SEE SHEET 2 FOR INDEX OF SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF MORETOWN

COUNTY OF WASHINGTON

ROUTE NO : VT 100B RURAL MAJOR COLLECTOR BRIDGE NO : 7

PROJECT LOCATION : 2.1 MILES SOUTH OF JUNCTION US 2

PROJECT DESCRIPTION : BRIDGE DECK REHABILITATION

LENGTH OF STRUCTURE :	364.88 FEET.
LENGTH OF ROADWAY :	100.00 FEET.
LENGTH OF PROJECT :	464.88 FEET.

RECORD PLANS

CONTRACTOR: CCS CONTRACTORS, LLC – MORRISVILLE, VT

RESIDENT ENGINEER: IAN JENIKE

CONSTRUCTION BEGAN: JUNE 8, 2009

CONSTRUCTION COMPLETE: OCTOBER 16, 2009

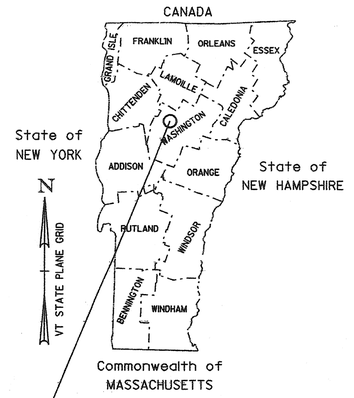
RECORD PLANS BY: IAN JENIKE & N. GARBACIK

I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

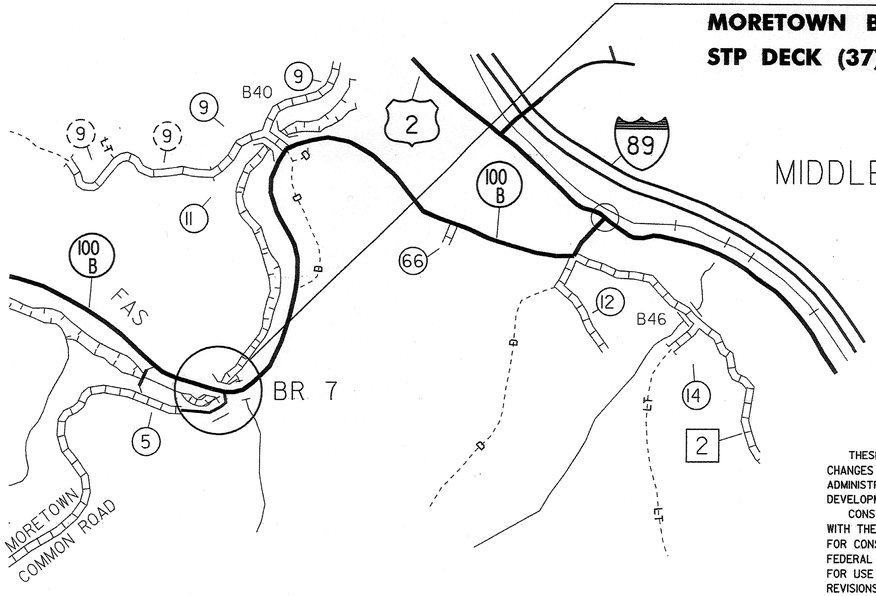
BY N. Garbacik For I. Jenike RESIDENT ENGINEER

DATE 2/17/2010

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
MORETOWN BRIDGE 7
STP DECK (37)



CONVENTIONAL SYMBOLS

COUNTY LINE	COUNTY LINE
TOWN LINE	TOWN LINE
LIMITS OF ACCESS	
POINT OF ACCESS	X
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	SR SR SR
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

PLOTTED 13-APR-2009

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED Richard Hilliard DATE 4/13/09

PROJECT MANAGER : C.P. WILLIAMS

PROJECT NAME : MORETOWN

PROJECT NUMBER : STP DECK (37)

SHEET 1 OF 25 SHEETS

INDEX OF SHEETS

1. TITLE SHEET
2.-3. INDEX & PROJECT NOTES SHEETS
4.-5. QUANTITY SHEETS
6. TYPICAL SECTIONS
7. PROPOSED JOINT LAYOUT
8.-9. VERMONT JOINT DETAILS
10. MISC DETAIL SHEET
11. DETOUR SHEET

REFERENCE SHEETS

12. LAYOUT AND ROW
13. ELEVATION
14. PLAN AND ELEVATION, GENERAL NOTES
15. SUPERSTRUCTURE PLAN
16. TYPICAL SECTION AND BEARING DEVICES
17. GIRDER DETAILS
18. EXPANSION JOINT DETAILS
19. FINGER PLATE, DRAINAGE, AND BUMPER DETAILS.
20.-21. APPROACH SLABS
22.-23. ABUTMENT DETAILS
24. PIER DETAILS
25. EXISTING REINFORCING STEEL SHEET.

VAOT STANDARDS FOR CONSTRUCTION

E-100	CONSTRUCTION APPROACH SIGNS	1-2-2004
E-101	CONSTRUCTION SIGN DETAILS	5-30-2003
E-102	CONSTRUCTION SIGN DETAILS	6-30-2003
E-102A	CONSTRUCTION SIGN DETAILS	5-1-2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	6-30-2003
E-107A	BREAKAWAY BARRICADE DETAILS	8-8-1995
E-145A	REGULATORY SIGN DETAILS	12-23-1994
E-191	PAVEMENT MARKING DETAILS	2-1-1999
E-193	PAVEMENT MARKING DETAILS	8-18-1995

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.

2. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, BEFORE ADVANCING THE WORK. ALL REFERENCE SHEETS WERE SCANNED IN, AND ARE NO LONGER TO SCALE.

3. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL MATERIALS ARE ON SITE AT A TIME TO MEET THE CONSTRUCTION SCHEDULE. TO FACILITATE THIS THE AGENCY COMMITS ITSELF TO RETURNING ANY FABRICATION DRAWINGS WITHIN THREE (3) WORKING DAYS OF RECEIPT.

4. ALL WORK WILL BE LIMITED TO THE ROADWAY AND BRIDGE DECK SURFACES, THEREFORE THERE WILL BE NO EARTH DISTURBANCE ON THIS PROJECT. IF THE CONTRACTOR PROPOSES ANY WORK THAT RESULTS IN EARTH DISTURBANCE, THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REQUIRED PERMITS.

5. FOLLOWING COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ANY FABRIC DRAIN TROUGHS, DOWNSPOUTS, AND BRIDGE SCUPPERS SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR WITH THE COST TO BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.

6. AFTER THE PAVEMENT AND MEMBRANE HAVE BEEN REMOVED, VAOT'S MATERIALS AND RESEARCH PERSONNEL WILL BE PERFORMING A HALF-CELL AND CHAIN DRAG TEST. THE CONTRACTOR SHALL ALLOW VAOT PERSONNEL ACCESS TO THE BRIDGE FOR THIS TESTING. IT IS NOT VAOT'S INTENTION TO HOLD UP THE CONTRACTOR AND TESTING SHALL BE DONE AROUND THE CONTRACTOR'S SCHEDULE. CONTACT JASON TREMBLAY AT 828-6945 TO MAKE ARRANGEMENTS.

7. UNLESS OTHERWISE PROVIDED, ALL REMOVED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF/RECYCLED AS AUTHORIZED BY THE ENGINEER.

PAVEMENT REMOVAL NOTES

1. ITEM 529.10 "REMOVAL OF BRIDGE PAVEMENT" SHALL INCLUDE THE REMOVAL OF PAVEMENT ON THE BRIDGE DECK AND APPROACH SLABS. THE FINAL ONE HALF INCH OF PAVEMENT ON THE APPROACH SLABS SHALL BE REMOVED BY LOADER, GRADER, OR EQUIPMENT APPROVED BY THE ENGINEER.

2. DURING BRIDGE AND APPROACH SLAB PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING APPROACH SLABS. IF THE CONTRACTOR DAMAGES AREAS OF THE APPROACH SLABS, THEN THE REQUIRED REPAIRS SHALL BE AS PER SECTION 580 OF THE SPECIFICATION AND WILL BE AT THE CONTRACTORS EXPENSE.

3. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY DROP INLETS, CATCH BASINS, BRIDGE SCUPPERS, BRIDGE RAIL, OR GRANITE CURB AT ANY STAGE DURING THE CONSTRUCTION. DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE COST FOR SUCH WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DECK REPAIR NOTES

1. FOLLOWING REMOVAL OF THE PAVEMENT, THE EXISTING CONCRETE WITHIN 16" OF THE EXISTING FINGER JOINTS SHALL BE REMOVED FULL DEPTH. THIS SHALL BE PAID FOR UNDER PAY ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE". THIS SHALL INCLUDE THE REMOVAL OF CONCRETE TO THE LIMITS SHOWN ON THE PLANS, INCLUDING ANY CONCRETE REMOVAL UNDER THE EXISTING GRANITE CURB AND PLATES NEEDED TO REMOVE THE EXISTING JOINT. THE EXISTING FINGER JOINTS AND RELATED TROUGH SHALL ALSO BE REMOVED UNDER ITEM 529.20.

2. ALL CONCRETE THAT IS NOT REMOVED UNDER "PARTIAL REMOVAL OF STRUCTURE" OR "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III" SHALL BE REMOVED UNDER PAY ITEM 580.11 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II" FOR THE ENTIRE DECK FROM CURB TO CURB.

3. AN ESTIMATED QUANTITY OF 3 CY HAS BEEN INCLUDED AS ITEM 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III" FOR ANY AREAS THAT REQUIRE FULL DEPTH REPAIR. THIS SHALL INCLUDE ANY AREAS INDICATED BY POP OUTS ON THE SOFFIT, FASCIA, AND CURBS; THE AREAS AROUND THE SCUPPERS THAT NEED REPAIR; OR ANY SECTION OF THE DECK THAT THE ENGINEER DETERMINES TO REQUIRE FULL DEPTH REPAIR AFTER CLASS II REMOVAL.

4. AN ESTIMATED QUANTITY FOR ITEMS 502.11 "SHORING SUPERSTRUCTURE BEARINGS (ABUTMENT)" AND "SHORING SUPERSTRUCTURE BEARINGS (PIER)" HAS BEEN INCLUDED IN THIS PROJECT BASED ON THE ASSUMPTION THAT ONE BEARING MAY NEED TO BE RESET AT EACH BRIDGE FOUNDATION LOCATION. AFTER THE REMOVAL OF THE CONCRETE FOR "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE" AND "PARTIAL REMOVAL OF STRUCTURE" HAS BEEN COMPLETED, AND BEFORE THE NEW CONCRETE HAS BEEN PLACED, THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE ENGINEER TO INSPECT THE BEARINGS. THE ENGINEER WILL DECIDE WHICH, IF ANY, OF THE BEARINGS WILL BE SHORED AND RESET. IF EXISTING ANCHOR BOLTS CANNOT BE REUSED THEN NEW ANCHOR BOLTS SHALL BE PROVIDED ACCORDING TO SECTION 531. PAYMENT FOR DRILLING AND GROUTING NEW ANCHOR BOLTS SHALL BE INCIDENTAL TO ITEM 502.11. PAYMENT FOR PROVIDING ACCESS WILL BE INCIDENTAL TO ITEM 635.11.

5. AFTER CLASS II AND CLASS III REMOVAL THE TOP MAT OF REINFORCING STEEL SHALL BE INSPECTED, ANY REMAINING RUST SHALL BE CLEANED OFF OF THE BARS BEFORE ANY CONCRETE SHALL BE PLACED. ANY SECTIONS ORDERED REMOVED BY THE ENGINEER SHALL BE REMOVED AND REPLACED WITH #5 BARS, CUT TO FIT. AN ESTIMATED QUANTITY OF 6450 LBS OF ITEM 507.15 "REINFORCING STEEL" HAS BEEN ADDED FOR THIS PURPOSE: THIS IS ANTICIPATED TO BE THREE HUNDRED (300) 20'-0" #5 BARS AND FOR THE TWENTY (20) 3'-1" #8 THREADED RODS IN ABUTMENT #1. IF THERE IS INSUFFICIENT COMPETENT EXISTING STEEL FOR LAPPING WITH THE NEW STEEL, THE TWO BARS SHALL BE CONNECTED USING MECHANICAL BAR CONNECTORS UNDER ITEM 507.19 "MECHANICAL BAR CONNECTORS", AN ESTIMATED QUANTITY OF 73 MECHANICAL BAR CONNECTORS HAVE BEEN ADDED FOR THIS PURPOSE, INCLUDING 3 CONNECTORS FOR TESTING UNDER 713.02.

6. THE DECK SHALL BE SANDBLASTED A MAXIMUM OF 12 HOURS PRIOR TO FLOODING THE SURFACE. THE AREA SHALL BE VACUUMED OR FLUSHED, USING HIGH PRESSURE AIR OR WATER, TO REMOVE ALL LOOSE PARTICLES, DUST AND DEBRIS. AFTER SANDBLASTING, THE PREPARED CONCRETE SURFACE SHALL BE FLOODED WITH WATER FOR AT LEAST 12 HOURS. ONCE THE CONCRETE IS WET, EITHER FROM FLOODING OR RAIN, IT MUST BE KEPT WET UNTIL THE PLACEMENT OF NEAT CEMENT PASTE AND CONCRETE. IF THE CONCRETE IS ALLOWED TO DRY OUT, THE AREA MUST BE SANDBLASTED AGAIN AND THE ENTIRE AREA VACUUMED OR FLUSHED AGAIN. THIS SHALL BE INCLUDED IN THE BID PRICE FOR ITEMS 580.11 OR 580.12; "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II OR III". ALL SURFACES OF METAL DECK JOINTS AND THE SURFACES OF GRANITE CURBING, WHICH ARE TO HAVE CONCRETE PLACED AGAINST THEM, WILL BE COATED WITH EPOXY BONDING COMPOUND, INCIDENTAL TO ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".

7. THE FINAL DECK THICKNESS OF CONCRETE SHALL BE 9" WITH A CLEARANCE TO THE TOP MAT OF REBAR OF 3". THE NEW DECK CONCRETE SHALL MEET THE REQUIREMENTS OF ITEM 900.608 "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT)". THE CONCRETE FOR EACH DECK SPAN SHALL BE DONE IN A SINGLE POUR. THE TOP SURFACE SHALL BE SCREEDED TO FINISH GRADE AND RECEIVE A TURF DRAG FINISH. THE DECK SHALL BE GROOVED ACCORDING TO ITEM 900.675 "SPECIAL PROVISION (LONGITUDINAL DECK GROOVING)". THE CONTRACTOR WILL TAKE APPROPRIATE MEASURES TO ENSURE THAT THE FINISHED GRADE AND CROSS-SLOPE OF THE NEW DECK WILL MATCH THE EXISTING GRADE AND CROSS-SLOPE.

8. THE GRANITE CURB JOINTS SHALL BE CLEANED AND REPOINTED AS DEEMED NECESSARY BY THE RESIDENT ENGINEER UNDER ITEM 602.30.

9. WATER REPELLENT, SILANE, SHALL BE APPLIED TO ALL EXPOSED CONCRETE, EXCEPT FOR THE PIER AND THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES. THE DECK SURFACE WILL BE PRESSURE WASHED AFTER GROOVING OPERATIONS, PRIOR TO TREATMENT. THIS WORK SHALL BE INCIDENTAL TO ITEM 514.10 "WATER REPELLENT, SILANE".

10. A VIBRATORY SCREED MACHINE WILL BE ALLOWED FOR THIS DECK POUR. IF THE SCREED RAIL SUPPORTS CREATE POINT LOADS OUTSIDE THE TOP FLANGE OF THE FASCIA GIRDERS, A SUPPORT SYSTEM FOR THESE AREAS SHALL BE DESIGNED AND SUBMITTED FOR DOCUMENTATION. ANY DAMAGE TO THE PROTECTIVE COATING ON THE EXISTING STRUCTURAL STEEL SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

HYDRO-DEMOLITION NOTES

1. HYDRO-DEMOLITION WILL BE THE PREFERRED METHOD OF REMOVING CONCRETE FOR THE WORK REQUIRED UNDER THESE GENERAL NOTES. THE SLURRY FROM THIS OPERATION SHALL BE DISPOSED OF IN ACCORDANCE WITH SUBSECTIONS 105.23, 105.24, AND 105.25.

2. HYDRO-DEMOLITION EQUIPMENT SHALL BE CAPABLE OF REMOVING ALL CONCRETE TO THE MINIMUM DEPTH REQUIRED FOR CLASS II REMOVAL, AND REMOVE ONLY UNSOUND CONCRETE BELOW THAT DEPTH. THE DECK SHALL BE INSPECTED TO INSURE REMOVAL OF ALL UNSOUND CONCRETE.

3. IN ALL CASES, IF ITEM 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE, CLASS III" IS REQUIRED AFTER CLASS II REMOVAL BY HYDRO-DEMOLITION, THEN AIR HAMMERS WILL BE USED FOR THIS ADDITIONAL PURPOSE.

AIR HAMMER REMOVAL NOTES

1. THE ANGLE BETWEEN THE DECK AND AIR HAMMER AXIS SHALL BE FROM ZERO (0) DEGREES AND FORTY-FIVE (45) DEGREES. AIR HAMMERS USED FOR THE REMOVAL OF UNSOUND AND DETERIORATED CONCRETE, SHALL HAVE A MAXIMUM RATING OF THIRTY (30) POUNDS AND SHALL USE CHISEL POINTS ONLY. IF REINFORCING STEEL IS DAMAGED, OR IF CONCRETE IS DEBONDED, DELAMINATED, OR OTHERWISE DAMAGED BEYOND THE DEFINED LIMITS OF REMOVAL BECAUSE OF THE IMPROPER USE OF THE AIR HAMMER, THEN THE CONTRACTOR SHALL REPAIR THE DAMAGED AREAS BY REMOVING AND REPLACING THE CONCRETE AND/OR REINFORCING STEEL AT THEIR OWN EXPENSE.

JOINT NOTES

1. WE HAVE SHOWN ONE METHOD OF ATTACHING THE JOINT BRACKETS TO THE OUTERMOST BEAMS. IT WILL BE UP TO THE CONTRACTOR TO SUBMIT FABRICATION DRAWING SHOWING ATTACHMENT OF THESE BRACKETS FOR APPROVAL.

2. A NEW ASPHALTIC PLUG JOINT SHALL BE INSTALLED BETWEEN DECK SPAN #2 AND APPROACH SLAB #2. THIS SHALL BE PAID UNDER PAY ITEM 516.10 "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG"

3. AT THE BEGINNING AND END OF EACH APPROACH SLAB, NOT ADJACENT TO THE BRIDGE DECK, A SAWCUT PAVEMENT JOINT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL SHOWN ON SHEET 10. PAYMENT FOR THE SAWCUT JOINT SHALL BE MADE UNDER ITEM 524.11 "JOINT SEALER, HOT POURED" OR 524.13 "JOINT SEALER, COLD POURED", AT THE OPTION OF THE CONTRACTOR.

PROJECT NAME: MORETOWN

PROJECT NUMBER: STP DECK (37)

FILE NAME: 08c218notes.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: H.I.SALLS
INDEX & PROJECT NOTES SHEET I

PLOT DATE: 16-APR-2009
DRAWN BY: D.D.BEARD
CHECKED BY: H.I. SALLS
SHEET 2 OF 25

DRAINAGE NOTES

1. REMOVAL AND REPLACEMENT OF THE DRAINAGE SYSTEM SHALL BE PAID FOR UNDER ITEM 900.640 "SPECIAL PROVISION (BRIDGE FIBERGLASS DRAIN SYSTEM)". SEE SPECIAL PROVISIONS FOR MORE INFORMATION.

2. ALL PLATES, BARS, OR ANGLES USED FOR DOWNSPOUT ATTACHMENT SHALL CONFORM TO AASHTO M 270M/M 270, GRADE 36 AND SHALL BE GALVANIZED PER AASHTO M 111M/M 111.

3. ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232.

4. THE INSTALLATION OF THE FIBERGLASS DRAIN SYSTEM SHALL OCCUR AFTER THE EXPANSION JOINT HAS BEEN SET, AND ANCHORED IN PLACE.

PAVEMENT NOTES

1. CARE SHALL BE EXERCISED TO SMOOTHLY TRANSITION THE NEW APPROACH SLAB PAVEMENT INTO THE EXISTING PAVEMENT (50' MAXIMUM, SEE SHEET 10). ANY COLD PLANING NECESSARY FOR SHAPING BRIDGE APPROACHES ALONG THE EXISTING MAIN LINE SHALL BE PAID FOR UNDER ITEM 210.10 "COLD PLANING, BITUMINOUS PAVEMENT". ANY COLD PLANING ALONG SIDE ROADS SHALL BE DONE AT THE ENGINEER'S DISCRETION.

2. LONGITUDINAL JOINTS IN THE PAVEMENT SHALL BE TAPERED IN ACCORDANCE WITH SECTION 490 OF THE SPECIFICATION.

TRAFFIC CONTROL

1. TRAFFIC SHALL BE DETOURED DURING THE BRIDGE CLOSURE. WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE MUTCD, AND THE APPROPRIATE VTRANS STANDARD DRAWINGS.

2. THE CONTRACTOR SHALL SUBMIT A SCHEDULE FOR IMPLEMENTATION AND MAINTENANCE OF TRAFFIC CONTROL FOR ALL WORK ASSOCIATED WITH THIS PROJECT. THE SUBMISSION SHALL BE MADE THROUGH THE ENGINEER TO VTRANS TRAFFIC DESIGN FOR APPROVAL PRIOR TO IMPLEMENTATION.

3. PCMS BOARDS SHALL BE IN PLACE AND OPERATING 14 DAYS BEFORE BRIDGE CLOSURE TO WARN OF THE BRIDGE CLOSURE. THE AGENCY INTENDS TO HAVE 4 SIGNS OPERATIONAL FOR A 45 DAY PERIOD. THEY SHALL BE REMOVED WHEN THE BRIDGE IS REOPENED TO TRAFFIC. PAYMENT FOR THE PCMS SHALL BE UNDER PAY ITEM 641.17 "PORTABLE CHANGEABLE MESSAGE SIGN RENTAL".

4. TEMPORARY PAVEMENT MARKINGS SHALL BE USED AT THE EASTERN INTERSECTION OF US 2 AND VT 100 TO DELINEATE BOTH A LEFT AND RIGHT TURN LANE. THE MARKINGS SHALL BE ONE 24" STOP BAR, TWO TURN ARROWS, AND A SINGLE 4" WHITE LINE TO DESIGNATE TWO LANES. PAYMENT FOR THE MARKINGS SHALL BE UNDER ITEMS 646.480, 646.600, AND 646.690 RESPECTFULLY. EXACT LAYOUT WILL BE DIRECTED BY THE ENGINEER.

5. UNIFORMED TRAFFIC OFFICERS WILL BE PROVIDED AT THE EASTERN INTERSECTION OF US 2 AND VT 100 AT PEAK TRAFFIC FLOW HOURS AND AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE UNDER PAY ITEM 630.10 "UNIFORMED TRAFFIC OFFICERS".

6. ALL SIGNS, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE CLEANED WEEKLY OR AS DIRECTED BY THE ENGINEER. EXISTING PERMANENT SIGNS THAT CONTRADICT TEMPORARY TRAFFIC CONTROL SIGNS SHALL BE REMOVED AND REPLACED OR COVERED FOR THE PERIOD OF TIME THAT THE TRAFFIC CONTROL PLAN IS IMPLEMENTED. COST FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".

7. THE CONTRACTOR SHALL COORDINATE ITS WORK ACTIVITIES AND TRAFFIC CONTROL WITH ANY OTHER CONTRACTOR AND/OR MAINTENANCE OPERATIONS WORKING NEAR OR WITHIN THE PROJECT AREAS.

8. PAYMENT FOR TEMPORARY CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES NOT OTHERWISE PAID UNDER A SEPARATE CONTRACT ITEM WILL BE INCLUDED IN THE UNIT BID PRICE FOR CONTRACT ITEM 641.10 "TRAFFIC CONTROL".

PROJECT NAME: MORETOWN

PROJECT NUMBER: STP DECK (37)

FILE NAME: 08c218notes.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: H.I.SALLS
INDEX & PROJECT NOTES SHEET 2

PLOT DATE: 15-APR-2009
DRAWN BY: D.D.BEARD
CHECKED BY: H.I. SALLS
SHEET 3 OF 25

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES		TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
BRIDGE 7	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
340		340		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
1		1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
1		1		EACH	SHORING SUPERSTRUCTURE BEARINGS (ABUTMENT)	502.11				
1		1		EACH	SHORING SUPERSTRUCTURE BEARINGS (PIER)	502.11				
6450		6450		LB	REINFORCING STEEL	507.15				
30		30		LF	DRILLING AND GROUTING DOWELS	507.16				
73		73		EACH	MECHANICAL BAR CONNECTOR	507.19				
100		100		GAL	WATER REPELLENT, SILANE	514.10				
40		40		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
75		75		LF	BRIDGE EXPANSION JOINT, VERMONT	516.11				
					BEGIN OPTION AA					
60		60		LF	JOINT SEALER, HOT POURED	524.11				
60		60		LF	JOINT SEALER, COLD POURED	524.13				
					END OPTION AA					
1220		1220		SY	REMOVAL OF BRIDGE PAVEMENT	529.10				
1		1		EACH	PARTIAL REMOVAL OF STRUCTURE	529.20				
1000		1000		SY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II	580.11				
3		3		CY	REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS III	580.12				
111		111		SY	REPOINTING MASONRY	602.30				
32		32		HR	POWER GRADER RENTAL	608.15				
450		450		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
80		80		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
150		150		HR	FLAGGERS	630.15				
	1	1		LS	FIELD OFFICE, ENGINEERS	631.10				
	1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16				
	1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17				
	1	1		LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25				
1		1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
1		1		LS	TRAFFIC CONTROL	641.10				
1		1		LS	PUBLIC RELATIONS OFFICER	641.12				
180		180		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
930		930		LF	DURABLE 4 INCH WHITE LINE	646.400				
930		930		LF	DURABLE 4 INCH YELLOW LINE	646.410				
26		26		LF	DURABLE 24 INCH STOP BAR	646.480				
150		150		LF	TEMPORARY 4 INCH WHITE LINE	646.600				
2		2		EACH	TEMPORARY LETTER OR SYMBOL	646.690				
55		55		CY	SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT)	900.608				
32		32		LF	SPECIAL PROVISION (BRIDGE FIBERGLASS DRAIN SYSTEM)	900.640				
1		1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (N.A.B.I.)	900.650				
1		1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				

PROJECT NAME: MORETOWN
PROJECT NUMBER: STP DECK (37)

FILE NAME: 08c218excel.dgn
PROJECT MANAGER: C.P.WILLIAMS
DESIGNED BY: D.D. BEARD
QUANTITY SHEET #1

PLOT DATE: 04/16/2009
DRAWN BY: D.D.BEARD
CHECKED BY: H.I. SALLS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES			TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
BRIDGE 7	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND		QUANTITIES	UNIT	ITEMS
1		1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650					
1025		1025		SY	SPECIAL PROVISION (LONGITUDINAL DECK GROOVING)	900.675					
70		70		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680					

PROJECT NAME: MORETOWN
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FILE NAME: 08c218excel.dgn
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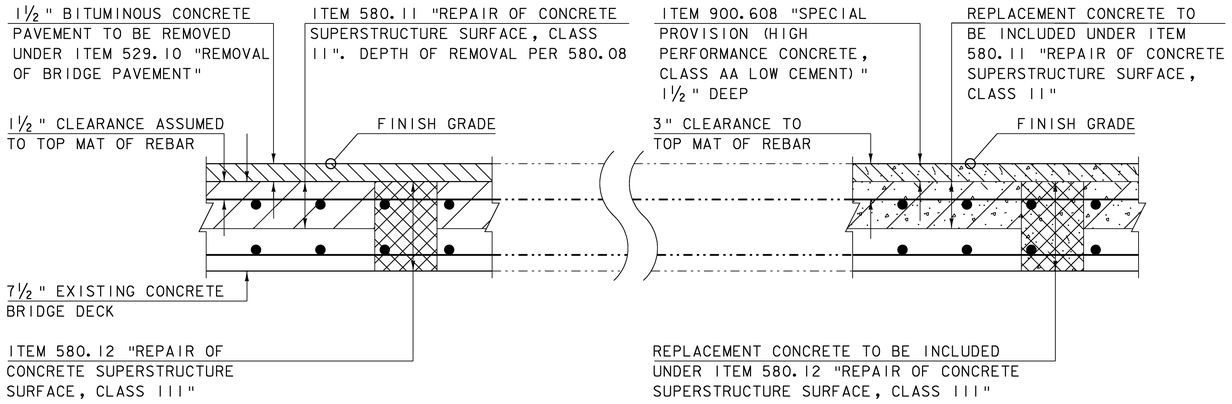
QUANTITY SHEET #2

PLOT DATE: 04/16/2009
DRAWN BY: D.D.BEARD
CHECKED BY: H.I. SALLS
SHEET 5 OF 25



CONCRETE REMOVAL PAY LIMIT DETAIL

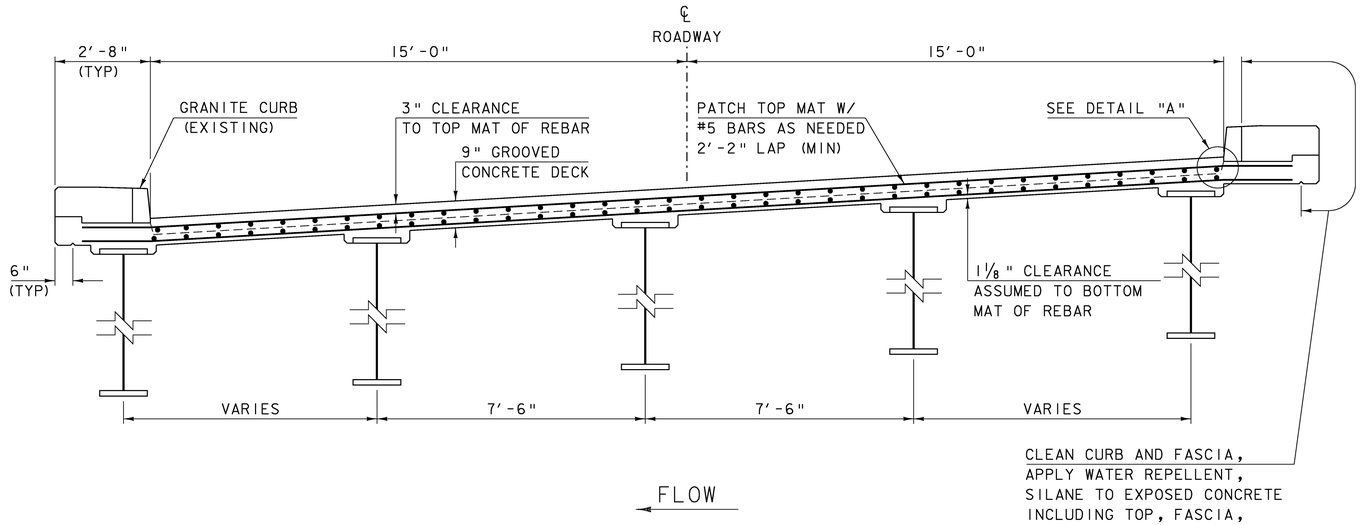
N.T.S.

CONCRETE REPLACEMENT PAY LIMIT DETAIL

N.T.S.

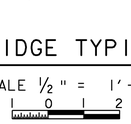
NOTES:

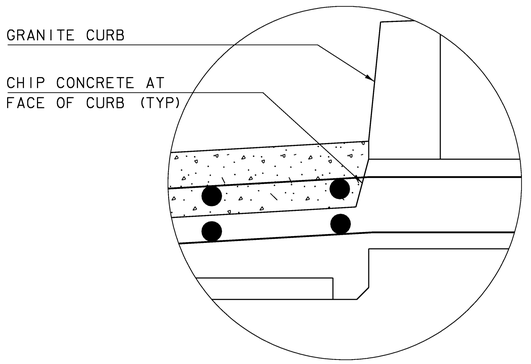
1. DUPLICATE PAYMENT WILL NOT BE MADE FOR REPAIR OF CONCRETE SURFACES IN ANY AREA. NO PAYMENT FOR ITEM 580.11 SHALL BE MADE WITHIN AREAS OF CLASS III REPAIR. FOR EXAMPLE, IF AN AREA IS ORIGINALLY TO BE REPAIRED AS CLASS II, AND THE ENGINEER ORDERS A CHANGE TO CLASS III DEPTH, THE AREA IN QUESTION WILL BE PAID AS CLASS III.
2. ALL EDGES OF REPAIR AREAS ARE TO BE SAWCUT SQUARE AND A MINIMUM OF 1" DEEP. EXCEPT AT THE CURB LINES WHERE THE EDGE WILL BE CHIPPED.
3. ALTHOUGH THE CONCRETE REPLACEMENT PAY LIMIT DETAIL SHOWS THREE DISTINCT CONCRETE AREAS TO CLARIFY PAYMENT, ALL CONCRETE IN EACH SPAN SHALL BE PLACED IN A SINGLE POUR USING "HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT."



PROPOSED BRIDGE TYPICAL SECTION

SCALE ½" = 1'-0"





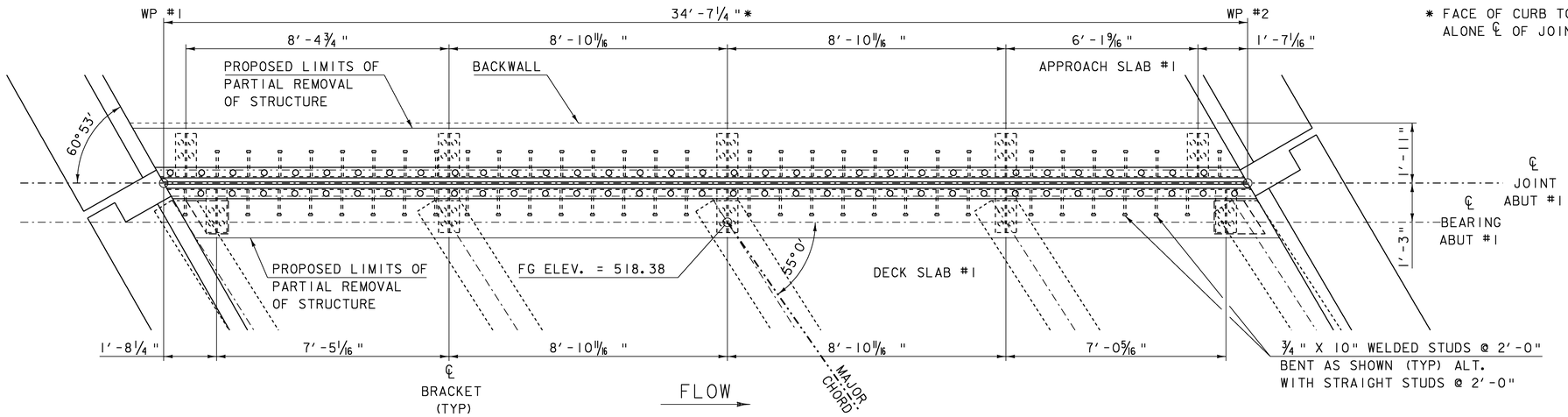
DETAIL "A"

N.T.S.

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLEAR, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
2'-2" BAR LAP UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT NAME:	MORETOWN
PROJECT NUMBER:	STP DECK (37)
FILE NAME: 08c218details.dgn	PLOT DATE: 15-APR-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: H.I.SALLS	CHECKED BY: H.I. SALLS
TYPICAL SECTIONS	SHEET 6 OF 25



* FACE OF CURB TO FACE OF CURB ALONE ℄ OF JOINT

WP	ELEVATION
1	519.51′
2	517.35′
3	515.75′
4	513.50′

NOTES:

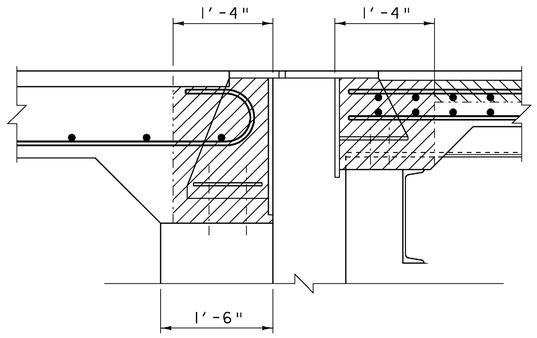
1. SEE SHEETS 8 AND 9 FOR TYPICAL SECTION BETWEEN GIRDERS AND TYPICAL SECTION AT GIRDERS.
2. ⅞" DIA HOLES @ 1′-0" c-c, COUNTERBORED 2¼" DIA. x ¾" DEEP. (TYP)

ALL DIMENSIONS AND ELEVATIONS ARE BASED OFF OF EXISTING PLANS AND WILL NEED TO BE VERIFIED IN THE FIELD. ANY DISCREPANCIES WILL BE BROUGHT TO THE ENGINEERS ATTENTION TO ENSURE PROPER FABRICATION AND PLACEMENT.

PROPOSED JOINT LAYOUT

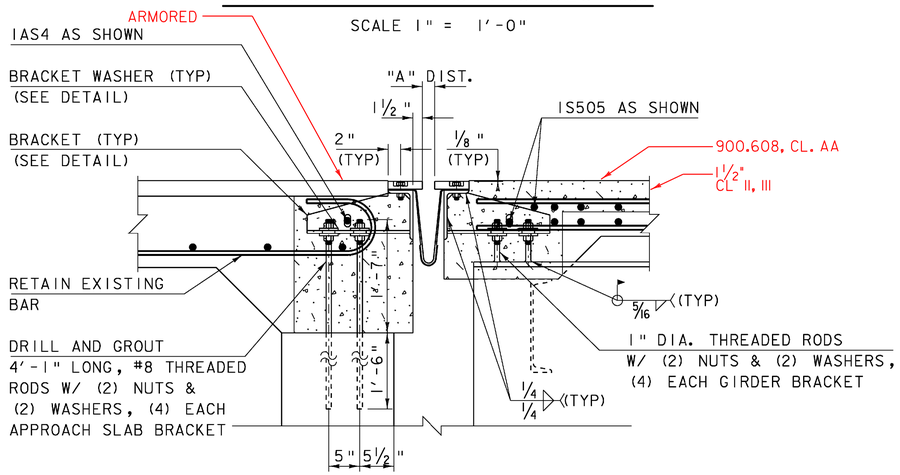
SCALE ½" = 1′-0"

PROJECT NAME:	MORETOWN
PROJECT NUMBER:	STP DECK (37)
FILE NAME: 08c218details.dgn	PLOT DATE: 15-APR-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: H.I.SALLS	CHECKED BY: H. I. SALLS
PROPOSED JOINT LAYOUT	SHEET 7 OF 25



ABUTMENT #1 EXISTING SECTION

SCALE 1" = 1'-0"



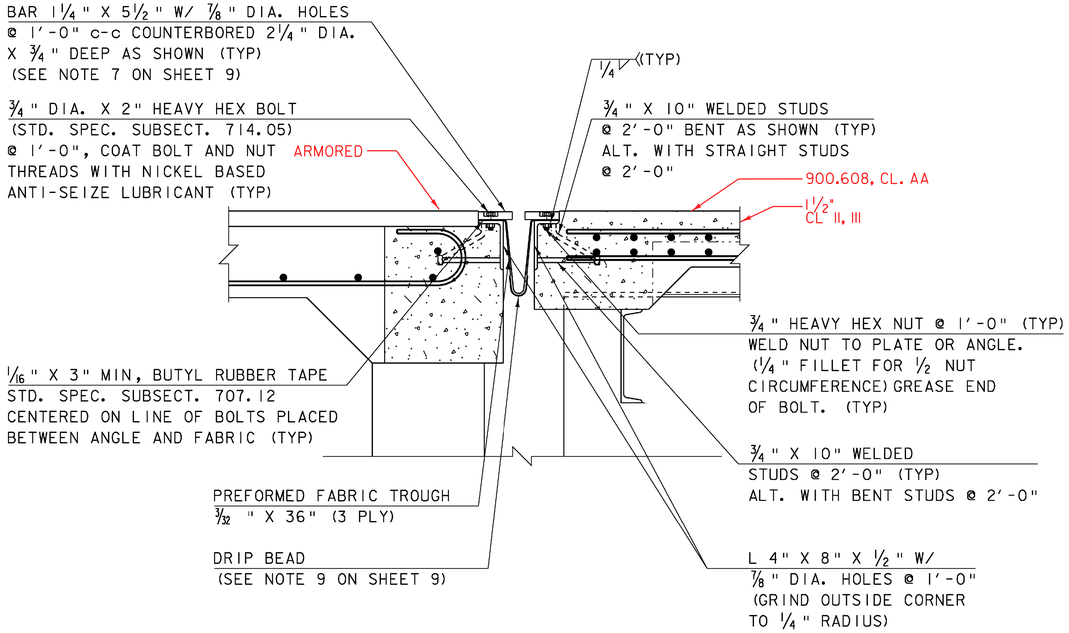
NEW ABUTMENT SECTION AT GIRDERS

SCALE 1" = 1'-0"

AREA OF PARTIAL REMOVAL OF STRUCTURE

AREA OF REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II

NEW CONCRETE, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT)"



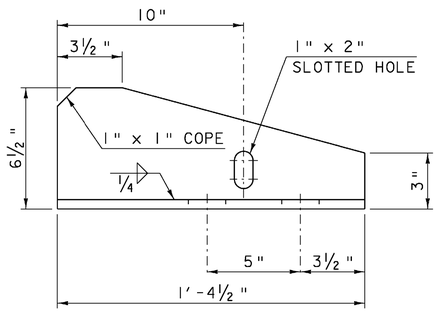
NEW ABUTMENT SECTION BETWEEN GIRDERS

SCALE 1" = 1'-0"

TEMP	"A" DIST
0° F	1 7/16"
15° F	1 5/16"
30° F	1 3/16"
45° F	1 1/16"
60° F	15/16"
75° F	3/4"
90° F	5/8"
105° F	1/2"

"A" IS THE SETTING AFTER DEAD LOADS ARE PUT IN PLACE.
NOTE: THE CONTRACTOR IS TO MEASURE THE DISTANCE BETWEEN THE TOP FLANGE AND ABUTMENT 1 BEFORE AND AFTER CONCRETE REMOVAL. ANY CHANGE IN DISTANCE SHALL BE APPLIED TO "A".

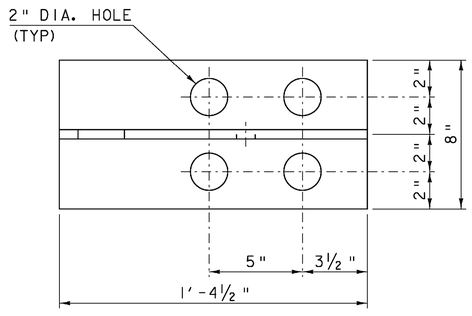
ALL PLATES ARE 1/2" THICK



BRACKET ELEVATION

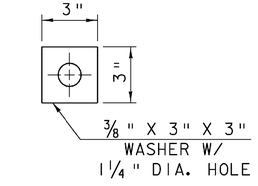
SCALE 3" = 1'-0"

CUT AND SHAPE TO FIT AGAINST 4" x 8" ANGLE



BRACKET PLAN

SCALE 3" = 1'-0"



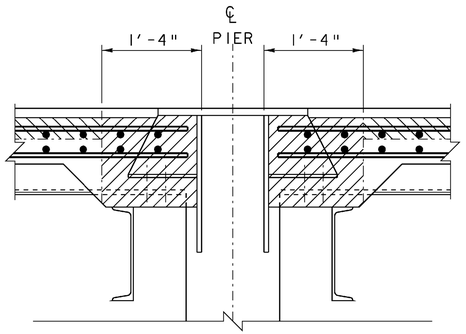
WASHER FOR BRACKET

SCALE: 3" = 1'-0"

SCALE 1" = 1'-0"
1 9 6 3 0 2

SCALE 3" = 1'-0"
1 9 6 3 0 1

PROJECT NAME: MORETOWN	
PROJECT NUMBER: STP DECK (37)	
FILE NAME: 08c218details.dgn	PLOT DATE: 15-APR-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: D.D. BEARD	CHECKED BY: H. I. SALLS
VERMONT JOINT DETAILS 1	SHEET 8 OF 25



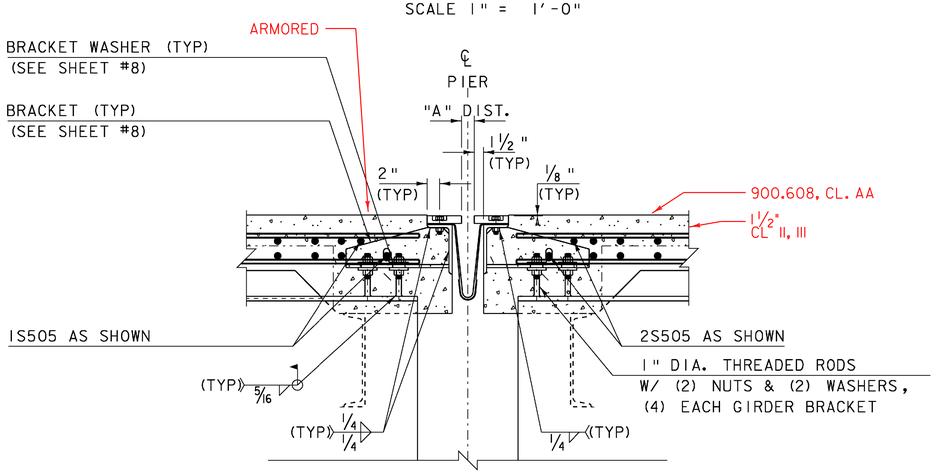
PIER EXISTING SECTION

SCALE 1" = 1'-0"

AREA OF PARTIAL REMOVAL OF STRUCTURE

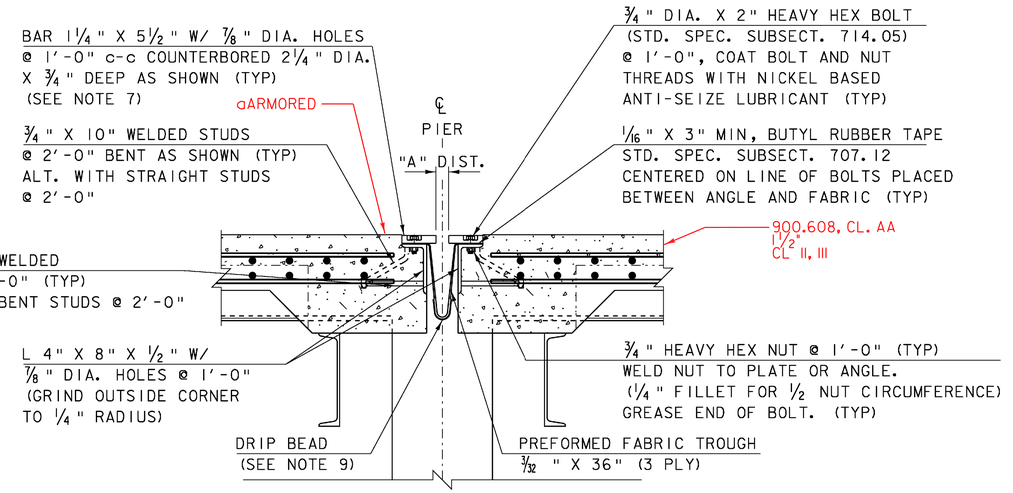
AREA OF REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS II

NEW CONCRETE, "SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS AA LOW CEMENT)"



NEW PIER SECTION AT GIRDERS

SCALE 1" = 1'-0"



NEW PIER SECTION BETWEEN GIRDERS

SCALE 1" = 1'-0"

1. DETAILS ON THE VERMONT JOINT DETAIL SHEETS ARE FOR ITEM 516.11 "BRIDGE EXPANSION JOINT (VERMONT)".

2. PREFORMED FABRIC MATERIAL SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT.

3. THE FINAL FINISH OF THE EXPANSION DEVICE SHALL BE COVERED DURING THE PLACING OF BRIDGE DECK CONCRETE.

4. ALL STEEL COMPONENTS SHALL BE GALVANIZED OR METALIZED AND MEET THE REQUIREMENTS OF SUBSECTION 516.02. THREADED RODS SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 713.01 THE 4" x 8" x ½" ANGLE AND WELDED STUD ASSEMBLY MAY BE SUPPLIED WITHOUT GALVANIZING OR METALIZING.

5. THE ITEM "BRIDGE EXPANSION JOINT (VERMONT)" SHALL INCLUDE THE FABRICATION AND ERECTION OF THE COMPLETE JOINT ASSEMBLY INCLUDING ALL STEEL PLATES, BRACKETS, ANGLES, WELDED STUDS OR RODS, PREFORMED FABRIC DRAIN TROUGH MATERIAL AND PLASTIC DRAIN TUBES, BUTYL RUBBER TAPE AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL JOINT.

6. THE 4" X 8" X ½" ANGLES SHALL BE FURNISHED AS ONE CONTINUOUS PIECE. THE 1¼" X 5½" BARS EACH SIDE OF THE JOINT SHALL BE PROVIDED IN TWO EQUAL LENGTHS.

7. FILL COUNTERBORED HOLES WITH HOT POURED JOINT SEALER (SUBSECTION 707.04) AFTER BOLT INSTALLATION. PAYMENT FOR THE WORK SHALL BE INCIDENTAL TO ITEM 516.11 "BRIDGE EXPANSION JOINT, VERMONT".

8. THE EXPANSION JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.

9. A DRIP BEAD CONSISTING OF ¼" X 7" STRIP OF PREFORMED FABRIC MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPOUT END OF THE TROUGH.

10. FABRIC TROUGH SHALL BE THOROUGHLY CLEANED AND FLUSHED AFTER PAVING OPERATION.

11. PRIOR TO GALVANIZING OR METALIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO A 1/16 INCH RADIUS.

12. TEMPORARY SHIPPING ATTACHMENTS SHALL BE ATTACHED BY BOLTING; WELDING WILL NOT BE PERMITTED.

13. PROJECTING THREADS OF THE ¾" BOLTS IN THE JOINT SHALL BE GREASED BY THE CONTRACTOR PRIOR TO PLACING ADJACENT CONCRETE. THIS WILL FACILITATE BOLT REMOVAL IF REQUIRED IN THE FUTURE.

TEMP	"A" DIST
0°F	1 7/16"
15°F	1 5/16"
30°F	1 3/16"
45°F	1 1/16"
60°F	15/16"
75°F	¾"
90°F	5/8"
105°F	½"

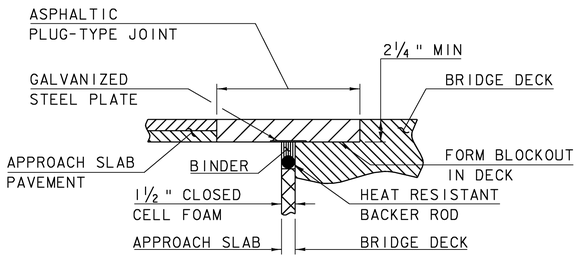
"A" IS THE SETTING AFTER DEAD LOADS ARE PUT IN PLACE.
NOTE: THE CONTRACTOR IS TO MEASURE THE DISTANCE BETWEEN TWO TOP FLANGES BEFORE AND AFTER CONCRETE REMOVAL. ANY CHANGE IN DISTANCE SHALL BE APPLIED TO "A".

SCALE 1" = 1'-0"
1 9 6 3 0 1 2

PROJECT NAME: MORETOWN
PROJECT NUMBER: STP DECK (37)

FILE NAME: 08c218details.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: D.D. BEARD
VERMONT JOINT DETAILS 2

PLOT DATE: 15-APR-2009
DRAWN BY: D.D.BEARD
CHECKED BY: H. I. SALLS
SHEET 9 OF 25



ASPHALTIC PLUG-TYPE JOINT DETAIL
(NOT TO SCALE)

ASPHALTIC PLUG JOINT NOTES

1. INSTALLATION

A. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.

B. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.

C. BLAST CLEAN THE JOINT AREA OF DEBRIS AND ASPHALT. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.

D. REPAIR SPALLED AND DEFECTIVE CONCRETE WITH AN APPROVED MATERIAL AS AGREED UPON BY THE ENGINEER.

E. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.

F. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.

G. PLACE ¼" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRESTAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.

H. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.

I. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

J. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

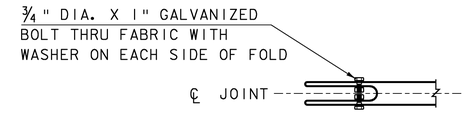
K. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

2. WEATHER LIMITATIONS. (APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER):

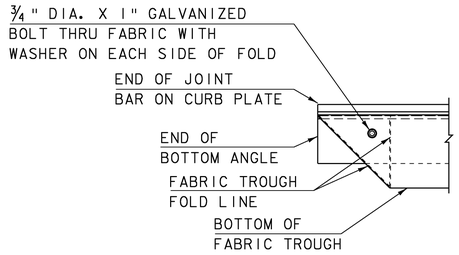
A. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.

B. THE ROAD SURFACE IS DRY.

C. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



PLAN VIEW - TROUGH FOLD
(NOT TO SCALE)

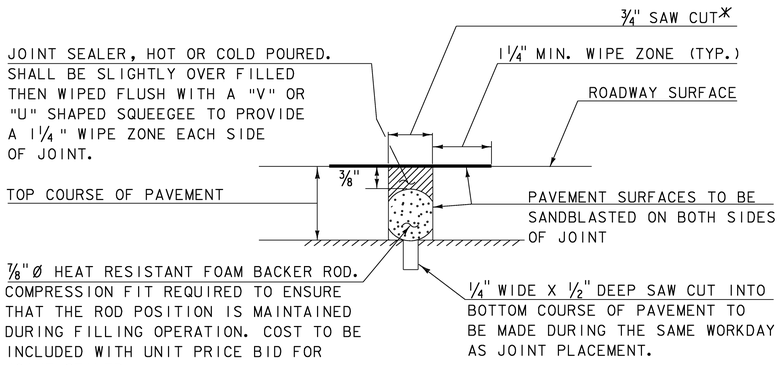


FOLDED TROUGH END DETAIL
(NOT TO SCALE)

NOTES:

1. TROUGH SHALL BE FOLDED ON HIGH SIDE OF BRIDGE ONLY.

2. BOLTS, NUTS AND WASHERS FOR FOLD SHALL MEET REQUIREMENTS OF 714.05 AND BE GALVANIZED PER AASHTO M298, CLASS 50, TYPE 1.

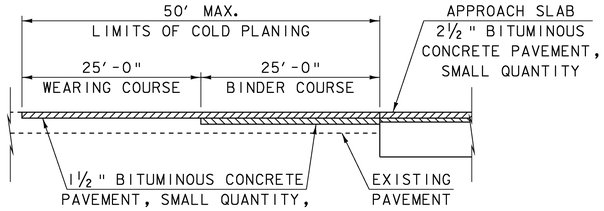


SAWED PAVEMENT JOINT DETAIL
(NOT TO SCALE)

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

BRIDGE NUMBER	CROSSING OVER	LENGTH OF BRIDGE (FT)	CURB TO CURB PAVEMENT WIDTH (FT)	TOWN	MILE MARKER
VT 100B BR 7	MAD RIVER	307.25	30.00	MORETOWN	5.85

BRIDGE LOCATION TABLE

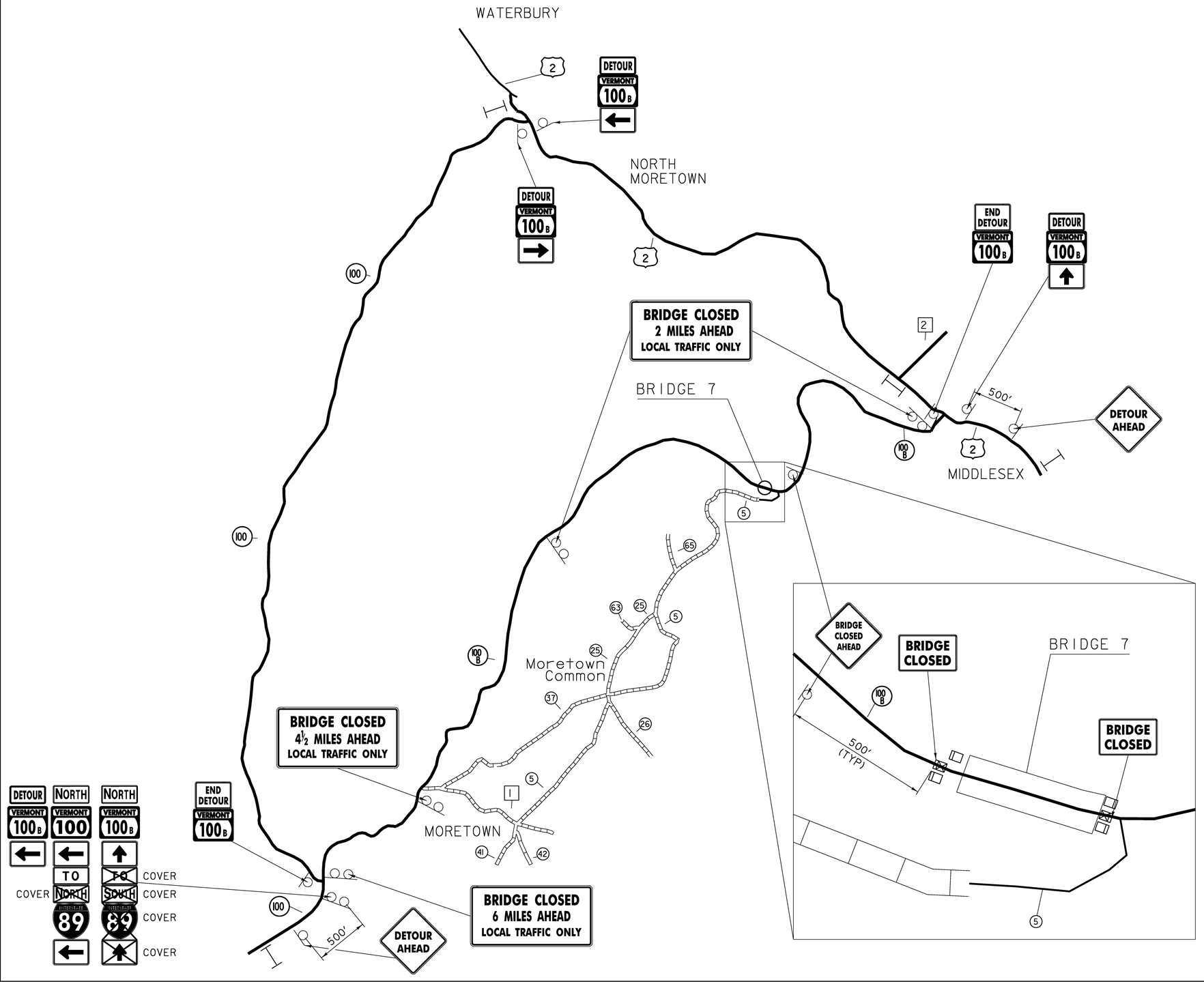


COLD PLANE APPROACH DETAIL
NTS
ALONG MAIN LINE ONLY

PROJECT NAME: MORETOWN
PROJECT NUMBER: STP DECK (37)

FILE NAME: 08c218details.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: H.I.SALLS
MISC DETAIL SHEET

PLOT DATE: 15-APR-2009
DRAWN BY: D.D.BEARD
CHECKED BY: H.I. SALLS
SHEET 10 OF 25



B	R	I	D	G	E		
C	L	O	S	E	D		
O	N		1	0	0	B	

PORTABLE CHANGEABLE SIGN – PHASE 1

M	M	/	D	D	/	Y	Y
T	O						
M	M	/	D	D	/	Y	Y

PORTABLE CHANGEABLE SIGN – PHASE 2

N

VT STATE PLANE GRID

LEGEND

- TYPE III BARRICADE
- TYPE III (MOD) BARRICADE
- PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NAME:	MORETOWN
PROJECT NUMBER:	STP DECK (37)

FILE NAME: 08c218detour.dgn	PLOT DATE: 15-APR-2009
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: D.D. BEARD	CHECKED BY: H.I. SALLS
DETOUR SHEET	SHEET II OF 25

PLAN

	BY	DATE
SURVEYED	Maps	
PLOTTED	A. Gagnon	
ALIGNMENT CHECKED		
BOOK MAP CHECKED	A. Gagnon	
NO. Sheet 2		Sept. 65

EXCAVATION AND REMOVAL OF ROAD SURFACES AND/OR PAVEMENTS
Rt.
282+00 ~ 285+75
284+85 ~ 288+40.00

12" SUB-BASE OF SAND
295+50 ~ 298+00

18" GRAVEL BACKFILL
Rt.
295+50 ~ 298+00

REMOVAL AND DISPOSAL OF PRESENT GUARD RAIL
Rt.
284+42 ~ 285+78
285+42 ~ 285+80
286+92 ~ 287+72
286+86 ~ 288+52

CONSTRUCT DRIVE
Lt. 289+00 ~ 288+84
Rt. 287+00

48" SUB-BASE TRANSITION
290+01.35 ~ 290+51.35
293+58.60 ~ 294+08.60

TREATED TIMBER CURB
Lt.
293+85 ~ 296+49

CURVE DATA
Δ 139°52'20" Lt.
D 3°22'30"
R 1697.7
T 4648.1
L 4144.3
E 3250.9
Bank 11/16" per ft.

PLANK GUARD RAIL (For Barricades)
Rt.
285+50± (16')
287+80 ~ 288+50 (96')

THREE CABLE GUARD RAIL WITH STEEL POSTS
Lt.
290+27 ~ 290+48
293+85 ~ 298+00
Rt.
286+00 ~ 286+84
287+89 ~ 290+27
293+50 ~ 293+90

CONSTRUCT APPROACH
Rt.
294+75
See Sheet 103 of 104

DRILLING AND BLASTING OF SOLID ROCK SUBGRADE
282+00 ~ 285+86.13

PAVED SHOULDER FULL WIDTH WITH BITUMINOUS CONCRETE PAVEMENT, ITEM 361 (MOD.)
Lt.
293+85 ~ 296+49

Approximate Aerial Utility Relocation Route by N.E.T. & T. Co.

297+50
New 18"x64' RCP Class III

296+50 Lt.
New 12"x24" Pipe (CAACP 16 Gage, CGMP 16 Gage), New P.R.C. Curb Dl. w/ Cast Iron Grate and Frame.

Approach Curve #1
Δ 74°50' Rt.
D 127°00'
R 45.1
T 34.5
L 58.9
E 11.7

P.O.C. 296+50.0

P.O.C. 295+00.0

ML P.O.C. 294+75.0 = Approach Sta. 0+00

STA. 293+58.60 END BRIDGE / RESUME ROADWAY

293+91.6 Lt.
New 12"x16' Pipe (CAACP 16 Gage, CGMP 16 Gage, New P.R.C. Curb Dl. w/ Cast Iron Grate & Frame

ML P.O.C. 293+00.0 = Chan. Line Sta. 5+40.0

Approach Pl. 0+81.5 = 0+71.4

295+50 Rt. 288.00' Rt.
New 12" ACCGMP 12 Gage Cast Iron Cover for ACCGMP Flushing Basin

Approximate Aerial Utility Relocation Route by Washington Elec. Co-op

294+75 END RELINQUISHMENT

ML P.O.C. 291+00.0 = Chan. Line Sta. 5+00.0

STA. 290+51.35 STOP ROADWAY / BEGIN BRIDGE

285+50 286+10
New 3/4" x 130' Seamless Copper Water Tube in 136'6" Sleeve For Water Pipe

286+50 Rt.
New 15"x50' Pipe (ACP Class II, CAACP 16 Gage, CGMP 16 Gage) Drive Culvert

P.O.C. 284+00.0

P.O.C. 289+00.0

BM 49-B
U.S. Elev. 510.52

BROOKS BRUCE

Approach Curve #2
Δ 4°05' Rt.
D 6°00'
R 954.93
T 34.04
L 68.06
E 0.60

Approximate Aerial Utility Relocation Route by N.E.T. and Washington Elec. Co-op

RIVER

M A D

BROOKS WARD

WALTER C. BROOKS

Shed

7½ St. Fr. Ho.

Barn on Lot 25 Sec. 53 Mo.

Marsh

Approximate Aerial Utility Relocation Route by GMPC Co.

S 20°40'30" E

POST 283+38.6

Old GMPC Power Ho.

178 GMP 280 NET

BM "47-A"
"a" in Wing Wall
U.S. Elev. 508.47

208+00
New 24"x132' ACCGMP 14 Gage

BM "48"
S/T (E) 12" Butt. nut
U.S. Elev. 504.49

Approach Pl. 3+45.20 = 3+45.18

Approach POT. 5+00.0

Barn

1 sl. Fr. Ho.

Garage

Septic Tank

Breezeway

L. RYAN

CLIFFORD BRUCE

12" CMP Retain

6" Willow

Town Road #5 To Moretown Common

18" ACCGMP (Good) Retain

18" ACCGMP Retain

15" ACCGMP Retain

1'-1' Plank Box Retain

2'-2' Stone Box Retain

6'6" Conc. Box Retain

10" CMP Retain

Approach Sta. 5+00 End Approach Construction

Appr. Sta. 5+35 LT & Diam. Drilled Well 168' Deep

Appr. Sta. 3+64 12" CMP New 18"x56' Pipe (RCP Class III, CAACP 16 Gage, CGMP 16 Gage)

Trans. P.I. 220+43.9 229+47.9

BRIDGE DATA

Type	Thru Truss
Built	1928
Length Along Roadway	132'
Clear Span	128'
Clear Height	25'
Roadway Width	20'

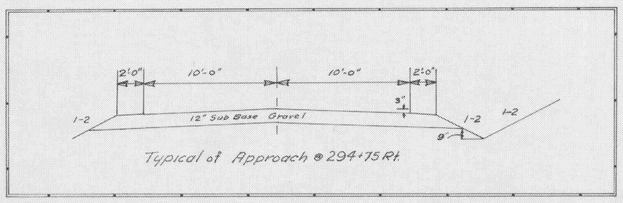
NOTE: See Sheets BR100 Series for the above structure.

MORETOWN
STP DECK(37)
SHEET 12 OF 25
FOR REFERENCE ONLY

PLAN SCALE
0 50 100
100 FEET

MORETOWN
Project S No 0167(3)
Sheet 16 of 104

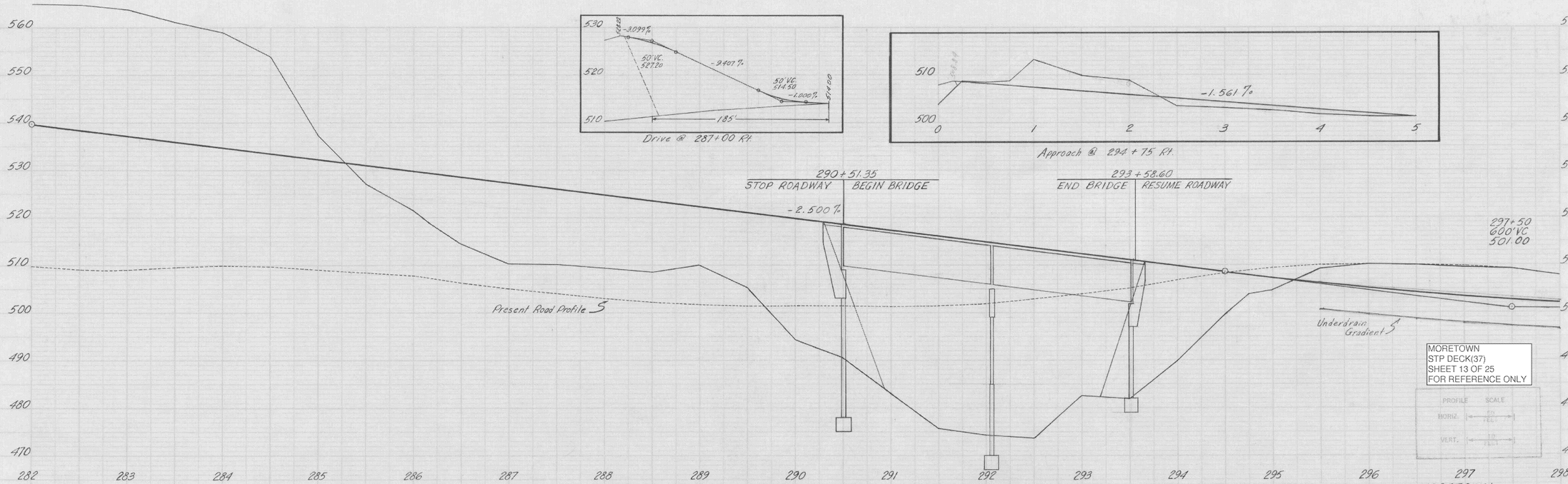
K·E



Typical of Approach @ 294+75 Rt.

Drive @ 287+00 Rt.

Approach @ 294+75 Rt.

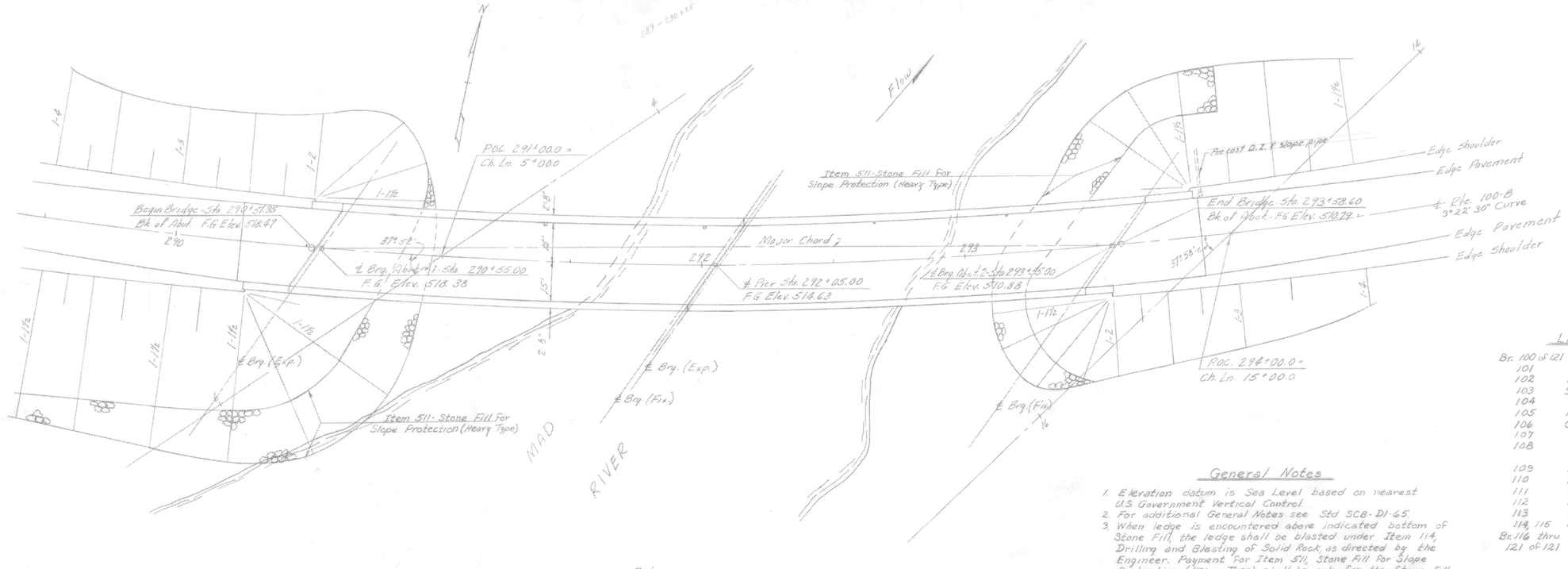


See Sheets BR 100 Series for the above Structure

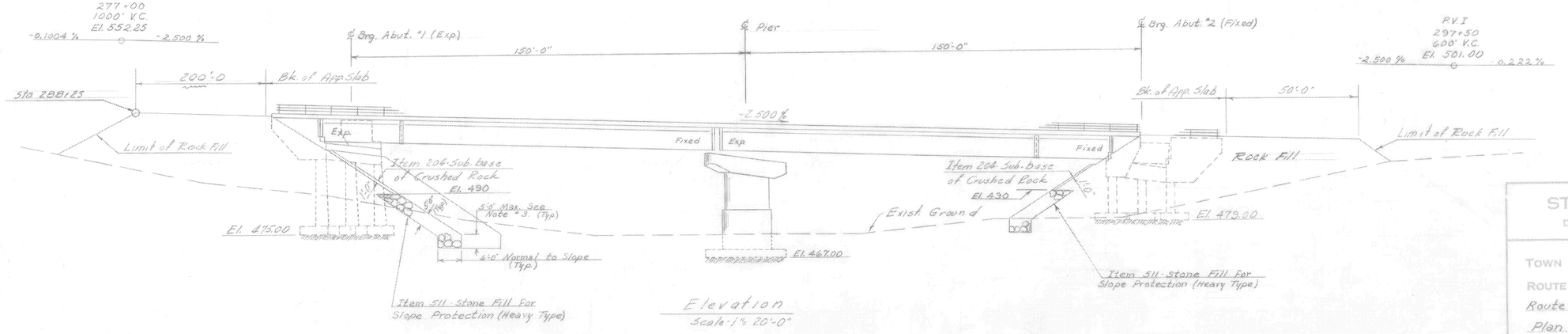
MORETOWN
STP DECK(37)
SHEET 13 OF 25
FOR REFERENCE ONLY

PROFILE SCALE
HORIZ. 50 FEET
VERT. 10 FEET

MORETOWN
Project S.N° 0167(3)
Sheet 17 of 104



Plan
Scale - 1" = 20'-0"



Elevation
Scale - 1" = 20'-0"

General Notes

1. Elevation datum is Sea Level based on nearest U.S Government Vertical Control.
2. For additional General Notes see Std SCB-D1-65.
3. When ledge is encountered above indicated bottom of Stone Fill, the ledge shall be blasted under Item 114 Drilling and Blasting of Solid Rock, as directed by the Engineer. Payment for Item 511, Stone Fill for Slope Protection (Heavy Type) shall be only for the Stone Fill placed above the surface of the blasted ledge.
4. The contractor shall use ledge rock encountered on the project within the limits designated as "Rock Fill", except adjacent to the abutments at which locations Granular Borrow Item 105 shall be used as indicated on Abutment Details.

List of Bridge Sheets

Br. 100 of 121	Plan & Elevation, General Notes
101	Quantity Sheet
102	Borings
103	Superstructure Plan & Scuppers
104	Typical Section
105	Framing Plan
106	Girder Details
107	Expansion Dam Details
108	Finger ℄, Drainage, and Bumper Details.
109	Approach Slab #1
110	Approach Slab #2
111	Abutment #1
112	Abutment #2
113	Pier
114, 115	Reinforcing Steel
Br. 116 thru 121 of 121	Channel Sections

Standard Sheets

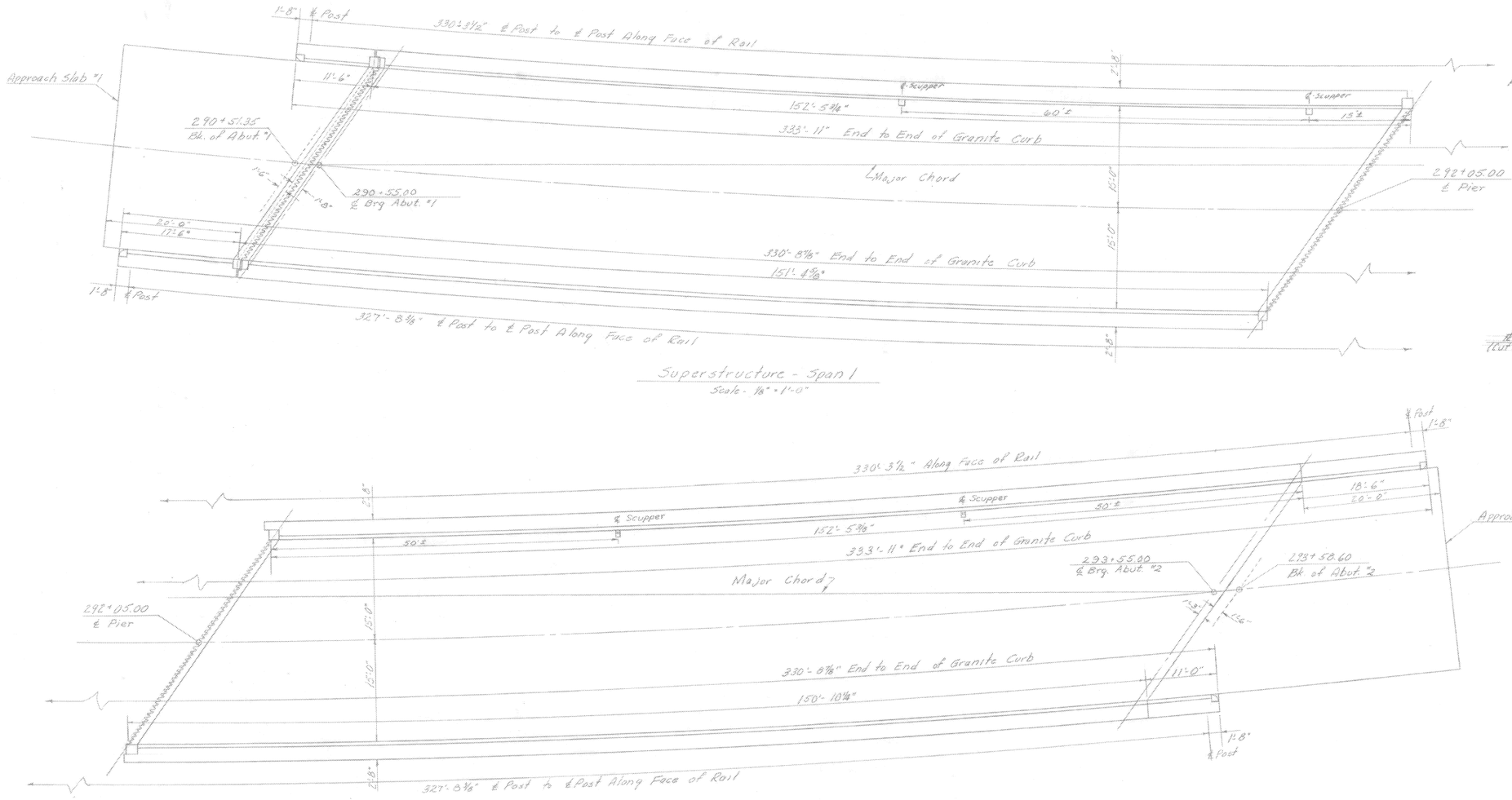
G-3a
SCB-D1-65
SCB-D4-65
SCB-D6-65
SB-R1-68 (2 sheets)
SB-R2-65

MORETOWN
STP DECK(37)
SHEET 14 OF 25
FOR REFERENCE ONLY

Br. 100 of 121

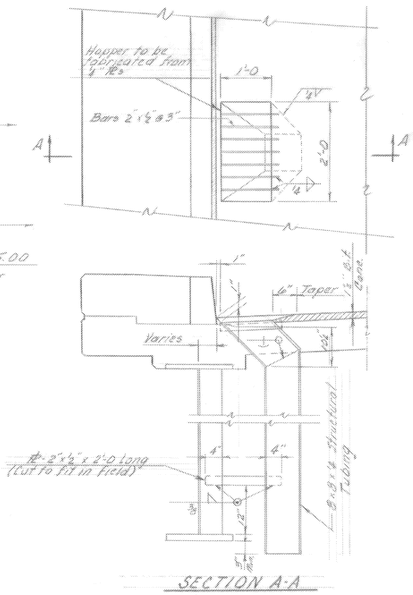
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE No. 100-B LOG STA. 292+05
Route 100-B over Mad River
Plan and Elevation, General Notes
SCALE As noted
SURVEYED BY
DRAWN BY N.D., WBT CHECKED BY RLO
PROJECT NO. S-0167(3)
SHEET 14 OF 184



Superstructure - Span 1

Scale - ⅛" = 1'-0"



SECTION A-A

SCUPPER DETAIL

SCALE ¾" = 1'-0

Superstructure Span 2

Scale - ⅛" = 1'-0"

Curve Layout

Scale - 1" = 20'

Notes

1. See Br. 100 for General Notes
2. Refer to SB-R1-64, sheets 1 & 2 of 2, and SB-R2-65 for railing details and post spacing.

MORETOWN
STP DECK(37)
SHEET 15 OF 25
FOR REFERENCE ONLY

Br. 103 of 121

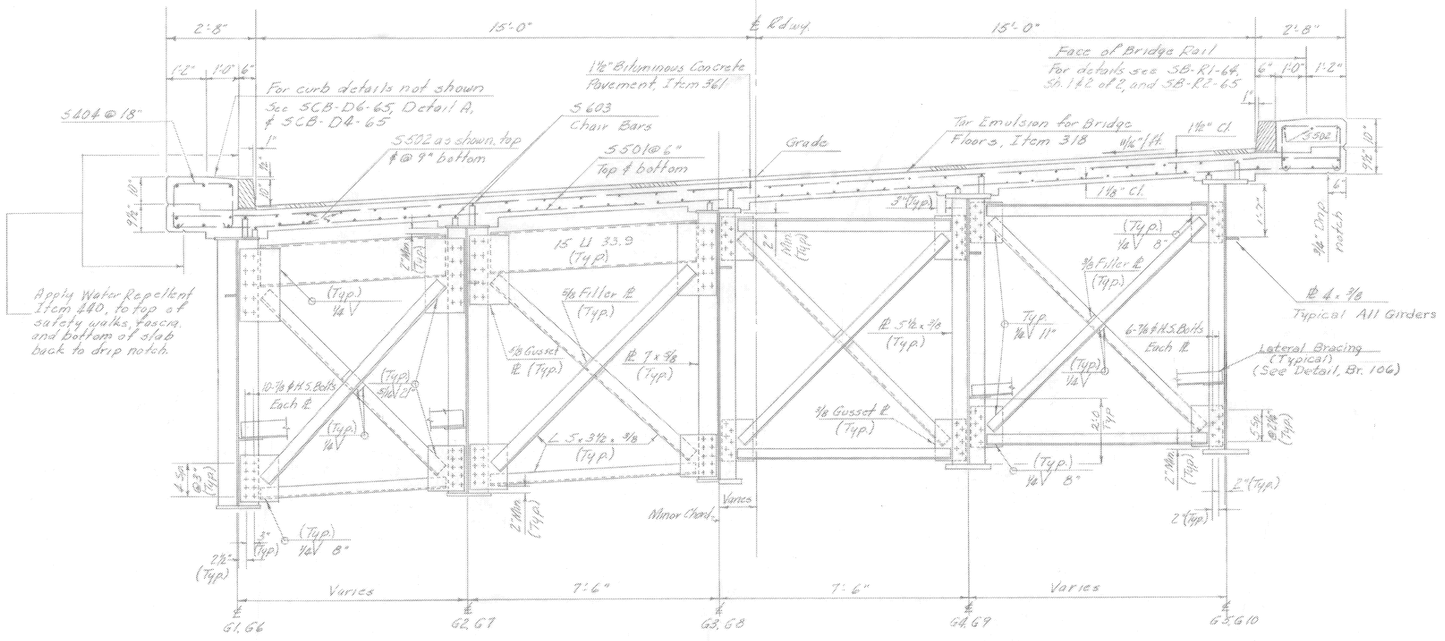
ITEM NO.	I.T.E.M.	UNIT	NET		TOTAL	FINAL
	CHAN. EXCAV. OF EARTH	C.Y.				
	CHAN. EXCAV. OF ROCK	C.Y.				
	UNCLASS. CHAN. EXCAV.	C.Y.				
	STRUCT. EXCAV.	C.Y.				
	CONC. CLASS AA (MOD.)	C.Y.				
	CONC. CLASS B (MOD.)	C.Y.				
	REINF. STEEL	LBS.				
	ASPHALTIC-ASB. COATING	S.Y.				
	TREATED TIMBER PILING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

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE NO. 100-B LOG STA. 292+05
Route 100-B over Mad River
Superstructure Plan
SCALE As noted
SURVEYED BY
DRAWN BY N.D., WBT CHECKED BY RLO
PROJECT NO. S-0167(3)
SHEET 42 OF 104

Floor Slab to be Concrete Class AA, 7½" Thick dapped as shown at beam haunches. Surface to be screeded, floated and broomed.

Note: Cut 5501 transverse bars at skew end as required and use cut-off on opposite end.



Abutment & Pier Cross Frame - CF-1

Typical Bridge Section
Scale - ½" = 1'-0"

Intermediate Cross Frame - CF-2
All Members - L 4 x 4 x ⅜

Superstructure Notes

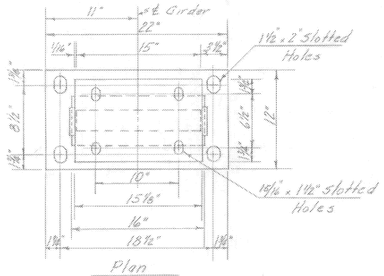
1. For General Notes see Br. 100.
2. All structural steel shall be ASTM A36-62T unless otherwise noted on the plans.
3. All Field connections shall be made with ⅞" ϕ High Strength Bolts in 15/16" ϕ holes unless otherwise noted on the plans.

Bearing Device Notes

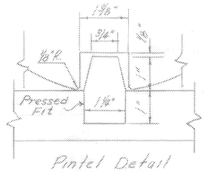
1. Bearing Pads ½" thick, equal in size to the bearing plates shall be used under each bearing, conforming to Specification 404.02(23)
2. Align devices so that all rocker arm shafts will be vertical at 45°F.
3. Contact surfaces of rockers to be given shop coat of white lead and tallow. Pintel holes are to be filled with graphite & grease at time of placement. Remainder of bearing to be given 3 coats of paint in accordance with Vt. Specification 404.03
4. Each span expands 0.01 Ft. for each 10°F. rise in temperature.

Wt. of Fixed Bearing: 325 lbs. ea. (10 required)

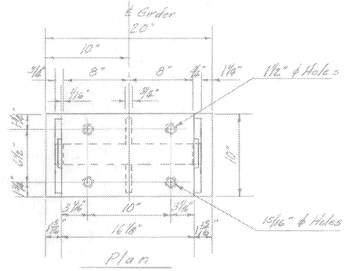
Wt. of Exp. Bearing: 405 lbs. ea. (10 required)



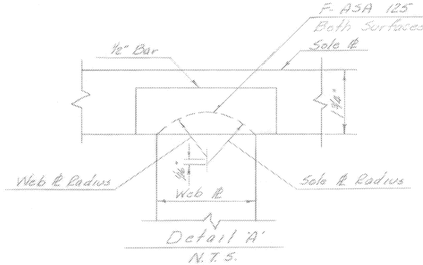
Plan

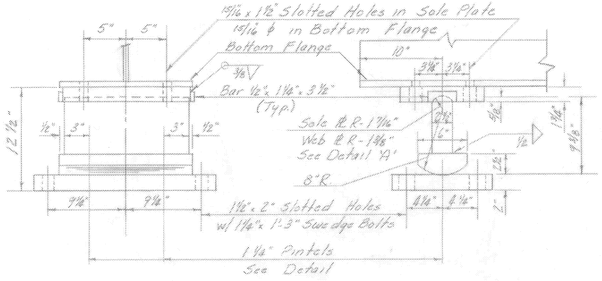


Pintel Detail
N.T.S.
Finish All Over

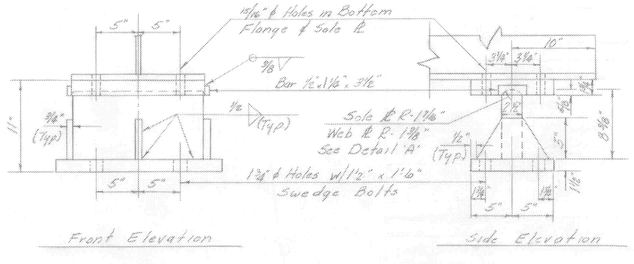


Plan





Bearing Devices
Scale - 1½" = 1'-0"

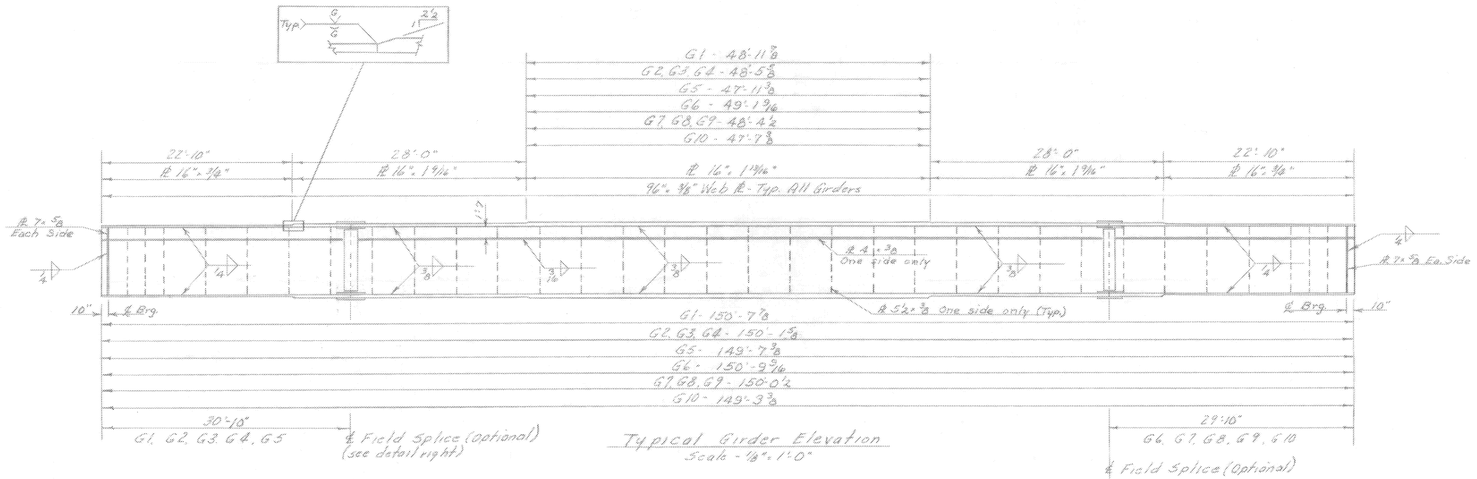


MORETOWN
STP DECK(37)
SHEET 16 OF 25
FOR REFERENCE ONLY

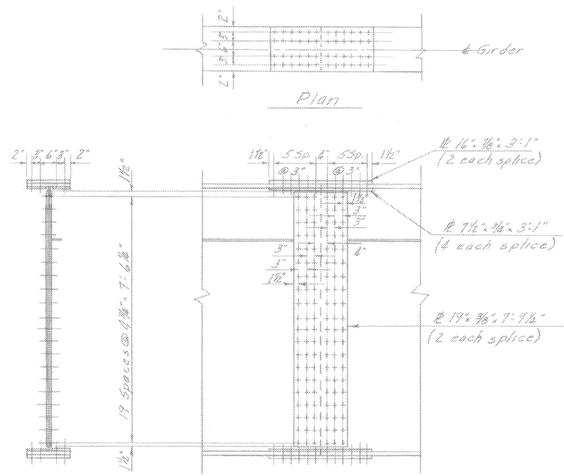
Br. 104 of 121

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE No. 100-B LOG STA. 292+05
Route 100-B over Mad River
Typical Section & Bearing Devices
SCALE As noted
SURVEYED BY
DRAWN BY N.D, WBT CHECKED BY RLO
PROJECT No. S-0167(3)
SHEET 50 OF 104



Typical Girder Elevation
Scale - 1/8" = 1'-0"

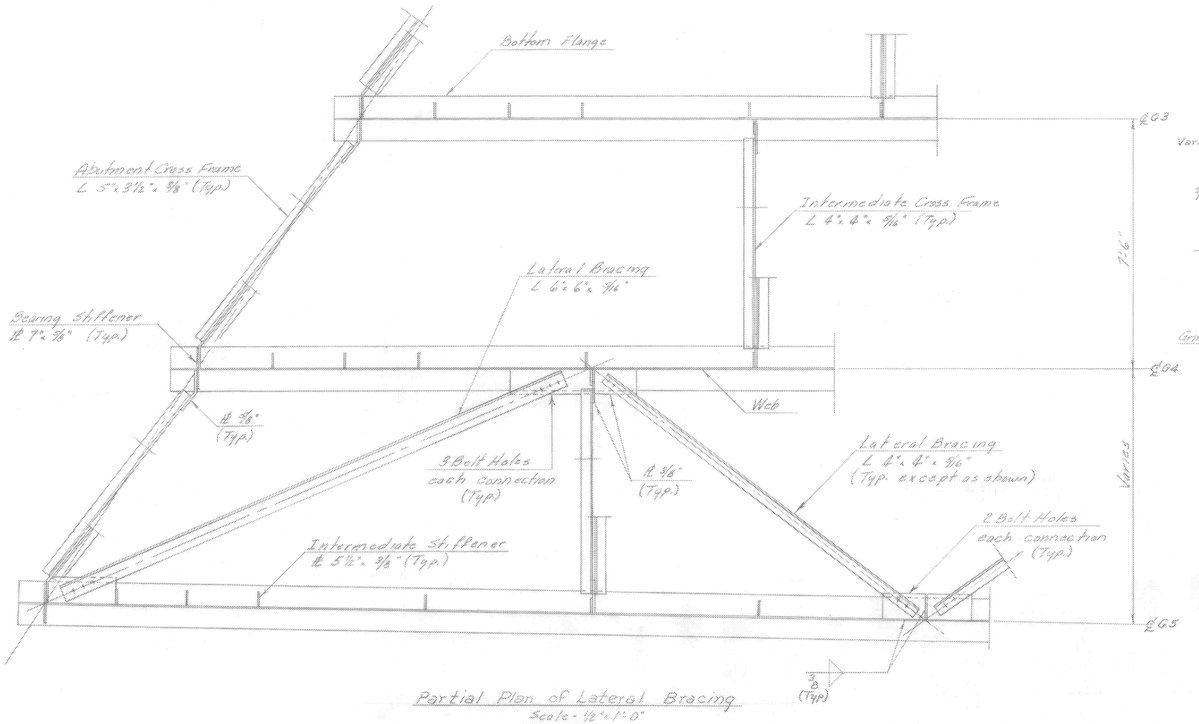


Plan

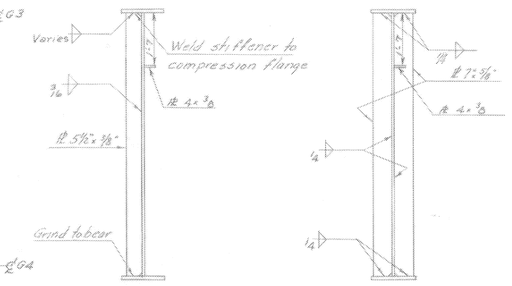
Section

Elevation

Optional
Field Splice Detail
Scale - 1/2" = 1'-0"



Partial Plan of Lateral Bracing
Scale - 1/2" = 1'-0"



Intermediate

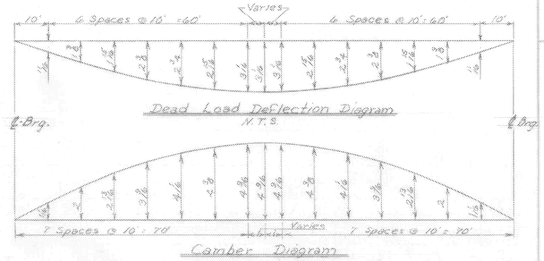
Abutment & Pier

Note: Clip 1 1/2" on inside corner of all stiffeners

Stiffener Details
Scale - 1/2" = 1'-0"

Notes

1. For transverse stiffener spacing see Br. 105.
2. For Superstructure Notes see Br. 104.
3. All Girders are to be cambered as shown in the Camber Diagram below.



Dead Load Deflection Diagram
N.T.S.

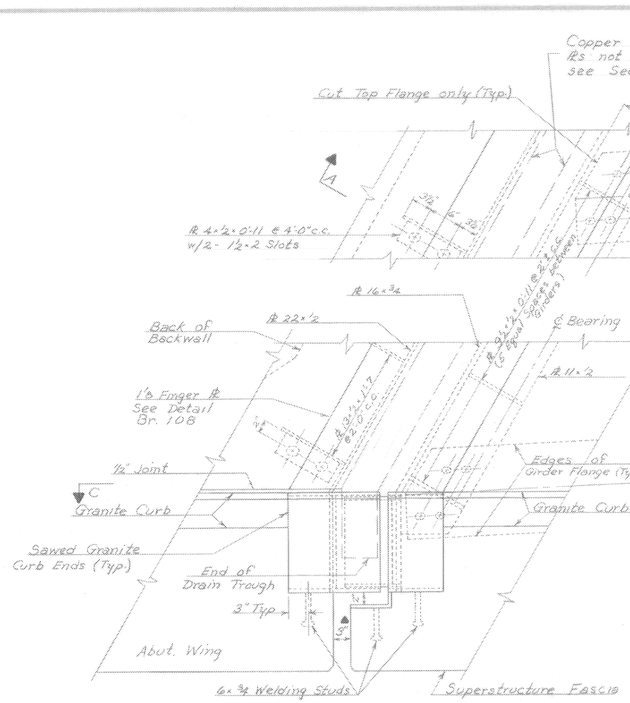
Camber Diagram
N.T.S.

MORETOWN
STP DECK(37)
SHEET 17 OF 25
FOR REFERENCE ONLY

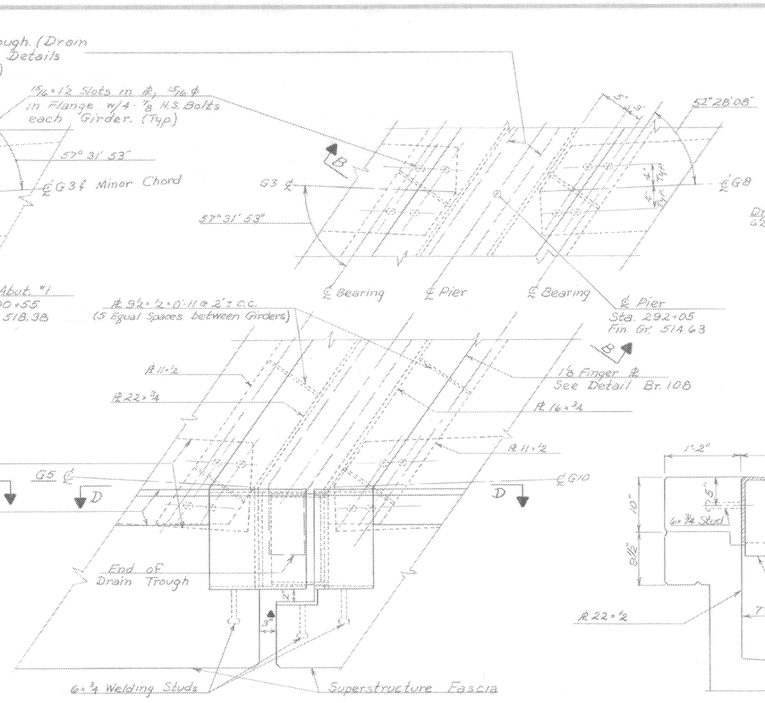
Br. 106 of 121

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

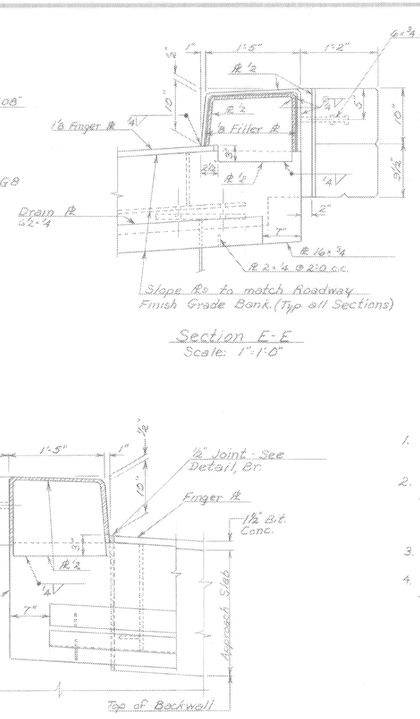
TOWN OF Moretown
ROUTE NO. 100-B LOG STA. 292+05
Route 100-B over Mad River
Girder Details
SCALE As noted
SURVEYED BY
DRAWN BY ND, WBT CHECKED BY RLO
PROJECT NO. S-0167(3)
SHEET 52 OF 104



Plan of Expansion Dam at Abutment "1"
Scale: 1" = 1'-0"

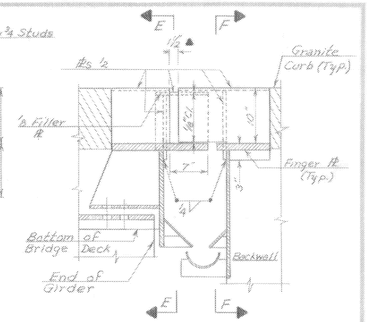


Plan of Expansion Dam at Pier
Scale: 1" = 1'-0"



Section F-F
Scale: 1" = 1'-0"

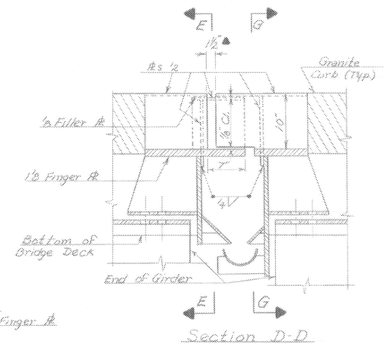
Section E-E
Scale: 1" = 1'-0"



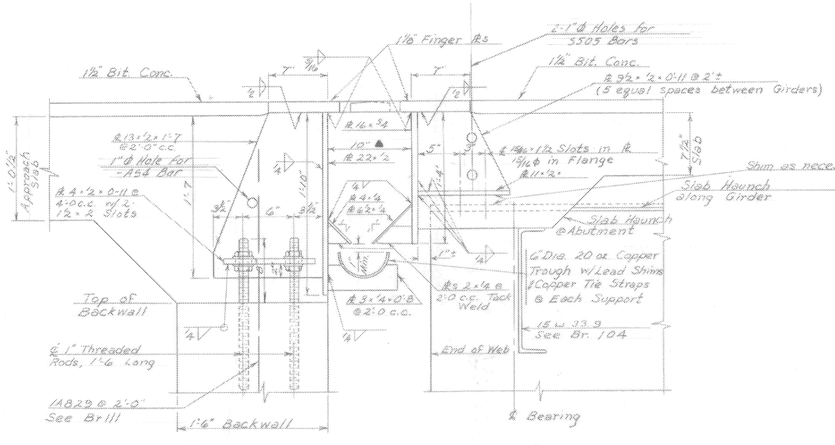
Section C-C
Scale: 1" = 1'-0"

Notes

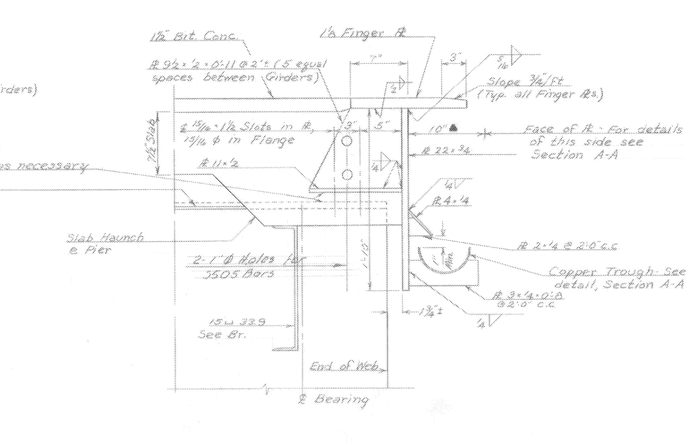
1. All clear dimensions indicated ▲ are for 68° F.
2. All steel for the Expansion Dams shall be ASTM A-242 unless otherwise noted, except plates completely embedded in concrete may be ASTM A-36 steel.
3. See Br. 100 for General Notes.
4. See Br. 108 for additional details of Drain Trough and Rs. and Finger Rs.



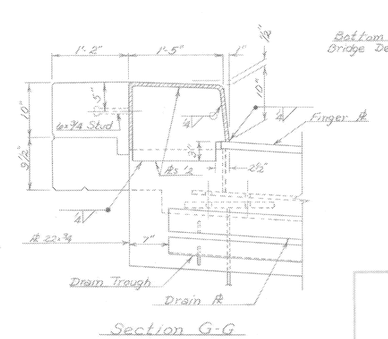
Section D-D
Scale: 1" = 1'-0"



Section A-A
Scale: 1 1/2" = 1'-0"



Section B-B
Scale: 1 1/2" = 1'-0"



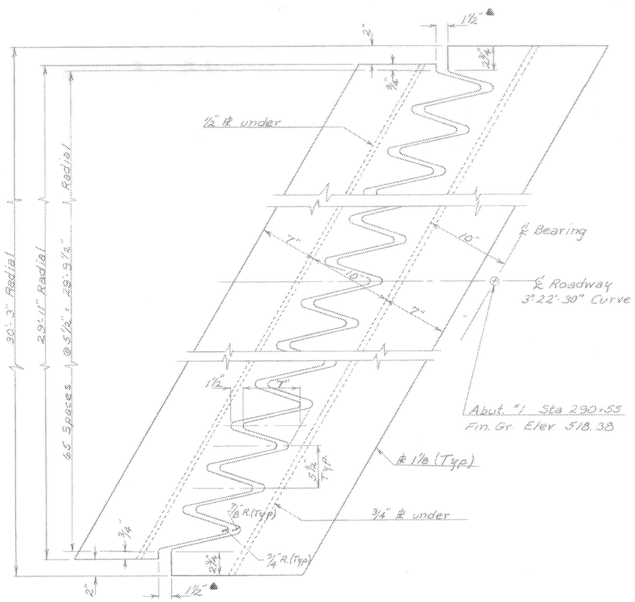
Section G-G
Scale: 1" = 1'-0"

MORETOWN
STP DECK(37)
SHEET 18 OF 25
FOR REFERENCE ONLY

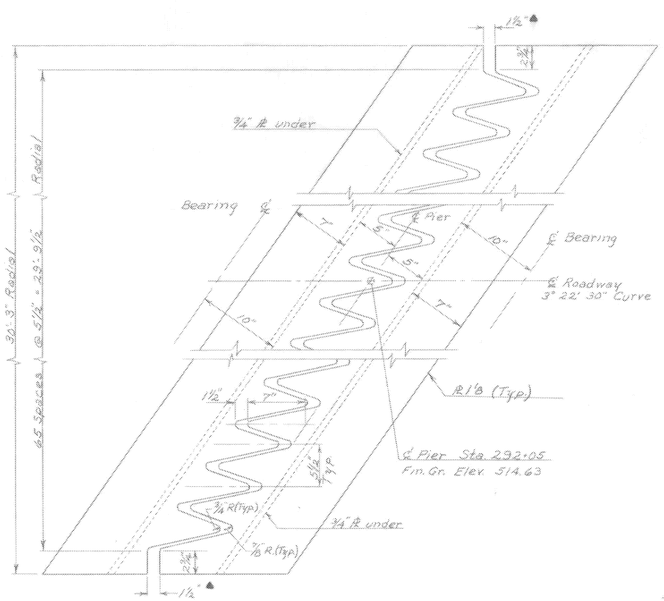
Br. 107 of 121

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

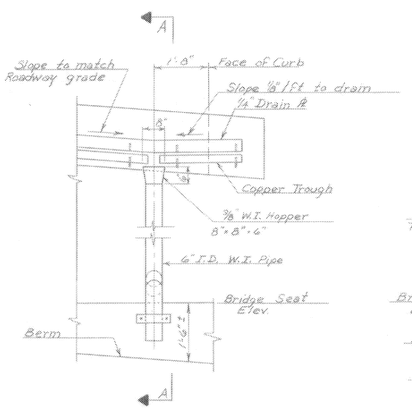
TOWN OF Moretown
ROUTE No. 100-B LOG STA. 292+05
Rte. 100-B over Mad River
Expansion Dam Details
SCALE As noted
SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT NO. S-0167(3)
SHEET 53 OF 104



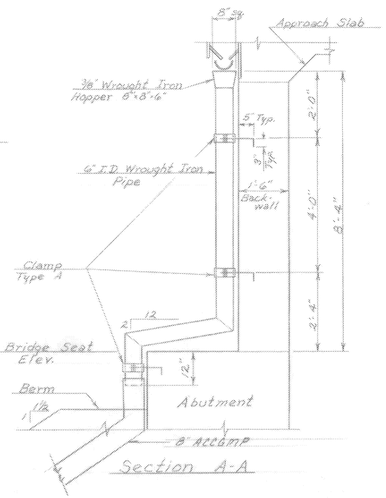
Finger ℄ Detail at Abutment "1"
Scale: 1½" = 1'-0"



Finger ℄ Detail at Pier
Scale: 1½" = 1'-0"

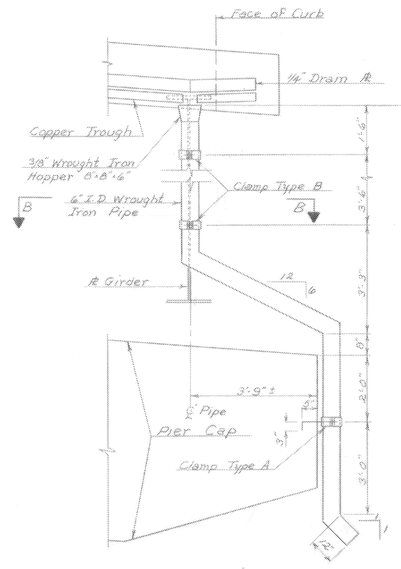


Elevation

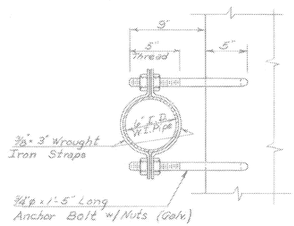


Section A-A

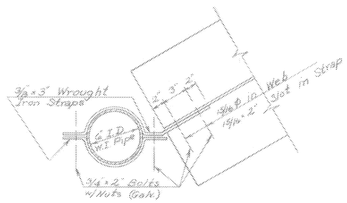
Abutment "1" Drainage Pipe Detail
Scale: ½" = 1'-0"



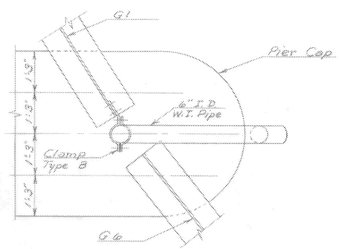
Elevation



Clamp Detail - Type A
Scale: 1½" = 1'-0"



Clamp Detail - Type B
Scale: 1½" = 1'-0"



Section B-B

Pier Drainage Pipe Detail
Scale: ½" = 1'-0"

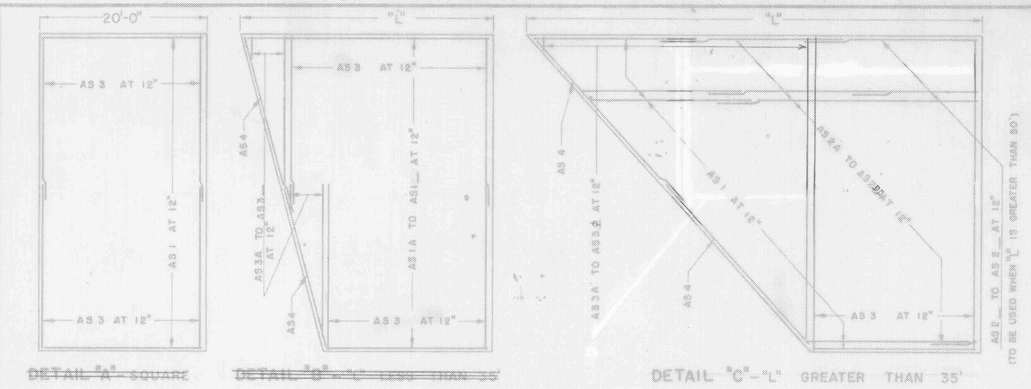
Notes
1. All clear dimensions indicated ▲ are for 68°F.

MORETOWN
STP DECK(37)
SHEET 19 OF 25
FOR REFERENCE ONLY

Br 108 of 121

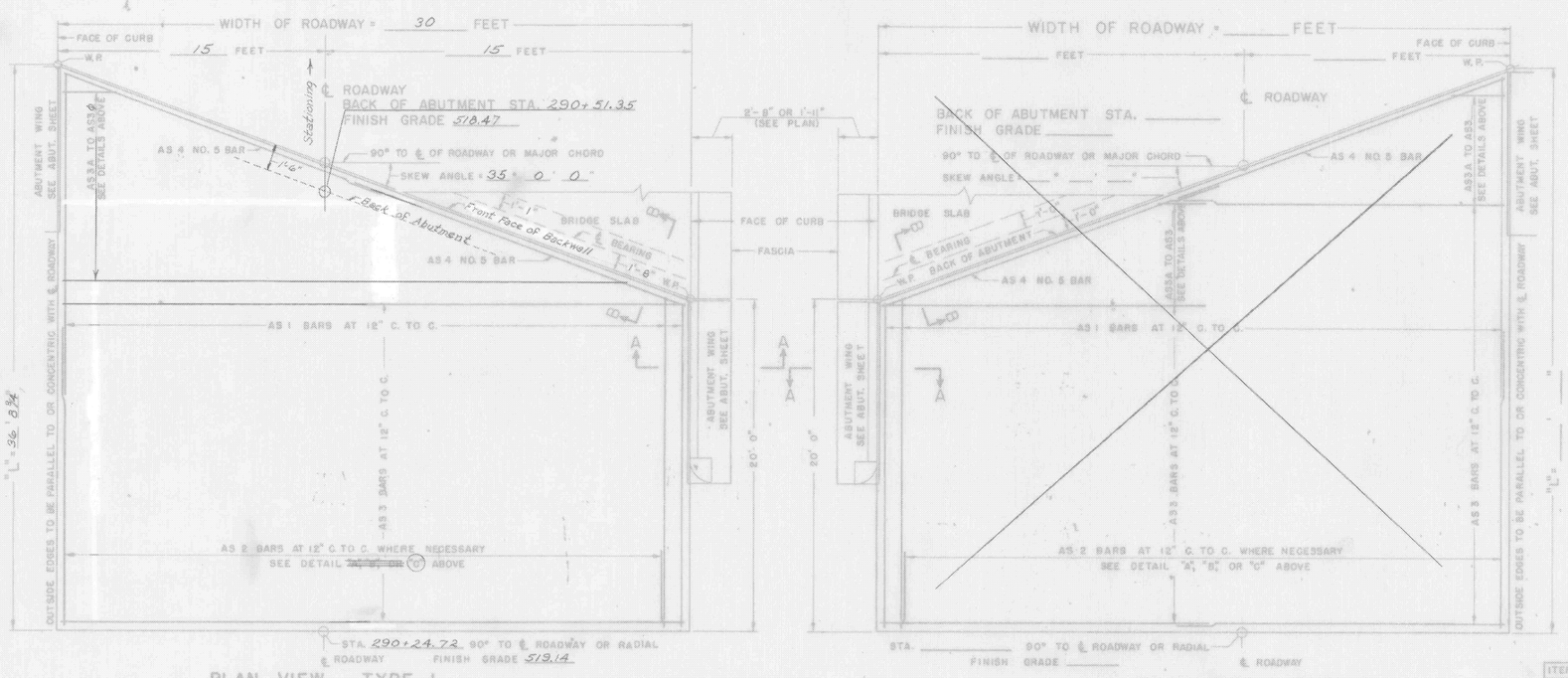
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE NO. 100-B LOG STA. 292+05
Route 100-B over Mad River
Finger ℄, Drainage, & Bumper Details
SCALE As noted
SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT NO. S 0167(3)
SHEET 54 OF 104



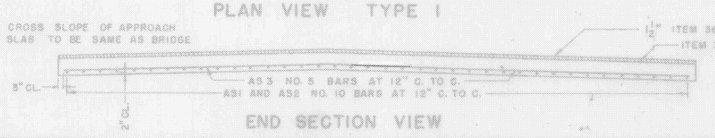
~~DETAIL "A" SQUARE~~ ~~DETAIL "B" "C" LESS THAN 35°~~ DETAIL "C"–"L" GREATER THAN 35°

Note: For details of Section B-B, see Section A-A, Br. 107

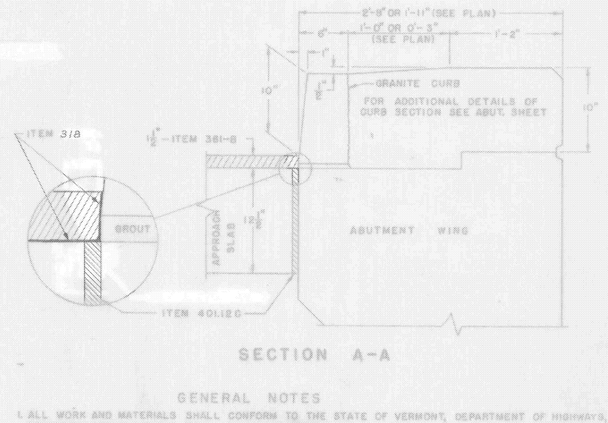


PLAN VIEW TYPE 1

~~PLAN VIEW TYPE 2~~



END SECTION VIEW



SECTION A-A

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR HS 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

MORETOWN
STP DECK(37)
SHEET 20 OF 25
FOR REFERENCE ONLY

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	38	
361-B	BITUMINOUS CONCRETE PAVEMENT	TONS	9	
372-A	JOINT SEALER – HOT POURED	L.F.	—	
372-C	JOINT SEALER – PREFORMED, TYPE A	L.F.	—	
372-D	JOINT SEALER – PREFORMED, TYPE B	L.F.	—	
401-B	CONCRETE CLASS B	CY.	35	
402	REINFORCING STEEL	LB.	5420	

REINFORCING BENDING DETAILS

A + J = C
J = 0'-9"
B = 19'-6" OR VARIES

DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A	B	C	LENGTH	WEIGHT PER FT.	A × B × C WEIGHT IN LBS.
AS 1					SEE REINFORCING SCHEDULE	4.303	
AS 2						4.303	
AS 3						1.043	
AS 4						1.043	
					TOTAL WEIGHT =		

REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 6/23/65 W.B.T.

DRAWN BY: W.B.T. Jan. 1964
TRACED BY: W.B.T. Jan. 1965
CHECKED BY: W.M.S. Feb. 1965

RECOMMENDED FOR APPROVAL: Lee Brown, BRIDGE ENGINEER, DATE 2/9/65
RECOMMENDED FOR APPROVAL: R.A. Arnold, ASSISTANT CHIEF ENGINEER, DATE 2/4/65
APPROVED BY: G.D. Bishop, CHIEF ENGINEER, DATE 2/5/65

DETAILS OF APPROACH SLAB FOR 30 (WIDTH) FOOT BRIDGE

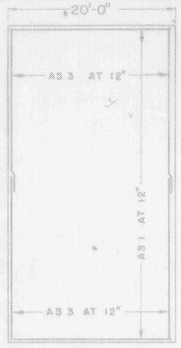
TO BE USED FOR BRIDGE AT STATION 292+05

LOCATION Approach Slab "1, Route 100-B over Mad River

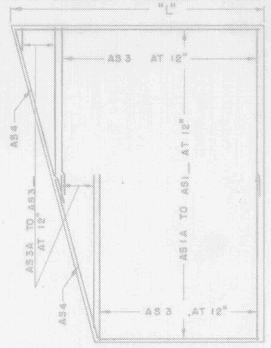
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE

SB-AS-65

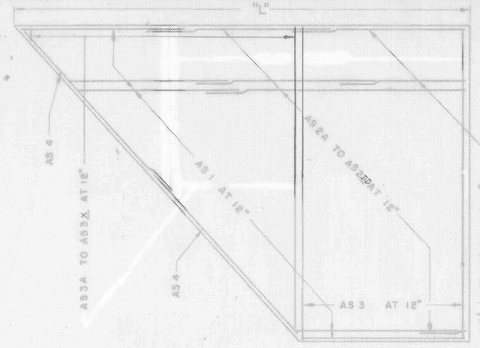
TOWN OF Moretown
ROUTE NO. 100-B
LOG STA. 292+05
DESIGNED BY W.B.T. CHECKED BY R.L.O.
PROJECT NO. S-0167(3)
BR 109 OF 121 SHEET 53 OF 109



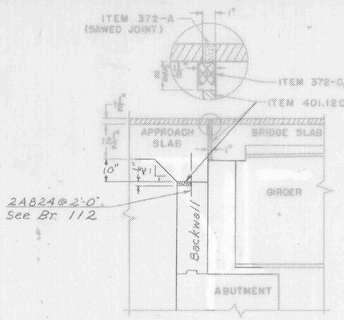
~~DETAIL "A" SQUARE~~



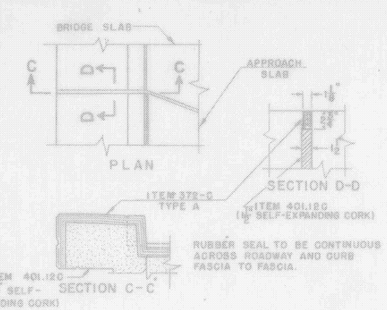
~~DETAIL "B" "L" LESS THAN 35'~~



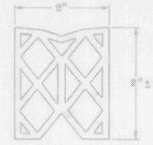
DETAIL "C" - "L" GREATER THAN 35'



SECTION B-B

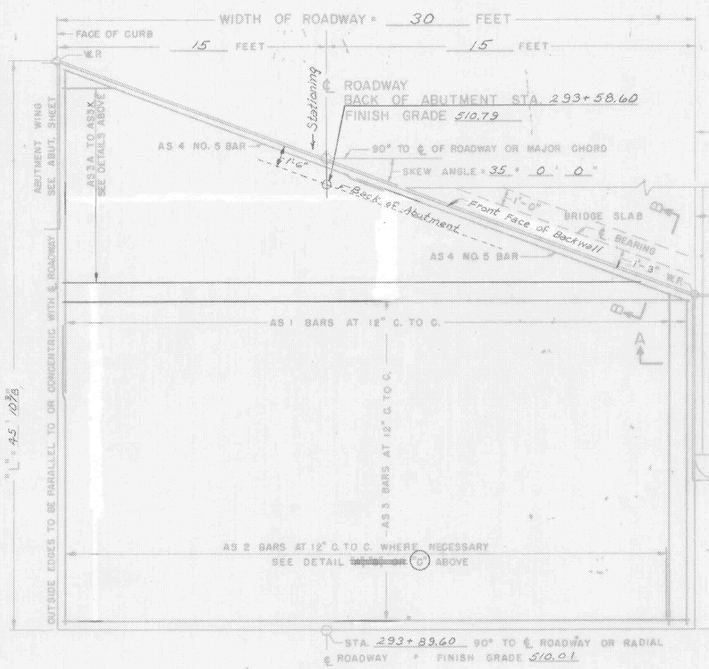


CURB JOINT DETAIL

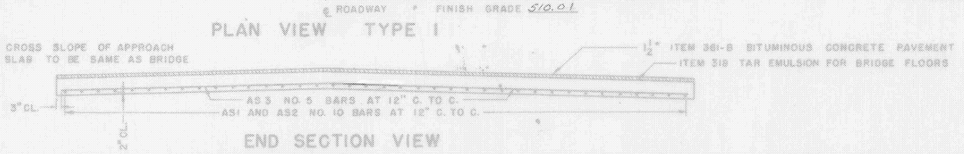


DETAILS - ITEM 372-C JOINT SEALER - PREFORMED

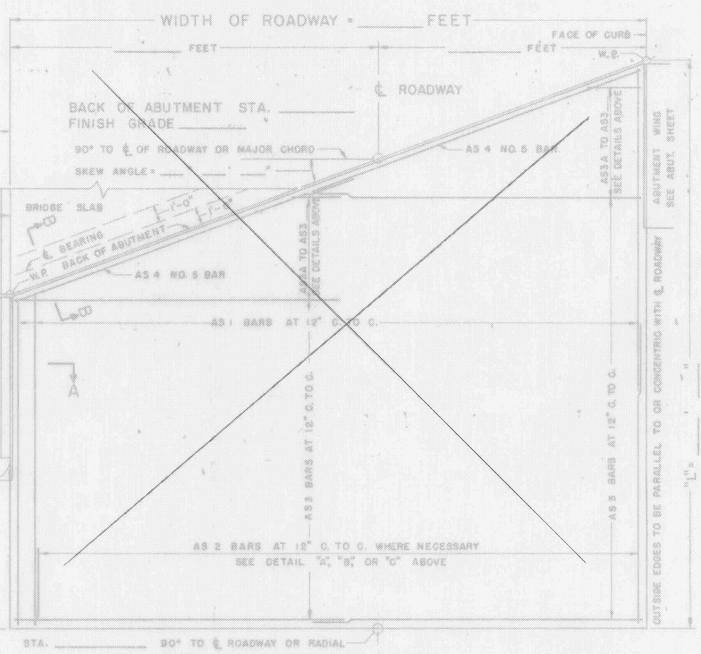
MATERIAL TO BE PREMOLDED NEOPRENE RUBBER (OTHER CONFIGURATIONS THAT SATISFY SPECIFICATIONS MAY BE USED.)



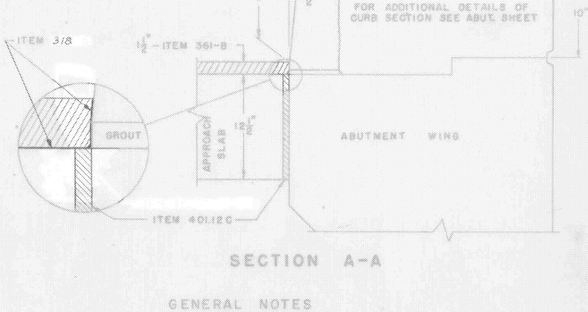
PLAN VIEW TYPE I



END SECTION VIEW



PLAN VIEW TYPE B



SECTION A-A

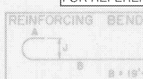
GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION DATED APRIL 1964, AND THE A.A.S.H.O. SPECIFICATIONS DATED 1961. DESIGNED FOR H S 20-44 LOADING.
2. ALL REINFORCING STEEL SHALL BE DETAILED ON THE REINFORCING STEEL SCHEDULE. ALL SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL	FINAL
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	44	
361-B	BITUMINOUS CONCRETE PAVEMENT	TONS	10	
372-A	JOINT SEALER - HOT POURED	L.F.	40	
372-C	JOINT SEALER - PREFORMED, TYPE A	L.F.	50	
372-C	JOINT SEALER - PREFORMED, TYPE B	L.F.		
401-B	CONCRETE CLASS B	CY.	41	
402	REINFORCING STEEL	LB.	6085	

REINFORCING BENDING DETAILS



DETAIL SHOWN IS FOR AS1 BAR
ALL OTHER BARS ARE TO BE STRAIGHT

REINFORCING STEEL

BAR NO.	NO. PIECES	A LENGTH	B LENGTH	C	WEIGHT PER FT.	A × B × C WEIGHT IN LBS.
AS1		SEE REINFORCING SCHEDULE			4.303	
AS2					4.303	
AS 3					1.043	
AS 4					1.043	
				TOTAL WEIGHT =		

MORETOWN
STP DECK(37)
SHEET 21 OF 25
FOR REFERENCE ONLY

REVISIONS AND CORRECTIONS
1. DIMENSIONS OF JOINT FOR SEALER TYPE A REVISED. 4/15/65 W.B.T.
2. DIMENSIONS OF JOINT SEALER TYPE B REVISED 6/23/65 W.B.T.

DRAWN BY: W.B.T. Jan. 1965
TRACED BY: W.B.T. Jan. 1965
CHECKED BY: W.M.S. Feb. 1965
RECOMMENDED FOR APPROVAL: BRIDGE ENGINEER — DATE 2/4/65
RECOMMENDED FOR APPROVAL: ASSISTANT CHIEF ENGINEER — DATE 2/4/65
APPROVED BY: CHIEF ENGINEER — DATE 2/4/65

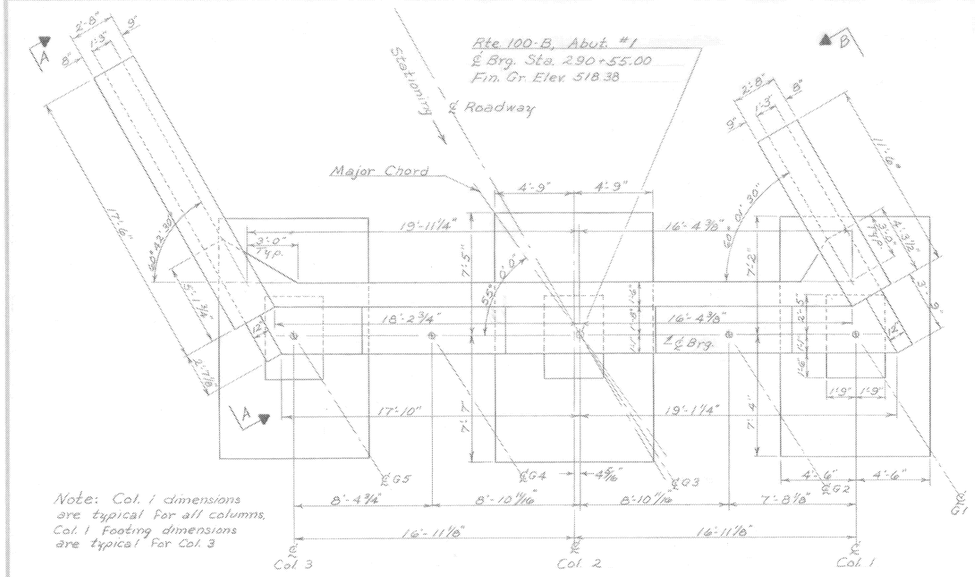
DETAILS OF APPROACH SLAB FOR 30 (WIDTH) FOOT BRIDGE

TO BE USED FOR BRIDGE AT STATION 292+05

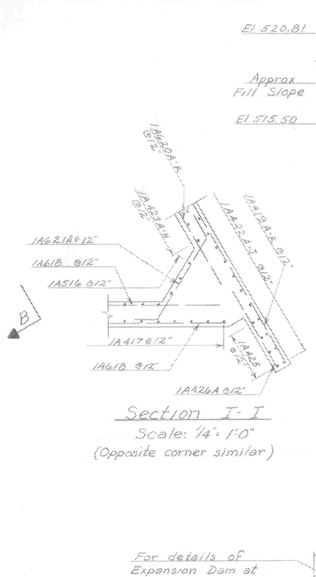
LOCATION Approach Slab "2, Route 100-B over Mad River

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD STRUCTURE
SB-AS-65

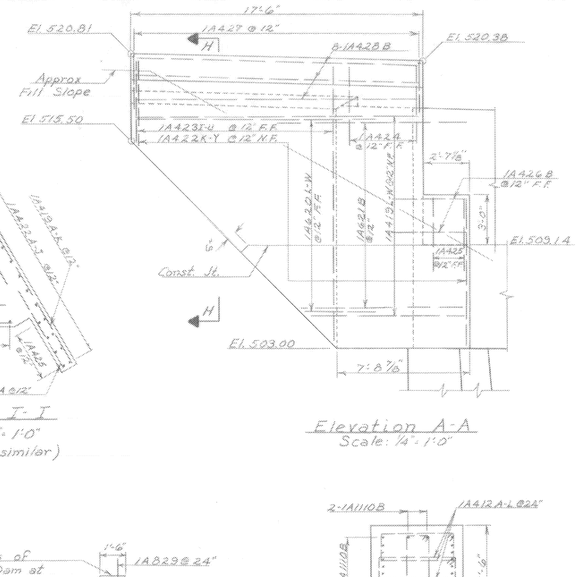
TOWN OF Moretown
ROUTE NO. 100-B
LOG STA. 292+05
DESIGNED BY WBT CHECKED BY RLO
PROJECT NO. S-0167(3)
BR 110 OF 121, SHEET 56 OF 109



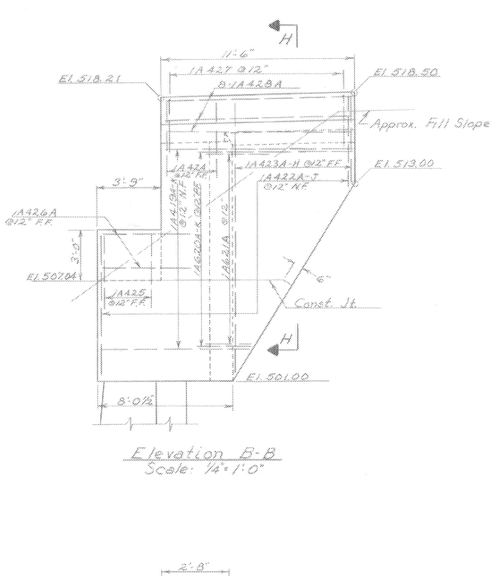
Plan
Scale: ¼" = 1'-0"



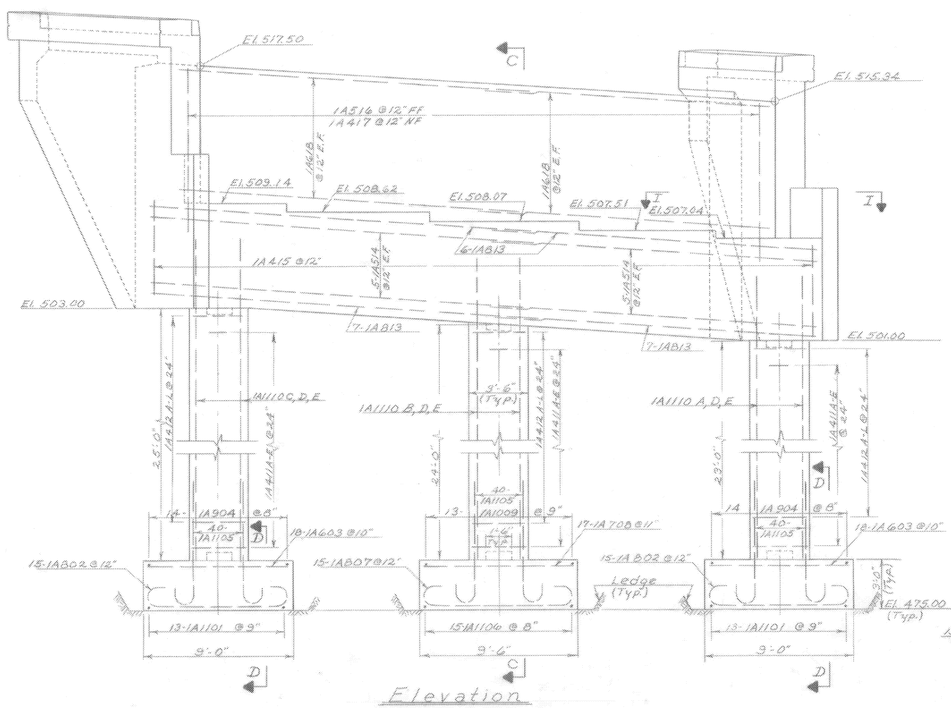
Section I-I
Scale: ¼" = 1'-0"
(Opposite corner similar)



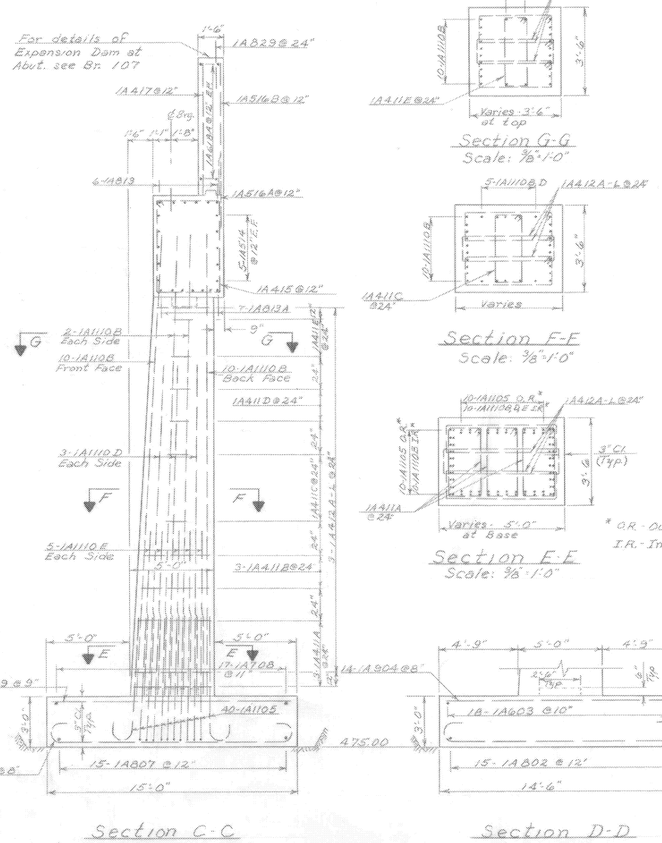
Elevation A-A
Scale: ¼" = 1'-0"



Elevation B-B
Scale: ¼" = 1'-0"



Elevation
Scale: ¼" = 1'-0"

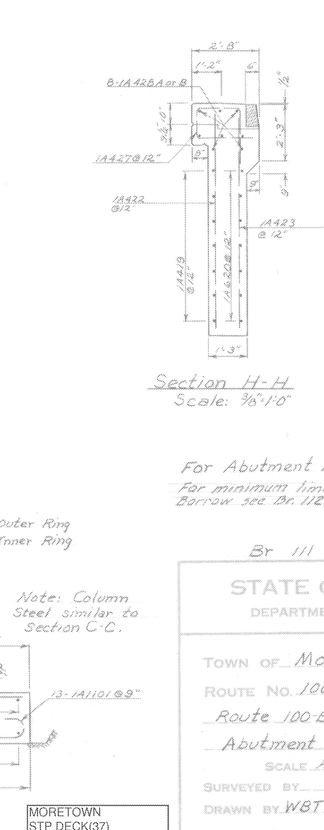


Section C-C
Scale: ¼" = 1'-0"

Section G-G
Scale: ⅜" = 1'-0"

Section F-F
Scale: ⅜" = 1'-0"

Section E-E
Scale: ⅜" = 1'-0"



Section D-D
Scale: ¼" = 1'-0"

Section H-H
Scale: ⅜" = 1'-0"

Note: Column Steel similar to Section C-C.

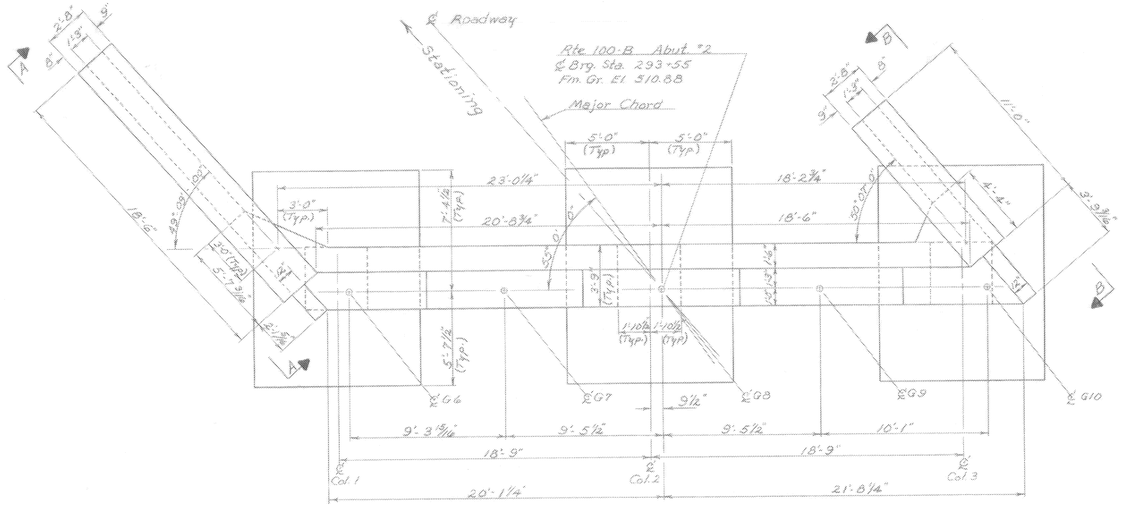
For Abutment Notes see Br. 112
For minimum limits of Granular Borrow see Br. 112

Br 111 of 121

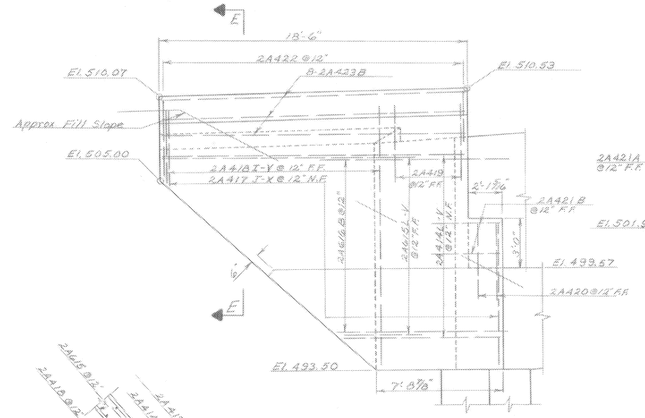
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE No. 100-B LOG STA. 292+05
Route 100-B over Mad River
Abutment "1"
SCALE As noted
SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT No. S-0167(3)
SHEET 57 OF 104

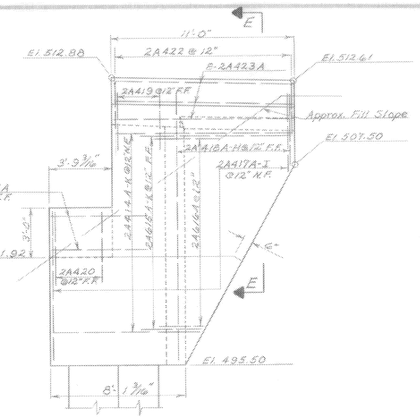
MORETOWN
STP DECK(37)
SHEET 22 OF 25
FOR REFERENCE ONLY



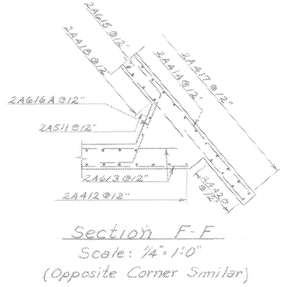
Plan
Scale: ¼"=1'-0"



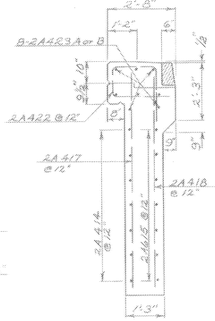
Elevation A-A
Scale: ¼"=1'-0"



Elevation B-B
Scale: ¼"=1'-0"



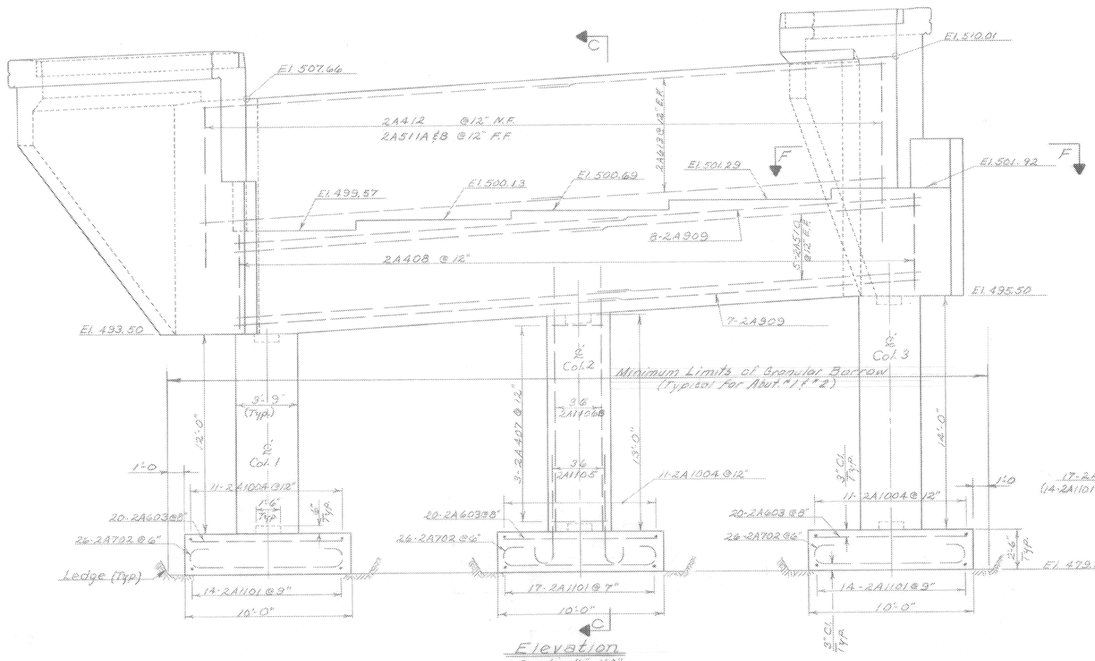
Section F-F
Scale: ¼"=1'-0"
(Opposite Corner Similar)



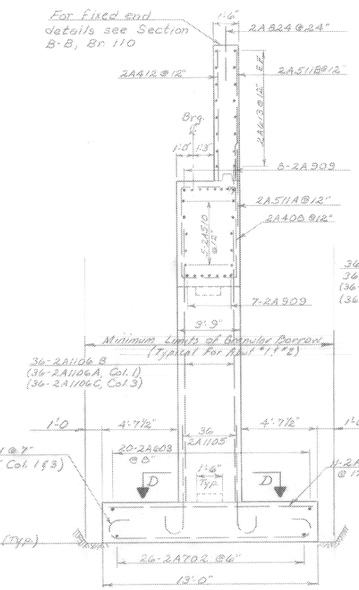
Section E-E
Scale: ⅜"=1'-0"

Notes

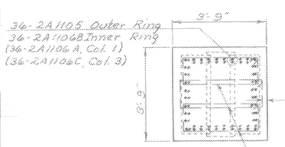
1. For General Notes see Br. 100.
2. All Abutment concrete shall be Class A-A, except Class B in Footings.
3. Footings are designed for a maximum pressure of 5 tons per Square foot on ledge.
4. The Footings shall be placed on sound ledge.
5. All ledge under the Footing shall be roughened such that no ledge projects above the bottom of footing elevation indicated on the plans.
6. Reinforcing is to have 2" minimum cover except as noted.
7. No concrete is to be placed above bridge seat elevation until Girders have been profiled and Final grade established by the Engineer.
8. Front Face of backwall above Bridge Seats and inside Face of abutment and wings shall be coated with Item 410, Paint Waterproofing.
9. Item 440 Water Repellent, shall be used on all exposed areas of abutments and wings not otherwise treated.
10. For details of Cable Guard Rail Anchorage see Std. Sh. G-3a.
11. For details of curved granite curb end block see SCB-D4-65.
12. For additional construction joint details see SCB-D6-65, Detail B.
13. For additional curb details see SCB-D6-65 Detail A.



Elevation
Scale: ¼"=1'-0"



Section C-C
Scale: ¼"=1'-0"
Note: Steel shown in Section C-C is typical for Col. 1 & 3 except as noted in parenthesis.



Rotate position of ties 90° each space as indicated

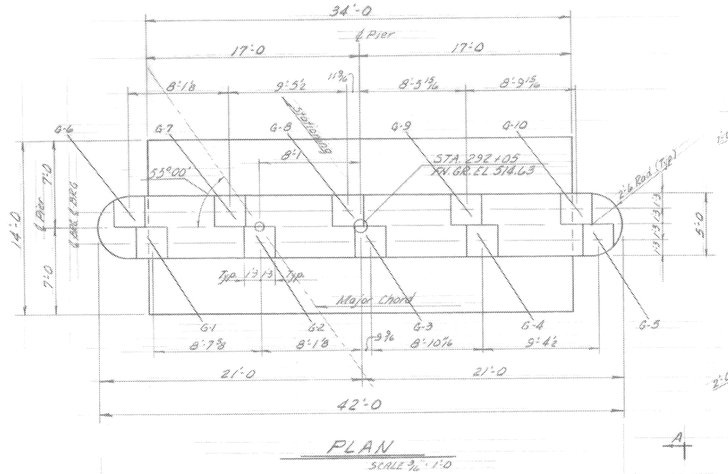
Section D-D
Scale: ⅜"=1'-0"
Note: Steel shown in Section D-D is typical for Col. 1 & 3.

Br 112 of 121

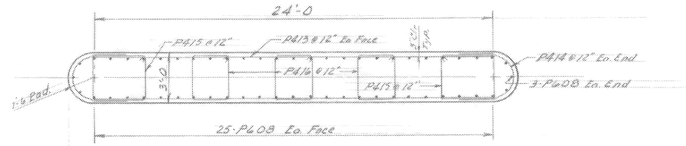
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
ROUTE No. 100-B LOG STA. 292+05
Route 100-B over Mad River
Abutment "2
SCALE As noted
SURVEYED BY
DRAWN BY WBT CHECKED BY RLO
PROJECT No. S-0167(3)
SHEET 58 OF 104

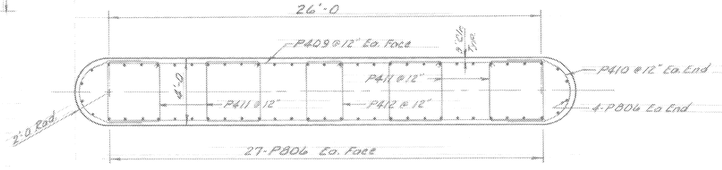
MORETOWN
STP DECK(37)
SHEET 23 OF 25
FOR REFERENCE ONLY



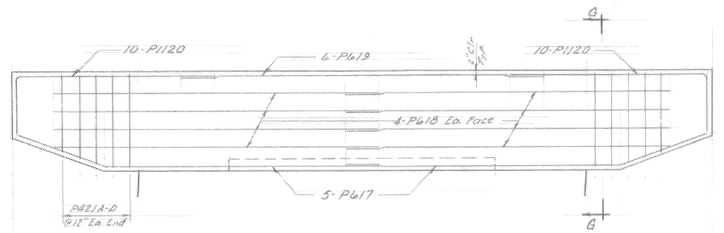
PLAN
SCALE 3/16" = 1'-0



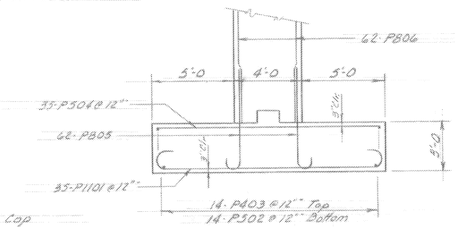
SECTION B-B
SCALE ½" = 1'-0



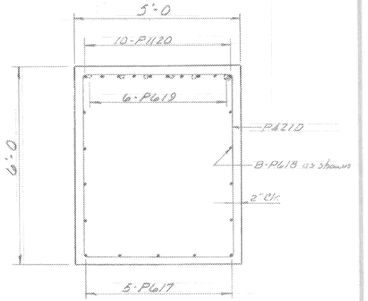
SECTION C-C
SCALE ½" = 1'-0



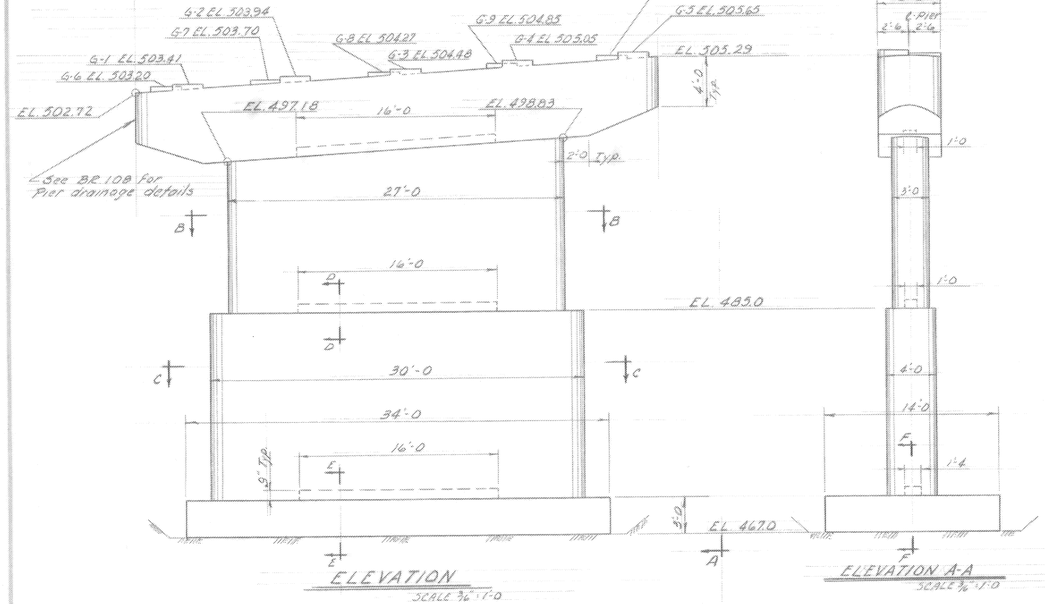
DETAIL OF CAP REINFORCEMENT
SCALE ½" = 1'-0



SECTION E-E
SCALE ½" = 1'-0

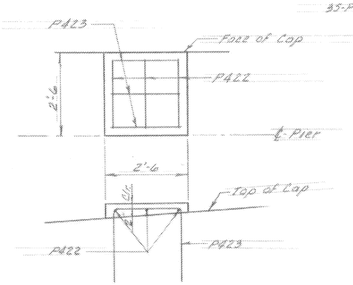


SECTION G-G
SCALE ½" = 1'-0



ELEVATION
SCALE 3/16" = 1'-0

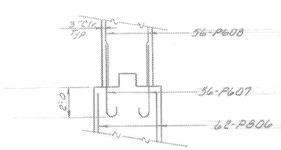
ELEVATION A-A
SCALE 3/16" = 1'-0



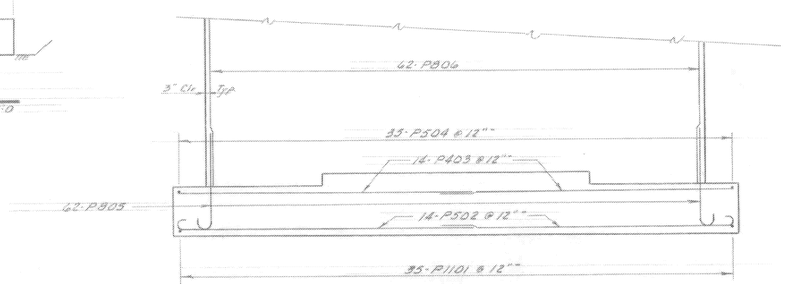
DETAIL OF BEARING PAD
SCALE 2" = 1'-0

NOTES:~

1- For General Notes see BR 100
2- Footing is designed for a maximum pressure of 5 tons per square foot on ledge.
3- The footing shall be poured on sound ledge.
4- All ledge under the footing shall be roughened such that no ledge projects above the bottom of footing elevation indicated on the plans.
5- The sides, ends and bottom of the pier cap shall be coated with Item 440, Water Repellent.
6- All Pier concrete shall be Item 401-B, Concrete Class B.



SECTION D-D
SCALE ½" = 1'-0



SECTION F-F
SCALE ½" = 1'-0

MORETOWN
STP DECK(37)
SHEET 24 OF 25
FOR REFERENCE ONLY

BR. 113 OF 121

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF MORETOWN
ROUTE NO. 100-B LOG STA. 292+05
ROUTE 100-B OVER MAD RIVER
PIER DETAILS
SCALE As shown
SURVEYED BY
DRAWN BY RLO CHECKED BY WBT
PROJECT NO. S-0167(3)
SHEET 59 OF 104

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	P	Q
						Pier											
1	28	4	17-9	P403	Str												
2	30	4	26-0	P409	Str												
3	24	4	24-0	P413	Str												
4	30	4	2-2	P422	Str												
5																	
6	35	5	13-6	P504	Str												
7																	
8	56	6	18-0	P608	Str												
9	16	6	19-9	P618	Str												
10	6	6	22-10	P619	Str												
11																	
12	62	8	14-9	P806	Str												
13																	
14	30	4	9-6	P410	10	2-0	5-6	2-0								1-9	3-6
15	60	4	14-2	P411	T1	5	3-2	3-6	3-2	3-6		5					
16	15	4	12-2	P412	T1	5	2-2	3-6	2-2	3-6		5					
17	24	4	7-11	P414	10	2-0	3-11	2-8								1-3	2-6
18	24	4	12-2	P415	T1	5	3-2	2-6	3-2	2-6		5					
19	36	4	10-2	P416	T1	5	2-2	2-6	2-2	2-6		5					
20	2	4	19-10	P421A	T1	5	4-10	4-8	4-10	4-8		5					
21	2	4	20-6	P421B	T1	5	5-2	4-8	5-2	4-8		5					
22	2	4	21-2	P421C	T1	5	5-6	4-8	5-6	4-8		5					
23	4	4	21-6	P421D	T1	5	5-8	4-8	5-8	4-8		5					
24	30	4	6-8	P423	17		2-3	2-2	2-3								
25																	
26	28	5	18-5	P502	1	7	17-10										
27	56	6	5-2	P607	1	8	4-6										
28	16	6	22-4	P617	19		5-7	16-9					2-0		5-3		22-0
29																	
30	62	8	7-2	P805	1	1-1	6-1										
31																	
32	35	11	16-8	P1101	1	1-7	13-6					1-7					
33	20	11	15-4	P1120	2	3-6	11-10										
34																	
35																	
36																	
37																	
38																	
39																	
40																	
41							Superstructure										
42																	
43							Span 1										
44	*361	5	31-10	15502	Str												
45	606	5	35-0	13501	Str												
46	* 51	6	32-3	13603	Str												
47	204	4	5-3	15404	S3	5	1-4	1-9	1-4			5					
48	8	5	17-0	15505	Str												
49																	
50																	
51							Span 2										
52						Same as Span 1 except Mark 25---											
53						and no Test Bars											
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55																	
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Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	P	Q
						Approach Slab No.1											
82	2	5	18-1	1AS4	Str												
83	21	5	29-6	1AS3	Str												
84																	
85	1	5	27-8	1AS3A	Str												
86	↓	↓	↓	thru	↓	1 each, vary in 14 increments of 1-9½"											
87	1	5	2-6	1AS3B	Str												
88																	
89	1	10	20-11	1AS2A	Str												
90	↓	↓	↓	thru	↓	1 each, vary in 29 increments of 0-6½"											
91	1	10	4-10	1AS2DD	Str												
92																	
93	*32	10	20-7	1AS1	1	1-1	19-6							9			
94																	
95																	
96																	
97																	
98						Approach Slab No. 2												
99	2	5	20-5	2AS4	Str												
100	21	5	29-6	2AS3	Str												
101																	
102	1	5	28-4	2AS3A	Str												
103	↓	↓	↓	thru	↓	1 each, vary in 23 increments of 1-1¾"											
104	1	5	2-0	2AS3X	Str												
105																	
106	1	10	30-1	2AS2A	Str												
107	↓	↓	↓	thru	↓	1 each, vary in 29 increments of 0-10½"											
108	1	10	5-1	2AS2DD	Str												
109																	
110	31	10	20-7	2AS1	1	1-1	19-6							9			
111																	
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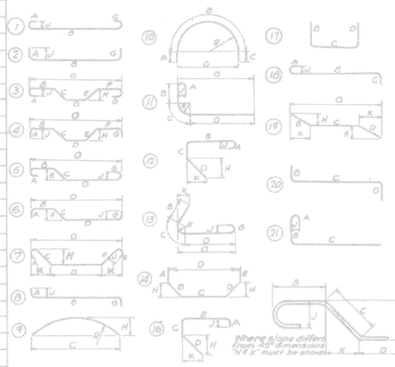
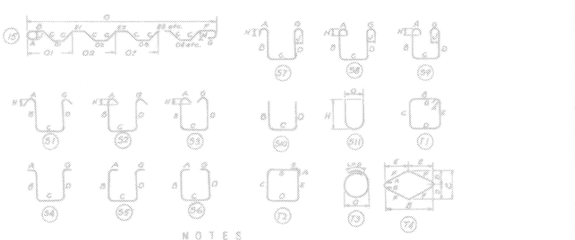
TYPICAL BAR BENDS



ENLARGED VIEW SHOWING BAR BENDING DETAILS



NOTES

1. All dimensions are out to out of bar
2. 'J' dimensions on 180° hooks to be shown only where necessary to restrict hook size otherwise standard hooks are to be used
3. Where 'J' is not shown, 'J' will be kept equal to or less than 'H'. Where 'J' can exceed 'H', it should be shown.
4. 'H' dimension on stirrups to be shown where necessary to restrict hooks.
5. Where bars are to be bent more accurately than standard bending tolerances bending dimensions which require closer working should have limits indicated
6. Figures in circles show types
7. No allowance for bend curvature is to be made except for standard hook & radii in excess of same.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	P	Q
163																	
164																	
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167																	
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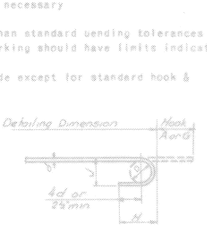

STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number	Weight per ft
4*	2	.167
3/8*	3	.376
1/2*	4	.668
5/8*	5	1.043
3/4*	6	1.502
7/8*	7	2.044
1"	8	2.670
1*	9	3.400
1 1/8*	10	4.303
1 1/4*	11	5.313
1 3/8*	14.5	7.650
2*	18S	13.600

MORETOWN
STP DECK(37)
SHEET 25 OF 25
FOR REFERENCE ONLY

GENERAL NOTES

(1) Unless otherwise designated all standard reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M31-60 or its latest revision.

(2) Unless otherwise designated all special large size reinforcement shall be deformed bars conforming with the requirements of the "Standard Specification for Special Large size Deformed Billet-Steel Bars for Concrete Reinforcement"(Intermediate Grade) AASHO Designation M-174-60 or its latest revision.

(3) * Denotes one extra bar added for testing purposes.

(N) Stirrups and tie bars shall be bent around a pin having a diameter not less than two times the minimum thickness of the bar. Bends for other bars shall be made around a pin having a diameter not less than six times the minimum thickness except for bars larger than 1 inch, in which case the bends shall be made around a pin of eight bar diameters.

ESTIMATED QUANTITIES

LOCATION	PLAN (LBS)	FINAL (LBS)
Pier	15,355	
Superstructure:		
Span 1	37,295	
Span 2	37,215	
Approach Slab 1	5,420	
Approach Slab 2	6,085	
Total this Sheet	101,370	
Total Br. 114	66,025	
Total	167,395	

Br. 115 of 121

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Moretown
Route 100-B over Mad River
Reinforcing - Pier, Superstructure, & Approach Slabs

DRAWN BY WBT CHECKED BY RLO
PROJECT S NO. 0167(3)
SHEET 61 OF 104

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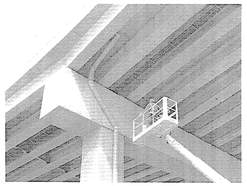
Bridge Drain Systems

Advantages:

- ✓ Lightweight—1/5 the weight of steel
- ✓ Corrosion Resistant
- ✓ High Flow Rates
- ✓ Easy Assembly/Pre-Assembly Available
- ✓ Custom Fabrications
- ✓ Wide Range of Colors to Match Structure
- ✓ Long Unsupported Spans
- ✓ Thermal Stability
- ✓ High Impact and Crush Resistance
- ✓ Freeze/Burst Resistant



Additional Features:

- ✓ Iron Pipe Size OD—No Special Supports Required
- ✓ Adhesive Bonded Fittings and Saddles
- ✓ Flanged, Coupled and Rubber Connections Available
- ✓ Odd Angle Elbows and Branch Connections
- ✓ Oversize Reducers Eliminate Drain Interference
- ✓ Trash Covers Keep Debris out of System
- ✓ Adaptable as Scupper Extensions
- ✓ Flexible—Follows the Contours of the Structure
- ✓ Color Pigmented Throughout—Scratch Resistant

Additional Services:

- ✓ **Estimating**—Take-Off and Bill of Material can be supplied with each job
- ✓ **Drafting**—AutoCAD submittals and erection drawings
- ✓ **Fabrication**—Drain systems can be pre-fabricated into shippable sub-assemblies, significantly reducing installation time
- ✓ **Installation**—UFA partners with installing contractors to provide a complete turn-key package

Quick Facts -

FRP Pipe vs. SCH 40 Steel Pipe

Avg. Weight of 6" Drain Pipe

FRP	1.91 lbs/ft
Steel	18.98 lbs/ft

Painting

FRP- Pigmented Throughout
Steel- Must be prepped, primed, painted or galvanized

FRP vs. Sch 80 PVC Pipe

Avg. Weight of 6" PVC Pipe

FRP	1.91 lbs/ft
PVC	3.13 lbs/ft

Unsupported Spans

FRP	16' @ 125°F
PVC	6' @ 125°F

BRIDGE DRAIN SYSTEMS BRIDGE DRAIN SYSTEMS BRIDGE DRAIN SYSTEMS

UNITED FIBERGLASS OF AMERICA, INC.

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Bridge Drain Systems

BridgeDrain Pipe

Nominal Pipe Size	OD	Wall Thickness	Weight/ft. (LBS.)	Gallons/ft.	Unsupported Spans @125°F
4"	4.500"	0.12"	1.30	0.74	11.7'
6"	6.625"	0.12"	1.91	1.62	16.0'
8"	8.625"	0.12"	2.55	2.75	18.0'
10"	10.750"	0.16"	3.22	4.34	21.0'
12"	12.750"	0.16"	5.00	6.18	22.0'
14"	14.400"	0.18"	6.83	8.22	19.7'
16"	16.500"	0.18"	7.82	10.69	20.3'
18"	18.900"	0.18"	8.76	13.50	23.1'
20"	20.670"	0.210"	11.96	16.63	23.8'

Nominal Ultimate Properties

Property	Test Method	Size	@ 75°F
Hoop Tensile Stress (Psi) Based on Reinforced Thickness	ANSI/ASTM D1599	4"-12"	30,000
		12"-36"	30,000

Ultimate Bending Moment - 90° Elbow

Nominal Pipe Size	Moment Foot-pounds	Nominal Pipe Size	Moment Foot-Pounds
4"	1,900	14"	3,200
6"	3,600	16"	4,200
8"	5,700	18"	6,400
10"	11,200	20"	7,800
12"	18,300		

Note: The actual operating conditions should never exceed 25% of the tabulated ultimate bending values for the 90° elbow. The operating moment should not exceed 4,500 foot-pounds.

Pipe Compressive End Loads Due to Restrained Thermal Expansion – Uninsulated Pipe

Nominal Pipe Size	(LBS./°F)	Nominal Pipe Size	(LBS./°F)
4"	24.3	14"	-
6"	36.0	16"	110.2
8"	45.0	18"	123.5
10"	84.0	20"	137.1
12"	99.0		

Above data based on modulus of Elasticity values at Ambient Temperature. This data is used to determine expected tensile and compressive loads from thermal expansion and contraction on the piping for design of anchors, expansion joints and bending moment considerations.

Thermal Expansion – Uninsulated Pipe

Change in Temperature °F	Change in Length (Inches/100 ft.)
25	0.375
50	0.750
75	1.125
100	1.500
125	1.875
150	2.25

The coefficient of thermal expansion for Uninsulated BridgeDrain pipe is 1.2 x 10-5 in/in °F.

BridgeDrain Pipe Flow Rates & Velocity for Full Bore Gravity Flow

Nominal Pipe Size	½% Gradient		1% Gradient		2% Gradient		4% Gradient	
	Flow (ft³/sec)	Velocity ft/s)	Flow (ft³/sec)	Velocity (ft/s)	Flow (ft³/sec)	Velocity (ft/s)	Flow (ft³/sec)	Velocity (ft/s)
4	0.23	2.9	0.33	3.3	0.46	4.6	0.65	6.5
6	0.65	3.0	0.93	4.3	1.31	6.0	1.85	8.5
8	1.35	3.6	1.90	5.1	2.69	7.2	3.81	10.2
10	2.43	4.2	3.43	5.9	4.86	8.4	6.87	11.8
12	3.90	4.7	5.51	6.7	7.79	9.4	11.02	13.3
14	5.54	5.1	7.83	7.3	11.07	10.3	15.66	14.6
16	8.09	5.7	11.44	8.0	16.18	11.3	22.86	16.0
18	11.03	6.1	15.60	8.6	22.07	12.2	31.21	17.3
20	14.57	6.6	20.61	9.3	29.14	13.1	41.22	18.5

Note: The Above flows and velocities are based on Manning Formula, dimensionless roughness coefficient n=0.009. To convert ft³/sec to gpm multiply by 448. For partial flows multiply by the following factors.

% Flow	Factor
75	0.810
50	0.566
25	0.337

Pipe Composition
Filament-wound "E" type fiberglass reinforced thermosetting resin pipe manufactured in accordance with ASTM D2996.

Standard Fittings
Manufactured specifically for bridge drain and duct work applications in accordance with NBS PS 15-69 standards and ASTM D 582.

90° Elbows
45° Elbows
Saddle Tees
45° Lateral Saddles
Concentric Reducers
Trash Covers
Couplings
Cleanouts
Expansion Joints
Flanges

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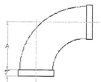
Bridge Drain Systems

Fig. 657
90° Elbow

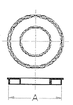


Size	6"	8"	10"	12"	14"
A ±1/8"	9"	12"	15"	18"	21"

Fig. 665
45° Elbow

Size	6"	8"	10"	12"	14"
A ±1/8"	5"	3 ½"	4"	5"	5 ½"

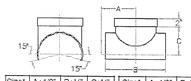
Fig. 633e
Socket Cleanout



Size**
4x6
6x8
6x10
6x12

** Female Pipe Thread x Pipe Size

Fig. 613
Tee Saddle

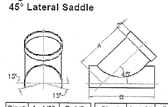


Size*	A±1/8"	B±¼"	C±¼"
6x6	5 ½"	11"	5"
8x6	5 ½"	11"	6"
10x6	5 ½"	11"	7"
12x6	5 ½"	11"	8"
8x8	6 ½"	13"	6"
10x8	6 ½"	13"	7"

Size*	A±1/8"	B±¼"	C±¼"
12x8	5 ½"	11"	5"
10x10	5 ½"	11"	6"
12x10	5 ½"	11"	7"
12x12	5 ½"	11"	8"
14x14	6 ½"	13"	6"

* Run x Branch Size

Fig. 615
45° Lateral Saddle



Size*	A±1/8"	B±½"
6x6	10"	13 ½"
8x6	12"	14 ½
10x6	12 ½"	13-7/8"
12x6	14"	14 ½
8x8	13"	16-7/8"
10x8	14"	16-7/8"

Size*	A±1/8"	B±½"
10x10	15"	19 ¼"
12x12	18"	22-5/8"
14x14	20"	25"

* Run x Branch Size

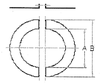
Fig. 634
Drain Reducer

Size	A
8x6	3"
10x6	6"
12x6	9"
10x8	3"
12x8	6"
12x10	3"
14x10	6"
14x12	3"
16x12	6"

Fig. 618
Socket Flange
(150# Drilling or Blank Face Available)

Size
6"
8"
10"
12"

Fig. 604
Trash Cover Assembly

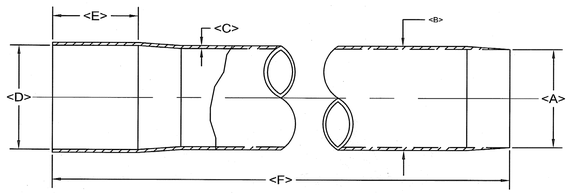


Size	A±1/8"	B±¼"
4x8	4-9/16"	10 5/8"
6x8	6-11/16"	12 ¾"
6x10	6-11/16"	12 ¾"
6x12	6-11/16"	14 ¾"
8x10	8-11/16"	12 ¾"
8x12	8-11/16"	14 ¾"

Size	A±1/8"	B±¼"
10x12	10-13/16"	14 ¾"
10x14	10-13/16"	16-1/8"
12x14	12-13/16"	16-1/8"
12x16	12-13/16"	18-1/8"
12x18	12-13/16"	20-1/8"

Drawing Number:

PRODUCT	REV	DESCRIPTION OF CHANGE	DATE	APPROVED
CONDUIT	1			
CONDUIT	2			
CONDUIT	3			
CONDUIT	4			



Note:
Bridge drain pipe may come with or without integral bell depending upon customer specifications.

Size	Part Number	A (I.D.)	B (O.D.)	C (Wall)	D	E	F	Lbs./Ft.
6" HW	UF60A-HW-BD-20-1	6.38"	6.60"	.110"	6.62"	3.00"	240"	1.75
8" SW	UF80A-SW-BD-20-1	8.40"	8.62"	.110"	8.64"	3.00"	240"	2.29
10" SW	UF100A-SW-BD-20-1	10.45"	10.75"	.150"	10.77"	3.00"	240"	3.9
12" SW	UF120A-SW-BD-20-1	12.45"	12.75"	.150"	12.77"	3.00"	240"	4.63

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UNITED FIBERGLASS OF AMERICA,INC
P.O. BOX 1511
SPRINGFIELD,OHIO 45501
PHONE 800-905-7506

PRODUCT DESCRIPTION

United Fiberglass Bridge Drain

Job:

Location:

This Drawing Issued For:	Issue Date:	Approved By:	Date:
☐ Preliminary Use ☐ Not For Construction ☐ For Approval	02/09/09		

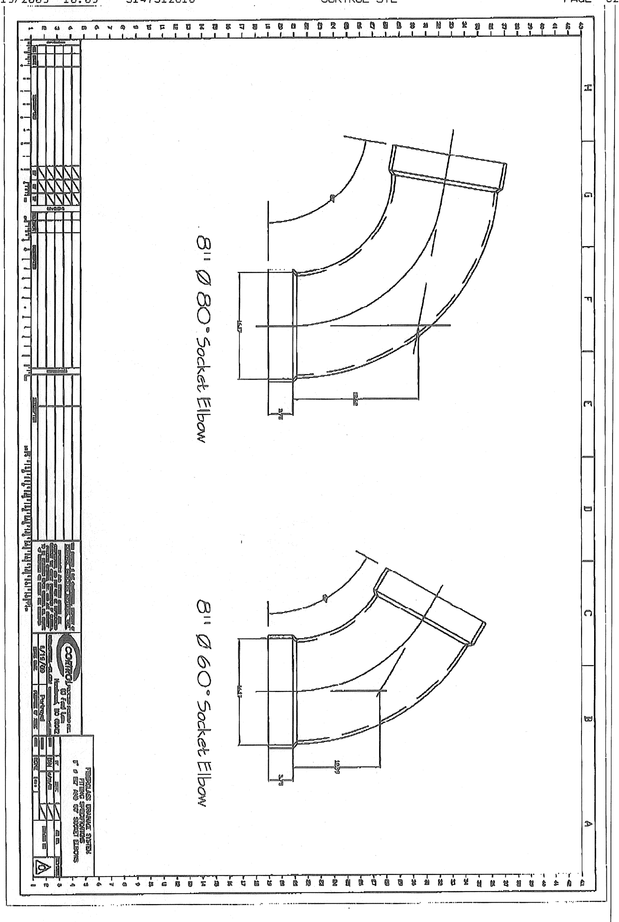
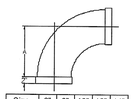
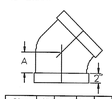

8" Ø 80° Socket Elbow
8" Ø 60° Socket Elbow

Fig. 657
90° Elbow



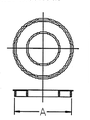
Size	6"	8"	10"	12"	14"
A ±1/8"	9"	12"	15"	18"	21"

Fig. 665
45° Elbow



Size	6"	8"	10"	12"	14"
A ±1/8"	3"	3 ½"	4"	5"	5 ½"

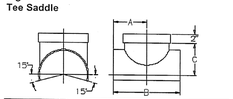
Fig. 633s
Socket Cleanout



Size**
4x6
6x8
6x10
6x12

** Female Pipe Thread x Pipe Size

Fig. 613
Tee Saddle

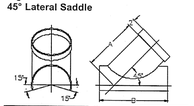


Size*	A±1/8"	B±¼"	C±½"
6x6	5 ½"	11"	5"
8x6	5 ½"	11"	6"
10x6	5 ½"	11"	7"
12x6	5 ½"	11"	8"
8x8	6 ½"	13"	6"
10x8	6 ½"	13"	7"

Size*	A±1/8"	B±¼"	C±½"
12x8	5 ½"	11"	5"
10x10	5 ½"	11"	6"
12x10	5 ½"	11"	7"
12x12	5 ½"	11"	8"
14x14	6 ½"	13"	6"

* Run x Branch Size

Fig. 615
45° Lateral Saddle



Size*	A±1/8"	B±¼"
6x6	10"	13 ½"
8x6	12"	14 ½
10x6	12 ½"	13-7/8"
12x6	14"	14 ½
8x8	13"	16-7/8"
10x8	14"	16-7/8"

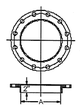
Size*	A±1/8"	B±¼"
10x10	15"	19 ¼"
12x12	18"	22-5/8"
14x14	20"	25"

* Run x Branch Size

Fig. 634
Drain Reducer

Size	A
8x6	3"
10x6	6"
12x6	9"
10x8	3"
12x8	6"
12x10	3"
14x10	6"
14x12	3"
16x12	6"

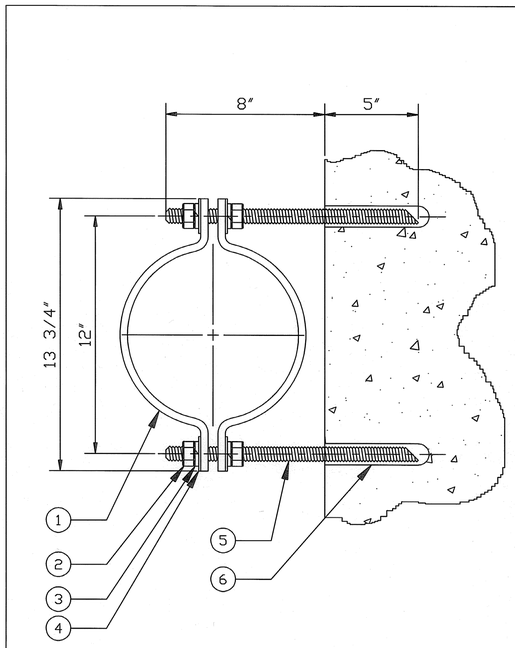
Fig. 618
Socket Flange
(150# Drilling or Blank Face Available)



Size
6"
8"
10"
12"

Fig. 604
Trash Cover Assembly

Size	A±1/8"	B±¼"	Size	A±1/8"	B±¼"
4x8	4-9/16"	10 5/8"	10x12	10-13/16"	14 ½"
6x8	6-11/16"	12 ½"	10x14	10-13/16"	16-1/8"
6x10	6-11/16"	12 ½"	12x14	12-13/16"	16-1/8"
6x12	6-11/16"	14 ½"	12x16	12-13/16"	18-1/8"
8x10	8-11/16"	12 ½"	12x18	12-13/16"	20-1/8"
8x12	8-11/16"	14 ½"			



BILL OF MATERIAL

MARK	QTY:	DESCRIPTION	FINISH
1	1	8" MEDIUM PIPE CLAMP (3/8" X 1-1/2")	ASTM A36 A153 GALV.
2	4	3/4" HDG FINISHED HEX NUT	ASTM A563 A153 GALV.
3	4	3/4" HDG LOCK WASHER	ASME 560 A153 GALV.
4	4	3/4" HDG FLAT WASHER	ASTM F844 A153 GALV.
5	2	1/2" HDG ALL THREAD 13"LG CHISEL CUT 45° ONE END	ASTM A-36 A153 GALV.
6	2	5/8" X 5" HILTI HVU ADHESIVE CAPSULE	ASTM E 1512 NSF/ANSI 61

DATE: 06-18-09
PIPE SIZE: 8"
QUOTE: K32-249
SCALE: NTS
DRAWN BY: D.P.B.
APPROVED:
DATE:

UNITED FIBERGLASS of America, Inc.

PROJECT

MORETOWN, VT
STP DECK (37) DRAIN PIPE

REFERENCE DRAWINGS

1) _____
2) _____

REVISION NO.	DATE REVISED
0	0

SHEET: 1 OF 1

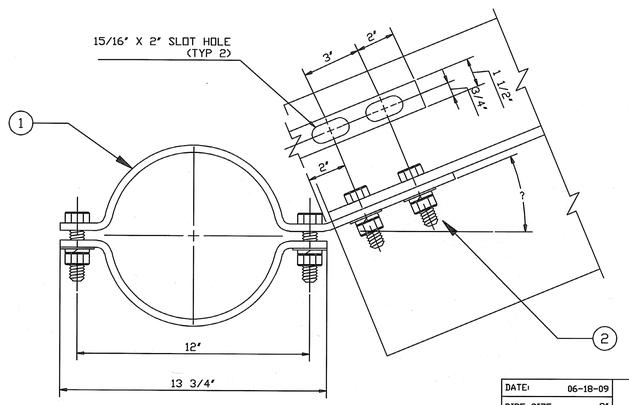
QUANTITY

TITLE

8" PIPE CLAMP DETAIL TYPE-A

BILL OF MATERIAL

MARK	QTY:	DESCRIPTION	FINISH
1	1	8" SPECIAL MEDIUM PIPE CLAMP (3/8" X 1-1/2")	ASTM A36 AI63 GALV.
2	4	3/4" X 2" HEX HEAD BOLT, FW AND LW	AI63 GALV.



DATE:	06-18-09
PIPE SIZE:	8"
QUOTE:	K32-249
SCALE:	NTS
DRAWN BY:	D.P.B.
APPROVED:	
DATE:	

UNITED FIBERGLASS of America, Inc.

PROJECT

MORETOWN, VT
STP DECK (37) DRAIN PIPE

REFERENCE DRAWINGS	REVISION NO.	DATE REVISED
1)	0	0
2)	SHEET: 1 OF 1	

QUANTITY

TITLE

8" PIPE CLAMP DETAIL TYPE-B

VTRANS
RECEIVED
JUN 09 2009

CK'D BY _____ OK'D BY JWC

RESUBMIT ___ APPROVED ✓

BY _____ DATE 6/9/09

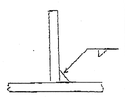
PROJECT NAME MORETOWN

PROJECT NUMBER STP DECK(37)

PREQUALIFIED JOINT WELDING PROCEDURE PROCEDURE SPECIFICATION

Material specification A36;A572;A588
Welding process FCAW
Manual or machine SEMI-AUTOMATIC
Position of welding FLAT OR HORIZONTAL
Filler metal specification AWS 5.20
Filler metal classification ALLOY RODS DUAL SHIELD II 71 ULTRA (E71T-1)
Flux N/A
Shielding gas CO_2 Flow rate 35 CFH
Single or multiple pass SINGLE AND MULTIPLE
Single or multiple arc SINGLE ELECTRICAL STICK-OUT 3/8"-3/8"
Welding current DC
Polarity REVERSE
Welding progression N/A
Root treatment NONE
Preheat and interpass temperature 50°to 3/8"TNCL ;70°to1-1/2"TNCL ;150°to 23" TNCL
Postheat treatment NONE
Supported by WPS 007 and 008

WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed (IPM)	Weld Size (fillet)	Joint detail
1	.045	220-240	26-28	16-18	3/16"	
1	.045	220-240	26-28	12-13	1/4"	
All	.045	210-230	25-27	9-10	5/16"	
1	.045	220-240	26-28	16-18	3/8" (3 passes)	
2	.045	220-240	26-28	16-18		
3	.045	220-240	26-28	16-18		
1	.045	210-230	25-27	9-11	7/16" (3 passes)	
2	.045	210-230	25-27	9-11		
3	.045	210-230	25-27	9-11		

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

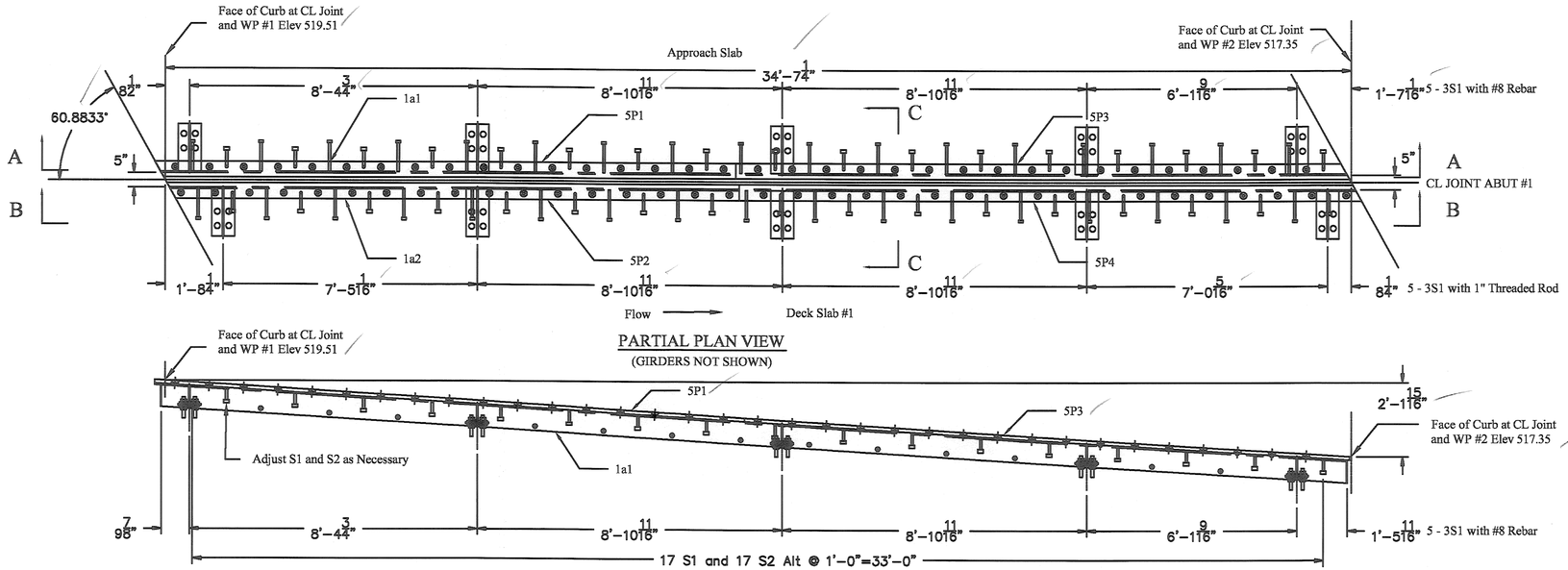
Procedure no. DS-16

Revision

Contractor Merrimack Sheet Metal, Inc.

Authorized by Scott Blanchette

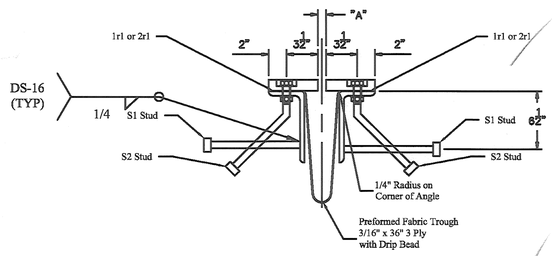
1/5/07



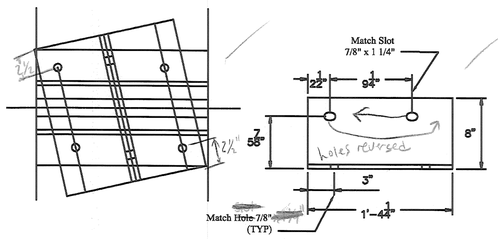
STRUCTURES COPY

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	1J1	VERMONT JOINT ASSEMBLY		
1	1a1	L 8" x 4" x 1/2"	34'-9 1/2"	
1	1a2	L 8" x 4" x 1/2"	34'-9 1/2"	
34	S1	3/4" x 10" Welded Stud		Str
34	S2	3/4" x 10" Welded Stud		Bent
2	1r1	1/16" x 3" Butyl Rubber x 35'		
10	3S1	GIRDER SUPPORT PLATES		
1	4T1	TROUGH		
1	5P1	JOINT PLATE		
1	5P2	JOINT PLATE		
1	5P3	JOINT PLATE		
1	5P4	JOINT PLATE		
10	1a7	L 8" x 4" x 1/2"	1'-4 1/4"	
20		Bolt 3/4" x 3 1/2" Lg		
10		Bolt 3/4" x 1 1/2" Lg w/ Nut		



STUD ANCHOR DETAILS



5 SETS REQ'D 1a7 - SHIPPING ANGLE DETAILS

RECEIVED
CK'D BY HES DJB OK'D BY
JUN 10 2009
RESUBMIT APPROVED As Noted
BY CPW DATE 6/10/09

		DATE SUBMITTED
1	6-9-2009	REVISED PER APPROVAL COMMENTS
0	6-3-2009	SUBMITTED FOR APPROVAL
REV NO.	DATE	DESCRIPTION

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS

VERMONT JOINT LAYOUT (ABUTMENT)

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

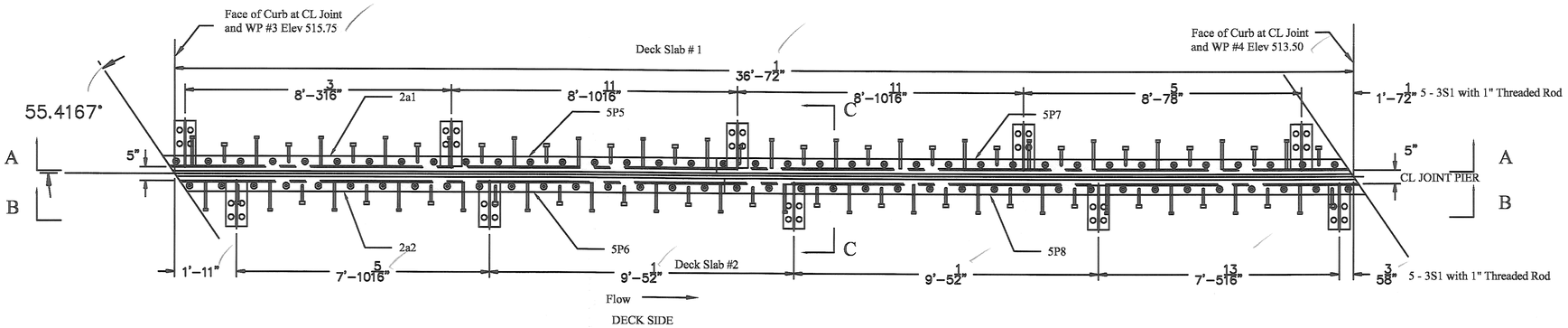
Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY: RL

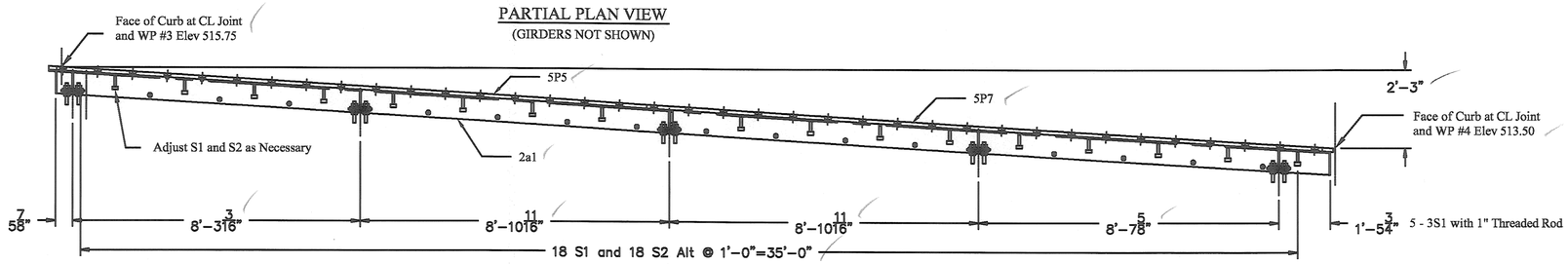
CHECKED BY: JD

JOB NO: #2808

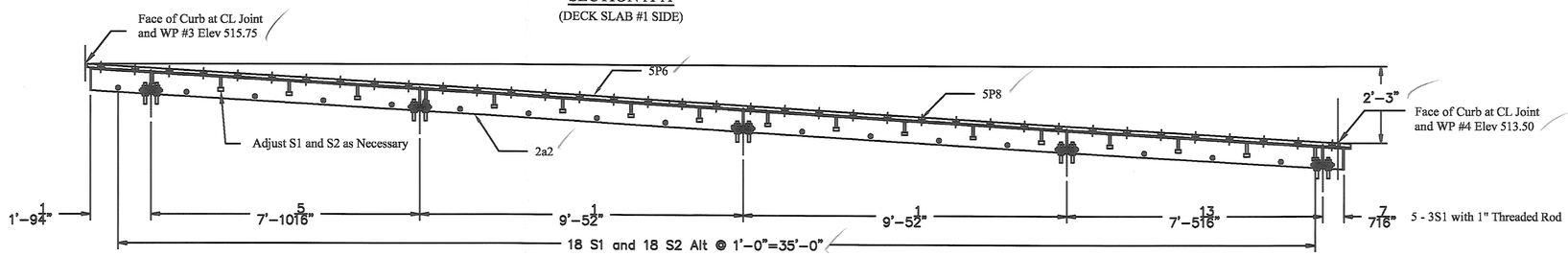
DWG: F1



PARTIAL PLAN VIEW
(GIRDERS NOT SHOWN)



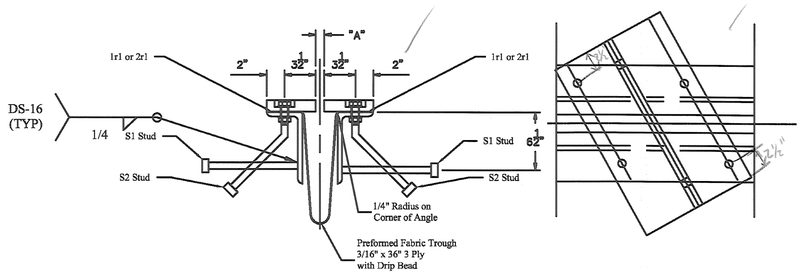
SECTION A-A
(DECK SLAB #1 SIDE)



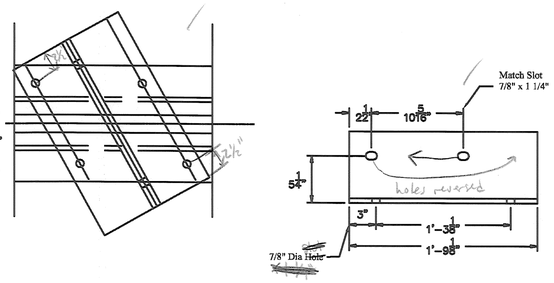
SECTION B-B
(DECK SLAB #2 SIDE)

BILL OF MATERIALS				
QTY	MARK	SHAPE	LENGTH	REMARKS
1	2J1	VERMONT JOINT ASSEMBLY		
1	2a1	L 8" x 4" x 1/2"	36'-10 1/4"	
1	2a2	L 8" x 4" x 1/2"	36'-10 1/4"	
5	2p1	Plate 1/2" x 12"	1'-6 1/4"	
36	S1	3/4" x 10" Welded Stud		Str
36	S2	3/4" x 10" Welded Stud		Bent
2	2r1	1/16" x 3" Butyl Rubber x 37'-0"		
10	3S1	GIRDER SUPPORT PLATES		
1	4T2	TROUGH		
1	5P5	JOINT PLATE		
1	5P6	JOINT PLATE		
1	5P7	JOINT PLATE		
1	5P8	JOINT PLATE		
10	2a7	L 8" x 4" x 1/2"	1'-9 1/8"	
20		Bolt 3/4" x 3 1/2" Lg		
10		Bolt 3/4" x 1 1/2" Lg		

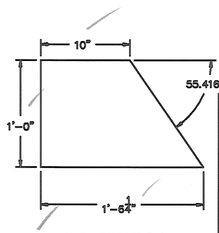
STRUCTURES
COPY



STUD ANCHOR DETAILS



5 SETS REQ'D 2a7 - SHIPPING ANGLE DETAILS



5 REQ'D - DETAIL 2p1
(Field Weld to Girder with 1/4" Fillet)

RECEIVED
CK'D BY HJS CK'D BY DDB
JUN 10 2009
RESUBMIT ____ APPROVED As Noted
BY CPW DATE 6/10/09

REV NO.	DATE	DESCRIPTION
		DATE SUBMITTED
1	6-8-2009	REVISED PER APPROVAL COMMENTS
0	6-3-2009	SUBMITTED FOR APPROVAL

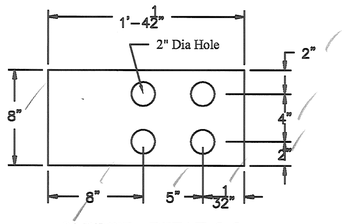
HOLES AS NOTED
MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS
VERMONT JOINT LAYOUT (PIER)

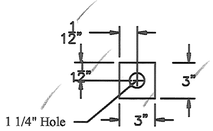
PROJECT	MORETOWN STP DECK (37)
LOCATION	VERMONT 100B BRIDGE NO. 7
ENGINEER	VERMONT AGENCY OF TRANSPORTATION
CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL
119 HALL STREET
CONCORD NH 03301
Tel. 603.224.7766
Fax 603.224.7925

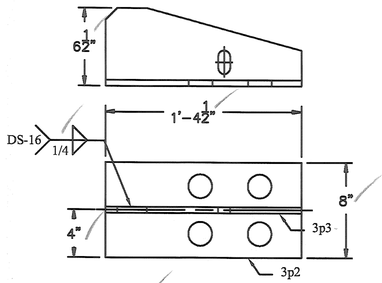
DRAWN BY: RL
CHECKED BY: JD
JOB NO: #2808
DWG: F2



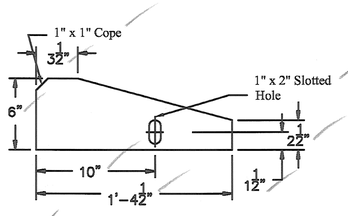
20 REQ'D - DETAIL 3p2



160 REQ'D - DETAIL 3b1

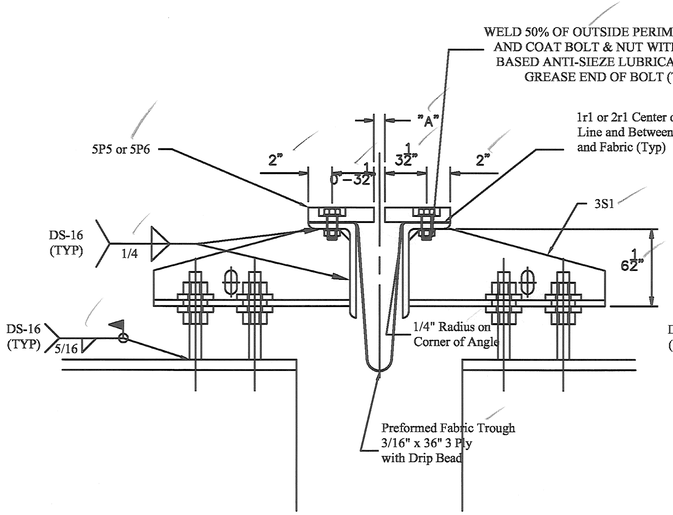


20 REQ'D - DETAIL 3S1

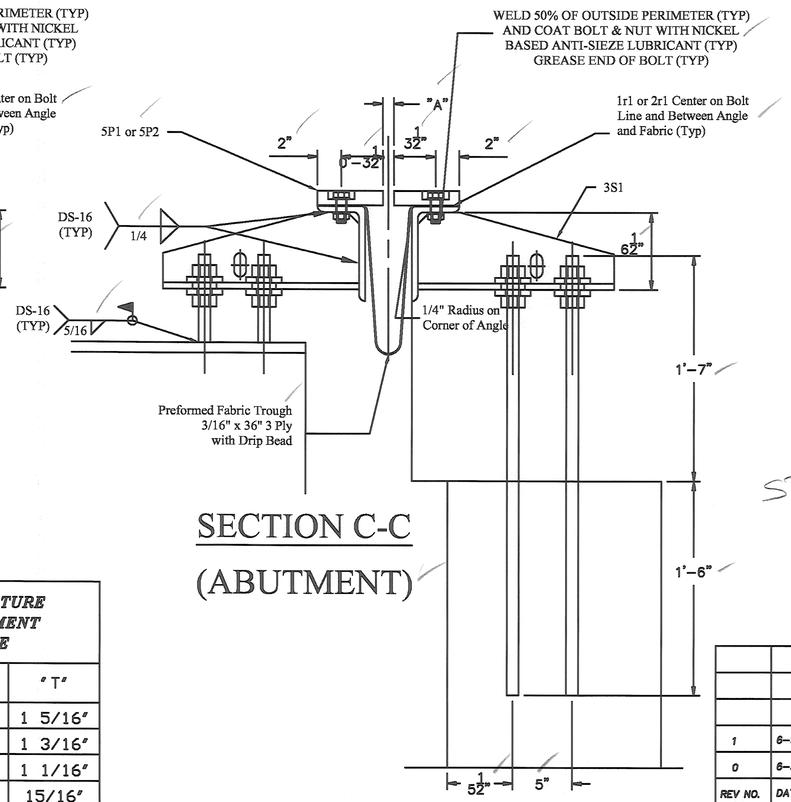


20 REQ'D - DETAIL 3p3

DETAIL OF GIRDER PLATES



SECTION C-C (PIER)



SECTION C-C (ABUTMENT)

TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
15 °F	1 5/16"
30 °F	1 3/16"
45 °F	1 1/16"
60 °F	15/16"
75 °F	3/4"
90 °F	5/8"

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
20	3S1	BRACKET SUPPORT ASSY		
20	3p2	Plate 1/2" x 8"	1'-4 1/2"	
20	3p3	Plate 1/2" x 6"	1'-4 1/2"	
160	3b1	Bar 3/8" x 3"	0'-3"	
60		1" Dia Threaded Rod x 8" with 2 Nuts		
20		#8 Threaded Rod x 3'-1" with 2 Nuts		

EXPANSION JOINT NOTES:

1. PREFORMED FABRIC TROUGH SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
2. BUTYL RUBBER TAPE SHALL CONFORM TO SUBSECTION 707.12.
3. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36.
4. ALL STEEL COMPONENTS SHALL BE GALVANIZED PER SUBSECTION 506.15, UNO.
5. BOLTS, NUTS & WASHERS SHALL CONFORM TO AASHTO M164 TYPE 1 UNO.
6. A DRIP BEAD 1/4" X 7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPROUT END OF THE TROUGH.
7. THREADED ROD AND ASSOCIATED NUTS SHALL CONFROM TO SUBSECTION 714.04.
8. BEVEL ALL EDGES 1/16". Prior to Galvanizing

STRUCTURES COPY

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JUN 10 2009
RESUBMIT APPROVED As Noted
BY CPW DATE 6/10/09

REV NO.	DATE	DESCRIPTION
		DATE SUBMITTED
1	6-9-2009	REVISED PER APPROVAL COMMENTS
0	6-3-2009	SUBMITTED FOR APPROVAL

HOLES AS NOTED
MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS
VERMONT JOINT SUPPORT DETAILS

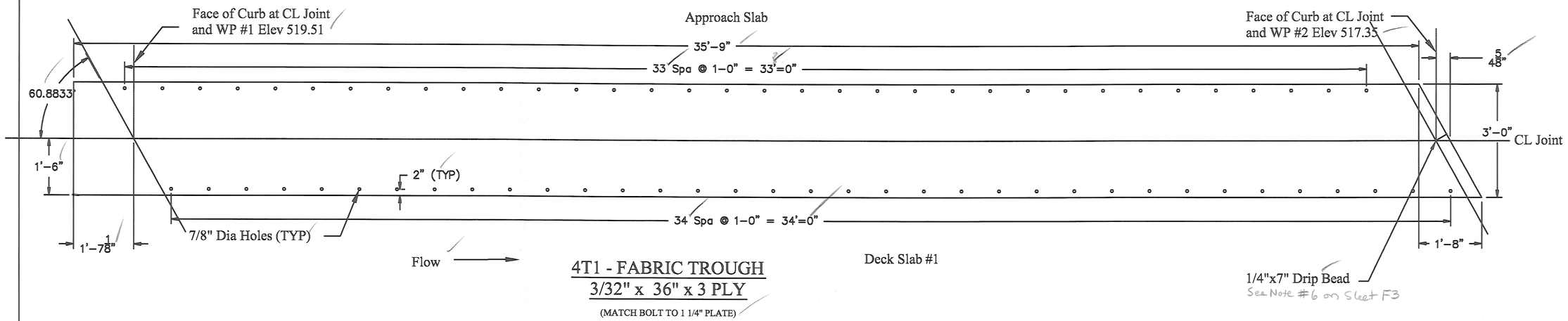
	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CCS CONSTRUCTION

MERRIMACK SHEET METAL

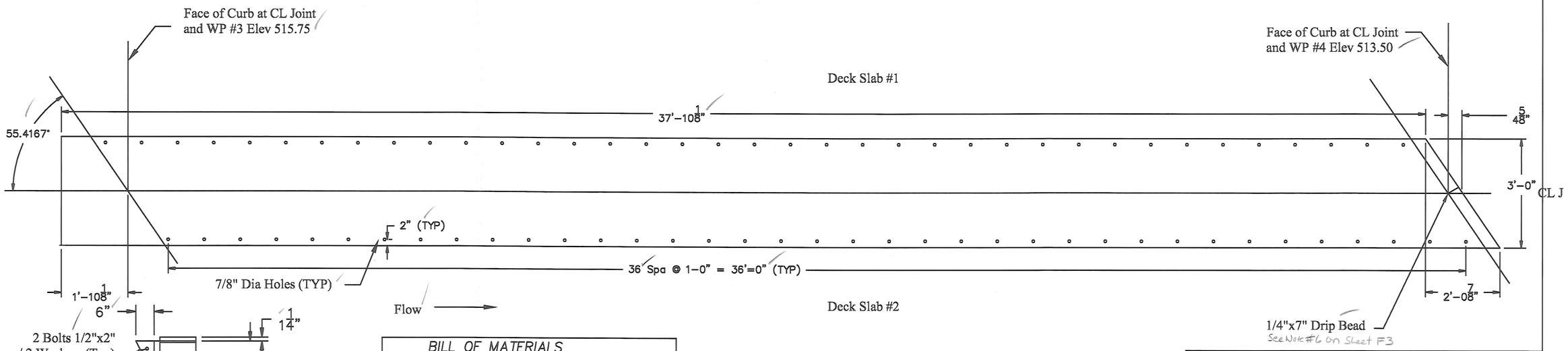
119 HALL STREET
CONCORD NH 03301

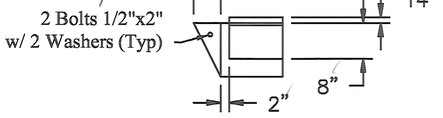
Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY: RL
CHECKED BY: JD
JOB NO: #2808
DWG: F3



4T1 - FABRIC TROUGH
3/32" x 36" x 3 PLY
(MATCH BOLT TO 1 1/4" PLATE)





FOLDED TROUGH DETAIL

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	4T1	FABRIC TROUGH (ABUTMENT)		
1		Preformed Fabric Material 3 Ply x 36" x 37'-5"		
2		Bolt 1/2" x 2" Lg with 2 Washers and Nut		
1	4T2	FABRIC TROUGH (PIER)		
1		Preformed Fabric Material 3 Ply x 36" x 39'-11"		
2		Bolt 1/2" x 2" Lg with 2 Washers and Nut		

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HOLES AS NOTED
MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS
TROUGH LAYOUT (ABUTMENT & PIER)

PROJECT	MORETOWN STP DECK (37)
LOCATION	VERMONT 100B BRIDGE NO. 7
ENGINEER	VERMONT AGENCY OF TRANSPORTATION
CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
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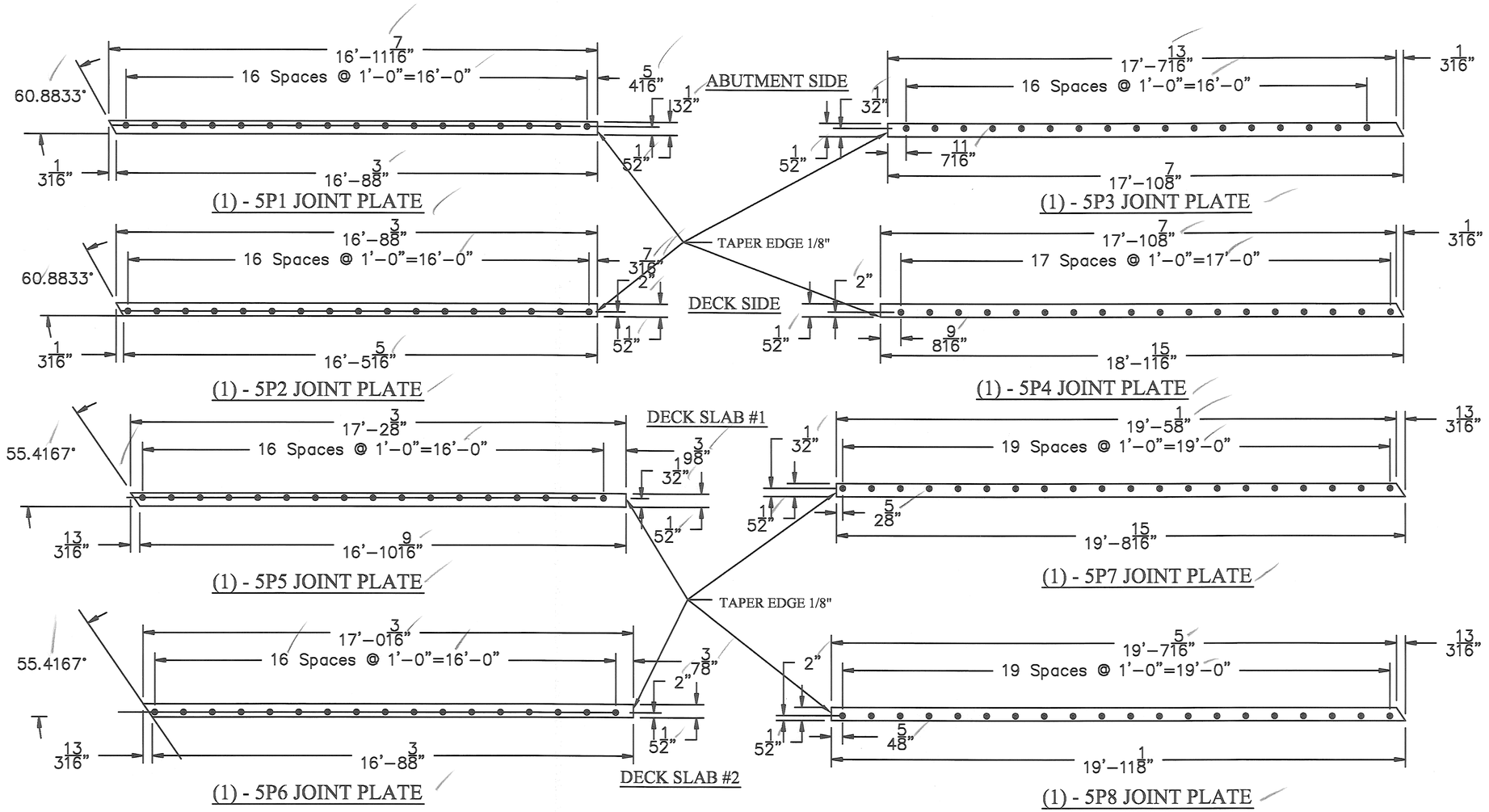
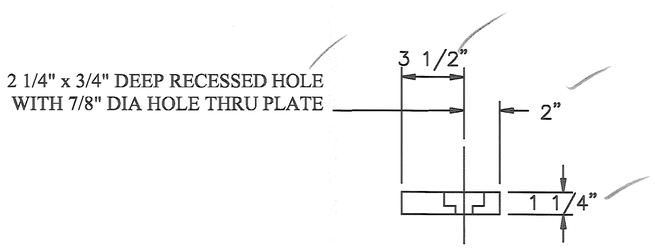
DRAWN BY: RL
CHECKED BY: JD
JOB NO: #2808
DWG: F4





HOLE LAYOUT

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	5P1	JOINT PLATE		
1	5p1	Plate 1 1/4 x 5 1/2"	16'-11 7/16"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P2	JOINT PLATE		
1	5p2	Plate 1 1/4 x 5 1/2"	16'-8 3/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P3	JOINT PLATE		
1	5p3	Plate 1 1/4 x 5 1/2"	17'-10 7/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P4	JOINT PLATE		
1	5p4	Plate 1 1/4 x 5 1/2"	18'-1 15/16"	
18	3/4" Hexhead Bolts x 2" lg with nut			
1	5P5	JOINT PLATE		
1	5p5	Plate 1 1/4 x 5 1/2"	17'-2 3/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P6	JOINT PLATE		
1	5p6	Plate 1 1/4 x 5 1/2"	17'-0 3/16"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P7	JOINT PLATE		
1	5p7	Plate 1 1/4 x 5 1/2"	19'-8 15/16"	
20	3/4" Hexhead Bolts x 2" lg with nut			
1	5P8	JOINT PLATE		
1	5p8	Plate 1 1/4 x 5 1/2"	19'-11 1/8"	
20	3/4" Hexhead Bolts x 2" lg with nut			

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		DATE SUBMITTED
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REV NO.	DATE	DESCRIPTION

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS

PLATE DETAILS

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

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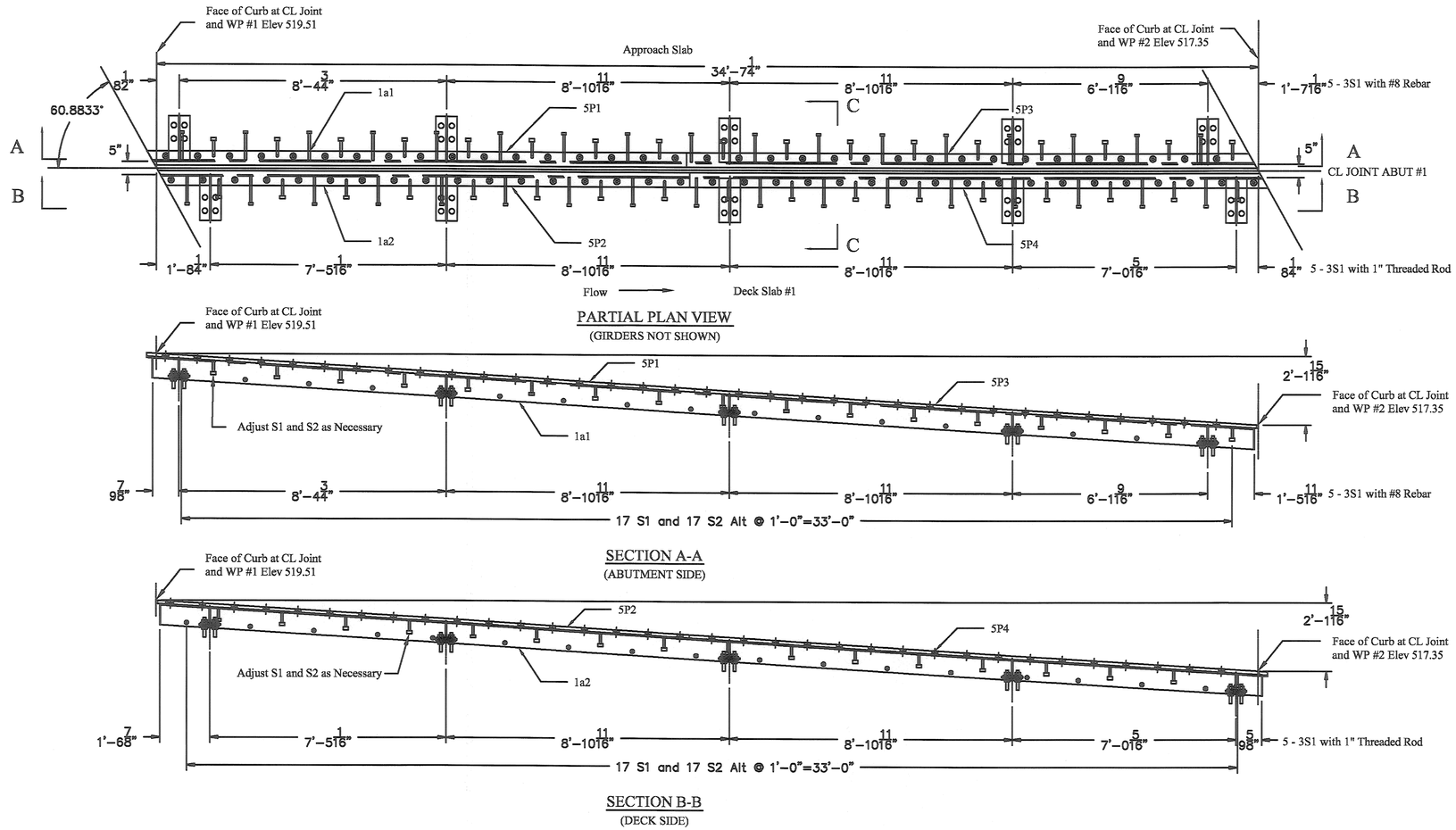
JOB NO: #2808

DWG: F5



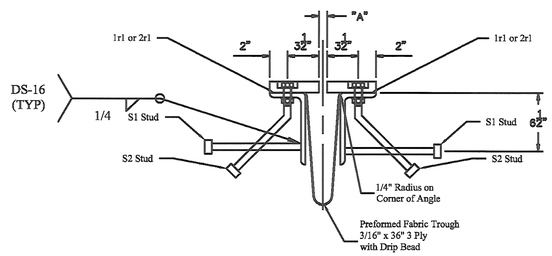
PARTIAL PLAN VIEW
(GIRDERS NOT SHOWN)

SECTION A-A
(ABUTMENT SIDE)

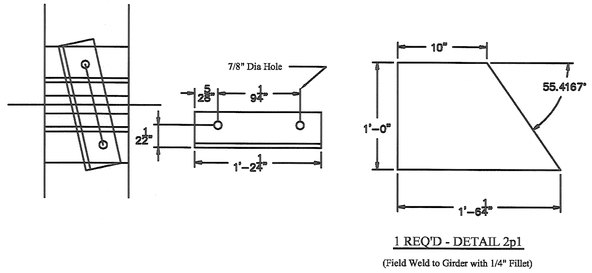
SECTION B-B
(DECK SIDE)

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	1J1	FINGER JOINT ASSEMBLY		
1	1a1	L 8" x 4" x 1/2"	34'-9 1/2"	
1	1a2	L 8" x 4" x 1/2"	34'-9 1/2"	
34	S1	3/4" x 10" Welded Stud		Str
34	S2	3/4" x 10" Welded Stud		Bent
2	1r1	1/16" x 3" Butyl Rubber x 35'		
10	3S1	GIRDER SUPPORT PLATES		
1	4T1	TROUGH		
1	5P1	JOINT PLATE		
1	5P2	JOINT PLATE		
1	5P3	JOINT PLATE		
1	5P4	JOINT PLATE		
3	1a7	L 4" x 4" x 1/2"	1'-2 1/4"	
6		Bolt 3/4" x 3 1/2" Lg		



STUD ANCHOR DETAILS



3 REQ'D 1a7 - SHIPPING ANGLE DETAILS

1 REQ'D - DETAIL 2p1
(Field Weld to Girder with 1/4" Fillet)

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BY DATE

		DATE SUBMITTED
0	6-3-2009	SUBMITTED FOR APPROVAL
REV NO.	DATE	DESCRIPTION
HOLES AS NOTED		
MATERIAL: AASHTO M 270 GRADE 36 GALV		

DRAWING COVERS
VERMONT JOINT LAYOUT (ABUTMENT)

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

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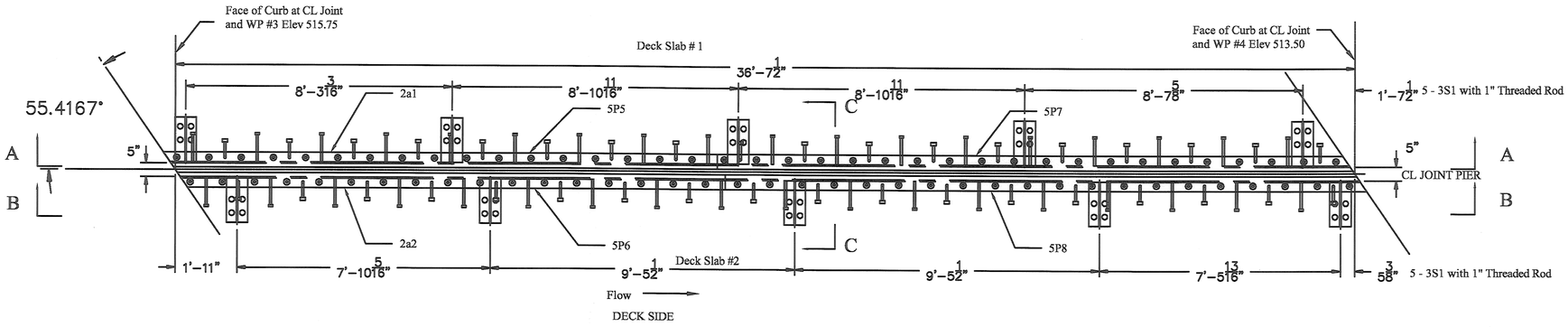
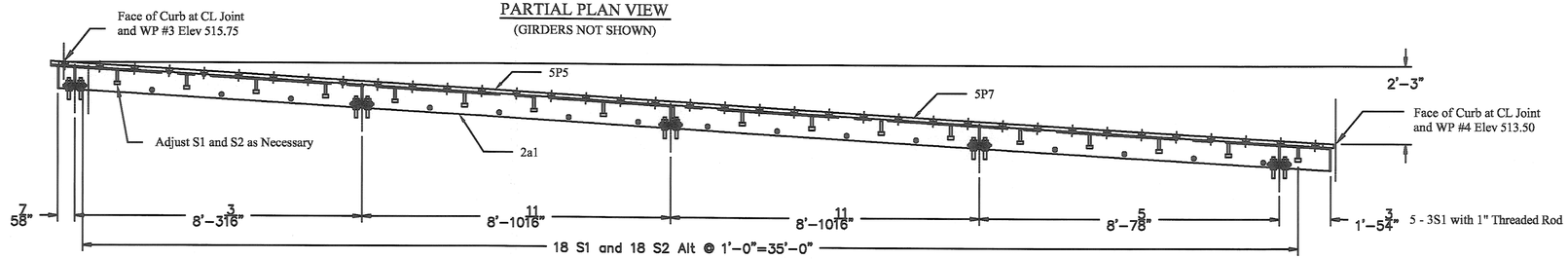
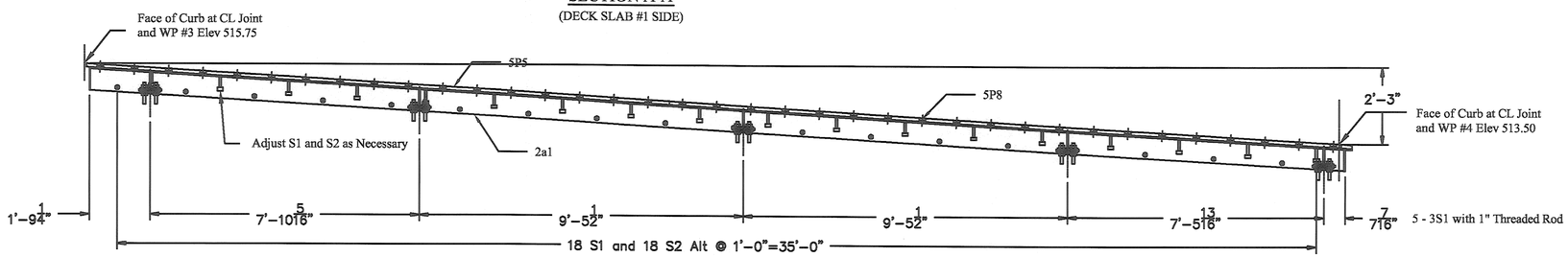
CHECKED BY:	JD
JOB NO:	#2808
DWG:	F1



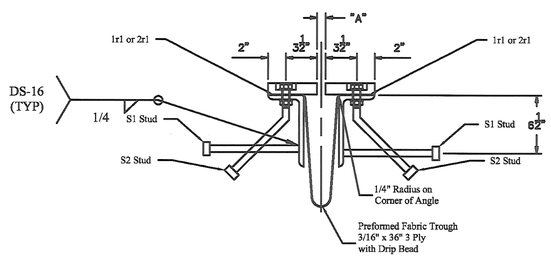
PARTIAL PLAN VIEW
(GIRDERS NOT SHOWN)



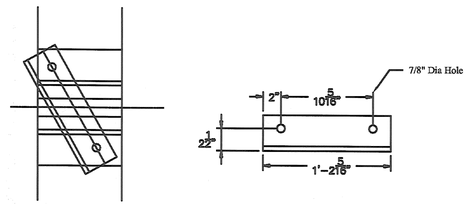
SECTION A-A
(DECK SLAB #1 SIDE)



SECTION B-B
(DECK SLAB #2 SIDE)



STUD ANCHOR DETAILS



3 REQ'D 2a7 - SHIPPING ANGLE DETAILS

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	2J1	FINGER JOINT ASSEMBLY		
1	2a1	L 8" x 4" x 1/2"	36'-10 1/4"	
1	2a2	L 8" x 4" x 1/2"	36'-10 1/4"	
1	2p1	Plate 1/2" x 12"	1'-6 1/4"	
36	S1	3/4" x 10" Welded Stud		Str
36	S2	3/4" x 10" Welded Stud		Bent
2	2r1	1/16" x 3" Butyl Rubber x ?'		
10	3S1	GIRDER SUPPORT PLATES		
1	4T2	TROUGH		
1	5P5	JOINT PLATE		
1	5P6	JOINT PLATE		
1	5P7	JOINT PLATE		
1	5P8	JOINT PLATE		
3	2a7	L 4" x 4" x 1/2"	1'-2 5/16"	
6		Bolt 3/4" x 3 1/2" Lg		

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BY DATE

REV NO.	DATE	DESCRIPTION
		DATE SUBMITTED
0	6-3-2009	SUBMITTED FOR APPROVAL

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS
VERMONT JOINT LAYOUT (PIER)

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY: RL
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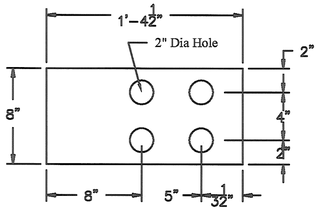
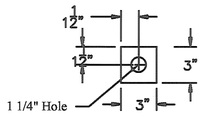
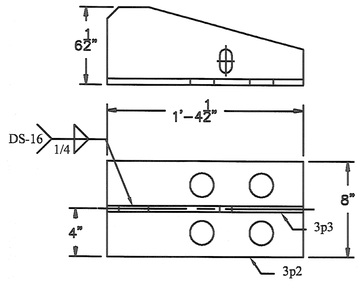
JOB NO: #2808
DWG: F2



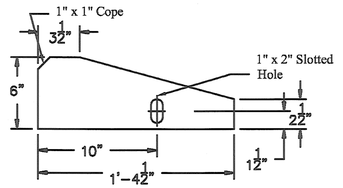
20 REQ'D - DETAIL 3p2



160 REQ'D - DETAIL 3b1

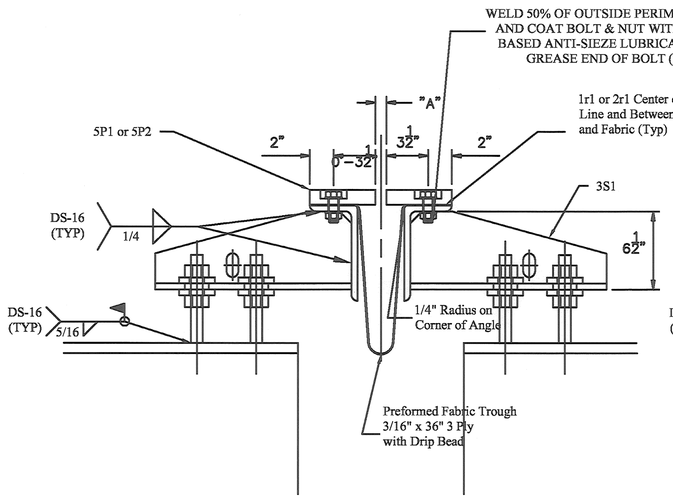


20 REQ'D - DETAIL 3S1

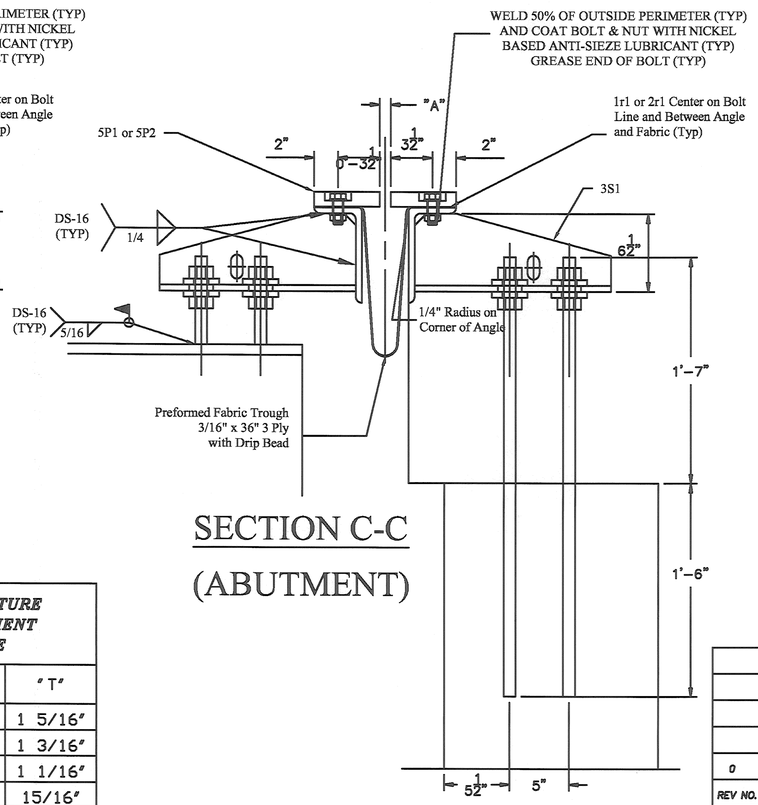


20 REQ'D - DETAIL 3p3

DETAIL OF GIRDER PLATES



SECTION C-C
(PIER)



SECTION C-C
(ABUTMENT)

TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
15 °F	1 5/16"
30 °F	1 3/16"
45 °F	1 1/16"
60 °F	15/16"
75 °F	3/4"
90 °F	5/8"

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
20	3S1	BRACKET SUPPORT ASSY		
20	3p2	Plate 1/2" x 8"	1'-4 1/2"	
20	3p3	Plate 1/2" x 6"	1'-4 1/2"	
160	3b1	Bar 3/8" x 3"	0'-3"	
60		1" Dia Threaded Rod x 8" with 2 Nuts		
20		#8 Threaded Rod x 3'-1" with 2 Nuts		

EXPANSION JOINT NOTES:

1. PREFORMED FABRIC TROUGH SHALL BE CONTINUOUS AND SHALL CONFORM TO SUBSECTION 707.07.
2. BUTYL RUBBER TAPE SHALL CONFORM TO SUBSECTION 707.12.
3. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36.
4. ALL STEEL COMPONENTS SHALL BE GALVANIZED OR METALIZED PER SUBSECTION 506.15, UNO.
5. BOLTS, NUTS & WASHERS SHALL CONFORM TO AASHTO M164 TYPE 1 UNO.
6. A DRIP BEAD 1/4" X 7" STRIP OF PREFORMED MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH USING AN ADHESIVE APPROVED BY THE MANUFACTURER. THE DRIP BEAD SHALL BE APPLIED 1" FROM THE DOWNSPROUT END OF THE TROUGH.
7. THREADED ROD AND ASSOCIATED NUTS SHALL CONFROM TO SUBSECTION 714.04.

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HOLES AS NOTED
MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS
VERMONT JOINT SUPPORT DETAILS

PROJECT	MORETOWN STP DECK (37)
LOCATION	VERMONT 100B BRIDGE NO. 7
ENGINEER	VERMONT AGENCY OF TRANSPORTATION
CUSTOMER	CCS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

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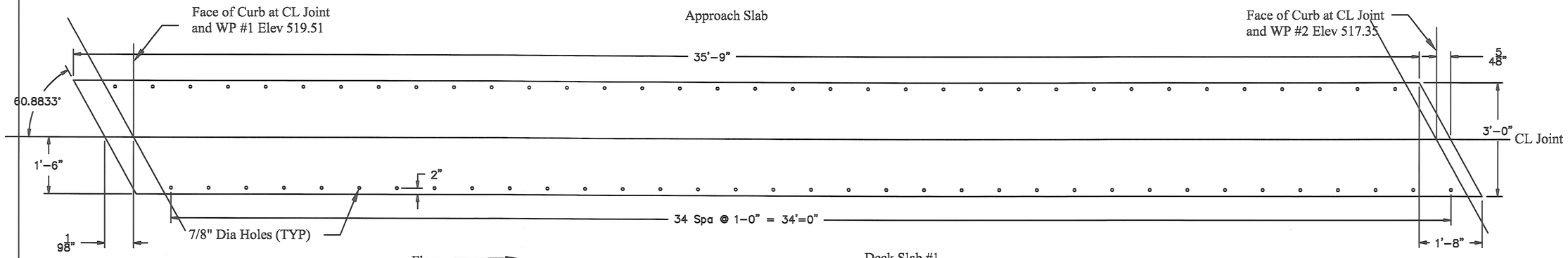
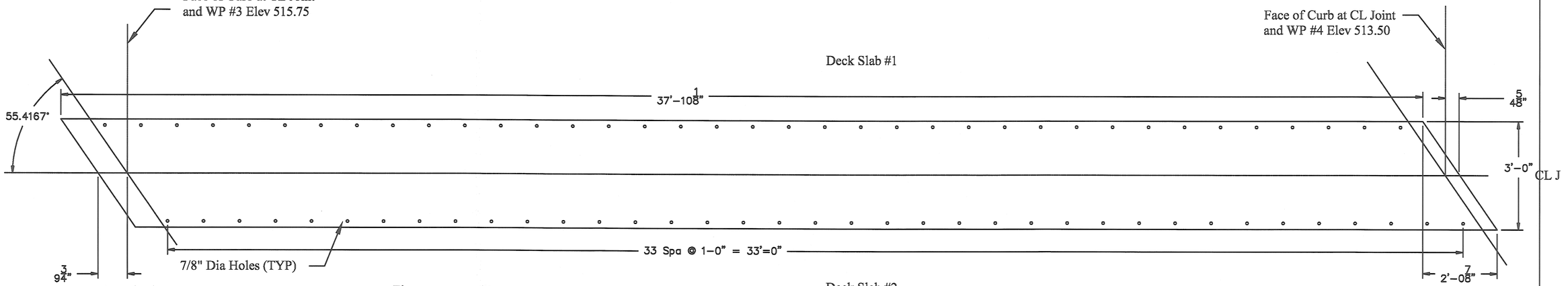
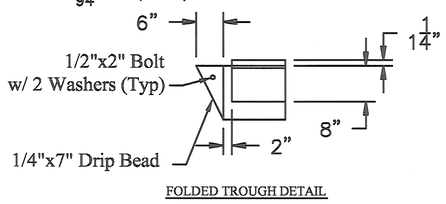
DRAWN BY: RL
CHECKED BY: JD
JOB NO: #2808
DWG: F3



4T1 - FABRIC TROUGH
3/32" x 36" x 3 PLY

(MATCH BOLT TO 1 1/4" PLATE)





FOLDED TROUGH DETAIL

BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	4T1	FABRIC TROUGH (ABUTMENT)		
1		Preformed Fabric Material 3 Ply x 36" x 37'-5"		
1		Bolt 1/2" x 2" Lg with 2 Washers and Nut		
1	4T2	FABRIC TROUGH (PIER)		
1		Preformed Fabric Material 3 Ply x 36" x 39'-11"		
1		Bolt 1/2" x 2" Lg with 2 Washers and Nut		

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RESIDENT _____ APPROVED _____
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HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS

TROUGH LAYOUT (ABUTMENT & PIER)

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

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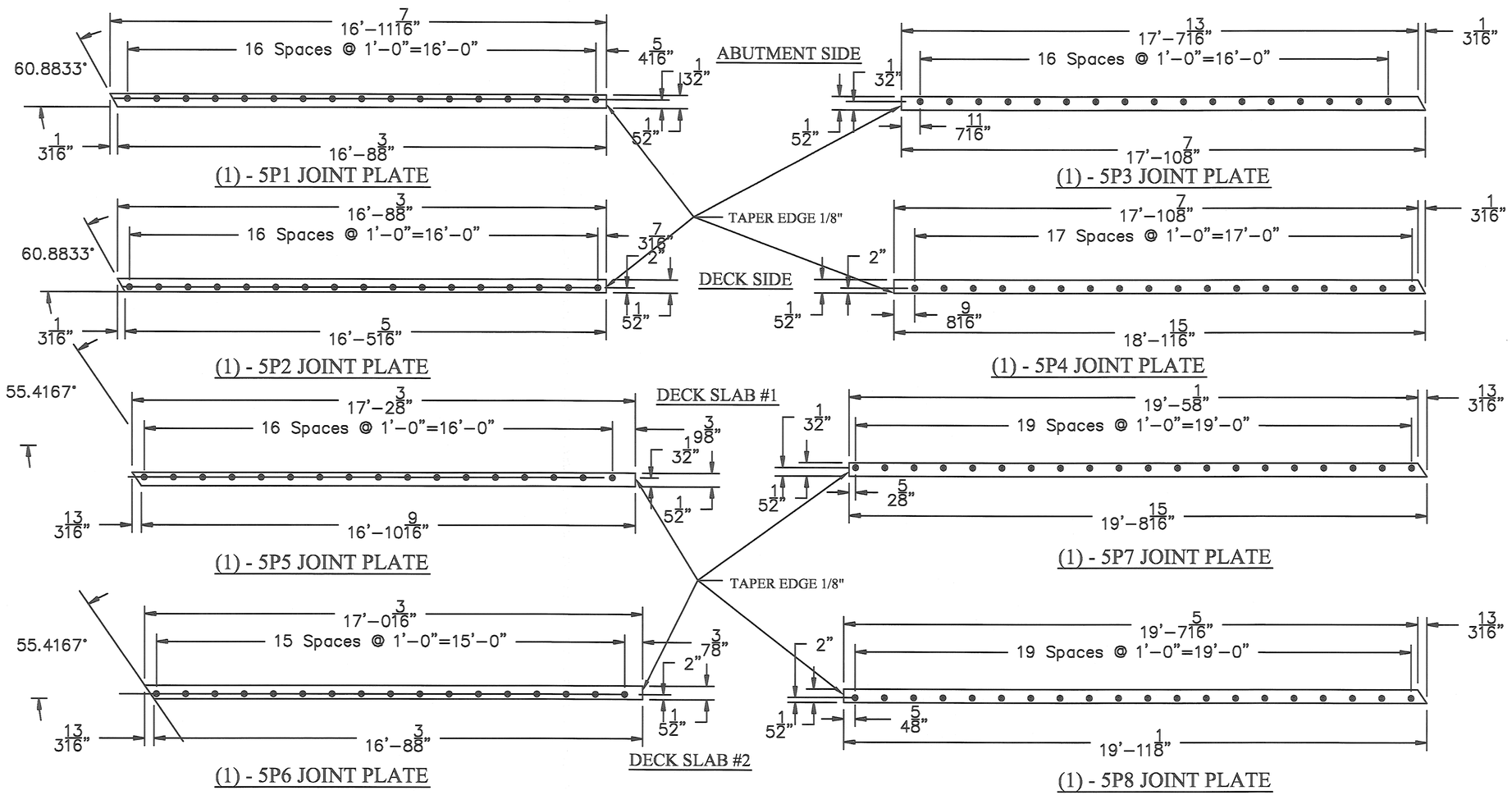
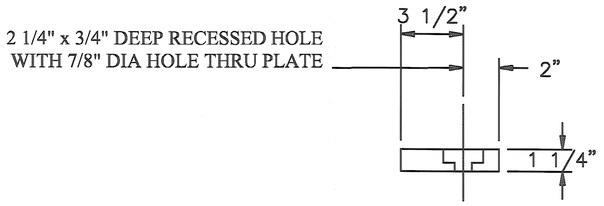


BILL OF MATERIALS

QTY	MARK	SHAPE	LENGTH	REMARKS
1	5P1	JOINT PLATE		
1	5p1	Plate 1 1/4 x 5 1/2"	16'-11 7/16"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P2	JOINT PLATE		
1	5p2	Plate 1 1/4 x 5 1/2"	16'-8 3/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P3	JOINT PLATE		
1	5p3	Plate 1 1/4 x 5 1/2"	17'-10 7/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P4	JOINT PLATE		
1	5p4	Plate 1 1/4 x 5 1/2"	18'-1 15/16"	
18	3/4" Hexhead Bolts x 2" lg with nut			
1	5P5	JOINT PLATE		
1	5p5	Plate 1 1/4 x 5 1/2"	17'-2 3/8"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P6	JOINT PLATE		
1	5p6	Plate 1 1/4 x 5 1/2"	17'-0 3/16"	
17	3/4" Hexhead Bolts x 2" lg with nut			
1	5P7	JOINT PLATE		
1	5p7	Plate 1 1/4 x 5 1/2"	19'-8 15/16"	
20	3/4" Hexhead Bolts x 2" lg with nut			
1	5P8	JOINT PLATE		
1	5p8	Plate 1 1/4 x 5 1/2"	19'-11 1/8"	
20	3/4" Hexhead Bolts x 2" lg with nut			



HOLE LAYOUT

RECEIVED
OK'D BY _____ OK'D BY _____
JUN 09 2009
BY DATE

		DATE SUBMITTED
0	6-3-2009	SUBMITTED FOR APPROVAL
REV NO.	DATE	DESCRIPTION

HOLES AS NOTED

MATERIAL: AASHTO M 270 GRADE 36 GALV

DRAWING COVERS

PLATE DETAILS

	PROJECT	MORETOWN STP DECK (37)
	LOCATION	VERMONT 100B BRIDGE NO. 7
	ENGINEER	VERMONT AGENCY OF TRANSPORTATION
	CUSTOMER	CSS CONSTRUCTION

MERRIMACK SHEET METAL

119 HALL STREET
CONCORD NH 03301

Tel. 603.224.7766
Fax 603.224.7925

DRAWN BY:	RL
CHECKED BY:	JD
JOB NO:	#2808
DWG:	F5