

REPLACEMENT

OF

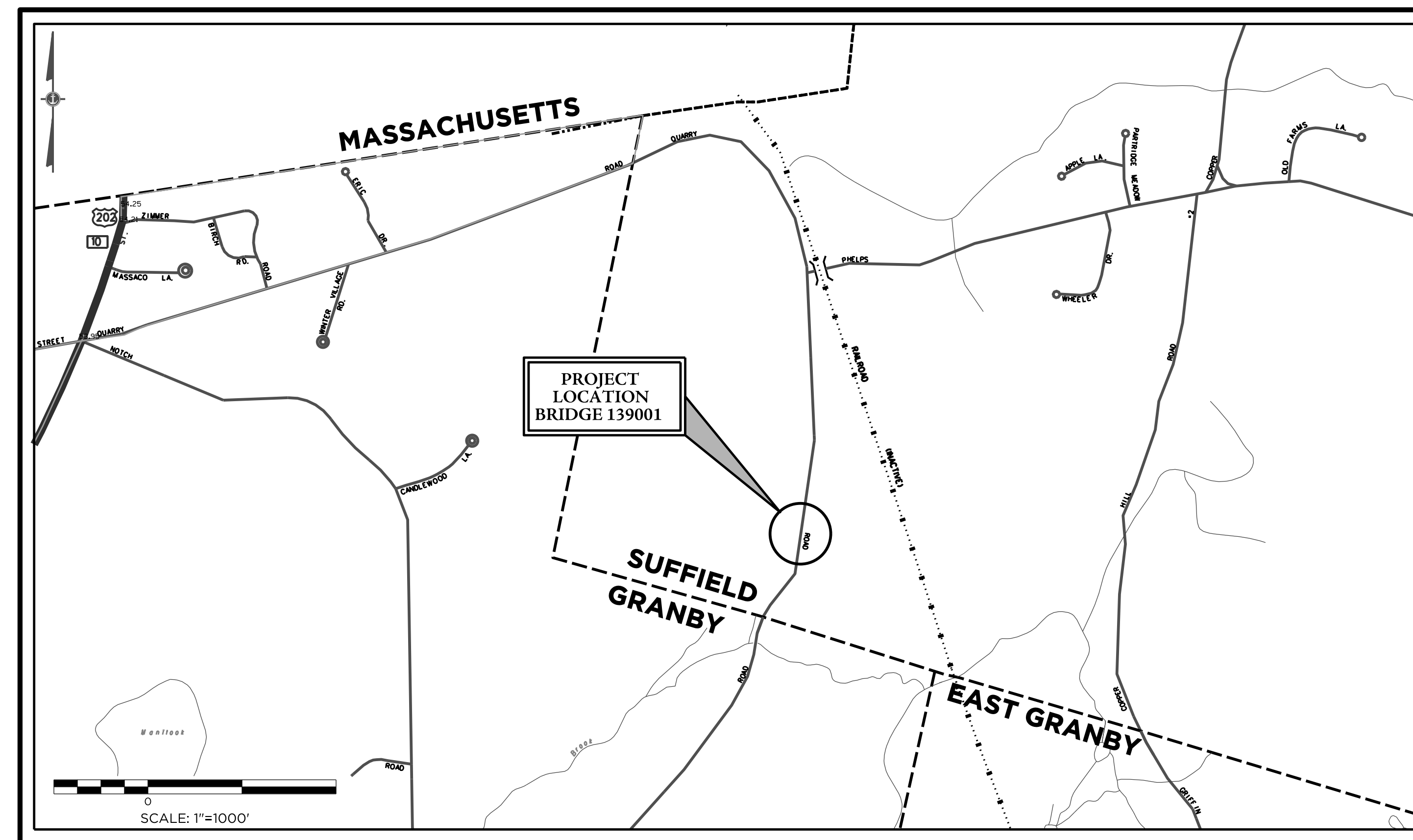
QUARRY ROAD BRIDGE NO. 139011

SUFFIELD, CT

STATE PROJECT NO. 9139-0011 (SLBP)
STATE PROJECT NO. 0139-0115 (STEAP)

PREPARED FOR

TOWN OF SUFFIELD
COLIN MOLL, FIRST SELECTMAN
83 MOUNTAIN ROAD
SUFFIELD, CT 06078



LOCATION MAP
SCALE: 1" = 1000'

LIST OF SHEETS

DATE: 03/05/25
REVISED:

ROAD PLAN & PROFILE	1
ROAD DETAILS	2
GENERAL PLAN	3
BORING LOG	4
LAYOUT PLAN	5
STRUCTURE DETAILS	6-8
BRIDGE RAIL	9-10
ROADWAY CROSS SECTIONS	11
DETOUR PLAN	12
WATER HANDLING PLAN	13

LIST OF CTDOT STANDARD SHEETS

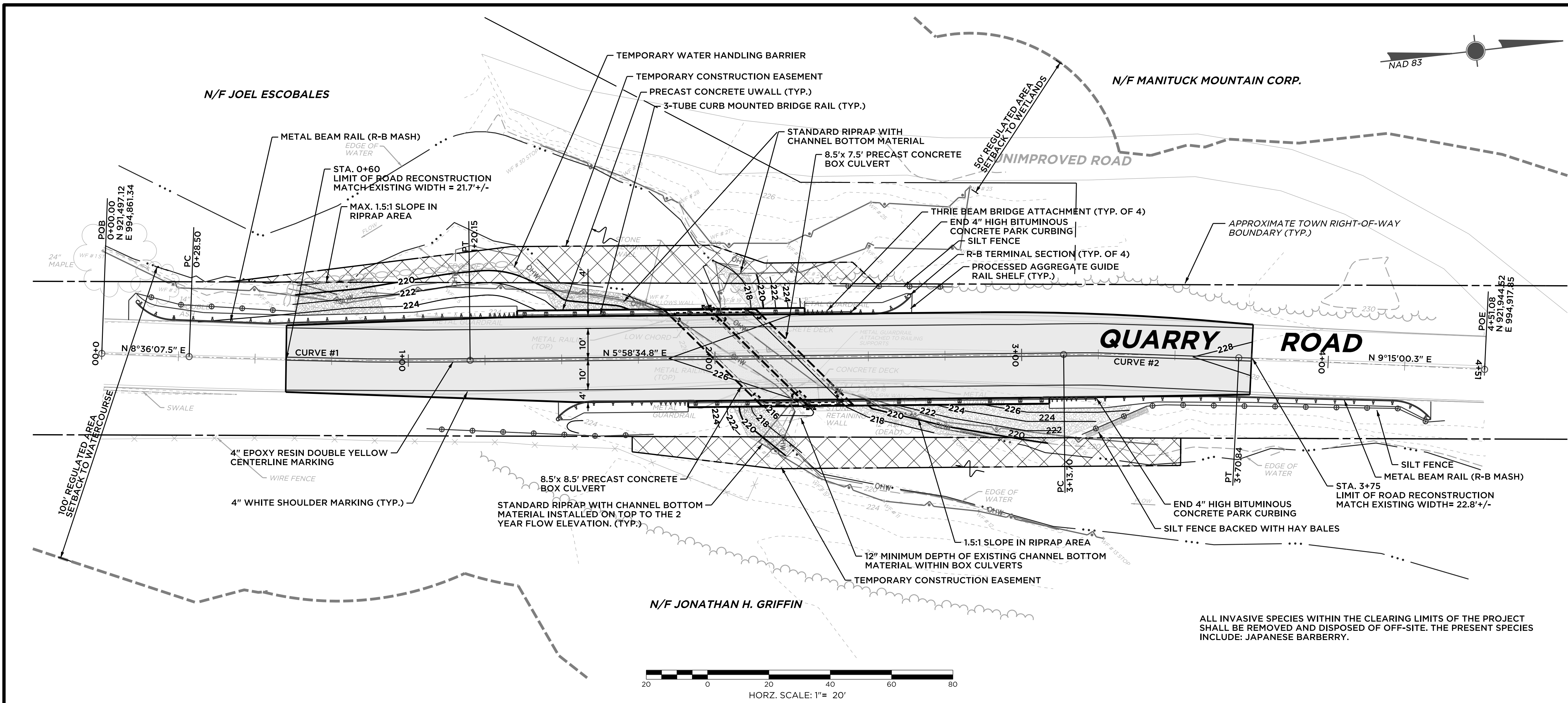
TEMPORARY PRECAST CONCRETE BARRIER CURB	HW-822_01
R-B TERMINAL SECTION	HW-910_17
MASH METAL BEAM HARDWARE	HW-910_20
METAL BEAM RAIL (R-B MASH) GUIDERAIL	HW-910_21
THRIE-BEAM ATTACHMENT HARDWARE	HW-910_26
THRIE-BEAM ATTACHMENT	HW-910_27
SIGNS FOR CONSTRUCTION AND PERMIT OPERATIONS	TR-1220_01
CONSTRUCTION SIGN SUPPORTS AND CHANNELIZING DEVICES	TR-1220_02

PREPARED BY:

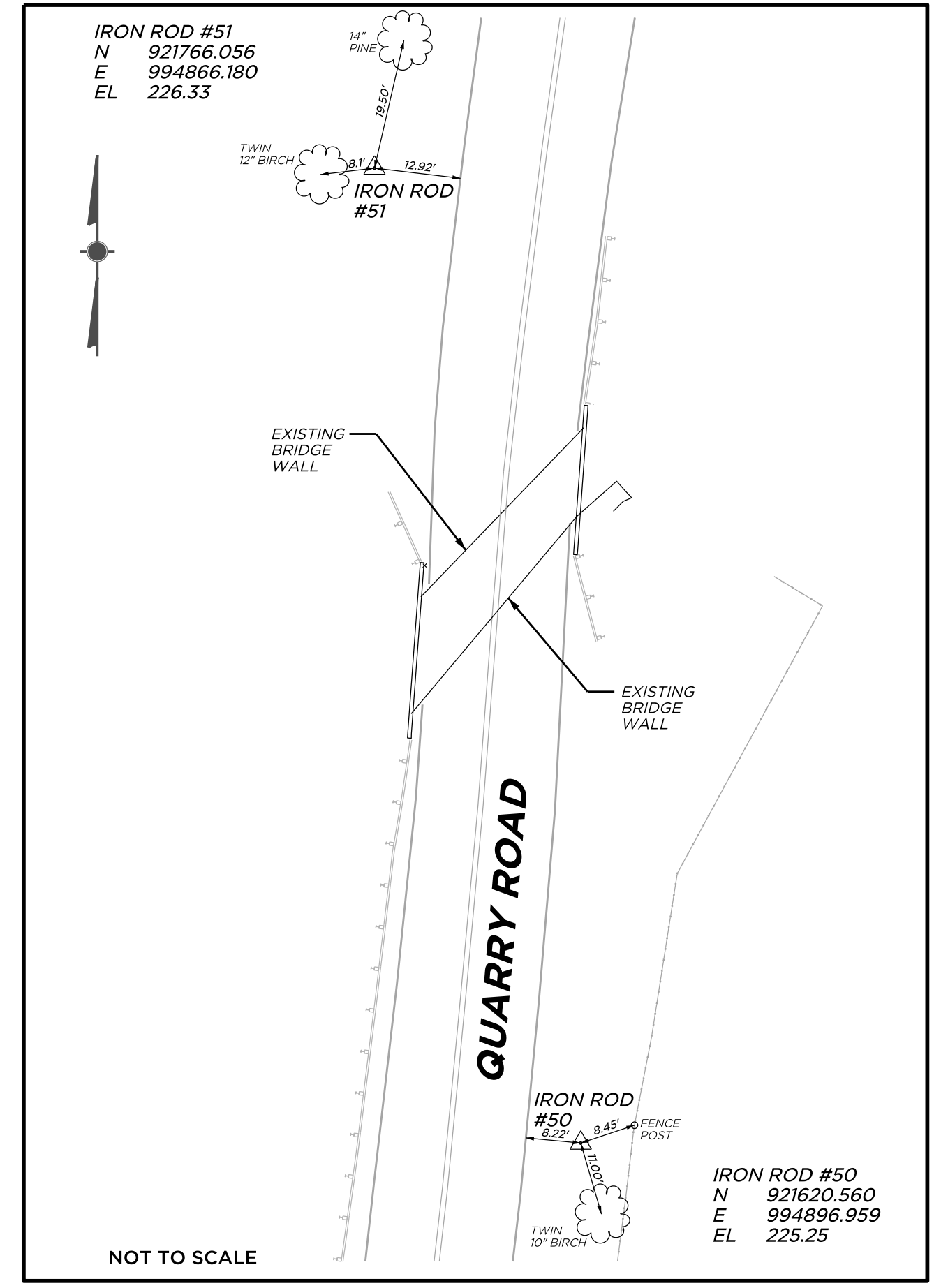
Barton & Loguidice
855 Winding Brook Drive
Glastonbury, CT 06033
Phone: (860) 633-8770
Fax: (860) 633-5971
www.bartonandloguidice.com

Civil Engineering • Environmental Consulting • Land Surveying • Construction Management





CURVE #1 R = 2000.00' D = 2°37'32.7" L DOC = 2°51'53.2" R L = 91.66' T = 45.84'	CURVE #2 R = 1000.00' D = 3°16'25.5" R DOC = 5°43'46.5" R L = 57.14' T = 28.58'
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ALL INVASIVE SPECIES WITHIN THE CLEARING LIMITS OF THE PROJECT SHALL BE REMOVED AND DISPOSED OF OFF-SITE. THE PRESENT SPECIES INCLUDE: JAPANESE BARBERRY.

SURVEY NOTES

- BEARINGS, COORDINATES AND ELEVATIONS DEPICTED HEREON ARE BASED UPON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) AND THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND WERE OBTAINED VIA GPS STATIC OBSERVATIONS PROCESSED THROUGH THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION ONLINE POSITIONING USER SERVICE WEBSITE (NOAA OPUS).
- FIELD SURVEY WAS CONDUCTED BY ANCHOR ENGINEERING SERVICES INC. IN JANUARY 2019.
- UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENT AGENCIES, FROM PAROL TESTIMONY AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO BARTON & LOGUIDICE. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG: 1-(800) 922-4455.

MAP REFERENCE

- PROPERTY SURVEY LAND OF RIVER BEND ASSOCIATES, INC. PHELPS ROAD & QUARRY ROAD, SUFFIELD, CONNECTICUT HUNGARY ROAD, GRANBY, CONNECTICUT PREPARED FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE OF CONNECTICUT. SCALE: 1" = 100'. DATED: FEBRUARY 2007. BY: URS CORPORATION AES. SHEET 2 OF 3.

Barton & Loguidice
41 Sequin Drive
Glastonbury, CT 06033
Phone: (860) 633-9370
Fax: (860) 633-5971
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PROJ. ENGINEER	DPL	REPLACEMENT OF QUARRY RD BRIDGE PREPARED FOR TOWN OF SUFFIELD ROAD PLAN & PROFILE
PROJ. MANAGER	KBF	
OFFICE REVIEW	MMZ	
REVISIONS		QUARRY ROAD SUFFIELD, CT
PROJECT	DATE	SHEET NO. 1 OF 13
SCALE: AS NOTED	3157-31	03/05/25

EROSION & SEDIMENTATION CONTROL NOTES

- CONSTRUCTION WILL COMMENCE IN THE SPRING OF 2024 AND WILL BE TENTATIVELY COMPLETED IN THE FALL OF 2024, WEATHER PERMITTING.
- 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.

REVEGETATION NOTES

- SOIL CONSERVATION PRACTICES SHALL BE APPLIED TO CONTROL SHEET AND RILL EROSION AT OR BELOW ALLOWABLE SOIL LOSS. THE SOIL SURFACE SHALL BE STABILIZED USING SUITABLE MULCH UNTIL THE SEEDED AREA(S) ARE STABILIZED WITH ADEQUATE VEGETATIVE COVER.
- TOPSOIL SHALL BE TILLED AT LEAST 3 INCHES TO PREPARE THE SURFACE FOR SEEDING AND TO FRACTURE ANY ROOT LIMITING LAYERS CAUSED BY COMPACTION DURING REGRADING.
- THE SEEDING SEASON SHALL BE MARCH 15 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15.
- THE FOLLOWING CONSERVATION/WILDLIFE SEED MIXTURE OR APPROVED EQUIVALENT SHALL BE APPLIED AT THE SEED MIX SPECIFIED RATE.

NEW ENGLAND WETLAND PLANTS, INC

820 WEST STREET, AMHERST, MA 01002
 PHONE: 413-548-8000 FAX 413-549-4000
 EMAIL: INFO@NEWP.COM WEB ADDRESS: WWW.NEWP.COM

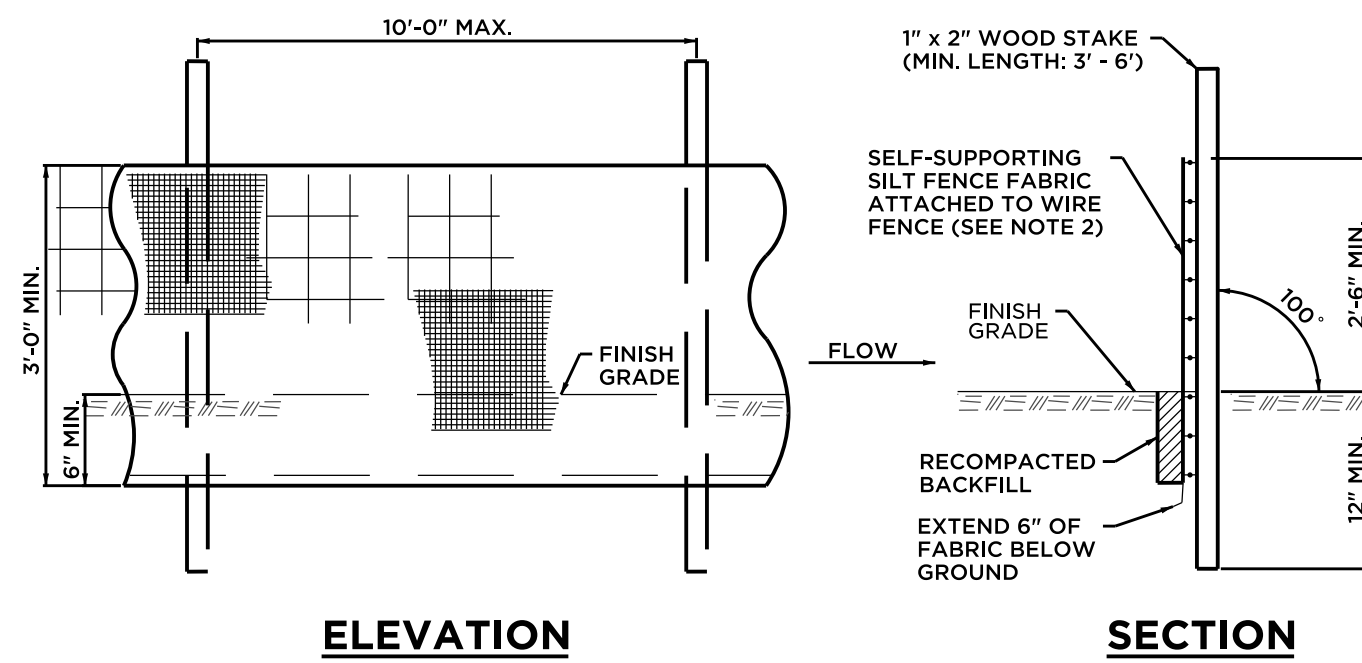
New England Conservation/Wildlife Mix

Botanical Name	Common Name	Indicator
<i>Elymus virginicus</i>	Virginia Wild Rye	FACW-
<i>Schizachyrium scoparium</i>	Little Bluestem	FACU
<i>Andropogon gerardii</i>	Big Bluestem	FAC
<i>Festuca rubra</i>	Red Fescue	FACU
<i>Sorghastrum nutans</i>	Indian Grass	UPL
<i>Panicum virgatum</i>	Switch Grass	FAC
<i>Chamaecrista fasciculata</i>	Partridge Pea	FACU
<i>Desmodium canadense</i>	Showy Tick Trefoil	FAC
<i>Asclepias tuberosa</i>	Butterfly Milkweed	NI
<i>Bidens frondosa</i>	Beggar Ticks	FACW
<i>Eupatorium purpureum (Eutrochium maculatum)</i>	Purple Joe Pye Weed	FAC
<i>Rudbeckia hirta</i>	Black Eyed Susan	FACU-
<i>Aster pilosus (Symphyotrichum pilosum)</i>	Heath (or Hairy) Aster	UPL
<i>Solidago juncea</i>	Early Goldenrod	

APPLY: 25 LBS/ACRE :1750 sq ft/lb

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes for both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

- TEMPORARY GRASS SEEDING, IF NECESSARY, SHALL BE PERENNIAL RYEGRASS (LOLIUM PERENNE) APPLIED AT A RATE OF 20-30 LBS PER ACRE.



ELEVATION

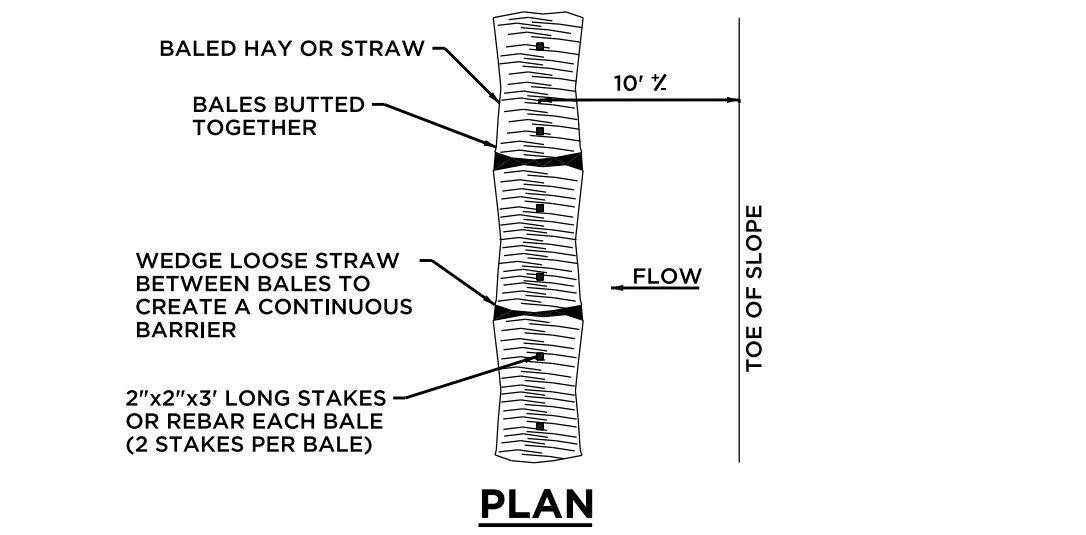
SECTION

NOTES:

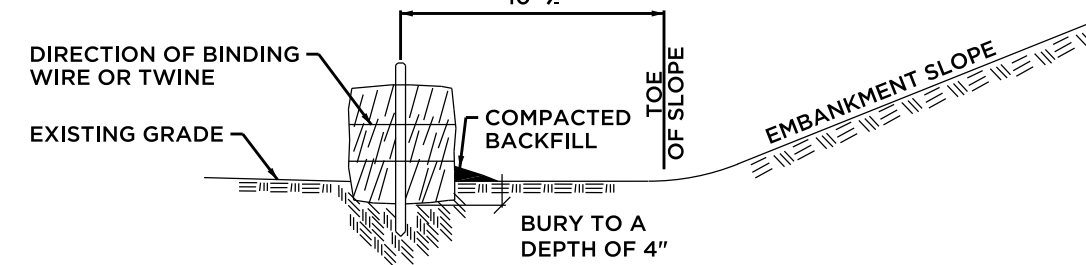
- INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
- SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 # STEEL/L.F.). THE MINIMUM POST LENGTH SHALL BE 5'-0"
- SILT FENCE FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN PROPYLENE, NYLON, POLYESTER OR POLYETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.

SILT FENCE

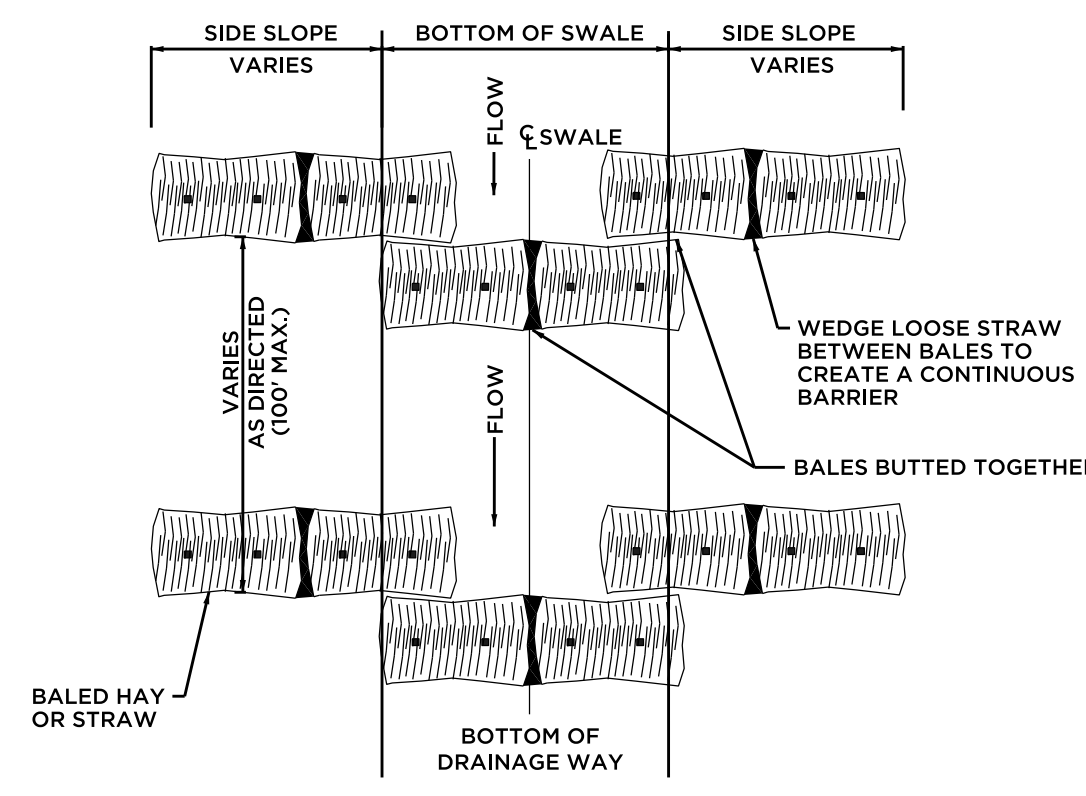
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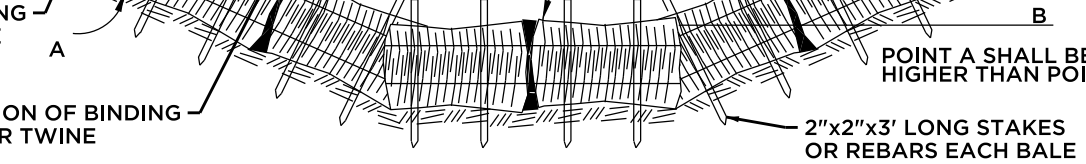
PLAN



SECTION AT TOE OF SLOPE



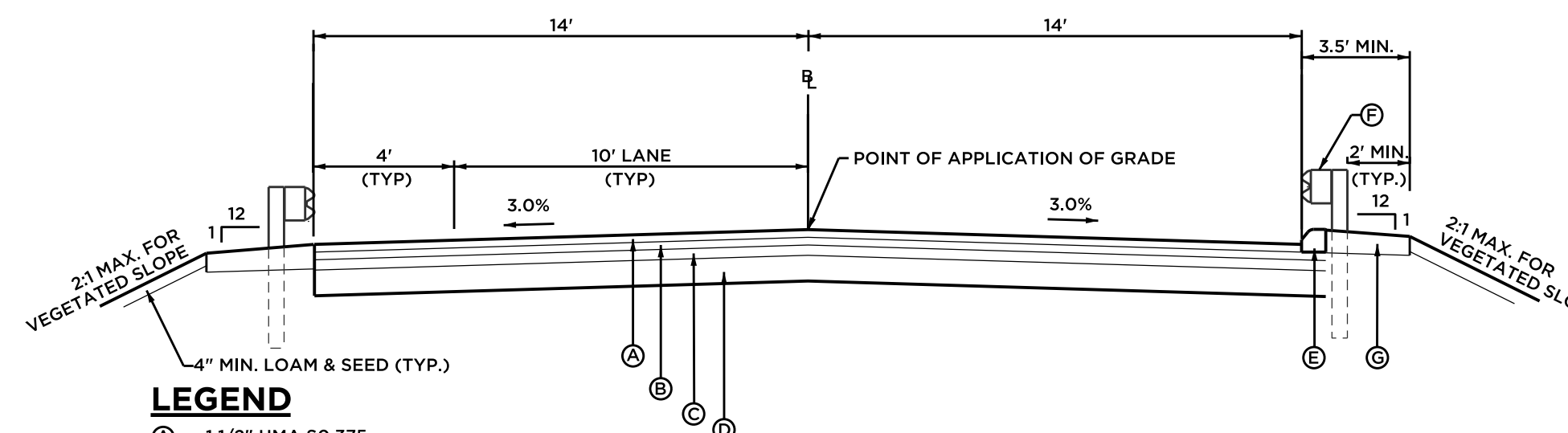
PLAN



SECTION AT SWALE

HAY BALES

NOT TO SCALE

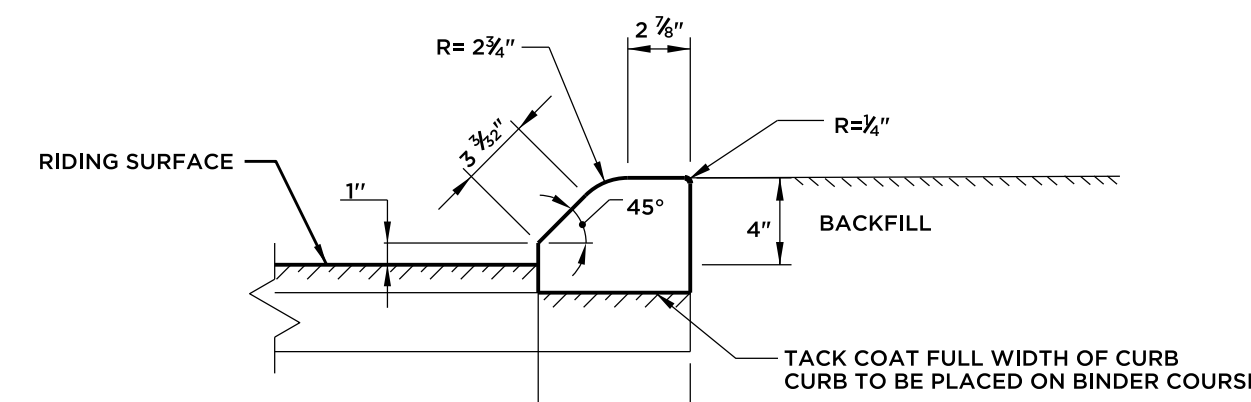


LEGEND

- (A) 1 1/2" HMA S0.375
- (B) 2" HMA S0.5
- (C) 9" PROCESSED AGGREGATE BASE
- (D) 12" SUBBASE
- (E) 4" HIGH BITUMINOUS CONCRETE PARK CURB (WHERE SHOWN ON PLANS)
- (F) THREE BEAM TRANSITION/METAL BEAM RAIL (R-B MASH) (WHERE REQUIRED)
- (G) 6" MIN. PROCESSED AGGREGATE GUIDE RAIL SHELF

TYPICAL ROADWAY SECTION

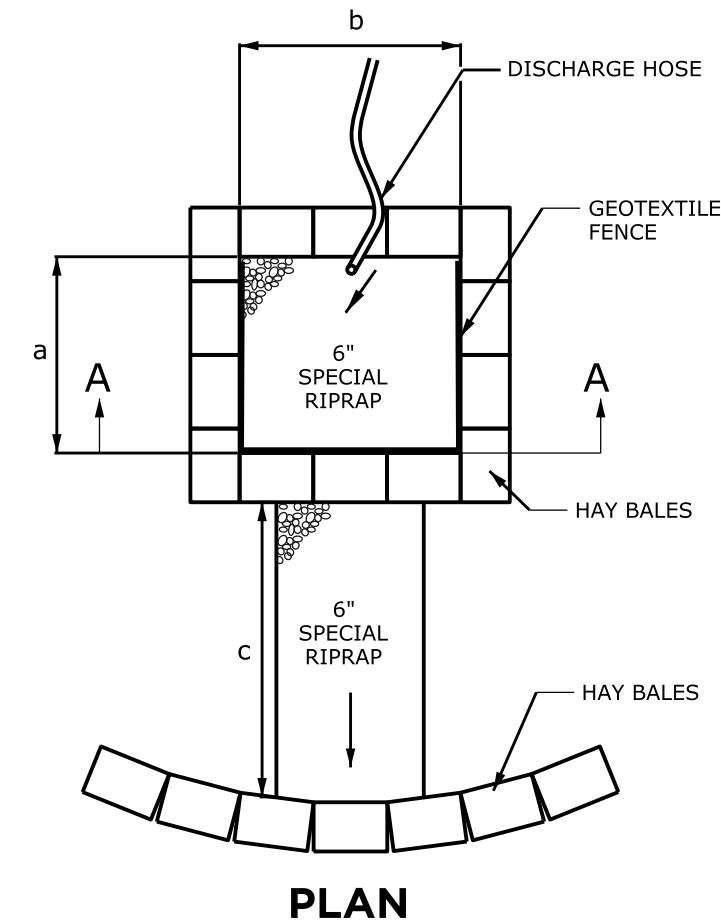
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SECTION

4" HIGH BITUMINOUS CONCRETE PARK CURB

NOT TO SCALE



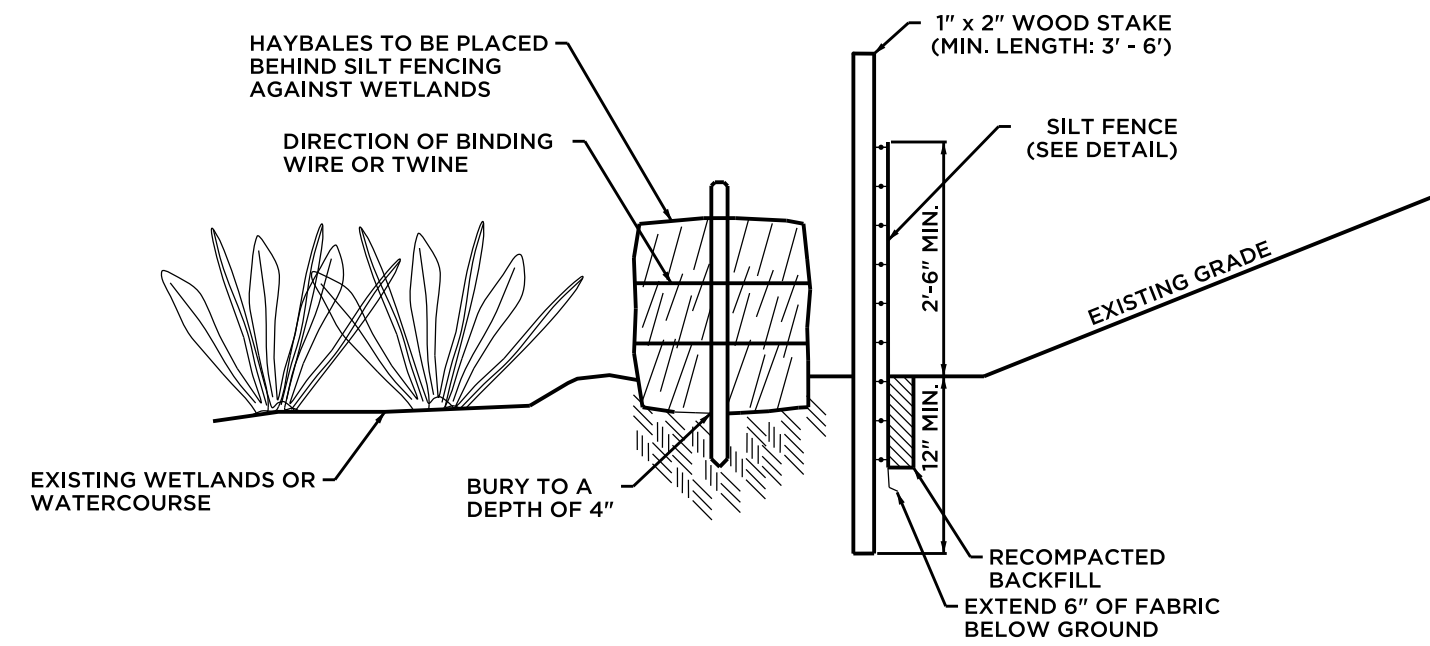
PLAN

SECTION A-A

TEMPORARY DEWATERING BASIN

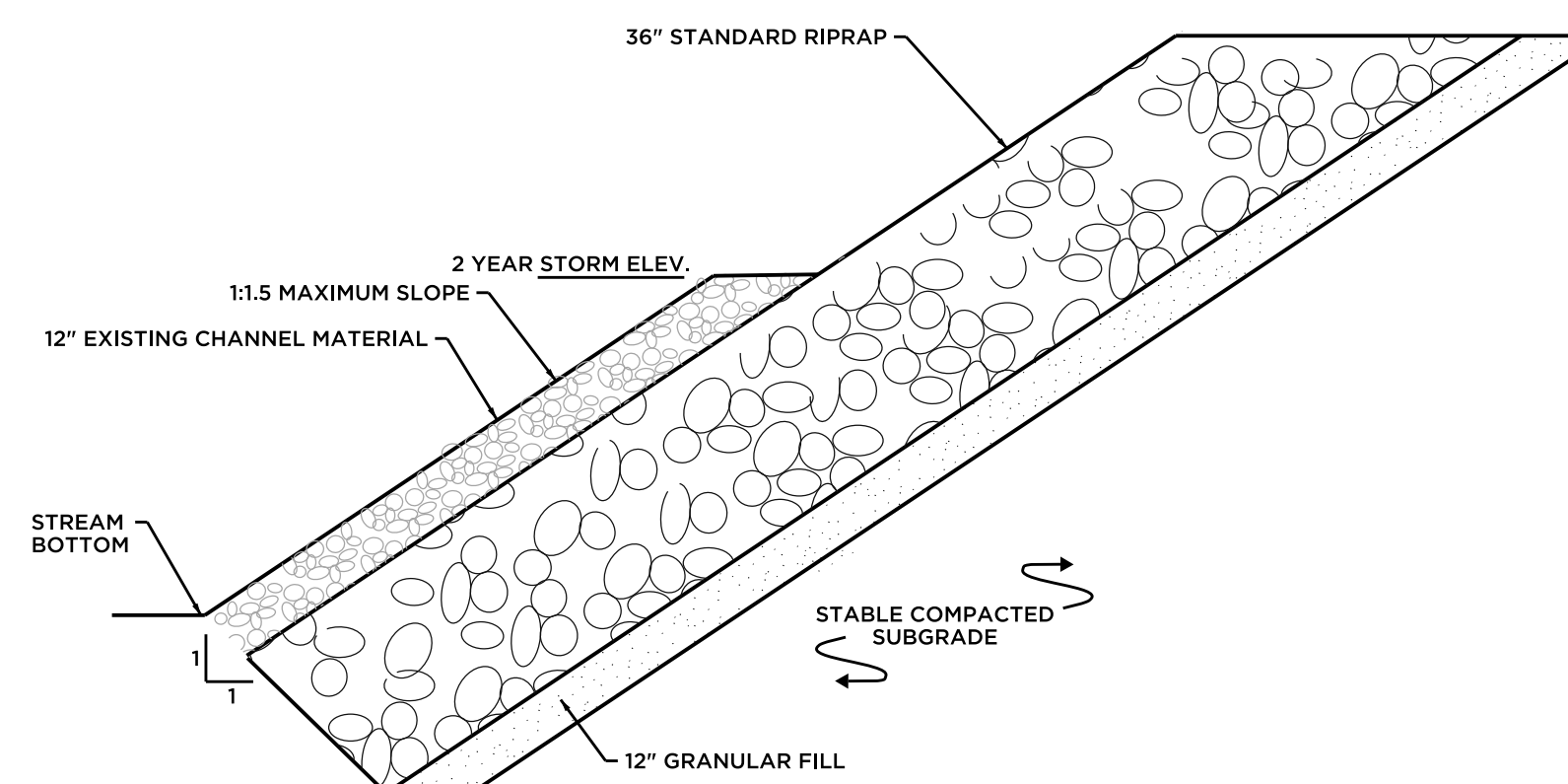
N.T.S.

DIMENSIONS OF DEWATERING BASIN SHALL BE SIZED BY THE CONTRACTOR



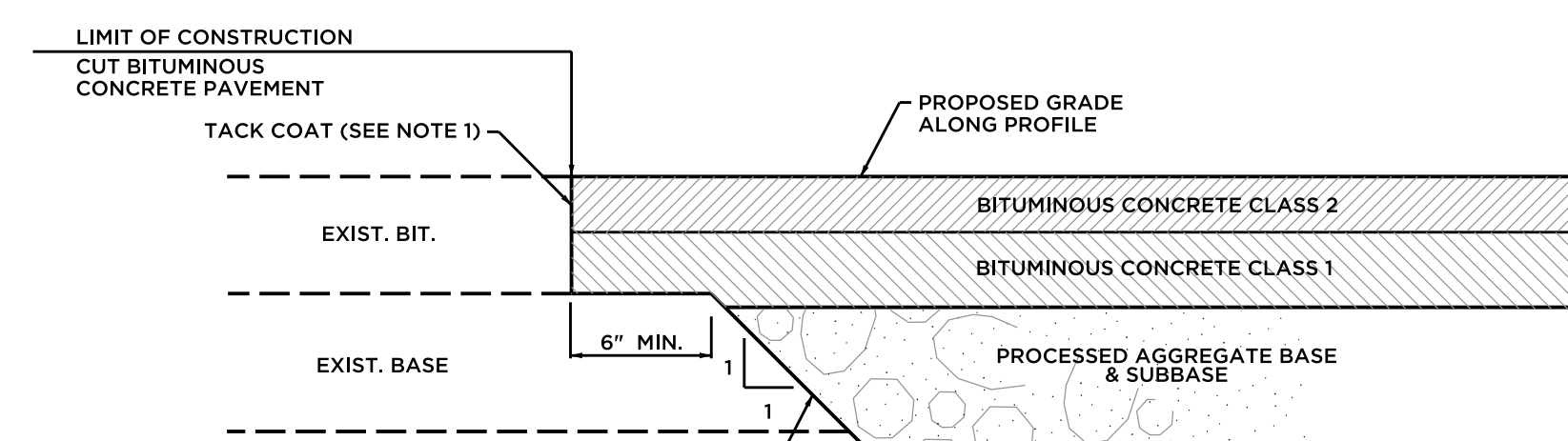
WETLAND/WATERCOURSE PROTECTION

NOT TO SCALE



STANDARD RIPRAP SLOPE STABILIZATION

NOT TO SCALE



NOTES:

- NO SEPARATE PAYMENT TO BE INCLUDED IN THE COST OF BITUMINOUS CONCRETE.
- PAVEMENT TRANSITION DETAIL APPLIES AT ALL LIMITS OF CONSTRUCTION.

PAVEMENT TRANSITION

NOT TO SCALE

Barton & Loguidice
 41 Sequin Drive
 Glastonbury, CT 06033
 Phone: (860) 633-9370
 Fax: (860) 633-5971
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PROJ. ENGINEER	DPL	REPLACEMENT OF QUARRY RD BRIDGE
PROJ. MANAGER	KBF	
OFFICE REVIEW	MMZ	
REVISIONS		PREPARED FOR TOWN OF SUFFIELD
REVISIONS		TYPICAL SECTIONS & DETAILS
REVISIONS		QUARRY ROAD SUFFIELD, CT
PROJECT	DATE	SHEET NO. 2 OF 13
SCALE: NOT TO SCALE	3157-31 03/05/25	

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS:
DESIGN SPECIFICATIONS:

MATERIAL STRENGTHS:

LIVE LOAD:

FUTURE PAVING ALLOWANCE: NONE

CLASS PPC 03340 CONCRETE: CLASS PPC 03340 CONCRETE SHALL BE USED FOR THE ENTIRE SUBSTRUCTURE.

CLASS PPC 04460 CONCRETE: CLASS PPC 04460 CONCRETE SHALL BE USED FOR CURBS.

CLASS PPC 04462 CONCRETE: CLASS PPC 04462 CONCRETE SHALL BE USED FOR TOP SLABS AND MOMENT SLABS.

FOUNDATION PRESSURES:

DIMENSIONS:

EXISTING DIMENSIONS:

UTILITIES:

MASH TEST LEVEL:

JOINT SEAL:

EXPOSED EDGES:

CONCRETE COVER:

REINFORCEMENT:

PREFORMED EXPANSION JOINT FILLER:

CONSTRUCTION JOINTS:

CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 819 (2024), WITH LATEST SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS NINTH EDITION (AASHTO 2020) WITH 2021 ERRATA, AS SUPPLEMENTED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL (2003), WITH LATEST REVISIONS.

CONCRETE:
CLASS PPC 03340 BASED ON f'c = 3,000 PSI
CLASS PPC 04460 BASED ON f'c = 4,000 PSI
CLASS PPC 04462 BASED ON f'c = 5,000 PSI
PRECAST CONCRETE f'c = 5,000 PSI (MIN.)

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."

REINFORCEMENT:
REINFORCING BARS (ASTM A615 GRADE 60) fy = 60,000 PSI

HL-93, LEGAL AND PERMIT VEHICLES

THE VARIOUS GROUP LOADINGS NOTED ON THE SUBSTRUCTURE PLAN SHEETS REFER TO THE GROUP LOADS AS GIVEN IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

WHEN DECIMAL DIMENSIONS ARE GIVEN TO LESS THAN THREE DECIMAL PLACES, THE OMITTED DIGITS SHALL BE ASSUMED TO BE ZEROS.

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.

THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE PROJECT LIMITS AND SHALL BE PROTECTED DURING CONSTRUCTION:
EVERSOURCE ENERGY, FRONTIER COMMUNICATIONS OF CT.

THE CONTRACTOR SHALL COORDINATE ALL WORK RELATED TO UTILITY RELOCATION WITH THE RESPECTIVE UTILITY COMPANIES.

THE 3-TUBE CURB MOUNTED BRIDGE RAIL WAS DESIGNED AND CRASH TESTED TO MEET THE TL-4 CRITERIA FOR MASH 2016. THE TRANSITION WAS DESIGNED TO MEET THE TL-3 CRITERIA FOR MASH 2016.

CONCRETE NOTES:

JOINT SEAL SHALL CONFORM TO THE CONNECTICUT DEPARTMENT OF TRANSPORTATION FORM 818 (2022), WITH SUPPLEMENTAL SPECIFICATIONS DATED JANUARY 2022.

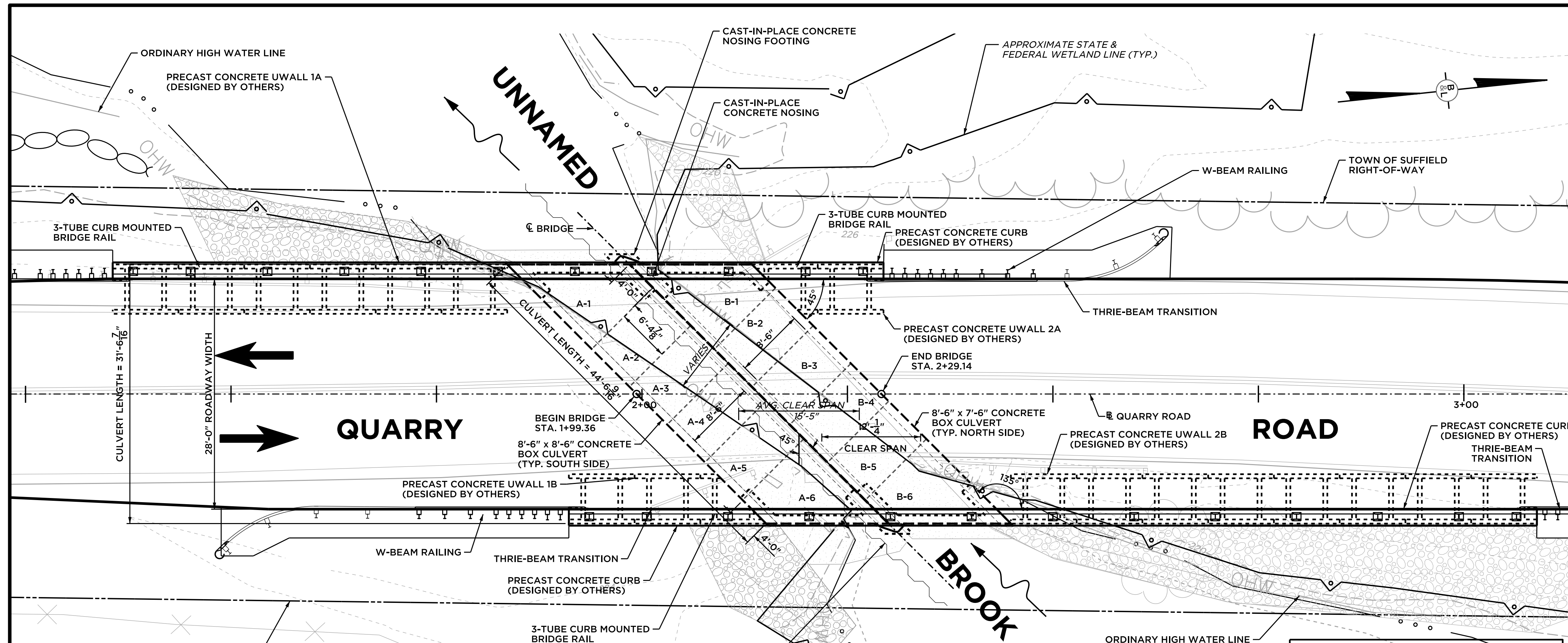
EXPOSED EDGES OF CONCRETE SHALL BE BEVELED 1"X1" UNLESS DIMENSIONED OTHERWISE.

ALL REINFORCEMENT SHALL HAVE TWO INCHES COVER UNLESS DIMENSIONED OTHERWISE.

ALL REINFORCEMENT SHALL BE GALVANIZED AFTER FABRICATION UNLESS NOTED OTHERWISE. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A767, CLASS 1, INCLUDING SUPPLEMENTAL REQUIREMENTS. THE COST OF FURNISHING AND PLACING THIS REINFORCEMENT SHALL BE INCLUDED IN THE ITEM "DEFORMED STEEL BARS - GALVANIZED".

1/2" PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO SPECIAL PROVISION "1/2" PREFORMED EXPANSION JOINT FILLER".

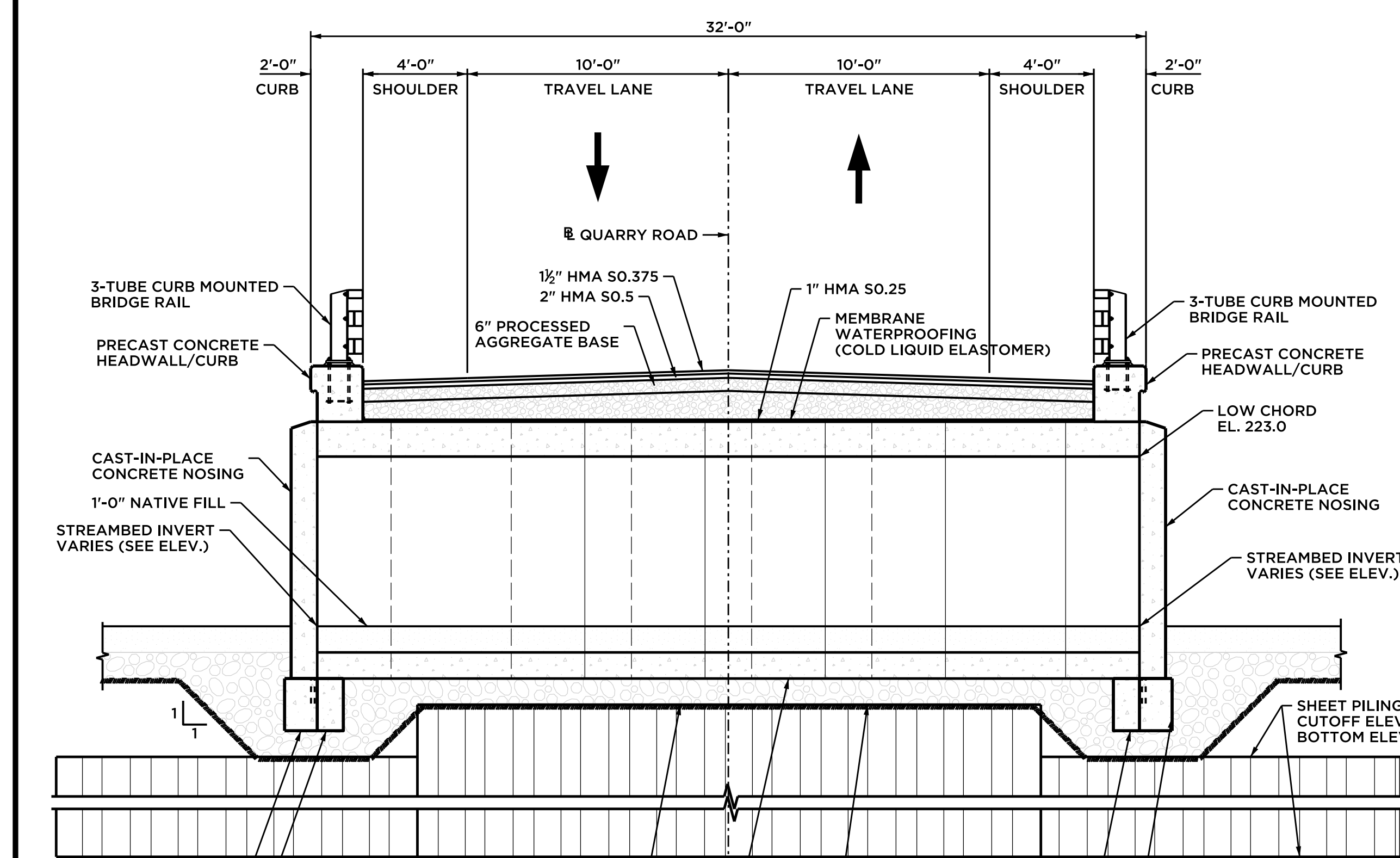
CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.



BRIDGE LAYOUT

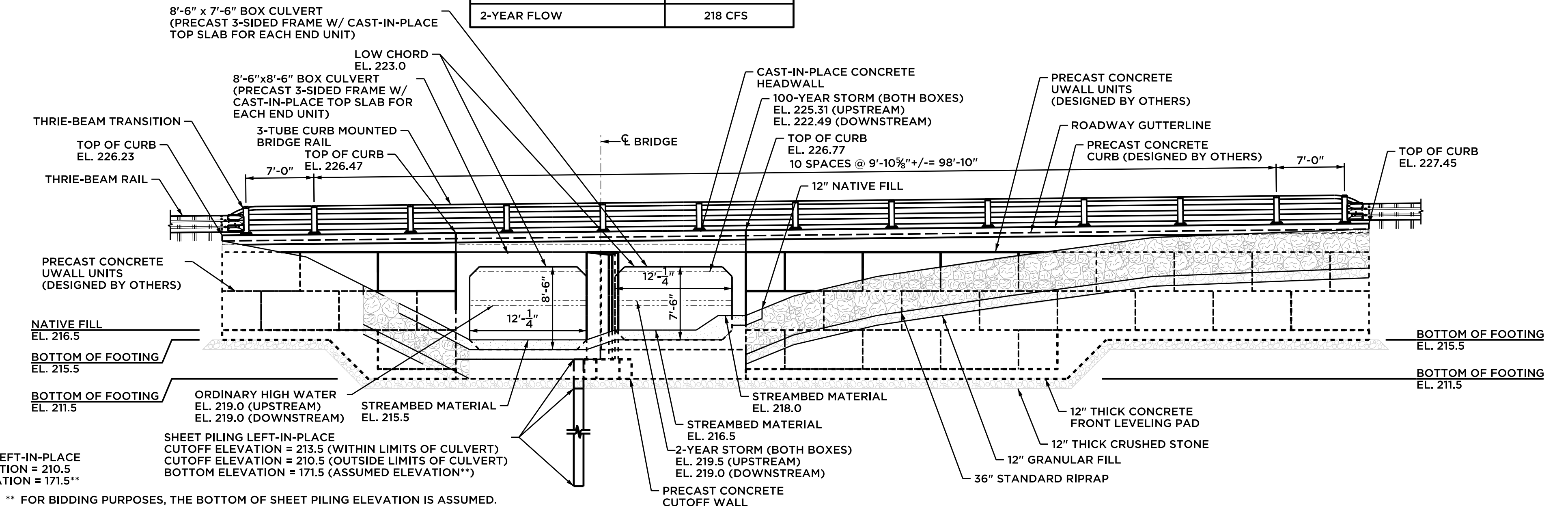
SCALE: 1/8"=1'-0"

HYDRAULIC DATA	
DRAINAGE AREA	6.24 MI. ²
DESIGN FREQUENCY	100-YEAR
DESIGN DISCHARGE	1,100 CFS
AVERAGE DAILY FLOW ELEVATION	216.6
UPSTREAM DESIGN WATER SURFACE ELEVATION	225.53
DOWNSTREAM DESIGN WATER SURFACE ELEVATION	222.57
MAXIMUM SCOUR ELEVATION FREQUENCY DISCHARGE	N/A
WORST CASE SCOUR SUBSTRUCTURE UNIT	N/A
2-YEAR FLOW	218 CFS



LONGITUDINAL SECTION

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



ELEVATION

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

SHIPPING DATA

MEMBER	SHIPPING LENGTH	SHIPPING HEIGHT	SHIPPING WIDTH	SHIPPING WEIGHT
B1 & B6	14'-6"	10'-10"	10'-6"	39 KIP
B7 & B12	14'-6"	9'-10"	10'-6"	36 KIP
B2 - B5	6'-6"	10'-10"	10'-6"	40.5 KIP
B6 - B11	6'-6"	9'-10"	10'-6"	38.5 KIP

CONCRETE NOTES:

CAST-IN-PLACE CONCRETE ITEMS:

PAY ITEM	BRIDGE COMPONENT	PCC CLASS
FOOTING CONCRETE	NOSING, NOSING FOOTING, CUTOFF WALLS, & RETURN WALLS	PCC03340
BARRIER WALL CONCRETE	CONCRETE CURBS	PCC04460
BRIDGE DECK CONCRETE	END CULVERT TOP SLAB, MOMENT SLABS	PCC04462

THE FOLLOWING CONCRETE CLASSES ARE REQUIRED FOR CAST-IN PLACE BRIDGE COMPONENTS:

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.

Barton & Loguidice
41 Sequin Drive
Glastonbury, CT 06033
Phone: (860) 633-9770
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PROJ. ENGINEER: KBF
PROJ. MANAGER: KBF
OFFICE REVIEW: MMZ

REPLACEMENT OF QUARRY RD BRIDGE
PREPARED FOR TOWN OF SUFFIELD
GENERAL PLAN

QUARRY ROAD SUFFIELD, CT

PROJECT: 3157-31 DATE: 03/05/25 SHEET NO. 3 OF 13

SCALE: AS NOTED

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT		PROJECT NAME REPLACEMENT OF BRIDGE NO.139001 LOCATION QUARRY ROAD, SUFFIELD, CT			
ANCHOR ENGINEERING				SURFACE ELEV.		HOLE NO. B-1			
TYPE	AUGER	CASING	SAMPLER	CORE BAR	OFFSET	LINE & STA.	GROUND WATER OBSERVATIONS	START DATE	
HSA			SS				AT 7.5 FT AFTER 0 HOURS	8/6/19	
SIZE I.D.	3.75"		1.375"			N. COORDINATE	AT FT AFTER HOURS	FINISH DATE	8/6/19
HAMMER WT.			140lbs			E. COORDINATE			
HAMMER FALL			30"						
DEPTH	SAMPLE		A		STRATUM DESCRIPTION + REMARKS				ELEV.
0	NO.	BLOWS/6"	DEPTH						
1	2-3-4-5	0.0'-2.0'			BR SANDY TOPSOIL			0.10	
2	2-3-4-4	2.0'-4.0'			BR FINE-CRS SAND, LITTLE SILT, TRACE GRAVEL & COBBLES - FILL				
3	1-1-2-2	4.0'-6.0'			DARK BR FINE-MED.SAND, SOME SILT, TRACE ROOTS - FILL			3.0	
4	2-3-4-4	6.0'-8.0'			GREY FINE SAND, SOME SILT			7.0	
5					BR FINE-MEDIUM TO FINE-CRS.SAND, TRACE SILT			8.0	
6	2-1-2	15.0'-16.5'							
7	3-5-8	20.0'-21.5'							
8	3-4-3	25.0'-26.5'							
9	2-2-2	30.0'-31.5'							

LEGEND: COL. A:
SAMPLE TYPE: D-DRY A-AUGER C-CORE U-UNDISTURBED PISTON S-SPLIT SPOON
PROPORTIONS USED: TRACE-0-10% LITTLE-10-20% SOME-20-35% AND-35-50%

DRILLER: J. BREWER
INSPECTOR:
SHEET 1 OF 2 HOLE NO. **B-1**

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT		PROJECT NAME REPLACEMENT OF BRIDGE NO.139001 LOCATION QUARRY ROAD, SUFFIELD, CT			
ANCHOR ENGINEERING				SURFACE ELEV.		HOLE NO. B-1			
TYPE	AUGER	CASING	SAMPLER	CORE BAR	OFFSET	LINE & STA.	GROUND WATER OBSERVATIONS	START DATE	
HSA			SS				AT 7.5 FT AFTER 0 HOURS	8/6/19	
SIZE I.D.	3.75"		1.375"			N. COORDINATE	AT FT AFTER HOURS	FINISH DATE	8/6/19
HAMMER WT.			140lbs			E. COORDINATE			
HAMMER FALL			30"						
DEPTH	SAMPLE		A		STRATUM DESCRIPTION + REMARKS				ELEV.
0	NO.	BLOWS/6"	DEPTH						
10	1-1-2	35.0'-36.5'							
40	3-3-4	40.0'-41.5'			GREY FINE SAND AND SILT			40.5	
					BOTTOM OF BORING @ 41.5'			41.5	

LEGEND: COL. A:
SAMPLE TYPE: D-DRY A-AUGER C-CORE U-UNDISTURBED PISTON S-SPLIT SPOON
PROPORTIONS USED: TRACE-0-10% LITTLE-10-20% SOME-20-35% AND-35-50%

DRILLER: J. BREWER
INSPECTOR:
SHEET 2 OF 2 HOLE NO. **B-1**

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT		PROJECT NAME REPLACEMENT OF BRIDGE NO.139001 LOCATION QUARRY ROAD, SUFFIELD, CT			
ANCHOR ENGINEERING				SURFACE ELEV.		HOLE NO. B-2			
TYPE	AUGER	CASING	SAMPLER	CORE BAR	OFFSET	LINE & STA.	GROUND WATER OBSERVATIONS	START DATE	
HSA			SS				AT 8.5 FT AFTER 0 HOURS	8/6/19	
SIZE I.D.	3.75"		1.375"			N. COORDINATE	AT FT AFTER HOURS	FINISH DATE	8/6/19
HAMMER WT.			140lbs			E. COORDINATE			
HAMMER FALL			30"						
DEPTH	SAMPLE		A		STRATUM DESCRIPTION + REMARKS				ELEV.
0	NO.	BLOWS/6"	DEPTH						
1	3-3-3-2	0.0'-2.0'			BR SANDY TOPSOIL			0.10	
2	2-2-1-2	2.0'-4.0'			BR FINE-CRS SAND, LITTLE SILT, TRACE GRAVEL & COBBLES - FILL			1.0	
3	2-2-4-5	4.0'-6.0'			DARK BR FINE SAND, SOME SILT, TRACE ROOTS - FILL				
5					GREY SILT, TRACE FINE SAND & CLAY			5.0	
10	1-2-4	10.0'-11.5'			BR FINE-MEDIUM TO FINE-CRS.SAND, TRACE SILT & GRAVEL			8.0	
15	2-2-4	15.0'-16.5'							
20	5-7-8	20.0'-21.5'							
25	3-4-3	25.0'-26.5'							
30	2-1-1	30.0'-31.5'							

LEGEND: COL. A:
SAMPLE TYPE: D-DRY A-AUGER C-CORE U-UNDISTURBED PISTON S-SPLIT SPOON
PROPORTIONS USED: TRACE-0-10% LITTLE-10-20% SOME-20-35% AND-35-50%

DRILLER: J. BREWER
INSPECTOR:
SHEET 1 OF 2 HOLE NO. **B-2**

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT		PROJECT NAME REPLACEMENT OF BRIDGE NO.139001 LOCATION QUARRY ROAD, SUFFIELD, CT			
ANCHOR ENGINEERING				SURFACE ELEV.		HOLE NO. B-2			
TYPE	AUGER	CASING	SAMPLER	CORE BAR	OFFSET	LINE & STA.	GROUND WATER OBSERVATIONS	START DATE	
HSA			SS				AT 8.5 FT AFTER 0 HOURS	8/6/19	
SIZE I.D.	3.75"		1.375"			N. COORDINATE	AT FT AFTER HOURS	FINISH DATE	8/6/19
HAMMER WT.			140lbs			E. COORDINATE			
HAMMER FALL			30"						
DEPTH	SAMPLE		A		STRATUM DESCRIPTION + REMARKS				ELEV.
0	NO.	BLOWS/6"	DEPTH						
9	1-2-1	35.0'-36.5'							
40	4-3-5	40.0'-41.5'			BR FINE SAND AND SILT			40.5	
					BOTTOM OF BORING @ 41.5'			41.5	

LEGEND: COL. A:
SAMPLE TYPE: D-DRY A-AUGER C-CORE U-UNDISTURBED PISTON S-SPLIT SPOON
PROPORTIONS USED: TRACE-0-10% LITTLE-10-20% SOME-20-35% AND-35-50%

DRILLER: J. BREWER
INSPECTOR:
SHEET 2 OF 2 HOLE NO. **B-2**

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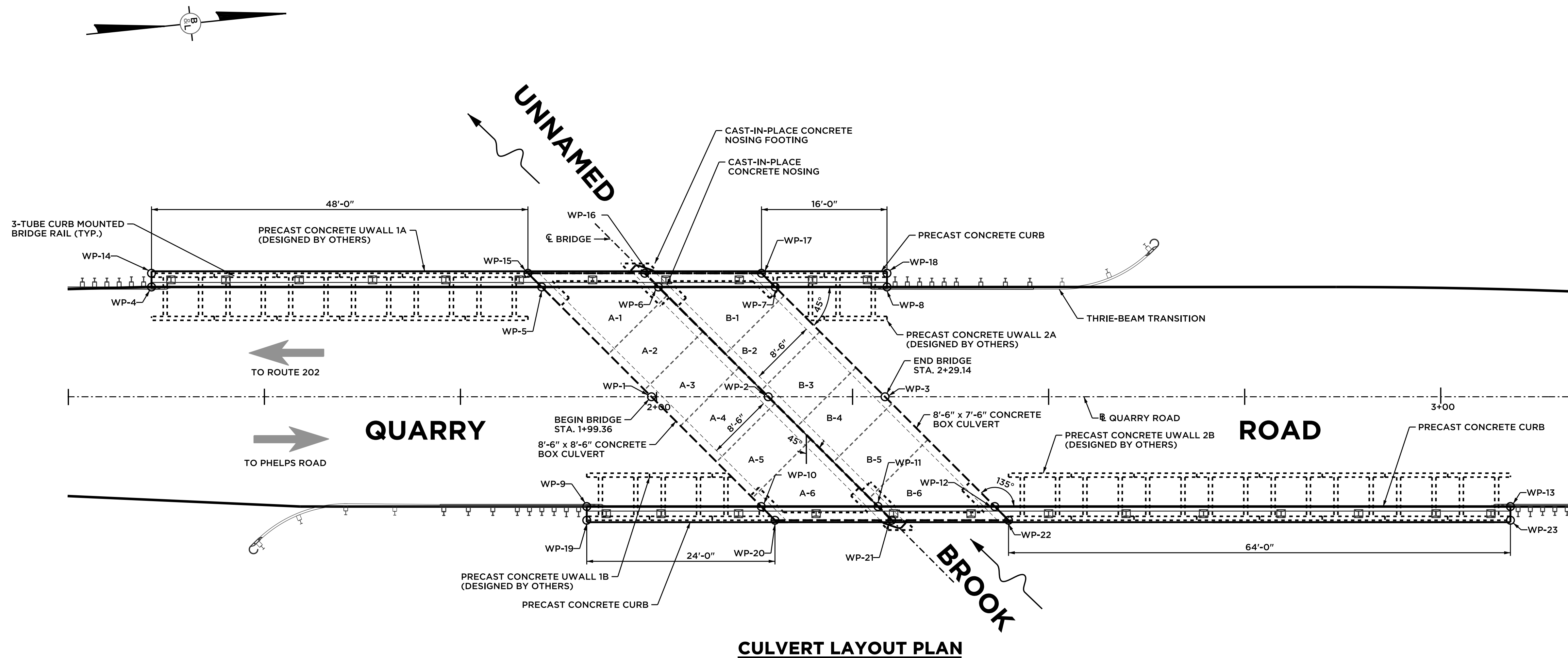
PROJ. ENGINEER: KBF
PROJ. MANAGER: KBF
OFFICE REVIEW: MMZ

REVISIONS

REPLACEMENT OF QUARRY RD BRIDGE
PREPARED FOR
TOWN OF SUFFIELD
BORINGS & GENERAL NOTES

QUARRY ROAD SUFFIELD, CT

PROJECT: QUARRY ROAD DATE: 03/05/25 SHEET NO. 4 OF 13
SCALE: NOT TO SCALE



CULVERT LAYOUT PLAN

WORKING POINTS AND COORDINATES					
WP NO.	DESCRIPTION	NORTHING	EASTING	STATION	OFFSET
1	℄ OF QUARRY ROAD & EXTERIOR EDGE OF CULVERT	921694.97	994885.48	1+99.36	0.00'
2	℄ OF QUARRY ROAD & ℄ OF DOUBLE BOX CULVERTS	921709.78	994887.03	2+14.25	0.00'
3	℄ OF QUARRY ROAD & EXTERIOR EDGE OF CULVERT	921724.59	994888.58	2+29.14	0.00'
4	GUTTERLINE @ SOUTHERN END OF WINGWALL 1A	921633.03	994864.92	1+35.61	14.00'
5	GUTTERLINE @ NORTHERN END OF WINGWALL 1A/EXT. EDGE OF CULVERT	921682.51	994870.10	1+85.36	14.00'
6	GUTTERLINE @ ℄ OF BOX CULVERTS	921697.32	994871.65	2+00.25	14.00'
7	GUTTERLINE @ SOUTHERN END OF WINGWALL 2A/ EXT. EDGE OF CULVERT	921712.13	994873.20	2+15.14	14.00'
8	GUTTERLINE @ NORTHERN END OF WINGWALL 2A	921726.30	994874.68	2+29.39	14.00'
9	GUTTERLINE @ SOUTHERN END OF WINGWALL 1B	921685.31	994898.54	1+91.11	14.00'
10	GUTTERLINE @ NORTHERN END OF WINGWALL 1B/ EXT. EDGE OF CULVERT	921707.44	994900.86	2+13.36	14.00'
11	GUTTERLINE @ ℄ OF BOX CULVERTS	921722.25	994902.41	2+28.25	14.00'
12	GUTTERLINE @ SOUTHERN END OF WINGWALL 2B/ EXT. EDGE OF CULVERT	921737.06	994903.96	2+43.14	14.00'
13	GUTTERLINE @ NORTHERN END OF WINGWALL 2B	921802.45	994910.81	3+08.89	14.00'
14	SOUTHERN CORNER OF WINGWALL 1A	921633.21	994863.18	1+35.61	15.75'
15	SOUTHWEST CORNER OF BOX CULVERT	921680.95	994868.18	1+83.61	15.75'
16	℄ OF BOX CULVERTS	921695.76	994869.73	1+98.50	15.75'
17	NORTHWEST CORNER OF BOX CULVERT	921710.57	994871.28	2+13.39	15.75'
18	NORTHERN CORNER OF WINGWALL 2A	921726.48	994872.94	2+29.39	15.75'
19	SOUTHERN CORNER OF WINGWALL 1B	921685.13	994900.29	1+91.11	15.75'
20	SOUTHEAST CORNER OF BOX CULVERT	921709.00	994902.78	2+15.11	15.75'
21	℄ OF BOX CULVERTS	921723.81	994904.33	2+30.00	15.75'
22	NORTHEAST CORNER OF BOX CULVERT	921738.62	994905.88	2+44.89	15.75'
23	NORTHERN CORNER OF WINGWALL 2B	921802.27	994912.55	3+08.89	15.75'

FINISHED ELEVATIONS (AT TOP OF WEARING SURFACE)						
STATION	DESCRIPTION	LEFT GUTTER LINE		℄	RIGHT GUTTER LINE	
		ELEVATION	OFFSET	ELEVATION	ELEVATION	OFFSET
1+99.36	℄ OF QUARRY RD. & EXT. OF CULVERT	225.73	14.00'	226.15	225.73	14.00'
2+14.25	℄ OF QUARRY RD. & ℄ OF CULVERTS	225.88	14.00'	226.30	225.88	14.00'
2+29.14	℄ OF QUARRY RD. & EXT. OF CULVERT	226.03	14.00'	226.45	226.03	14.00'
1+35.61	GUTTERLINE @ CORNER OF WW1A	225.09	14.00'	225.51	225.09	14.00'
1+85.36	GUTTERLINE @ CORNER OF WW1A	225.59	14.00'	226.01	225.59	14.00'
2+15.14	GUTTERLINE @ CORNER OF WW2A	225.89	14.00'	226.31	225.89	14.00'
2+29.39	GUTTERLINE @ CORNER OF WW2A	226.03	14.00'	226.45	226.03	14.00'
1+91.11	GUTTERLINE @ CORNER OF WW1B	225.65	14.00'	226.07	225.65	14.00'
2+13.36	GUTTERLINE @ CORNER OF WW1B	225.87	14.00'	226.29	225.87	14.00'
2+43.14	GUTTERLINE @ CORNER OF WW2B	226.17	14.00'	226.59	226.17	14.00'
3+08.89	GUTTERLINE @ CORNER OF WW2B	226.87	14.00'	227.29	226.87	14.00'

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PROJ. ENGINEER: KBF
 PROJ. MANAGER: KBF
 OFFICE REVIEW: MMZ

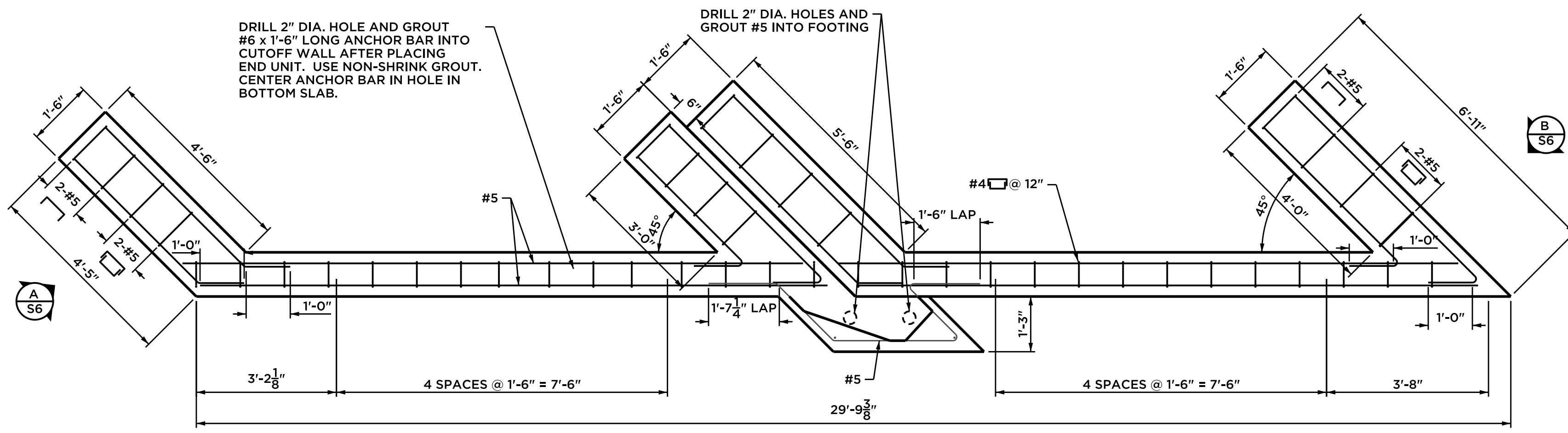
REVISIONS:

QUARRY ROAD, SUFFIELD, CT

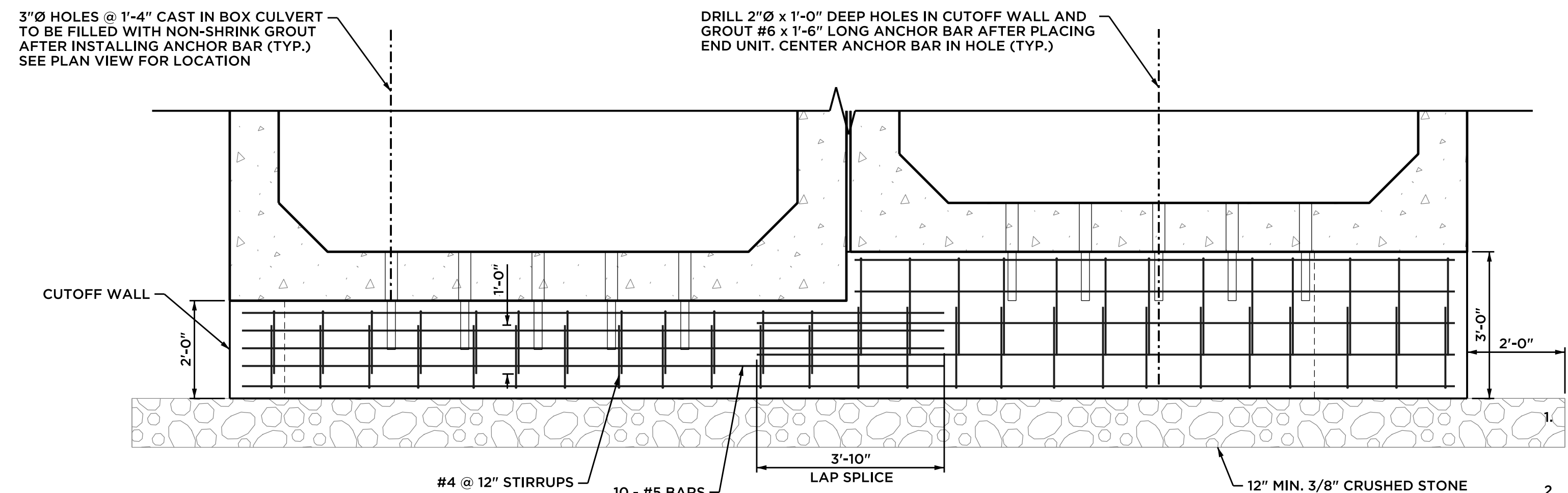
REPLACEMENT OF QUARRY RD BRIDGE
 PREPARED FOR
 TOWN OF SUFFIELD
 LAYOUT PLAN

PROJECT: 3157-31 DATE: 03/05/25 SHEET NO. 5 OF 13

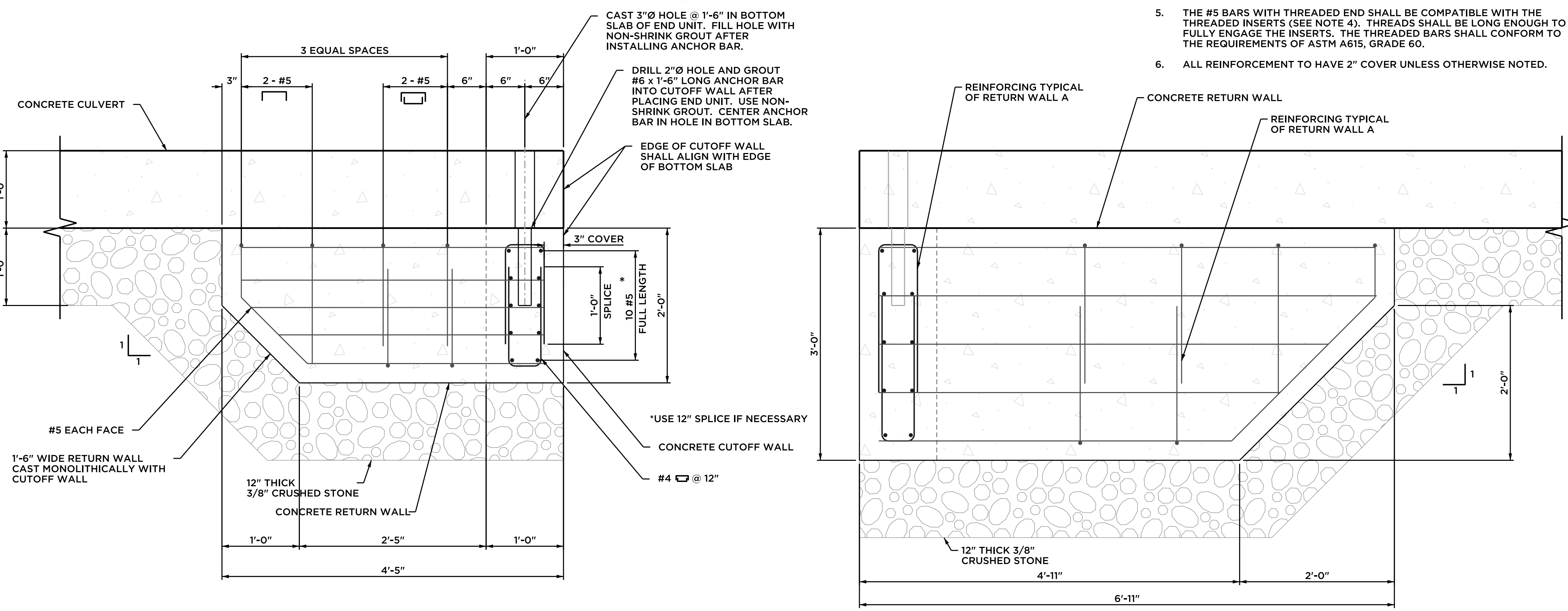
SCALE: AS NOTED



CUTOFF WALL PLAN
EAST (INLET) CUTOFF WALL SHOWN
WEST (OUTLET) CUTOFF WALL MIRROR IMAGE

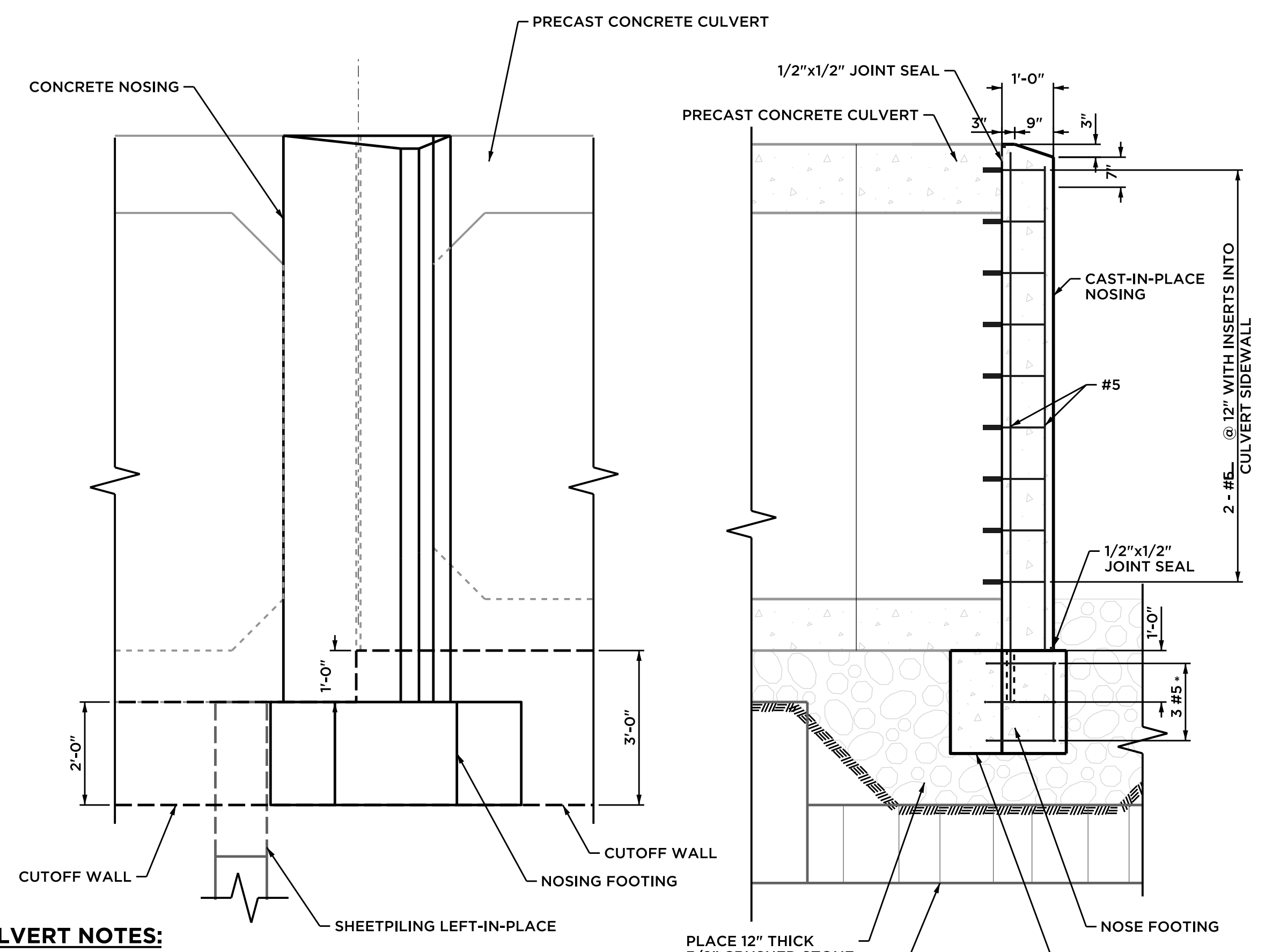


CUTOFF WALL ELEVATION
EAST (INLET) CUTOFF WALL AS SHOWN
WEST (OUTLET) CUTOFF WALL MIRROR IMAGE
CAST-IN-PLACE CUTOFF WALL DETAILS
 SCALE: 1/2" = 1'-0"



A RETURN WALL
 NOT TO SCALE

B RETURN WALL
 NOT TO SCALE

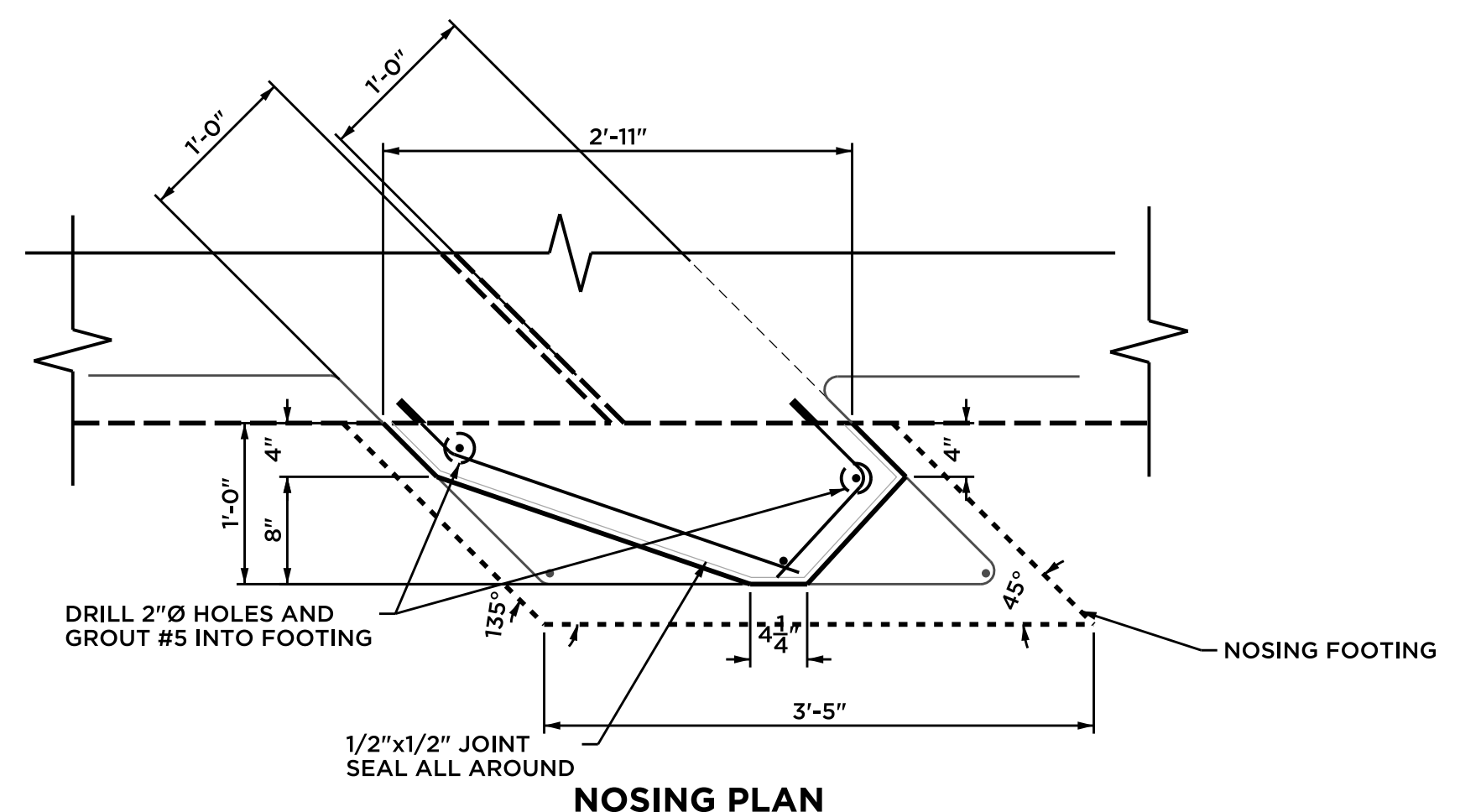


NOSING ELEVATION

NOSING SECTION

PRECAST CONCRETE BOX CULVERT NOTES:

1. THE CONTRACTOR SHALL DESIGN, MANUFACTURE, AND CONSTRUCT PRECAST CONCRETE BOX CULVERT IN ACCORDANCE WITH THE SPECIAL PROVISION FOR "PRECAST CONCRETE BOX CULVERTS" AND THE INSIDE DIMENSIONS, LENGTH, AND DETAILS SHOWN ON THESE PLANS.
2. ALL INSERTS OR HOLES CAST INTO THE CULVERT SECTIONS FOR THE SOLE PURPOSE OF HANDLING AND SETTING THE UNITS SHALL BE GROUTED OVER TO A SMOOTH FINISH UPON COMPLETION OF THE WORK.
3. NON-SHRINK GROUT SHALL BE USED TO GROUT THE REINFORCEMENT.
4. INSERTS SHALL BE ONE OF THE FOLLOWING:
 1. STAR EXPANSION INDUSTRIES CORP. TYPE P-35-T
 2. RICHMOND SCREW ANCHOR CO. TYPE LF
 3. DAYTON SUPERIOR CORP. TYPE F-57
5. THE #5 BARS WITH THREADED END SHALL BE COMPATIBLE WITH THE THREADED INSERTS (SEE NOTE 4). THREADS SHALL BE LONG ENOUGH TO FULLY ENGAGE THE INSERTS. THE THREADED BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60.
6. ALL REINFORCEMENT TO HAVE 2" COVER UNLESS OTHERWISE NOTED.



NOSING PLAN

NOSING DETAILS

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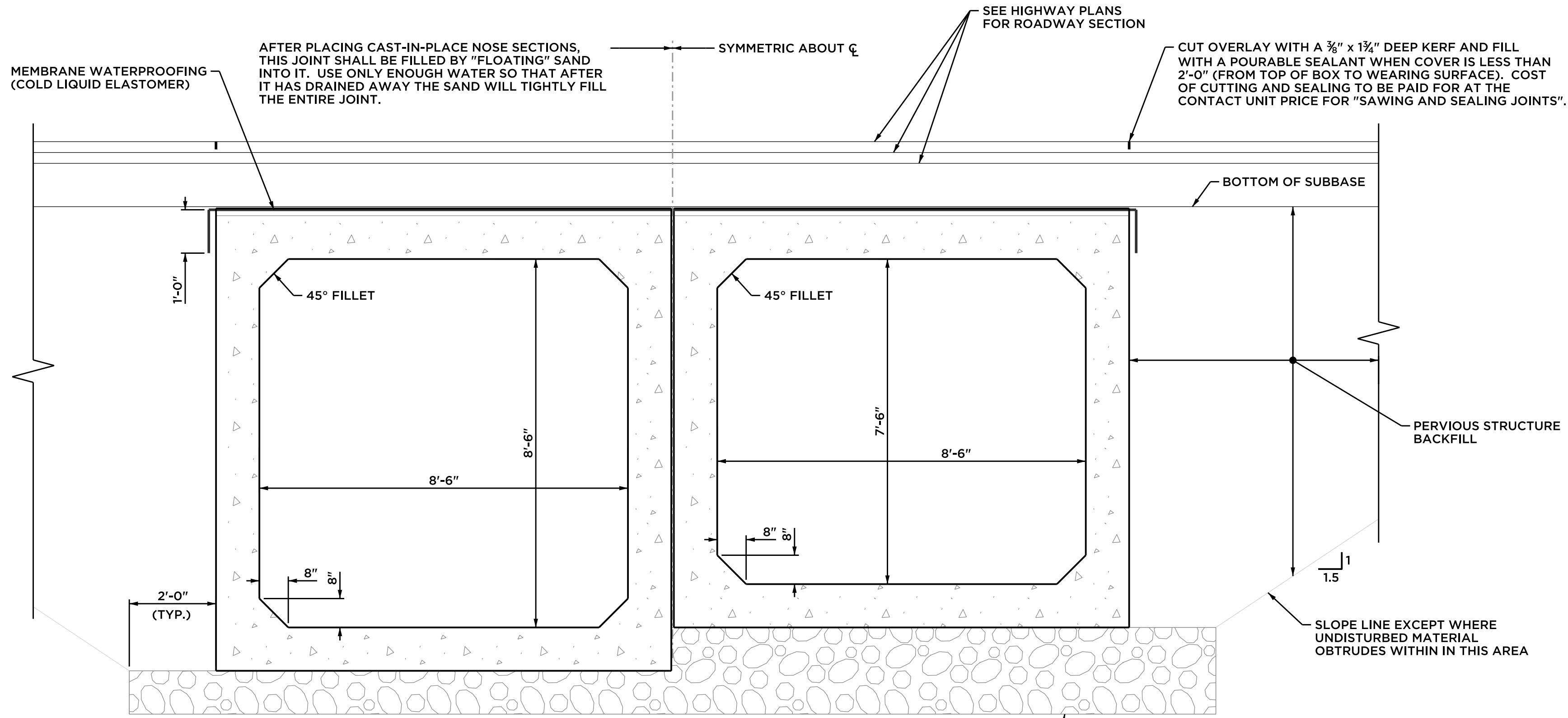
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PROJ. ENGINEER KBF
 PROJ. MANAGER KBF
 OFFICE REVIEW MMZ

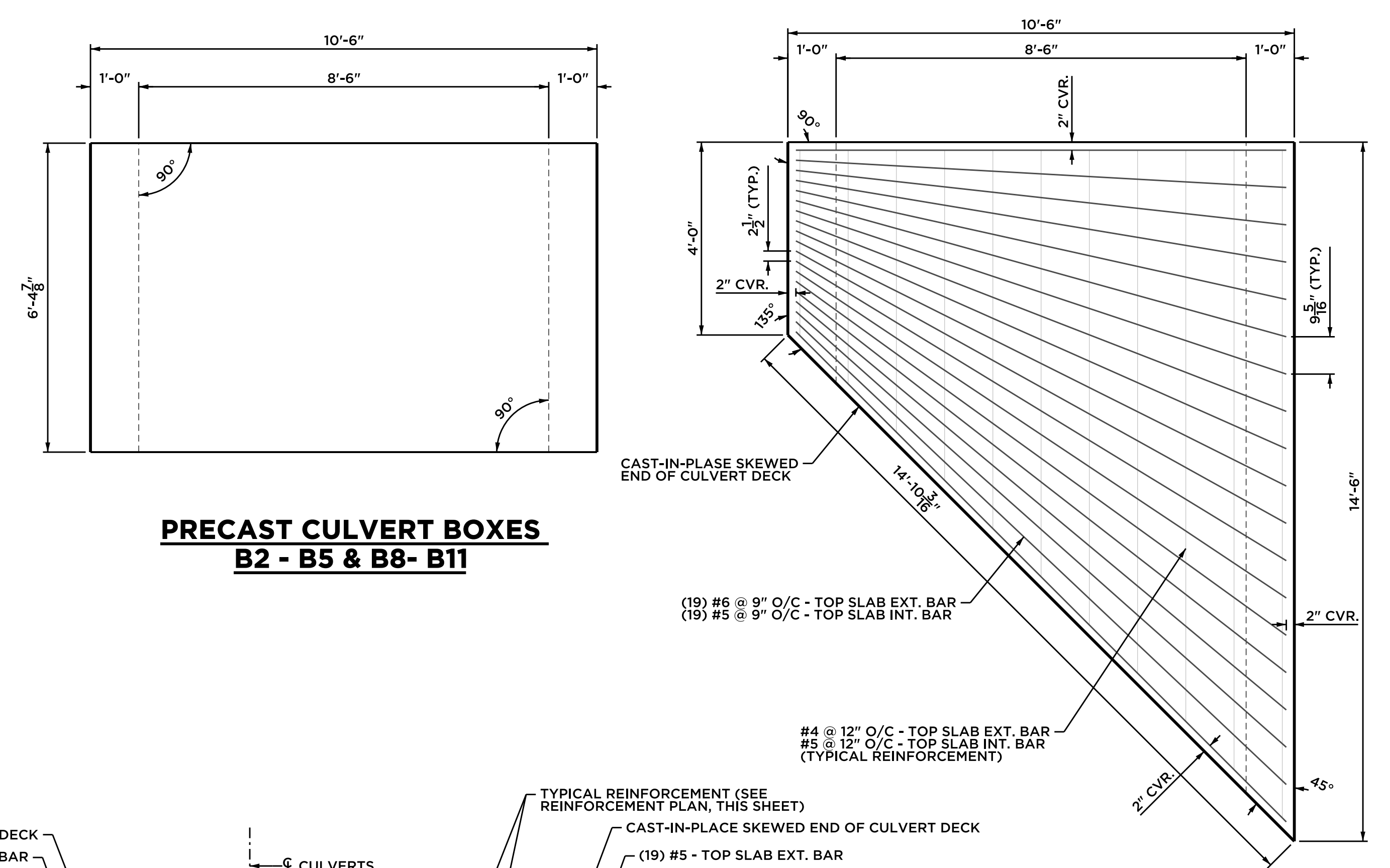
REPLACEMENT OF QUARRY RD BRIDGE
 PREPARED FOR
 TOWN OF SUFFIELD
CUTOFF WALL & NOSING DETAIL
 QUARRY ROAD SUFFIELD, CT

REVISIONS	PROJECT	DATE	SHEET NO.	OF	13
	3157-31	03/05/25	6		

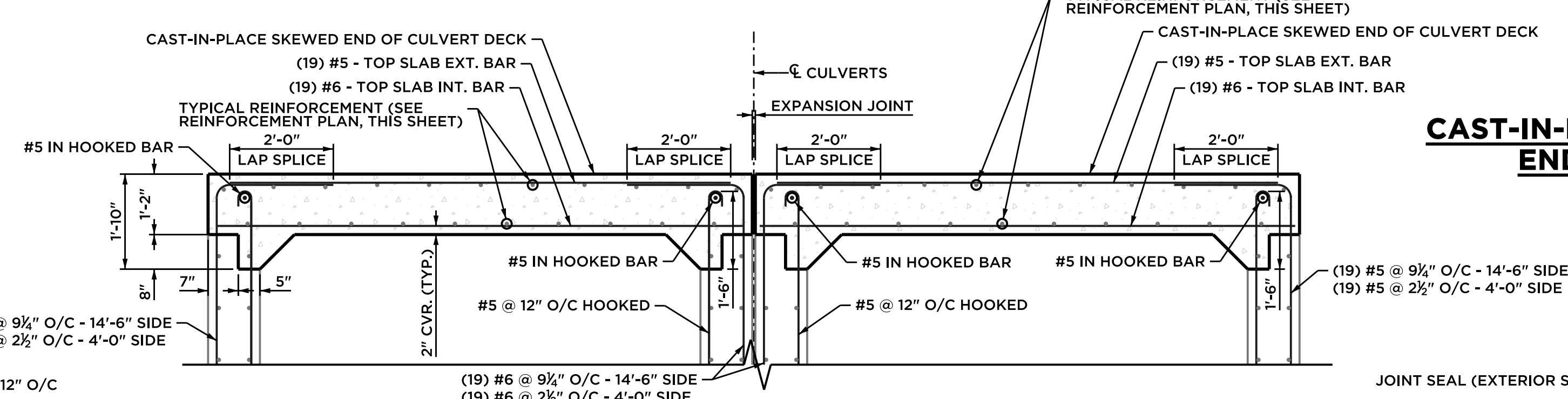
SCALE: AS NOTED



**PRECAST BOX CULVERT
TYPICAL SECTION**

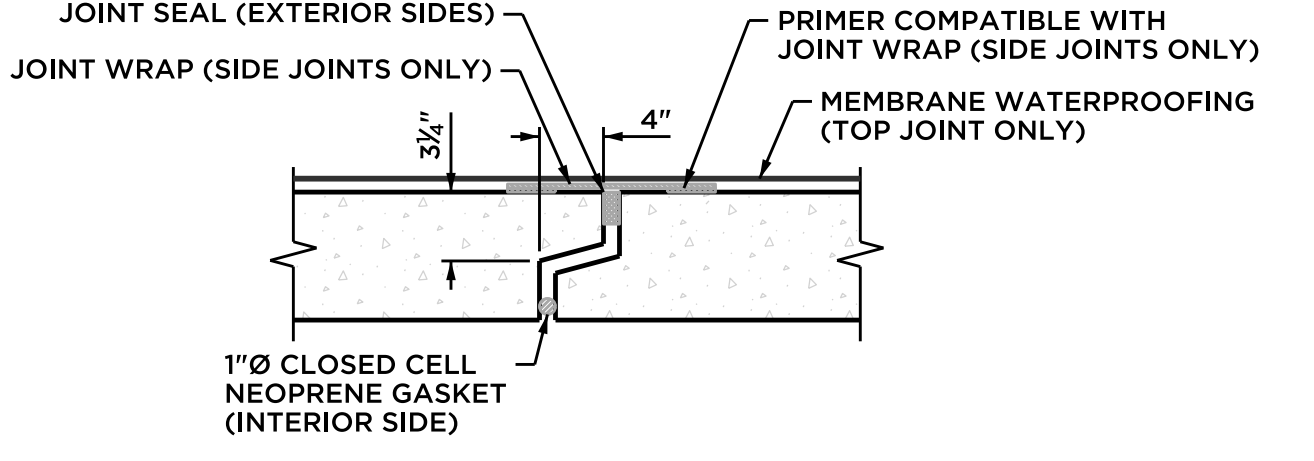


**PRECAST CULVERT BOXES
B2 - B5 & B8- B11**

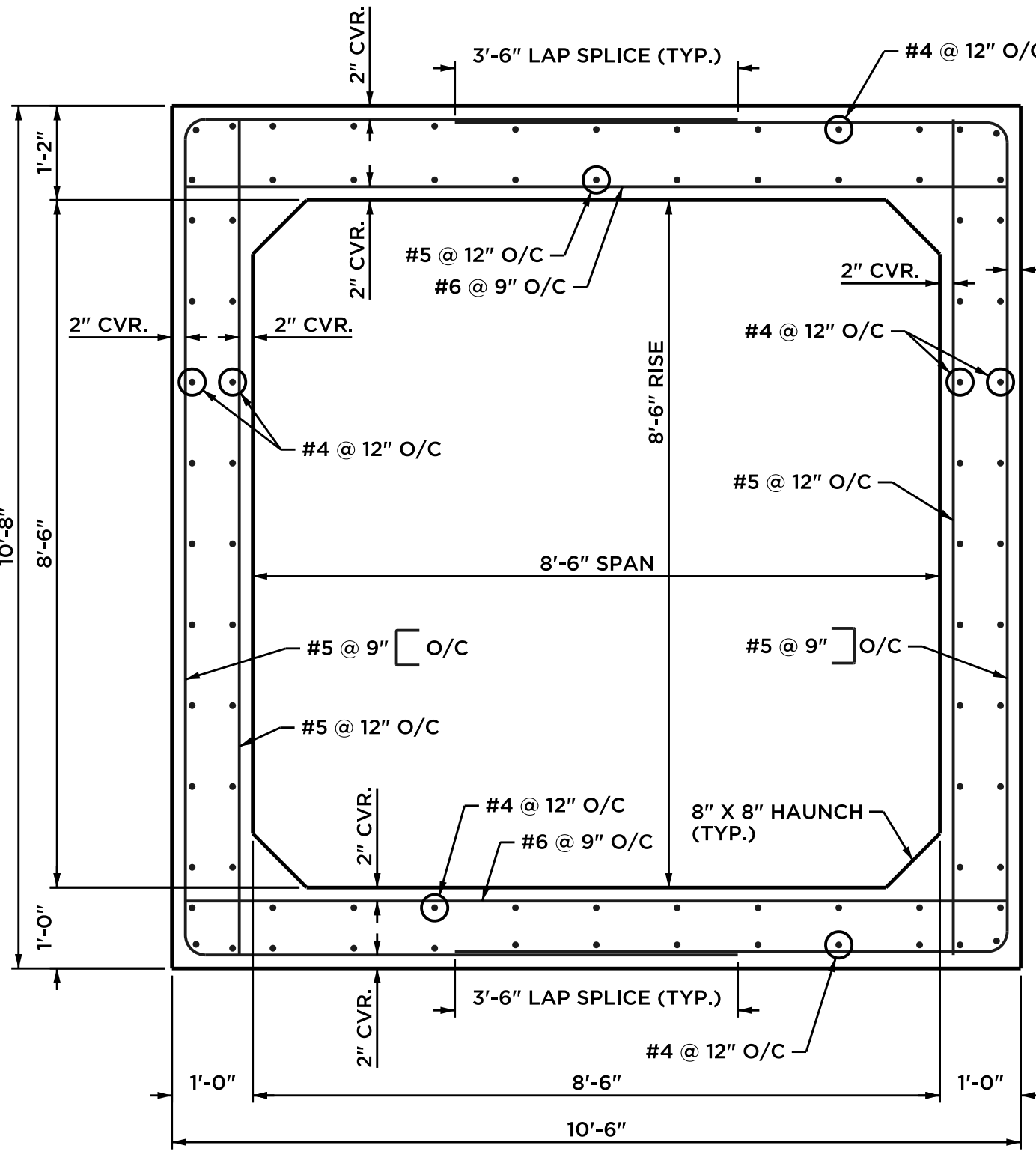


**CAST-IN-PLACE CONCRETE SKEWED END CULVERT
TOP SLAB: B1, B6, B7, B12**

NOTE:
CONCRETE TOP SLAB IS DESIGNED FOR CAST-IN-PLACE APPLICATION. THE CONTRACTOR MAY SUBMIT A DETAILED PROPOSAL FOR PRECAST CONCRETE ALTERNATIVES FOR ENGINEER REVIEW AND APPROVAL. THE PROPOSAL SHALL INCLUDE, BUT NOT BE LIMITED TO, SHOP DRAWINGS, CONNECTION DETAILS, ERECTION SEQUENCE, STRUCTURAL CALCULATIONS, AND QUALITY CONTROL PROCEDURES. APPROVAL OF PRECAST ALTERNATIVES IS AT THE SOLE DISCRETION OF THE ENGINEER.

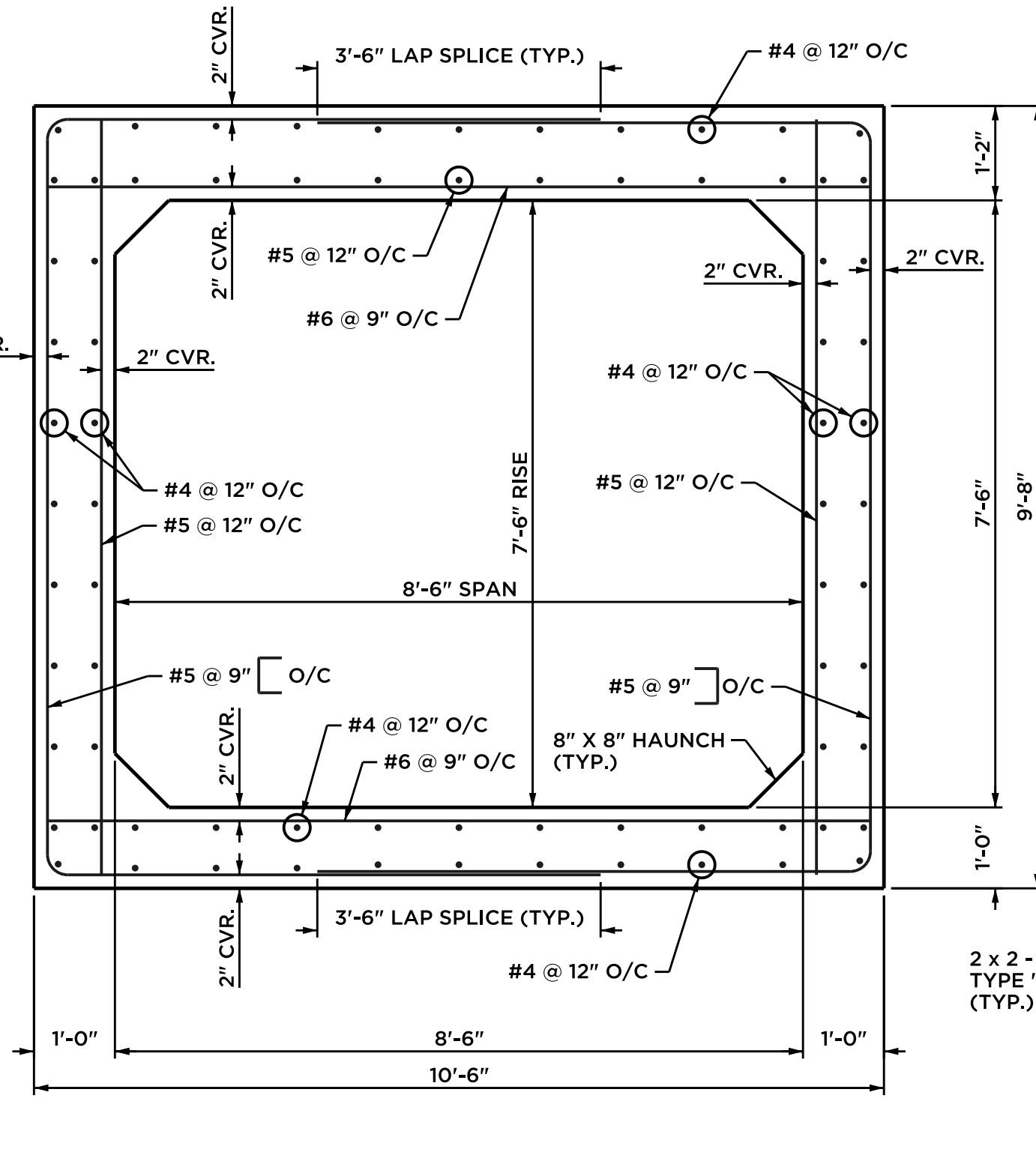


CULVERT JOINT DETAIL



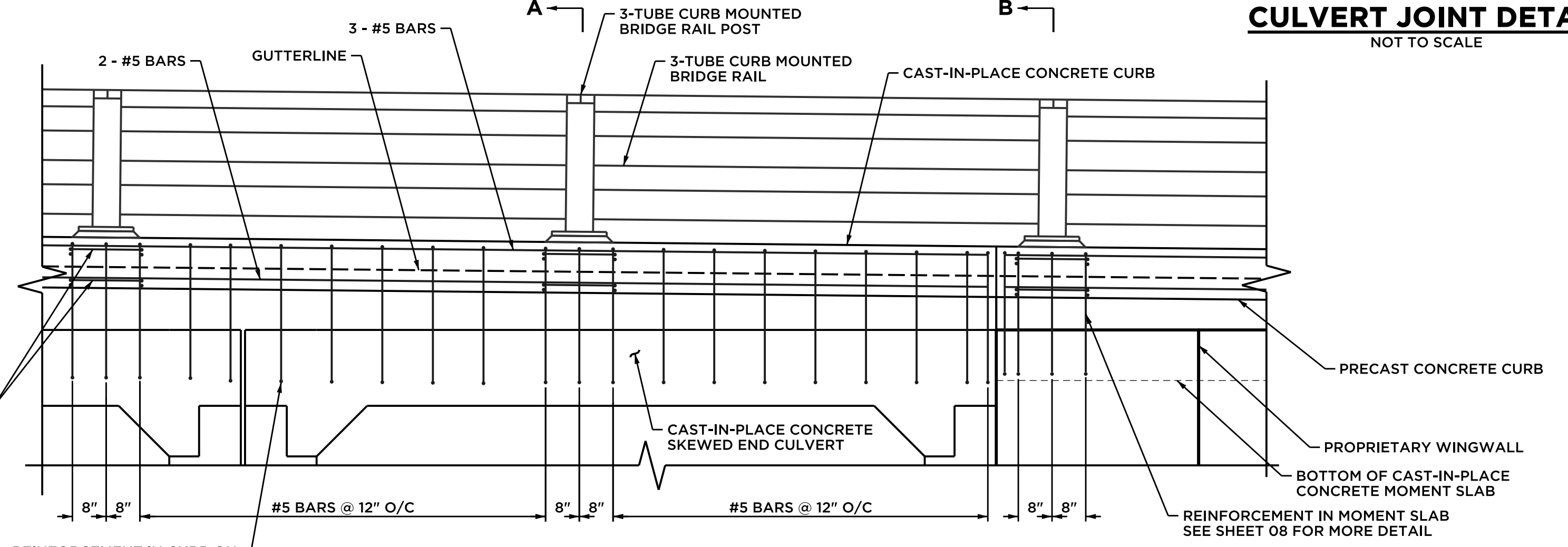
**8'-6" x 8'-6" CULVERT REINFORCEMENT
B2, B3, B4, B5**

NOT TO SCALE



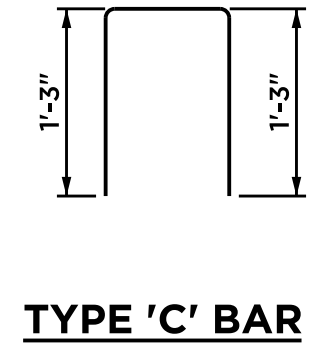
**8'-6" x 7'-6" CULVERT REINFORCEMENT
B8, B9, B10, B11**

NOT TO SCALE



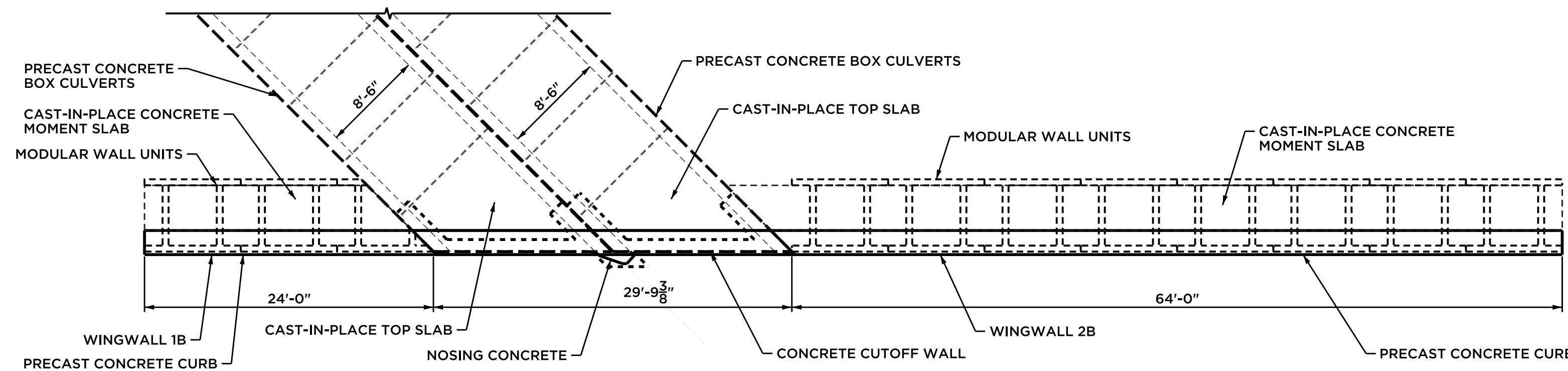
CURB REINFORCEMENT

NOTE:
SEE SECTION A-A & SECTION B-B ON SHEET 8 FOR MORE DETAILS

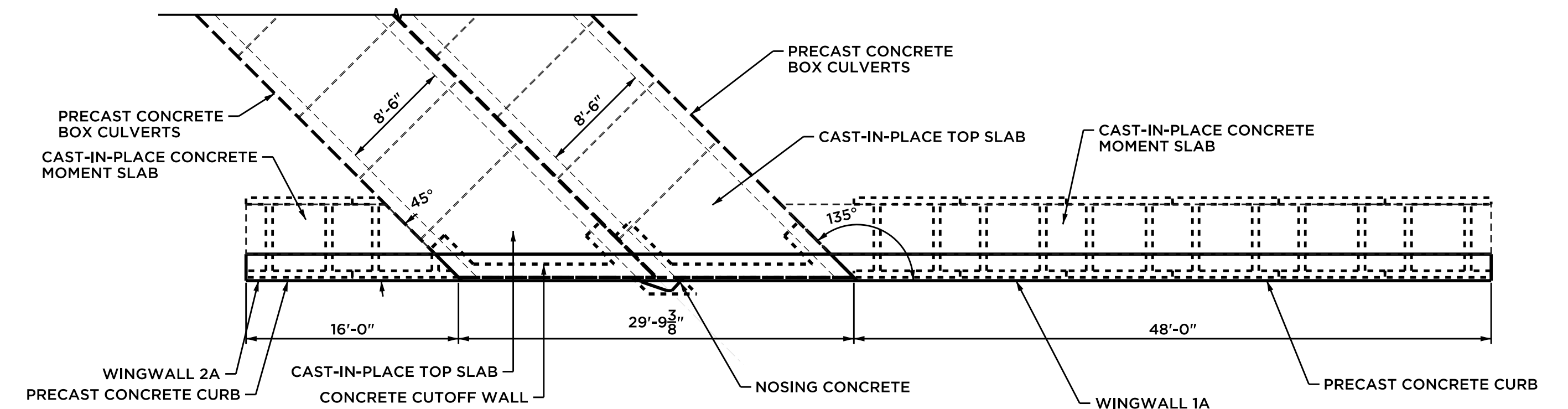


TYPE 'C' BAR

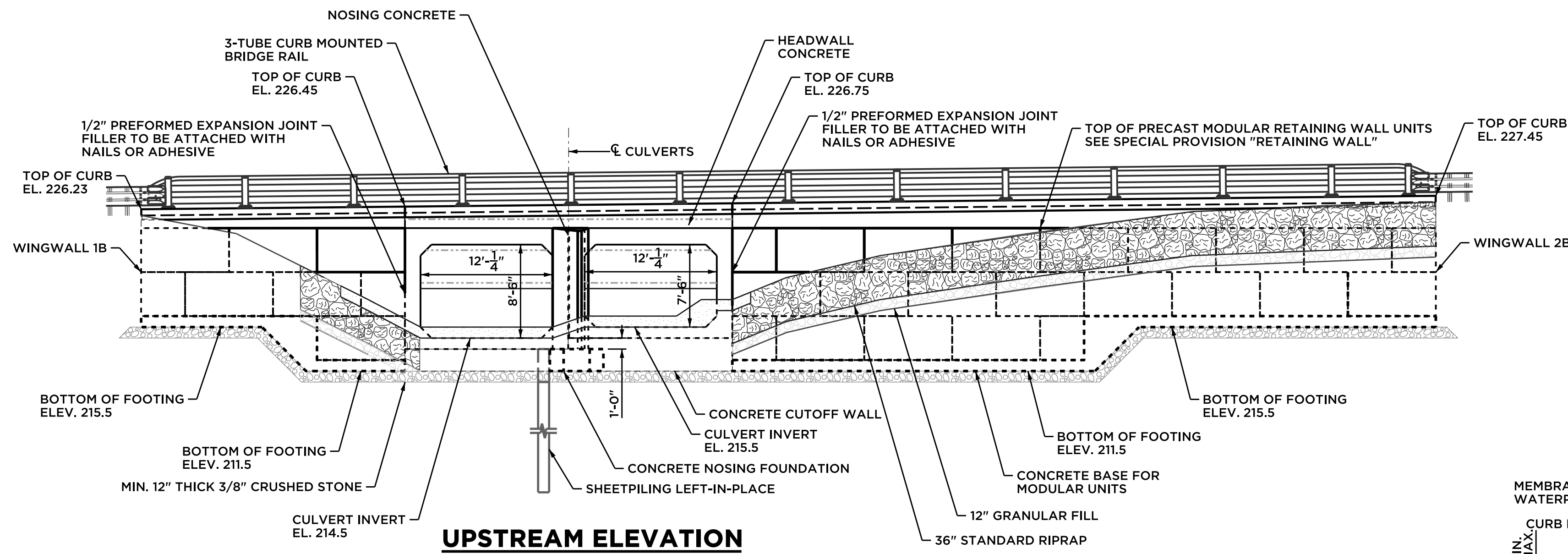
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PROJ. MANAGER	KBF		
OFFICE REVIEW	MMZ		
REVISIONS		PROJECT	DATE
		QUARRY ROAD	03/05/25
		SHEET NO.	7 OF 13
		SCALE:	AS NOTED



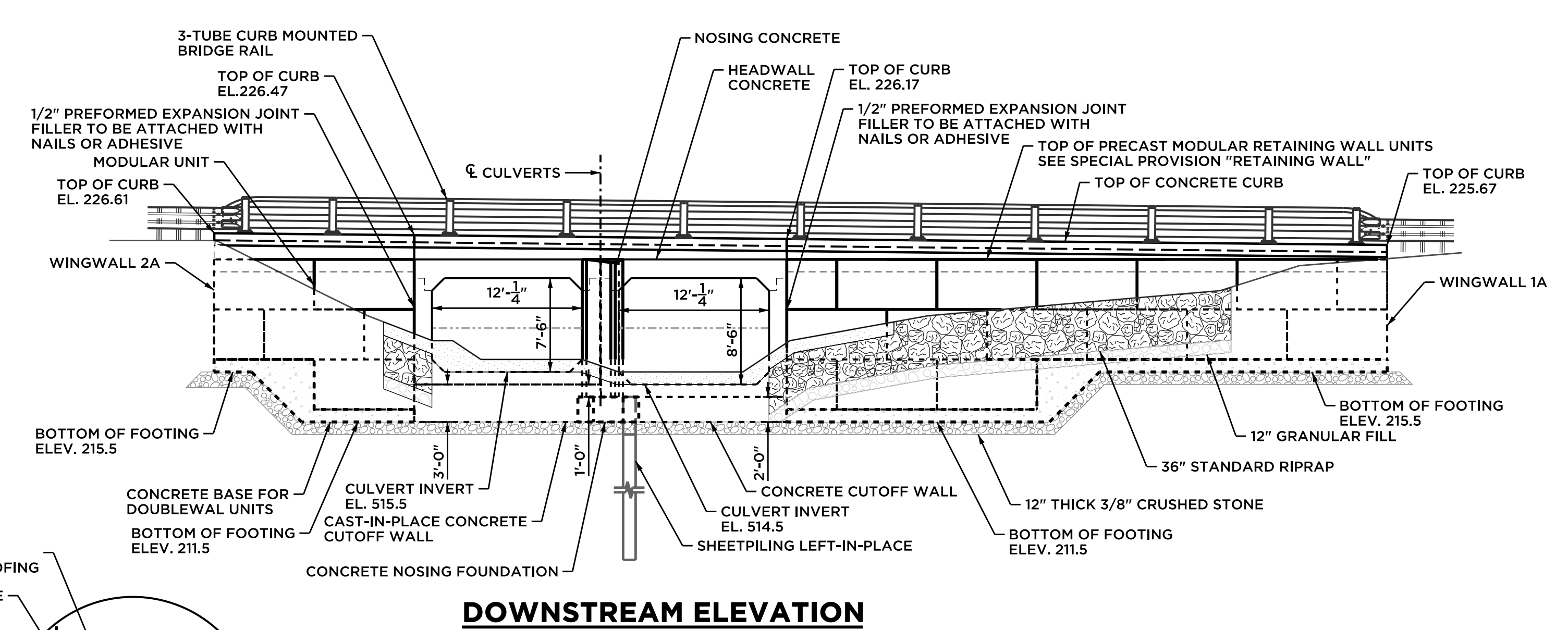
UPSTREAM LAYOUT



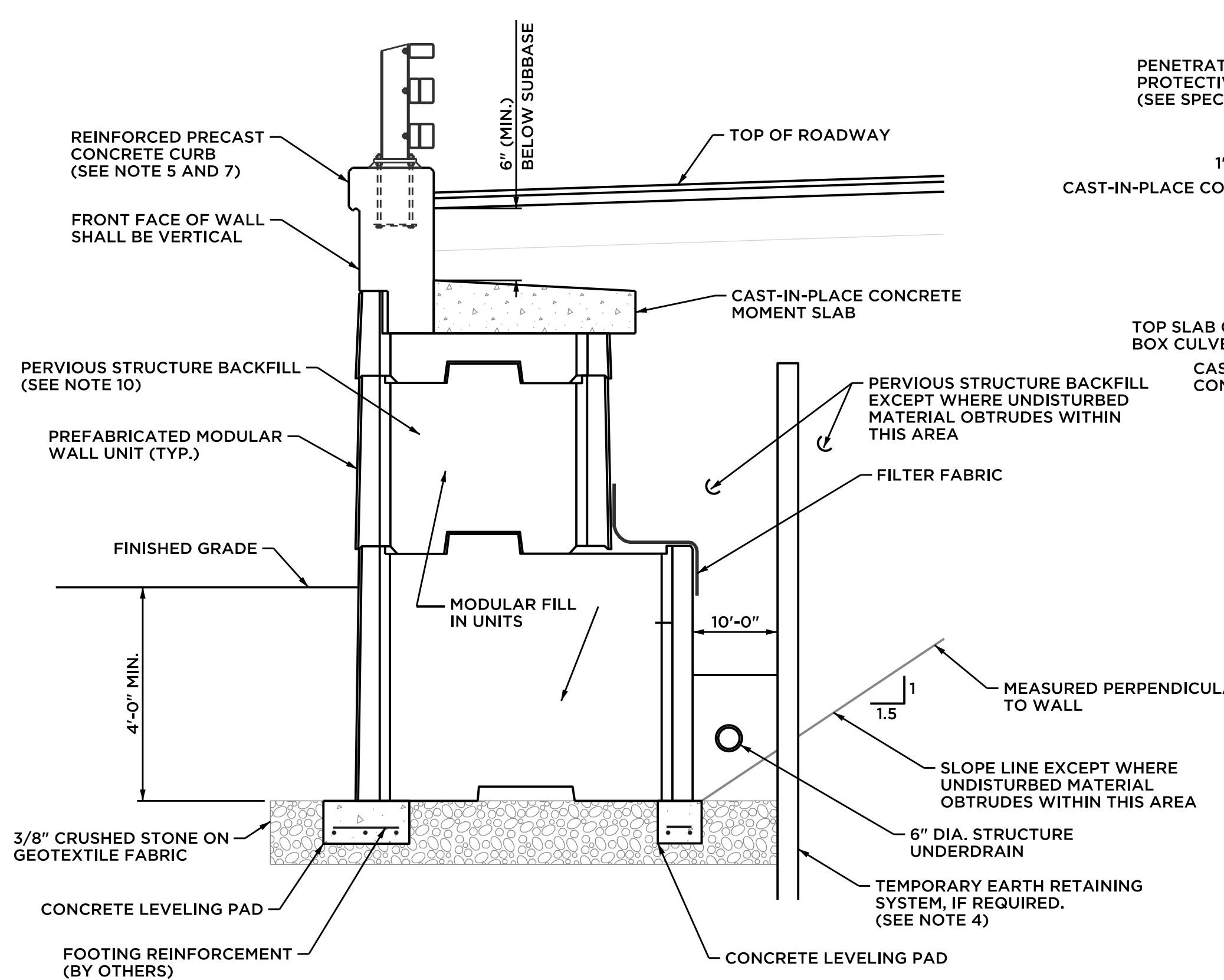
DOWNSTREAM LAYOUT



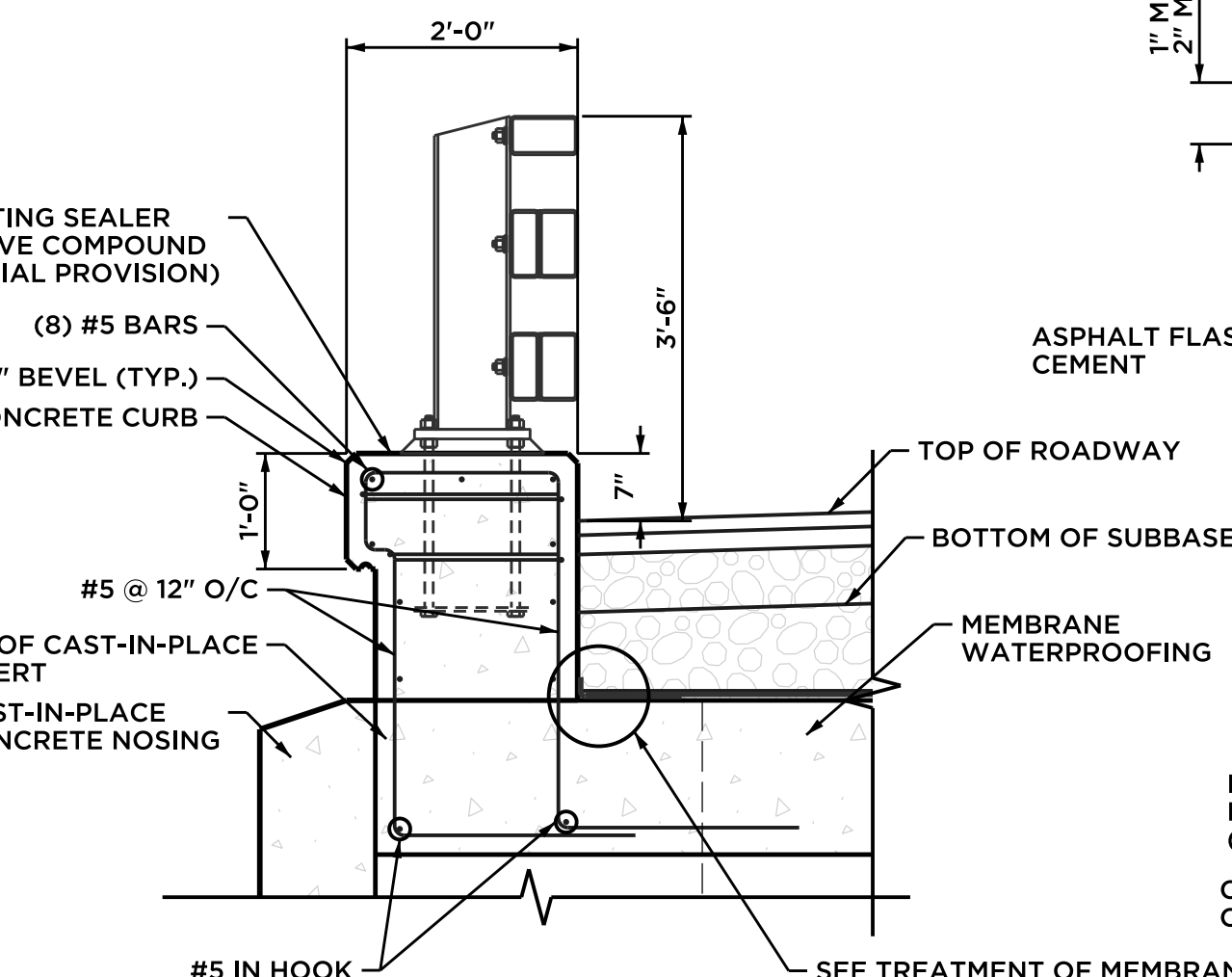
UPSTREAM ELEVATION



DOWNSTREAM ELEVATION

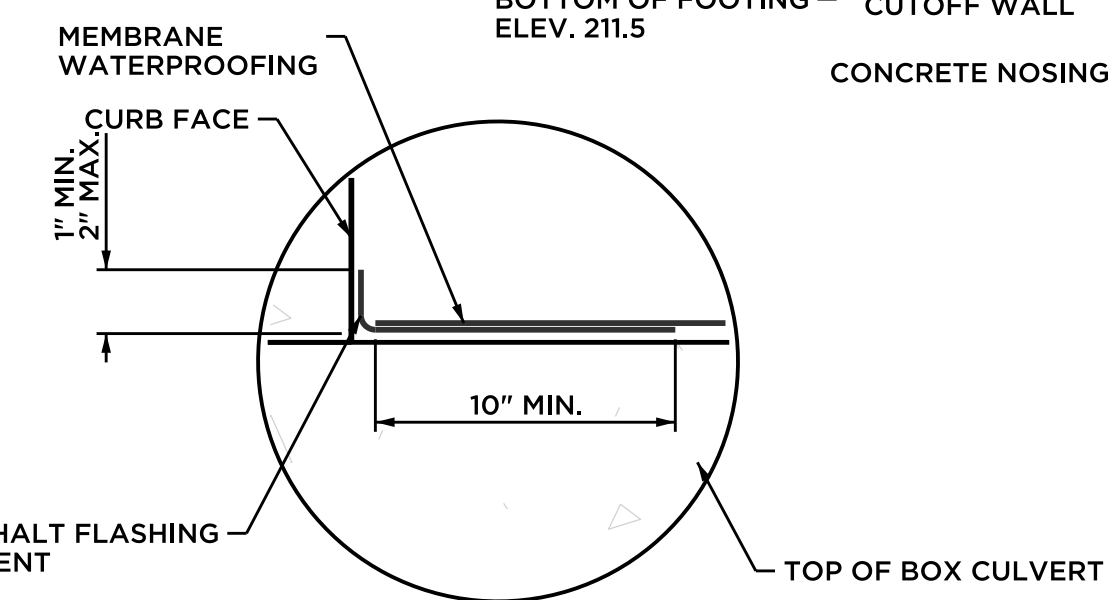


TYPICAL PROPRIETARY WINGWALL DETAIL



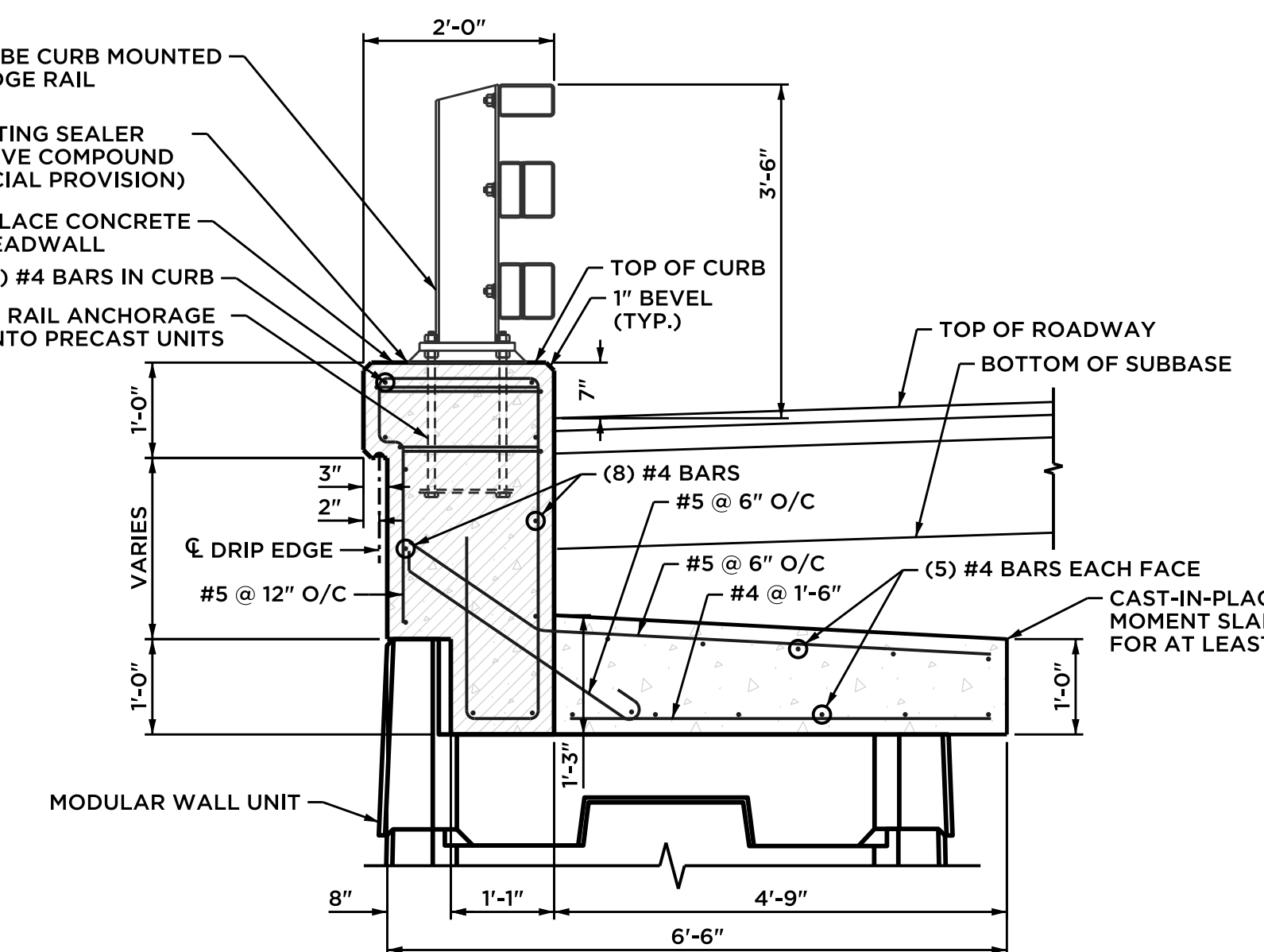
CAST-IN-PLACE CURB ON CULVERT SECTION A-A

- PROPRIETARY WALL NOTES**
- THE CONTRACTOR SHALL SELECT, DESIGN, AND CONSTRUCT ONE OF THE FOLLOWING WALL OPTIONS IN ACCORDANCE WITH THE SPECIAL PROVISION "RETAINING WALL (SITE NO. 1)"
 - DOUBLEWALL UNITS - UNITED CONCRETE PRODUCTS, INC
 - T-WALL UNITS - REINFORCED EARTH COMPANY
 - OR EQUAL. ANY PROPOSED SUBSTITUTIONS MUST MEET OR EXCEED THE SPECIFICATIONS OUTLINED IN SPECIAL PROVISION "RETAINING WALL (SITE NO. 1)". SUBMIT FOR APPROVAL PRIOR TO PROCUREMENT.
 - THE MAXIMUM FACTORED BEARING RESISTANCE (LRFD) = 6.75 KSF
 - VACANT
 - THE MAXIMUM ULTIMATE CAPACITY (LRFD) = 15 KSF
 - TEMPORARY EARTH RETAINING SYSTEM BELOW PAY LIMITS AND ANY TIEBACKS AND BRACING ASSOCIATED WITH SAME SHALL BE INCLUDED IN THE LUMP SUM COST OF THE WALL.
 - DETAILS SHOWN ON THIS SHEET ARE NOT SPECIFIC. THE CONTRACTOR'S DESIGNER SHALL MODIFY EACH SECTION FOR EACH SPECIFIC SITE.
 - LIGHT STANDARD ANCHORAGES, JUNCTION BOXES, AND RIGID METAL CONDUIT SHALL BE INCLUDED IN THE LUMP SUM PAY ITEM "RETAINING WALL (SITE NO. 1)". THE DETAILING AND REINFORCEMENT OF THE PARAPET SECTION, ABOVE THE GUTTER LINE SHALL BE AS SHOWN FOR THE PRECAST CONCRETE REINFORCED SECTION. SEE THIS SHEET FOR ADDITIONAL DETAILS.
 - REINFORCING TO HAVE 2" COVER EXCEPT WHERE SHOWN OTHERWISE.
 - ALL DIMENSIONS ARE SPECIFIED WITH THE APPLICABLE UNITS OF MEASUREMENT.
 - ANY ADDITIONAL PERVIOUS STRUCTURE BACKFILL REQUIRED OUTSIDE THIS LIMIT SHALL ALSO BE INCLUDED IN THE LUMP SUM PRICE.

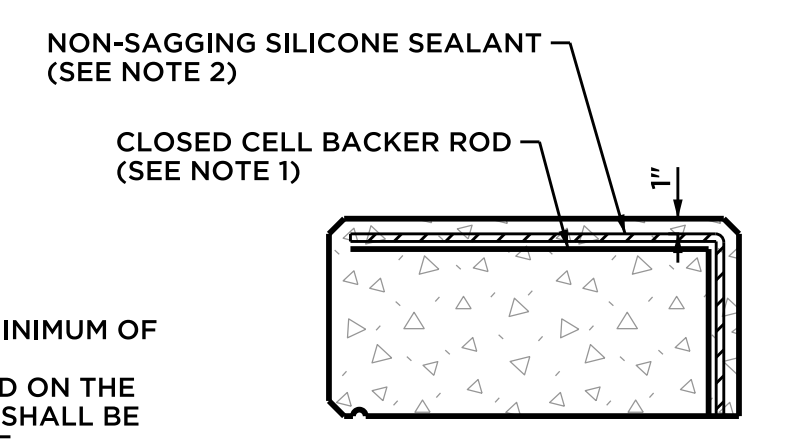


TREATMENT OF MEMBRANE WATERPROOFING AT CURB

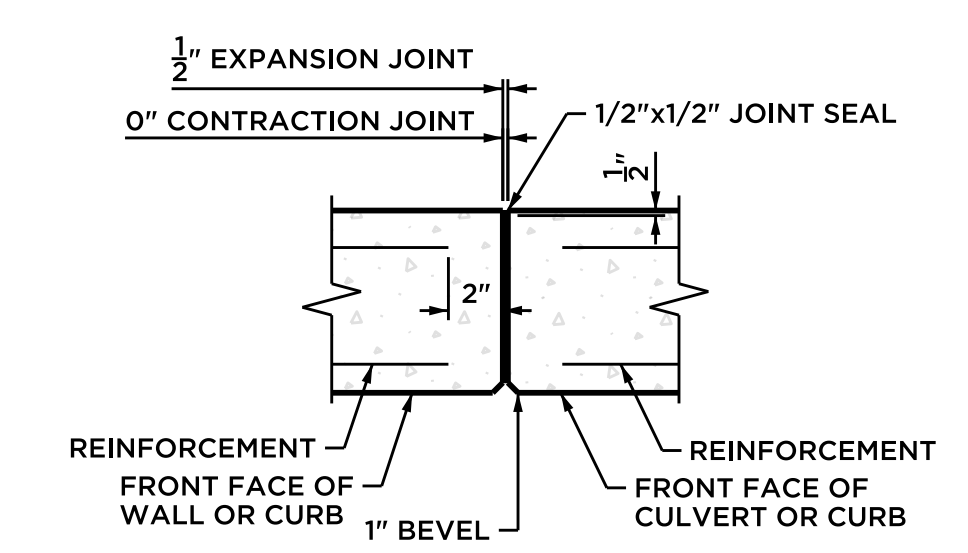
- CURB NOTES:**
- THE CLOSED CELL BACKER ROD SHALL BE PLACED A MINIMUM OF 2" FROM THE OUTSIDE FACE OF CURB.
 - THE NON-SAGGING SILICONE SEALANT SHALL BE PLACED ON THE BACKER ROD 1/2" THICK. AT THE GUTTER, THE SEALANT SHALL BE PLACED FLUSH WITH THE OUTSIDE FACE OF CONCRETE.
 - PRIOR TO INSTALLING THE SILICONE SEALANT, CLEAN JOINT SIDES BY SAND BLASTING. DUST SHALL BE REMOVED BY THE METHOD APPROVED BY THE ENGINEER.
 - APPLY PENETRATING SEALER PROTECTIVE COMPOUND ON EXPOSED CURB SURFACES.



CURB/MOMENT SLAB ON WINGWALL SECTION B-B



CONCRETE CURB JOINT DETAIL



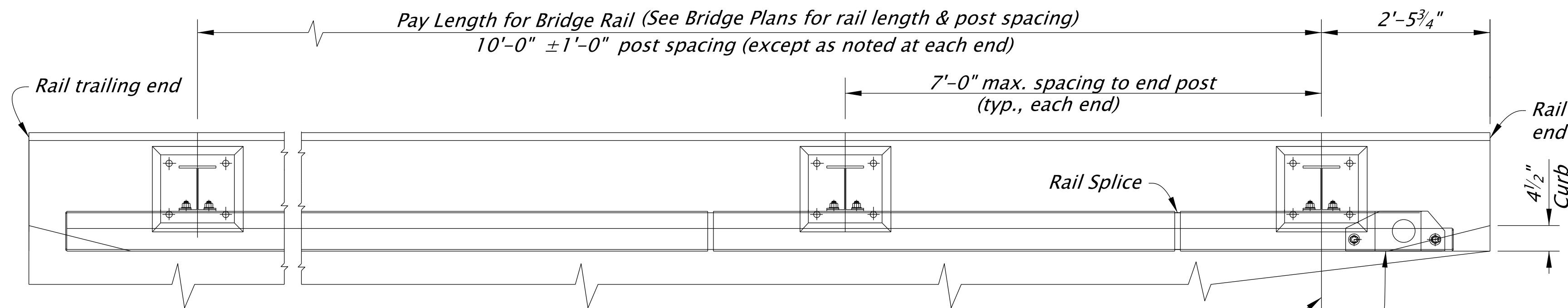
VERTICAL STEM JOINT DETAILS

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REPLACEMENT OF QUARRY RD BRIDGE
 PREPARED FOR TOWN OF SUFFIELD
WINGWALL DETAILS
 QUARRY ROAD SUFFIELD, CT

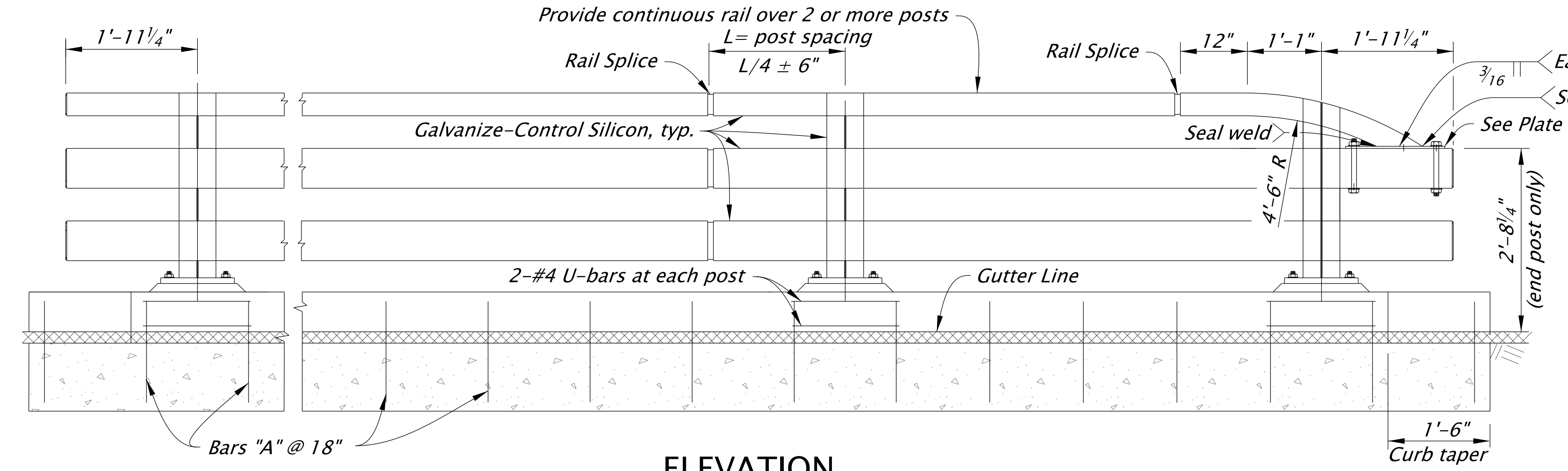
PROJ. ENGINEER	KBF
PROJ. MANAGER	KBF
OFFICE REVIEW	MMZ
REVISIONS	
PROJECT	3157-31
DATE	03/05/25
SHEET NO.	8 OF 13
SCALE:	AS NOTED

br208.dgn 12-2020

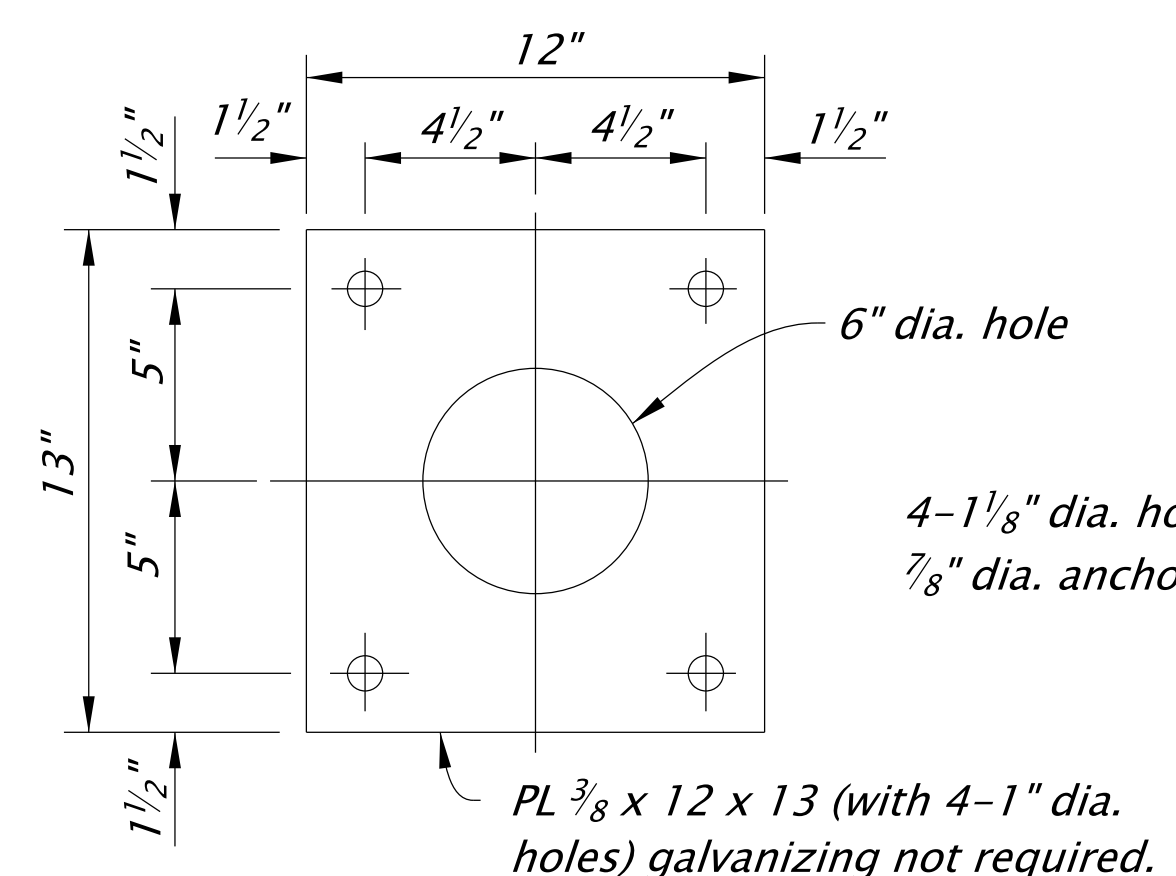


NOTE:
 Guardrail Connection may be omitted on trailing end of one way structures when omitted on detail plans. When not omitted, use connection details shown on dwg. BR209 for leading end.

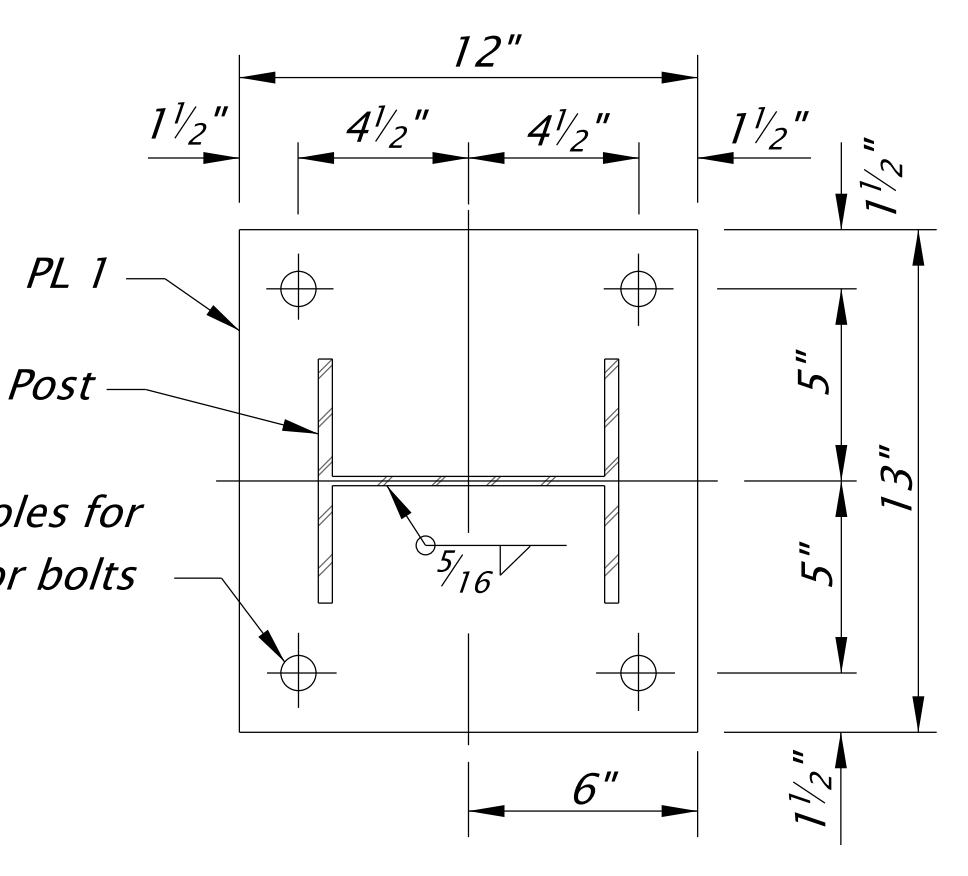
PLAN



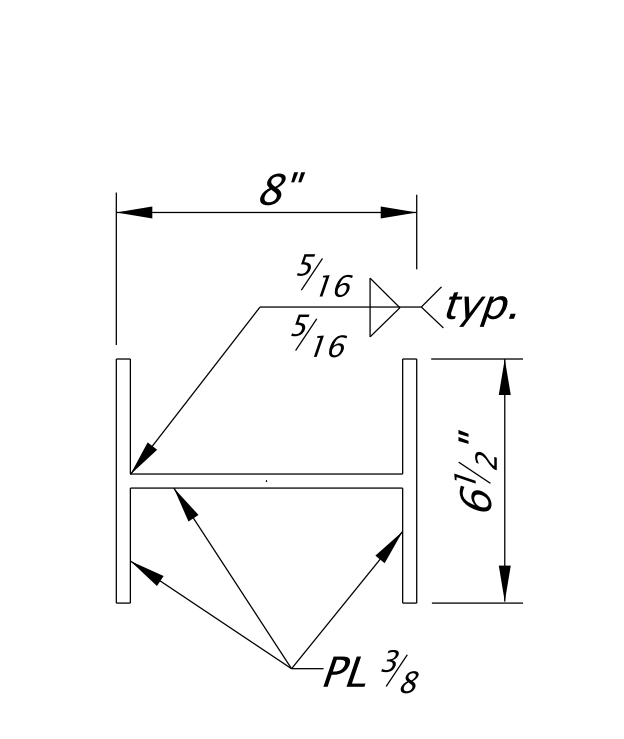
ELEVATION



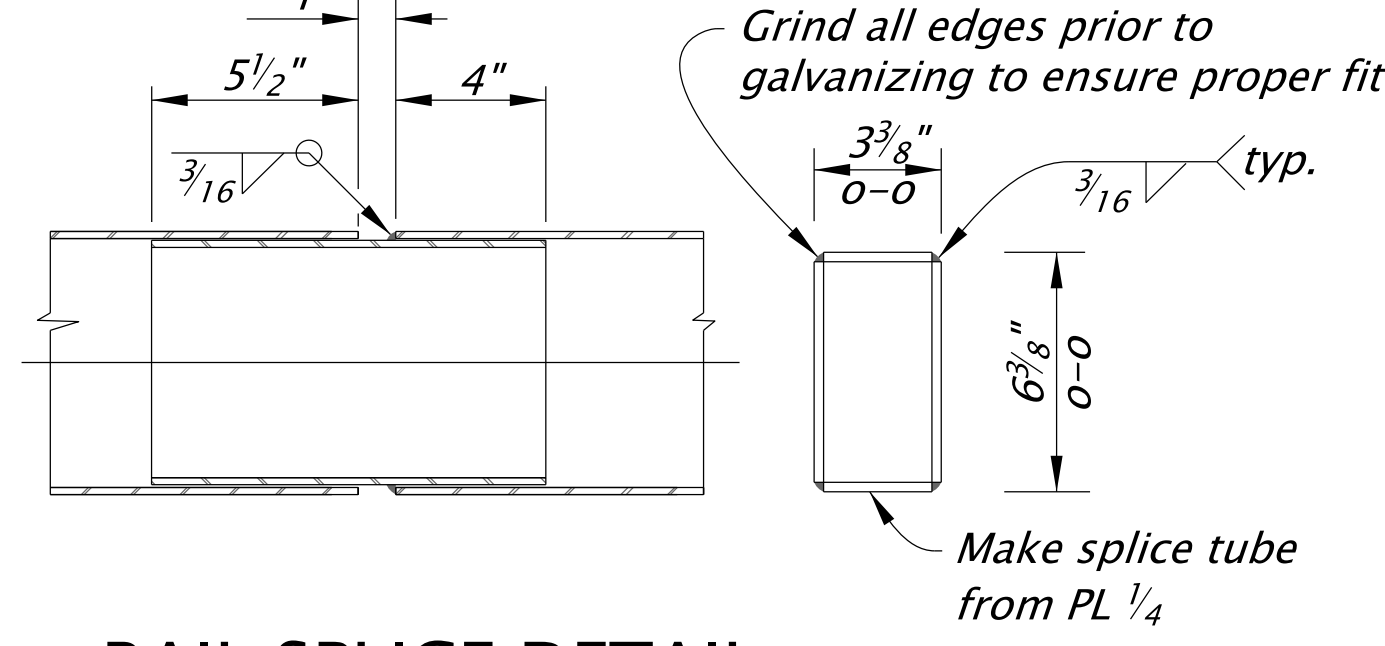
ANCHOR PLATE DETAIL



BASE PLATE DETAIL



ALTERNATE POST



RAIL SPLICE DETAIL

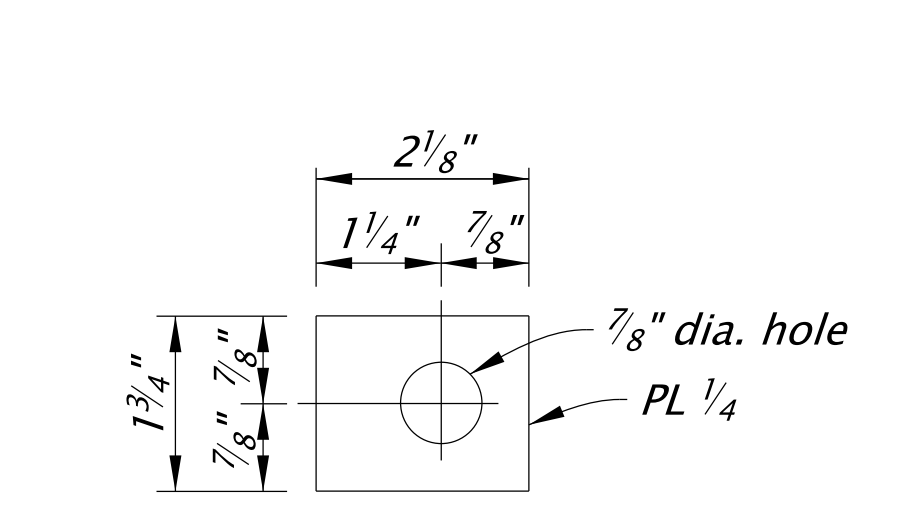
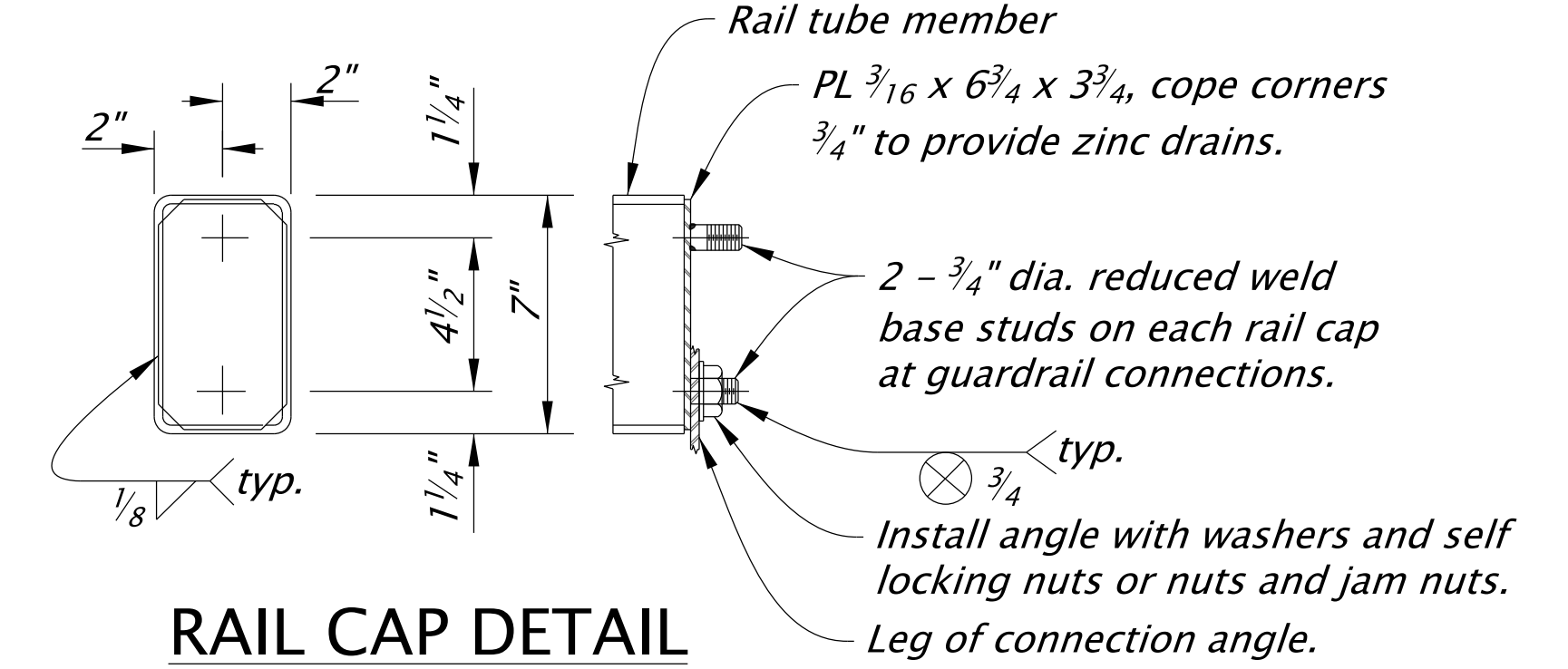


PLATE WASHER "C"



RAIL CAP DETAIL

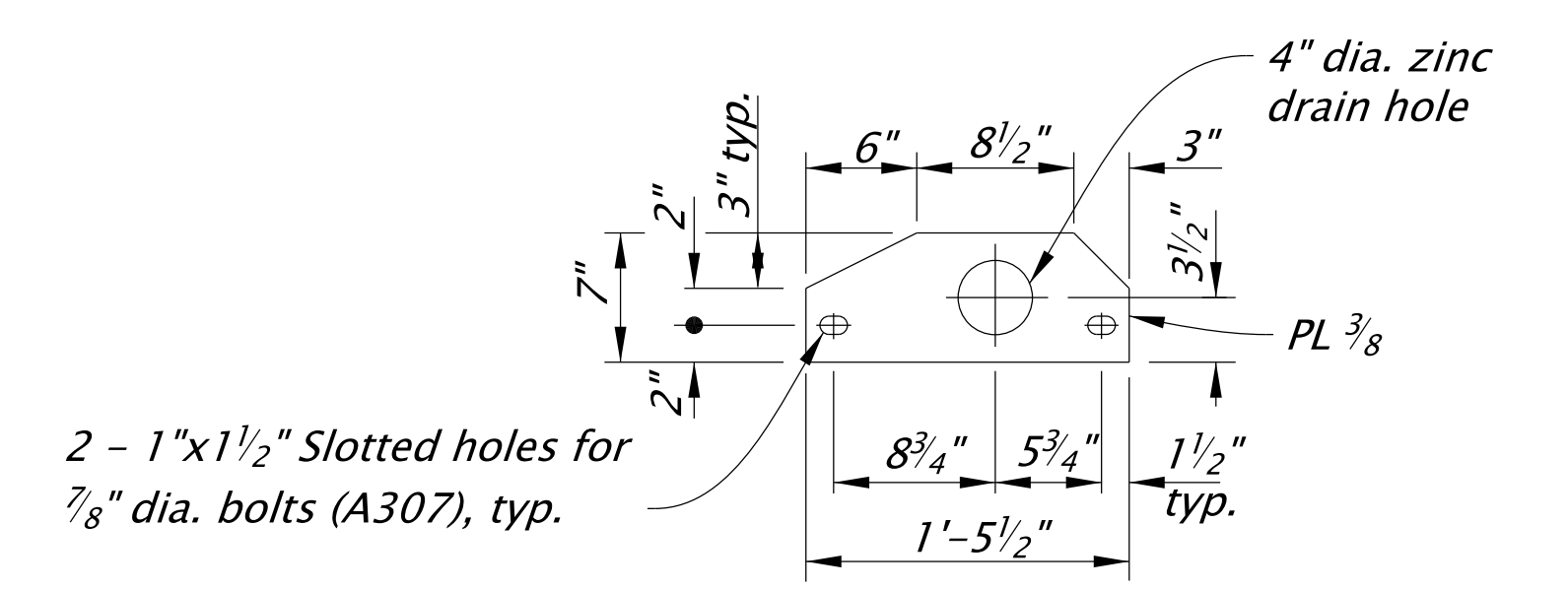
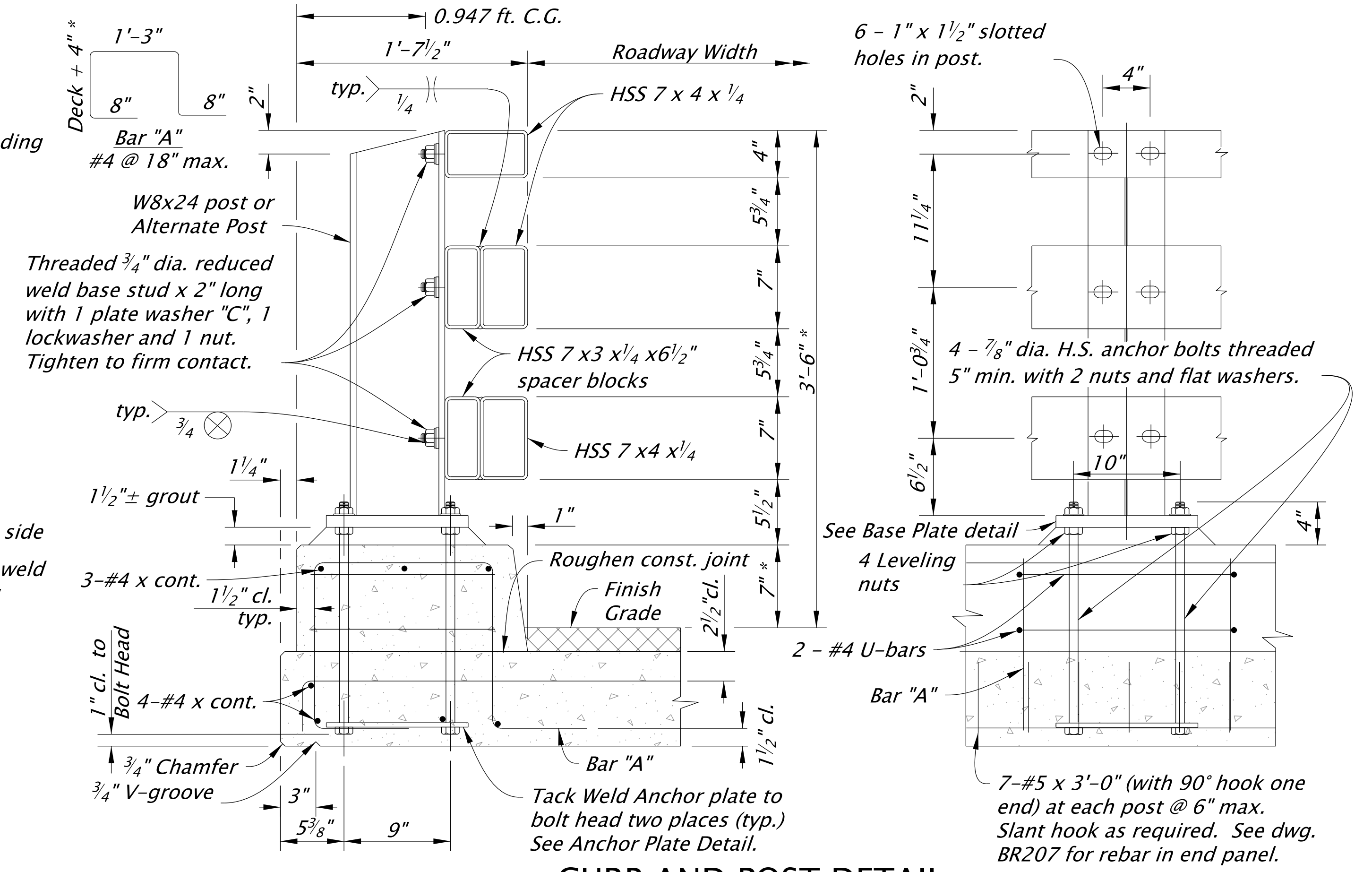


PLATE "D"



CURB AND POST DETAIL

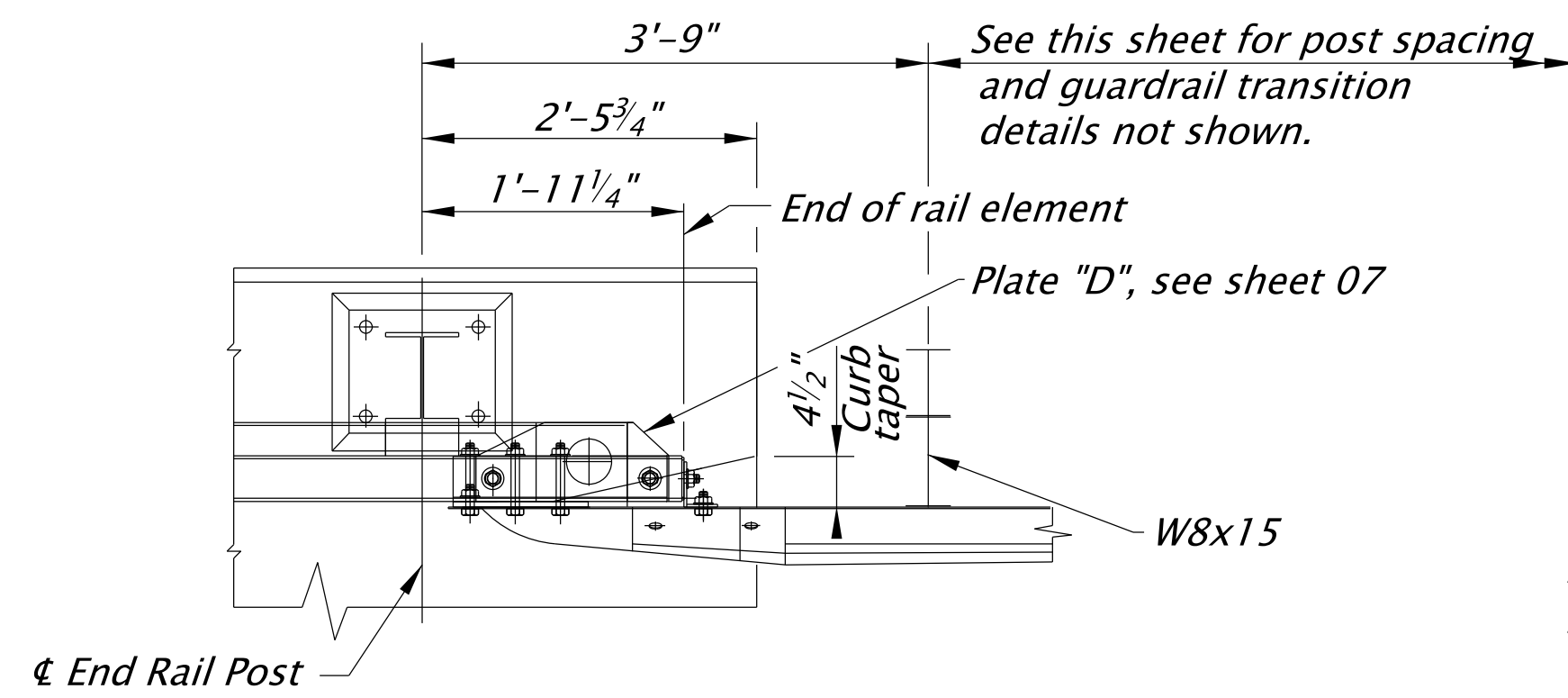
* Set top of post 3'-6" above finish grade. Increase dimensions marked thus (*) by depth of ACWS.

- GENERAL NOTES:**
1. Rail designed and crash tested to meet MASH TL-4 requirements. Transition designed to meet MASH TL-3.
 2. Provide structural tubing, steel posts and plates according to Oregon Standard Specification 2810.20.
 3. Provide High Strength anchor bolts (Grade 105) according to Oregon Standard Specification 02560.30 (b).
 4. Fabricate steel studs with material, welding and inspection according to AWS D1.5, Clause 7.
 5. Provide reinforcing steel conforming to ASTM A706 or AASHTO M31 (ASTM A615) Grade 60.
 6. Provide concrete Class 3300 - 1 1/2 or 3/4
 7. Construct railing conforming to the horizontal and vertical alignment of the structure. Install posts normal to grade in longitudinal direction and vertical in transverse direction.
 8. Payment for the railing will include compensation for furnishing and installing the necessary guardrail connection plates and terminal connectors.
 9. Hot-dip galvanized structural steel including fasteners after fabrication, except as noted. Provide Galvanize-Control Silicon according to Oregon Standard Specification 02530.70.

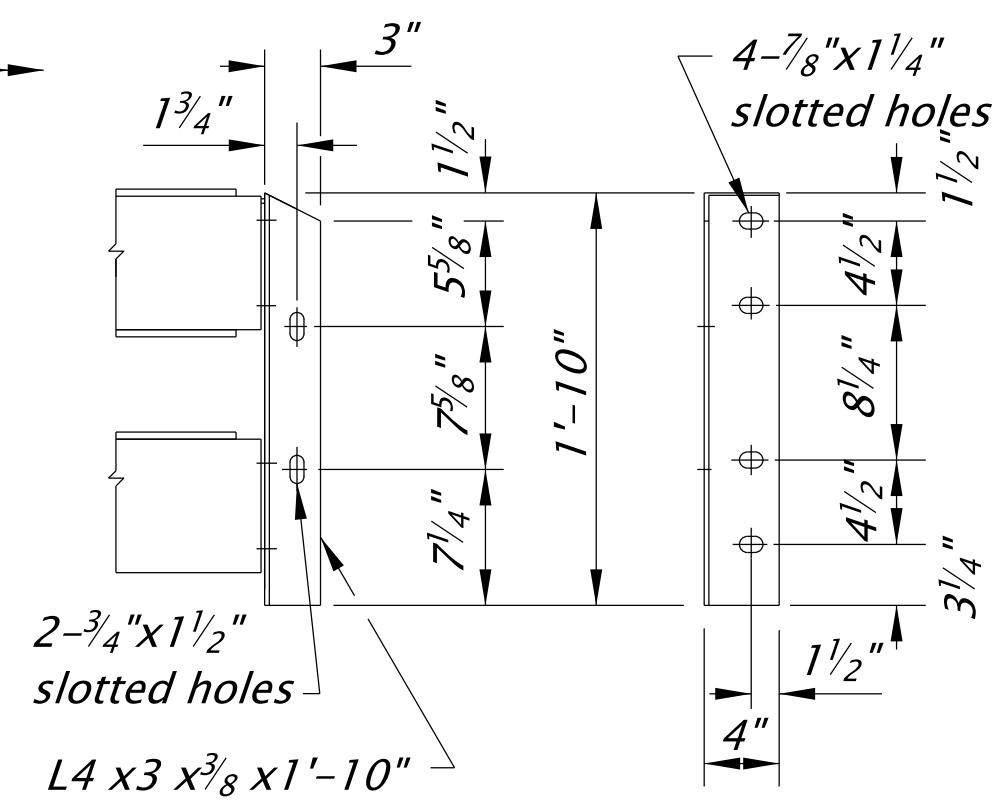
Accompanied by dwgs. BR207, BR209

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		Civil Engineering • Environmental Consulting • Land Surveying • Construction Management	
PROJ. ENGINEER	KBF	REPLACEMENT OF QUARRY RD BRIDGE PREPARED FOR TOWN OF SUFFIELD 3 TUBE CURB MOUNTED RAIL 1 OF 2 QUARRY ROAD SUFFIELD, CT	
PROJ. MANAGER	KBF		
OFFICE REVIEW	MMZ		
REVISIONS		PROJECT	DATE
		3157-31	03/05/25
		SHEET NO.	9 OF 13
SCALE: NOT TO SCALE			

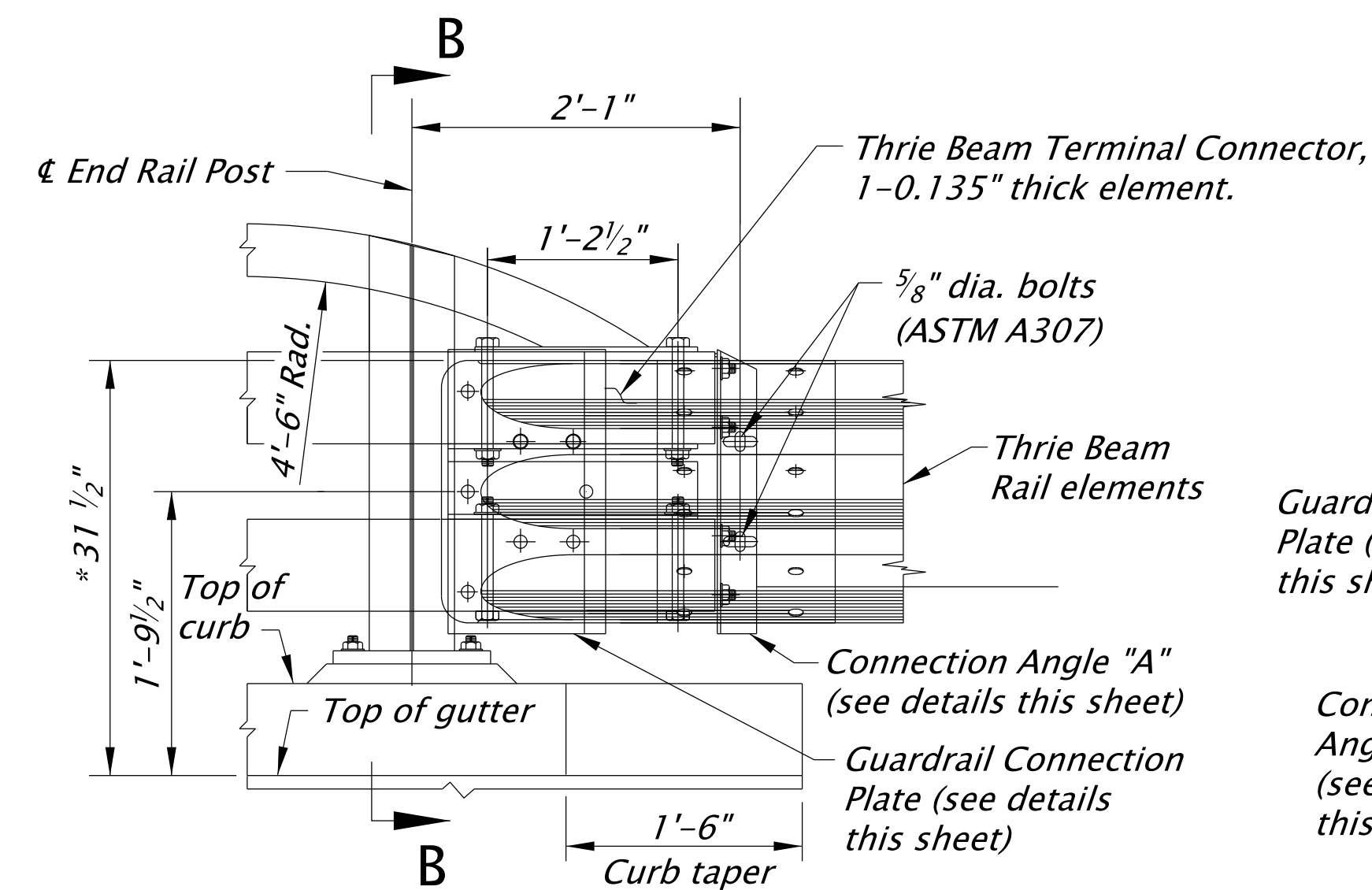
br209.dgn 03-2017



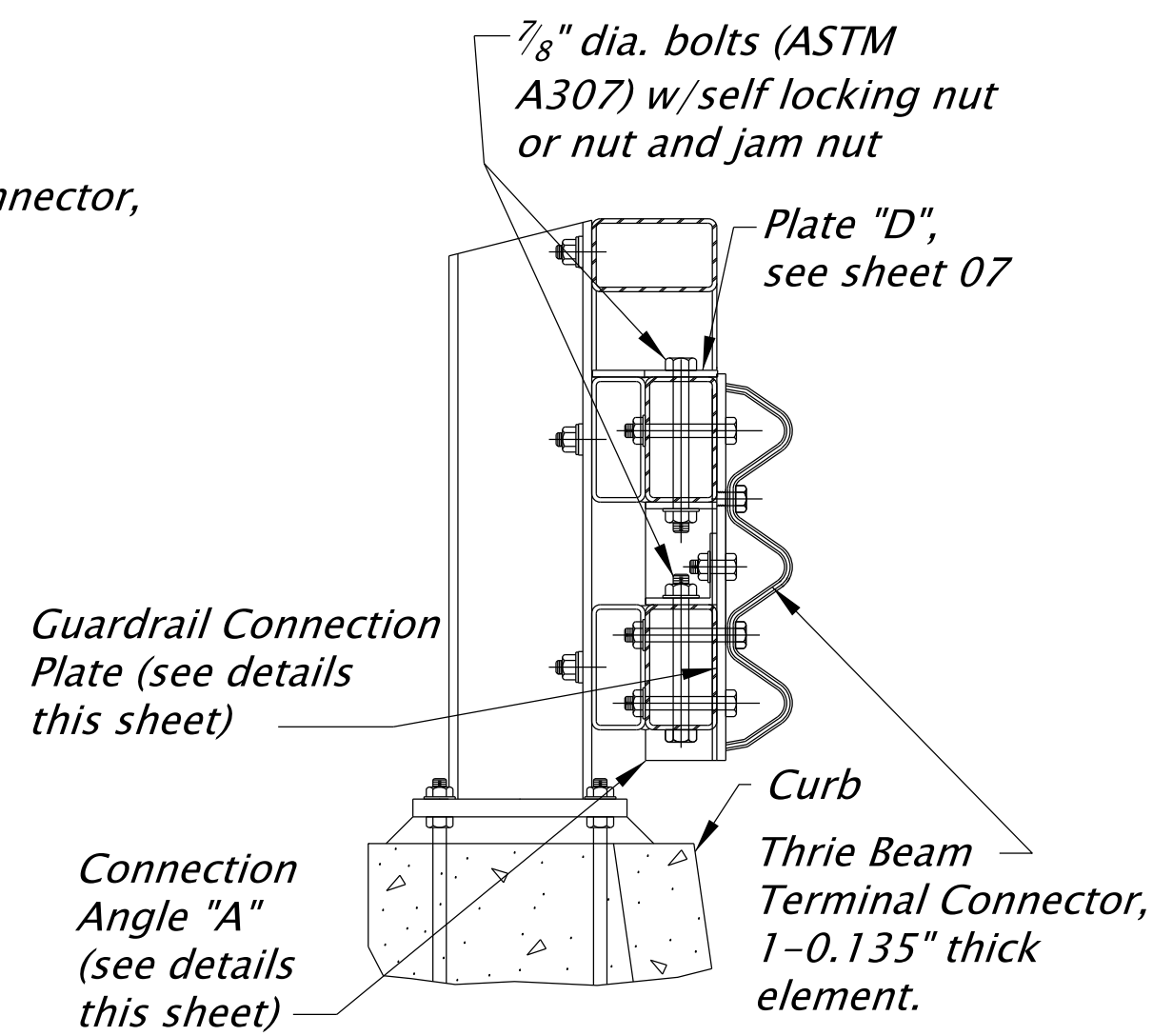
PLAN



CONNECTION ANGLE "A"

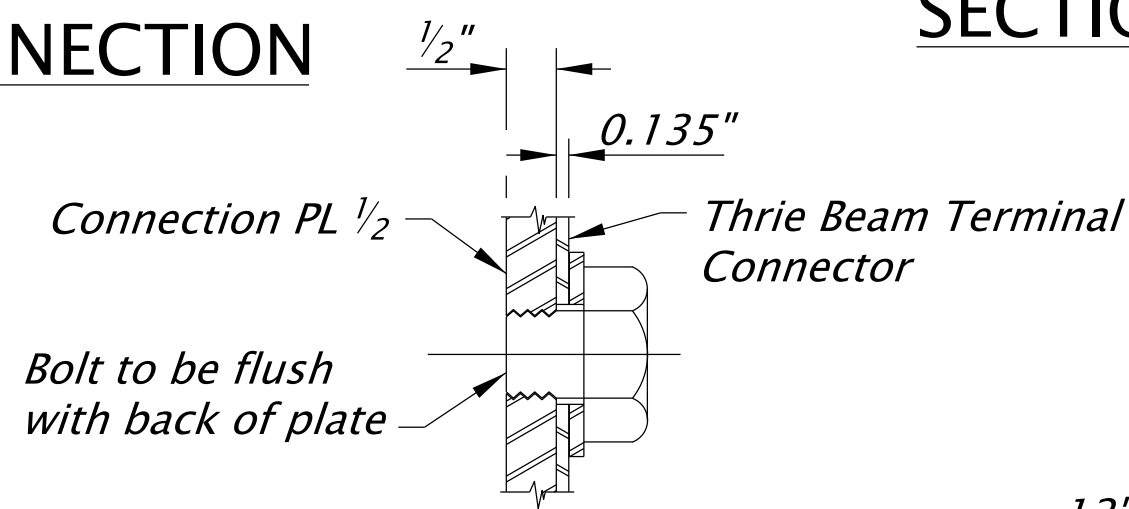


ELEVATION: TRANSITION CONNECTION TYPE I

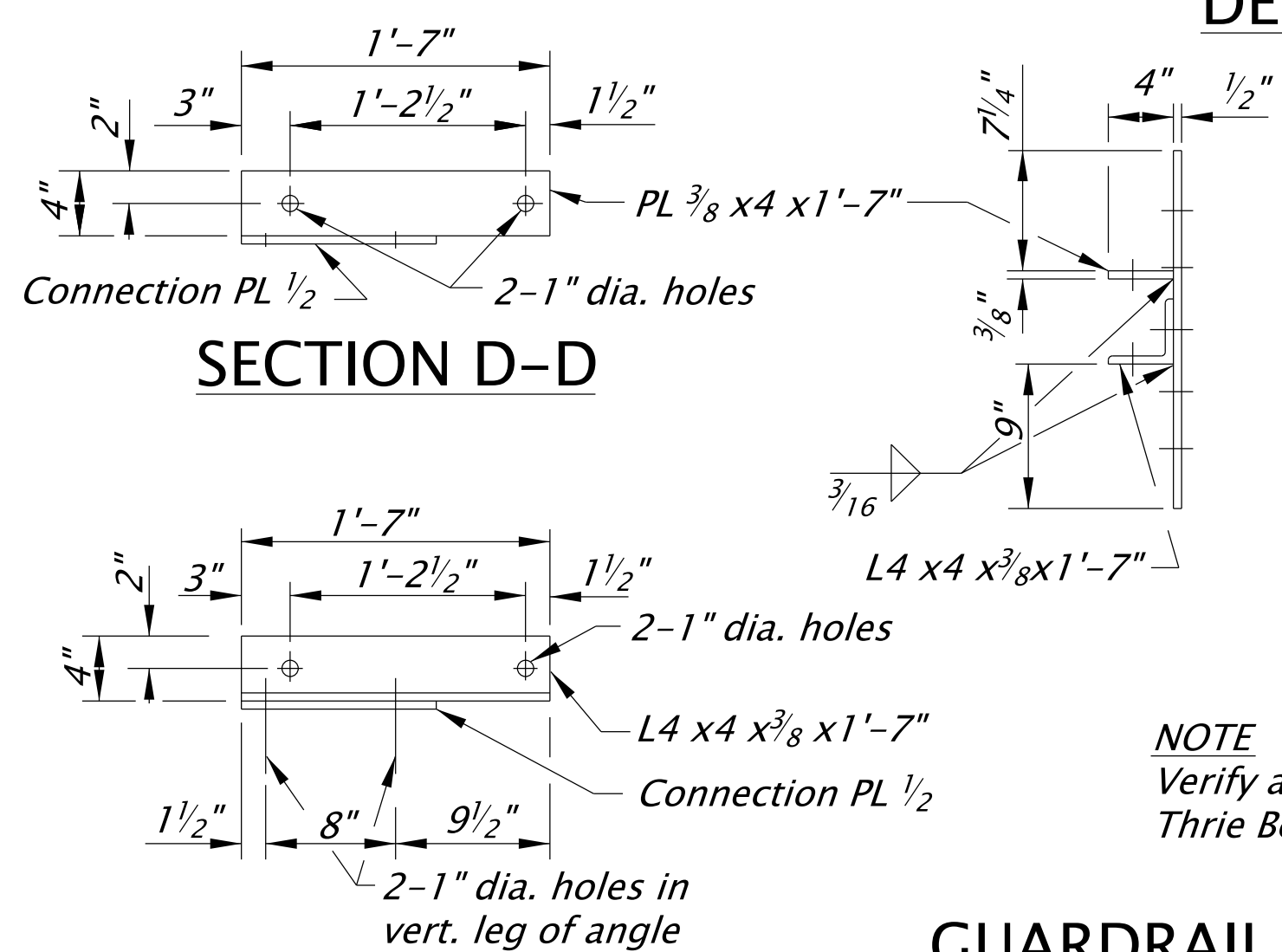


SECTION B-B

***NOTE**
Transition top of rail to match 31" approach rail as shown on BR207.



DETAIL "A"

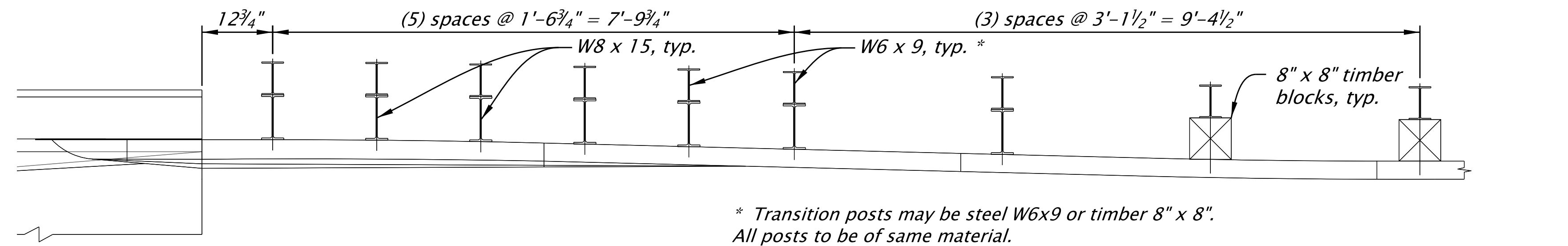


SECTION D-D

SECTION E-E

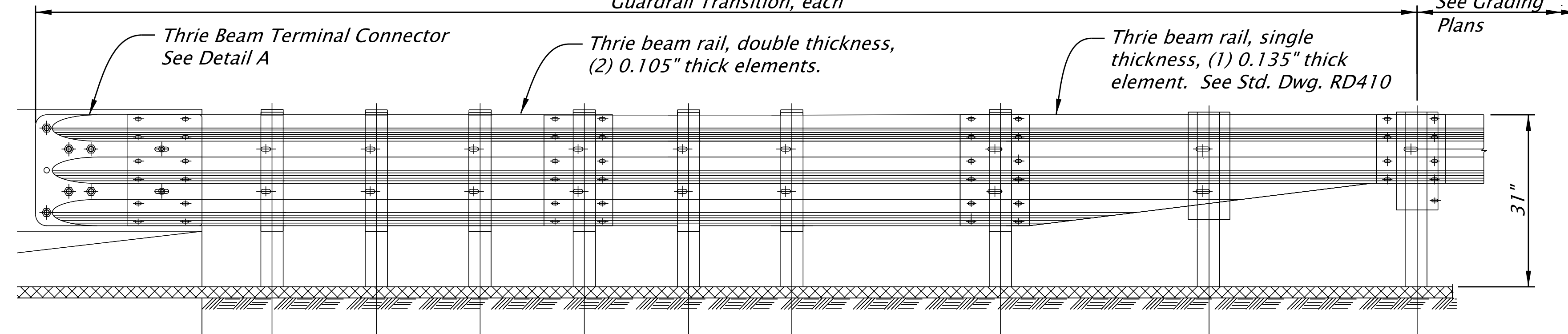
GUARDRAIL CONNECTION PLATE DETAIL

NOTE
Verify all bolt hole locations to match Thrie Beam Terminal Connector.

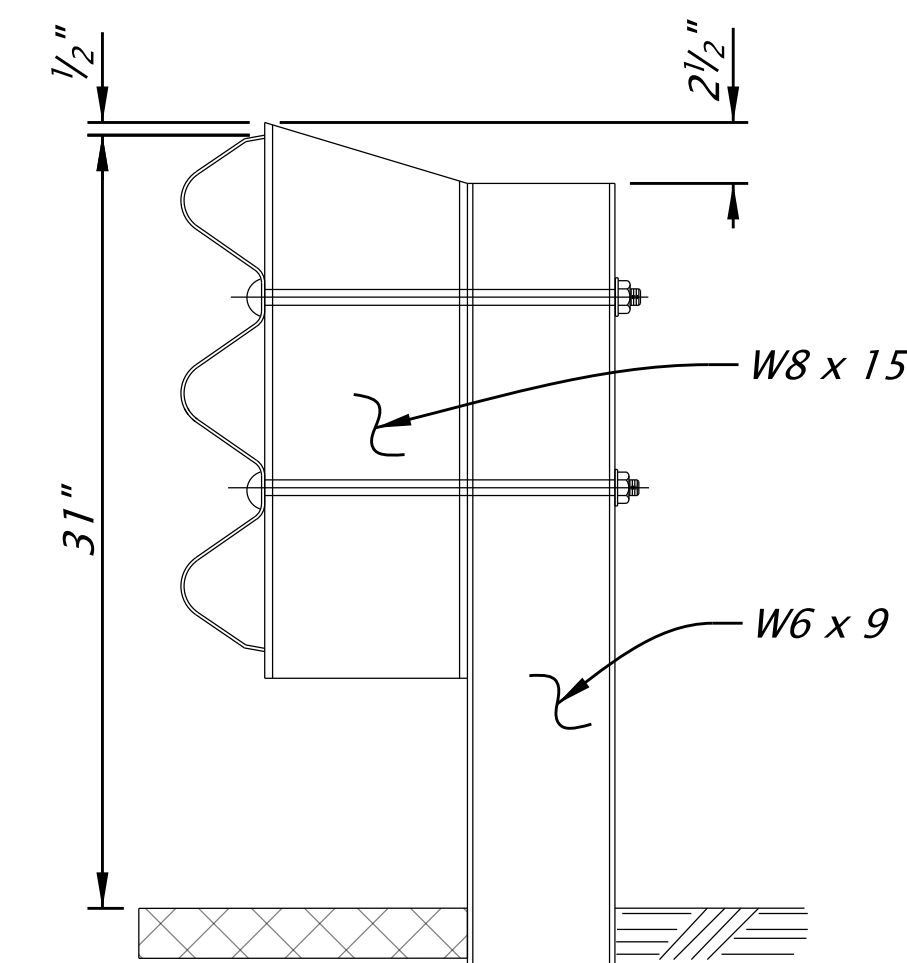


PLAN

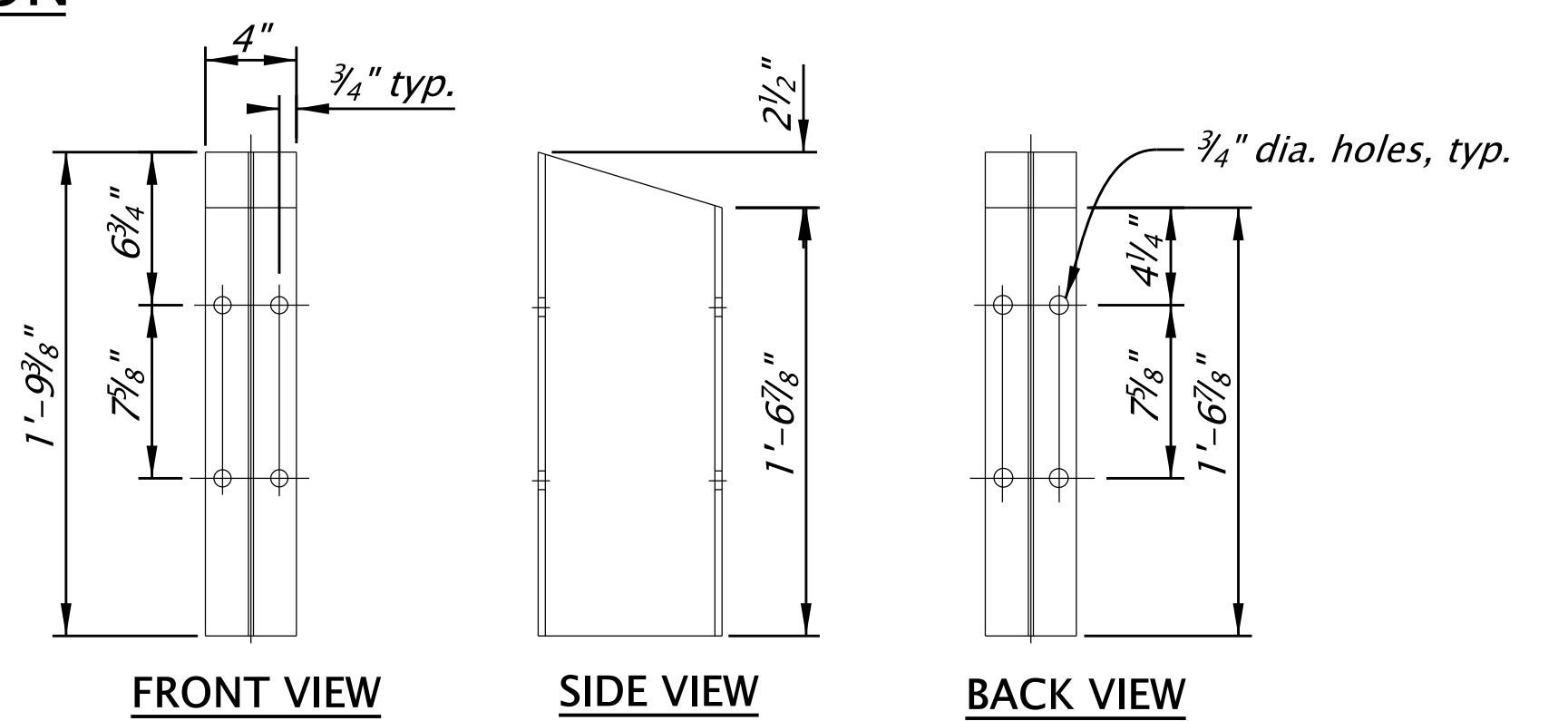
Guardrail Transition, each



ELEVATION



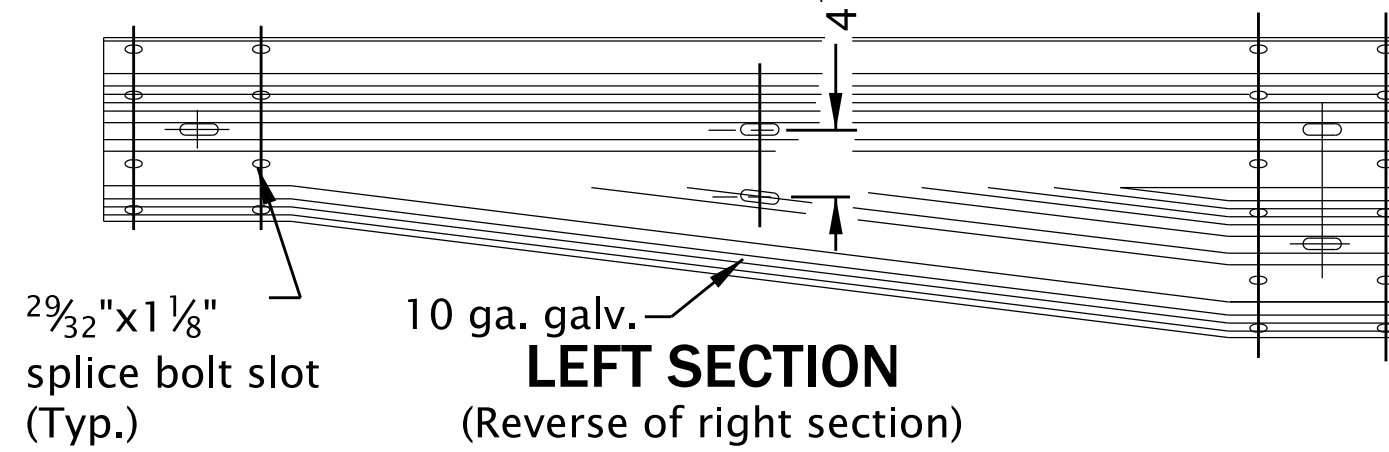
SECTION B-B



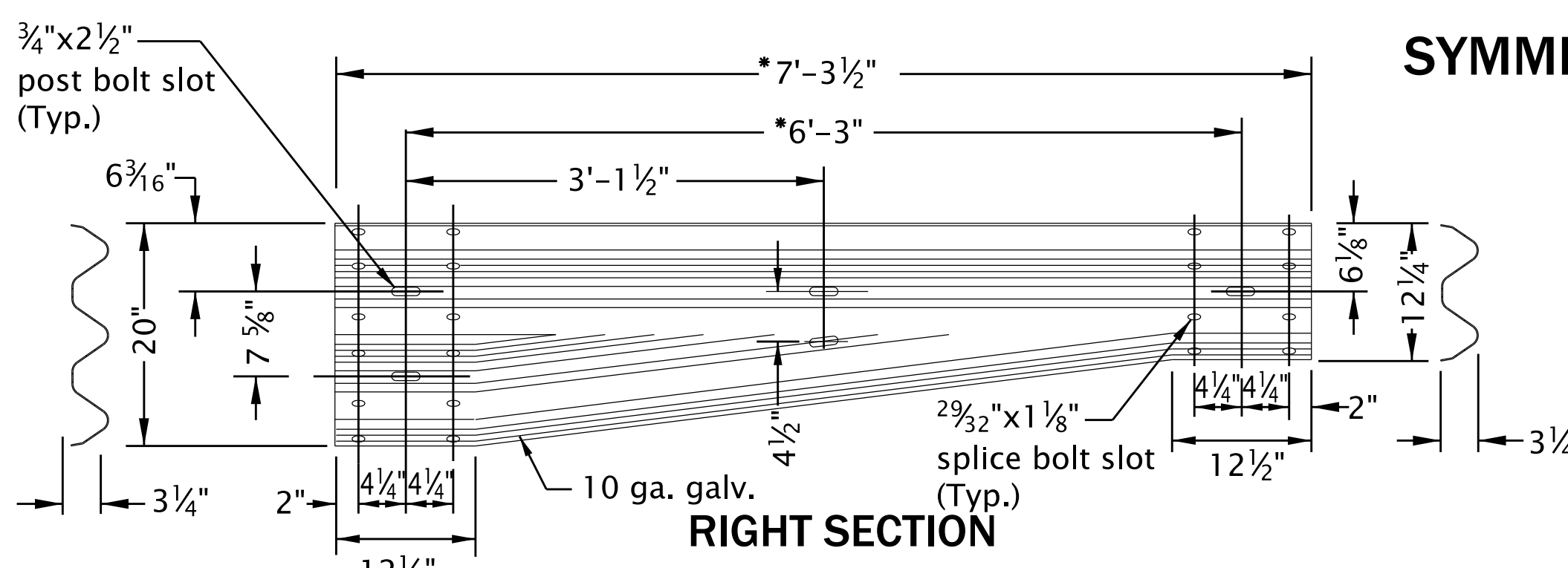
THRIE BEAM BLOCK (W8 x 15)

GENERAL NOTES:
Provide steel for wide-flange posts conforming to AASHTO M183 (ASTM A36).
Hot dip galvanize after fabrication.

GENERAL NOTES FOR THRIE BEAM TRANSITION ELEMENTS:
1. See appropriate guardrail standard drawing(s) for details not shown.
2. See appropriate bridge standard drawing(s) for transition guardrail detail and installation limits at bridge ends.
3. All rail sections shall be lapped in the direction of adjacent traffic.
4. Slot layout per manufacturer with appropriate post and block.

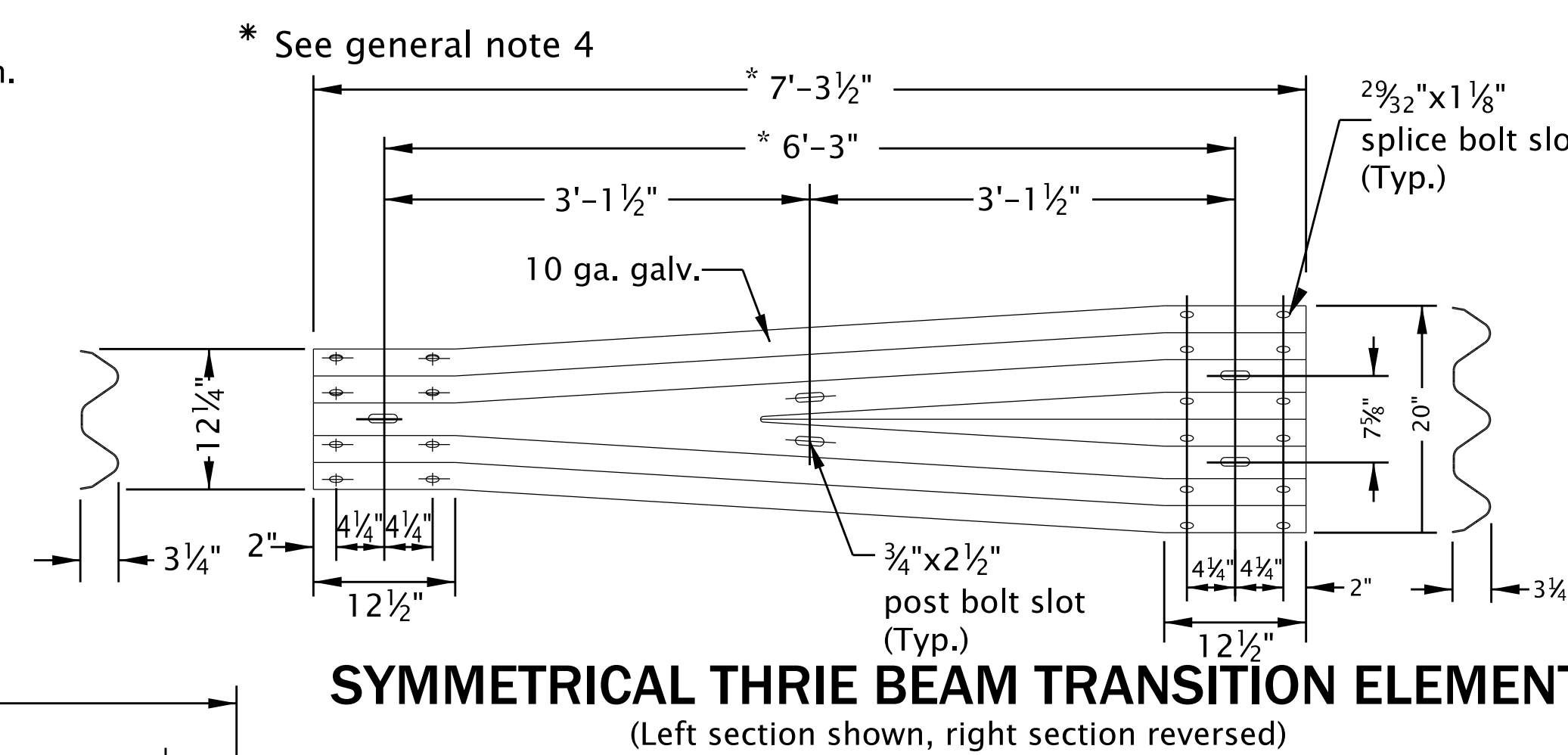


LEFT SECTION
(Reverse of right section)



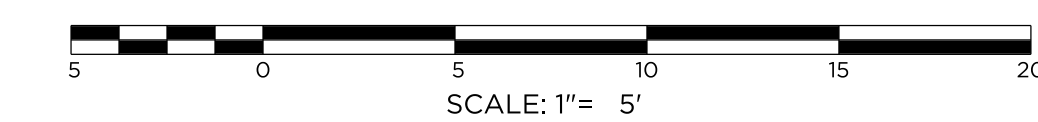
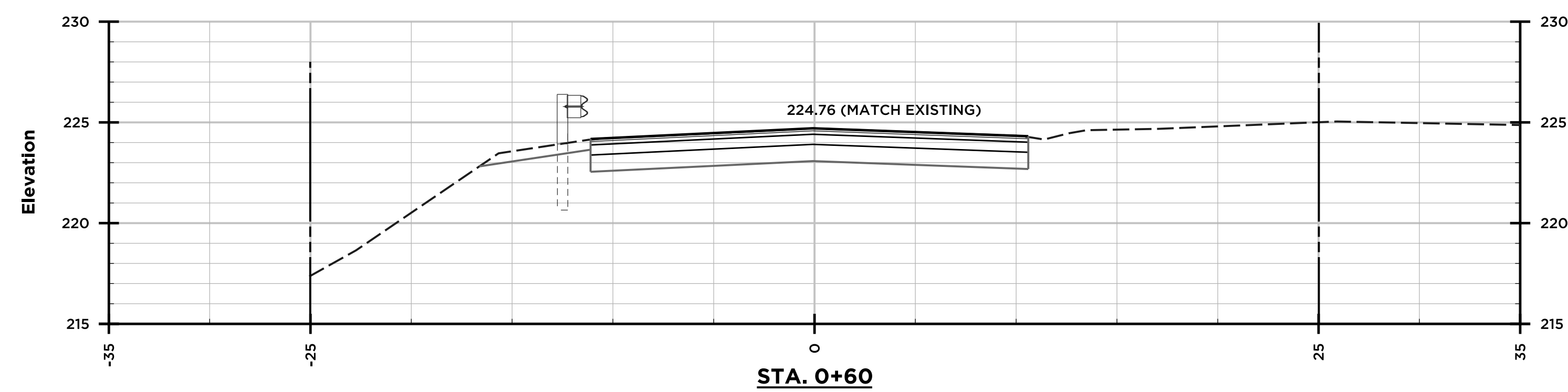
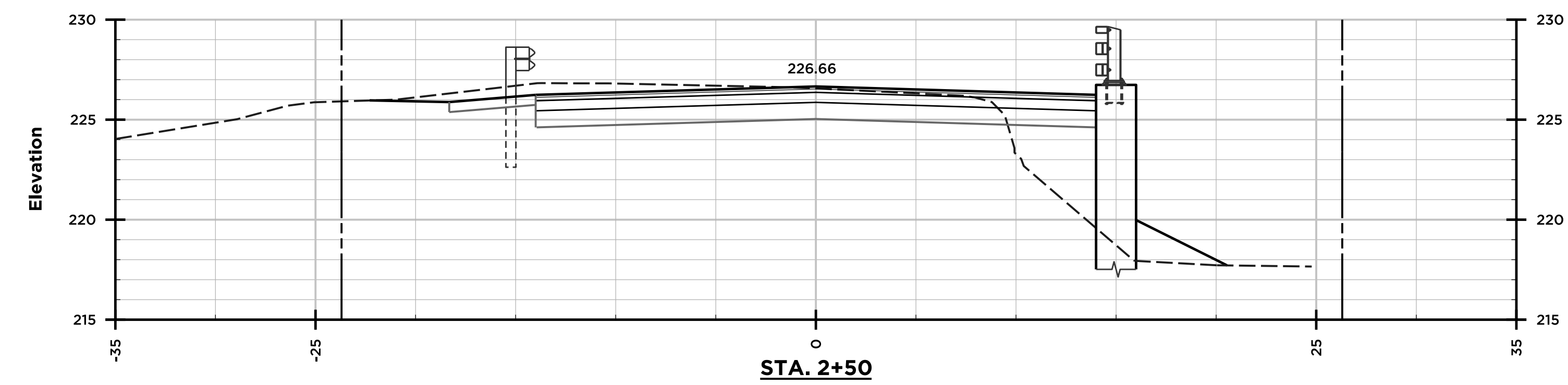
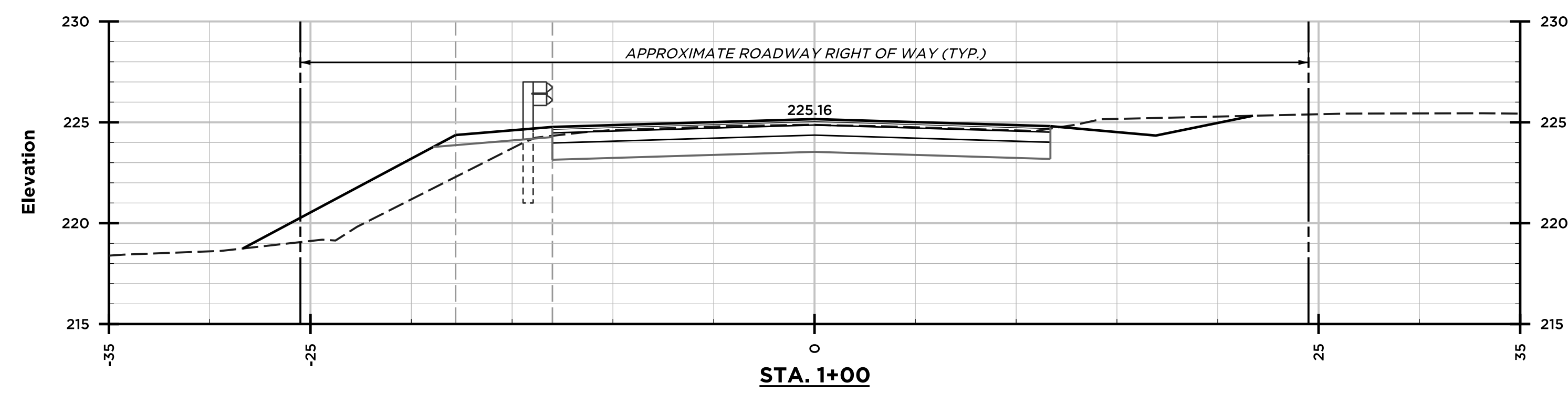
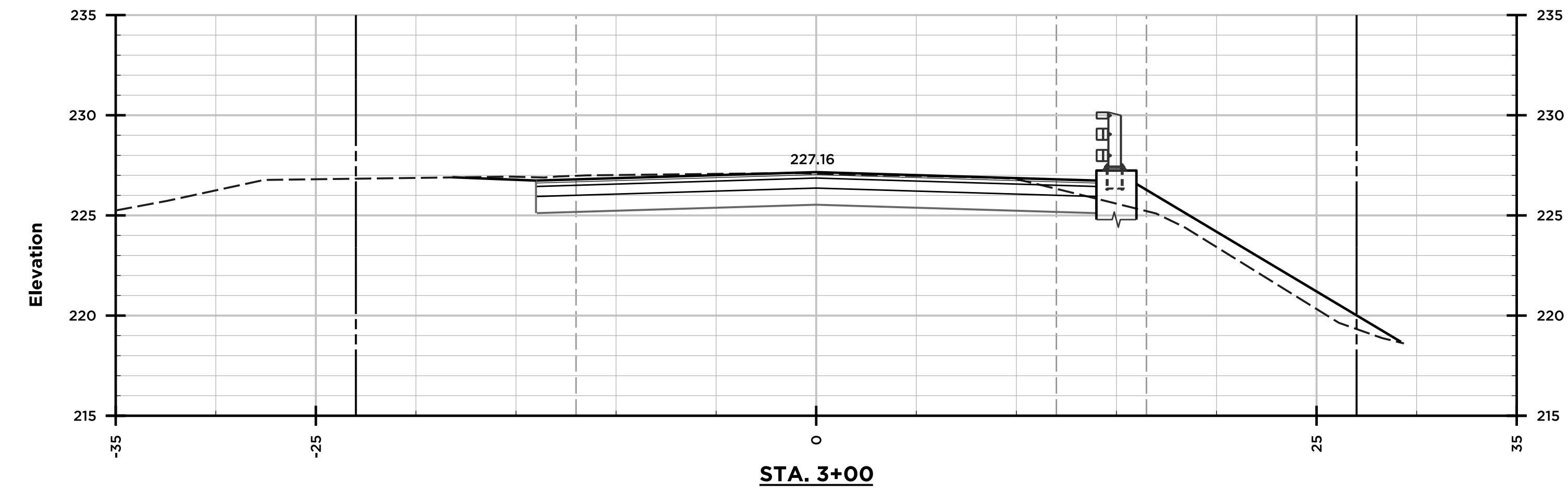
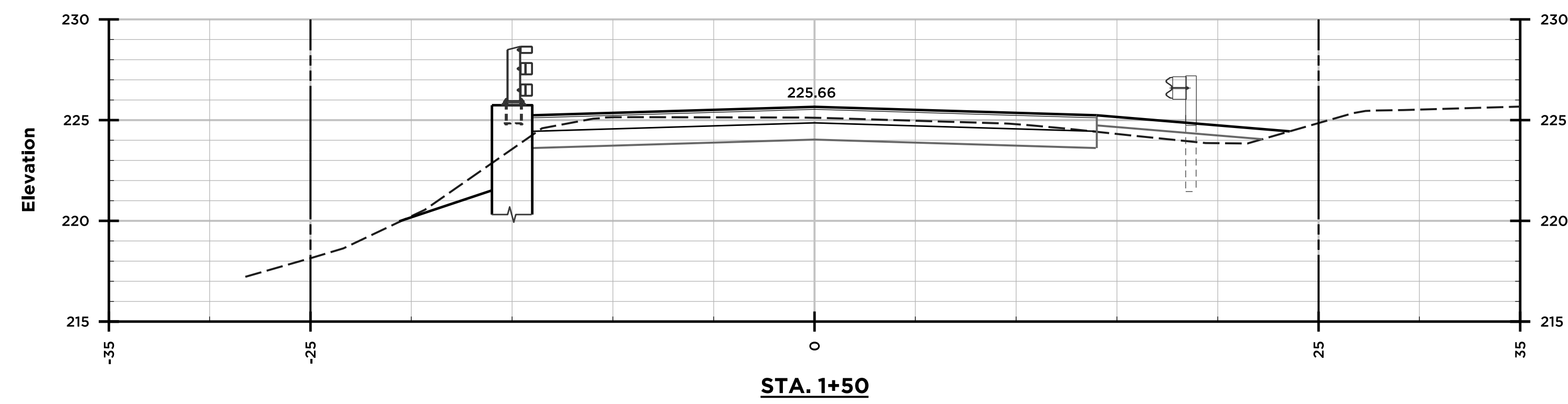
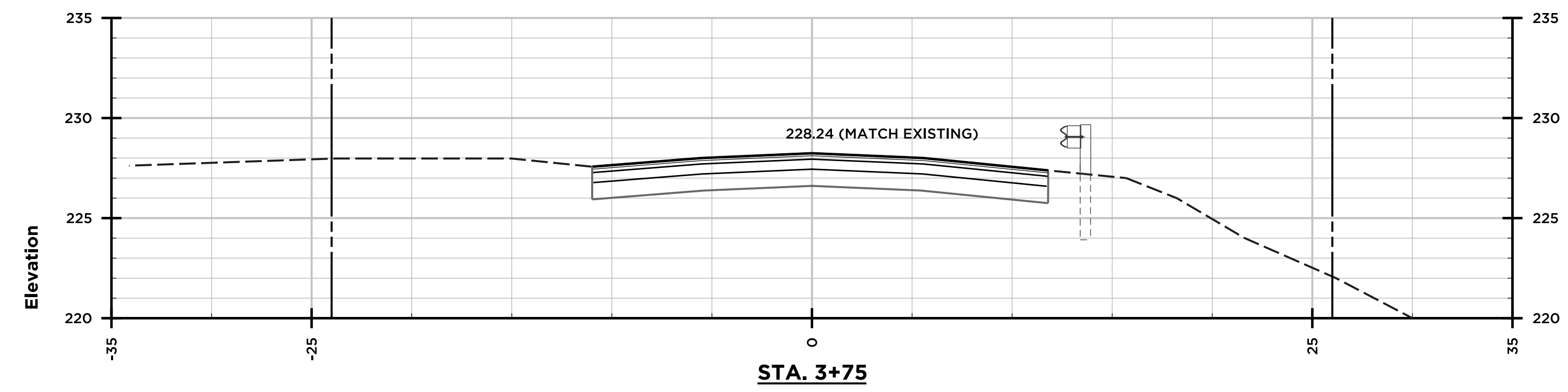
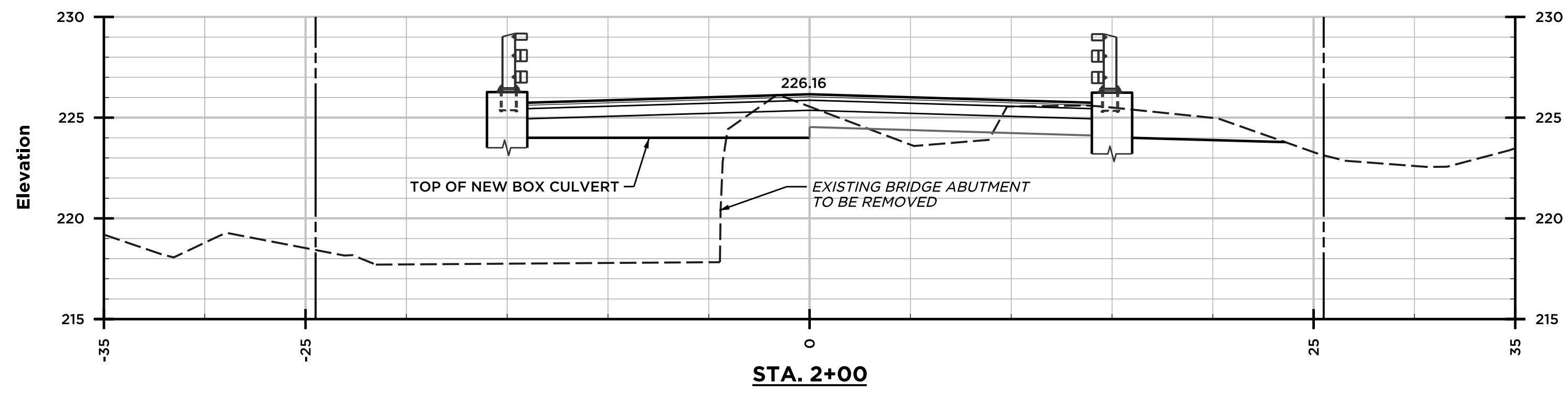
RIGHT SECTION

TYPICAL THRIE BEAM TRANSITION ELEMENT

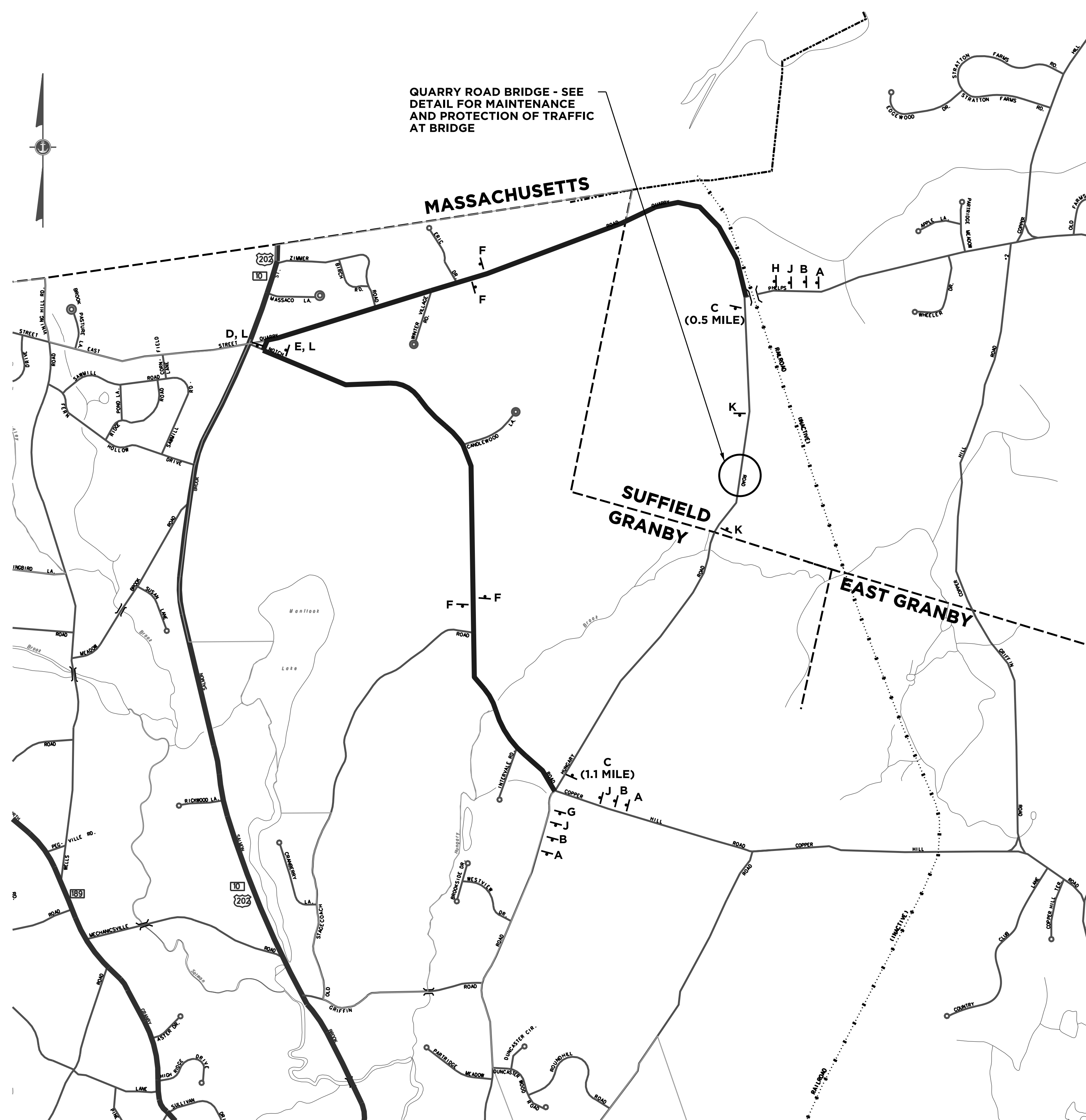


SYMMETRICAL THRIE BEAM TRANSITION ELEMENT
(Left section shown, right section reversed)

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		<p>REPLACEMENT OF QUARRY RD BRIDGE</p> <p>PREPARED FOR THE TOWN OF SUFFIELD</p> <p>3 TUBE CURB MOUNTED RAIL 2 OF 2</p> <p>QUARRY ROAD SUFFIELD, CT</p>	
<p>REVISIONS</p>		<p>PROJECT 3157-31</p>	<p>DATE 03/05/25</p>
<p>SCALE: NOT TO SCALE</p>		<p>SHEET NO. 10 OF 13</p>	



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PROJ. ENGINEER	DPL	REPLACEMENT OF QUARRY RD BRIDGE PREPARED FOR TOWN OF SUFFIELD ROAD PLAN & PROFILE	
PROJ. MANAGER	KBF		
OFFICE REVIEW	MMZ		
REVISIONS		PROJECT	DATE
		QUARRY ROAD	03/05/25
		SUFFIELD, CT	SHEET NO. 11 OF 13
SCALE: 1" = 5'		3157-31	



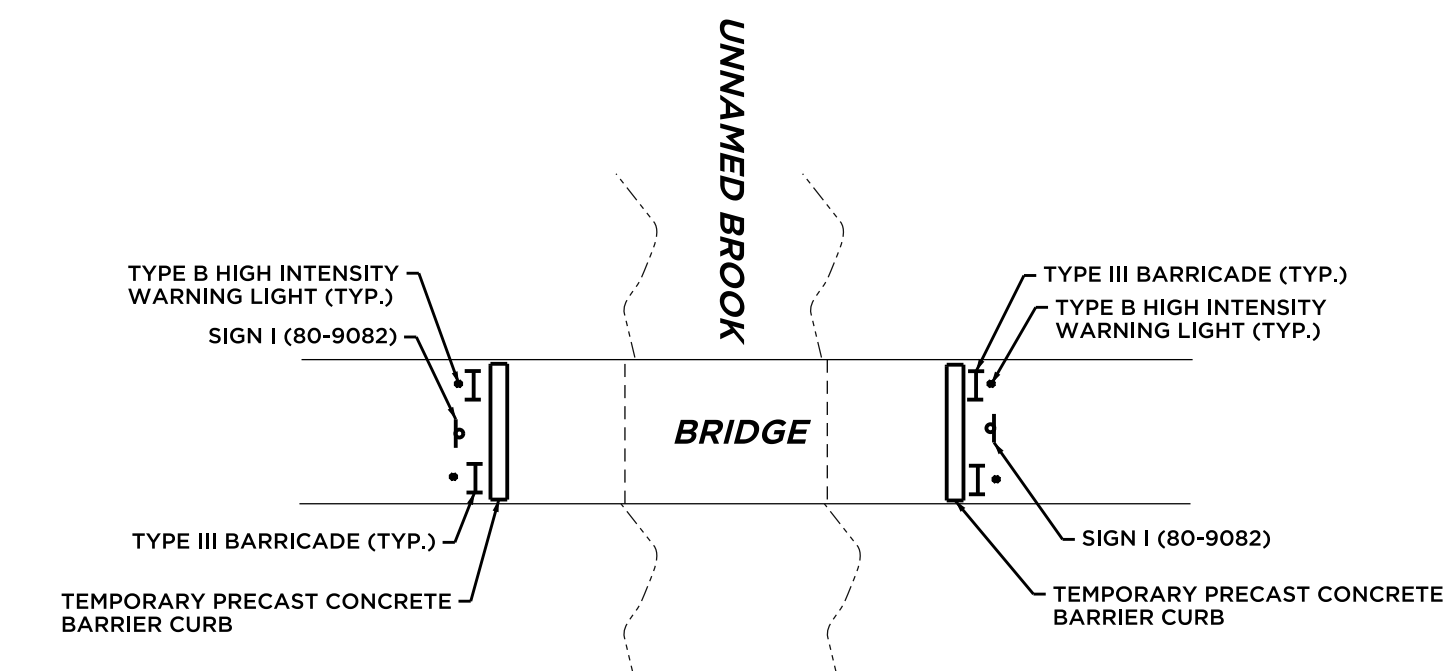
QUARRY ROAD BRIDGE - SEE
DETAIL FOR MAINTENANCE
AND PROTECTION OF TRAFFIC
AT BRIDGE

MASSACHUSETTS

SUFFIELD
GRANBY

EAST GRANBY

DETOUR PLAN
SCALE: 1"=1000'



**MAINTENANCE AND PROTECTION
OF TRAFFIC AT BRIDGE**
NOT TO SCALE

A 80-9811	B 80-9805	C 80-9077
D 80-9710	E 80-9710	F 80-9707
G 80-9702	H 80-9701	I 80-9082
J 80-9928	K 80-9810	L 80-9920

SIGN	M.U.T.C.D.	DIMENSION	DESCRIPTION
A	W20-1	36" X 36"	ROAD CONSTRUCTION AHEAD
B	W20-2	36" X 36"	DETOUR AHEAD
C	R11-3A	60" X 30"	ROAD CLOSED X MILES AHEAD LOCAL TRAFFIC ONLY
D	M4-9L	30" X 24"	← DETOUR
E	M4-9R	30" X 24"	→ DETOUR
F	M4-8	24" X 12"	DETOUR
G	M4-10L	48" X 18"	← DETOUR
H	M4-10R	48" X 18"	→ DETOUR
I	R11-2	48" X 30"	BRIDGE OUT
J	R11-3	60" X 30"	QUARRY ROAD BRIDGE OUT
K	W20-3	36" X 36"	ROAD CLOSED 1000 FT
L		30" X 18"	QUARRY RD SUFFIELD

NOTE: 1) INSTALL BARRICADE WARNING LIGHTS - HIGH INTENSITY ON ALL POSTED-MOUNTED DIAMOND SIGNS IN THE ADVANCE WARNING AREA.

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PROJ. ENGINEER: DPL
PROJ. MANAGER: KBF
OFFICE REVIEW: MMZ

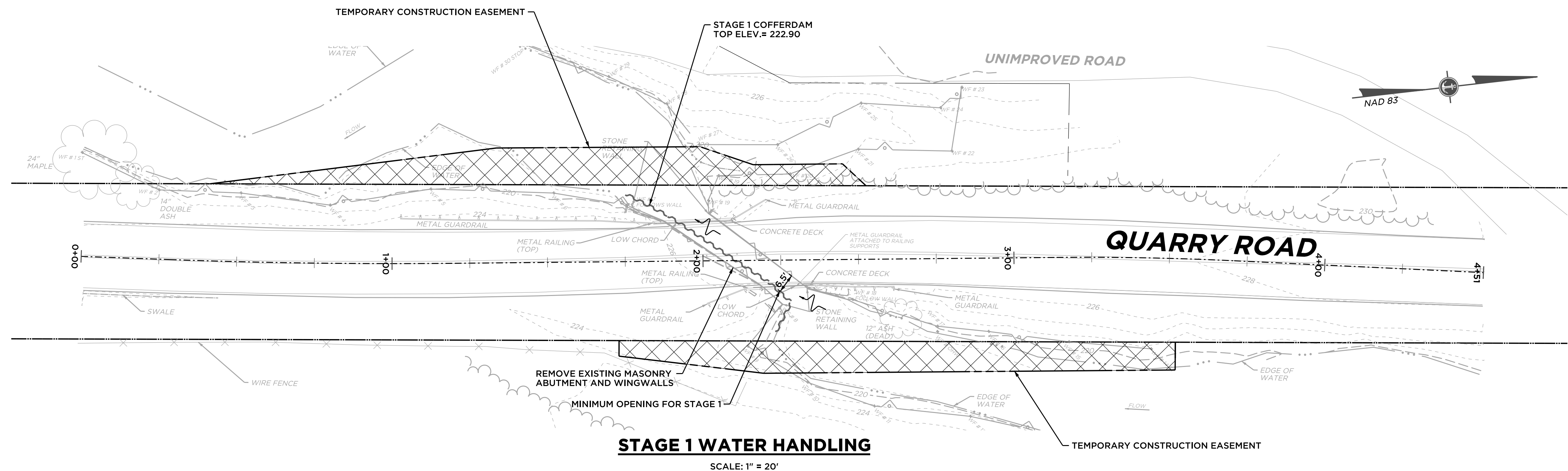
REVISIONS:

PREPARED FOR
TOWN OF SUFFIELD
DETOUR PLAN

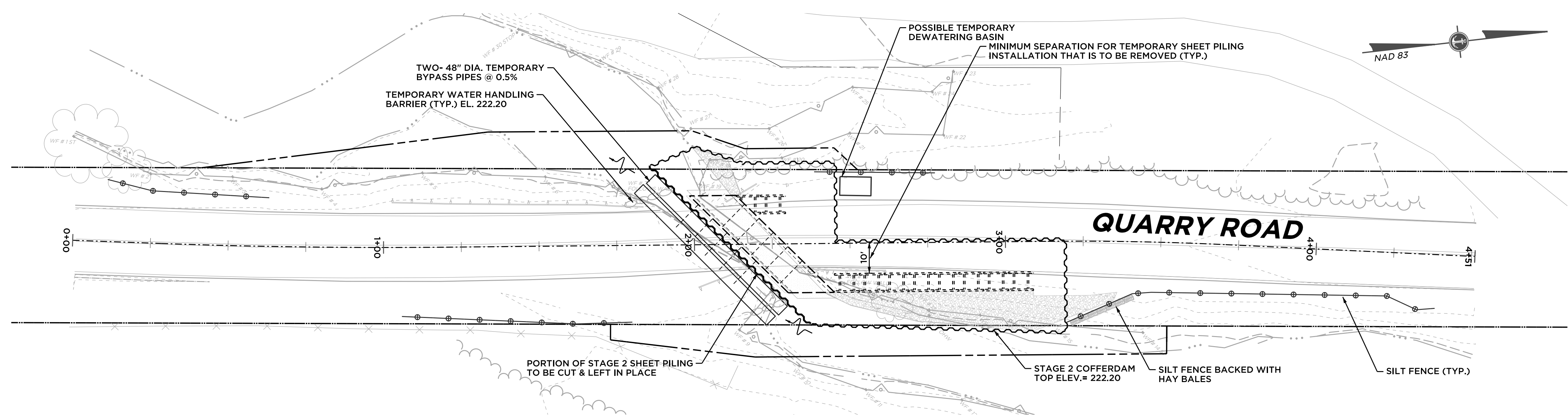
QUARRY ROAD SUFFIELD, CT

PROJECT: 157.31
DATE: 03/05/25
SHEET NO. 12 OF 13

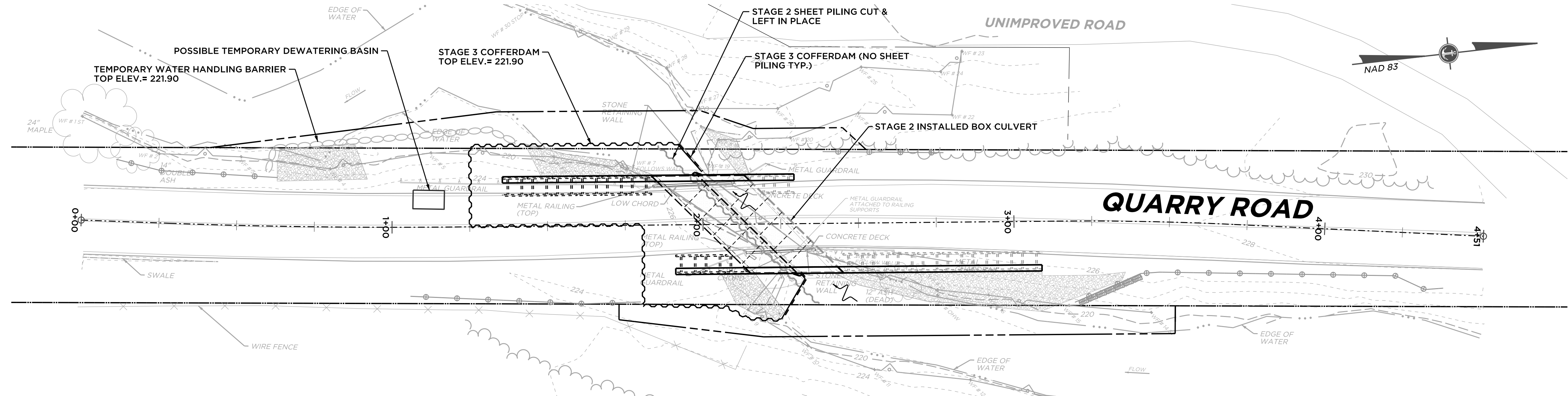
SCALE: AS NOTED



STAGE 1 WATER HANDLING
SCALE: 1" = 20'



STAGE 2 WATER HANDLING
SCALE: 1" = 20'



STAGE 3 WATER HANDLING
SCALE: 1" = 20'

COFFERDAM & DEWATERING NOTES

1. COFFERDAMS SHALL BE DESIGNED BY THE CONTRACTOR BASED ON THE SELECTED METHOD OF CONSTRUCTION.
2. ALL WATER PUMPED FROM WITHIN THE CONSTRUCTION ENCLOSURES TO BE HANDLED THROUGH TEMPORARY DEWATERING BASIN(S). THE TEMPORARY DEWATERING BASIN(S) AND PUMP(S) SHALL BE SIZED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. COST OF TEMPORARY DEWATERING BASINS SHALL BE INCLUDED IN THE COST OF THE ITEM "COFFERDAM AND DEWATERING".
3. ANY UNCONFINED INSTREAM WORK IS RESTRICTED TO THE PERIOD FROM JUNE 1 TO SEPTEMBER 30, INCLUSIVE.
4. THE CONTRACTOR SHALL MAINTAIN THE MINIMUM OPEN WATERWAY SHOWN ON THE PLANS.

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. COORDINATE AND COMPLETE A PRE- CONSTRUCTION MEETING WITH TOWN AND OWNER. RESPONSIBLE PARTIES TO BE IDENTIFIED AND EMERGENCY PHONE NUMBERS PROVIDED.
2. CONTACT CALL BEFORE YOU DIG (1-800-922-4455) PRIOR TO ANY CONSTRUCTION ACTIVITIES.
3. INSTALL EROSION CONTROL MEASURES AT LOCATIONS INDICATED ON PLANS OR AS ORDERED BY THE ENGINEER.
4. CLEAR AND GRUB SITE.
5. SET UP ROADWAY DETOUR AND CLOSE THE BRIDGE. REMOVE THE TOWN'S TEMPORARY CONCRETE BARRIER CURB AND COORDINATE THEIR REMOVAL FROM SITE BY THE TOWN.
6. INSTALL DEBRIS SHIELDS AND REMOVE THE EXISTING SUPERSTRUCTURE AND RAILING.
7. INSTALL STAGE 1 COFFERDAMS. REMOVE THE EXISTING SOUTH ABUTMENT AND WINGWALLS. EXCAVATE AS REQUIRED FOR THE TEMPORARY BYPASS PIPE INSTALLATION.
8. REMOVE STAGE 1 COFFERDAMS AND INSTALL TEMPORARY BYPASS PIPES AND BARRIERS.
9. INSTALL STAGE 2 COFFERDAMS.
10. REMOVE EXISTING NORTH ABUTMENT AND WINGWALLS.
11. COMPLETE THE NORTHERN BOX CULVERT AND U WALL INSTALLATION.
12. COMPLETE STONE EMBANKMENT AND CHANNEL BOTTOM MATERIAL INSTALLATION.
13. REMOVE STAGE 2 COFFERDAM EXCEPT PORTION TO REMAIN IN PLACE. DIRECT THE BROOK FLOW THROUGH THE NEW NORTH CELL BOX CULVERTS.
14. REMOVE THE TEMPORARY BYPASS PIPES AND BARRIERS. INSTALL STAGE 3 COFFERDAMS AND COMPLETE THE SOUTHERN BOX CULVERT AND U WALL INSTALLATION.
15. INSTALL EMBANKMENT PROTECTION AND CHANNEL BOTTOM MATERIALS.
16. REMOVE COFFERDAMS.
17. INSTALL MEMBRANE WATERPROOFING & PAVING.
18. COMPLETE STRUCTURE BACKFILL.
19. COMPLETE ROADWAY RECONSTRUCTION.
20. INSTALL BRIDGE RAIL AND ROADWAY GUIDE RAILING. SPREAD TOPSOIL, SEED AND MULCH ON DISTURBED AREAS.
21. REMOVE SEDIMENT BARRIERS WHEN PERMANENT VEGETATIVE COVER IS ESTABLISHED.

TEMPORARY HYDRAULIC DATA

AVERAGE DAILY FLOW	11.25 CFS
AVERAGE SPRING FLOW	22.10 CFS
TEMPORARY DESIGN DISCHARGE	218 CFS
TEMPORARY DESIGN FREQUENCY	2-YEAR
TEMPORARY UPSTREAM WATER SURFACE ELEVATION STAGE 1	222.73 FT.
TEMPORARY UPSTREAM WATER SURFACE ELEVATION STAGE 2	222.00 FT.
TEMPORARY UPSTREAM WATER SURFACE ELEVATION STAGE 3	221.68 FT.

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PROJ. ENGINEER DPL
PROJ. MANAGER KBF
OFFICE REVIEW MMZ

REVISIONS

PREPARED FOR
TOWN OF SUFFIELD
WATER HANDLING PLAN

QUARRY ROAD SUFFIELD, CT

PROJECT DATE
3157-31 03/05/25

SCALE: AS NOTED SHEET NO. 13 OF 13