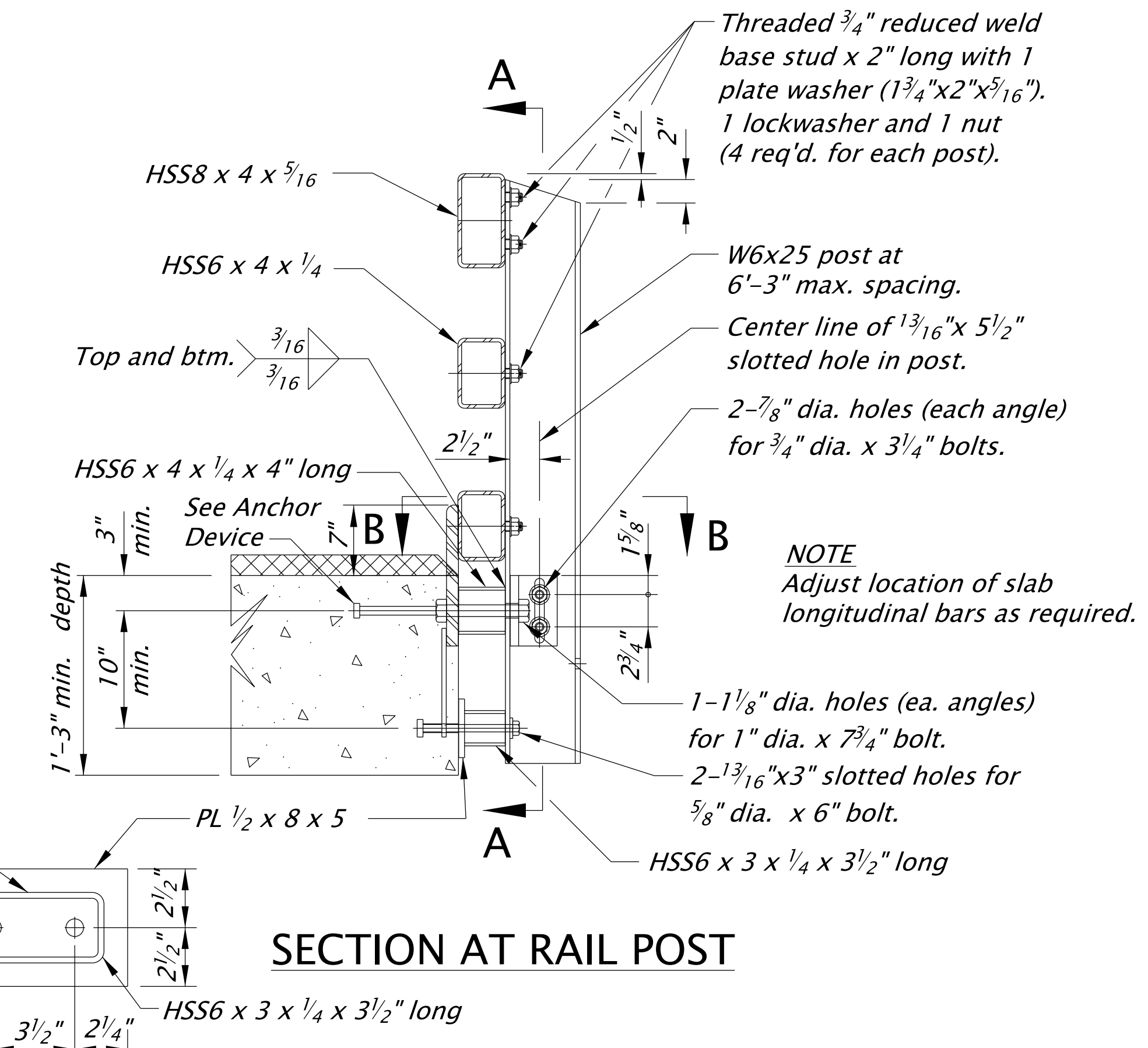
PLAN



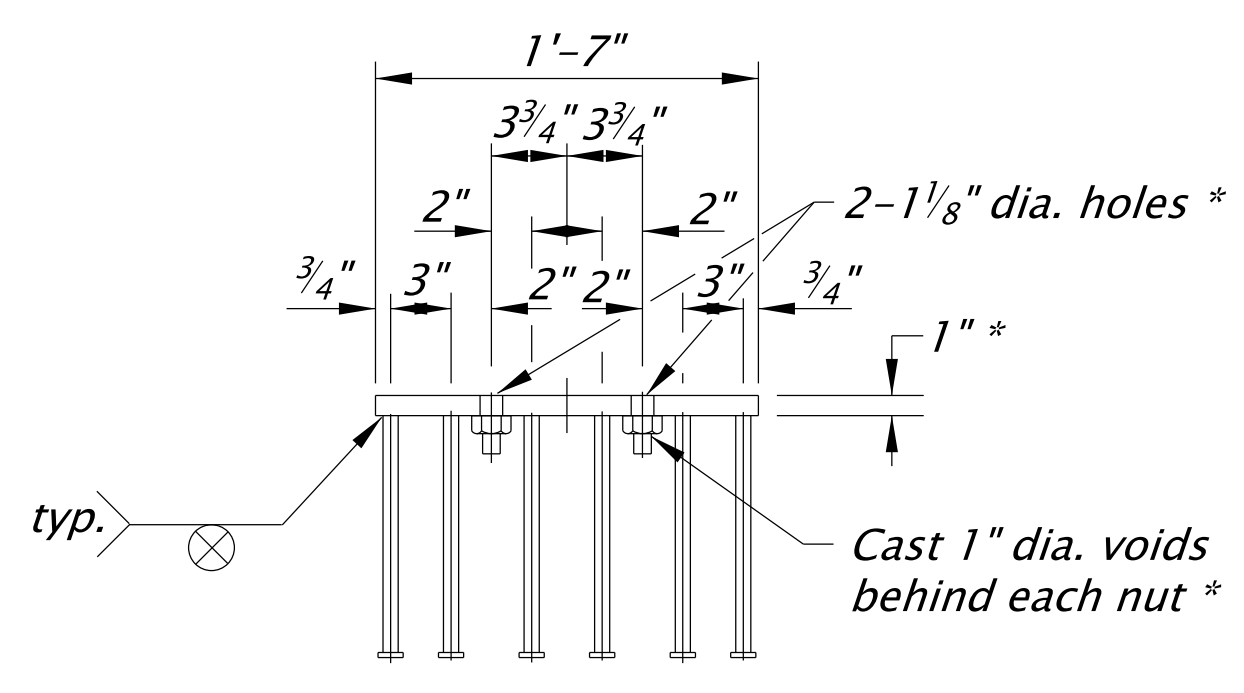
ELEVATION



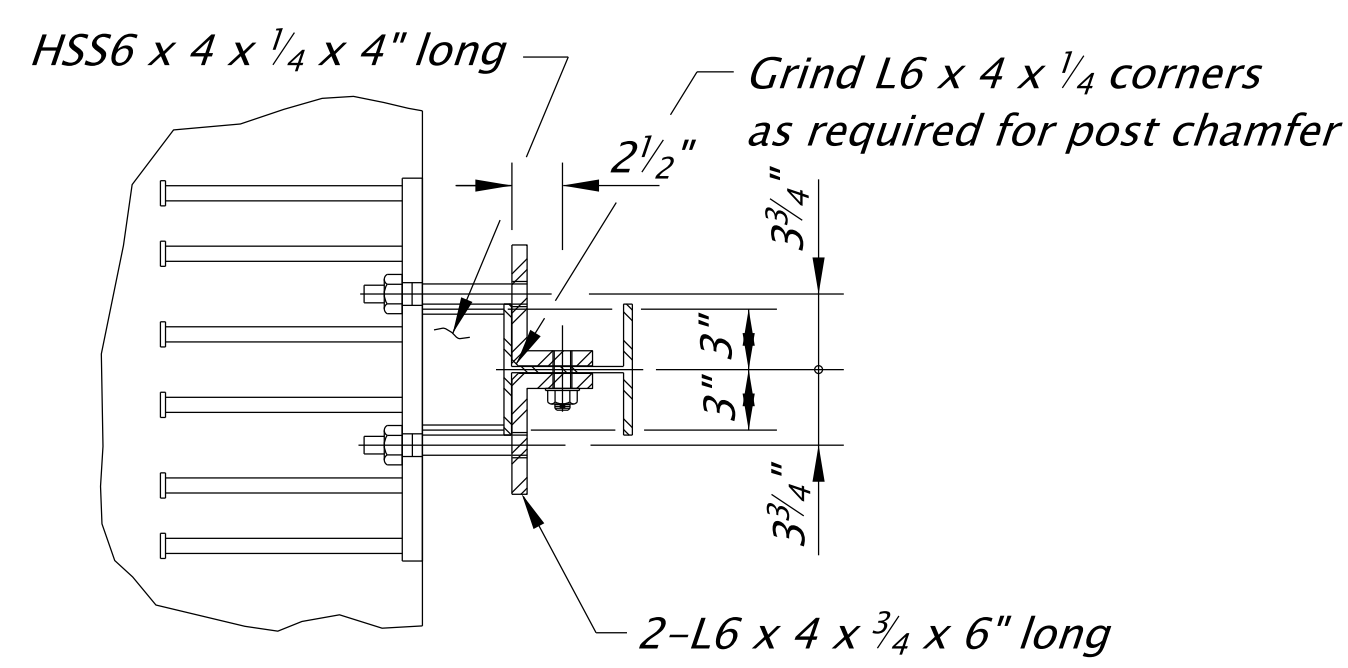
SECTION A-A



SECTION AT RAIL POST

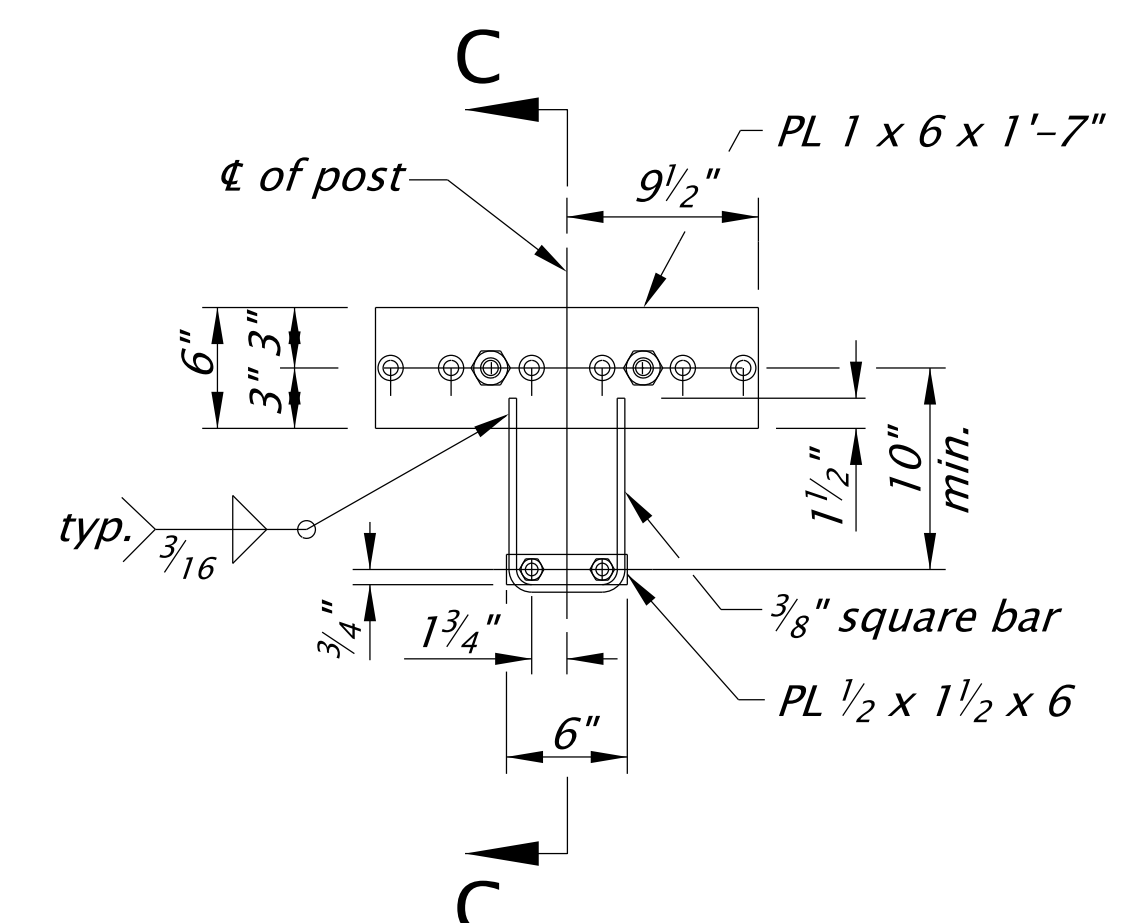


PLAN

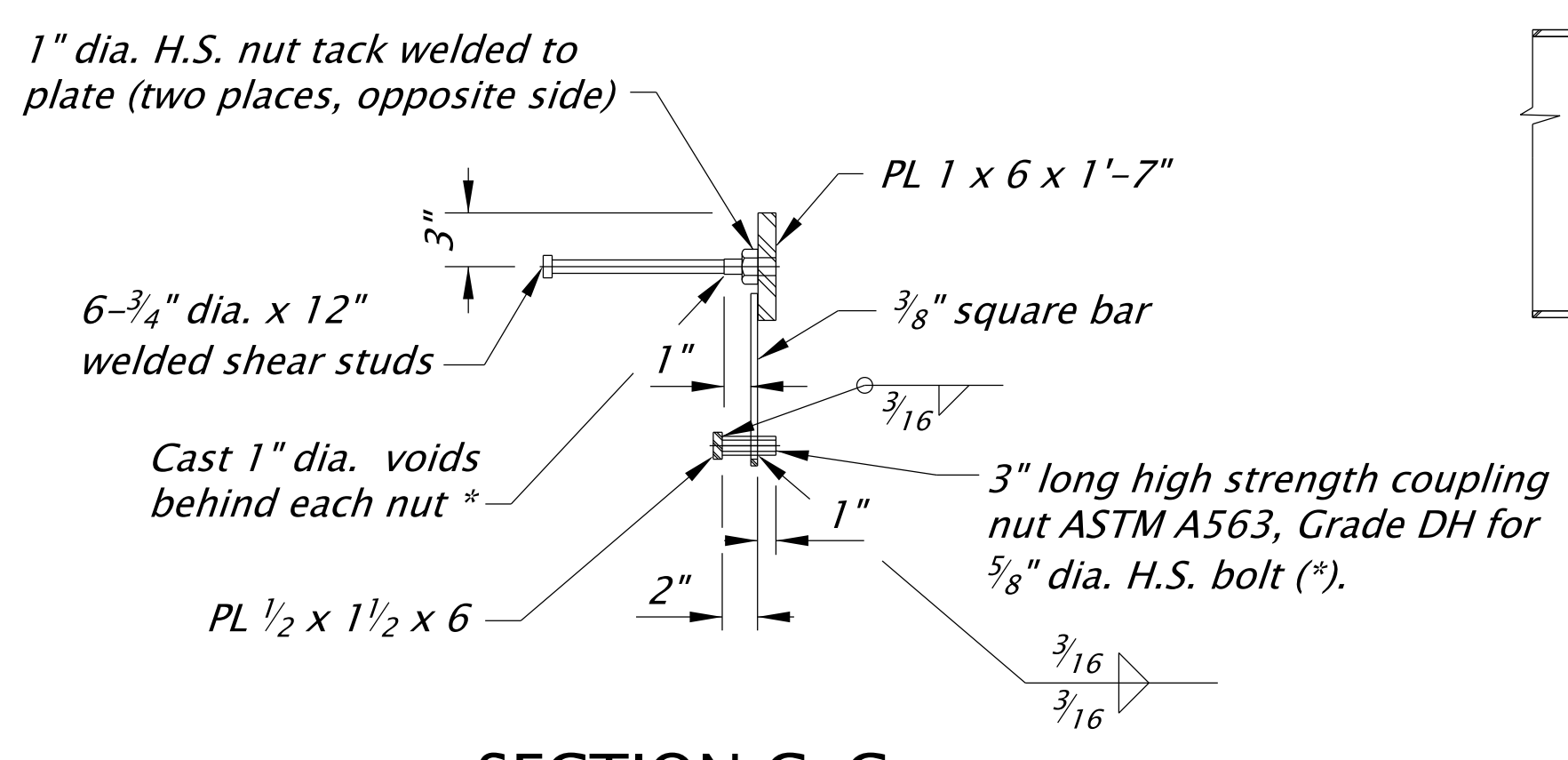


SECTION B-B

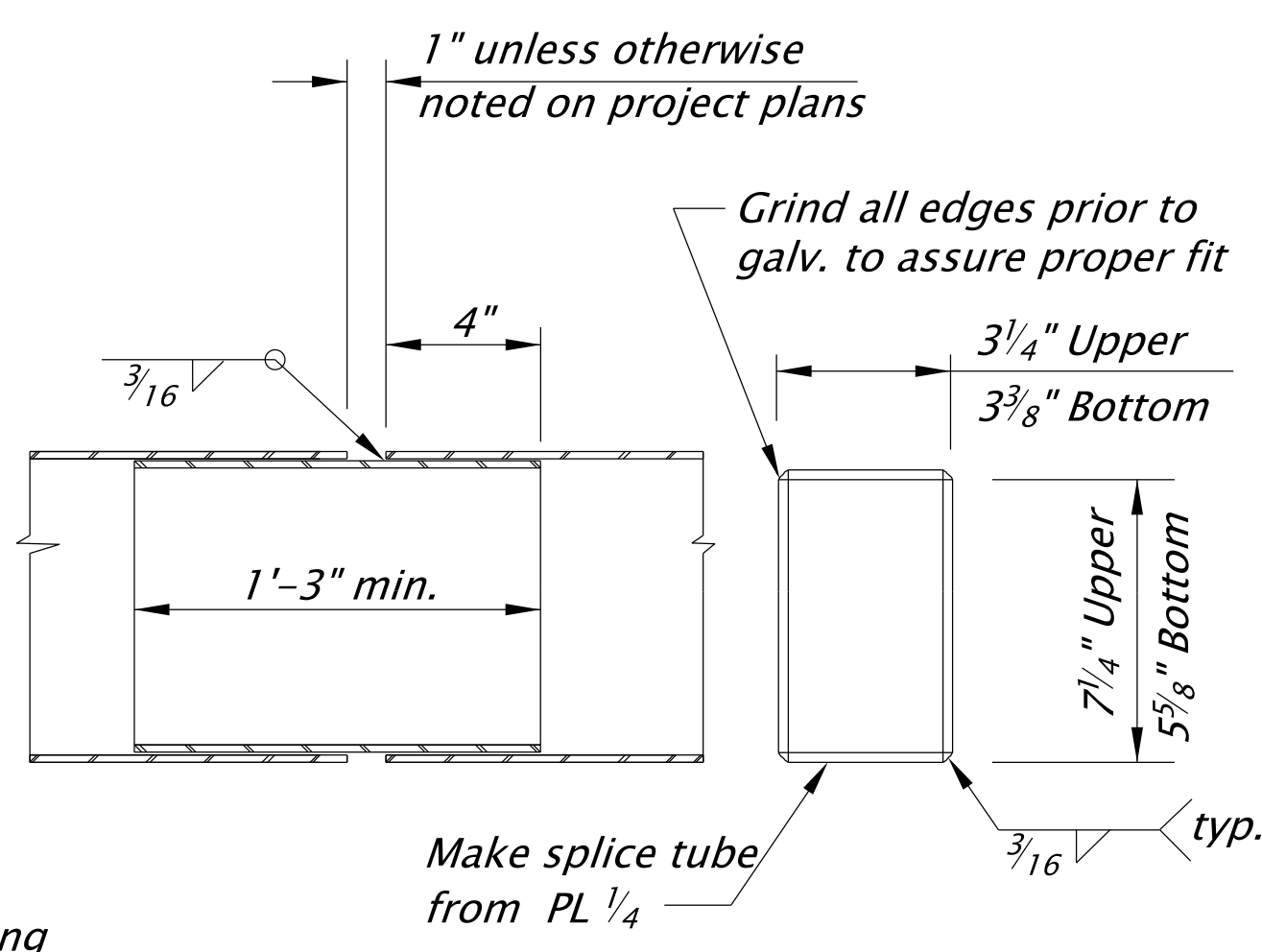
NOTE
* Plug or block off holes and threaded area during casting of slabs.



ANCHOR DEVICE



SECTION C-C

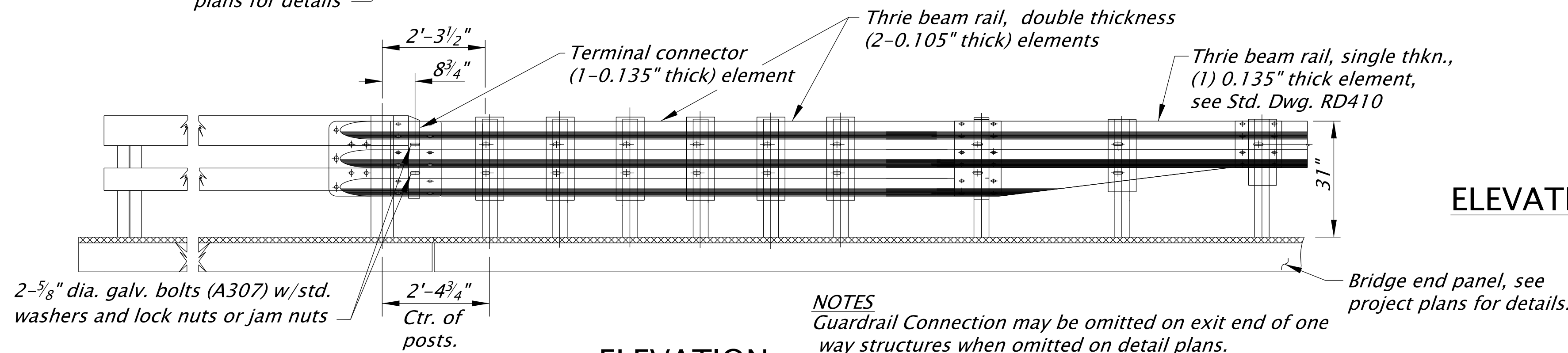
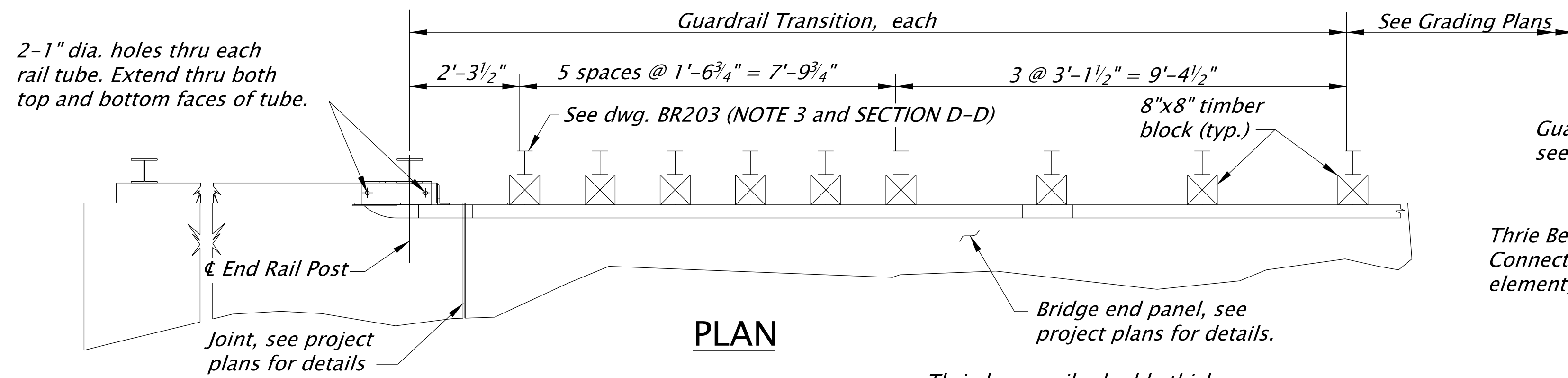


RAIL SPLICE DETAILS

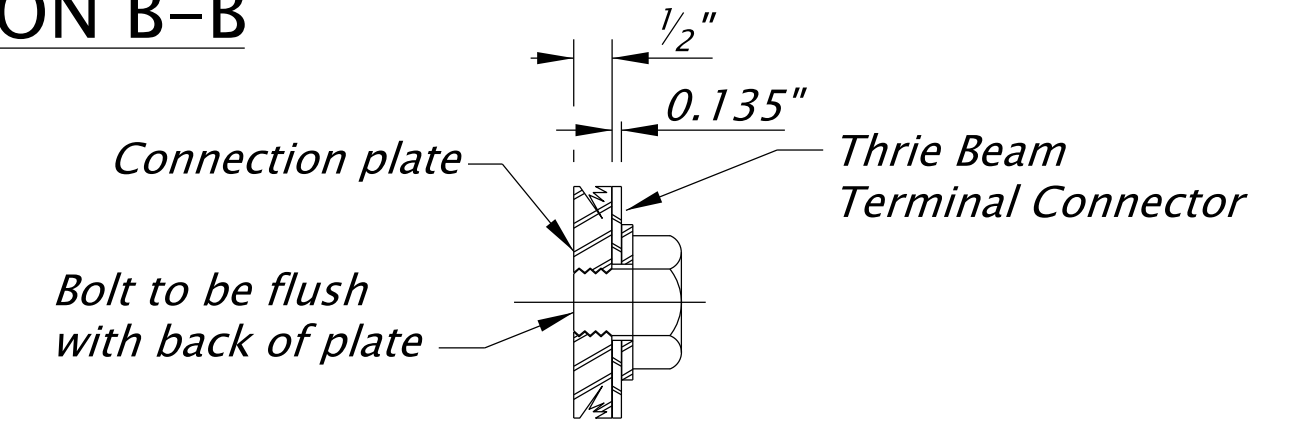
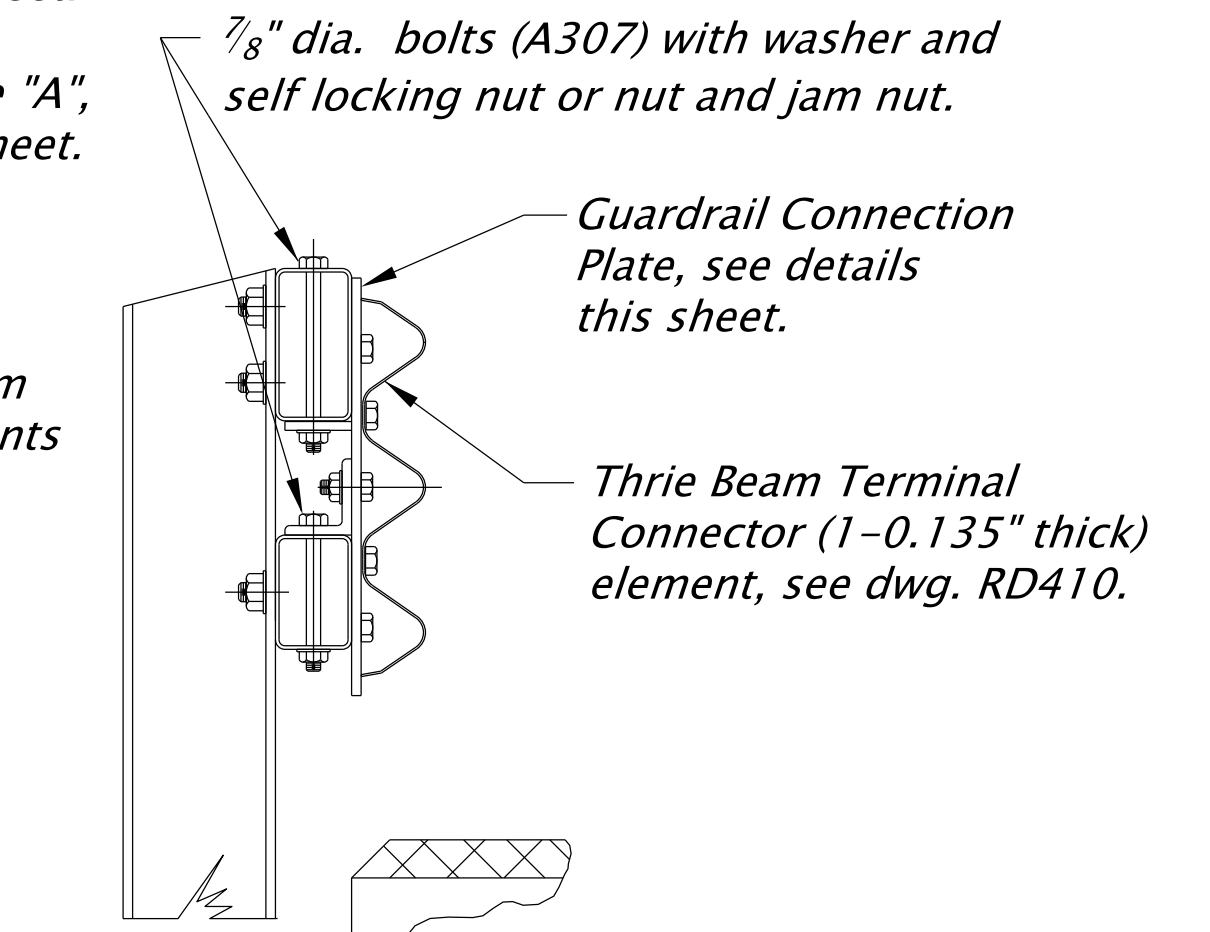
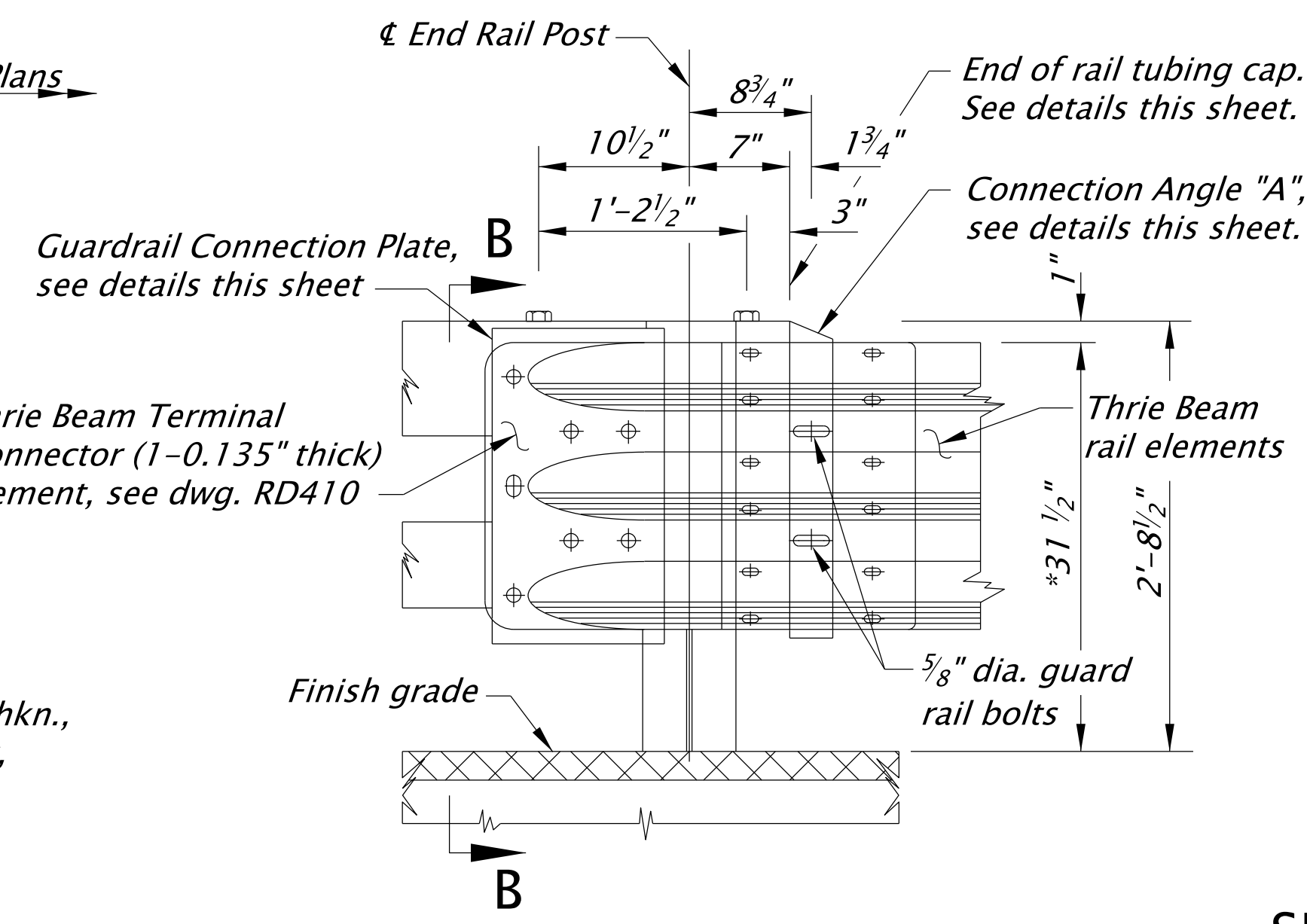
GENERAL NOTES

- Provide structural tubing according to Oregon Standard Specification 2810.20.
- Provide structural steel shapes and plates conforming to AASHTO Specification M183 (ASTM A36) unless otherwise noted.
- Provide bolts conforming to AASHTO Specification M164 (ASTM A325) unless otherwise noted.
- Fabricate shear studs with material, welding and inspection according to Section 7 of AWS D1.5.
- Construct rail normal to slab in both the longitudinal and the transverse directions. When wearing surface thickness varies due to beam camber and/or superelevation, vary rail post lengths to provide uniform rail height. Field verify post lengths before fabrication.
- Hot-dip galvanize structural steel including fasteners after fabrication. Provide Galvanize-Control Silicon posts and horizontal rail steel tubing according to ODOT Specification 02530.70. Tap nuts 0.021+0.01-0.00 oversize after galvanizing in accordance with ASTM A563.
- Tighten upper post bolts 240° turn past snug tight condition and lower post bolts 120° turn past snug tight condition.
- Estimated rail mass (for slab design) is 72 lb. per linear foot.
- Do not use this rail for 12" and Slab No. 9 of the 15" Std. Precast Slabs.

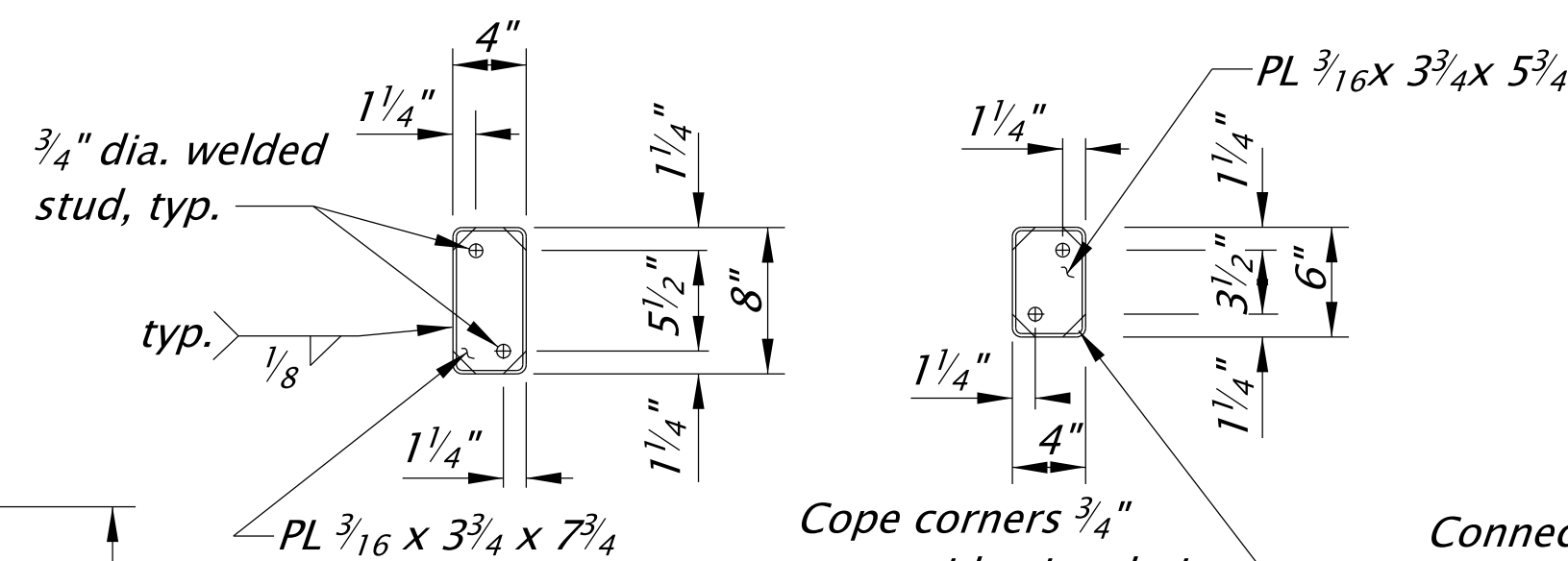
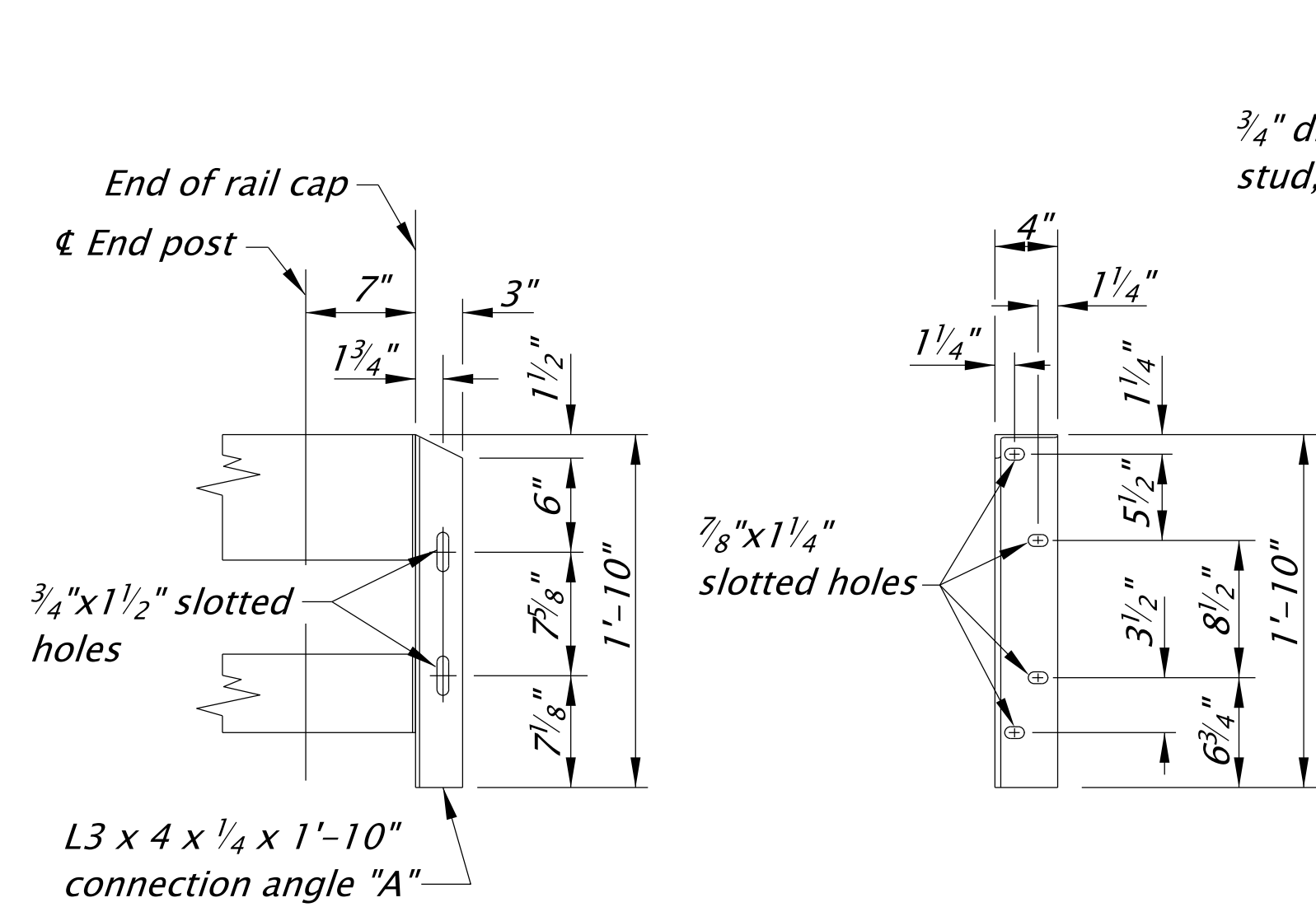
		41 Sequin Drive Glastonbury, CT 06033 Phone: (860) 633-9770 Fax: (860) 633-5971 www.anchorengr.com	
		Civil Engineering • Environmental Consulting • Land Surveying • Construction Management	
PROJ. ENGINEER SMM PROJ. MANAGER MNB OFFICE REVIEW KBF	REHABILITATION OF BRIDGE NO. 05528 PREPARED FOR TOWN OF COLCHESTER BRIDGE RAIL DETAIL PAPER MILL ROAD COLCHESTER, CT		
REVISIONS _____ _____ _____	PROJECT 084-13 DATE 06/12/19 SCALE: AS NOTED	SHEET NO. 7 OF 9	



NOTES
 Guardrail Connection may be omitted on exit end of one way structures when omitted on detail plans.
 Last bridge rail post may be side mounted on either precast slab or on end panel, see project plans.
 End panel must be thickened near posts, see project plans.



* Transition top of rail to match 31" approach rail as shown on this sheet.



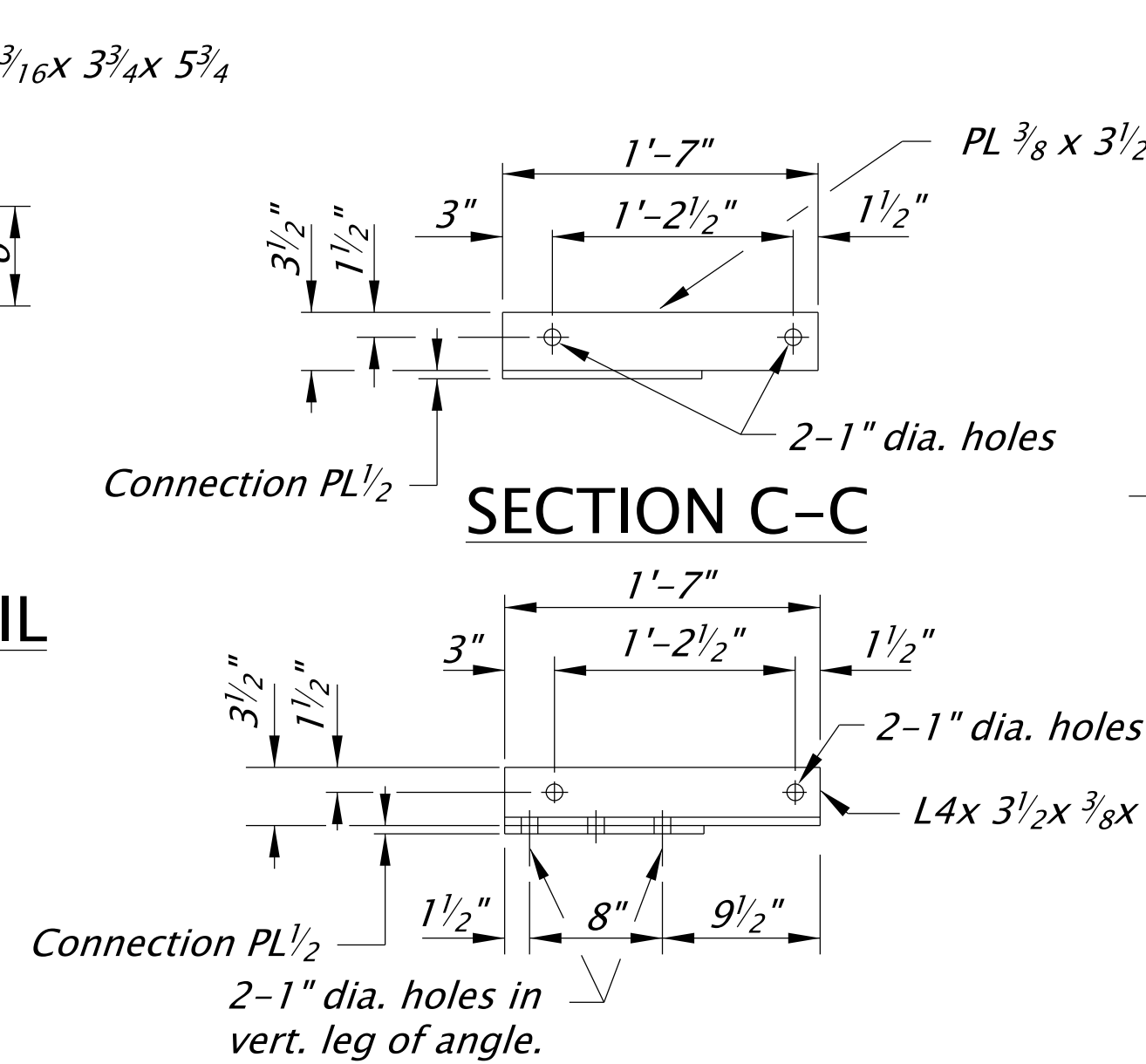
Cope corners 3/4" to provide zinc drains.

Install angle with washers and self locking nuts or nuts and jam nuts.

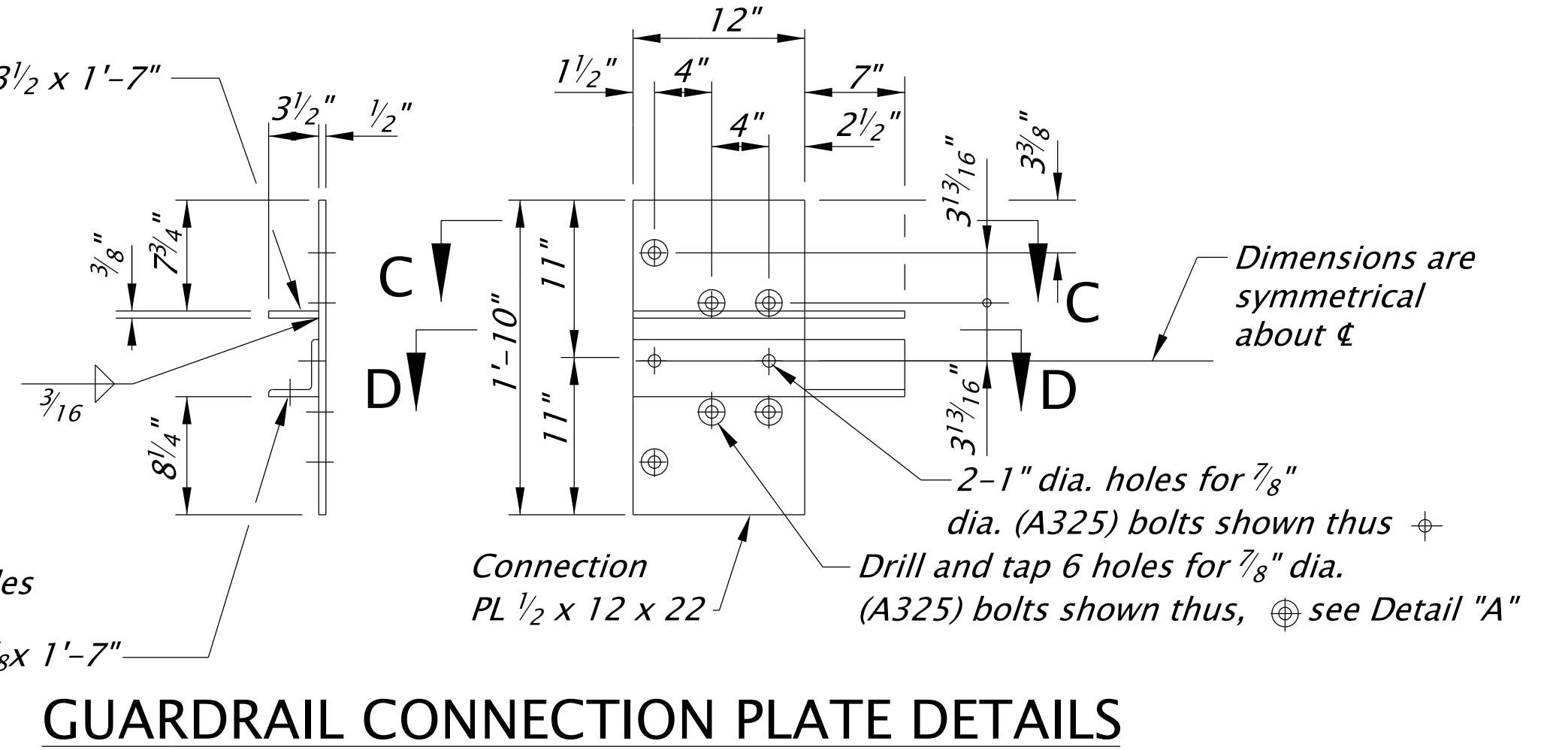
2-3/4" dia. reduced base welded studs on each rail cap at guardrail connections.

Leg of connection angle

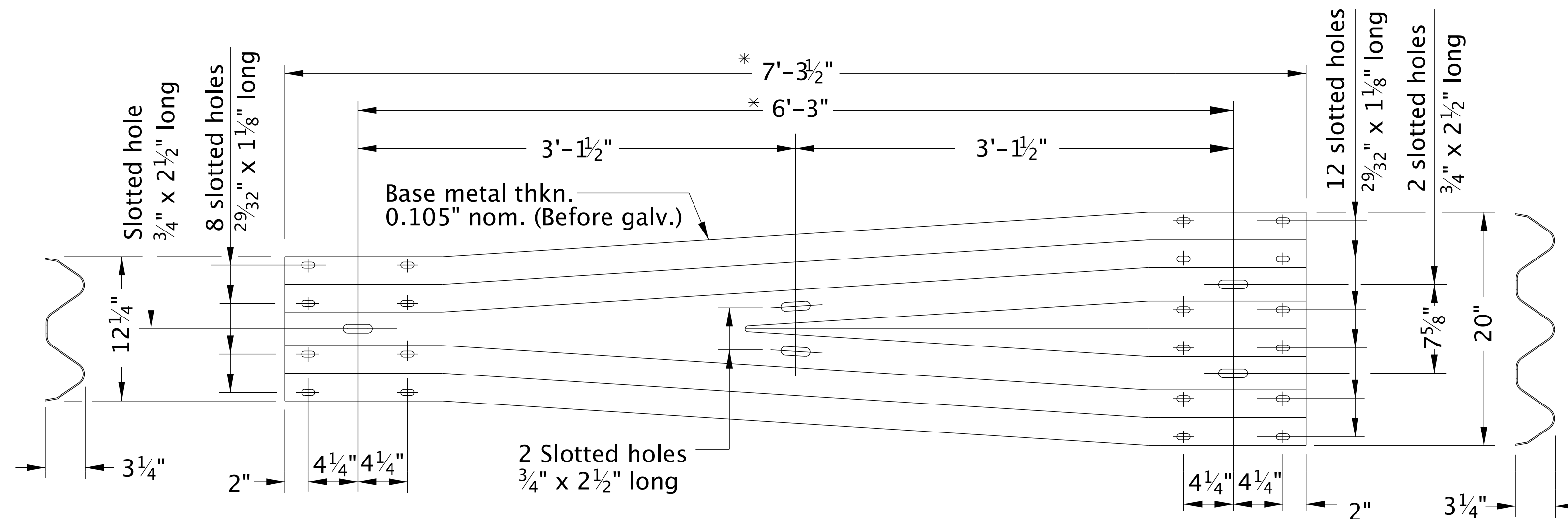
RAIL CAP DETAIL



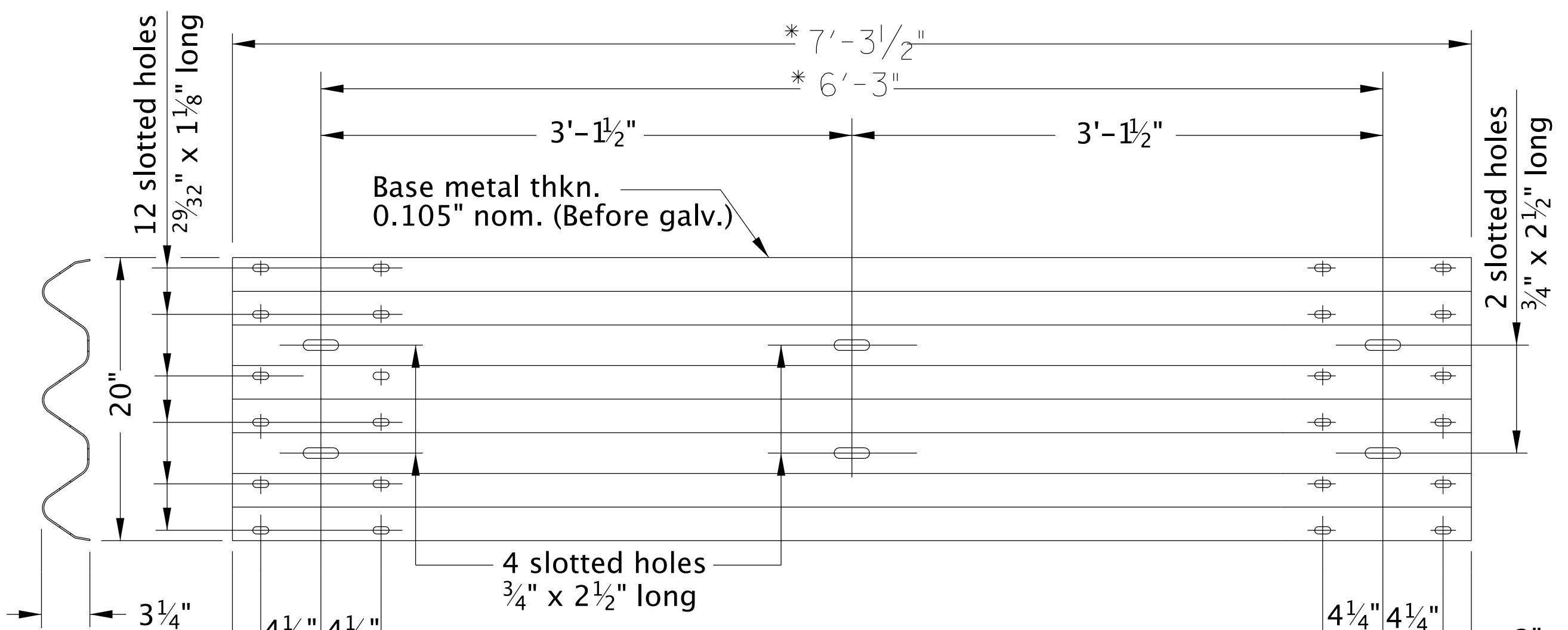
NOTE
 Verify that all bolt hole locations match Thrie Beam terminal connector holes.



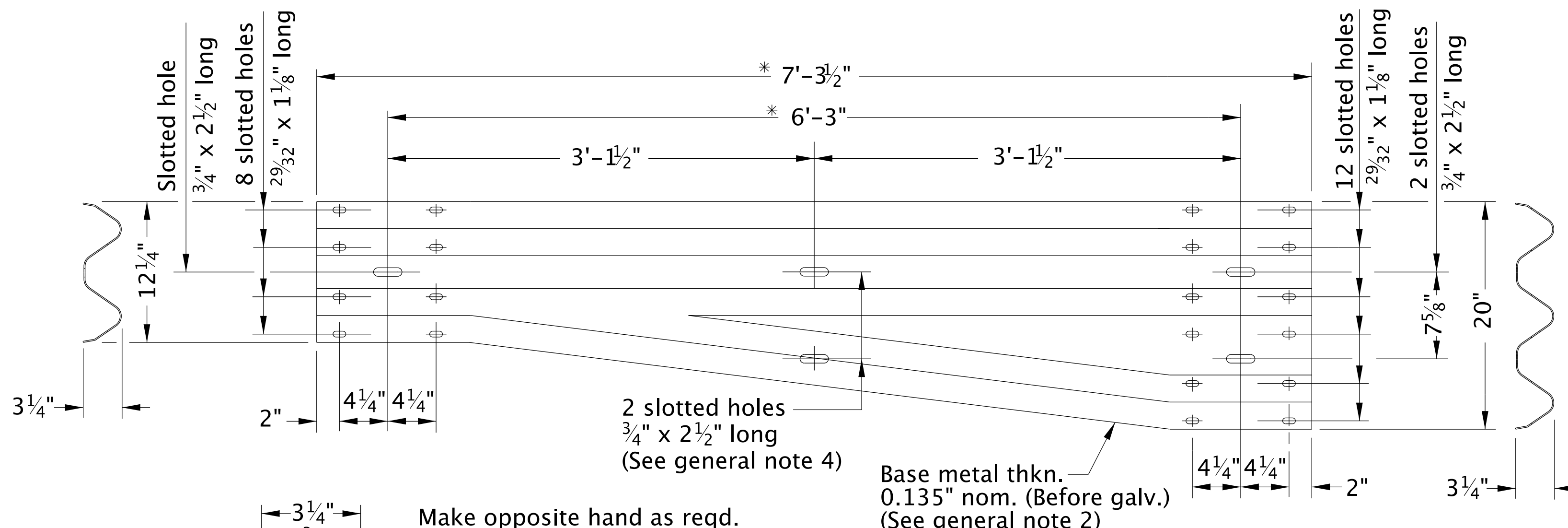
		41 Sequin Drive Glastonbury, CT 06033 Phone: (860) 633-9770 Fax: (860) 633-5971 www.anchorengr.com	
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PROJ. ENGINEER	SMM	REHABILITATION OF BRIDGE NO. 05528 PREPARED FOR TOWN OF COLCHESTER THRIE BEAM TRANSITION 1 OF 2 PAPER MILL ROAD COLCHESTER, CT	
PROJ. MANAGER	MNB		
OFFICE REVIEW	KBF		
REVISIONS		PROJECT	DATE
		084-13	06/12/19
		SHEET NO.	8 OF 9
SCALE: AS NOTED			



ELEVATION - SYMMETRICAL TRANSITION ELEMENT

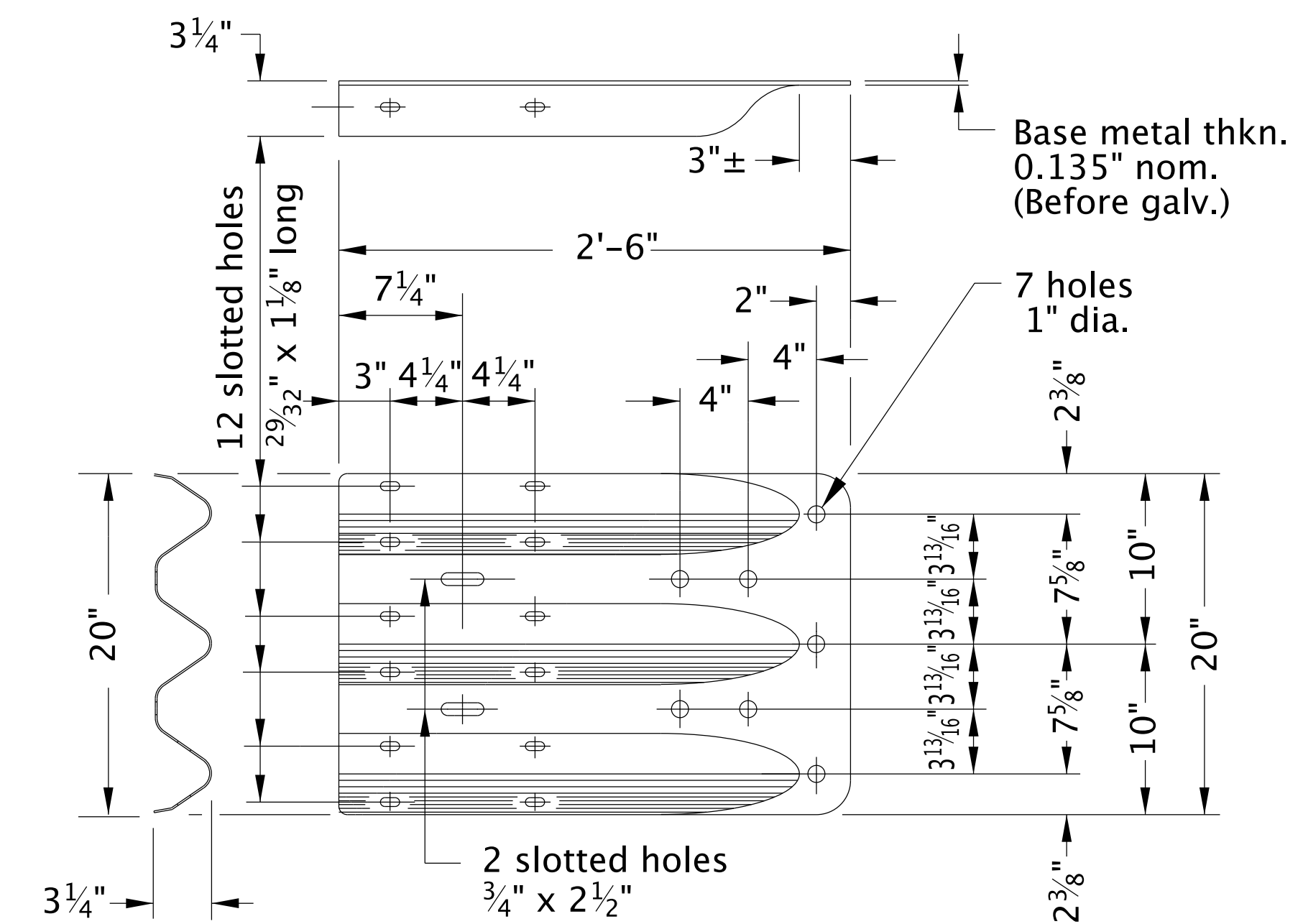


ELEVATION - RAIL ELEMENT (Type 4)



ELEVATION - ASYMMETRICAL TRANSITION ELEMENT

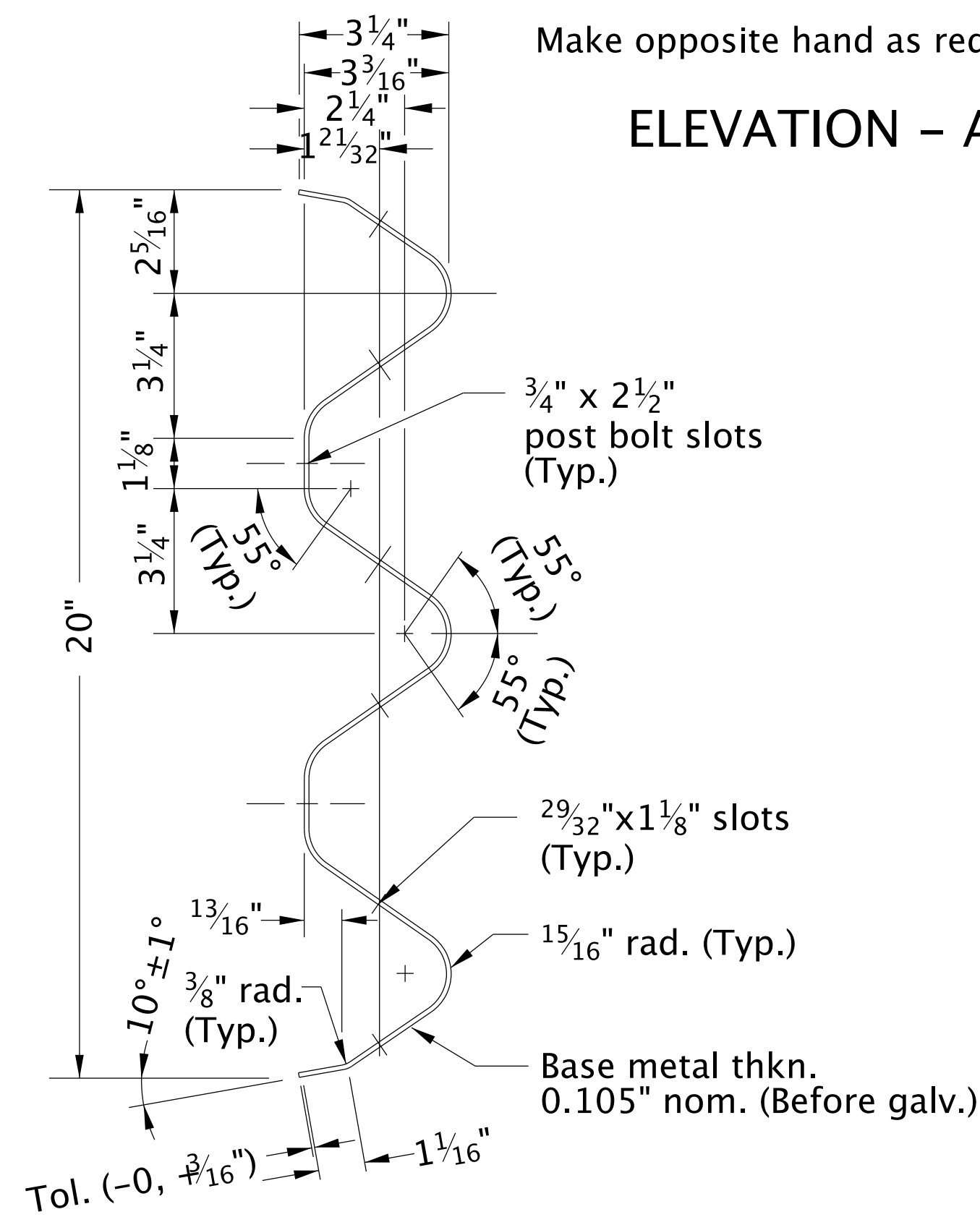
* See general note 4



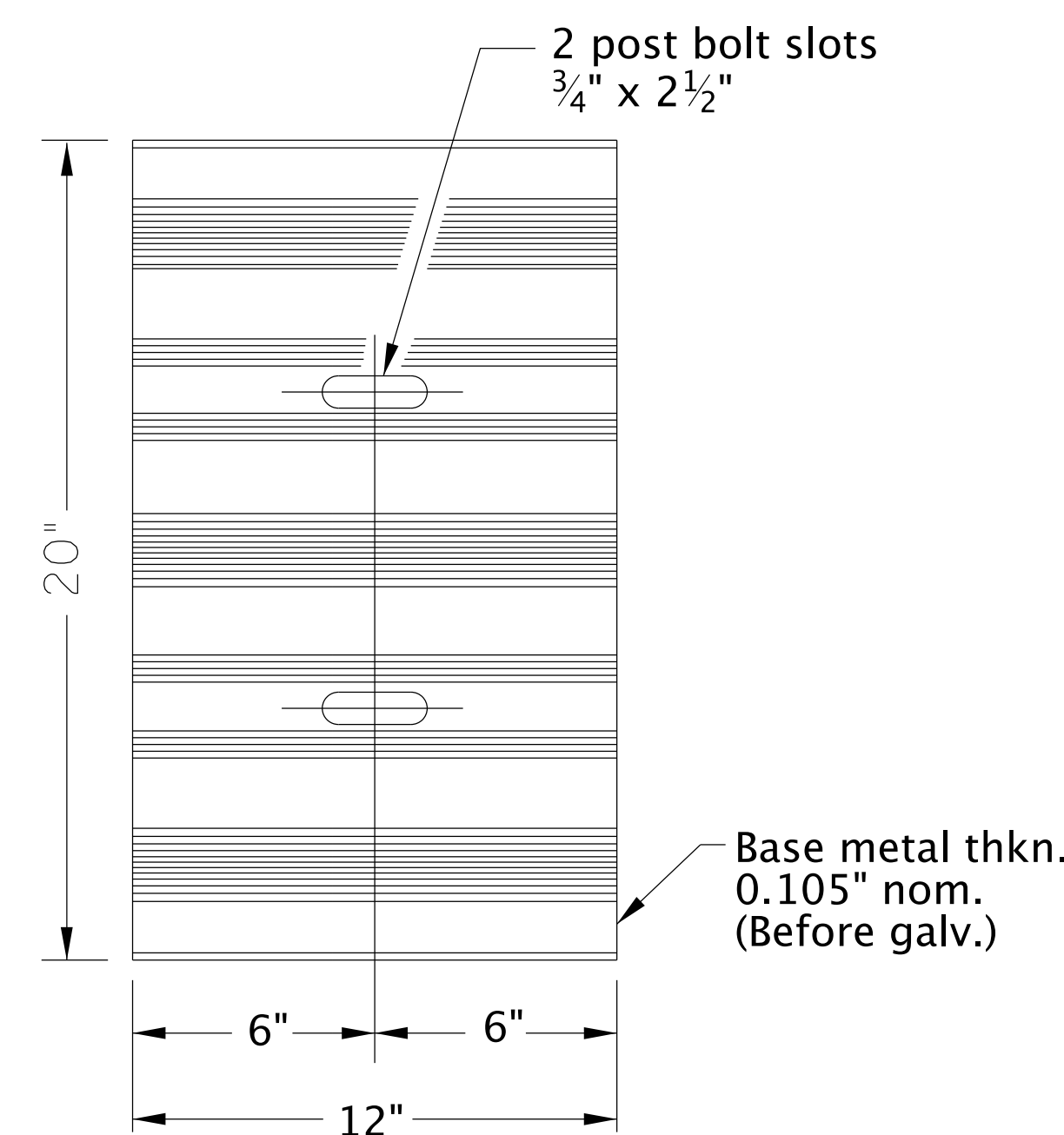
TERMINAL CONNECTOR

GENERAL NOTES FOR ALL DETAILS:

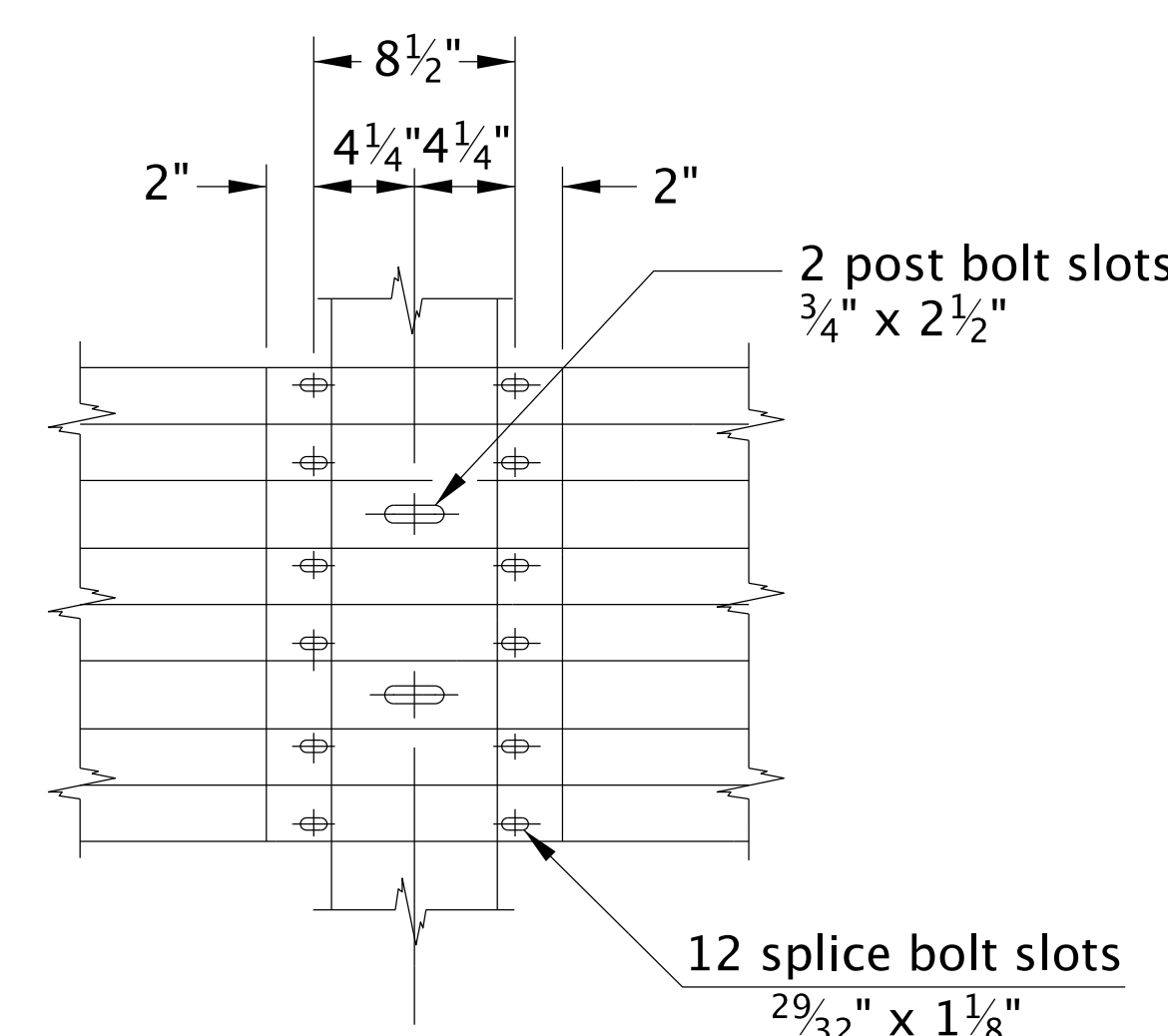
1. See appropriate guardrail standard drawing(s) for details not shown.
2. For locations, see appropriate bridge rail standard drawing(s).
3. Lap guardrail in direction of adjacent traffic.
4. Hole layout per manufacturer with appropriate post and block.



SECTION THRU RAIL ELEMENT



THRIE BEAM BACK-UP PLATE
 For detail not shown, see "Section Thru Rail Element"



BEAM SPLICE

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OFFICE REVIEW KBF	REVISIONS	PROJECT 084-13	DATE 06/12/19
SCALE: AS NOTED	SHEET NO. 9 OF 9		