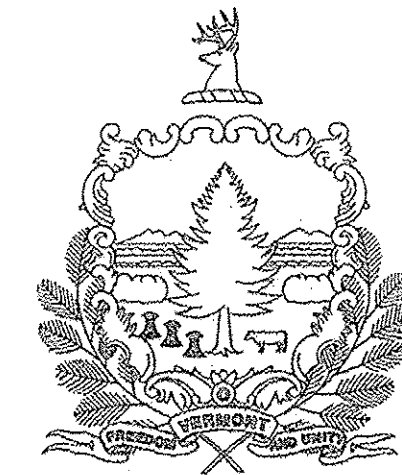


STATE OF VERMONT
AGENCY OF TRANSPORTATION



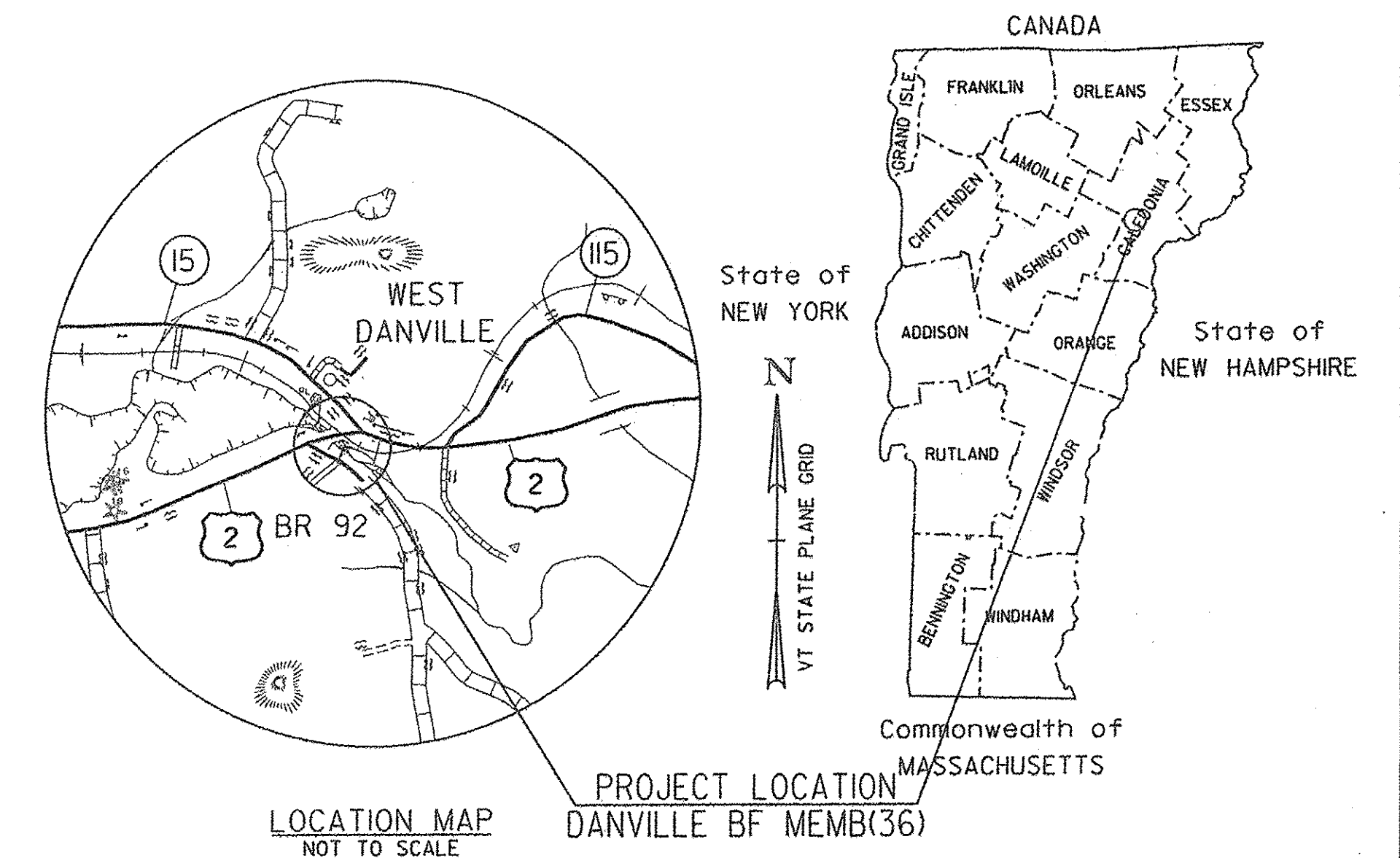
PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF DANVILLE
COUNTY OF CALEDONIA
US ROUTE 2 BRIDGE NO. 92

PROJECT LOCATION: BRIDGE 92 IS LOCATED ON US ROUTE 2 (M.M.1.64) OVER JOE'S BROOK IN THE TOWN OF DANVILLE.

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BITUMINOUS CONCRETE WEARING SURFACE AND MEMBRANE, REPLACING CONCRETE CURB ON UPSTREAM SIDE, REPLACING APPROACH SIDEWALK, AND MINOR ASSOCIATED WORK.

LENGTH OF BRIDGE: 74.00 FEET = 0.014 MILES



LOCATION MAP
NOT TO SCALE

PROJECT LOCATION
DANVILLE BF MEMB(36)

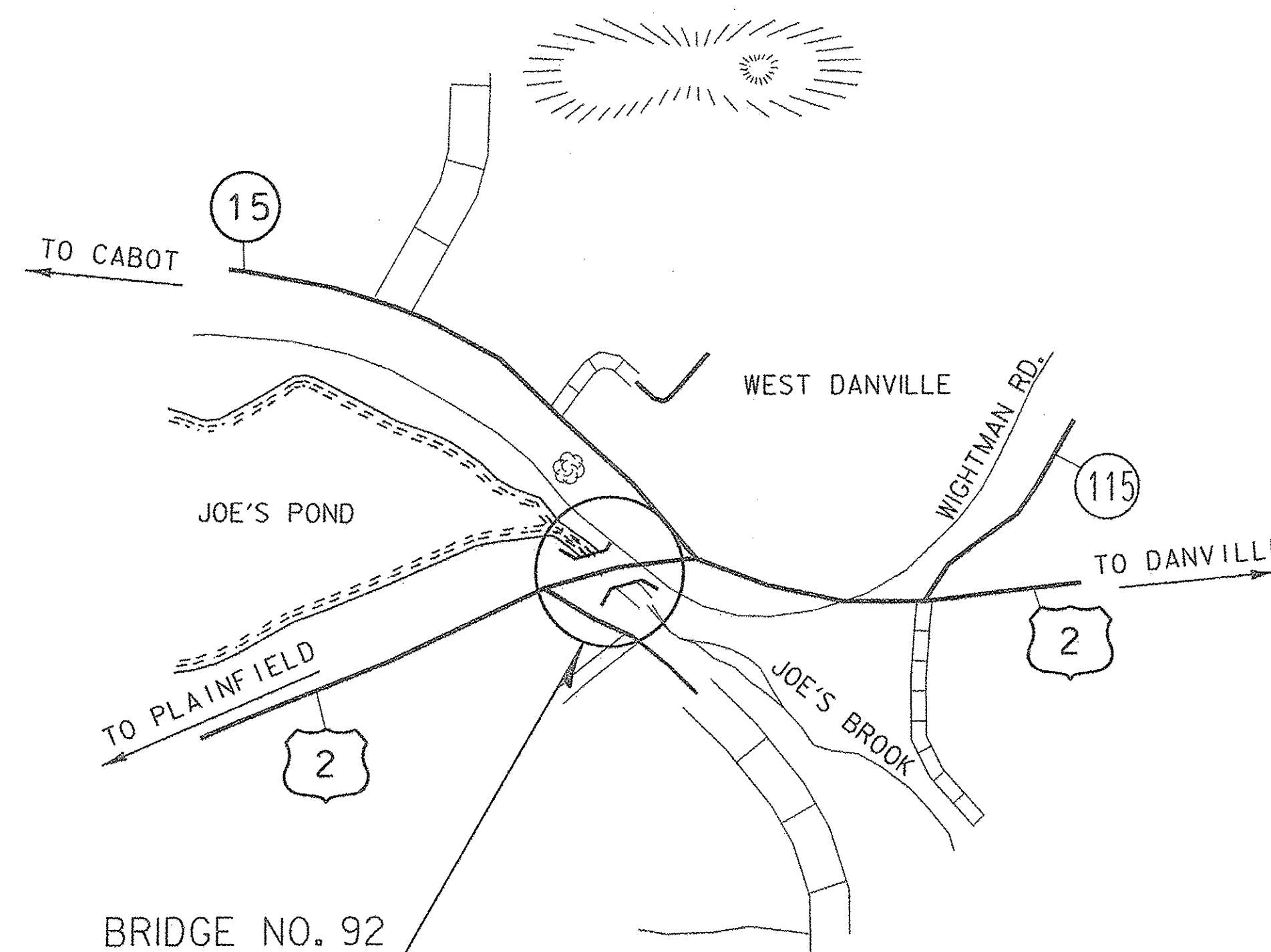
RECORD PLANS	
CONTRACTOR:	WINTERSET, INC. - LYNDONVILLE, VT
RESIDENT ENGINEER:	DOUG BUMPS
CONSTRUCTION BEGAN:	SEPTEMBER 5, 2014
CONSTRUCTION COMPLETE:	NOVEMBER 14, 2014
RECORD PLANS BY:	DOUG BUMPS & C. PIERCE
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	<i>Douglas Bumps</i> RESIDENT ENGINEER
DATE	5/24/15
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.	

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

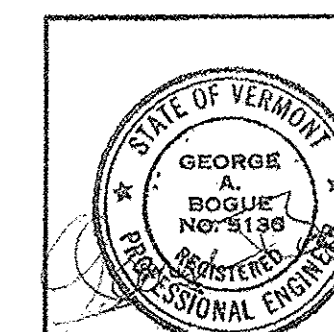
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS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

QUALITY ASSURANCE PROGRAM : LEVEL I	
SURVEYED BY :	N/A
SURVEYED DATE :	N/A
DATUM	
VERTICAL	N/A
HORIZONTAL	N/A

VT STATE PLANE GRID



NOT TO SCALE



Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Phone: (802) 864-0223
Fax: (802) 864-0165
www.stantec.com

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED	DATE 6/9/14
PROJECT MANAGER : DOUG BONNEAU	
PROJECT NAME : DANVILLE	
PROJECT NUMBER : BF MEMB(36)	
SHEET 1 OF 22 SHEETS	

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6-7	TC-01 - TC-02	TRAFFIC CONTROL PLANS
8	MD-01	MEMBRANE SPLICE DETAILS
9	BD-01	BITUMINOUS CONCRETE DETAILS
10	SR-01	SIDEWALK AND CURB-CONCRETE REPAIR
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VAOT STANDARD SHEETS

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E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES & DETAILS	08/09/95
E-172	VEHICLE LOOP DETAILS	08/09/95
E-191	PAVEMENT MARKING DETAILS	02/01/99
E-192	PAVEMENT MARKING DETAILS	10/12/00
E-193	PAVEMENT MARKING DETAILS	08/18/95
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PROJECT NOTES

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 6TH EDITION, AND ITS LATEST REVISIONS.
- ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS.
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT ON THE UNDERSIDE OF THE DECK. THIS WORK WILL BE PAID FOR UNDER ITEM 514.10 WATER REPELLENT, SILANE.
- TREE LIMBS AND/OR ANY PLANTS/BUSHES THAT PREVENT THE APPLICATION OF WATER REPELLENT, SILANE TO THE ABUTMENTS OR WINGWALLS SHALL BE REMOVED. THE COST OF REMOVING THESE TREE LIMBS AND/OR PLANTS/BUSHES SHALL BE INCIDENTAL TO ITEM 514.10.
- FOLLOWING THE COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ALL FABRIC DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE BITUMINOUS CONCRETE REMOVAL PLAN, SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR. COST FOR FLUSHING THE FABRIC DRAIN TROUGHS, DOWNSPOUTS AND SCUPPERS WILL BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.

PAVEMENT REMOVAL AND DECK REPAIRS

- THE FINAL ONE HALF INCH OF PAVEMENT ON THE CONCRETE BRIDGE DECK SHALL BE REMOVED BY LOADER, GRADER OR EQUIPMENT APPROVED BY THE ENGINEER. COLD PLANING TO REMOVE BRIDGE PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
- DURING BRIDGE PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING CONCRETE BRIDGE DECK. ANY DAMAGE TO THE CONCRETE BRIDGE DECK AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 580.
- CARE SHALL BE TAKEN TO PROTECT ANY SCUPPERS OR DROP INLETS AT ALL STAGES OF CONSTRUCTION. ANY DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
- ALL SCUPPERS SHALL BE CLEANED TO REMOVE ANY DIRT AND DEBRIS THAT HAS ACCUMULATED IN THEM TO ALLOW WATER TO FLOW FREELY THROUGH THE SCUPPER. PAYMENT FOR CLEANING THE SCUPPERS WILL BE INCIDENTAL TO ITEM 529.10 "REMOVAL OF BRIDGE PAVEMENT". A COMPLETE INVENTORY OF PLUGGED SCUPPERS HAS NOT BEEN PERFORMED.
- AFTER THE REMOVAL OF THE BRIDGE PAVEMENT, THE BARRIER MEMBRANE SHALL BE REMOVED AND THE CONCRETE BRIDGE DECK SHALL BE CLEANED IN ACCORDANCE WITH SUBSECTION 580.04 AND TO THE SATISFACTION OF THE ENGINEER.REMOVAL OF THE BARRIER MEMBRANE AND THE CLEANING OF THE CONCRETE BRIDGE DECK WILL BE PAID FOR UNDER ITEM 580.16, "SURFACE PREPARATION FOR MEMBRANE".
- ONCE THE BARRIER MEMBRANE IS REMOVED, ANY AREAS ON THE CONCRETE BRIDGE DECK THAT ARE FOUND TO BE UNSOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE METHOD FOR DETERMINING AREAS OF UNSOUND CONCRETE SHALL BE APPROVED BY THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO HOW TO REPAIR THE DETERIORATED PORTION OF THE CONCRETE BRIDGE DECK AND THE LIMITS OF THE REPAIR. PAYMENT FOR REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE SHALL BE MADE UNDER ITEMS 580.10 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I", 580.11 "REPAIR OF CONCRETE SUPERSTRUCTURE CLASS II" AND 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE CLASS III". QUANTITIES FOR ITEMS 580.10, 580.11 AND 580.12 AS SHOWN ON THE QUANTITY SHEET ARE ESTIMATED.

PAVEMENT AND MEMBRANE

- UPON THE ENGINEER'S APPROVAL OF THE CONCRETE BRIDGE DECK'S CONDITION, ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 519. SHEET MEMBRANE WATERPROOFING SHALL NOT BE APPLIED WHEN THE DECK CONCRETE AND/OR DECK PATCH AREA'S MOISTURE CONTENT IS/ARE ABOVE THE SECTION 519 SPECIFICATIONS OR THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS LESS.
- FOLLOWING THE INSTALLATION OF THE NEW MEMBRANE WATERPROOFING ON THE CONCRETE BRIDGE DECK, THE CONCRETE BRIDGE DECK SHALL BE PAVED WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) IN TWO 1/4" LIFTS (SEE SHEET 9). THE PAVEMENT SHALL BE TYPE IVS FOR BOTH LIFTS. EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL COLD PLANED SURFACES AND BETWEEN PAVEMENT LIFTS.
- CARE SHALL BE EXERCISED TO SMOOTHLY TRANSITION THE NEW BRIDGE PAVEMENT INTO THE EXISTING PAVEMENT. ANY COLD PLANING NECESSARY FOR SHAPING BRIDGE APPROACHES SHALL BE PAID FOR UNDER ITEM 210.10, "COLD PLANING, BITUMINOUS PAVEMENT".
- TESTING FOR PAVEMENT DENSITY WILL REQUIRE CORES OF THE PAVEMENT ON THE BRIDGE. THE COST FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY). ANY DAMAGE TO THE NEW SHEET MEMBRANE CAUSED BY CORING THE PAVEMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
- FOR PG BINDER GRADE SEE THE SPECIAL PROVISIONS FOR PAY ITEM 900.680.
- EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.08 GAL/SY TO ALL COLD PLANED SURFACES AND AT A RATE OF 0.03 TO 0.04 GAL/SY BETWEEN PAVEMENT LIFTS. PAYMENT SHALL BE UNDER ITEM 404.65, "EMULSIFIED ASPHALT".
- THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT MARKINGS ON ALL PAVED SURFACES THAT WILL NOT HAVE THE PERMANENT MARKINGS APPLIED WITHIN 14 CALENDAR DAYS OF THE FINAL PAVING OPERATIONS AS DIRECTED BY THE ENGINEER.
- UPON COMPLETION OF ALL PAVING OPERATIONS, FINAL PAVEMENT MARKINGS SHALL BE INSTALLED TO REPLICATE THE EXISTING CONFIGURATION.

TRAFFIC CONTROL

- THE TRAFFIC CONTROL PLANS ARE SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ONE LANE CLOSURES PER THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL ALLOW THE RESIDENT ENGINEER 14 CALENDAR DAYS TO REVIEW AND ACCEPT THE PROPOSED PLANS BEFORE THEY ARE TO BE IMPLEMENTED. NO WORK SHALL COMMENCE UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED. DEVELOPMENT AND IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
- UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON THE TRAFFIC CONTROL SHEETS FOR TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING RETROREFLECTIVE DRUMS, SIGNS AND SIGN POSTS WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL, ITEM 641.10.
- TRAFFIC WILL BE ALLOWED TO DRIVE ON THE BARE CONCRETE BRIDGE DECK AFTER THE REMOVAL OF THE BARRIER MEMBRANE AND PRIOR TO THE DECK BEING CLEANED AND PREPARED FOR THE NEW SHEET MEMBRANE. ONCE THE CONCRETE BRIDGE DECK IS PREPARED FOR THE NEW SHEET MEMBRANE, NO TRAFFIC WILL BE ALLOWED ON THE DECK UNTIL TWO LIFTS OF BITUMINOUS CONCRETE PAVEMENT ARE IN PLACE OVER THE ENTIRE LENGTH OF THE MEMBRANE.
- SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM HIGHWAYS OR DRIVES.
- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).

NOTES CONTINUED ON SHEET 3.



PROJECT NAME: DANVILLE
PROJECT NUMBER: BF MEMB(36)

FILE NAME: z13ell4notes.dgn	PLOT DATE: 6/6/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
INDEX AND PROJECT NOTES ID-01	SHEET 2 OF 22

TRAFFIC CONTROL (CONTINUED)

- 25. ORANGE SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" (ASTM D 4956) TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
- 26. ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D 4956 TYPE VI.
- 27. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.
- 28. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL.
- 29. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.
- 30. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.
- 31. THE NUMBER OF CHANNELIZING DEVICES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THE TRAFFIC CONTROL PLANS IS FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED ARE TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.).
- 32. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
- 33. TRAVEL LANES SHALL BE 12 FOOT MINIMUM WIDTH AND HAVE 1 FOOT MINIMUM WIDTH SHOULDERS. SEE SHEET MD-01 FOR ADDITIONAL INFORMATION.
- 34. THE CONTRACTOR SHALL SHIFT TRAFFIC IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS DURING NON-WORK PERIODS, AND PROTECTED BY BARRELS OR CONES.

TEMPORARY TRAFFIC SIGNAL SYSTEM

- 35. ALL WORK DESCRIBED HEREIN FOR TEMPORARY TRAFFIC SIGNAL SYSTEM FOR TWO OR MORE APPROACHES, AND NOT SPECIFIED FOR PAYMENT UNDER A SEPARATE CONTRACT ITEM, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.620, "TEMPORARY TRAFFIC SIGNAL SYSTEM, PORTABLE".
- 36. DESIGN OF THE SIGNAL SUPPORTS AND ANY REQUIRED GUYING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 37. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND RESPONDED TO WITHIN A 48 HOUR PERIOD.
- 38. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES (RED, YELLOW, AND GREEN).
- 39. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO ASSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.
- 40. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.
- 41. SIGNAL HEADS MAY BE HUNG ON A SPAN WIRE OR ON A CANTILEVER MAST ARM; HOWEVER, THE USE OF PORTABLE SIGNALS IS ENCOURAGED. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE POST MOUNTED, LOCATED AT A DISTANCE OF NO GREATER THAN 14.5 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE CURRENT EDITION OF THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.

- 42. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.
- 43. THE SIGNAL SYSTEM SHALL INCLUDE THE SETUP AND REMOVAL OF TRAILER, TRAILER POLES, SIGNAL HEADS, SIGNS AND POSTS, DETECTORS, WARNING SIGNS, LUMINAIRES, FLASHING BEACONS, STOP BARS, AND SIGNAL EQUIPMENT TO PROVIDE FOR AN ADEQUATE DESIGN. IT ALSO INCLUDES PERMITS AND COSTS ASSOCIATED WITH PROVIDING ELECTRICAL POWER.
- 44. INSTALL WIRING BETWEEN SIGNAL POLES TO PROVIDE FOR A SAFE INSTALLATION. ATTACHMENT TO UTILITY POLES TO BE COORDINATED BY THE CONTRACTOR WITH THE UTILITY COMPANY.
- 45. PLACE TEMPORARY POLES BEHIND GUARDRAIL OR OUTSIDE OF THE CLEAR ZONE.
- 46. POLES SUPPORTING SPAN WIRES AND/OR MAST ARMS SHALL BE ADEQUATELY BRACED OR GUYED AND SHALL NOT BE PLACED SO AS TO CREATE A HAZARD TO THE TRAVELING PUBLIC.
- 47. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.
- 48. A 250 WATT MER/150 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30 FEET ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT.
- 49. SEE STD. E-121 FOR SIGN PLACEMENT. SEE STDS E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS.
- 50. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.
- 51. ALL STOP SIGNS AND ANY TRAFFIC SIGNS MADE IRRELEVANT DUE TO THE TEMPORARY SIGNAL SHALL BE COMPLETELY COVERED DURING OPERATION OF THE TEMPORARY SIGNAL OR AT THE DISCRETION OF THE ENGINEER. THE COSTS OF COVERING AND UNCOVERING THESE SIGNS SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
- 52. CONSTRUCTION APPROACH SIGNS SHALL BE PROVIDED ON EACH APPROACH PER THE "TRAFFIC CONTROL APPROACH SIGN PACKAGE" SHOWN ON THE TRAFFIC CONTROL PLAN SHEETS. ADDITIONAL CONSTRUCTION APPROACH SIGNS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER. THE COSTS ASSOCIATED WITH THESE SIGNS, THE REFLECTORIZED PLASTIC DRUMS, ETC., SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".
- 53. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF THE PHASING DIAGRAM BY THE ENGINEER.

PROJECT NAME: DANVILLE
PROJECT NUMBER: BF MEMB(36)

FILE NAME: z13ell4notes.dgn	PLOT DATE: 6/6/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
INDEX AND PROJECT NOTES ID-02	SHEET 3 OF 22



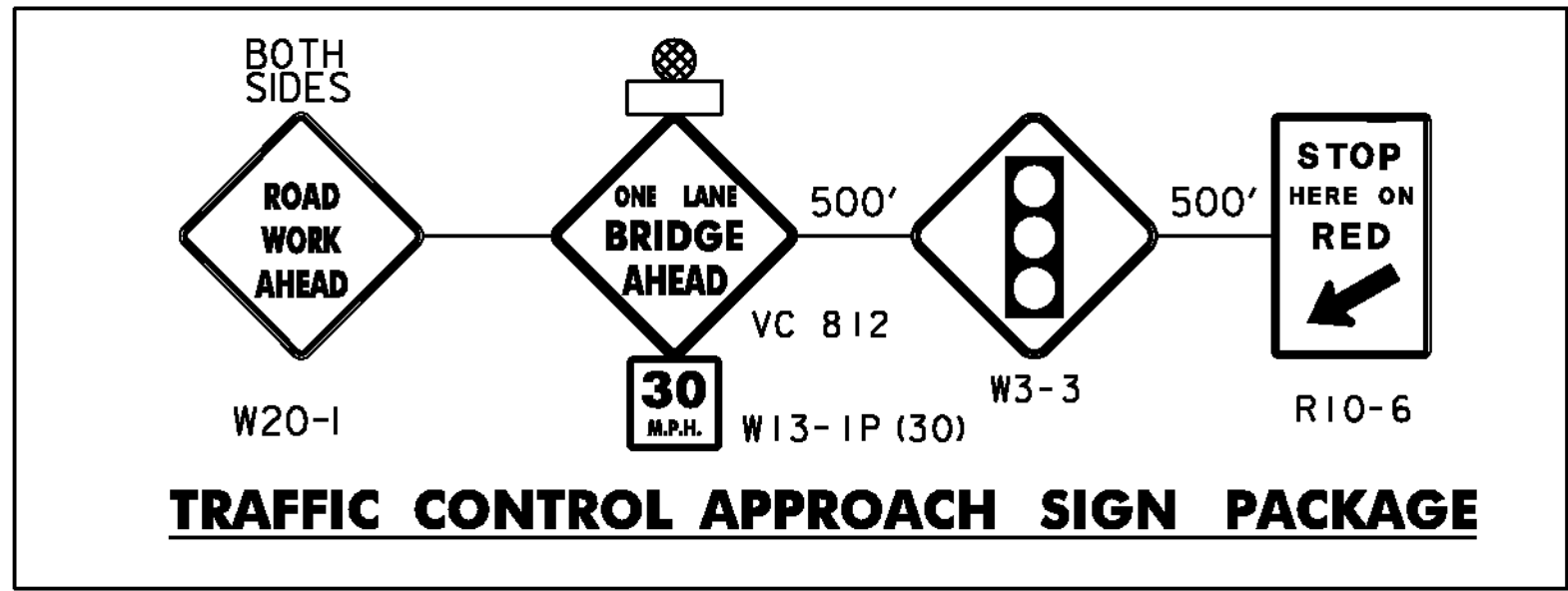
QUANTITY SHEET

PROJECT NAME: DANVILLE	
PROJECT NUMBER: BF MEMB(36)	
FILE NAME: z13ell4frm.dgn	PLOT DATE: 6/12/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: D. GROVER
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
QUANITY SHEET QS-01	SHEET 4 OF 22

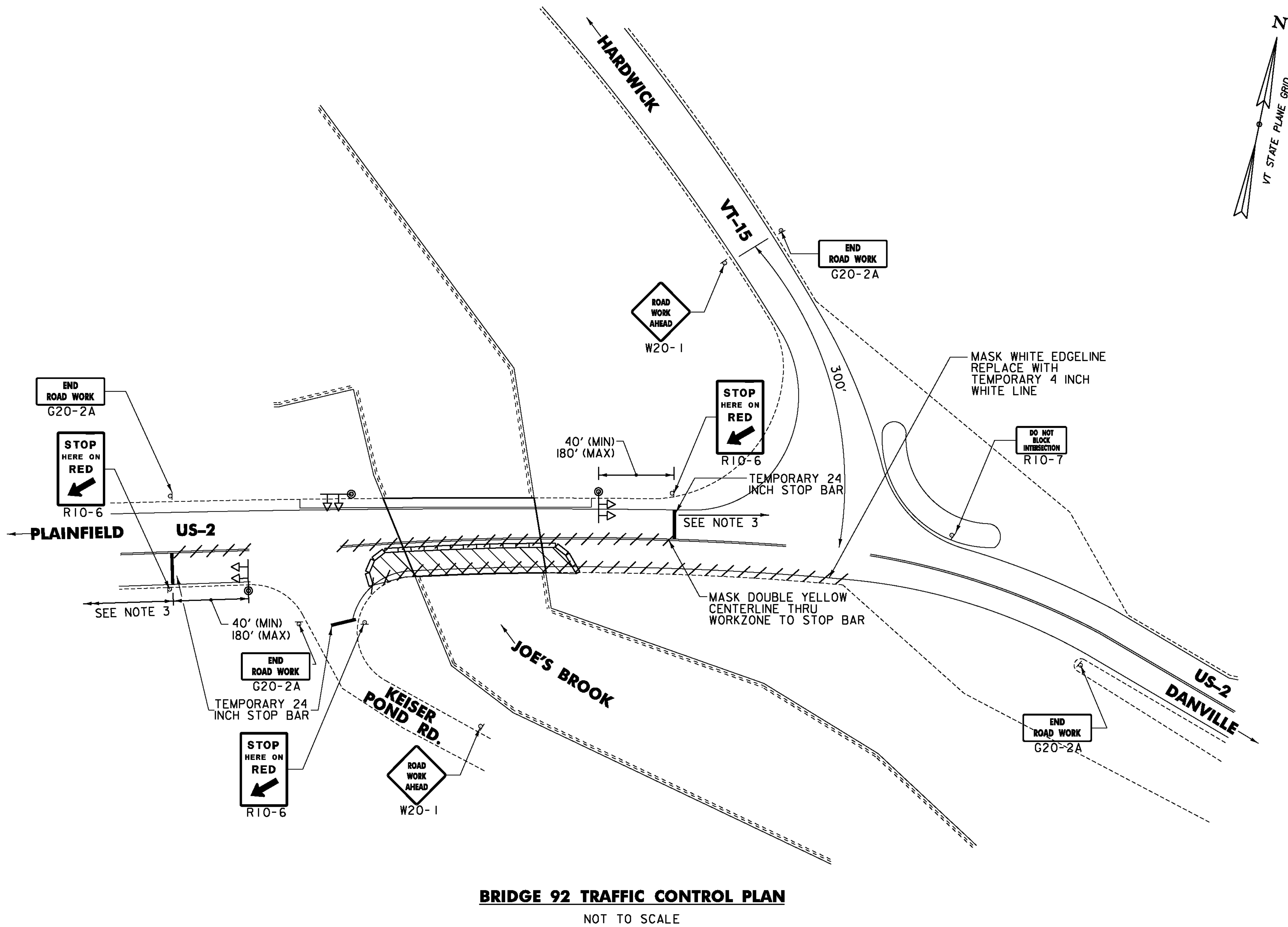
QUANTITY SHEET

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PROJECT NAME:	DANVILLE
PROJECT NUMBER:	BF MEMB(36)
FILE NAME: z13el14frm.dgn	PLOT DATE: 6/12/2014
PROJECT LEADER: C. BOGUE	DRAWN BY: D. GROVER
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
QUANTITY SHEET 05-02	SHEET 5 OF 22



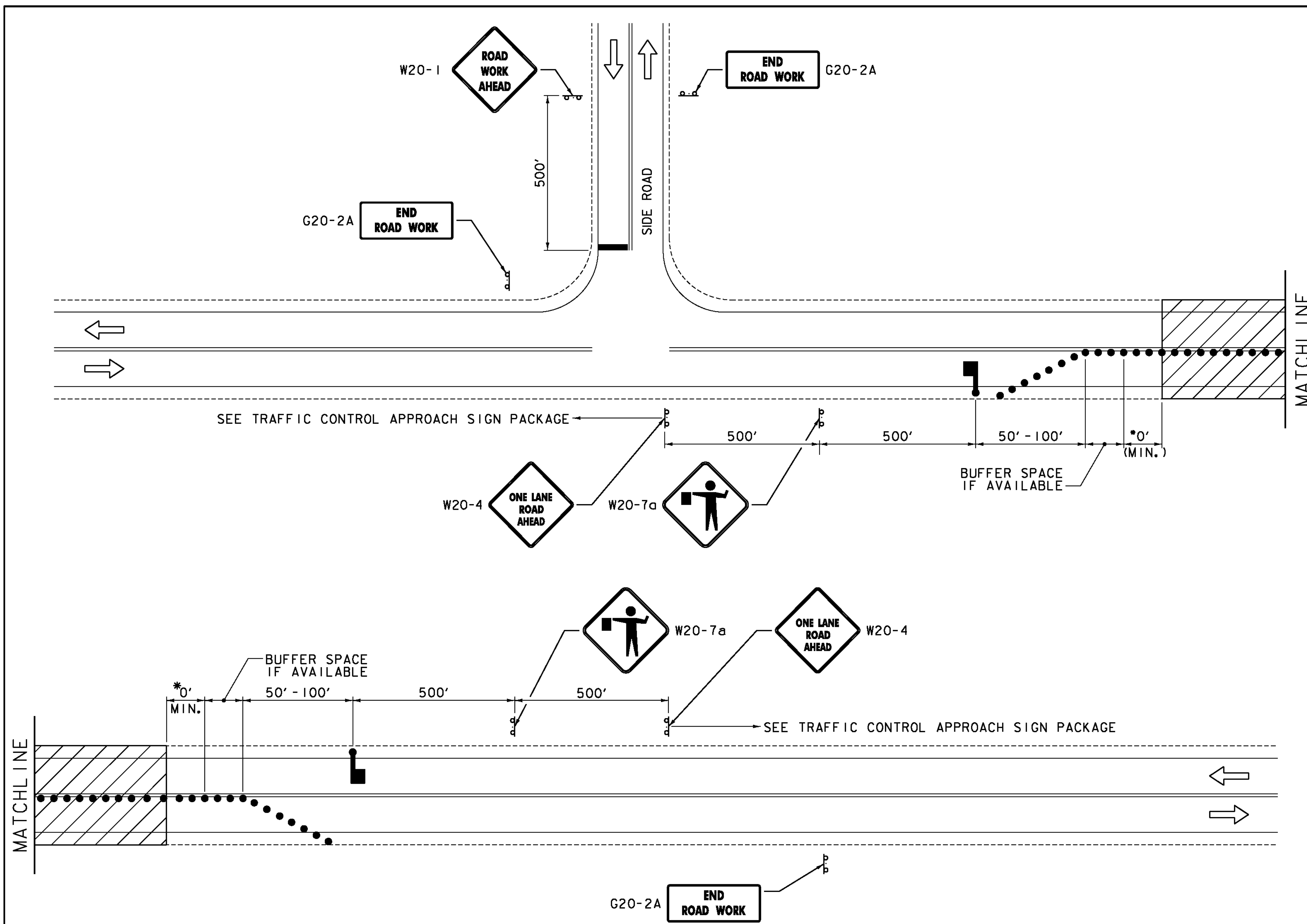
- NOTES:
1. SEE SHEETS 2 AND 3 FOR GENERAL TRAFFIC CONTROL NOTES.
 2. REFER TO STANDARD T-10 FOR CONSTRUCTION APPROACH SIGNS CRITERIA.
 3. REFER TO "TRAFFIC CONTROL APPROACH SIGN PACKAGE" ON THIS SHEET.
 4. CHANNELIZING DEVICE SPACING
TANGENT SECTIONS: 60 FT. (2X DESIGN SPEED LIMIT)
TAPER SECTIONS: 30 FT. (1X DESIGN SPEED LIMIT)
DESIGN SPEED THROUGH CONSTRUCTION ZONE = 30MPH
 5. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES, AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DRIVES, SIDE ROADS OR PARKING AREAS SHALL NOT BE LOCATED WITHIN THE ONE-LANE CLOSURE.
 6. TEMPORARY TRAFFIC BARRIER SHALL BE USED WHEN BRIDGE RAILING IS NOT IN PLACE.
 7. PEDESTRIAN ACCESS TO CROSS BRIDGE SHALL BE PROVIDED AT ALL TIMES.
 8. VT-15 IS TO BE FLAGGER CONTROLLED DURING PEAK HOURS IF DELAYS ON VT-15 EXCEED 2 MINUTES.



LEGEND	
///	MASK LINES
⊗	CHANNELIZING DEVICE
⊕	TEMPORARY TRAFFIC SIGNAL
⊕	TEMPORARY CONSTRUCTION SIGN
⊕	FLASHING BEACON
▨	WORK ZONE
▨	TEMPORARY TRAFFIC BARRIER
▨	TYPE III BARRICADE



PROJECT NAME:	DANVILLE	PLOT DATE:	6/6/2014
PROJECT NUMBER:	BF MEMB(36)	DRAWN BY:	P. ARMATA
FILE NAME:	z13e114detail.dgn	DESIGNED BY:	D. DEBAIE
PROJECT LEADER:	G. BOGUE	CHECKED BY:	G. BOGUE
TRAFFIC CONTROL PLAN - TC-01		SHEET	6 OF 22



* - ACTUAL DIMENSION TO BE DETERMINED BY INDIVIDUAL BRIDGE SITE CONDITIONS AND TO BE SHOWN ON TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR.

TRAFFIC CONTROL PLAN FOR DAYTIME WORK - FLAGGER

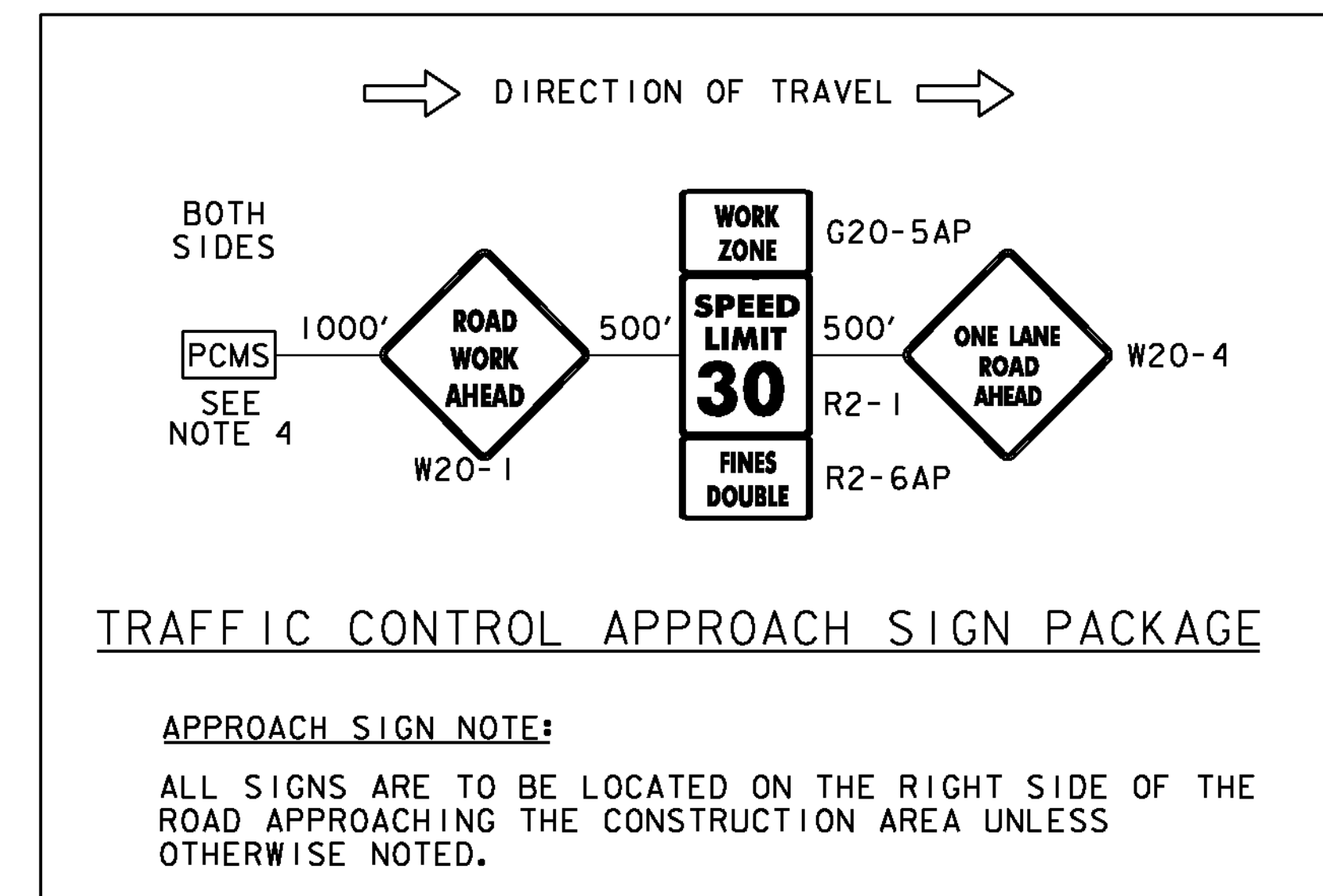
NOT TO SCALE

LEGEND

- FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- WORK AREA
- FLAGGER
- PORTABLE CHANGEABLE MESSAGE SIGN

TRAFFIC CONTROL NOTES (NON-INTERSTATE ROADWAYS):

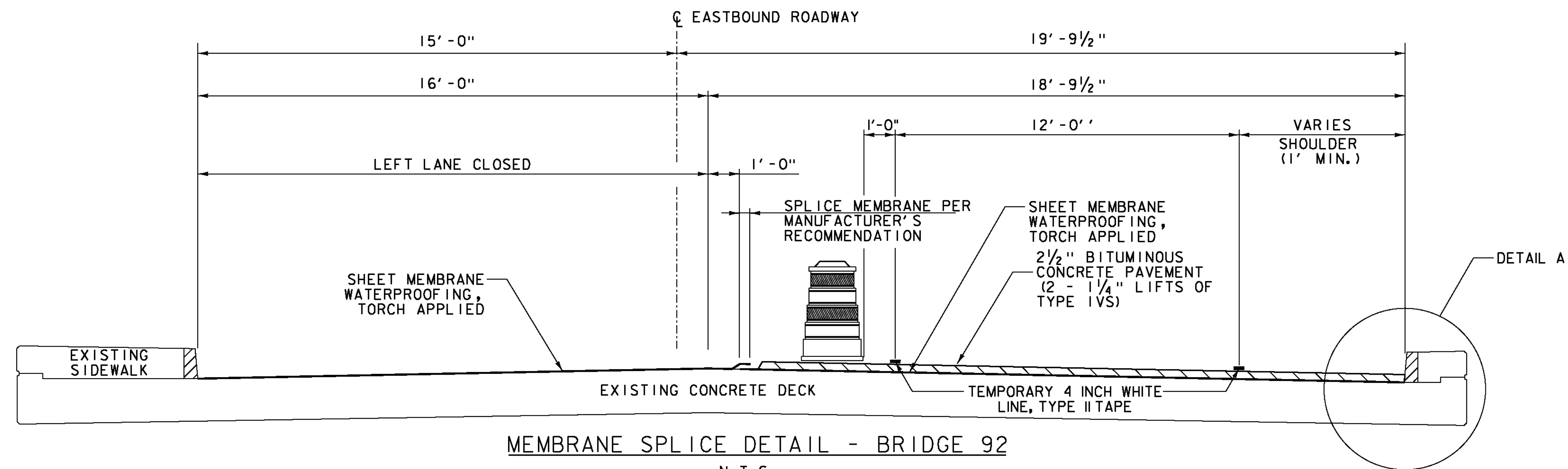
- SEE SHEETS 2 AND 3 FOR GENERAL TRAFFIC CONTROL NOTES.
- THE CONTRACTOR MAY REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS AND OUTSIDE CLEAR ZONE DURING NON-WORK PERIODS, AND DELINEATED BY BARRELS OR CONES. NORMAL TRAFFIC LANES SHALL BE RESTORED DURING NON-WORK PERIODS AND TEMPORARY TRAFFIC SIGNS REMOVED OR COVERED.
- IF CONTRACTOR OPTS TO USE A TEMPORARY TRAFFIC SIGNAL IN LIEU OF FLAGGERS, COST OF TEMPORARY TRAFFIC SIGNAL SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
- THE PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
- ANY PARKING AREAS OR DRIVES WITH AN ENTRANCE/EXIT BETWEEN THE FLAGGER AND THE WORK ZONE SHALL HAVE THAT ENTRANCE/EXIT CLOSED WITH CONES OR DRUMS, PROVIDED ADDITIONAL ENTRANCES/EXITS EXIST IN THE AREA APPROACHING THE FLAGGER.
- ANY PUBLIC HIGHWAYS BETWEEN THE FLAGGER AND THE WORK ZONE WILL REQUIRE AN ADDITIONAL FLAGGER TO MAINTAIN TRAFFIC CONTROL FOR THE PUBLIC HIGHWAY.
- UNIFORMED TRAFFIC OFFICERS ARE ASSUMED TO BE REQUIRED DURING SETUP OF TRAFFIC CONTROL MEASURES DUE TO THE PROXIMITY OF VT ROUTE 15.



PROJECT NAME: DANVILLE
PROJECT NUMBER: BF MEMB(36)

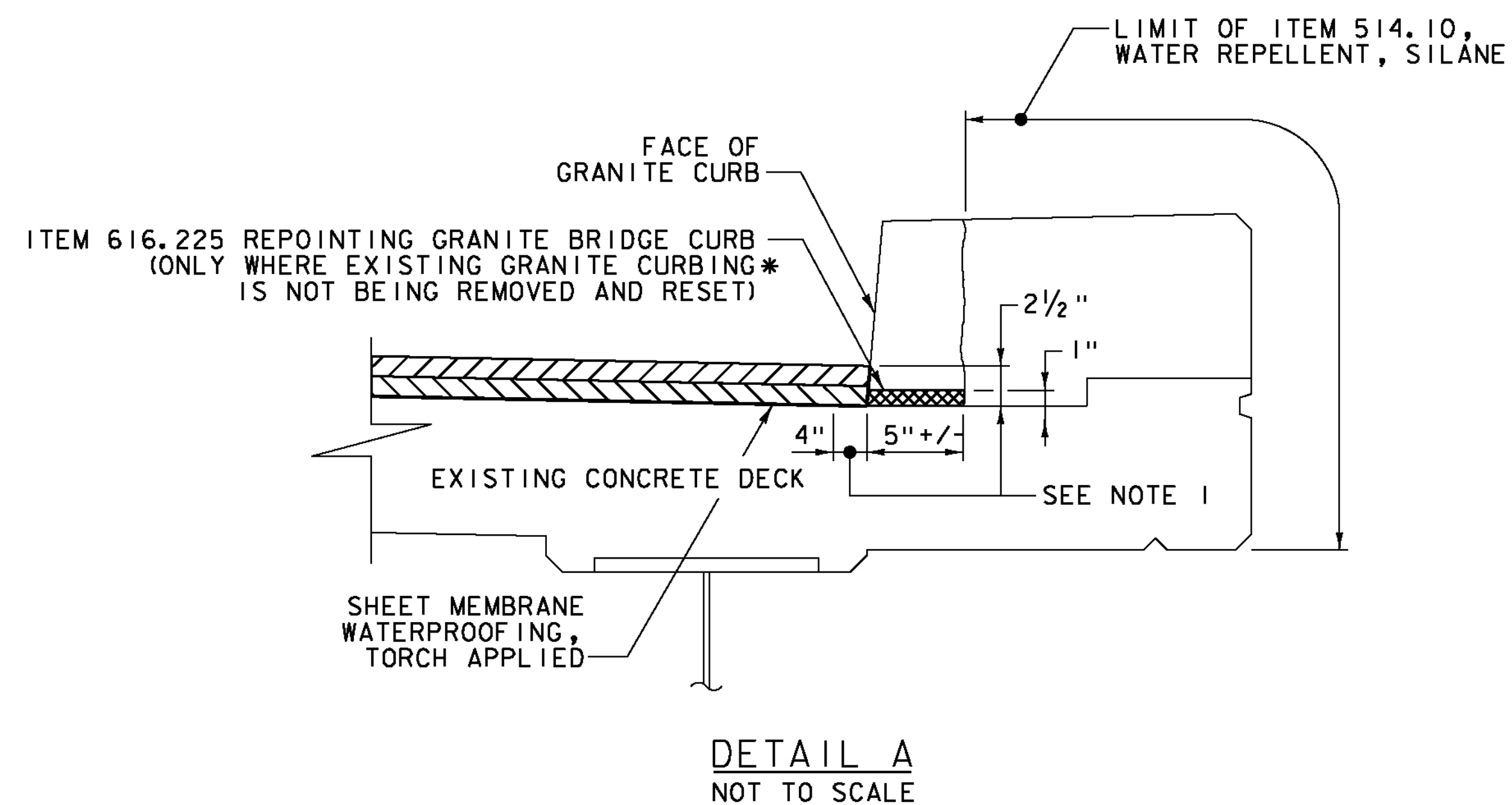
FILE NAME: z13e114+cp.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
TRAFFIC CONTROL PLAN TC-02

PLOT DATE: 6/6/2014
DRAWN BY: D. GROVER
CHECKED BY: D. DEBAIE
SHEET 7 OF 22



NOTES:

1. LEFT LANE CLOSURE AND LEFT SIDE MEMBRANE SPLICE SHOWN. RIGHT LANE CLOSURE AND RIGHT SIDE MEMBRANE SPLICE SIMILAR. PLACEMENT OF THE MEMBRANE SHALL START AT THE LOW SIDE OF THE BRIDGE. THE SPLICE SHALL BE AS SHOWN ABOVE, WITH THE HIGH SIDE OVERLAPPING THE LOW SIDE.
2. PEDESTRIAN USE OF THE BRIDGE SHALL BE ACCOMMODATED AT ALL TIMES. TEMPORARY TRAFFIC BARRIERS WILL BE REQUIRED TO SEPARATE PEDESTRIANS FROM THE WORKZONE AND VEHICULAR TRAFFIC WHEN SIDEWALK IS CLOSED



DETAIL A NOTES:

1. INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.
2. POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED."
3. SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
4. IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 519.04, BLAST CLEAN 2 1/2" UP THE FACE OF CURB PRIOR TO PLACING THE MEMBRANE, INCIDENTAL TO ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED."

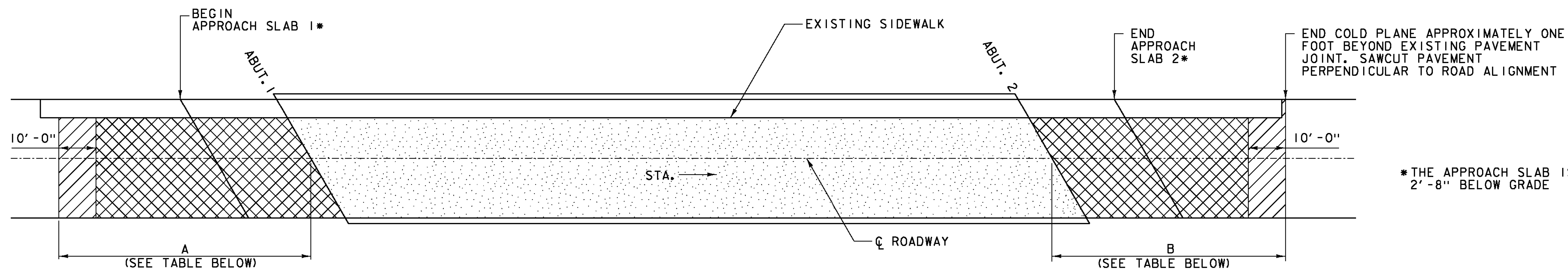
*EXISTING MORTAR BED AND VERTICAL CURB JOINTS TO BE REPOINTED AS DIRECTED BY THE ENGINEER AND PAID AS ITEM 616.225 REPOINTING GRANITE BRIDGE CURBS. FOR QUANTITY ESTIMATE IT WAS ASSUMED THAT 20% OF THE BRIDGE CURB REQUIRES REPOINTING. A 1" HIGH BY 5" DEEP MORTAR BED AND VERTICAL JOINTS EQUATES TO 3.0 GAL/10 LF OF CURB.

PROJECT NAME: DANVILLE
PROJECT NUMBER: BF MEMB(36)

FILE NAME: z13e114detail.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
MEMBRANE SPLICE DETAILS MD-01

PLOT DATE: 6/6/2014
DRAWN BY: D. GROVER
CHECKED BY: G. BOGUE
SHEET 8 OF 22





*THE APPROACH SLAB IS BURIED 2'-8" BELOW GRADE

-  COLD PLANE - 1 1/4"
-  COLD PLANE - 2 1/2"
-  BRIDGE PAVEMENT REMOVAL

BITUMINOUS CONCRETE REMOVAL PLAN

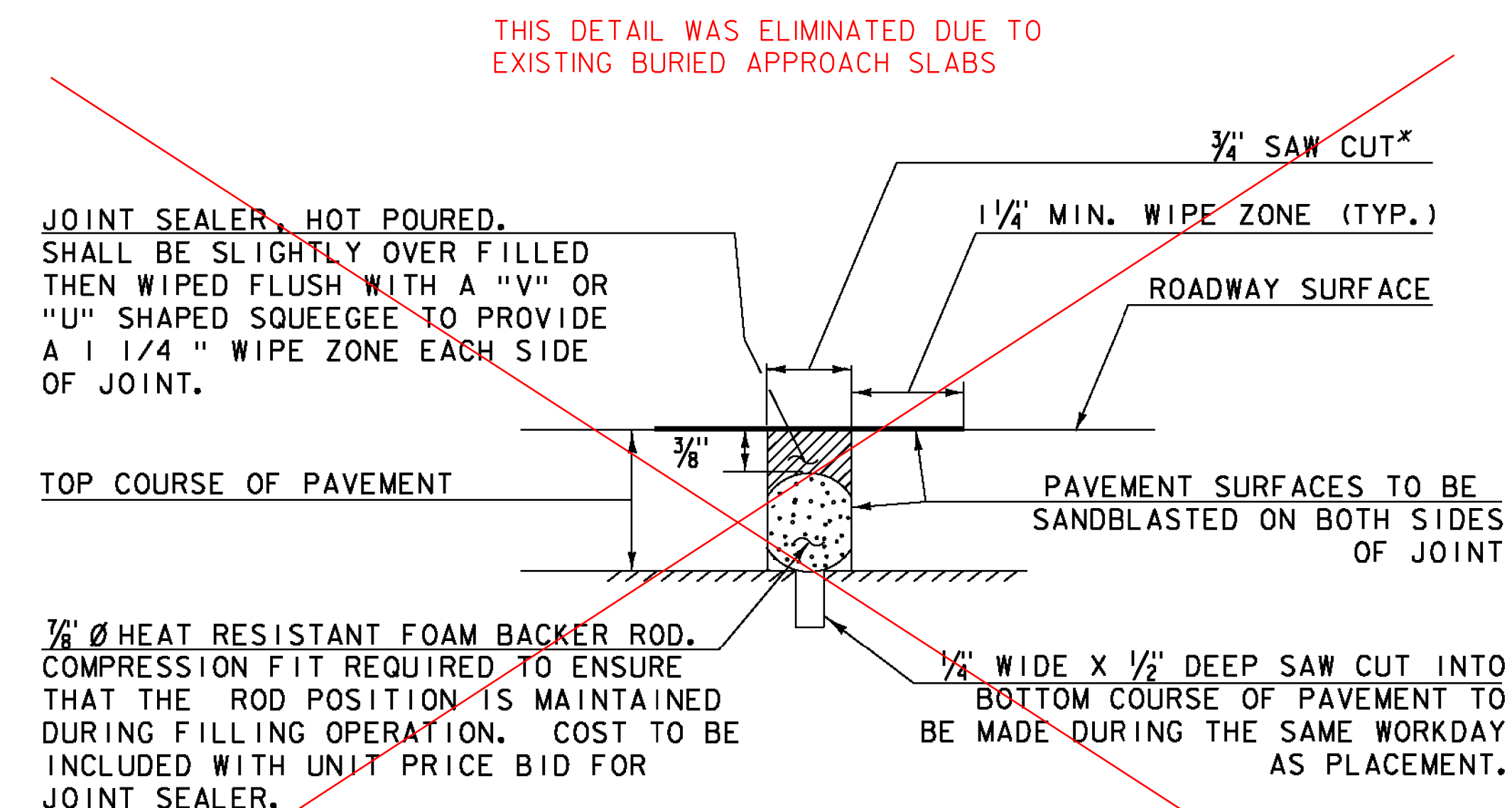
NOT TO SCALE

PAVEMENT REMOVAL NOTES:

1. REMOVE PAVEMENT TO THE TOP OF THE CONCRETE BRIDGE DECK. REMOVE PAVEMENT TO THE TOP OF THE APPROACH SLAB OR 2 1/2", WHICHEVER IS LESS, AND REMOVE THE BARRIER MEMBRANE WHERE APPLICABLE.
2. REMOVAL OF THE BIT. CONC. PAV'T. WILL BE PAID FOR UNDER ITEM 529.10 REMOVAL OF BRIDGE PAVEMENT.
3. REMOVAL OF THE BARRIER MEMBRANE WILL BE PAID FOR UNDER ITEM 580.16 SURFACE PREPARATION FOR MEMBRANE.

BRIDGE LENGTH AND WIDTH (CURB TO CURB)				
BRIDGE NUMBER	WIDTH (CURB TO CURB) (FEET)	LENGTH (FEET)	A (FEET)	B (FEET)
92	34.8	74	50	APPROX. 120'

ASPHALTIC PLUG JOINT REPLACEMENT SCHEDULE			
BRIDGE NO.	ABUT. 1	ABUT. 2	TOTAL
92	41 LF	41 LF	82 LF

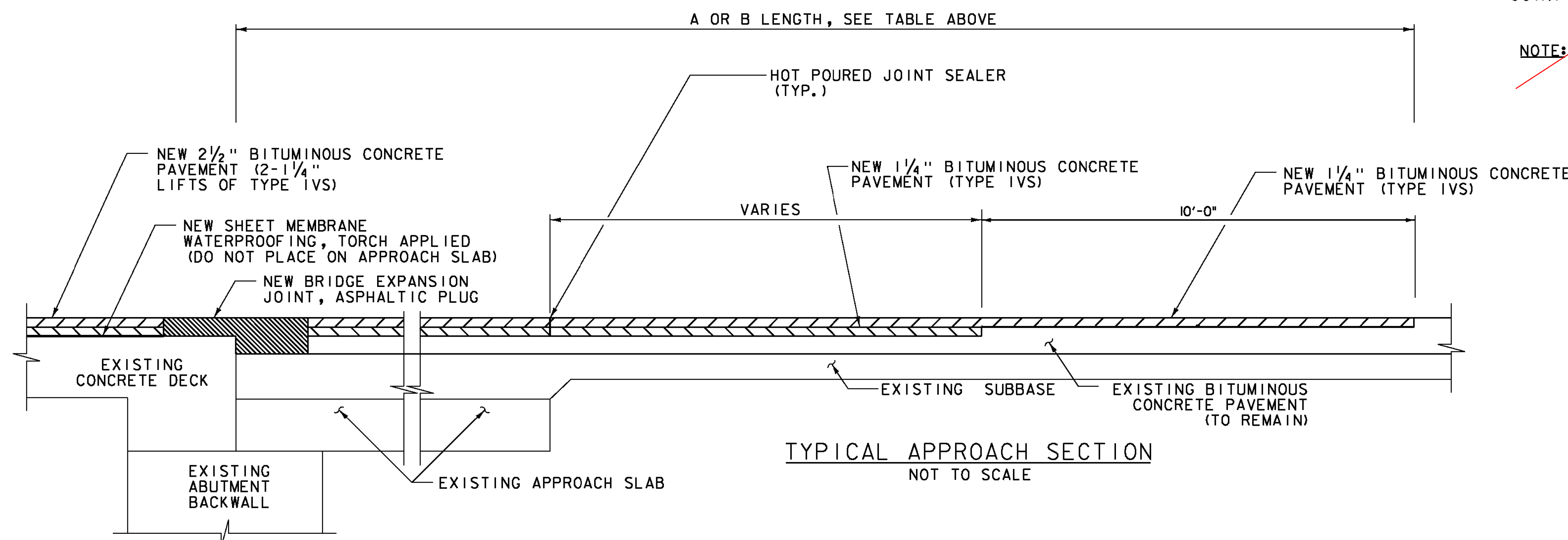


NOTE: PLACE JOINT SEALER, HOT POURED AT THE BEGINNING OF APPROACH SLABS.

SAWED PAVEMENT JOINT DETAIL

N. T. S.

*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.

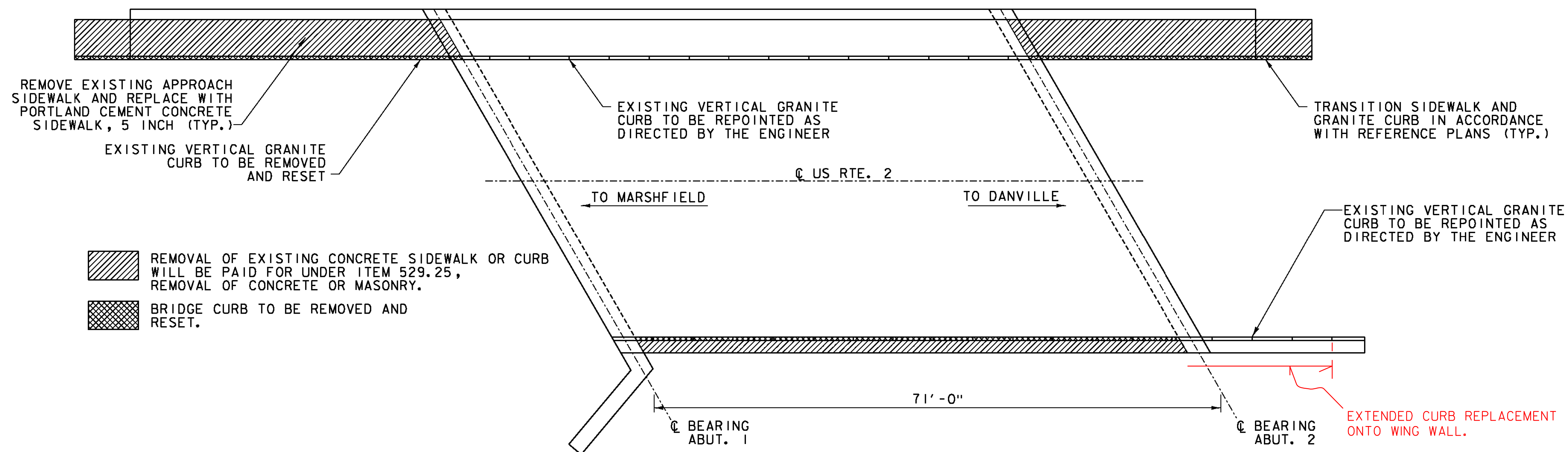


TYPICAL APPROACH SECTION

NOT TO SCALE

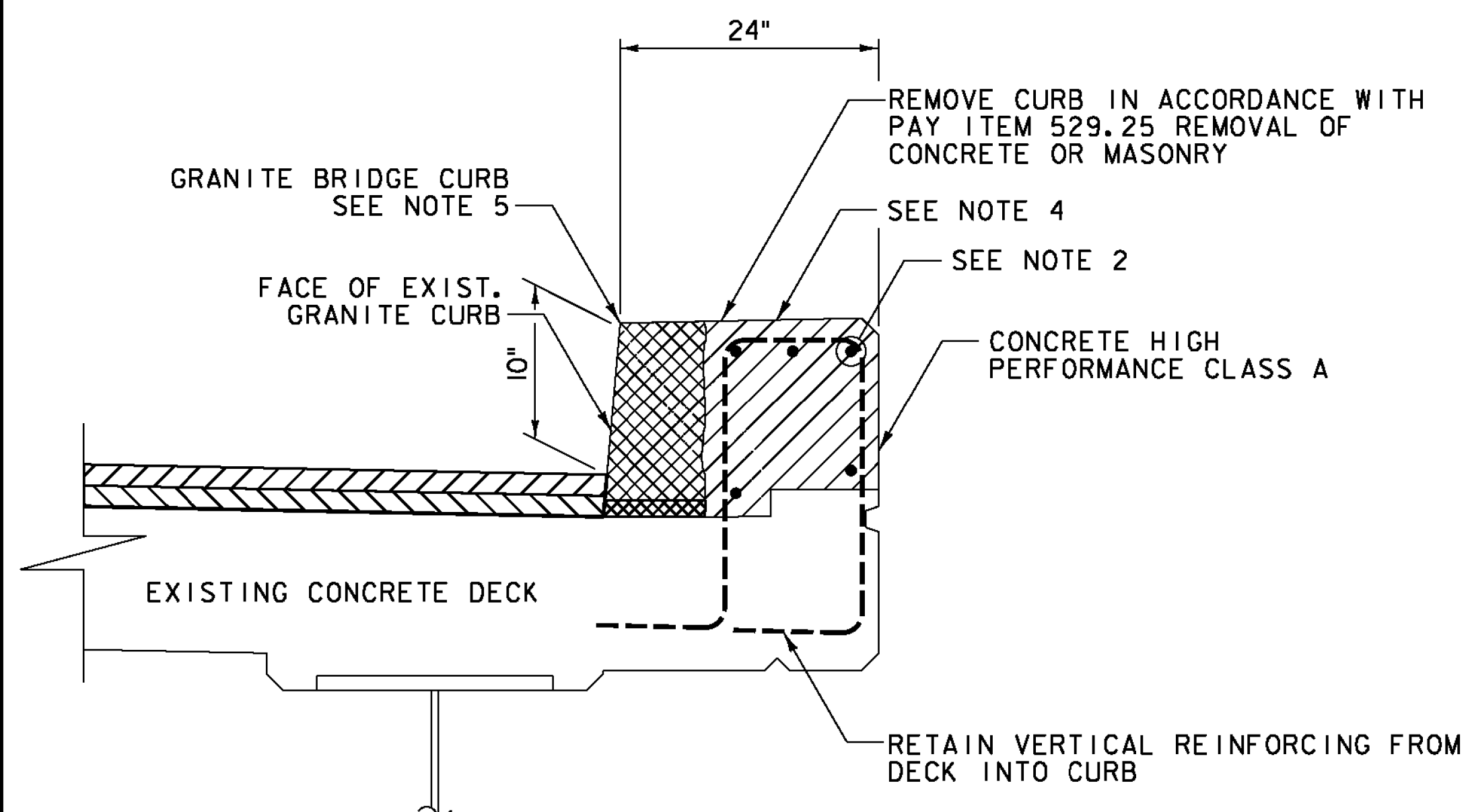


PROJECT NAME: DANVILLE	
PROJECT NUMBER: BF MEMB(36)	
FILE NAME: z13ell4detail.dgn	PLOT DATE: 7/1/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: D. GROVER
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
BITUMINOUS CONCRETE DETAILS BD-01	SHEET 9 OF 22

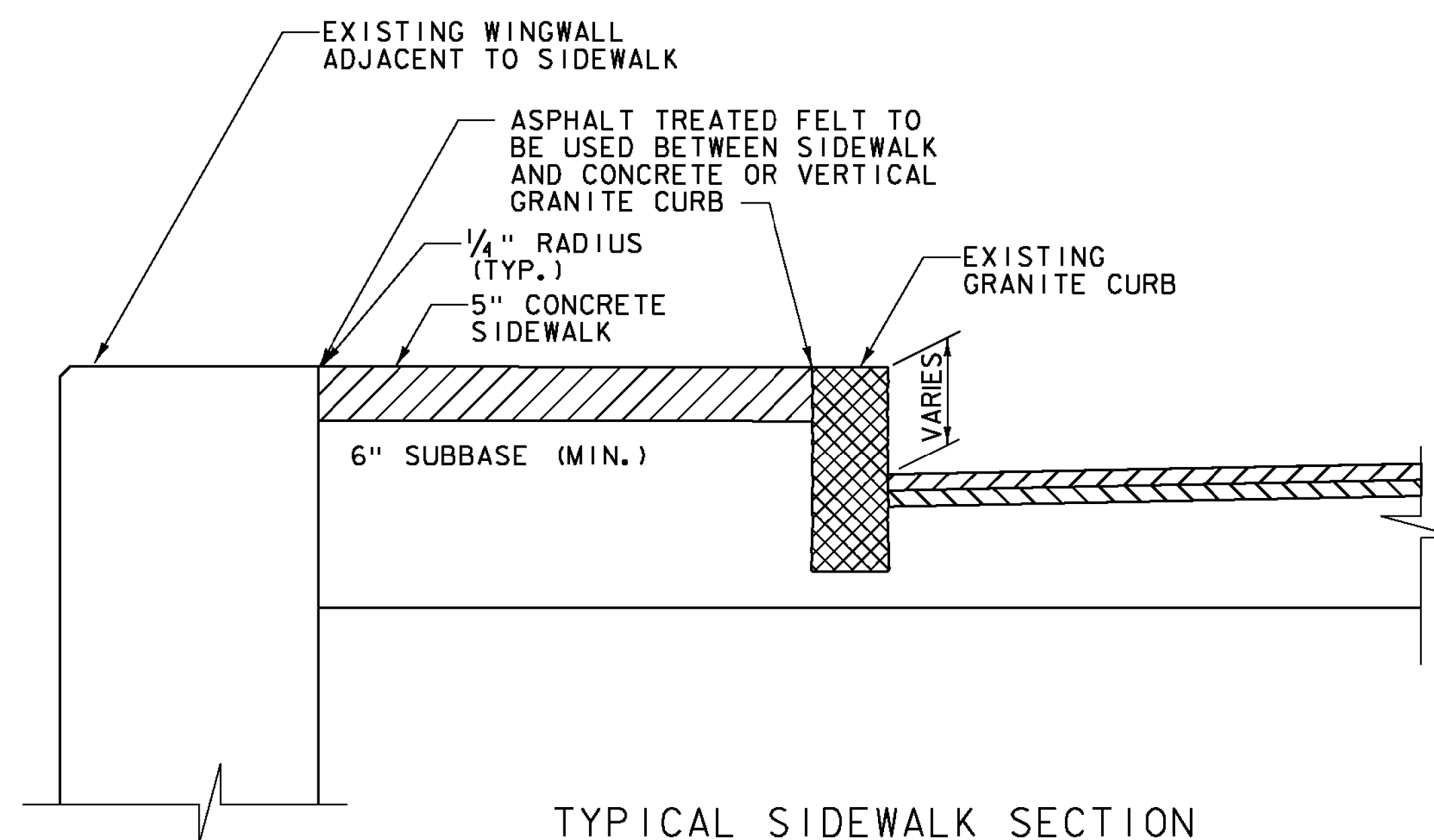


CONCRETE & SIDEWALK REPAIR PLAN

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



CURB DETAIL
NOT TO SCALE



TYPICAL SIDEWALK SECTION
NOT TO SCALE

NOTES:

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1".
2. INSTALL NEW LONGITUDINAL EPOXY COATED REINFORCING STEEL IN CURB. PLACE REINFORCING STEEL TO MATCH REFERENCE PLANS. USE 60 ksi #5 EPOXY COATED REINFORCING STEEL, MINIMUM 2 FOOT LAP.
3. CONCRETE CURB JOINTS SHALL BE IN ACCORDANCE WITH VTRANS STRUCTURES DETAIL SD-502.00.
4. EXISTING BRIDGE RAIL NOT SHOWN. INSTALL NEW POST ANCHOR ASSEMBLIES AND ANCHOR BOLTS IN ACCORDANCE WITH ATTACHED REFERENCE SHEET, SB-R1-71. ALL COMPONENTS NECESSARY TO RE-INSTALL ALUMINUM BRIDGE RAILING SHALL BE PAID FOR UNDER ITEM 525.11 RESET EXISTING BRIDGE RAILING.
5. REMOVE AND RESET EXISTING GRANITE BRIDGE CURB. PAYMENT WILL BE MADE UNDER ITEM 616.40 REMOVING AND RESETTING CURB.

PROJECT NAME: DANVILLE
PROJECT NUMBER: BF MEMB(36)

FILE NAME: z13ell4str_def.s.dgn PLOT DATE: 7/1/2014
PROJECT LEADER: G. BOGUE DRAWN BY: L. BUXTON
DESIGNED BY: J. HUNGERFORD CHECKED BY: G. BOGUE
SIDEWALK AND CURB-CONCRETE REPAIR SR-01 SHEET 10 OF 22



DANVILLE BR 028-3(19)S

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125	5-74 REGULATORY SIGNS

2 APR 66

6 DEC 71

12 DEC 74 R

25 OCT 85 R

28 APR 86 R

30 OCT 85 R

04 APR 73 R

24 AUG 81 R

03 FEB 86 R

25 FEB 85 R

03 FEB 86 R

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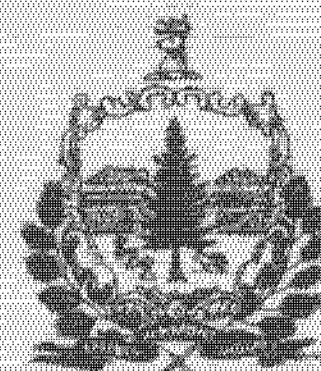
03 FEB 86 R

03 FEB 86 R

03 FEB 86 R

03 FEB 86 R

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
TOWN OF DANVILLE
COUNTY OF CALEDONIA
U.S. ROUTE 2
(FAP)

Beginning at a point 1.611 miles easterly of the Cabot-Danville town line and extending easterly 760 feet.

Length of Roadway 672.12 ft = .127 mi
Length of Bridge 73.88 ft = .014 mi
Length of Railroad Crossing 14.00 ft = .003 mi
Length of Project 760.00 ft = .144 mi

Project consists of widening existing structure over Joe's Brook and necessary roadway approaches.

RECORD PLANS AND MATERIAL SUPPLIERS
CONTRACTOR: AUSTIN CONSTRUCTION INC., CONCORD, VT.
RESIDENT ENGINEER: FREDRICK H. REED
CONTRACT DATED: OCT. 30, 1967 CONSTRUCTION BEGAN APRIL 13, 1967 CONSTRUCTION SUSPENDED 8-6-67 CONSTRUCTION RESUMED 6-2-68
CONSTRUCTION COMPLETED DEC. 7, 1968
CONSTRUCTION ACCEPTED DEC. 7, 1968
RECORD PLANS: ROBERT E. SMITH
JOINT SEALER: POLYURETHANE, REXNORD CHEMICAL PRODUCTS INC., MASPETH, NY.
BRIDGE RAILING: 3 RAIL ALUMINUM & ALUMINUM /
PEDESTRIAN: L.B. FOSTER, DARTMOUTH, GA.
BEARING DEVICE ASSEMBLY: VT. STRUCTURAL STEEL
18" R.C.C.S. PIPE (064) BURLINGTON, VT.
NORTHEASTERN CULVERT, WESTMINSTER STA., VT.
6" RIGID PLASTIC PIPE: JOHN
MANSFIELD J.M. MFG. CO., INC.
GARREN COVER SPRINGS, FLORIDA
CAST IRON GRATE: QUALITY WATER
PRODUCTS, SO. DARTMOUTH, MA.
6" UNDERDRAIN CARRIER PIPE & FLUSHING PIPE:
NORTHEASTERN CULVERT, WESTMINSTER STA., VT.
BITUMINOUS CONCRETE CURB, TYPE B:
COOLEY, BERLIN, VT.

SAND BORROW: RANDAL PIT, DANVILLE, VT.
GRANULAR BORROW: RANDAL PIT, DANVILLE, VT.
GRANULAR BACKFILL FOR STRUCTURES: DAVISON PIT
WALDEN, VT.
SUBBASE OF DENSE GRADED CRUSHED STONE: WATERFORD
SAND & GRAVEL, WATERFORD, VT.
PLANT MIXED BASE COURSE: PIKE, WATERFORD, VT.
CONCRETE CLASS A & B: LAWRENCE, ST. JOHNSBURY, VT.
STRUCTURAL STEEL: VT. STRUCTURAL STEEL
BURLINGTON, VT.
REINFORCING STEEL & EPOXY COATED REINFORCING
STEEL: K. ROSS BROS. SUPPLY CO. INC., LEBANON, N.H.
SHEAR CONNECTORS: VT. STRUCTURAL STEEL
BURLINGTON, VT.
STRUCTURE PAINTING: NEW ENGLAND
PAINT MFG. CO. INC., CENTRAL FALLS, RI.
WATER REPELLENT: A.M. HARRIS, NEW BRITAIN,
CONN.
SHEET MEMBRANE WATERPROOFING:
PROTECTO WRAP CO. DENVER, COLORADO
JOINT SEALER, HOT POURED:
W.R. MEADOWS OF PA.
YORK, PA.

CONVENTIONAL SIGNS
COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
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
TOP OF CUT
TOE OF SLOPE

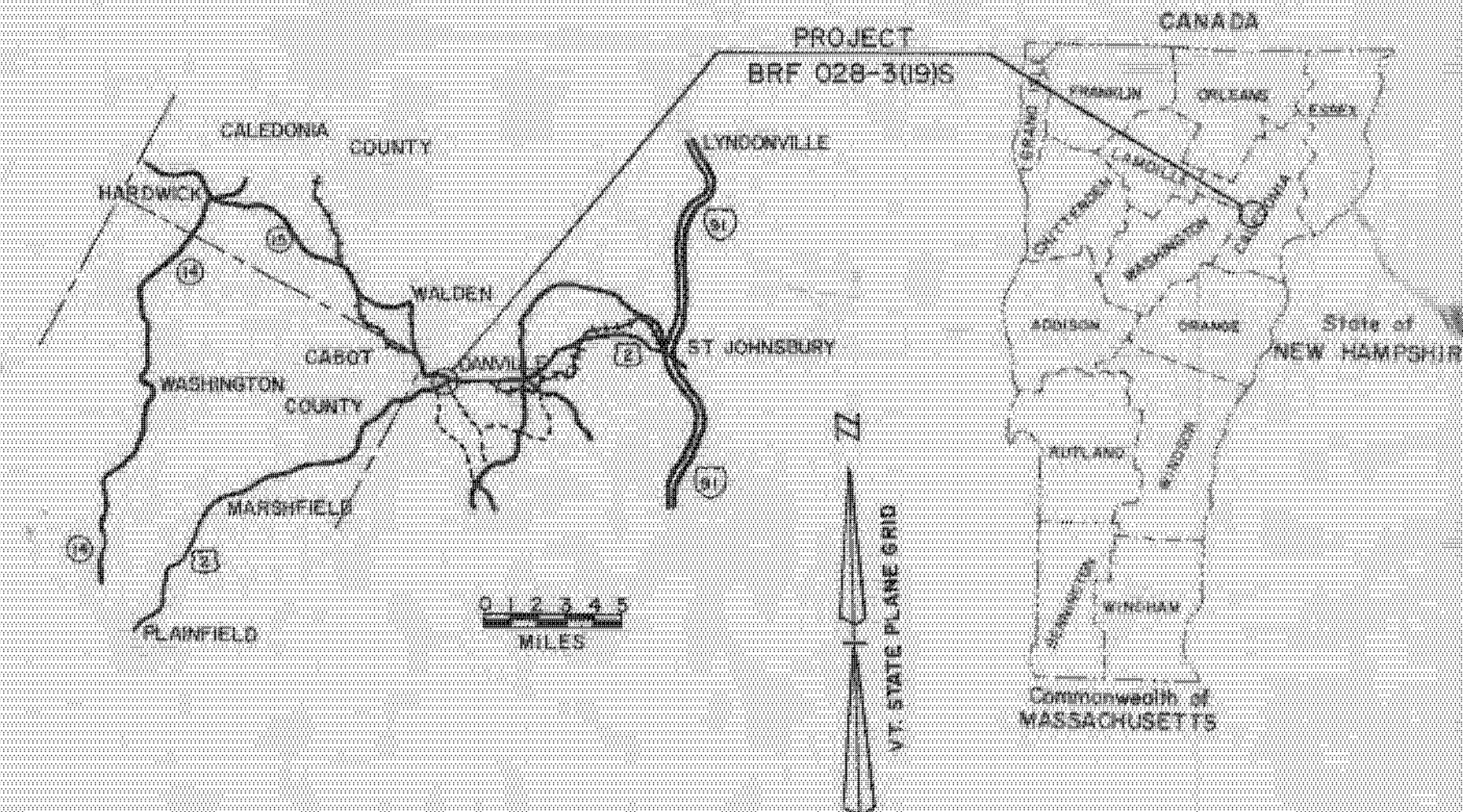
DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

SCALE IN FEET
0 50 100 150 200

DANVILLE
BF MEMB (36)
SHEET 11 OF 22
BRIDGE 92
FOR REFERENCE ONLY

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING
CHANGES AS MAY BE REQUIRED BY THE FEDERAL
HIGHWAY ADMINISTRATION OR THE CHIEF ENGINEER.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE
WITH THESE PLANS AND THE STANDARD SPECIFICATIONS
FOR CONSTRUCTION DATED 1966, FOR USE ON THESE
PROJECTS, INCLUDING ALL SUBSEQUENT PROVISIONS AS
ARE INCORPORATED IN THESE PLANS.

SUBMITTED BY ORDER OF THE STATE TRANSPORTATION BOARD
APPROVED: *Arthur J. Ross* DATE: 3/24/86
ACTING CHIEF ENGINEER
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____ DATE: _____
DIVISION ADMINISTRATOR
PROJECT BR 028-3(19)S
SHEET 11 OF 22 SHEETS



PROJECT PROCESSED UNDER
SECONDARY ROAD PLAN

END APPRO. CONSTR.

END APPRO. CONSTR.

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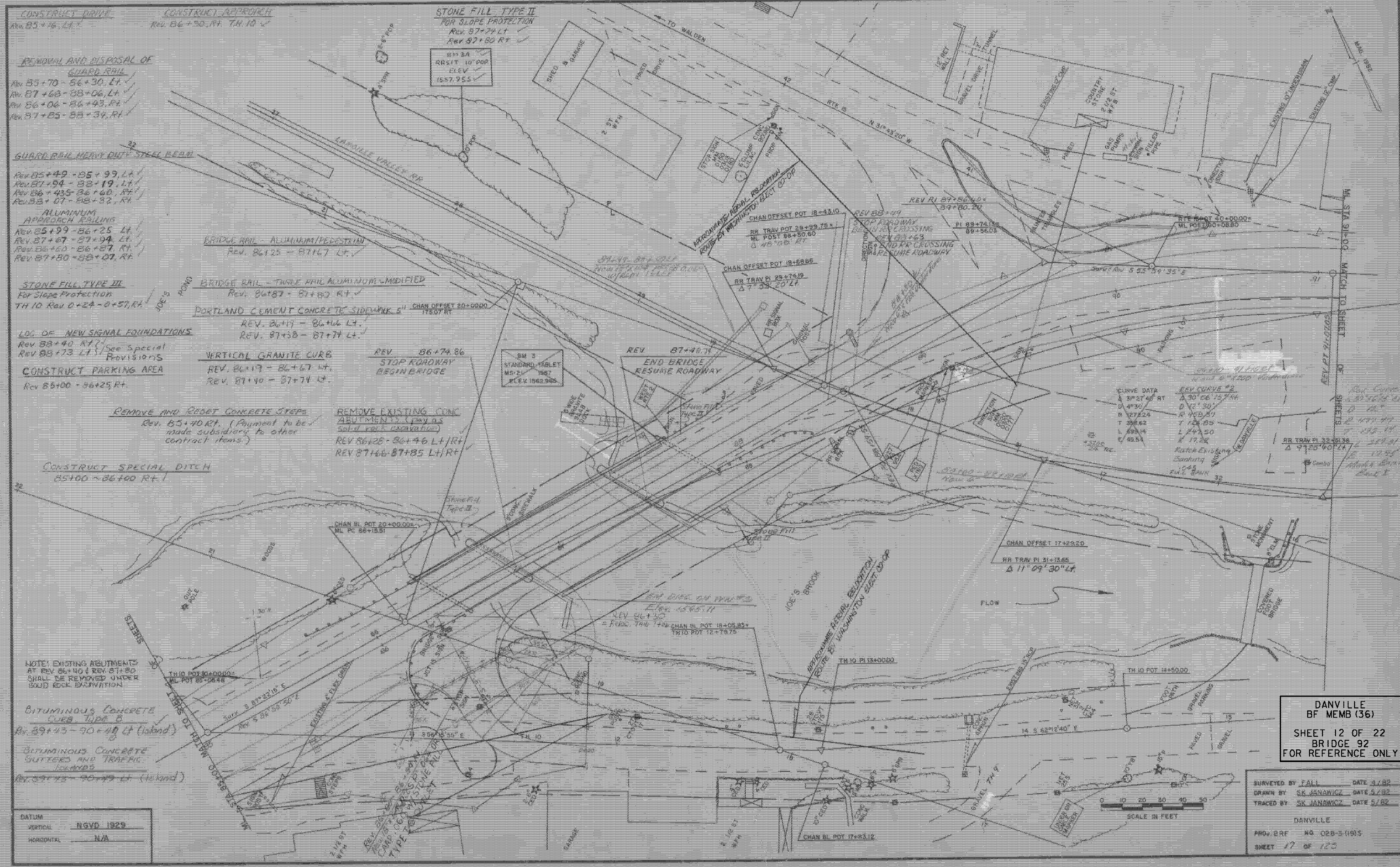
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CONSTRUCT DRIVE
Rev 85+46-86+41 LT

CONSTRUCT APPROACH
Rev 86+30-87 TH 10

REMOVAL AND DISPOSAL OF
GUARD RAIL
Rev 83+70-86+30 LT
Rev 87+60-88+06 LT
Rev 86+06-86+43 RT
Rev 81+03-88+34 RT

GUARD RAIL HEAVY DUTY STEEL BEAM
Rev 85+49-85+99 LT
Rev 87+94-88+19 LT
Rev 86+43-86+60 RT
Rev 88+07-88+32 RT

ALUMINUM
APPROACH RAILING
Rev 85+99-86+25 LT
Rev 87+67-87+94 LT
Rev 86+60-86+87 RT
Rev 87+80-88+07 RT

STONE FILL TYPE II
For Slope Protection
TH 10 Rev 0+24-0+57 RT

LOC OF NEW SIGNAL FOUNDATIONS
Rev 88+40 RT
Rev 88+73 LT (See Special Provisions)

CONSTRUCT PARKING AREA
Rev 86+00-86+25 RT

BRIDGE RAIL - ALUMINUM/PEDESTAL
Rev. 86+25-87+67 LT

BRIDGE RAIL - THREE RAIL ALUMINUM MODIFIED
Rev. 86+87-87+80 RT
PORTLAND CEMENT CONCRETE SIDEWALK
Rev. 86+19-86+46 LT
Rev. 87+38-87+74 LT

VERTICAL GRANITE CURB
Rev. 86+19-86+46 LT
Rev. 87+38-87+74 LT

STOP ROADWAY
BEGIN BRIDGE

REMOVE AND REEPT CONCRETE STEPS
Rev. 85+40 RT. (Pavement to be made subsidiary to other contract items)

REMOVE EXISTING CURB
ABUTMENT 1 (Pavement to be made subsidiary to other contract items)
Rev 86+28-86+46 LT/RT
Rev 87+66-87+85 LT/RT

CONSTRUCT SPECIAL DITCH
85+00-86+00 RT+1

NOTE: EXISTING ABUTMENTS
AT REV 86+40 & REV 87+80
SHALL BE REMOVED UNDER
CUTTING ROCK EXCAVATION

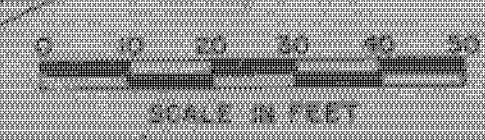
BITUMINOUS CONCRETE
CURB TYPE B
Rev 89+43-90+49 LT (Island)

BITUMINOUS CONCRETE
DITCHES AND TRAFFIC
ISLANDS
Rev 89+43-90+49 LT (Island)

DATUM
VERTICAL NGVD 1929
HORIZONTAL N/A

DANVILLE
BF MEMB (36)
SHEET 12 OF 22
BRIDGE 92
FOR REFERENCE ONLY

SURVEYED BY FALL DATE 3/82
DRAWN BY SK JANAWICZ DATE 3/82
TRACED BY SK JANAWICZ DATE 5/82
DANVILLE
PROJ 2RF NO 02B-3-1915
SHEET 17 OF 120



PLAN	DATE	BY	CHK
DESIGNED BY			
CHECKED BY			
APPROVED BY			
NOTED BY			
DATE			

PROFILE	DATE	BY	CHK
DESIGNED BY			
CHECKED BY			
APPROVED BY			
NOTED BY			
DATE			

DIAGRAM OF VEHICLE MOVEMENT
YEAR 2005

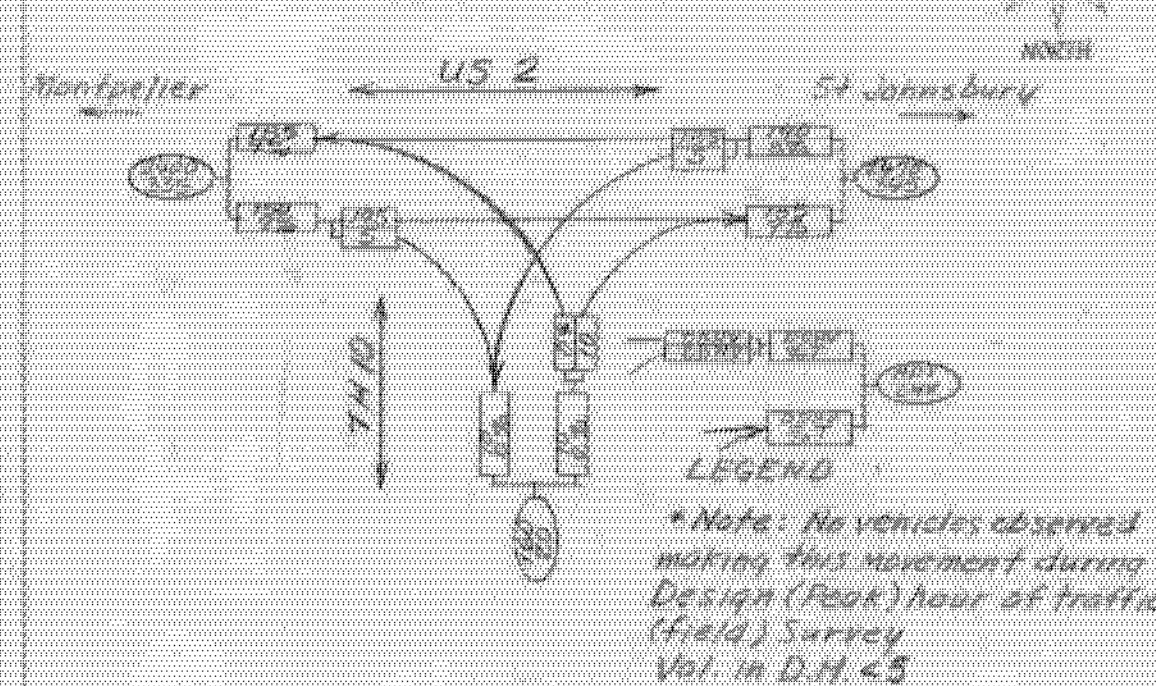
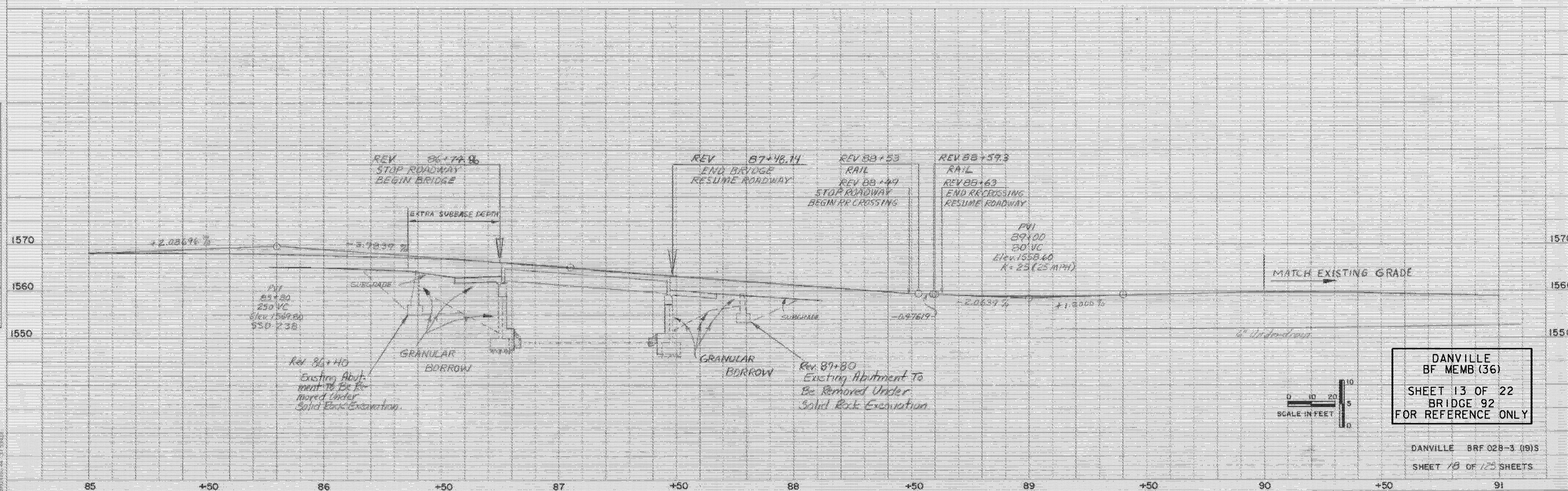
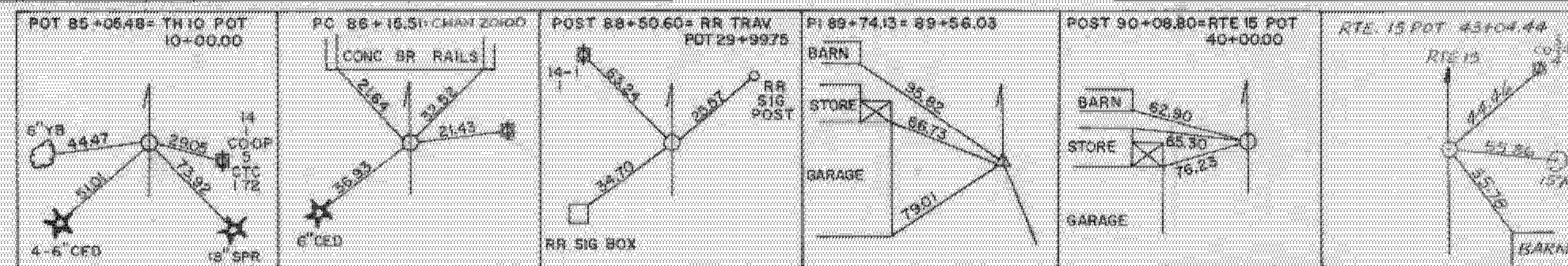
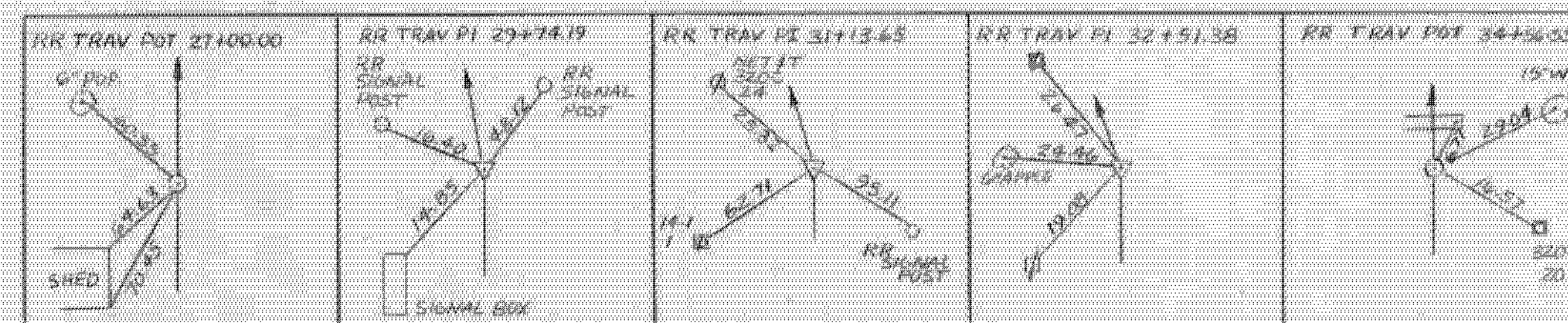
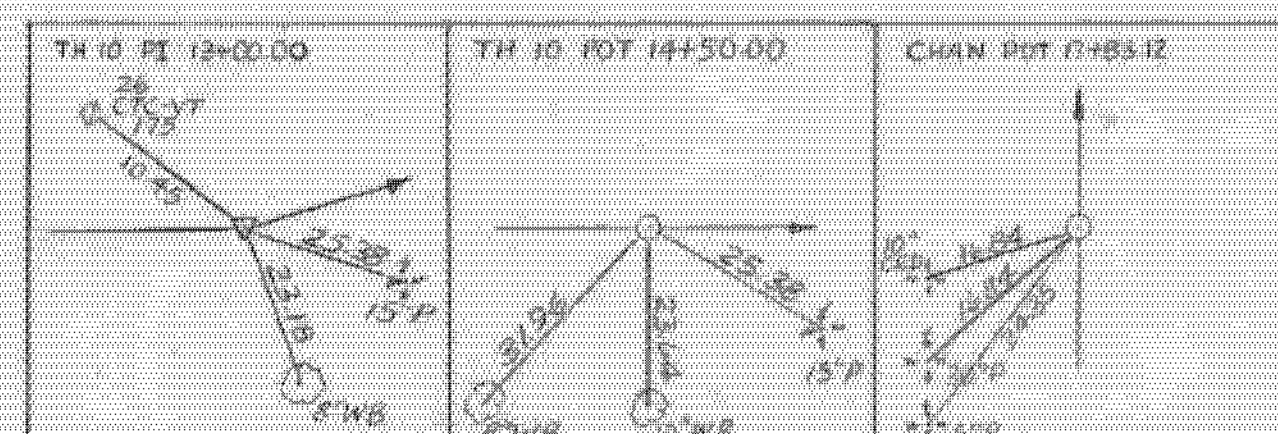
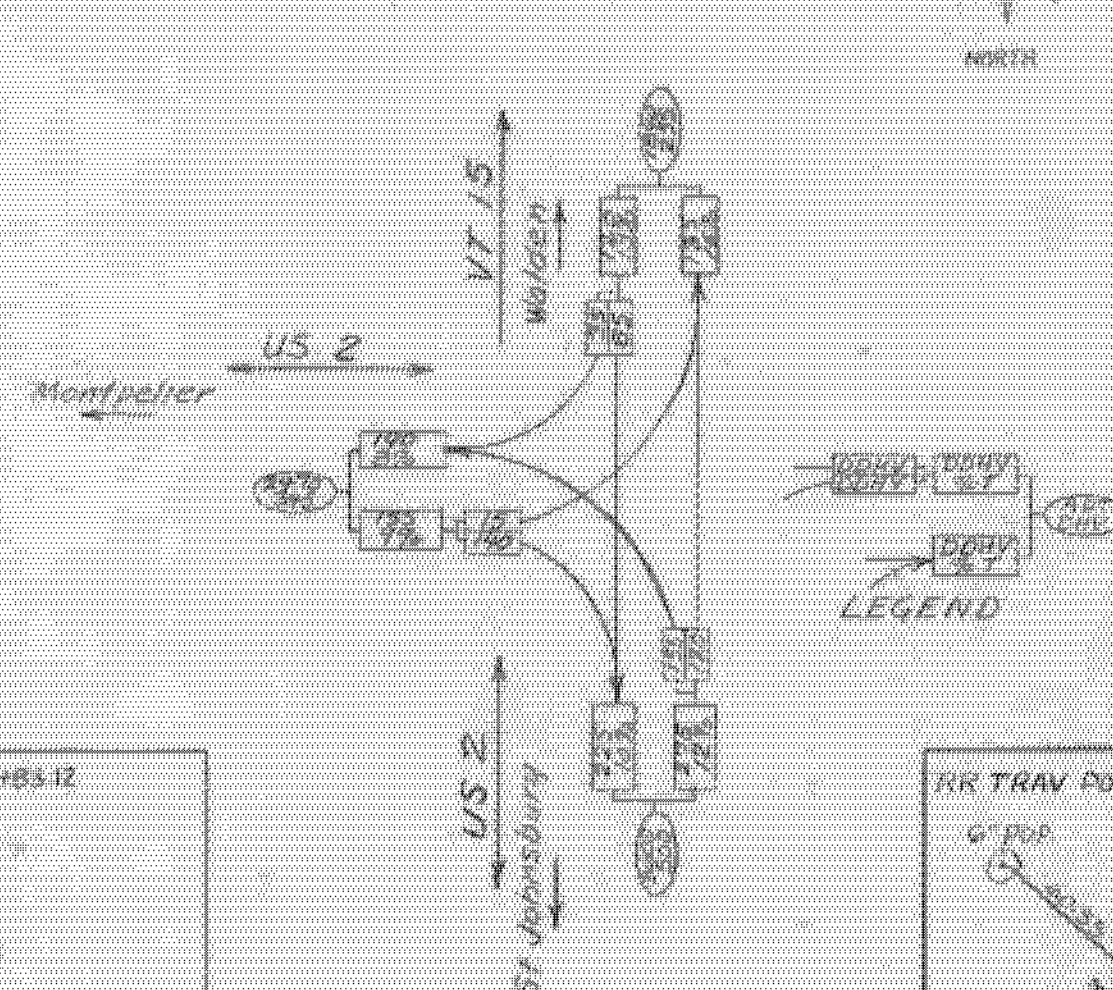


DIAGRAM OF VEHICLE MOVEMENT
YEAR 2005

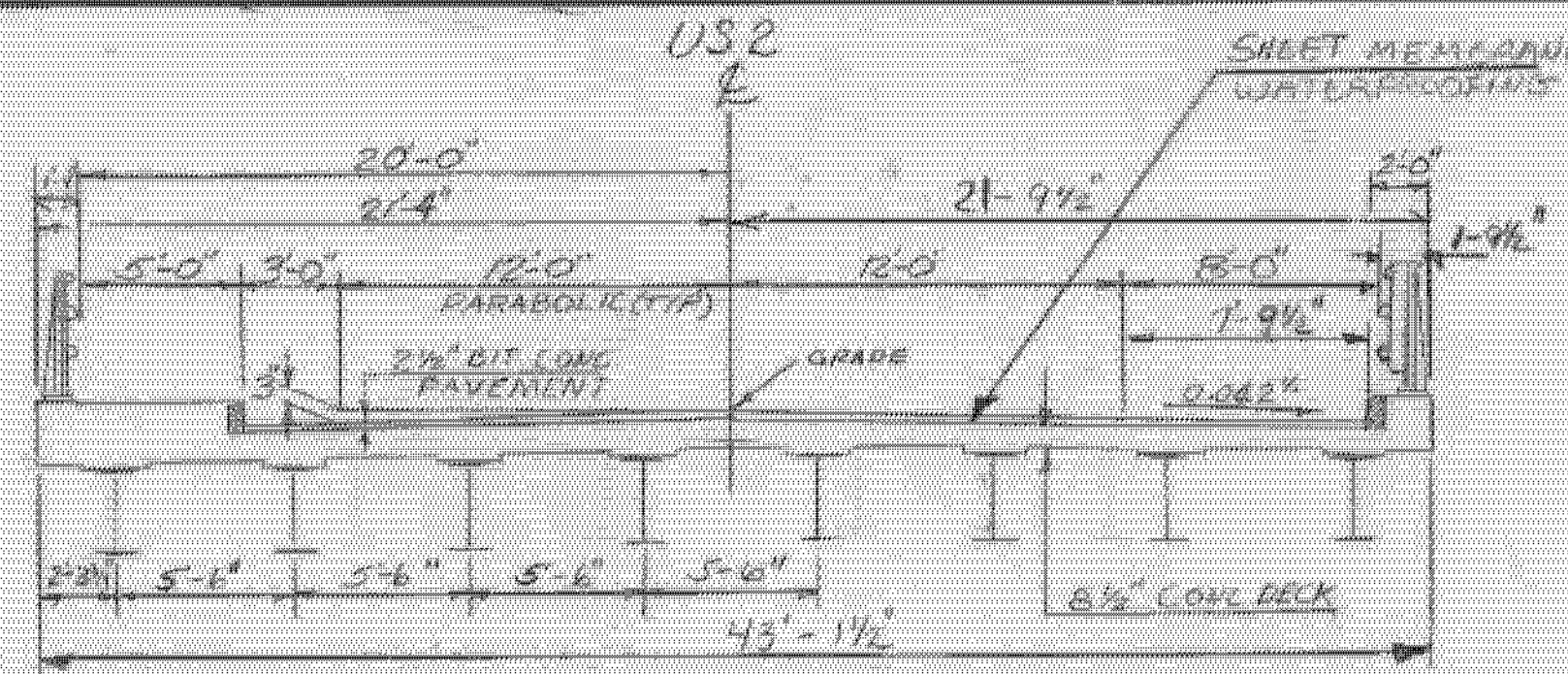


DANVILLE
BF MEMB (36)
SHEET 13 OF 22
BRIDGE 92
FOR REFERENCE ONLY

DANVILLE BR 028-3 (09)S
SHEET 13 OF 125 SHEETS

NEW HIGHWAY SECTION — BRIDGE APPROACHES

SEE ROADWAY X-SECTIONS 3



BRIDGE TYPICAL SECTION
(NOT TO SCALE)

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATION FOR CONSTRUCTION, DATED 1986, AND ITS LATEST REVISIONS, AND THE AGENCY'S STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, THIRTEENTH EDITION, AND ITS LATEST REVISIONS. BRIDGE IS DESIGNED FOR HS-20-44. THE FOLLOWING GENERAL NOTES FROM STANDARD SPEC-D-175 APPLY TO THIS PROJECT: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15 & 16.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE ROADWAY DESIGN PLANS AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS FOR ANY ITEMS "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS" AND "TRAFFIC CONTROL SIGNAL (MODIFIED)". ONE-WAY TRAFFIC WILL BE MAINTAINED OVER PART OF EXISTING STRUCTURE DURING PHASE 1 AND OVER PART OF NEW STRUCTURE DURING PHASE 2. THE COST FOR GRAVEL USED ON OLD DECK IN PHASE 1, AND SHORING OF NEW FILL BEHIND NEW ABUTMENTS SHALL BE SUBSIDIARY TO THE ITEM "MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS". SEE SHEET BR 104 FOR DETAILS FOR MAINTAINING TRAFFIC ON BRIDGE.
- DAY ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE", SHALL BE FULL COMPENSATION FOR THE REMOVAL OF THE EXISTING STRUCTURE AS FOLLOWS:
 - DISMANTLING THE EXISTING SUPERSTRUCTURE TO EXISTING BRIDGE SEATS AT THE OLD ABUTMENTS AND EXISTING PIERS.
 - CARE SHALL BE TAKEN DURING THE REMOVAL OF THE EXISTING DECK AND BEAMS SO AS NOT TO DAMAGE THE 18 EXISTING BEAMS. ALL APPROACH BEAMS ARE TO REMAIN THE PROPERTY OF THE STATE OF VERMONT. THE CENTER SPAN BEAMS (6) ARE TO BE REHABILITATED AND USED IN THE NEW SUPERSTRUCTURE. THE APPROACH SPAN BEAMS ARE TO BE LOADED INTO STATE OF VERMONT TRAILERS OR OTHERS, AS DIRECTED BY THE ENGINEER.
- DAY ITEM 529.25, "REMOVAL OF CONCRETE OR MASONRY", IS TO BE USED FOR PARTIAL REMOVAL OF EXISTING PIERS. CARE SHALL BE TAKEN IN THE REMOVAL OF PART OF THE PIERS SO AS NOT TO DAMAGE THE REMAINING STEM PORTIONS THAT WILL BE INTEGRATED INTO NEW ABUTMENTS. SEE BRIDGE SHEETS BR 104, BR 112, BR 113 AND BR 114 FOR ADDITIONAL DETAILS.
- ALL EXISTING DIMENSIONS, INCLUDING STATIONS AND ELEVATIONS, SHALL BE FIELD CHECKED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE NOTES ON STANDARD SB-R1-71 7/1/77 R, SHEET 2 OF 2, ARE TO BE REPLACED BY NOTES ON SHEET BR 104.
- THE DAY ITEM "ALUMINUM APPROACH RAILING" WILL BE USED ON THIS PROJECT. SEE SHEET BR 110 FOR DETAILS.
- THE DRILLING AND GROUTING OF BARS INTO EXISTING PIERS OR LEDGE WILL BE PAID FOR UNDER THE ITEM "DRILLING AND GROUTING COWELS".
- THE OLD ABUTMENTS, BELOW EXISTING BRIDGE SEAT ELEVATIONS, ARE TO BE REMOVED UNDER THE ITEM, "SOLID ROCK EXCAVATION".
- WATER REPELLENT SHALL BE APPLIED TO ALL EXPOSED CONCRETE ON BOTH SUBSTRUCTURE AND SUPERSTRUCTURE, EXCEPT THE UNDERSIDE OF THE SLAB BETWEEN DRIP BEADS.
- IN ALL HORIZONTAL CONSTRUCTION JOINTS, SHEAR KEYS SHALL BE FORMED AS DETAILED ON STANDARD DRAWING SCD-06-73, DETAIL "B", AND THEY SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE JOINT. ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.
- IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 THROUGH OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS PERMISSION FROM THE AGENCY OF ENVIRONMENTAL CONSERVATION TO DO WORK OUTSIDE THAT TIME FRAME.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH BY 1 INCH.
- THE VERTICAL OUTLINES ON THE PIERS SHALL FIRST BE SCORED WITH A 1 INCH DEEP SAW CUT SO AS TO CREATE A SMOOTH BREAKAGE JOINT.
- NO TRAFFIC SHALL BE ALLOWED ON THE NEW SLAB UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TIGHT CYLINDER BREAKS.
- SINCE THE FOOTINGS ARE PLACED ON LEDGE, CARE SHALL BE TAKEN TO CLEAN ALL LEDGE SURFACES OF ALL LOOSE ROCK OR OTHER DEBRIS PRIOR TO PLACING CONCRETE.

- IF LEDGE IS ENCOUNTERED MORE THAN TWO (2) FEET BELOW OR MORE THAN TWO (2) FEET ABOVE THE INDICATED BOTTOM OF FOOTING ELEVATIONS, AS SHOWN ON THESE PLANS, THE STRUCTURES ENGINEER SHALL BE CONTACTED. PROFILES OF THE LEDGE MAY BE REQUIRED TO ADJUST THE FOOTING ELEVATIONS AND SIZE. NO FURTHER WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED FROM THE STRUCTURES ENGINEER.
- SEE DETAIL SHEETS BR 105 AND BR 106 FOR NOTES PERTAINING TO ITEMS "STRUCTURAL STEEL, ROLLED BEAM", AND "STRUCTURE PAINTING".
- SEE DETAIL SHEET BR 111 FOR SOLE PLATE AND BEARINGS.
- SEE DETAIL SHEET BR 103 FOR "BRIDGE CONSTRUCTION SEQUENCE".
- ALL "REINFORCING STEEL" IN SUPERSTRUCTURE IS TO BE "EPOXY COATED REINFORCING STEEL". THE STORING, HANDLING, AND PLACEMENT OF "EPOXY COATED REINFORCING STEEL" REQUIRES SPECIAL HANDLING. SEE SECTIONS 507 & 713.

LIST OF SHEETS

BR 101	PRELIMINARY INFORMATION & GENERAL NOTES
BR 102	BRIDGE QUANTITY SHEET
BR 103	PLAN & ELEVATION
BR 104	BRIDGE RAIL, SIDEWALK & GRANITE CURB DETAILS
BR 105	BRIDGE TYPICAL & FARMING PLAN
BR 106	SUBSTRUCTURE - BEAMS & DIAPHRAGM DETAILS
BR 107	SUBSTRUCTURE - DECK & CURB DETAILS
BR 108	CURB WALL DETAILS
BR 109	APPROACH SLAB & JOINT SEALER DETAILS
BR 110	ALUMINUM APPROACH RAIL DETAILS
BR 111	SOLE PLATE & BEARING DETAILS
BR 112	ABUTMENT # 1 DETAILS
BR 113	ABUTMENT # 2 DETAILS
BR 114	ABUTMENT FOOTING REINFORCING PLANS
BR 115	WINGWALL 1 & 2 DETAILS
BR 116	WINGWALL 3 & 4 DETAILS
BR 117	REINFORCING STEEL SCHEDULE # 1
BR 118	REINFORCING STEEL SCHEDULE # 2
BR 119-126	CHANNEL CROSS SECTIONS

LIST OF STANDARD DRAWINGS

C-1	2/16/80 R
SCB-C1-75	3/14/81 R
SCB-D4-76	10/12/82 R
SCB-D6-73, DET. B,D,F	1/3/79 R
SCB-D7-71	12/15/76 R
SCB-D9-71	1/6/75 R
SB-R1-71 (1 OF 2)	7/7/77 R
SB-R1-71 (2 OF 2)	7/7/77 R

LIST OF REFERENCE SHEETS

US 2	PLAN SHEET (REV. STA. 82+00 - REV. STA. 91+00) (1 SHEET)
US 2	PROFILE SHEET (REV. STA. 85+00 - REV. STA. 91+00) (1 SHEET)
US 2	CROSS SECTIONS (REV. STA. 85+00 - REV. STA. 87+06.13) (3 SHEETS)

EXISTING STRUCTURE

- STRUCTURE TYPE 3 SPAN STEEL BEAM BRIDGE OVERALL LENGTH 117.87 INVENTORY RATING 11 (at center pier)
- SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 31'-8 1/2" - 72'-0 1/2" - 31'-8 1/2"
- CLEAR SPAN LENGTH(S) NORMAL TO STREAM 28'-0" - 60'-0" - 28'-0" VERTICAL CLEARANCE ABOVE STREAMBED 11 (at center pier)
- WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 985.57 SQ. FT. WATER SURFACE ELEVATION @ Q 100 1550
- WATER SURFACE ELEVATION @ Q 50 1546 ESTIMATED DISCHARGE 1550
- WATER SURFACE ELEVATION AT FLOOD OF RECORD UNKNOW YEAR —
- DOES ALL WATER PASS THROUGH EXISTING STRUCTURE? YES IF NOT, AT WHAT FREQUENCY AND ELEVATION DOES RELIEF OCCUR? N/A
- ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF N/A
- TYPE OF SUBSTRUCTURE FOUNDATION MATERIAL GRAVEL LEDGE
- DISPOSITION OF STRUCTURE REMOVE END SPANS, WIDEN CENTER SPAN

NEW STRUCTURE

- STRUCTURE TYPE SINGLE SPAN STEEL BEAM BRIDGE OVERALL LENGTH 73.87
 - SPAN LENGTH(S) CENTER TO CENTER OF BEARINGS 60'-0"
 - VERTICAL CLEARANCE ABOVE STREAMBED OR ROAD UNDER 11'
 - CLEAR SPAN LENGTH(S) NORMAL TO STREAM 60'
 - WATERWAY AREA OF FULL OPENING (NORMAL TO STREAM) 635.79 SQ. FT.
 - ARE PROVISIONS TO BE MADE FOR PUBLIC UTILITIES? NO
- HYDRAULIC DATA:
- | | | | | | |
|-------|---------|-----------------|---------|----------|------------|
| Q 235 | 200 cfs | WATER ELEVATION | 1541.7' | VELOCITY | 4.6 f.p.s. |
| Q 10 | 10 cfs | WATER ELEVATION | 1551.8' | VELOCITY | 4.7 f.p.s. |
| Q 25 | 25 cfs | WATER ELEVATION | 1541.9' | VELOCITY | 4.8 f.p.s. |
| Q 50 | 50 cfs | WATER ELEVATION | 1542.0' | VELOCITY | 5.0 f.p.s. |
| Q 100 | 100 cfs | WATER ELEVATION | 1552.1' | VELOCITY | 5.2 f.p.s. |
- DRAINAGE AREA 2.28 sq. mi. CHARACTER OF TERRAIN ROLLING TO MOUNTAINS
 - ARE THERE OBJECTIONS TO ARIER IN THE STREAM? NO IS ORDINARY RISE RAPID? NO
 - DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? NO
 - NATURE OF NATURAL STREAMBED SILT, SAND, LEDGE
 - ESTIMATED SCOUR DEPTH 3' COMMENT ON SCOUR SLIGHT ICE HEAVY
 - WILL ALL WATER PASS THROUGH NEW STRUCTURE? YES IF NOT, WHAT FREQUENCY AND ELEVATION WILL RELIEF OCCUR? —
 - ADDITIONAL WATERWAY AREA PROVIDED BY RELIEF —
 - VERTICAL CLEARANCE ABOVE Q 50 1552.1' LIMITED BY NO CHANGE IN EXISTING ROAD ELEVATIONS
 - ALLOWABLE WATER SURFACE ELEVATION 1552.1' IF YES, DESCRIBE DAM DOWNSTREAM —
 - IS DESIGN STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? YES
 - AVERAGE DAILY LOW FLOW — DEPTH — AVERAGE DAILY HIGH FLOW — DEPTH —
 - STREAMBANK OR CHANNEL PROTECTION REQUIRED TYPE II, STONE FILL
 - DISTANCE TO EXISTING UPSTREAM STRUCTURE 2.1 MI. SPAN 36' WATERWAY AREA OF FULL OPENING —
 - DISTANCE TO EXISTING DOWNSTREAM STRUCTURE 2.1 MI. SPAN 36' WATERWAY AREA OF FULL OPENING —

- ALLOWABLE STRESSES:
- | | | | |
|--|-------|----------|------------------|
| 1. DESIGN LIVE LOAD | HS-20 | ON LEDGE | 10K |
| 2. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL | — | — | — |
| 3. ALLOWABLE LOAD FOR PILING | — | — | — |
| 4. ALLOWABLE STRESS FOR STRUCTURAL STEEL ASTM A 7 | — | TENSION | ESTIMATED LENGTH |
| 5. ALLOWABLE STRESS FOR REINFORCING STEEL GRADE 60 TENSION | — | — | — |
| 6. ALLOWABLE STRESS FOR CONCRETE CLASS A 1 | — | — | — |

- TRAFFIC MAINTENANCE:
- | | | | | | |
|----------------------------------|-------------------------|-------------------------------|----------------------------------|------------------------|---|
| 1. IS TRAFFIC TO BE MAINTAINED? | YES | IF YES, ON EXISTING STRUCTURE | YES | OR ON TEMPORARY BRIDGE | — |
| 2. TEMPORARY BRIDGE REQUIREMENTS | ONE OR TWO WAY | ONE | TRAFFIC CONTROL SIGNALS REQUIRED | YES | — |
| | MINIMUM CLEAR SPAN | — | MINIMUM CLEAR HEIGHT | — | — |
| | ARE SIDEWALKS REQUIRED? | NO | IF SO, ON WHAT SIDE? | — | — |

ADDITIONAL DESIGN CONSIDERATIONS

LOAD RATING (TONS)		TRUCK					
STRESS LEVELS	H	MS	SS2	SAILE	SA STR	4A STR	5A SEMI
INVENTORY 0.55 Fy 16.5	43	51					
POSTED 0.67 Fy 20.0	62		92		66	68	82
OPERATING 0.75 Fy 22.5			111	137			

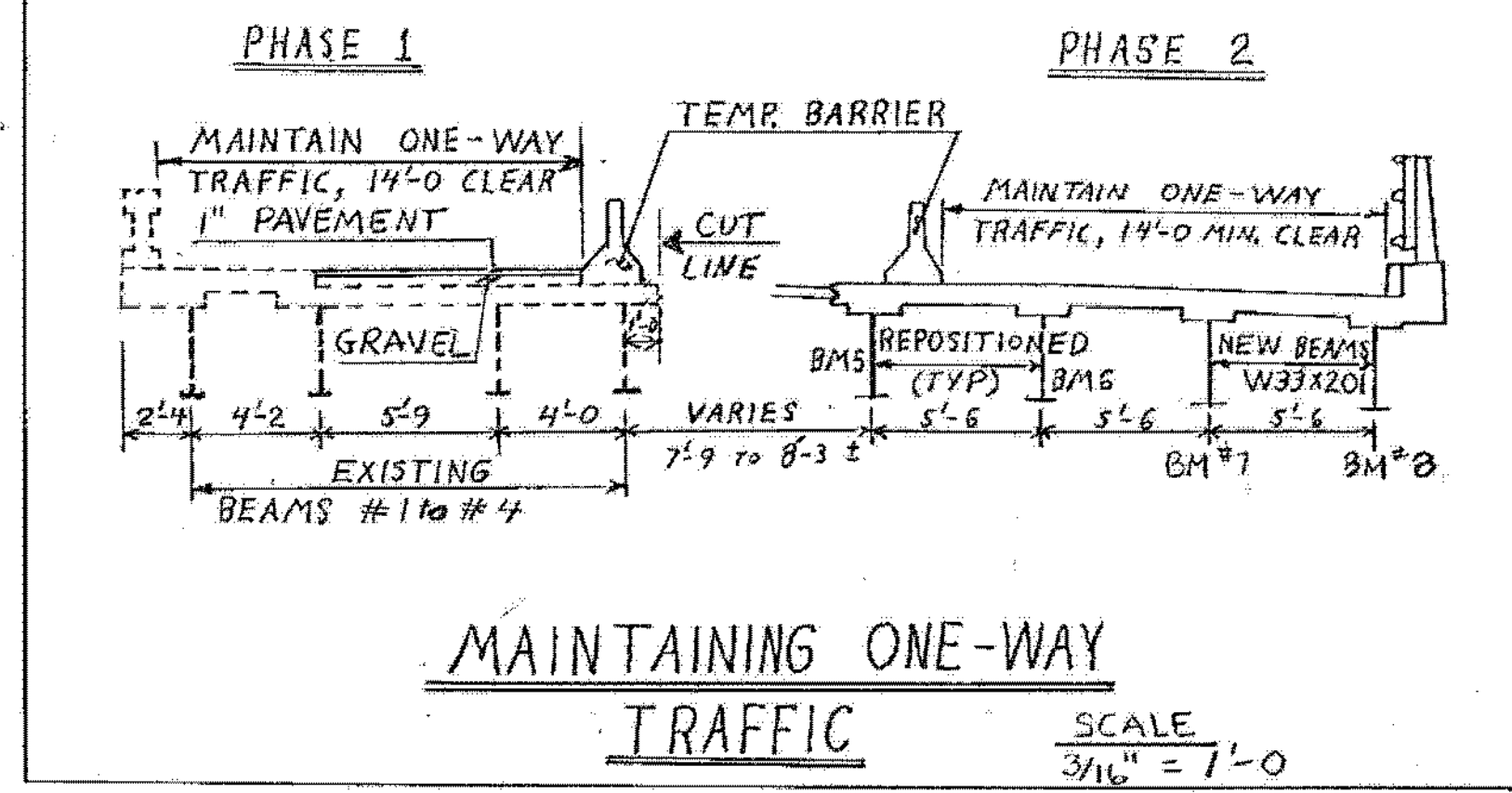
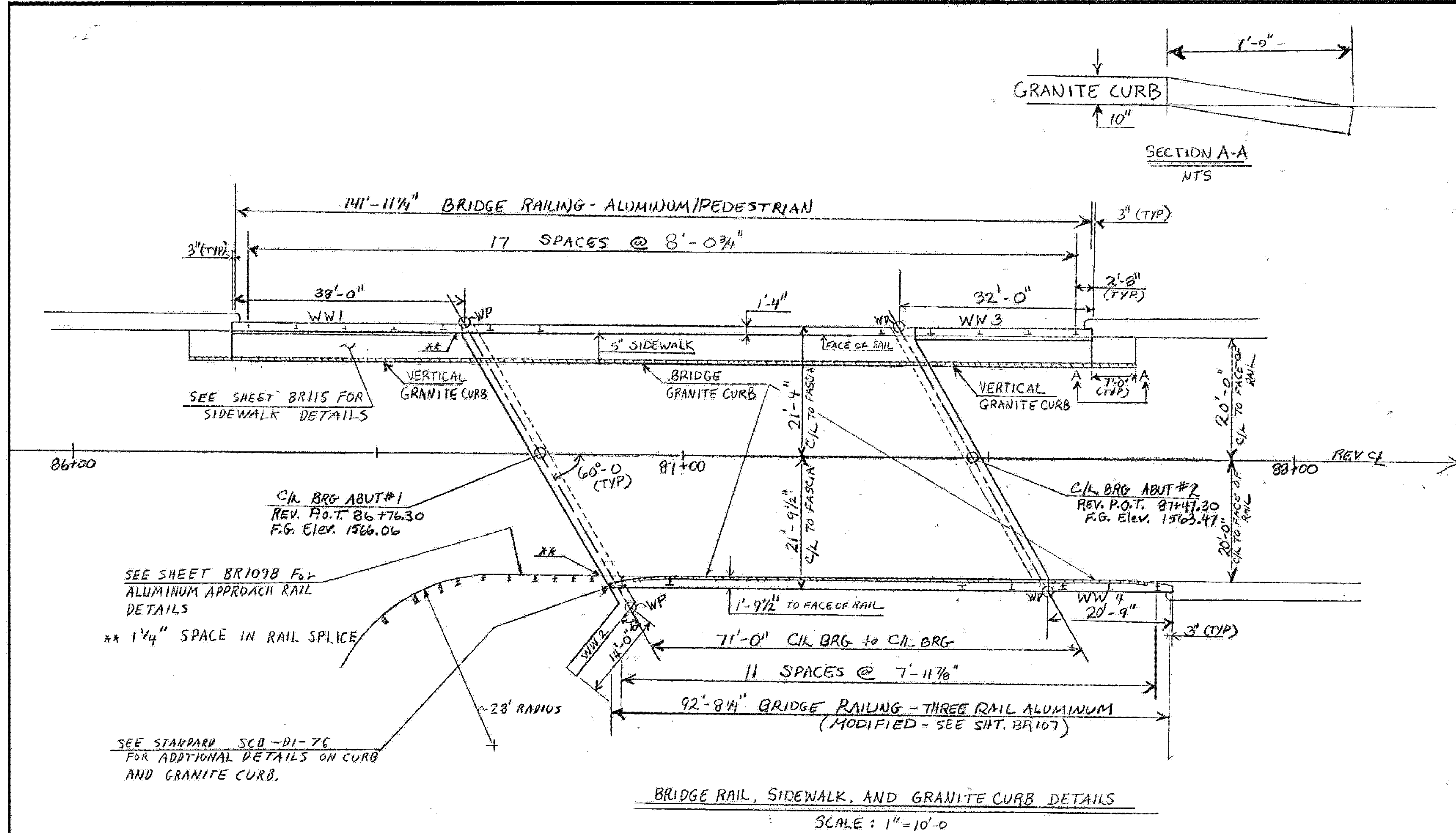
- RECOMMENDED FOR APPROVAL Warren B. Jones 6/14/83
STRUCTURES ENGINEER DATE
- RECOMMENDED FOR APPROVAL William Jones 6/14/83
CHIEF OF DESIGN DATE
- APPROVED BY — 6/14/83
DIRECTOR OF ENGINEERING & CONSTRUCTION DATE

REVISIONS		BY & DATE
NO.	DESCRIPTION	BY & DATE
1	ADDED OFFSET FOOT TO RIGHT BRIDGE RAIL.	SBF 2/86

STATE OF VERMONT AGENCY OF TRANSPORTATION

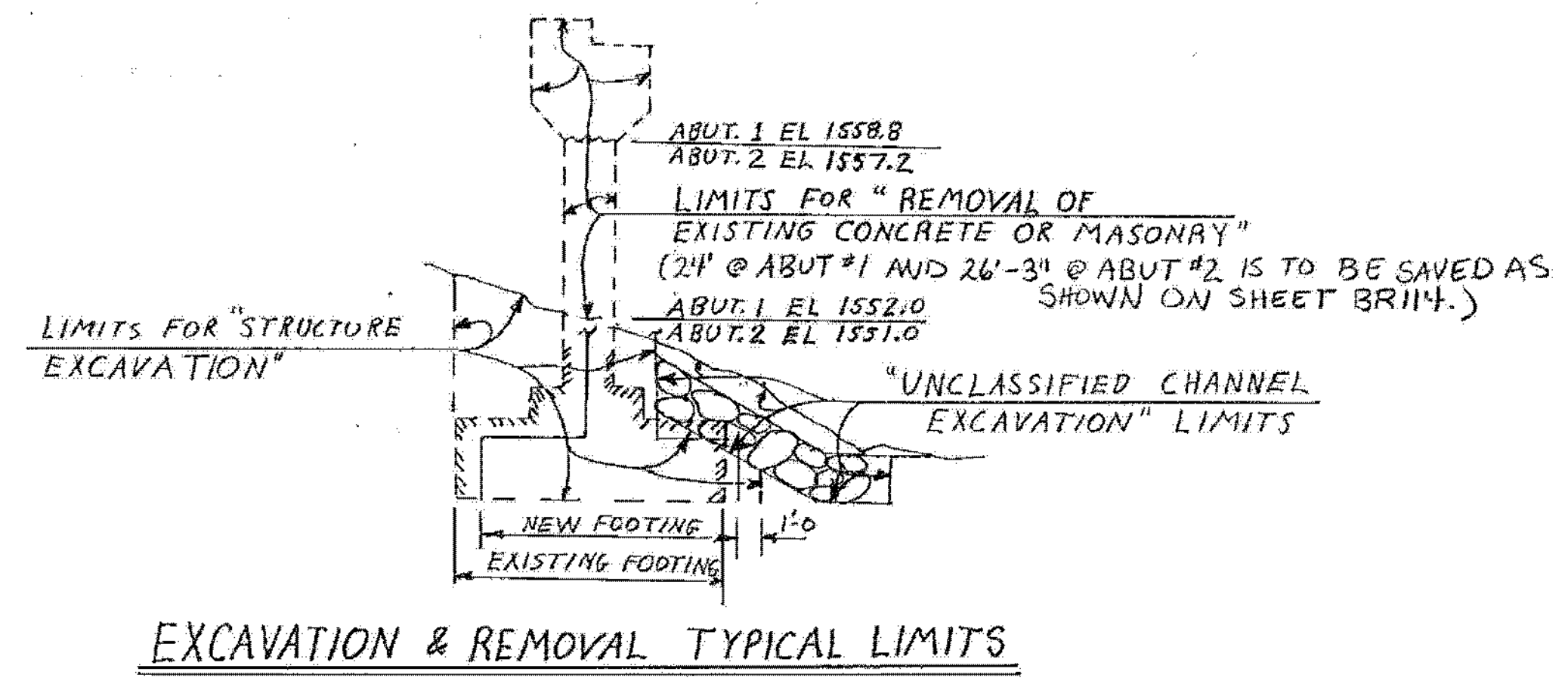
TOWN OF <u>DANVILLE</u>	Bridge No. <u>92</u>
HIGHWAY NO. <u>US RTE 2</u>	Log Sta. <u>—</u>
	Surv. Sta. <u>87+0</u>
<u>U.S. 2 OVER JOE'S BROOK</u>	
PRELIMINARY INFORMATION & GENERAL NOTES	
Designed by <u>J. BUSHEY</u>	Drawn by <u>J. BUSHEY</u>
Checked by <u>DELATHROP</u> date <u>3/83</u>	Bridge Design Supervisor <u>F.W. Bolkom</u> date <u>3/86</u>
PROJECT <u>DANVILLE</u>	PROJECT NO. <u>BRF028-3(09)S</u>
Bridge Sheet No. <u>BR 101</u>	Sheet <u>35</u> of <u>105</u>

DANVILLE
BF MEMB (36)
SHEET 14 OF 22
BRIDGE 92
FOR REFERENCE ONLY



THE FOLLOWING WILL REPLACE THE NOTES ON STANDARD SB-R1-71, 7/1/77R, SHEET 2 OF 2.

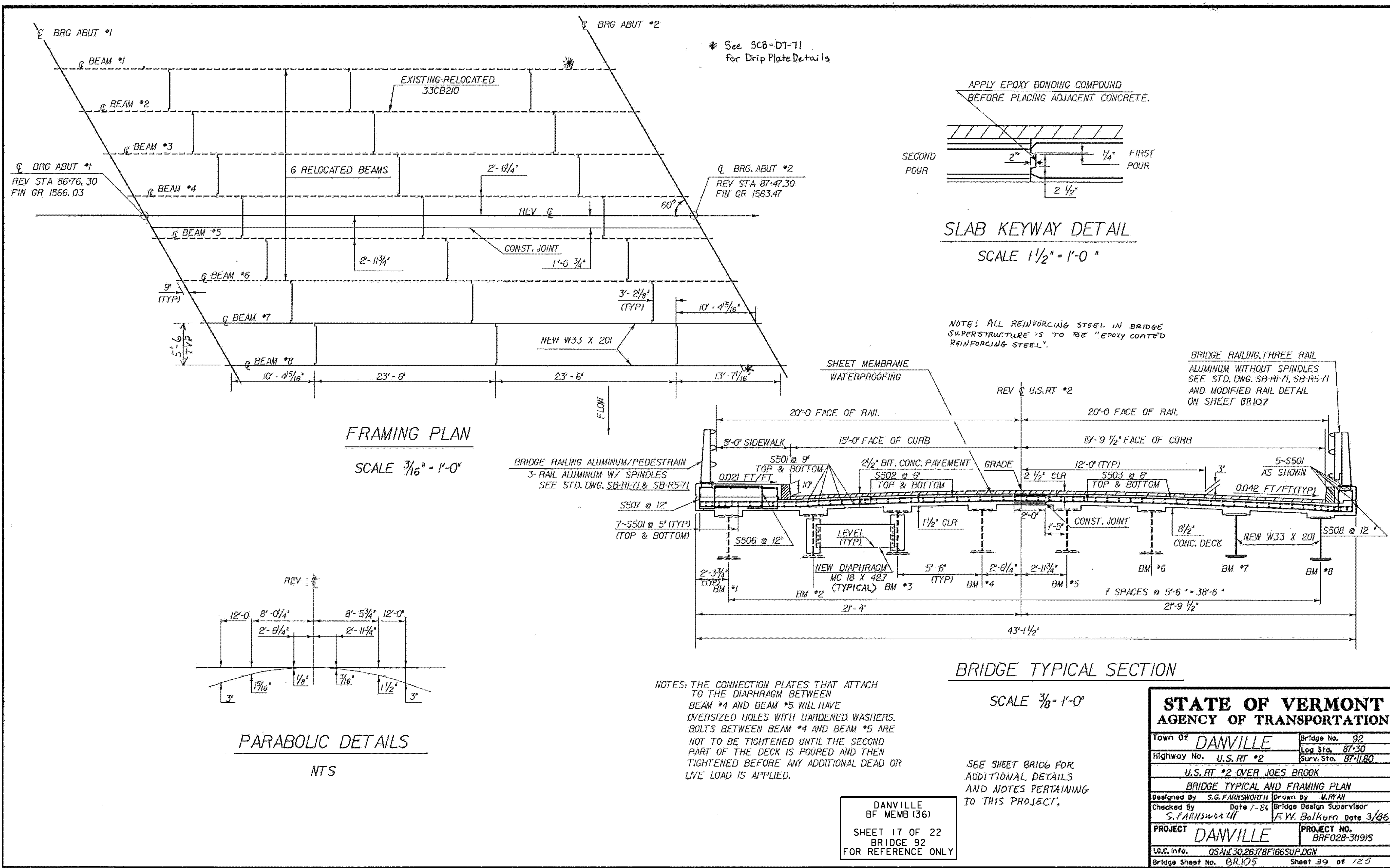
- ANCHOR BOLTS:
(A) MAY BE EITHER ASTM A-449 GALVANIZED, OR
(B) BOLTS AND WASHERS OF STAINLESS STEEL ASTM A-276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH ASTM A-194 GRADE 2B STAINLESS STEEL NUTS.
- ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B-221 ALLOY 6061-T6 OR 6063-T5.
- ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B-210 ALLOY 6061-T5 OR 6063-T4.
- ALUMINUM END CAPS SHALL CONFORM TO ASTM B-26 ALLOY 5052.
- SET SCREWS, CAP SCREWS AND POST CONNECTION BOLTS SHALL CONFORM TO ASTM A-276, TYPE 304.
- RIVETS SHALL BE HIGH BUTT-ON AND CONE POINT CONFORMING TO ASTM B-316 ALLOY 5051-T5 WITH DIMENSIONS OF ANSI B 18.4 AND SHALL BE COLD DRIVEN.
- WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW INVERT GAS PROCESS WITH AWS ER-5356 ELECTRODE WIRE.
- SHIMS AND 1/8\"
- UNLESS OTHERWISE SPECIFIED, THE ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
- BARRIER RAIL AND HAND RAIL SHALL, WHEREVER POSSIBLE, BE FULL LENGTH SECTIONS (40'+-). RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITH THE SAME PANEL.
- ENDS OF RAILS SHALL BE SQUARE, SMOOTH AND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
- THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4\"

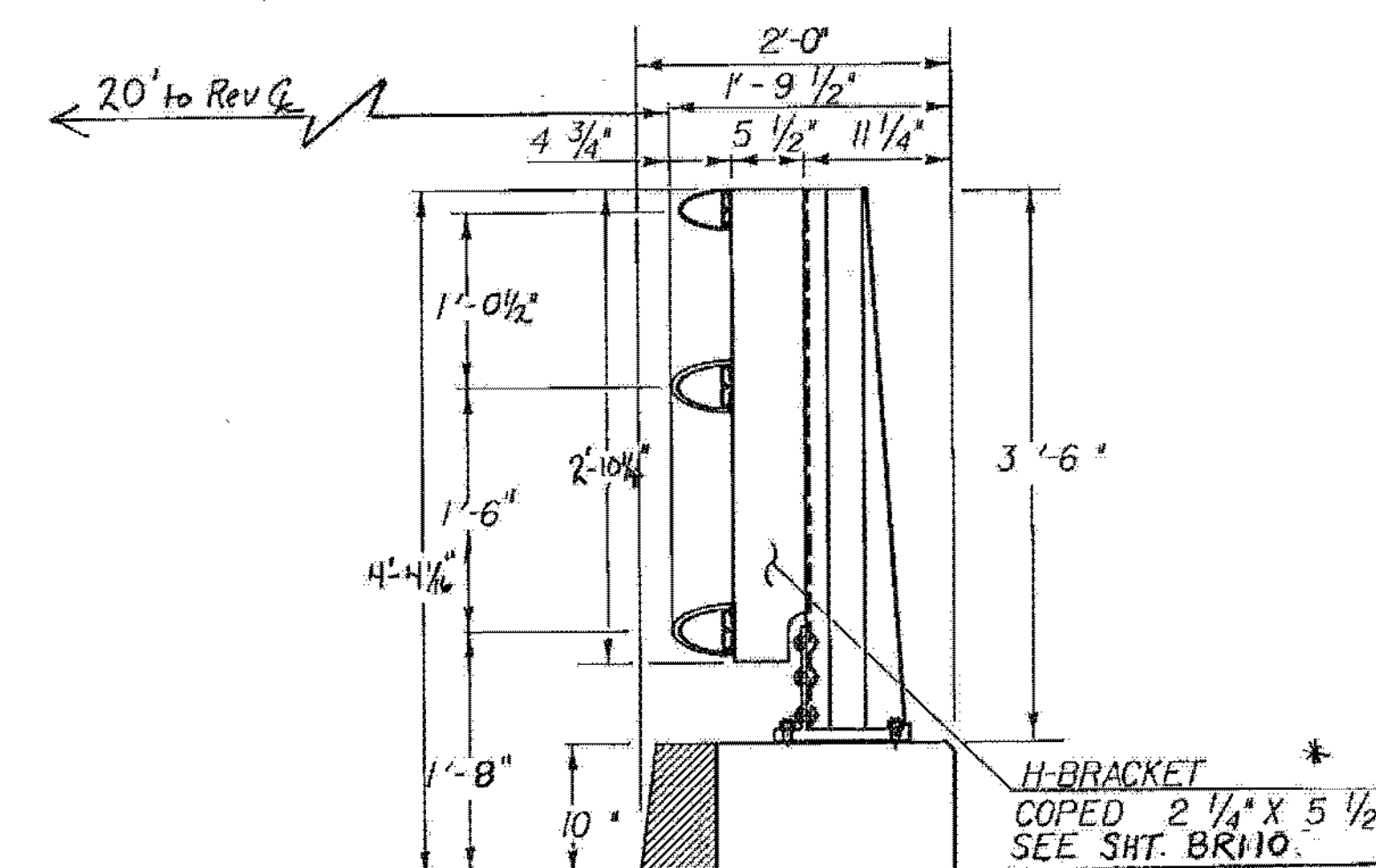


STATE OF VERMONT AGENCY OF TRANSPORTATION	
Town of DANVILLE	Bridge No. 92
Highway No. US RTE 2	Log Sta. 87+38
U.S. 2 OVER JOE'S BROOK	
BRIDGE RAIL, SIDEWALK, AND GRANITE CURB DETAIL	
Designed By S. G. Farnsworth	Drawn By C. WILLIS
Checked By S. FARNSWORTH	Bridge Design Supervisor F. W. Bolkm Date 3/86
PROJECT DANVILLE	PROJECT NO. 02B-3195
I.C. Info.	
Bridge Sheet No. BR104	Sheet 38 of 123

DANVILLE
BF MEMB (36)
SHEET 16 OF 22
BRIDGE 92
FOR REFERENCE ONLY

BRUNING 41232 6442





SCALE $1\frac{1}{2}" = 1' - 0"$

* COST OF H-BRACKET TO BE SUBSIDIARY TO ITEM "BRIDGE RAILING-3 RAIL ALUMINUM".

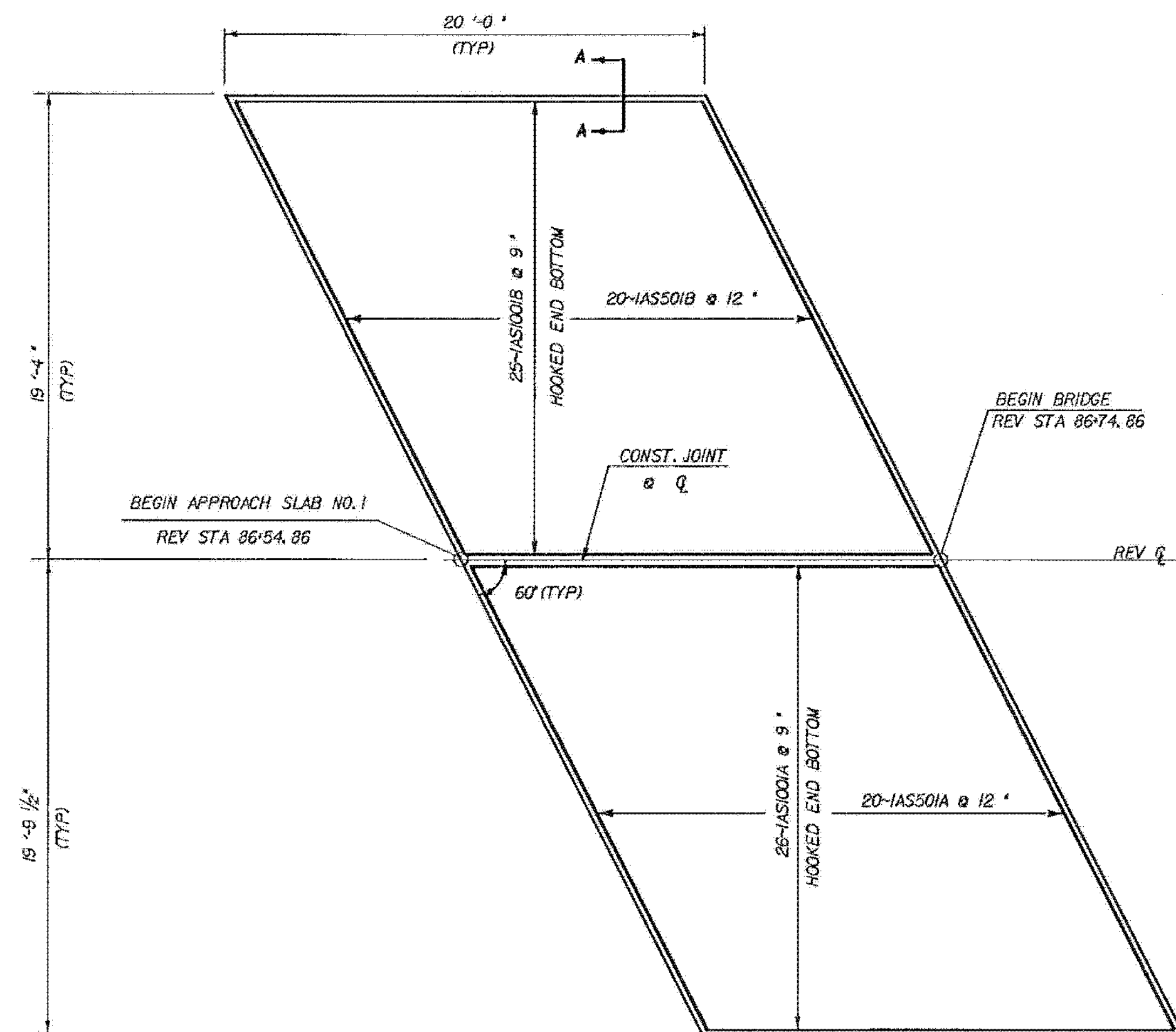
SCALE $\frac{3}{16}'' = 1'-0''$



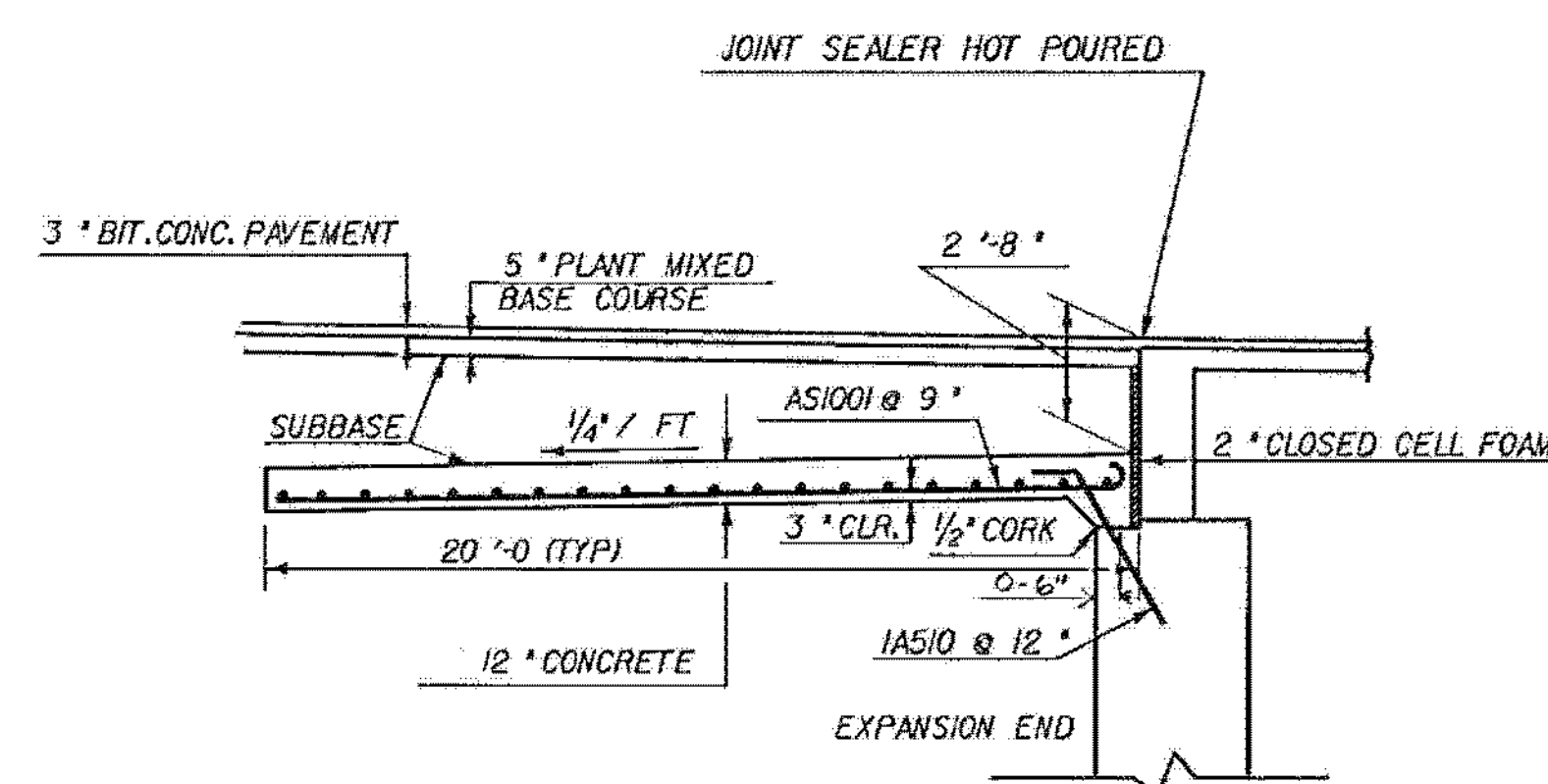
SCALE $I'' = I' - O''$

I.G.C. info.	QSAI:130.26178F166SUP.DGN
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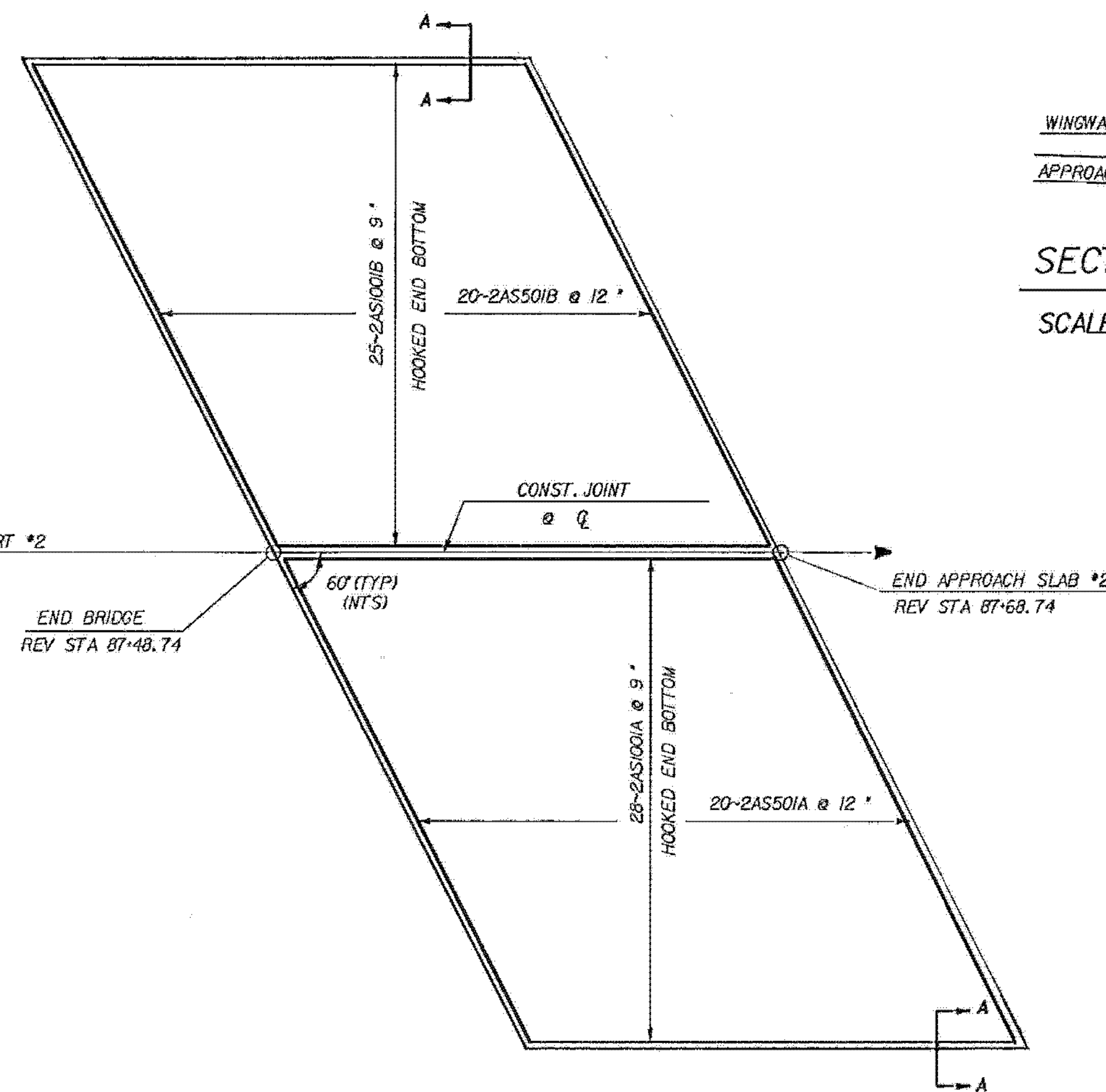
DANVILLE
BF MEMB (36)
SHEET 18 OF 22
BRIDGE 92
FOR REFERENCE ONLY



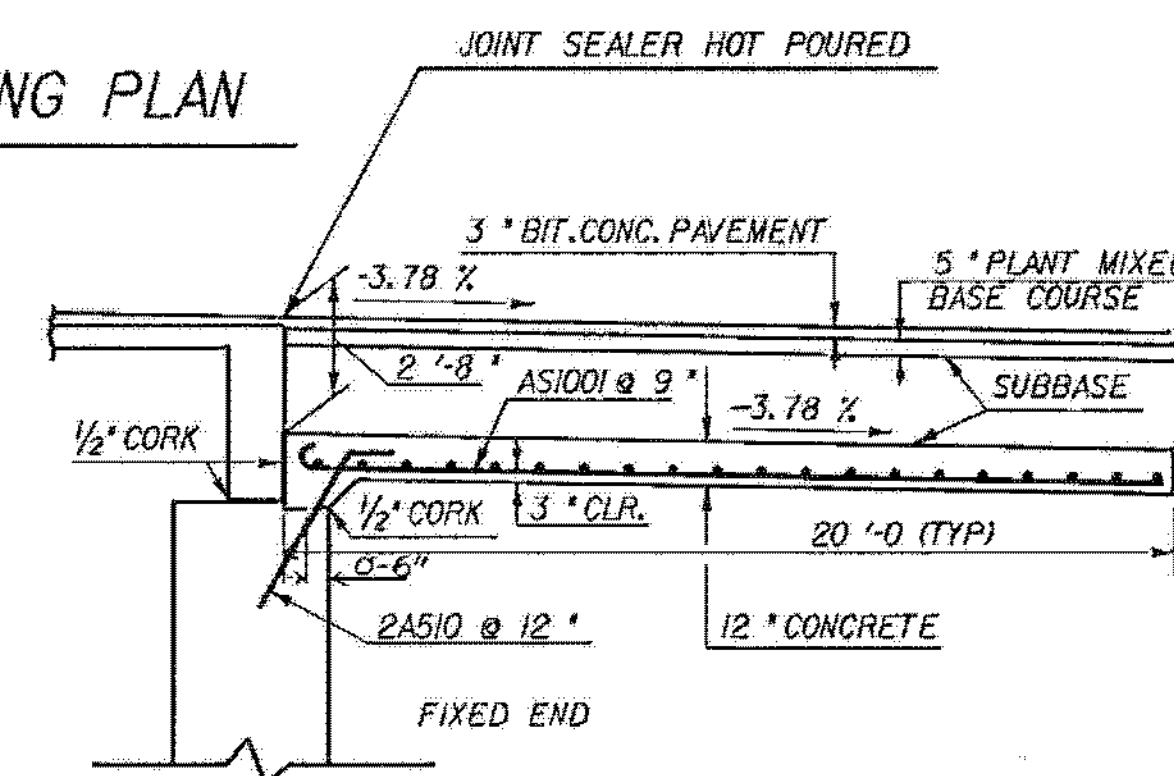
APPROACH SLAB NO. 1
SCALE 1/4" = 1'-0"



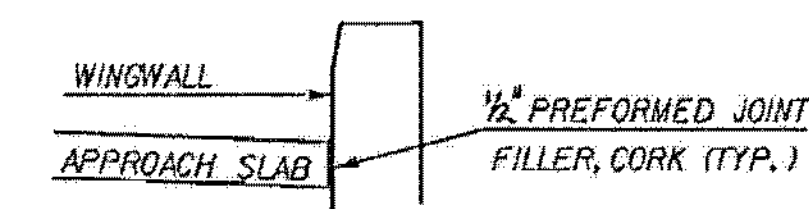
APPROACH SLAB ELEVATION AT ABUTMENT NO. 1
SCALE 1/4" = 1'-0"



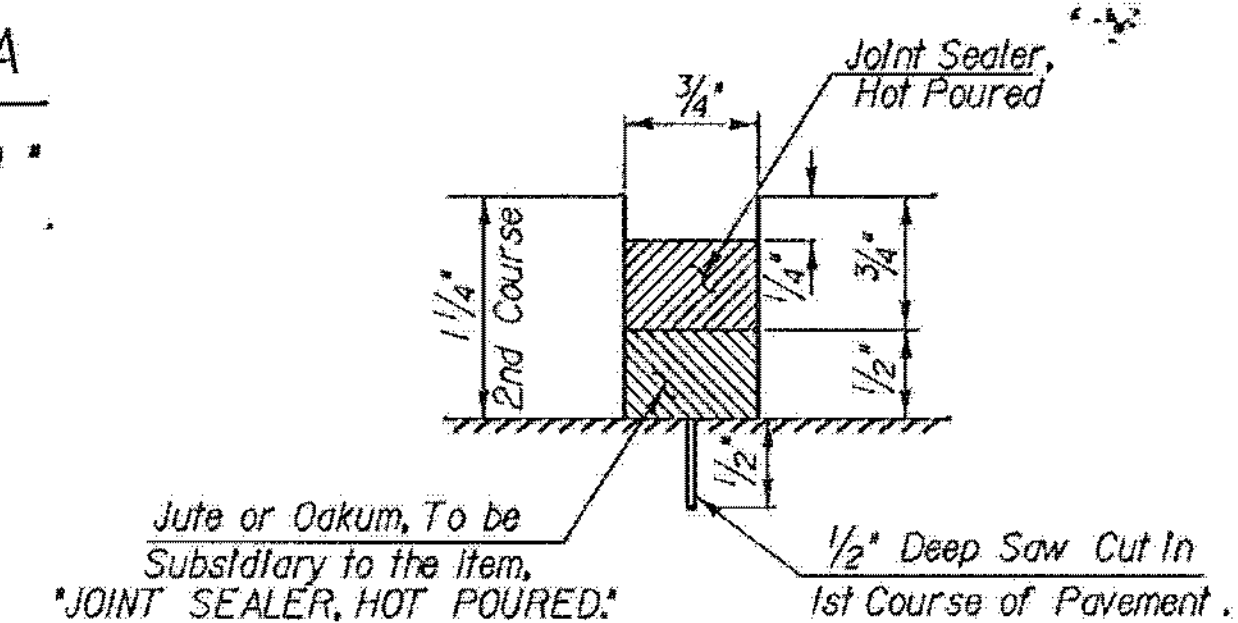
APPROACH SLAB NO. 2
SCALE 1/4" = 1'-0"



APPROACH SLAB ELEVATION AT ABUTMENT NO. 2
SCALE 1/4" = 1'-0"

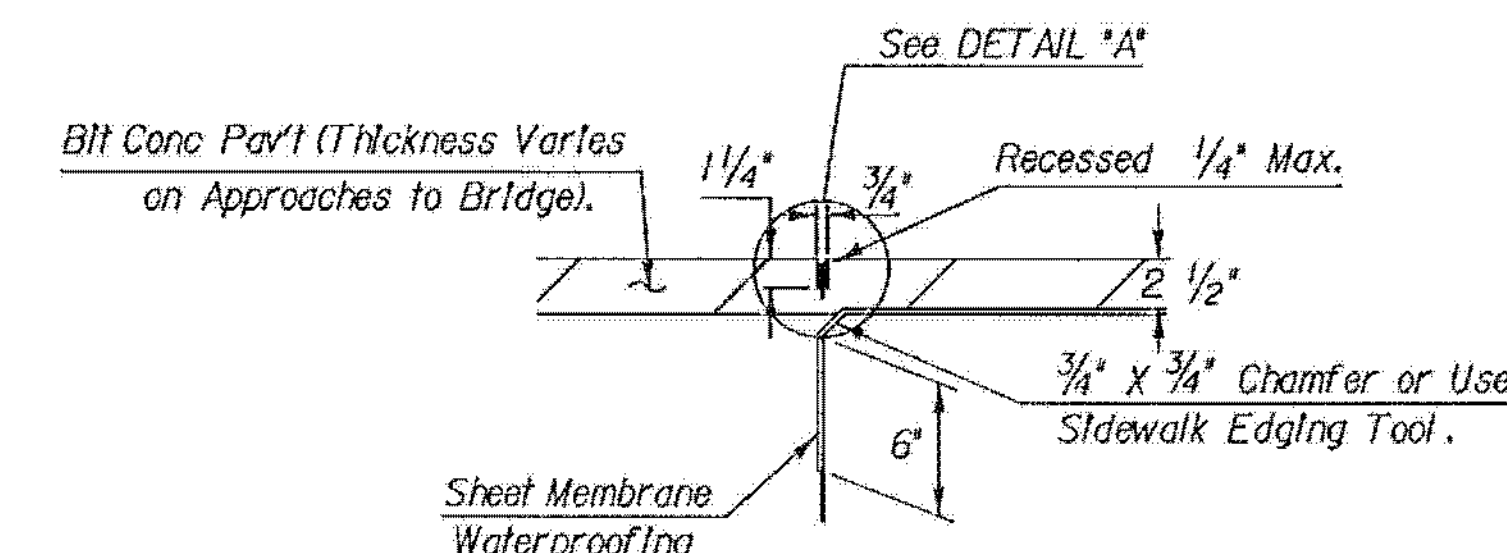


SECTION A-A
SCALE 1/4" = 1'-0"



DETAIL "A"
Scale 1" = 1'

NOTE: See STD DWG SCB - D9 - 71, Detail B, for additional details, except as noted.



JOINT SEALER DETAIL
Scale 1 1/2" = 1'-0"

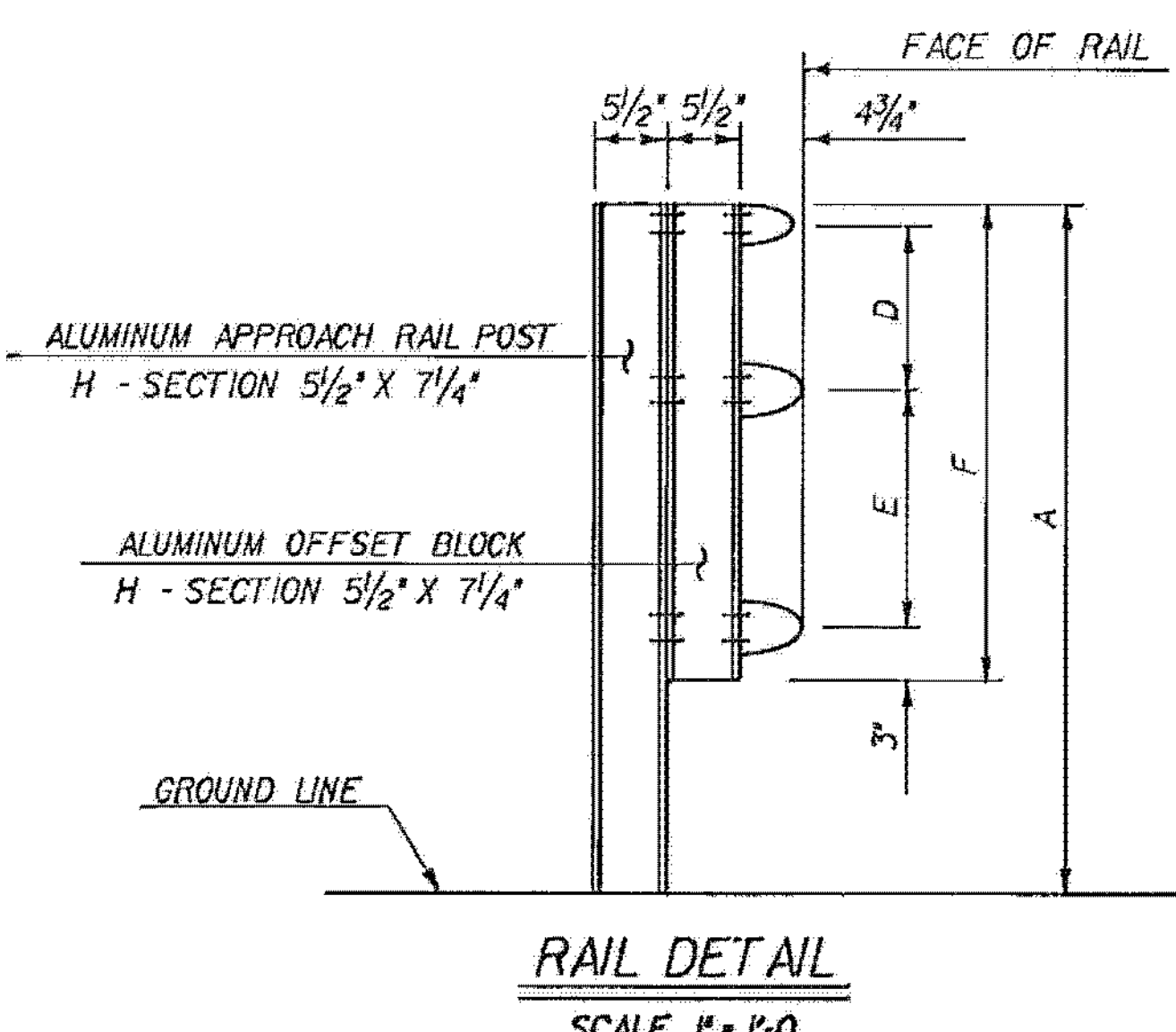
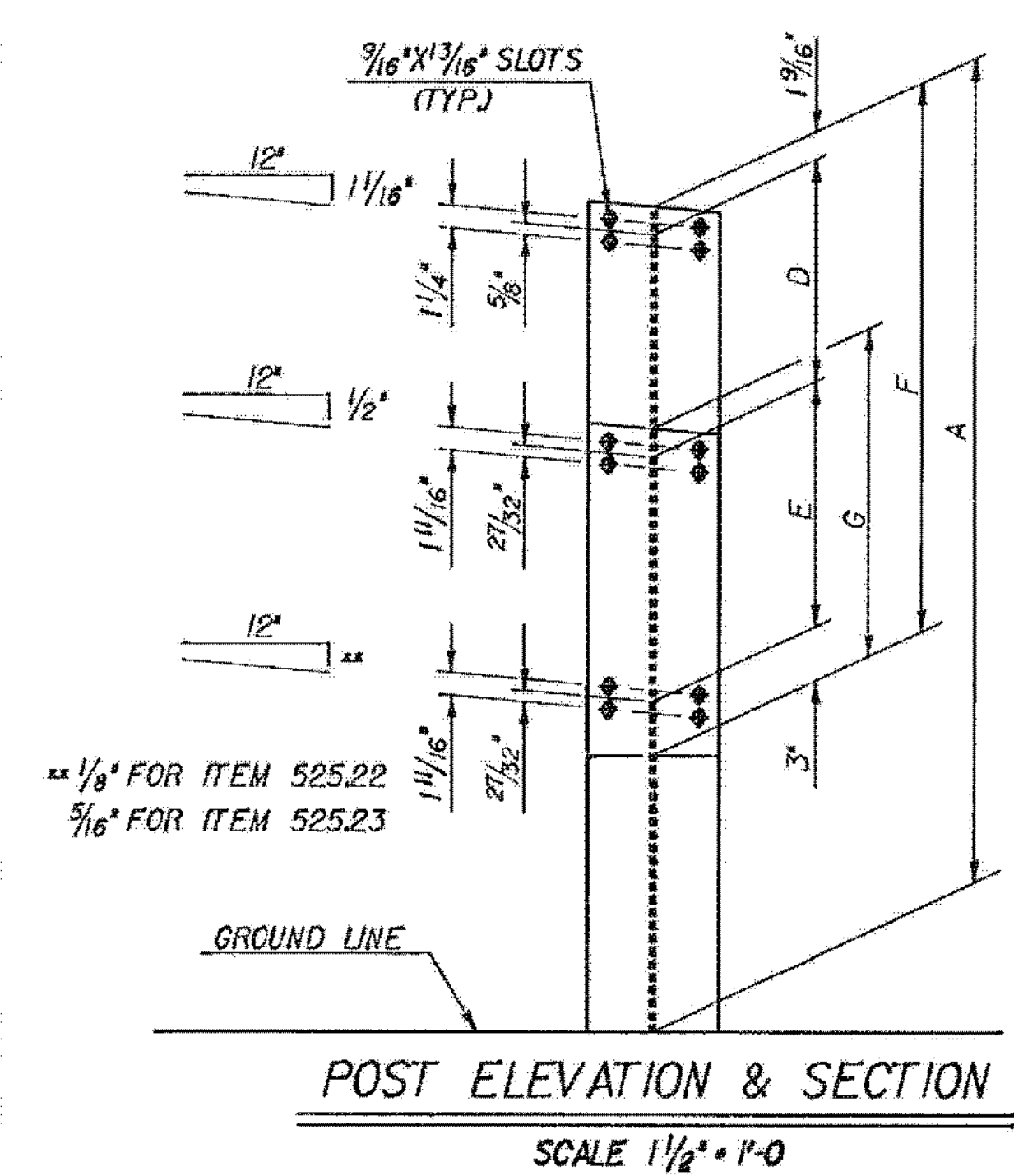
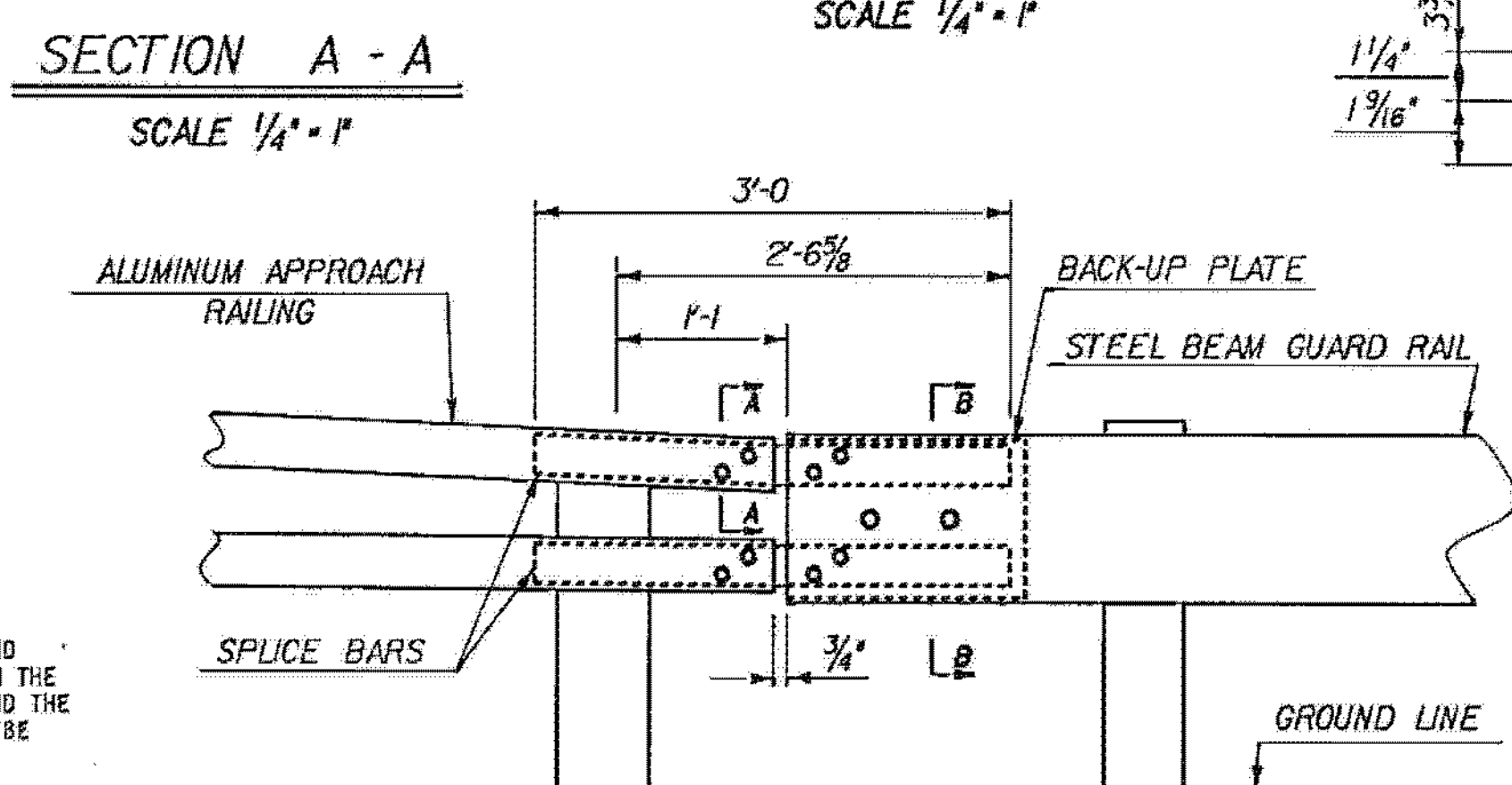
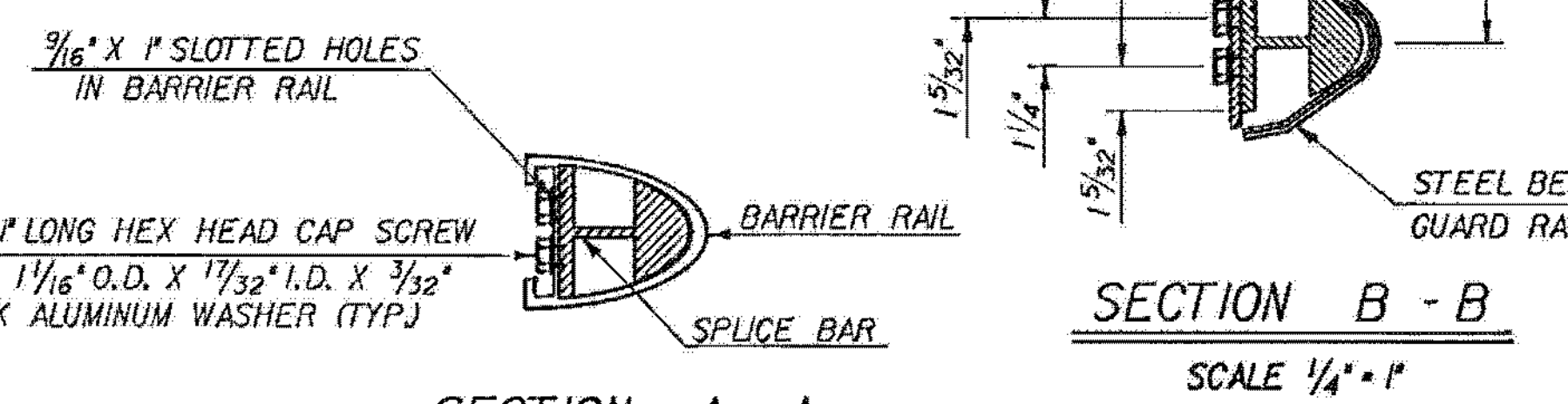
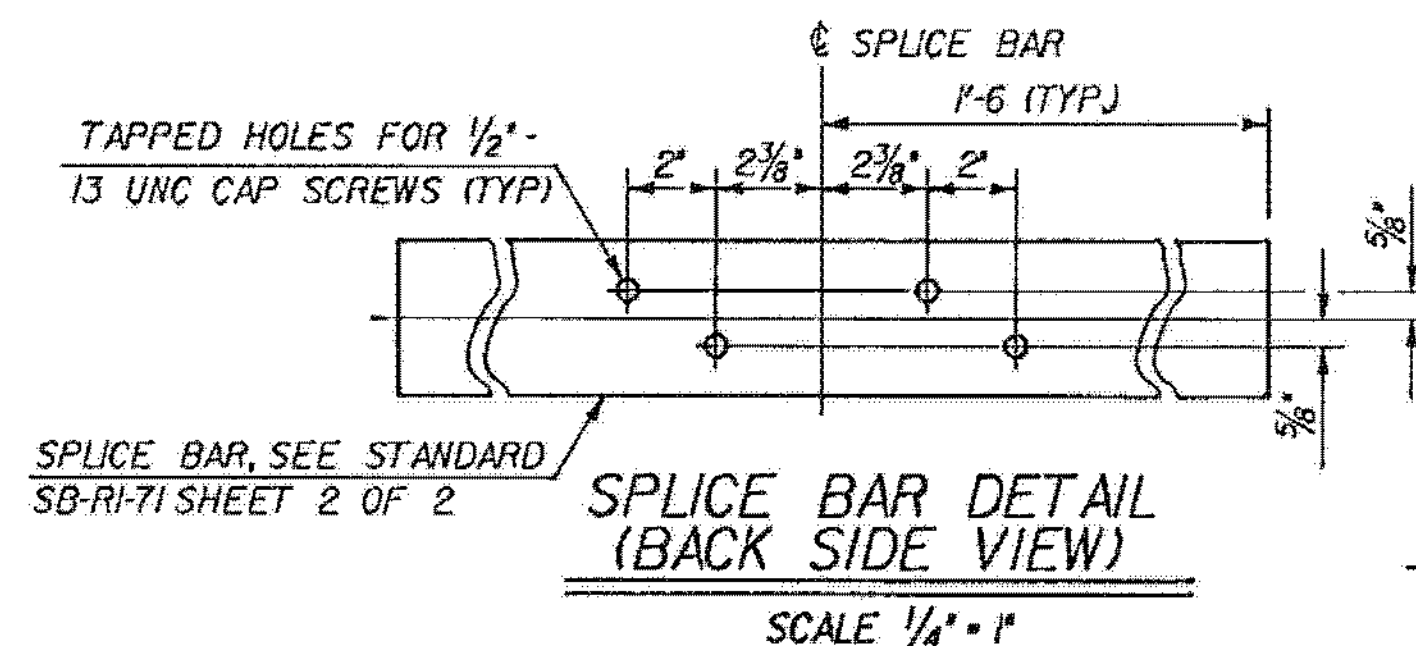
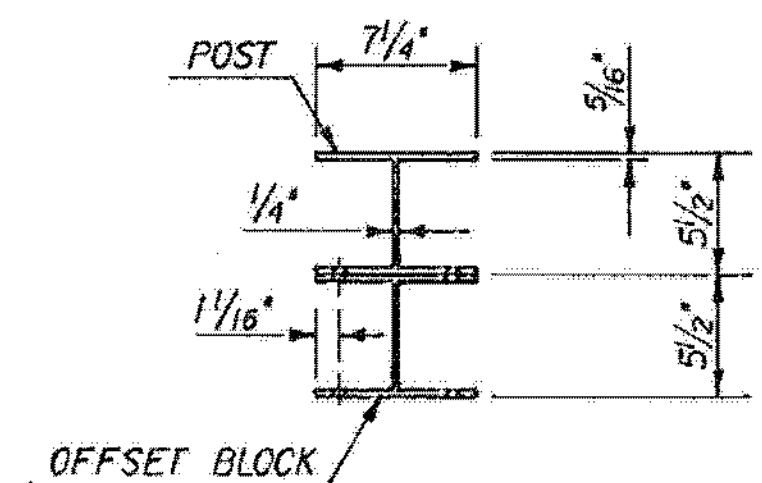
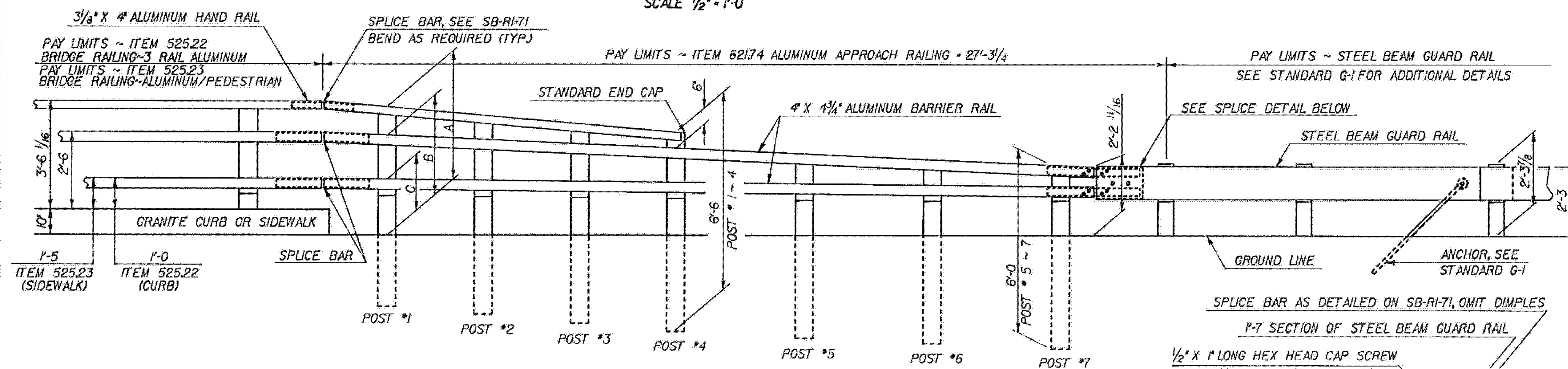
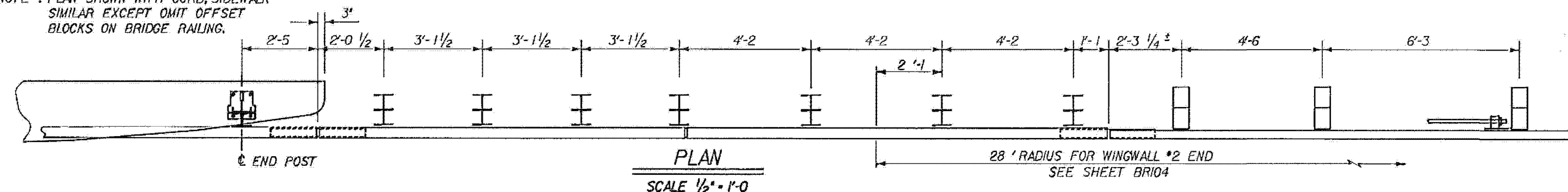
1 1/4" x 3/4" saw cut in second course of Bituminous Concrete Pavement. To be made within 24 hours of placement. Fill with Joint Sealer, Hot Poured

STATE OF VERMONT AGENCY OF TRANSPORTATION

Town Of	DANVILLE	Bridge No.	92
Highway No.	U. S. RT #2	Log Sta.	87+38
		Surv. Sta.	87+11.80
U. S. RT #2 OVER JOES BROOK			
APPROACH SLAB & JOINT SEALER DETAILS			
Designed By	S. G. FARNSWORTH	Drawn By	M. RYAN
Checked By	C. WILKS Date 1-86	Bridge Design Supervisor	
	AND S. FARNSWORTH	F.W. Belkum Date 3/86	
PROJECT	DANVILLE	PROJECT NO.	BRF028-3(19)S
I.G.C. Info.	QSA#302678F166SUP		
Bridge Sheet No.	BR109	Sheet	43 of 123

DANVILLE
BF MEMB (36)
SHEET 19 OF 22
BRIDGE 92
FOR REFERENCE ONLY

NOTE: PLAN SHOWN WITH CURB, SIDEWALK
SIMILAR EXCEPT OMIT OFFSET
BLOCKS ON BRIDGE RAILING.



THE COST OF ALL MATERIALS AND
LABOR FOR THE SPICE BETWEEN THE
ALUMINUM APPROACH RAILING AND THE
STEEL BEAM GUARD RAIL SHALL BE
SUBSIDIARY TO ITEM 621.74,
"ALUMINUM APPROACH RAILING".

DANVILLE
BF MEMB (36)

SHEET 20 OF 22
BRIDGE 92
FOR REFERENCE ONLY

SPICE DETAIL
SCALE 1" = 1'-0"

NOTES

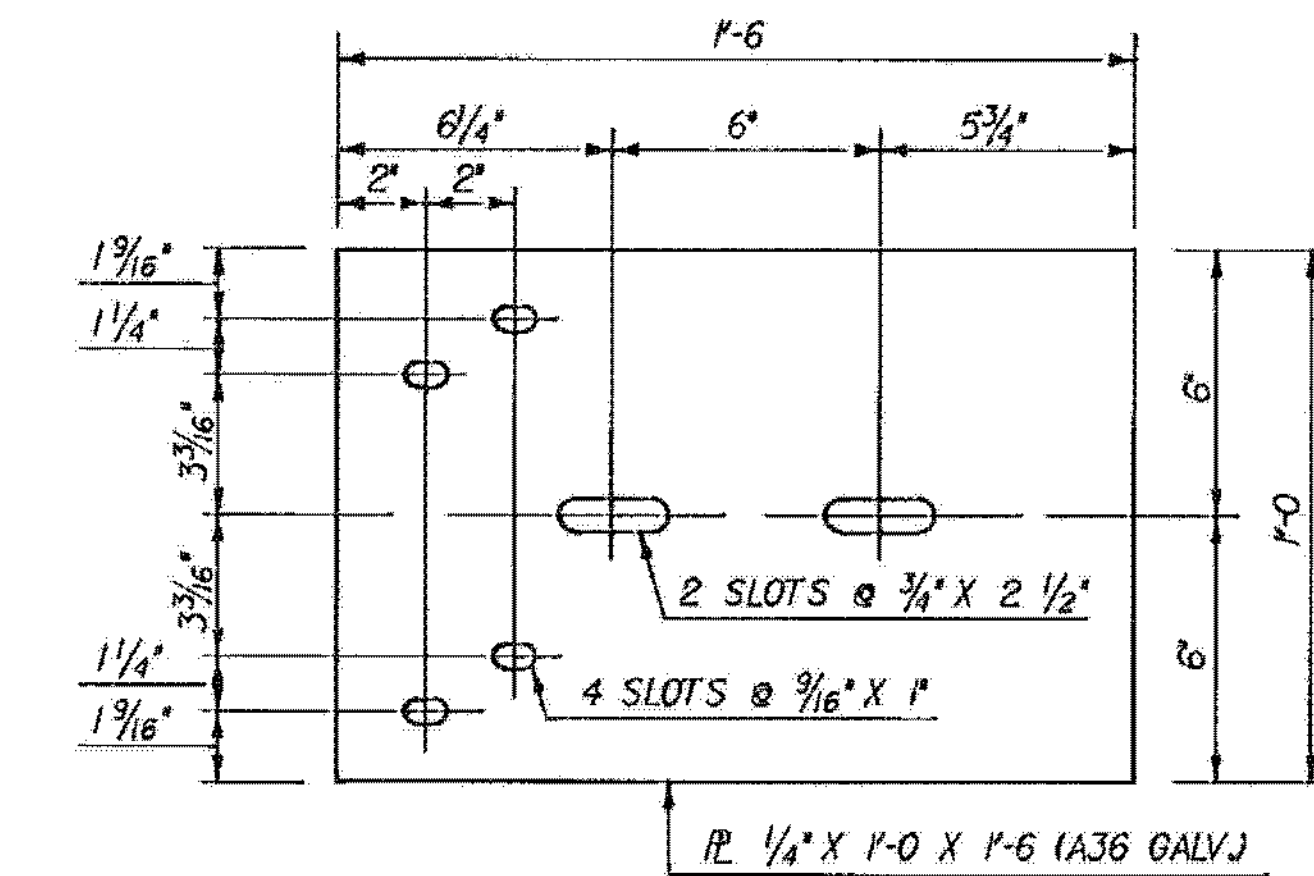
1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE ASTM A-36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE STANDARDS SB-RI-71 SHEET #1 AND SHEET #2 FOR ALUMINUM BRIDGE RAILING DETAILS.

ALUMINUM APPROACH RAIL ATTACHED TO
ITEM 525.22 BRIDGE RAILING - 3 RAIL ALUMINUM

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-1 1/8"	3'-2 5/16"	1'-9 3/4"	0'-11 3/8"	1'-5 3/16"	2'-9 1/8"	
2	3'-10 9/16"	3'-1 1/4"	1'-9 3/8"	0'-9 3/4"	1'-3 1/8"	2'-6 3/16"	
3	3'-7 1/4"	2'-11 9/16"	1'-9"	0'-8 1/2"	1'-2 9/16"	2'-3 1/4"	
4	3'-3 5/16"	2'-9 9/16"	1'-8 3/8"	0'-6 1/16"	1'-1 9/16"	2'-0 9/16"	
5		2'-7 11/16"	1'-8 7/8"		0'-11 1/2"		1'-4 1/2"
6		2'-5 1/2"	1'-7 11/16"		0'-9 3/16"		1'-2 3/16"
7		2'-3 1/4"	1'-7 3/16"		0'-8 1/16"		1'-1 1/16"

ALUMINUM APPROACH RAIL ATTACHED TO
ITEM 525.23 BRIDGE RAILING - ALUMINUM/PEDESTRIAN

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-1 1/8"	3'-2 5/16"	2'-2 3/8"	0'-11 3/8"	1'-0 9/16"	2'-4 1/2"	
2	3'-10 9/16"	3'-1 1/4"	2'-1 3/8"	0'-9 3/4"	0'-11 7/8"	2'-2 3/16"	
3	3'-7 1/4"	2'-11 9/16"	2'-0 3/8"	0'-8 1/2"	0'-11 1/8"	1'-11 7/8"	
4	3'-3 5/16"	2'-9 9/16"	1'-11 3/8"	0'-6 1/16"	0'-10 9/16"	1'-9 9/16"	
5		2'-7 11/16"	1'-10 1/16"		0'-9 3/8"		1'-2 3/8"
6		2'-5 1/2"	1'-8 3/4"		0'-8 3/4"		1'-1 3/4"
7		2'-3 1/4"	1'-7 3/8"		0'-7 1/8"		1'-0 1/8"



BACK-UP PLATE DETAIL
SCALE 1/4" = 1"

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

Town of **DANVILLE** Bridge No. **92**

Highway No. **U.S. RTE. 2** Log Sta. **87+38**

Surv. Sta. **87+11.80**

ALUMINUM APPROACH RAIL DETAILS

U.S. RTE. 2 OVER JOE'S POND BROOK

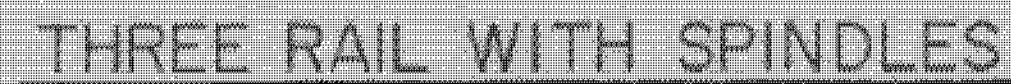
Designed By **R.J. RANALDO** Drawn By **D.C. WILLEY**

Checked By **S. FARNSWORTH** Date **2/18/86** Bridge Design Supervisor **F.W. Bolcum** Date **3/86**

PROJECT **DANVILLE** PROJECT NO. **BRF 028-31191S**

I.G.C. Info. **QSAH3026778F166APPDGN**

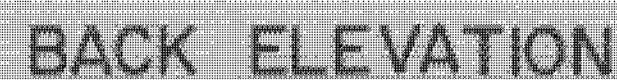
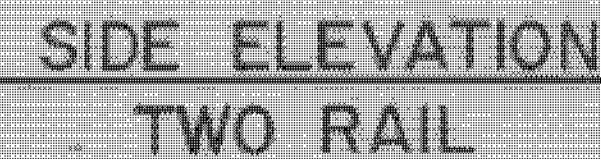
Bridge Sheet No. **BR 110** Sheet **11** of **123**



NOTE: RAIL POSTS ARE TO BE SET NORMAL TO GRADE
UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS
ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE
DESIGNATED ON BRIDGE PLANS.

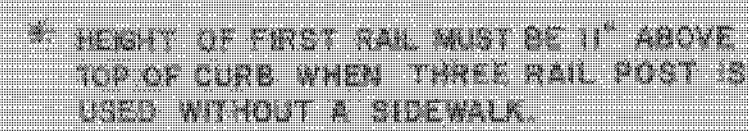


POST BASE DETAILS



BASE PLATE NOTES

1. ALTERNATE ANCHORAGE SYSTEMS OF EQUIVALENT STRENGTH MAY BE USED UPON WRITTEN APPROVAL OF THE BRIDGE ENGINEER.

REVISIONS AND CORRECTIONS

1. BASE PLATE NOTES ADDED. J. WOOD 3/27/73
2. POST LOCATION DIMENSIONS REVISED FROM 12" TO 8",
AND FROM 1'-8" TO 2'-6". J. WOOD 1/28/74
3. REVISED BASE DIMENSIONS. W. TRIPP 12-29-75
4. REVISED PEDESTRIAN RAIL HEIGHT & ALLOWABLE STRESSES
W. TRIPP 7-1-77
5. REVISED BASE PLATE, RIVET DIA., RIVET SPACING, RAIL HEIGHT,
AND POST CAP SCREWS. R. OATLEY 2-11-85

APPROVED

DATE: 8/24/97

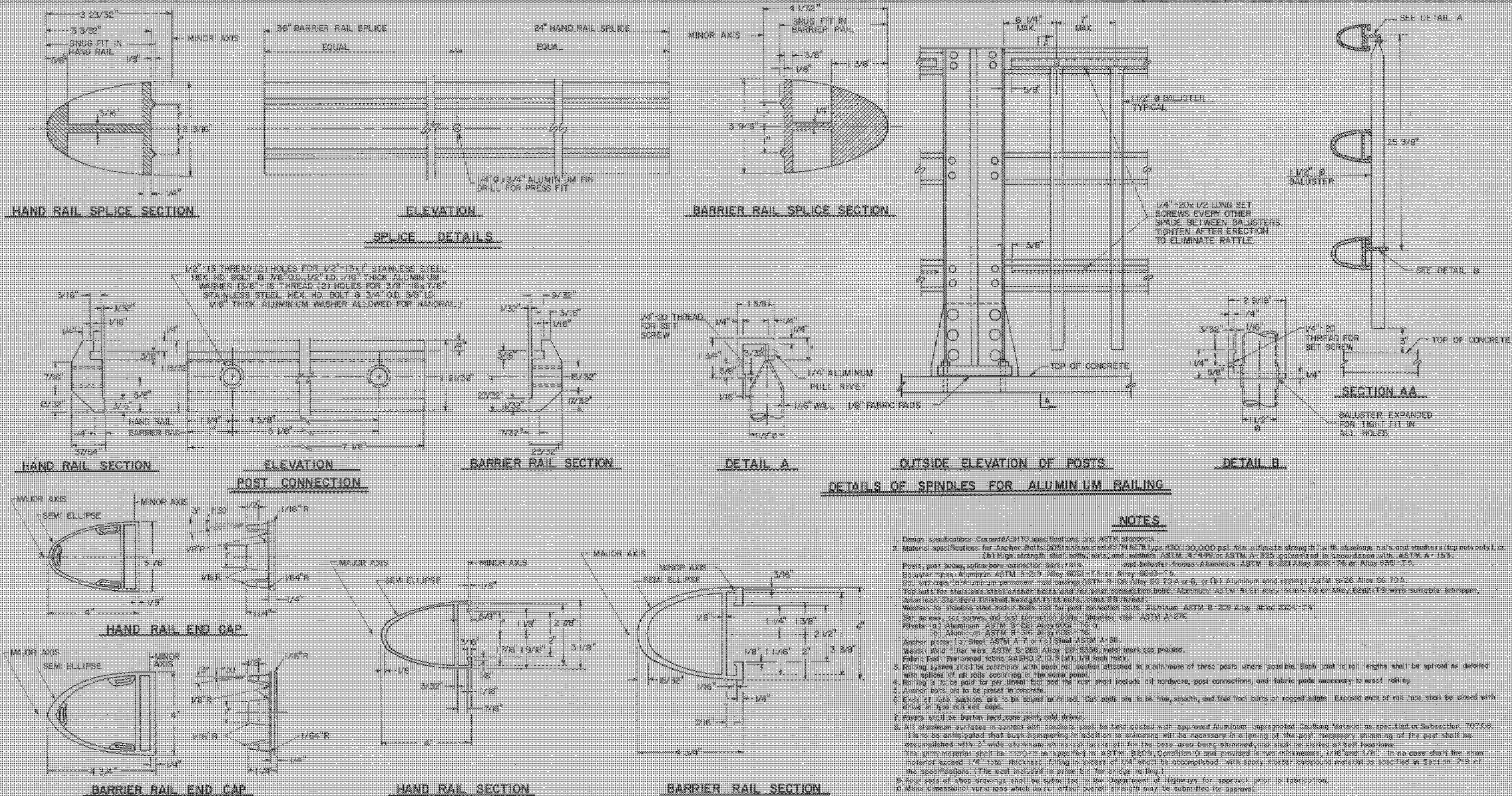
R. H. Conrad
CHIEF ENGINEER
E. H. Stokroy
ASST. CHIEF ENGINEER
L. M. Bjorn
DRISTY ENGINEER

ALUMINUM BRIDGE RAILING DETAILS

DANVILLE
BF MEMB (36)
SHEET 21 OF 22
BRIDGE 92
FOR REFERENCE ONLY

VERMONT
DEPARTMENT
OF HIGHWAYS
STANDARD

SB-RI-71
SHEET 1 OF 2



REVISIONS AND CORRECTIONS	
1. REVISED NOTE #8 - SHIM MATERIAL	10/5/71
2. REVISED ASTM A-325 TO ASTM A-449	J. WOOD 1/28/74
3. ADDED ASTM A-325 TO NOTE #2	J. WOOD 4/1/75
4. REVISED BALUSTER MATERIAL	W. TRIPP 12/18/75
5. ADDED NOTE 10.	W. TRIPP 12/18/75
6. REVISED NOTE 1 & SPINDLE HEIGHT	W. TRIPP 7/1/77

APPROVED: *R. W. Curren*
CHIEF ENGINEER

L. M. B. Jones
ASSISTANT CHIEF ENGINEER

DATE: 8/24/1991

ALUMINUM BRIDGE RAILING DETAILS

DANVILLE
BF MEMB (36)

SHEET 22 OF 22
BRIDGE 92
FOR REFERENCE ONLY

VERMONT
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SB-RI-71

SHEET 2 OF 2