



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

December 17, 2018
Subject: Piscataqua River Bridge Wearing
Surface Replacement
State WIN: 019270.00
Location: **Kittery & Portsmouth, N.H.**
Amendment No. 3

Dear Sir/Ms.:

Please make the following changes to the Bid Documents:

In the Bid Book:

CHANGE on page 14, NOTICE TO CONTRACTORS, the Bid Opening date from "December 19, 2018" to read "**January 9, 2019**". Make this change in pen and ink.

REMOVE pages 16 – 27, Proposal Schedule of Items, 12 pages, dated 12/3/2018 (from Amendment No. 1), and **REPLACE** with the attached, revised Proposal Schedule of Items, 12 pages, dated 12/17/2018.

REMOVE pages 109-111, SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT, 3 pages, dated November 14, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT, 3 pages, dated December 11, 2018.

REMOVE page 161, SPECIAL PROVISION – SECTION 526 – CONCRETE BARRIER – (Single Slope Barrier), 1 page, dated October 18, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 526 – CONCRETE BARRIER – (Single Slope Barrier), 1 page, December 13, 2018.

REMOVE page 162, SPECIAL PROVISION – SECTION 527 – ENERGY ABSORBING UNIT – (Truck Mounted Attenuator), 1 page, dated October 18, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 527 – ENERGY ABSORBING UNIT – (Truck Mounted Attenuator), 1 page, December 13, 2018.

REMOVE page 169, SPECIAL PROVISION – SECTION 605 – UNDERDRAIN, 1 page, dated October 30, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 605 – UNDERDRAIN, 1 page, December 13, 2018.

REMOVE pages 188 - 189, SPECIAL PROVISION – SECTION 627 – PAVEMENT MARKINGS – (Temporary Raised Pavement Markers), 2 pages, dated September 6, 2018, and **REPLACE** with the



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attached, revised SPECIAL PROVISION – SECTION 627 – PAVEMENT MARKINGS – (Temporary Raised Pavement Markers), 2 pages, December 13, 2018.

REMOVE pages 190 - 191, SPECIAL PROVISION – SECTION 627 – PAVEMENT MARKINGS – (Pavement Marking Tape) – (Pavement Marking Tape – Dotted White Lane Line, 6-inch width), 2 pages, dated October 12, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 627 – PAVEMENT MARKINGS – (Pavement Marking Tape) – (Pavement Marking Tape – Dotted White Lane Line, 6-inch width), 2 pages, December 13, 2018.

REMOVE pages 213 - 215, SPECIAL PROVISION – SECTION 652 – MAINTENANC OF TRAFFIC, 3 pages, dated October 30, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 652 – MAINTENANC OF TRAFFIC, 4 pages, December 12, 2018.

ADD the attached MaineDOT Pre-Bid Conference Agenda, 6 pages, dated December 5, 2018.

In the Plan Set:

The following sheets are to be **REMOVED** from the existing plan set and then **REPLACED** with the corresponding attached revised sheets:

REMOVE sheet	and REPLACE with sheet
2A	2B
3A	3B
5A	5B
9	9A
11	11A
79	79A
80	80A
83	83A
84	84A
107	107A
117	117A
122	122A
127	127A
132	132A
137	137A
142	142A
147	147A
152	152A
157	157A
202	202A
210	210A
211	211A
215	215A
217	217A
218	218A

219	219A
220	220A
230A	230B

ADD the attached SHEET NUMBER 211B OF 232, FINGER JOINT EXPANSION DAMS.

The following questions have been received:

Question: Due to the complex nature of this project with repairs, staging, schedule, and the large incentive/disincentives associated with them, we respectfully request a postponement of 3 weeks in order to get past the upcoming Holidays.

Response: See above changes to NOTICE TO CONTRACTORS.

Question: Due to the complex nature of this project, we request a 3-week postponement to extend past the holiday season.

Response: See above changes to NOTICE TO CONTRACTORS.

Question: Will the MaineDOT give us an extension to the bid date?

Response: See above changes to NOTICE TO CONTRACTORS.

Question: Due to the large complexity of this project, and various other bridge projects being bid recently and many others being bid at the same time throughout New England; many of the specialty subcontractors and suppliers are asking for more time and that the bid to be pushed into mid January. Please take this into consideration, and push the bid opening out until January 16th. In doing this, it will also give the four GC bidders an adequate amount of time to also put a fair a reasonable price to this project. Thank you.

Response: See above changes to NOTICE TO CONTRACTORS.

Question: Mix under Item 403.2081, used on Bridge Deck, shall the Contractor be allowed to used RAP?

Response: RAP will **NOT** be allowed for any mixture required to meet 70E-28 grading requirements.

Question: On all pavement where incentive-disincentive for pavement density is applied, will the contractor be allowed to use vibratory rollers?

Response: Vibratory rollers will **NOT** be allowed on any mixtures used on the bridge decks. Vibratory rollers may be utilized for all approach mixtures.

Question: Sheet 210 of 230 has the detail for the compression seal expansion joint. Reinforcing in Section A-A, labeled as S502 shows 8 Each, and S503 shows 9 EA Longitudinal Bars. The Reinforcement schedule (per Joint) shows 14 EA of S502 and 18 EA of S503. Please clarify which is correct?

Response: The plan quantities are correct. There are 6-S502 on the left side of the joint and 8-S502 on the right side, 14 total per joint. There are 3 sets of S503 in each of the 6 bays between stringers, 18 total per joint.

Question: If you read MaineDOT Standard Spec for shoulder reconstruction and widening items 205.41, and 205.51 it appears excavation, fill, aggregates and a few other items are incidental and paid for by the SY. These two pay items are part of the bid. Please clarify if the bulk of the aggregates in the schedule of items pertain to the shoulder widening work, or elsewhere.

Response: These items have been removed and Item 631.14 has been added to cover grading. Please see the revised sheets.

Question: Per the standard specifications section 526 Type II barrier is defined as “double face barrier of a shape shown on the plans” and Type IIIb as “single face barrier of a shape shown on the plans”. The drawings on sheet 2 for the quantity breakdown for item 526.312 Type II indicate 13780 lf which corresponds to the approximate lf of single face barrier on the approaches and exterior main span and for item 526.331 Type IIIb 1345 lf which corresponds to the approximate quantity of double face median on the main span. These appear to be opposite as defined by the standard specifications, please clarify.

Response: The barrier descriptions and quantities have been updated. Please see the revised plan sheets.

Question: The 403 box states that there is a 2" mill and the detail states 1.5", which is correct.

Response: The mill depth shall be 1.5" as shown on the plans. Please see the revised 403 SP.

Question: Is the item number correct for the HMA on the bridge deck (403.2081)?

Response: Yes, the 403.2081 mixture shall be placed first and utilized as the wearing course during construction. Item 403.2101 shall be installed in a 1" mill and overlay operation as the final wearing course to provide a surface clean of temporary striping/markings for the final condition.

Question: Is the 403.2101 being used for mill and fill on the bridge deck and approaches?

Response: The 403.2101 is required on the bridge decks and for the 1" mill & overlay areas defined on the plans. All 1.5" mill and overlay areas shall be item 403.2081 as defined in Special Provision 403.

Question: What wall thickness is required for the FRP deck drain downspouts?

Response: Special Provision 502 provides FRP requirements.

Question: Sheet 220 provides a light support detail which indicates 1” stainless steel anchor bolts with concrete imbedded plate. Is the plate supposed to also be stainless? Are anchor rods with a larger than 1” diameter acceptable?

Response: Larger rods of the same grade would be considered. However, one-inch diameter anchor rods are the maximum to fit the transformer base used as a basis of design (Valmont TB2-17/M104). The embedded plates do not need to be stainless.

Question: Sheet 227 Note 8 indicates the anchor bolts are galvanized and sized per manufacturer. This appears to contradict Sheet 220 information.

Response: Note 8 on Sheet 227 will be deleted.

Question: What should be used for wind load MPH for the light pole calculations?

Response: Per AASHTO requirements.

Question: Sheet 13 note references directional drilling if needed for the weigh-in-motion system, with cost incidental. Can that be converted to a separate pay item instead of incidental?

Response: Yes, this is acceptable.

Question: On the 9.5mm Polymer 1” mix—is that just for New Hampshire overlay?

Response: Item 403.2101, 9.5 mm Polymer 1” mix is required on the bridge deck and where shown on the plans for the approaches. The intent of the mix is to provide a clean final surface free of any temporary marking/stripping.

Question: Is the pavement removal around the bridge drainage structures and bridge joints being paid for under the 202.203 item?

Response: Item 202.127, “Removing of Existing Bituminous Pavement” is for the initial removal of pavement from the existing bridge, including around bridge drainage structures and bridge joints. Milling of the approaches and of the bridge deck for the final mill & overlay is covered under 202.202, “Removing Pavement Surface”.

Question: 202.127 Lump Sum Removal of Existing Pavement. Is that used for the bridge deck itself? There is also a milling item.

Response: Item 202.127, “Removing of Existing Bituminous Pavement” is for the initial removal of pavement from the existing bridge, including around bridge drainage structures and bridge joints. Milling of the bridge deck for the final mill & overlay is covered under 202.202, “Removing Pavement Surface”.

Question: There has been discussion about going to a 65 Gyratation mix instead of a 50 Gyratation and a 75 Gyratation mix. Is that going to be incorporated in this project?

Response: The required gyrations shall be 75, as defined in the 403 SP.

Question: What is the height to bottom of the light pole, measured from low tide, that should be used for light pole calculations?

Response: Approximately 160 feet at the high point of the bridge.

Question: How should the areas under the bridge be accessed by Contractors during the bid phase to evaluate the site, since the areas are locked?

Response: This was addressed with Amendment No. 2, Contractors had access to areas under the bridge on Wednesday, December 12, 2018.

Question: The pavement items were changed between the original advertisement and Addendum 1 — 19mm was added. This no longer matches the 403 spec and quantities sheet. Will the 403 spec be updated?

Response: The items defined in the 403 SP are correct as shown. See attached, revised Proposal Schedule of Items.

Question: The drawings on sheet 219 call for crack control joints at 30' max, will intermediate crack joints be required in the 42' span lengths in the truss spans?

Response: Yes, one crack control joint will be required.

Question: Will formation of crack control joints as shown of drawing 219 by saw cutting be allowed?

Response: Yes.

Question: What are the horizontal limitations on deck slab construction joint spacing?

Response: No construction joints are anticipated for the deck overhang pours as these will each be less than 100 CY. Construction joints at the expansion joints will of course occur between phases.

Question: Can you tell us the design of the hangers and the conduit thickness (SW or XW)?

Response: Design of the FRP conduit hangars is the responsibility of the Contractor in accordance with the plans and special provisions. FRP conduit shall be XW.

Question: Please confirm the incentive package in addendum 1 Notes 3 through 11 are additive and there is no maximum incentive cap for these items?

Response: SP 107 incentives and disincentives in Notes 3 through 11 are additive. There are caps on some of those notes individually as described in SP 107, but no overall cap.

Question: Please confirm that if each requirement is met, the maximum Incentive for notes 3,5 and 6 in addendum 1 is \$1,145,000?

Response: Correct. The incentives in SP 107 notes 3, 5 and 6 total \$1,145,000.

Question: Note 4 in the General Scope of work states that 3 lanes required on NB until November 30, 2019 or Woodbury Avenue Bridge over U.S. Route 1 is opened to traffic. What is the anticipated date for the Woodbury Avenue Bridge Over U.S. Route 1 Bypass opening to traffic? Is there any early finish date anticipated for that project?

Response: No certain information is currently available for the anticipated traffic opening of the Woodbury Ave. Bridge, which is part of NH Project 13455D/13455E.

Question: Please provide a detail of the 30" FRP drain trough and it's supports shown on drawings 178 & 201 at the abutments.

Response: The 30" Drain Trough shall be a minimum of 15" deep, have a minimum wall thickness of $\frac{1}{2}$ ", and shall be positively attached to the abutment by a method approved by the Resident.

Question: What is the thickness of the 30" FRP trough shown on drawings 178 & 201?

Response: The 30" Drain Trough shall be a minimum of 15" deep, have a minimum wall thickness of $\frac{1}{2}$ ", and shall be positively attached to the abutment by a method approved by the Resident.

Question: Please reference Contract Drawing number 210, Section A-A. The note on the left of this section directs for the installation of (3) Three 1" PVC pipes thru the existing deck on the low side of the new expansion joints.

- a. Is the PVC to be Schedule 40 or 80?
- b. Are the PVC Pipes required to be installed on an angle as is shown on the plan sheet?
- c. Can you confirm that there are 72 sets of (3) pipes each on the northbound and 72 Sets of (3) pipes each on the southbound roadway? (36 Joints x 2 Locations at each joint, per each side of the median barrier NB and SB)
- d. Please elaborate what "provide breaks thru the membrane and seal" means relative to the $\frac{1}{2}$ " depression called for on the plans sheet.

Response: Please note that the drains are to be placed at the low end of the deck, i.e. high side of the joint.

- a. Schedule 40.
- b. The angle shown is schematic. The drains must be oriented to clear structural steel and substructures as indicated.
- c. The number of drains at the expansion joints is correct. Note that additional drain tubes are required at bridge drains as shown on Sheet 212.
- d. The membrane shall be punctured to allow seepage into the drain tubes. The interface between the tubes and the membrane shall be sealed to prevent seepage from reaching the concrete deck.

Question: Please confirm there are no existing shear studs on the top of the beams and that there are no new shear studs required?

Response: Correct. There are no existing shear studs and no new shear studs are required.

Question: Please confirm that drilling of the fascia girder web to install a bolt for an overhang bracket is acceptable assuming a new high strength bolt would be installed in the hole when it is removed.

Response: Yes, this is acceptable.

Question: The quantity sheet included with Addendum 1 indicates Bid Item 604.26 Catch Basin Type B5, this bid item does not appear on the bid form. Please advise

Response: See attached, revised Proposal Schedule of Items.

Consider these changes and information prior to submitting your bid on **January 9, 2019**.

Sincerely,



George M. A. Macdougall P.E.
Contracts & Specifications Engineer

12/17/2018

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Proposal Schedule of Items

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Proposal ID: 019270.00

Project(s): 019270.00

SECTION: 1 MAIN ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	202.12 REMOVING EXISTING STRUCTURAL CONCRETE	2,540.000 CY	_____	 _____	_____	 _____
0020	202.1211 CONCRETE HAUNCH REMOVAL	32,200.000 LF	_____	 _____	_____	 _____
0030	202.127 REMOVE EXISTING BITUMINOUS PAVEMENT	LUMP SUM	LUMP SUM		_____	 _____
0040	202.1294 REMOVAL OF BRIDGE DRAINAGE SYSTEM	LUMP SUM	LUMP SUM		_____	 _____
0050	202.1295 HYDRO DEMOLITION, PROPERTY OF CONTRACTOR	4,530.000 SY	_____	 _____	_____	 _____
0060	202.13 REMOVING EXISTING RAILINGS (RETAINED BY DEPARTMENT)	7,260.000 LF	_____	 _____	_____	 _____
0070	202.202 REMOVING PAVEMENT SURFACE	76,250.000 SY	_____	 _____	_____	 _____
0080	202.203 PAVEMENT BUTT JOINTS	7,305.000 SY	_____	 _____	_____	 _____
0090	202.205 RUMBLE STRIPS - SHOULDER	16,600.000 LF	_____	 _____	_____	 _____
0100	202.207 RUMBLE STRIPS, FILL	850.000 LF	_____	 _____	_____	 _____
0110	203.20 COMMON EXCAVATION	3,160.000 CY	_____	 _____	_____	 _____
0120	203.24 COMMON BORROW	670.000 CY	_____	 _____	_____	 _____

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SECTION: 1 MAIN ITEMS

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0130	203.25 GRANULAR BORROW	1,150.000 CY	_____	_____	_____	_____
0140	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	380.000 CY	_____	_____	_____	_____
0150	304.14 AGGREGATE BASE COURSE - TYPE A	260.000 CY	_____	_____	_____	_____
0160	403.2081 12.5 MM POLYMER MODIFIED HOT MIX ASPHALT	6,000.000 T	_____	_____	_____	_____
0170	403.2101 9.5 MM POLYMER MODIFIED HMA	5,150.000 T	_____	_____	_____	_____
0180	403.211 HOT MIX ASPHALT (SHIMMING)	1,500.000 T	_____	_____	_____	_____
0190	403.213 HOT MIX ASPHALT 12.5 MM BASE	4,050.000 T	_____	_____	_____	_____
0200	403.2131 12.5 MM POLYMER MODIFIED HMA BASE	8,850.000 T	_____	_____	_____	_____
0210	409.15 BITUMINOUS TACK COAT - APPLIED	7,850.000 G	_____	_____	_____	_____
0220	461.131 TEMPORARY PAVEMENT	56.000 T	_____	_____	_____	_____
0230	502.26 STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	LUMP SUM	LUMP SUM	_____	_____	_____
0240	502.705 COMPOSITE BRIDGE DRAIN	LUMP SUM	LUMP SUM	_____	_____	_____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0250	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	636,000.000 LB	_____	_____	_____	_____
0260	503.13 REINFORCING STEEL, PLACING	636,000.000 LB	_____	_____	_____	_____
0270	504.709 BRIDGE HARDWARE TRUSS SCREEN PANEL	LUMP SUM	LUMP SUM		_____	_____
0280	504.811 STRUCTURAL STEEL REPAIR	1,900.000 LB	_____	_____	_____	_____
0310	514.06 CURING BOX FOR CONCRETE CYLINDERS	2.000 EA	_____	_____	_____	_____
0320	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES	LUMP SUM	LUMP SUM		_____	_____
0330	518.51 REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 IN.	20,400.000 SF	_____	_____	_____	_____
0340	518.52 REPAIR OF UPWARD FACING SURFACES >= 8 IN.	11.000 CY	_____	_____	_____	_____
0350	518.60 REPAIR OF VERTICAL SURFACES < 8 IN.	1,450.000 SF	_____	_____	_____	_____
0360	518.70 REPAIR OF OVERHEAD SURFACES < 8 IN.	770.000 SF	_____	_____	_____	_____
0370	520.2321 ASPHALTIC CRACK CONTROL JOINT	LUMP SUM	LUMP SUM		_____	_____

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SECTION: 1 MAIN ITEMS

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0380	520.245 BRIDGE JOINT MODIFICATION TYPE 5	36.000 EA	_____	 _____	_____	 _____
0390	520.261 LONGITUDINAL JOINT SEAL	3,200.000 LF	_____	 _____	_____	 _____
0400	521.32 FABRIC TROUGH FOR FINGER JOINT Approach Piers	4.000 EA	_____	 _____	_____	 _____
0410	521.32 FABRIC TROUGH FOR FINGER JOINT Approach Spans	14.000 EA	_____	 _____	_____	 _____
0420	524.40 PROTECTIVE SHIELD	LUMP SUM	_____	 LUMP SUM	_____	 _____
0430	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP SUM	_____	 LUMP SUM	_____	 _____
0440	526.307 MOVABLE TEMPORARY CONCRETE BARRIER SYSTEM	LUMP SUM	_____	 LUMP SUM	_____	 _____
0450	526.312 PERMANENT CONCRETE BARRIER TYPE II	LUMP SUM	_____	 LUMP SUM	_____	 _____
0460	526.331 PERMANENT CONCRETE BARRIER TYPE III B	LUMP SUM	_____	 LUMP SUM	_____	 _____
0470	526.36 MEDIAN BARRIER FIXED OBJECT PROTECTION	165.000 LF	_____	 _____	_____	 _____
0480	526.50 PRECAST CONCRETE BARRIER MEDIAN	4,440.000 LF	_____	 _____	_____	 _____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0490	527.33 TRUCK MOUNTED ATTENUATOR	2.000 EA	_____	_____	_____	_____
0500	527.341 WORK ZONE CRASH CUSHIONS, TL-3	3.000 UN	_____	_____	_____	_____
0510	530.25 FIBERGLASS REINFORCED POLYMER GRATING	900.000 SF	_____	_____	_____	_____
0520	603.159 12 INCH CULVERT PIPE OPTION III	63.000 LF	_____	_____	_____	_____
0530	604.09 CATCH BASIN TYPE B1	2.000 EA	_____	_____	_____	_____
0540	604.161 ALTERING CATCH BASIN	5.000 EA	_____	_____	_____	_____
0550	604.164 REBUILDING CATCH BASIN	3.000 EA	_____	_____	_____	_____
0560	604.18 ADJUSTING MANHOLE OR CATCH BASIN TO GRADE	9.000 EA	_____	_____	_____	_____
0570	604.26 CATCH BASIN TYPE B5	10.000 EA	_____	_____	_____	_____
0580	605.105 8" UNDERDRAIN OUTLET TY B	13.000 LF	_____	_____	_____	_____
0590	606.1301 31" W-BM GR, MID-WAY SPLICE-SGL FACED	3,530.000 LF	_____	_____	_____	_____
0600	606.1305 31" W-BM GR, MID-WAY SPLICE FLARED TERMINAL	3.000 EA	_____	_____	_____	_____

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SECTION: 1 MAIN ITEMS

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0610	606.1733 BRIDGE TRANSITION - TYPE 3	4.000 EA	_____	_____	_____	_____
0620	606.1733 BRIDGE TRANSITION - TYPE 3 MODIFIED	1.000 EA	_____	_____	_____	_____
0630	606.277 TERMINAL END - ANCHORED END	2.000 EA	_____	_____	_____	_____
0640	606.352 REFLECTORIZED BEAM GUARDRAIL DELINEATORS	100.000 EA	_____	_____	_____	_____
0650	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	8.000 EA	_____	_____	_____	_____
0660	606.356 UNDERDRAIN DELINEATOR POST	2.000 EA	_____	_____	_____	_____
0670	606.362 GUARDRAIL ADJUSTED	1,970.000 LF	_____	_____	_____	_____
0680	606.363 GUARDRAIL REMOVE AND DISPOSE	8,700.000 LF	_____	_____	_____	_____
0690	606.569 REMOVE, MODIFY AND RESET - DOUBLE RAIL	65.000 LF	_____	_____	_____	_____
0700	607.17 CHAIN LINK FENCE - 6 FOOT	700.000 LF	_____	_____	_____	_____
0710	607.432 PROTECTIVE SCREENING	120.000 LF	_____	_____	_____	_____
0720	608.07 PLAIN CONCRETE SIDEWALK	220.000 SY	_____	_____	_____	_____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0730	609.312 SPECIAL CURB TYPE 2	90.000 LF	_____	_____	_____	_____
0740	610.08 PLAIN RIPRAP	1,505.000 CY	_____	_____	_____	_____
0750	615.07 LOAM	630.000 CY	_____	_____	_____	_____
0760	618.14 SEEDING METHOD NUMBER 2	51.000 UN	_____	_____	_____	_____
0770	620.58 EROSION CONTROL GEOTEXTILE	420.000 SY	_____	_____	_____	_____
0780	620.622 CELLULAR CONFINEMENT SYSTEM	610.000 SY	_____	_____	_____	_____
0790	626.222 FRP CONDUIT	14,500.000 LF	_____	_____	_____	_____
0800	627.18 12 " SOLID WHITE PAVEMENT MARKING	3,550.000 LF	_____	_____	_____	_____
0810	627.1801 12" SOLID WHITE RETROFLECTIVE THERMOPLASTIC PAVE MARK	690.000 LF	_____	_____	_____	_____
0820	627.51 6" TEMPORARY PAVEMENT TAPE, YELLOW OR WHITE	6,500.000 LF	_____	_____	_____	_____
0830	627.57 12" REMOVABLE BLACK LINE MASKING TAPE	1,350.000 LF	_____	_____	_____	_____
0840	627.744 6" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	83,100.000 LF	_____	_____	_____	_____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0850	627.7441 6" WHITE RETROFLECTIVE THERMOPLASTIC PAVEMENT MARKING	5,650.000 LF	_____	_____	_____	_____
0860	627.77 REMOVING PAVEMENT MARKINGS	130,000.000 SF	_____	_____	_____	_____
0870	627.781 TEMPORARY 6 INCH PAINTED PAVEMENT MARKING LINE, WHITE OR YELLOW	400,000.000 LF	_____	_____	_____	_____
0880	627.801 TEMPORARY RAISED PAVEMENT MARKER	36,200.000 EA	_____	_____	_____	_____
0890	627.945 PAVEMENT MARKING TAPE	805.000 LF	_____	_____	_____	_____
0900	627.945 PAVEMENT MARKING TAPE DOTTED WH LN LINE 6 IN	385.000 LF	_____	_____	_____	_____
0910	629.05 HAND LABOR, STRAIGHT TIME	80.000 HR	_____	_____	_____	_____
0920	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	10.000 HR	_____	_____	_____	_____
0930	631.11 AIR TOOL (INCLUDING OPERATOR)	10.000 HR	_____	_____	_____	_____
0940	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	30.000 HR	_____	_____	_____	_____
0950	631.14 GRADER (INCLUDING OPERATOR)	40.000 HR	_____	_____	_____	_____

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Proposal ID: 019270.00

Project(s): 019270.00

SECTION: 1 MAIN ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0960	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	5.000 HR	_____	_____	_____	_____
0970	634.160 HIGHWAY LIGHTING	LUMP SUM	LUMP SUM	_____	_____	_____
0980	634.210 CONVENTIONAL LIGHT STANDARD	36.000 EA	_____	_____	_____	_____
0990	639.18 FIELD OFFICE TYPE A	1.000 EA	_____	_____	_____	_____
1000	643.71 TRAFFIC SIGNAL MODIFICATION I95 NB/ MARKET ST	LUMP SUM	LUMP SUM	_____	_____	_____
1010	643.71 TRAFFIC SIGNAL MODIFICATION I95 SB/ MARKET ST	LUMP SUM	LUMP SUM	_____	_____	_____
1020	643.71 TRAFFIC SIGNAL MODIFICATION RT 1 BYPASS/ ALBACORE	LUMP SUM	LUMP SUM	_____	_____	_____
1030	643.871 WEIGH-IN-MOTION SYSTEM	LUMP SUM	LUMP SUM	_____	_____	_____
1040	645.103 DEMOUNT GUIDE SIGN	1.000 EA	_____	_____	_____	_____
1050	645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	3.000 EA	_____	_____	_____	_____
1060	645.113 REINSTALL GUIDE SIGN	1.000 EA	_____	_____	_____	_____

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Proposal ID: 019270.00

Project(s): 019270.00

SECTION: 1 MAIN ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1070	645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	3.000 EA				
1080	645.521 HYBRID TRAVEL TIME SIGN INTEGRATION	LUMP SUM		LUMP SUM		
1090	645.523 TRAVEL TIME DATA	LUMP SUM		LUMP SUM		
1100	652.30 FLASHING ARROW BOARD	4.000 EA				
1110	652.312 TYPE III BARRICADE	20.000 EA				
1120	652.33 DRUM	600.000 EA				
1130	652.34 CONE	100.000 EA				
1140	652.35 CONSTRUCTION SIGNS	3,000.000 SF				
1150	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP SUM		LUMP SUM		
1160	652.38 FLAGGER	3,000.000 HR				
1170	652.381 TRAFFIC OFFICER	640.000 HR				
1180	652.382 TRAFFIC MONITOR	915.000 CD				

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Proposal ID: 019270.00

Project(s): 019270.00

SECTION: 1 MAIN ITEMS

Alt Set ID:

Alt Mbr ID:

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
1190	652.41 PORTABLE CHANGEABLE MESSAGE SIGN	26.000 EA	_____	_____	_____	_____
1200	652.451 AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGN	200.000 CD	_____	_____	_____	_____
1210	655.511 EMBEDDED GALVANIC ANODE (FROM MANUFACTURER)	16,160.000 EA	_____	_____	_____	_____
1220	655.513 EMBEDDED CATHODIC PROTECTION SYSTEM	LUMP SUM	LUMP	SUM	_____	_____
1230	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP SUM	LUMP	SUM	_____	_____
1240	659.10 MOBILIZATION	LUMP SUM	LUMP	SUM	_____	_____
Section: 1			Total:		_____	_____

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Proposal ID: 019270.00

Project(s): 019270.00

SECTION: 2 NH APPR SPANS HP MEMBRANE TORCH APPL

Alt Set ID: AL

Alt Mbr ID: 1

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0290	508.1401 HIGH PERFORMANCE WATERPROOFING MEMBRANE, TORCH APPLIED	LUMP SUM		LUMP SUM	_____	_____
Section: 2			Total:		_____	_____

SECTION: 3 NH APPR SPANS HP MEMBRANE SPRAY APPL

Alt Set ID: AL

Alt Mbr ID: 2

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0300	508.1402 HIGH PERFORMANCE WATERPROOFING MEMBRANE, SPRAY APPLIED	LUMP SUM		LUMP SUM	_____	_____
Section: 3			Total:		_____	_____
			Total Bid:		_____	_____

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
<u>1" - Mill and Overlay – Bridge Deck & Approaches – As shown on plans</u>					
Wearing	9.5 mm	403.2101	1"	1	6,7,19,20,24,28,29,30
<u>Varies 2"-2½" – Bridge Deck</u>					
Wearing	12.5 mm	403.2081	Varies	1	2,6,7,12,19,24,27,28,30
<u>10" – I-95 Travel Way & Shoulders</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	6,7,15,19,20,23,24,26,27,28,30
Intermediate	12.5 mm	403.2131	1 ½"	1	6,7,15,16,23,27,28,30
Intermediate	12.5 mm	403.213	2 ½"	1	1,6,7,13,15,16,23
Base	12.5 mm	403.213	4 ½"	2	1,6,7,13,15,16,23
<u>5½" – I-95 Median Barrier Areas</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	6,7,19,20,24,26,27,28,30
Intermediate	12.5 mm	403.2131	1 ½"	1	6,7,16,27,28,30
Base	12.5 mm	403.213	2 ½"	1	1,6,7,13,16
<u>1½" Mill & Overlay / Variable Depth Shim & 1 ½" Overlay - I-95</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	6,7,19,20,24,26,27,28,30
Shim	9.5 mm	403.211	Varies	1/more	1,2,6,7,11,14,20
<u>Temporary Pavement in Median Areas</u>					
Temporary	12.5 mm	461.131	4"	2	1,31

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading.
2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
6. The design traffic level for mix placed shall be 10 to <30 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
12. The combined aggregate gradation required for this item shall be classified as a 12.5mm "**fine graded**" mixture, (using the Primary Control Sieve control point) as defined in 703.09.
13. A mixture meeting the gradation of 19.0 mm hot mix asphalt may be used at the option of the contractor.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.

15. The entire HMA pavement section (consisting of surface and base layers) shall be completed before winter suspension. Any surface or base HMA placed after the seasonal limitations shall be considered temporary and removed and replaced the following construction season. The Department will not be responsible for costs or time related to the placement, removal or replacement of temporary pavement.
16. In areas inaccessible to a standard roller train, compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. Areas less than 2 feet wide shall be compacted with a minimum of a **150 pound** plate compactor. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
19. The use of a Material Transfer Vehicle (MTV) shall be required on **all mainline travelway and adjacent shoulders that are paved in the same operation** on this layer. See Special Provision 401 – Material Transfer Vehicle for specifics.
20. The Contractor may place the specified HMA pavement course, not to exceed 1 inch compacted depth, over the full single travel lane width, for each production day. If this option is utilized the Contractor will be required to place a matching course of HMA over the adjacent section of travel lane before weekend suspension. For courses greater than 1 inch, but not to exceed 2 inch compacted, the Contractor may place the specified HMA pavement course over the full single travel lane width, for each production day and will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double RPM application, or temporary painted line for centerline at the end of each production day. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. On roadways with two-way traffic, the Contractor will be required to place the specified course over the full width of the mainline traveled way being paved prior to opening the sections to weekend or holiday traffic. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.
23. The entire roadway (from edge to edge, including shoulders) shall be considered mainline travelway for density testing purposes according to the specified testing method.
24. A tack coat of a RS-1, RS-1h, CRS-1 or CRS-1h, Item #409.15 shall be applied along the longitudinal centerline construction joint, on the horizontal surface immediately adjacent to the construction joint, and in a minimum width of one foot. The rate of application shall be approximately 0.050 to 0.075 G/SY. This application shall be in addition to the normal application of tack coats to the construction joint face and horizontal surfaces prior to placing a new lift.
26. Centerline joint density testing shall be applied to the specified HMA layer. See Special Provision 401 – Hot Mix Asphalt Longitudinal Joint Density for project specifics.
27. See Special Provision 401 – HMA with Fine Micro-Deval Requirement for project specifics.
28. The mixture shall meet the minimum requirements of Special Provision 401 – HMA Hamburg Wheel Tracker Specification.
29. See Special Provision 401 – HMA Aggregate requirements for project specifics.

30. The required PGAB shall be a storage-stable, homogeneous, polymer modified asphalt binder that meets **PG 70E-28** grading requirements in AASHTO M 332. All polymer modified asphalt grades utilized on the Project shall be treated with an approved liquid anti-strip. PG binders shall be treated either at the asphalt source terminal with the required dose rate on the delivery documentation, or at the hot mix asphalt plant utilizing a system integrated with the plants controls that will introduce a minimum 0.50 percent anti-strip by weight of asphalt binder used unless a rate is otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 70E-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.
31. See Special Provision 461 – Temporary Pavement for project specifics.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1 or CRS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd². Tack used will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 526
CONCRETE BARRIER
(Single Slope Barrier)

526.02 Materials.

The following paragraph is added after paragraph 2:

Concrete for precast barriers shall also meet the requirements of Standard Specification Subsection 712.061 Structural Precast Units.

At the Contractor's option, the final precast concrete barrier piece, if an odd length (less than the standard 20'-0"), may be cast in place. All requirements for permanent concrete barrier shall apply to this cast-in-place section. This cast-in-place section, if used, will be paid for at the contract unit price for the precast concrete barrier it is replacing.

526.05 Basis of Payment.

The following paragraphs are added:

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
526.36 Median Barrier Fixed Object Protection	Linear Foot
526.50 Precast Concrete Barrier, Median	Linear Foot

SPECIAL PROVISION
SECTION 527
ENERGY ABSORBING UNIT
(Truck Mounted Attenuator)

Description: This work consists of furnishing, maintaining and deploying a truck mounted attenuator (TMA) and a shadow or barrier truck in accordance with this specification and as directed. A Truck Mounted Attenuator must comply with NCHRP Report 350.

Materials: The energy absorbing system shall be from the Department's Qualified Product List (QPL). The TMA shall be mounted in accordance with the manufactures specifications to a truck with a gross vehicle weight of at least 10,000 pounds.

Installation: The chart below identifies the distance from the work zone or hazard where the TMA shall be deployed. If the work zone is within a marked lane closure, the barrier truck distances shall apply and if the work is mobile, then shadow truck distances shall apply. When used as a barrier, the barrier truck shall be parked in low gear with brakes applied and the front wheels turned away from the work zone and the adjacent traffic lane. For placement details, reference the Manual of Uniform Traffic Control Devices (MUTCD).

Weight of Truck	Barrier Truck Distance from Work Zone of Hazard	Shadow Truck Distance from Work Vehicle or Work Zone
10,000 lbs	250 ft	300 ft
15,000 lbs	200 ft	250 ft
>24,000 lbs	150 ft	200 ft

Method of Measurement: Truck mounted attenuator will be measured by the unit furnished.

Basis of Payment: The accepted quantity of truck mounted attenuator will be paid for at the contract unit price each which includes furnishing and all costs of attaching to and retrofitting of a truck on which The TMA will be deployed. Daily maintenance and deployment of the TMA, including the cost of the truck, shall be considered incidental.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
527.33 Truck Mounted Attenuator	Each

**SPECIAL PROVISION
SECTION 605
UNDERDRAIN**

This section is amended by the addition of the following:

605.07 Basis of Payment.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
605.105 8 Inch Underdrain (Type B)	Linear Foot

SPECIAL PROVISION
SECTION 627
PAVEMENT MARKINGS
(Temporary Raised Pavement Markers)

627.01 Description

The following sentence is added:

This work shall consist of furnishing, placing and removing temporary raised pavement markers at locations as shown on the Plans or as directed by the Resident.

627.02 Materials

The second paragraph is deleted and replaced with the following:

The temporary raised pavement markers shall be white or yellow one way markers (Type Tom W-1, Y-1, Grade WZ) as distributed by Davidson Plastics Co. (DAPCO), Kent, WA, or an approved equal. Colors shall conform to 2009 MUTCD requirements.

627.04 General

The following sentences are added:

Temporary raised pavement markers shall be used to delineate travel lanes (BWLL) after placement of the surface course (HMA 12.5 mm).

Temporary raised pavement marker that lose reflectivity, becomes broken, dislodged or missing during the life of the Contract shall be replaced by the Contractor at no additional cost to the Department.

The spacing and number of temporary pavement markers installed as edge lines shall be the same as shown for the BWLL on the Plans for Temporary Pavement Marking.

627.09 Method of Measurement

The following sentence is added:

Temporary Raised Pavement Markers will be measured by each unit, complete in place, maintained and accepted.

627.10 Basis of Payment

The following paragraphs are added:

The accepted quantity of Temporary Raised Pavement Markers white and/or yellow will be paid for at the Contract price each. This price shall include all labor and materials to furnish, install, maintain, and remove the markers.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
627.801 Temporary Raised Pavement Markers	Each

SPECIAL PROVISION
SECTION 627
PAVEMENT MARKINGS

(Pavement Marking Tape)
(Pavement Marking Tape – Dotted White Lane Line, 6-inch Width)

627.01 Description

The following sentence is added:

This work shall consist of furnishing and placing reflective pavement marking tape in conformity with the Plans, as specified herein and as directed by the Resident.

The pavement marking tape shall be installed at all locations.

627.02 Materials

The following paragraphs are added:

For the Broken White Lane Line (BWLL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380AW – High Performance pavement marking tape, color- white, six (6) inch width, as manufactured by 3M of St. Paul, Minnesota, or approved equal.

For the Dotted White Lane Line (DWLL), Pavement Marking Tape shall be 3M Stamark™ High Performance Tape Series 380I ES – High Performance pavement marking tape, color- white, six (6) inch wide and twelve (12) inch wide, as manufactured by 3M of St. Paul, Minnesota, or approved equal.

627.04 General

The following paragraphs are added:

The tape shall be used as a supplemental broken white lane line. The tape shall be installed between the painted Broken White Lane Line (BWLL) spaced eighty (80) foot center to center as shown on the Plans. The length of the tape shall be three (3) feet.

The tape shall also be used to mark a Dotted White Lane Line (DWLL) and shall be installed on parallel deceleration and acceleration lanes at locations as noted in the Plans. On deceleration lanes, the tape shall be installed from the beginning of the full width deceleration lane and shall extend to the theoretical gore markings. On acceleration lanes, the DWLL shall extend from the theoretical gore markings to a point one-half of the total length of the acceleration lane (including the lane taper length). Layout data is noted on the Plans. Dotted White Lane Line tape shall be three (3) foot in length and shall be spaced nine (9) feet apart. Spacing from the Solid White Lane Line (SWLL) or the Theoretical Gore Markings shall be nine (9) feet.

627.05 Preparation of Surface

The following paragraph is added:

The Contractor shall mill a groove in the pavement for each tape length to be placed (“in-and-out” pattern). Continuous grooving for installation of the tape shall not be allowed. The groove length shall be the required tape length plus 12 inches on both ends. Tape length spacing shall be as shown on the plans. The groove width for inlaid tape pavement marking shall be the pavement marking width plus 1 inch, with a tolerance of $\pm \frac{1}{4}$ inch. The groove shall have a uniform depth of 150 Mils (± 20 Mils). Groove position shall be a minimum of 2 inches from the edge of the pavement marking to the longitudinal pavement joint. The bottom of the groove shall have a smooth, flat finished surface. The use of gang stacked Diamond cutting blades is required for asphalt pavement surfaces. The spacers between blade cuts shall be such that there will be less than a 10 mil rise in the finished groove between the blades.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. The Contractor shall prevent traffic from traversing the grooves, and re-clean grooves, as necessary, prior to application of the primer and pavement marking tape. Depth plates shall be provided by the contractor to assure that desired groove depth is achieved.

Reference is made to 3M Information Folder 5.18 Grooving Applications, May 2011, “Application Guidelines for Pavement Marking in Grooved Pavement Surfaces.”

627.09 Method of Measurements

The following paragraph is added:

The quantity of Pavement Marking Tape measured for payment will be the linear feet of tape in place and accepted. The measurement will not include the gaps.

627.10 Basis of Payment

The following paragraphs are added:

The accepted quantity of pavement marking tape will be paid for at the Contract unit price per linear foot which price shall include all material, pavement grooving, equipment, labor and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
627.945 Pavement Marking Tape	Linear Foot
627.945 Pavement Marking Tape (Dotted White Lane Line, 6-inch Width)	Linear Foot

SPECIAL PROVISION
SECTION 652
MAINTENANCE OF TRAFFIC

652.1 Description. This subsection is amended by the addition of the following:

All traffic control shall be in accordance with the maintenance of traffic and construction phasing plans in the Contract Documents. The Contractor shall submit Traffic Control Plans for lane closures to install the work zone traffic control and complete the highway preservation work. Submittals shall meet the requirements of Subsection 652.3.3 Submittal of Traffic Control Plan (TCP).

The Contractor shall furnish all signs noted herein and noted on the Sign Summary Sheets. The Contractor shall furnish all sign posts, sign post breakaways and fasteners required to erect and maintain the signs.

652.2.2 Signs. This subsection is amended by the addition of the following:

The minimum required construction signing is shown on the Sign Summary Sheets.

652.2.5 Portable Changeable Message Sign. This first sentence in the sixth paragraph shall be replaced with the following sentences:

PCMS units shall be capable of being programmed by a remote computer via a data (IP over Cell) cellular modem connection. It shall also have GPS location capability by adding on a GPS device capable of providing GPS location remotely.

The Contractor shall complete and/or provide the following for PCMS designated on the Plans as ADV-x:

- Submit a catalog cut shop drawing to the Resident of all proposed equipment for review and approval.
- Establish and pay for a data cellular account so that PCMS may be remotely programmed and operated from the MaineDOT and NHDOT Traffic Management Centers (TMC), the MTA Communications' Center, and by the Resident.
- Provide to the representatives listed technical support from the PCMS manufacturer that may be necessary to integrate the PCMS into their software platform (Vanguard Software by Daktronics).
- Provide the manufacturer's software necessary to change the PCMS messages remotely from the MaineDOT and NHDOT TMC, the MTA Communications' Center, and the Resident's computer if necessary or requested.
- Provide training on the operation of the PCMS to representatives of the MaineDOT and NHDOT TMC, the MTA Communications' Center, and to the Resident.

- Make all PCMS on the Project work site available to the TMC's and the MTA for any/all emergency situations as defined by the Resident. This shall include the preemption of any messages running at the time of need as approved by the Resident.
- Furnish, operate, relocate and maintain the PCMS as approved or requested by the Resident.
- Be responsible for the day to day programming and operation of the PCMS for Project purposes.

PCMS designated on the Plans as RTT-x shall meet the requirements as noted in Special Provision Section 645 Highway Signing – Travel Time Sign Integration.

652.3.3 Submittal of Traffic Control Plan. This Subsection is amended by the addition of the following:

The Department has prepared Maintenance of Traffic Plans for the work zone for the Contractor to implement to complete the Project. The Contractor may include these plans as a portion of the Traffic Control Plan submittal.

652.3.3.f. Notification Procedure. This subsection is amended by the addition of the following:

The Contractor shall provide a schedule of anticipated lane closures to the Resident on a weekly basis, and provide a minimum notice of 72 hours of proposed changes to the lane closures. The Contractor shall provide a 4 hour notice to the emergency dispatchers for both the Town of Kittery and the City of Portsmouth for all temporary lane closures. The Contractor shall meet all required notifications listed in Special Provision 105 Limitations of Operations.

652.3.4 General. The fourth and fifth paragraphs of this subsection are deleted and replaced with the following:

The Contractor, his/her Subcontractors and employees shall conduct all work in a safe and professional manner as it relates to the traveling public (i.e. not adversely disrupting the flow of traffic in an unsafe manner when exiting or entering a lane closure or crossover, no negative verbal or physical gestures).

Channelization. Channelization devices shall include the following:

Flashing Arrow Boards

Drums (**In lane closures, The Contractor shall place 3 drums across a closed lane every 1500'**)

Channelization devices shall be installed and maintained at the spacing determined by the MUTCD to delineate travel lanes through the project. Drums shall be placed in the closed lane at a maximum spacing of 2 x speed limit.

Existing emergency access crossovers shall not be used by the Contractor, Subcontractors and employees to change direction, store materials, park vehicles or equipment, or for any other purpose, at any time, unless explicitly allowed in the Contract Documents. Existing emergency access crossovers shall be closed within the project limits, utilizing drums at all times during phased bridge construction, and at times when lane closures are in place. Existing emergency access crossovers shall not be blocked in a manner that prevents normal use by MaineDOT maintenance, Maine Turnpike Authority maintenance, or State Police forces.

652.3.6 Traffic Control. Temporary lane closures shall not be set up until work in the area is to be performed and must be removed when no work is being performed. The work zone minimum travel lane widths are shown on the Plans and stated in Special Provision 105 Limitations of Operations. The Contractor shall provide the minimum roadway width stated (face of drum to face of drum; face of drum to toe of concrete barrier) during a temporary lane closure.

All construction work shall be confined to the temporary lane closures or long term lane closures, and be closed to traffic.

Slow moving construction equipment may travel the closed lane for short distances. **ALL** vehicles shall be oriented with the flow of traffic unless otherwise authorized by the Resident.

Any vehicle using LED Lights shall have them angled as to not impede or disrupt normal traffic flow at any time as determined by the Resident. Vehicles unable to manipulate these devices shall be removed from the project immediately.

All trucking shall be done in the lane open to traffic.

No equipment or vehicles of the Contractor, Subcontractor or employees engaged in work on this Contract, shall be parked or stopped on lanes carrying traffic, or on lanes or shoulders adjacent to lanes carrying traffic, at any time.

The Contractor shall keep all paved areas of the roadway as clear as possible at all times. The Contractor's personnel and equipment shall avoid crossing traffic lanes whenever possible.

Existing pavement markings at centerline in the taper to the lane closure shall be removed or covered over with an approved paint or tape beginning at the first drum in the taper in overnight lane closures.

See the General Notes sheet in the Construction Plans for additional requirements for temporary pavement marking lines.

Temporary pavement markings shall be placed from the existing lane edge line through the length of the taper in overnight lane closures (highway milling and pavement work only).

Placing all temporary pavement marking lines or markers will be paid under Items 627.51 6 Inch Temporary Pavement Tape, 627.781 Temporary 6 Inch Painted Pavement Marking Line, and 627.812 Temporary Raised Pavement Markers.

Contractor shall place Temporary 6 Inch Painted Pavement Marking Line, White or Yellow on all milled mainline surfaces prior to opening the lane up to traffic. These lines shall be paid under Item 627.781.

Temporary Lane Lines and Edge Lines. Temporary painted/taped edge lines and lane lines shall be marked each day on all new pavement to be used by traffic. The temporary lines shall conform to the standard marking patterns used for permanent markings and will be paid for under Section 627. Failure to apply temporary lines daily will result in suspension of paving until temporary markings are applied to all previously placed pavement.

Roadside Recovery Area The Contractor shall not temporarily store material nor park equipment within 15 feet of the edge of the established travel lanes without a lane or shoulder closure.

No long term storage of equipment or material will be allowed within 30 feet of the edge of the established travel lanes. Short term storage of equipment or material less than 30 feet from the edge of the established travel lanes must be approved by the Department and shall be clearly marked by **drums and cones**. Short term storage shall be defined as less than 12 hours.



Pre-Bid Conference

WIN 19270.00

AC-IM-1927(000)E

Kittery/Portsmouth - Interstate 95 - Piscataqua River Bridge

December 5, 2018

1. General Information:

In case of discrepancy between this document and the Bid Documents, the Bid Documents shall take precedence.

2. Location:

The general limits of work are as shown in the contract plans. The project limits extend from the New Hampshire abutment of the I-95 Piscataqua River Bridge to just north of the ME 236 bridge over I-95. Total project length is approximately 1.75 miles. Mill, overlay, striping and ancillary work will extend beyond these limits.

3. General Description:

The work on the Piscataqua River Bridge includes:

- Deck overhang and rail replacement with concrete barrier
- Median overhang and rail replacement with concrete barrier
- Deck repair
- Install zinc anodes in deck
- Wearing surface replacement
- Compression seal joint replacement (including surrounding deck)
- Finger joint trough replacement
- Concrete haunch removal
- Bridge drainage system replacement
- Miscellaneous steel repairs
- Electrical system replacement
- Installation of FRP conduits for future ITS
- Maintenance of Traffic, including real-time travel time signs
- and all other work incidental thereto in accordance with the Plans and Specifications.

The work on the Maine Approaches includes:

- Shoulder widening
- Median barrier installation
- Mill & fill
- Overlay
- Weigh-in-Motion System
- Maintenance of Traffic
- and all other work incidental thereto in accordance with the Plans and Specifications.

4. Bid:

- a. The Notice to Contractors includes more detailed bidding requirements.
- b. Bid opening: **December 19, 2018 at 11:00 AM** at Maine DOT Building, Capitol Street, Augusta, Maine.
- c. For general information regarding Bidding and Contracting procedures, contact George Macdougall at (207) 624-3410. The webpage at <http://www.maine.gov/mdot/contractors/> contains copies of relevant documents.
- d. For project specific information, fax all questions to Project Manager Leanne Timberlake at (207) 624-3431, use the electronic RFI form at the webpage listed above, or email questions to RFI-Contracts.MDOT@maine.gov (project name and identification number should be in the subject line).
- e. Questions received after 12:00 noon of the Monday prior to the bid date will not be answered.
- f. Bidders shall not contact any other Departmental staff or its representatives for clarification of Contract provisions, and the Department will not be responsible for any interpretations so obtained.

5. Contract Specifications:

- a. All work is governed by “State of Maine, Department of Transportation, Standard Specifications, November 2014 Edition”.
- b. Supplemental Specifications supersede the Standard Specifications and are included starting on page 244 of the Contract Bid Book.
- c. Project Special Provisions supersede the Supplemental Specifications and Standard Specifications and are included starting in the Contract Bid Book.

6. Construction Schedule/Substantial Completion

- a. November 30, 2019 – Northbound lane closures permitted (unless Woodbury Ave Bridge over U.S. Route 1 Bypass fully open earlier). Southbound does not have this restriction.

- b. October 1, 2021 – Contract Substantially Complete. Special Provision 107 outlines the definition of substantially complete. Generally, it indicates all work complete except final mill & fill, overlay and final striping.
- c. May 20, 2022 – Contract Completion Date.

7. Limitations of Operations (Special Provision 105)

- a. Special Provision 105 details limitations of operations. Some key requirements are listed below:
- b. The Contractor is advised that portions of the work may require relocation of the Movable Temporary Concrete Barrier (MTCB). The Contractor shall provide steel plating or other means acceptable to the Resident to support the MTCB and properly span it over open holes, depressions, or newly placed concrete in the deck.
- c. The Contractor shall maintain a minimum of three (3) lanes of traffic during “Peak Traffic Periods”. In general, this refers to the summer traffic season plus some busy holidays. A minimum of two (2) lanes are required otherwise.
- d. Temporary lane closures are allowed at night, with specific times required for each day of the week and direction of the Interstate.
- e. Temporary lane closures, if used, shall be one spatially continuous closure.
- f. The Contractor shall be assessed a penalty at the rate of Ten Thousand U.S. Dollars (\$10,000) per every 15 minutes for each lane that is closed beyond the times allowed. The fee shall be assessed the full amount starting 1 minute beyond the allowed times and added cumulatively every 15 minutes thereafter.
- g. The Contractor shall not have Interstate through-traffic lanes closer than five (5) feet to the existing aluminum bridge railing. This must be considered if the Contractor contemplates modifications to the Maintenance of Traffic sequence detailed in the plans.
- h. The Contractor is responsible for snow removal within the project limits in accordance with Section 105.4.3 of the MaineDOT Standard Specifications. However, the Agency maintenance forces will assume responsibility to plow snow from the open travel lanes and from shoulders that are not adjacent to temporary barrier or other work-related obstructions (such as drums) within the project limits. The Contractor shall remove snow from shoulders adjacent to temporary barrier or other work-related obstructions (such as drums) and from all portions of the roadway that are closed to traffic as soon as practicable, regardless of winter suspensions.
- i. The Contractor shall allow safe access, as determined by the Resident, for emergency vehicle use of all ramps temporarily closed during construction. This access shall include snow removal vehicles.
- j. The Contractor shall not have any temporary lane closures, except for emergency repairs, if a storm is anticipated during the temporary lane closure duration. The Resident will make the

final decision if a forecasted storm warrants this prohibition, in coordination with MaineDOT, NHDOT, and Maine Turnpike Authority maintenance forces. For every night in which temporary lane closures are so prohibited, the Contractor will receive an extension of 12 hours on the Contract Substantially Complete Date. No extension will be made for this prohibition to the Contract Completion Date.

8. Incentive/Disincentive (Special Provision 107)

- a. Special Provision 107 outlines incentives and disincentives.
- b. Work ongoing: Incentives of \$7,000 or more for 3 lanes open Friday Northbound, Sunday Southbound, and some specific holidays during times when the Contractor is allowed to reduce to 2 lanes open. These incentives end with Substantial Completion and are replaced by a requirement to have 3 lanes open during these times.
- c. Daily incentives of \$7,000/day are associated with early Substantial Completion. There is a \$100,000 incentive for substantial completion by May 21, 2021 (No excuses for missing this time). Disincentives of \$5,500/day are associated with late Substantial Completion.
- d. After Contract Substantially Complete is accepted, the Contractor shall pay a fee of \$3,500 for each Day that the roadway is reduced to two (2) lanes of traffic within the hours of 6:00 am to 10:00 pm.
- e. There is an incentive of \$100,000 for Physical Work Complete within 2021. Disincentives of \$7,000/day are associated with Physical Work Complete occurring after May 20, 2022. (No excuses for altering this date.)

9. Utility Coordination (Special Provision 104)

- a. There is no utility relocation work scheduled or anticipated by the utility owners in this contract.
- b. Existing utilities will need to be protected during construction. Consolidated Communications, CMP, MaineDOT and Comcast have facilities on the bridge.
- c. Pan Am Railways crosses under the bridge. MaineDOT has a PRTS and flagger agreement allowing work under the bridge, over the rails, for a limited period of time. This agreement has been included in the contract documents.

10. Permit Requirements (Special Provision 105)

- a. Peregrine falcons are known to nest on the Piscataqua River Bridge (Br# 6330). Peregrines are protected by the New Hampshire and Maine State Endangered Species Act and the U.S. Migratory Bird Treaty Act. Peregrine nesting period is approximately February 15-August 1. Once the birds construct a nest, it cannot be disturbed by construction activity and cannot be removed. Nest building activity is primarily in February and March. The contractor shall coordinate with MaineDOT Environmental Office and assist as necessary to preclude birds from nesting on the bridge to allow construction activities between February 15 and August 1.

11. General Requirements:

- a. U-Turns at toll plazas and median openings are not allowed.
- b. All jobsite personnel shall wear a safety vest labeled as ANSI 107-2004 standard performance for Class 3 risk exposures at all times. This requirement also applies to truck drivers and equipment operators when out of an enclosed cab.
- c. All vehicles used on the Project shall be equipped with amber flashing beacons.

12. Traffic Control (Special Provision 652)

- a. The Contractor is responsible for supplying, inspecting and maintaining traffic control devices in accordance with the project specifications. Contractor is subject to Penalty Damages for violation(s) per Standard Specification 652 and Special Provision 652.
- b. Lane closures shall be communicated to the relevant emergency service contacts as described in SP 105 and SP 652.
- c. The Contractor shall assign a Traffic Coordinator to the Project who shall coordinate all traffic control on the Project and work with the Project Superintendent and Resident to ensure safe and efficient set up, maintenance and removal of the traffic control layouts and devices for the duration of the project.
- d. The Contractor shall provide full time Traffic Monitor(s) to the Project who shall continuously observe and patrol the traffic setups to ensure traffic is flowing as anticipated, and all traffic control devices (PCMS, signs, arrow boards, drums, cones, Type III barrier, etc.) are in the correct locations and functioning properly.

13. Specific Contract Items:

- a. Automated Trailer Mounted Speed Limit signs are being included for mainline lane closures.
- b. Drums for this project shall have 6-inch-wide retroreflective bands.
- c. Hydro-demolition is specified for use in removal of the top portion of the deck adjacent to the overhangs and is a distinct pay item. Hydro-demolition may be used by the Contractor as a method for other concrete removal that is part of this contract, but no additional payment for the use of the hydro-demolition in those cases will be made.
- d. Existing finger joints will remain in place, but new troughs will be installed. This work will be done from below. Proposed pavement will be tapered down to meet the existing finger joints.

14. Coordination with Maine Turnpike (Special Provision 105):

- a. The Contractor is made aware that a work permit is required to conduct work on Maine Turnpike facilities. Please see the Bid Book.
- b. \$5,000,000 in liability insurance is required.

15. Questions?

- a. Note: verbal responses by the MaineDOT or its representatives in the Pre-Bid meeting shall not be considered binding. Written responses to all questions asked at the Pre-Bid meeting will be issued after the meeting and will be considered the official responses from MaineDOT.

Date:12/17/2018

Username:

Division: HIGHWAY

Filename: ... \MSTA\002b_Quantities.dgn

ESTIMATED QUANTITIES									
ITEM NO.	DESCRIPTION	QUANTITIES							UNIT
		N.H. APPROACH ROADWAY	N.H. APPROACH BRIDGE SPANS	RIVER BRIDGE	MAINE APPROACH BRIDGE SPANS	MTA APPROACH ROADWAY	MAINTENANCE OF TRAFFIC	TOTAL QUANTITY	
202.12	Removing Existing Structural Concrete		880	830	830			2,540	CY
202.121	Concrete Haunch Removal		29600		2600			32,200	LF
202.127	Removing of Existing Bituminous Pavement (50400 SY)		0.43	0.28	0.29			1	LS
202.1294	Bridge Drainage System Removal		0.5	0.5				1	LS
202.1295	Hydra-Demolition, Property of Contractor		1530	1500	1500			4,530	SY
202.13	Removing Existing Railings Retained by Department		1870	2690	2700			7,260	LF
202.202	Removing Pavement Surface	16200	21500	14700	14500	9350		76,250	SY
202.203	Pavement Butt Joints					7305		7,305	SY
202.205	Rumble Strip - Shoulder	3800				12800		16,600	LF
202.207	Rumble Strips, Fill						850	850	LF
203.20	Common Excavation					3160		3,160	CY
203.24	Common Borrow					670		670	CY
203.25	Granular Borrow					1150		1,150	CY
205.41	Reconstruction of Existing Shoulder, Plan Quantity					7000		7,000	SY
205.51	Widening of Existing Shoulder, Plan Quantity					3100		3,100	SY
304.10	Aggregate Subbase Course - Gravel					380		380	CY
304.14	Aggregate Base Course - Type A					260		260	CY
403.2081	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Polymer Modified)					6000		6,000	TON
403.2101	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Polymer Modified)	900	1800	1250	1200			5,150	TON
403.211	Hot Mix Asphalt, 9.5 mm Nominal Maximum Size (Shimming)					1500		1,500	TON
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Course)					4050		4,050	TON
403.2131	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Course, Polymer Modified)		3000	2050	2000	1800		8,850	TON
409.15	Bituminous Tack Coat, Applied	650	1080	740	730	4650		7,850	GAL
461.131	Temporary Pavement						56	56	TON
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges (1980 CY)		0.33	0.34	0.33			1	LS
502.705	Composite Bridge Drain (256 EA)		0.17	0.58	0.25			1	LS
503.12	Reinforcing Steel, Fabricated and Delivered		228000	189000	219000			636,000	LB
503.13	Reinforcing Steel, Placing		228000	189000	219000			636,000	LB
504.709	Bridge Hardware, Truss Screen Panel (800 EA)			1				1	LS
504.811	Structural Steel Repair			1900				1,900	LB
514.06	Curing Box for Concrete Cylinders		1		1			2	EA
515.21	Protective Coating for Concrete Surfaces (45950 SY)		0.47	0.15	0.38	0.00		1	LS
518.51	Repair of Upward Facing Surfaces - Below Reinforcing Steel <8 inches		7700	7700	5000			20,400	SF
518.52	Repair of Upward Facing Surfaces ≥ 8 inches		5	3	3			11	CY
518.60	Repair of Vertical Surfaces < 8 inches		600	280	520	50		1,450	SF
518.70	Repair of Overhead Surfaces < 8 inches		320	210	240			770	SF
520.2321	Asphaltic Crack Control Joint (240 LF)		0.58		0.42			1	LS
520.245	Bridge Joint Modifications Type 5			36				36	EA
520.261	Longitudinal Joint Seal		1850		1350			3,200	LF
521.32	Fabric Trough for Finger Joint (Anchor Piers)		8	4	6			4	EA
521.32	Fabric Trough for Finger Joint (Approach Spans)							14	EA
524.40	Protective Shielding		0.92		0.08			1	LS
526.301	Temporary Concrete Barrier, Type I (9500 LF)						1	1	LS
526.307	Movable Temporary Concrete Barrier (9700 LF)						1	1	LS
526.312	Permanent Concrete Barrier Type II (1345 LF)			1				1	LS
526.331	Permanent Concrete Barrier Type II1b (13780 LF)		0.4	0.2	0.4			1	LS
526.36	Median Barrier Fixed Object Protection					165		165	LF
526.50	Precast Concrete Barrier, Median					4440		4,440	LF
527.33	Truck Mounted Attenuator						2	2	EA
527.341	Work Zone Crash Cushions - TL-3						3	3	UNIT
530.25	FRP Grating			900				900	SF
603.159	12" Culvert Pipe Option III					63		63	LF
604.09	Catch Basin Type B1					2		2	EA
604.161	Altering Catch Basin					5		5	EA
604.164	Rebuilding Catch Basin					3		3	EA
604.18	Adjusting Manhole or Catch Basin to Grade					9		9	EA
604.26	Catch Basin Type B5					10		10	EA
605.105	8" Inch Underdrain (Type B)					13		13	LF
606.1301	31" W-Beam Guardrail - Mid-Way Splice (Steel Post, 8" Offset Blocks, Single Faced)					3530		3,530	EA
606.1305	31" W-Beam Guardrail Mid-Way Splice Flared Terminal					3		3	EA
606.1723	Bridge Transition - Type III	2				2		4	EA
606.1724	Bridge Transition - Type III, Modified					1		1	EA
606.277	Terminal End - Anchored End					2		2	EA
606.352	Reflectorized Beam Guardrail Delineator						100	100	EA
606.353	Reflectorized Flexible Guardrail Marker					8		8	EA
606.356	Underdrain Delineator Post					2		2	EA
606.362	Guardrail, Adjust					1970		1,970	LF
606.363	Guardrail Remove And Dispose					8700		8,700	LF
606.569	Remove, Modify And Reset, Double Rail					65		65	LF
607.17	Chain Link Fence - 6 foot				700			700	LF
607.432	Protective Screening		120					120	LF
608.07	Plain Concrete Sidewalk	220						220	SY
609.312	Special Curb, Type 2	30				60		90	LF

TYLIN INTERNATIONAL

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
WIN
019270.00
BRIDGE NOS. 6330

PROJ. MANAGER
Leanne Timberlake

CHECKED-REVIEWED
J. Legere
D. Myers
B. Touchette

DESIGNED-DETAILLED
JUL 5/21/32 & 6/07/432
DSM-Misc. Corrections

REVISIONS
3

FIELD CHANGES
4

DATE
10/18
10/18
11/18
12/18

SIGNATURE

P.E. NUMBER

DATE

KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY

ESTIMATED QUANTITIES
SHEET 1 OF 2

SHEET NUMBER
2B
OF 232

ESTIMATED QUANTITIES		QUANTITIES							UNIT
ITEM NO.	DESCRIPTION	N.H. APPROACH ROADWAY	N.H. APPROACH BRIDGE SPANS	RIVER BRIDGE	MAINE APPROACH BRIDGE SPANS	MTA APPROACH ROADWAY	MAINTENANCE OF TRAFFIC	TOTAL QUANTITY	
610.08	Plain Riprap		55		90	1360		1,505	CY
615.07	Loam					630		630	CY
618.14	Seeding Method No. 2					51		51	UNIT
620.58	Erosion Control Geotextile		160		260			420	SY
620.622	Cellular Confinement System					610		610	SY
626.222	FRP Conduit		4800	4900	4800			14,500	LF
627.18	12 Inch Solid White Pavement Marking Line					3550		3,550	LF
627.1801	12" Solid White Retroreflective Thermoplastic Pavement Marking	690						690	LF
627.51	6 Inch Temporary Pavement Tape, Yellow or White						6500	6,500	LF
627.57	12 Inch Removable Black Line Masking Tape						1350	1,350	LF
627.744	6" White or Yellow Painted Pavement Marking Line	7655	12195	9715	11300	42235		83,100	LF
627.7441	6" White Retroreflective Thermoplastic Pavement Marking	5650						5,650	LF
627.77	Removing Existing Pavement Marking						130000	130,000	SF
627.781	Temporary 6" Painted Pavement Marking Line, White or Yellow						400000	400,000	LF
627.801	Temporary Raised Pavement Markers						36200	36,200	EA
627.945	Pavement Marking Tape					805		805	LF
627.945	Pavement Marking Tape (Dotted White Lane Line, 6-inch Width)					385		385	LF
629.05	Hand Labor - Straight Time					80		80	HR
631.10	Air Compressor (Including Operator)					10		10	HR
631.11	Air Tool (Including Operator)					10		10	HR
631.12	All Purpose Excavator (Including Operator)					30		30	HR
631.14	Grader (Including Operator)					40		40	HR
631.172	Truck, Large (Including Operator)					5		5	HR
634.160	Highway Lighting		0.33	0.34	0.33			1	LS
634.210	Conventional Light Standard		10	12	14			36	EA
639.18	Field Office, Type A		0.25	0.25	0.25	0.25		1	EA
643.71	Traffic Signal Modification: I-95 SB / Market St						1	1	LS
643.71	Traffic Signal Modification: I-95 NB / Market St						1	1	LS
643.71	Traffic Signal Modification: Route 1 Bypass / Albacore						1	1	LS
643.871	Weigh-In-Motion System					1		1	LS
645.103	Demount Guide Sign					1		1	EA
645.106	Demount Regulatory, Warning, Confirmation and Route Marker Assembly Sign					3		3	EA
645.113	Reinstall Guide Sign					1		1	EA
645.116	Reinstall Regulatory, Warning, Confirmation and Route Marker Assembly Signs					3		3	EA
645.521	Travel Time Sign Integration						1	1	LS
645.523	Travel Time Data						1	1	LS
652.30	Flashing Arrow					4		4	EA
652.312	Type III Barricades						20	20	EA
652.33	Drum						600	600	EA
652.34	Cone						100	100	EA
652.35	Construction Signs						3000	3,000	SF
652.361	Maintenance of Traffic Control Devices					1		1	LS
652.38	Flaggers						3000	3,000	HR
652.381	Traffic Officers						640	640	HR
652.382	Traffic Monitor						915	915	CD
652.41	Portable-Changeable Message Sign						26	26	EA
652.451	Automated Trailer Mounted Speed Limit Sign						200	200	CD
655.511	Embedded Galvanic Anode		7110	4520	4530			16,160	EA
655.513	Embedded Cathodic Protection System (16300 LF)		0.34	0.33	0.33			1	LS
656.75	Temporary Soil Erosion and Water Pollution Control		0.15		0.15		0.70	1	LS
659.10	Mobilization	0.009	0.245	0.238	0.184	0.117	0.207	1	LS

BID ALTERNATE 1									
508.1401	High Performance Waterproofing Membrane, Torch Applied	(50700 SY)		0.42	0.29	0.29		1	LS

BID ALTERNATE 2									
508.1402	High Performance Waterproofing Membrane, Spray Applied	(50700 SY)		0.42	0.29	0.29		1	LS

EARTHWORK COMPUTATIONS

COMMON EXCAVATION FOR ESTIMATE

Common Excavation (from Cross Sections)	3170	
Grubbing in Fill	211	
Total Common Excavation	3381	
FILL FOR BORROW CALCULATIONS		
Common Fill (from cross sections)	660	
Grubbing in Fill	211	
Pavement Salvage in Fill	0	
Total Fill	871	
ROCK EXCAVATION FOR ESTIMATE		
Rock Excavation (from cross sections)	-	
Rock Excavation (ledge undercuts)	-	
Total Rock Excavation	0	

AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS

(1) Total Common Excavation	3381
Deductions:	
Grubbing in Cut	496
Grubbing in Fill	211
Pavement in Cut	1369
(2) Total Deductions	2075
Total Available Common Excavation (1) minus (2)	1306
Total Available Struct. Excavation (Underdrain only)	0
Total Available Non-Rock Excavation	1306
Total Available Rock Excavation	0

COMPUTATION OF COMMON BORROW FOR ESTIMATE

(3) Total Fill						871
Total Available Non-Rock Excav.	1306	x	0.85	=	1110	
Total Available Rock Excav.	0	x	1.33	=	0	
Total Available Str. Rock Excav.	0	x	1.33	=	0	
(4) Total Available Excavation						1110
Total Available Excavation minus Total Fill [(4)-(3)]						239
Total Surplus Material [(2)+(4)-(3)]						2314

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
WIN
019270.00
BRIDGE NOS. 6330

PROJ. MANAGER
DESIGNED-Detailed
CHECKED-Reviewed
DESIGNED-Detailed
REVISIONS
FIELD CHANGES

DATE
10/18
10/18
11/18
12/18

BY
D. Myers
B. Tothaker
JUL-Philip Riprap Moved
DSM-Misc. Corrections

SIGNATURE
P.E. NUMBER
DATE

KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY

ESTIMATED QUANTITIES
SHEET 2 OF 2

SHEET NUMBER
3B
OF 232

GENERAL PROJECT NOTES

1. All details shall be in conformance with Maine Department of Transportation (MaineDOT) Standard Details, Highways and Bridges, latest revision and MaineDOT Best Management Practices for Erosion and Sediment Control, latest revision unless otherwise included in these plans.

2. For additional details referenced or not shown in these drawings, see the State of Maine, Department of Transportation Standard Details, latest revision.

3. For easements, construction limits and right-of-way lines, refer to Right-of-Way Map.

4. The Contractor is required to call Dig Safe at 1-888-344-7233 at least 72 hours prior to the start of the work.

5. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.

6. "Undetermined Locations" shall be determined by the Resident.

7. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items will take precedence.

b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specification Section 109.7, Equitable Adjustments to Compensation.

8. A bead of Hot-Applied Rubberized Asphalt Sealer (ASTM D6690, Type IV) shall be applied along barriers after installation of base course and on all surface pavement joints. Payment will be incidental to related contract items.

9. Pay Item 527.34I, Work Zone Crash Cushions (TL-3) used to protect the Moveable Temporary Concrete Barrier (MTCB) shall be able to pass through the Barrier Transfer Machine. Differing crash cushion types under this pay item are anticipated for the MTCB and the Temporary Concrete Barrier, Type I.

GENERAL APPROACH NOTES

1. The Contractor is responsible for the careful side-staking of existing centerline as per Standard Specification 105.6.2. Side stakes shall be placed safely outside of the construction limits and the NB and SB crown grades shall be transferred to these stakes. These stakes and grades will be used to layout centerline and determine new construction finish grades. All layout, stakes, and grades will be checked and must be acceptable to the Resident.

2. The Contractor will place appropriately marked stakes at every 500' for stationing. The Contractor will paint every full station (100') on the existing roadway and will transfer the painted stationing through all intermediate lifts (not surface). Stationing control must be placed before work can commence.

3. Portable Changeable Message Signs (PCMS) shall be located in their temporary location as approved by the Resident. The signs shall be in place and functioning properly prior to all appropriate construction phases.

4. No separate payment for superintendent or foreman will be made for the supervision of equipment and layout of work being paid for under the equipment rental items.

5. All clearing shall be considered incidental to the contract and no separate payment will be made. The actual lines for clearing shall be established in the field by the Contractor and approved by the Resident.

6. All joints between existing and proposed hot bituminous pavement shall be butted. Payment will be made under Item 202.203, "Pavement Butt Joints".

7. Payment for sawcutting existing pavement will be incidental to related 202 items.

8. Payment for regrading existing aggregate subbase (in areas where no new aggregate is to be added) will be paid for under equipment rental Item 631.14 - Grader (Including Operator).

9. Any necessary cleaning of existing pavement prior to paving (or milling) shall be incidental to the related paving (or milling) items. This includes killing and removal of all vegetative matter.

10. Any base pavement not surfaced before opening to traffic will require temporary pavement markings of paint, both yellow and white edge lines, and broken white lane lines, and will be considered part of Item 627.78I.

11. Final striping for the project shall be done by the Contractor per the striping layout in the contract documents or as provided by the Department. Payment will be made under appropriate contract items.

12. Grind transition tapers at Catch Basins in accordance with Standard Detail 609(05) or as directed by the Resident; payment will be incidental to related contract items.

13. Any necessary cutting of existing catch basins to allow for proposed pipe connections will not be paid for separately and will be considered incidental to related 603 or 605 Items.

14. Existing culverts and catch basins will be cleaned as directed by the Resident; payment will be incidental to related 604 items.

15. Existing catch basins which are removed and not reused on the project will become the property of the contractor. Payment will be incidental to related 604 items.

16. Flat tops for catch basins are not allowed unless noted on the plans or directed by the Resident.

17. Option III drainage pipes will consist of reinforced concrete pipe or plastic pipe. No corrugated metal pipe will be allowed.

18. Any necessary cutting of existing pipes to fit in areas of proposed catch basins will not be paid for separately and will be considered incidental to 604 items.

19. No existing drainage shall be abandoned, removed or plugged without prior approval of the Resident.

20. Any necessary cutting of existing drainage pipes to attach and extend with new drainage pipe, will not be paid for separately and will be considered incidental to 603 Items.

21. Backslaping of trenches required to install drainage pipes will not be allowed.

22. Inlets and outlets of all culverts shall be riprapped unless otherwise noted on the plans or directed by the Resident.

23. Place a 24 inch wide strip of Temporary Erosion Control Blanket along the top of all riprap downspouts. Payment will be incidental to Item 610.08, "Plain Riprap".

24. Extended-use Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be incidental to related Contract Items.

25. Cellular Confinement System shall be used on all slopes steeper than 2:1 and shall be installed per the special provisions.

26. Where deemed necessary by the Resident, unsuitable excess material shall be removed from the edges of shoulders and placed in designated areas or disposed of. Payment will be incidental to related contract items.

27. The Contractor shall place suitable existing or other material acceptable to the Resident on all pavement edges to allow a drop off no greater than the surface pavement thickness. The material shall be graded to match existing in-slope or as directed by the Resident before surface is placed. The Contractor will be paid under appropriate equipment rental items. Borrow is not authorized until all acceptable waste material has been utilized. Seed and Mulch will be paid for at the contract unit price.

28. Loam has been estimated for disturbed areas. Actual placement of the loam shall be as noted on the plans or designated by the Resident.

29. Unless otherwise noted Seeding Method No. 2 shall be utilized on all disturbed areas.

30. Loam shall be placed to a nominal depth of 4 inches in all areas unless otherwise noted or directed.

31. Any damage to the slopes caused by the Contractor's equipment, personnel, or operation shall be repaired to the satisfaction of the Resident. All work, equipment, and materials required to make repairs will be at the Contractor's expense.

32. All waste material not used on the project shall be disposed of off the project in acceptable waste areas reviewed by the Resident. Grading, seeding and mulching of waste areas shall be considered incidental.

33. Guardrail which is removed and not reused on the project shall become the property of the Contractor. Payment will be made under Item 606.363, "Guardrail Remove and Dispose".

34. Guardrail end treatments shall be installed concurrently with the placement of each section of beam guardrail.

35. Holes created by Guardrail removal shall be filled and compacted with approved materials as directed by the Resident. Payment to be considered incidental to the guardrail items.

36. Connections for proposed guardrail to existing guardrail will be considered incidental to 606 Items.

37. Guardrail posts shall be 9'-0" minimum when installed adjacent to side slopes which are steeper than 2:1.

38. The Contractor shall remove both Median Barrier Transitions Type I, including connection I-beams, from the terminal end of the existing barrier at the Dennett Road Bridge. The Contractor shall reset one barrier at the terminal end of the proposed median barrier; payment will be made under Item 526.50, "Precast Concrete Barrier, Median". The barrier which is not reused on the project will be delivered to and unloaded at the MTA York maintenance yard or another location, as directed by the Resident; payment will be incidental to Item 526.50, "Precast Concrete Barrier, Median".

39. An NCHRP350 compliant FLEAT guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail; no exceptions or substitutions will be considered.

GENERAL BRIDGE NOTES

1. Bidders and Contractors may obtain a copy of the existing bridge plans by faxing a Request for Information to the Bid Contact Person. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations, which may have been made to the bridge during its life span.

2. Bidders and Contractors may obtain a copy of the bridge deck evaluation report of the existing bridge by faxing a Request for Information to the Bid Contact Person. The report contains visual inspection information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.

3. The proposed elevations are based on the NAVD 88 Datum. The as-built bridge plans are based on NGVD 29 Datum.

4. All aluminum bridge rail, rail posts, and associated hardware which are to be removed shall be carefully salvaged by the Contractor and will remain the property of the Department. The Contractor shall deliver and unload all salvaged materials to the nearest MaineDOT maintenance lot, as directed by the Resident. Payment will be considered incidental to related contract items.

5. All LED light heads that are removed shall be carefully salvaged by the Contractor and will remain the property of the NHDOT. The Contractor shall deliver and unload the LED light heads to the NHDOT Bridge Maintenance Facility at 10 Ranger Way, Portsmouth, NH, as directed by the Resident. Payment will be considered incidental to related contract items.

6. Slipforming of curbs and barriers will not be permitted.

7. All proposed inside and top faces of the bridge fascia barriers and both traffic faces and top face of median barriers shall receive a rubbed finish prior to the application of the Protective Coating for Concrete Surfaces.

8. The Contractor shall be responsible for repairing areas of the existing paint system which is damaged by The Contractor's operations, as directed by The Resident.

9. The steel portions of the existing bridge are coated with a lead-based paint system. The Contractor is responsible for the containment, proper management, and disposal of all lead-contaminated hazardous waste generated by the process of demolishing any portion of the bridge. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. The Contractor is solely responsible for the care, custody and control of any components of the existing bridge, once they have been removed from the structure, unless otherwise noted in the plans. The Contractor is solely responsible for any hazardous waste generated as a result of the storage, recycling, or disposal of the bridge components, including lead-coated steel. The Contractor shall recycle or reuse the steel in accordance with the Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment and other costs required to remove and dispose of the existing bridge will be considered incidental to the related pay items.

10. Reinforcing steel shall have a clear cover of 2" min., unless otherwise noted.

11. Where drilling and anchoring of reinforcing steel is required, the Contractor shall use a material listed on the MaineDOT Prequalified List of Chemical Anchoring Materials. The depth of embedment shall be sufficient to develop 125% of the yield strength of the bar, but shall be no less than the minimum depth of embedment when specified. Where minimum embedment depth has not been specified, bar lengths have been developed based on an assumed embedment depth of 12 inches. The Contractor shall verify the required depth of embedment and adjust the required bar lengths as required.

12. Payment for drilling and anchoring of reinforcing steel is incidental to Item 503.13, "Reinforcing Steel, Placing", unless otherwise noted on the plans.

12. Concrete repairs, including the associated removals, will be paid under the related 518 items.

13. The minimum depth for all concrete patching areas shall be 1 inch behind all bars (longitudinal and transverse) in the reinforcing mat closest to the repair surface.

14. Any reinforcing steel required to replace deteriorated existing reinforcement shall be paid for under item 503.12, "Reinforcing Steel, Fabricated and Delivered" and Item 503.13, "Reinforcing Steel, Placing".

15. Chamfer all exposed concrete edges 3/4" unless otherwise noted.

16. All exposed concrete surfaces shall be coated with a protective coating in accordance with Specification Section 515, after patching is complete and patch materials have cured. Areas to be coated include:

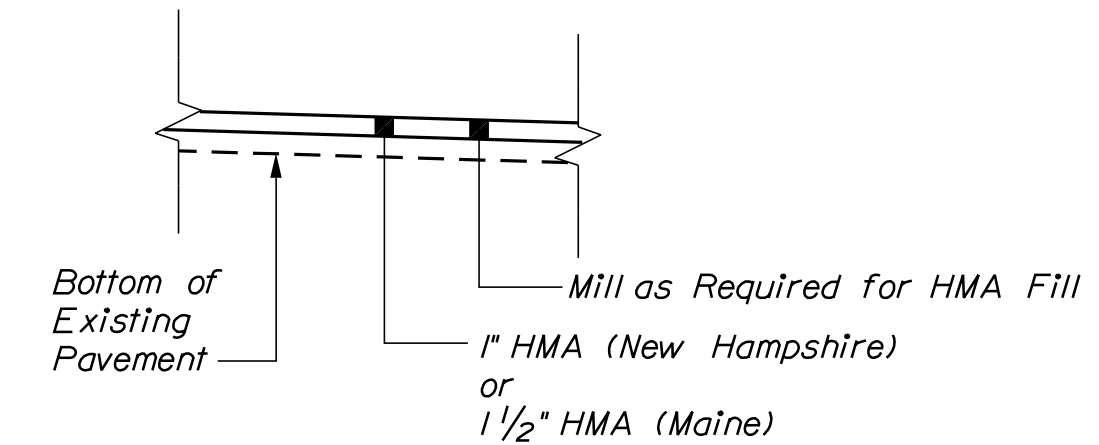
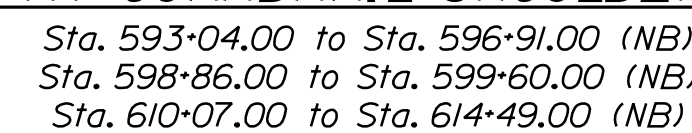
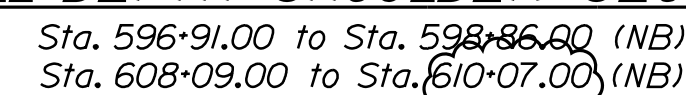
a. Permanent Concrete Barrier and Permanent Concrete Median Barrier, to limits shown on plans.

b. Exposed concrete headers surrounding expansion/rotation joints and bridge drains in the deck.

c. All vertical and horizontal concrete surfaces for all substructure units, which are exposed in the final condition.

Equipment necessary to access areas of substructure units which are to receive protective coating shall be considered incidental to Item 515.21 "Protective Coating for Concrete Surfaces".

KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY	STATE OF MAINE DEPARTMENT OF TRANSPORTATION		AC-IM-1927(000)E		WIN 019270.00	
	PROJ. MANAGER Lennie Timberlake	BY S. Morcan D. Myers	DATE 9/18 9/18	SIGNATURE	P.E. NUMBER	DATE
	DESIGN-DETAILED B. Toothaker	CHECKED-REVIEWED N. Baker	DESIGN-DETAILED A	REVISIONS BLT - Luminaire Salvage DSM - Notes/Item No.s	REVISIONS 3	REVISIONS 4
GENERAL NOTES		FIELD CHANGES				
SHEET NUMBER 5B OF 232						



ETW = EDGE OF TRAVELWAY
NB = NORTHBOUND
SB = SOUTHBOUND
PTSU = PART TIME SHOULDER USE

DETAIL D
NOT TO SCALE

TY·LININTERNATIONAL

**KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY**

**HIGHWAY APPROACH
TYPICAL SECTIONS**

OF 232

Date:12/13/2018

Username:

Division: HIGHWAY

Filename: ... \xxxA_ConstructionNotes_01.dgn

<u>ITEM 606.1305 - 31"W-BEAM GUARDRAIL - MID-WAY SPLICE FLARE TERMINAL (31" HEIGHT)</u>	
<u>STATION</u>	<u>OFFSET</u>
587+12.85	66.04' Rt
598+86.03	74.12' Rt
610+06.61	71.39' Rt
<u>ITEM 606.1723 - BRIDGE TRANSITION - TYPE III</u>	
<u>STATION</u>	<u>OFFSET</u>
569+45.85	51.95' Rt
569+45.83	51.67' Lt
523+82.76	75.23' Rt
523+82.74	69.29' Lt

ITEM 606.1724 - BRIDGE TRANSITION - TYPE III, MODIFIED				
STATION	OFFSET			
616+28.43	BL			

ITEM 606.1301 - 31"W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)				
STATION	OFFSET	TO	STATION	OFFSET
569+66	52.35' Rt		579+21	60.57' Rt
569+66	52.24' Lt		580+20	65.46' Lt
587+50	62.07' Rt		596+91	70.23' Rt
599+23	70.11' Rt		599+95	70.42' Rt
610+44	68.47' Rt		615+49	76.51' Rt

ITEM 606.277 - TERMINAL END - ANCHORED END				
STATION	OFFSET			
596+91.49	70.23' Rt			
615+48.72	76.51' Rt			

ITEM 606.353 - REFLECTORIZED FLEXIBLE GUARDRAIL MARKER				
STATION	OFFSET			
587+13	66.04' Rt			
587+50	62.07' Rt			
596+91	70.23' Rt			
598+86	74.17' Rt			
599+23	70.11' Rt			
610+06	71.43' Rt			
610+44	68.47' Rt			
615+49	76.53' Rt			

ITEM 606.362 - GUARDRAIL ADJUST				
STATION	OFFSET	TO	STATION	OFFSET
579+21	60.57' Rt		582+47	66.43' Rt
580+20	65.46' Lt		582+97	72.34' Lt
583+44	67.98' Rt		585+44	71.57' Rt
583+97	76.11' Lt		587+34	88.78' Lt
587+27	92.08' Rt		587+62	116.31' Rt
591+48	65.69' Lt		596+77	89.90' Lt
599+95	70.42' Rt		602+47	88.39' Rt

ITEM 606.363 - GUARDRAIL REMOVE AND DISPOSE				
STATION	OFFSET	TO	STATION	OFFSET
569+47.99	51.78' Rt		579+20.90	60.57' Rt
569+48.44	51.00' Lt		580+19.58	65.46' Lt
587+12.89	65.23' Rt		596+00.44	61.05' Rt
598+84.90	68.36' Rt		599+94.62	70.42' Rt
611+97.47	65.43' Rt		615+48.59	76.50' Rt
569+48.22	1.19' Rt		581+90.36	2.49' Lt
583+90.22	3.33' Lt		617+10.17	5.00' Lt
584+07.61	2.96' Lt		585+31.26	5.64' Rt
599+96.03	4.35' Lt		602+32.99	4.47' Rt
612+71.08	4.16' Lt		616+32.79	4.48' Rt

ITEM 606.369 - REMOVE, MODIFY, AND RESET DOUBLE RAIL				
STATION	OFFSET	TO	STATION	OFFSET
616+49	0.98' Rt		617+10	4' Lt

ITEM 526.36 - MEDIAN BARRIER FIXED OBJECT BARRIER				
STATION	OFFSET	TO	STATION	OFFSET
614+46.21	BL		616+10.77	BL

LENGTH
164.56'

ITEM 526.50 - PRECAST CONCRETE BARRIER, MEDIAN				
STATION	OFFSET	TO	STATION	OFFSET
569+48.25	BL		581+88.25	1.98' Lt
583+71.26	2.44' Lt		585+51.09	3.77' Rt
585+00.13	6.91' Lt		601+81.73	3.09' Rt
601+66.14	7.59' Lt		614+46.21	BL
616+10.77	BL		616+30.77	BL

LENGTH
1240.00'
180.00'
1681.60'
1280.07'
20.00'

ITEM 610.08 - PLAIN RIPRAP	
STATION	LENGTH
574+00.00, LT	85.27'
590+50.00, RT	45.00'
594+00.00, RT	17.40'
597+50.00, RT	14.00'

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
BRIDGE NOS. 6330
WIN
019270.00
BRIDGE PLANS

PROJ. MANAGER
Leanne Timberlake

DESIGN-DETAILED
TSK

CHECKED-REVIEWED
BLT

DESIGNS-DETAILED
JUL

REVISIONS
2

REVISIONS
3

REVISIONS
4

FIELD CHANGES

DATE
10/18

BY
JTR

TSK

Update Items No.

DATE
12/18

SIGNATURE

P.E. NUMBER

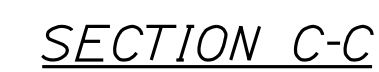
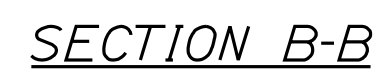
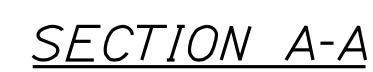
DATE

KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY

CONSTRUCTION NOTES

SHEET NUMBER
11A
OF 232

TYLININTERNATIONAL



1. Contractor options for fill between concrete barrier walls:
 - A. Place 4" PCC at base between concrete barrier walls.
 - B. Place 1'-0" of granular material at base between walls.
 - C. Place granular material from base to bottom of 4" cap.
 - D. Monolithic concrete with foam blockouts is not permitted.
2. Reinforcing steel shall extend continuous through construction joints.
3. Adjust height of concrete barrier wall on low side of offset or superelevated roadways to provide level grade across top of concrete barrier cap.
4. Install 1-inch diameter drain pipe every 20 ft. of voided cavity. Minimum 1 drain per cavity.
5. Sound and repair the lower 7'-0" of the existing bridge columns as directed by the Resident. Payment will be made under 518 items.
6. Apply protective coating for concrete surfaces to the lower 7'-0" of the existing bridge columns as directed by the resident. Payment will be incidental to Item 515.2, "Protective Coating for Concrete Surfaces".

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Date:12/13/2018

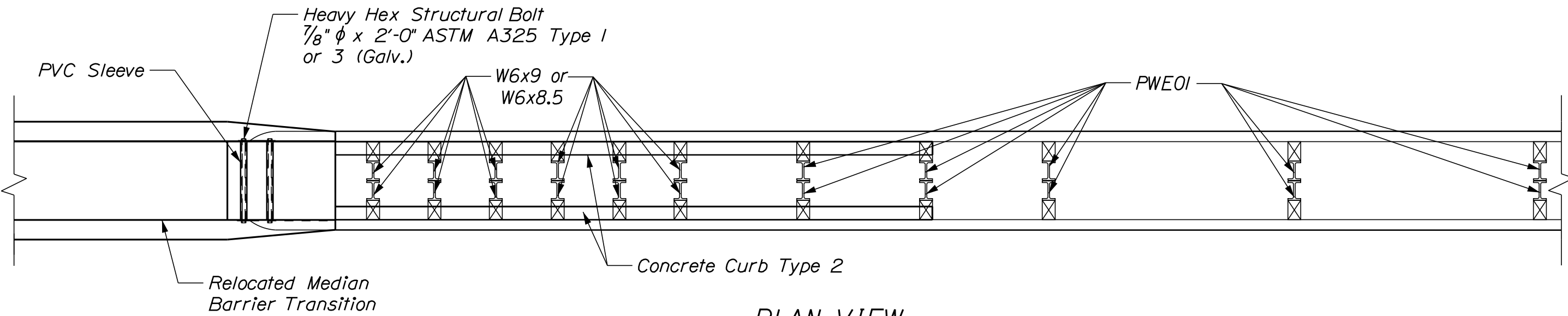
Username:

Division: HIGHWAY

Filename: ...\\xxx\\A_Bridge_Transition.DGN

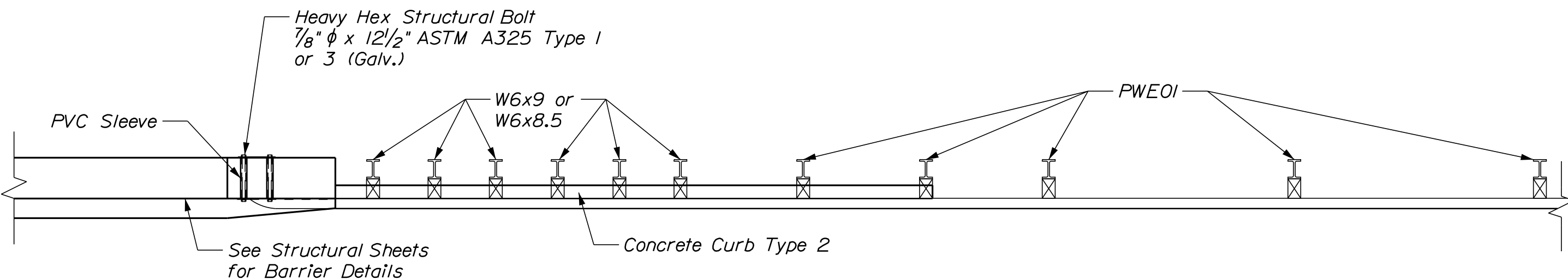
GENERAL NOTES:

1. Additional holes may be made in the thrie-beam panels by drilling, punching, or other means that produce a neat, clean hole. Burning holes will not be allowed.
2. Thrie beam shall be placed with the composite blockout face in front of or directly above the curb face.
3. Rail element shall meet all requirements of AASHTO M-180 except as modified on the plans. The thrie beam transition to w-beam shall be of the same material, but shall not be less than 10 gauge.
4. All bolts shall have double nuts.
5. Standard barrier hardware has been used to develop these guardrail attachments. Designations provided in parenthesis relate to standard elements detailed in "A Guide to Standardized Highway Barrier Hardware," 1995, AASHTO-AGC-ARTBA joint committee.



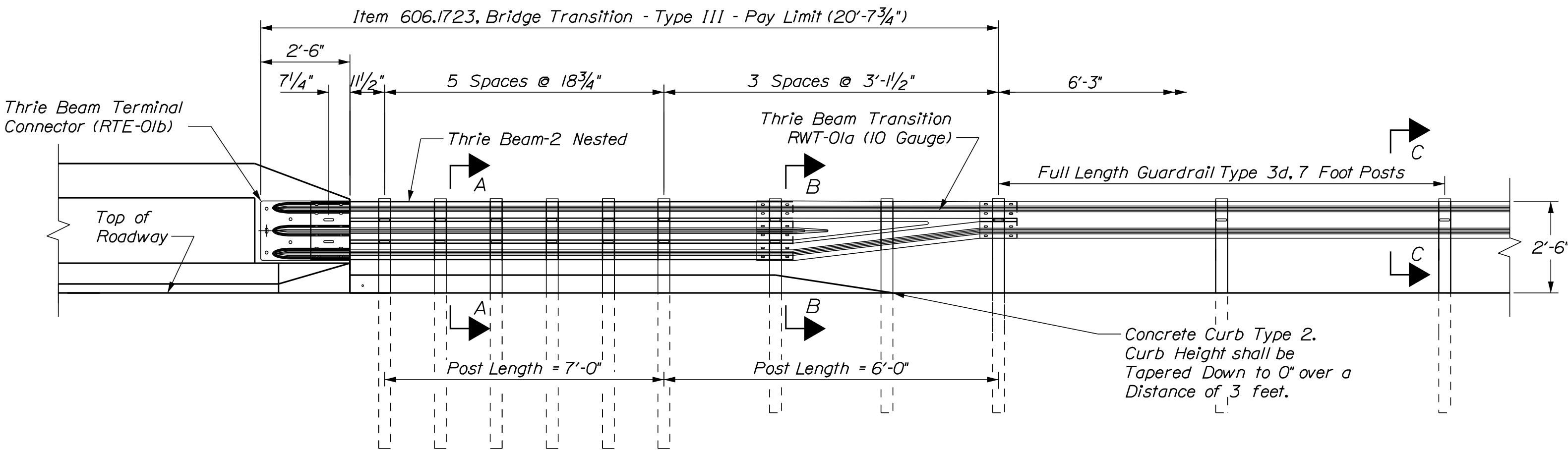
PLAN VIEW
BRIDGE TRANSITION - TYPE III, MODIFIED

3/8" = 1'-0"



PLAN VIEW
BRIDGE TRANSITION - TYPE III

3/8" = 1'-0"

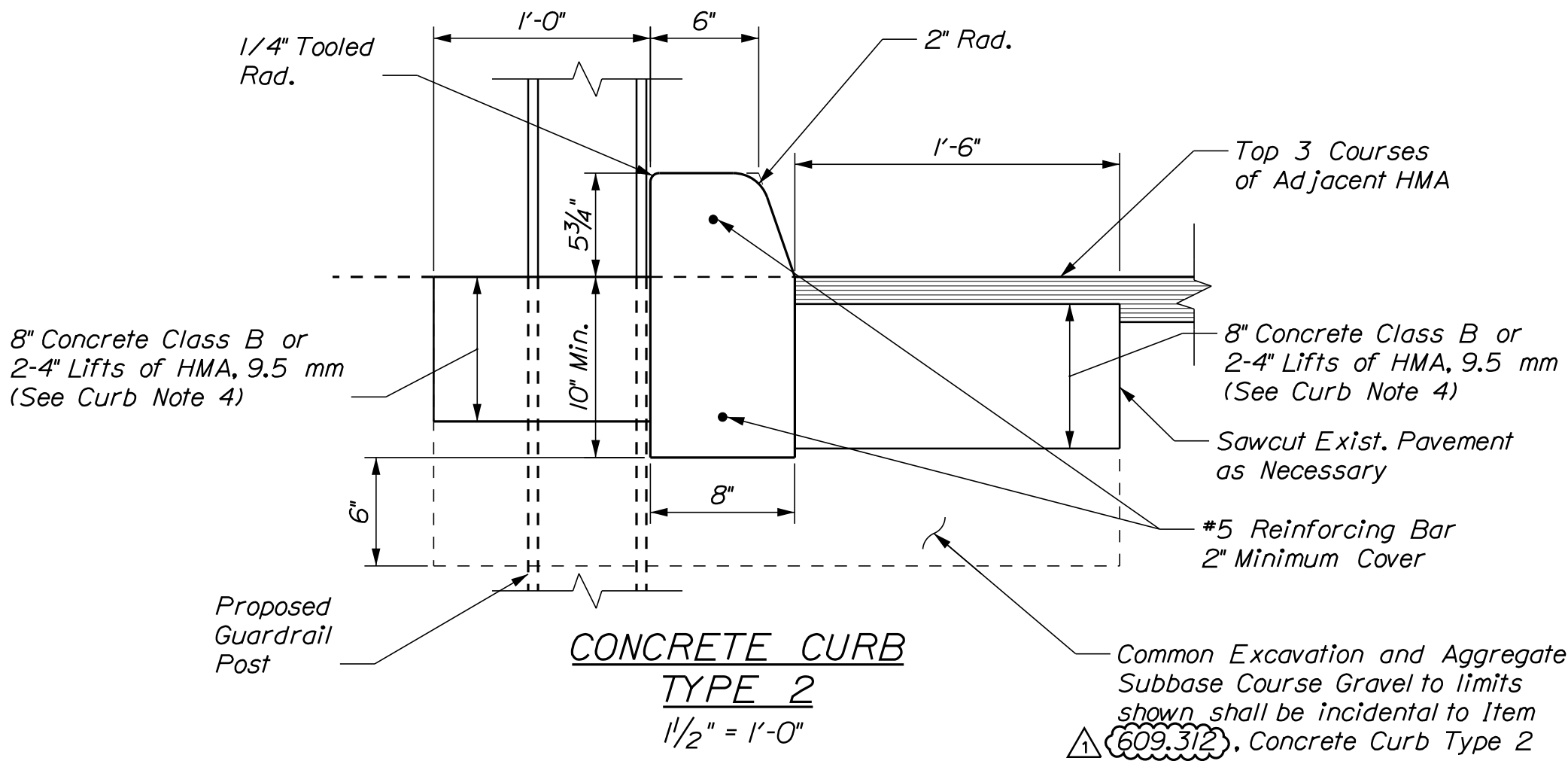


THRIE BEAM BRIDGE ATTACHMENT AT BRIDGE BARRIER

3/8" = 1'-0"

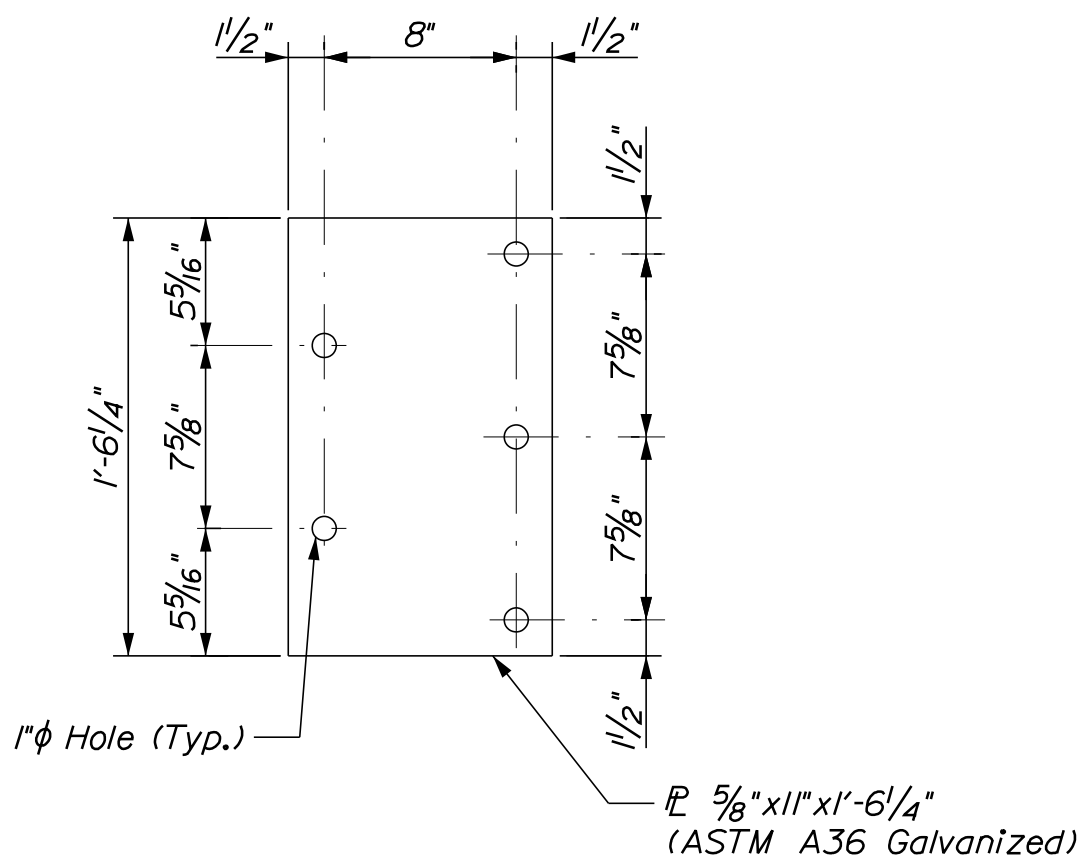
CURB NOTES:

1. Curbing shall be either precast concrete, cast-in-place concrete or granite to meet dimensions shown on the plans. Curbing shall be paid under Item 609.312, Special Curb, Type 2.
2. Concrete curbs used in conjunction with thrie-beam bridge transitions shall be Type 2. See details this sheet. Concrete curbs shall be continuous without drainage cuts.
3. Curb transitions shall be included for payment under Item 609.312.
4. Sawcutting existing pavement, concrete fill, and pavement to limits shown shall be incidental to Item 609.312.



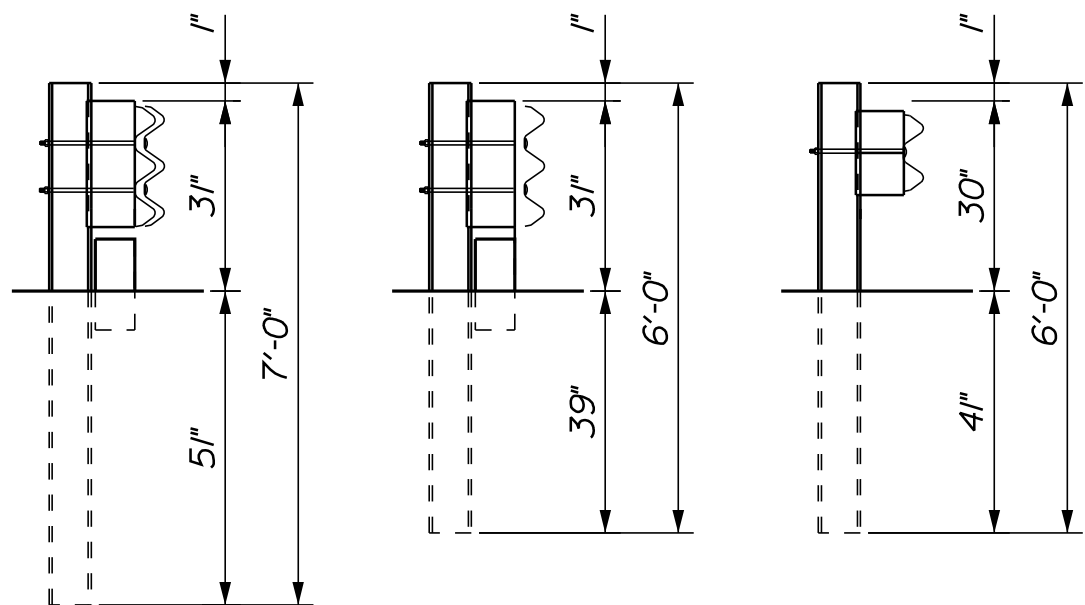
CONCRETE CURB
TYPE 2

1 1/2" = 1'-0"



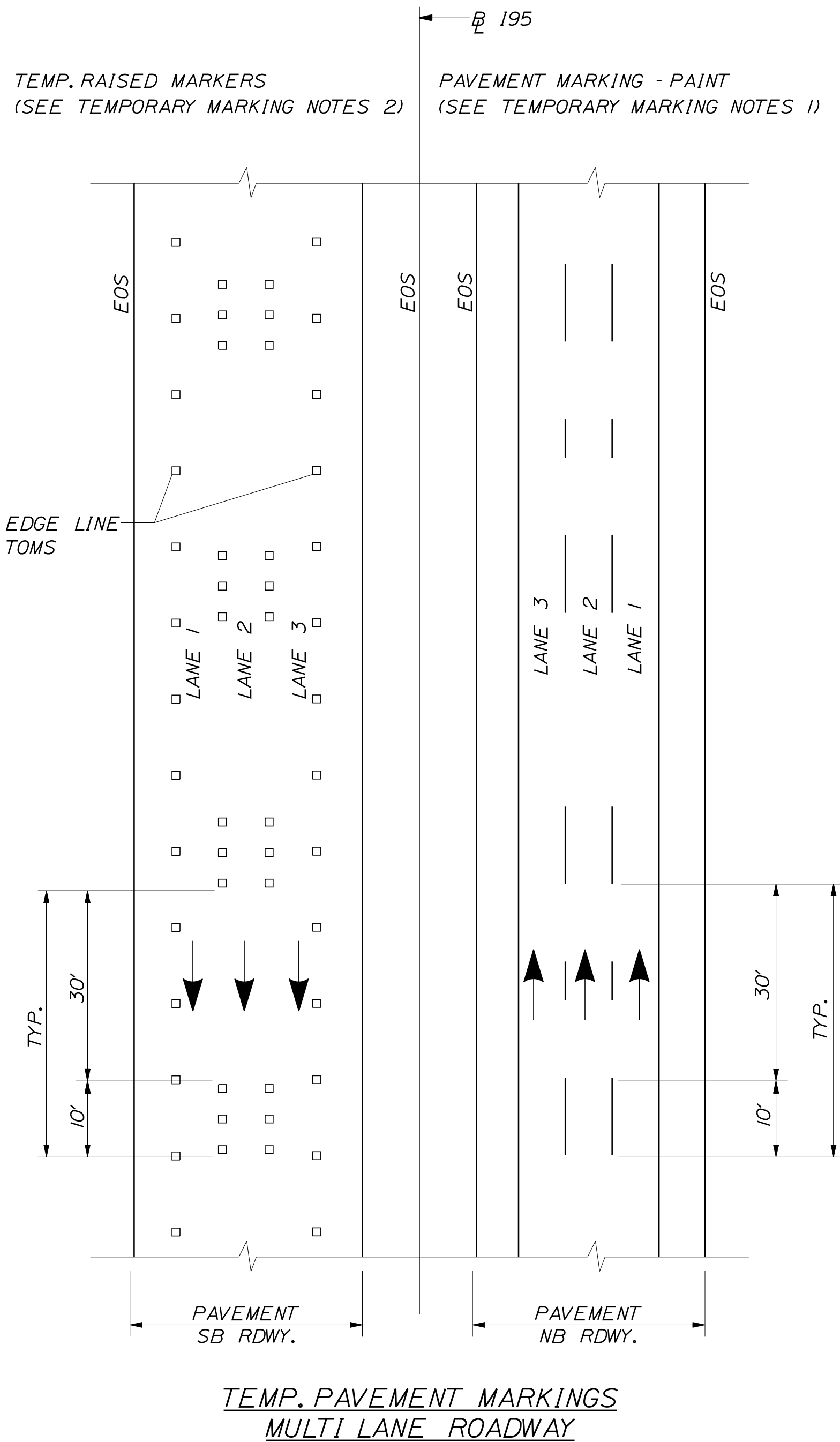
ANCHOR PLATE

1 1/2" = 1'-0"



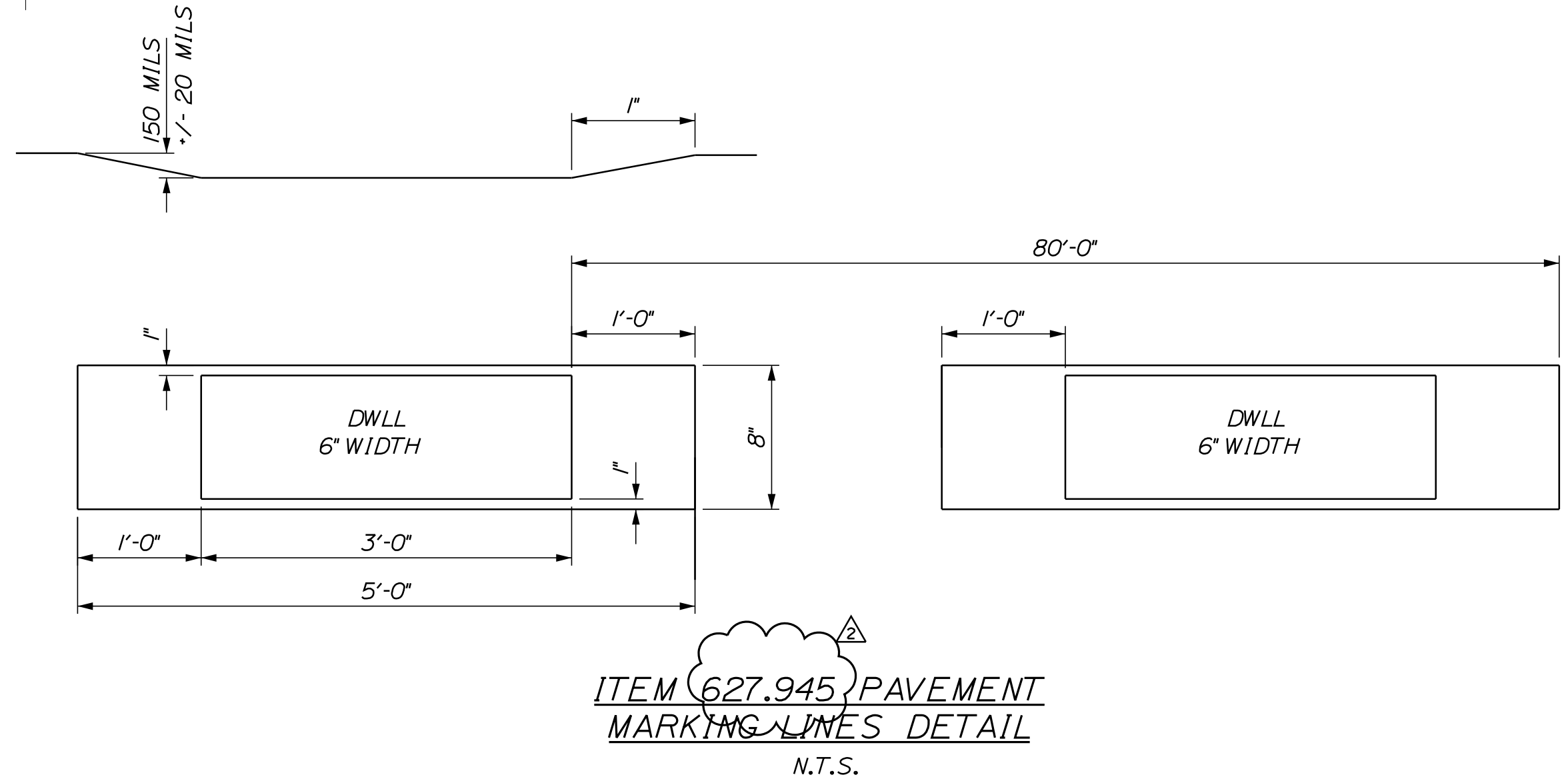
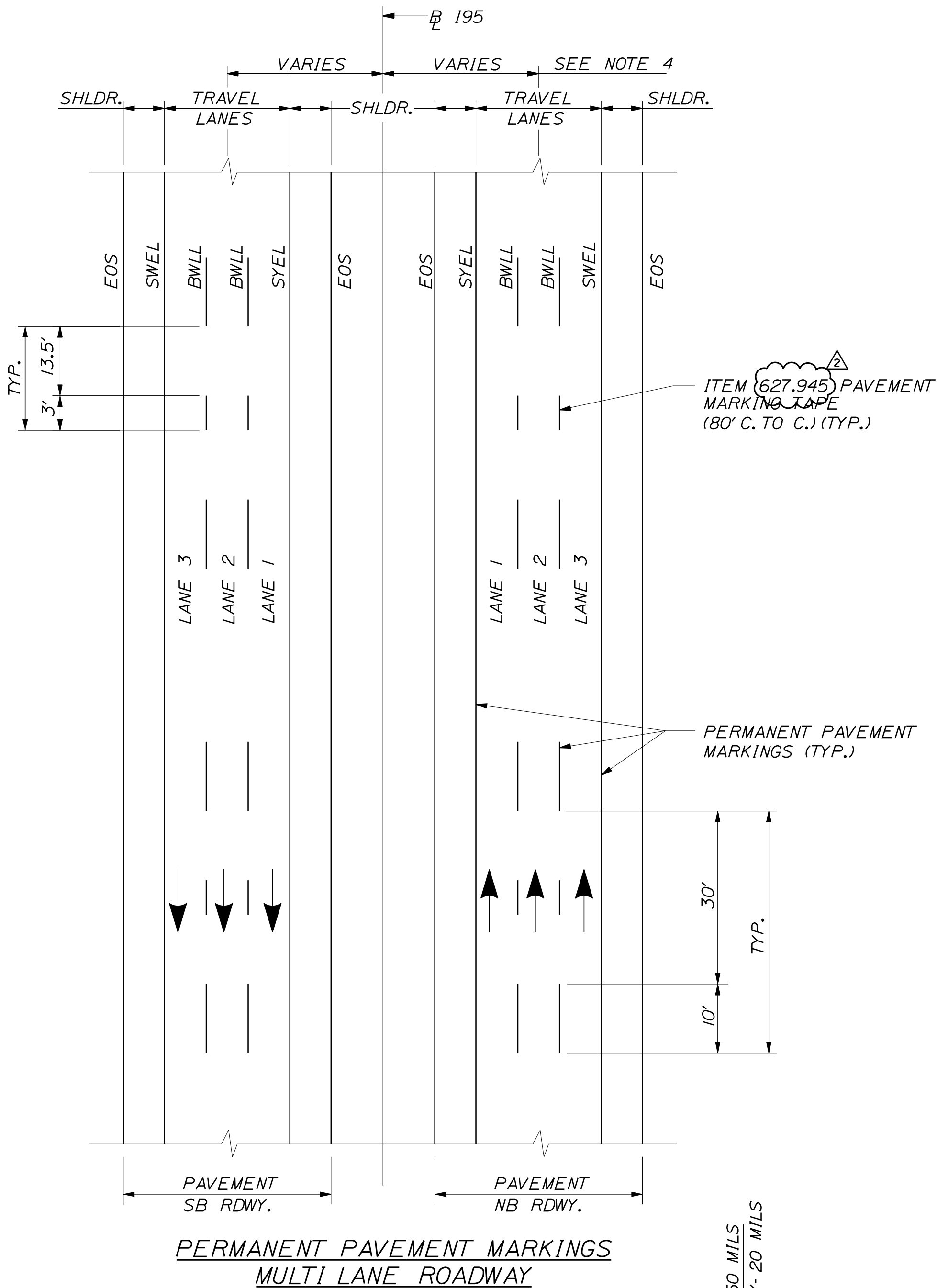
SECTION A-A SECTION B-B SECTION C-C

DATE	BY	PROJ. MANAGER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	REVISIONS	DATE
9/18	D. Myers	Leanne Timberlake	D. Myers	D. Myers	D. Myers	1	
9/18	C. Taylor		C. Taylor	C. Taylor	C. Taylor	2	
12/18						3	
						4	
						5	



TEMPORARY MARKING NOTES:

- TEMPORARY PAVEMENT MARKINGS ON MILLED PAVEMENT SHALL BE 6" SOLID WHITE, BROKEN WHITE, AND SOLID YELLOW PAINT LINES.
- TEMPORARY PAVEMENT MARKINGS ON NEW HMA 12.5MM, OR SHIM MATERIAL, SHALL BE TEMPORARY RAISED PAVEMENT MARKERS. "SOLID" WHITE AND "SOLID" YELLOW LANE LINES SHALL BE TEMPORARY RAISED PAVEMENT MARKERS SPACED AT 10'-0" C. TO C. "BROKEN" WHITE LANE LINES SHALL BE TEMPORARY RAISED PAVEMENT MARKERS SPACED 5'-0" C. TO C. EVERY 40'-0". TEMPORARY 6" PAVEMENT MARKING TAPE SHALL BE USED ON RADII ON SURFACE PAVEMENT. A 3' PIECE EVERY 40'.
- SEE MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL INFORMATION.

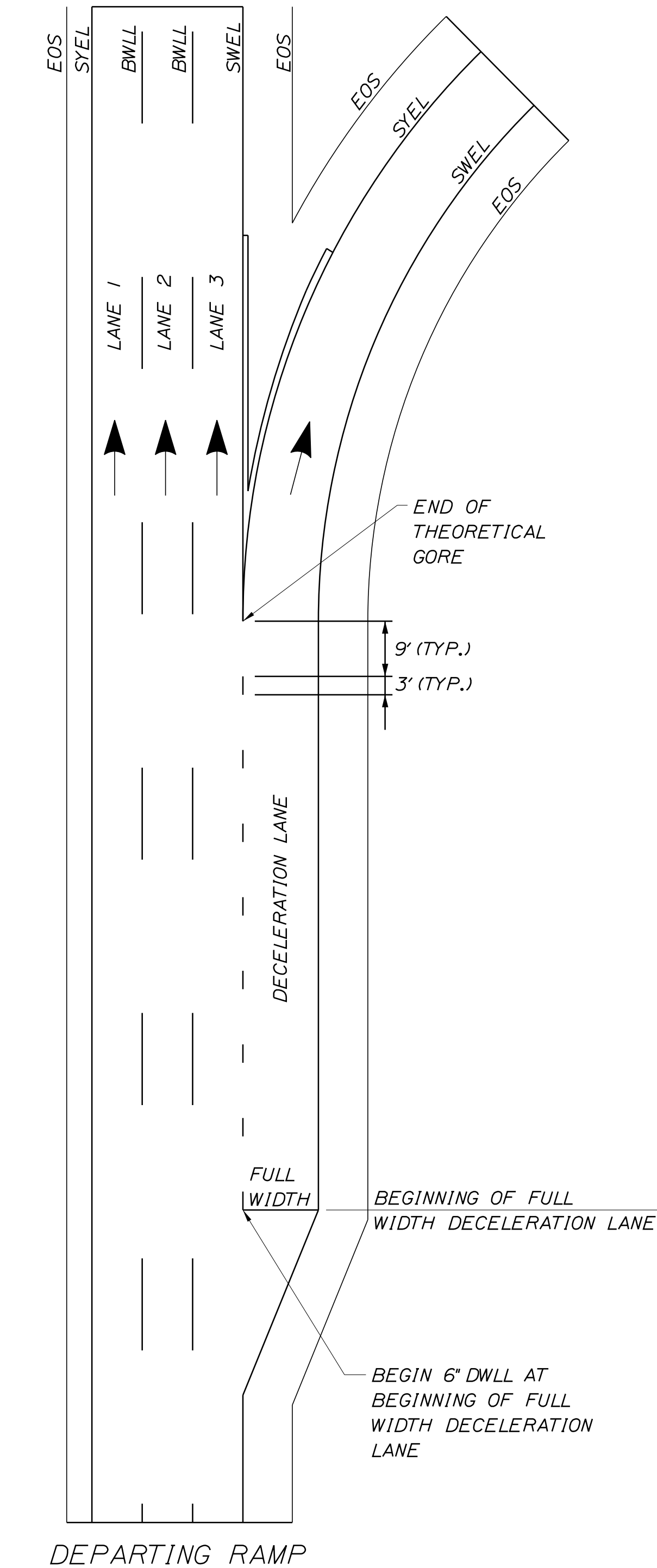


LEGEND

- SYEL = SOLID YELLOW EDGE LINE (6" PAINT)
SWEL = SOLID WHITE EDGE LINE (6" PAINT)
BWLL = BROKEN WHITE LANE LINE (6" PAINT)
EOS = EDGE OF SHOULDER

NOTES:

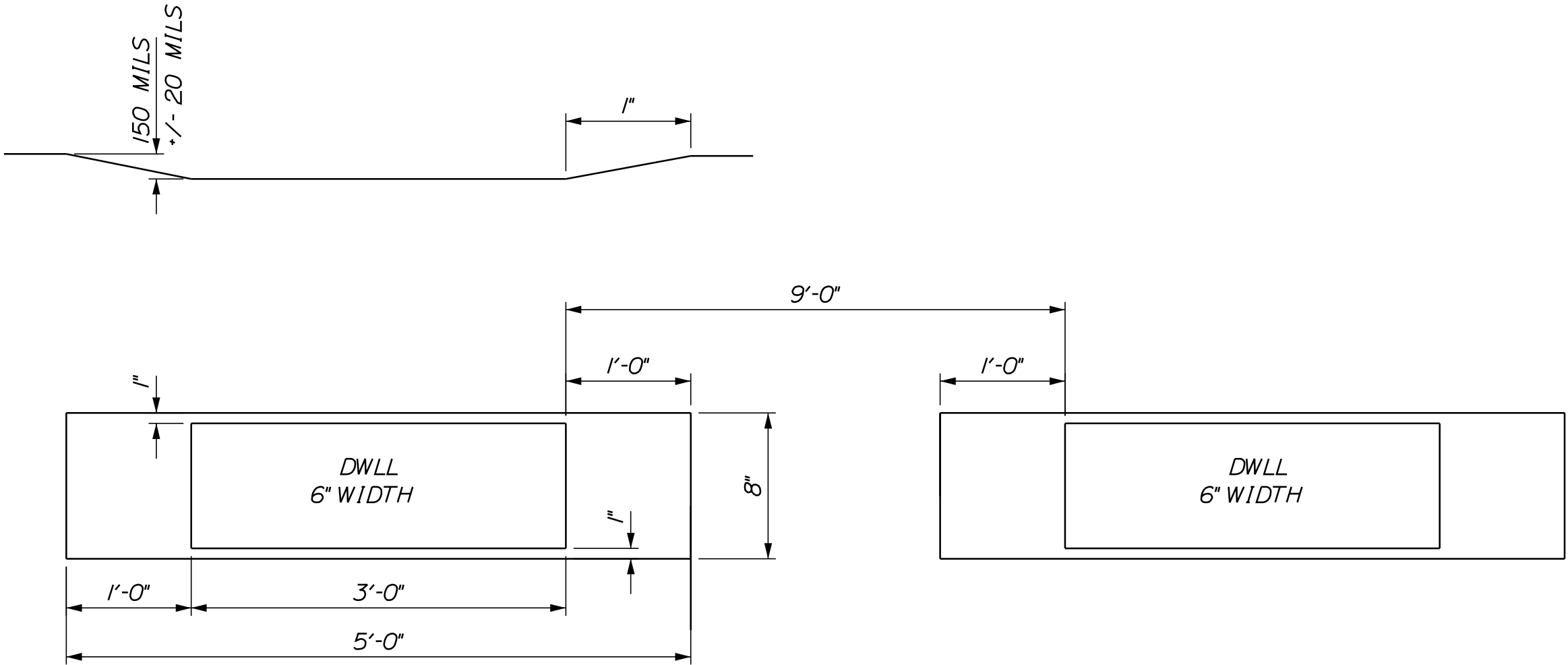
- PERMANENT PAVEMENT MARKINGS SHALL BE 6" WIDE LINES AND MEASURED TO THE CENTER.
- PERMANENT PAVEMENT MARKINGS SHALL BE INSTALLED ON BOTH NOTHBOUND AND SOUTHBOUND ROADWAYS.
- ALL EXISTING PAINT MARKINGS SHALL BE REMOVED PRIOR TO INSTALLATION OF ITEM 627.945 PAVEMENT MARKING TAPE AND SHALL BE INCIDENTAL TO INSTALLATION OF THE TAPE.
- SEE OVERLAY, SIGNING AND STRIPING PLANS FOR ADDITIONAL INFORMATION.



PERMANENT PAVEMENT MARKINGS WITH TAPE
(ITEM 627.945) PAVEMENT MARKING TAPE -
DOTTED WHITE LANE LINE, 6-INCH WHITE

ITEM 627.945 PAVEMENT MARKING TAPE - DWLL INSTALLATION LOCATIONS					
LOCATION	LANE TYPE	BEGIN (STA)	END (STA)	LENGTH (LF)	LENGTH OF TAPE (LF)
NEW HAMPSHIRE					
EXIT 7 (SB)	DECEL LANE	522+56	524+17	161	16
MAINE					
*EXIT 1 (NB)	DECEL LANE	579+88	582+52	265	66
*EXIT 1 (NB)	DECEL LANE	583+51	585+14	164	42
EXIT 2 (NB)	DECEL LANE	596+20	601+50	532	135
EXIT 3 (NB)	DECEL LANE	610+89	616+26	537	135
TOTAL					394

* NO STRIPING TO BE APPLIED ACROSS EXISTING DENNETT ROAD BRIDGE



GROOVING DETAIL
NTS

LEGEND

- SYEL = SOLID YELLOW EDGE LINE (6" PAINT)
- SWEL = SOLID WHITE EDGE LINE (6" PAINT)
- BWLL = BROKEN WHITE LANE LINE (6" PAINT)
- EOS = EDGE OF SHOULDER

NOTES:

- ALL EXISTING PAINT MARKINGS SHALL BE REMOVED PRIOR TO INSTALLATION OF ITEM 627.945 PAVEMENT MARKING TAPE AND SHALL BE INCIDENTAL TO INSTALLATION OF THE TAPE.
- ON DEPARTING RAMPS, THE DWLL SHALL BEGIN AT THE BEGINNING OF THE FULL WIDTH DECELERATION LANE AND EXTEND TO THE THEORETICAL GORE MARKINGS.
- ITEM 627.945 PAVEMENT MARKING TAPE FOR DWLL SHALL BE INSTALLED IN AN "IN-AND-OUT" GROOVING PATTERN. SEE DETAIL THIS SHEET.
- CONTRACTOR SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION OF THE TAPE. ANY CHANGES TO INSTALLATION PROCEDURES SHALL BE APPROVED THE RESIDENT ENGINEER.
- SEE OVERLAY, SIGNING AND STRIPING PLANS FOR ADDITIONAL INFORMATION.

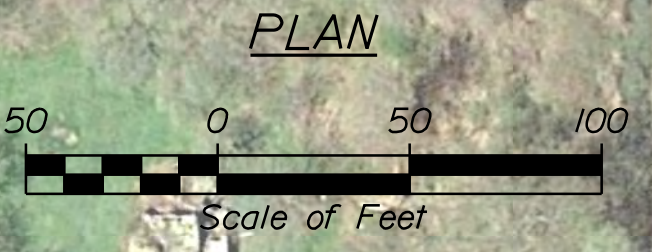
KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY	STATE OF MAINE DEPARTMENT OF TRANSPORTATION			
	AC-IM-1927(000)E			
	BRIDGE NOS. 6330 WIN 019270.00 BRIDGE PLANS			
STRIPING DETAILS 3 OF 3	PROJ. MANAGER LEONNE TIMBERLOKE	BY RPK HEC	DATE 10/18 10/18	SIGNATURE
	DESIGN-DETAILED CHECKED-REVIEWED DESIGN-DETAILED DESIGN-DETAILED	TSK TSK		
	REVISIONS REVISIONS REVISIONS REVISIONS	TSK - Item Numbers	12/18	P.E. NUMBER
	FIELD CHANGES			DATE
SHEET NUMBER		84A		
		OF 232		



107A OF 232		SHEET NUMBER		KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY				PROJ. MANAGER	Leonie Timberlake	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION AC-IM-1927(000)E	
				DESIGN-DETAILED				TWA	SAM	10/18			
				CHECKED-REVIEWED				KSD	KSD	10/18			
				DESIGN2-DETAILED2									
				DESIGN3-DETAILED3									
MAINTENANCE OF TRAFFIC PHASE 1 - SHEET 8 OF 10								Revised Item Number		12/18	WIN 019270.00 BRIDGE NOS 6330		
				REVISIONS 1									
				REVISIONS 2									
				REVISIONS 3									
				REVISIONS 4									
				FIELD CHANGES							DATE	BRIDGE PLANS	



KITTY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTY-PORTSMOUTH YORK COUNTY MAINTENANCE OF TRAFFIC PHASE 2 - SHEET 8 OF 10	STATE OF MAINE DEPARTMENT OF TRANSPORTATION			
	AC-IM-1927(000)E			
	BRIDGE NOS. 6330			
	WIN 019270.00			
SHEET NUMBER 117A				OF 232
PROJ. MANAGER Leanne Timberlake		BY SAM KSD	DATE 10/18	SIGNATURE
DESIGN-DETAILED TWA KSD		CHECKED-REVIEWED KSD	DATE 10/18	P.E. NUMBER
DESIGNS-DETAILED Revised Item Number		REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4	DATE	FIELD CHANGES



SHEET NUMBER 122A OF 232	KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY				PROJ. MANAGER	Leanne Timmerlake	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION AC-IM-1927(000)E
					DESIGN-DETAILED	TWA	SAM	10/18	
					CHECKED-REVIEWED	KSD	KSD	10/18	
					DESIGN2-DETAILED2			SIGNATURE	
					DESIGN3-DETAILED3			P.E. NUMBER	
MAINTENANCE OF TRAFFIC PHASE 3 - SHEET 3 OF 10				REVISED	Item	Number	12/18		BRIDGE NOS. 6330 WIN 019270.00 BRIDGE PLANS
				REVISED	1			DATE	
				REVISED	2				
				REVISED	3				
				REVISED	4				
				FIELD CHANGES					



SHEET NUMBER 127A OF 232	KITTELY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTELY-PORTSMOUTH YORK COUNTY										STATE OF MAINE DEPARTMENT OF TRANSPORTATION												
	KITTELY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTELY-PORTSMOUTH YORK COUNTY MAINTENANCE OF TRAFFIC PHASE 3 - SHEET 8 OF 10										PROJ. MANAGER Leonie Timberlake					BY		DATE					
											DESIGN-DETAILED TWA					SAM		10/18					
											CHECKED-REVIEWED KSD					KSD		10/18			SIGNATURE		
											DESIGN2-DETAILED D2												
											DESIGN3-DETAILED D3												
	MAINTENANCE OF TRAFFIC PHASE 3 - SHEET 8 OF 10					REVISED ITEM Number					P.E. NUMBER												
						REVISIONS 1																	
						REVISIONS 2																	
						REVISIONS 3																	
REVISIONS 4																							
					FIELD CHANGES					DATE													
					BRIDGE NOS 6330					WIN 019270.00													
										BRIDGE PLANS													



132A OF 232	SHEET NUMBER	KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY				PROJ. MANAGER	Leanne Timberlake	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION		
						DESIGN-DETAILED	TWA	SAM	10/18			
					CHECKED-REVIEWED		KSD	KSD	10/18		AC-IM-1927(000)E	
					DESIGN2-DETAILED2					SIGNATURE		
					DESIGN3-DETAILED3							P.E. NUMBER
					REVISIONS 1		Revised Item Number	12/18				
					REVISIONS 2							
					REVISIONS 3							
					REVISIONS 4					DATE		
					FIELD CHANGES							
BRIDGE NOS 6330										WIN	019270.00	BRIDGE PLANS



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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
BRIDGE NOS. 6330
WIN
019270.00
BRIDGE PLANS

PROJ. MANAGER
Leanne Timberlake

DATE
10/18

BY
SAM KSD

DESIGN-DETAILED
TWA KSD

CHECKED-REVIEWED
KSD

DESIGNS-DETAILED
Revised Item Number

REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

DATE
12/18

P.E. NUMBER

DATE

KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY
MAINTENANCE OF TRAFFIC
PHASE 4 - SHEET 8 OF 10

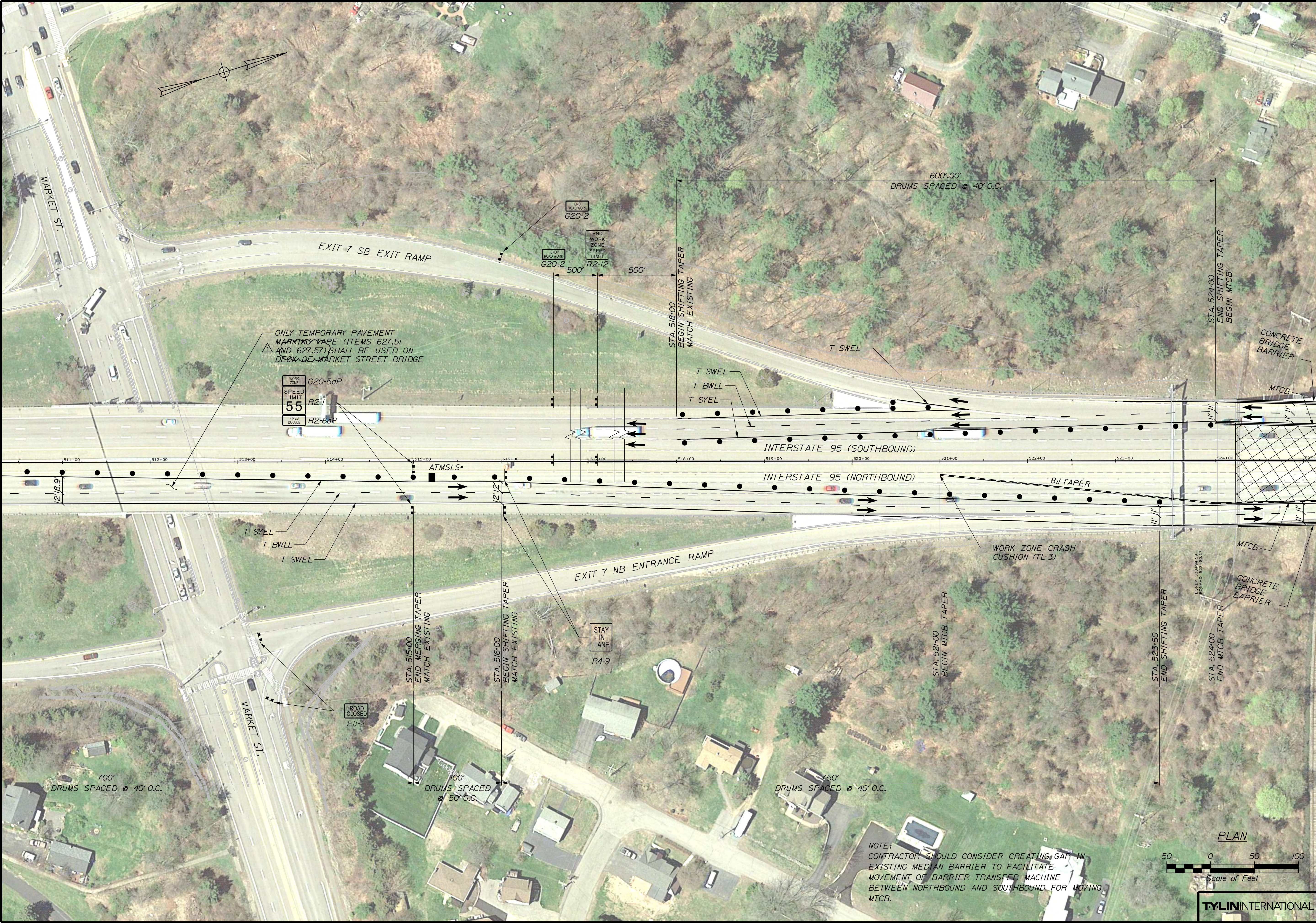
SHEET NUMBER
137A
OF 232

Filename: ... \MSTAV142a_M0T Phase 5.dgn

Division: HIGHWAY

Username: User

Date: 12/13/2018



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AC-IM-1927(000)E

BRIDGE NOS. 6330
WIN 019270.00
BRIDGE PLANS

PROJ. MANAGER
LEONIE TIMBERLAKE

DATE
10/18

BY
SAM KSD

DESIGNED
TWA

CHECKED
KSD

DESIGNED
KSD

REVISIONS
1

REVISIONS
2

REVISIONS
3

REVISIONS
4

FIELD CHANGES

SIGNATURE

P.E. NUMBER

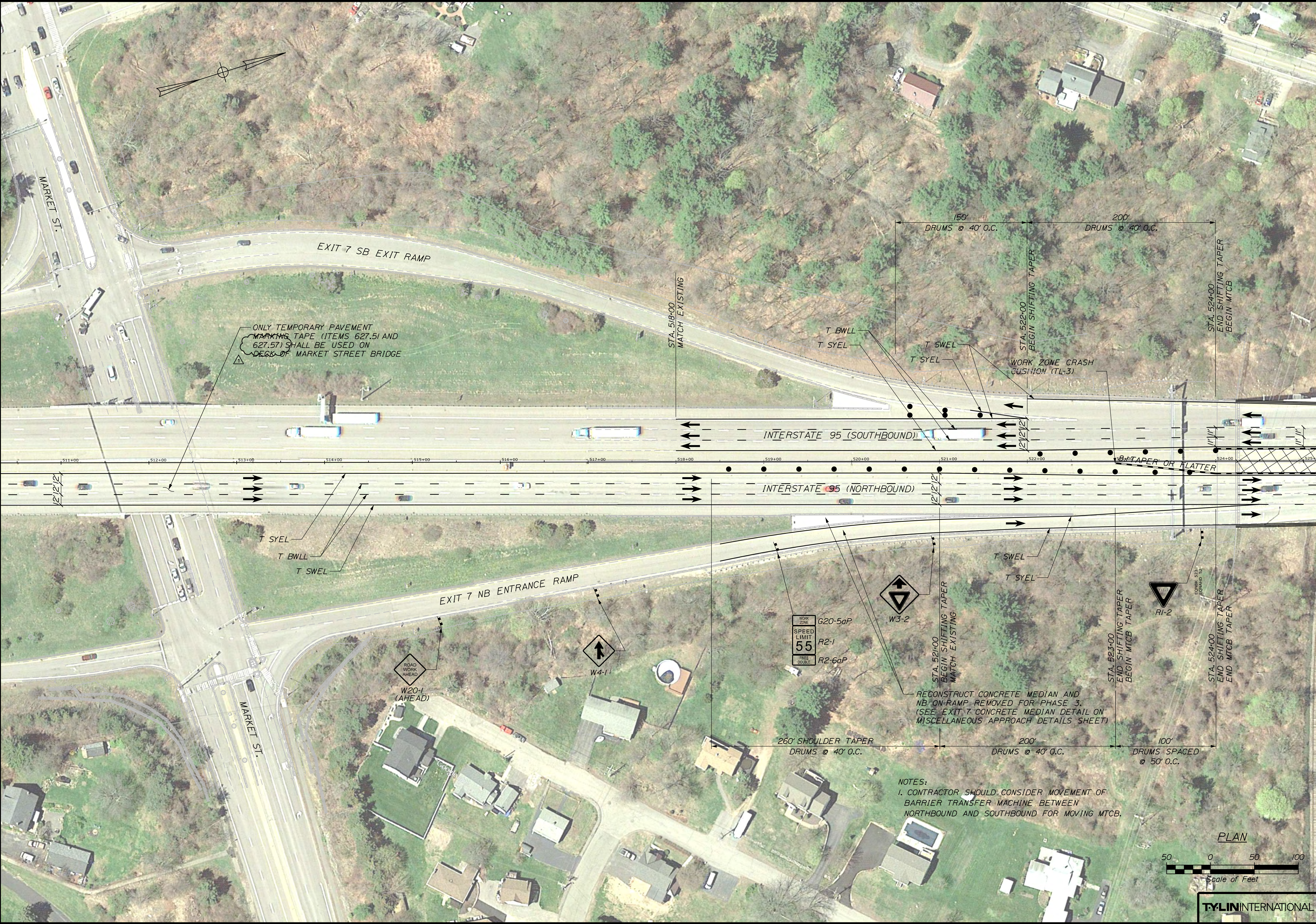
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KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY

SHEET NUMBER
142A
OF 232

MAINTENANCE OF TRAFFIC
PHASE 5 - SHEET 3 OF 10

[illegible]



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
BRIDGE NOS. 6330
WIN
019270.00
BRIDGE PLANS

PROJ. MANAGER
LEONNE TIMBERLAKE

BY
SAM KSD

DATE
10/18

DESIGN-DETAILED
TWA

CHECKED-REVIEWED
KSD

DESIGNS-DETAILED
KSD

DESIGNS-DETAILED
KSD

REVISIONS 1
Number

REVISIONS 2
Number

REVISIONS 3
Number

REVISIONS 4
Number

FIELD CHANGES

SIGNATURE

P.E. NUMBER

DATE

KITTERY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTERY-PORTSMOUTH YORK COUNTY
MAINTENANCE OF TRAFFIC
PHASE 6 - SHEET 3 OF 10

SHEET NUMBER
152A
OF 232



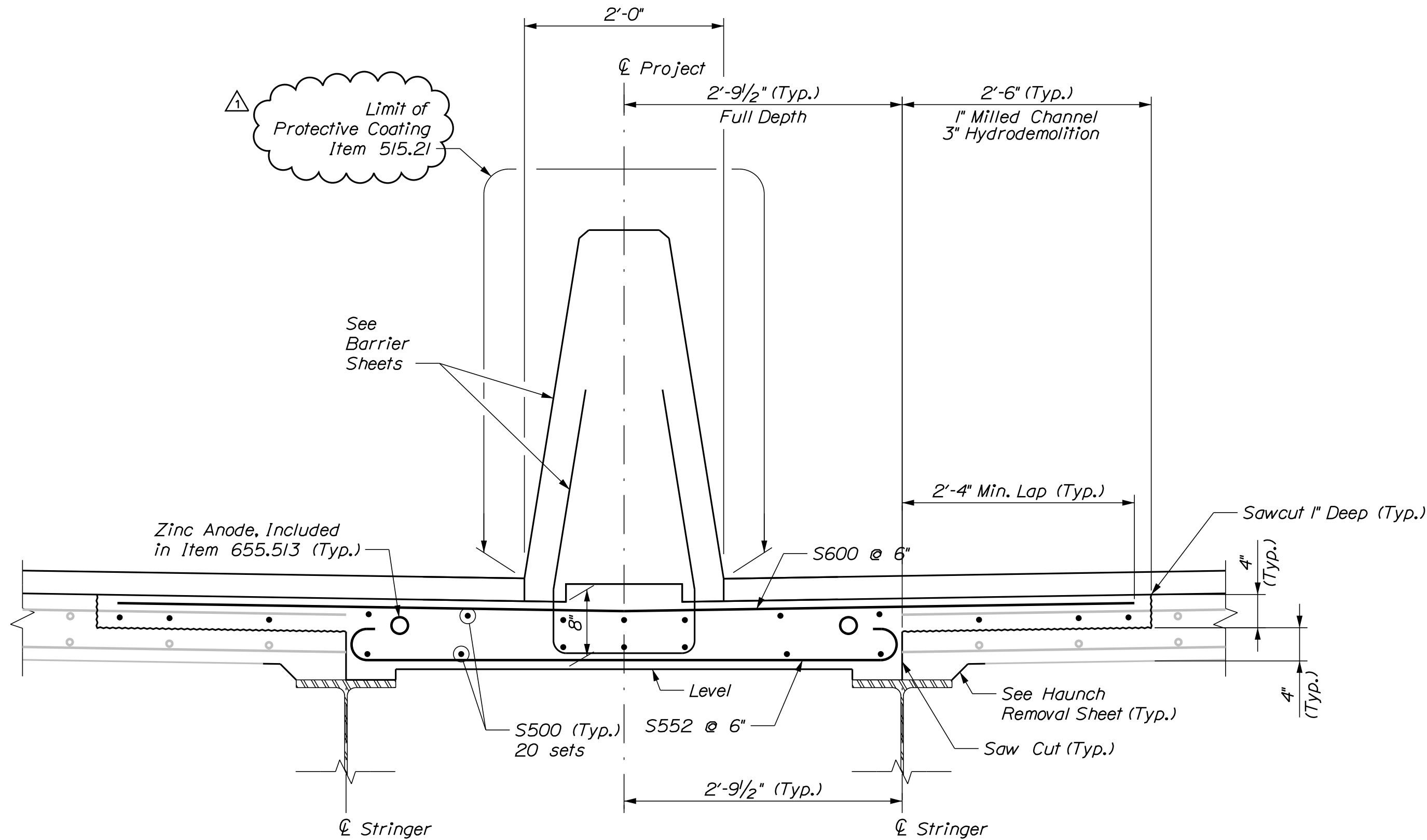
KITTEY - PORTSMOUTH BRIDGE
OVER PISCATAQUA RIVER
KITTEY-PORTSMOUTH YORK COUNTY

SHEET NUMBER
157A
OF 232

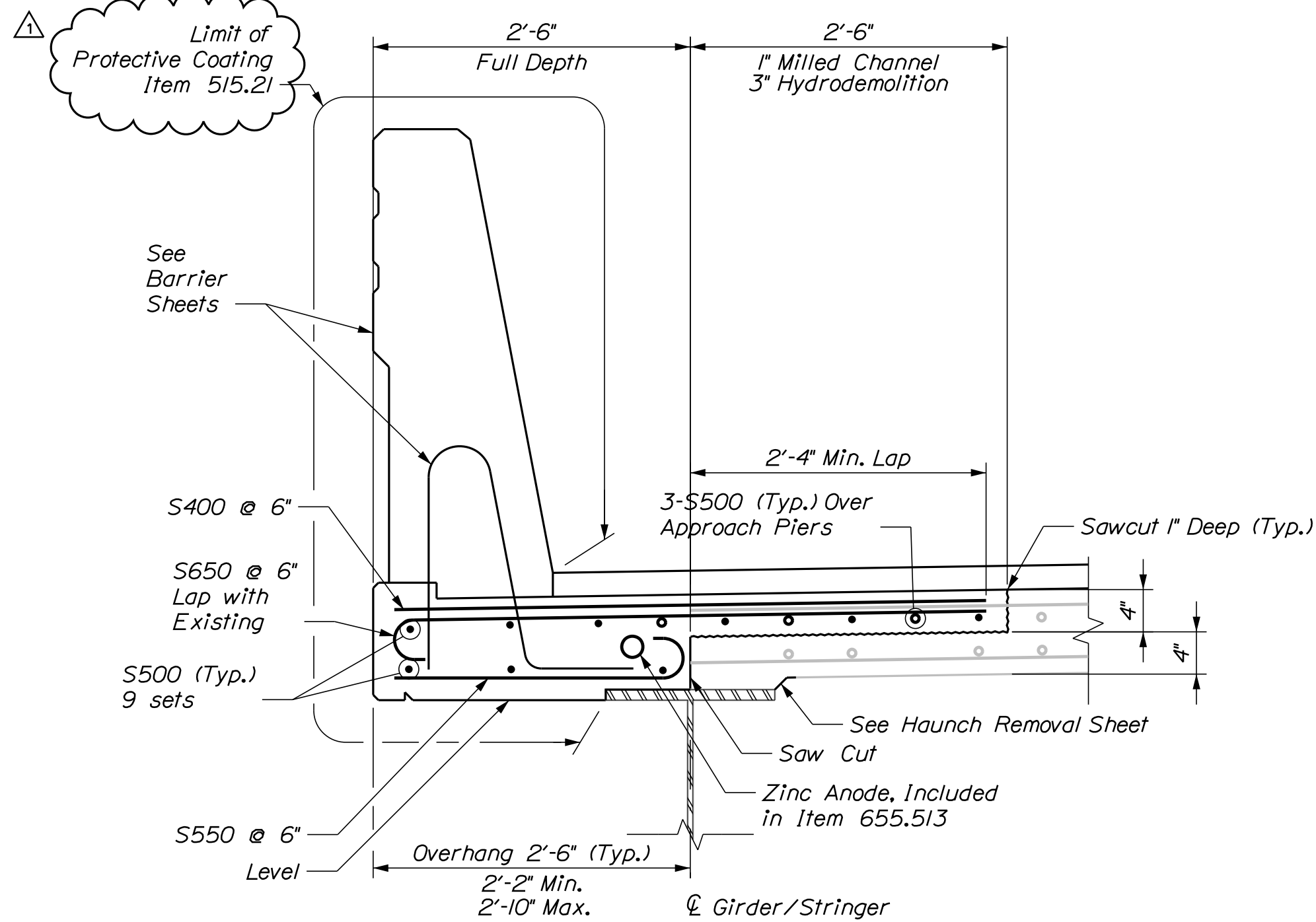
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AC-IM-1927(000)E
BRIDGE NOS. 6330
WIN
019270.00
BRIDGE PLANS

PROJ. MANAGER	LENNIE TIMBERLAKE	BY	DATE
DESIGN-DETAILED	TWA	SAM	10/18
CHECKED-REVIEWED	KSD	KSD	10/18
DESIGN-DETAILED			SIGNATURE
REVISIONS 1	Revised Item	Number	P.E. NUMBER
REVISIONS 2			DATE
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

MAINTENANCE OF TRAFFIC
PHASE 6 - SHEET 8 OF 10



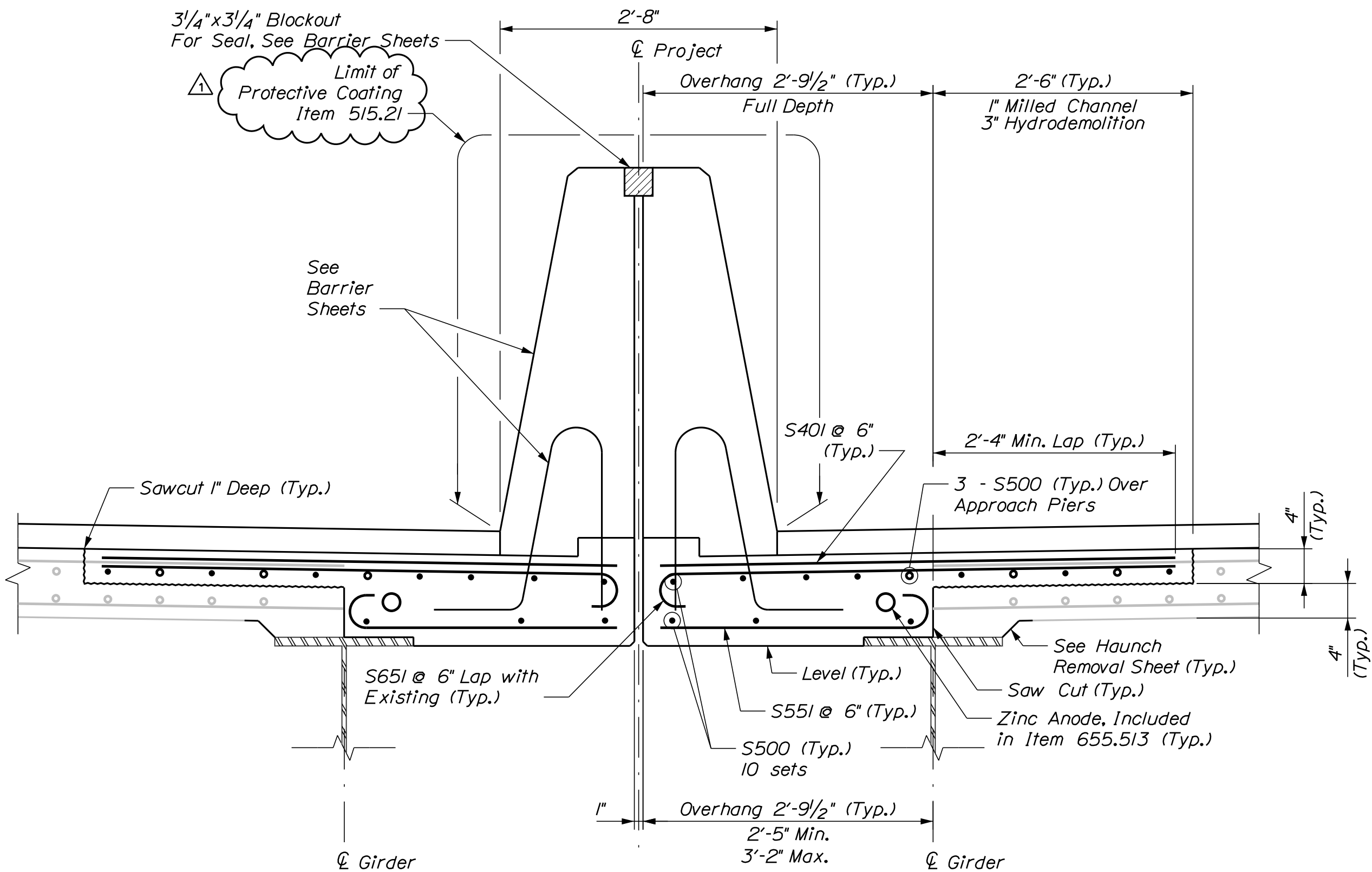
DECK REPLACEMENT AT
TRUSS MEDIAN BARRIER



DECK REPLACEMENT AT FASCIA

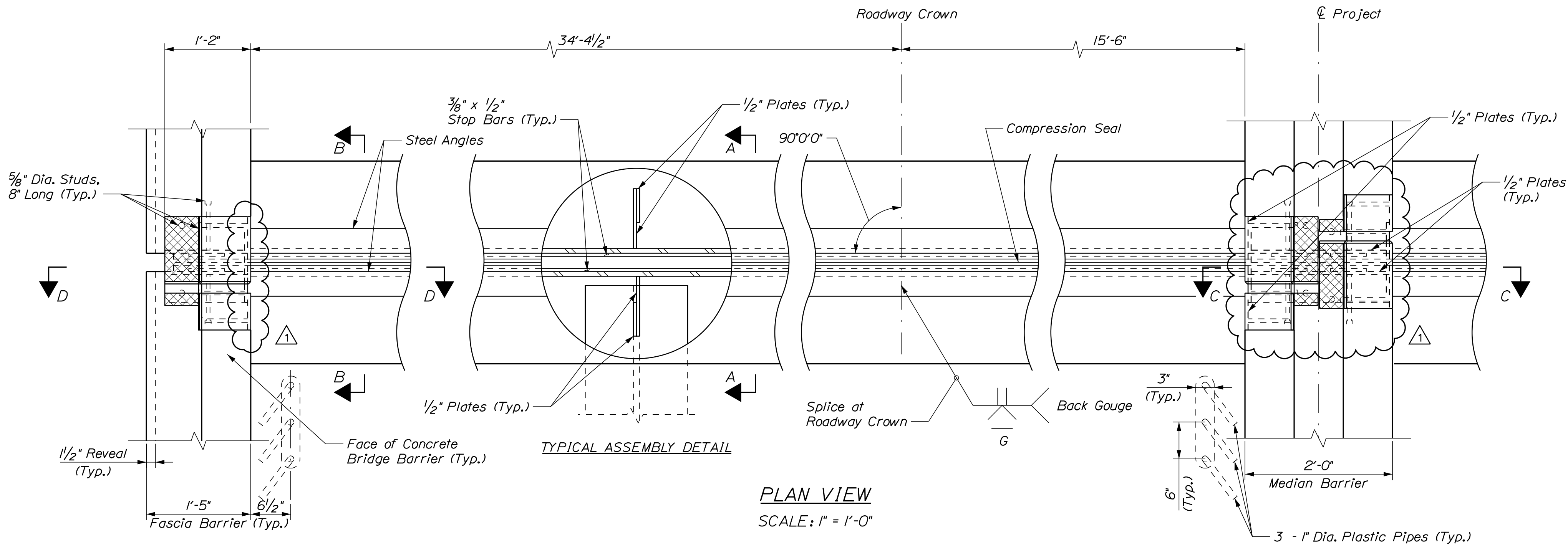
NOTES:

1. A one inch milled channel is shown to aid in water and debris containment during hydrodemolition.

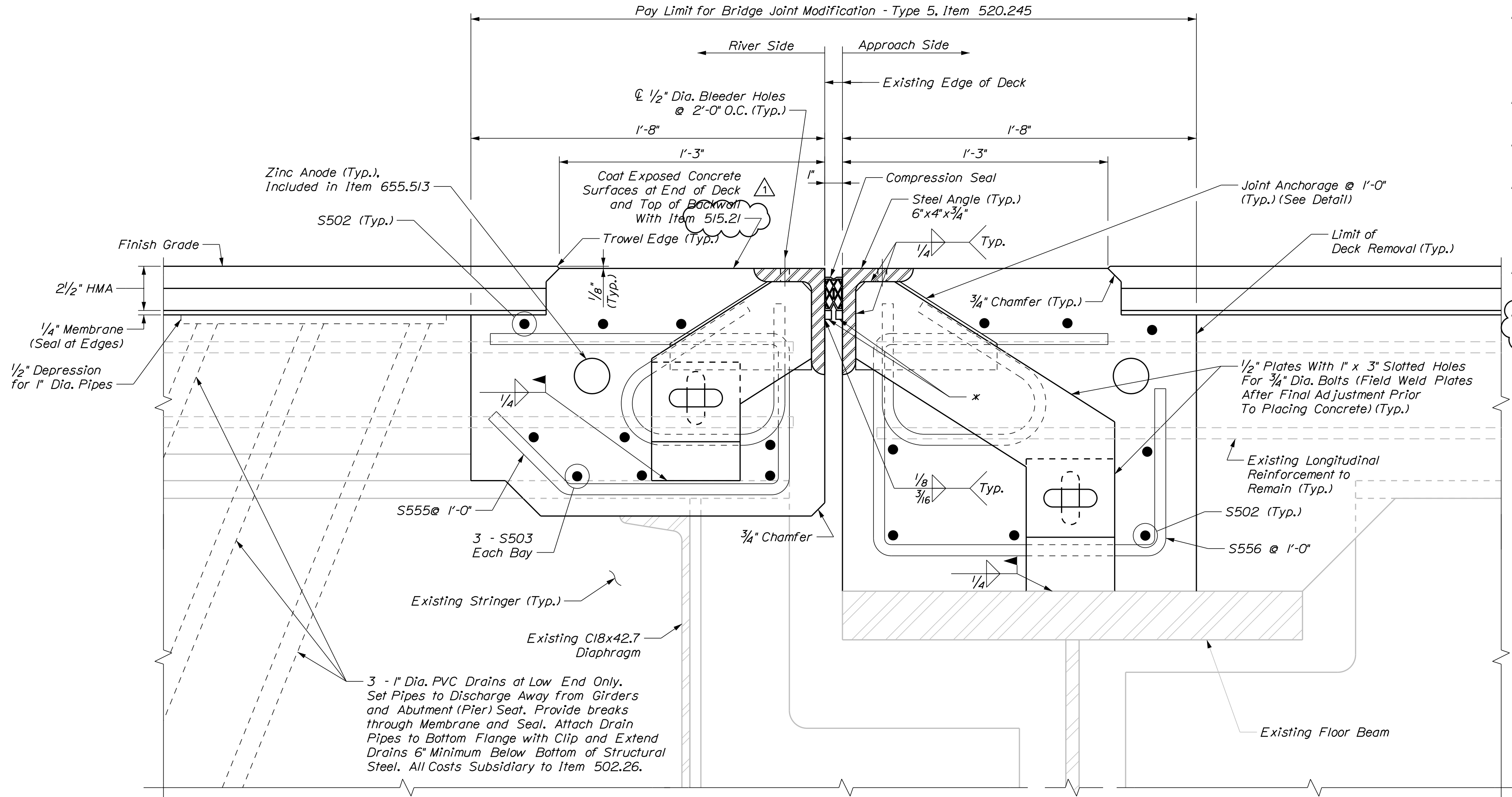


DECK REPLACEMENT AT
APPROACH MEDIAN BARRIER

PROJ. MANAGER	Lennie Timberlake	BY	DATE
DESIGN DETAIL	C. Taylor	L. Petix	9/18
CHECKED-REVIEWED	D. Myers	D. Myers	9/18
DESIGN DETAIL	E2		
DESIGN DETAIL	E3		
DESIGN DETAIL	JUL. Change	Item No.	9/18
REVISIONS	1		
REVISIONS	2		
REVISIONS	3		
REVISIONS	4		
FIELD CHANGES			



PLAN VIEW
SCALE: 1" = 1'-0"



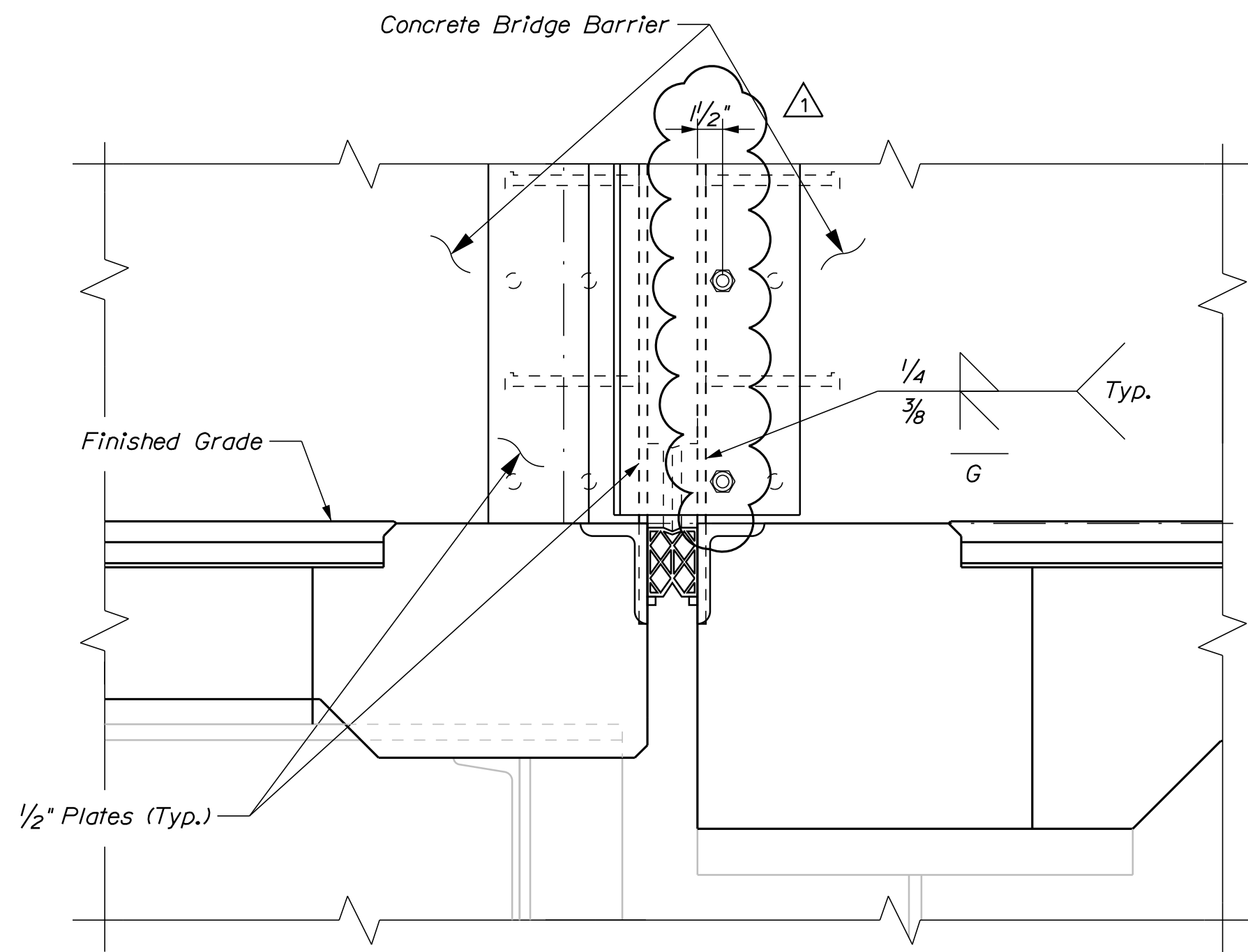
SECTION A-A
SCALE: 3" = 1'-0"

EXPANSION JOINT NOTES

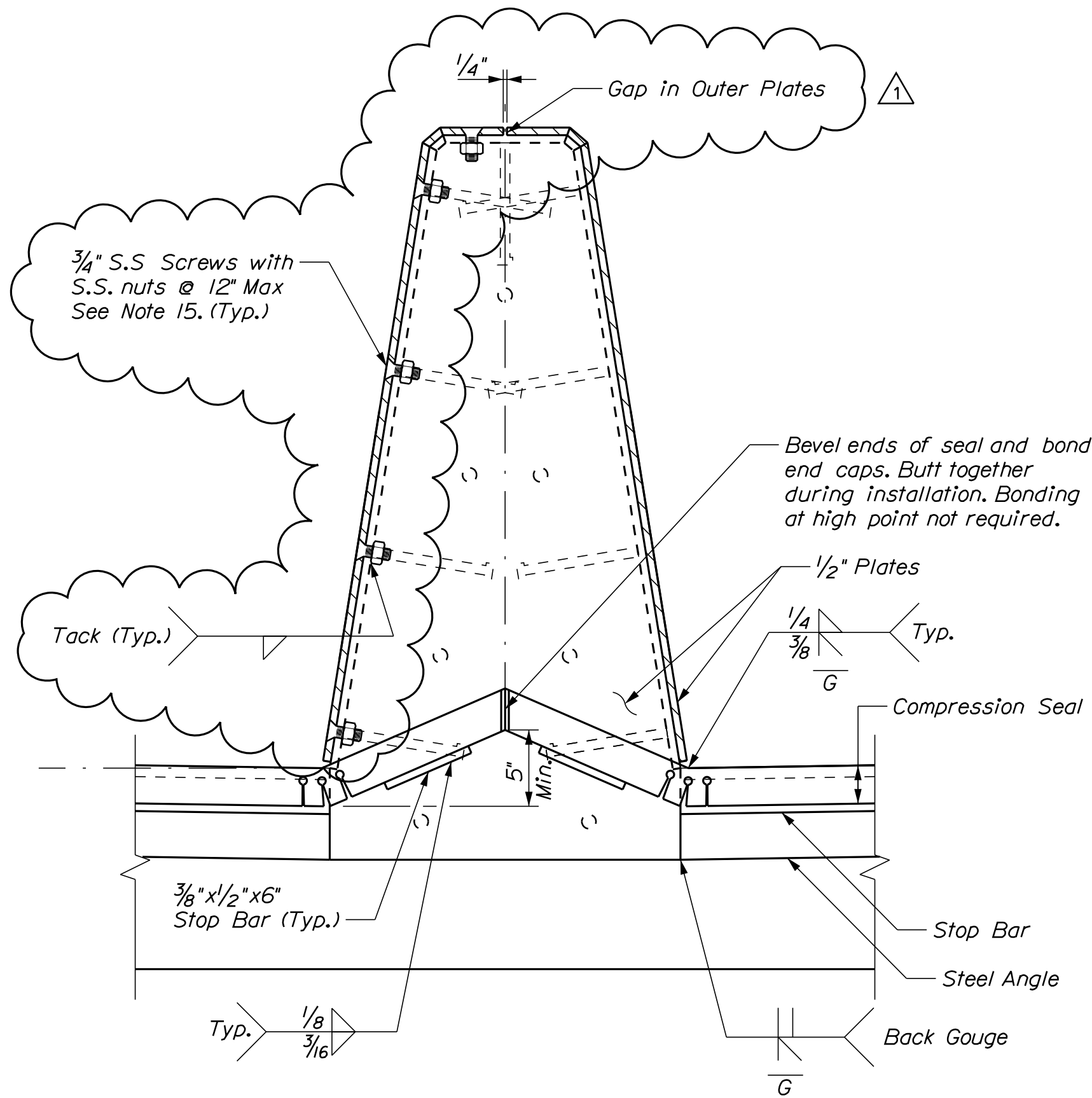
1. All expansion joint steel, including anchors, shall be galvanized. Steel angles shall be ASTM A72 Grade 50. Minor steel plates may conform to ASTM A36. The entire assembly, including compression seal, shall be paid for as Item 520.245. Zinc anodes shall be paid for under Item 655.513.
2. Splices for steel angles shall develop full strength.
3. The compression 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.
4. 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 shall be assembled with a constant joint opening to ensure proper performance and water tightness.
5. Immediately after the joint has been secured to the structural steel, remove shipping devices and grind smooth any welds on exposed surfaces. Repair any damage to galvanized surfaces in accordance with Section 506.16.
6. Protect top of expansion joint during placement of concrete and bituminous pavement.
7. The Contractor shall use a WA-162 seal by Watson Bowman or CV-1625 by D.S. Brown, as noted in the MaineDOT Qualified Products List.
8. No adjustments shall be made for setting temperature.
9. Prior to installing the seal, all temporary form work shall be removed. Steel angles and stop bars 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.
10. A temporary seal(s) shall be installed prior to the start of the winter maintenance period for all joint assemblies or portions thereof that will be in place throughout the winter. All temporary seals shall be removed and joint openings and substructure shall be cleaned prior to installing the final seal. All costs shall be subsidiary to Item 520.245.
11. Expansion joint elevations shall be set 2.625' above the adjacent deck. The expansion device shall be placed normal to grade.
12. Contractor shall locate field splices to match final phasing sequence selected.
13. Contractor shall provide continuous transverse reinforcement at the final condition through the use of laps of at least 2'-4" or mechanical splices. Contractor shall be responsible for determining bar details based on approved phasing sequence and splice method. Payments for splices will be incidental to reinforcing steel items.
14. For expansion dam details not shown, see MaineDOT Standard Details Section 520.
15. Prior to placement of sidewalk/safety curb concrete, lubricate stainless steel screws with graphite and set securely in place. Machine screws to be temporarily removed after concrete has attained final set.

Compression Seal Expansion Joint Reinforcement Schedule (Per Joint)				
Description	Size	No.	Length	Type
S502	#5	14	As Req'd	—
S503	#5	18	As Req'd	—
S555	#5	53	3'-9"±	⌋
S556	#5	53	4'-4"±	⌋

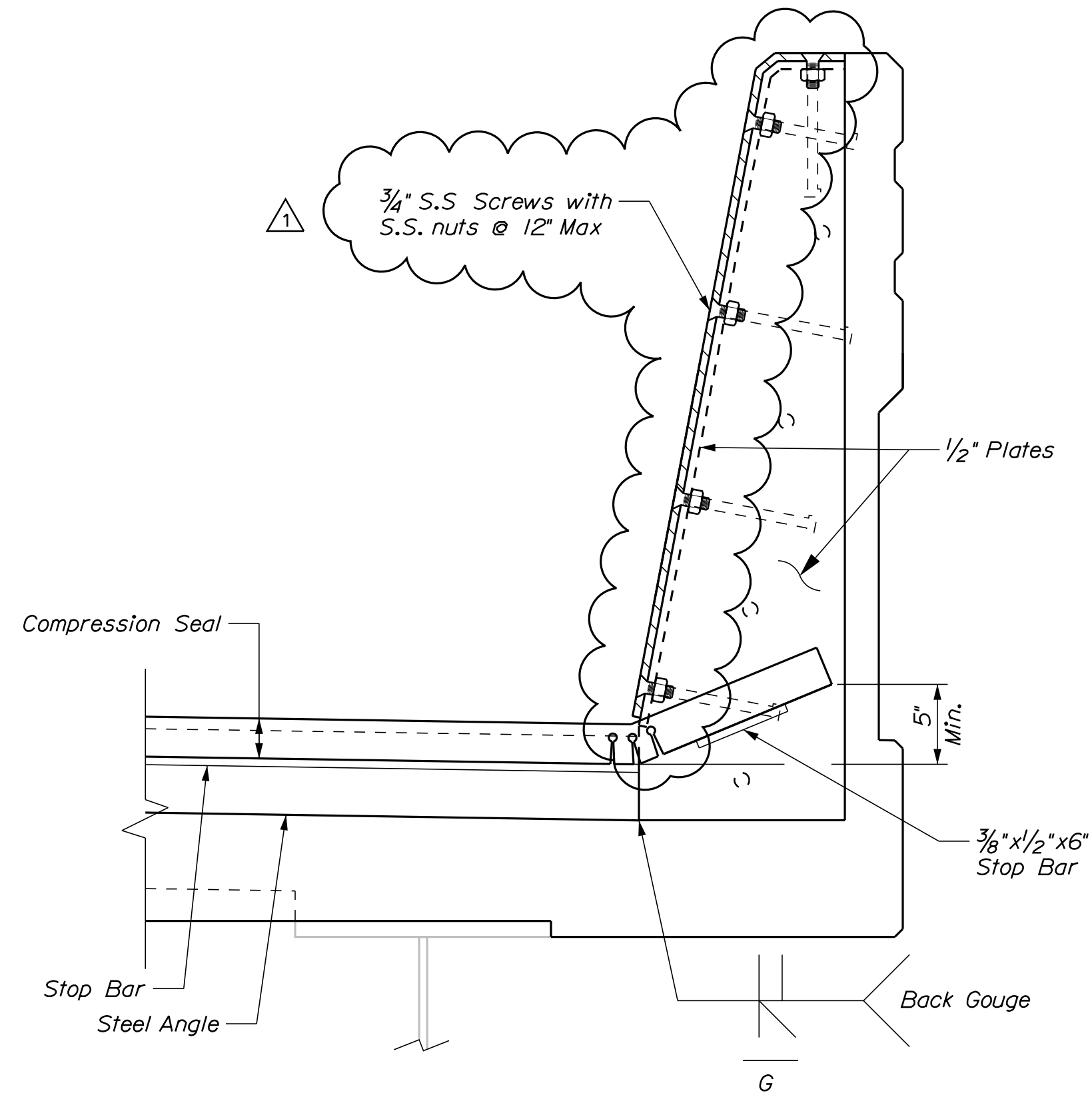
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	AC-IM-1927(000)E	BRIDGE NOS. 6330	WIN 019270.00	BRIDGE PLANS
KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY				
COMPRESSION SEAL EXPANSION JOINT 1				
SHEET NUMBER				
210A				
OF 232				



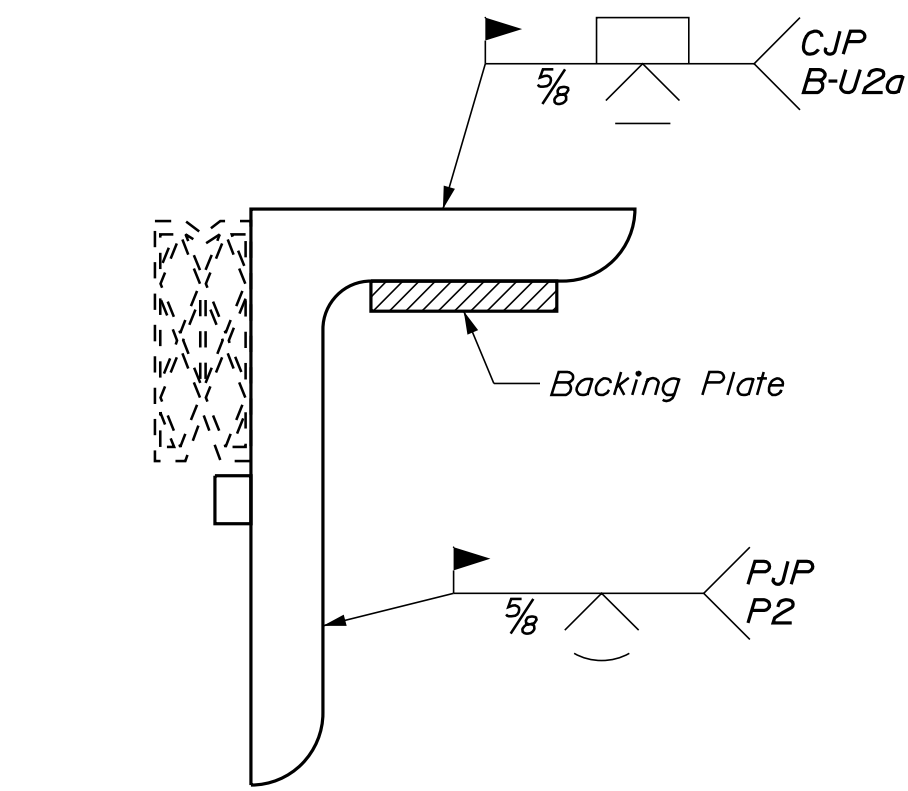
SECTION B-B
SCALE: 1 1/2" = 1'-0"



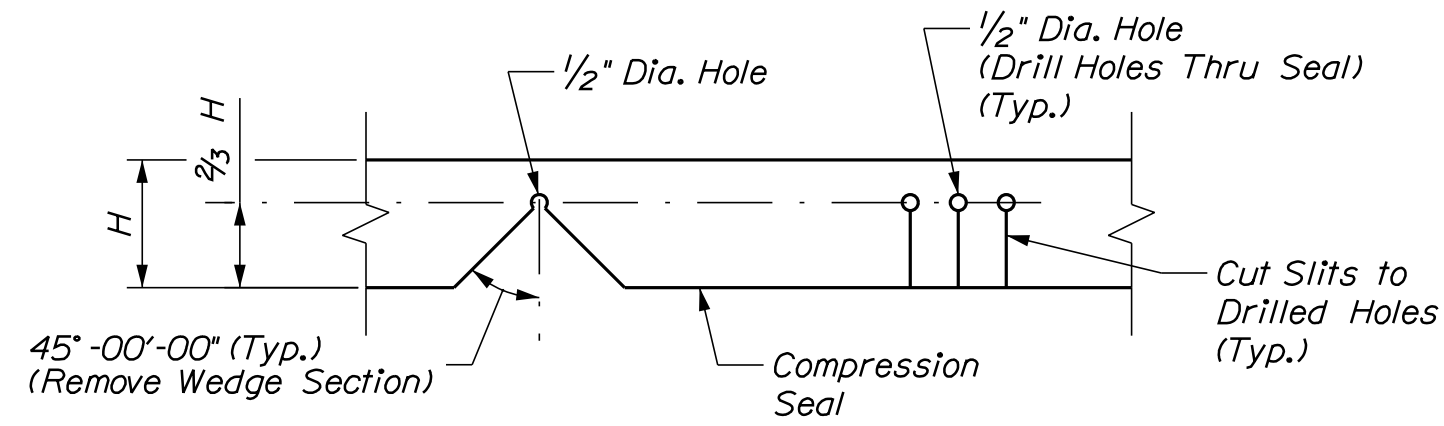
SECTION C-C
SCALE: 1 1/2" = 1'-0"



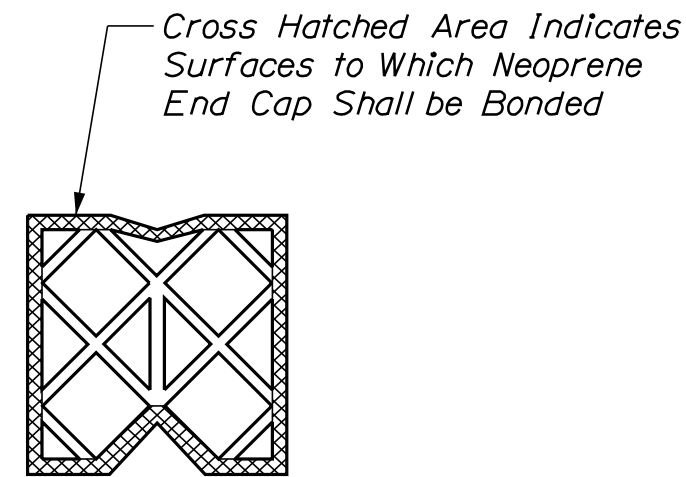
SECTION D-D
SCALE: 1 1/2" = 1'-0"



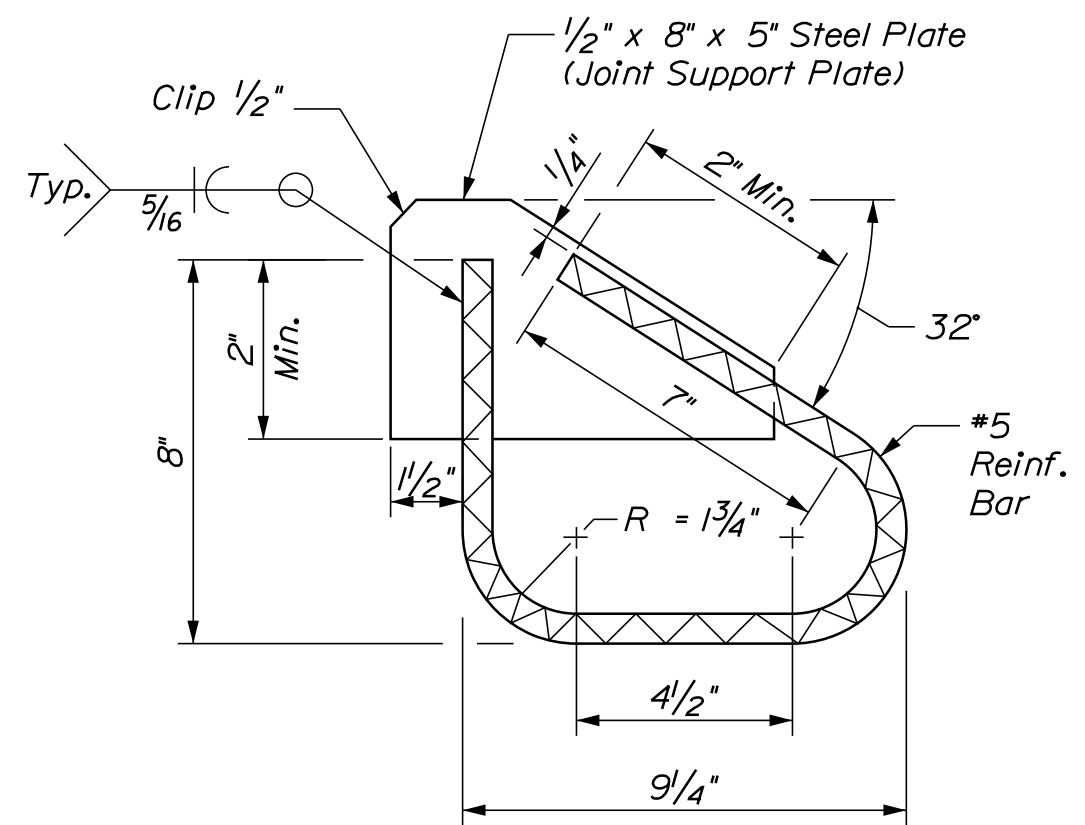
FIELD SPLICE WELD DETAIL
SCALE: 6" = 1'-0"



RELIEF CUT DETAILS
NOT TO SCALE

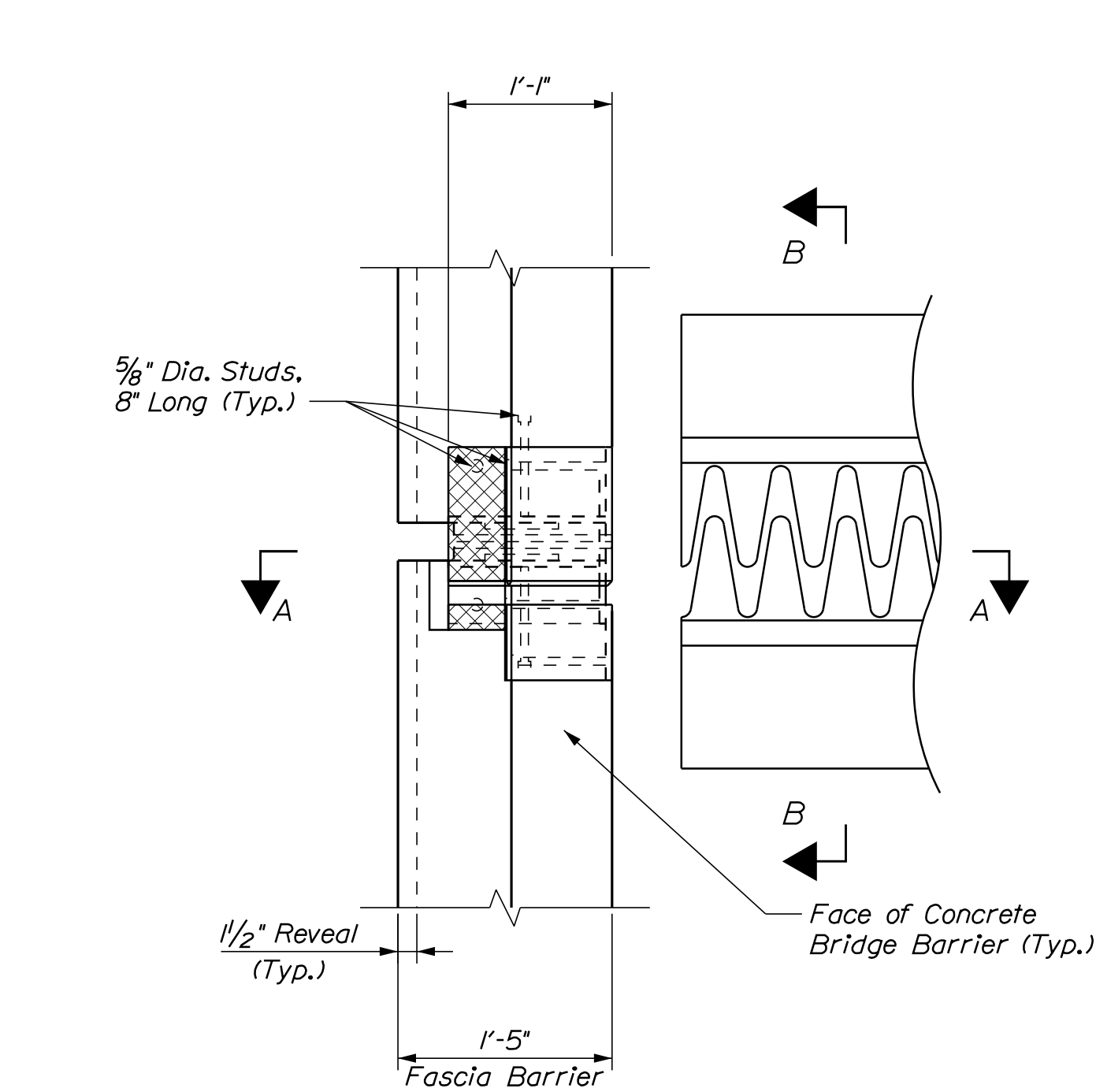


UNCOMPRESSED SEAL
NOT TO SCALE

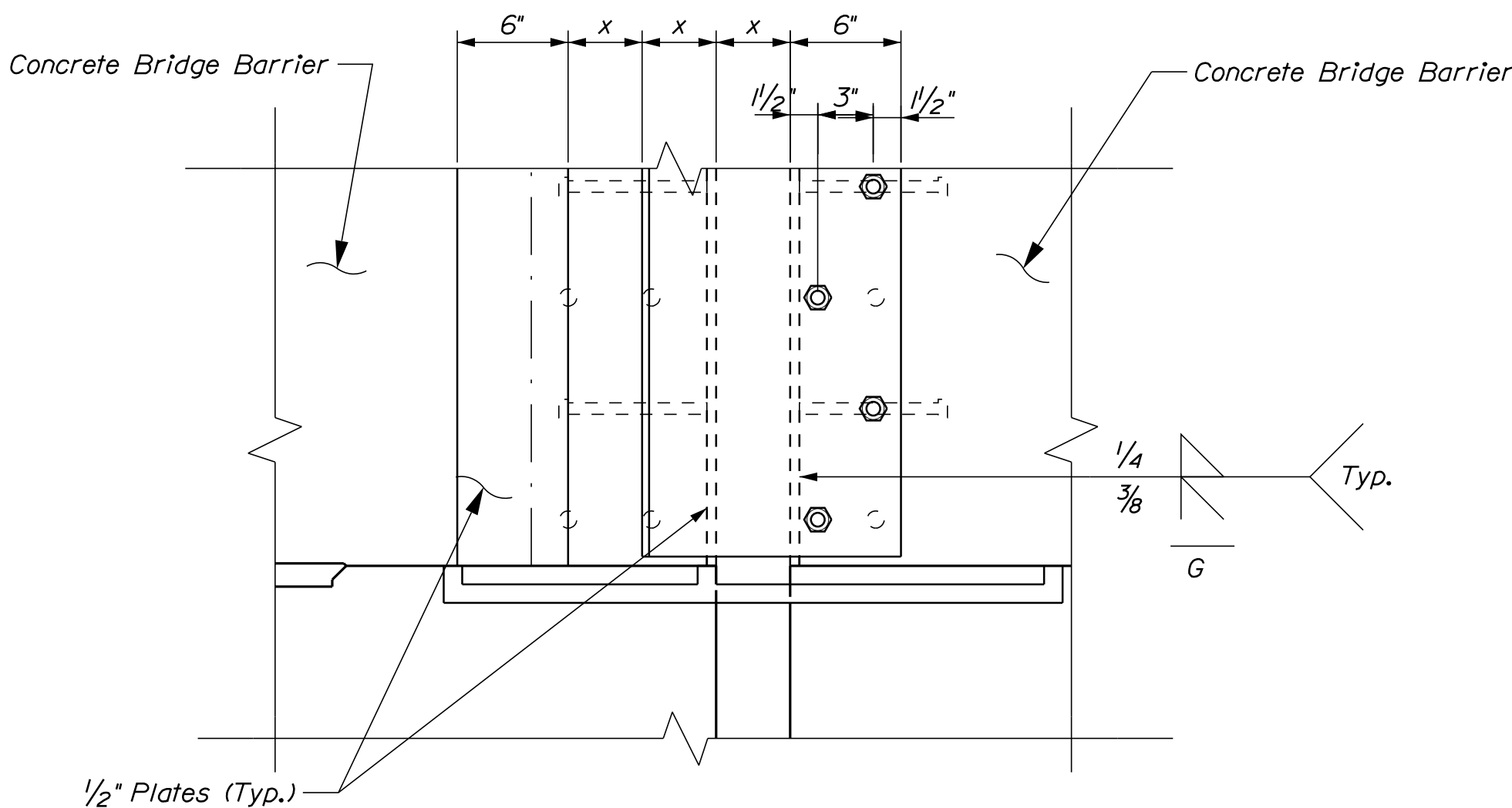


ANCHOR DETAIL
SCALE: 3" = 1'-0"

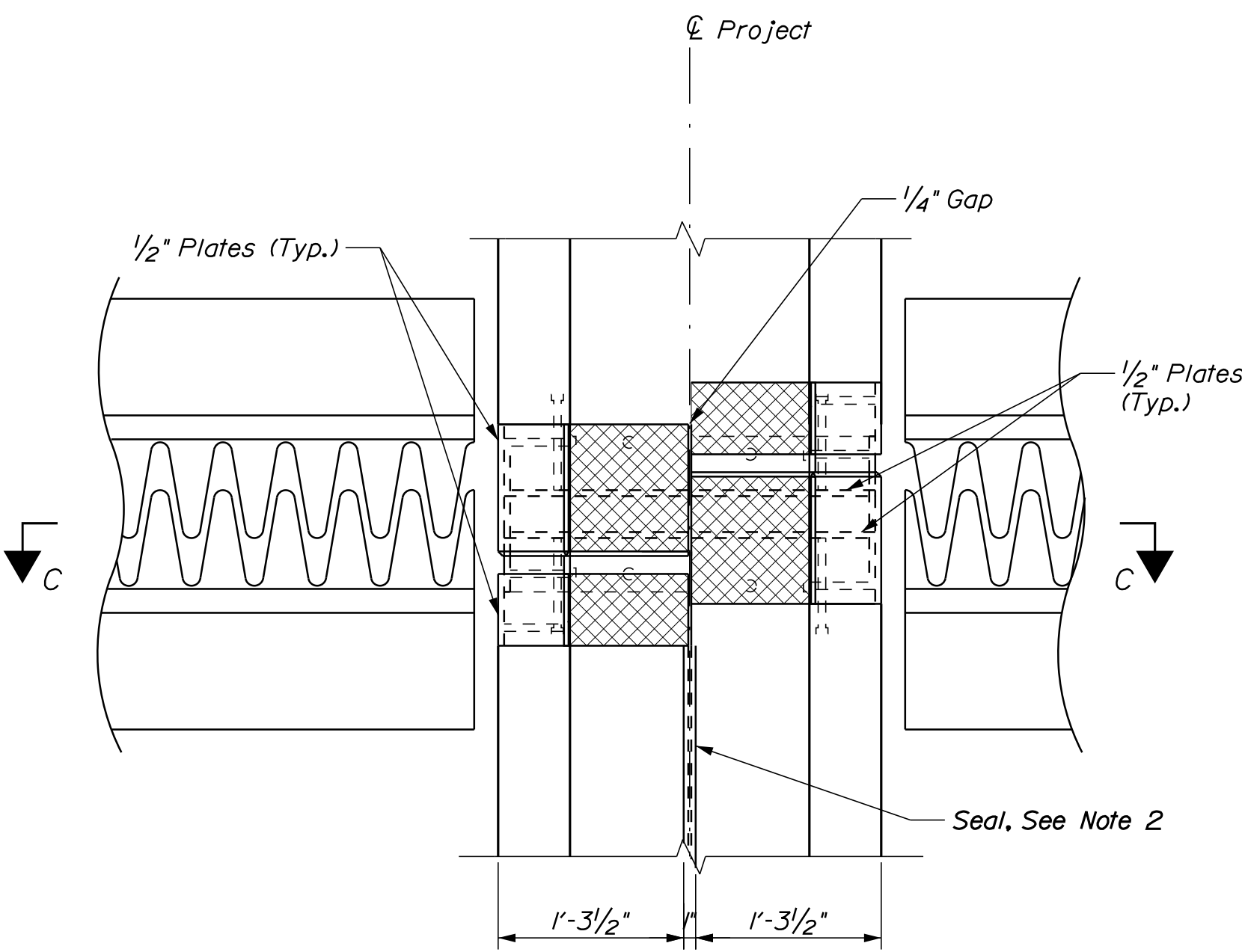
STATE OF MAINE DEPARTMENT OF TRANSPORTATION AC-IM-1927(000)E BRIDGE NOS. 6330 WIN 019270.00 BRIDGE PLANS										
	DATE	BY	PROJ. MANAGER	LEAD	DESIGNED	CHECKED	DESIGNED	REVIEWED	REVIEWED	REVIEWED
	9/18	L. Pelix	C. Taylor	C. Taylor	C. Taylor	C. Taylor	C. Taylor	C. Taylor	C. Taylor	C. Taylor
	9/18	D. Myers	D. Myers	D. Myers	D. Myers	D. Myers	D. Myers	D. Myers	D. Myers	D. Myers
KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY COMPRESSION SEAL EXPANSION JOINT 2	DATE	BY	PROJ. MANAGER	LEAD	DESIGNED	CHECKED	DESIGNED	REVIEWED	REVIEWED	REVIEWED
	12/18	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam	Explosion Dam
	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	REVISIONS 5	REVISIONS 6	REVISIONS 7	REVISIONS 8	REVISIONS 9	REVISIONS 10
	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES	FIELD CHANGES
SHEET NUMBER 211A OF 232										



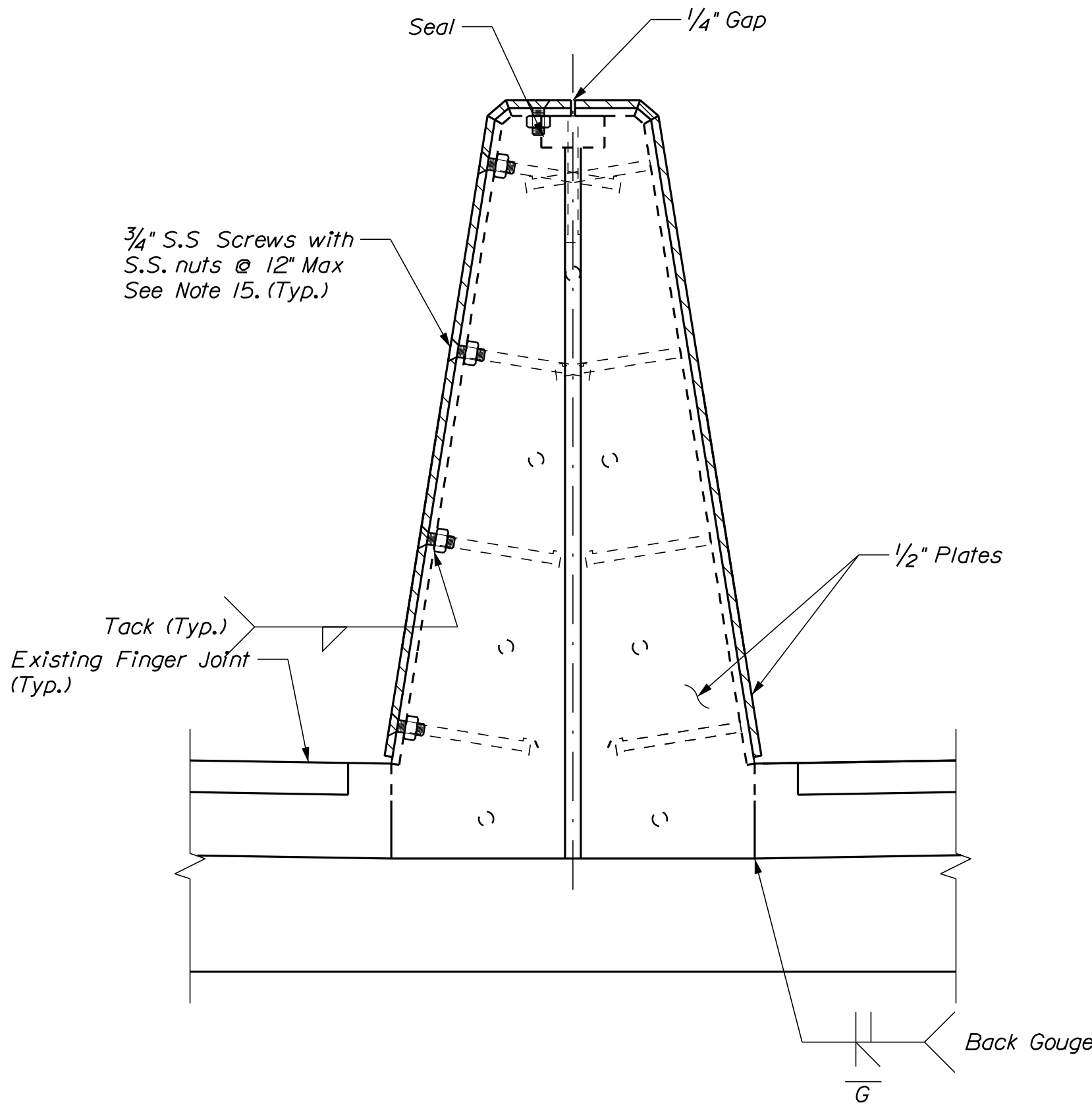
PLAN VIEW
 SCALE: 1" = 1'-0"
 Approach Span Joint Shown
 Anchor Pier Joint similar



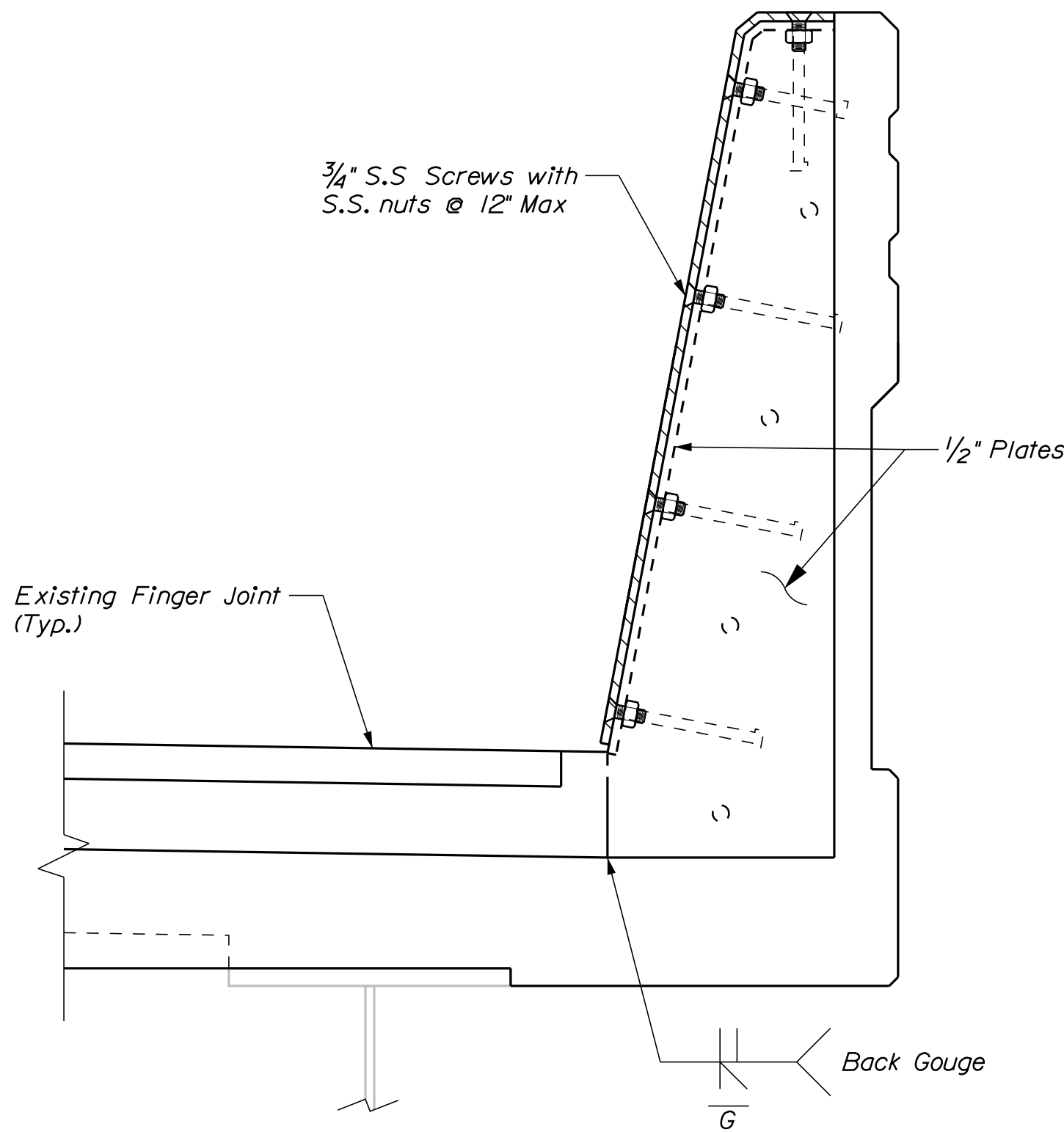
SECTION B-B
 SCALE: 1 1/2" = 1'-0"



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



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



NOTES

- Payment for Finger Joint Expansion Dams shall be incidental to Item 526.312, "Permanent Concrete Barrier Type 11" and Item 526.331, "Permanent Concrete Barrier Type 111b".
- For Seal, see "Permanent Concrete Barrier Details - 3" sheet.
- Dimension "X" shall be 4 inches for approach spans and 10 inches at anchor piers.
- At the time of installation, the expansion dams shall be set with a gap greater than the finger joint opening "J" as follows:
 Approach Spans: J = 7/8"
 Anchor Piers: J = 2"
- For expansion dam details not shown, see MaineDOT Standard Details Section 521.
- Prior to placement of sidewalk/safety curb concrete, lubricate stainless steel screws with graphite and set securely in place. Machine screws to be temporarily removed after concrete has attained final set.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		AC-IM-1927(000)E		BRIDGE NOS. 6330		WIN		019270.00		BRIDGE PLANS	
KITTERY - PORTSMOUTH BRIDGE		OVER PISCATAQUA RIVER		KITTERY-PORTSMOUTH YORK COUNTY		FINGER JOINT		EXPANSION DAMS		SHEET NUMBER		211B	
PROJ. MANAGER		LEONIE TIMBERLAKE		BY		DATE		SIGNATURE		P.E. NUMBER		DATE	
DESIGN-DETAILED		C. TAYLOR		L. PELIX		9/18							
CHECKED-REVIEWED		D. MYERS		D. MYERS		9/18							
DESIGN-DETAILED		CPT - SHEET ADDED				12/18							
REVISIONS 1													
REVISIONS 2													
REVISIONS 3													
REVISIONS 4													
FIELD CHANGES													



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

See Sheet "Permanent Concrete Barrier Details - 5" For Barrier Notes.

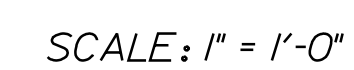
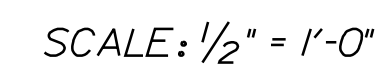


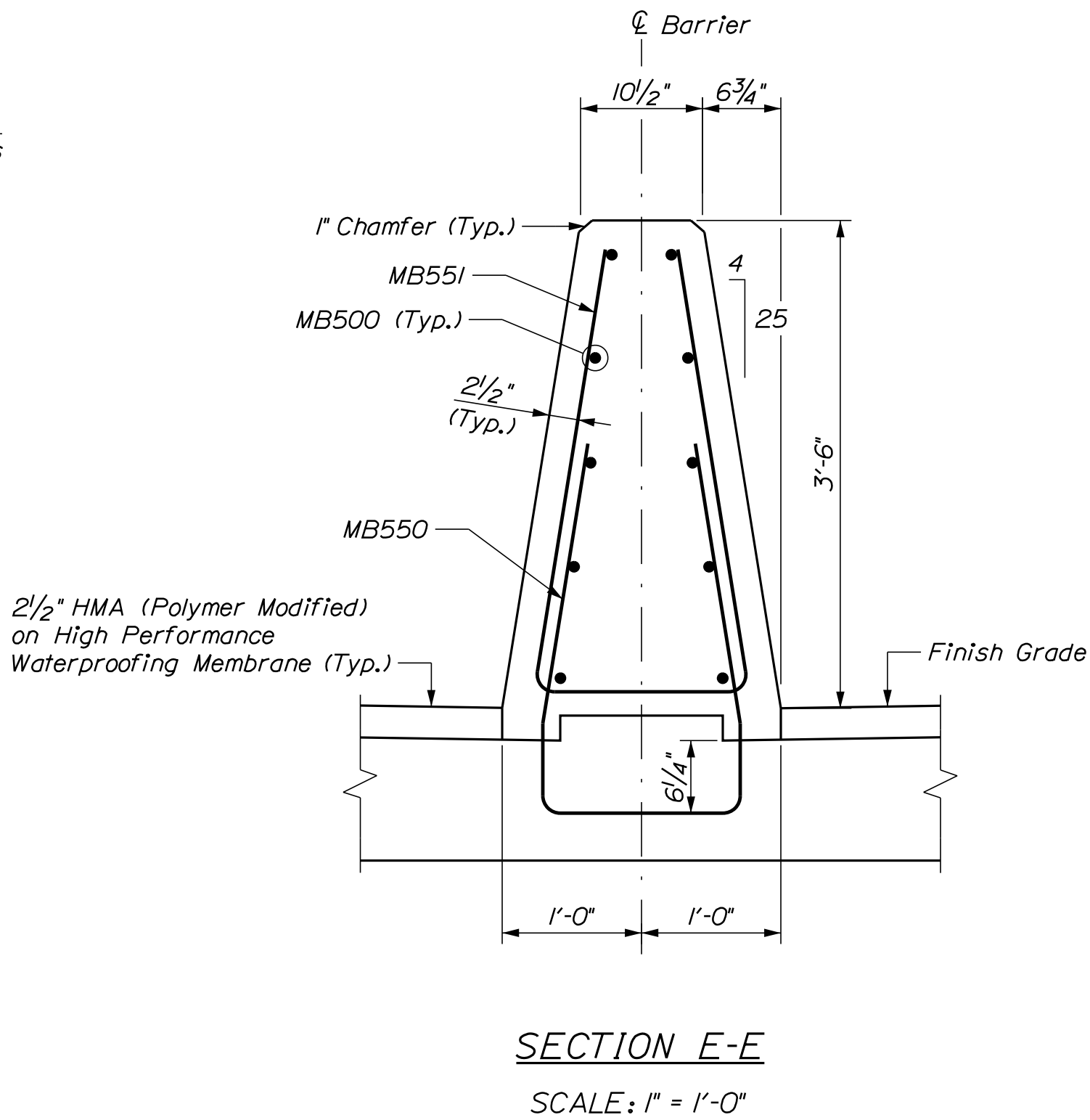
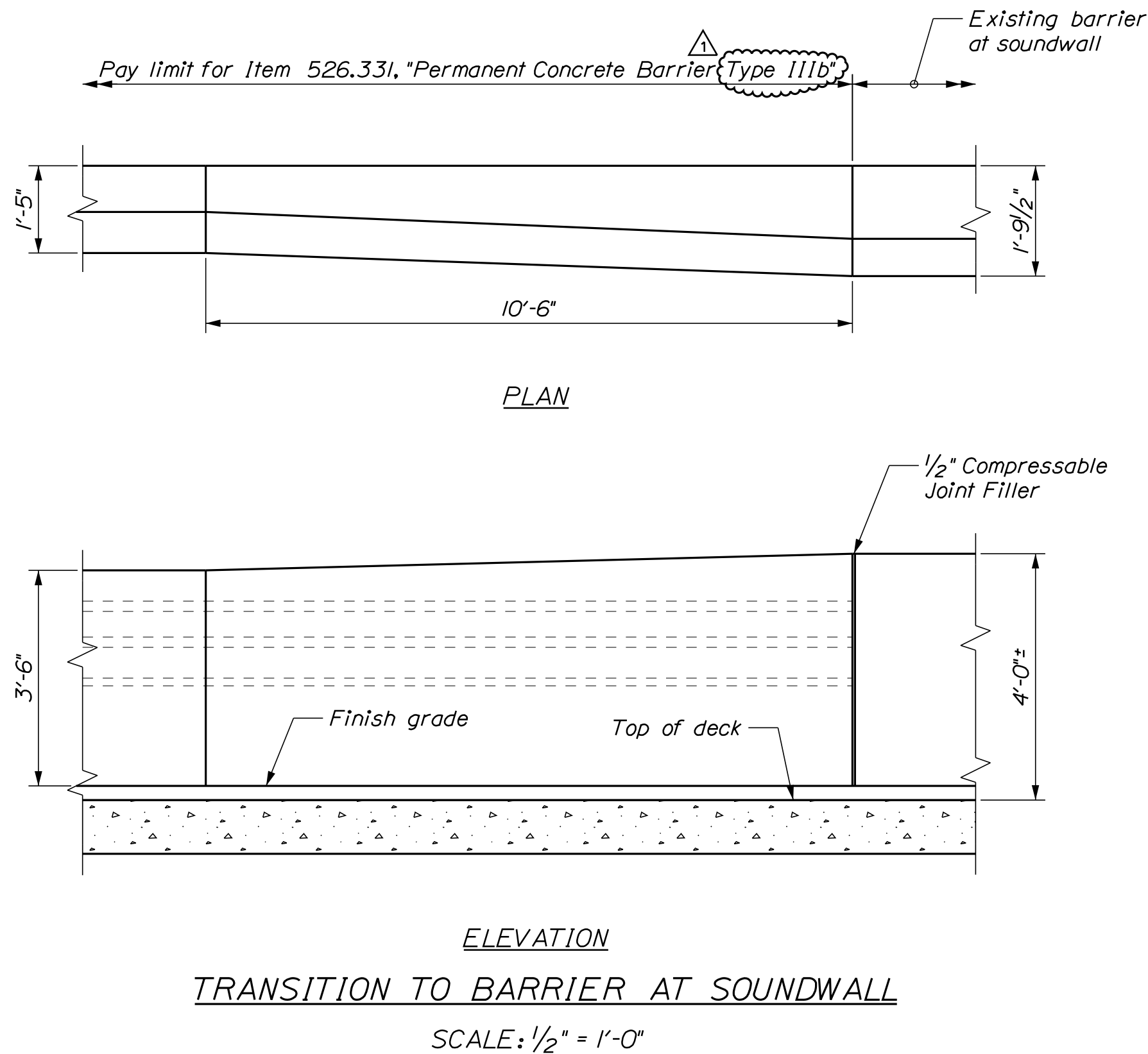
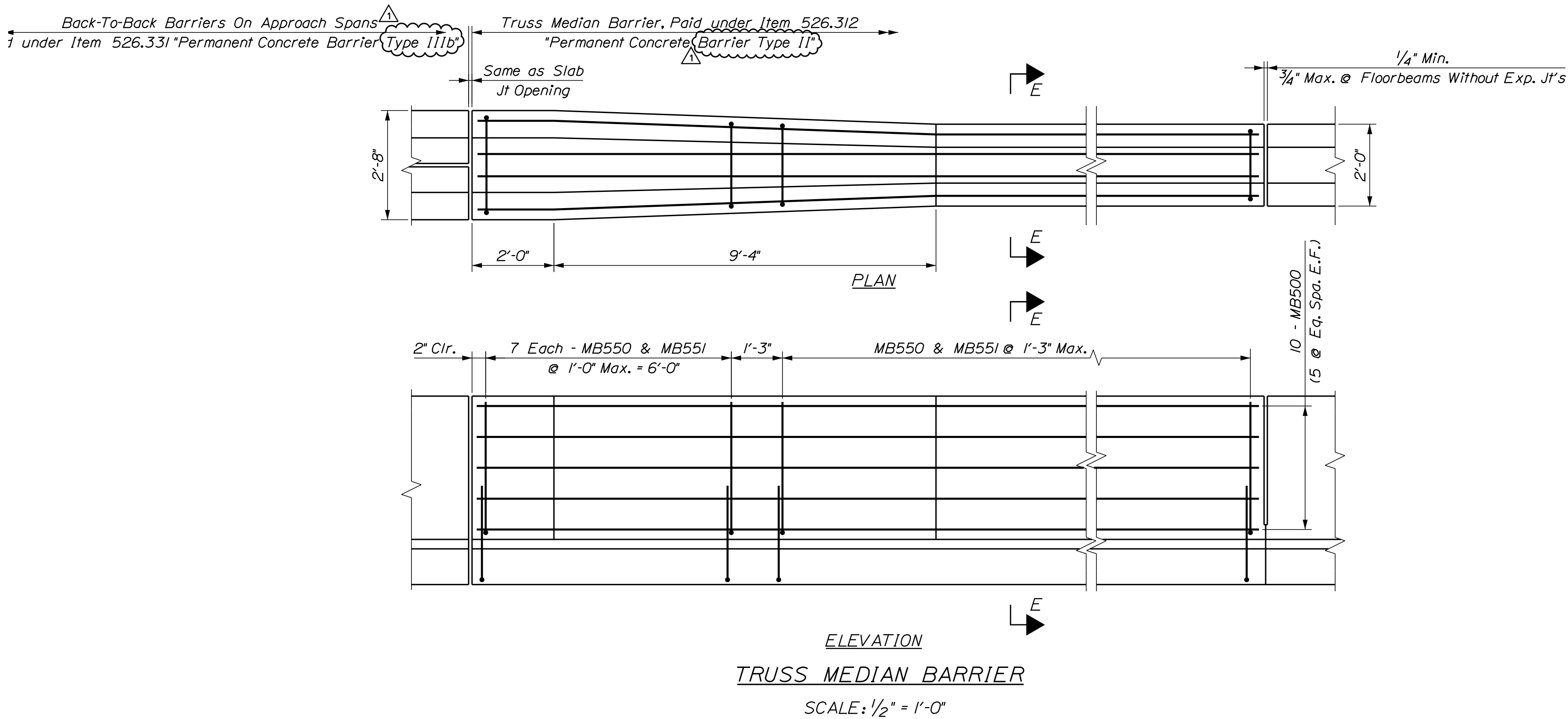
SCALE: 1" = 1'-0"



SCALE: 1" = 1'-0"

215A OF 232 SHEET NUMBER	KITTELY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER				PROJ. MANAGER	Leonore Timmerlake	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION
	KITTELY - PORTSMOUTH YORK COUNTY				DESIGN-DRAWN	C. Taylor	I. Pelin	9/18	
	PERMANENT CONCRETE				CHECKED-REVIEWED	B. Goddard	C. Taylor	9/18	
	BARRIER DETAILS - 1				DESIGN-DETAILS			SIGNATURE	
					DESIGN-DETAILS			P.E. NUMBER	
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					REVISIONS 2				
					REVISIONS 3				
					REVISIONS 4				
					FIELD CHANGES				
								DATE	BRIDGE NOS. 6330
									WIN 019270.00
									BRIDGE PLANS





NOTE:
See Sheet "Permanent Concrete Barrier Details - 5" For Barrier Notes.

LEGEND
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

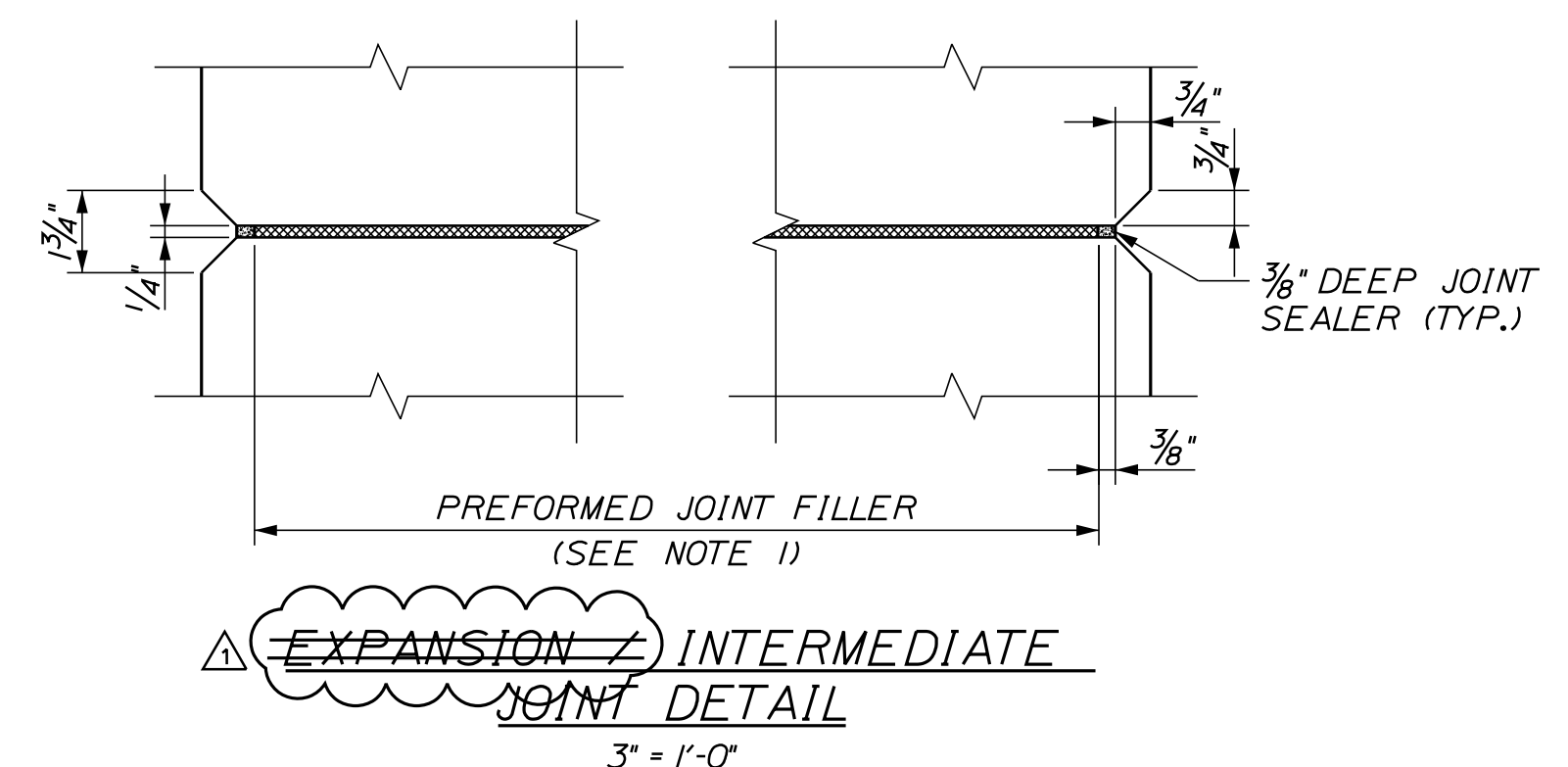
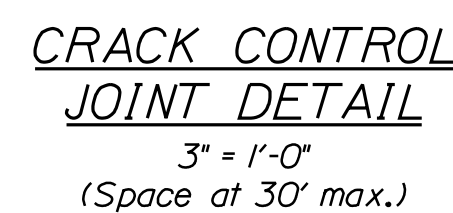
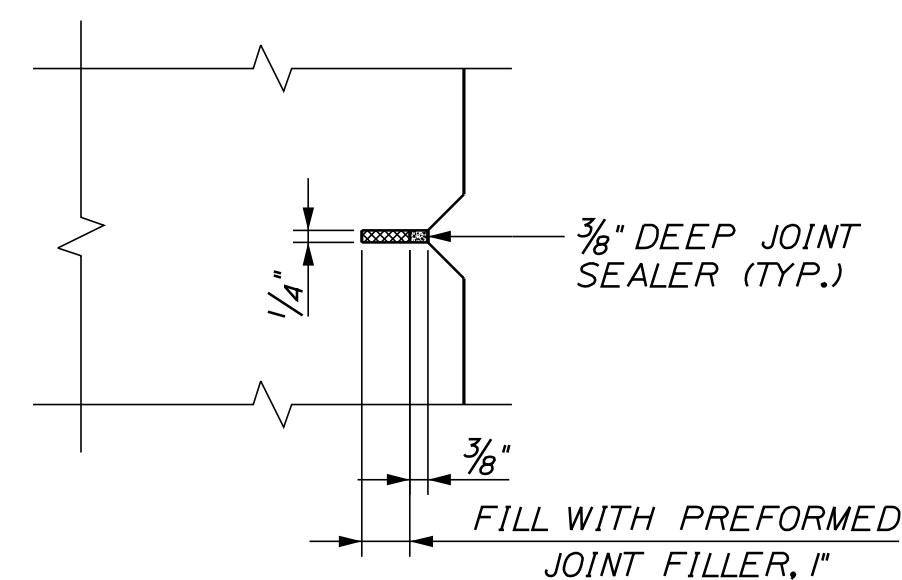
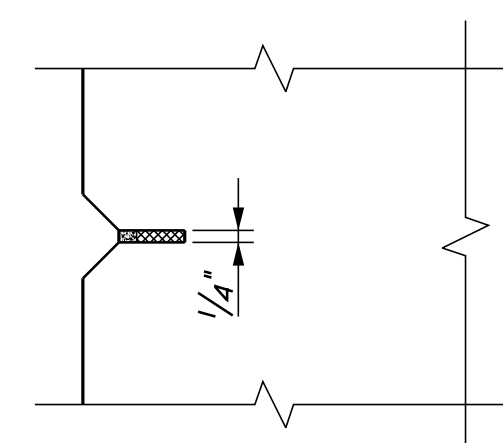
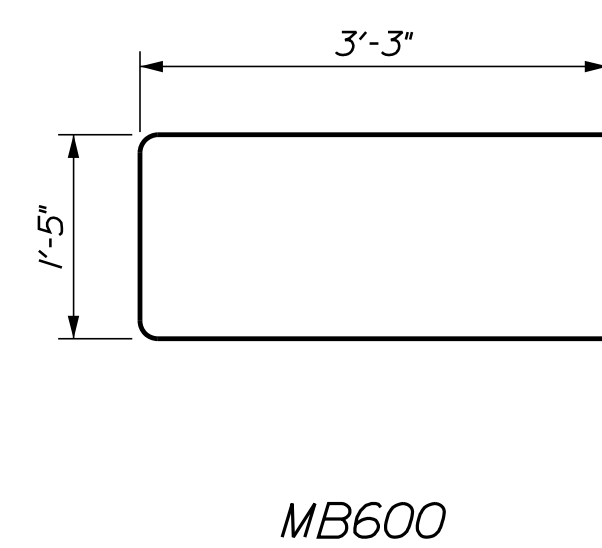
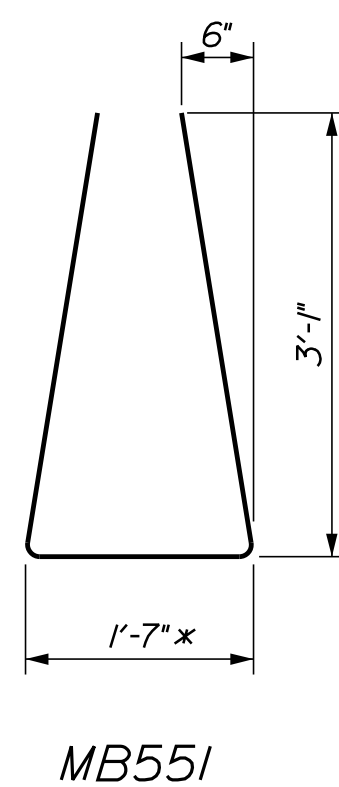
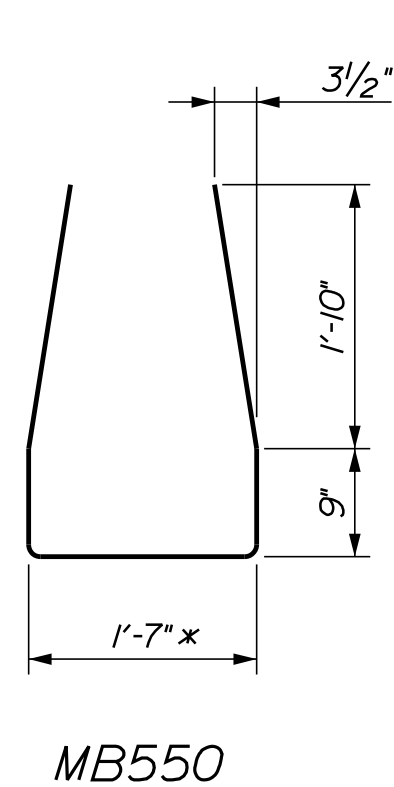
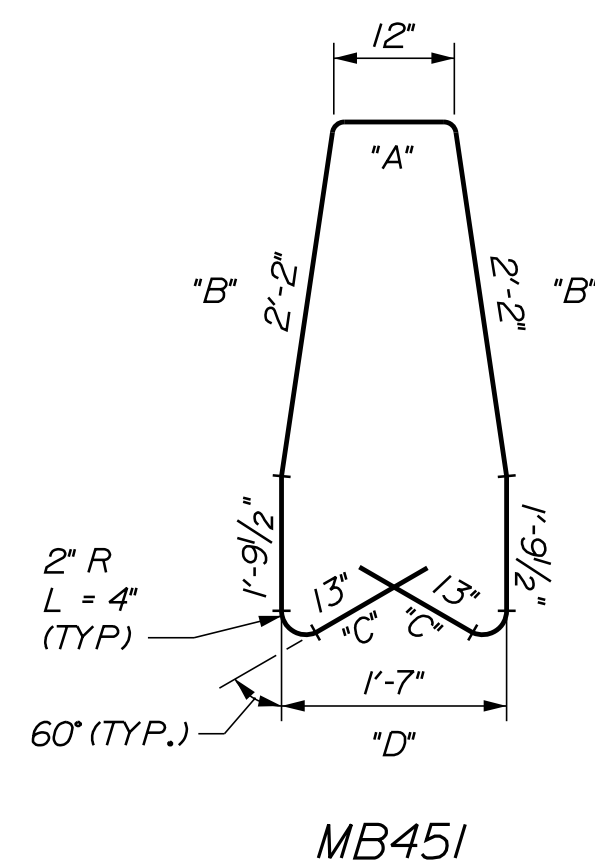
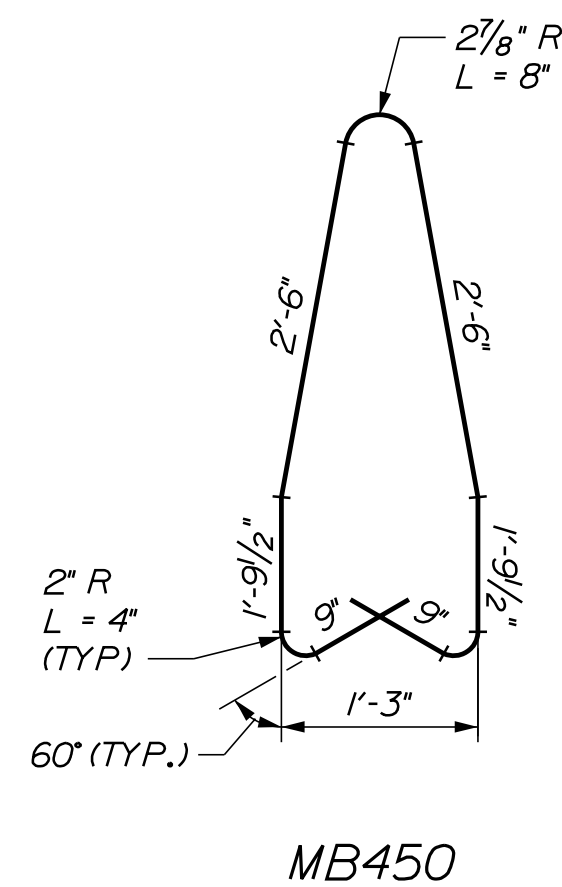
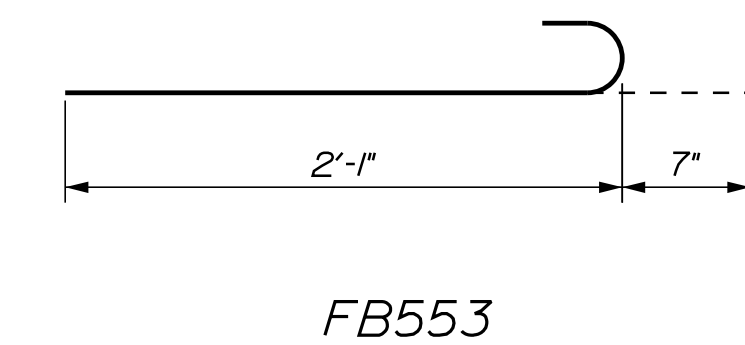
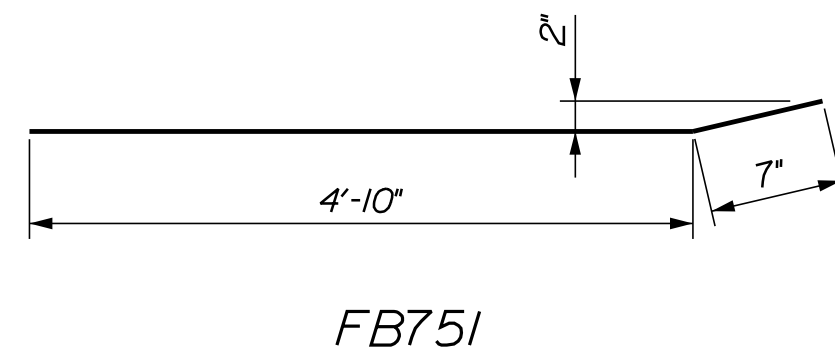
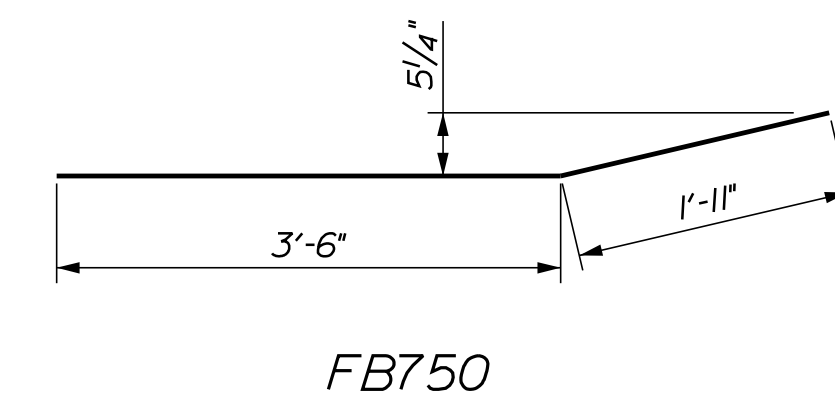
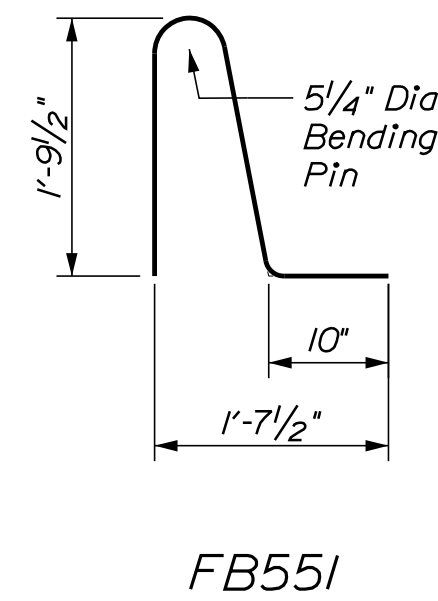
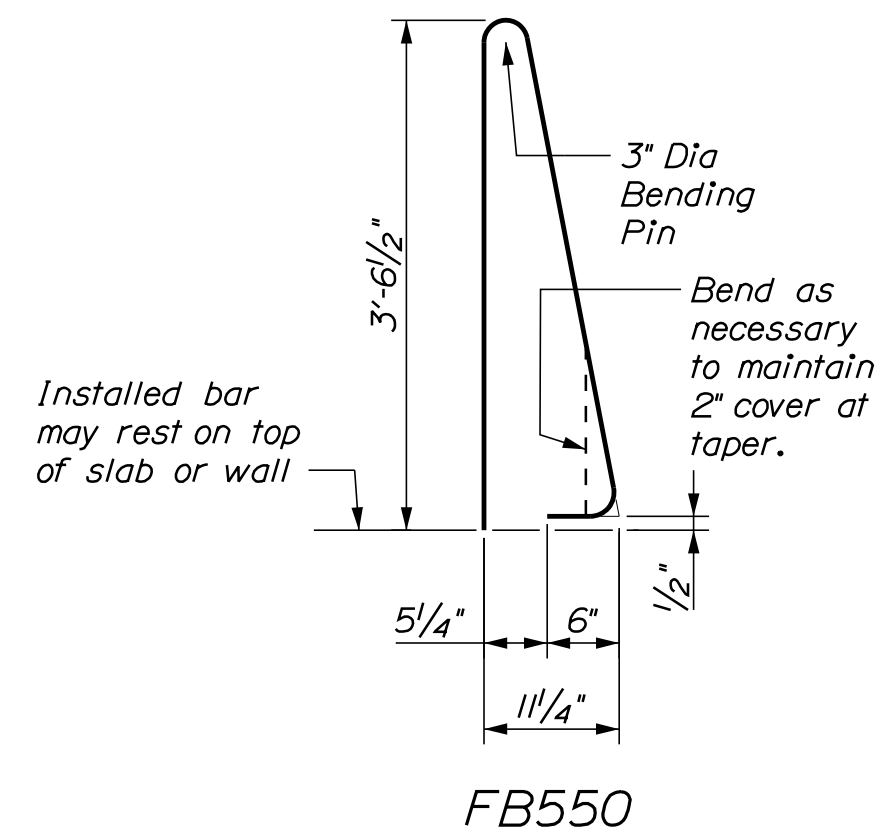
KITTERY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTERY-PORTSMOUTH YORK COUNTY	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	DATE	BY	PROJ. MANAGER	Leanne Timberlake	DESIGN-DETAILED	C. Taylor	9/18
	AC-IM-1927(000)E	SIGNATURE	C. Taylor	CHECKED-REVIEWED	B. Tothaker	DESIGN-DETAILED		9/18
	BRIDGE NOS. 6330	P.E. NUMBER	JUL Update Description	DESIGN-DETAILED		REVISIONS	1	12/18
	WIN 019270.00	DATE		REVISIONS	2	REVISIONS	3	
BRIDGE PLANS		FIELD CHANGES		REVISIONS	4			

SHEET NUMBER

218A

OF 232

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NOTES:

1. *All work and materials shall conform to the provisions of Standard Specifications Section 526 - Concrete Barrier.*
2. *The first digit following the letters of the mark indicates the size of the reinforcing bar. (FA600 = #6 bar.) All dimensions are out - to - out of bar.*
3. *Minimum lap splice length is 2'-9" for FB600 and 2'-4" for MB500.*
4. *Bolt holes in concrete shall be formed by a method approved by the Resident.*
5. *Payment for anchor bolts, bearing plates and associated hardware will be considered incidental to the concrete barrier pay item.*
6. *After installation of the guardrail is complete, upset the threads on the anchor bolts in 3 places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.*
7. *At deck expansion joints, provide expansion dams at face of concrete parapets. Top plate shall extend to within 2" of the back of single faced barriers and to the mid point of double faced barriers. See MaineDOT Standard Detail Sections 520 & 521. Payment will be incidental to the related Barrier Items.*
8. *Longitudinal median barrier seal shall be Emseal BEJS or Wabo FS.*
9. *Payment for Drilling & Anchoring of reinforcing steel is incidental to item 526.331, "Permanent Concrete Barrier (Type 111b)".*
10. *For removal details, see sheet "Abutment Removal Limits"*

11. Adjust length of median barrier transition as directed by Resident to allow tie in to existing median barrier at New Hampshire approach.
12. See sheet "Roadway Median Barrier" for additional details on HSS 4x2x $\frac{9}{16}$ and S3x7.5. Payment for S3x7.5 is incidental to Item 526.50 "Precast Concrete Barrier Median".
13. Grout pad shall be constructed of non-sag cementitious grout from the MaineDOT Qualified Product List.
14. All median and fascia barrier shall be coated with a protective coating, Paid under Item 515.21 "Protective Coating for Concrete Structures". See sheet "Deck Replacement Details" for limits.
15. Light supports shown on deck plan sheets shall be incidental to Pay Item 526.331, "Permanent Concrete Barrier Type 111b". See sheets "Light Support - Type I Details" and "Light Support - Type 2 Details" for construction details.

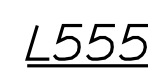
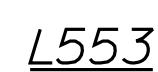
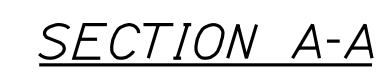
MATERIALS:

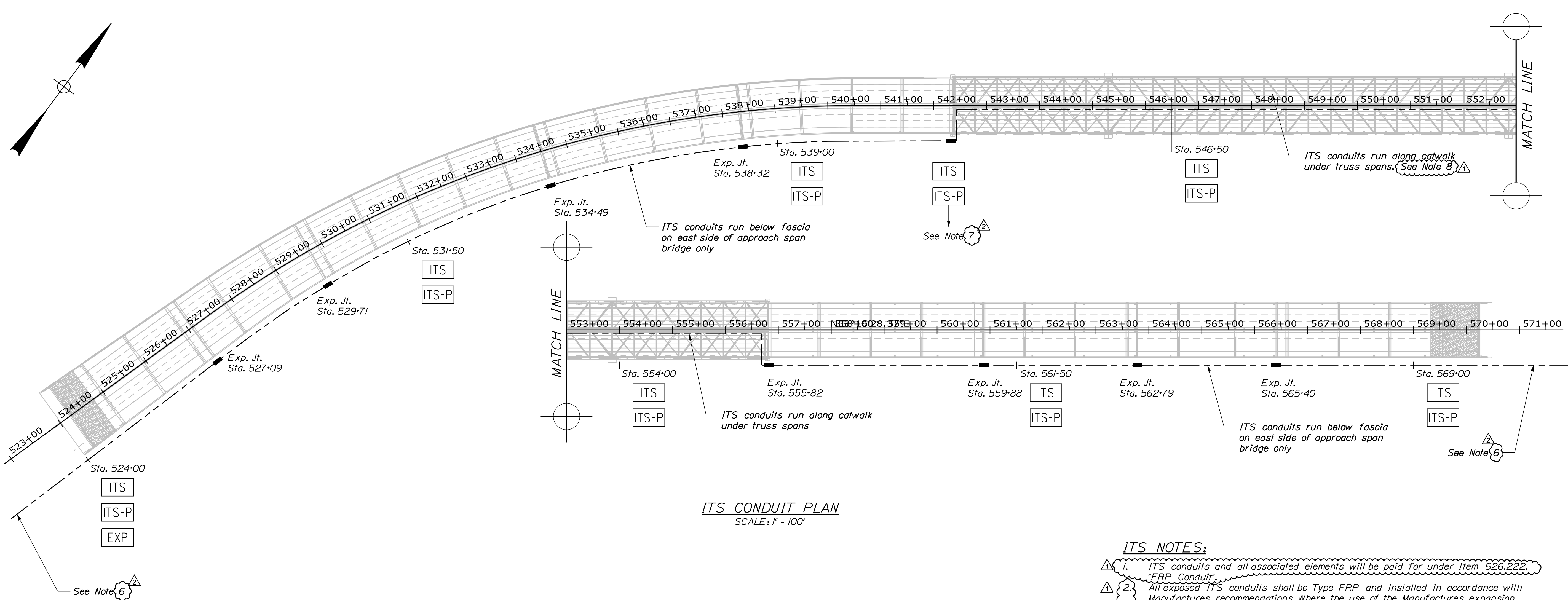
Concrete _____ Class "LP"
 Reinforcing Steel _____ AASHTO M 31M/M 31, Grade 60
 Bearing Plate _____ AASHTO M 270M/M 270, Grade 36 (Galvanized)
 Bolts _____ AASHTO M 314, Grade 105 (Galvanized) (Unless Noted Otherwise)

219A OF 232 SHEET NUMBER	KITTEY - PORTSMOUTH BRIDGE OVER PISCATAQUA RIVER KITTEY-PORTSMOUTH YORK COUNTY				PROJ. MANAGER	Leanne Timberlake	BY	DATE
	PERMANENT CONCRETE BARRIER DETAILS - 5				DESIGN-DETAILED	C. Taylor	L. Pettit	9/18
					CHECKED-REVIEWED	B. Toth/oker	C. Taylor	9/18
					DESIGN-DETAILED2			
					DESIGN-DETAILED3			
					REVISIONS/A	Update Notes/Detail Name		
					REVISIONS 2			
					REVISIONS 3			
					REVISIONS 4			
					FIELD CHANGES			
				STATE OF MAINE				
				DEPARTMENT OF TRANSPORTATION				
				AC-IM-1927(000)E				
				WIN				
				019270.00				
				BRIDGE NOS 6330				
				BRIDGE PLANS				

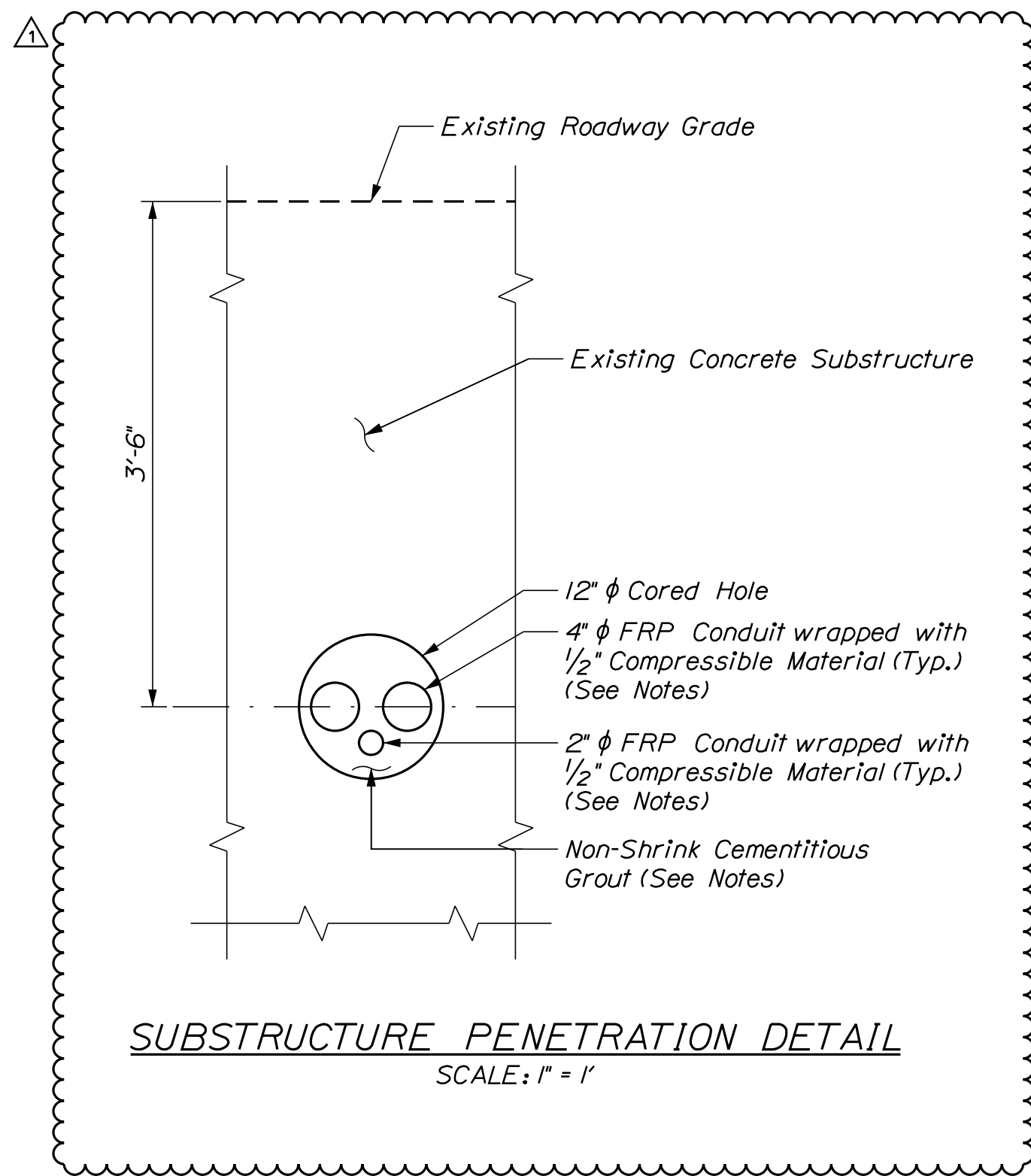


1. Contractor must coordinate anchor bolt locations with approved pole/base shop drawings.
2. For light support locations, see deck plan sheets.
3. For details not shown, see lighting sheets.
4. All conduit, conductors, anchorages and associated hardware, bases, light poles, luminaires and arms, and all associated work shall be paid under item 634.60, Highway Lighting.
5. For additional notes and details not shown, see Permanent Concrete Barrier Sheets 1 - 5.
6. Stainless steel anchor rods shall be ASTM F593 and have a minimum yield strength of





ITS CONDUIT PLAN
SCALE: 1" = 100'



SUBSTRUCTURE PENETRATION DETAIL

SCALE: 1" = 1'

ITS NOTES:

- ITS conduits and all associated elements will be paid for under Item 626.222, "FRP Conduit".
- All exposed ITS conduits shall be Type FRP and installed in accordance with Manufacturers recommendations. Where the use of the Manufacturers expansion joints will not accommodate the expected expansion movement the use of sections of liquidtight flexible metal conduit will be allowed as approved by the Resident Engineer.
- All fasteners and hardware for the attachment of conduits and pull boxes shall be Type 316 Stainless Steel.
- The exact locations of pull boxes shall be adjusted in the field to eliminate any interference with structural members and allow proper access and to open the doors a minimum of ninety degrees.
- All ITS conduits shall contain a pull line for future installation of ITS wiring.
- ITS conduits shall exit the pull box at the abutment and run underground via an expansion joint to a point five feet beyond the point of concrete embedment and terminate with a conduit cap at 30" below grade. Mark the conduit end with a length of rebar extending two feet above grade. The point of conduit termination shall not be below any pavement and be orientated in such a way as to be easily extended under a future contract.
- ITS conduits (2) 4" & (1) 2" run down anchor pier column to ITS equipment cabinet at grade level see lighting detail sheet for additional information.
- Provide a conduit and pull box support system as manufactured by conduit manufacturer, consisting of FRP channels with 316 stainless steel hardware. Arrange support system such as to locate conduits and pull boxes in close proximity to catwalk system, to allow safe access to conduits and pull boxes from catwalk.
- Contractor shall make conduit weather and animal tight.
- A minimum of 1' clear cover shall be provided around all FRP conduits at substructure penetrations.
- Non-shrink cementitious grout shall be from the MaineDOT Qualified Products List for Grout Products. A bonding agent from the MaineDOT Qualified Products List for Concrete Bonding Agents shall be used on all interfaces between existing and fresh concrete.
- Payment for all materials, labor, and equipment shall not be made directly, but shall be considered incidental to related contract items.

ITS LEGEND:

- ITS ITS pull box 48"x48"x48", NEMA 4X, with continuous hinged double doors, and door clamps.
- ITS-P ITS power pull box, 12"x12"x8", NEMA 4X, 14 gauge Type 316 stainless steel with continuous hinged cover, and door clamps.
- ITS conduits (2) 4" - 2 duct signal & (1) 2" Power, Type FRP, mounted on FRP channels with Type 316 stainless steel hardware below concrete fascia on east side of bridge and along catwalk under truss spans.
- Expansion fitting as recommended by conduit Manufacturer. Provide one in each ITS and power conduit at each deck expansion joint location and at intervals not exceeding conduit Manufacturers recommendations. Refer to lighting drawings for expansion joint locations.
- EXP Expansion Fitting. See note above.