B. & R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

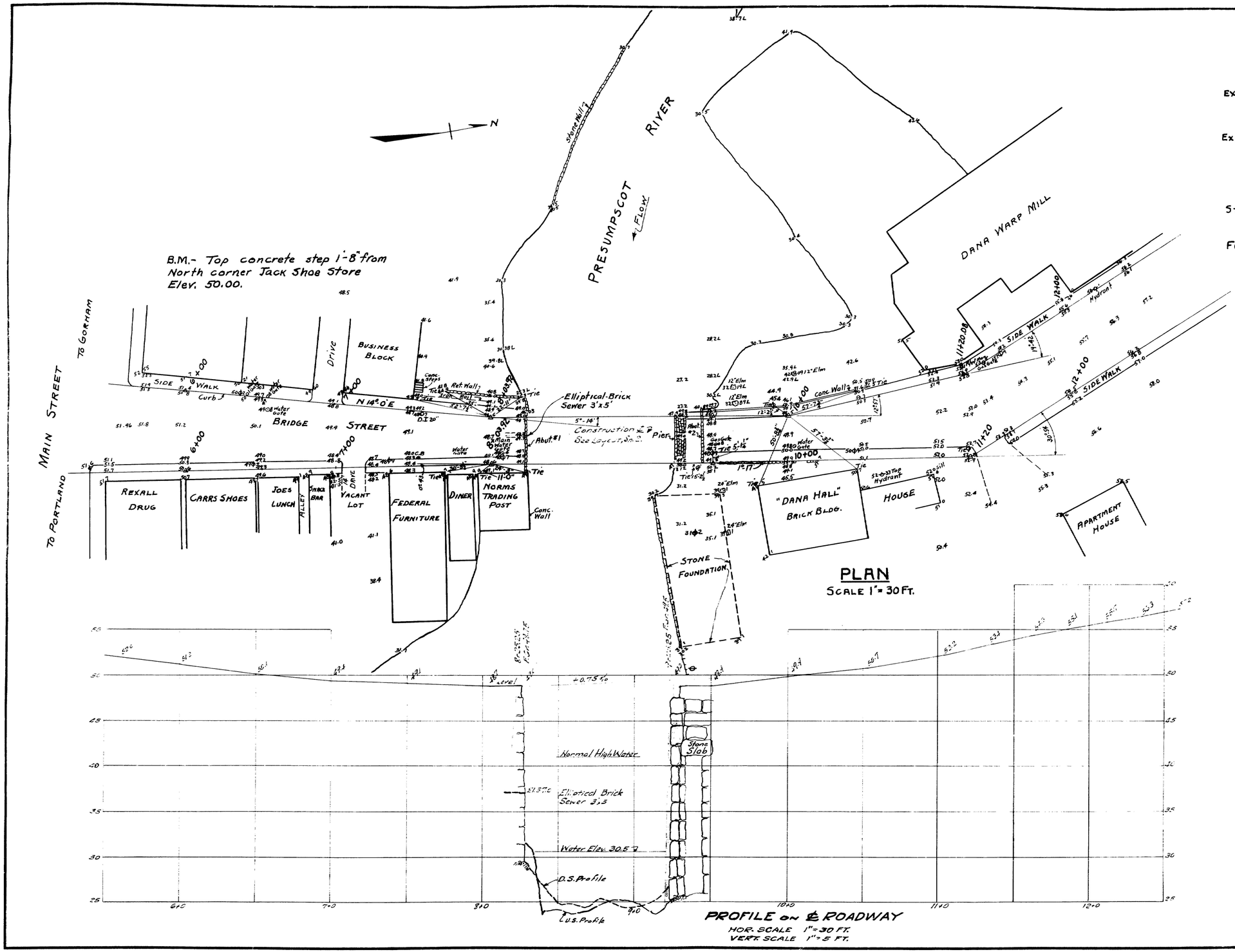
NOTES

EXISTING SUPERSTRUCTURE:- Iron Bow String Arch (Parks Patent). Fair condition. Wood floor, wood stringers, side walk on each side. All in fair condition.

EXISTING SUBSTRUCTURE:- Abutment No. 1 split granite fairly well laid. Good condition.
Pier #1 split granite, fairly well laid, good condition.
Pier #2 and Abut. #2 Stone Causeway over former penstock. Split granite roughly laid, fair condition. Heavy stone slab cover stone.

STREAM:- Extreme high water never reaches Bridge. Ordinary high water Elev. 41.0. Low water at present stage.

FOUNDATION:- Ledge under Abut. #1. Ledge near Abut. #2.



DESIGN -
TRACE - G.C.W.
CHECK - KMT

BRIDGE NO. 5661
SURVEY - BLAKE
PLOT - G.C.W.

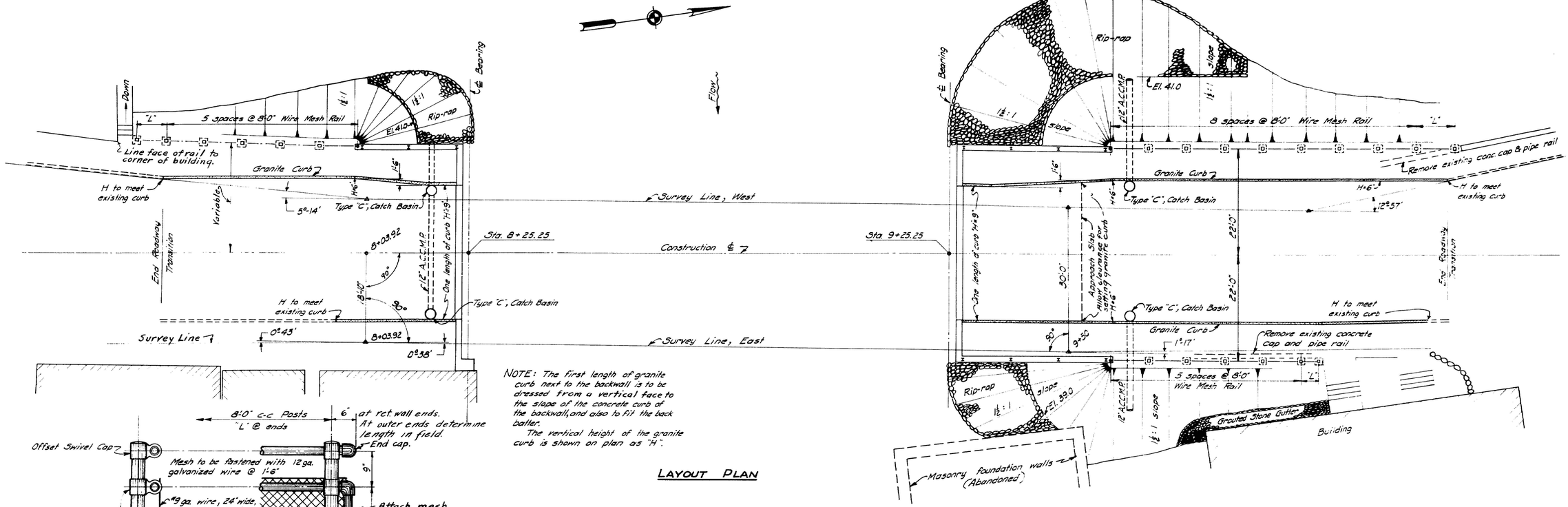
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY
SURVEY

SHEET 1 OF 7 AUGUSTA, MAINE NOV. 1955

68-184

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

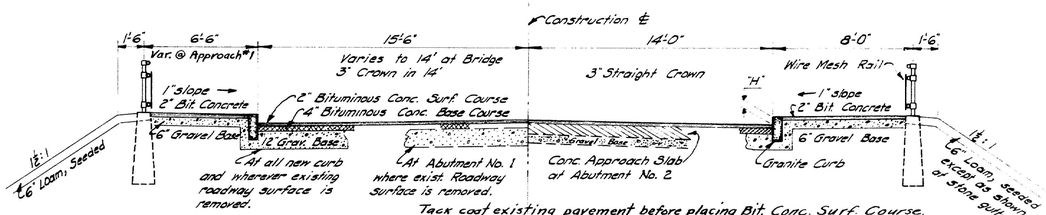


NOTE: The first length of granite curb next to the backwall is to be dressed from a vertical face to the slope of the concrete curb of the backwall, and also to fit the back batter.
The vertical height of the granite curb is shown on plan as "H".

LAYOUT PLAN

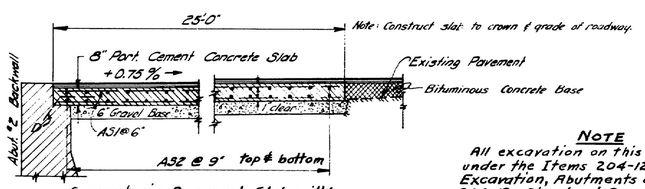
Rail Bars to be 2"ϕ Standard Galvanized Pipe. Posts to be 3"ϕ Standard Galvanized Pipe. Fittings to be malleable iron.
Rail length "L" to be determined in the field, and the entire rail is not to be ordered until these lengths are determined. At the ends of the mesh rail, as so determined, the existing pipe rail is to be cut and repaired in a manner satisfactory to the Engineer and paid for as Extra Work.
The concrete in the bases will be paid for under Item 701-33, "Concrete in Abutments and Ret. Walls." Furnishing and setting the pipe sleeves and the rail will be included in the price for Item 805-9, "Approach Rail."
Details of rail to be furnished shall be submitted for approval.

APPROACH RAIL DETAIL
(WIRE MESH RAIL)



Tack coat existing pavement before placing Bit. Conc. Surf. Course.
Place levelling course for depths up to 2" or bituminous concrete base course for depths exceeding 2" on the existing roadway surface to support the 2" bituminous concrete surface course.
At ends of transitions the depth of the surface course shall be diminished to meet existing roadway grade.
All gravel base shall receive a bituminous surface treatment before placing Bituminous Concrete Surface Course.

APPROACH DETAILS

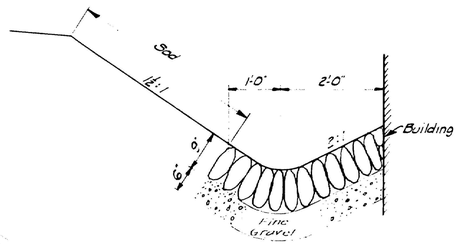


Concrete in Approach Slab will be paid for under Item 701-40.

APPROACH SLAB DETAIL

NOTE

All excavation on this Project will be paid for under the Items 204-12, Structural Earth Excavation, Abutments and Retaining Walls and 204-13, Structural Rock Excavation, Abutments and Retaining Walls.



GROUTED STONE GUTTER

DESIGN - ALLEN TRACE - CLARK CHECK -	BRIDGE NO. 5661 SURVEY - PLOT -

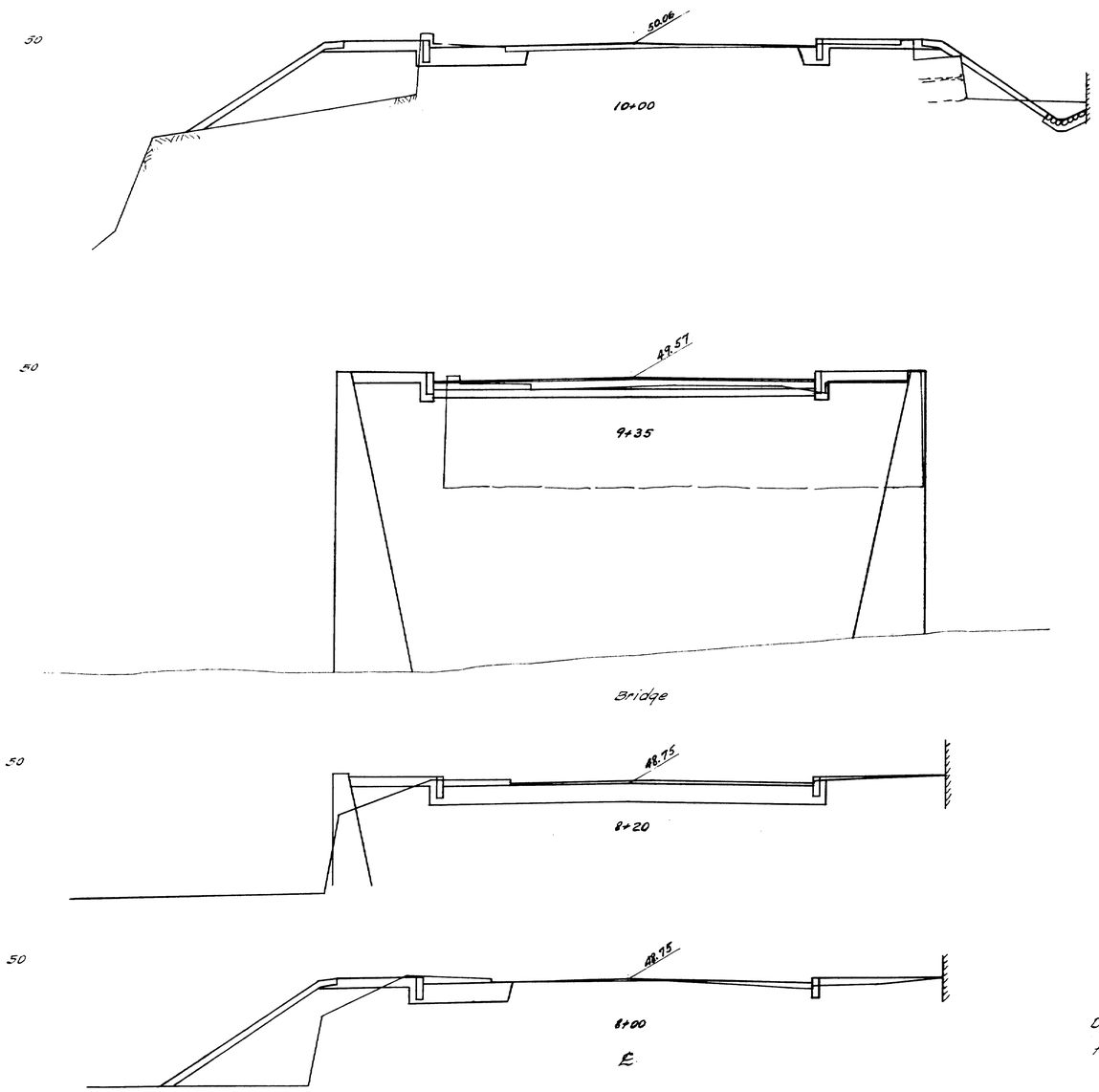
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY

LAYOUT & APPROACH DETAILS

SHEET 2 OF 7 AUGUSTA, MAINE AUG. 1956

68-185



Do not remove existing pavement except where necessary for new construction.

DESIGN - ALLEN TRACE - ALLEN CHECK -	BRIDGE - 5661

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY

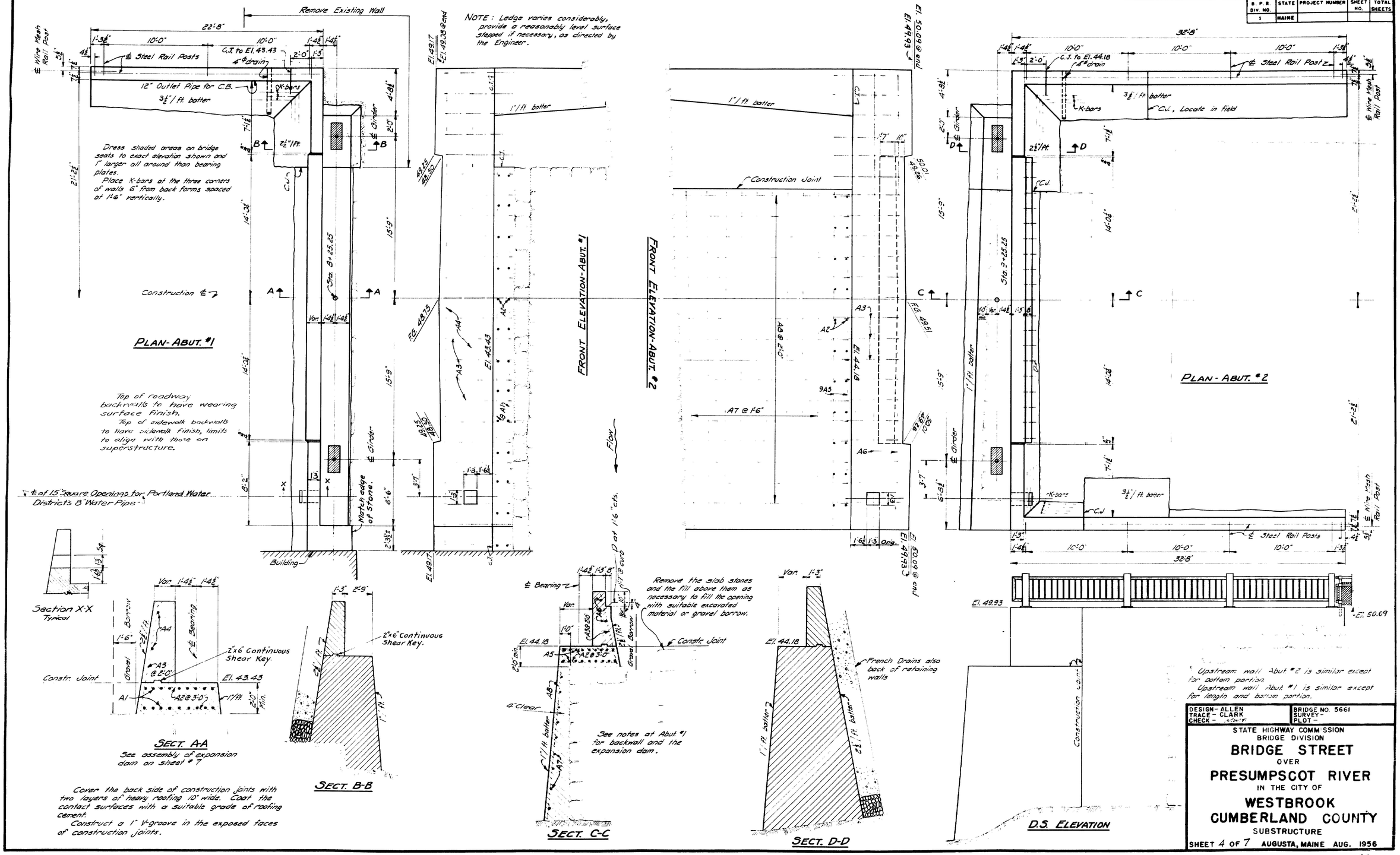
CROSS SECTIONS

SHEET 3 OF 7 AUGUSTA, MAINE AUG. 1956

68-186

0 1 2 3 4 5 INCHES

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



DESIGN - ALLEN
TRACE - CLARK
CHECK - STAFF

BRIDGE NO. 5661
SURVEY -
PLOT -

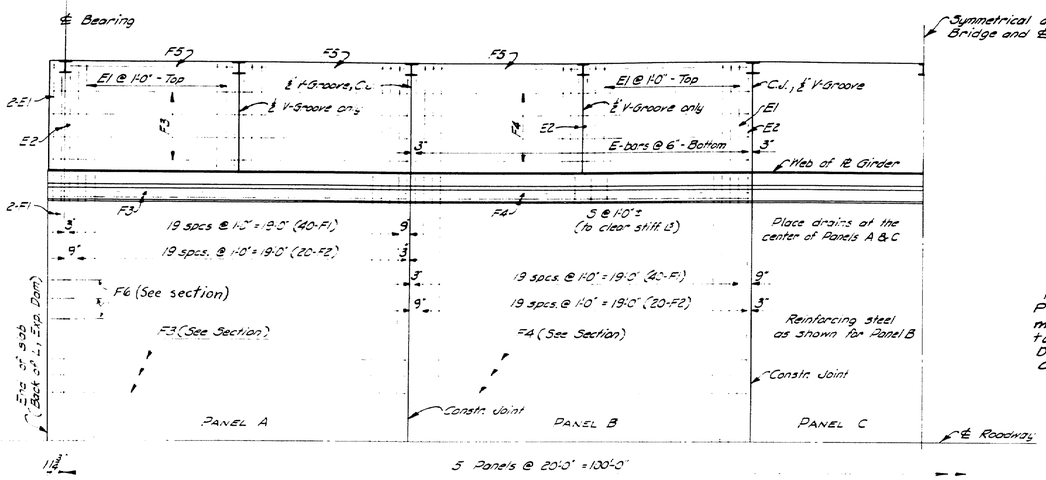
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY
SUBSTRUCTURE

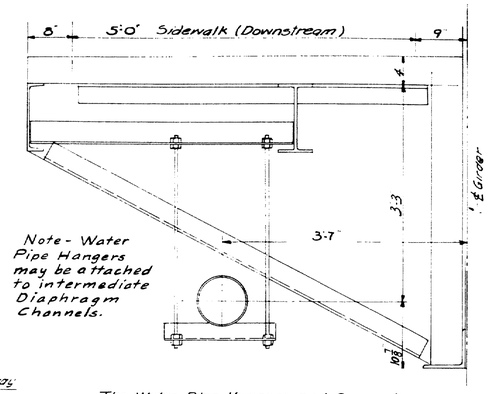
SHEET 4 OF 7 AUGUSTA, MAINE AUG. 1956

58-187

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



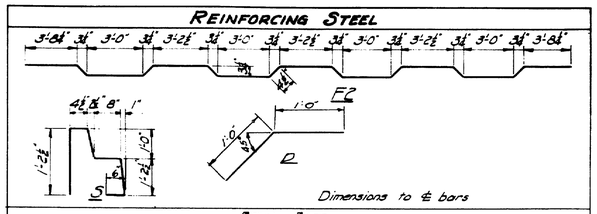
QUARTER PLAN - SUPERSTRUCTURE



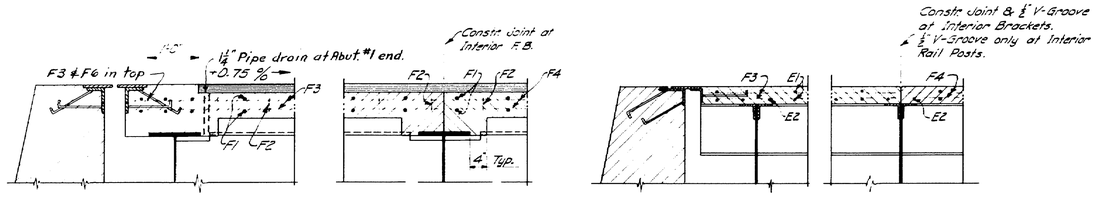
Note - Water Pipe Hangers may be attached to intermediate Diaphragm Channels.

The Water Pipe Hangers and Supports will be furnished and installed by the Portland Water District.

REINFORCING STEEL



BENT BARS									
MARK	SIZE	No.	LENGTH	REMARKS	MARK	SIZE	No.	LENGTH	REMARKS
F2	#5	100	32'-0"	Roadway Slab					
S	#4	204	5'-0"	Curbs					
D	#6	19	2'-0"	Abut. #2					
STRAIGHT BARS									
A1	#6	36	19'-0"	Abut. #1 - splice	F4	#4	165	19'-8"	Roadway & S.W. Slabs
A5	#6	36	17'-0"	" #2 - "	F5	#4	20	9'-8"	Sidewalk Slab
K	#6	30	8'-0"	" #1 & #2	E1	#4	548	6'-0"	" "
F1	#5	208	31'-2"	Roadway Slab	E2	#4	44	5'-4"	" "
A3	#5	46	6'-9"	Abut. #1 & #2	A2	#4	48	4'-8"	Abut. #1 & #2
A7	#5	18	17'-0"	" #2 - splice	A4	#4	4	24'-0"	" #1 - splice
A8	#5	16	15'-6"	" #2	A6	#4	4	22'-9"	" #2 - "
F3	#4	110	20'-8"	Roadway & S.W. Slabs					
AS1	#5	112	24'-8"	Approach Slab	W	#3	84	3'-8"	Post bases
AS2	#4	66	27'-6"	" "	F6	#5	44	2'-0"	Rdwy slab ends



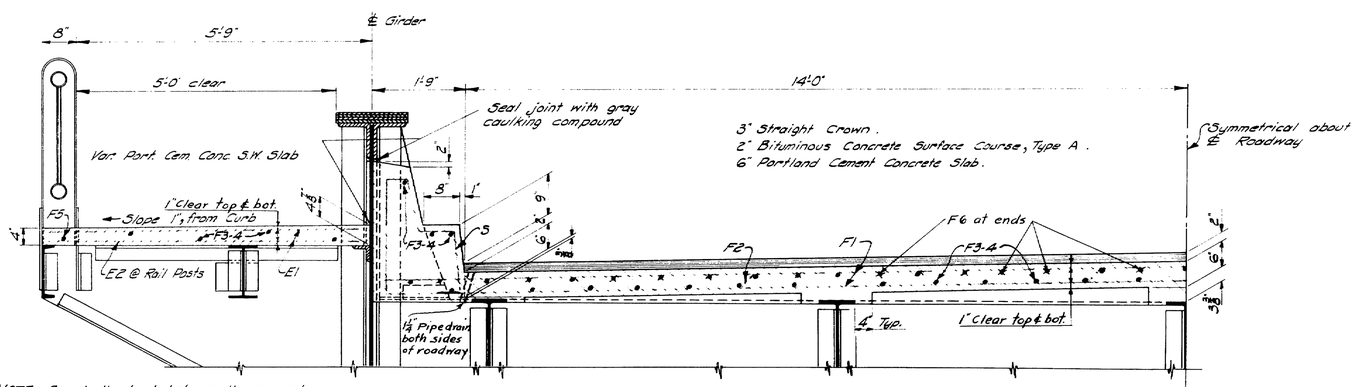
ROADWAY SLAB

SIDEWALK SLAB

LONGITUDINAL SECTIONS

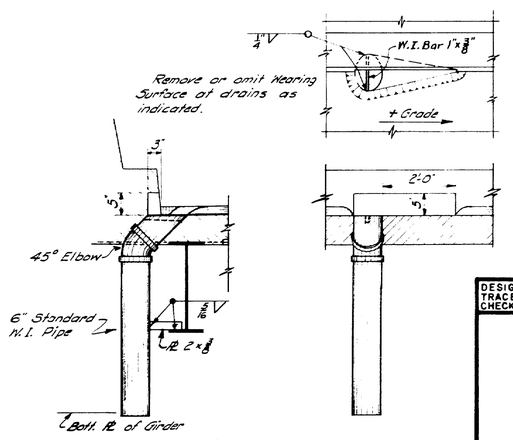
Design

Loading H 20 - S16 - 44
f_s = 18,000 psi.
f_c = 1,200 psi.
n = 10



NOTE: Break the bond between the concrete and rail post with a coat of roofing cement on the post, and a layer of light roofing around it. Cut away all exposed roofing after concrete has been placed.

HALF TRANSVERSE SECTION



DRAIN DETAIL

6 - Req'd.

Drains to be furnished with the structural steel. Payment for erection to be made under Item 702-104.

CONCRETE CLASSIFICATION

Abuts., Ret. Walls & Rail Post Bases - Class B
Roadway & Sidewalk Slabs - Class A
& Approach Slab

DESIGN - ALLEN	BRIDGE NO. 5661
TRACE - CLARK	SURVEY -
CHECK - L.H.Y.	PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

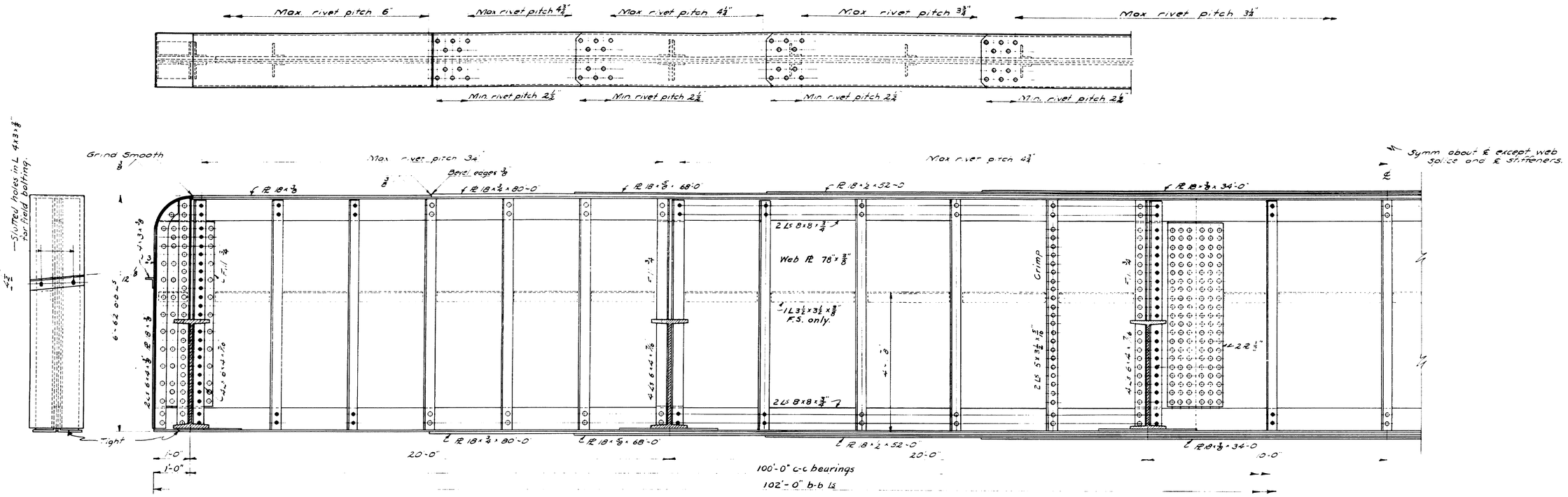
BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY

SUPERSTRUCTURE & REINFORCING STEEL

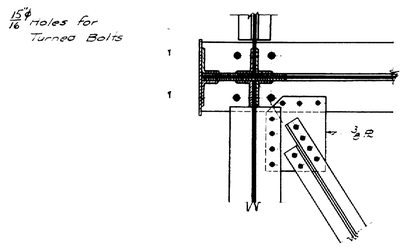
SHEET 5 OF 7 AUGUSTA, MAINE AUG. 1956

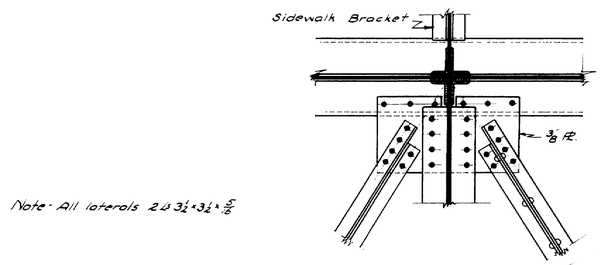
68-188

0 1 2 3 4 5 INCHES



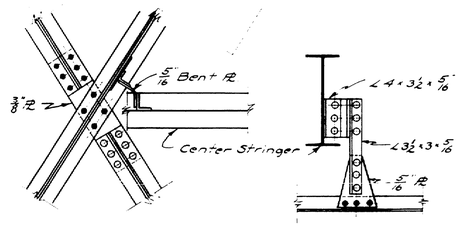
HALF GIRDER ELEVATION



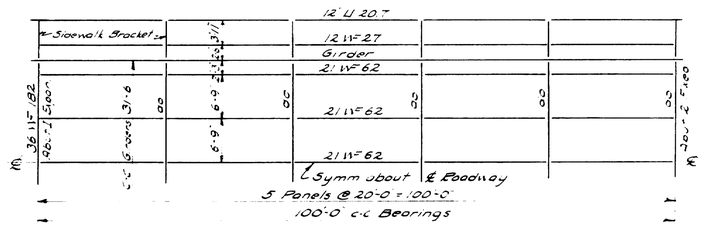


Note: All laterals 2 L 3 1/2 x 3 1/2 x 5/16

LOWER LATERAL



LOWER LATERAL SUPPORT



HALF PLAN

DESIGN - ALLEN
TRACE - BAILEY
CHECK -

BRIDGE NO. 5661

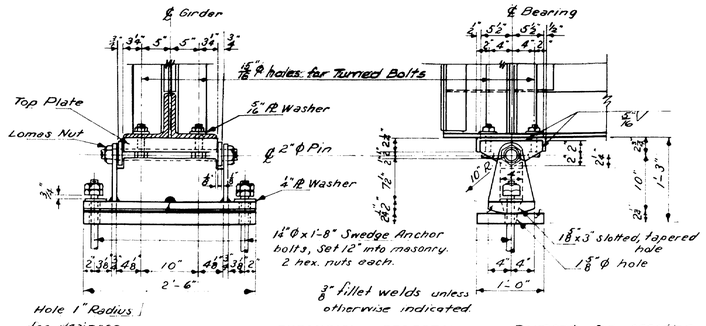
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY
STRUCTURAL STEEL

SHEET 6 OF 7 AUGUSTA, MAINE JULY 1956

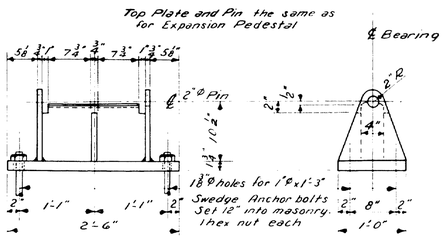
68-189

0 1 2 3 4 5 INCHES



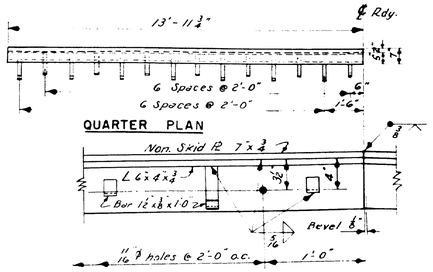
EXPANSION PEDESTAL

2 Req'd

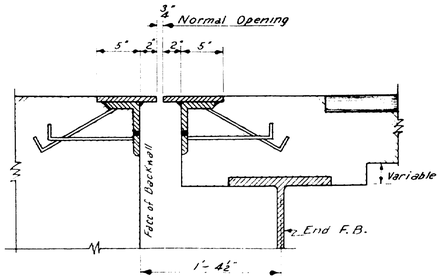


FIXED PEDESTAL

2 Req'd

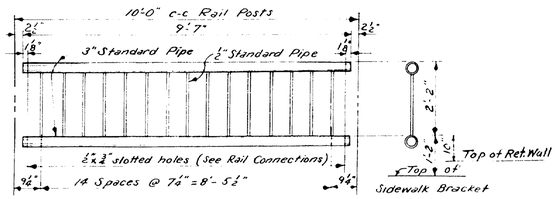


ROADWAY EXPANSION DAM DETAIL



ASSEMBLY

The same for both Abuts.



Payment for erection of rail posts, their connections to structural members, their connections to the retaining walls and their connections to the Bridge Rail will be made at the contract unit price per pound for Structural Steel, Erection, Item 702-104.

Complete Rail Details to be furnished by the supplier for approval before fabrication is started.

7/8" ϕ holes for the 1/2" pipes to be drilled in the 3" pipe so that the pipe will extend thru wall of pipe and these joints fillet welded and finished by grinding or filling to give a neat appearance.

Rail Posts, their connections to structural members and their bases for the wall Posts, shall be low-alloy steel conforming to the latest revised specification for Low-Alloy Steel of the A.S.T.M. Designation A-242.

Rail members, rails and poles, to be either welded wrought iron pipes A.S.T.M. Designation A-72 or continuously welded corrosion resisting high strength alloy steel pipes. Connections, rails to posts to be either wrought iron or low alloy steel.

Continuously welded alloy steel pipes shall conform to the following chemical analysis:

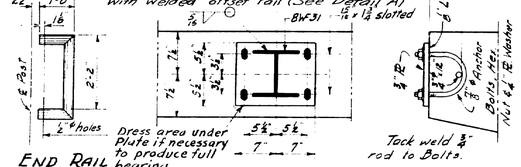
Carbon	.12% maximum
Manganese	.60% "
Phosphorus	.040% "
Sulphur	.050% "
Nickel	1.60% to 2.10%
Copper	.85% to 1.35%

The minimum physical properties for the alloy steel are:

Tensile strength, lbs. per sq.in.	50,000
Yield strength, lbs. per sq.in.	37,500
Elongation in 2 in. per cent 14"-8"	30.0

NORMAL RAIL SECTION

Regd 27 Panels as shown above and One Panel as shown above with welded offset rail (See Detail A)



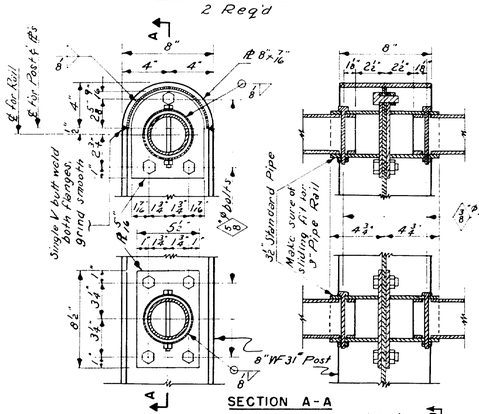
END RAIL SECTION

7-Req'd.

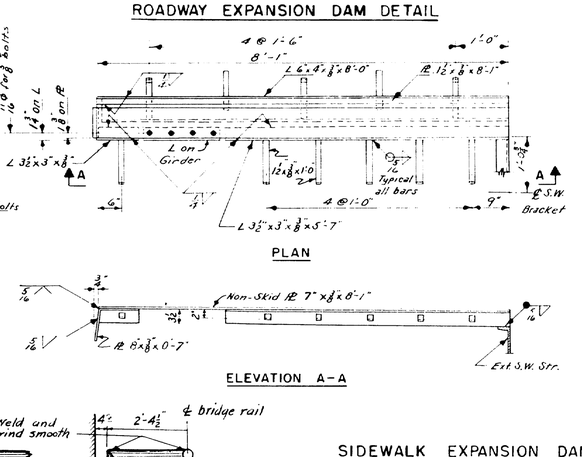
BASE PLATE FOR RET. WALL RAIL POSTS

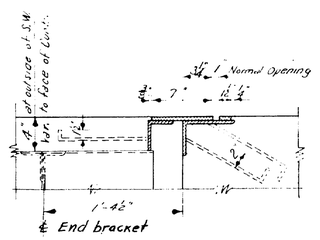
RAIL CONNECTIONS

Rail Posts Required
12 Posts at Brackets
10 Posts at Int. Diaphragms
11 Posts on Retaining Walls



SECTION A-A

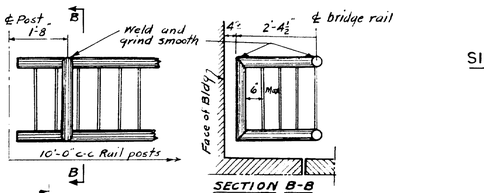


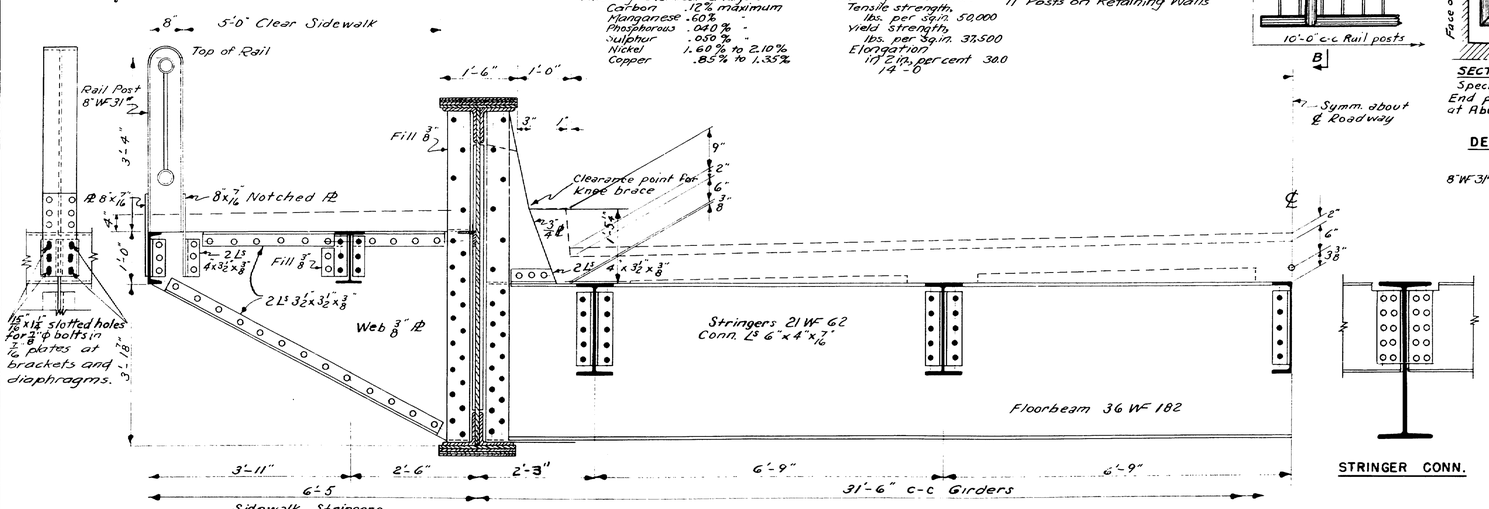


ASSEMBLY

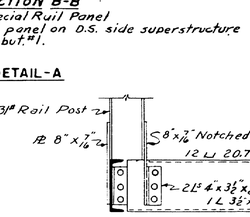
The same for both Abuts. Opp hand for opposite sides

SIDEWALK EXPANSION DAM DETAIL





HALF TRANSVERSE SECTION



DETAIL-A

STRINGER CONN.

INT. DIAPHRAGM

at Rail Post
One per panel

Rdy Stringer	Int. S.W. Stringer	Ext S.W. Stringer
M = 165.7'^k Req. S = 110.4	M = 25.5'^k Req. S = 16.8	M = 18'^k Req. S = 12.0
Use 21 WF 62 S = 126.4	Use 12 WF 27 S = 34.1	Use 12 ⊔ 20.7 S = 21.4

Floorbeam	Girder
M = 930.3'^k Req. S. 620.2	M = 6286.2'^k Req $\frac{I}{C}$ = 4190.8
Use 36 WF 182 S = 621.2	Use 4 L's 8" x 8" x 3/4" 2 PL's 18" x 3/4" 2 PL's 18" x 5/8" 2 PL's 18" x 5/8" 2 PL's 18" x 5/8" Web PL 78" x 5/8" Net $\frac{I}{C}$ = 4199.5

Camber Girders 1 1/2"
Est Wgt. of Girder 500 #/l. for design

LOADING H20-S16-44

Shop - 15/16" ϕ holes for 7/8" ϕ rivets unless noted.
Field - 15/16" ϕ holes for 7/8" ϕ High Tensile Strength bolts unless otherwise noted.

SPECIFICATIONS

Design - A.A.S.H.O. Standard Specifications for Highway Bridges, 1953.
Fabrication and Erection - State of Maine State Highway Commission Standard Specifications, Highways and Bridges, Revision of January 1956.

Drains to be furnished with the Structural Steel, see Sheet 5 for "Drain Detail".

DESIGN - ALLEN TRACE - MCDOUGAL CHECK - Trouille N.W.T.	BRIDGE NO. 5661

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

BRIDGE STREET
OVER
PRESUMPSCOT RIVER
IN THE CITY OF
WESTBROOK
CUMBERLAND COUNTY

STRUCTURAL STEEL & RAIL

SHEET 7 OF 7 AUGUSTA, MAINE JULY 1956

68-190

0 1 2 3 4 5 INCHES