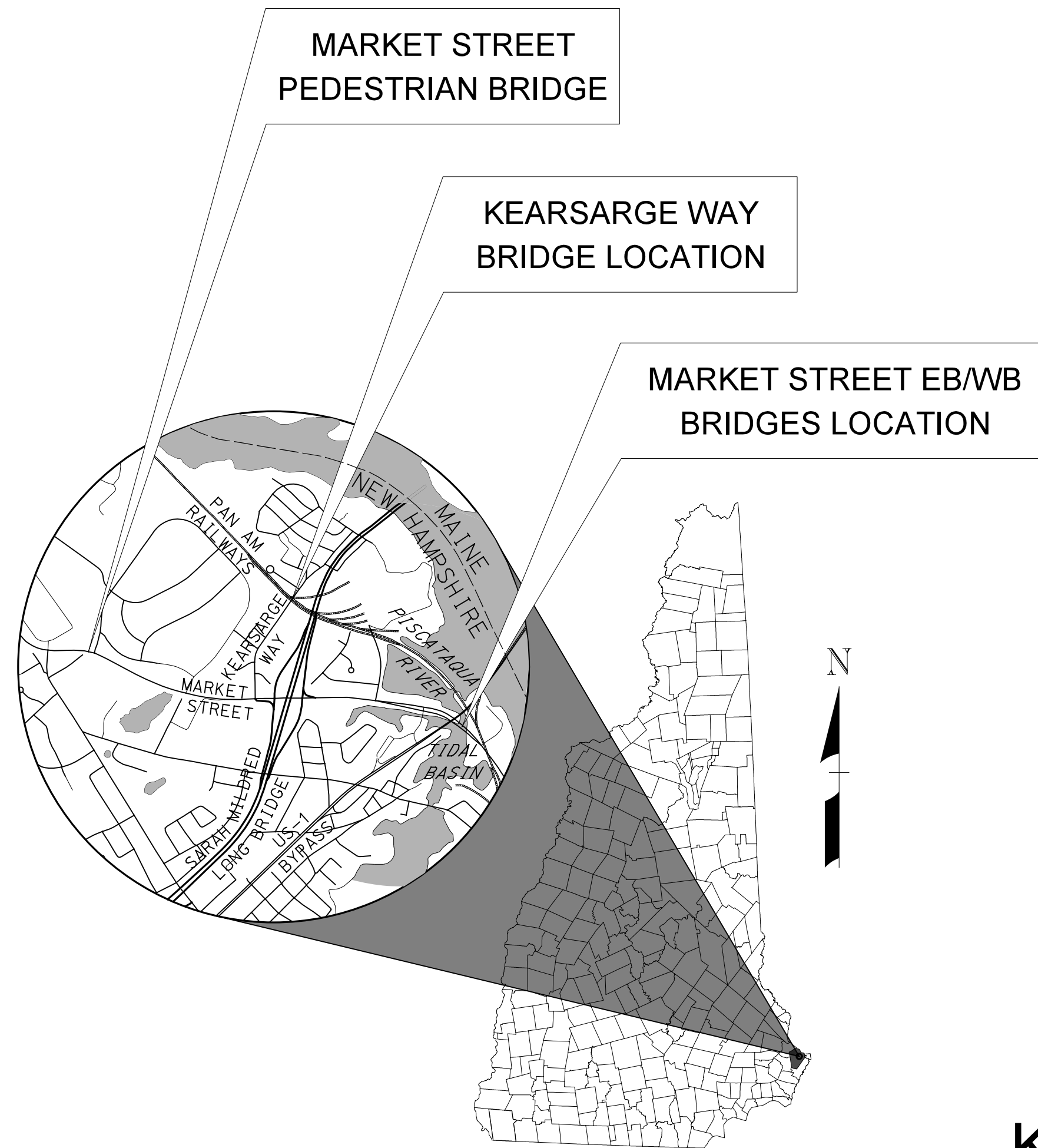


CITY OF PORTSMOUTH
ROCKINGHAM COUNTY
NEW HAMPSHIRE



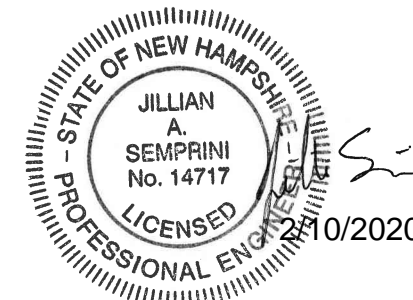
LOCATION MAP

PLANS OF PROPOSED BRIDGE REPAIRS
MARKET STREET OVER TIDAL BASIN
NHDOT BRIDGE NOS. 240/106 AND 241/106

KEARSARGE WAY OVER PAN AM RAILWAYS
NHDOT BRIDGE NO. 240/132

MARKET STREET PEDESTRIAN BRIDGE
NHDOT BRIDGE NO. 220/143

FEBRUARY 2020



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REV	DESCRIPTION	DRW	CHKD	BY	DATE

PROJECT NO. 240/132 AND 220/143
 FILENAME 905108 Title
 MODEL NAME 9051081SC
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 CHECKED AS SHOWN
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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET OVER TIDAL BASIN, KEARSARGE WAY OVER PAN AM RAILWAYS, MARKET STREET PEDESTRIAN BRIDGE
 TITLE SHEET

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SCOPE OF WORK

- MARKET STREET EB (BR. NO. 240/106) & WB (BR. NO. 241/106) OVER TIDAL BASIN
- REMOVAL OF EXISTING EXPANSION JOINT AND PARTIAL REMOVAL OF ABUTMENT BACKWALL, WINGWALLS AND EXPANSION END OF BRIDGE DECK TO FACILITATE EXPANSION JOINT REPLACEMENT.
 - RECONSTRUCTION OF ABUTMENT BACKWALLS, WINGWALLS, AND END OF DECK.
 - INSTALLATION OF NEW EXPANSION JOINT.
 - INSTALLATION OF BRIDGE APPROACH RAIL.

MATERIALS AND SPECIFICATIONS

1. SPECIFICATIONS: NHDOT 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS AMENDED.
2. CONCRETE: PROPOSED DECK, BRUSH CURB, SIDEWALK, AND ABUTMENT BACKWALL MODIFICATIONS, ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS = 4,000 PSI

GENERAL NOTES

1. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS PREPARED BY HOYLE, TANNER & ASSOCIATES, INC. (HOYLE, TANNER) AND THE PROPOSED WORK THEY CONVEY.
2. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS AND THE MORE STRINGENT SHALL GOVERN.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS AND COORDINATION OF OTHER TRADES
4. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SITE SAFETY SHALL SOLELY BE THE CONTRACTOR'S RESPONSIBILITY.
5. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS MUST BE VERIFIED BY THE GENERAL CONTRACTOR OR RESPONSIBLE TRADES PRIOR TO COMMENCING WITH THE WORK, FABRICATION OR ORDERING MATERIALS. DO NOT SCALE DRAWINGS, USE DIMENSIONS SHOWN.
6. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, BEFORE PROCEEDING WITH THE WORK.
7. IN THE PREPARATION OF THESE DRAWINGS, HOYLE, TANNER HAS RELIED UPON INFORMATION OBTAINED FROM THE FOLLOWING DRAWINGS:

AS-BUILT DRAWINGS, STATE PROJECT NO. P-3875-E, DATED 1970, 16 PAGES. THIS INFORMATION IS INCLUDED IN CONTRACT SPECIFICATIONS, APPENDIX A.

FINAL DESIGN DRAWINGS, MARKET STREET GATEWAY IMPROVEMENTS, DATED NOVEMBER, 2015, 100 PAGES.
8. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. ALL COSTS FOR DETERMINING UNDERGROUND UTILITY TYPES AND LOCATIONS SHALL BE SUBSIDIARY TO THE CONTRACT. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER AND UTILITY OWNERS BEFORE PROCEEDING WITH THE WORK.
9. ALL APPLICABLE UTILITY DEPARTMENTS AND COMPANIES SHALL BE NOTIFIED BEFORE EXCAVATION IS STARTED. UTILITIES WITHIN 50 FEET OF AN EXCAVATION SHALL BE MARKED IN THE FIELD.
10. HOYLE, TANNER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE DUE TO THE FAILURE OF THE CONTRACTOR:
 - a. TO FOLLOW THESE DRAWINGS AND SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.
 - b. TO NOTIFY HOYLE, TANNER OF ANY DISCREPANCIES, ERRORS, OMISSIONS OR CONFLICTS AND OBTAIN THEIR GUIDANCE TO RESOLVE.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, INSTALLATION AND REMOVAL OF ALL TEMPORARY SHORING AND BRACING REQUIRED DURING CONSTRUCTION.
12. THE CONTRACTOR SHOULD NOTE THAT THE NHDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" ARE MADE A PART OF THIS PROJECT AND ALL APPLICABLE DETAILS, STANDARDS AND SPECIFICATIONS SHALL APPLY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.
14. THE CITY OF PORTSMOUTH IS UNDERGOING IMPROVEMENTS TO THE MARKET STREET CORRIDOR UNDER THE MARKET STREET GATEWAY PROJECT CONCURRENTLY WITH THIS JOINT REPLACEMENT PROJECT. AS PART OF THE MARKET STREET GATEWAY PROJECT, THE MARKET STREET BRIDGES AND APPROACHES WILL BE REPAVED AND FINAL PAVEMENT MARKINGS ARE TO BE COMPLETED. MAINTENANCE OF TEMPORARY MARKINGS UNTIL FINAL MARKINGS ARE INSTALLED IS THE RESPONSIBILITY OF THE CONTRACTOR. PAVING IS PLANNED TO COMMENCE NO LATER THAN SEPTEMBER 1, 2020. CONTRACTOR SHALL COORDINATE WITH THE CITY OF PORTSMOUTH PRIOR TO COMPLETION OF THE JOINT REPLACEMENT WORK. THE CITY'S POINT OF CONTACT FOR THIS COORDINATION SHALL BE DAVE DESPOSSES, PROJECT MANAGER FOR THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, (603) 766-1411.

GENERAL CONSTRUCTION NOTES

1. DIMENSIONS, ANGLES, AND BEARINGS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM EXISTING PLANS, AND LIMITED FIELD INVESTIGATIONS, AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE PROPOSED WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK.
2. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.
3. WATER LEVEL VARIES FROM THAT SHOWN DUE TO TIDAL EFFECTS.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT DEBRIS DOES NOT FALL INTO THE TIDAL BASIN BELOW THE EXISTING STRUCTURE DURING REMOVAL WORK. ALL COSTS SHALL BE PAID UNDER ITEM 502.101 AND SHALL INCLUDE ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH METHODS AS APPROVED.
5. THE WELDING OF ATTACHMENTS TO EXISTING BRIDGE COMPONENTS FOR CONSTRUCTION PURPOSES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
6. NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE ROADWAY UNLESS APPROVED BY THE ENGINEER.
7. TO ACCOMPLISH THE PROPOSED EXPANSION JOINT REPLACEMENT, THE EXISTING DECK, ABUTMENT BACKWALL AND WINGWALLS SHALL BE REMOVED TO THE LIMITS SHOWN IN THESE PLANS UNDER ITEM 502.101, REMOVAL OF EXISTING BRIDGE STRUCTURE. ALL EXPOSED CONCRETE SURFACES SHALL BE SAWCUT 1" DEEP TO PROVIDE CLEAN REMOVAL LINES (ALL COSTS INCLUDED IN ITEM 502.101). NEW DECK END AT THE EXPANSION JOINT, ABUTMENT BACKWALL AND WINGWALLS SHALL BE RECONSTRUCTED WITH ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS. PRIOR TO PLACING NEW CONCRETE, THE REMOVAL SURFACES SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS INCLUDED IN ITEM 520.0201).
8. ALL BACKFILL MATERIAL (EXCEPT SUITABLE FILL) SHALL NOT EXCEED THE OPTIMUM MOISTURE CONTENT BY MORE THAN 2 PERCENTAGE POINTS. THE MATERIAL SHALL BE PLACED IN LAYERS NOT MORE THAN 8" LOOSE DEPTH, UNLESS OTHERWISE NOTED. BACKFILL MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 100 PERCENT OF MAXIMUM DENSITY. THE COMPACTION WILL BE TESTED AT FREQUENCIES DETERMINED IN THE FIELD BY THE ENGINEER.
9. IF CONCRETE FORMS ARE TO BE TREATED WITH FORM RELEASE COMPOUND THIS WORK SHALL BE DONE PRIOR TO THE ERECTION OF THE FORMS. THE REINFORCING STEEL, AT THE TIME CONCRETE IS PLACED, SHALL BE FREE OF DIRT, PAINT, OIL, FORM RELEASE COMPOUND, OR OTHER ORGANIC MATERIALS THAT MAY ADVERSELY AFFECT OR REDUCE BOND.
10. ALL EXPOSED EDGES OF THE CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
11. ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED – BRIDGE STRUCTURES, SHALL BE USED FOR COMPLETION OF UNANTICIPATED WORK IN CONNECTION WITH THE SCOPE OF THIS PROJECT, AS DIRECTED BY THE ENGINEER.
11. ITEM 646.41, TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS, SHALL BE USED TO REPAIR DISTURBED AREAS AS DIRECTED BY THE ENGINEER.

REMOVAL NOTES

1. THE CONTRACTOR'S METHOD OF REMOVAL OF PORTIONS OF THE EXISTING BRIDGE DECK AND THE ABUTMENT BACKWALL AND WINGWALLS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 502 TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY REMOVAL OPERATIONS.
2. EXISTING PAVEMENT SHALL BE SAW CUT PRIOR TO REMOVAL AND SHALL BE PAID AS ITEM 628.22. SAWED BITUMINOUS PAVEMENT.
3. REMOVAL OF EXISTING BRIDGE STRUCTURE, ITEM 502.101, SHALL INCLUDE REMOVAL OF THE EXISTING BRIDGE DECK CONCRETE, ABUTMENT BACKWALL, WINGWALLS, AND EXISTING EXPANSION JOINT TO THE LIMITS SHOWN ON THESE PLANS.
4. DURING ALL REMOVAL AND REPAIR OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE THE EXISTING CONCRETE DECK REINFORCEMENT. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED AT THE CONTRACTOR'S EXPENSE.
5. DURING CONCRETE EXPANSION JOINT END OF DECK REMOVAL OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE TOP FLANGES OF EXISTING BEAMS. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.

EXPANSION JOINT NOTES

1. ACCEPTABLE EXPANSION JOINT FOR USE ON THIS PROJECT IS EMSEAL BEJS SYSTEM OR APPROVED EQUAL. THE JOINT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES.
2. THE JOINT SHALL BE SPLICED PER MANUFACTURER'S INSTRUCTIONS AND SHALL NOT HAVE A GAP BETWEEN THE TWO BRIDGES.
3. SHOP DRAWINGS OF THE JOINT AND ALL BENDS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
4. BENDS SHALL BE FACTORY-FABRICATED TRANSITIONS FOR THE 90 DEGREE TURNS AND CAN BE CUSTOM FABRICATED OR FIELD MODIFIED FOR OTHER TRANSITIONS PER MANUFACTURERS INSTRUCTIONS.
5. ELASTOMERIC CONCRETE SHALL BE USED FOR THE HEADERS OF THE JOINT AS DETAILED ON THE PLANS. ELASTOMERIC CONCRETE SHALL BE EMCRETE OR APPROVED EQUAL. ELASTOMERIC CONCRETE SHALL BE SUBSIDIARY TO ITEM 560.14, PREFABRICATED EXPANSION JOINT.

REINFORCEMENT NOTES

1. EXISTING REINFORCING STEEL, UNLESS OTHERWISE SHOWN/NOTED IN THE PLANS, SHALL BE RETAINED.
2. PROPOSED REINFORCEMENT, AS SHOWN IN THE PLANS. REPLACING EXISTING REBAR TO BE REMOVED, SHALL BE PAID UNDER ITEM 544.301, REINFORCING STEEL (CONTRACTOR DETAILED).
3. ALL REINFORCING TO REMAIN IN PLACE SHALL BE INSPECTED FOR DAMAGE OR CORROSION JOINTLY BY THE ENGINEER AND CONTRACTOR AFTER EACH REMOVAL PHASE. ALL NEW REINFORCING STEEL REQUIRED TO REPAIR OR REPLACE EXISTING REINFORCEMENT SHALL BE PAID UNDER ITEM 544.301, REINFORCING STEEL (CONTRACTOR DETAILED).
4. EXISTING REINFORCING STEEL THAT IS TO REMAIN IN PLACE WITHIN THE REMOVAL AREAS SHALL BE CUT AS REQUIRED TO PROVIDE 2 1/2" MINIMUM CLEAR COVER FROM THE PROPOSED CONCRETE SURFACES, EXCEPT AS OTHERWISE NOTED. ALL COSTS INCLUDED IN ITEM 502.101.
5. ALL NEW REINFORCING SHALL HAVE A CLEAR COVER OF 2 1/2" FROM PROPOSED CONCRETE SURFACES UNLESS OTHERWISE NOTED.
6. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," AASHTO M31 (ASTM A615), GRADE 60.
7. FOR TYPICAL BENDING DETAILS, RECOMMENDED MINIMUM DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICES, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE."
8. ALL LAP SPLICES SHALL HAVE A MINIMUM LENGTH OF 24" FOR NUMBER 5 BARS UNLESS OTHERWISE SPECIFIED ON THE PLANS.
9. ITEM 544.3011, MECHANICAL CONNECTORS (CONTRACTOR DETAILED), ARE TO BE USED TO SPLICE ALL NEW REINFORCEMENT AT THE PHASED CONSTRUCTION JOINTS.

BRIDGE RAIL NOTES

1. EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING BRIDGE RAIL, INCLUDING ALL ELEMENTS TO REMAIN IN PLACE. ANY DAMAGE TO EXISTING BRIDGE RAIL SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
2. ITEM 565.919, BRIDGE APPROACH RAIL, THRIE BEAM TRANSITION (STEEL POSTS) (MODIFIED), SHALL INCLUDE STRUCTURAL TUBING, RAIL POSTS, SYNTHETIC OFFSET BLOCKS, THRIE BEAM RAIL ELEMENTS, CONNECTION PLATES, THRIE BEAM TERMINAL CONNECTORS, THRIE BEAM TRANSITION SECTIONS, BOLTS, NUTS, WASHERS AND GALVANIZING.
3. ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.
4. BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.
5. NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER GALVANIZING.
6. FIELD DRILLED HOLES AND DAMAGED AREAS OF GALVANIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING A MINIMUM 92% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING, ACCORDING TO SECTION 550.2.9.1 AND ASTM A780.
7. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
8. FIELD DRILL HOLES IN THE EXISTING BRIDGE RAIL USING A CORE DRILL. COLLECT ALL PLUGS AND DELIVER TO A STEEL RECYCLER. ALL COSTS ARE SUBSIDIARY TO ITEM 565.919.
9. MODIFIED CONNECTION PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572, GRADE 36.
10. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT-LBS. AT 0°F. FOR ASTM A500, GRADE B, TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.
11. ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZED SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZED MATERIAL SHALL BE PROPERLY STORED.
12. W 6x8.5 POSTS SHALL BE THE SAME AS W-BEAM GUARDRAIL POSTS.
13. CARRIAGE BOLTS SHALL BE ASTM A307, AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).
14. THRIE BEAM GUARDRAIL SHALL BE 12 GAUGE.
15. ALL COMPONENTS, EXCEPT TUBULAR RAIL, SHALL CONFORM TO SECTION 606 OF NHDOT STANDARD SPECIFICATIONS.

REV	DESCRIPTION	DATE	BY	CHKD	DATE		
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NHDOT BRIDGE NO. 240/106 & 241/106	DESIGNED FILENAME 905108BNotes_M	RPM	DRAWN MODEL NAME 905108BNotes1	TAG	CHECKED EGW	DATE AS SHOWN	FEBRUARY 2020
 Hoyle, Tanner & Associates, Inc. 100 International Drive, #580, Portsmouth, NH 03801 Tel: (603) 431-2520 • Fax: (603) 431-8067 www.hoyletanner.com							
CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE				MARKET STREET OVER TIDAL BASIN			
PROJECT NO. 905108				PROJECT NOTES			
SHEET NO.							
2							
SHEET 2 OF 40							

BRIDGE CONSTRUCTION PHASING NOTES

GENERAL

- TRAFFIC WILL BE MAINTAINED DURING CONSTRUCTION UTILIZING A SINGLE LANE ON THE EASTBOUND AND WESTBOUND BRIDGE TO MAINTAIN EASTBOUND AND WESTBOUND TRAFFIC RESPECTIVELY (ITEM 619.1). THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, ERECTING, AND MAINTAINING PERMANENT CONSTRUCTION FENCING, SIGNS, AND/OR WARNING DEVICES AS APPROVED OR DIRECTED BY THE ENGINEER. ALL DEVICES SHALL CONFORM TO SECTION 619 OF THE NHDOT STANDARD SPECIFICATIONS AND THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). WORK ON THE PROJECT OR ANY SEPARATE ACTIVITY THEREIN SHALL NOT START UNTIL ALL REQUIRED SIGNS AND WARNING DEVICES ARE INSTALLED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER AND WITH MESSAGES AS APPROVED BY THE ENGINEER AND THE CITY OF PORTSMOUTH.
- PORTABLE CONCRETE BARRIER OR CHANNELIZING DEVICES SHALL BE IN PLACE BEFORE REMOVAL OPERATIONS BEGIN FOR EACH CONSTRUCTION PHASE.
- ALL CONSTRUCTION SHALL BE COMPLETED USING THE TRAFFIC CONTROL PLAN AND APPROVED TRAFFIC CONTROL PROCEDURES.
- PEDESTRIAN TRAFFIC IS TO BE MAINTAINED AT ALL TIMES FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY PRIOR TO REMOVAL OF THE PHASE 2 TEMPORARY TRAFFIC CONTROL.

PHASE 1

- MAINTAIN ONE 15'-3" TRAVEL LANE IN THE EASTBOUND DIRECTION ON THE EASTBOUND BRIDGE AND ONE 12'-0" TRAVEL LANE IN THE WESTBOUND DIRECTION ON THE WESTBOUND BRIDGE. MAINTAIN EXISTING SIDEWALK FOR PEDESTRIAN TRAVEL.
- INSTALL TRAFFIC CONTROL FOR PHASE 1 CONSTRUCTION.
- REMOVE PORTIONS OF THE EXISTING DECK, ABUTMENT BACKWALL AND WINGWALLS AS REQUIRED FOR PHASE 1 CONSTRUCTION.
- CONSTRUCT PHASE 1 PORTION OF THE DECK, ABUTMENT BACKWALL AND WINGWALLS.

PHASE 2

- MAINTAIN ONE 15'-3" TRAVEL LANE IN THE EASTBOUND DIRECTION ON THE EASTBOUND BRIDGE AND ONE 12'-8" TRAVEL LANE IN THE WESTBOUND DIRECTION ON THE WESTBOUND BRIDGE. MAINTAIN SIDEWALK FOR PEDESTRIAN TRAVEL.
- INSTALL TRAFFIC CONTROL FOR PHASE 2 CONSTRUCTION AND ROUTE TRAFFIC ONTO PHASE 1.
- REMOVE PORTIONS OF THE EXISTING DECK AND ABUTMENT BACKWALL AS REQUIRED FOR PART OF PHASE 2 CONSTRUCTION WHILE MAINTAINING THE SIDEWALK.
- CONSTRUCT A PORTION OF PHASE 2 OF THE DECK AND ABUTMENT BACKWALL.

PHASE 2A

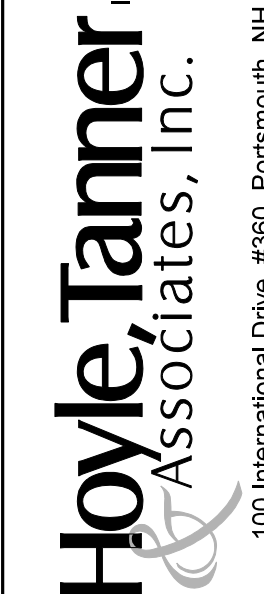
- TRANSITION PEDESTRIAN TRAVEL ONTO THE COMPLETED WORK FROM PHASE 2.
- REMOVE PORTIONS OF THE EXISTING DECK AND ABUTMENT BACKWALL AS REQUIRED TO COMPLETE PHASE 2 CONSTRUCTION.
- COMPLETE REMAINING PHASE 2 PORTION OF THE DECK AND ABUTMENT BACKWALL.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	Quantity	
		Unit	Amount
304.3	CRUSHED GRAVEL (F)	CY	30
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	TON	15
502.101	REMOVAL OF EXISTING BRIDGE STRUCTURE	U	1
504.1	COMMON BRIDGE EXCAVATION (F)	CY	40
520.0201	CONCRETE CLASS AA, ABOVE FOOTINGS	CY	15
534.3	WATER REPELLENT (SILANE/ SILOXANE)	GAL	5
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	SY	30
544.301	REINFORCING STEEL (CONTRACTOR DETAILED)	LB	2000
544.3011	REINFORCING STEEL, MECHANICAL CONNECTORS (CONTRACTOR DETAILED)	EA	30
560.14	PREFABRICATED EXPANSION JOINT	LF	118
562.1	SILICONE JOINT SEALANT (F)	LF	4
565.919	BRIDGE APPROACH RAIL, THRIE BEAM TRANSITION (STEEL POSTS) (MODIFIED)	U	4
606.18001	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	LF	50
606.417	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL	LF	530
606.41741	PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE)	LF	120
606.9522	TEMP. IMPACT ATTENUATION DEVICE (NON-REDIRECTIVE) TEST LEVEL 2	U	2
608.2401	4" CONCRETE SIDEWALK	SY	5
618.7	FLAGGERS	HR	160
619.1	MAINTENANCE OF TRAFFIC	U	1
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	U	2
628.22	SAWED BITUMINOUS PAVEMENT (BRIDGE)	LF	180
632.1104	PREFORMED RETROREFLECTIVE TAPE, TYPE I (REMOVABLE) 4" LINE	LF	3050
632.911	OBLITERATE PAVE. MARKING LINE, 12" WIDE & UNDER	LF	2150
646.41	TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS	SY	35
670.104	TEMPORARY PORTABLE LIGHTING	U	4
692	MOBILIZATION	U	1
1002.1	REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES	\$	25000
1008.251	TEMPORARY PEDESTRIAN ACCOMODATIONS	\$	5000

REV	DESCRIPTION	DATE	DRW	CHKD	BY

NHDOT BRIDGE NO. 240706 & 241706	DESIGNED RPM	DRAWN TAG	CHECKED EGW	DATE FEBRUARY 2020
FILENAME 905108BNotes_M	RPM	DRAWN TAG	EGW	
MODEL NAME 905108BNotes2				
SCALE AS SHOWN				



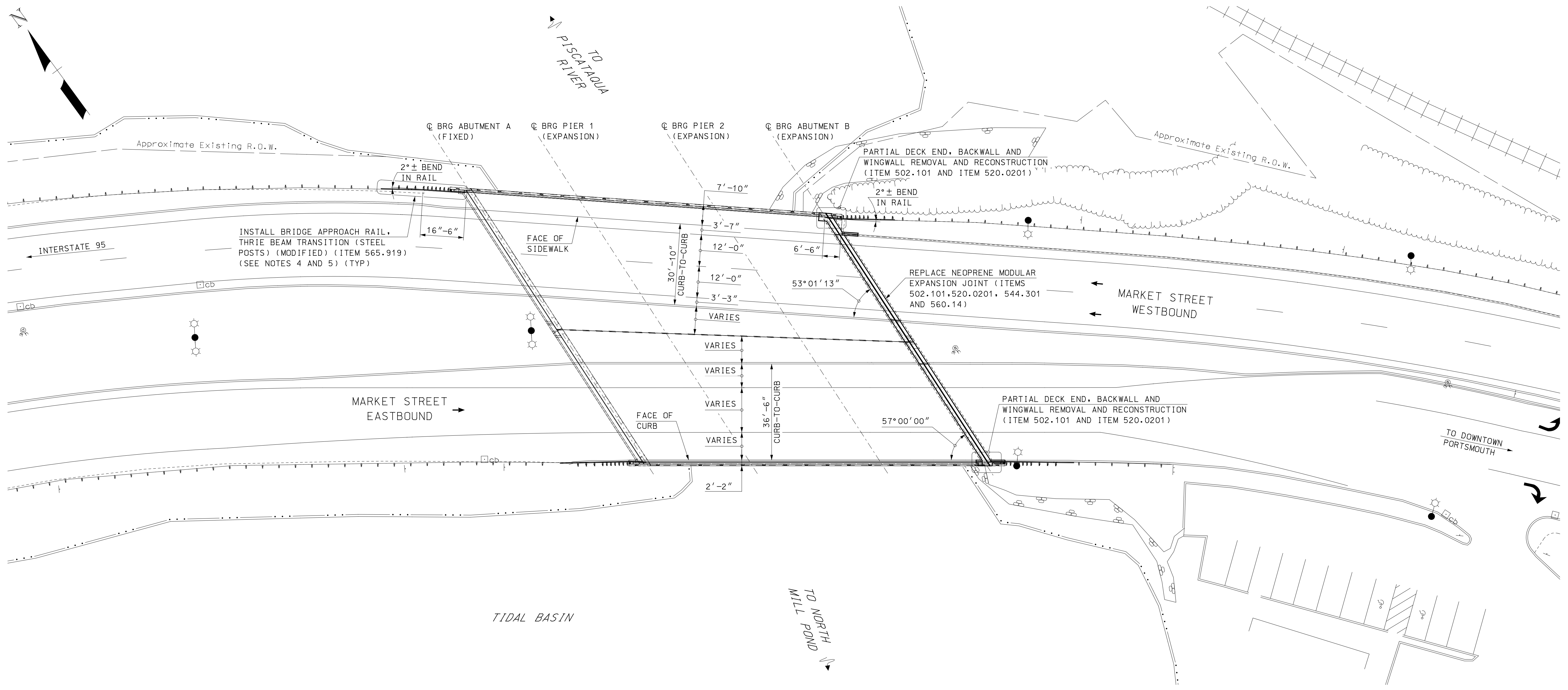
 Hoyle, Tanner & Associates, Inc.

 100 International Drive, #500, Portsmouth, NH 03801

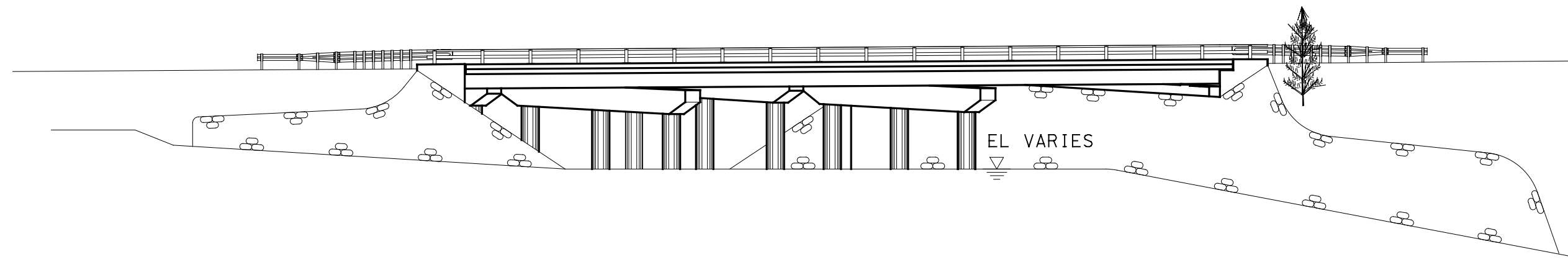
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PROJECT NO.	905108
SHEET NO.	3
SHEET 3 OF 40	



GENERAL PLAN
SCALE: 1" = 20'



ELEVATION
SCALE: 1" = 20'

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

NOTES

1. THE DEVELOPMENT OF THESE PLANS IS BASED ON A COMBINATION OF THE AS BUILT DRAWINGS AND DIGITIZED AERIAL INFORMATION. RIGHT-OF-WAY AND PROPERTY LINES ARE APPROXIMATE AND BASED ON THE CITY'S GIS. NO SURVEY INFORMATION WAS USED IN THE DEVELOPMENT OF THESE PLANS.
2. THE MARKET STREET GATEWAY PROJECT IS IN-PROGRESS; ACTUAL LINE STRIPING MAY VARY FROM THAT SHOWN. SOME FEATURES SHOWN IN THE GENERAL PLAN ARE FROM THE MARKET STREET GATEWAY PROJECT AND MAY NOT BE INSTALLED AT THE TIME OF THIS PROJECT.
3. SEE SHEETS 9 TO 11 FOR BRIDGE DECK, ABUTMENT B BACKWALL AND WINGWALL REMOVAL AND RECONSTRUCTION LIMITS.
4. SEE SHEET 10 FOR EXPANSION JOINT REPLACEMENT DETAILS.
5. THE BRIDGE APPROACH RAIL UNIT SHALL BE TRANSITIONED TO MATCH THE EXISTING BRIDGE RAIL AND BEAM GUARDRAIL HEIGHTS.
6. REFER TO SHEETS 12 AND 13 FOR BRIDGE APPROACH RAIL DETAILS.

REV	DESCRIPTION	DATE

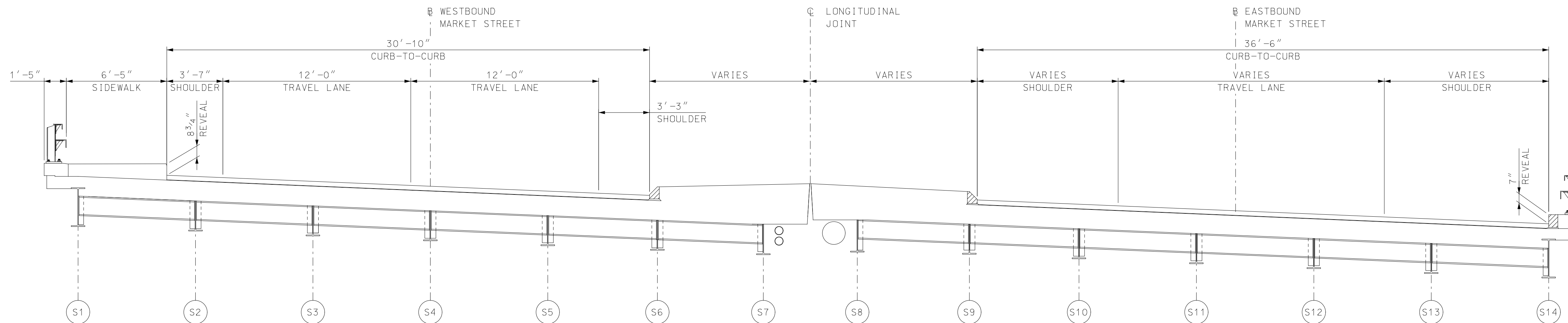
NO.	DESCRIPTION	DATE
1	AS SHOWN	FEBRUARY 2020

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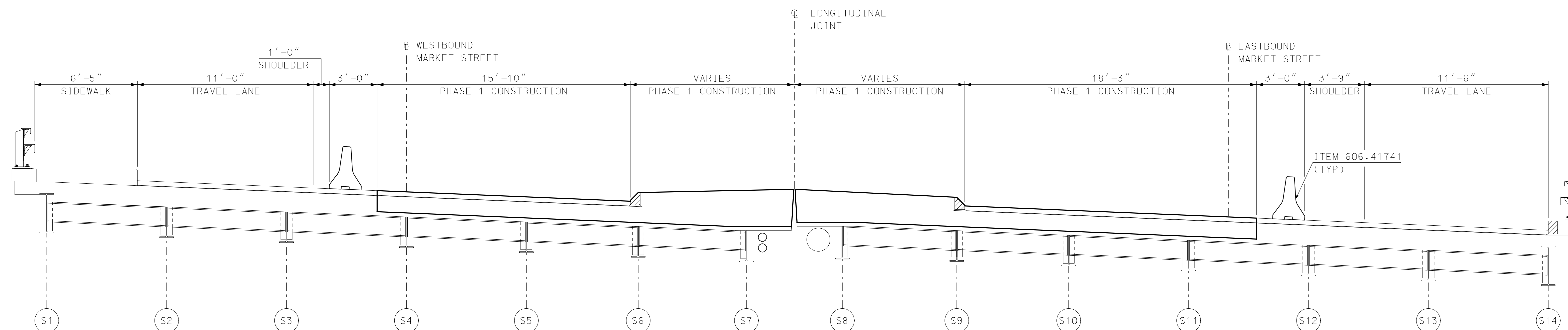
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET OVER TIDAL BASIN
GENERAL PLAN AND ELEVATION

PROJECT NO. 905108
SHEET NO. **4**
SHEET 4 OF 40

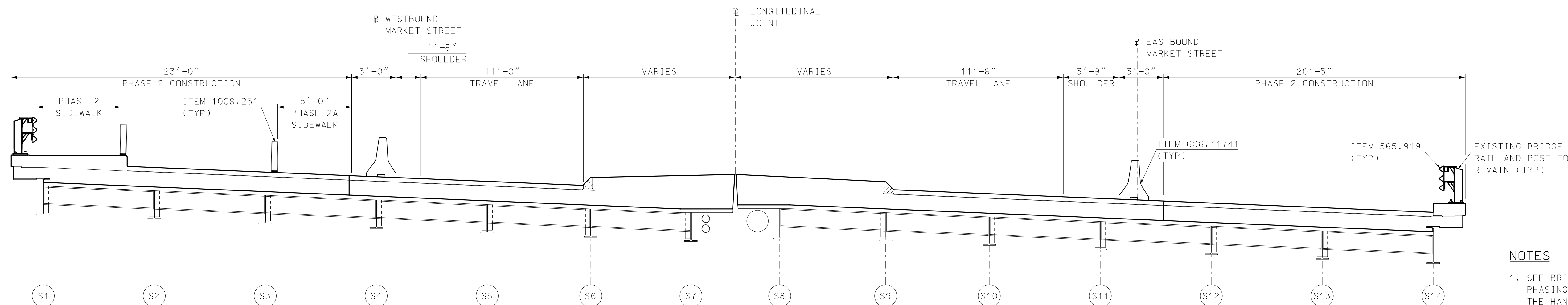
2/10/2020 4:32:19 PM K:\905108\2-CADD\BRC\B\Site\905108\GenPlan_M.dgn



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



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



PHASE 2 SECTION
SCALE: 1/4" = 1'-0"

NOTES
1. SEE BRIDGE CONSTRUCTION PHASING NOTES ON SHEET 3 FOR THE HANDLING OF PEDESTRIAN TRAFFIC IN PHASE 2 AND 2A.

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

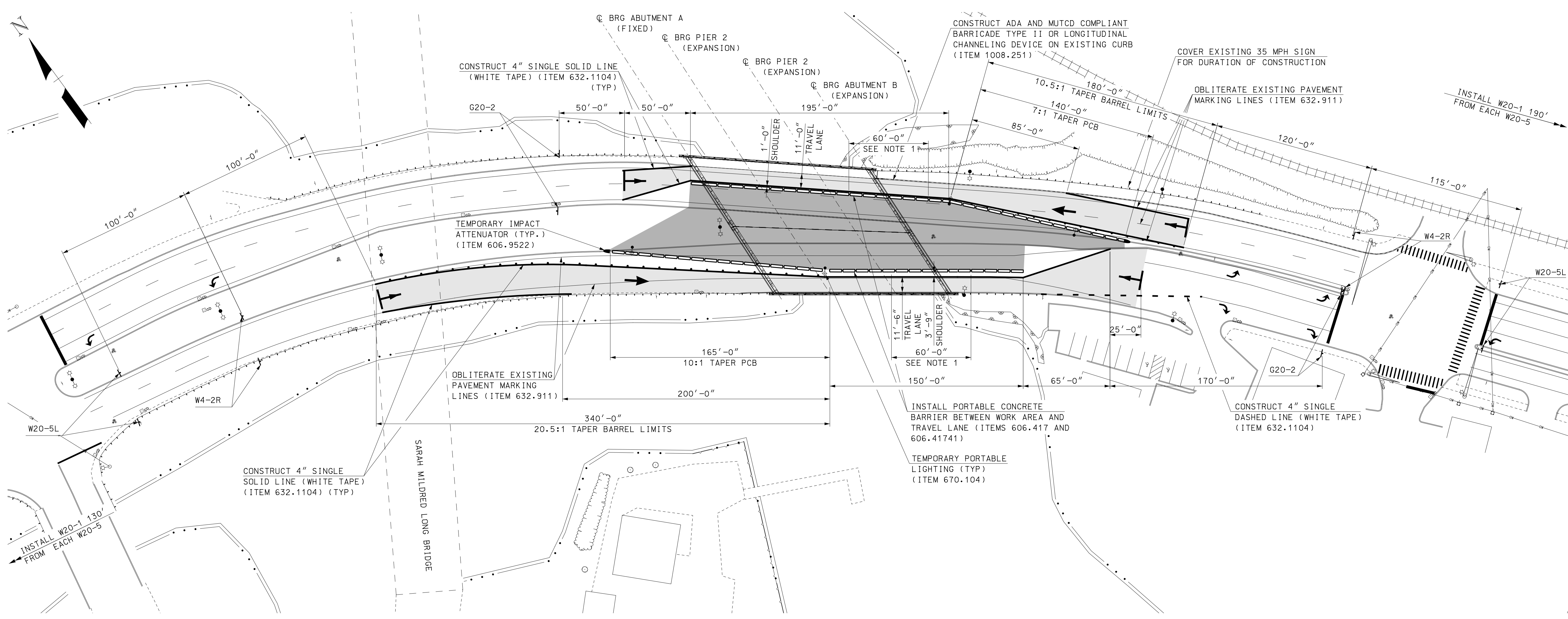
REV	DESCRIPTION	DATE

PROJECT NO.	905108
FILENAME	905108PhaseSec_LM
DESIGNED	RPM
MODEL NAME	905108Phaseplan
DRAWN	TAG
CHECKED	EGW
SCALE	AS SHOWN
DATE	FEBRUARY 2020

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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET OVER TIDAL BASIN
 CONSTRUCTION PHASING SECTIONS

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PHASE 1 TRAFFIC CONTROL PLAN
SCALE: 1" = 40'

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

CONSTRUCTION SIGNS AND WARNING DEVICES (ITEM 619.1)

TYPE	DESCRIPTION	SIZE WxH	SQ. FT.	NO REQ.	TOTAL AREA	POST	COLOR	TYPE	DESCRIPTION	SIZE WxH	SQ. FT.	NO REQ.	TOTAL AREA	POST	COLOR
G20-2		36" x 18"	4.5	4	18	1 POST PER SIGN	B/O	W20-1		36" x 36"	9	4	36	1 POST PER SIGN	B/O
W4-2R		36" x 36"	9	4	36	1 POST PER SIGN	B/O	W20-5L		36" x 36"	9	4	36	1 POST PER SIGN	B/O

LEGEND

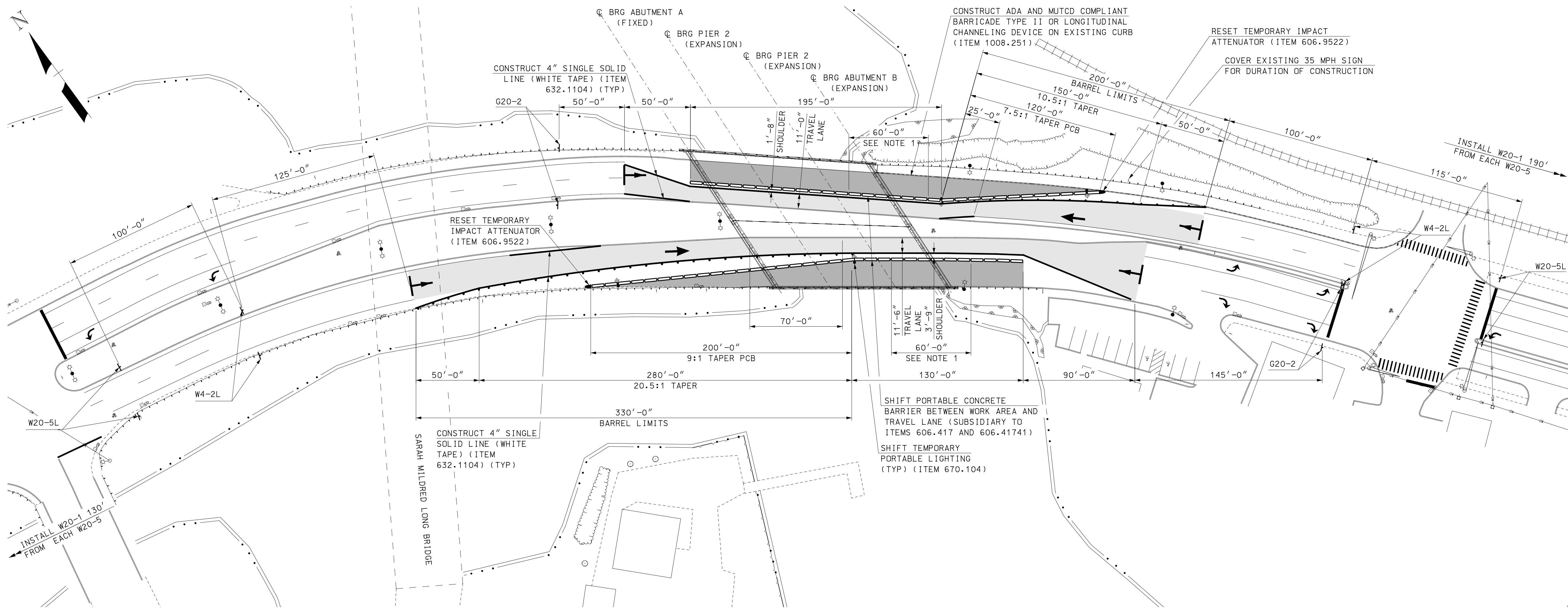
	WORK ZONE
	TRAFFIC LANES
	TRAFFIC FLOW
	PORTABLE CONCRETE BARRIER
	TRAFFIC BARRELS
	OBLITERATE PAVEMENT MARKING LINES, 12" WIDE AND UNDER (ITEM 632.911)

NOTE
1. LIMITS OF ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL - BRIDGE: BARRIER OUTSIDE OF THESE LIMITS SHALL BE ITEM 606.417, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL.

<p align="center">Hoyle, Tanner & Associates, Inc. Professional Engineers 100 International Drive, #380, Portsmouth, NH 03801 Tel: (603) 431-2520 • Fax: (603) 431-8067 www.hoyletanner.com</p>	<p>PROJECT NO. 905108</p>
	<p>SHEET NO. 6</p>
<p>CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE MARKET STREET OVER TIDAL BASIN</p>	<p>PHASE 1 TRAFFIC CONTROL PLAN</p>
<p>DATE: FEBRUARY 2020</p>	<p>EGW</p>
<p>AS SHOWN</p>	<p>CHECKED</p>
<p>SCALE</p>	<p>TAG</p>
<p>MODEL NAME</p>	<p>DRAWN</p>
<p>905108PhasePlan1</p>	<p>RPM</p>
<p>DESIGNED</p>	<p>FILENAME</p>
<p>240706 & 241706</p>	<p>INDOOT BRIDGE NO.</p>
<p>REV</p>	<p>DESCRIPTION</p>
<p>DATE</p>	<p>DATE</p>
<p>BY</p>	<p>DATE</p>
<p>DATE</p>	<p>DATE</p>

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2/10/2020 4:32:22 PM K:\905108-2-CADD\BRC\Site\905108PhasePlan_M.dgn



PHASE 2 TRAFFIC CONTROL PLAN
SCALE: 1" = 40'

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

CONSTRUCTION SIGNS AND WARNING DEVICES (ITEM 619.1)

TYPE	DESCRIPTION	SIZE WxH	SQ. FT.	NO REQ.	TOTAL AREA	POST	COLOR	TYPE	DESCRIPTION	SIZE WxH	SQ. FT.	NO REQ.	TOTAL AREA	POST	COLOR
G20-2		36" x 18"	4.5	4	18	1 POST PER SIGN	B/O	W20-1		36" x 36"	9	4	36	1 POST PER SIGN	B/O
W4-2R		36" x 36"	9	4	36	1 POST PER SIGN	B/O	W20-5L		36" x 36"	9	4	36	1 POST PER SIGN	B/O

LEGEND

	WORK ZONE
	TRAFFIC LANES
	TRAFFIC FLOW
	PORTABLE CONCRETE BARRIER
	TRAFFIC BARRELS
	OBLITERATE PAVEMENT MARKING LINES, 12" WIDE AND UNDER (ITEM 632.911)

NOTE
1. LIMITS OF ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL - BRIDGE: BARRIER OUTSIDE OF THESE LIMITS SHALL BE ITEM 606.417, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL.

REV	DESCRIPTION	DATE

NO.	DATE	BY	CHKD

PROJECT NO. 905108
SHEET NO. **7**
SHEET 7 OF 40

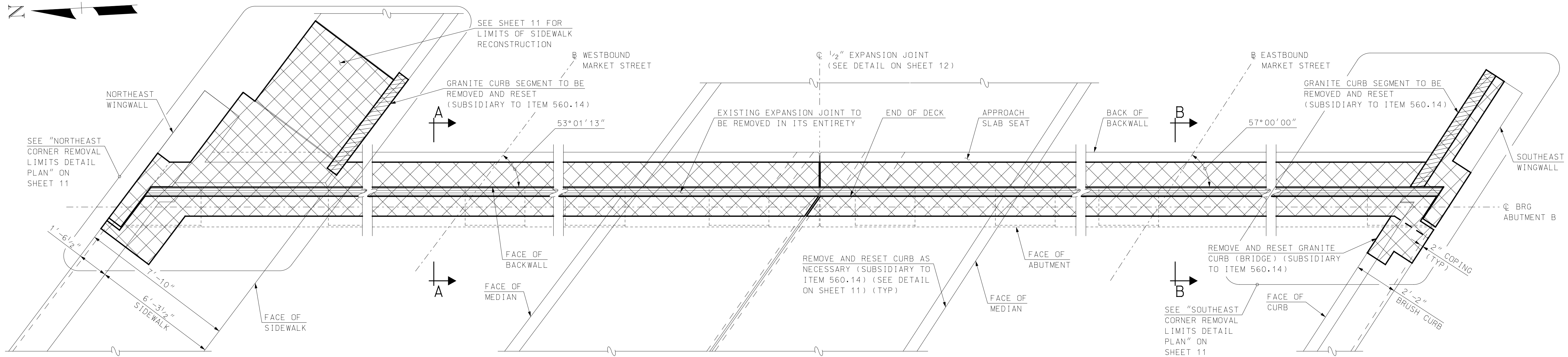
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET OVER TIDAL BASIN
PHASE 2 TRAFFIC CONTROL PLAN

PROJECT NO. 905108
SHEET NO. **7**
SHEET 7 OF 40

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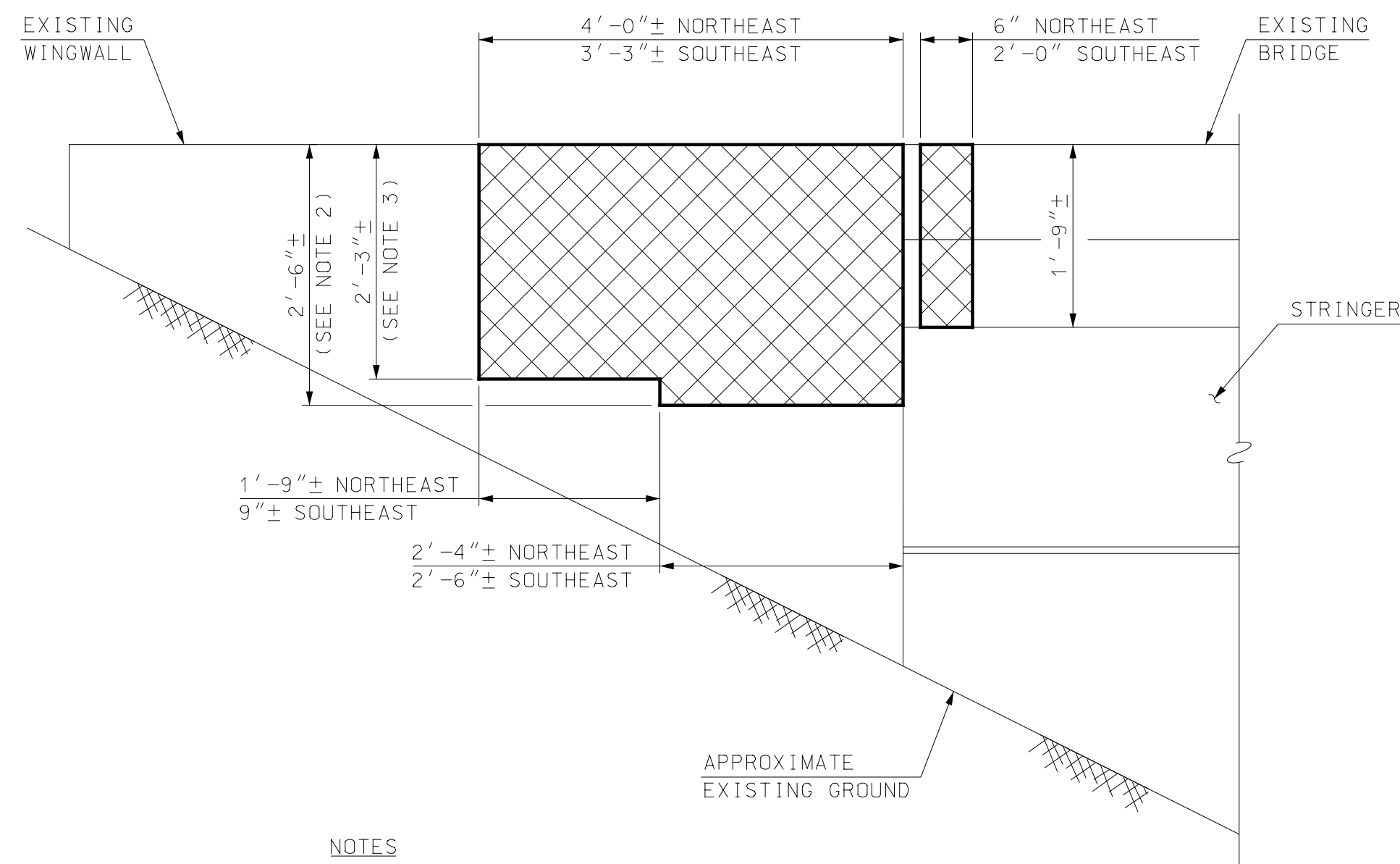
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ABUTMENT B CONCRETE REMOVAL PLAN

SCALE: 3/8" = 1'-0"

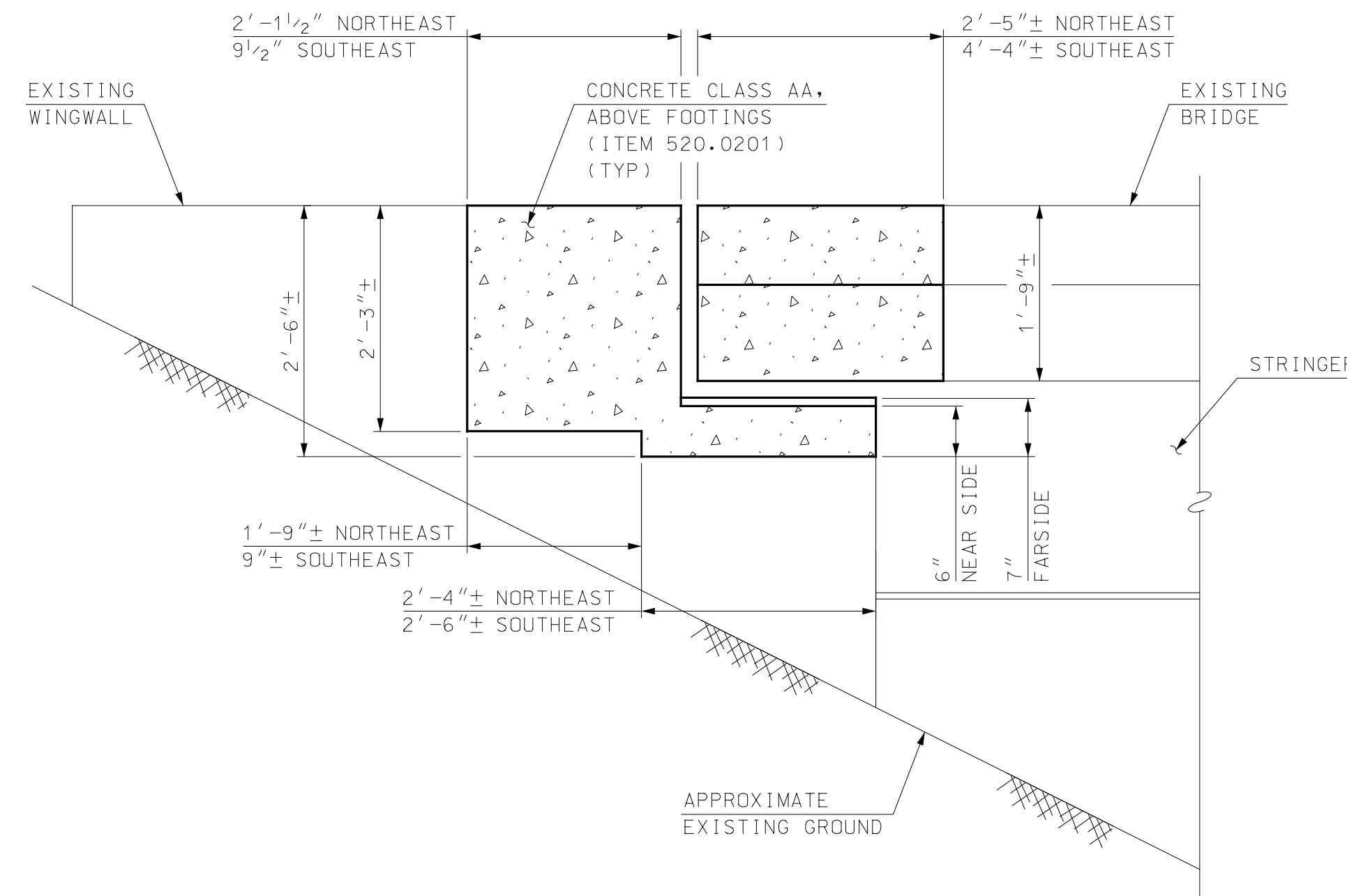


NOTES

1. NORTHEAST WINGWALL SHOWN, SOUTHEAST WINGWALL SIMILAR.
2. REMOVE DOWN TO A DEPTH AT WHICH ELEVATION IS 9" BELOW BOTTOM OF BRIDGE DECK.
3. REMOVE DOWN TO A DEPTH AT WHICH ELEVATION IS EQUAL TO BACKWALL REMOVAL LIMITS.

NORTHEAST CORNER REMOVAL LIMITS DETAIL - ELEVATION

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



NOTE

1. NORTHEAST WINGWALL SHOWN, SOUTHEAST WINGWALL SIMILAR.

NORTHEAST CORNER MODIFICATION DETAIL - ELEVATION

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

NOTE

1. FOR SECTIONS A-A AND B-B, SEE SHEET 10.

LEGEND

- DENOTES LIMITS OF ITEM 502.101, REMOVAL OF EXISTING BRIDGE STRUCTURE

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

REV	DESCRIPTION	DATE

NO.	BRIDGE NO.	FILE NAME	DESIGNED	DRAWN	CHECKED	DATE

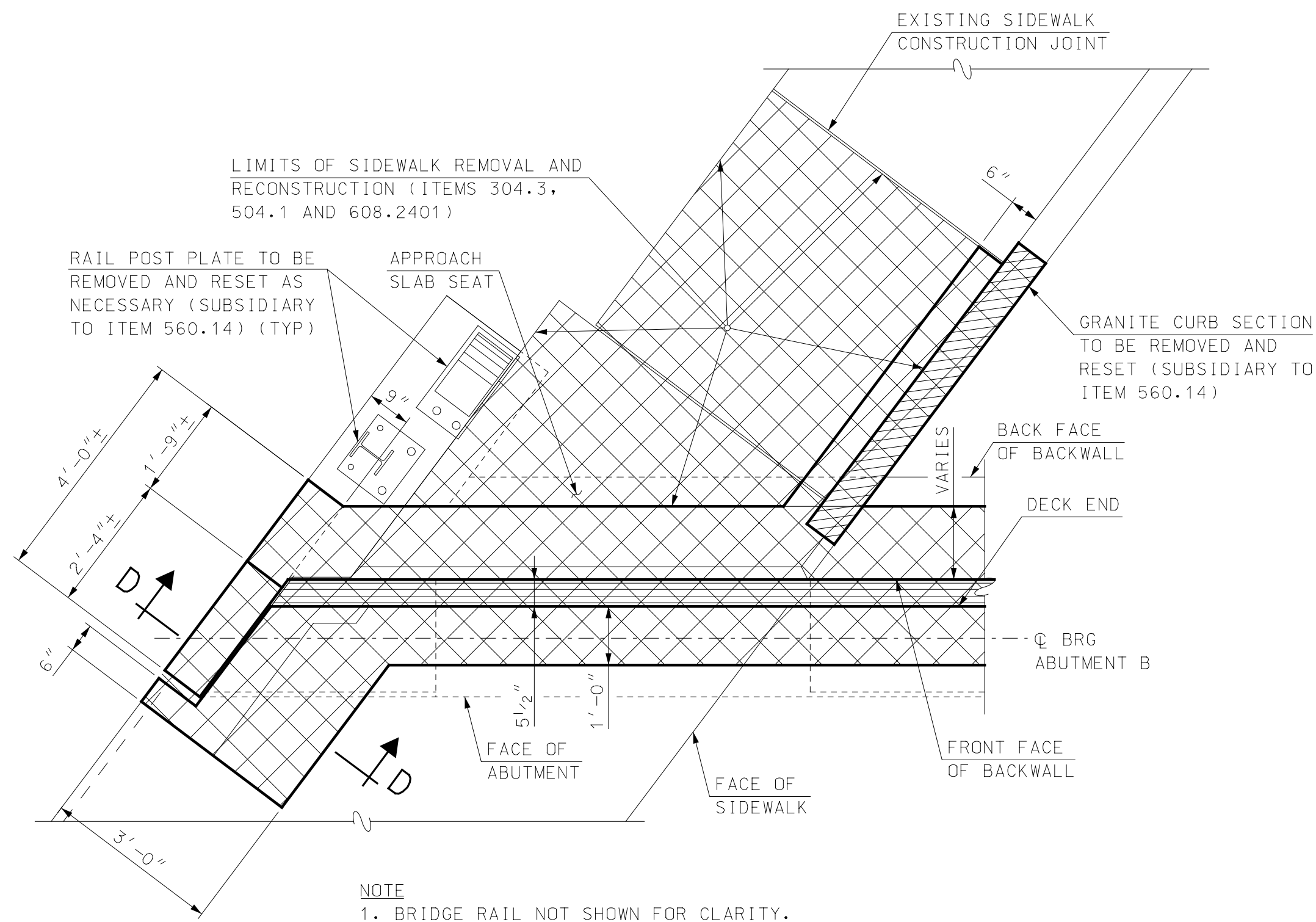
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PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET OVER TIDAL BASIN

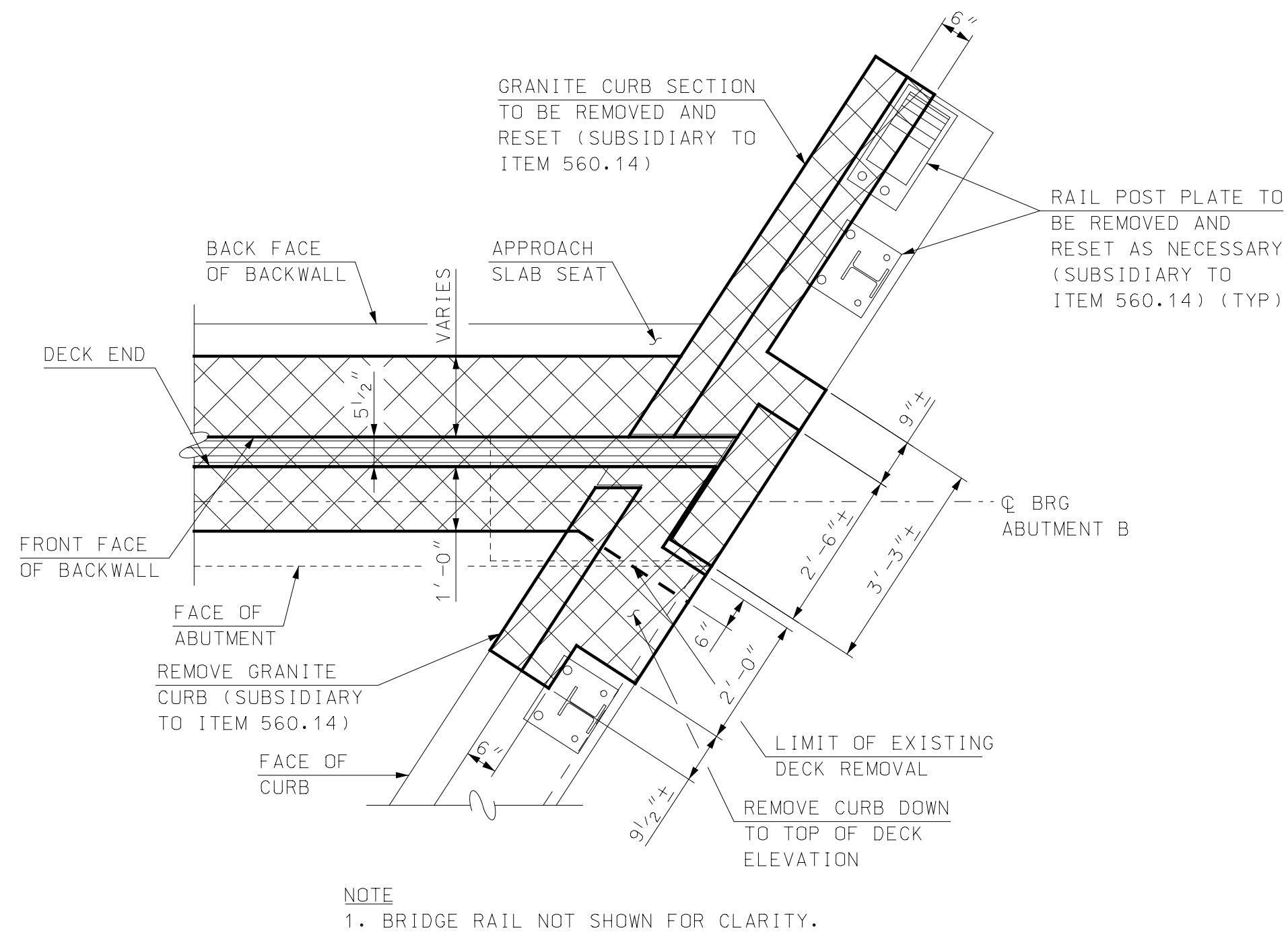
REPAIR DETAILS (1 OF 3)

PROJECT NO. 905108
 SHEET NO. **9**
 SHEET 9 OF 40

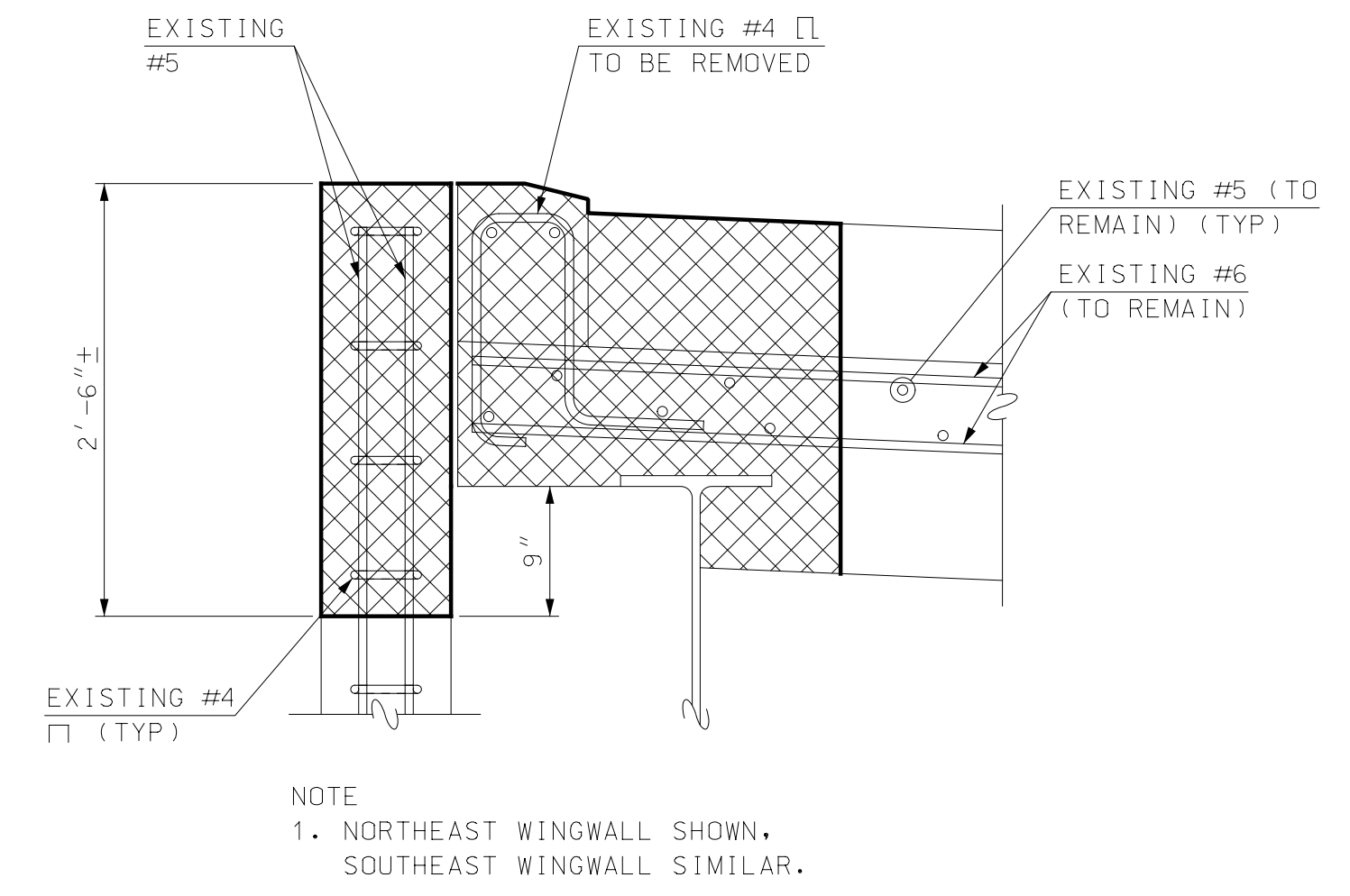
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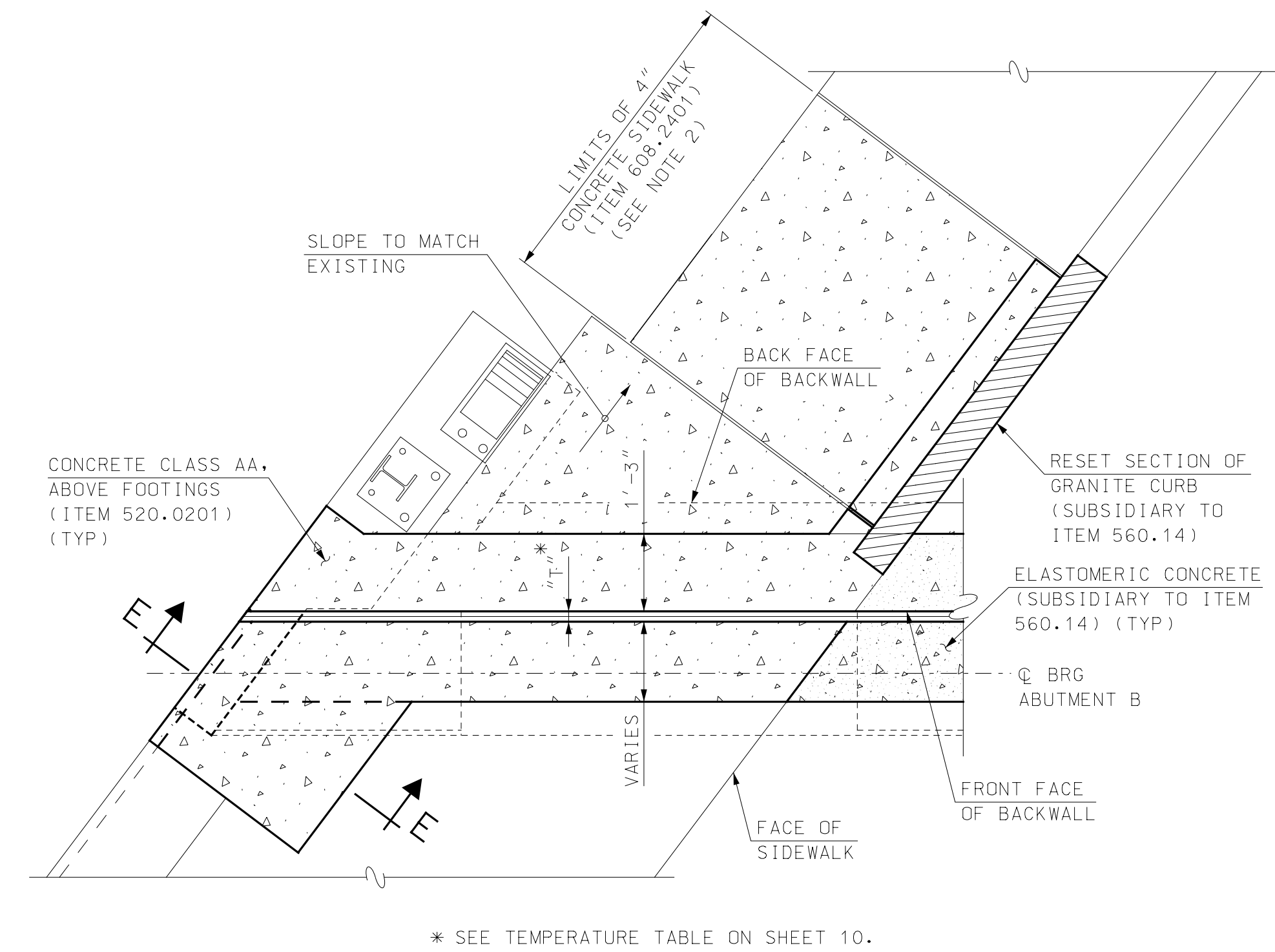
NORTHEAST CORNER REMOVAL LIMITS DETAIL - PLAN
SCALE: 1/2" = 1'-0"



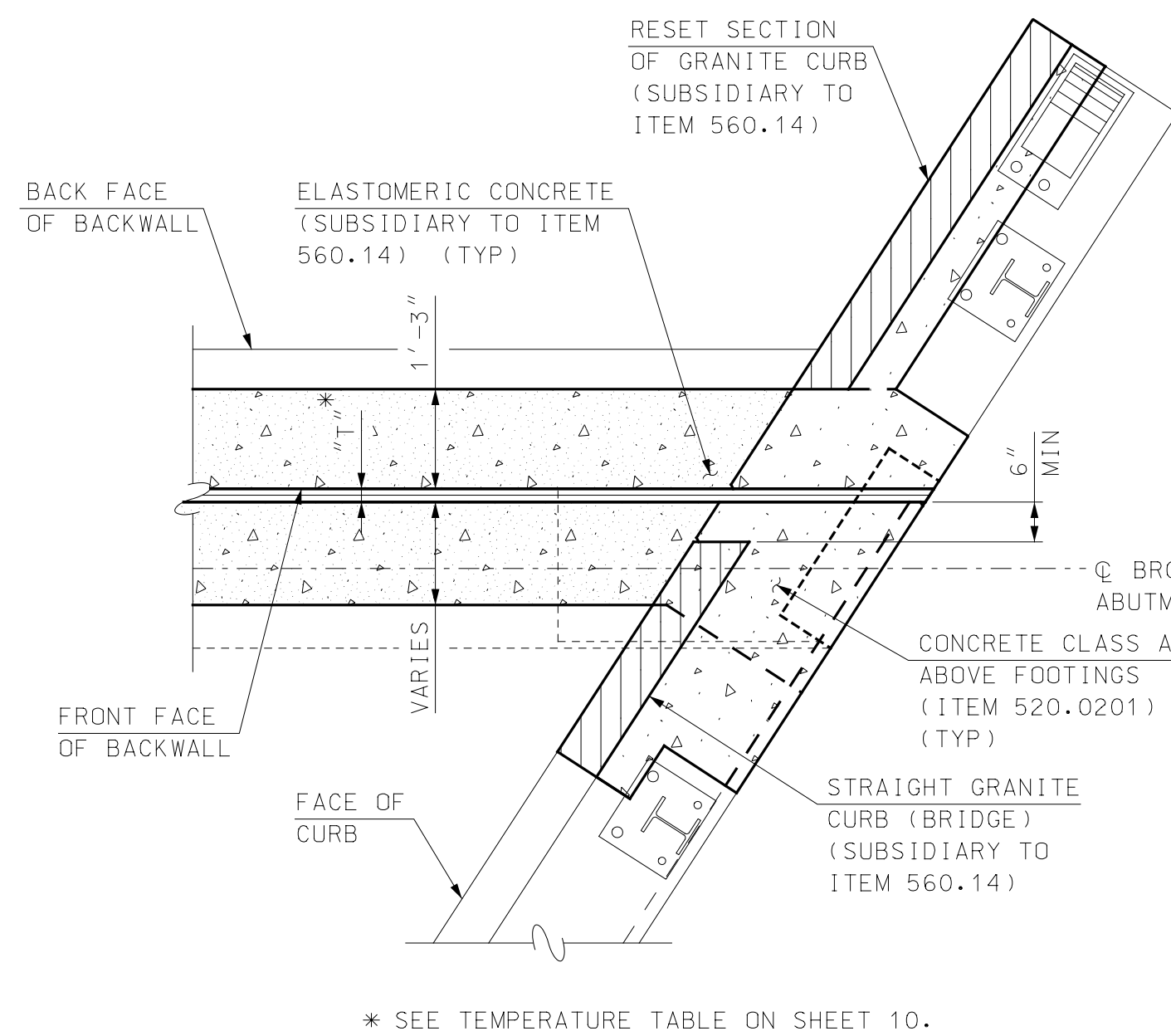
SOUTHEAST CORNER REMOVAL LIMITS DETAIL - PLAN
SCALE: 1/2" = 1'-0"



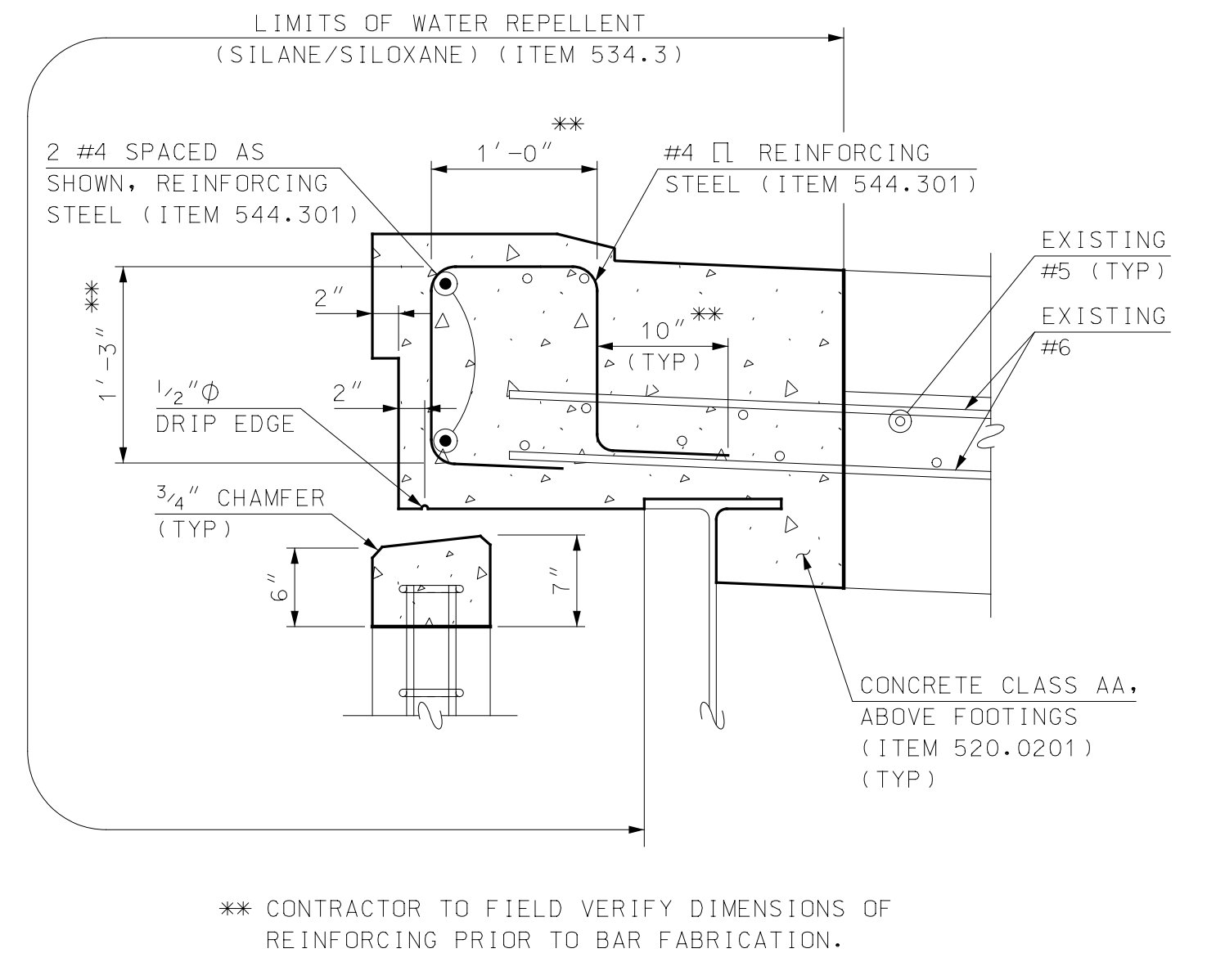
SECTION D-D
SCALE: 1" = 1'-0"



NORTHEAST CORNER MODIFICATION DETAIL - PLAN
SCALE: 1/2" = 1'-0"



SOUTHEAST CORNER MODIFICATION DETAIL - PLAN
SCALE: 1/2" = 1'-0"



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

LEGEND
 DENOTES LIMITS OF ITEM 520.101, REMOVAL OF EXISTING BRIDGE STRUCTURE

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

REV	DESCRIPTION	DATE

FILE NAME	DESIGNED	DATE
905108AbutDetls_M	RPM	
MODEL NAME	DRAWN	TAG
905108AbutDetls3	EGW	
SCALE	CHECKED	DATE
AS SHOWN	EGW	FEBRUARY 2020

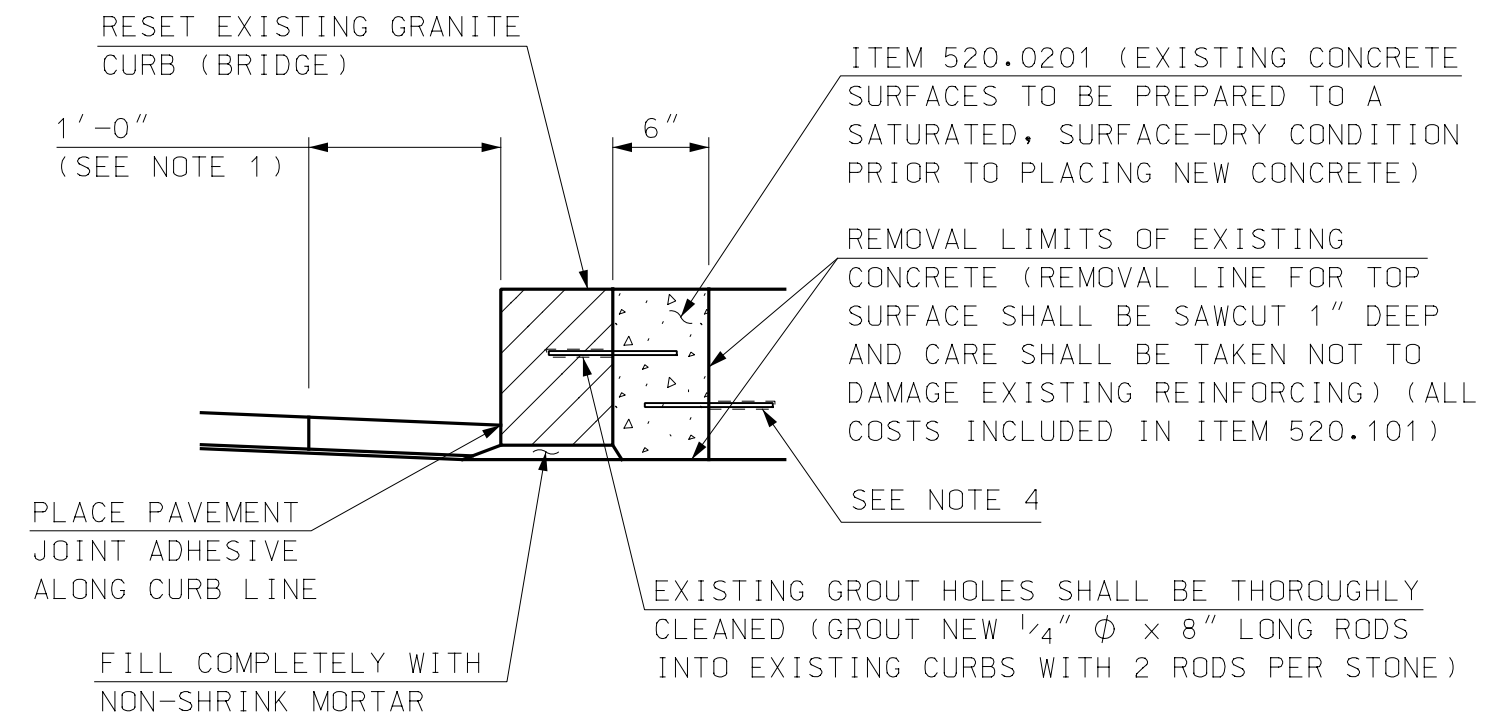
PROJECT NO.	905108
SHEET NO.	11

**CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET OVER TIDAL BASIN
 REPAIR DETAILS (3 OF 3)**

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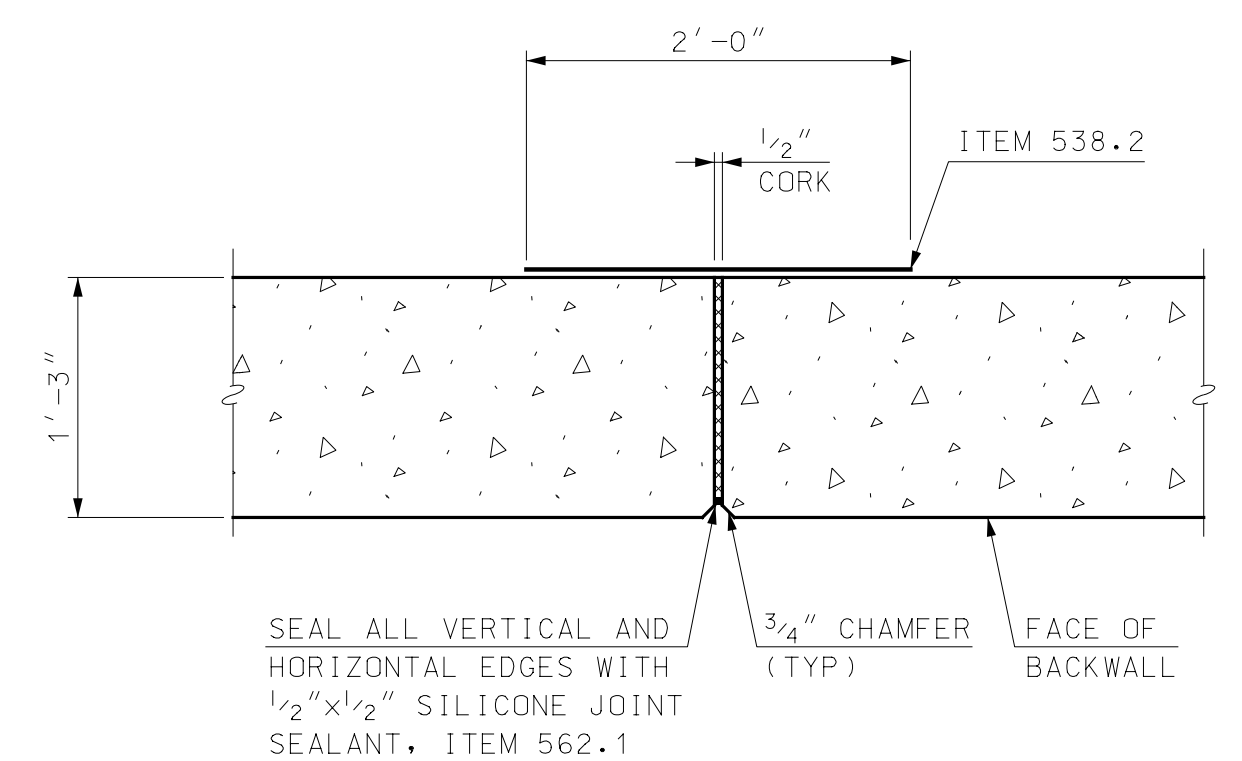
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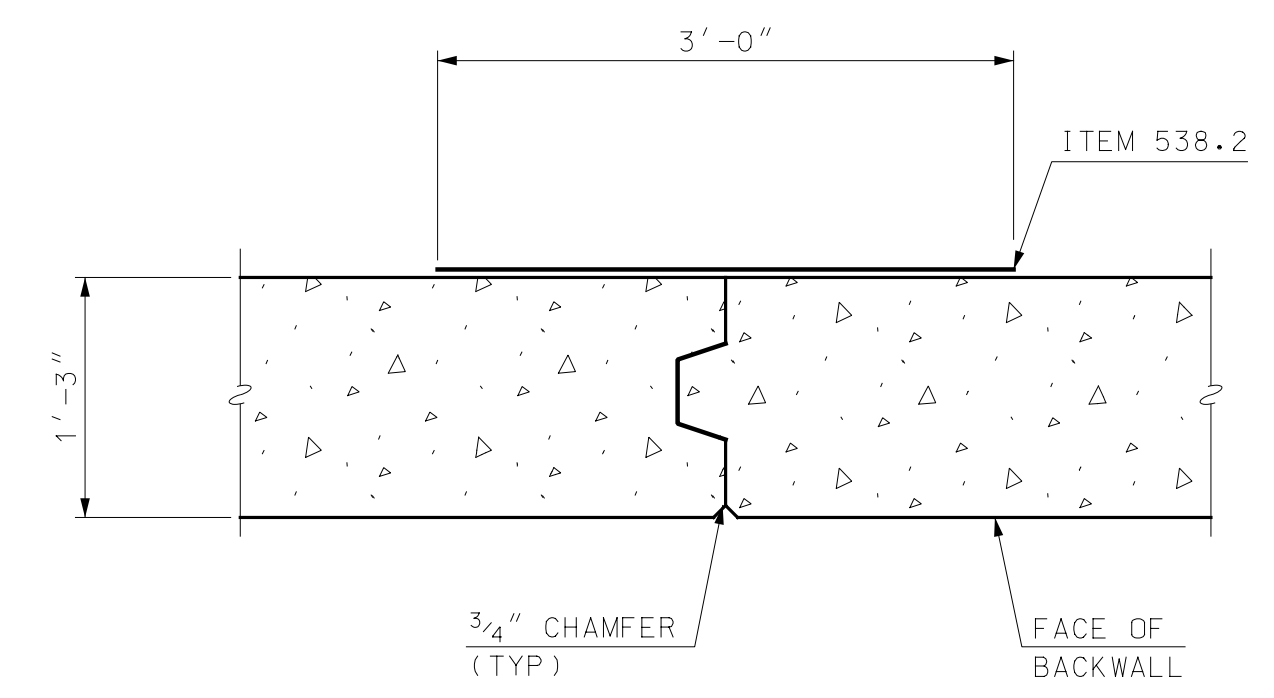


- LIMITS OF SAWCUT AND PAVEMENT REMOVAL TO BE REPLACED WITH HOT BITUMINOUS PAVEMENT, HAND METHOD (ITEM 403.12). CONTRACTOR TO TAKE SPECIAL CARE NOT TO DAMAGE THE BARRIER MEMBRANE. ANY DAMAGE TO THE BARRIER MEMBRANE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR
- ALL COSTS SUBSIDIARY TO ITEM 560.14.
- EXTERIOR CURB SHOWN, MEDIAN CURB SIMILAR.
- CONTRACTOR TO TAKE CARE TO NOT DAMAGE EXISTING REINFORCING. IF NO REINFORCING IS EXPOSED DURING CONCRETE REMOVAL, DOWELS SHALL BE ADDED TO CONNECT THE NEW CONCRETE TO THE EXISTING AS DIRECTED BY THE ENGINEER (COSTS SUBSIDIARY TO ITEM 520.0201)

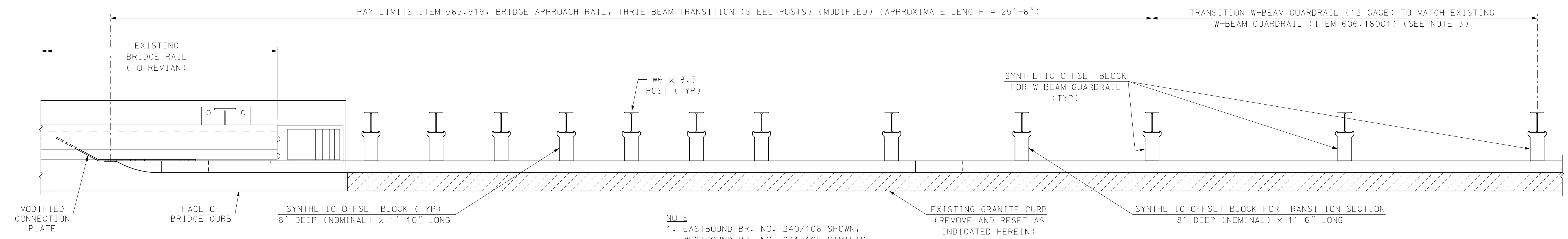
RESET GRANITE BRIDGE CURB
SCALE: 1" = 1'-0"



EXPANSION JOINT DETAIL
SCALE: 1" = 1'-0"

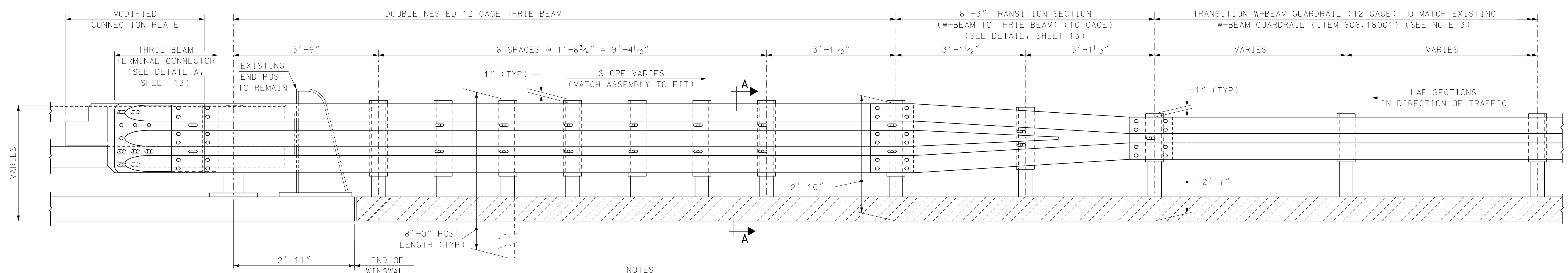


EXISTING CONTRACTION JOINT
SCALE: 1" = 1'-0"



- NOTE**
- EASTBOUND BR. NO. 240/106 SHOWN, WESTBOUND BR. NO. 241/106 SIMILAR EXCEPT WITH 2° BEND IN TRANSITION SECTION. (SEE GENERAL PLAN ON SHEET 4).

PLAN VIEW - APPROACH RAIL
SCALE: 3/4" = 1'-0"



- NOTES**
- EASTBOUND BR. NO. 240/106 SHOWN, WESTBOUND BR. NO. 241/106 SIMILAR EXCEPT WITH 2° BEND IN TRANSITION SECTION.
 - FOR SECTION A-A, SEE SHEET 13.
 - LIMITS OF GUARDRAIL REMOVAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO REMOVAL.

ELEVATION - APPROACH RAIL
SCALE: 3/4" = 1'-0"

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

REV	DESCRIPTION	DATE

NO.	DATE	BY	CHKD	DATE

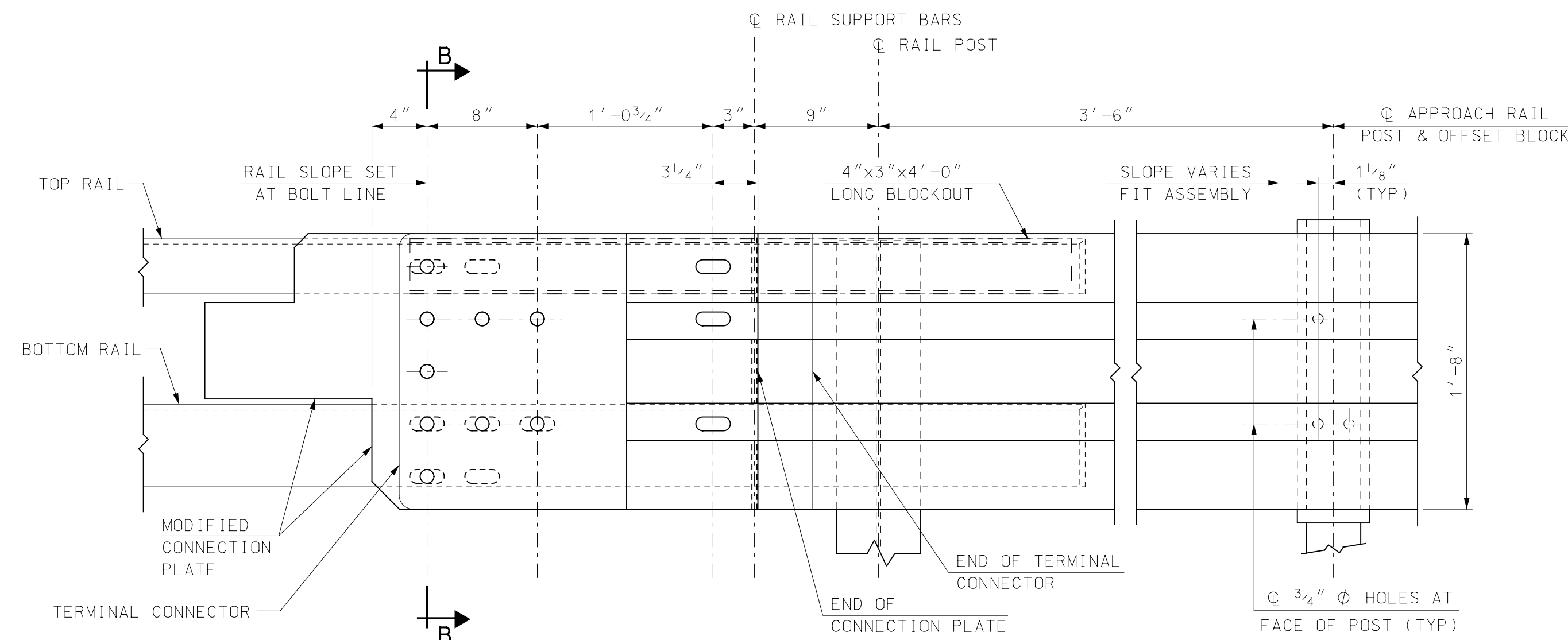
NO.	DATE	BY	CHKD	DATE

PROJECT NO. 905108
SHEET NO. 12
SHEET 12 OF 40

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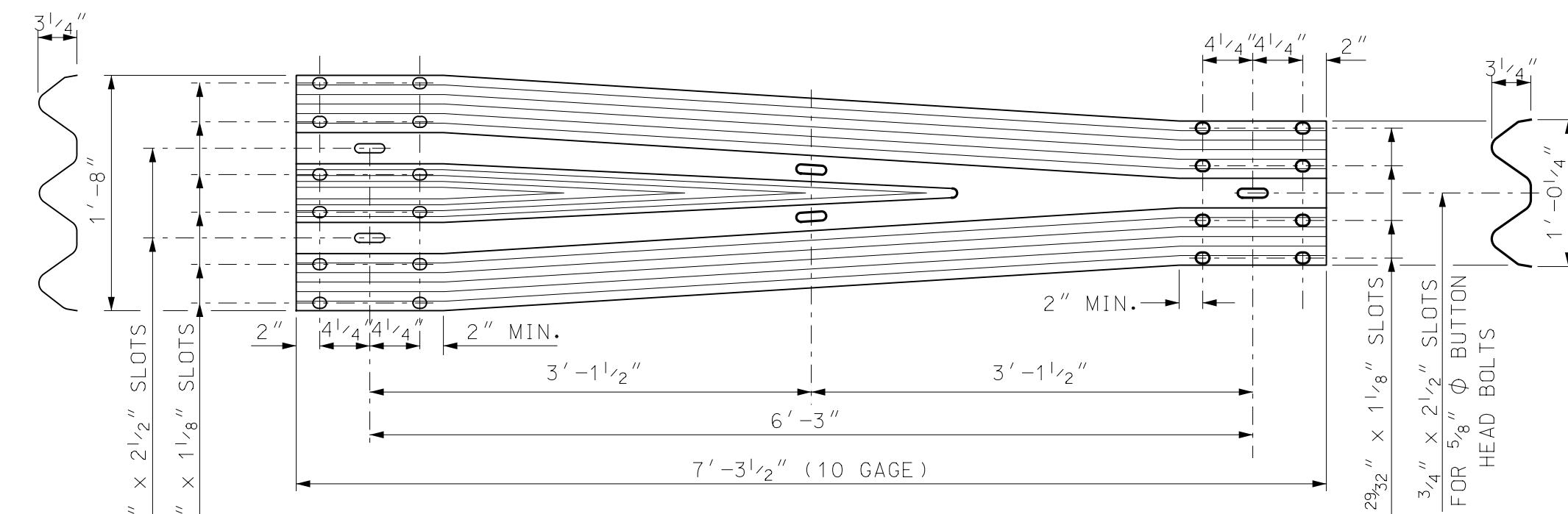
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET OVER TIDAL BASIN
BRIDGE APPROACH RAIL (1 OF 2)

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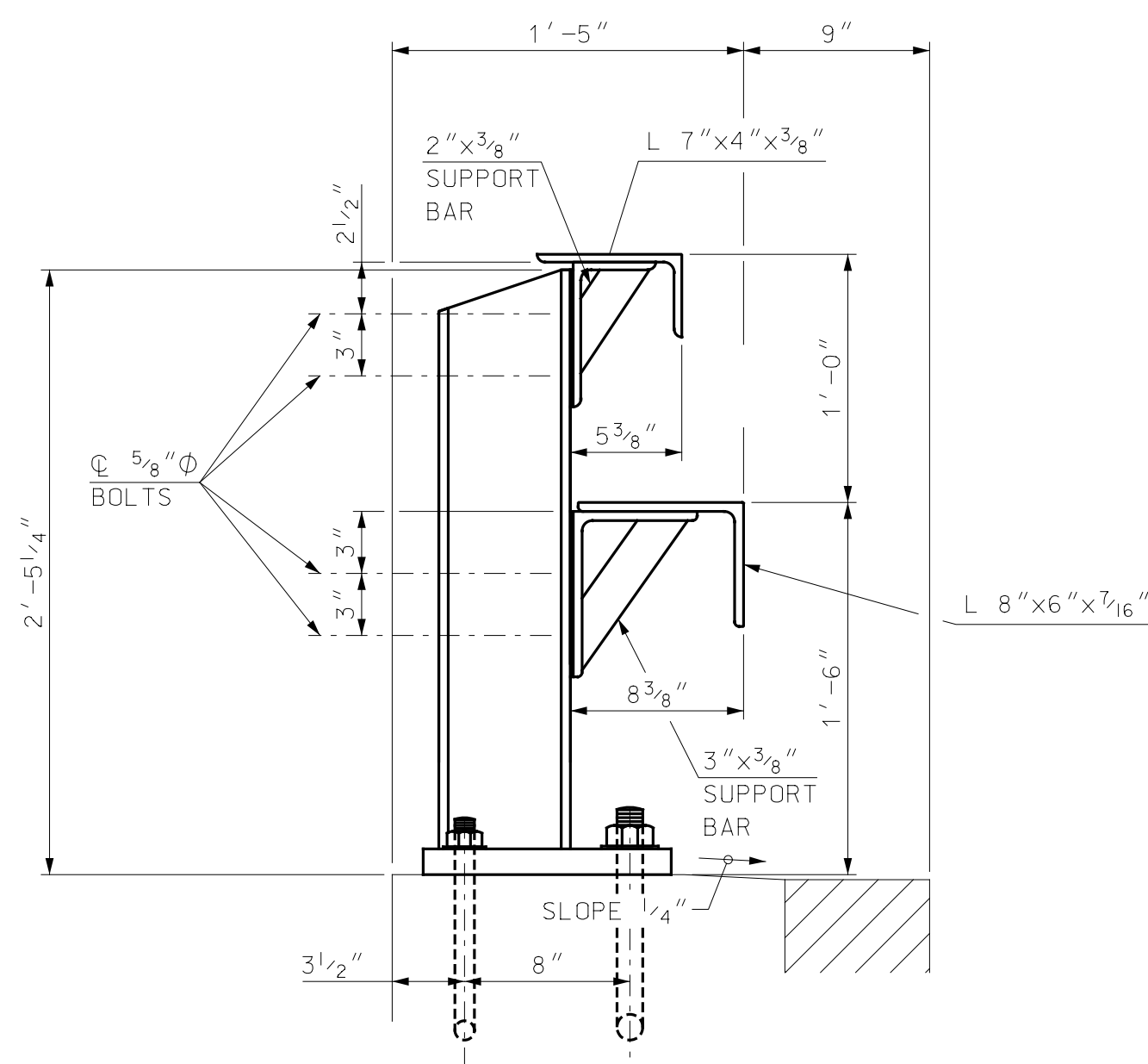


NOTE
1. SEE BRIDGE RAIL NOTE 8 ON SHEET 2 REGARDING FIELD DRILLING OF EXISTING RAIL.

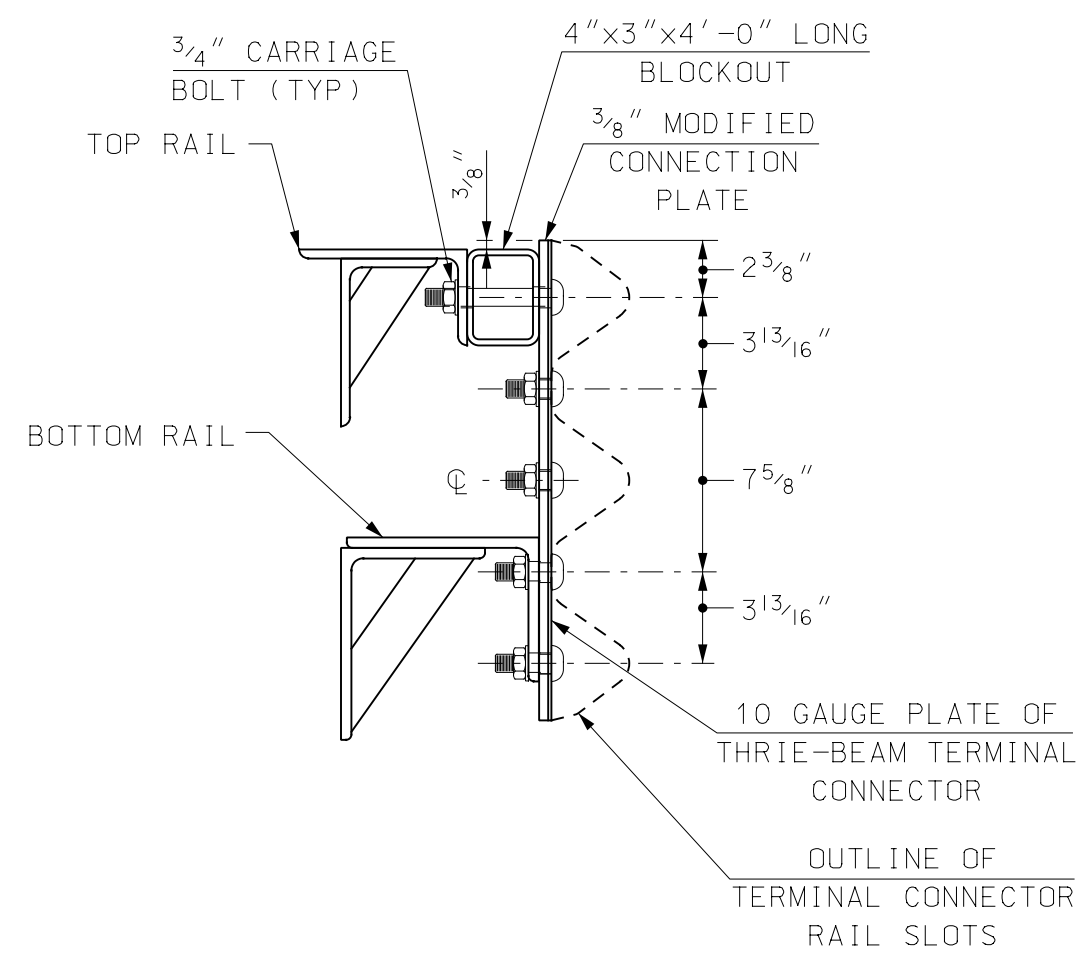
DETAIL A
SCALE: 1 1/2" = 1'-0"



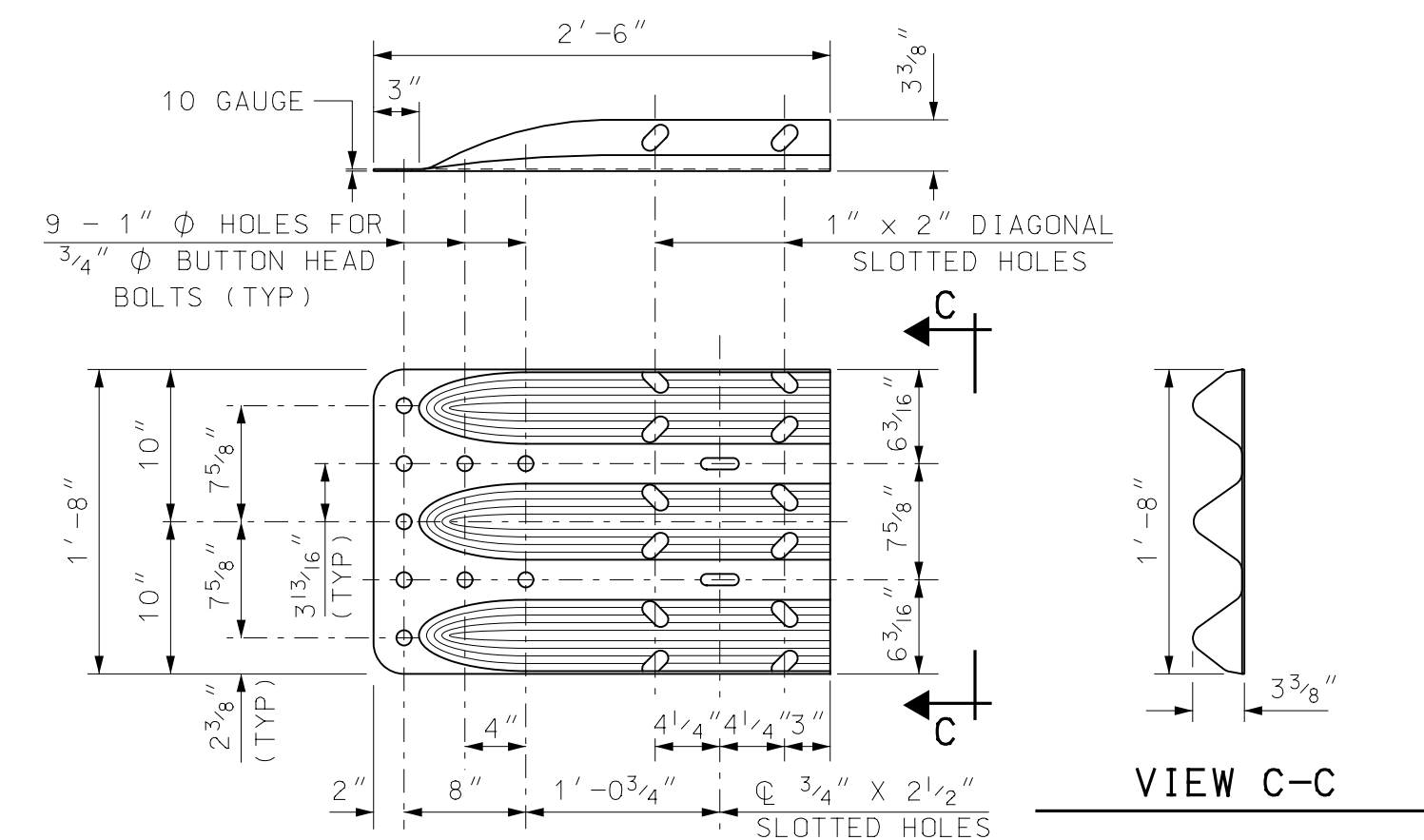
THRIE-BEAM TO W-BEAM TRANSITION SECTION
SCALE: 1" = 1'-0"



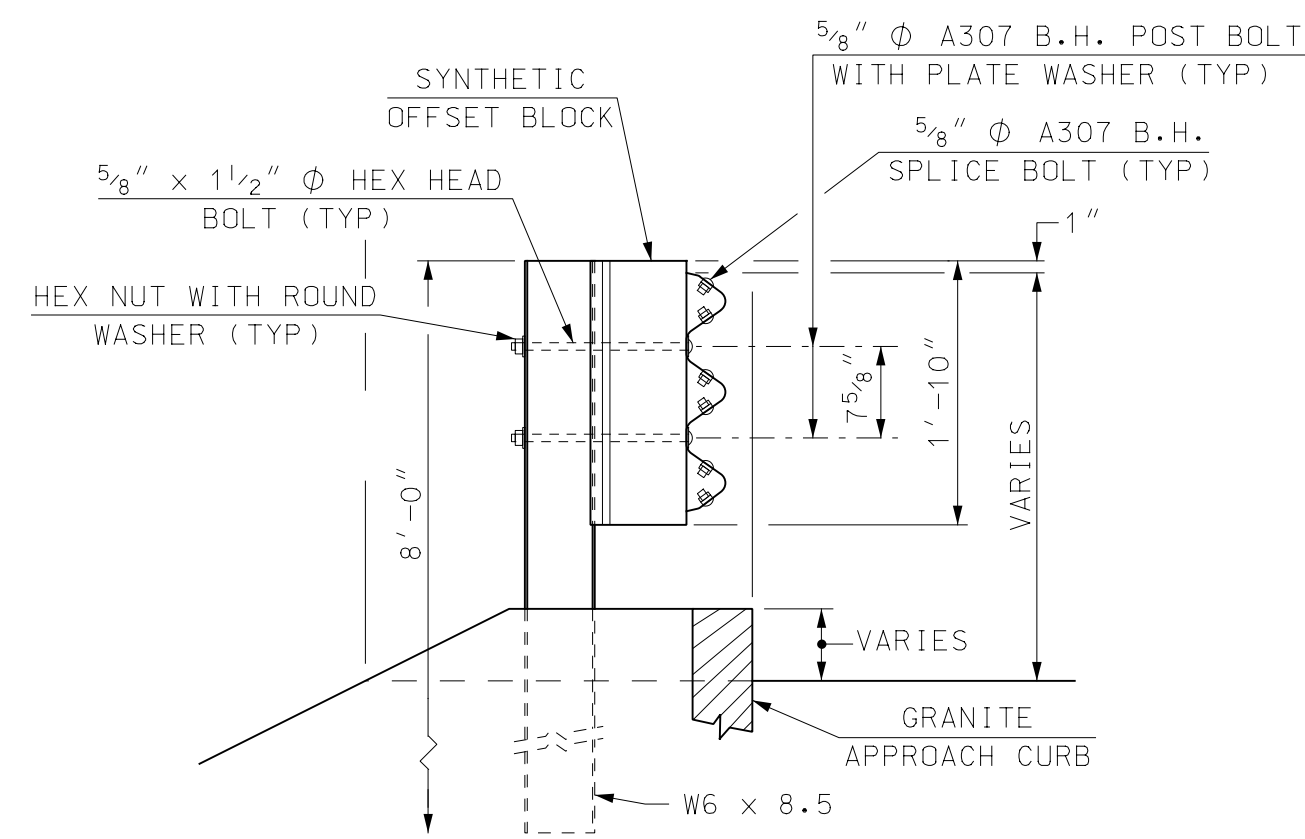
TYPICAL SECTION (EXISTING)
SCALE: 1 1/2" = 1'-0"



SECTION B-B (RAIL CONNECTION)
SCALE: 1 1/2" = 1'-0"

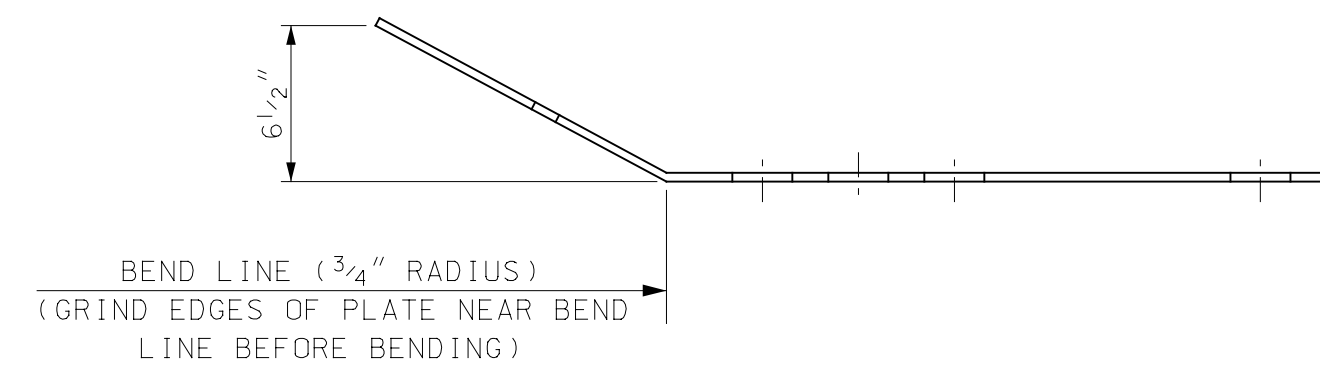


THRIE-BEAM TERMINAL CONNECTOR
SCALE: 1" = 1'-0"

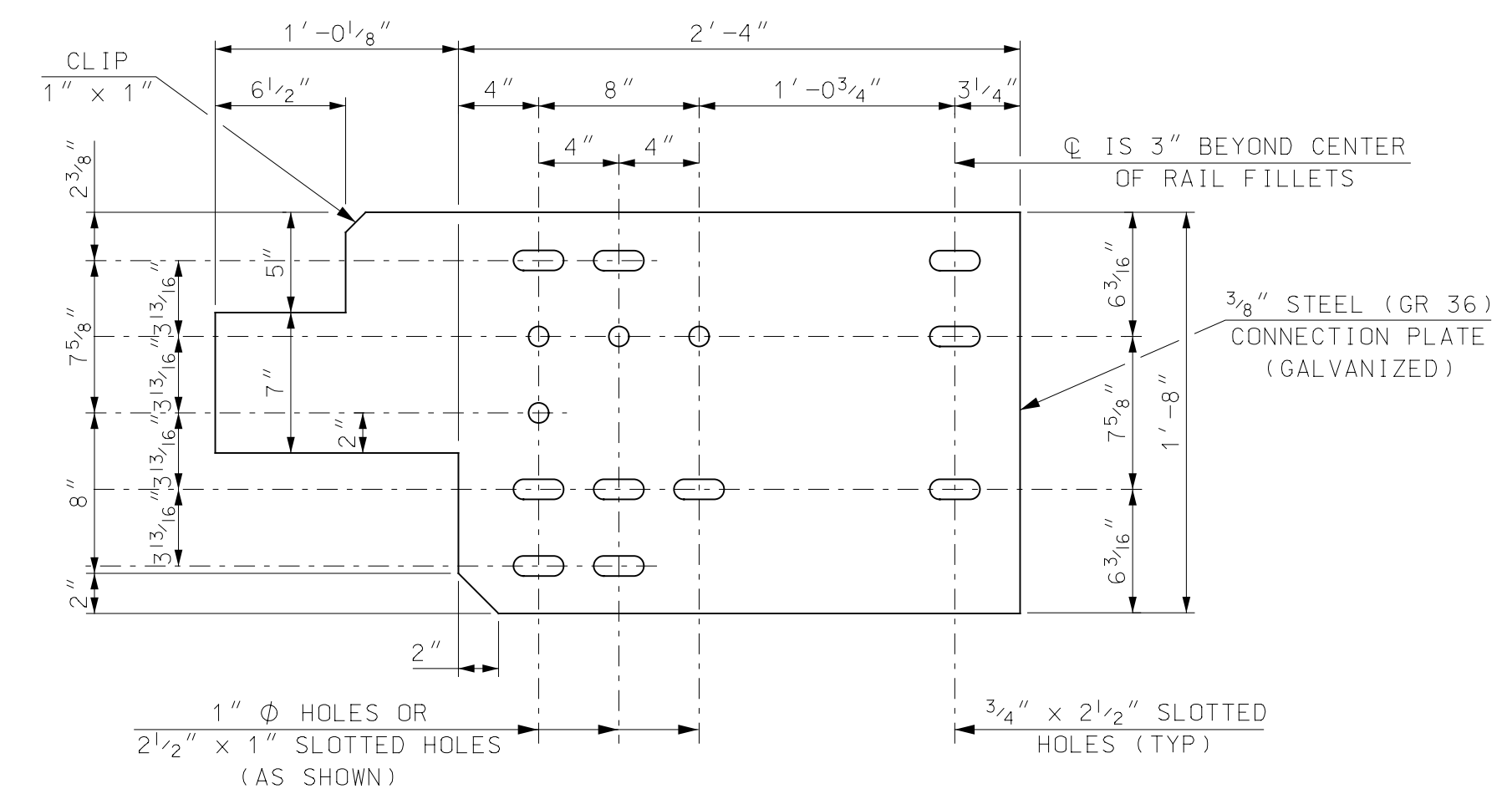


NOTES
1. EASTBOUND BR. NO. 240/106 SHOWN, WESTBOUND BR. NO. 241/106 SIMILAR.
2. FOR SECTION A-A LOCATION, SEE SHEET 12.

SECTION A-A (POST RAIL ASSEMBLY)
SCALE: 3/4" = 1'-0"



MODIFIED CONNECTION PLATE (PLAN VIEW)
SCALE: 1 1/2" = 1'-0"



MODIFIED CONNECTION PLATE (ELEVATION)
SCALE: 1 1/2" = 1'-0"

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND EXISTING DETAILS NOT SHOWN.

REV	DESCRIPTION	DRW CHG BY	DATE

PROJECT NO.	905108
FILE NAME	905108B/ApproRail
DESIGNED	RPM
MODEL NAME	90508ApproRail
DRAWN	TAG
CHECKED	EGW
SCALE	AS SHOWN
DATE	FEBRUARY 2020

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CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET OVER TIDAL BASIN
BRIDGE APPROACH RAIL (2 OF 2)

SCOPE OF WORK

BR. NO. 240/132 KEARSARGE WAY OVER PAN AM RAILWAYS

- REMOVE AND REPLACE DECK PAVEMENT AND MEMBRANE.
- PARTIAL AND FULL DEPTH CONCRETE DECK REPAIRS.
- ABUTMENT CONCRETE SPALL, CONCRETE BRUSH CURB, AND SIDEWALK REPAIRS.
- REPAIRS TO SOUTH ABUTMENT BACKWALL AROUND EXISTING UTILITIES.
- REMOVAL OF EXPANSION JOINT, DECK END, AND PARTIAL REMOVAL OF BACKWALL.
- RECONSTRUCTION OF DECK END AND BACKWALL, CONSTRUCTION OF STUB WALL, AND INSTALLATION OF EXPANSION JOINT BEHIND THE BACKWALL.

MATERIALS AND SPECIFICATIONS

1. SPECIFICATIONS: NHDOT 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS AMENDED.
2. REINFORCING STEEL: AASHTO M 31 (ASTM A615) GRADE 60
3. CONCRETE: PARTIAL DEPTH CONCRETE DECK REPAIRS = 4000 PSI
ITEM 520.01, CONCRETE CLASS AA

FULL DEPTH CONCRETE DECK REPAIRS, ABUTMENT REPAIRS, STUBWALLS, DECK ENDS, AND BACKWALL RECONSTRUCTION ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS = 4000 PSI

GENERAL NOTES

1. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS PREPARED BY HOYLE, TANNER & ASSOCIATES, INC. (HOYLE, TANNER) AND THE PROPOSED WORK THEY CONVEY.
2. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS AND THE MORE STRINGENT SHALL GOVERN.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS AND COORDINATION OF OTHER TRADES.
4. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SITE SAFETY SHALL SOLELY BE THE CONTRACTOR'S RESPONSIBILITY.
5. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS MUST BE VERIFIED BY THE GENERAL CONTRACTOR OR RESPONSIBLE TRADES PRIOR TO COMMENCING WITH THE WORK, FABRICATION OR ORDERING MATERIALS. DO NOT SCALE DRAWINGS, USE DIMENSIONS SHOWN.
6. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, BEFORE PROCEEDING WITH THE WORK.
7. IN THE PREPARATION OF THESE DRAWINGS, HOYLE, TANNER HAS RELIED UPON INFORMATION OBTAINED FROM THE FOLLOWING REPORTS, DRAWINGS AND TEST DATA/RESULTS AS FOLLOWS:

AS-BUILT DRAWINGS PREPARED BY WALTER J. HICKEY ASSOCIATES, INC. NH PROJECT NO. C-2441-H, DATED OCTOBER 13, 1978, ENTITLED "PLANS OF PROPOSED FEDERAL AID URBAN SYSTEM PROJECT, M-5379 (008), N.H. PROJECT NO. C-2441-H, KEARSARGE WAY"

REPORT BY NDT CORPORATION, DATED APRIL 30, 2019, ENTITLED "GPR BRIDGE DECK ASSESSMENT, KEARSARGE WAY BRIDGE OVER PAN AM RAILROAD, PORTSMOUTH, NEW HAMPSHIRE"

THIS INFORMATION IS INCLUDED IN CONTRACT SPECIFICATIONS; APPENDIX B AS-BUILT DRAWINGS AND APPENDIX D GPR REPORT.

8. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. ALL COSTS FOR DETERMINING UNDERGROUND UTILITY TYPES AND LOCATIONS SHALL BE SUBSIDIARY TO THE CONTRACT. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER AND UTILITY OWNERS BEFORE PROCEEDING WITH THE WORK.
9. ALL APPLICABLE UTILITY DEPARTMENTS AND COMPANIES SHALL BE NOTIFIED BEFORE EXCAVATION IS STARTED. UTILITIES WITHIN 50 FEET OF AN EXCAVATION SHALL BE MARKED IN THE FIELD.
10. HOYLE, TANNER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE DUE TO THE FAILURE OF THE CONTRACTOR:
 - a. TO FOLLOW THESE DRAWINGS AND SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.
 - b. TO NOTIFY HOYLE, TANNER OF ANY DISCREPANCIES, ERRORS, OMISSIONS OR CONFLICTS AND OBTAIN THEIR GUIDANCE TO RESOLVE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, INSTALLATION AND REMOVAL OF ALL TEMPORARY SHORING AND BRACING REQUIRED DURING CONSTRUCTION.
12. THE CONTRACTOR SHOULD NOTE THAT THE NHDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" ARE MADE A PART OF THIS PROJECT AND ALL APPLICABLE DETAILS, STANDARDS AND SPECIFICATIONS SHALL APPLY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.
14. THE ELEVATIONS SHOWN HEREIN WERE TAKEN FROM THE AS-BUILT DRAWINGS AND REFER TO MEAN SEA LEVEL AS DEFINED BY THE U.S.C. AND G.S.

GENERAL CONSTRUCTION NOTES

1. DIMENSIONS, ANGLES, BEARINGS AND ELEVATIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM EXISTING PLANS, AND LIMITED FIELD INVESTIGATIONS AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE PROPOSED WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK.
2. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
3. CLEARING, GRUBBING AND PRUNING REQUIRED FOR CONSTRUCTION OF THE PROJECT SHALL BE SUBSIDIARY TO THE CONTRACT.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT DEBRIS DOES NOT FALL ONTO THE RAILROAD BELOW THE EXISTING STRUCTURE DURING REMOVAL WORK. ALL COSTS FOR THE ERECTION, MAINTENANCE, AND REMOVAL OF TEMPORARY STRUCTURES REQUIRED FOR SHIELDING OR OTHER SUCH METHODS, AS APPROVED, SHALL BE INCLUDED IN THE COST FOR ITEM 502.102, ITEM 511.02, AND ITEM 511.03, AS APPROPRIATE.
5. THE WELDING OF ATTACHMENTS TO EXISTING BRIDGE COMPONENTS FOR CONSTRUCTION PURPOSES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
6. NO SCAFFOLDS SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE ROADWAY UNLESS APPROVED BY THE ENGINEER.
7. TO ACCOMPLISH THE PROPOSED EXPANSION JOINT REPLACEMENT, THE EXISTING DECK AND ABUTMENT BACKWALL SHALL BE REMOVED TO THE LIMITS SHOWN IN THESE PLANS UNDER ITEM 502.102, REMOVAL OF EXISTING BRIDGE STRUCTURE. ALL EXPOSED CONCRETE SURFACES SHALL BE SAW CUT 1" DEEP TO PROVIDE CLEAN REMOVAL LINES (ALL COSTS INCLUDED IN ITEM 502.102). NEW DECK END AT THE EXPANSION JOINT, ABUTMENT BACKWALL AND STUBWALL SHALL BE RECONSTRUCTED WITH ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS. PRIOR TO PLACING NEW CONCRETE, THE REMOVAL SURFACES SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS INCLUDED IN ITEM 520.0201).
8. EXPOSED SURFACES OF EXISTING SUBSTRUCTURES (FACE OF ABUTMENTS, WINGWALLS, AND PIER) SHALL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR. DETERIORATED CONCRETE SHALL BE REMOVED TO THE LIMITS DESIGNATED FROM THE INSPECTION AS SPECIFIED IN SECTION 512. REMOVAL OF THE DETERIORATED CONCRETE SHALL EXTEND ONLY TO THE LIMITS OF UNSOUND CONCRETE AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE PAID UNDER ITEM 512.02.
9. THE ABUTMENT AND PIER BEARING SEATS SHALL BE INSPECTED FOR DETERIORATED CONCRETE AND SHALL BE REMOVED TO THE LIMITS DESIGNATED FROM THE INSPECTION AS SPECIFIED IN SECTION 512. REMOVAL OF THE DETERIORATED CONCRETE SHALL EXTEND ONLY TO THE LIMITS OF UNSOUND CONCRETE AS DIRECTED BY THE ENGINEER. ALL COSTS FOR REMOVAL SHALL BE PAID UNDER ITEM 512.02.
10. EXISTING BRIDGE DECK SOFFIT, COPINGS, ABUTMENTS, WINGS AND PIER SHALL BE WASHED, SUBSIDIARY TO ITEM 534.3, IN SUCH A MANNER THAT OVERSPRAY ONTO THE RAILROAD BELOW IS KEPT TO A MINIMUM. IF THE WATER BEADS, NO COATING NEEDS TO BE APPLIED. IF THE WATER DOES NOT BEAD, COAT THE SURFACE WITH ITEM 534.3, WATER REPELLENT (SILANE/SILOXANE).
11. LIGHTLY BLAST-CLEAN ABUTMENTS, WINGWALLS, AND PIER TO REMOVE GRAFFITI AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE INCLUDED IN ITEM 534.3, WATER REPELLENT (SILANE/SILOXANE).
12. PROFILE ADJUSTMENT IN THE VICINITY OF THE REHABILITATED BRIDGE SHALL BE MADE AS REQUIRED OR AS DIRECTED TO ACCOUNT FOR VARIATIONS IN THE BRIDGE DECK CROSS SLOPES. ALL COSTS SHALL BE INCLUDED IN THE APPROPRIATE ITEMS.
13. RESEAL EXISTING EXPOSED WINGWALLS TO ABUTMENT JOINTS WITH ½" x ½" ITEM 562.1, SILICONE JOINT SEALANT (F). REMOVAL OF LOOSE ELASTOMERIC SEALANT AND CLEANING OF JOINT SHALL BE SUBSIDIARY TO ITEM 562.1.
14. ALL BACKFILL MATERIAL (EXCEPT SUITABLE FILL) SHALL NOT EXCEED THE OPTIMUM MOISTURE CONTENT BY MORE THAN 2 PERCENTAGE POINTS. THE MATERIAL SHALL BE PLACED IN LAYERS NOT MORE THAN 8" LOOSE DEPTH, UNLESS OTHERWISE NOTED. BACKFILL MATERIAL SHALL BE COMPACTED TO NOT LESS THAN 100 PERCENT OF MAXIMUM DENSITY. THE COMPACTION WILL BE TESTED AT FREQUENCIES DETERMINED IN THE FIELD BY THE ENGINEER.
15. IF CONCRETE FORMS ARE TO BE TREATED WITH FORM RELEASE COMPOUND THIS WORK SHALL BE DONE PRIOR TO THE ERECTION OF THE FORMS. THE REINFORCING STEEL, AT THE TIME CONCRETE IS PLACED, SHALL BE FREE OF DIRT, PAINT, OIL, FORM RELEASE COMPOUND, OR OTHER ORGANIC MATERIALS THAT MAY ADVERSELY AFFECT OR REDUCE BOND.
16. ALL EXPOSED EDGES OF THE CONCRETE SHALL BE CHAMFERED ¾", UNLESS OTHERWISE NOTED.
17. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL MAKE A RECORD OF THE EXISTING PAINT PAVEMENT MARKINGS. UPON COMPLETION OF THE BRIDGE WORK, THE PAVEMENT MARKINGS SHALL BE REPLICATED IN KIND WITH ITEM 632.0104, RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE. ITEM 632.0118, RETROREFLECTIVE PAINT PAVE. MARKING, 18" LINE SHALL BE USED FOR STOP BARS, AS NECESSARY.
18. ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED – BRIDGE STRUCTURES, SHALL BE USED FOR COMPLETION OF UNANTICIPATED WORK IN CONNECTION WITH THE SCOPE OF THIS PROJECT, AS DIRECTED BY THE ENGINEER.
19. APPLY PAVEMENT JOINT ADHESIVE ALONG ALL LONGITUDINAL JOINTS BETWEEN PAVEMENT PASSES AND ALONG BRIDGE CURB LINE AND EXPANSION JOINT ARMORING PRIOR TO PLACING ALL PAVEMENT COURSES. FOR BRIDGE BASE, APPLY ITEM 403.61, PAVEMENT JOINT ADHESIVE (BRIDGE BASE) AND FOR WEARING COURSE APPLY ITEM 403.6, PAVEMENT JOINT ADHESIVE.
20. ITEM 410.22, ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED TO THE PAVEMENT BASE COURSE PRIOR TO THE PLACEMENT OF THE PAVEMENT WEARING COURSE PER THE REQUIREMENTS OF SECTION 410.
21. ITEM 646.41, TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS, SHALL BE USED TO REPAIR DISTURBED AREAS AS DIRECTED BY THE ENGINEER.
22. BARRIER MEMBRANE, HEAT WELDED ITEM 538.5 TO BE LAPPED PER MANUFACTURERS RECOMMENDATION.

BRIDGE DECK REHABILITATION NOTES

1. AFTER REMOVAL OF THE EXISTING ASPHALT WEARING SURFACE AND MEMBRANE, THE CONTRACTOR AND ENGINEER SHALL JOINTLY SOUND THE ENTIRE DECK SURFACE BY USE OF SOUNDING HAMMERS OR CHAIN DRAGGING TO DETERMINE AREAS OF DELAMINATION OR DETERIORATION. DELAMINATED OR DETERIORATED CONCRETE SHALL BE REMOVED AND THE REMAINING SURFACES SHALL BE PREPARED IN ACCORDANCE WITH SECTION 511 – PREPARATION FOR CONCRETE BRIDGE DECK REPAIRS – NHDOT STANDARD SPECIFICATIONS.
2. DURING ALL REMOVAL AND REPAIR OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING DECK REINFORCING. ANY DAMAGE SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
3. ITEM 538.5, BARRIER MEMBRANE, HEAT WELDED (F) SHALL BE OVERLAPPED PER MANUFACTURER'S RECOMMENDATIONS. AT THE DECK ENDS, A SEALANT/REPAIR MASTIC COMPATIBLE WITH ITEM 538.5 SHALL BE USED TO SEAL THE ENDS OF THE NEW MEMBRANE. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 538.5
4. THE CONTRACTOR SHALL PREPARE SPALLED AREAS BY REMOVING ALL UNSOUND CONCRETE TO A MINIMUM DEPTH BY SQUARE CUTTING THE REPAIR AREA (ITEM 511.02 OR 511.03, AS APPROPRIATE). FEATHERED REMOVAL EDGES WILL NOT BE PERMITTED. THE MINIMUM REPAIR AREA SHALL BE 1'-0"x1'-0".
5. AFTER CONCRETE REMOVAL, THE REPAIR SURFACE AND EXISTING REINFORCING BARS SHALL BE THOROUGHLY CLEANED OF INJURIOUS RUST, CONCRETE DIRT, GREASE, OR ANY OTHER BOND-INHIBITING MATERIALS.
6. EXISTING REINFORCING BARS DEEMED UNSALVAGEABLE BY THE ENGINEER SHALL BE SUPPLEMENTED WITH NEW REINFORCING BARS. CONCRETE SHALL BE REMOVED SUCH THAT THE MINIMUM LAP LENGTH IS PROVIDED BETWEEN THE EXISTING AND NEW REINFORCING BARS, OR AS DIRECTED BY THE ENGINEER. NEW REINFORCING BARS SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 544.31.
7. ALL CONCRETE REMOVAL OPERATIONS SHALL BE APPROVED BY THE ENGINEER.
8. FULL DEPTH CONCRETE BRIDGE DECK REPAIRS SHALL BE PATCHED WITH ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS.
9. PARTIAL DEPTH CONCRETE BRIDGE DECK REPAIRS SHALL BE PATCHED WITH ITEM 520.01, CONCRETE CLASS AA.
10. PRIOR TO PLACING NEW CONCRETE, THE PREPARED AREAS SHALL BE BLAST CLEANED AND SATURATED SURFACE DRY (ALL COSTS SUBSIDIARY TO ITEMS 520.01 AND 520.0201).

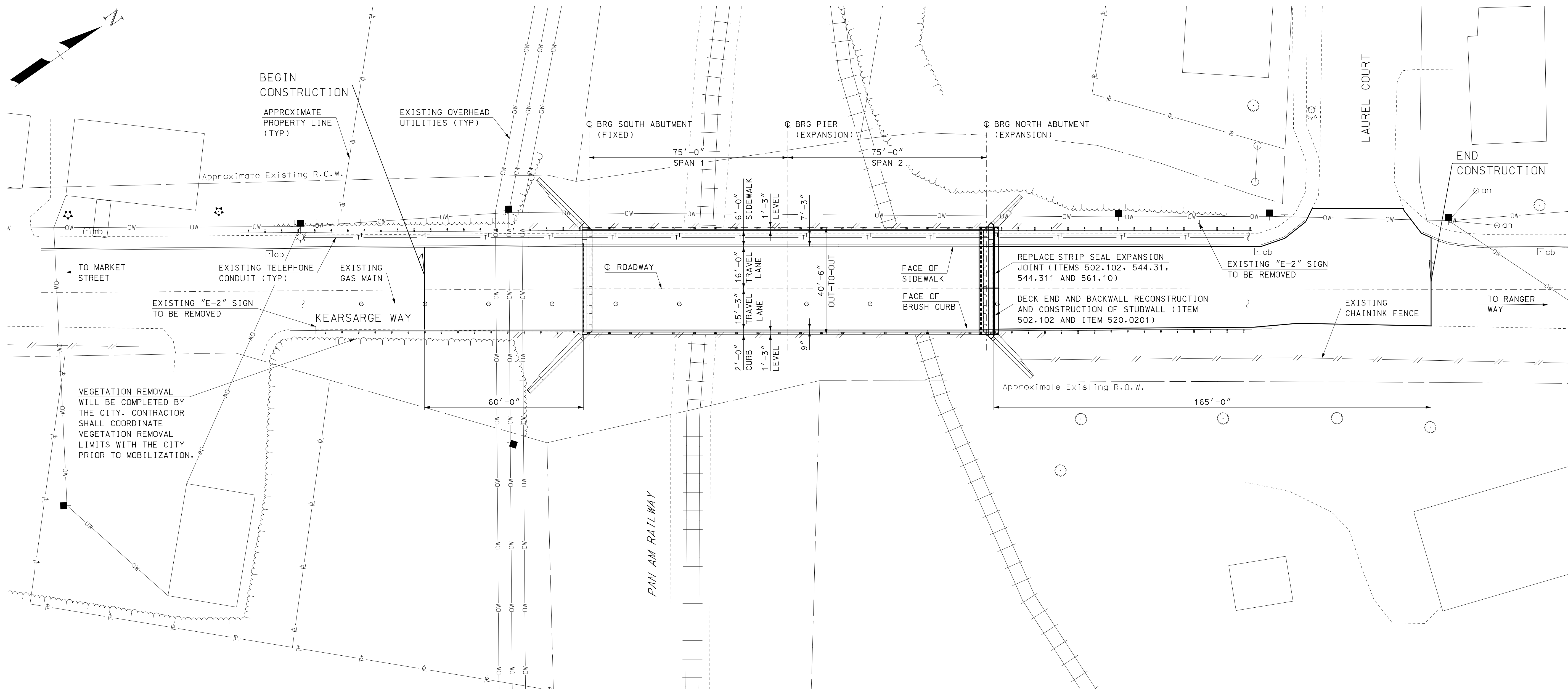
REMOVAL NOTES

1. THE CONTRACTOR'S METHOD OF REMOVAL OF PORTIONS OF THE EXISTING BRIDGE DECK AND BACKWALL SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 502 TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY REMOVAL OPERATIONS.
2. REMOVAL OF EXISTING BRIDGE STRUCTURE, ITEM 502.102, SHALL INCLUDE REMOVAL OF THE EXISTING BRIDGE DECK, CONCRETE SIDEWALK, BRUSH CURB, REMOVAL AND RESETTING OF GRANITE CURB, REMOVAL OF THE ABUTMENT CONCRETE BACKWALL AND EXISTING EXPANSION JOINT TO THE LIMITS SHOWN ON THESE PLANS.
3. DURING ALL REMOVAL AND REPAIR OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE THE EXISTING CONCRETE DECK REINFORCEMENT. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED AT THE CONTRACTOR'S EXPENSE.
4. DURING CONCRETE EXPANSION JOINT END OF DECK REMOVAL OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE TOP FLANGES OF EXISTING BEAMS. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.

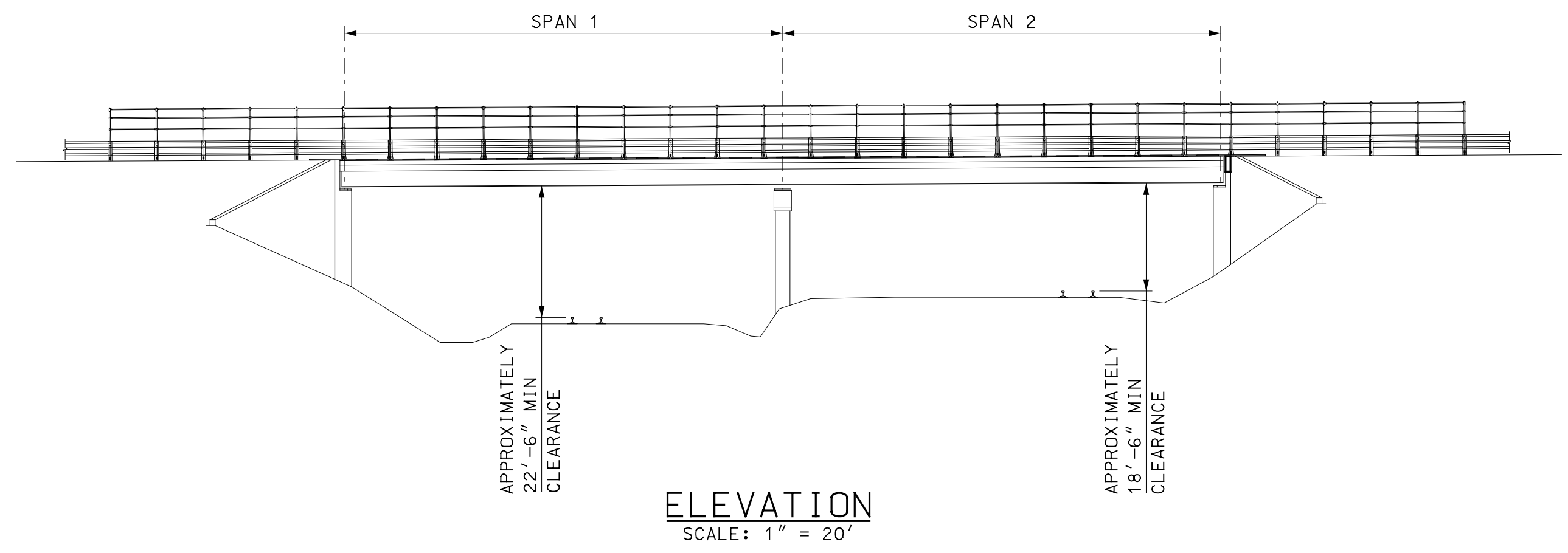
REINFORCEMENT NOTES

1. EXISTING REINFORCING STEEL, UNLESS OTHERWISE SHOWN/NOTED IN THE PLANS, SHALL BE RETAINED.
2. PROPOSED REINFORCEMENT, AS SHOWN IN THE PLANS AND REPLACING EXISTING REBAR TO BE REMOVED, SHALL BE PAID UNDER ITEM 544.31, REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED).
3. ALL REINFORCING TO REMAIN IN PLACE SHALL BE INSPECTED FOR DAMAGE OR CORROSION JOINTLY BY THE ENGINEER AND CONTRACTOR AFTER EACH REMOVAL PHASE. ALL NEW REINFORCING STEEL REQUIRED TO REPAIR OR REPLACE EXISTING REINFORCEMENT SHALL BE PAID UNDER ITEM 544.31, REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED).
4. EXISTING REINFORCING STEEL THAT IS TO REMAIN IN PLACE WITHIN THE REMOVAL AREAS SHALL BE CUT AS REQUIRED TO PROVIDE 2½" MINIMUM CLEAR COVER FROM THE PROPOSED CONCRETE SURFACES, EXCEPT AS OTHERWISE NOTED. ALL COSTS INCLUDED IN ITEM 502.102.
5. UNLESS OTHERWISE NOTED, HOLES DRILLED INTO EXISTING CONCRETE SHALL BE DRILLED ½" DIAMETER LARGER THAN THE BAR DIAMETER AND SHALL BE GROUTED WITH HIGH STRENGTH NON-SHRINK CEMENTITIOUS GROUT. ALL COSTS FOR DRILLING AND GROUTING SHALL BE SUBSIDIARY TO ITEM 520.0201.
6. ALL NEW REINFORCING SHALL HAVE A CLEAR COVER OF 2½" FROM PROPOSED CONCRETE SURFACES UNLESS OTHERWISE NOTED.
7. UNLESS OTHERWISE NOTED, ALL BAR REINFORCEMENT FOR CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," AASHTO M31 (ASTM A615), GRADE 60.
8. FOR TYPICAL BENDING DETAILS, RECOMMENDED MINIMUM DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICES, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE."
9. ALL LAP SPLICES SHALL HAVE A MINIMUM LENGTH OF 24" FOR NUMBER 5 BARS AND 29" FOR NUMBER 6 BARS UNLESS OTHERWISE SPECIFIED ON THE PLANS.
10. ITEM 544.311, REINFORCING STEEL, EPOXY COATED MECHANICAL CONNECTORS (CONTRACTOR DETAILED), ARE TO BE USED TO SPLICE ALL NEW REINFORCEMENT AT THE PHASED CONSTRUCTION JOINTS.

CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE KEARSARGE WAY OVER PAN AM RAILWAYS	PROJECT NO. 905108	SHEET NO. 14	PROJECT NOTES	DATE FEBRUARY 2020	DRAWN BY	CHECKED BY	DATE
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GENERAL PLAN
SCALE: 1" = 20'



ELEVATION
SCALE: 1" = 20'

- NOTES**
1. THE DEVELOPMENT OF THESE PLANS IS BASED ON A COMBINATION OF THE AS BUILT DRAWINGS AND DIGITIZED AERIAL INFORMATION. RIGHT-OF-WAY AND PROPERTY LINES ARE APPROXIMATE AND BASED ON THE CITY'S GIS. NO SURVEY INFORMATION WAS USED IN THE DEVELOPMENT OF THESE PLANS.
 2. SEE SHEETS 24 TO 28 FOR BRIDGE DECK, NORTH ABUTMENT REMOVAL AND RECONSTRUCTION LIMITS.
 3. SEE SHEETS 29 AND 30 FOR EXPANSION JOINT DETAILS.

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DESIGNED	RPM
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EGW	EGW
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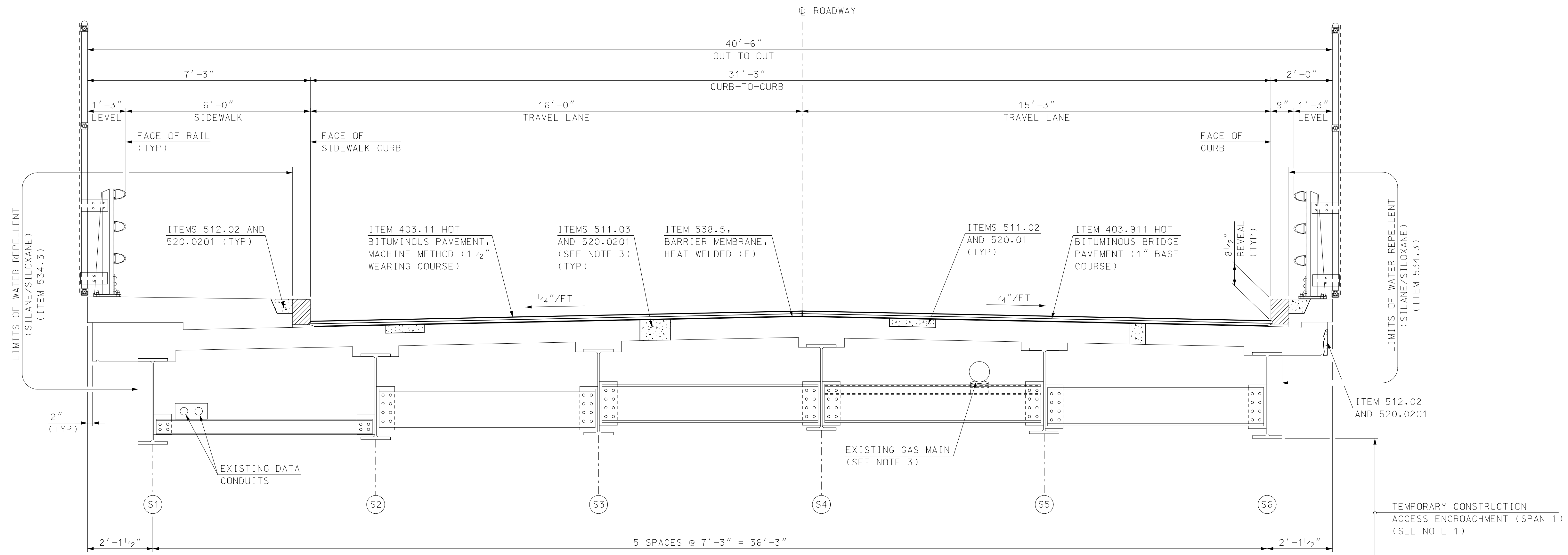
CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 GENERAL PLAN AND ELEVATION

PROJECT NO. 905108

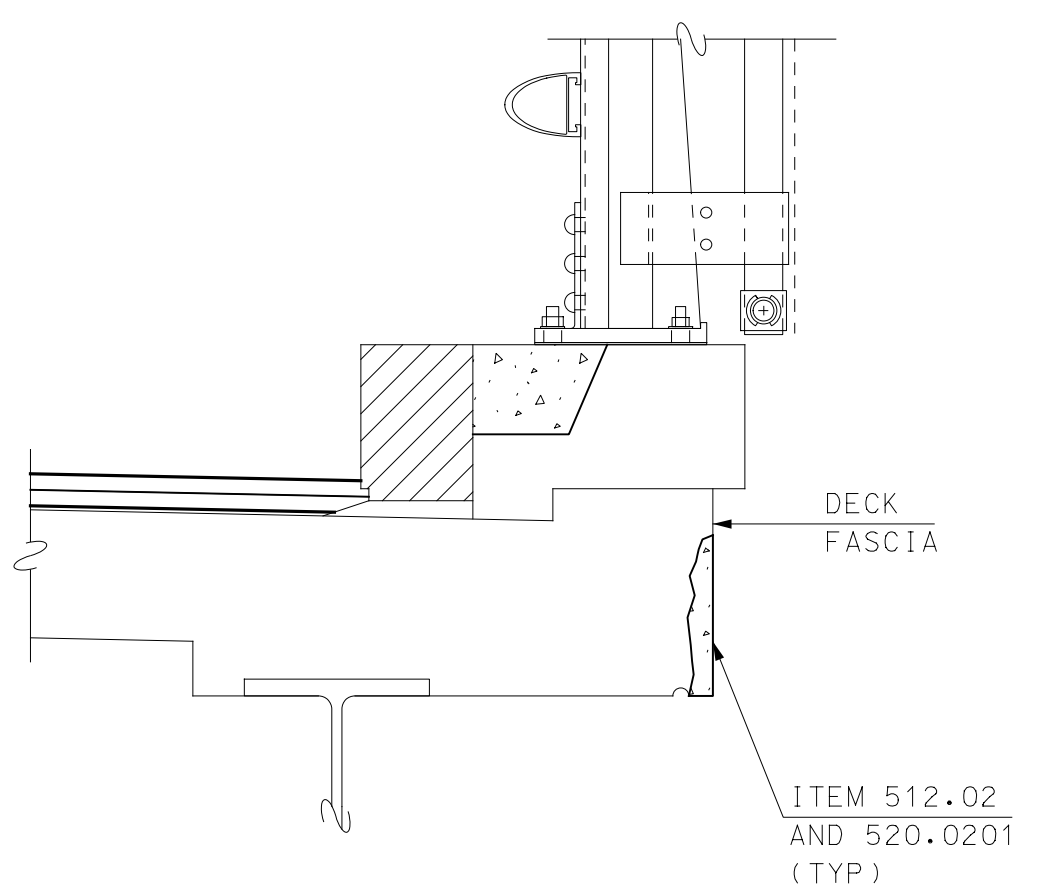
SHEET NO.
16
 SHEET 16 OF 40

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



FASCIA REPAIR DETAIL
SCALE: 1" = 1'-0"

LEGEND

 CONCRETE REPAIR AREA

NOTES

1. A MAXIMUM OF 17'-8" VERTICAL CLEARANCE SHALL BE MAINTAINED UNDER SPAN 1, MEASURED FROM THE TOP OF RAIL TO THE BOTTOM OF ANY TEMPORARY STRUCTURE NECESSARY FOR CONSTRUCTION ACCESS, SHIELDING OR SHORING.
2. CONTRACTOR SHALL COORDINATE WITH BOISE CASCADE FOR THE MAXIMUM VERTICAL CLEARANCE UNDER SPAN 2.
3. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT THE GAS LINE FROM DAMAGE WHEN FULL DEPTH CONCRETE DECK REPAIR AREAS OCCUR DIRECTLY OVER THE PIPE. THE CONTRACTOR'S MEANS AND METHODS TO PROTECT THE GAS LINE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMPLETING THE WORK. ALL COSTS TO PROTECT THE GAS LINE SHALL BE SUBSIDIARY TO ITEM 511.03, PREPARATION FOR FULL DEPTH CONCRETE BRIDGE DECK REPAIRS.

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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 TYPICAL DECK SECTION

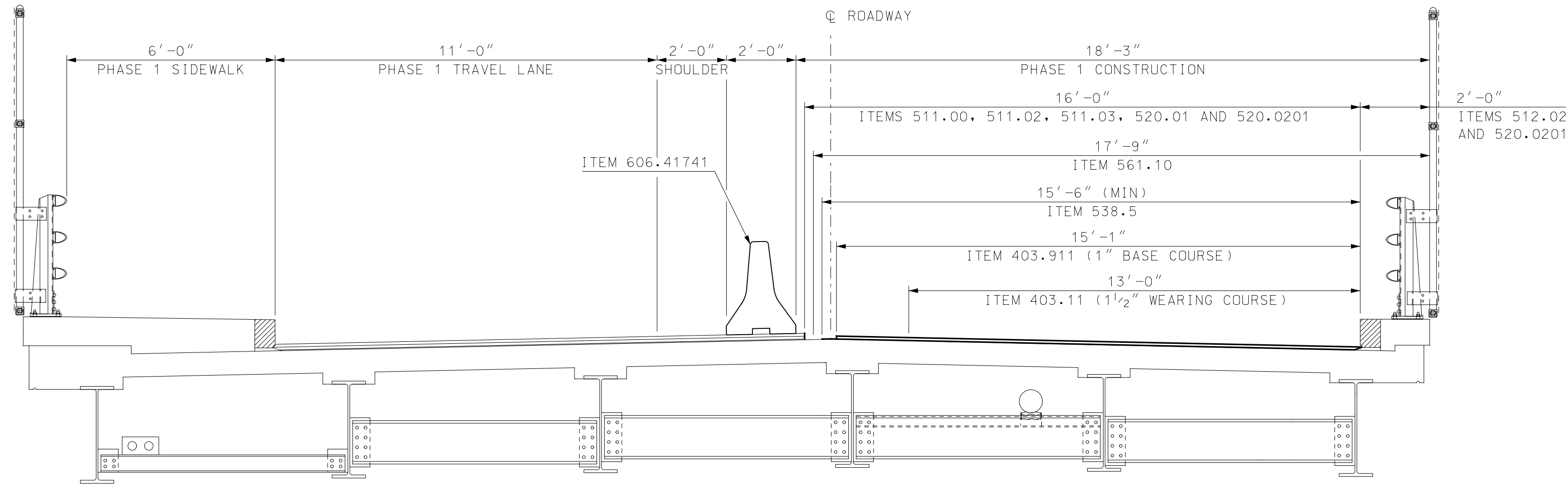
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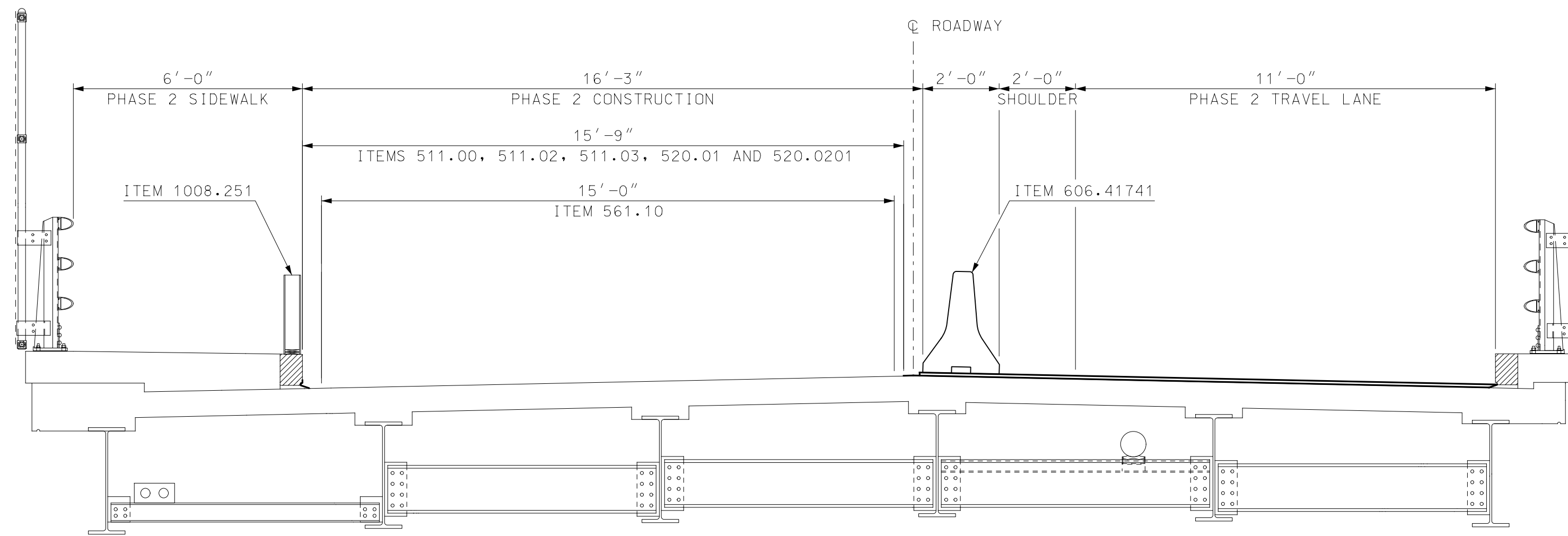
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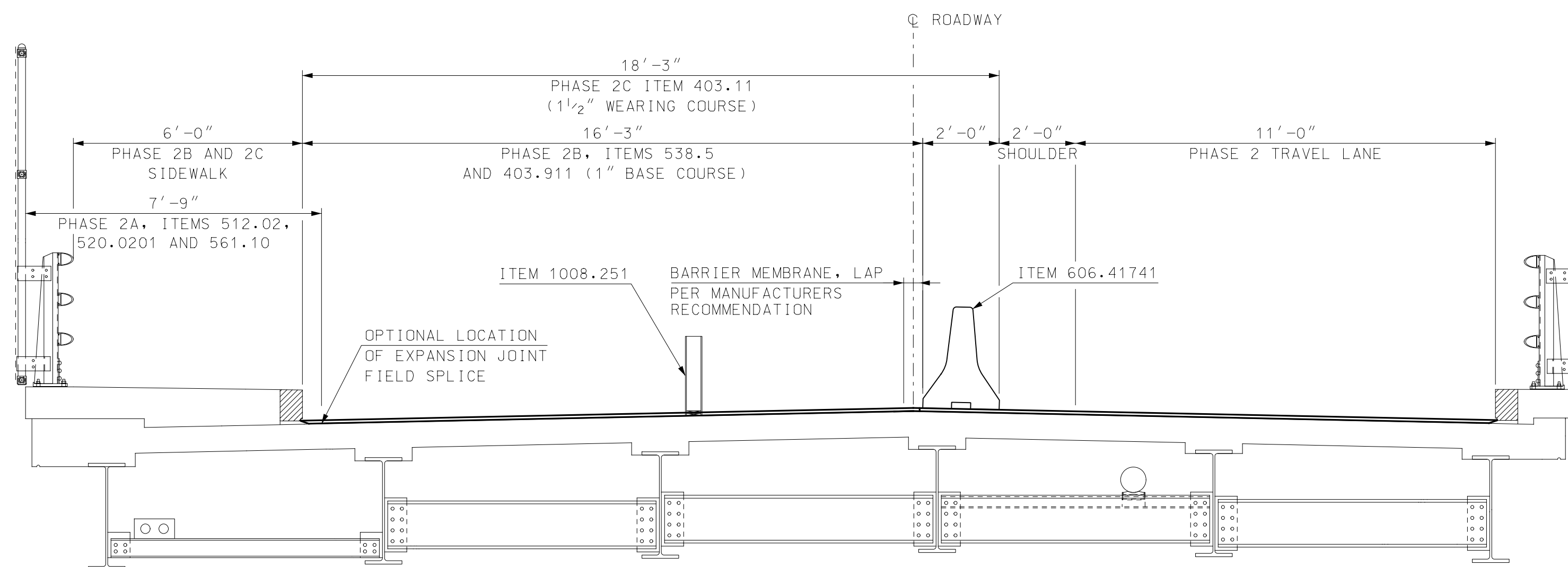
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PHASE 1 SECTION
SCALE: $\frac{3}{8}'' = 1'-0''$



PHASE 2 SECTION
SCALE: $\frac{3}{8}'' = 1'-0''$



PHASE 2A, 2B AND 2C SECTIONS
SCALE: $\frac{3}{8}'' = 1'-0''$

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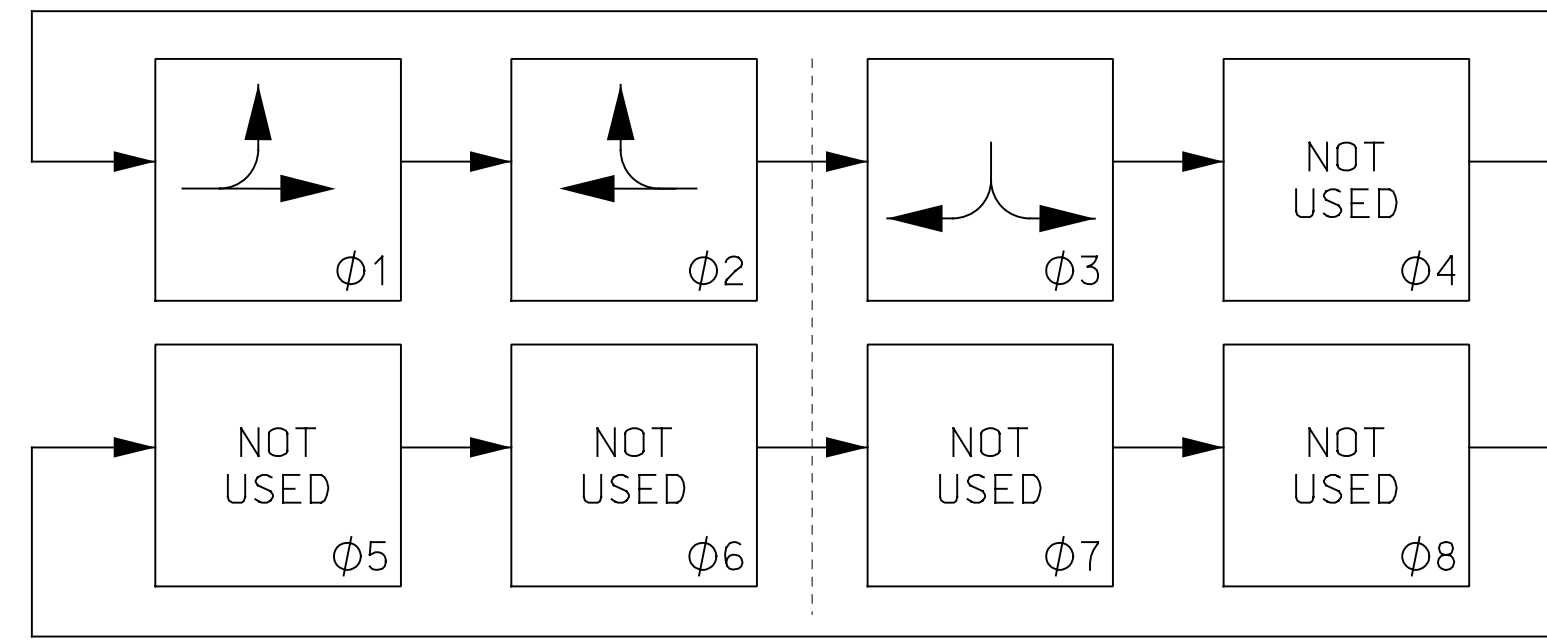
CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 CONSTRUCTION PHASING SECTIONS

PROJECT NO. 905108
 SHEET NO.
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 SHEET 18 OF 40

TRAFFIC CONTROL NOTES

- TRAFFIC CONTROL DEVICES SHALL CONFORM TO SECTION 619 OF THE NHDOT STANDARD SPECIFICATIONS, AND THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION (USDOT) AND ADOPTED BY THE COMMISSIONER OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION. SIGNS SHALL ALSO CONFORM TO USDOT STANDARD HIGHWAY SIGNS AND NHDOT CONSTRUCTION SIGN STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING, ERECTING AND MAINTAINING PERMANENT CONSTRUCTION SIGNS AND WARNING DEVICES AS LISTED ON THE PLANS, AND SHALL ALSO BE RESPONSIBLE FOR SUPPLYING, ERECTING AND MAINTAINING ALL OPERATIONAL SIGNS AND WARNING DEVICES FOR THE PLANNED METHODS OF OPERATION IN CONFORMANCE WITH THE MUTCD.
- THE CONTRACTOR SHALL MARK ALL HAZARDS WITHIN THE LIMITS OF THE PROJECT AND CONNECTING ROADS WITH WELL MAINTAINED SIGNS AND WARNING DEVICES. ALL SIGNS AND WARNING DEVICES SHALL BE MOVED, SUPPLEMENTED, CHANGED, OR REMOVED DURING THE PROGRESS OF THE CONSTRUCTION AS NEEDED.
- TRAFFIC CONTROL DEVICES SHALL BE REMOVED, AND SIGNS SHALL BE COVERED OR REMOVED, WHEN THEY NO LONGER APPLY TO THE EXISTING CONDITIONS.
- PLYWOOD SUBSTRATE FOR CONSTRUCTION SIGNS SHALL CONFORM TO SECTION 619. AND FLAT ALUMINUM SHEETS SHALL CONFORM TO SECTION 615 OF THE NHDOT STANDARD SPECIFICATIONS.
- WORK ON THE PROJECT, OR ANY SEPARATE ACTIVITY THEREIN, SHALL NOT START UNTIL ALL THE REQUIRED SIGNS AND WARNING DEVICES ARE INSTALLED AND APPROVED BY THE ENGINEER.
- SIGN LOCATIONS SHOWN ON THESE STANDARDS ARE RECOMMENDED AND MAY BE ADJUSTED AS DETERMINED BY THE ENGINEER. TYPICAL LAYOUTS SHOWN ARE NOT TO SCALE.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE ENGINEER WITH CERTIFICATION THAT ALL THE SIGNS AND WARNING DEVICES USED ON THE PROJECT MEET THE SPECIFICATIONS.
- THE USE OF CONSTRUCTION SIGNS AND WARNING DEVICES NOT SHOWN ON THESE STANDARDS OR MUTCD, UNLESS APPROVED BY THE ENGINEER, SHALL BE PROHIBITED.
- ALL COSTS FOR TRAFFIC CONTROL DEVICES, INCLUDING PLACEMENT, RELOCATION AND REMOVAL OF SIGNS SHALL BE INCLUDED IN ITEM 619.1, MAINTENANCE OF TRAFFIC.
- THE CONTRACTOR SHALL MAINTAIN SAFE, CONTINUOUS ACCESS TO ALL PROPERTIES ADJACENT TO THE PROJECT LOCATION.

NEMA STD 8Φ CONTROLLER



NOTE: UPON INSTALLATION OF TEMPORARY TRAFFIC SIGNAL SYSTEM UTILIZING PROVIDED TIMING, CONTRACTOR SHALL OBSERVE TRAFFIC OPERATIONS DURING PEAK HOURS AND PROVIDE RECOMMENDED TIMING MODIFICATIONS, AS REQUIRED. TIMING CHANGES TO BE CONFIRMED WITH ENGINEER PRIOR TO IMPLEMENTATION. TIMING REVISIONS ARE SUBSIDIARY TO ITEM 616.171

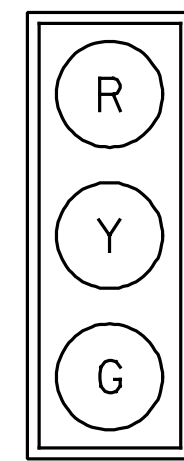
SIGNAL PHASING

	Φ1	Φ2	Φ3
TIMING IN SECONDS			
INITIAL INTERVAL	8	8	5
VEHICLE EXTENSION	3	3	3
MAX. I	20	20	10
YELLOW	4	4	4
ALL RED	20	20	20
RECALL	MIN	MIN	OFF
DETECTOR MEMORY	NL	L	L
FLASH	RED	RED	RED

MAX. I: ALL TIME PERIODS

SIGNAL HEADS

ALL LENSES ARE 12" LED WITH 5" LOUVERED BACK PLATE

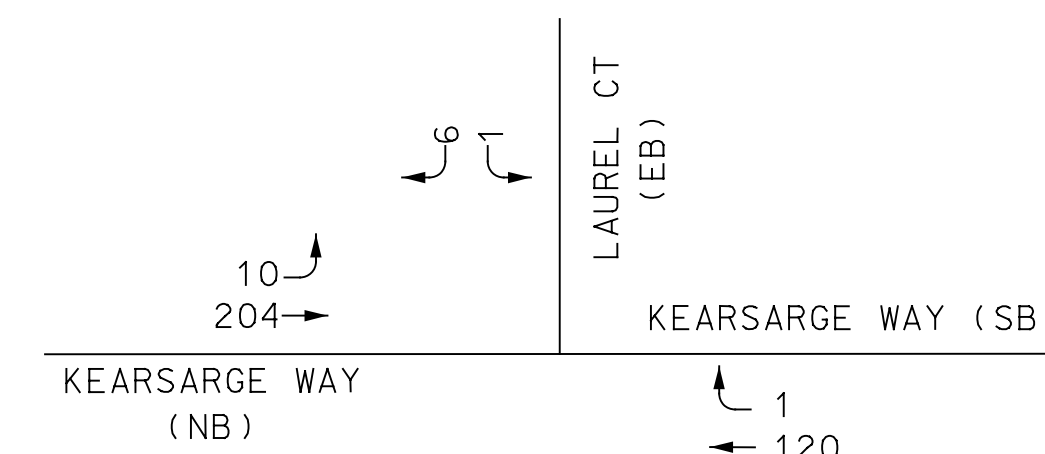


1, 2, 3

CONSTRUCTION SIGNS AND WARNING DEVICES (ITEM 619.1)

TYPE	DESCRIPTION	SIZE WxH	SO. FT.	NO REQ.	TOTAL AREA	POST	COLOR
G20-2		36" x 18"	4.5	2	9	1 POST PER SIGN	B/O
R10-6		24" x 36"	6	3	18	1 POST PER SIGN	B/W
R10-11a		30" x 36"	7.5	2	15	MOUNT ON TEMPORARY MAST ARM & WITH R10-6	B/W
W3-3		36" x 36"	9	2	18	1 POST PER SIGN	B/O
W20-1a		36" x 36"	9	3	18	1 POST PER SIGN	B/O
W20-4		36" x 36"	9	2	18	1 POST PER SIGN	B/O
R10-7a		24" x 30"	5	1	5	MOUNT WITH W3-3 ON EAST SIDE OF BRIDGE	B/W

PEAK TRAFFIC VOLUME



FIRE PREEMPTION

PREEMPT 1	CALLS Φ 1
PREEMPT 2	CALLS Φ 2
PREEMPT 3	CALLS Φ 3

PREEMPTION NOTES:

- LOCATION OF EMERGENCY VEHICLE PREEMPTION RECEIVERS ARE TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR, ENGINEER AND THE CITY OF PORTSMOUTH FIRE DEPARTMENT.
- PREEMPTION SIGNAL SHALL BE SERVED ON A FIRST COME, FIRST SERVE BASIS.
- MINIMUM GREEN TIME: NORMAL VEHICLE CLEARANCE TIMES SHALL BE PROVIDED ON PHASES THAT ARE TO BE DETERMINED BY PREEMPTION DEMAND.

CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
KEARSARGE WAY OVER PAN AM RAILWAYS

CONSTRUCTION PHASING AND SIGNALIZATION NOTES

PROJECT NO. 905108

SHEET NO.

19

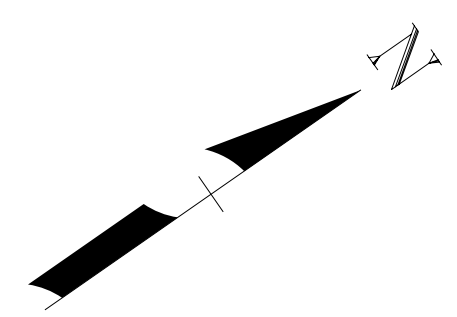
SHEET 19 OF 40

REV	DESCRIPTION	DATE

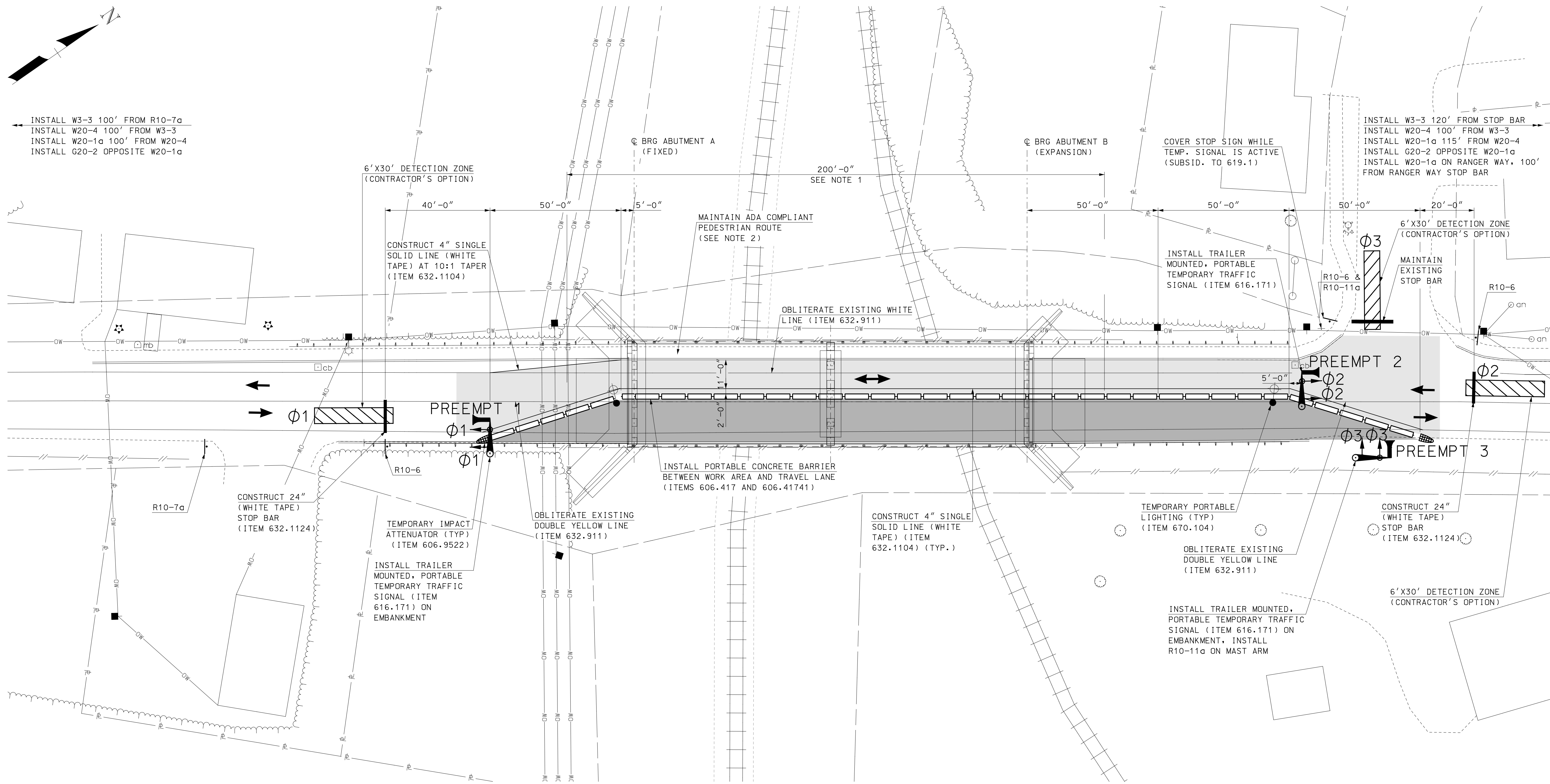
NHDOT BRIDGE NO. 240/732
FILE NAME 905108PhasePlan_K
DESIGNED JFMS
DRAWN KDP
MODE NAME 905108PhaseNotes
CHECKED AS SHOWN
SCALE SBH
DATE FEBRUARY 2020

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INSTALL W3-3 100' FROM R10-7a
 INSTALL W20-4 100' FROM W3-3
 INSTALL W20-1a 100' FROM W20-4
 INSTALL G20-2 OPPOSITE W20-1a



PHASE 1 TRAFFIC CONTROL PLAN
 SCALE: 1" = 20'

LEGEND

	WORK ZONE
	TRAFFIC LANES
	TRAFFIC FLOW
	PORTABLE CONCRETE BARRIER

- NOTES**
- LIMITS OF ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL - BRIDGE; BARRIER OUTSIDE OF THESE LIMITS SHALL BE ITEM 606.417, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL.
 - PEDESTRIAN ROUTE SHALL BE ADA COMPLIANT AND AVAILABLE TO PEDESTRIANS DURING ALL PHASES OF CONSTRUCTION.

- TRAFFIC CONTROL SEQUENCING - PHASE 1**
- INSTALL CONSTRUCTION SIGNS, TEMPORARY MARKINGS, AND WARNING DEVICES AS SHOWN.
 - INSTALL CONCRETE BARRIER AND TEMPORARY SIGNALS AS SHOWN.
 - SHIFT TRAFFIC TO PHASE 1 LAYOUT.
 - MAKE DECK REPAIRS ALONG THE NORTHBOUND TRAVEL LANE AS SHOWN.

REV	DESCRIPTION	DATE

FILENAME	DESIGNED	DATE
905108PhasePlan_K	JFMS	FEBRUARY 2020
MODEL NAME	DRAWN	
905108PhasePlan1	KDP	
SCALE	CHECKED	
AS SHOWN	SBH	

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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS

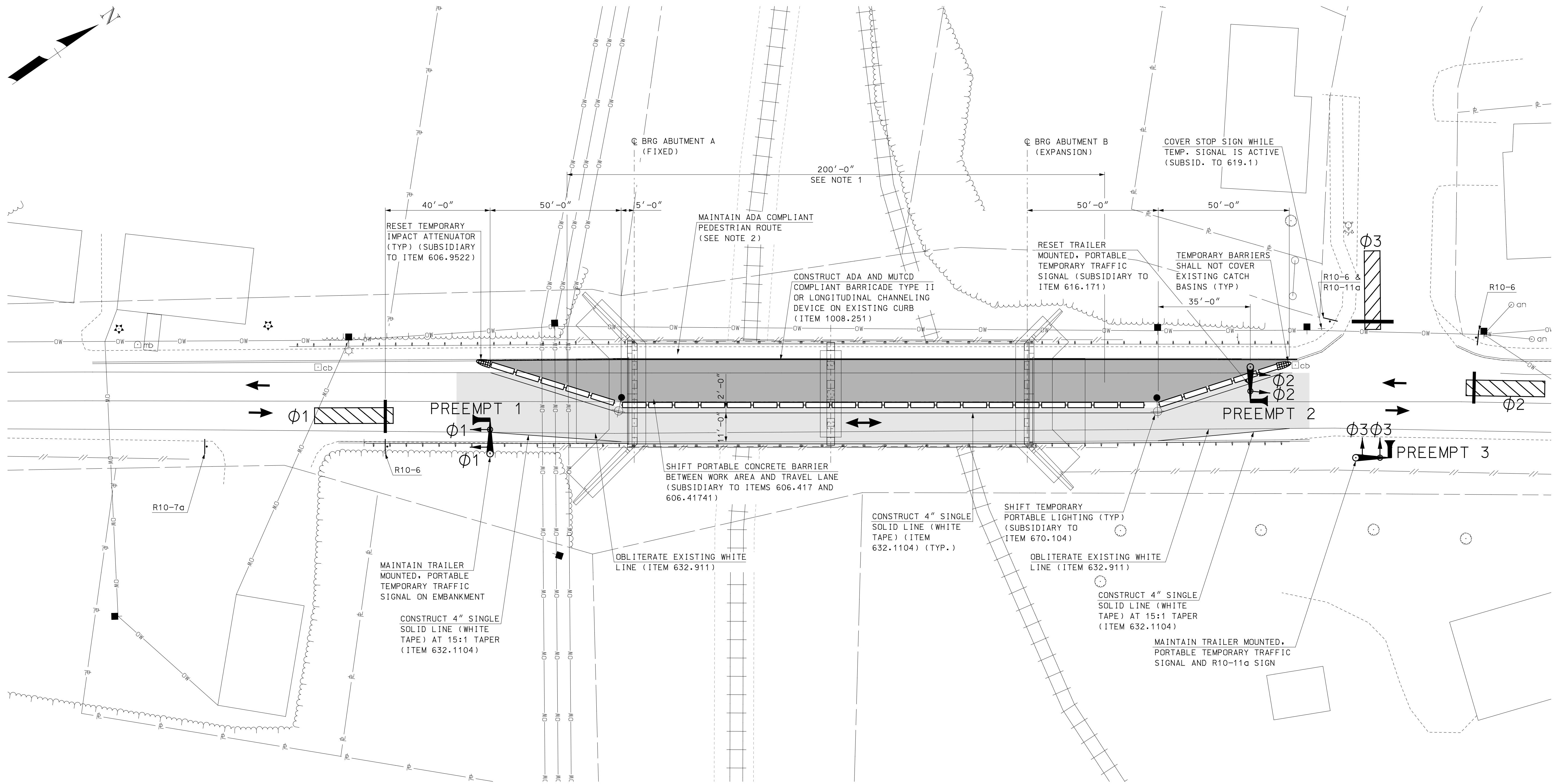
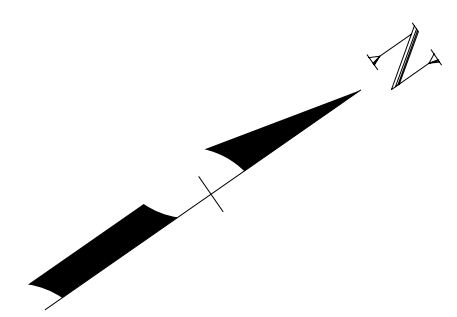
PHASE 1 TRAFFIC CONTROL PLAN

PROJECT NO. 905108

SHEET NO.
20

SHEET 20 OF 40

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PHASE 2 TRAFFIC CONTROL PLAN

SCALE: 1" = 20'

LEGEND

- WORK ZONE
- TRAFFIC LANES
- TRAFFIC FLOW
- PORTABLE CONCRETE BARRIER

NOTES

1. LIMITS OF ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL - BRIDGE; BARRIER OUTSIDE OF THESE LIMITS SHALL BE ITEM 606.417, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL.
2. PEDESTRIAN ROUTE SHALL BE ADA COMPLIANT AND AVAILABLE TO PEDESTRIANS DURING ALL PHASES OF CONSTRUCTION.
3. PHASE 2B TRAFFIC CONTROL PLAN IS SIMILAR.

TRAFFIC CONTROL SEQUENCING - PHASE 2

- CONSTRUCT ADA COMPLIANT PEDESTRIAN TYPE II BARRICADE OR LONGITUDINAL CHANNELING DEVICE ALONG EXISTING SIDEWALK CURB.
- TRANSITION TRAFFIC CONTROL MEASURES TO PHASE 2 LAYOUT.
- MAKE DECK REPAIRS ALONG THE SOUTHBOUND TRAVEL LANE AS SHOWN.

REV	DESCRIPTION	DATE

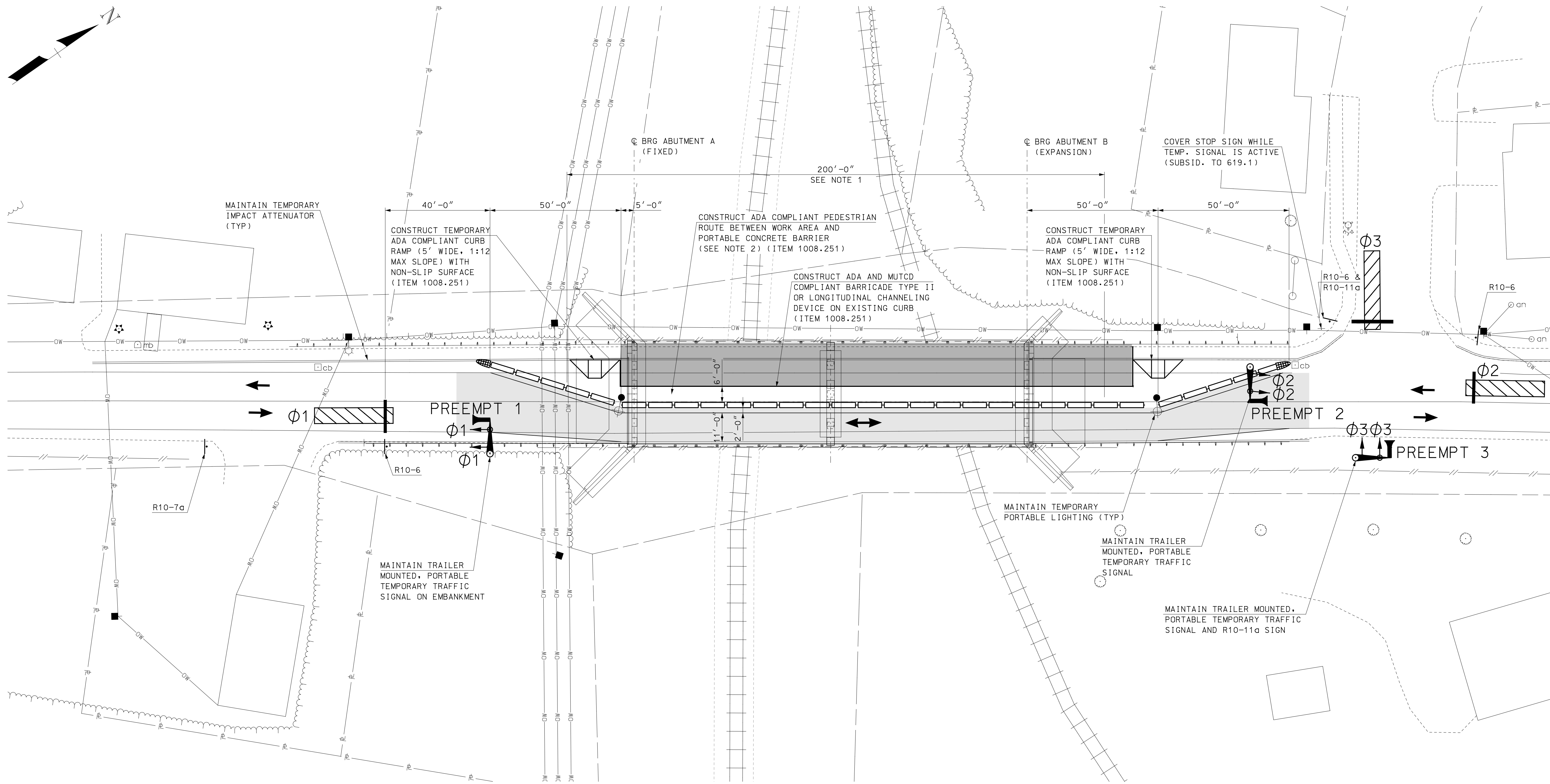
NH DOT BRIDGE NO. 240/132	DESIGNED JFMS	CHECKED SBH
FILENAME 905108PhasePlan_K	DRAWN KDP	DATE FEBRUARY 2020
MODEL NAME 905108PhasePlan2	SCALE AS SHOWN	SBH

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 PHASE 2 TRAFFIC CONTROL PLAN

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PHASE 2A TRAFFIC CONTROL PLAN

SCALE: 1" = 20'

LEGEND

	WORK ZONE
	TRAFFIC LANES
	TRAFFIC FLOW
	PORTABLE CONCRETE BARRIER

TRAFFIC CONTROL SEQUENCING - PHASE 2A

- TRANSITION TRAFFIC CONTROL MEASURES TO PHASE 2A LAYOUT.
- MAKE DECK REPAIRS ALONG THE EXISTING SIDEWALK.
- UPON COMPLETION OF REPAIRS, OPEN BRIDGE TO TWO LANES OF TRAFFIC. REMOVE ALL CONSTRUCTION SIGNS, MARKINGS, AND WARNING DEVICES. RESTORE ALL EXISTING ROADWAY STRIPING (ITEM 632.0104)

NOTES

1. LIMITS OF ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL - BRIDGE; BARRIER OUTSIDE OF THESE LIMITS SHALL BE ITEM 606.417, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL.
2. PEDESTRIAN ROUTE SHALL BE ADA COMPLIANT AND AVAILABLE TO PEDESTRIANS DURING ALL PHASES OF CONSTRUCTION.

REV	DESCRIPTION	DATE

NH DOT BRIDGE NO. 240/132	DESIGNED JFMS	CHECKED KDP
FILENAME 905108PhasePlan_K	DRAWN KDP	SCALE AS SHOWN
MODE NAME 905108PhasePlan2A	DATE FEBRUARY 2020	SBH

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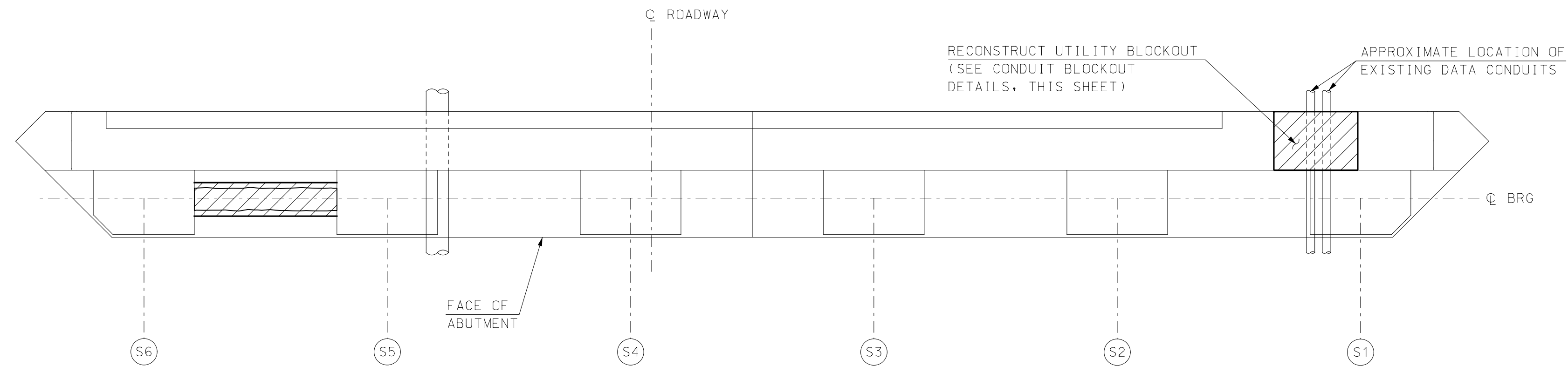
CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 PHASE 2A TRAFFIC CONTROL PLAN

PROJECT NO. 905108

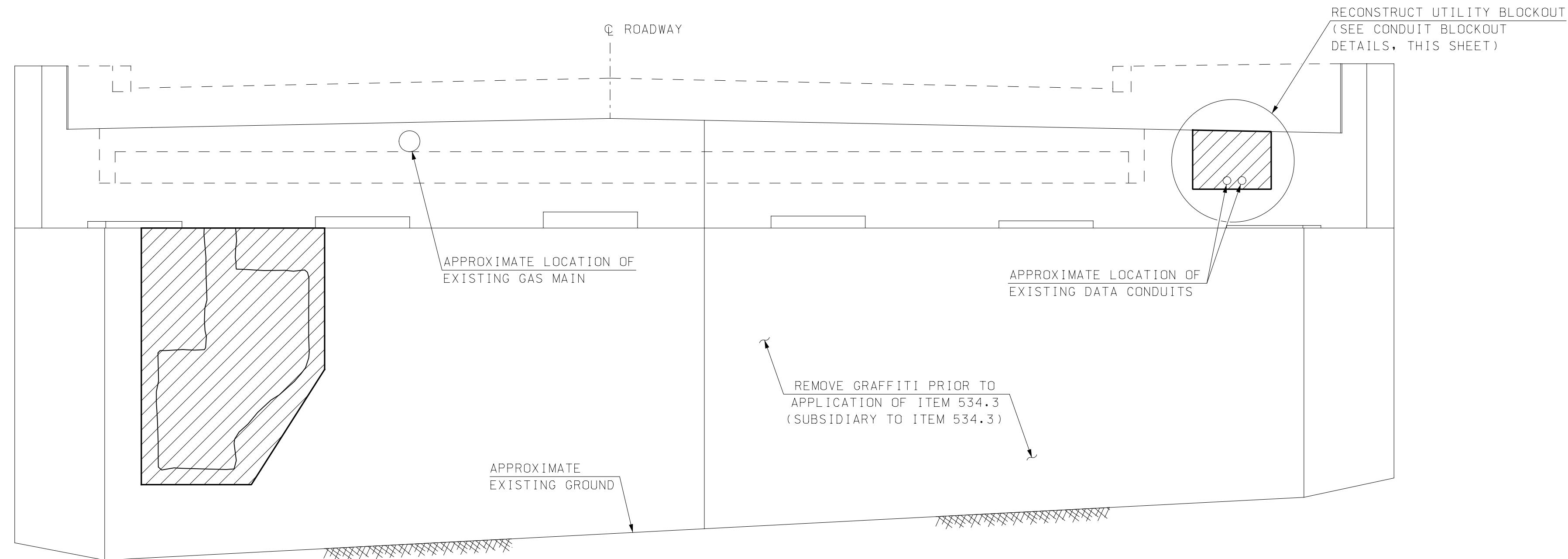
SHEET NO.
22
 SHEET 22 OF 40

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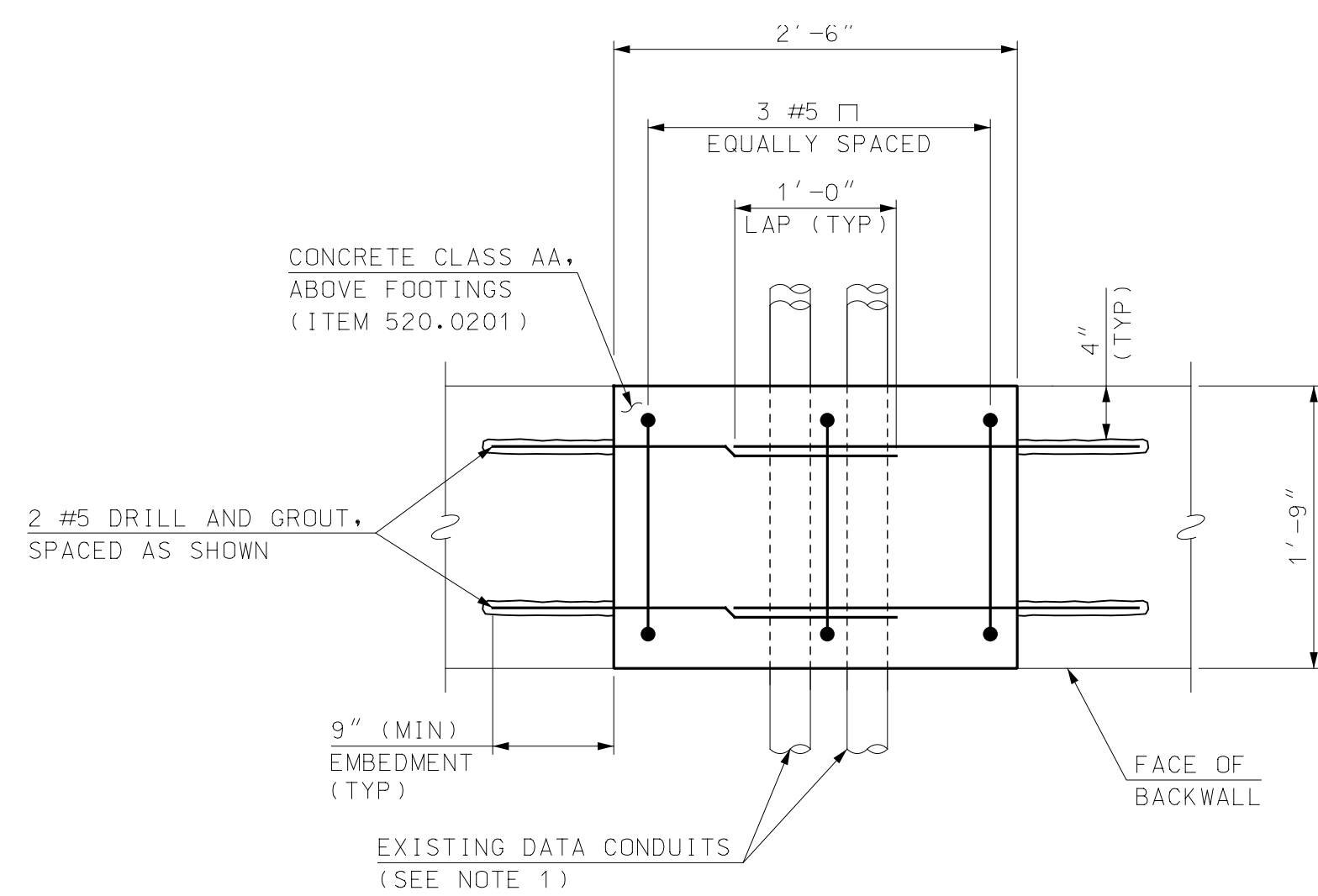
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SOUTH ABUTMENT PLAN
SCALE: 3/8" = 1'-0"



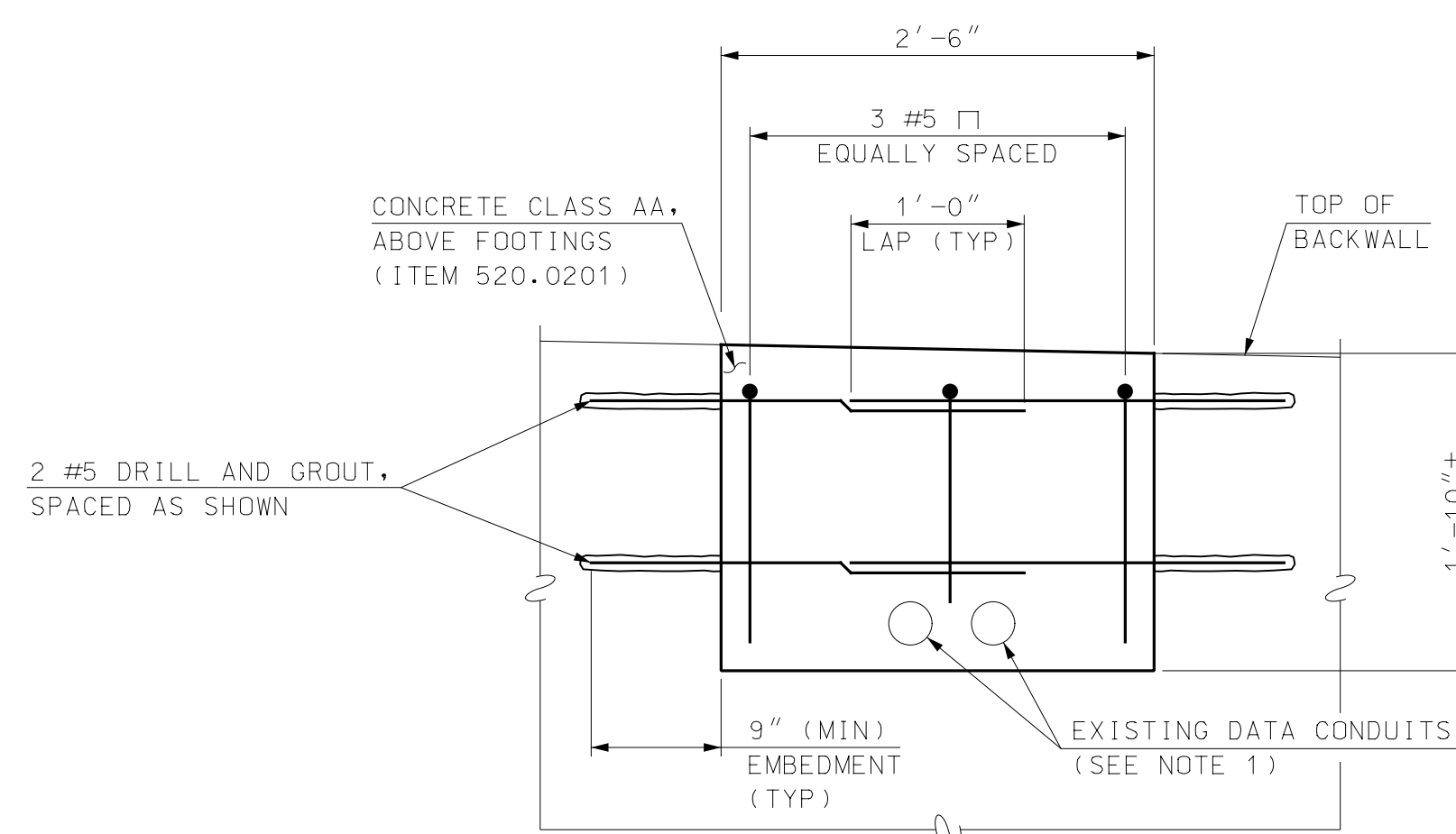
ELEVATION
SCALE: 3/8" = 1'-0"



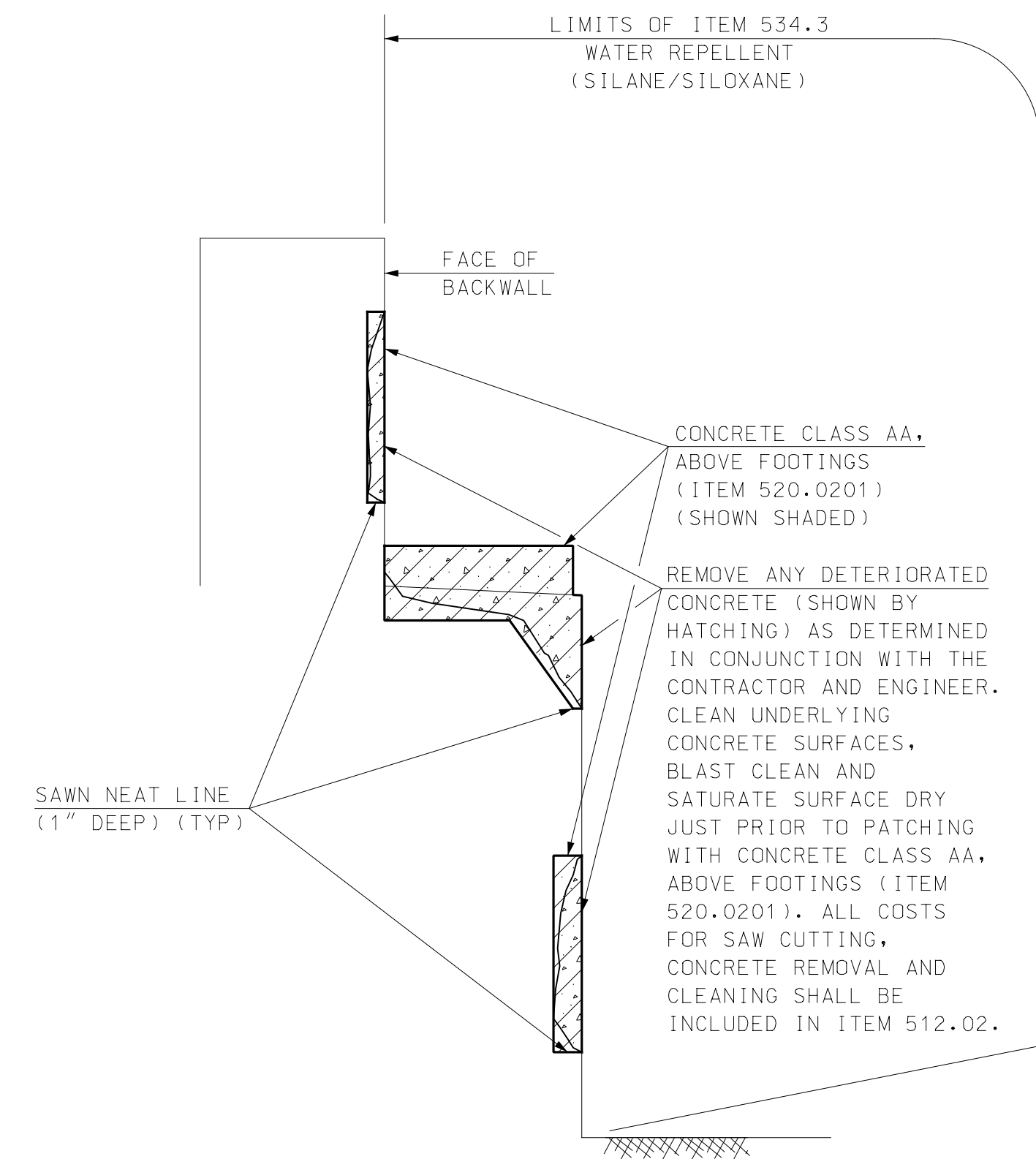
PLAN

NOTE
1. CONTRACTOR TO TAKE SPECIAL CARE NOT TO DAMAGE EXISTING UTILITY CONDUITS. ANY DAMAGE TO UTILITY CONDUITS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.

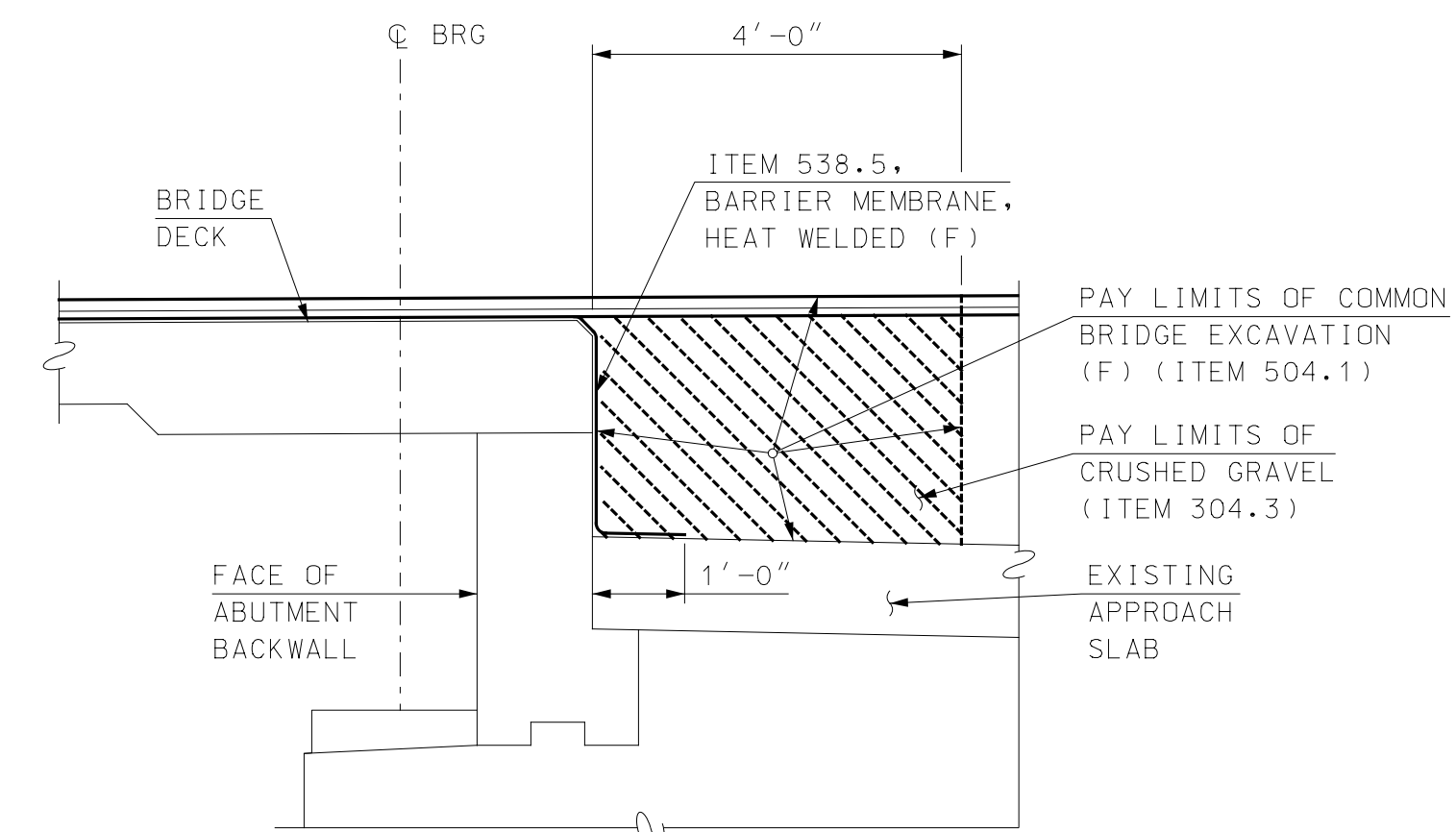
CONDUIT BLOCKOUT REINFORCING
SCALE: 1" = 1'-0"



ELEVATION



TYPICAL ABUTMENT CONCRETE REPAIR DETAIL
SCALE: 3/4" = 1'-0"



DECK END DETAIL
SCALE: 1/2" = 1'-0"

NOTES

- GRAFFITI REMOVAL METHODS AND MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK. REMOVAL VIA A COMBINATION OF CHEMICAL PAINT REMOVER AND PRESSURE WASHING IS ANTICIPATED.
- CHEMICAL PAINT REMOVAL, IF USED, SHALL BE SOLVENT-BASED AND SHALL NOT CONTAIN METHANOL, METHYLENE, CHLORIDE, OR HALOGENATED SOLVENTS.

LEGEND

- DENOTES APPROXIMATE LIMITS OF DETERIORATED CONCRETE
- DENOTES APPROXIMATE LIMITS OF DETERIORATED CONCRETE REMOVAL (ITEM 512.02) AND REPAIR CONCRETE (ITEM 520.0201)

REV	DESCRIPTION	DATE

FILE NAME	DESIGNED	DATE
905108A-Abut	RPM	
MODEL NAME	DRAWN	
905108A-Abut	TAG	
SCALE	CHECKED	
AS SHOWN	EGW	

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DATE: FEBRUARY 2020

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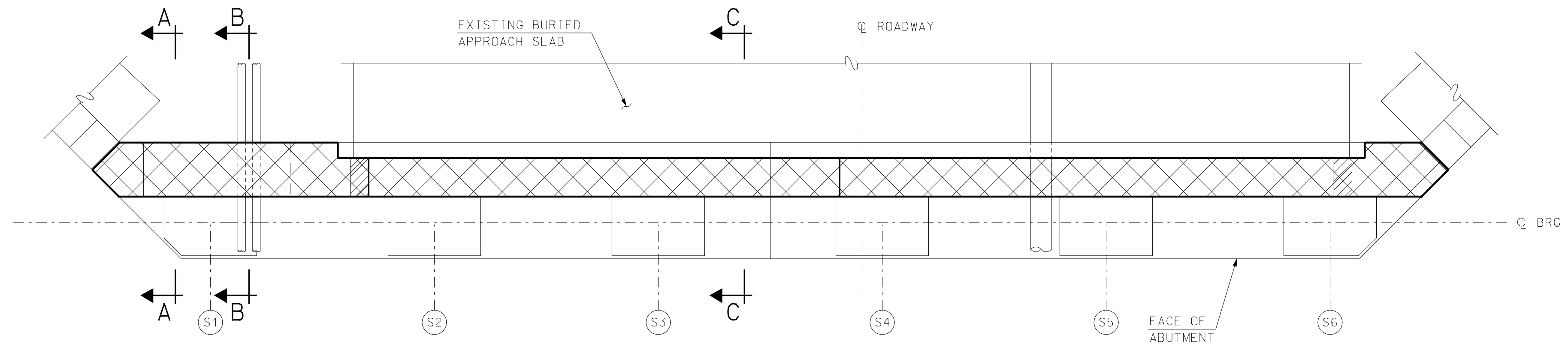
CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
KEARSARGE WAY OVER PAN AM RAILWAYS

SOUTH ABUTMENT REPAIR AND DETAILS

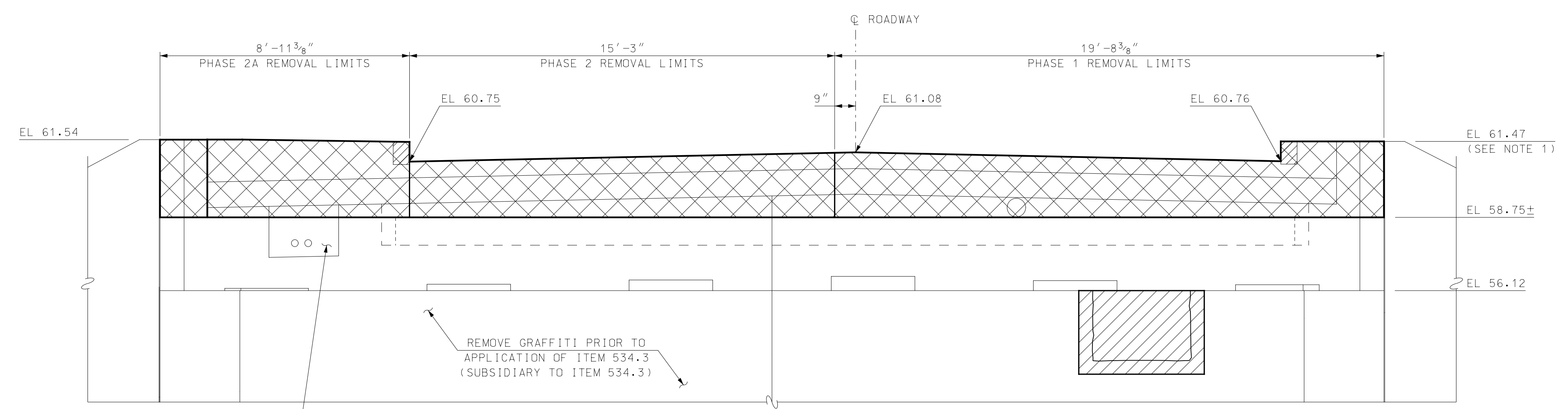
PROJECT NO. 905108

SHEET NO.
23
SHEET 23 OF 40

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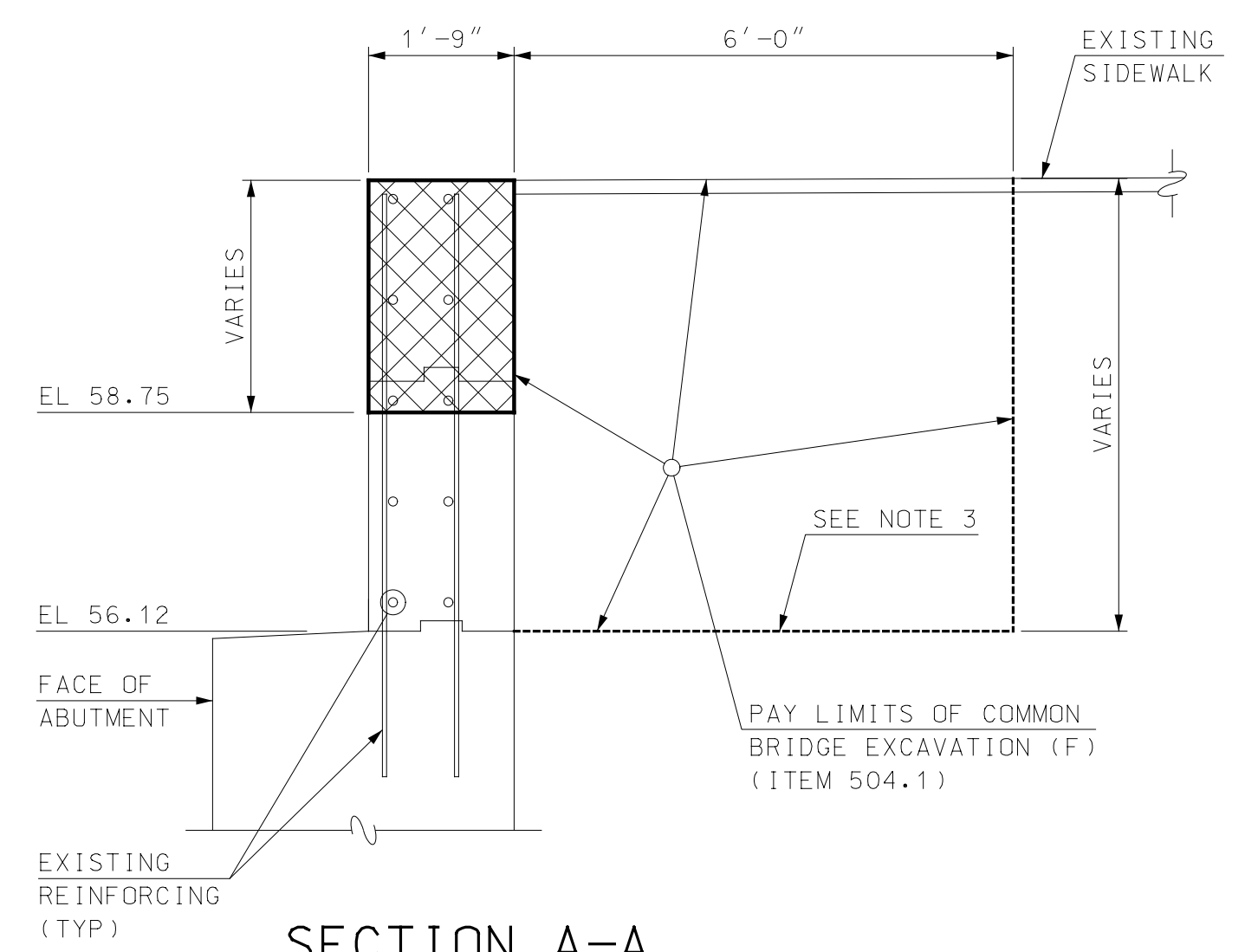


NORTH ABUTMENT REMOVAL - PLAN VIEW
SCALE: 3/8" = 1'-0"

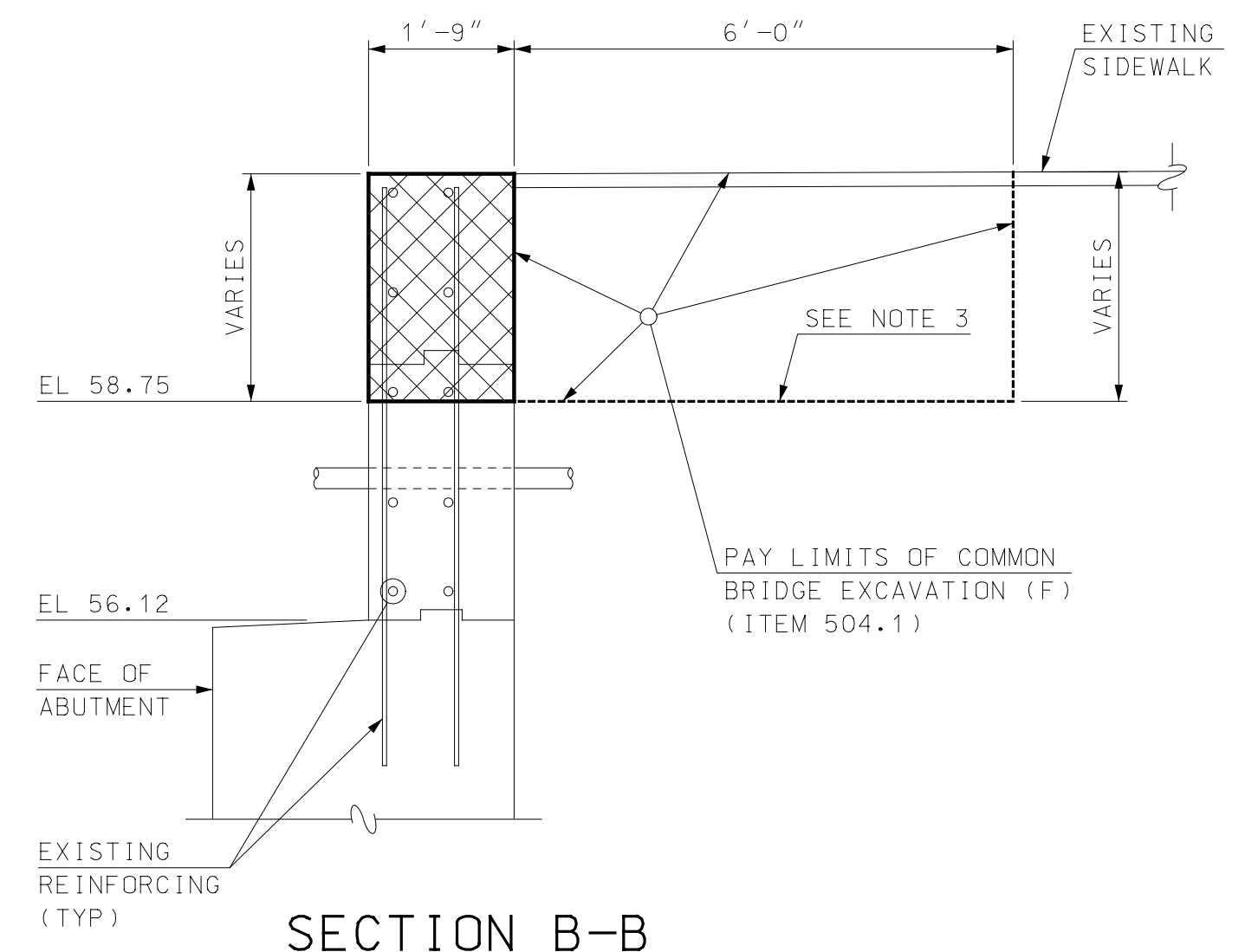


NORTH ABUTMENT REMOVAL - ELEVATION VIEW
SCALE: 3/8" = 1'-0"

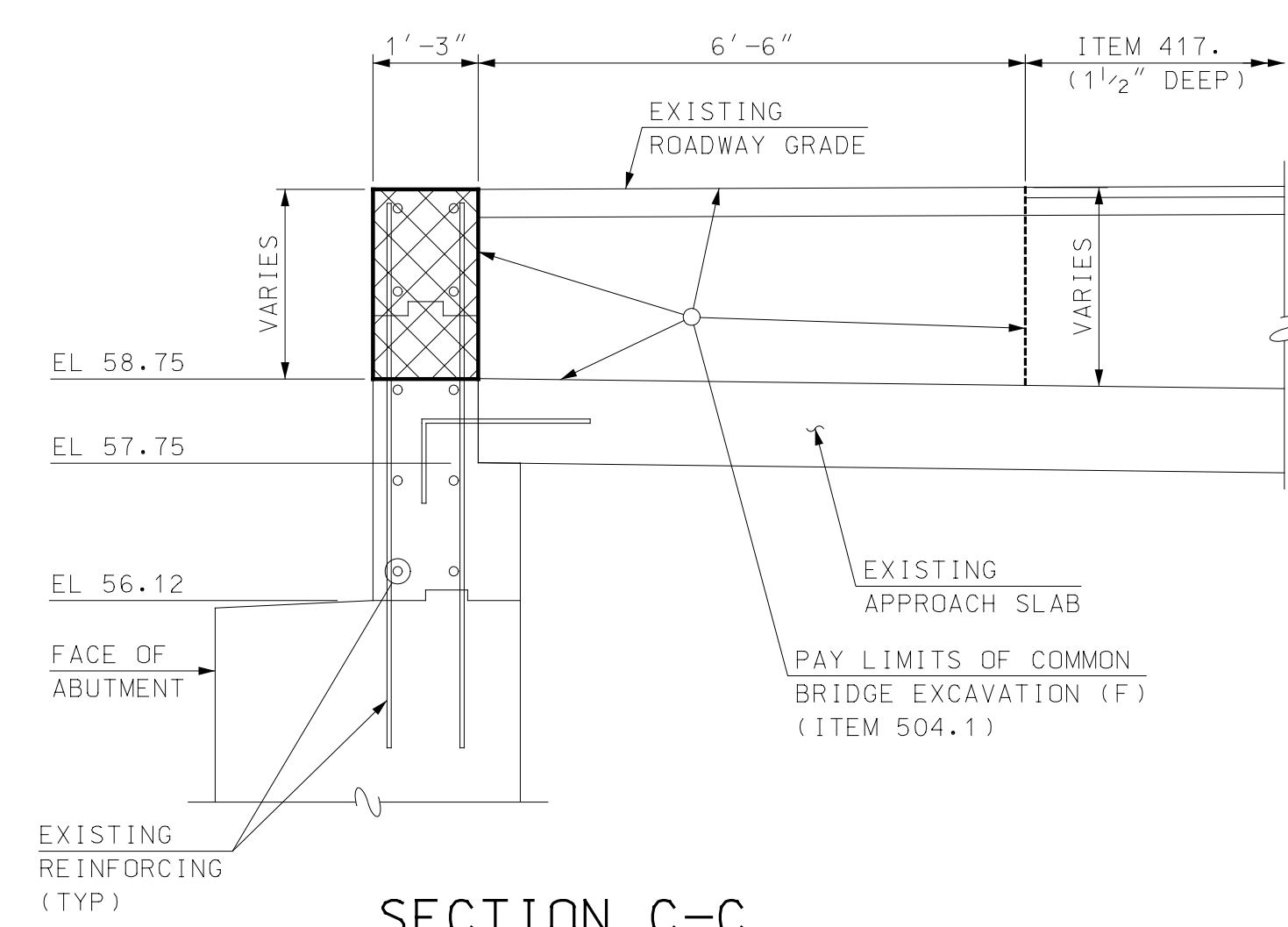
CONTRACTOR AND ENGINEER TO JOINTLY HAMMER SOUND THE UTILITY BLOCKOUT. IF UNSOUND, REPAIR PER THE UTILITY BLOCKOUT RECONSTRUCTION ON SHEET 23



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



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



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

NOTES

- EXISTING ELEVATIONS ARE BASED ON THE EXISTING PLANS. THE CONTRACTOR SHALL USE ELEVATION 61.47', LOCATED AT THE TOP OF THE NORTHEAST BRUSH CURB. ADJUST OTHER ELEVATIONS ACCORDINGLY.
- SEE SHEET 23 FOR GRAFFITI REMOVAL NOTES.
- FINAL EXCAVATION TO SPECIFIED ELEVATION SHALL BE PERFORMED AS TO MINIMIZE DISTURBANCE TO THE EXISTING SUBGRADE. SUBGRADE ELEVATION SHALL BE LEVEL AND COMPACT, AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTING THE STUBWALL

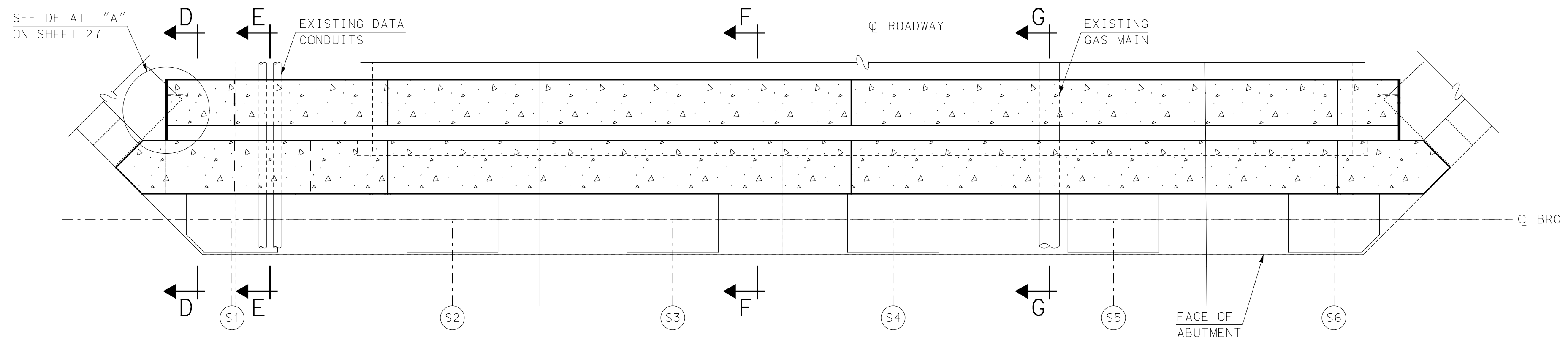
LEGEND

- DENOTES APPROXIMATE LIMITS OF DETERIORATED CONCRETE
- DENOTES APPROXIMATE REMOVAL LIMITS OF DETERIORATED CONCRETE (ITEM 512.02) AND REPAIR CONCRETE (ITEM 520.0201)
- DENOTES LIMITS OF ABUTMENT BACKWALL REMOVAL (ITEM 502.102)

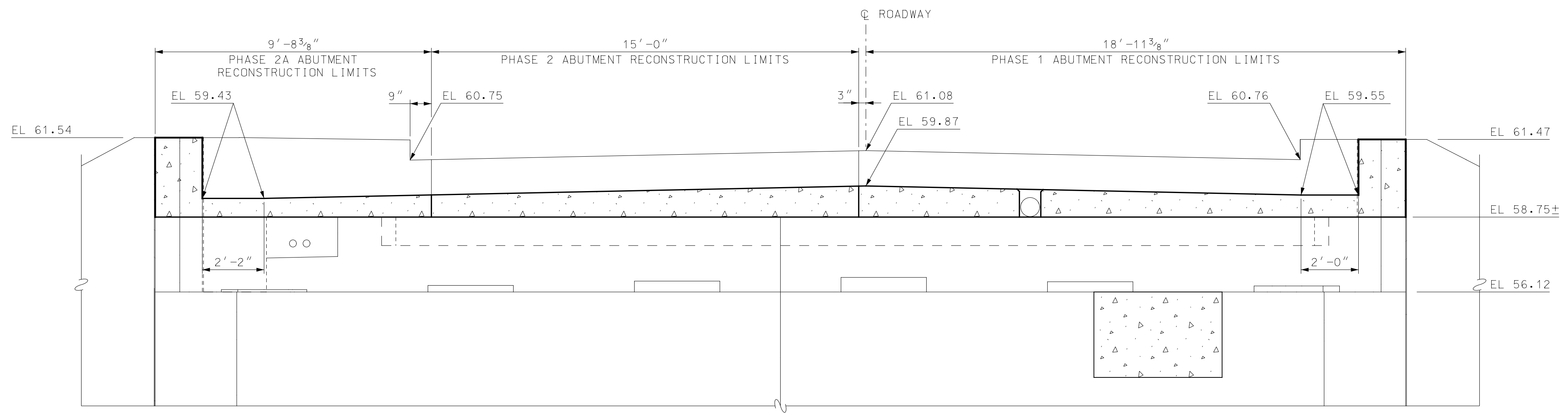
REV	DESCRIPTION	DATE

PROJECT NO.	905108
FILE NAME	905108B-Abut
MODE NAME	905108B-AbutLE
SCALE	AS SHOWN
CHECKED	EGW
DATE	FEBRUARY 2020

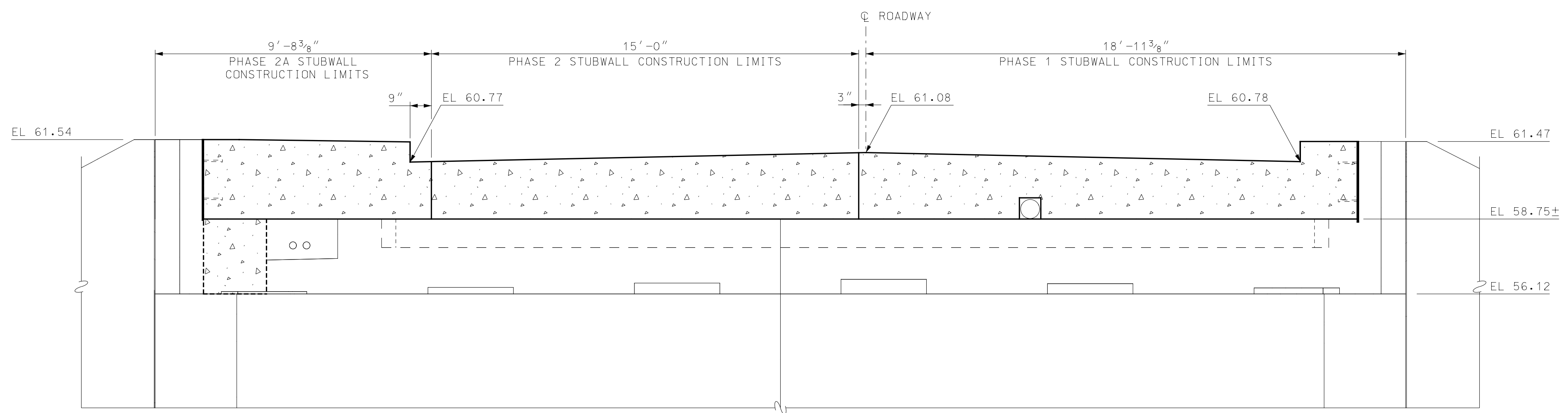
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NORTH ABUTMENT MODIFICATIONS - PLAN VIEW
SCALE: 3/8" = 1'-0"

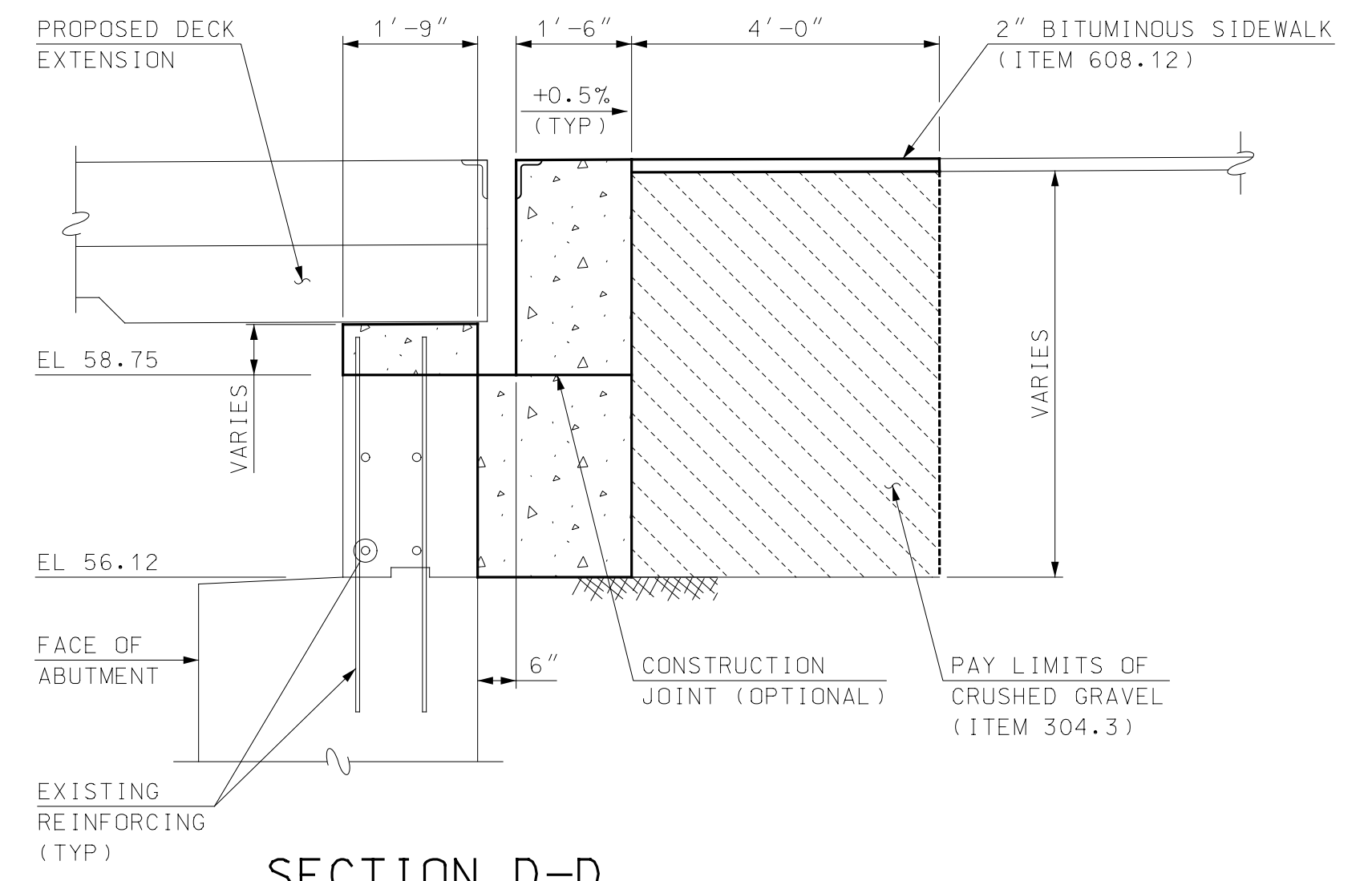


NORTH ABUTMENT MODIFICATIONS - ELEVATION VIEW
SCALE: 3/8" = 1'-0"

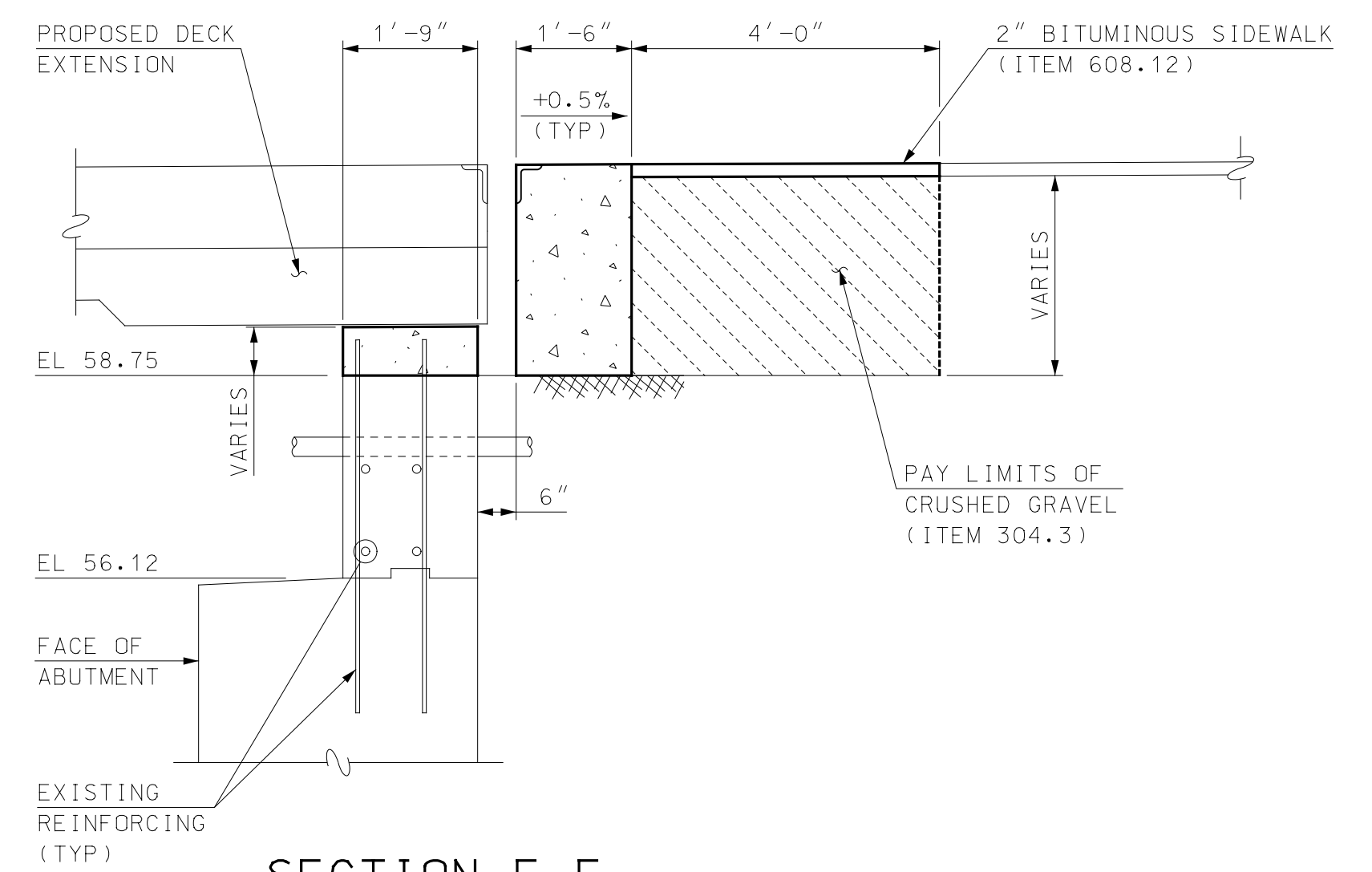


NORTH ABUTMENT NEW STUB WALL - ELEVATION VIEW
SCALE: 3/8" = 1'-0"

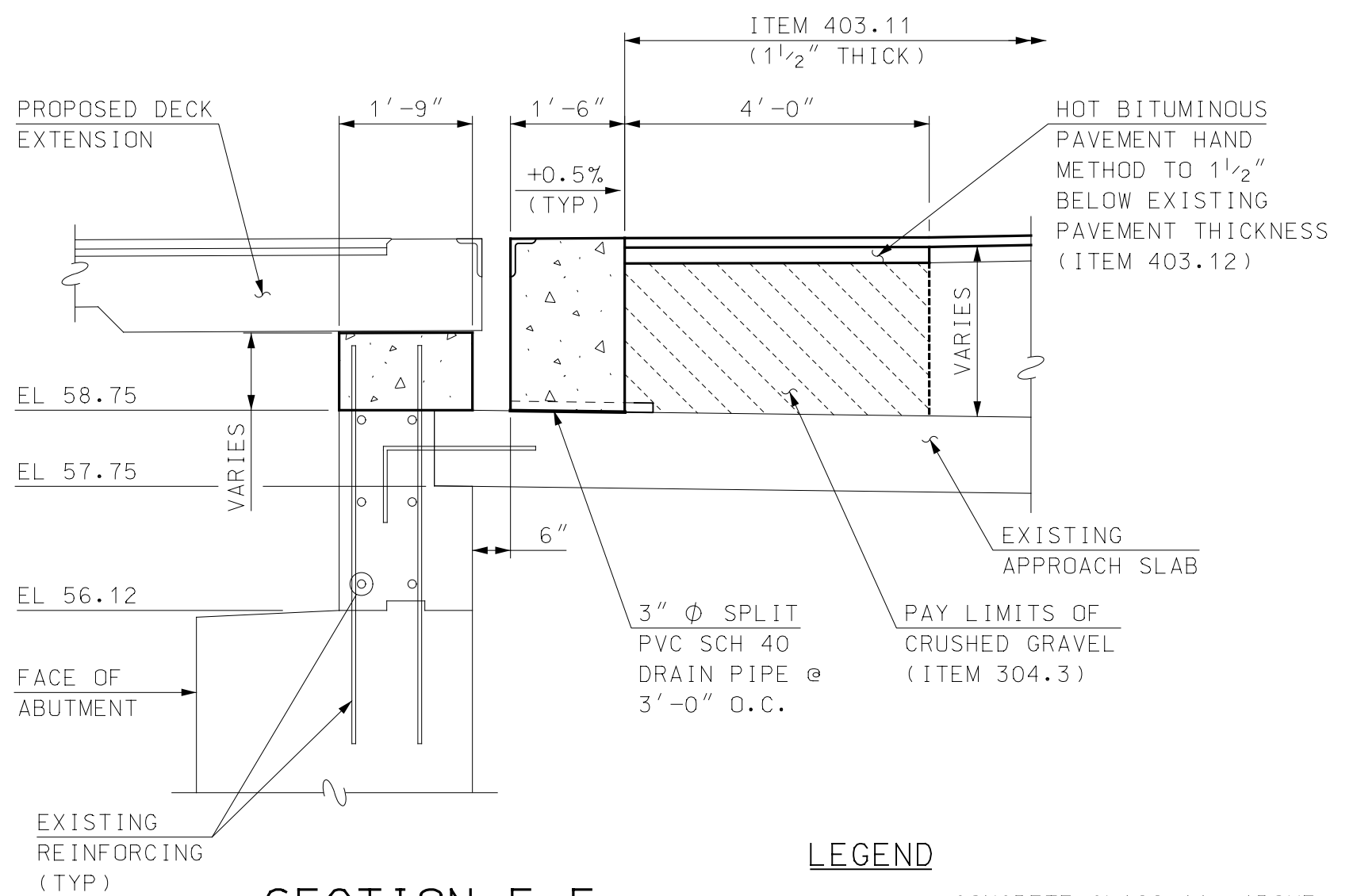
NOTE
1. ABUTMENT BACKWALL MODIFICATION NOT SHOWN FOR CLARITY.



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



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



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

LEGEND
 CONCRETE CLASS AA, ABOVE FOOTINGS (ITEM 520.0201)

NOTES
 1. SEE SHEET 26 FOR SECTIONS G-G.
 2. SEE SHEETS 29 AND 30 FOR ADDITIONAL INFORMATION.

REV	DESCRIPTION	DATE

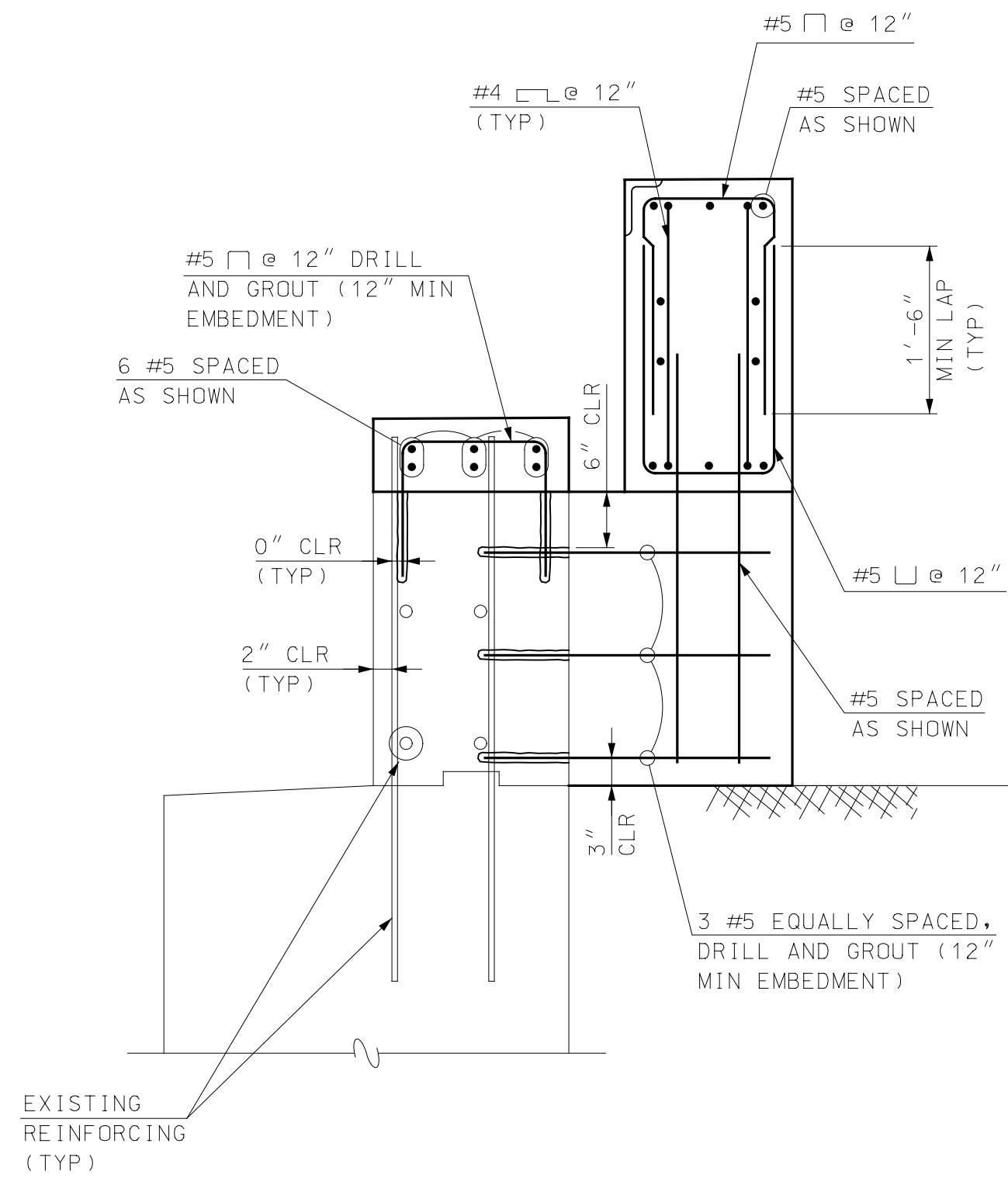
FILENAME	DESIGNED	DATE
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905108B-Abut	TAG	
AS SHOWN	EGW	

PROJECT NO. 905108
 SHEET NO. 25
 SHEET 25 OF 40

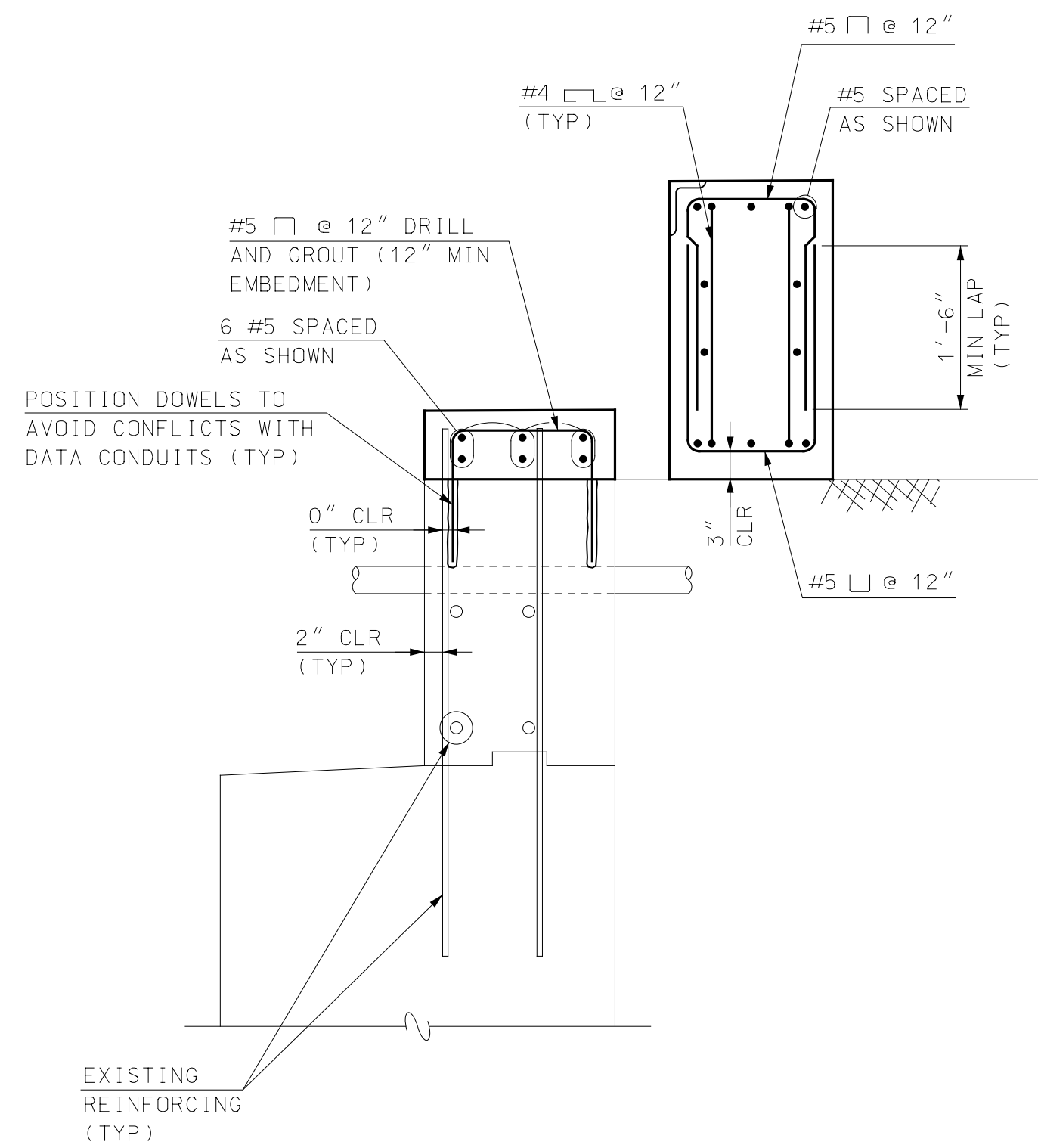
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PORTSMOUTH, NEW HAMPSHIRE
KEARSARGE WAY OVER PAN AM RAILWAYS
NORTH ABUTMENT REPAIR AND MODIFICATIONS

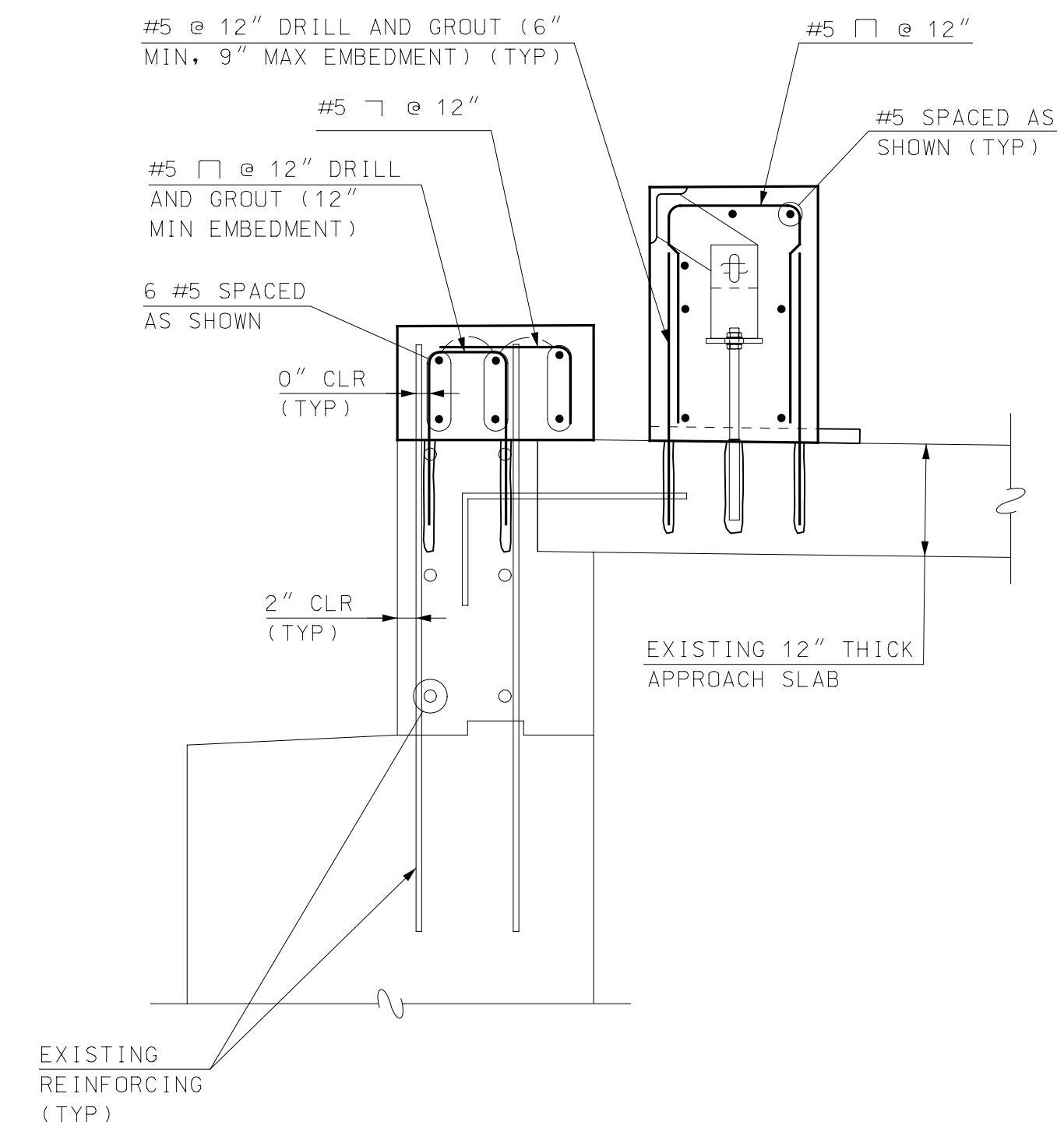
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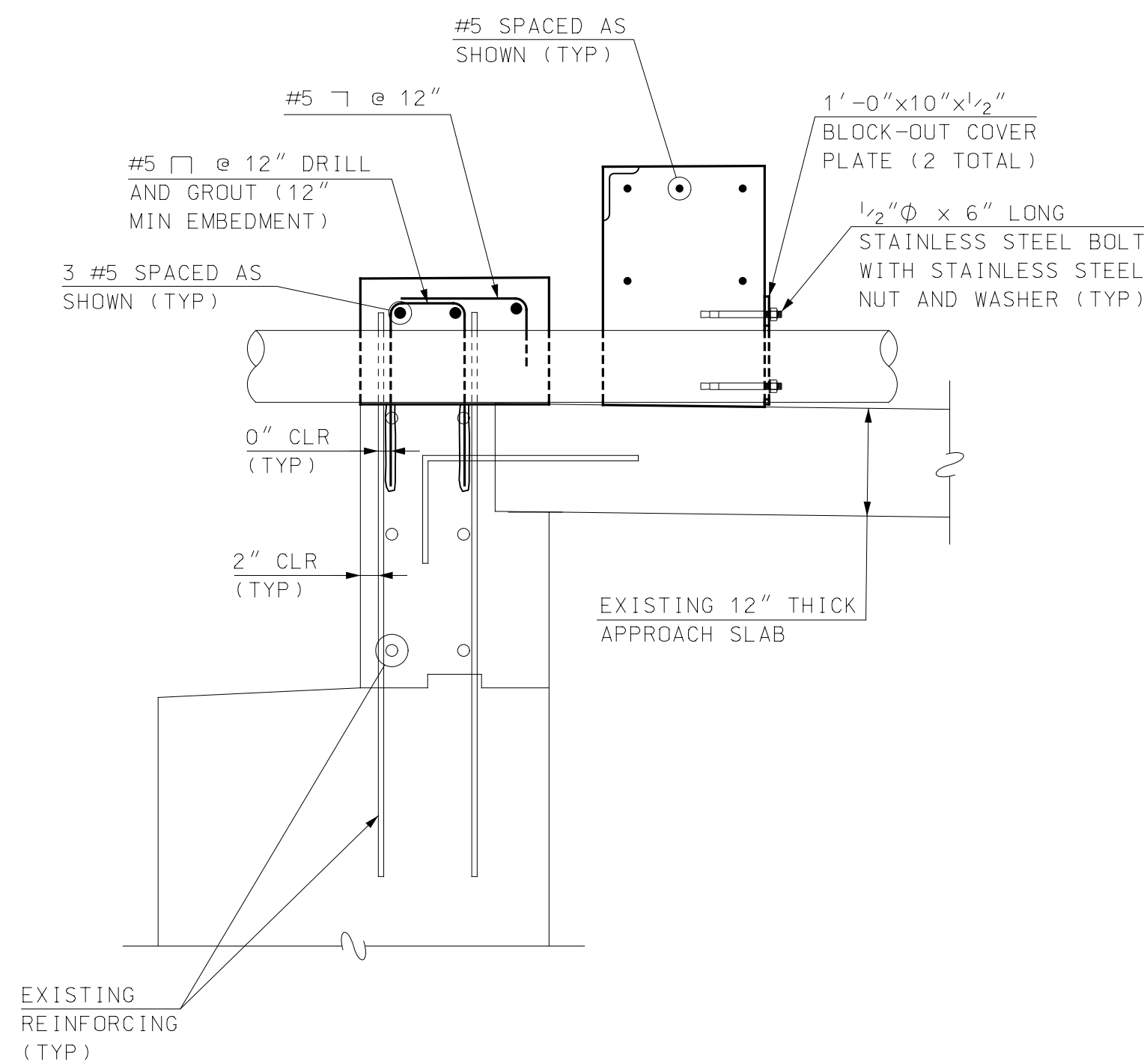
SECTION D-D REINFORCEMENT
SCALE: 3/4" = 1'-0"



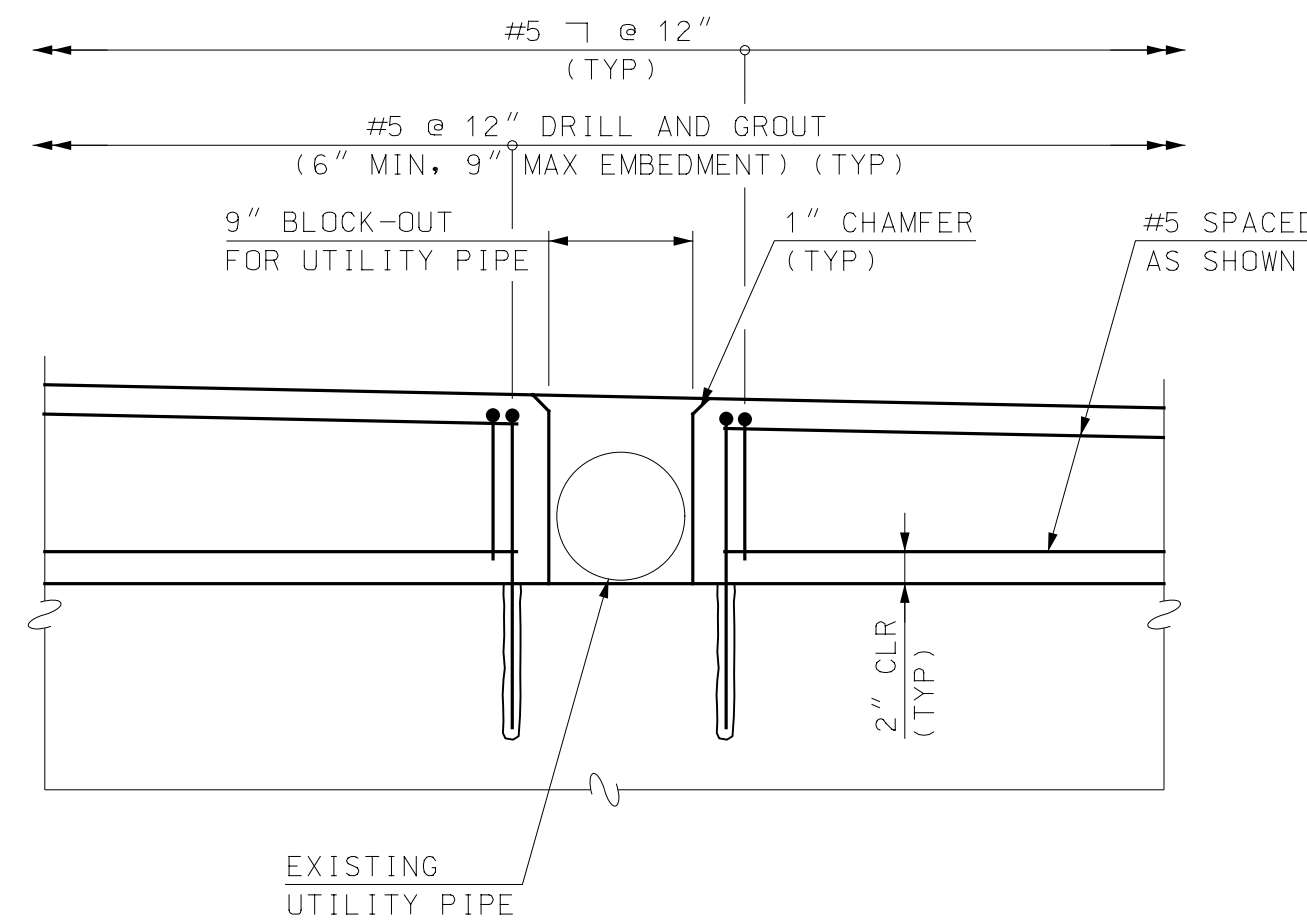
SECTION E-E REINFORCEMENT
SCALE: 3/4" = 1'-0"



SECTION F-F REINFORCEMENT
SCALE: 3/4" = 1'-0"

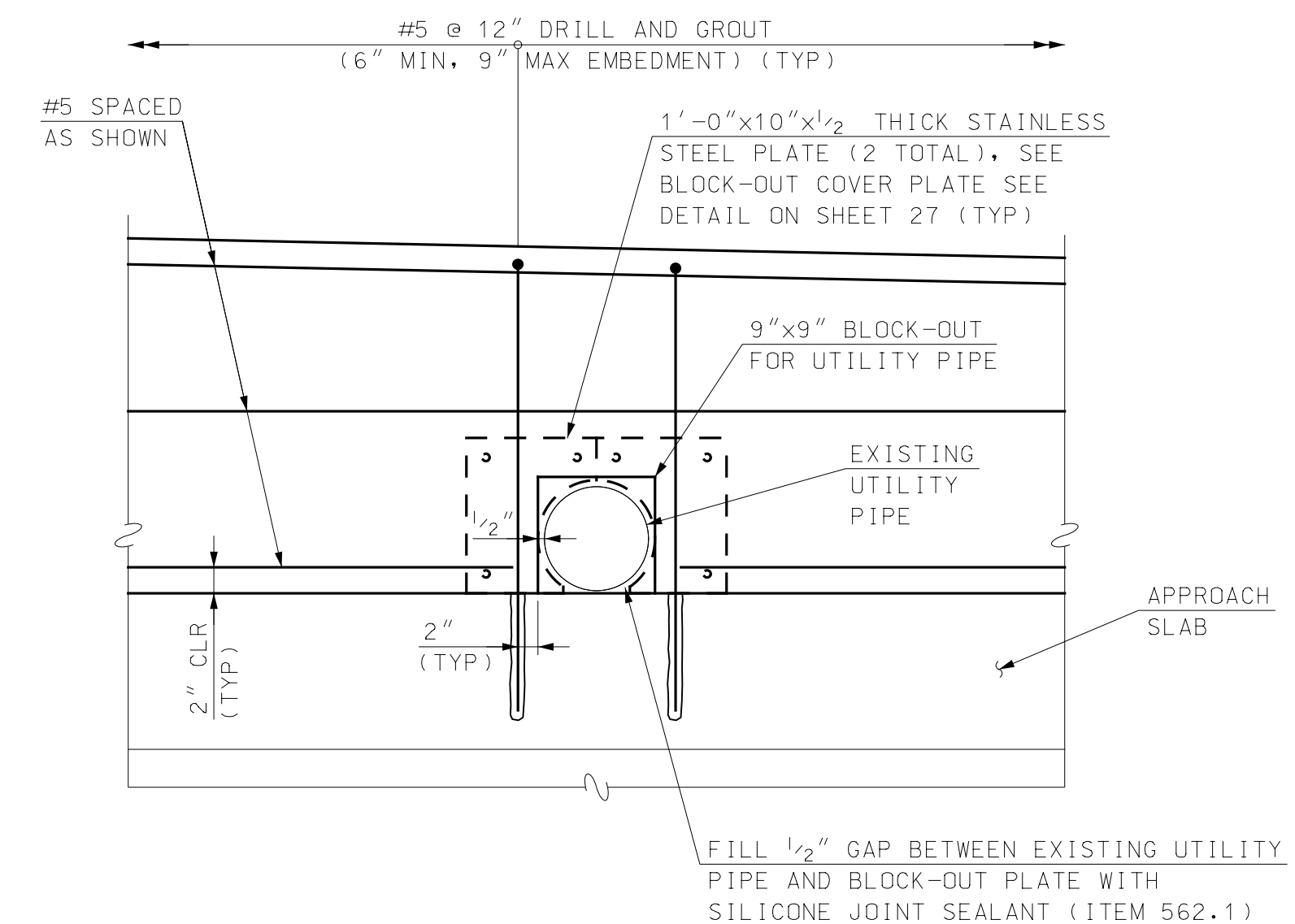


SECTION G-G REINFORCEMENT
SCALE: 3/4" = 1'-0"



NORTH ABUTMENT BACKWALL REINFORCING AT UTILITY PIPE
SCALE: 1" = 1'-0"

NOTE
1. STUB WALL NOT SHOWN FOR CLARITY.



UTILITY PIPE REINFORCING AT NORTH ABUTMENT STUB WALL
SCALE: 1" = 1'-0"

NOTE
1. ABUTMENT BACKWALL NOT SHOWN FOR CLARITY.

NOTES

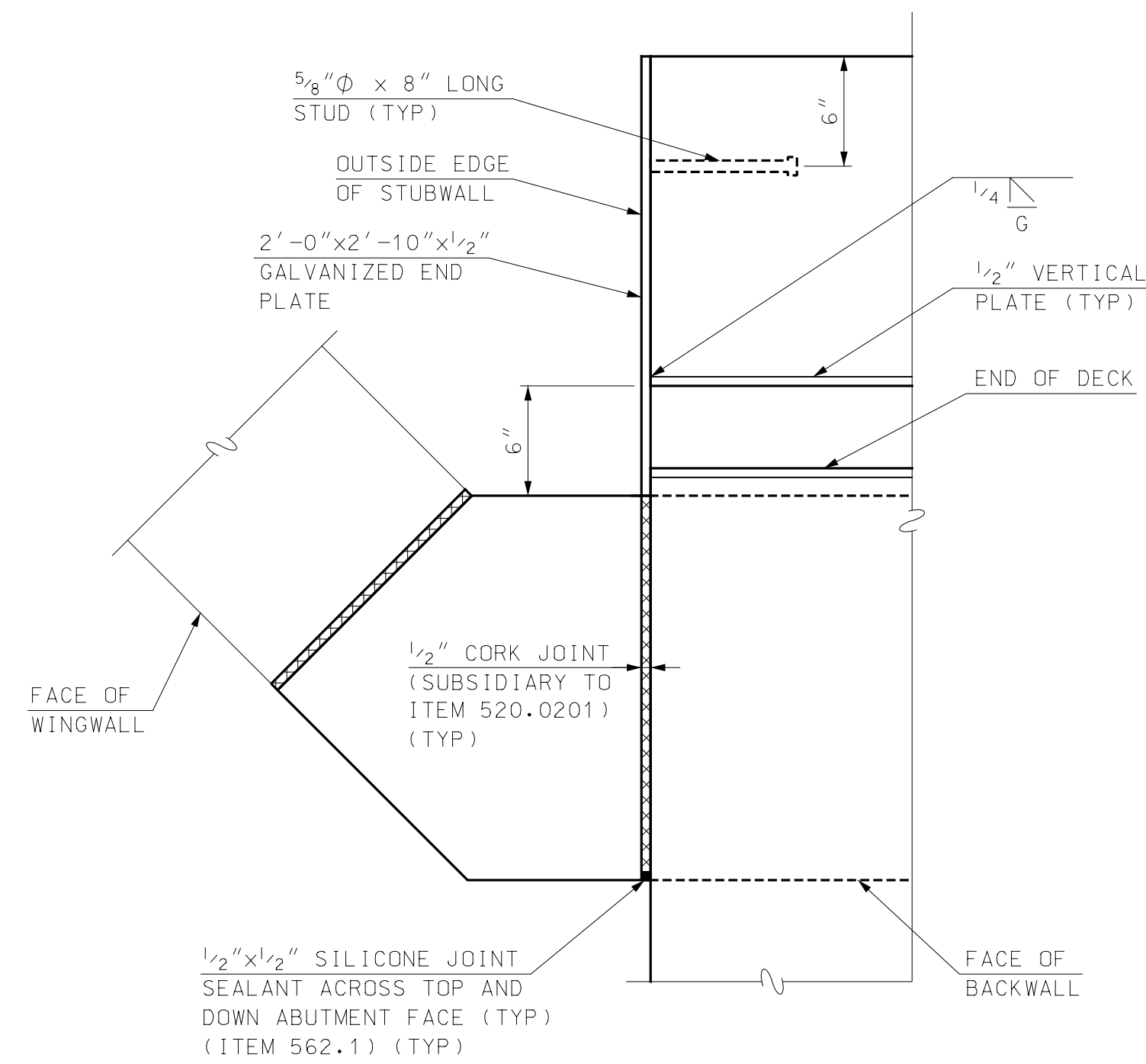
- SEE SHEET 25 FOR SECTIONS D-D, E-E, F-F AND G-G LOCATIONS.
- CONTRACTOR TO ADJUST REINFORCING TO CLEAR EXPANSION JOINT HARDWARE AS NECESSARY.

REV	DESCRIPTION	DATE

NH DOT BRIDGE NO. 240/132
 FILE NAME 905108B-Abut
 MODEL NAME 905108B-AbutL
 SCALE AS SHOWN
 DATE FEBRUARY 2020
 DESIGNED RPM
 DRAWN TAG
 CHECKED EGV
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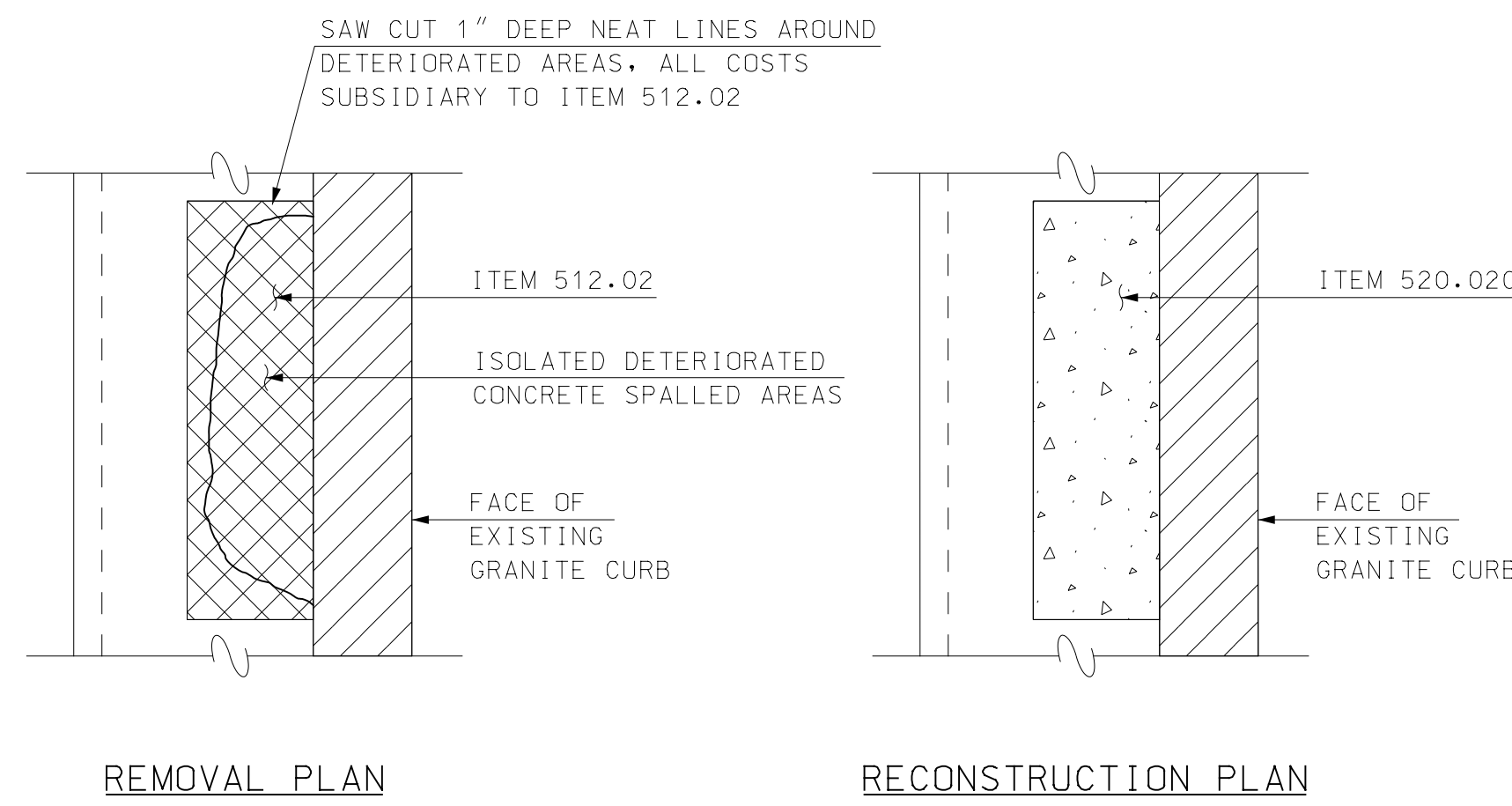
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 NORTH ABUTMENT REINFORCEMENT DETAILS

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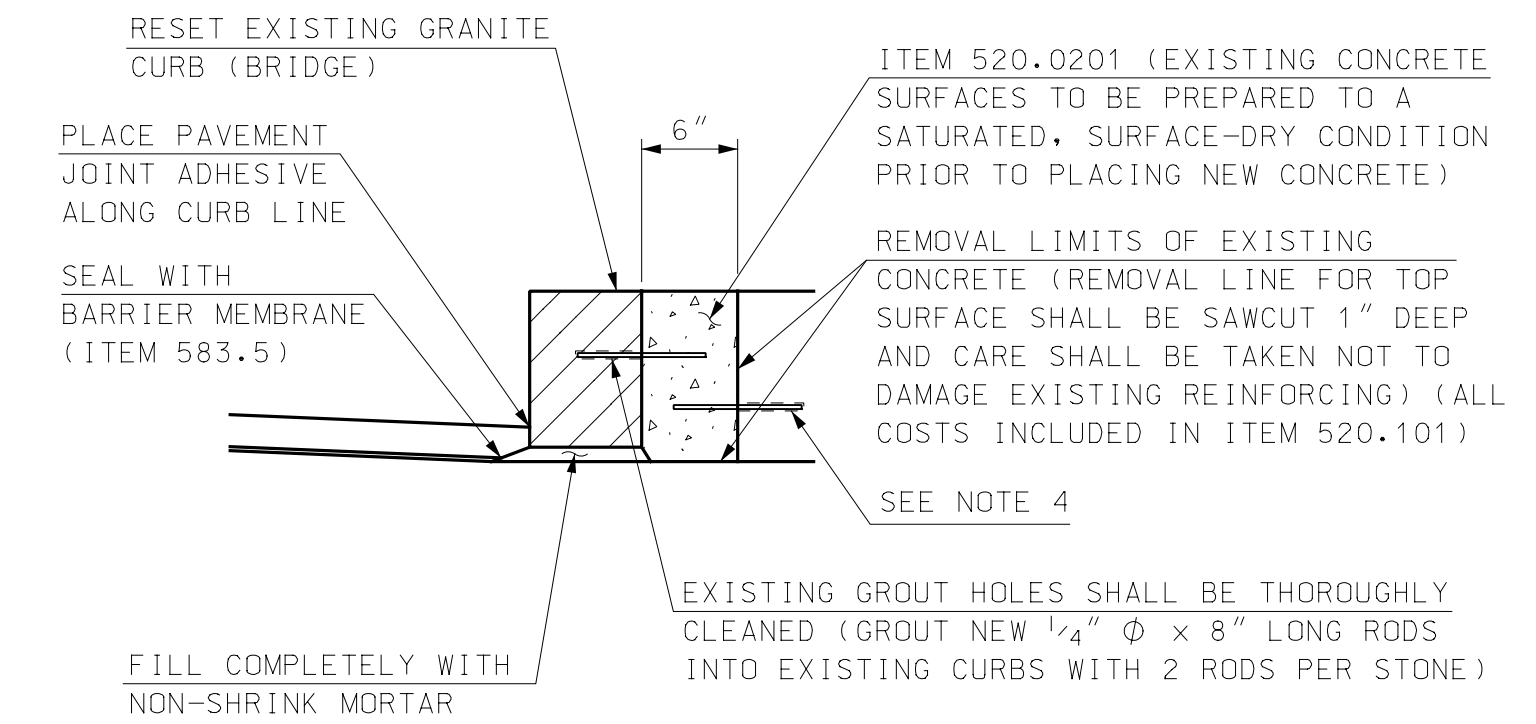
- NOTES**
1. NORTHWEST CORNER SHOWN, NORTHEAST CORNER SIMILAR.
 2. ALL STRUCTURAL STEEL ANGLES, CHANNELS AND BOLTS TO BE SUBSIDIARY TO ITEM 561.10. SEE EXPANSION JOINT NOTES ON SHEET 30.
 3. SEE SHEETS 29 AND 30 FOR ADDITIONAL INFORMATION.

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



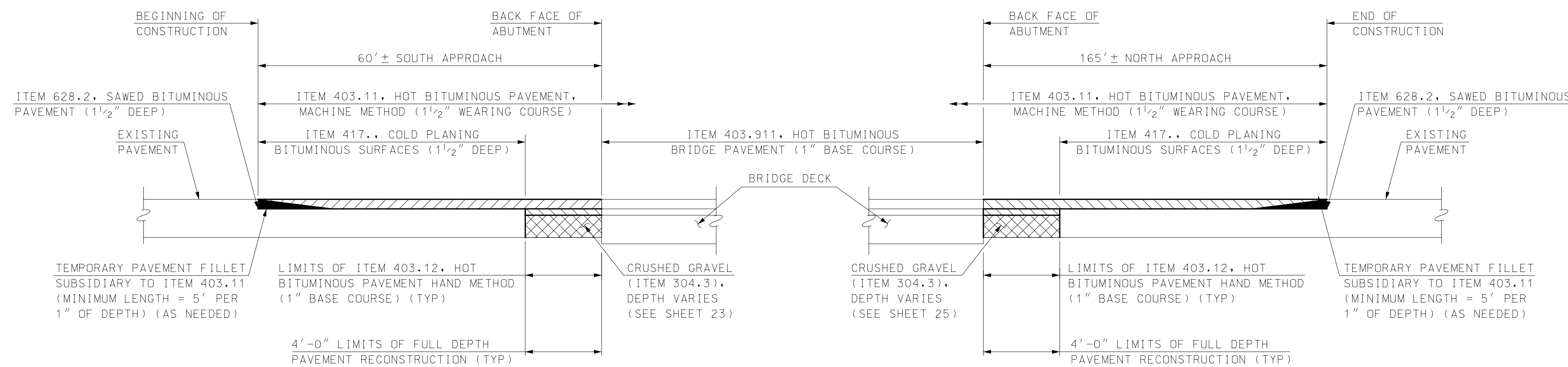
- NOTE**
1. RAIL POSTS NOT SHOWN FOR CLARITY.

DECK AT GRANITE CURB
REPAIR DETAIL
SCALE: 1" = 1'-0"



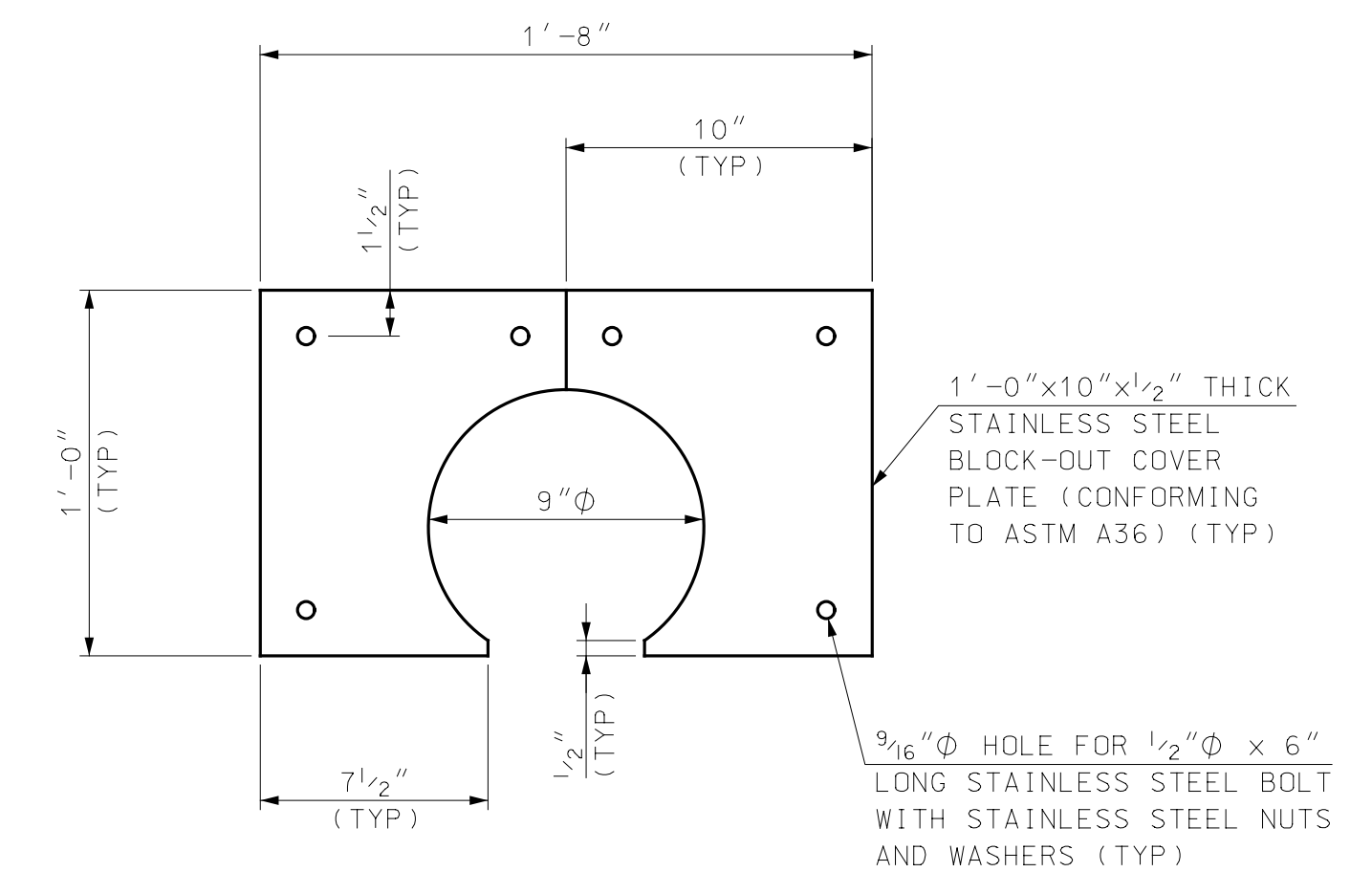
1. LIMITS OF SAWCUT AND PAVEMENT REMOVAL TO BE REPLACED WITH HOT BITUMINOUS PAVEMENT, HAND METHOD (ITEM 403.12). CONTRACTOR TO TAKE SPECIAL CARE NOT TO DAMAGE THE BARRIER MEMBRANE. ANY DAMAGE TO THE BARRIER MEMBRANE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.
2. ALL COSTS SUBSIDIARY TO ITEM 560.14.
3. EXTERIOR CURB SHOWN, MEDIAN CURB SIMILAR.
4. CONTRACTOR TO TAKE CARE TO NOT DAMAGE EXISTING REINFORCING. IF NO REINFORCING IS EXPOSED DURING CONCRETE REMOVAL, DOWELS SHALL BE ADDED TO CONNECT THE NEW CONCRETE TO THE EXISTING AS DIRECTED BY THE ENGINEER (COSTS SUBSIDIARY TO ITEM 520.0201)

RESET GRANITE BRIDGE CURB
SCALE: 1" = 1'-0"



- NOTE**
1. PAVEMENT JOINT ADHESIVE (ITEM 403.6) IS TO BE USED FOR ALL PAVEMENT JOINTS NOT LOCATED ON THE BRIDGE.

PAVEMENT MATCH DETAIL
NOT TO SCALE



- NOTE**
1. ALL COSTS ASSOCIATED WITH THE BLOCK-OUT COVER PLATE SHALL BE SUBSIDIARY TO ITEM 520.0201.

GAS LINE BLOCK-OUT COVER PLATE DETAIL
SCALE: 2" = 1'-0"

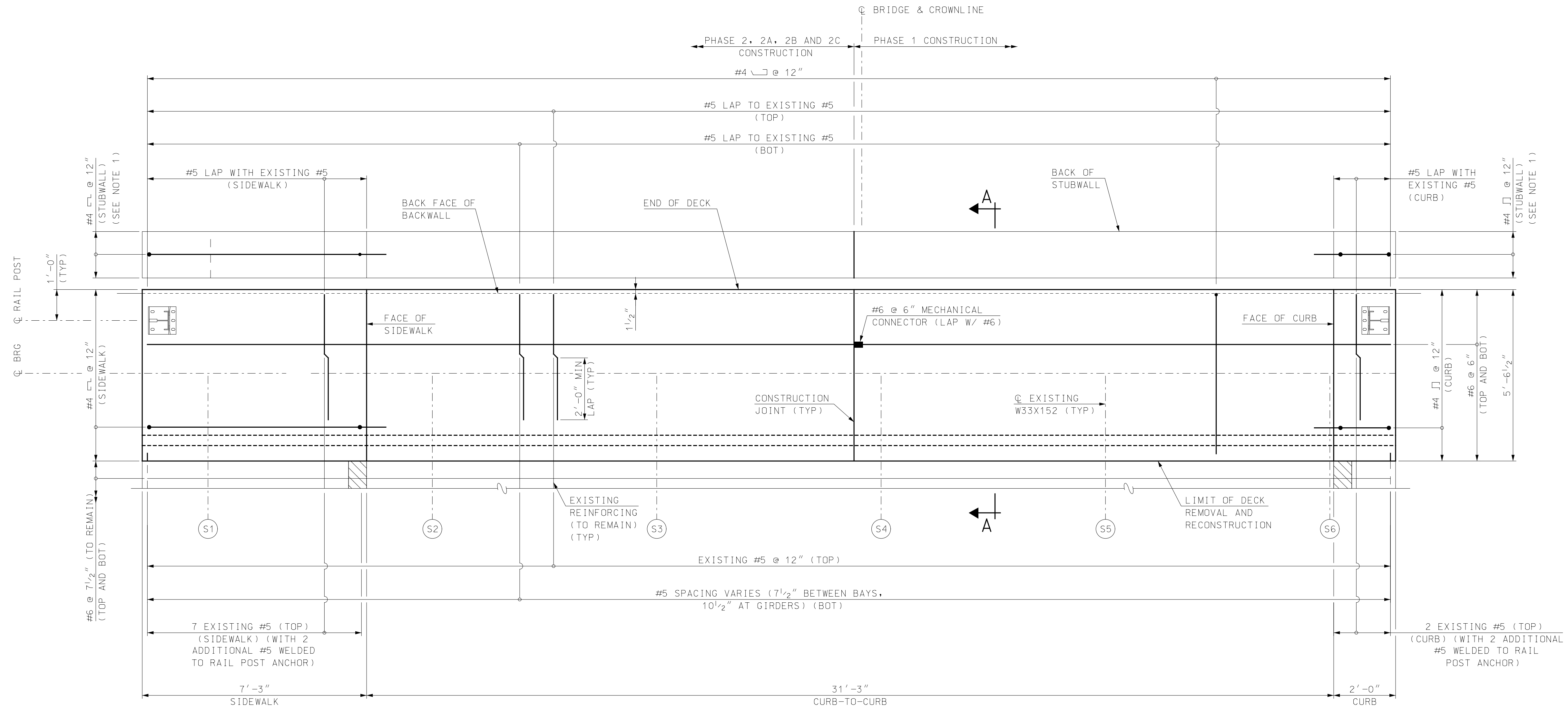
REV	DESCRIPTION	DATE

NHDOT BRIDGE NO. 240/132
 FILENAME 905108B-Abut
 MODEL NAME 905108B-Abut.LD
 SCALE AS SHOWN
 CHECKED EGVW
 DATE FEBRUARY 2020
 DESIGNED RPM
 DRAWN TAG
 EGVW

Hoyle, Tanner & Associates, Inc.
 100 International Drive, #300, Portsmouth, NH 03801
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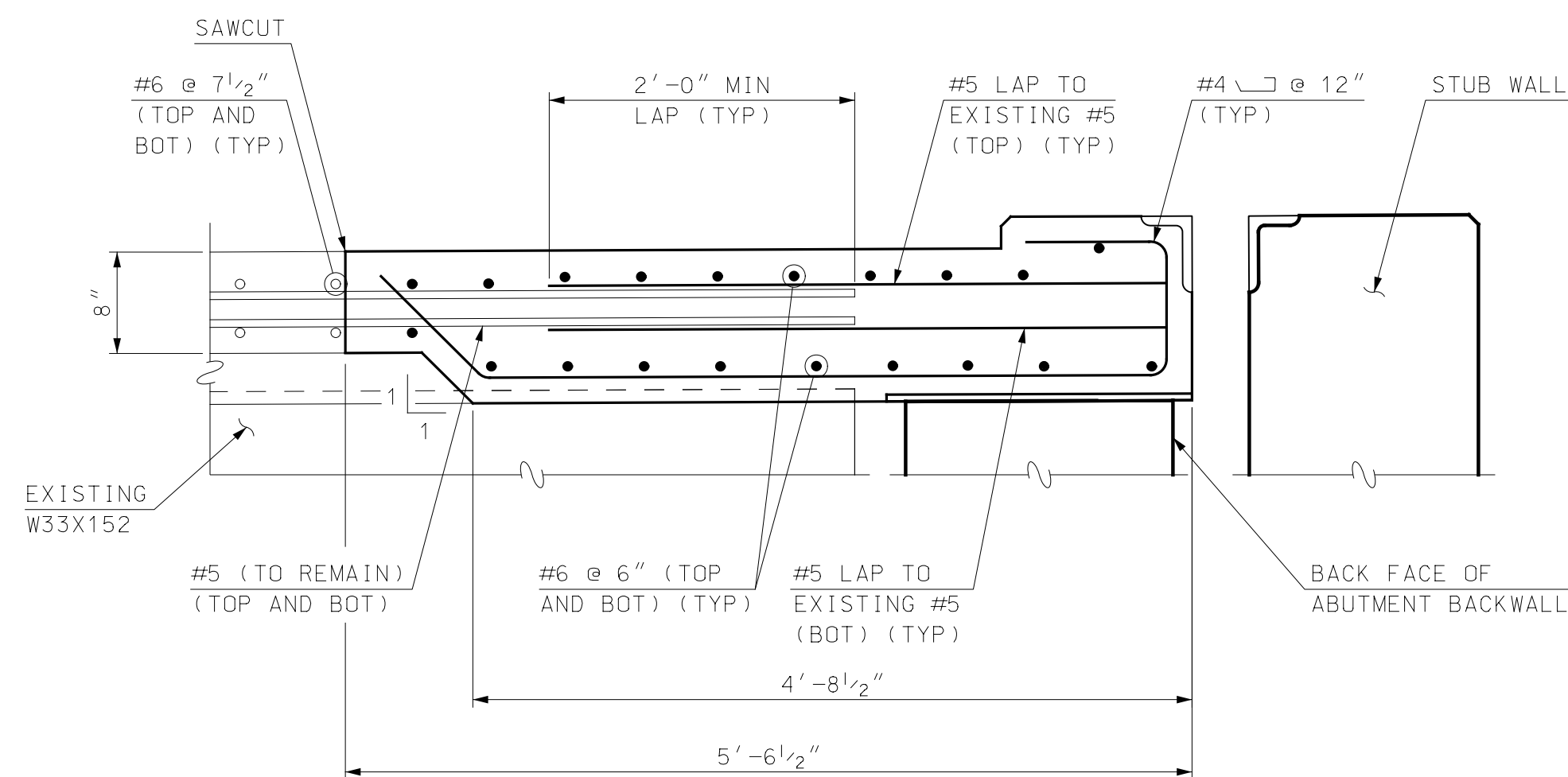
CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 MISCELLANEOUS DETAILS

PROJECT NO. 905108
 SHEET NO.
27
 SHEET 27 OF 40



NOTE
 1. SEE SECTIONS D-D AND E-E ON SHEET 26 FOR ADDITIONAL STUBWALL REINFORCING DETAILS.

PARTIAL DECK PLAN
 SCALE: 1/2" = 1'-0"



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

SEE AS BUILT DRAWINGS PROVIDED IN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND DETAILS NOT SHOWN.

REV	DESCRIPTION	DRW	CHKD	BY	DATE

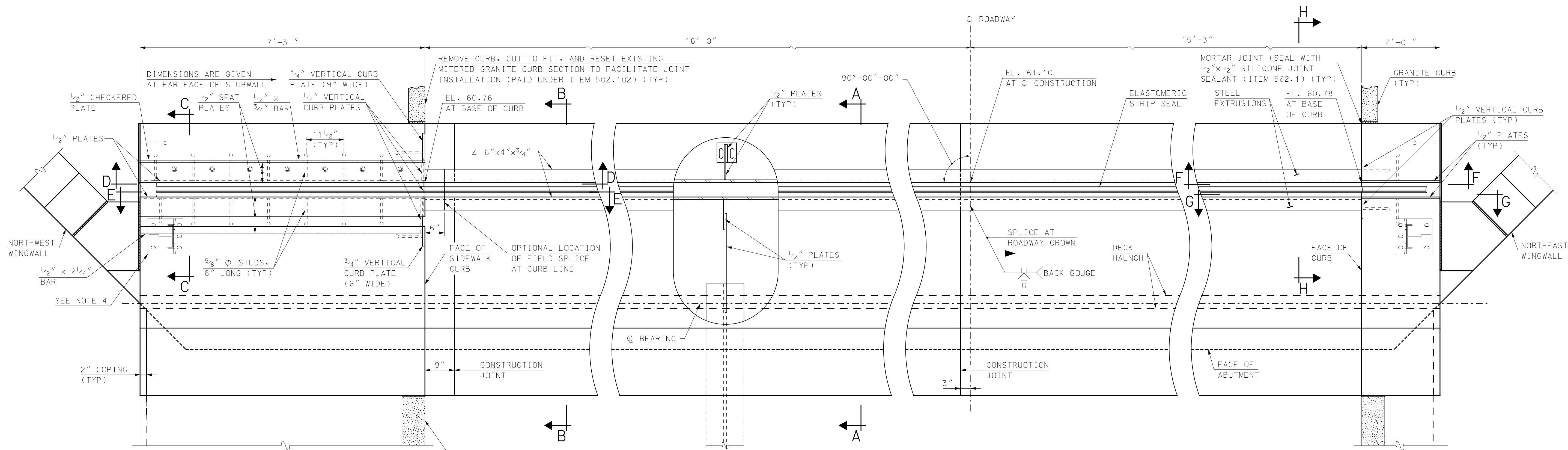
NH DOT BRIDGE NO.	240/132
FILE NAME	905108SSDets_K
MODEL NAME	905108SSDets
SCALE	AS SHOWN
CHECKED	EGW
DATE	FEBRUARY 2020

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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 SUPERSTRUCTURE REINFORCEMENT DETAILS

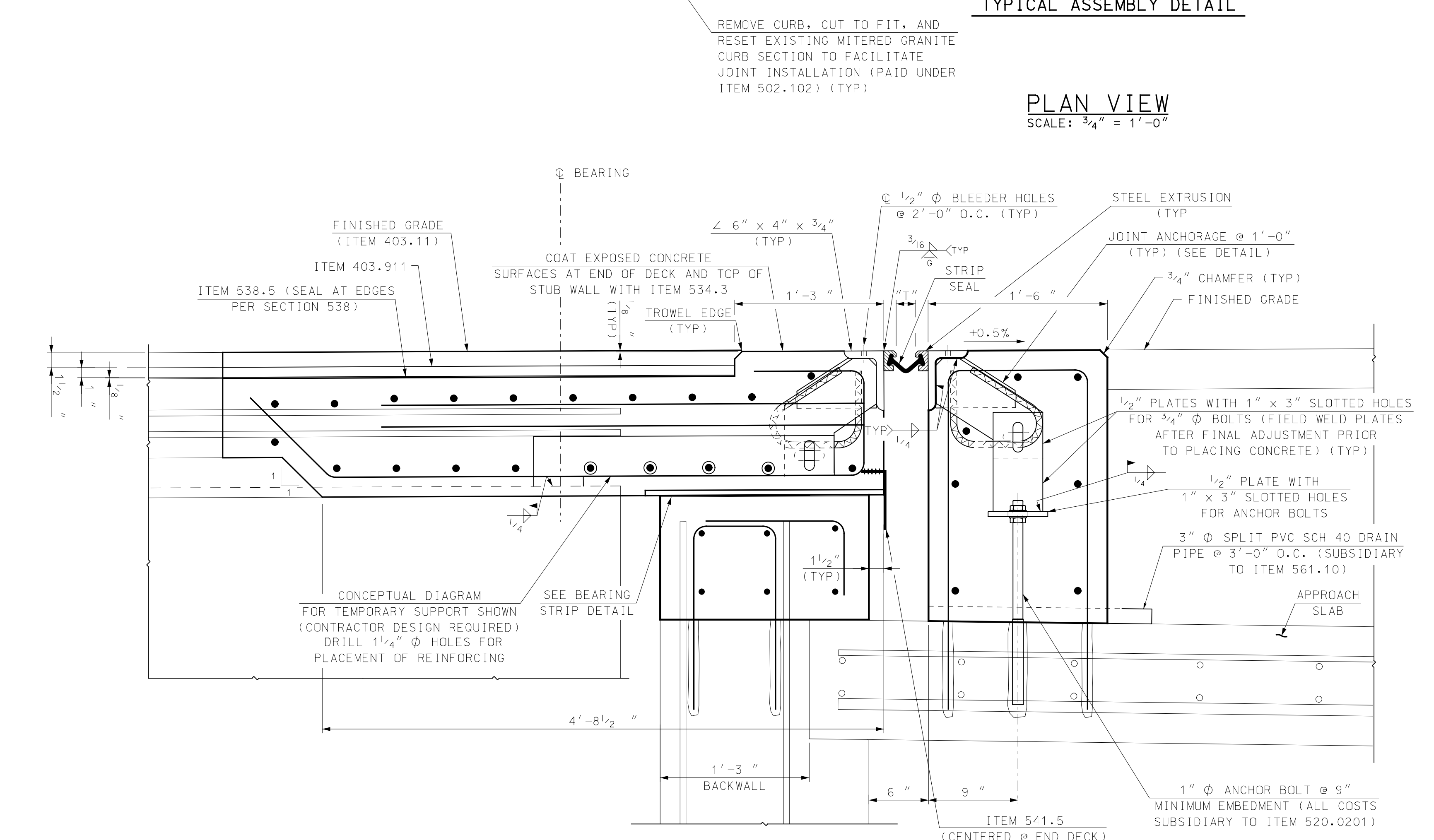
PROJECT NO. 905108
 SHEET NO. **28**
 SHEET 28 OF 40

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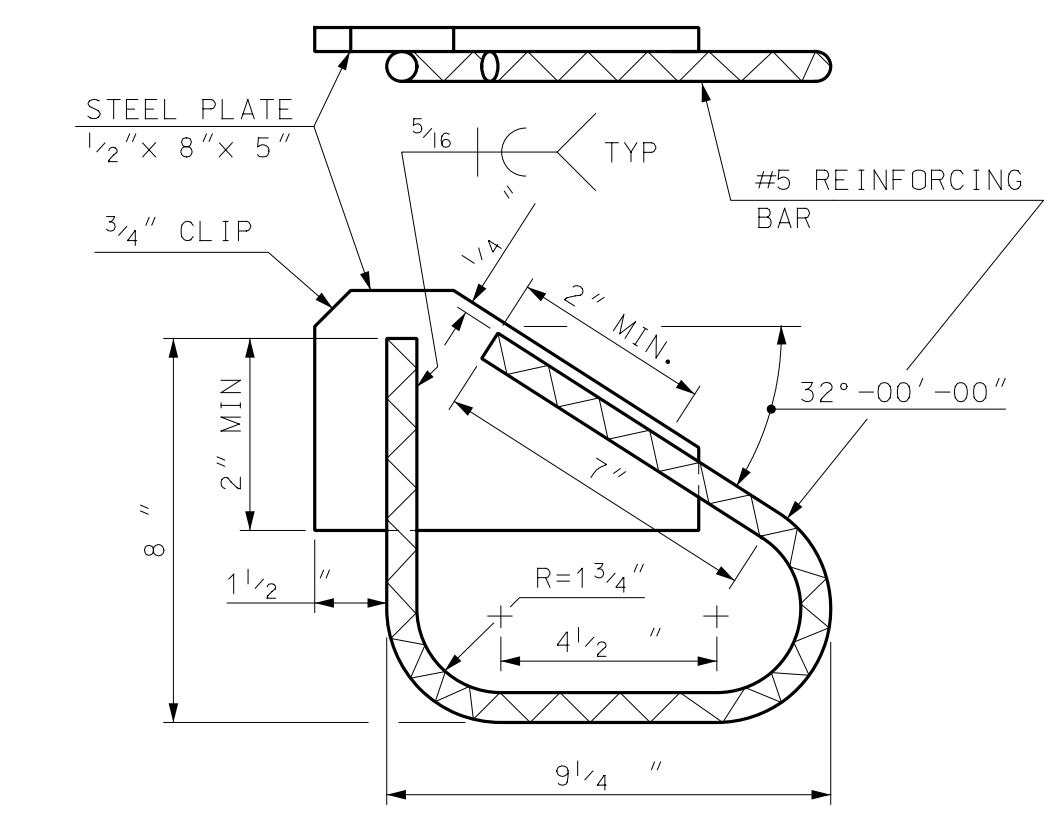


TYPICAL ASSEMBLY DETAIL

NOTE THAT THE ELEVATIONS AND DIMENSIONS ARE TAKEN FROM ORIGINAL PLANS AND/OR BRIDGE MAINTENANCE RECORDS. DAMAGE AND/OR FIELD MAINTENANCE MAY HAVE OCCURRED THAT MAY NOT HAVE BEEN RECORDED SO FIELD VERIFICATION OF DIMENSIONS AND ELEVATIONS IS REQUIRED TO ENSURE PROPER FITTING OF THE EXPANSION JOINT. ANY DIFFERENCE BETWEEN FIELD MEASUREMENTS AND DESIGN PLANS SHALL BE NOTED ON THE SHOP DRAWINGS.



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



ANCHOR DETAIL (90° CROSSING)
SCALE: 3" = 1'-0"

TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
20°F	2 9/16"
35°F	2 3/8"
50°F	2 3/16"
65°F	2"
80°F	1 13/16"
95°F	1 5/8"

NOTES

- FOR EXPANSION JOINT NOTES, SEE SHEET 30.
- FOR SECTIONS B-B THROUGH H-H, SEE SHEET 30.
- FOR ADDITIONAL EXPANSION JOINT DETAILS, SEE SHEET 30.
- RELOCATE RAIL POST PLATE TO NOT INTERFERE WITH EXPANSION JOINT SIDEWALK SEAT PLATE. ADJUSTMENTS TO THE RAILING SHALL BE SUBSIDIARY TO ITEM 561.1. CONTRACTOR SHALL COORDINATE WITH ENGINEER PRIOR TO POST PLATE RELOCATION.

TEMPERATURE ADJUSTMENT NOTES

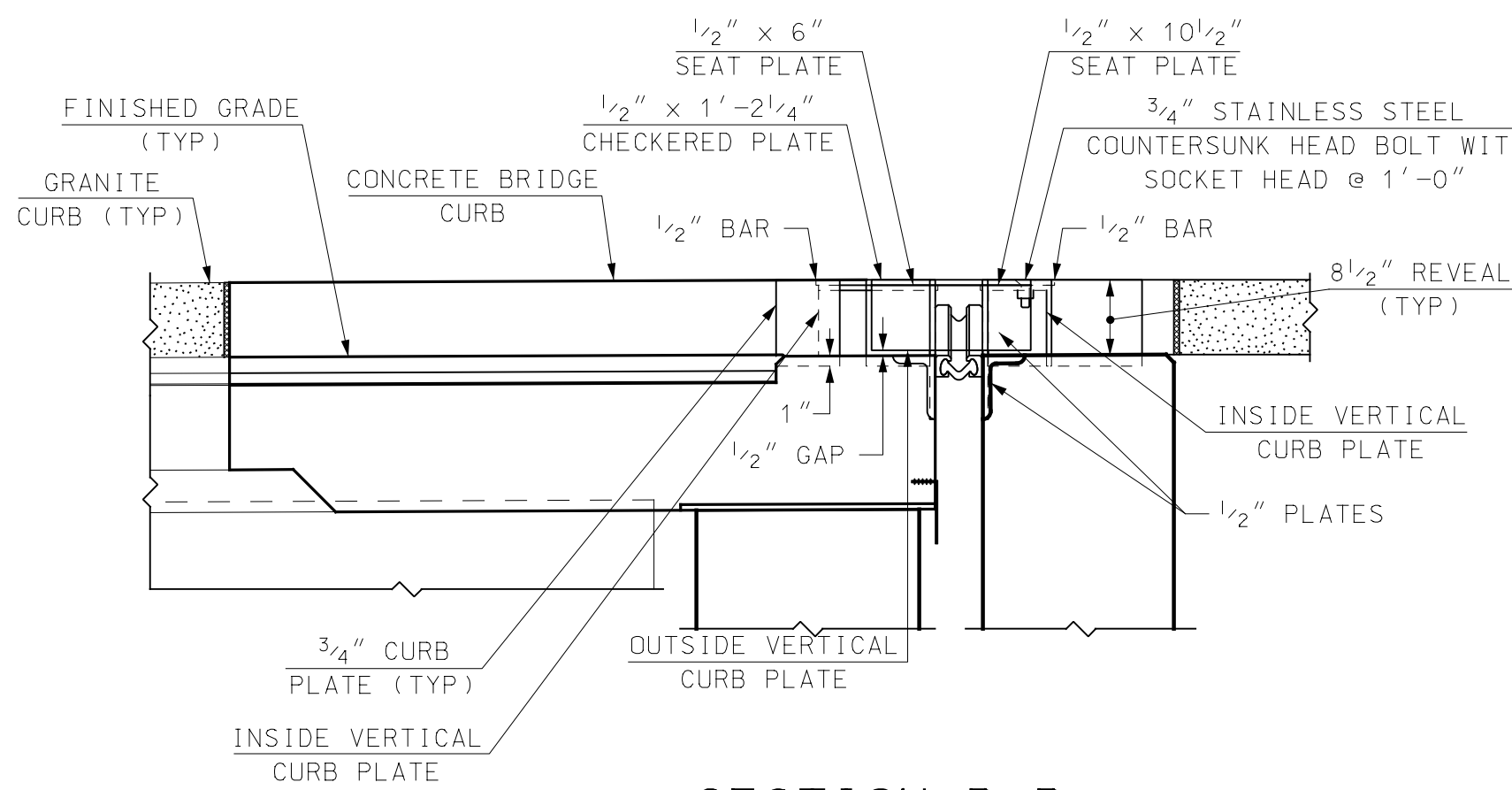
- "T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL.
- MINIMUM "T" WIDTH FOR SEAL INSTALLATION = 2" (APPROXIMATELY 65°F OR LESS).
- VALUES IN THE TEMPERATURE ADJUSTMENT TABLE ARE FOR SETTING THE EXPANSION JOINT ASSEMBLY IMMEDIATELY PRIOR TO POURING THE DECK BLOCKOUT.

REV	DESCRIPTION	DATE

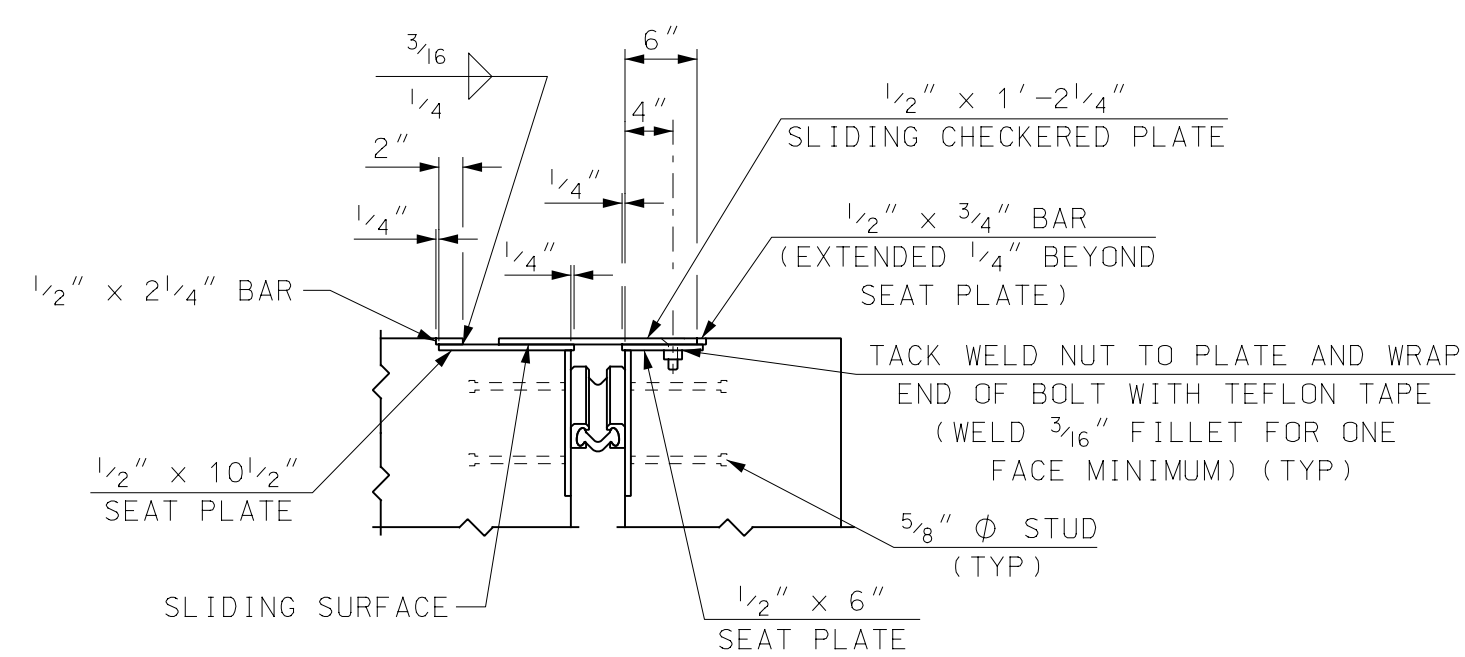
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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 KEARSARGE WAY OVER PAN AM RAILWAYS
 STRIP SEAL EXPANSION JOINT (1 OF 2)

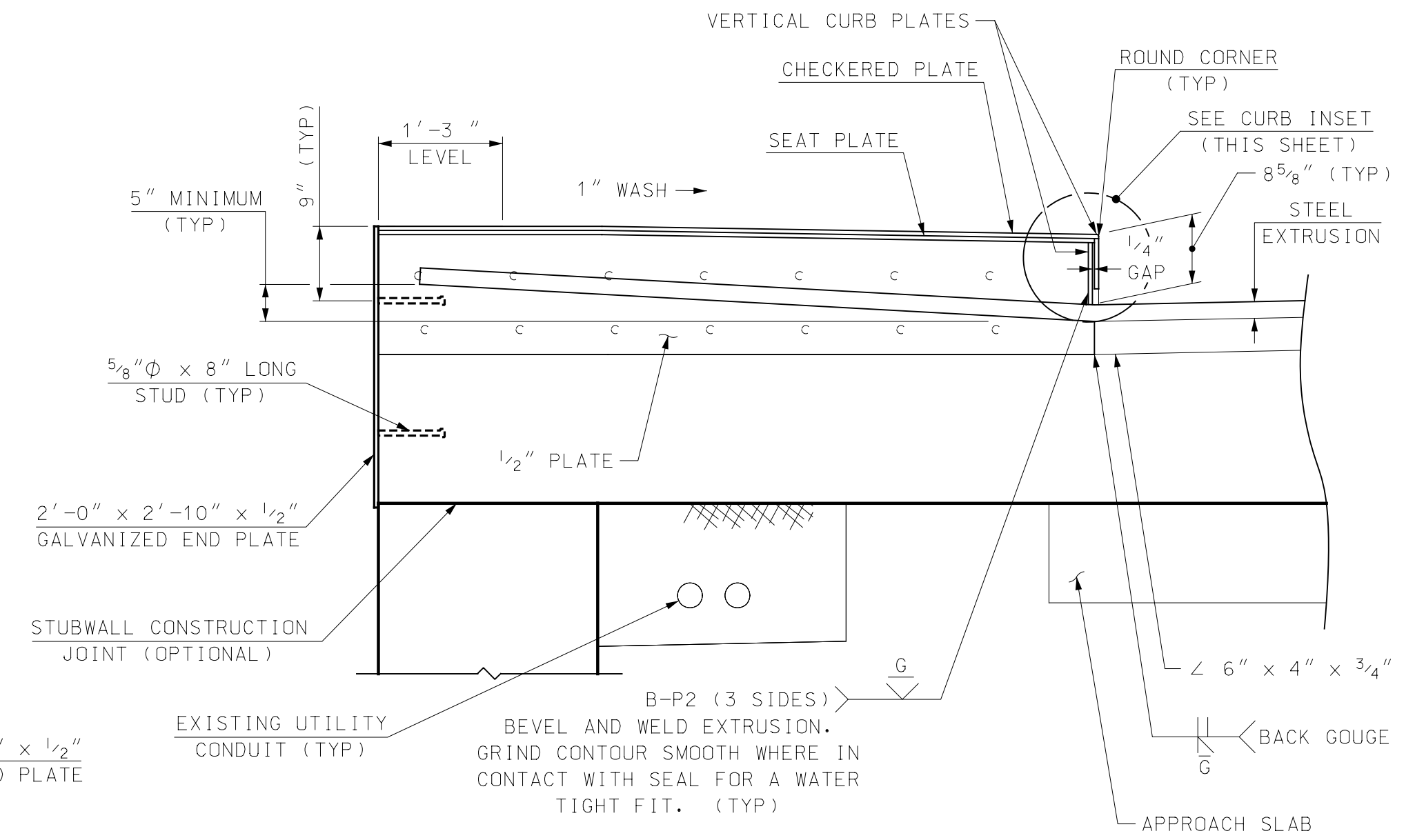
2/10/2020 4:33:24 PM K:\905108-2-CADD\BRC\Details\STRIP_SEAL_K.dgn



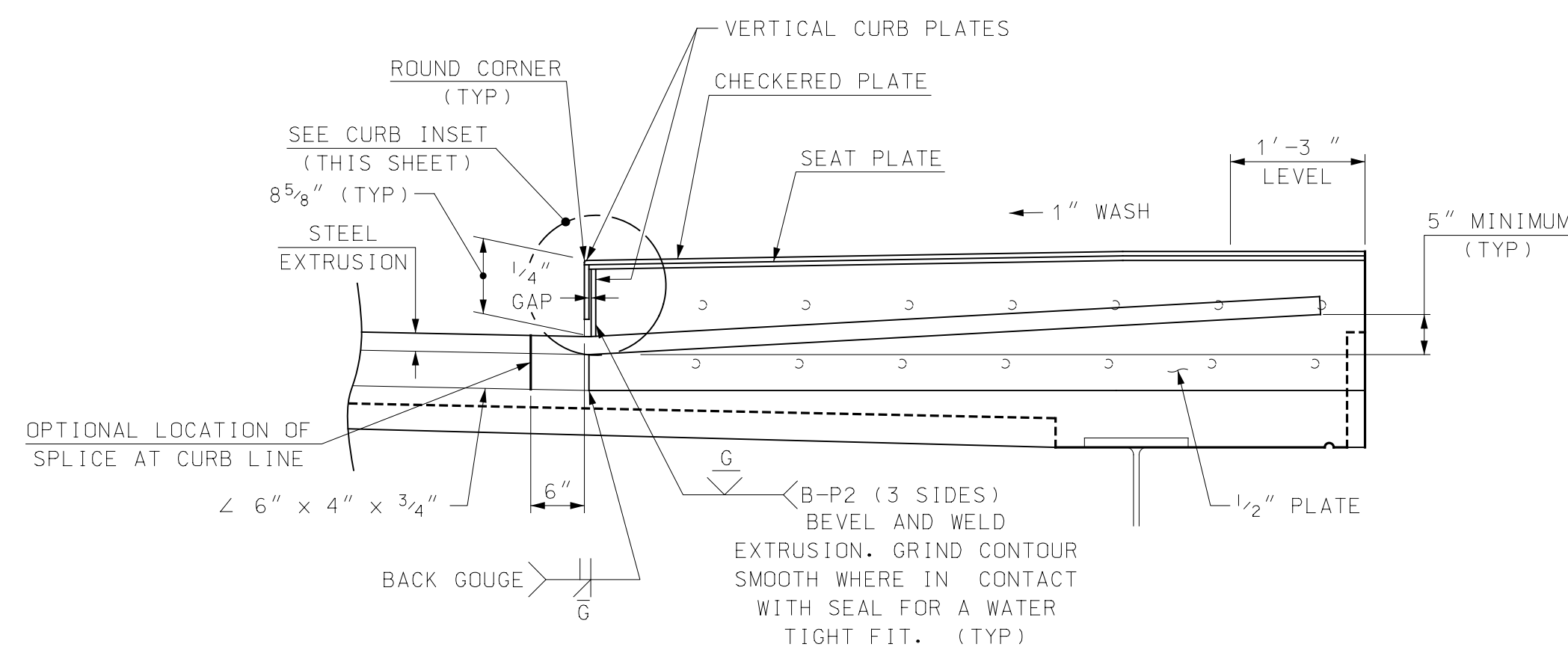
SECTION B-B
SCALE: 3/4" = 1'-0"



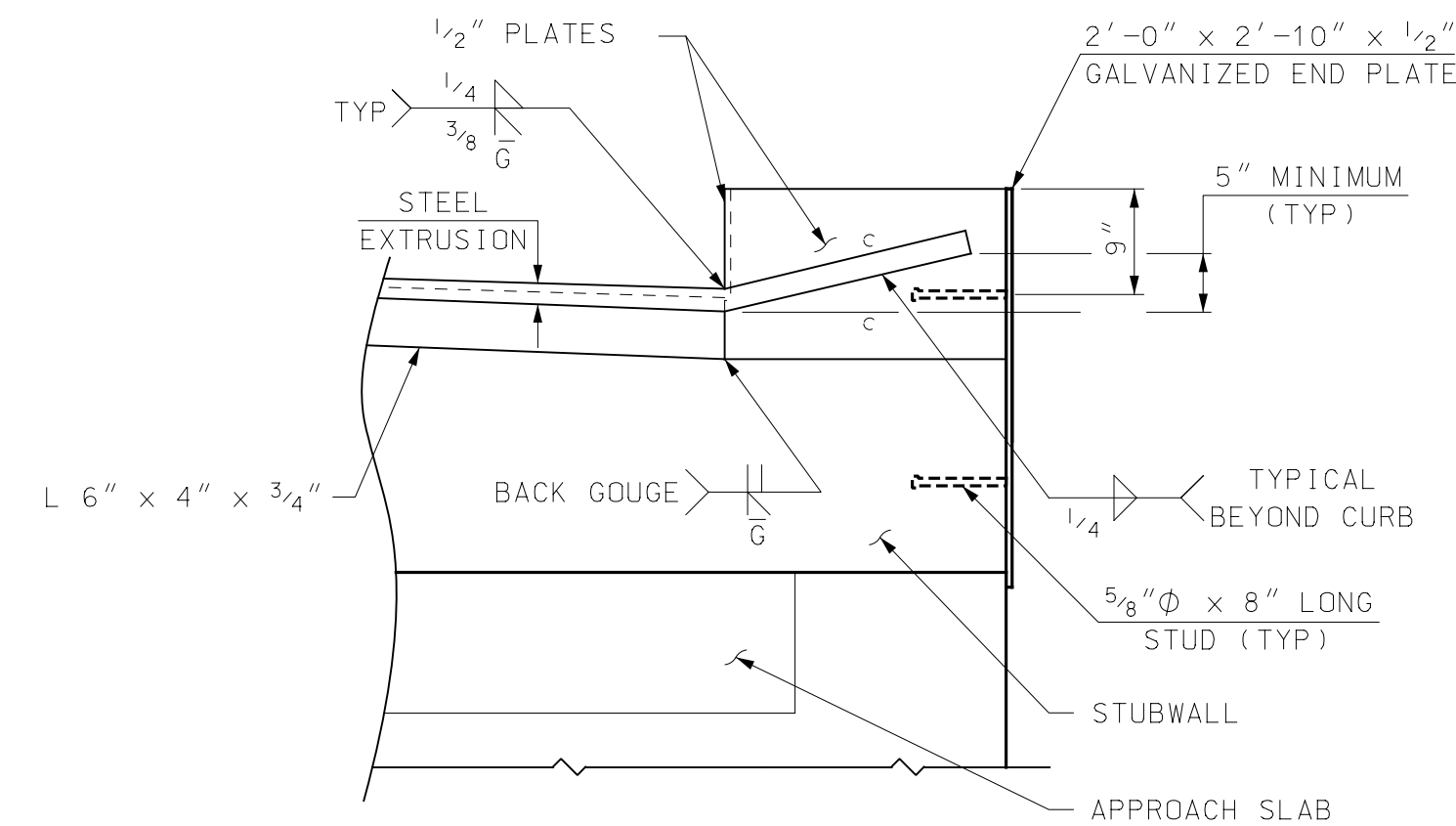
SECTION C-C
SCALE: 3/4" = 1'-0"



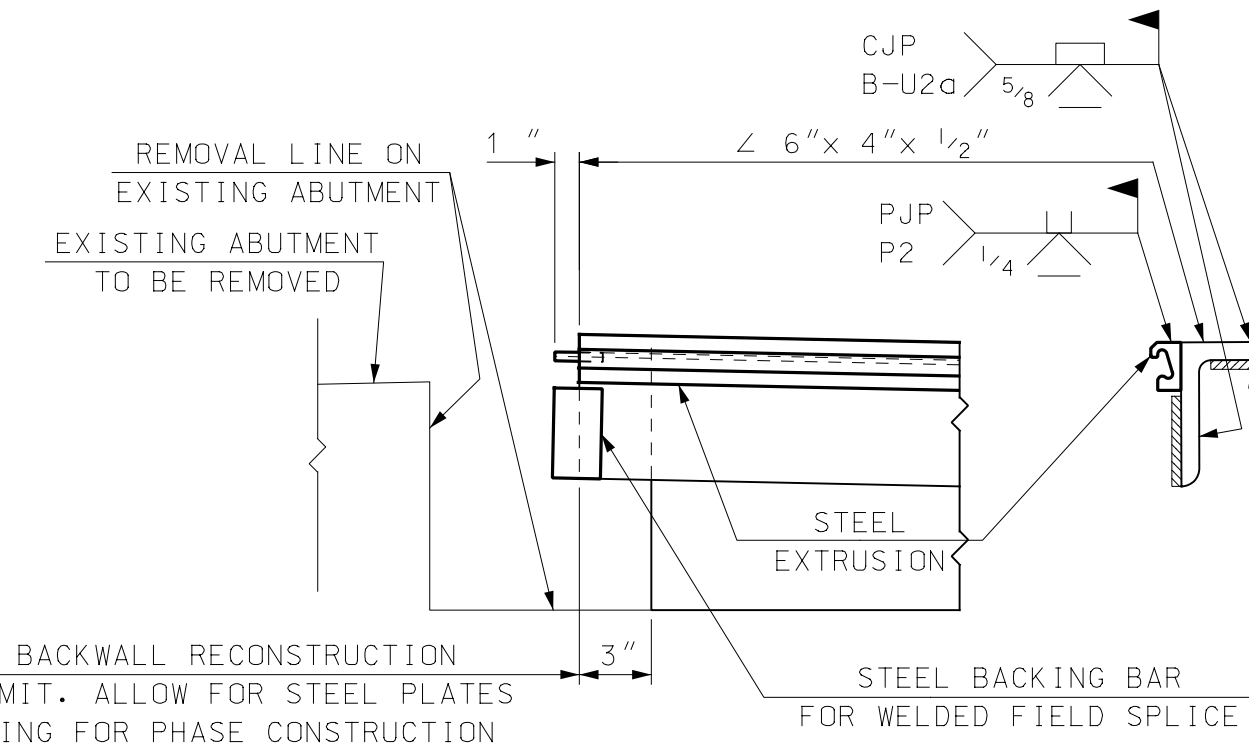
SECTION D-D
SCALE: 3/4" = 1'-0"



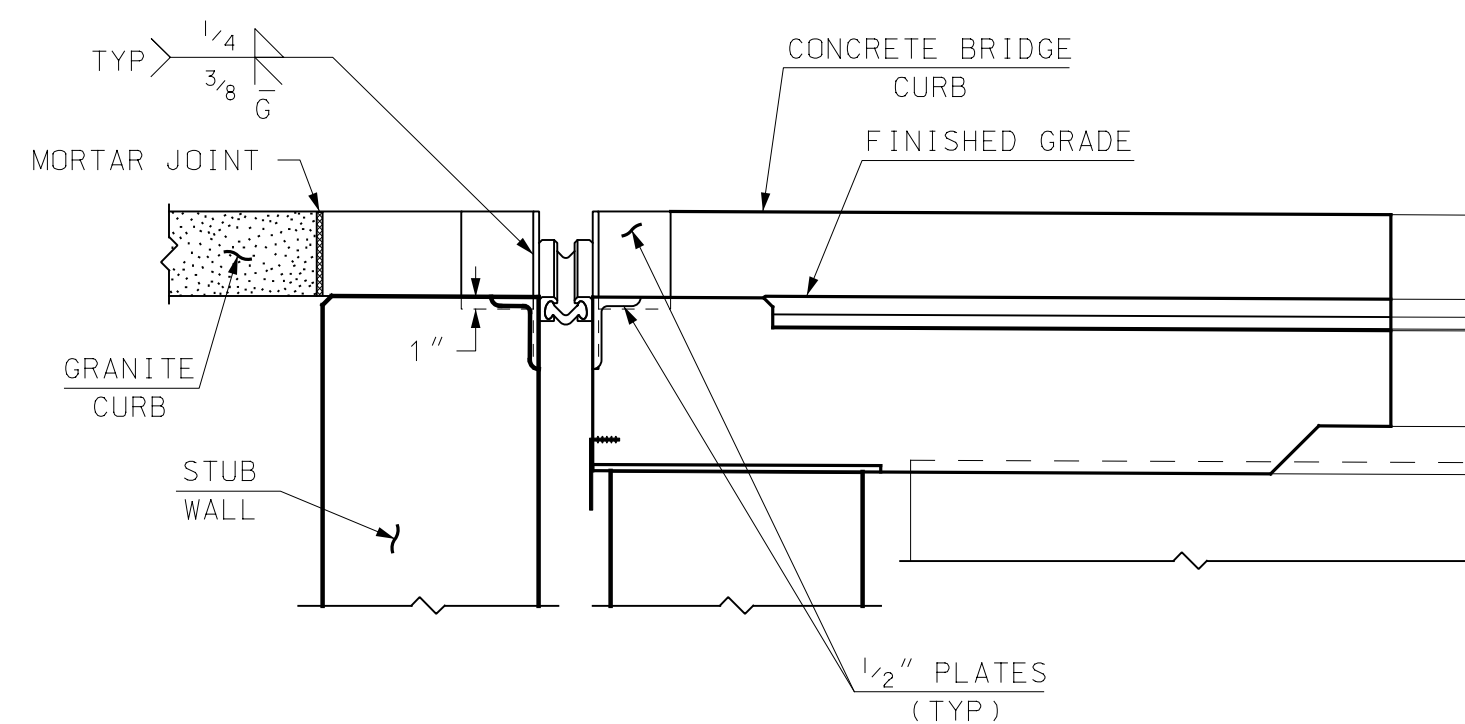
SECTION E-E
SCALE: 3/4" = 1'-0"



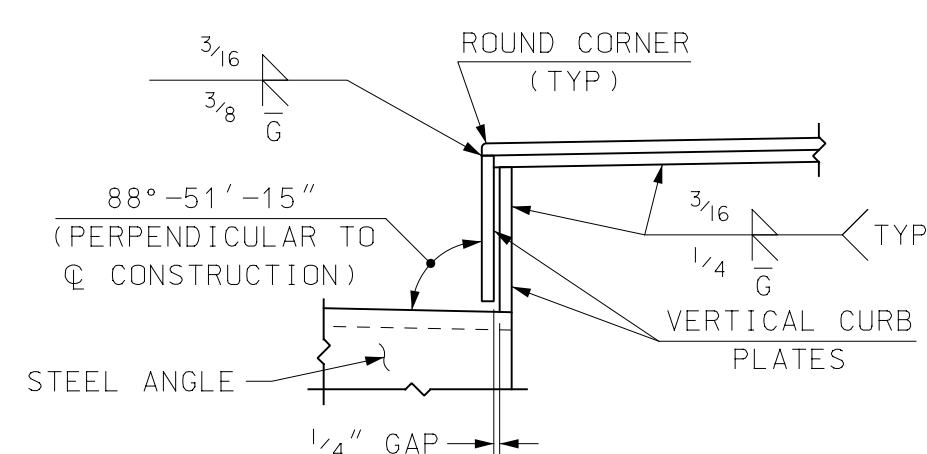
SECTION F-F
SCALE: 3/4" = 1'-0"



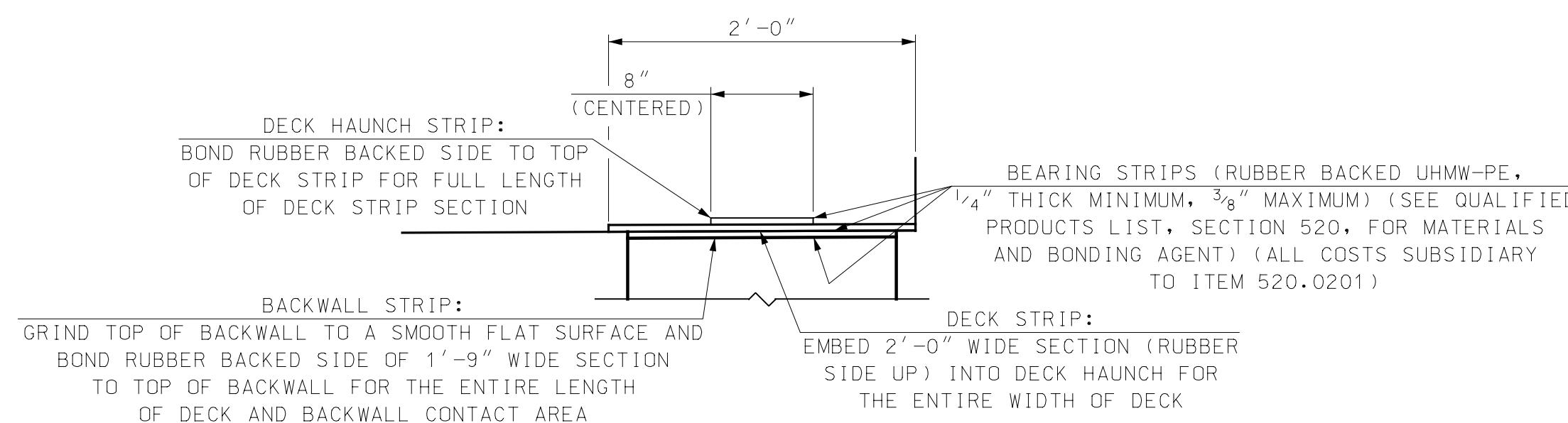
SECTION G-G
SCALE: 3/4" = 1'-0"



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



CURB INSET
NOT TO SCALE



BEARING STRIP DETAIL
NOT TO SCALE

PHASE CONSTRUCTION - SPLICE DETAILS

(PHASE 1 SPLICE SHOWN, PHASE 2 SIMILAR)
N.T.S.

EXPANSION JOINT NOTES

1. ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING STRIP SEAL, SHALL BE PAID FOR AS ITEM 561.10 PREFABRICATED STRIP SEAL EXPANSION JOINT (F).
2. SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.
3. EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO PLACEMENT OF DECK BLOCKOUT CONCRETE. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE ENGINEER. SEE TEMPERATURE ADJUSTMENT TABLE AND TEMPERATURE ADJUSTMENT NOTES ON SHEET 29.
4. STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL. PROVIDE A TEMPORARY STRIP SEAL AT PHASE 1 INSTALLATION. LEAVE IN-PLACE UNTIL PERMANENT SEAL IS INSTALLED.
5. JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES AND EXTRUSIONS SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.
6. IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND STUBWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.
7. PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE AND BITUMINOUS PAVEMENT.
8. THE STRIP SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 1.05 INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE AN SE-400 SEAL BY WATSON BOWMAN OR A2R-400 BY D.S. BROWN, AS NOTED IN THE OPL.
9. ELEVATIONS SHOWN AT TOP OF ANGLES ARE LOWER THAN PROPOSED FINISHED ROADWAY GRADE.
10. NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED. SEE NHDOT QUALIFIED PRODUCTS LIST FOR APPROVED PRODUCTS.
11. PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND EXTRUSIONS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.

REV	DESCRIPTION	DATE

FILENAME	DESIGNED	DATE
STRIP_SEAL_K	RPM	
MODEL_NAME	DRAWN	
STRIP_SEAL2	TAG	
SCALE	CHECKED	
AS SHOWN	EGW	
		FEBRUARY 2020

Passes
International
Tradeport
Hoyle, Tanner & Associates, Inc.
100 International Drive, #380, Portsmouth, NH 03801
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CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
KEARSARGE WAY OVER PAN AM RAILWAYS
STRIP SEAL EXPANSION JOINT (2 OF 2)

PROJECT NO. 905108
SHEET NO.
30
SHEET 30 OF 40

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SCOPE OF WORK

BR. NO. 220/143 RECREATION TRAIL OVER MARKET STREET

- MODIFICATIONS TO EXISTING FENCE SYSTEM
- MODIFY HANDRAIL ATTACHMENTS TO CHAIN-LINK FENCE AND/OR GIRDER TO MEET ADA REQUIREMENTS
- SEAL CONCRETE DECK
- ROUTE AND SEAL CRACKS IN CONCRETE CURBS
- CLEAN EXPANSION JOINTS AND REPLACE DAMAGED EXPANSION JOINT GLANDS
- REPLACE ELASTOMERIC SEAL BETWEEN THE CONCRETE CURBS AND STEEL GIRDERS WITH SILICONE JOINT SEALANT
- CONCRETE REPAIRS TO ABUTMENTS AND PIERS AT LOCATIONS OF BEARING PLATES/ANCHOR BOLTS
- REMOVAL OF GRAFFITI FROM SUBSTRUCTURE
- VEGETATION REMOVAL
- REPAVE SIDEWALK APPROACHES
- REPLACE APPROACH HANDRAILS

MATERIALS AND SPECIFICATIONS

1. SPECIFICATIONS: NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2016 WITH CURRENT ADDITIONS AND MODIFICATIONS AS OF THE BID OPENING DATE.

WELDING PER ANSI/AASHTO/AWS D1.5-2015 (INCLUDING ALL REVISIONS PUBLISHED BY AASHTO AS OF THE BID OPENING DATE)
2. REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60
3. CONCRETE: SUBSTRUCTURE REPAIRS = 4000 PSI
ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS
4. PAINT: MODIFIED BRIDGE APPROACH AND MAIN SPAN FENCE, AND SUPERSTRUCTURE STEEL

GENERAL NOTES

1. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS PREPARED BY HOYLE, TANNER & ASSOCIATES, INC. (HOYLE, TANNER) AND THE PROPOSED WORK THEY CONVEY.
2. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL CODES, REGULATIONS AND STANDARDS AND THE MORE STRINGENT SHALL GOVERN.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS AND COORDINATION OF OTHER TRADES.
4. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CARE OF ADJACENT PROPERTIES DURING CONSTRUCTION AND COMPLIANCE WITH STATE AND FEDERAL REGULATIONS REGARDING SITE SAFETY SHALL SOLELY BE THE CONTRACTOR'S RESPONSIBILITY.
5. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS MUST BE VERIFIED BY THE GENERAL CONTRACTOR OR RESPONSIBLE TRADES PRIOR TO COMMENCING WITH THE WORK, FABRICATION OR ORDERING MATERIALS. DO NOT SCALE DRAWINGS, USE DIMENSIONS SHOWN.
6. ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY, BEFORE PROCEEDING WITH THE WORK.
7. IN THE PREPARATION OF THESE DRAWINGS, HOYLE, TANNER HAS RELIED UPON INFORMATION OBTAINED FROM THE FOLLOWING REPORTS, DRAWINGS AND TEST DATA/RESULTS AS FOLLOWS:

PRELIMINARY PLANS, NH PROJECT NO. C-3275, CIRCA 1982, ENTITLED "PEDESTRIAN OVERPASS OVER MARKET STREET"

THIS INFORMATION IS INCLUDED IN CONTRACT SPECIFICATIONS, APPENDIX C.
8. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. ALL COSTS FOR DETERMINING UNDERGROUND UTILITY TYPES AND LOCATIONS SHALL BE SUBSIDIARY TO THE CONTRACT. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION SHALL BE AGREED TO BY THE ENGINEER AND UTILITY OWNERS BEFORE PROCEEDING WITH THE WORK.
9. ALL APPLICABLE UTILITY DEPARTMENTS AND COMPANIES SHALL BE NOTIFIED BEFORE EXCAVATION IS STARTED. UTILITIES WITHIN 50 FEET OF AN EXCAVATION SHALL BE MARKED IN THE FIELD.
10. HOYLE, TANNER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE DUE TO THE FAILURE OF THE CONTRACTOR:
 - a. TO FOLLOW THESE DRAWINGS AND SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY.
 - b. TO NOTIFY HOYLE, TANNER OF ANY DISCREPANCIES, ERRORS, OMISSIONS OR CONFLICTS AND OBTAIN THEIR GUIDANCE TO RESOLVE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING, INSTALLATION AND REMOVAL OF ALL TEMPORARY SHORING AND BRACING REQUIRED DURING CONSTRUCTION.
12. THE CONTRACTOR SHOULD NOTE THAT THE NHDOT "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION" ARE MADE A PART OF THIS PROJECT AND ALL APPLICABLE DETAILS, STANDARDS AND SPECIFICATIONS SHALL APPLY.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3 EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" BY THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES.
14. THE DEVELOPMENT OF THESE PLANS IS BASED ON A COMBINATION OF THE PRELIMINARY DRAWINGS AND AERIAL INFORMATION. RIGHT-OF-WAY AND PROPERTY LINES ARE APPROXIMATE AND BASED ON THE CITY'S GIS. NO SURVEY INFORMATION WAS USED IN THE DEVELOPMENT OF THESE PLANS.

GENERAL CONSTRUCTION NOTES

1. DIMENSIONS, ANGLES, BEARINGS AND ELEVATIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM EXISTING PLANS, AND LIMITED FIELD INVESTIGATIONS AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE PROPOSED WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK.
2. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT DEBRIS DOES NOT FALL ONTO THE ROAD BELOW THE EXISTING STRUCTURE DURING COMPLETION OF THE WORK. ALL COSTS SHALL BE PAID UNDER ITEM 607.921 OR ITEM 607.922, AS APPLICABLE, AND SHALL INCLUDE ERECTION, MAINTENANCE AND REMOVAL OF TEMPORARY STRUCTURES OR OTHER SUCH METHODS AS APPROVED.
4. THE WELDING OF ATTACHMENTS TO EXISTING BRIDGE COMPONENTS FOR CONSTRUCTION PURPOSES SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
5. EXPOSED SURFACES OF EXISTING SUBSTRUCTURE, DECK AND CONCRETE CURB SHALL BE INSPECTED JOINTLY BY THE ENGINEER AND CONTRACTOR. DETERIORATED CONCRETE SHALL BE REMOVED TO THE LIMITS DESIGNATED FROM THE SECTION AS SPECIFIED IN THE RELEVANT REPAIR DETAILS INCLUDED IN THESE PLANS. REMOVAL OF THE DETERIORATED CONCRETE SHALL EXTEND ONLY TO THE LIMITS OF UNSOUNDED CONCRETE. ALL COSTS SHALL BE PAID UNDER ITEM 512.01.
6. ITEM 535.1, CONCRETE STAINING AND SEALING (F), SHALL BE APPLIED TO THE CONCRETE DECK SURFACE AND CURBS. PRIOR TO APPLICATION, THE EXISTING JOINTS SHALL BE THOROUGHLY CLEANED AND FOREIGN MATERIAL REMOVED WITH ALL COSTS SUBSIDIARY TO ITEM 535.1.
7. EXISTING BRIDGE DECK AND CURBS SHALL BE WASHED, SUBSIDIARY TO ITEM 535.1, CONCRETE COATING AND SEALING (F), IN SUCH A MANNER THAT OVERSPRAY ONTO THE ROAD BELOW IS KEPT TO A MINIMUM.
8. ALL SUBSTRUCTURE CONCRETE SHALL BE COATED WITH ITEM 535.2, ANTI-GRAFFITI COATING.
9. LIGHTLY BLAST-CLEAN ABUTMENTS, WINGWALLS, AND PIER TO REMOVE GRAFFITI AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE INCLUDED IN ITEM 535.2, ANTI-GRAFFITI COATING.
10. IF CONCRETE FORMS ARE TO BE TREATED WITH FORM RELEASE COMPOUND THIS WORK SHALL BE DONE PRIOR TO THE ERECTION OF THE FORMS. THE REINFORCING STEEL, AT THE TIME CONCRETE IS PLACED, SHALL BE FREE OF DIRT, PAINT, OIL, FORM RELEASE COMPOUND, OR OTHER ORGANIC MATERIALS THAT MAY ADVERSELY AFFECT OR REDUCE BOND.
11. ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED – BRIDGE STRUCTURES, SHALL BE USED FOR COMPLETION OF UNANTICIPATED WORK IN CONNECTION WITH THE SCOPE OF THIS PROJECT, AS DIRECTED BY THE ENGINEER.
12. ITEM 646.41, TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS, SHALL BE USED TO REPAIR DISTURBED AREAS AS DIRECTED BY THE ENGINEER.
13. THE REMOVAL OF INVASIVE SPECIES SHALL BE SUBSIDIARY TO ITEM 201.1, CLEARING AND GRUBBING (F). SEE SPECIAL PROVISIONS. ALL INVASIVE SPECIES IN THE AREA OF THE SOUTH APPROACH SPANS ARE TO BE REMOVED FROM THE SITE. LIMITS OF REMOVAL ARE APPROXIMATE AND SHALL BE CONFIRMED WITH THE CITY ARBORIST PRIOR TO THE START OF WORK.

MOBILIZATION AREAS NOTES

1. THE CONTRACTOR SHALL BE LIMITED TO MOBILIZATION WITHIN THE CITY'S RIGHT-OF-WAY SHOWN IN THESE PLANS, UNLESS OTHERWISE NOTED. ADDITIONAL MOBILIZATION AREAS REQUIRED BY THE CONTRACTOR SHALL BE COORDINATED BY THE CONTRACTOR WITH THE AFFECTED PROPERTY OWNERS AND SHALL BE AT NO COST OT THE OWNER.

SUBSTRUCTURE REPAIR NOTES

1. EXISTING CONCRETE PIERS SHALL BE INSPECTED FOR DETERIORATED CONCRETE JOINTLY BY THE ENGINEER AND CONTRACTOR. ALL DETERIORATED CONCRETE SHALL BE REMOVED TO SOUND CONCRETE. SAWCUT THE CONCRETE 1" DEEP, UNLESS NOTED OTHERWISE, ON ALL EXPOSED CONCRETE SURFACES TO PROVIDE CLEAN REMOVAL LINES. COST OF INSPECTION, REMOVAL, AND CLEANING SHALL BE PAID FOR UNDER ITEM 512.01, PREPARATION FOR CONCRETE REPAIRS, CLASS I.
2. CONCRETE SHALL BE REMOVED IN A MANNER WHICH AVOIDS DAMAGE TO ANCHOR BOLTS, ANY REINFORCING STEEL ENCOUNTERED AND THE CONCRETE TO REMAIN. EXISTING ANCHOR BOLTS, REINFORCING STEEL OR CONCRETE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3. PRIOR TO PLACING NEW CONCRETE, THE REMOVAL SURFACES OF THE EXISTING CONCRETE SHALL BE BLAST CLEANED AND PREPARED TO A SATURATED SURFACE-DRY CONDITION. ALL COSTS SHALL BE INCLUDED IN ITEM 512.01, PREPARATION FOR CONCRETE REPAIRS, CLASS I.
4. HOLES DRILLED IN EXISTING CONCRETE SHALL BE DRILLED ½" LARGER THAN THE BAR DIAMETER AND GROUTED WITH AN APPROVED HIGH STRENGTH, NON-SHRINK GROUT. HIGH STRENGTH, NON-SHRINK GROUT SHALL BE APPROVED BY THE ENGINEER. REINFORCING STEEL SHALL HAVE A MINIMUM EMBEDMENT LENGTH OF 1'-0" UNLESS OTHERWISE NOTED. ALL COSTS FOR DRILLING AND GROUTING SHALL BE SUBSIDIARY TO ITEM 512.01, UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL SHALL HAVE A 2" MINIMUM CLEAR COVER AND SHALL BE A MINIMUM OF 1.125" CLEAR OF THE ANCHOR BOLTS.
6. ALL NEW REINFORCING STEEL ON THIS PROJECT SHALL BE EPOXY COATED AND SHALL BE PAID AS ITEM 544.31, REINFORCING STEEL, EPOXY COATED.
7. ANY TEMPORARY SUPPORT OF THE GIRDERS REQUIRED FOR THE SUBSTRUCTURE REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PAID PER ITEM 550.191, TEMPORARY GIRDER SUPPORT SYSTEM.

BRIDGE REHABILITATION NOTES

1. ALL EXPOSED EXISTING CONCRETE ON THE BRIDGE DECK AND BRIDGE CURBS SHALL BE INSPECTED FOR DETERIORATION JOINTLY BY THE CONTRACTOR AND THE ENGINEER.
2. ALL CRACKS IN THE CURB OR DECK MEASURING ½" OR LESS IN WIDTH SHALL BE ROUTED, SEALED AND REPAIRED USING JOINT SEALANT AS SHOWN IN THE CRACK REPAIR DETAIL ON SHEET 33. APPROXIMATELY 30 REPAIRS OF THIS NATURE ARE ANTICIPATED AND SHALL BE PAID AS ITEM 526.21, ROUTE AND SEAL SMALL CRACKS.
3. ALL CRACKS IN THE CURB OR DECK MEASURING MORE THAN ½" IN WIDTH SHALL BE ROUTED, SEALED AND REPAIRED USING GROUT AS SHOWN IN THE CRACK REPAIR DETAIL ON SHEET 33. APPROXIMATELY 10 REPAIRS OF THIS NATURE ARE ANTICIPATED AND SHALL BE PAID AS ITEM 521.22, ROUTE AND SEAL LARGE CRACKS.
4. ALL CHAIN LINK FENCE FABRIC SHALL BE REPLACED WITH A BLACK VINYL COATED STEEL FABRIC AND SHALL BE PAID FOR PER LINEAL FOOT OF BRIDGE ALONG THE BRIDGE CENTERLINE UNDER ITEM 607.921 AND 607.922.
5. DAMAGED LOCATIONS OF THE HANDRAIL AND FENCE POSTS SHALL BE TOUCHED UP WITH COLD GALVANIZING SPRAY AS NECESSARY PRIOR TO PAINTING AND SHALL BE PAID FOR UNDER ITEM 607.921, MODIFICATIONS TO THE MAIN SPAN FENCE, AND ITEM 607.922, MODIFICATIONS TO THE APPROACH SPAN FENCE.
6. THE MODIFIED BRIDGE APPROACH FENCE AND MODIFIED BRIDGE MAIN SPAN FENCE SHALL BE PAINTED BLACK.

BID ALTERNATE 2

1. BID ALTERNATE 2 SHALL CONSIST OF ITEM 556.101 PAINTING EXISTING STRUCTURAL STEEL, WHICH SHALL CONSIST OF PAINTING THE SURFACES OF THE STEEL SUPERSTRUCTURE COMPONENTS; GIRDERS, FLOOR BEAMS, AND BEARINGS. SEE NHDOT STANDARD SPECIFICATIONS SECTION 556 FOR ADDITIONAL INFORMATION.
2. THE CITY OF PORTSMOUTH SHALL CHOOSE THE FINAL TOP COAT COLOR.

SUMMARY OF QUANTITIES

BID ALTERNATE NO.1

ITEM NO.	ITEM DESCRIPTION	Quantity	
		Unit	Amount
201.1	CLEARING AND GRUBBING (F)	A	0.4
203.1	COMMON EXCAVATION	CY	35
304.31	CRUSHED GRAVEL FOR SHIMMING	CY	20
512.01	PREPARATION FOR CONCRETE REPAIRS, CLASS I	SY	15
520.0201	CONCRETE CLASS AA, ABOVE FOOTINGS	CY	5
521.22	ROUT AND SEAL LARGE CRACKS	EA	10
521.23	ROUT AND SEAL SUBSTRUCTURE CRACKS	EA	10
526.21	ROUT AND SEAL SMALL CRACKS	EA	30
535.1	CONCRETE STAINING AND SEALING	SY	550
535.2	ANTI-GRAFFITI COATING	SY	400
544.31	REINFORCING STEEL, EPOXY COATED (CONTRACTOR DETAILED)	LB	275
550.191	TEMPORARY GIRDER SUPPORT SYSTEM	U	1
560.131	PREFABRICATED COMPRESSION SEAL EXPANSION JOINT - REHABILITATION	EA	9
562.1	SILICONE JOINT SEALANT (F)	LF	745
606.6211	RAMP HANDRAIL, W/GUARD STEEL	LF	440
607.921	MODIFICATIONS TO THE MAIN SPAN FENCE	LF	128
607.922	MODIFICATIONS TO THE APPROACH SPAN FENCE	LF	320
608.12	2" BITUMINOUS SIDEWALK (F)	SY	275
628.2	SAWED BITUMINOUS PAVEMENT	LF	10
646.41	TURF ESTABLISHMENT WITH MULCH, TACKIFIERS AND HUMUS	SY	1800
692	MOBILIZATION	U	1
697.11	INVASIVE SPECIES CONTROL AND MANAGEMENT PLAN	U	1
1002.1	REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES	\$	10000

BID ALTERNATE NO.2

ITEM NO.	ITEM DESCRIPTION	Quantity	
		Unit	Amount
556.101	PAINTING EXISTING STRUCTURAL STEEL	U	1

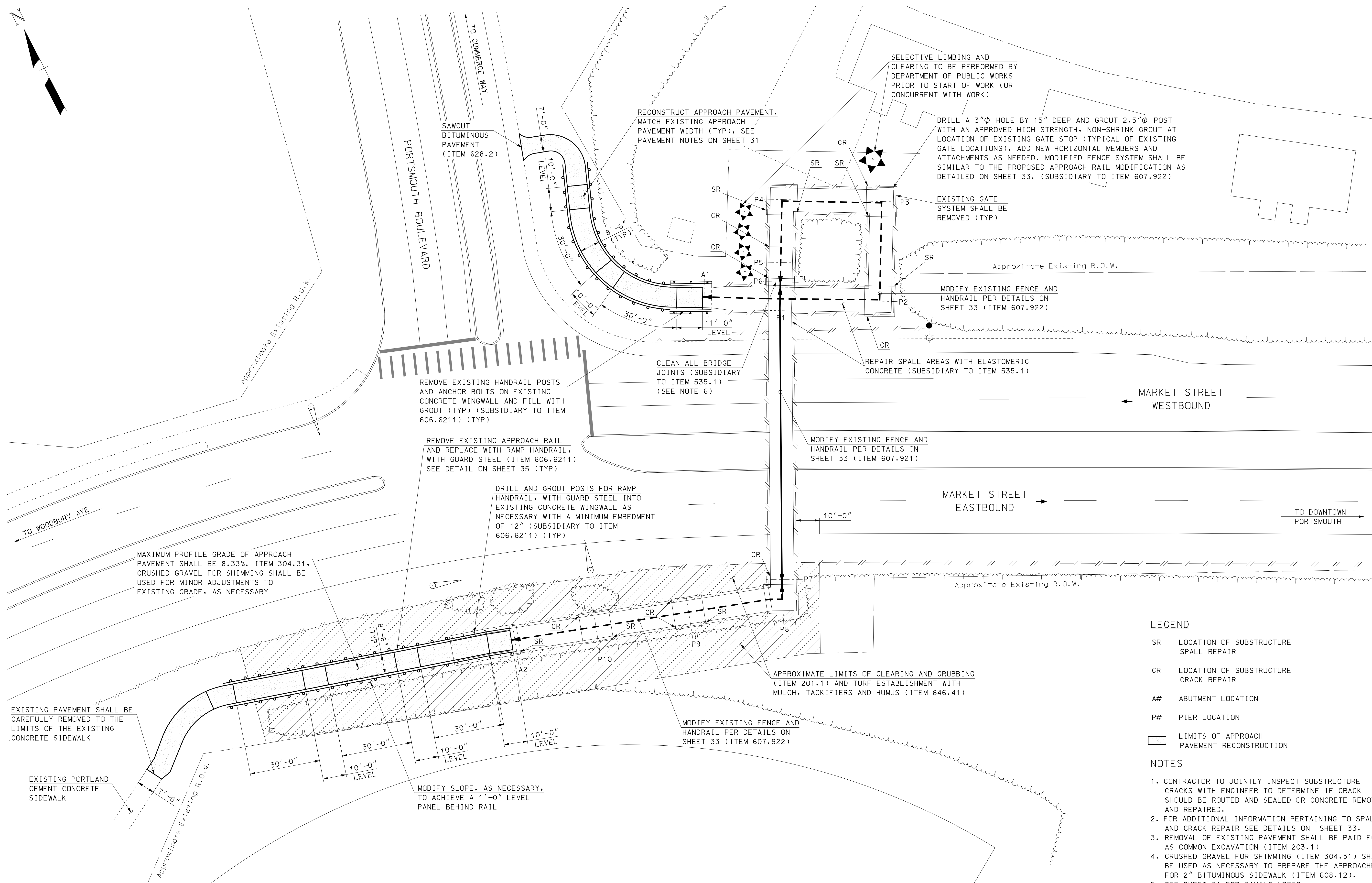
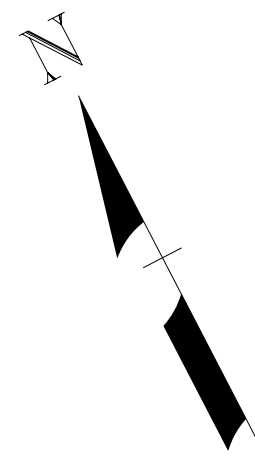
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NHDOT BRIDGE NO. 220/143	DESIGNED RPM	DRAWN TAG	CHECKED EGW	DATE FEBRUARY 2020
FILENAME 905108BNotes_Ped	MODEL NAME 905108BNotes1	SCALE AS SHOWN	This document is prepared as an instrument of service and shall remain the property of Hoyle, Tanner. It may not be used, reproduced, disseminated or transmitted in any manner, including electronically, for any other purpose than that project, without the written permission of Hoyle, Tanner.	


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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET PEDESTRIAN BRIDGE
 PROJECT NOTES AND SUMMARY OF QUANTITIES

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GENERAL PLAN
SCALE: 1" = 20'

LEGEND

- SR LOCATION OF SUBSTRUCTURE SPALL REPAIR
- CR LOCATION OF SUBSTRUCTURE CRACK REPAIR
- A# ABUTMENT LOCATION
- P# PIER LOCATION
- LIMITS OF APPROACH PAVEMENT RECONSTRUCTION

NOTES

1. CONTRACTOR TO JOINTLY INSPECT SUBSTRUCTURE CRACKS WITH ENGINEER TO DETERMINE IF CRACK SHOULD BE ROUTED AND SEALED OR CONCRETE REMOVED AND REPAIRED.
2. FOR ADDITIONAL INFORMATION PERTAINING TO SPALL AND CRACK REPAIR SEE DETAILS ON SHEET 33.
3. REMOVAL OF EXISTING PAVEMENT SHALL BE PAID FOR AS COMMON EXCAVATION (ITEM 203.1)
4. CRUSHED GRAVEL FOR SHIMMING (ITEM 304.31) SHALL BE USED AS NECESSARY TO PREPARE THE APPROACHES FOR 2" BITUMINOUS SIDEWALK (ITEM 608.12).
5. SEE SHEET 31 FOR PAVING NOTES.
6. ENGINEER AND CONTRACT TO JOINTLY INSPECT EXPANSION JOINTS. GLANDS SHALL BE REPLACED AS DIRECTED BY THE ENGINEER PER ITEM 560.131
7. REMOVAL OF ALL INVASIVE SPECIES SHALL BE SUBSIDIARY TO ITEM 201.1, CLEARING AND GRUBBING.

REV	DESCRIPTION	DATE

NH DOT BRIDGE NO.	220743
FILENAME	905108Gemplan_Ped
DESIGNED	RPM
DRAWN	RPM
MODEL NAME	905108Gemplan
TAG	
CHECKED	EGW
SCALE	AS SHOWN
DATE	FEBRUARY 2020

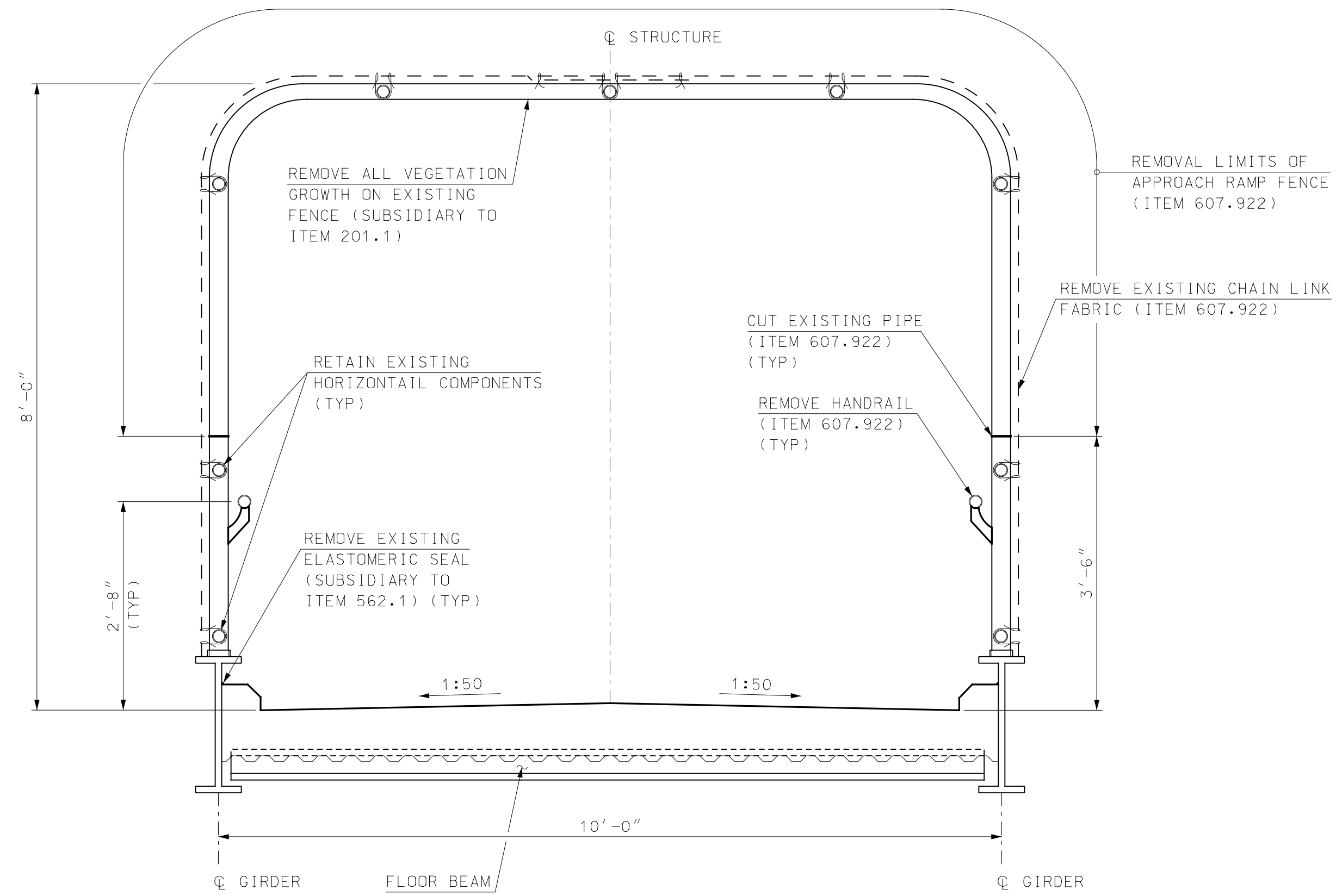
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CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET PEDESTRIAN BRIDGE
 GENERAL PLAN

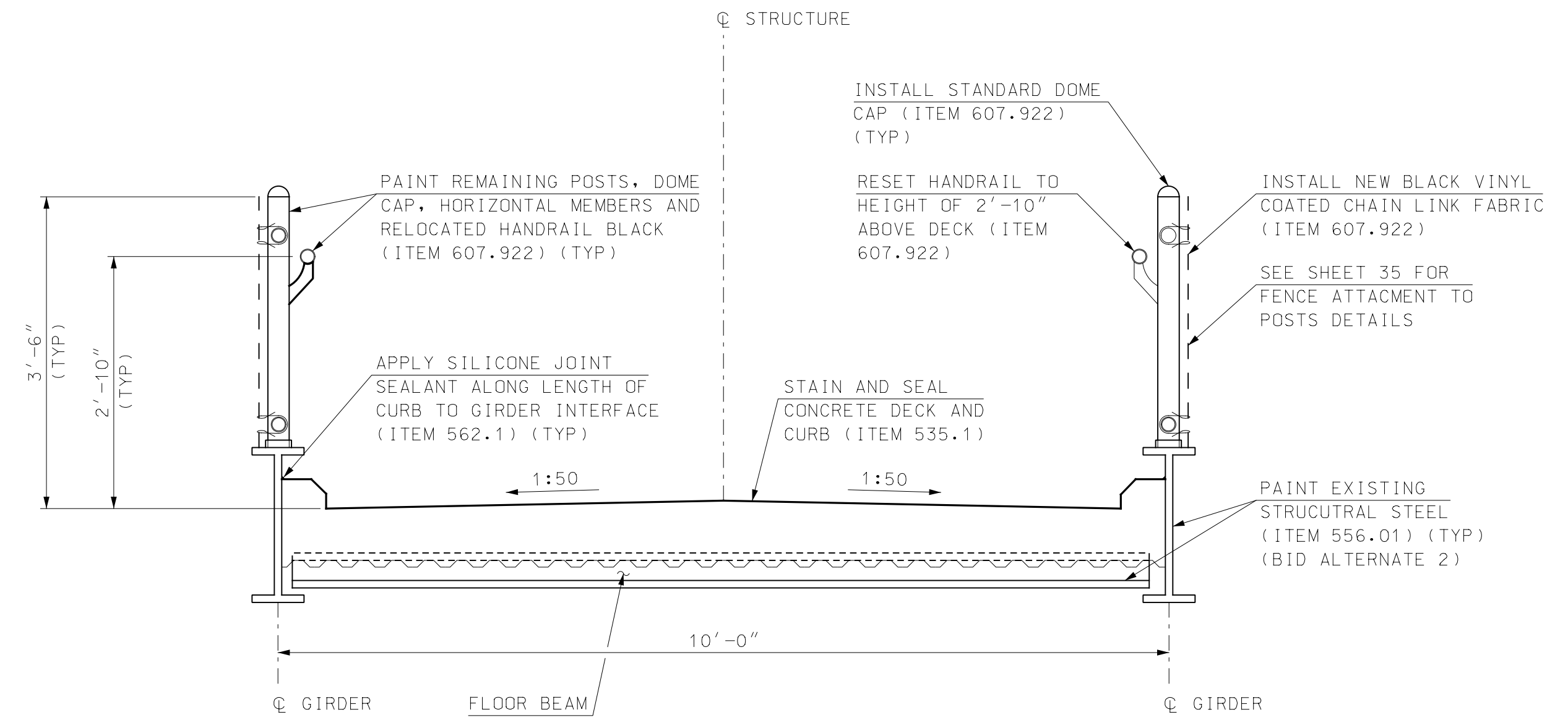
PROJECT NO.	905108
SHEET NO.	32
SHEET 32 OF 40	

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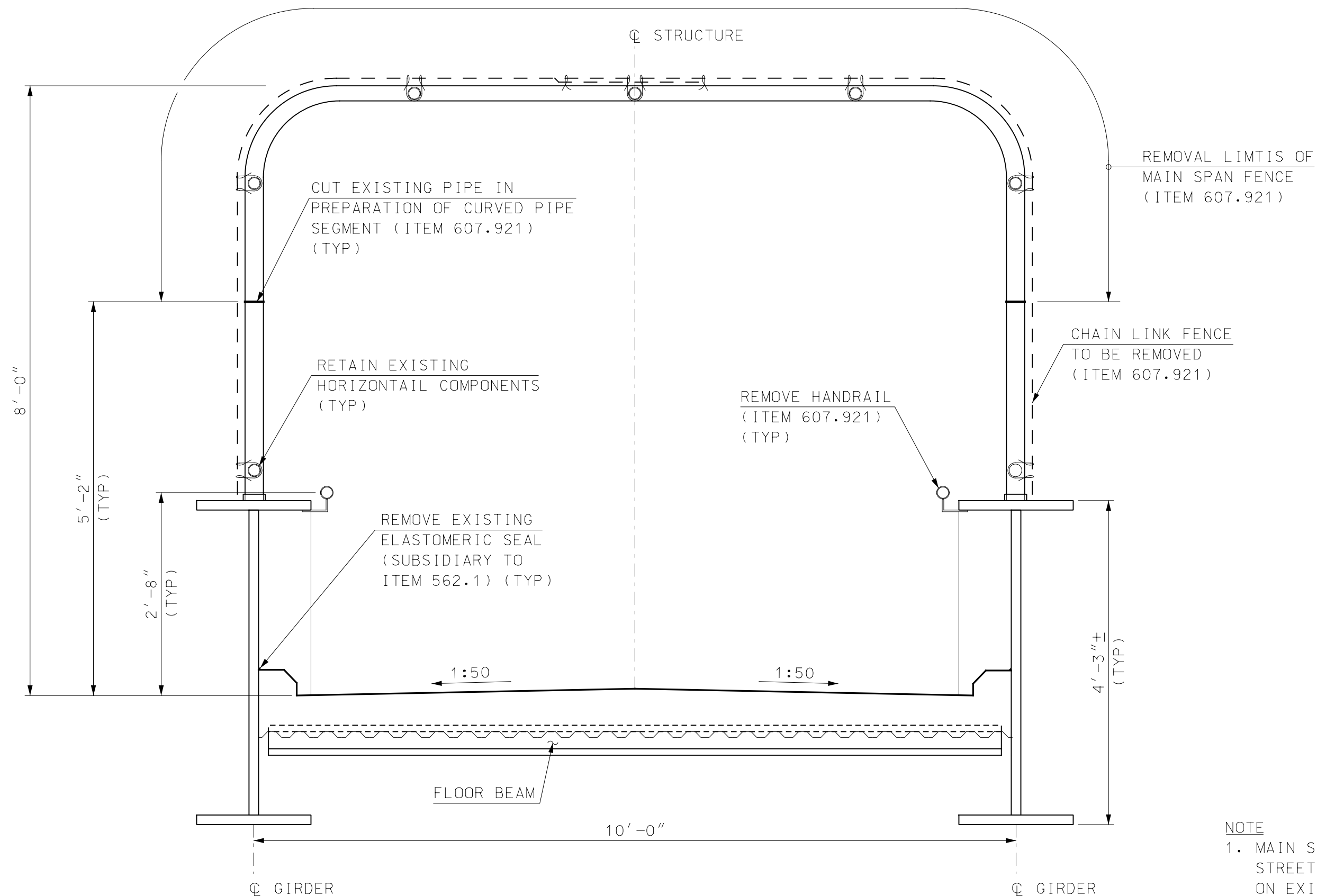
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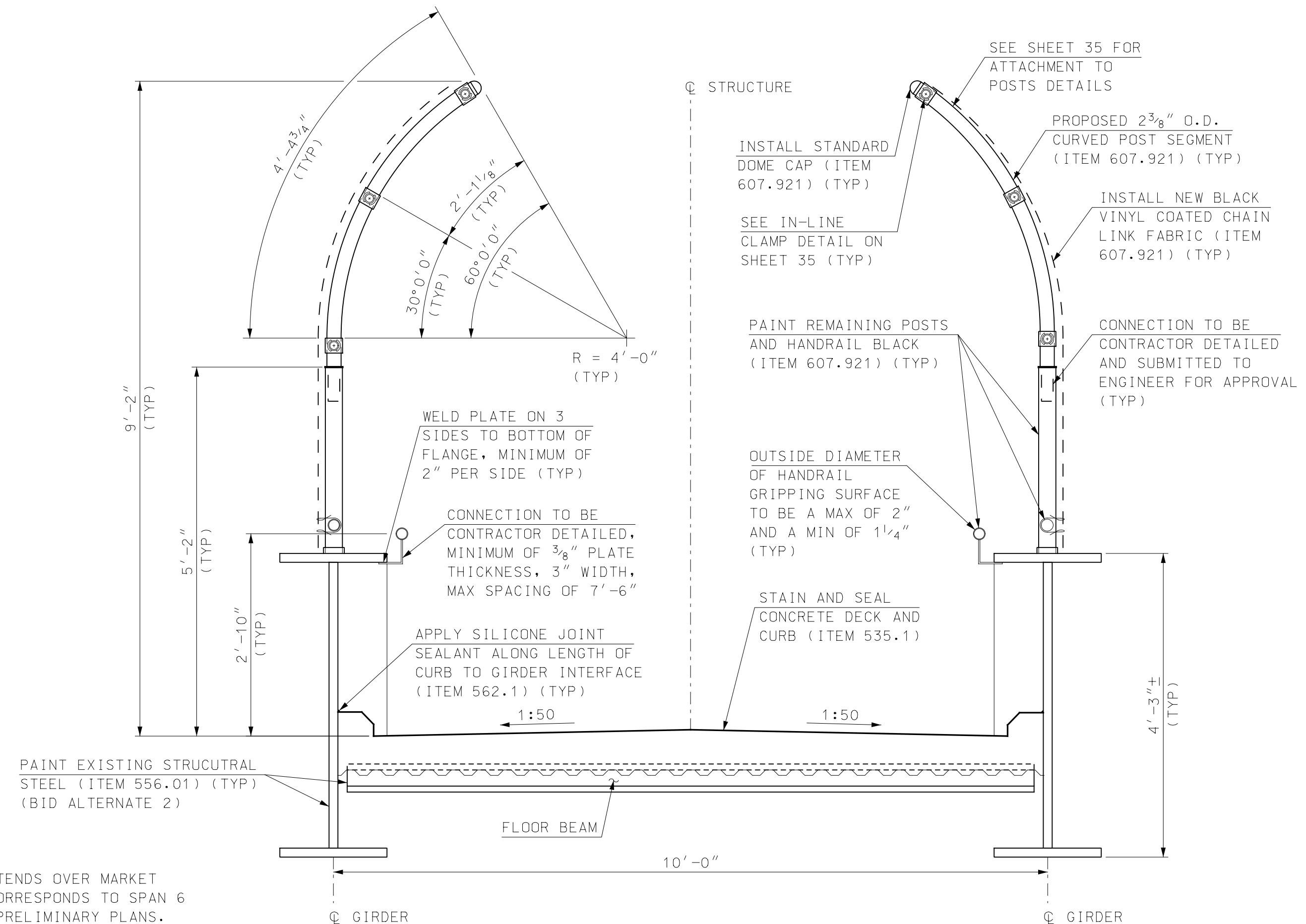
**EXISTING APPROACH RAMP
TYPICAL SECTION**
SCALE: 3/4" = 1'-0"



**PROPOSED APPROACH RAMP
TYPICAL SECTION**
SCALE: 3/4" = 1'-0"



**EXISTING MAIN SPAN
TYPICAL SECTION**
SCALE: 3/4" = 1'-0"



**PROPOSED MAIN SPAN
TYPICAL SECTION**
SCALE: 3/4" = 1'-0"

NOTE
1. MAIN SPAN EXTENDS OVER MARKET STREET AND CORRESPONDS TO SPAN 6 ON EXISTING PRELIMINARY PLANS.

REV	DESCRIPTION	DATE

FILENAME	DESIGNED	DATE
905108Detail_Ped	RPM	
MODEL NAME	DRAWN	
905108Detail1	TAG	
SCALE	CHECKED	
AS SHOWN	EGW	
DATE		
FEBRUARY 2020		

Pease Hoyle, Tanner & Associates, Inc.	PROJECT NO. 905108
	CITY OF PORTSMOUTH PORTSMOUTH, NEW HAMPSHIRE MARKET STREET PEDESTRIAN BRIDGE
	DETAILS (1 OF 3)

SHEET NO. 33
SHEET 33 OF 40

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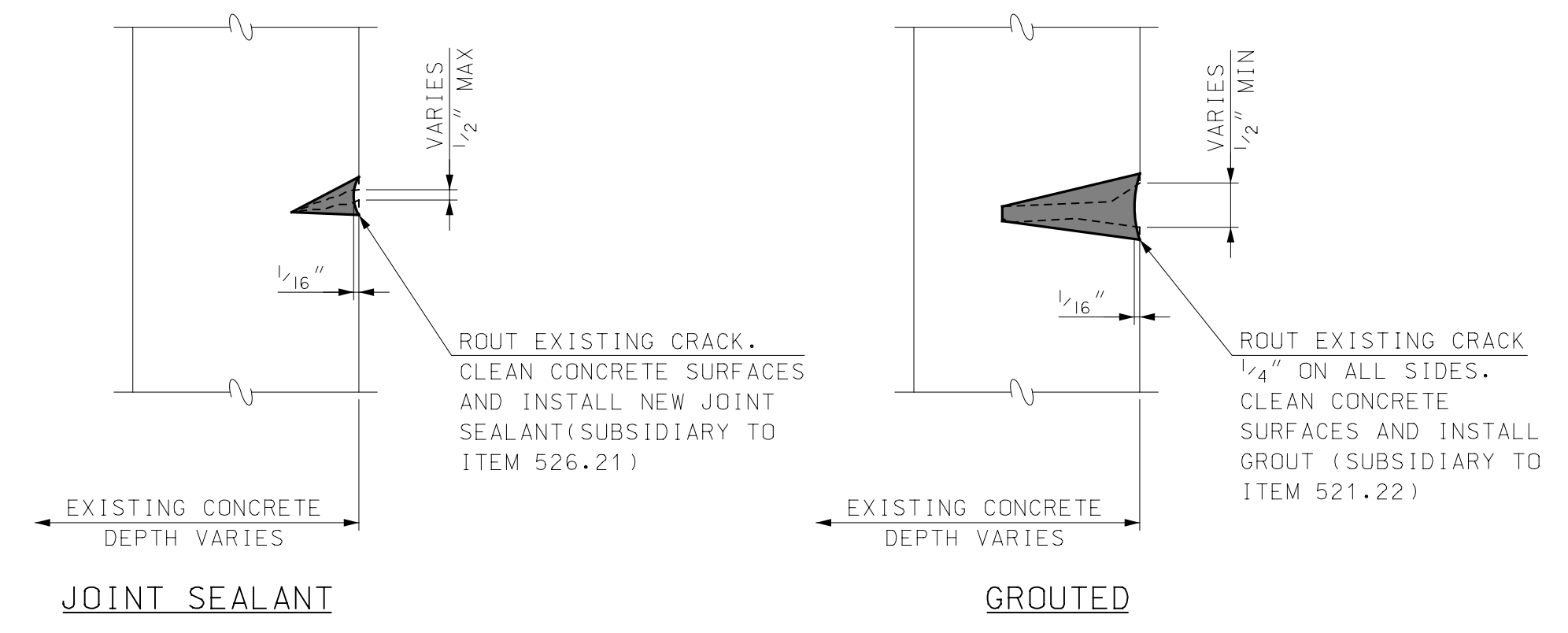
REMOVE EXISTING ELASTOMERIC SEALANT AND REPLACE WITH SILICONE JOINT SEALANT ALONG LENGTH OF GIRDER/CURB INTERFACE (ITEM 562.1) (TYP)

SEALANT REPLACEMENT
NOT TO SCALE



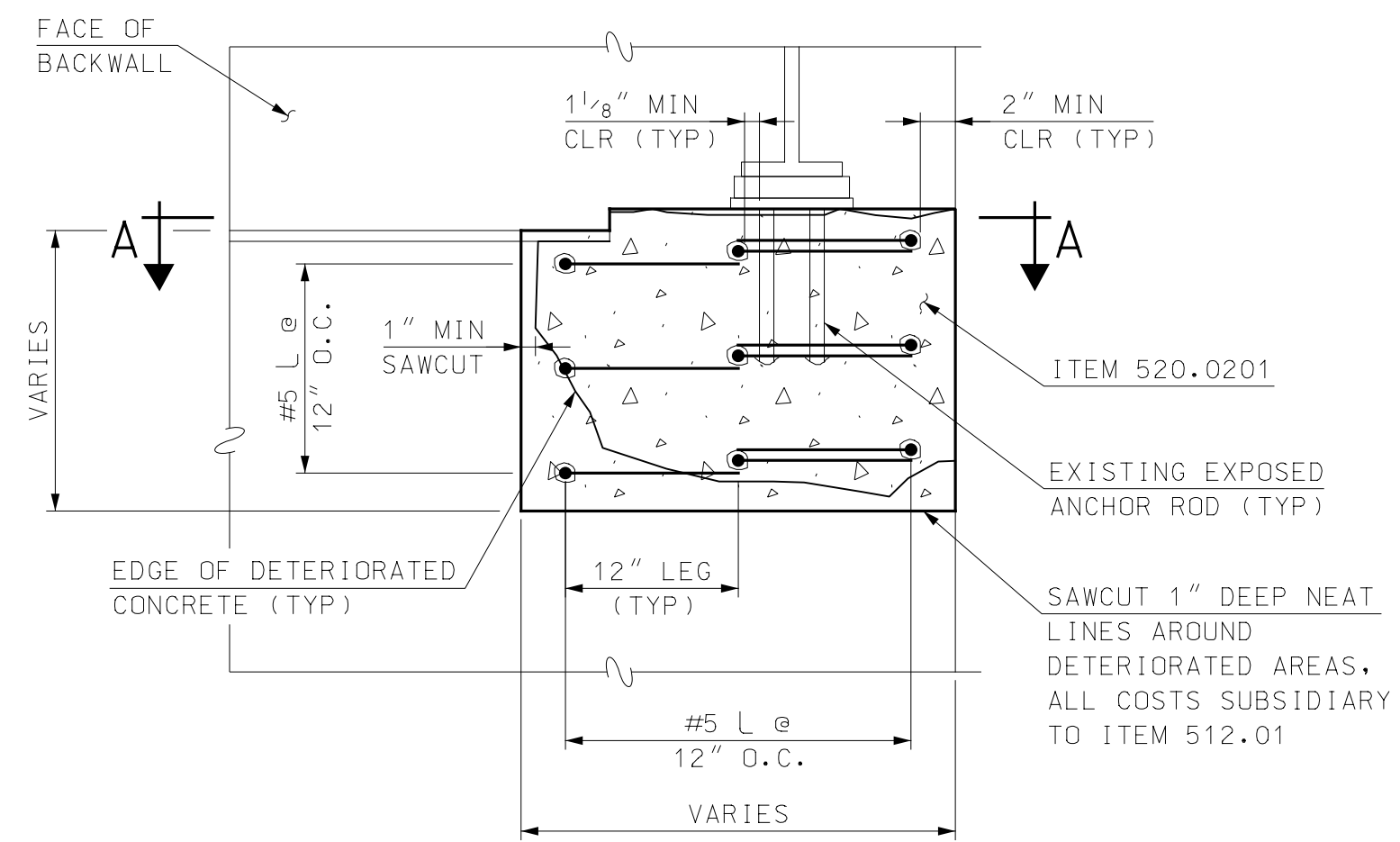
ROUTE AND SEAL CRACK (ITEM 521.22), SEE CRACK REPAIR DETAIL FOR MORE INFORMATION

TYPICAL CRACK REPAIR
NOT TO SCALE

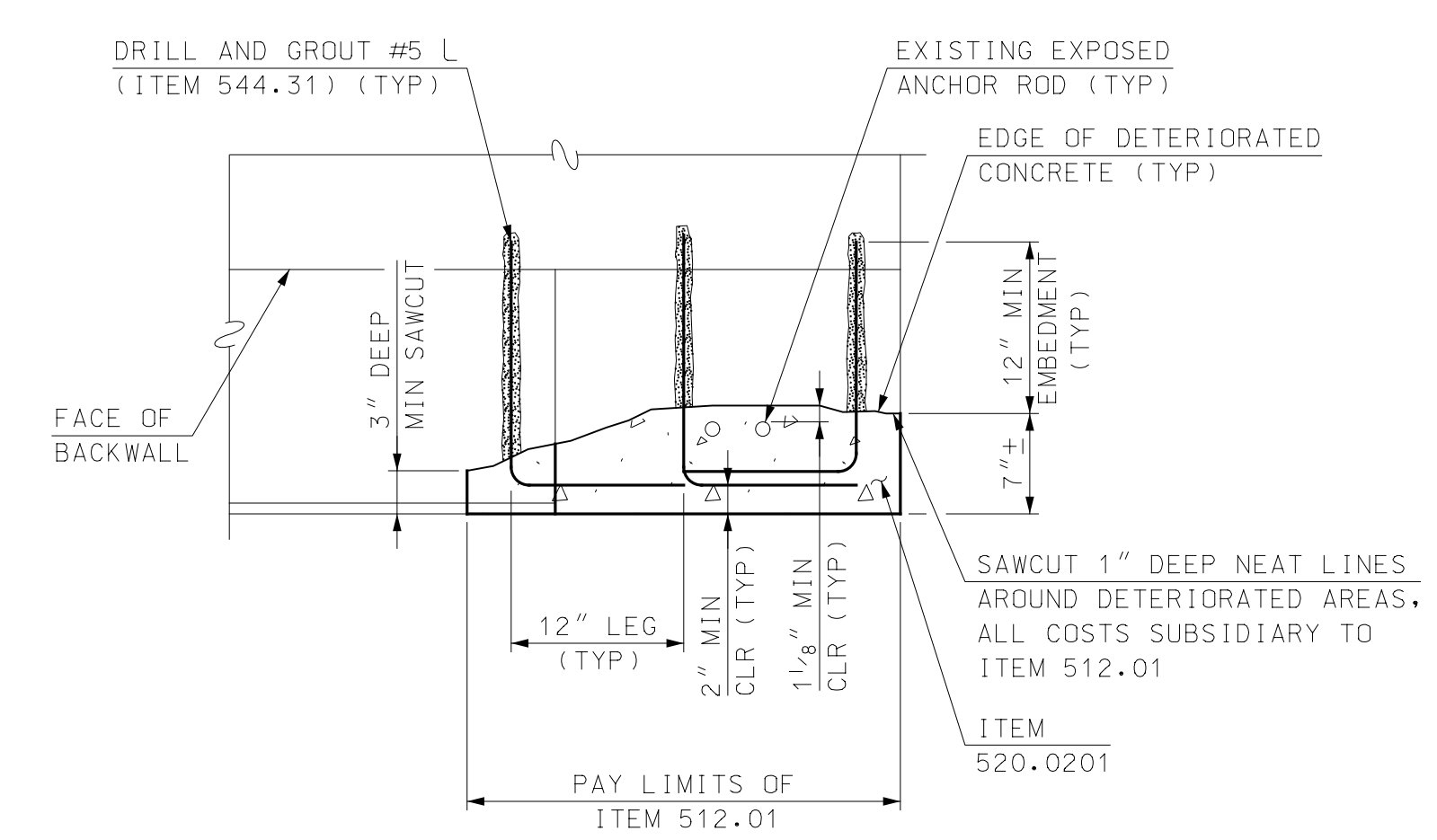


NOTE
1. CRACKS LARGER THAN 1/2" IN WIDTH SHALL BE REPAIRED WITH GROUT. CRACKS SMALLER THAN 1/2" SHALL BE SEALED.
2. ALL CRACKS IN THE SUBSTRUCTURE SHALL BE PAID UNDER ITEM 521.23 PER THE DETAIL FOR 521.22.

CRACK REPAIR DETAIL
NOT TO SCALE



TYPICAL ANCHOR BOLT REPAIR DETAIL
SCALE: 1" = 1'-0"



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

- NOTES**
1. SPALL AREA SHALL BE FREE OF ALL LOOSE CONCRETE BEFORE CASTING ITEM 520.0201.
 2. DETAILS AT ABUTMENT SHOWN, DETAILS AT PIER SIMILAR.
 3. ITEM 550.191 TO BE USED AS NECESSARY TO SUPPORT GIRDERS DURING REPAIRS.
 4. IF ANCHOR BOLT IS COMPLETELY EXPOSED, REMOVE CONCRETE BEHIND THE ANCHOR BOLT SUCH THAT THERE IS A MINIMUM OF 1 1/8" ALL AROUND THE BOLT TO BE FILLED WITH FRESH CONCRETE.
 5. BOLTS SHALL BE PLUM AND SECURED IN PLACE DURING PLACEMENT OF CONCRETE.
 6. THE CONDITION OF THE ANCHOR BOLTS SHALL BE JOINTLY INSPECTED BY THE CONTRACTOR AND ENGINEER AND REPLACED AS NECESSARY. REPLACEMENT OF BOLTS SHALL BE SUBSIDIARY OF ITEM 520.0201.

REV	DESCRIPTION	DRW	CHKD	BY	DATE

NH DOT BRIDGE NO.	DESIGNED	CHECKED	DATE
220/43	RPM	EGW	FEBRUARY 2020
FILENAME	DRAWN	SCALE	AS SHOWN
905108Dette_Ped	TAG		
MODEL NAME			
905108Dette2			

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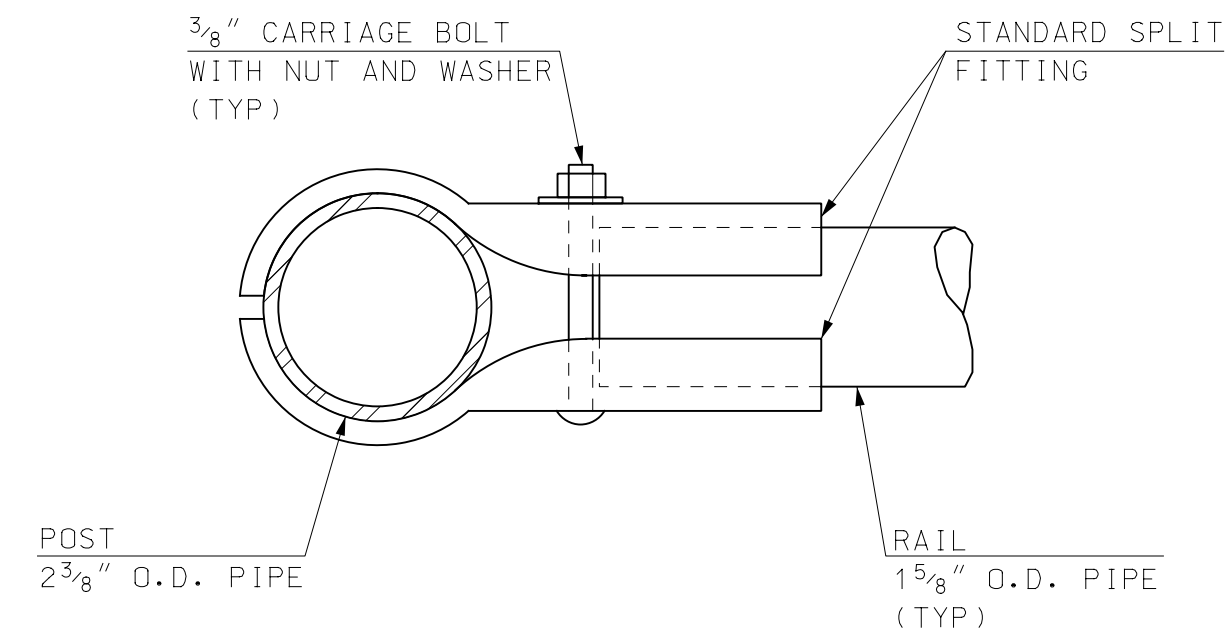
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CITY OF PORTSMOUTH
PORTSMOUTH, NEW HAMPSHIRE
MARKET STREET PEDESTRIAN BRIDGE

PROJECT NO. 905108
 SHEET NO. **34**
 SHEET 34 OF 40

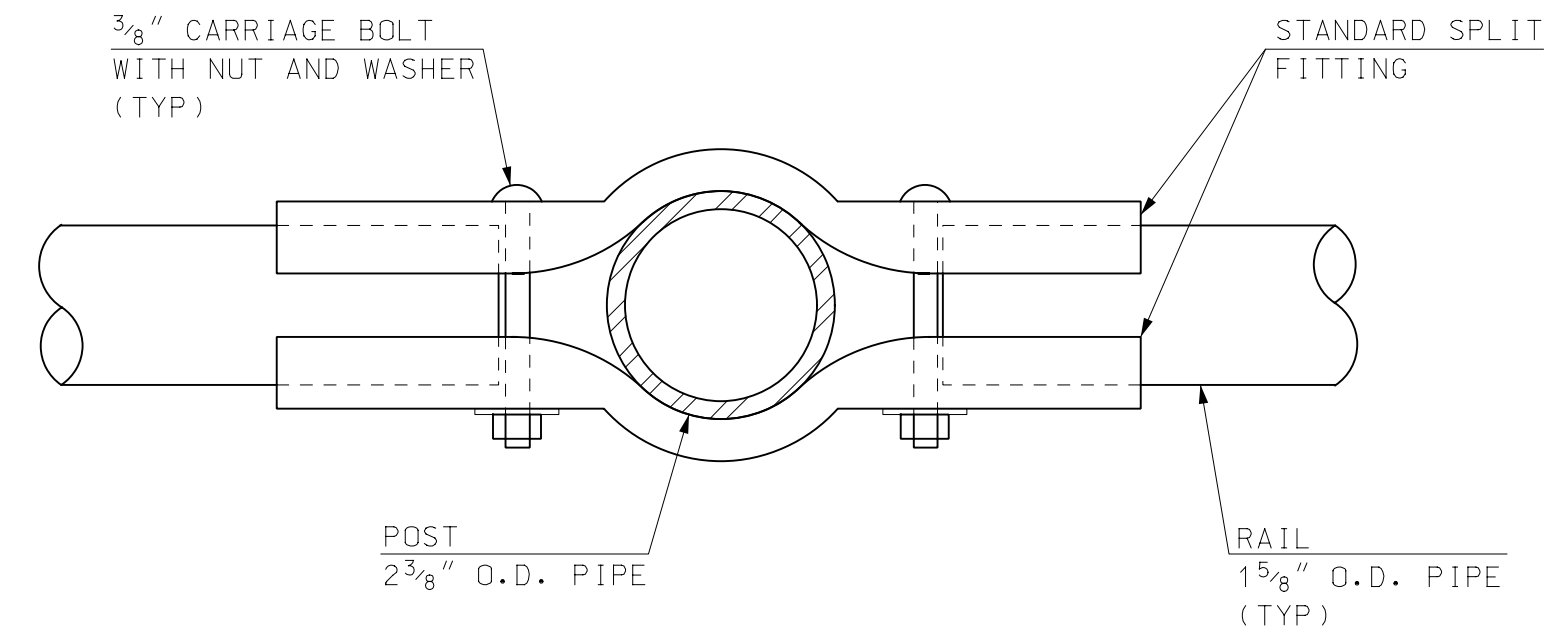
DETAILS (2 OF 3)

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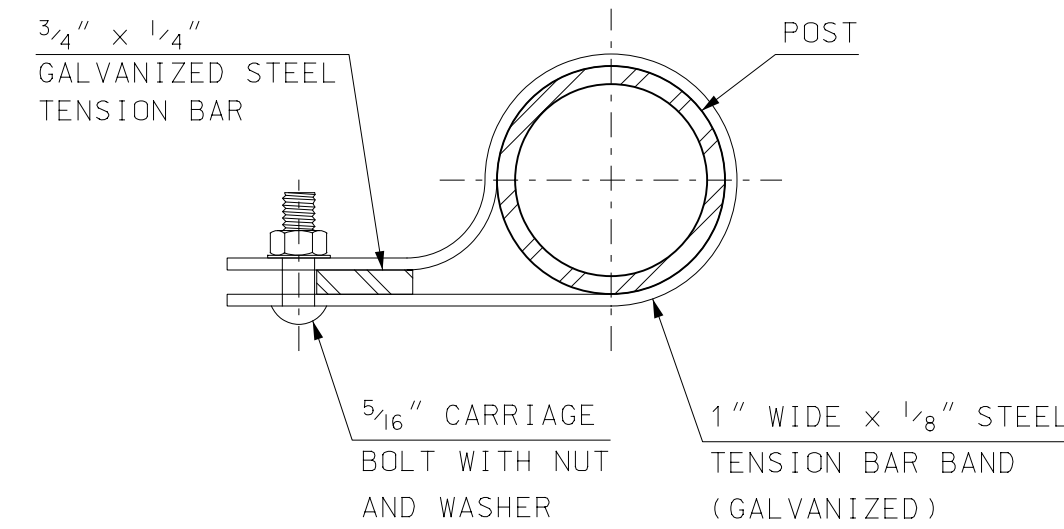
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(AT END POST)**

NOT TO SCALE



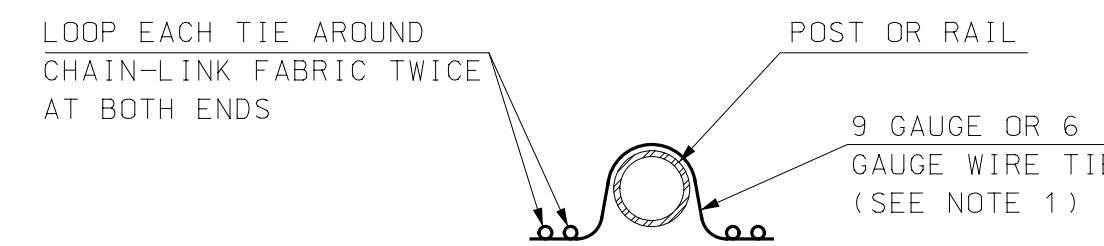
IN-LINE CLAMP DETAIL

NOT TO SCALE



TENSION BAND DETAIL

NOT TO SCALE

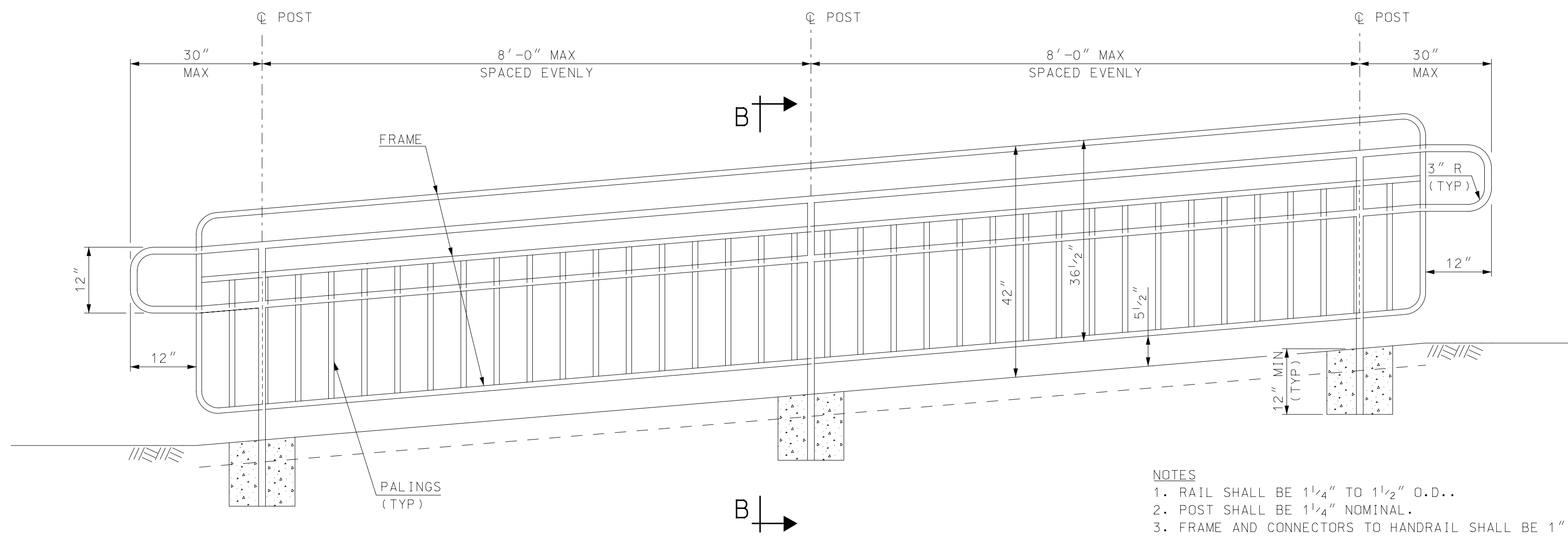


NOTE

1. WIRE TIES SHALL BE STANDARD ROUND 9 GAUGE ALUMINUM-COATED STEEL OR 6 GAUGE ALUMINUM ALLOY CONFORMING TO ASTM F 626 AND SHALL BE BLACK. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK FABRIC TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6" O.C. TO BOTTOM RAIL AND @ 12" O.C. TO ALL POSTS AND OTHER RAILS.

DOUBLE PIGTAILED TIE

NOT TO SCALE

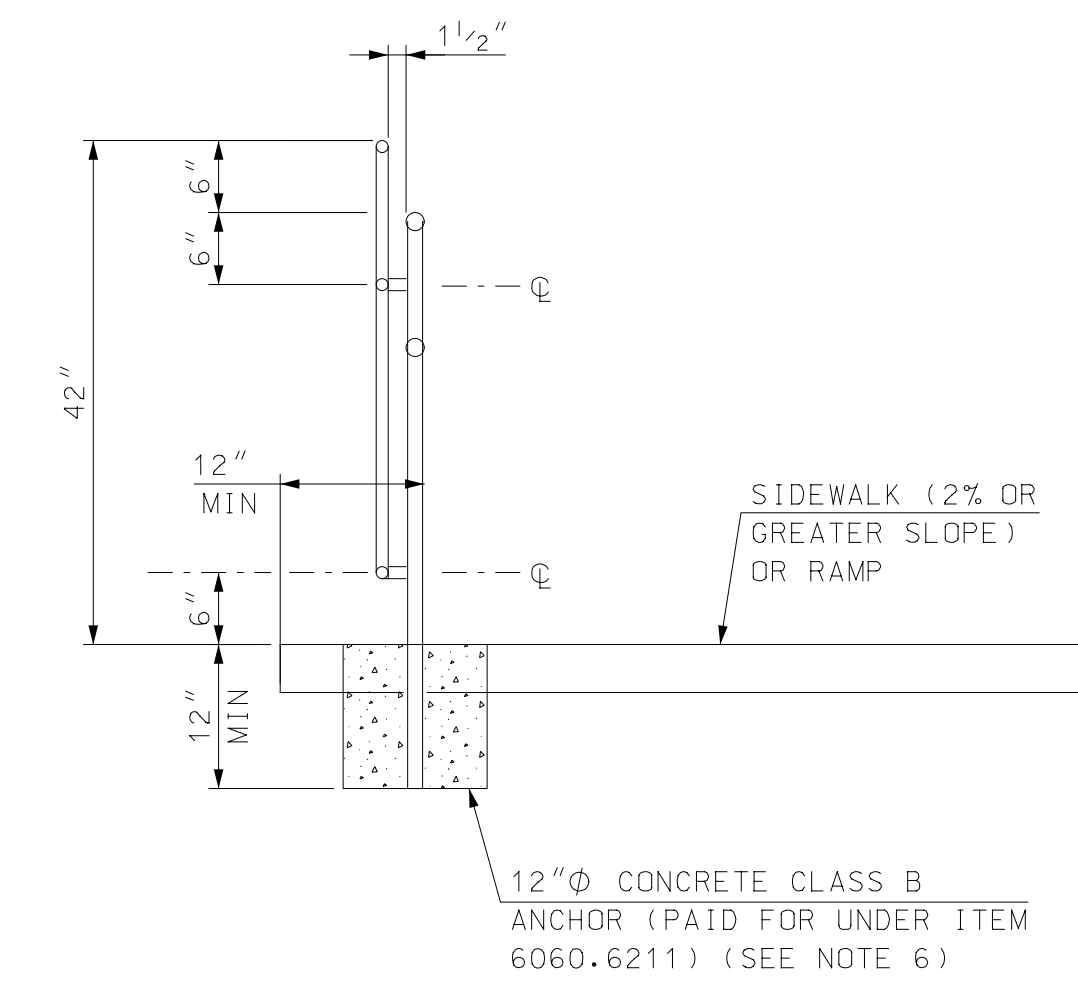


APPROACH RAMP ELEVATION

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

NOTES

1. RAIL SHALL BE 1 1/4" TO 1 1/2" O.D..
2. POST SHALL BE 1 1/4" NOMINAL.
3. FRAME AND CONNECTORS TO HANDRAIL SHALL BE 1" NOMINAL.
4. PALINGS SHALL BE 3/4" NOMINAL SPACED 6" ON CENTER
5. RAILING SHALL CONFORM TO NHDOT STANDARD PLAN NO. HR-1 PLATES 3 AND 4.
6. TYPICAL RAMP SECTION SHOWN WITHIN PAVED SIDEWALK APPROACHES. AT LOCATIONS OF EXISTING CONCRETE WINGWALLS DRILL 2" DIAMETER HOLE INTO EXISTING CONCRETE AND GROUT POSTS WITH AN APPROVED HIGH STRENGTH, NON-SHRINK GROUT (PAID FOR UNDER ITEM 606.6211)



SECTION B-B

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

REV	DESCRIPTION	DRW	CHKD	BY	DATE

NHDOT BRIDGE NO. 220743
 FILENAME 905108Detail_Ped
 DESIGNED RPM
 MODEL NAME 905108Detail3
 DRAWN TAG
 CHECKED EGVW
 SCALE AS SHOWN
 DATE FEBRUARY 2020

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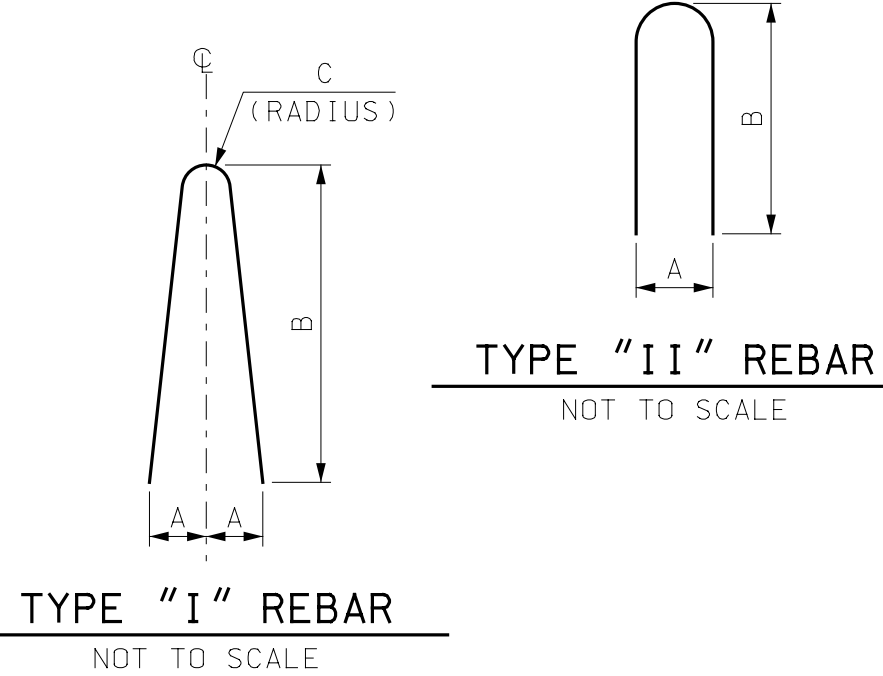
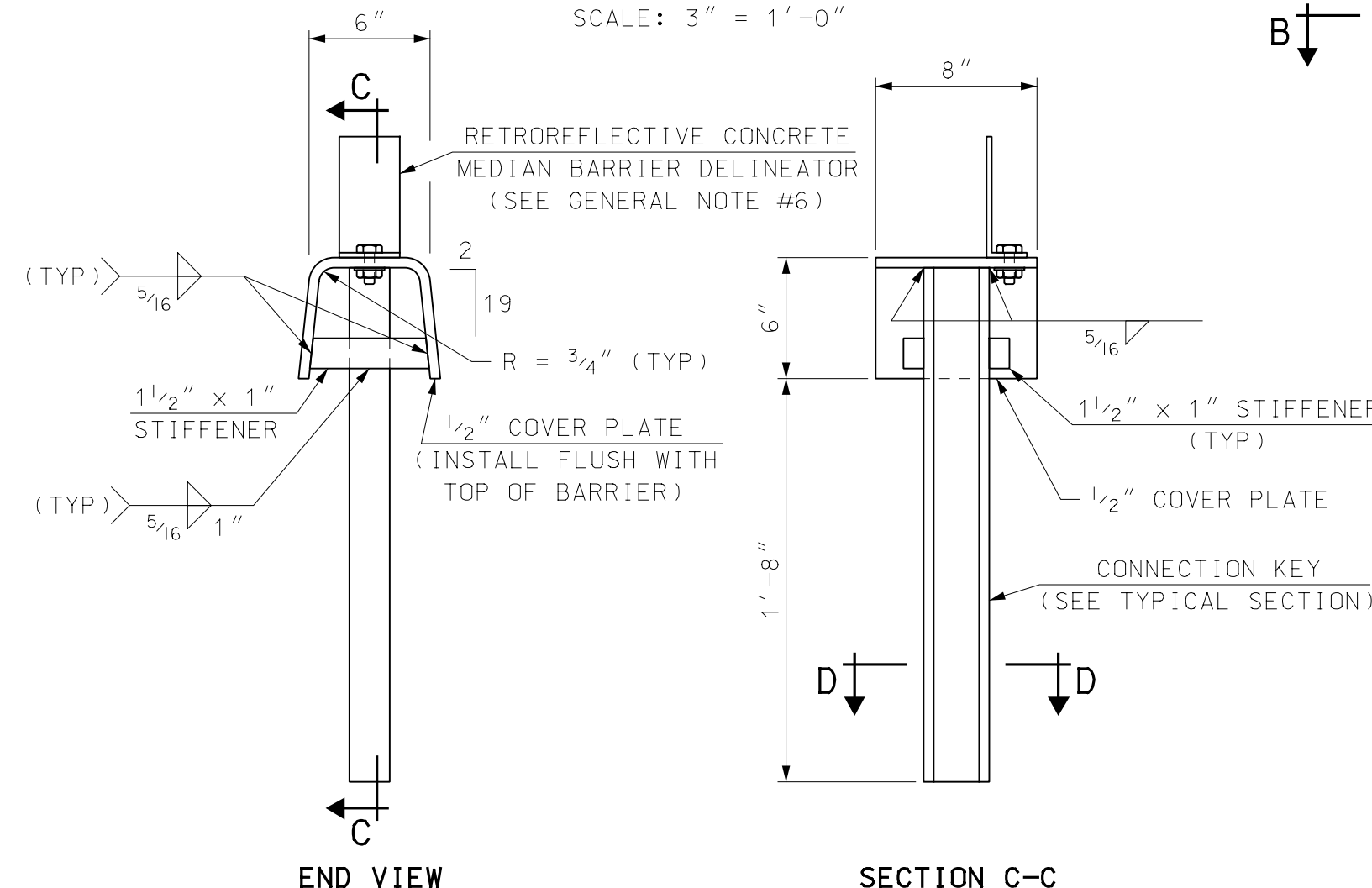
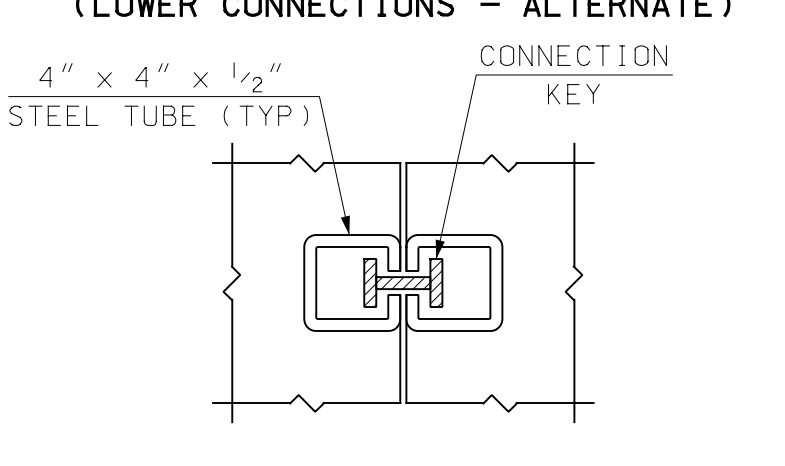
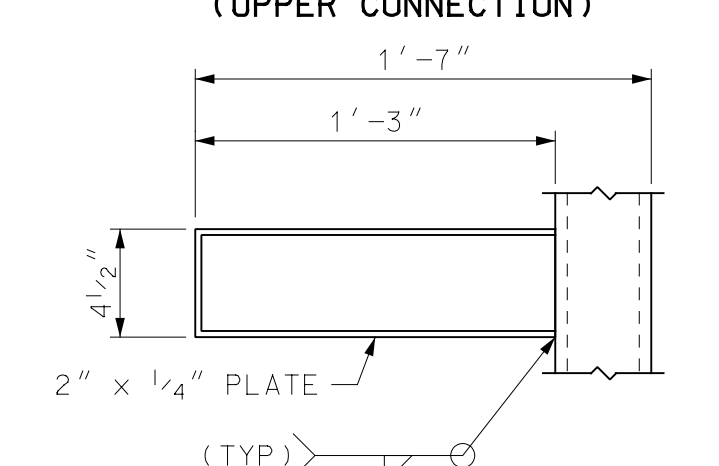
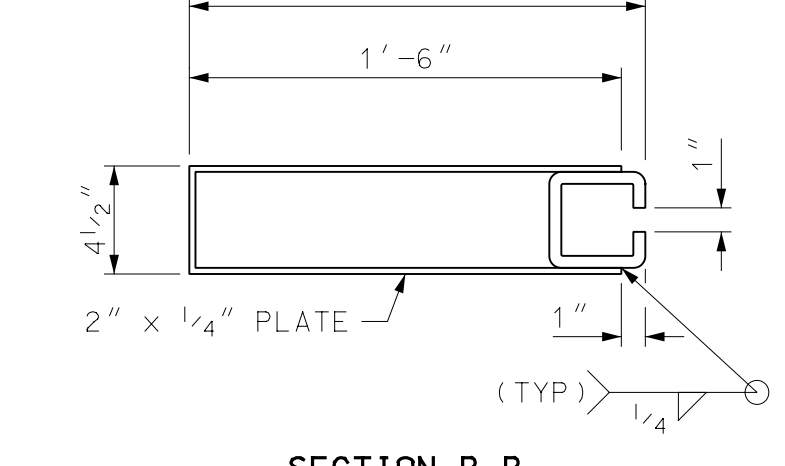
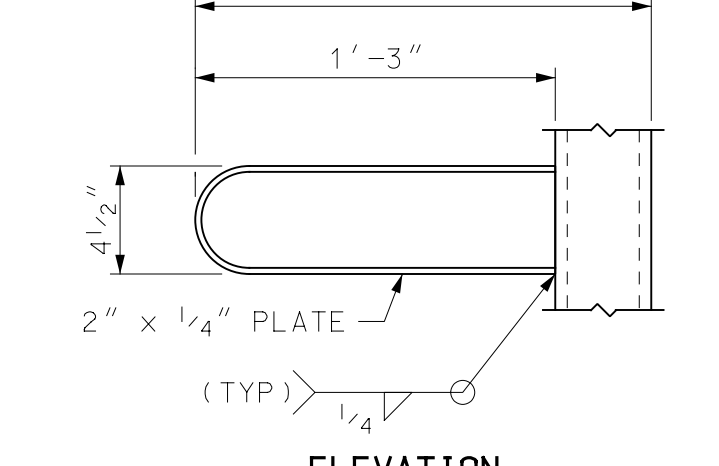
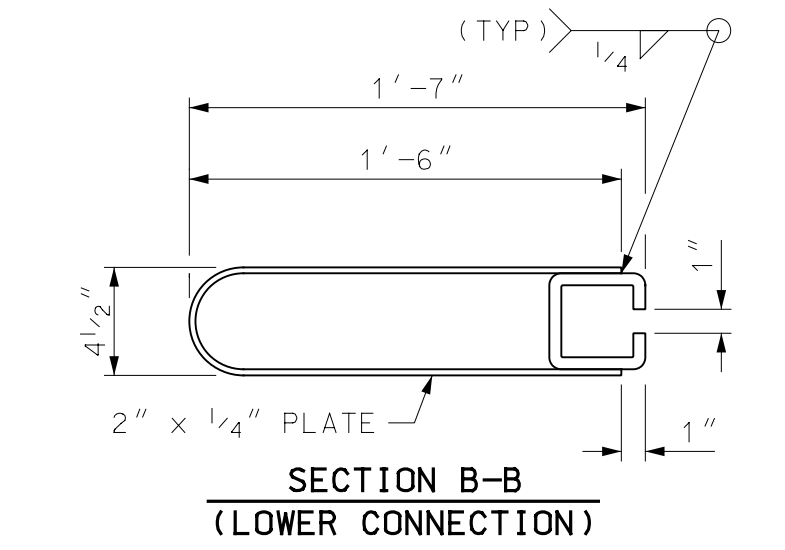
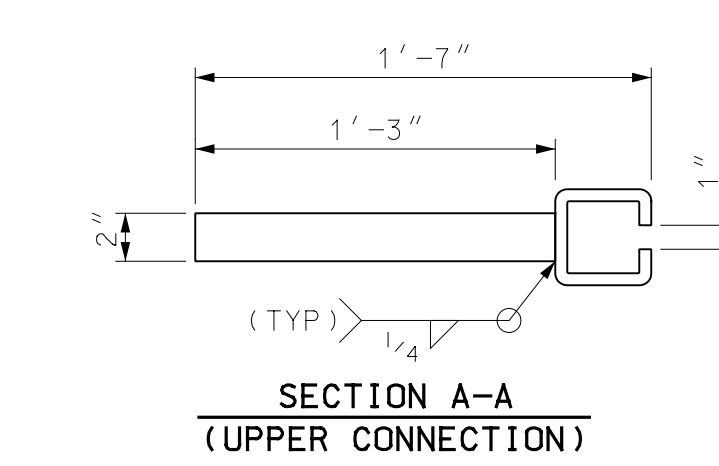
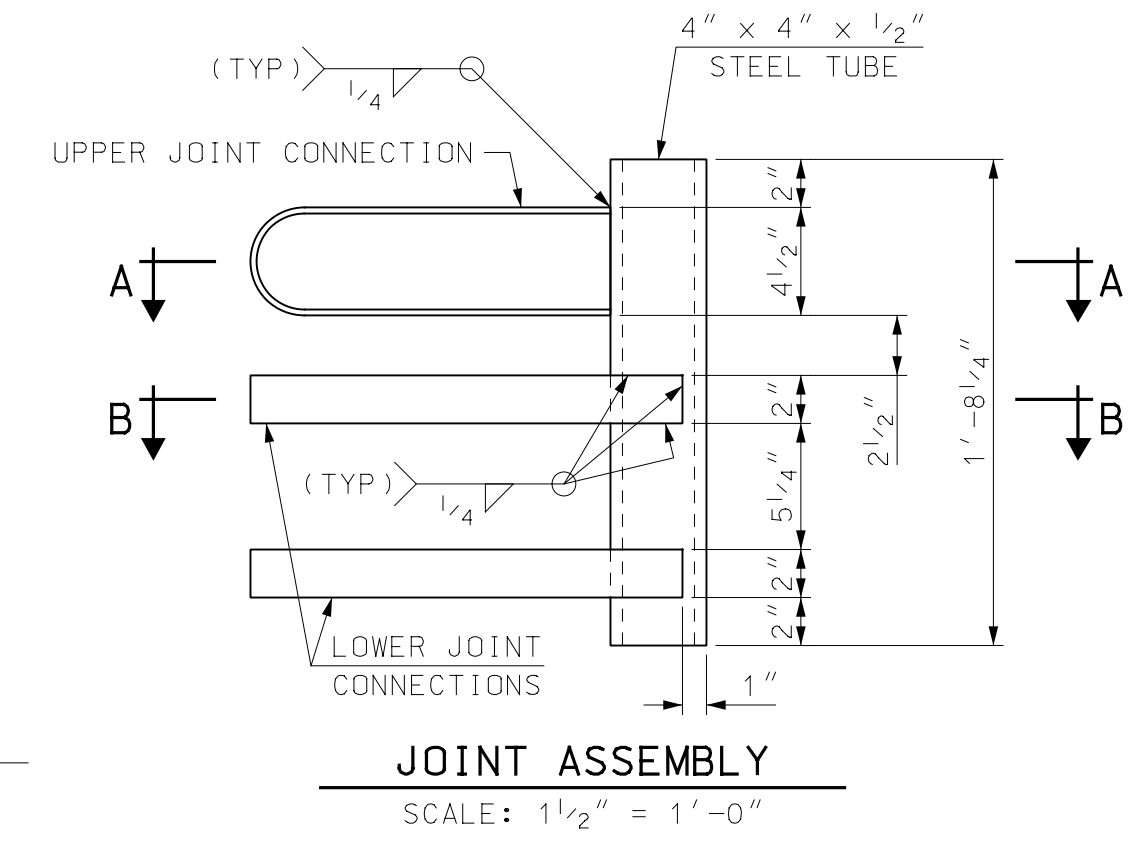
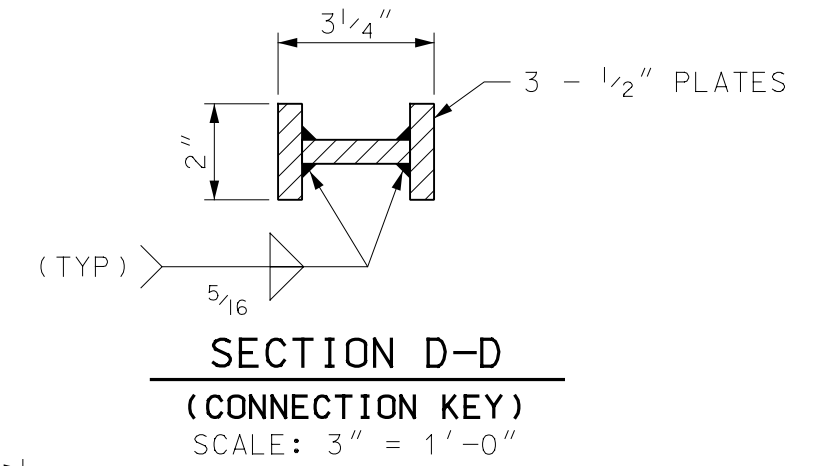
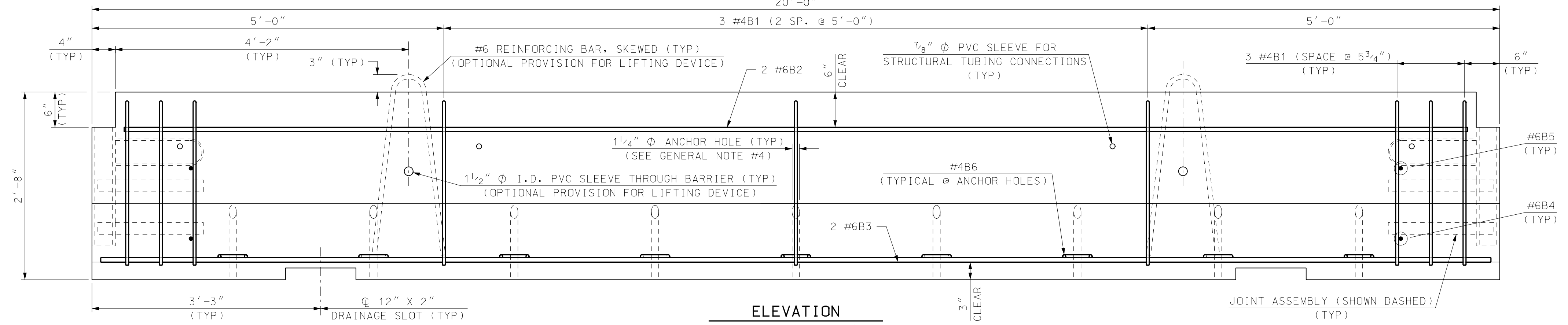
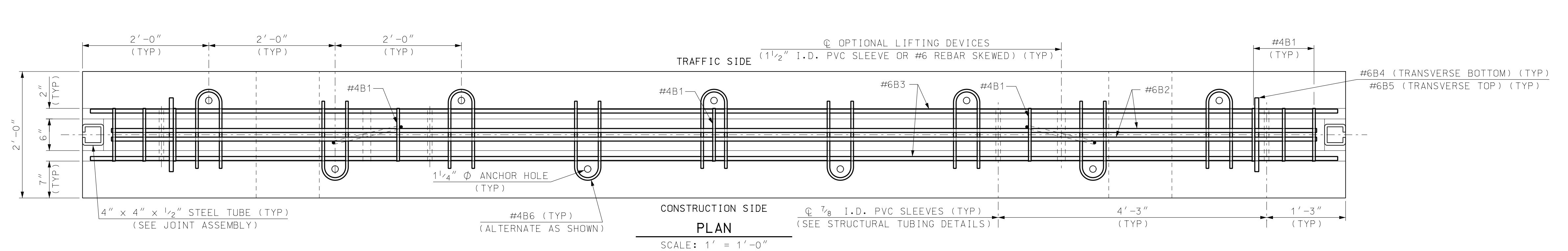
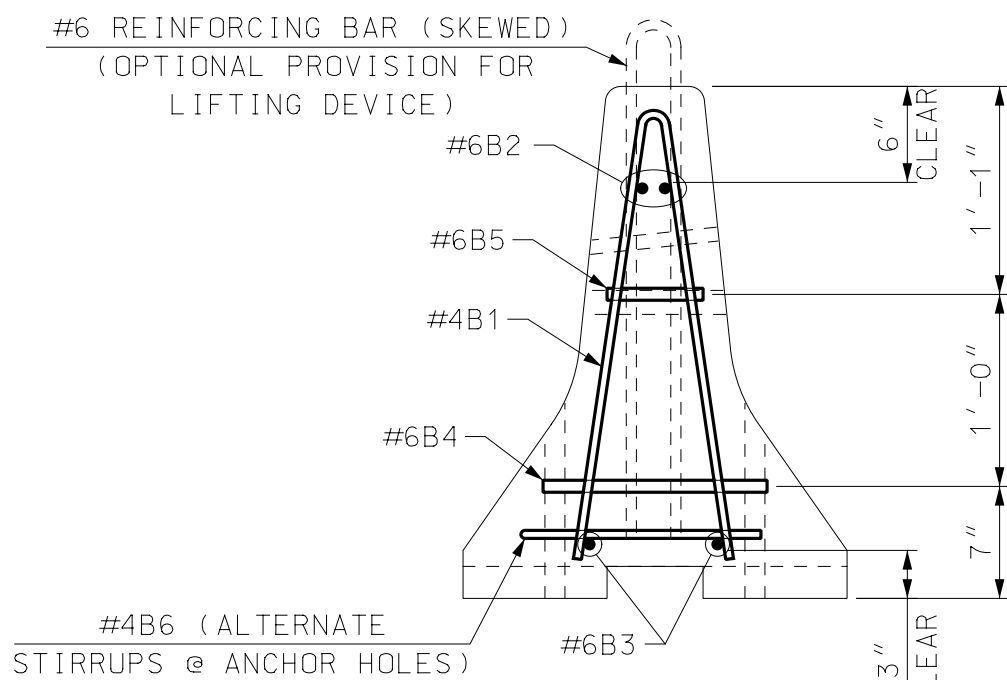
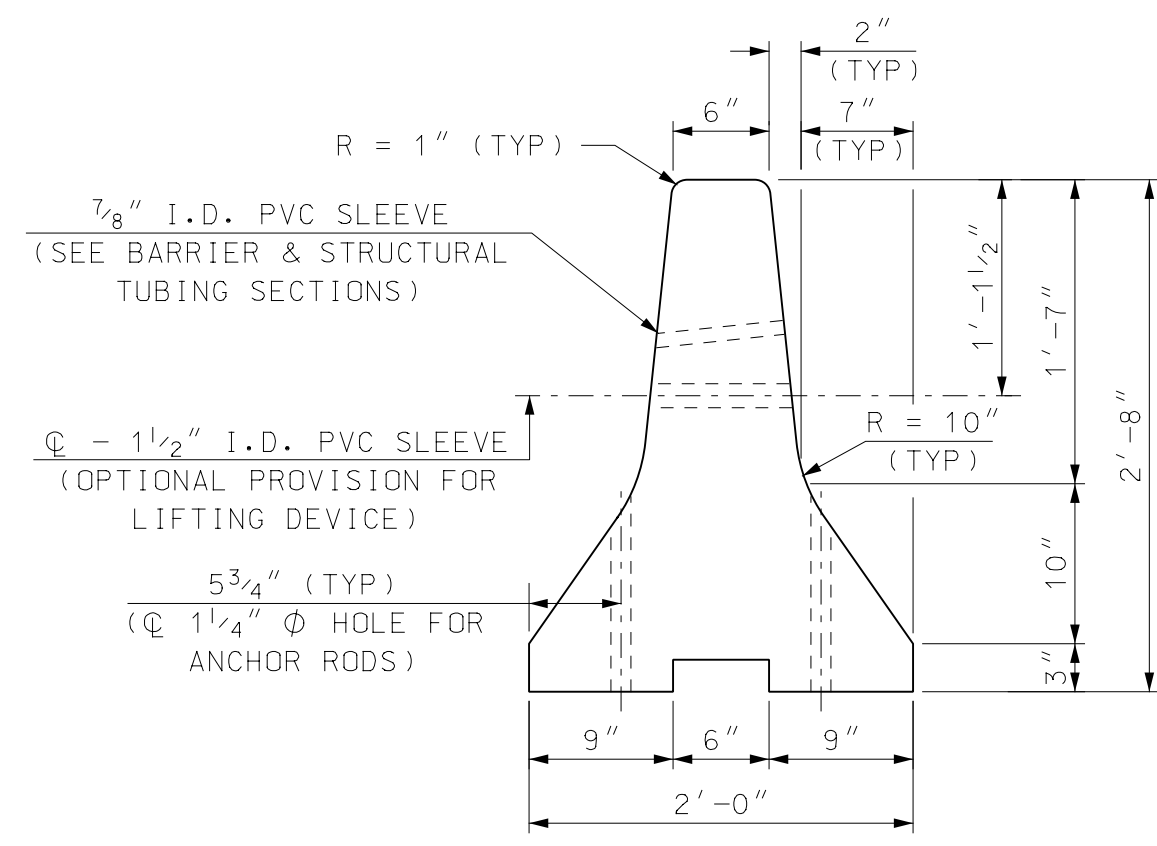
CITY OF PORTSMOUTH
 PORTSMOUTH, NEW HAMPSHIRE
 MARKET STREET PEDESTRIAN BRIDGE

PROJECT NO. 905108

DETAILS (3 OF 3)

SHEET NO.
35
 SHEET 35 OF 40

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CONNECTION KEY ASSEMBLY DETAILS
SCALE: 1 1/2" = 1'-0"

JOINT CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0" (EXCEPT AS NOTED)

- GENERAL NOTES**
- PORTABLE CONCRETE BARRIER SHALL BE FURNISHED BY THE CONTRACTOR AND PAID FOR AS ITEM 606.41741 PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE). CONCRETE BARRIER AND ALL ATTACHMENTS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIAL PROVISIONS. ALL BARRIER UNITS FOR BRACED SYSTEMS SHALL BE 20' LONG.
 - PORTABLE CONCRETE BARRIER DETAILS, AS SHOWN IN THESE PLANS, ARE IN COMPLIANCE WITH REQUIREMENTS PER UPDATED NCHRP REPORT 350 FOR TEST NO. 3-11 (MASH TEST LEVEL 3), CRASH TESTED BY MIDWEST ROADSIDE SAFETY; NY BOX BEAM STIFFENING OF UNANCHORED TCB, MARCH 2008, AND ACCEPTED PER FHWA LETTER B-239 (11/1/2012). THE BARRIER SYSTEM HAS BEEN CRASH TESTED WITH A 27.6" DYNAMIC DEFLECTION WHICH WILL ALLOW BRACED BARRIER TO BE PLACED A MINIMUM 12" FROM THE EDGE OF BRIDGE DECK.
 - A MINIMUM OF TWO BARRIER UNITS, WITH BRACED JOINTS ARE REQUIRED TO BE PLACED BEYOND BOTH ENDS OF THE BRIDGE WORK AREA, FOR SPEEDS GREATER THAN 45 MPH. FOR SPEEDS ≤ 45 MPH, A MINIMUM OF ONE BRACED BARRIER IS REQUIRED TO BE FULLY SET BEYOND EACH END OF BRIDGE WORK AREA.
 - THE LAST CONCRETE BARRIER UNIT, AT EACH END OF BRACED BARRIER LAYOUT, SHALL BE ANCHORED A MINIMUM 18" BELOW THE ROADWAY SURFACE. REQUIRED 1" Φ ANCHOR RODS (A36 STEEL) SHALL BE INSTALLED WITH 5 ANCHORS ON THE TRAFFIC SIDE OF BARRIER AND 4 ON THE CONSTRUCTION SIDE. IF THE END(S) OF THE BRACED CONCRETE BARRIER SYSTEM EXTENDS 5' OR MORE BEYOND LIMITS OF BRIDGE WORK THE LAST BARRIER UNIT DOES NOT REQUIRE ANCHORAGE.
 - PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE), ITEM 606.41741, MAY BE INSTALLED WITH A 230' MINIMUM RADIUS. GAPS CREATED BETWEEN STRUCTURAL TUBES AND CONCRETE BARRIER, DURING A RADIAL LAYOUT, SHALL BE SHIMMED WITH 8" x 8" x 1/2" PLATES & FENDER WASHERS TO FIRMLY ATTACH STRUCTURAL TUBING TO BARRIER.
 - THE CONTRACTOR SHALL FURNISH AND INSTALL APPROVED RETROREFLECTIVE DELINEATORS AT 25-FOOT INTERVALS ALONG TOP AND/OR ONE FOOT DOWN THE SIDE OF PORTABLE CONCRETE BARRIER, SUBSIDIARY TO ITEM 606.41741 (SEE STANDARD NO. DL-1 OF NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION). THE COLOR OF DELINEATORS SHALL, IN ALL INSTANCES, CONFORM TO THE COLOR OF EDGE LINE MARKINGS. DELINEATORS SUPPLEMENT, BUT DO NOT REPLACE, THE NEED FOR RETROREFLECTIVE SOLID EDGE LINE MARKINGS.

MATERIAL NOTES

- BARRIERS SHALL BE LIGHT COLORED CLASS AA CONCRETE, WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 psi, AND SHALL HAVE A SMOOTH UNIFORM SURFACE FREE OF DEFECTS AND IRREGULARITIES. CASTING DATE SHALL BE SHOWN ON BARRIER. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615) GRADE 60. ALL REINFORCEMENT SHALL HAVE 1/2" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.
- STRUCTURAL STEEL, EXCEPT THE STEEL TUBES, SHALL BE ASTM A36 OR A572. ALL STEEL SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 550.
- STEEL TUBES, 6" x 6" x 3/16" & 4" x 4" x 1/2", SHALL BE ASTM A 500 GRADE B OR C. ALL TUBES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.
- ALL STEEL FOR CONNECTION KEY AND TRANSITION KEY ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.
- A MINIMUM OF 2 LIFTING DEVICES, EACH WITH THE CAPACITY TO LIFT A MASS OF 6 TONS (MINIMUM), SHALL BE INSTALLED TO EACH BARRIER UNIT. TWENTY FOOT LONG CONCRETE BARRIER UNITS ARE APPROXIMATELY 400 LBS./FT.
- DELINEATORS SHALL BE ATTACHED TO BARRIER USING AN APPROVED ADHESIVE MATERIAL OR AS SHOWN ON THIS SHEET.

REINFORCING SCHEDULE (PER 20' BARRIER UNIT)								
MARK	SIZE	LENGTH	# PIECES	TYPE	A	B	C	LOCATION
B1	#4	4'-10"	9	I	5"	2'-4"	1"	STIRRUPS
B2	#6	19'-1"	2	---				LONGITUDINAL (TOP)
B3	#6	19'-9"	2	---				LONGITUDINAL (BOTTOM)
B4	#6	1'-2"	2	---				TRANSVERSE (BOTTOM)
B5	#6	6"	2	---				TRANSVERSE (TOP)
B6	#4	2'-9"	9	II	5"	1'-3"		STIRRUPS

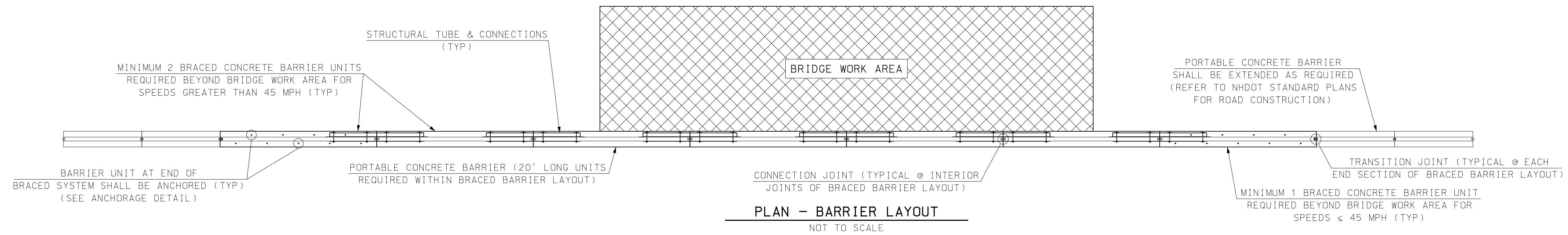
SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
English/BARRIER	905108_PCB-BRACED	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

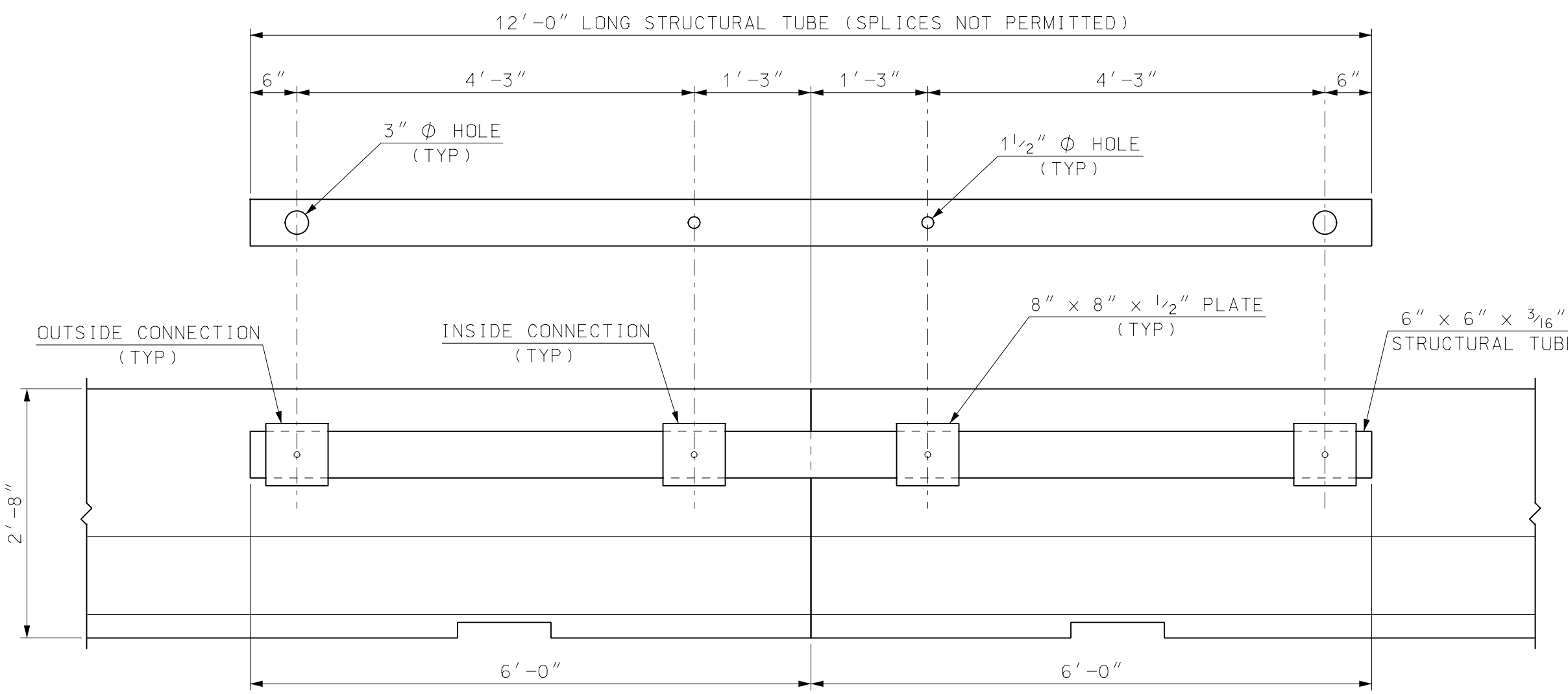
CITY PORTSMOUTH BRIDGE NO. 240/106 & 241/106 STATE PROJECT

LOCATION MARKET STREET

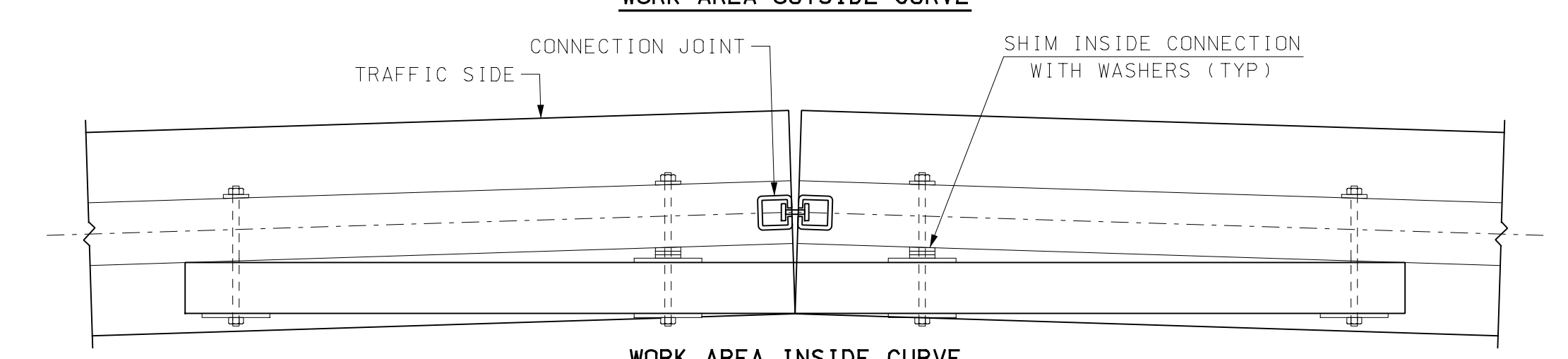
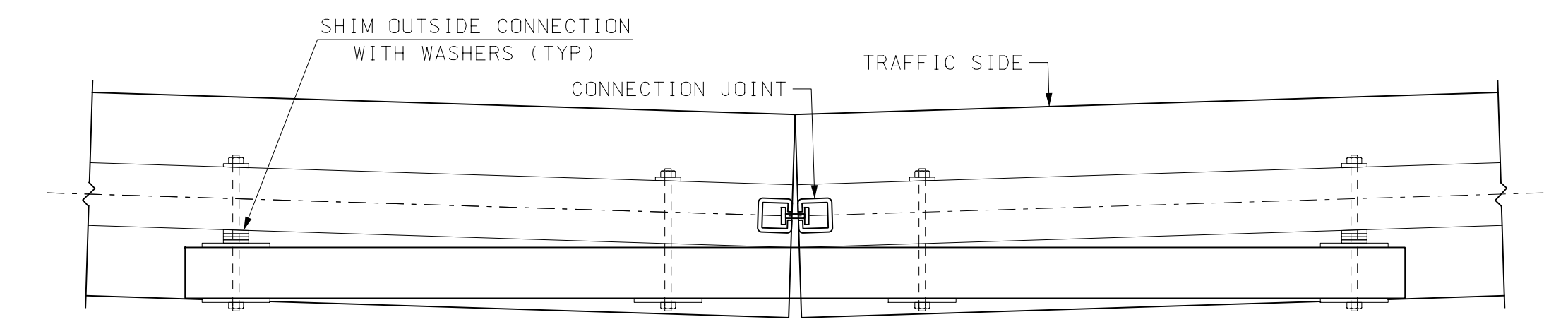
PORTABLE CONCRETE BARRIER - BRACED (1 OF 2)				BRIDGE SHEET
REVISIONS AFTER PROPOSAL	BY	DATE	BY	DATE
	DESIGNED	NHDOT 7/12	CHECKED	ABH 8/12
	DRAWN	PJP 8/12	CHECKED	ABH 8/12
	QUANTITIES		CHECKED	
ISSUE DATE	8/15/12	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	5/15/18	-----	36	40



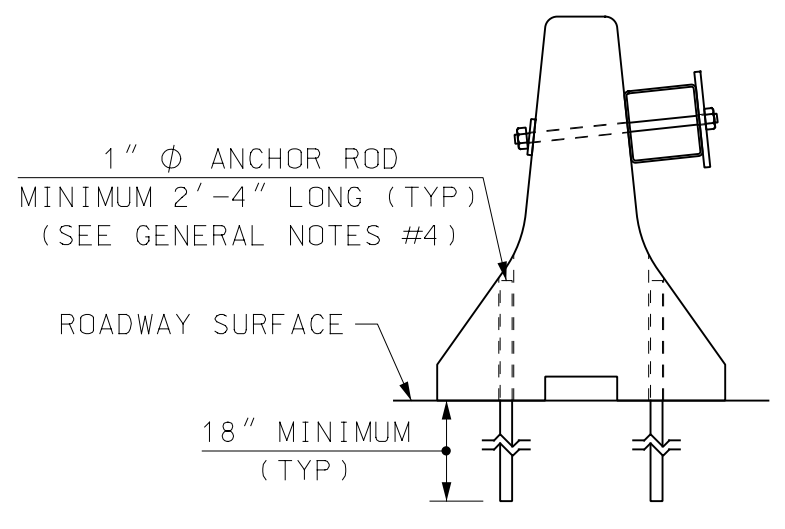
PLAN - BARRIER LAYOUT
NOT TO SCALE



STRUCTURAL TUBING DETAILS
SCALE: 3/4" = 1'-0"



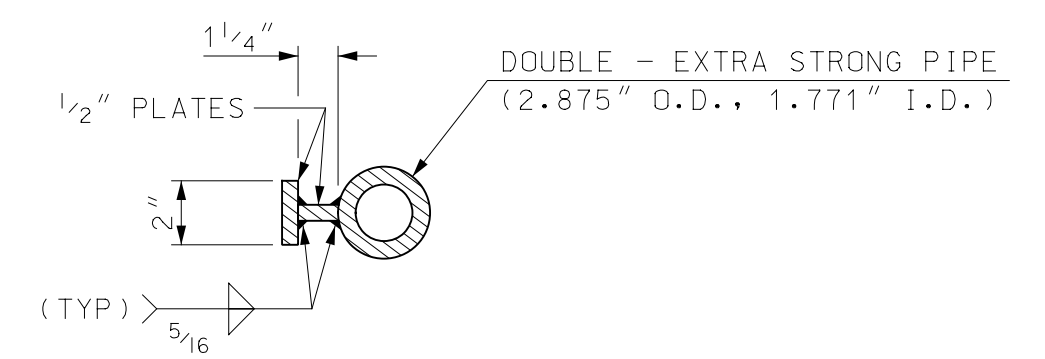
TUBE CONNECTIONS (CURVED ALIGNMENT)
SCALE: 3/4" = 1'-0"



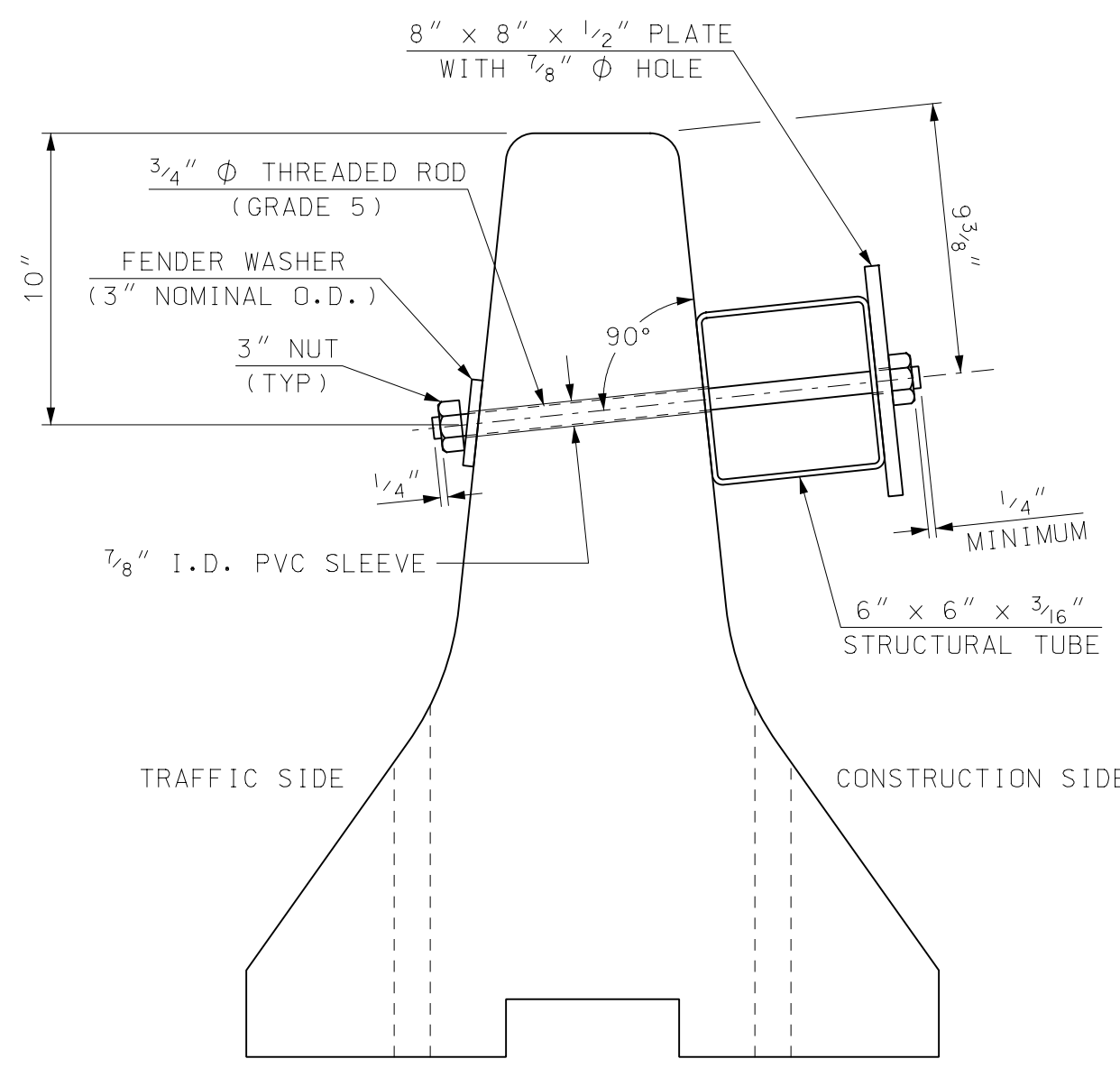
ANCHORAGE DETAIL
SCALE: 3/4" = 1'-0"

PVC SLEEVE OPENINGS SHALL BE MODIFIED/DRILLED AS REQUIRED TO PROPERLY ALIGN STRUCTURAL TUBE BRACING UNITS FOR CURVED ALIGNMENTS

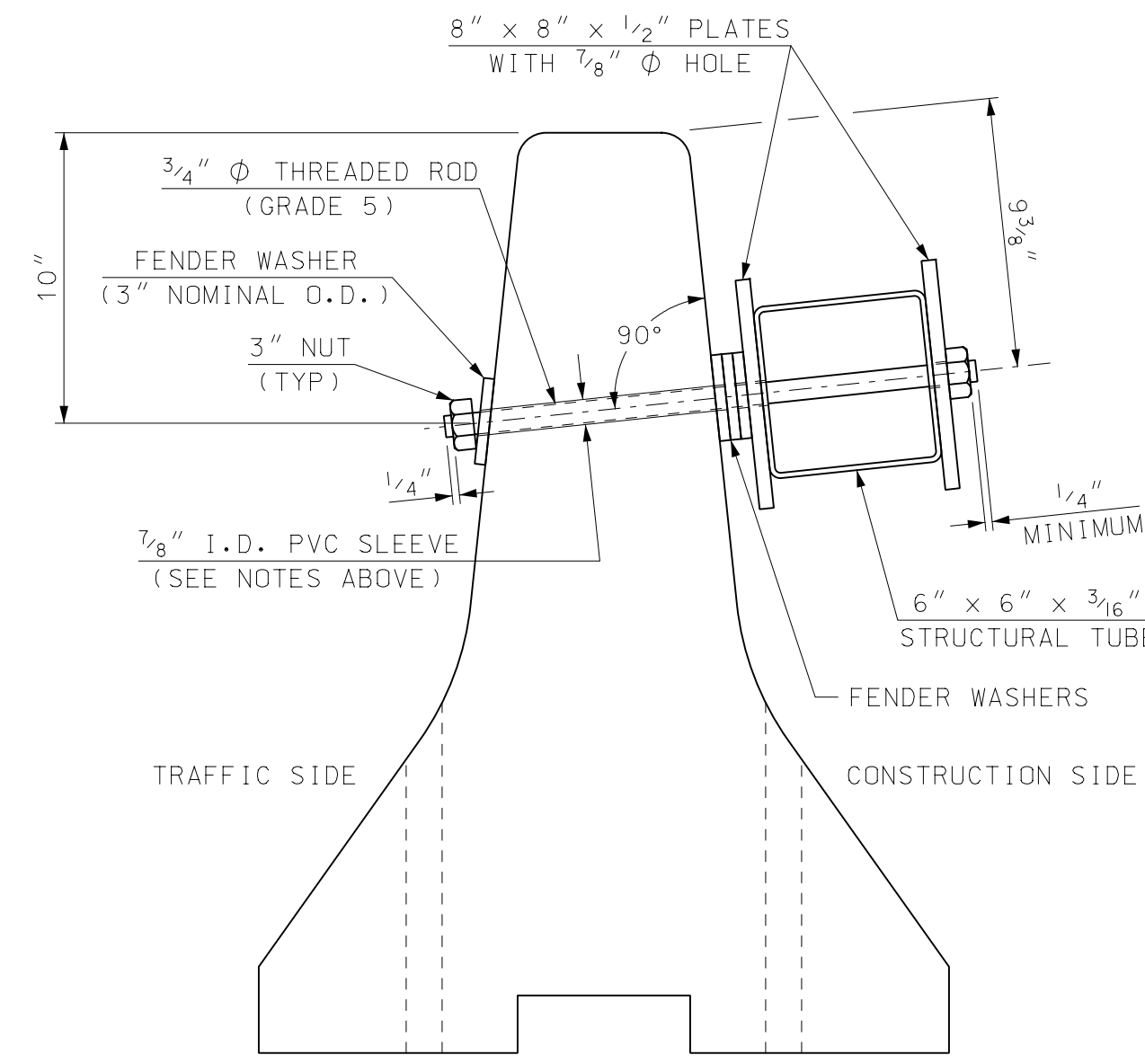
THE PRESENCE OF NORMAL HOLES WHICH HAVE BEEN MODIFIED/DRILLED WILL NOT AFFECT THE REUSE OF CONCRETE BARRIER UNITS



TYPICAL SECTION (TRANSITION KEY)
SCALE: 2" = 1'-0"

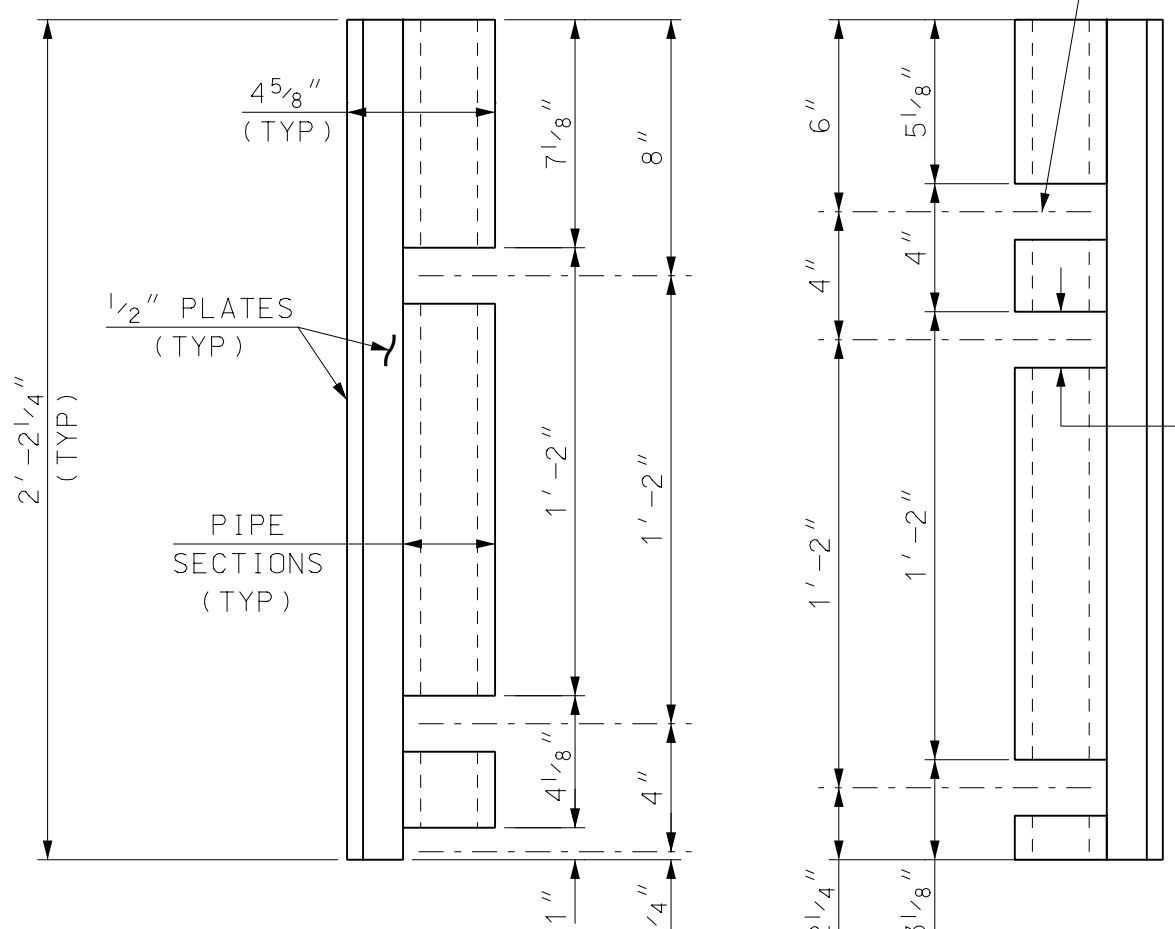


SECTION WITHOUT SHIMS

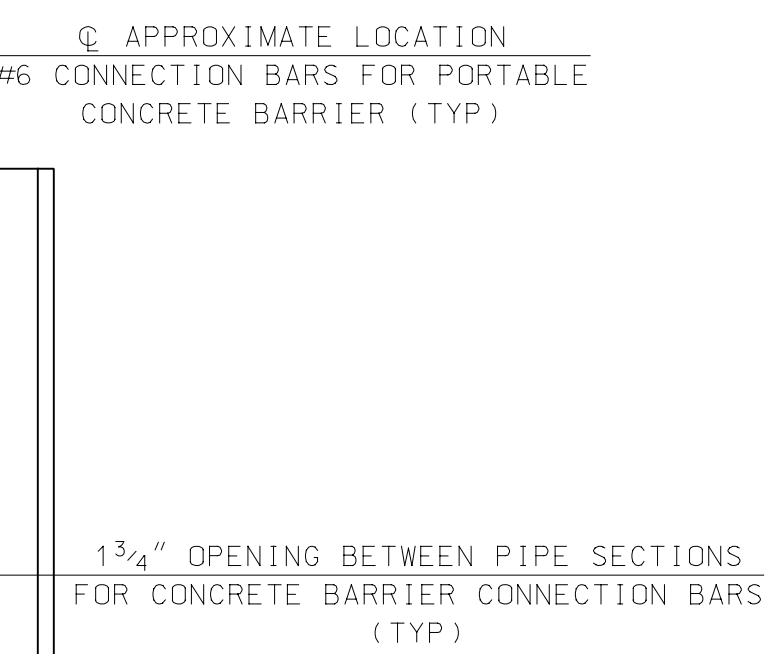


SECTION WITH SHIMS

BARRIER & STRUCTURAL TUBING SECTIONS
SCALE: 2" = 1'-0"

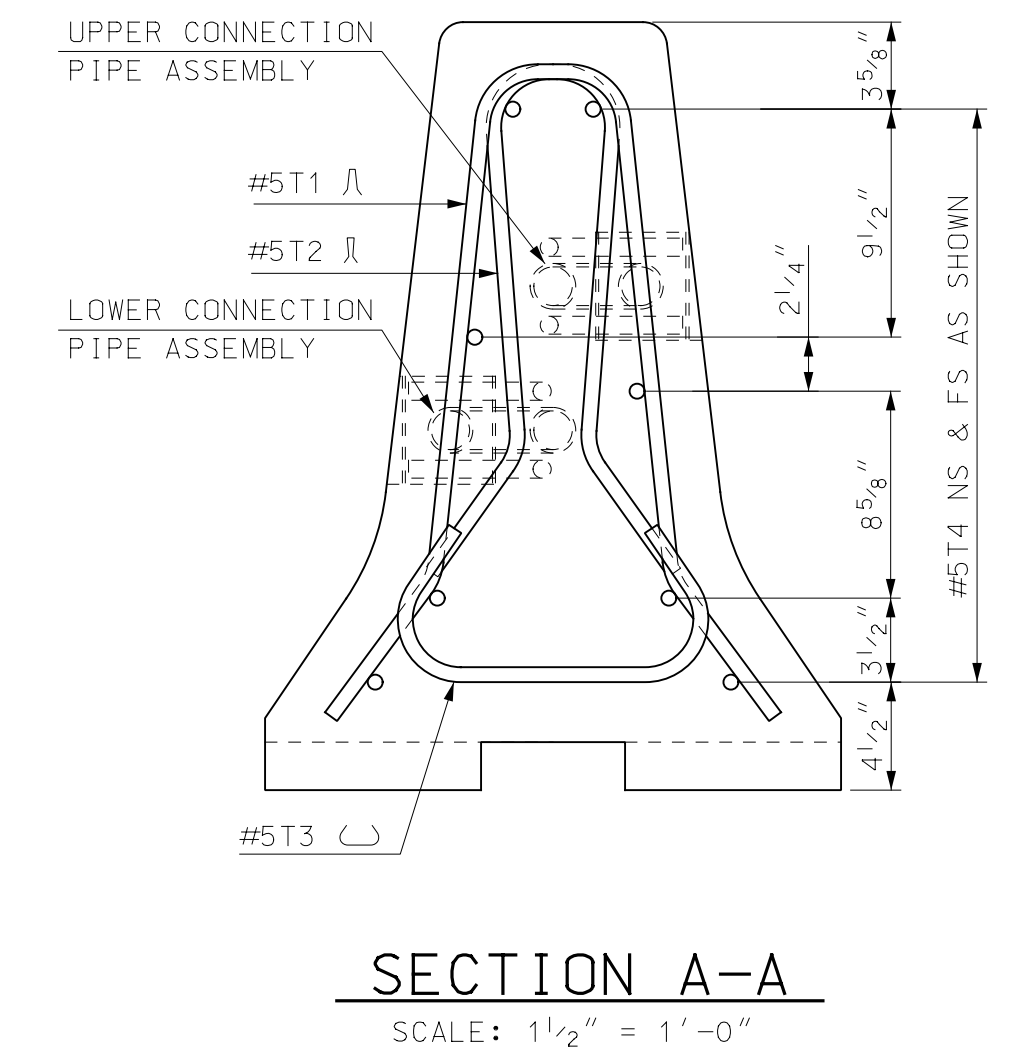
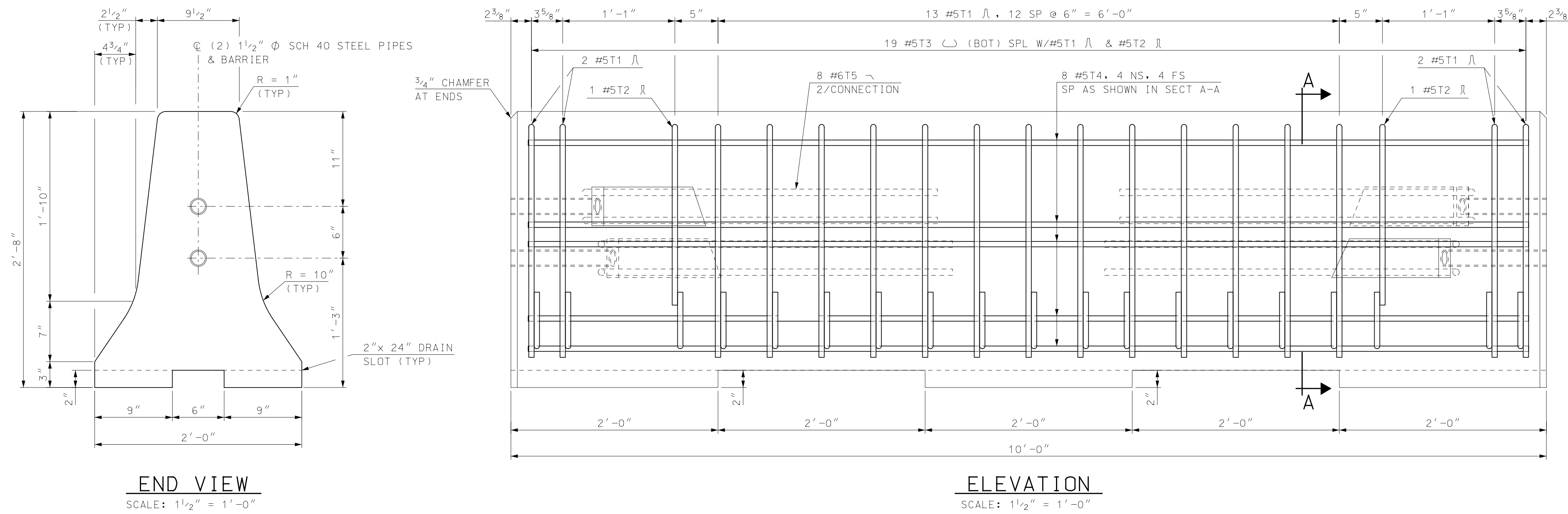


TRANSITION KEY ELEVATIONS
SCALE: 2" = 1'-0"



TRANSITION JOINT DETAILS
NOT TO SCALE

STATE OF NEW HAMPSHIRE									
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN									
CITY PORTSMOUTH		BRIDGE NO. 240/106 & 241/106		STATE PROJECT					
LOCATION MARKET STREET									
PORTABLE CONCRETE BARRIER - BRACED (2 OF 2)								BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY DATE		BY DATE		OF	
DESIGNED NHDOT 7/12				CHECKED ABH 8/12		CHECKED ABH 8/12		FILE NUMBER	
DRAWN PJP 8/12				CHECKED ABH 8/12		CHECKED			
QUANTITIES				ISSUE DATE 8/15/12		FEDERAL PROJECT NO.		SHEET NO. 37	
SUBDIRECTORY English/BARRIER				DGN LOCATOR 905108_PCB-BRACED		REV. DATE 5/15/18		TOTAL SHEETS 40	



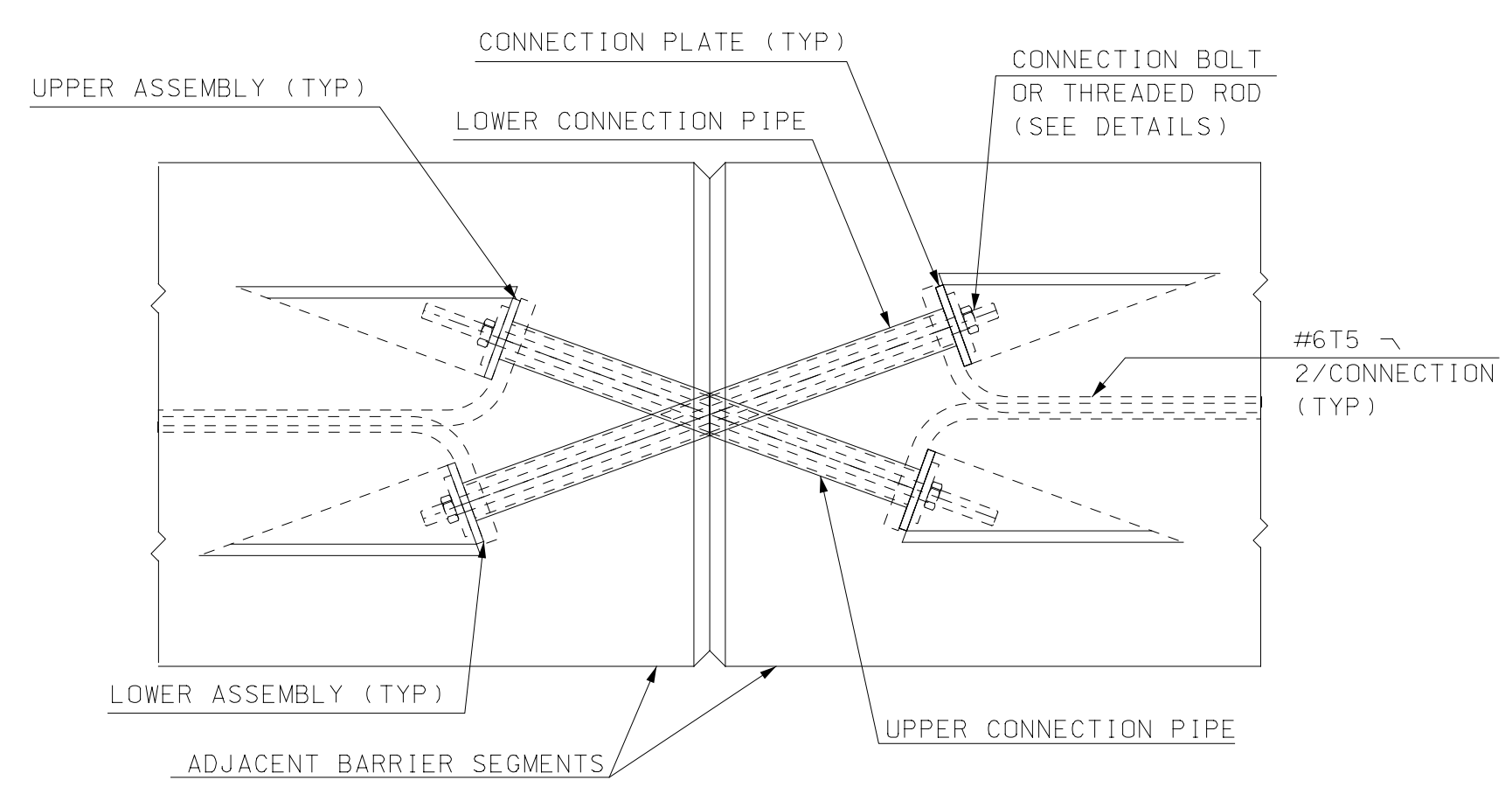
GENERAL NOTES:

- PORTABLE CONCRETE BARRIER SHALL BE FURNISHED BY THE CONTRACTOR AND PAID FOR AS ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE). CONCRETE BARRIER AND ALL ATTACHMENTS SHALL BE FABRICATED IN ACCORDANCE WITH SPECIAL PROVISIONS. ALL BARRIER UNITS SHALL BE 10' LONG.
- PORTABLE CONCRETE BARRIER DETAILS, AS SHOWN ON THESE PLANS, ARE IN COMPLIANCE WITH REQUIREMENTS PER UPDATED NCHRP REPORT 350 FOR TEST NO 3-11 (MASH TEST LEVEL 3), CRASH TESTED BY TEXAS A&M UNIVERSITY SYSTEM, MAY 2005, AND ACCEPTED PER REPORT FHWA/TX-05/0-4692-1.
- THE BARRIER HAS BEEN CRASH TESTED WITH A 27" DYNAMIC DEFLECTION WHICH WILL ALLOW THE BARRIER TO BE PLACED A MINIMUM 12" FROM THE EDGE OF THE DECK.
- USAGE OF THE TEXAS X-BOLT BARRIER REQUIRES A MINIMUM OF 100 LINEAR FEET (10 - 10' UNITS). THE X-BOLT BARRIER SHALL EXTEND A MINIMUM OF 50' BEYOND THE BRIDGE AT EACH END, PARALLEL TO THE ROADWAY CENTERLINE. THE ENDS OF THE BARRIER SHALL CONNECT TO THE TRANSITION UNIT AND THEN TO NHDOT PCB FLARED OUT THE REQUIRED CLEAR ZONE AS SHOWN ON SHEET 2 OF 3.
- THE CONNECTION BOLTS AT THE BARRIER JOINTS SHALL BE TIGHTENED TO THE "TURN OF THE NUT" METHOD IN ACCORDANCE WITH SECTION 550.3.11.6.4 OF NHDOT STANDARD SPECIFICATIONS. AFTER INSTALLATION, ALL X-BOLT JOINTS SHALL BE CHECKED BY THE CONTRACT ADMINISTRATOR CONFIRMING THEY MEET THE TIGHTENED REQUIREMENT.
- THE TEXAS X-BOLT BARRIER MAY BE INSTALLED WITH A 125' MINIMUM RADIUS OF CURVATURE AND A RELATIVE ANGLE OF 4 DEGREES BETWEEN THE 10' UNITS.
- THE CONTRACTOR SHALL FURNISH AND INSTALL APPROVED RETROREFLECTIVE DELINEATORS AT 25-FOOT INTERVALS ALONG TOP AND/OR ONE FOOT DOWN THE SIDE OF PORTABLE CONCRETE BARRIER, SUBSIDIARY TO ITEM 606.41741 (SEE STANDARD NO. DL-1 OF NHDOT STANDARD PLANS FOR ROAD CONSTRUCTION). THE COLOR OF THE DELINEATORS SHALL, IN ALL INSTANCES, CONFORM TO THE COLOR OF THE EDGE LINE MARKINGS. DELINEATOR SUPPLEMENT, BUT DO NOT REPLACE, THE NEED FOR RETROREFLECTIVE SOLID EDGE LINE MARKINGS.

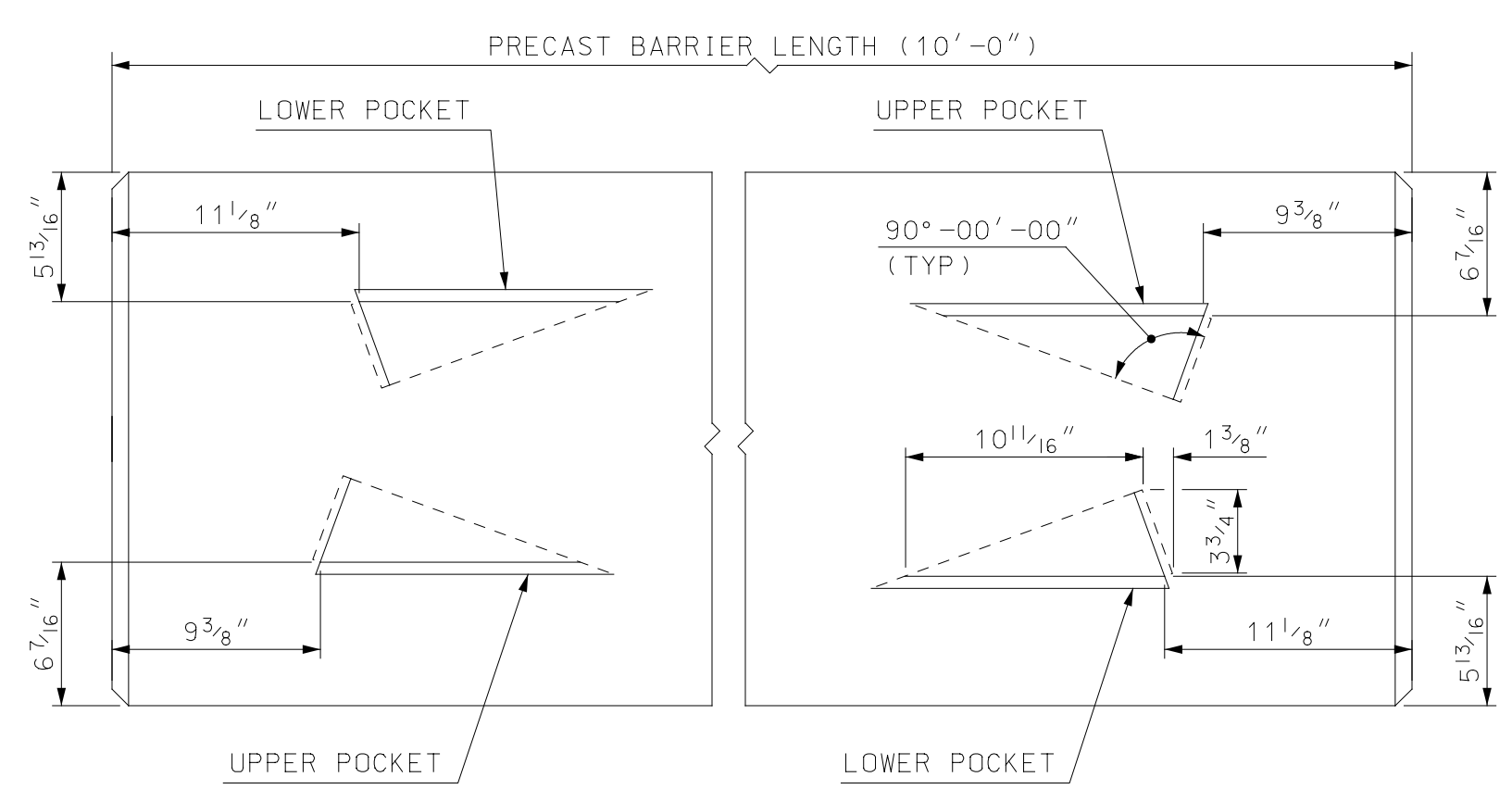
MATERIAL NOTES:

- BARRIERS SHALL BE LIGHT COLORED CLASS AA CONCRETE, WITH COMPRESSIVE STRENGTH OF 4000 psi, AND SHALL HAVE A SMOOTH UNIFORM SURFACE FREE OF DEFECTS AND IRREGULARITIES. CASTING DATE SHALL BE SHOWN ON BARRIER. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4", UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615) GRADE 60. ALL REINFORCEMENT SHALL HAVE 1 3/4" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.
- CONNECTION BOLTS SHALL BE 7/8" Ø GALVANIZED HIGH STRENGTH THREADED RODS CONFORMING TO ASTM A325. STEEL PIPES, PLATE WASHERS, AND CONNECTION PLATES SHALL BE GALVANIZED ASTM A36 STEEL.
- ALL STEEL FOR CONNECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 550.

NOTE: CONNECTION HARDWARE SHALL NOT EXTEND BEYOND THE CONCRETE FACE OF BARRIER



TYPE X JOINT CONNECTION DETAILS
SCALE: 1 1/2" = 1'-0"

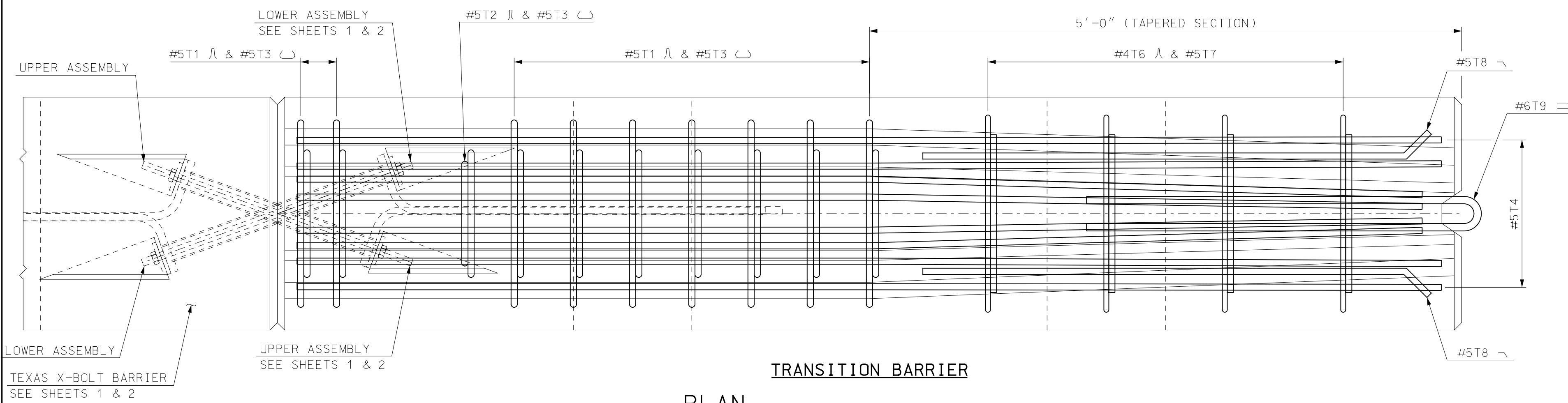


TOP VIEW CONNECTION POCKETS
SCALE: 1 1/2" = 1'-0"

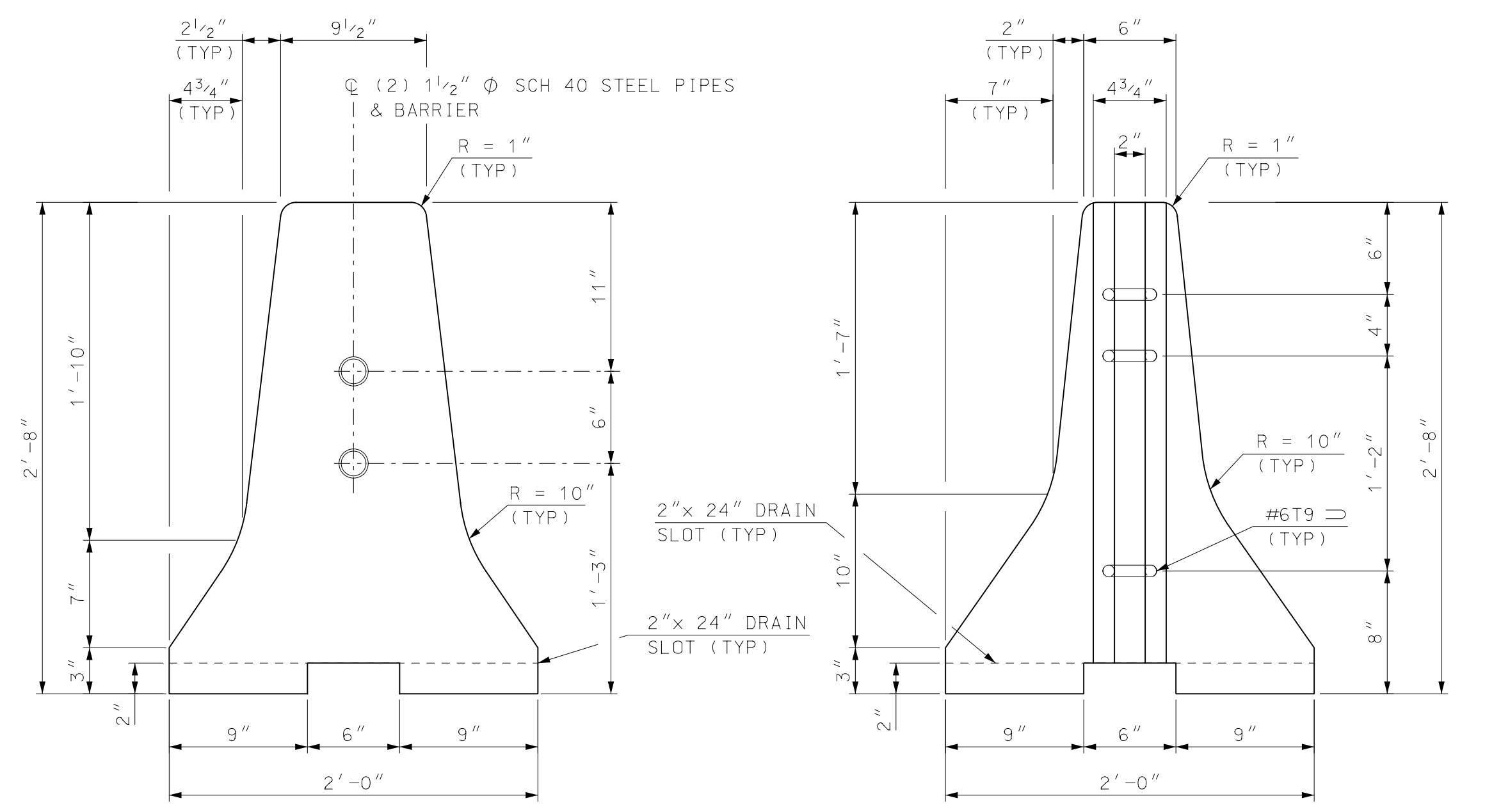
BARRIER WEIGHT APPROX. 2.38 TONS

STATE OF NEW HAMPSHIRE					
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN					
CITY PORTSMOUTH		BRIDGE NO. 240/106 & 241/106		STATE PROJECT	
LOCATION MARKET STREET					
TEXAS RESTRAINED BARRIER (X-BOLT) (1 OF 3)					BRIDGE SHEET
					OF
					FILE NUMBER
DESIGNED	TXDOT	DATE	CHECKED	NHDOT	DATE
DRAWN	GMC	12/10	CHECKED	NHDOT	4/18
QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX
ISSUE DATE	5/15/18	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE				38	40

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
standard/english/barrier	905108_X-BoltBarrier	AS NOTED

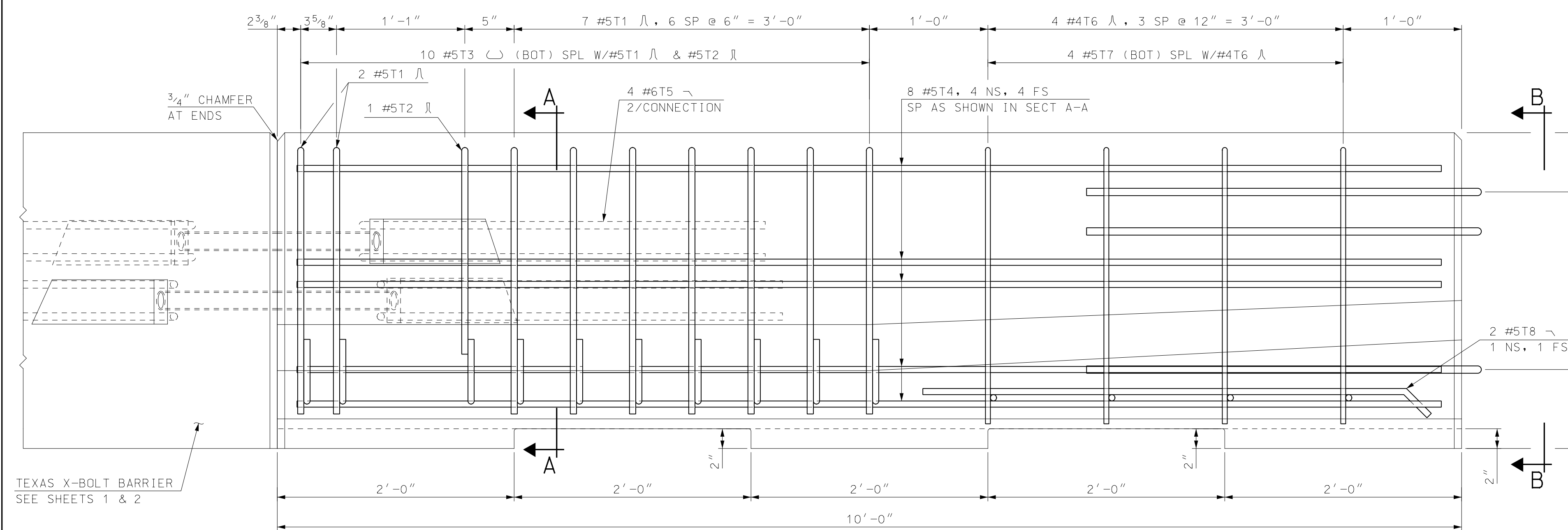


PLAN
SCALE: 1 1/2" = 1'-0"

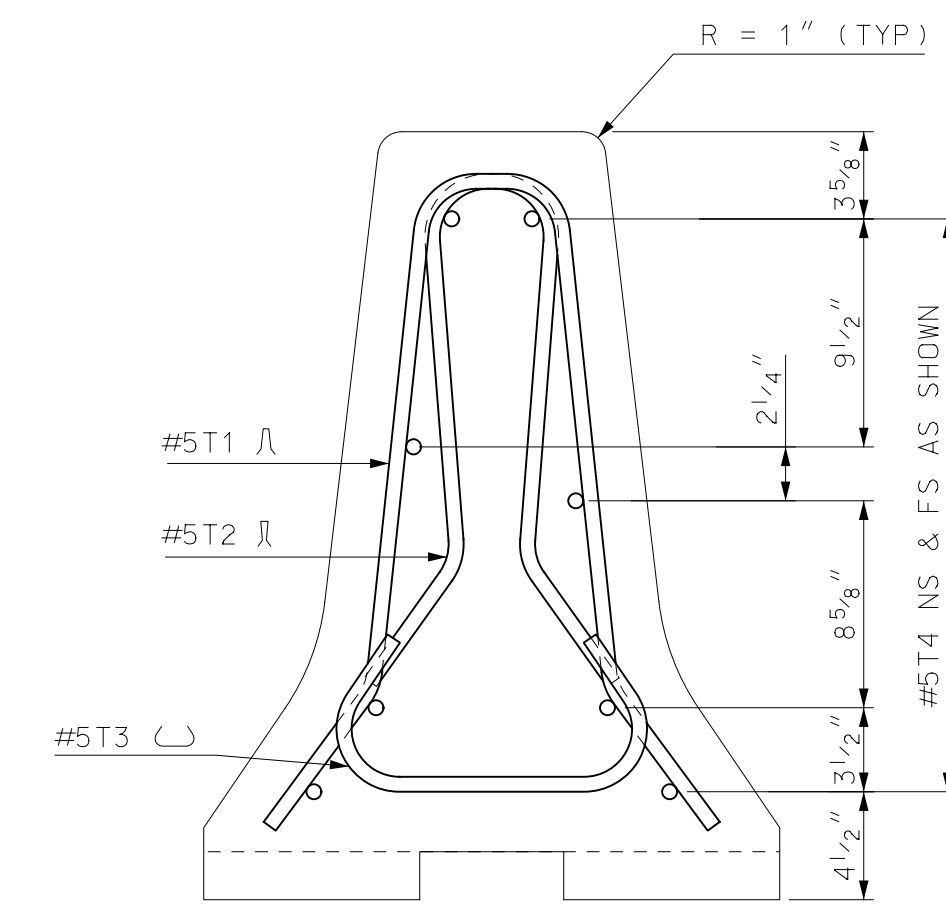


END VIEW SECTION A-A
SCALE: 1 1/2" = 1'-0"

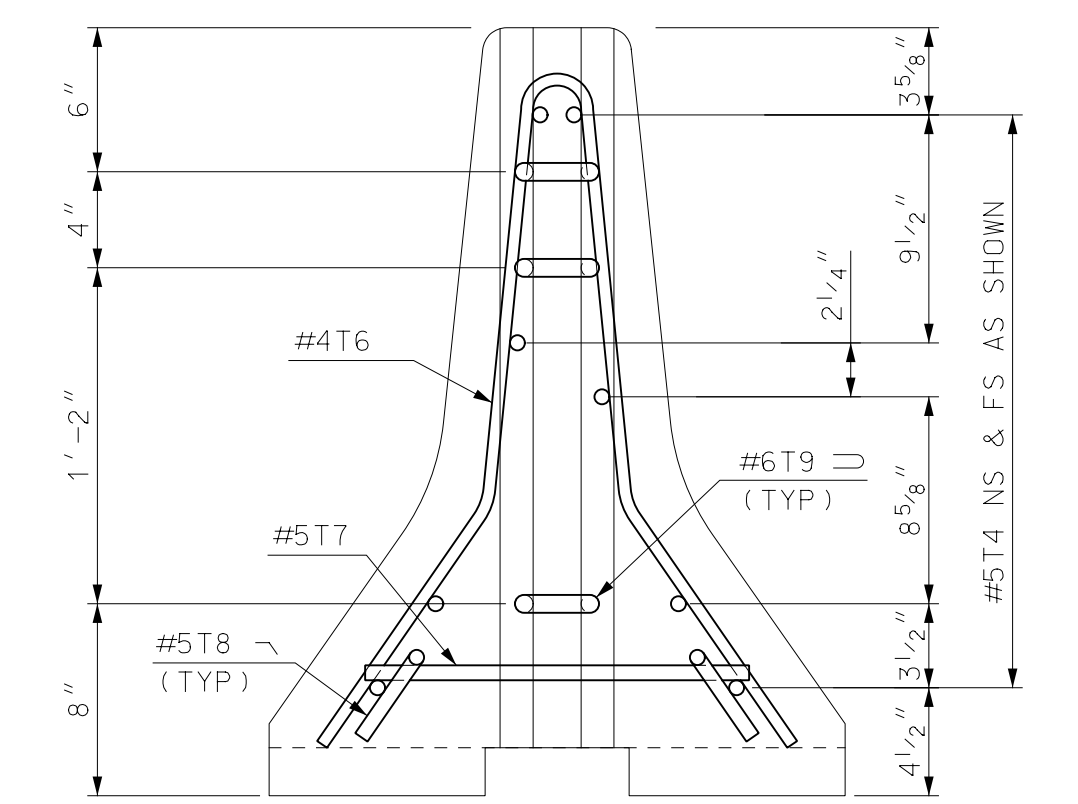
VIEW B-B
SCALE: 1 1/2" = 1'-0"



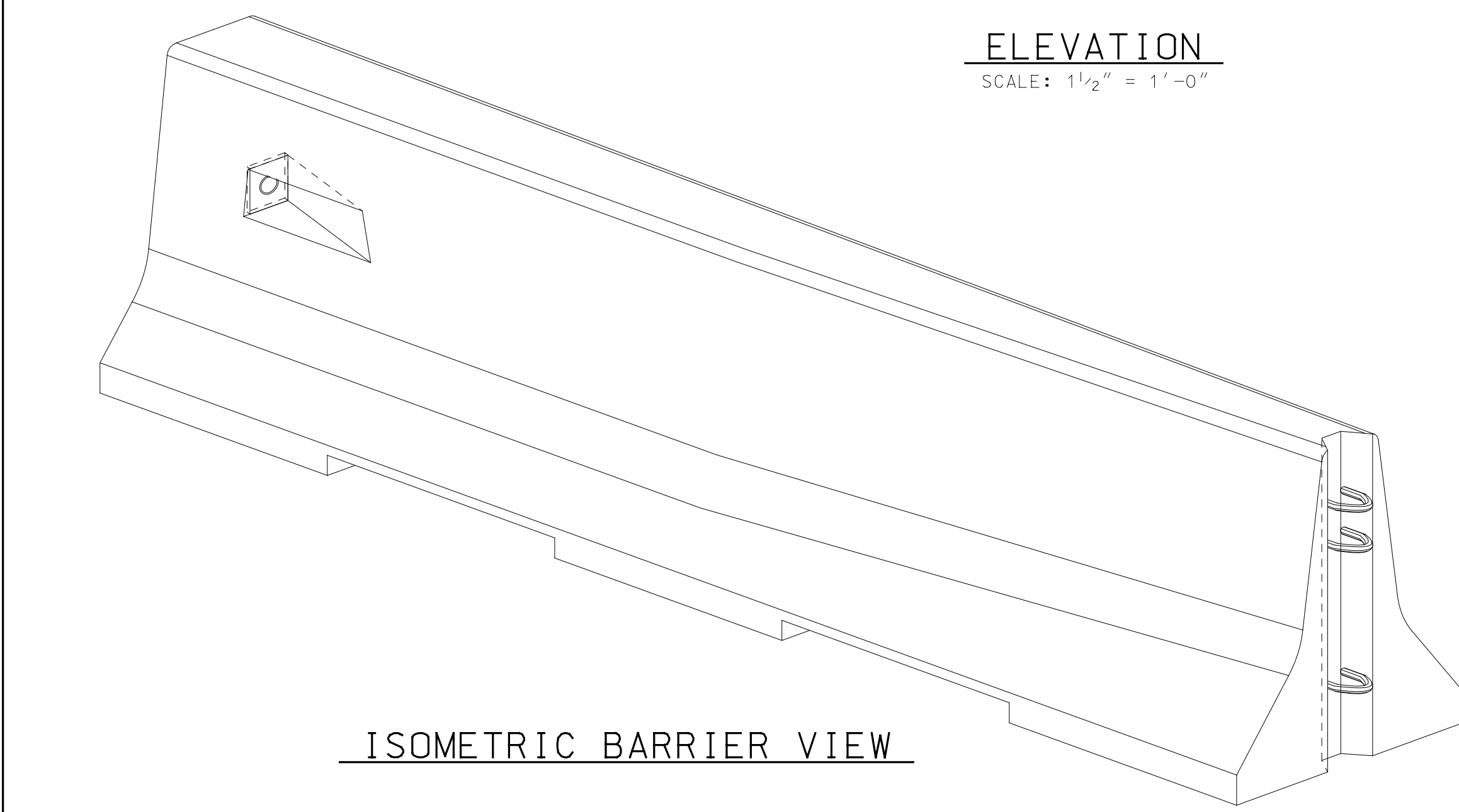
ELEVATION
SCALE: 1 1/2" = 1'-0"



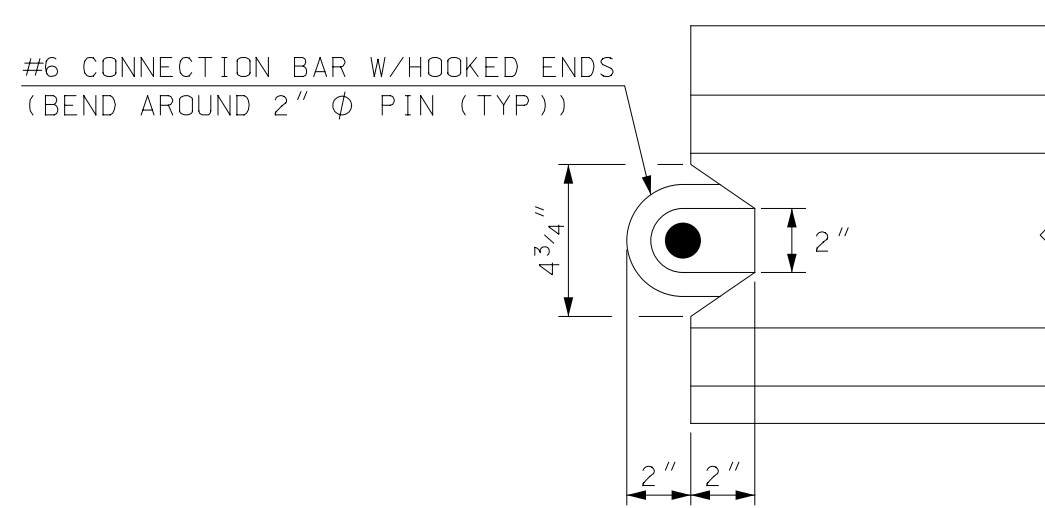
SECTION A-A
SCALE: 1 1/2" = 1'-0"



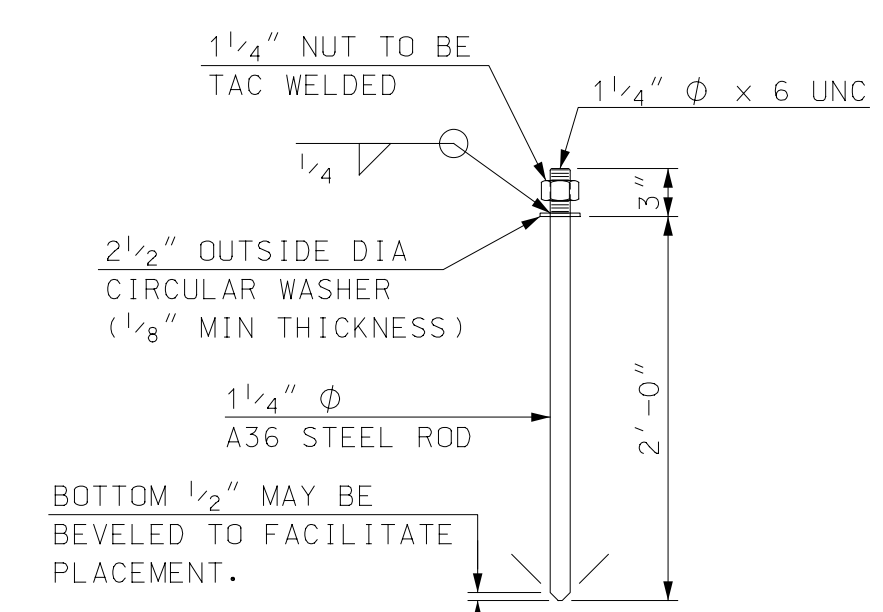
VIEW B-B
SCALE: 1 1/2" = 1'-0"



ISOMETRIC BARRIER VIEW



END NOTCH DETAIL
(AT VIEW B-B)
SCALE: 2" = 1'-0"



CONNECTOR PIN ASSEMBLY
SCALE: 1" = 1'-0"

NOTES

1. TEXAS RESTRAINED BARRIER (TRANSITION UNIT) SHALL BE PAID FOR UNDER ITEM 606.41741, PORTABLE CONCRETE BARRIER FOR TRAFFIC CONTROL (BRIDGE).
2. SEE SHEET 1 OF 3 FOR NOTES AND SHEET 2 OF 3 FOR REBAR SCHEDULE.

BARRIER WEIGHT APPROX. 2.28 TONS

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN										
CITY PORTSMOUTH		BRIDGE NO. 240/106 & 241/106		STATE PROJECT				BRIDGE SHEET		
LOCATION MARKET STREET		TEXAS RESTRAINED BARRIER (X-BOLT) (3 OF 3)								OF
REVISIONS AFTER PROPOSAL		DESIGNED	TXDOT	DATE	CHECKED	NHDOT	DATE	BY	DATE	FILE NUMBER
		DRAWN	GMC	12/10	CHECKED	NHDOT	4/18	XXX	XX/XX	
		QUANTITIES	XXX	XX/XX	CHECKED	XXX	XX/XX			
ISSUE DATE		5/15/18		FEDERAL PROJECT NO.		SHEET NO.		TOTAL SHEETS		
REV. DATE						40		40		

SUBDIRECTORY	DGN LOCATOR	SHEET SCALE
standard/english/barrier	905108_X-BoltBarrier	AS NOTED