

FILE NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
9	VT.	263	1934	1	27

See Note on Plans

INDEX OF SHEETS

SHEET NO.	TITLE PAGE	SHEET NO.	TITLE PAGE
1	TITLE PAGE	21-25	BRIDGE DETAILS
2	TYPICAL SECTIONS	26	N.H. STANDARDS
3-5	PLAN AND PROFILE	27	VT. STANDARDS
6-17	CROSS SECTIONS		
18	CONTOUR MAP		

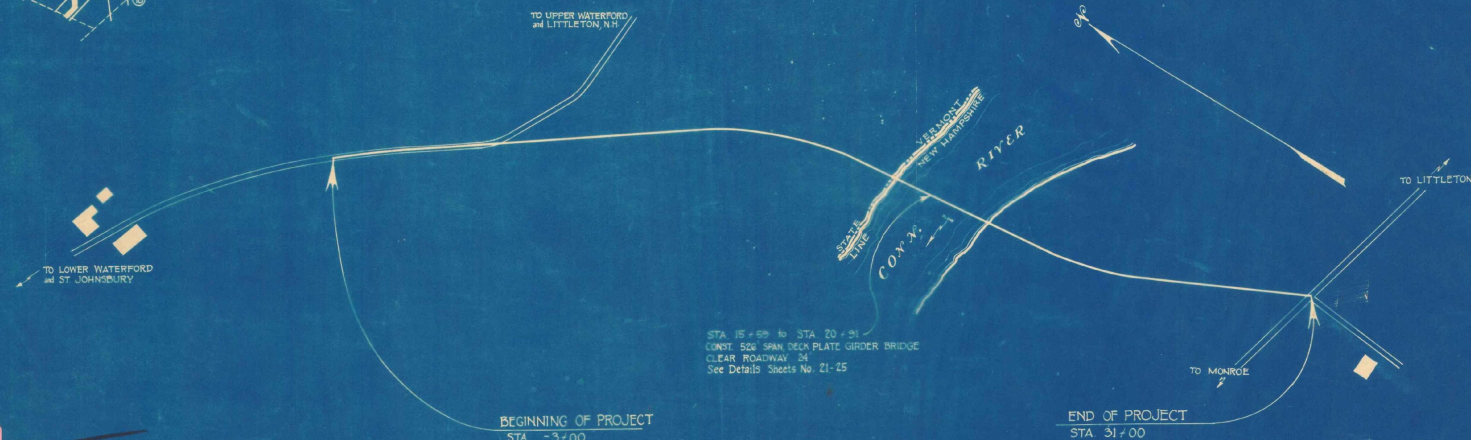
STATE OF NEW HAMPSHIRE
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED INTERSTATE BRIDGE PROJECT NO 263

THEODORE ROOSEVELT HIGHWAY

PLAN, 1"=50'-0"
PROFILE, VERT. 1"=10'-0" HOR. 1"=50'-0"
CROSS SECTION, VERT. 1"=5'-0" HOR. 1"=5'-0"

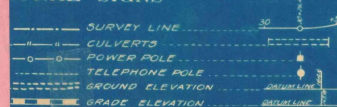
NOTE. This project to be constructed in accordance with standard specifications on file with the Bureau of Public Roads, and Special Provisions attached to Proposal.



TOWNS OF WATERFORD, VT. and LITTLETON, N.H.
CALEDONIA and GRAFTON COUNTIES

LAYOUT
SCALE 1"=300'

ADDITIONAL SIGNS



APPROVED: *H.E. Sargent*
VT. COMMISSIONER OF HIGHWAYS

APPROVED: *H.C. Scott*
N.H. HIGHWAY COMMISSIONER

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER, BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

CHIEF ENGINEER, BUREAU OF PUBLIC ROADS

APPROVED:

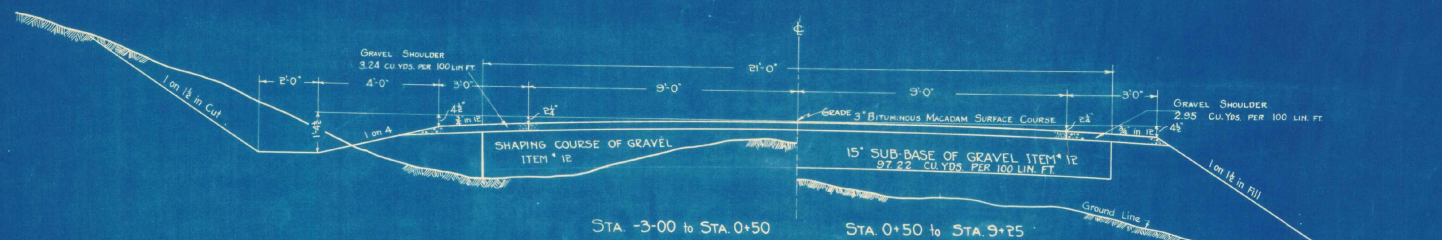
DIRECTOR, BUREAU OF PUBLIC ROADS

PROJECT: Waterford, Vermont & Littleton, N.H.
NUMBER: 263
TYPE: INTERSTATE BRIDGE
LOCATION: Inter-State bridge, Number 263 across Connecticut River.
YEAR: 1934
LENGTH: 1320
CONTRACTOR: [Blank]

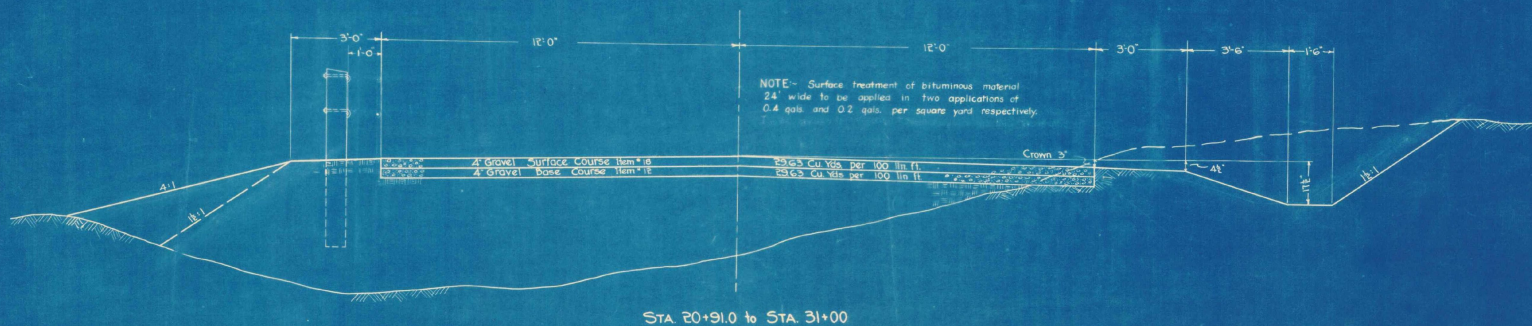
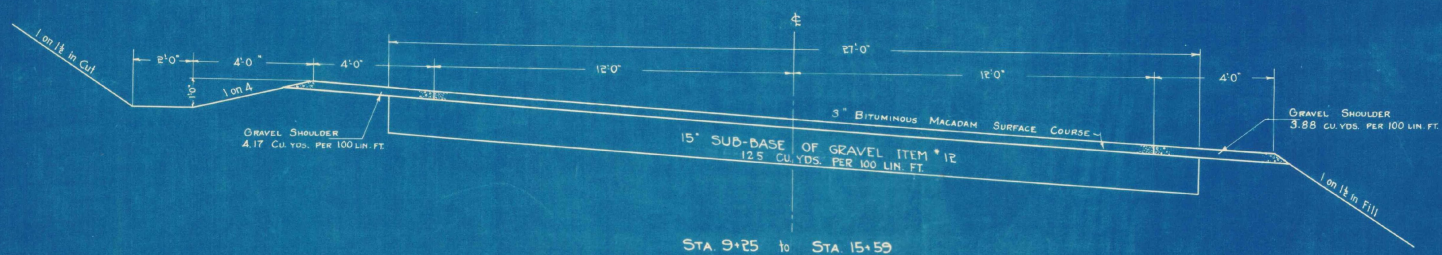
Waterford 34 keep

Only hand with care

FILE NO.	DATE	REVISED	BY	DATE
9	VI-111	263	1933	2



Note:
The 3" Bituminous Surface Course and Gravel Shoulders will be constructed by the State of Vermont at a later date. Not a part of this Contract.



TYPICAL SECTIONS OF IMPROVEMENT

SCALE 1"=10'

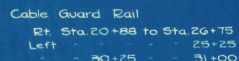
REVISIONS	DATE	STATION	FROM	TO
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[illegible]

STANDARD UNDERDRAIN WITH 6" P.C.G.M.P. (Bit. Coated)			
STATIONS	SIZE	LENG.	Exc.
11+00 L- 11+50 R.	6"	72	40

REVISIONS		AFTER	PROPOSAL
Date	Station	From	or to
	Orig		
	Rev		
	Orig		
	Rev		
	Orig		
	Rev		
	Orig		

Traced by <i>CPB/npa</i>	Date <i>5/5/84</i>
Checked by <i>CPB/npa</i>	Date <i>5/7/84</i>



END OF BRIDGE PROJECT
STATION 31+00.
EQUATION: $31+00 = 30+68.6$ OF ROAD SURVEY.

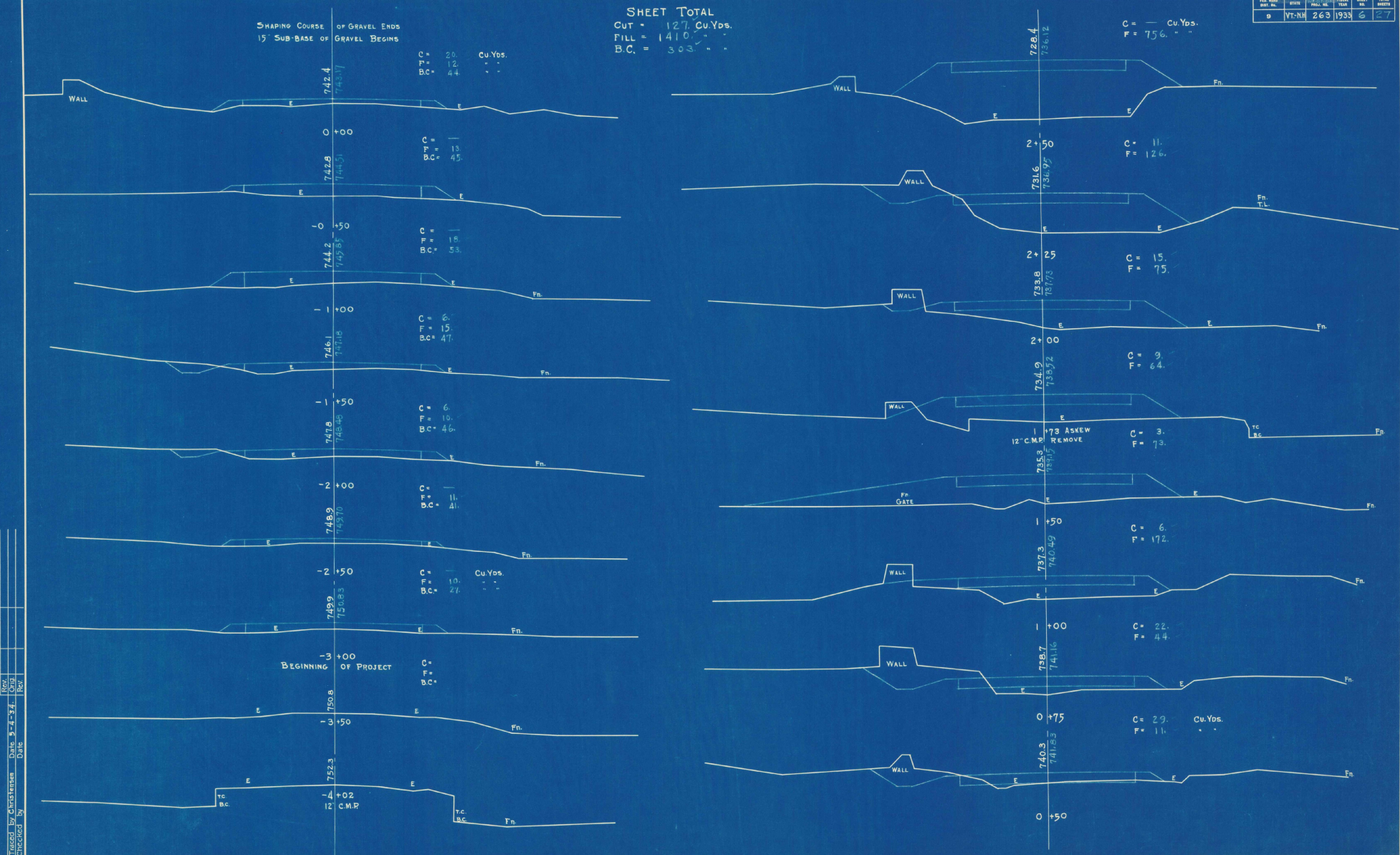


FILE NO.	DATE	YEAR	PROJECT NO.	SHEET NO.
0	VT-NH	263	1933	6

SHEET TOTAL
 CUT = 127 Cu.Yds.
 FILL = 1410 " "
 B.C. = 303 " "

C = — Cu.Yds.
 F = 756. " "

REVISIONS	DATE	BY	REASON
1			
2			
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9			
10			



Traced by Christensen Date 9-7-34
 Checked by Date

WATERFORD, VT.

FILE NO.	DATE	REV.	BY	DATE	REV.	BY
9	VT-N.H.	263	1933	7	27	

SHEET TOTAL
CUT = 38. Cu.Yds.
FILL = 7420. "

C = — Cu.Yds.
F = 684. "

C = 38. Cu.Yds.
F = 116. "

C = — Cu.Yds.
F = 457. "

C = —
F = 454. "

C = —
F = 498. "

C = — Cu.Yds.
F = 846. "

SIDE ROAD APPROACH

6+00

5+70

5+50

5+30

5+00

4+75

4+50

4+00

3+50

3+00

C = —
F = 585. "

C = —
F = 1258. "

C = —
F = 1307. "

C = — Cu.Yds.
F = 1215. "

6'x6' R.C. Box - LENGTH 70 ft.

REVISIONS	DATE	BY	REASON
1	5-5-34	Christman	Checked by
2			
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9			
10			

WATERFORD, VT.

FILE NO.	DATE	BY	REVISION	DATE	BY
8	VT-NH	263	1933	9	27

SHEET TOTAL
CUT = 6394 Cu Yds.
FILL = 4 - -

705.3
687.37

10 + 15

706.9
689.12

10 + 50

707.2
692.62

10 + 00

704.8
694.37

10 + 15

C = 709 Cu Yds
F = -

C = 370
F = -

C = 1897
F = -

C = 186
F = -

Top Bank

Top Bank

Top Bank

Top Bank

Top Bank

Spring
Having

689.3
681.09

11 + 60

688.0
682.20

11 + 50

687.9
683.87

11 + 25

693.4
685.62

11 + 00

C = 646 Cu Yds
F = 4

C = 442
F = -

C = 512
F = -

C = 462
F = -

ref

Wooded

11+00 LT. - 11+50 RT. STD. UNDERPAV. WITH 6" ASPHALT - 80' - Long 72

REVISIONS - AFTER PROPOSED	DATE	BY	REASON
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Drawn by J. L. Leland Date 4-1-34
Checked by W. Date

WATERFORD, - V.I.

REV. NO.	DATE	BY	CHKD. BY	DATE	REV. NO.	DATE	BY	CHKD. BY	DATE
9		Vt-NR	263	1933	10	27			

SHEET TOTAL
CUT = 1895' Cu.Yds.
FILL = 1812' " "

C = 135' Cu.Yds.
F = 9' " "

C = 309'
F = " "

C = 747'
F = " "

C = 324'
F = " "

C = 330' Cu.Yds.
F = 4' " "

C = 0' Cu.Yds.
F = 332' " "

C = 0'
F = 653' " "

C = 0'
F = 427' " "

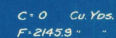
C = 0'
F = 274' " "

C = 0' Cu.Yds.
F = 113' " "

Sta. 14+00
Begin 162' Transition

REVISIONS AFTER PROPOSAL		DATE		STATION		FROM		TO	
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Prepared by J. J. [illegible] Date 5-1-34
Checked by [illegible] Date [illegible]



C = 0 39. Ins.
F = 34.61 " "

21.04.42 (Ahead)



$C = 0$
 $F = 24.80$

21+ 04.42
(Back)



C = 0 Sq. Ins.
F = 21.12 " "

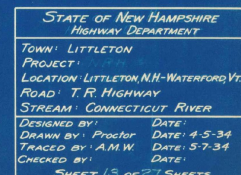
20 • 90.75
(Curtain Wall)

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT

TOWN: LITTLETON
PROJECT: 27A
LOCATION: LITTLETON/NH-WATERFORD Vt.
ROAD: T.R. HIGHWAY
STREAM: CONNECTICUT RIVER

DESIGNED BY: DATE:
DRAWN BY: Proctor DATE: 4-5-34
TRACED BY: A.M.W. DATE: 5-7-34
CHECKED BY: DATE:

SHEET 12 OF 27 SHEETS



LITTLETON-N.H.

SHEET NO.	DATE	SCALE	PLAN	SECTION	REVISIONS
0	7-11-11	263	1354	14	27



STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT

TOWN: LITTLETON
PROJECT: LOCATION: LITTLETON, N.H. - WATERFORD Vt.
ROAD: T.R. HIGHWAY
STREAM: CONNECTICUT RIVER

DESIGNED BY: DATE: 4-5-34
DRAWN BY: PROFOR DATE: 4-5-34
TRACED BY: A.M.W. DATE: 5-7-34
CHECKED BY: DATE:

SHEET 14 OF 27 SHEETS

Date	Station	From	To
01/12/11	22+50	22+50	23+00
01/12/11	23+00	23+00	23+50
01/12/11	23+50	23+50	24+00
01/12/11	24+00	24+00	24+50
01/12/11	24+50	24+50	25+00
01/12/11	25+00	25+00	25+50
01/12/11	25+50	25+50	26+00
01/12/11	26+00	26+00	26+50
01/12/11	26+50	26+50	27+00
01/12/11	27+00	27+00	27+50
01/12/11	27+50	27+50	28+00
01/12/11	28+00	28+00	28+50
01/12/11	28+50	28+50	29+00
01/12/11	29+00	29+00	29+50
01/12/11	29+50	29+50	30+00
01/12/11	30+00	30+00	30+50
01/12/11	30+50	30+50	31+00
01/12/11	31+00	31+00	31+50
01/12/11	31+50	31+50	32+00
01/12/11	32+00	32+00	32+50
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01/12/11	36+00	36+00	36+50
01/12/11	36+50	36+50	37+00
01/12/11	37+00	37+00	37+50
01/12/11	37+50	37+50	38+00
01/12/11	38+00	38+00	38+50
01/12/11	38+50	38+50	39+00
01/12/11	39+00	39+00	39+50
01/12/11	39+50	39+50	40+00
01/12/11	40+00	40+00	40+50
01/12/11	40+50	40+50	41+00
01/12/11	41+00	41+00	41+50
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01/12/11	42+00	42+00	42+50
01/12/11	42+50	42+50	43+00
01/12/11	43+00	43+00	43+50
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01/12/11	96+50	96+50	97+00
01/12/11	97+00	97+00	97+50
01/12/11	97+50	97+50	98+00
01/12/11	98+00	98+00	98+50
01/12/11	98+50	98+50	99+00
01/12/11	99+00	99+00	99+50
01/12/11	99+50	99+50	100+00

SCALE 1" = 5'-0"

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.

TOWN. LITTLETON.

PROJECT.

LOCATION. LITTLETON, N.H. WATERFORD, VT.

ROAD. THEODORE ROOSEVELT.

STREAM. CONNECTICUT RIVER.

DESIGNED BY. _____ DATE _____

DRAWN BY. _____ DATE _____

TRACED BY. F.W.G.S. DATE 5-5-34

CHECKED BY. _____ DATE _____

SHEET 15 OF 21 SHEETS.

LITTLETON-N.H.

FILE NO.	DATE	BY	CHKD.	APP'D.	DATE
9	11-11-34	263	234	16	27



SCALE 1"=5'-0"

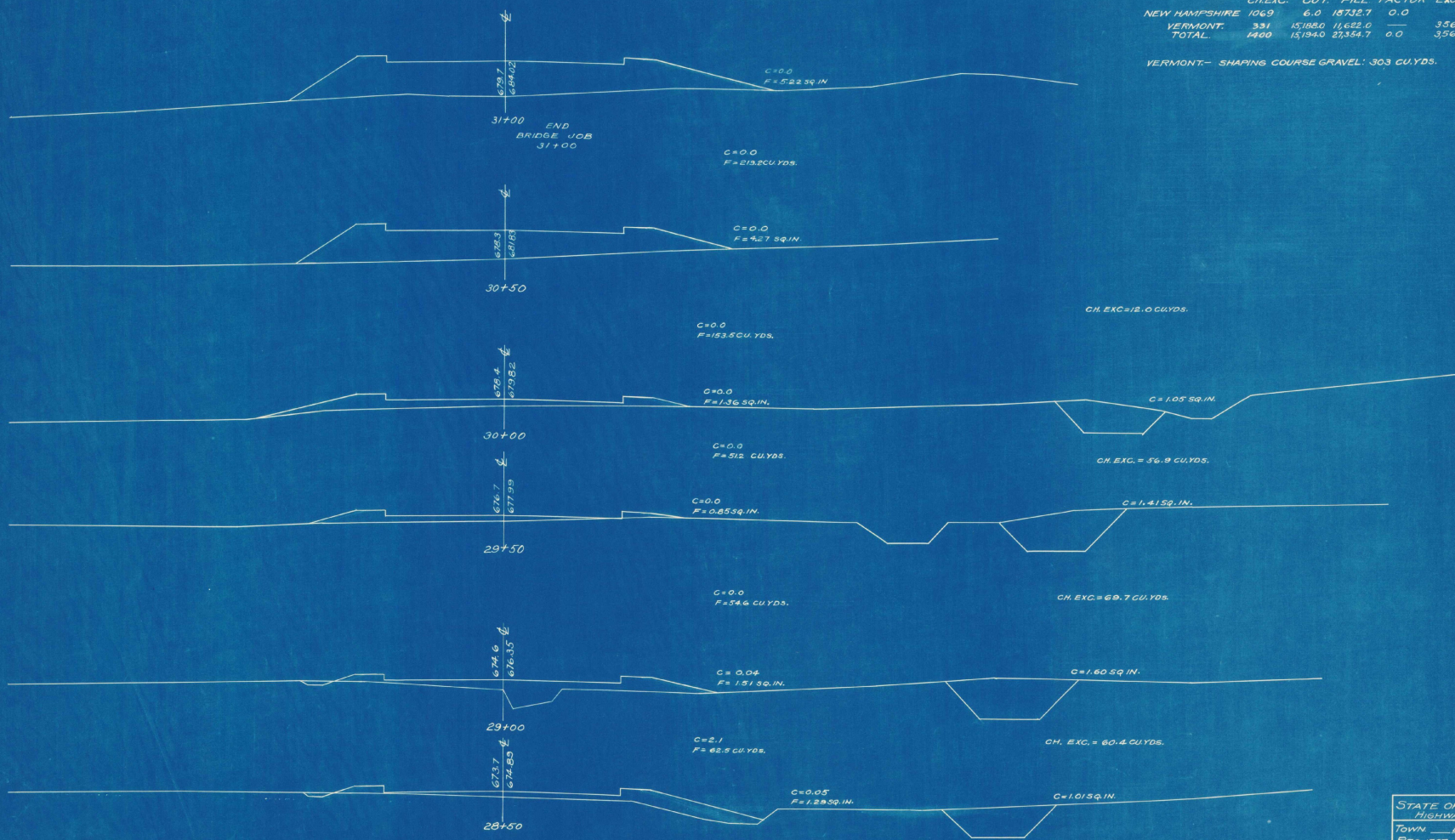
STATE OF NEW HAMPSHIRE.
 HIGHWAY DEPARTMENT.
 TOWN: LITTLETON.
 PROJECT: LOCATION LITTLETON N.H. WATERFORD VY.
 ROAD: THEODORE ROOSEVELT.
 STREAM: CONNECTICUT RIVER.
 DESIGNED BY: DATE: _____
 DRAWN BY: DATE: _____
 TRACED BY: E.W.G.S. DATE: 5-5-39.
 CHECKED BY: DATE: _____
 SHEET 16 OF 27 SHEETS.

FILE NO.	DATE	DESIGNED BY	CHECKED BY	DATE	DATE
9	VT-NH	263	1934	17	27

GRAND TOTALS.

CH. EXC.	CUT.	FILL.	SHRINKAGE FACTOR	EXCESS EXC.	BORROW
NEW HAMPSHIRE	106.9	6.0	18732.7	0.0	14657.6 CU YDS.
VERMONT	381	15,188.0	11,622.0	3566.0	-
TOTAL	1488	15,194.0	23,354.7	3566.0	14657.6

VERMONT— SHAPING COURSE GRAVEL: 303 CU YDS.



SCALE 1"=5'-0"

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.
PROJECT. LITTLETON
LOCATION. LITTLETON, N.H. WATERBURY
ROAD. THEODORE ROOSEVELT
STREAM. CONNECTICUT RIVER
DESIGNED BY. DATE.
DRAWN BY. DATE.
TRACED BY. E.W.G.S. DATE. 5-5-34.
CHECKED BY. DATE.
SHEET 17 OF 27 SHEETS.

FILE NO.	DATE	PROJECT NO.	FEED NO.	SHEET NO.
9	Vt. NH	263	1	30

INDEX OF SHEETS

SHEET NO.	TITLE PAGE	SHEET NO.	BORINGS
"	"	2	TYPICAL SECTIONS
"	"	3-5	PLAN AND PROFILE
"	"	6-17	CROSS SECTIONS
"	"	18	CONTOUR MAP
"	"	21-25	BRIDGE DETAILS
"	"	26	N.H. STANDARDS
"	"	27-30	VT. STANDARDS

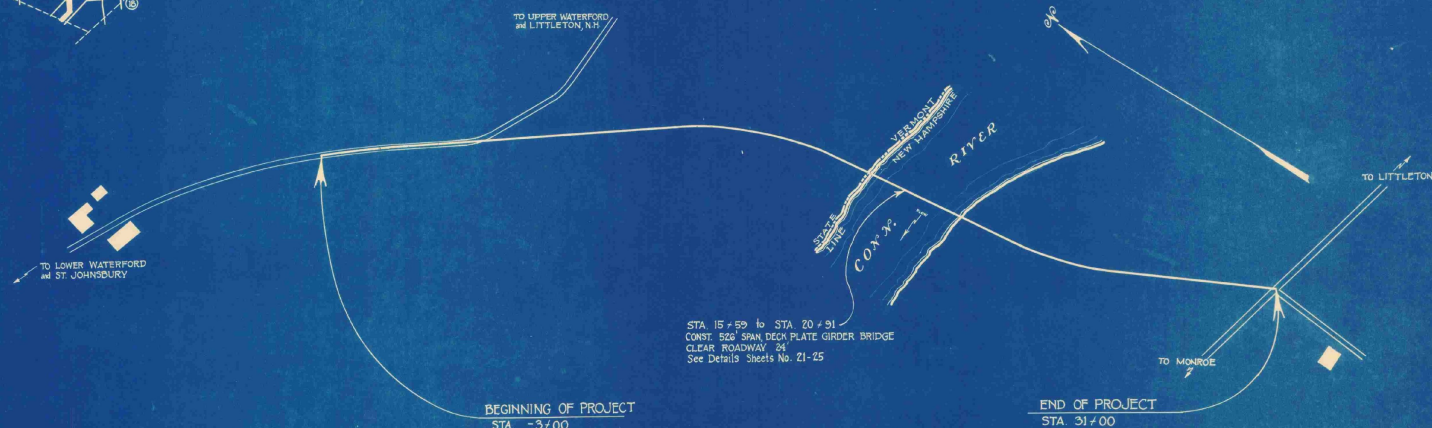
STATE OF NEW HAMPSHIRE
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED INTERSTATE BRIDGE PROJECT No 263

THEODORE ROOSEVELT HIGHWAY

PLAN, 1"=50'-0"
PROFILE, VERT. 1"=10'-0" HOR. 1"=50'-0"
CROSS SECTION, VERT. 1"=5'-0" HOR. 1"=5'-0"

NOTE: This project to be constructed in accordance with standard specifications on file with the Bureau of Public Roads, and Special Provisions attached to Proposal.



TOWNS OF WATERFORD, VT. and LITTLETON, N.H. CALEDONIA and GRAFTON COUNTIES

CONVENTIONAL SIGNS

TOWN LINE	SURVEY LINE
FENCE LINE	CULVERTS
STONE WALL	POWER POLE
UNFENCED PROPERTY	TELEPHONE POLE
TRAVELED WAY	GROUND ELEVATION
RAILROADS	GRADE ELEVATION
RETAINING WALL	

LAYOUT
SCALE 1"= 300'

APPROVED: *H.E. Sargent*
VT. COMMISSIONER OF HIGHWAYS

APPROVED: *H.E. Sargent*
NH. HIGHWAY COMMISSIONER

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER, BUREAU OF PUBLIC ROADS.
RECOMMENDED FOR APPROVAL:

CHIEF ENGINEER, BUREAU OF PUBLIC ROADS.
APPROVED:

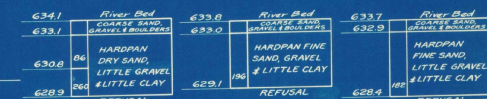
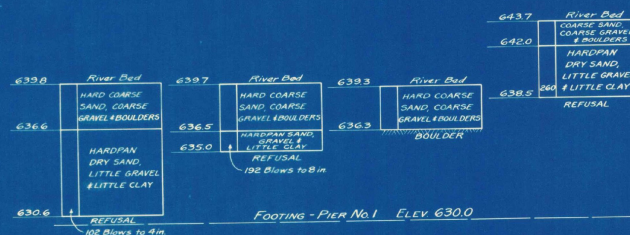
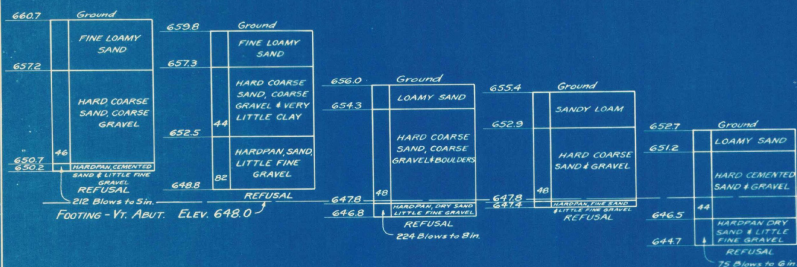
DIRECTOR, BUREAU OF PUBLIC ROADS.

Plans drawn by
Plans traced by
Plans checked by

WATERFORD, VT.
DALTON, N.H.
N.H. 70 2

Chief Engineer, N.H.

FED. ROAD DIST. No.	STATE	INT. ST. RR PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT-NH	263	1934	19	30



BORINGS No. 22

No. 21

No. 20

No. 19

No. 18

No. 17

No. 16A

No. 16

No. 15

No. 14

No. 13

No. 12

FOOTING - PIER No. 3
ELEV. 628.0

BORINGS No. 11

No. 10

No. 9

No. 8

No. 7

No. 6

No. 5

No. 4

No. 3

No. 2

WASH BORINGS

TAKEN MAY 6, 1934 SCALE: 1" = 1'-0"

Borings taken for purpose of design and show conditions at boring points only, but do not necessarily show nature of material to be encountered in connection with construction of the bridge.

Figures in columns indicate blows per foot dropping 135 lb. hammer 2 ft. to 3 ft. on a 1 in. pipe in casing.

Borings 6 to 22 inclusive "Refusal" noted at end instead of "Ledge or Boulder" because in Handpan comparatively small stone will stop progress of spoon.

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT

TOWN: LITTLETON

PROJECT:

LOCATION: LITTLETON, N.H. - WATERFORD Vt.

ROAD: T.R. HIGHWAY

STREAM: CONNECTICUT RIVER

DESIGNED BY: DATE

DRAWN BY: DATE

TRACED BY: A.M.W. DATE 5-9-34

CHECKED BY: DATE

SHEET 20 OF 21 SHEETS

Guilford
Brandy Bridge

2/11/37
WHD

Abuts. Class C.

$$2.5' \times 4' \times 31' \times \frac{1}{2} \times 2 = 23 \text{ C.Y. say } 30 \text{ C.Y.}$$

Superstr.

$$\text{Class A} = 48.3 \quad \text{Rein.} \quad + 15' = 63 \text{ C.Y.}$$

$$\text{Reinf.} = 11,169$$

$$\text{Str. Steel} = 107,479$$

Str. Exc.

$$\#1 \quad 6' \times 2' \times 31' \times \frac{1}{2} = 15 \text{ C.Y.}$$

$$\#2 \quad 6' \times 2' \times 31' \times \frac{1}{2} = 15$$

30 say 50 C.Y.

CSR 260 L.F

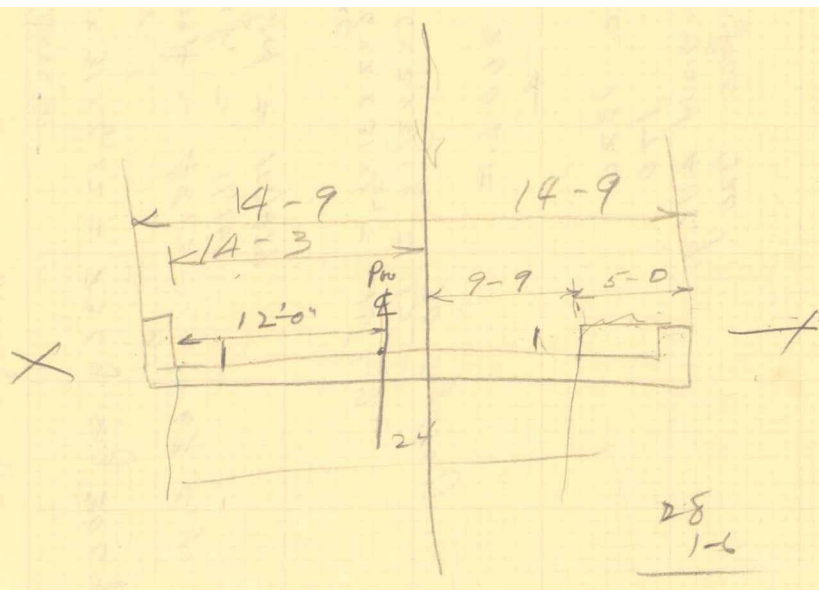
Anchors 4

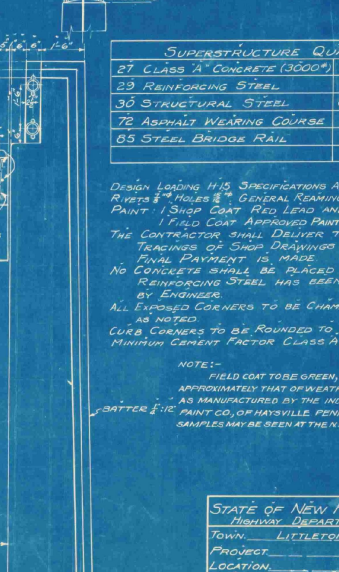
Conc Exc. 1326

Rock " 170

Sub-base Gravel 411 C.Y.

Grav. Surface 320

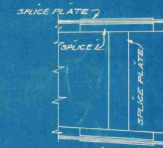
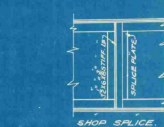
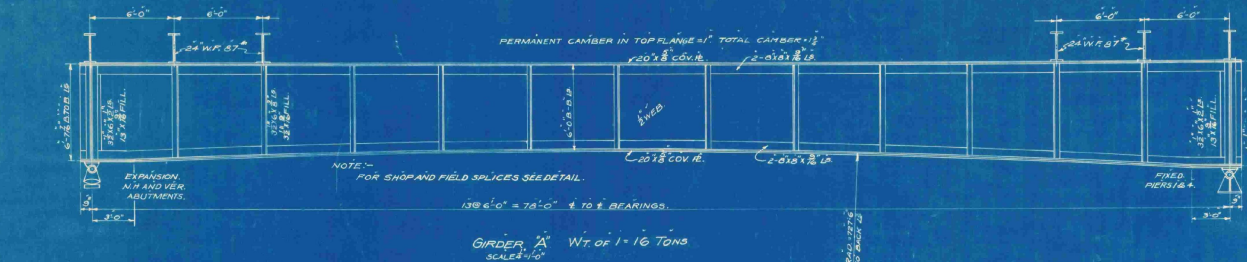




DESIGN LOADS: 115 KIP/INCHES APPROXIMATELY, MINOR
 AIRSIDE "HOLE" - GENERAL REPAIRING NOT REQUIRED.
 PAINT: 1" SHOP COAT RED LEAD AND OIL.
 FIELD COAT: A REPAIRED CRACKED NOTEBOOK
 THE CONTRACTOR SHALL DELIVER TO THE STATE
 TRAILING OF SHOP DRAWINGS BEFORE
 FINAL PAYMENT IS MADE.
 NO CRACKING SHALL BE PERMITTED UNTIL
 REINFORCING STEEL HAS BEEN CHECKED
 BY ENGINEER.
 ALL EXPOSED CORNERS TO BE CHAMFERED 1" EXCEPT
 AT JOINTS.
 CURB CORNERS TO BE ROUNDED TO 1" RADIUS.
 MINIMUM CEMENT FACTOR CLASS A CONCRETE 140
 NOTE:
 FIELD COAT TO BE GIVEN, OF A SHADE
 APPROXIMATELY THAT OF WEATHERED COPPER
 AS MANUFACTURED BY THE INDUSTRIES
 BATTER 1:1. PAINT CO. OF HAVSINE PENN. OR EQUIVALENT.
 SAMPLES MAY BE SEEN AT THE N. H. JOHNSON LAB.

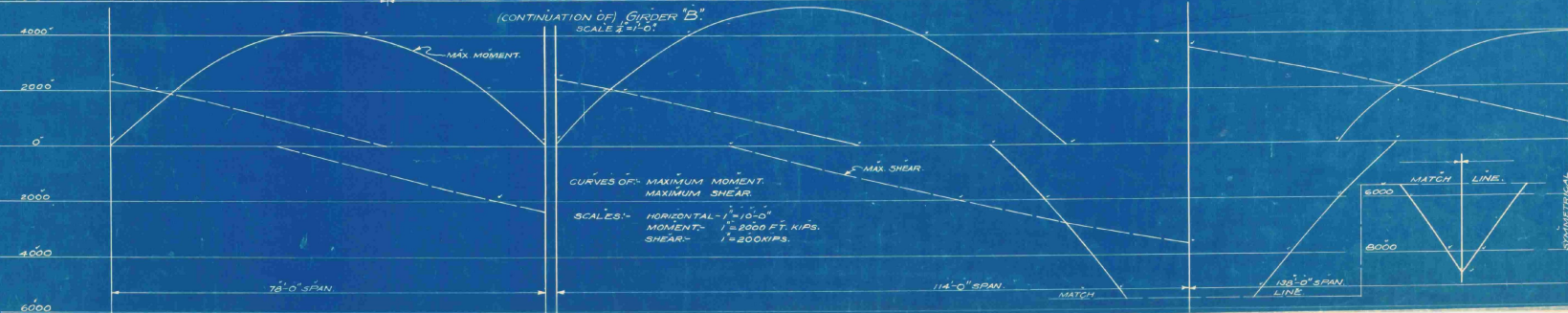
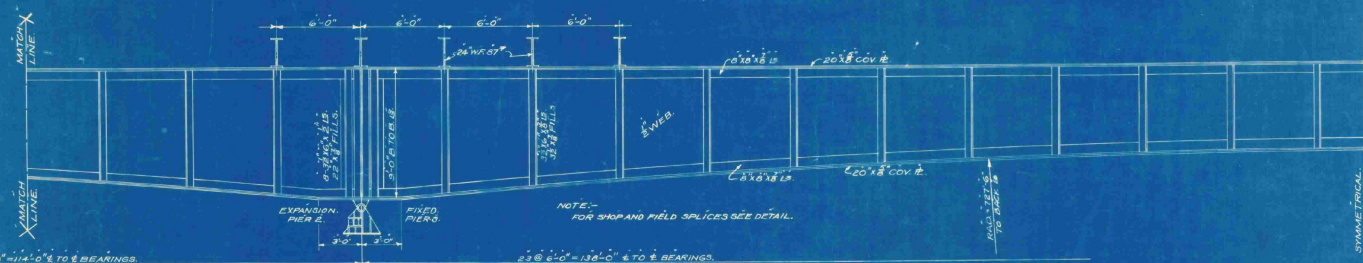
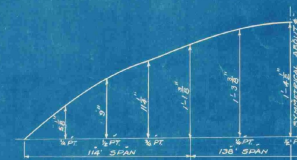
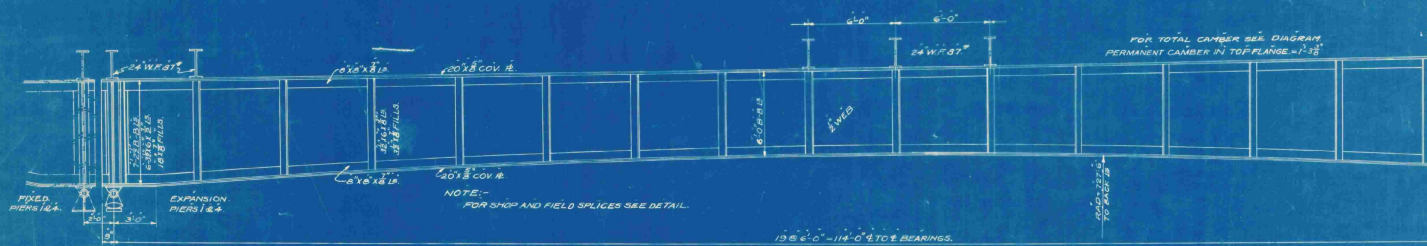
STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT _____
LOCATION _____
ROAD I. R. Highway.
STREAM CONNECTICUT RIVER.
DESIGNED BY R. D. F. DATE 1-24-34.
DRAWN BY M. P. S. DATE 11-23-33.
TRACED BY F. W. G. S. DATE 2-15-34.
CHECKED BY H. K. K. DATE 3-2-34.
SHEET 21 OF 21 SHEETS.

DESIGN NO.	DATE	SCALE	PROJECT	LOCATION	DATE
9	VT-NH	26.3	1034	2.2	27



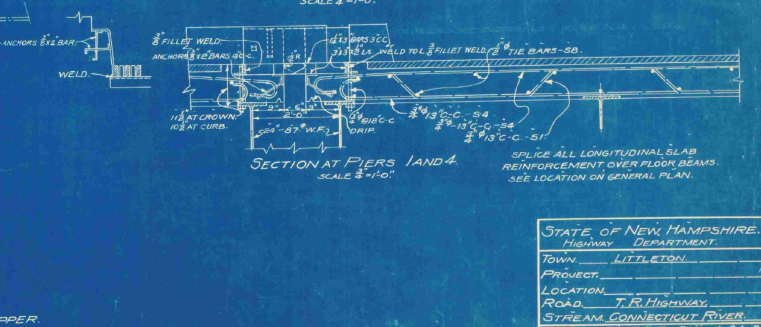
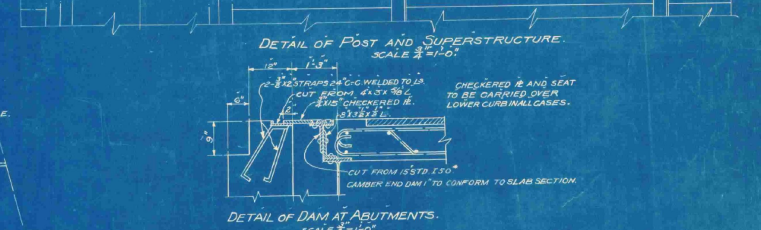
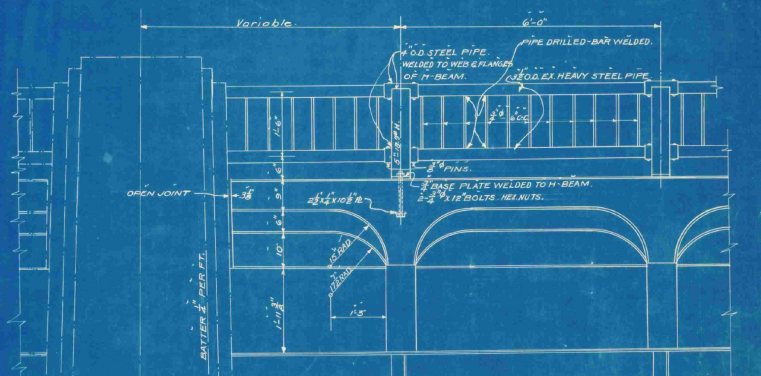
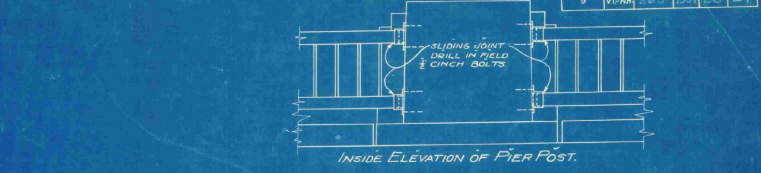
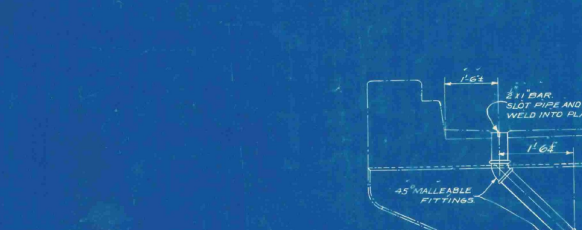
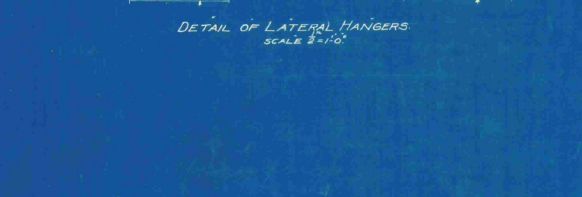
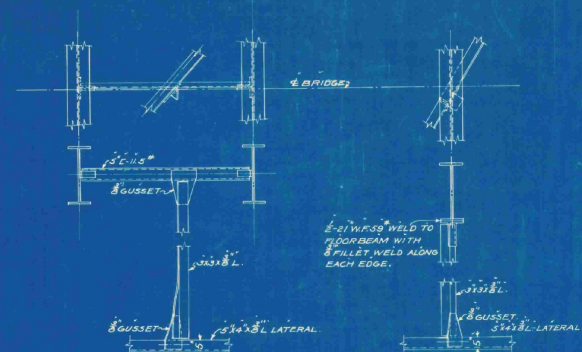
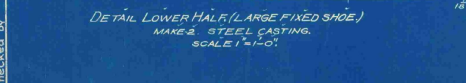
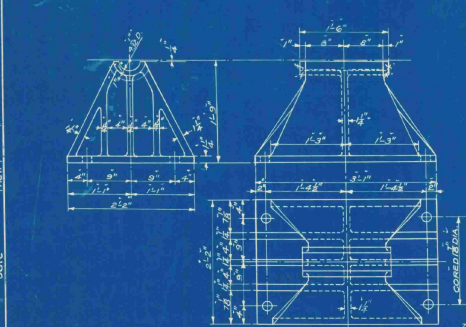
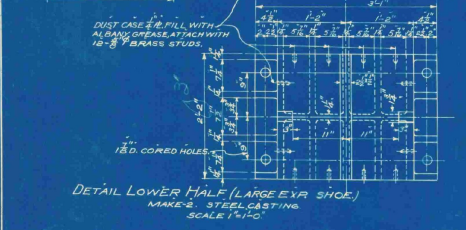
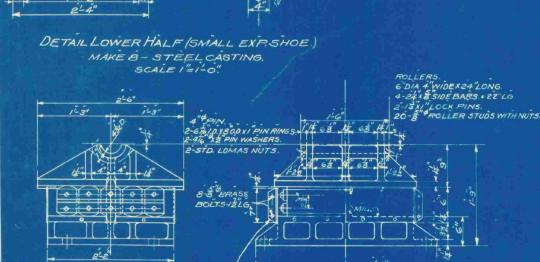
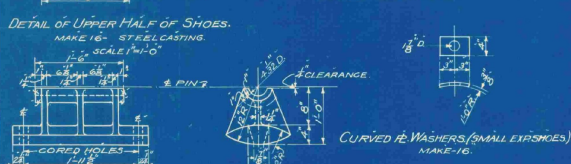
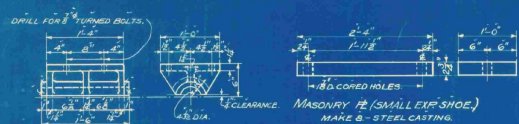
DETAIL OF SHOP AND FIELD SPLICES.

NOTE: SHOP AND FIELD SPLICES TO BE KEPT TO A MINIMUM AND TO BE LOCATED AT POINTS OF MINIMUM MOMENT AND SHEAR SO FAR AS POSSIBLE.

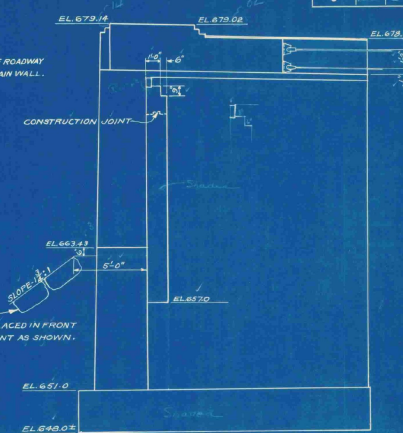


STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT
LOCATION
ROAD T.R. HIGHWAY.
STREAM CONNECTICUT RIVER.
DESIGNED BY DATE 11-20-34
DRAWN BY M.B.S. DATE 11-23-34
CHECKED BY E.W.G.S. DATE 2-20-34
SHEET 2 OF 2 SHEETS

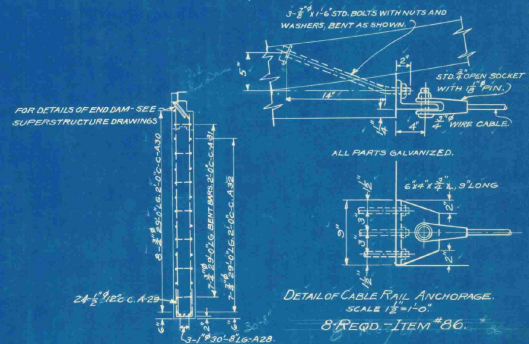
FILE NO.	STATE	INT. BY	DATE	SCALE	NO.	DATE
9	VT-NH	263	1934	23	27	



STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT LOCATION ROAD T.R. HIGHWAY.
STREAM CONNECTICUT RIVER.
DESIGNED BY R.D.E. DATE 1-24-34.
DRAWN BY M.G.S. DATE 2-21-34.
TRACED BY L.W.G.S. DATE 2-21-34.
CHECKED BY T.H.H. DATE 3-15-34.
SHEET 23 OF 21 SHEETS.



SECTION "B-B" THRU CURTAIN WALL
SCALE $\frac{1}{4}'' = 1'-0''$

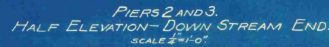
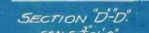
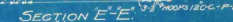
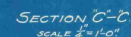


SECTION B-B (REINF.)
SCALE 1"=10'



SECTION D-D (REINF.)

STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT
LOCATION, LITTLETON, NH - WATERFORD, VT.
ROAD. T. R. HIGHWAY.
STREAM, CONNECTICUT RIVER.
DESIGNED BY M.P.S. DATE, 1-3-3.
DRAWN BY M.P.S. DATE, 11-3-3.
TRACED BY F.W.G.S. DATE, 5-10-34.
CHECKED BY G.S. DATE, 5-11-34.
SHEET 24 OF 30 SHEETS.



NOTES:-
ALL PIER FOOTINGS TO BE CARRIED TO SUITABLE FOUNDATION.
NO CONCRETE TO BE PLACED UNTIL AFTER REINFORCING STEEL
HAS BEEN CHECKED BY THE ENGINEER.
EXPOSED CORNERS OF CONCRETE TO BE CHAMFERED $\frac{1}{4}$ EXCEPT PYLONS
BACKFILL AROUND PIERS WITH RIP RAP FOR FOUNDATION
PROTECTION.

GLASS "A" CONCRETE TO HAVE MINIMUM CEMENT FACTOR OF 1.61
GLASS "C" CONCRETE TO HAVE MINIMUM CEMENT FACTOR OF 1.30

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT 524
LOCATION LITTLETON N.H. - WATERBURY
ROAD T.R. Highway
STREAM CONNECTICUT RIVER.
DESIGNED BY HYDRO DATE 3-1-34
DRAWN BY C.B. DATE 3-2-34
TRACED BY E.W.G.S. DATE 3-3-34
CHECKED BY H.M.S. DATE 3-3-34
SHEET 25 OF 27 SHEETS.

THE INSIDE TOTAL CHANGE IS THE ARITHMETICAL DIFFERENCE BETWEEN THE BANK AND THE CROWN. THE OUTSIDE TOTAL CHANGE IS THE ARITHMETICAL SUM OF THE BANK AND THE CROWN.

Consider Crown as Minus (-)

REV.	DATE	BY	CHKD.	APP'D.	REMARKS
1					

INDEX OF SHEETS

SHEET NO.	1	TITLE PAGE
"	"	2 TYPICAL SECTION OF IMPROVEMENT
"	"	PLAN AND PROFILE
"	"	CROSS SECTIONS
"	"	STANDARDS

STATE OF NEW HAMPSHIRE
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED U.S. PUBLIC WORKS PROJECT

NO - N.R.H.

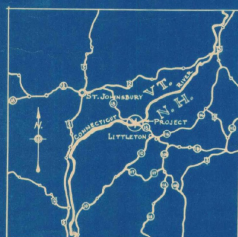
INTERSTATE BRIDGE PROJECT

T. R. HIGHWAY.

PLAN, 1"=50' 0"
SCALES: PROFILE VERT. 1"=10' 0" HORIZ. 1"=80' 0"
CROSS SECTION VERT. 1"=5' 0" HORIZ. 1"=5' 0"

NOTE. This project to be constructed in accordance with standard specifications on file with the Bureau of Public Roads, and special provisions attached to proposal.

KEY MAP



CONVENTIONAL SIGNS

TOWN LINE	---	SURVEY LINE	---
FENCE LINE	---	CULVERTS	---
STONE WALL	---	POWER POLE	---
UNFENCED PROPERTY	---	TELEPHONE POLE	---
TRAVELED WAY	---	GROUND ELEVATION	---
RAILROADS	---	GRADE ELEVATION	---
RETAINING WALL	---		

Plans drawn by
Plans traced by
Plans checked by

LAYOUT SCALE 1"

TOWNS OF - WATERFORD, VT. & LITTLETON, N.H.
COUNTIES OF - CALEDONIA, VT. & GRAFTON, N.H.

APPROVED: _____
HIGHWAY COMMISSIONER

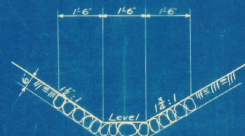
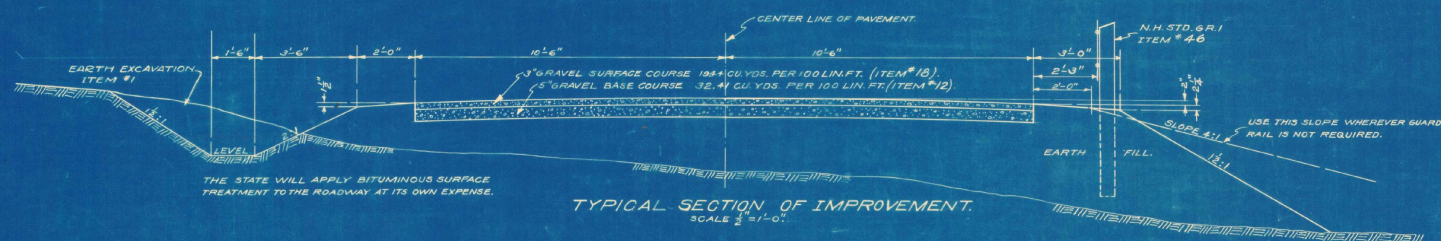
RECOMMENDED FOR APPROVAL: _____

DISTRICT ENGINEER, BUREAU OF PUBLIC ROADS
RECOMMENDED FOR APPROVAL: _____

CHIEF ENGINEER, BUREAU OF PUBLIC ROADS
APPROVED: _____

DIRECTOR, BUREAU OF PUBLIC ROADS

PROJ. NO.	STATE	PROJ. NO.	YEAR	SHEET NO.	TOTAL SHEETS
9	N. H.		1932	2	10



SECTION OF COBBLE GUTTER
ITEM #39

STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN. LITTLETON.
PROJECT.
LOCATION.
ROAD. LITTLETON-WATERFORD.
STREAM. CONNECTICUT RIVER.
DESIGNED BY R.V.E. DATE 12-19-31.
DRAWN BY L.W.G.S. DATE 12-19-31.
TRACED BY L.W.G.S. DATE 12-19-31.
CHECKED BY M.P.S. DATE 12-21-31.
SHEET 2 OF 13 SHEETS.

REVISIONS AFTER PROPOSAL	DATE	STATION	FROM	TO
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PRO. NO.	SHEET	PRO. NO.	PRO. NO.	PRO. NO.	PRO. NO.
9	N. H.	1034			

VERMONT

PLAN
Scale 1" = 20'

NEW HAMPSHIRE

Flow

P12 EL 68000'

520' VC

Operating Level EL 6507

WL 11/6/33 EL 6443.7

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

EL 640'

PROFILE

HOR SCALE 1" = 20'

VERT SCALE 1" = 5'

DATUM EL 6400'

DATUM EL 6200'

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT
TOWN - LITTLETON
PROJECT - NH
LOCATION - LITTLETON, N.H. WATERCROFT
ROAD - THEODORE ROSSWORTH
STREAM - CONNECTICUT RIVER
SURVEYED BY - E.A. DATE 11/6/33
DRAWN BY - E.A. DATE 11/6/33
TRACED BY - J.W. DATE 2/13/34
CHECKED BY - E.A. DATE 3-1-34
SHEET 4 of 10 SHEETS

REVISIONS - AFTER	DATE	PERSON
1	11/6/33	E.A.
2	11/6/33	E.A.
3	11/6/33	E.A.
4	11/6/33	E.A.
5	11/6/33	E.A.
6	11/6/33	E.A.
7	11/6/33	E.A.
8	11/6/33	E.A.
9	11/6/33	E.A.
10	11/6/33	E.A.
11	11/6/33	E.A.
12	11/6/33	E.A.
13	11/6/33	E.A.
14	11/6/33	E.A.
15	11/6/33	E.A.
16	11/6/33	E.A.
17	11/6/33	E.A.
18	11/6/33	E.A.
19	11/6/33	E.A.
20	11/6/33	E.A.
21	11/6/33	E.A.
22	11/6/33	E.A.
23	11/6/33	E.A.
24	11/6/33	E.A.
25	11/6/33	E.A.
26	11/6/33	E.A.
27	11/6/33	E.A.
28	11/6/33	E.A.
29	11/6/33	E.A.
30	11/6/33	E.A.
31	11/6/33	E.A.
32	11/6/33	E.A.
33	11/6/33	E.A.
34	11/6/33	E.A.
35	11/6/33	E.A.
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37	11/6/33	E.A.
38	11/6/33	E.A.
39	11/6/33	E.A.
40	11/6/33	E.A.
41	11/6/33	E.A.
42	11/6/33	E.A.
43	11/6/33	E.A.
44	11/6/33	E.A.
45	11/6/33	E.A.
46	11/6/33	E.A.
47	11/6/33	E.A.
48	11/6/33	E.A.
49	11/6/33	E.A.
50	11/6/33	E.A.
51	11/6/33	E.A.
52	11/6/33	E.A.
53	11/6/33	E.A.
54	11/6/33	E.A.
55	11/6/33	E.A.
56	11/6/33	E.A.
57	11/6/33	E.A.
58	11/6/33	E.A.
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66	11/6/33	E.A.
67	11/6/33	E.A.
68	11/6/33	E.A.
69	11/6/33	E.A.
70	11/6/33	E.A.
71	11/6/33	E.A.
72	11/6/33	E.A.
73	11/6/33	E.A.
74	11/6/33	E.A.
75	11/6/33	E.A.
76	11/6/33	E.A.
77	11/6/33	E.A.
78	11/6/33	E.A.
79	11/6/33	E.A.
80	11/6/33	E.A.
81	11/6/33	E.A.
82	11/6/33	E.A.
83	11/6/33	E.A.
84	11/6/33	E.A.
85	11/6/33	E.A.
86	11/6/33	E.A.
87	11/6/33	E.A.
88	11/6/33	E.A.
89	11/6/33	E.A.
90	11/6/33	E.A.
91	11/6/33	E.A.
92	11/6/33	E.A.
93	11/6/33	E.A.
94	11/6/33	E.A.
95	11/6/33	E.A.
96	11/6/33	E.A.
97	11/6/33	E.A.
98	11/6/33	E.A.
99	11/6/33	E.A.
100	11/6/33	E.A.

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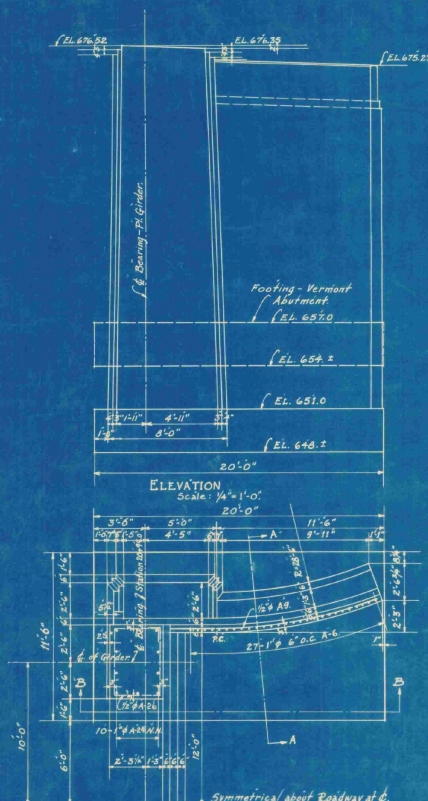
EL. 6-57.0	WONCAVE	EL. 6-58.0	WONCAVE	EL. 6-59.0	WONCAVE
EL. 6-57.0	LEANY SAND	EL. 6-58.0	LEANY SAND	EL. 6-59.0	LEANY SAND
25	COARSE SAND AND COARSE GRAVEL	31	COARSE SAND AND COARSE GRAVEL	32	COARSE SAND AND COARSE GRAVEL
EL. 6-60.0	CEMENTED SAND, GRAVEL & LITTLE SAND	EL. 6-61.0	BLUE SAND	EL. 6-62.0	CEMENTED SAND AND GRAVEL
34	COARSE GRAVEL	35	COARSE GRAVEL	36	

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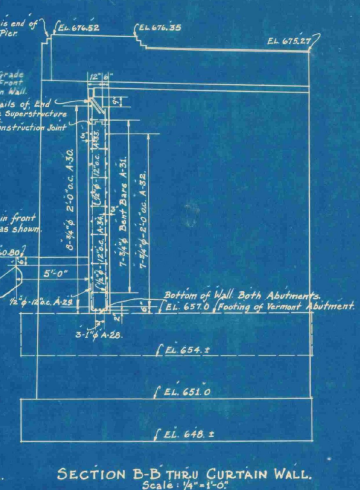
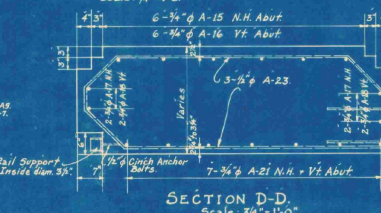
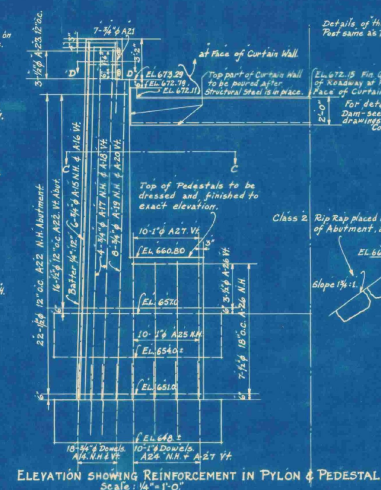
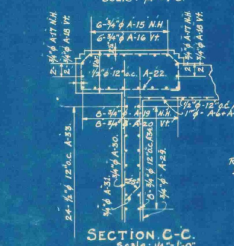
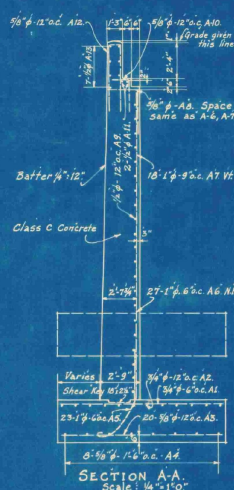
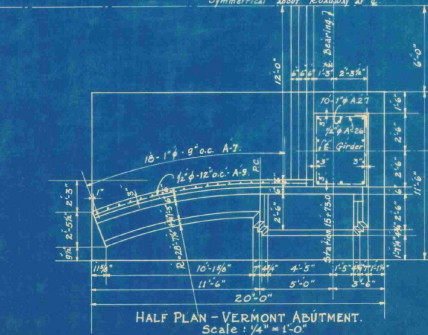
STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.
TOWN LITTLETON
PROJECT _____
LOCATION, LITTLETON NJH-WATERFORD V.
ROAD, THEODORE ROOSEVELT
STREAM, CONNECTICUT RIVER
SURVEYED BY F.A.B. DATE 11-20-33
DRAWN BY F.W.G.S. DATE 11-27-33
TRACED BY F.W.G.S. DATE 11-28-33
CHECKED BY K.W.V. DATE 2-2-34
SHEET 5 OF 10 SHEETS

[illegible]

DATE	STATE	PROJECT	TOWN	SHEET	TOTAL
1934	N. H.			6	10



HALF PLAN - NEW HAMPSHIRE ABUTMENT.
Scale: 1/4" = 1'-0".
Symmetrical about Roadway at 6.

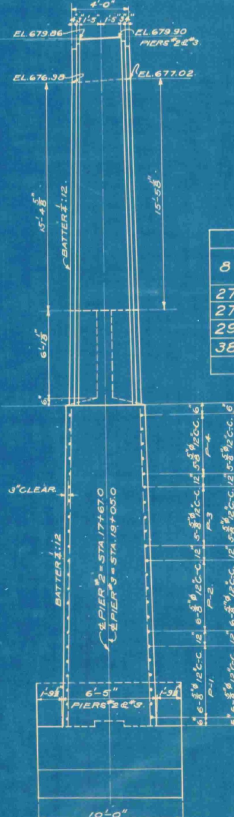
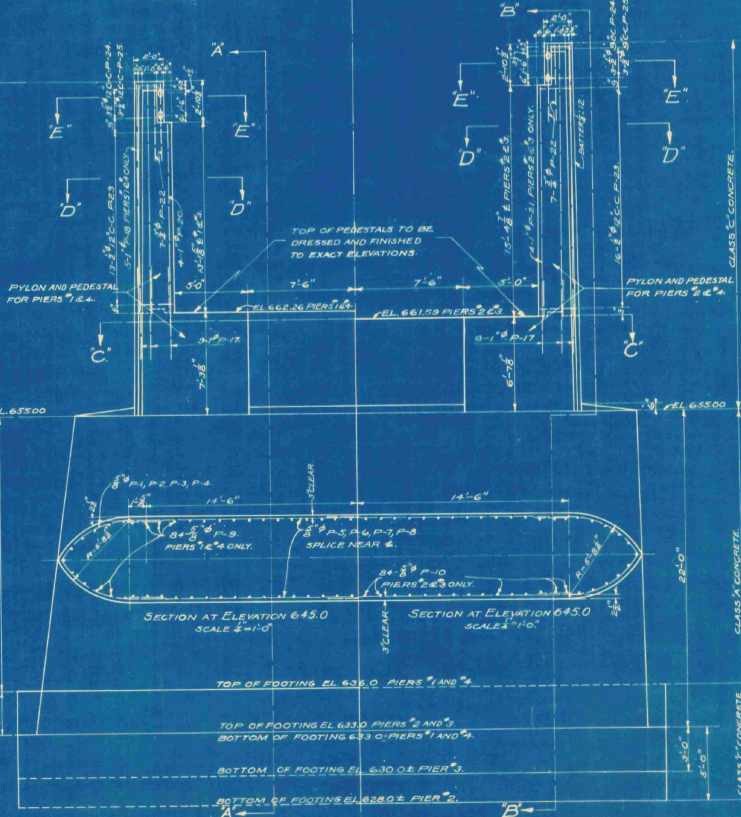
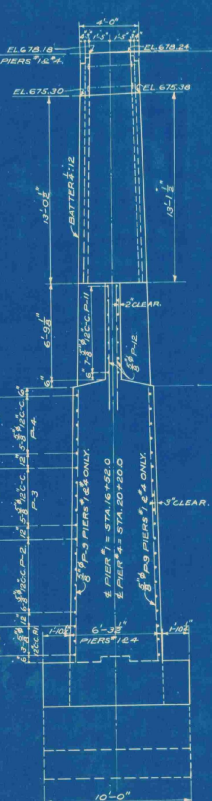
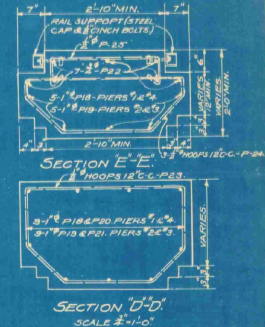
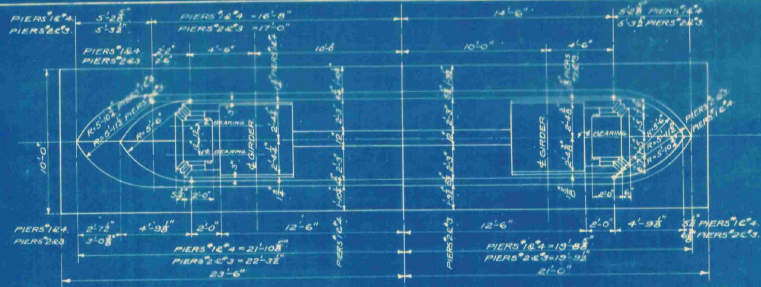


ESTIMATED QUANTITIES.		
MATERIALS.	VERMONT.	NEW HAMPSHIRE
STRUCTURAL EXCAVATION.	85 cu. yds.	100 cu. yds.
CONCRETE - CLASS C.	144 cu. yds.	178 cu. yds.
REINFORCING STEEL.	10142 LBS.	13000 LBS.
RIP RAP - CLASS Z.	7 cu. yds.	25 cu. yds.

Note: Exposed corners of concrete to be chamfered for corners of curb to be rounded to 4" radius. No concrete to be placed until after reinforcing steel has been checked by engineers. Minimum cement factor of Class C concrete = 1.80. Footings to be carried to a firm foundation, subject to the approval of the engineers. Excess structure excavation to be used for fill under rip rap without additional compensation.

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT
TOWN: LITTLETON
PROJECT: LOCATION LITTLETON, N.H. - WATERBURY, Vt. ROAD T.R. HIGHWAY. STREAM CONNECTICUT RIVER.
DESIGNED BY M.P.S. DATE 11-33
DRAWN BY M.P.S. DATE 11-33
TRACED BY C.N.P. DATE 2-28-34
CHECKED BY H.D. DATE 3-1-34
SHEET 6 OF 10 SHEETS.

DESIGN NO.	DATE	DESIGNER	CHECKED	APPROVED	SCALE
9	N.H.				



ESTIMATED QUANTITIES.	PIER N°1	PIER N°2	PIER N°3	PIER N°4
8 STRUCTURE EXCAVATION	125 CUYDS	135 CUYDS	15 CUYDS	40 CUYDS
27 CONCRETE CLASS A	153 CUYDS	153 CUYDS	153 CUYDS	153 CUYDS
27 CONCRETE CLASS C	26 CUYDS	147 CUYDS	14 CUYDS	26 CUYDS
29 REINFORCING STEEL	6156 LBS	6781 LBS	6781 LBS	6156 LBS
38 RIP RAP FOR FOUNDATION PROTECTION	25 CUYDS	25 CUYDS	25 CUYDS	25 CUYDS

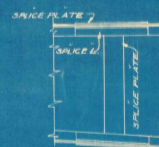
NOTES:-
ALL PIER FOOTINGS TO BE CARRIED TO SUITABLE FOUNDATION.
NO CONCRETE TO BE PLACED UNTIL AFTER REINFORCING STEEL HAS BEEN CHECKED BY THE ENGINEER.
EXPOSED CORNERS OF CONCRETE TO BE CHAMFERED 1/4".
BACKFILL AROUND PIERS WITH RIP RAP FOR FOUNDATION PROTECTION.
CLASS A CONCRETE TO HAVE MINIMUM CEMENT FACTOR OF 1.61
CLASS C CONCRETE TO HAVE MINIMUM CEMENT FACTOR OF 1.30

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT
TOWN - LITTLETON
PROVINC -
LOCATION -
ROAD - I.R. HIGHWAY
STREAM, CONNECTICUT RIVER
DESIGNED BY - DATE -
DRAWN BY - DATE -
CHECKED BY - DATE -
SHEET 7 OF 10 SHEETS

STATIONARY

SOURCE RATE

6HOP SPLICE.
SPLICE TO DEVELOP FULL STRENGTH OF WEB



FIELD SPICE.
SPICE TO DEVELOP FULL STRENGTH OF WEB AND FLANGES
WEB AND FLANGES TO BEAR FULL LENGTH.
SPICE TO BE LOCATED BETWEEN STIFFENERS.

DETAIL OF SHOP AND FIELD SPLICES

NOTE:-
SHOP AND FIELD SPLICES TO BE KEPT TO A MINIMUM AND
TO BE LOCATED AT POINTS OF MINIMUM MOMENT AND SHEAR
SO FAR AS POSSIBLE.

DIAGRAM FOR CAMBER - GIRDER B

(CONTINUATION OF) GIRDER "B".
SCALE $\frac{1}{2}'' = 1'-0''$

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.
TOWN. LITTLETON.
PROJECT.
LOCATION.
ROAD. T. R. Highway.
STREAM. CONNECTICUT RIVER.
DESIGNED BY R.D.F. DATE. 1-24-31
DRAWN BY M.R.S. DATE. 11-23-31
TRACED BY E.W.G.S. DATE. 2-20-32
CHECKED BY R.R.K. DATE. 3-2-32
SHEET 3 OF 10 SHEETS.

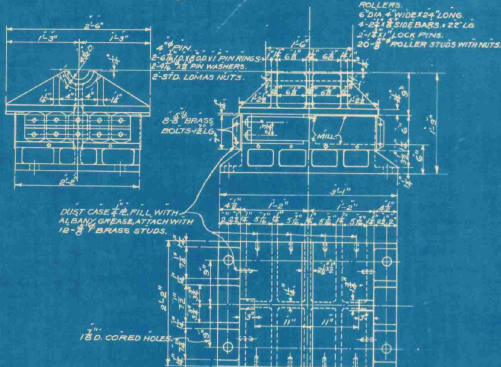
DES. NO.	DATE	BY	CHKD.	APP'D.	REVISIONS
9	N.H.				



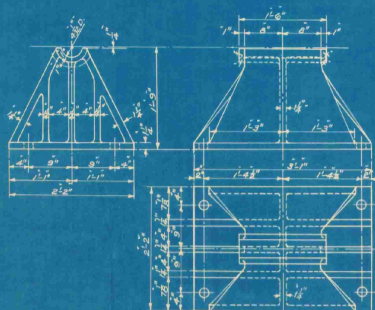
DETAIL OF UPPER HALF OF SHOES.
MAKE 16 - STEEL CASTING.
SCALE 1/4"=1'-0"



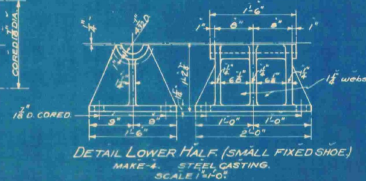
DETAIL LOWER HALF (SMALL EXR SHOE)
MAKE 8 - STEEL CASTING.
SCALE 1/2"=1'-0"



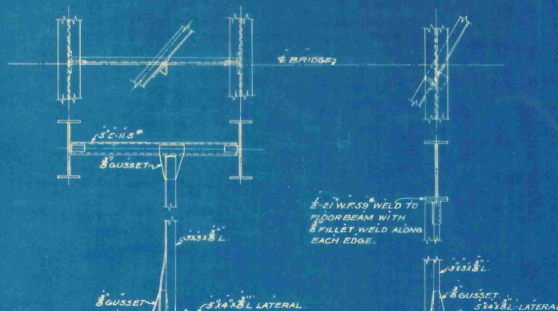
DETAIL LOWER HALF (LARGE EXR SHOE)
MAKE 8 - STEEL CASTING.
SCALE 1/2"=1'-0"



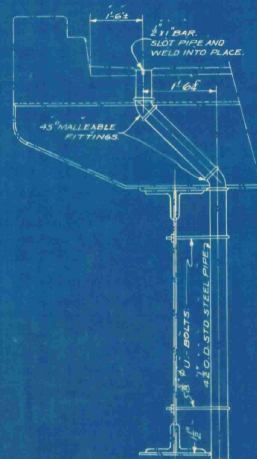
DETAIL LOWER HALF (LARGE FIXED SHOE)
MAKE 8 - STEEL CASTING.
SCALE 1"=1'-0"



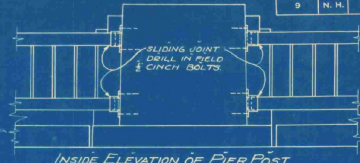
DETAIL LOWER HALF (SMALL FIXED SHOE)
MAKE 4 - STEEL CASTING.
SCALE 1/2"=1'-0"



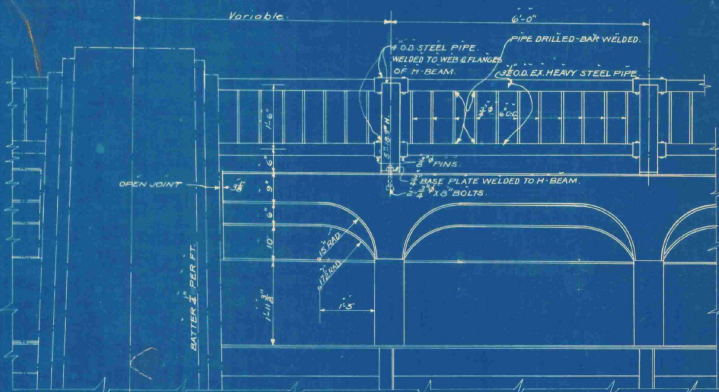
DETAIL OF LATERAL HANGERS
SCALE 3/4"=1'-0"



DETAIL OF SCUPPER
3/4\"/>



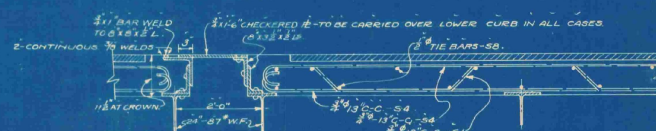
INSIDE ELEVATION OF PIER POST.



DETAIL OF POST AND SUPERSTRUCTURE.
SCALE 3/4"=1'-0"



DETAIL OF DAM AT ABUTMENTS.
SCALE 3/4"=1'-0"



SECTION AT PIERS 1 AND 4.
SCALE 3/4"=1'-0"

STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN: LITTLETON.
PROJECT:
LOCATION:
ROAD: T.R. HIGHWAY.
STREAM: CONNECTICUT RIVER.
DESIGNED BY: R.D.P. DATE: 1-2-34.
DRAWN BY: M.H.S. DATE: 2-12-34.
CHECKED BY: E.W.G.S. DATE: 2-24-34.
CHECKED BY: R.N.K. DATE: 3-2-34.
SHEET 10 OF 10 SHEETS.

DES. NO.	DATE	BY	CHK. BY	DATE	NO.	TOTAL SHEETS
9	N. H.			1934	1	13

INDEX OF SHEETS

- SHEET NO 1 TITLE PAGE
 " 2 TYPICAL SECTION OF IMPROVEMENT
 " 3 PLAN AND PROFILE
 " 4, 5 & CROSS SECTIONS
 " 6 EROSIONS
 " 7 ABUTMENTS
 " 8 PIERS
 " 9 MAINTENANCE SPAN
 " 10 PLATE GIRDER APP SPANS
 " 11 EXPANSION JOINT DETAILS
 " 12 STANDARDS

STATE OF NEW HAMPSHIRE
 STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED U.S. PUBLIC WORKS PROJECT

NO - N.R.H. 102-4
 INTERSTATE BRIDGE PROJECT
 ROAD

END OF PROJECT
 STATION 15+60.71



BEGINNING OF PROJECT
 STATION 0+00

SCALES (PLAN: 1" = 50' 0"
 PROFILE VERT: 1" = 10' 0" HOR: 1" = 50' 0"
 CROSS SECTION VERT: 1" = 5' 0" HOR: 1" = 5' 0")

NOTE: This project to be constructed in accordance with standard specifications on file with the Bureau of Public Roads and special provisions attached to proposal

KEY MAP



CONVENTIONAL SIGNS

TOWN LINE	.....	SURVEY LINE	.....
FENCE LINE	.....	CULVERTS	.....
STONE WALL	.....	POWER POLE	.....
UNFENCED PROPERTY	.....	TELEPHONE POLE	.....
TRAVELED WAY	.....	GROUND ELEVATION	.....
RAILROADS	.....	GRADE ELEVATION	.....
RETAINING WALL	.....	.....	.....

LAYOUT
 SCALE 1" = 50 FEET

TOWNS OF - WATERFORD, VT. & LITTLETON, N.H.
 COUNTIES OF - CALEDONIA, VT. & GRAFTON, N.H.

APPROVED: *J. G. Grant*
 HIGHWAY COMMISSIONER

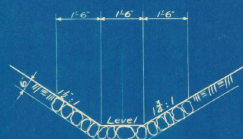
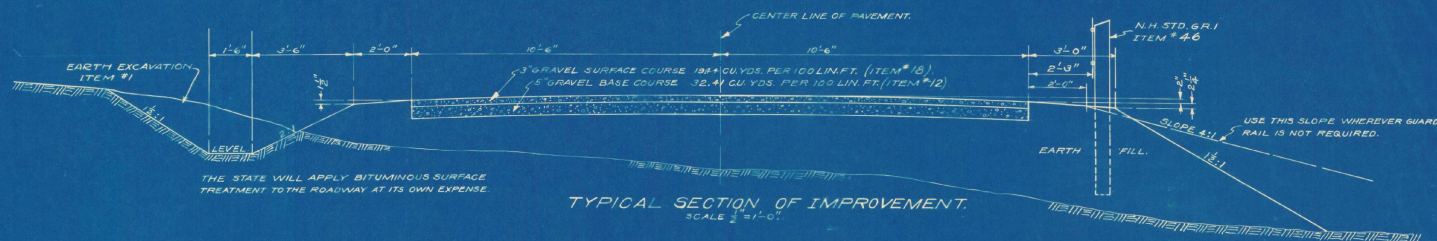
RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER, BUREAU OF PUBLIC ROADS
 RECOMMENDED FOR APPROVAL:

CHIEF ENGINEER, BUREAU OF PUBLIC ROADS
 APPROVED:

DIRECTOR, BUREAU OF PUBLIC ROADS

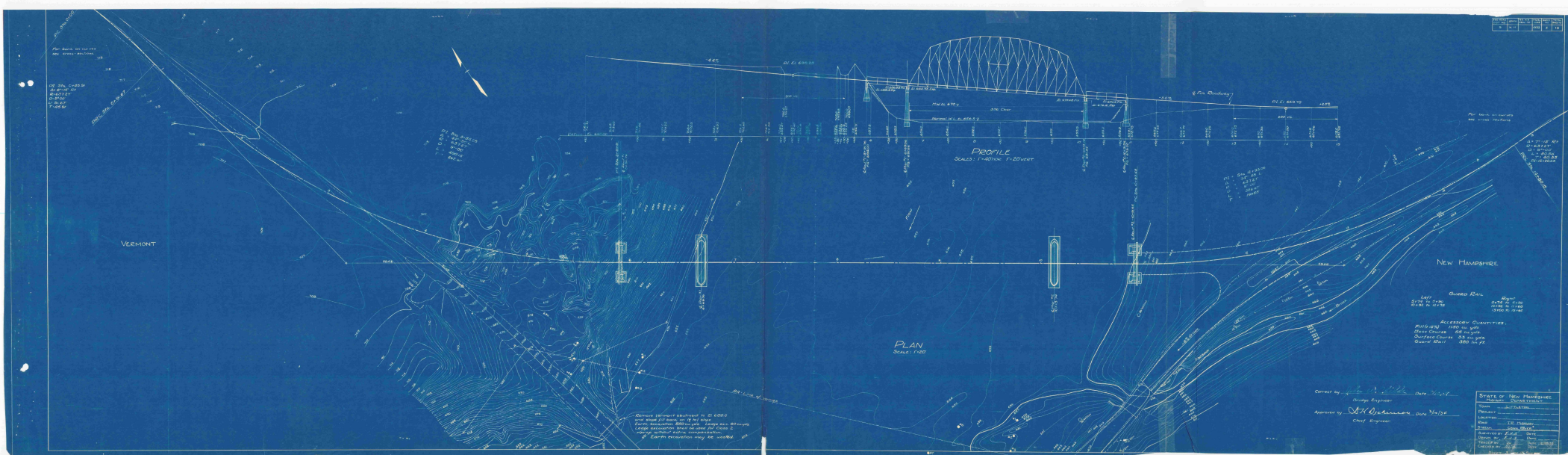
DES. NO.	DATE	REV.	BY	DATE	REV.	BY	DATE
9	N.H.			1933	2		10



STATE OF NEW HAMPSHIRE.
HIGHWAY DEPARTMENT.
TOWN LITTLETON.
PROJECT.
LOCATION.
ROAD LITTLETON-WATERFORD.
STREAM CONNECTICUT RIVER.
DESIGNED BY R.W.F. DATE 12-19-33.
DRAWN BY L.W.G.S. DATE 12-19-33.
TRACED BY L.W.G.S. DATE 12-19-33.
CHECKED BY M.F.S. DATE 12-21-33.
SHEET 2 OF 13 SHEETS

Traced by _____ Date _____
Checked by _____ Date _____

REVISION	DATE	BY	REASON
1			
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Revisions After Proposal	From	To
1	1	2
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Drawn by
Checked by
Date

Beginning of Project Sta. 0+00

STATE	FED. AID	FED. AID	FED. AID	FED. AID	FED. AID
9	N. H.	RD-4	4	13	

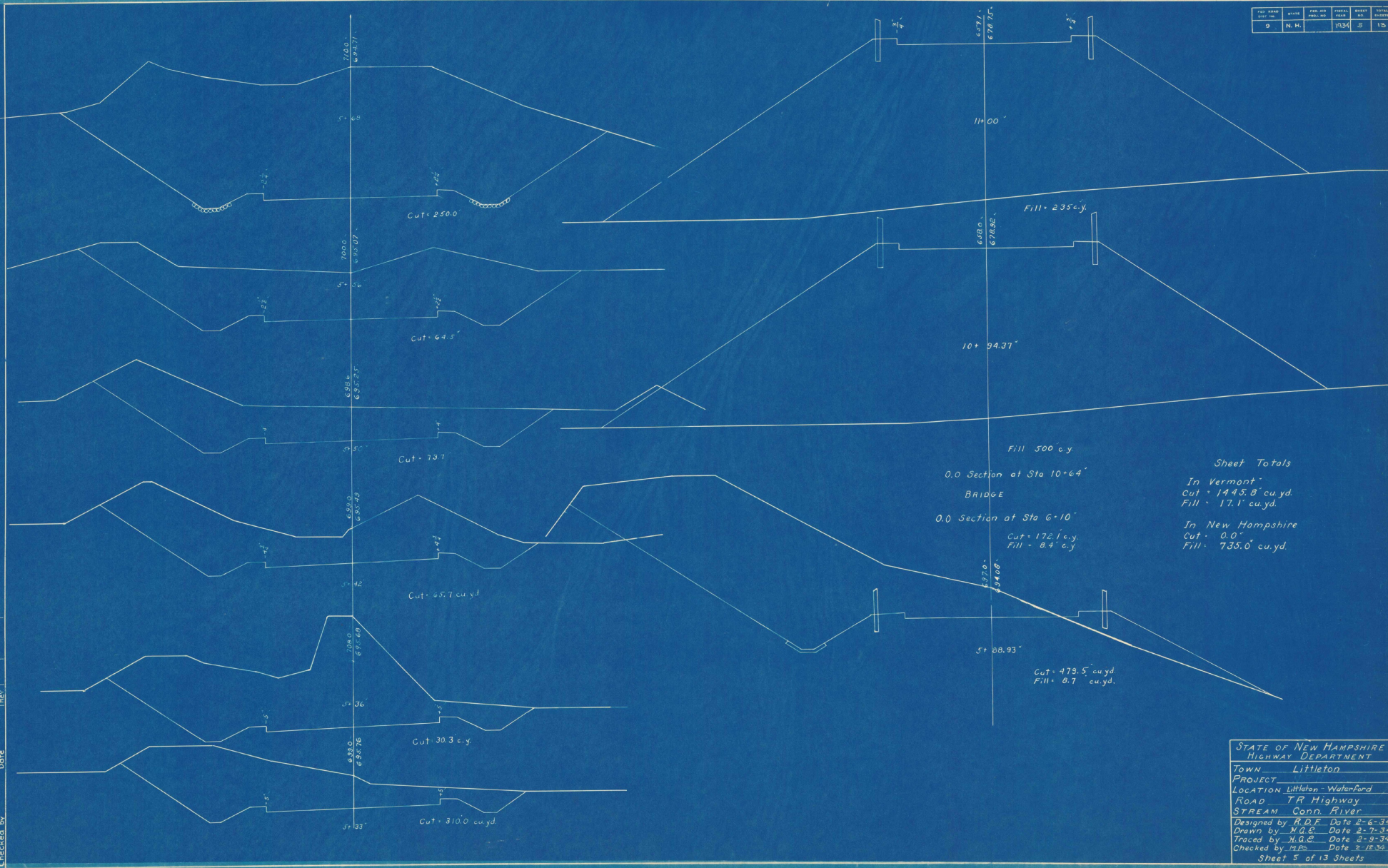
Sheet Totals
Cut: 2293.4 cu. yd.
Fill: 30.3 cu. yd.

STATE OF NEW HAMPSHIRE
Highway Department
TOWN Littleton
PROJECT LOCATION Littleton - Waterford
ROAD T.R. Highway
STREAM Conn. River
Designed by R.D.R. Date 2-6-34
Drawn by N.G.C. Date 2-7-34
Traced by N.G.C. Date 2-8-34
Checked by M.D.S. Date 2-12-34
Sheet 11 of 13 Sheets

FILE NO.	DATE	FILE NO.	DATE	FILE NO.	DATE	TOTAL
9	N. H.			1934	5	15

FILE NO.	DATE	FILE NO.	DATE	FILE NO.	DATE
1	10/10/34	2	10/10/34	3	10/10/34
4	10/10/34	5	10/10/34	6	10/10/34
7	10/10/34	8	10/10/34	9	10/10/34
10	10/10/34	11	10/10/34	12	10/10/34
13	10/10/34	14	10/10/34	15	10/10/34

Traced by _____
Checked by _____



GRAND TOTALS

	Cut	Fill	Fill + 15%
Vermont	3739.2	47.4	54.5
New Hampshire	30.6	4054.5	4662.7
Total	3769.8	4101.9	4717.2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEEP NO.	TOTAL SHEEP
9	N. H.		1934	6	13

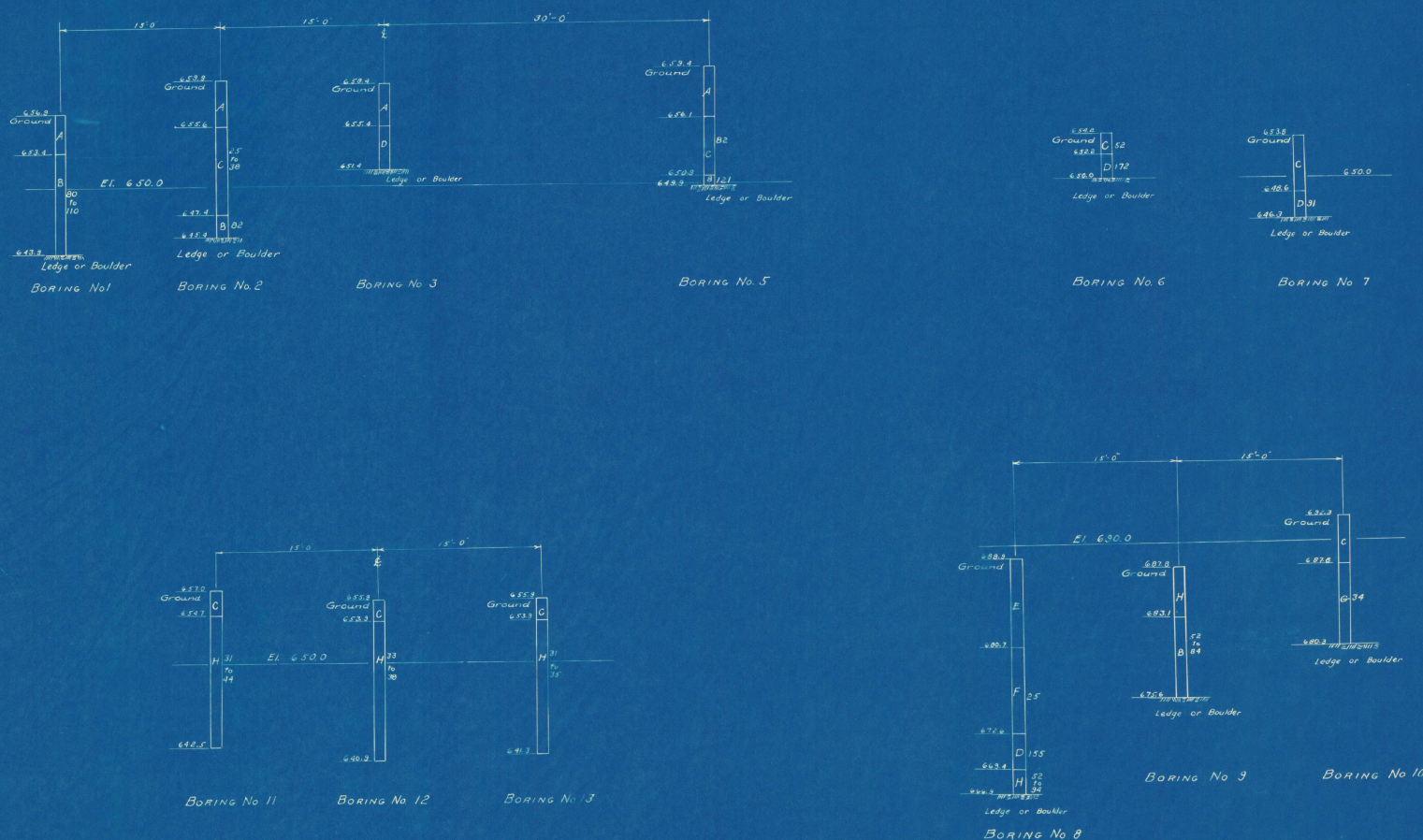
Yt. Approach	Cut	Fill
Removal of old Abut.	3739	47
Total	550	
154.	4288	47
Excav. Excavation	54	
Waste	4235	54
Available for N.H. Fill	550	
	3685	
N.H. Approach		4055
Accessory		1000
Total FILL (N.H.)		5055
154.		250
Total + 154.		5013
- N.H. Cut		31
Total Borrow		5082
From Yt		3685
Net Borrow		2097

	Vermont	New Hampshire (Incl. Acc.)
Fine Grading	3600	2500 Sq. Yds.
Gravel Base Course	191	209 Cu. Yds.
Gravel Surface Course	115	125 Cu. Yds.

[illegible]

STATE OF NEW HAMPSHIRE HIGHWAY DEPARTMENT	
TOWN	Littleton
PROJECT	
LOCATION	Littleton - Waterford
ROAD	T.R. Highway
STREAM	Conn. River
Designed by	R.D.F. Date 2-6-34
Drawn by	H.A.E. Date 2-7-34
Treeed by	H.A.E. Date 2-9-34
Checked by	M.P.D. Date 2-12-34
Sheet 6 of 13 Sheets	

FEED NO.	DATE	FEED NO.	DATE	FEED NO.	DATE
9	N. H.	10	12-18-33	11	7



KEY

A Fine dirty sand and boulders
 B Cemented sand, gravel and boulders
 C Coarse sand, coarse gravel and boulders
 D Cemented sand and gravel, little clay and boulders
 E Loamy sand, gravel and boulders.
 F Sand and gravel
 G Fine sand, coarse gravel and boulders
 H Coarse sand and coarse gravel

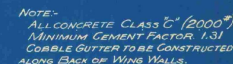
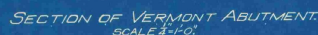
Figures beside columns indicate blows per foot dropping 135 lb hammer 2 to 3 feet on a 1" pipe in a casing.

Borings taken Oct.-Nov. 1933, on line A-A
 Borings taken for purpose of design and show conditions at boring points only, but do not necessarily show nature of material to be encountered in connection with construction of the bridge.
 Max HW El. 670

STATE OF NEW HAMPSHIRE	Highway Department
TOWN	Littleton
PROJECT	
LOCATION	
ROAD	TR Highway
STREAM	Connecticut River
Borings by	C.A. Leary Co. Date 11-2-33
Drawn by	N.A.E. Date 12-18-33
Traced by	N.A.E. Date 12-18-33
Checked by	
Date	
Sheet	7 of 13 Sheets



SYNOPSIS

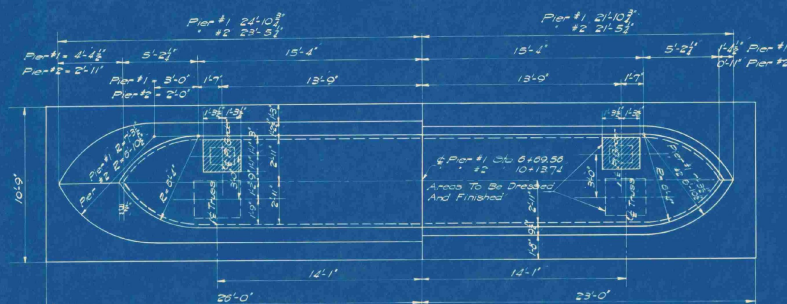


NEW HAMPSHIRE ABUTMENT. SECTION OF NEW HAMPSHIRE ABUTMENT.
SCALE 1"=10'

CONCRETE (CLASS "C")	113 CU. YDS.
REINFORCING STEEL	4850 LBS.
STRUCT. EXCAV.	75 CU. YDS.
RIP RAP CLASS 2.	160 CU. YDS.
COBBLE GUTTER	25 SQ. YDS.

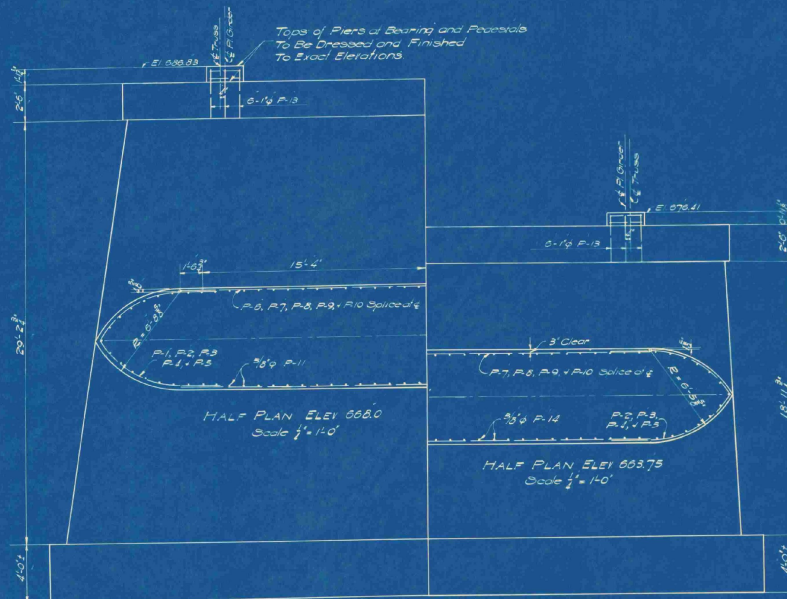
STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT.
TOWN. LITTLETON.
PROJECT. _____
LOCATION LITTLETON-WATERFORD
ROAD T.R. Highway.
STREAM CONNECTICUT RIVER.
DESIGNED BY R.D.F. DATE 1-29-34
DRAWN BY R.D.F. DATE 2-8-34
TRACED BY E.W.G.S. DATE 2-10-34
CHECKED BY M.P.S. DATE 2-10-34
SHEET 8 OF 13 SHEETS

FIG. NO.	DATE	FIG. NO.	DATE	FIG. NO.	DATE	FIG. NO.	DATE
9	N. H.			1994	9		15



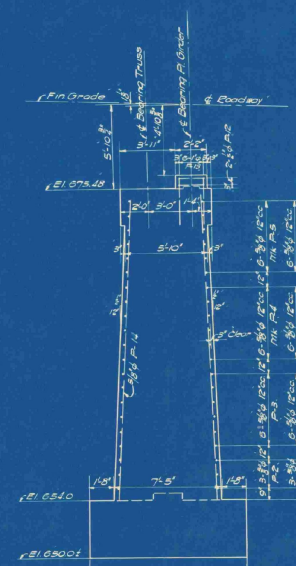
HALF PLAN PIER NO 1
Scale 1/4" = 1'-0"

HALF PLAN PIER NO 2
Scale 1/4" = 1'-0"



HALF ELEVATION PIER NO 1
Scale 1/4" = 1'-0"

HALF ELEVATION PIER NO 2
Scale 1/4" = 1'-0"



SECTION PIER NO 2
Scale 1/4" = 1'-0"

ESTIMATED QUANTITIES	
PIER NO 1	
EXCAVATION	120' CU YDS
CONCRETE CLASS 'B'	414' "
REINFORCING STEEL	6650 LBS
RIP RAP (FOUNDATION PROTECTION)	50' CU YDS

PIER NO 2	
EXCAVATION	135' CU YDS
CONCRETE CLASS 'B'	287' "
REINFORCING STEEL	4120 LBS
RIP RAP (FOUNDATION PROTECTION)	50' CU YDS

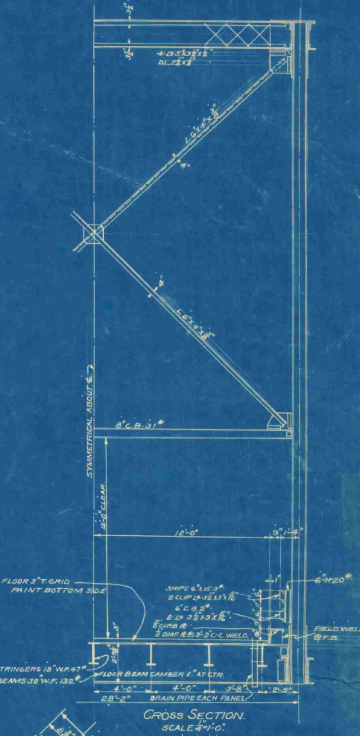
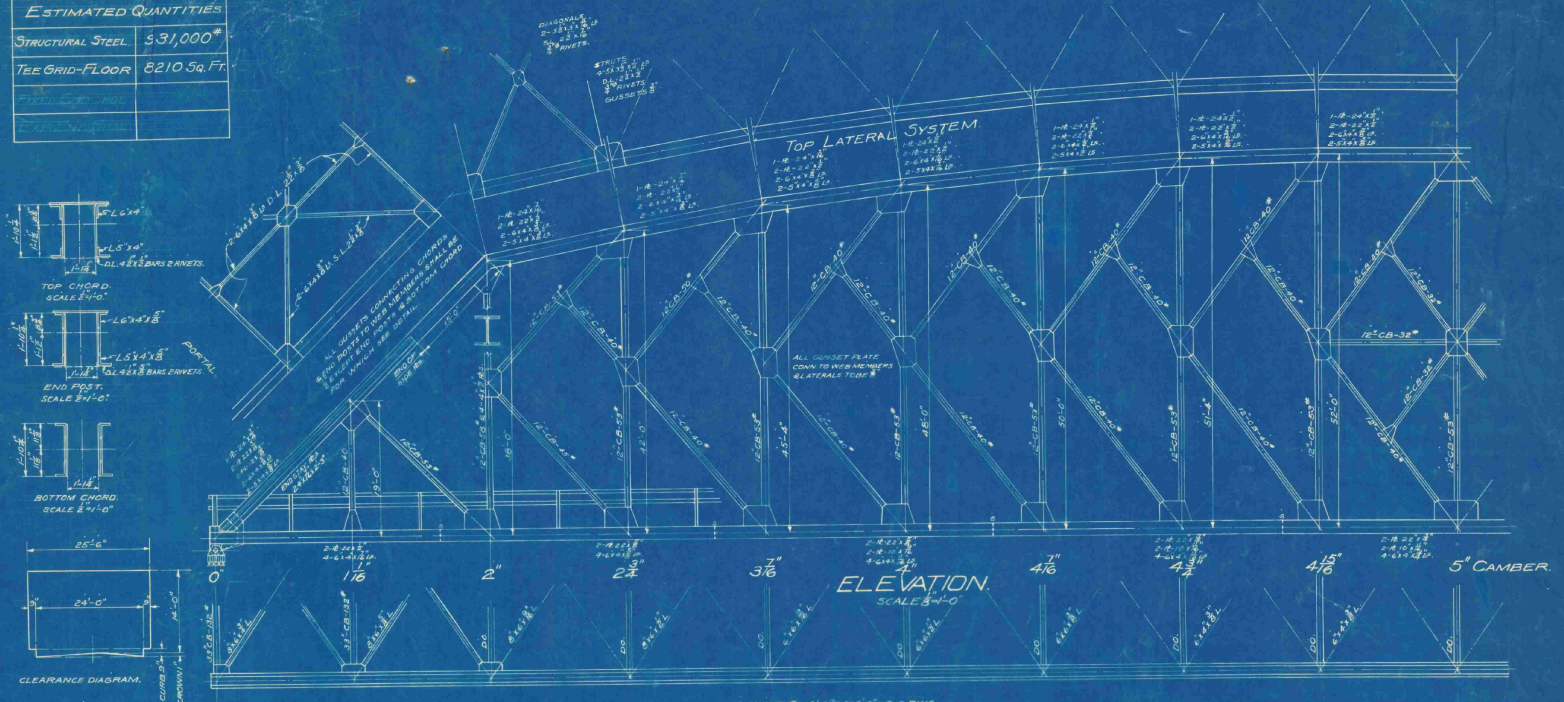
STATE OF NEW HAMPSHIRE HIGHWAY DEPARTMENT	
TOWN	LITTLETON
PROJECT	
LOCATION	
ROAD	LITTLETON-BATELLE
DRAWN BY	C.B.
CHECKED BY	M.R.S.
DATE	2-2-94
SHEET	9 OF 13 SHEETS

NOTE:
Backfill Around Piers With
Riprap For Foundation Protection
Piers To Be Class 'B' (2500#) Conc.
Min. Cement Factor = 1.45

REVISIONS AFTER PROPOSAL	DATE	STATION	FROM	TO
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REV.	DATE	BY	CHK.	APP.	NO.	TOTAL
9	N. H.				10	13

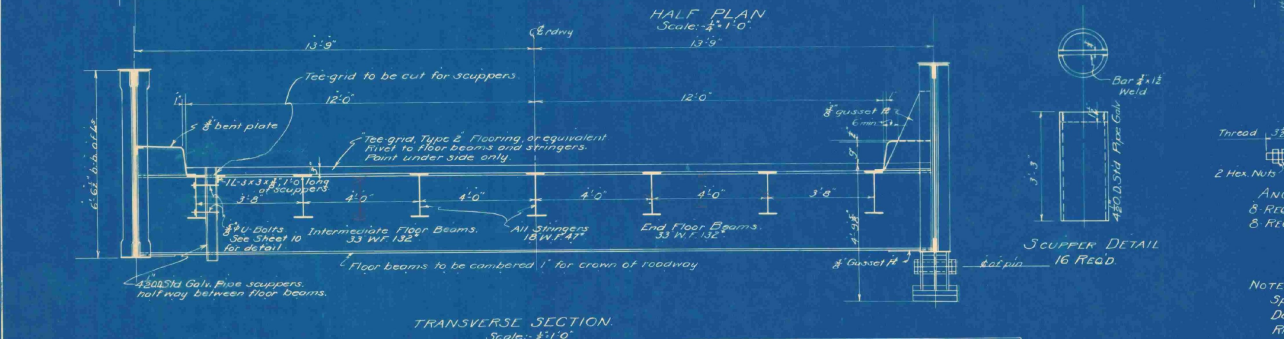
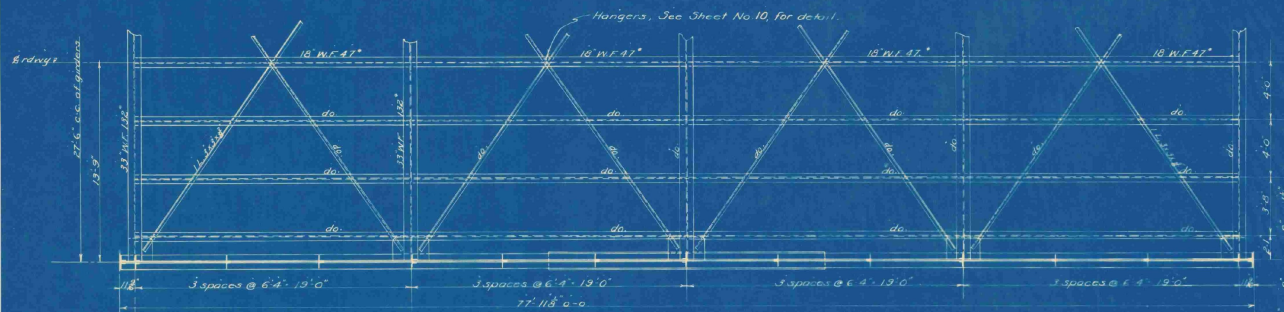
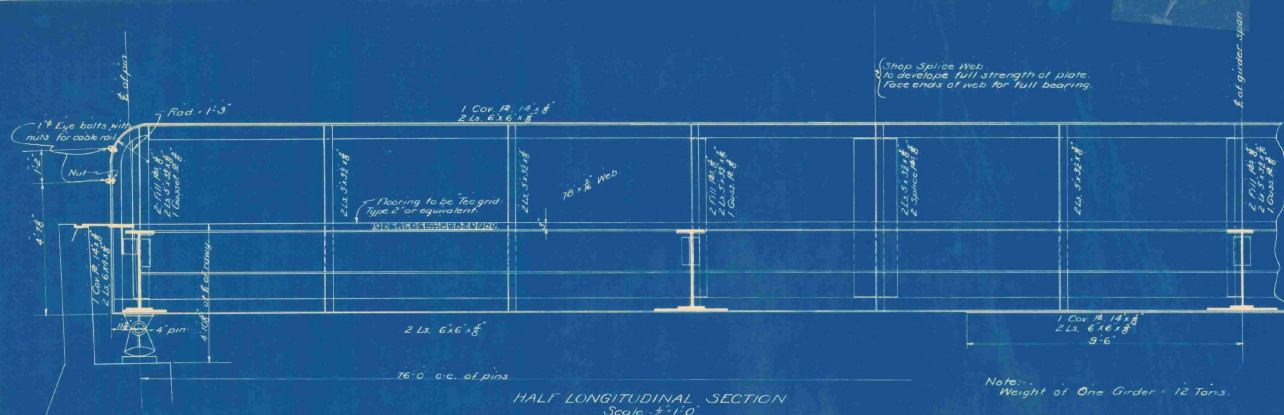
ESTIMATED QUANTITIES	
STRUCTURAL STEEL	531,000*
TEE GRID-FLOOR	8210 Sq. Ft.
PAINT	1000
CONCRETE	1000



REVISIONS	DATE	BY	CHK.	APP.	NO.
1	1933	N. H.			1
2	1933	N. H.			2
3	1933	N. H.			3
4	1933	N. H.			4
5	1933	N. H.			5
6	1933	N. H.			6
7	1933	N. H.			7
8	1933	N. H.			8
9	1933	N. H.			9
10	1933	N. H.			10
11	1933	N. H.			11
12	1933	N. H.			12
13	1933	N. H.			13

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT
TOWN - LITTLETON
PROJECT
LOCATION - LITTLETON-WATERFORD
ROAD - R.R. Highway
STREAM - CONNECTICUT RIVER
DESIGNED BY - STATE - DATE - 2-29-34
DRAWN BY - E.W.G. - DATE - 2-6-34
TRACED BY - R.D.L. - DATE - 2-8-34
CHECKED BY - R.D.L. - DATE - 2-10-34
SHEET 10 OF 13 SHEETS

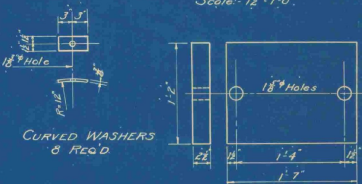
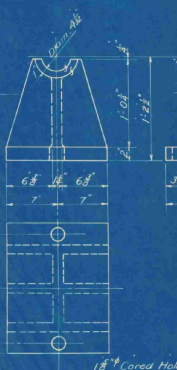
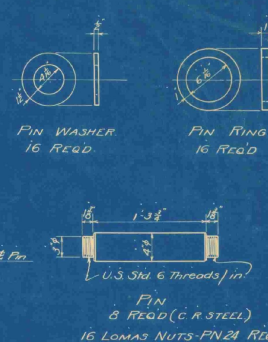
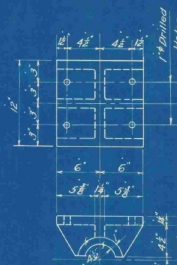
REV.	DATE	BY	CHKD.	DATE	BY	CHKD.	DATE	BY	CHKD.
9	N.H.			1933	11				



Note: All shoes and scouppers are included in the item "Structural Steel."

TABLE OF MOMENTS & SHEARS FOR GIRDER			
	END	2 POINT	4 POINT
MOMENT	0	218,400	1,311,500
SHEAR	170,900	128,200	65,200

Moments in Foot Pounds.
Shears in Pounds.
Design based on 24,000 psi stress.



ESTIMATE OF QUANTITIES	
Structural Steel	218,000 lbs.
Teegrid Floor	36.48 sq. ft.

ANCHOR BOLTS
8 REQ'D - 14" x 1.5" lg. (Fixed)
8 REQ'D - 14" x 1.5" lg. (Expand)

PLATE GIRDER APPROACH SPANS
2 REQUIRED

NOTE:
Specifications, N.H.D. & A.A.S.H.O. 1931 Standard Specifications.
Design Loading - H-15.
Rivets - 8"
Shop Paint: One coat red lead + oil.
Field Paint: One coat approved aluminum paint.
The contractor shall furnish the state with tracings of shop drawings before final payment is made.

STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT
TOWN - LITTLETON
PROJECT -
LOCATION - LITTLETON WATERBURY
ROAD - I.R. HIGHWAY
STREAM - CONNECTICUT RIVER
Designed by - H.E.L. Date - 1-27-34
Drawn by - B.R.A. Date - 2-5-34
Traced by - J.R.A. Date - 2-1-34
Checked by - W.F. Date - 2-1-34
Sheet 11 of 13 Sheets

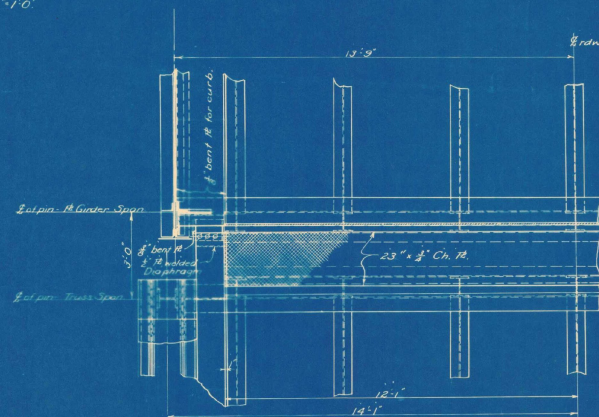
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STATE OF NEW HAMPSHIRE
HIGHWAY DEPARTMENT

TOWN _____ LITTLETON _____
PROJECT _____
LOCATION _____ LITTLETON WATERFORD _____
ROAD _____ T.R. HIGHWAY _____
STREAM _____ CONNECTICUT RIVER _____

Designed by _____ Date _____
Drawn by _____ R.R.K. Date 2-5-34.
Traced by _____ R.R.K. Date 2-9-34.
Checked by _____ E.V. Date 2-10-34.

Sheet 12 of 13 Sheets.



TRAFFIC SIGN SUMMARY SHEET

TRAFFIC SIGN SUMMARY SHEET																													
MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS	NEW AND SALVAGED SIGNS				EXIST. POSTS		NEW SIGN POSTS															REMARKS	SIGN DETAIL				
			"A"	"B"	SALV. SIGN	SALV. T.S.S.	RET.	SALV.	NO. OF POSTS	FLANGED CHANNEL LBS./FT.			TUBULAR ALUMINUM		TUBULAR STEEL				W-SHAPE STEEL		FTG. SIZE		SIGN FRAME		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
										1/2	2.0	3.0	3.0"Ø	4.0"Ø	FOUND- ATION	3"Ø	3.5"Ø	4.0"Ø	5.0"Ø	POST SIZE	WEIGHT	24"					30"		
2+10 RT		48" X 48"	16						1				X																E-155
RAMP A		48" X 48"	16						1				X																E-155
7+55 LT		30" X 30"	6.25						1				X																E-140
9+60 LT		30" X 30"	6.25						1				X																E-145A
11+65 LT		72" X 10"	5						2				X																E-123
		72" X 10"	5																										E-123
12+20 RT		72" X 10"	5						2				X																E-123
		72" X 10"	5																										E-123
		72" X 10"	5																										E-123
		72" X 10"	5																										E-123
13+45 RT						1			2				X																
						1																							
		36" X 48"	12																										52
14+00 LT		2 @ 24" X 12"	4						2				X																E-135
		2 @ 24" X 24"	8																										E-135
		2 @ 21" X 15"	4.38																										E-135
17+10 LT						1			1				X																
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S			SF.	SF.	EA.	SF.																							
																</													

VERMONT AGENCY OF
TRANSPORTATION
PHASE III-INTERSTATE

HANGER 4396

Bridge
19 34
35

Waterford Vt. and Littleton
263

N.H. 19 34
35