

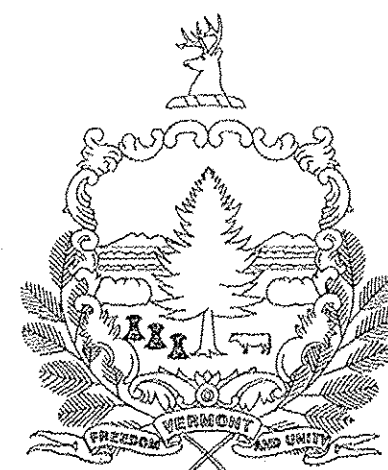
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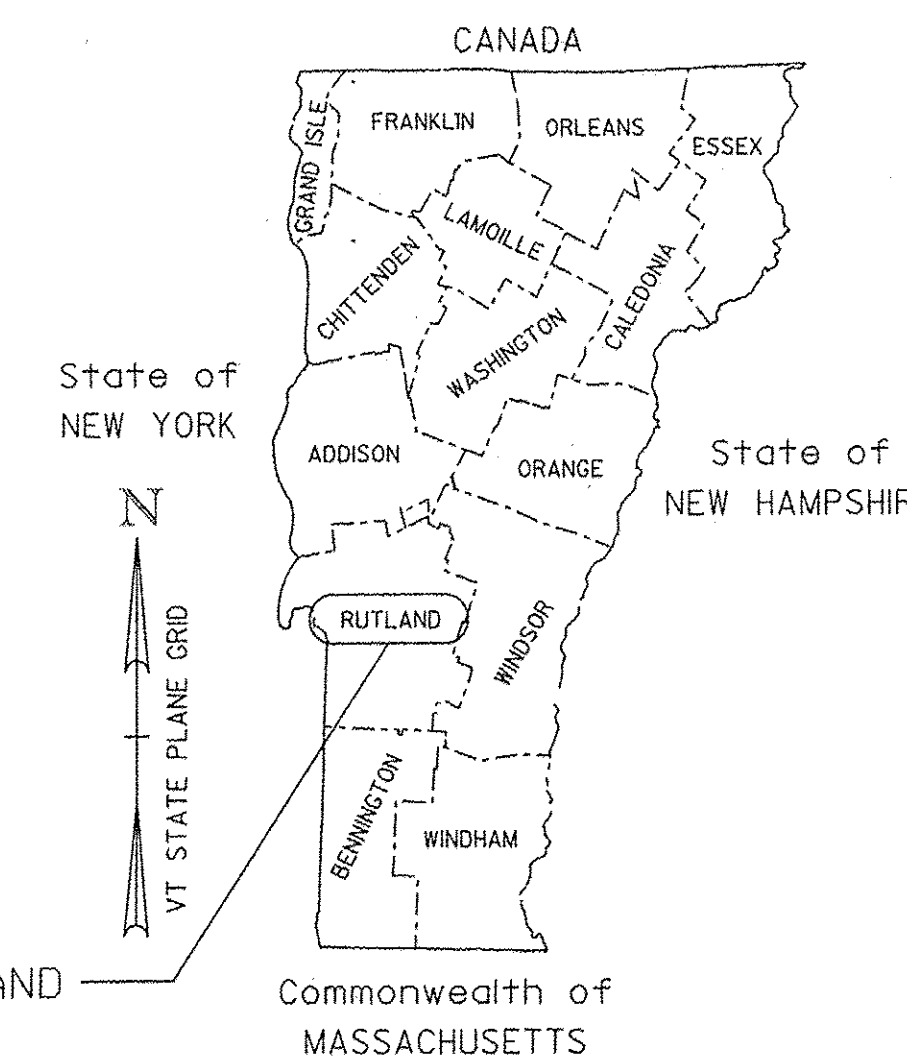
- T-1 08-06-2012
- T-10 08-06-2012
- T-11 08-06-2012
- T-12 08-06-2012
- T-13 08-06-2012

# STATE OF VERMONT AGENCY OF TRANSPORTATION



## PROPOSED IMPROVEMENT BRIDGE PROJECT

CASTLETON-WEST RUTLAND  
COUNTY OF RUTLAND  
THREE BRIDGES ON OR OVER US ROUTE 4



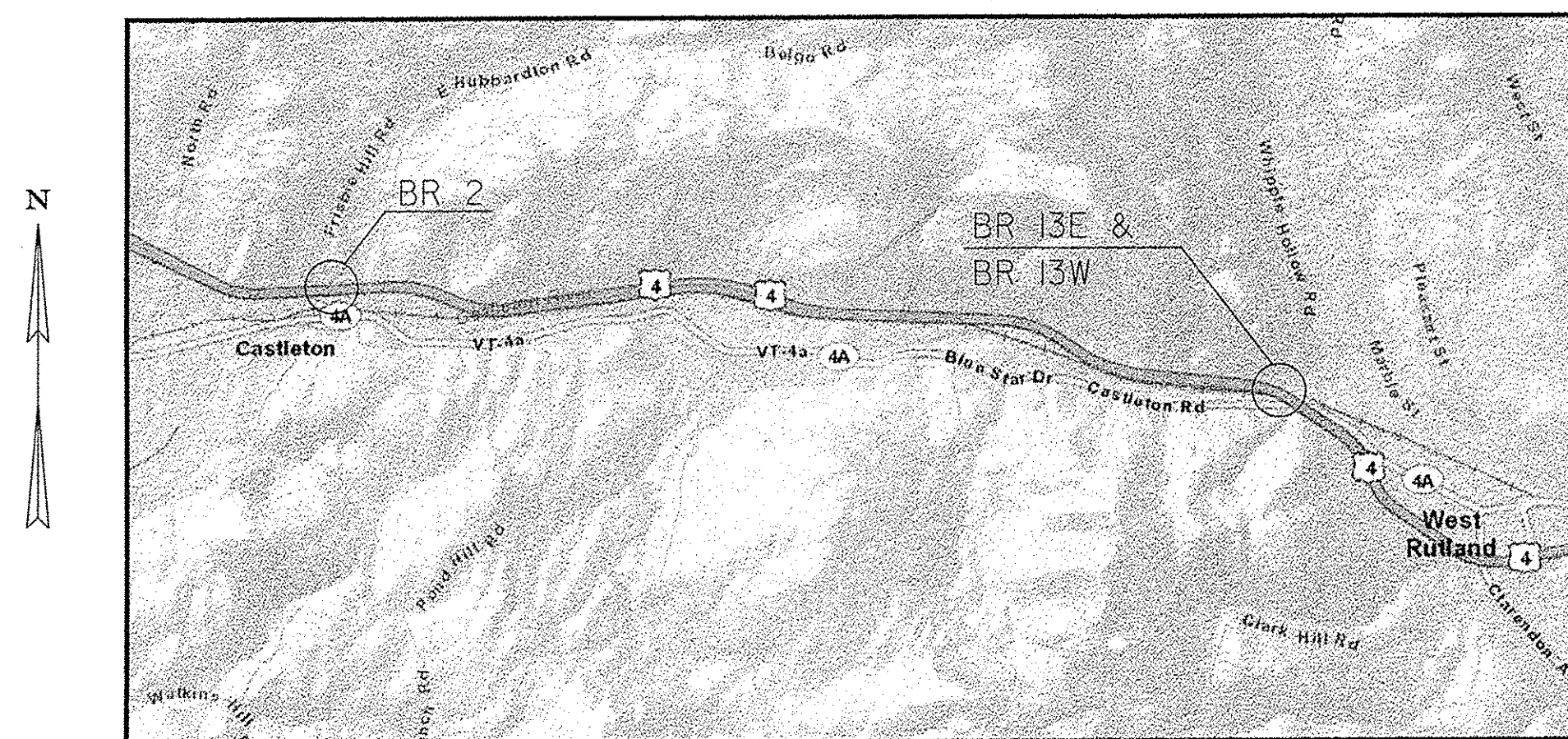
CASTLETON-WEST RUTLAND  
BF BPNT (15)

LOCATION MAP  
NOT TO SCALE

RECORD PLANS	
CONTRACTOR:	MODERN PROTECTIVE COATINGS - HUDSON, NH
RESIDENT ENGINEER:	TIM POCKETTE
CONSTRUCTION BEGAN:	MAY 18, 2015
CONSTRUCTION COMPLETE:	SEPTEMBER 28, 2015
RECORD PLANS BY:	TIM POCKETTE & AARON JAMES
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY:	RESIDENT ENGINEER
DATE:	09-12-2016
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: CASTLETON BR 2 (NSH 9150 [CASTLETON STATE HIGHWAY] OVER US ROUTE 4) (US ROUTE 4 MM 0.76)  
 WEST RUTLAND BR 13E (US ROUTE 4 OVER CLARENDON PITTSFORD RAILROAD) (MM 12.95)  
 WEST RUTLAND BR 13W (US ROUTE 4 OVER CLARENDON PITTSFORD RAILROAD) (MM 12.95)

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

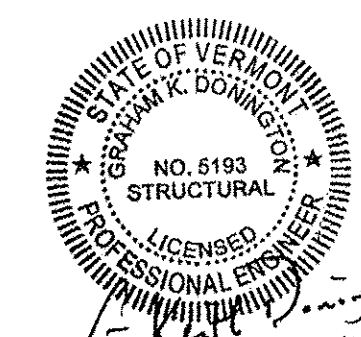


PROJECT LIMITS PLAN  
NOT TO SCALE

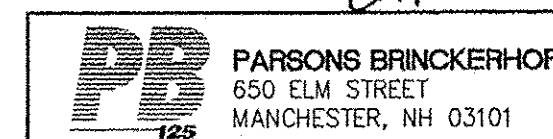
BUILT AS DESIGNED

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



DIRECTOR OF PROJECT DELIVERY	
APPROVED	DATE 11/16/14
PROJECT MANAGER : MARK SARGENT	
PROJECT NAME : CASTLETON-WEST RUTLAND	
PROJECT NUMBER : BF BPNT (15)	
SHEET 1 OF 14 SHEETS	



### PROJECT NOTES:

1. 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 SPECIAL PROVISIONS.
2. 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 US ROUTE 4. THE RIGHT-OF-WAY FOR ALL OTHER HIGHWAYS SHALL BE ASSUMED TO BE A MINIMUM OF 3 RODS UNLESS SHOWN OTHERWISE ON REFERENCE PLANS.
3. 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.
4. 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).
5. 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.)
6. UTILITIES THAT ARE PRESENT ON THE STRUCTURES SHALL NOT BE BLASTED OR PAINTED. THESE UTILITIES MUST BE PROTECTED. SEE UTILITY SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
7. 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 THE START OF WORK.
8. THE CONTRACTOR SHALL NOT IMPEDE THE TOWN CONTROLLED PORTION OF THE RIGHT OF WAY WITH EQUIPMENT OR ANY STAGING MATERIALS FOR STRUCTURES CARRYING TOWN HIGHWAYS OVER THE INTERSTATE.
9. WORK OUTSIDE THE SEASONAL LIMITATIONS WILL NOT BE ALLOWED UNLESS BY SPECIAL PERMISSION GRANTED BY THE PROJECT MANAGER. WORK OUTSIDE THE SEASONAL LIMITATIONS 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.
10. 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.
11. ALL WORK ADJACENT TO OR OVER ACTIVE RAILROADS SHALL BE PERFORMED IN COMPLIANCE WITH APPLICABLE RAILROAD REQUIREMENTS. SEE THE RAILROAD SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. 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 (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.
13. THE CONTRACTOR SHALL GRIND ALL EDGES OF EXISTING STEEL TO A RADIUS OF  $\frac{1}{16}$ " -  $\frac{1}{8}$ " PRIOR TO BLASTING THE STEEL IN PREPARATION FOR COATING.

### BRIDGE NOTES:

#### CASTLETON, BRIDGE 2 - CASTLETON STATE HIGHWAY OVER US ROUTE 4

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS. NO GREASE PAINTING OF BEAMS IS REQUIRED.
3. CLEAN AND/OR REPLACE DIAPER DRAINS AS NECESSARY AT PIERS (3 DRAINS)
4. EXTEND/REPLACE BRIDGE DRAIN WEEPERS AS NECESSARY (APPROX. 26)
5. FILL SHALL BE PLACED AS NECESSARY FOR STAGING AND SHALL BE REMOVED UPON COMPLETION
6. SNOW FENCE PRESENT ON BRIDGE
7. THIS BRIDGE HAS CONCURRENT WORK ASSOCIATED WITH CASTLETON-RUTLAND BF MEMB (37) PROJECT. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES, INCLUDING TRAFFIC CONTROL, WITH THE CORRESPONDING CONTRACTOR.

#### WEST RUTLAND, BRIDGE 13E - US ROUTE 4 OVER CLARENDON PITTSFORD R.R.

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS. NO GREASE PAINTING OF BEAMS IS REQUIRED.
3. CLEAN AND/OR REPLACE DIAPER DRAINS AS NECESSARY AT PIERS (4 DRAINS)
4. EXTEND/REPLACE BRIDGE DRAIN WEEPERS AS NECESSARY
5. REPAIR/REPLACE SCUPPERS AS NECESSARY (9 SCUPPERS)

### TRAFFIC CONTROL:

1. THE CONTRACTOR SHALL SUBMIT SITE SPECIFIC TRAFFIC CONTROL PLANS DEPICTING EACH PHASE OF THE PLANNED WORK FOR ANY WORK ON US ROUTE 4 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.
2. THE CONTRACTOR SHALL VERIFY THE MOST CURRENT TRAFFIC VOLUMES FOR US ROUTE 4 AND CROSS ROADS FOR USE IN THE SPECIFIC TRAFFIC CONTROL PLANS.

TOWN	BRIDGE No	US ROUTE 4 2012 AADT		CROSSROAD	CROSSROAD 2012 AADT SUM OF BOTH DIRECTIONS
		EASTBOUND	WESTBOUND		
CASTLETON	2	6550	6550	E. HUBBARDTON RD	990
WEST RUTLAND	13E	6550	N/A	RAILROAD	NOT AVAILABLE
WEST RUTLAND	13W	N/A	6550	RAILROAD	NOT AVAILABLE

3. THE TRAFFIC CONTROL PLANS SHALL SHOW ALL RAMPS AND US ROUTE 4 ACCELERATION LANES AND DECELERATION LANES.
4. UNIFORMED TRAFFIC OFFICERS ARE REQUIRED FOR THE TRAFFIC CONTROL ON US ROUTE 4.
5. 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.
6. 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.
7. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AND PRINT MEDIA SHALL BE IMPLEMENTED 2 WEEKS IN ADVANCE OF LANE CLOSURES AS DIRECTED BY THE ENGINEER.
8. TRAFFIC BARRELS ARE FOR TEMPORARY CLOSURES ONLY, UP TO A MAXIMUM OF 3 DAYS. ALL CLOSURES LONGER THAN 3 DAYS SHALL USE CONCRETE BARRIERS, WHICH SHALL BE PAID UNDER ITEM 621.90 TEMPORARY TRAFFIC BARRIER.
9. RAILROAD TRAFFIC CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH MAINTENANCE OF RAILROAD TRAFFIC OF SECTION 900 OF THE SPECIAL PROVISIONS.

#### WEST RUTLAND, BRIDGE 13W - US ROUTE 4 OVER CLARENDON PITTSFORD R.R.

1. REMOVE GREASE COATING ON ENDS OF STEEL BEAMS, END CROSS MEMBERS, AND BEARINGS
2. CLEAN AND PAINT EXISTING STEEL, APPLYING AN ADDITIONAL INTERMEDIATE COAT OF PAINT ON ALL EXPOSED STEEL WITHIN 20' OF ABUTMENTS AND PIERS. NO GREASE PAINTING OF BEAMS IS REQUIRED.
3. CLEAN AND/OR REPLACE DIAPER DRAINS AS NECESSARY AT PIERS (4 DRAINS)
4. EXTEND/REPLACE BRIDGE DRAIN WEEPERS AS NECESSARY
5. REPAIR/REPLACE SCUPPERS AS NECESSARY (6 SCUPPERS)

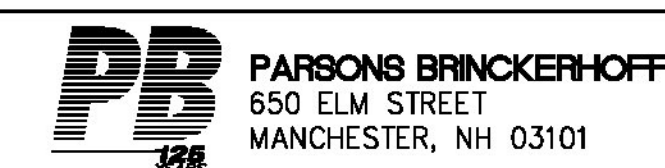
## PROJECT NOTES

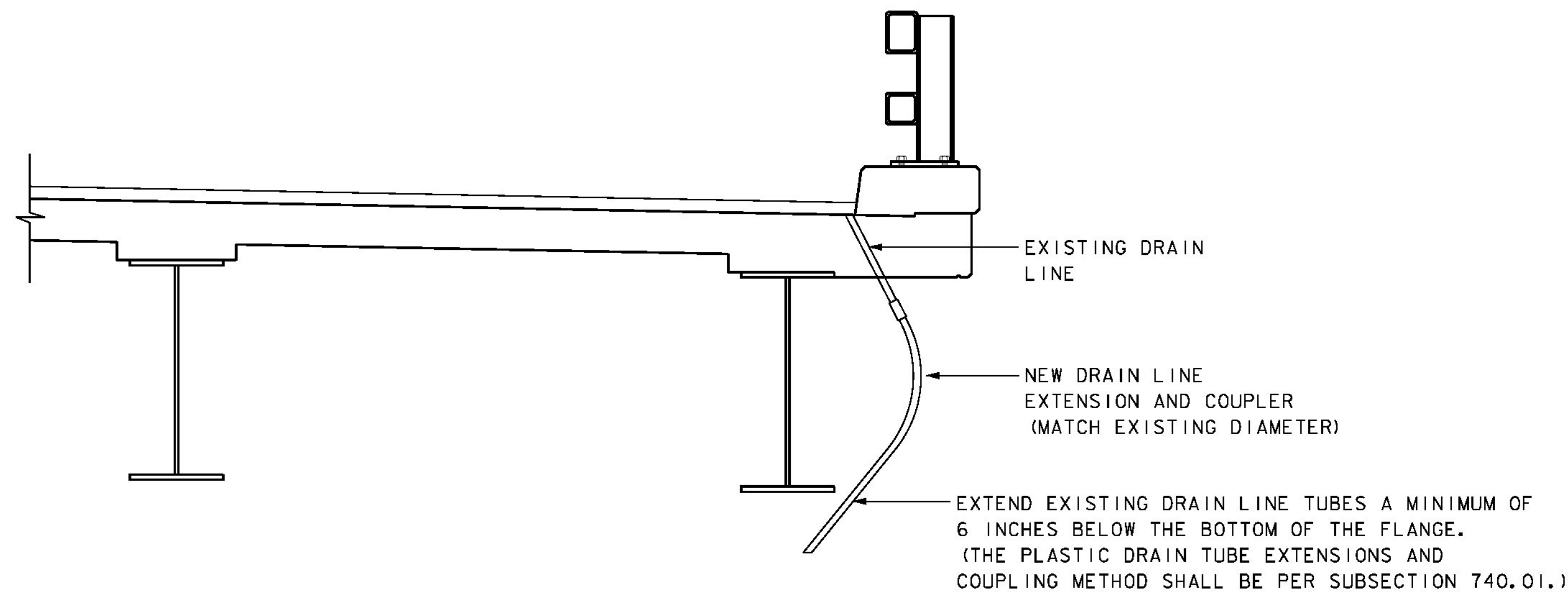
PROJECT NAME: CASTLETON-WEST RUTLAND

PROJECT NUMBER: BF BPNT (15)

FILE NAME: z525459det.dgn  
PROJECT LEADER: G.K.DONNINGTON  
DESIGNED BY: R.GAUDREAU  
det.dgn

PLOT DATE: 17-OCT-2014  
DRAWN BY: R. GAUDREAU  
CHECKED BY: S.BROWN  
SHEET 2 OF 14

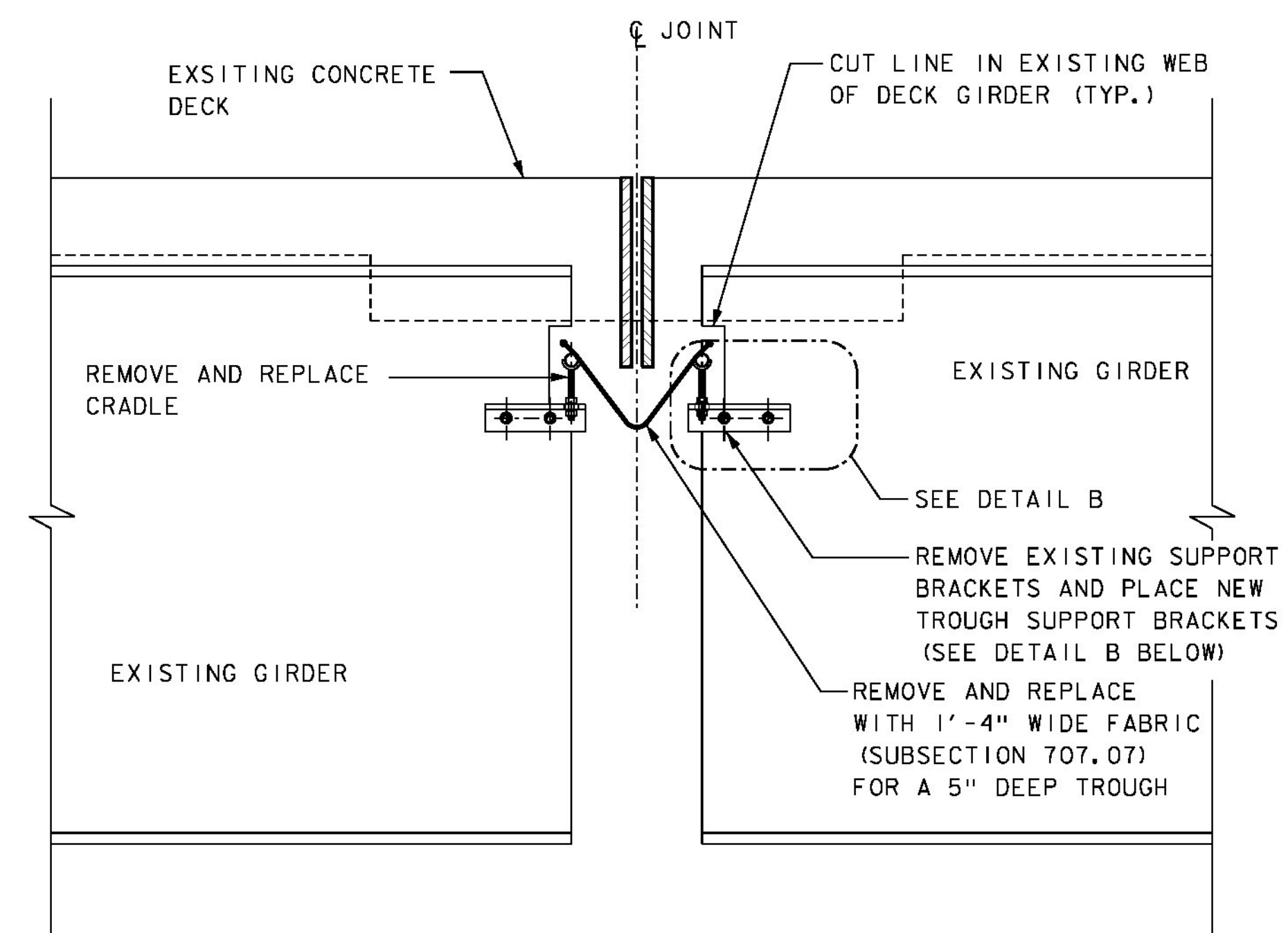




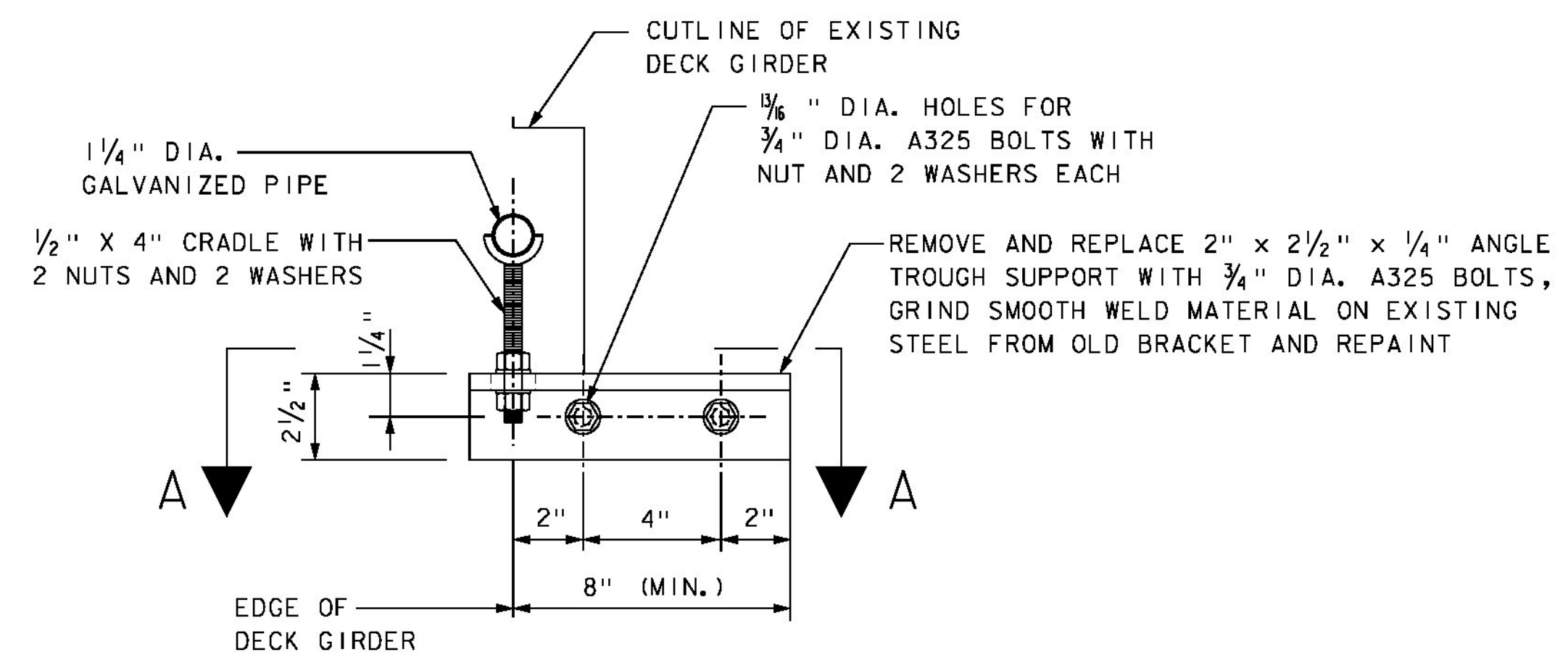
**DRAIN TUBE EXTENSION DETAIL**  
NOT TO SCALE

**DRAIN TUBE EXTENSION NOTE:**

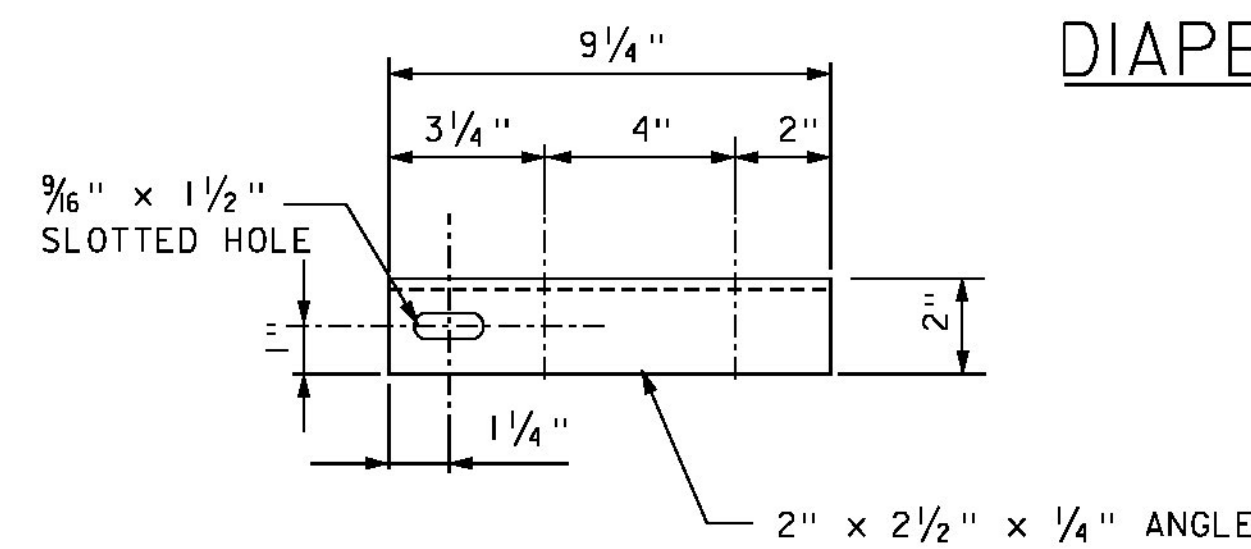
IF EXISTING DRAIN TUBE IS TOO SHORT TO PROVIDE ADEQUATE CONNECTION, THE CONTRACTOR SHALL COMPLETELY FILL THE TUBE WITH POLYURETHANE SEALANT CONFORMING TO SUBSECTION 707.05. TUBES TO BE FILLED WITH POLYURETHANE SEALANT SHALL BE APPROVED BY THE ENGINEER PRIOR TO BEING FILLED.



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



**DETAIL B**  
3" = 1'-0"  
**DIAPER DRAIN REPAIR DETAILS**



**TROUGH SUPPORT BRACKET DETAIL A-A**  
**PLAN VIEW**  
3" = 1'-0"

**DIAPER DRAIN REPAIR NOTES:**

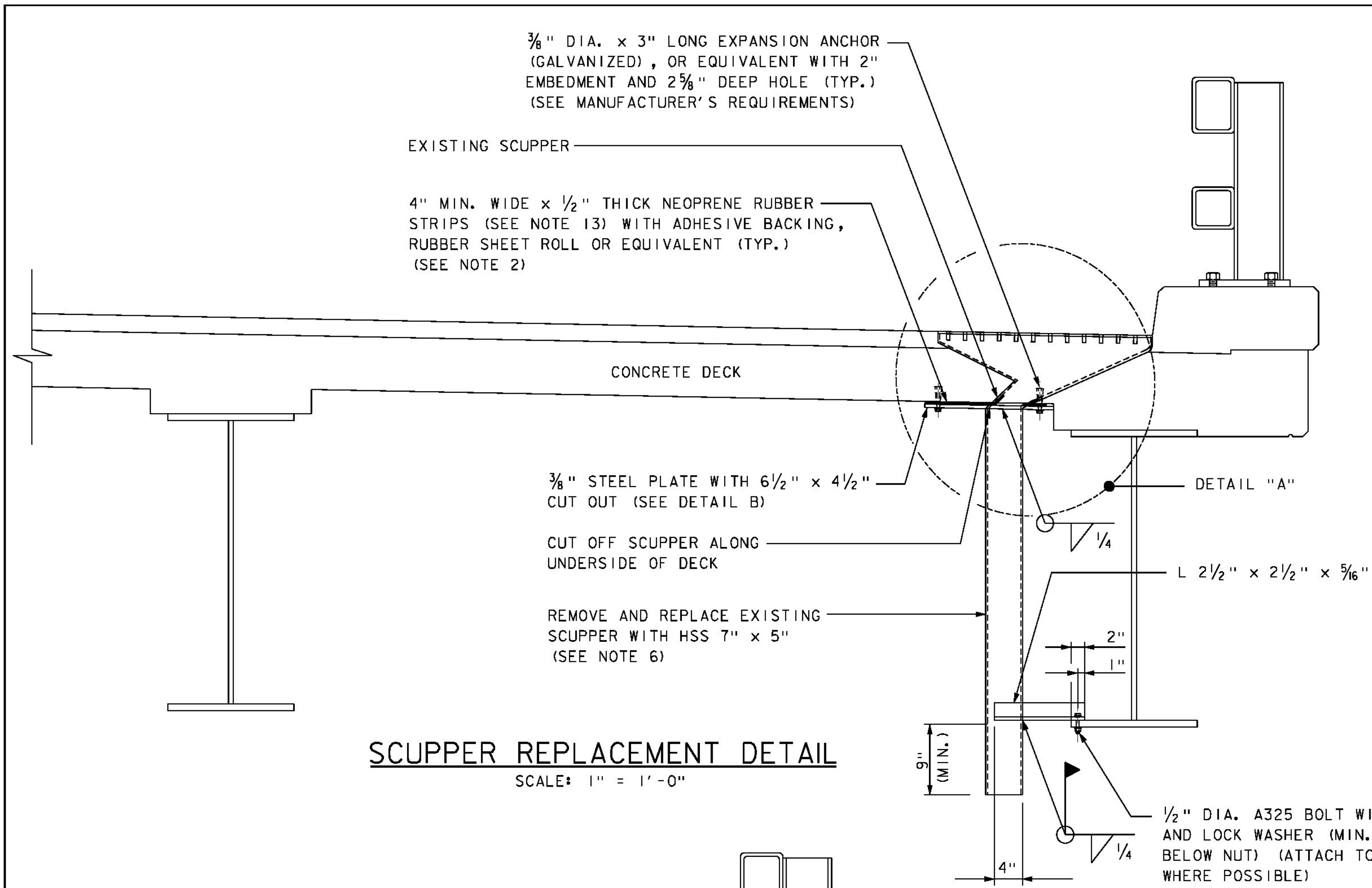
1. TROUGH SUPPORT BRACKETS SHALL NOT BE WELDED TO GIRDER WEB.
2. STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM-500 OR ASTM-501 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION. ALL PLATES, CRADLES, BARS AND ANGLES SHALL CONFORM TO ASTM A-36 AND SHALL ALSO BE GALVANIZED IN ACCORDANCE 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 SHALL 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 (1)**

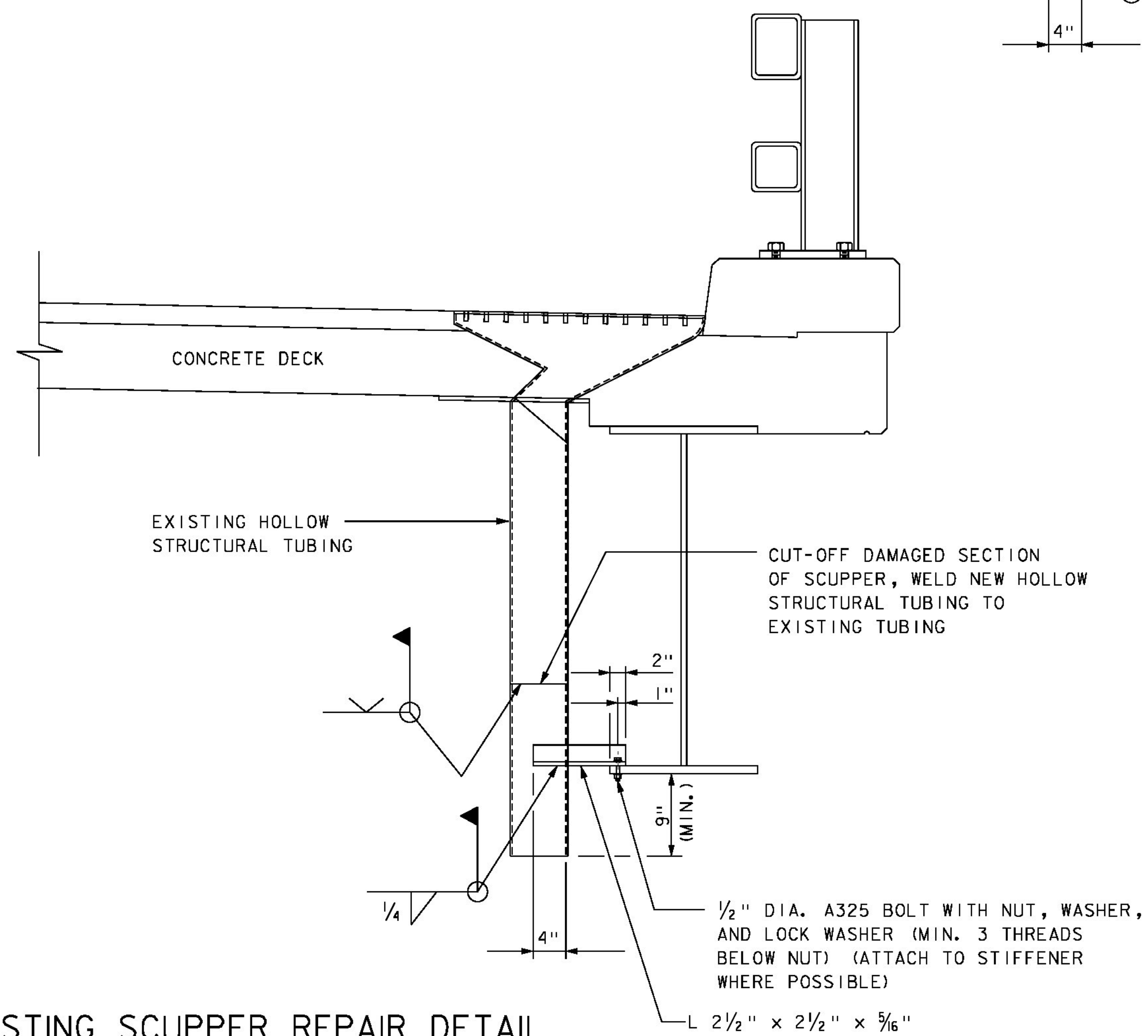
PROJECT NAME: CASTLETON-WEST RUTLAND  
PROJECT NUMBER: BF BPNT (15)

FILE NAME: z525459det\_2.dgn  
PROJECT LEADER: G.K.DONINGTON  
DESIGNED BY: R.GAUDREAU  
det2.dgn

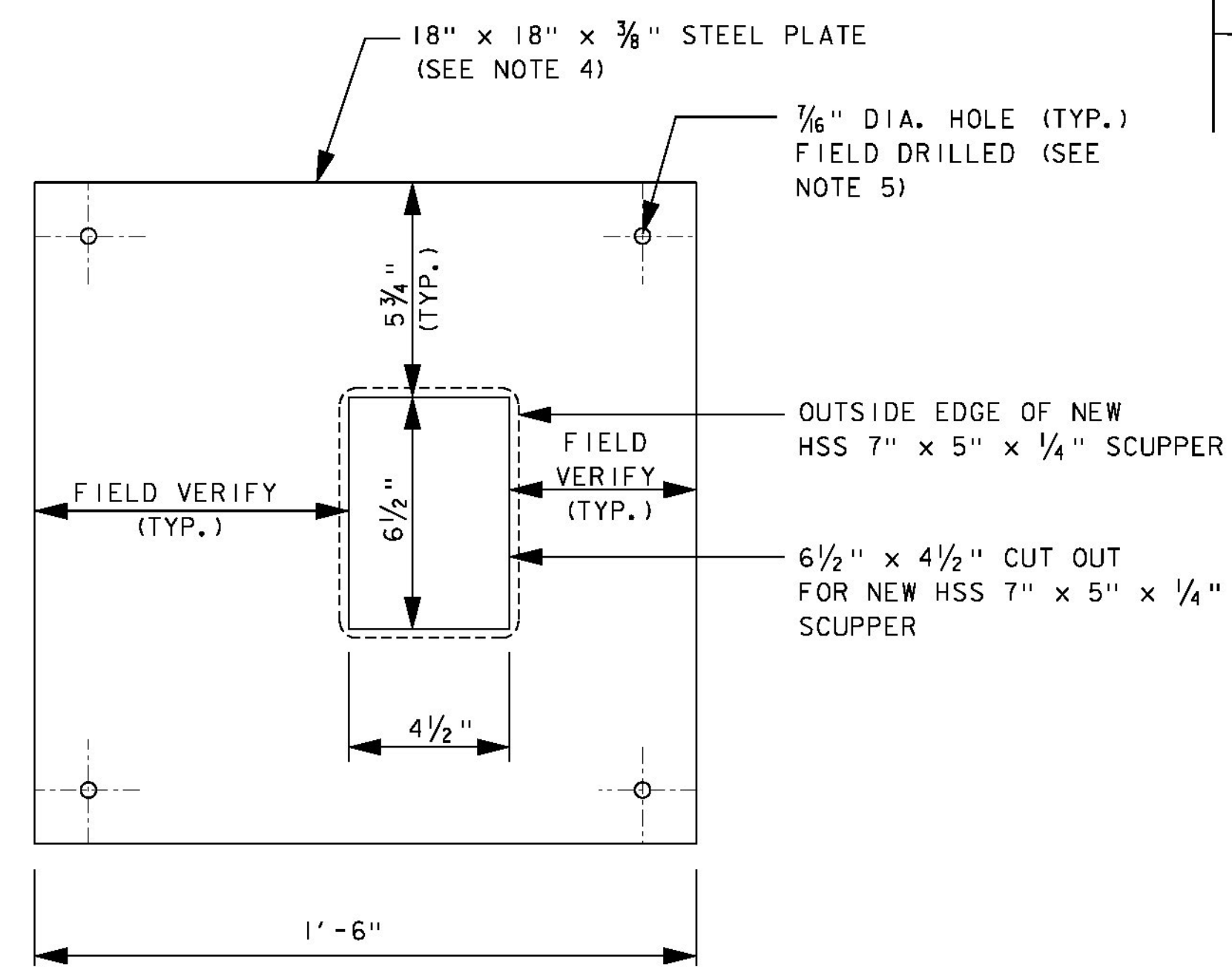
PLOT DATE: 17-OCT-2014  
DRAWN BY: R.GAUDREAU  
CHECKED BY: S.BROWN  
SHEET 3 OF 14



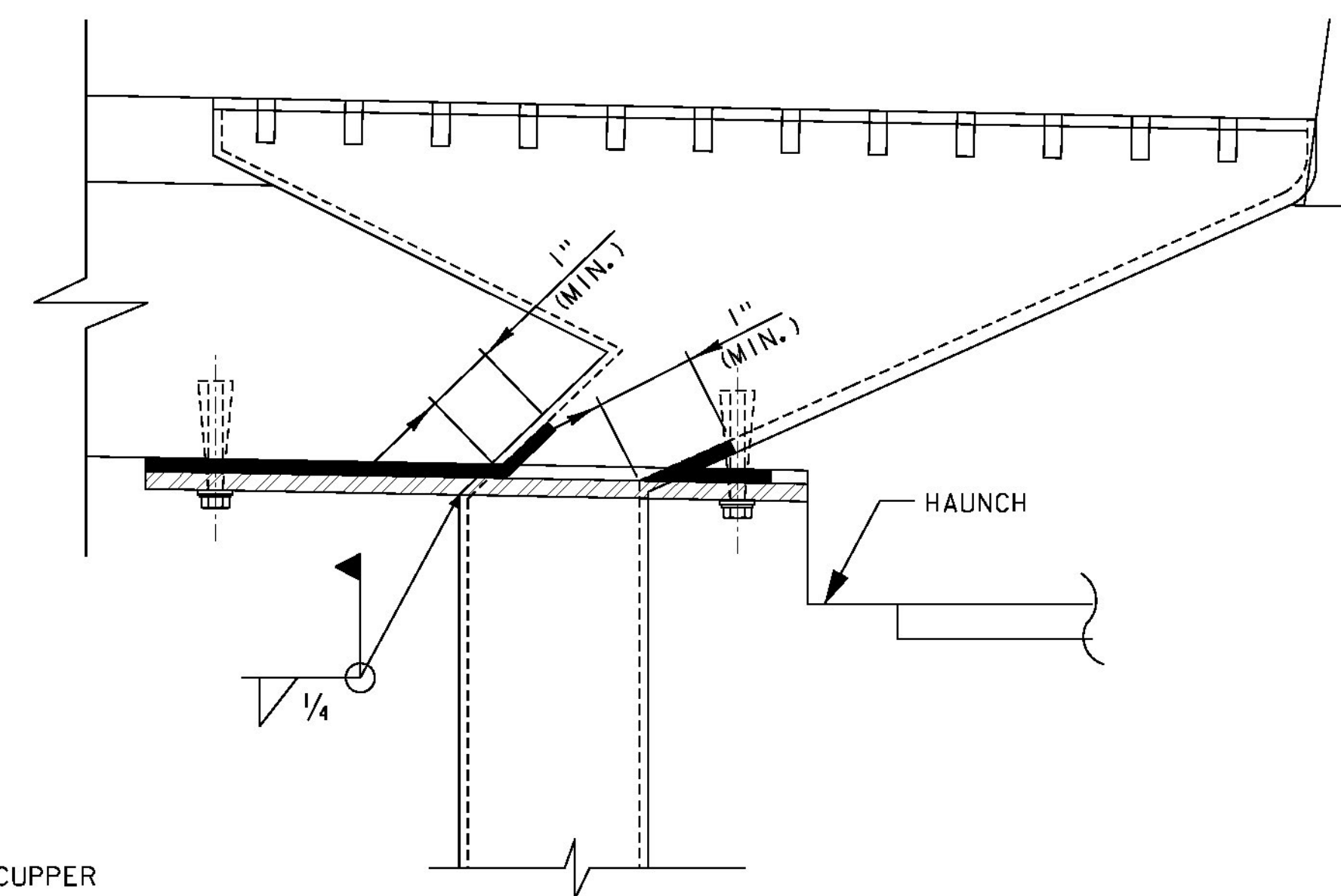
**SCUPPER REPLACEMENT DETAIL**  
SCALE: 1" = 1'-0"



**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 EXTEND 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 1/2" EXCEPT WHERE NOTED OTHERWISE.
6. ALL NEW STEEL SHALL BE ZINC PRIMED AND COATED WITH 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 (2)**

PROJECT NAME: CASTLETON-WEST RUTLAND  
PROJECT NUMBER: BF BPNT (I5)

FILE NAME: z525459det\_3.dgn  
PROJECT LEADER: G.K.DONINGTON  
DESIGNED BY: R.GAUDREAU  
det3.dgn

PLOT DATE: 17-OCT-2014  
DRAWN BY: R.GAUDREAU  
CHECKED BY: S.BROWN  
SHEET 4 OF 14

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES								TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES				
				ROADWAY	EROSION CONTROL	BRIDGE NO. 2	BRIDGE NO. 13E	FULL C.E. ITEMS	BRIDGE NO. 13W	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
						55				55		CY	COMMON EXCAVATION	203.15				
						55				55		CY	EARTH BORROW	203.30				
						1	1		1	3		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				
						1				1		LS	STRUCTURAL STEEL (BRIDGE NO. 2 OVER US ROUTE 4)	506.75				
							1			1		LS	STRUCTURAL STEEL (US ROUTE 4 - BRIDGE NO. 13E)	506.75				
									1	1		LS	STRUCTURAL STEEL (US ROUTE 4 - BRIDGE NO. 13W)	506.75				
						120	120		120	360		HR	TRUCK-MOUNTED ATTENUATOR	608.45				
						1170	1170		1170	3510		LF	TEMPORARY TRAFFIC BARRIER	621.90				
						300	300		300	900		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
						300	300		300	900		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				
								540		540		HR	EMPLOYEE TRAINEESHIP	634.10				
				1						1		LS	MOBILIZATION/DEMOLITION	635.11				
						1				1		LS	TRAFFIC CONTROL (BRIDGE NO. 2 OVER US ROUTE 4)	641.10				
							1			1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 13E)	641.10				
									1	1		LS	TRAFFIC CONTROL (US ROUTE 4 - BRIDGE NO. 13W)	641.10				
						30	30		30	90		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
						1545	1545		1545	4635		LF	6 INCH WHITE LINE	646.214				
						3090	3090		3090	9270		LF	TEMPORARY 6 INCH WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6211				
						3090	3090		3090	9270		LF	TEMPORARY 6 IN YELLOW LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6311				
						550				550		LF	TEMPORARY 12 IN WHITE LINE, TEMPORARY PAVEMENT MARKING TAPE	646.6611				
						170	170		170	510		SF	PAVEMENT MARKING MASK	646.86				
					1100					1100		SY	GEOTEXTILE FOR SILT FENCE	649.51				
						30				30		LB	SEED	651.15				
						10				10		LB	FERTILIZER	651.18				
						0.6				0.6		TON	AGRICULTURAL LIMESTONE	651.20				
						0.6				0.6		TON	HAY MULCH	651.25				
					2200					2200		SY	TEMPORARY EROSION MATTING	653.20				
						1				1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (BR.NO.2 OVER US 4)	900.645				
									1	1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES) (US 4-BR. NO. 13W)	900.645				
							1			1		LS	SPECIAL PROVISION (CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES)(US 4-BR. NO. 13E)	900.645				
						1				1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)(BR.NO.2 OVER US 4)	900.645				
							1			1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)(US 4-BR NO. 13E)	900.645				
									1	1		LS	SPECIAL PROVISION (QC/QA CLEAN AND PAINT EXISTING STEEL STRUCTURES, BARE STEEL)(US 4-BR NO. 13W)	900.645				
						1				1		LS	SPECIAL PROVISION (REMOVAL OF EXISTING GREASE COATING) (BRIDGE NO. 2 OVER US ROUTE 4)	900.645				

## QUANTITY SHEET (1)

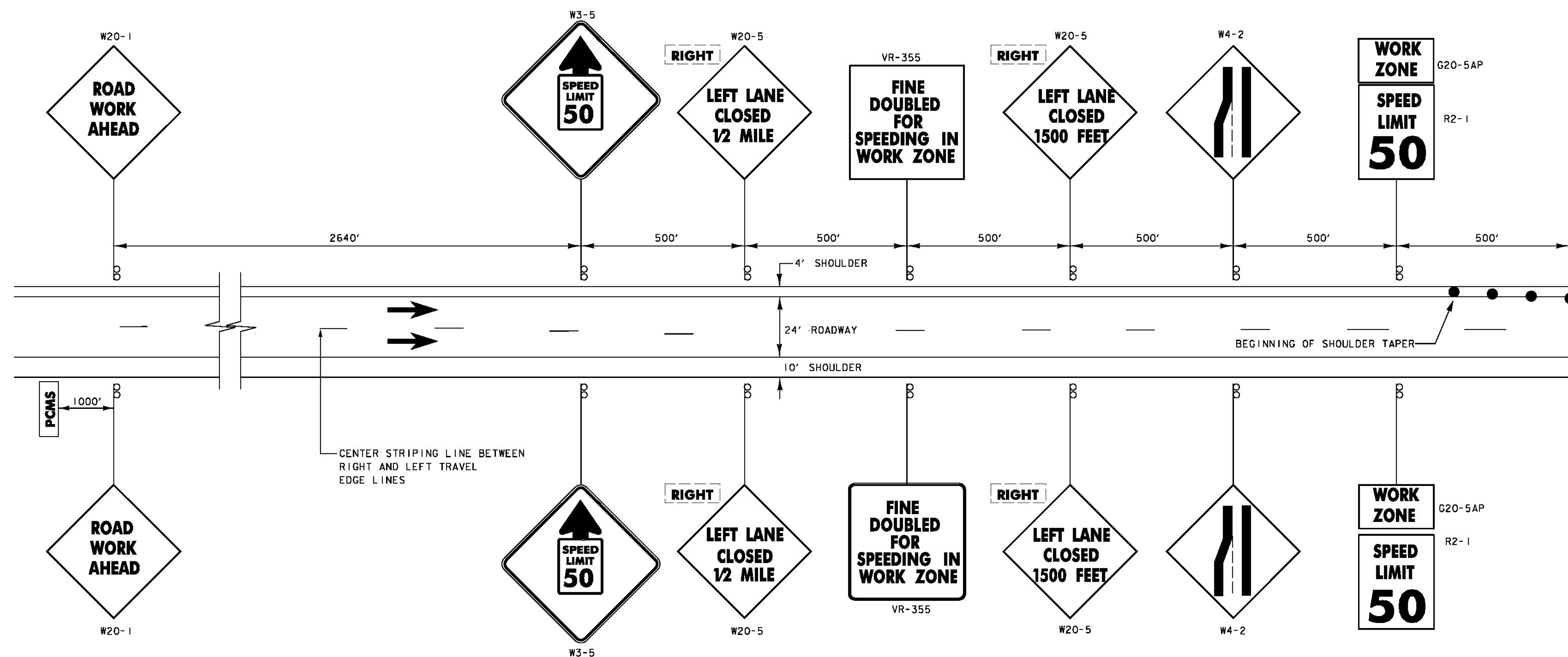
PROJECT NAME: CASTLETON-WEST RUTLAND  
PROJECT NUMBER: BF BPNT (I5)

FILE NAME: z525459qs.dgn  
PROJECT LEADER: G.K.DONINGTON  
DESIGNED BY: R.GAUDREAU  
qs.dgn

PLOT DATE: 17-OCT-2014  
DRAWN BY: R.GAUDREAU  
CHECKED BY: S.BROWN  
SHEET 5 OF 14

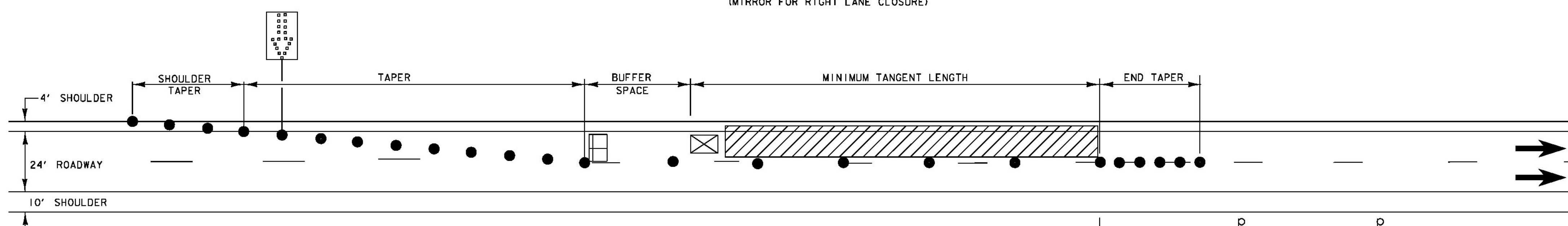






**CONSTRUCTION APPROACH SIGNING ON US ROUTE 4, LEFT LANE CLOSED**

NOT TO SCALE  
(MIRROR FOR RIGHT LANE CLOSURE)



**TRAFFIC CONTROL ON US ROUTE 4, 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

**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

TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATIONS:  
 $L = WS$  FOR POSTED SPEEDS OF 45 MPH OR GREATER  
 $L = WS^2/60$  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 NOTES - US ROUTE 4:**

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 2, 13E, AND 13W 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 EXISTING SPEED LIMIT FOR US ROUTE 4 IS 65 MPH. THE SPEED LIMIT WILL BE REDUCED TO 50 MPH IN THE WORK ZONE FOR THIS PROJECT. 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 (VAOT) "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 VI 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 COMPLETELY 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. SIGNS SHALL BE ATTACHED WITH AT LEAST TWO BOLTS PER POST. 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. ROADWAY AND SHOULDER WIDTHS DEPICTED ON THE STANDARD DRAWINGS MAY VARY.
14. THE STANDARD DRAWINGS ARE INTENDED TO SERVE AS VTRANS STANDARD OPERATING PROCEDURE. IT IS NOTED THAT COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL WORK ZONE MAY BE MODIFIED DUE TO FIELD CONDITIONS, AT THE DISCRETION OF THE ENGINEER.
15. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.

NOTES CONTINUED ON TRAFFIC CONTROL SHEET (2).

**TRAFFIC CONTROL SHEET (1)**

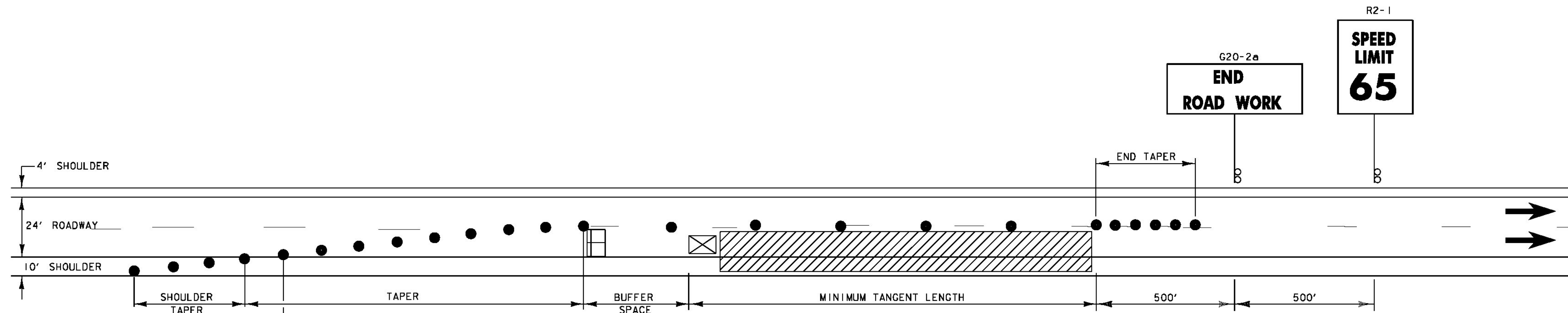
PROJECT NAME: CASTLETON-WEST RUTLAND  
PROJECT NUMBER: BF BPNT (15)

FILE NAME: z525459+tc.dgn PLOT DATE: 17-OCT-2014  
PROJECT LEADER: G.K.DONNINGTON DRAWN BY: R.GAUDREAU  
DESIGNED BY: R.GAUDREAU CHECKED BY: J.KHERA  
tcl.dgn SHEET 7 OF 14

**TRAFFIC CONTROL NOTES - US ROUTE 4:**

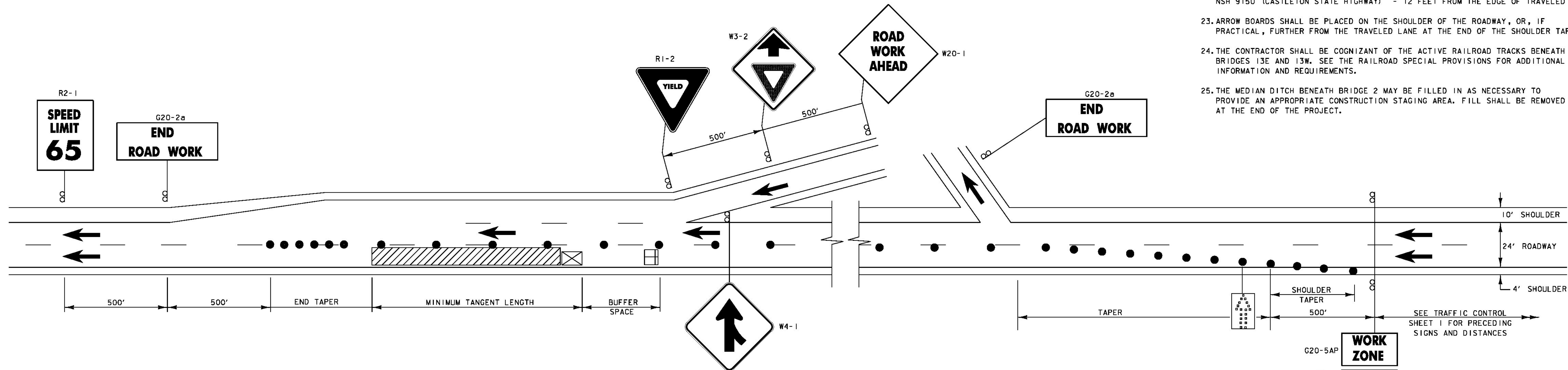
NOTES CONTINUED FROM TRAFFIC CONTROL SHEET (1):

16. 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.
17. THE CONTRACTOR SHALL HAVE SIGNS FOR CLOSURE OF LEFT OR RIGHT LANES INSTALLED BEFORE WORK COMMENCES.
18. THE NUMBER OF CHANNELIZING DEVICES, TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED IS 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.
19. 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.
20. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED FOR US ROUTE 4 LANE CLOSURES AND AT THE DISCRETION OF THE ENGINEER FOR LANE CLOSURES ON OTHER ROADWAYS. MESSAGES SHALL BE LIMITED TO TWO PHRASES, SUCH AS "RIGHT (LEFT) LANE ENDS, MERGE EARLY".
21. TRAVEL LANES SHALL BE A MINIMUM OF 12 FEET WIDE ON US ROUTE 4.
22. AT NO TIME WILL THE CONTRACTOR BE ALLOWED TO HAVE WORKERS' VEHICLES, CONSTRUCTION EQUIPMENT OR STOCKPILED MATERIALS WITHIN THE CLEAR ZONE OF US ROUTE 4 WITHOUT POSITIVE PROTECTION. POSITIVE PROTECTION SHALL BE AS DIRECTED BY THE ENGINEER. THE CLEAR ZONE IS DEFINED AS FOLLOWS:  
US ROUTE 4 - 34 FEET FROM THE EDGE OF TRAVELED WAY  
NSH 9150 (CASTLETON STATE HIGHWAY) - 12 FEET FROM THE EDGE OF TRAVELED WAY.
23. ARROW BOARDS SHALL BE PLACED ON THE SHOULDER OF THE ROADWAY, OR, IF PRACTICAL, FURTHER FROM THE TRAVELED LANE AT THE END OF THE SHOULDER TAPER.
24. THE CONTRACTOR SHALL BE COGNIZANT OF THE ACTIVE RAILROAD TRACKS BENEATH BRIDGE 13E AND 13W. SEE THE RAILROAD SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
25. THE MEDIAN DITCH BENEATH BRIDGE 2 MAY BE FILLED IN AS NECESSARY TO PROVIDE AN APPROPRIATE CONSTRUCTION STAGING AREA. FILL SHALL BE REMOVED AT THE END OF THE PROJECT.



**TRAFFIC CONTROL ON US ROUTE 4, RIGHT LANE CLOSED**

NOT TO SCALE  
SEE TRAFFIC CONTROL SHEET 1 FOR SIGNING



**TRAFFIC CONTROL ON US ROUTE 4, LEFT LANE CLOSED  
BRIDGE 2 (WESTBOUND)**

NOT TO SCALE

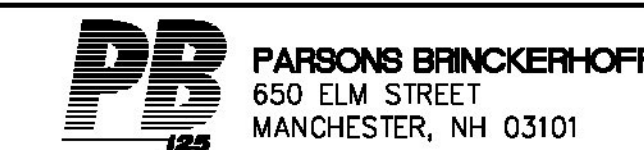
**LEGEND**

- ➔ - 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

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  
 $L = WS^2/60$  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 SHEET (2)**

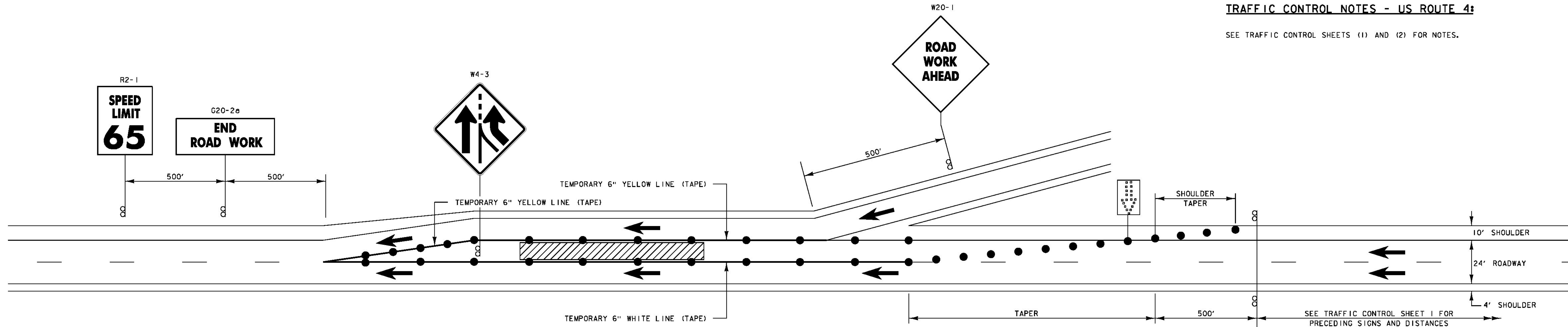
PROJECT NAME: CASTLETON-WEST RUTLAND  
PROJECT NUMBER: BF BPNT (15)

FILE NAME: z525459tc\_2.dgn  
PROJECT LEADER: G.K.DONNINGTON  
DESIGNED BY: R.GAUDREAU  
tc2.dgn

PLOT DATE: 17-OCT-2014  
DRAWN BY: R.GAUDREAU  
CHECKED BY: J.KHERA  
SHEET 8 OF 14

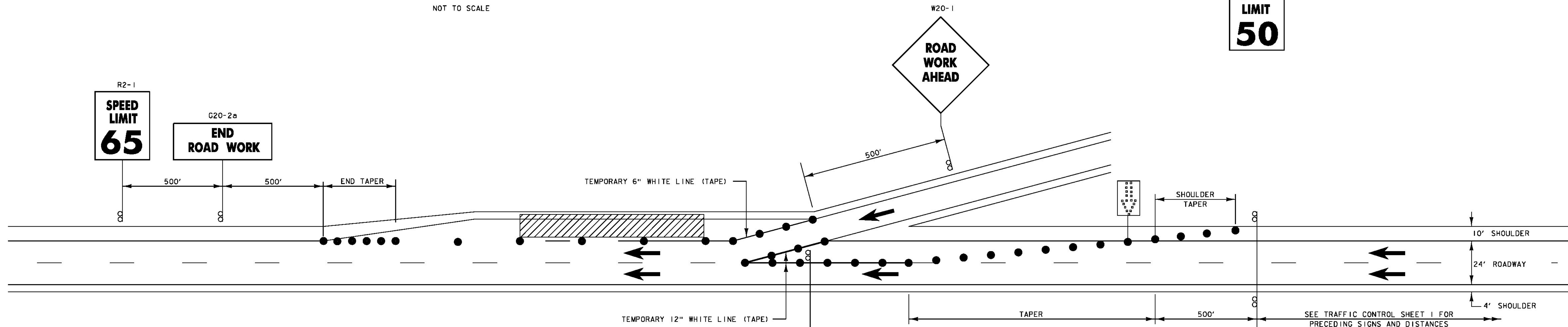
**TRAFFIC CONTROL NOTES - US ROUTE 4:**

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



**TRAFFIC CONTROL ON US ROUTE 4, RIGHT LANE CLOSED  
BRIDGE 2 (WESTBOUND)**

NOT TO SCALE



**TRAFFIC CONTROL ON US ROUTE 4, ACCEL LANE CLOSED  
BRIDGE 2 (WESTBOUND)**

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

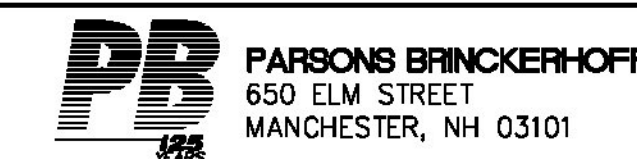
POSTED SPEED LIMIT	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=10 FT	MERGING 12 FT LANE			TAPER	TANGENT
40	90	320	160	305	40	80
45	150	540	270	360	45	90
50	170	600	300	425	50	100
55	185	660	330	495	55	110
60	200	720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

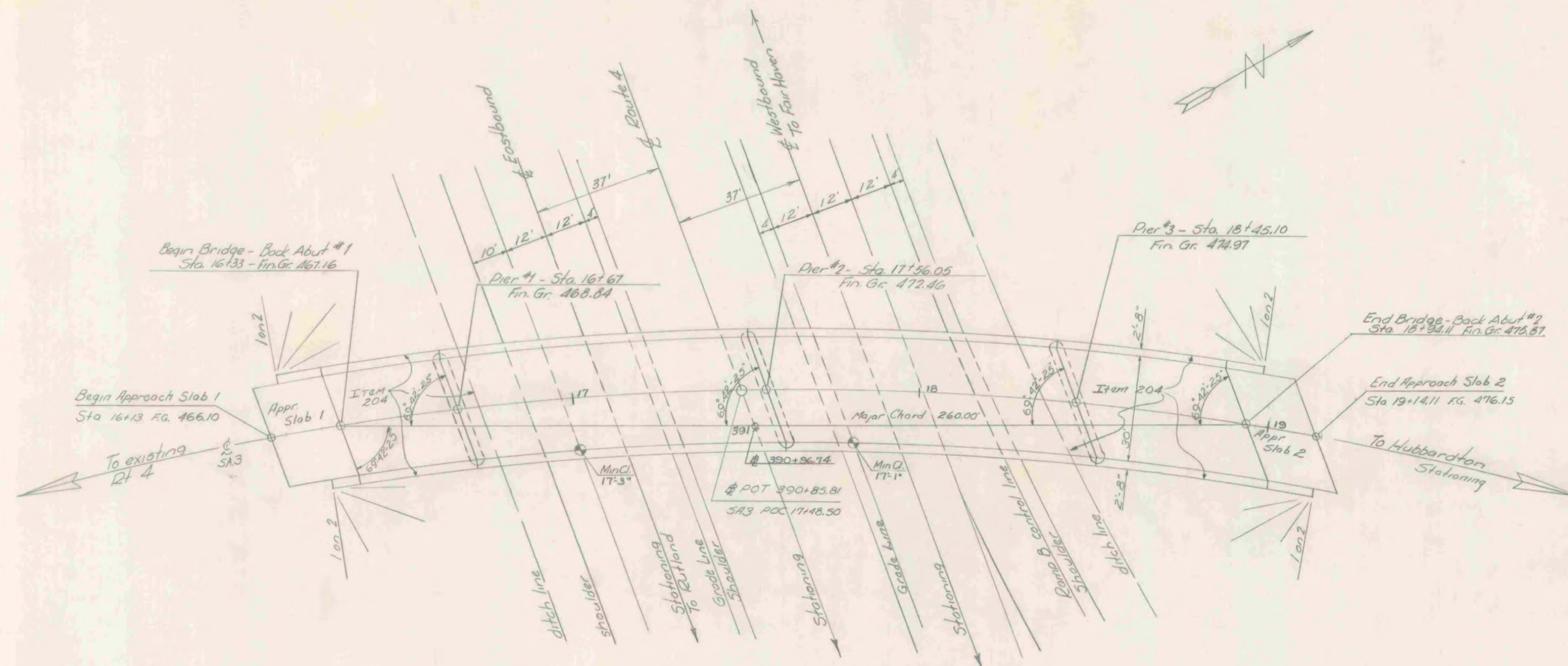
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 L = MINIMUM LENGTH OF TAPER  
 W = WIDTH OF OFFSET IN FEET  
 S = POSTED SPEED IN MPH

**TRAFFIC CONTROL SHEET (3)**

PROJECT NAME: CASTLETON-WEST RUTLAND  
 PROJECT NUMBER: BF BPNT (15)

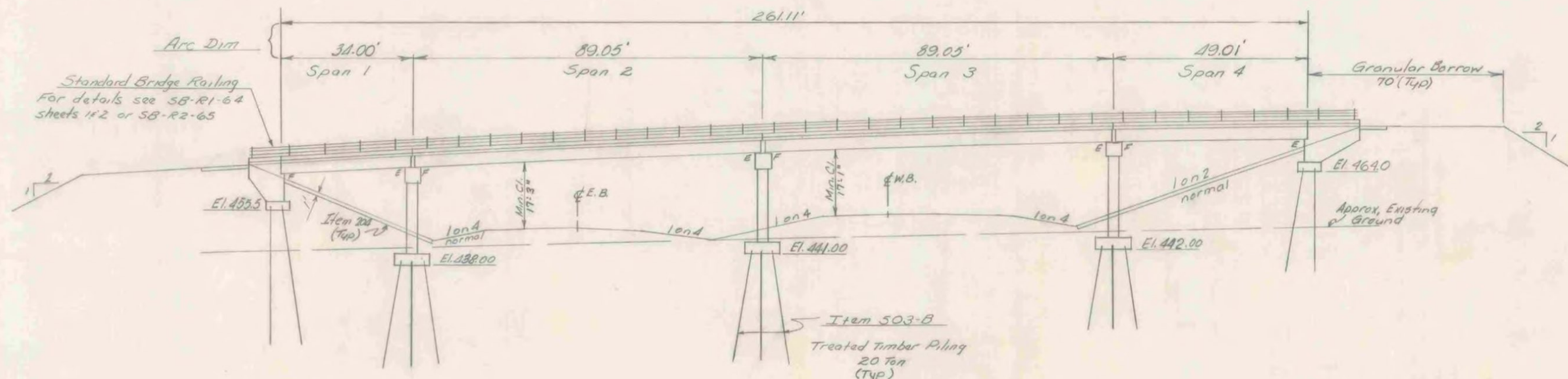
FILE NAME: z525459tc\_3.dgn  
 PROJECT LEADER: G.K.DONNINGTON  
 DESIGNED BY: R.GAUDREAU  
 PLOT DATE: 17-OCT-2014  
 DRAWN BY: R.GAUDREAU  
 CHECKED BY: J.KHERA  
 SHEET 9 OF 14





PLAN

See framing plan sheet for curb and railing dimensions.



ELEVATION

General Notes ~

1. For General Notes see SCB-D1-65.
2. The Abutments and Piers are parallel to each other.
3. Superstructure details shall be as per SCB-30-65 except Span #1 where 36 W135 beams are used as fascia beams. Modify superstructure details to provide 3/8" per foot super-elevation.
4. No scappers are to be used on this Bridge.
5. Dimensions given at beams are horizontal dimensions from  $\pm$  bearing to  $\pm$  bearing.
6. The three interior beams are parallel to each other.
7. Dimensions given for diaphragms are horizontal dimensions from  $\pm$  beam to  $\pm$  beam.
8. Water Repellent Item 440 shall be applied to top of safety walks, fascia, and back to drip notch under the slab and to all exposed areas of substructure not otherwise treated.
9. Construct embankment within area of abutments to 6" above footing elevation prior to driving piling. Excavation of this material is to be paid as Structure Excavation - Item 109.
10. For termination of cover its see SCB-D7-65 (C).
11. Embankment at abutments shall be predrilled to abt ground for piling.
12. Minimum cover for reinforcement in footings shall be 3".
13. Item 503-Pile loading tests, shall be performed only if ordered by the Engineer.

Index of Sheets ~

- BR 100 - Preliminary Information
- BR 101 - Plan & Elevation
- BR 102 - Quantity Sheet
- BR 103 - Boring Log
- BR 104 - Framing Plan
- BR 105 - Abutment #1 Details
- BR 106 - Abutment #2 Details
- BR 107 - Pier #1 Details
- BR 108 - Pier #2 Details
- BR 109 - Pier #3 Details
- BR 110 - Approach Slab Details
- BR 111/112 - Reinforcing Steel Details

List of Standards ~

Standard	Date
SCB-30-65	2-24-66 R
SCB-D1-65	2-14-66 R
SCB-D2-65 (1)(2)(3)	2-4-65 R
SCB-D3-65 (1)(2)(3)(4)	Do
SCB-D4-65	Do
SCB-D5-65	Do
SCB-D6-65 (1)(2)(3)	3-7-66 R
SCB-D7-65 (1)(2)(3)	2-4-65 R
SCB-D8-65 (1)(2)	Do
SCB-D9-65 (1)	Do
SB-R1-64 Sheet 1	12-5-66 R
SB-R1-64 Sheet 2	11-8-66 R
SB-R2-65	Do

Reference Sheets ~

- 50 Scale layout & profile sheets:
- U.S. #4 - Sta. 385+00 - 401+00
  - SA #3 - Sta. 4+50 - 32+00
- Cross Sections:
- U.S. #4 - Sta. 390+00 - 392+50
  - SA #3 - Sta. 14+00 - 21+50

**STATE OF VERMONT**  
DEPARTMENT OF HIGHWAYS

---

PROJECT - CASTLETON - IBA  
TOWN OF - CASTLETON

---

ROUTE No. U.S. 4 STA. 391+00

---

PLAN & ELEVATION

---

SA #3 OVER U.S. Rte. #4  
SCALE 1" = 20'

---

IN CHARGE R. MERCHANT

---

DRAWN BY J. JENNINGS CHECKED BY C. O. BROWN 267

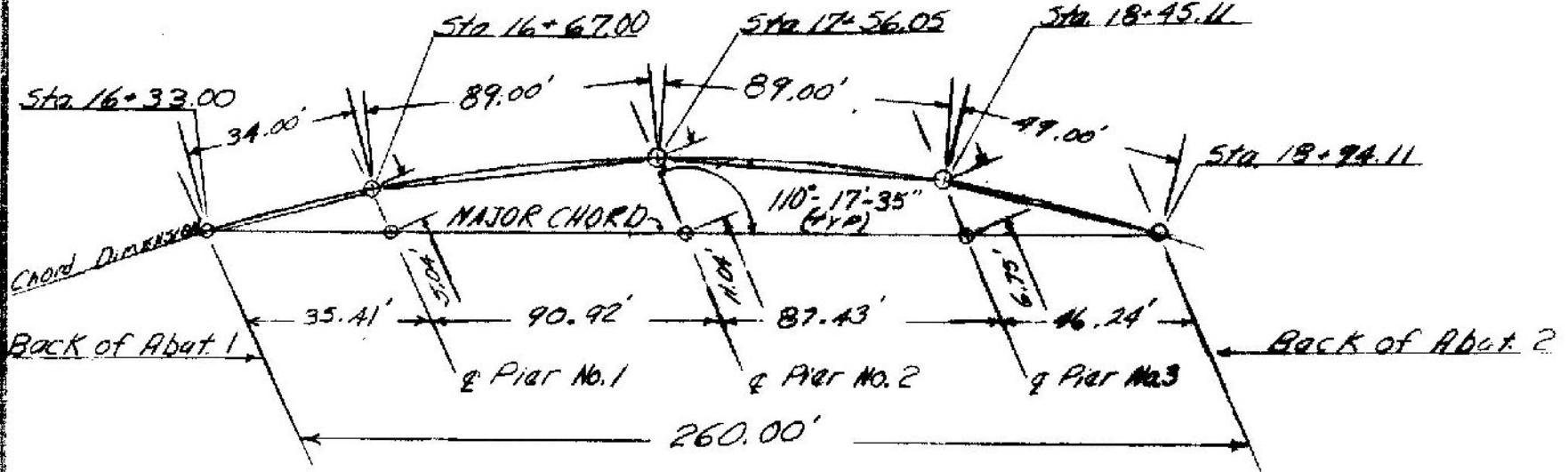
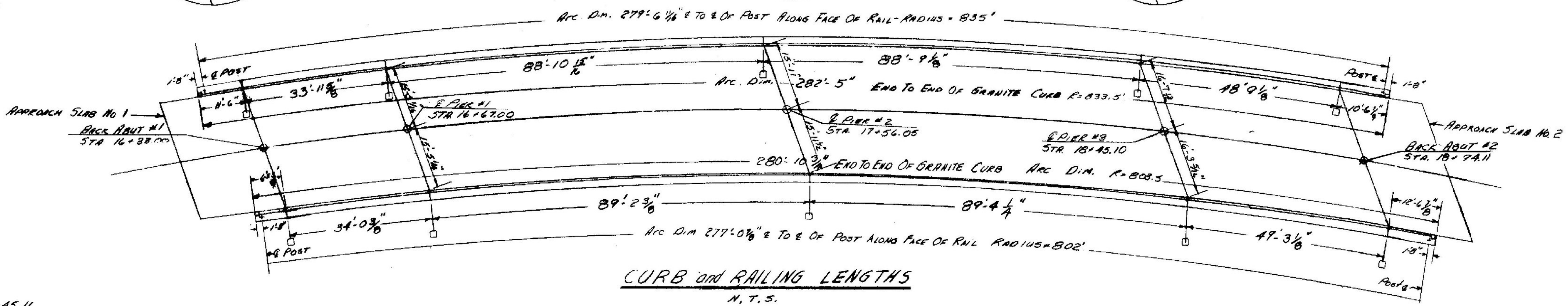
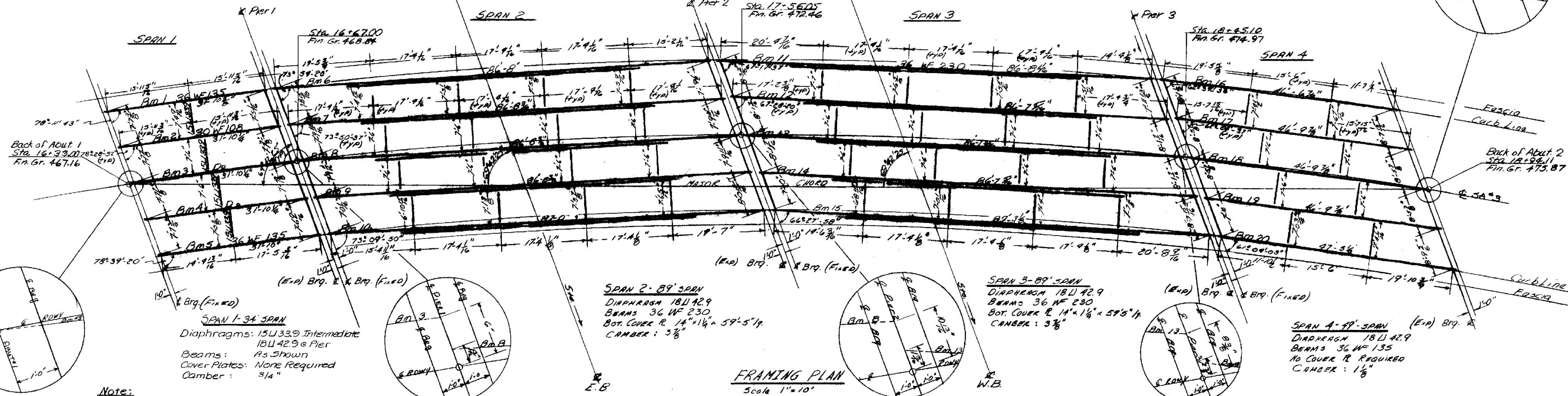
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PROJECT No. AP-020-1(A)

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SHEET 58 OF 301 BR 101

CASTLETON - WEST RUTLAND  
BF BPNT (15)  
PROJECT BRIDGE #2  
SHEET 10 OF 14  
FOR INFORMATION ONLY



**NOTES**

□ INDICATES 1 1/8" SAWED JOINT IN CURB  
CURB SHALL BE FURNISHED IN RANDOM  
LENGTHS OF 4' TO 10'.  
MIN. DISTANCE FROM EDGE OF JOINT  
TO E. OF RAILING POST SHALL BE 1'-0"

CASTLETON - WEST RUTLAND  
BF BPNT (15)  
PROJECT BRIDGE #2  
SHEET 11 OF 14  
FOR INFORMATION ONLY

**STATE OF VERMONT**  
DEPARTMENT OF HIGHWAYS

PROJECT CASTLETON - IRA  
TOWN OF CASTLETON

ROUTE No. 454 STA. 391+00  
SA. 3 OVER U.S. RT. #4

FRAMING PLAN

SCALE AS NOTED

IN CHARGE R.L. MERCHANT

DRAWN BY J.I.P.F. CHECKED BY G. WILSON

PROJECT No. AP 020-114

SHEET 61 OF 301

**CURVE DATA**  
 EASTBOUND WESTBOUND  
 $\Delta 33^{\circ}17'11''$  RR  $\Delta 33^{\circ}59'06''$  RT  
 $D 3'$   $D 2^{\circ}30'$   
 BANK  $1/8''/ft$  BANK  $3/4''/ft$

**BASELINE**  
 $\Delta 33^{\circ}59' RT$   
 $D 3^{\circ}30'$

**LIST OF BRIDGE SHEETS**

BR 100	PLAN & ELEVATION
BR 101-102	BRIDGE QUANTITY SHEETS
BR 103	PRELIMINARY INFORMATION SHEET
BR 104-105	BORINGS
BR 106-107	RAILING, CURB, & FRAMING PLANS
BR 108-112	ABUTMENTS #1, #2, #3, #4
BR 113-118	PIERS #1 THRU #8
BR 119-122	APPROACH SLABS #1 THRU #4
BR 123-125	RETAINING WALLS
BR 126-131	REINFORCING STEEL SHEETS
BR 132-134	CHANNEL SECTIONS

**STANDARD SHEETS**

SCB-30-65	SB-R1-64(3H. 142)
SB-R2-65	SCB-D1 THRU D7-65

**GENERAL NOTES**

- ALL 12BP53 STEEL PILES SHALL BE DRIVEN TO A BEARING CAPACITY OF 45 TONS PER PILE.
- ELEVATION DATUM IS SEA LEVEL BASED ON NEAREST U.S. GOVERNMENT VERTICAL CONTROL.
- FOR ADDITIONAL GENERAL NOTES SEE SCB-D1-65.
- APPROACH SLABS SHALL BE CONSTRUCTED AS PART OF STAGE 3 CONSTRUCTION.
- IF ROCK FILL IS NOT AVAILABLE, USE ITEM 204 (1" THICK) FOR SLOPE PROTECTION UNDER BRIDGES AT ABUT. #1 & #3.
- EASTBOUND BRIDGE SHALL BE POSITIONED FROM PIER 6. THE E OF PIER 6 SHALL BE AT THE INTERSECTION OF E.B. LANE AND D.H. RR. A PRELIMINARY FIELD CHECK WAS MADE PRIOR TO DESIGN. A FINAL FIELD CHECK SHOULD BE MADE OF THIS INTERSECTION, AND PIER LOCATION REVISED IF NECESSARY.
- ITEM 505, PILE LOADING TESTS, ARE TO BE USED WHEN IN THE OPINION OF THE ENGINEER, THE DESIGNED LOAD CARRYING CAPACITY MAY NOT BE ACHIEVED.

**Design Allowable stresses**  
 Concrete  $f_c = 3000$  P.S.I.  $f_c = 1200$  P.S.I.  
 Structural Steel  $f_s = 20,000$  P.S.I.  
 Reinforcing Steel  $f_s = 20,000$  P.S.I. Tension  
 16,000 P.S.I. Compression

**Design Notes**

- Construction clearance is to be 8'-0" horizontally from Q of R.R. track.
- Minimum horizontal clearance after construction is to be 12'-0" from Q of R.R. Track above track elevation.
- Minimum vertical clearance during construction is to be 18'-0".
- Minimum vertical clearance after construction is to be 22'-0" as per A.R.R.A. Standard clearance diagram.

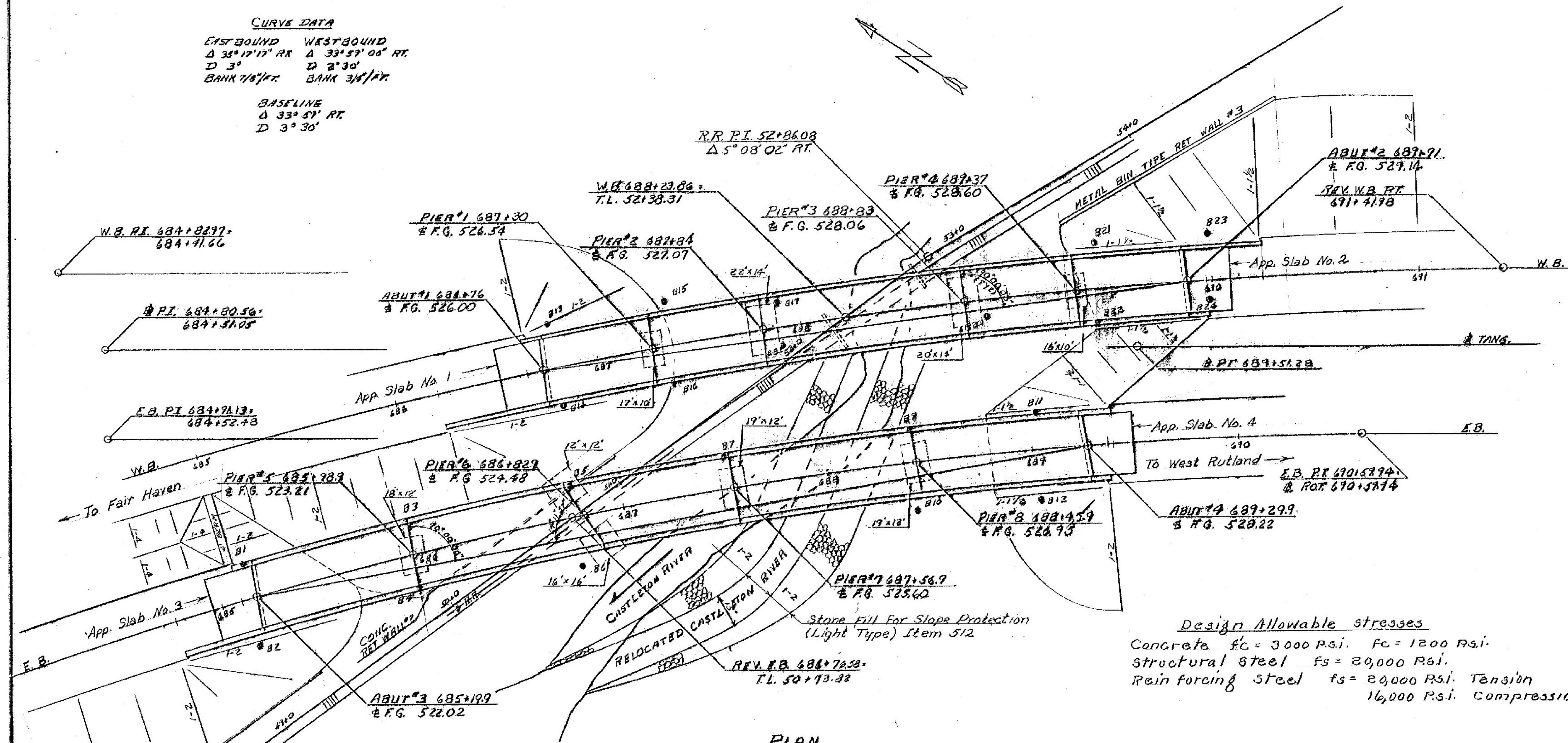
**STATE OF VERMONT**  
 DEPARTMENT OF HIGHWAYS

PROJECT --- WEST RUTLAND ---  
 TOWN OF --- WEST RUTLAND ---  
 ROUTE NO. 113-E STA. 487+10  
 U.S. 4 OVER D & H RAILROAD &  
 CASTLETON RIVER  
 SCALE --- 1" = 20' ---  
 IN CHARGE --- W. SMITH ---  
 DRAWN BY --- [unclear] --- CHECKED BY --- W. SMITH ---  
 PROJECT NO. 82039-1(1) ---  
 SHEET 91 OF 337 BB-102

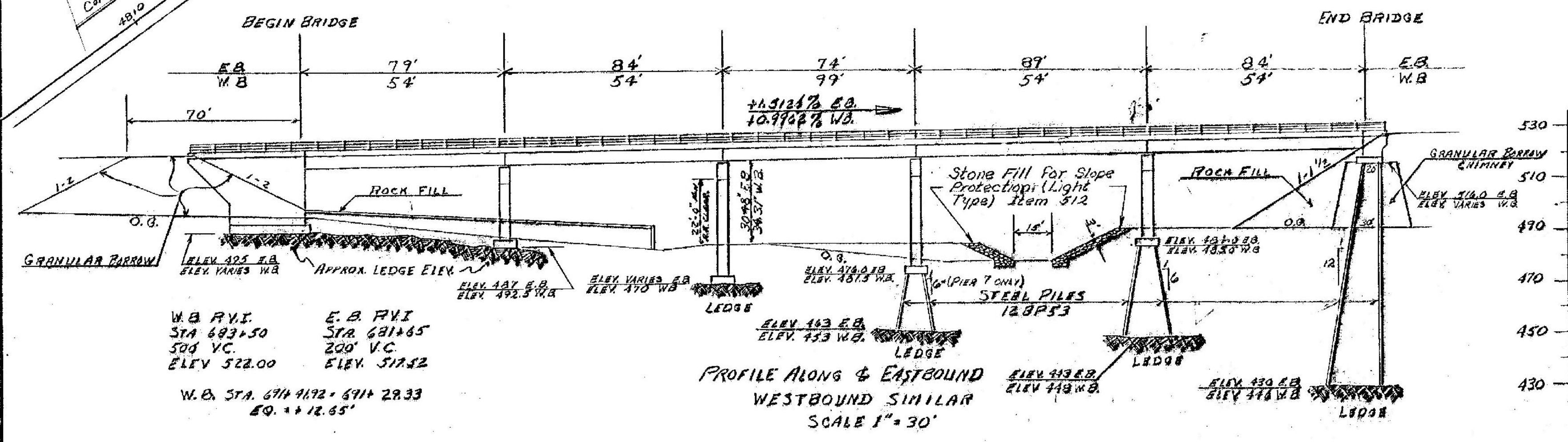
CASTLETON - WEST RUTLAND  
 BF BPNT (15)  
 PROJECT BRIDGE 13E&W  
 SHEET 12 OF 14  
 FOR INFORMATION ONLY

Stage 2 Construction

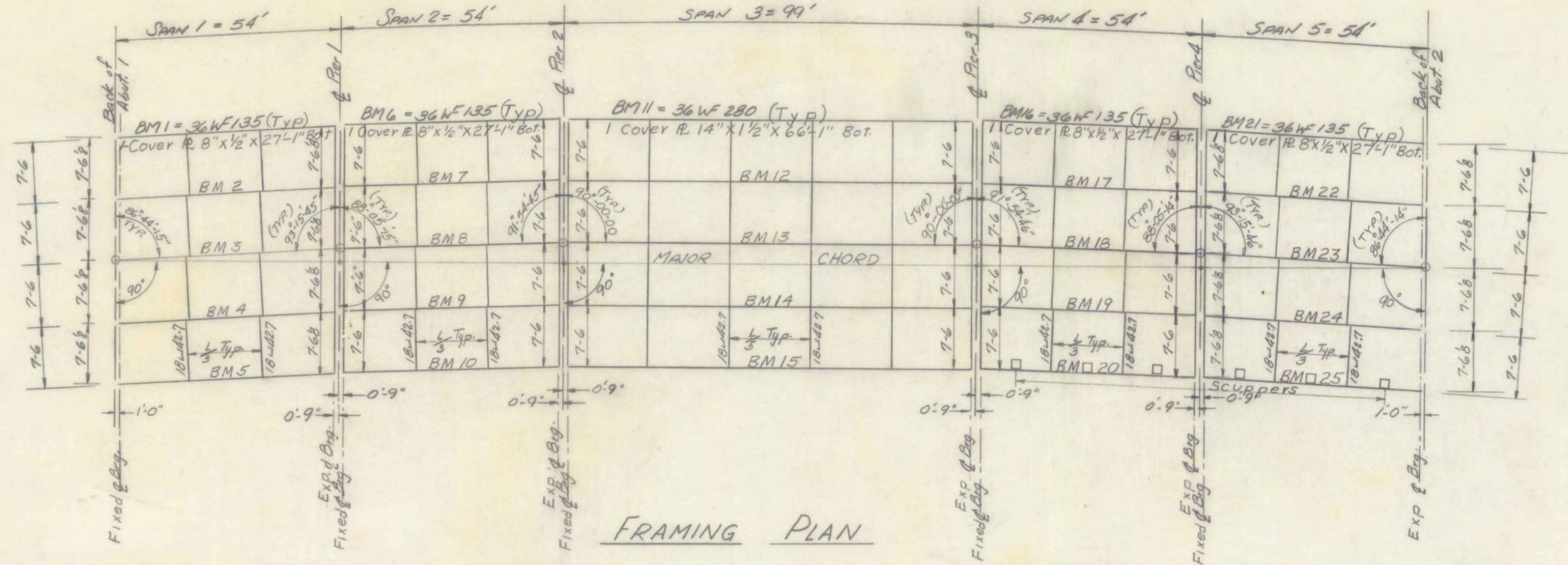
Sheet 13a of 170 Sheets



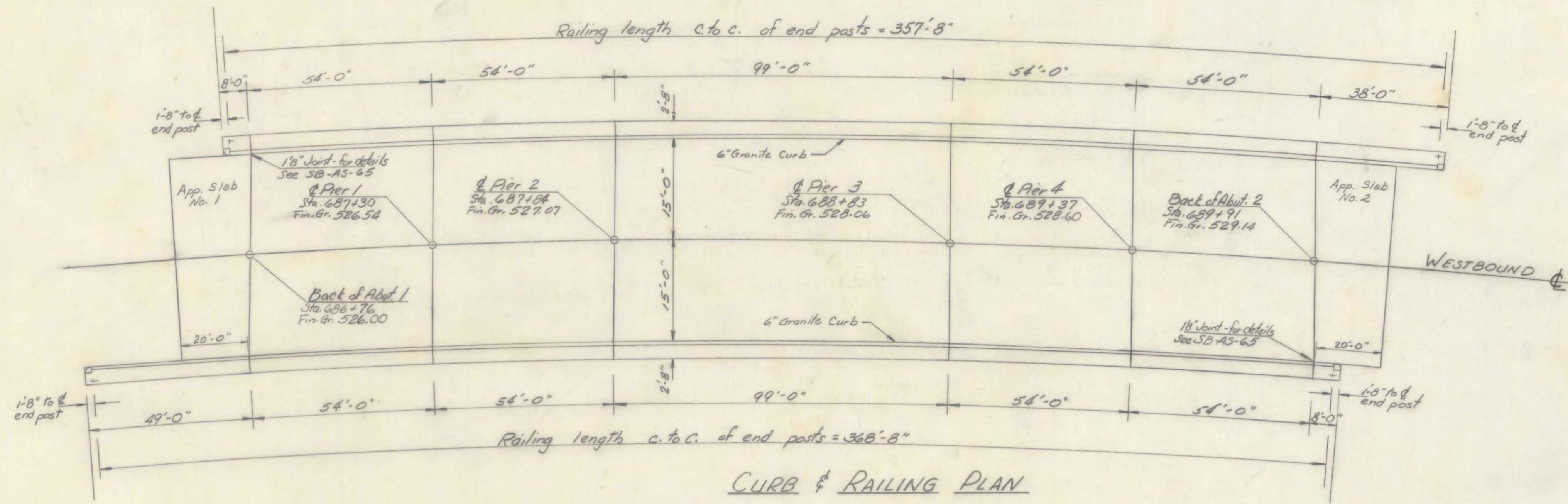
**PLAN**  
 SCALE 1" = 30'



**PROFILE ALONG E & WESTBOUND**  
 WESTBOUND SIMILAR  
 SCALE 1" = 30'

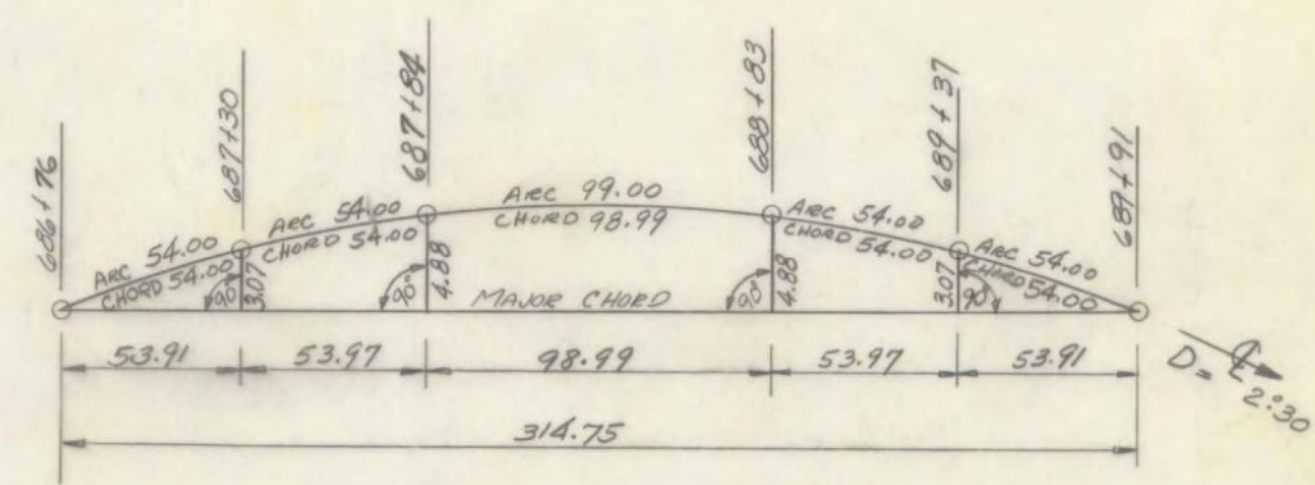


FRAMING PLAN



CURB & RAILING PLAN

- NOTES:
1. For General Notes see Std Sh SCB-D1-65 and Br 100
  2. For superstructure details see Std Sh SCB-D1 thru D9-65
  3. See SB-R1-64 and SB-R2-65 for details of Aluminum and Galvanized Steel Bridge Railing.
  4. Item 440 Water Repellent shall be applied to the top of the safety walk, fascia and bottom of slab to the drip bead.
  5. Shop drawings for Item 556-C shall be submitted in triplicate to the State of Vermont for approval before fabrication. All curb ends at pier and abutment joints shall be sawed. Curb stones shall be furnished in lengths ranging from 4' minimum to 10' maximum. End blocks shall have 1" beveled face and 2 anchors per block.
  6. For Typical Section and Details see Std Sh SCB-30-65 except as modified for straight bank of 3/4" /ft W.B. and 7/8" /ft E.B.

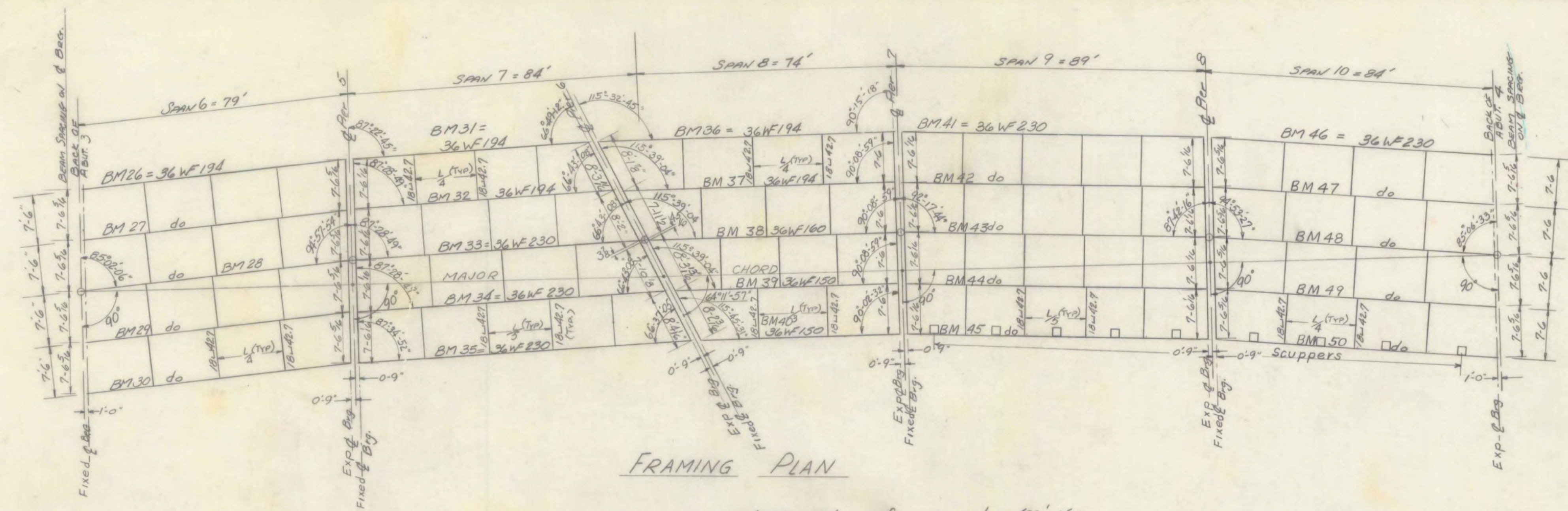


CHORD OFFSETS

STATE OF VERMONT  
DEPARTMENT OF HIGHWAYS

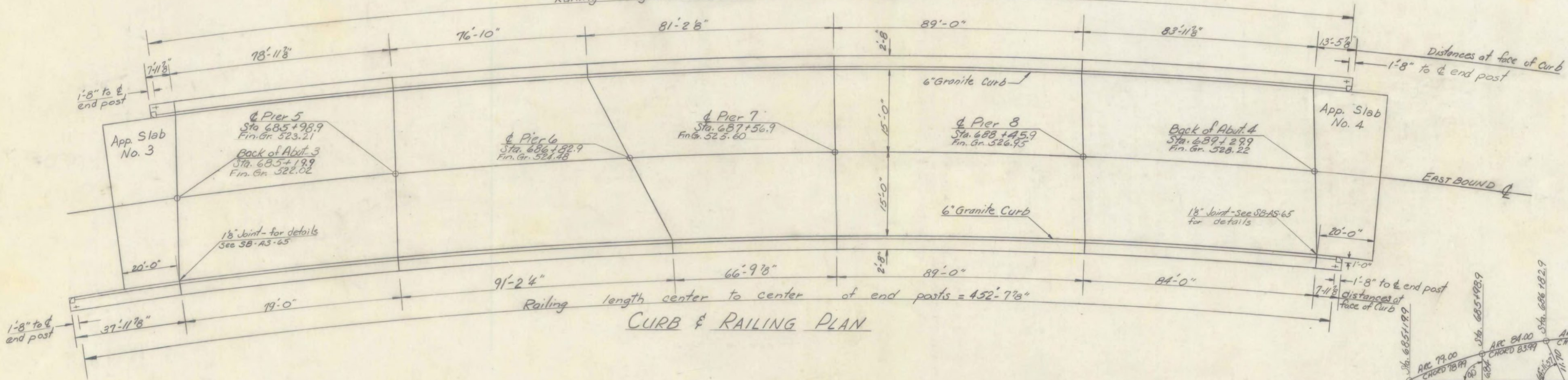
PROJECT WEST RUTLAND  
TOWN OF WEST RUTLAND  
ROUTE No US-4 LOG STA. 687+50  
US-4 OVER R.R. & CASTLETON RIVER  
WEST BOUND  
FRAMING PLAN & CURB AND RAILING PLAN  
SCALE NOT TO SCALE  
IN CHARGE W. SMITH  
DRAWN BY ISHAM CHECKED BY D. PERKINS  
PROJECT No 1020-1(10)  
SHEET 87 OF 359 BR 106

CASTLETON - WEST RUTLAND  
BF BPNT (15)  
PROJECT BRIDGE 13W  
SHEET 13 OF 14  
FOR INFORMATION ONLY



FRAMING PLAN

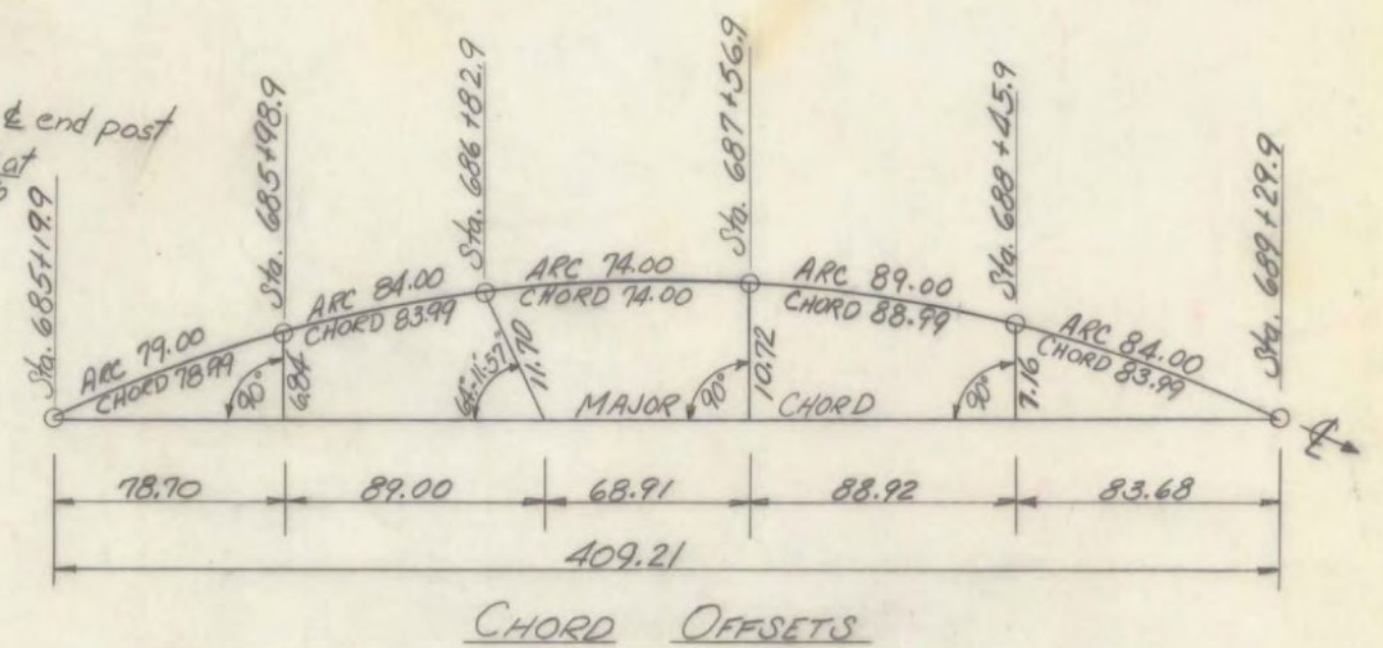
Railing length center to center of end posts = 428'-1 1/8"



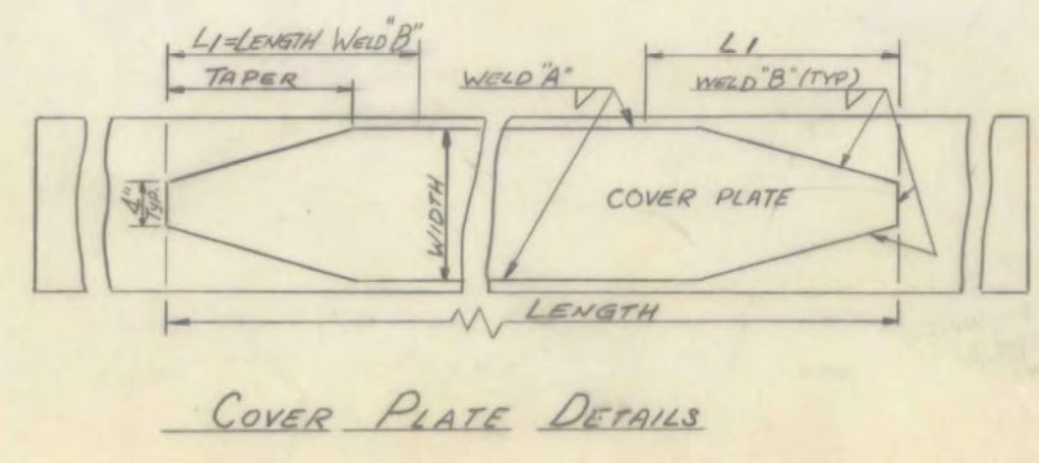
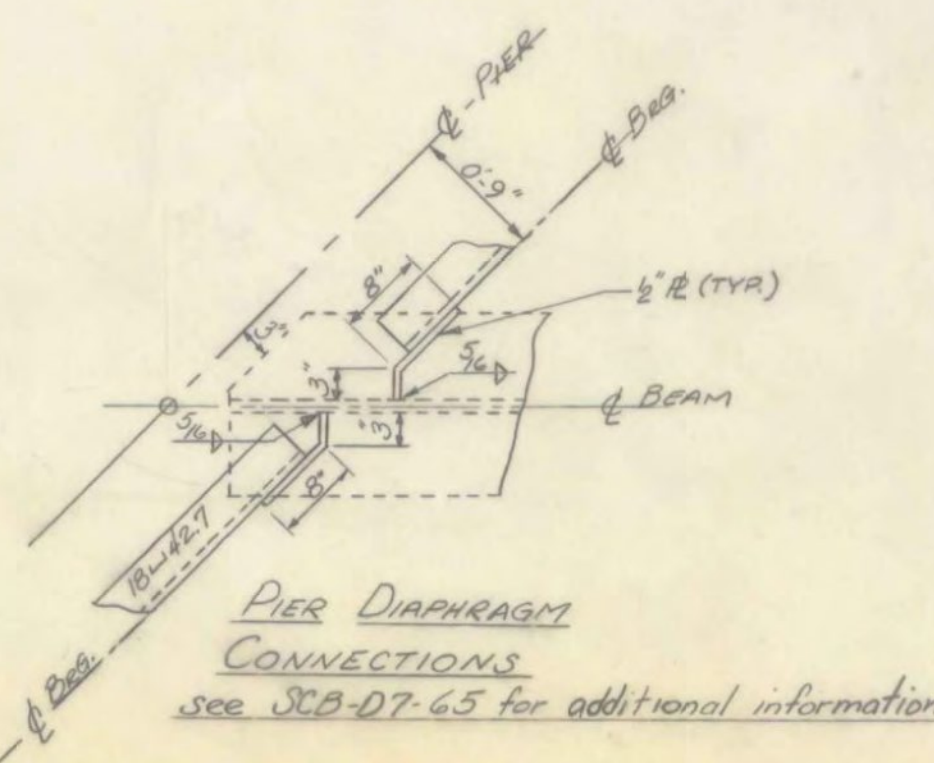
CURB & RAILING PLAN

NOTES:  
 1. For Superstructure notes see Br 106  
 2. All expansion bearing devices on the eastbound lane shall be as per SCB-DB-65, detail B

CASTLETON - WEST RUTLAND  
 BF BPNT (15)  
 PROJECT BRIDGE 13E  
 SHEET 14 OF 14  
 FOR INFORMATION ONLY



CHORD OFFSETS



SPAN	BEAM NO.	CAMBER	SIZE	LENGTH C-C OF BRG.	COVER PLATE (SEE SCB-D7-65)					SPRINK PITCH FOR SHEAR CONNECTIONS (SEE SCB-D7-65)						
					LENGTH	WIDTH	THICKNESS	TAPER	WELD "A"	WELD "B"	L1	6'-10"	10'-20"	20'-30' @ 4"	30'-40' @ 6"	40'-50' @ 8"
6	ALL	3/8"	36WF194	77.24	49-10	10"	1 1/2"	1'-0"	5/16	1/2	2'-0"	double @ 5"	double @ 7"	single @ 4 1/2"	single @ 6"	---
	31	3/8"	36WF194	75.26	47-1	10"	1 1/2"	1'-0"	5/16	1/2	1'-9 1/2"	double @ 5"	double @ 6 1/2"	single @ 4 1/2"	single @ 6"	---
	32	3/4	36WF194	78.87	52-9	10"	1 1/2"	1'-0"	5/16	1/2	2'-3"	double @ 5"	double @ 6 1/2"	" " 4"	" " 5"	---
	33	3/8"	36WF230	82.43	49-7	14"	1 1/2"	1'-6"	5/16	1/2	1-11"	" " 5 1/2"	" " 6 1/2"	" " 4 1/2"	" " 5 1/2"	---
	34	3/8"	36WF230	85.98	58-8"	14"	1 1/2"	1'-6"	5/16	1/2	2'-7"	" " 5 1/2"	" " 6 1/2"	" " 4"	" " 5"	---
7	35	3/8"	36WF230	89.61	63-2"	14"	1 1/2"	1'-6"	5/16	1/2	3-2"	" " 5 1/2"	" " 6 1/2"	" " 4"	" " 5"	---
	36	3/8"	36WF194	79.59	54-11	10"	1 1/2"	1'-0"	5/16	1/2	2'-6"	double @ 5"	double @ 6 1/2"	single @ 4 1/2"	single @ 6"	---
	37	3"	36WF194	76.03	46-5	10"	1 1/2"	1'-0"	5/16	1/2	1'-9 1/2"	" " 5"	" " 6 1/2"	" " 4"	" " 5 1/2"	---
	38	2 1/8"	36WF190	72.41	50-0	10"	1 1/2"	1'-0"	5/16	1/2	2-0"	" " 5"	" " 6"	" " 4"	" " 5 1/2"	---
	39	2 3/4"	36WF150	68.79	46-11	10"	1 1/2"	1'-0"	5/16	1/2	1-9 1/2"	" " 5"	" " 6 1/2"	" " 4 1/2"	" " 5 1/2"	---
	40	2 3/8"	36WF150	65.23	41-1	10"	1 1/2"	1'-0"	5/16	5/16	1-9 1/2"	" " 5"	" " 6 1/2"	" " 4 1/2"	" " 4 1/2"	---
8	ALL	3/8"	36WF230	87.50	59-5"	14"	1 1/2"	1'-6"	5/16	1/2	2-10	double @ 5"	double @ 6 1/2"	" @ 4 1/2"	" " 5"	single @ 6"
	ALL	3/2"	36WF230	82.24	49-5	14"	1 1/2"	1'-6"	5/16	1/2	1-11	double @ 5"	" @ 7"	" @ 4 1/2"	" @ 6"	" @ 6"

STATE OF VERMONT  
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 PROJECT WEST RUTLAND  
 TOWN OF WEST RUTLAND  
 ROUTE No US 4 STA. 687+50  
 USA over R.R. and CASTLETON RIVER EASTBOUND  
 FRAMING PLAN & CURB and RAILING PLAN  
 SCALE NOT TO SCALE  
 IN CHARGE W. Smith  
 DRAWN BY ISHAM CHECKED BY D. PERKINS  
 PROJECT No AP 020-1(10)  
 SHEET 88 OF 359 BR 107