Fed. Road Dist. No.	State	USWPFR Proj. No.	Fiscal Year	Sheet No.	Total Sheets
9	Maine	16			

STATE OF MAINE
STATE HIGHWAY COMMISSION

PLAN AND PROFILE

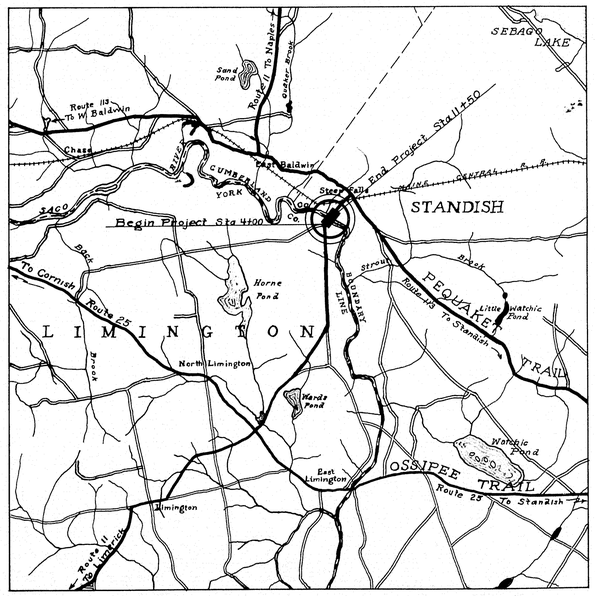
CONVENTIONAL SIGNS

State or National Line		Survey Line	
County Line		Culvert	
Town Line		Drop Inlet	
Unfenced Property		Trolley Pole	
Fence		Power Pole	
Right of Way Line		Tel. Pole	
Traveled Way		Marsh	
Railroad		Trees	
Retaining Wall		Stone Wall	

STEEP FALLS BRIDGE
OVER
SACO RIVER
LIMINGTON & STANDISH
YORK & CUMBERLAND COUNTIES
USWPFR PROJECT NO.16
TOTAL LENGTH 0.142 MILES

INDEX OF SHEETS

Sheet No.	1+2	Survey
Sheet No.	3+4	Steel Details
Sheet No.	5	Floor Details
Sheet No.	6	West Abutment
Sheet No.	7	East Abutment
Sheet No.		



LOCATION MAP
TRACED FROM USGS BUXTON & SEBAGO SHEETS
Scale $\frac{1}{62,500}$

APPROVED:
MAINE STATE HIGHWAY COMMISSION
Paul C. Thurston
CHAIRMAN

[illegible]

[illegible]
CHIEF ENGINEER.

APPROVED:
U. S. BUREAU OF PUBLIC ROADS

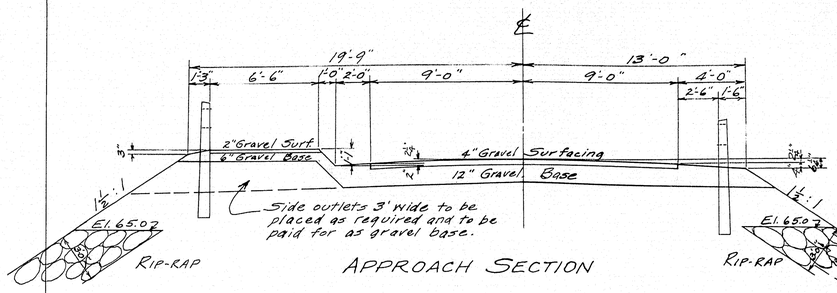
[redacted]
DISTRICT ENGINEER

[redacted]
CHIEF ENGINEER

[redacted]
DIRECTOR.

330-14

0 1 2 3 4 5 INCHES



APPROACH SECTION

Keep roadway ℄ at the correct grade. The transition from bridge section to approach section is to be made in about 25'.

Survey by Blake
Plotted & Traced by W. G. Pratt

Town 16-15
Bridge 3328

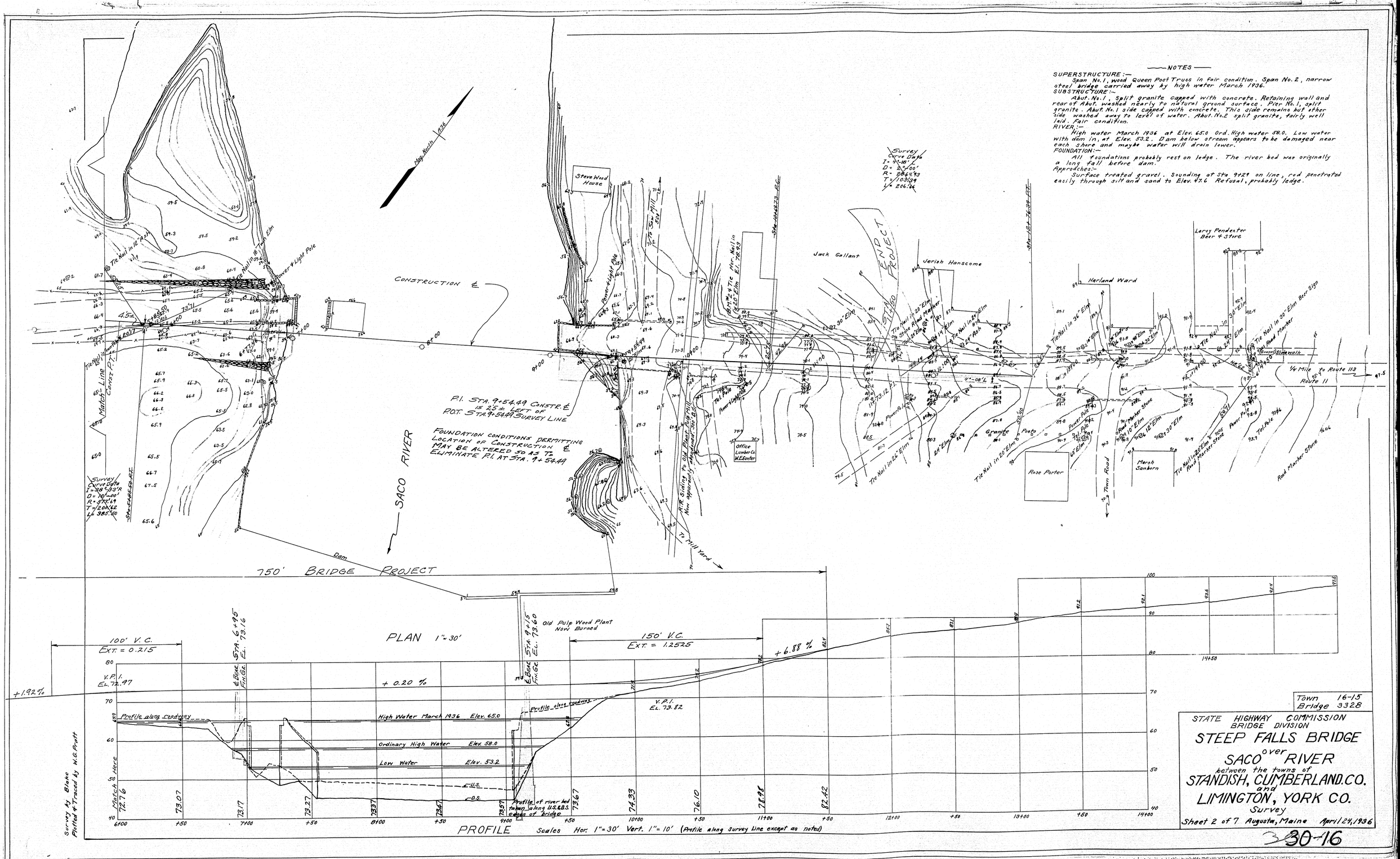
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

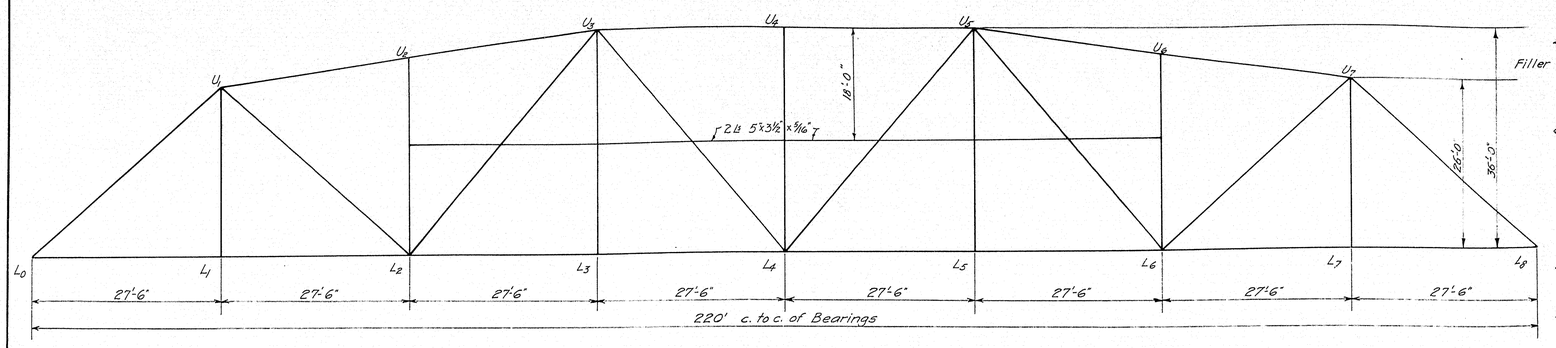
STEEP FALLS BRIDGE
over
SACO RIVER
between the towns of
STANDISH, CUMBERLAND CO.
and
LIMINGTON, YORK CO.
Survey

Sheet 1 of 7 Augusta, Maine April 24, 193

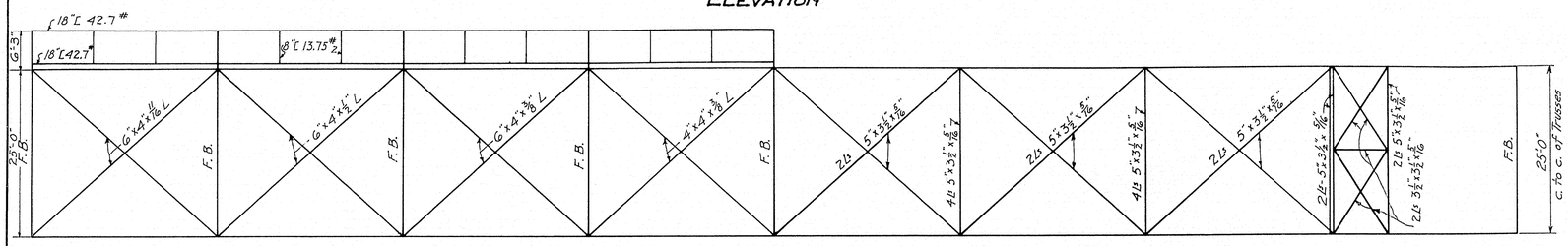
30-30-15

0 1 2 3 4 5 INCHES


NOTES
SUPERSTRUCTURE:—
Span No. 1, wood Queen Post Truss in fair condition. Span No. 2, narrow steel bridge carried away by high water March 1936.
SUBSTRUCTURE:—
Abut. No. 1. Split granite capped with concrete. Retaining wall and rear of Abut. washed nearly to natural ground surface. Pier No. 1, split granite. Abut. No. 1 side capped with concrete. This side remains but other side washed away to level of water. Abut. No. 2 split granite, fairly well laid. Fair condition.
RIVER:—
High water March 1936 at Elev. 65.0 Ord. High water 58.0. Low water with dam in, at Elev. 53.2. Dam below stream appears to be damaged near each shore and maybe water will drain lower.
FOUNDATION:—
All foundations probably rest on ledge. The river bed was originally a long fall before dam.
Approaches:—
Surface treated gravel. Sounding at Sta 9+29 on line, rod penetrated easily through silt and sand to Elev. 47.6 Refusal, probably ledge.
Map North
Steve Ward House
CONSTRUCTION ℄
P.I. STA. 9+54.49 CONSTR. ℄ IS 2.5± LEFT OF P.O.T. STA. 9+54.49 SURVEY LINE
FOUNDATION CONDITIONS PERMITTING LOCATION OF CONSTRUCTION ℄ MAY BE ALTERED SO AS TO ELIMINATE P.I. AT STA. 9+54.49
SACO RIVER
Dam
750' BRIDGE PROJECT
Jack Gallant
Jerish Hanscome
Harland Ward
Larey Pendexter Beer & Store
Office Lumber Co. W.E. Cutler
Rose Porter
Marsh Sanborn
Granite Posts
Town Road
To Mill Yard
Route 11
1/4 Mile to Route 113
Road Marker Stone
Tel. Pole
Power & Light Pole
Tie Nail in 24" Elm
Tie Nail in 30" Elm Beer Sign
Survey Curve Data
I = 38°33'R
D = 10°00'
R = 577.49
T = 200.62
L = 385.50
Survey Curve Data
I = 41°42'
D = 2°00'
R = 286.93
T = 103.39
L = 206.66
Match Line Const. P.I.
Match Here
PLAN 1" = 30'
100' V.C.
EXT. = 0.215
+1.92%
V.P.I. El. 72.97
+0.20 %
150' V.C.
EXT. = 1.2525
+6.88 %
V.P.I. El. 73.82
Old Pulp Wood Plant Now Burned
Profile along roadway
High Water March 1936 Elev. 65.0
Ordinary High Water Elev. 58.0
Low Water Elev. 53.2
U.S.
D.S.
Profile of river bed taken along U.S. & D.S. edge of bridge
72.76
73.07
73.17
73.27
73.37
73.47
73.57
73.67
74.33
76.10
78.98
82.42
PROFILE Scales Hor. 1" = 30' Vert. 1" = 10' (Profile along survey line except as noted)
Survey by Blake
Plotted & Traced by W.B. Pratt
Town 16-15
Bridge 3328
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
STEEP FALLS BRIDGE
SACO over RIVER
between the towns of
STANDISH, CUMBERLAND CO.
and
LIMINGTON, YORK CO.
Survey
Sheet 2 of 7 Augusta, Maine April 24, 1936
330-16
0 1 2 3 4 5 INCHES



ELEVATION



HALF PLAN - BOTTOM LATERALS

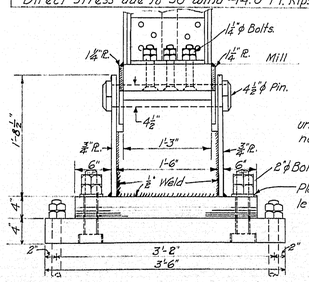
HALF PLAN - TOP LATERALS

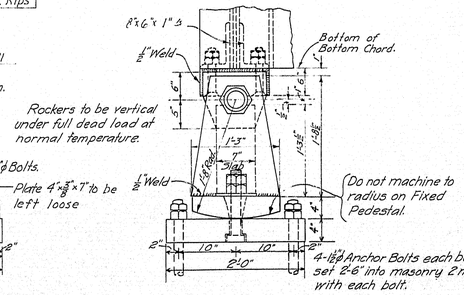
Scale 1" = 10'

Member	Sidewalk Truss Stresses in Kips Dead	Live Roadway	Live Sidewalk	Impact	Total	Section	Area Gross	Area Net	Roadway Truss Stresses Dead	Live Roadway	Impact	Total	Section	Area Gross	Area Net
U_1-U_3	-450	-105.1	-45.3	-15.3	-615.7	2-18" [s 51.9# 1 Cov. Pl. 24"x½"	42.4		-348	-105.1	-15.3	-468.4	2-18" [s 45.8# Cov. Pl. 24"x½"	38.8	
U_3-U_5	-509	-119.2	-51.5	-17.3	-697.0	2-18" [s 51.9# 1 Cov. Pl. 24"x½"	46.0		-394	-119.2	-17.3	-530.5	2-18" [s 45.8# Cov. Pl. 24"x½"	38.8	
L_0-L_2	+309	+72.2	+31.2	+10.5	+422.9	2-18" [ ] 51.9#	30.4	24.1	+239	+72.2	+10.5	+321.7	2-18 [ ] 42.7#	25.0	19.8
L_2-L_4	+478	+111.7	+48.5	+16.2	+654.4	2-18" [ ] 51.9 2 Pl. 15"x3/16"	47.3	37.6	+370	+111.7	+16.2	+497.9	2-18" [ ] 42.7# 2 Pl. 15"x3/16"	36.2	28.8
L_0-U_1	-424	-99.2	-42.8	-14.4	*-580.4	2-18" [s 51.9# Cov. Pl. 24"x3/8"	49.0		-328	-99.2	-14.4	*-441.6	2-18" [s 51.9# Cov. Pl. 24"x½"	42.4	
U_1-L_2	+186	+56.2	+23.2	+9.8	+270.4	14" WF 61#	17.9	15.4	+143.7	+56.9	+9.8	+210.4	14" WF 61#	17.9	15.4
L_2-U_3	-55.1	-36.9	-15.3	-7.1	-115.0	14" WF 61#	17.9		-43.1	-36.9	-7.1	-87.1	14" WF 61#	17.9	
U_3-L_4	+33.4 +36.7	+38.7 -25.4	+16.2 -11.2	+8.3 -6.2	+115.9 -6.1	14" WF 61#	17.9	15.4	+49.3 +28.4	+38.7 -25.4	+8.3 -6.2	+87.5 -3.2	14" WF 61#	17.9	15.4
U_1-L_1, U_3-L_3	+72.8	+31.3	+14.7	+8.7	+127.5	4 Ls 5"x3½"x3/8"	12.2	9.2	+54.7	+31.3	+8.7	+94.7	4 Ls 5"x3½"x3/8"	12.2	9.2
U_2-L_2, U_4-L_4	-10.6	—	—	—	-10.6	do	12.2		-9.8	—	—	-9.8	do	12.2	
Gross Reaction	333.6	84.9	33.3	12.3	464.1										

* Moment due to 30# wind = 93.5 Ft. Kips

Direct Stress due to 30# wind = -14.0 Ft. Kips





BEARING PEDESTALS

Scale 1" = 1'-0"

STRINGERS

Exterior D.L.M. 77,500 Ft. lbs.
L.L.M 83,400 " "
I. 29,300 " "
196,200 = 21⅛" WF 68#

Interior D.L.M. 74,200 Ft. lbs.
L.L.M. 110,000 " "
I. 36,100 " "
220,300 = 21¼" WF 73#

FLOOR BEAMS

D.L.M. 289,000 Ft. lbs.
L.L.M. 213,500 " "
I. 71,300 " "
573,800 = 30¼" WF 132#

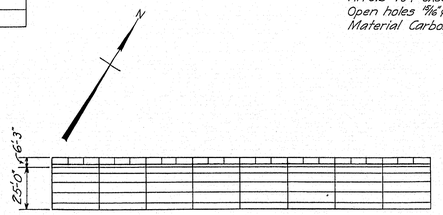
LIVE LOADS

Roadway: Uniform; 562 lbs. per ft. per truss.
Concentrated; 13,830 lbs. for chords, and End Post.
22,300 lbs for diagonals.

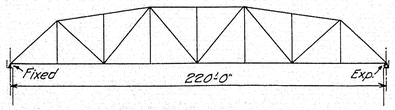
Sidewalk: $P = (40 + \frac{3000}{L})(\frac{55-W}{50})$

P = load in lbs. per sq. ft.
L = loaded length in ft.
W = width of sidewalk in ft.
for L = 220 ft., P = 53.7 lbs. per sq. ft.

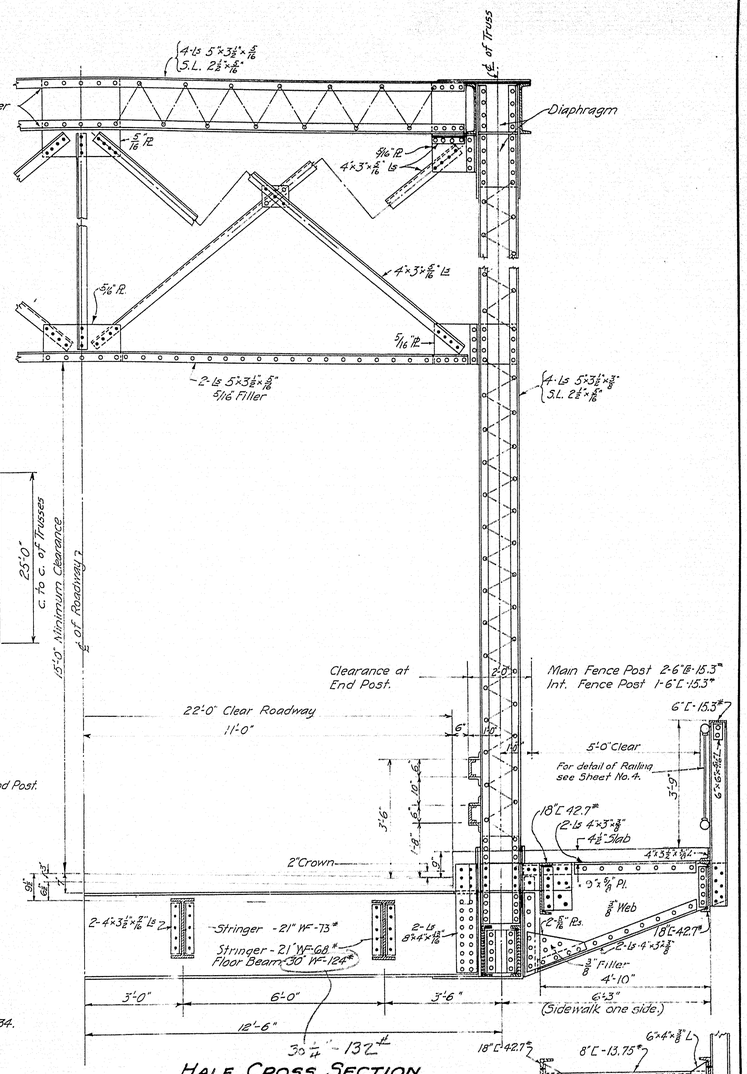
Notes:
All details shall be made in accordance with Maine Highway Commission Specifications.
Loading H-15.
Rivets ⅞" ϕ except as noted.
Open holes 9/16" ϕ except as noted.
Material Carbon Steel A.S.T.M. Spec. A7-34.



GENERAL PLAN

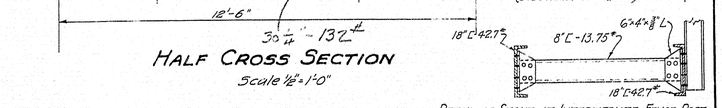


ELEVATION



HALF CROSS SECTION

Scale ½" = 1'-0"



DETAIL OF STRUT AT INTERMEDIATE FENCE POST

Town 16-15
Bridge 3328

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

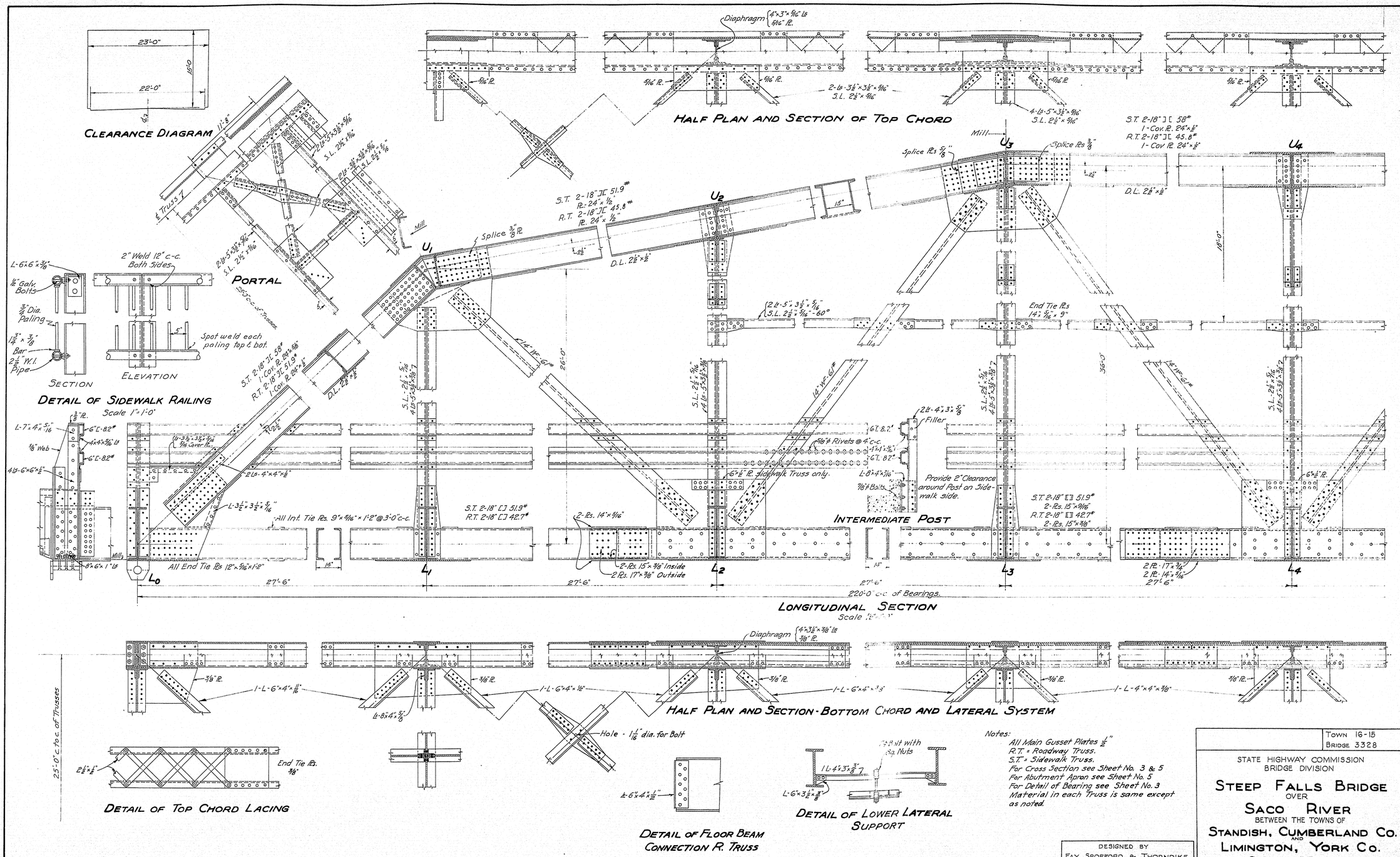
STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.
STEEL DETAILS

Sheet 3 of 7 Sheets — Augusta, Me. — July 1936

DESIGNED BY
FAY, SPOFFORD & THORNDIKE
ENGINEERS

30-30-17

0 1 2 3 4 5 INCHES



Notes:

All Main Gusset Plates $\frac{1}{2}$"
R.T. = Roadway Truss.
S.T. = Sidewalk Truss.
For Cross Section see Sheet No. 3 & 5
For Abutment Apron see Sheet No. 5
For Detail of Bearing see Sheet No. 3
Material in each Truss is same except as noted.

DESIGNED BY
FAY, SPOFFORD & THORNDIKE
ENGINEERS

TOWN 16-15
BRIDGE 3328

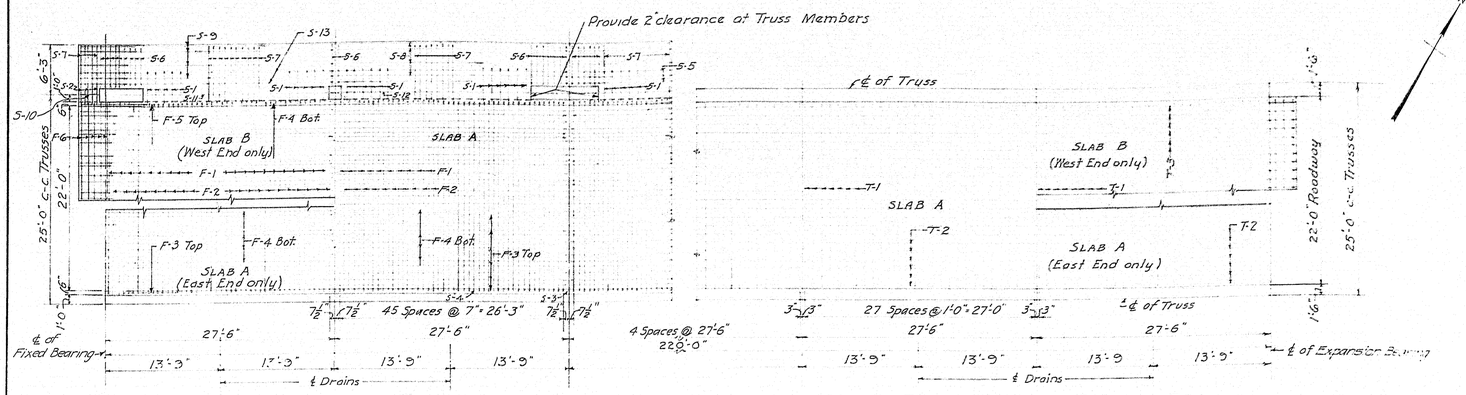
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.

STEEL DETAILS

SHEET 4 OF 7 SHEETS AUGUSTA, ME. JULY 1936

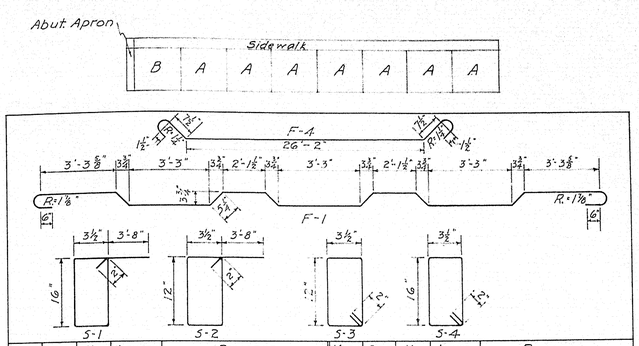
330-18



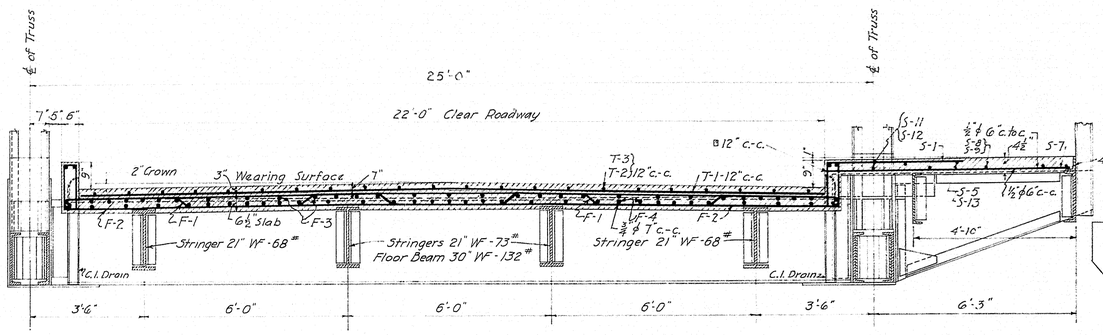
HALF PLAN SLAB STEEL

HALF PLAN WEARING SURFACE STEEL

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

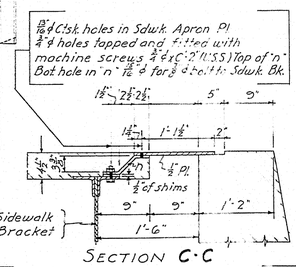


Mark	Size	No.	Length	Remarks	Mark	Size	No.	Length	Remarks
F-1	3/4" ϕ	184	25'-3"	Slab A & B	S-1	1/2" ϕ	18	7'-2"	Top of Curb
F-2	3/4" ϕ	368	22'-8"	Slab A & B	S-2	1/2" ϕ	4	6'-6"	Top of Curb
F-3	5/8" ϕ	217	27'-2"	Slab A Top	S-3	1/2" ϕ	32	3'-0"	Curb
F-4	5/8" ϕ	264	28'-4"	Slab A & B Bot.	S-4	1/2" ϕ	240	3'-8"	Curb
F-5	5/8" ϕ	31	30'-0"	Slab B & Abut. Apron	S-5	1/2" ϕ	12	26'-2"	Top of Sidewalk
F-6	5/8" ϕ	5	22'-8"	Abut. Apron	S-6	1/2" ϕ	10	5'-4"	Bot. of Sidewalk
T-1	3/8" ϕ	227	21'-10"	Slab A & B Surface	S-7	1/2" ϕ	354	1'-4"	Bot. of Sidewalk
T-2	3/8" ϕ	154	27'-2"	Slab A Surface	S-8	1/2" ϕ	56	27'-2"	Curbs & Sidewalk
T-3	3/8" ϕ	22	30'-0"	Slab B Surface	S-9	1/2" ϕ	8	29'-10"	Curbs & Sidewalk
					S-10	1/2" ϕ	2	2'-5"	Sidewalk
					S-11	1/2" ϕ	2	21'-10"	Sidewalk
					S-12	1/2" ϕ	6	21'-11"	Sidewalk
					S-13	1/2" ϕ	4	29'-10"	Sidewalk



CROSS SECTION

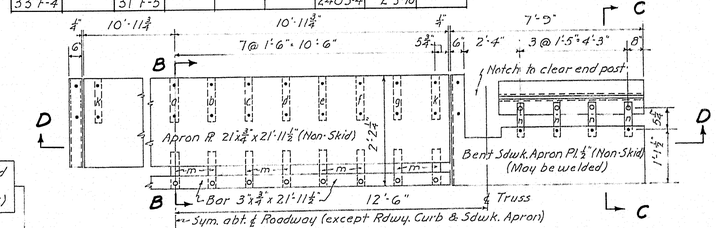
Scale: $\frac{1}{2}$" = 1'-0"



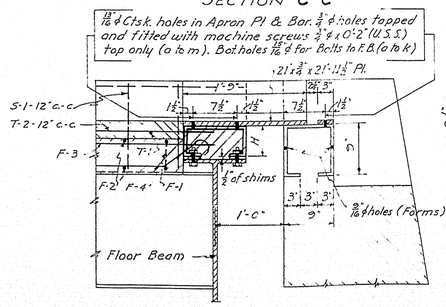
SECTION C-C

Reinforcing Steel Location									
Panel A		Panel B				Sidewalk			
23 F-1	28 T-1	23 F-1	5 F-6	31 T-1	12 S-5	184 S-1	354 S-7	4 S-13	
46 F-2	22 T-2	46 F-2		22 T-3	70 S-6	4 S-2	56 S-8	2 S-11	
31 F-3		33 F-4				32 S-3	8 S-9	6 S-12	
33 F-4		31 F-5				240 S-4	2 S-10		

Notes:-
All Reinforcing Steel to be plain bars.
Structural Grade.
All dimensions to center line of bars.



SECTION D-D

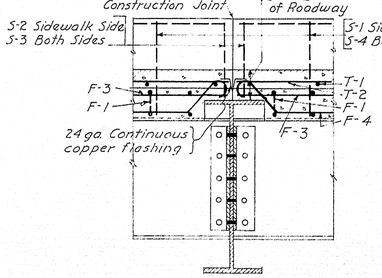


SECTION B-B

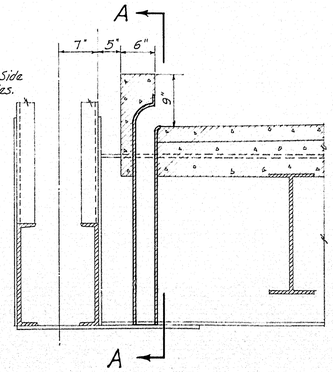
Mark	H	No. Req'd.
a	6"	1
b	5¾"	2
c	5¾"	2
d	5¾"	2
e	5"	2
f	4⅞"	2
g	4⅞"	2
k	4"	2
m	9"	15
n	3⅞"	4

Straps a to k inc. Lugs m & n } Bent Bars 3" x ½"

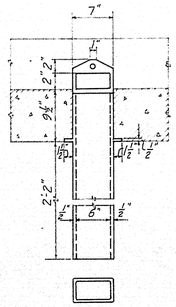
DETAIL OF EXPANSION JOINT AND EXPANSION APRON PLATE



SLAB AND CURB DETAIL AT INTERMEDIATE FLOOR BEAMS



DETAIL OF CAST IRON DRAIN 16 REQUIRED



SECTION A-A

DESIGNED BY
FAY, SPOFFORD & THORNDIKE
ENGINEERS

Town 16-15
Bridge 3328

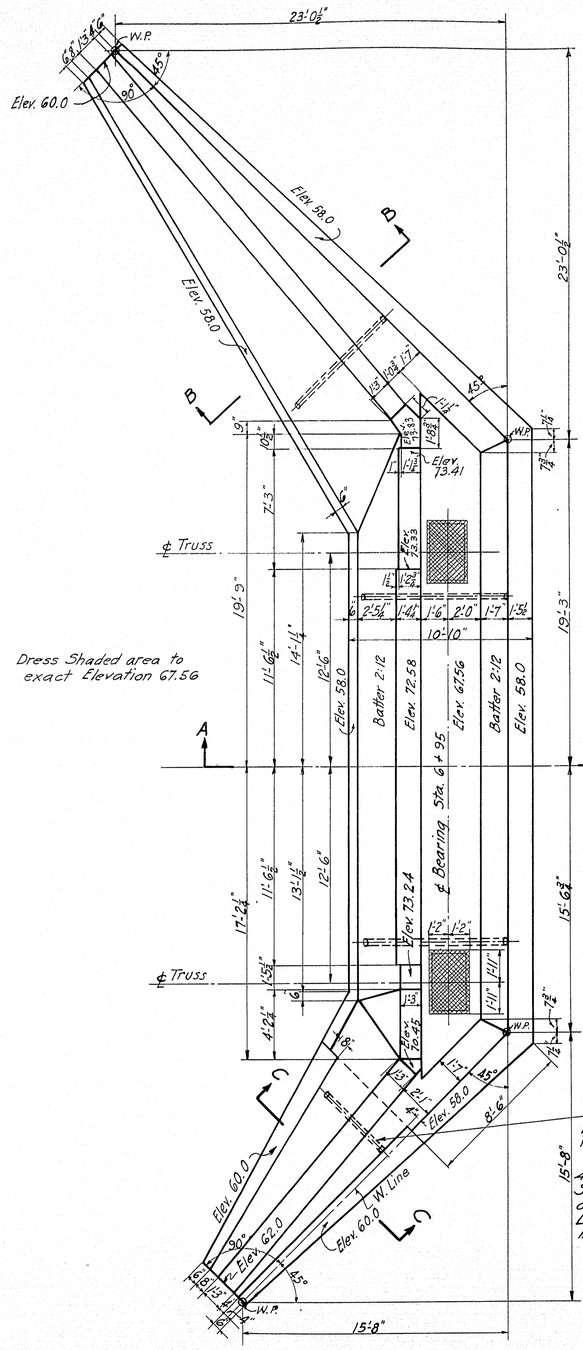
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.

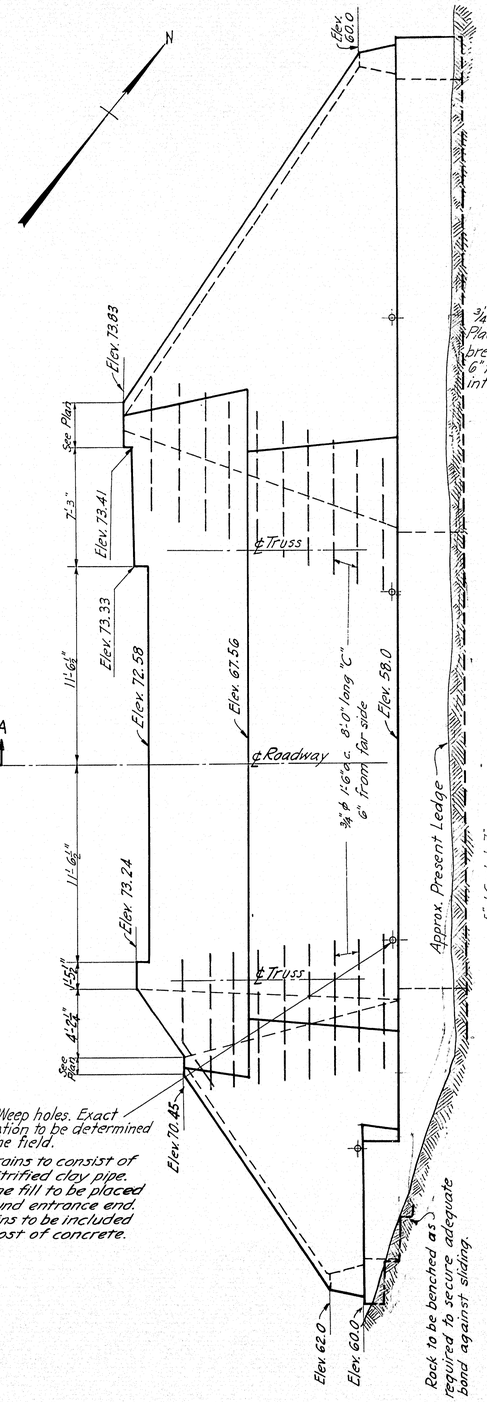
FLOOR DETAILS

SHEET 5 OF 7 SHEETS — AUGUSTA, ME. JULY 1936

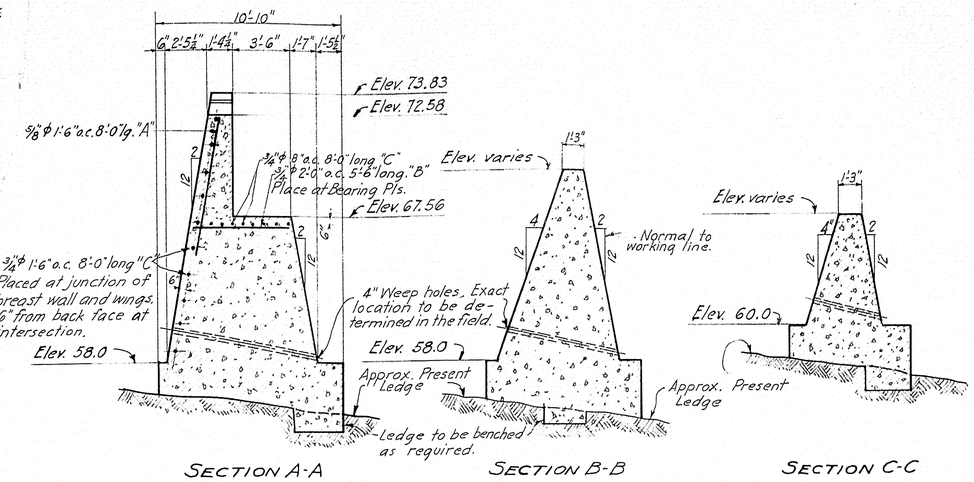
3-030-19



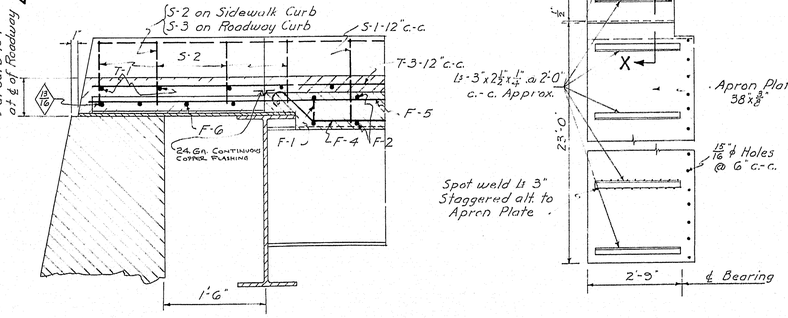
PLAN
Scale ¼" = 1'-0"



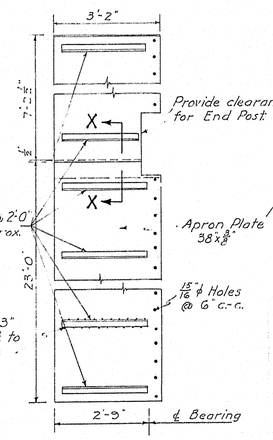
EAST ELEVATION
SCALE: 1" = 1'-0"



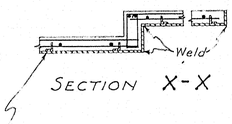
SECTION A-A
SECTION B-B
SECTION C-C



DETAIL OF APRON AT WEST ABUTMENT AND PLAN OF APRON PLATE
Scale 1" = 1'-0"



Scale ½" = 1'-0"



SECTION X-X

CONCRETE CLASSIFICATIONS

Rdwy. and Sdwk. Slab	Class A
Abutments	Class C
Rdwy. Wearing Surface	Class Y
Loading	H 15

SCHEDULE OF REINFORCING STEEL

Mark	Size	No.	Length	Remarks
A	⅝"ϕ	24	8'-0"	All reinforcing steel to be plain bars, structural grade.
B	¾"ϕ	8	5'-6"	
C	¾"ϕ	35	8'-0"	

Town 16-15
Bridge 3328

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.
WEST ABUTMENT

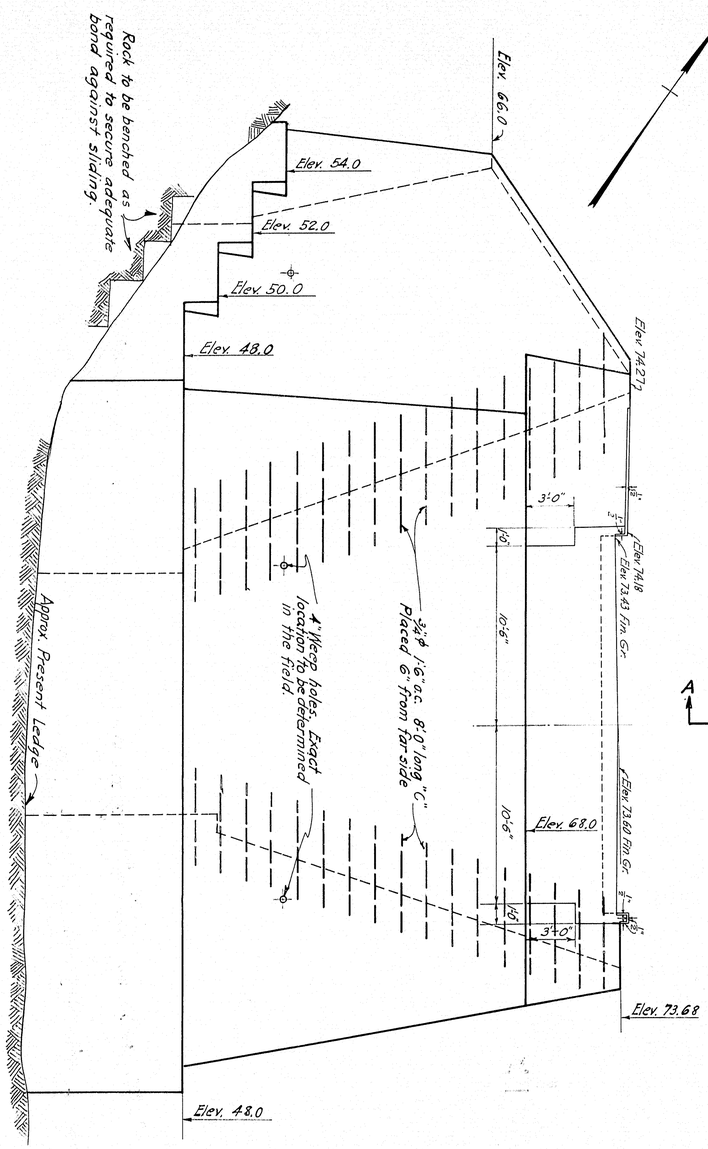
Sheet 6 of 7 Sheets — Augusta, Me. July 1936

DESIGNED BY
FAY, SPOFFORD & THORNDIKE
ENGINEERS

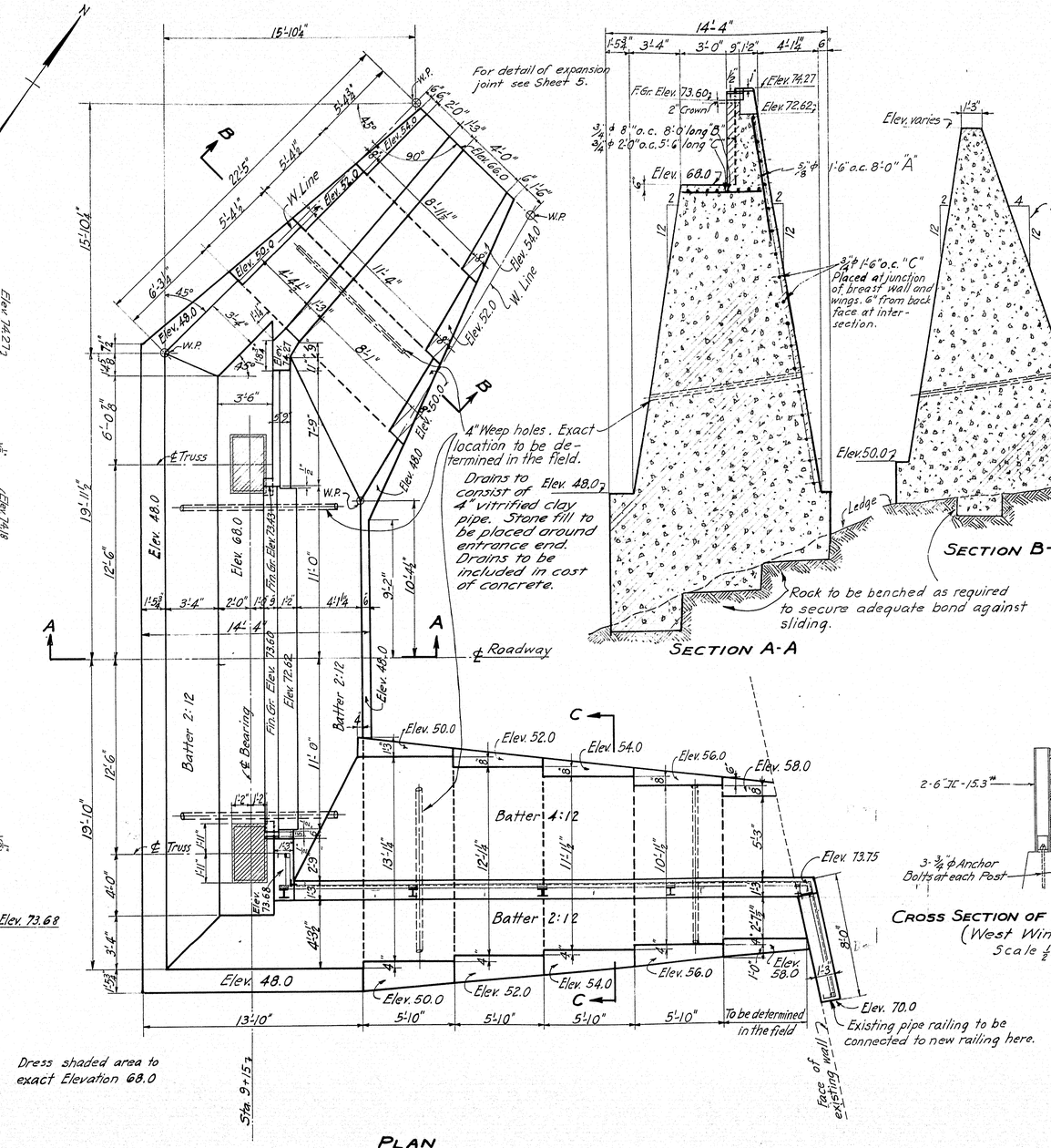
Construction Engineer
Jan. 12, 1938
F.E.W.

30-20

0 1 2 3 4 5 INCHES

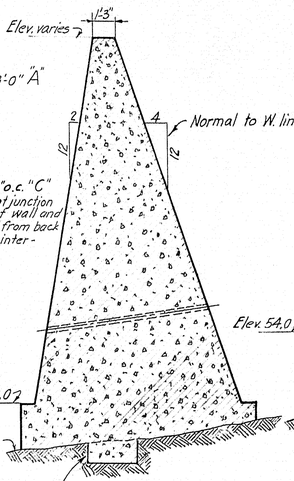


WEST ELEVATION

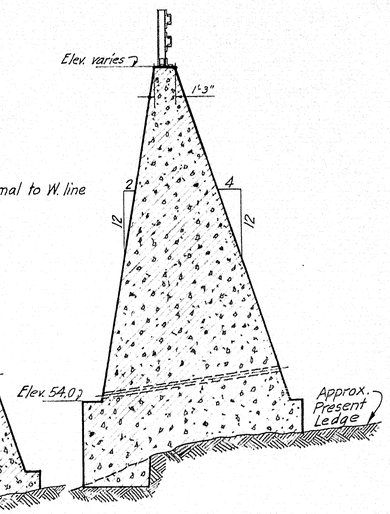


PLAN
Scale: 1/4" = 1'-0"

SECTION A-A



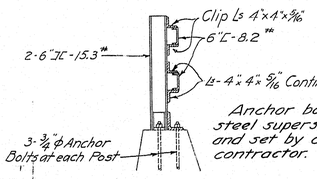
SECTION B-B



SECTION C-C

SCHEDULE OF REINFORCING STEEL

MARK	SIZE	NO.	LENGTH	REMARKS
A	5/8" ϕ	23	8'-0"	All Reinforcing Steel to be plain bars, Structural Grade.
B	3/4" ϕ	8	5'-6"	
C	3/4" ϕ	50	8'-0"	



Anchor bolts to be furnished by steel superstructure contractor and set by concrete portion contractor.

CROSS SECTION OF RAILING ON ABUT.
(West Wing only)
Scale 1/2" = 1'-0"

DESIGNED BY
FAY, SPOFFORD & THORNDIKE
ENGINEERS

TOWN 16-15
BRIDGE 3328

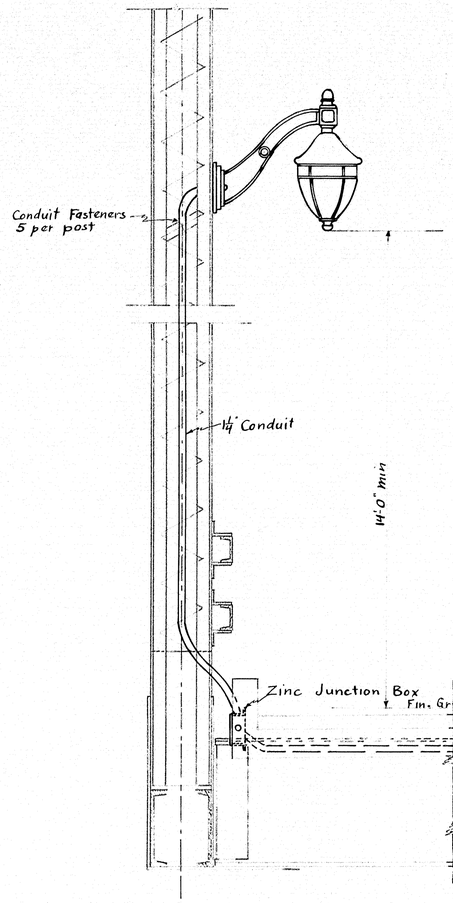
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.
EAST ABUTMENT

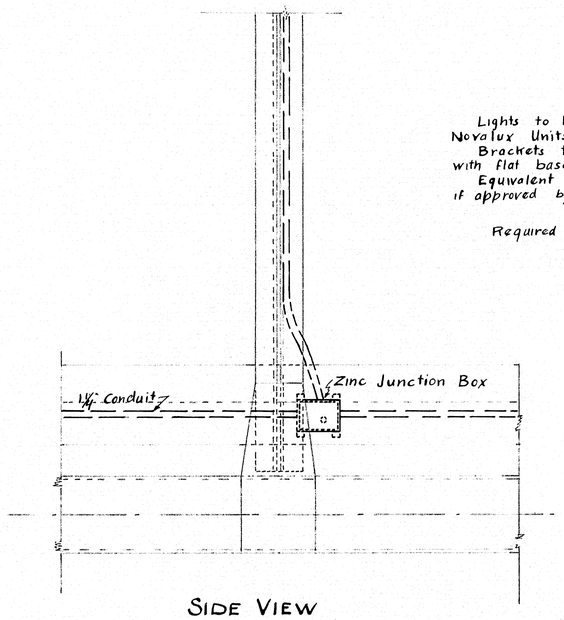
SHEET 7 OF 7 SHEETS AUGUSTA, ME. JULY 1936

30-21

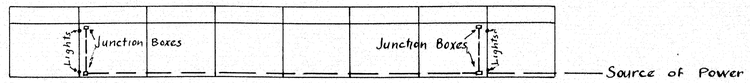
0 1 2 3 4 5 INCHES



TRANSVERSE SECTION



SIDE VIEW



CONDUIT PLAN

All conduit 1¼"

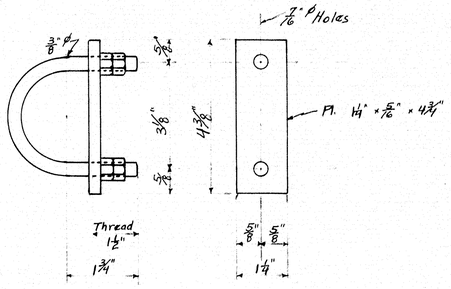
NOTES

Lights to be General Electric form 25B Novalux Units with Dome Refractors.

Brackets to be King Company design K-1241 with flat base.

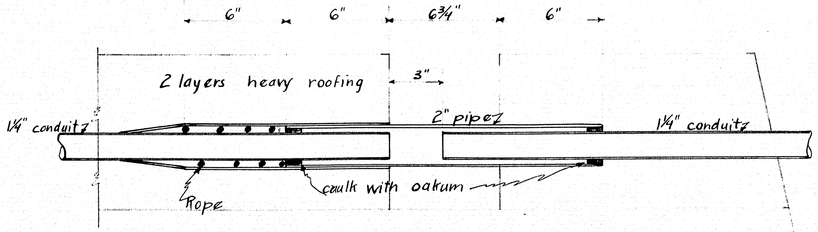
Equivalent lighting details may be substituted if approved by the Engineer.

Required 4 Junction Boxes
4 Brackets
4 Light Units
300 l.f. conduit



CONDUIT FASTENERS

20 Required



SECTION CONDUIT EXPANSION SLEEVE

1 Required

TOWN 16-15
BRIDGE 3328

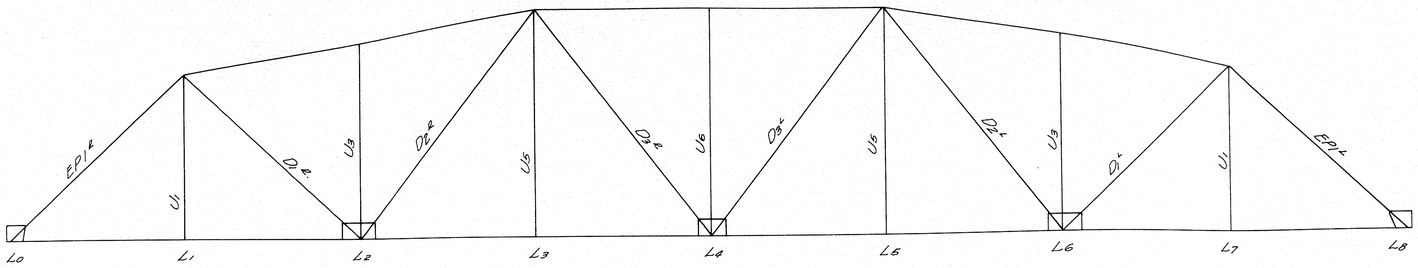
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.
LIGHT DETAILS

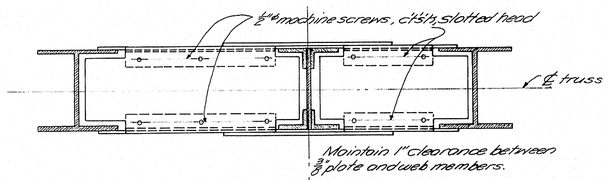
SHEET OF SHEETS AUGUSTA, ME. MAR. 1937

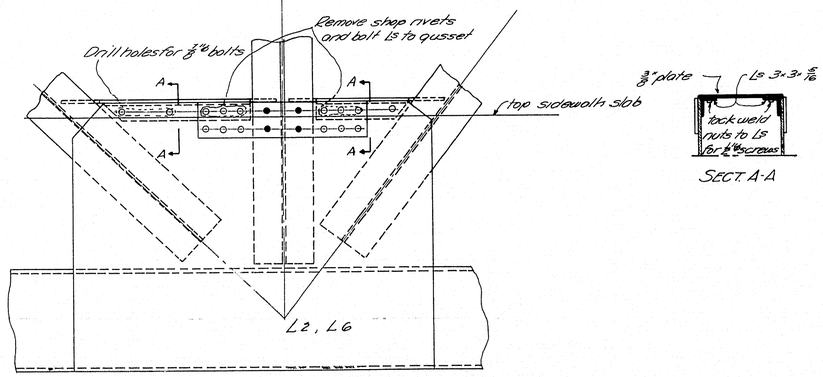
30-30-22

0 1 2 3 4 5 INCHES

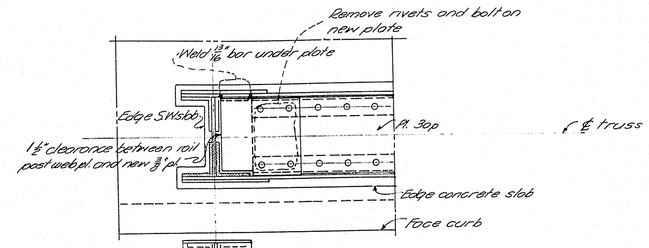


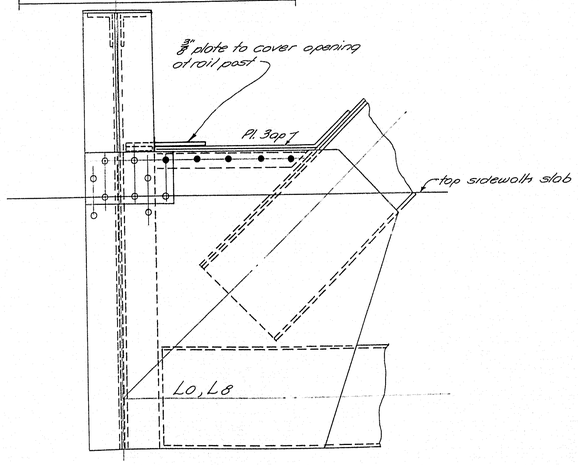
TRUSS No 1 (SIDEWALK)





Use similar detail at L4





Town	16-15
Bridge	3328

State Highway Commission
Bridge Division

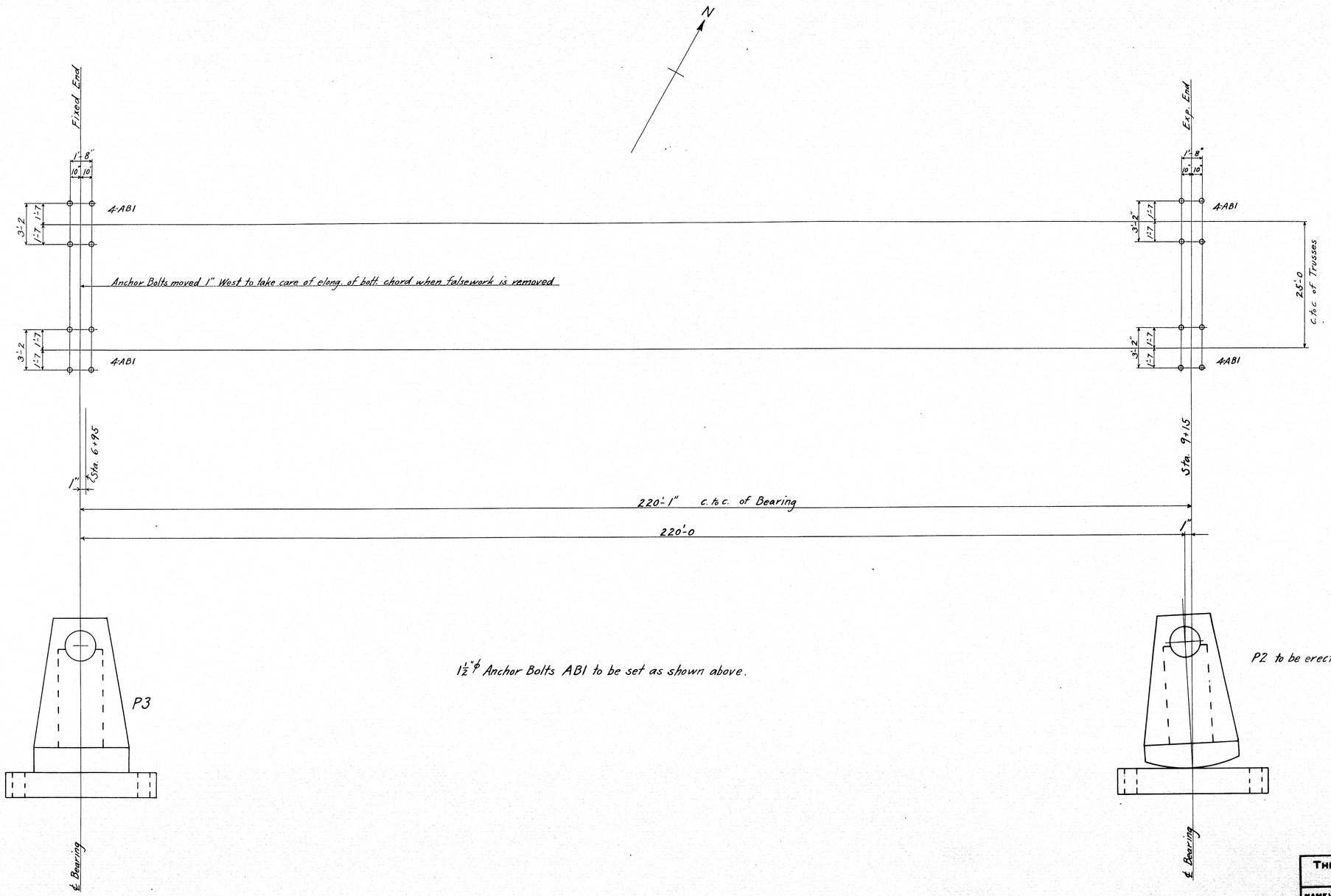
STEEP FALLS BRIDGE
over
SACO RIVER
between the towns of
STANDISH - CUMBERLAND Co.
LIMINGTON - YORK Co.

Augusta, Me. April 1937

30-23

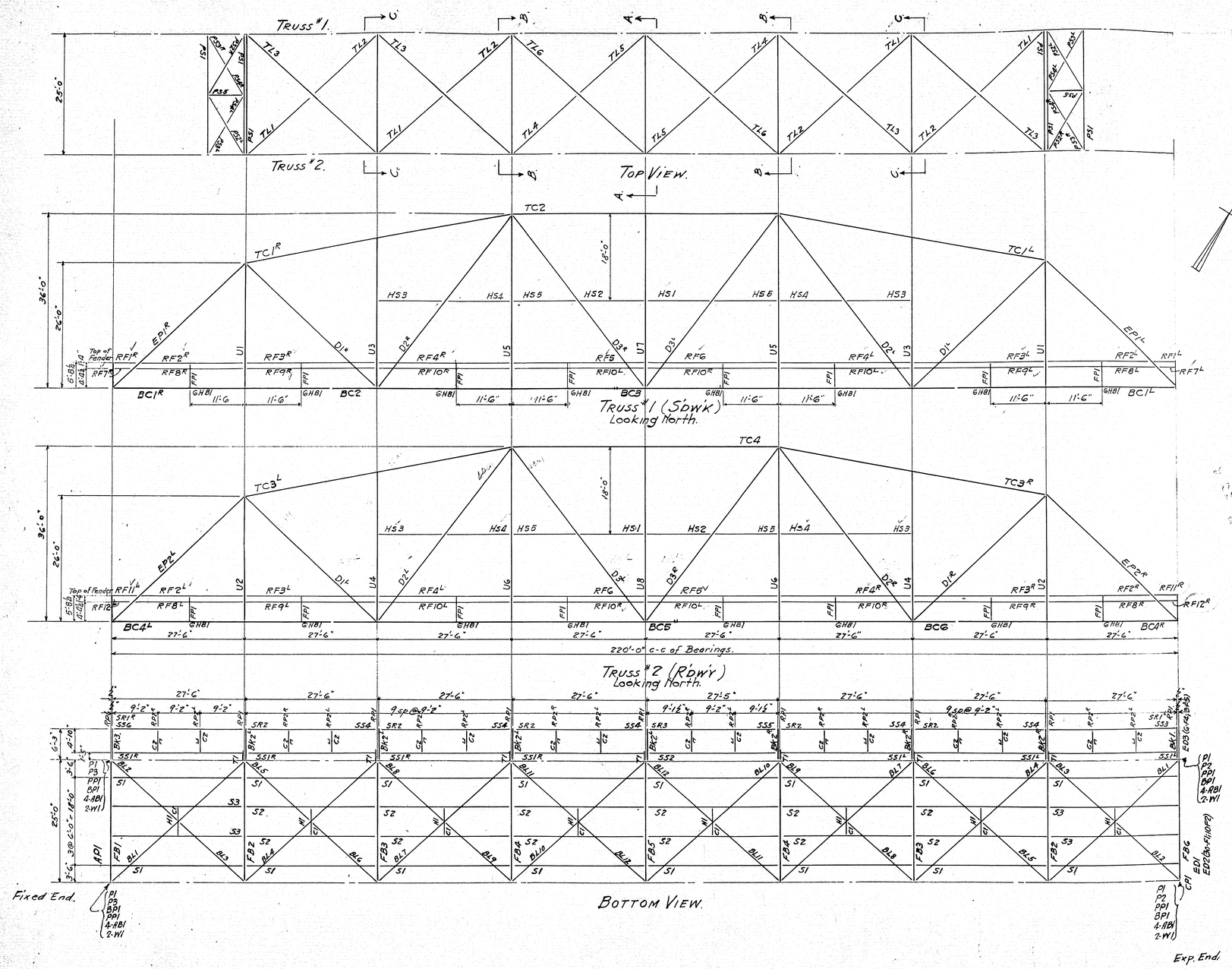
Plan E.B.
Traced W.H.B

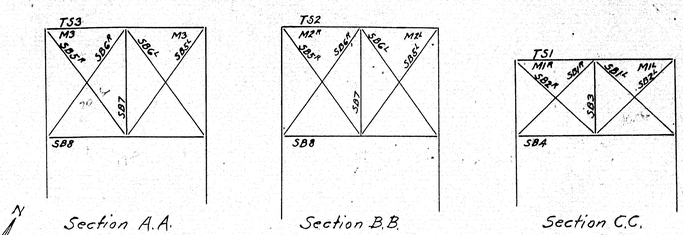
0 1 2 3 4 5 INCHES



THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River between Standish Me. + Limington Me.
DETAILS OF Setting of Anchor Bolts + Pedestals
RIVETS ..... EX. NOTED. DRAWN BY EHS
HOLES ..... EX. NOTED. CHE'K'D BY .....
SCALE ..... DATE 11/6/36 LIST PAGE .....
JOB 6176 SH. E1





Notes:

Specifications:- State of Maine for Steel Highway Bridges 1936.

All main material forming parts of a member composed of not more than 5 thicknesses of metal may be punched $\frac{1}{16}$" larger than the normal diameter of the rivets whenever the thickness of the metal is not greater than $\frac{3}{4}$". When there are more than 5 thicknesses or when any of the main material is thicker than $\frac{3}{4}$" the holes shall be subpunched and reamed after assembly except that when the metal is thicker than the diameter of the rivet the holes shall be drilled.

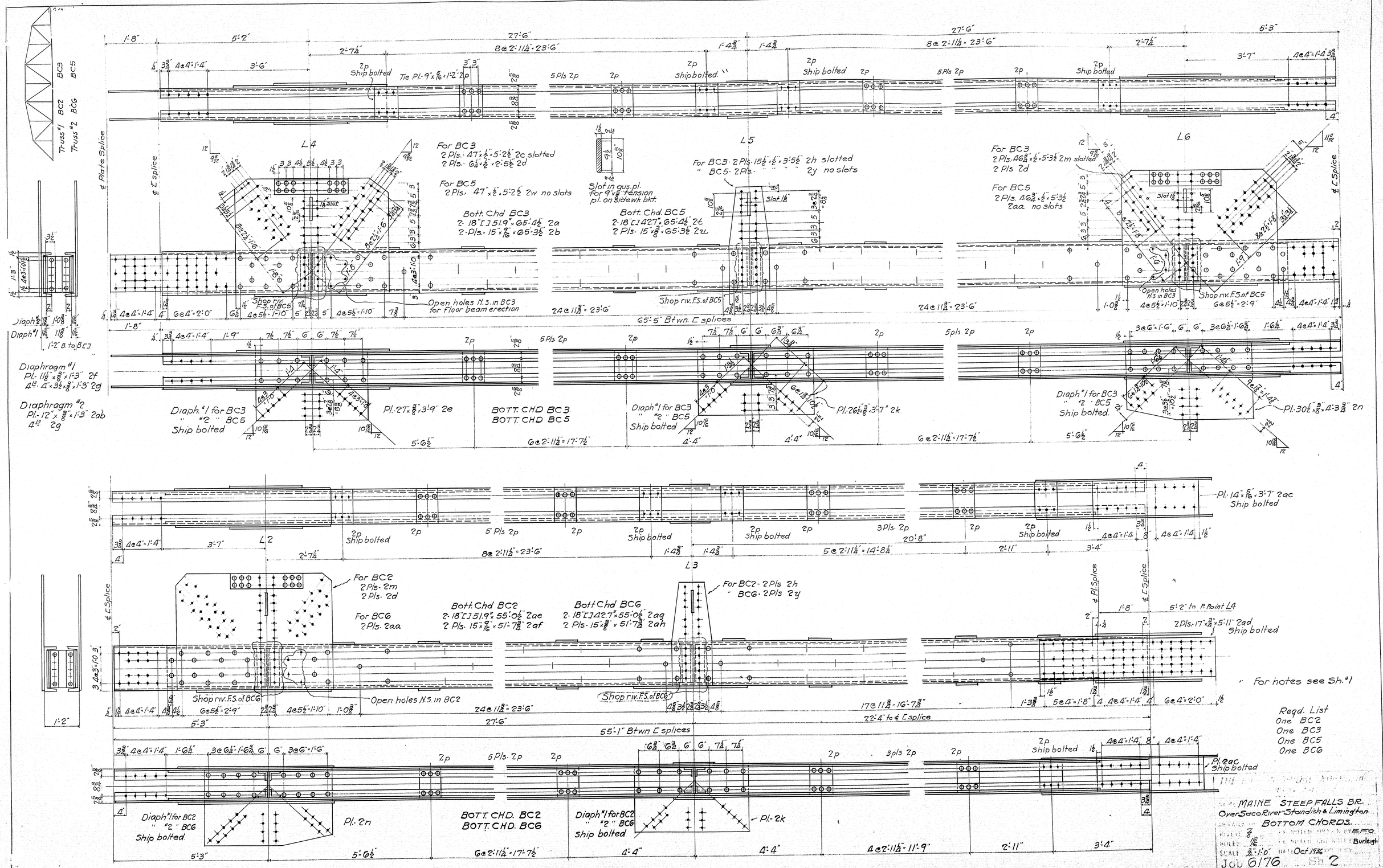
Field connections except those for lateral longitudinal and sway bracing shall be reamed to a metal templet without assembling or reamed in the shop with the connecting parts assembled.

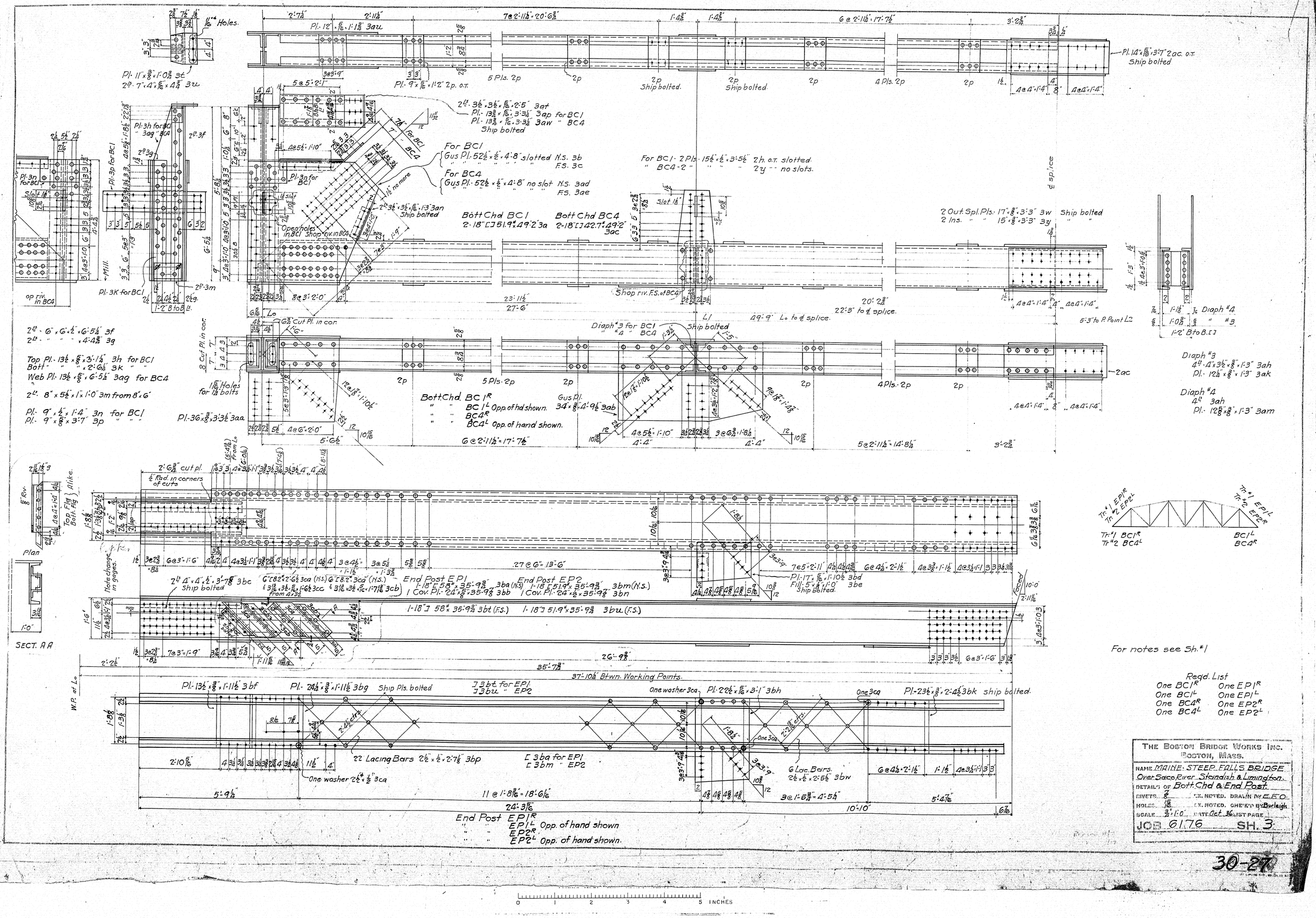
Portions of work exposed to view shall be finished neatly.

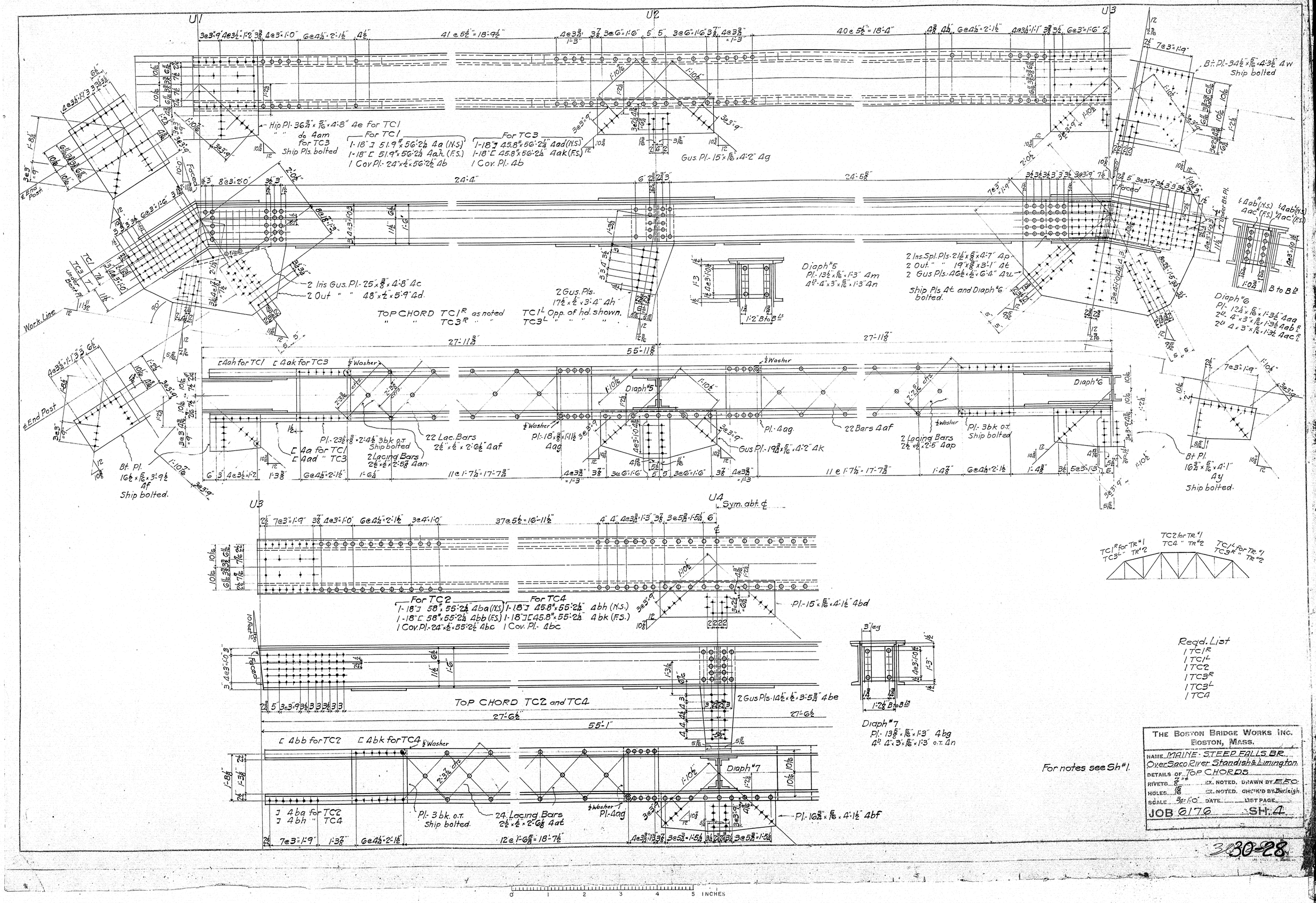
Shop Paint:- One coat of Red Lead as per specifications except surfaces to be riveted in contact either in the shop or field shall not be painted. Surfaces not in contact but which will be inaccessible after assembly or erection shall be painted 2 coats.

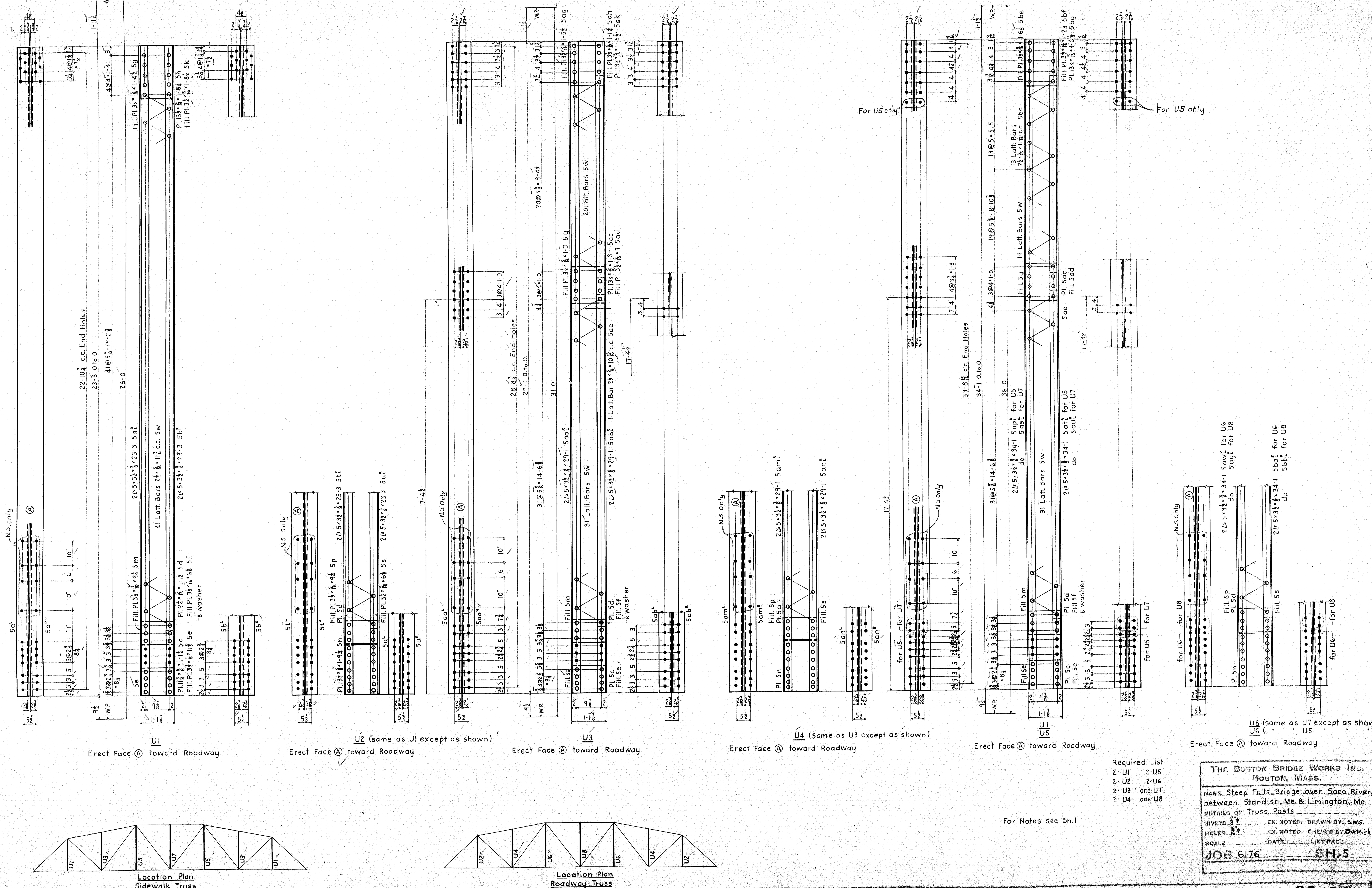
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.
NAME MAINE STEEP FALLS BRIDGE
Over Saco River Standish & Limington
DETAILS
DRAWN BY C.W.
SCALE $\frac{3}{32}$"=1'-0"
JOB 6176 SH. 1

330-25


Truss #1 BC2 BC3
Truss #2 BC6 BC5
L4
L5
L6
L2
L3
For BC3
2 Pls. 47" x 1/2" x 5'-2 1/2" 2c slotted
2 Pls. 6 1/4" x 1/2" x 2'-5 1/2" 2d
For BC5
2 Pls. 47" x 1/2" x 5'-2 1/2" 2w no slots
Bott. Chd BC3
2-18" [ ] 51.9# x 65'-4 1/2" 2a
2-Pls. 15" x 7/16" x 65'-3 1/2" 2b
Slot in gus. pl. for 9" x 5/8" tension pl. on sidewk bkt.
For BC3 2 Pls. 15 1/2" x 1/2" x 3'-5 1/2" 2h slotted
" BC5 2 Pls. " " " " 2y no slots
Slot 1 1/8"
For BC3
2 Pls. 46 3/4" x 1/2" x 5'-3 1/2" 2m slotted
2 Pls 2d
For BC5
2 Pls. 46 3/4" x 1/2" x 5'-3 1/2"
2aa no slots
Open holes N.S. in BC3 for Floor beam erection
Shop riv. F.S. of BC5
Open holes N.S. in BC3
Shop riv. F.S. of BC5
24 @ 11 3/4" = 23'-6"
65'-5" Btwn. ℄ splices
Diaph. #1
Pl. - 11 1/8" x 3/8" x 1'-3" 2f
4 1/2" - 4" x 3 1/2" x 3/8" x 1'-3" 2g
Diaphragm #2
Pl. - 12" x 3/8" x 1'-3" 2ab
4 1/2" 2g
Diaph. #1 for BC3
" #2 " BC5
Ship bolted
Pl. - 27" x 3/8" x 3'-9" 2e
BOTT. CHD BC3
BOTT. CHD BC5
Diaph. #1 for BC3
" #2 " BC5
Ship bolted
Pl. - 26 1/2" x 3/8" x 3'-7" 2k
Diaph. #1 for BC3
" #2 " BC5
Ship bolted.
Pl. - 30 1/2" x 3/8" x 4'-3 3/4" 2n
Pl. - 14" x 5/16" x 3'-7" 2ac
Ship bolted
For BC2
2 Pls. 2m
2 Pls. 2d
For BC6
2 Pls. 2aa
Bott. Chd BC2
2-18" [ ] 51.9# x 55'-0 1/2" 2ae
2 Pls. 15" x 9/16" x 51'-7 3/4" 2af
Bott. Chd BC6
2-18" [ ] 42.7# x 55'-0 1/2" 2ag
2 Pls. 15" x 3/8" x 51'-7 3/4" 2ah
For BC2 - 2 Pls 2h
" BC6 - 2 Pls 2y
2 Pls. 17" x 3/4" x 5'-11" 2ad
Ship bolted
5'-2" to P. Point L4
For notes see Sh. #1
Shop riv. F.S. of BC6
Open holes N.S. in BC2
Shop riv. F.S. of BC6
17 @ 11 3/4" = 16'-7 3/4"
72'-4" to ℄ splice
55'-1" Btwn ℄ splices
Diaph. #1 for BC2
" #2 " BC6
Ship bolted
Pl. - 2n
BOTT. CHD. BC2
BOTT. CHD. BC6
Diaph. #1 for BC2
" #2 " BC6
Ship bolted
Pl. - 2k
Pl. 2ac
Ship bolted
Reqd. List
One BC2
One BC3
One BC5
One BC6
MAINE STEEP FALLS BR.
Over Saco River - Standish & Limington
BOTTOM CHORDS.
Burleigh
Oct 1936
Job 6176
30-26


Pl. 14" × 5/16" × 3'-7" 2ac. o.t. Ship bolted
Pl. 12" × 5/16" × 1'-1 3/4" 3au
Pl. 11" × 3/8" × 1'-0 3/4" 3t
2 L 7" × 4" × 5/16" × 4 3/4" 3u
Pl. 9" × 5/16" × 1'-2" 2p. o.t.
5 Pls. 2p
4 Pls. 2p
Ship bolted.
2 L 3 1/2" × 3 1/2" × 5/16" × 2'-5" 3at
Pl. 13 3/4" × 5/16" × 3'-3 1/2" 3ap for BC1
Pl. 13 3/4" × 5/16" × 3'-3 1/2" 3aw " BC4
Ship bolted
For BC1
Gus Pl. 52 1/2" × 1/2" × 4'-8" slotted N.S. 3b
" " " " " " " F.S. 3c
For BC4
Gus Pl. 52 1/2" × 1/2" × 4'-8" no slot N.S. 3ad
" " " " " " " F.S. 3ae
For BC1 - 2 Pls. 15 1/2" × 1/2" × 3'-5 1/2" 2h. o.t. slotted.
" BC4 - 2 " " " " " 2y " " no slots.
Bott Chd BC1
2-18" [51.9# 49'-2" 3a
Bott Chd BC4
2-18" [42.7# 49'-2" 3ac
2 Out. Spl. Pls. 17" × 3/8" × 3'-3" 3w Ship bolted
2 Ins. " " 15" × 3/8" × 3'-3" 3y " "
Shop riv. F.S. of BC4
22'-3" to ℄ splice.
49'-9" L0 to ℄ splice.
5'-3" to P. Point L2
Diaph "3 for BC1
" "4 " BC4
Ship bolted
Diaph "3
4 L 4" × 3 1/2" × 3/8" × 1'-3" 3ah
Pl. 12 1/4" × 3/8" × 1'-3" 3ak
Diaph "4
4 L 3ah
Pl. 12 5/8" × 3/8" × 1'-3" 3am
Pl. 36" × 3/8" × 3'-3 1/2" 3aa
Bott Chd BC1 R
" " BC1 L Opp. of hand shown.
" " BC4 R
" " BC4 L Opp. of hand shown.
Gus Pl. 34" × 3/8" × 4'-9 1/2" 3ab
6 @ 2'-11 1/2" = 17'-7 1/2"
5 @ 2'-11 1/2" = 14'-8 1/2"
2 L 6" × 6" × 5/8" 3f
2 L " " " × 4'-4 3/4" 3g
Top Pl. 13 1/2" × 5/8" × 3'-1 1/2" 3h for BC1
Bott " " " × 2'-6 1/2" 3k " "
Web Pl. 13 1/2" × 5/8" × 6'-5 1/2" 3ag for BC4
2 L 8" × 5 1/2" × 1/2" × 1'-0" 3m from 8" × 6"
Pl. 9" × 1/2" × 1'-4" 3n for BC1
Pl. 9" × 5/8" × 3'-7" 3p " " "
Pl. 3n for BC1
Pl. 3p for BC1
Pl. 3h for BC1
" 3ag " BC4
Pl. 3n for BC1
Pl. 3K for BC1
2 L 3m
2 L 3f
2 L 3g
Open holes in BC1 Shop riv. in BC4
2 L 3 1/2" × 3 1/2" × 5/16" × 1'-3" 3an Ship bolted
Cut Pl. in cor.
1 1/16" Holes for 1 1/4" bolts
Diaph "3
4 L 4" × 3 1/2" × 3/8" × 1'-3" 3ah
Pl. 12 1/4" × 3/8" × 1'-3" 3ak
Diaph "4
4 L 3ah
Pl. 12 5/8" × 3/8" × 1'-3" 3am
2 L 6" × 4" × 3'-7 5/8" 3bc Ship bolted
End Post EP1
End Post EP2
1-18" [58# × 35'-9 3/4" 3ba (N.S.)
1-18" [51.9# × 35'-9 3/4" 3bm (N.S.)
1 Cov. Pl. - 24" × 3/8" × 35'-9 3/4" 3bb
1 Cov. Pl. - 24" × 1/2" × 35'-9 3/4" 3bn
1-18"] 58# × 35'-9 3/4" 3bt (F.S.)
1-18"] 51.9# × 35'-9 3/4" 3bu (F.S.)
Pl. 17" × 5/16" × 1'-10 1/2" 3bd
Fill. 5" × 3/8" × 1'-0" 3be
Ship bolted.
Pl. 13 1/2" × 3/8" × 1'-11 1/2" 3bf
Pl. 24 1/4" × 3/8" × 1'-11 1/2" 3bg
Ship Pls. bolted
] 3bt for EP1
] 3bu " EP2
One washer 3ca
Pl. 22 1/2" × 5/16" × 3'-1" 3bh
One 3ca
Pl. 23 1/2" × 3/8" × 2'-4 1/2" 3bk ship bolted.
22 Lacing Bars 2 1/2" × 1/2" × 2'-7 3/8" 3bp
[3ba for EP1
[3bm " EP2
One washer 2 1/2" × 1/2" 3ca
6 Loc. Bars. 2 1/2" × 1/2" × 2'-5 1/2" 3bw
37'-10 1/2" Btwn. Working Points.
End Post EP1 R
" " EP1 L Opp. of hand shown
" " EP2 R
" " EP2 L Opp. of hand shown.
Tr. #1 EP1 R
Tr. #2 EP2 L
Tr. #1 EP1 L
Tr. #2 EP2 R
Tr. #1 BC1 R
Tr. #2 BC4 L
BC1 L
BC4 R
SECT. A A
Plan
For notes see Sh. #1
Reqd. List
One BC1 R
One BC1 L
One BC4 R
One BC4 L
One EP1 R
One EP1 L
One EP2 R
One EP2 L
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.
NAME MAINE: STEEP FALLS BRIDGE
Over Saco River Standish & Limington
DETAILS OF Bott. Chd & End Post.
RIVETS 7/8 CK. NOTED. DRAWN BY C.E.O.
HOLES 1 1/16 CK. NOTED. CHE'K'D BY Burleigh
SCALE 3/4" = 1'-0" DATE Oct. 36 LIST PAGE
JOB 6176 SH. 3.
30-27


U1
U2
U3
U4
Hip Pl. 36¾" x 5/16" x 4'-8" 4e for TC1
" " do 4am for TC3
Ship Pls. bolted
For TC1
1-18" ⌋ 51.9# x 56'-2¼ 4a (N.S.)
1-18" ⌊ 51.9# x 56'-2¼ 4ah (F.S.)
1 Cov. Pl. 24" x ½" x 56'-2½ 4b
For TC3
1-18" ⌋ 45.8# x 56'-2¼ 4ad (N.S.)
1-18" ⌊ 45.8# x 56'-2¼ 4ak (F.S.)
1 Cov. Pl. 4b
Gus. Pl. 15" x 5/16" x 4'-2" 4g
Bt. Pl. 34½" x 5/16" x 4'-3½" 4w
Ship bolted
2 Ins Gus. Pl. 25" x ⅜" x 4'-8" 4c
2 Out " " 48" x ½" x 5'-9" 4d
TOP CHORD TC1R as noted
" " TC3R " "
2 Gus. Pls. 17½" x ½" x 3'-4" 4h
TC1L Opp. of hd. shown.
TC3L " " " "
Diaph #5
Pl. 13½" x 5/16" x 1'-3" 4m
4Ls 4" x 3" x 5/16" x 1'-3" 4n
2 Ins. Spl. Pls. 21½" x ⅝" x 4'-7" 4p
2 Out " " 19" x ⅜" x 3'-1" 4t
2 Gus Pls. 46½" x ½" x 6'-4" 4u
Ship Pls 4t and Diaph #6 bolted.
Diaph #6
Pl. 12¼" x 5/16" x 1'-3½" 4aa
2Ls 4" x 3" x 5/16" x 1'-3½" 4ab R
2Ls 4" x 3" x 5/16" x 1'-3½" 4ac R
Work Line
℄ End Post
℄ Ah for TC1
℄ 4ak for TC3
½" Washer
Diaph #5
Diaph #6
Pl. 23½" x ⅜" x 2'-4½" 3bk o.t. Ship bolted
℄ 4a for TC1
℄ 4ad " TC3
2 Lacing Bars 2½" x ½" x 2'-5⅞" 4an
22 Lac. Bars 2½" x ½" x 2'-6½" 4af
Pl. 18" x ⅜" x 1'-11½" 4ag
Pl. 4ag
22 Bars 4af
Gus Pl. 19¾" x 5/16" x 4'-2" 4k
2 Lacing Bars 2½" x ½" x 2'-5" 4ap
Pl. 3bk o.t. Ship bolted
Bt. Pl. 16½" x 5/16" x 3'-9½" 4f
Ship bolted.
Bt. Pl. 16¾" x 5/16" x 4'-1" 4y
Ship bolted.
Sym. abt. ℄
For TC2
1-18" ⌋ 58# x 55'-2¼ 4ba (N.S.)
1-18" ⌊ 58# x 55'-2¼ 4bb (F.S.)
1 Cov. Pl. 24" x ½" x 55'-2½ 4bc
For TC4
1-18" ⌋ 45.8# x 55'-2¼ 4bh (N.S.)
1-18" ⌋ ⌊ 45.8# x 55'-2¼ 4bk (F.S.)
1 Cov. Pl. 4bc
Pl. 15" x 5/16" x 4'-1½" 4bd
TOP CHORD TC2 and TC4
2 Gus Pls. 14½" x ½" x 3'-5¾" 4be
Diaph #7
Pl. 13⅝" x 5/16" x 1'-3" 4bg
4Ls 4" x 3" x 5/16" x 1'-3" o.t. 4n
℄ 4bb for TC2
℄ 4bk for TC4
Diaph #7
⌋ 4ba for TC2
⌋ 4bh " TC4
Pl. 3bk o.t. Ship bolted.
24 Lacing Bars 2½" x ½" x 2'-6⅛" 4at
Pl. 4ag
Pl. 16¾" x 5/16" x 4'-1½" 4bf
TC1R for TR #1
TC3L " TR #2
TC2 for TR #1
TC4 " TR #2
TC1L for TR #1
TC3R " TR #2
Reqd. List
1 TC1R
1 TC1L
1 TC2
1 TC3R
1 TC3L
1 TC4
For notes see Sh #1.
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.
NAME MAINE - STEEP FALLS BR.
Over Saco River Standish & Limington
DETAILS OF TOP CHORDS
RIVETS 7/8" EX. NOTED. DRAWN BY E.E.O.
HOLES 15/16 EX. NOTED. CHK'D BY Burleigh
SCALE 3/4" = 1'-0" DATE LIST PAGE
JOB 6176 SH. 4
30-28
0 1 2 3 4 5 INCHES



Required List

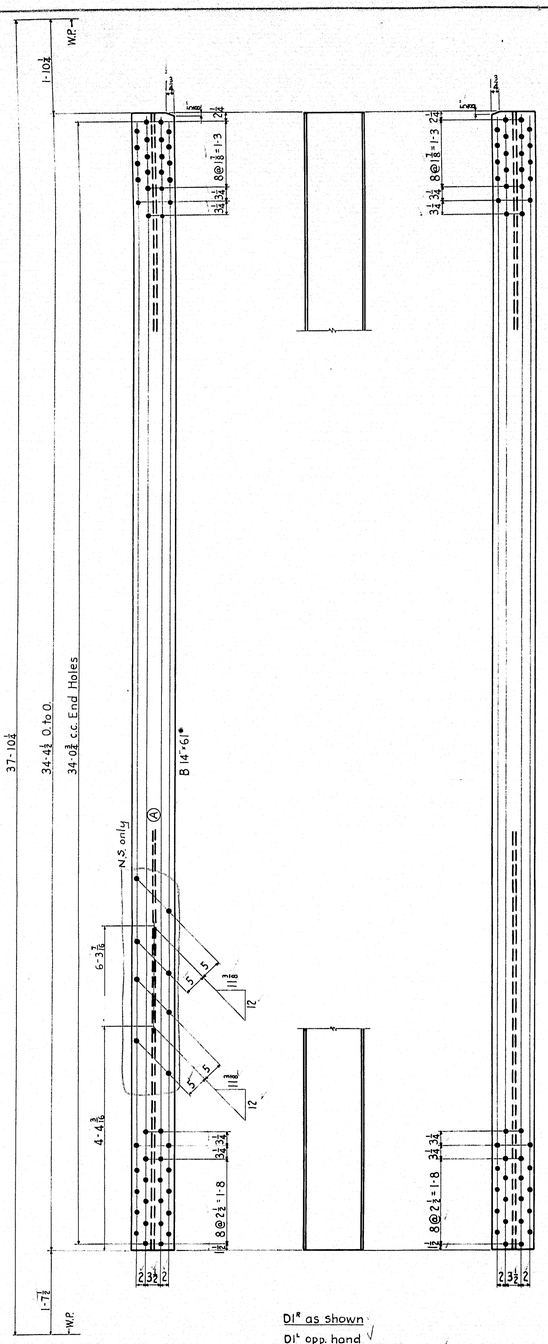
2 - U1 2 - U5
2 - U2 2 - U6
2 - U3 one - U7
2 - U4 one - U8

For Notes see Sh. 1

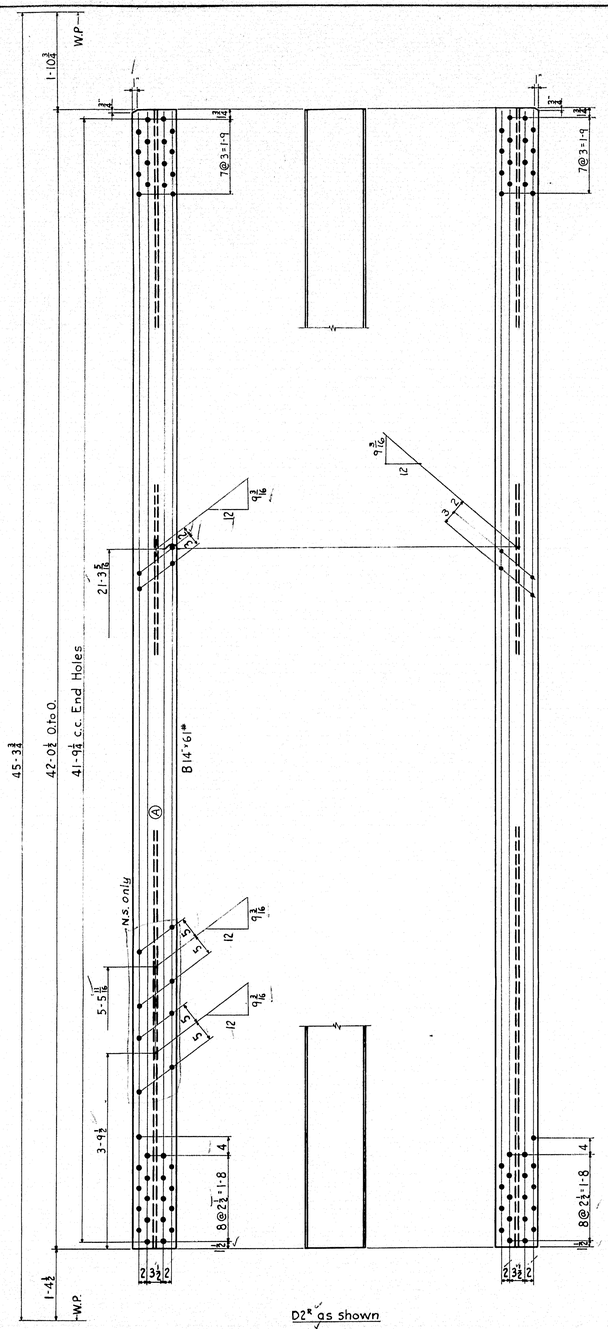
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River, between Standish, Me. & Limington, Me.
DETAILS OF Truss Posts
RIVETS ⅞" ϕ EX. NOTED. DRAWN BY S.W.S.
HOLES 15/16" ϕ EX. NOTED. CHE'K'D BY Burleigh
SCALE DATE LIST PAGE
JOB 6176 SH. 5

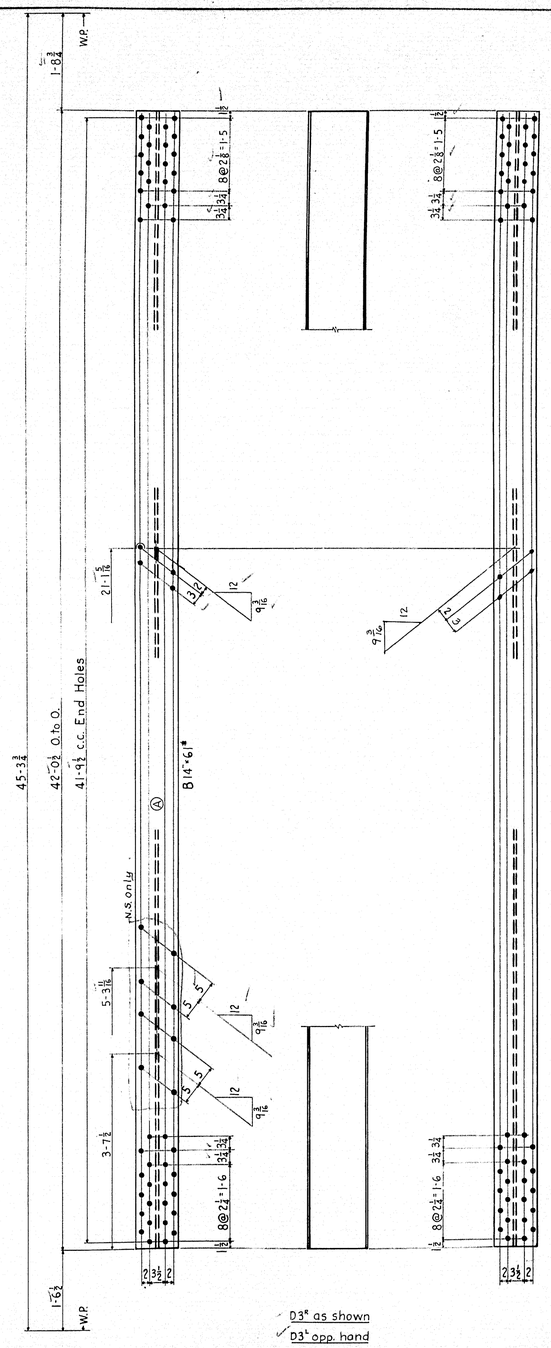
330-29



D1R as shown
D1L opp. hand
Erect Face Ⓐ toward Roadway



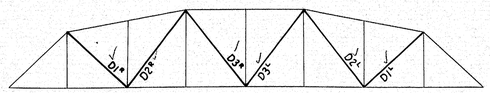
D2R as shown
D2L opp. hand
Erect Face Ⓐ toward Roadway



D3R as shown
D3L opp. hand
Erect Face Ⓐ toward Roadway

Material Required
2-D1R 2-D1L
2-D2R 2-D2L
2-D3R 2-D3L

For Notes see Sh. 1



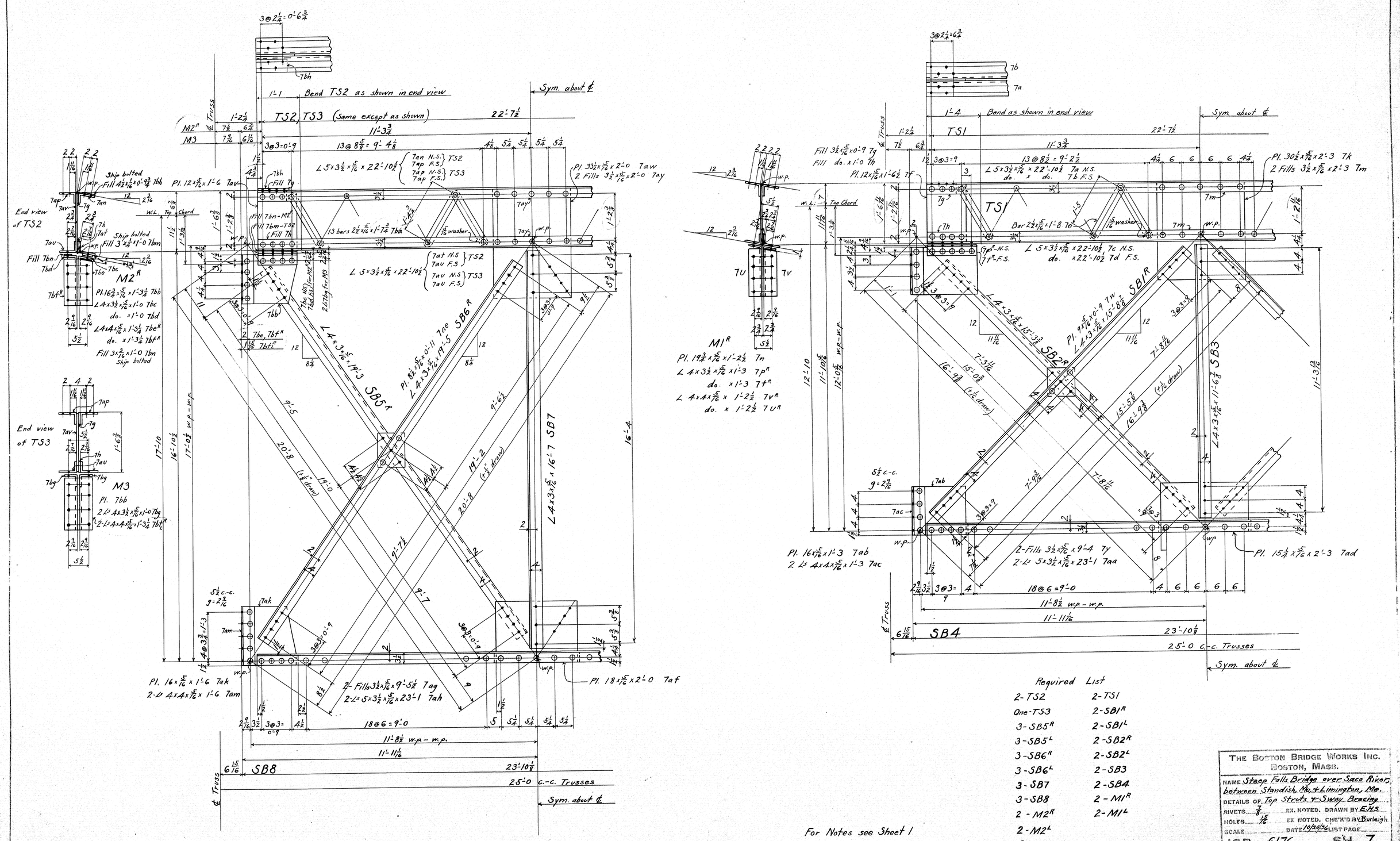
Location Plan

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River, between Standish, Me. & Limington, Me.
DETAILS OF Truss Diagonals
RIVETS 7/8 EX. NOTED. DRAWN BY S.W.S.
HOLES 15/16 EX. NOTED. CHE'K'D BY Burleigh
SCALE DATE LIST PAGE
JOB 6176 SH. 6

330-30

0 1 2 3 4 5 INCHES



Required List

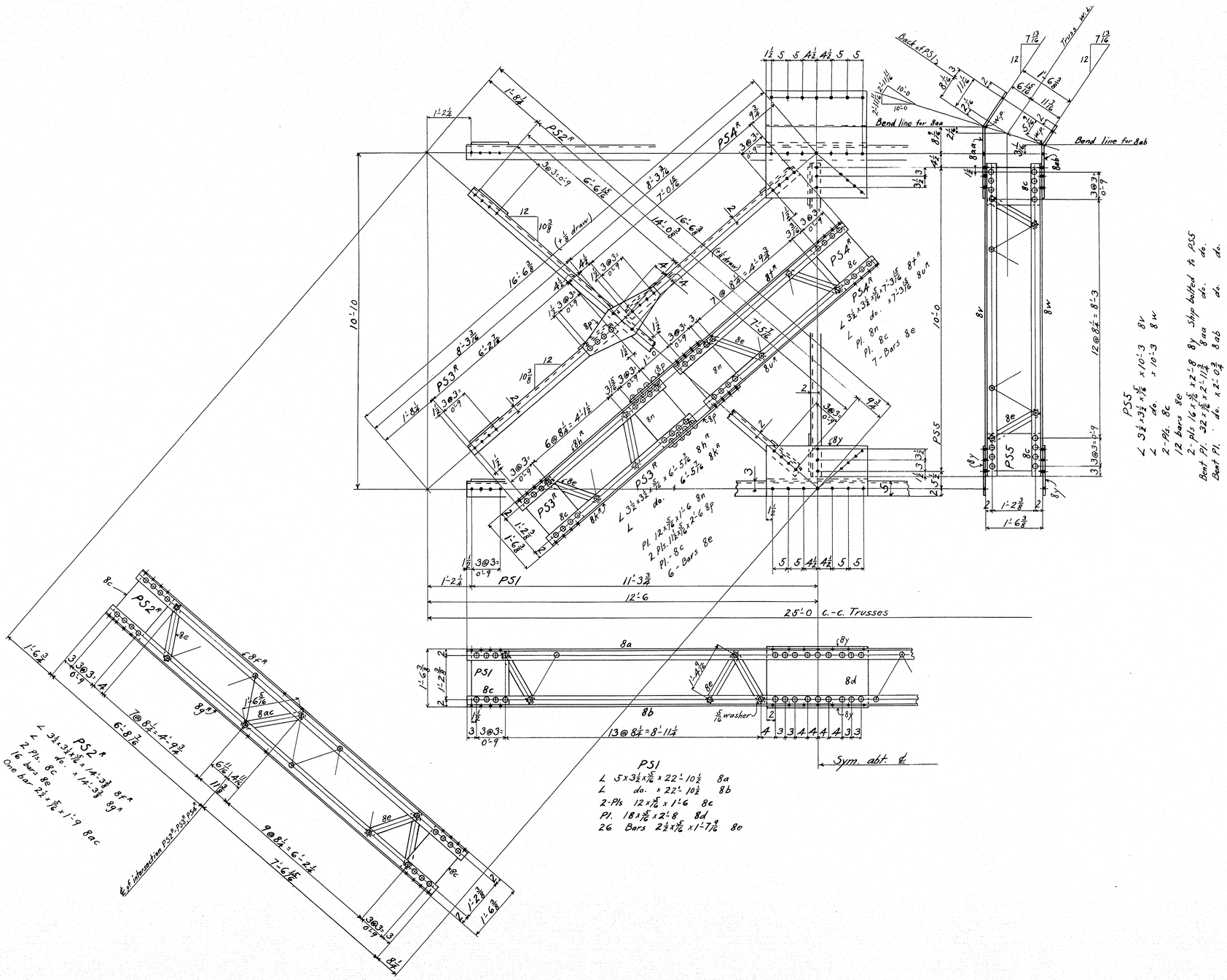
2-TS2	2-TS1
One-TS3	2-SB1R
3-SB5R	2-SB1L
3-SB5L	2-SB2R
3-SB6R	2-SB2L
3-SB6L	2-SB3
3-SB7	2-SB4
3-SB8	2-M1R
2-M2R	2-M1L
2-M2L	
2-M3	

For Notes see Sheet 1

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River between Standish, Me. & Limington, Me.
DETAILS OF Top Struts & Sway Bracing
RIVETS 7/8 EX. NOTED. DRAWN BY E.H.S.
HOLES 15/16 EX. NOTED. CHE'K'D BY Burleigh
SCALE DATE 10/25/06 LIST PAGE
JOB 6176 SH. 7

30-31



Required List

6-PS1	2-PS3L
2-PS2R	2-PS4R
2-PS2L	2-PS4L
2-PS3R	2-PS5

For Notes see Sheet 1

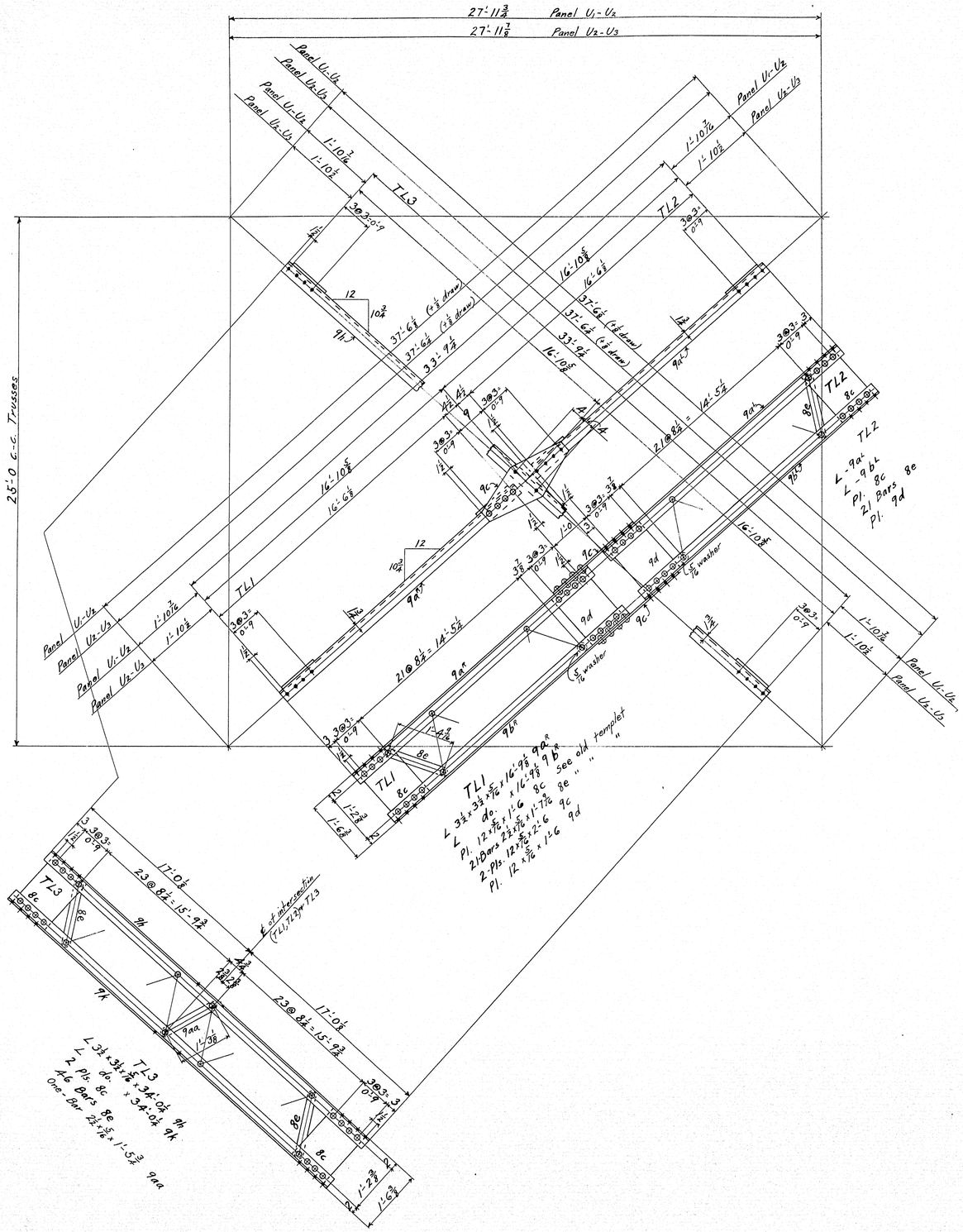
Revised - Nov. 30, 1936 by E.H.S.

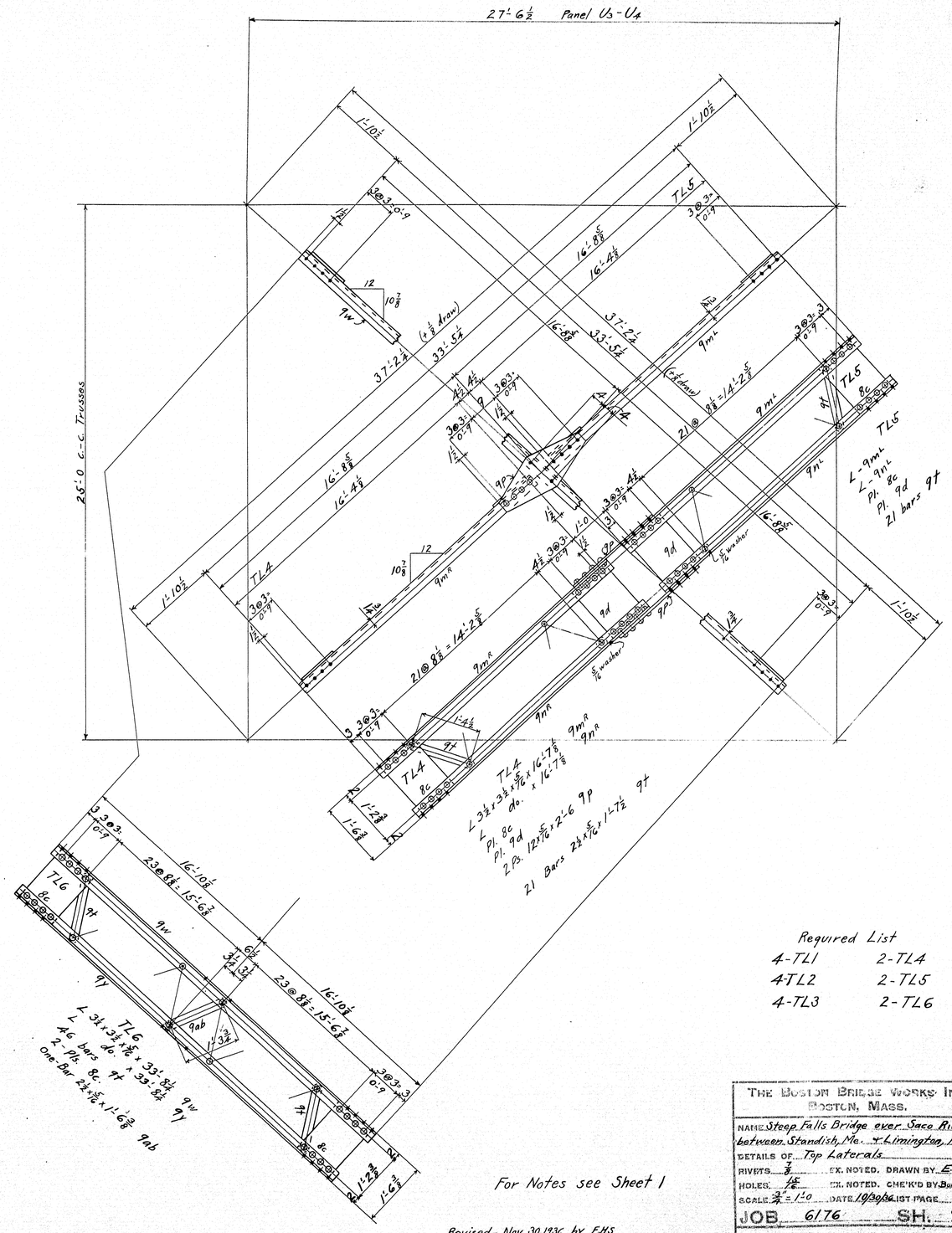
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River between Standish, Me. + Limington, Me.
DETAILS OF Portal Bracing
RIVETS 7/8 EX. NOTED. DRAWN BY E.H.S.
HOLES 15/16 EX. NOTED. CHE'K'D BY Burleigh
SCALE 3/4" = 1'-0 DATE 10/28/36 LIST PAGE
JOB 6176 SH. 8

30-32

0 1 2 3 4 5 INCHES





Required List

4-TL1	2-TL4
4-TL2	2-TL5
4-TL3	2-TL6

For Notes see Sheet 1

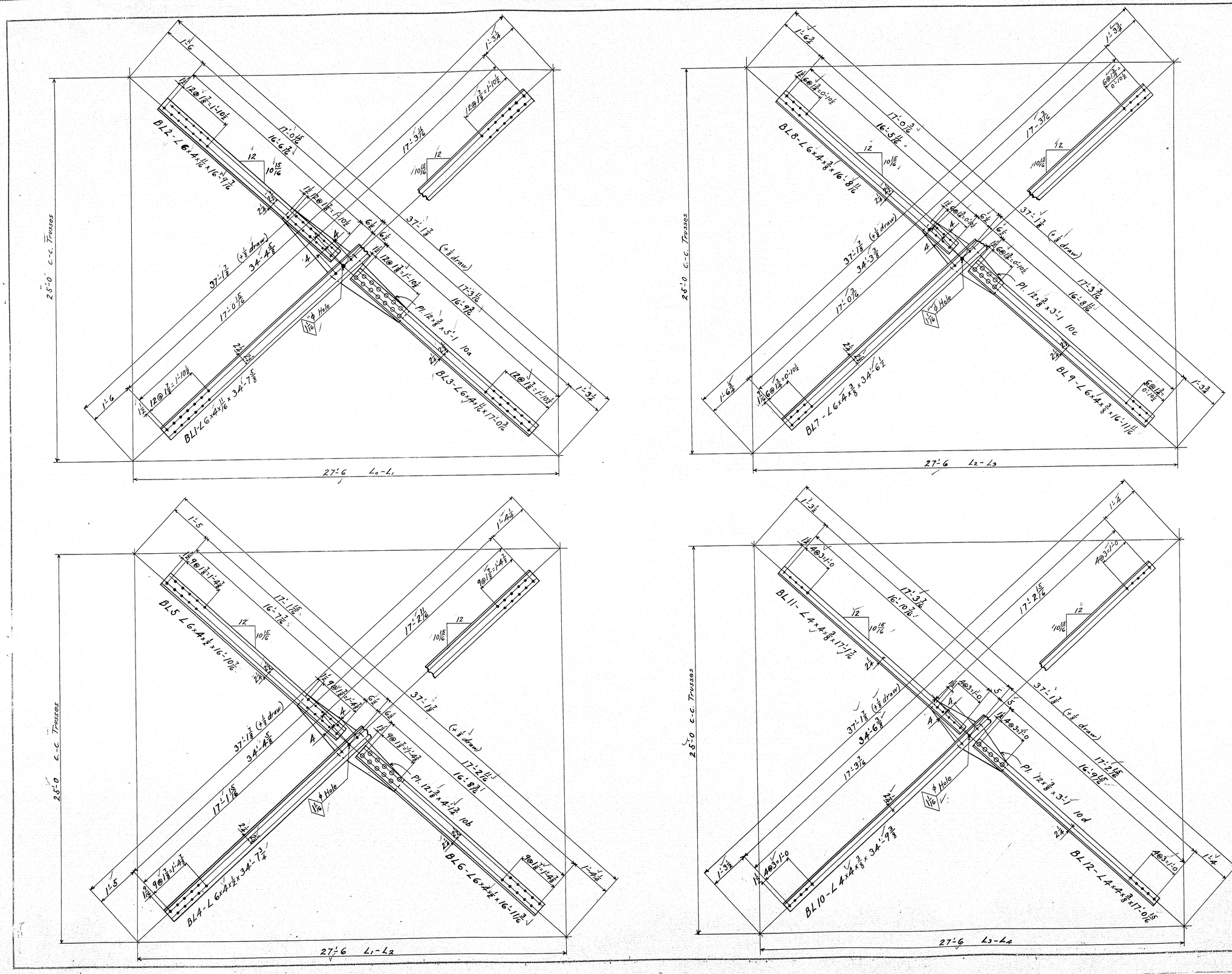
Revised - Nov. 30, 1936 by E.H.S.

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME Steep Falls Bridge over Saco River between Standish, Me. & Limington, Me.
DETAILS OF Top Laterals
RIVETS 7/8 EX. NOTED. DRAWN BY E.H.S.
HOLES 15/16 EX. NOTED. CHE'K'D BY Burleigh
SCALE 3/4" = 1'-0 DATE 10/30/36 LIST PAGE
JOB 6176 SH. 9

30-33

0 1 2 3 4 5 INCHES



For Notes see Sheet 1

Required List

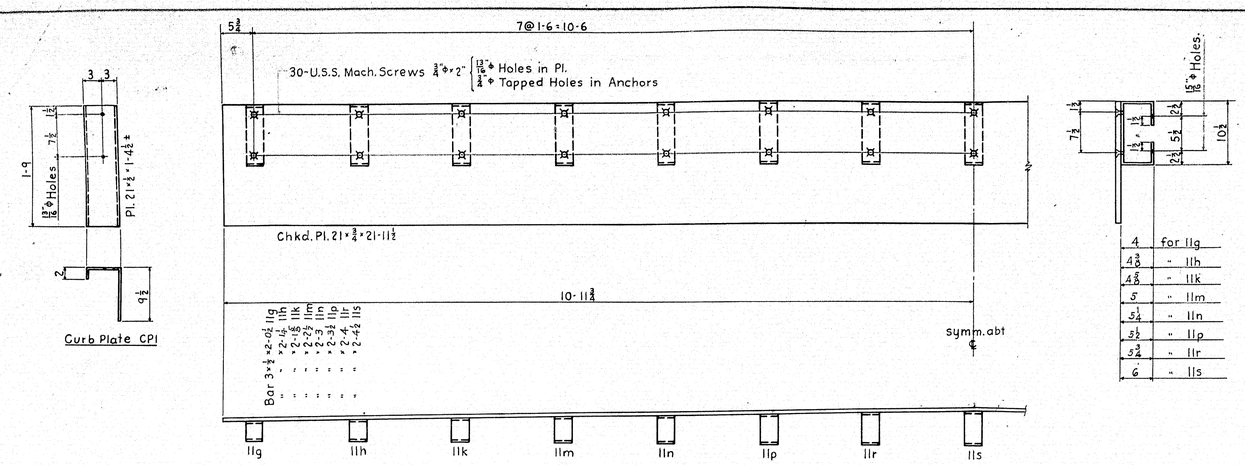
2 -	Bot.	Laterals	BL1
2 -	"	"	BL2
2 -	"	"	BL3
2 -	"	"	BL4
2 -	"	"	BL5
2 -	"	"	BL6
2 -	"	"	BL7
2 -	"	"	BL8
2 -	"	"	BL9
2 -	"	"	BL10
2 -	"	"	BL11
2 -	"	"	BL12

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

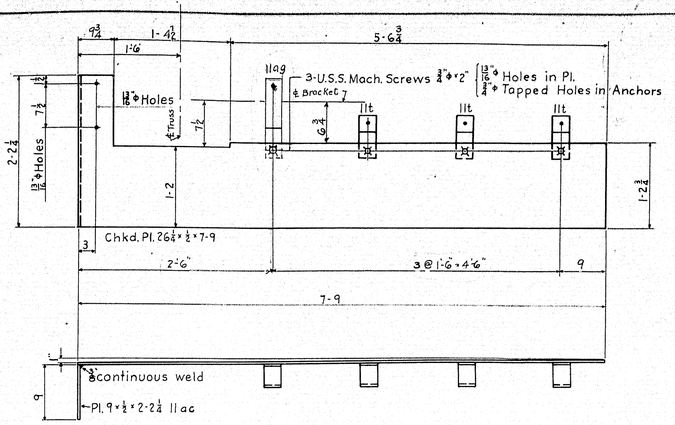
NAME Steep Falls Bridge over Saco River between Standish, Me. + Limington, Me.
DETAILS OF Bot. Laterals
RIVETS 7/8 EX. NOTED, DRAWN BY EHS
HOLES 15/16 EX. NOTED, CHE'K'D BY Burleigh
SCALE 3/4 = 1 ft. DATE 11/2/26 LIST PAGE
JOB 6176 SH. 10

30-34

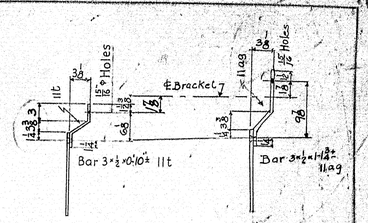
0 1 2 3 4 5 INCHES

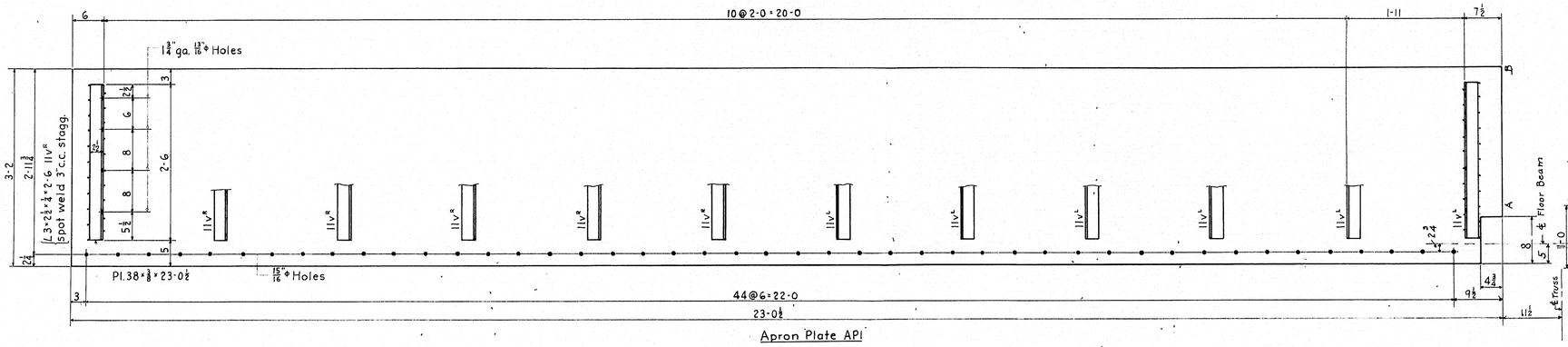


Apron Plate ED2

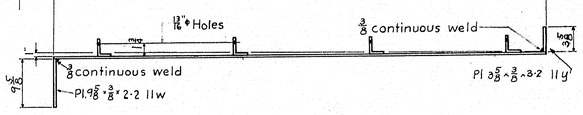


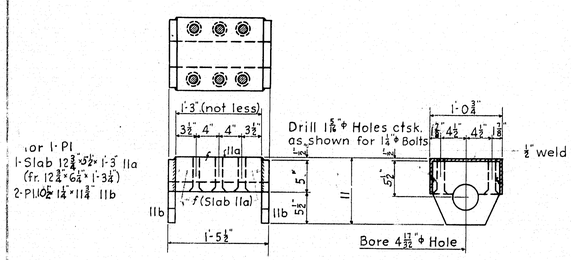
Apron Plate ED3



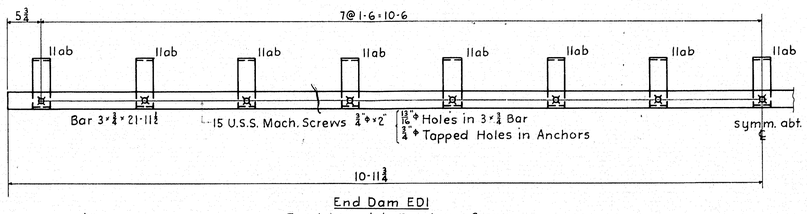


Apron Plate API

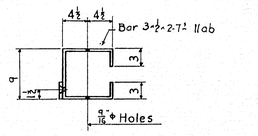


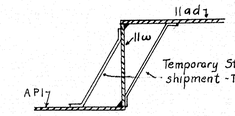


4-Bearing Pedestals (Top) P1



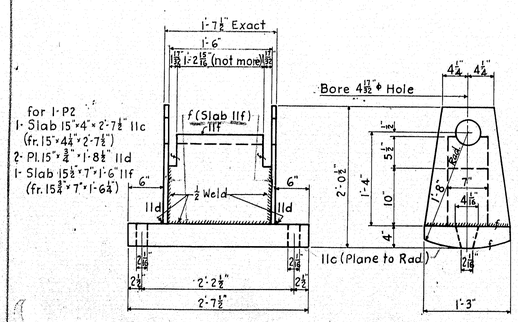
End Dam ED1
Erect to match Roadway Crown



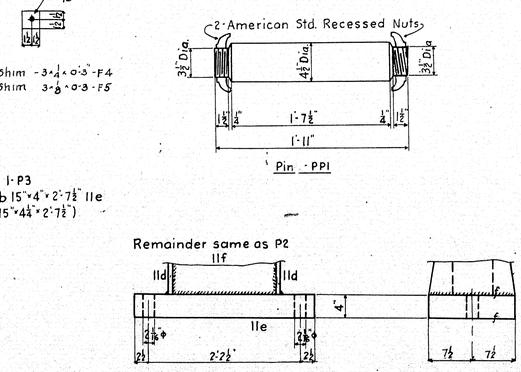


NOTE— Shop weld 11w to API along lines A-B & C-D — 3/8 continuous weld

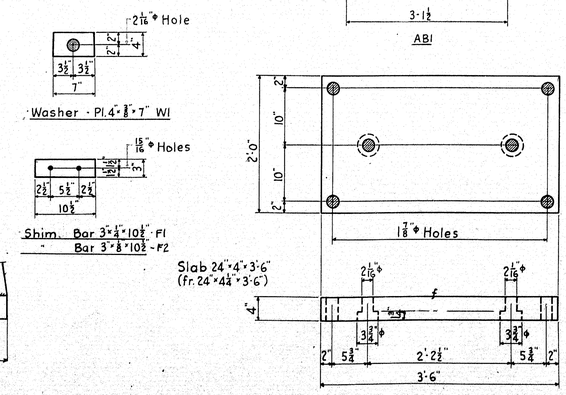
Required List
one - End Dam ED1
one - Apron Plate ED2
one - " - ED3
one - " - API
4 - Pedestals P1
2 - " P2
2 - " P3
4 - Bearing Plates BP1
4 - Pins PP1
16 - Anchors AB1
8 - Washers W1
30 Shims F1
10 " F2
one - Curb Plate CP1
6 Shims F4
3 " F5



Exp. End. 2-Bearing Pedestals (Bott.) P2



Fixed End 2-Bearing Pedestals (Bott.) P3



4-Bearing Plates-BP1

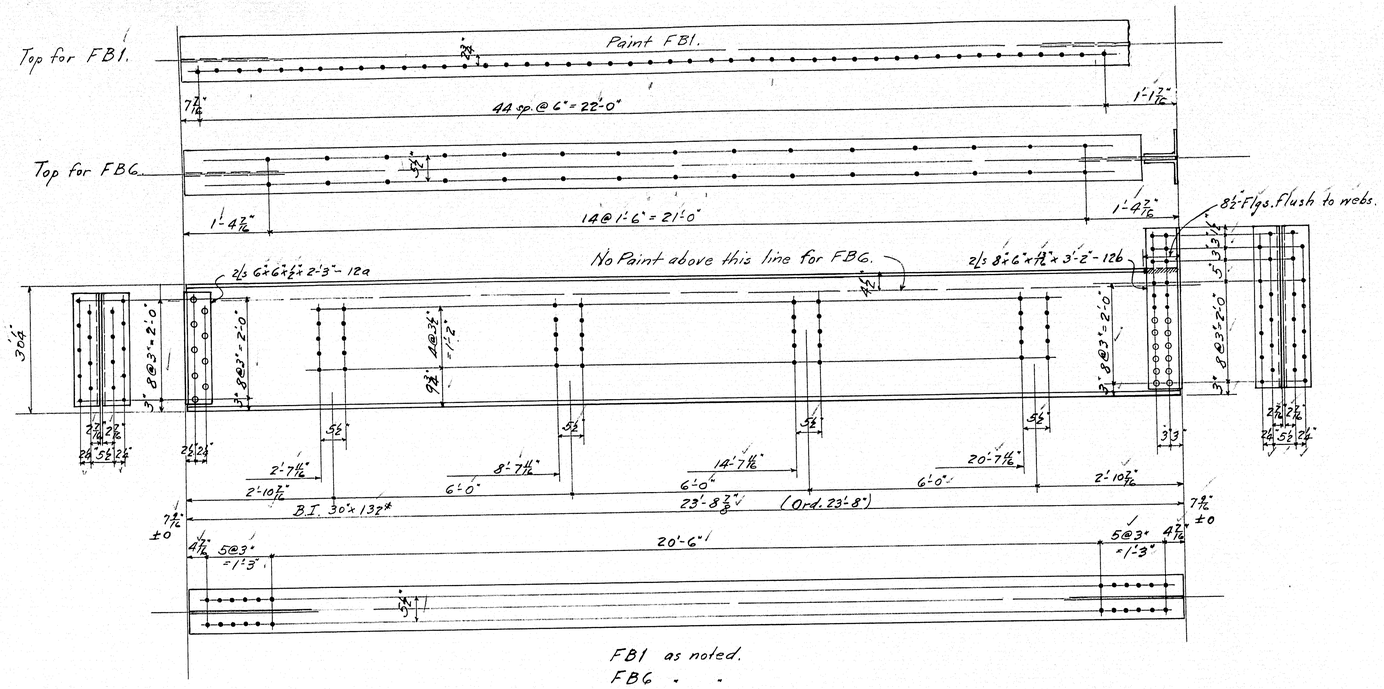
For Notes see Sh. 1

THE BOSTON BRIDGE WORKS INC. BOSTON, MASS.	
NAME Steep Falls Bridge over Saco River, between Standish, Me. & Limington, Me.	
DETAILS OF Misc. Steel	
RIVETS — EX. NOTED.	DRAWN BY S.W.S.
HOLES As Noted EX. NOTED.	CHE'K'D BY Burleigh
SCALE 1"=1'-0" DATE	LIST PAGE
JOB 6176	SH. 11

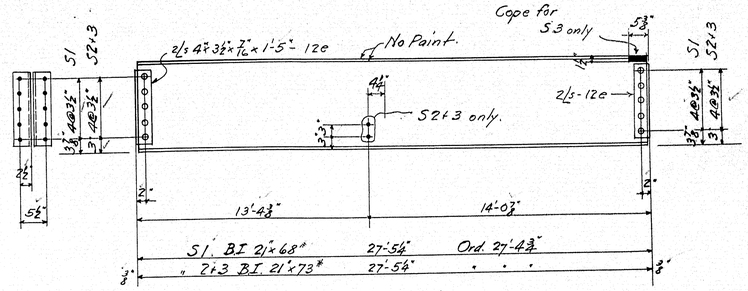
Revised 1-18

30-335

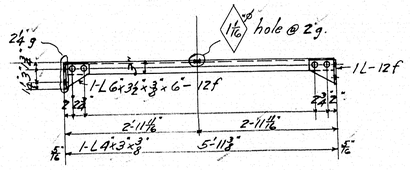
0 1 2 3 4 5 INCHES



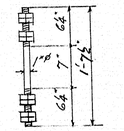
FB1 as noted.
FBG " "



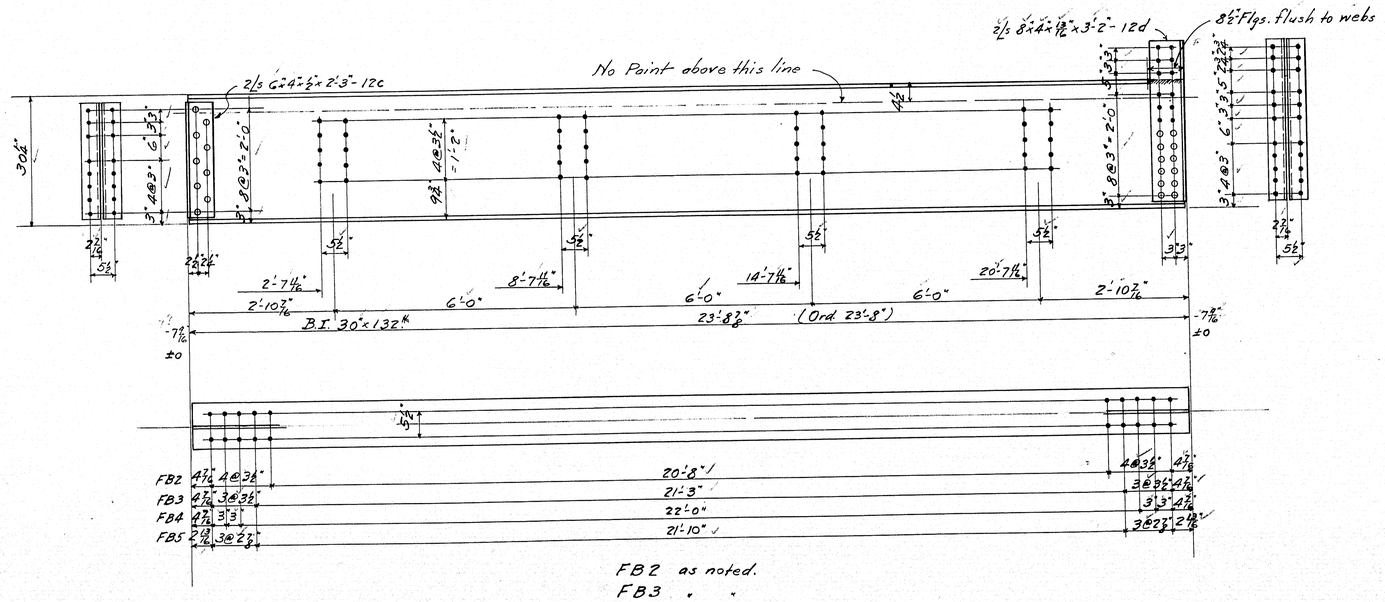
S1 as noted.
S2 " "
S3 " "



C1.



Rod 1"x 1'-7½"
8 sq. nuts.
H1.



FB2 as noted.
FB3 " "
FB4 " "
FB5 " "

Required List.

1 - Floor Beam	FB1
2 - " "	FB2
2 - " "	FB3
2 - " "	FB4
1 - " "	FB5
1 - " "	FBG
16 - Stringers	S1.
12 "	S2.
4 "	S3.

8 - Struts C1.

8 - Hangers H1.

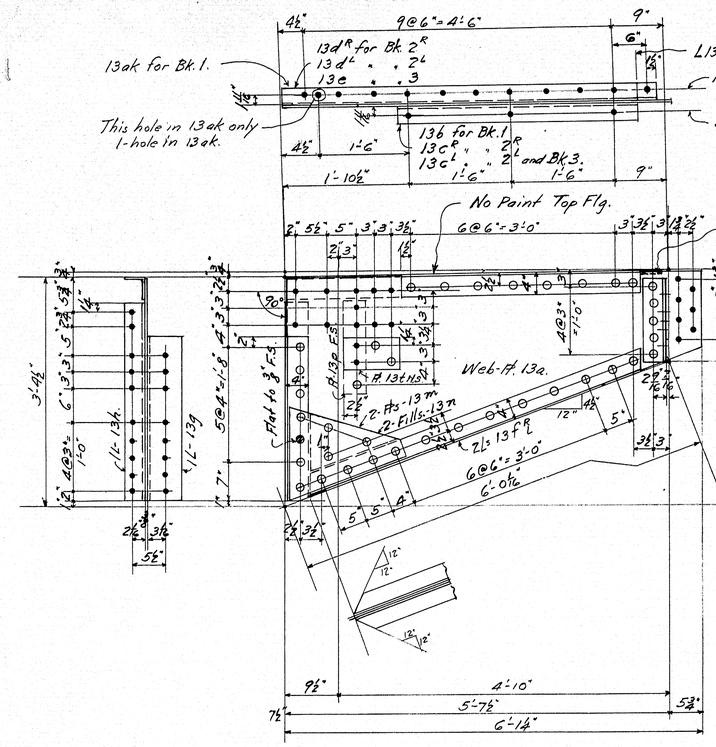
For Notes see Sheet 1.

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME MAINE, STEEP FALLS BR.
Over Saco River - Standish & Limington
DETAILS OF Fl. Bms., Strs., Struts & Hangers
RIVETS 7/8" EX. NOTED. DRAWN BY C.M.
HOLES 15/16" EX. NOTED. CHE'K'D BY Burleigh
SCALE 3/4" = 1'-0" DATE LIST PAGE
JOB 6176. SH. 12.

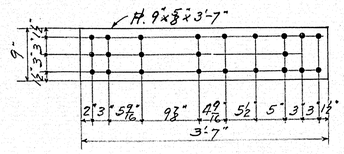
30-36

0 1 2 3 4 5 INCHES

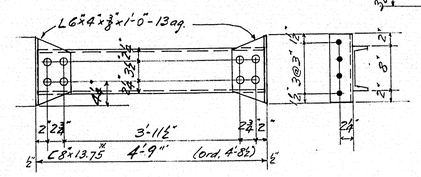


Bk.1 as shown and noted.
" 2^R " " " "
" 2^L opp. hand " "
" 3 " " " "

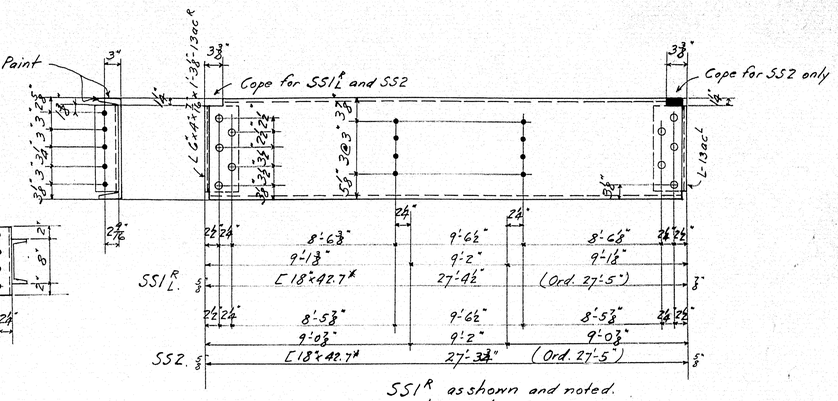
Web H. 40"×⅜"×6'-1"-13a
Top Flg. Ls 4"×3"×⅜"×3'-6"-13b for Bk.1.
" " " " " " 3'-6"-13c^R_L " Bk.2^R_L and Bk.3.
" " " " " " 5'-2½"-13d^R_L " Bk.2^R_L
" " " " " " 5'-5¾"-13e " Bk.3.
Bott. " " " " " 5'-4"±-13f^R_L
Conn. Ls 1L 6"×4"×⅜"×2'-5"-13g
" " 1L 4"×3½"×⅜"×2'-11"-13h.
" " 2-Ls 7"×4"×7/16"×1'-3"-13k
Battens 2-Hs 15"×5/16"×1'-10"±-13m.
Fills - 2Hs 9½"×⅜"×1'-4"±-13n.
" 1H 4"×⅜"×1'-4½"-13p
" 1H 5¾"×5/16"×10"-13t.
Top Flg. L 4"×3"×⅜"×5'-2¼"-13ak for Bk.1.
Conn. L 4"×3½"×⅜"×1'-3"-13ba for Bk.1 + Bk.3.
Fill 2½"×7/16"×1'-3"-13bb for Bk.1 + Bk.3. (Ship bolted.)



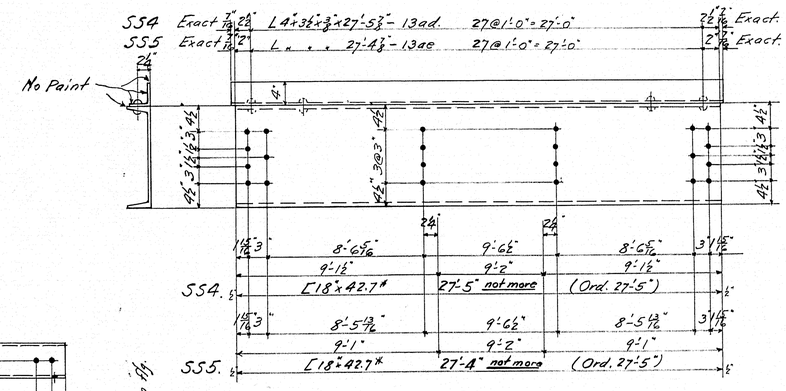
T1.



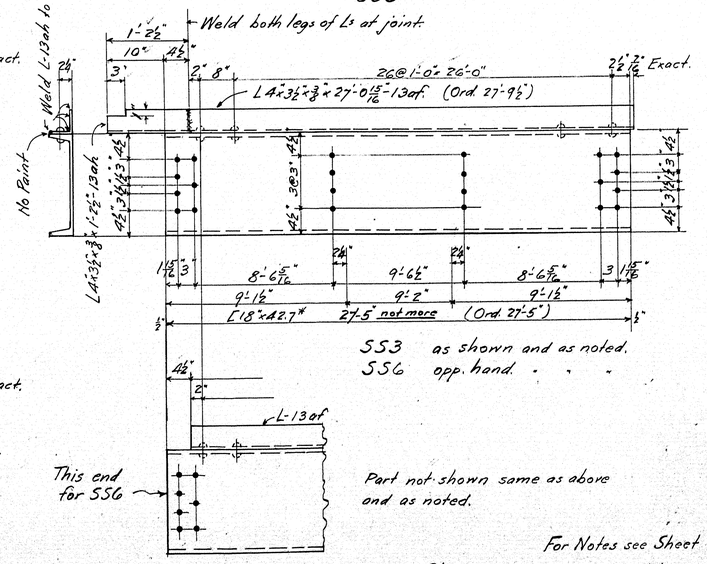
C2



SS1^R as shown and noted.
SS1^L opp. hand " "
SS2 as noted



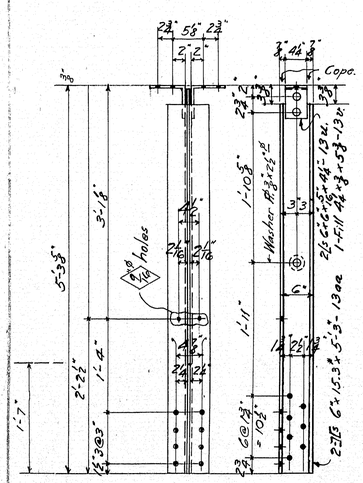
SS4
SS5



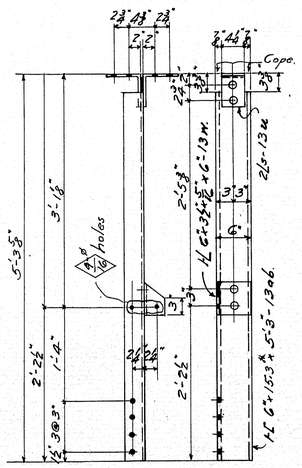
SS3 as shown and as noted.
SS6 opp. hand " "

Required List.

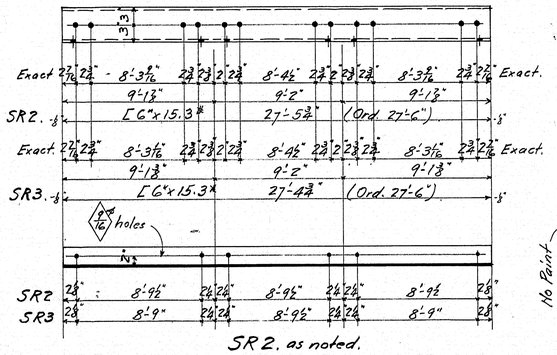
1-	Bracket	Bk.1
3-	"	Bk.2^R
4-	"	Bk.2^L
1-	"	Bk.3
7-	Ties	T1
4-	Stringers	SS1^R
3-	"	SS1^L
1-	"	SS2
1-	"	SS3
1-	"	SS6
5-	"	SS4
1-	"	SS5
16-	Struts	C2
9-	Posts	RP1
8-	"	RP2^R
8-	"	RP2^L
1-	Sidewalk Rails	SR1^R
1-	" "	SR1^L
5-	" "	SR2
1-	" "	SR3



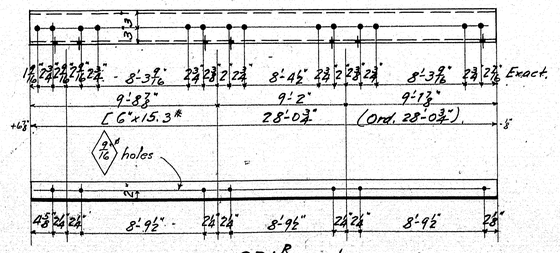
Post-RP1.



Post RP2^R as shown.
" RP2^L opp. hand.



SR2. as noted.
SR3. " "



SR1^R as shown
SR1^L opp. hand.

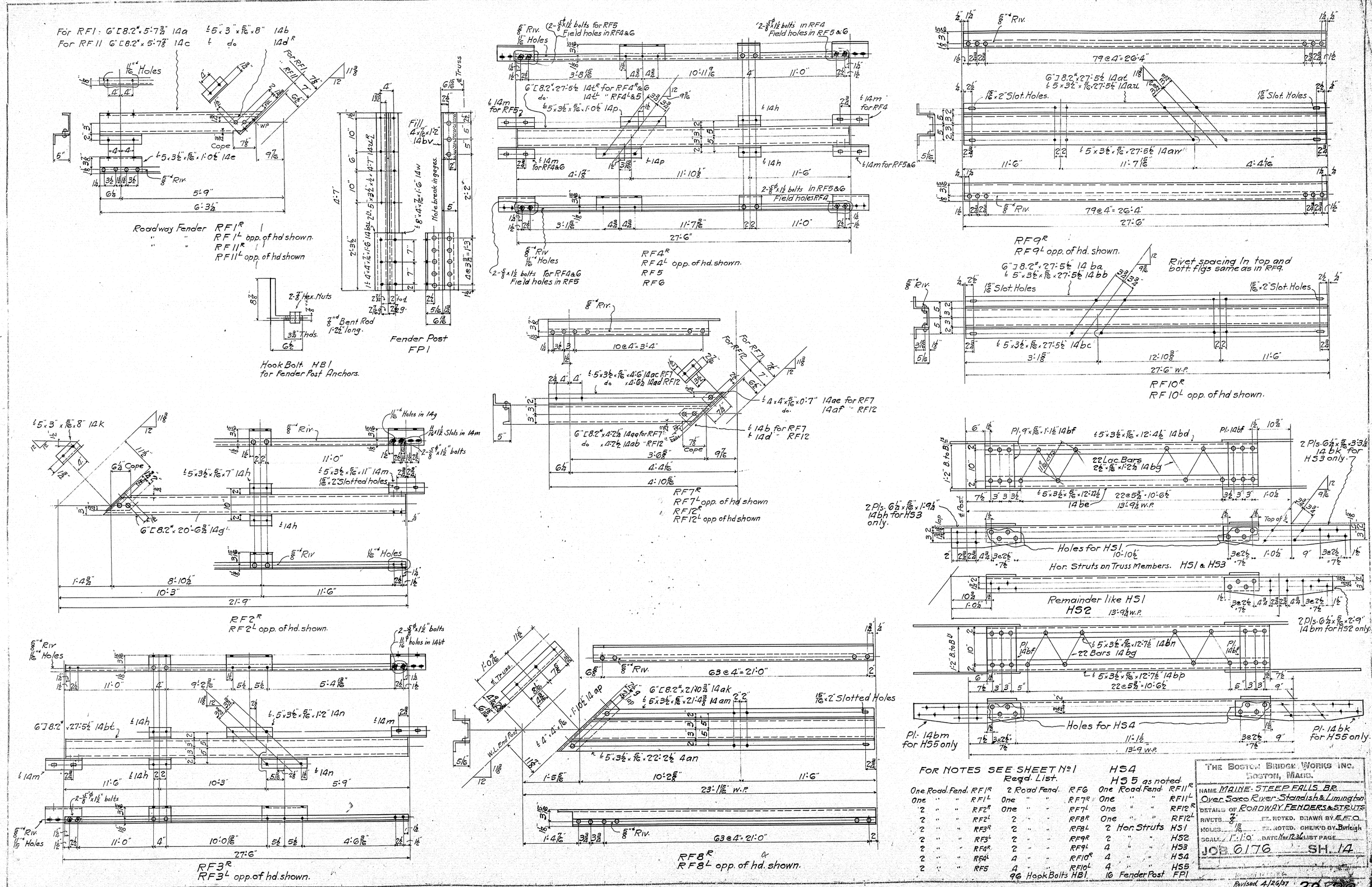
For Notes see Sheet 1.

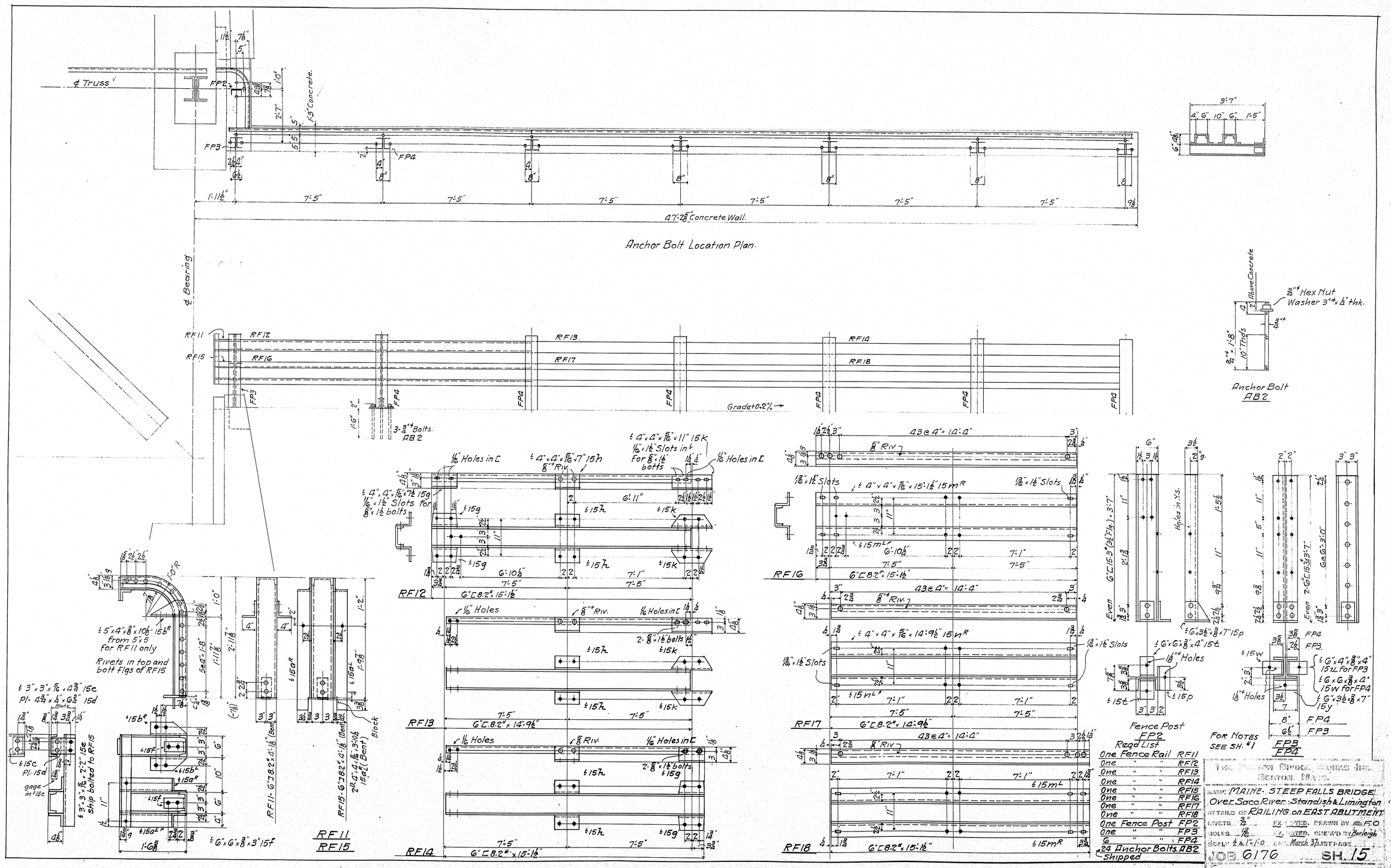
Shop Paint: One coat Red Lead except as noted.

THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

NAME MAINE STEEP FALLS BRIDGE
Over Saco River - Standish + Limington
DETAILS OF
RIVETS ⅞" EX. NOTED. DRAWN BY E.M.
HOLES 15/16" EX. NOTED. CHE'K'D BY Burleigh
SCALE 1"=1'-0" DATE LIST PAGE
JOB 6176. SH. 13.

330-37


For RF1: 6" [8.2# x 5'-7 3/8" 14a
For RF11 6" [8.2# x 5'-7 3/8" 14c
∟ 5" x 3" x 5/16" x 8" 14b
∟ do 14d R
11/16" Holes
Cope
∟ 5 x 3 1/2" x 5/16" x 1'-0 1/2" 14e
5/8" Rivet
5'-9"
6'-3 1/2"
Roadway Fender RF1 R
RF1 L opp. of hd shown.
RF11 R
RF11 L opp. of hd shown
Fill 4" x 5/16" x 1'-2" 14bv
Note break in gages.
Truss
2-3/8" Hex. Nuts
3 1/2" Thds.
5/8" Bent Rod 1'-2 1/2" long.
Hook Bolt HB1 for Fender Post Anchors.
Fender Post FP1
5/8" Rivet
(2-5/8" x 1 1/2" bolts for RF5
Field holes in RF4&6
(2-5/8" x 1 1/2" bolts in RF4
Field holes in RF5&6
6" [8.2# x 27'-5 1/2" 14t R for RF4 R&6
14t L " RF4 L&5
∟ 14m for RF5
∟ 14m for RF4
∟ 14m for RF4&6
∟ 14m for RF5&6
∟ 14p
∟ 14h
2-5/8" x 1 1/2" bolts for RF4&6
Field holes in RF5
2-5/8" x 1 1/2" bolts in RF5&6
Field holes RF4
11/16" Holes
27'-6"
RF4 R
RF4 L opp. of hd. shown.
RF5
RF6
79 @ 4" = 26'-4"
6"] 8.2# x 27'-5 1/2" 14at
∟ 5 x 3 1/2" x 5/16" x 27'-5 1/2" 14au
15/16" x 2" Slot. Holes.
∟ 5 x 3 1/2" x 5/16" x 27'-5 1/2" 14av
15/16" Slot. Holes
27'-0"
RF9 R
RF9 L opp. of hd. shown.
6"] 8.2# x 27'-5 1/2" 14 ba
∟ 5 x 3 1/2" x 5/16" x 27'-5 1/2" 14 bb
Rivet spacing in top and bott. flgs same as in RF9.
15/16" Slot. Holes
15/16" x 2" Slot. Holes
∟ 5 x 3 1/2" x 5/16" x 27'-5 1/2" 14bc
27'-6" W.P.
RF10 R
RF10 L opp. of hd shown.
10 @ 4" = 3'-4"
∟ 5 x 3 1/2" x 5/16" x 4'-6" 14ac RF7
do x 4'-6 1/2 14ad RF12
∟ 4 x 4 x 5/16" x 0'-7" 14ae for RF7
14af " RF12
6" [8.2# x 4'-7 1/2 14aa for RF7
do x 4'-7 1/2 14ab " RF12
∟ 14b for RF7
∟ 14d " RF12
Cope
4'-10 5/16"
RF7 R
RF7 L opp. of hd shown
RF12 R
RF12 L opp of hd shown
∟ 5 x 3" x 5/16" x 8" 14k
6 1/2" Cope
11/16" Holes in 14g
11/16" x 1 1/2" Slots in 14m
∟ 5/8" x 1 1/2" bolts
∟ 5 x 3 1/2" x 5/16" x 7" 14h
∟ 5 x 3 1/2" x 5/16" x 11" 14m
15/16" x 2" Slotted holes
6" [8.2# x 20'-6 3/4" 14g
∟ 14h
11/16" Holes
21'-9"
RF2 R
RF2 L opp. of hd. shown.
2-5/8" x 1 1/2" bolts
11/16" holes in 14bt
6"] 8.2# x 27'-5 1/2" 14bt
∟ 5 x 3 1/2" x 5/16" x 1'-2" 14n
∟ 14m
∟ 14h
∟ 14n
27'-6"
RF3 R
RF3 L opp. of hd. shown.
Pl. 9" x 5/16" x 1'-1 1/2" 14bf
∟ 5 x 3 1/2" x 5/16" x 12'-4 1/2" 14bd
Pl. 14bf
2 Pls. 6 1/2" x 5/16" x 3'-3 1/2" 14bk for HS3 only.
22 Loc. Bars 22" x 5/16" x 1'-2 1/2 14bg
∟ 5 x 3 1/2" x 5/16" x 12'-7 1/2" 14be
22 @ 5 1/2" = 10'-6 1/2"
13'-9 1/2" W.P.
2 Pls. 6 1/2" x 5/16" x 1'-9 1/2" 14bh for HS3 only.
Top of ∟
Holes for HS1.
10'-10 1/2"
Hor. Struts on Truss Members. HS1 & HS3
Remainder like HS1
HS2 13'-9 1/2" W.P.
2 Pls. 6 1/2" x 5/16" x 2'-9" 14bm for HS2 only.
∟ 5 x 3 1/2" x 5/16" x 12'-7 1/2" 14bn
22 Bars 14bg
∟ 5 x 3 1/2" x 5/16" x 12'-7 1/2" 14bp
22 @ 5 1/2" = 10'-6 1/2"
Holes for HS4
Pl. 14bm for HS5 only
Pl. 14bk for HS5 only.
63 @ 4" = 21'-0"
6" [8.2# x 21'-10 3/8" 14ak
∟ 5 x 3 1/2" x 5/16" x 21'-4 3/8" 14am
15/16" x 2" Slotted Holes
∟ 5 x 3 1/2" x 5/16" x 22'-2 1/2" 4an
∟ 14p
∟ 4 x 4 x 5/16
W.L. End Post
23'-1 15/16" W.P.
RF8 R
RF8 L opp. of hd. shown.
FOR NOTES SEE SHEET No 1
Reqd. List.
One Road. Fend. RF1 R
One " " RF1 L
2 " " RF2 R
2 " " RF2 L
2 " " RF3 R
2 " " RF3 L
2 " " RF4 R
2 " " RF4 L
2 " " RF5
2 Road Fend. RF6
One " " RF7 R
One " " RF7 L
2 " " RF8 R
2 " " RF8 L
2 " " RF9 R
2 " " RF9 L
4 " " RF10 R
4 " " RF10 L
4 " " HS5
96 Hook Bolts HB1
HS4
HS5 as noted.
One Road. Fend. RF11 R
One " " RF11 L
One " " RF12 R
One " " RF12 L
2 Hor. Struts HS1
2 " " HS2
4 " " HS3
4 " " HS4
4 " " HS5
16 Fender Post FP1
THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.
NAME MAINE - STEEP FALLS BR.
Over Saco River - Standish & Limington
DETAILS OF ROADWAY FENDERS & STRUTS
RIVETS 7/8" EX. NOTED. DRAWN BY E.F.O.
HOLES 15/16" EX. NOTED. CHEK'D BY Burleigh
SCALE 1" = 1'-0" DATE Nov 12 '36 LIST PAGE
JOB 6176 SH. 14
Revised 4/20/37
30838
0 1 2 3 4 5 INCHES

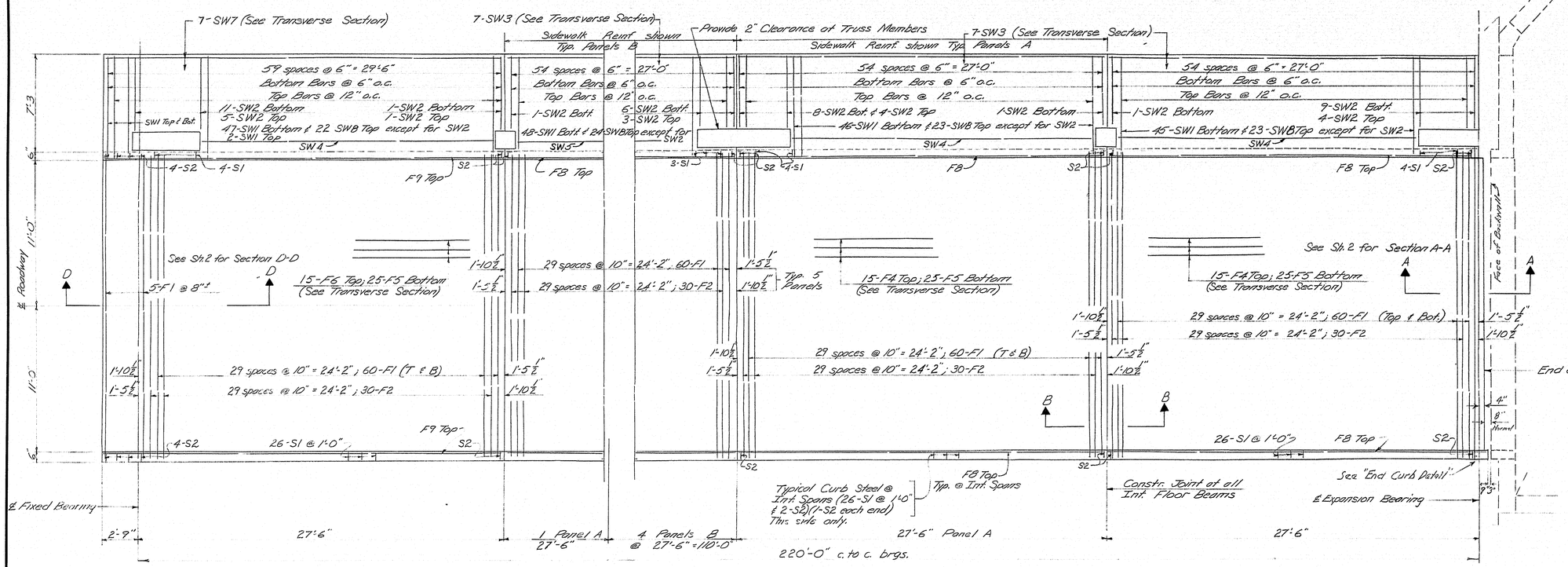


THE BOSTON BRIDGE WORKS INC.
BOSTON, MASS.

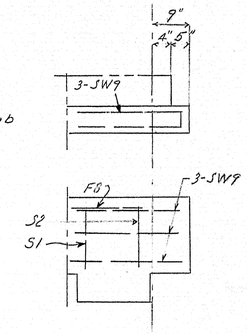
NAME: MAINE - STEEP FALLS BRIDGE
Over Saco River - Standish & Limington
DETAILS OF RAILING on EAST ABUTMENT
RIVETS 3/4" EX. NOTED. DRAWN BY E.F.O.
HOLES 13/16" EX. NOTED. CHK'D BY Burleigh
SCALE 1/2 & 1" = 1'-0" DATE March 37 LIST PAGE
JOB 6176 SH. 15

30-39

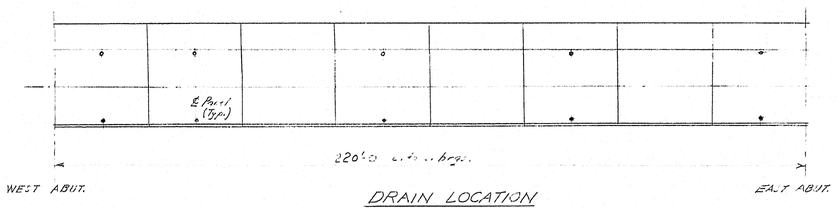
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



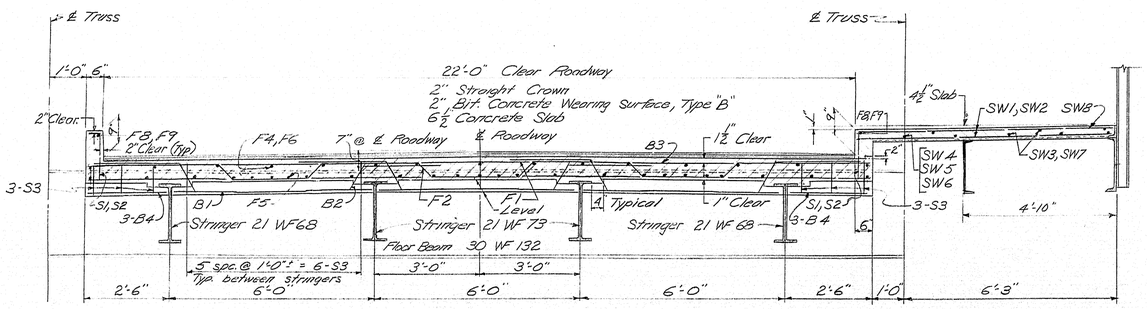
PLAN



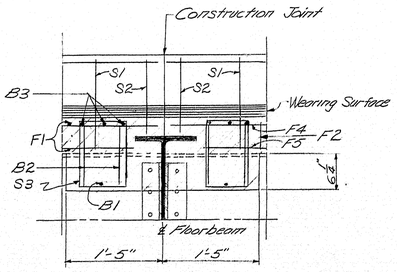
END CURB DETAIL



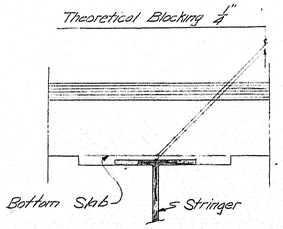
DRAIN LOCATION
10 - REQUIRED



TRANSVERSE SECTION



SECTION B-B
Typical at Intermediate Floor Beams



BLOCKING

NOTES

Loading: H20-44

All concrete to be class A.

An approved type of epoxy resin shall be used as a waterproofing between the concrete deck slab and the wearing surface. A light coat of sand shall be spread on the waterproofing while it is still tacky.

Epoxy resin shall be applied to the sidewalk, top of curbs, face of curbs, and back of curb where possible. No sand applied to curbs or sidewalk.

Top of Floor Beams shall be coated with epoxy resin.

Epoxy resin shall be applied to bridge seat front face & top of backwall - East Abutment.

DESIGN- R. GRAY TRACE- CHECK- H.L.D.	BRIDGE NO. 3328 SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.

SUPERSTRUCTURE

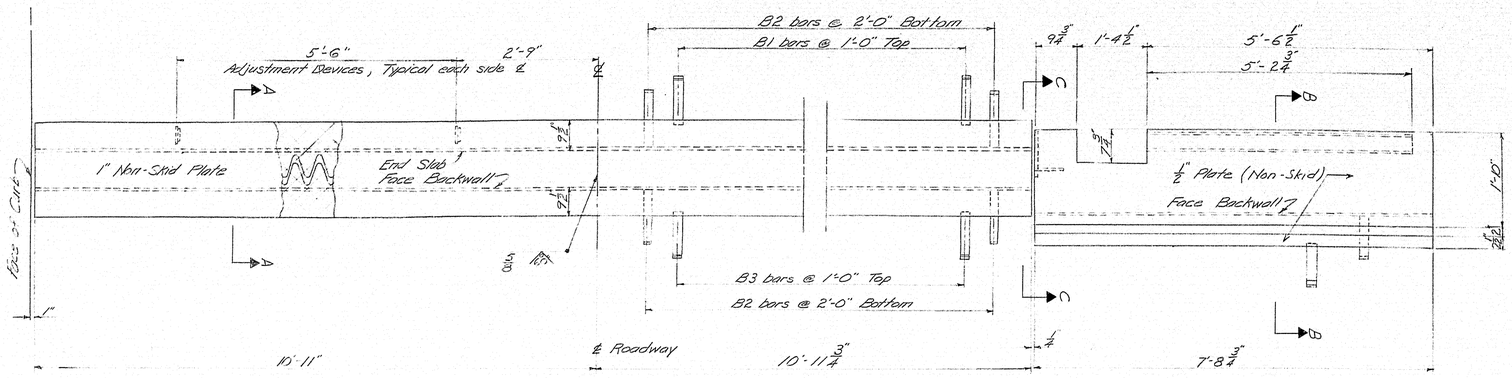
SHEET 1 OF 3 AUGUSTA, MAINE August 1963

C. B. CO., NO. 44-302 28216

87-83

0 1 2 3 4 5 INCHES

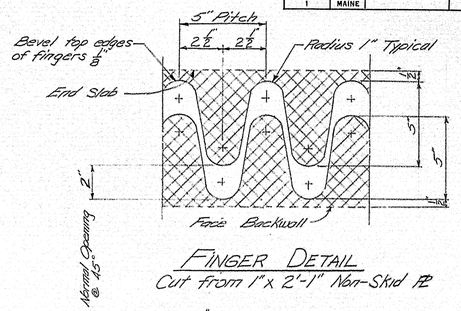
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



PLAN EXPANSION DAM

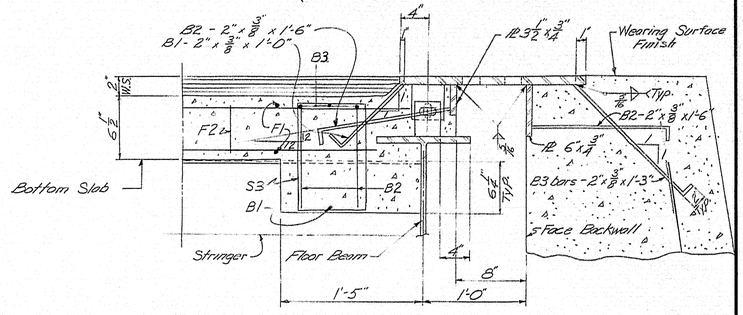
Steel shall be ASTM designation A7 or A36.

Note: B1, B2 & B3 bars typical each side of ℄.

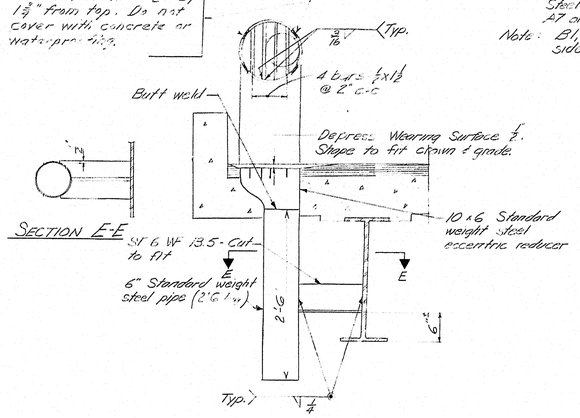


FINGER DETAIL

Cut from 1" x 2'-1" Non-Skid PL



SECTION A-A



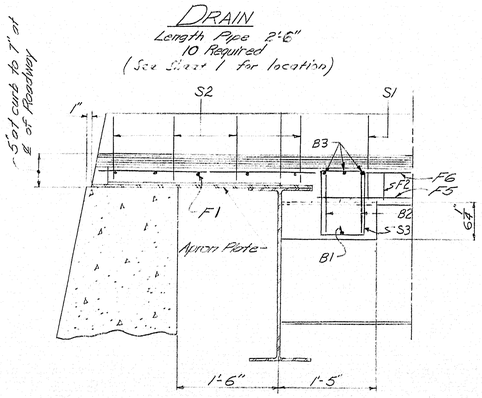
SECTION E-E

DRAIN

Length Pipe 2'-6"

10 Required

(See Sheet 1 for location)



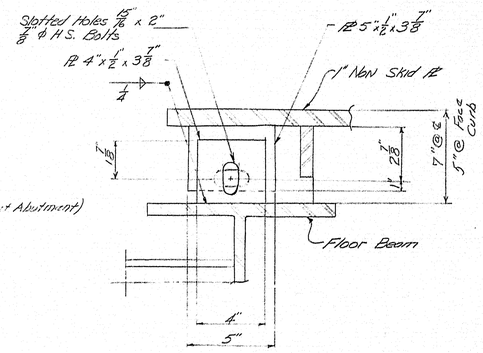
SECTION D-D

Apron plates on West Abutment to be left in place. Concrete to be placed as shown in Detail.

STRUCTURAL STEEL REQUIRED

One-Expansion Dam, Roadway and Sidewalk (East Abutment)

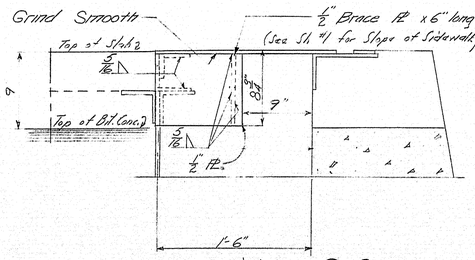
10-Drains



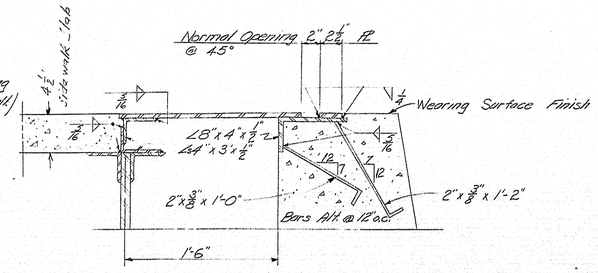
AJUSTMENT DEVICE

After Unit is in its final position weld PL's together with 1/4" fillet.

4 Required



VIEW C-C



SECTION B-B

DESIGN- R. GRAY TRACE- CHECK- H.L.D.	BRIDGE NO. 3328 SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.

EXPANSION DAM, DRAINS

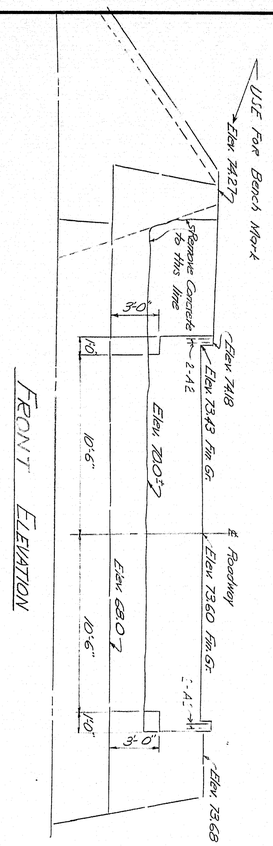
SHEET 2 OF 3 AUGUSTA, MAINE August 1963

87-84

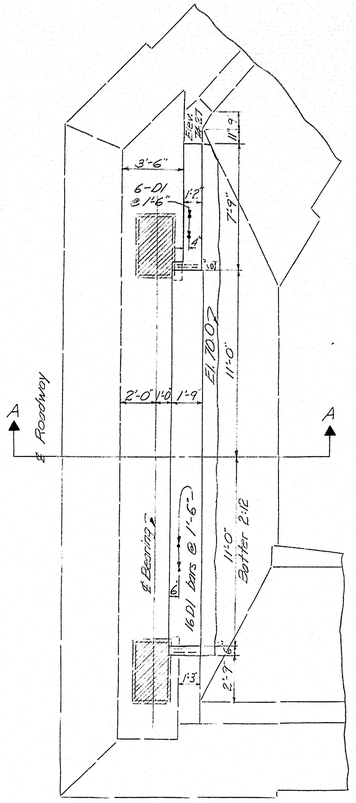
C. D. CO., NO. 44-302 26816

0 1 2 3 4 5 INCHES

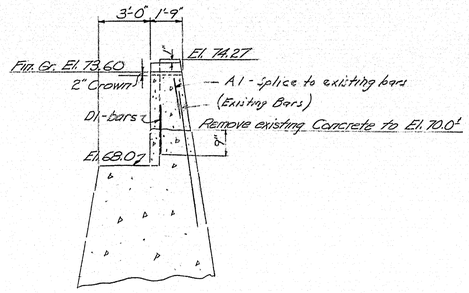
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



FRONT ELEVATION

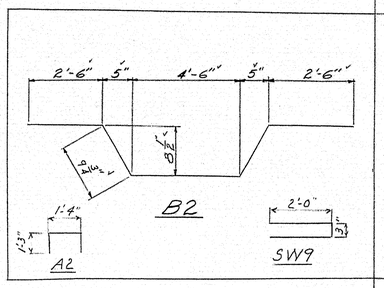


PLAN

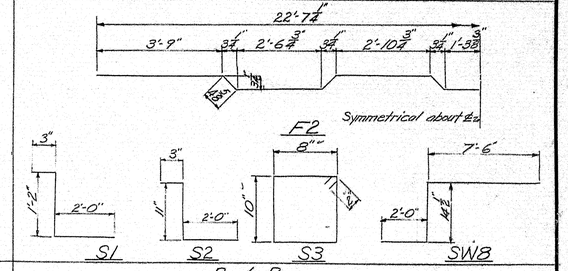


SECTION A-A

Drill 1½" x 9" holes in existing Abut. after concrete has been removed to El. 70.0±. Grout D1 dowels in holes.



REINFORCING STEEL SCHEDULE



Bent Bars

Mark	Size	No.	Length	Location
F2	#5	240	23'-3½"	Slab
S1	#4	236	3'-5"	Curbs
S2	#4	38	3'-2"	Curbs
S3	#4	384	3'-4"	Edge Beams Slab
B2	#7	96	11'-1½"	" " "
SW8	#4	187	10'-10"	Sidewalk & Curb
SW9	#3	3	4'-3"	End of Curb
A2	#3	4	3'-10"	East Abutment Curbs

Straight Bars

Mark	Size	No.	Length	Location
F1	#5	485	28'-8"	Slab
F4	#5	105	27'-2"	Top-Slab
F5	#5	200	26'-3"	Bottom-Slab
F6	#5	15	29'-11"	Top-Slab
A1	#5	23	2'-0"	Backwall East Abut. (Splice to existing bars)
F8	#4	14	27'-2"	Top Curb
F9	#4	2	29'-11"	Top Curb
SW1	#4	378	7'-5"	Sidewalk Slab
SW2	#4	98	5'-2"	" "
SW3	#4	49	27'-2"	" "
SW4	#4	4	21'-10"	" "
SW5	#4	4	22'-11"	" "
SW7	#4	7	29'-11"	" "
D1	#6	22	1'-6"	Dowels - West Abutment
B1	#6	48	5'-3"	Edge Beam Slab
B3	#6	48	22'-8"	" " "
B4	#4	96	2'-3"	" " "

NOTE: All dimensions are to ℄ of bars.
Reinforcing steel to be intermediate grade.

DESIGN- R. GRAY
TRACE-
CHECK- H. L. D.

BRIDGE NO. 3328
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

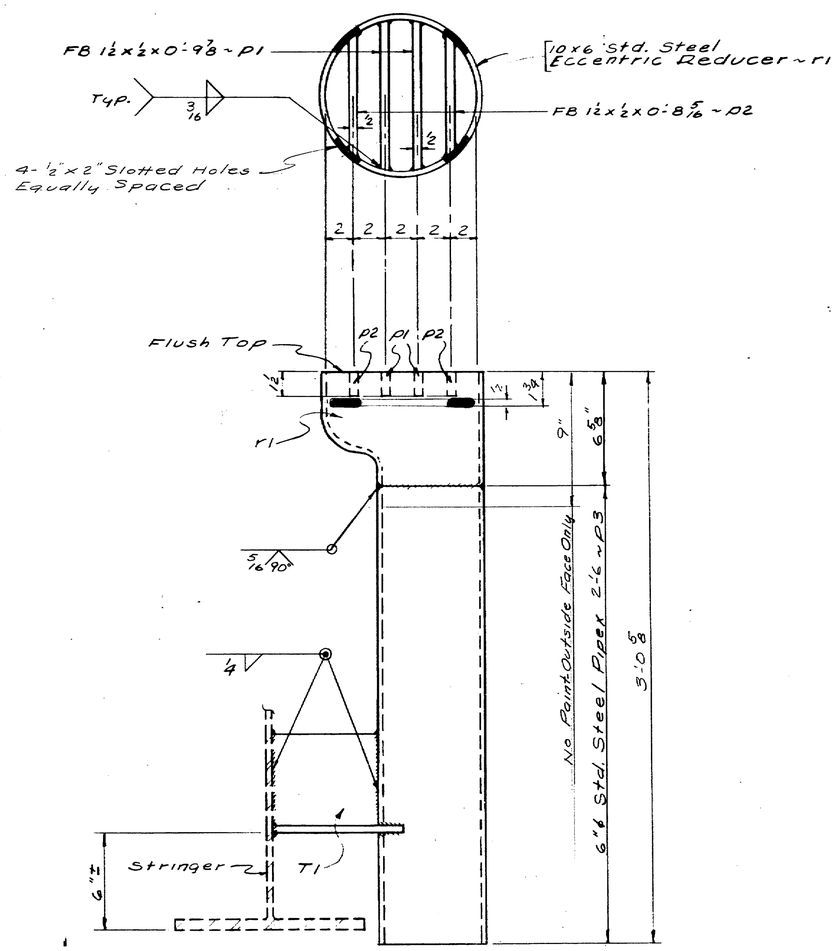
STEEP FALLS BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH, CUMBERLAND CO.
AND
LIMINGTON, YORK CO.

EAST ABUTMENT, REINF STEEL

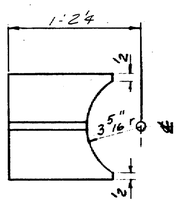
SHEET 3 OF 3 AUGUSTA, MAINE August 1963

87-85

C. S. CO., NO. 44-302 88814



DRAIN DR1 ~ 10 REQ'D.



ST 6 WF 13.5 x 1'-0 3/8 ~ T1
10 REQ'D.

NOTE: SEE STATE'S DWGS. FOR DRAIN LOCATION

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
DR1	10		Shop Assy	—	—		
T1	10		ST6WF13.5	1	0 3/8		
	20	P1	FB 1½x½	0	9⅞		
	20	P2	do	0	8 5/16		
	10	P3	6ø Std. Pipe	2	6		
	10	R1	10x6	0	7		Std. Steel Eccentric Reducer Req. # 1078
			ITEM NO. 702-103				

BILL OF MATERIAL — DWG. NO. 63-258-S1

SHOP CONNECTIONS: WELDED
FIELD CONNECTIONS: WELDED
HOLES: ———
PAINT: PER ME. STATE SPECS. RED LEAD & OIL & AS NOTED

DRAIN DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

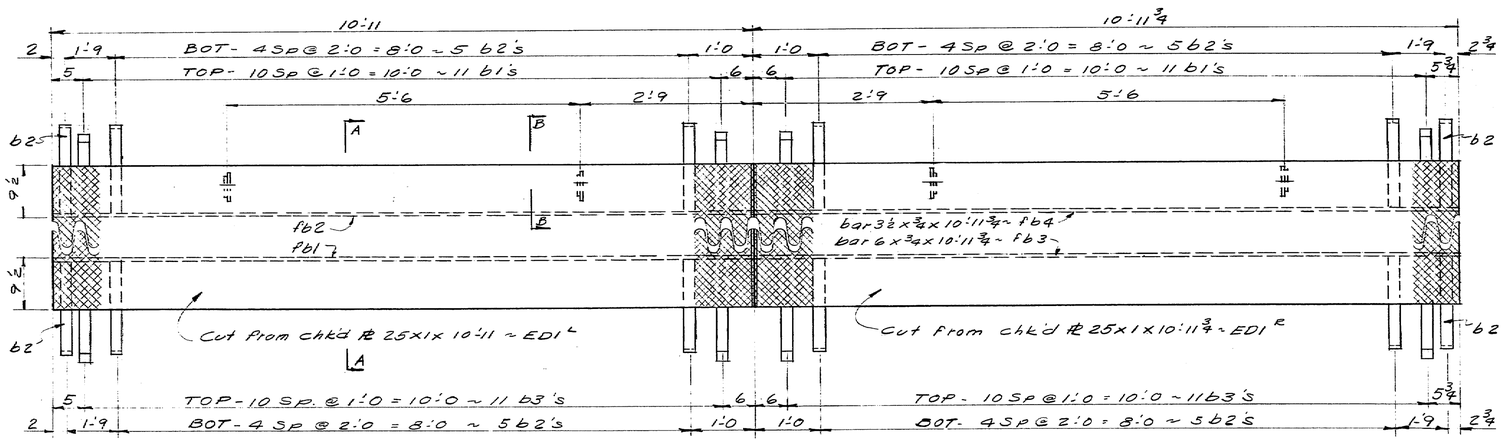
STEEP FALLS BRIDGE OVER SACO RIVER BETWEEN STANDISH & LIMINGTON, ME.

CUSTOMER ME. STATE HIGHWAY COMM.
DESIGNER M.S.H.C.

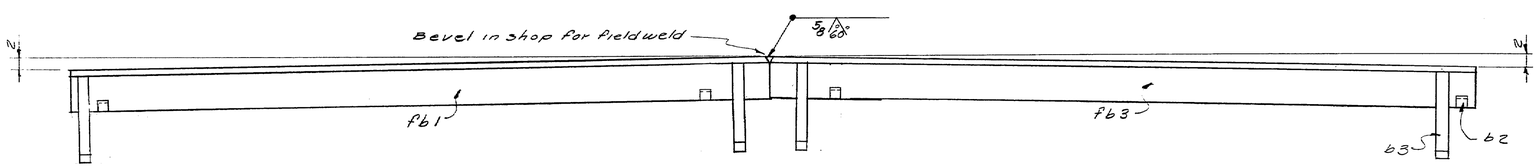
DRAWN	7-3-63	T.F.G.
REVISION		
REVISION		
REVISION		

ORDER NO. ——— DWG. NO. 63-258-S1

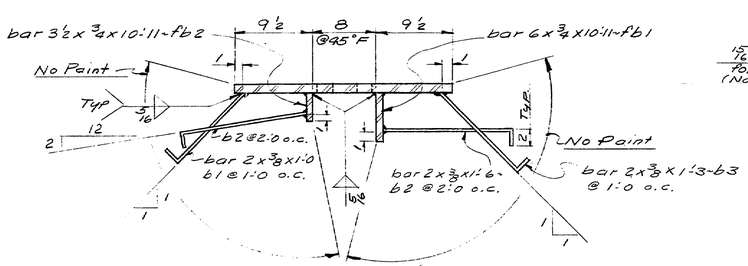
156-171



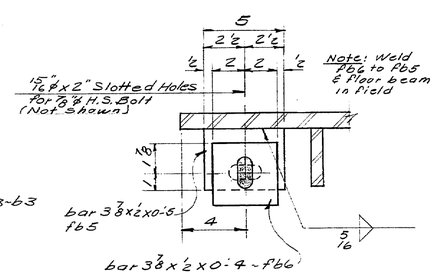
PLAN ~ EXPANSION DAM @ EAST ABUT.



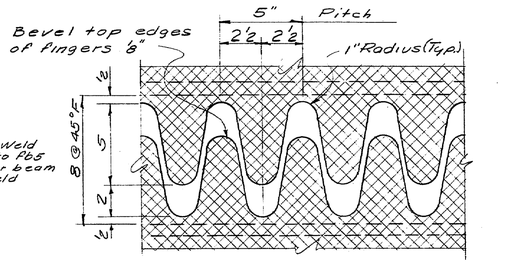
ELEVATION



SECTION A-A



SECTION B-B

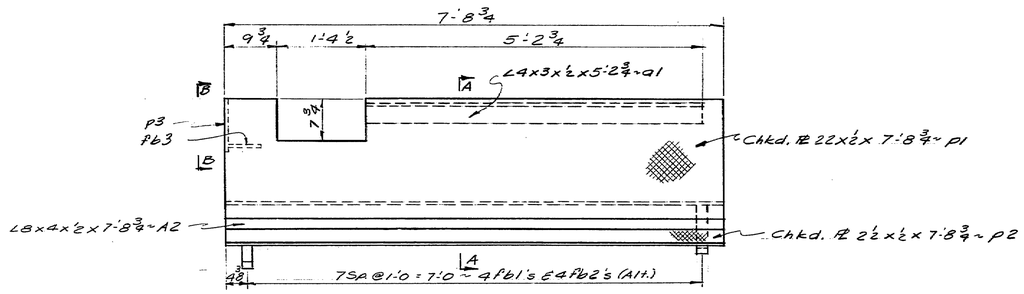


FINGER DETAIL

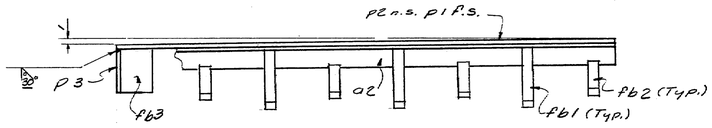
Cut from one plate and match mark.

NOTE:
PROVIDE TEMPORARY CONN. BETWEEN 2 PLATES OF EDI R
DO THE SAME FOR EDI L

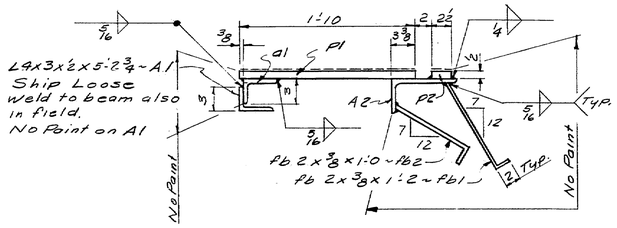
SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
EDI R	1		PL 25 x 1	10	11 3/4		Checkered PL
EDI L	1		do	10	11		do
	22	b1	fb 2 x 3/8	1	0		
	24	b2	do	1	6		
	22	b3	do	1	3		
	1	fb1	fb 6 x 3/4	10	11		
	1	fb2	fb 3 1/2 x 3/4	10	11		
	1	fb3	fb 6 x 3/4	10	11 3/4		
	1	fb4	fb 3 1/2 x 3/4	10	11 3/4		
	4	fb5	fb 3 3/8 x 2	0	5		
	4	fb6	do	0	4		
	4	Shop	7/8" H.S. Bolt	0	2 1/2		High Strength Bolt
	8	do	7/8" Washer				Hard Washer



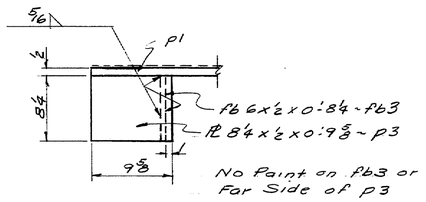
PLAN - SIDEWALK DAM EAST ABUT.
ED2 ONE REQ'D.



ELEVATION



SECTION A-A



SECTION B-B

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
ED2	1		Shop Assy	—	—		
A1	1		L4x3x1/2	5	2 3/4		No Point
	1	p1	Pl 22x1/2	7	8 3/4		Checkered Pl
	1	p2	Pl 2 1/2x1/2	7	8 3/4		do
	1	a1	L4x3x1/2	5	2 3/4		
A2	1		L8x4x1/2	7	8 3/4		
	4	Pb1	Pb 2x3/8	1	2		
	4	Pb2	do	1	0		
	1	Pb3	Pb 6x1/2	0	8 1/4		
	1	p3	Pl 8 1/4x1/2	0	9 5/8		
			ITEM 702-103				

BILL OF MATERIAL — DWG. NO. 63-258-S3

SHOP CONNECTIONS: WELDED
FIELD CONNECTIONS: WELDED
HOLES: —
PAINT: PER ME. STATE SPECS.
RED LEAD & OIL & AS NOTED
BRIDGE NO. 3328

EXPANSION DAM DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

STEEP FALLS BRIDGE
OVER SACO RIVER BETWEEN
STANDISH & LIMINGTON, ME.

CUSTOMER ME. STATE HIGHWAY COMM.
DESIGNER DO
ORDER NO.
DWG. NO. 63-258-S3

DRAWN	9-4-63	TFG
REVISION		
REVISION		
REVISION		

156-173

F.H.W.A. REGN. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	1	70

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS
STANDISH-LIMINGTON
CUMBERLAND & YORK COUNTIES
FEDERAL AID PROJECT NO. RF-012-1(18)
TOTAL LENGTH 0.326 MILES

CONVENTIONAL SIGNS

COUNTY LINES
TOWN LINES
PROPERTY LINES
R/W LINES - EXISTING
R/W LINES - NEW - ACCESS CONTROL
R/W LINES - NEW - NO ACCESS CONTROL
CULVERT - EXISTING
CULVERT - PROPOSED
CURBING - EXISTING
CURBING - PROPOSED
TRAVELLED WAY - EXISTING
TRAVELLED WAY - PROPOSED
UNDERGROUND UTILITIES - EXISTING
UNDERGROUND UTILITIES - PROPOSED
RAILROAD - SINGLE TRACK
RAILROAD - DOUBLE TRACK
UTILITY POLE - EXISTING
UTILITY POLE - JOINT OCCUPANCY
PROPOSED UTILITY POLE - TEMPORARY
PROPOSED UTILITY POLE - PERMANENT
TREES — hardwood, softwood
WOODS

INDEX OF SHEETS

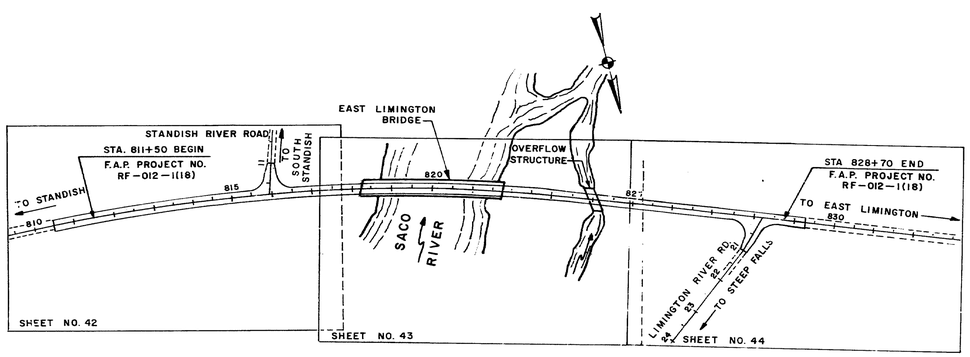
TITLE SHEET — 1
ESTIMATED QUANTITIES — 2
BRIDGE CONSTRUCTION NOTES — 3
GENERAL PLAN (BRIDGE) — 4
PROFILE (BRIDGE) — 5
FOUNDATION SURVEY AND BORING DETAILS — 6-8
EAST LIMINGTON BRIDGE PLANS — 9-23
OVERFLOW STRUCTURE BRIDGE PLANS — 24-28
BRIDGE STANDARD DETAILS AND HIGHWAY STANDARD DETAILS — 29-39
DRAINAGE SUMMARY, GENERAL NOTES, AND TYPICAL ENTRANCE PLANS — 40
TYPICAL SECTIONS — 41
SURVEY PLAN (HIGHWAY) — 42-44
SURVEY PROFILE (HIGHWAY) — 45-47
SIDE ROAD PROFILES — 48
CROSS SECTIONS (HIGHWAY) — 49-66
RIGHT OF WAY MAPS — 67-70

HIGHWAY STANDARD DETAILS

AUG 1969	1	CATCH BASINS AND MANHOLES
AUG 1969	3	CURB, DITCHES, SLOPES & CATCH BASINS TYPE E
AUG 1969	5	GUARD RAIL, EROSION CONTROL
AUG 1969	6	GUARD RAILS
AUG 1969	9	BEAM GUARD RAIL END TREATMENT
AUG 1969	11	BARRICADES, WARNING SIGNS AND MONUMENTS, ETC.
AUG 1969	12	DRIVEWAY DETAIL & FIELD OFFICE

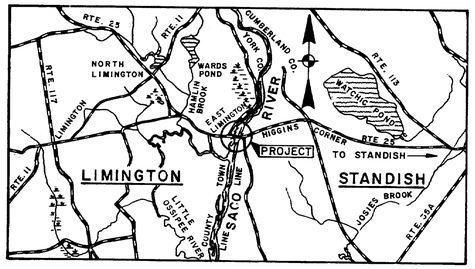
BRIDGE STANDARD DETAILS

BD 100-71	BEARING PEDESTALS
BD 104-73	ARMORED JOINT; DRAINS, SHEAR CONNECTORS; ETC.
BD 114-73	ALUMINUM BRIDGE RAILING
BD 113-72	DIAPHRAGMS AND CROSSFRAMES



LAYOUT PLAN

100 0 100 200
SCALE OF FEET



LOCATION MAP

1 0 1 2
SCALE OF MILES

NOTE:
ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE 1968.) AND SUPPLEMENTS THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.

TRAFFIC DATA

A.D.T. 2860 1976
A.D.T. 5460 1996
D.H.V. 655
T. (%) 8
D. (%) 60
V.
P.S.D. (%)
18 KIPS 146

COAST GUARD PERMIT NUMBER 49-77

APPROVED:
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
COMMISSIONER — DATE
CHIEF ENGINEER AND BUREAU DIRECTOR

Project completed 1973
As-Built Plans on file

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1
APPROVED:
DIVISION ENGINEER — DATE

168-105

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	12-1[illegible]	2	70

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY: EAST LIMINGTON BRIDGE	OVERFLOW STRUCTURE		HIGHWAY	TOTAL	UNIT
201.11	Clearing				1	1	Acre
202.[illegible]	Removal of Existing Superstructure (Property of Contractor)	Nec.				Nec.	L.S.
202.[illegible]	Removal of Existing Superstructure (Property of Contractor)		Nec.			Nec.	L.S.
202.16	Removal of Existing Structural Concrete	320				320	C.Y.
202.17	Removal of Existing Structural Concrete	Nec.				Nec.	L.S.
203.20	Common Excavation				2400	2400	C.Y.
203.21	Common Borrow				1400	1400	C.Y.
203.25	Granular Borrow	1300	400		500	2200	C.Y.
206.06	Str. Earth Excav.-Drainage & Minor Strs.				130	130	C.Y.
206.09	Str. Earth Excav.-Abut. & Ret. Walls	20	260			280	C.Y.
206.09	Str. Rock Excav.-Abut. & Ret. Walls		20			20	C.Y.
206.10	Str. Earth Excav.-Piers	655				655	C.Y.
301.09	Plant Mix Bituminous Base Course, Grading B				470	470	Ton
304.10	Aggregate Subbase Course-Gravel	320			5580	5900	C.Y.
403.07	Hot Bit. Pavement, Grading B				650	650	Ton
403.08	Hot Bit. Pavement, Grading C				470	470	Ton
403.101	Hot Bit. Pavement, Grading D (Sidewalks, Drives, Etc.)				10	10	Ton
403.121	Hot Bituminous Pavement Grading E (Shimming)				15	15	Ton
410.14	Cut-back Asphalt, Applied				1240	1240	Gal.
410.15	Emulsified Asphalt, Applied				410	410	Gal.
410.16	Cover Coat Material, Sand				30	30	C.Y.
410.161	Cover Coat Material, Sand (Leveling)				70	70	C.Y.
501.212	Steel H-beam Piles 42 lbs/Ft.	780				780	L.F.
502.21	Structural Concrete, Abut. & Retaining Walls	194	125			319	C.Y.
502.22	Structural Concrete, Piers	540				540	C.Y.
502.24	Struct. Conc., Piers (Placed Under Water)	530				530	C.Y.
502.26	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	Nec.				Nec.	L.S.
502.33	Structural Concrete, Wearing Surface on Bridges	Nec.				Nec.	L.S.
502.30	Structural Concrete, Box Culverts		Nec.			Nec.	L.S.
502.31	Structural Concrete, Approach Slabs	Nec.				Nec.	L.S.
503.12	Reinforcing Steel, Fab. & Delivered	153,996	15,174			174,146	Lb.
503.13	Reinforcing Steel, Placing	153,972	15,174			174,146	Lb.
504.70	Structural Steel, Fab. & Delivered	Nec.				Nec.	L.S.
504.71	Structural Steel, Erection	Nec.				Nec.	L.S.
505.08	Shear Connectors	Nec.				Nec.	L.S.
507.141	Aluminum Bridge Railing Type A	630				630	L.F.
511.0701	Cofferdam, Pier #1	Nec.				Nec.	L.S.
511.0702	Cofferdam, Pier #2	Nec.				Nec.	L.S.
511.0703	Cofferdams, Overflow Structure		Nec.			Nec.	L.S.
512.06	French Drains	53	145			198	C.Y.
514.06	Cutting Border Concrete Cylinders	1				1	Each
515.20	Protective Coating for Concrete Surfaces	1,750				1,750	S.Y.
550.20	Expansion Joints	Nec.				Nec.	L.S.
603.[illegible]	15 inch Culvert Pipe, Option I				343	343	L.F.
603.119	18 inch Culvert Pipe, Option III				69	69	L.F.
604.03	Catch Basins Type B1-C				2	2	Each
604.24	Catch Basin, Type F				2	2	Each
606.26	Terminal End-Single Rail				4	4	Each
606.29	Single Posts-Type 10				5	5	Each
606.35	Guard Rail Delineator Posts				4	4	Each
606.55	Guard Rail Type 5-Single Rail				363	363	L.F.
606.70	Guard Rail Type 5-Curvilinear-Greater Than 12 Foot Radius				63	63	L.F.

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY: EAST LIMINGTON BRIDGE	OVERFLOW STRUCTURE		HIGHWAY	TOTAL	UNIT
609.13	Vertical Bridge Curb-Type 1	694				694	L.F.
609.21	Curb Type 3				700	700	L.F.
610.03	Plain Riprap	1700	43			1743	C.Y.
613.03	Bituminous Hot Sealing-Black				55	55	S.Y.
613.07	Loam				300	300	C.Y.
613.09	Seeding	45	55		125	180	S.Y.
613.14	Seeding, Method No. 2				60	60	Unit
613.15	Temporary Seeding				40	40	Lb.
613.16	Mulch				63	63	Unit
626.06	Right of Way Monuments				3	3	Each
626.07	Survey Monuments				5	5	Each
634.06	Project Markers				2	2	Each
683.05	Labor, Straight Time	20			10	30	M.Hr.
	Trucking Services				100	100	M.Hr.
631.10	Air Compressor (Inc. operator)	20			10	30	Hour
631.11	Air Tool (Inc. op.)	20			10	30	Hour
631.12	Air Powered Excavator (Incl. bkr. op.)	20			10	30	Hour
631.13	Bulldozer (Inc. op.)				10	10	Hour
631.14	Grader (Inc. op.)				10	10	Hour
631.171	Truck-small (Inc. op.)	20			10	30	Hour
631.15	Chain Saw Rental (Inc. op.)				10	10	Hour
631.22	Front End Loader (Inc. op.)	20			10	30	Hour
631.23	Crane (Inc. op.)	10				10	Hour
632.30	Warning Lights				2	2	Grp.
632.29	Portable Barricade				4	4	Each
637.07	Sprinkling				75	75	M.G.
637.03	Calcium Chloride				8	8	Ton
639.03	Field Office Type A				1	1	Each
639.11	Testing Facilities, Soils				Nec.	Nec.	L.S.
639.12	Testing Facilities, Bit. Mixes				Nec.	Nec.	L.S.
652.25	Maintenance of Traffic				Nec.	Nec.	L.S.
656.50	Baled Hay, in place				10	10	Each
656.51	Sandbags, in place				10	10	Each
656.55	Dumped Stone				3	3	C.Y.
656.60	Temporary Berms				3100	3100	L.F.
656.62	Temporary Stone Drains				30	30	L.F.
659.251	Seed and Application Method A				65	65	Unit
659.12	Mobilization	Nec.	Nec.		Nec.	Nec.	L.S.
660.21	On-the-Job Training (Bit)				1000	1000	M.Hr.

SUMMARY OF EXCAVATION AND BORROW

COMMON EXCAVATION FOR ESTIMATE

Common Excavation (From Cross Sections) — [illegible] C.Y.
Earth From Loam Salvaged Excavation, Etc. — [illegible] C.Y.
Grubbing in Fill Section — [illegible] C.Y.
Total Common Excavation — [illegible] C.Y.

FILL FOR COMMON BORROW CALCULATIONS

Common Fill (From Cross Sections) — [illegible] C.Y.
Grubbing Fill Areas — [illegible] C.Y.
Fill For Loam — [illegible] C.Y.
Total Fill — [illegible] C.Y.

AVAILABLE EARTH EXCAVATION FOR COMMON BORROW CALCULATIONS

1) Total Common Excavation — 2,342 C.Y.
Grubbing in Cut — [illegible] C.Y.
Grubbing in Fill — [illegible] C.Y.
2) Total Grubbing — [illegible] C.Y.
3) Waste Disposal Area — 403 C.Y.
Grubbing to be Disposed Off Project (2 Minus 3) — 0 C.Y.
Total Available Nonrock Excavation (1 Minus 3) — 1941 C.Y.

COMPUTATION OF COMMON BORROW FOR ESTIMATE

4) Total Fill — 11,[illegible] C.Y.
Total Available Nonrock Excavation — 1941 X 0.85 = 1650 C.Y.
5) Total Available Excavation — 1650 C.Y.
6) Total Fill Minus Total Available Excavation (4 Minus 5) — [illegible] C.Y.
7) Granular Borrow For Traffic Maintenance — 435 C.Y.
Deduct Granular Borrow For Traffic Maintenance (6 Minus 7) — [illegible] C.Y.
Common Borrow — [illegible] X 1.15 = 10,[illegible] C.Y.

COMPUTATION OF GRANULAR BORROW FOR ESTIMATE

Granular Borrow To Maintain Traffic — 435 / 1.15 = 570 C.Y.
Granular Borrow For Abutments* — 1475 X 1.15 = 1700 C.Y.
Total Granular Borrow — 2200 C.Y.

*Not include in cut and fill quantities.

ESTIMATED QUANTITIES FOR LUMP SUM ITEMS

(EAST LIMINGTON BRIDGE)

502.26 Structural Concrete, Roadway and Sidewalk Slabs on Steel Bridges — 470 C.Y.
502.33 Structural Concrete, Wearing Surface on Bridges — 149 C.Y.
502.31 Structural Concrete, Approach Slab — 23 C.Y.
504.70 Structural Steel, Fab. & Delivered — 336,300 Lb.
504.71 Structural Steel, Erection — 336,300 Lb.
505.08 Shear Connectors — 3030 Each

(OVERFLOW STRUCTURE)

502.30 Structural Concrete, Box Culverts — 125 C.Y.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH-CUMBERLAND COUNTY
& LIMINGTON-YORK COUNTY
ESTIMATED QUANTITIES
AUGUSTA, MAINE

168-106

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN-DETAILED	[illegible]	12-14-[illegible]
CHECKED	[illegible]	[illegible]
REVISIONS		
FIELD CHANGES		

JANUARY 1966

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	BIR-1(13)	3	76

OVERFLOW STRUCTURE

1) Payment for removal of the existing superstructure will be made under Item 202.1002, Removal of Existing Superstructure (Property of Contractor).

2) The existing concrete and stone abutments and concrete pier shall be removed to streambed as directed by the Engineer. The wings shall be removed to 1 Ft. below subgrade. Payment will be made under Item 206.03, Structural Rock Excavation - Abutments and Retaining Walls.

3) Concrete for footings and mass wingwalls will be paid under Item 502.21, Structural Concrete, Abutments and Retaining Walls. All other concrete will be paid under Item 502.30, Structural Concrete, Box Culverts.

4) The Structural Excavation required for the overflow structure within the limits shown on the plans will be paid for under Item 206.05 and Item 206.09.

5) The Structural Excavation required below elevation 217.00 will be paid for at 1½ times the contract unit price for Items 206.05 and 206.09.

EAST LIMINGTON BRIDGE

1) Payment for removal of the existing superstructure including the concrete bridge rail will be made under Item 202.1001, Removal of Existing Superstructure (Property of Contractor)

2) The existing mass concrete piers shall be removed to Elevation 215.0 or to the top of the footings at the contractors option. Payment will be made under Item 202.17, Removal of Existing Structural Concrete.

3) The existing mass concrete abutments shall be removed to 2 Ft. below the finish slopes. Payment will be made under Item 202.12, Removal of Existing Structural Concrete.

4) The 12 inches of aggregate subbase course gravel under the riprap shall extend down to Elevation 220.0 or to existing ground whichever is lower. Excavation for placing of the 12 inches aggregate subbase course gravel will be considered incidental to related contract items and no separate payment will be made.

5) Payment for End Post concrete will be made under Item 502.21, Structural Concrete, Abutments and Retaining Walls. Payment for the reinforcing steel in the End Posts will be made under Item 503.12 and 503.13, Reinforcing Steel. Payment for Guard Rail anchors and additional guard rail posts will be considered incidental to related contract items.

6) Payment for excavation required above the finish grade of the riprap slopes in the general area of the existing abutments will be made under Item 203.20, Common Excavation.

7) Structural Earth Excavation - Piers, required below Elevation 195.00 at Pier No. 1 and below Elevation 200.00 at Pier No. 2 will be paid for at 1½ Times the contract unit price for Item 206.10.

GENERAL

1) Fill material placed below Elevation 227.00 or below an Elevation one foot above the water elevation at the time of placement, whichever is greater, shall be Gravel Borrow which meets the requirements of Subsection 703.19, Material for Underwater Backfill.

2) Embankments below elevation 226.00 shall not be left unprotected for a period exceeding 2 days from the time the material is placed. Riprap shall be placed over the embankments as soon as practical after the material is placed.

3) The excavation and embankment construction required shall be done in a manner which will cause as little stream pollution as practical and in a manner approved by the Engineer.

4) The Contractor shall maintain two-way traffic on the existing structures until such time as two-way traffic is maintained across the new structures. No direct compensation will be made for work or materials required to maintain two-way traffic, and such cost will be considered incidental to related contract items.

5) The Contractor shall submit a proposal for hoisting operations 10 days in advance, for approval. Approval will not relieve the contractor of full responsibility for resulting damages.

REFERENCE

See sheet 40 of 70 for General Notes pertaining to approaches.

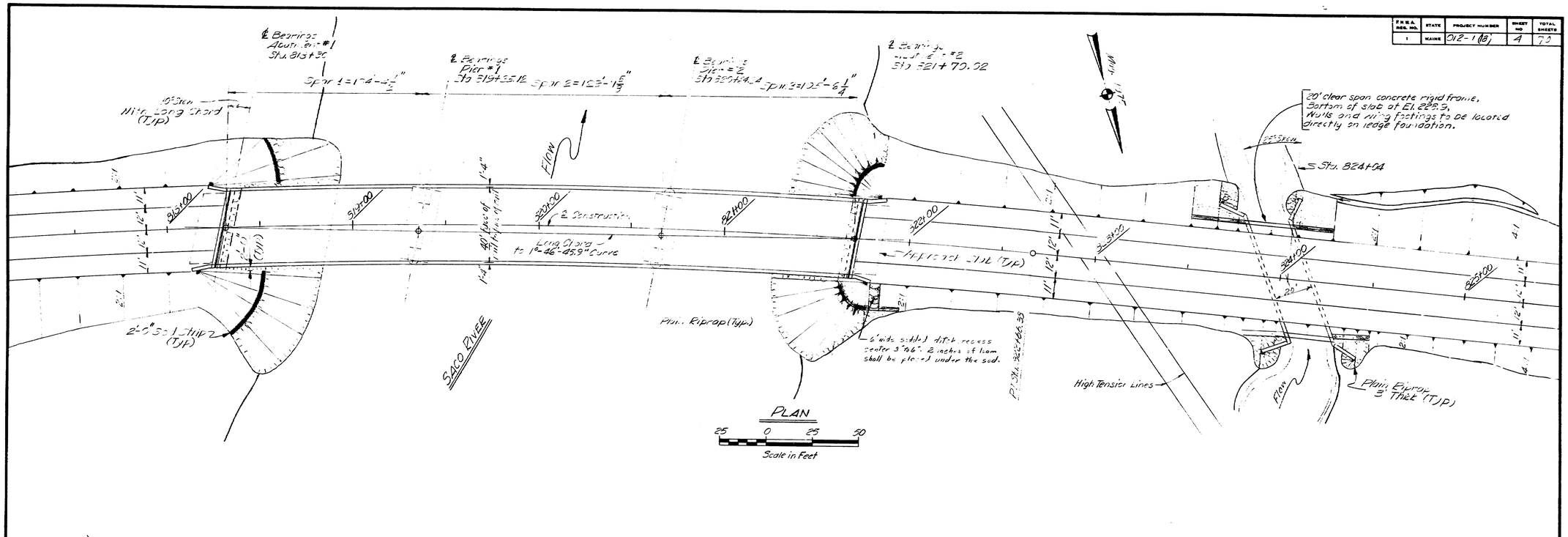
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED	M.L.L.	2/1/82
	REVISIONS		
	FIELD CHANGES		

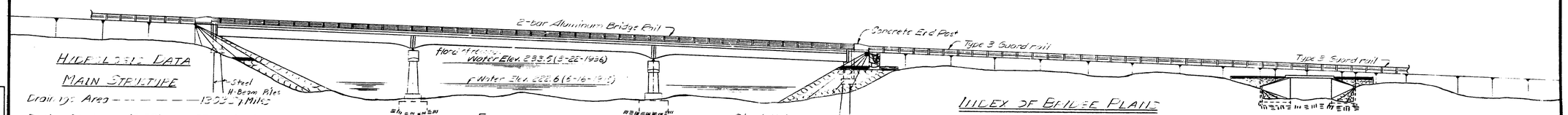
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
BRIDGE CONSTRUCTION NOTES
AUGUSTA, MAINE

168-107

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	4	72





HYDRAULIC DATA

MAIN STRUCTURE

Drainage Area — — — — — — 1303.2 Sq. Miles

Design Discharge (Q50) — — 37,000 c.f.s.

Check Discharge (Q175) — 47,000 c.f.s.

Discharge Velocity (w. Q50) — — 10 f.p.s.

High Water Elevation (w. Q50) - Elev. 231.7

Discharge Velocity (w. Q175) — 11 f.p.s.

High Water Elevation (w. Q175) = Elev. 233.6

OVERFLOW STRUCTURE

Design Discharge (Q50) — — 17,[illegible] c.f.s.

Check Discharge (Q175) — 20,[illegible] c.f.s.

Discharge Velocity (w. Q50) — — 10 f.p.s.

Discharge Velocity (w. Q175) — — 11 f.p.s.

SPECIFICATIONS

Design: A.A.S.H.T.O. Standard Specifications for Highway Bridges 1973 and Interim Specifications 1974, 1975, 1976.

Certain Sections of the State Highway Commission Standard Specifications for Highway and Bridges Revision of June 1963.

Live Loading: H. 20-44.

MATERIALS

Concrete: Wearing Surface, Curbs and End Posts — — — — Class AA

[illegible] — — — — Class B

All Other — — — — — — Class A

Reinforcing Steel — — — — — — ASTM A615 Grade 60

Structural Steel: Bottom Flanges — — — ASTM A588

Webs — — — — ASTM A36

All Other — — ASTM A36 (or A283)

High Strength Bolts — ASTM A325 Type 3

Unit wt. 1

EAST LIMINGTON BRIDGE

Footing and Pile Plan — — — — — — — — — — 6

Abutment 1 — — — — — — — — — — — — 7

Abutment 2 — — — — — — — — — — — — 8

Pier No. 1 — — — — — — — — — — — — 9

Pier No. 2 — — — — — — — — — — — — 10

Framing Plan — — — — — — — — — — — 11

Structural Details — — — — — — — — — 12

Bearing and Floor Details — — — — — — 13

Expansion Joint Details — — — — — — 14

Superstructure Cross Section — — — — 15-16

Approach Slab — — — — — — — — — — 17

Curb — — — — — — — — — — — — — 18

Railing — — — — — — — — — — — — — 19

Railing Detail (East Limington End) — — — — — 20

INDEX OF BRIDGE PLANS

General Plan — — — — — — — — — — — — — — — 1

Bridge Profile — — — — — — — — — — — — — — 2

(Note: For Survey Plan see sheet "4 of 70")

Foundation Survey and Boring Details — — — — — 3-5

OVERFLOW STRUCTURE

Footing Plan — — — — — — — — — — — 21

Plan — — — — — — — — — — — — — — — 22

Elevations — — — — — — — — — — — — 23

Foundation Details — — — — — — — — 24

Painting Detail (Overflow Structure) — 25

PROJECT DESIGN ENGINEER — PLANS — DESIGN - DETAILED — CHECKED — REVISIONS — FIELD CHANGES

BY	DATE
GRW	2-76
H.E.L.	11-76

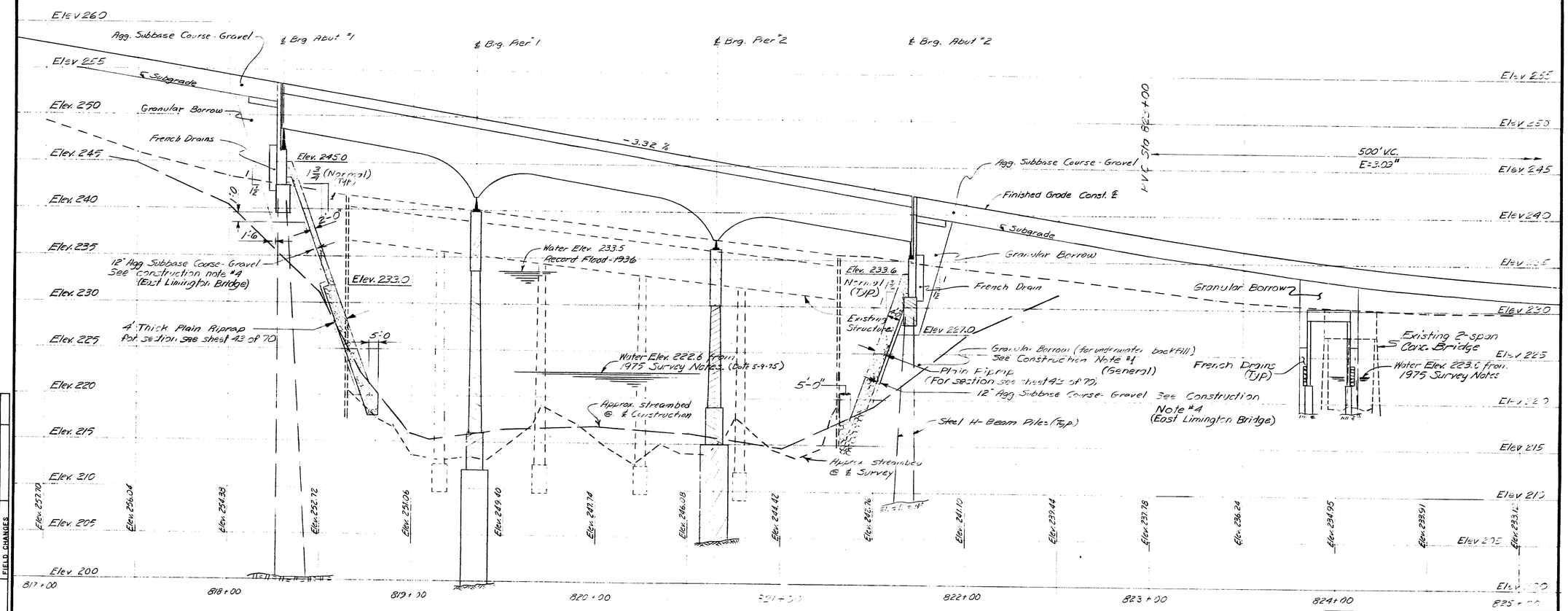
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH — CUMBERLAND COUNTY
& LIMINGTON — YORK COUNTY
GENERAL PLAN

SHEET 1 OF 25 AUGUSTA, MAINE

168-108

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	5	70



PROFILE
Existing - Along ℄ Survey
New - Along ℄ Construction

For Bridge Survey Plan see sheet No. 43 of 70
For construction notes see sheet No. 3 of 70

Survey Plotted GKW 11/75

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	JET	9/76
CHECKED	H.E.K.	11/76
REVISIONS		
FIELD CHANGES		

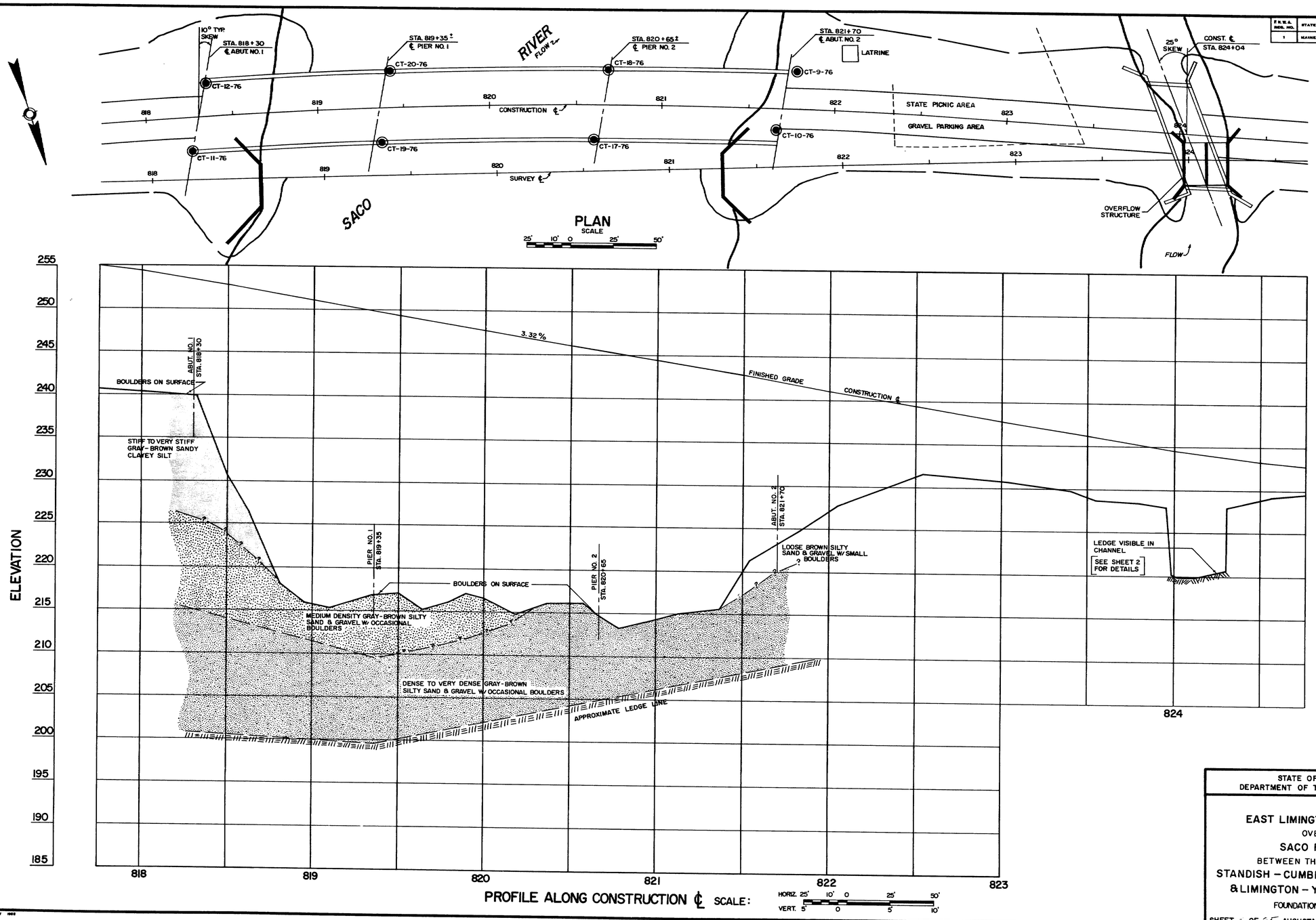
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH - CUMBERLAND COUNTY
& LIMINGTON - YORK COUNTY
BRIDGE PROFILE

SHEET OF 25 AUGUSTA, MAINE SEPT. 1975

168-109

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(13)	6	70



PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

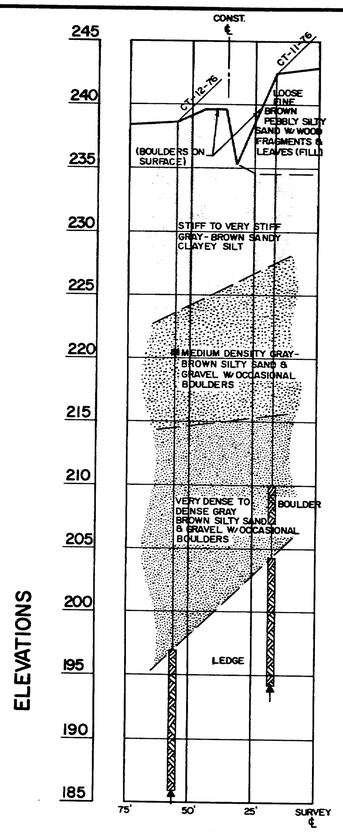
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH – CUMBERLAND COUNTY
& LIMINGTON – YORK COUNTY
FOUNDATION SURVEY

SHEET 3 OF 25 AUGUSTA, MAINE

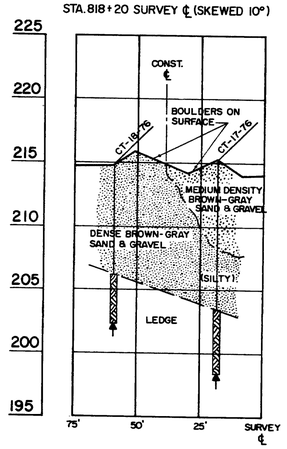
168-110

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	7	70



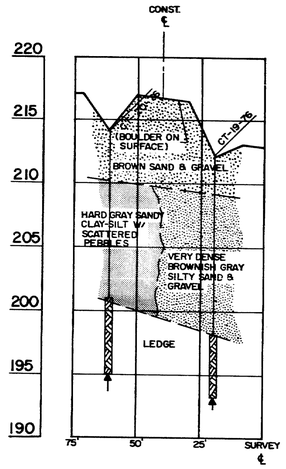
ABUT. NO. 1

STA. 818+20 SURVEY ℄ (SKEWED 10°)



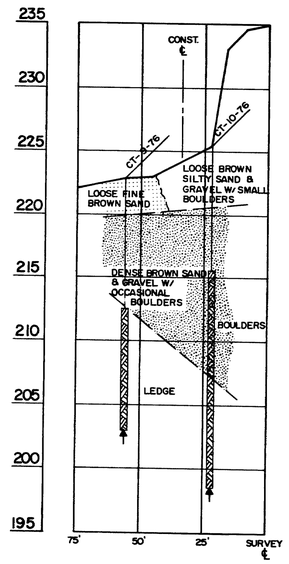
PIER NO. 2

STA. 820+54 SURVEY ℄ (SKEWED 11°)



PIER NO. 1

STA. 819+33 SURVEY ℄ (SKEWED 5°)



ABUT NO. 2

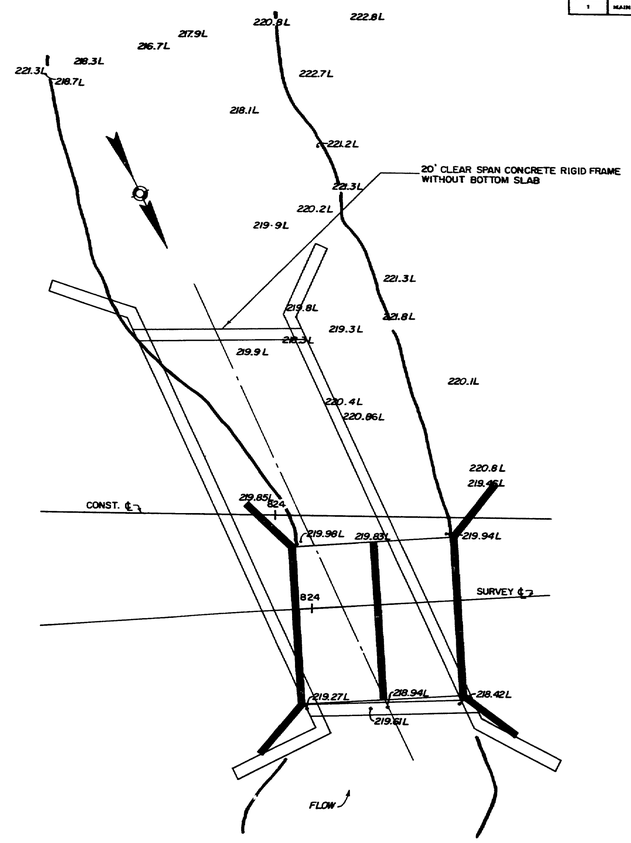
STA. 820+53 SURVEY ℄ (SKEWED 22°)

TRANSVERSE SECTIONS

SCALE

HORIZ. 25' 10' 0 25' 50'

VERT. 5' 0 5' 10'



PLAN VIEW OF OVERFLOW STRUCTURE

ELEVATIONS NOTED ON PLAN ARE VISIBLE LEDGE OUTCROPS

SCALE

10' 5' 0 10' 20'

NOTE: SHADED AREA REPRESENTS EXISTING STRUCTURE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	
	CHECKED	
	REVISIONS	
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH – CUMBERLAND COUNTY
& LIMINGTON – YORK COUNTY

FOUNDATION SURVEY

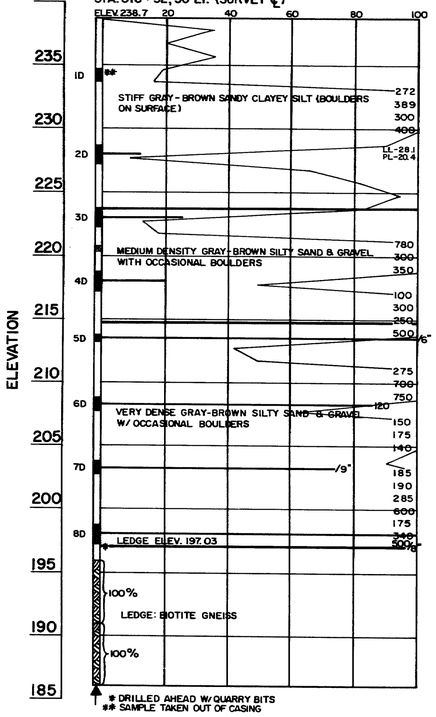
SHEET 4 OF 25 AUGUSTA, MAINE March 197

768-111

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(13)	3	70

BORING CT-12-76

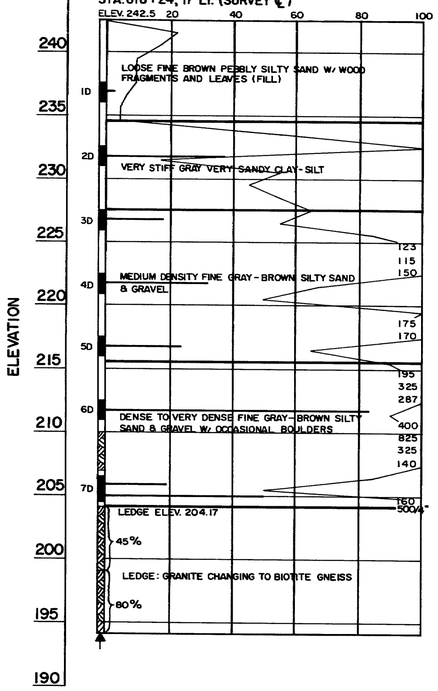
STA. 818 + 32, 56' LT. (SURVEY ℄)



* DRILLED AHEAD W/ QUARRY BITS
** SAMPLE TAKEN OUT OF CASING

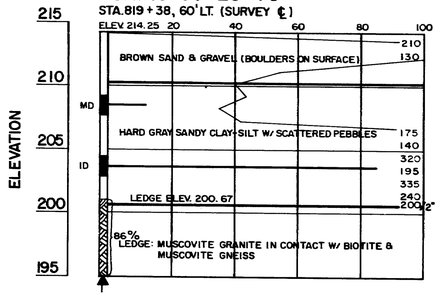
BORING CT-11-76

STA. 818 + 24, 17' LT. (SURVEY ℄)



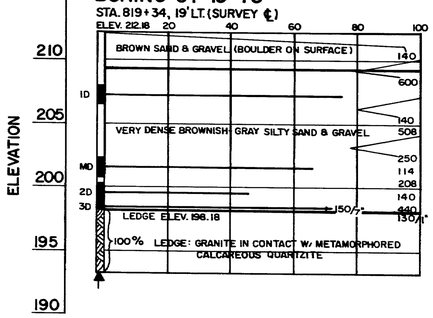
BORING CT-20-76

STA. 819 + 38, 60' LT. (SURVEY ℄)



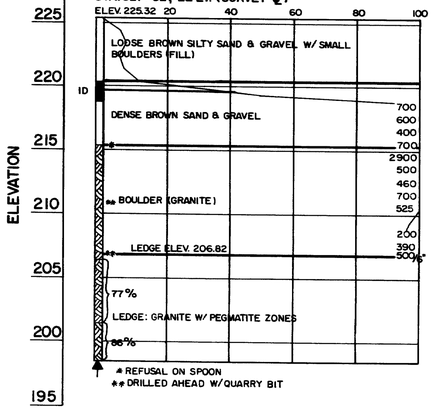
BORING CT-19-76

STA. 819 + 34, 19' LT. (SURVEY ℄)



BORING CT-10-76

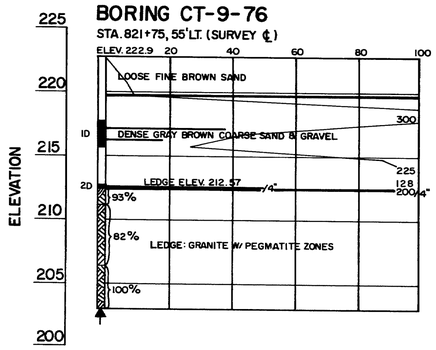
STA. 821 + 62, 22' LT. (SURVEY ℄)



* REFUSAL ON SPOON
** DRILLED AHEAD W/ QUARRY BIT

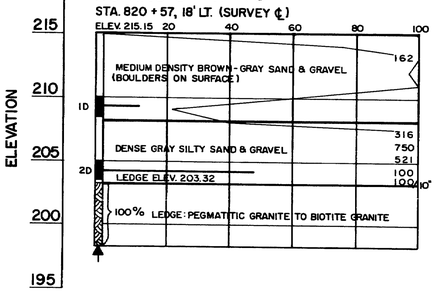
BORING CT-9-76

STA. 821 + 75, 55' LT. (SURVEY ℄)



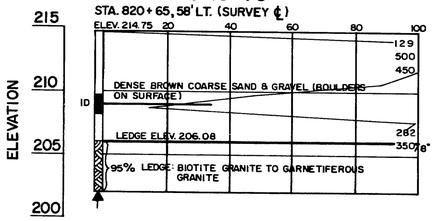
BORING CT-17-76

STA. 820 + 57, 18' LT. (SURVEY ℄)



BORING CT-18-76

STA. 820 + 65, 58' LT. (SURVEY ℄)



BORING NOTES

All samples and vanes are made ahead of casing

Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow

Location of sample or sample attempt

Number and type of dry sample

ID S & H Sampler # 1290's

MD Unsuccessful sample attempt and type of sampler

Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow

Bottom of boring (may not be bottom of soil strata)

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN-DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

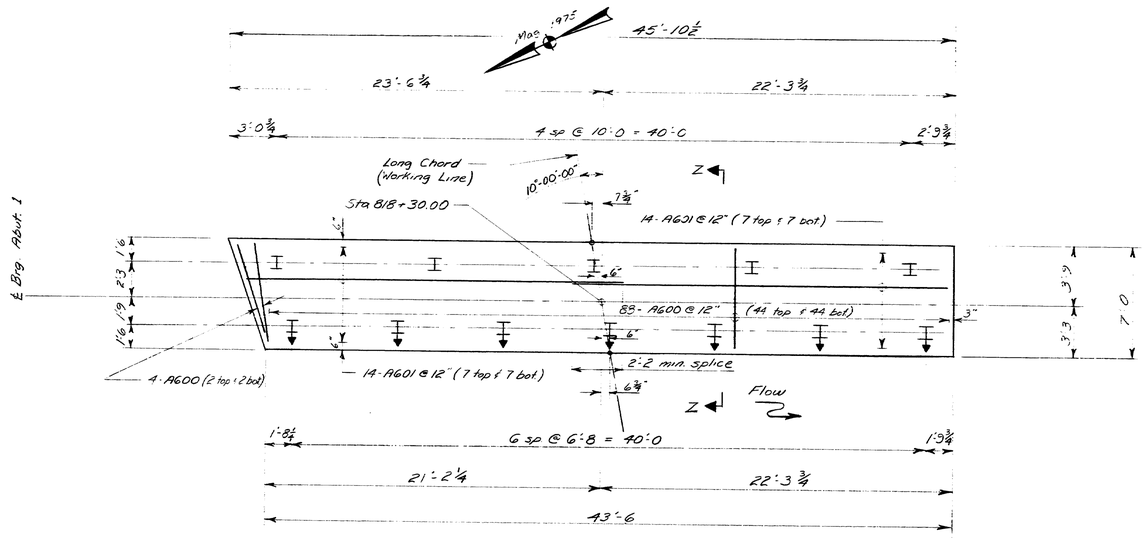
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH — CUMBERLAND COUNTY
& LIMINGTON — YORK COUNTY

BORING DETAILS

SHEET 5 OF 25 AUGUSTA, MAINE

168-112

F.E.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(15)	9	70



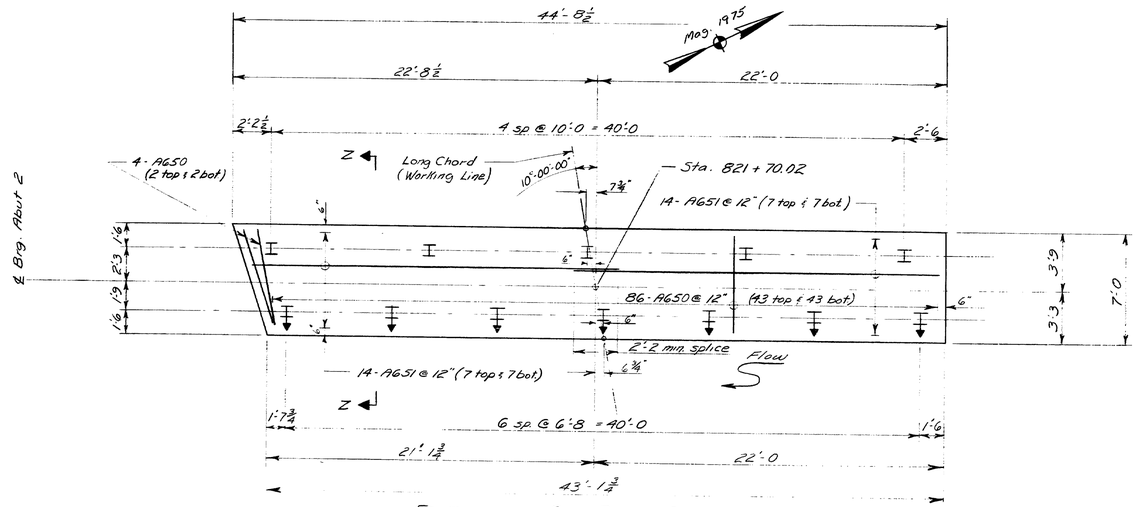
FOOTING AND PILE PLAN - ABUTMENT NO. 1

PILE NOTES

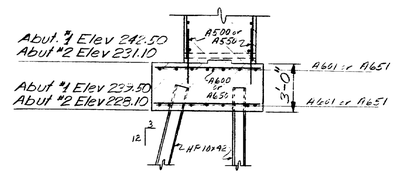
1. Piles shall be driven to ledge or practical refusal.
2. All piles shall have Pointed Reinforced Pile Tips as shown on Standard Details BD 104-73.
3. Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
4. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
5. Pile embedment into the footings may vary between 1'-0 and 2'-0, however payment shall be allowed only for the actual embedment length up to a maximum of 1'-6.
6. Piles marked, ↦, shall be battered at 3 inches per foot in the direction of the arrow.
7. Maximum pile loads : 43.5 tons.
8. The following are pile locations, number of piles required, size of piles and estimated driven lengths :

Abutment No. 1: 6 - HP10x42 @ 40'±
6 - HP10x42 @ 45'±

Abutment No. 2: 6 - HP10x42 @ 20'±
6 - HP10x42 @ 25'±



FOOTING AND PILE PLAN - ABUTMENT NO. 2



SECTION Z-Z

REFERENCES

Pointed Reinforced Pile Tips - - - BD 104-73

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	JET JET	Apr 76
CHECKED	N.E.R.	11/76
REVISIONS		
FIELD CHANGES		

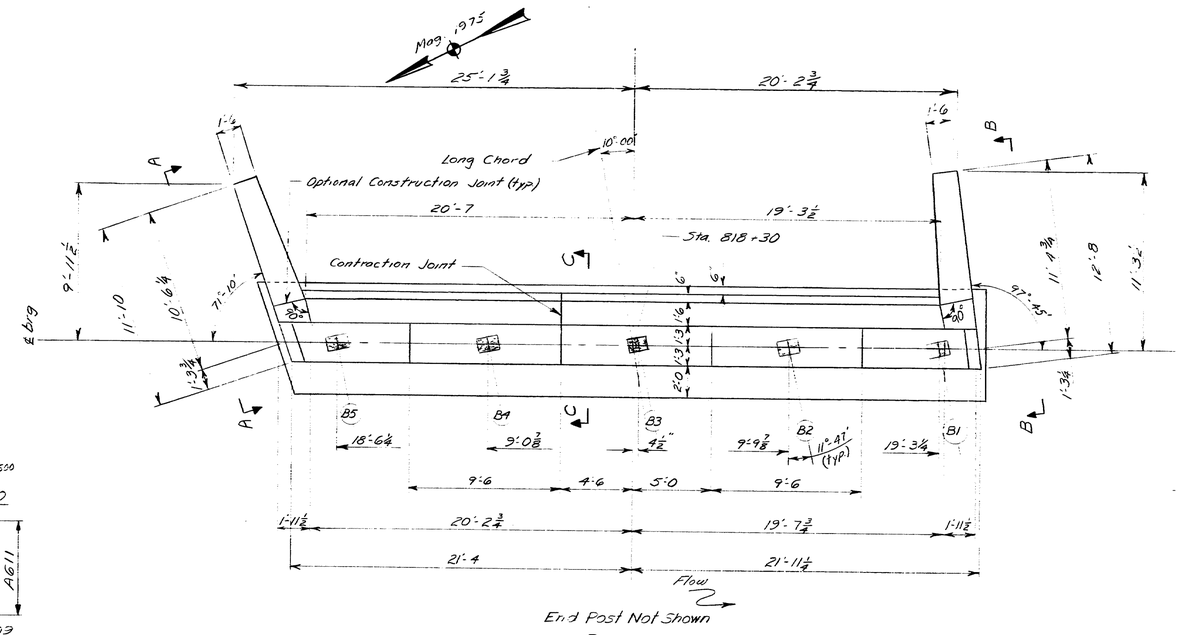
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
FOOTING AND PILE PLAN

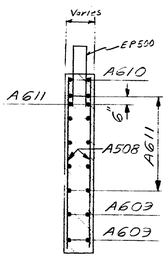
SHEET 6 OF 25 AUGUSTA, MAINE

168-113

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	10	70



PLAN



SECTION G-G

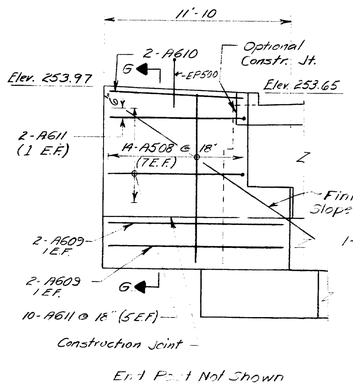
ABUTMENT NOTES

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive, unless otherwise indicated.
2. Reinforcing steel shall have 2 inches of cover unless otherwise indicated.
3. Place reinforcing steel in bridge seats to clear anchor bolts.
4. Break bond at vertical contraction joints by a method approved by the Engineer. Contraction and construction joints shall be as shown on Standard Details BD-104-73.
5. Protective Coating for Concrete Surfaces shall be applied to the top of backwalls and the exposed top and inside surfaces of the wings.
6. Place 4" diameter drains in the breastwall at 15 feet maximum spacing. Exact location to be determined by the Engineer.
7. Welding of reinforcing steel will be allowed in the top 2 feet of backwall.
8. The interface between the approach slab seat and approach slab shall be rough, clean, and free of laitance.
9. Polyethelene sheets or an approved impervious covering shall be placed on and around the abutment bearing areas prior to setting the bearing pedestals and shall extend underneath the masonry plates. The abutment breastwalls shall be protected from rust staining by leaving forms in place temporarily or by covering with approved materials after the removal of forms. The protection materials shall remain in place at least until the placement of the Structural Concrete Slab is completed. Removal of stains will not be required unless, in the opinion of the Engineer, the Contractor has not made satisfactory effort to prevent staining.
10. Polyvinylchloride waterstops as shown on Standard Details BD-104-73 shall be placed in all vertical contraction and construction joints. Waterstops will not be required in horizontal joints.
11. French Drains are not required behind the wings.

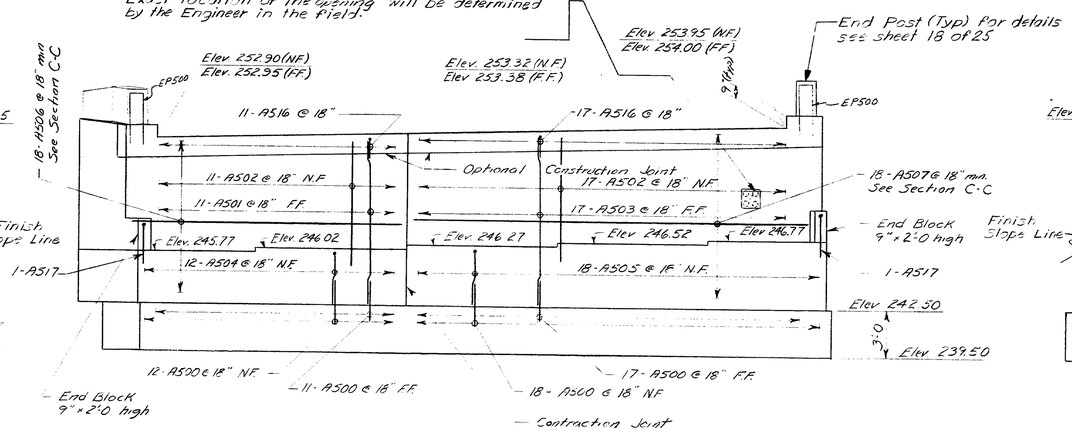
REFERENCES

Section C-C — — — — — — Sheet 8 of 25
End Posts — — — — — — Sheet 19 of 25
Construction & Contraction Joints — BD-104-73
Bridge Construction Notes — — Sheet 3 of 70

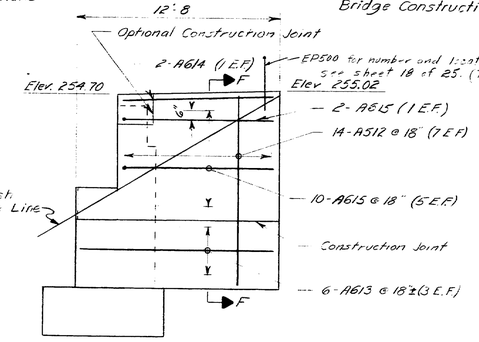
A 16"×16" opening shall be provided by the Contractor. Payment for constructing the opening will be considered incidental to Item No. 502.81. Exact location of the opening will be determined by the Engineer in the field.



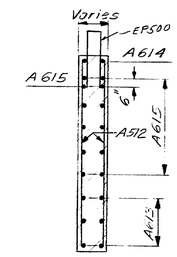
VIEW A-A



ELEVATION



VIEW B-B



SECTION F-F

LEGEND

N.F. — Near Face
F.F. — Far Face
E.F. — Each Face

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN DETAILED	JET	5/76
CHECKED	JET	5/76
REVISIONS	H.E.R.	7/76
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

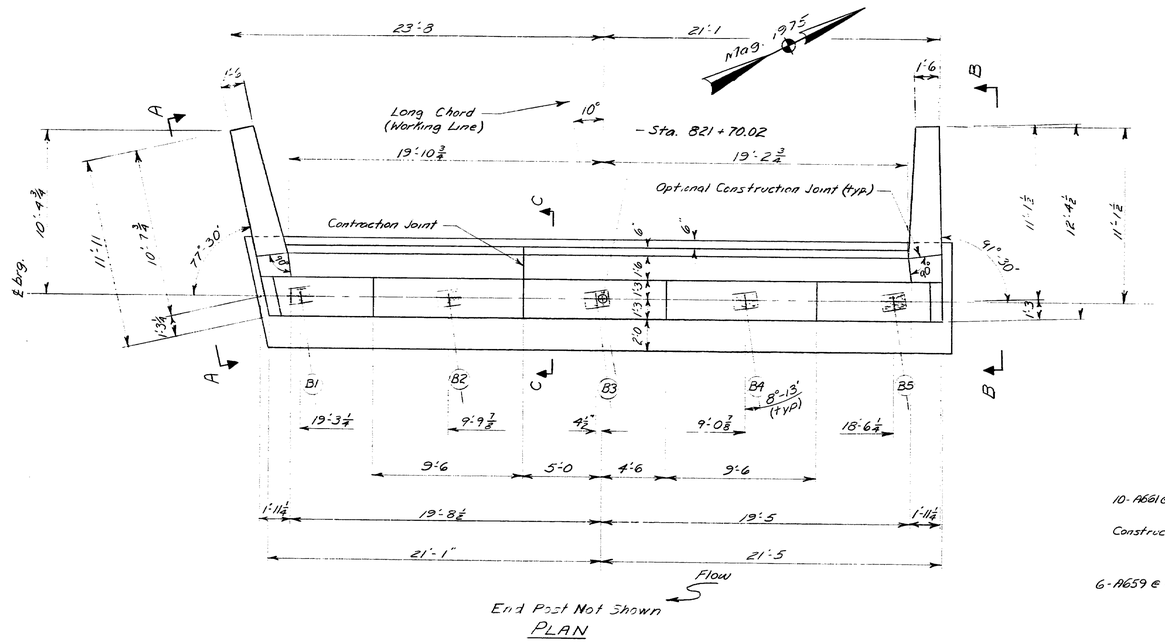
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
ABUTMENT I

SHEET 7 OF 25 AUGUSTA, MAINE

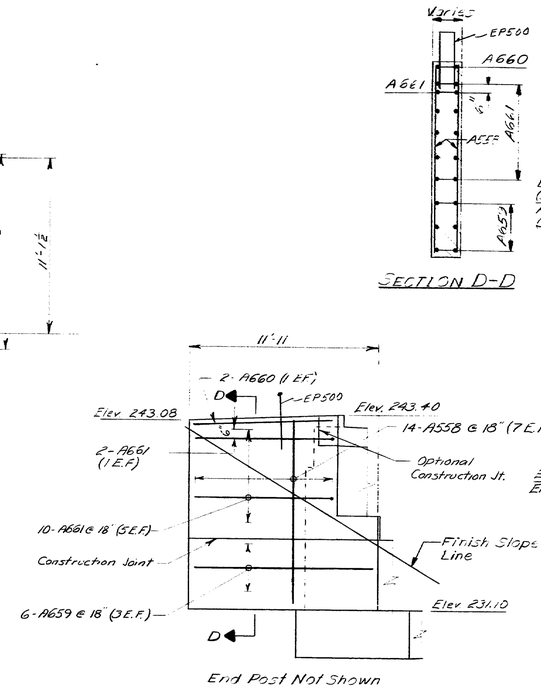
JANUARY 1969

168-114

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	11	70



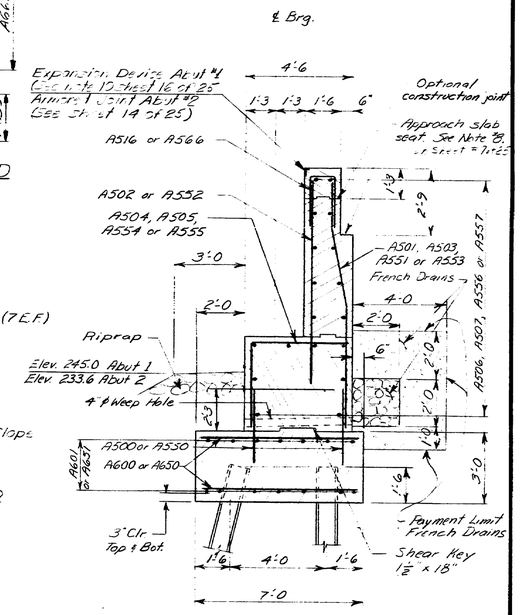
PLAN



SECTION D-D

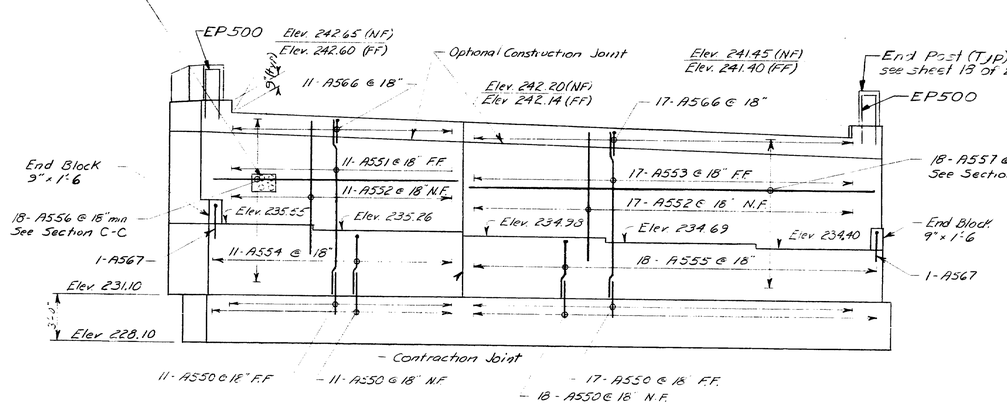
End Post Not Shown

VIEW A-A

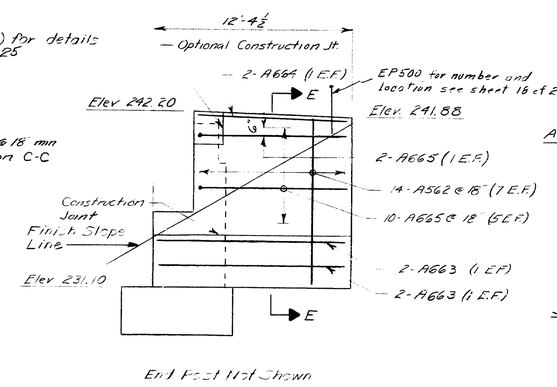


SECTION C-C

A 16" x 16" opening shall be provided by the contractor. Payment for constructing the opening will be considered incidental to Item No. 502.21. Exact location of the opening will be determined by the Engineer in the field.

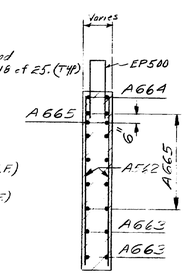


ELEVATION



End Post Not Shown

VIEW B-B



SECTION E-E

NOTE
For Abutment Notes and References see sheet 7 of 25.

LEGEND

N.F.	Near Face
F.F.	Far Face
E.F.	Each Face

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN-DETAILED	JET	5/76
CHECKED	N.E.R.	7/76
REVISIONS		
FIELD CHANGES		

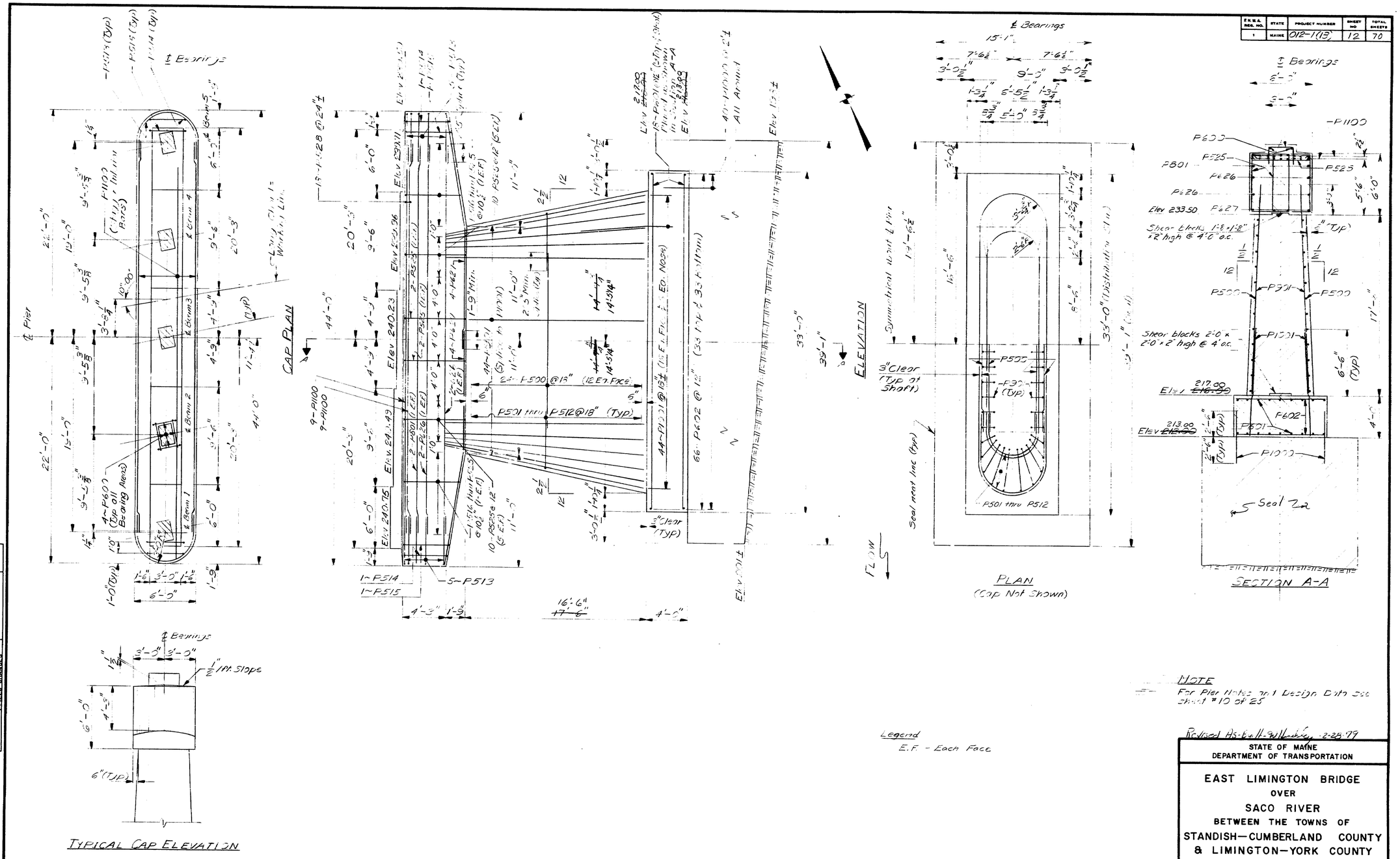
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
ABUTMENT 2

SHEET 8 OF 25 AUGUSTA, MAINE

168-115

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	12	70



NOTE
For Pier Notes and Design Data see sheet #10 of 25

Legend
E.F. - Each Face

Revised As-Built-Sw Hardy 2-28-79

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY

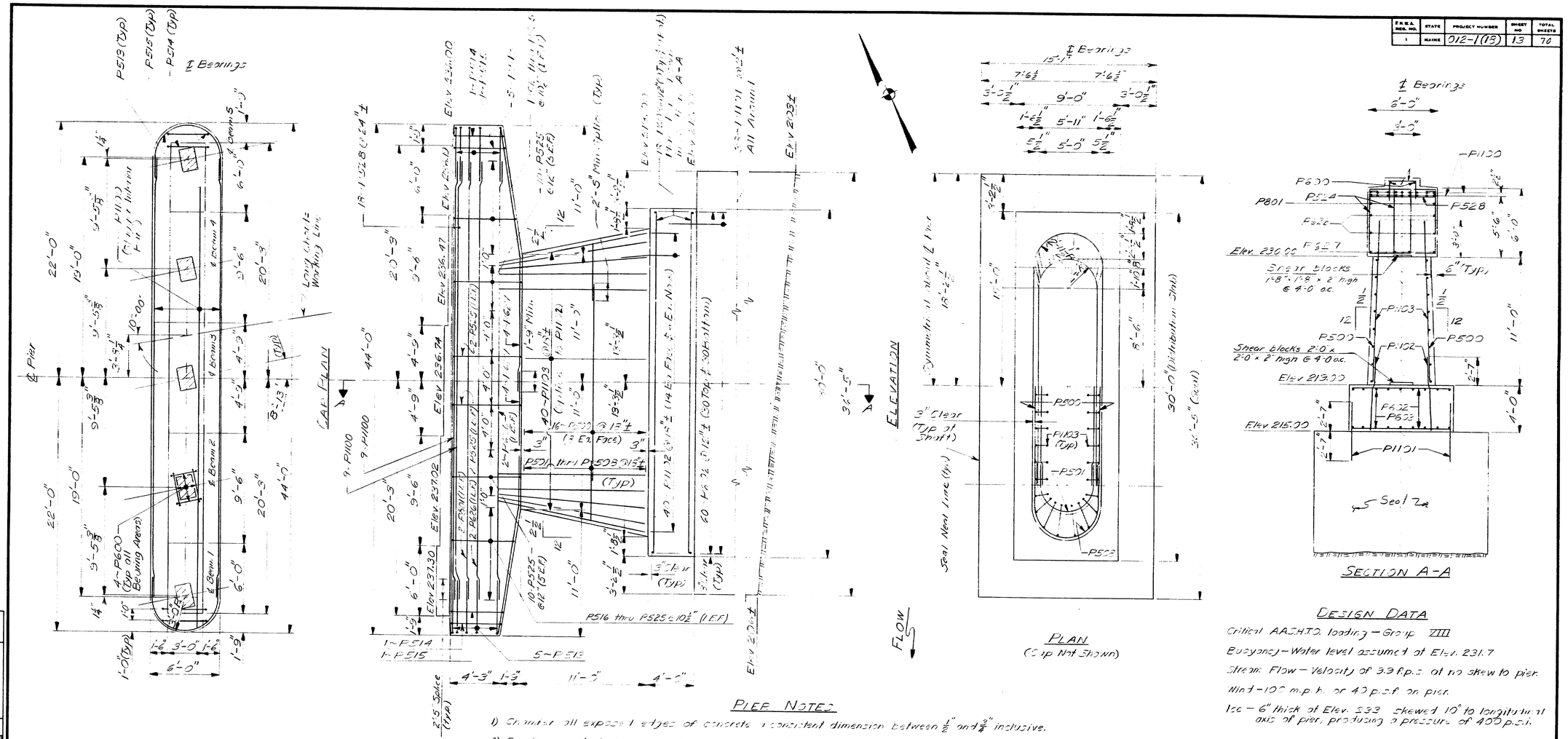
PIER NO. 1

SHEET 9 OF 25 AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN-DETAILED	JLT WTF	9-16-76
CHECKED	MLK	11/76
REVISIONS		
FIELD CHANGES		

168-116

F.H.E.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	13	70



PIER NOTES

1) Chamfer all exposed edges of concrete a consistent dimension between $\frac{1}{2}$" and $\frac{3}{4}$" inclusive.

2) Reinforcing steel shall have 2 inches cover in the cap and 3" cover elsewhere unless otherwise indicated.

3) Place reinforcing steel on bridge seats to clear anchor bolts.

4) Maximum calculated footing pressure = 8 tons per square foot.

5) Seal concrete dimensions are predicated on use of MP-116, DP-2, I-27 or equivalent steel sheet piling with approximate standard rolled corners. Pay dimensions for seal concrete shall be to the neat lines shown plus five inches all around.

6) The depth of seal is set for a water elevation of 224. If the water elevation is higher at the time of construction, or if the ledge elevations are found to be higher than 3 feet average above those shown on the plans, the Engineer may adjust the top of the seal upward a maximum of one foot.

7) The method of placing dowels in the seal shall be approved by the Engineer.

8) The interfaces between the seal and distribution slab shall be rough, clean, and free of laitance.

9) Pier concrete above water elevation at the time shall be protected from rust staining in a manner similar to that used for abutments. (see Note #9, sheet 7 of 25)

DESIGN DATA

Critical AASHTO loading — Group VIII

Buoyancy — Water level assumed at Elev. 231.7

Stream Flow — Velocity of 3.9 f.p.s. at no skew to pier.

Wind — 100 m.p.h. or 40 p.s.f. on pier.

Ice — 6" thick at Elev. 233 skewed 10° to longitudinal axis of pier, producing a pressure of 400 p.s.i.

Note:
See sheet #9 of 25 for Typical Cap Elevation

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JCT JTF	9-29-76
"	CHECKED	N.E.K.	4/7
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

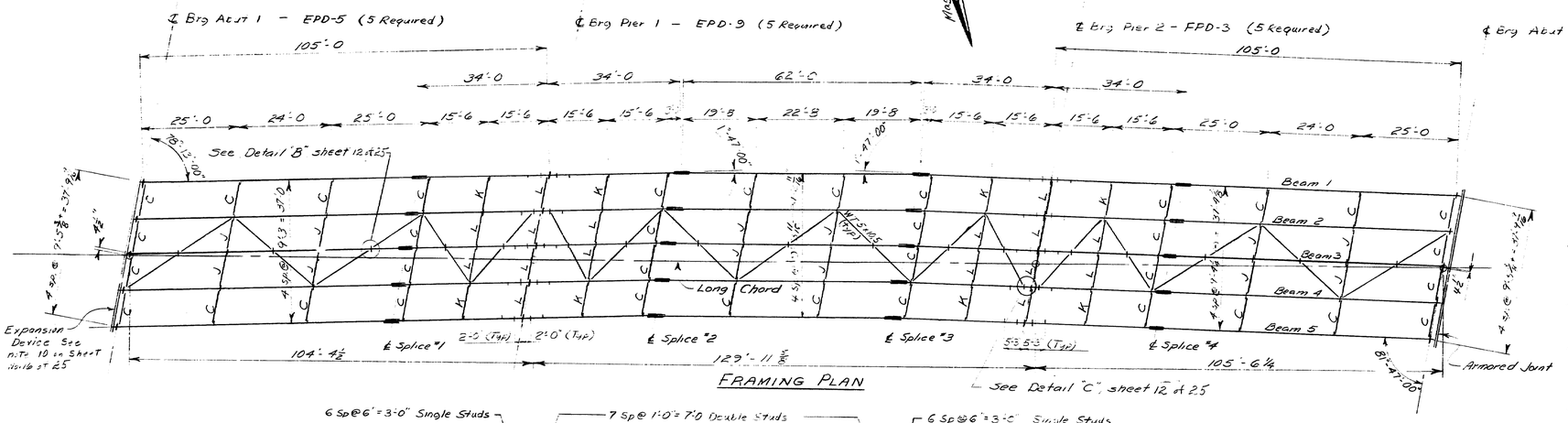
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY

PIER NO. 2

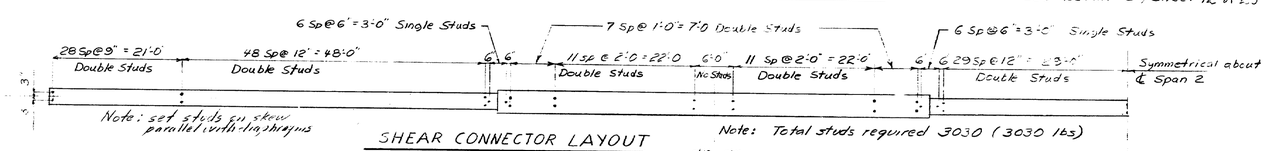
SHEET 10 OF 25 AUGUSTA, MAINE

168-117

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	14	70

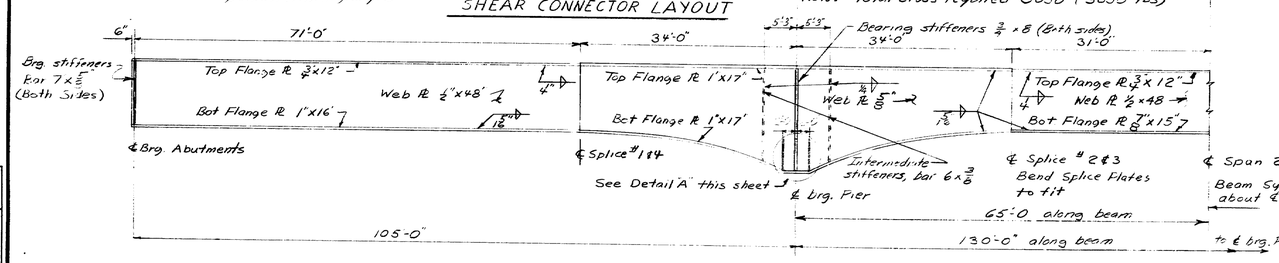


FRAMING PLAN

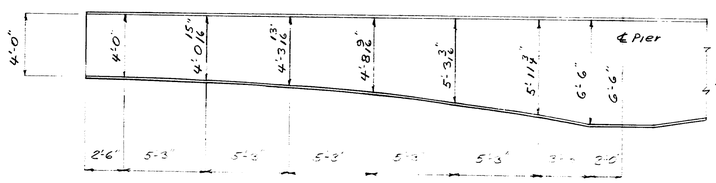


SHEAR CONNECTOR LAYOUT

Note: Total studs required 3030 (3030 lbs)

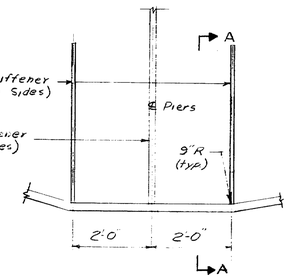


PART BEAM ELEVATION

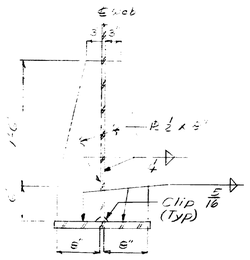


WEB HAUNCH DETAIL

Symmetrical about ℄ Piers



DETAIL "A"



SECTION "A-A"

FABRICATION NOTES

1. No transverse butt weld splices will be allowed in the flange or web plates within 10 feet of the points of maximum positive and negative moments
2. Sections of flange plates or web plates between transverse butt weld splices or from field splices shall be not less than 20 feet in length
3. Butt weld splices in flange plates shall not be closer than one foot from transverse welds in web plates
4. One longitudinal butt weld splice in the web of haunched sections will be allowed. Feather edges between the longitudinal welds and the bottom flanges will not be allowed.
5. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners, cross frame and diaphragm connection plates may be either plumb or normal to the top flange.
6. All bolts shall be ⅞ Ø H.S. ASTM A325, Type 3. Bolt holes shall be 15/16 ø unless otherwise noted.
7. Connection plates for lateral bracing shall conform to the requirements for connection plates on BD 113-72.
8. Dimensions are horizontal or vertical.
9. Bearing stiffeners shall be "grind to bear" or "full penetration groove weld" bottom and "paint tight fit" top. Intermediate stiffeners shall have 5/16" fillet welds both sides of stiffeners of bottom flange and "paint tight fit" top flange.
10. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finish grade profile.
11. All structural steel, including bearing pedestals, shall be ASTM A588, except that secondary members may be ASTM A242, armored joints and expansion devices may be ASTM A36.
12. The curb expansion dams at Abutment #1 shall be painted 2 coats in the shop as required in section 564.41. Payment will be considered incidental to related contract items.

REFERENCES

Bearing Pedestals ····· BD 100-71
Shear Connectors ····· BD 104-73
Diaphragms & Crossframes ·· BD 113-72
Armored Joint ····· Sht. 19 of 25 & BD 104-73

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN-DETAILED	JCT	1/74
CHECKED		
REVISIONS		
FIELD CHANGES		

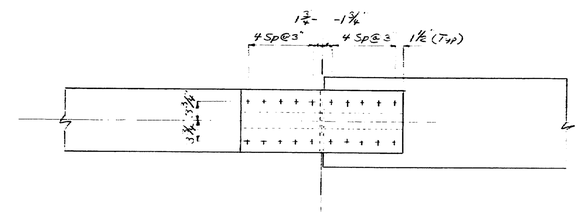
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

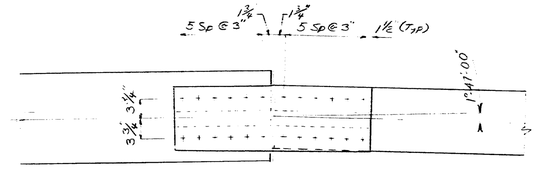
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
FRAMING PLAN

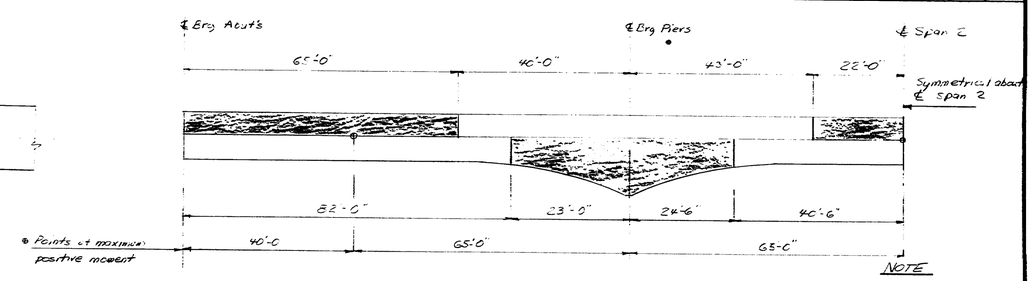
SHEET 11 OF 25 AUGUSTA, MAINE

168-118

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	15	70



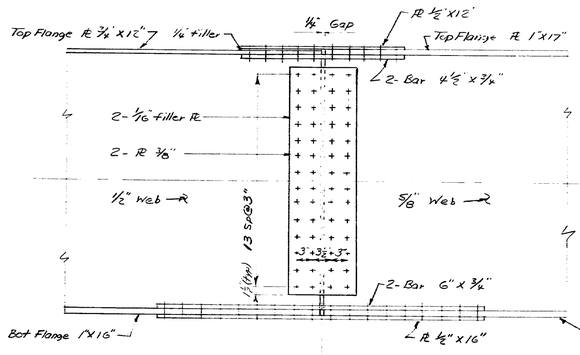


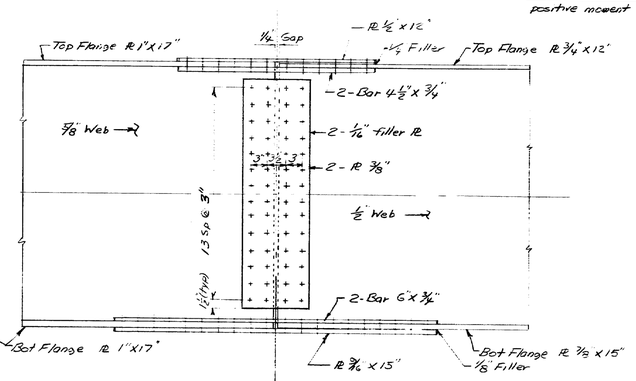


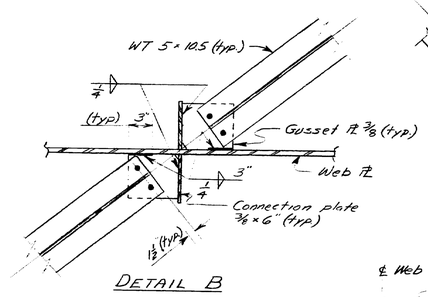
NOTE

▬ = Areas on the beam which will always be in compression. All other areas will be in Tension, or in areas which have stress reversals.

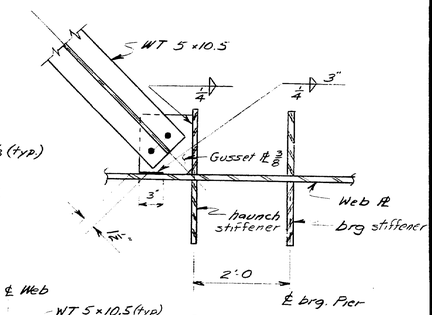
BEAM STRESS DIAGRAM



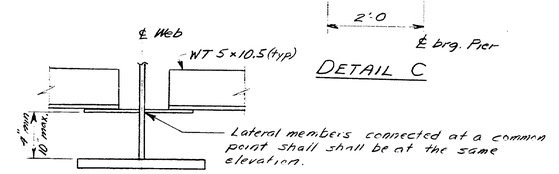




DETAIL B



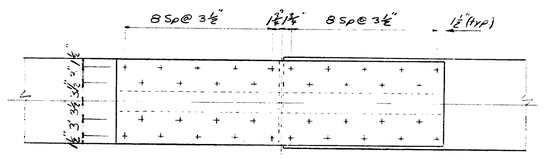
DETAIL C



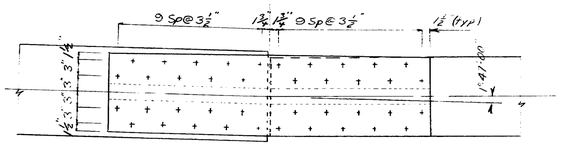
SECTION

LATERAL CONNECTION DETAILS

Note: Lateral connections at diaphragms and crossframes are similar to those shown.



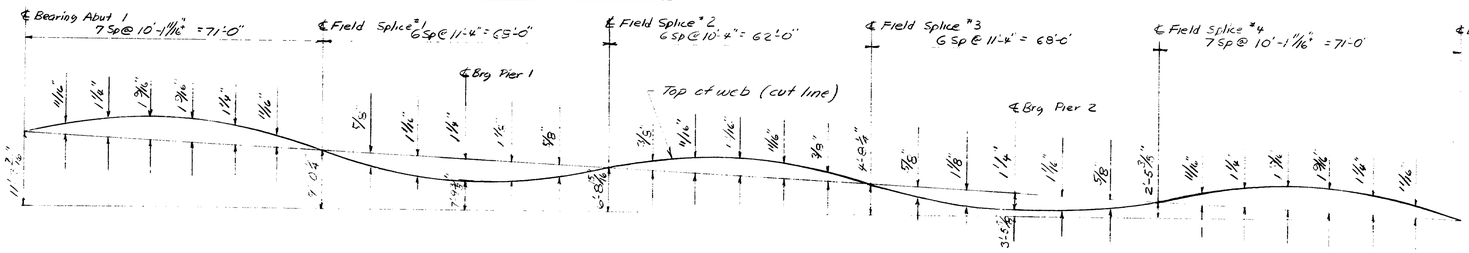
FIELD SPLICE #1 & 4



FIELD SPLICE #2 & 3

Note: Bend web splice plates to fit

SPLICE DETAILS



CAMBER DIAGRAM

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

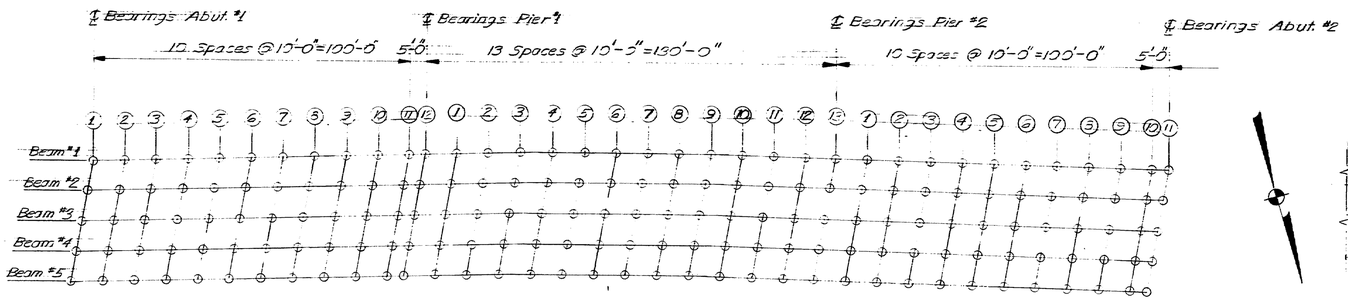
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
STRUCTURAL STEEL DETAILS

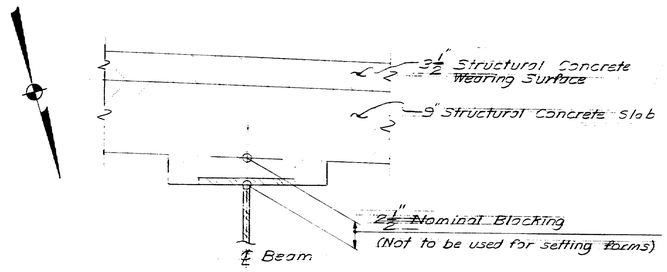
SHEET 13 OF 25 AUGUSTA, MAINE

768-119

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1 (13)	16	70



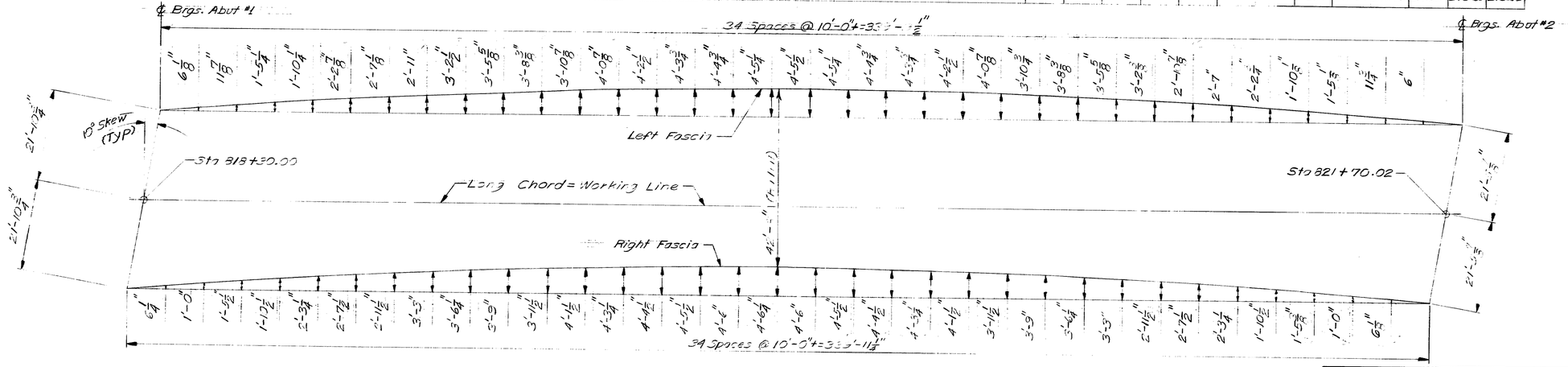
BLOCKING PLAN



BLOCKING DETAIL

*BOTTOM OF SLAB ELEVATIONS

	℄ Bgs. Abut #1	SPAN #1										↑ Bgs. Pier #1	SPAN #2												℄ Bgs. Pier #2	SPAN #3										℄ Bgs. Abut #2
Point No.	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11
Beam #1	252.85	252.59	252.32	252.03	251.72	251.38	251.02	250.64	250.26	249.89	249.54	249.37	249.04	248.74	248.45	248.16	247.86	247.54	247.21	246.87	246.51	246.14	245.77	245.41	245.03	244.77	244.47	244.13	243.91	243.62	243.31	242.98	242.62	242.24	241.84	241.64
Beam #2	252.60	252.34	252.07	251.78	251.46	251.12	250.76	250.38	250.01	249.63	249.28	249.11	248.78	248.48	248.19	247.90	247.59	247.28	246.94	246.60	246.24	245.87	245.50	245.14	244.81	244.49	244.19	243.81	243.63	243.34	243.03	242.63	242.33	241.95	241.55	241.35
Beam #3	252.35	252.09	251.82	251.53	251.21	250.87	250.50	250.13	249.75	249.37	249.02	248.85	248.52	248.21	247.92	247.63	247.32	247.01	246.67	246.33	245.97	245.60	245.22	244.86	244.52	244.21	243.92	243.63	243.35	243.05	242.74	242.41	242.05	241.67	241.27	241.07
Beam #4	252.10	251.84	251.57	251.27	250.96	250.61	250.25	249.87	249.49	249.11	248.76	248.59	248.25	247.95	247.66	247.36	247.06	246.74	246.41	246.06	245.70	245.33	244.95	244.59	244.26	243.94	243.64	243.35	243.07	242.77	242.46	242.13	241.76	241.38	240.98	240.78
Beam #5	251.86	251.59	251.32	251.02	250.70	250.36	249.99	249.61	249.23	248.85	248.50	248.33	247.99	247.69	247.39	247.10	246.79	246.47	246.14	245.79	245.43	245.05	244.68	244.32	243.99	243.66	243.36	243.07	242.79	242.49	242.15	241.84	241.48	241.03	240.63	240.49



FASCIA OFFSETS

*Bottom of slab elevations have been computed to compensate for concrete deadload deflections (and [illegible]) use in conjunction with [illegible] 302.10.a) except stem [illegible] may be installed after bottom of slab [illegible] height [illegible].

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	J.E.T.	5-28-78
CHECKED	N.E.K.	[illegible]
PLANS REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

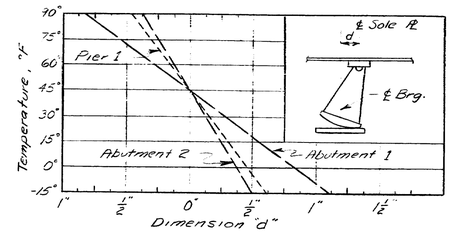
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
BLOCKING AND FASCIA OFFSETS

SHEET 16 OF 25 AUGUSTA, MAINE

JANUARY 1969

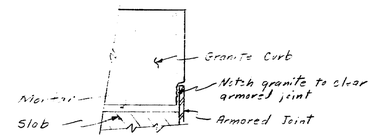
168-120

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	17	70

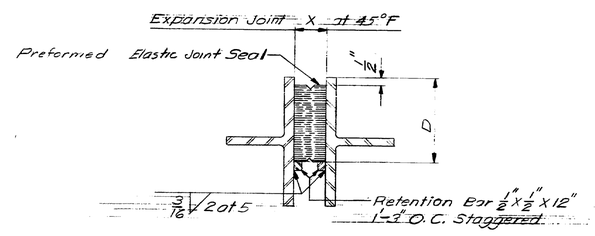


EXPANSION PEDESTAL SETTING CHART

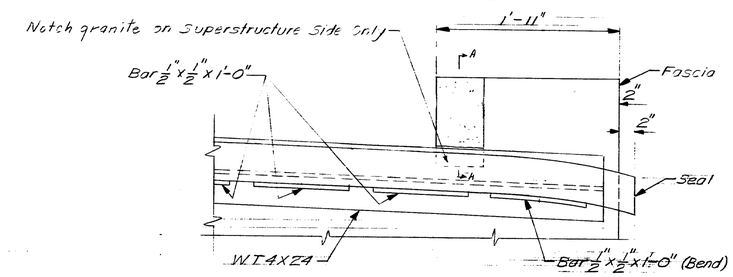
Note: Abutment pedestals tilt toward backwall when temperature is above 45°F.
Pier 1 pedestals tilt toward Abutment 1 when temperature is above 45°F.
It is anticipated that the pedestal movements due to superstructure dead loads will be negligible.



Section A-A



ARMORED JOINT SECTION
Abutment #2



CURB DETAIL
ARMORED JOINT

ARMORED JOINT NOTES

1) The seal furnished for abutment 2 shall have a movement rating of 1.25 inches.

2) The seal characteristics shall be submitted to the Engineer for approval prior to the fabrication of the armored joint and the dimensions "X" and "D" will be established by the Engineer at the time based on the characteristics of the approved seal.

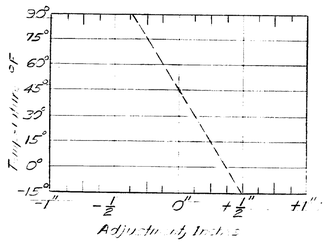
3) The maximum joint opening shall not exceed 3 1/2" at -30°F measured parallel to ℄ Construction.

4) It is anticipated that the armored joint will open approximately 1/4" due to superstructure dead loads.

REFERENCE

For armored joint details not shown, see Standard Details Sheet BD 104-73.

For options and details of expansion device at Abutment #1, see Special Provisions Section 520



ARMORED JOINT ADJUSTMENT
Abutment #2

Note: This chart represents the algebraic adjustment to dimension "X" at the approved joint seal.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	J.E.L. / J.T.F.	7-8-76
	CHECKED	N.E.K.	2/77
	REVISIONS		
	FIELD CHANGES		

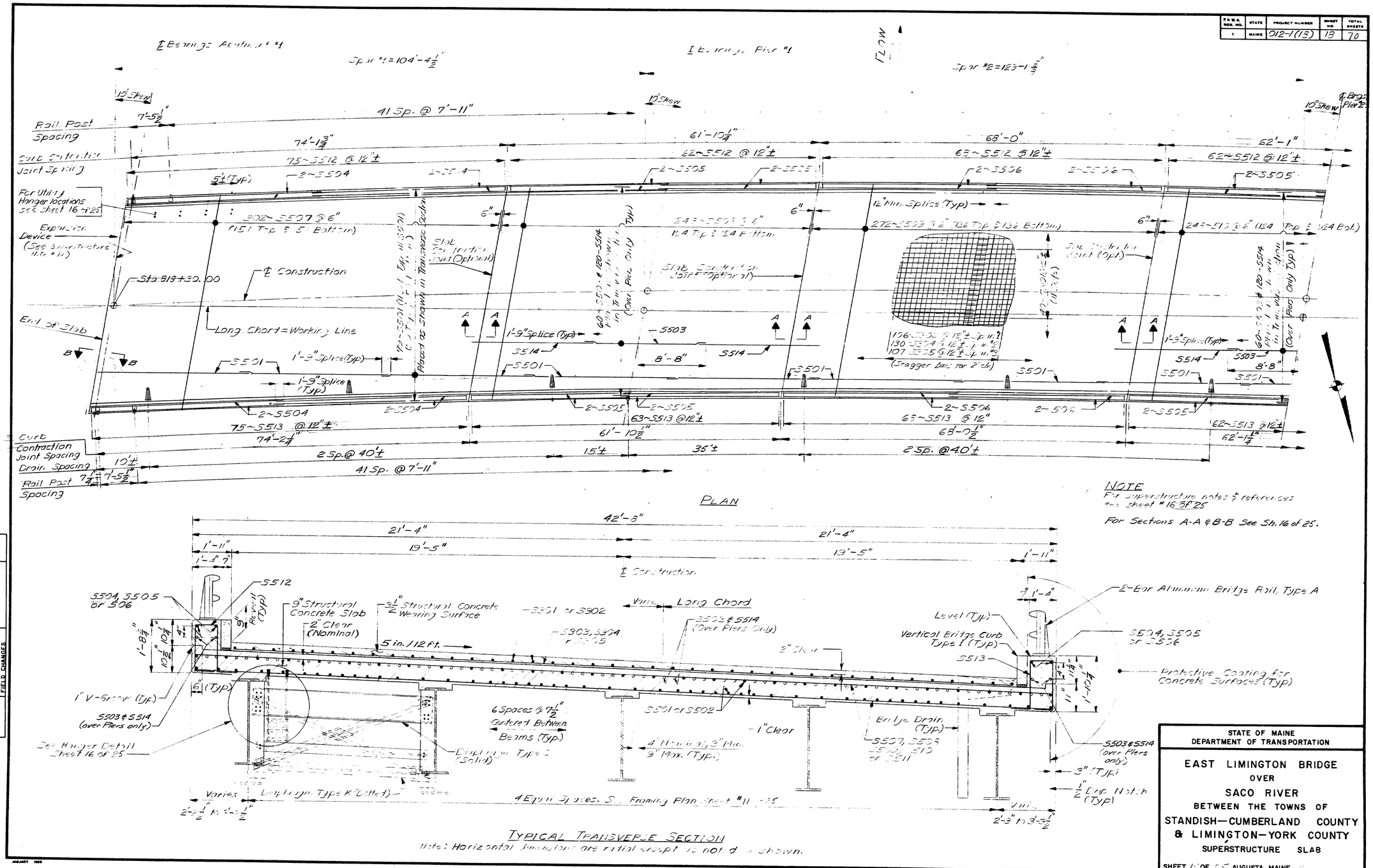
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
EXPANSION JOINT DETAILS

SHEET 14 OF 25 AUGUSTA, MAINE

168-121

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(13)	13	70



PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN-DETAILED	J.E.T. / J.T.F.	6-30-76
CHECKED	N.E.R.	9/30/76
REVISIONS		
FIELD CHANGES		

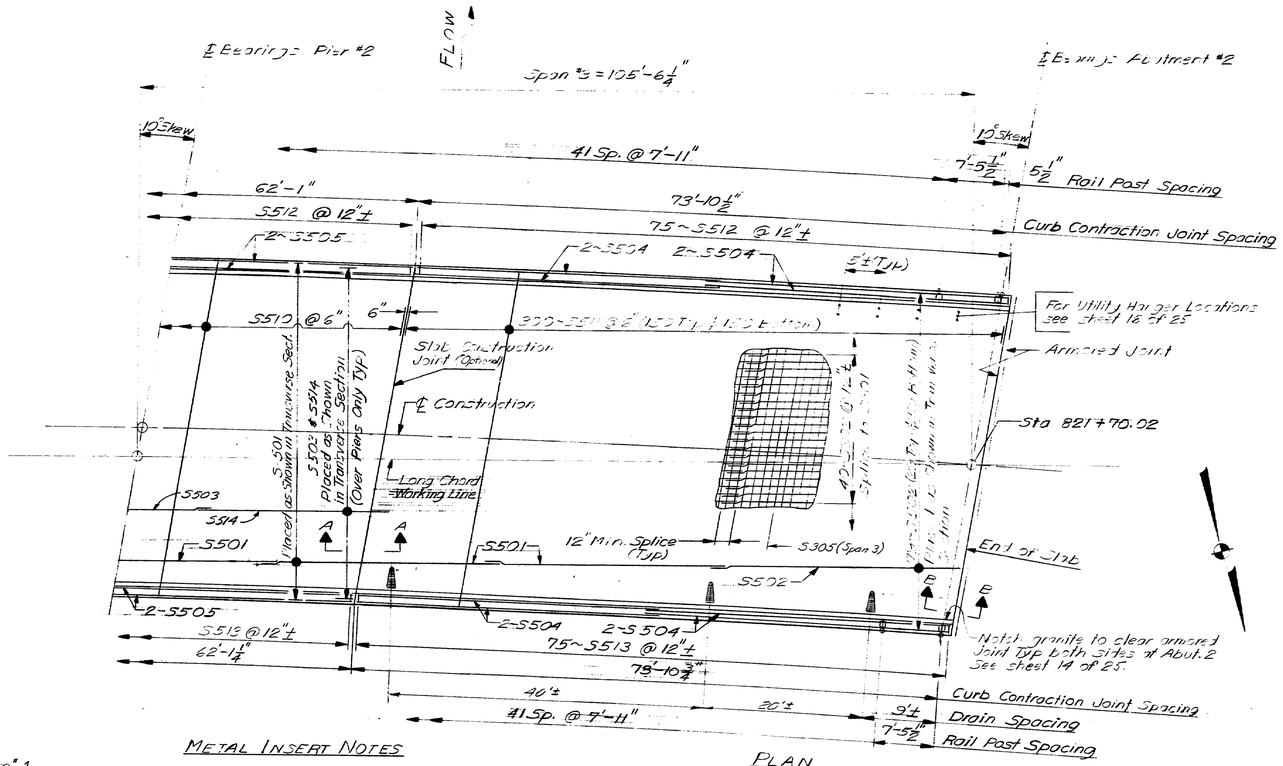
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
SUPERSTRUCTURE SLAB

SHEET 15 OF 25 AUGUSTA, MAINE

168-122

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	19	70



PLAN

SUPERSTRUCTURE NOTES

1) 1/2" Chamfer all exposed edges of concrete a consistent dimension between 1/2" and 3/4" inclusive unless otherwise indicated.

2) Form a 1 inch V-groove on the outside faces of each contraction joint in the curbs, at each construction joint in the slab and at the joint between the curb and slab.

3) Break the bond in contraction joints in the concrete curbs by a method approved by the Engineer. Do not break the bond in construction joints in the superstructure slab.

4) Provide joints in the Vertical Bridge Curb, Type 1 at each contraction joint in the concrete curb.

5) Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.

6) Reinforcing steel splices shall be a minimum of 21 inches unless otherwise indicated.

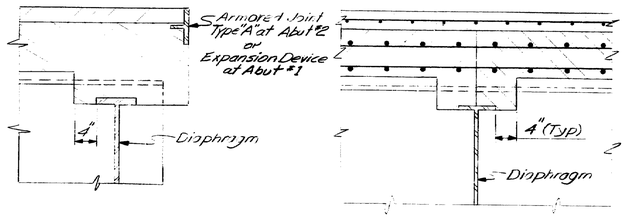
7) Protective Coating for Concrete Surfaces shall be applied to the following areas: Top of concrete curbs, fascias to drip notch under slab and wearing surface curb to curb.

8) Mortar for bedding and for joints in the granite curb shall contain an approved non-shink additive.

9) Adjust reinforcing steel to fit around drains in a manner approved by the Engineer. Do not cut transverse bars.

10) For options and details of expansion device at Abutment #1, see Special Provisions, Section 520. Coordinate curbs and end of slab with these details.

11) Drains shall be ASTM A36 or A53 unprinted, except angles connecting pipe to web shall be ASTM A595, or A242.



SECTION B-B

SECTION A-A

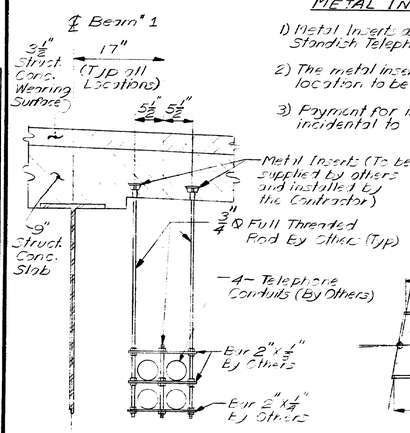
at Slab Construction Joints. Bridge may be omitted with continuous placement

METAL INSERT NOTES

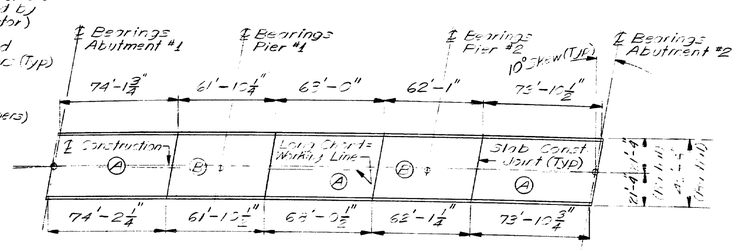
1) Metal Inserts as shown on sheets 15 and 16 will be supplied by the Standish Telephone Company and installed by the Contractor.

2) The metal inserts shall be at 5 ft. maximum spacing, the exact location to be determined by the Engineer in the field.

3) Payment for installing the metal inserts will be considered incidental to Item 502.26.



HANGER DETAIL



PANEL PLACEMENT DIAGRAM

REFERENCES

Drains & Curbs - - - - - - - - - ED 104-73
Aluminum Bridge Rail Type A - ED 114-73 & Sheet #13 of 25
For Reinforcing Steel Schedule see sheet No. 13 of 25
For Armored Joint Details see Standard Details ED 104-73 and sheet #14 of 25
For Superstructure Slab Spans 1 & 2 see sheet #15 of 25

NOTE:

The superstructure slab may be placed either continuously or by panels as follows:

Continuous Placement

The Contractor's method of placement shall be approved by the Engineer. The concrete shall be kept plastic 1 complete span back of the span being placed. The transverse slab joints and haunches shown shall be omitted. Approved set-retarding admixtures shall be used when authorized by the Engineer.

Panel Placement

All panels "A" shall be placed before placing any panels "B". A minimum of 5 days shall elapse between placement of panels "A" in adjacent spans, and between placement of panels "A" and "B" and between placement of panels "B" except simultaneous placement of panels "A" and simultaneous placement of panels "B" will be allowed.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN-DETAILED	JCT UTF	9-5-76
CHECKED	M.R.	
REVISIONS		9/22/76
FIELD CHANGES		

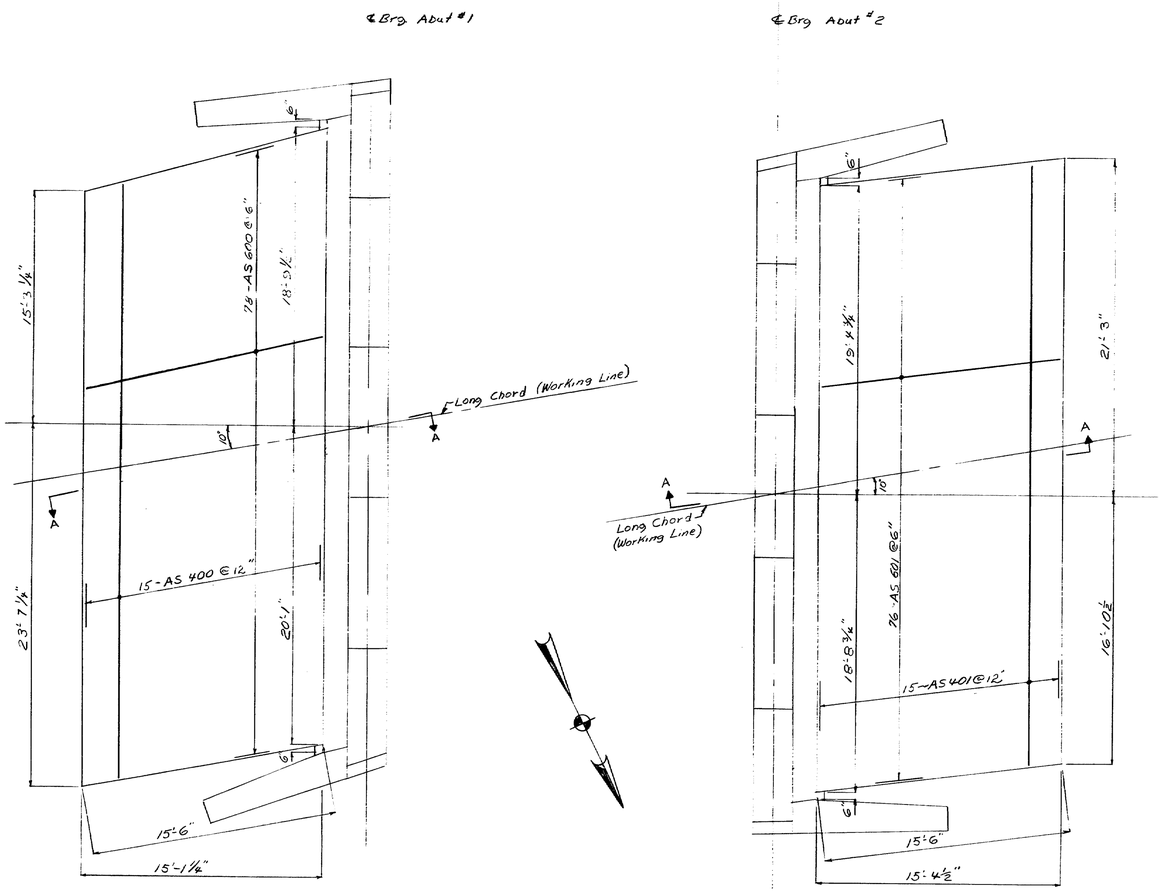
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
SUPERSTRUCTURE SLAB

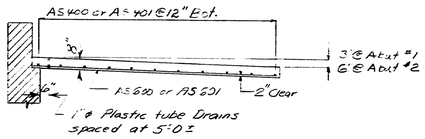
SHEET 16 OF 25 AUGUSTA, MAINE

168-123

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	20	70



PLAN - APPROACH SLABS



SECTION A-A

References:
For Reinforcing Steel Schedule see sheet No. 13 of 25

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	JET J.P.H.	9/76
CHECKED	N.E.R.	9/76
REVISIONS		
FIELD CHANGES		

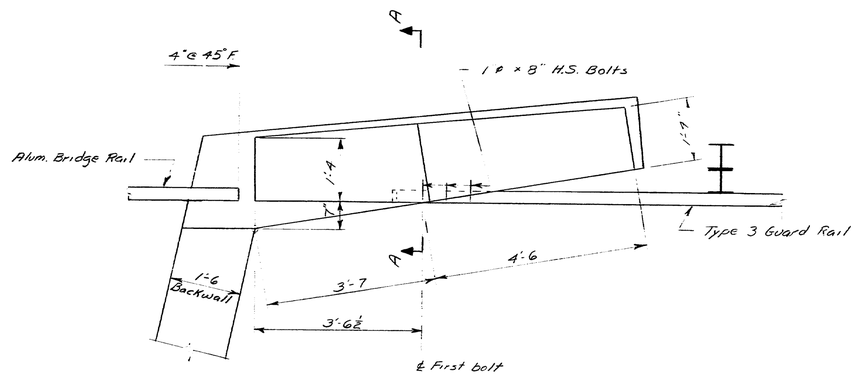
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
APPROACH SLABS

SHEET 17 OF 25 AUGUSTA, MAINE March 1977

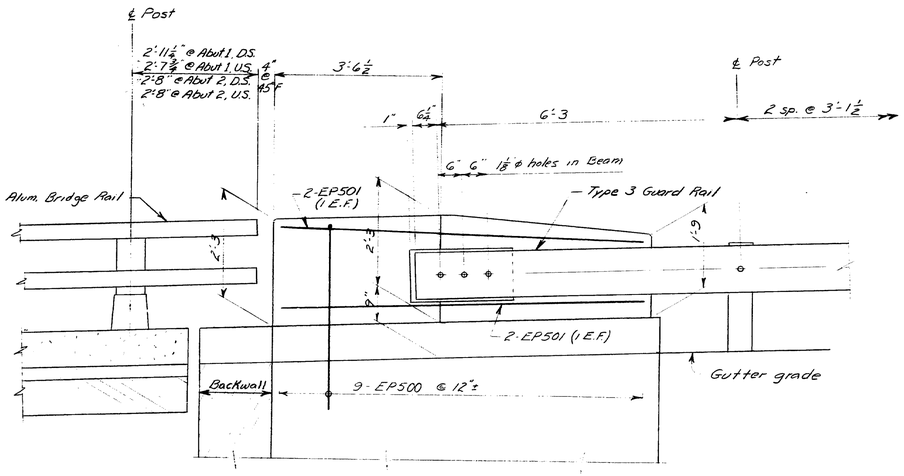
168-124

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	21	70

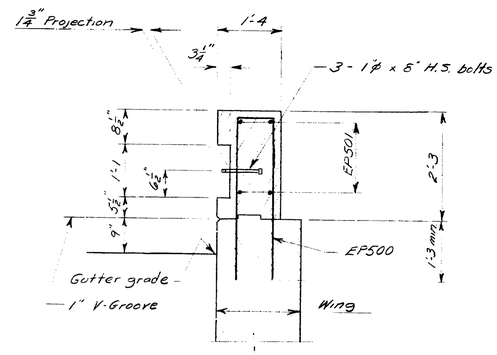


PLAN

NOTE: Northeast End Post shown. Three others similar.



ELEVATION



SECTION A-A

END POST NOTES

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive unless otherwise indicated.
2. Reinforcing steel shall have 2 inches of cover.

REFERENCES

Type 3 Guard Rail ---- Standard Details Aug. 1969 (G)
Aluminum Bridge Rail ---- Std. Dtl. Details BD 114-73
For Reinforcing Steel Schedule see Sheet No. 13 of 25

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	J.E.T.	5/76
	CHECKED	J.E.T.	7/76
	REVISIONS	N.E.R.	
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
END POSTS

SHEET 12 OF 25 AUGUSTA, MAINE March 19

168-125

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	22	70

REINFORCING STEEL SCHEDULE

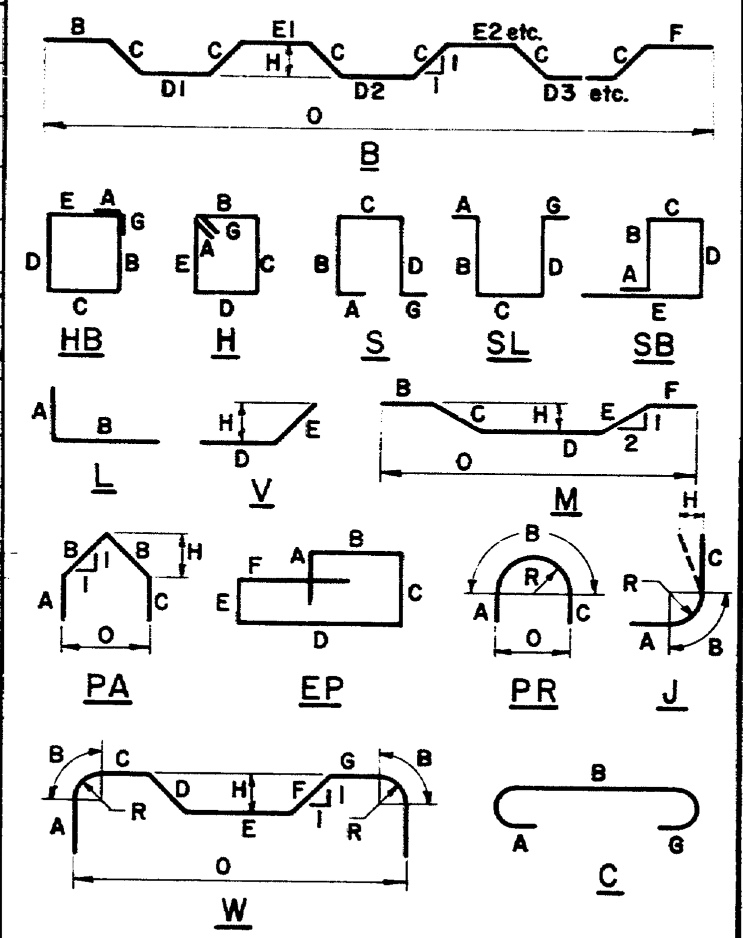
STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION
			ABUTMENT No.1				ABUTMENT No.2				
A500	58	3'-6"	Footing (Dowels)	A550	57	3'-6"	Footing (Dowels)				
A501	11	10'-2"	Breastwall	A551	11	10'-9"	Breastwall & Backwall				
A502	28	8'-3"	"	A552	28	8'-10"	↑				
A503	17	10'-8"	"	A553	17	10'-0"					
A506	18	16'-6"	Breastwall & Backwall	A556	18	15'-9"	↓				
A507	18	25'-6"	" "	A557	18	26'-0"	Breastwall & Backwall				
A508	14	10'-10"	Upstream Wingwall	A558	14	11'-6"	Downstream Wingwall				
A512	14	11'-10"	Downstream Wingwall	A562	14	10'-4"	Upstream Wingwall				
A609	4	11'-6"	Upstream Wingwall	A659	6	11'-6"	Downstream Wingwall				
A610	2	8'-9"	" "	A660	2	8'-9"	" "				
A613	6	12'-0"	Downstream Wingwall	A663	4	12'-0"	Upstream Wingwall				
A614	2	3'-6"	" "	A664	2	3'-6"	" "				
A600	92	6'-4"	Footing	A650	90	6'-4"	Footing				
A601	28	23'-9"	"	A651	28	23'-2"	"				
			SUPERSTRUCTURE								
S501	869	30'-0"	Slab								
S502	79	31'-5"	"								
S503	120	15'-0"	Slab over Piers								
S504	16	38'-2"	Curb Panels								
S505	16	31'-8"	" "								
S506	8	34'-9"	" "								
S507	302	43'-3"	Slab								
S508	248	43'-1"	↑								
S509	272	42'-11"									
S510	248	42'-3"									
S511	300	42'-7"	↓								
S514	240	30'-0"	Slab								
S301	440	30'-0"	Wearing Surface				APPROACH SLABS				
S302	40	24'-0"	↑	AS400	15	38'-6"	Approach Slabs				
S303	106	39'-3"		AS401	15	37'-3"	↑				
S304	130	39'-0"	↓	AS600	78	15'-0"	↓				
S305	107	38'-9"	Wearing Surface	AS601	76	15'-0"	Approach Slabs				

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
														ABUTMENT No.1
A504	12	7'-2"	L	3'-0"	4'-2"									Breastwall
A505	16	7'-8"	L	3'-6"	4'-2"									"
A516	28	4'-0"	S		1'-5"	1'-2"	1'-5"							Backwall
A517	2	8'-4"	S		3'-1"	2'-2"	3'-1"							End Blocks
A611	12	11'-0"	V				8'-9"	2'-3"			2'-2"			Upstream Wingwall
A615	12	11'-9"	J	9'-2"	4"	2'-3"					4"		2 1/2"	Downstream Wingwall
														ABUTMENT No.2
A554	11	8'-1"	L	3'-11"	4'-2"									Breastwall
A555	18	7'-2"	L	3'-0"	4'-2"									"
A566	28	4'-0"	S		1'-5"	1'-2"	1'-5"							Backwall
A567	2	7'-4"	S		2'-7"	2'-2"	2'-7"							End Blocks
A661	12	11'-0"	V				8'-9"	2'-3"			2'-2"			Downstream Wingwall
A665	12	11'-7"	L	9'-4"	2'-3"									Upstream Wingwall
														END POSTS
EP500	36	7'-4"	S		3'-4"	8"	3'-4"							End Posts
EP501	16	7'-6"	V				4'-2"	3'-4"				8"		" "
														SUPERSTRUCTURE
S512	342	5'-11"	S	1'-0"	1'-5"	1'-1"	1'-5"			1'-0"				Left Curb
S513	342	6'-3"	S	1'-0"	1'-7"	1'-1"	1'-7"			1'-0"				Right Curb

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A502) bar size - #5
   Mark (P1001) bar size - #10
   Mark (S603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

PLANS	BY	DATE
DESIGN - DETAIL	JET J.T.F.	7-13-76
CHECKED	N.E.R	9/20/76
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
REINFORCING STEEL
(EAST LIMINGTON BRIDGE)
SHEET 19 OF 25 AUGUSTA, MAINE

168-126

REINFORCING STEEL SCHEDULE

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(13)	23	70

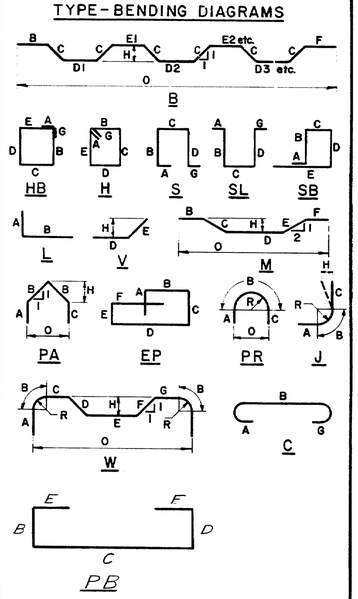
STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
			PIERS
P500	40	17'-5"	Shafts, Piers #1 & #2
P601	18	32'-6"	Distrib. Slab Pier #1
P602	126	8'-6"	Dist. Slab Piers #1 & #2
P603	18	23'-6"	Distrib. Slab Pier #2
P626	8	38'-0"	Caps, Piers #1 & #2
P801	4	38'-0"	Caps, Piers #1 & #2
P301	44	20'-8"	Shaft, Pier #1
P1000	40	5'-0"	Dist. Slab Pier #1
P1001	44	10'-6"	Shaft, Pier #1
P1100	36	38'-0"	Caps, Piers #1 & #2
P1101	38	5'-2"	Seal, Pier #2
P1102	40	6'-7"	Dist. Slab, Pier #2
P1103	40	14'-0"	Shaft, Pier #2

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
														PIERS
P501	4	12'-[illegible]	PA	2'-6	7'-1"	2'-6							2'-3"	Shafts, Piers #1 & #2
P502		12'-10"		2'-9"	7'-4"	2'-9"							2'-4"	
P503		13'-7"		3'-0"	7'-7"	3'-0							2'-5"	
P504		14'-3"		3'-3"	7'-5"	3'-3"							2'-5 1/2"	
P505		15'-0"		3'-6"	7'-5"	3'-6"							2'-6 1/2"	
P506		15'-7"		3'-9"	7'-1"	3'-9"							2'-7"	
P507		16'-5"		4'-0"	5'-5"	4'-0"							2'-8"	
P508	4	17'-0"		4'-3"	5'-6"	4'-3"							2'-8 1/2"	Shafts, Piers #1 & #2
P509	2	17'-9"		4'-6"	5'-9"	4'-6"							2'-9 1/2"	Shaft, Pier #1
P510	2	18'-5"		4'-9"	5'-11"	4'-9"							2'-10"	Shaft, Pier #1
P511	2	19'-2"		5'-0"	5'-5"	5'-0"							2'-11"	Shaft Pier #1
P512	2	19'-10"		5'-3"	5'-4"	5'-3"							2'-11 1/2"	Shaft, Piers #1
P513	20	13'-6"	PA	2'-5"	5'-5"	2'-5							2'-3"	Caps, Piers #1 & #2
P514	4	17'-5"	H	6"	4'-5 1/2"	4'-5"	4'-5 1/2"	4'-0"		6"				
P515	4	17'-3"			4'-5 1/2"	4'-5"	4'-5 1/2"	4'-2"						
P516	8	17'-2"			3'-9"	4'-5"	5'-5"	4'-5"						
P517		17'-5"				4'-6 1/2"		4'-6 1/2"						
P518		17'-8"				4'-8"		4'-8"						
P519		18'-0"				4'-10"		4'-10"						
P520		18'-3"				4'-11 1/2"		4'-11 1/2"						
P521		18'-6"				5'-1"		5'-1"						
P522		18'-10"				5'-3		5'-3						
P523		19'-1"				5'-4 1/2"		5'-4 1/2"						
P524	8	19'-4"	H	6"	3'-8"	5'-6"	3'-8"	5'-6"		6"				
P525	56	19'-8"	H	6"	3'-8"	5'-8"	3'-8"	5'-8"		6"				
P528	36	8'-2	PB		5"	5'-8"	5"	10"	10"					
P600	40	5'-10"	S		1'-3"	2'-4"	1'-3"							Caps, Piers #1 & #2
P627	16	22'-10"	V			10'-11"	11'-11"				1'-9"			Caps, Piers #1 & #2

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   - Mark (A 502) bar size - #5
   - Mark (P 1001) bar size - #10
   - Mark (S 603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

PLANS	BY	DATE
DESIGN - DETAIL	JET UTF	8-5-78
CHECKED	N.E.R.	11/78
REVISIONS		
FIELD CHANGES		

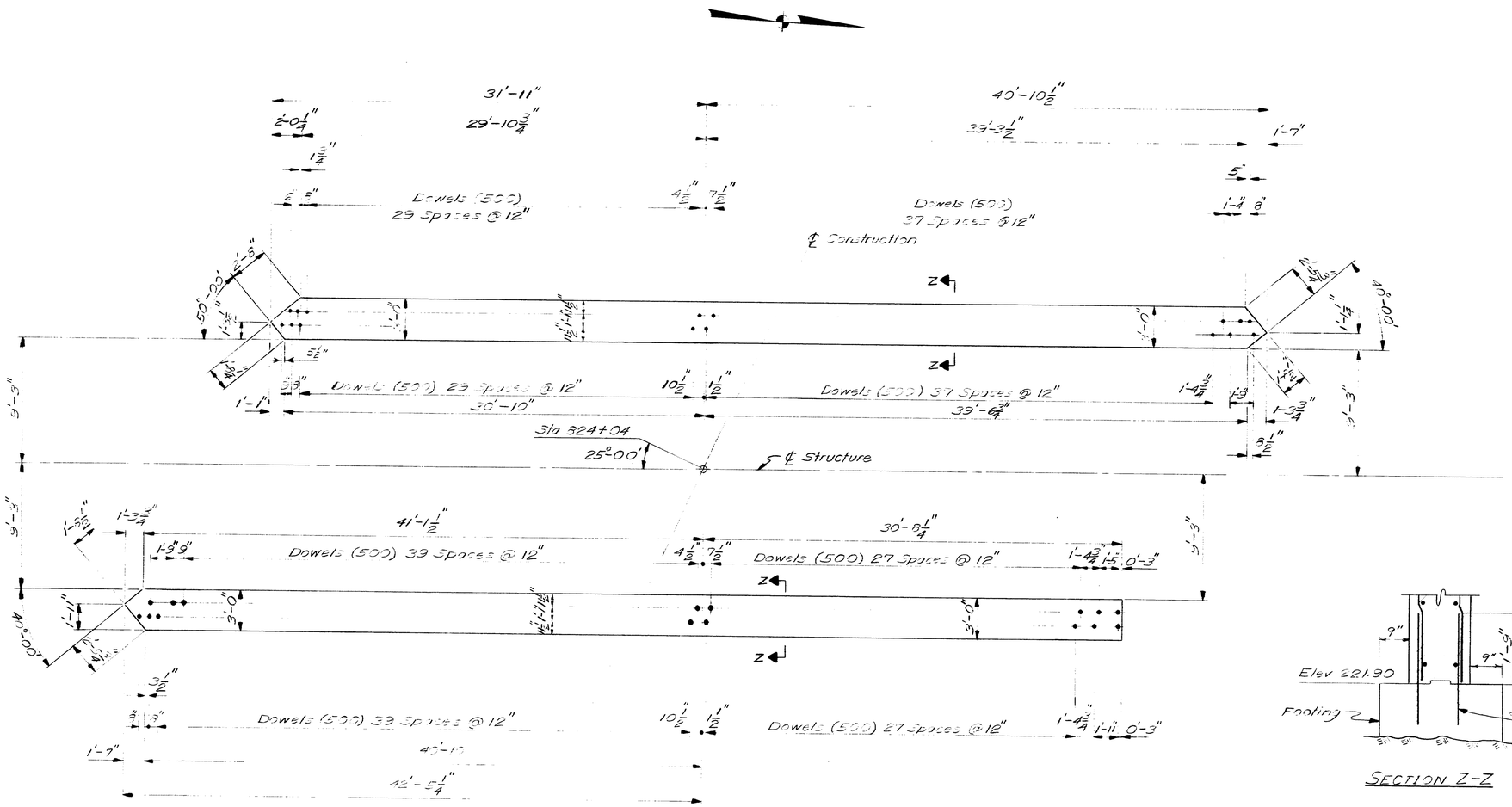
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH— CUMBERLAND COUNTY
& LIMINGTON— YORK COUNTY
REINFORCING STEEL
(EAST LIMINGTON BRIDGE)

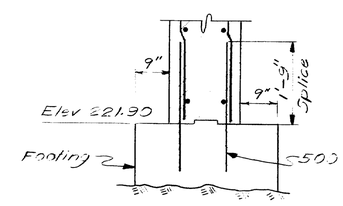
SHEET 20 OF 25 AUGUSTA, MAINE March 1977

168-127

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	S12-1(15)	24	76



FOOTING PLAN



SECTION Z-Z

For Notes sheet #24 of 25 & sheet 3 of 70

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN-DETAILED	V.J.T.F.	Apr 77
CHECKED	N.E.B.	May 77
REVISIONS		
FIELD CHANGES		

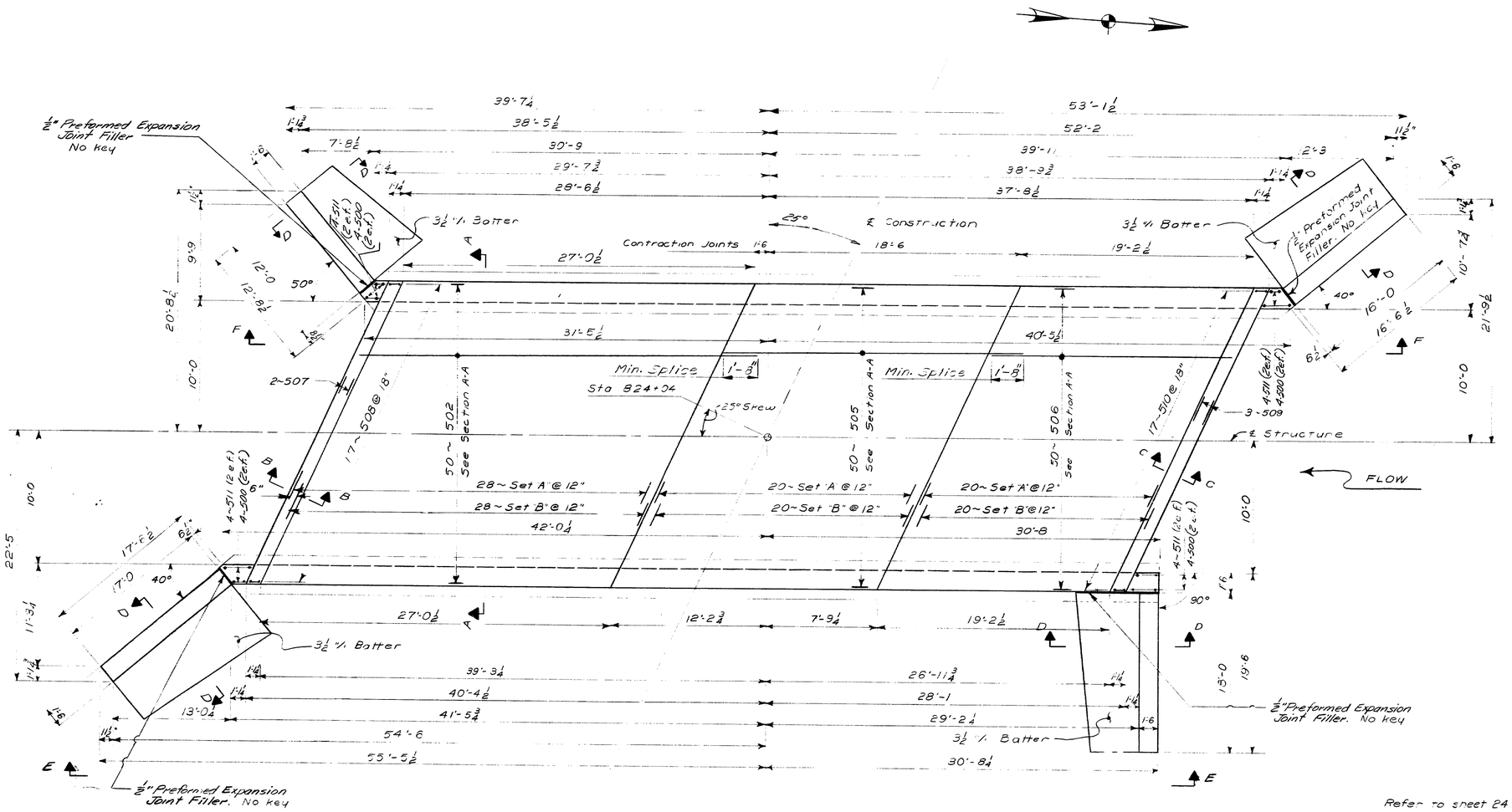
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
OVERFLOW STRUCTURE
FOOTING PLAN

SHEET 21 OF 25 AUGUSTA, MAINE MARCH 1977

168-128

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(16)	25	70



PLAN

Refer to sheet 24 of 25 for notes.

For View E-E & F-F see sheet 23 of 25
For Sections A-A, B-B, C-C & D-D see sheet 24 of 25

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

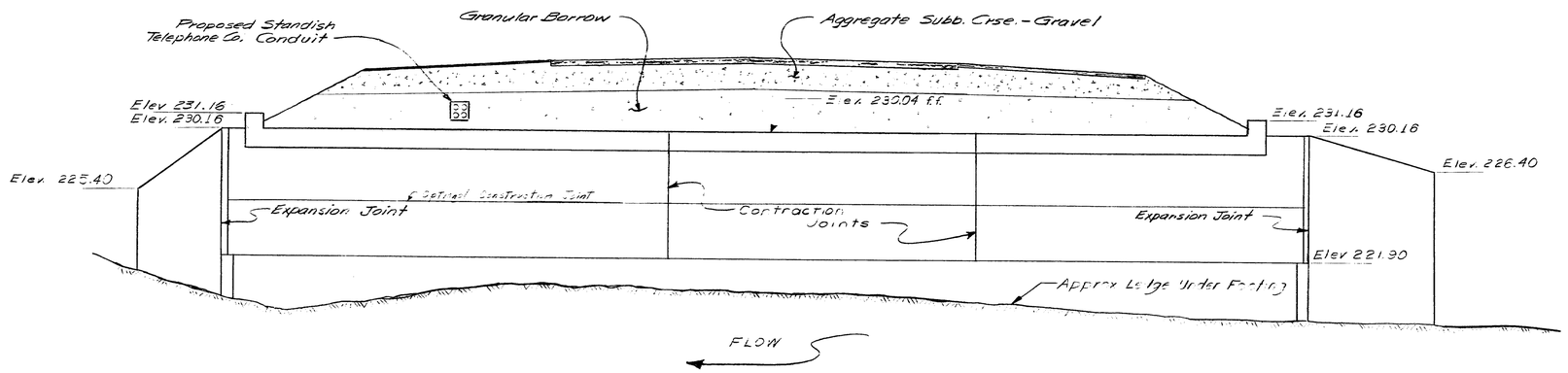
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
OVERFLOW STRUCTURE
PLAN

SHEET 22 OF 25 AUGUSTA, MAINE

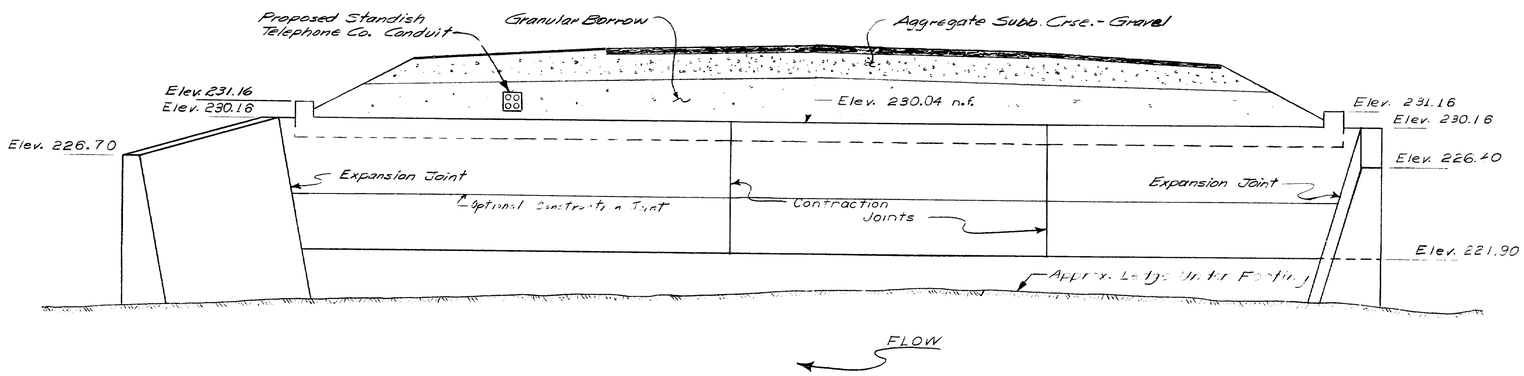
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

168-129

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(15)	26	70



VIEW F-F
(Reinforcing Steel and Keys not shown)



VIEW E-E
(Reinforcing Steel and Keys not shown)

Refer to sheet 24 of 25 for notes
Legend: n.f. = near face
f.f. = far face

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

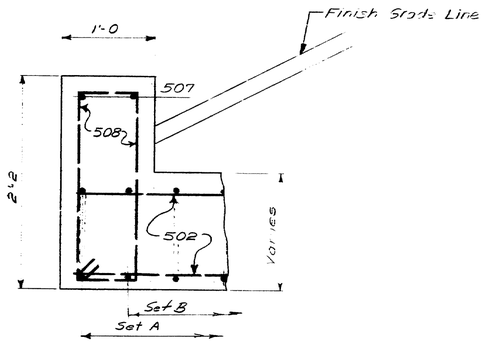
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
OVERFLOW STRUCTURE
ELEVATIONS

SHEET 23 OF 25 AUGUSTA, MAINE

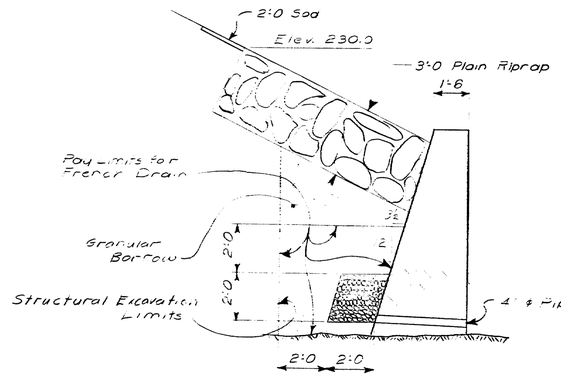
168-130

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	Pep / Pep	Jun 76
	CHECKED	N.E.R.	Dec 1976
	REVISIONS		
	FIELD CHANGES		

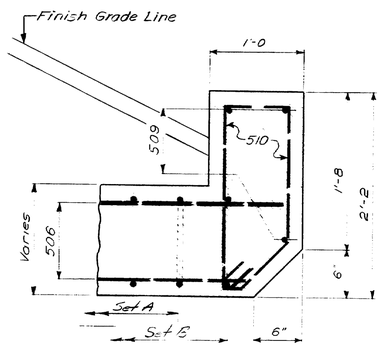
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	12-1(8)	27	70



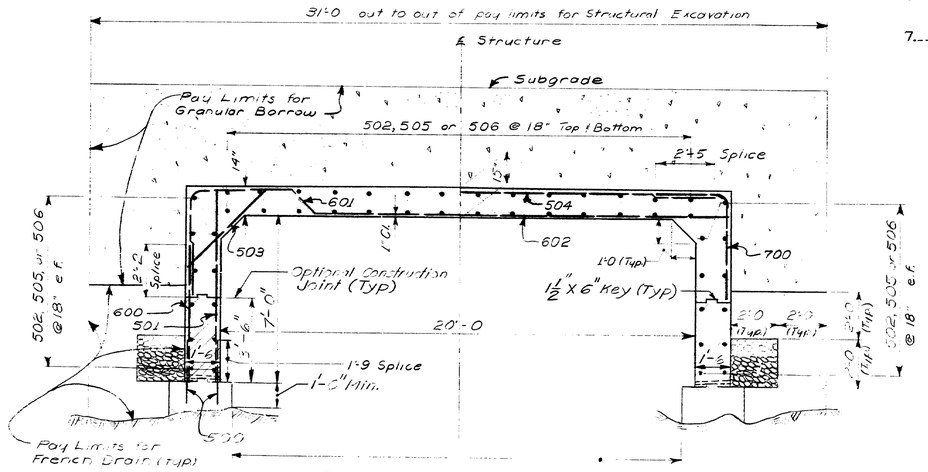
SECTION B-B



SECTION D-D



SECTION C-C



Set "A"	Set "B"
4 - 500	1 - 504
2 - 501	2 - 700
2 - 503	1 - 602
2 - 600	
1 - 601	

All material between the limits shown shall be excavated to ledge unless otherwise directed by the Engineer and will be paid for under Item 206.08 & 206.09

SECTION A-A

NOTES:

1. Chamfer all exposed edges of concrete a consistent dimension between ½" and ¾" inclusive, unless otherwise indicated.
2. Form a 1 inch V-groove at the front face of vertical contraction & construction joints.
3. Reinforcing Steel shall have 2 inches concrete cover unless otherwise indicated.
4. Place 4 inch diameter drains in the walls and wings at 20 feet maximum spacing. Exact location to be determined by the Engineer in the field.
5. Granular Borrow shall meet the requirements of Subsection 703.19, Material for Underwater Backfill.
6. Warp slopes to fit the end of the structure.
7. Cover the vertical contraction and construction joints on the back with two layers of heavy roofing 10 inches wide. Coat the concrete and back of each layer as applied with plastic roofing cement. Recess the area covered ¼ inch. Cover the contraction joints in the top slab in the same manner without recessing the concrete. Polyvinylchloride waterstops not required. The outside corner of the slab and walls at the joint shall be beveled or rounded as directed by the Engineer.

References:
Refer to sheet 3 of 70 for General Notes.
Refer to BD 104-73 for joint details.

Legend
e.f. = each face

Revised As-Built W.K. 2-28-79

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
OVERFLOW STRUCTURE
RIGID FRAME DETAILS
SHEET OF 25 AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	Pap Pap	Apr. '76
CHECKED	N.E.R.	10-13-76
REVISIONS		
FIELD CHANGES		

168-131

REINFORCING STEEL SCHEDULE

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	28	70

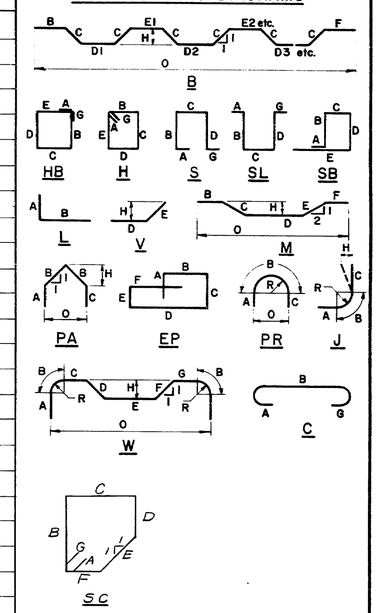
STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION
OVERFLOW STRUCTURE											
500	152	2'-9"	Set A								
501	68	3'-0"	Set A								
502	50	32'-0"	Longitudinal								
503	68	4'-10"	Set A								
504	68	25'-0"	Set B								
505	50	24'-0"	Longitudinal								
506	50	20'-0"	" "								
507	2	25'-0"	D. S. Curb								
509	2	25'-0"	U. S. Curb								
511	16	8'-0"	Corners								
600	68	5'-8"	Set A								
602	68	25'-0"	Set B								

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
OVERFLOW STRUCTURE														
508	17	6'-3"	H	5½"	9"	1'-11"	9"	1'-11"		5½"				D.S. Curb
510	17	5'-11"	SC	5½"	1'-11"	9"	1'-5"	8"	3"	5½"				U.S. Curb
601	68	34'-3"	W	4'-0"	9½"	4'-10"	1'-3"	12'-6"	1'-3"	4'-10"	11"	25'-0"	6"	Set A
700	68	7'-3"	J	2'-5½"	9½"	4'-0"							6"	Set B

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

PLANS		BY	DATE
	DESIGN - DETAIL	Pep / Pep	Jun 76
	CHECKED	N.E.R.	Dec. 76
	REVISIONS		
	FIELD CHANGES		

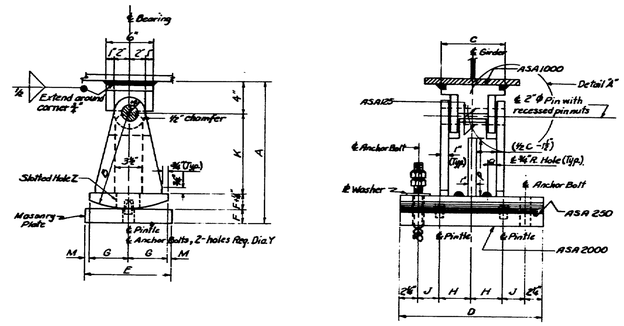
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH—CUMBERLAND COUNTY
& LIMINGTON—YORK COUNTY
REINFORCING STEEL
(OVERFLOW STRUCTURE)

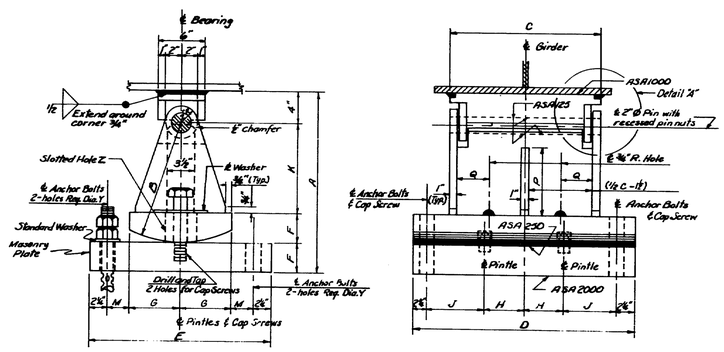
SHEET 25 OF 25 AUGUSTA, MAINE

168-132

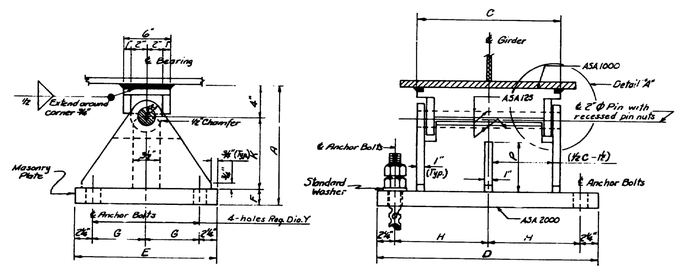
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(12)	27	70



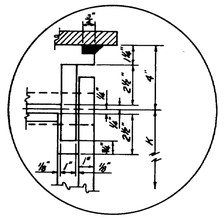
EXPANSION PEDESTAL — EPD



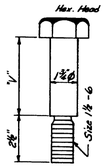
EXPANSION PEDESTAL — EPE



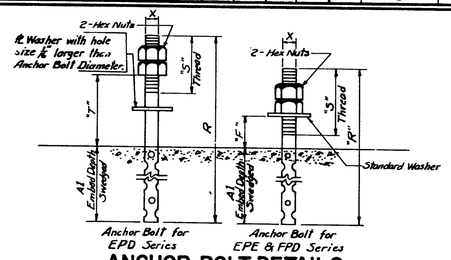
FIXED PEDESTAL — FPD



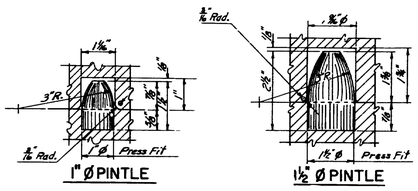
DETAIL "A"



CAP SCREW DETAIL



ANCHOR BOLT DETAILS



PINTLE DETAILS

NOTE:
Use 1" Ø Pintles with 1" Ø Anchor Bolts & 1½" Ø Pintles with 1½" Ø Anchor Bolts.

MARK	LOAD	A	B	C	D	E	F	G	H	J	K	M	P	Q	R	S	T		V	X-Anchor Bolt Diameter	Y-Masonry Plate Hole Size	Number Anchor Bolts Required	Z-Slotted Hole for Anchor Bolts or Cap Screws	℄ Washer Size for Anchor Bolts or Cap Screws	A1 Embedment Depth	MARK
EPD-1	100K	1'-2⅜"	9"	8"	1'-6"	8"	1⅜"	3½"	4"	2⅜"	7"	½"	–	3"	1'-4½"	3"	4½"		–	1"	1⅛"	2	3"×1⅛"	3"×5"×½"	10"	EPD-1
EPD-2	100K	1'-2⅜"	9"	8"	1'-6"	9"	1⅜"	4"	4"	2⅜"	7"	½"	–	3"	1'-4½"	3"	4½"		–	1"	1⅛"	2	3"×1⅛"	3"×5"×½"	10"	EPD-2
EPD-3	100K	1'-2⅜"	9"	8"	1'-6"	10"	1⅜"	4½"	4"	2⅜"	7"	½"	–	3"	1'-4½"	3"	4½"		–	1"	1⅛"	2	3"×1⅛"	3"×5"×½"	10"	EPD-3
EPD-4	100K	1'-3½"	1'-0"	8"	1'-6"	11"	1⅜"	5"	4"	2⅜"	10"	½"	–	3"	1'-5"	3"	4½"		–	1"	1⅛"	2	3"×1⅛"	3"×5"×½"	10"	EPD-4
EPD-5	200K	1'-9½"	1'-3"	10"	1'-8"	1'-0"	2½"	5½"	4"	3⅜"	1'-0½"	½"	–	4"	2'-0⅜"	4"	6½"		–	1½"	1½"	2	4"×1⅛"	4"×7"×½"	1'-3"	EPD-5
EPD-6	200K	1'-9½"	1'-3"	10"	1'-8"	1'-1"	2½"	6"	4"	3⅜"	1'-0½"	½"	–	4"	2'-1"	4"	6½"		–	1½"	1½"	2	4"×1⅛"	4"×7"×½"	1'-3"	EPD-6
EPD-7	200K	1'-9½"	1'-3"	10"	1'-8"	1'-2"	2½"	6½"	4"	3⅜"	1'-0½"	½"	–	4"	2'-1"	4"	6½"		–	1½"	1½"	2	4"×1⅛"	4"×7"×½"	1'-3"	EPD-7
EPD-8	200K	1'-9½"	1'-3"	10"	1'-8"	1'-3"	2½"	7"	4"	3⅜"	1'-0½"	½"	–	4"	2'-1"	4"	6⅝"		–	1½"	1½"	2	4"×1⅛"	4"×7"×½"	1'-3"	EPD-8
EPD-9	300K	1'-10"	1'-3"	1'-2"	2'-0"	1'-6"	3"	7½"	5"	4⅜	11⅜"	½"	–	6"	2'-2½"	4"	8"		–	1½"	1½"	2	5"×1⅛"	4"×8"×½"	1'-3"	EPD-9
EPD-10	400K	1'-10½"	1'-3"	1'-6"	2'-4"	1'-6"	3½"	8½"	6"	5⅜"	11⅜"	½"	8⅜"	3⅜"	2'-3"	4"	8⅜"		–	1½"	1½"	2	5"×1⅛"	4"×8"×½"	1'-3"	EPD-10
EPE-1	200K	1'-10"	1'-3"	10"	1'-7"	1'-6"	3"	4"	4"	3⅜"	1'-0"	2⅜"	–	4"	1'-10"	4½"	–		4"	1½"	1⅛"	4	3⅜"×1⅛"	3½"×4½"×½"	1'-3"	EPE-1
EPE-2	200K	1'-10"	1'-3"	11"	1'-8"	1'-9"	3"	5½"	4½"	3⅜"	1'-0"	2⅜"	–	4½"	1'-10"	4½"	–		4"	1½"	1⅛"	4	4"×1⅛"	3½"×5½"×½"	1'-3"	EPE-2
EPE-3	200K	1'-10"	1'-3"	11"	1'-8"	1'-10"	3"	6"	4½"	3⅜"	1'-0"	2⅜"	–	4½"	1'-10"	4½"	–		4½"	1½"	1⅛"	4	4"×1⅛"	3½"×5½"×½"	1'-3"	EPE-3
EPE-4	200K	1'-10"	1'-3"	11"	1'-8"	1'-10"	3"	6½"	4½"	3⅜"	1'-0"	2⅜"	–	4½"	1'-10"	4½"	–		4½"	1½"	1⅛"	4	4½"×1⅛"	3½"×6"×½"	1'-3"	EPE-4
EPE-5	200K	1'-10"	1'-3"	11"	1'-8"	2'-0"	3"	7"	4½"	3⅜"	1'-0"	2⅜"	–	4½"	1'-10"	4½"	–		4½"	1½"	1⅛"	4	4½"×1⅛"	3½"×6"×½"	1'-3"	EPE-5
EPE-6	300K	1'-10"	1'-3"	1'-2"	1'-11"	1'-6"	3"	4"	5"	4⅜"	1'-0"	2⅜"	–	6"	1'-10"	4½"	–		4"	1½"	1⅛"	4	2⅜"×1⅛"	3½"×4½"×½"	1'-3"	EPE-6
EPE-7	300K	1'-10½"	1'-3"	1'-2"	1'-11"	1'-8"	3⅜"	5"	5"	4⅜"	11⅜"	2⅜"	–	6"	1'-10"	4½"	–		4"	1½"	1⅛"	4	3"×1⅛"	3½"×5"×½"	1'-3"	EPE-7
EPE-8	300K	1'-10½"	1'-3"	1'-2"	1'-11"	1'-10"	3½"	6"	5"	4⅜"	11⅜"	2⅜"	–	6"	1'-10½"	4½"	–		4½"	1½"	1⅛"	4	4½"×1⅛"	3½"×6"×½"	1'-3"	EPE-8
EPE-9	300K	1'-10½"	1'-3"	1'-2"	1'-11"	2'-0"	3½"	7"	5"	4⅜"	11⅜"	2⅜"	–	6"	1'-10½"	4½"	–		4½"	1½"	1⅛"	4	5"×1⅛"	3½"×6½"×½"	1'-3"	EPE-9
EPE-10	300K	1'-10½"	1'-3"	1'-2"	1'-11"	2'-3"	3½"	8"	5"	4½"	11½"	3½"	–	6"	1'-10½"	4½"	–		5½"	1½"	1⅛"	4	5"×1⅛"	3½"×7"×½"	1'-3"	EPE-10
EPE-11	400K	1'-10½"	1'-3"	1'-7"	2'-4"	1'-7"	3½"	4½"	5"	6⅜"	11⅜"	2⅜"	9"	4"	1'-10"	4½"	–		4"	1½"	1⅛"	4	4"×1⅛"	3½"×5"×½"	1'-3"	EPE-11
EPE-12	400K	1'-10½"	1'-3"	1'-7"	2'-4"	1'-11"	3⅜"	6½"	5"	6⅜"	11½"	2⅜"	8½"	4"	1'-10½"	4½"	–		5"	1½"	1⅛"	4	5"×1⅛"	3½"×6"×½"	1'-3"	EPE-12
EPE-13	400K	1'-11"	1'-3"	1'-7"	2'-4"	2'-4"	4"	8½"	5"	6⅜"	11"	3½"	8½"	4"	1'-11"	4½"	–		6½"	1½"	1⅛"	4	6½"×1⅛"	3½"×8"×½"	1'-3"	EPE-13
EPE-14	600K	2'-1⅜"	1'-6"	1'-11"	3'-0"	1'-10"	3⅜"	6"	7"	8⅜"	1'-2½"	2⅜"	11½"	5"	1'-10½"	4½"	–		4⅜"	1½"	1⅛"	4	4½"×1⅛"	4"×5½"×½"	1'-3"	EPE-14
EPE-15	600K	2'-2½"	1'-6"	1'-11"	3'-0"	2'-5"	4½"	9"	7"	8⅜"	1'-1⅜"	3½"	11"	5"	1'-11"	4½"	–		6½"	1½"	1⅛"	4	6½"×1⅛"	4"×8"×½"	1'-3"	EPE-15
EPE-16	800K	2'-2"	1'-6"	2'-6"	3'-10"	1'-11"	4"	6½"	10"	10⅜"	1'-2"	2⅜"	11½"	6⅜"	1'-11"	4½"	–		5"	1½"	1⅛"	4	4½"×1⅛"	4"×6"×½"	1'-3"	EPE-16
EPE-17	800K	2'-2½"	1'-6"	2'-6"	3'-10"	2'-5"	4½"	9"	10"	10⅜"	1'-1½"	3½"	10⅜"	6⅜"	1'-11½"	4½"	–		6⅜"	1½"	1⅛"	4	6½"×1⅛"	4"×8½"×½"	1'-3"	EPE-17
FPD-1	100K	1'-0"	–	8"	1'-6"	9"	2"	2½"	6½"	–	6"	–	–	–	1'-3"	3½"	–		–	1"	1⅛"	4	–	Standard	10"	FPD-1
FPD-2	200K	1'-0"	–	10"	1'-8"	1'-2"	2"	4½"	7½"	–	6"	–	–	–	1'-8"	4"	–		–	1½"	1⅛"	4	–	Standard	1'-3"	FPD-2
FPD-3	300K	1'-0"	–	1'-2"	2'-0"	1'-4"	2"	5½"	9½"	–	6"	–	–	–	1'-8"	4"	–		–	1½"	1⅛"	4	–	Standard	1'-3"	FPD-3
FPD-4	400K	1'-3"	–	1'-6"	2'-4"	1'-6"	2"	6½"	11⅜"	–	9"	–	6½"	–	1'-8"	4"	–		–	1½"	1⅛"	4	–	Standard	1'-3"	FPD-4
FPD-5	600K	1'-3"	–	1'-11"	3'-0"	1'-10"	3"	8½"	1'-3⅜"	–	8"	–	3½"	–	1'-9"	4"	–		–	1½"	1⅛"	4	–	Standard	1'-3"	FPD-5
FPD-6	800K	1'-3"	–	2'-6"	3'-10"	1'-11"	3"	9½"	1'-8⅜"	–	8"	–	3½"	–	1'-9"	4"	–		–	1½"	1⅛"	4	–	Standard	1'-3"	FPD-6

GENERAL NOTES:

At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2", and a min. slope of ¼ inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

Fabricate pedestals with ¼" fillet welds. The diameter of the pin hole shall not exceed that of the pin by more than 1/16 inch.

Pedestals EPD-1 thru EPD-9 and EPE-1 thru EPE-10 have no center stiffeners and have only one drainage hole.

Pedestals EPD-10 and EPE-11 thru EPE-17 have a center stiffener and have two drainage holes.

Pedestals FPD-1 thru FPD-3 have no center stiffeners and have no drainage holes.

Pedestals FPD-4 thru FPD-6 have a center stiffener and no drainage holes.

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1969

A.S.T.M. STEEL CLASSIFICATION

All structural steel shall be -A36 except the following:
2" Ø Pin - A36; A235, Class E or A108, Grade 1016 - 1030 inclusive.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

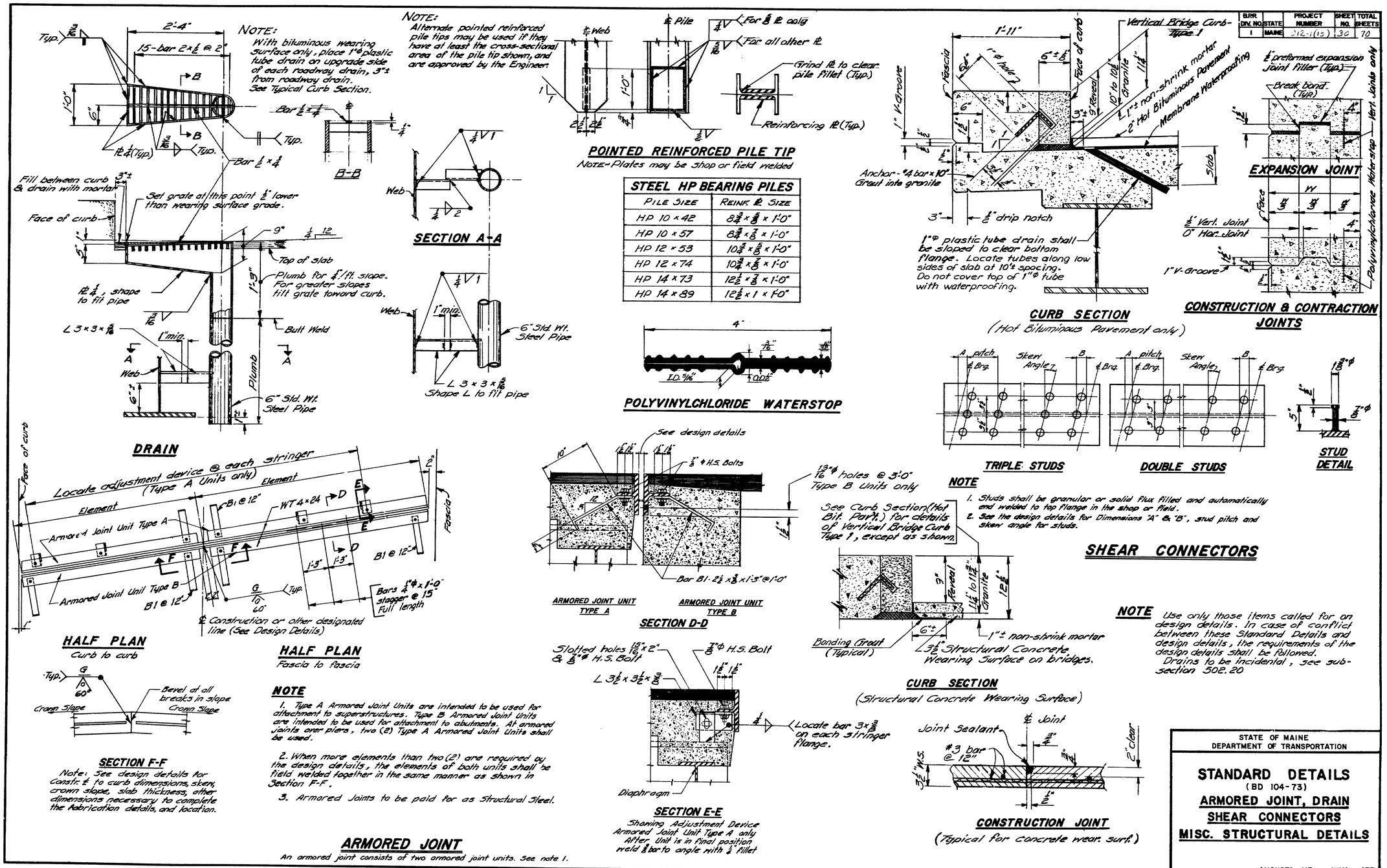
STANDARD DETAILS
(BD 100-71)

BEARING PEDESTALS

AUGUSTA, MAINE JULY 1971

168-133

B.P.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(13)	30	70



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 104-73)

ARMORED JOINT, DRAIN
SHEAR CONNECTORS
MISC. STRUCTURAL DETAILS

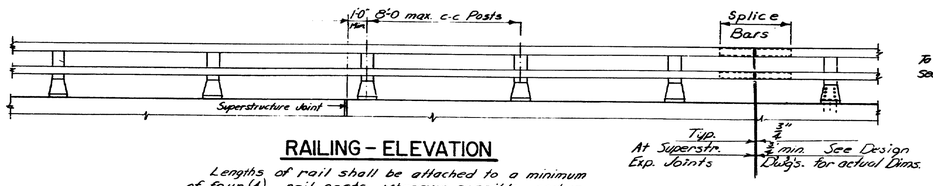
AUGUSTA, ME. JULY 1973

168-134

F.E.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	S-R-1(03)	31	70

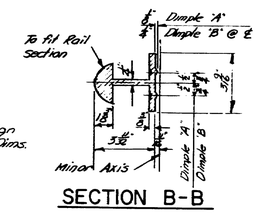
DESIGN SPECIFICATIONS

A.A.S.H.O. Standard Specifications for Highway Bridges 1969 and Interim Specifications.

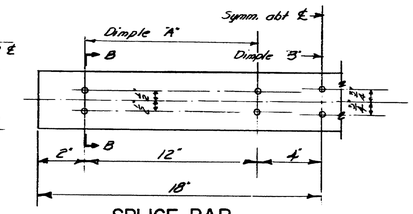


RAILING - ELEVATION

Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.

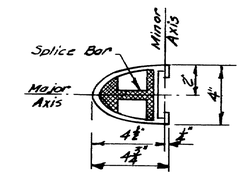


SECTION B-B



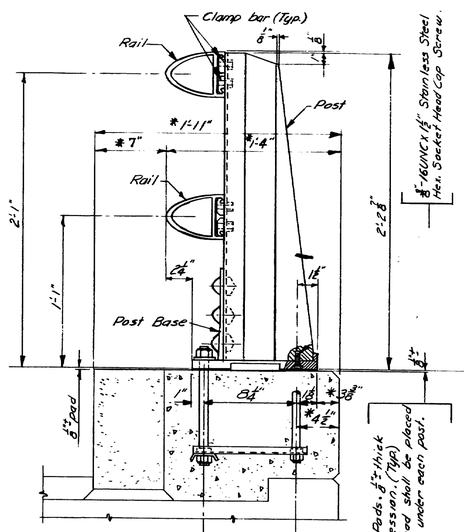
SPLICE BAR

Note - An alternate to the dimple system for holding the splice bar in position may be used if approved by the Engineer.



RAIL SECTION

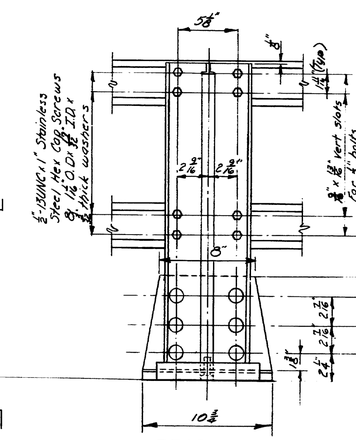
See "Rail Detail"



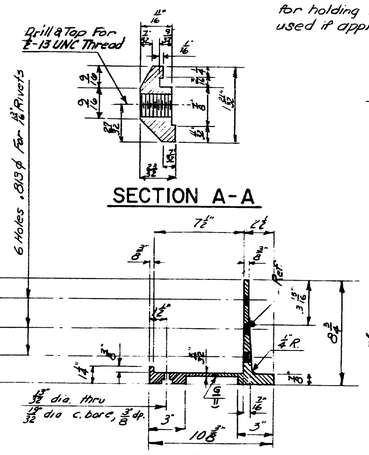
BRIDGE RAILING

(Assembly)

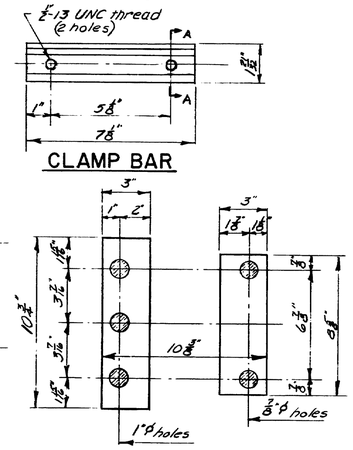
* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



REAR ELEV.

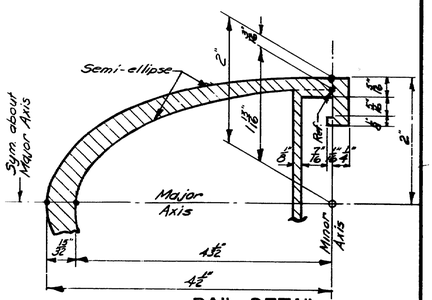


SECTION A-A

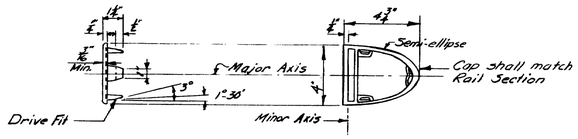


CLAMP BAR

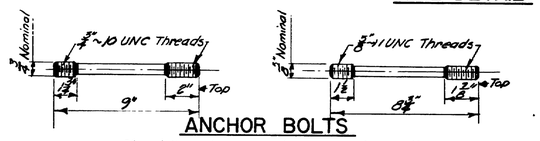
PREFORMED PADS



RAIL DETAIL

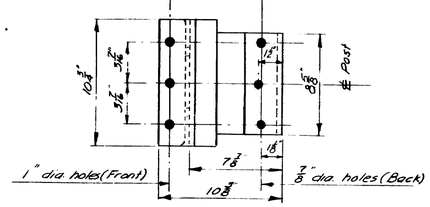


RAIL CAP



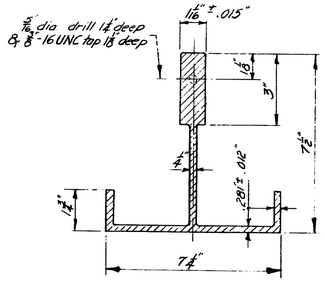
ANCHOR BOLTS

If cut threads are used, body diameter shall be not less than nominal diameter.
If rolled threads are used, body diameter shall be not less than root diameter of the threads.

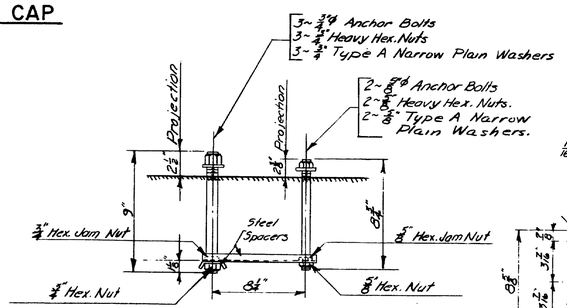


POST BASE

(Bottom View)

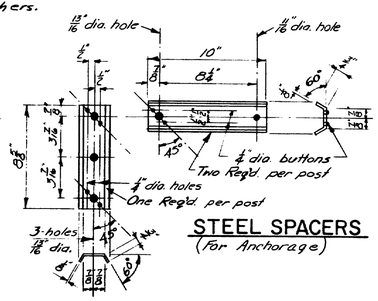


POST SECTION



RAIL POST ANCHORAGE

(Assembly)



STEEL SPACERS

(For Anchorage)

PLANS		BY	DATE
	DESIGN - DETAILED	K. Leach	Jan. 1973
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS

(BD 114-73)

ALUMINUM BRIDGE RAILING

2-BAR (SEMI-ELLIPSE)

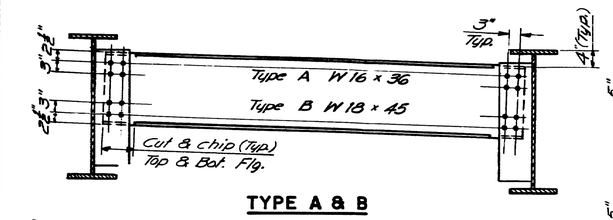
TYPE "A"

AUGUSTA, MAINE FEBRUARY 1973

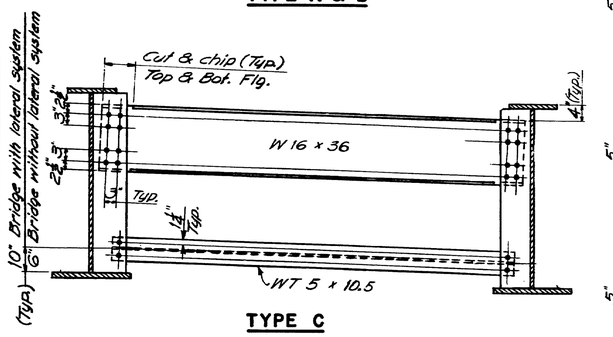
168-134

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	32	70

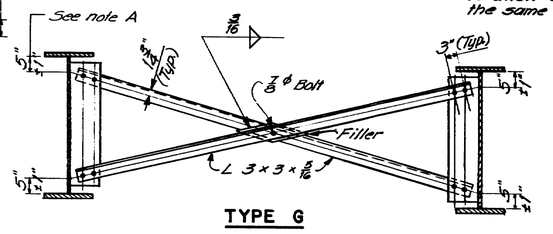
NOTE A This dimension may be varied (±1") to allow a series of diagonals to have the same slope.



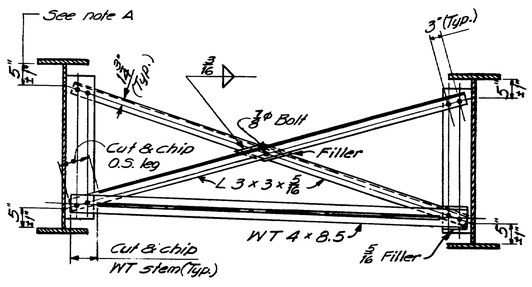
TYPE A & B



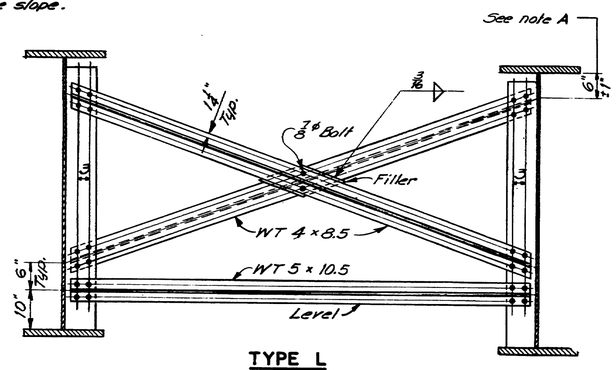
TYPE C



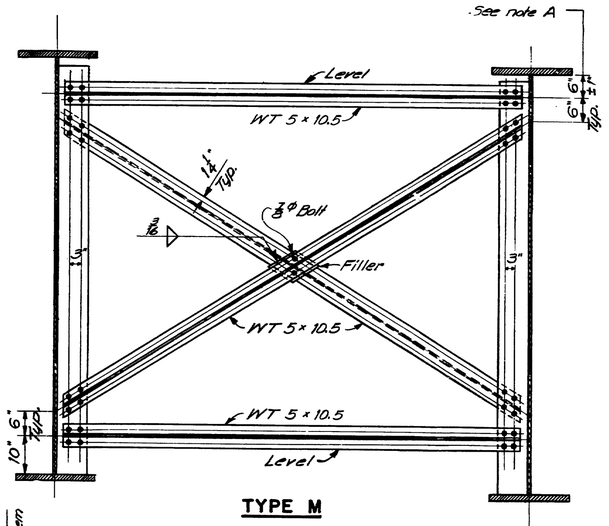
TYPE G



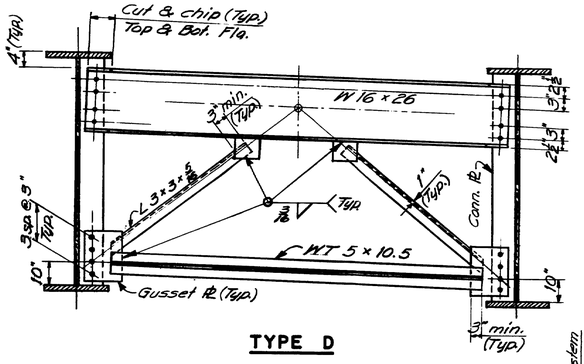
TYPE H



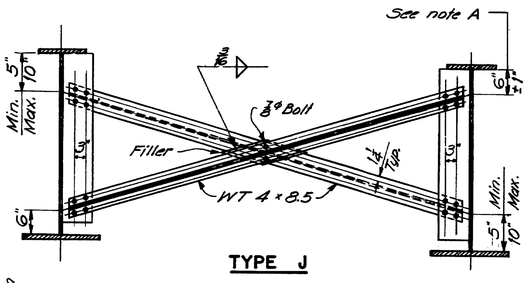
TYPE L



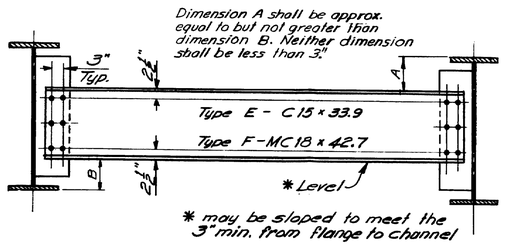
TYPE M



TYPE D

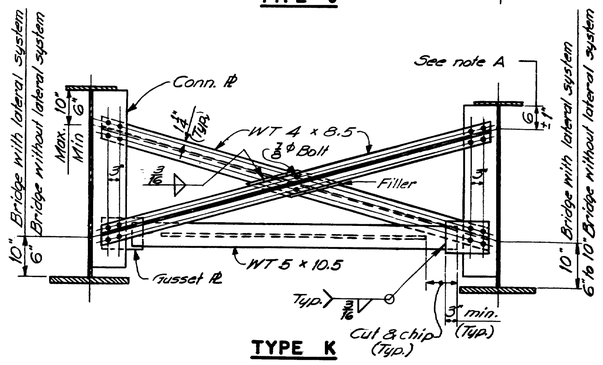


TYPE J

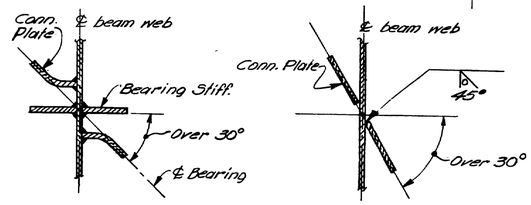


* may be sloped to meet the 3" min. from flange to channel

TYPE E & F



TYPE K



DETAIL A
Referenced from Note 5

DETAIL B
Referenced from Note 4

MATERIALS

Diaphragms, Crossframes and All Plates (Filler, gusset, and connection) ASTM A36
High Strength Bolts 7/8" diameter — — — ASTM A325

FABRICATION NOTES

1. For location and type of diaphragm or crossframe see design details.
2. Holes for 7/8" diameter bolts shall be 15/16" dia. and Edge distances shall be 1 1/2" minimum unless otherwise shown.
3. Connection plates and gusset plates shall have a minimum thickness of 3/8" and shall have sufficient width to provide erection clearances. When bearing stiffeners or intermediate stiffeners are used as connection plates, the plate size will be given on the design details.
4. Connection plates shall be fastened to beam and girder webs as follows:
   0° to 30° skew--- fillet weld both sides.
   Over 30° skew--- full penetration groove weld (see Detail B) except as indicated in Note 5
   Over 45° skew_ weld prequalification will be required.

   The skew angle is the angle between the connection plate and a line normal to the beam.
5. Bearing stiffeners shall be used as connection plates when the skew is not over 30°. When the skew is over 30° a bent connection plate shall be attached to the web adjacent to the bearing stiff. as shown in Detail A.
6. All fillet weld sizes shall be the minimum for the thickness of metal being joined according to AWS Specifications for welded Highway & Railway Bridges.
7. Connection plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression or when used as a bearing stiffener or intermediate stiff.
8. Connection plates shall extend to the bottom flange when used as a bearing stiffener, at points where lateral bracing is attached & on welded beams and girders in areas where the bottom flange is always in compression.
9. When a conn. plate is extended to a flange it shall be a paint tight fit except as otherwise indicated on design details.
10. Conn. plates shall be 2 1/2" clear from flanges, except as indicated by Notes 7&8.
11. Use only those items called for on the design details. In case of conflict between these standard details and the design details, the design details shall be followed.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 113 - 72)
DIAPHRAGMS & CROSSFRAMES

AUGUSTA, MAINE SEPT. 1972

PLANS
DESIGN - DETAILED
CHECKED
REVISIONS
FIELD CHANGES
BY
DATE

168-135

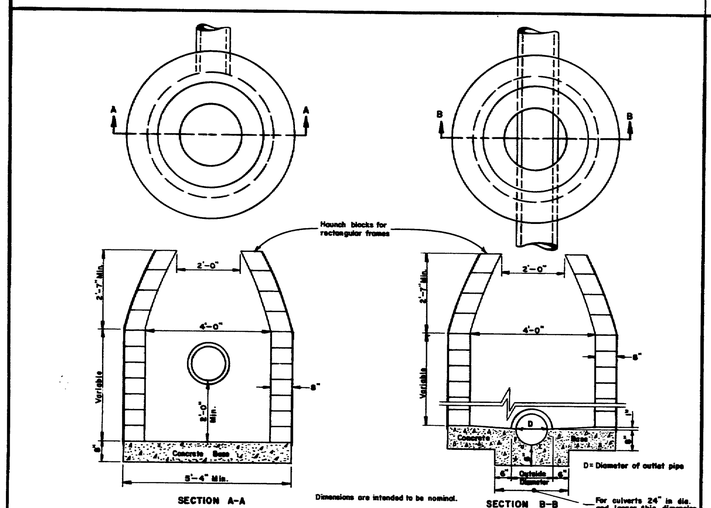
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	33	70

GENERAL NOTES — ALL CATCH BASINS AND MANHOLES

1. Any Catch Basin in excess of 8' in depth shall, if directed be provided with steps similar to those detailed for Manholes.
2. Frames, Grates & Covers shall be considered as part of the structure, and no separate payment shall be made.

GENERAL NOTES — PRECAST CATCH BASINS AND MANHOLES

1. Drain holes in precast sumps to be not over 3" in diameter, and shall be plugged with mortar when constructed.
2. All precast sections of less than 8" wall thickness shall have tongue and groove joints.
3. Cone and Ring sections wall thickness min. 4", max. 8"
4. Minimum wall thickness of sump may be 4" as specified in A.S.T.M. C-478, however, if concrete blocks are used around the inlet and outlet pipes, the wall thickness of sump shall be 8".
5. Wall around inlet and outlet pipes may be built of 8" concrete blocks or a precast ring with an opening 2" larger than the outside diameter of the pipe may be used.
6. Lift Holes shall be provided.

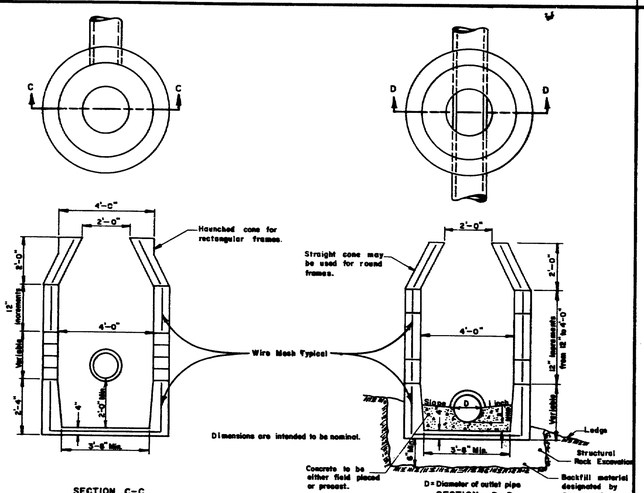


SECTION A-A
SHAPE "1"

SECTION B-B
SHAPE "2"

CATCH BASINS (Concrete Blocks or Bricks)

A

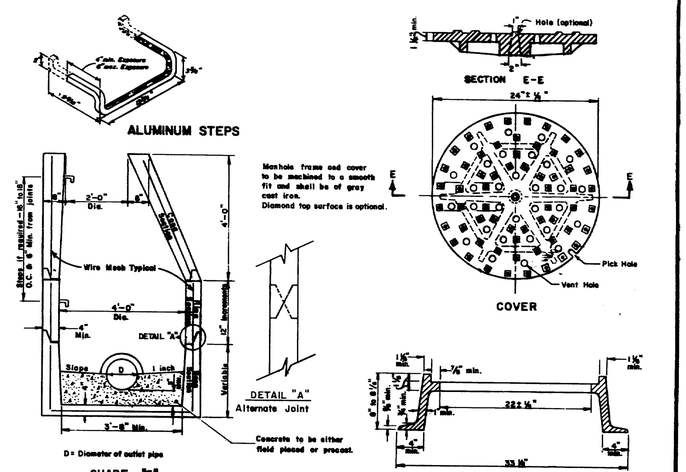


SECTION C-C
SHAPE "3"

SECTION D-D
SHAPE "4"

CATCH BASINS (Precast Units)

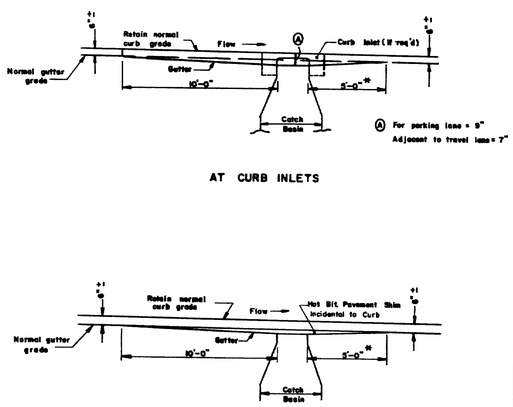
B



SHAPE "5"

MANHOLE

C



AT CURB INLETS

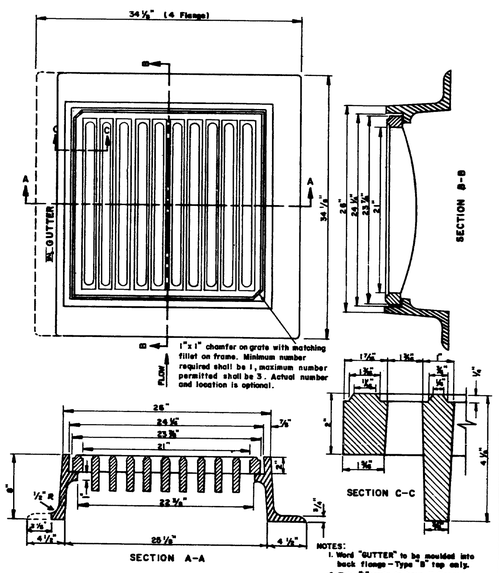
AT CURB WITHOUT INLET STONES

* If at bottom of sag, this dimension to be 10'-0".

NOTE: PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT. CASCADE GRATES SHALL BE INSTALLED ON GRADIENT OF THE GUTTER. THE GRATES SHALL BE DEPRESSED 3" BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. DIMENSIONS ARE INTENDED TO BE NOMINAL.

GUTTER GRADE TRANSITION AT CATCH BASIN

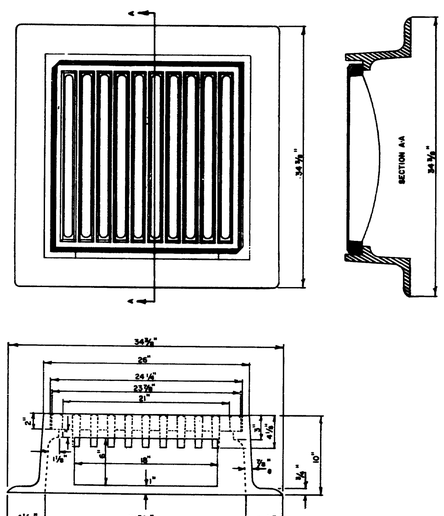
D



NOTES:
1. Word "GUTTER" to be moulded into back flange - Type "B" top only.
2. Type "A" grate to have 3 flanges
3. Type "B" grate to have 4 flanges.
4. Frame and grate to be of gray cast iron.
5. Dimensions are intended to be nominal.

TYPE "A" & "B" CATCH BASIN TOPS
(PARALLEL BAR GRATES)

E



1. Open throat shall be constructed on side away from the direction of traffic. All other sides shall be graded flush with the top of C.B. grate.
2. Frame shall be gray cast iron.
3. Grate shall be same as type "A" and "B".
4. Dimensions are intended to be nominal.
5. When volume of water variable, a 6" opening may be increased.

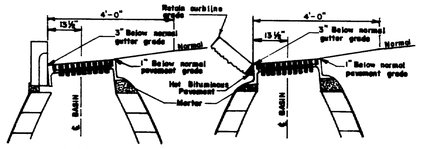
TYPE "C" CATCH BASIN TOPS

F

STRUCTURE	TOP				SHAPE				
CATCH BASIN	A	B	C	D	1	2	3	4	5
Type A-1	X				X		X		
Type A-2	X					X		X	
Type B-1		X			X		X		
Type B-2		X				X		X	
Type C-1			X		X		X		
Type C-2			X			X		X	
MANHOLE				X		X		X	X

TABLE OF CATCH BASIN TYPES
(COMBINATION OF TOPS AND SHAPES)

For Type "E" & Type "F" C.B. See Sheet No. 3



Dimension are intended to be nominal.

CATCH BASIN TOP INSTALLATION

G

REVISIONS	
CATCH BASINS TYPE A, B, C	10-21-69
PLATE 'E'	4-21-71
PLATE 'D-E'	8-26-75
PLATE C	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

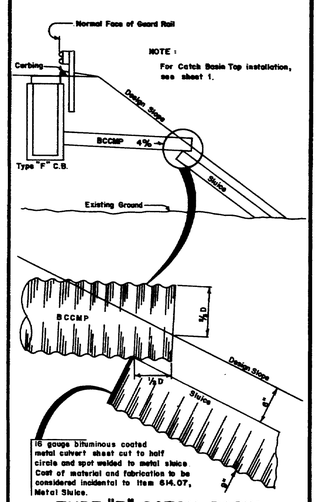
STANDARD DETAILS

CATCH BASINS
AND
MANHOLES

AUG. 1969 (1)

168-136

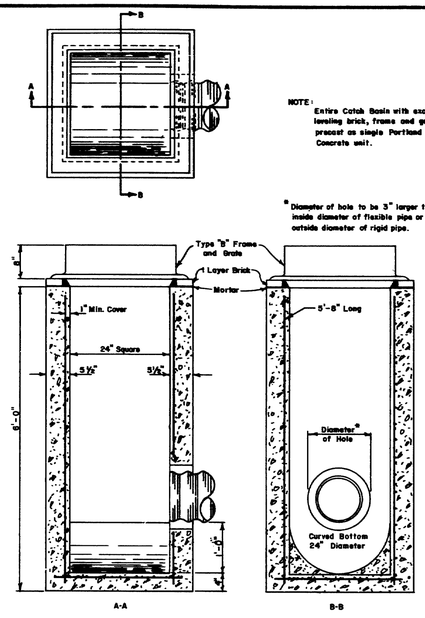
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	39	72



TYPE "F" CATCH BASIN WITH OUTLET PIPE (SLUICE OPTIONAL)

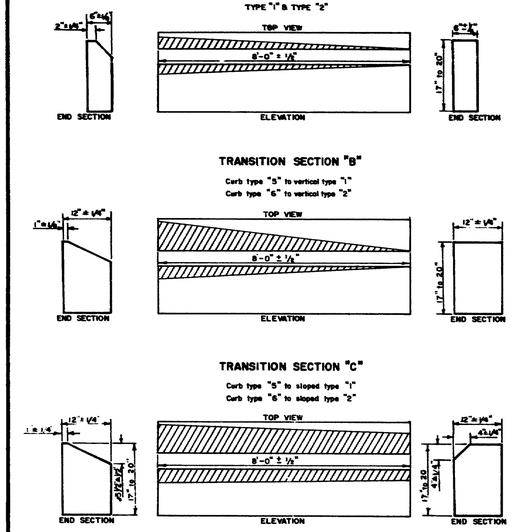
(SEE SHEET NO. 2 FOR STANDARD SLUICE DRAWING)

3-A



CATCH BASIN TYPE "F"

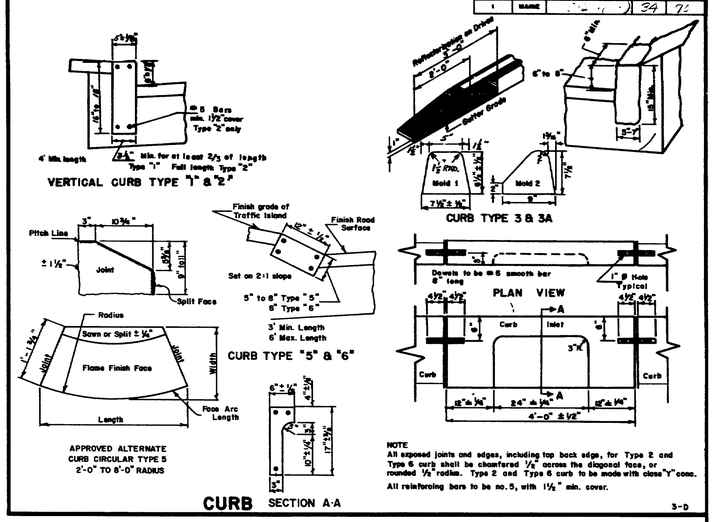
3-B



CURB TRANSITION

NOTE - TYPE 2 CURB
Precast concrete curb to be made with class "Y" concrete.
All reinf. bars to be #5, 1½" min. cover.

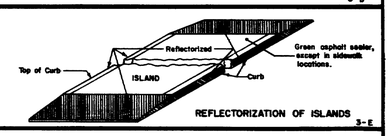
3-C



NOTE
All exposed joints and edges, including top back edge, for Type 2 and Type 6 curb shall be chamfered ½" across the diagonal face, or rounded ½" radius. Type 2 and Type 6 curb to be made with class "Y" conc.
All reinforcing bars to be no. 5, with 1½" min. cover.

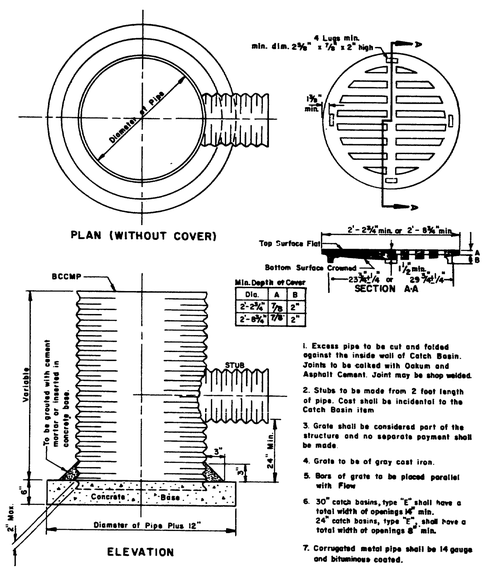
CURB SECTION A-A

3-D



REFLECTORIZATION OF ISLANDS

3-E

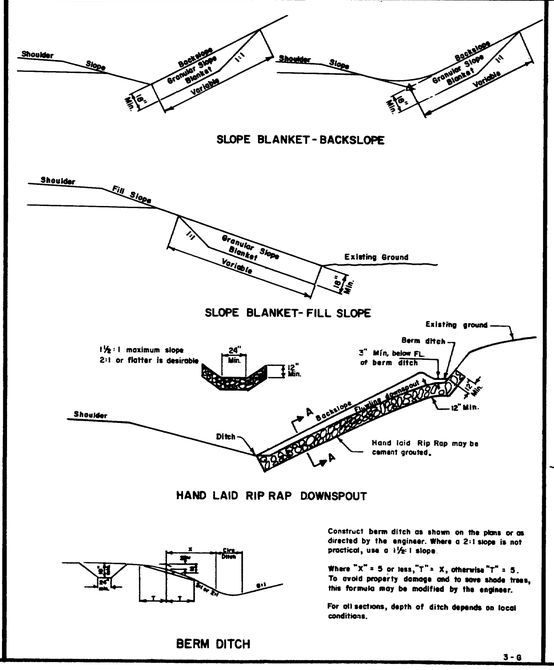


Min. Depth of Cover		
Dia.	A	B
2'-2⅝"	⅞"	2"
2'-8⅝"	1⅞"	2"

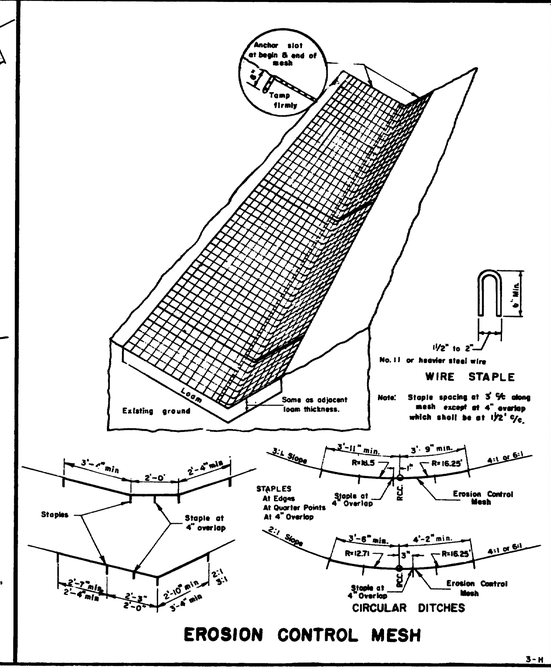
1. Excess pipe to be cut and folded against the inside wall of Catch Basin. Joints to be caked with Oakum and Asphalt Cement. Joint may be shop welded.
2. Stubs to be made from 2 foot length of pipe. Cost shall be incidental to the Catch Basin item
3. Grate shall be considered part of the structure and no separate payment shall be made
4. Grate to be of gray cast iron.
5. Bars of grate to be placed parallel with Flow
6. 30" catch basins, type "E" shall have a total width of openings 14" min. 24" catch basins, type "E", shall have a total width of openings 8" min.
7. Corrugated metal pipe shall be 14 gauge and bituminous coated.

CATCH BASIN TYPE "E"

3-F



3-G



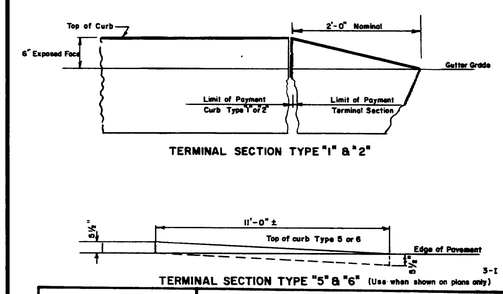
EROSION CONTROL MESH

3-H

CURB TYPES (1&2),(5&6) ON CURVES				
Type	RADIUS OF CURVE	LENGTH	PAID FOR AS	STONE IS CUT OR CAST
1 & 2	0' To 60' Incl.	4' Min.	Circular	To Fit Curve
	Over 60' To 160'	4' To 6'	Straight	Straight Pieces
5 & 6	0' To 8' Incl.	2' Min	Circular	To Fit Curve
	Over 8' To 30' Incl.	12" Min. Chord	Circular	Straight Pieces, Radial Ends
	Over 30' And Under 160'	2' To 3'	Straight	Straight Pieces
	160' And Over	3' To 6'	Straight	Straight Pieces

3-J

TERMINAL CURB SECTION



3-I

REVISIONS	
Plate 3-G	12-23-69
Plate 3-F	5-27-70
Plate 3J	7-15-70
PLATE 3G	3-4-71
PLATE 3H	8-18-73
PLATE 3H	6-26-75
PLATE D	2-8-75
PLATE D&I	11-24-75

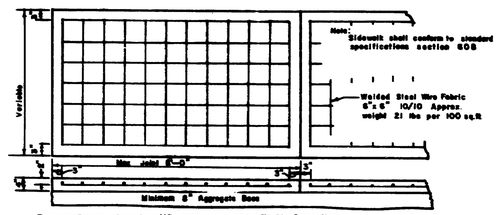
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

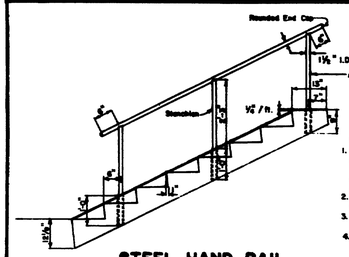
CURB, DITCHES AND SLOPES, AND CATCH BASINS TYPE "E"

AUG. 1969 (3)

168-137



REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK



NOTES:

1. Stanchions shall be placed at a maximum horizontal distance of 5'-0". When more than two stanchions are used, spacing shall be equal between end posts and adjacent stanchions.
2. Stanchions shall be used when seven or more steps occurs.
3. Stanchions end and posts to be placed vertically and in center of parapet wall
4. All stanchions and rails shall be coated with an approved black enamel paint.

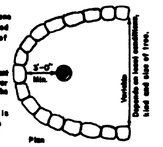
STEEL HAND RAIL

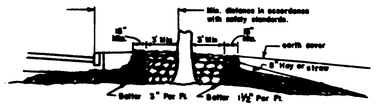
5-A

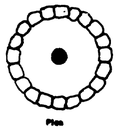
TREE WELLS

NOTES:

1. Selected ledge excavation, crushed stone or other porous material shall be used to fill around the old ground area of the tree from the tree wall to the perimeter of the brushes.
2. An 8" layer of hay or straw to prevent infiltration of fines shall be placed over the rock fill except in areas under the roadway and shoulders.
3. If drainage away from the tree well is necessary, underdrain outlet pipe shall be used, and will be paid for under item 608.10.



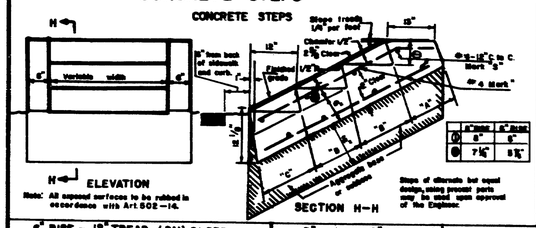




To be paid for under item
610.09 Hand laid riprap.
608.10 6" Underdrain Outlet

5-E

CONCRETE STEPS



	6" Rise	8" Rise
Ⓐ	8"	8"
Ⓑ	7 5/16"	8 5/8"

6" RISE – 12" TREAD (2:1) SLOPE

8" RISE – 12" TREAD (1 1/2:1) SLOPE

REINFORCING STEEL

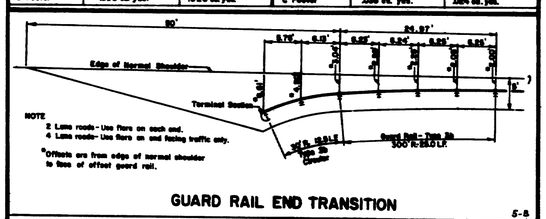
Mark	Size	Number	Length (Feet)
R	Φ 4 .668 lbs. per ft.	2 Each parapet 1 Each ft. of width	11' For "A" +13.4' For each "B" +12' For "C"
S	Φ 4 .668 lbs. per ft.	2 For "A" 2 For each "B" 2 For "C"	4' Each parapet + 12' per ft. of width

Mark	Size	Number	Length (Feet)
R	Φ 4 .668 lbs. per ft.	2 Each parapet 1 Each ft. of width	11' For "A" +14.93' For each "B" +12' For "C"
S	Φ 4 .668 lbs. per ft.	2 For "A" 2 For each "B" 2 For "C"	4' Each parapet + 12" per ft. of width

CONCRETE CLASS "A"

Section	Steps per ft. of width	Parapet each wall
"A" Header	.030 cu. yds.	.018 cu. yds.
"B" Each inter. step	.030 cu. yds.	.020 cu. yds.
"C" Footer	.030 cu. yds.	.020 cu. yds.

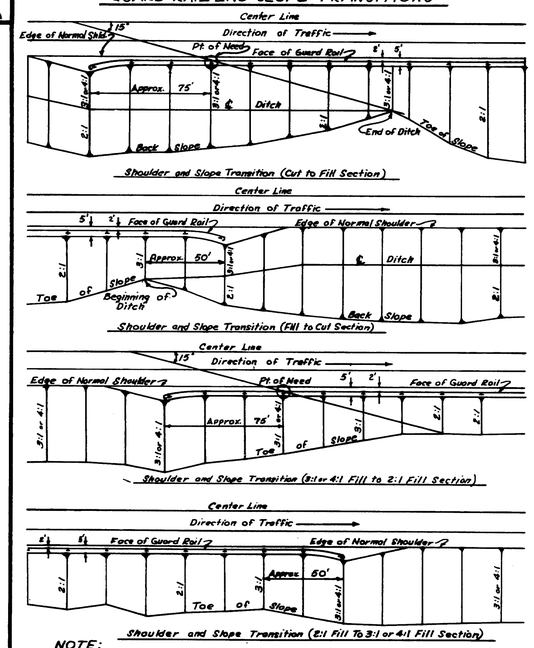
Section	Steps per ft of width	Parapet each wall
"A" Header	.038 cu. yds.	.018 cu. yds.
"B" Each inter. step	.038 cu. yds.	.024 cu. yds.
"C" Footer	.038 cu. yds.	.024 cu. yds.



GUARD RAIL END TRANSITION

5-B

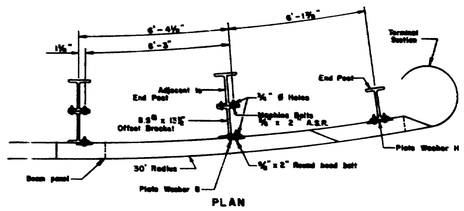
GUARD RAIL END SLOPE TRANSITIONS



NOTE:
The Transitions are a design guide only.
These slope Transitions shall be used with Beam Type Guard Rail.

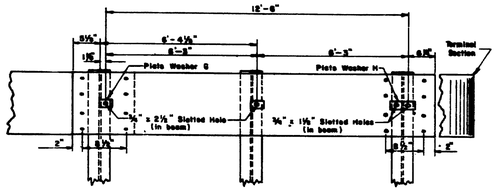
5-F

END BEAM ASSEMBLY-SPACING OF POSTS
GUARD RAIL TYPE 3a and 3b

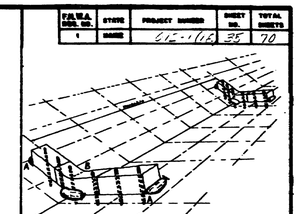


To be used in all locations except on the end away from traffic on 4 lane divided.

NOTE:
Offset Bracket shall be installed on all posts, except end post.



5-C



EROSION CHECK TO BE OF BALES OF HAY SECURED TO THE GROUND WITH 2-4' LONG GRADE STAKES FOR EACH BALE. BARB BAR AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT 'A' AT LEAST 6 INCHES ABOVE OVERFLOW AT 'B'.

EROSION CHECK for DITCH

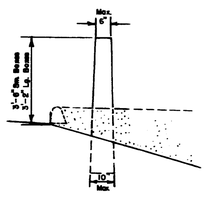
Notes

1. Temporary berm approx. 21"± wide x 12"± high (Compacted with wheel or track)
2. Crescent shaped berm length as required to contain surface drainage & direct into end section.
3. Collapsible pipe or equal.
4. Discharge in drainage ditch, on stabilized area or on dumped stone as designated by Engineer.

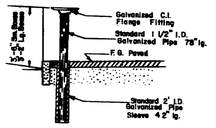
TEMPORARY BERM and SLOPE DRAIN

TEMPORARY EROSION CONTROL

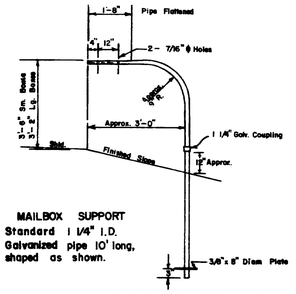
5-D



WOOD POST
(Single Post – Type Ia,)



STEEL PIPE POST
(Single post – Type Ic.)



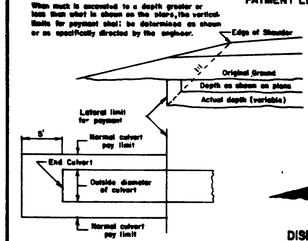
MAILBOX SUPPORT
Standard 1 1/4" I.D.
Galvanized pipe 10' long,
shaped as shown.

SUPPORTS FOR MAILBOXES

5-G

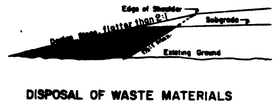
MUCK EXCAVATION
PAYMENT LIMITS

NOTE:
When muck is excavated to a depth greater or less than what is shown on the plans, the vertical limits for payment shall be determined as shown or as specifically directed by the engineer.

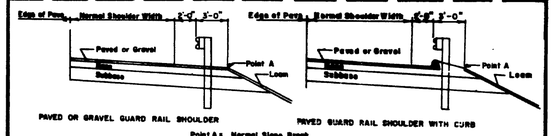


CULVERT EXCAVATION LIMITS IN MUCK AREAS
PLAN VIEW

When directed by the engineer, waste material shall be used in this area, except that waste shall not be placed in fills designed with slopes of 2:1 or less. No additional payment will be made for this work.



DISPOSAL OF WASTE MATERIALS



PAVED OR GRAVEL GUARD RAIL SHOULDER
PAVED GUARD RAIL SHOULDER WITH CURB

Point A = Normal Slope Break

LOCATION OF GUARD RAIL

5-H

REVISIONS	
Plate 5-A	12-24-69
PLATE 5B	1-27-71
PLATE 5 H	5-12-71
PLATE 5B	1-19-72
PLATE 5G	6-7-72
PLATE 5D	6-7-72
PLATE 5D+C	10-22-74
PLATE A,B,F,H	3-18-75
PLATE 5 H	6-26-75
PLATE G	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

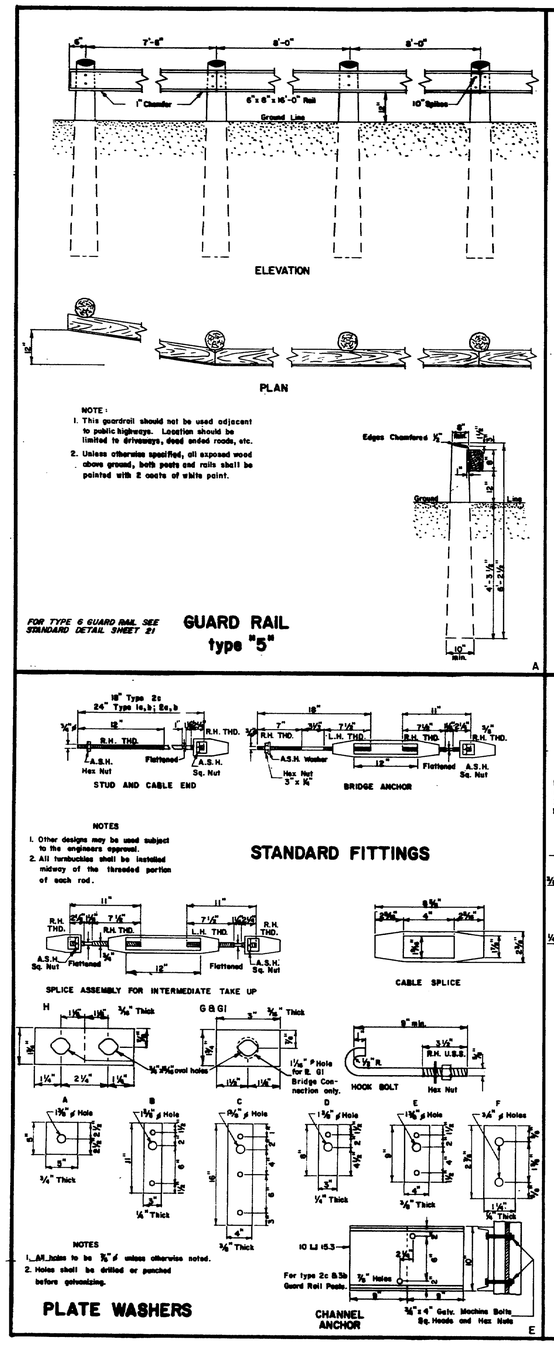
GUARD RAIL, MUCK EXCAVATION
CONCRETE STEPS & SIDEWALK
GUYING TREES
TREE WELLS, EROSION CONTROL,
MAILBOX SUPPORTS.

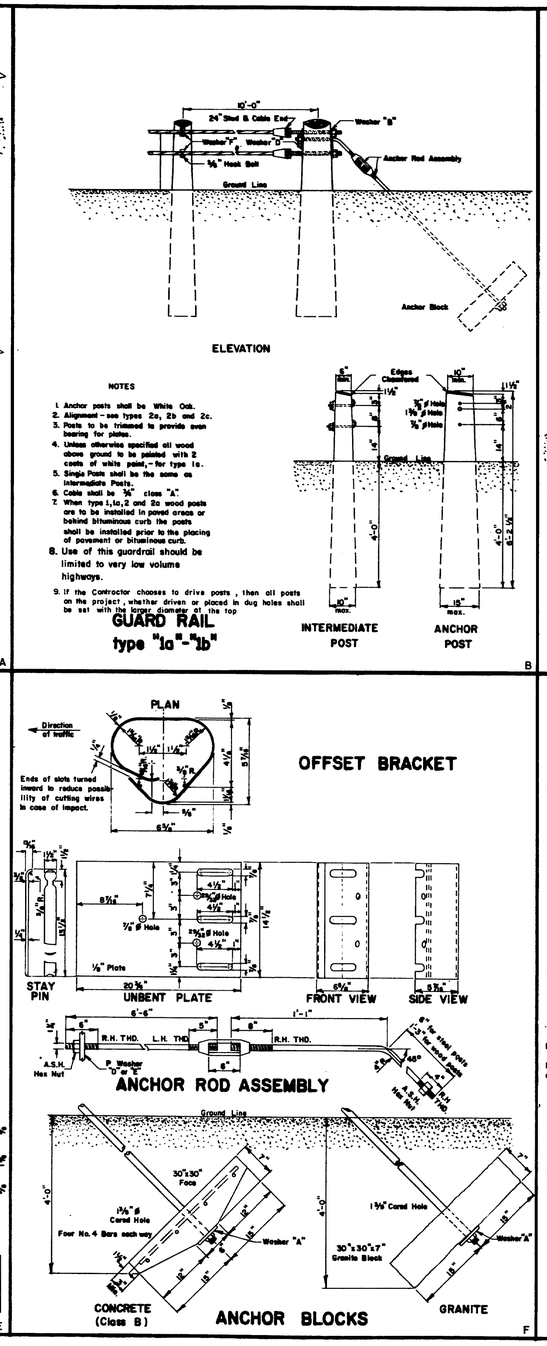
AUG. 1969

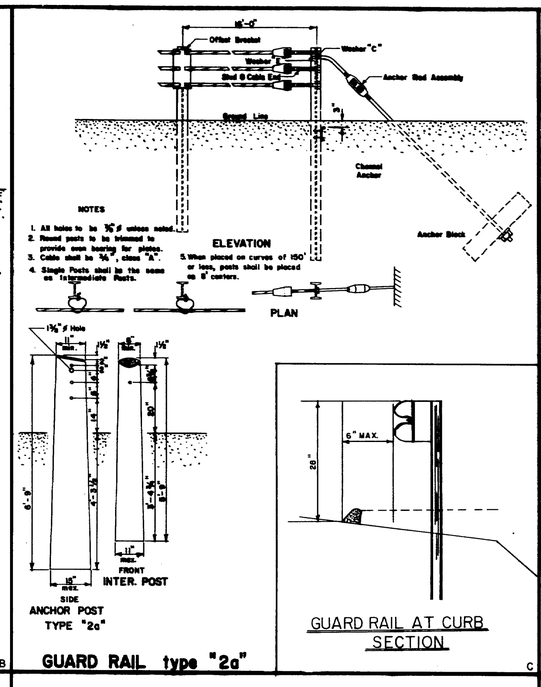
5

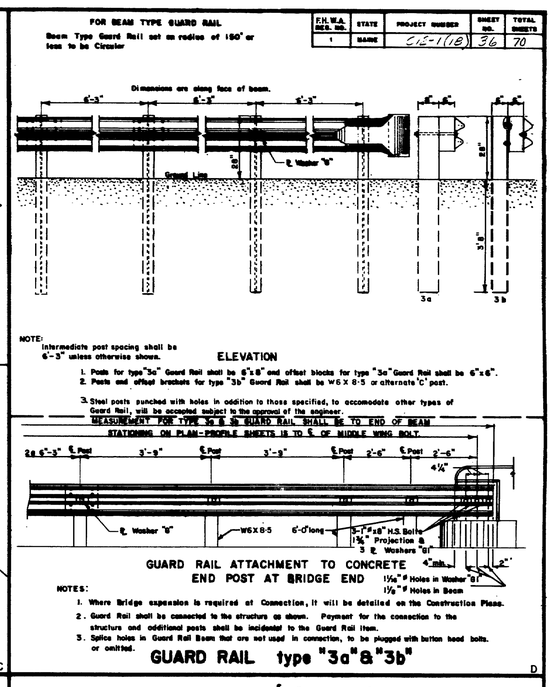
F.A.W.A. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	615-116	35	70

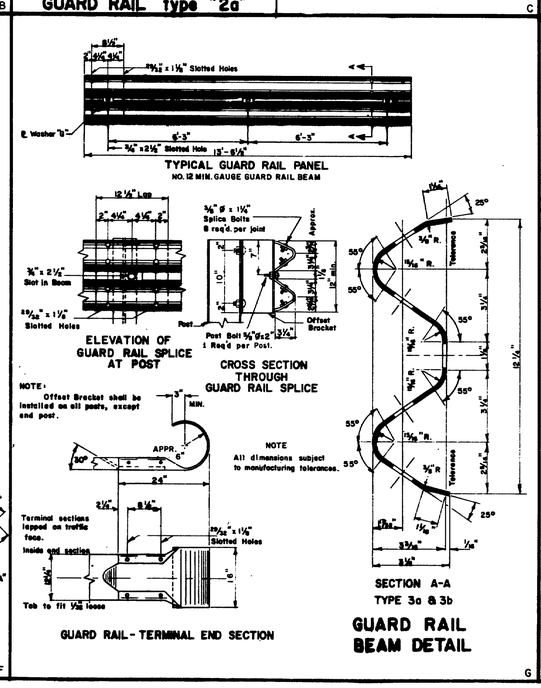
168-138

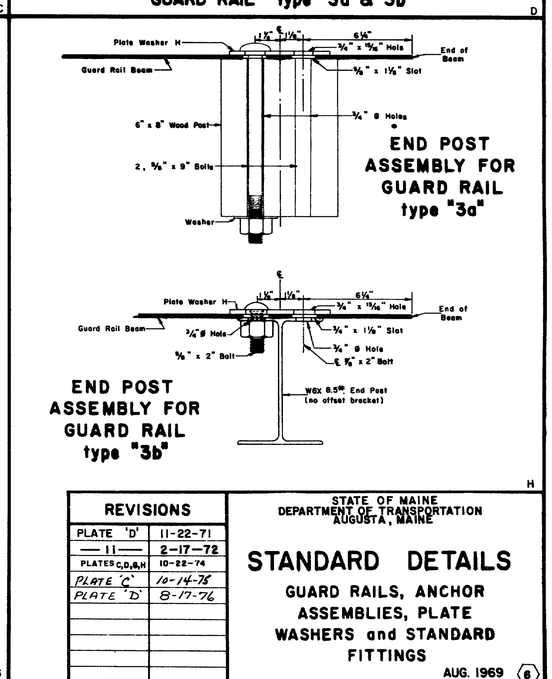












REVISIONS	
PLATE 'D'	11-22-71
— 11 —	2-17-72
PLATES C,D,G,H	10-22-74
PLATE 'C'	10-14-75
PLATE 'D'	8-17-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

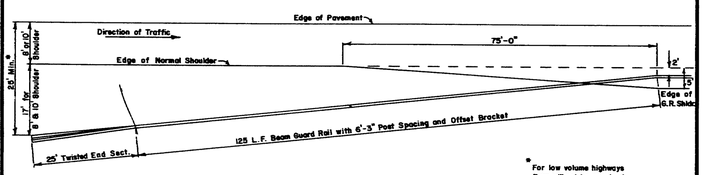
STANDARD DETAILS

GUARD RAILS, ANCHOR ASSEMBLIES, PLATE WASHERS and STANDARD FITTINGS

AUG. 1969 (6)

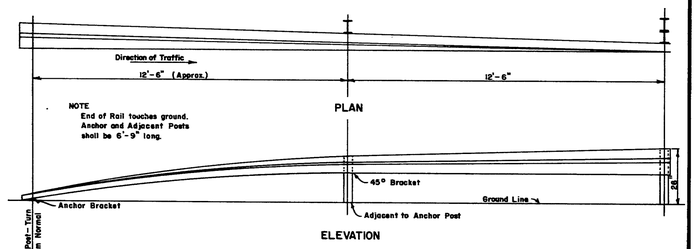
168-139

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	37	70



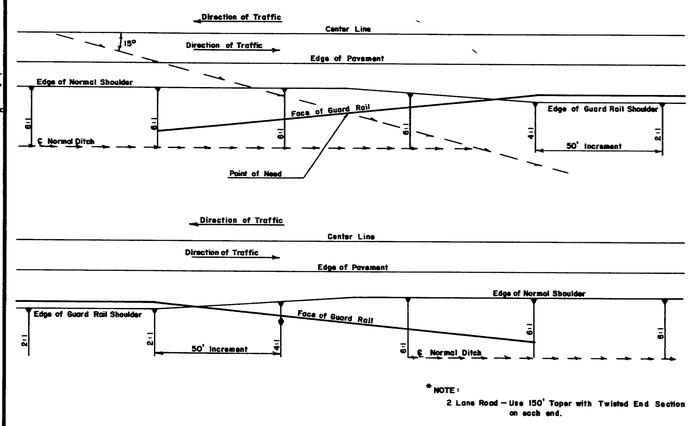
* For low volume highways flare will not be required.

BEAM GUARD RAIL END TREATMENT



TWISTED END SECTION

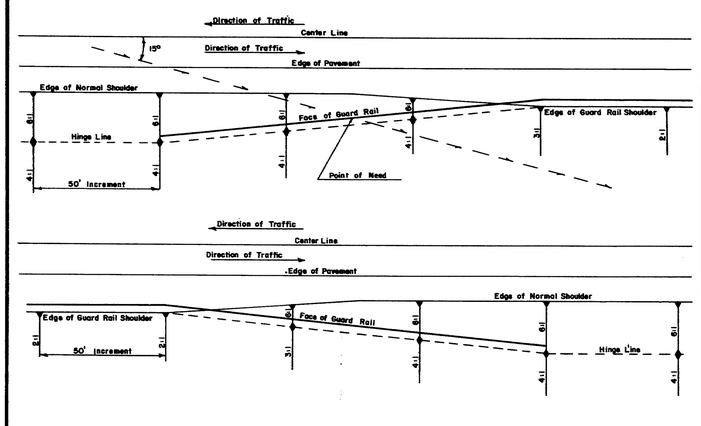
9-A



CUT TO FILL*

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

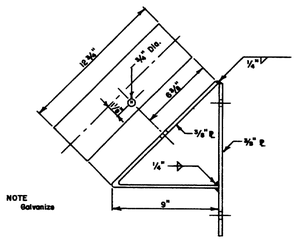
9-B



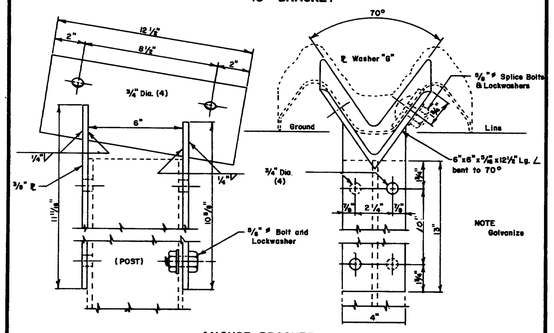
LOW FILL TO HIGH FILL*

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

9-C



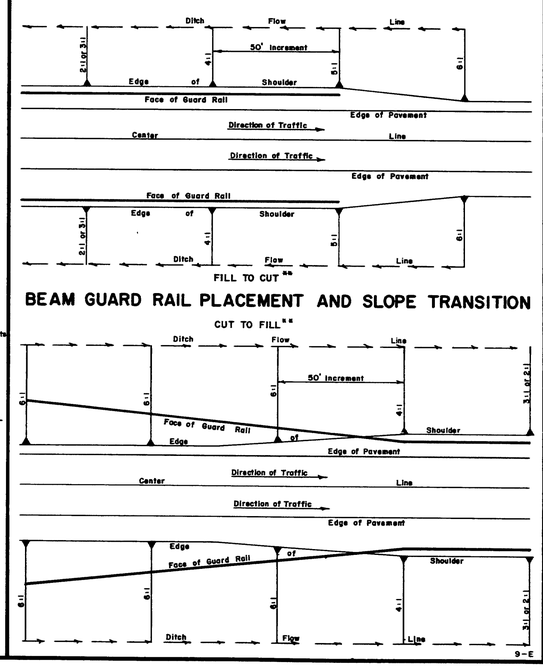
45° BRACKET



ANCHOR BRACKET

TWISTED END SECTION ANCHOR DETAIL

9-D

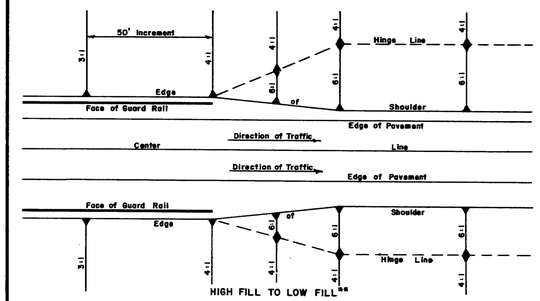


FILL TO CUT**

BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

CUT TO FILL**

9-E

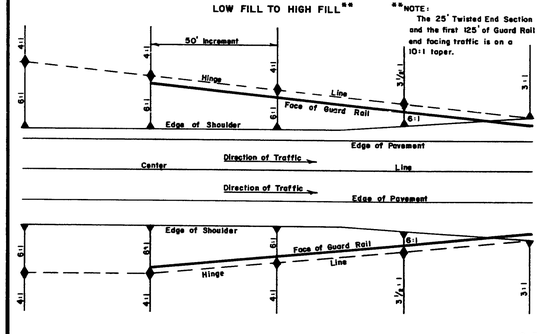


HIGH FILL TO LOW FILL**

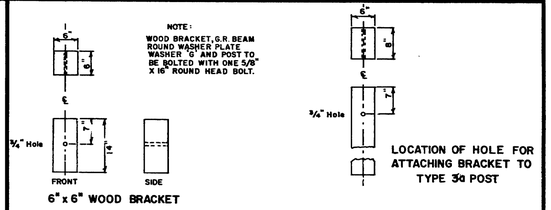
BEAM GUARD RAIL PLACEMENT AND SLOPE TRANSITION

LOW FILL TO HIGH FILL**

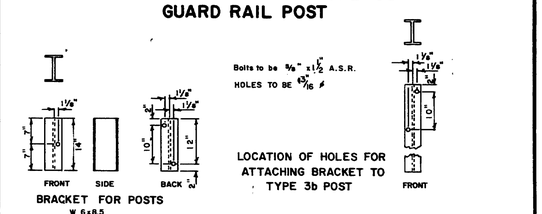
**NOTE:
The 25' Twisted End Section and the first 125' of Guard Rail and facing traffic is on a 10:1 taper.



9-F



OFFSET BRACKET FOR TYPE 3a GUARD RAIL POST



OFFSET BRACKET FOR TYPE 3b GUARD RAIL POST

9-G

REVISIONS	
Added Plates 9E & 9F	NOV. 1969
PLATE 9G	12-20-71
PLATE 9G	1-19-72
PLATE 9G	10-22-74
PLATE D	10-14-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

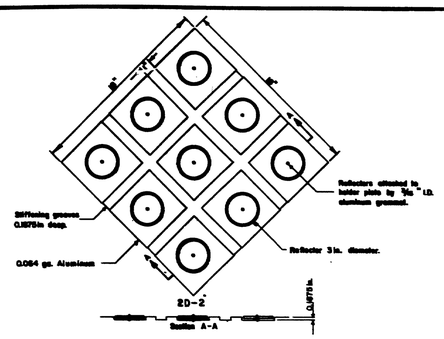
STANDARD DETAILS

BEAM GUARD RAIL END TREATMENT

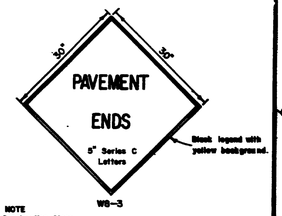
AUG. 1969

9

168-140



HAZARD MARKER



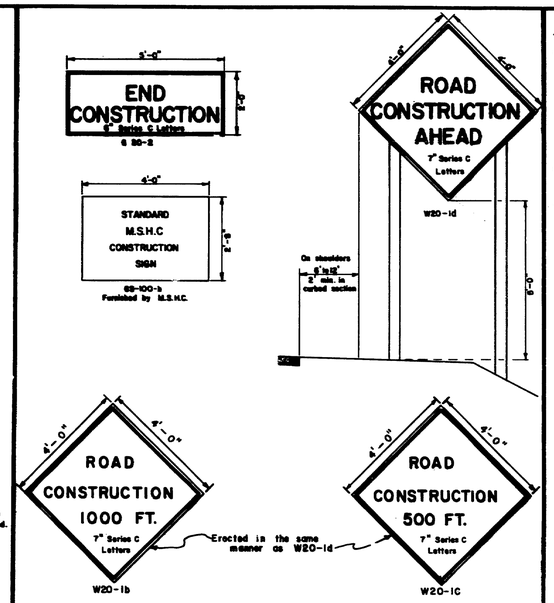
NOTE

SIGNING IN AN AREA WHERE BLASTING IS NECESSARY SHALL BE PLACED AS OUTLINED IN THE "MANUAL", AND THE PRECAUTIONS OF SUBSECTION 107.12 OF THE STANDARD SPECIFICATIONS SHALL BE OBSERVED.

GENERAL NOTE
Construction Signs

1. Sign Borders: All signs shall have borders conforming to the sizes and spacing as shown below:
   a. 30" x 30" Sign - 1/2" Border, 1/2" Space from sign edge.
   b. 2' x 2' Sign - 1/2" Border, 3/4" Space from sign edge.
   c. 3' x 4' Sign - 3/4" Border, 1" Space from sign edge.
   d. 4' x 4' Sign - 1 1/4" Border, 3/4" Space from sign edge.

A



CONSTRUCTION SIGNS

B

GENERAL NOTES - BARRICADES

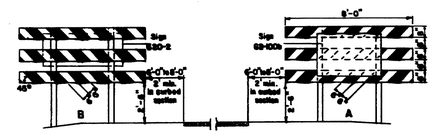
1. Unless otherwise designated, sign designation letters shall refer to the "Manual of Uniform Traffic Control Devices for Street and Highways," published by the U. S. Department of Transportation, Federal Highway Administration, 1971.
2. White stripes shall be of silver reflective sheeting bonded to 0.019 minimum gauge aluminum, 16 minimum gauge galvanized steel, or 1/4" plywood. Individual white sheets may be attached to an orange reflectorized background to form the orange and white stripes. At the Contractor's option the reflective sheeting and backing may extend the full width of the barricade with an opaque film or paint applied to form the stripes.
3. All signs shall be of reflective sheeting on 5/8" thick plywood. The plywood shall conform to subsection 712.25, Standard Specifications, June 1968.
4. Pressure sensitive reflective sheeting will be an acceptable alternate to the reflective sheeting required by Standard Specifications.

NOTES - PORTABLE BARRICADES

1. Lumber sizes for portable barricades shall be 2" x 8" except posts which shall be 4" x 4" (nominal sizes).
2. The detour sign shall be an oversized M4-10 sign with a demountable "DETOUR" message which shall be made of screened reflective sheeting on 1/4" plywood, masonite, sheet steel or sheet aluminum.
3. Hazard markers shall be attached to the barricade with a bolt assembly of steel cadmium plated 5/16" bolt, lock washer and vandal resistant nuts.
4. When two W1-6 signs are required, R11-2, R11-3, or R11-4 signs shall be omitted.
5. Flashing lights housings shall be mounted to permit rotating in a vertical axis to allow for adjustment to face oncoming traffic.
6. Location of electric service and meter to be determined after the power source has been located.

NOTES-WING BARRICADES

1. Lumber sizes for wing barricades shall be 1" x 8" except posts which shall be 4" x 4" (nominal sizes).
2. Wing barricades will not be required unless specifically called for in the special provisions.
3. Location of signs and barricades will be determined by the Engineer.

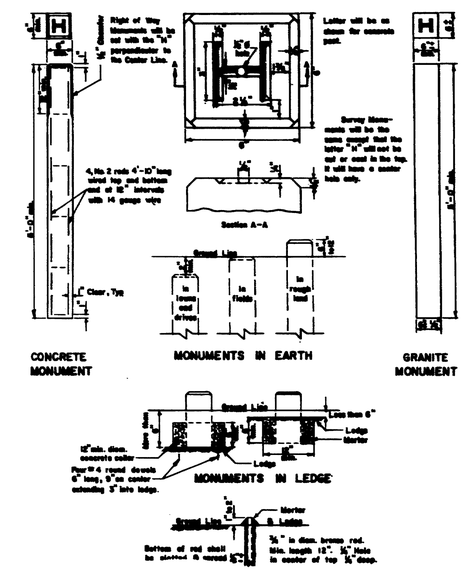


WING BARRICADES

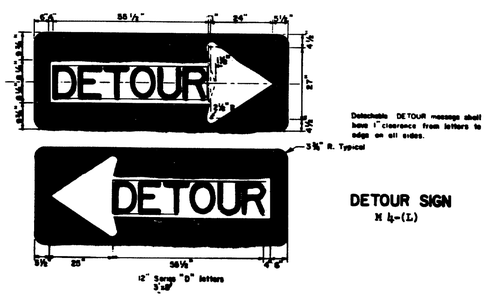
C

P.R.M.A. SECT. NO.	SHEET	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1		[illegible]	38	70

RIGHT OF WAY & SURVEY MONUMENTS



D

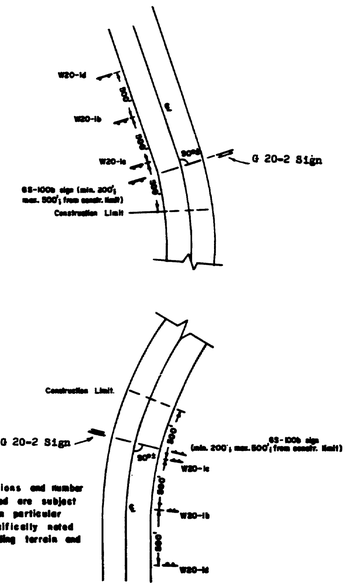


Detachable DETOUR message shall have 1" clearance from letters to edge on all sides.

DETOUR SIGN
M 4-(L)

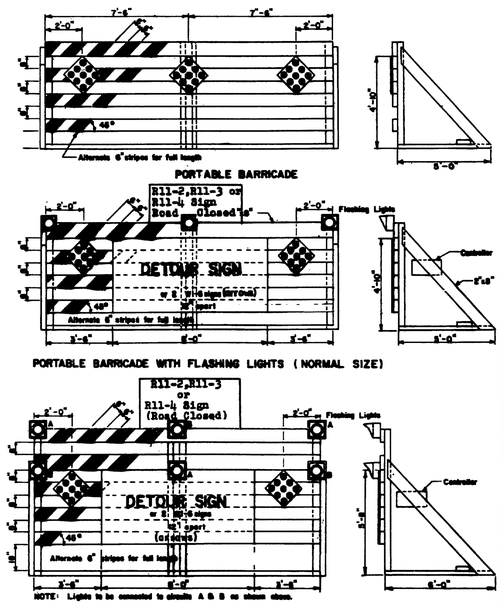
E

STANDARD SIGN LOCATIONS



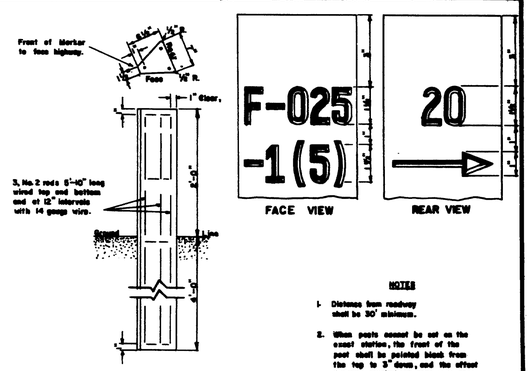
NOTE:
Standard locations and number of signs required are subject to variation on particular projects if specifically noted due to surrounding terrain and land use.

F



BARRICADES

G



NOTES

1. Distance from roadway shall be 30' minimum.
2. When posts cannot be set on the exact station, the front of the post shall be painted black from the top to 3" down, and the offset distance marked on rear with an arrow pointing in direction of beginning or end of project.
3. All markings to be 1/4" deep and 3/4" wide.

PROJECT MARKERS

H

REVISION	
PLATE B	12-21-70
PLATES A, C, & F/G	12-15-71
PLATE C	10-12-72
PLATES C/G	3-25-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

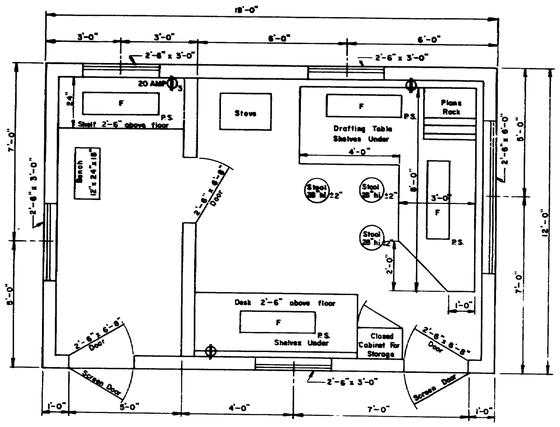
BARRICADES
WARNING SIGNS
MONUMENTS
PROJECT MARKERS

AUG. 1969

11

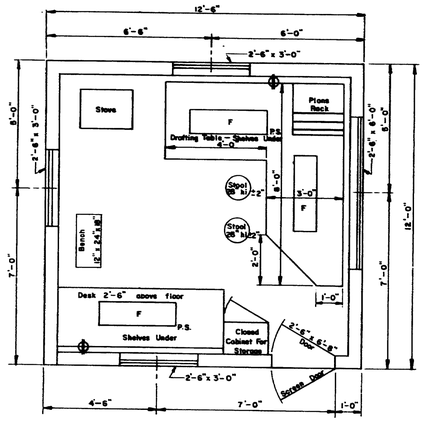
168-141

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	37	70



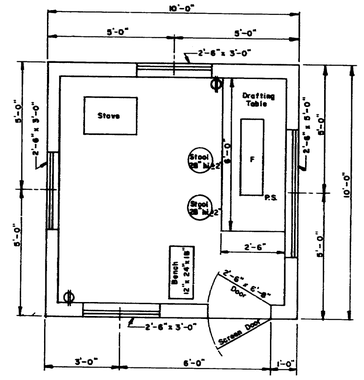
FLOOR PLAN
TYPE "A"

A



FLOOR PLAN
TYPE "B"

B



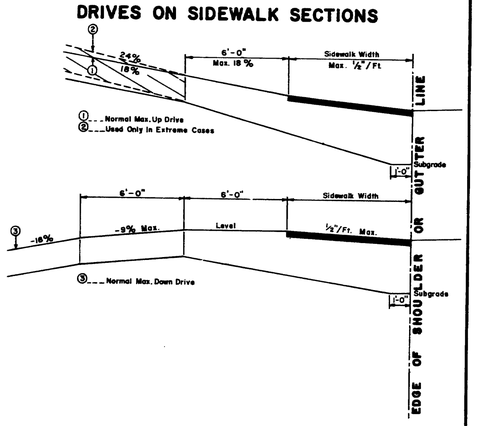
FLOOR PLAN
TYPE "C"

C

GENERAL NOTES

1. Drafting table shall be 3'-6" high at front edge and placed 2" from studs to allow prints to hang down behind table when in use.
2. Shelves under desk shall be constructed to received 11½" x 14" x 25" transfiles.
3. Windows shall be double hung.
4. Stovepipe shall not be in direct contact with combustible material ; the pipe shall be surrounded with at least 6" of fireproof material.
5. Continuous 110 volt 60 cycle electric service shall be supplied.
6. The engineer may rearrange the items shown on the plan views during construction of the field office.
7. FURNISHINGS TO BE SUPPLIED :
   - 2 Straight back chairs for types A and B
   - 1 Bench for types A, B & C
   - 3 Stool for type A
   - 2 Stools for types B & C
8. SYMBOLS :
   - F — Florescent lights (2 light , rapid start 48" strips and 40 watt bulbs)
   - P.S. — Pull switch
   - Duplex wall outlet — 15 amp unless otherwise noted.
   - Triplex Wall Outlet
9. For the Type "A" Field Office one clean 55 gal. drum shall be supplied, installed on a suitable rack and equipped with a spigot suitable for drawing off water. The drum shall be furished with water at all times.

DRIVES ON SIDEWALK SECTIONS



GENERAL NOTES

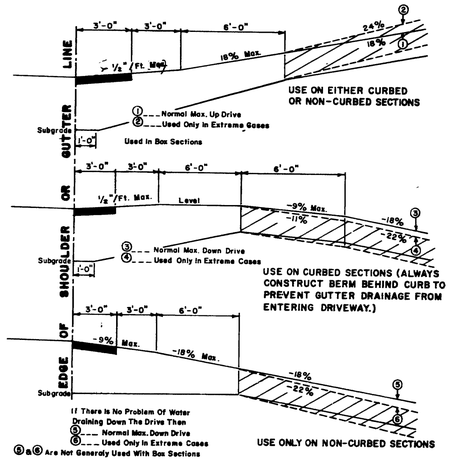
1. The sidewalk width shall be paved in all cases.
2. All residential or commercial drives 10% and over shall be paved.

NOTES ON MAXIMUM DRIVEWAY PROFILES

1. These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
2. Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
3. When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.

D

DRIVES ON NON-SIDEWALK SECTIONS



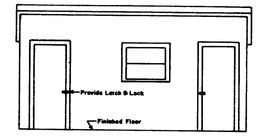
GENERAL NOTES

1. The first 3' shown as pavement shall be paved only when abuting a paved area.
2. All residential or commercial drives 10% and over shall be paved.

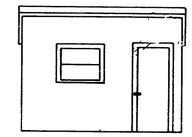
NOTES ON MAXIMUM DRIVEWAY PROFILES

1. These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
2. Generally the majority of drives on a project will be built with flatter profiles than these maximum cases.
3. When grading drives which are flatter than the maximum profiles the following rule of thumb should be used, do not exceed a grade % change of more than 9% in a 6 foot increment of driveway length. This applies to both up and down profiles.

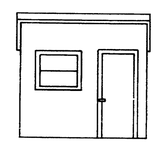
E



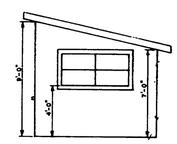
FRONT ELEVATION
TYPE "A"



FRONT ELEVATION
TYPE "B"



FRONT ELEVATION
TYPE "C"



SIDE ELEVATION
TYPES "A" "B" & "C"

F

REVISIONS	
PLATE 'D' E	3 - 16 - 73

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AUGUSTA, MAINE

STANDARD DETAILS

DRIVEWAY DETAILS
FIELD OFFICES
TESTING LABORATORY

AUG. 1969

12

168-142

B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	512-1(13)	40	70

DRAINAGE

STATION	RCP SIZE	RCP LENGTH	RCP CLASS	BCCMP SIZE	BCCMP LENGTH	CMP SIZE	CMP LENGTH	CULVERT PIPE SIZE	CULVERT PIPE LENGTH	CATCH BASINS A1	A2	B+C	B2	C1	C2	F	MAN HOLES	UNDERDRAINS 'B' LENGTH	'C' SIZE	'C' LENGTH	'B' OUTLET LENGTH	REMARKS
MAINLINE & SIDE ROADS																						
812+07 Rt.								15"	36'													
815+40 Rt.								15"	44'													OPTION I
815+85.11, 32.93' Lt.												1										OPTION I
815+85 Lt. - 816+00 Rt.								18"	64'													
815+85 Lt. - 10+93 Lt. (SRR)								15"	40'													OPTION III
816+34 Lt.								15"	48'													OPTION I
10+94, 18.5' Lt. (SRR)																1						OPTION I
825+18 - 826-37 Rt.								15"	120'													NON-STANDARD DEPTH
826+39, 20.88' Rt.												1										OPTION I
20+82, 15.5 Lt. (LRR)																1						
20+82 - (LRR) - 826+50.34 Rt.								15"	65'													NON-STANDARD DEPTH
																						OPTION I

GENERAL NOTES

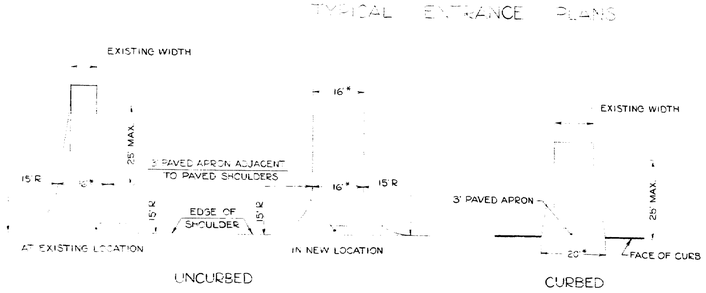
1. THE UTILITIES INVOLVED IN THIS CONTRACT ARE:
   CENTRAL MAINE POWER COMPANY
   STANDISH TELEPHONE COMPANY
   ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE NOTED.
2. WARNING LIGHTS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS:
   BEGINNING OF PROJECT - END OF PROJECT
3. CLEARING LIMITS SHALL BE 5' BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES UNLESS OTHERWISE NOTED ON THE PLANS, OR DIRECTED BY THE ENGINEER.
4. THE CLEARING ~~AND SELECTIVE CLEARING AND THINNING~~ LINES SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. THE ACTUAL LINES FOR PAYMENTS SHALL BE ESTABLISHED IN THE FIELD BY THE ENGINEER.
5. GRUBBING IN FILL AREAS SHALL BE AS SHOWN ON THE PLANS. THE GRUBBING DEPTH HAS BEEN ESTIMATED AS 6" IN FIELD AREAS AND 2" IN WOODED AREAS.
6. ALL DITCH ELEVATIONS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISH DITCH FLOW LINE.
7. DRIVEWAY FILL SIDE SLOPES SHALL BE 4:1 UNLESS OTHERWISE NOTED ON THE PLANS.
8. PAVED ENTRANCES SHALL BE CONSTRUCTED WITH 2" HOT BITUMINOUS PAVEMENT AND 12" AGGREGATE SUBBASE COURSE - GRAVEL.
   UNPAVED ENTRANCES SHALL BE CONSTRUCTED WITH 14" AGGREGATE SUBBASE COURSE - GRAVEL.
9. ONE GUARD RAIL DELINEATOR POST SHALL BE INSTALLED AT EACH GUARD RAIL END.
10. CURB TYPE 3 SHALL BE INSTALLED WITH MOLD 2.
11. LOAM SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER.
12. LOAM DEPTHS SHALL BE AS FOLLOWS:
    UNDER SOD - 2"
    SEEDED AREAS, METHOD NO.2 - 2"
13. PLACE SOD STRIP 1' WIDE BEHIND CURB WHEN DIRECTED BY THE ENGINEER.
14. ALL SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO 2. MULCH SHALL BE APPLIED IN ALL SEEDED AREAS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

CULVERT PIPE DATA
CIRCULAR

Nominal Inside Diameter	Thickness in Inches CMP or BCCMP	Thickness in Inches CAP	Class and Wall FCP	Class Asbestos Cement Pipe
15 Inch	0.064	0.060	Class III	Class III
18 "	0.064	0.060	Class III A or B	

The thicknesses and classes for culvert options I & III shall meet the requirements shown for Corrugated Metal Pipe, Bituminous Coated Corrugated Metal Pipe, Corrugated Aluminum Pipe, Reinforced Concrete Pipe and Asbestos Cement Pipe.

TYPICAL ENTRANCE PLANS



* MINIMUM WIDTH, UNLESS OTHERWISE NOTED.

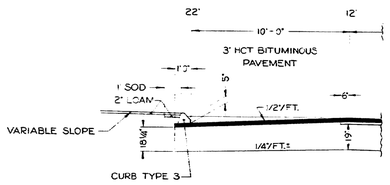
SCALE
1
20'
1

DRAINAGE SUMMARY
GENERAL NOTES
TYPICAL ENTRANCE PLANS

STANDISH-L 168-143

F.A.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(13)	41	73

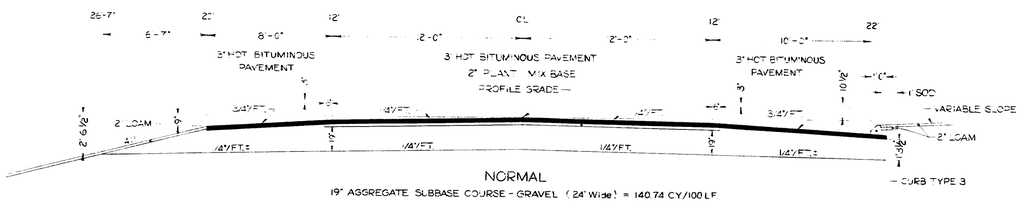
3" HOT BITUMINOUS PAVEMENT *



BOX SECTION (Super. High Side)

AGGREGATE SUBBASE COURSE - GRAVEL = 66.32 C.Y./100 L.F.

STA. 812+50 TO 816+74 LT.



NORMAL

19" AGGREGATE SUBBASE COURSE - GRAVEL (24' Wide) = 140.74 CY./100 L.F.

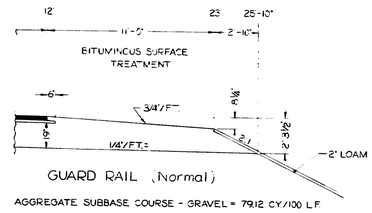
AGGREGATE SUBBASE COURSE - GRAVEL = 64.71 CY./100 L.F.

STA. 825+90 TO 827+25 LT.

STA. 824+00 TO 828+70

AGGREGATE SUBBASE COURSE - GRAVEL = 61.65 CY./100 L.F.

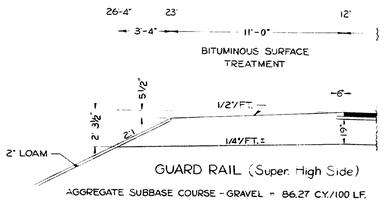
STA. 825+86 TO 828+70 RT.



GUARD RAIL (Normal)

AGGREGATE SUBBASE COURSE - GRAVEL = 79.12 CY./100 L.F.

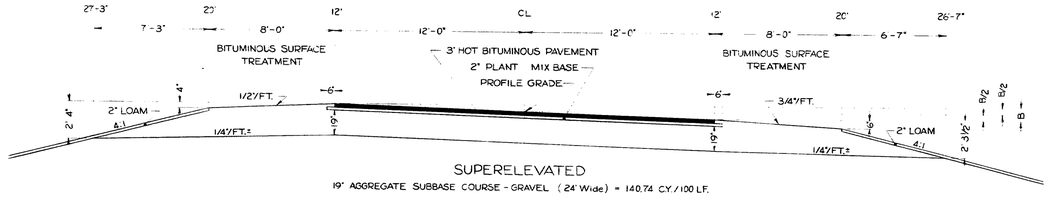
STA. 823+50 TO 825+25 LT.



GUARD RAIL (Super. High Side)

AGGREGATE SUBBASE COURSE - GRAVEL = 86.27 C.Y./100 L.F.

STA. 822+50 TO 823+00 LT.



SUPERELEVATED

19" AGGREGATE SUBBASE COURSE - GRAVEL (24' Wide) = 140.74 C.Y./100 L.F.

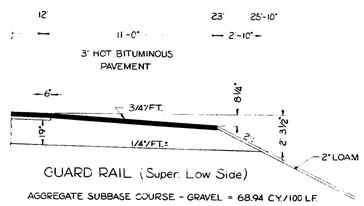
AGGREGATE SUBBASE COURSE - GRAVEL = 79.09 C.Y./100 L.F.

STA. 811+50 TO 812+00 LT.

STA. 811+00 TO 818+30
STA. 821+70 TO 823+00

AGGREGATE SUBBASE COURSE - GRAVEL = 72.12 C.Y./100 L.F.

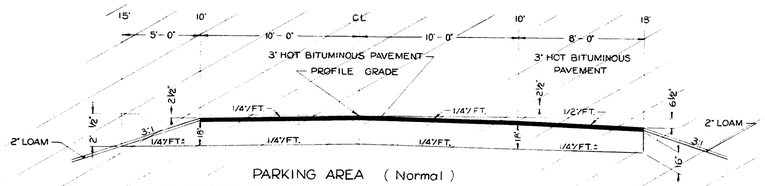
STA. 827+25 TO 828+70 LT.
STA. 811+50 TO 816+50 RT.



GUARD RAIL (Super. Low Side)

AGGREGATE SUBBASE COURSE - GRAVEL = 68.94 CY./100 L.F.

STA. 817+25 TO 818+15± RT.
STA. 821+78± TO 825+35 RT.

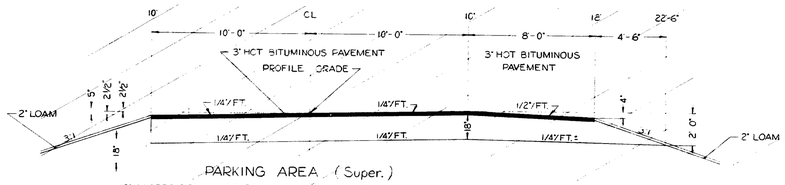


PARKING AREA (Normal)

18" AGGREGATE SUBBASE COURSE - GRAVEL (20' Wide) = 111.11 C.Y./100 L.F.

AGGREGATE SUBBASE COURSE - GRAVEL = 14.66 C.Y./100 L.F.

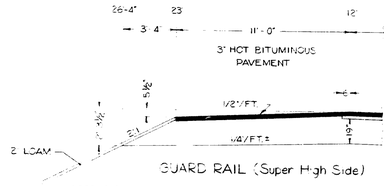
AGGREGATE SUBBASE COURSE - GRAVEL = 41.98 C.Y./100 L.F.



PARKING AREA (Super.)

18" AGGREGATE SUBBASE COURSE - GRAVEL (20' Wide) = 111.11 C.Y./100 L.F.

AGGREGATE SUBBASE COURSE - GRAVEL = 53.78 C.Y./100 L.F.



GUARD RAIL (Super High Side)

AGGREGATE SUBBASE COURSE - GRAVEL = 76.08 C.Y./100 L.F.

STA. 817+00 TO 818+23± LT.
STA. 821+50 TO 822+50 LT.

NOTE:

* THE PAVEMENT AND BASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

CROWNS FOR BOTH NORMAL AND SUPERELEVATED SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.

@, THE MAXIMUM RATE OF SUPERELEVATION SHALL NOT EXCEED .08/FT.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	RPM	Feb.11,76
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

STANDISH - LIVINGTON

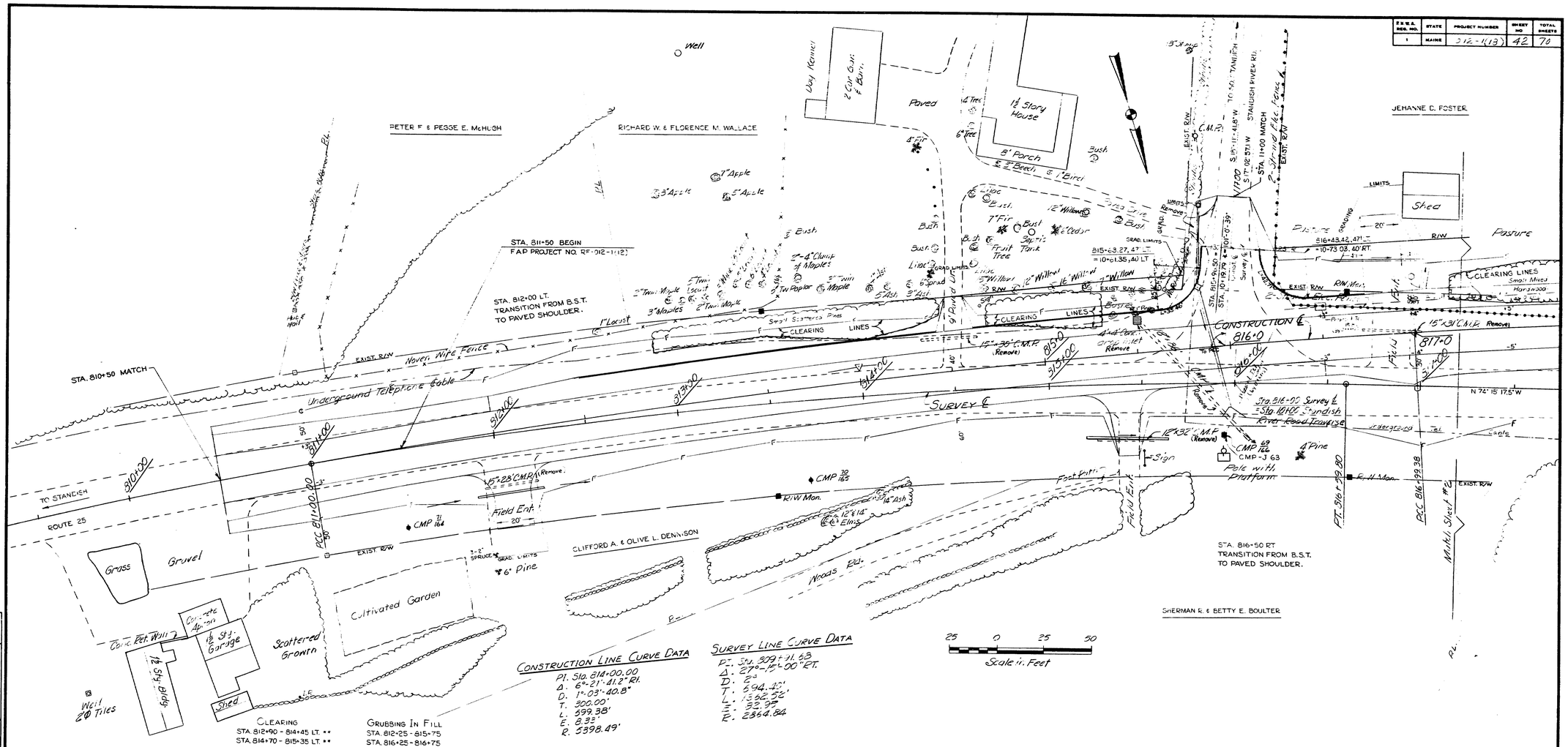
12-1(18)

SCALE

SHEET OF AUGUSTA, MAINE

168-144

F.A.P. U.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	RF-012-1(13)	42	70



Construction Line Curve Data

PI. Sta. 814+00.00
Δ. 6°-21'-41.2" Rt.
D. 1°-03'-40.8"
T. 300.00'
L. 599.38'
E. 8.83'
R. 5398.49'

Survey Line Curve Data

PI. Sta. 809+41.63
Δ. 27°-12'-00" RT.
D. 2°
T. 594.42'
L. 1362.52'
E. 32.95'
R. 2864.84

Clearing

STA. 812+90 - 814+45 LT. **
STA. 814+70 - 815+35 LT. **
STA. 817+20 - 817+80 LT.

Grubbing In Fill

STA. 812+25 - 815+75
STA. 816+25 - 816+75
STA. 10+50 - 10+75 SRR.

Survey Monuments

STA. 816+99.38, 30' LT.
STA. 816+99.38, 30' RT.

R/W Monuments

STA. 811+00, 50' LT.
STA. 811+00, 50' RT.

Construct Drives & Entrances

STATION	TYPE
812+07 RT.	GRAVEL
814+52 LT.	PAVED
815+40 RT.	GRAVEL
* 816+84 LT.	GRAVEL
10+82 LT. (SRR)	PAVED

Drainage

STA. 812+07 RT. INSTALL 15"x36' CULVERT PIPE, OPTION I.

STA. 815+40 RT. INSTALL 15"x42' CULVERT PIPE, OPTION I.

STA. 815+85.11, 32.93' LT. CONST. CATCH BASIN TYPE B1-C.

STA. 815+85 LT. - 816+00 RT. INSTALL 18"x64' CULVERT PIPE, OPTION III. SOD OUTLET.

STA. 815+85 LT. - 10+93 LT. (S.R.R.) INSTALL 15"x40' CULVERT PIPE, OPTION I.

STA. 816+84 LT. INSTALL 15"x48' CULVERT PIPE, OPTION I. SOD OUTLET.

STA. 10+94, 18.5' LT. S.R.R. CONST. CATCH BASIN, TYPE F.

STA. 817+05 LT. CONST. SODDED DOWNSPOUT.

Install Cure Type 3

STATION	TO	STATION	LENGTH
812+50 LT.	-	10+72 LT. (S.R.R.)	340'
10+73 RT. (S.R.R.)	-	816+74 LT.	73

* NOTE: 2:1 SLOPE ON THE WEST SIDE OF THIS ENTRANCE.

** NOTE: BACK CLEARING LINES SHALL BE CONSTRUCTION SLOPE LINES.

Install Guard Rail - Type 3

STA. 816+945, 31.5' LT. TERMINAL END SECTION
STA. 816+945, 31.5' LT. - 817+15.5, 20' LT. CIRCULAR - 25' R (25 L.F.)
STA. 817+15.5 - 818+28.14 LT. SINGLE RAIL

STA. 821+78.65 - 825+41 LT. SINGLE RAIL
STA. 825+41 - 825+53 LT. CIRCULAR - 30' R
STA. 825+53 LT. TERMINAL END SECTION

STA. 816+94.5 RT. TERMINAL END SECTION
STA. 816+945 - 817+06.5 RT. CIRCULAR - 30' R
STA. 817+06.5 - 818+19.07 RT. SINGLE RAIL

STA. 821+73.96 - 825+49 RT. SINGLE RAIL
STA. 825+49 - 825+61 RT. CIRCULAR - 30' R
STA. 825+61 RT. TERMINAL END SECTION

Install Guard Rail Delineator Posts

STATION
816+95 RT.
825+61 RT.
825+53 LT.
817+00 LT.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

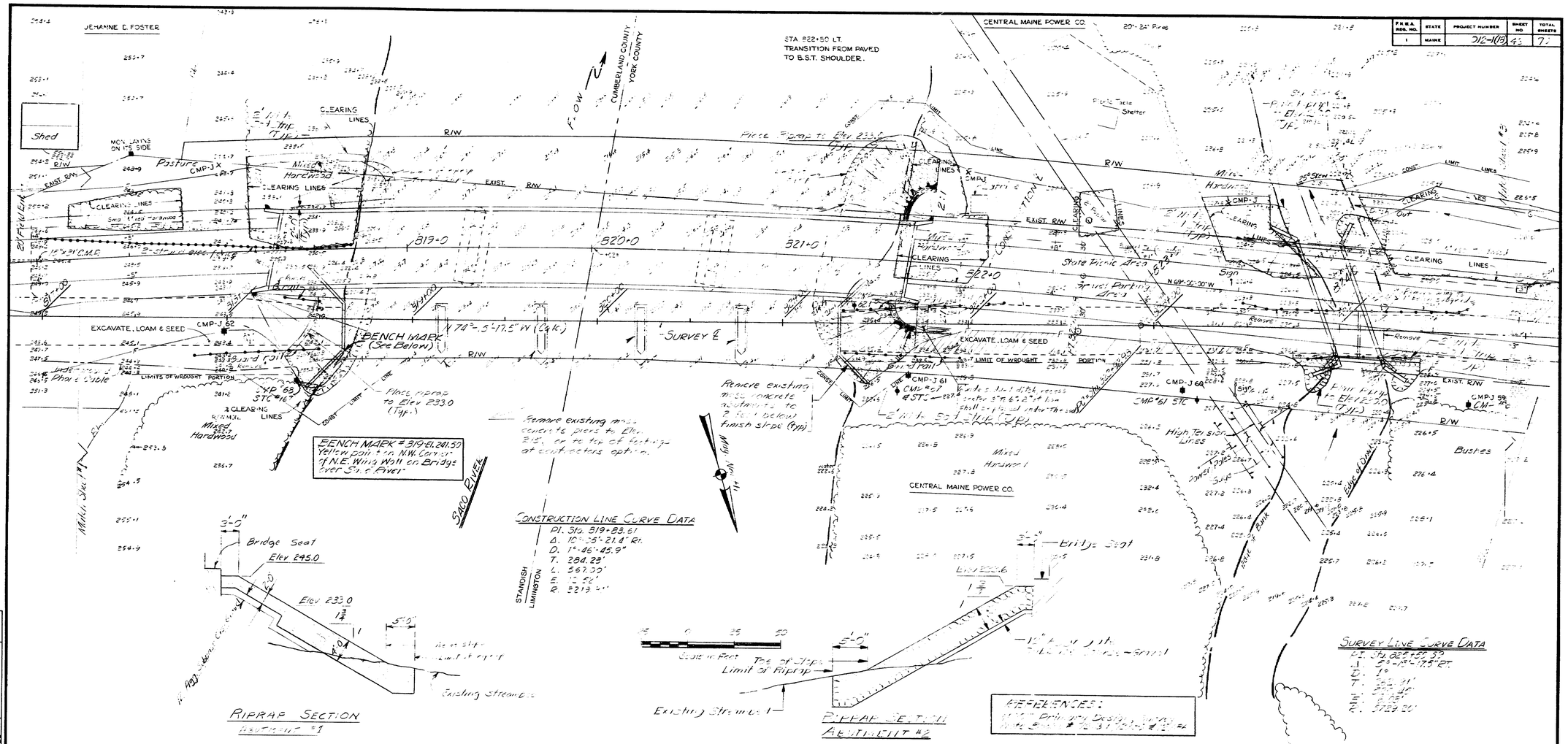
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH - CUMBERLAND COUNTY
& LIMINGTON - YORK COUNTY

SURVEY

AUGUSTA, MAINE SEPT. 1975

168-145

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRC-1(13)	43	7[illegible]



PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	[illegible]	[illegible]
CHECKED	[illegible]	[illegible]
REVISIONS	M.E.T.	11-77
FIELD CHANGES		

Project No. BRC-1(13)

Clearing
STA. TO STA.
818+15 - 818+75 LT.
818+30 - 818+50 RT.
821+65 - 822+15 LT.
823+25 - 823+90 LT.
824+10 - 826+75 LT.

Grubbing In Fill
STA. 824+25 - 827+25

Survey Monuments
STA. 822+66.38, 30' LT.
STA. 822+66.38, 30' RT.

FOR DETAILS OF BRIDGE CONSTRUCTION SEE SHEETS NO. 9 - 23.

FOR DETAILS OF BOX CULVERT CONSTRUCTION SEE SHEETS NO. 24 - 28.

East Limington Bridge No. 2[illegible]
Overflow Structure Bridge No. 2[illegible]

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

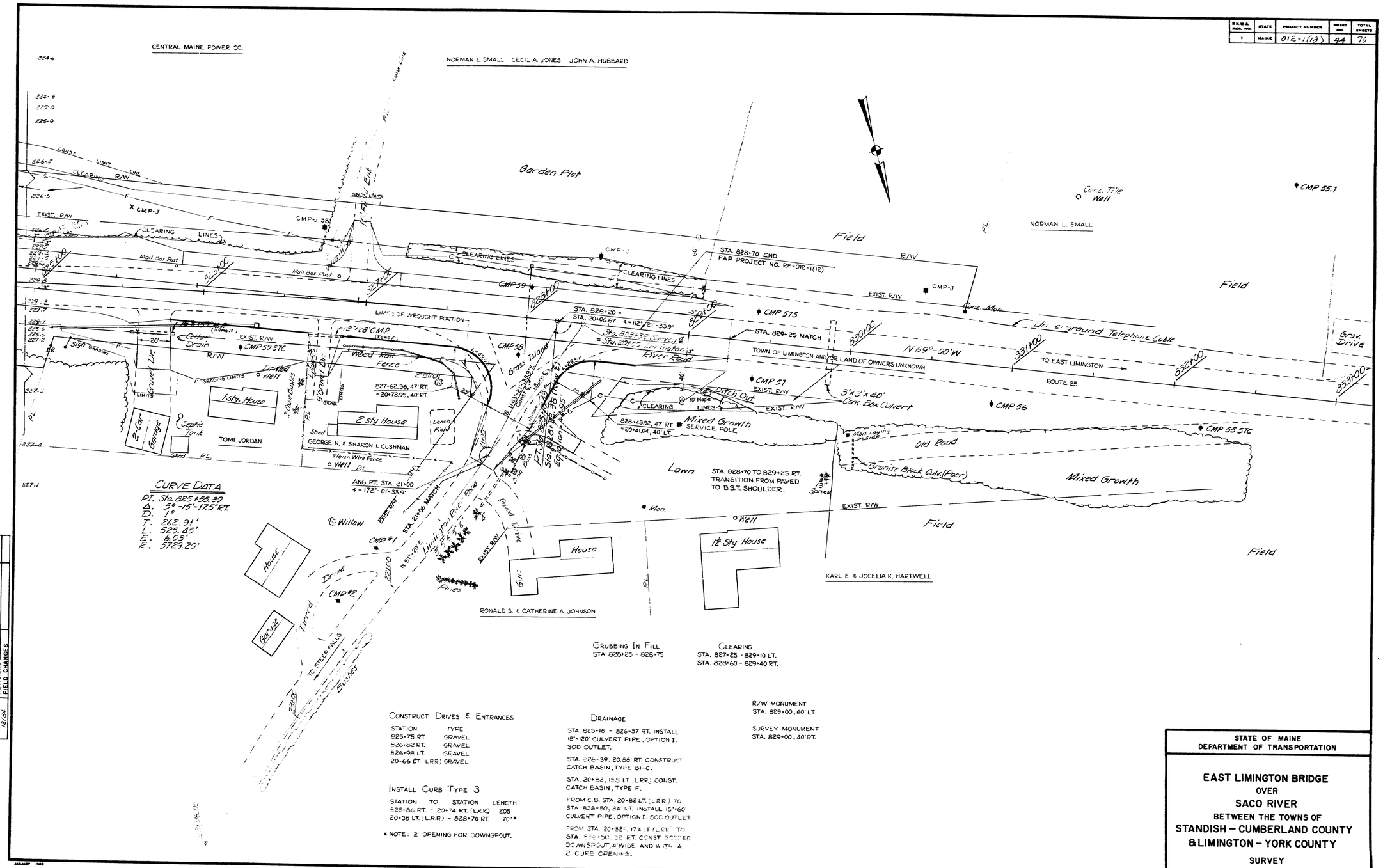
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH — CUMBERLAND COUNTY
& LIMINGTON — YORK COUNTY

SURVEY

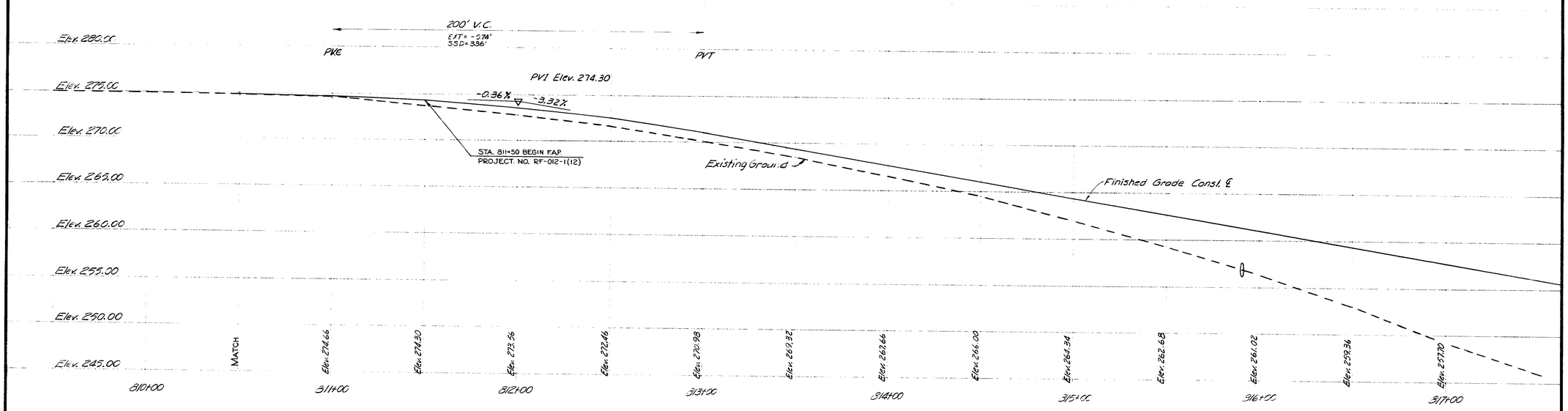
AUGUSTA, MAINE SEPT. 1975

168-146

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(12)	44	70



F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	45	70



PROFILE ALONG ℄ SURVEY

Survey Plotted GKW 7.5

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

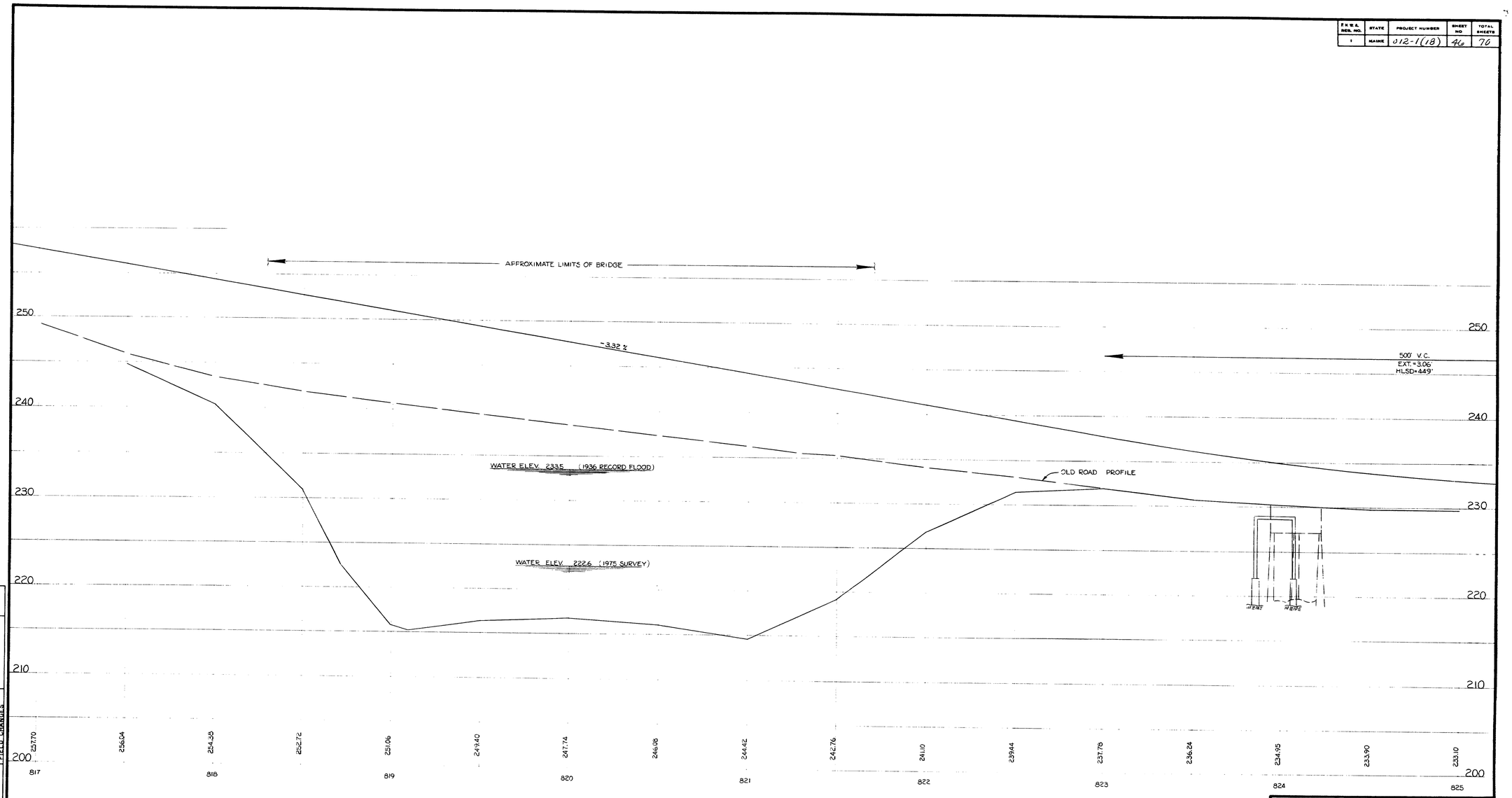
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH - CUMBERLAND COUNTY
& LIMINGTON - YORK COUNTY

SURVEY PROFILE

AUGUSTA, MAINE SEPT. 1975

168-148

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	012-1(18)	46	76



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

TRACED BY R.P.M. NOV. 1976

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

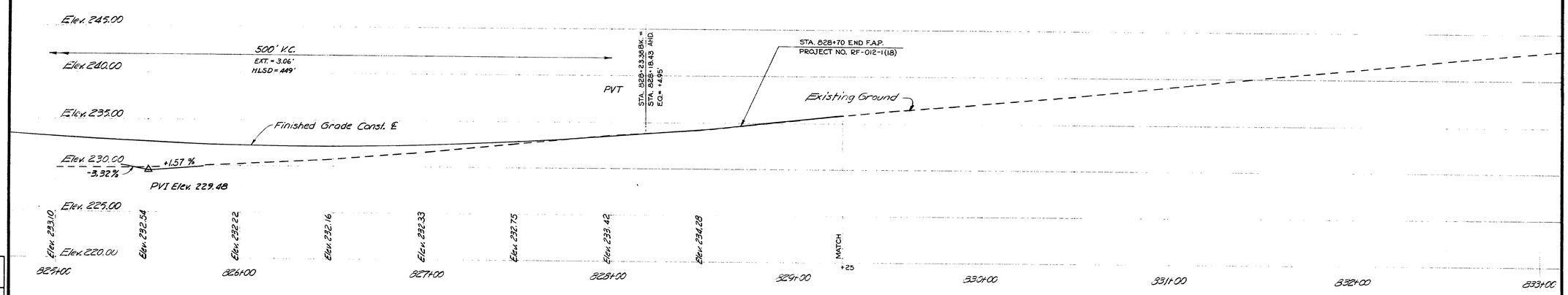
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH - CUMBERLAND COUNTY
& LIMINGTON - YORK COUNTY

SURVEY PROFILE

AUGUSTA, MAINE

STANI 168-149

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	012-1(18)	47	70



PROFILE ALONG ℄ SURVEY

Survey Plotted GKW '75

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

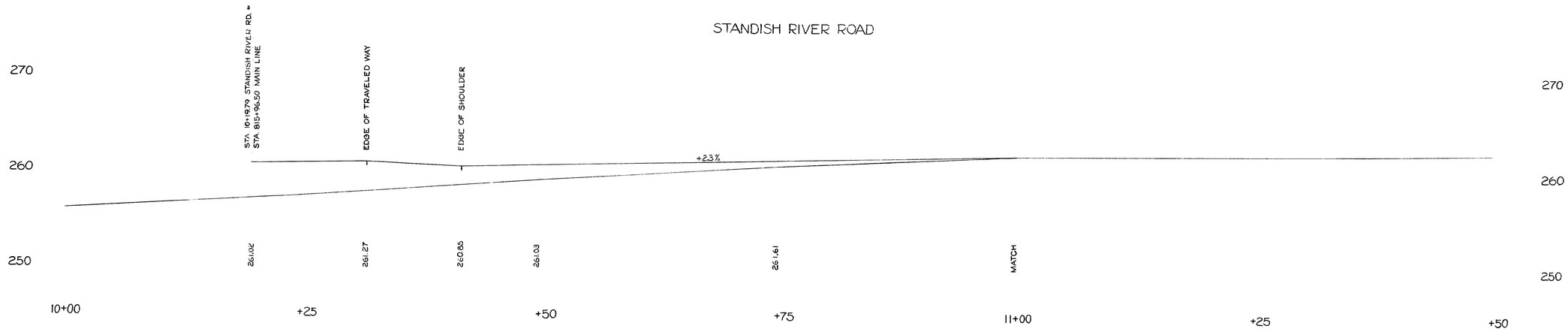
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

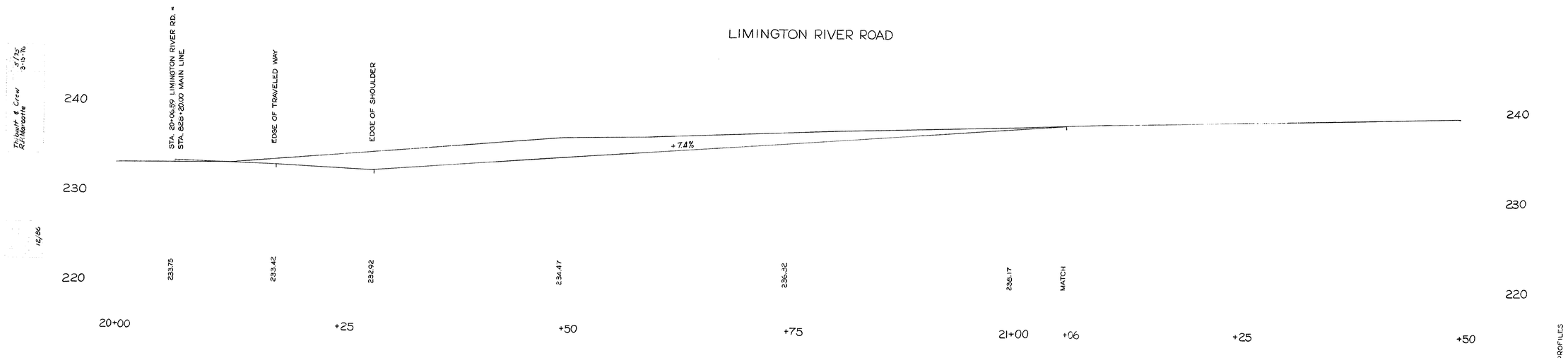
EAST LIMINGTON BRIDGE
OVER
SACO RIVER
BETWEEN THE TOWNS OF
STANDISH – CUMBERLAND COUNTY
& LIMINGTON – YORK COUNTY

SURVEY PROFILE

AUGUSTA, MAINE SEPT. 1975

STANDISH 16B-150





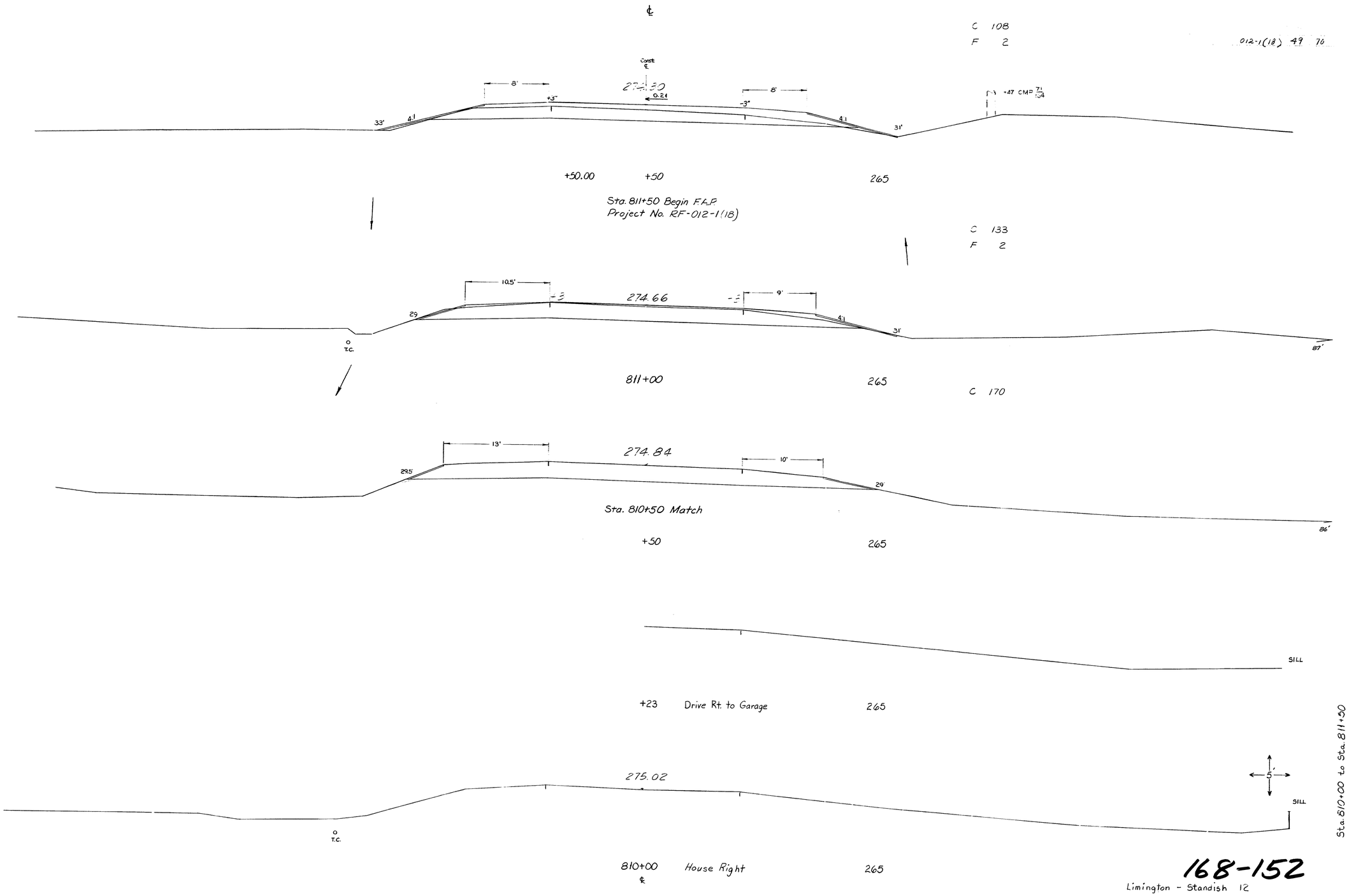
Thibault & Crew 5/75
R.P. Marcotte 3-15-76

12/86

SIDE ROAD PROFILES

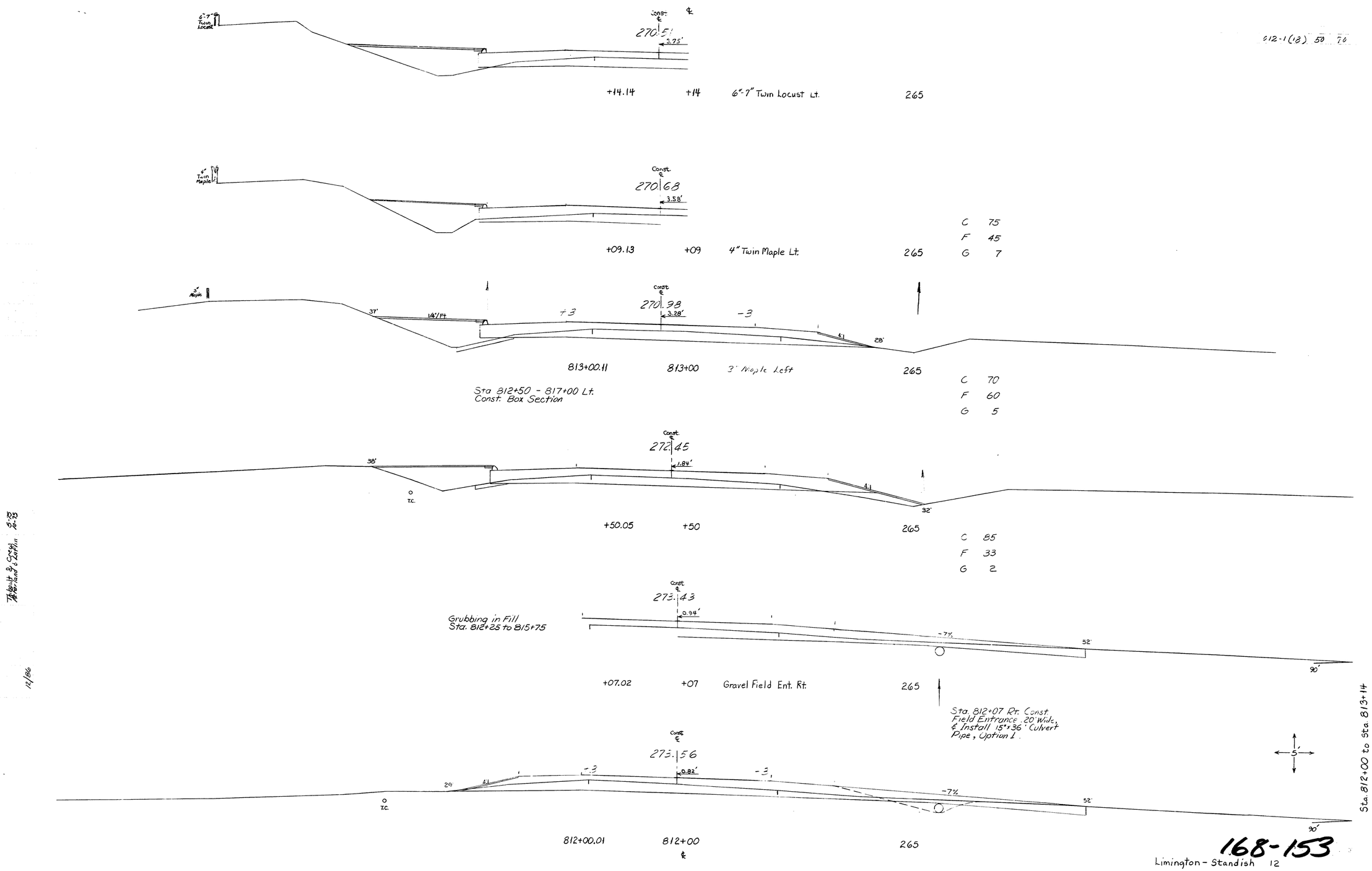
168-151 SCALE 5

Limington - Standish



168-152

Limington - Standish 12



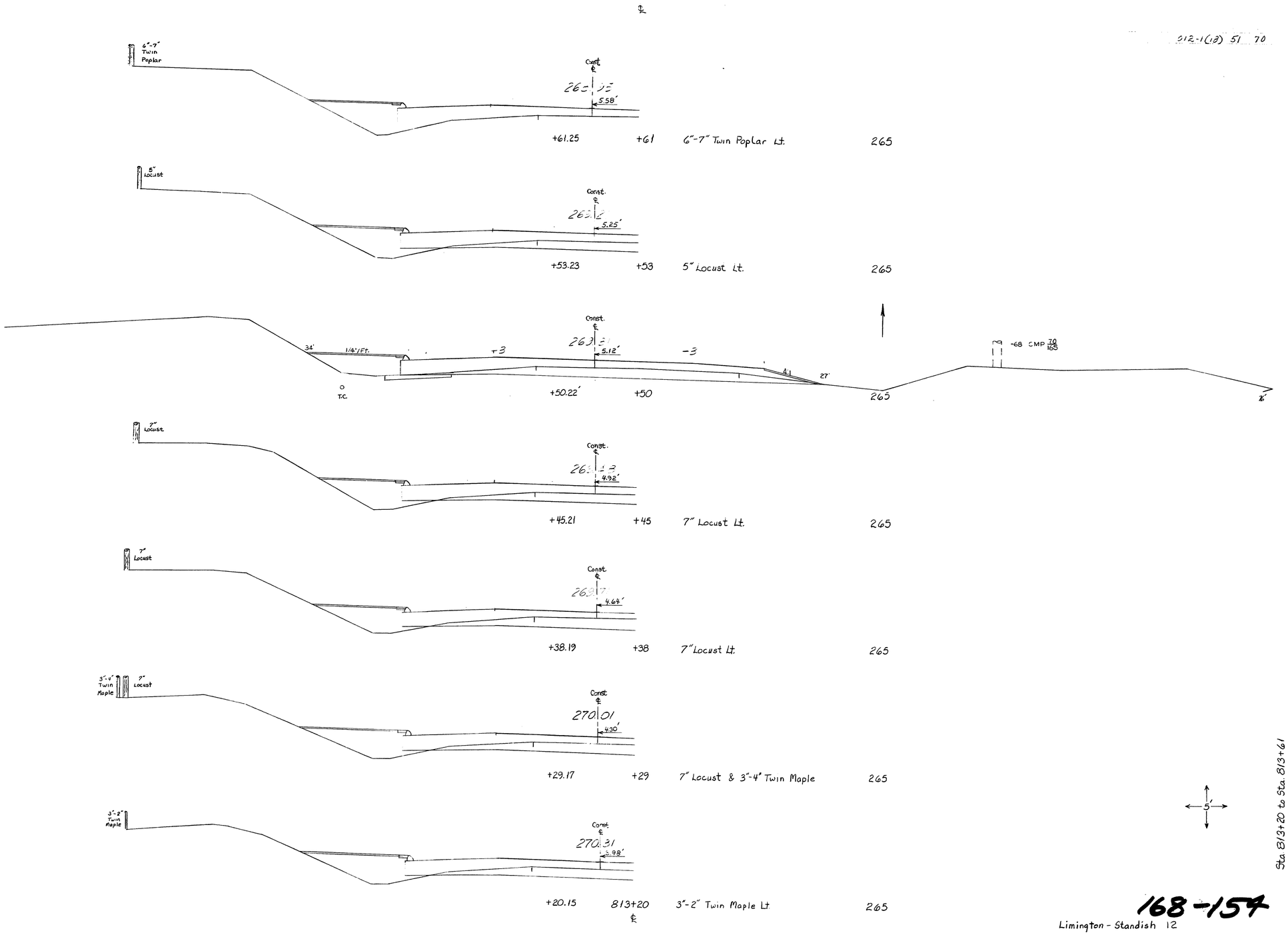
Thibault & Creyl 5-75
Maryland & Latlin 10-75

12/86

812-1(18) 50 70

168-153

Limington - Standish 12



Sta. 813+20 to Sta. 813+61

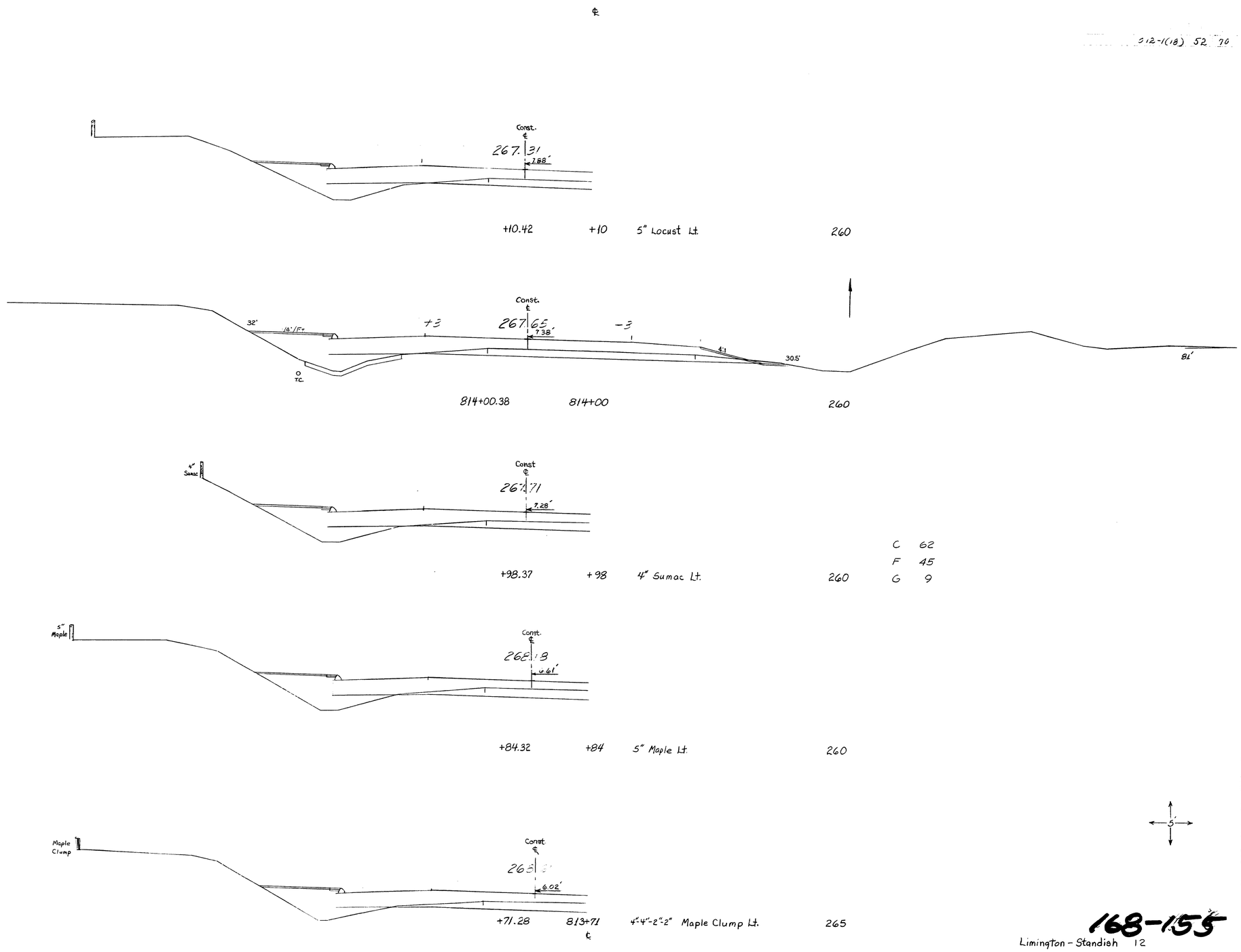
Thibault & Cray 5-75
McFarland & Laflin 10-75

12/86

012-1(13) 51 70

168-154

Limington - Standish 12



C 62
F 45
G 9

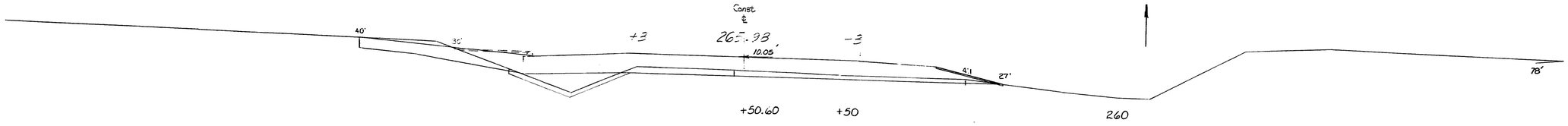
Sta. 813+71 to Sta. 814+10

Limington - Standish 12

168-155

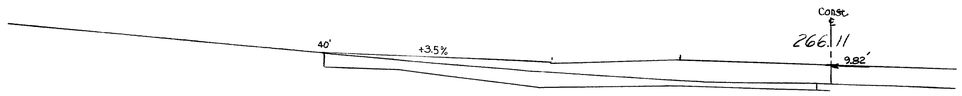
Thibault & Craig, Maryland & Laflin 5-75 10-75

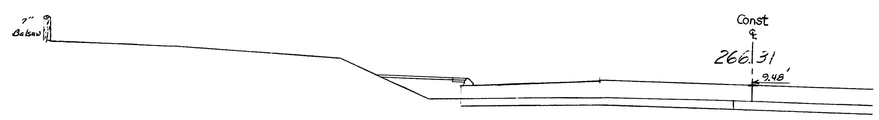
12/86

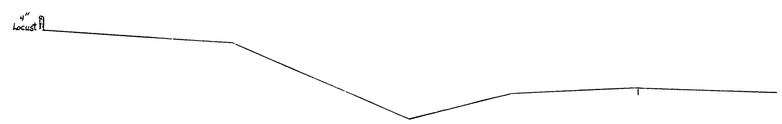


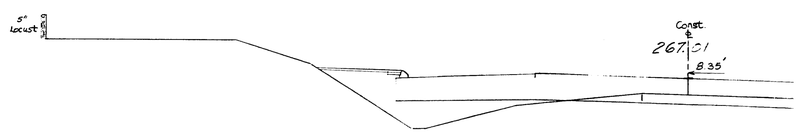
C 44
F 43
G 11

Sta 814+52 Lt. Const.
Paved Drive.









Sta. 814+19 to Sta. 814+50

5'

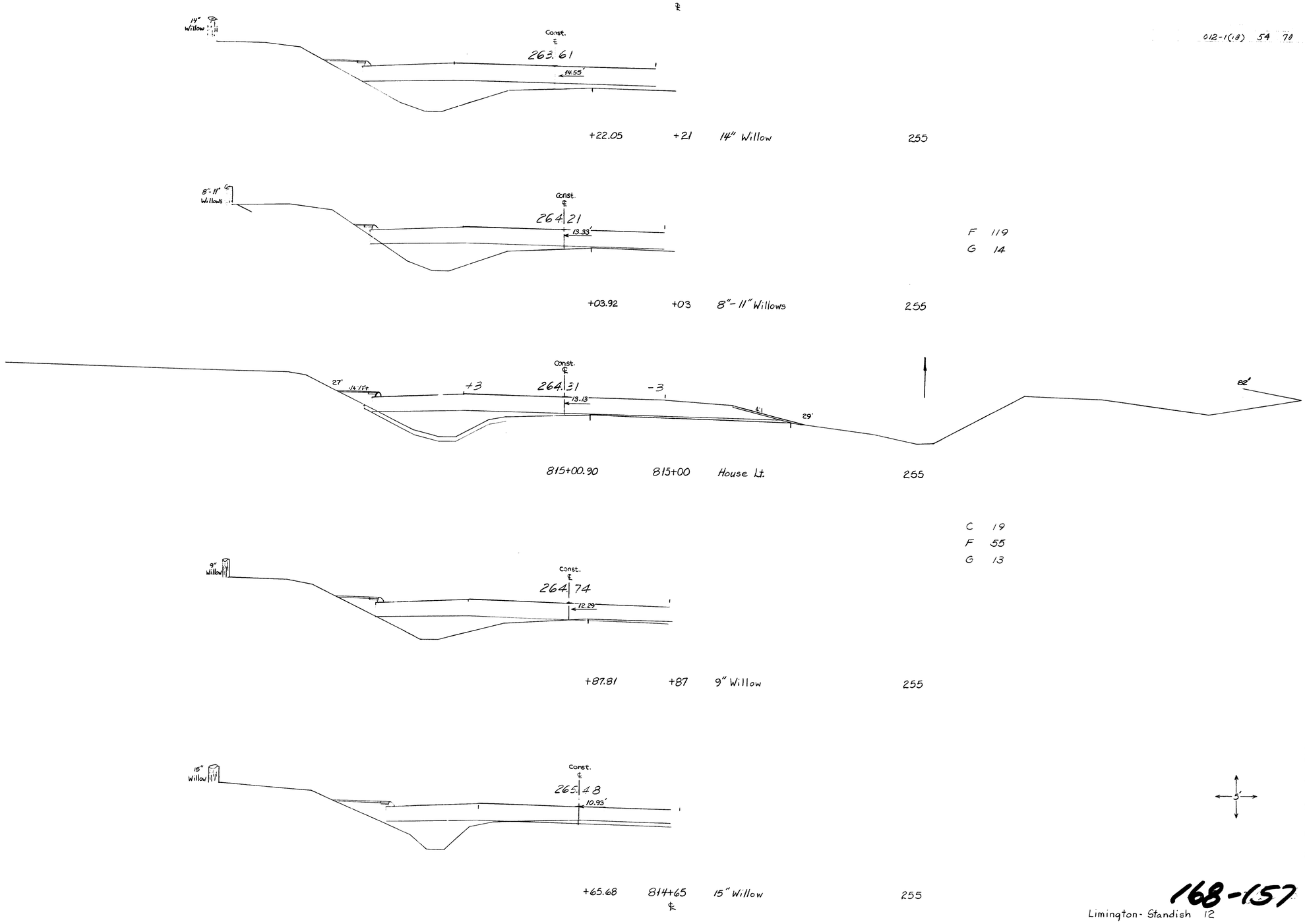
Thibault & Cray 5-75
Mc Farland & Lothin 11-75

12/86

168-156

Limington - Standish 12

012-1(18) 54 70



Thibault & Crevy 5-75
McFarland & Latlin 11-75

14/86

Sta. 814+65 to Sta. 815+21

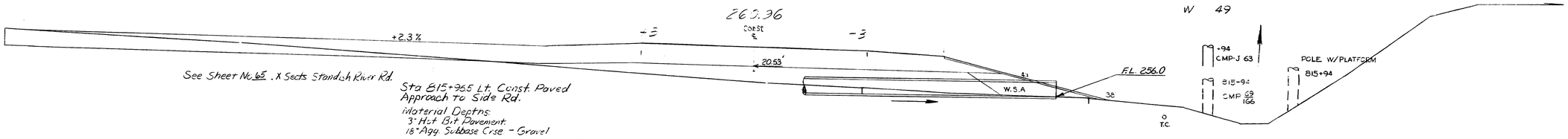
168-157

Limington- Standish 12

012-1(18) 55 70

Grading In Fill
Sta. 818+25 to 816+75

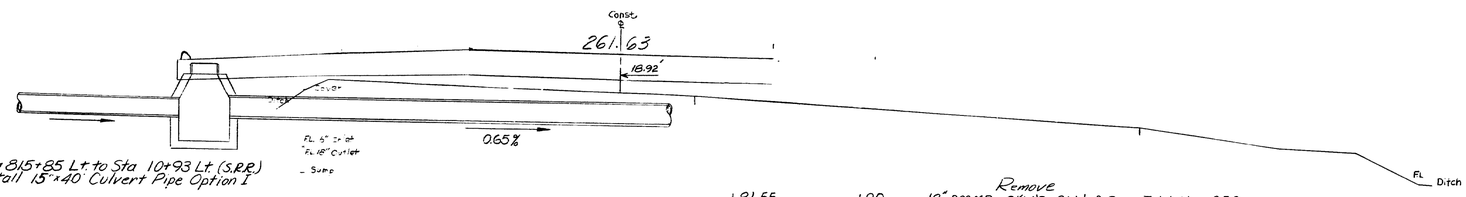
F 283
G 16
W 49



From C.B. Sta. 815+85 Lt. to Sta 816+00 Rt
Install 18" x 64' Culvert Pipe, Option III. Sod Outlet.

F 139
G 6
W 22

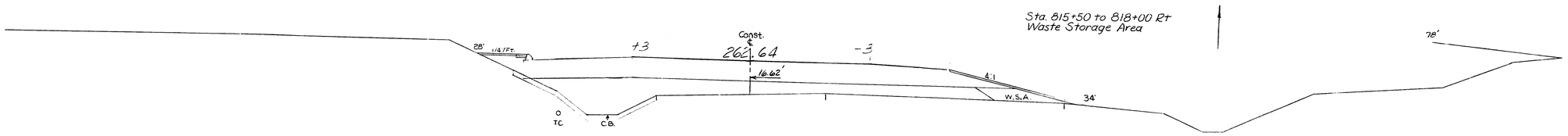
Sta. 815+85.11, 32.93' Lt. (= Sta. 10+50.69, 16.13' Lt. Standish River Rd)
Const Catch Basin Type B1-C.
Grate = 260.6
F.L. = 256.4



Sta 815+85 Lt. to Sta 10+93 Lt. (S.R.R.)
Install 15" x 40' Culvert Pipe Option I

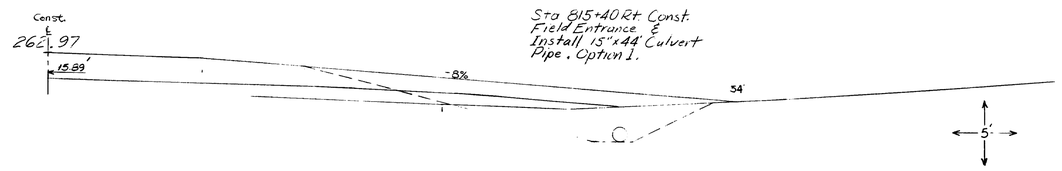
+81.55 +80 Remove 18" ACCMP SKW'D Ah'd & Drop Inlet Lt. 250

Sta. 815+50 to 818+00 Rt
Waste Storage Area



+51.28 +50 Remove Catch Basin 31' Lt. 250

Sta. 815+40 Rt. Const.
Field Entrance ℄
Install 15" x 44' Culvert
Pipe. Option 1.



+41.19 815+40 ℄ Field Ent. Rt. 250

Sta. 815+40 to Sta. 816+00

168-158

Limington - Standish 2

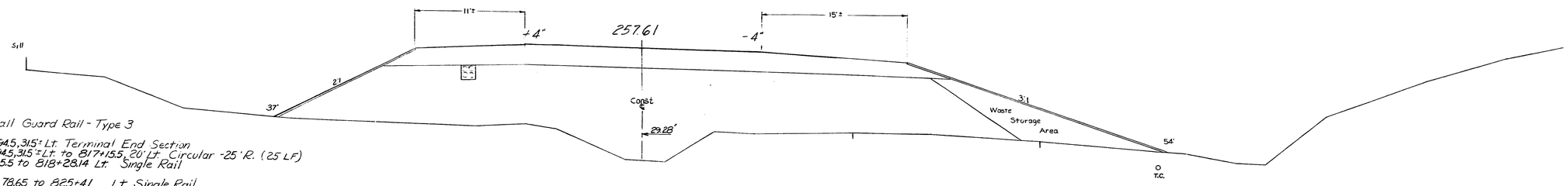
T.B. Scott & Cent. Lewin & Rutland 3-78

12/80

012-1(18) 56 70

F 897
W 96

Sta 817+05± Lt. Const.
Sodded Downspout.



Install Guard Rail - Type 3

Sta. 816+94.5, 31.5'± Lt. Terminal End Section
Sta. 816+94.5, 31.5'± Lt. to 817+15.5, 20' Lt. Circular -25' R. (25 LF)
Sta 817+15.5 to 818+28.14 Lt. Single Rail

Sta. 821+78.65 to 825+41 Lt. Single Rail
Sta. 825+41 to 825+53 . Lt. Circular -30' R
Sta 825+53 Lt. Terminal End Section

817+02.62 817+00 240

Install Guard Rail Delineator Posts
Sta. 817+00± Lt. & Sta. 825+53± Lt.

Sta. 816+84 Lt. Const. Field Entrance,
20' Wide & Install 15"x48' Culvert
Pipe, Option I. Sod Outlet.

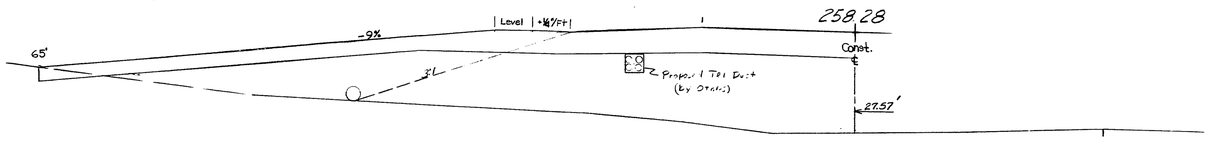
Note: 2:1 Slope on West Side of This Entrance.

Install Guard Rail Type 3

Sta. 816+94.5 Rt. Terminal End Section
Sta. 816+94.5 to 817+06.5 Rt. Circular - 30' R.
Sta. 817+06.5 to 818+19.07 Rt. Single Rail

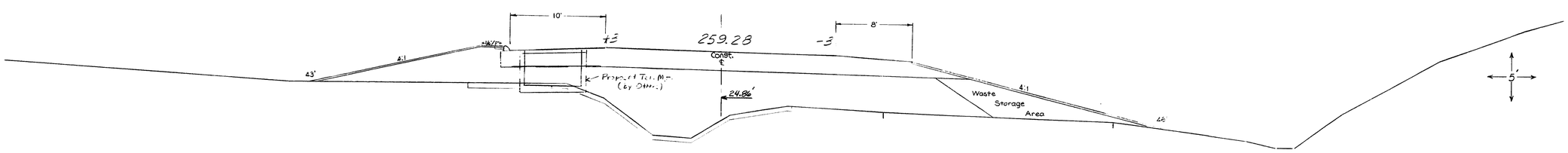
Sta. 821+73.98 to 825+49 Rt. Single Rail
Sta. 825+49 to 825+61 Rt. Circular - 30' R.
Sta. 825+61 Rt. Terminal End Section

Install Guard Rail Delineator Posts
Sta. 816+95± Rt. & Sta. 825+61 ± Rt.



F 612
G 16
W 82

+82.54 +80 Field Ent. Lt. 240



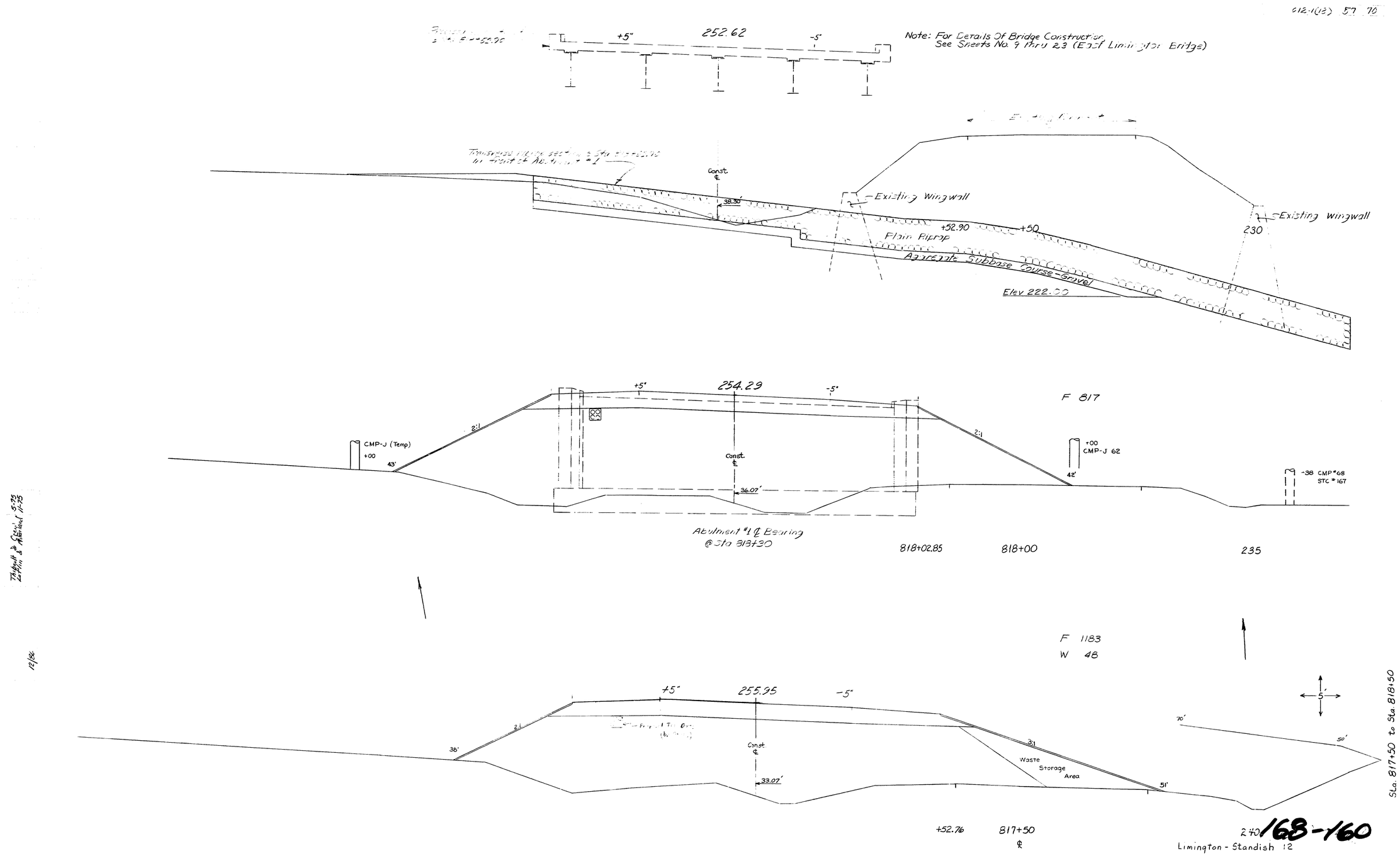
816+52.33 816+50 245

Sta. 816+50 to Sta. 817+00

168-159

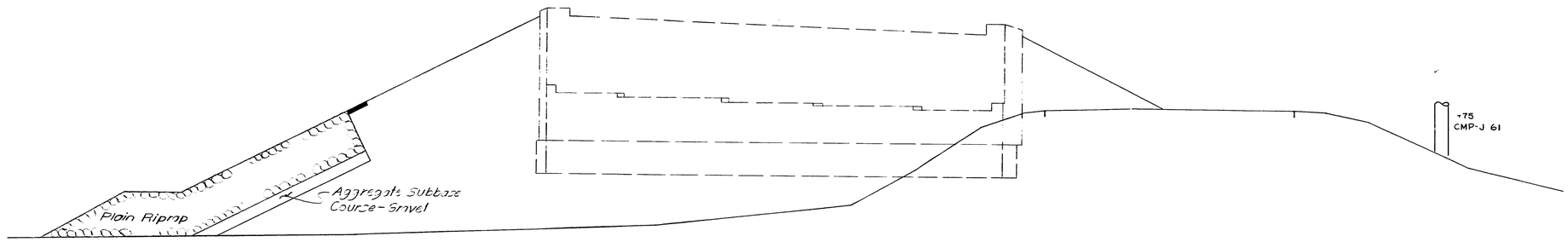
Limington - Standish 12

Maxwell & Gruder 8-78
10/96



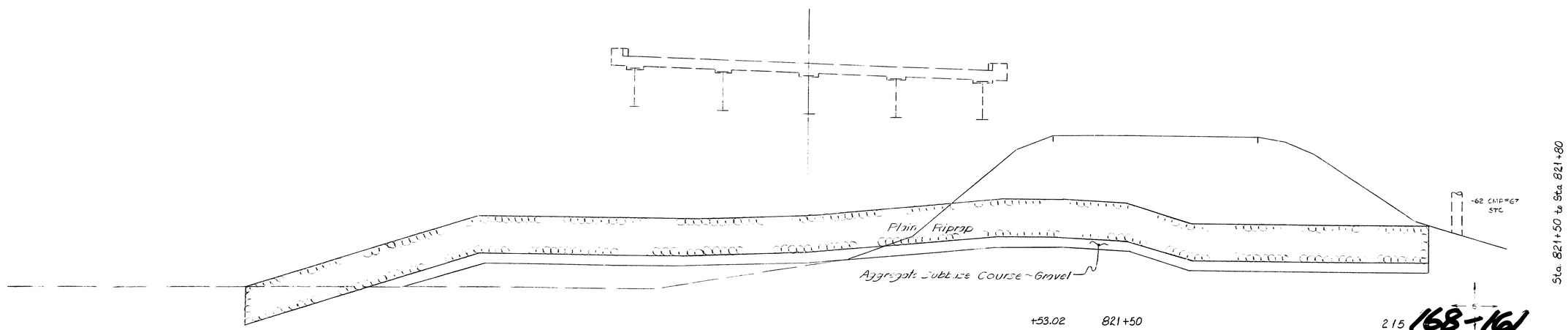
Note: For Details Of Bridge Construction See Sheets No. 9 thru 23 (East Limington Bridge)
+5"
252.62
-5"
Const. ℄
38.30'
Existing Wingwall
+52.90
+50
Plain Riprap
Aggregate Subbase Course-Gravel
Elev 222.00
Existing Wingwall
230
+5"
254.29
-5"
F 817
2:1
CMP-J (Temp)
+00
43'
Const. ℄
36.07'
2:1
+00
CMP-J 62
42'
-38 CMP #68
STC #167
Abutment #1 ℄ Bearing
@ Sta 818+30
818+02.85
818+00
235
F 1183
W 48
+5"
255.95
-5"
2:1
38'
Const. ℄
33.07'
3:1
Waste
Storage
Area
51'
70'
50'
5'
Sta. 817+50 to Sta. 818+50
+52.76
817+50
℄
240
168-160
Limington - Standish 12

012-1(18) 58 73



Abutment #2 ℄ Bearing @ Sta 821+70.02

+80 215



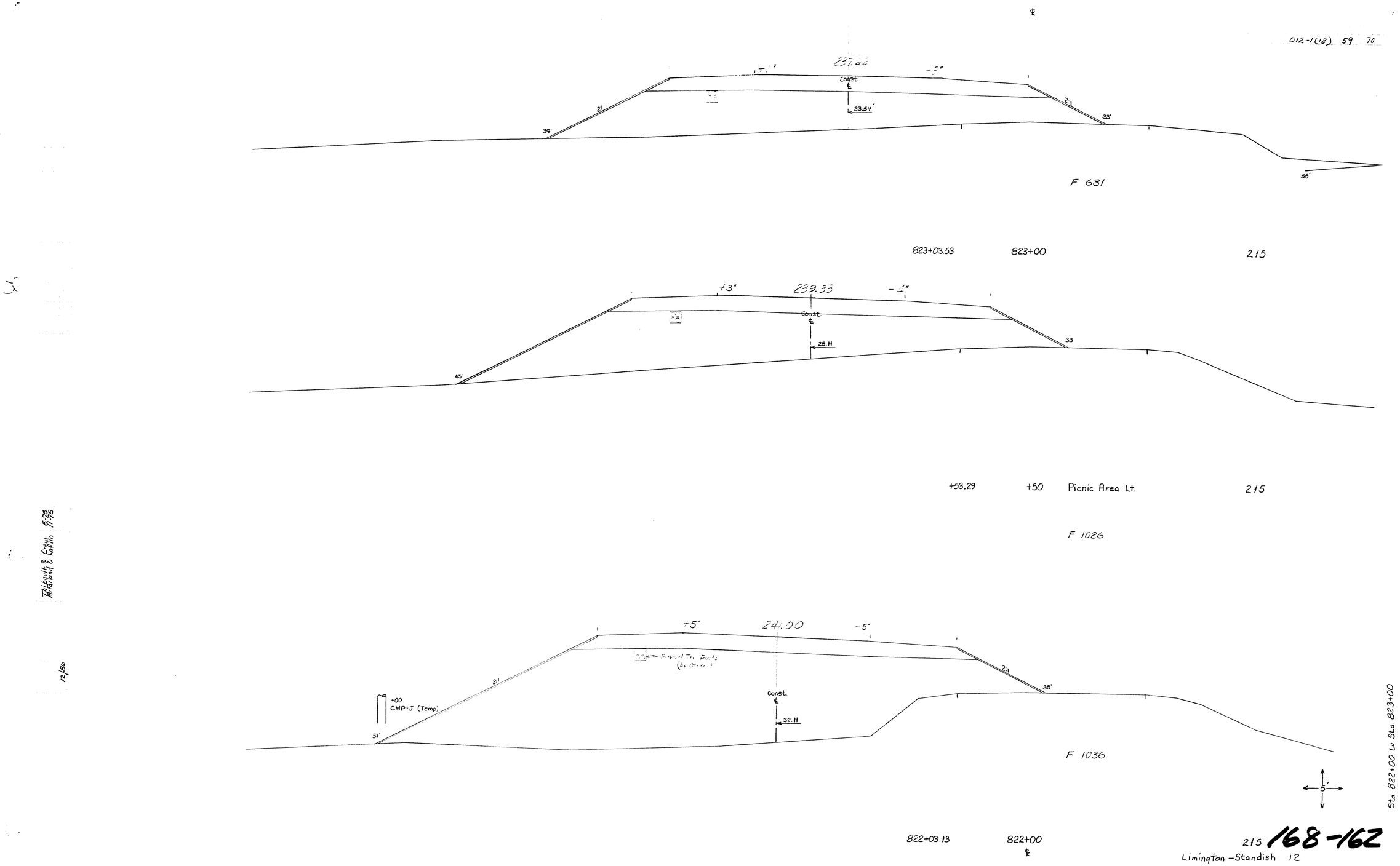
Sta. 821+50 to Sta 821+80

+53.02 821+50 ℄ 215 168-161

Limington - Standish 12

Thibault & Cray 5-75
Maitland & Laflin 11-75

12/86

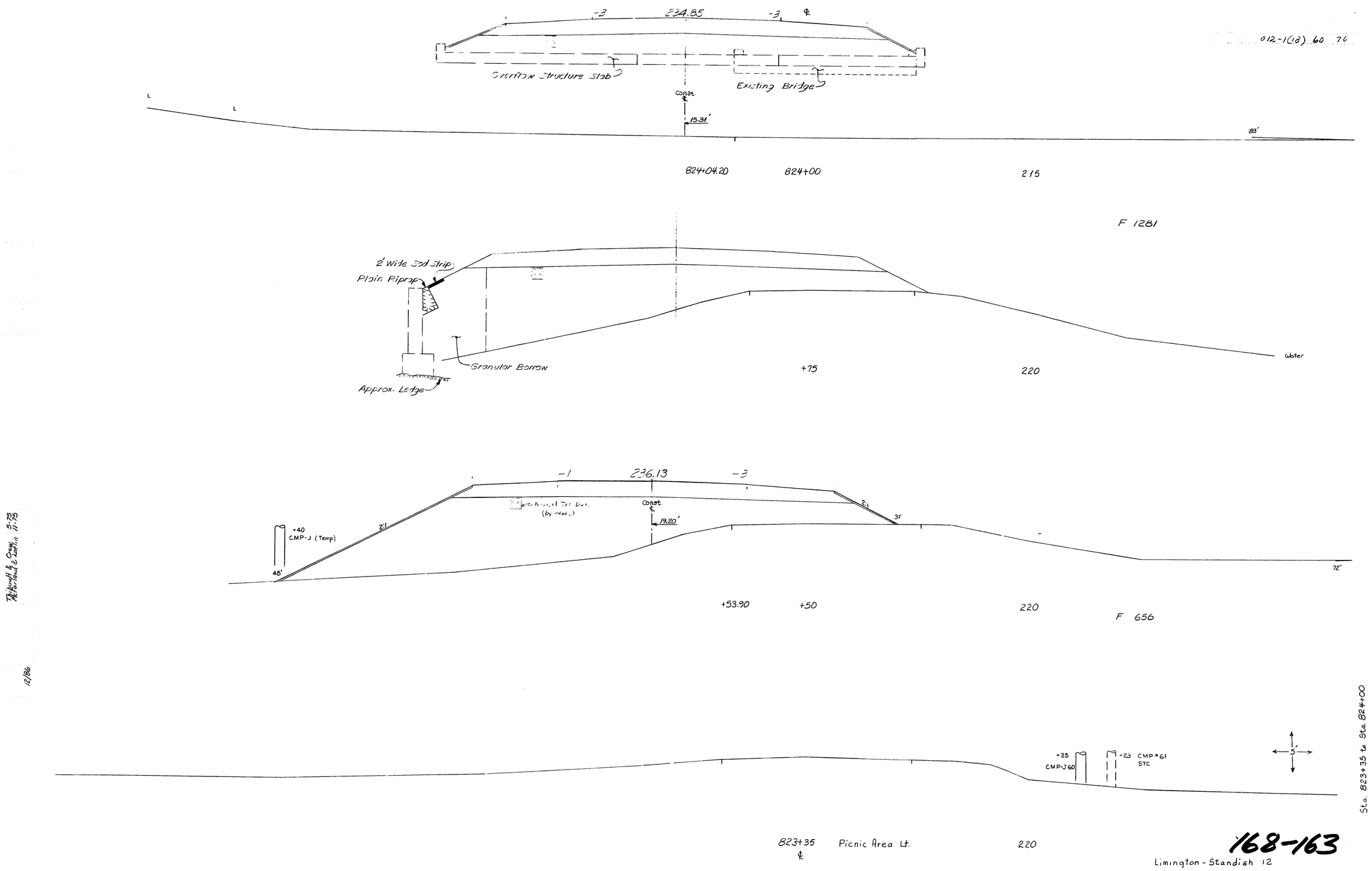


168-162

Limington-Standish 12

Thibault & Crew
McFarland & Kaplin 5-75
11-75

12/86

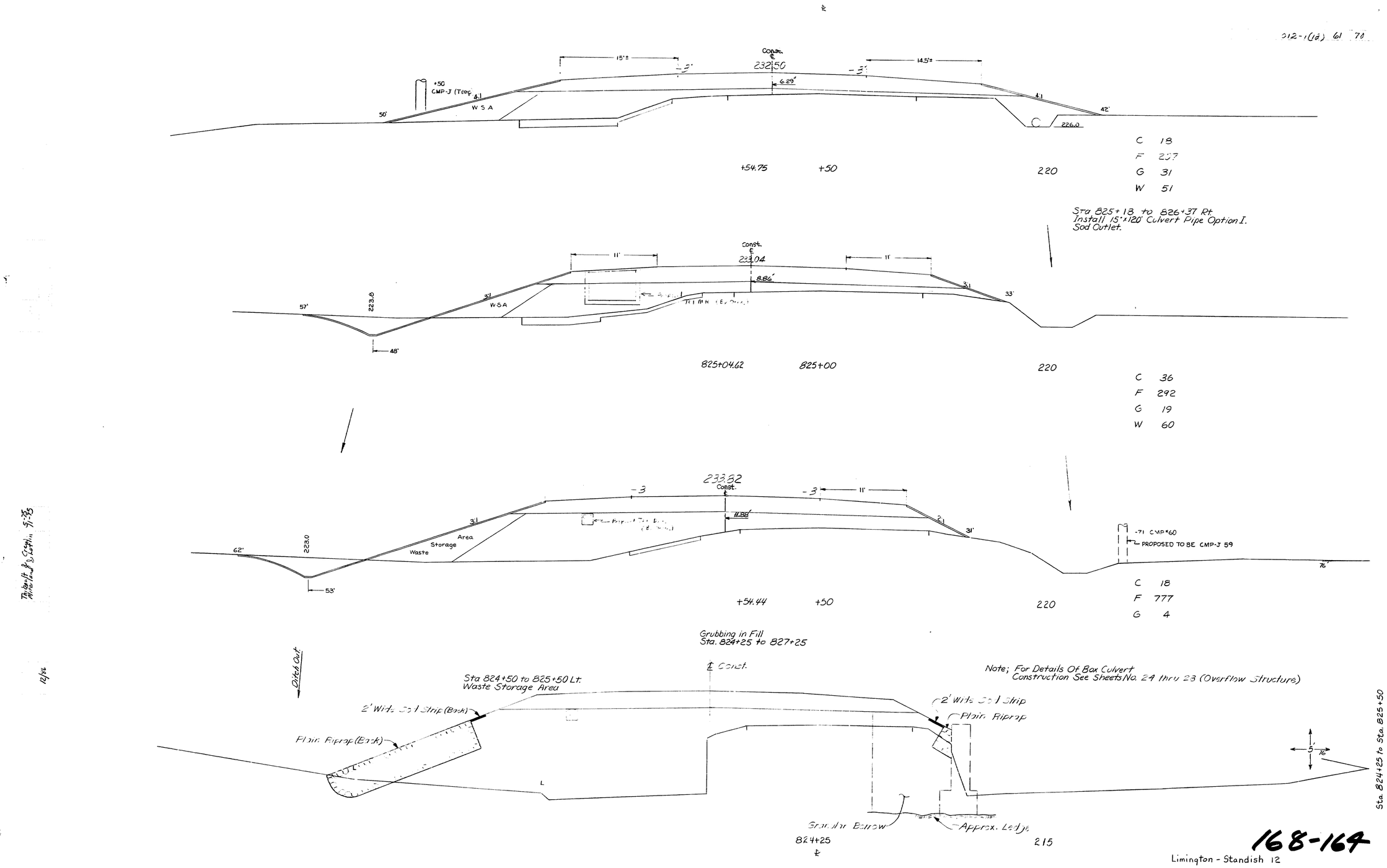


Thibault & Cregg, 5-75
McFarland & Lotkin 11-75

12/86

168-163

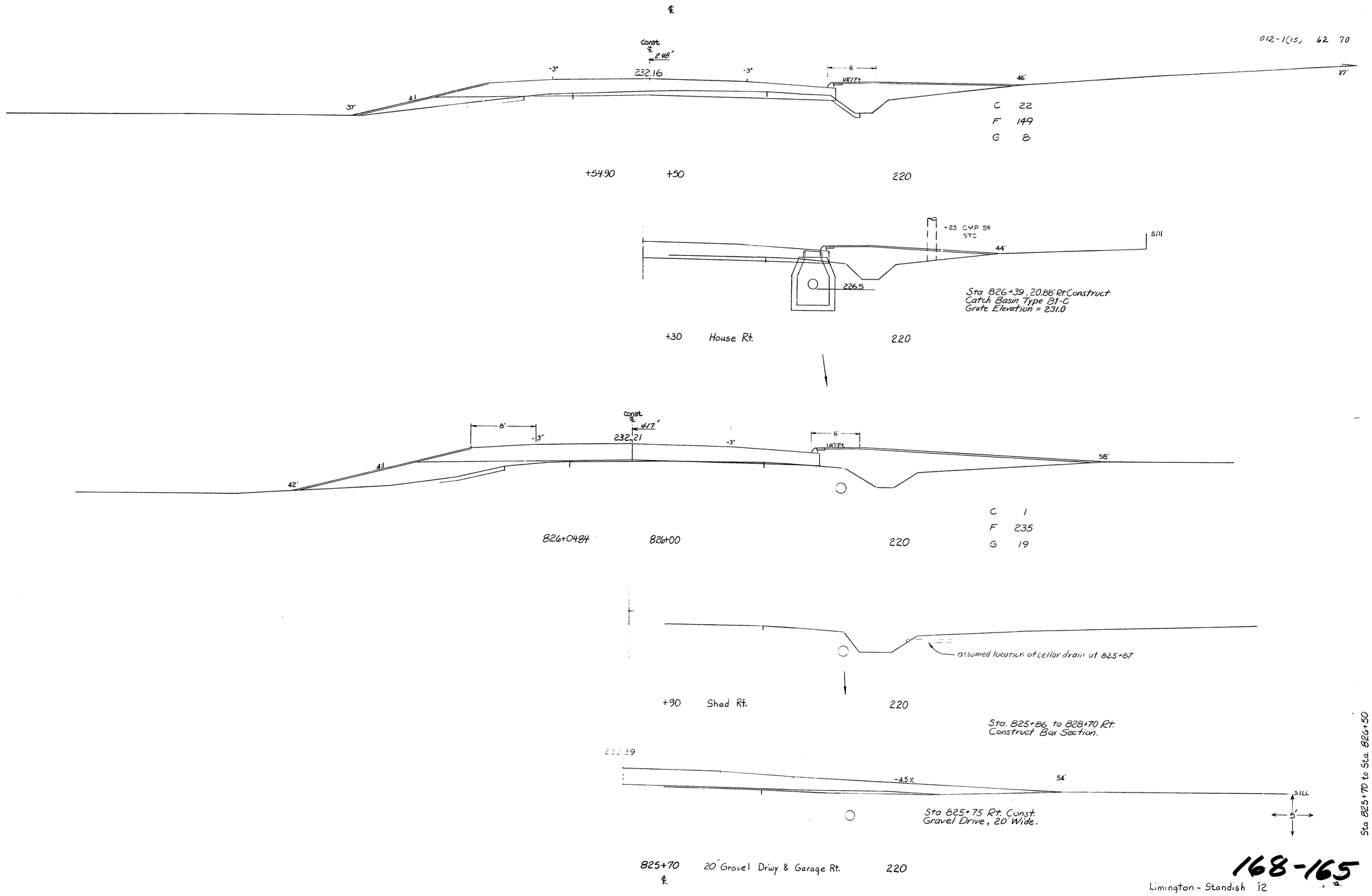
Limington - Standish 12



Thibault & Creagh 5-25
Mitchell & Lothin 5-25
12/86

168-164

Limington - Standish 12

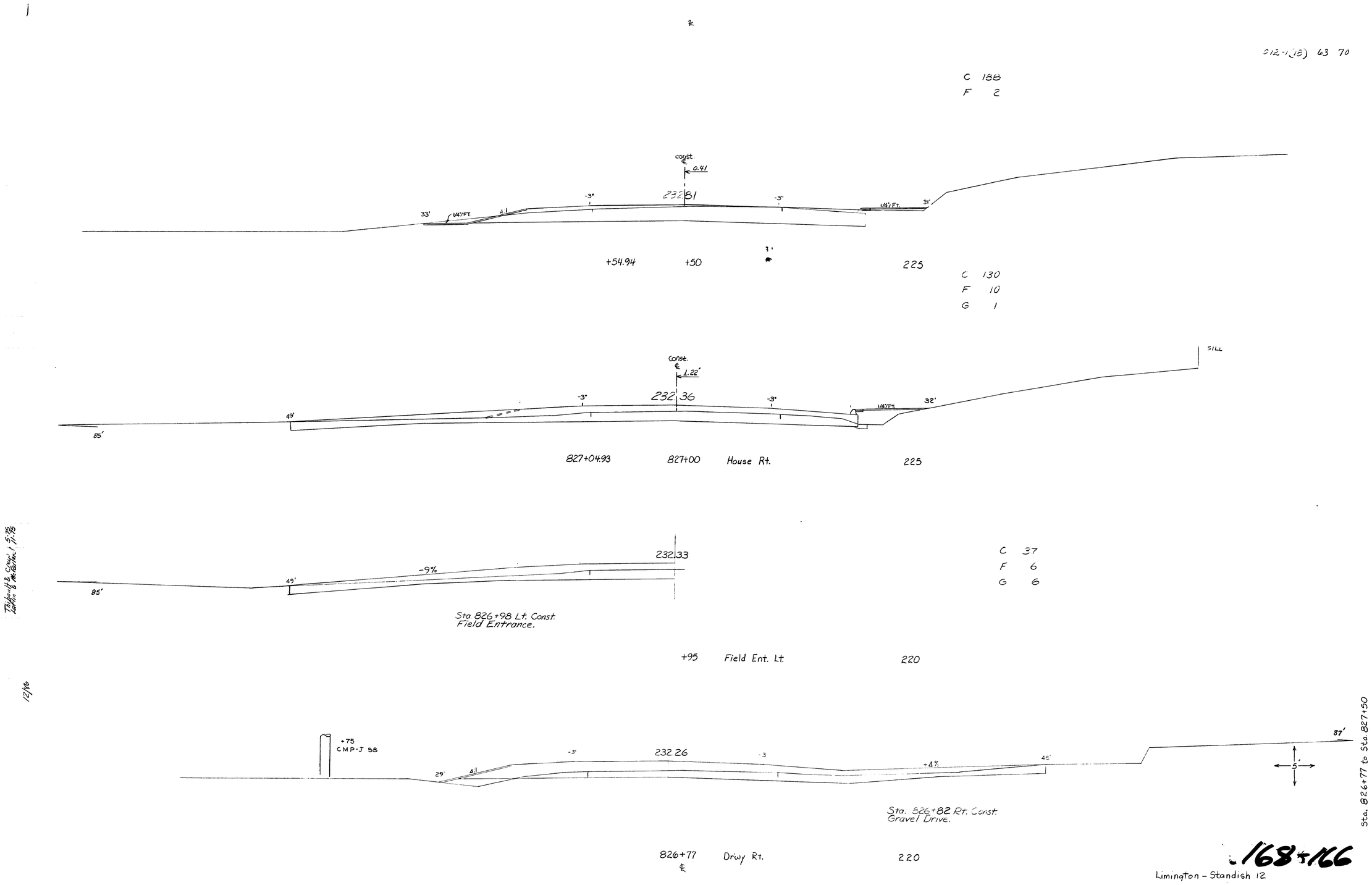


Thibault & Crew 5-75
Mcfarland & Lahlin 11-75

12/86

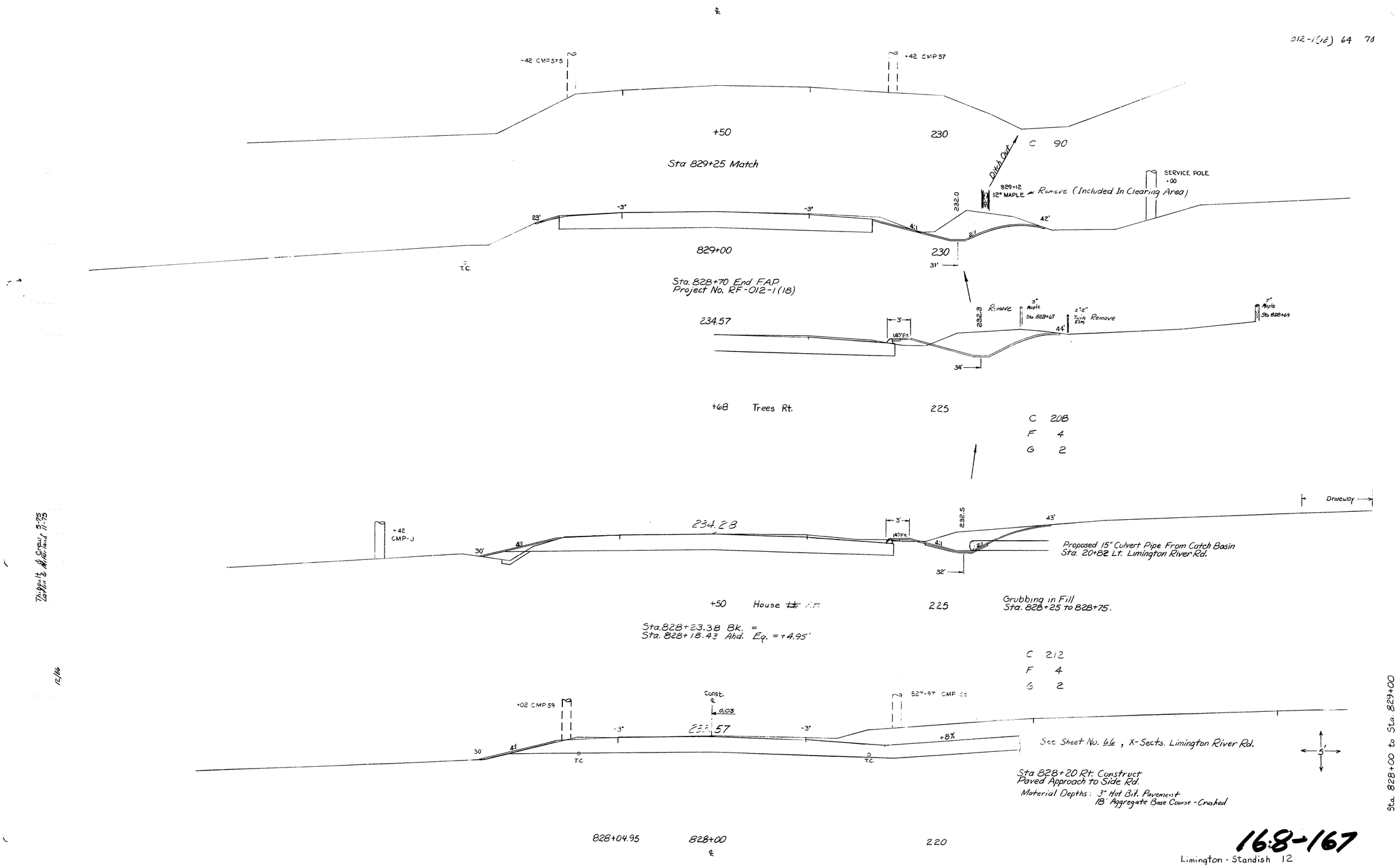
168-165

Limington - Standish 12



168+166

Limington - Standish 12

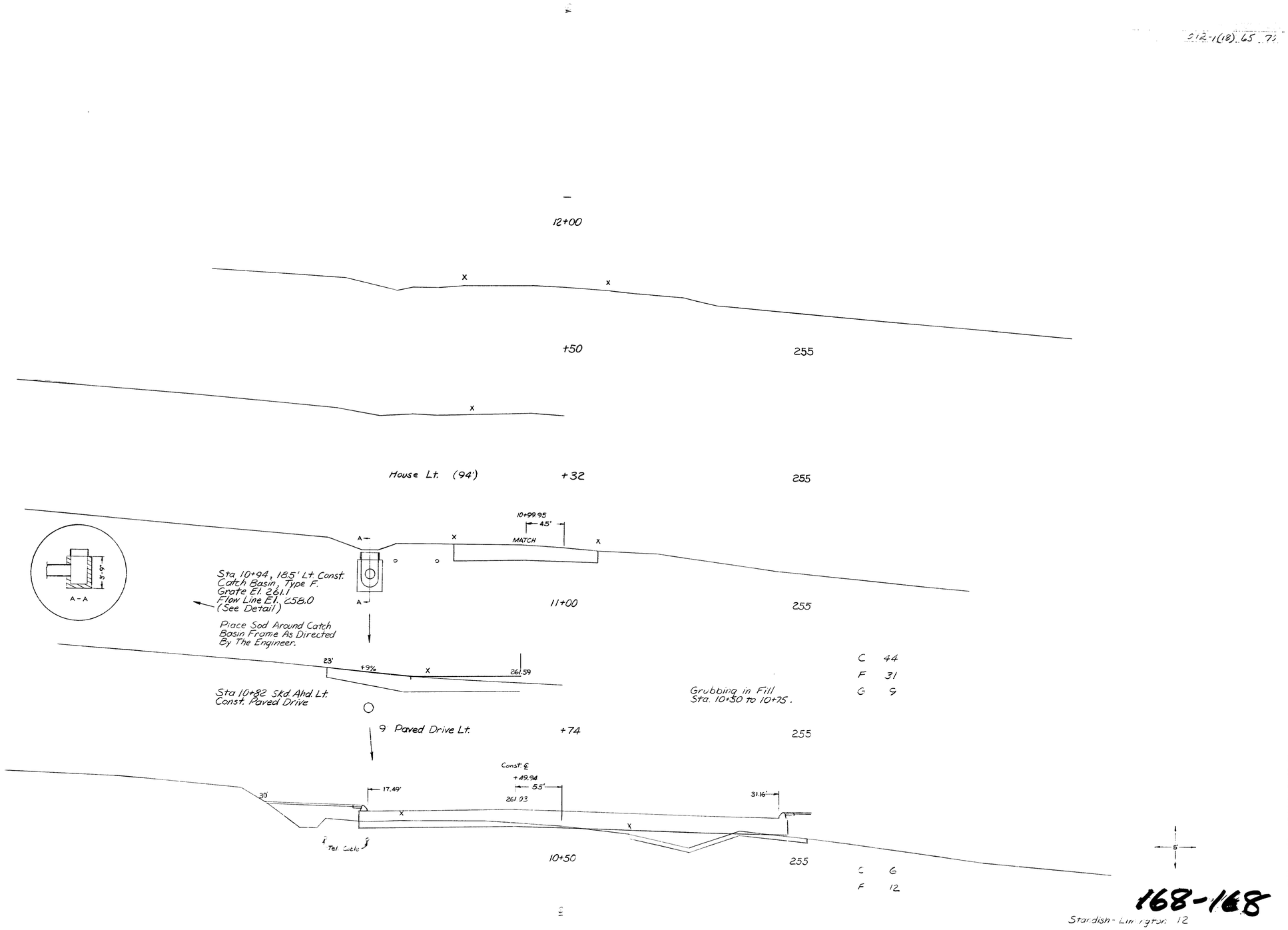


Thibault & Crew 5-75
Latin & Mitchell 11-75

12/86

168-167

Limington - Standish 12

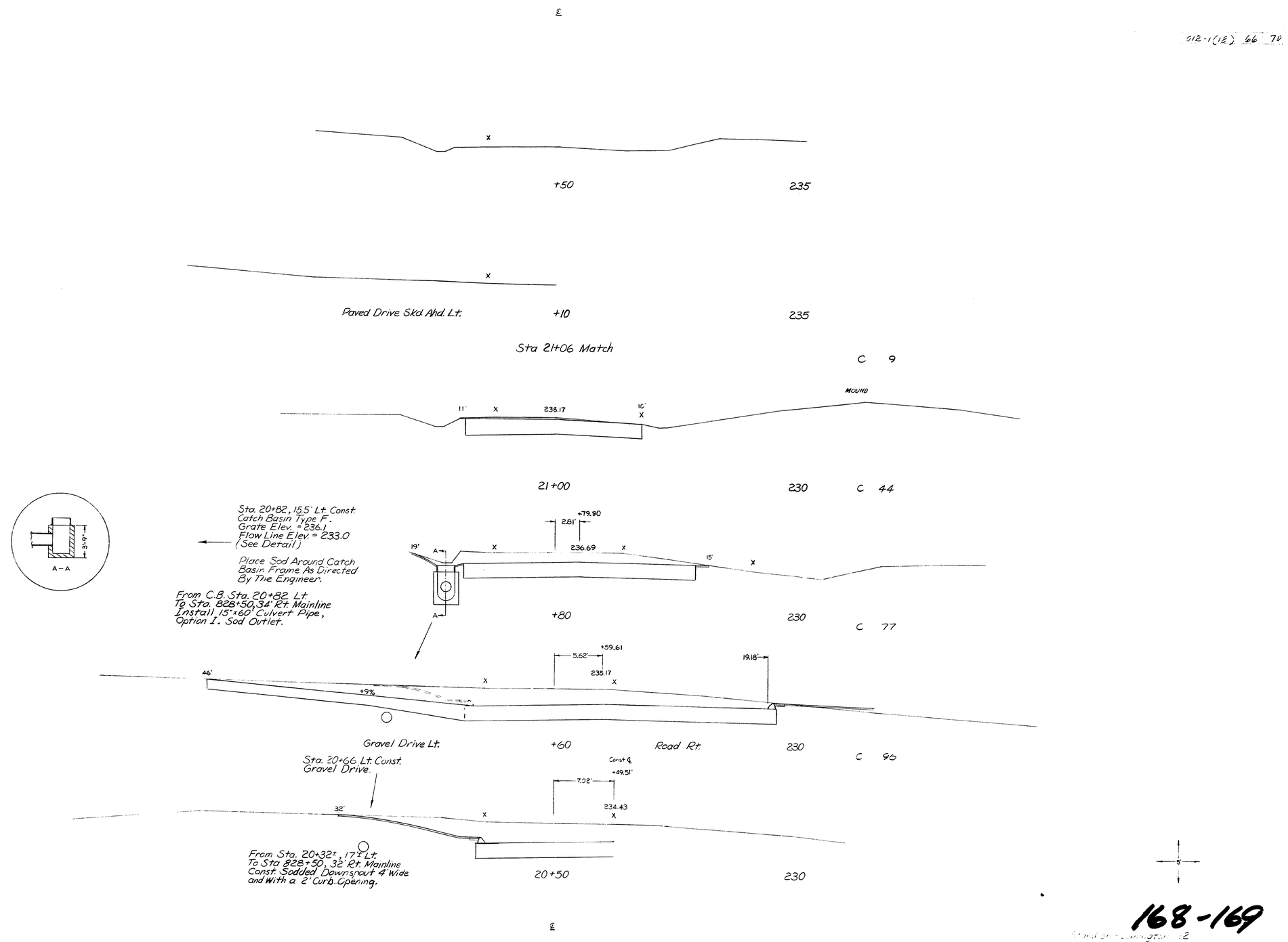


Thibault & Crew RPM 3/15 3/2/76

10+50 - 11+50 STANDISH RIVER RD.

168-168

Standish - Limington 12



Thrust & Cross 5/75
RFM 3/2/76
12/80

20+50 - 21+50 L MINGTON RIVER RD

168-169

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	M-14	012-1(18)	~~66~~ 67	~~84~~ ~~84~~ 70

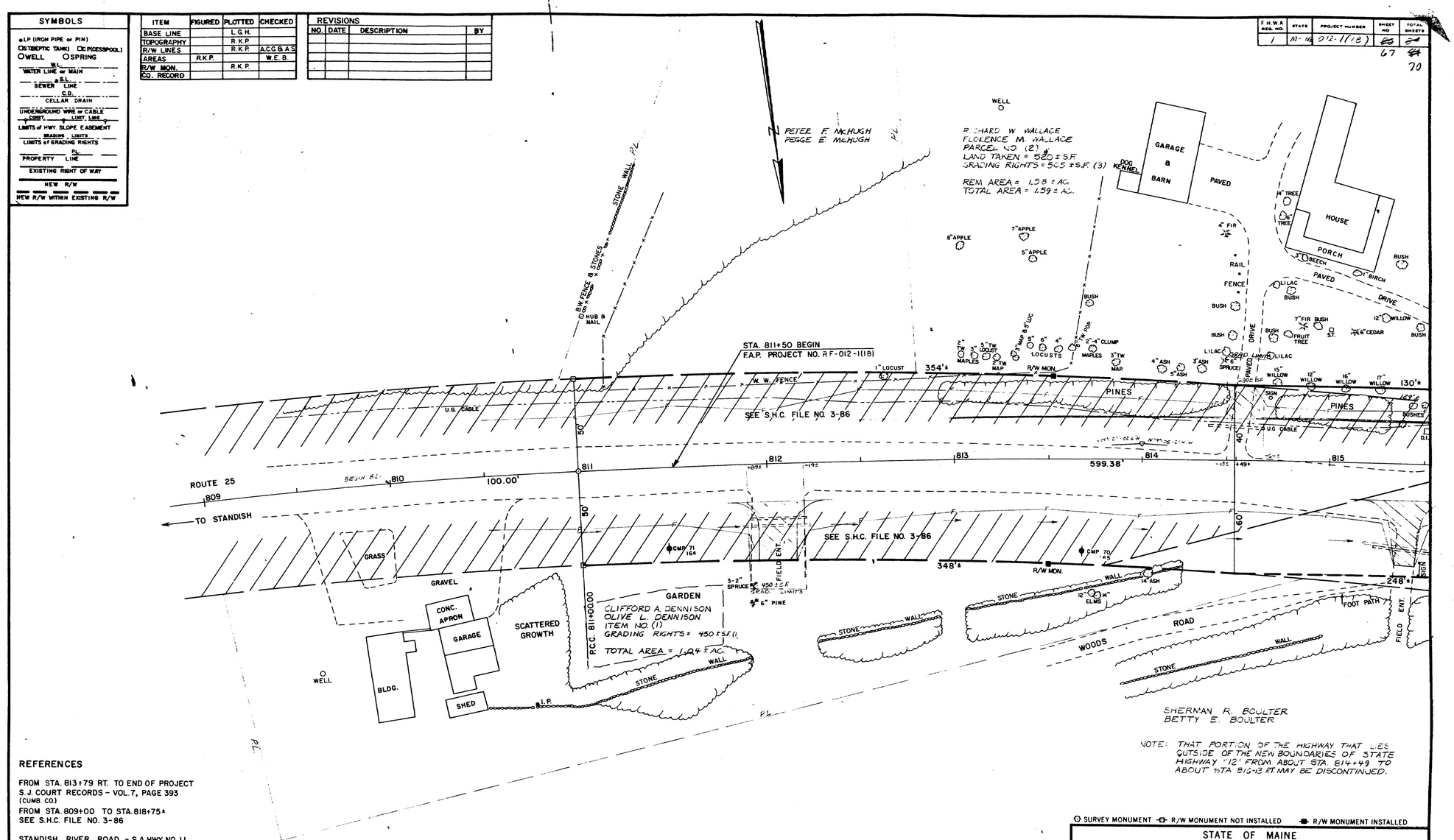
SYMBOLS

- ● I.P. (IRON PIPE or PIN)
- ☐ S.T. (SEPTIC TANK) ☐ C.P. (CESSPOOL)
- ○ WELL ○ SPRING
- W.L. — WATER LINE or MAIN
- S.L. — SEWER LINE
- C.D. — CELLAR DRAIN
- UNDERGROUND WIRE or CABLE — CONST. LIMIT LINE
- LIMITS of HWY. SLOPE EASEMENT
- GRADING LIMITS — LIMITS of GRADING RIGHTS
- P.L. — PROPERTY LINE
- EXISTING RIGHT OF WAY
- NEW R/W
- NEW R/W WITHIN EXISTING R/W

ITEM	FIGURED	PLOTTED	CHECKED
BASE LINE		L.G.H.	
TOPOGRAPHY		R.K.P.	
R/W LINES		R.K.P.	A.C.G. & A.S.
AREAS	R.K.P.		W.E.B.
R/W MON.		R.K.P.	
CO. RECORD			

REVISIONS

NO.	DATE	DESCRIPTION	BY



NOTE: THAT PORTION OF THE HIGHWAY THAT LIES OUTSIDE OF THE NEW BOUNDARIES OF STATE HIGHWAY "12" FROM ABOUT STA. 814+49 TO ABOUT STA. 816+13 RT. MAY BE DISCONTINUED.

REFERENCES

FROM STA. 813+79 RT. TO END OF PROJECT
S.J. COURT RECORDS - VOL. 7, PAGE 393
(CUMB. CO.)
FROM STA. 809+00 TO STA. 818+75±
SEE S.H.C. FILE NO. 3-86

STANDISH RIVER ROAD - S.A. HWY. NO. 11
STANDISH TOWN RECORDS - VOL. 1, PAGE 80

LIMINGTON RIVER ROAD
YORK COUNTY - VOL. 13, PAGE 63

PLAN FILED IN PLAN BOOK PAGE

NO.	GRANTOR	COUNTY RECORD INSTRUMENT	DATE	BOOK	PAGE

P.I. STA. 814+00.00
Δ = 6°-21'-41.2" RT.
D = 1°-03'-40.8"
T = 300.00'
L = 599.38'
E = 8.33'
R = 5398.49'

○ SURVEY MONUMENT ⊖ R/W MONUMENT NOT INSTALLED ■ R/W MONUMENT INSTALLED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
RIGHT OF WAY MAP

STATE HIGHWAY "12"
STANDISH CUMBERLAND COUNTY
FEDERAL AID PROJECT NO. RF-012-1(18)

APPROVED:
DATE: NOVEMBER 1976
SCALE: 1 INCH = 25 FEET
SHEET NO. 1 OF 5 SHEETS
D.O.T. FILE NO. 3-252

ROGER L. MALLAR
COMMISSIONER
RICHARD A. LUETTICH
BUREAU DIRECTOR
CHIEF ENGINEER

168-170

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	ME	[illegible]	68	84 70

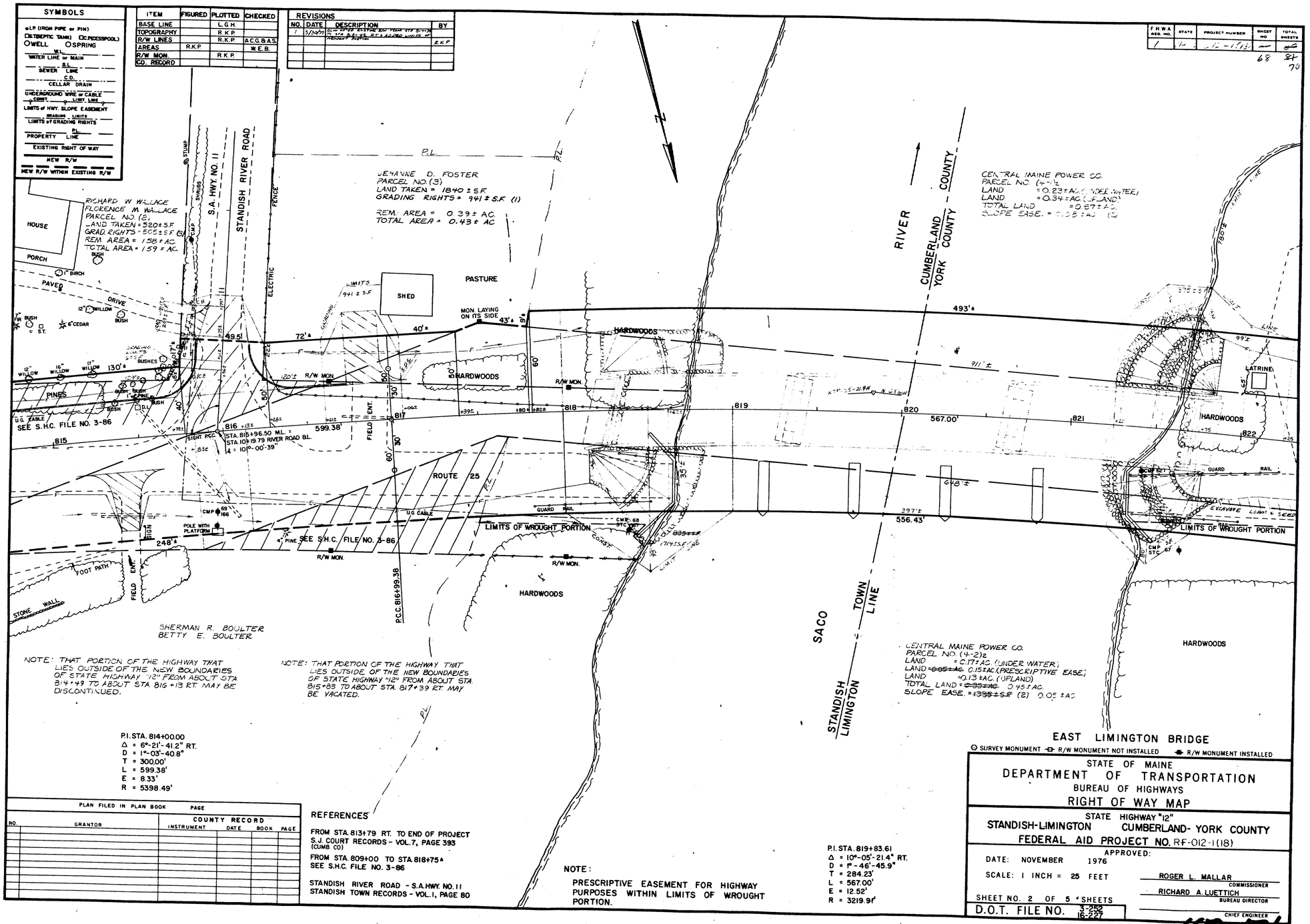
SYMBOLS

- ● I.P. (IRON PIPE or PIN)
- DT (SEPTIC TANK) CP (CESSPOOL)
- ○ WELL ○ SPRING
- W.L. — WATER LINE or MAIN
- S.L. — SEWER LINE
- C.D. — CELLAR DRAIN
- UNDERGROUND WIRE or CABLE — COMM. LIMY. LINE
- LIMITS of HWY. SLOPE EASEMENT
- GRADING LIMITS — LIMITS of GRADING RIGHTS
- P.L. — PROPERTY LINE
- EXISTING RIGHT OF WAY
- NEW R/W
- NEW R/W WITHIN EXISTING R/W

ITEM	FIGURED	PLOTTED	CHECKED
BASE LINE		L.G.H.	
TOPOGRAPHY		R.K.P.	
R/W LINES		R.K.P.	A.C.G.B.A.S.
AREAS	R.K.P.		W.E.B.
R/W MON.		R.K.P.	
CO. RECORD			

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	3/24/77	[illegible]	EKP



NOTE: THAT PORTION OF THE HIGHWAY THAT LIES OUTSIDE OF THE NEW BOUNDARIES OF STATE HIGHWAY "12" FROM ABOUT STA. 814+49 TO ABOUT STA. 816+13 RT. MAY BE DISCONTINUED.

NOTE: THAT PORTION OF THE HIGHWAY THAT LIES OUTSIDE OF THE NEW BOUNDARIES OF STATE HIGHWAY "12" FROM ABOUT STA. 815+83 TO ABOUT STA. 817+39 RT. MAY BE VACATED.

P.I. STA. 814+00.00
Δ = 6°-21'-41.2" RT.
D = 1°-03'-40.8"
T = 300.00'
L = 599.38'
E = 8.33'
R = 5398.49'

P.I. STA. 819+83.61
Δ = 10°-05'-21.4" RT.
D = 1°-46'-45.9"
T = 284.23'
L = 567.00'
E = 12.52'
R = 3219.91'

NOTE:
PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION.

PLAN FILED IN PLAN BOOK	PAGE

NO.	GRANTOR	COUNTY RECORD INSTRUMENT	DATE	BOOK	PAGE

REFERENCES

FROM STA. 813+79 RT. TO END OF PROJECT
S.J. COURT RECORDS – VOL. 7, PAGE 393 (CUMB. CO.)

FROM STA. 809+00 TO STA. 818+75±
SEE S.H.C. FILE NO. 3-86

STANDISH RIVER ROAD – S.A. HWY. NO. 11
STANDISH TOWN RECORDS – VOL. 1, PAGE 80

○ SURVEY MONUMENT ⊕ R/W MONUMENT NOT INSTALLED ● R/W MONUMENT INSTALLED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
RIGHT OF WAY MAP

STATE HIGHWAY "12"
STANDISH-LIMINGTON CUMBERLAND- YORK COUNTY
FEDERAL AID PROJECT NO. RF-012-1(18)

APPROVED:
DATE: NOVEMBER 1976
SCALE: 1 INCH = 25 FEET

ROGER L. MALLAR — COMMISSIONER
RICHARD A. LUETTICH — BUREAU DIRECTOR
CHIEF ENGINEER

SHEET NO. 2 OF 5 * SHEETS
D.O.T. FILE NO. 3-252 16-227

168-171

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS

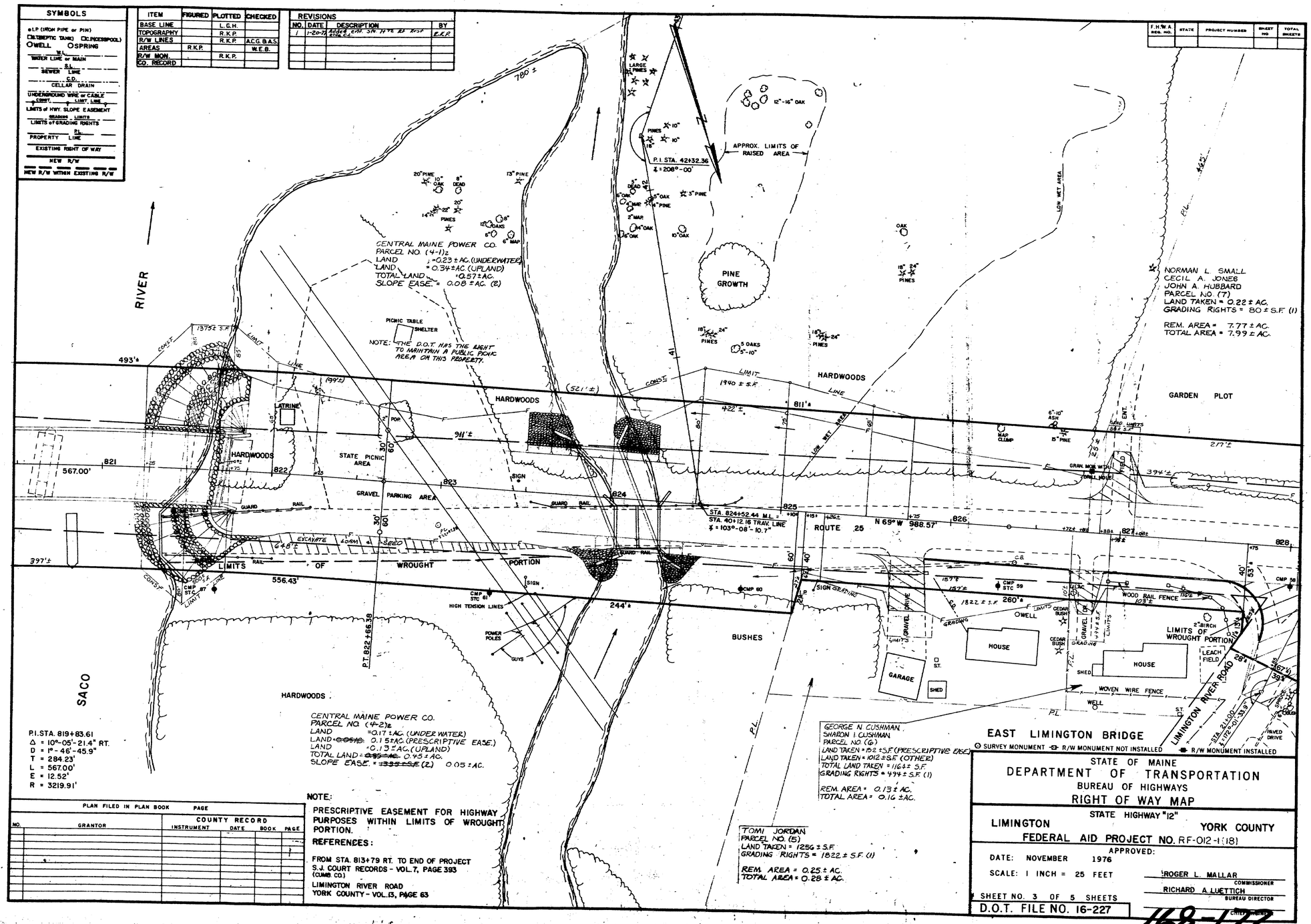
SYMBOLS

- ⊙I.P. (IRON PIPE or PIN)
- ☐SEPTIC TANK ⊙C.P.(CESSPOOL)
- ○WELL ○SPRING
- W.L. — WATER LINE or MAIN
- S.L. — SEWER LINE
- C.D. — CELLAR DRAIN
- UNDERGROUND WIRE or CABLE
- CONST. LIMIT LINE — LIMITS of HWY. SLOPE EASEMENT
- GRADING LIMITS — LIMITS of GRADING RIGHTS
- P.L. — PROPERTY LINE
- EXISTING RIGHT OF WAY
- NEW R/W
- NEW R/W WITHIN EXISTING R/W

ITEM	FIGURED	PLOTTED	CHECKED
BASE LINE		L.G.H.	
TOPOGRAPHY		R.K.P.	
R/W LINES		R.K.P.	A.C.G. & A.S.
AREAS	R.K.P.		W.E.B.
R/W MON.		R.K.P.	
CO. RECORD			

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	1-20-77	Added cert. sta. 11+76 Rt. Rest area C.L.	E.K.P.



PLAN FILED IN PLAN BOOK	PAGE

NO.	GRANTOR	COUNTY RECORD INSTRUMENT	DATE	BOOK	PAGE

NOTE:

PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION.

REFERENCES:

FROM STA. 813+79 RT. TO END OF PROJECT
S.J. COURT RECORDS - VOL. 7, PAGE 393 (CUMB. CO.)

LIMINGTON RIVER ROAD
YORK COUNTY - VOL. 13, PAGE 63

⊙ SURVEY MONUMENT ⊖ R/W MONUMENT NOT INSTALLED ● R/W MONUMENT INSTALLED

EAST LIMINGTON BRIDGE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
RIGHT OF WAY MAP

STATE HIGHWAY "12"

LIMINGTON — YORK COUNTY

FEDERAL AID PROJECT NO. RF-012-1(18)

APPROVED:

DATE: NOVEMBER 1976

SCALE: 1 INCH = 25 FEET

ROGER L. MALLAR — COMMISSIONER

RICHARD A. LUETTICH — BUREAU DIRECTOR

SHEET NO. 3 OF 5 SHEETS

CHIEF ENGINEER

D.O.T. FILE NO. 16-227

168-112

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	ME	F-012-1(18)	5	5

70 70

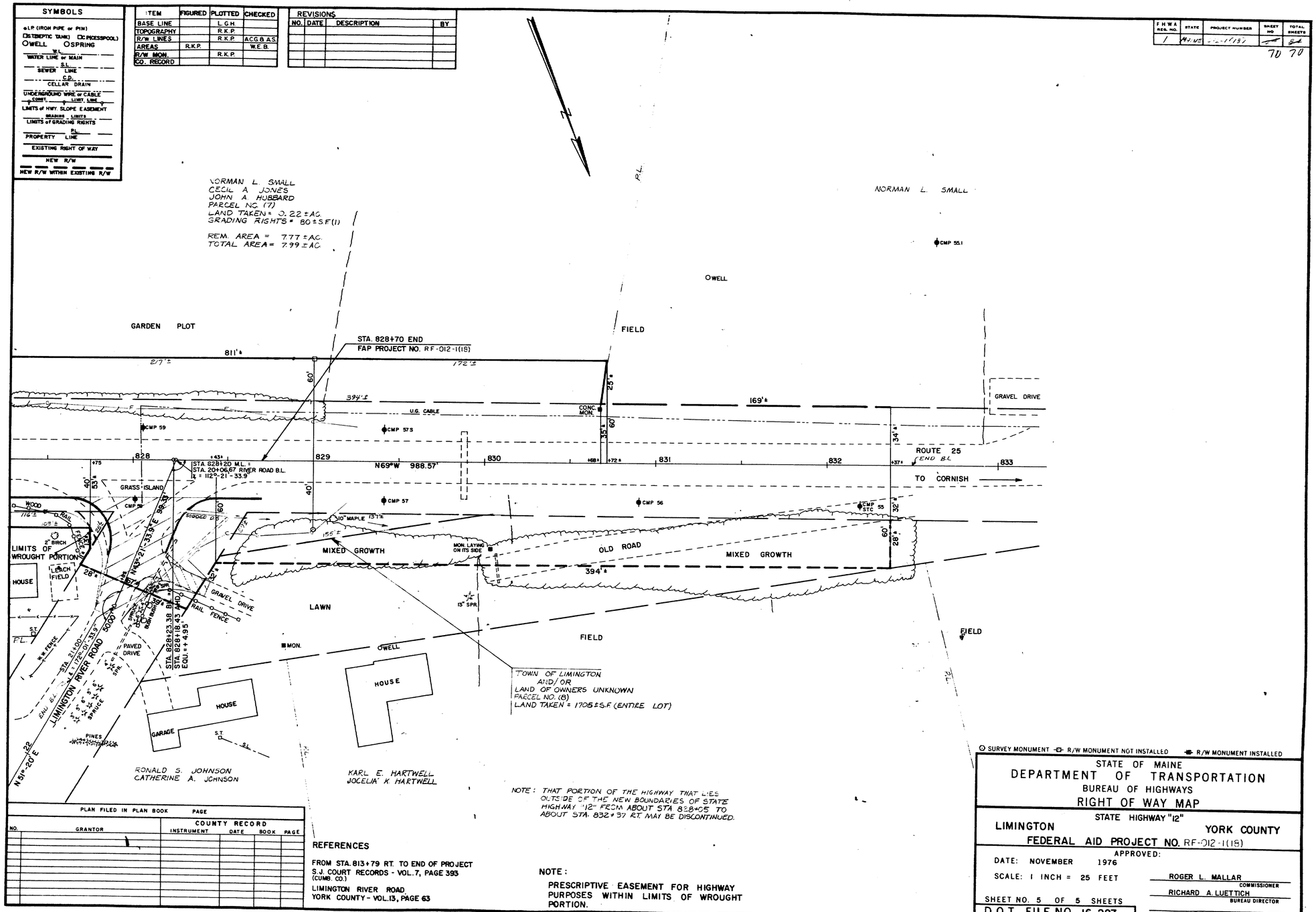
SYMBOLS

- ⊕ I.P. (IRON PIPE or PIN)
- (S) SEPTIC TANK (C) CESSPOOL
- O WELL O SPRING
- W.L. WATER LINE or MAIN
- S.L. SEWER LINE
- C.D. CELLAR DRAIN
- UNDERGROUND WIRE or CABLE
- CONST. LIMIT LINE — LIMITS of HWY. SLOPE EASEMENT
- GRADING LIMITS — LIMITS of GRADING RIGHTS
- P.L. PROPERTY LINE
- EXISTING RIGHT OF WAY
- NEW R/W
- NEW R/W WITHIN EXISTING R/W

ITEM	FIGURED	PLOTTED	CHECKED
BASE LINE		L.G.H.	
TOPOGRAPHY		R.K.P.	
R/W LINES		R.K.P.	ACG & A.S.
AREAS	R.K.P.		W.E.B.
R/W MON.		R.K.P.	
CO. RECORD			

REVISIONS

NO.	DATE	DESCRIPTION	BY



NOTE: THAT PORTION OF THE HIGHWAY THAT LIES OUTSIDE OF THE NEW BOUNDARIES OF STATE HIGHWAY "12" FROM ABOUT STA 828+05 TO ABOUT STA. 832+37 RT. MAY BE DISCONTINUED.

PLAN FILED IN PLAN BOOK	PAGE

NO.	GRANTOR	COUNTY RECORD INSTRUMENT	DATE	BOOK	PAGE

REFERENCES

FROM STA. 813+79 RT. TO END OF PROJECT
S.J. COURT RECORDS - VOL. 7, PAGE 393
(CUMB. CO.)
LIMINGTON RIVER ROAD
YORK COUNTY - VOL. 13, PAGE 63

NOTE:

PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION.

○ SURVEY MONUMENT ⊖ R/W MONUMENT NOT INSTALLED ⊕ R/W MONUMENT INSTALLED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
RIGHT OF WAY MAP

STATE HIGHWAY "12"

LIMINGTON — YORK COUNTY

FEDERAL AID PROJECT NO. RF-012-1(18)

APPROVED:

DATE: NOVEMBER 1976

SCALE: 1 INCH = 25 FEET

ROGER L. MALLAR, COMMISSIONER

RICHARD A. LUETTICH, BUREAU DIRECTOR

CHIEF ENGINEER

SHEET NO. 5 OF 5 SHEETS

D.O.T. FILE NO. 16-227

168-173