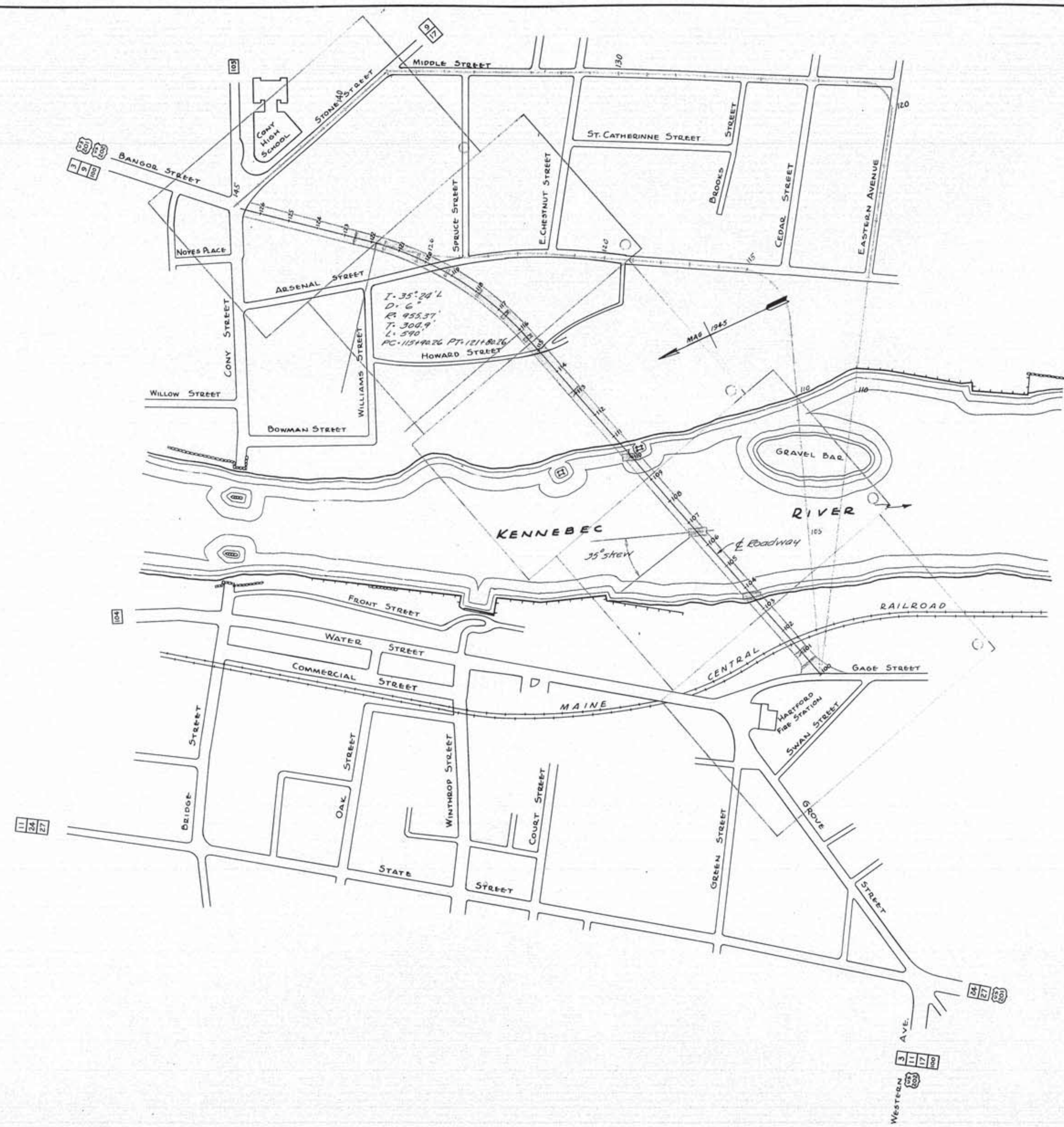


SURVEY - P. JOHNSON
PLAN - BOYD

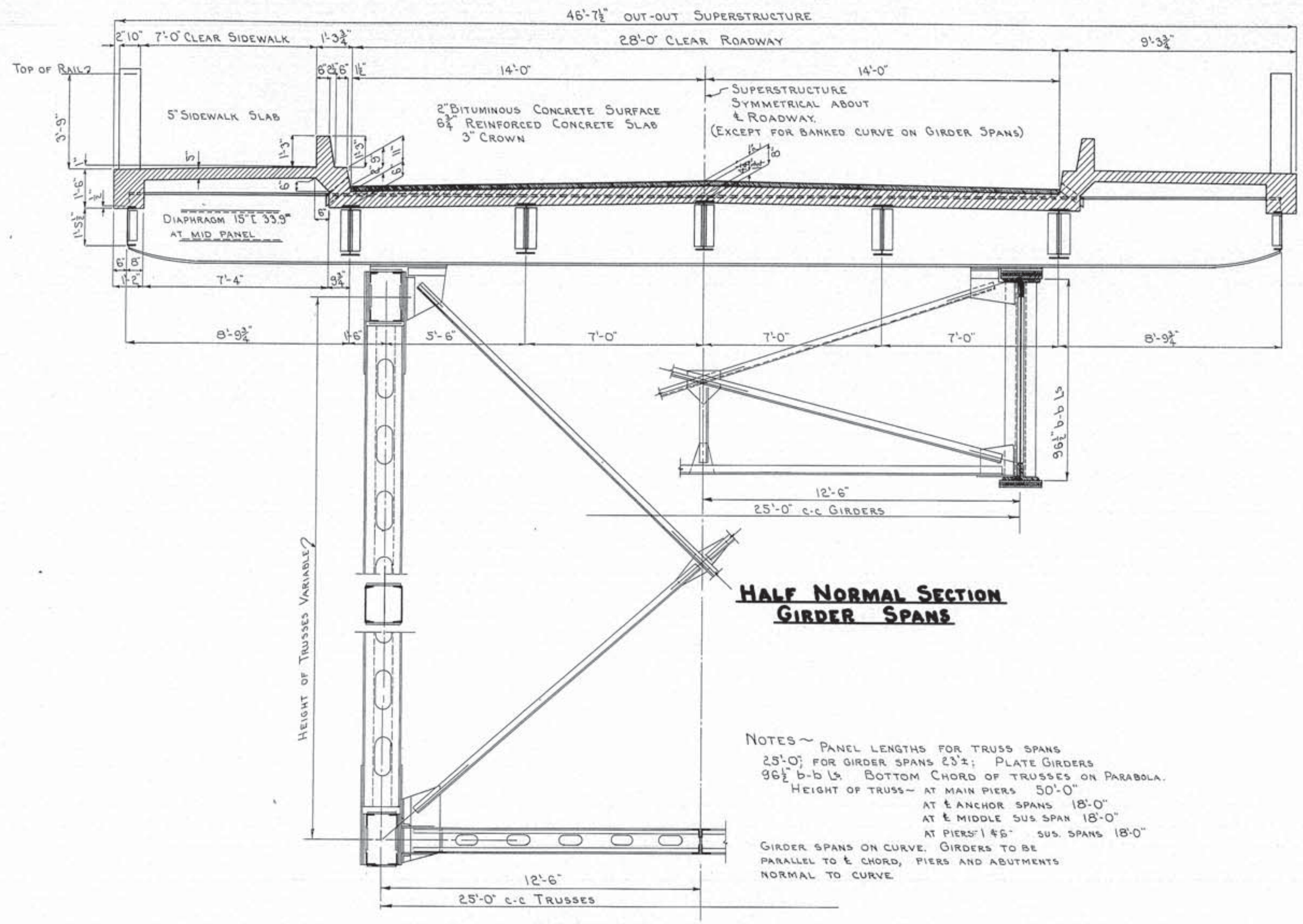
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY.
KEY PLAN

SCALE 1" = 200'

SHEET 1 OF 3 AUGUSTA MAINE DEC 1945

PRELIMINARY PLAN 51-200



HALF NORMAL SECTION
GIRDER SPANS

HALF SECTION
TRUSS SPANS

NOTES ~ Panel lengths for truss spans 25'-0"; for girder spans 23'±; Plate Girders 96½" b-b Ls. Bottom Chord of trusses on Parabola.
Height of truss ~ at main piers 50'-0"
at ℄ anchor spans 18'-0"
at ℄ middle sus. span 18'-0"
at piers 1 & 6 sus. spans 18'-0"
Girder spans on curve. Girders to be parallel to ℄ chord, piers and abutments normal to curve.

Plan: Everett
Traced: C.O.S.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

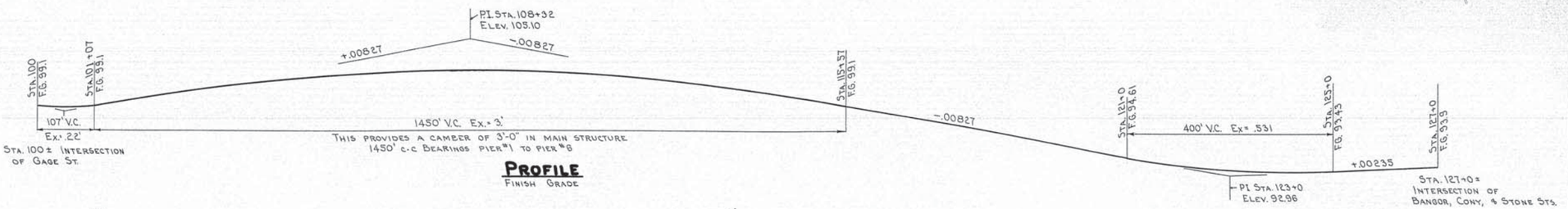
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA

KENNEBEC COUNTY

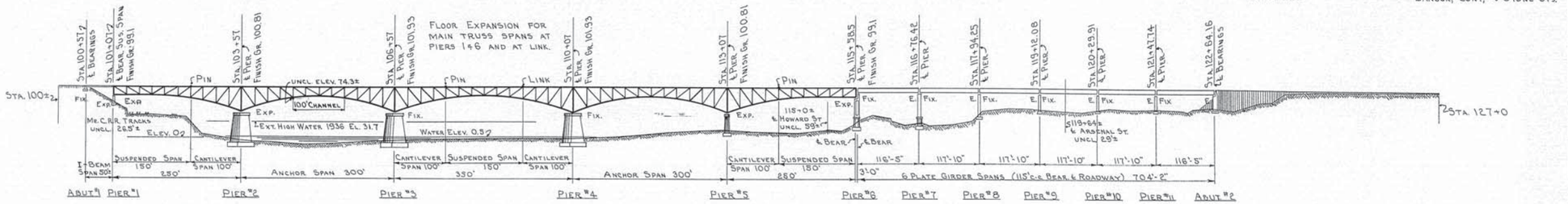
TYPICAL BRIDGE SECTIONS

SHEET 2 OF 3 AUGUSTA, ME. MAY 1946

PRELIMINARY PLAN 51-201



PROFILE
FINISH GRADE



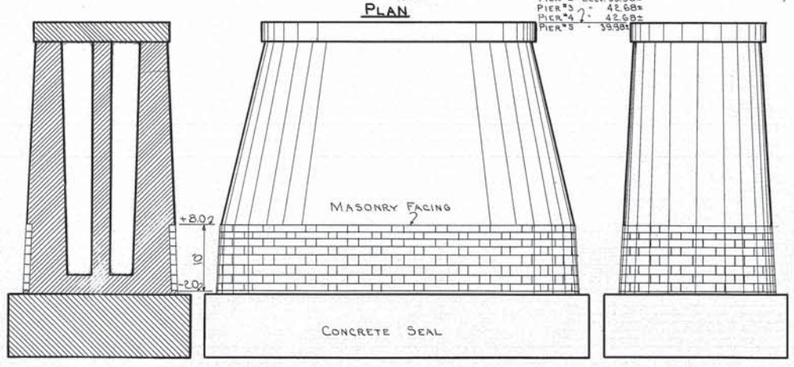
GENERAL ELEVATION
SCALE 1"=100' VER. & HOR.

FOUNDATION DATA NOT YET AVAILABLE.
SHOULD PILING PROVE NECESSARY, WF 12x12x74# BEARING PILES WILL BE USED.
MAXIMUM LOAD PER PILE 65 TONS.

NOTES—
LOADING: H20-S16-44
SPECIFICATIONS: MAINE STATE HIGHWAY COMMISSION, SPECIFICATIONS FOR STEEL HIGHWAY BRIDGES, NOVEMBER 1945. ALL STEEL TO BE STRUCTURAL CARBON. RIVETS ⅞"ϕ

CONCRETE: fs = 18000 #/□"
fc = 1000 #/□"
n = 10

PLAN



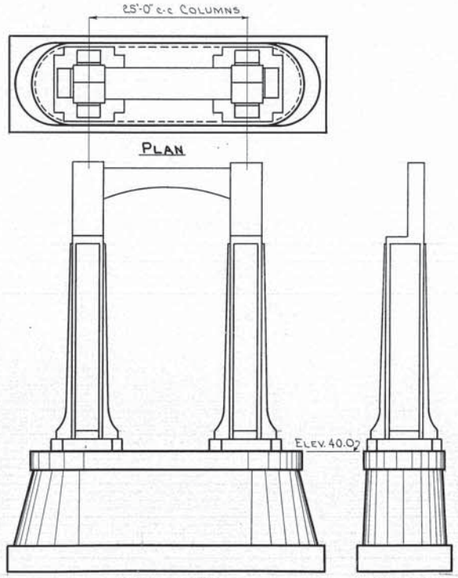
SECT. A-A

SIDE ELEV.

END ELEV.

TYPICAL DETAIL PIERS 2-3-4
SKEWED RIVER PIERS
SCALE 1"=10'

NOTE: PIER #5 WILL BE SIMILAR TO PIERS 2-3-4 EXCEPT IT WILL BE MASS CONCRETE AND NOT SKEWED.

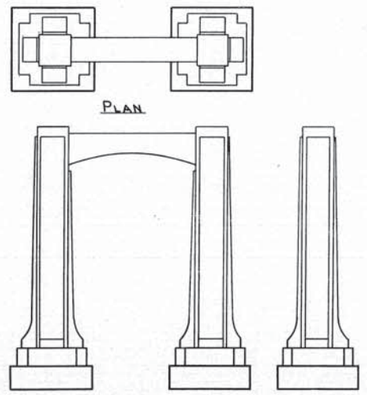


PLAN

SIDE ELEV.

END ELEV.

TYPICAL DETAIL PIER 6
SCALE 1"=10'



PLAN

SIDE ELEV.

END ELEV.

TYPICAL DETAIL PIERS 8-9-10-11
SCALE 1"=10'

PLAN: Traced CAB

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

BRIDGE ELEVATION ~ TYPICAL PIER DETAILS

SHEET 3 OF 3 AUGUSTA, ME. MAY 1946

PRELIMINARY PLAN 51-202

GROVE STREET

WEST CRESCENT STREET

EAST CRESCENT STREET

Match with borderline

P.T. Bridge Tangent 7

Garden

Garden

Garden

Match with borderline

Scale 1"=30'

Plan L.J.B.

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

over the
KENNEBEC RIVER
in the city of
AUGUSTA
KENNEBEC COUNTY

Augusta, Me. Jan. 1947

51-203

0 1 2 3 4 5 INCHES

STATE OF MAINE
STATE HIGHWAY COMMISSION

PLAN AND PROFILE

AUGUSTA BRIDGE

OVER THE

KENNEBEC RIVER

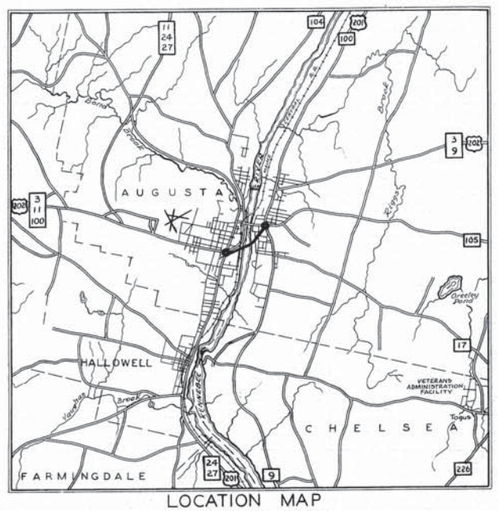
IN THE CITY OF

AUGUSTA

KENNEBEC COUNTY

FEDERAL AID PROJECT
NO. FI, UI-389 (2)

TOTAL LENGTH 0.776 MILE



LOCATION MAP
TRACED FROM U.S.G.S.
SCALE 1/62,500

P.R.A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI,UI-389(2)	1	19

GENERAL SPECIFICATION

Payment for any necessary unwatering of foundation pits shall be included in the contract unit price for excavation.

CONCRETE CLASSIFICATION

Class A- Bridge floor including sidewalk slabs and allcurbs. Approach roadway base slabs, and approach sidewalk slabs and curbs.

Class B- Retaining Wall.

CONTRACT 5

BRIDGE FLOOR

INDEX OF SHEETS

NUMBER	TITLE
1	TITLE SHEET
2	GENERAL LAYOUT
3	NO. RETAINING WALL DETAILS - GAGE ST.
4	APPROACH SLAB - GAGE ST.
5	NO. SIDEWALK & CURB - GAGE ST.
6	SO. SIDEWALK & CURB - GAGE ST.
7	APPROACH SLAB - ABUT. NO. 2
8	EAST APPROACH SLABS
9	GENERAL FLOOR PLAN
10	FLOOR DETAILS - SPAN NO. 1
11	REINFORCING STEEL - SPAN NO. 1
12	FLOOR DETAILS - PANELS A & B
13	FLOOR DETAILS - PANELS C,D,E,F,G,H.
14	FLOOR DETAILS - PANEL NO. 1
15	FLOOR DETAILS - SPAN NO. 7 - PANELS J,K,L
16	FLOOR DETAILS - PANEL M
17	REINF. STEEL - SPANS 2 TO 11, PANELS A TO M
18	LIGHTING DETAILS
19	C.M.P. CO. MANHOLE DETAILS

APPROVED:
MAINE STATE HIGHWAY COMMISSION

Lloyd B. Morton CHAIRMAN

C. J. Rushell

Harley D. Welch

Percival D. Barrows CHIEF ENGINEER

RECOMMENDED FOR APPROVAL DATE

[redacted]

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE

[redacted]

DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

P.R.A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI,UI-389(2)	1	45

GENERAL SPECIFICATION

Payment for any necessary unwatering of foundation pits shall be included in the contract unit price for excavation except piers 2-3-4 where cofferdams are covered under items 4A, 4B, 4C.

CONCRETE CLASSIFICATION

Abutment 1 Class B
Pier 1 Class B below and class A above Elev. 73.52
Piers 2,3,4 Seal concrete class A, all other class B
Pier 5 Class B
Pier 6 Class A above and class B below Elev. 40
Piers 7,8,9,10 Class A
Abutment 2 Class B

CONTRACTS 1 & 2

SUBSTRUCTURE AND
STEEL SUPERSTRUCTURE

INDEX OF SHEETS

NUMBER	TITLE
1	TITLE SHEET
2-6	SURVEY PLAN
7-9	PROFILE
10	GENERAL PLAN AND ELEVATION
11	LAYOUT - SUBSTRUCTURE - EAST APPROACH
12	ABUTMENT NO. 1
13	PIER NO. 1
14	PIER NO. 2
15	PIER NO. 3
16	PIER NO. 4
17	PIER NO. 5
18	PIER NO. 6
19	PIER NO. 7
20	PIER NO. 8
21	PIER NO. 9
22	PIER NO. 10
23	ABUTMENT NO. 2
24	ARSENAL ST. RETAINING WALL
25	REINFORCING STEEL - PIERS 1 TO 6
26	REINF. STEEL - ABUTS. & PIERS 7 TO 10
27	SUPERSTRUCTURE AND RAIL DETAILS
28	STRESSES - TRUSS SPANS
29	MAKE-UP OF MEMBERS
30	STRUCTURAL STEEL DETAILS AT U4L4
31	DETAIL AT FIXED PIN
32	DETAIL - PIN AND LINK
33	STEEL & BEARING DETAILS - PIERS 1 & 6
34	EXP. & FIXED BEARINGS - PIERS 2 TO 5
35	FLOOR EXPANSION DETAILS
36-37	STEEL DETAILS - SPAN NO. 1
38	STRESSES & LAYOUT - PLATE GIRDER SPANS
39-40	PLATE GIRDER DETAILS
41	GAGE STREET RAIL
42-45	CROSS SECTIONS - EAST APPROACH

APPROVED:
MAINE STATE HIGHWAY COMMISSION

[redacted] CHAIRMAN

Lloyd B. Morton

[redacted]

Percival D. Barrows CHIEF ENGINEER

RECOMMENDED FOR APPROVAL DATE

[redacted]

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

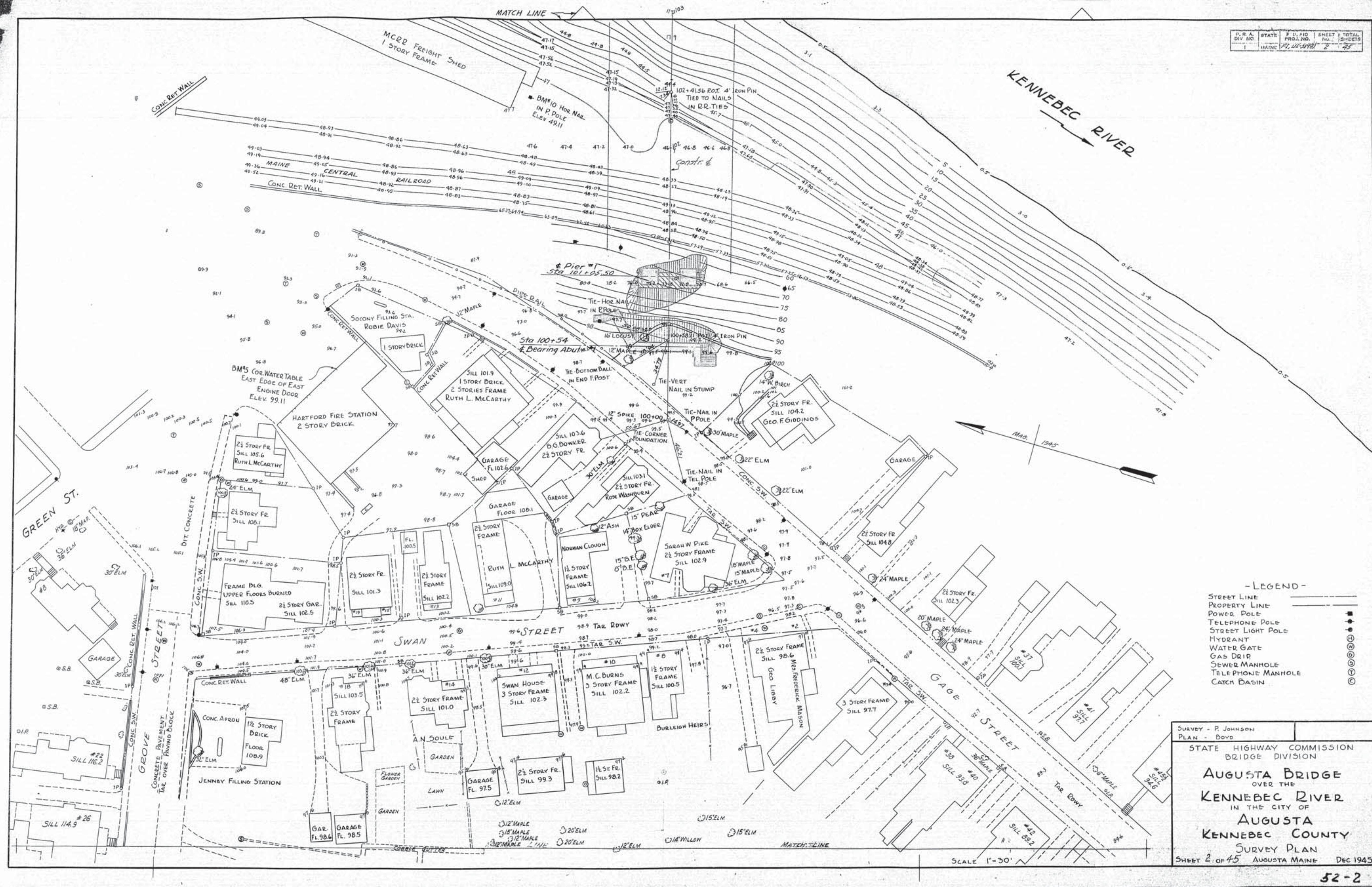
APPROVED DATE

[redacted]

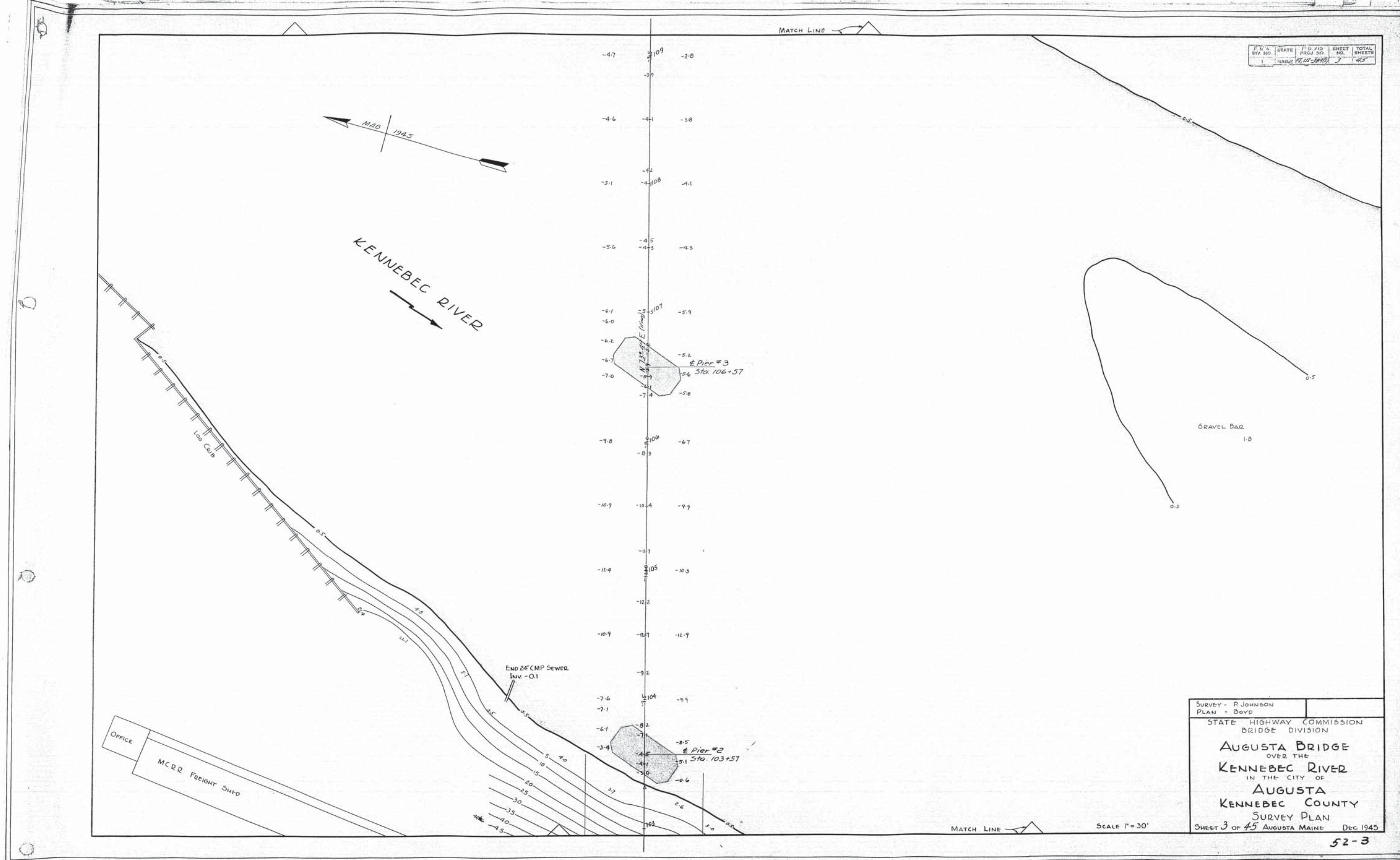
DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

52-1

0 1 2 3 4 5 INCHES

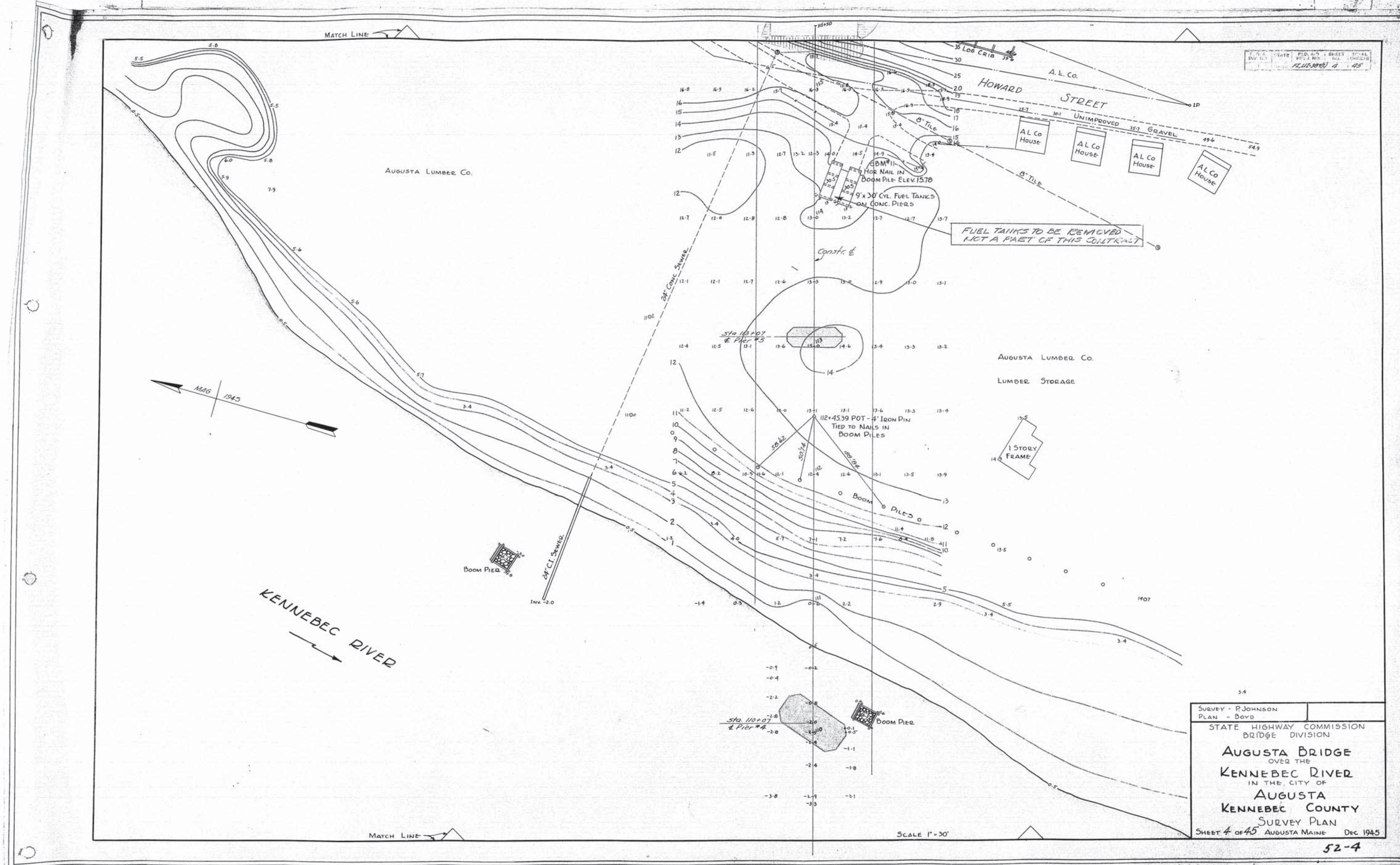


0 1 2 3 4 5 INCHES

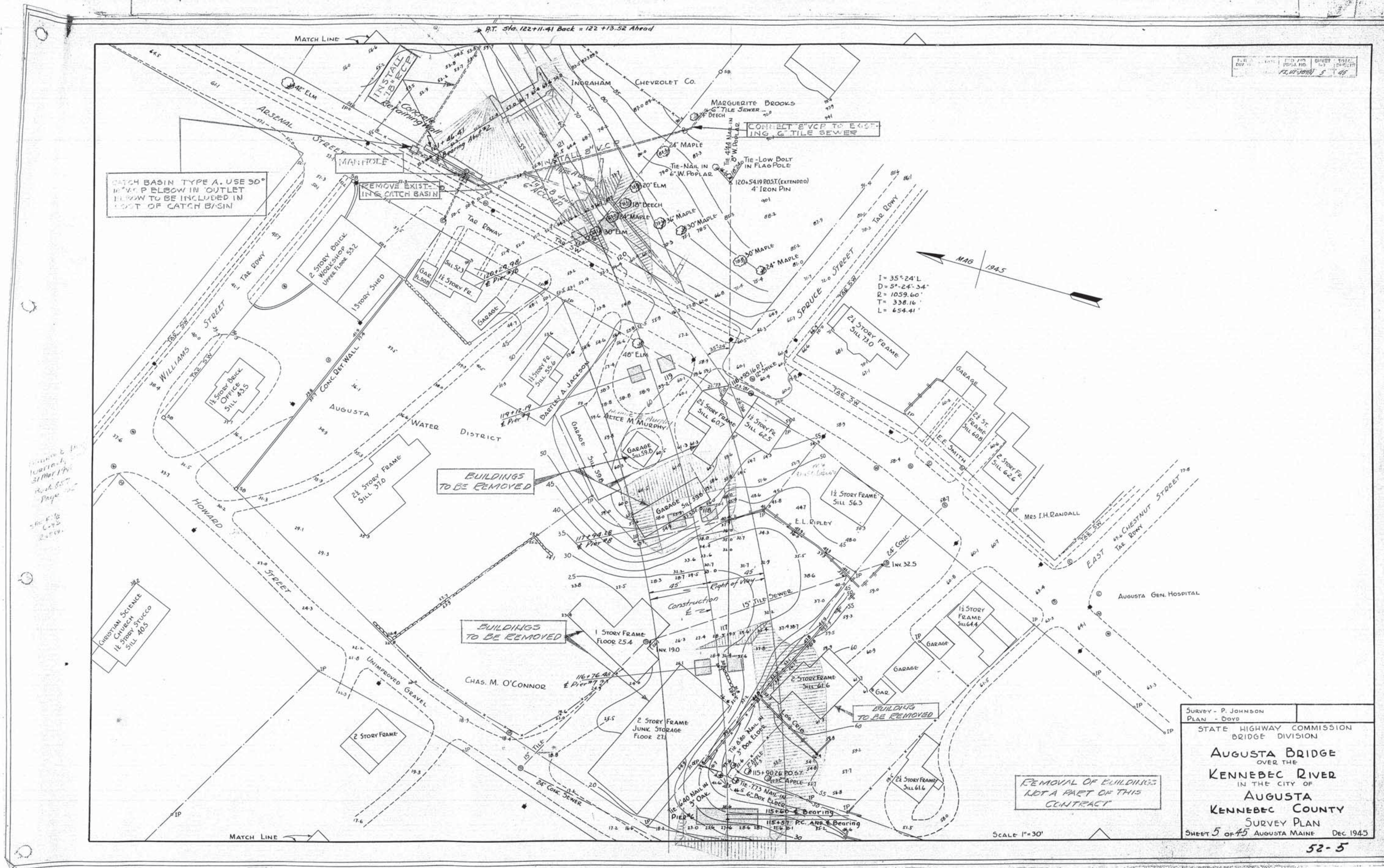


F. R. A. DIV. NO.	STATE	F. D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI, UE-309(2)	3	45

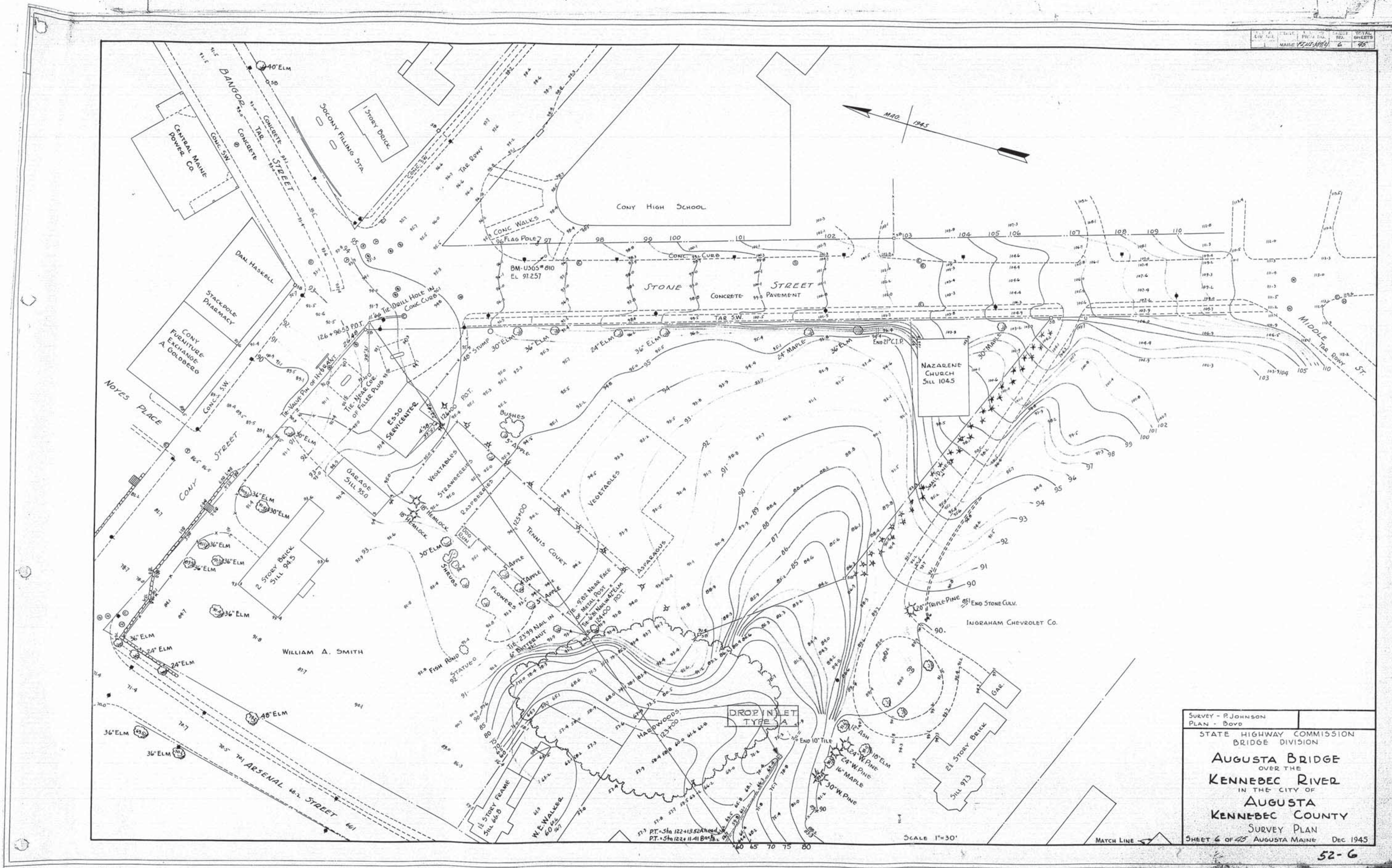
MATCH LINE
MAG 1945
KENNEBEC RIVER
LOG CRIB
℄ Pier #3
Sta. 106+57
℄ Pier #2
Sta. 103+57
End 24" CMP Sewer
Inv. -0.1
OFFICE
MCRR FREIGHT SHED
GRAVEL BAR
1.8
SCALE 1" = 30'
MATCH LINE
SURVEY - P. JOHNSON
PLAN - BOYD
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
SURVEY PLAN
SHEET 3 OF 45 AUGUSTA MAINE DEC 1945
52-3
0 1 2 3 4 5 INCHES



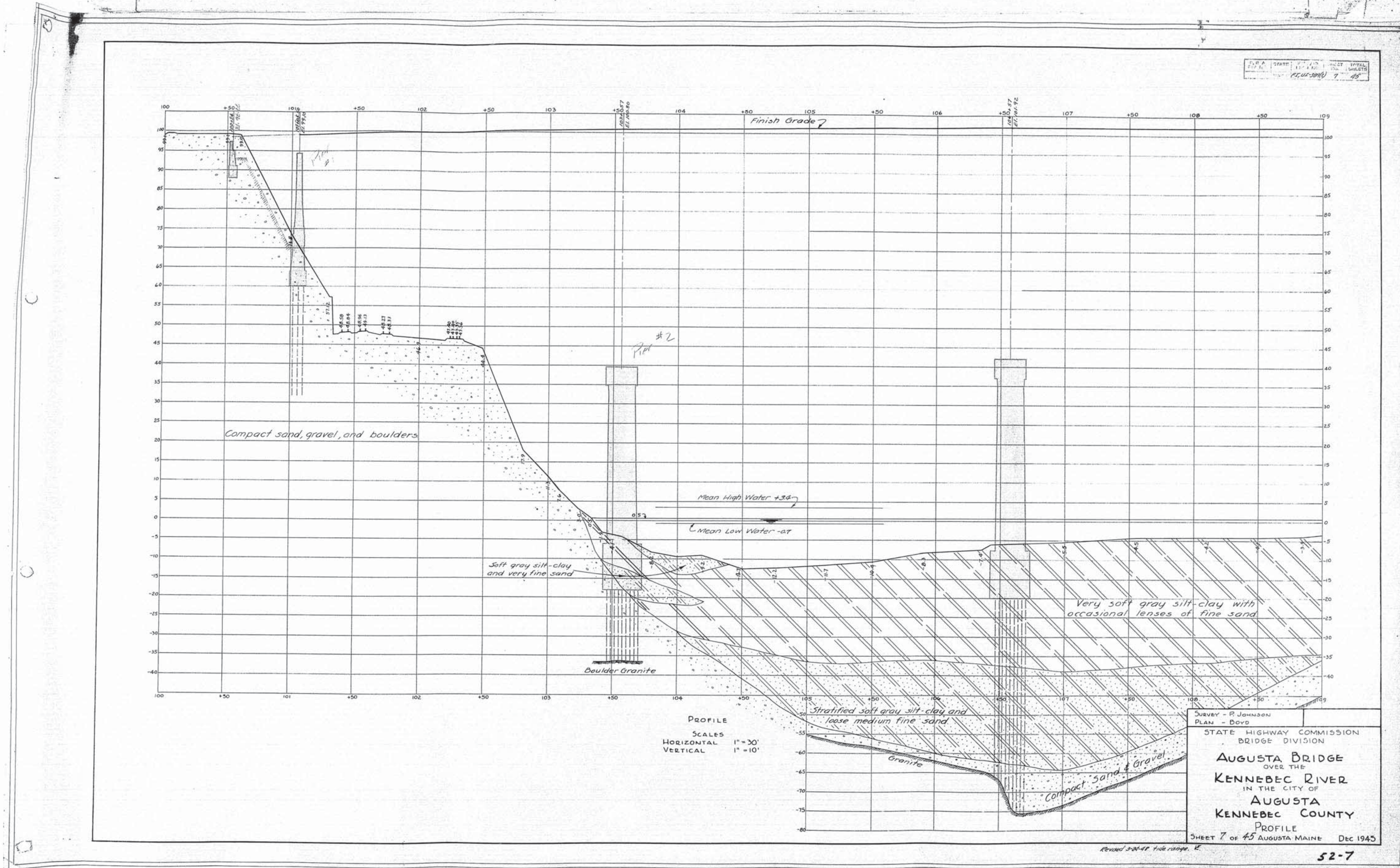
MATCH LINE
LOG CRIB
A. L. CO.
HOWARD STREET
UNIMPROVED GRAVEL
8" TILE
AL Co House
AUGUSTA LUMBER CO.
SBM #11 - HOR NAIL IN BOOM PILE ELEV. 13.78
9'x30' CYL. FUEL TANKS ON CONC. PIERS
FUEL TANKS TO BE REMOVED NOT A PART OF THIS CONTRACT
Constr. ℄
24" CONC. SEWER
Sta. 113+07 ℄ Pier #5
AUGUSTA LUMBER CO.
LUMBER STORAGE
MAG 1945
112+45.39 POT - 4' IRON PIN TIED TO NAILS IN BOOM PILES
1 STORY FRAME
BOOM PILES
BOOM PIER
24" C.I. SEWER
INV. -2.0
KENNEBEC RIVER
Sta. 110+07 ℄ Pier #4
BOOM PIER
SCALE 1" = 30'
SURVEY - P. JOHNSON
PLAN - BOYD
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
SURVEY PLAN
SHEET 4 OF 45 AUGUSTA MAINE DEC 1945
52-4

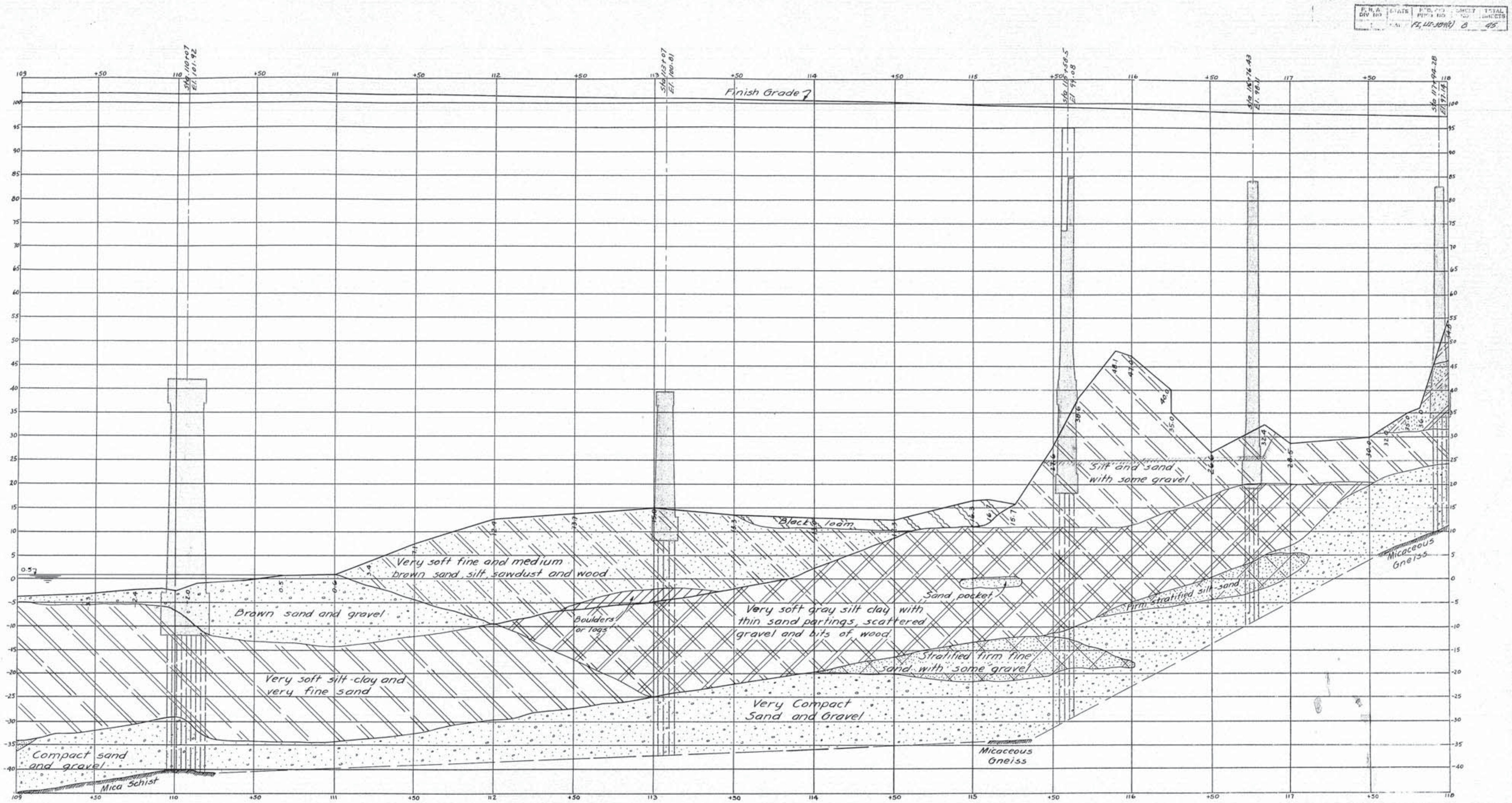


0 1 2 3 4 5 INCHES



0 1 2 3 4 5 INCHES


Finish Grade
Pier #2
Compact sand, gravel, and boulders
Mean High Water +3.4
Mean Low Water -0.7
Soft gray silt-clay and very fine sand
Boulder Granite
Very soft gray silt-clay with occasional lenses of fine sand
Stratified soft gray silt-clay and loose medium fine sand
Granite
Compact Sand & Gravel
Profile
Scales
Horizontal 1" = 30'
Vertical 1" = 10'
Survey - P. Johnson
Plan - Boyd
State Highway Commission
Bridge Division
Augusta Bridge
over the
Kennebec River
in the city of
Augusta
Kennebec County
Profile
Sheet 7 of 45 Augusta Maine Dec 1945
52-7



PROFILE

SCALES
HORIZONTAL 1" = 30'
VERTICAL 1" = 10'

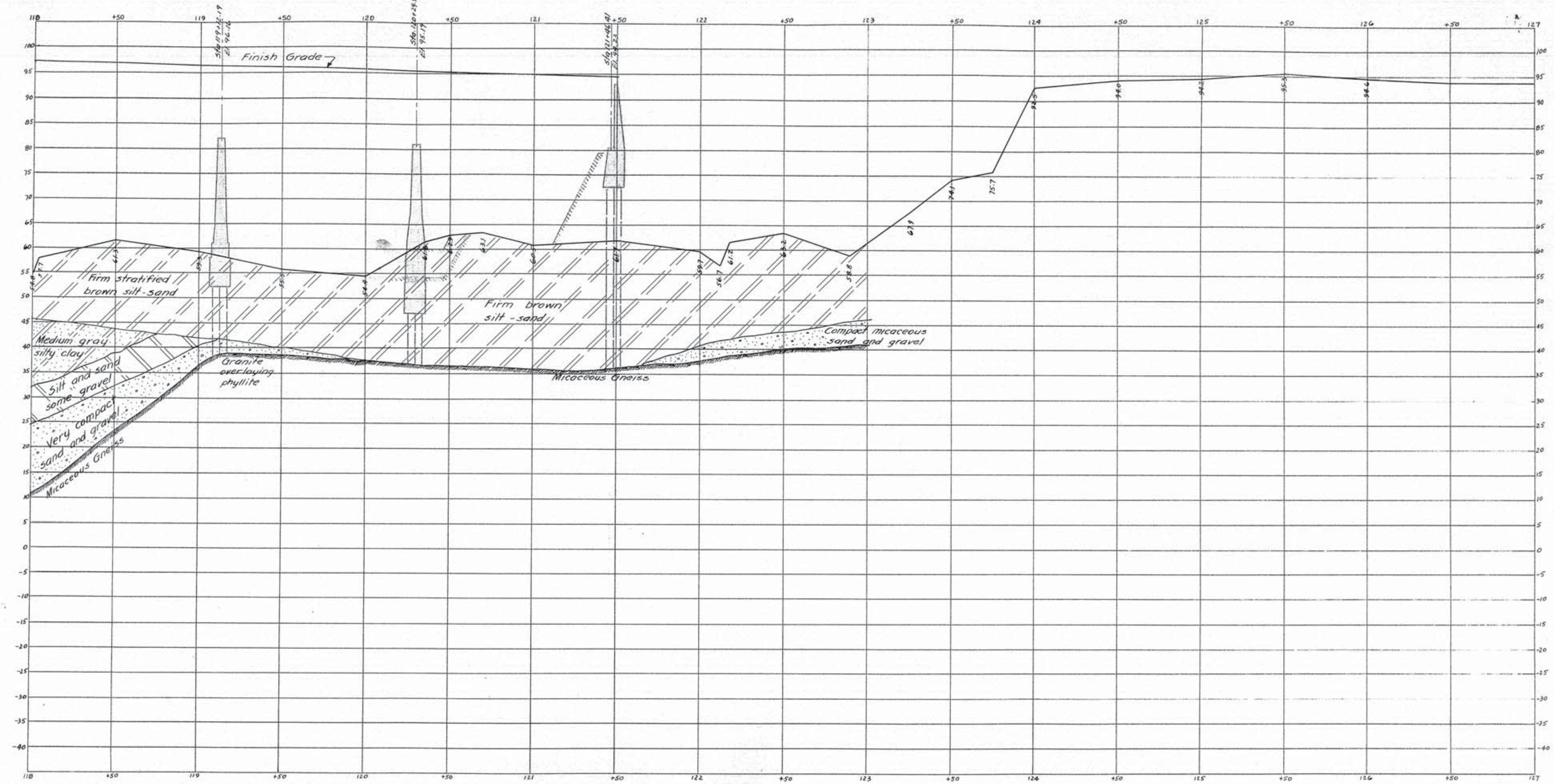
SURVEY - P. JOHNSON
PLAN - BOYD

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PROFILE

SHEET 8 OF 45 AUGUSTA MAINE DEC 1945

52-8



PROFILE

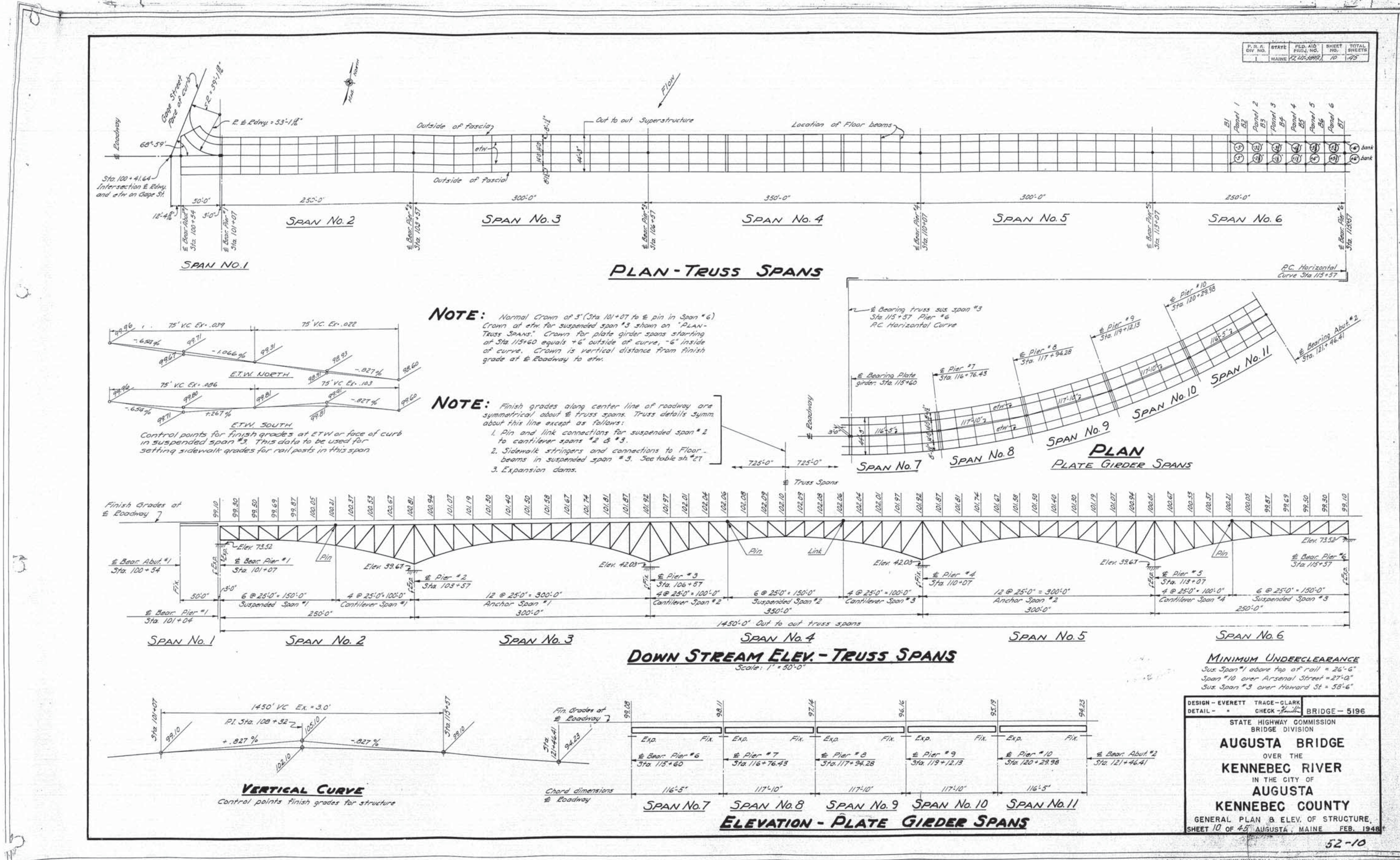
SCALES
HORIZONTAL 1" = 30'
VERTICAL 1" = 10'

SURVEY - P. JOHNSON
PLAN - BOYD

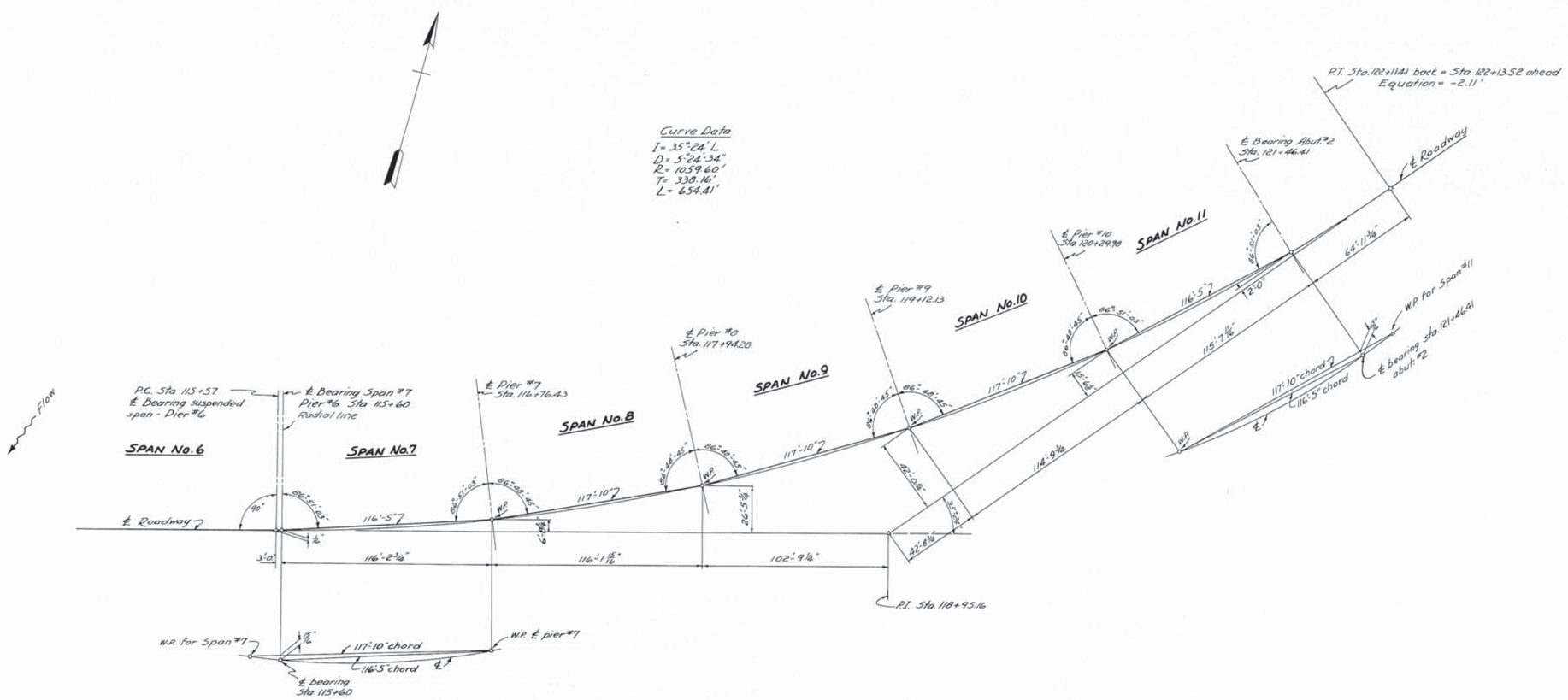
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PROFILE
SHEET 9 OF 45 AUGUSTA MAINE DEC 1945

52-9


PLAN - TRUSS SPANS
SPAN No. 1
SPAN No. 2
SPAN No. 3
SPAN No. 4
SPAN No. 5
SPAN No. 6
NOTE: Normal Crown of 3" (Sta. 101+07 to ℄ pin in Span #6) Crown at etw. for suspended span #3 shown on "PLAN-TRUSS SPANS." Crown for plate girder spans starting at Sta. 115+60 equals +6" outside of curve, -6" inside of curve. Crown is vertical distance from finish grade at ℄ Roadway to etw.
NOTE: Finish grades along center line of roadway are symmetrical about ℄ truss spans. Truss details symm. about this line except as follows:
1. Pin and link connections for suspended span #2 to cantilever spans #2 & #3.
2. Sidewalk stringers and connections to Floor beams in suspended span #3. See table sh. #27
3. Expansion dams.
E.T.W. NORTH
E.T.W. SOUTH
Control points for finish grades at E.T.W. or face of curb in suspended span #3. This data to be used for setting sidewalk grades for rail posts in this span.
PLAN
PLATE GIRDER SPANS
SPAN No. 7
SPAN No. 8
SPAN No. 9
SPAN No. 10
SPAN No. 11
DOWN STREAM ELEV. - TRUSS SPANS
Scale: 1" = 50'-0"
1450'-0" Out to out truss spans
MINIMUM UNDERCLEARANCE
Sus. Span #1 above top of rail = 26'-6"
Span #10 over Arsenal Street = 27'-0"
Sus. Span #3 over Howard St = 58'-6"
VERTICAL CURVE
Control points finish grades for structure
1450' VC Ex. = 3.0'
ELEVATION - PLATE GIRDER SPANS
DESIGN - EVERETT TRACE - CLARK
DETAIL - " CHECK - Hamilton
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
GENERAL PLAN & ELEV. OF STRUCTURE
SHEET 10 OF 45 AUGUSTA, MAINE FEB. 1948
52-10

P. R. A. DIV NO.	STATE	F.A.P. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F(LU-3991(2)	11	45



SUBSTRUCTURE LAYOUT
SPANS 7 TO 11
EAST APPROACH

DESIGN - EVERETT TRACE - BOYD
DETAIL - " CHECK - [illegible]

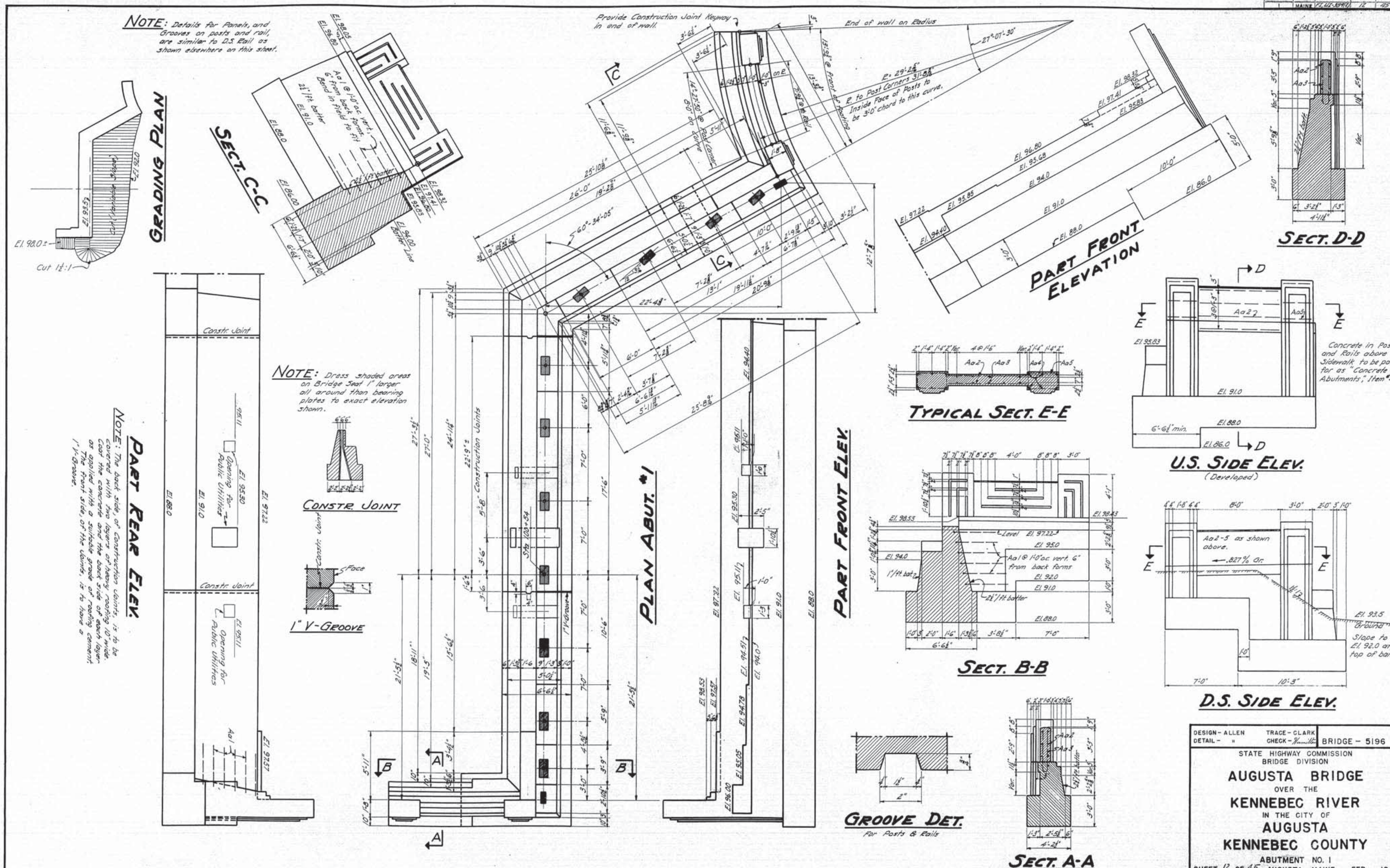
BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

LAYOUT SUBSTRUCTURE - EAST APPROACH
SHEET 11 OF 45 AUGUSTA, MAINE FEB. 1948

52-11



DESIGN - ALLEN DETAIL - "	TRACE - CLARK CHECK - Hamilton
BRIDGE - 5196	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

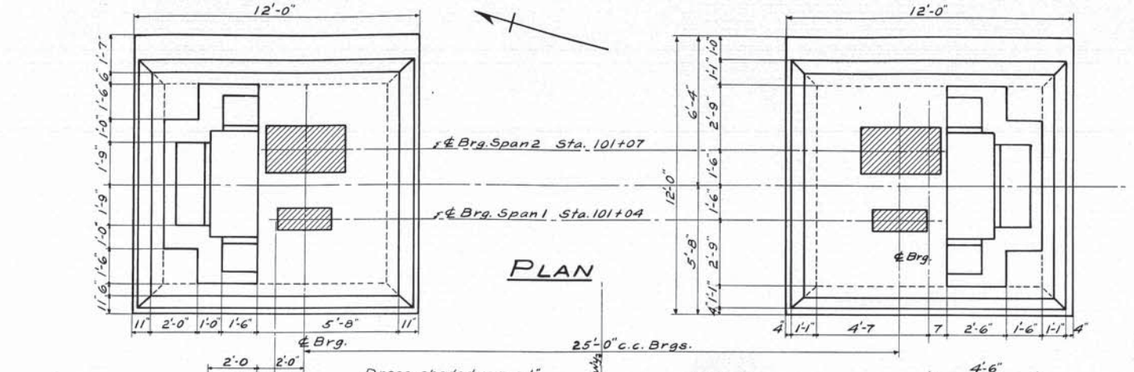
ABUTMENT NO. 1
SHEET 12 OF 45 AUGUSTA, MAINE FEB. 1948

Revised 8-19-48 opening for P.U. down stream side
" 9-30-48 " " " up " "

52-12

0 1 2 3 4 5 INCHES

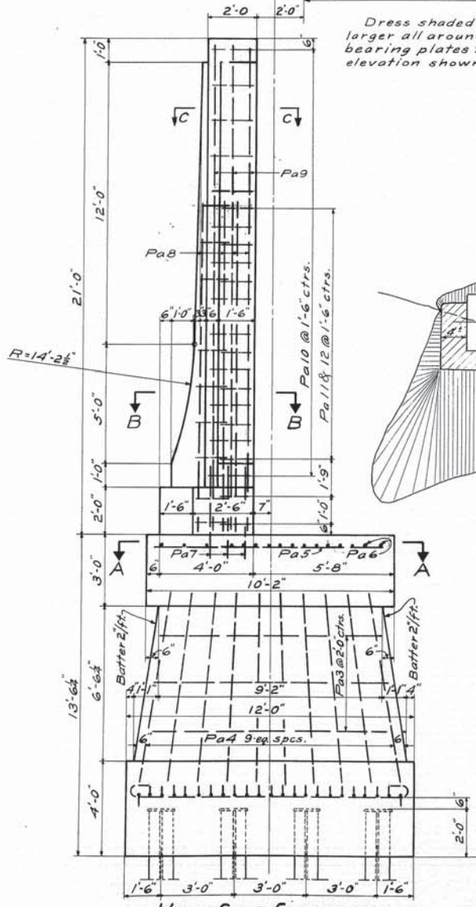
R. R. A. DIV NO.	STATE	FT'D. FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	13	45



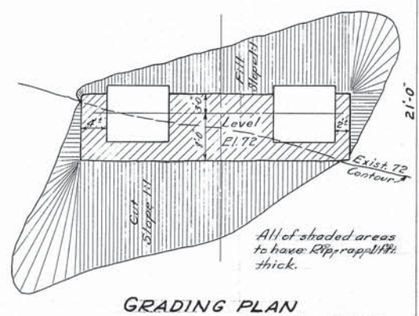
PLAN

Dress shaded areas 1" larger all around than bearing plates to exact elevation shown.

Symmetrical about ℄ Rdwy.

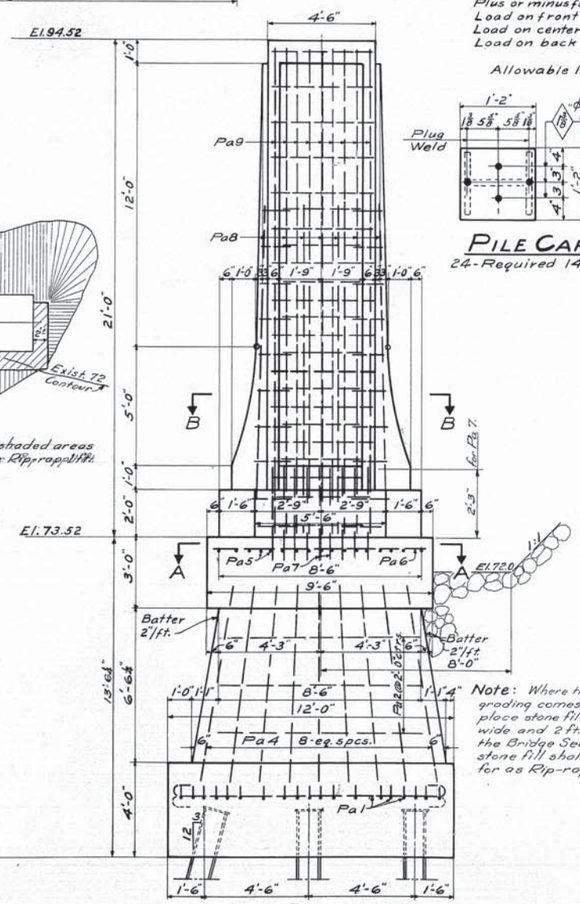


HALF SIDE ELEVATION



GRADING PLAN

PIER 1

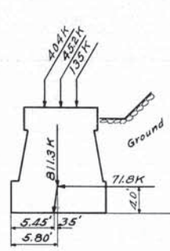


END ELEVATION

Note: Where the top of the grading comes above El. 70.5, place stone fill about 1 ft. wide and 2 ft. deep under the Bridge Seat Cap. This stone fill shall be paid for as Rip-rap.

Conditions of Loading

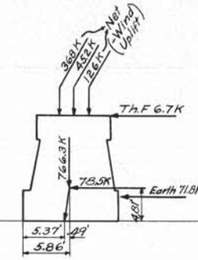
① D.L., L.L., S.W. & Earth P.



Direct load on piles 33.8 Tons/pile
Plus or minus for eccentricity 6.2 Tons
Load on front row 40.0 Tons
Load on center row 33.8 Tons
Load on back row 27.6 Tons

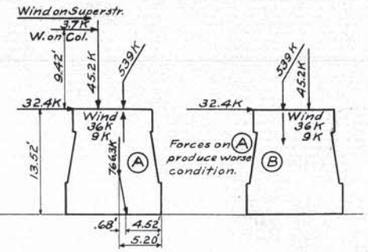
Allowable load 46.7 Tons

② D.L., L.L., S.W., Earth P. Thermal F. & Wind



Direct load on piles 31.9 Tons/pile
Plus or minus for eccentricity 6.6 Tons
Load on front row 38.5 Tons
Load on center row 31.9 Tons
Load on back row 25.3 Tons

③ As for ② & work together.

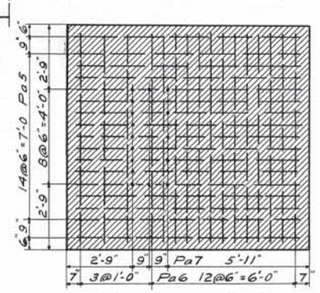


Load on front corner pile from condition ② 38.5 Tons
Plus for eccentricity 18.9 Tons
Max. load on corner pile 57.4 Tons

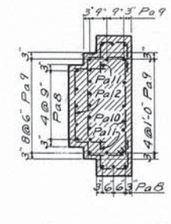
Allowable load 58.4 Tons

PILE CAP

24-Required 14"x½"x1'-2"

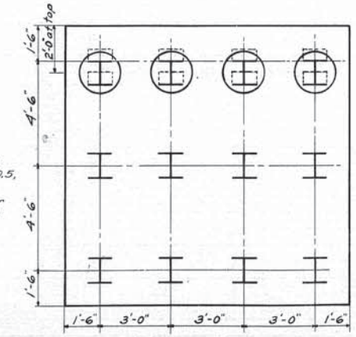


SECTION A-A



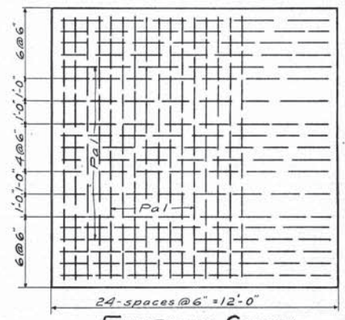
SECTION B-B

SECTION C-C



PILE PLAN

Piles in circles to be battered 3"/ft.
Piles to be 12"x53#. Estimated length 30ft.
24-Required.



FOOTING STEEL

DESIGN – ALLEN TRACE – WHITE
DETAIL – " CHECK – G.W.S. BRIDGE – 5196

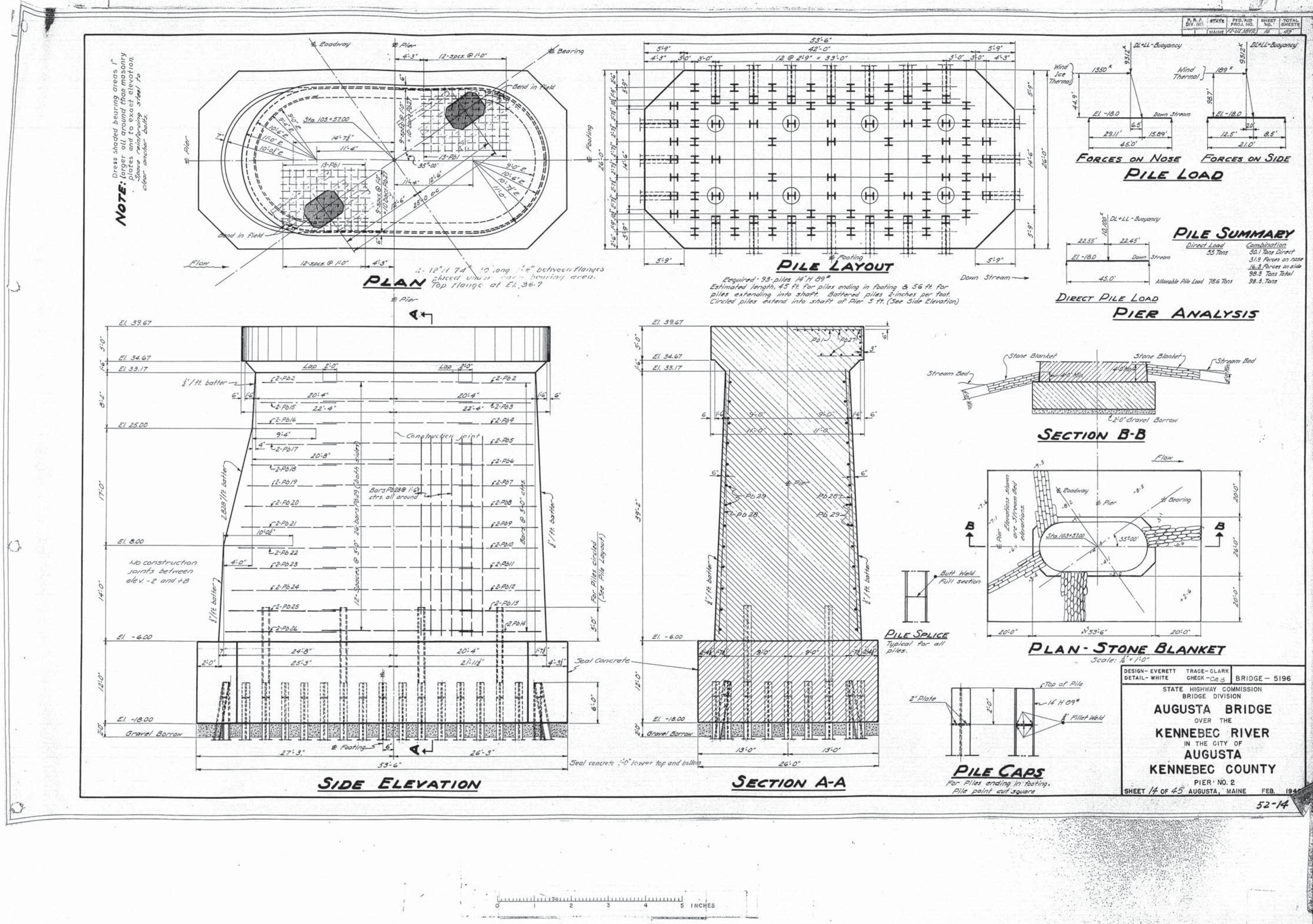
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

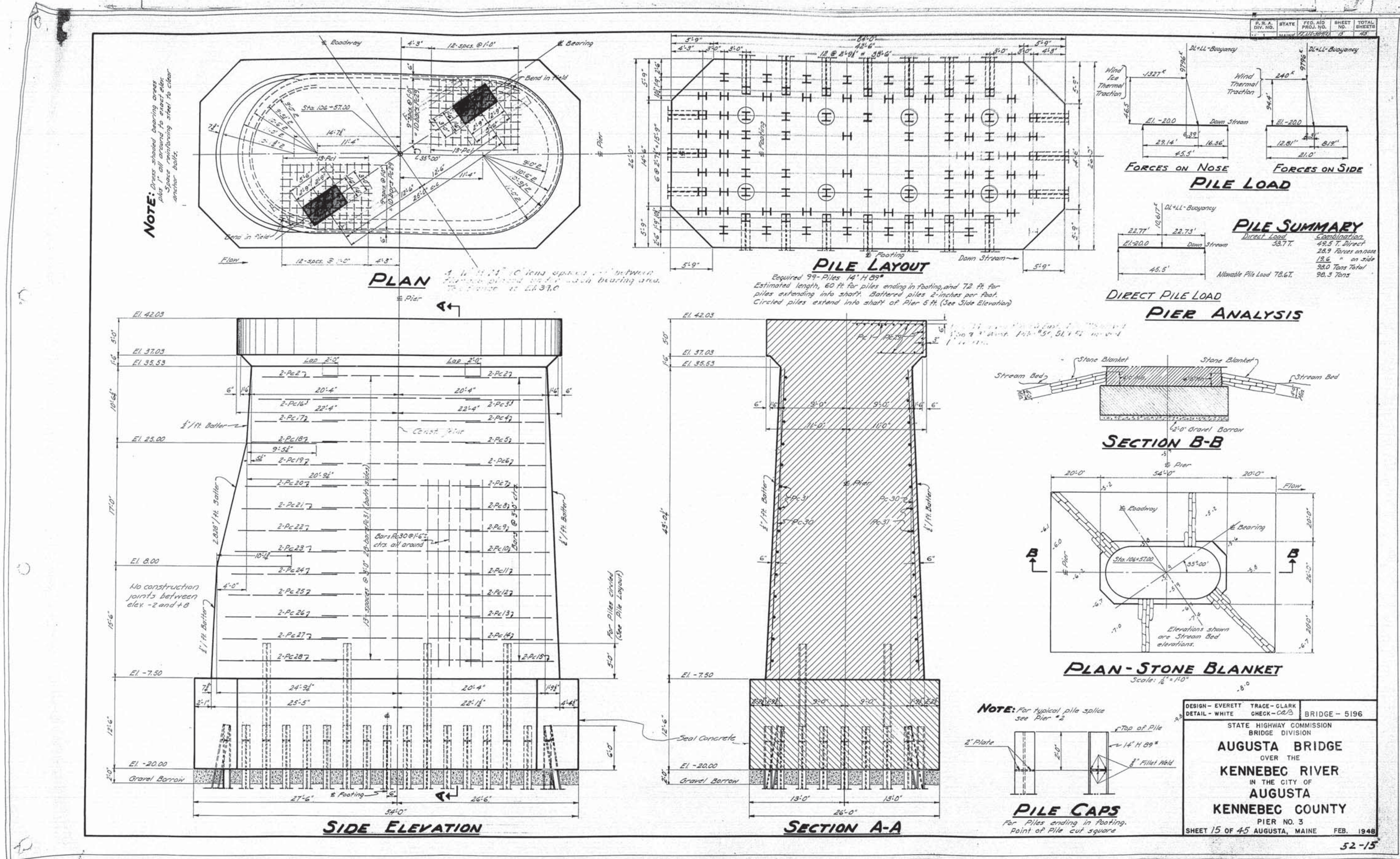
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PIER NO. 1

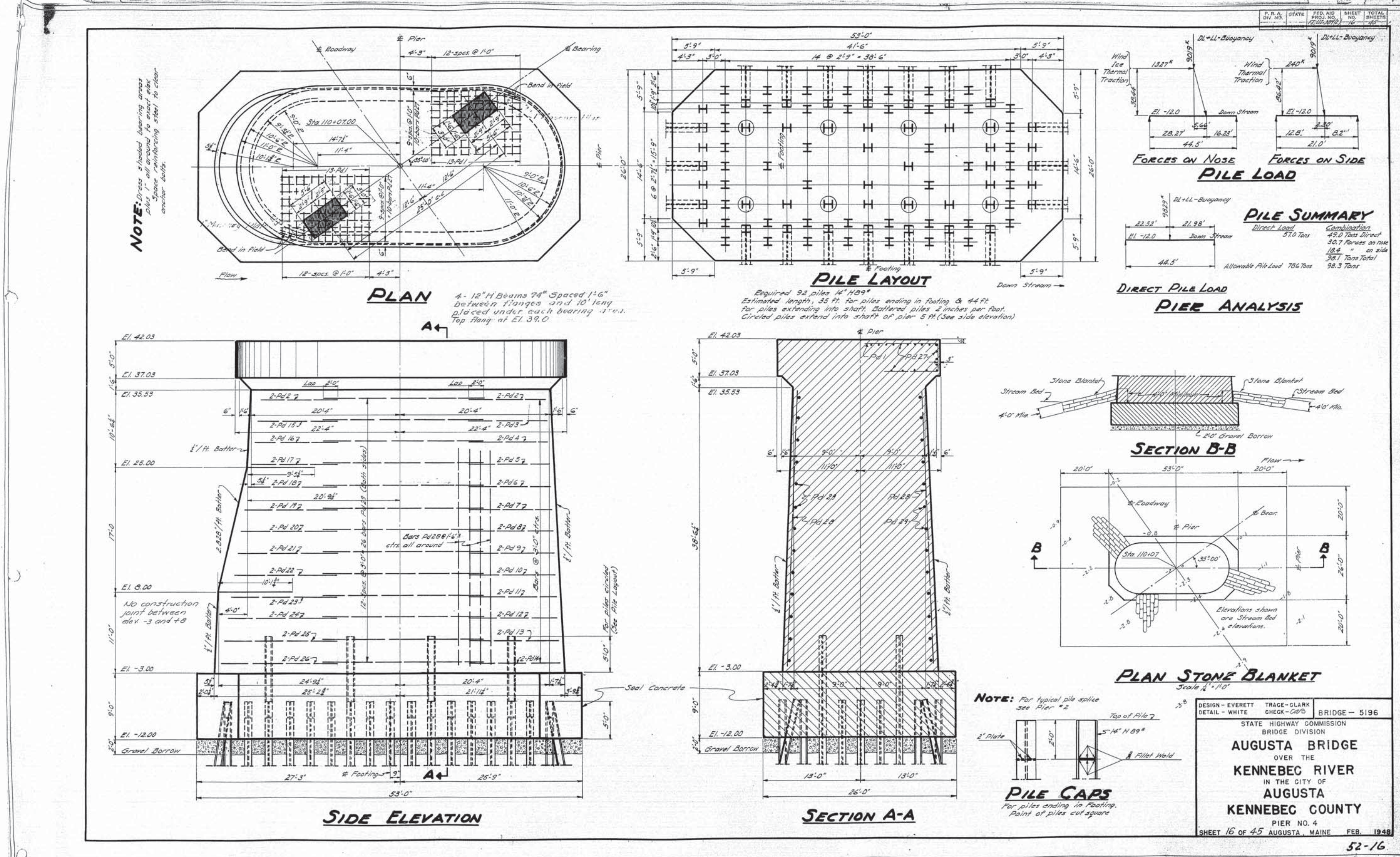
SHEET 13 OF 45 AUGUSTA, MAINE FEB. 1948

52-13


NOTE: Dress shaded bearing areas 1" larger all around than masonry plates and to exact elevation. Space reinforcing steel to clear anchor bolts.
PLAN
4-12"x 74" 10'long 1'6" between flanges placed under each bearing area. Top flange at El. 36.7
PILE LAYOUT
Required - 93 - piles 14" H 89# Estimated length, 45 ft. for piles ending in footing & 56 ft. for piles extending into shaft. Battered piles 2-inches per foot. Circled piles extend into shaft of Pier 5 ft. (See Side Elevation)
FORCES ON NOSE
FORCES ON SIDE
PILE LOAD
PILE SUMMARY
Direct Load
Combination
DIRECT PILE LOAD
PIER ANALYSIS
SECTION B-B
PLAN - STONE BLANKET
Scale: 1/16" = 1'-0"
SIDE ELEVATION
SECTION A-A
PILE SPLICE
Typical for all piles.
PILE CAPS
For Piles ending in footing. Pile point cut square
Seal concrete 1'-0" lower top and bottom
No construction joints between elev. -2 and +8
DESIGN - EVERETT
DETAIL - WHITE
TRACE - CLARK
CHECK - Cay
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PIER NO. 2
SHEET 14 OF 45 AUGUSTA, MAINE FEB. 194
52-14
INCHES

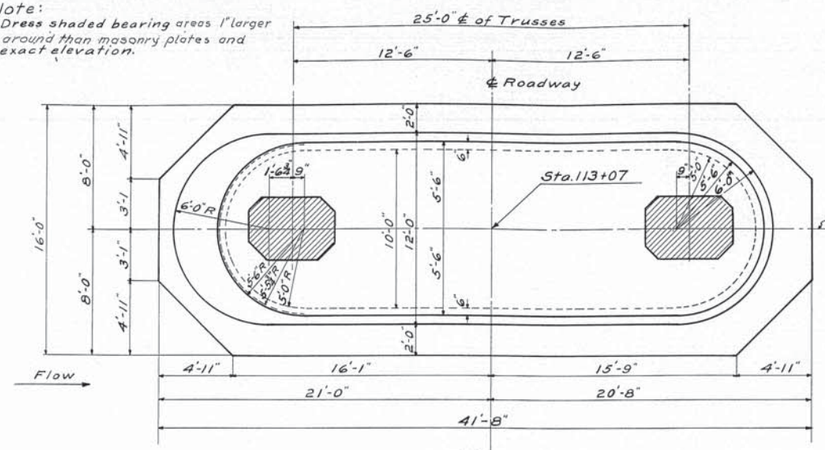


PLAN
PILE LAYOUT
Required 99-Piles 14" H 89#
Estimated length, 60 ft for piles ending in footing, and 72 ft for piles extending into shaft. Battered piles 2-inches per foot. Circled piles extend into shaft of Pier 6 ft. (See Side Elevation)
FORCES ON NOSE
FORCES ON SIDE
PILE LOAD
PILE SUMMARY
DIRECT PILE LOAD
PIER ANALYSIS
SECTION B-B
PLAN - STONE BLANKET
Scale: 1/16" = 1'-0"
Elevations shown are Stream Bed elevations.
SIDE ELEVATION
SECTION A-A
NOTE: Dress shaded bearing areas plus 1" all around to exact elev. Space reinforcing steel to clear anchor bolts.
No construction joints between elev. -2 and +8
NOTE: For typical pile splice see Pier #2
PILE CAPS
For Piles ending in Footing. Point of Pile cut square
DESIGN - EVERETT TRACE - CLARK
DETAIL - WHITE CHECK - CAB
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PIER NO. 3
SHEET 15 OF 45 AUGUSTA, MAINE FEB. 1948
52-15

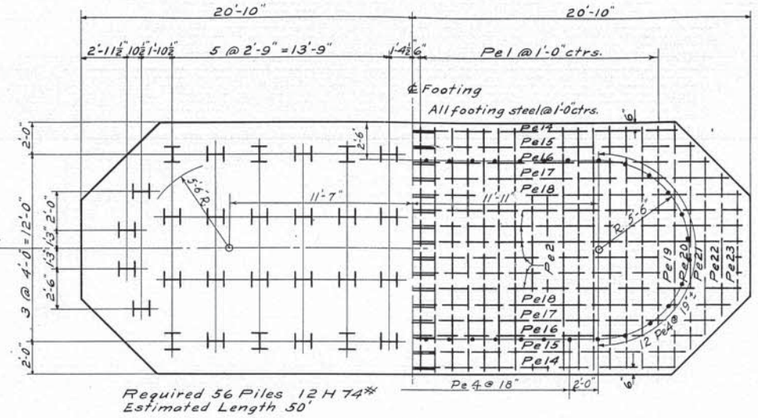

NOTE: Press shaded bearing areas plus 1" all around to exact elev. Space reinforcing steel to clear anchor bolts.
PLAN
4-12" H Beams 74" Spaced 1'-6" between flanges and 10' long placed under each bearing area. Top flange at El. 39.0
PILE LAYOUT
Required 92 piles 14" H 89#
Estimated length, 35 ft. for piles ending in footing & 44 ft. for piles extending into shaft. Battered piles 2 inches per foot. Circled piles extend into shaft of pier 5 ft. (See side elevation)
FORCES ON NOSE
FORCES ON SIDE
PILE LOAD
DIRECT PILE LOAD
PILE SUMMARY
Direct Load 57.0 Tons
Combination
49.0 Tons Direct
30.7 Forces on nose
18.4 " on side
98.1 Tons Total
Allowable Pile Load 78.6 Tons
98.3 Tons
PIER ANALYSIS
SIDE ELEVATION
No construction joint between elev. -3 and +8
Seal Concrete
Gravel Borrow
SECTION A-A
SECTION B-B
PLAN STONE BLANKET
Scale 1/8" = 1'-0"
Elevations shown are Stream Bed elevations.
NOTE: For typical pile splice see Pier #2
PILE CAPS
For piles ending in Footing. Point of piles cut square
DESIGN - EVERETT
DETAIL - WHITE
TRACE - CLARK
CHECK - C.G.D.
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PIER NO. 4
SHEET 16 OF 45 AUGUSTA, MAINE FEB. 1948
52-16

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	(2)UF-394(2)	17	45

Note:
Dress shaded bearing areas 1" larger all around than masonry plates and to exact elevation.



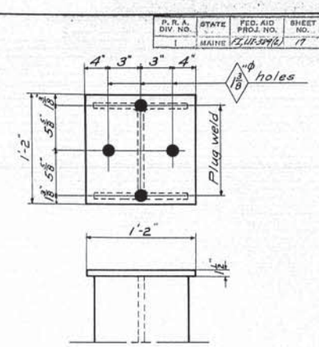
PLAN



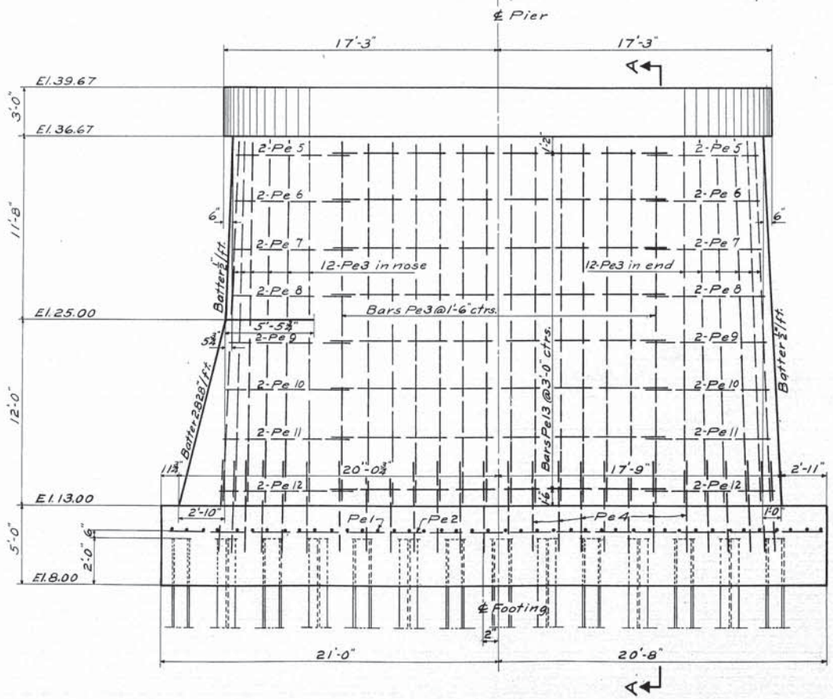
Required 56 Piles 12 H 74#
Estimated Length 50'

HALF PLAN
PILE LAYOUT

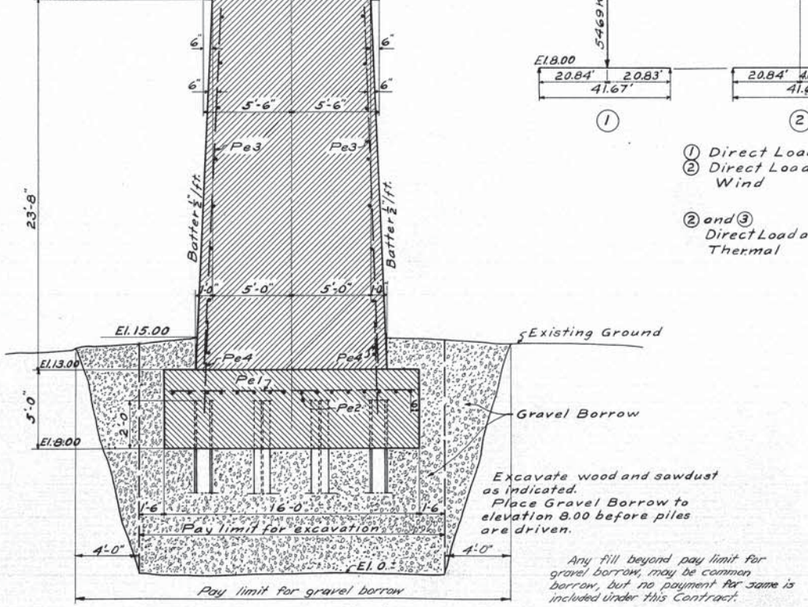
HALF PLAN
FOOTING REINFORCEMENT



PILE CAP
Required 56 - Pls. 14 x 1½ x 1'-2"
Pile points cut square
See Pier #2 for Typical Pile Splice

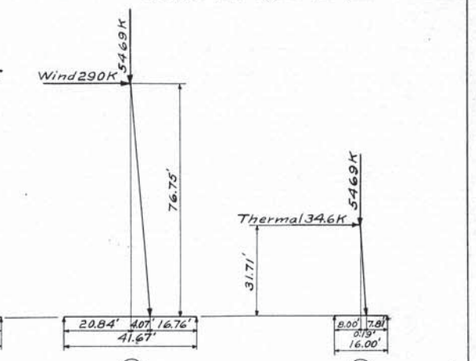


SIDE ELEVATION



SECTION A-A

Any fill beyond pay limit for gravel borrow, may be common borrow, but no payment for same is included under this Contract.



① Direct Load 48.8 Tons. Allowable 65.3T
② Direct Load 48.8 Tons
Wind 29.5 Tons
Total = 78.3 Tons. Allowable 81.6T

②and③
Direct Load and Wind 78.3 Tons
Thermal 0.6 Tons
Total = 78.9 Tons. Allowable 81.6T

DESIGN – STANGEL TRACE – WHITE
DETAIL – " CHECK – CAS
BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

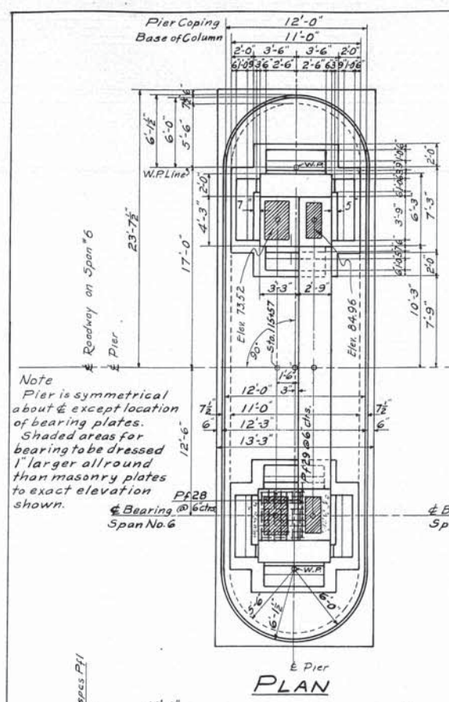
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PIER NO. 5

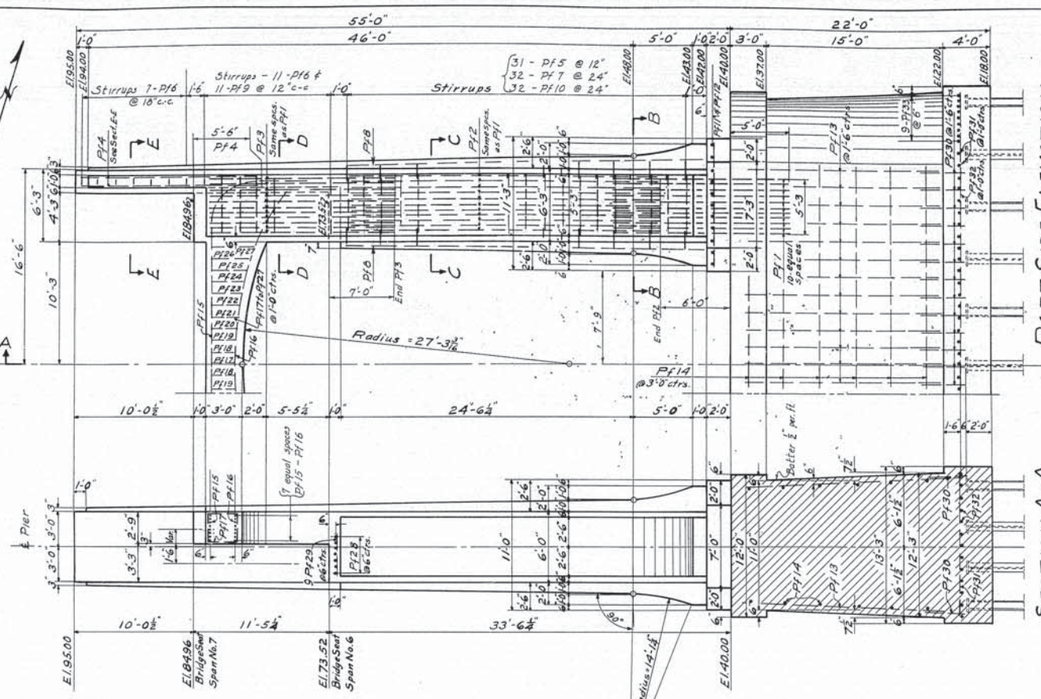
SHEET 17 OF 45 AUGUSTA, MAINE FEB. 1948

52-17

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FAUI-3941(1)	18	45

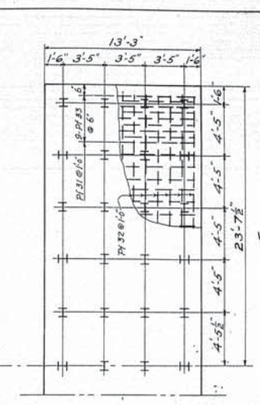


PLAN



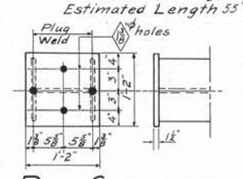
SECTION A-A

PART SIDE ELEVATION



PART PILE PLAN

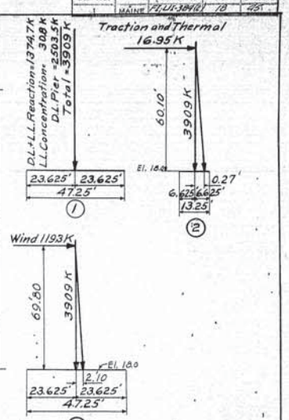
44 - 12 H 53# Req'd
Estimated Length 55'



PILE CAP

44 - Req'd 14"x1/2"x1'-2"

Cut Pile Point Square. See Pier No. 2 for Typical Pile Splice.

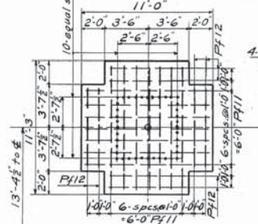


PIER ANALYSES

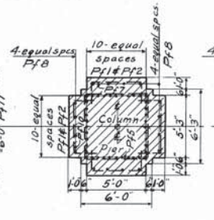
(1) Direct load per pile = 44.4 Tons
Allowable = 46.7 Tons

(2) Direct load per pile = 44.4 Tons
Tractive and Thermal = 4.0 "
Total = 48.4 Tons

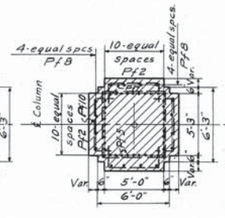
(2) and (3)
Direct load per pile = 44.4 Tons
Tractive and Thermal = 4.0 "
Wind = 10.1 "
Total = 58.5 Tons
Allowable = 58.5 Tons



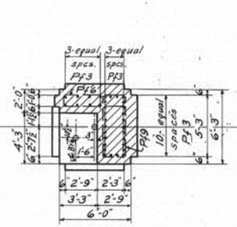
PLAN COLUMN BASE



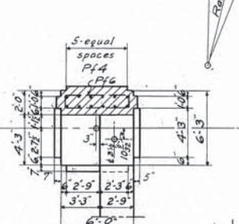
SECTION B-B



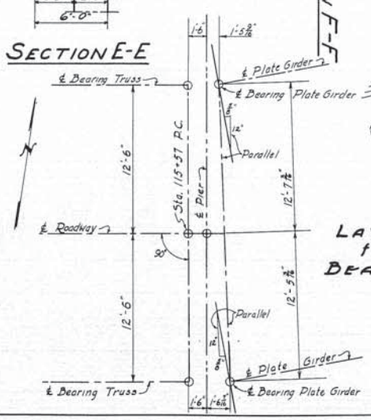
SECTION C-C



SECTION D-D

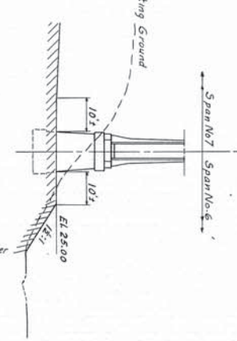


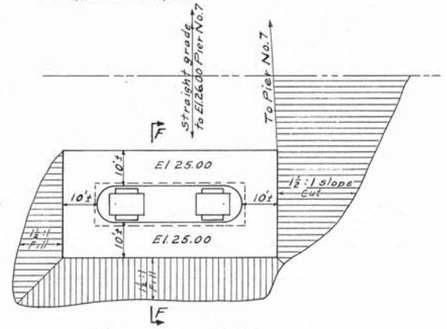
SECTION E-E



LAYOUT for BEARINGS

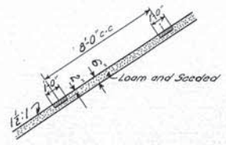
SECTION F-F





GRADING PLAN

All graded areas to have 6" loam and are to be seeded.



STRIP-SODDING

All 1 1/2 : 1 slopes to be strip-sodded.

DESIGN - HAMILTON	TRACE - WHITE	BRIDGE — 5196
DETAIL - "	CHECK - CAS	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

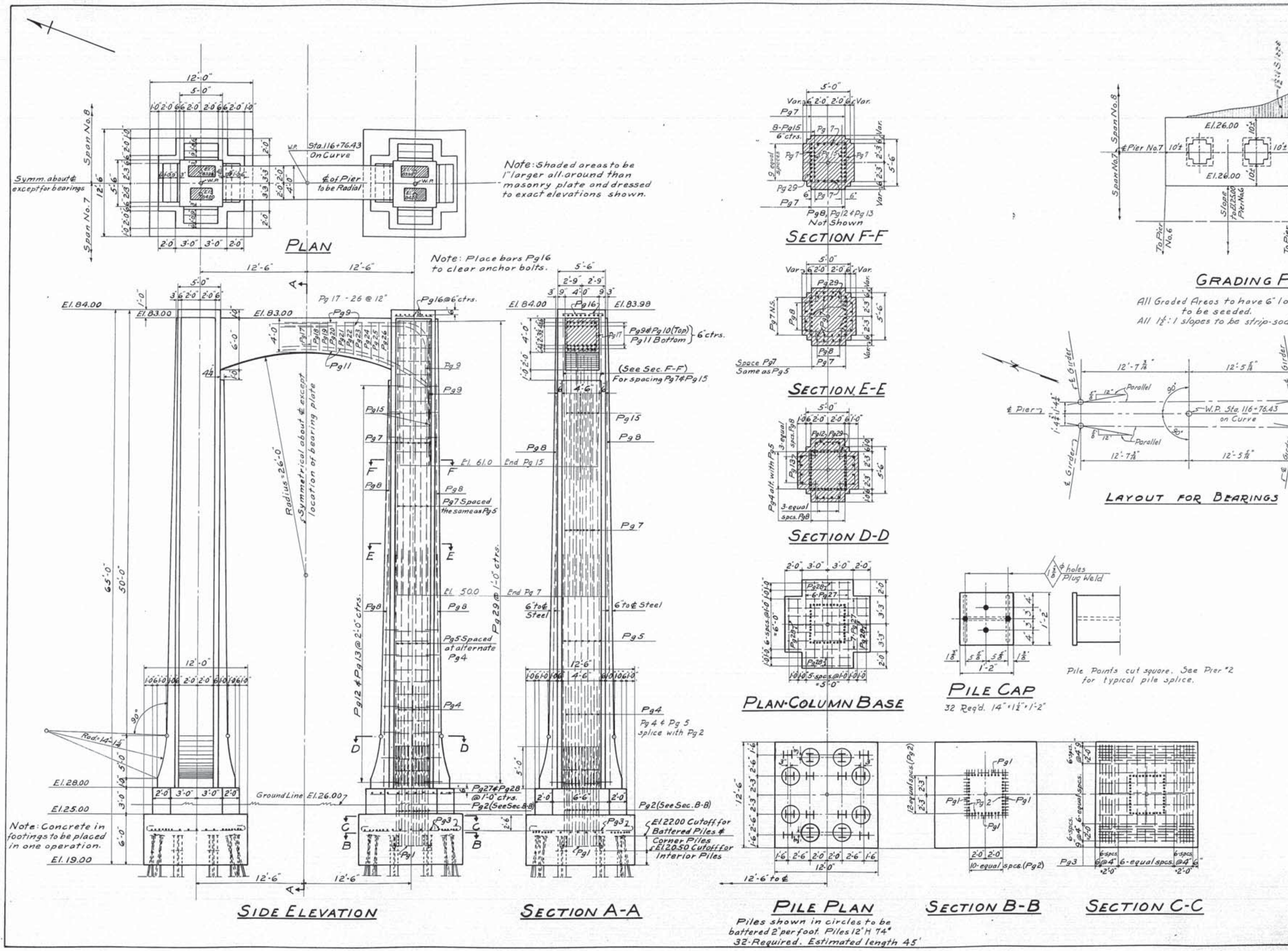
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PIER NO. 6

SHEET 18 OF 45 AUGUSTA, MAINE FEB. 1948

52-18

0 1 2 3 4 5 INCHES



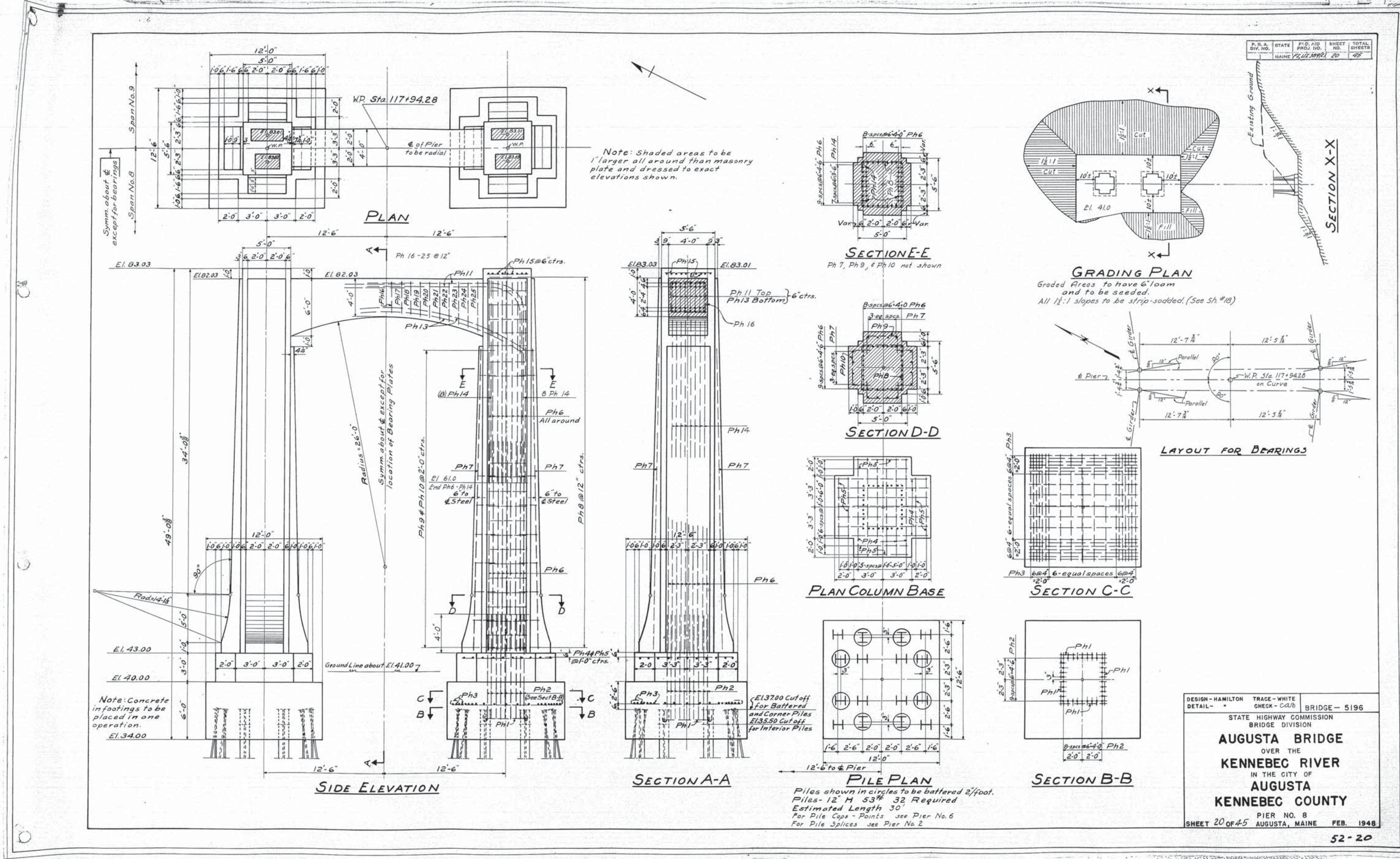
DESIGN - HAMILTON DETAIL - "	TRACE - WHITE CHECK - CAB	BRIDGE — 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PIER NO. 7

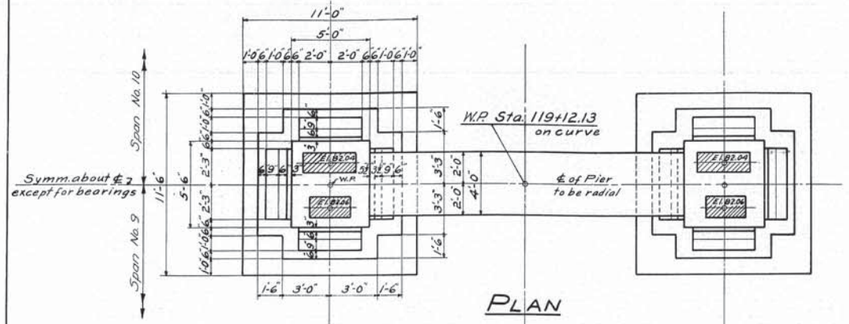
SHEET 19 OF 45 AUGUSTA, MAINE FEB. 1948

52-19



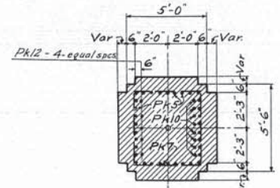
P.R.A. DIV. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS
MAINE | 20 | 45
PLAN
W.P. Sta. 117+94.28
℄ of Pier to be radial
Note: Shaded areas to be 1" larger all around than masonry plate and dressed to exact elevations shown.
Symm. about ℄ except for bearings
Span No. 9
Span No. 8
SIDE ELEVATION
Radius 26'-0"
Symm. about ℄ except for location of Bearing Plates
Note: Concrete in footings to be placed in one operation.
El. 83.03
El. 43.00
El. 40.00
El. 34.00
Ground Line about El. 41.00
SECTION A-A
El. 37.00 Cut off for Battered and Corner Piles
El. 35.50 Cut off for Interior Piles
SECTION E-E
Ph 7, Ph 9, & Ph 10 not shown
SECTION D-D
PLAN COLUMN BASE
PILE PLAN
Piles shown in circles to be battered 2"/foot.
Piles - 12" H 53# 32 Required
Estimated Length 30'
For Pile Caps - Points see Pier No. 6
For Pile Splices see Pier No. 2
SECTION C-C
SECTION B-B
GRADING PLAN
Graded Areas to have 6" loam and to be seeded.
All 1½:1 slopes to be strip-sodded. (See Sh. #18)
SECTION X-X
LAYOUT FOR BEARINGS
W.P. Sta. 117+94.28 on Curve
DESIGN - HAMILTON TRACE - WHITE
DETAIL - " CHECK - CAB
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
PIER NO. 8
SHEET 20 OF 45 AUGUSTA, MAINE FEB. 1948
52-20

P. R. A. DIV. NO.	STATE	F.D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI-UI-39(17)	21	45



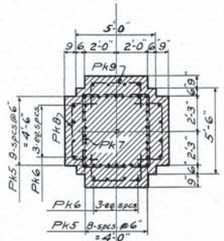
PLAN

Note: Shaded areas to be 1" larger all around than masonry plate and dressed to exact elevations shown.

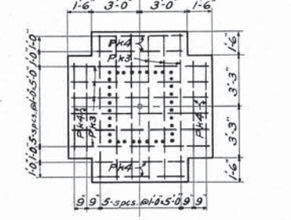


Pk6, Pk8 and Pk9 not shown

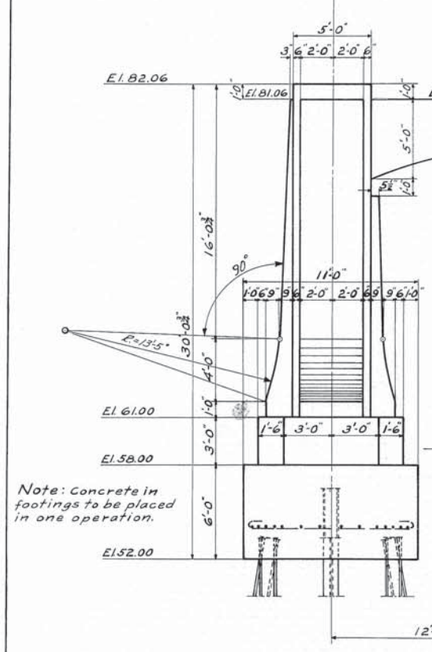
SECTION D-D



SECTION C-C



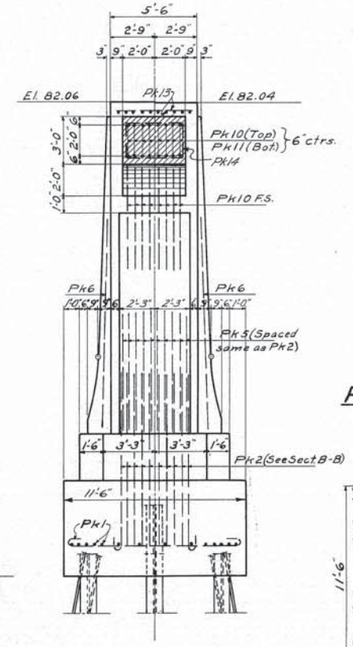
PLAN-COLUMN BASE



Note: Place bars Pk13 to clear anchor bars.

Note: Concrete in footings to be placed in one operation.

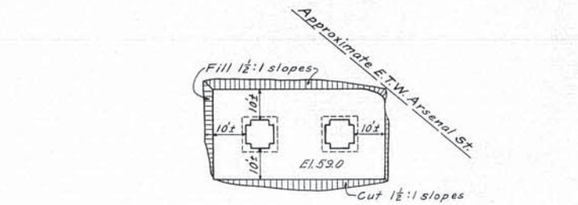
SIDE ELEVATION



SECTION A-A

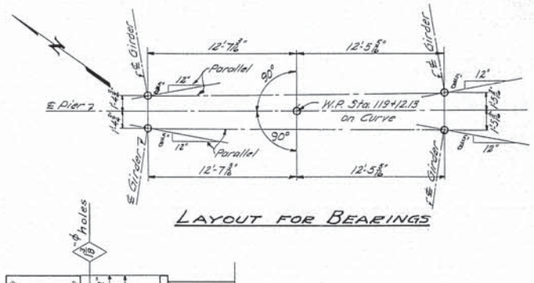
PILE PLAN

Piles shown in circles to be battered 2" per foot.
Piles - 12 H 74# 18 - Required
Estimated Length 20'

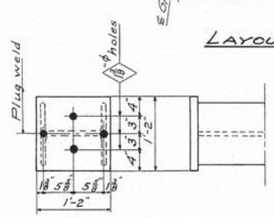


GRADING PLAN

All graded areas to have 6" loam and are to be seeded.



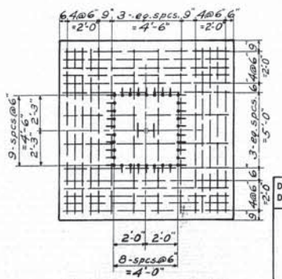
LAYOUT FOR BEARINGS



PILE CAP

18 - Required 14"x13"x1'-2"

Pile Points cut square. See Pier No. 2 for Typical Pile Splice.



SECTION B-B

DESIGN - HAMILTON TRACE - WHITE
DETAIL - " CHECK - C.A.J.

BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

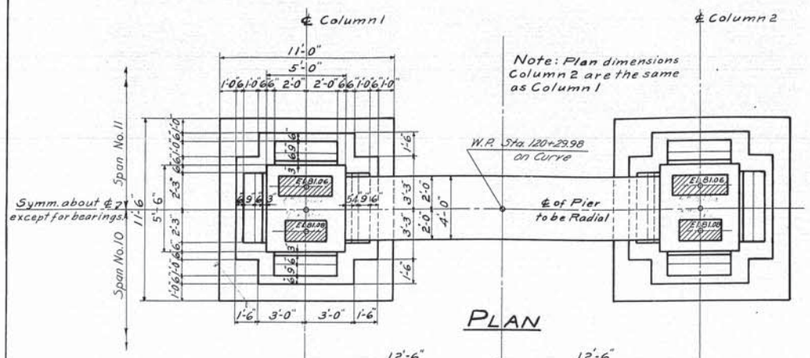
PIER NO. 9

SHEET 21 OF 45 AUGUSTA, MAINE FEB. 1948

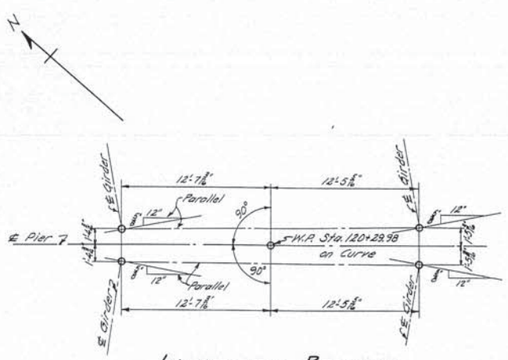
52-21

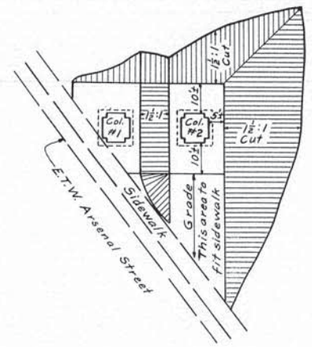
0 1 2 3 4 5 INCHES

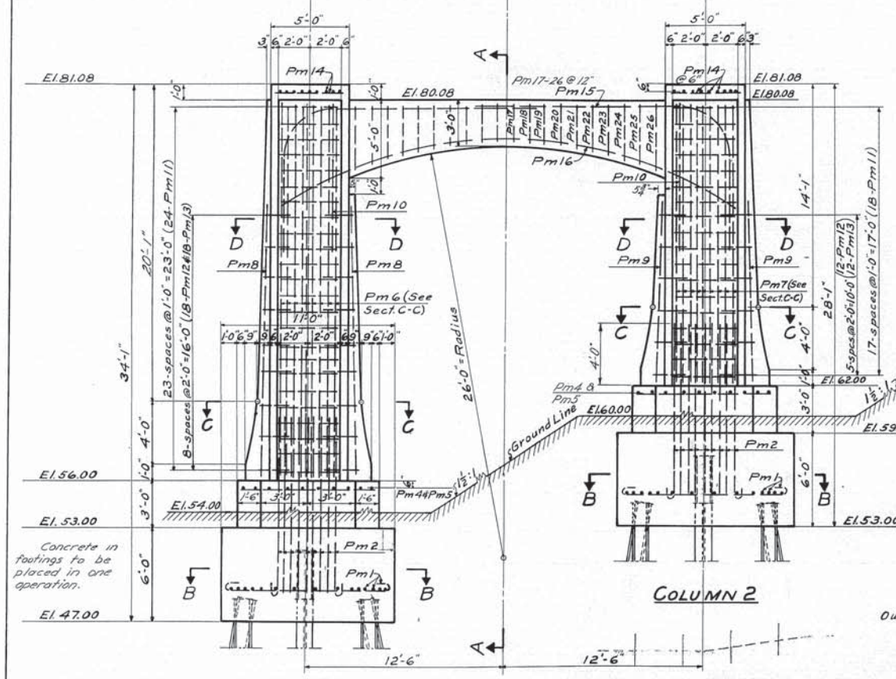
P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FLH-38(4)	22	45

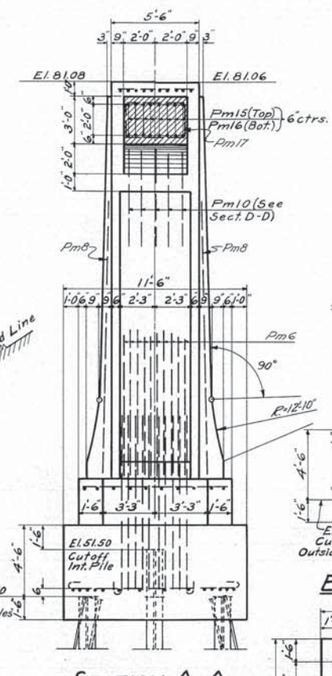


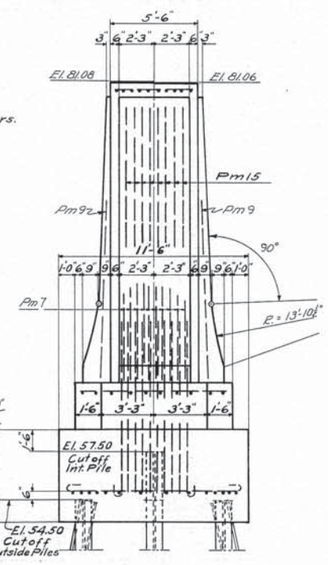
Note: Shaded areas to be 1' larger all around than masonry plate and dressed to exact elevations shown.

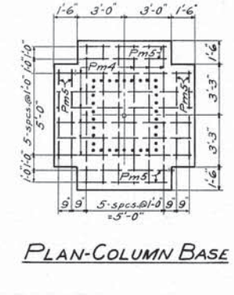


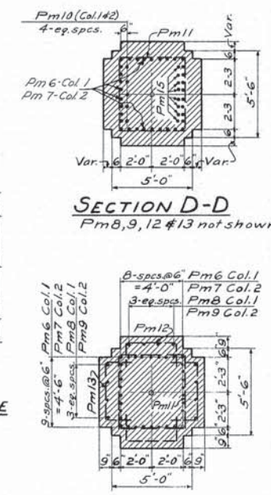


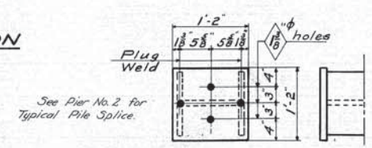


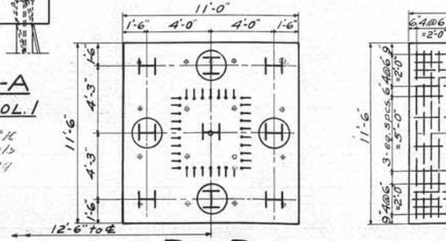


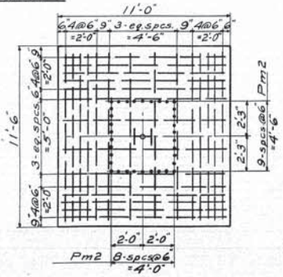












DESIGN – HAMILTON	TRACE – WHITE	BRIDGE – 5196
DETAIL – "	CHECK – CAB	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

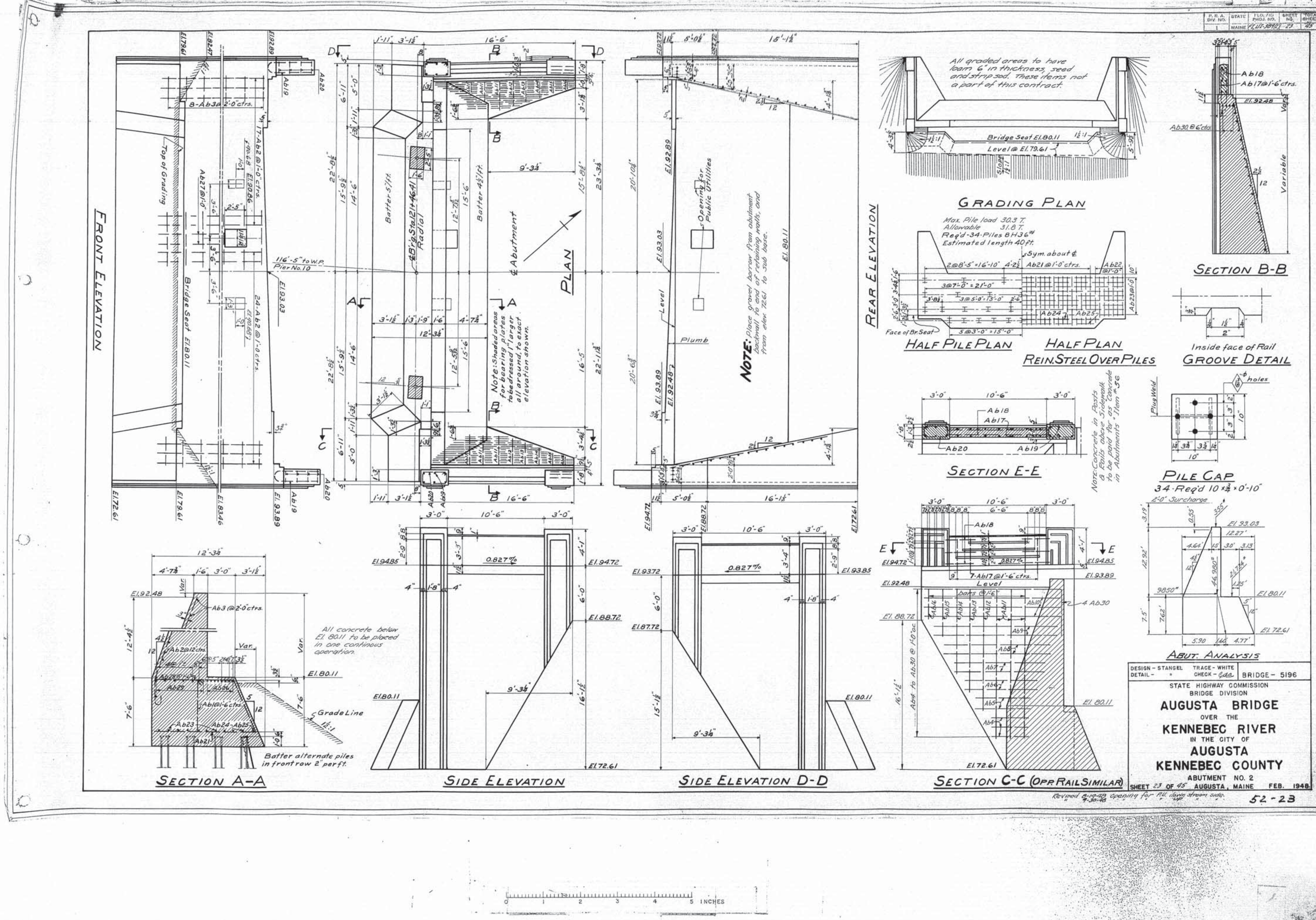
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PIER I NO. 10

SHEET 22 OF 45 AUGUSTA, MAINE FEB. 1948

52-22

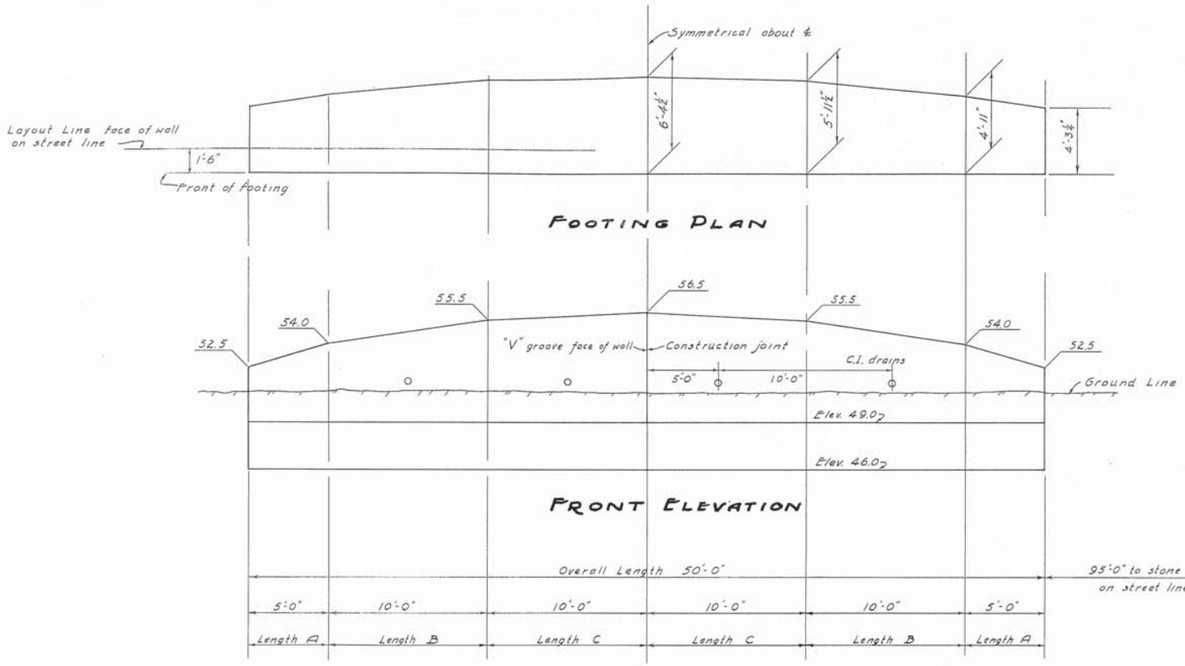
0 1 2 3 4 5 INCHES



FRONT ELEVATION
PLAN
REAR ELEVATION
GRADING PLAN
All graded areas to have loam 6" in thickness, seed and strip sod. These items not a part of this contract.
Bridge Seat El. 80.11
Level @ El. 79.61
Max. Pile load 30.3 T.
Allowable 31.8 T.
Req'd 34-Piles 8H36#
Estimated length 40 ft.
HALF PILE PLAN
HALF PLAN
REIN. STEEL OVER PILES
SECTION B-B
Inside face of Rail
GROOVE DETAIL
SECTION E-E
PILE CAP
34-Req'd 10 x 3/4 x 0'-10"
ABUT. ANALYSIS
Note: Shaded areas for bearing plates to be dressed 1" larger all around, to exact elevation shown.
NOTE: Place gravel borrow from abutment backwall to end of retaining walls, and from elev. 72.61 to sub base.
Opening for Public Utilities
Note: Concrete in Posts & Rails above sidewalk to be paid for as Concrete in Abutments "Item # 56"
All concrete below El. 80.11 to be placed in one continous operation.
Batter alternate piles in front row 2" per ft.
SECTION A-A
SIDE ELEVATION
SIDE ELEVATION D-D
SECTION C-C (OPP. RAIL SIMILAR)
P.R.A. DIV. NO. 1 | STATE MAINE | FED. AID PROJ. NO. F-UI-3898(2) | SHEET NO. 23 | TOTAL SHEETS 45
DESIGN - STANGEL
DETAIL - "
TRACE - WHITE
CHECK - Eda
BRIDGE - 5196
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY
ABUTMENT NO. 2
SHEET 23 OF 45 AUGUSTA, MAINE FEB. 1948
52-23
0 1 2 3 4 5 INCHES

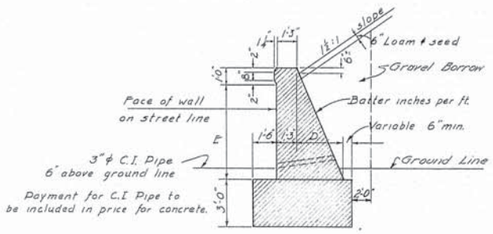
F. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F-1-(4)-104(2)	24	45

Mag. North

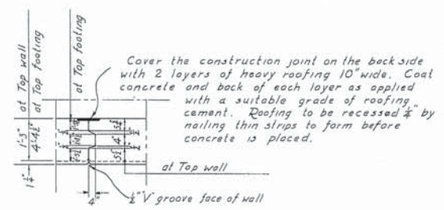


FOOTING PLAN

FRONT ELEVATION



TYPICAL SECTION



DETAIL CONSTRUCTION JOINT

SCHEDULE of DIMENSIONS

Length	Batter	D	E
A	3¼"	1'-0¾" to 1'-5¾"	2'-6" to 4'-0"
B	4"	1'-8" to 2'-2"	4'-0" to 5'-6"
C	5"	2'-8½" to 3'-1½"	5'-6" to 6'-6"

DESIGN - EVERETT TRACE - FORTIER
DETAIL - " CHECK - G.W.S. BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

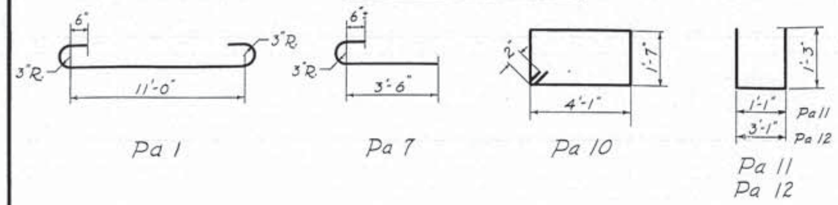
ARSENAL STREET RETAINING WALL
SHEET 24 OF 45 AUGUSTA, MAINE FEB. 1948

52-24

0 1 2 3 4 5 INCHES

P. R. A. DIV. NO.	STATE	F'D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F.A. US 301(2)	25	45

Pier No. 1



Bent Bars

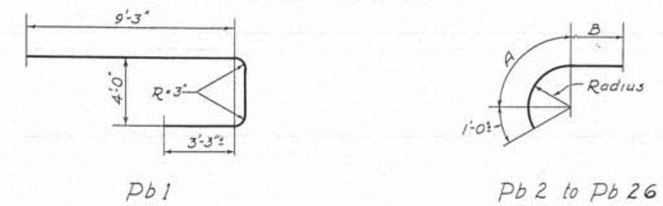
Mark	Size	No.	Length	Location
Pa 1	¾"φ	84	13'-7"	Footing
Pa 7	⅜"φ	32	4'-9"	Pier Cap
Pa 10	⅜"φ	26	11'-8"	" Column
Pa 11	⅜"φ	40	3'-7"	" "
Pa 12	⅜"φ	20	5'-7"	" "

Straight Bars

Mark	Size	No.	Length	Location
Pa 2	½"φ	12	8'-6"	Pier Shaft
Pa 3	½"φ	12	9'-2"	" "
Pa 4	½"φ	68	8'-6"	" "
Pa 5	¾"φ	34	9'-6"	" Cap
Pa 6	¾"φ	32	9'-0"	" "
Pa 8	½"φ	22	14'-0"	" Column
Pa 9	⅝"φ	32	20'-6"	" "

GWS

Pier No. 2



Bent Bars

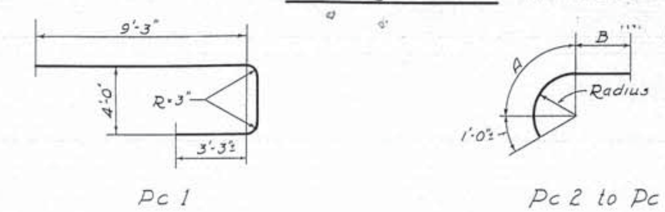
Mark	Size	No.	Radius	A	B	Length	Location
Pb 1	¾"φ	26	—	—	—	16'-9"	Under bearing areas
Pb 2	½"φ	4	8'-7"	13'-6"	2'-0"	16'-6"	Pier Shaft (hor. bars)
Pb 3	"	2	8'-8½"	13'-8¼"	"	16'-8"	" " "
Pb 4	"	2	8'-10"	13'-10½"	"	16'-10"	" " "
Pb 5	"	2	8'-11½"	14'-1"	"	17'-1"	" " "
Pb 6	"	2	9'-1"	14'-3"	"	17'-3"	" " "
Pb 7	"	2	9'-2½"	14'-5½"	"	17'-5"	" " "
Pb 8	"	2	9'-4"	14'-8"	"	17'-8"	" " "
Pb 9	"	2	9'-5½"	14'-10¼"	"	17'-10"	" " "
Pb 10	"	2	9'-7"	15'-0½"	"	18'-0"	" " "
Pb 11	"	2	9'-8½"	15'-3"	"	18'-3"	" " "
Pb 12	"	2	9'-10"	15'-5¼"	"	18'-5"	" " "
Pb 13	"	2	9'-11½"	15'-7¾"	"	18'-8"	" " "
Pb 14	"	2	10'-1"	15'-10¼"	2'-0"	18'-10"	" " "
Pb 15	"	2	8'-8½"	13'-8¼"	2'-4"	17'-0"	" " "
Pb 16	½"φ	2	8'-10"	13'-10½"	2'-8"	17'-6"	Pier Shaft (hor. bars)
Pb 17	"	2	8'-11½"	14'-1"	3'-0"	18'-1"	" " "
Pb 18	"	2	9'-1"	14'-3"	3'-4"	18'-7"	" " "
Pb 19	"	2	9'-2½"	14'-5½"	3'-8"	19'-1"	" " "
Pb 20	"	2	9'-4"	14'-8"	4'-0"	19'-8"	" " "
Pb 21	"	2	9'-5½"	14'-10¼"	4'-4"	20'-2"	" " "
Pb 22	"	2	9'-7"	15'-0½"	4'-8"	20'-8"	" " "
Pb 23	"	2	9'-8½"	15'-3"	5'-0"	21'-3"	" " "
Pb 24	"	2	9'-10"	15'-5¼"	5'-4"	21'-9"	" " "
Pb 25	"	2	9'-11½"	15'-7¾"	5'-8"	22'-4"	" " "
Pb 26	"	2	10'-1"	15'-10¼"	6'-0"	22'-10"	" " "

Straight Bars

Mark	Size	No.	Length	Location
Pb 27	¾"φ	36	12'-6"	Under bearing areas
Pb 28	"	72	38'-0"	Pier Shaft (vert. bars)
Pb 29	½"φ	26	21'-11"	" " (hor. bars)

CAB

Pier No. 3



Bent Bars

Mark	Size	No.	Radius	A	B	Length	Location
Pc 1	¾"φ	26	—	—	—	16'-9"	Under bearing areas
Pc 2	½"φ	4	8'-7"	13'-6"	2'-0"	16'-6"	Pier Shaft (hor. bars)
Pc 3	"	2	8'-8½"	13'-8¼"	"	16'-8"	" " "
Pc 4	"	2	8'-10"	13'-10½"	"	16'-10"	" " "
Pc 5	"	2	8'-11½"	14'-1"	"	17'-1"	" " "
Pc 6	"	2	9'-1"	14'-3"	"	17'-3"	" " "
Pc 7	"	2	9'-2½"	14'-5½"	"	17'-5"	" " "
Pc 8	"	2	9'-4"	14'-8"	"	17'-8"	" " "
Pc 9	"	2	9'-5½"	14'-10¼"	"	17'-10"	" " "
Pc 10	"	2	9'-7"	15'-0½"	"	18'-0"	" " "
Pc 11	"	2	9'-8½"	15'-3"	"	18'-3"	" " "
Pc 12	"	2	9'-10"	15'-5¼"	"	18'-5"	" " "
Pc 13	"	2	9'-11½"	15'-7¾"	"	18'-8"	" " "
Pc 14	"	2	10'-1"	15'-10¼"	"	18'-10"	" " "
Pc 15	"	2	10'-2½"	16'-0½"	2'-0"	19'-0"	" " "
Pc 16	"	2	8'-8½"	13'-8¼"	2-4"	17-0"	" " "
Pc 17	½"φ	2	8'-10"	13'-10½"	2'-8"	17'-6"	Pier Shaft (hor. bars)
Pc 18	"	2	8'-11½"	14'-1"	3'-0"	18'-1"	" " "
Pc 19	"	2	9'-1"	14'-3"	3'-4"	18'-7"	" " "
Pc 20	"	2	9'-2½"	14'-5½"	3'-8"	19'-1"	" " "
Pc 21	"	2	9'-4"	14'-8"	4'-0"	19'-8"	" " "
Pc 22	"	2	9'-5½"	14'-10¼"	4'-4"	20'-2"	" " "
Pc 23	"	2	9'-7"	15'-0½"	4'-8"	20'-8"	" " "
Pc 24	"	2	9'-8½"	15'-3"	5'-0"	21'-3"	" " "
Pc 25	"	2	9'-10"	15'-5¼"	5'-4"	21'-9"	" " "
Pc 26	"	2	9'-11½"	15'-7¾"	5'-8"	22'-4"	" " "
Pc 27	"	2	10'-1"	15'-10¼"	6'-0"	22'-10"	" " "
Pc 28	"	2	10'-2½"	16'-0½"	6'-4"	23-4"	" " "

Straight Bars

Mark	Size	No.	Length	Location
Pc 29	¾"φ	36	12'-6"	Under bearing areas
Pc 30	¾"φ	72	41'-0"	Pier Shaft (vert. bars)
Pc 31	½"φ	28	21'-11"	" " (hor. bars)

CAB

Pier No. 4

Bent Bars

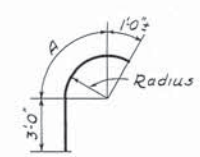
Mark	Size	No.	Radius	A	B	Length	Location
Pd 1	¾"φ	26	—	—	—	16'-9"	Under bearing areas
Pd 2	½"φ	4	8'-7"	13'- "	2'-0"	16'-6"	Pier Shaft (hor. bars)
Pd 3	"	2	8'-8½"	13'-8¼"	"	16'-8"	" " "
Pd 4	"	2	8'-10"	13'-10½"	"	16'-10"	" " "
Pd 5	"	2	8'-11½"	14'-1"	"	17'-1"	" " "
Pd 6	"	2	9'-1"	14'-3"	"	17'-3"	" " "
Pd 7	"	2	9'-2½"	14'-5½"	"	17'-5½"	" " "
Pd 8	"	2	9'-4"	14'-8"	"	17'-8"	" " "
Pd 9	"	2	9'-5½"	14'-10¼"	"	17'-10"	" " "
Pd 10	"	2	9'-7"	15'-0½"	"	18'-0"	" " "
Pd 11	"	2	9'-8½"	15'-3"	"	18'-3"	" " "
Pd 12	"	2	9'-10"	15'-5¼"	"	18'-5"	" " "
Pd 13	"	2	9'-11½"	15'-7¾"	"	18'-8"	" " "
Pd 14	"	2	10'-1"	15'-10¼"	2'-0"	18'-10"	" " "
Pd 15	"	2	8'-8½"	13'-8¼"	2'-4"	17'-0"	" " "
Pd 16	½"φ	2	8'-10"	13'-10½"	2'-8"	17'-6"	Pier Shaft (hor. bars)
Pd 17	"	2	8'-11½"	14'-1"	3'-0"	18'-1"	" " "
Pd 18	"	2	9'-1"	14'-3"	3'-4"	18'-7"	" " "
Pd 19	"	2	9'-2½"	14'-5½"	3'-8"	19'-1"	" " "
Pd 20	"	2	9'-4"	14'-8"	4'-0"	19'-8"	" " "
Pd 21	"	2	9'-5½"	14'-10¼"	4'-4"	20'-2"	" " "
Pd 22	"	2	9'-7"	15'-0½"	4'-8"	20'-8"	" " "
Pd 23	"	2	9'-8½"	15'-3"	5'-0"	21'-3"	" " "
Pd 24	"	2	9'-10"	15'-5¼"	5'-4"	21'-9"	" " "
Pd 25	"	2	9'-11½"	15'-7¾"	5'-8"	22'-4"	" " "
Pd 26	"	2	10'-1"	15'-10¼"	6'-0"	22'-10"	" " "

Straight Bars

Mark	Size	No.	Length	Location
Pd 27	¾"φ	36	12'-6"	Under bearing areas
Pd 28	"	72	38'-0"	Pier Shaft (vert. bars)
Pd 29	½"φ	26	21'-11"	" " (hor. bars)

CAB

Pier No. 5



Pe 5 to Pe 12

Bent Bars

Mark	Size	No.	Radius	A	Length	Location
Pe 5	½"φ	4	4'-6½"	7'-1½"	11'-1"	Pier Shaft (hor. bars)
Pe 6	"	4	4'-8"	7'-4"	11'-4"	" " "
Pe 7	"	4	4'-9½"	7'-6¼"	11'-6"	" " "
Pe 8	"	4	4'-11"	7'-8½"	11'-8"	" " "
Pe 9	"	4	5'-0½"	7'-11"	11'-11"	" " "
Pe 10	"	4	5'-2"	8'-1¼"	12'-1"	" " "
Pe 11	"	4	5'-3½"	8'-3¾"	12'-4"	" " "
Pe 12	"	4	5'-5"	8'-9"	12'-9"	" " "

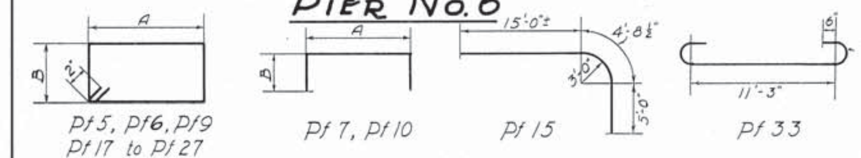
CAB

Straight Bars

Mark	Size	No.	Length	Location	Mark	Size	No.	Length	Location
Pe 1	¾"φ	32	15'-8"	Footing	Pe 18	¾"φ	4	21'-4"	Footing (splice)
Pe 2	"	12	21'-9"	" (Splice)	Pe 19	"	2	13'-6"	"
Pe 3	"	52	23'-7"	Pier Shaft (vert. bars)	Pe 20	"	2	11'-6"	"
Pe 4	"	52	6'-0"	Dowels in footing	Pe 21	"	2	9'-6"	"
Pe 13	½"φ	16	23'-6"	Pier Shaft (hor. bars)	Pe 22	"	2	7'-6"	"
Pe 14	¾"φ	4	17'-5"	Footing (splice)	Pe 23	"	2	5'-6"	"
Pe 15	"	4	18'-5"	" "					
Pe 16	"	4	19'-4"	" "					
Pe 17	"	4	20'-5"	" "					

CAB

Pier No. 6



Bent Bars

Mark	Size	No.	A	B	Length	Location
Pf 5	½"φ	62	5'-4½"	5'-1½"	21'-4"	Pier Columns
Pf 6	"	36	5'-1½"	1'-1½"	12'-10"	" "
Pf 9	"	22	5'-4½"	1'-10½"	14'-10"	" "
Pf 7	"	64	4'-1½"	1'-6"	7'-1"	" "
Pf 10	"	64	4'-4½"	1'-6"	7'-4"	" "
Pf 15	1"■	16	—	—	24'-8"	" Strut
Pf 17	½"φ	1	2'-1½"	2'-5½"	9'-6"	" "
Pf 18	"	2	2'-1⅜"	"	9'-6"	" "
Pf 19	"	2	2'-2¼"	"	9'-7"	" "
Pf 20	"	2	2'-3⅜"	"	9'-10"	" "
Pf 21	½"φ	2	2'-4⅞"	2'-5½"	10'-1"	Pier Strut
Pf 22	"	2	2'-6⅞"	"	10'-5"	" "
Pf 23	"	2	2'-9⅜"	"	10'-10"	" "
Pf 24	"	2	3'-0¼"	"	11'-3"	" "
Pf 25	"	2	3'-3⅝"	"	11'-10"	" "
Pf 26	"	2	3'-7½"	"	12'-6"	" "
Pf 27	"	2	4'-0"	"	13'-3"	" "
Pf 33	1"■	18			15'-5"	Footing

CAB

Straight Bars

Mark	Size	No.	Length	Location
Pf 1	1"■	80	15'-0"	Pier Shaft to Column
Pf 2	1"φ	80	26'-6"	Pier Column
Pf 3	"	68	18'-0"	" "
Pf 4	"	24	15'-0"	" "
Pf 8	¾"φ	32	30'-0"	" "
Pf 11	"	28	10'-6"	Column Base
Pf 12	"	16	6'-6"	" "
Pf 13	"	46	17'-0"	Pier Shaft
Pf 14	½"φ	12	34'-0"	" "
Pf 16	1"■	8	34-0"	" Strut
Pf 28	¾"φ	14	4'-6"	Br. Seat
Pf 29	"	18	3'-6"	" "
Pf 30	1"■	46	4'-0"	Footing (Top)
Pf 31	¾"φ	37	13'-0"	"
Pf 32	"	26	25'-6"	"

Note: All dimensions to ℄ steel.

PLAN – WHITE
TRACE – FORTIER
CHECK – as noted

BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

REINF. STEEL – PIERS 1 TO 6

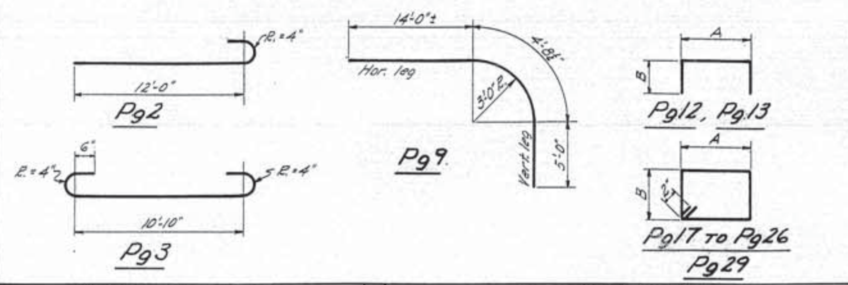
SHEET 25 OF 45 AUGUSTA, MAINE FEB. 1948

52-25

0 1 2 3 4 5 INCHES

P.R.A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	26	45

PIER No. 7



STRAIGHT BARS

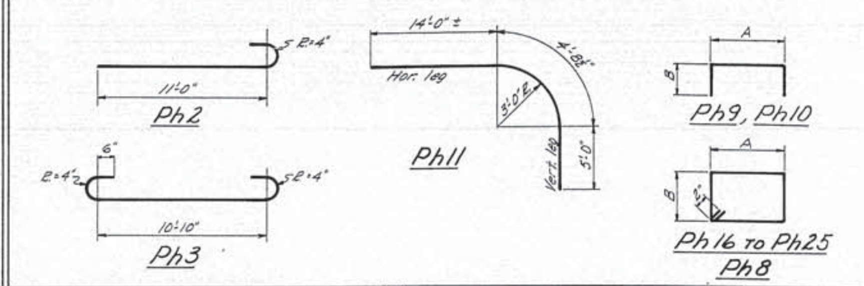
MARK	SIZE	NO.	LENGTH	LOCATION
Pg1	1" ■	8	6'-0"	Footing
Pg4	1¼" ■	44	12'-0"	Column
Pg5	1¼" ■	44	27'-0"	"
Pg7	1¼" ■	56	33'-0"	"
Pg8	¾" φ	64	25'-0"	"
Pg11	1¼" ■	16	32'-0"	Strut to Column
Pg15	1¼" ■	32	22'-0"	Column
Pg16	¾" φ	38	4'-6"	" (Top)
Pg27	¾" φ	26	9'-6"	" (Base)
Pg28	¾" φ	16	5'-6"	" "

BENT BARS

MARK	SIZE	NO.	A	B	LENGTH	LOCATION
Pg2	1¼" ■	88	—	—	13'-6"	Footing to Columns
Pg3	1" ■	76	—	—	14'-0"	Footing
Pg9	1¼" ■	32	—	—	23'-8"	Strut to Column
Pg12	½" φ	96	3'-2¼"	1'-6"	6'-2"	Columns
Pg13	"	96	3'-8¼"	1'-6"	6'-8"	"
Pg17	"	2	"	3'-2¼"	14'-1"	Strut
Pg18	"	2	"	3'-3"	14'-2"	"
Pg19	"	2	"	3'-4"	14'-4"	"
Pg20	"	2	"	3'-5¼"	14'-7"	"
Pg21	"	2	"	3'-7¼"	14'-11"	"
Pg22	"	2	"	3'-9½"	15'-3"	"
Pg23	"	2	"	4'-0¼"	15'-9"	"
Pg24	"	2	"	4'-3⅝"	16'-4"	"
Pg25	"	2	"	4'-7⅜"	16'-11"	"
Pg26	"	2	3'-8¼"	4'-11¾"	17'-8"	Strut
Pg29	½" φ	112	4'-8¼"	4'-2¼"	18'-1"	Columns

L-CAB

PIER No. 8



STRAIGHT BARS

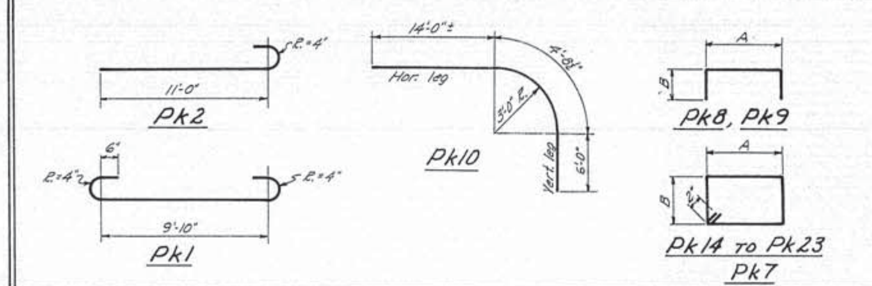
MARK	SIZE	NO.	LENGTH	LOCATION
Ph1	1" ■	8	6'-0"	Footing
Ph4	¾" φ	26	9'-6"	Column Base
Ph5	¾" φ	16	5'-6"	" "
Ph6	1" ■	136	22'-0"	Column
Ph7	¾" φ	32	31'-0"	"
Ph13	1⅛" ■	16	32'-0"	Strut to Column
Ph14	1⅛" ■	32	20'-0"	Column
Ph15	¾" φ	38	4'-6"	" (Top)

BENT BARS

MARK	SIZE	NO.	A	B	LENGTH	LOCATION
Ph2	1" ■	68	—	—	12'-6"	Footing to Column
Ph3	1" ■	76	—	—	14'-0"	Footing
Ph8	½" φ	80	4'-8¼"	4'-2¼"	18'-1"	Columns
Ph9	½" φ	64	3'-2¼"	1'-6"	6'-2"	"
Ph10	½" φ	64	3'-8¼"	1'-6"	6'-8"	"
Ph11	1⅛" ■	32	—	—	23'-8"	Strut to Column
Ph16	½" φ	2	3'-8¼"	3'-2¼"	14'-1"	Strut
Ph17	"	2	"	3'-3"	14'-2"	"
Ph18	"	2	"	3'-4"	14'-4"	"
Ph19	"	2	"	3'-5¼"	14'-7"	"
Ph20	"	2	"	3'-7¼"	14'-11"	"
Ph21	"	2	"	3'-9½"	15'-3"	"
Ph22	"	2	"	4'-0¼"	15'-9"	"
Ph23	"	2	"	4'-3⅝"	16'-4"	"
Ph24	"	2	"	4'-7⅜"	16'-11"	"
Ph25	½" φ	2	3'-8¼"	4'-11¾"	17'-8"	Strut

L-CAB

PIER No. 9



STRAIGHT BARS

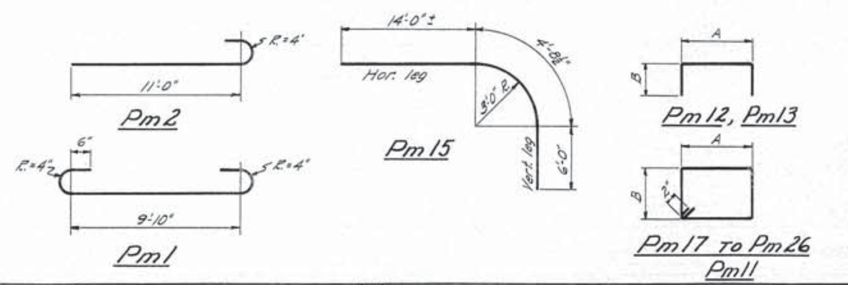
MARK	SIZE	NO.	LENGTH	LOCATION
Pk3	¾" φ	24	8'-6"	Column Base
Pk4	¾" φ	16	5'-6"	" "
Pk5	1" φ	68	20'-4"	Columns
Pk6	¾" φ	32	13'-6"	"
Pk11	1¼" ■	8	32'-0"	Strut
Pk12	1¼" ■	10	10'-0"	Columns
Pk13	¾" φ	38	4'-6"	Columns (Top)

BENT BARS

MARK	SIZE	NO.	A	B	LENGTH	LOCATION
Pk1	1" ■	56	—	—	13'-0"	Footing
Pk2	1" φ	68	—	—	12'-6"	Footing to Column
Pk7	½" φ	40	4'-8¼"	4'-2¼"	18'-1"	Columns
Pk8	"	28	3'-8¼"	1'-6"	6'-8"	"
Pk9	"	28	3'-2¼"	1'-6"	6'-2"	"
Pk10	1¼" ■	16	—	—	24'-8"	Strut
Pk14	½" φ	2	3'-8¼"	2'-2¼"	12'-1"	"
Pk15	"	2	"	2'-3"	12'-2"	"
Pk16	"	2	"	2'-4"	12'-4"	"
Pk17	"	2	"	2'-5¼	12'-7"	"
Pk18	"	2	"	2'-7¼"	12'-11"	"
Pk19	"	2	"	2'-9½"	13'-3"	"
Pk20	"	2	"	3'-0¼"	13'-9"	"
Pk21	"	2	"	3'-3⅝"	14'-4"	"
Pk22	"	2	"	3'-7⅜"	14'-11"	"
Pk23	½" φ	2	3'-8¼"	3'-11¾"	15'-8"	Strut

L-CAB

PIER No. 10



STRAIGHT BARS

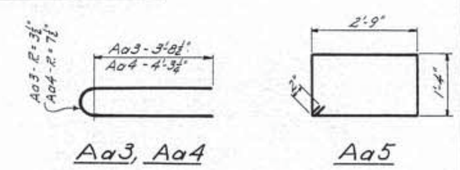
MARK	SIZE	NO.	LENGTH	LOCATION
Pm4	¾" φ	24	8'-6"	Column Base
Pm5	¾" φ	16	5'-6"	" "
Pm6	1" φ	34	24'-4"	Column #1
Pm7	1" φ	34	18'-4"	" #2
Pm8	¾" φ	16	17'-6"	" #1
Pm9	¾" φ	16	11'-6"	" #2
Pm10	1½" ■	10	10'-0"	" #1 & #2
Pm14	¾" φ	38	4'-6"	Columns (Top)
Pm16	1¼" ■	8	32'-0"	Strut

BENT BARS

MARK	SIZE	NO.	A	B	LENGTH	LOCATION
Pm1	1" ■	56	—	—	13'-0"	Footing
Pm2	1" φ	68	—	—	12'-6"	Footing to Column
Pm11	½" φ	42	4'-8¼"	4'-2¼"	18'-1"	Columns
Pm12	"	30	3'-8¼"	1'-6"	6'-8"	"
Pm13	"	30	3'-2¼"	1'-6"	6'-2"	"
Pm15	1¼" ■	16	—	—	24'-8"	Strut
Pm17	½" φ	2	3'-8¼"	2'-2¼"	12'-1"	"
Pm18	"	2	"	2'-3"	12'-2"	"
Pm19	"	2	"	2'-4"	12'-4"	"
Pm20	"	2	"	2'-5¼"	12'-7"	"
Pm21	"	2	"	2'-7¼"	12'-11"	"
Pm22	"	2	"	2'-9½"	13'-3"	"
Pm23	"	2	"	3'-0¼"	13'-9"	"
Pm24	"	2	"	3'-3⅝"	14'-4"	"
Pm25	"	2	"	3'-7⅜"	14'-11"	"
Pm26	½" φ	2	3'-8¼"	3'-11¾"	15'-8"	Strut

L-CAB

ABUTMENT No. 1



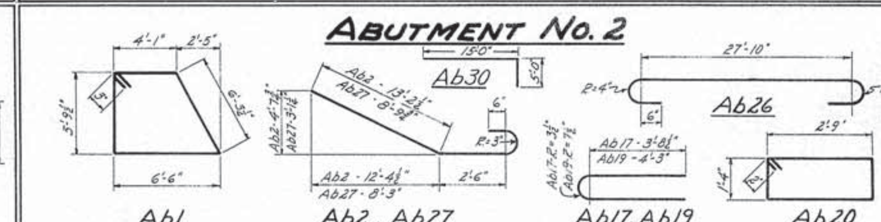
STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
Aa1	¾" φ	12	8'-0"	Cor. Br. Wall
Aa2	½" φ	16	7'-6"	Ret. Wall Rail

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
Aa3	⅝" φ	10	8'-4"	Ret. Wall Rail
Aa4	¾" φ	12	10'-6"	" " Post
Aa5	¼" φ	12	8'-6"	" " "

ABUTMENT No. 2



STRAIGHT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
Ab3	½" φ	16	24'-2"	Retaining Wall
Ab4	¾" φ	6	4'-2"	" "
Ab5	"	4	6'-3"	" "
Ab6	"	4	8'-0"	" "
Ab7	"	4	9'-6"	" "
Ab8	"	4	11'-6"	" "
Ab9	"	4	13'-3"	" "
Ab10	"	6	15'-0"	" "
Ab11	½" φ	2	16'-6"	" "
Ab12	"	2	14'-6"	" "
Ab13	"	2	12'-6"	" "
Ab14	"	2	8'-6"	" "
Ab15	"	2	6'-6"	" "
Ab16	"	2	4'-6"	" "
Ab18	"	6	10'-3"	Rail
Ab21	¾" φ	31	11'-0"	Over Pile
Ab22	"	14	9'-0"	" " (Splice)
Ab23	"	18	24'-0"	" " "
Ab24	"	2	19'-0"	" " "
Ab25	"	2	17'-6"	" " "
Ab28	½" φ	31	5'-9"	Backwall Br. Seat

BENT BARS

MARK	SIZE	NO.	LENGTH	LOCATION
Ab1	½" φ	19	23'-2"	Bridge Seat
Ab2	¾" φ	41	17'-0"	Backwall
Ab17	⅝" φ	14	8'-4"	Rail
Ab19	¾" φ	12	10'-6"	Rail Post
Ab20	½" φ	16	8'-6"	" "
Ab26	1¼" ■	8	30'-11"	Bridge Seat
Ab27	¾" φ	2	12'-7"	Backwall
Ab30	¾" φ	8	20'-0"	Ret. Wall
Ab27	[illegible]	[illegible]	[illegible]	[illegible]

Note: All dimensions to ℄ steel.

PLAN – WHITE
TRACE – CLARK
CHECK – As noted.

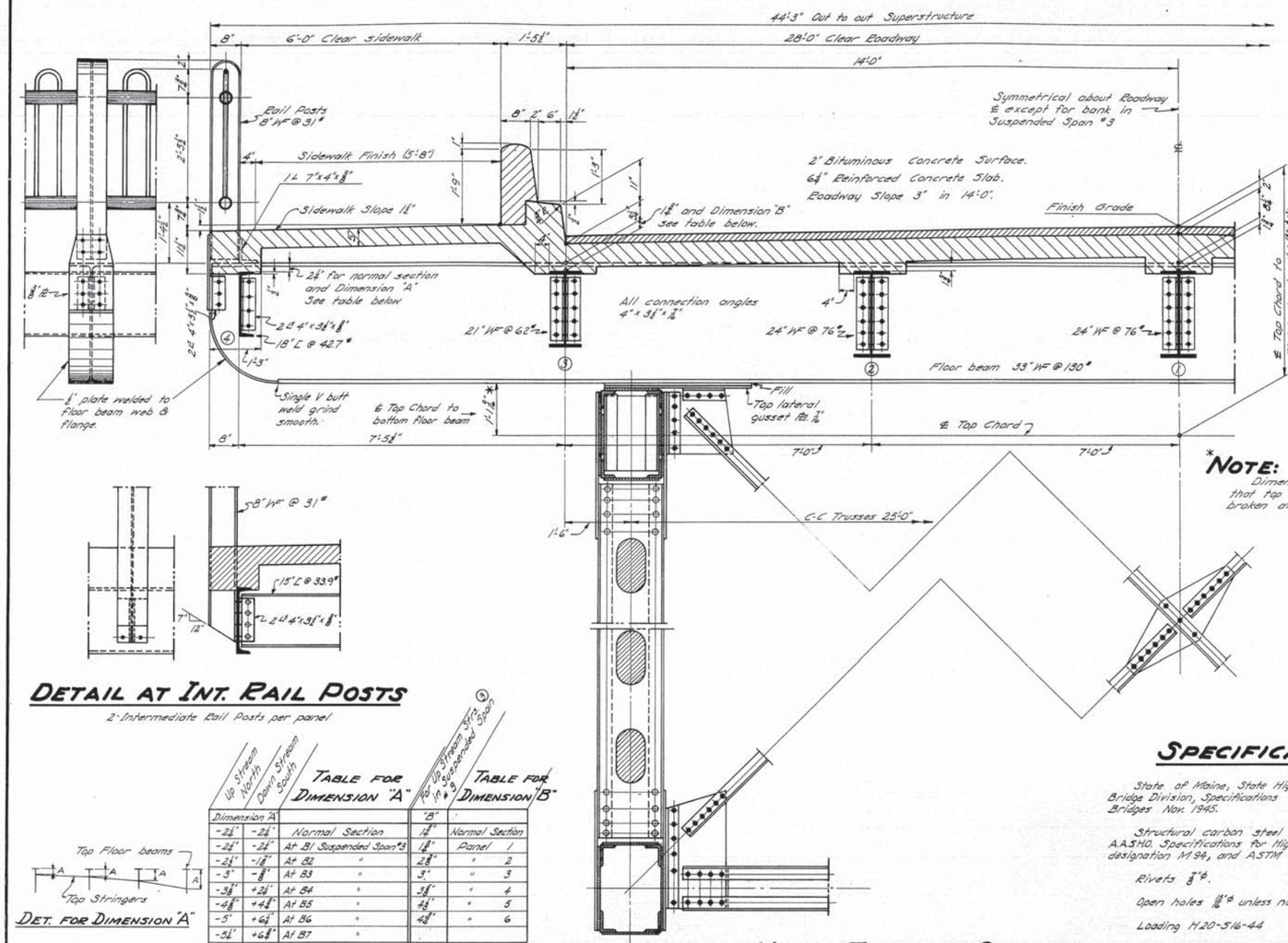
BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

REINF. STEEL – ABUTS., & PIERS, 7-8-9-10
SHEET 26 OF 45 AUGUSTA, MAINE FEB. 1948

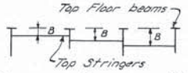
0 1 2 3 4 5 INCHES



DETAIL AT INT. RAIL POSTS

2 Intermediate Rail Posts per panel

DET. FOR DIMENSION "A"



DET. FOR DIMENSION "B"

Up Stream North	Down Stream South	TABLE FOR DIMENSION "A"	Up Stream Str. ④ in Suspended Span #3	TABLE FOR DIMENSION "B"
Dimension "A"			"B"	
-2½"	-2½"	Normal Section	1⅞"	Normal Section
-2½"	-2½"	At B1 Suspended Span #3	1⅞"	Panel 1
-2½"	-1⅞"	At B2 "	2⅞"	" 2
-3"	-⅜"	At B3 "	3"	" 3
-3⅜"	+2½"	At B4 "	3⅜"	" 4
-4⅜"	+4⅜"	At B5 "	4⅜"	" 5
-5"	+6⅜"	At B6 "	4⅜"	" 6
-5½"	+6⅜"	At B7 "		

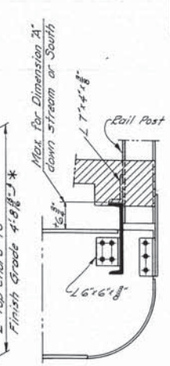
Table for Dimension "A" for location of sidewalk stringers, shows distance from top of floor beam to top of stringers. (+) = sidewalk stringer above floor beam, (-) = sidewalk stringer below floor beam. Top flange of floor beam to be coped whenever necessary. For floor beam designation see sheet "GENERAL PLAN & ELEVATION"

Dimension "B", for location of stringers ③ in Suspended Span #3, is the distance from top of floor beam to top of stringer. Dimension "B" for stringers ④ on up-stream or North side only.

HALF TYPICAL SECTION TRUSS SPANS

NORMAL SECTION

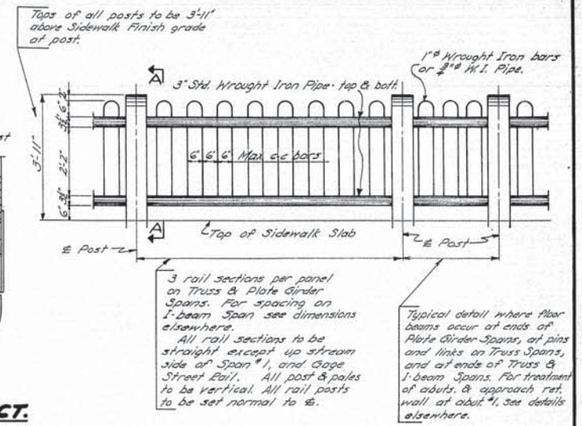
Normal Section is for all truss Spans except Suspended Span #3 (See Dimensions "A" & "B")



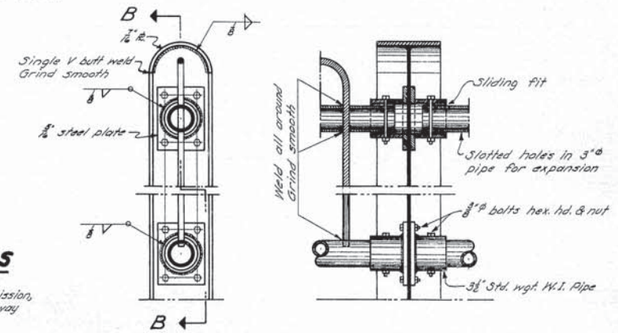
PART SECT.

Down stream side of FBT Suspended Span #3

NOTE: Dimensions marked * assume that top chord of truss will be broken at truss panel points.



PART RAIL ELEVATION



SECT. A-A SECT. B-B

RAIL DETAILS

Complete rail details to be furnished by the Contractor for approval before fabrication is started. W.I. Pipe sleeves, steel plates and bolts for connecting rail sections to posts, shall be furnished with W.I. Rail.

Rail posts on Superstructure to be Structural Steel.

SPECIFICATIONS

State of Maine, State Highway Commission, Bridge Division, Specifications Steel Highway Bridges Nov. 1945.

Structural carbon steel shall conform to A.A.S.H.O. Specifications for Highway Materials, designation M 94, and A.S.T.M. designation A.T.

Rivets ⅞" ⌀.

Open holes 15/16" ⌀ unless noted.

Loading H 20-S16-44

Holes for field connections and field splices of Main Members, shall be sub-punched and reamed to a steel template or reamed while assembled.

Revised, Specification Reference, March, 1948

DESIGN – EVERETT	TRACE – CLARK
DETAIL – "	CHECK – C.L.P.

BRIDGE – 5196

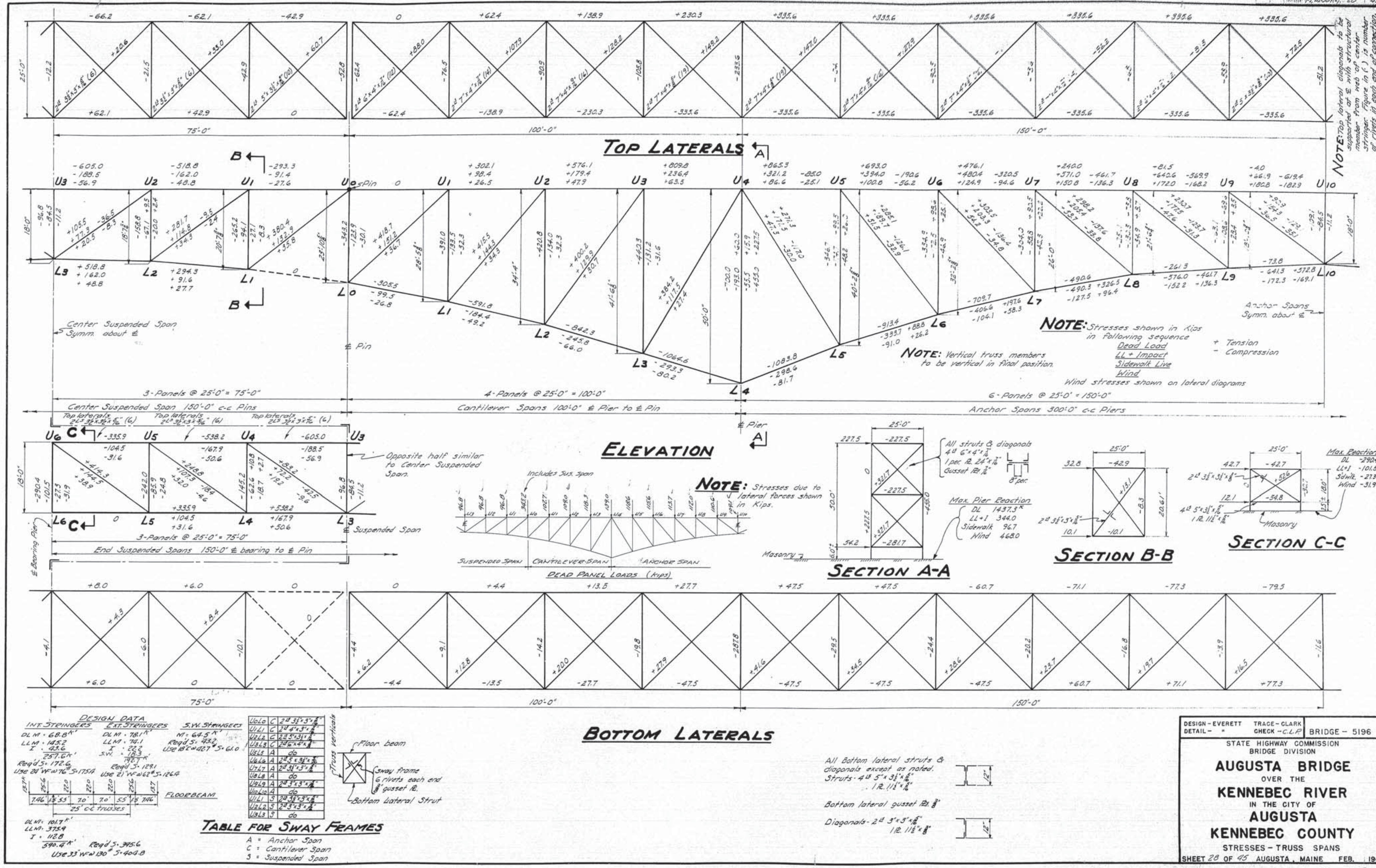
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

SUPERSTRUCTURE & RAIL DETAILS

SHEET 27 OF 45 AUGUSTA, MAINE FEB. 1948

52-27



DESIGN - EVERETT TRACE - CLARK
DETAIL - " CHECK - C.L.P.

BRIDGE - 5196

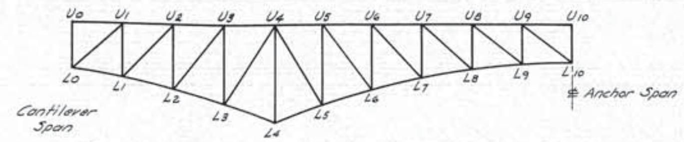
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

STRESSES - TRUSS SPANS

SHEET 28 OF 45 AUGUSTA, MAINE FEB. 1946

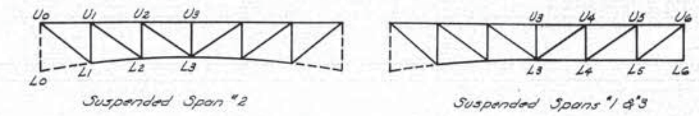
52 - 28



ANCHOR & CANTILEVER SPANS

Reference Sheet #10

Member	Stress	Reqd A	Net A reqd	Net A	Gross A reqd	Gross A	Section
U_0U_1							Use same section as U_1U_2
U_1U_2	+427.0		23.72□"	26.61□"		34.76□"	4∠s 4"x4"x3/8"; 2 Pls. 24"x3/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_2U_3	+803.4		44.63□"	45.75□"		61.38□"	4∠s 6"x4"x1/2"; 2 Pls. 24"x3/4"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_3U_4	+1109.7		61.65□"	63.35□"		85.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x5/8"; 2 Pls. 12"x5/8"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_5U_6	+1218.7		67.71□"	67.87□"		91.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x1"; 2 Pls. 12"x3/8"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_4U_5	+1287.0		71.50□"	72.40□"		97.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x1/2"; 2 Pls. 24"x5/8"; 2 Pls. 12"x3/8"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_6U_7	+1300.6 / -500.9		72.26□"	72.40□"	34.10□"	97.14□"	Use same section as U_4U_5; 7" per.; 18" 0-0; 24½" b-b ∠s
U_7U_8	+1344.2 / -918.7		74.68□"	74.66□"	62.56□"	100.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x5/8"; 2 Pls. 24"x9/16"; 2 Pls. 12"x5/8"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_8U_9	+1390.4 / -1219.9		77.24□"	78.09□"	83.09□"	104.64	4∠s 6"x4"x3/4"; 4 Pls. 24"x5/8"; 2 Pls. 12"x7/16"; 2 per. Pls. 15½"x3/8"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_9U_{10}	+1397.0 / -1370.2		77.61□"	78.09□"	93.33□"	104.64□"	Use same section as U_8U_9; 7" per.; 18" 0-0; 24½" b-b ∠s
L_0L_1	-431.8	29.35□"				43.75□"	4∠s 6"x4"x3/8"; 2 Pls. 24"x1/2"; 2 per. Pls. 16"x5/16"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_1L_2	-825.4	56.21□"				56.44□"	4∠s 6"x4"x1/2"; 2 Pls. 24"x5/8"; 2 per. Pls. 16"x7/16"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_2L_3	-1154.1	78.69□"				79.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x3/4"; 2 Pls. 12"x5/8"; 2 per. Pls. 16"x3/8"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_3L_4	-1438.1	97.9□"				99.26□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x1"; 2 Pls. 12"x5/8"; 2 per. Pls. 16"x1/2"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_4L_5	-1464.1	99.6□"				99.26□"	Use same section as L_3L_4; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_5L_6	-1338.1	91.30□"				92.64□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x15/16"; 2 Pls. 12"x9/16"; 2 per. Pls. 16"x3/8"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_6L_7	-1220.4	83.2□"				83.64□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x3/4"; 2 Pls. 12"x9/16"; 2 per. Pls. 16"x3/8"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_7L_8	-1148.2 / +119.3		6.63□"	58.82□"	78.28□"	79.14□"	Use same section as L_2L_3; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_8L_9	-1197.1 / +622.7		34.59□"	61.13□"	81.49□"	82.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x3/4"; 2 Pls. 12"x1/2"; 2 per. Pls. 16"x3/8"; 7½" per.; 18" 0-0; 24½" b-b ∠s
L_9L_{10}	-1232.5 / +1035.3		57.52□"	63.44□"	83.87□"	85.14□"	4∠s 6"x4"x3/4"; 2 Pls. 24"x3/4"; 2 Pls. 12"x5/8"; 2 per. Pls. 16"x3/8"; 7½" per.; 18" 0-0; 24½" b-b ∠s
U_0L_0	-497.2k	33.76□"				42.96□"	2 [s 18"x58#; 2 per. Pls. 17"x1/2"; 8" per.
U_1L_1	-556.8	38.19□"				38.24□"	2 [18"x51.9#; 2 per. Pls. 17"x7/16"; 8" per.
U_2L_2	-587.1	40.94□"				41.84□"	2 [18"x58#; 2 per. Pls. 17"x7/16"; 8" per.
U_3L_3	-603.1	43.11□"				44.09□"	2 [18"x58#; 2 per. Pls. 17"x9/16"; 8" per.
U_4L_4	-1122.8	80.29□"				80.76□"	4∠s 6"x4"x5/8"; 2 Pls. 24"x3/4"; 2 Pls. 12"x5/8"; 2 per. Pls. 16"x1/2"; 8" per.; 18" 0-0; 24½" b-b ∠s
U_5L_5	-569.6	40.70□"				40.71□"	2 [18"x58#; 2 per. Pls. 17"x3/8"; 8" per.
U_6L_6	-554.3	38.57□"				39.59□"	2 [18"x58#; 2 per. Pls. 17"x5/16"; 8" per.
U_7L_7	-505.1	34.51□"				35.99□"	2 [18"x51.9#; 2 per. Pls. 17"x5/16"; 8" per.
U_8L_8	-416.3	28.16□"				30.59□"	2 [18"x42.7#; 2 per. Pls. 17"x5/16"; 8" per.
U_9L_9	-300.1	20.29□"				25.43□"	2 [15"x33.9#; 2 per. Pls. 17"x5/16"; 8" per.
$U_{10}L_{10}$	-204.8	13.82□"				25.43□"	Use same section as U_9L_9; 8" per.
L_3U_4	+174.6		9.70□"	19.05□"		25.43□"	Use same section as U_9L_{10} Anchor Span; 8" per.
L_0U_1	+606.6		33.70□"	34.45□"		44.09□"	Use same section as U_3L_3; 8" per.
L_1U_2	+594.1		33.01□"	33.57□"		42.96□"	2 [18"x58#; 2 per. Pls. 17"x1/2"; 8" per.
L_2U_3	+560.8		31.15□"	31.82□"		40.71□"	2 [18"x58#; 2 per. Pls. 17"x3/8"; 8" per.
L_3U_4	+529.1		29.39□"	30.95□"		39.59□"	2 [18"x58#; 2 per. Pls. 17"x5/16"; 8" per.
U_4L_5	+490.1		27.23□"	28.07□"		35.99□"	2 [18"x51.9#; 2 per. Pls. 17"x5/16"; 8" per.
U_5L_6	+526.3		29.24□"	29.82□"		38.24□"	2 [18"x51.9#; 2 per. Pls. 17"x7/16"; 8" per.
U_6L_7	+561.0		31.17□"	31.82□"		40.71□"	Use same section as L_2U_3; 8" per.
U_7L_8	+557.3		30.96□"	30.95□"		39.59□"	2 [18"x58#; 2 per. Pls. 17"x5/16"; 8" per.
U_8L_9	+455.8		25.32□"	26.06□"		33.51□"	2 [18"x45.8#; 2 per. Pls. 17"x3/8"; 8" per.
U_9L_{10}	+332.0 / -150.9		18.44□"	19.05□"	10.53□"	25.43□"	2 [15"x33.9#; 2 per. Pls. 17"x5/16"; 8" per.
L_4U_5	+388.1		21.56□"	23.75□"		30.59□"	2 [18"x42.7#; 2 per. Pls. 17"x5/16"; 8" per.
L_5U_6	+597.7		33.21□"	33.57□"		42.96□"	Use same section as L_1U_2 Cantilever Span; 8" per.



SUSPENDED SPANS

Reference Sheet #10

Member	Stress	Reqd A	Net A reqd	Net A	Gross A	Section
U_0U_1	-412.3	28.03□"			43.75□"	4∠s 6"x4"x3/8"; 2 Pls. 24"x1/2"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_1U_2	-729.6	49.60□"			49.75□"	4∠s 6"x4"x5/8"; 2 Pls. 24"x5/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_2U_3	-850.4	57.83□"			58.03□"	4∠s 6"x4"x7/16"; 2 Pls. 24"x3/4"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
L_0L_1	0					4∠s 4"x4"x3/8"; 2 Pls. 24"x5/16"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
L_1L_2	+413.6		22.98□"	24.29□"	31.76□"	4∠s 4"x4"x3/8"; 2 Pls. 24"x5/16"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
L_2L_3	+729.6		40.53□"	40.41□"	54.31□"	4∠s 6"x4"x1/2"; 2 Pls. 24"x5/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_1L_1	-386.4	26.24□"			29.03□"	2 [15"x40#; 2 per. Pls. 17"x5/16"; 8" per.
U_2L_2	-245.9	16.71□"			17.69□"	2 [12"x20.7#; 2 per. Pls. 17"x5/16"; 8" per.
U_3L_3	-192.5	13.07□"			17.69□"	Use same section as U_2L_2 Suspension Span #2; 8" per.
U_0L_1	+549.1		30.51□"	30.95□"	39.59□"	Use same section as L_3U_4 Cantilever Span; 8" per.
U_1L_2	+430.8		23.93□"	25.19□"	32.39□"	2 [18"x45.8#; 2 per. Pls. 17"x5/16"; 8" per.
U_2L_3	+203.3		11.29□"	19.05□"	25.43□"	Use same section as U_9L_{10} Anchor Span; 8" per.
U_3U_4						Use same section as U_2U_3
U_4U_5	-756.7	51.45□"			52.03□"	4∠s 6"x4"x7/16"; 2 Pls. 24"x5/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
U_5U_6	-472.0	32.09□"			43.75□"	Use same section as U_0U_1 Suspension Span #2; 7" per.; 18" 0-0; 24½" b-b ∠s
L_3L_4	+756.7		42.04□"	43.57□"	58.75□"	4∠s 6"x4"x5/8"; 2 Pls. 24"x5/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
L_4L_5	+472.0		26.22□"	26.61□"	34.75□"	4∠s 4"x4"x3/8"; 2 Pls. 24"x3/8"; 2 per. Pls. 15½"x5/16"; 7" per.; 18" 0-0; 24½" b-b ∠s
L_5L_6						Use same section as L_0L_1 Suspension Span #2
U_4L_4	-226.5	15.37□"			17.69□"	Use same section as U_2L_2 Suspension Span #2; 8" per.
U_5L_5	-352.7	23.82□"			29.03□"	Use same section as U_1L_1 Suspension Span #2; 8" per.
U_6L_6	-419.2	28.31□"			29.03□"	Use same section as U_1L_1 Suspension Span #2; 8" per.

NOTE: All members are figured for allowable unit stresses as follows; Tension = 18,000 #/□"
Compression = $15{,}000 - \frac{1}{4}\left(\frac{L^2}{r^2}\right)$

Gross areas shown include gross area of perforated plates less area of the perforation. (per. = perforation.)

Minimum stagger for net section = 1½ inches.

All stresses shown in Kips.

DESIGN - EVERETT TRACE - CLARK DETAIL - " CHECK - C.L.P.	BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

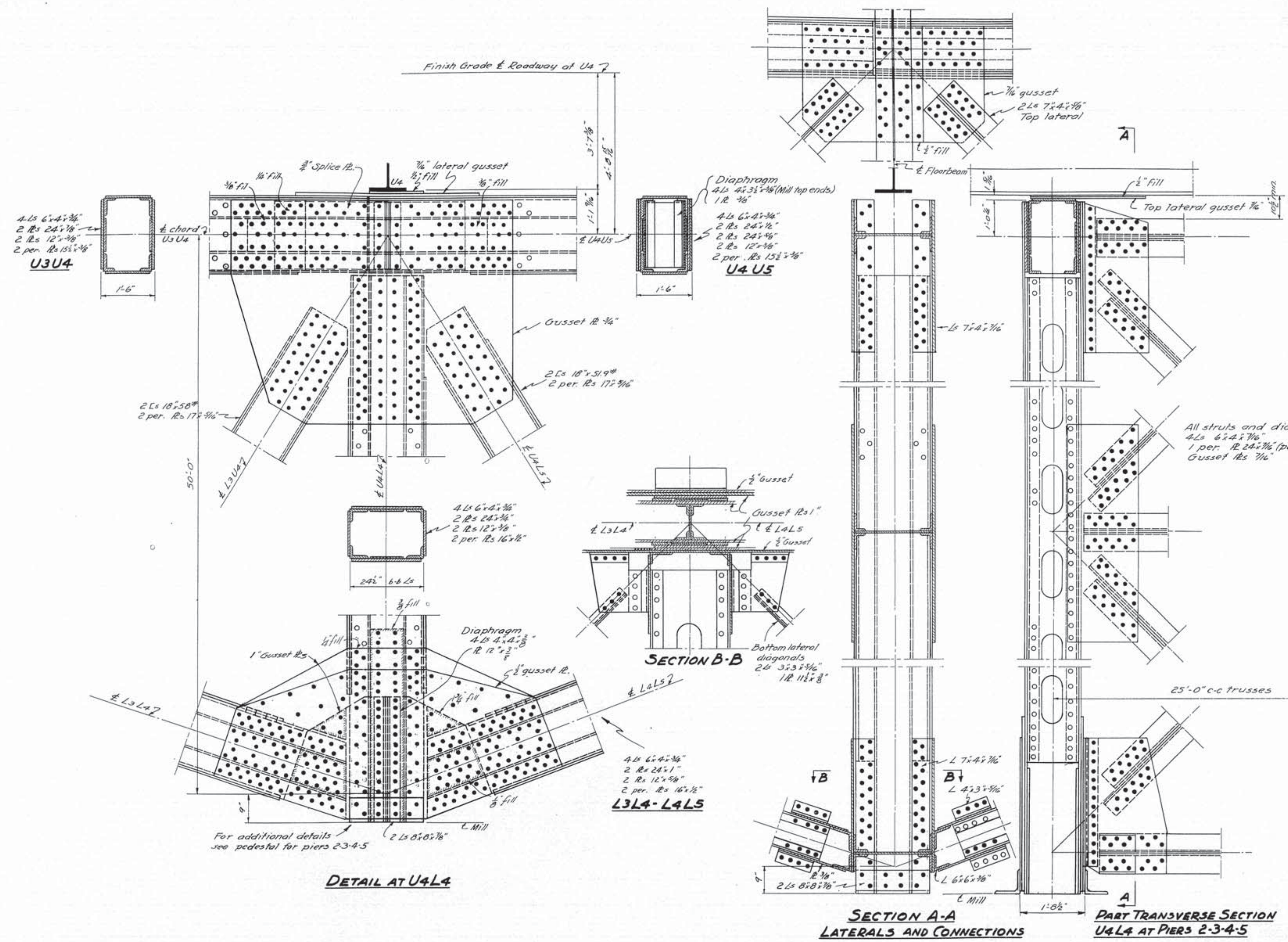
MAKE-UP OF MEMBERS

SHEET 29 OF 45 AUGUSTA, MAINE FEB. 1948

52-29

0 1 2 3 4 5 INCHES

P.R.A. DIV NO.	STATE	F.E.D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
I	MAINE	F.I.,U.I. 389(2)	30	45



DESIGN - EVERETT	TRACE - BOYD	BRIDGE - 5196
DETAIL - "	CHECK - C.L.P.	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

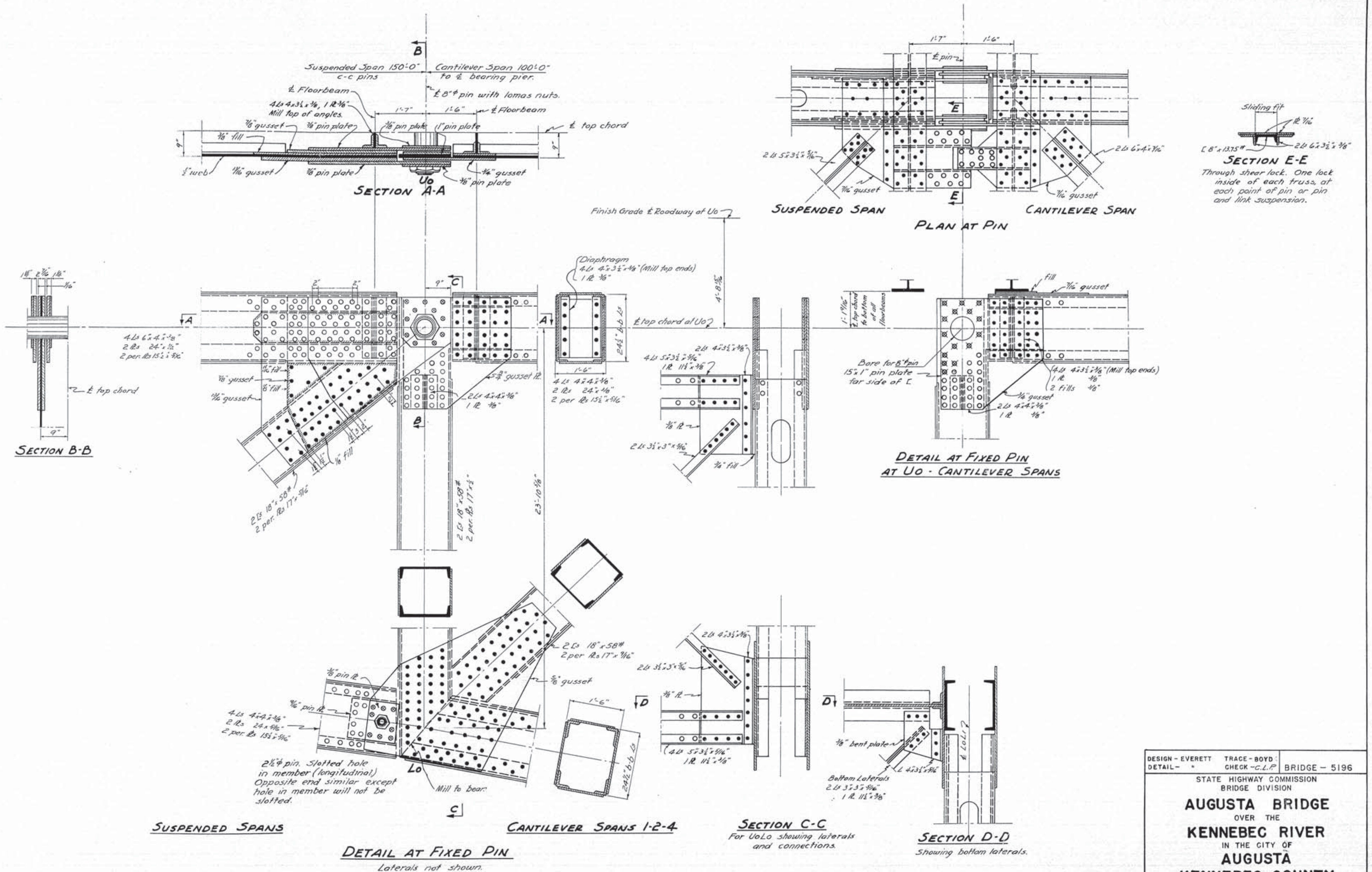
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

STRUCTURAL STEEL DETAILS AT U4L4

SHEET 30 OF 45 AUGUSTA, MAINE FEB. 1948

52-30

0 1 2 3 4 5 INCHES



DESIGN - EVERETT TRACE - BOYD
DETAIL - " CHECK - C.L.P.

BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE

OVER THE

KENNEBEC RIVER

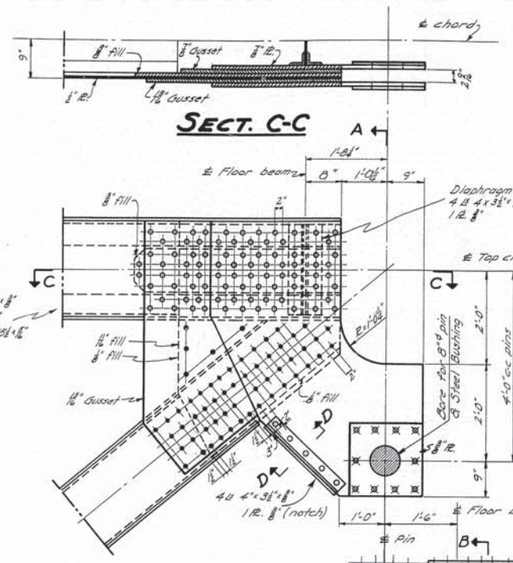
IN THE CITY OF

AUGUSTA

KENNEBEC COUNTY

DETAIL AT FIXED PIN - CANT. & SUS. SPANS
SHEET 31 OF 45 AUGUSTA, MAINE FEB. 1948

52-31



SECT. C-C

JOINT AT U0

Suspended Span

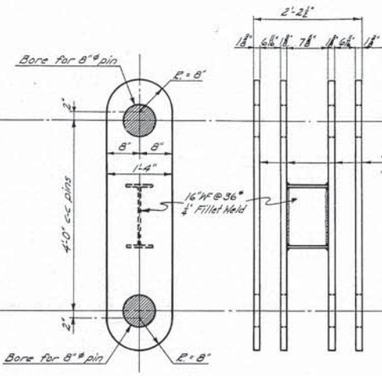
SECT. D-D

JOINT AT U0

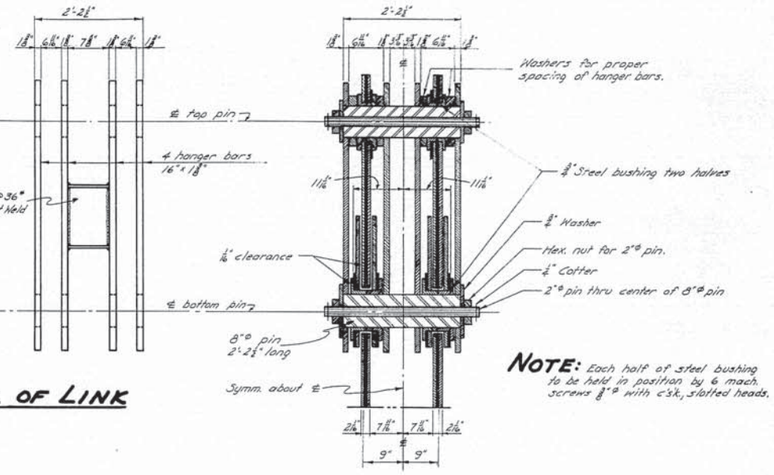
Cantilever Span

SECT. A-A

SECT. B-B



DETAIL OF LINK



NOTE: Each half of steel bushing to be held in position by 6 mach. screws ⅜"ø with c'sk, slotted heads.

LINK & PIN ASSEMBLY

Transverse Section at ℄ of Pins

0 1 2 3 4 5 INCHES

DESIGN – EVERETT	TRACE – CLARK	BRIDGE – 5196
DETAIL – "	CHECK – C.L.P	

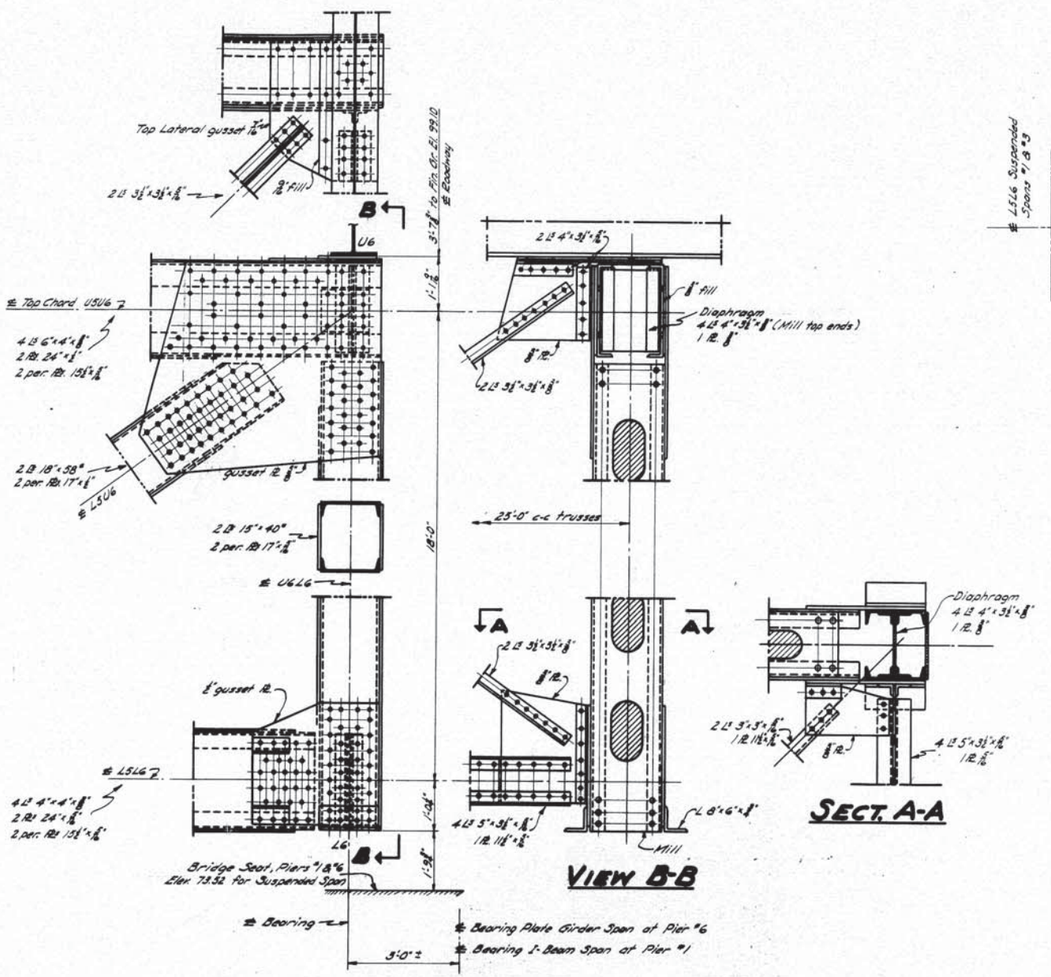
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

DETAIL – PIN & LINK

SHEET 32 OF 45 AUGUSTA, MAINE FEB. 1948

52-32

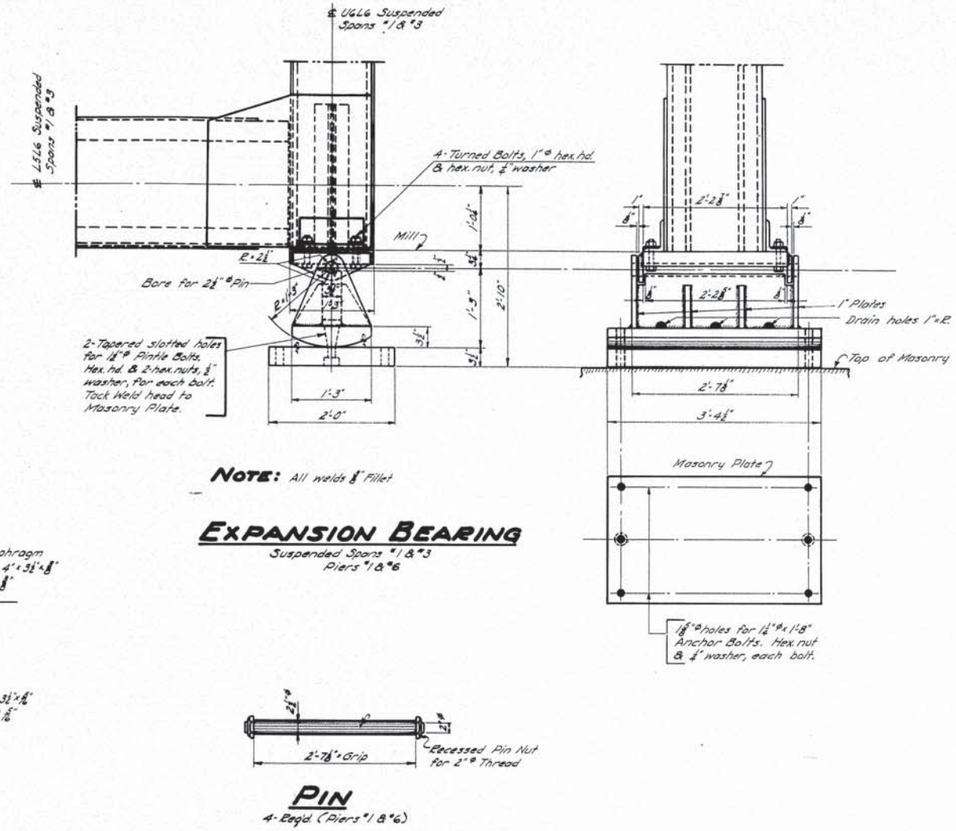


VIEW B-B

SECT. A-A

DETAIL AT U6L6

Suspended Spans #1&#3



NOTE: All welds ⅜" Fillet

EXPANSION BEARING

Suspended Spans #1&#3
Piers #1&#6

PIN

4- Req'd. (Piers #1&#6)

DESIGN – EVERETT TRACE – CLARK
DETAIL – WHITE CHECK – CAB

BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

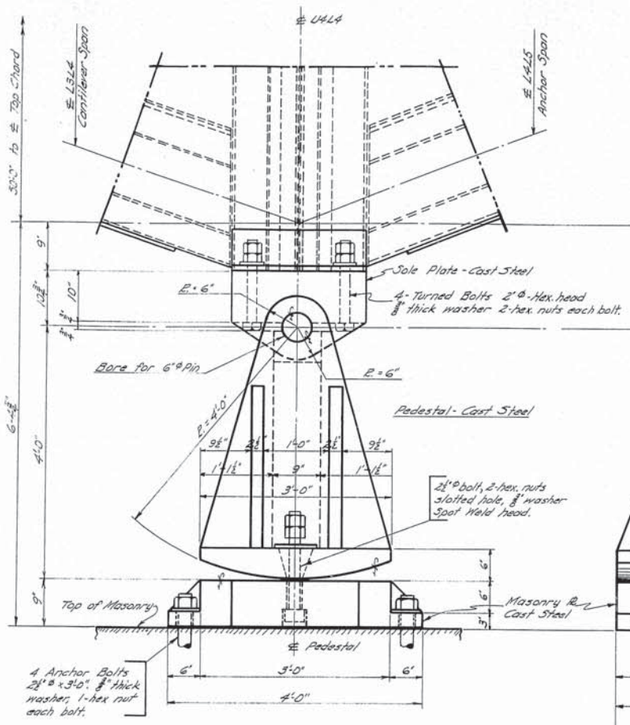
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

STEEL & BEARING DETAILS – PIERS 1 & 6

SHEET 33 OF 45 AUGUSTA, MAINE FEB. 1948

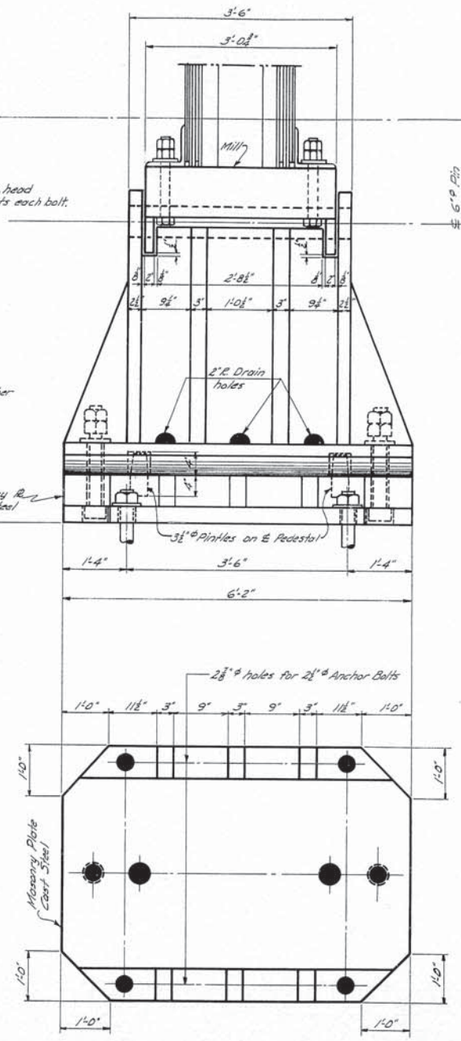
52-33

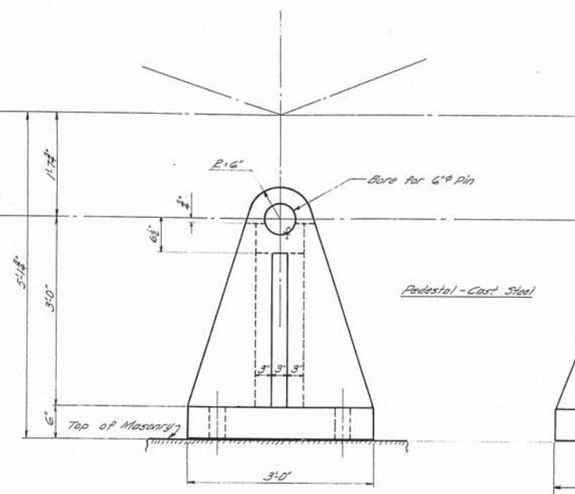
P. R. A. DIV. NO.	STATE	F.A.U. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	(FAU-3018)	34	45



EXPANSION BEARING

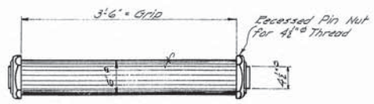
4- Required (Piers #2 & #3)





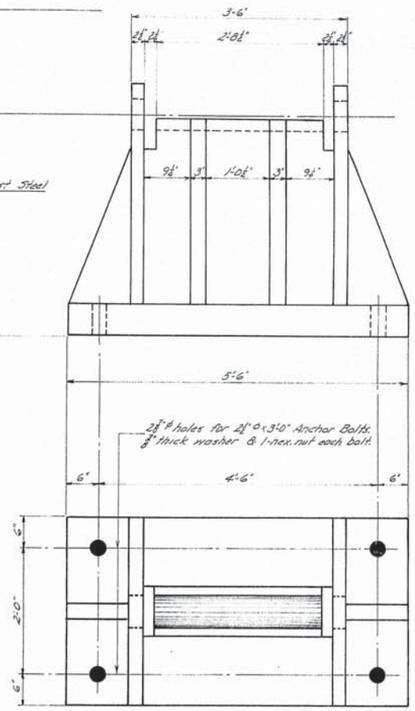
FIXED BEARING

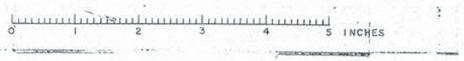
4- Required (Piers #3 & #4)



PIN

8- Required (Piers #2, 3, 4, & 5)





DESIGN – EVERETT	TRACE – CLARK	BRIDGE – 5196
DETAIL – WHITE	CHECK – CdS	

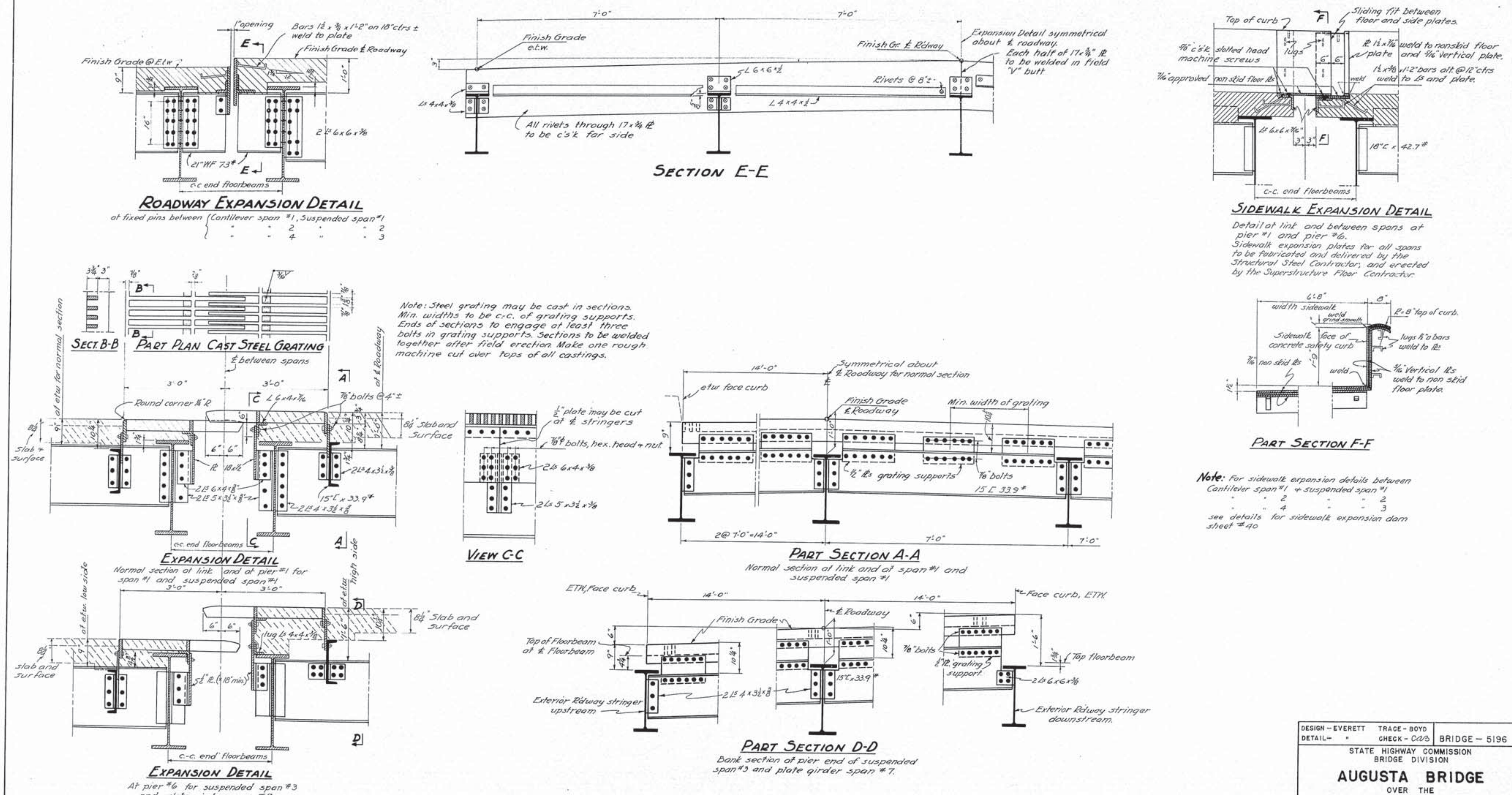
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

EXP. & FIX. BEARINGS-TRUSS SPANS-PIERS 2,3,4,5

SHEET 34 OF 45 AUGUSTA, MAINE FEB. 1948

52-34



DESIGN – EVERETT	TRACE – BOYD	BRIDGE – 5196
DETAIL – "	CHECK – CAB	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

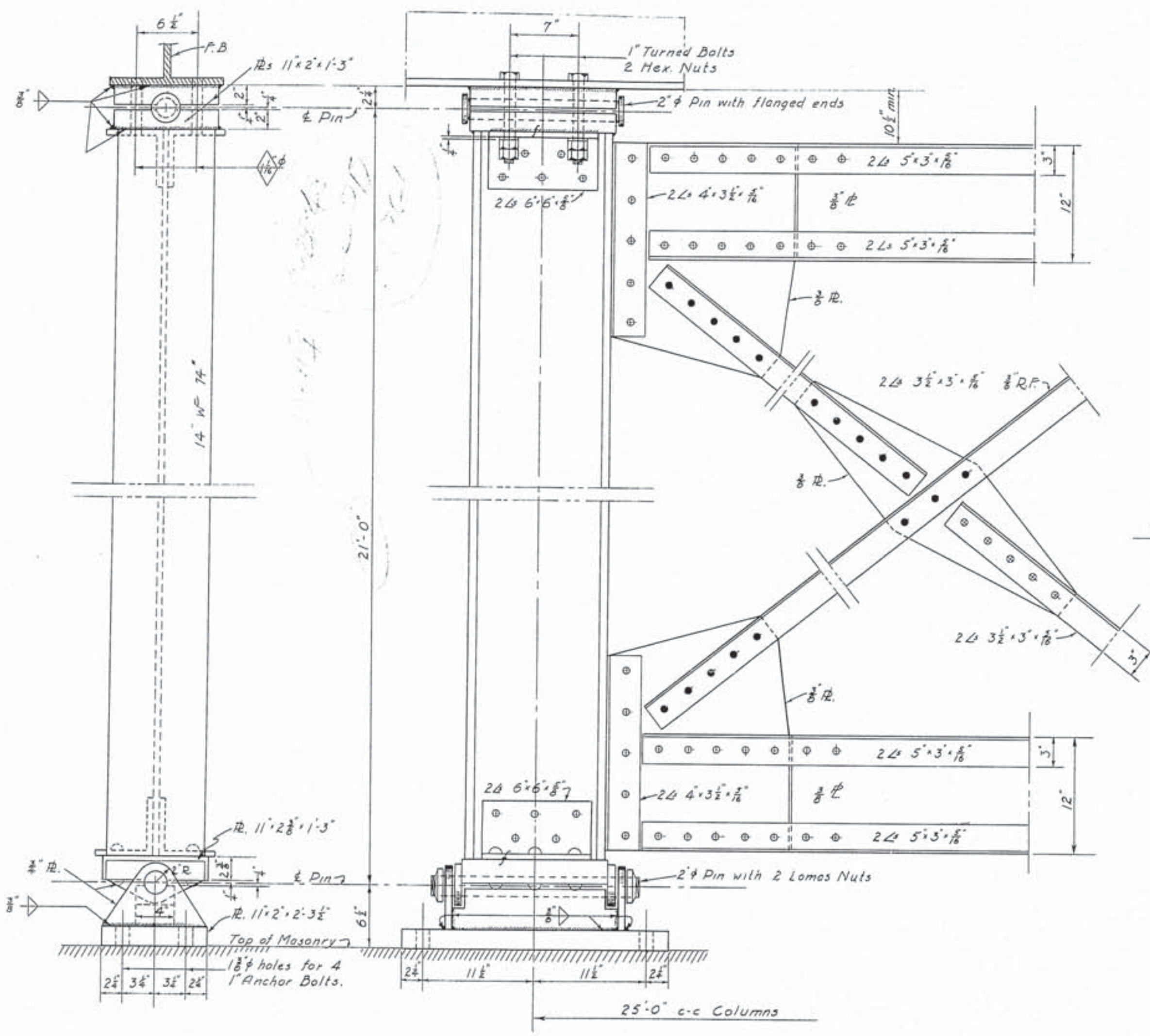
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

FLOOR EXPANSION DETAILS

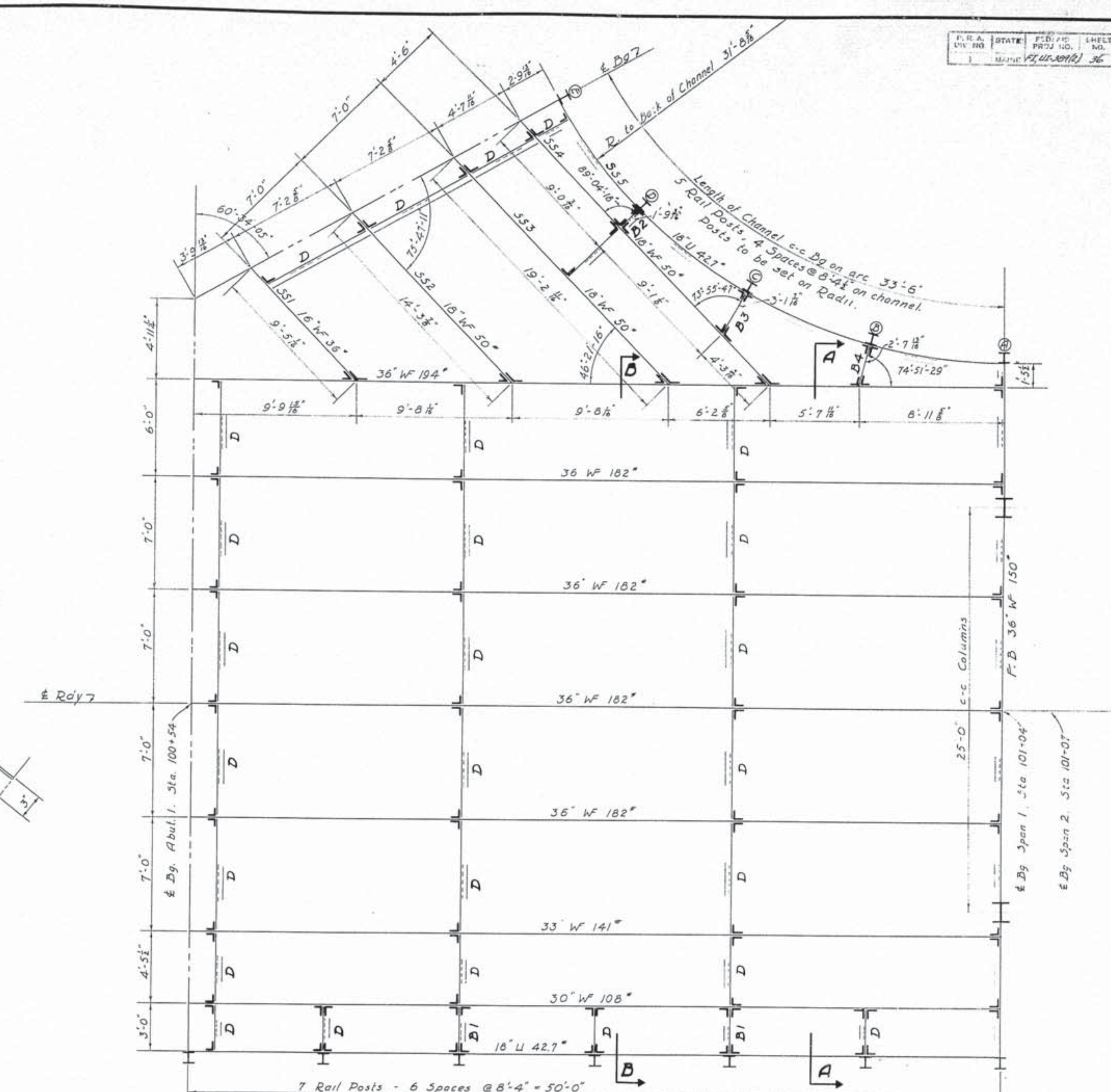
SHEET 35 OF 45 AUGUSTA, MAINE FEB. 1948

52-35

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI, UI-389(2)	36	45



Column Details at Pier 1 for Span 1



Layout Span 1

B indicates Bracket
D indicates Diaphragm

Work this Sheet with Sheet #37

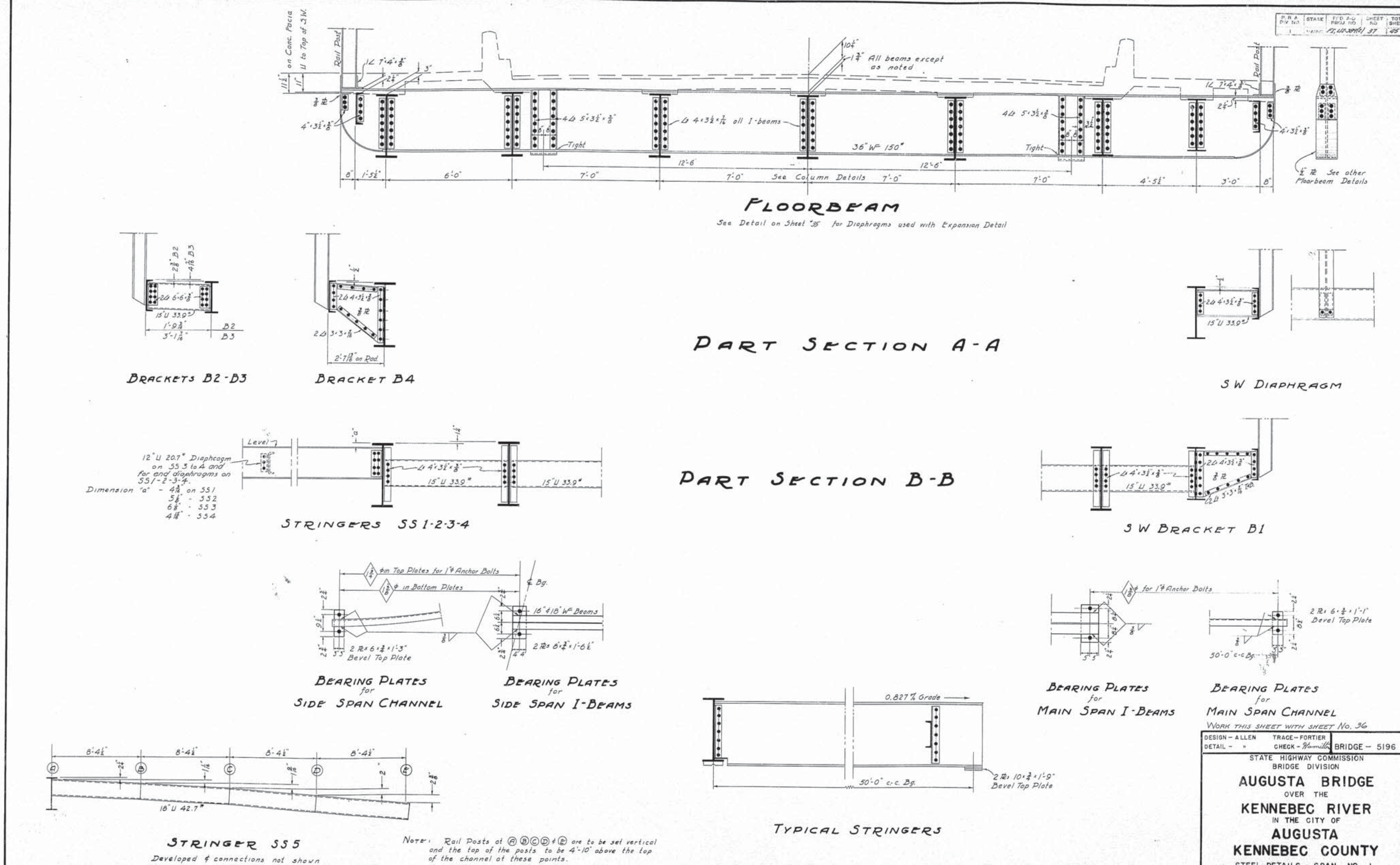
DESIGN - ALLEN TRACE - FORTIER
DETAIL - " CHECK - Pavillion
BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

STEEL DETAILS - SPAN NO. 1
SHEET 36 OF 45 AUGUSTA, MAINE FEB. 1946

52-36



P.R.A. DIV. NO.	STATE	FED. A-D PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI, UI-389(1)	37	45

WORK THIS SHEET WITH SHEET No. 36

DESIGN – ALLEN TRACE – FORTIER
DETAIL – " CHECK – Hamilton
BRIDGE – 5196

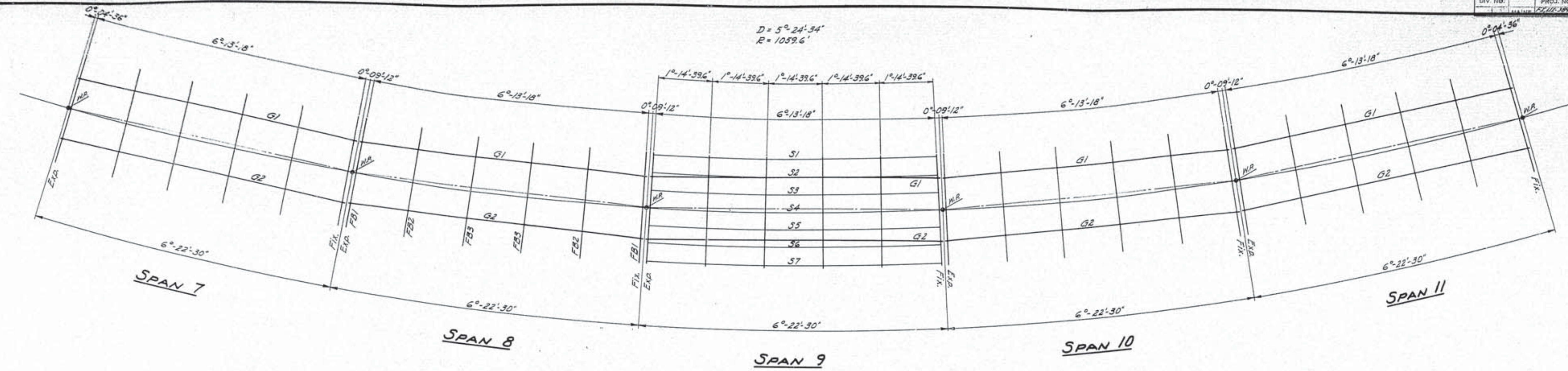
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

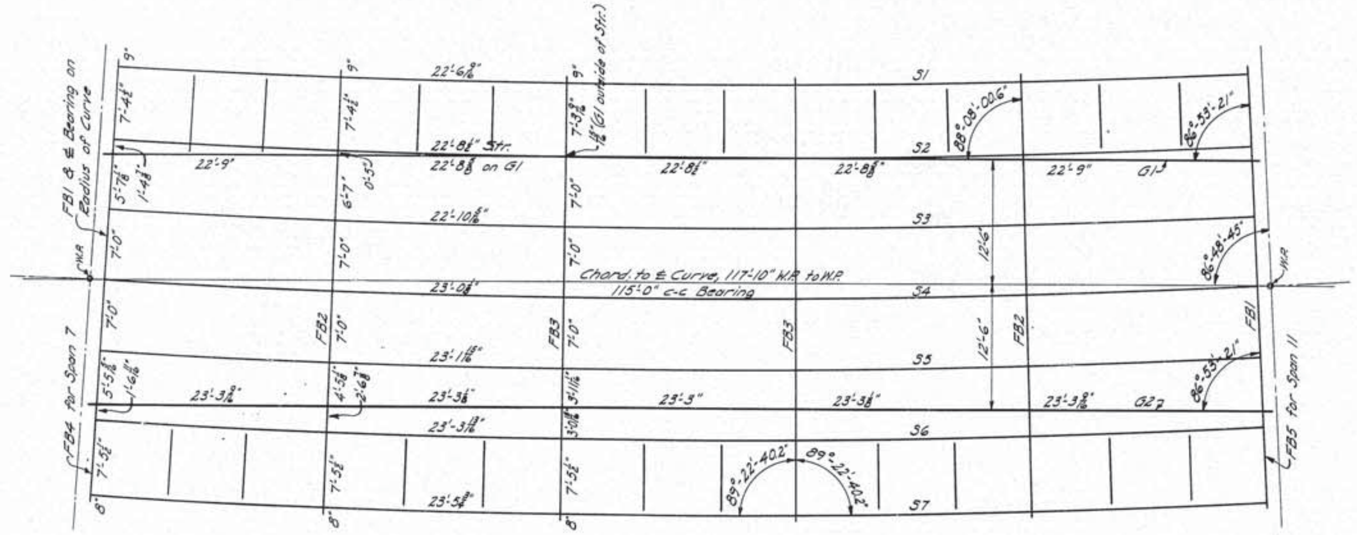
STEEL DETAILS – SPAN NO. 1
SHEET 37 OF 45 AUGUSTA, MAINE FEB. 1948

52-37

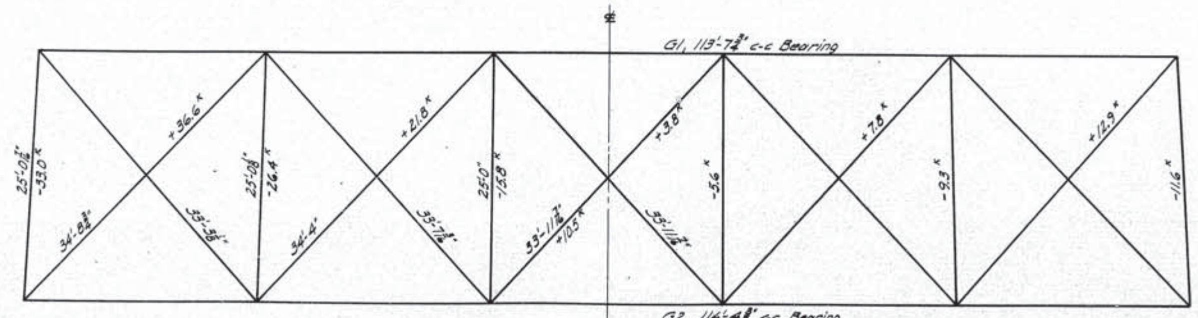
0 1 2 3 4 5 INCHES



Note: All floor beams placed normal to Curve



Spans 7 to 11
(alike except for End FB spans 7 & 11)



Half Plan - Top Laterals

Half Plan - Bottom Laterals

Design Data

Stringers

S1-7
M = 653"K Reqd. s = 36.3
Use 18" ⊔ 42.7# s = 61

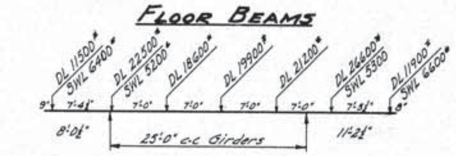
S2-6
DLM + SW = 1113"K
LLM = 800"K
I = 240"K
2153"K Reqd. s = 119.6
Use 21" WF 62# s = 126.4

S3
DLM = 639"K
LLM = 1537"K
I = 461"K
2637"K Reqd. s = 146.5
Use 21" WF 73# s = 150.7

S4
DLM = 687"K
LLM = 1546"K
I = 464"K
2697"K Reqd. s = 149.8
Use 21" WF 73# s = 150.7

S5
DLM = 736"K
LLM = 1557"K
I = 467"K
2760"K Reqd. s = 153.3
Use 21" WF 73# s = 150.7

Floor Beams



FB3

− Cont. Mom.		+ Mom. ℄ F.B.	
DL Con. + SWL	293.1'K	DL Con.	74.1'K
DL Un.	8.2'K	DL Un.	4.0'K
LL + I	33.5'K	LL + I	470.0'K
	334.8'K		548.1'K

Reqd. s = 365.4
Use 33" WF 130# s = 404.8
Use the same for all F.B.

Girders

	G1	G2
Loads LL Un.	665.6#/'	800#/'
S.W.L.L.	55#/'	55#/'
Con. Shear	27040#	32500#
Con. Mom.	18720#	22600#
DL Un., Girder	700#/'	750#/'
Max. Mom.	7550'K	9900'K
Use	4 Ls 8"×8"×7/8"	4 Ls 8"×8"×7/8"
Web	1 PL. 102"×1/2"	1 PL. 102"×1/2"
Cov. PLs.	2 PLs. 20"×7/8"	2 PLs. 20×7/8"
	2 PLs. 20×13/16"	4 PLs. 20×3/4"
Net I	266400"4	356400"4

DESIGN - ALLEN	TRACE - CLARK	BRIDGE - 5196
DETAIL - "	CHECK - Hamilton	

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

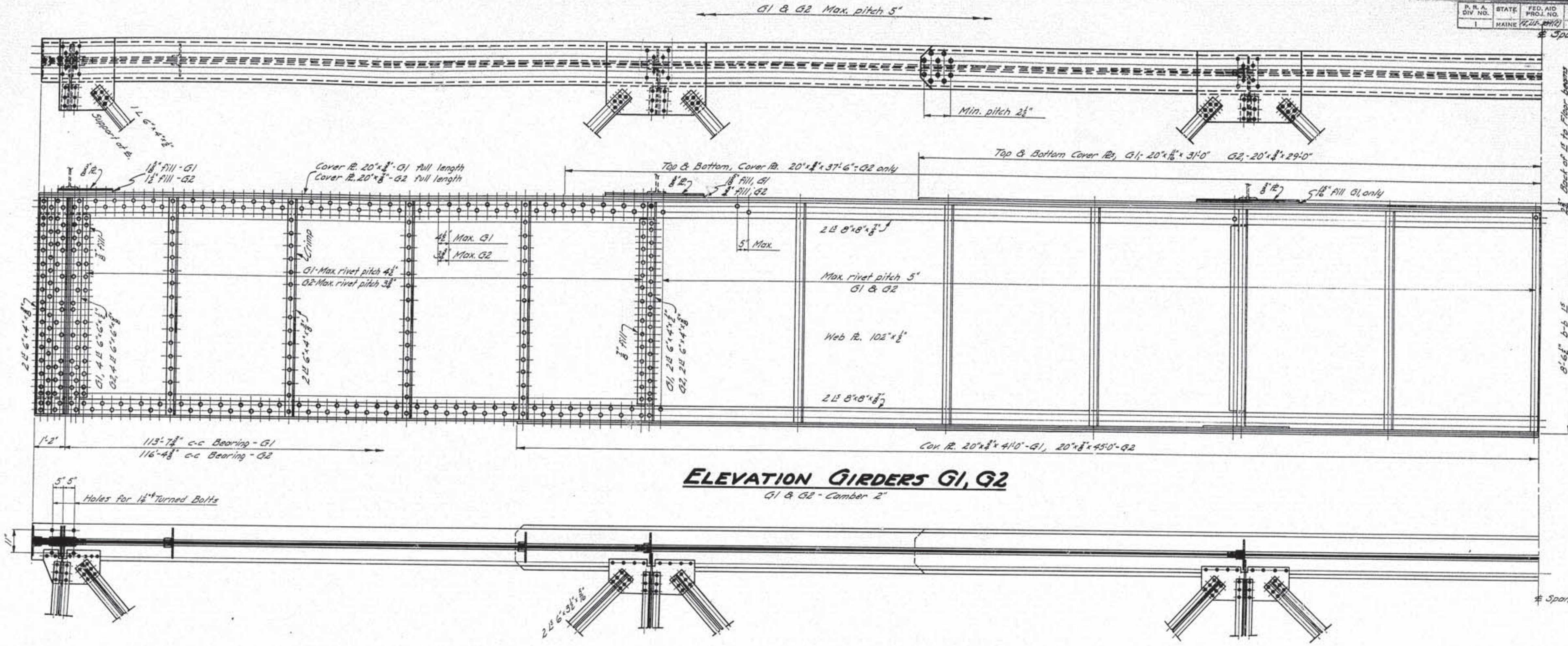
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

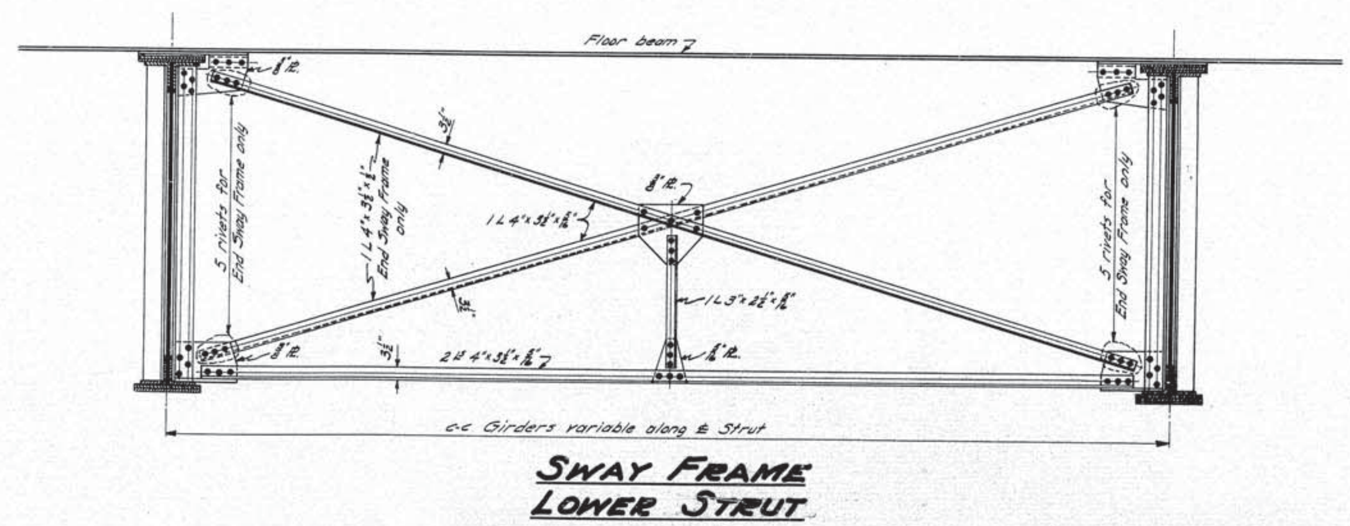
STRESSES & LAYOUT PLATE GIRDER SPANS
SHEET 38 OF 45 AUGUSTA, MAINE FEB. 1948

52-38

0 1 2 3 4 5 INCHES

P. R. A. DIV NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	39	45





DESIGN - ALLEN
DETAIL - "
TRACE - CLARK
CHECK - Hamilton

BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

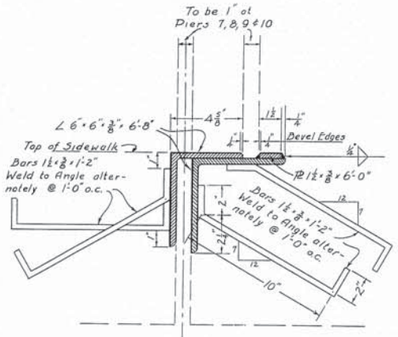
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PLATE GIRDER DETAILS

SHEET 39 OF 45 AUGUSTA, MAINE FEB. 1948

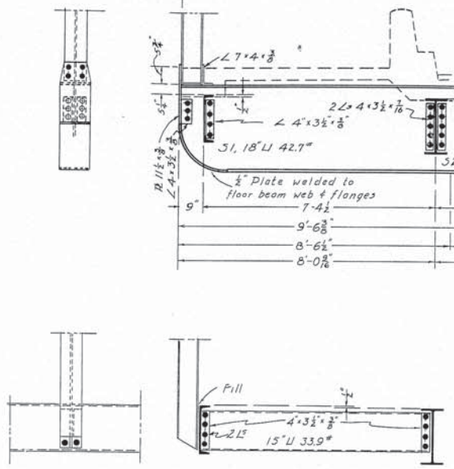
52-39

P.R.A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	[illegible]	40	45



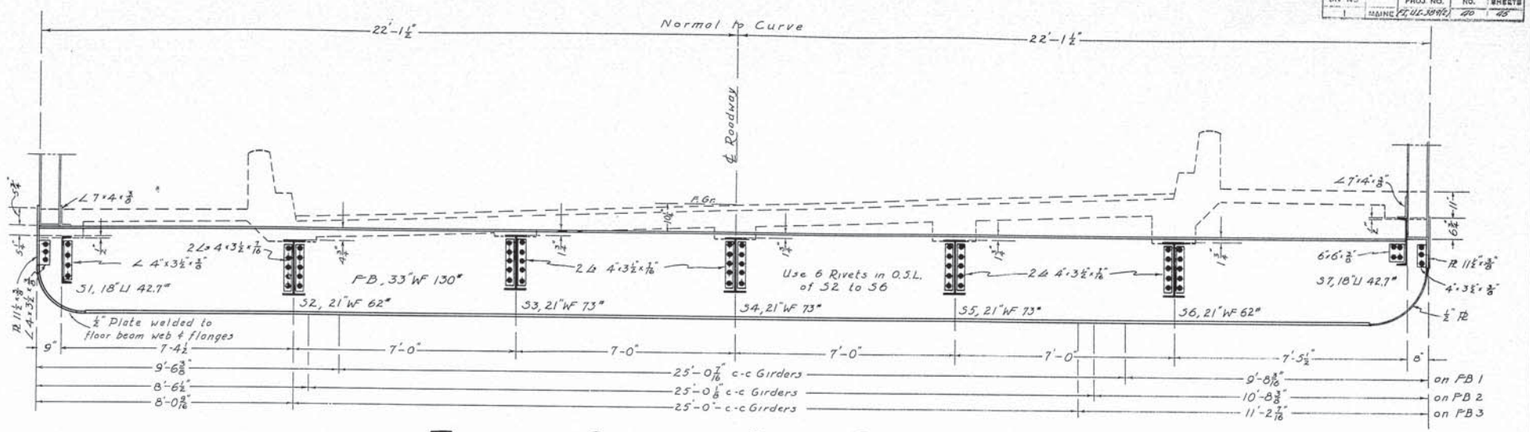
Sidewalk Expansion Dam

Note: The top angle and the 1½" bar to have a non-skid surface by bead welding to an area, depth and pattern of an approved non-skid plate.

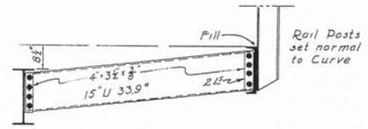


Diaphragm at Int. Rail Posts

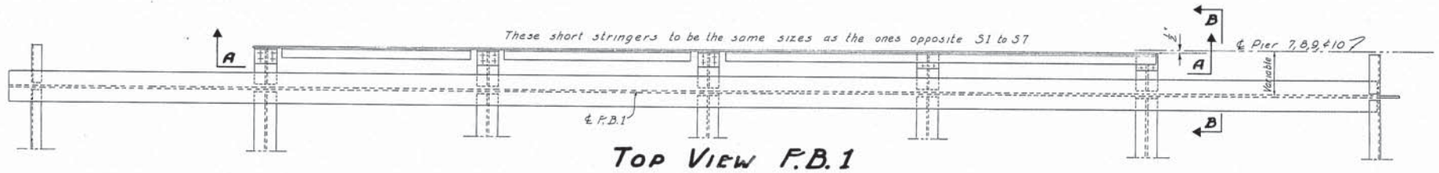
Note:
Rail Posts to be set plumb.
Two Int. Rail Posts between Floor beams on both sides, set at three equal spaces.



Typical Section Floor Beam

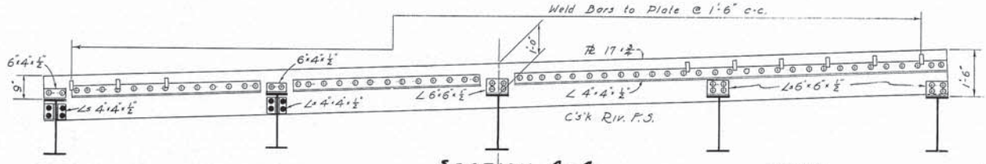


Diaphragm at Int. Rail Posts

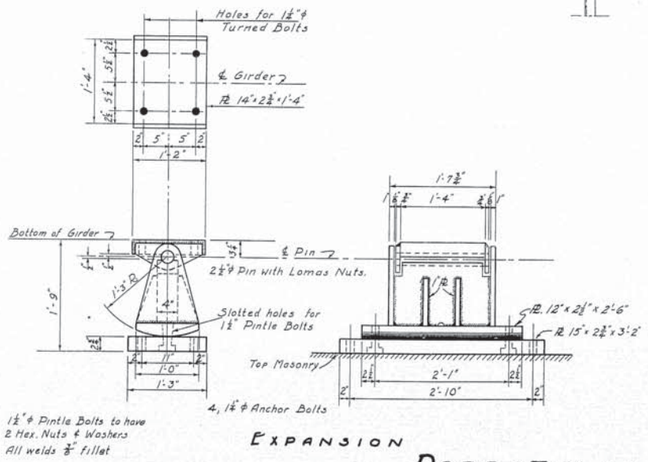


Top View P.B.1

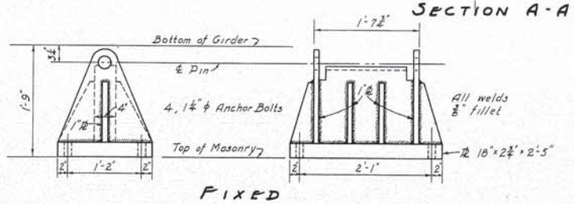
For P.B.4 see sheet # 35 Expansion Details at Pier 6
P.B.5 will be similar to P.B.1 without short stringer brackets.



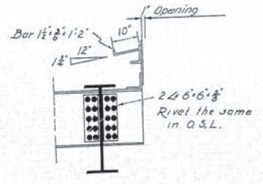
Section A-A



Expansion



Fixed



Section B-B

Pedestals for Plate Girder Spans

DESIGN – ALLEN	TRACE – FORTIER
DETAIL – *	CHECK – [illegible]

BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

PLATE GIRDER DETAILS

SHEET 40 OF 45 AUGUSTA, MAINE FEB, 1948

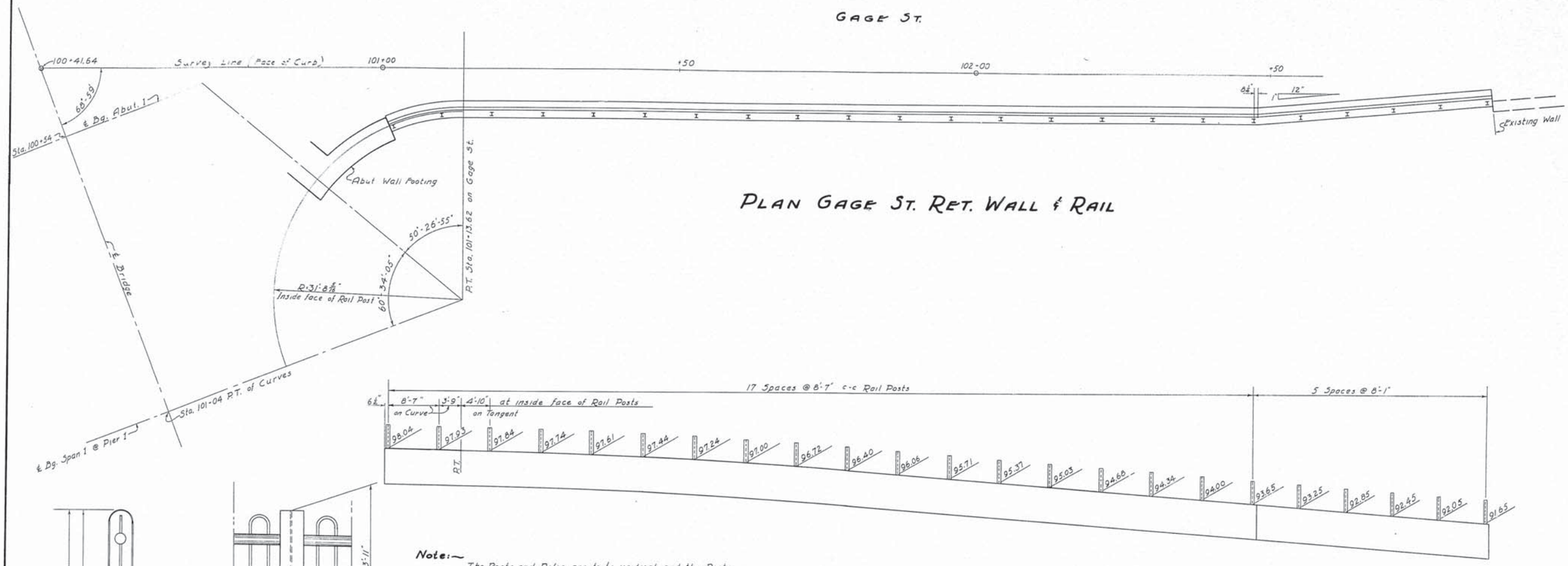
52-40

0 1 2 3 4 5 INCHES

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FT. 01-3042	41	45

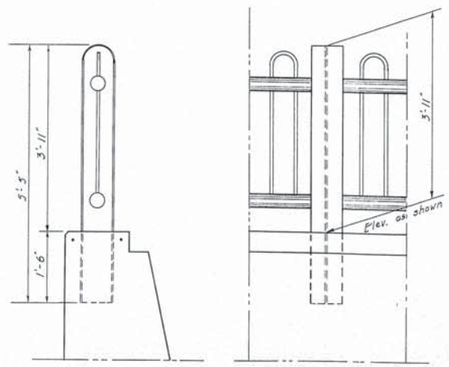
Mag. North

GAGE ST.



PLAN GAGE ST. RET. WALL & RAIL

RAIL ELEVATION



TYPICAL RAIL POST DETAIL

For all Details not shown see Sheet "2T of Bridge Rail

Note:—

The Posts and Poles are to be vertical and the Posts are to be normal to the curve or tangent shown in Plan View.

The steel rail posts and the wrought iron rail on this wall shall be furnished and delivered by the Structural Steel Contractor.

The construction of the concrete retaining wall and the erection of the rail and posts shall be done by the Bridge Floor Contractor.

DESIGN- ALLEN TRACE- FURTIER
DETAIL- " CHECK- BRIDGE- 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

GAGE STREET RAIL

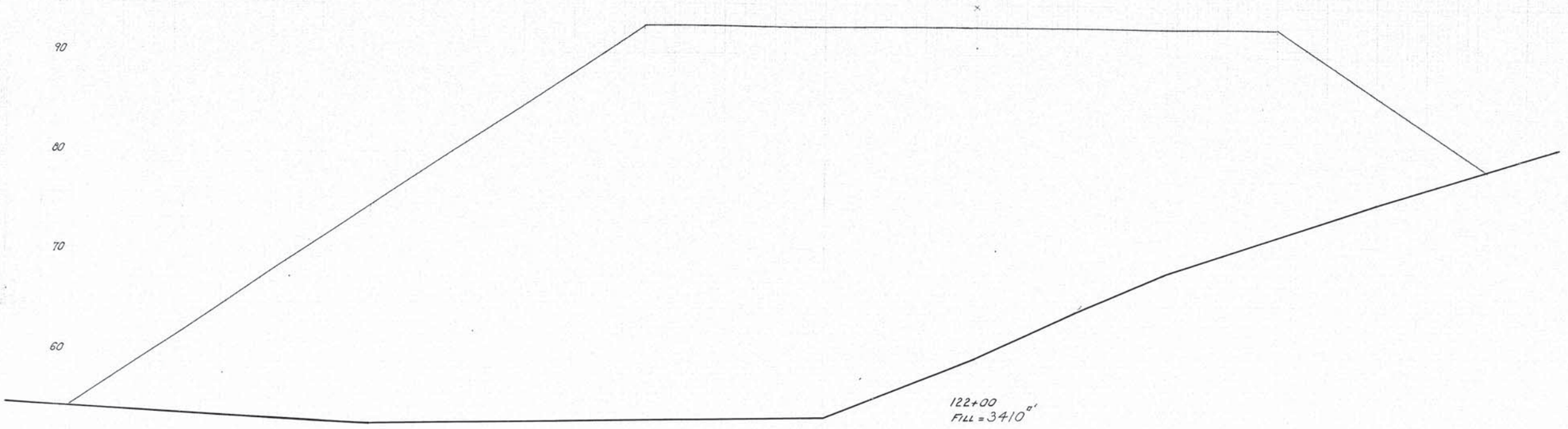
SHEET 41 OF 45 AUGUSTA, MAINE FEB. 1948

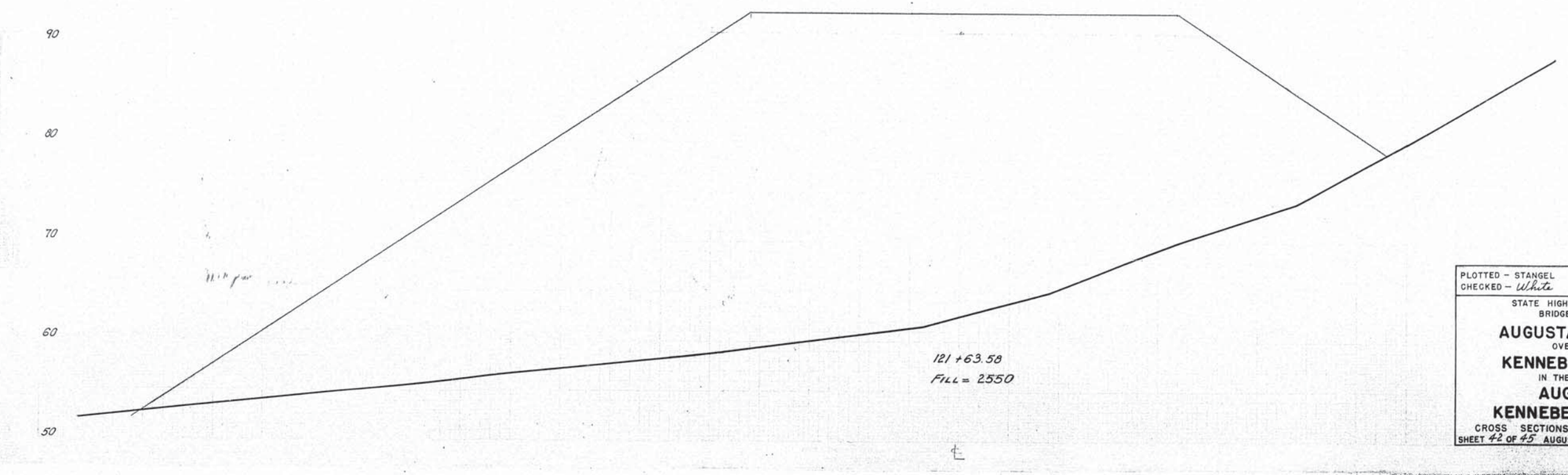
52-41

0 1 2 3 4 5 INCHES

P. R. A. DIV. NO.	STATE	F.A.D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F(U)P-5196(1)	42	45

Equation = -2.11'





PLOTTED – STANGEL
CHECKED – White

BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

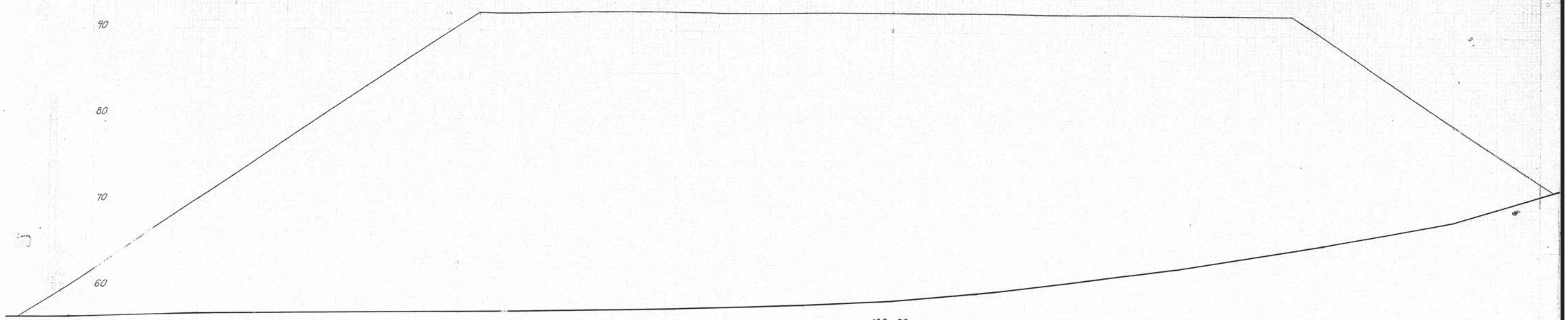
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

CROSS SECTIONS – EAST APPROACH

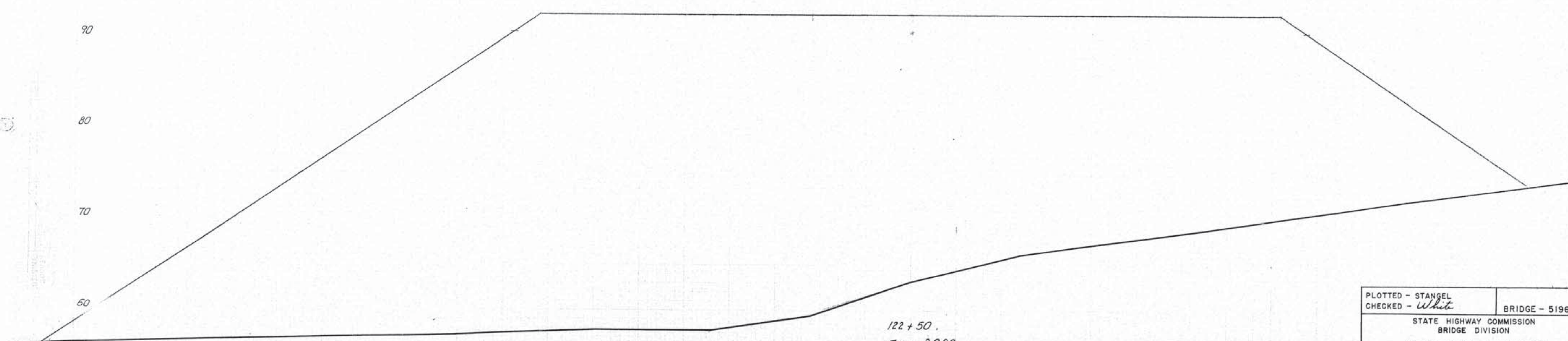
SHEET 42 OF 45 AUGUSTA, MAINE FEB. 1948

52-42

P. R. A. DIV NO.	STATE	F. D. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	FI,UI-389(2)	43	45



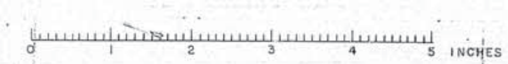
122+90
FILL = 4380



122 + 50.
FILL = 3688

Equation= -2.11

℄



PLOTTED - STANGEL CHECKED - White	BRIDGE - 5196

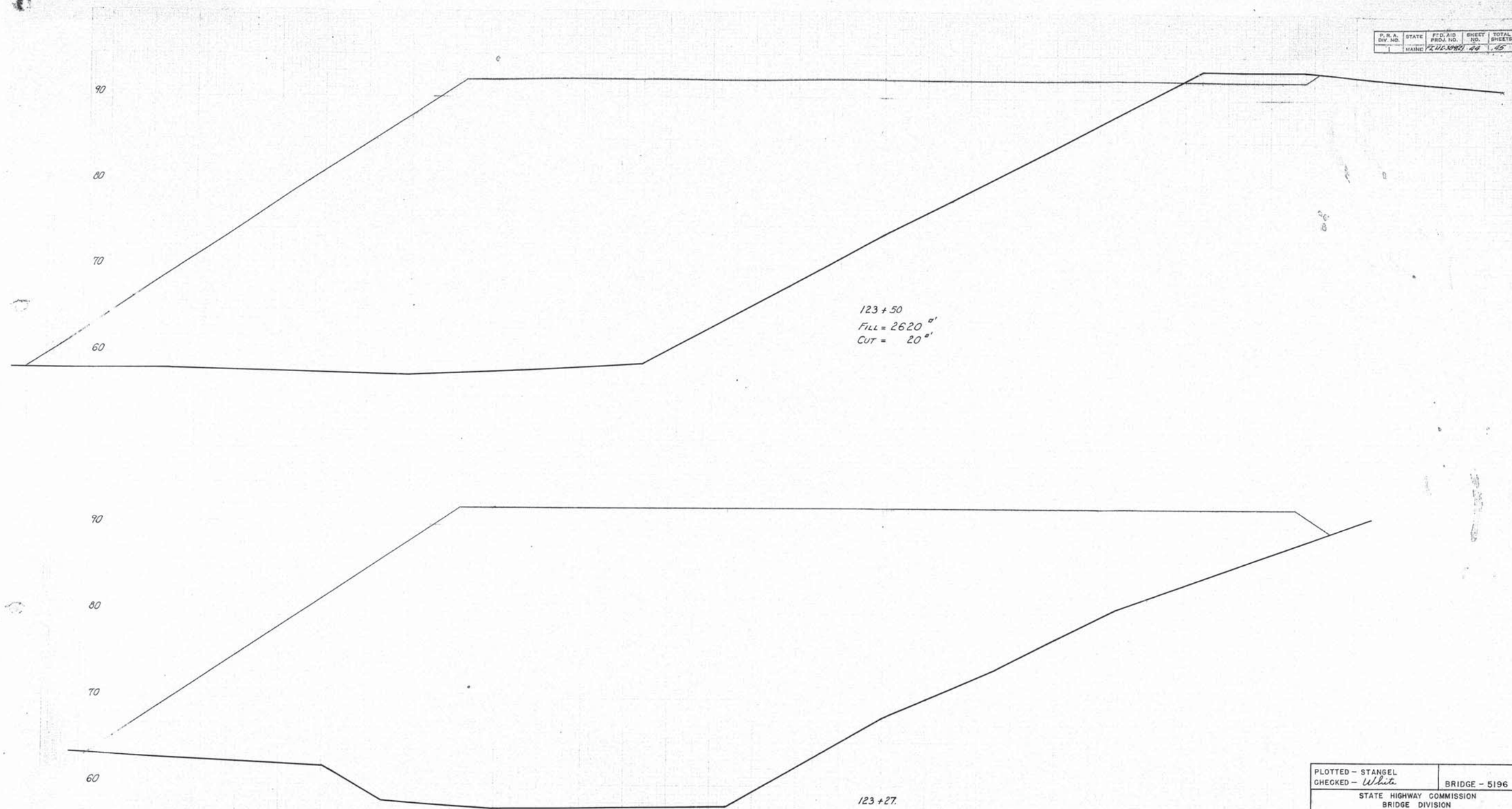
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

CROSS SECTIONS – EAST APPROACH
SHEET 43 OF 45 AUGUSTA, MAINE FEB. 1948

52 -43

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	MAINE	F.H.D.30(2)	44	45



PLOTTED – STANGEL
CHECKED – White

BRIDGE – 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

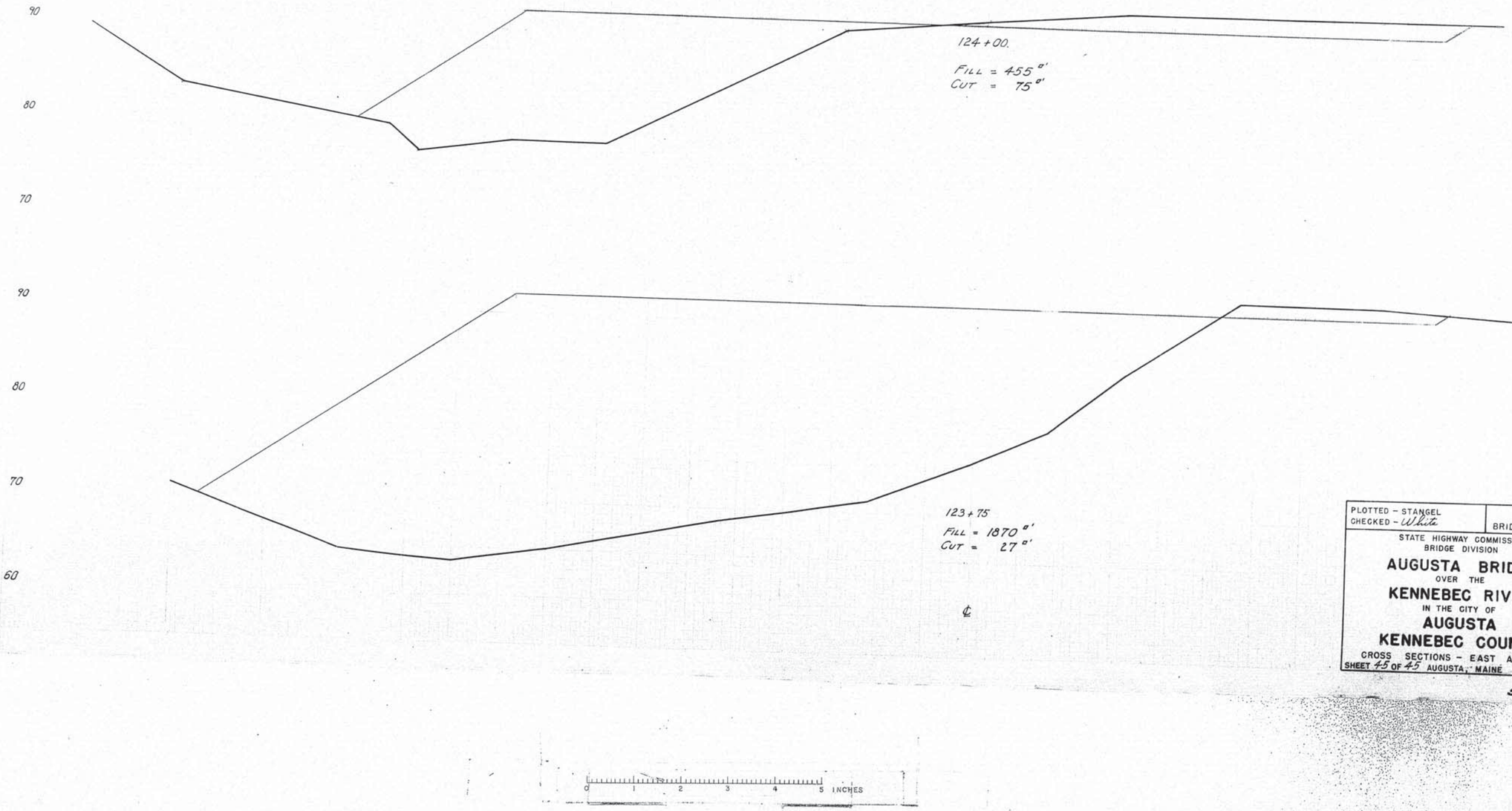
AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

CROSS SECTIONS – EAST APPROACH

SHEET 44 OF 45 AUGUSTA, MAINE FEB. 1948

52-44

P. R. A. DIV. NO.	STATE	FED. AID PROJ. NO.		
1	MAINE	FEUE39(1)	45	45



0 1 2 3 4 5 INCHES

PLOTTED - STANGEL
CHECKED - White

BRIDGE - 5196

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

AUGUSTA BRIDGE
OVER THE
KENNEBEC RIVER
IN THE CITY OF
AUGUSTA
KENNEBEC COUNTY

CROSS SECTIONS - EAST APPROACH

SHEET 45 OF 45 AUGUSTA, MAINE FEB. 1948

52-45