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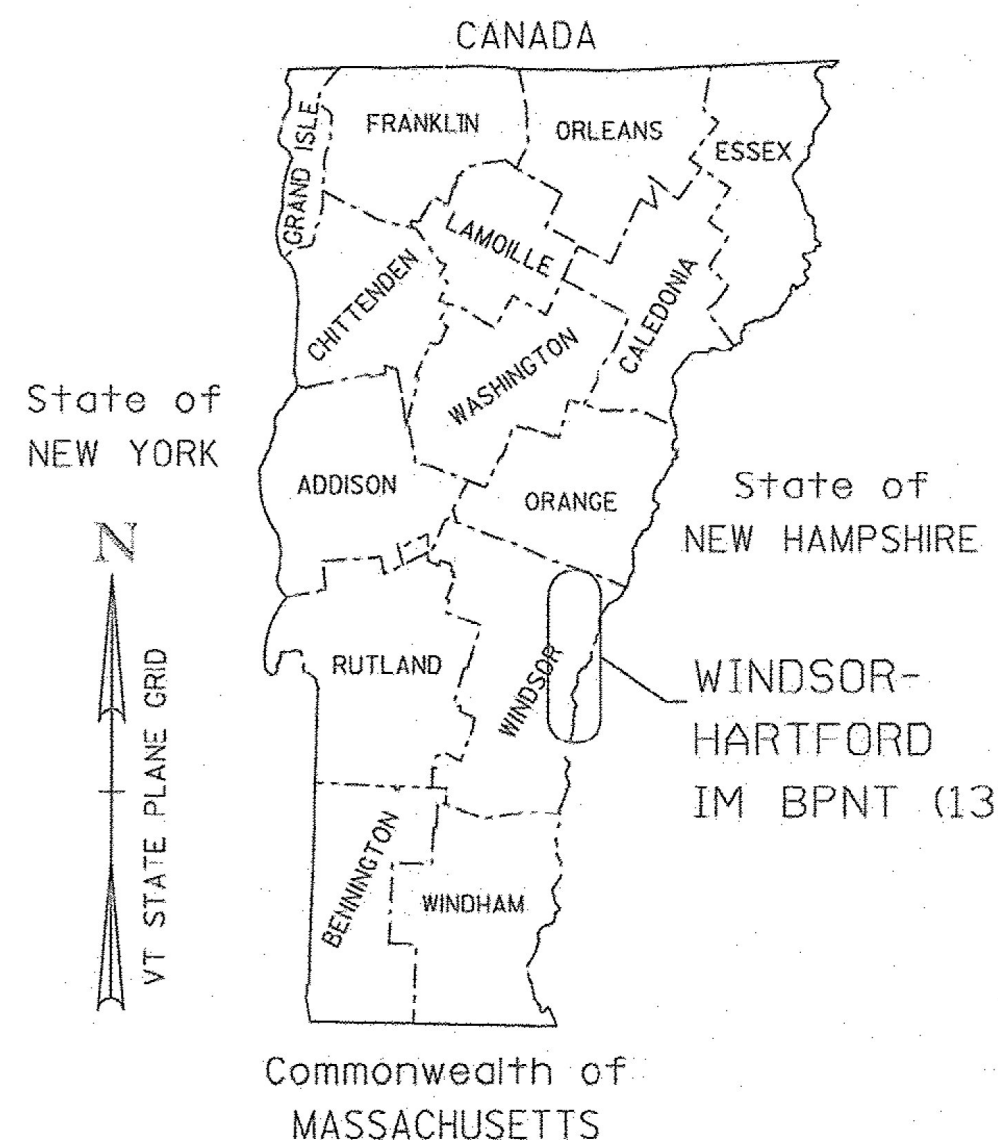
STANDARD SHEETS

- T-1 08-06-2012
- T-10 08-06-2012
- T-11 08-06-2012
- T-12 08-06-2012
- T-13 08-06-2012

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT
WINDSOR-HARTFORD
COUNTY OF WINDSOR
ELEVEN BRIDGES ON I-91



LOCATION MAP
NOT TO SCALE

Record Plans

Contractor: MONOKO, LLC
Resident Engineer: PAUL PERRY
Construction Began: AUGUST, 2, 2016
Construction Complete: OCTOBER 27, 2017
Record Plans By: PAUL PERRY & JESSE IVES

I hereby certify that all construction required by this set of drawings has been accomplished as indicated herein.

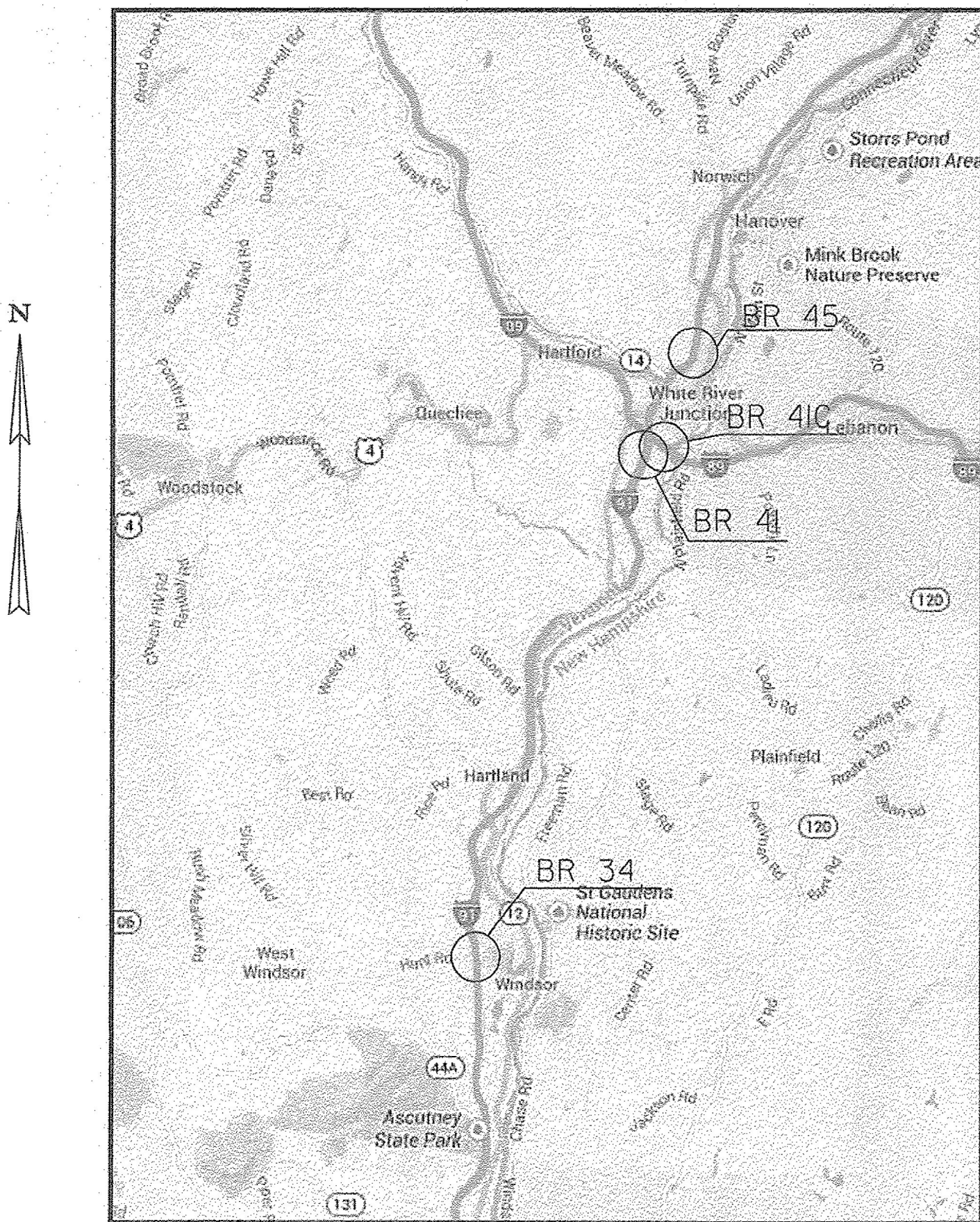
BY: E-SIGNED by Paul Perry on 2019-02-04 16:46:50 UTC Resident Engineer

Date: February 04, 2019

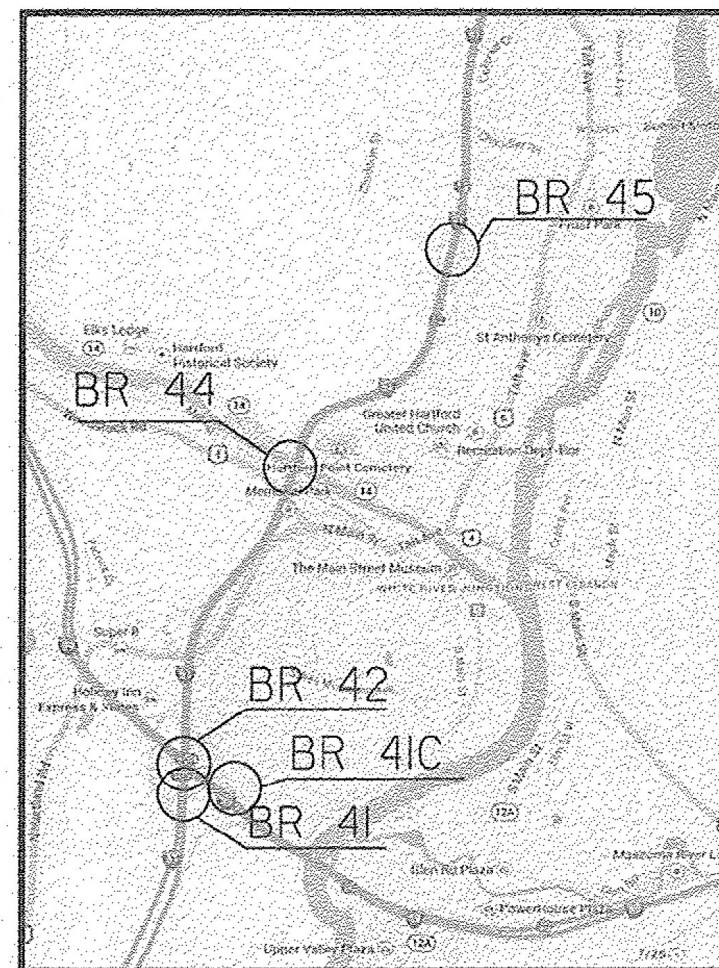
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

PROJECT LOCATION: WINDSOR BRIDGES 34N AND 34S (I-91 BRIDGE OVER TH NO 5)(MM 57.40), HARTFORD BRIDGES 41N AND 41S (I-91 BRIDGE OVER RAMP C I-91)(MM 69.68), HARTFORD BRIDGE 41C (I-91 RAMP C OVER I-89)(MM 69.51), HARTFORD BRIDGES 42N AND 42S (I-91 OVER I-89)(MM 69.81), HARTFORD BRIDGES 44N AND 44S (I-91 OVER US 4, VT 14, NECR, WHITE RIVER)(MM 70.94), HARTFORD BRIDGES 45N AND 45S (I-91 OVER WILDER SH)(MM 72.01).

PROJECT DESCRIPTION: THIS PROJECT INVOLVES CLEANING, LEAD PAINT REMOVAL AND REPAINTING THE EXISTING STEEL SUPERSTRUCTURE MEMBERS AND ASSOCIATED WORK.



PROJECT LOCATION PLAN
NOT TO SCALE



HARTFORD LOCATION PLAN
NOT TO SCALE

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

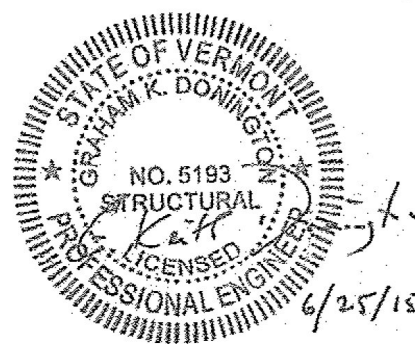
QUALITY ASSURANCE PROGRAM : LEVEL 3

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A

BUILT AS DESIGNED

DIRECTOR OF PROJECT DELIVERY
APPROVED: Mark Sargent DATE 7/2/2015
PROJECT MANAGER : MARK SARGENT
PROJECT NAME : WINDSOR-HARTFORD
PROJECT NUMBER : IM BPNT (13)
SHEET 1 OF 36 SHEETS



PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND ITS LATEST REVISIONS, AND THE CONTRACT DOCUMENTS.
- ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING RIGHT-OF-WAY LIMITS ALONG I-91 AND I-89. THE RIGHT-OF-WAY FOR ALL OTHER HIGHWAYS SHALL BE ASSUMED AT A MINIMUM OF 3 RODS UNLESS SHOWN OTHERWISE ON REFERENCE PLANS.
- VTRANS WILL REVIEW CONSTRUCTION STAGING AREAS FOR ADEQUACY AND EXISTING CONDITIONS. THESE STAGING AREAS SHALL BE RESTORED TO ORIGINAL CONDITION. EROSION CONTROL MEASURES SHALL BE INCORPORATED FOR ALL DISTURBED AREAS AND WILL BE PAID UNDER THE APPROPRIATE CONTRACT ITEMS.
- ALL COSTS ASSOCIATED WITH EXTENDING OR FILLING THE DRAIN TUBES SHALL BE INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL).
- STAGING AND CONTAINMENT STRUCTURES SHALL NOT BE ANCHORED INTO PIERS. ANCHORING INTO THE ABUTMENTS IS ALLOWED AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL PROVIDE A DETAILED PLAN FOR CLEANING AND PAINTING BEARING DEVICES IF ANCHOR CABLES ARE PLACED AROUND BEARING PLATES. PAYMENT WILL BE CONSIDERED INCIDENTAL TO CONTRACT ITEM 900.645 SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES).
- UTILITIES THAT ARE PRESENT ON THE STRUCTURES SHALL NOT BE BLASTED OR PAINTED. THESE UTILITIES MUST BE PROTECTED. SEE THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- CONTRACTOR SHALL VERIFY, THROUGH LOAD CALCULATIONS, THE CAPACITY OF THE EXISTING BRIDGE IF ANY EQUIPMENT, MATERIALS OR CONTAINMENT SYSTEM IS PLACED ON THE BRIDGE STRUCTURE. THIS IS TO INCLUDE WIND LOADING CONDITIONS, GRIT BUILD UP, EQUIPMENT, AND PERSONNEL LOADING PER SQUARE FOOT OF THE CONTAINMENT. CALCULATIONS SHALL BE PROVIDED TO THE ENGINEER PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOT IMPEDE THE TOWN CONTROLLED PORTION OF THE RIGHT OF WAY WITH EQUIPMENT OR ANY STAGING MATERIALS.
- WORK OUTSIDE THE SEASONAL CLOSURE PERIOD WILL NOT BE ALLOWED UNLESS BY SPECIAL PERMISSION FROM THE REGIONAL CONSTRUCTION ENGINEER. WORK OUTSIDE THE SEASONAL CLOSURE PERIOD WILL ONLY BE ALLOWED FOR A SHORT PERIOD OF TIME IF GIVEN, TO FINALIZE TOUCHUPS OR OTHER REPAIRS. NO LONG TERM OUT OF SEASON WORK WILL BE ALLOWED OR CONSIDERED.
- ALL DIMENSIONS ON PLANS FOR DOWNSPOUT AND DRAINAGE SYSTEM ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. CONTRACTOR TO SUBMIT FABRICATION DRAWINGS FOR ALL REPAIR ACTIVITIES.
- ALL WORK ADJACENT TO OR OVER ACTIVE RAILROADS SHALL BE PERFORMED IN COMPLIANCE WITH APPLICABLE RAILROAD REQUIREMENTS.
- EXISTING GREASE PROTECTION APPLIED TO STEEL MEMBERS FOR CORROSION PROTECTION MAY NOT BE LIMITED TO TOP SURFACE, AS GREASE MAY HAVE PERMEATED INTO MULTIPLE LAYERS OF PAINT. THIS MAY RESULT IN PAINT LAYER REMOVAL DURING THE GREASE REMOVAL PROCESS. GREASE REMOVAL ACTIVITIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.645, SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING).THE CONTRACTOR IS INVITED TO PERFORM THE NECESSARY TESTS FOR ADHESION TO THE UNDERLYING PAINT LAYERS PRIOR TO SUBMISSION OF FINAL BID DOCUMENTS.
- THE CONTRACTOR SHALL GRIND ALL EDGES OF EXISTING STEEL TO A RADIUS OF 1/16" - 1/8" PRIOR TO BLASTING THE STEEL IN PREPARATION FOR COATING.

TRAFFIC CONTROL:

- THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON I-91, I-89, AND OTHER ROADWAYS. THE DESIGN SHALL ENSURE STATE-REGULATED WIDE LOADS CAN BE ACCOMMODATED DURING THE LANE CLOSURES. PLANS SHALL BE SUBMITTED IN ACCORDANCE WITH SECTION 641 AND SUBSECTION 105.03 AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN AN APPROPRIATE DISCIPLINE IN THE STATE OF VERMONT.

TOWN	I-91 BRIDGE No	I-91 2012 AADT		CROSSROAD	CROSSROAD 2012 AADT SUM OF BOTH DIRECTIONS
		NORTHBOUND	SOUTHBOUND		
WINDSOR	34N&S	6500	6500	TH NO 5 (HUNT ROAD)	2100
HARTFORD	41N&S	13750	13750	RAMP C	NOT AVAILABLE
HARTFORD	41C	13750	13750	I-89	38500
HARTFORD	42N&S	13750	13750	I-89	38500
HARTFORD	44N&S	9900	9900	US 4 & VT 14 (WOODSTOCK RD. & MAPLE STREET)	8900
HARTFORD	45N&S	9900	9900	WILDER SH (BUGBEE STREET)	5300

- THE CONTRACTOR SHALL VERIFY THE MOST CURRENT TRAFFIC VOLUMES FOR I-91 AND CROSS ROADS FOR USE IN THE SPECIFIC TRAFFIC CONTROL PLANS.
- THE TRAFFIC CONTROL PLANS SHALL SHOW ALL RAMPS AND I-91 ACCELERATION LANES AND DECELERATION LANES.

BRIDGE NOTES:

WINDSOR, BRIDGES 34N & 34S

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 16 PER STRUCTURE)
- CONTRACTOR SHALL BE AWARE OF SNOW FENCING PRESENT ON CENTER SPANS

HARTFORD, BRIDGES 41N & 41S

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 20 PER STRUCTURE)
- DOWNSPOUTS FROM DRAINAGE TROUGHS LOCATED AT NORTH END OF BRIDGES SHALL BE REMOVED AND REPLACED
- AT CONTRACTOR'S DISCRETION, ITEM 203.30 EARTH BORROW MAY BE PLACED TEMPORARILY FOR STAGING PURPOSES AT STRUCTURES. CONTRACTOR SHALL REMOVE ALL TEMPORARY FILL PRIOR TO PROJECT COMPLETION. PAYMENT FOR REMOVAL WILL BE INCLUDED IN ITEM 203.15 COMMON EXCAVATION

HARTFORD, BRIDGE 41C

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 20)
- REMOVE AND REPLACE SCUPPER AND DRAIN PIPE AT SOUTHERN END OF BRIDGE
- REMOVAL AND CLEANING OF DIAPER DRAIN AT CENTER SPAN IS NOT REQUIRED
- CONTRACTOR SHALL BE AWARE OF SNOW FENCING PRESENT ON BRIDGE
- AT CONTRACTOR'S DISCRETION, ITEM 203.30 EARTH BORROW MAY BE PLACED TEMPORARILY FOR STAGING PURPOSES AT STRUCTURES. CONTRACTOR SHALL REMOVE ALL TEMPORARY FILL PRIOR TO PROJECT COMPLETION. PAYMENT FOR REMOVAL WILL BE INCLUDED IN ITEM 203.15 COMMON EXCAVATION

HARTFORD, BRIDGES 42N & 42S

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 96 PER STRUCTURE)
- REMOVE AND REPLACE TROUGH AND DOWNSPOUTS LOCATED AT SOUTH END OF BRIDGES
- CONTRACTOR SHALL BE AWARE OF SNOW FENCING PRESENT ON CENTER SPANS

TRAFFIC CONTROL (CONTINUED):

- UNIFORMED TRAFFIC OFFICERS ARE REQUIRED FOR THE TRAFFIC CONTROL ON I-91 AND I-89.
- THE TRAFFIC CONTROL DEVICES SHOWN ON THESE PLANS ARE FOR ILLUSTRATIVE PURPOSES AND DO NOT RELIEVE THE CONTRACTOR FROM ADHERING TO ALL VTRANS TRAFFIC CONTROL STANDARDS, REQUIREMENTS AND SPECIFICATIONS. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE 2009 MUTCD AND ITS LATEST REVISIONS. WHERE CONFLICTS EXIST BETWEEN AOT STANDARDS AND MUTCD, THE MUTCD SHALL GOVERN.
- UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS, ALL COSTS FOR TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR ITEM 641.10, TRAFFIC CONTROL.
- THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AND PRINT MEDIA SHALL BE IMPLEMENTED 2 WEEKS IN ADVANCE OF LANE CLOSURES AS DIRECTED BY THE ENGINEER.
- TRAFFIC BARRELS ARE FOR TEMPORARY CLOSURES ONLY, UP TO A MAXIMUM OF 3 CONSECUTIVE DAYS. ALL CLOSURES LONGER THAN 3 DAYS SHALL USE CONCRETE BARRIERS, WHICH SHALL BE PAID UNDER ITEM 621.90 TEMPORARY TRAFFIC BARRIER.

HARTFORD, BRIDGES 44N & 44S

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 20 PER STRUCTURE)
- REMOVE AND REPLACE ALL DOWNSPOUTS
- UTILITIES PRESENT UNDER SPAN 3 AND ALONG VT 14
- REMOVE AND DISPOSE OF BRUSH, INCIDENTAL TO ITEM 900.645, SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)
- CONTRACTOR RESPONSIBLE FOR HIRING A PROFESSIONAL ENGINEER LICENSED IN VT TO INSPECT AND CERTIFY STRUCTURAL ADEQUACY OF EXISTING CATWALKS IF INTENDED FOR USE. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT
- CONTRACTOR SHALL INSTALL A SAFETY NET OVER RAIL YARD PORTION OF BRIDGE SPANS PRIOR TO START OF WORK TO PREVENT ITEMS FROM FALLING ONTO ACTIVE RAIL ROAD. PAYMENT SHALL BE CONSIDERED INICIDENTAL TO THE CONTRACT.

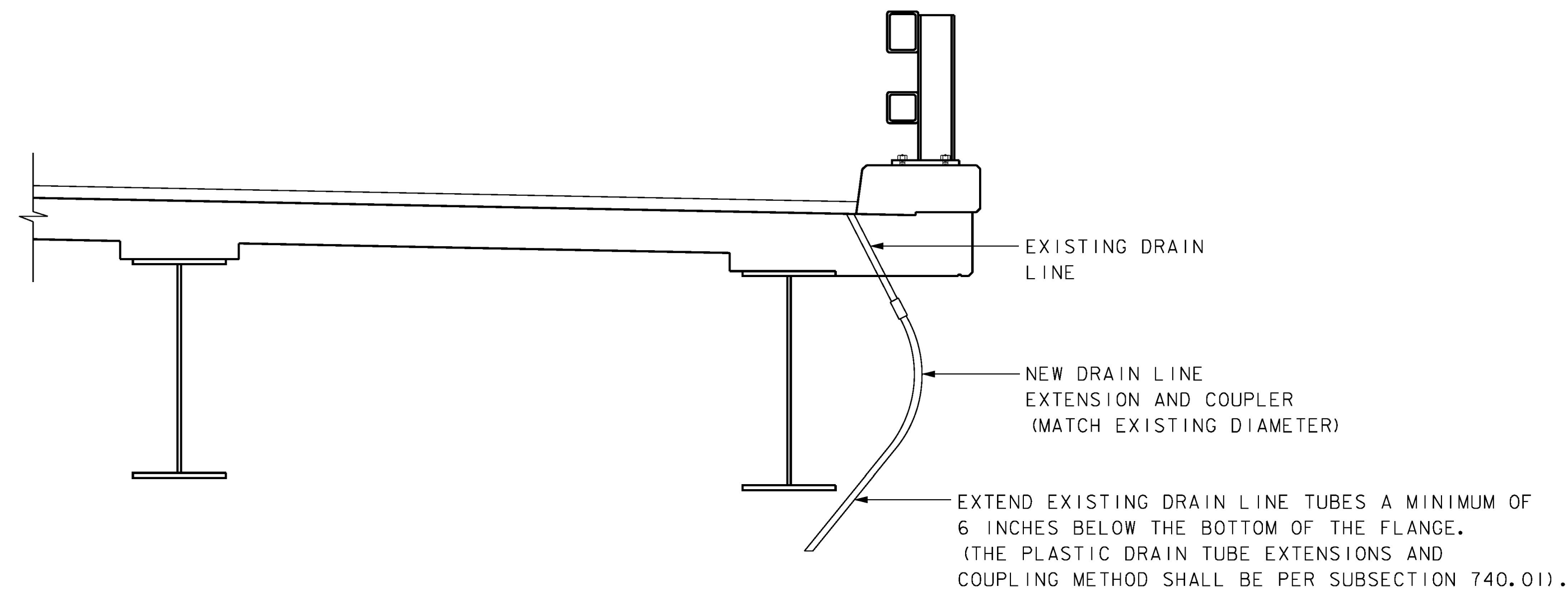
HARTFORD, BRIDGES 45N & 45S

- REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, CROSS MEMBERS, AND BEARINGS
- CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS IN LIEU OF GREASE PAINT
- EXTEND BRIDGE DRAIN WEEPERS (APPROX. 32 PER STRUCTURE)
- CONTRACTOR SHALL BE AWARE OF SNOW FENCING PRESENT ON CENTER SPANS

PROJECT NOTES

PROJECT NAME: WINDSOR-HARTFORD	
PROJECT NUMBER: IM BPNT (13)	
FILE NAME: z525457det.dgn	PLOT DATE: 25-JUNE-2015
PROJECT LEADER: G.K.DONINGTON	DRAWN BY: S.BROWN
DESIGNED BY: S.BROWN	CHECKED BY: R.GAUDREAU
det.dgn	SHEET 2 OF 36

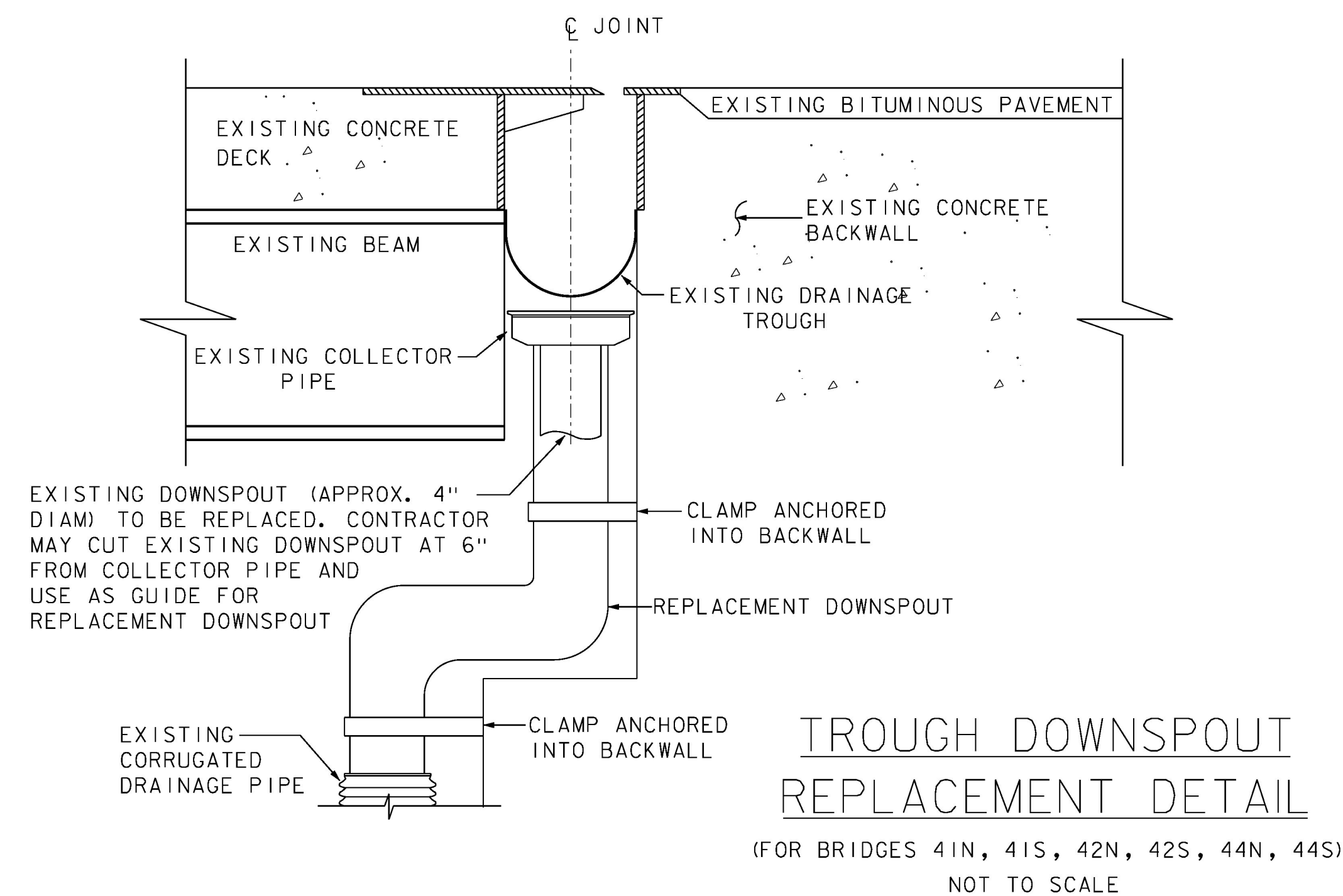




DRAIN TUBE EXTENSION DETAIL
NOT TO SCALE

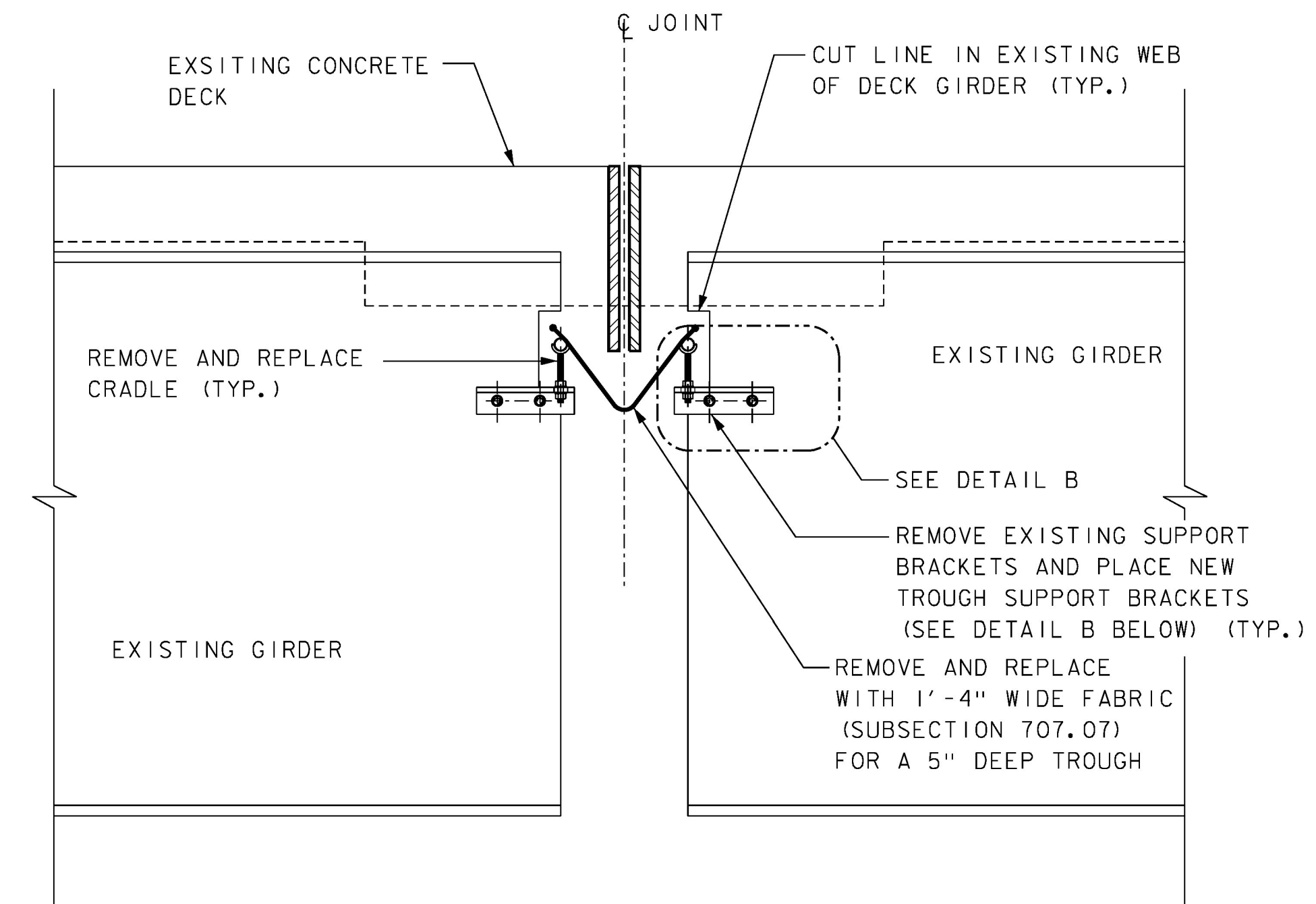
DRAINAGE TUBE EXTENSION NOTE:

1. IF EXISTING DRAIN TUBE IS TOO SHORT TO PROVIDE ADEQUATE CONNECTION, THE CONTRACTOR SHALL COMPLETELY FILL THE TUBE WITH POLYURETHANE SEALANT CONFORMING TO SUBSECTION 707.05. TUBES TO BE FILLED WITH POLYURETHANE SEALANT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING FILLED.

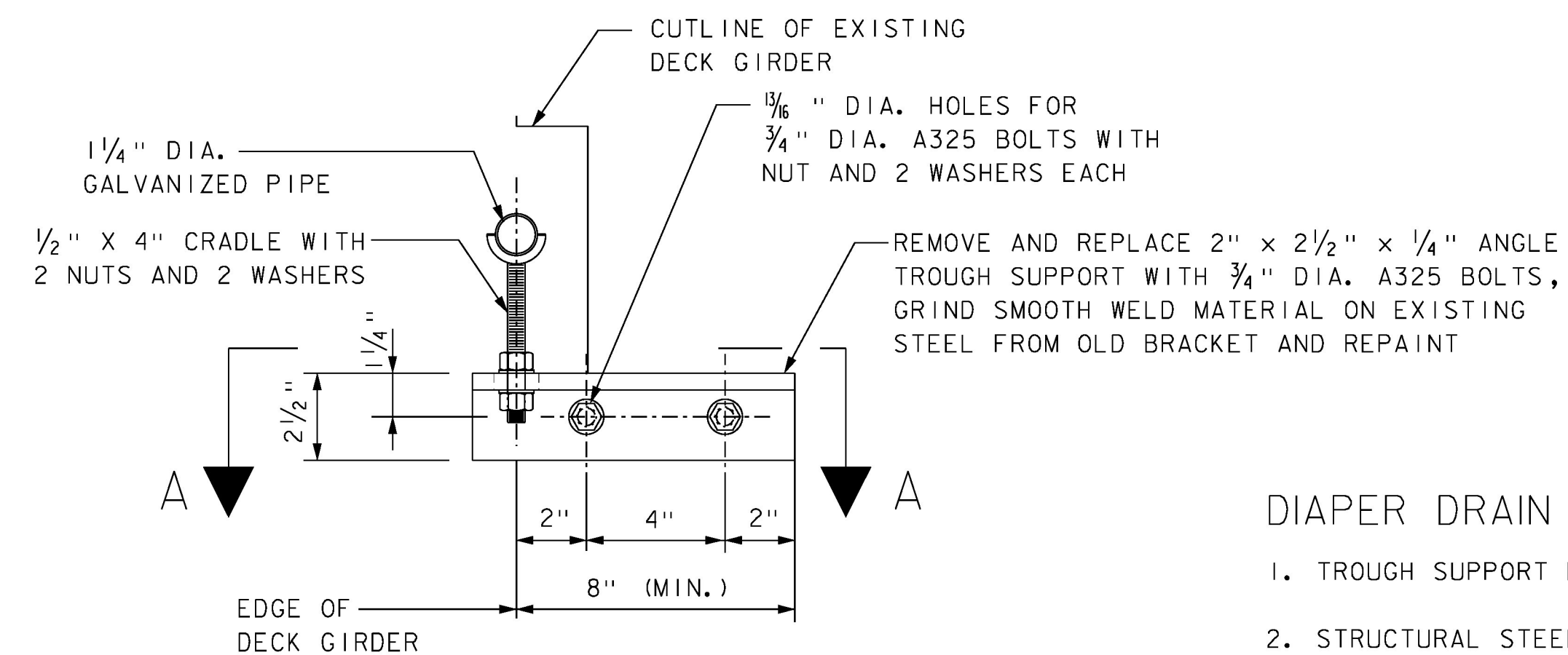


TROUGH DOWNSPOUT NOTES:

1. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED.
2. REPLACEMENT DOWNSPOUT SHALL BE CONNECTED TO DRAINAGE TROUGH AS DIRECTED BY THE ENGINEER.
3. THE DRAINAGE PIPES, TAP SCREWS, CUTTING OF THE EXISTING STRUCTURAL STEEL AS REQUIRED, REMOVAL AND DISPOSAL OF THE EXISTING DOWNSPOUT, AND RELATED HARDWARE WILL BE PAID UNDER ITEM 506.75, STRUCTURAL STEEL.
4. THESE DETAILS ARE ILLUSTRATED AS AN EXAMPLE. CONTRACTOR TO SUBMIT FABRICATION DRAWINGS FOR APPROVAL.

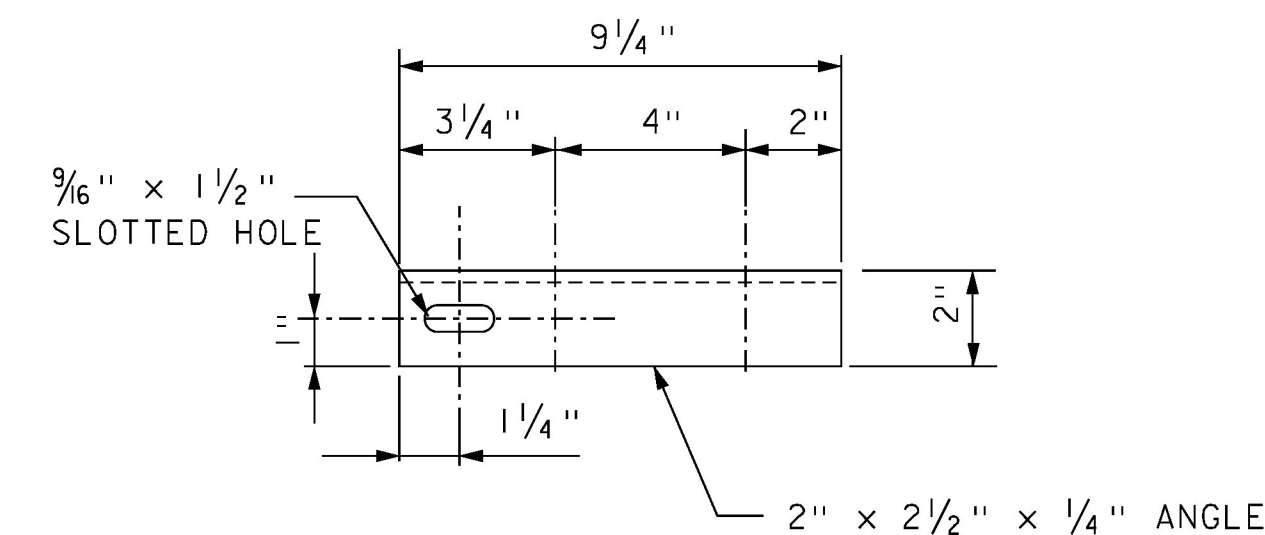


TYPICAL SECTION AT EXISTING DIAPER DRAIN
SCALE: 1" = 1'-0"



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

DIAPER DRAIN REPAIR DETAILS



TROUGH SUPPORT BRACKET DETAIL A-A

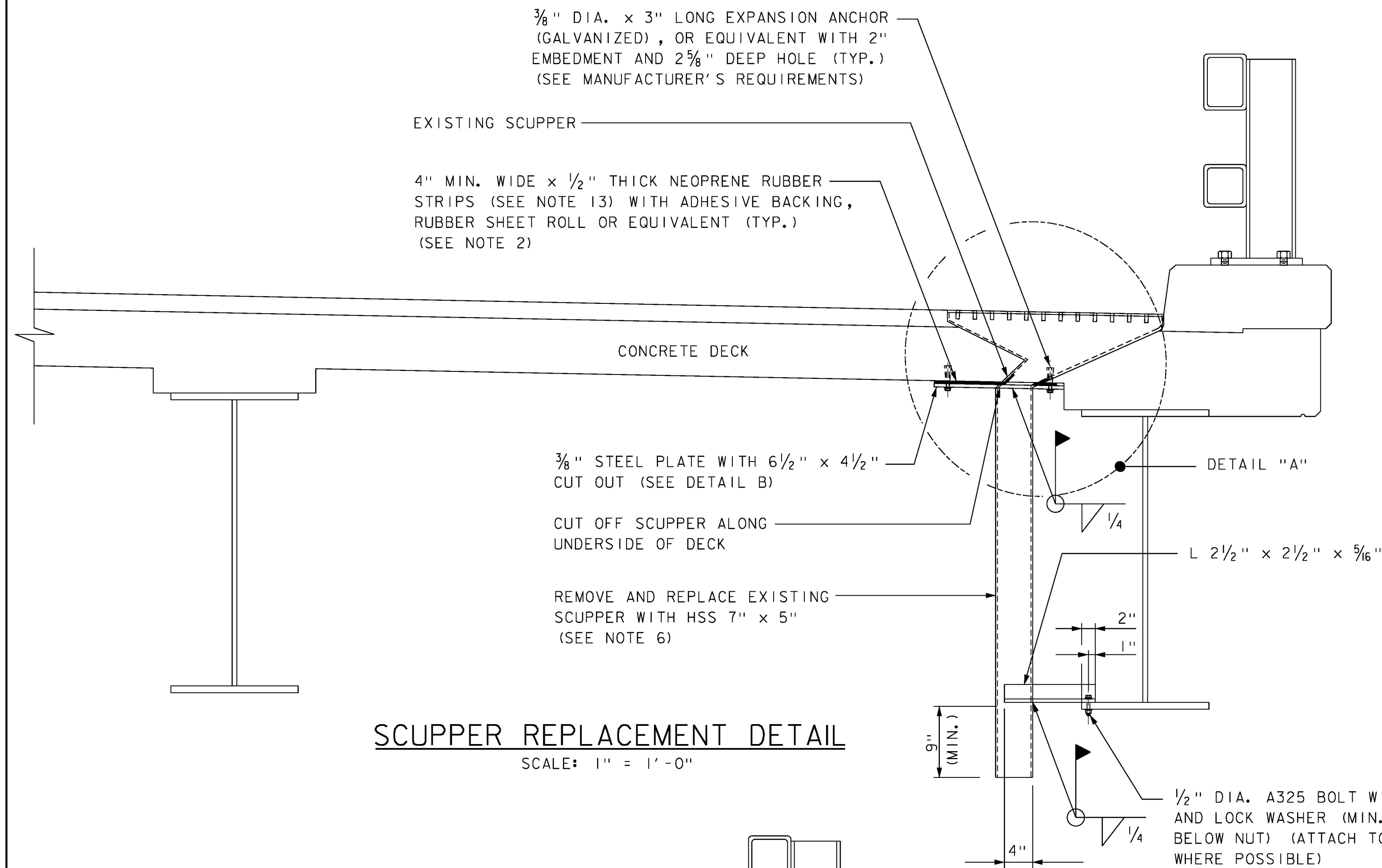
PLAN VIEW
SCALE: 3" = 1'-0"

DIAPER DRAIN REPAIR NOTES:

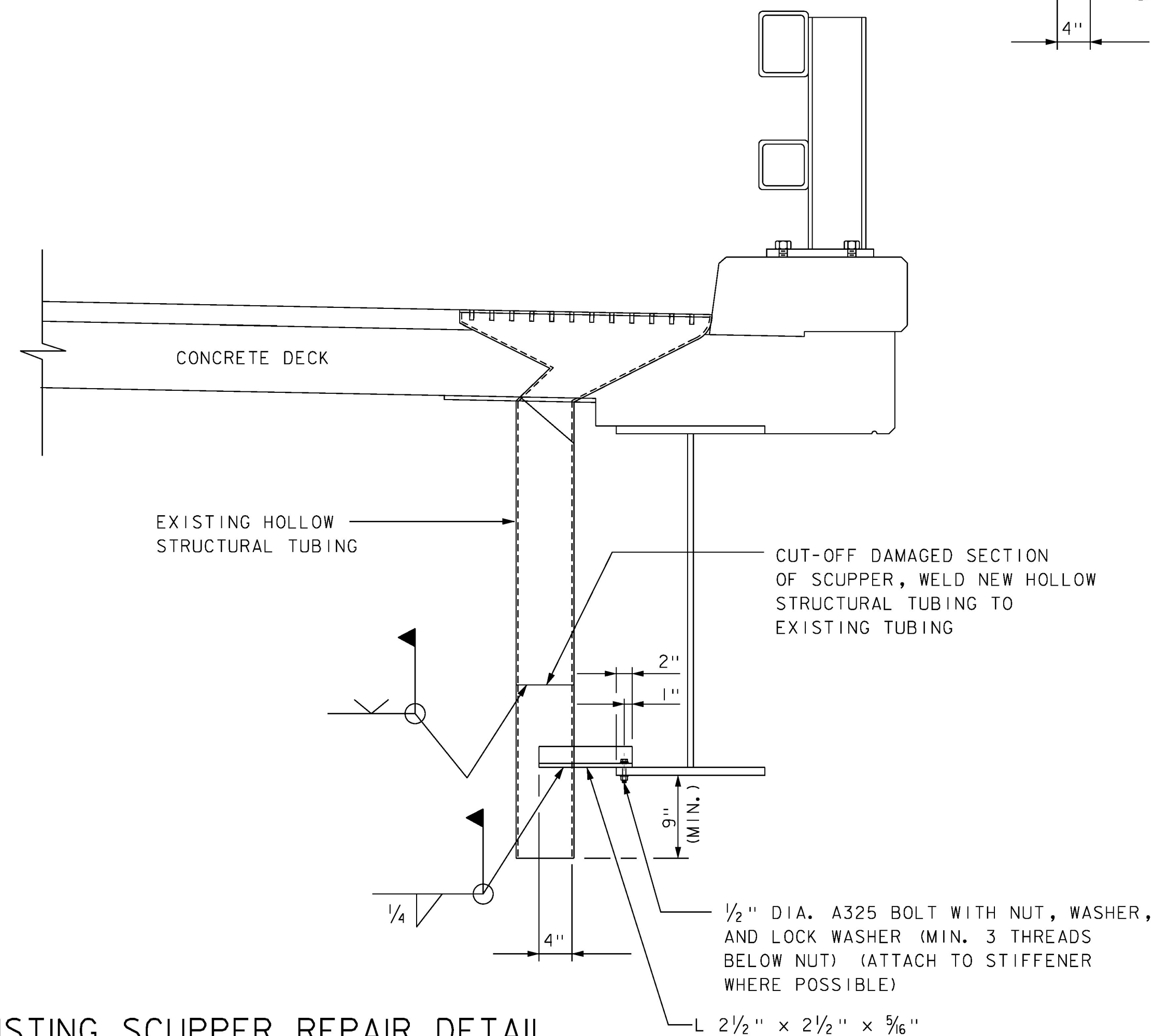
1. TROUGH SUPPORT BRACKETS SHALL NOT BE WELDED TO GIRDER WEB.
2. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM-500 OR ASTM-501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION. ALL PLATES, CRADLES, BARS AND ANGLES SHALL CONFORM TO ASTM A-36 AND SHALL ALSO BE GALVANIZED IN ACCORDANCE WITH ASTM-123 AFTER FABRICATION.
3. THE 1 1/4" (NOMINAL DIAMETER) GALVANIZED STEEL PIPE, PREFORMED FABRIC MATERIAL, CRADLES AND RELATED HARDWARE, TAP SCREWS, CUTTING OF THE EXISTING STRUCTURAL STEEL AS REQUIRED, REMOVAL AND DISPOSAL OF THE EXISTING DRAIN TROUGH SYSTEM AND FLUSHING OF ALL PIER CAPS TO BE PAID UNDER ITEM 506.75, STRUCTURAL STEEL.
4. THESE DETAILS ARE ILLUSTRATED AS AN EXAMPLE. CONTRACTOR TO SUBMIT FABRICATION DRAWINGS FOR APPROVAL.

PROJECT STANDARD DETAILS SHEET (1)

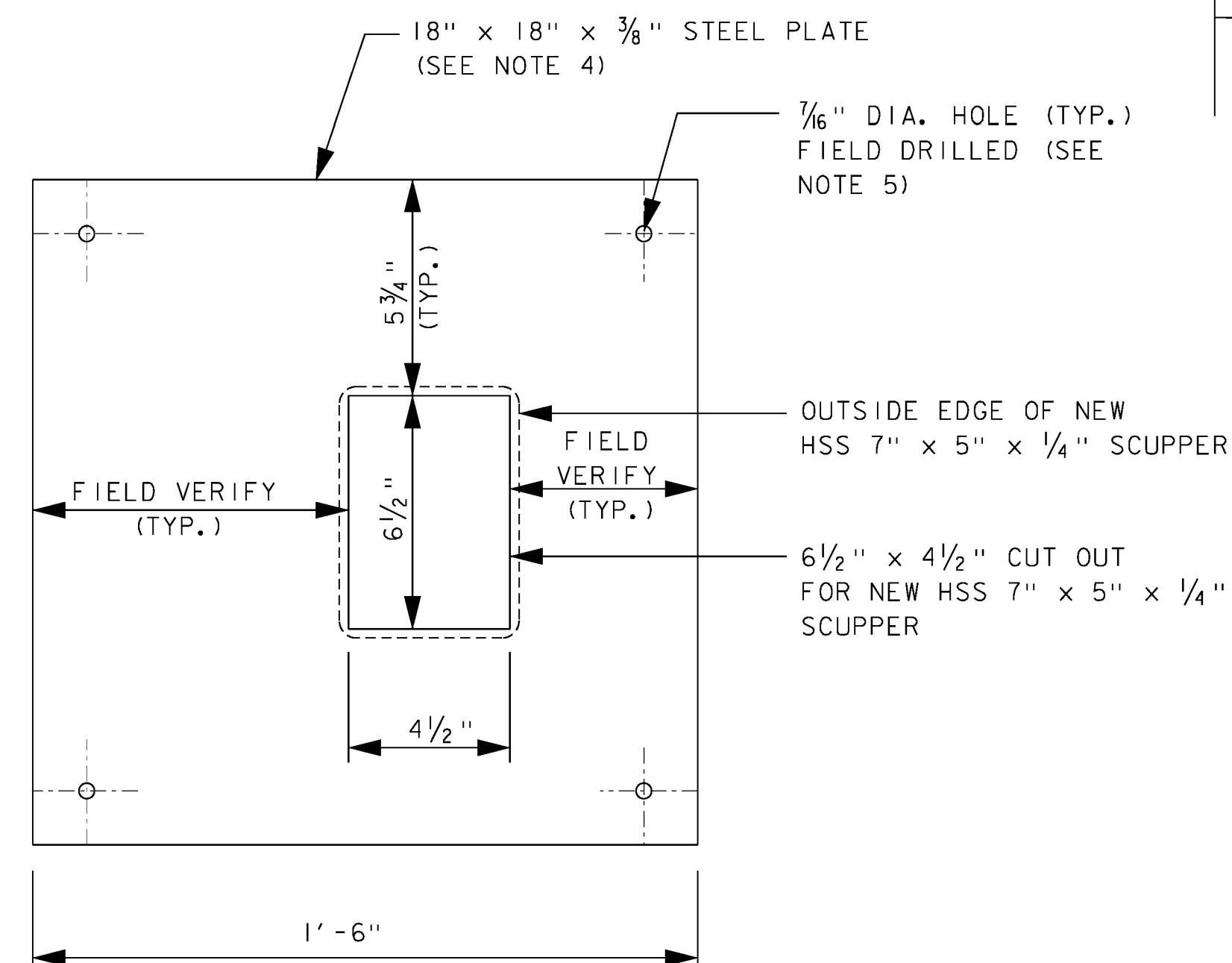
PROJECT NAME: WINDSOR-HARTFORD	
PROJECT NUMBER: IM BPNT (I3)	
FILE NAME: z525457det_2.dgn	PLOT DATE: 25-JUNE-2015
PROJECT LEADER: G.K.DONINGTON	DRAWN BY: S.BROWN
DESIGNED BY: S.BROWN	CHECKED BY: R.GAUDREAU
det2.dgn	SHEET 3 OF 36



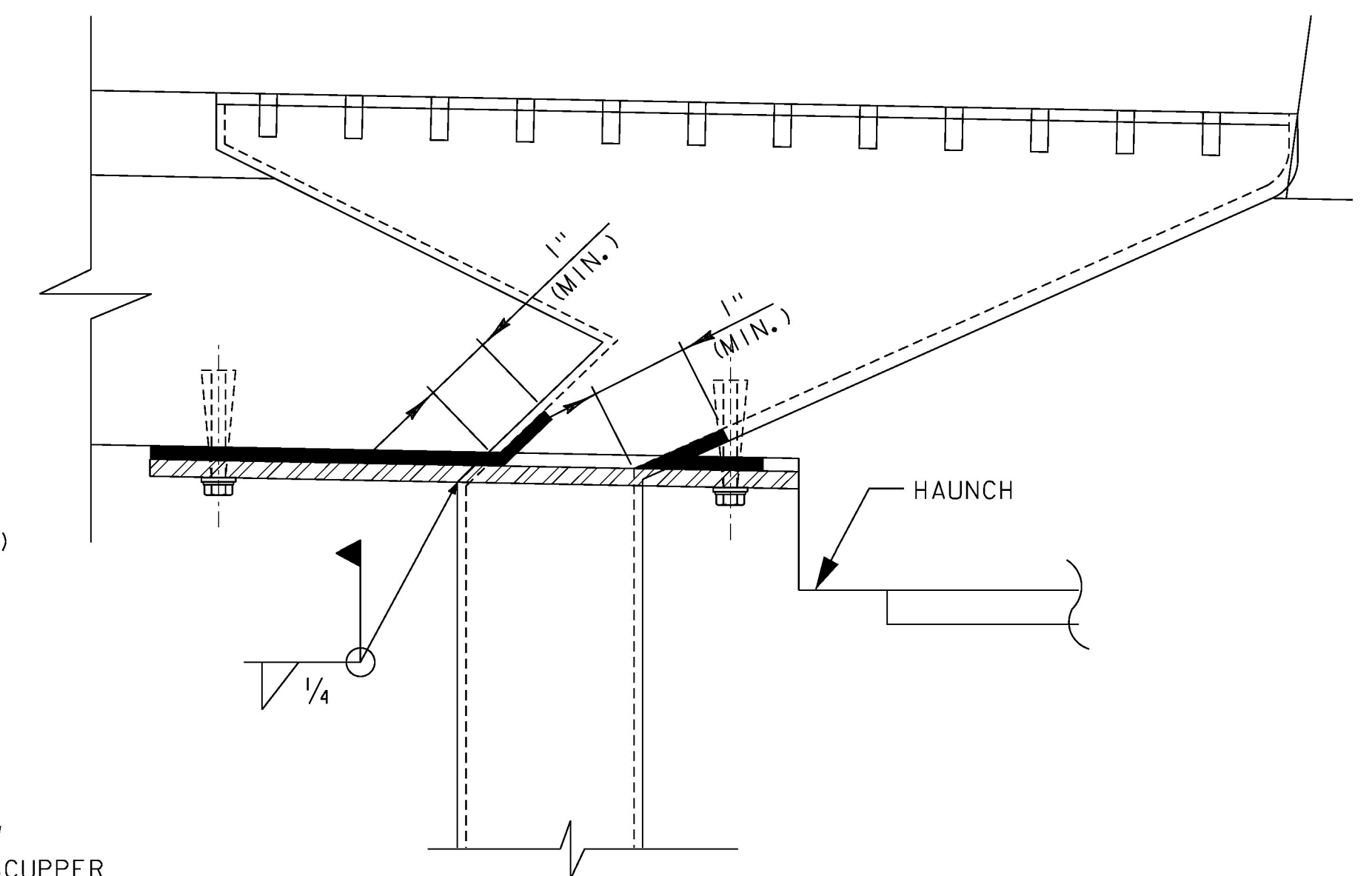
SCUPPER REPLACEMENT DETAIL
SCALE: 1" = 1'-0"



EXISTING SCUPPER REPAIR DETAIL
SCALE: 1" = 1'-0"



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



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

NOTES:

1. ALL THE DETERIORATED SCUPPERS WITH SIGNIFICANT LOSS OF SECTION SHALL BE CUT OFF ABOVE THE DETERIORATION AREA. IF THE DETERIORATION EXTENDS TO THE UNDERSIDE OF THE DECK, THE SCUPPER SHALL BE CUT OFF AND REPLACED. THE ENGINEER SHALL APPROVE THE EXTENT OF THE REPAIR FOR EACH DETERIORATED SCUPPER IDENTIFIED BY THE CONTRACTOR PRIOR TO BEING REPAIRED OR REPLACED.
2. ADHESIVE SIDE OF NEOPRENE SHALL BE PLACED ON THE UNDERSIDE OF CONCRETE DECK AND INTERIOR OF EXISTING SCUPPER AROUND PERIMETER OF DRAIN. NEOPRENE SHALL COVER ENTIRE SURFACE OF THE STEEL PLATE AND SHALL EXTEND CONTINUOUSLY FOR A MINIMUM OF 1" UP INTO THE INTERIOR OF THE EXISTING SCUPPER DRAIN.
3. ALL EXISTING DIMENSIONS AND SCUPPER SIZES SHALL BE FIELD VERIFIED.
4. PLATE SHALL BE CUT IN THE FIELD TO ACCOMMODATE HAUNCH.
5. BOLT HOLES SHALL BE FIELD DRILLED AND SHALL HAVE A MINIMUM EDGE DISTANCE OF 1 1/2" EXCEPT WHERE NOTED OTHERWISE.
6. ALL NEW STEEL SHALL BE ZINC PRIMED AND COATED THE SAME NEPCOAT SYSTEM AND COLOR AS THE MAIN MEMBERS. COATING IS ONLY REQUIRED ON THE EXTERNAL SURFACE OF THE SCUPPER DOWNSPOUT.
7. ALL WELDING SHALL CONFORM WITH THE PROVISIONS OF SUBSECTION 506.10.
8. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A-500 GRADE C.
9. STEEL PLATES AND ANGLES SHALL CONFORM TO AASHTO M270, GRADE 50 (ASTM A709, GRADE 50).
10. HIGH STRENGTH BOLTS, NUTS AND CIRCULAR WASHERS SHALL CONFORM TO SUBSECTION 714.05.
11. ALL WORK TO BE PAID UNDER ITEM 506.75, STRUCTURAL STEEL.
12. THESE DETAILS ARE ILLUSTRATED AS AN EXAMPLE. CONTRACTOR TO SUBMIT FABRICATION DRAWINGS FOR APPROVAL.
13. NEOPRENE RUBBER GASKET SHALL BE CLOSED CELL, DUROMETER HARDNESS SHORE A OF 40 TO 60, TYPE EA-WATER RESISTANT, AND EF-FUEL RESISTANT.

PROJECT STANDARD DETAILS SHEET (2)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (I3)

FILE NAME: z525457det_3.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
det+3.dgn

PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: R.GAUDREAU
SHEET 4 OF 36

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
			ROADWAY	EROSION CONTROL	BRIDGE NO. 34N	BRIDGE NO. 41N	BRIDGE NO. 42N	BRIDGE NO. 44N	BRIDGE NO. 45N	BRIDGE NO. 41C	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						58				15	73		CY	COMMON EXCAVATION	203.15				
						58				15	73		CY	EARTH BORROW	203.30				
					1	1	1	1	1	1	6		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
					1						1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 34N)	506.75				
										1	1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 41C)	506.75				
						1					1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 41N)	506.75				
							1				1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 42N)	506.75				
								1			1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 44N)	506.75				
									1		1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 45N)	506.75				
					120	120	120	120	120	120	720		HR	TRUCK-MOUNTED ATTENUATOR	608.45				
						1					1		EACH	ENERGY ABSORPTION ATTENUATOR	621.56				
					321	400	2704	1935	340	2704	8404		LF	TEMPORARY TRAFFIC BARRIER	621.90				
					300	300	300	800	300	300	2300		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
					300	300	300	800	300	300	2300		HR	FLAGGERS	630.15				
			1								1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
					1						1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 34N)	641.10				
										1	1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 41C)	641.10				
						1					1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 41N)	641.10				
							1				1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 42N)	641.10				
								1			1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 44N)	641.10				
									1		1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 45N)	641.10				
					30	30	30	60	30	30	210		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
					721	375	3079	340	340	3079	7934		LF	6 INCH WHITE LINE	646.214				
					1442	750	6158	680	680	6158	15868		LF	TEMPORARY 6 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6211				
					1442	750	6158	680	680	6158	15868		LF	TEMPORARY 6 IN YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6311				
							350			400	750		LF	TEMPORARY 12 IN WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6611				
							16			16	32		LF	TEMPORARY 24 INCH STOP BAR, TEMPORARY PAVEMENT MARKING TAPE	646.6811				
					200	375	200	200	200	1200	2375		SF	PAVEMENT MARKING MASK	646.86				
				1100							1100		SY	GEOTEXTILE FOR SILT FENCE	649.51				
						20				10	30		LB	SEED	651.15				
						10					5		LB	FERTILIZER	651.18				
						0.1				0.1	0.2		TON	AGRICULTURAL LIMESTONE	651.20				
						0.1				0.1	0.2		TON	HAY MULCH	651.25				
				2200							2200		SY	TEMPORARY EROSION MATTING	653.20				
			5								5		EACH	SPECIAL PROVISION (CPM SCHEDULE)	900.620				
					1						1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(Ø1-BR. NO. 34N)	900.645				
										1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(Ø1-BR. NO. 41C)	900.645				
						1					1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(Ø1-BR. NO. 41N)	900.645				

△ REVISED QUANTITY SHEET TO REMOVE ITEM 634.10 - 10/6/2015



PROJECT NAME: WINDSOR - HARTFORD
PROJECT NUMBER: IM BPNT (I3)

FILE NAME: z525457qs.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
qs-1.dgn

PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: R.GAUDREAU
SHEET 5 OF 36

QUANTITY SHEET 2

[illegible]

PROJECT NAME:	WINDSOR - HARTFORD
PROJECT NUMBER:	IM BPNT (13)

FILE NAME: z525457qs.dgn	PLOT DATE: 25-JUNE-2015
PROJECT LEADER: G.K.DONINGTON	DRAWN BY: S.BROWN
DESIGNED BY: S.BROWN	CHECKED BY: R.GAUDREAU
qs_2.dgn	SHEET 6 OF 36



QUANTITY SHEET 3

SUMMARY OF ESTIMATED QUANTITIES											TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
					FULL C.E. ITEMS	BRIDGE NO. 34S	BRIDGE NO. 41S	BRIDGE NO. 42S	BRIDGE NO. 44S	BRIDGE NO. 45S	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
							58				58		CY	COMMON EXCAVATION	203.15				
							58				58		CY	EARTH BORROW	203.30				
						1	1	1	1	1	5		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
						1					1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 34S)	506.75				
							1				1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 41S)	506.75				
								1			1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 42S)	506.75				
									1		1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 44S)	506.75				
										1	1		LS	STRUCTURAL STEEL (I-91 - BRIDGE NO. 45S)	506.75				
						120	120	120	120	120	600		HR	TRUCK-MOUNTED ATTENUATOR	608.45				
							1				1		EACH	ENERGY ABSORPTION ATTENUATOR	621.56				
						321	400	2704	1935	340	5700		LF	TEMPORARY TRAFFIC BARRIER	621.90				
						300	300	300	800	300	2000		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
						300	300	300	800	300	2000		HR	FLAGGERS	630.15				
					1						1		LS	FIELD OFFICE, ENGINEERS	631.10				
					1						1		LS	TESTING EQUIPMENT, PROTECTIVE COATINGS	631.18				
					3000						3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
						1					1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 34S)	641.10				
							1				1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 41S)	641.10				
								1			1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 42S)	641.10				
									1		1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 44S)	641.10				
										1	1		LS	TRAFFIC CONTROL (I-91 - BRIDGE NO. 45S)	641.10				
						30	30	30	60	30	180		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
						721		3079	340	340	4480		LF	6 INCH WHITE LINE	646.214				
						1442		6158	680	680	8960		LF	TEMPORARY 6 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6211				
						1442		6158	680	680	8960		LF	TEMPORARY 6 IN YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6311				
								350			350		LF	TEMPORARY 12 IN WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6611				
								16			16		LF	TEMPORARY 24 INCH STOP BAR, TEMPORARY PAVEMENT MARKING TAPE	646.6811				
						200	375	200	200	200	1175		SF	PAVEMENT MARKING MASK	646.86				
							20				20		LB	SEED	651.15				
							10				10		LB	FERTILIZER	651.18				
							0.1				0.1		TON	AGRICULTURAL LIMESTONE	651.20				
							0.1				0.1		TON	HAY MULCH	651.25				
						1					1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I91-BR. NO. 34S)	900.645				
							1				1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I91-BR. NO. 41S)	900.645				
								1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I91-BR. NO. 42S)	900.645				
									1		1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I91-BR. NO. 44S)	900.645				
										1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(I91-BR. NO. 45S)	900.645				

PROJECT NAME: WINDSOR - HARTFORD
PROJECT NUMBER: IM BPNT (I3)



FILE NAME: z525457qs.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
qs_3.dgn

PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: R.GAUDREAU
SHEET 7 OF 36

QUANTITY SHEET 4

[illegible]

PROJECT NAME: WINDSOR - HARTFORD	
PROJECT NUMBER: IM BPNT (13)	
FILE NAME: z525457qs.dgn	PLOT DATE: 25-JUNE-2015
PROJECT LEADER: G.K.DONNINGTON	DRAWN BY: S.BROWN
DESIGNED BY: S.BROWN	CHECKED BY: R.GAUDREAU
qs_4.dgn	SHEET 8 OF 36



TRAFFIC CONTROL NOTES - I-91 & I-89:

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 41N, 41S, 41C, 42N, 42S, 44N, AND 44S TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING NECESSARY REVISIONS TO THE PLAN, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 - TRAFFIC CONTROL. THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLAN. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN.
2. THE SPEED LIMIT WILL BE REDUCED TO 10 MPH LESS THAN THE POSTED SPEED LIMIT IN THE WORK ZONE FOR THIS PROJECT UNLESS OTHERWISE SHOWN. ANY EXISTING SPEED LIMIT SIGNS WITHIN THE SPEED REDUCTION AREA SHALL BE COMPLETELY COVERED.
3. CONSTRUCTION SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS.
4. TRAFFIC CONTROL DEVICES NOT DETAILED IN THE VERMONT AGENCY OF TRANSPORTATION (VAT) "STANDARD DRAWINGS" OR THE PROJECT PLANS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE "STANDARD HIGHWAY SIGNS AND MARKINGS" BOOK (SHSM) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
5. SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J TYPE VIII OR IX UNLESS OTHERWISE NOTED.
6. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING THE "AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS" (AASHTO) M 268 "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM) D 4956J . TYPE VI UNLESS OTHERWISE NOTED.
7. CONSTRUCTION SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER.
8. CONSTRUCTION SIGN COVERS SHALL CONSIST OF A PANEL, PAINTED FLAT BLACK, THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE MADE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.
9. SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION SATISFACTORY TO THE ENGINEER. THEY SHALL BE KEPT PLUMB AND LEVEL, AND ALWAYS PRESENT A NEAT APPEARANCE. DAMAGED, DEFACED OR DIRTY SIGNS SHALL BE REPAIRED, CLEANED OR REPLACED AS ORDERED BY THE ENGINEER.
10. NO CROSS-BRACING OR BACK-BRACING TO KEEP POSTS PLUMB WILL BE ALLOWED. CONCRETE FOUNDATIONS, COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED. CONSTRUCTION SIGNS SHALL BE PLACED ON TWO POSTS.
11. CONSTRUCTION SIGNS INSTALLED ON POSTS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST FIVE FEET ABOVE THE EDGE OF PAVEMENT AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT, FOUR FEET OUTSIDE THE GUARDRAIL, OR TWO FEET OUTSIDE THE CURBING OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE SIDEWALK OR EDGE OF PAVEMENT, WHICHEVER IS HIGHER.
12. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND A MINIMUM OF ONE FOOT ABOVE THE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND THE GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
13. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
14. WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL MEET "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 OR THE AASHTO "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH). THE APPROPRIATE RESOURCE SHALL BE DETERMINED AS DESCRIBED IN THE MASH PUBLICATION. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POSTS. WHEN ANCHORS ARE INSTALLED, STUBS SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.

NOTES CONTINUED ON TRAFFIC CONTROL SHEET (2).

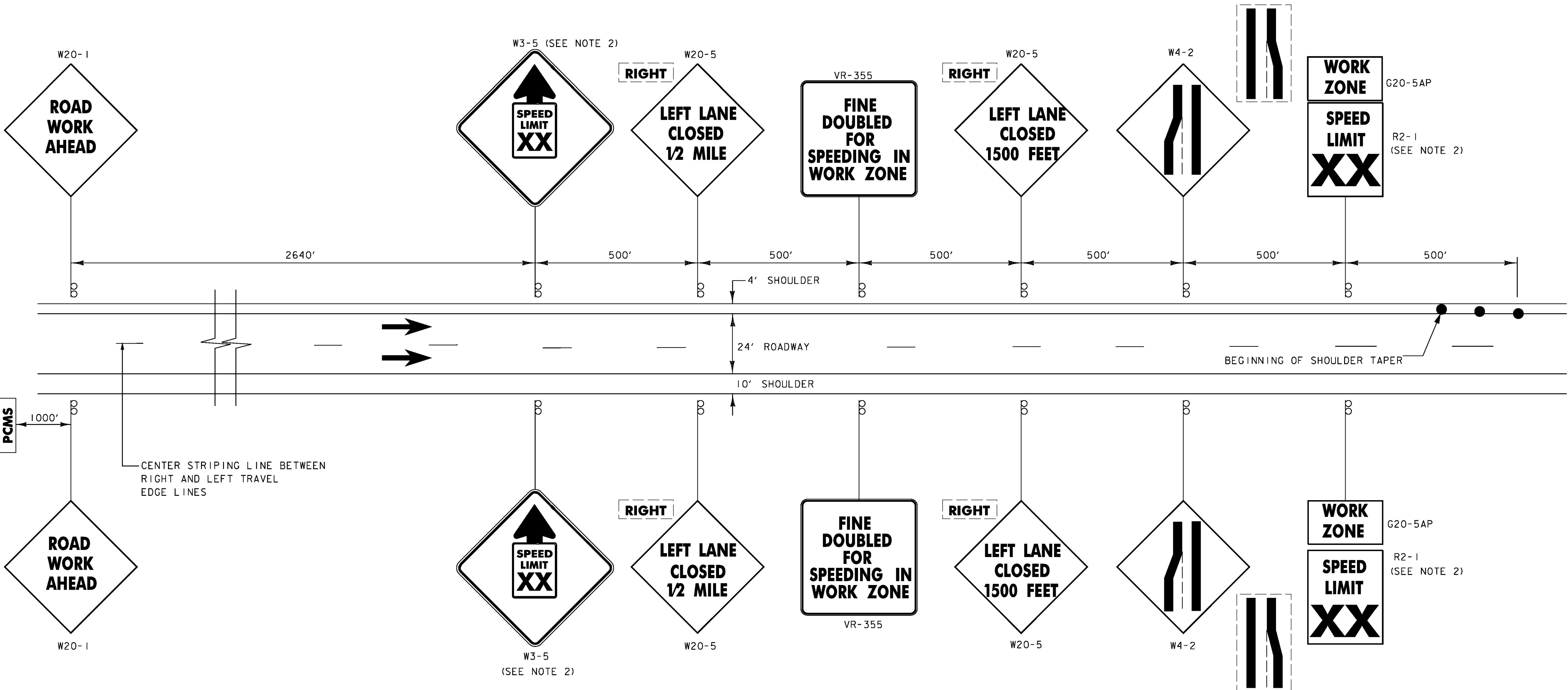
TRAFFIC CONTROL SHEET (1)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (13)

FILE NAME: z525457tc1.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
tcl.dgn

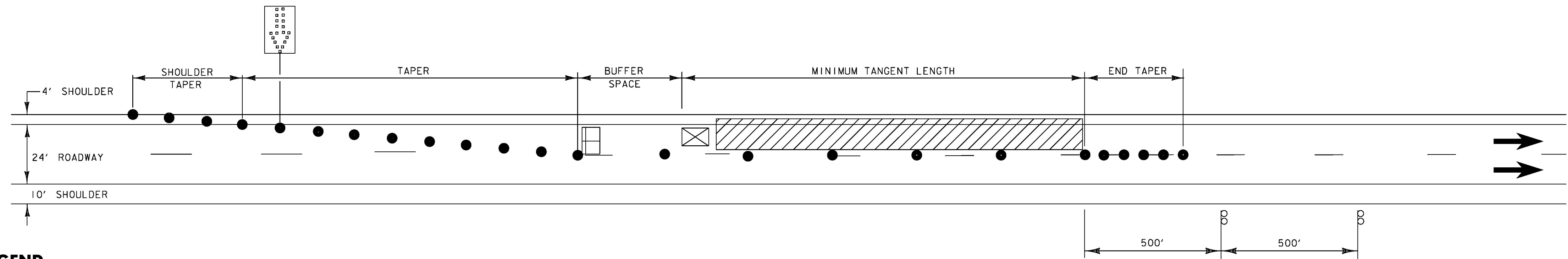
PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET 9 OF 36

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



CONSTRUCTION APPROACH SIGNING ON I-91 AND I-89, LEFT LANE CLOSED

NOT TO SCALE



LEGEND

- - FLOW OF TRAFFIC
- ▨ - WORK AREA
- - REFLECTORIZED PLASTIC DRUM
- - TYPE III BARRICADE
- ⊠ - TRUCK/TRAILER MOUNTED ATTENUATOR (ATTENUATOR OPTIONAL)
- ⬢ - FLASHING ARROW PANEL
- PCMS - PORTABLE CHANGEABLE MESSAGE SIGN
- ▭ - TEMPORARY CONCRETE BARRIER

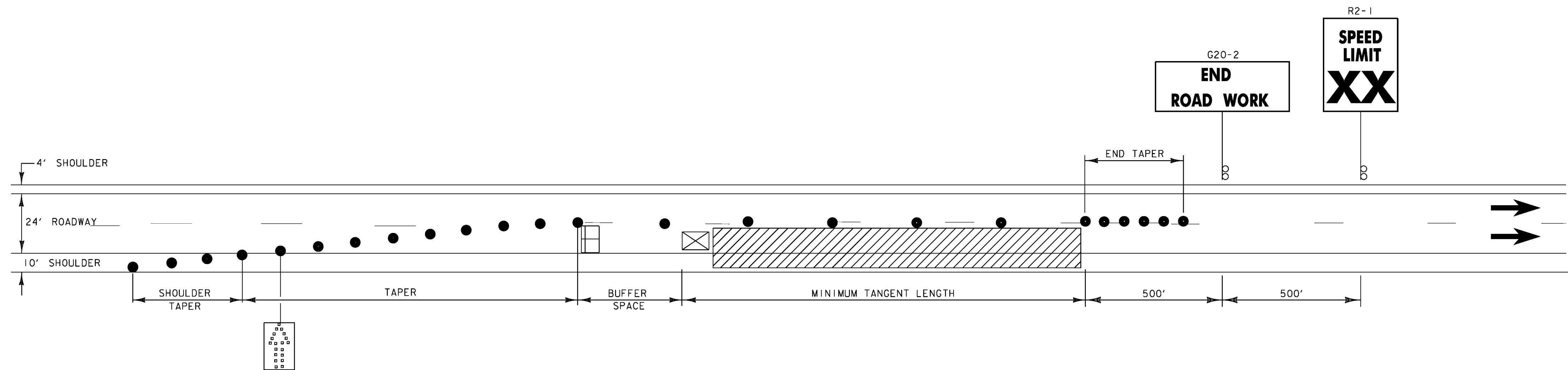
TRAFFIC CONTROL ON I-91 AND I-89, LEFT LANE CLOSED

NOT TO SCALE

POSTED SPEED LIMIT	TAPER LENGTHS (FT)		TANGENT W= 12 FT (L/2)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W= 10 FT	MERGING 12 FT LANE			TAPER	TANGENT
40	90	320	160	305	40	80
45	150	540	270	360	45	90
50	170	600	300	425	50	100
55	185	660	330	495	55	110
60	200	720	360	570	60	120
65	215	780	390	645	65	130

TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:
L = WS FOR POSTED SPEEDS OF 45 MPH OR GREATER
L = WS²/60 FOR POSTED SPEEDS OF 40 MPH OR LESS

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED IN MPH

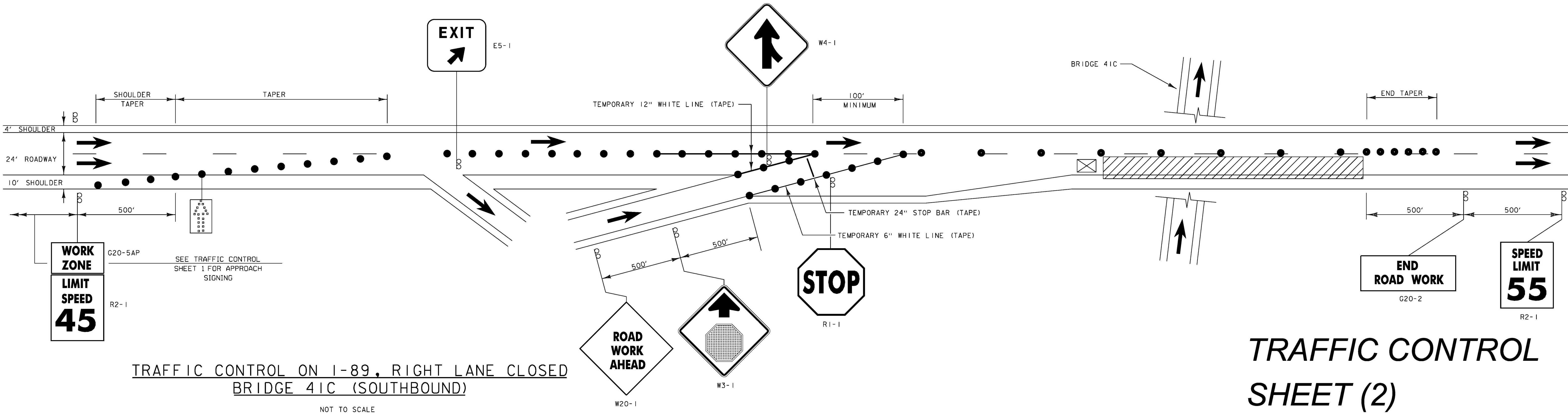


TRAFFIC CONTROL ON I-91 AND I-89, RIGHT LANE CLOSED

NOT TO SCALE
SEE TRAFFIC CONTROL SHEET 1 FOR SIGNING

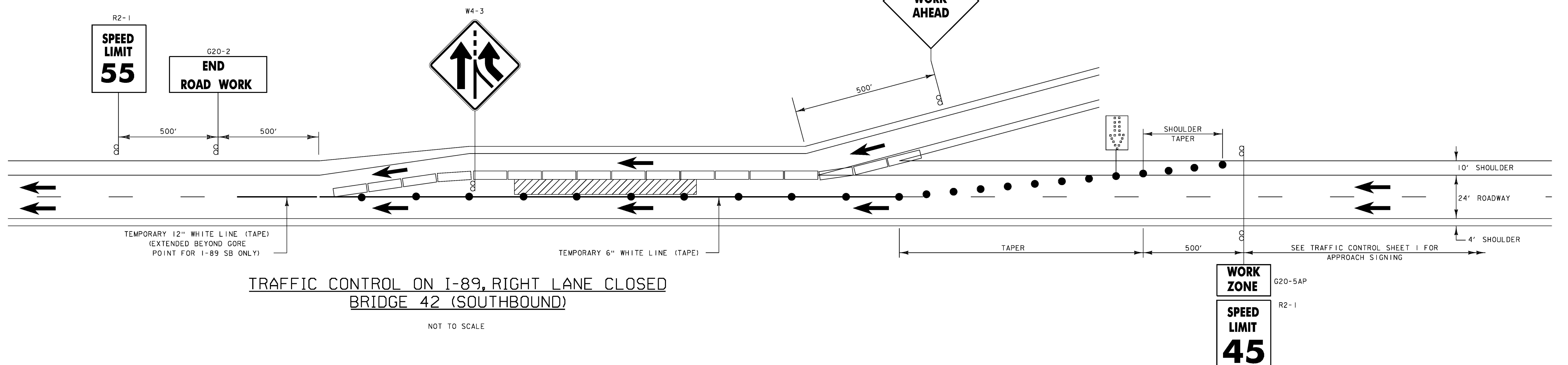
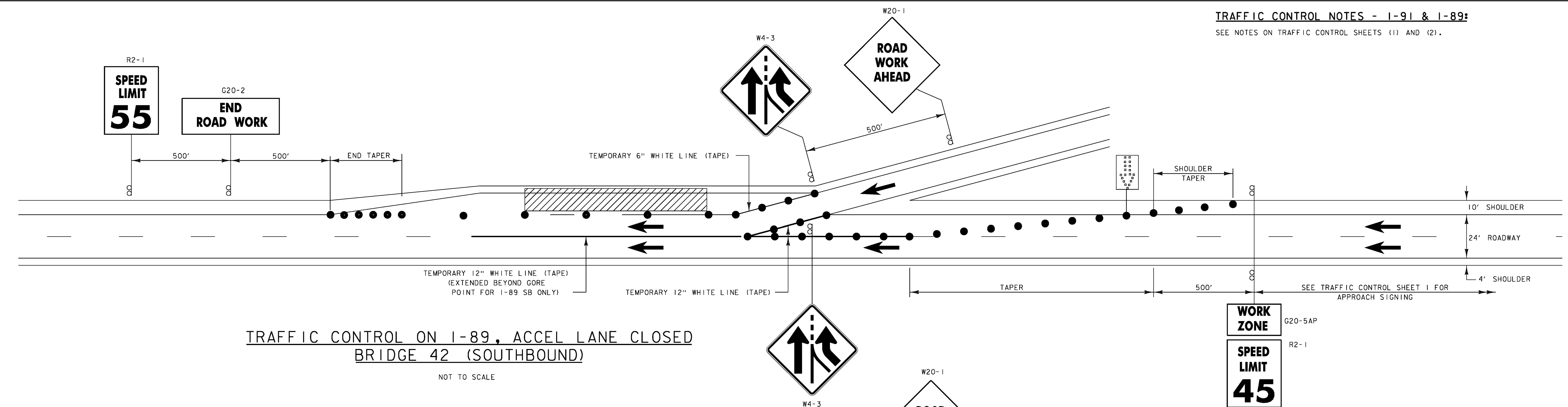
TRAFFIC CONTROL NOTES - I-91 & I-89:

- NOTES CONTINUED FROM TRAFFIC CONTROL SHEET (1):
15. THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF LEFT OR RIGHT LANES INSTALLED BEFORE WORK COMMENCES.
 16. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE ETC.). WARNING LIGHTS SHALL NOT BE USED ON CHANNELIZING DEVICES.
 17. PLACE LAST CHANNELIZING DEVICE 100 FEET BEYOND THE ANTICIPATED WORK ZONE TERMINAL POINT EACH DAY AND START THE END TAPER. THE END TAPER SHALL BE CONSTRUCTED OF 5 ADDITIONAL RETROREFLECTIVE DRUMS SPACED AT 10 FEET ON CENTER.
 18. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED FOR I-91 & I-89 LANE CLOSURES AND AT THE DISCRETION OF THE ENGINEER FOR LANE CLOSURES ON OTHER ROADWAYS.
 19. TRAVEL LANES SHALL BE A MINIMUM OF 12 FEET WIDE ON I-91 & I-89.
 20. AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE OF I-91 OR I-89 WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER.
THE CLEAR ZONE IS DEFINED AS FOLLOWS:
I-91 - 34 FEET FROM THE EDGE OF TRAVELED WAY
I-89 - 34 FEET FROM THE EDGE OF TRAVELED WAY
 21. THE CONTRACTOR SHALL BE COGNIZANT OF ACTIVE RAILROAD TRACKS BENEATH BRIDGES 44N & 44S.
 22. THE ARROW BOARD SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, OR IF PRACTICAL, FURTHER FROM THE TRAVELED LANE AT THE END OF THE SHOULDER TAPER.
 23. BRIDGE 41C, I-89 NORTHBOUND AND SOUTHBOUND RIGHT LANE CLOSED: MERGE TRAFFIC INTO LEFT LANE BEFORE THE EXIT RAMP. PROVIDE A GAP IN THE REFLECTORIZED PLASTIC DRUMS SO THAT VEHICLES MAY EXIT I-89.
 24. SPACING OF CONSTRUCTION APPROACH SIGNS ON BRIDGE 44S SHOULD BE EXTENDED AROUND THE HORIZONTAL CURVE AS NECESSARY TO PROVIDE ADEQUATE SIGHT DISTANCE OF APPROACH SIGNAGE.
 25. SEE TRAFFIC CONTROL SHEET (1) FOR LEGEND, TAPER RATES, AND DEVICE SPACING TABLE.



TRAFFIC CONTROL
SHEET (2)

PROJECT NAME:	WINDSOR-HARTFORD
PROJECT NUMBER:	IM BPNT (13)
FILE NAME:	z525457tc_2.dgn
PROJECT LEADER:	G.K.DONINGTON
DESIGNED BY:	S.BROWN
tc2.dgn	
PLOT DATE:	25-JUNE-2015
DRAWN BY:	S.BROWN
CHECKED BY:	J.KHERA
SHEET 10	OF 36



TRAFFIC CONTROL SHEET (3)

PROJECT NAME:	WINDSOR-HARTFORD
PROJECT NUMBER:	IM BPNT (13)

FILE NAME: z525457+c_3.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
+c3.dgn

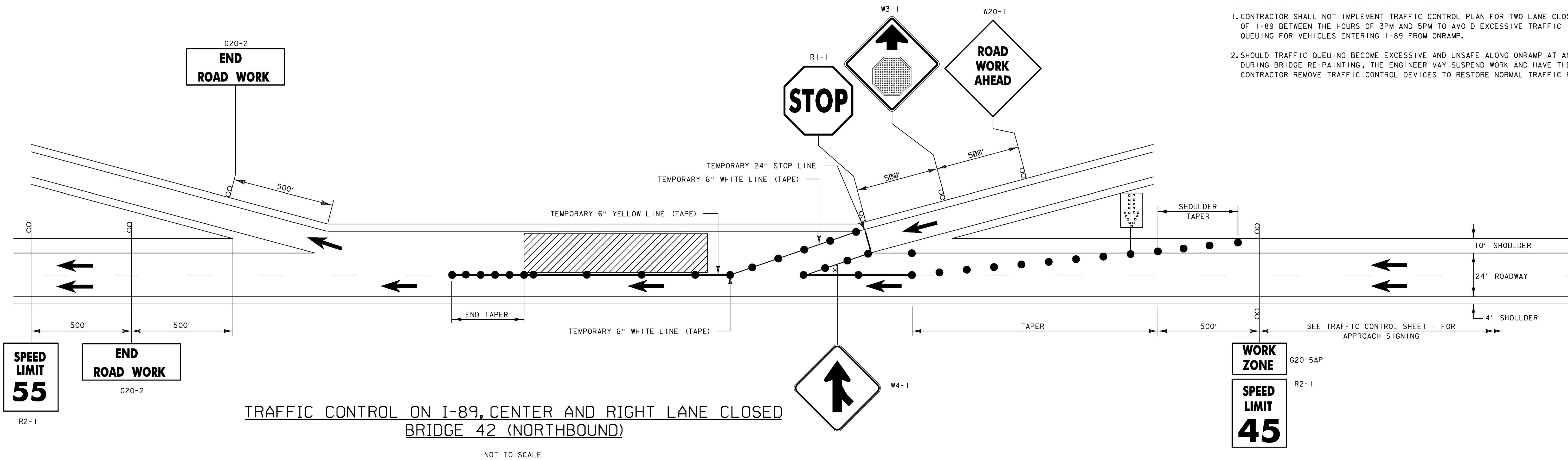
PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET II OF 36



TRAFFIC CONTROL NOTES - I-91 & I-89:

SEE NOTES ON TRAFFIC CONTROL SHEETS (1) AND (2).

1. CONTRACTOR SHALL NOT IMPLEMENT TRAFFIC CONTROL PLAN FOR TWO LANE CLOSURE OF I-89 BETWEEN THE HOURS OF 3PM AND 5PM TO AVOID EXCESSIVE TRAFFIC QUEUING FOR VEHICLES ENTERING I-89 FROM ONRAMP.
2. SHOULD TRAFFIC QUEUING BECOME EXCESSIVE AND UNSAFE ALONG ONRAMP AT ANY TIME DURING BRIDGE RE-PAINTING, THE ENGINEER MAY SUSPEND WORK AND HAVE THE CONTRACTOR REMOVE TRAFFIC CONTROL DEVICES TO RESTORE NORMAL TRAFFIC FLOW.



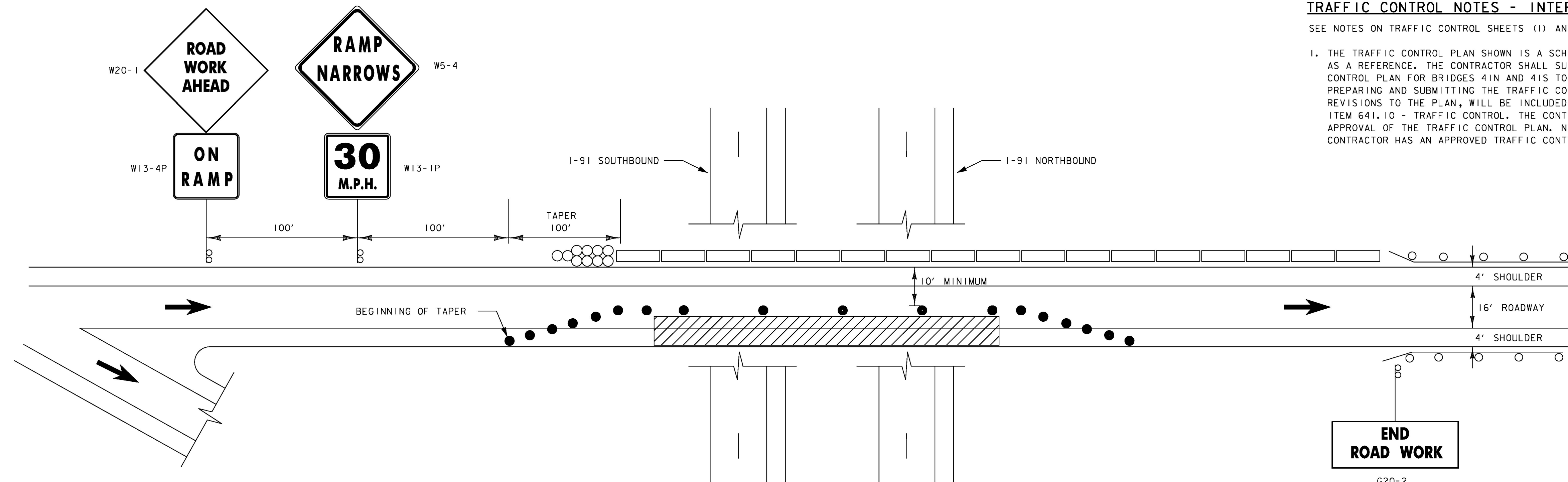
TRAFFIC CONTROL SHEET (4)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (13)

FILE NAME: z525457tc_4.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
tc4.dgn

PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET 12 OF 36

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



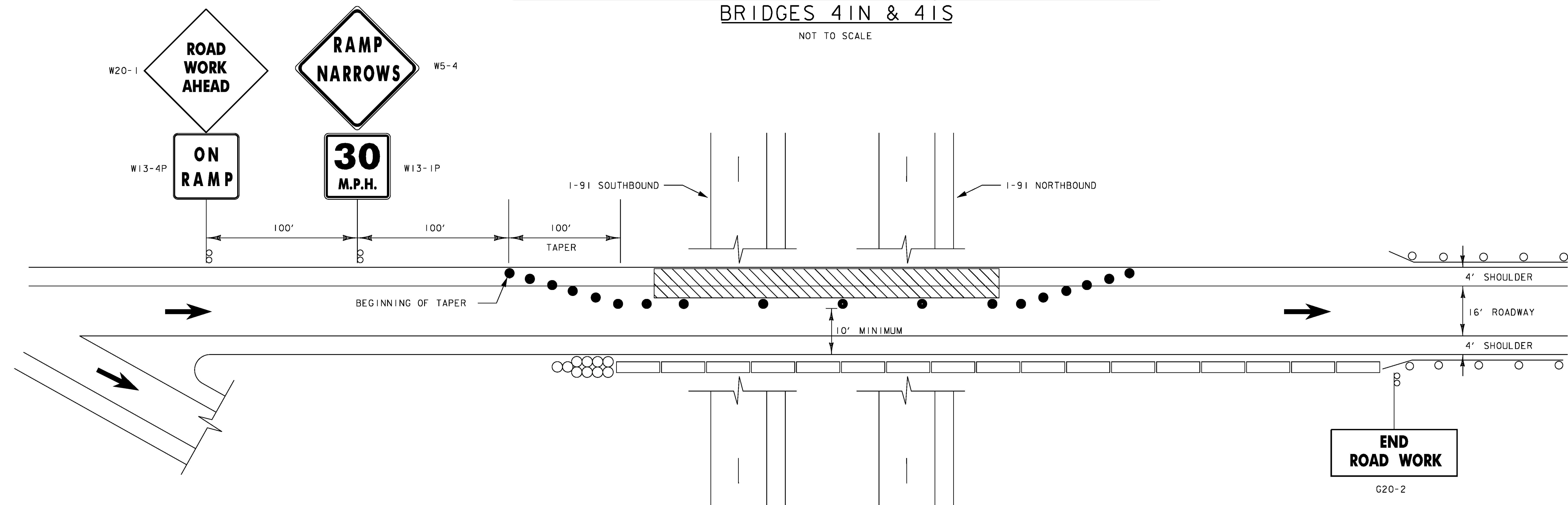
TRAFFIC CONTROL NOTES - INTERSTATE RAMP C:

SEE NOTES ON TRAFFIC CONTROL SHEETS (1) AND (2).

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 4IN AND 4IS TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING NECESSARY REVISIONS TO THE PLAN, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 - TRAFFIC CONTROL. THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLAN. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN.

TRAFFIC CONTROL ON I-91 RAMP C, LANE SHIFT LEFT BRIDGES 4IN & 4IS

NOT TO SCALE



TRAFFIC CONTROL ON I-91 RAMP C, LANE SHIFT RIGHT BRIDGES 4IN & 4IS

NOT TO SCALE

LEGEND

- ➔ - FLOW OF TRAFFIC
- ⌚ - FLAGGER
- ▨ - WORK AREA
- - REFLECTORIZED PLASTIC DRUM
- ▭ - TEMPORARY CONCRETE BARRIER
- ⊙⊙⊙ - IMPACT ATTENUATOR

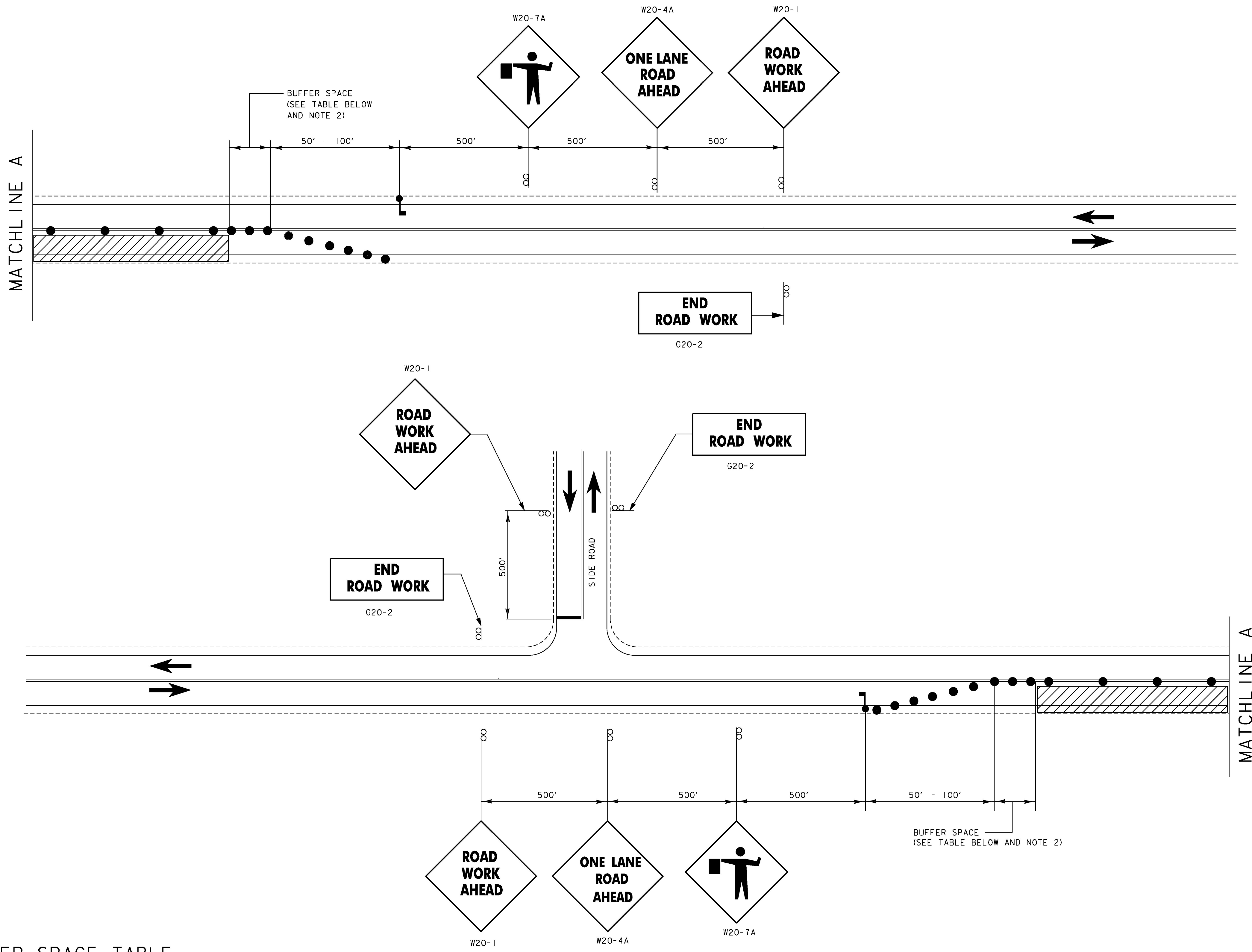
TRAFFIC CONTROL SHEET (5)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (13)

FILE NAME: z525457tc_5.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
tc5.dgn

PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET 13 OF 36

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



BUFFER SPACE TABLE

POSTED SPEED LIMIT	MINIMUM BUFFER SPACE LENGTH (FT)
30	200
35	250
40	305
45	360
50	425

TRAFFIC CONTROL ON HUNT ROAD AND MAPLE STREET
BRIDGES 34N, 34S, 44N, & 44S
NOT TO SCALE

TRAFFIC CONTROL NOTES - LOCAL ROADS:

SEE NOTES ON TRAFFIC CONTROL SHEETS (1) AND (2).

1. THE TRAFFIC CONTROL PLAN SHOWN IS A SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR BRIDGES 34N, 34S, 44N, 44S, 45N, AND 45S TO VTRANS FOR APPROVAL. PAYMENT FOR PREPARING AND SUBMITTING THE TRAFFIC CONTROL PLAN, AND MAKING NECESSARY REVISIONS TO THE PLAN, WILL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 641.10 - TRAFFIC CONTROL. THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR APPROVAL OF THE TRAFFIC CONTROL PLAN. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS AN APPROVED TRAFFIC CONTROL PLAN.
 2. THE BUFFER SPACES SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.
 3. AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER.
THE CLEAR ZONE IS DEFINED AS FOLLOWS:
HUNT ROAD - 14'
WOODSTOCK ROAD - 16'
MAPLE STREET - 14'
BUGBEE STREET - 14'
 4. CONTRACTOR SHALL BE COGNIZANT OF VEHICLES ENTERING AND EXITING THE WORKZONE WHILE PERFORMING WORK OVER ROUND HOUSE ROAD.
 5. SEE TRAFFIC CONTROL SHEET (5) FOR LEGEND.
- CONTINUED ON TRAFFIC CONTROL SHEET (7).

TRAFFIC CONTROL
SHEET (6)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (13)

FILE NAME: z525457tc_6.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
tc6.dgn

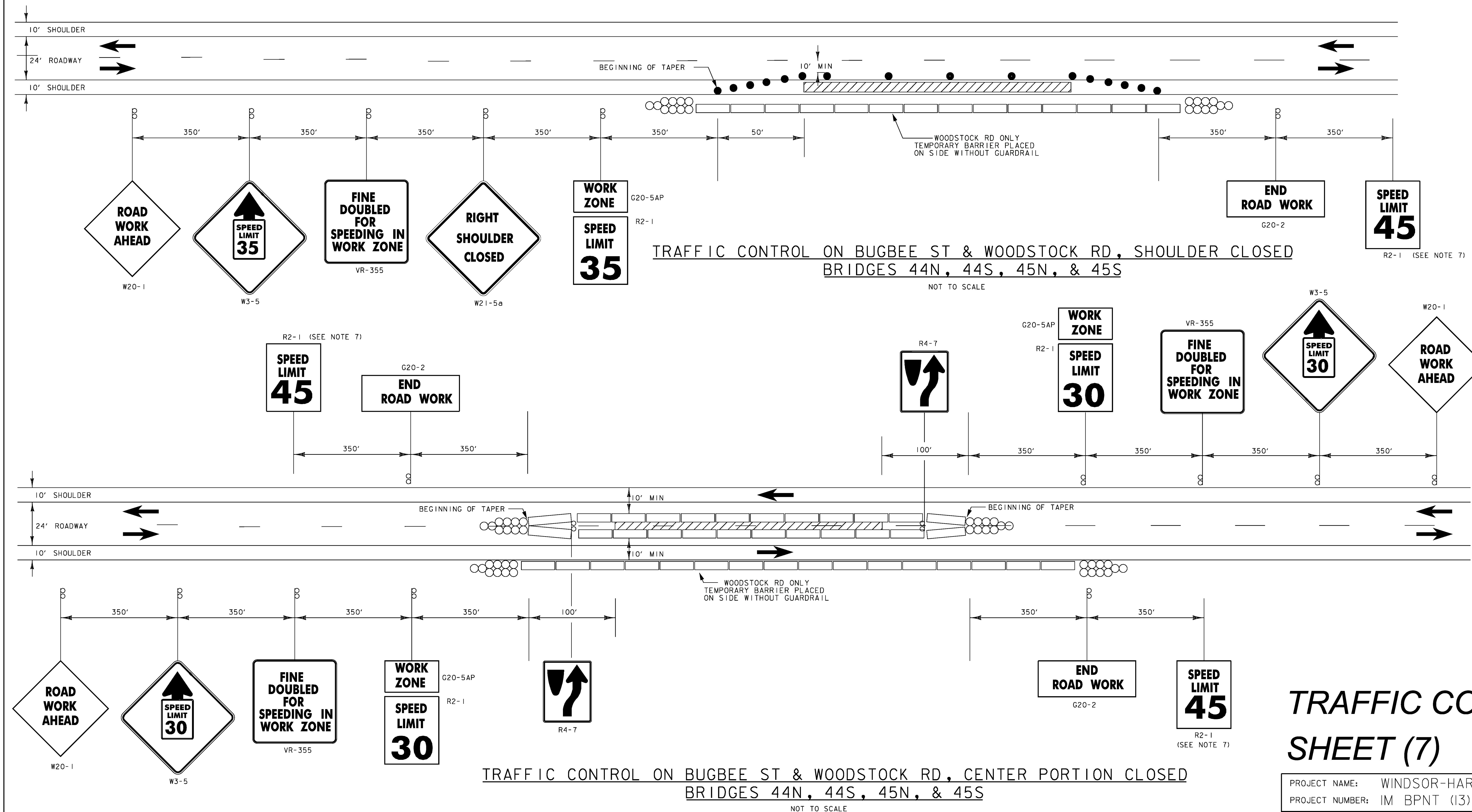
PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET 14 OF 36

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101

TRAFFIC CONTROL NOTES - LOCAL ROADS:

NOTES CONTINUED FROM TRAFFIC CONTROL SHEET (6):

6. THE SPEED LIMIT WILL BE REDUCED TO 10MPH LESS THAN THE POSTED SPEED LIMIT IN THE WORK ZONE FOR WOODSTOCK ROAD AND BUGBEE STREET UNLESS OTHERWISE SHOWN. ANY EXISTING SPEED LIMIT SIGNS WITHIN THE SPEED REDUCTION AREA SHALL BE COMPLETELY COVERED.



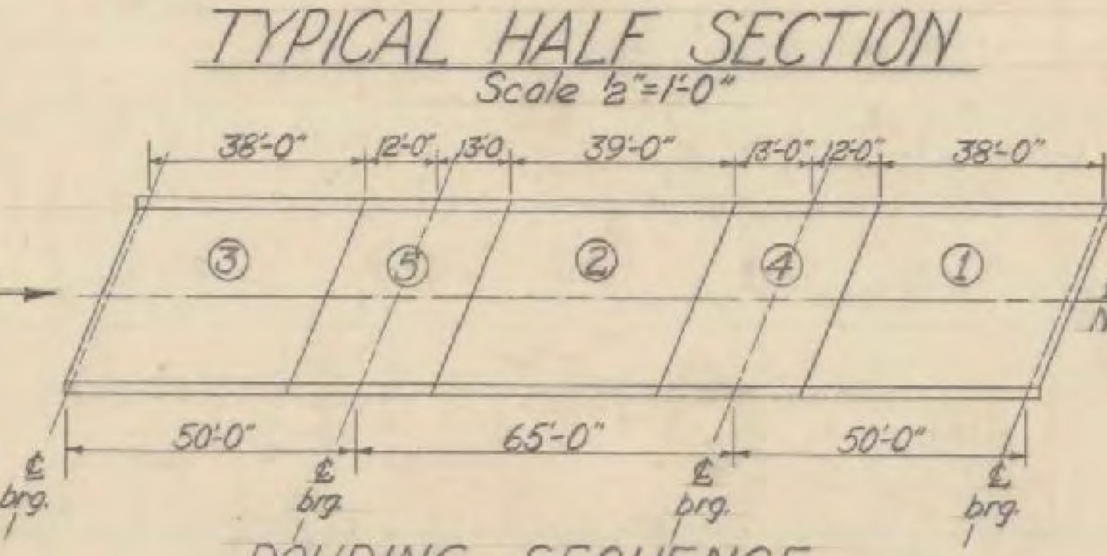
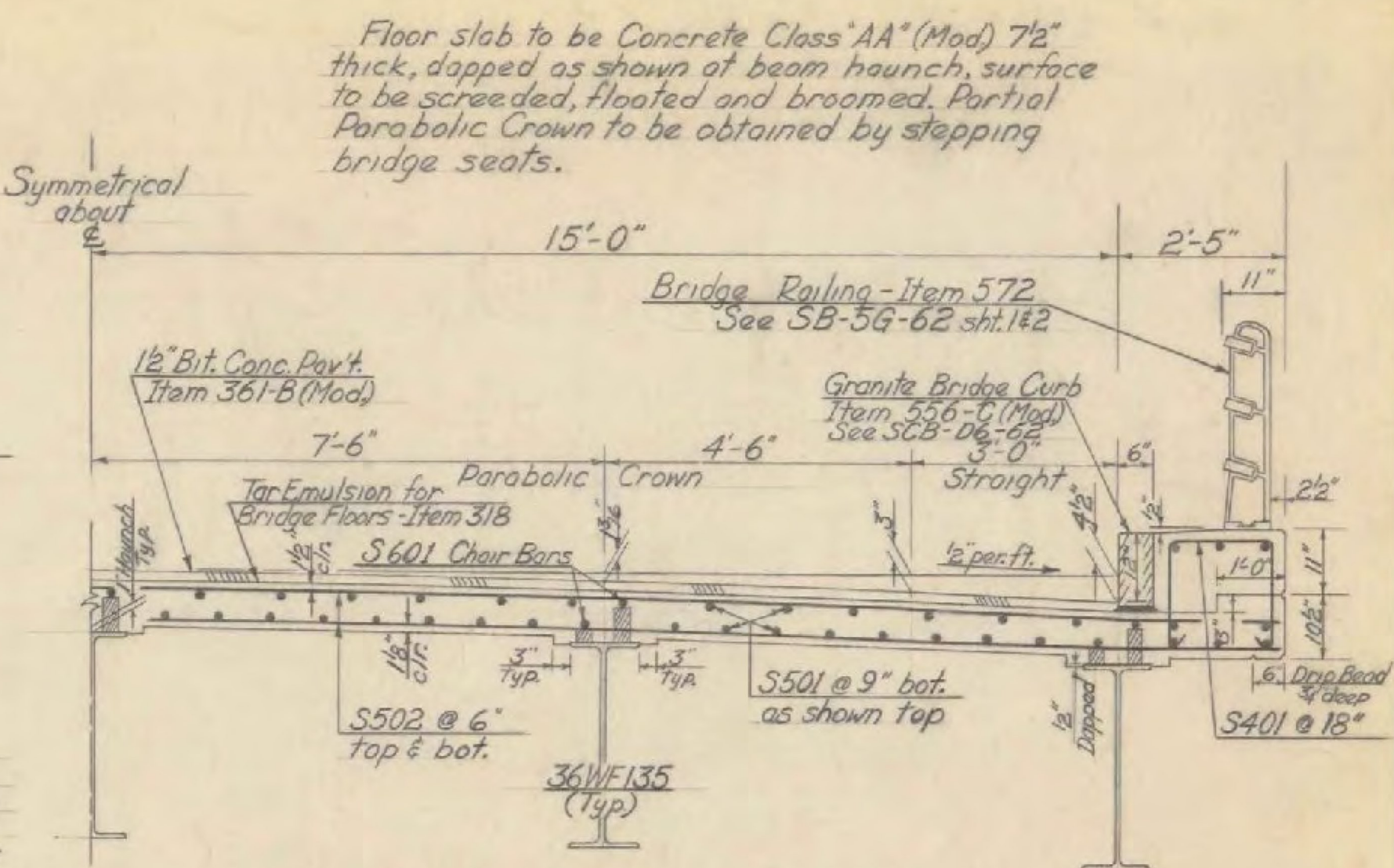
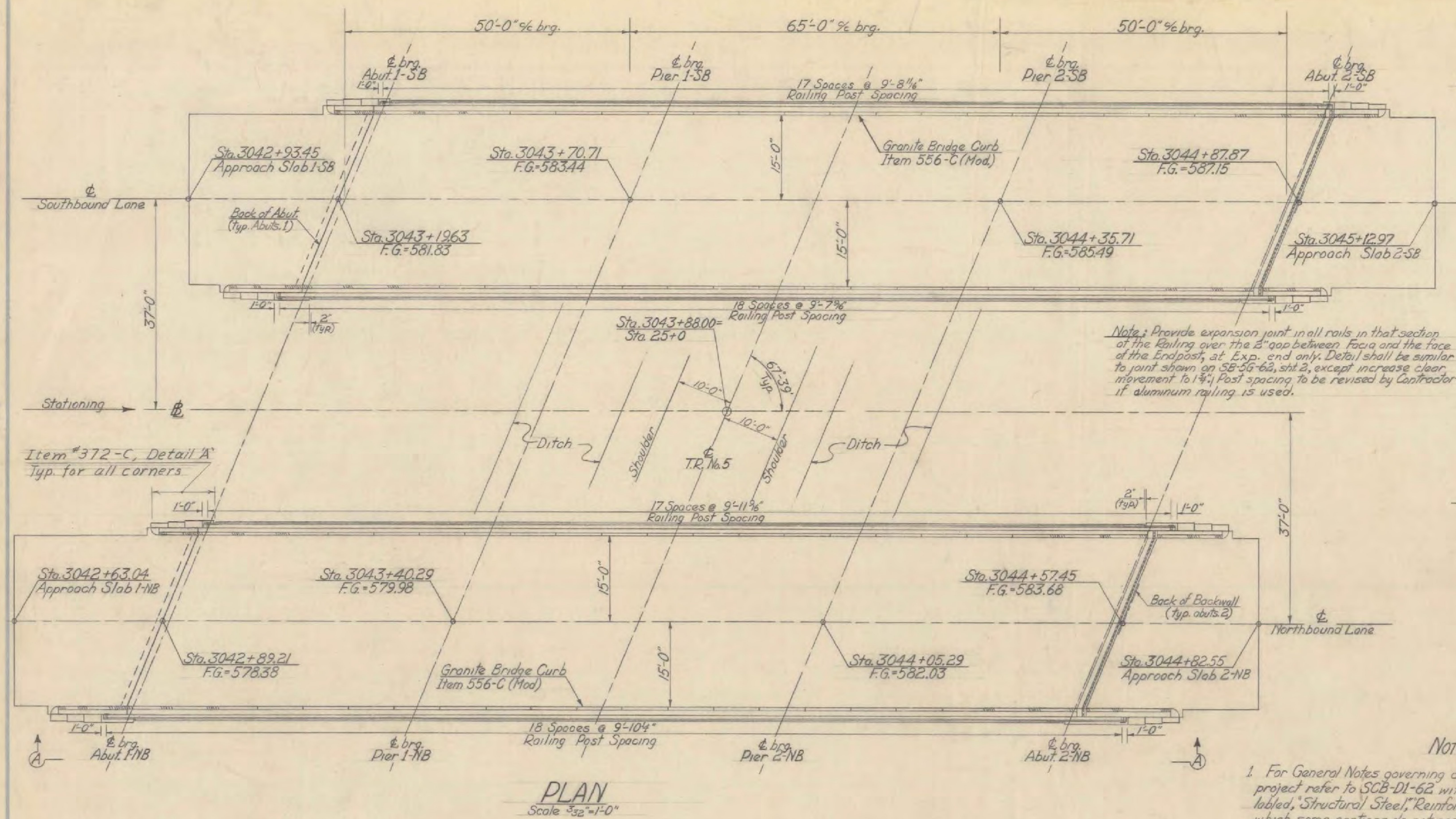
TRAFFIC CONTROL SHEET (7)

PROJECT NAME: WINDSOR-HARTFORD
PROJECT NUMBER: IM BPNT (13)

FILE NAME: z525457+tc_7.dgn
PROJECT LEADER: G.K.DONINGTON
DESIGNED BY: S.BROWN
+tc7.dgn

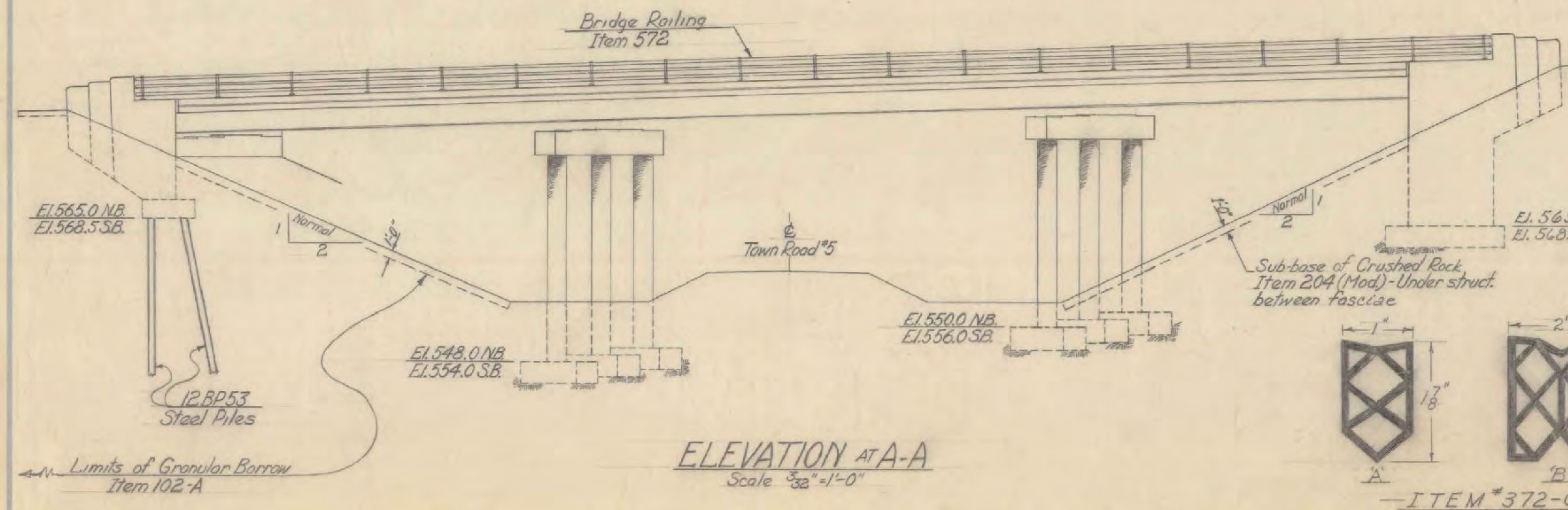
PLOT DATE: 25-JUNE-2015
DRAWN BY: S.BROWN
CHECKED BY: J.KHERA
SHEET 15 OF 36

PB PARSONS BRINCKERHOFF
650 ELM STREET
MANCHESTER, NH 03101



NOTES

- For General Notes governing design and construction of this project refer to SCB-D1-62 with the exception of paragraphs labeled, "Structural Steel," "Reinforcing Steel," and "Quantities," in which some portions do not apply or are specified elsewhere.
- Preformed Neoprene Rubber Joint Material, Item #372-C, shall be used wherever Item #373 is indicated in the standards, unless otherwise noted on the plans.

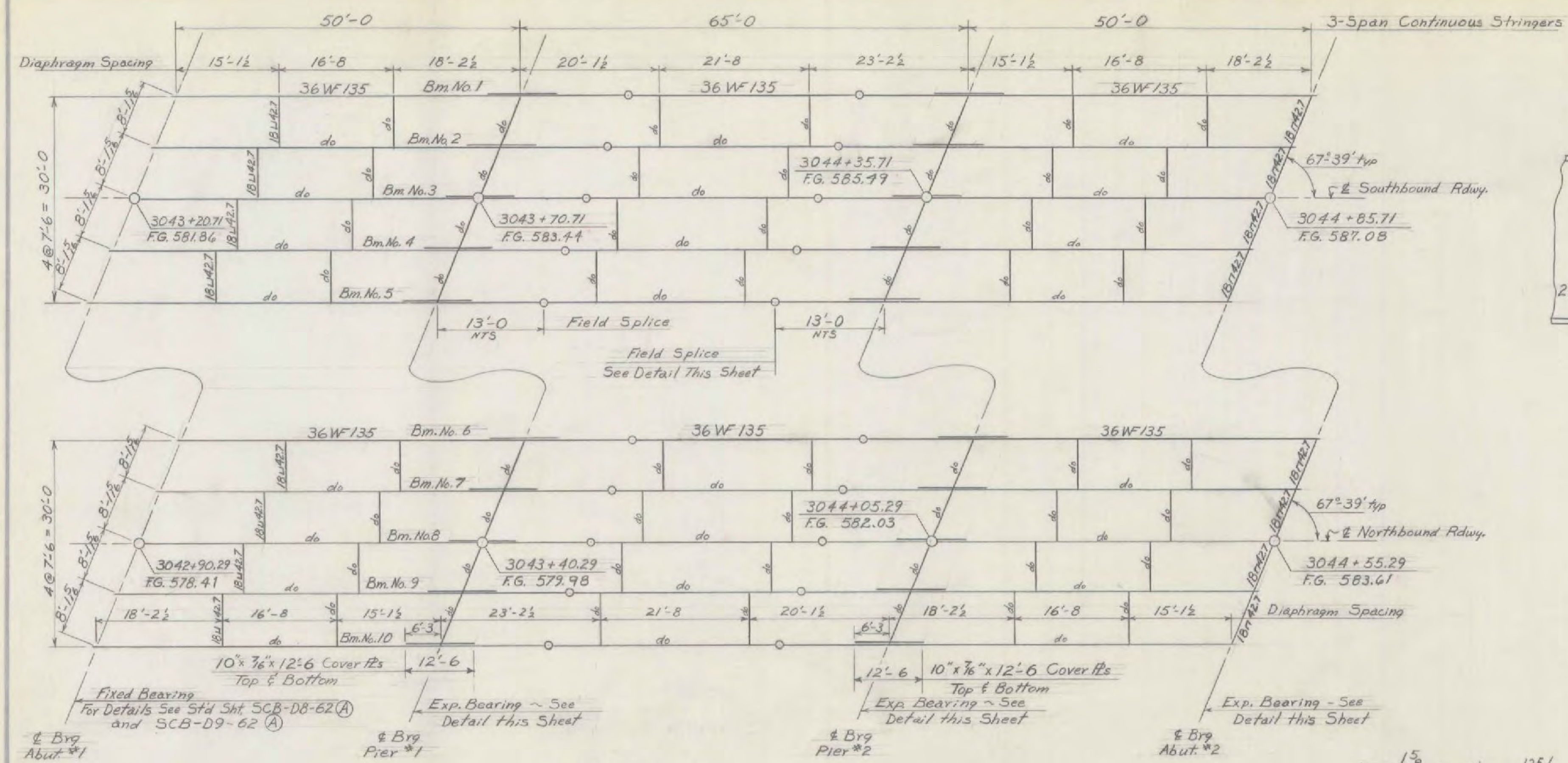


SUPERSTRUCTURE QUANTITIES					
ITEM NO.	ITEM	UNIT	NORTHBOUND	SOUTHBOUND	TOTAL
204	SUBBASE OF CRUSHED ROCK (MOD) UNDER STR.	C.Y.	132	132	264
318	TAR EMULSION FOR BRIDGE FLOORS	S.Y.	222	222	444
361-B	BITUMINOUS CONCRETE PAVEMENT (MOD)	TONS	47	47	94
401-A	CONC. CLASS AA (MOD)	C.Y.	172	172	344
402	REINF. STEEL	LBS.	See Reinforcing Schedule		
407	ASPHALTIC ASB. COATING	S.Y.			
502-B	TREATED TIMBER PILING	L.F.			
503	SPLICES FOR STEEL PILING	EA.			
504	STEEL PILING	L.F.			
502-A	UNTREATED TIMBER PILING	L.F.			
404-A	STRUCTURAL STEEL	LBS.	147,900	147,900	295,800
556-C	GRANITE BRIDGE CURB (MOD)	L.F.	333	333	666
572	BRIDGE RAILING	L.F.	347	339	686
373	RUBBER JOINT MATERIAL	L.F.	37	37	74
372-A	JOINT SEALER - HOT APPLIED	L.F.	38	38	76
372-C	JOINT SEALER - PREFORMED	L.F.	99	90	189

LIST OF BRIDGE SHEETS	
Sheet No.	Title
BR100	Plan & Elevation - Typical Section
BR101	Bridge Quantity Sheet
BR102	Preliminary Information Sheet
BR103	Reinforcing Schedule
BR104	Reinforcing Plan & Expansion Bearings
BR105	Expansion Dams
BR106	Piers
BR107	Abutment 1-NB&SB
BR108	Abutment 2-NB
BR109	Abutment 2-SB
BR110	SB-AS-62: Approach Slab 1-NB&SB
BR111	SB-AS-62: Approach Slab 2-NB
BR112	SB-AS-62: Approach Slab 2-SB
BR113	Reinforcing Schedule
BR114	Reinforcing Schedule
SCB-D1-62	Detail B, C, F
SCB-D8-62	Detail A
SCB-D9-62	Detail A
SB-56-62, sht. 1	Galvanized (Detail A)
SB-56-62, sht. 2	Aluminum (Detail B)

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

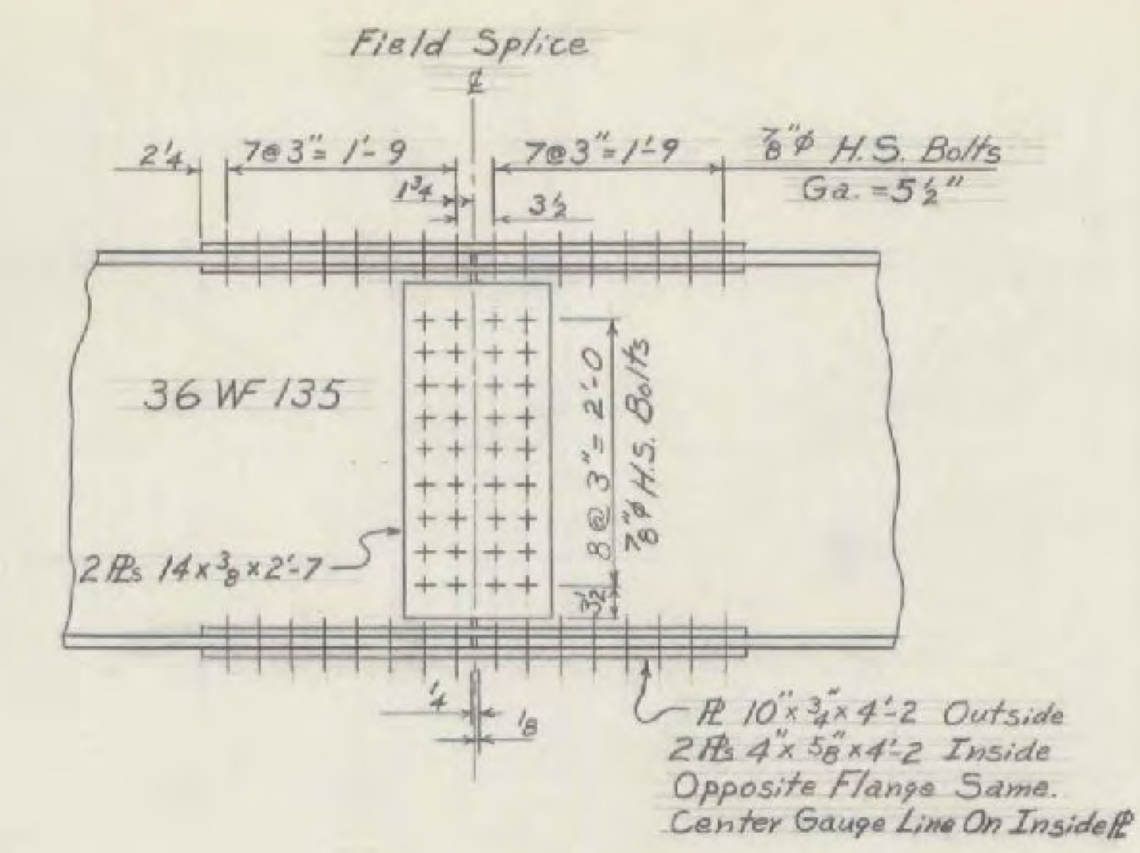
WEATHERSFIELD-WINDSOR-HARTLAND
ROUTE No. 1-91 STA. 3043+80
PLAN-ELEVATION & TYPICAL HALF-SECTION
INTERSTATE OVER WINDSOR T.R. #5
SCALE as noted
SURVEYED BY
DRAWN BY RND CHECKED BY R.P.G.
PROJECT No. 1-91-1(21) Cont. 3 (30)
SHEET 41 OF 106



FRAMING PLAN

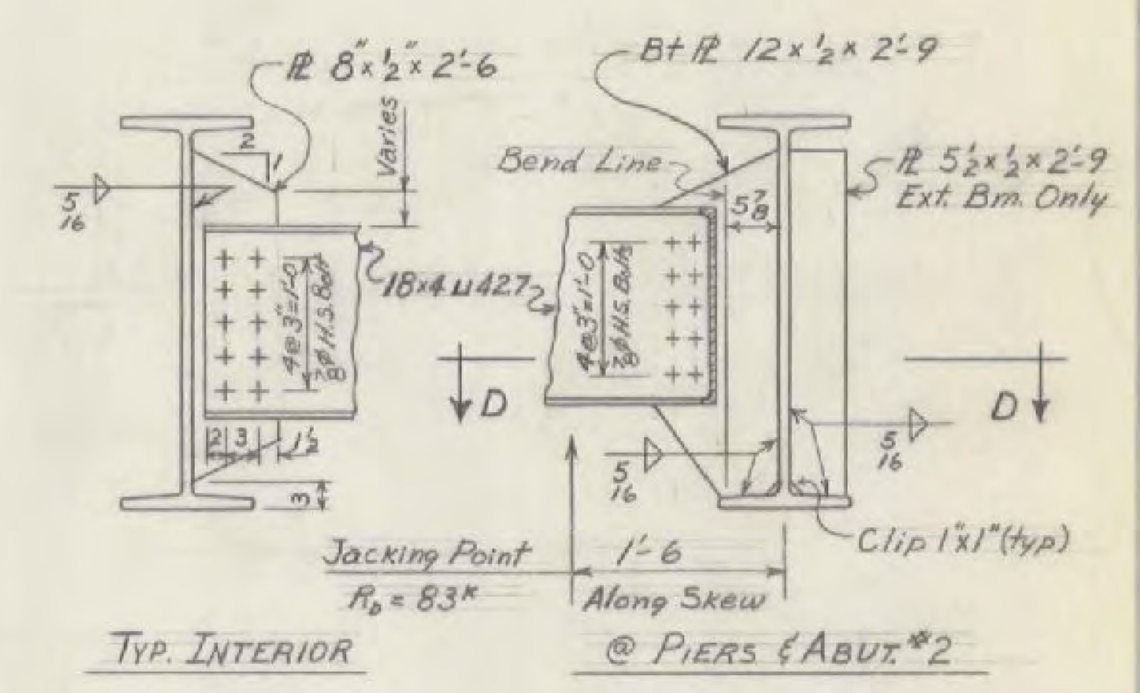
Scale 3/4"=1'-0"

Details Not Shown Are Same As Opposite Bridge



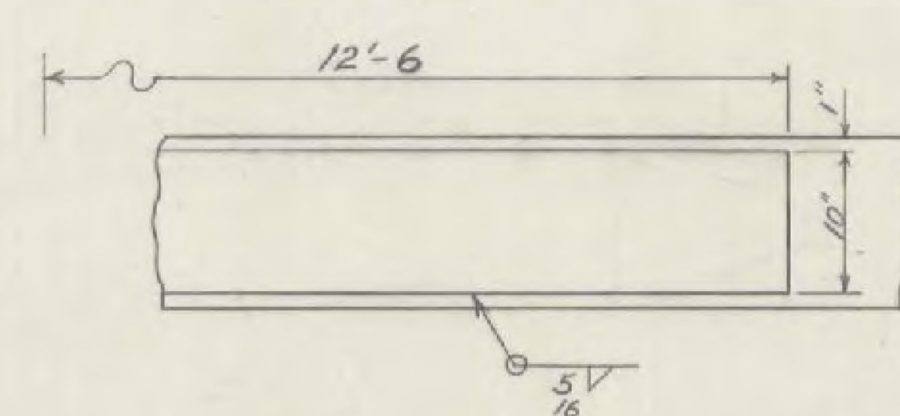
FIELD SPLICE

Scale 3/4"=1'-0"



DIAPHRAGM DETAILS

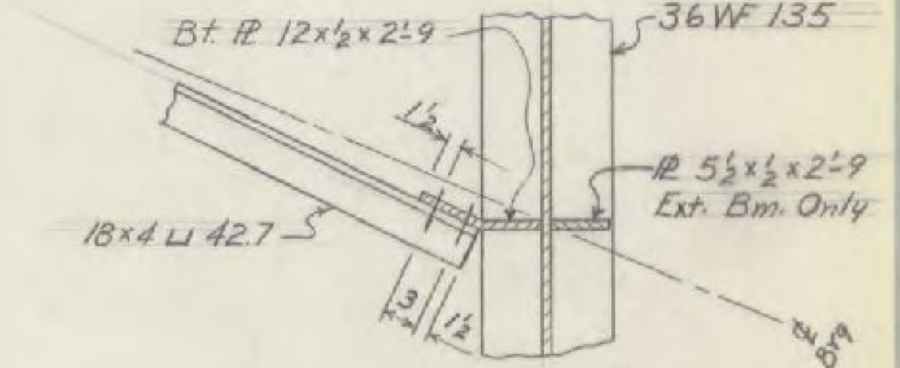
Scale 3/4"=1'-0"



COVER PLATE DETAILS

Scale 1"=1'-0"

Top & Bottom Plates Are Same



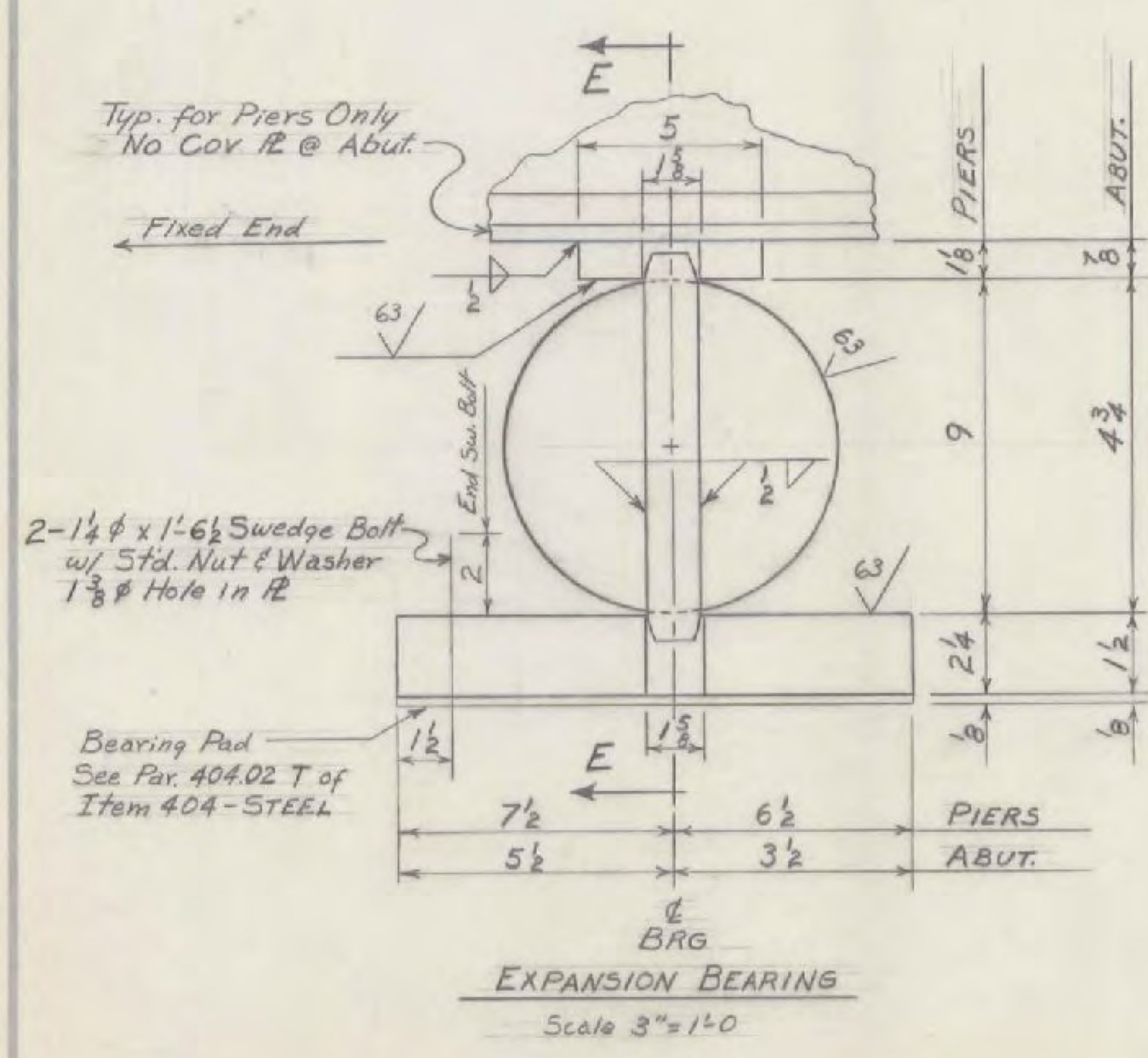
SECTION D-D

Scale 3/4"=1'-0"

NOTES

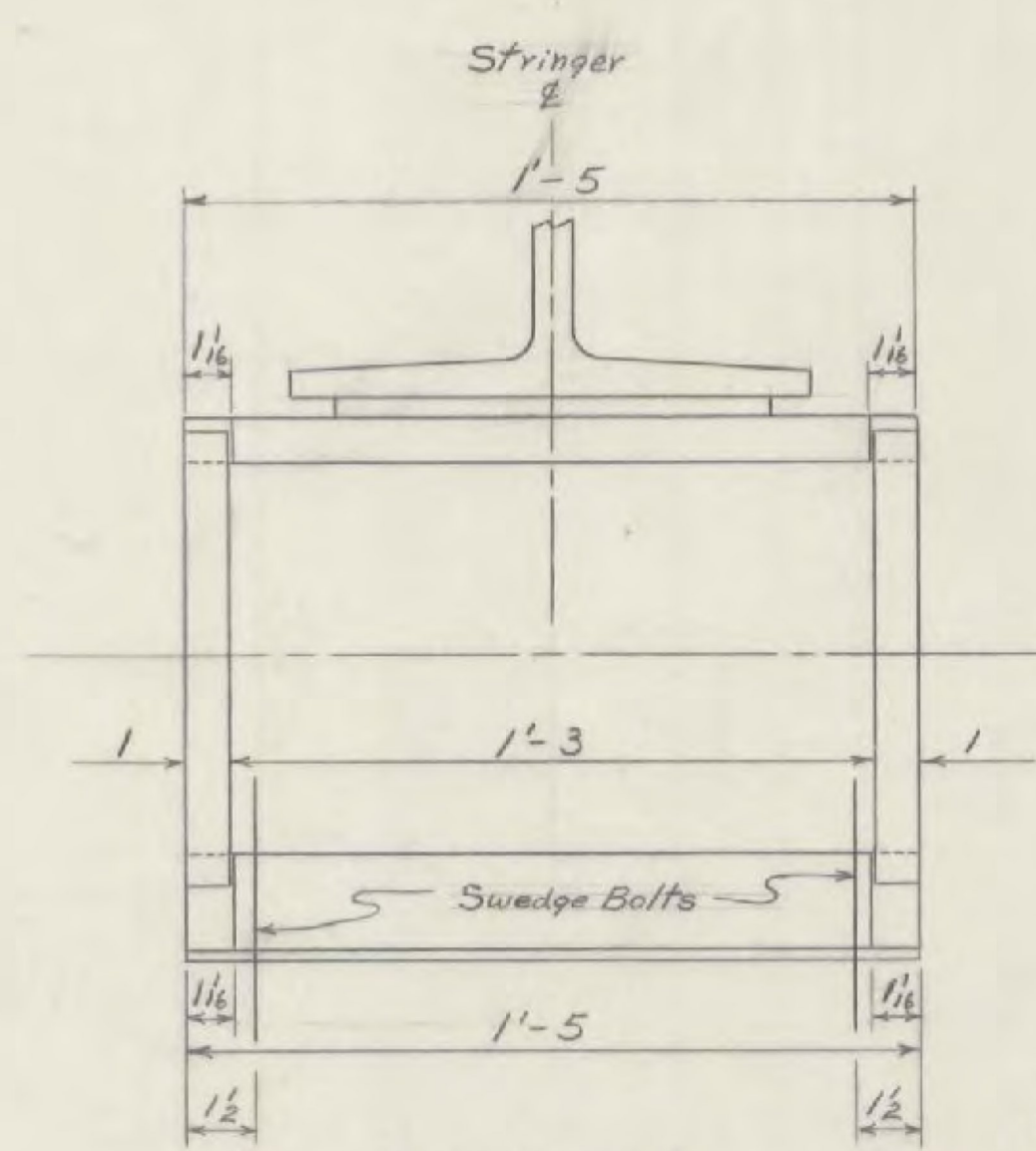
1. Materials: All structural steel not otherwise specified shall conform to the specification for Structural Steel A.S.T.M. Designation A36-62T. Rollers for expansion bearings shall be cold finished carbon steel conforming to A.S.T.M. Designation A108 (A.I.S.I. Grade 1045). Roller shall be turned and finished as indicated. Roller shall be preheated in furnace to a temperature appropriate to the type of electrode before welding, held at this temperature until welding is completed, and allowed to cool slowly. Finish machining shall be done subsequent to welding. Min. allow. 50,000 psi. Exp. Base plates and sole plates shall be Structural Nickel Steel, A.S.T.M. Designation A8. Finished surfaces shall be plane so as to afford full contact with the roller.
2. Dimensions shown are measured horizontally or vertically and are for 68°F.
3. No camber is specified. Fabricate end spans with mill camber down and center section with mill camber up. Final roadway grade and haunch depth is to be determined by the Engineer following erection of the structural steel and the determination of the stringer profiles.
4. For additional notes see Standard Structures Sheet SCB-D1-62.

Revision 1 Date 2-25-65 by R.P.G. del R.V.D.
Increased finish grade elevations by 0.25 ft. on this sheet only.



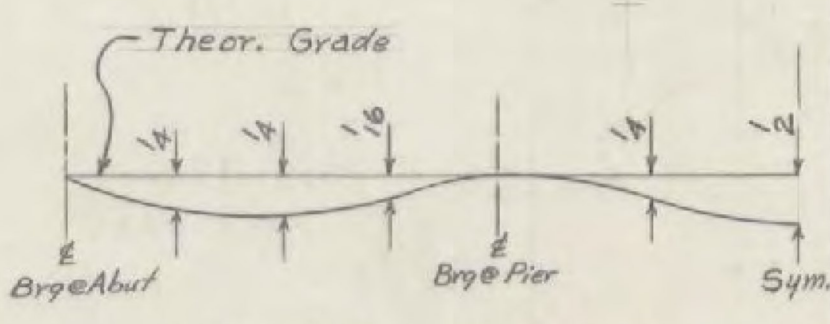
EXPANSION BEARING

Scale 3"=1'-0"



SECTION E-E

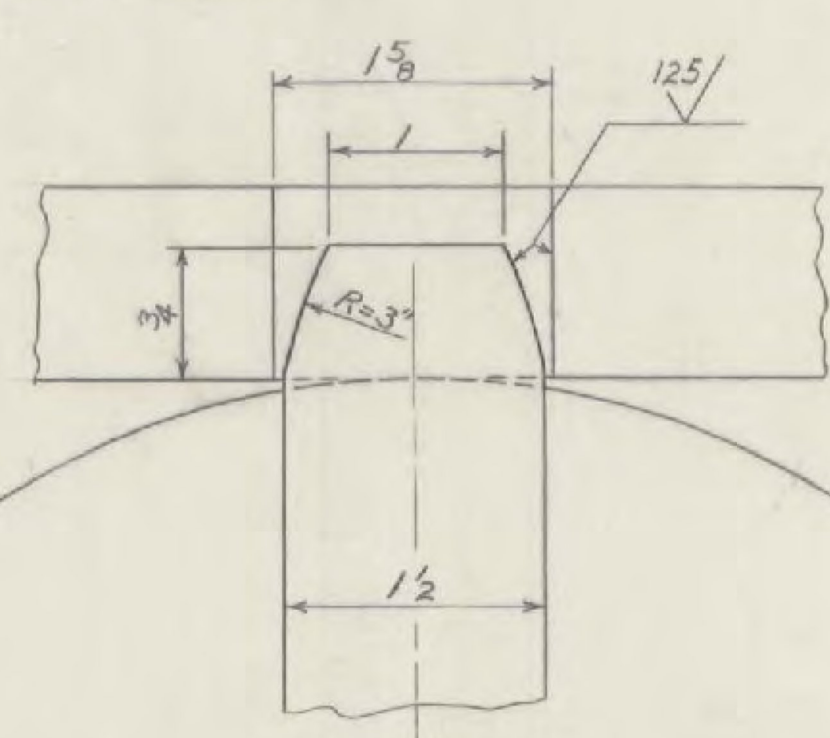
Scale 3"=1'-0"



DEAD LOAD DEFLECTION

Not to Scale

Dimensions shown are for expected deflection at quarter points due to full dead load.



PINTLE DETAIL

Full Size

ITEM NO.	ITEM	UNIT	N.B.	S.B.	TOTAL	FINAL
105-A	CHAN. EXCAV. OF EARTH	C.Y.				
105-B	CHAN. EXCAV. OF ROCK	C.Y.				
105-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				
404-A	Structural Steel	LBS.	117,900	147,900	265,800	246,011

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 34
SHEET 17 OF 36
FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

WEATHERSFIELD-WINDSOR-HARTLAND

ROUTE No. 191 STA. 3043+80

FRAMING PLAN & EXP. BRG. DETAILS

INTERSTATE OVER WINDSOR T.R. #5

SCALE: As Noted

SURVEYED BY: _____

DRAWN BY: RLM 5-20-63 CHECKED BY: R.P.G.

PROJECT NO. I91-1(21) Cont. 3

SHEET 45 OF 166

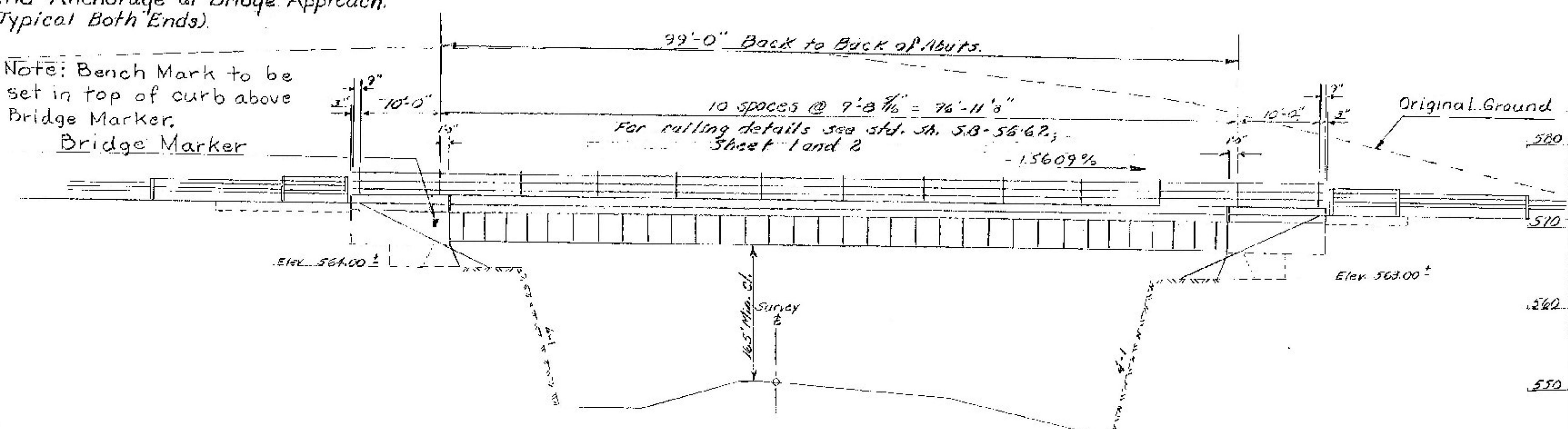
BR 104 of 114



PLAN
SCALE 1" = 10'

Note:
See Std. Dwg. G-3a For Dead
End Anchorage of Bridge Approach.
(Typical Both Ends)

Note: Bench Mark to be
set in top of curb above
Bridge Marker.



ELEVATION
SCALE 1" = 10'

Notes

1. For General Notes see Std. Sh. SCB-D1-62.
2. Bridge railing is detailed for steel railing. Aluminum railing may be substituted with a maximum spacing of 7'-2" as per std. sh. SB-56-62, sh. 1 & 2 Det. B.

List of Bridge Sheets

- BR100 Preliminary Information Sheet
- BR101 Preliminary Information Plan
- BR102&103 Boring Logs
- BR104 Bridge Quantity Sheet
- BR105 Plan and Elevation Southbound
- BR106 Superstructure Details S.B.
- BR107 Bearing Details S.B.
- BR108 Abutment No. 1 S.B.
- BR109 Abutment No. 2 S.B.
- BR110 Approach Slab No. 1 S.B.
- BR111 Approach Slab No. 2 S.B.
- BR112 Reinforcing Schedule S.B.
- BR113 Plan and Elevation Northbound
- BR114 Superstructure Details N.B.
- BR115 Abutment No. 1 N.B.
- BR116 Abutment No. 1 N.B. Details
- BR117 Abutment No. 2 N.B.
- BR118 Abutment No. 2 N.B. Details
- BR119 Approach Slab No. 1 N.B.
- BR120 Approach Slab No. 2 N.B.
- BR121&122 Reinforcing Schedule N.B.

Bridge Standard Sheets

- SCB-D1-62; SCB-D2-62, Det. A, B, & C; SCB-D4-62;
- SCB-D6-62, Det. A, B, C & D; SCB-D9-62, Det. A;
- SCB-3A-62; SCWPG-30-62, sheets 1, 2 & 4;
- SB-56-62, sh. 1; SB-56-62 sh. 2, Det. A and B; G-3a.

Reference Sheets

- Plan and Profile I-91 Sta. 3702 to 3718
- Cross Sections I-91 SB & NB Sta. 3701+0 to 3705+50
- Profile Ramp C Sta. 1 to 32
- Cross Sections Ramp C Sta. 20+50 to 21+75

WINDSOR - HARTFORD
IM BPT (13)
PROJECT BRIDGE 41
SHEET 18 OF 36
FOR INFORMATION ONLY

Stage I & II Construction

ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.			
	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
	CONC. CLASS AA (MOD.)	C.Y.			
	CONC. CLASS B (MOD.)	C.Y.			
	REINF. STEEL	LBS.			
	ASPHALTIC AGG. COATING	S.Y.			
	TREATED TIMBER PILING	L.F.			
	SPICES FOR STEEL PILING	EA.			
	STEEL PILING	L.F.			
	UNTREATED TIMBER PILING	L.F.			

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWNS OF Hartford

ROUTE NO. I-91 LOG STA.

INTERSTATE OVER RAMP "C" (Southbound)

Plan and Elevation

SCALE 1" = 10'

SURVEYED BY TERRELL

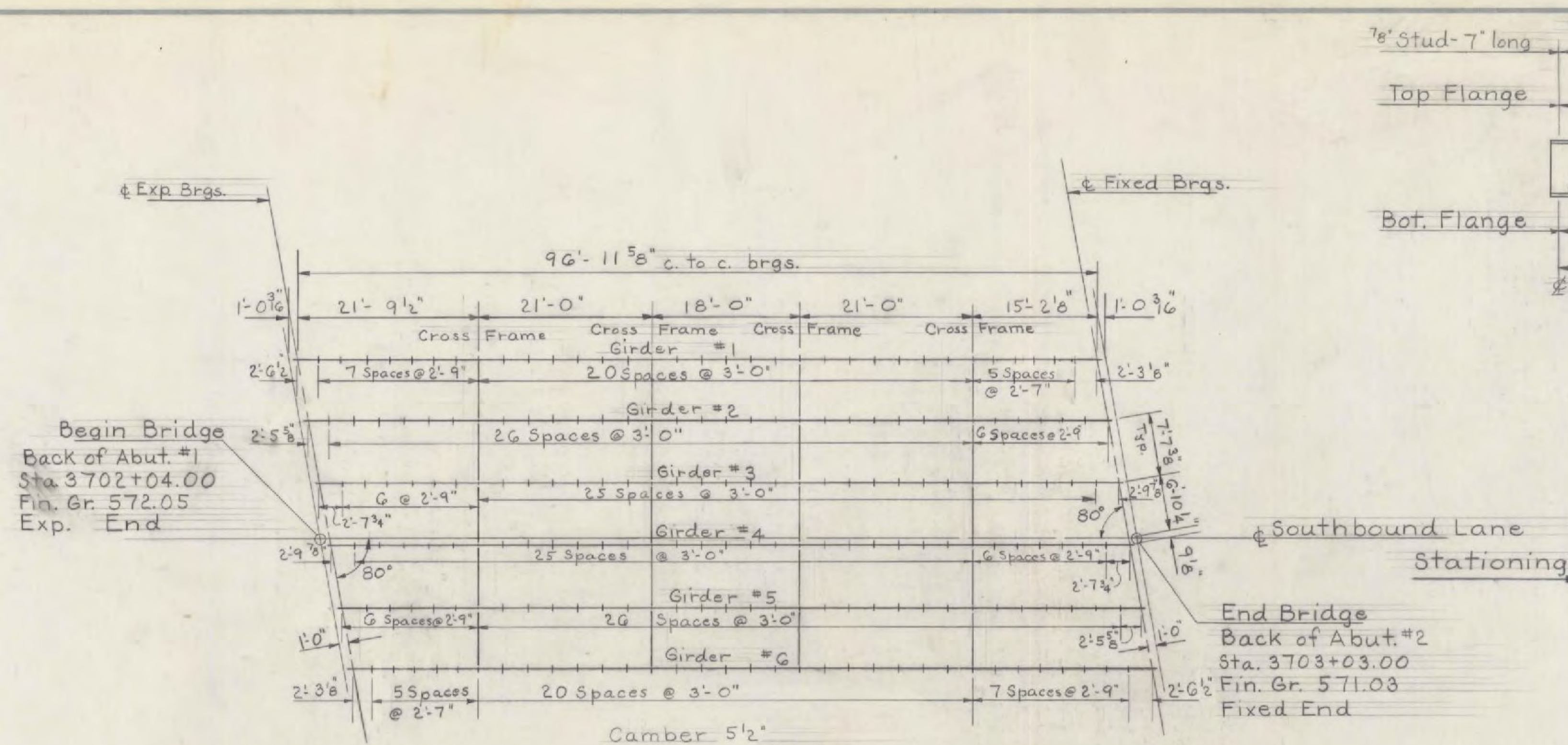
DRAWN BY Wood CHECKED BY A.J.C.

PROJECT NO. I-91(25)631

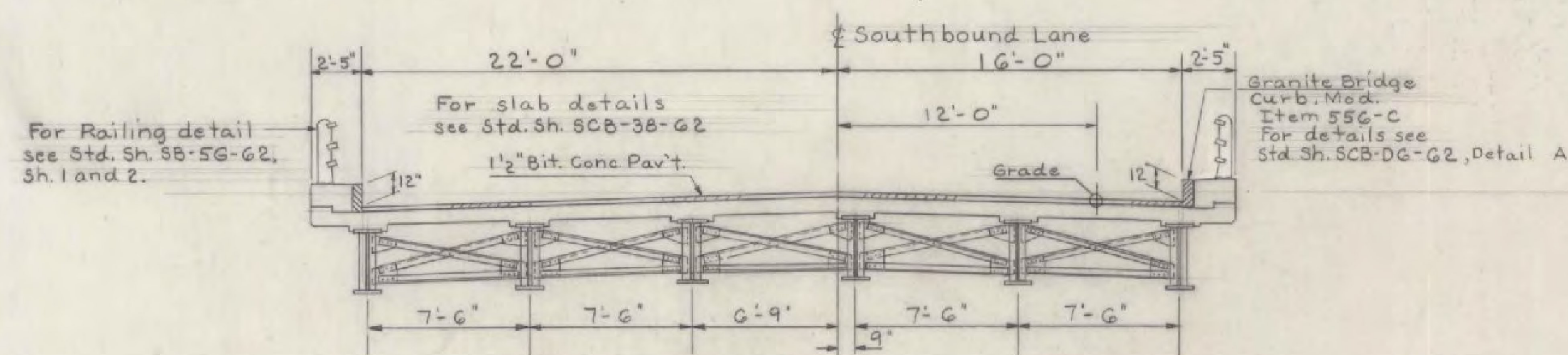
SHEET 23 OF 245 Sheet 175 of 245

BR-105

COMPLETE WMS

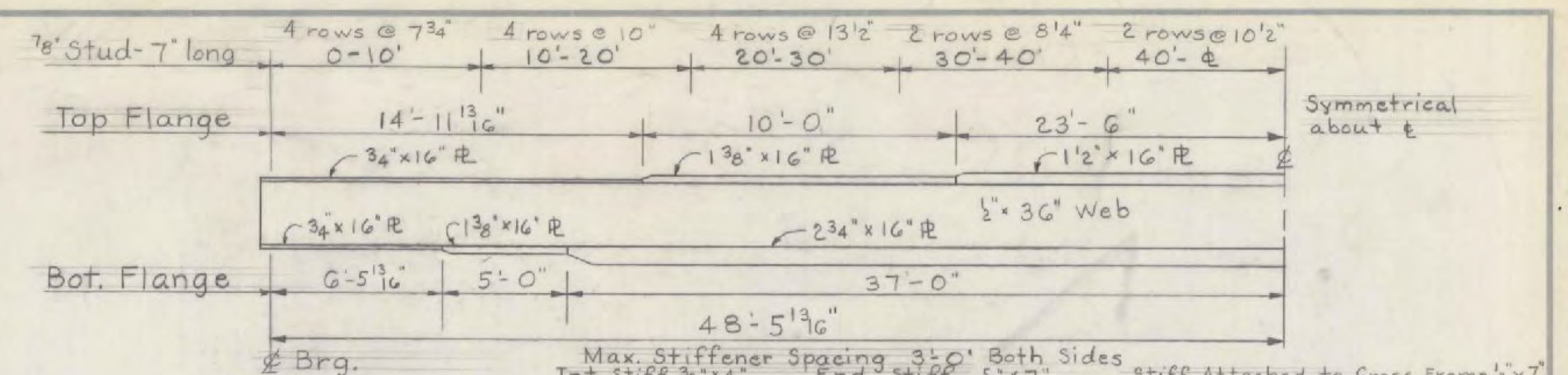


Framing Plan
Scale 1"=10'

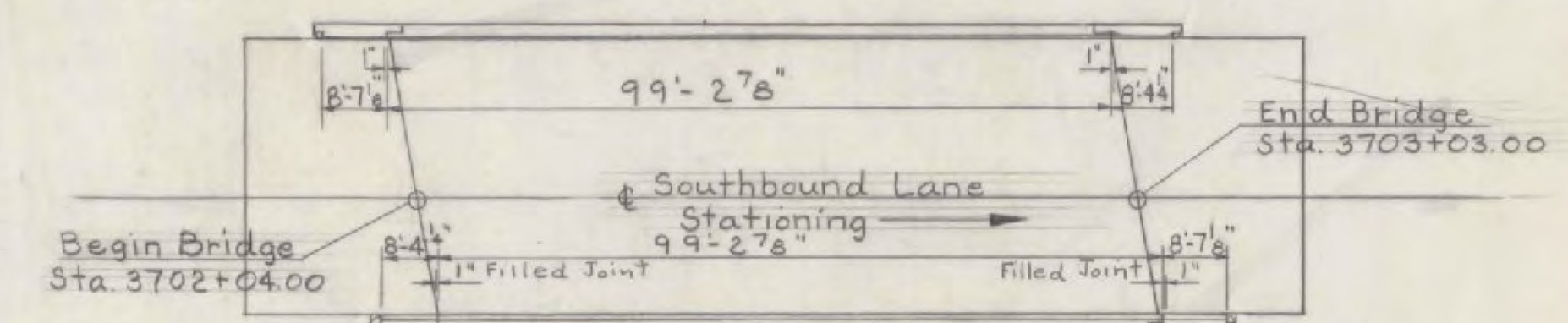


Typical Section
Scale 1"=5'

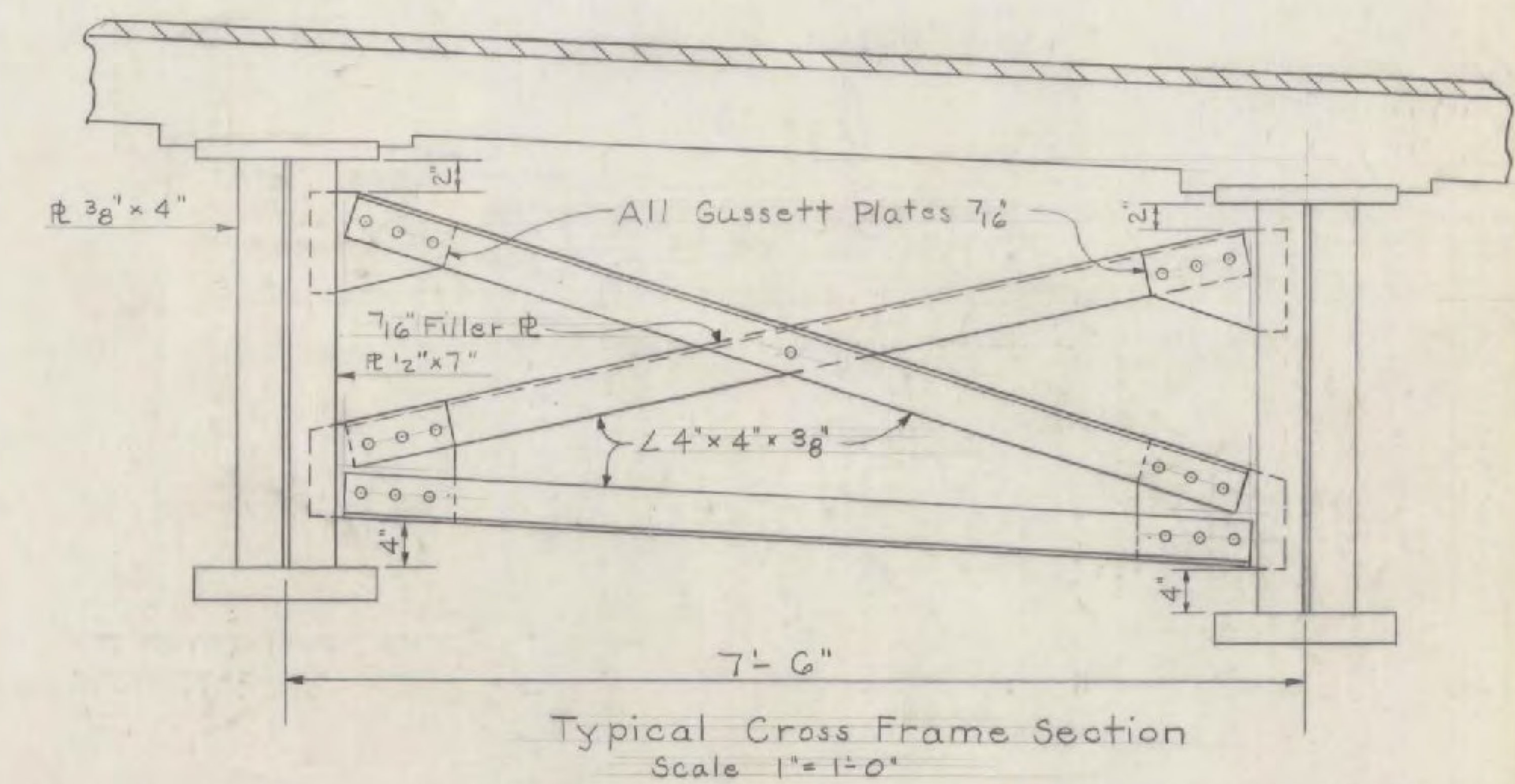
- Notes:
1. For General Notes see Std. Sh. SCB-D1-G2.
 2. Spiral reinforcement may be substituted for studs, on the basis of 1 1/2 pitches of 5/8" spirals per double row of studs. Estimated weight given in Item 403 is based on spiral reinforcement.
 3. * Indicates quantity to be included in roadway quantities.
 4. See Std. Sh. SCB-D2-G2, Detail C, for detail of beam haunch.
 5. For details of joints at the ends of the bridge see Approach Slab Details sheets BR110 & BR111.



Girder Section
Not to Scale



Curb Layout
Scale 1"=20'



Typical Cross Frame Section
Scale 1"=1'-0"

Estimated Superstructure Quantities (S.B. Lane) Stage II Construction

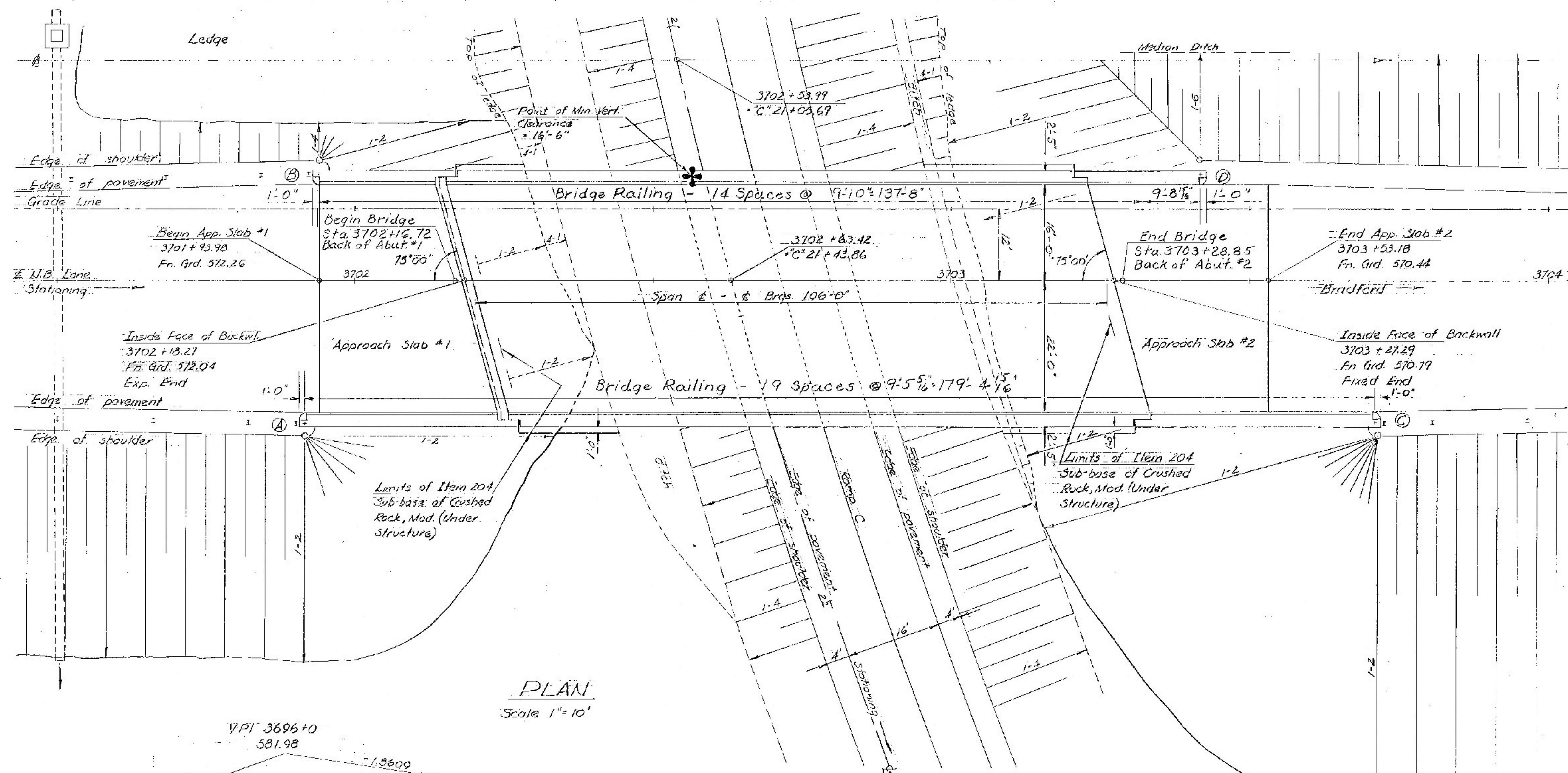
ITEM NO.	ITEM	UNIT	TOTAL	FINAL
* 318	Tar Emulsion for Bridge Floors	Gal.	167	
* 361-B	Bituminous Conc. Pav't Mod. (Dense Graded Top Course)	Ton.	36	
372A	Joint Sealer-Hot Poured	L.F.	118	
372C	Joint Sealer-Preformed	L.F.	136	
401-AA	Concrete Class AA, Mod.	C.Y.	140	
402	Reinforcing Steel	Lb.	31,589	
403	Spiral Reinforcement (3060#)	L.S.	12	
404	Structural Steel @ Sta. 3702+50	Lb.	170,474	
556-C	Granite Bridge Curb, Mod.	L.F.	198	
572	Bridge Railing	L.F.	343	

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 41
SHEET 19 OF 36
FOR INFORMATION ONLY

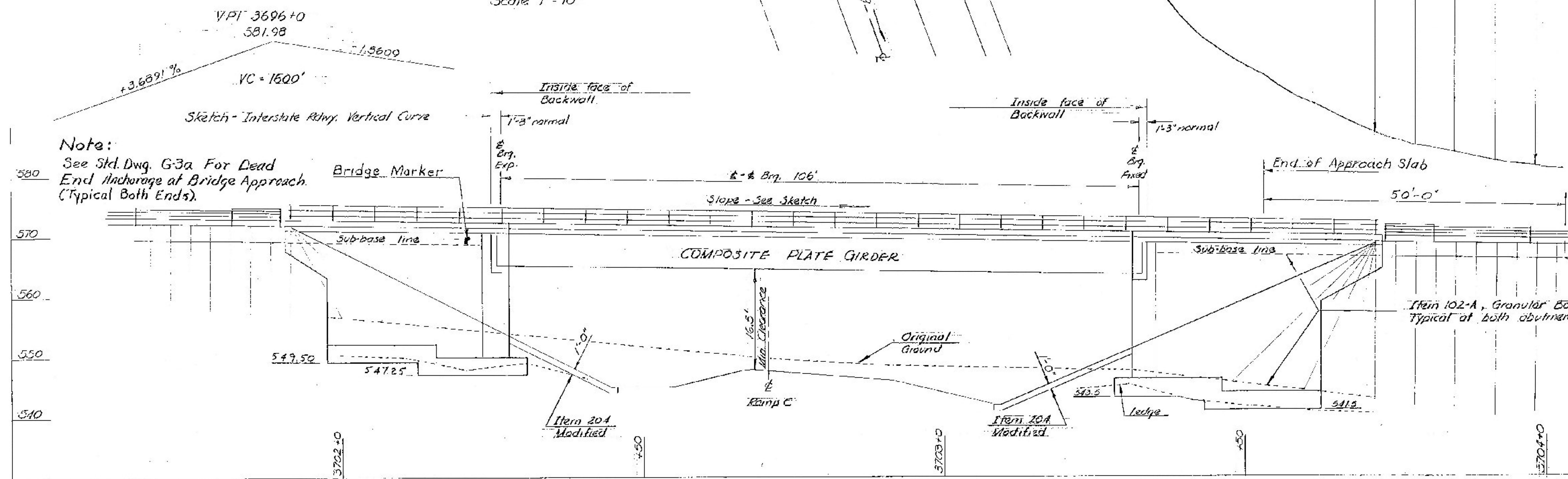
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE No. I 91 LOG STA.
I 91 over Ramp C (Southbound)
Superstructure Details
SCALE As Noted

SURVEYED BY Jewett
DRAWN BY A.J.C. CHECKED BY WOOD
PROJECT No. I 91-1(25)
SHEET 19 OF 36
BR-106



PLAN
Scale 1" = 10'



PROFILE N.B. BRIDGE ALONG RT. FASCIA @ 21+69 'C' Scale 1" = 10'

- Notes
1. For General Notes see Std. Sh. SCB-D1-62 and SCWPG-30-62, Sh. 1 of 4.
 2. Bridge railing is detailed for steel railing. Aluminum railing may be substituted with a max. spacing of 7'-2" as per Std. Sh. 38-56-62, sh. 1 and sh. 2, Det. 8.

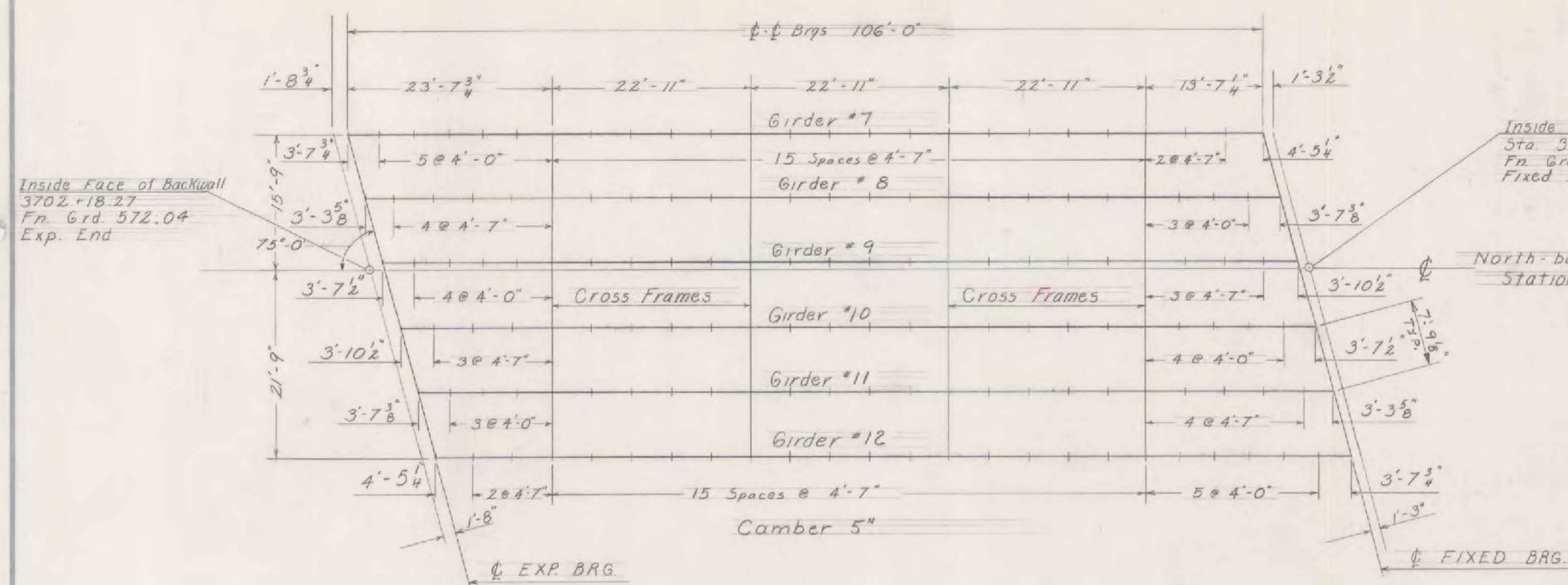
WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 41
SHEET 20 OF 36
FOR INFORMATION ONLY

Stage II Construction

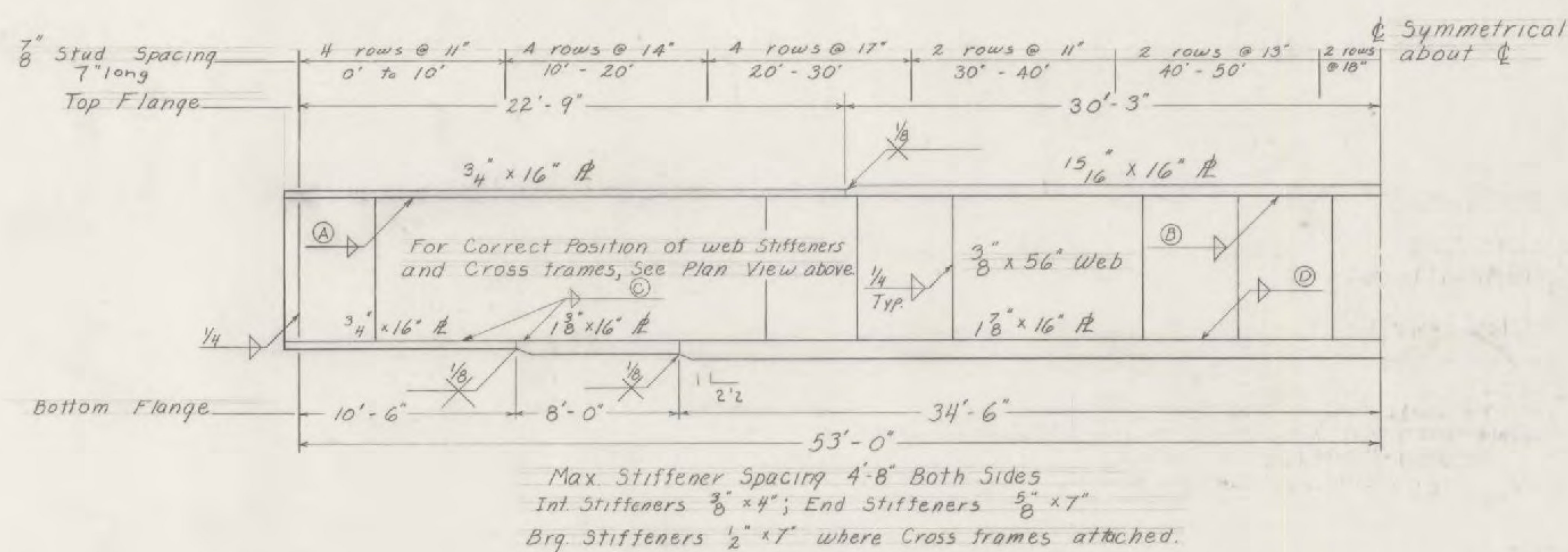
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROUTE No. 191 LOG STA.
191 OVER RAMP C, NORTHBOUND
PLAN & ELEVATION

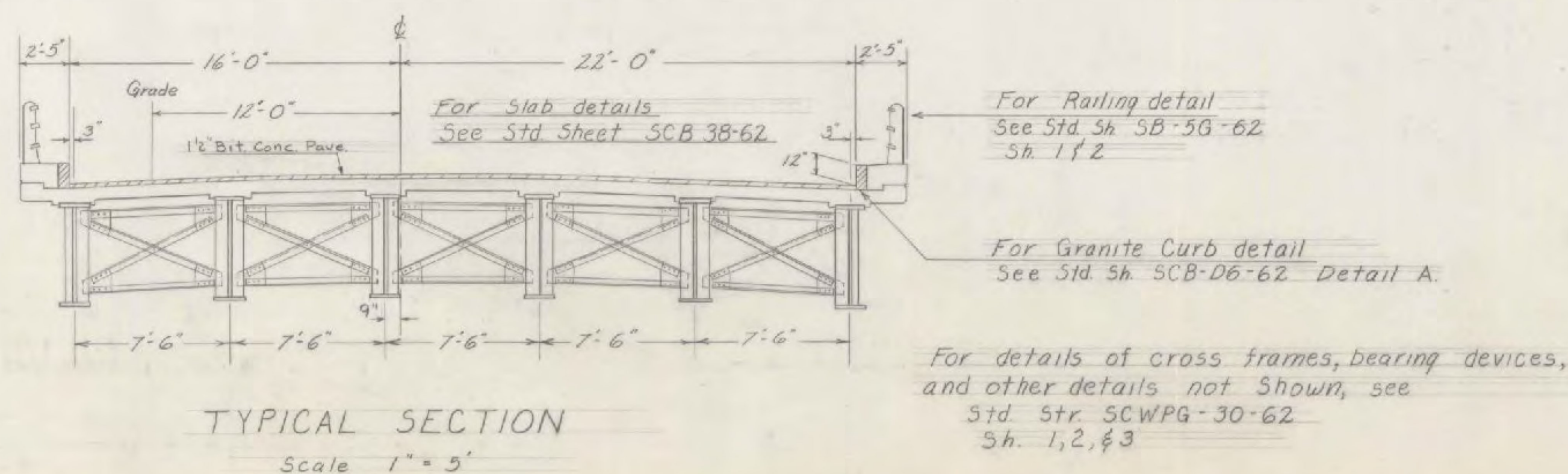
SCALE: 1" = 10'
SURVEYED BY: Jewett
DRAWN BY: ABB CHECKED BY: A.J.C.
PROJECT No. 191-1(35)(2)
SHEET 21 OF 265 (19-1242)



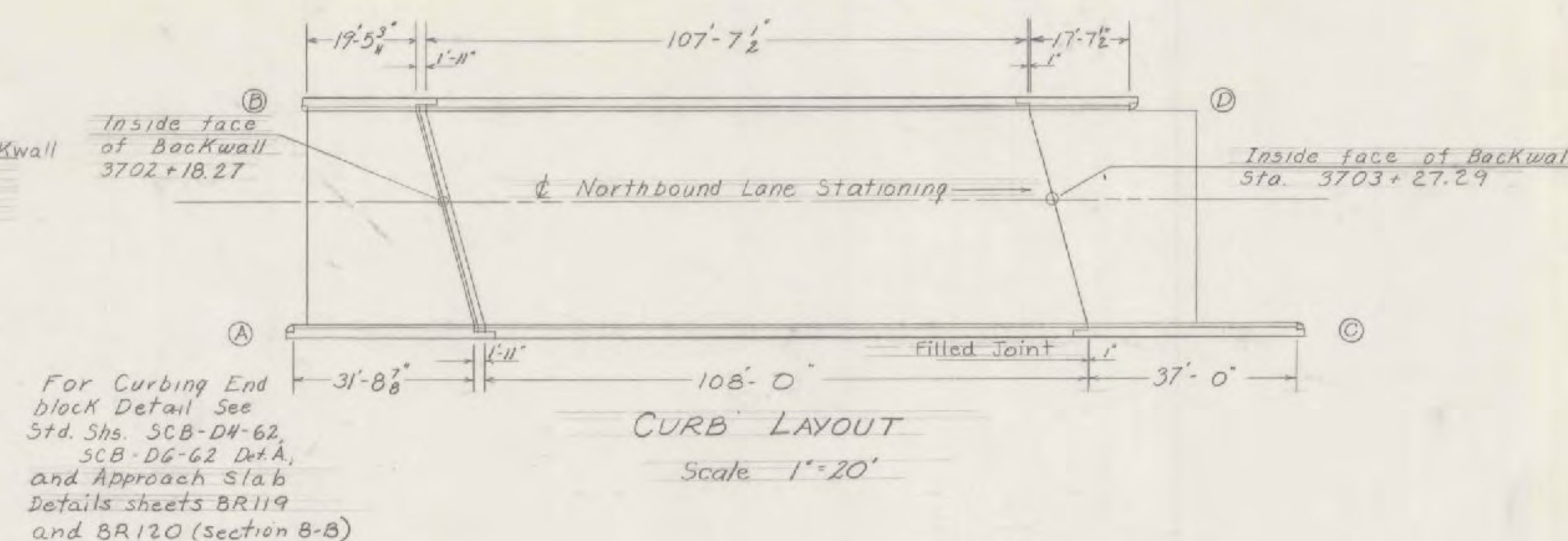
FRAMING PLAN
Scale 1" = 10'



GIRDER SECTION
No Scale

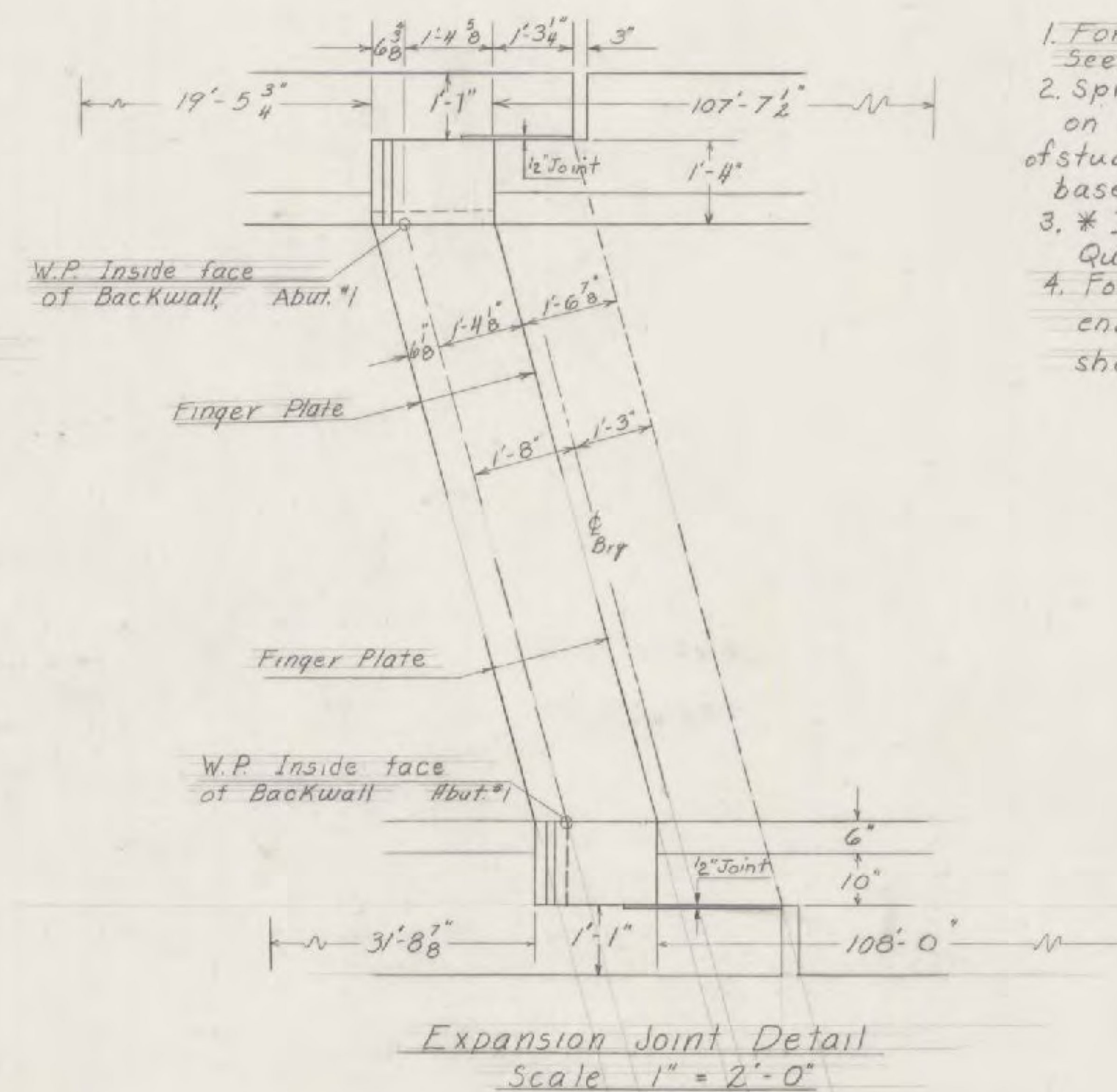


TYPICAL SECTION
Scale 1" = 5'



NOTES

1. For General Notes For Welded Plate Girder Bridge See Std. Sh. SCWPG-30-62 Sh. 1.
2. Spiral reinforcement may be substituted for studs, on the basis of 1 1/2 pitches of 5/8" spiral per double row of studs. Estimated weight given in Item 403 is based on spiral reinforcement.
3. * Indicates item to be included in Roadway Quantities.
4. For details of joints other than shown at the ends of the bridge see Approach Slab Details, sheets BR119 and BR120.



DATA FOR GIRDER 15° SKEW

Span $\perp$ Brg.	106'-0"
Length of Girder	107'-8 3/4"
Size of Weld (A)	5/16"
" " (B)	5/16"
" " (C)	5/16"
" " (D)	3/8"
Size End Stiff.	5/8" x 7"
" Int. "	3/8" x 4"
at Cross Frames	1/2" x 7"
Length ϕ Studs	7"

Estimated Superstructure Quantities N.B. Lane

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
* 318	Tar Emulsion for Bridge Floors Gal.		181	
* 361-B	Bituminous Concrete Pave. Mod. (Dense Graded Top Course)		40	
* 372-A	Joint Sealer - Hot Poured	L.F.	129	
372-C	Joint Sealer - Preformed	L.F.	143	
401-AA	Concrete Class AA, Mod.	C.Y.	137	
402	Reinforcing Steel	Lb.	33,515	
403	Spiral Reinforcement (2440*)	L.S.	12	1/2
404-A	Structural Steel @ 150	Lb.	170,827	
556C	Granite Bridge Curb. Mod.	L.F.	215	
572	Bridge Railing	L.F.	331	

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 41
SHEET 21 OF 36
FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford
ROUTE No. 191 LOG STA.
191 over Ramp C (North bound)
Superstructure Details
SCALE AS INDICATED

SURVEYED BY
DRAWN BY A.R.B. CHECKED BY A.J.C.
PROJECT No. 191-1 (25) 199
SHEET 22 OF 28

BR 114

SPECIFICATIONS: ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED JANUARY 1956, AND THE A.A.S.H.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1961 TOGETHER WITH THE LATEST REVISIONS. WELDING SHALL CONFORM TO SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY, AWS D2.0-63.

DESIGN IS FOR HS20-44 LOADING MODIFIED FOR THE NATIONAL SYSTEM OF INTERSTATE HIGHWAYS, APPLIED IN ACCORDANCE WITH THE PROVISIONS OF THE A.A.S.H.O. STANDARD SPECIFICATIONS, ARTICLE 1.2.8.

STRUCTURAL STEEL: UNLESS OTHERWISE NOTED ON THE PLANS, ALL STRUCTURAL STEEL SHALL CONFORM WITH A.S.T.M. DESIGNATION A-36-62T.

UNLESS OTHERWISE DETAILED, ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" HIGH STRENGTH BOLTS (A325) USING 15/16" HOLES. WHERE CONNECTIONS ARE NOT DETAILED ON THE PLANS, THEY SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STATE FOR APPROVAL.

DETAILS OF SHEAR CONNECTORS SHALL BE SUBMITTED TO THE STATE FOR APPROVAL. THE CAMBER SHALL APPROXIMATE A SIMPLE CIRCULAR CURVE FROM END TO END OF PLATE GIRDER. AFTER THE STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS ON THE TOP OF THE PLATE GIRDERS SHALL BE TAKEN UNDER THE DIRECTION OF THE ENGINEER TO DETERMINE THE FINAL GRADE.

NO SCUPPERS ARE REQUIRED.

PAINT: THE FINAL COAT OF FIELD PAINT SHALL BE DARK GREEN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CONCRETE: ALL CONCRETE IN THE SUPERSTRUCTURE SHALL BE CLASS AA (MOD.) AND ALL CONCRETE IN THE SUBSTRUCTURES AND APPROACH SLABS SHALL BE CLASS B (MOD.).

ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" X 1".

CONSTRUCTION JOINTS SHALL BE AS INDICATED ON THE STANDARDS UNLESS OTHERWISE INDICATED ON THE PLANS.

REINFORCING STEEL: THE SLAB REINFORCING (SSOI BARS) SHALL BE CUT IN THE FIELD TO FIT THE SKEWED END, THE CUT-OFF BARS SHALL BE USED AT THE OPPOSITE END OF THE SPAN.

MINIMUM COVER FOR REINFORCING STEEL, MEASURED FROM THE SURFACE OF THE REINFORCEMENT, SHALL BE 2" UNLESS OTHERWISE SPECIFIED.

PILES: STEEL PILES SHALL BE DRIVEN TO REFUSAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WHERE PILES ARE DRIVEN IN FILL, THE MATERIAL SHOULD BE SUCH AS TO HAVE NO STONES LARGE ENOUGH TO INTERFERE WITH THE DRIVING OF PILES.

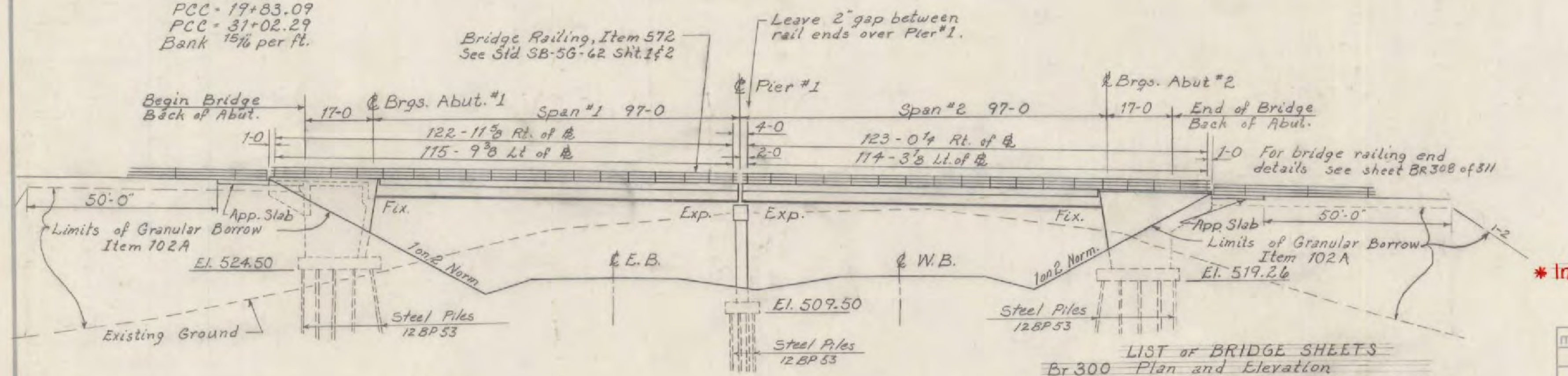
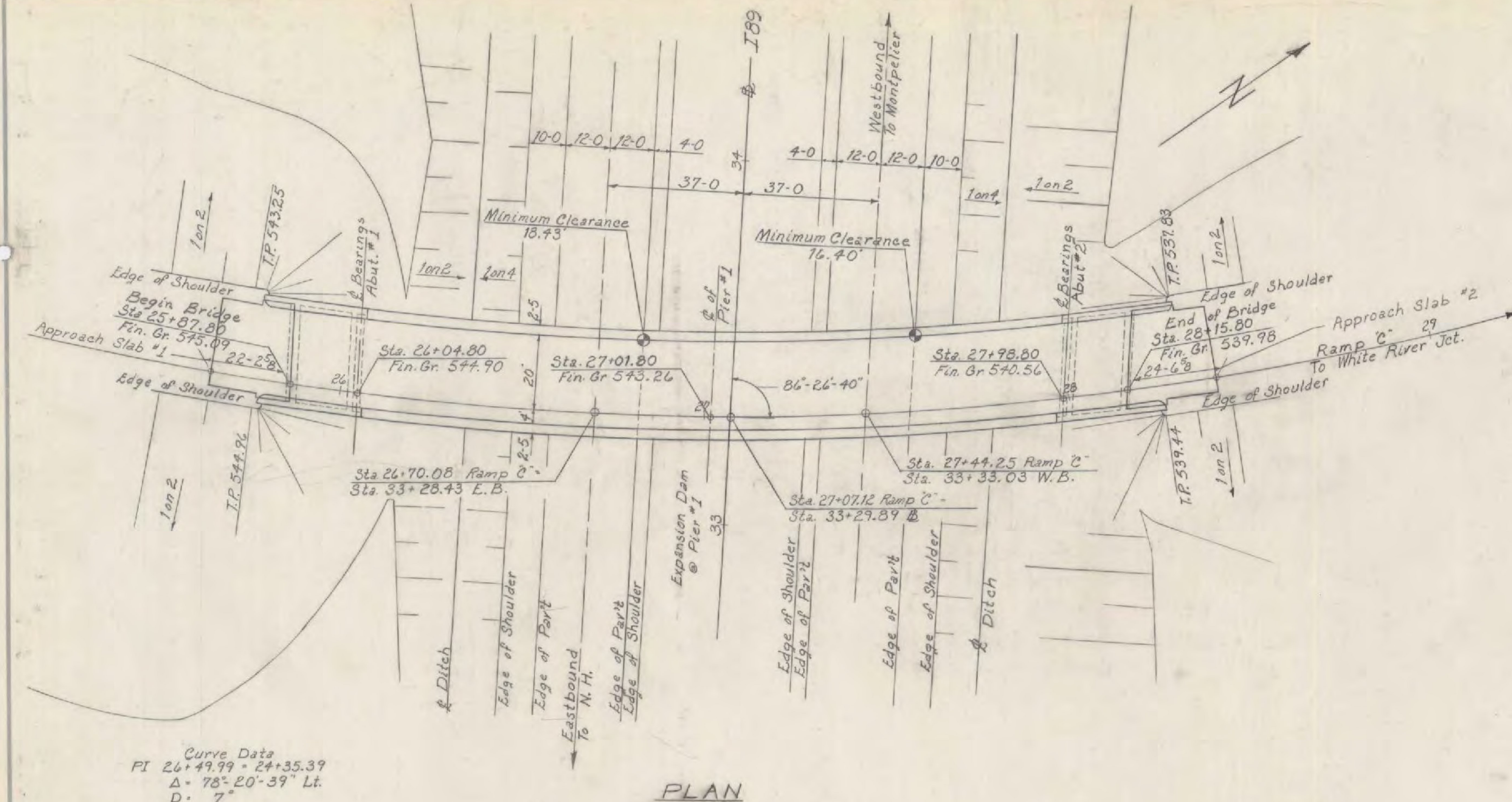
GENERAL: ALL DIMENSIONS GIVEN ARE AT 68°F. AND ARE MEASURED HORIZONTALLY OR VERTICALLY UNLESS OTHERWISE NOTED.

BORINGS INDICATED ON THE DRAWINGS HAVE BEEN MADE FOR DESIGN PURPOSES ONLY AND ARE NOT WARRANTED TO SHOW ACTUAL SUB-SURFACE CONDITIONS.

THE ENTIRE EXPOSED TOP SURFACE OF THE ABUTMENT, BRIDGE SEATS AND PIER SHALL BE COATED WITH ITEM 407, ASPHALTIC-ASBESTOS COATING 1/2" THICK. THIS ITEM SHALL BE APPLIED AFTER ALL PAINTING AND INCIDENTAL ITEMS ARE COMPLETED.

UNLESS OTHERWISE DESIGNATED, ALL EXPANSION MATERIAL SHALL NOT CONTAIN ASPHALT OR BITUMINOUS MATERIAL AND IT SHALL CONFORM WITH A.A.S.H.O. DESIGNATION: M153 TYPE II.

WHERE BITUMINOUS CONCRETE PAVEMENT IS CALLED FOR AS WEARING SURFACE ON BRIDGE DECKS AND APPROACH SLABS IT SHALL BE A DENSE GRADED TOP COURSE MATERIAL, APPLIED IN ONE COURSE, ONE AND ONE-HALF INCHES (1 1/2") THICK.



- LIST OF BRIDGE SHEETS
- Br 300 Plan and Elevation
 - 301 Bridge Quantity Sheet
 - 302 Preliminary Information Sheet
 - 303 Boring Log
 - 304 Framing Plan and Typical Section
 - 305 Expansion Dam
 - 306 Abutment N#1
 - 307 Abutment N#2
 - 308 Abutment Details
 - 309 Pier N#1
 - 310 Approach Slabs N#1 & 2
 - 311 Reinforcing Schedule

SCB-D6-62 Details A,B,C, & F
SB-56-62 Sheets 1 & 2
G3a

* Indicates Items on Stage II Construction

Superstructure Quantities						
ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL	
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
401-AA	CONC. CLASS AA (MOD.)	C.Y.	183			183
	CONC. CLASS B (MOD.)	C.Y.				
402	REINF. STEEL	LBS.	39,142			39,142
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING	L.F.				
* 318	Tar Emulsion for Bridge Floors	Gal.	208			
* 361-B	Bit. Conc. Pav't Dense graded top	Tons	44			
* 372-A	Joint Sealer - Hot Poured	L.F.	51			
* 373	Rubber Joint Material	L.F.	79			
404-A	Structural Steel	LBS.	175,741			175,741
556-C	Granite Bridge Curb (Mod)	L.F.	452			452
572	Bridge Railing	L.F.	488			488
403	Spiral Reinforcement (3710*)	L.S.	1			1

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD

ROUTE No. 191 STA. 27+02

Plan and Elevation

Ramp C over Interstate 189

SCALE 1" = 20'

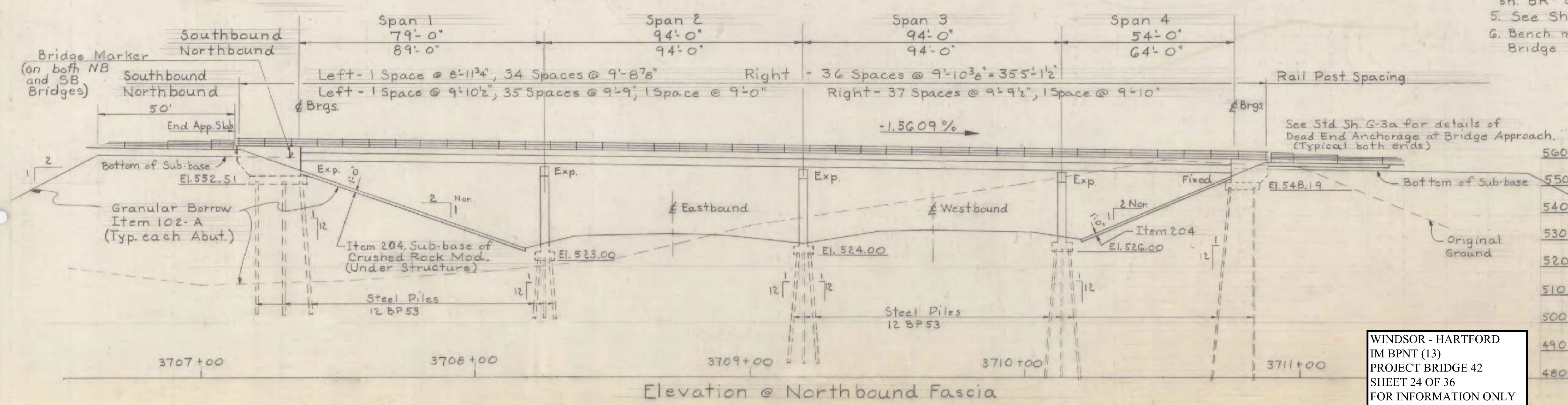
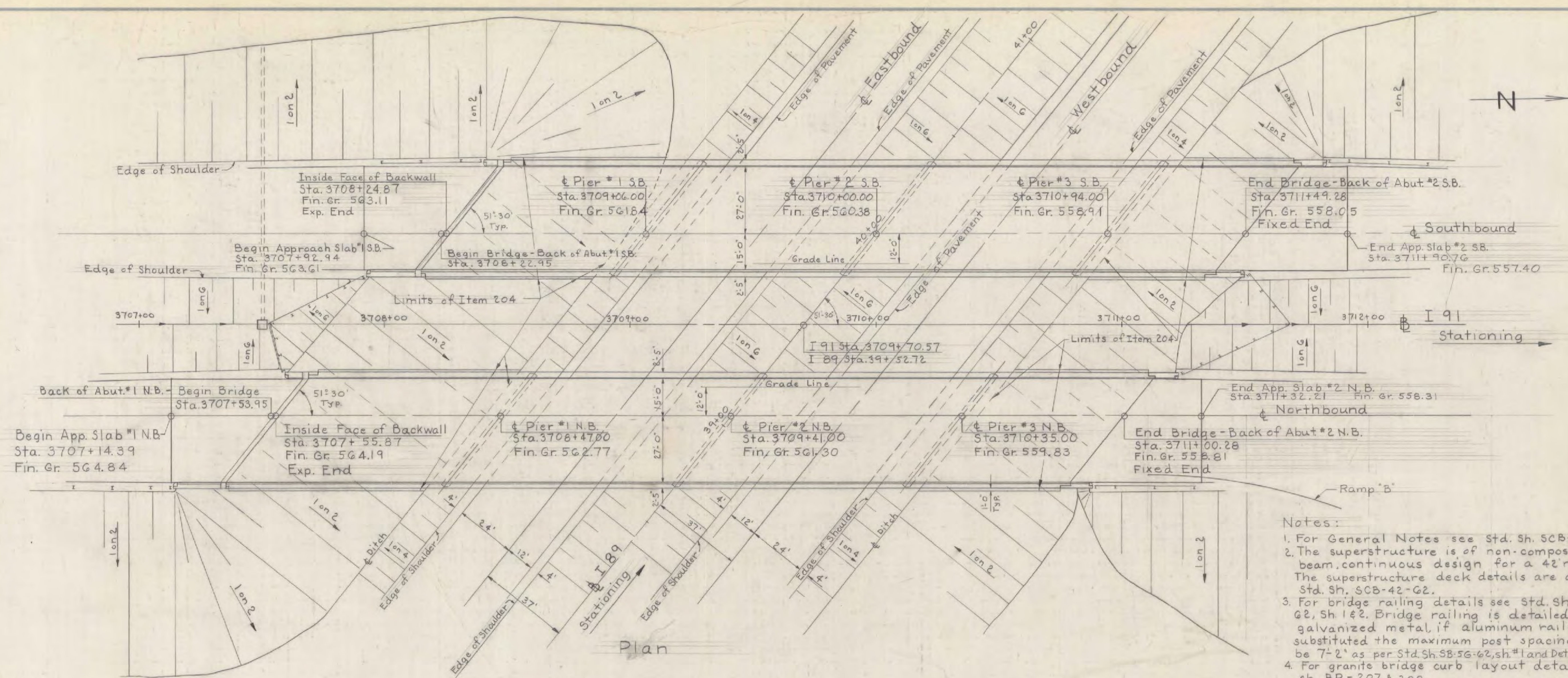
SURVEYED BY

DRAWN BY RFG CHECKED BY DHR

PROJECT No. 191-1(25)

BR 300 of 311 SHEET 24 OF 245 Sheet 193 of 242

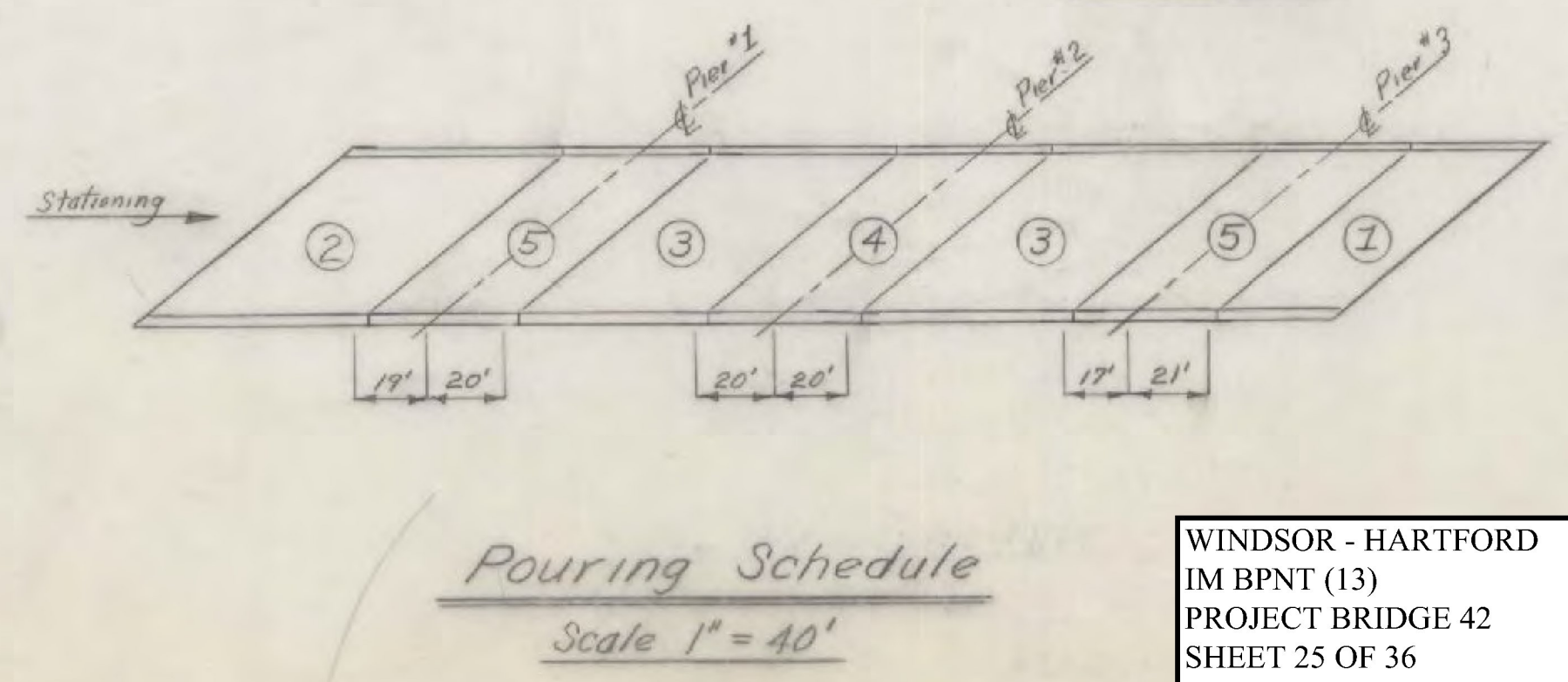
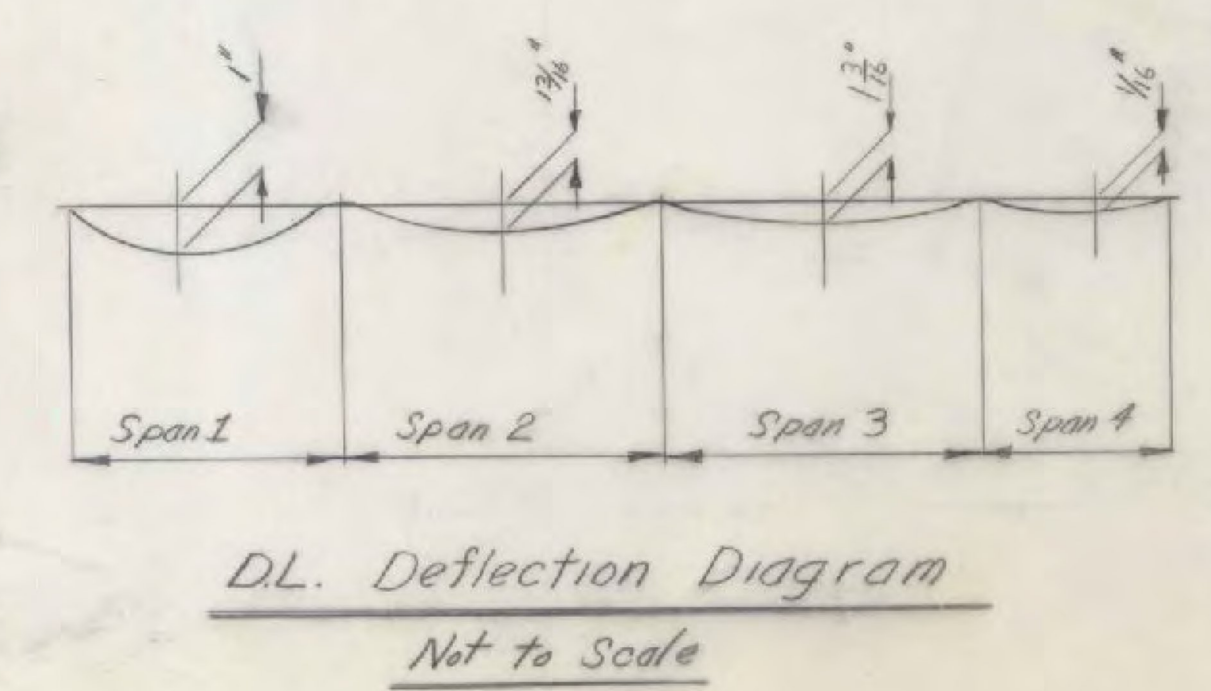
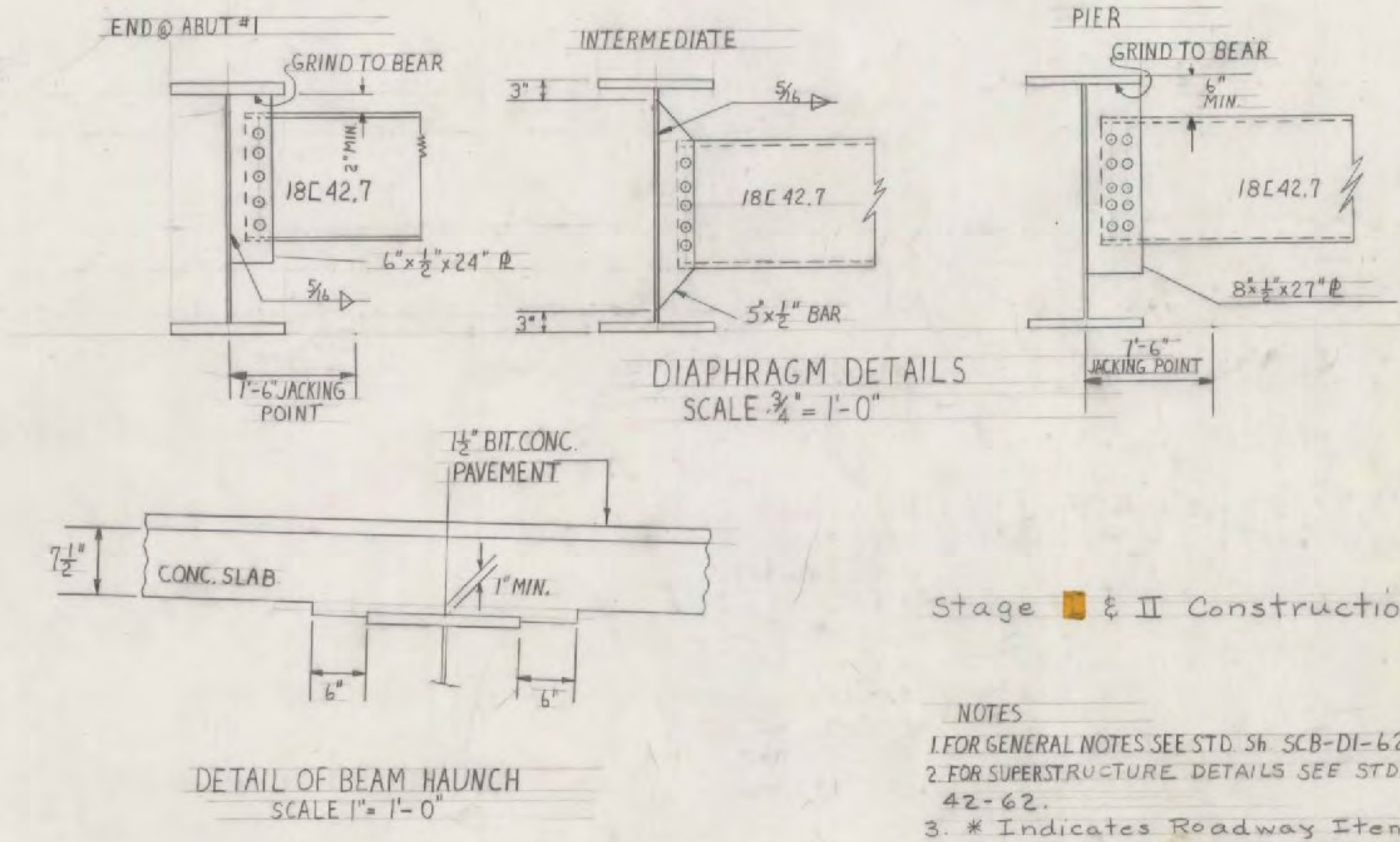
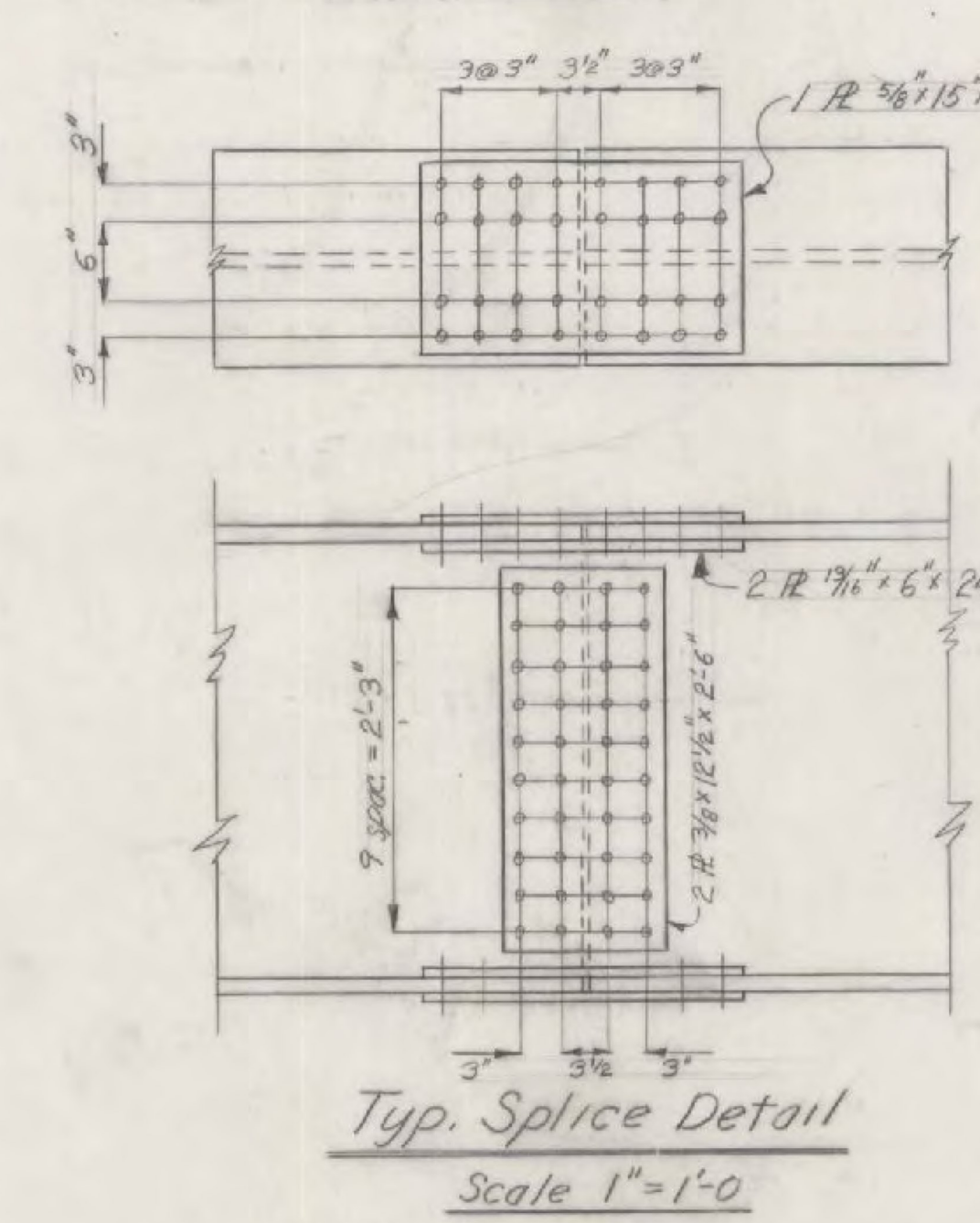
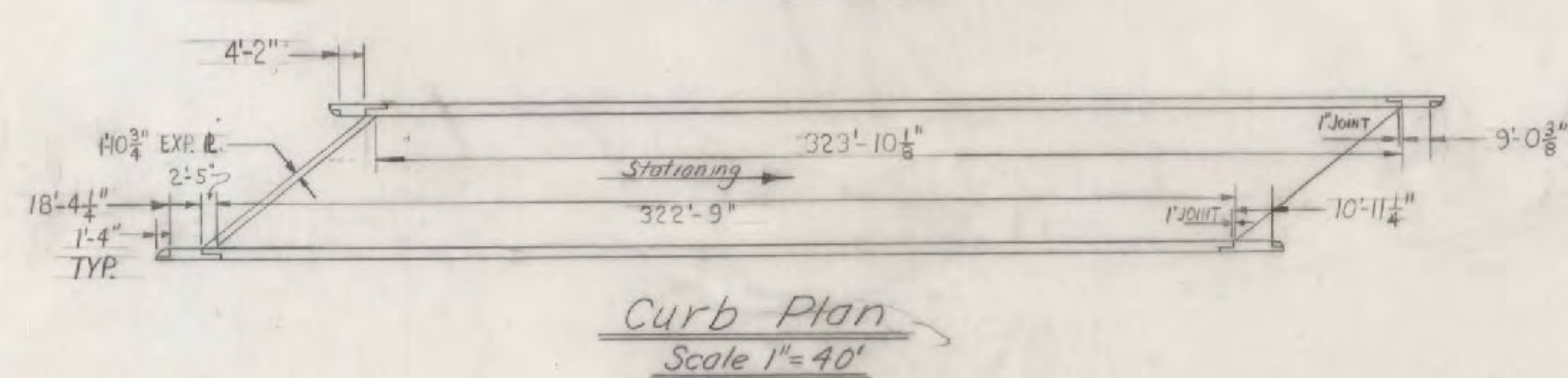
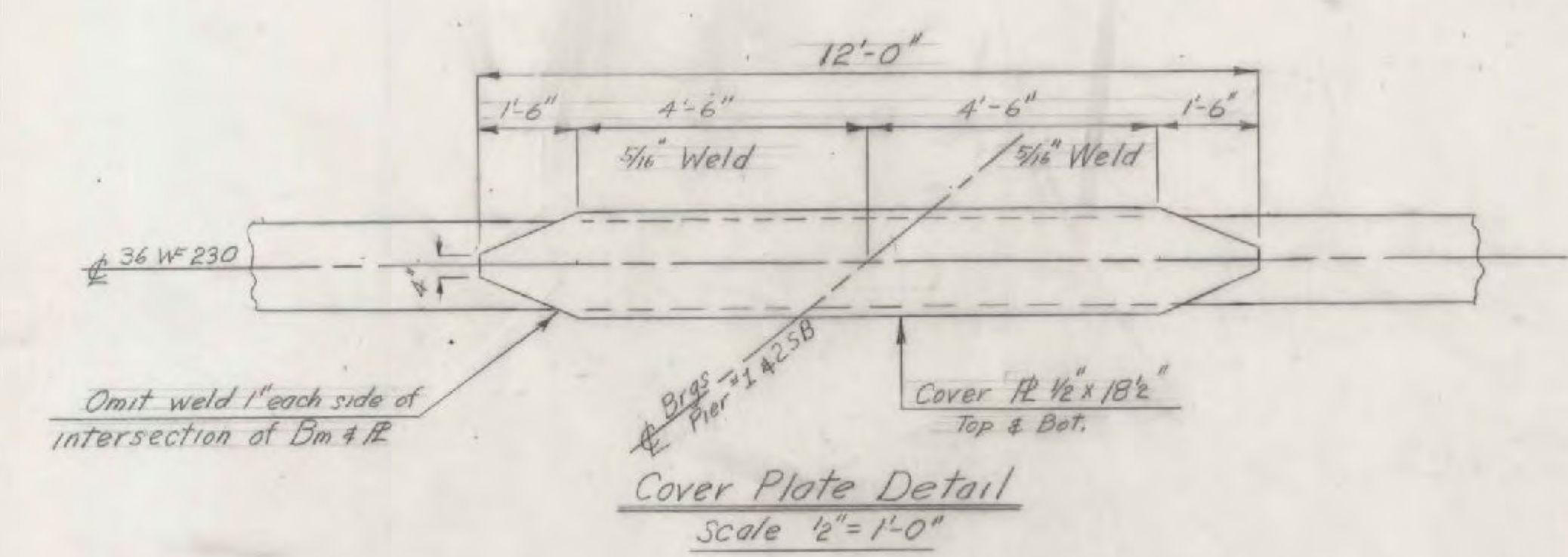
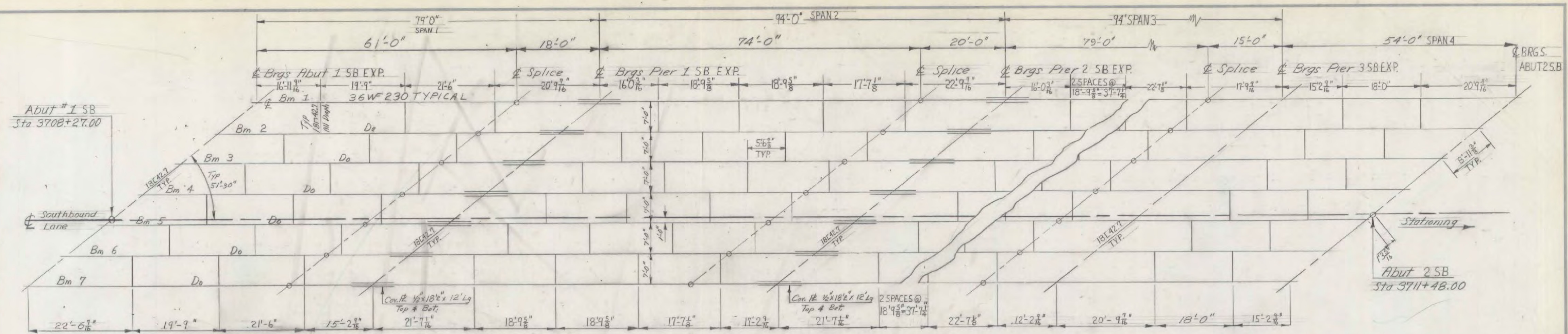
WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 41C
SHEET 22 OF 36
FOR INFORMATION ONLY



Stage II Construction

STATE OF VERMONT	
DEPARTMENT OF HIGHWAYS	
TOWN OF	Hartford
ROUTE No.	I 91 LOG STA.
I 91 over I 89	
Plan and Elevation	
SCALE	1" = 20'
SURVEYED BY	Jewett
DRAWN BY	A.J.C. CHECKED BY JW-WMS
PROJECT No.	I 91-1(25)(1)
SHEET	25 OF 265
BR 200	

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 42
SHEET 24 OF 36
FOR INFORMATION ONLY



EST. SUPERSTRUCTURE QUANTITIES - SOUTHBOUND

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.		
	CHAN. EXCAV. OF ROCK	C.Y.		
	UNCLASS. CHAN. EXCAV.	C.Y.		
	STRUCT. EXCAV.	C.Y.		
401-AA	CONC. CLASS AA (MOD.)	C.Y.	445	454
402	CONC. CLASS B (MOD.)	C.Y.	110,109	111,109
	REINF. STEEL	LBS.		
	ASPHALTIC-ASB. COATING	S.Y.		
	TREATED TIMBER PILING	L.F.		
	SPLICES FOR STEEL PILING	EA.		
372-A	Joint Sealer - Hot Poured	L.F.	10.2	
372-C	Joint Sealer - Preformed	L.F.	119	
404-A	Structural Steel	LB	573,000	606,716
318	TAR EMULSION FOR BRIDGE FLOORS	GAL	604	
361-B	BIT. CONC. PAVEMENT MOD. (DENSE GRADED TOP)	TON	129	
556-C	GRANITE BRIDGE CURB (MOD.)	L.F.	647	647
572	BRIDGE RAILING	L.F.	701	701

Stage I & II Construction

NOTES
1. FOR GENERAL NOTES SEE STD. SH. SCB-DI-62
2. FOR SUPERSTRUCTURE DETAILS SEE STD. SH. SCB-42-62.
3. * Indicates Roadway Items.
4. For additional notes see sh. BR-208.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF **HARTFORD**

ROUTE NO. **I-91** LOG STA. **I-91 over I-89**

Southbound - Superstructure

SCALE **as noted**

SURVEYED BY **C.F.H.** CHECKED BY **A.J.C.**

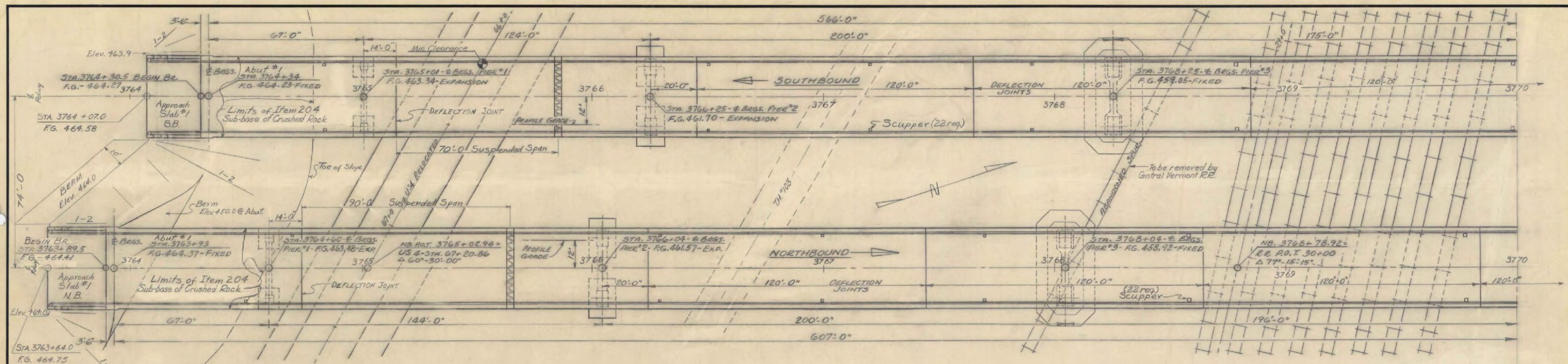
DRAWN BY **C.F.H.** PROJECT NO. **I-91-1(25)**

SHEET **102 OF 265**

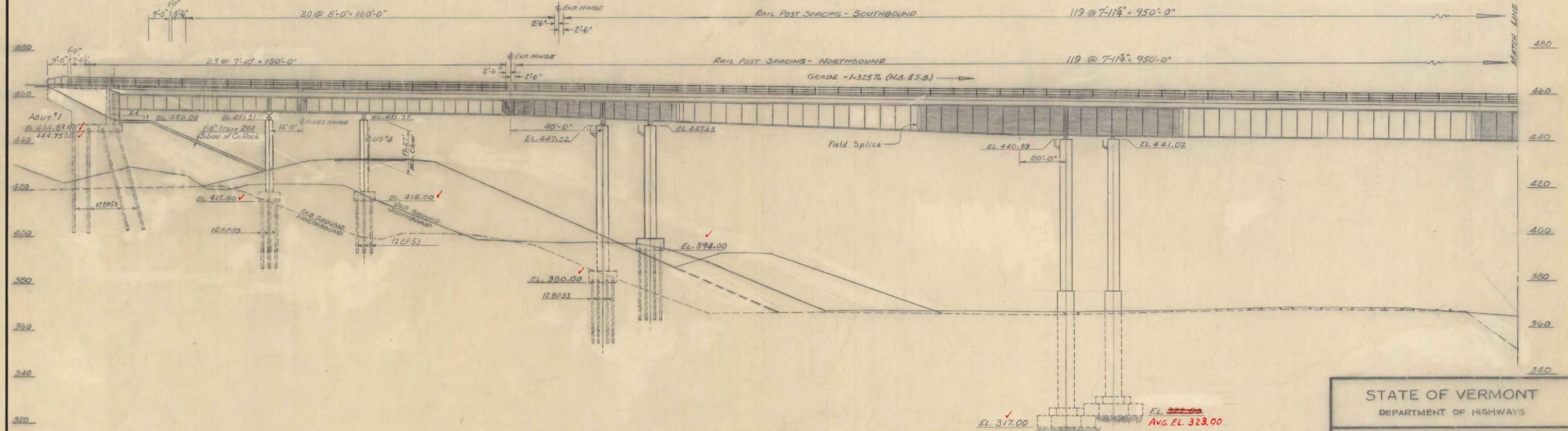
BR 207

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 42
SHEET 25 OF 36
FOR INFORMATION ONLY

[illegible]



PLAN



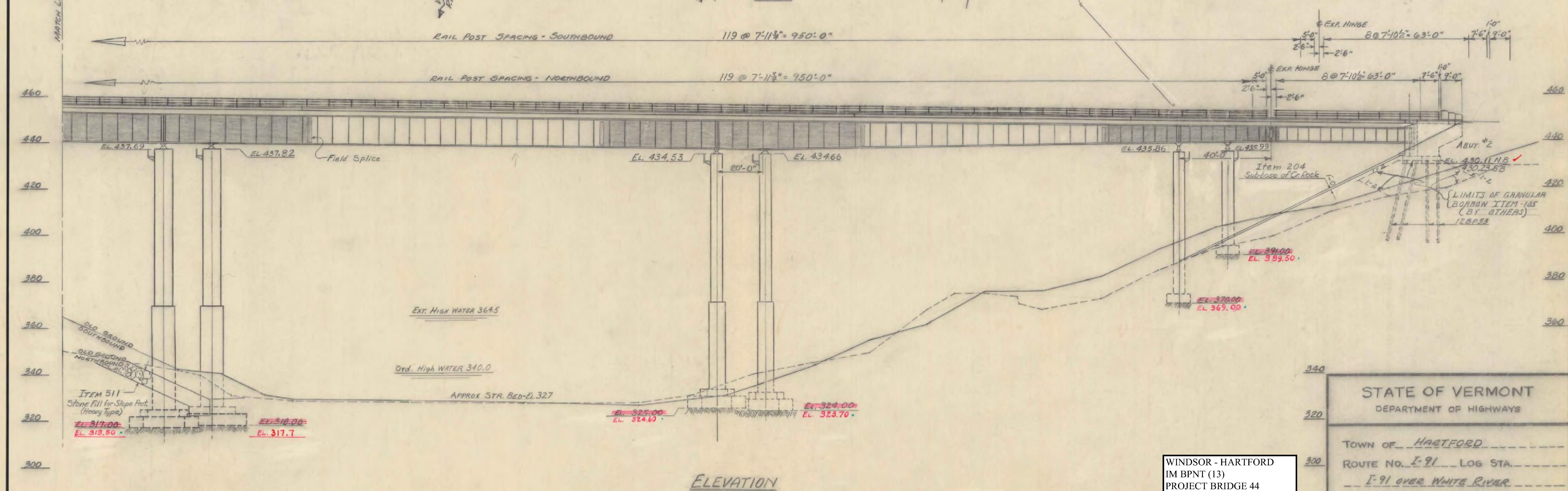
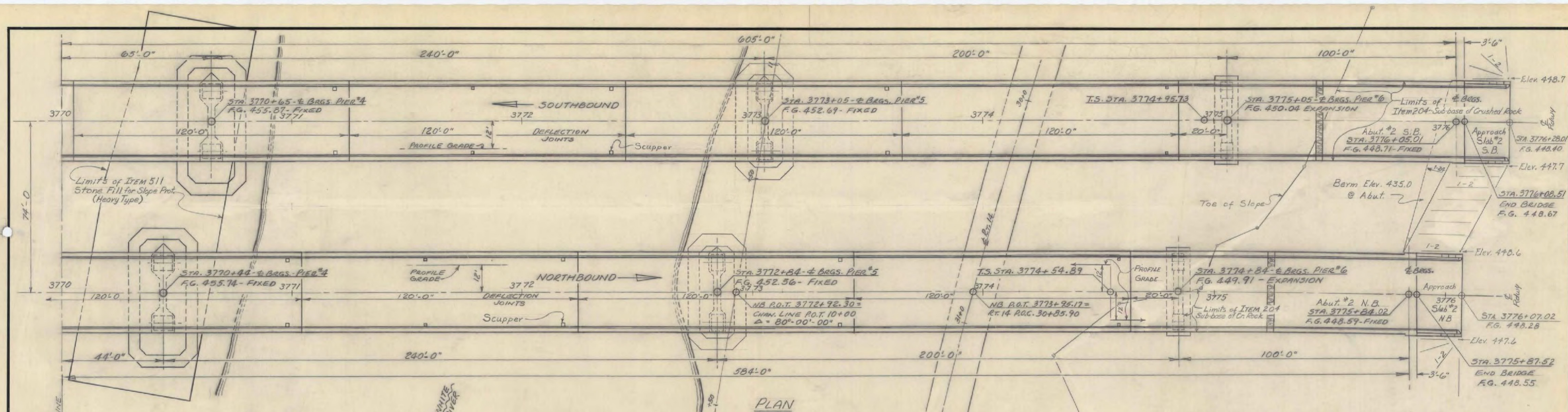
ELEVATION

STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
TOWN OF <u>HARTFORD</u>	ROUTE No. <u>I-91</u> LOG STA. <u>---</u>
<u>I-91 OVER WHITE RIVER</u>	
PLAN AND ELEVATION	
SCALE 1" = 20'-0"	
SURVEYED BY <u>SWETT & WATSON</u>	
DRAWN BY <u>R.T. 7/6</u> CHECKED BY <u>N.B.T.</u>	
PROJECT No. <u>I-91-2 (3)</u> (22)	
SHEET <u>11</u> OF <u>60</u> 52 of 175	

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 27 OF 36
FOR INFORMATION ONLY

NOTE- Shaded areas of Girder in the elevation view indicate that Girder material is ASTM A-441 low-alloy high strength steel. Remainder of Girder is ASTM A36 carbon steel.

BE 402 of 403



WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 28 OF 36
FOR INFORMATION ONLY

NOTE - Shaded areas of Girder in the elevation view indicate that Girder material is A.S.T.M. A-441 low-alloy, high strength steel. Remainder of Girder is A.S.T.M. A36 carbon steel.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD

ROUTE NO. I-91 LOG STA. ---

I-91 OVER WHITE RIVER

PLAN AND ELEVATION

SCALE 1" = 20'-0"

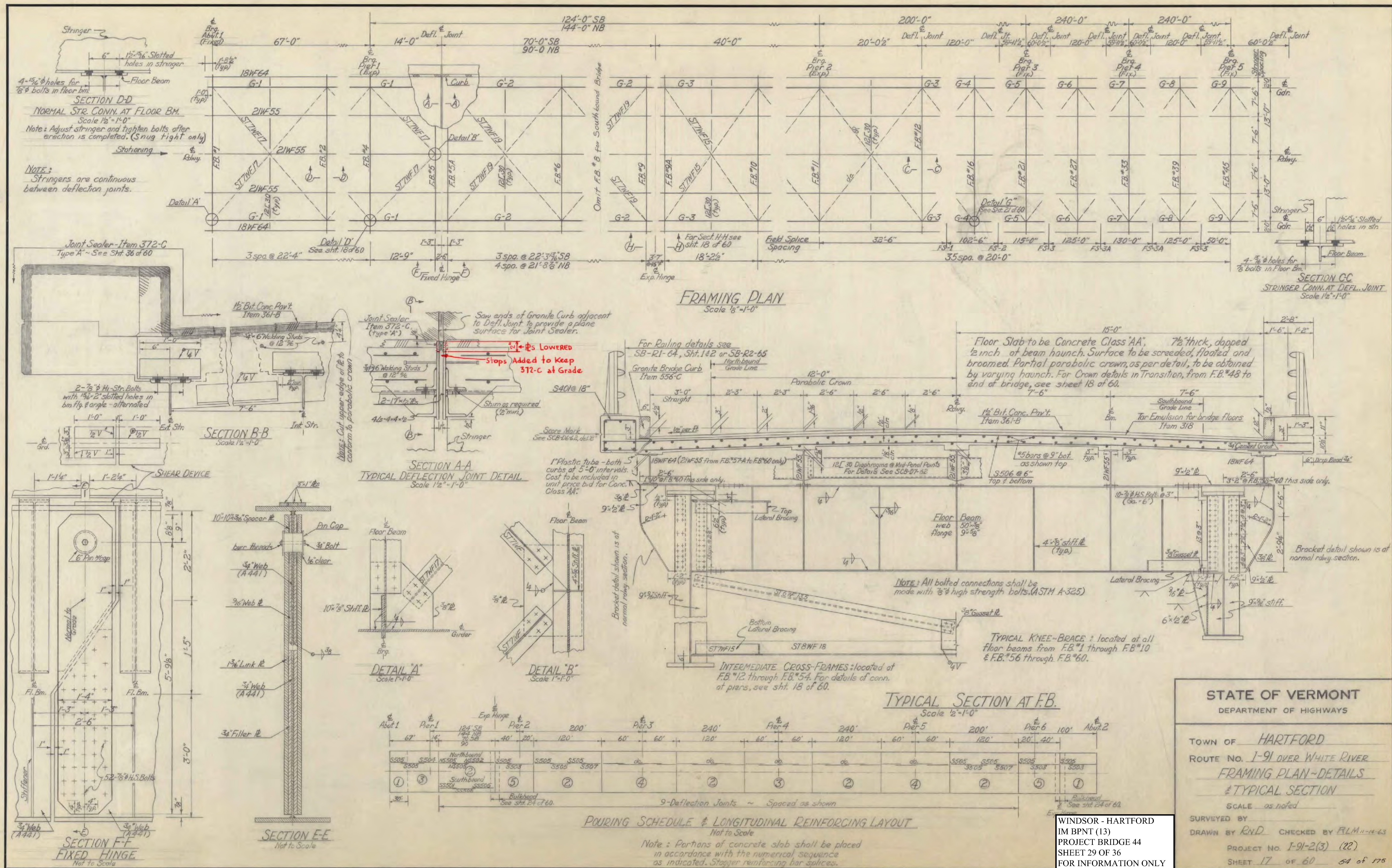
SURVEYED BY LEWIS & HARRISON

DRAWN BY B.E.G. CHECKED BY N.B.T.

PROJECT NO. I-91-2(3) (22)

SHEET 12 OF 60 03 of 175

BR 403 of 405

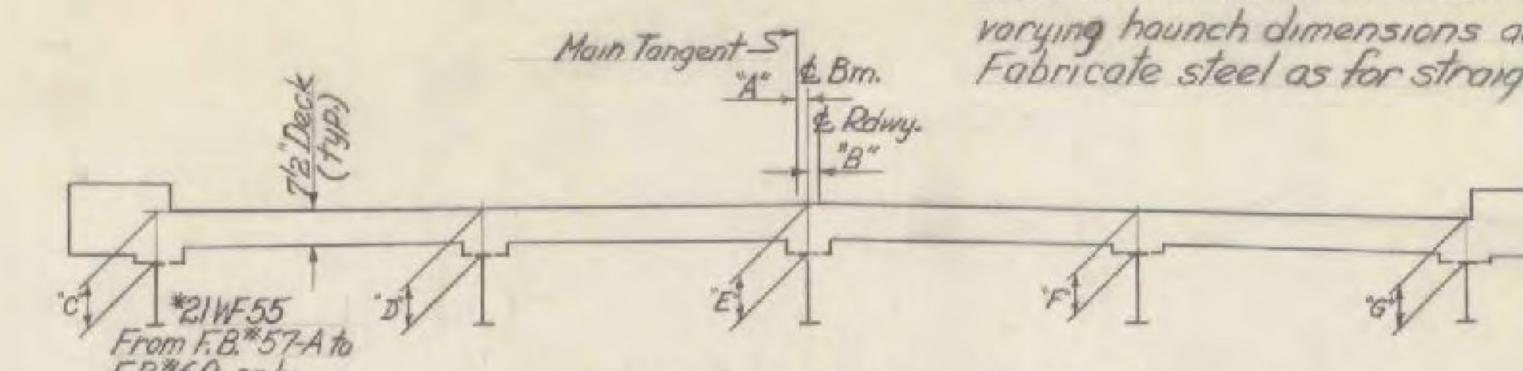
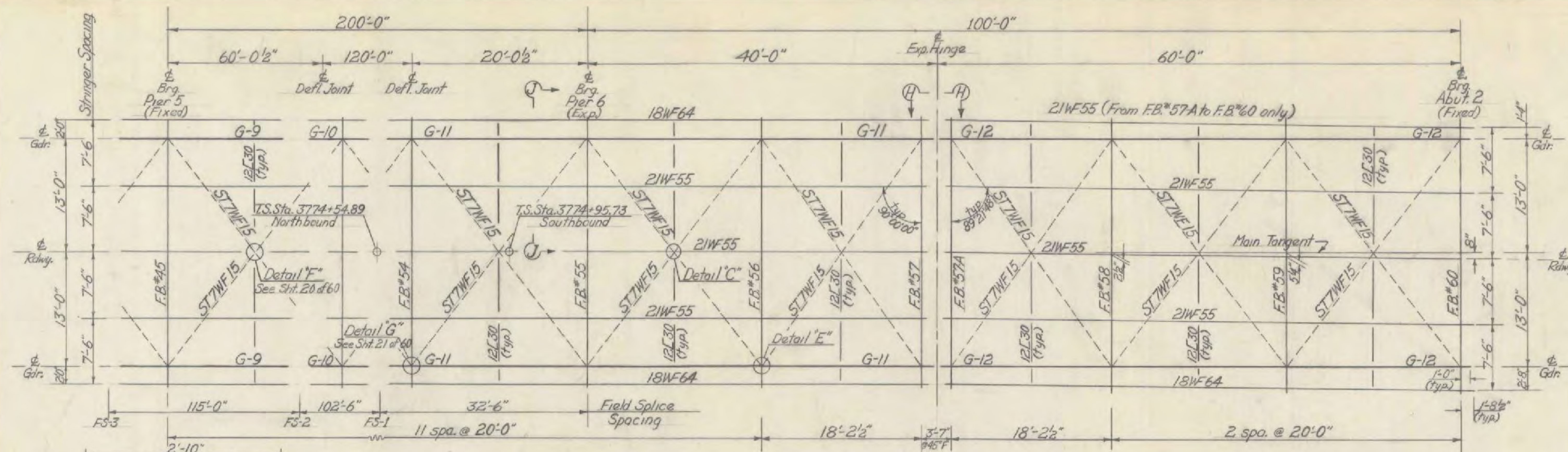


STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROUTE NO. I-91 OVER WHITE RIVER
FRAMING PLAN-DETAILS
TYPICAL SECTION
SCALE as noted
SURVEYED BY
DRAWN BY RND CHECKED BY PLM-11-43
PROJECT NO. I-91-2(3) (22)
SHEET 17 OF 60 54 of 175

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 29 OF 36
FOR INFORMATION ONLY

NOTE:
Transition from parabolic crown to straight slope 12'-0" either side of & to be made between F.B. #48 & F.B. #54 both NB. & SB. by varying haunch dimensions as indicated. Fabricate steel as for straight grade.



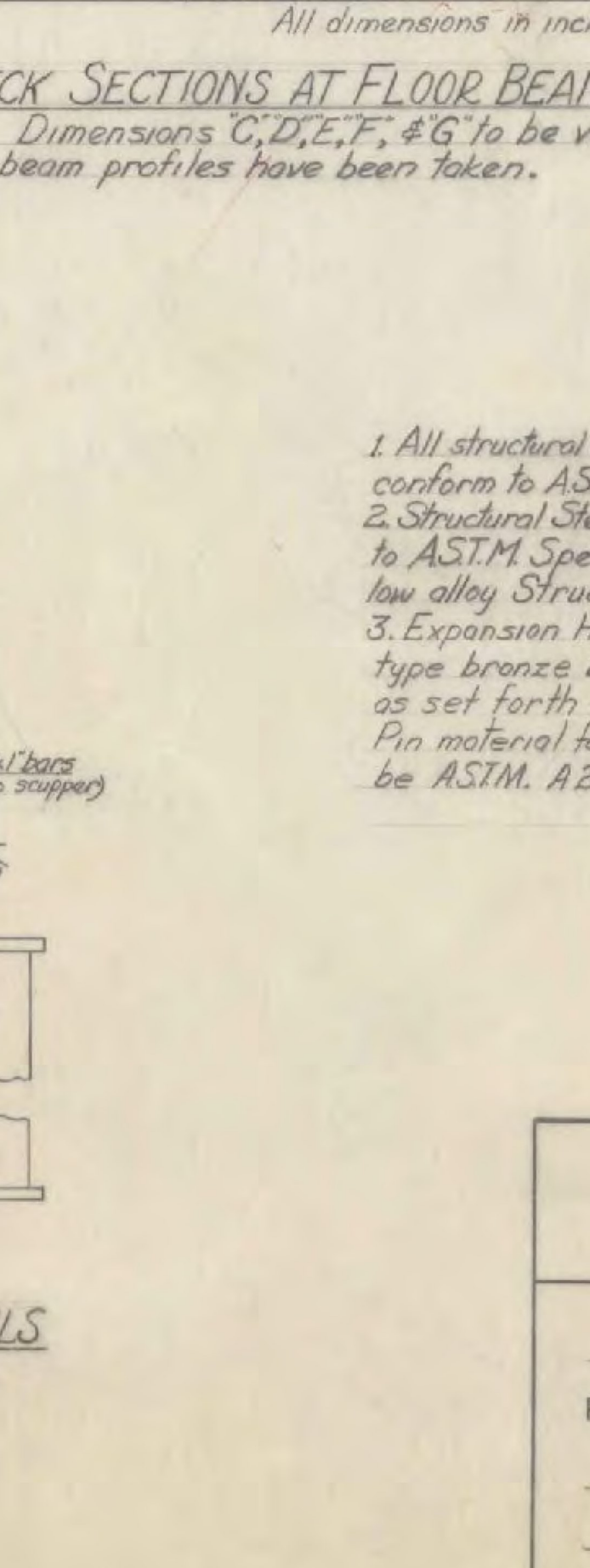
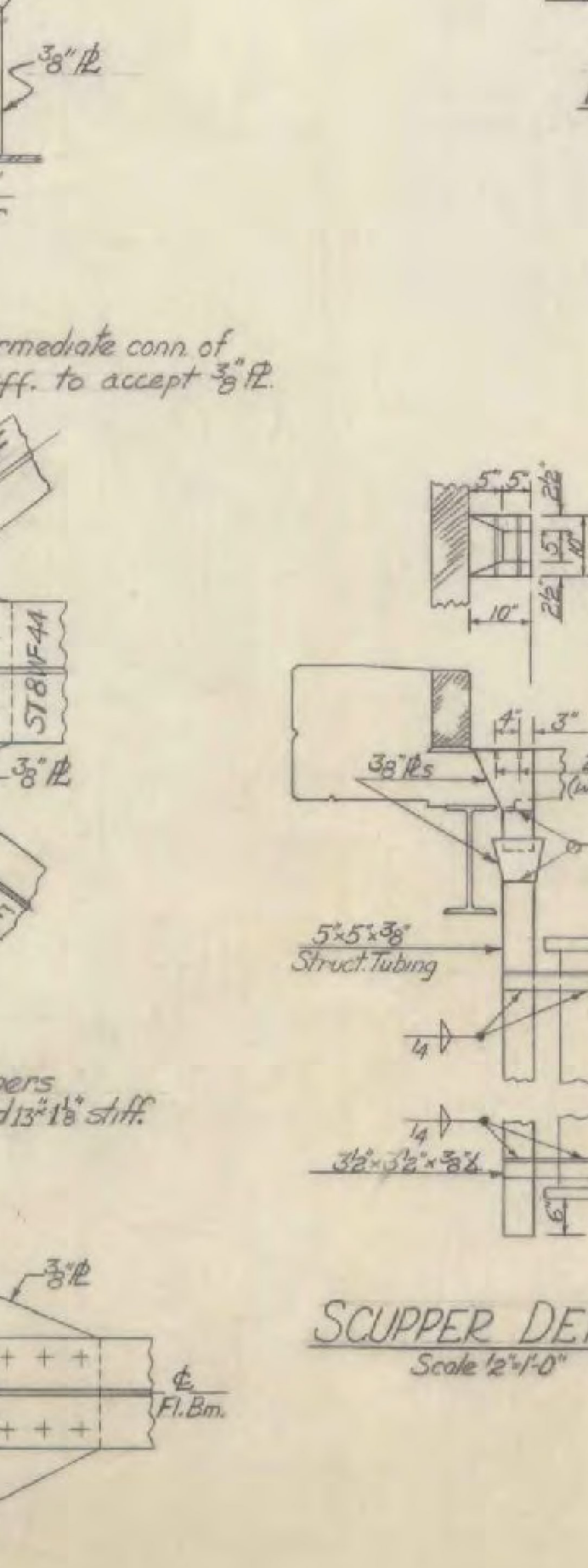
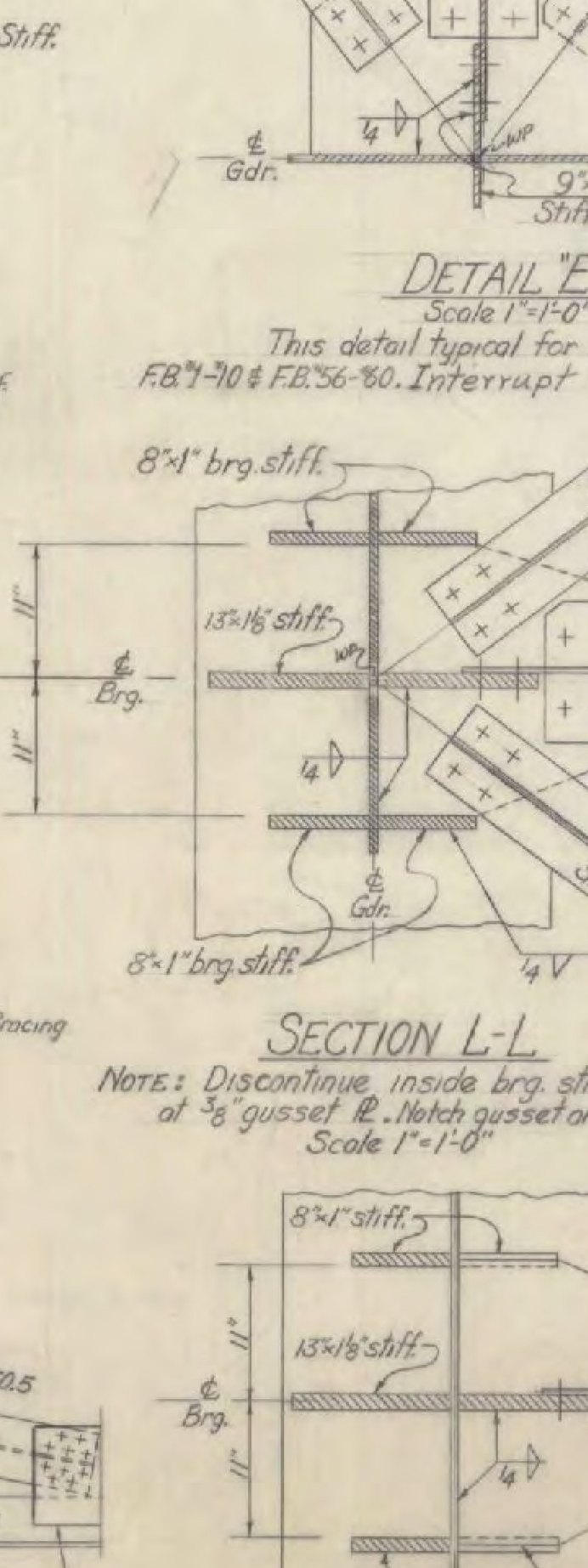
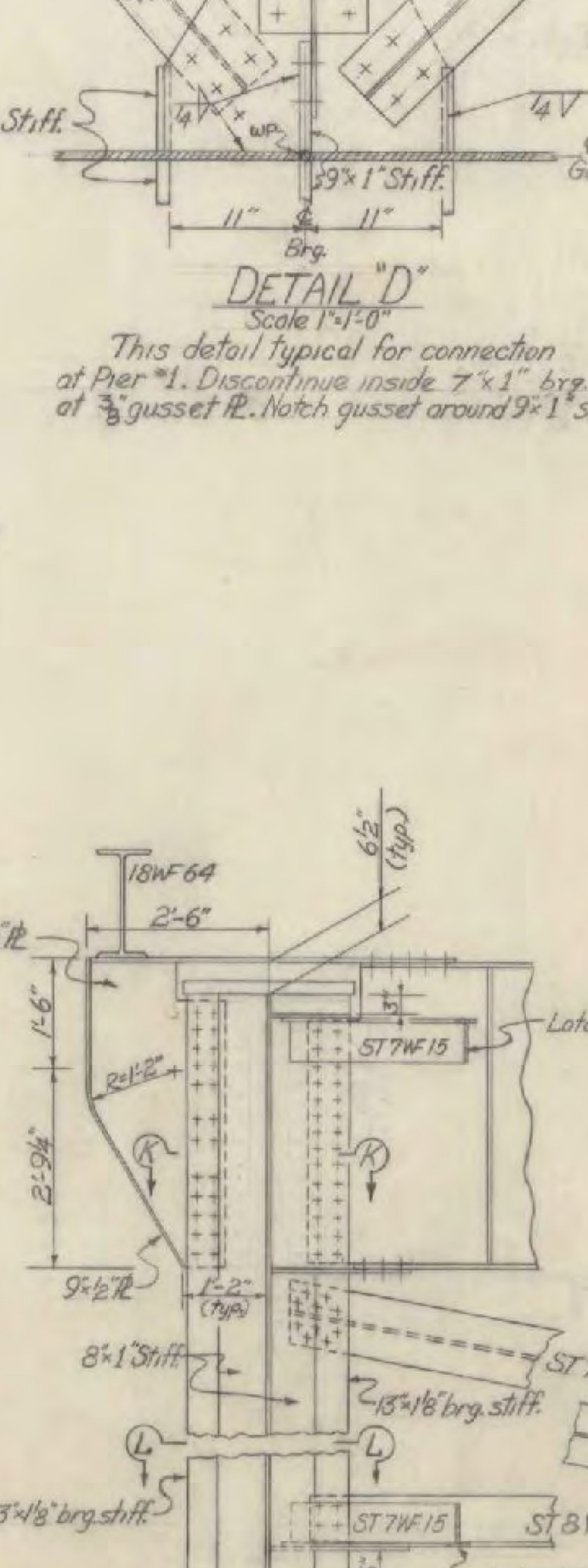
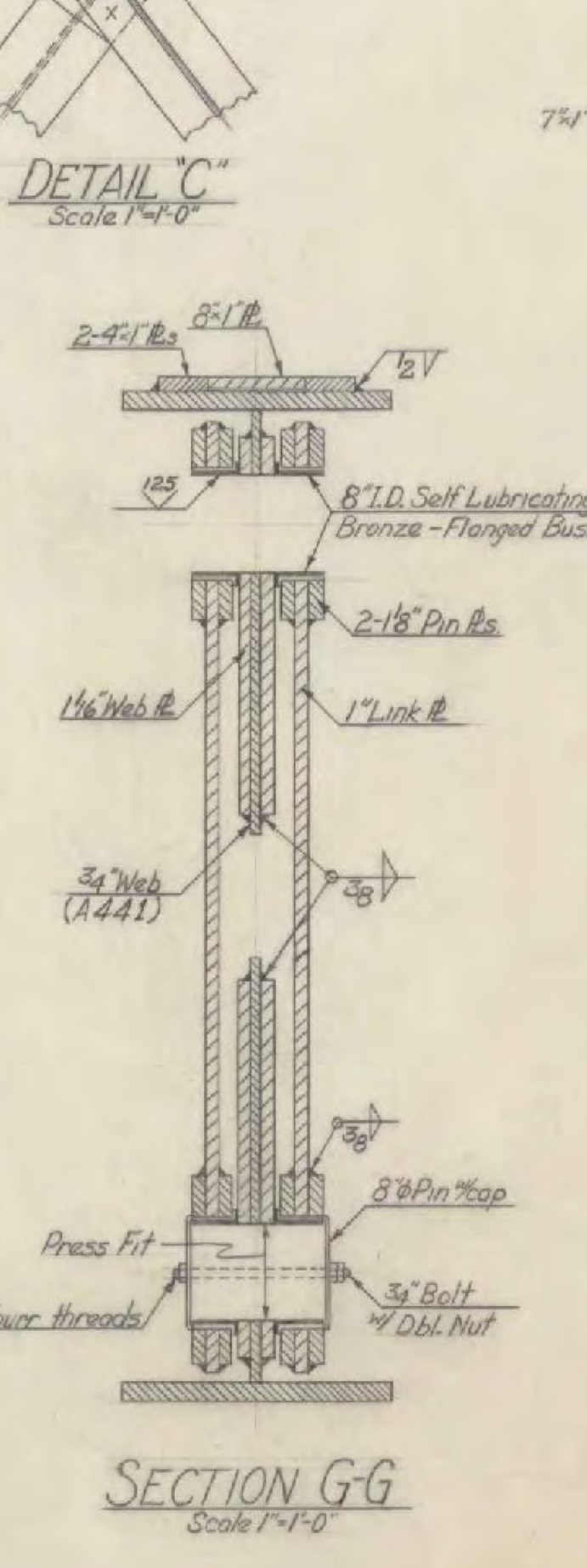
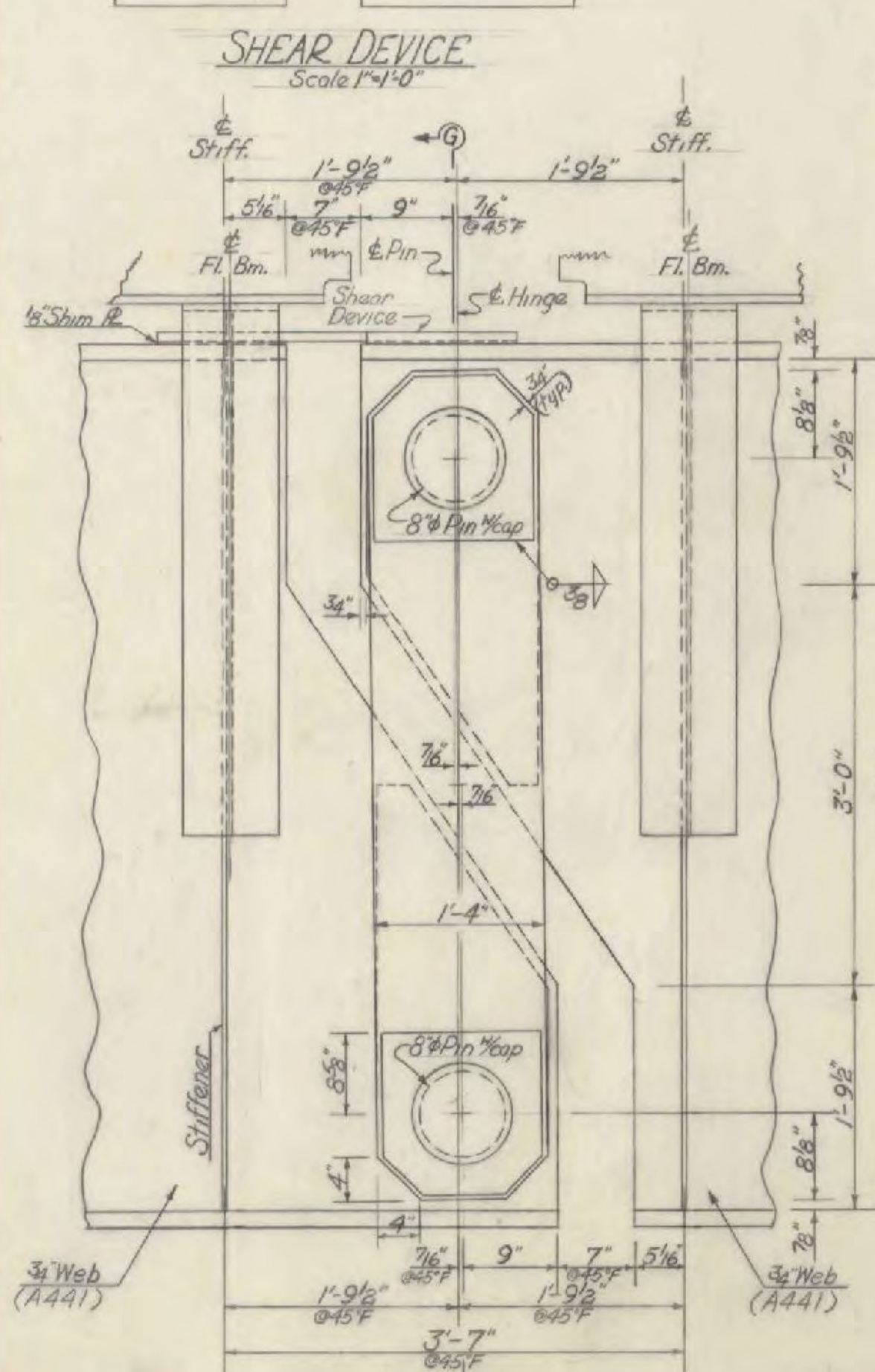
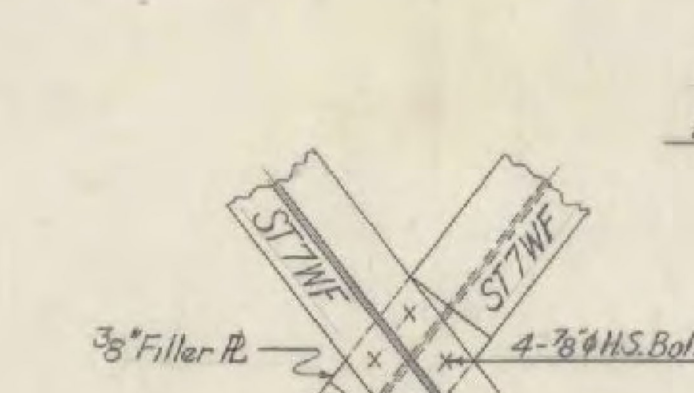
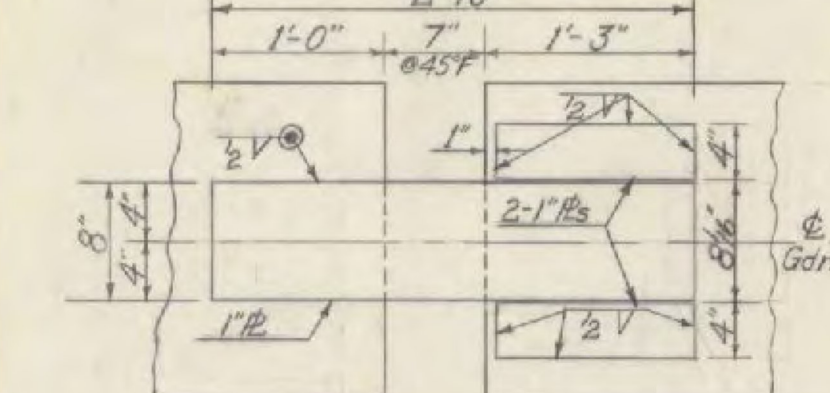
* Indicates a change in Stringer size.

Section at Floor Beam No.	A	B	C	D	E	F	G
48 (Normal Section)			8 1/2	9 1/2	10 1/2	9 1/2	8 1/2
53			8 1/2	8 1/2		8 1/2	8 1/2
54 (Slope Section)		0	8 1/2	8 1/2		8 1/2	8 1/2
55		4	8 1/2	8 1/2		8 1/2	8 1/2
56		1 1/2	10 1/2	9 1/2		8 1/2	8 1/2
57		2 1/2	11 1/2	9 1/2		8 1/2	8 1/2
57-A	0	3 1/2	* 8 1/2	10 1/2		8 1/2	8 1/2
58	2 1/2	3 1/2	* 10 1/2	10 1/2		8 1/2	8 1/2
59	5 1/2	6 1/2	* 11 1/2	11 1/2	10 1/2	8 1/2	8 1/2
60	8	10 1/2	* 12 1/2	11 1/2	10 1/2	9	8 1/2
48 (Normal Section)			8 1/2	9 1/2	10 1/2	9 1/2	8 1/2
54 (Slope Section)		0	8 1/2	8 1/2		8 1/2	8 1/2
55		4	8 1/2	8 1/2		8 1/2	8 1/2
56		1 1/2	10 1/2	9 1/2		8 1/2	8 1/2
57		2 1/2	11 1/2	9 1/2		8 1/2	8 1/2
57-A	0	3 1/2	* 8 1/2	10 1/2		8 1/2	8 1/2
58	2 1/2	3 1/2	* 10 1/2	10 1/2		8 1/2	8 1/2
59	5 1/2	6 1/2	* 11 1/2	11 1/2	10 1/2	8 1/2	8 1/2
60	8	10 1/2	* 12 1/2	11 1/2	10 1/2	9	8 1/2

All dimensions in inches

DECK SECTIONS AT FLOOR BEAMS ON SPIRAL
Dimensions C, D, E, F, & G to be verified after beam profiles have been taken.

- NOTES
1. All structural steel not otherwise detailed shall conform to ASTM Specification A-36-62T.
 2. Structural Steel detailed as A-441 shall conform to ASTM Specification A-441-60T, High-Strength Alloy Structural Manganese Vanadium Steel.
 3. Expansion Hinge shall have self-lubricating type bronze bushings meeting requirements as set forth in ASTM-B 22 (AASHTO M 107, Alloy "E") Pin material for Fixed & Expansion Hinges shall be ASTM A 235-63T, Class "E".



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

HARTFORD

ROUTE NO. I-91 STA. _____

FRAMING PLAN & DETAILS

I-91 OVER WHITE RIVER

SCALE as noted

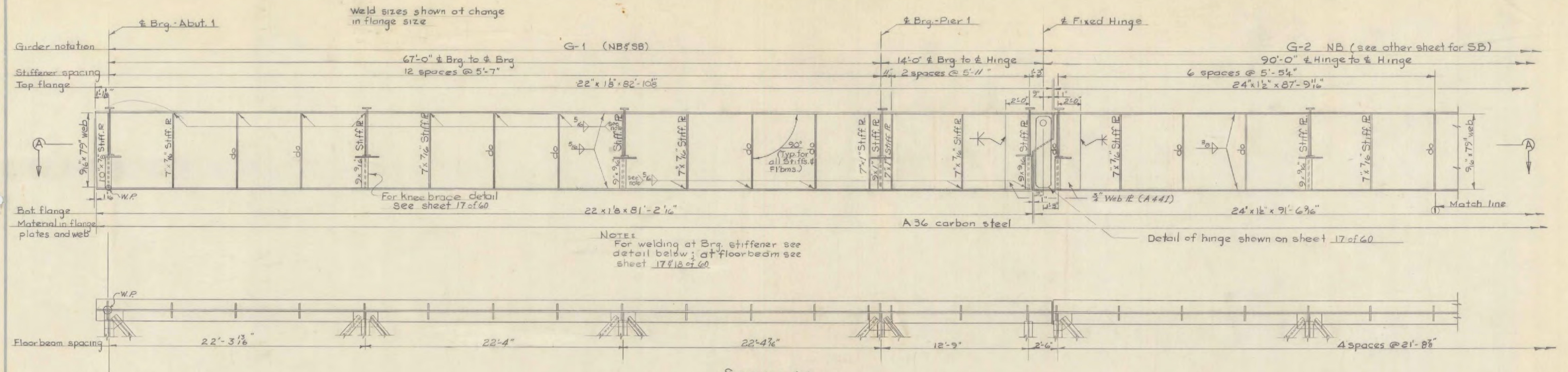
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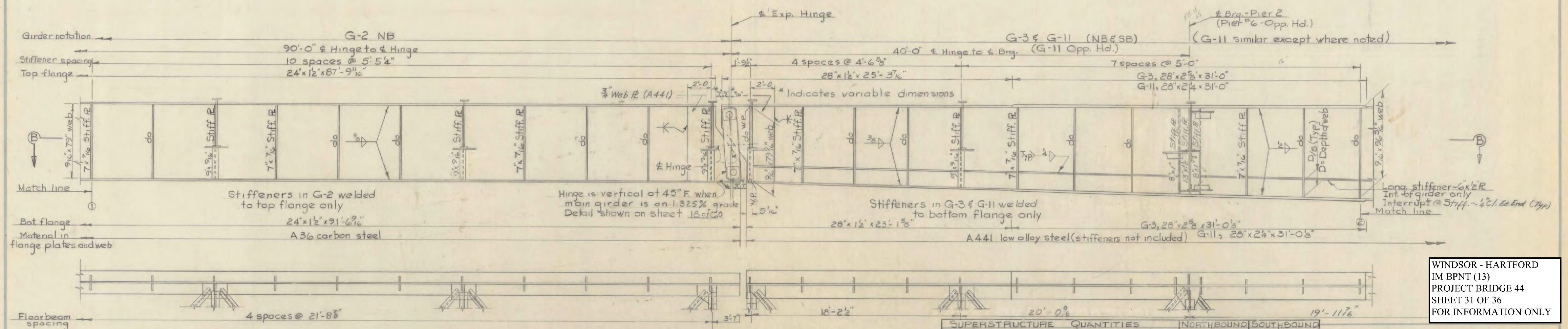
PROJECT NO. I-91-2(3)

SHEET 18 OF 60

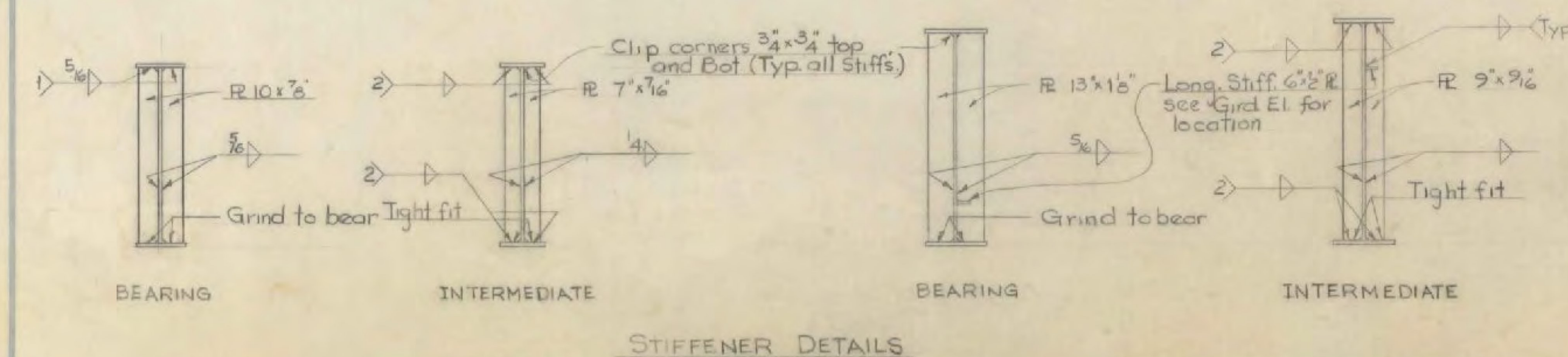
WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 30 OF 36
FOR INFORMATION ONLY



SECTION AA



SECTION B-B



- WELDING NOTES (Stiffeners)
1. Weld to top flange at abutment only
 2. Weld to top or bottom flange as indicated on Girder Elevation, opposite end to have tight fit (AASHTO 2.10.32)
 3. Where size of fillet weld is not shown use minimum size allowed by AWS Spec. D 2.0-63 para. 217(8).
 4. Full penetration groove welds may be substituted for grinding of bearing stiffeners.

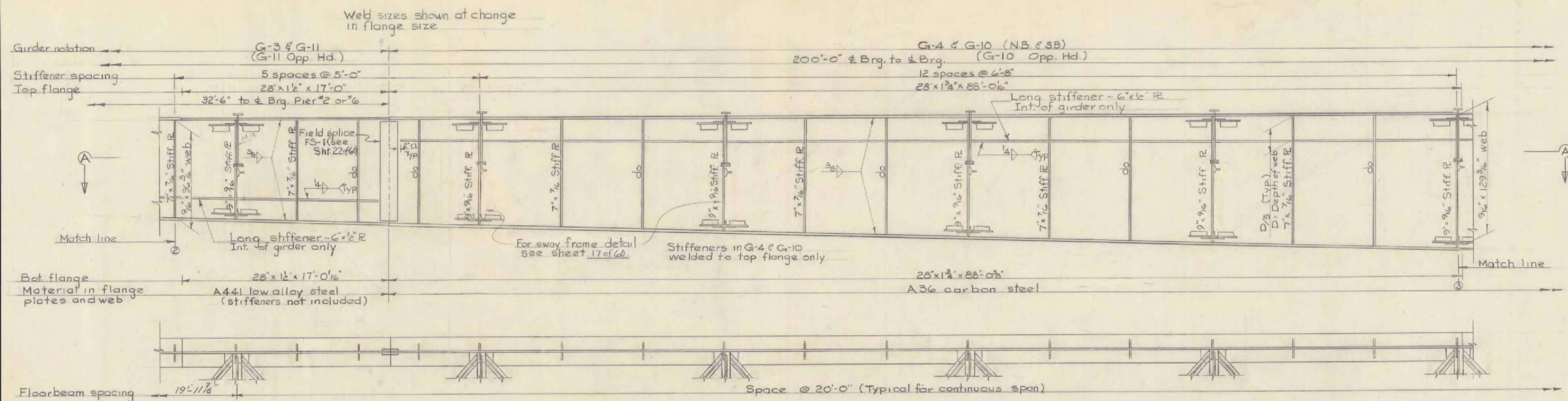
* Stage II Construction

SUPERSTRUCTURE QUANTITIES			NORTHBOUND		SOUTHBOUND	
ITEM NO.	ITEM	UNIT	TOTAL	FINAL	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-AA	CONC. CLASS AA	C.Y.	1260	1,284	1240	1,257
402	REINF. STEEL	LBS	283,000	307,568	278,300	295,191
407	ASPHALTIC-ASE. COATING	S.Y.				
408	Rebar for Air-entrainment for Concrete	CY.	1260	227	1240	206
440	Water Repellent	Gal.	142	70	140	66
515	TAR EMULSION FOR BRIDGE FLOORS	GAL.	1584	*	1557	*
361-B	BITUMINOUS CONCRETE PAVEMENT (DENSE GRADED TOP AND BOTTOM COURSE)	TON	340	*	330	*
372-C	Joint Sealer-Preformed (Type "A")	L.F.	369	448	369	448
404-A	STRUCTURAL STEEL	LBS	2,412,720	2,501,913	2,401,521	2,460,400
556-C	GRANITE BRIDGE CURB	L.F.	2,378	2,479	2,338	2,434
572	BRIDGE RAILING	L.F.	2,447	2,487	2,403	2,444

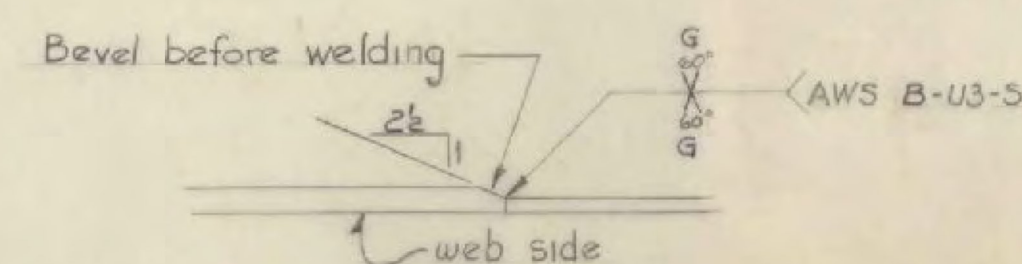
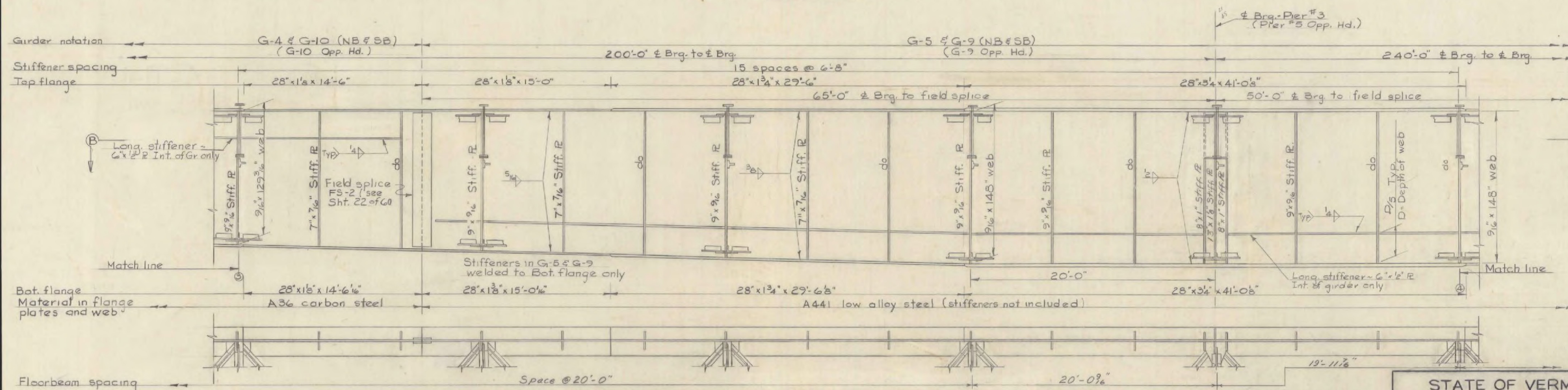
WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 31 OF 36
FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROUTE NO. 1-91 LOG STA.
GIRDER DETAILS - NB & SB
INT. 91 OVER WHITE RIVER
SCALE 1/4" = 1'-0"
SURVEYED BY
DRAWN BY NBT CHECKED BY RLM 11-5-63
PROJECT NO. I-91-2(3)
SHEET 19 OF 60

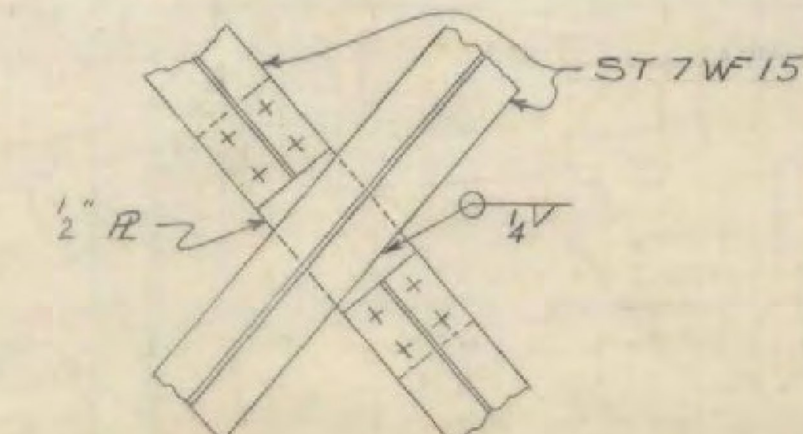


SECTION A-A



FLANGE SPLICE
(Typ.)

Web splices to be located by the Contractor. Splices shall be butt welds extending full height of web.



Detail shown for lower laterals.
Upper laterals Opp. side up.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD

ROUTE No. I-91 _____

GIRDER DETAILS - NB & SB

INT 91 OVER WHITE RIVER

SCALE $\frac{1}{4}'' = 1'-0''$

SURVEYED BY _____

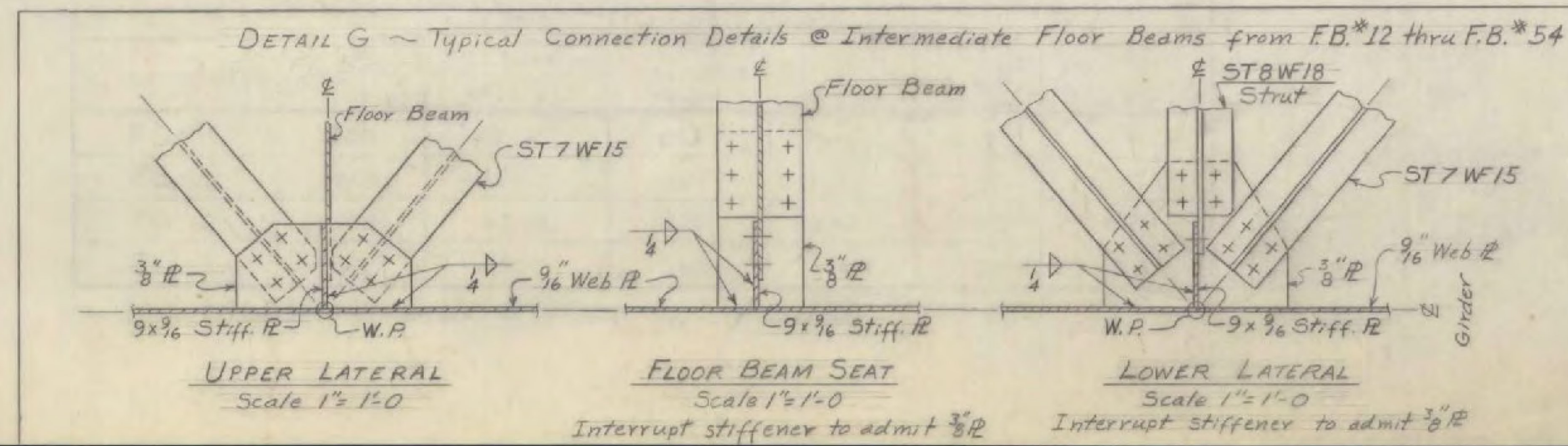
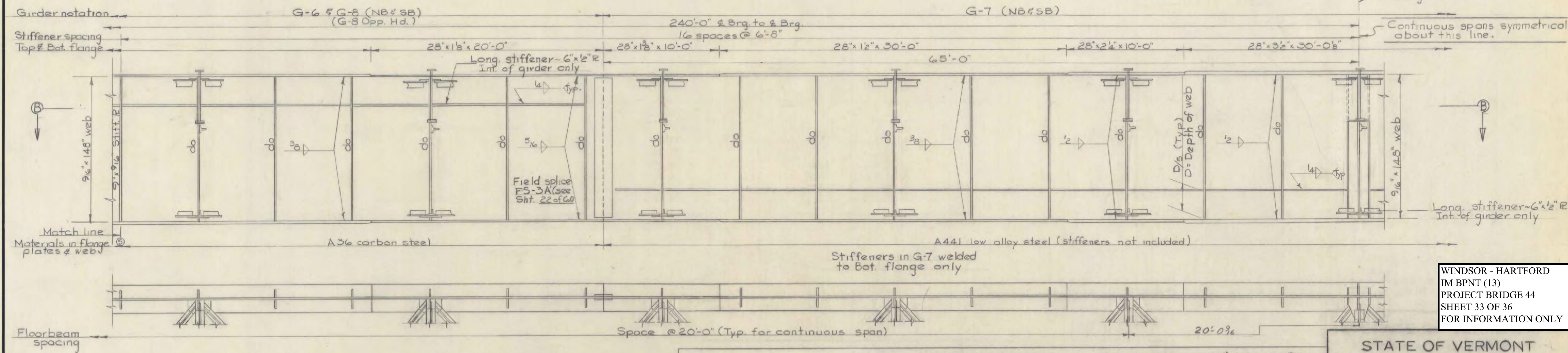
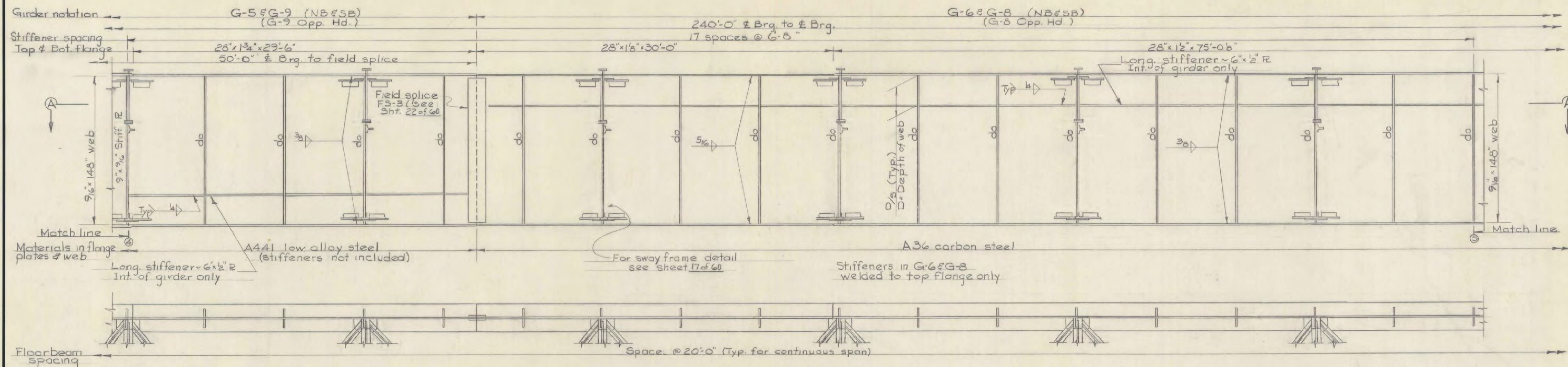
DRAWN BY NBT CHECKED BY RLM 11-56

Bracing Rev. by RLM, 1-19-65
PROJECT NO. T-91-2(3)

SHEET 20 OF 60

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 32 OF 36
FOR INFORMATION ONLY

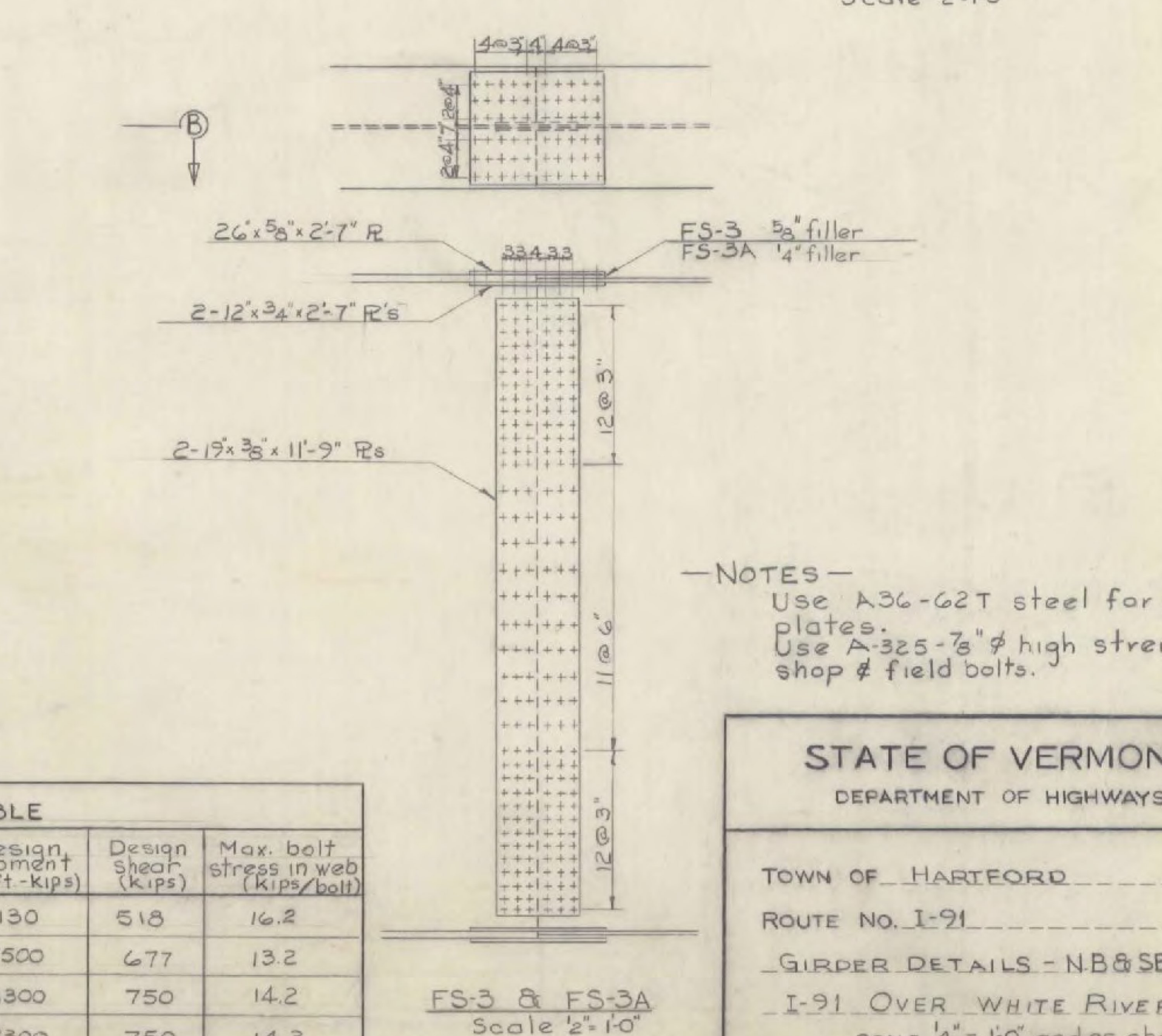
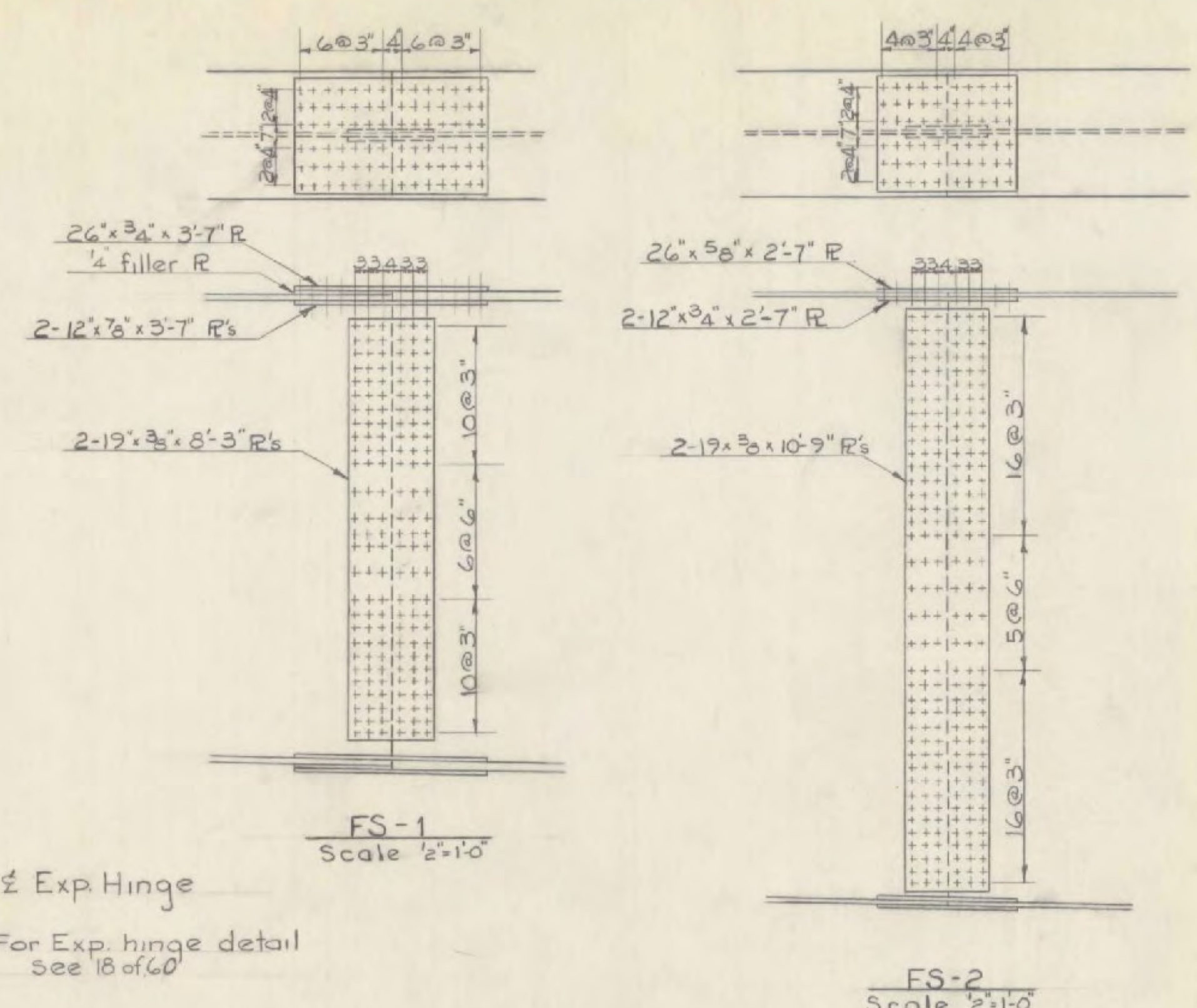
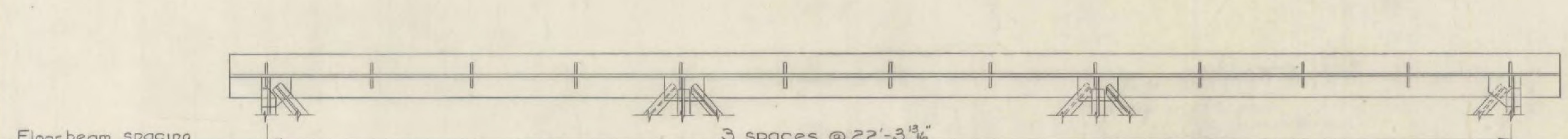
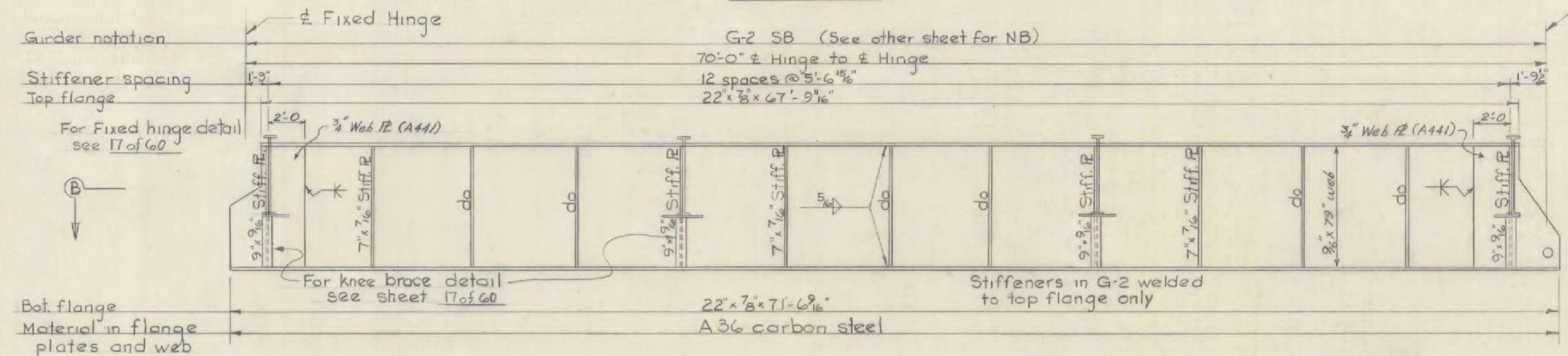
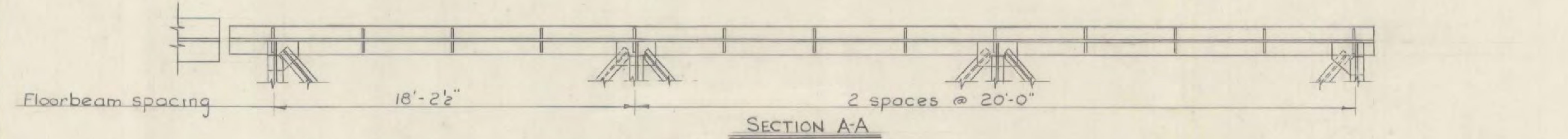
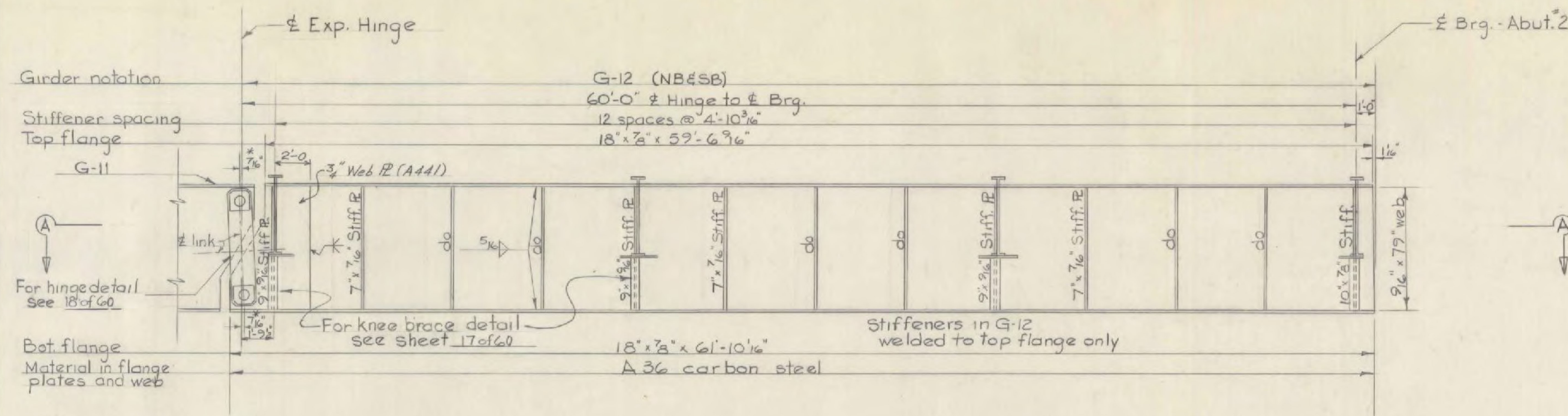
Weld sizes shown at change
in flange size



WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 33 OF 36
FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD
ROUTE No. 1-91
GIRDER DETAILS - NB & SB
INT. 91 OVER WHITE RIVER
SCALE 1/2" = 1'-0"
SURVEYED BY
DRAWN BY NBT CHECKED BY RLM 11-5-63
PROJECT No. 1-91-2(3)
SHEET 21 OF 60



NOTES—
Use A36-G2T steel for splice plates.
Use A-325-7/8" high strength shop & field bolts.

SPlice STRESS TABLE						
Splice notation	Girder Resisting moment (ft-kips)	Actual Max. bending moment (ft-kips)	Actual Max. shear (kips)	Design moment (ft-kips)	Design shear (kips)	Max. bolt stress in web (Kips/bolt)
FS-1	9500	4500	313	7130	518	16.2
FS-2	9800	5200	262	7500	677	13.2
FS-3	11,100	5300	310	8300	750	14.2
FS-3A	11,100	4800	468	8300	750	14.2

Note: Splices are designed as friction type connections.

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD

ROUTE NO. I-91

GIRDER DETAILS - NB&SB

I-91 OVER WHITE RIVER

SCALE 1/4" = 1'-0" and as shown

SURVEYED BY

DRAWN BY NBT CHECKED BY ALM 11-5-69

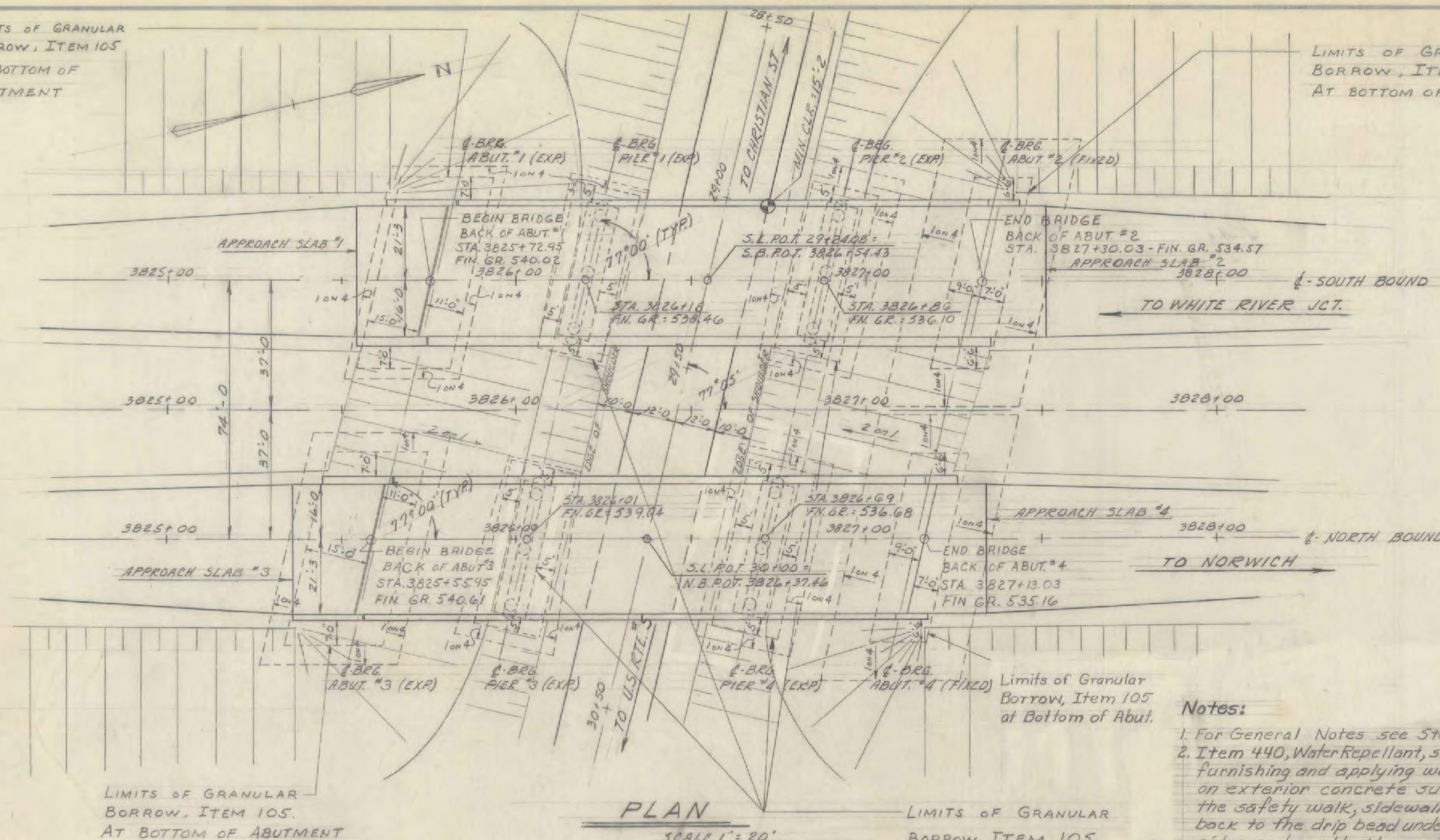
PROJECT NO. I-91-2 (3)

SHEET 22 OF 60

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 44
SHEET 34 OF 36
FOR INFORMATION ONLY

LIMITS OF GRANULAR BORROW, ITEM 105 AT BOTTOM OF ABUTMENT

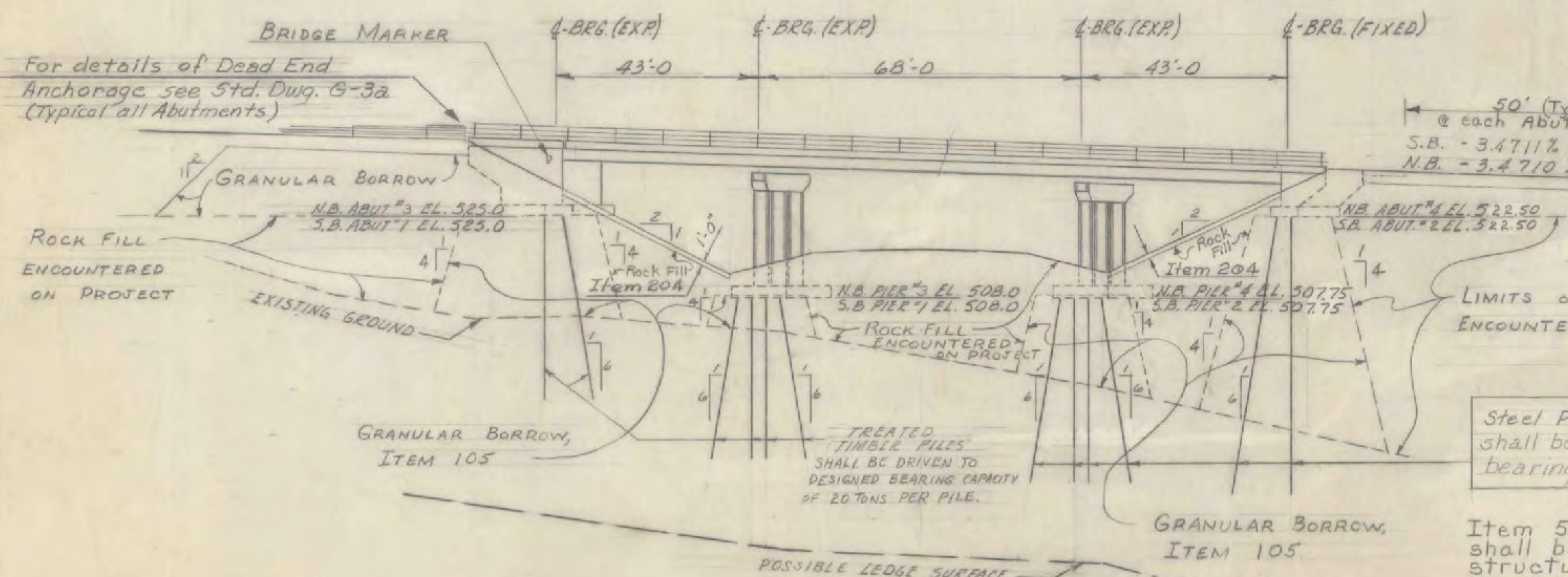
LIMITS OF GRANULAR BORROW, ITEM 105 AT BOTTOM OF ABUTMENT



PLAN

SCALE 1" = 20'

LIMITS OF GRANULAR BORROW, ITEM 105. AT BOTTOM OF PIER.



ELEVATION ~ N.B. FASCIA

SCALE 1" = 20'

Steel Piling (12BP53) shall be driven to designed bearing capacity of 40 tons per pile.

Item 505, Pile Loading Tests, shall be used for each sub-structure when called for by the Engineer.

Revised 6/3/66 A.J.C. Steel Piling placed at Piers #2 & #4 and Abutments #2 & #4 and footing elev. lowered.

Notes:

- For General Notes see Std. Sh. 5CB-D1-65
- Item 440, Water Repellent, shall consist of furnishing and applying water repellent on exterior concrete surfaces on top of the safety walk, sidewalk, on the fascia and back to the drip bead under the slab, on the sides, ends and bottoms of all pier caps, and on exposed areas of abutments not otherwise treated.
- Bench marks are to be located on top of wall above Bridge Markers.
- For details of dead end anchorage at bridge approach see Std. Sh. G-3a.
- Abutments #1 & #3 and Piers #1 & #3 are designed for a maximum pile bearing pressure of 20 tons per pile. Abutments #2 & #4 and Piers #2 & #4 are designed for a maximum pile bearing pressure of 40 tons per pile.

GRANULAR BORROW TO BE WIDTH OF FILL SLOPES ABOVE BOTTOM OF ABUT. FOOTING. (TYP. BOTH ENDS OF BRIDGE)

List of Bridge Sheets

- BR-100 Plan and Elevation
- BR-101 Bridge Quantity Sheet
- BR-102 Preliminary Information Sheet
- BR-103 Boring Plan
- BR-104 Boring Log - Southbound
- BR-105 Boring Log - Northbound
- BR-106 Framing Plan
- BR-107 Expansion Dams
- BR-108 Rocker Bearings
- BR-109 Curb and Rail Plan
- BR-110 Approach Slab No. 1 & 2
- BR-111 Approach Slab No. 3 & 4
- BR-112 Abutment No. 1
- BR-113 Abutment No. 2
- BR-114 Abutment No. 3
- BR-115 Abutment No. 4
- BR-116 Pier Layout
- BR-117 Pier Reinforcing Details
- BR-118, 119 Reinforcing Steel Schedule

Standard Sheets

SCB-37.25-65, SCB-D1-65, SCB-D2-65 (Det. A & C), SCB-D6-65 (Det. A, B & E), SCB-D7-65 (Det. D), SCB-D8-65 (Det. A), SCB-D9-65 (Det. A), SB-R1-64, Sheets 1 & 2, SB-R3-64, G-3a.

Reference Sheets

Plan I 91 (Scale 1" = 50') Sta. 3825+00 to 3841+00
Profile I 91 N.B. & S.B. Sta. 3825+00 to 3841+00
Profile Christian St.-Rte. 5 Sta. 26+00 to 42+00
Cross Sections I 91 Sta. 3824+00 to 3829+00
Cross Sections Christian St.-Rte. 5 Sta. 28+50 to 30+50

ITEM NO.	ITEM	UNIT	NET	TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.			
	CHAN. EXCAV. OF ROCK	C.Y.			
	UNCLASS. CHAN. EXCAV.	C.Y.			
	STRUCT. EXCAV.	C.Y.			
	CONC. CLASS AA (MOD.)	C.Y.			
	CONC. CLASS B (MOD.)	C.Y.			
	REINF. STEEL	LBS.			
	ASPHALTIC-ASB. COATING	S.Y.			
	TREATED TIMBER PILING	L.F.			
	SPLICES FOR STEEL PILING	EA.			
	STEEL PILING	L.F.			
	UNTREATED TIMBER PILING	L.F.			

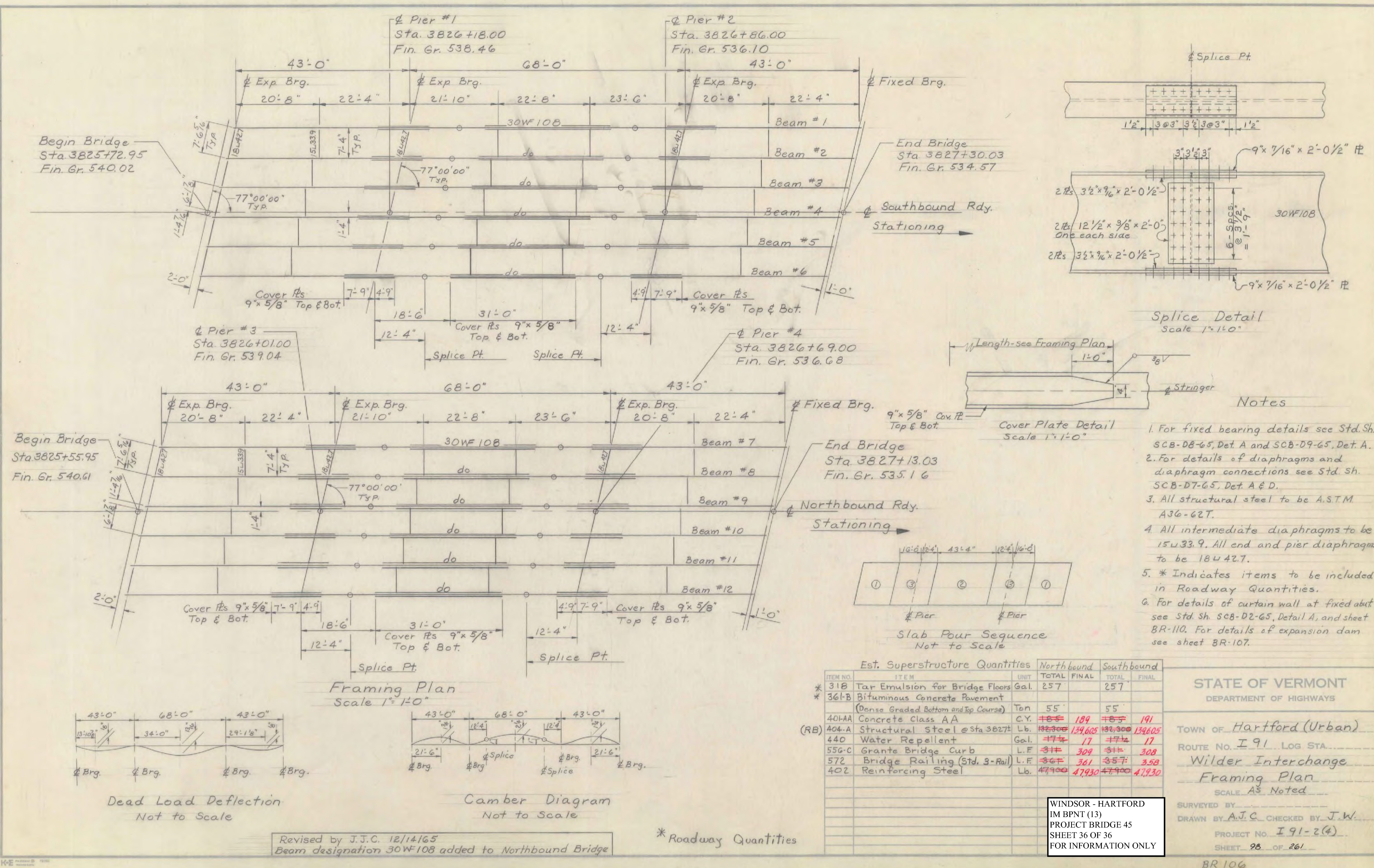
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF HARTFORD (Urban)
ROAD No. I-91 BRIDGE No. 53-B1
WILDER INTERCHANGE
PLAN AND ELEVATION

SCALE As Shown
SURVEYED BY
DRAWN BY RLO CHECKED BY A.G.C.
PROJECT No. I-91-2(4) (22)
SHEET 92 OF 261 130 of 175

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 45
SHEET 35 OF 36
FOR INFORMATION ONLY

BR-100



Est. Superstructure Quantities			Northbound		Southbound	
ITEM NO.	ITEM	UNIT	TOTAL	FINAL	TOTAL	FINAL
* 31B	Tar Emulsion for Bridge Floors	Gal.	257		257	
* 361-B	Bituminous Concrete Pavement (Dense Graded Bottom and Top Course)	Ton	55		55	
404AA	Concrete Class AA	C.Y.	185	189	185	191
404-A	Structural Steel (Sta 3827)	Lb.	134,605	134,605	134,605	134,605
440	Water Repellent	Gal.	17	17	17	17
556-C	Grande Bridge Curb	L.F.	31	309	31	308
572	Bridge Railing (Std. 3-Rail)	L.F.	361	361	357	358
402	Reinforcing Steel	Lb.	47,900	47,930	47,900	47,930

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Hartford (Urban)

ROUTE NO. I 91 LOG STA. Wilder Interchange

Framing Plan
SCALE AS NOTED

SURVEYED BY A.J.C. CHECKED BY J.W.

DRAWN BY A.J.C. PROJECT NO. I 91-2(4)

SHEET 28 OF 261

BR 106

WINDSOR - HARTFORD
IM BPNT (13)
PROJECT BRIDGE 45
SHEET 36 OF 36
FOR INFORMATION ONLY

MONOKO, LLC

1037 Peninsula Avenue

Tarpon Springs, FL 34689-2125

E-mail Address: MonokoLLC@aol.com

(727) 940-3244

(727) 279-8795 Fax

Submittal No.: 07e: Steel Repair Drawings, Bridges 44 N & S, rev.

Date: June 29, 2017

Vermont Department of Transportation

Southeast Regional Construction Office

Attn: Mark Mackintosh, P.E., acting SE Regional Engineer

PO Box 1873; 61 Depot Street

Wilder, VT 05088-1873

(802) 522-5719; (802) 281-5000; (802) 281-5002 fax

Mark.Mackintosh@Vermont.gov

Description: Proposal/Contract Number: Windsor-Hartford IM BPNT (13)

Letting Date: 10/09/15; Award Date: 11/02/15

Project Description: Bridge Painting of Eleven Bridges

In the Towns of Windsor & Hartford, Windsor County, VT

Contract Amount: \$8,671,323.00; Completion Date: 10/12/18

Contractor: **MONOKO, LLC**

Reviewed & Approved By: *Keri Monokandilos*

Keri Monokandilos, Manager

Date: **06/29/2017**

Engineer: Paul Perry IV, Resident Engineer

PO Box 1873; 61 Depot Street

Wilder, VT 05088-1873

802-498-8255 cell; 802-281-5000 office; 802-281-5002 fax

paul.perry@vermont.gov

mark.mackintosh@vermont.gov

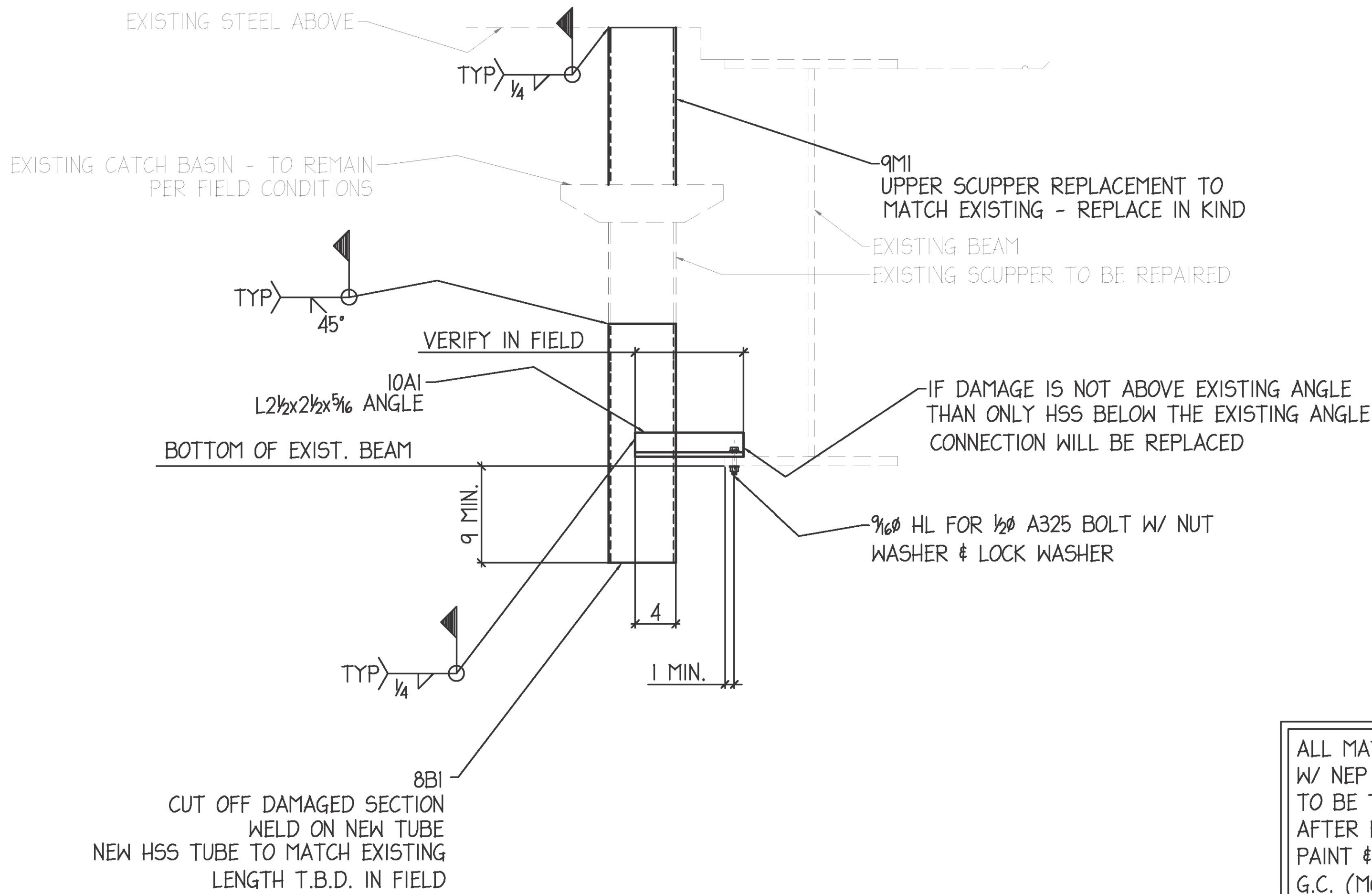
jb.McCarthy@vermont.gov

pmcdonald@gpinet.com

Revision:

The drawings attached replace originally submitted drawings on July 9, 2016, Submittal No. 07

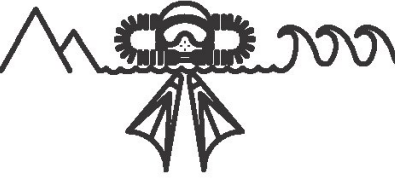
- Notes:
- 1.) All the deteriorated scuppers with significant loss of section shall be cut off above the deteriorated area. If the deterioration extends to the underside of the deck, the scupper shall be cut off and replaced. The engineer shall approve the extent of the repair for each deteriorated scupper identified by the contractor prior to being repaired or replaced.
 - 2.)All existing dimensions and scupper sizes shall be field verified.
 - 3.) Bolt holes shall be field drilled and shall have a minimum edge distance of 1½ except where noted otherwise.
 - 4.) All new steel shall be zinc primed and painted with NEP coat system.
 - 5.) All welding shall conform with the provisions of subsection 506.10.
 - 6.) Hollow structural steel tubing shall conform to ASTM A-500 GRADE C.
 - 7.) Steel plates and angles shall conform to AASHTO M270, GRADE 50 (ASTM A709, GRADE 50).
 - 8.) High strength bolts, nuts and circular washers shall conform to subsection 714.05 of the 2011 standard specifications.
 - 9.) NEP coat system & touch-up is by G.C. (Monoko). All paint system specs & application info will be provided by Monoko.



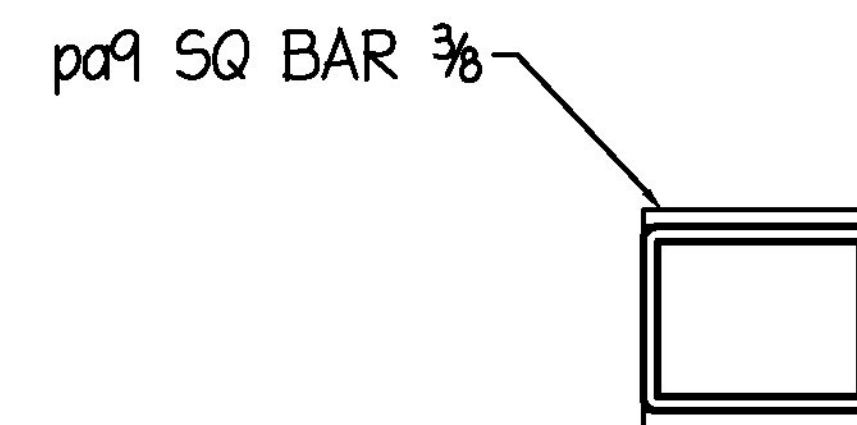
ALL MATERIAL PAINTED
W/ NEP COAT SYSTEM,
TO BE TOUCHED UP
AFTER FIELD WELDING.
PAINT & PAINTING BY
G.C. (MONOKO)

SUPPER REPAIR DETAIL

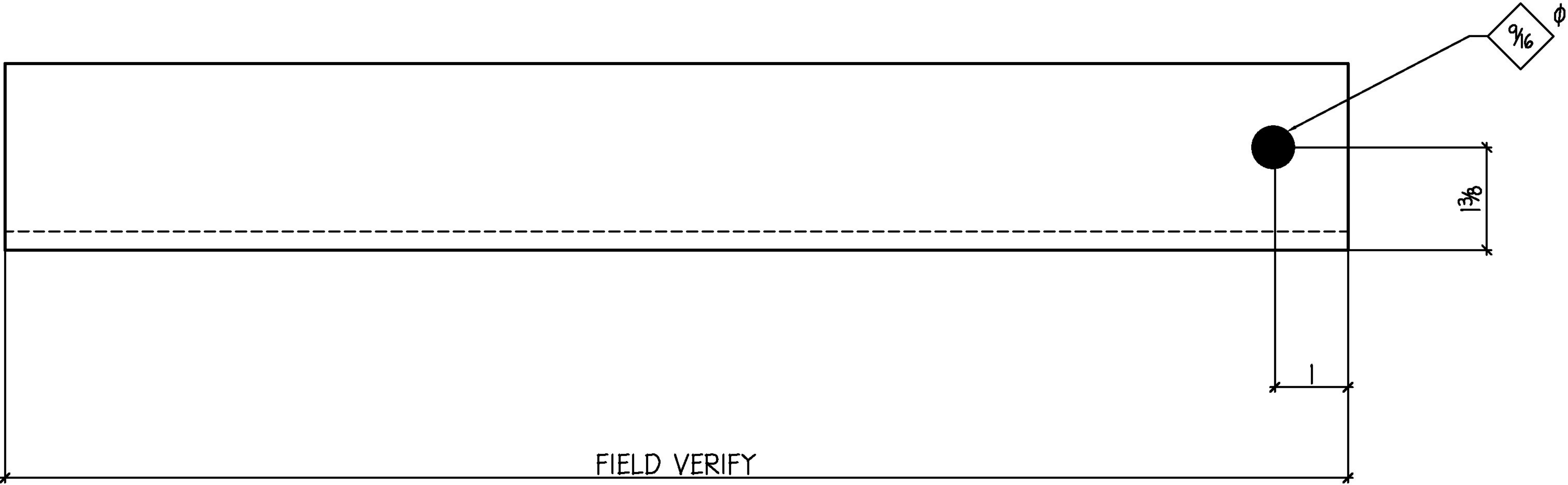
(42) LOCATIONS

	6/26/17	Per App'l			
	3/3/17	Per Check'g			
NO.	DATE	REVISION			
 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelvt.com 					
CUSTOMER Monoko					
PROJECT Scupper Repair & Replacement Components					
DETAIL Scupper Repair & Replacement Component Details					
DRAWN/CHECKED		DATE	JOB NO.	DWG NO.	REV
RCL		FEB2017	7324	E2	

PROJECT LOCATION: WINDSOR-HARTFORD, VT IM BPNT (13)
BRIDGE 44 NORTH & SOUTH



CUSTOMER Monoko				
PROJECT Scupper Repair & Replacement Components				
DETAIL Scupper Replacement Tube				
DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV
RCL	FEB 2017	7324	09	A

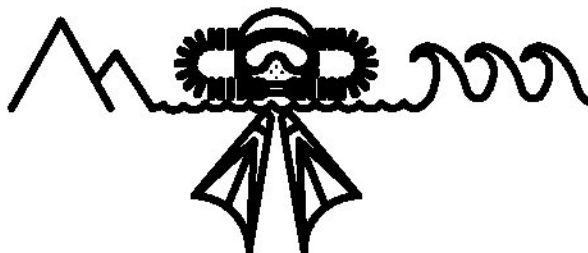


SAND BLASTED AND
PAINTED IN THE FIELD BY
MONOKO, LLC

8 ~ ANGLES ~ 10A1
REF: E1

NOTE: FIELD VERIFY FIELD BOLT LENGTH

BRIDGE 44 NORTH & SOUTH

BRIDGE 44 NORTH & SOUTH									NOTE: FIELD VERIFY FIELD BOLT LENGTH		3/3/17 Per Check'g NO. DATE REVISION									
SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A DFT: 1.0									HOLES: 1/16" UNO		Saw: INITIAL DATE Drill: INITIAL DATE Fitter: INITIAL DATE GCI: INITIAL DATE Weld: INITIAL DATE Prep: INITIAL DATE Paint: INITIAL DATE Load: INITIAL DATE									
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS: A325-TC	 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelvt.com 										
8		L2 1/2 x 2 1/2 x 5/16	?	?		10A1			MATL: W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36											
8		HS 1/2"	0	1 3/4		10FBI	A325 FIELD BOLT		ELECTRODES: E70XX/E71-T											
									E DWG REF: E1											
									ENGR DWG REF: E1											
									SEQ / DIV:	CUSTOMER Monoko										
									GRID LOCATION:	PROJECT Bridge Downspouts & Components										
									TOS ELEVATION:	DETAIL Angle Supports @ Scupper Repairs & Replacements										
									NOTES:	DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV						
										RCL	FEB 2017	7324	10							

MONOKO, LLC

1037 Peninsula Avenue

Tarpon Springs, FL 34689-2125

E-mail Address: MonokoLLC@aol.com

(727) 940-3244

(727) 279-8795 Fax

Submittal No.: 07f: Steel Repair Drawings, Bridges 44 N & S, Final Rev.

Date: August 10, 2017

Vermont Department of Transportation

Southeast Regional Construction Office

Attn: Mark Mackintosh, P.E., acting SE Regional Engineer

PO Box 1873; 61 Depot Street

Wilder, VT 05088-1873

(802) 522-5719; (802) 281-5000; (802) 281-5002 fax

Mark.Mackintosh@Vermont.gov

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Project Description: Bridge Painting of Eleven Bridges

In the Towns of Windsor & Hartford, Windsor County, VT

Contract Amount: \$8,671,323.00; Completion Date: 10/12/18

Contractor: **MONOKO, LLC**

Reviewed & Approved By: *Keri Monokandilos*

Keri Monokandilos, Manager

Date: **08/10/2017**

Engineer: Paul Perry IV, Resident Engineer

PO Box 1873; 61 Depot Street

Wilder, VT 05088-1873

802-498-8255 cell; 802-281-5000 office; 802-281-5002 fax

paul.perry@vermont.gov

mark.mackintosh@vermont.gov

jb.McCarthy@vermont.gov

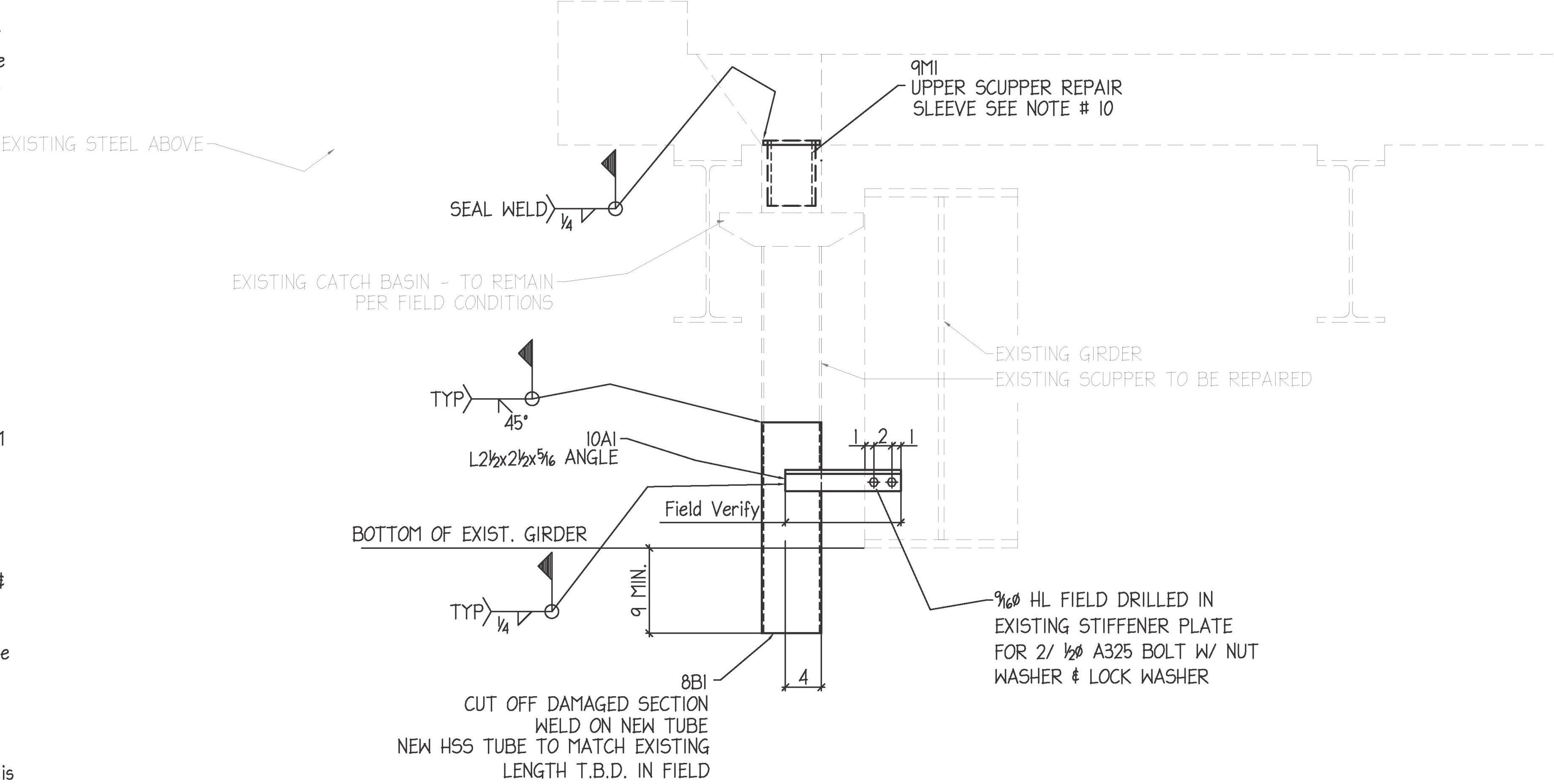
pmcdonald@gpinet.com

Revision:

The drawings attached replace originally submitted drawings on July 9, 2016, Submittal No. 07

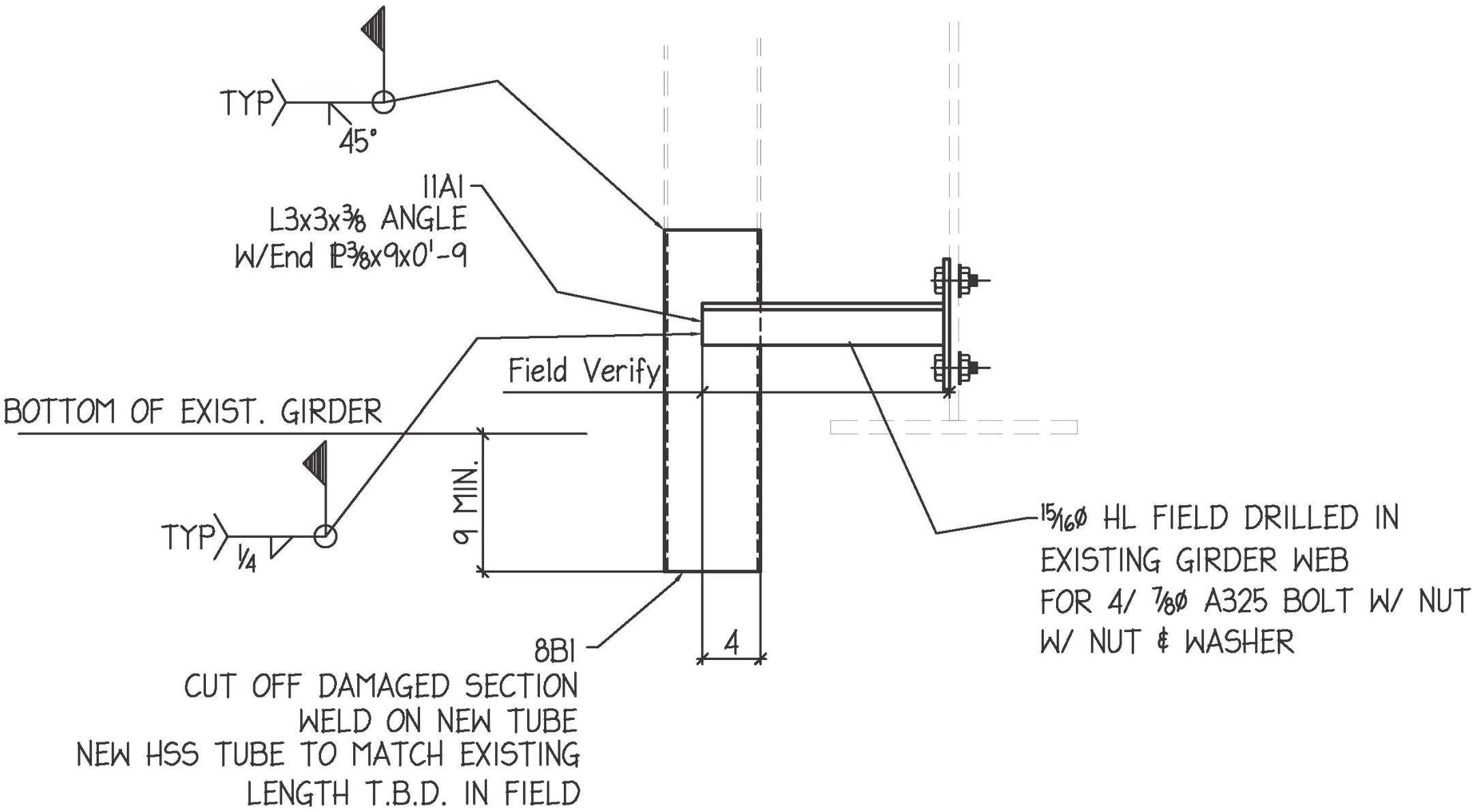
- Notes:
- 1.) All the deteriorated scuppers with significant loss of section shall be cut off above the deteriorated area. If the deterioration extends to the underside of the deck, the scupper shall be cut off and replaced. The engineer shall approve the extent of the repair for each deteriorated scupper identified by the contractor prior to being repaired or replaced.
- 2.)All existing dimensions and scupper sizes shall be field verified.
- 3.) Bolt holes shall be field drilled and shall have a minimum edge distance of 1½ except where noted otherwise.
- 4.) All new steel shall be zinc primed and painted with NEP coat system.
- 5.) All welding shall conform with the provisions of subsection 506.10.
- 6.) Hollow structural steel tubing shall conform to ASTM A-500 GRADE C.
- 7.) Steel plates and angles shall conform to AASHTO M270, GRADE 50 (ASTM A709, GRADE 50).
- 8.) High strength bolts, nuts and circular washers shall conform to subsection 714.05 of the 2011 standard specifications.
- 9.) NEP coat system & touch-up is by G.C. (Monoko). All paint system specs & application info will be provided by Monoko.
- 10.) The upper 4 x 4 tube is a sleeve that was designed by VTrans to fit inside the existing upper scupper. After accessing the upper scupper from below. Field verification were made. There is a concrete haunch where the upper scupper rest inside of. Also some of the upper scuppers come in contact with the small stringer beam next to it. VTrans designed an inner sleeve (4x4 tube) to be placed inside the upper scupper from the top. The upper scupper is going to be sandblasted from the top of the deck and bottom. After primed, the new sleeve will be inserted and welded from the top for 100 % seal. The welds will be cleaned and painted from final touch up.

ALL MATERIAL PAINTED
W/ NEP COAT SYSTEM,
TO BE TOUCHED UP
AFTER FIELD WELDING.
PAINT & PAINTING BY
G.C. (MONOKO)



TYPICAL SCUPPER REPAIR DETAIL

(42) LOCATIONS

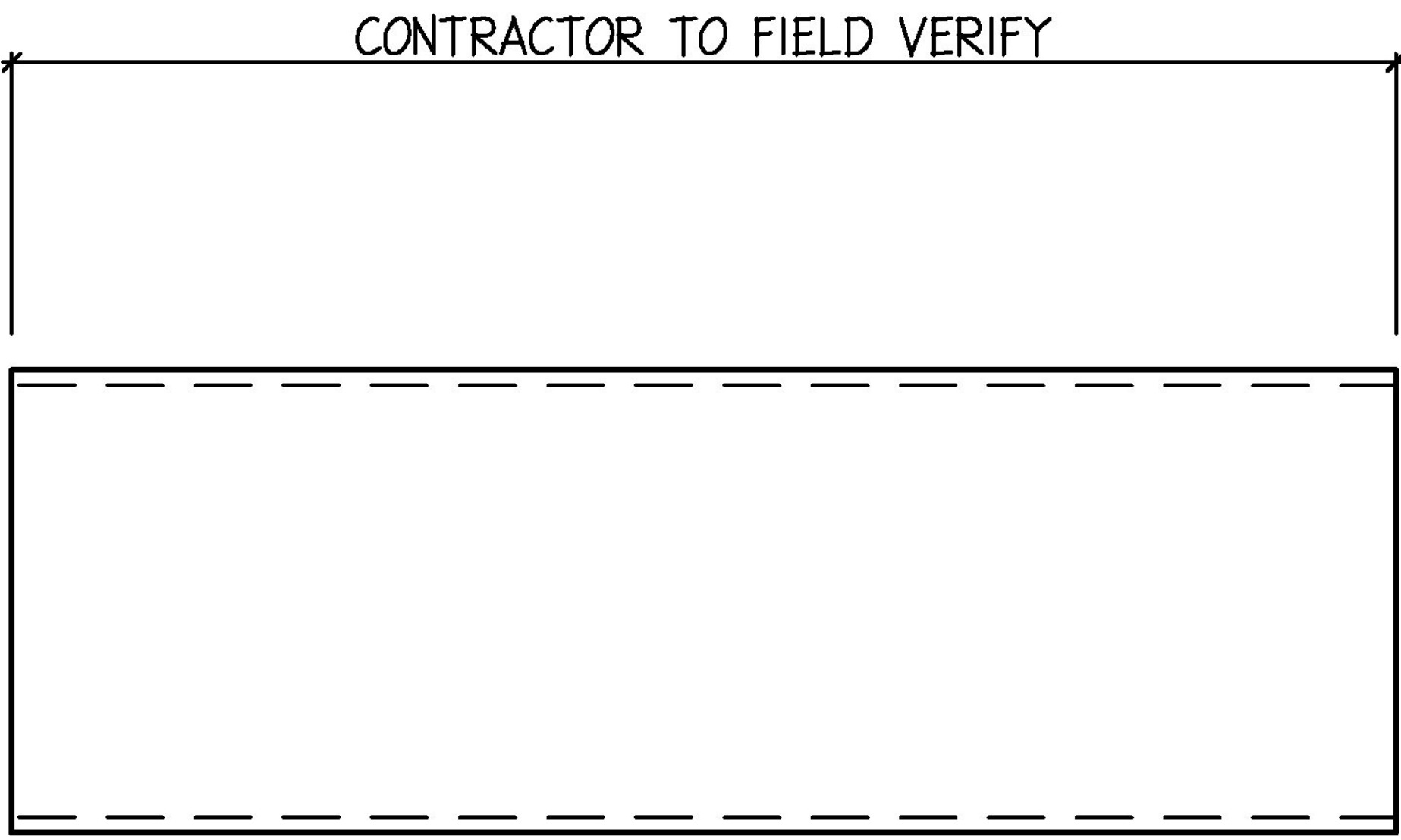


ALTERNATE SCUPPER REPAIR DETAIL

(TBD) LOCATIONS

PROJECT LOCATION: WINDSOR-HARTFORD, VT IM BPNT (13)
BRIDGE 44 NORTH & SOUTH

	8/10/17	Per App'l						
	6/26/17	Per App'l						
	3/3/17	Per Check'g						
NO.	DATE	REVISION						
 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelofvt.com								
CUSTOMER Monoko								
PROJECT Scupper Repair & Replacement Components								
DETAIL Scupper Repair & Replacement Component Details								
DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV				
RCL	FEB2017	7324	E2					

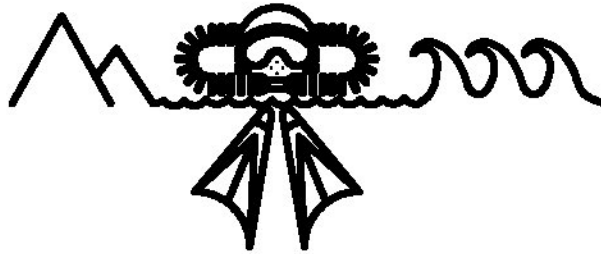


42 ~ SCUPPER REPLACEMENTS ~ 8BI

REF: E2

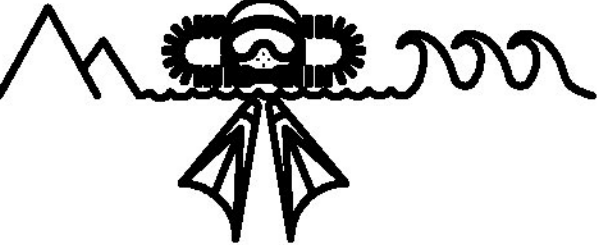
SAND BLASTED AND PAINTED IN THE FIELD BY MONOKO, LLC

BRIDGE 44 NORTH & SOUTH

SURFACE PREP:							FINISH: MILL PRIMER:		DFT: 1.0		HOLES: 13/16" UNO		Saw: INITIAL DATE		Drill: INITIAL DATE		Fitter: INITIAL DATE		GCI: INITIAL DATE	
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS: A325-TC		Weld: INITIAL DATE		Prep: INITIAL DATE		Paint: INITIAL DATE		Load: INITIAL DATE			
42		HSS 5X5X3/8	?	?		8BI			W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36				RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelofvt.com							
							ELECTRODES: E70XX/E71-T													
							E DWG REF: E2													
							ENGR DWG REF: H1													
									SEQ / DIV:		CUSTOMER Monoko									
									GRID LOCATION:		PROJECT Bridge Downspouts & Components									
									TOS ELEVATION:		DETAIL Scupper Replacement HSS									
									NOTES:		DRAWN/CHECKED RCL/DAG		DATE FEB 2017		JOB NO. 7324		DWG NO. 08		REV 3	



BRIDGE 44 NORTH & SOUTH

SURFACE PREP: SSPC-SP2 FINISH: MILL PRIMER: N/A DFT: 1.0								HOLES: 1 3/16" UNO	Saw: INITIAL DATE	Drill: INITIAL DATE	Fitter: INITIAL DATE	QC: INITIAL DATE					
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS: A325-TC	Weld: INITIAL DATE	Prep: INITIAL DATE	Paint: INITIAL DATE	Load: INITIAL DATE				
42		HSS 4x4x3/8	?	?		9MI	FIELD VERIFY		W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36	 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelofvt.com 							
	42	SQ 3/8	0	4	pa9												
	84	SQ 3/8	0	4 3/8	pa9												
									ELECTRODES: E70XX/E71-T								
									E DWG REF: E2					CUSTOMER Monoko			
									ENGR DWG REF:	PROJECT Scupper Repair & Replacement Components							
									SEQ / DIV:	DETAIL Scupper Repair Sleeve							
									GRID LOCATION:								
									TOS ELEVATION:	DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV			
									NOTES:	RCL/DAG	FEB 2017	7324	09	3			

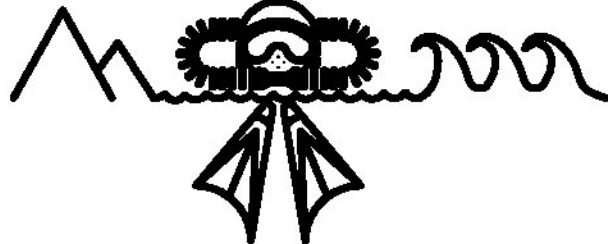
SEE



SAND BLASTED AND
PAINTED IN THE FIELD BY
MONOKO, LLC

REF: E2

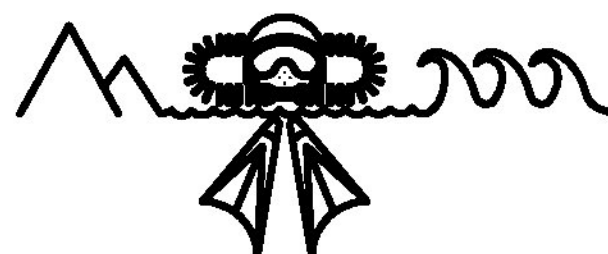
NOTE: FIELD VERIFY FIELD BOLT LENGTH

	8/9/17	Per Approval			
	3/3/17	Per Check'g			
NO.	DATE	REVISION			
 Saw:	 Drill:	 Fitter:	 GCI:		
 Weld:	 Prep:	 Paint:	 Load:		
 INITIAL	 INITIAL	 INITIAL	 INITIAL	 INITIAL	
 DATE	 DATE	 DATE	 DATE	 DATE	
 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelofvt.com 					
CUSTOMER Monoko					
PROJECT Bridge Downsputs & Components					
DETAIL Angle Supports @ Scupper Repairs & Replacements					
DRAWN/CHECKED		DATE		JOB NO.	DWG NO.
RCL/DAG		FEB 2017		7324	10
					



BRIDGE 44 NORTH & SOUTH

BRIDGE 44 NORTH & SOUTH										NO.		DATE		REVISION					
SURFACE PREP: SSPC-SP2 FINISH: MILL PRIMER: N/A DFT: 1.0										HOLES: 1 1/16" UNO		Saw:		Drill:		Fitter:		QC:	
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS: A325-TC	Weld:		Prep:		Paint:		Load:			
??		L3x3x3/8	?	?		IIAI	FIELD VERIFY		W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36	INITIAL		DATE		INITIAL		DATE			
	??	P 3/8x9	0	9	pall					INITIAL		DATE		INITIAL		DATE			
										INITIAL		DATE		INITIAL		DATE			
									ELECTRODES: E70XX/E71-T	INITIAL		DATE		INITIAL		DATE			
									E DWG REF: E2	INITIAL		DATE		INITIAL		DATE			
??		7/8" A325	0	2		IIFBI	FIELD VERIFY QUANTITIES		ENGR DWG REF:	INITIAL		DATE		INITIAL		DATE			
									SEQ / DIV:	INITIAL		DATE		INITIAL		DATE			
									GRID LOCATION:	INITIAL		DATE		INITIAL		DATE			
									TOS ELEVATION:	INITIAL		DATE		INITIAL		DATE			
									NOTES:	INITIAL		DATE		INITIAL		DATE			



RELIANCE STEEL
94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446
TEL 802-655-4810 FAX 802-655-9352
www.reliancesteelofvt.com



CUSTOMER Monoko				
PROJECT Scupper Repair & Replacement Components				
DETAIL Alternate Scupper Support Angle				
DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV
RCL/DAG	FEB 2017	7324	11	

MONOKO, LLC

1037 Peninsula Avenue
Tarpon Springs, FL 34689-2125
E-mail Address: MonokoLLC@aol.com

(727) 940-3244
(727) 279-8795 Fax

Submittal No.: 07bb: Steel Repair Drawings, Bridge 41N, rev.3

Date: April 25, 2017

Vermont Department of Transportation
Southeast Regional Construction Office
Attn: Ann Gammell, P.E., Regional Construction Engineer
PO Box 1873; 61 Depot Street
Wilder, VT 05088-1873
(802) 522-5719; (802) 281-5000; (802) 281-5002 fax
Ann.Gammell@Vermont.gov

Description: Proposal/Contract Number: Windsor-Hartford IM BPNT (13)
Letting Date: 10/09/15; Award Date: 11/02/15
Project Description: Bridge Painting of Eleven Bridges
In the Towns of Windsor & Hartford, Windsor County, VT
Contract Amount: \$8,671,323.00; Completion Date: 10/12/18

Contractor: **MONOKO, LLC**

Reviewed & Approved By: Keri Monokandilos
Keri Monokandilos, Manager

Date: 04/25/2017

Engineer: Paul Perry IV, Resident Engineer
PO Box 1873; 61 Depot Street
Wilder, VT 05088-1873
802-498-8255 cell; 802-281-5000 office; 802-281-5002 fax
paul.perry@vermont.gov
mark.sargent@vermont.gov
pmcdonald@gpinet.com
ann.gammell@vermont.gov

Revision:

Bridge 41N has existing downspouts for repair. The attach drawings apply to 41N only.
There are no existing downspouts at Bridge 41S.

Vermont Agency of Transportation

RECEIVED

CK'D BY Mark SargentS OK'D BY Mark Sargent

April 17, 2017

RESUBMIT No Approved AsNoted
BY Mark Sargent DATE 06/14/2017

SUBMITTAL REVIEW	
Review is only for general conformity to the contract drawings and specifications and shall not relieve the contractor of his entire responsibility under the contract, including among other things, dimensions to be confirmed and correlated at the job site, and information that pertains to the fabrication processes or to techniques of construction.	
☐	NO EXCEPTIONS TAKEN
☒	MAKE CORRECTIONS NOTED RESUBMITTAL NOT REQUIRED
☐	AMEND AND RESUBMIT
☐	REJECTED - SEE REMARKS
PARSONS BRINCKERHOFF, INC.	
BY:	<u>Stephen R. Basington</u>
DATE:	<u>5/17/17</u>



94 South Oak Circle
Colchester, VT 05446
Tel: 802-655-4810
Fax: 802-655-9352
www.reliancesteelofvt.com



TRANSMITTAL

Page 1/1

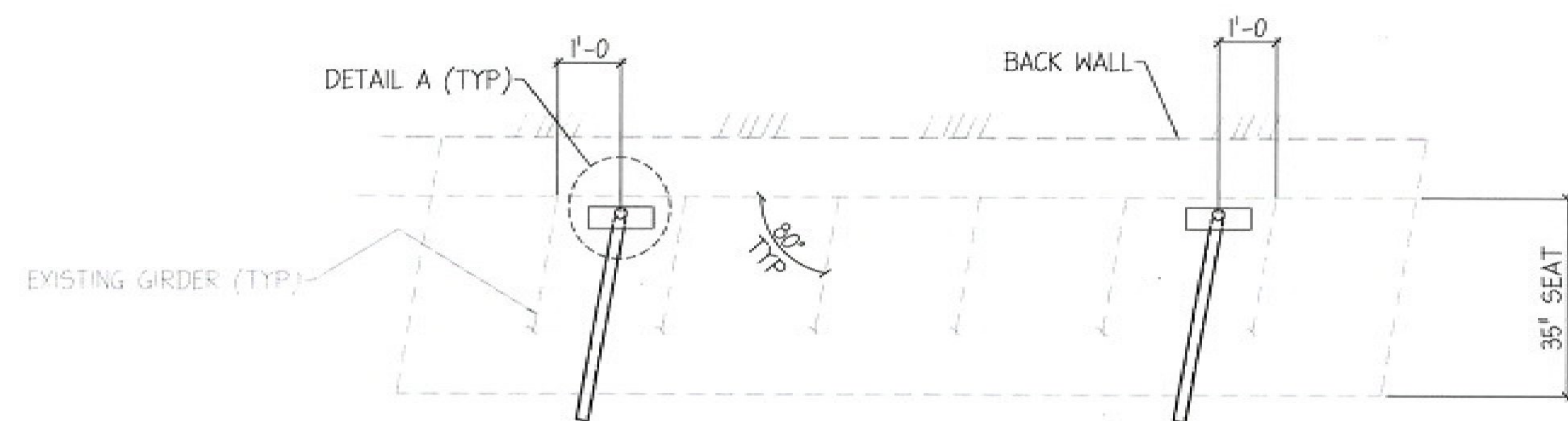
Project: BRidge Downspouts and Components	RSI Job #: 7324 Transmittal #: 7 Transmittal Date: Monday, 24 April 2017 By: Email Please Respond By: 01/May/17
To: Monoko, LLC	
There is 1 copy of drawings transmitted herewith for Revise & Re-Submit	
Notes: Bridge 41 Down Spouts	
Remarks:	

Drawing & Attachments

Type	Qty	Drawing / Revision
Fabrication	3	5/2, 6/2, 7/2
Erection	1	E03/2

Vermont Agency of Transportation
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☐ NO EXCEPTIONS TAKEN ☒ MAKE CORRECTIONS NOTED RESUBMITTAL NOT REQUIRED ☐ AMEND AND RESUBMIT ☐ REJECTED - SEE REMARKS
PARSONS BRINCKERHOFF, INC. BY: <u>Stephen R. Brinkhoff</u> DATE: <u>5/17/17</u>

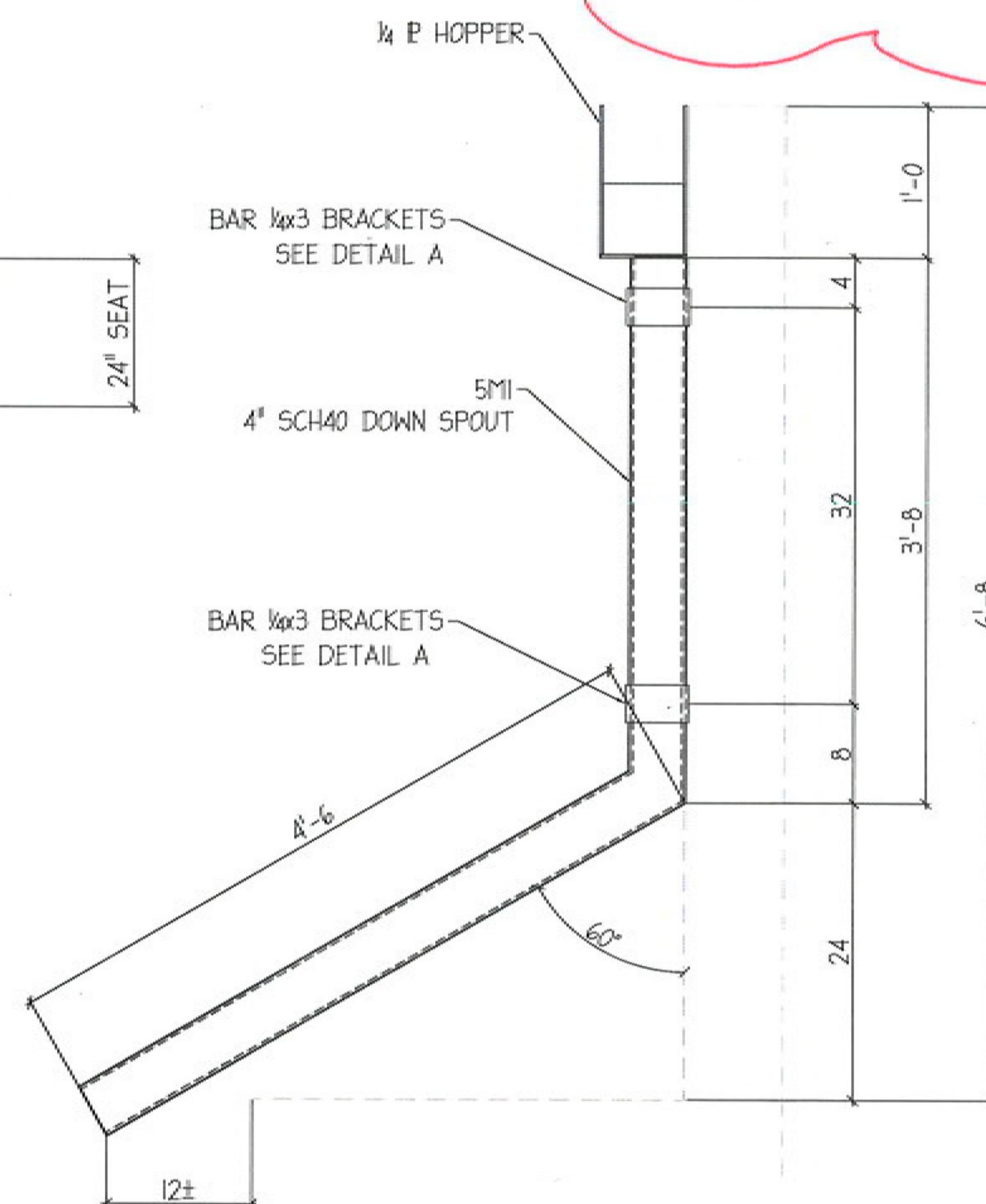


4IN NORTH BOUND BRIDGE
PLAN VIEW DOWN SPOUTS



PER FIELD VERIFICATION BY MONOKO, LLC
THERE ARE NO EXISTING DOWNSPOUTS ON
SOUTH BOUND BRIDGE 4IS, IF DOWNSPOUTS
ARE NEEDED PLEASE CONFIRM

4IS SOUTH BOUND BRIDGE
PLAN VIEW DOWN SPOUTS



4IN NORTH BOUND BRIDGE
DOWN SPOUT DETAIL

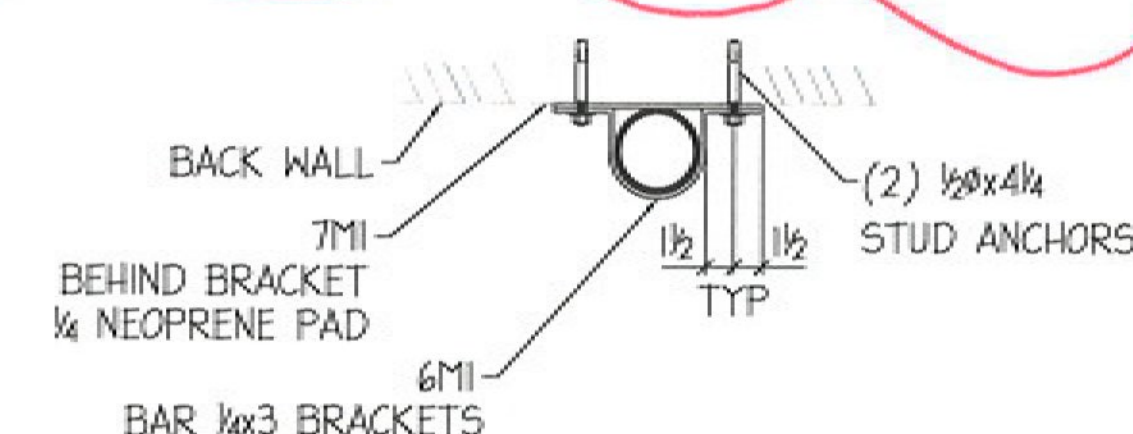
(2) LOCATIONS

PLEASE CONFIRM IF NEW DOWNSPOUTS
ARE NEEDED AT 4IS SOUTH BOUND
BRIDGE

Notes:

- 1.) No welding shall be done to existing girders.
- 2.) Structural steel tubing shall conform to ASTM-A500 or ASTM-A501 and shall be galvanized in accordance with ASTM A-123 after fabrication. All plates, bars and angles shall conform to ASTM A-36 and shall also be galvanized in accordance with ASTM-123 after fabrication.
- 3.) All welding shall conform with the provisions of subsection 506.10.
- 4.) Hollow structural steel tubing shall conform to ASTM A-500 GRADE C.
- 5.) Steel plates and angles shall conform to AASHTO M270, GRADE 50 (ASTM A709, GRADE 50).
- 6.) High strength bolts, nuts and circular washers shall conform to subsection 714.05 of the 2011 standard specifications.

7.) STUD ANCHORS TO BE WES-IT WEDGE ANCHERS,
ZINC-PLATED CARBON STEEL INSTALLED IAW
MANUFACTURER'S WRITTEN INSTRUCTIONS.



DETAIL A
N.T.S.

Vermont Agency of Transportation

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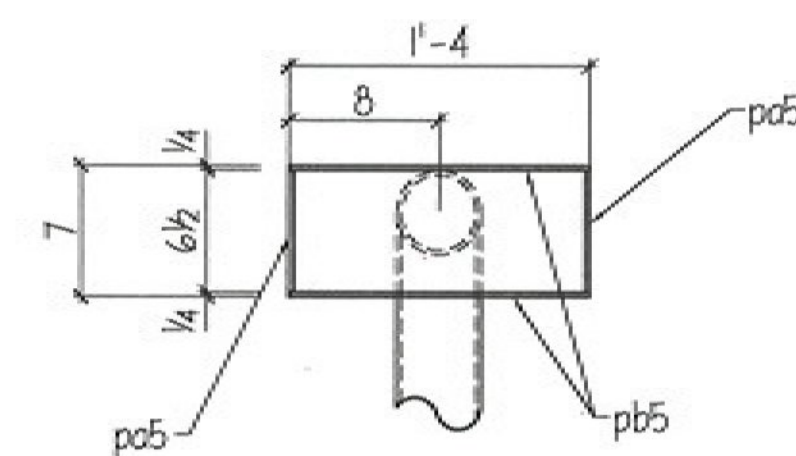
- ☐ NO EXCEPTIONS TAKEN
- ☒ MAKE CORRECTIONS NOTED
RESUBMITTAL NOT REQUIRED
- ☐ AMEND AND RESUBMIT
- ☐ REJECTED - SEE REMARKS

PARSONS BRINCKERHOFF, INC.

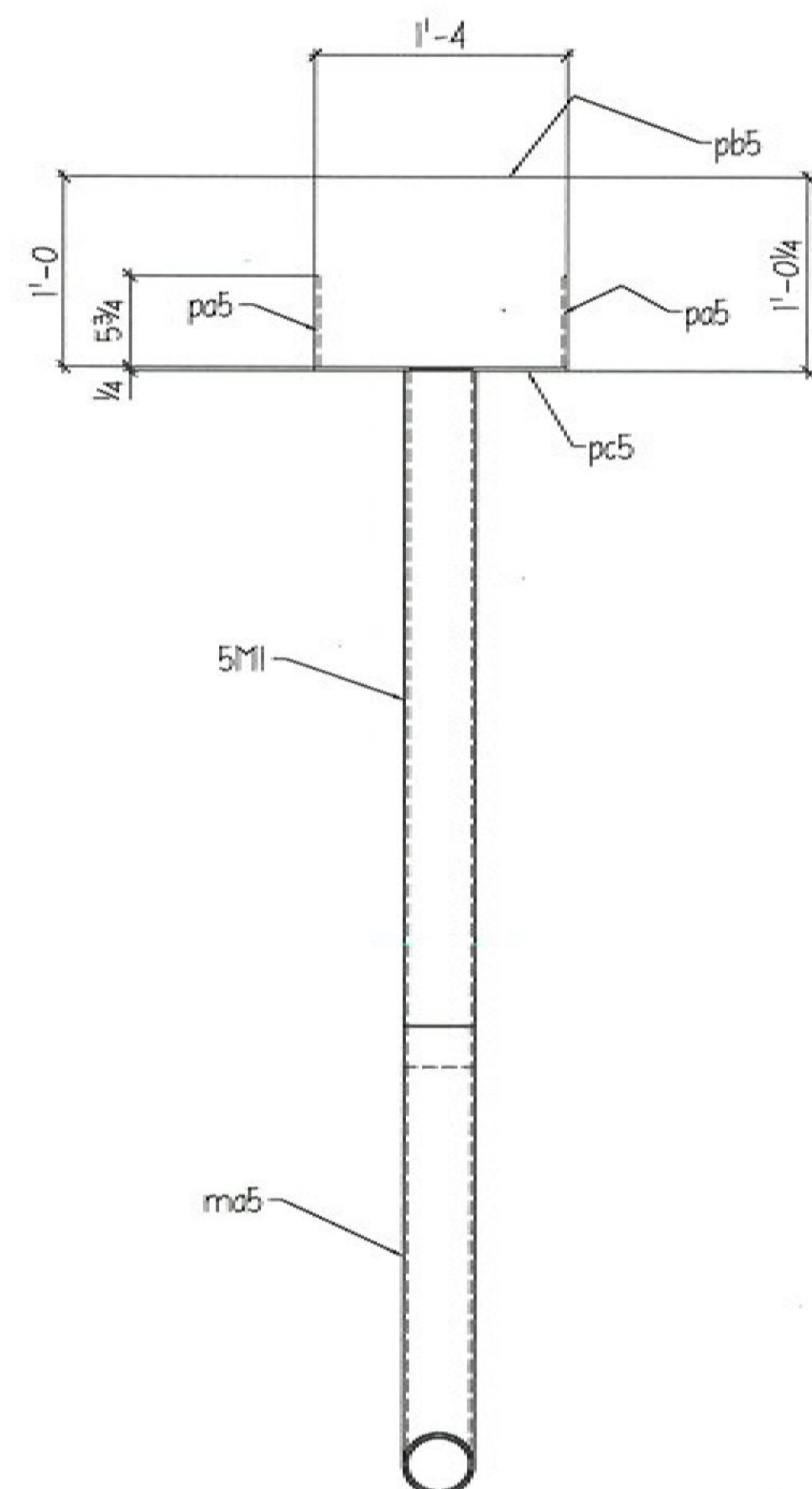
BY: Stephen Z. Bayington
DATE: 5/17/17

4/19/17	Per App'l
3/3/17	Per Check'g
NO.	DATE
REVISION	
RELiance STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelvt.com	
CUSTOMER Monoko	
PROJECT Bridge Downspouts & Components	
DETAIL Down Spouts	
DRAWN/CHECKED	DATE
RCL	FEB 2017
JOB NO.	DWG NO.
7324	E3
REV	

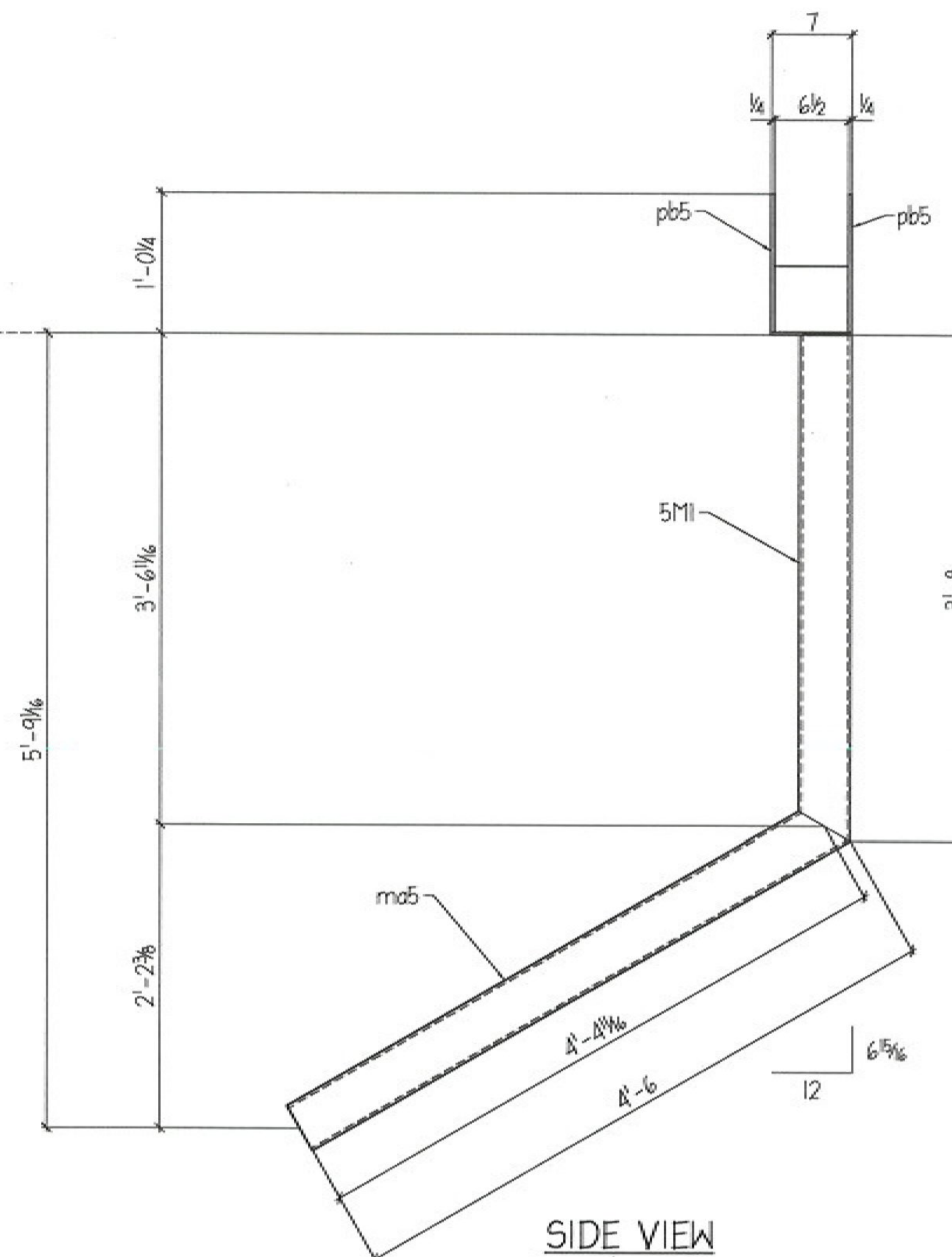
PROJECT LOCATION: WINDSOR-HARTFORD, VT IM BPNT (13)
BRIDGE 4IN NORTH & 4IS SOUTH



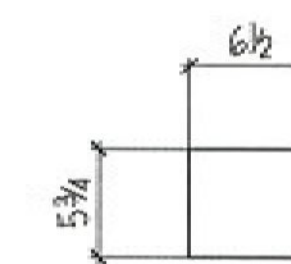
TOP VIEW



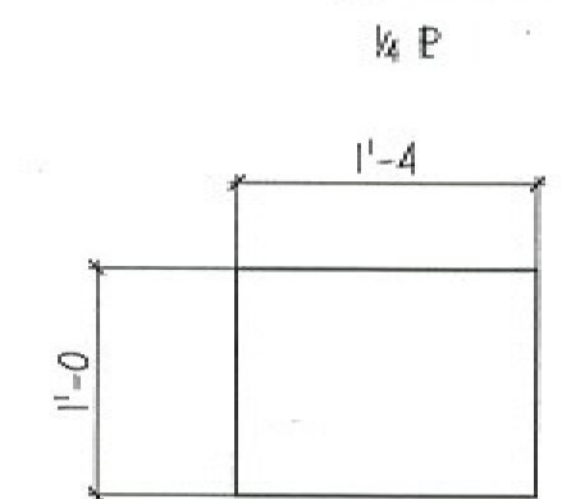
FRONT VIEW



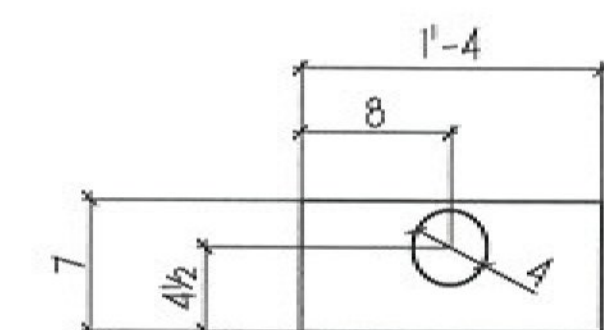
SIDE VIEW



DETAIL OF pa5



DETAIL OF pb5



DETAIL OF pc5

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April 17, 2017

RESUBMIT No Approved AsNoted
BY Mark Sargent DATE 06/14/2017

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- ☐ REJECTED - SEE REMARKS

PARSONS BRINCKERHOFF, INC.

BY: *Stephen L. Boyington*

DATE: *5/17/17*

HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 1/8" VENT
HLS. AS REQ'D.

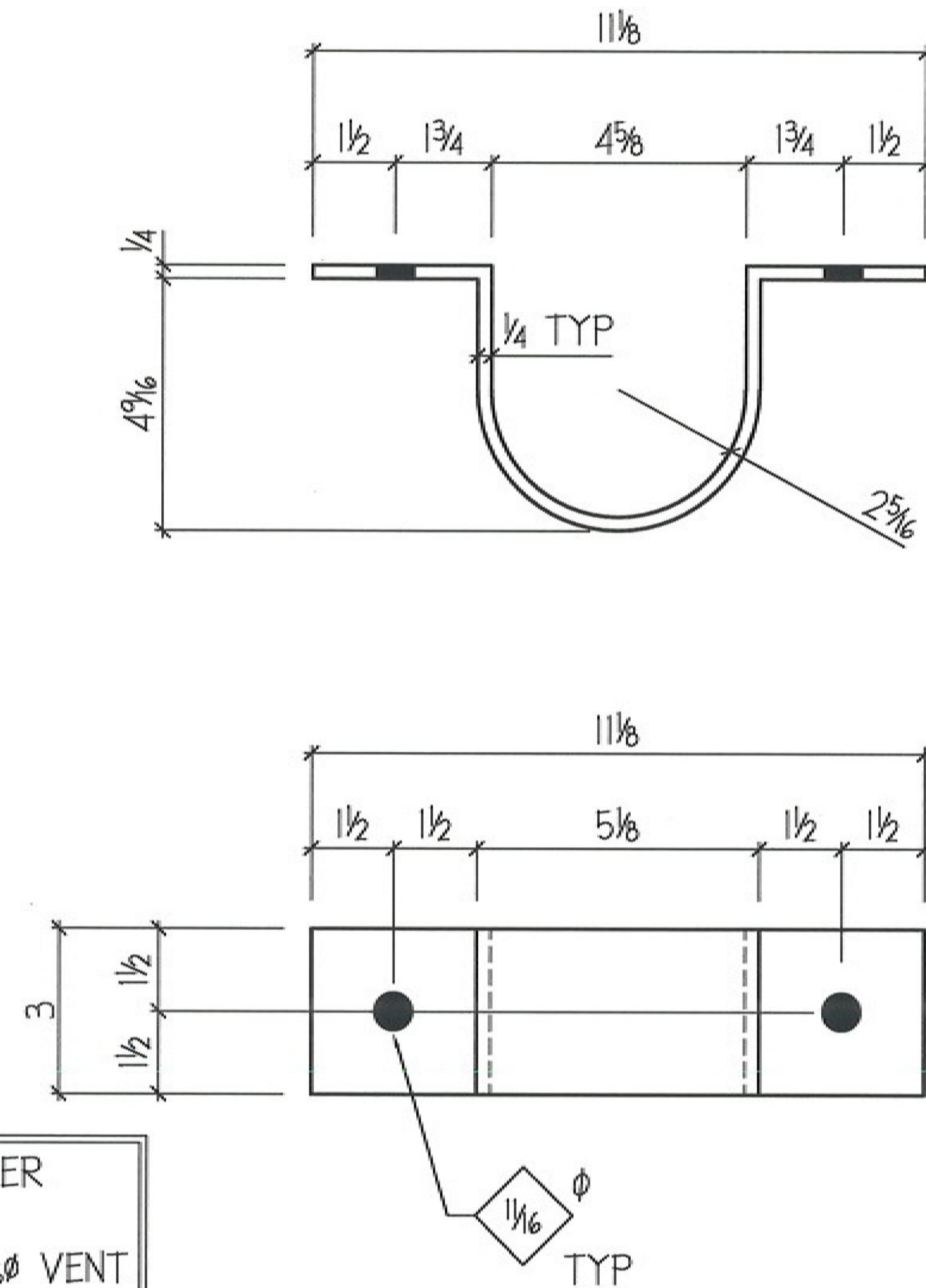
2 ~ DOWNSPOUTS ~ 5MI

REF: HI

BRIDGE 41 NORTH

SURFACE PREP: SSPC-SP2		FINISH: GALV		PRIMER: NONE		DFT: 1.0		REMARKS	WEIGHT
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK			
2		PI 40SCH40	3	8		5MI		BCIE	
	2	PI 40SCH40	4	6	ma5			BCIE	
	2	PI 40SCH40	4	6	ma5			BCIE	
	4	P 1/4x5 3/4	0	6 1/2	pa5				
	4	P 1/4x12	1	4	pb5				
	2	P 1/4x7	1	4	pc5			SHAPE	

HOLES: 1/4" UNO	4/19/17	Per App'l
SHOP BOLTS: A325-TC	3/3/17	Per Check'g
W's - A992-50	REVISION	
HSS - A500 Grd B		
Pipe - A53 Grd B		
Bars & P & L - A36		
ELECTRODES: E70XX/E71-T		
E DWG REF: EI		
ENGR DWG REF: HI		
SEQ / DIV:		
GRID LOCATION:		
TOS ELEVATION:		
NOTES:		
RELiance STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelvt.com		
CUSTOMER Monoko		
PROJECT Bridge Downspouts & Components		
DETAIL Down Spouts		
DRAWN/CHECKED	DATE	JOB NO.
RCL	FEB 2017	7324
DWG NO.	REV	
05		



HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 9/16" VENT
HLS. AS REQ'D.

4 ~ BRACKETS ~ 6MI
REF: HI

BRIDGE 41 NORTH

Vermont Agency of Transportation
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April 17, 2017
RESUBMIT No Approved AsNoted
BY Mark Sargent DATE 06/14/2017

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☐ AMEND AND RESUBMIT
☐ REJECTED - SEE REMARKS

PARSONS BRINCKERHOFF, INC.
BY: *Stephen H. Baymiller*
DATE: *5/17/17*

SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A DFT: 1.0								HOLES: 1 3/16" UNO											
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS: A325-TC										
4		BAR 1/4x3	1	5 1/4 ±		6MI	BENT BAR												
8		STA 1/2"	0	4 1/4		6FBI	STUD ANCHORS		MATL: W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36										
									ELECTRODES: E70XX/E71-T										
									E DWG REF: EI										
									ENGR DWG REF: HI										
									SEQ / DIV:										
									GRID LOCATION:										
									TOS ELEVATION:										
									NOTES:										

4/19/17	Per App'l	
3/3/17	Per Check'g	
NO.	DATE	REVISION
Saw:	INITIAL DATE	Drill: INITIAL DATE
Weld:	INITIAL DATE	Prep: INITIAL DATE
	INITIAL DATE	Paint: INITIAL DATE
	INITIAL DATE	Load: INITIAL DATE
	INITIAL DATE	QC: INITIAL DATE

RELiance STEEL
94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446
TEL 802-655-4810 FAX 802-655-9352
www.reliancesteelvt.com

CUSTOMER Monoko

PROJECT Bridge Downspouts & Components

DETAIL Downspout Bracket

DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV
RCL	FEB 2017	7324	06	2

MONOKO, LLC

1037 Peninsula Avenue
Tarpon Springs, FL 34689-2125
E-mail Address: MonokoLLC@aol.com

(727) 940-3244
(727) 279-8795 Fax

Submittal No.: 07d: Steel Repair Drawings, Bridges 42 N & S, rev _____.

Date: April 25, 2017

Vermont Department of Transportation
Southeast Regional Construction Office
Attn: Ann Gammell, P.E., Regional Construction Engineer
PO Box 1873; 61 Depot Street
Wilder, VT 05088-1873
(802) 522-5719; (802) 281-5000; (802) 281-5002 fax
Ann.Gammell@Vermont.gov

Description: Proposal/Contract Number: Windsor-Hartford IM BPNT (13)
Letting Date: 10/09/15; Award Date: 11/02/15
Project Description: Bridge Painting of Eleven Bridges
In the Towns of Windsor & Hartford, Windsor County, VT
Contract Amount: \$8,671,323.00; Completion Date: 10/12/18

Contractor: **MONOKO, LLC**

Reviewed & Approved By: *Keri Monokandilos*
Keri Monokandilos, Manager

Date: 04/07/2017

Engineer: Paul Perry IV, Resident Engineer
PO Box 1873; 61 Depot Street
Wilder, VT 05088-1873
802-498-8255 cell; 802-281-5000 office; 802-281-5002 fax
paul.perry@vermont.gov
mark.sargent@vermont.gov
pmcdonald@gpinet.com
ann.gammell@vermont.gov

Revision:

Corrections & additions to plans previously submitted to VTRans No. 07c

Vermont Agency of Transportation

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April 17, 2017

RESUBMIT No Approved AsNoted
BY Mark Sargent DATE 06/14/2017

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☐	REJECTED - SEE REMARKS
PARSONS BRINCKERHOFF, INC.	
BY:	<u>Stephen L. Bayington</u>
DATE:	<u>5/17/17</u>



94 South Oak Circle
Colchester, VT 05446
Tel: 802-655-4810
Fax: 802-655-9352
www.reliancesteelofvt.com



TRANSMITTAL

Page 1/1

Project: BRidge Downspouts and Components	RSI Job #: 7324
	Transmittal #: 6
	Transmittal Date: Monday, 24 April 2017
To: Monoko, LLC	By: Email
	Please Respond By: 01/May/17
There is 1 copy of drawings transmitted herewith for Revise & Re-Submit	
Notes: Bridge 42 V-Troughs	
Remarks:	

Drawing & Attachments

Type	Qty	Drawing / Revision
Fabrication	4	1/2, 2/2, 3/2, 4/2
Erection	1	E01/2

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April 17, 2017

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BY Mark Sargent DATE 06/14/2017

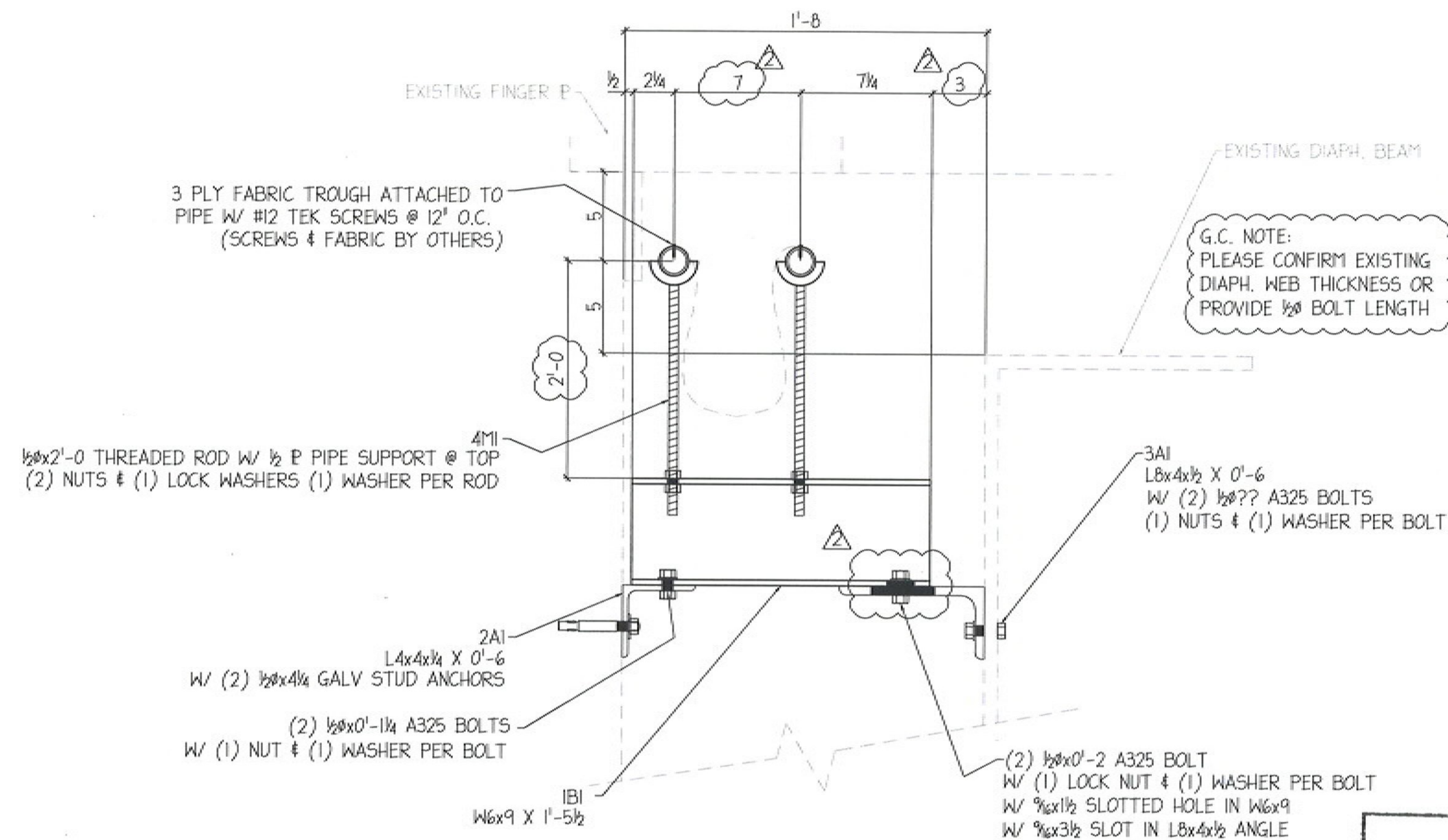
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☐ AMEND AND RESUBMIT
☐ REJECTED - SEE REMARKS
PARSONS BRINCKERHOFF, INC.
BY: Stephen L. Bojangles
DATE: 5/17/17

Notes:

1.) Trough support brackets shall not be welded to girder web.

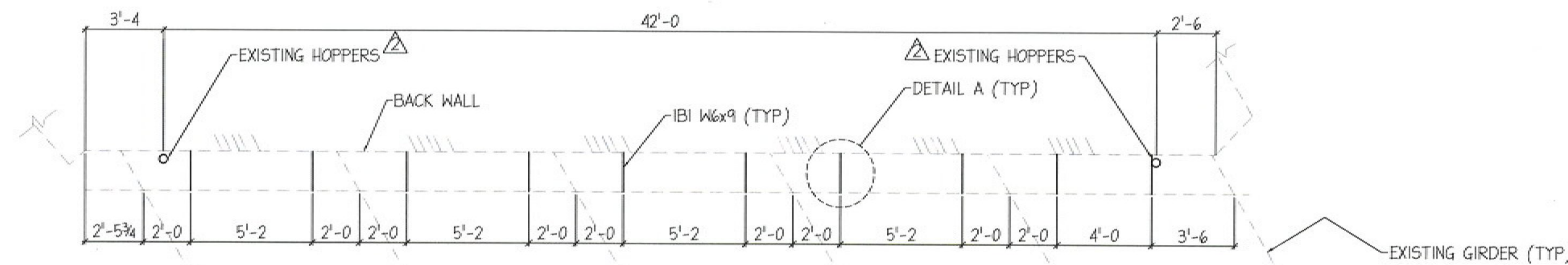
2.) No field welding shall be done to compromise galvanized coating system.

3.) Structural steel tubing shall conform to ASTM-A500 or ASTM-A501 and shall be galvanized in accordance with ASTM A-123 after fabrication. All plates, bars and angles shall conform to ASTM A-36 and shall also be galvanized in accordance with ASTM-A123 after fabrication. Cradle assemblies shall consist of threaded rods (ASTM A568, Class 4.6), Nuts (ASTM A563), and washers (ASTM F486), Finish to be hot dipped zinc coating (ASTM A153).



DETAIL A
N.T.S.

NOTE:
DETAIL ENLARGED PER REV. 2
TO CLARIFY DIMENSIONS/DETAIL
QUESTIONS



PLAN VIEW V TROUGH'S

ALL MATERIAL HOT-DIP
GALV. PER A.S.T.M. A123
GALVANIZED
SEE NOTE 3.

PROJECT LOCATION: WINDSOR-HARTFORD, VT 1M BPNT (13)
BRIDGE 42 NORTH & SOUTH

NO.	DATE	REVISION
1	4/19/17	Per App'l
2	3/3/17	Per Check'g

RELIANCE STEEL
94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446
TEL 802-655-4830 FAX 802-655-9352
www.reliancesteelvt.com

CUSTOMER: Monaka
PROJECT: Bridge Troughs
DETAIL: Trough Plan & Details

DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV
RCL	FEB 2017	7324	EI	1

Vermont Agency of Transportation
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PARSONS BRINCKERHOFF, INC.

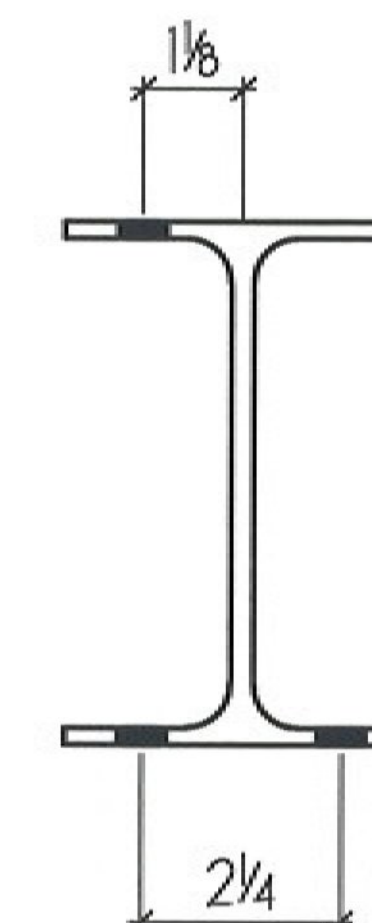
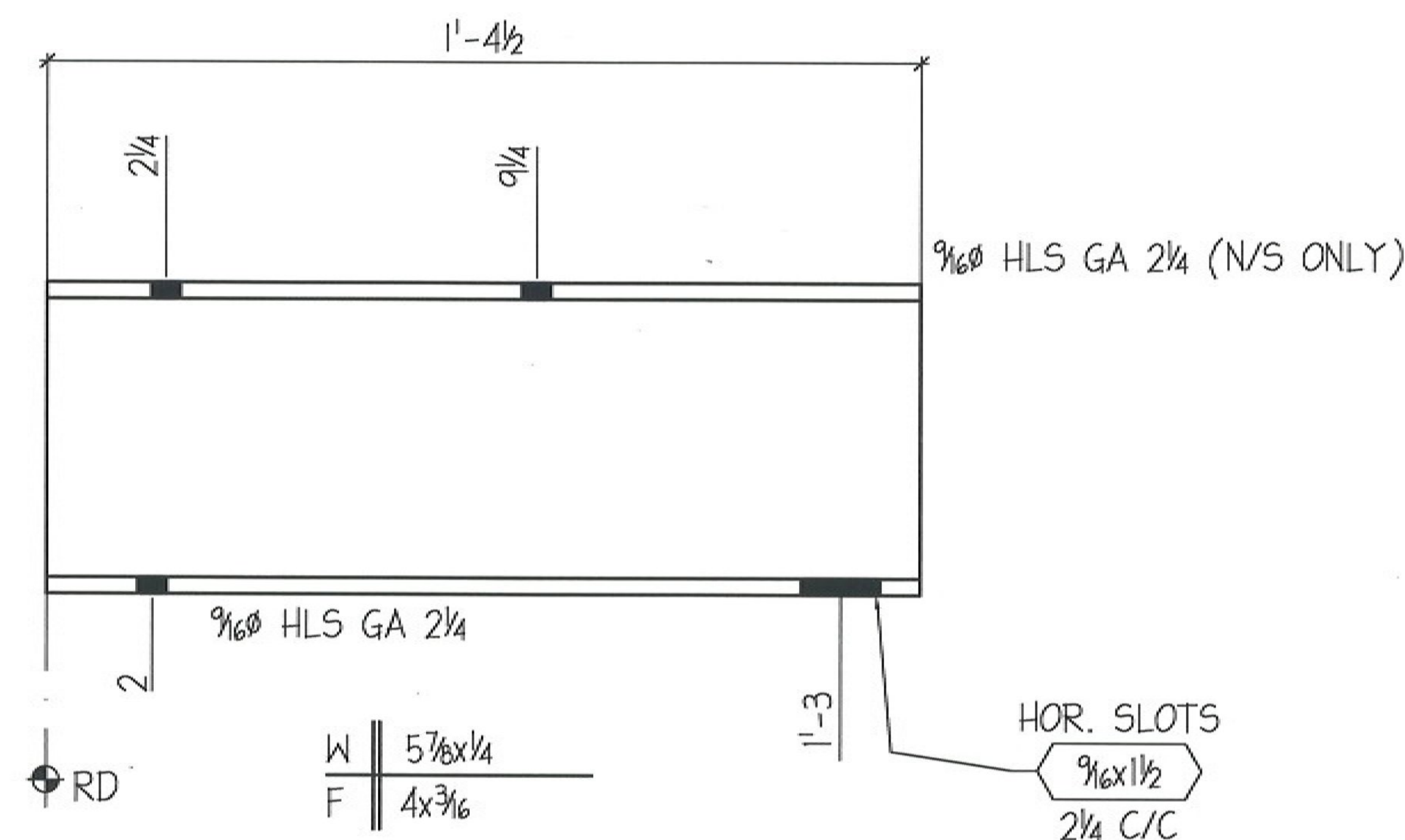
BY: *Stephen L. Bajmat*
DATE: *5/17/17*

Vermont Agency of Transportation
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April 17, 2017

RESUBMIT No Approved AsNoted
BY Mark Sargent DATE 06/14/2017



HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 9/16 VENT
HLS. AS REQ'D.

10 ~ BEAMS ~ IBI
REF: EI

SUBMITTAL REVIEW

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☐ REJECTED - SEE REMARKS

PARSONS BRINCKERHOFF, INC.

BY: *Stephan L. Boyington*
DATE: *5/18/17*

BRIDGE 42 NORTH & SOUTH

SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A DFT: 1.0							HOLES: 9/16 UNO		Saw: INITIAL DATE		Drill: INITIAL DATE		Fitter: INITIAL DATE		QC1: INITIAL DATE	
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	Weld: INITIAL DATE		Prep: INITIAL DATE		Paint: INITIAL DATE		Load: INITIAL DATE	
10		W6x9	1	4 1/2		IBI			SHOP BOLTS: A325-TC							
20		1/2 A325	0	1 1/4		IFB1	A325		MATERIAL: W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36							
20		1/2 A325	0	1 1/2		IFB2	A325		ELECTRODES: E70XX/E71-T							
									E DWG REF: EI							
									ENGR DWG REF: EI							
									SEQ / DIV:							
									GRID LOCATION:							
									TOS ELEVATION:							
									NOTES:							



RELIANCE STEEL
94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446
TEL 802-655-4810 FAX 802-655-9352
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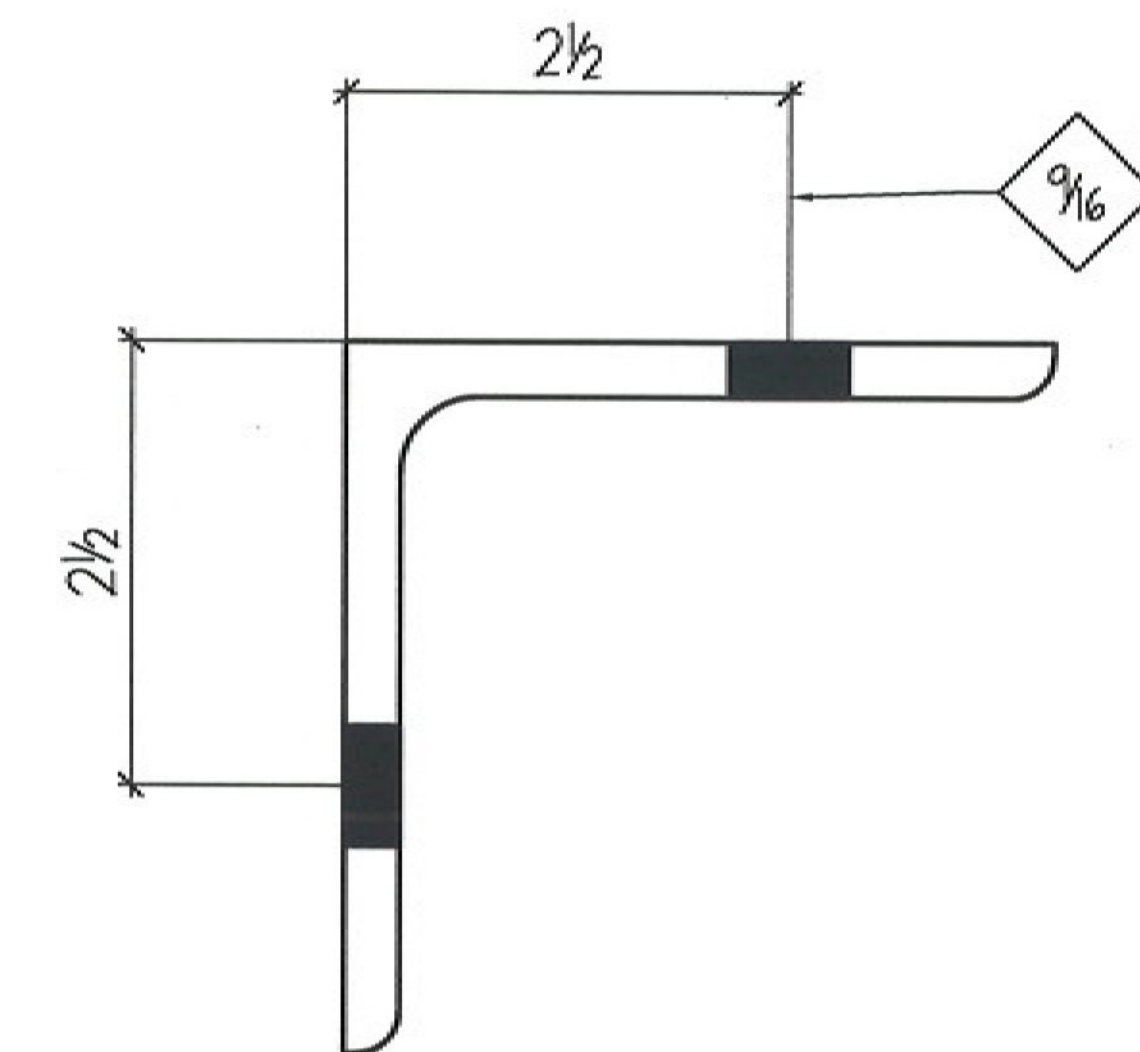
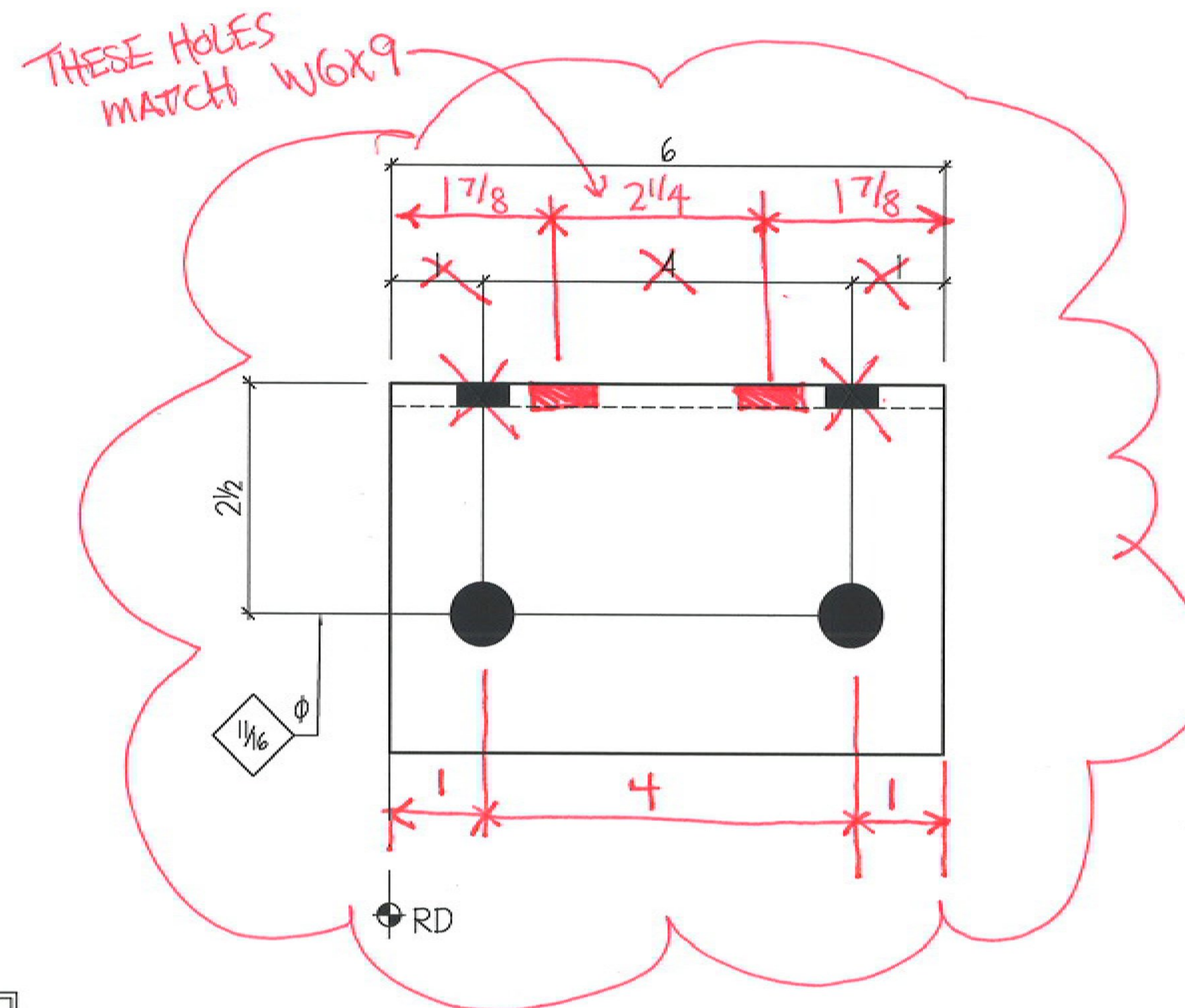


CUSTOMER Monoko				
PROJECT Bridge Downspouts & Components				
DETAIL Trough Beam				
DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV
RCL	FEB 2017	7324	01	2

RECEIVED
closed 03.6 Steel Design Division, Division 42, 30 5 2000 rff

April 17, 2017

RESUBMIT No **Approved AsNoted**
BY Mark Sargent **DATE** 06/14/2017



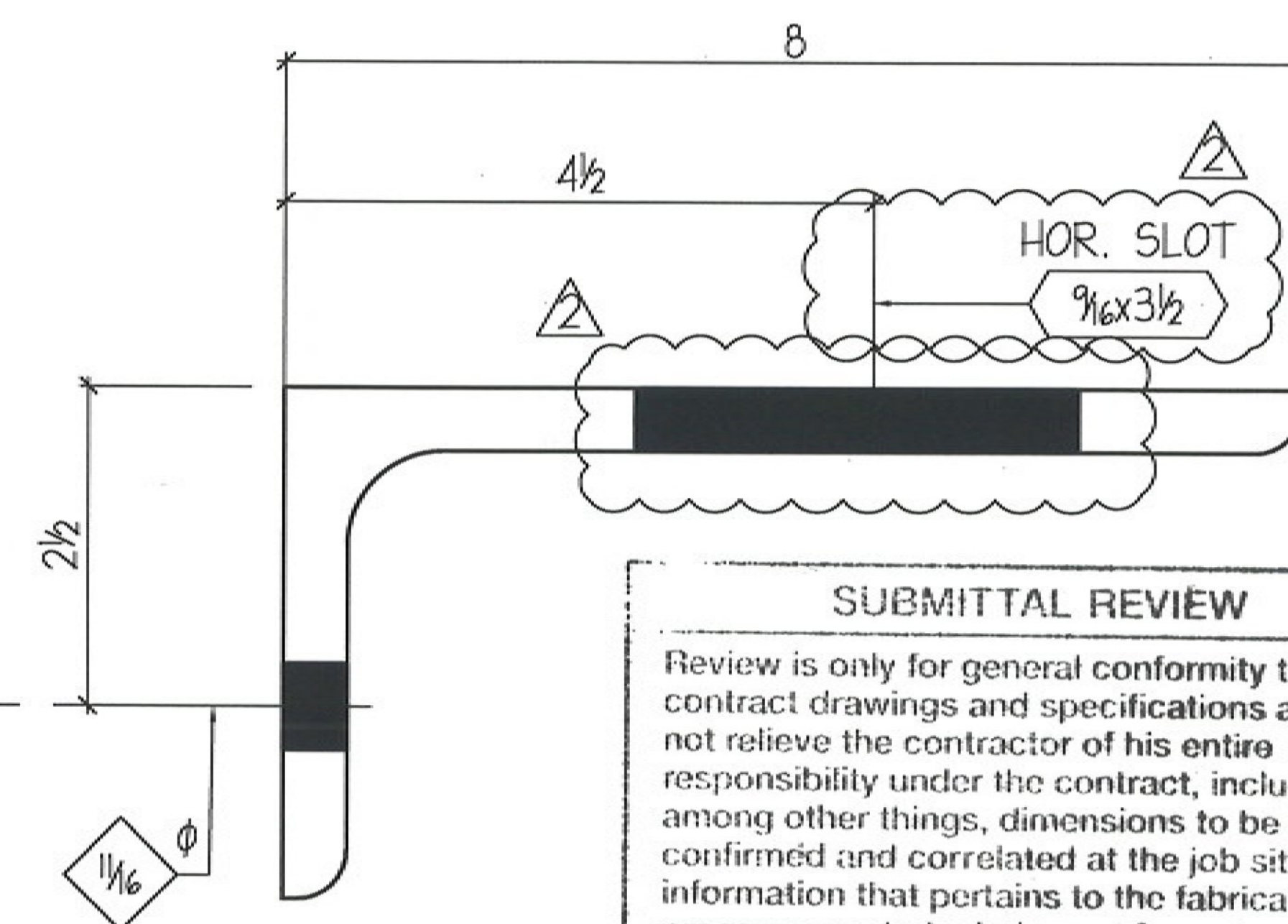
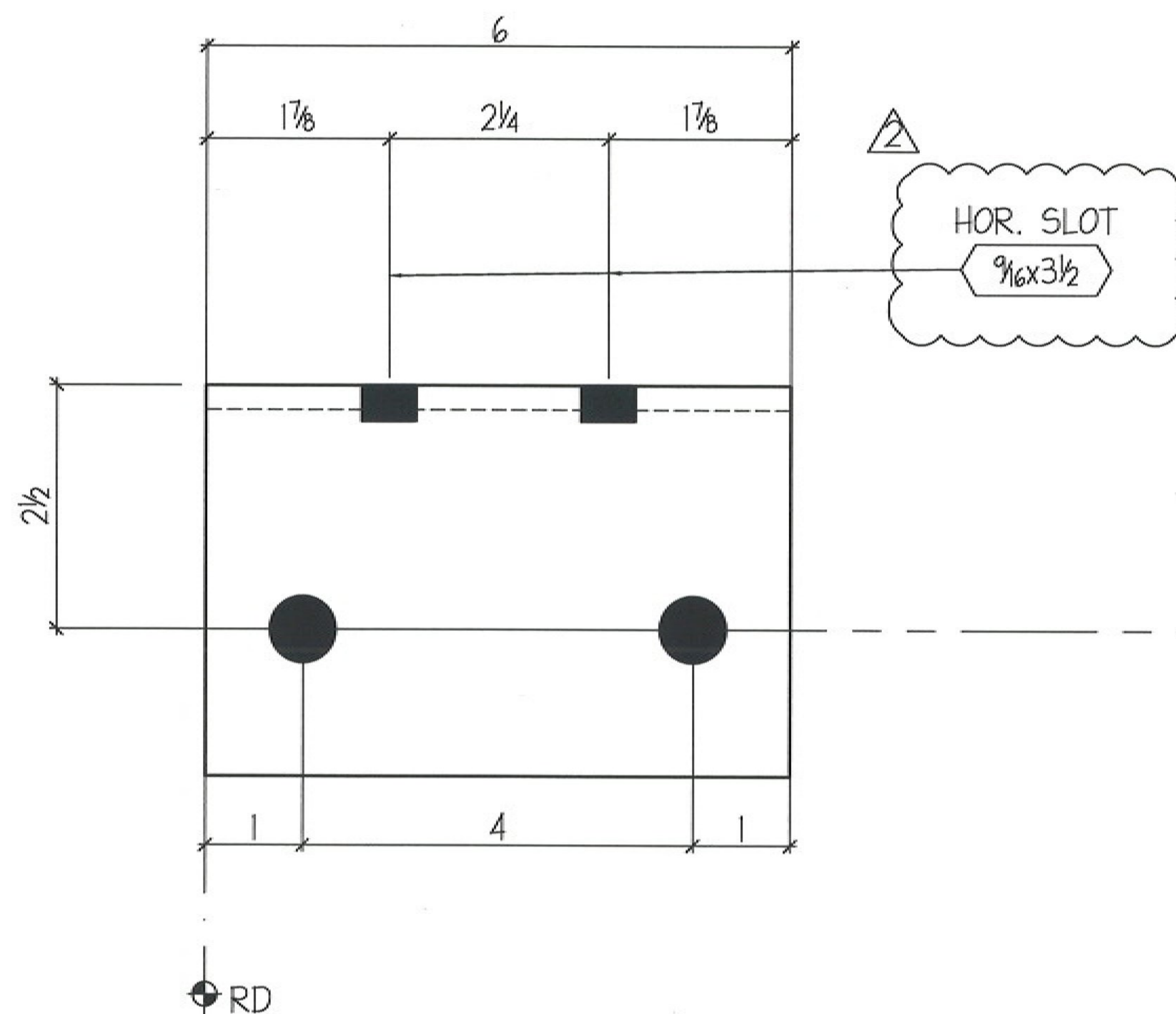
HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 9/16" VENT
HLS. AS REQ'D.

10 ~ ANGLES ~ 2AI
REF: EI

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PARSONS BRINCKERHOFF, INC.	
BY:	<u>Stephen L. Boring</u>
DATE:	<u>5/17/17</u>

BRIDGE 42 NORTH & SOUTH

SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A DFT: 1.0										HOLES:	NO. DATE		Saw:		DATE		Drill:		DATE		Fitter:		DATE		QC:		DATE	
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	SHOP BOLTS:	A325-TC	Weld:	INITIAL	DATE	PREP:	INITIAL	DATE	PAINT:	INITIAL	DATE	LOAD:	INITIAL	DATE	QC	INITIAL	DATE	QC	INITIAL	DATE
10		L4x4x1/4	0	6		2A1																						
20		STA 1/20	0	4 1/4		2FBI	GALV STUD ANCHOR																					



HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 9/16" VENT
HLS. AS REQ'D.

10 ~ ANGLES ~ 2AI
REF: EI

Vermont Agency of Transportation
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BY Mark Sargent DATE 06/14/2017

SUBMITTAL REVIEW

Review is only for general conformity to the contract drawings and specifications and shall not relieve the contractor of his entire responsibility under the contract, including among other things, dimensions to be confirmed and correlated at the job site, and information that pertains to the fabrication processes or to techniques of construction.

- ☒ NO EXCEPTIONS TAKEN
- ☐ MAKE CORRECTIONS NOTED
RESUBMITTAL NOT REQUIRED
- ☐ AMEND AND RESUBMIT
- ☐ REJECTED - SEE REMARKS

PARSONS BRINCKERHOFF, INC.

BY: *Stephane Baynham*
DATE: *5/17/17*

BRIDGE 42 NORTH & SOUTH

SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A DFT: 1.0								HOLES:	9/16" UNO	REVISION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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BOLTS:	A325-TC	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:	NO.:	DATE:

4/19/17	Per App'l	
3/3/17	Per Check'g	
NO.	DATE	REVISION
CUSTOMER Monoko PROJECT Bridge Downspouts & Components DETAIL Trough Angle Supports		
DRAWN/CHECKED	DATE	JOB NO.
RCL	FEB 2017	7324
DWG NO.	REV	
03		



RELIANCE STEEL
94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446
TEL 802-655-4810 FAX 802-655-9352
www.reliancesteelvt.com



RECEIVED

April 17, 2017

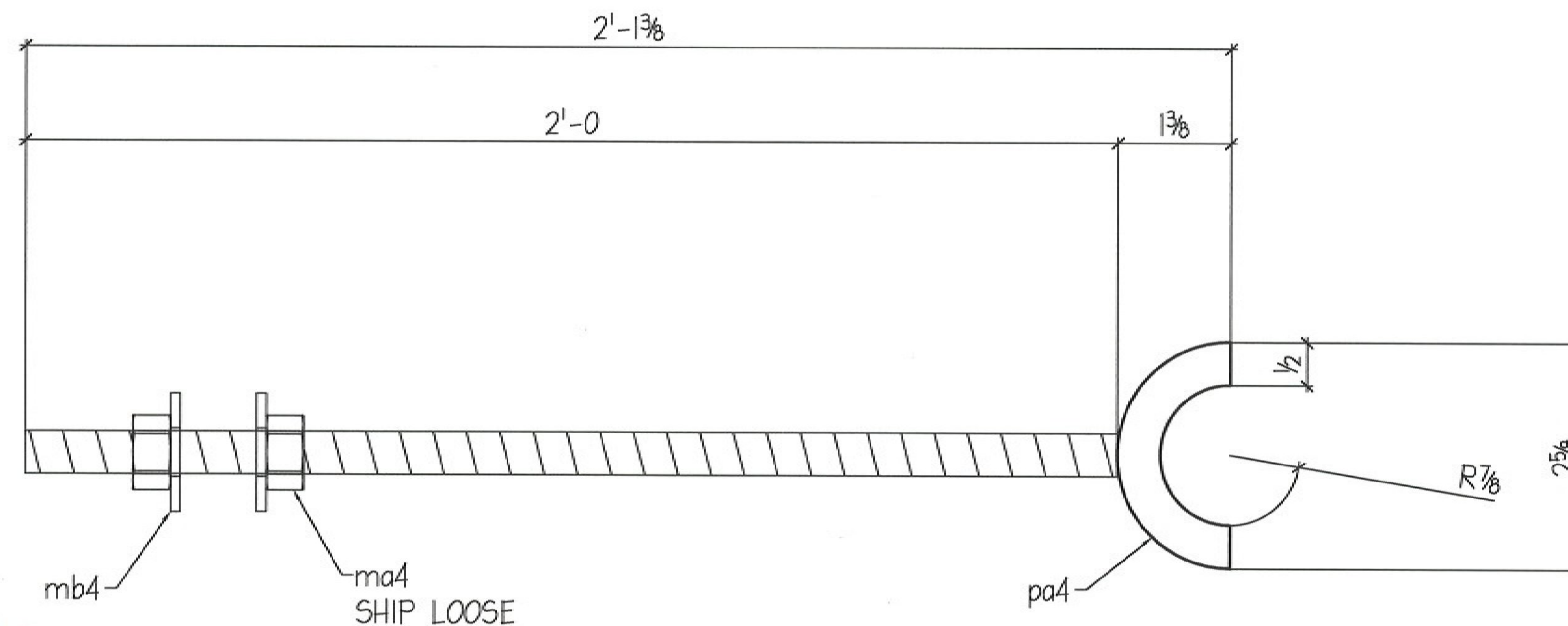
RESUBMIT No **Approved AsNoted**
BY Mark Sargent **DATE** 06/14/2017

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☐ AMEND AND RESUBMIT
☐ REJECTED - SEE REMARKS

BY: Stephen L. Baymiller

DATE: 5/17/17



GALVANIZE
- ALL MATERIAL. SEE NOTE 3
NOT PER GALV. PER DWG E1

~~HOT DIP GALV. PER
A.S.T.M. A123
SHOP PROVIDE 9/16" VENT
HLS. AS REQ'D.~~

20 ~ SUPPORTS ~ 4MI

REF: EI

BRIDGE 42 NORTH & SOUTH

SURFACE PREP: SSPC-SP2 FINISH: GALV PRIMER: N/A							DFT: 1.0	HOLES: 9/16" UNO	NO. DATE REVISION									
SHIP QTY	ASSEMBLY QTY	SECTION	FT	INCH	ASSEMBLY MARK	SHIP MARK	REMARKS	WEIGHT	Saw:	Drill:	Fitter:	GCI:						
20		THR 1/2-13	2	0		4MI			INITIAL	DATE	INITIAL	DATE	INITIAL	DATE	INITIAL	DATE		
	20	P 1/2x2 5/8	0	2 5/8	pa4		SHAPE		Weld:	Prep:	Paint:	Load:						
	40	NUT 1/2"			ma4		A563-SHIP LOOSE		INITIAL	DATE	INITIAL	DATE	INITIAL	DATE	INITIAL	DATE		
	40	FW 1/2"			mb4		F436-SHIP LOOSE											
									 RELIANCE STEEL 94 SOUTH OAK CIRCLE, COLCHESTER, VT 05446 TEL 802-655-4810 FAX 802-655-9352 www.reliancesteelvt.com 									
								MATL: W's - A992-50 HSS - A500 Grd B Pipe - A53 Grd B Bars & P & L - A36										
								ELECTRODES: E70XX/E71-T										
								E DWG REF: E1										
								ENGR DWG REF: E1										
								SEQ / DIV:	CUSTOMER Monoko									
								GRID LOCATION:	PROJECT Bridge Downspouts & Components									
								TOS ELEVATION:	DETAIL Trough Threaded Rod Supports									
								NOTES:	DRAWN/CHECKED	DATE	JOB NO.	DWG NO.	REV					
									RCL	FEB 2017	7324	04	