FED ROAD REGION NO	STATE	PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
1	VT		POST WAR	1	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

CONTRACT 3

INTERSTATE PROJECT

TOWN OF SPRINGFIELD
COUNTY OF WINDSOR
INTERSTATE ROUTE 91
BELLOWS FALLS–WHITE RIVER JCT. ROAD

Contract #3
Bridge

BRIDGE NO. 1 220.66 FEET

BRIDGE NO. 3 74.00 FEET
BRIDGE NO. 4 204.54 FEET

LENGTH OF BRIDGES 498.20 FEET 0.094 MILES
LENGTH OF CONTRACT 499.20 FEET 0.094 MILES

BRIDGE NO. 1

BEGINNING AT A POINT 1.733 MILES NORTHERLY OF THE WINDHAM–WINDSOR COUNTY LINE AND EXTENDING 0.041 MILES NORTHERLY.

	SOUTH OF INTERCHANGE	NORTH OF INTERCHANGE
A.D.T. 1958	2,445	3,145
A.D.T. 1975 (EST)	5,420	6,970
D.H.V. (1975)	600	970
D.	51.5 %	61 %
T.	8 %	8 %
V.	65	

BRIDGE NO. 3

BEGINNING AT A POINT 2.361 MILES NORTHERLY OF THE WINDHAM–WINDSOR COUNTY LINE AND EXTENDING 0.014 MILES NORTHERLY.

BRIDGE NO. 4

BEGINNING AT A POINT 2.493 MILES NORTHERLY OF THE WINDHAM–WINDSOR COUNTY LINE AND EXTENDING 0.039 MILES NORTHERLY.

INDEX OF SHEETS

SHEET NO. 1 TITLE PAGE
2–3 TYPICAL CROSS SECTION OF IMPROVEMENT 3" BITUMINOUS CONCRETE PAVEMENT, ITEM 361-B MOD.
4 TYPICAL SHEET U.S. 5 RELOCATION
5 TYPICAL SHEET U.S. 5 AND VT. RTE 11
6 QUANTITY SHEET (ITEMS)
7–14 EARTHWORK AND GRADE SHEET
15–20 PLAN AND PROFILE SHEETS
21 E-2 (BARRICADES, SIGNS AND LIGHTS) BRIDGE
22 BLANK
23 BLANK
24 E-9 (CONSTRUCTION IDENTIFICATION SIGNS)
25 BLANK
26 BLANK
27 BLANK
28 BLANK
29 J-4 FIELD OFFICE
30 SB-56-62 DETAILS OF BRIDGE RAILING (SHEET 1)
31 SB-56-62 DETAILS OF BRIDGE RAILING (SHEET 2)
32 SCB-D1-62 DETAILS OF WF BEAM BRIDGES
33 SCB-D2-62 DETAILS OF WF BEAM BRIDGES
34 SCB-D4-62 DETAILS OF WF BEAM BRIDGES
35 SCB-D6-62 DETAILS OF WF BEAM BRIDGES
36 SCB-D7-62 DETAILS OF WF BEAM BRIDGES
37 SCB-D8-62 DETAILS OF WF BEAM BRIDGES
38 SCB-D9-62 DETAILS OF WF BEAM BRIDGES
39 SCB-38-62 TYPICAL SECTION, PLAN VIEW & QUANTITIES
40 SCB-42-62 TYPICAL SECTION, PLAN VIEW & QUANTITIES
41–44 BLANK
45 BLANK
US #5 BRIDGE
46 BR 10 PRELIMINARY INFORMATION SHEET
47 11 BRIDGE QUANTITY SHEET
48 14 PLAN AND ELEVATION (20 SCALE)
49 15 BORING LOG
50 16 FRAMING PLAN & TYPICAL SECTION
51 17 EXPANSION JOINTS AT ABUTMENTS NB & SB
52 18 BEARING DEVICES NB & SB
53 20 ABUTMENT NO. 1 NB & SB
54 21 ABUTMENT NO. 2 NB & SB
55 22 PIER NO. 1 AND PIER NO. 2 NB
56 23 PLAN & ELEVATION OF PIERS NOS. 1 & 2 SB
57 24 REINFORCING STEEL DETAILS
58 BR 25 REINFORCING STEEL DETAILS
59 BLANK
60 BR 19 APPROACH SLABS NOS. 1 & 2 NB & SB – U.S. 5 BRIDGE
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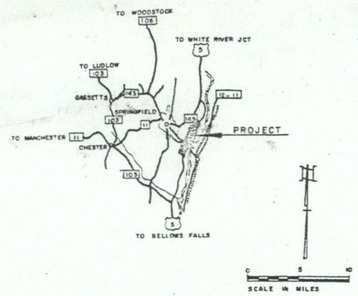
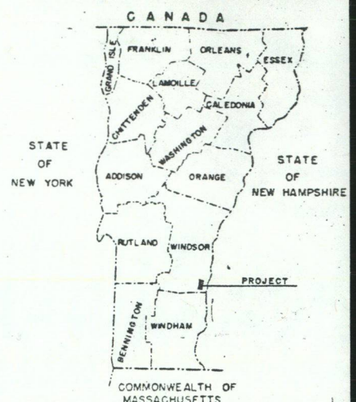
72 BLANK
SHEET NO. 73 BLANK
74 BLANK
75–94 BLANK
SPRINGFIELD TERMINAL RR BRIDGE
95 BR 81 PRELIMINARY INFORMATION SHEET
96 66 PLAN VIEW
97 67 BORING LOG
98 68 BRIDGE QUANTITY SHEET
99 BLANK
100 70 FRAMING PLAN
101 71 NB ABUTMENT DETAILS
102 72 SB ABUTMENT DETAILS
103 77 REINFORCING STEEL SCHEDULE NB
104 BR 79 REINFORCING STEEL SCHEDULE SB
105 BR 80 REINFORCING STEEL SCHEDULE SB
US #5 AND VERMONT ROUTE 11
106 BR 82 PRELIMINARY INFORMATION SHEET
107 83 NORTHBOUND BORING LOGS
108 84 SOUTHBOUND BORING LOGS
109 85 QUANTITY SUMMARY NB AND SB
110 86 TYPICAL SECTIONS NB AND SB
111 87 FRAMING PLAN NB AND SB
112 88 NORTHBOUND PLAN AND ELEVATION
113 89 NORTHBOUND ABUTMENTS NOS. 1 AND 2
114 90 NORTHBOUND PIER NO. 1
115 91 NORTHBOUND PIERS NOS. 2 AND 3
116 92 SOUTHBOUND PLAN AND ELEVATION
117 93 SOUTHBOUND ABUTMENTS NOS. 1 AND 2
118 94 SOUTHBOUND PIER NOS. 1, 2 AND 3
119 95 BEARING DEVICES NB AND SB
120 96 DETAILS OF EXPANSION JOINTS AT ABUTMENTS
121 98 NORTHBOUND REINFORCING STEEL SCHEDULE
122 BR 99 SOUTHBOUND REINFORCING STEEL SCHEDULE
123 BR 97 APPROACH SLABS NB & SB
124–141 MAINLINE CROSS SECTIONS

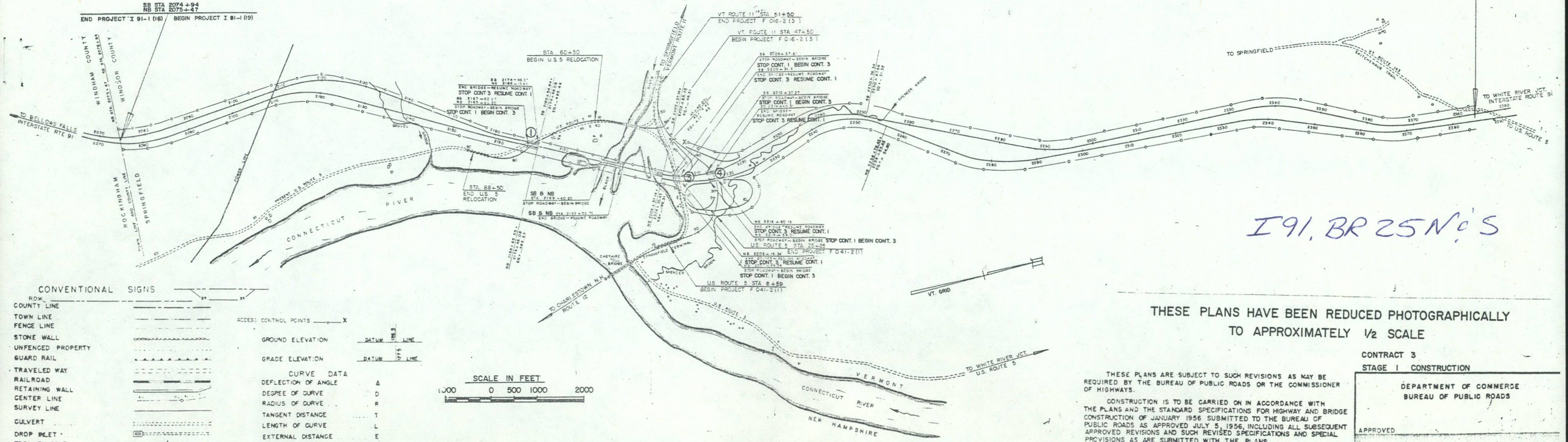
103-A BR 78 REINFORCING STEEL SCHEDULE





SB STA 2074+94
NB STA 2075+47
END PROJECT I 91-1 (16) / BEGIN PROJECT I 91-1 (19)

SB STA 2363+15.5
NB STA 2364+76.5
END PROJECT I 91-1 (19) BEGIN PROJECT I 91-1 (20)



I91, BR 25 No's

CONVENTIONAL SIGNS

ROW
COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE
SURVEY LINE
CULVERT
DROP INLET
TROLLEY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE
CONTROL OF ACCESS
ACCESS CONTROL POINTS X

GROUND ELEVATION DATUM LINE
GRADE ELEVATION DATUM LINE

CURVE DATA

DEFLECTION OF ANGLE	Δ
DEGREE OF CURVE	D
RADIUS OF CURVE	R
TANGENT DISTANCE	T
LENGTH OF CURVE	L
EXTERNAL DISTANCE	E
POINT OF INTERSECTION	P.I.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT ON TANGENT	POT
POINT ON SUB-TANGENT	POST

SCALE IN FEET
1000 0 500 1000 2000

THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY TO APPROXIMATELY 1/2 SCALE

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THE PLANS AND THE STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION OF JANUARY 1956 SUBMITTED TO THE BUREAU OF PUBLIC ROADS AS APPROVED JULY 5, 1956, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE SUBMITTED WITH THE PLANS.

CONTRACT 3
STAGE 1 CONSTRUCTION

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

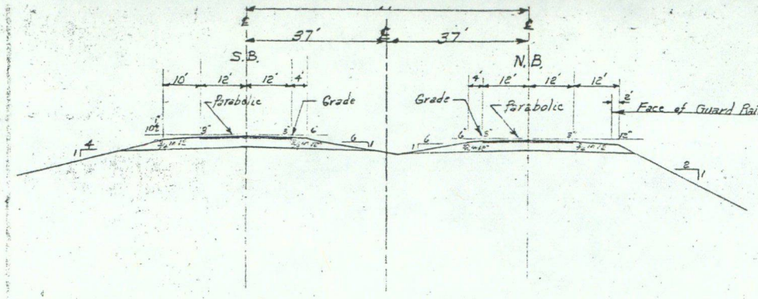
APPROVED
DIVISION ENGINEER DATE

APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED
R H Arnold	E. F. Stickney	Lyle Stone	F. B. Chase	G. M. Lane	A. D. Bishop
ASST. CHIEF ENGINEER	CONSTRUCTION ENGINEER	BRIDGE ENGINEER	DISTRICT ENGINEER	HIGHWAY ENGINEER	CHIEF ENGINEER
DATE 8/22/63	DATE 3/30/62	DATE 3/30/62	DATE 3-30-62	DATE 3-30-62	DATE 3/30/62

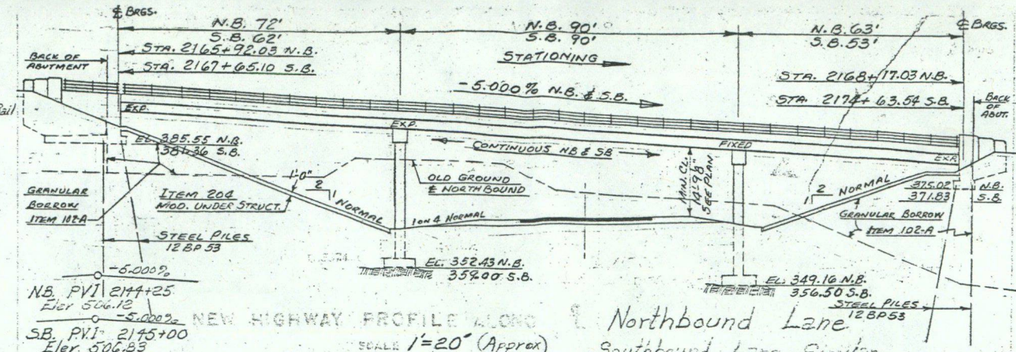
SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

PROJECT I NO. 91-1 (19)

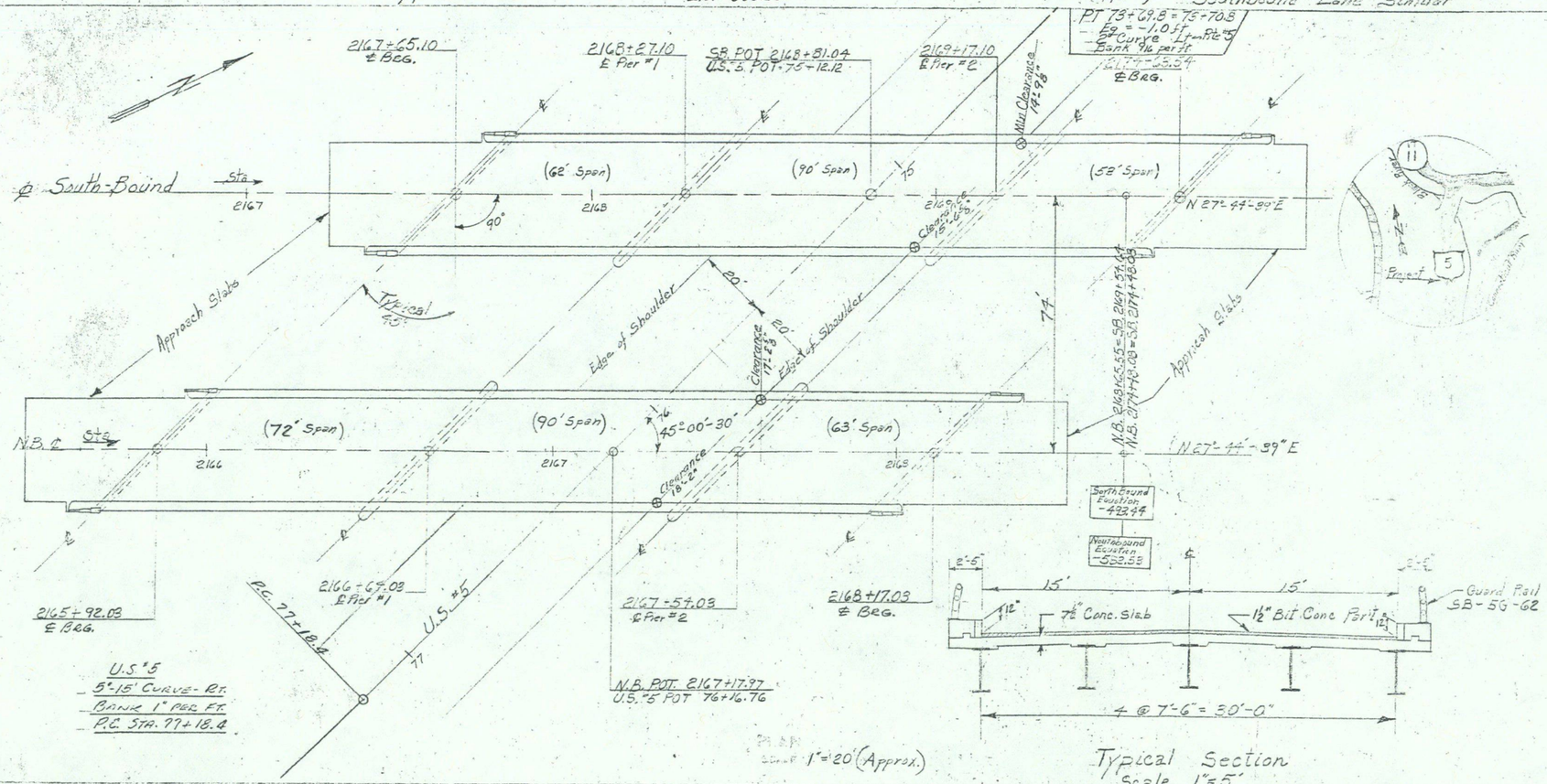
SHEET 1 OF 141 SHEETS



NEW HIGHWAY SECT. STA. TO STA.
SCALE 1" = 20'
Typical

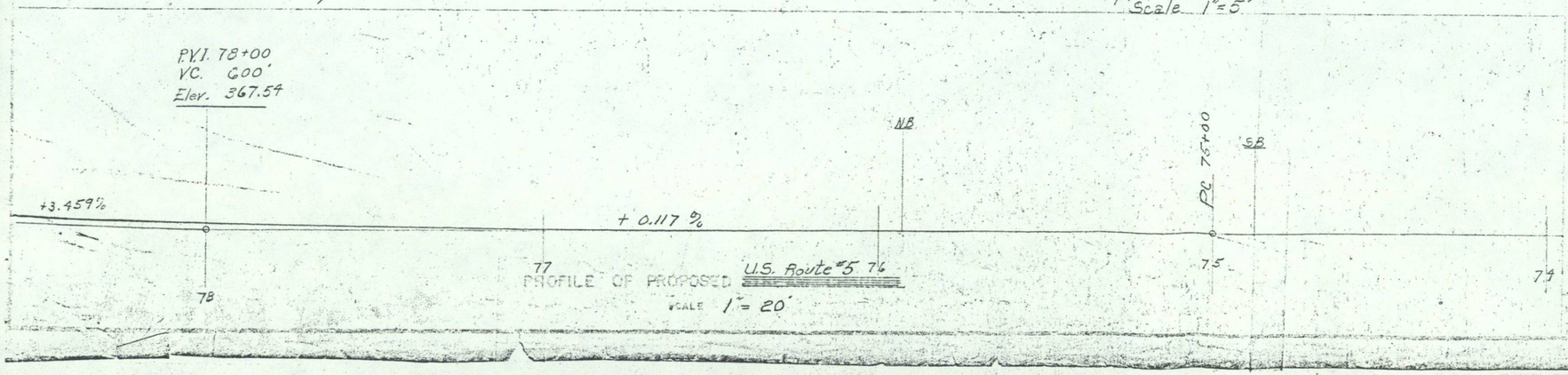


NEW HIGHWAY PROFILE ALONG ℄ Northbound Lane
SCALE 1" = 20' (Approx)
Southbound Lane Similar



PLAN
SCALE 1" = 20' (Approx.)

Typical Section
Scale 1" = 5'



PROFILE OF PROPOSED U.S. Route #5
SCALE 1" = 20'

HIGHWAY NO. I-91 NAME OF HIGHWAY INTERSTATE
STRUCTURE NO. S-2, B-2 COUNTY WINDSOR TOWN SPRINGFIELD
PROJECT NO. I-91-1(19) LOCATION 0.75 Miles south of the intersection of U.S. #5 and VT #11 on U.S. #5

EXISTING STRUCTURE

1. TYPE OF LOADING ON EXISTING STRUCTURE
2. TYPE OF EXISTING STRUCTURE
3. IN DISPOSAL ANALYSIS ELEVATION OF EXISTING STRUCTURE
4. WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE — COST OF REMOVAL
5. SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6. SHOULD NEW TEMPORARY STRUCTURE BE BUILT
7. ORDINARY HIGH WATER SURFACE ELEV. OF EXISTING STRUCTURE — WATERWAY TO ORDINARY H.W.
8. ESTIMATE HIGH WATER AT EXISTING STRUCTURE
9. DEPTH OF EXISTING BRIDGE UPSTREAM — WATERWAY TO ORDINARY H.W.
10. DEPTH OF EXISTING BRIDGE DOWNSTREAM — WATERWAY TO ORDINARY H.W.
11. TYPE OF FOUNDATION USED — EXISTING ABUTMENTS
12. DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE
13. IF NOT, WHAT ELEVATION IS DEEMED APPROVED
14. HYDRAULIC WATERWAY AREA PROVIDED

NEW STRUCTURE

1. RECOMMENDED TYPE OF STRUCTURE Continuous (Noncomposite) WF Beams
2. REPLACEMENT BRIDGE LENGTH OR SPANS 72, 90, 63 N.B. : 62, 90, 53 S.B.
3. [illegible] Route US #5 Center Spans 63, 65 N.B. & S.B.
4. [illegible]
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6. GROUND AND WATER ELEVATION AT NEW STRUCTURE
7. EXISTING HIGH WATER ELEVATION AT NEW STRUCTURE — SOURCE OF INFORMATION
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10 K/SQ.FT.

ABUT. SKEW

A-1 - 31.0
A-2 - 30.0
A-1 - 22.0
A-2 - 17.0

SEE BR-15.

PILES: Point Bearing. 45 TON Design Capacity
FOOTINGS: Designed 10 KIPS/SQ.FT. Capacity
BORINGS: SEE BORING LOG SHEET

INDEX OF BRIDGE SHEETS

SHEET No.	DESCRIPTION
BR-10	PRELIMINARY INFORMATION SHEET
BR-11	BRIDGE QUANTITY SHEET
BR-12	PLAN (50 SCALE)
BR-13	PROFILE (50 SCALE)
BR-14	PLAN & ELEVATION (20 SCALE)
BR-15	BORING LOG
BR-16	FRAMING PLAN & TYPICAL SECTION
BR-17	EXPANSION JOINTS @ ABUTMENTS - NB & SB
BR-18	BEARING DEVICES - NB & SB
BR-19	APPROACH SLAB #1 & #2 - NB & SB
BR-20	ABUTMENT #1 - NB & SB
BR-21	ABUTMENT #2 - NB & SB
BR-22	PIER #1 & PIER #2 - NB
BR-23	PLAN & ELEVATION OF PIERS #1 & #2 - SB
BR-24-25	REINFORCING STEEL DETAILS
BR-100	SCB-D6-62 - DETAILS B, C & F
BR-101	SB-5G-62 - SHEET 1 (RAILING DETAIL)
BR-102	SB-5G-62 - SHEET 2 (RAILING DETAIL)

SHEETS BR 26-28 OMITTED.

REVISION:- NORTHBOUND SPANS CHANGED FROM 79'-90'-64' TO 72'-90'-63' 11-13-61 RJB

DATE Jan 24, 1961
Lowtyom
A. O. Sikut

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

BRIDGES IN THE TOWN OF SPRINGFIELD
ROUTE I-91 LOC. STA. 2168±
Interstate over U.S. Route #5

DESIGNED RPG STONE AS Shown
Nov. 23, 19
PROJECT NO. I-91-1(19) SHEET 40 OF 141
CONTRACT - 3
BR-10

EARTHWORK

ON	GRADES ELEVATION ON TAN.	ON V.C.	CORR. V.C.	DIST.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.	AREA	CU.YDS.

BRIDGE QUANTITY SHEET

DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

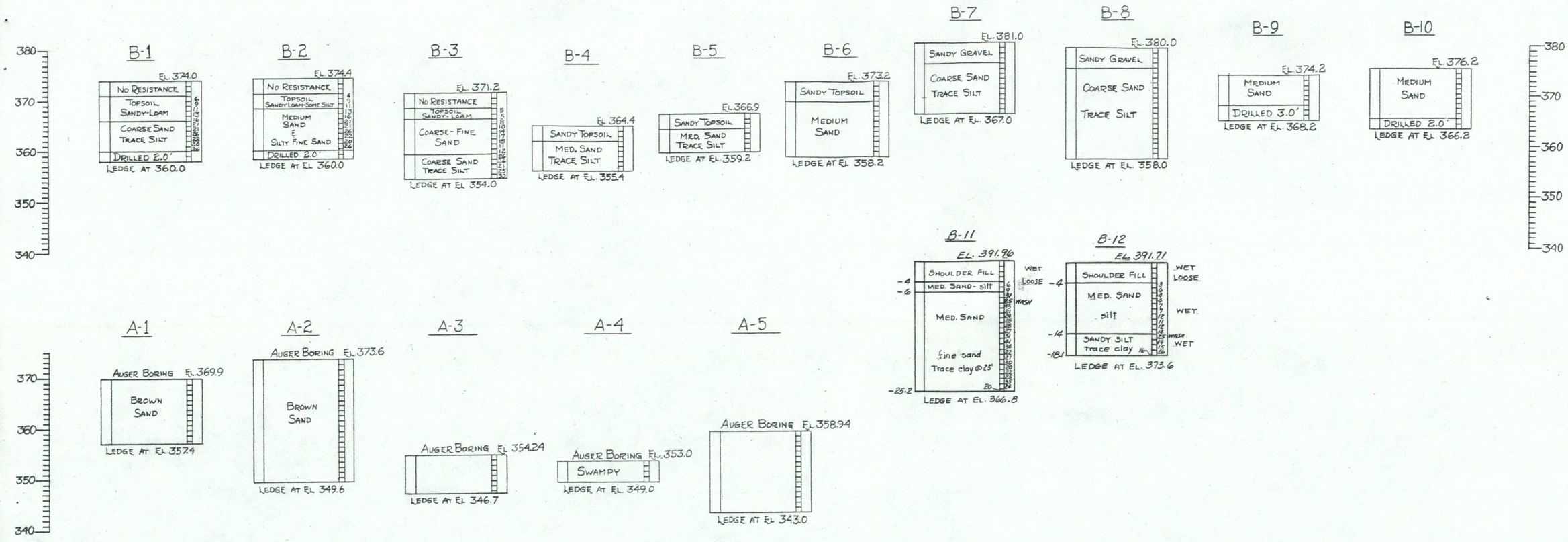
QUANTITY BREAKDOWN -FOR 2 BRIDGES- NORTHBOUND & SOUTHBOUND

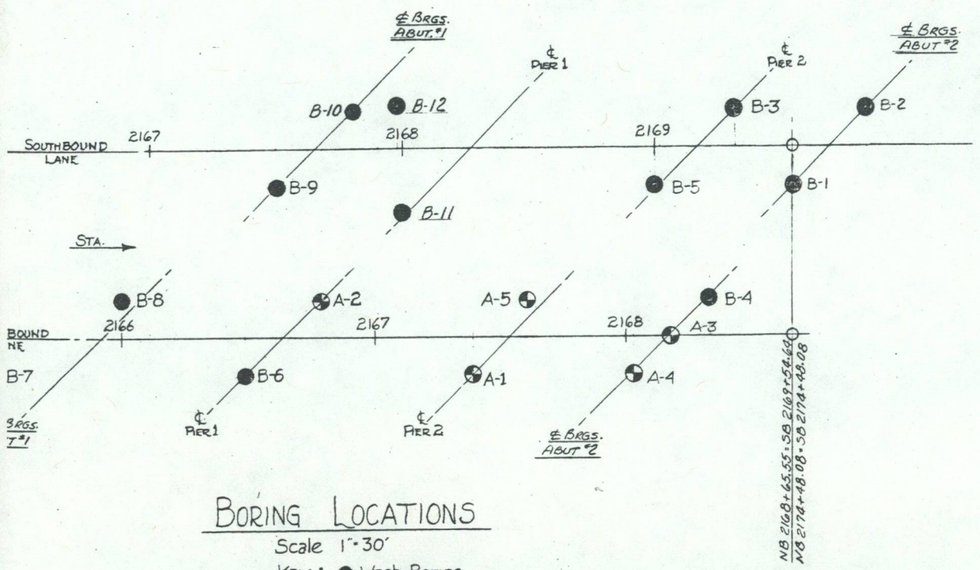
NO.	ITEM	UNIT	ABUT. No. 1 (2)	ABUT. No. 2 (2)	PIER No. 1 (2)	PIER No. 2 (2)	SUPER-STRUCTURE (6 SPANS)	APP. SLAB No. 1 (2)	APP. SLAB No. 2 (2)	TOTAL	FINAL
*102-A	GRANULAR BORROW	C.Y.	*3400							*3400	
107	STRUCTURE EXCAVATION	C.Y.	55	33	269	371				728	
204	SUB-BASE OF CRUSHED ROCK MODIFIED (UNDER STRUCTURE)	C.Y.	204	112						316	
*318	TAR EMULSION FOR BRIDGE FLOORS	GAL.					*574	*107	*94	*775	
*361-B	BITUMINOUS CONCRETE PAVEMENT (MOD.)	TON					*121	*23	*20	*164	
*372-A	JOINT SEALER - HOT POURED	L.F.					*340			*340	
401-B	CONCRETE CLASS B (MOD.)	C.Y.						101	84	185	
402	REINFORCING STEEL	LB.	19,542	12,532	38,630	37,159	106,730	15,566	13,016	243,265	
404-A	STRUCTURAL STEEL	LB.					523,400			523,400	
407	ASPHALTIC-ASBESTOS COATING	S.Y.	20	20	34	34				108	
501	FURNISHING EQUIP. FOR DRIVING PILES	L.S.	REQ'D.	REQ'D.						1/3	
503	SPLICES FOR STEEL PILING	EA.	8	4						12	
504	STEEL PILING (12 BP 53)	L.F.	954	470						1424	
556-C	GRANITE BRIDGE CURB (MOD.)	L.F.					862	90	34	986	
572	BRIDGE RAILING	L.F.	68				846			914	
401-AA	CONCRETE CLASS AA (MOD.)	C.Y.	228	146	153	165	435			1127	
569	FIELD OFFICE	L.S.								1/3	
373	RUBBER JOINT MATERIAL	L.F.						104	49	153	

* DENOTES QUANTITY IS NOT INCLUDED IN CONTRACT 3

BRIDGE(S) AT STATION(S) NORTHBOUND - 2165+92.03 - 2168+17.03
SOUTHBOUND - 2167+65.10 - 2174+63.54
LOCATION(S) INTERSTATE OVER U.S. #5

SPRINGFIELD PROJECT NO. I-91-1(19) CONT. 3
BR 11 OF _____ SHEET NO. 47 OF 141





Boring Locations

Scale 1"=30'

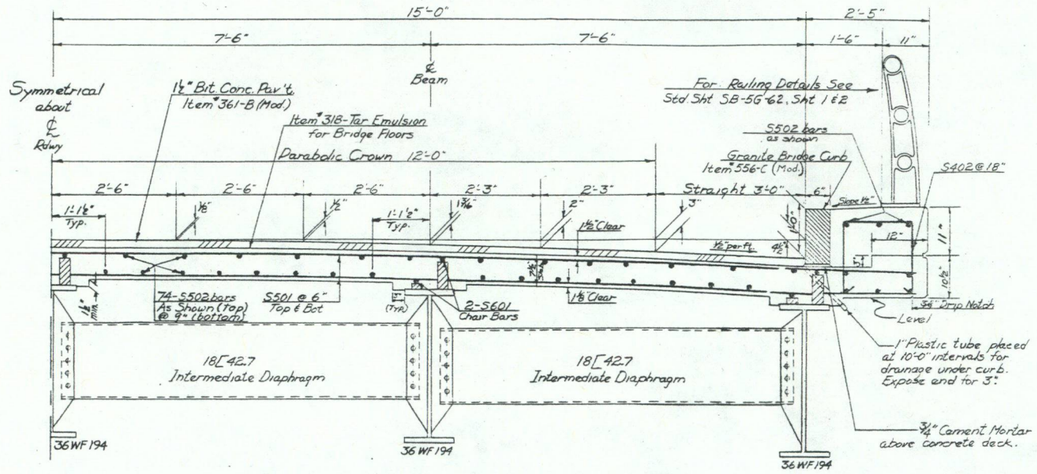
Key: ● Wash Boring
⊕ Auger Boring

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.				
401-B	CONC. CLASS B (MOD.)	C. Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				

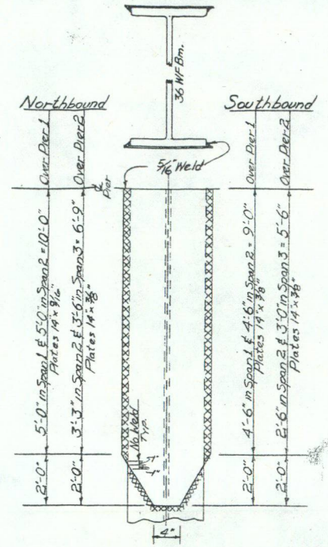
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

Town of Springfield
Route No. I-91 Sta. 2168+00
Boring Log
Interstate over U.S. Route #5
Scale As Noted
Surveyed by
Drawn by RND Checked by GAB
Project No. I-91-1(19) Cont. 3
BR-15 Sheet 49 of 141

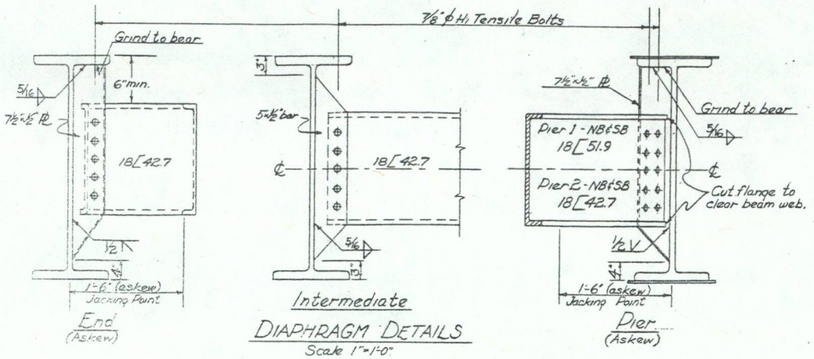
as shown at beam haunch, surface to be screeded, floated and broomed. Partial parabolic crown as per detail, to be obtained by stepping bridge seats.



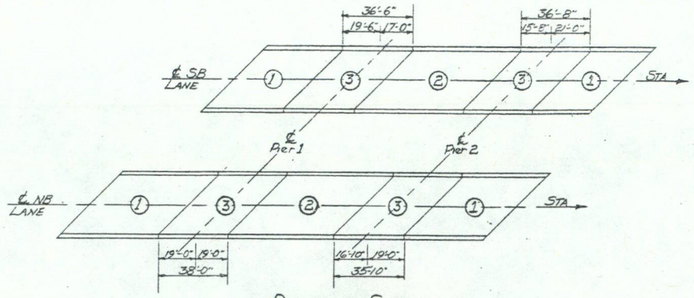
TYPICAL HALF SECTION
Scale 1"=1'-6"



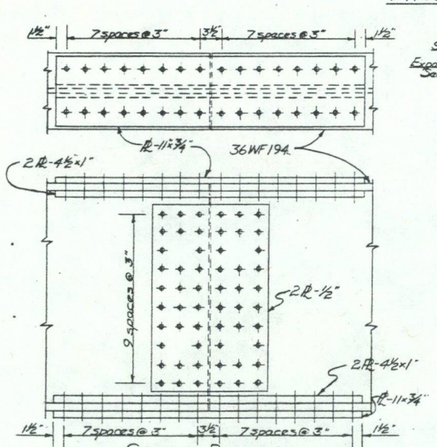
COVER PLATE DETAILS
Not to scale
(Note: All cover plates both top & bottom)



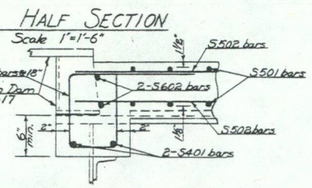
DIAPHRAGM DETAILS
Scale 1"=1'-0"



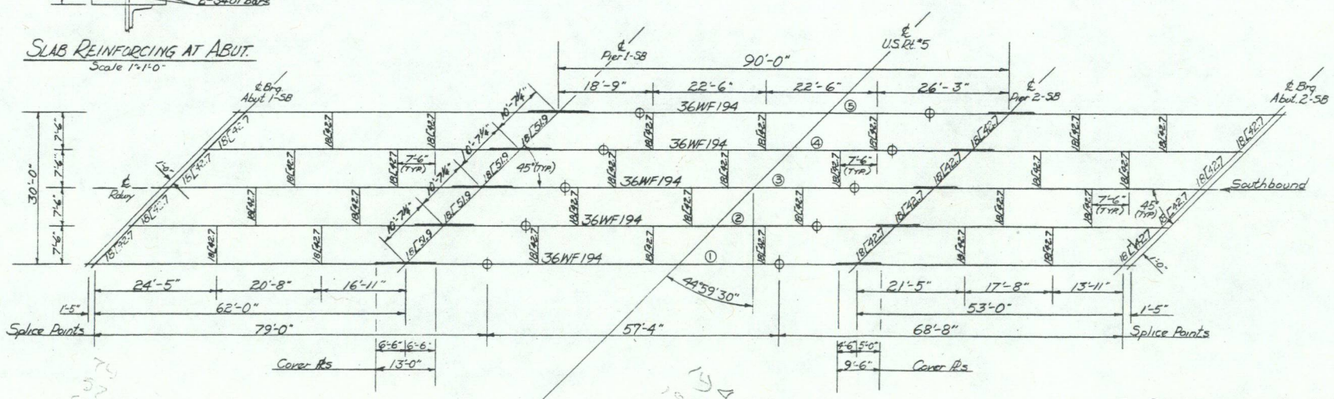
POURING SCHEDULE
Not to Scale



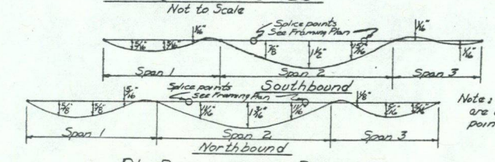
SPLICE DETAILS
Scale 1"=1'-0"



SLAB REINFORCING AT ABUT.
Scale 1"=1'-0"



FRAMING PLAN
Scale 1"=15'-0"



Note: All deflections are at quarter span points.

DL. DEFLECTION DIAGRAM

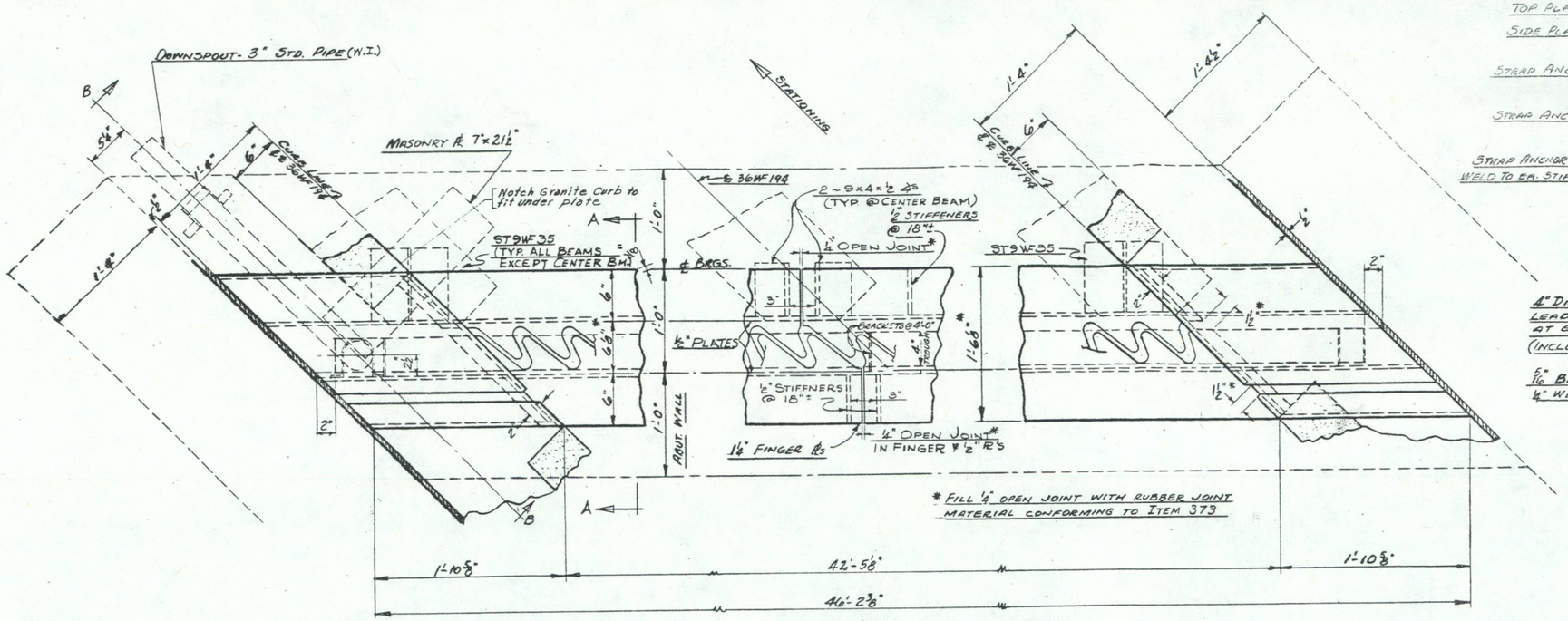
—NOTES—

1. Beam splices shall be sub-punched, shop assembled and reamed in accordance with A.A.S.H.O. specs. - Art 2.10.10.
2. The concrete deck shall be placed in numerical order as indicated in the schedule shown on this sheet.
3. All bolts to be H.S. ⅞" ϕ & holes 15/16" unless otherwise noted, with connections made in accordance with 1961 AASHO specs. for Highway Bridges 2.10.20.
4. All beams shall be cambered for dead load deflection.
5. Structural steel for beams, cover plates, and splice plates shall be A.S.T.M. designation A-36-62T

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.				
401-B	CONC. CLASS B (MOD.)	C. Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				

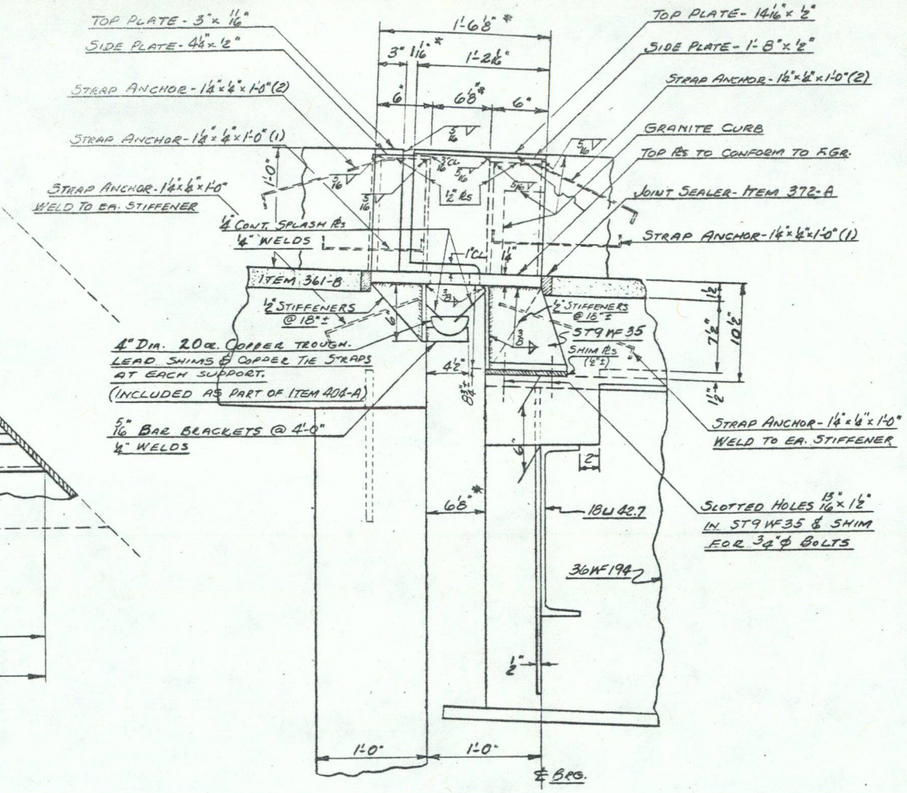
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SPRINGFIELD
ROUTE NO. I-91 STA. 2168 ±
FRAMING PLAN & TYPICAL SECTION
INTERSTATE OVER U.S. RT. 5
SCALE AS NOTED
SURVEYED BY
DRAWN BY RND CHECKED BY J.A.B.
PROJECT NO. I-91-1(9) Coats 3.
BR-16 SHEET 50 OF 141



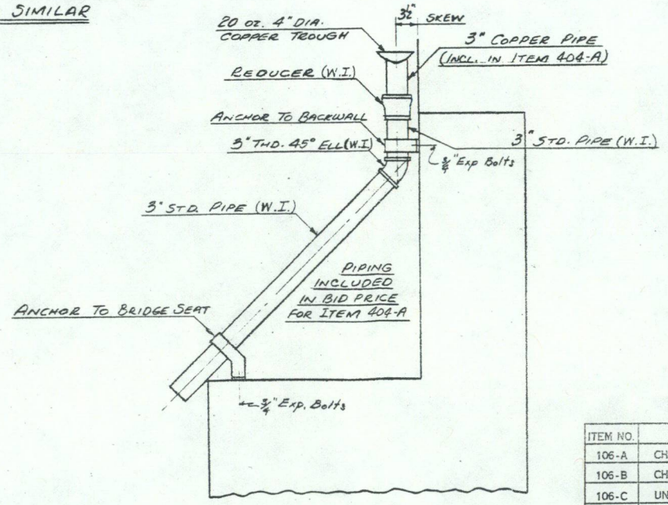
PARTIAL PLAN - ABUT. #1

ABUT. #2 SIMILAR



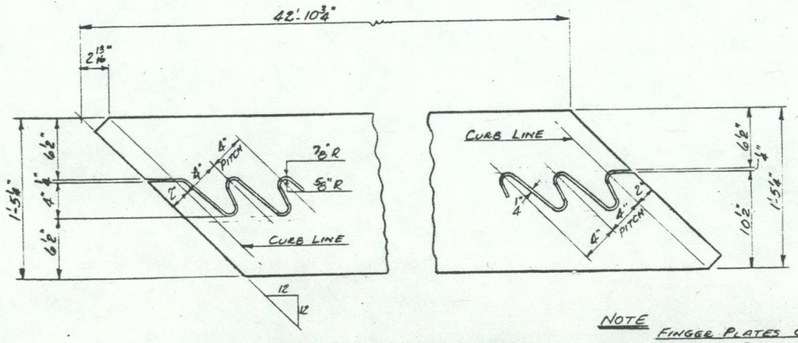
SECTION A-A

*FOR 45°F



SECTION B-B

SCALE - 1" = 1'-0"



DETAIL OF FINGER PLATES

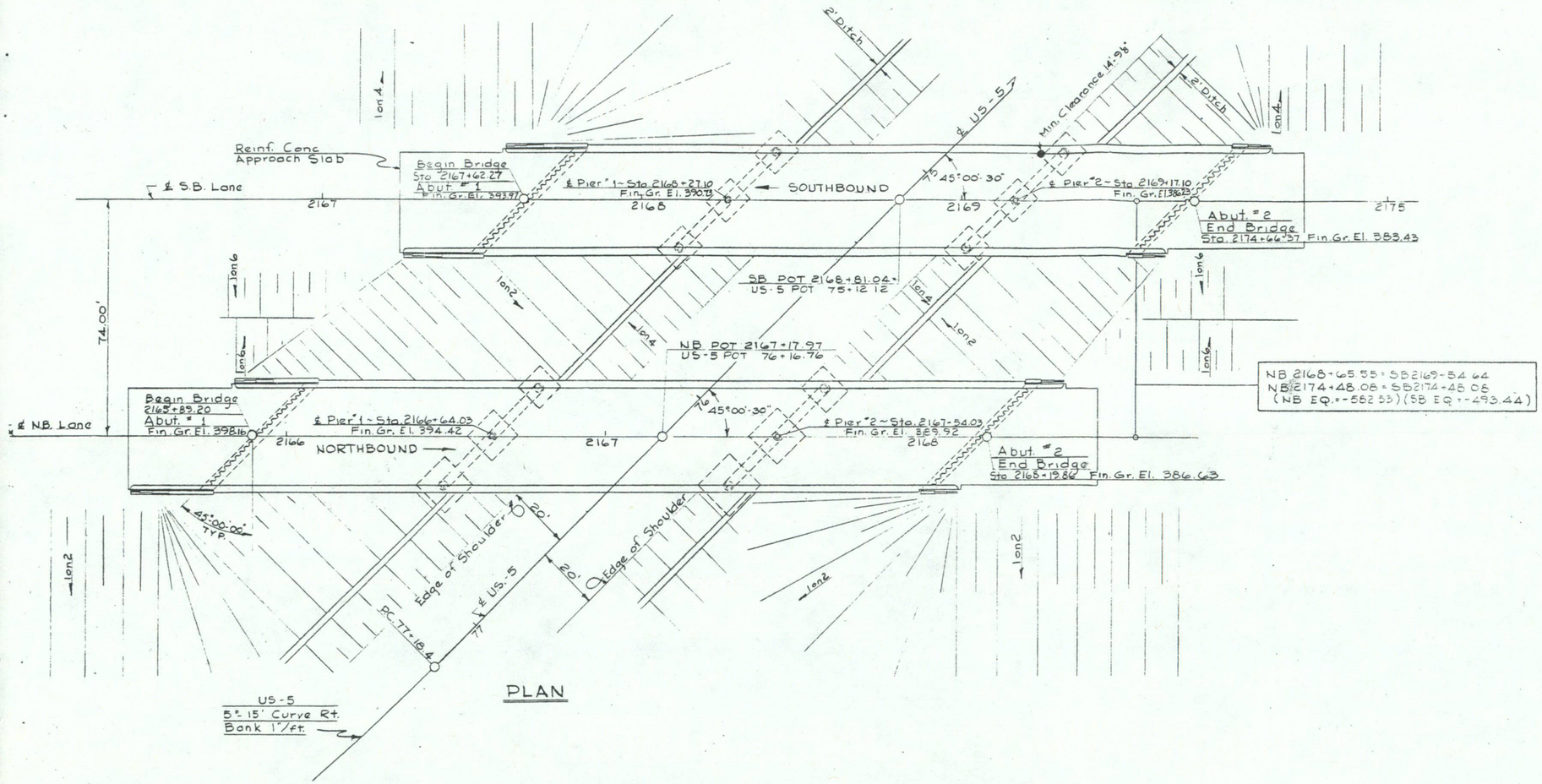
NOTE

FINGER PLATES CUT FROM 17¼" x 1¼" STOCK MAY BE FABRICATED AND ERECTED AS A SINGLE UNIT AND THE ¼" OPEN JOINTS MADE BY BURNING THE ℞'S PRIOR TO THE POURING OF THE CONCRETE SLABS, TO BE SHOP ASSEMBLED AND WELDED TOGETHER FOR SHIPMENT.

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.				
401-B	CONC. CLASS B (MOD.)	C. Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				
404-A	STRUCTURAL STEEL	LB.	23215			

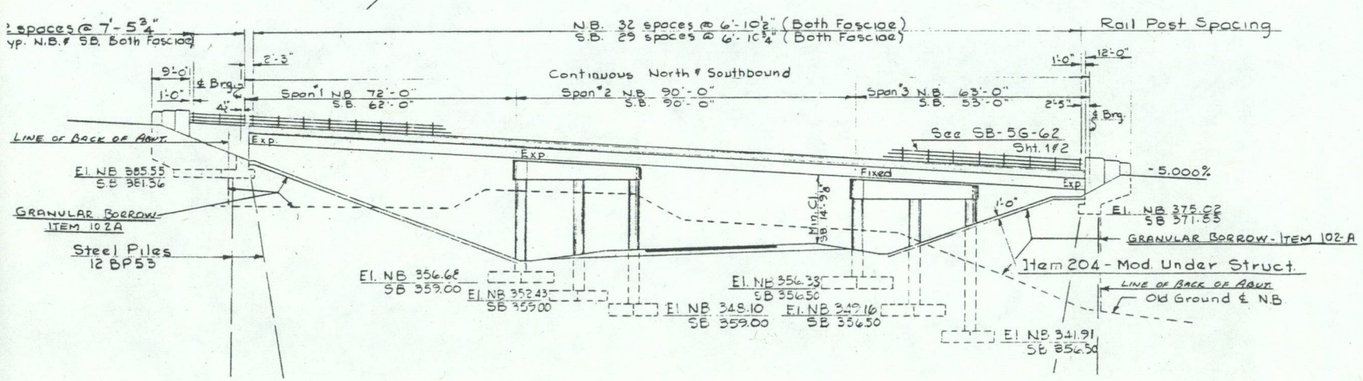
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SPRINGFIELD
ROUTE NO. I-91 [redacted] STA. 2168 ±
EXPANSION JOINTS @ ABUTMENTS (FINGER PLATES) N.B. & S.B.
SCALE 1½" = 1'-0"
SURVEYED BY
DRAWN BY RTB 12/61 CHECKED BY J.A.B. '62
PROJECT NO. I-91-1 (19)
BR-17 SHEET 51 OF 141 — CONTRACT-3



PLAN

US-5
5° 15' Curve Rt.
Bank 1"/ft.



ELEVATION N.B. BRIDGE

(S.B. Similar)

GENERAL NOTES

Specifications: All materials and construction shall conform to the State of Vermont, Department of Highways, Standard Specifications for Highway and Bridge Construction, dated January, 1956 and the AASHO Standard Specifications dated 1961.

Live Load: Structure designed for H20-S16-44 loading modified for National System of Interstate Highways applied in accordance with the provisions of the AASHO Standard Specifications Article 1.2.8.

Concrete: All exposed edges of concrete shall be chamfered 1"x1" unless otherwise noted. All construction joints to be made as shown on SCB-DG-62, details B & C unless otherwise noted.

Reinforcement: All reinforcement to have a clear cover of 3", unless otherwise noted.

Embankments: Where granular material is indicated around bridge abutments, rock fill, if available, shall be substituted except in the area where piles are to be driven. Wherever materials from excavation are used in embankments requiring granular material, they shall be paid for as indicated under Item 101, Excavation.

Blasting: Where rock is encountered, no blasting shall be done within 200 feet of any concrete structure and proper precaution against damage shall be taken when blasting outside this 200' limit.

Dimensions: All dimensions given are measured horizontally or vertically unless otherwise noted. Dimensions given are for 68° F, unless otherwise noted. Elevation datum sea level based on nearest U.S. Government vertical control.

Structural Steel: Item 404-A shall include all structural steel, copper, wrought iron, and any other metals indicated or required in the completed structure which are not otherwise classified.
All structural steel shall be structural carbon steel conforming to the requirements of the specifications for steel bridges and buildings A.S.T.M. Designation A36-62T except as otherwise noted.
The contractor shall submit complete details of the structural steel to the State of Vermont, Department of Highways, and receive their written approval prior to the start of fabrication. The steel details shall include provision for the cambering of beams for dead load deflection as well as erection diagrams and falsework details.
The final coat of field paint shall be green.

Steel Piles: Steel Bearing Piles (12 BP 53) shall be driven to ledge rock (Point bearing capacity 45 tons) unless otherwise approved by the engineer. When piles are driven in fill, the material should be such as to have no stones large enough to interfere with the driving of the piles.

Abutments & Piers: The top surfaces of all abutments and piers shall be sloped 1/4" per foot from the front edge of abutment curtainwalls or center lines of piers, except for bearing pads projecting 1" or more above the general area, which surfaces shall be level. Elevation of bridge seats given are for centerline of bearings. The entire exposed top surface of abutments and piers shall be coated with Asphaltic-Asbestos Coating 1/4" thick as per Item 407 of the specifications. The application of this item shall be after all painting and incidental items are completed.

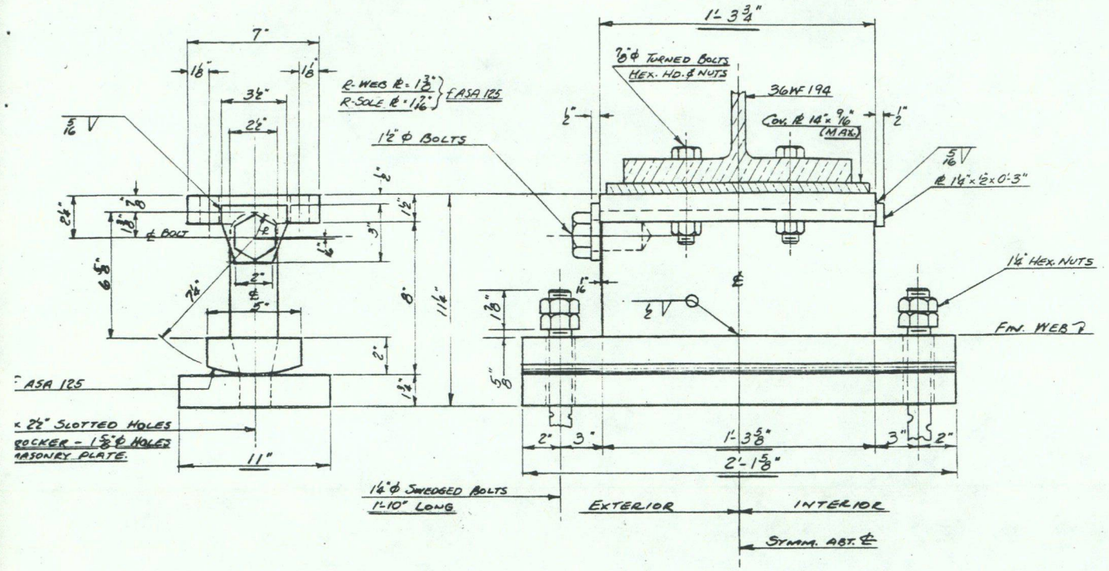
General: Cross slope of approach slabs to conform to the cross slope of the bridge. All expansion material shall be premoulded cork containing no bitumen or asphalt.

-SUPERSTRUCTURE QUANTITIES-

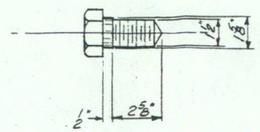
ITEM NO.	ITEM	UNIT	N.B. Superstruct. NET	N.B. Superstruct. FINAL	S.B. Superstruct. NET	S.B. Superstruct. FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-AA	CONC. CLASS AA (MOD.)	C.Y.	227		208	
402	REINF. STEEL	LBS.	SEE REINF. STEEL DETS.			
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				
318	Tar Emulsion for Bridge Floors	Gal.	300		274	
[illegible]	Bituminous Conc. Pavement (Mod.)	Ton	63		58	
372-A	Joint Sealer - Hot Poured	L.F.	170		170	
424-A	Structural Steel	lbs.	255,170		233,700	
556-C	Granite Bridge Curb (Mod.)	L.F.	451		411	
572	Bridge Railing	L.F.	223		205	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

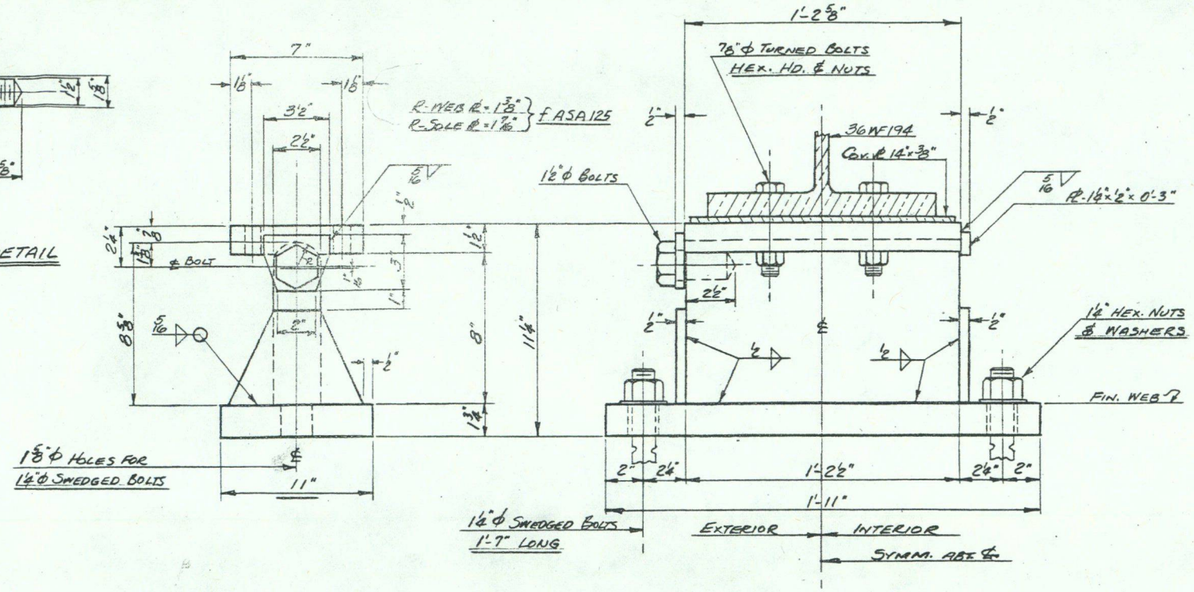
TOWN OF Springfield
ROUTE NO. I-91 STA. 2168 ±
Plan & Elevation of
Int. Over US-5
SCALE 1" = 20'
SURVEYED BY
DRAWN BY NBT CHECKED BY RPG
PROJECT NO. I-91-1(19) CONT. 3
BR-14 SHEET 48 OF 141



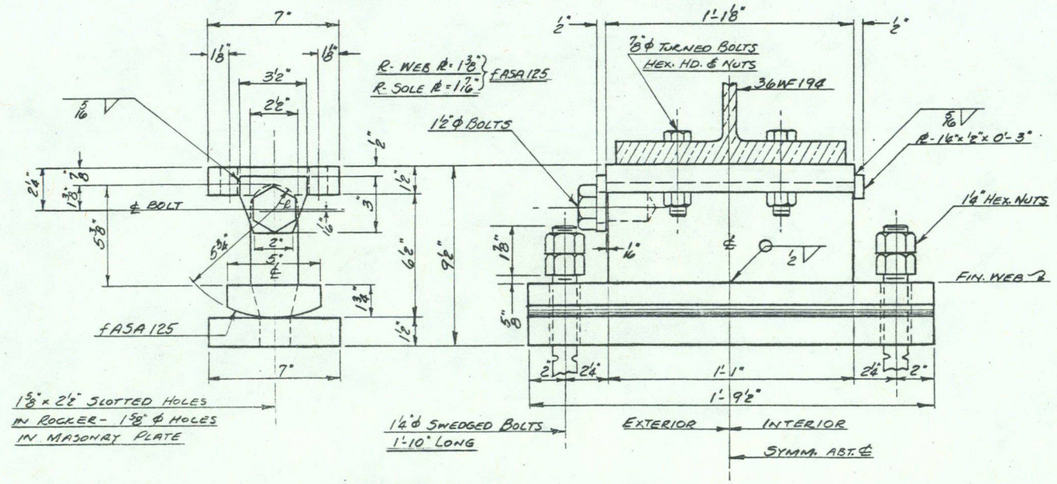
PIER No. 1 - EXPANSION BEARING



BOLT DETAIL



PIER No. 2 - FIXED BEARING



ABUTS. No's. 1 & 2 - EXPANSION BEARING

-NOTES-

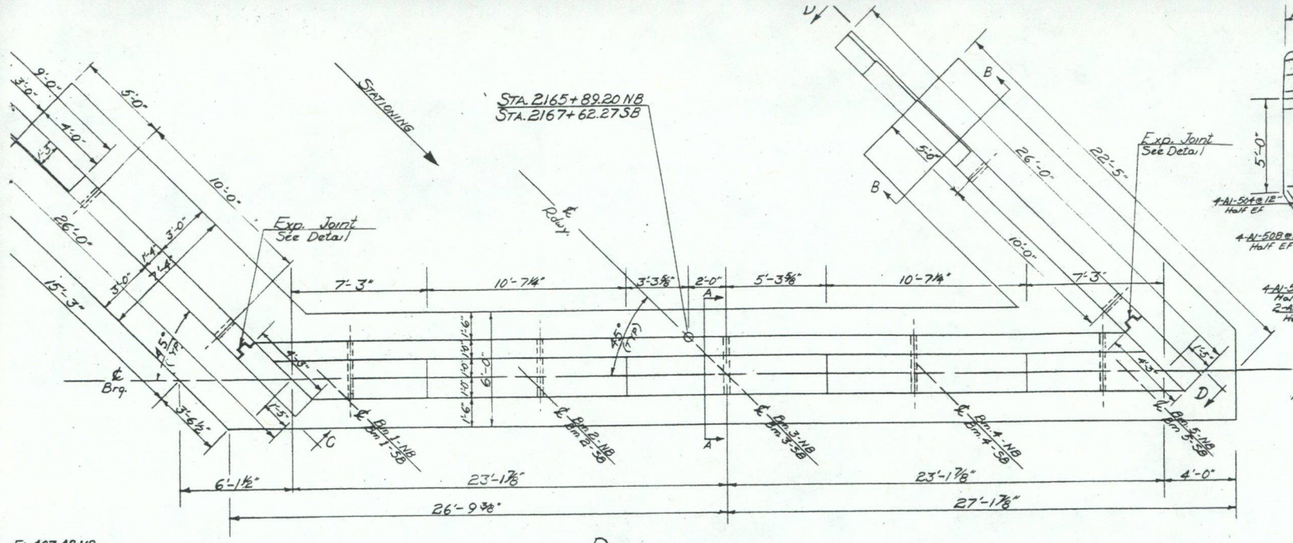
1. SWEDGE BOLTS TO BE GROUTED AFTER SUPERSTRUCTURE IS IN PLACE.

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.				
401-B	CONC. CLASS B (MOD.)	C. Y.				
402	REINF. STEEL	LBS.				
407	ASPHALTIC-ASB. COATING	S. Y.				
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				
404-A	STRUCTURAL STEEL	LB.	11,315			

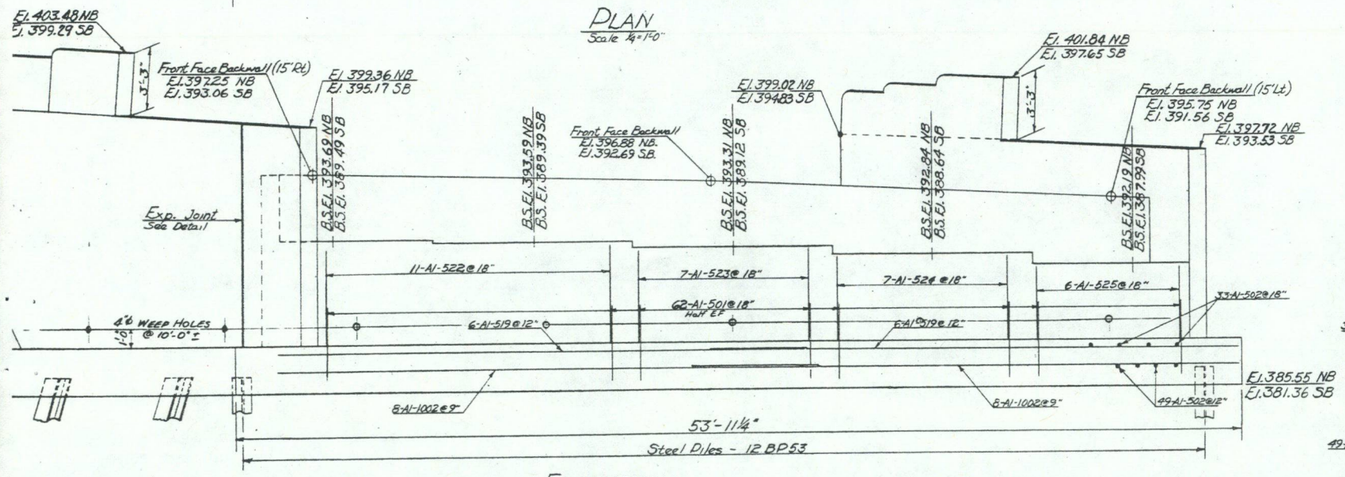
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SPRINGFIELD
ROUTE No. I-91 STA. 2168 ±
BEARING DEVICES - NB & S.B.

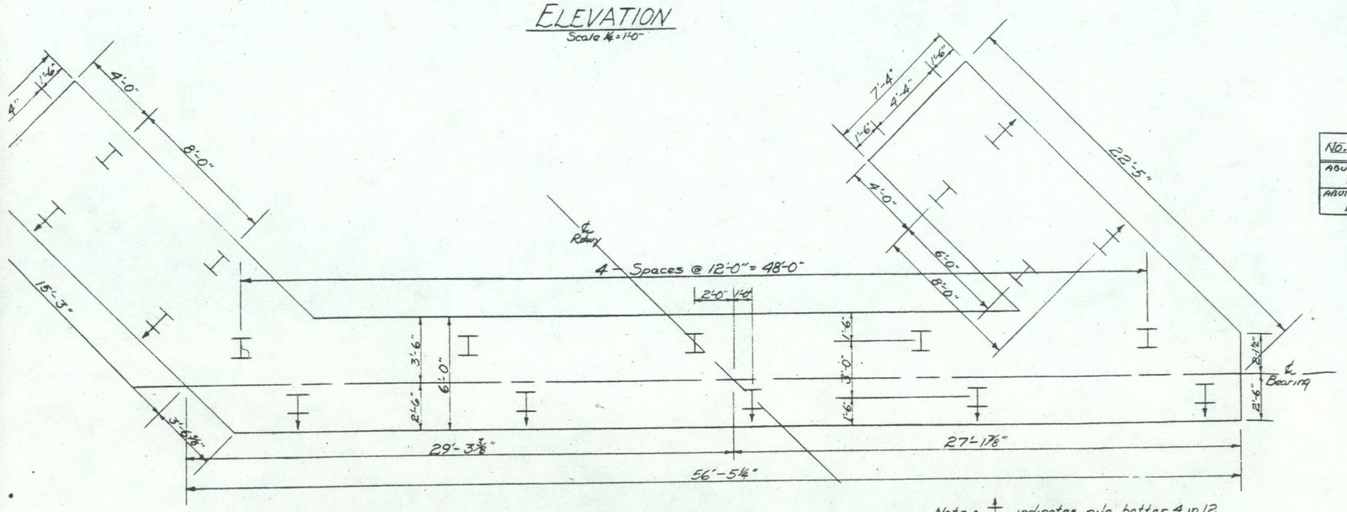
SCALE 3" = 1'-0"
SURVEYED BY
DRAWN BY RTB 7/61 CHECKED BY J.A.B. 1/62
PROJECT No. I-91-1(19)
BR-18 SHEET 52 OF 141 CONTRACT-3



PLAN
Scale 1/4"=1'-0"



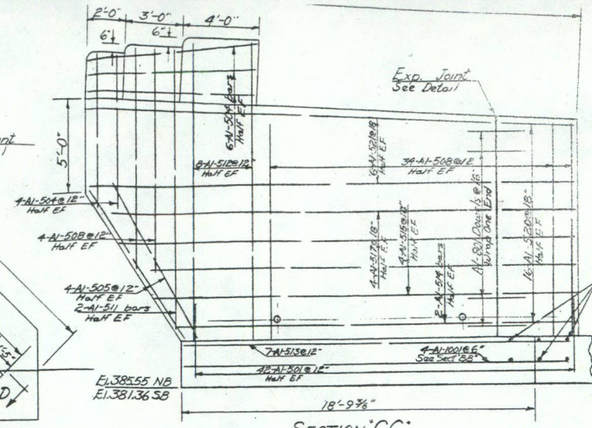
ELEVATION
Scale 1/4"=1'-0"



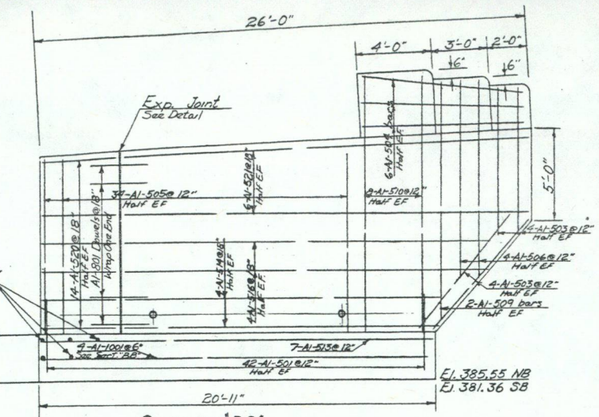
Estimated Pile Length:
Abut. 1-NB : 31.0'
Abut. 1-SB : 22.0'

PILE PLAN
Scale 1/4"=1'-0"

Note: ⊥ indicates pile batter 4 in 12 in direction of arrow. All piles are 12BP53.

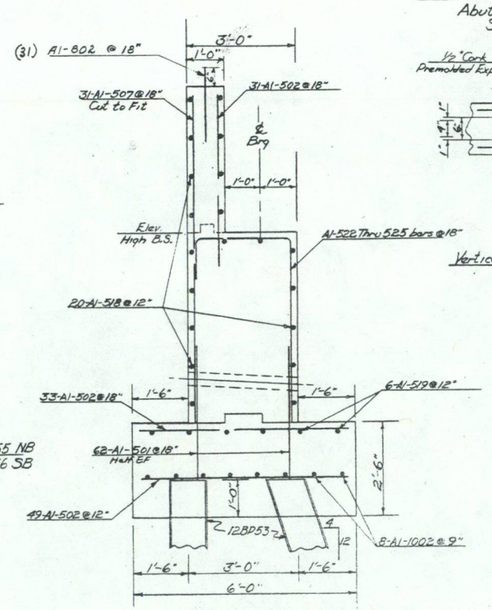


SECTION "CC"

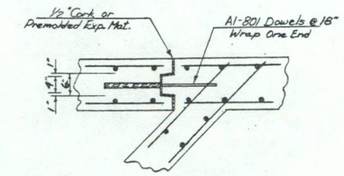


SECTION "DD"

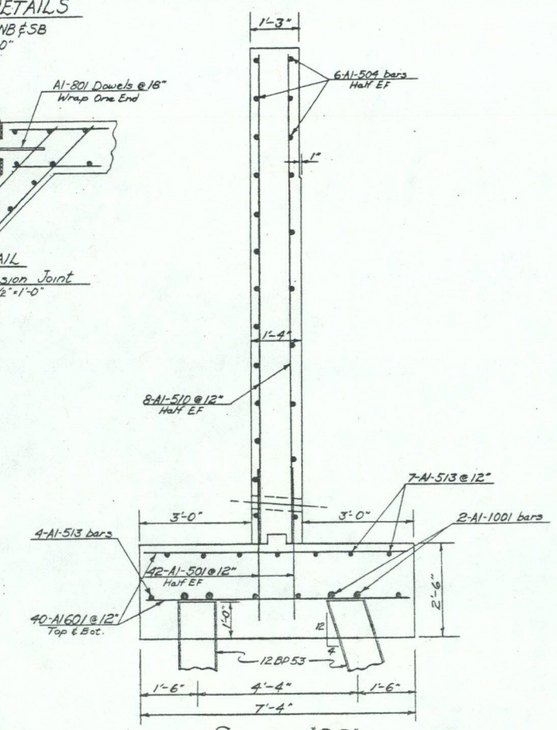
WINGWALL DETAILS
Abutment 1 -NB & SB
Scale 1/4"=1'-0"



SECTION "AA"
Scale 1/2"=1'-0"



DETAIL
Vertical Expansion Joint
Scale 1/2"=1'-0"



SECTION "BB"
Scale 1/2"=1'-0"

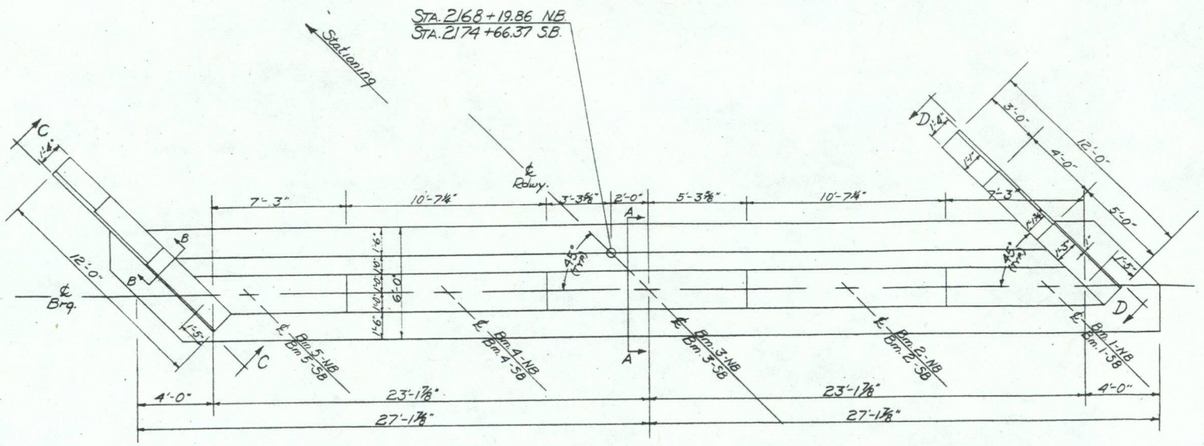
~STEEL PILES~

No. Piles	Size	Est. Length of Piles	Splices Allowed for Piles not Exceeding Plan Lgth. to be Paid for only if used to 60 Pile Ext. only if used	Splices Estimated for Piles Exceeding Plan Lgth.
Abut 1-NB 18	12BP53	31'	—	4
Abut 1-SB 18	12BP53	22'	—	4

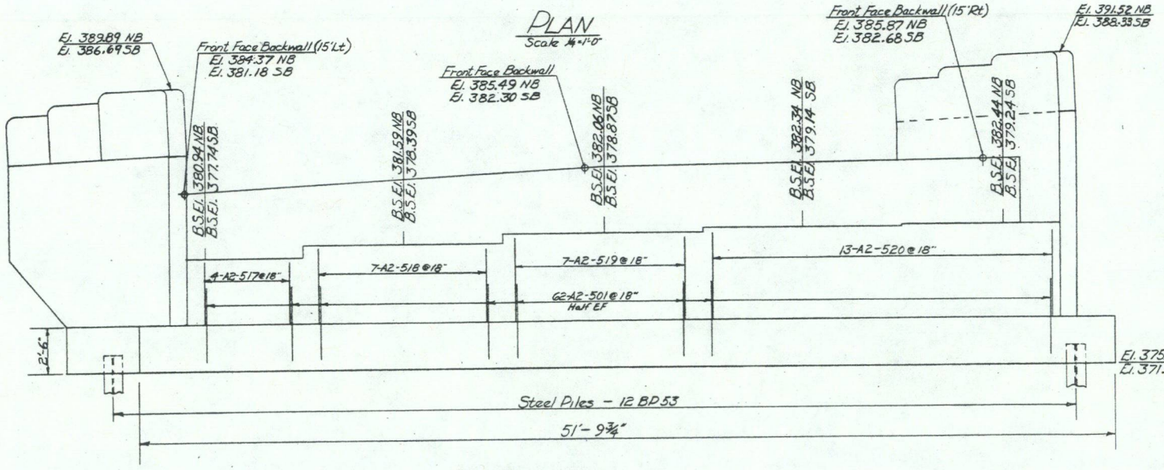
Item No.	Item	Unit	Abut #1 NB Net	Abut #1 NB Final	Abut #1 SB Net	Abut #1 SB Final
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.	27			
401-AA	CONC. CLASS AA (MOD.)	C.Y.	114			
402	REINF. STEEL	LBS.	See Reinf. Steel Dets.			
407	ASPHALTIC-ASB. COATING	S.Y.	10		10	
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.	4		4	
504	STEEL PILING	L.F.	558		396	
502-A	UNTREATED TIMBER PILING	L.F.				
501	FURNISHING EQUIP. FOR DRIVING PILES	L.S.	Req'd.		Req'd.	
572	Bridge Railing	L.F.	34		34	
204	SUB-BASE OF CRUSHED ROCK MODIFIED (UNDER STRUCTURE)	C.Y.	111		93	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

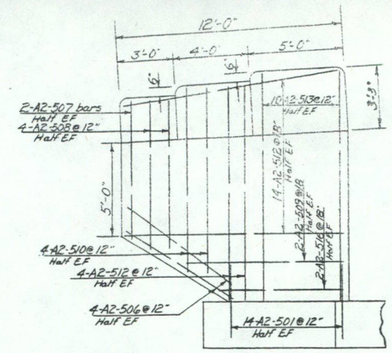
Town of Springfield
Route No. I-91 Sta. 216B±
Abutment 1 - NB & SB
Interstate over U.S. Rt. 5
Scale As Noted
Surveyed by
Drawn by RND Checked by NBT
Project No. I-91-1(19)-Cont. 3
B.R.-20 Sheet 53 of 141



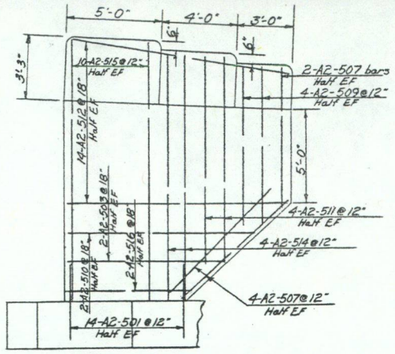
PLAN
Scale ¼"=1'-0"



ELEVATION
Scale ¼"=1'-0"

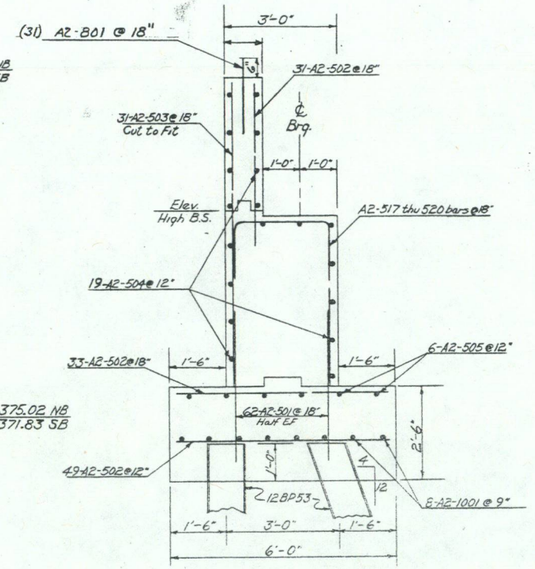


SECTION "CC"

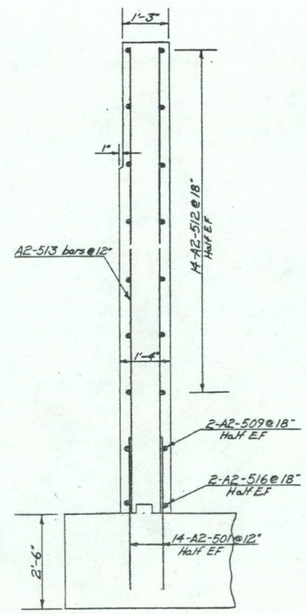


SECTION "DD"

WINGWALL DETAILS
Abut. 2-NB & SB
Scale ¼"=1'-0"



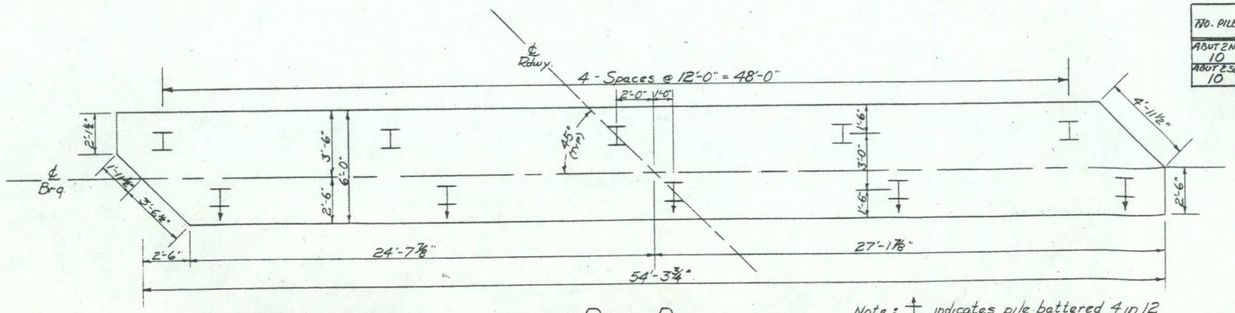
SECTION "AA"
Scale ½"=1'-0"



SECTION "BB"
Scale ½"=1'-0"

~STEEL PILES~

NO. PILES	SIZE	EST. LGTH. OF PILES	SPLICES ALLOWED FOR PILES NOT EXCEEDING PLAN LGTH. TO BE PAID FOR ONLY IF USED	SPLICES ESTIMATED FOR PILES EXCEEDING PLAN LGTH. TO BE PAID FOR ONLY IF USED.
ABUT 2 NB 10	12BP53	30'	—	2
ABUT 2-SB 10	12BP53	17'	—	2



Estimated Pile Length:
Abut 2-NB: 30.0'
Abut 2-SB: 17.0'

PILE PLAN
Scale ¼"=1'-0"

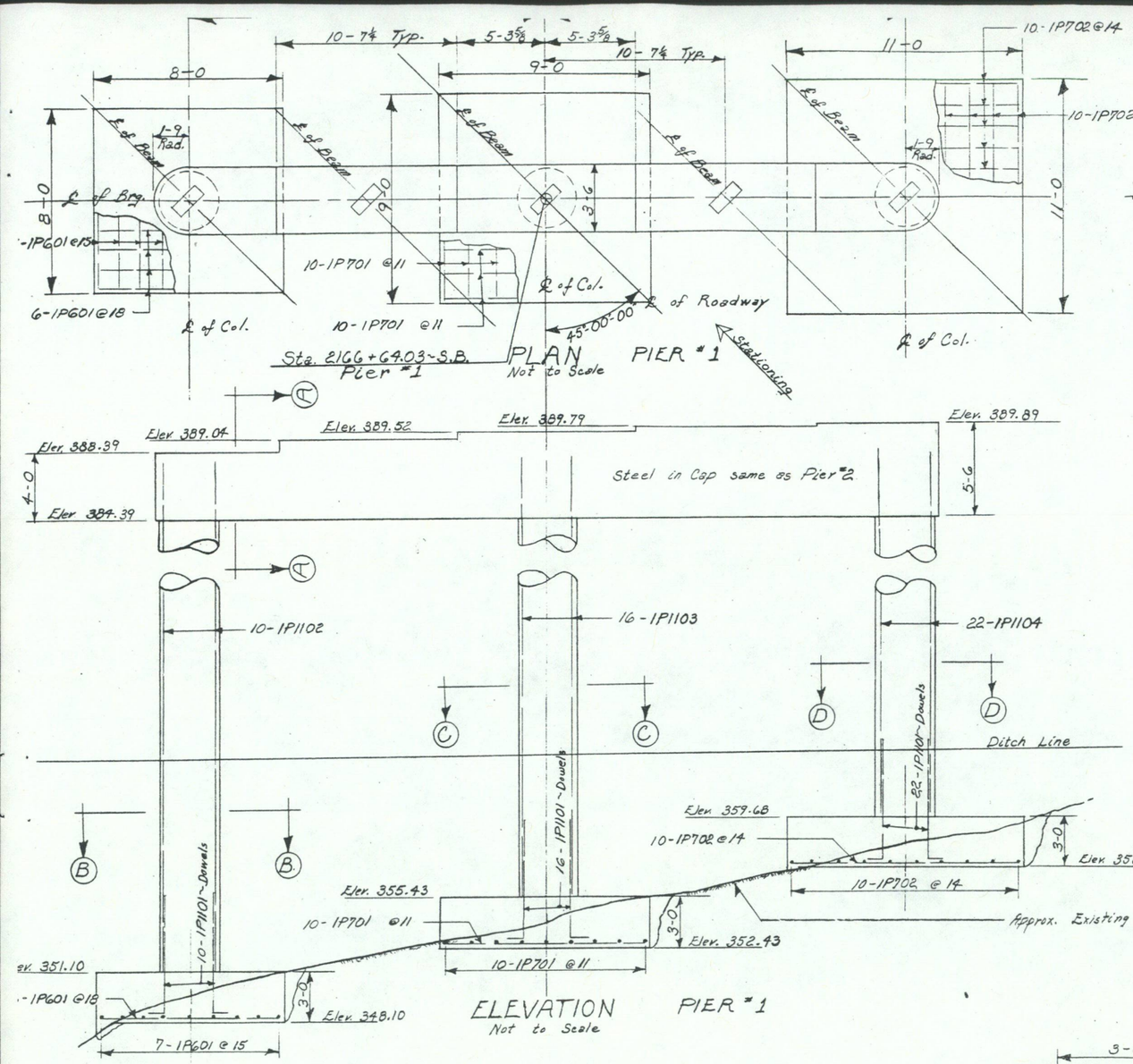
Note: ⊥ indicates pile battered 4 in 12 in direction of arrow. All piles are 12BP53.

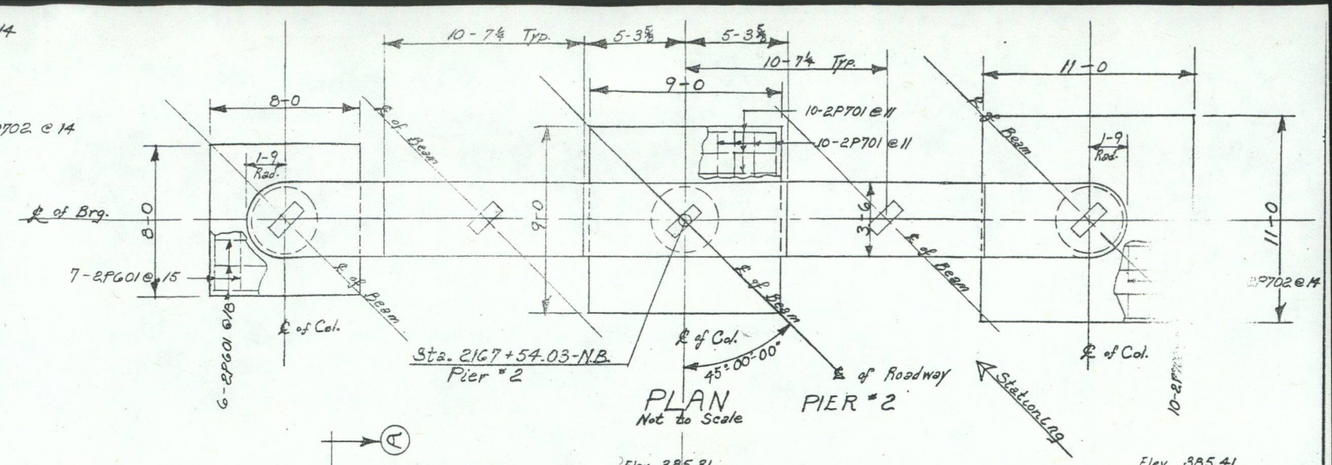
ITEM NO.	ITEM	UNIT	ABUT #2 NB NET	ABUT #2 NB FINAL	ABUT #2 SB NET	ABUT #2 SB FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.	16		17	
401-AA	CONC. CLASS AA (MOD.)	C.Y.	73		73	
402	REINF. STEEL	LBS.	SEE REINF. STEEL DETS.			
407	ASPHALTIC-ASB. COATING	S.Y.	10		10	
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.	2		2	
504	STEEL PILING	L.F.	300		170	
502-A	UNTREATED TIMBER PILING	L.F.				
501	FURNISHING EQUIP. FOR DRIVING PILES	L.S.	REQ'D.		REQ'D.	
204	SUB-BASE OF CRUSHED ROCK MODIFIED (UNDER STRUCTURE)	C.Y.	61		51	

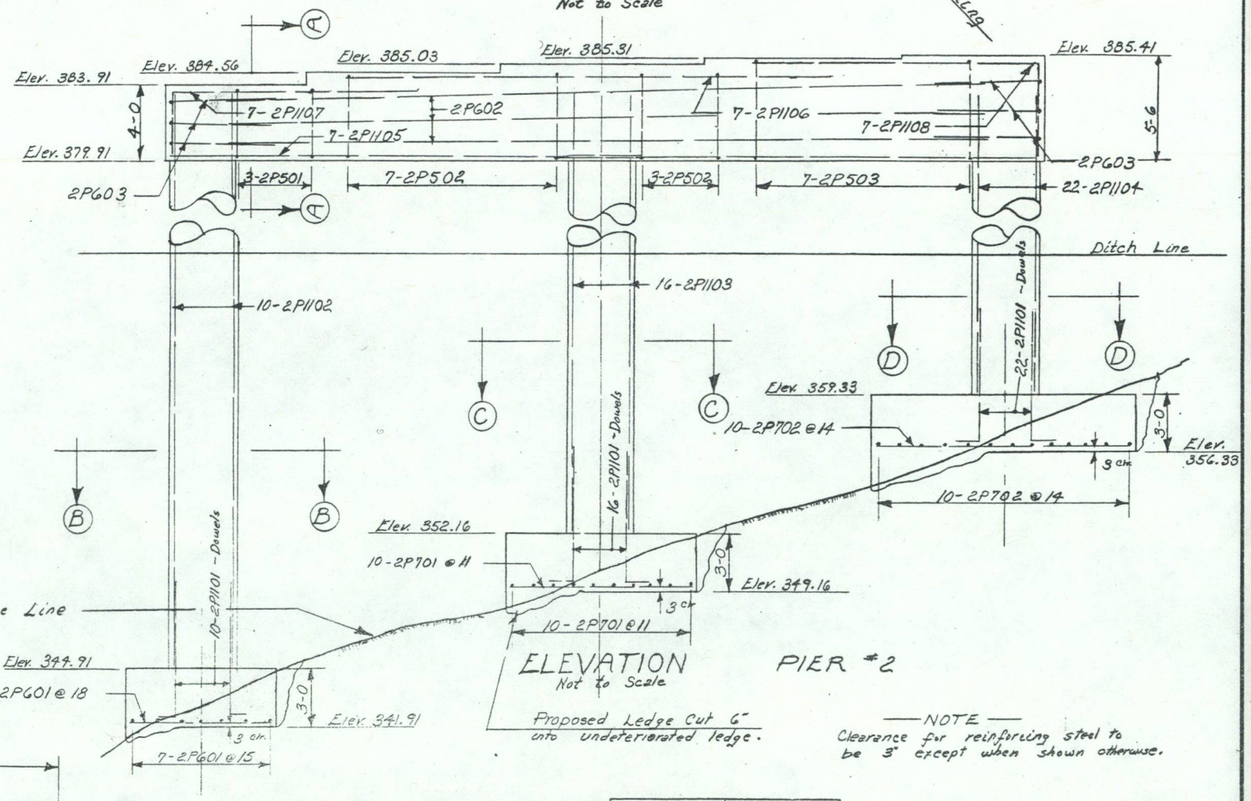
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SPRINGFIELD
ROUTE NO. I-91 STA. 216B ±
ABUTMENT 2 - NB & SB
INTERSTATE OVER U.S. RT. #5
SCALE As Noted
SURVEYED BY
DRAWN BY R.N.D. CHECKED BY N.B.T.
PROJECT NO. I-91-1(19)-Contr. 3
SHEET 54 OF 141

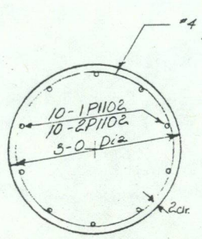
B2-21



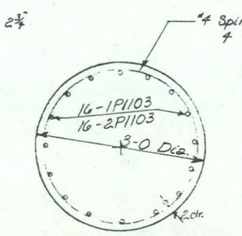




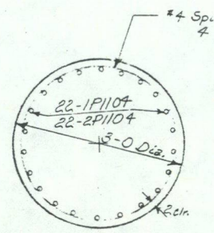
—NOTE—
Clearance for reinforcing steel to be 3" except when shown otherwise.



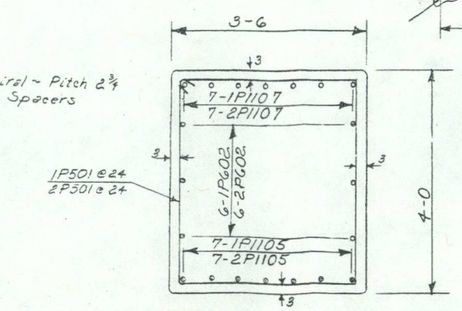
SECTION B-B
Scale ¾" = 1'



SECTION C-C
Scale ¾" = 1'



SECTION D-D
Scale ¾" = 1'

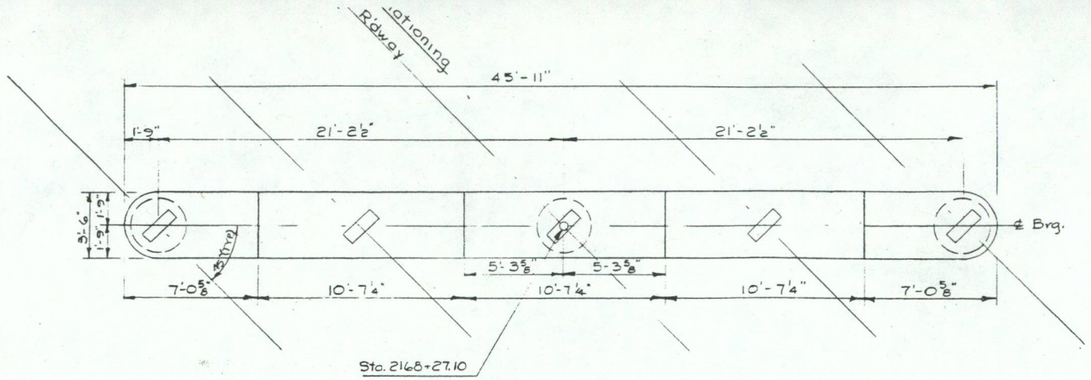


SECTION A-A
Scale ¾" = 1'

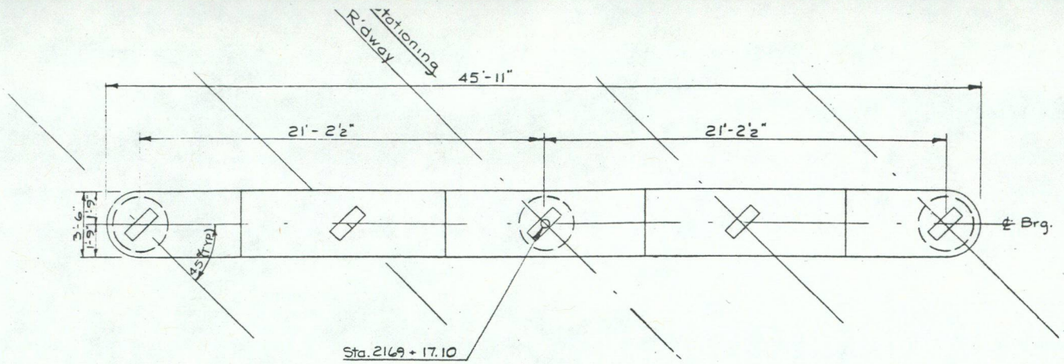
ITEM NO.	ITEM	UNIT	PIER #1 N.B. NET	PIER #1 N.B. FINAL	PIER #2 N.B. NET	PIER #2 N.B. FINAL
106-A	CHAN. EXCAV. OF EARTH	C. Y.				
106-B	CHAN. EXCAV. OF ROCK	C. Y.				
106-C	UNCLASS. CHAN. EXCAV.	C. Y.				
107	STRUCT. EXCAV.	C. Y.	170		228	
401-AA	CONC. CLASS AA (MOD.)	C. Y.	81		80	
402	REINF. STEEL	LBS.	SEE REINF. STEEL DETS.			
407	ASPHALTIC-ASB. COATING	S. Y.	17		17	
502-B	TREATED TIMBER PILING	L. F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L. F.				
502-A	UNTREATED TIMBER PILING	L. F.				

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

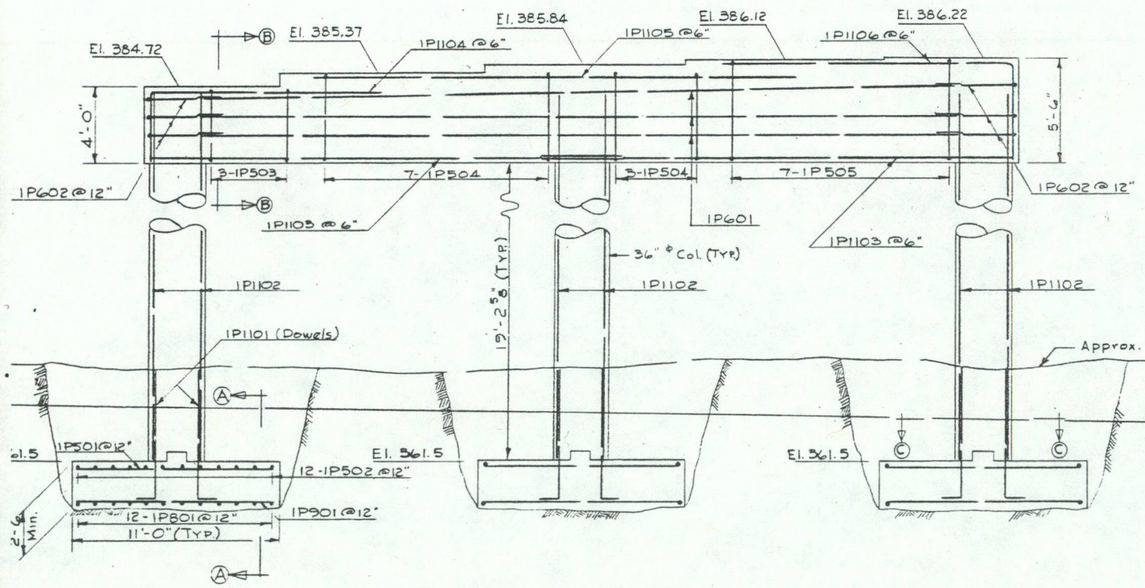
TOWN OF SPRINGFIELD
ROUTE NO. I 91 STA. 2168±
Pier 1 and Pier 2 N.B.
INTERSTATE OVER U.S. RT. #5
SCALE As Shown
SURVEYED BY
DRAWN BY R.P.G. CHECKED BY NBT
PROJECT NO. I 91-1(19) Contr. 3
BR-22 SHEET 55 OF 141



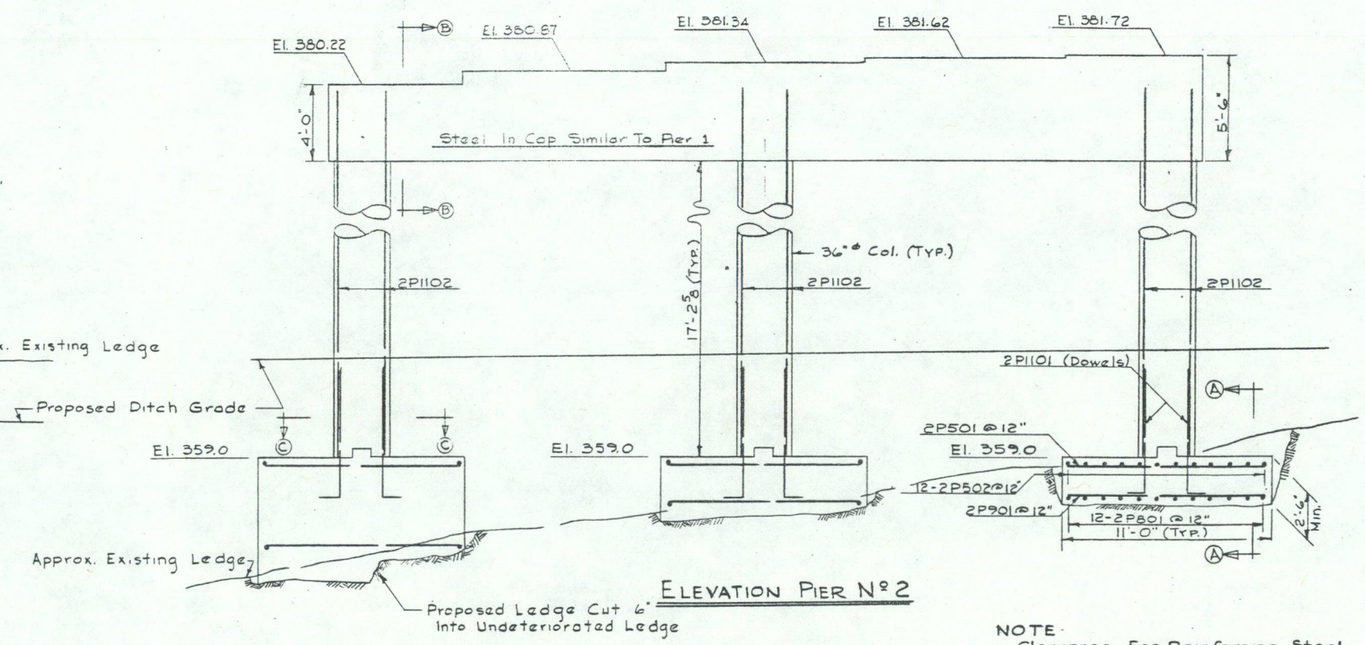
PLAN PIER Nº 1



PLAN PIER Nº 2

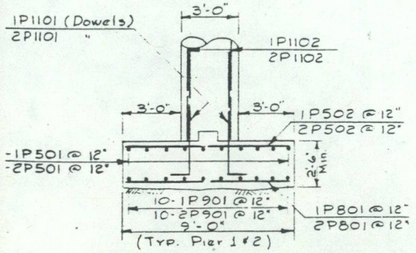


ELEVATION PIER Nº 1

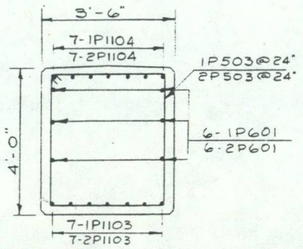


ELEVATION PIER Nº 2

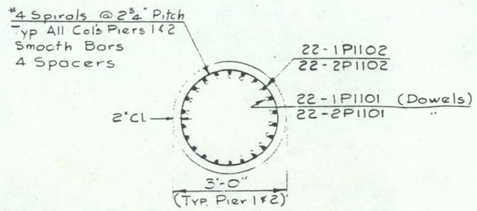
NOTE
Clearance For Reinforcing Steel To Be 3" Except When Shown Otherwise



SECTION A-A



SECTION B-B
Scale ½"=1'



SECTION C-C
Scale ½"=1'

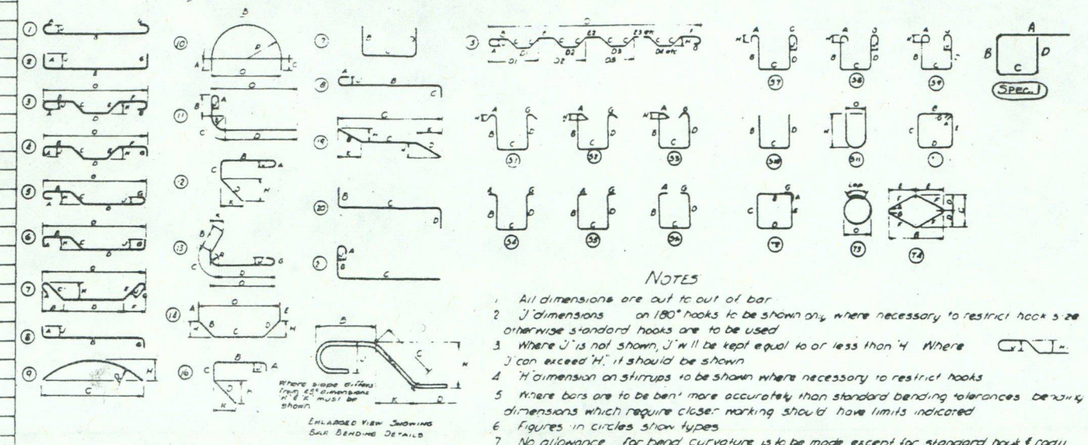
ITEM NO.	ITEM	UNIT	PIER #1 SB NET	PIER #1 SB FINAL	PIER #2 SB NET	PIER #2 SB FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.	99		143	
401-AA	CONC. CLASS AA (MOD.)	C.Y.	72		85	
402	REINF. STEEL	LBS.	SEE REINF. STEEL DETS.			
407	ASPHALTIC-ASB. COATING	S.Y.	17		17	
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Springfield
ROUTE No. I-91 STA. 2168±
PLAN & ELEVATION OF PIERS 1 & 2 SOUTHBOUND
SCALE ¼" = 1' AND AS NOTED
SURVEYED BY
DRAWN BY NBT CHECKED BY RTB
PROJECT No. I-91-1(19)
BR-23 SHEET 56 OF 141 CONTRACT-3

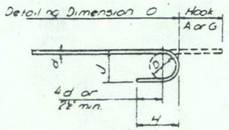
Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
				SUPERSTRUCTURE N.B.													
	*17	4	10-0	S401	str												
	898	5	34-4	S501	str	Cut to fit at skewed ends											
	*519	5	34-0	S502	str												
	*71	6	34-6	S601	str												
	4	6	41-9	S602	str												
	306	4	5-4	S402	S3	0-5	1-6	1-6	1-6		0-5	0-3					
	56	4	4-8	S403	Spec1	2-2	0-11	0-8	0-11								
				SUPERSTRUCTURE S.B.													
	*17	4	10-0	S401	str												
	*819	5	34-4	S501	str	cut to fit at skewed ends											
	444	5	36-0	S502	str												
	*61	6	36-6	S601	str												
	4	6	41-9	S602	str												
	276	4	5-4	S402	S3	0-5	1-6	1-6	1-6		0-5	0-3					
	56	4	4-8	S403	Spec1	2-2	0-11	0-8	0-11								
				ABUTMENT #1 N.B.													
	*147	5	4-0	A1-501	str												
	113		5-6	A1-502													
	8		7-9	A1-503													
	16		8-6	A1-504													
	38		9-3	A1-505													
	4		10-6	A1-506													
	31		9-0	A1-507		Cut to fit.											
	38		11-6	A1-508													
	2		12-6	A1-509													
	8		13-6	A1-510													
	2		15-0	A1-511													
	8		15-9	A1-512													
	22		20-6	A1-513													
	6		16-6	A1-514													
	4		17-9	A1-515													
	4		19-3	A1-516													
	4		19-9	A1-517													
	40		25-9	A1-518													
	12		28-0	A1-519													
	30		3-9	A1-520													
	12	5	21-3	A1-521	str												
	*81	6	7-0	A1-601	str												
	*16	8	3-0	A1-801	str												
	*32	8	2-0	A1-802	str												
	*9	10	20-6	A1-1001	str												
	16	10	28-0	A1-1002	str												
	11	5	9-3	A1-522	17	5-3	2-6	1-6									
	7		9-0	A1-523		5-0											
	7		8-6	A1-524		4-6											
	6	5	8-0	A1-525	17	4-0	2-6	1-6									
				ABUTMENT #1 S.B.													
				(Same as Abutment #1 N.B.)													
				ABUTMENT #2 N.B.													
	*91	5	4-0	A2-501	str.												
	113		5-6	A2-502													
	33		8-3	A2-503		Cut to fit											
	38		25-9	A2-504													
	12		28-0	A2-505													
	4		7-0	A2-506													
	8		7-6	A2-507													
	4		8-0	A2-508													
	6		8-6	A2-509													
	6		10-0	A2-510													
	4		11-0	A2-511													
	32		11-6	A2-512													
	10		12-0	A2-513													
	4		13-0	A2-514													
	10		13-9	A2-515													
	4	5	6-6	A2-516	str.												
	*32	8	2-0	A2-801	Str.												
	*17	10	29-0	A2-1001	Str.												
	4	5	7-3	A2-517	17	3-3	2-6	1-6									
	7		8-0	A2-518		4-0											
	7		8-6	A2-519		4-6											
	13	5	8-9	A2-520	17	4-9	2-6	1-6									
				ABUTMENT #2 S.B.													
				(Same as Abutment #2 N.B.)													
				APPROACH SLAB #1 N.B.													
	46	5	3-6	1A3501	str.												
	2		21-6	1A3502													
	*3		20-2	1A3503													
	2		24-0	1A3504													
	40	5	29-6	1A3505	str.	Cut in field - use cut-offs in skewed end											
	*2	10	5-3	1A31001	str												
	↓		to	to		1-each - increments of 1'-0"											
	1	10	33-3	1A31029	str												
	2	10	21-8	1A31030	str												
	2	10	23-0	1A31031	str												
	22	5	5-0	1A3506	S3	0-6	1-9	0-6	1-9		0-6						
	30	10	25-7	1A31032	1	1-1	29-6				0	0-9					
				APPROACH SLAB #1 S.B.													
				(Same as Approach Slab #1 N.B.)													
				APPROACH SLAB #2 N.B.													
	18	5	3-6	2A3501	str												
	2		7-6	2A3502													
	*3		6-2	2A3503													
	2		24-0	2A3504													
	35	5	29-6	2A3505	str												
	*2	10	5-3	2A31001	str												
	↓		to	to		1-each - increments of 1'-0"											
	1	10	33-3	2A31029	str												
	2	10	7-10	2A31030	str												
	2	10	9-2	2A31031	str												
	10	5	5-0	2A3506	S3	0-6	1-9	0-6	1-9		0-6						
	30	10	20-7	2A31032	1	1-1	19-6				0	0-9					
				APPROACH SLAB #2 S.B.													
				(Same as Approach Slab #2 N.B.)													

TYPICAL BAR BENDS



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



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number (S)
1/4"	#2
3/8"	#3
1/2"	#4
5/8"	#5
3/4"	#6
7/8"	#7
1"	#8
1 1/8"	#9
1 1/4"	#10
1 1/4"	#11

*DENOTES EXTRA BAR FOR TESTING PURPOSES.

MINIMUM BENDS TO BE AS FOLLOWS:

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", IN WHICH CASE THE BENDS SHALL BE MADE AROUND A PIN OF EIGHT BAR DIAMETERS.

8. Bar reinforcement metal shall conform to the requirements of the Standard Specifications for new Billet-Steel Concrete Reinforcement Bars (Intermediate Grade) Serial Designation A.A.S.H.O. M31-48 or its latest revision. All bars shall be deformed to conform with A.S.T.M. Specifications A 305-49.

ESTIMATED QUANTITIES

Location	Pounds
Superstructure N.B.	55,867
Superstructure S.B.	50,863
Abutment No 1 N.B.	9771
Abutment No 1 S.B.	9771
Abutment No 2 N.B.	6266
Abutment No 2 S.B.	6266
Approach Slab No 1 N.B.	7783
Approach Slab No 1 S.B.	7783
Approach Slab No 2 N.B.	6508
Approach Slab No 2 S.B.	6508
Total	167,476

Springfield
I 91-1 (19) Contr. 3

Interstate over U.S. 5

Drawn by RPG Ckd by RJB.

BR-24 Sheet 57 of 141

PIER #1 N.B.

*14	6	7-6	1P601	str								
6	6	40-0	1P602	str								
*21	7	8-6	1P701	str								
20	7	10-6	1P702	str								
10	11	37-1	1P1102	str								
16	|	32-9	1P1103	|								
22	|	28-6	1P1104	|								
14	|	25-1	1P1105	|								
7	11	26-0	1P1106	str								
3	5	14-8	1P501	T1	0-6	3-2	3-8	3-2	3-8		0-6	
*11	5	16-0	1P502	T1	0-6	3-2	4-4	3-2	4-4		0-6	
7	5	17-6	1P503	T1	0-6	3-2	5-1	3-2	5-1		0-6	
6	6	12-0	1P603	10	3-8	4-8	3-8			1-6	3-0	
*49	11	7-9	1P1101	2	1-0	6-9						NONE
7	11	15-0	1P1107	2	3-6	11-6						NONE
7	11	22-2	1P1108	2	5-0	17-2						NONE

Spirals — Smooth bars — Hot Rolled Intermediate Grade

No. Pieces	Size	Core	Pitch	Turns	Spacers
1	½"	32"	2¾"	111	4
1	½"	32"	2¾"	129	4
1	½"	32"	2¾"	148	4

PIER #2 N.B.

*14	6	7-6	2P601	str								
6	6	40-0	2P602	str								
*21	7	8-6	2P701	str								
20	7	10-6	2P702	str								
10	11	38-9	2P1102	str								
16	|	31-6	2P1103	|								
22	|	24-4	2P1104	|								
14	|	25-1	2P1105	|								
7	11	26-0	2P1106	str								
3	5	14-8	2P501	T1	0-6	3-2	3-8	3-2	3-8		0-6	
*11	5	16-0	2P502	T1	0-6	3-2	4-4	3-2	4-4		0-6	
7	5	17-6	2P503	T1	0-6	3-2	5-1	3-2	5-1		0-6	
6	6	12-0	2P603	10	3-8	4-8	3-8			1-6	3-0	
*49	11	7-9	2P1101	2	1-0	6-9						
7	11	15-0	2P1107	2	3-6	11-6						
7	11	22-2	2P1108	2	5-0	17-2						

Spirals — Smooth bars — Hot Rolled Intermediate Grade

No. Pieces	Size	Core	Pitch	Turns	Spacers
1	½"	32"	2¾"	93	4
1	½"	32"	2¾"	124	4
1	½"	32"	2¾"	156	4

PIER #1 S.B.

30	5	10-6	1P501	str								
*37	5	8-6	1P502	str								
6	6	40-0	1P601	str								
*37	8	8-6	1P801	str								
*31	9	10-6	1P901	str								
66	11	23-0	1P1102	str								
14	11	25-1	1P1103	str								
7	11	26-0	1P1105	str								
3	5	14-8	1P503	T1	0-6	3-2	3-8	3-2	3-8		0-6	
10	5	16-0	1P504	T1	0-6	3-2	4-4	3-2	4-4		0-6	
7	5	17-6	1P505	T1	0-6	3-2	5-1	3-2	5-1		0-6	
*7	6	12-0	1P602	10	3-8	4-8	3-8			1-6	3-0	
*67	11	7-9	1P1101	2	1-0	6-9						NONE
7	11	15-0	1P1104	2	3-6	11-6						NONE
7	11	22-2	1P1106	2	5-0	17-2						NONE

Spirals — Smooth bars — Hot Rolled Intermediate Grade

No. Pieces	Size	Core	Pitch	Turns	Spacers
1	½"	32"	2¾"	87	4
1	½"	32"	2¾"	87	4
1	½"	32"	2¾"	87	4

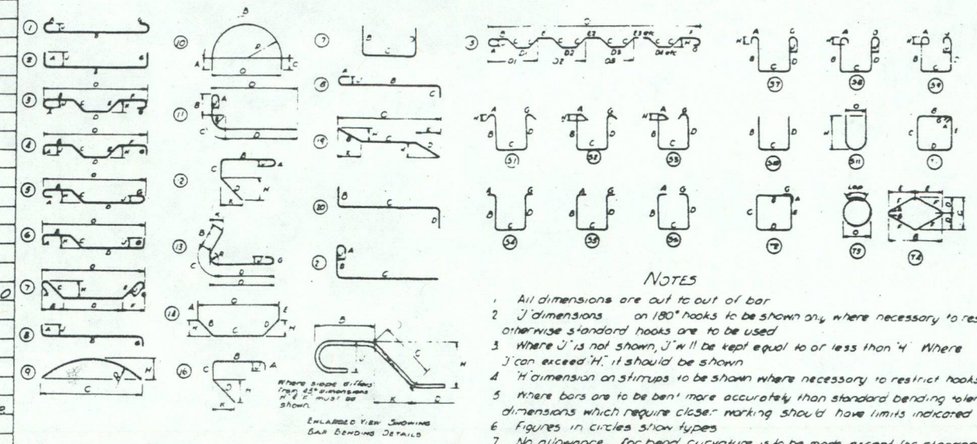
PIER #2 S.B.

30	5	10-6	2P501	str								
*37	5	8-6	2P502	str								
6	6	40-0	2P601	str								
*37	8	8-6	2P801	str								
*31	9	10-6	2P901	str								
66	11	21-0	2P1102	str								
14	11	25-1	2P1103	str								
7	11	26-0	2P1105	str								
3	5	14-8	2P503	T1	0-6	3-2	3-8	3-2	3-8		0-6	
10	5	16-0	2P504	T1	0-6	3-2	4-4	3-2	4-4		0-6	
7	5	17-6	2P505	T1	0-6	3-2	5-1	3-2	5-1		0-6	
*7	6	12-0	2P602	10	3-8	4-8	3-8			1-6	3-0	
*67	11	7-9	2P1101	2	1-0	6-9						NONE
7	11	15-0	2P1104	2	3-6	11-6						NONE
7	11	22-2	2P1106	2	5-0	17-2						NONE

Spirals — Smooth bars — Hot Rolled Intermediate Grade

No. Pieces	Size	Core	Pitch	Turns	Spacers
1	½"	32"	2¾"	78	4
1	½"	32"	2¾"	78	4
1	½"	32"	2¾"	78	4

TYPICAL BAR BENDS



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 5.28 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
8. Bar reinforcement metal shall conform to the requirements of the Standard Specifications for new Billet-Steel Concrete Reinforcement Bars (Intermediate Grade) Serial Designation A.A.S.H.O. M31-48 or its latest revision. All bars shall be deformed to conform with A.S.T.M. Specifications A305-49.

Item	No. Pieces	Size	Length	Mark	Type	A	B	C	D	E	F	G	H	J	K	R	O
163																	
164																	
165																	
166																	
167																	
168																	
169																	
170																	
171																	
172																	
173																	
174																	
175																	
176																	
177																	
178																	
179																	
180																	
181																	
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183																	
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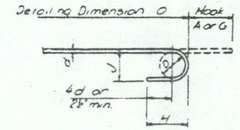
185																	
186																	
187																	
188																	
189																	
190																	



STANDARD HOOK DETAIL

BAR SIZES

Equivalent Size	Present Number
¼"	#2
3/8"	#3
½"	#4
5/8"	#5
¾"	#6
7/8"	#7
1"	#8
1 1/8"	#9
1¼"	#10
1 3/8"	#11

* DENOTES EXTRA BAR FOR TESTING PURPOSES

MINIMUM BENDS TO BE AS FOLLOWS:

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", IN WHICH CASE THE BENDS SHALL BE MADE AROUND A PIN OF EIGHT BAR DIAMETERS.

ESTIMATED QUANTITIES

Location	Pounds
Pier #1 N.B.	18,530
Pier #2 N.B.	17,925
Pier #1 S.B.	20,100
Pier #2 S.B.	19,234
(CONT. 3) Total	75,789

SPRINGFIELD

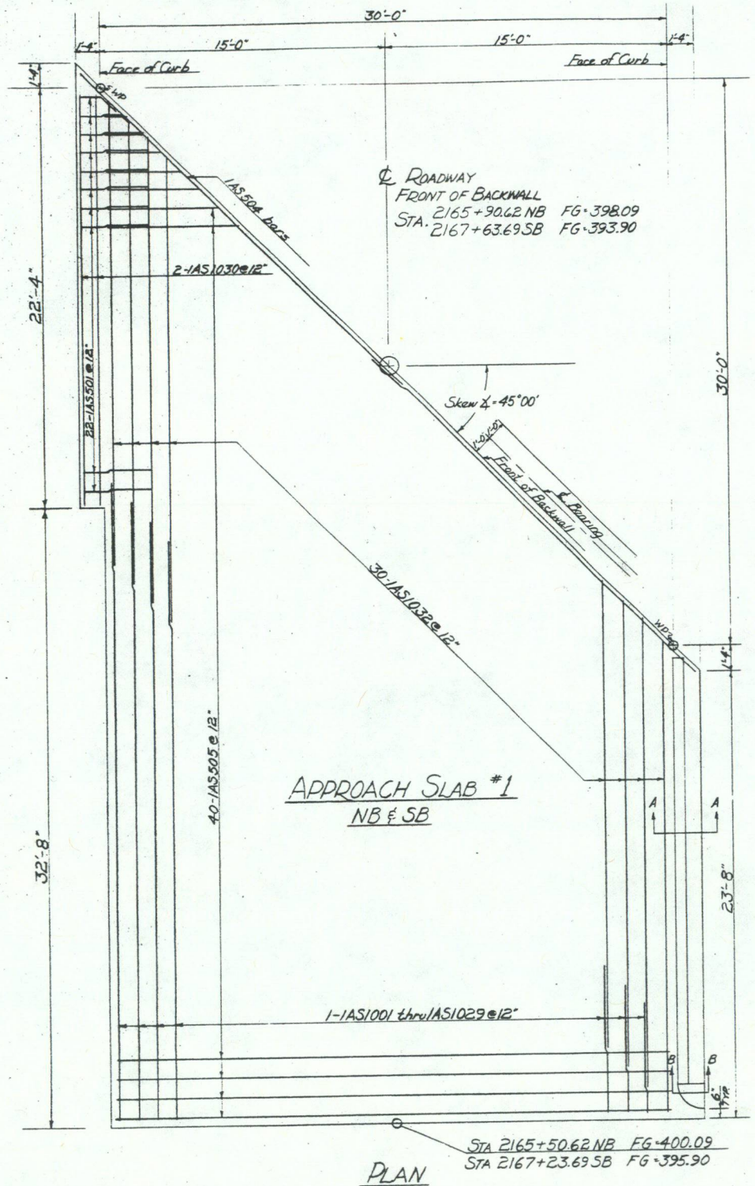
I 91-1(19) Contr. #3

Interstate over U.S. 5

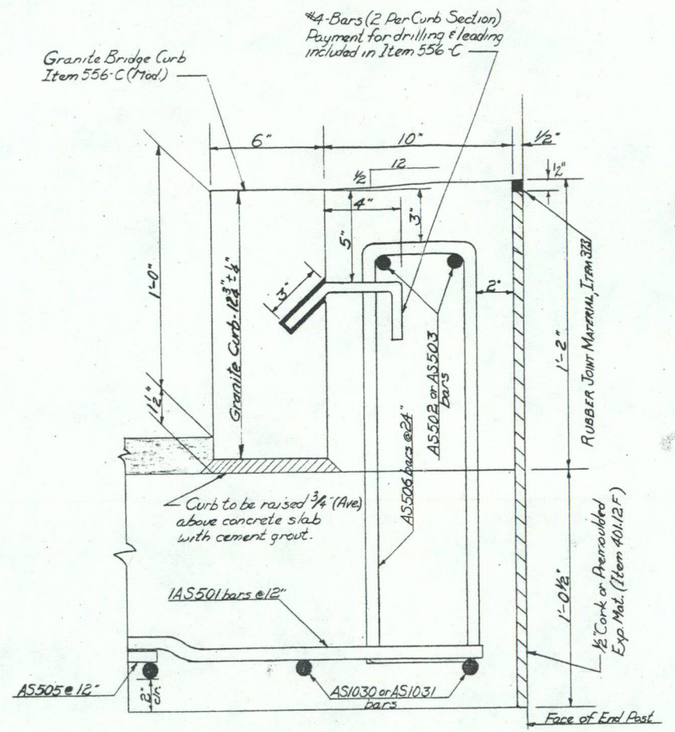
Drawn by B.P.G. Chd by NBT

Sheet 58 of 141

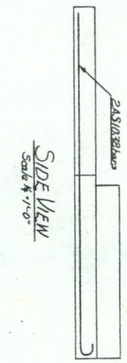
Br 25



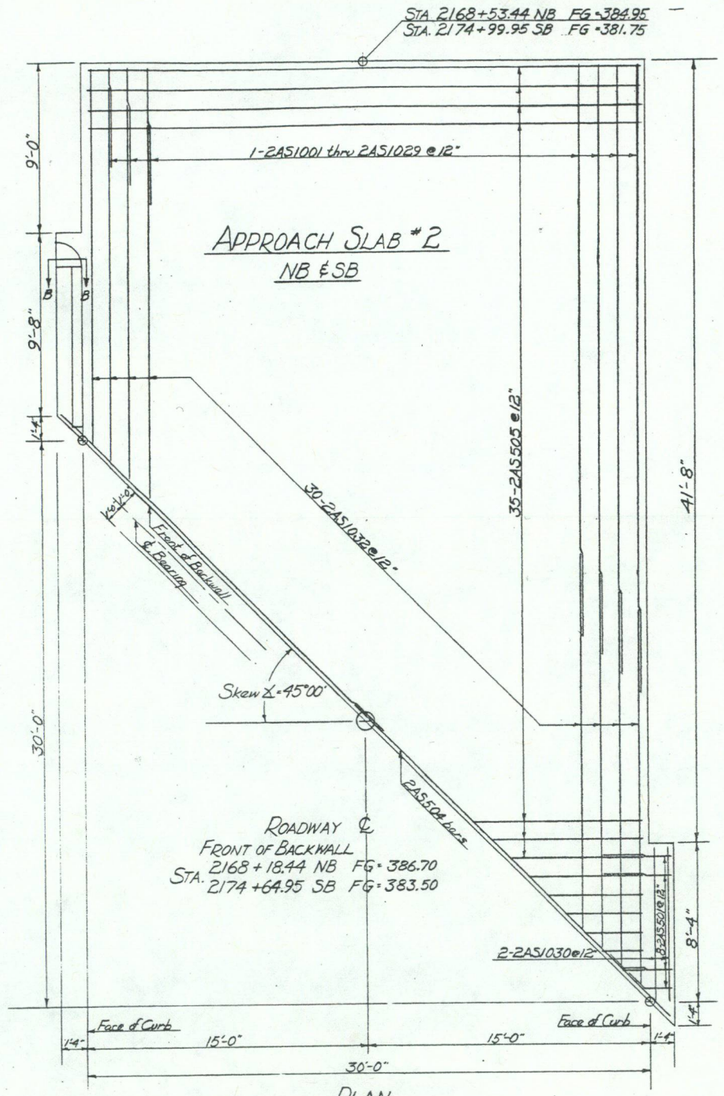
PLAN
Scale 1/4"=1'-0"



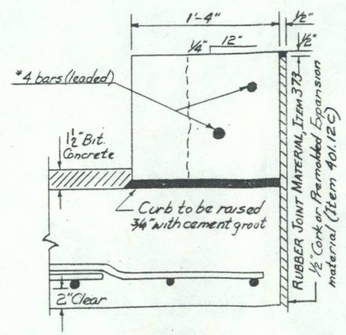
SECTION AA
Scale 3"=1'-0"



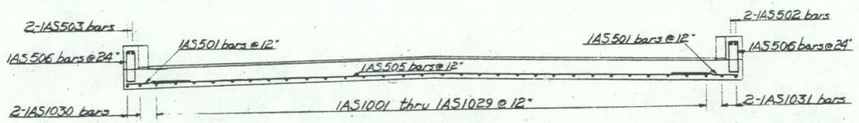
SIDE VIEW
Scale 1/4"=1'-0"



PLAN
Scale 1/4"=1'-0"



SECTION "BB"
Scale 1 1/2"=1'-0"



END VIEW
Scale 1/4"=1'-0"

ITEM NO.	ITEM	UNIT	APPROACH SLABS 1-NB&SB NET	APPROACH SLABS 1-NB&SB FINAL	APPROACH SLABS 2-NB&SB NET ~~TOTAL~~	APPROACH SLABS 2-NB&SB FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.	101		84	
402	REINF. STEEL	LBS.	15,566		13,016	
407	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				
361-B	BITUMINOUS CONCRETE PAVEMENT (MOD.)	TON.	23		20	
318	TAR EMULSION FOR BRIDGE FLOORS	GAL.	107		94	
556-C	GRANITE BRIDGE CURB (MOD.)	L.F.	90		34	
373	RUBBER JOINT MATERIAL	L.F.	104		49	

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF SPRINGFIELD
ROUTE NO. I-91 STA. 2168±
APPROACH SLABS 1&2-NB&SB
Interstate Over U.S. Route #5
SCALE As Noted
SURVEYED BY
DRAWN BY RND CHECKED BY J.A.B. 1/62
PROJECT NO. I-91-1(19) Cont. 3
BR-19 SHEET 60 OF 141