

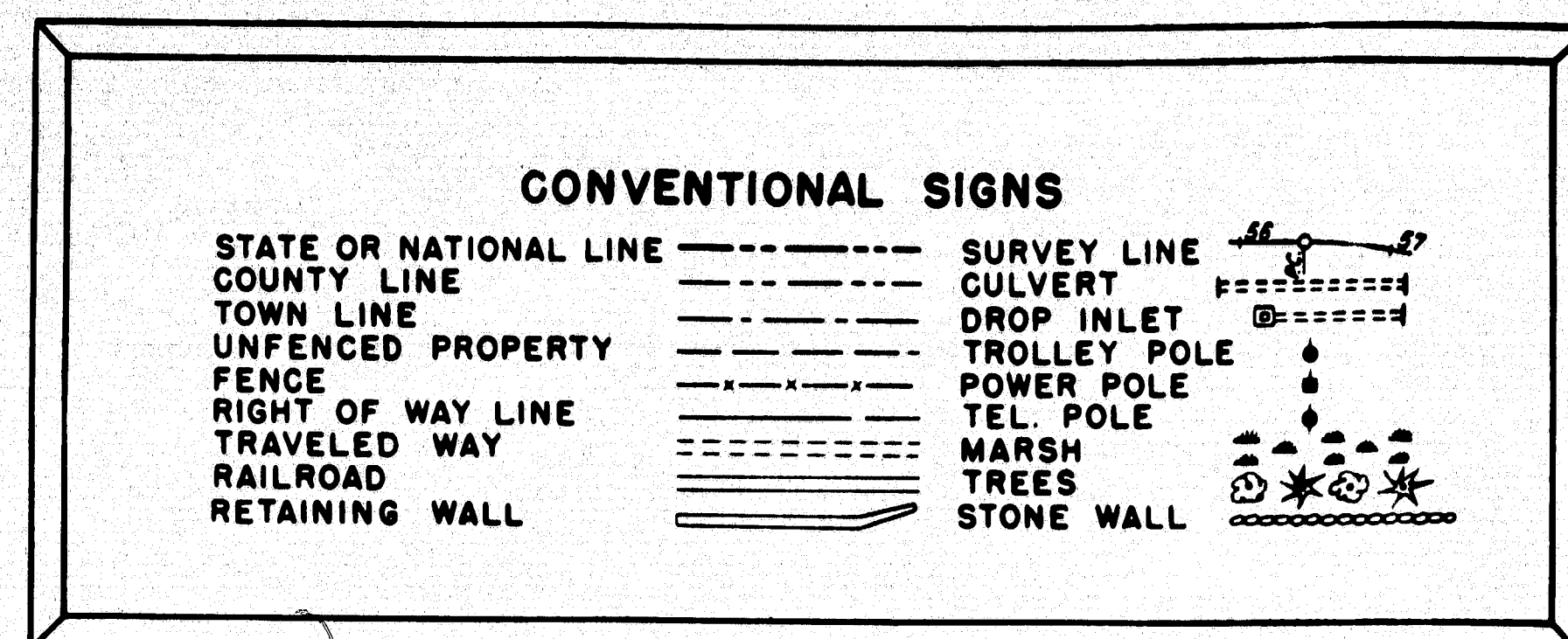
STATE OF MAINE STATE HIGHWAY COMMISSION

PLAN AND PROFILE STATE HIGHWAY #80 BANGOR

PENOBSCOT COUNTY
FEDERAL AID PROJECT NO. I-080-8(3)
OHIO STREET TO VALLEY AVENUE

TOTAL LENGTH 0.365 MILES

SCALES
PLAN 1 IN. = 50 FT. (Except As Noted)
PROFILE HOR. 1 IN. = 50 FT.
VER. 1 IN. = 5 FT.
CROSS SECTIONS 1 IN. = 10 FT.



INDEX OF SHEETS

| SHEET NO. | TITLE PAGE | STA. 200+50 TO 219+75 |
|-----------|---------------------------|-----------------------|
| 1 | TITLE PAGE | |
| 2 - 3 | TYPICAL SECTIONS | |
| 4 - 5 | QUANTITIES | |
| 6 - 8 | STANDARD DETAILS | |
| 16 - 29 | PLAN AND PROFILE | STA. 200+50 TO 219+75 |
| 51 - 62 | CROSS SECTIONS | STA. 200+50 TO 219+75 |
| 30 - 50 | BRIDGES & RETAINING WALLS | B. OHIO ST. |
| 9 - 14 | SPECIAL DETAILS | |
| 15 | SUBSURFACE DATA | |

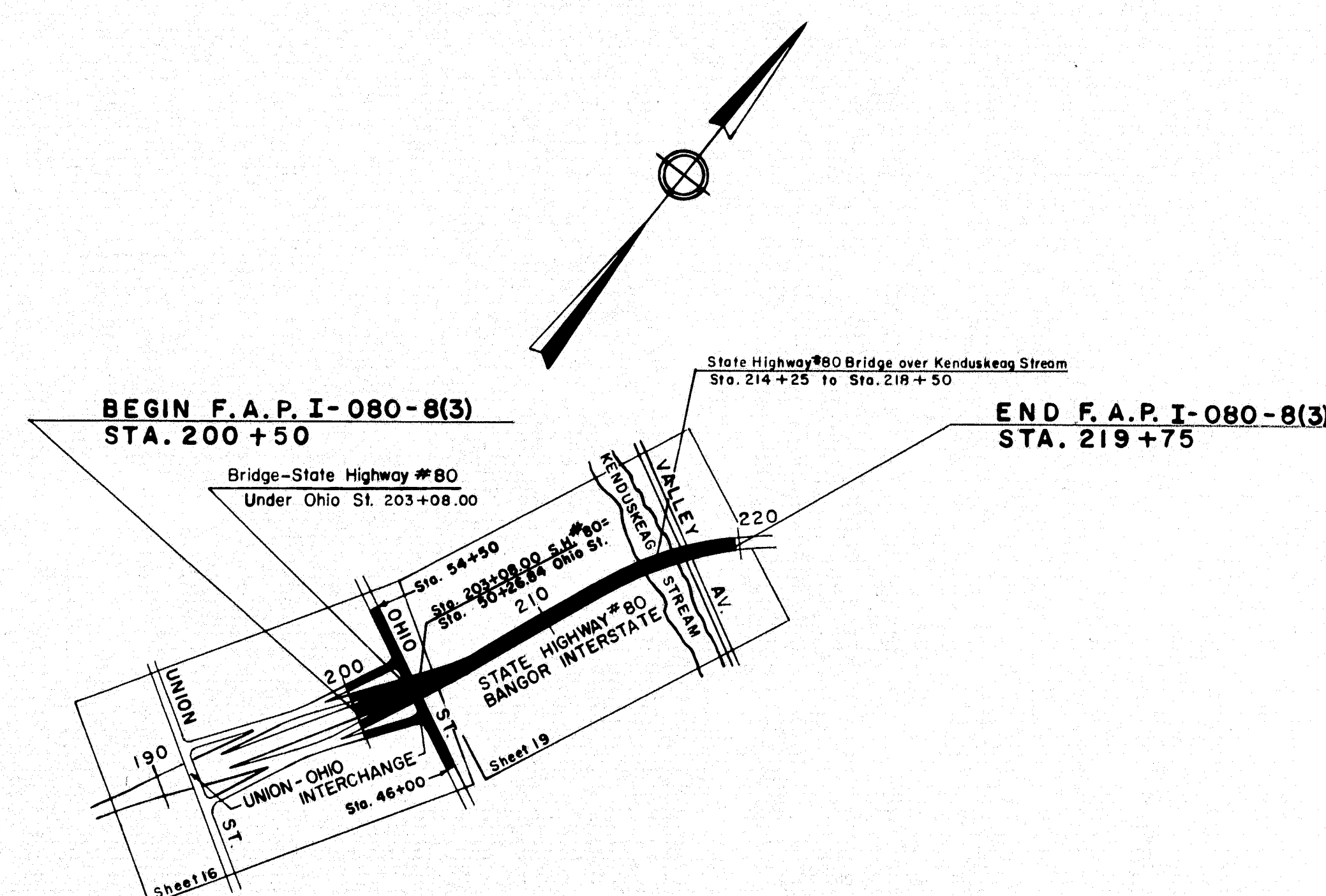
AS BUILT 1959

State Highway #80 and Adjacent Ramps shall be Constructed to Top of Gravel Base only within the Limits indicated on the Plans. Ohio Street Construction is to include Pavement.

All work contemplated under this contract to be governed by and in conformity with the Standard Specifications, Highways and Bridges, revision of Jan. 1956, except as modified on these plans and by the Special Provisions.

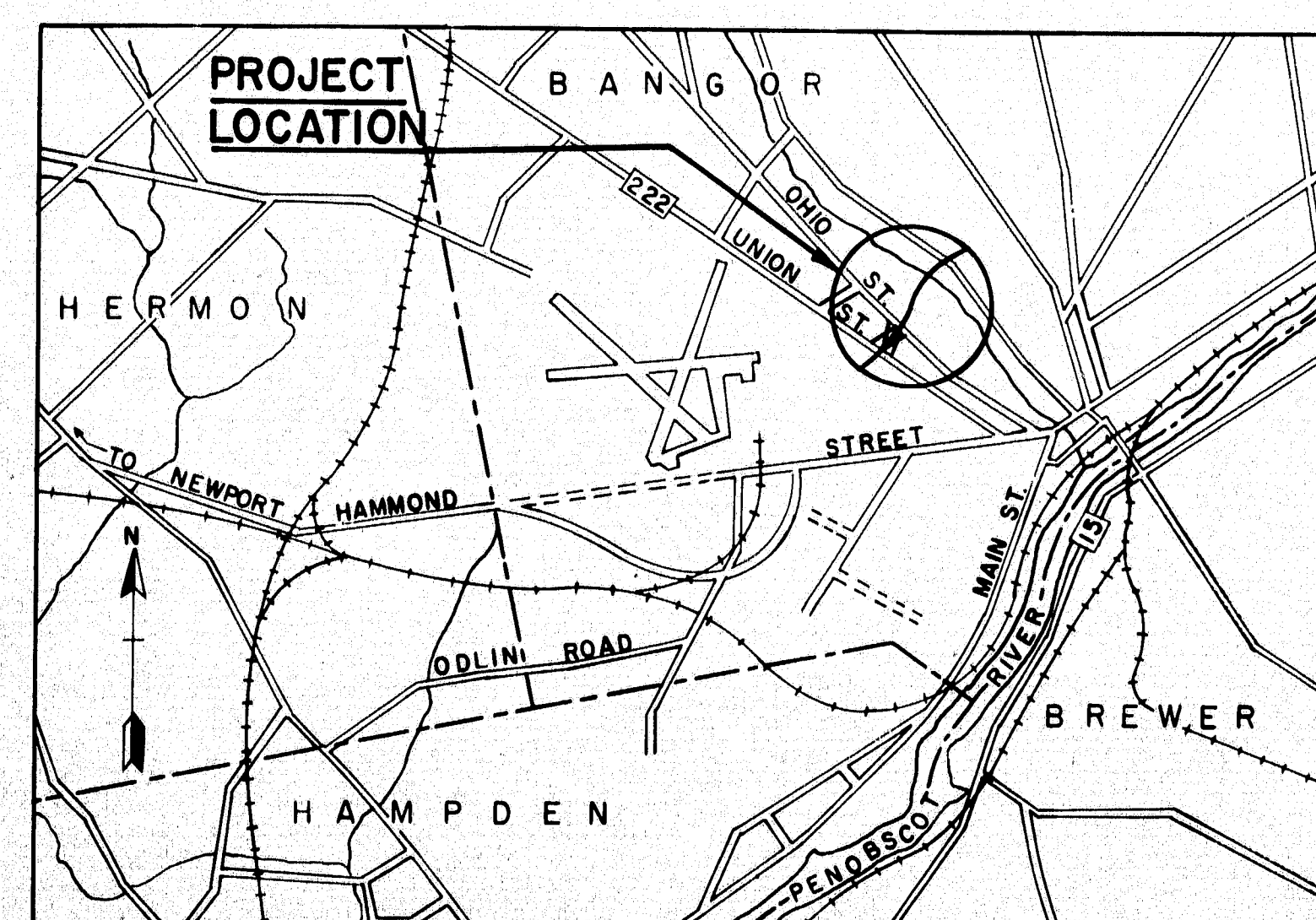
Notes

- Datum is Mean Sea Level.
- Side slopes of newly constructed roadways (including slopes of portions not to be paved under this contract) are to have 3" loam, seed and hay mulch, unless otherwise indicated or specified.
- The subsurface data shown on the plans represents only the findings at the point of investigation and are not representations of the general subsurface condition. The contractor is to form his own opinion of the character of the material, and is to make his own interpretation of subsurface data. The Engineer does not warrant the findings as being accurate or complete.



LAYOUT PLAN
Scale 1" = 600'

A.D.T. (1955) = 7,300
A.D.T. (1975) = 10,220
D.H.V. = 1,840
D. = 60 %
T. = 10 %
V. = 60 M.P.H.



A PORTION OF PENOBSCOT COUNTY
APPROX. SCALE: 1 IN. = 1 MILE

APPROVED:
MAINE STATE HIGHWAY COMMISSION

David W. Stevens
CHAIRMAN

Charles S. Cross

Harold B. Emery

Charles W. Duggan
CHIEF ENGINEER

CONSULTING ENGINEERS
THE CLARKSON ENGINEERING COMPANY, INC.
BOSTON
Clarkson
CONSULTING ENGINEER
DATE: 1/14/58

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION I
APPROVED:
DIVISION ENGINEER
DATE

| B.P.R. REG. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------|--------------|-----------------|
| 1 | MAINE | 1-080-8(3) | 30 | 62 |

BANGOR INTERSTATE

GENERAL NOTES

FOUNDATIONS:

Foundations may be altered, if necessary, to suit conditions encountered in construction.

DESIGN:

In accordance with the Specifications of the American Association of State Highway Officials for H20-44 loading (1953 Edition) with adopted tentative revisions.

Design Stresses: Structural Steel 18,000 psi
Reinforcing Steel 18,000 psi
Concrete (n=10) 1,200 psi

CONSTRUCTION:

State of Maine Standard Specifications to be followed except as noted in Special Provisions.

REINFORCEMENT:

All bars shall have deformations conforming to A.S.T.M. Designation A305. Unless otherwise shown on plans, reinforcing bars shall be lapped 20 diameters to make a splice, except that main reinforcing bars near the top of slabs and beams having more than 12 inches of concrete under the bars shall be lapped 35 diameters to make a splice.

BENCH MARK:

B.M.S-21 Vertical hinge spike in root of 21" Elm, 20' West of 15th Street, 0.8 mile South of Valley Avenue, 45' South of Ohio Street, East of target on Ohio Street. Elevation 133.60, U.S.G.S. Datum.

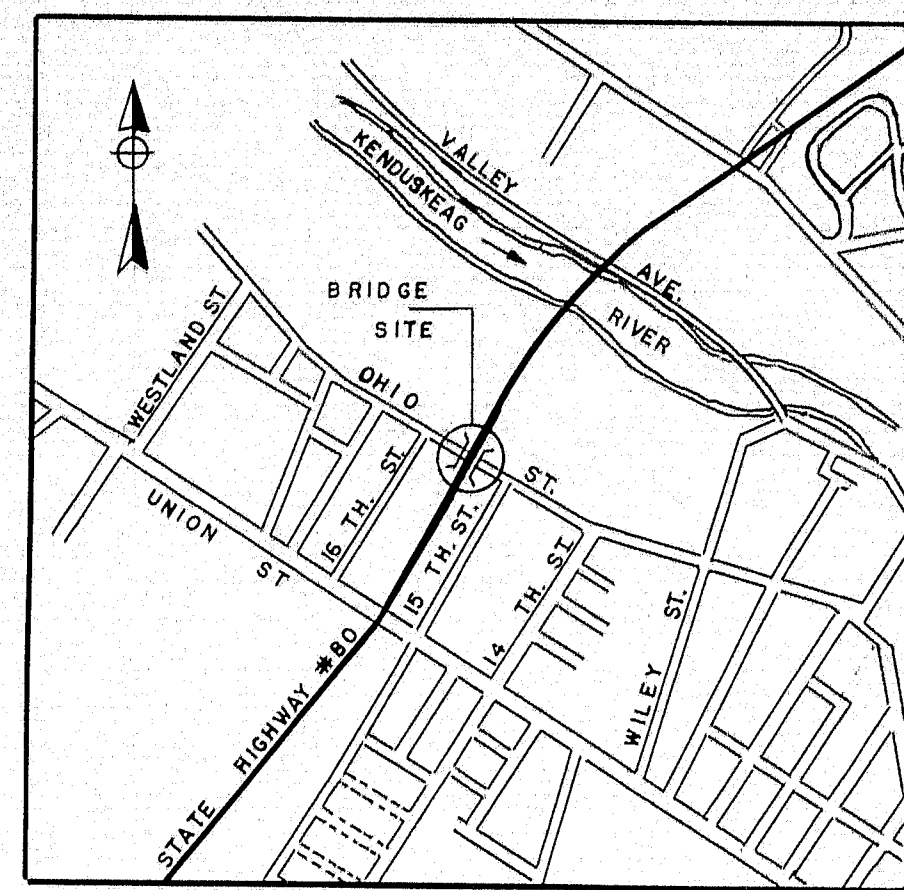
STRUCTURAL STEEL:

Wherever cover plates and/or shear connectors are welded to beams, beams and plates shall be structural weldable steel A.S.T.M. designation A-373.

ESTIMATED QUANTITIES

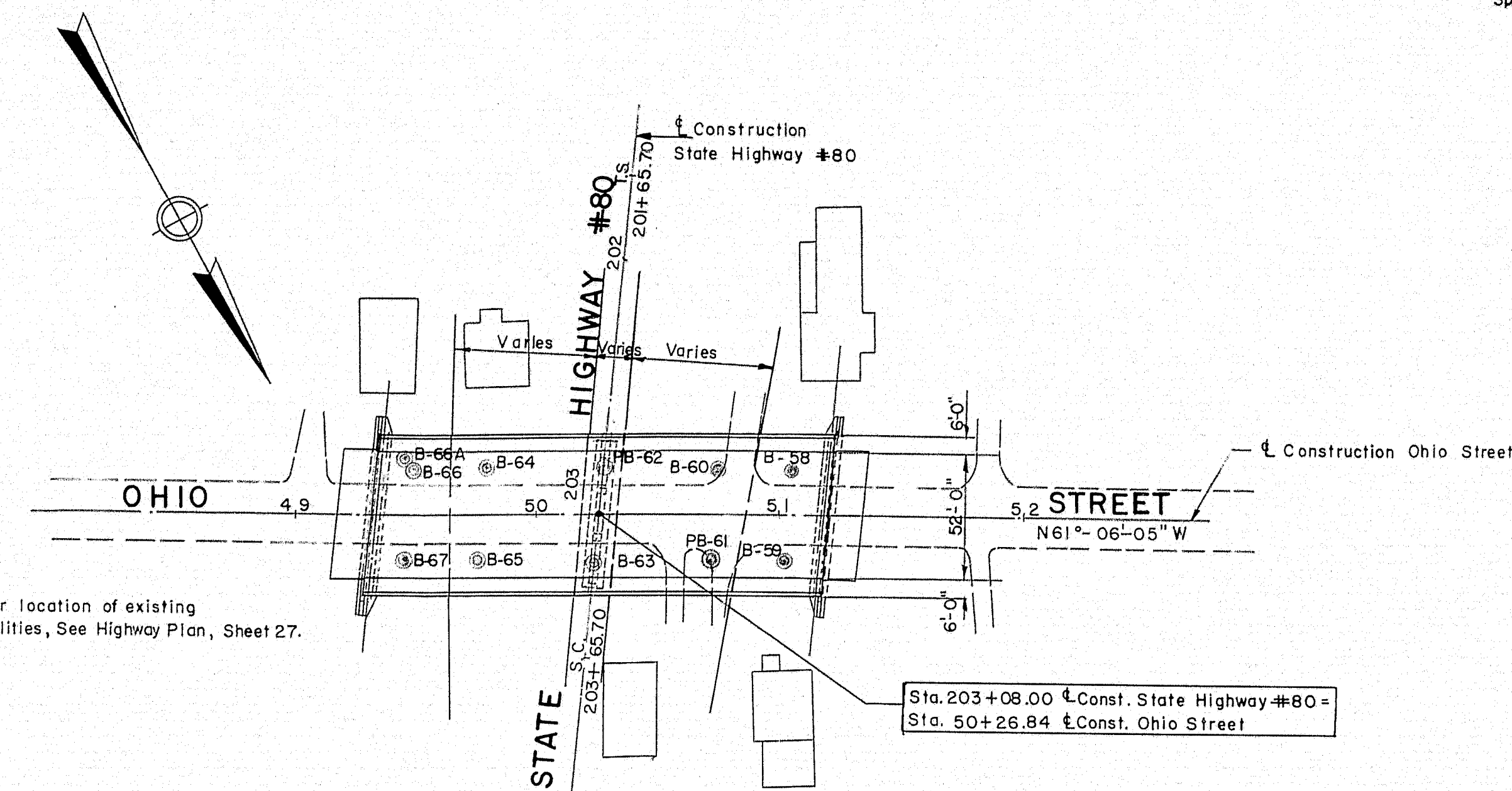
(NOT GUARANTEED)

| | | |
|--|---------|----------|
| STRUCTURAL EARTH EXCAVATION, ABUTMENTS AND RETAINING WALLS | 600 | CU.YDS |
| STRUCTURAL EARTH EXCAVATION, PIERS | 80 | CU.YDS |
| STRUCTURAL ROCK EXCAVATION, PIERS | 10 | CU.YDS |
| GRAVEL BASE COURSE - IN PLACE MEASUREMENT | 220 | CU.YDS |
| BITUMINOUS CONCRETE SURFACE COURSE, TYPE "A" | 140 | TONS |
| MEMBRANE WATERPROOFING (3 PLY) | 1120 | SQ.YDS |
| PORTLAND CEMENT CONCRETE, ABUTMENTS AND RETAINING WALLS | 240 | CU.YDS |
| PORTLAND CEMENT CONCRETE, PIERS | 120 | CU.YDS |
| PORTLAND CEMENT CONCRETE | | |
| ROADWAY & SIDEWALK SLABS ON STEEL BRIDGES | 420 | CU.YDS |
| PORTLAND CEMENT | 1170 | BBLS |
| BRIDGE DRAINAGE | 1 | LUMP SUM |
| STRUCTURAL STEEL, FABRICATED & DELIVERED | 601,800 | LBS |
| STRUCTURAL STEEL, ERECTION | 601,800 | LBS |
| BRONZE OR COPPER - ALLOY BEARING AND EXPANSION PLATES, DELIVERED | 1260 | LBS |
| BRONZE OR COPPER - ALLOY BEARING AND EXPANSION PLATES, PLACING | 1260 | LBS |
| REINFORCING STEEL, DELIVERED | 114,000 | LBS |
| REINFORCING STEEL, PLACING | 114,000 | LBS |
| SHEAR CONNECTORS, DELIVERED & PLACED | 1 | LUMP SUM |
| FRENCH DRAINS | 100 | CU.YDS |
| ALUMINUM RAILING | 380 | LIN. FT |
| SLOPE PAVING FOR BRIDGES | 440 | SQ.YDS |



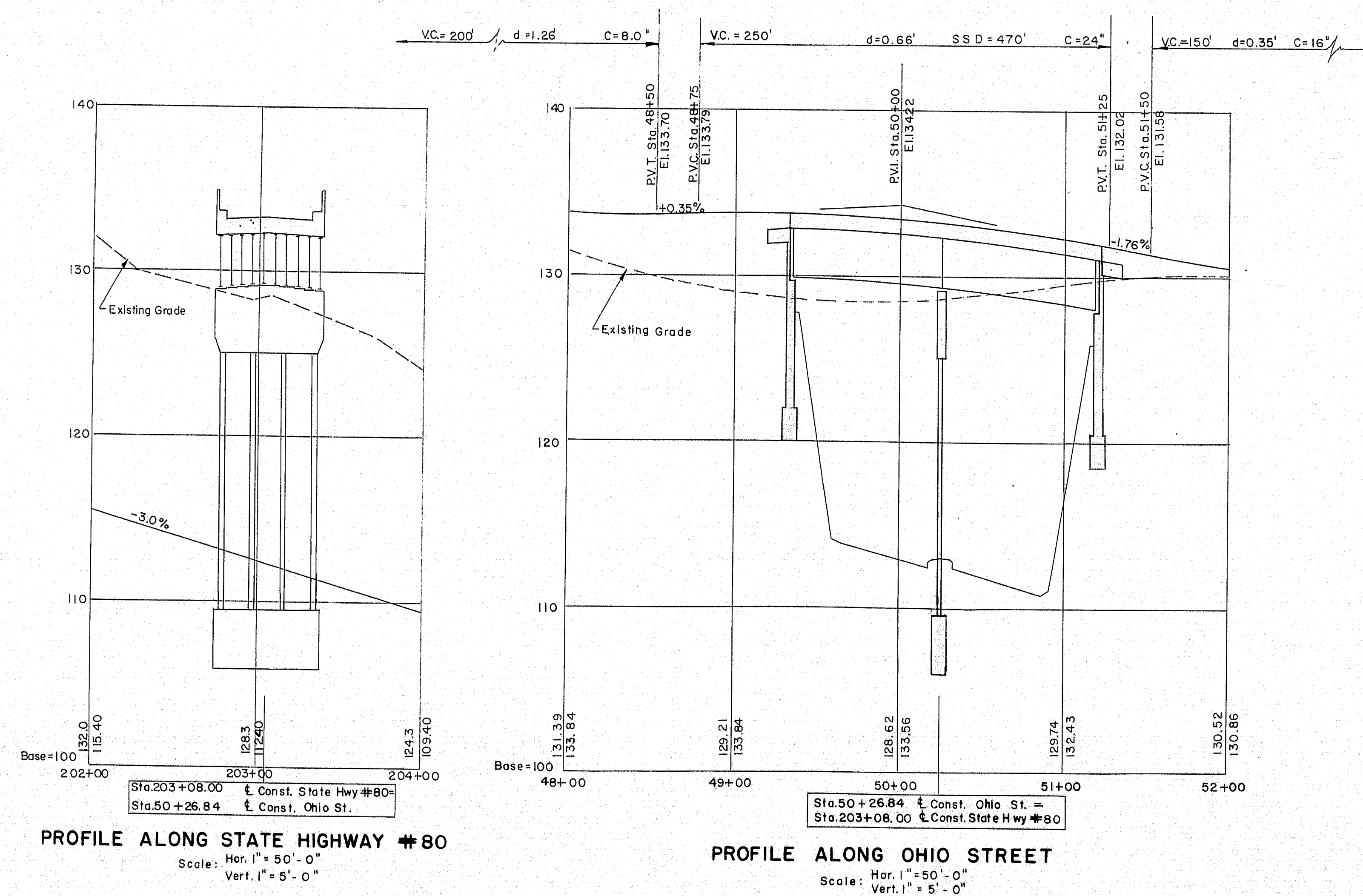
LOCATION MAP
No Scale

For location of existing utilities, See Highway Plan, Sheet 27.



KEY PLAN
Scale: 1"=50'-0"

Spiral & Curve Data for Const. State Hwy. #80
P.I. Sta. 204+86.88
 $\Delta = 6^\circ 49' 41''$
 $\Delta_c = 4^\circ 49' 41''$
 $D_c = 2^\circ 00' 00''$
 $L_c = 241.40'$
 $T_c = 120.77'$
 $E_s = 9.11'$
 $R_c = 2864.79'$
 $\Delta_s = 2^\circ 00' 00''$
 $L_s = 200.00'$
 $X_s = 199.98'$
 $Y_s = 2.33'$
 $T_s = 321.18'$



PROFILE ALONG STATE HIGHWAY #80
Scale: Hor. 1"=50'-0"
Vert. 1"=5'-0"

PROFILE ALONG OHIO STREET
Scale: Hor. 1"=50'-0"
Vert. 1"=5'-0"

APPROVED BY *[Signature]* DATE 1/13/58
THE CLARKESON ENGINEERING CO., INC.
CONSULTING ENGINEERS
BOSTON MASSACHUSETTS

| DESIGN | CHECK | H.P. | BRIDGE NO. |
|--------------------------|-----------------|--------|-------------|
| DRAWN D.A.T. | APPROVED C.J.W. | W.A.H. | SURVEY PLOT |
| STATE HIGHWAY COMMISSION | | | |
| STATE HIGHWAY #80 | | | |
| UNDER | | | |
| OHIO STREET | | | |
| IN THE CITY OF | | | |
| BANGOR | | | |
| PENOBSCOT COUNTY | | | |
| KEY PLAN & PROFILES | | | |

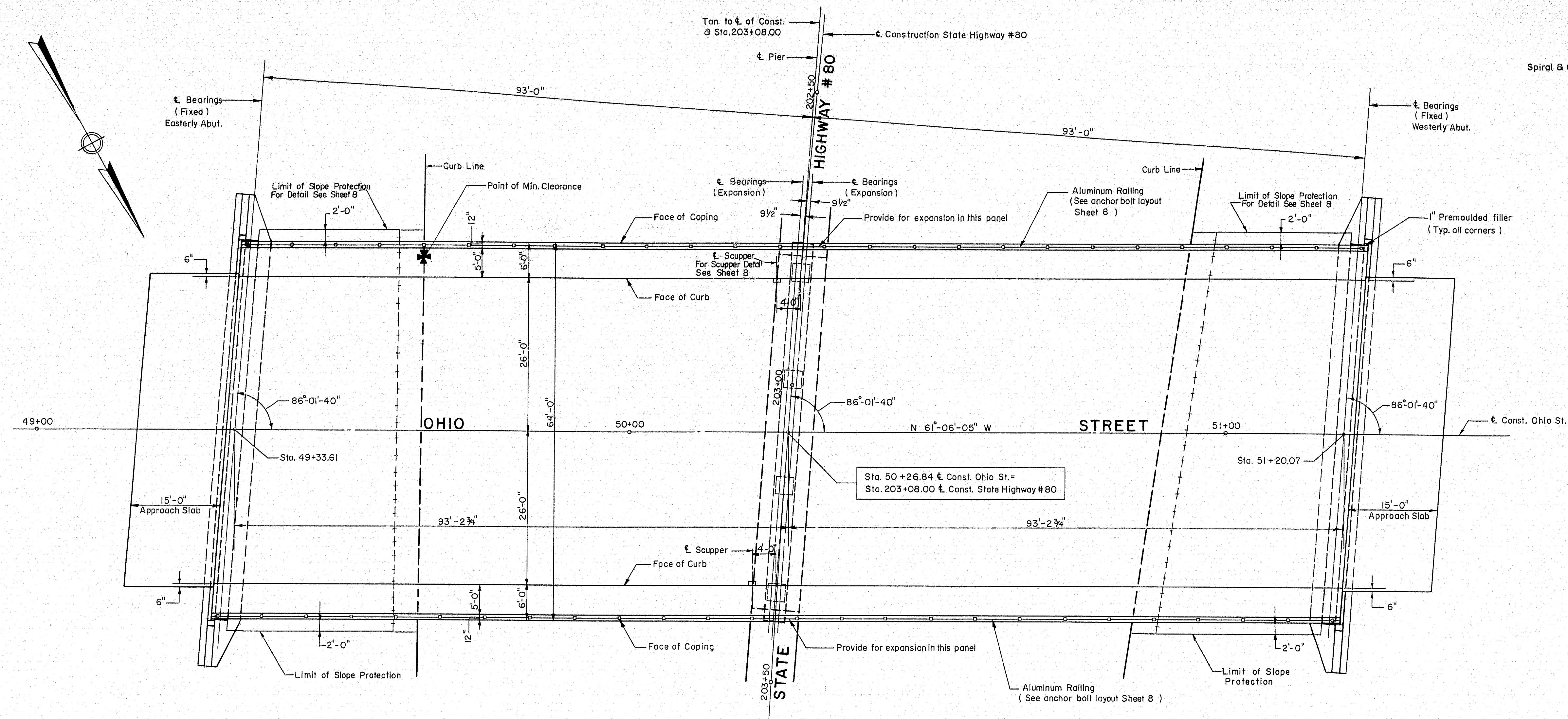
SHEET 1 OF 8 AUGUSTA, MAINE

| B.P.R. REG. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------|--------------|-----------------|
| 1 | MAINE | 1-080-8(3) | 32 | 62 |

BANGOR INTERSTATE

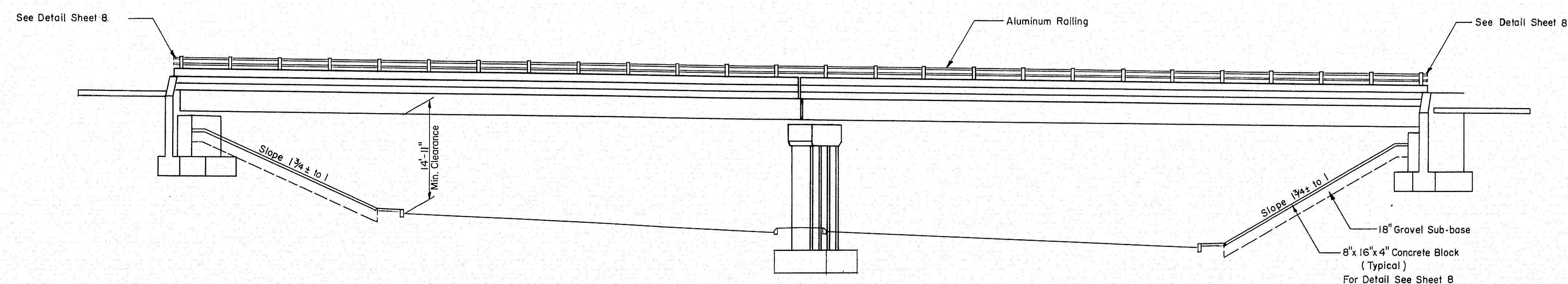
Spiral & Curve Data for Const. State Hwy. # 80

P.I. Sta. 204+86.88
 $\Delta = 8^{\circ}49'41''$
 $\Delta_c = 4^{\circ}49'41''$
 $D_c = 2^{\circ}00'00''$
 $L_c = 241.40'$
 $T_c = 120.77'$
 $E_s = 9.11'$
 $R_c = 2864.79'$
 $\Delta_s = 2^{\circ}00'00''$
 $L_s = 200.00'$
 $X_s = 199.98'$
 $Y_s = 2.33'$
 $T_s = 321.18'$



GENERAL PLAN

Scale: $\frac{3}{32} = 1'-0''$



GENERAL ELEVATION

Scale: $\frac{3}{32} = 1'-0''$

THE CLARKSON ENGINEERING CO., INC.

DESIGN J.J.A. CHECK Y.E. & H.P. BRIDGE NO.
DRAWN E.K. APPROVED W.A.H. SURVEY
PLOT

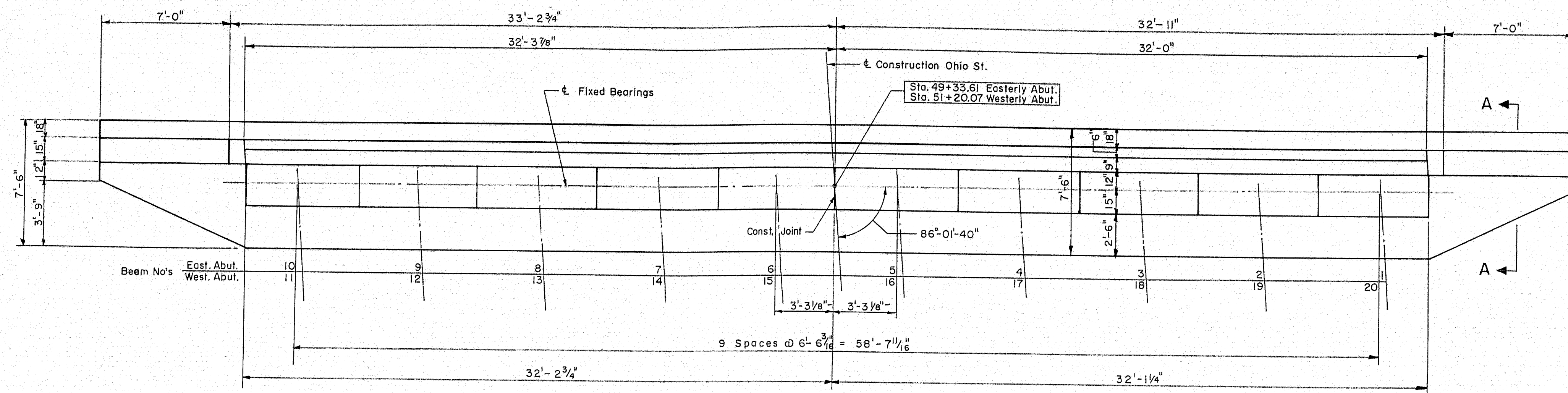
STATE HIGHWAY COMMISSION
STATE HIGHWAY # 80
UNDER
OHIO STREET
IN THE CITY OF
BANGOR
PENOBSCOT COUNTY
GENERAL PLAN & ELEVATION

SHEET 3 OF 8 AUGUSTA, MAINE

72-32

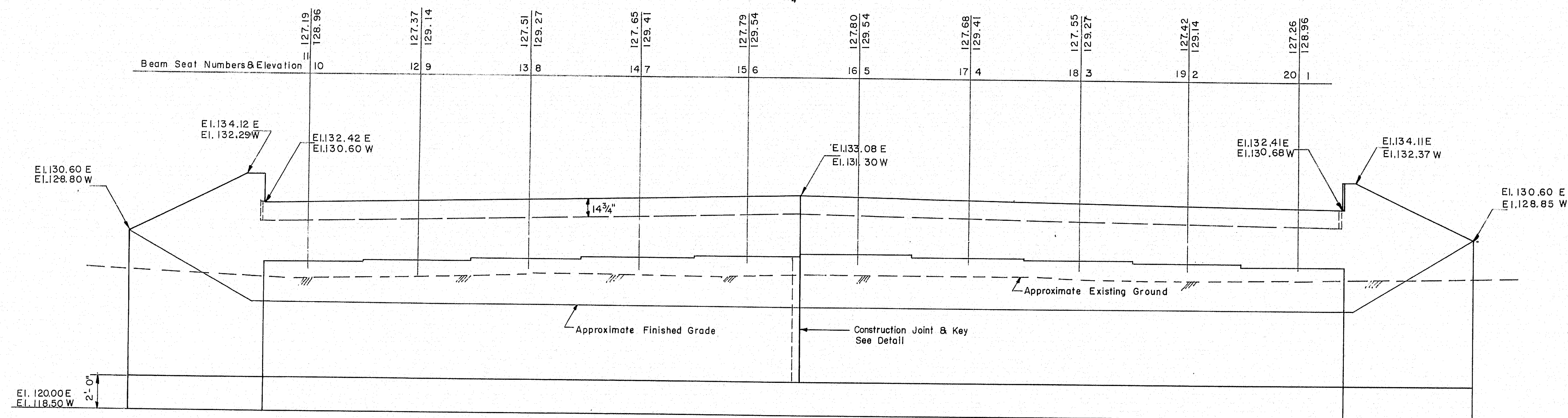
0 1 2 3 4 5 INCHES

| SPR | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|-----|-------|-------------|-----------|--------------|
| 1 | MAINE | I-080-8(3) | 33 | 62 |



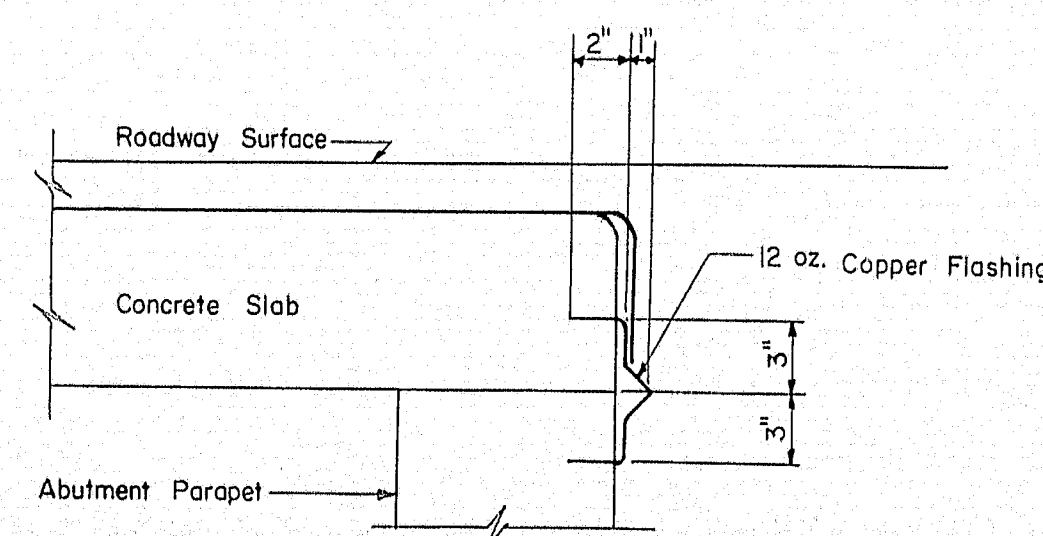
EASTERY ABUTMENT PLAN
WESTERLY ABUTMENT PLAN (SAME)

Scale: $\frac{1}{4}'' = 1'-0''$

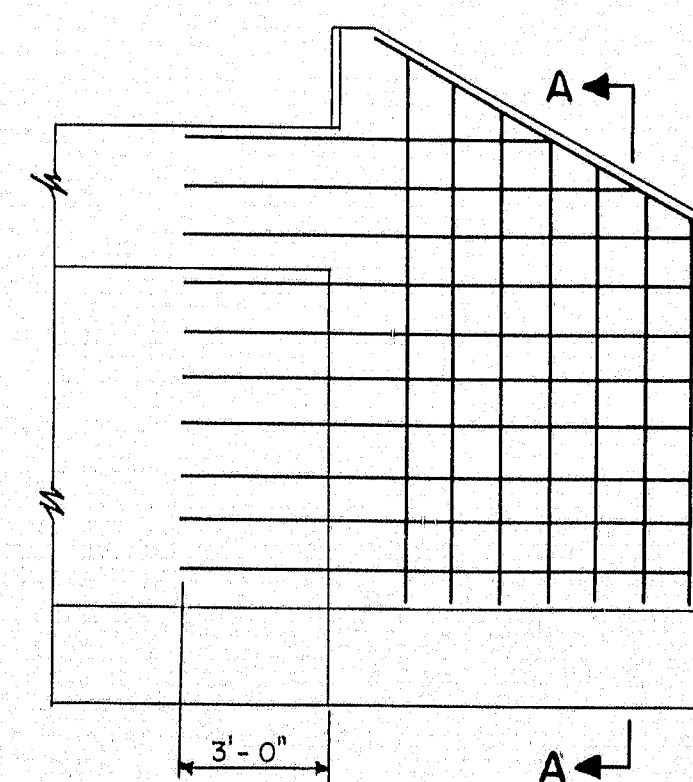


EASTERY ABUTMENT ELEVATION
WESTERLY ABUTMENT ELEVATION (SIMILAR)

Scale: $\frac{1}{4}'' = 1'-0''$

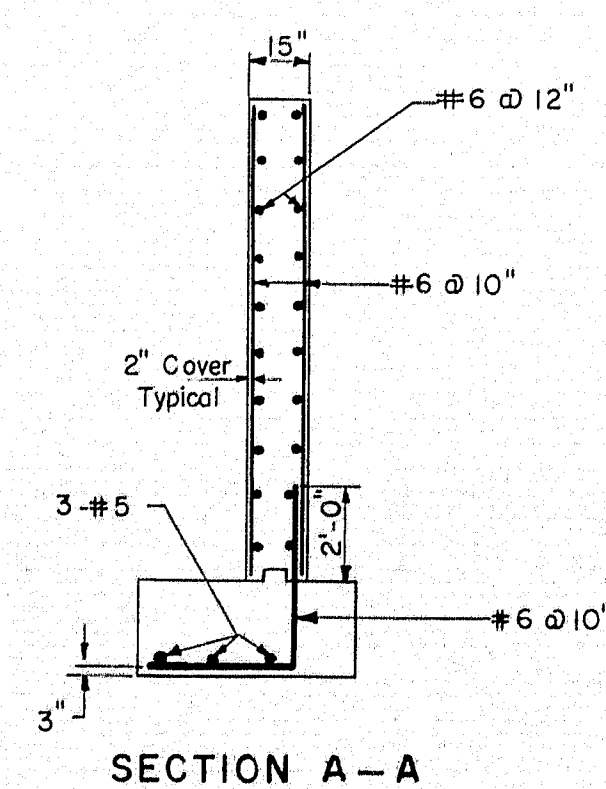


DETAIL B
Scale: $\frac{1}{2}'' = 1'-0''$

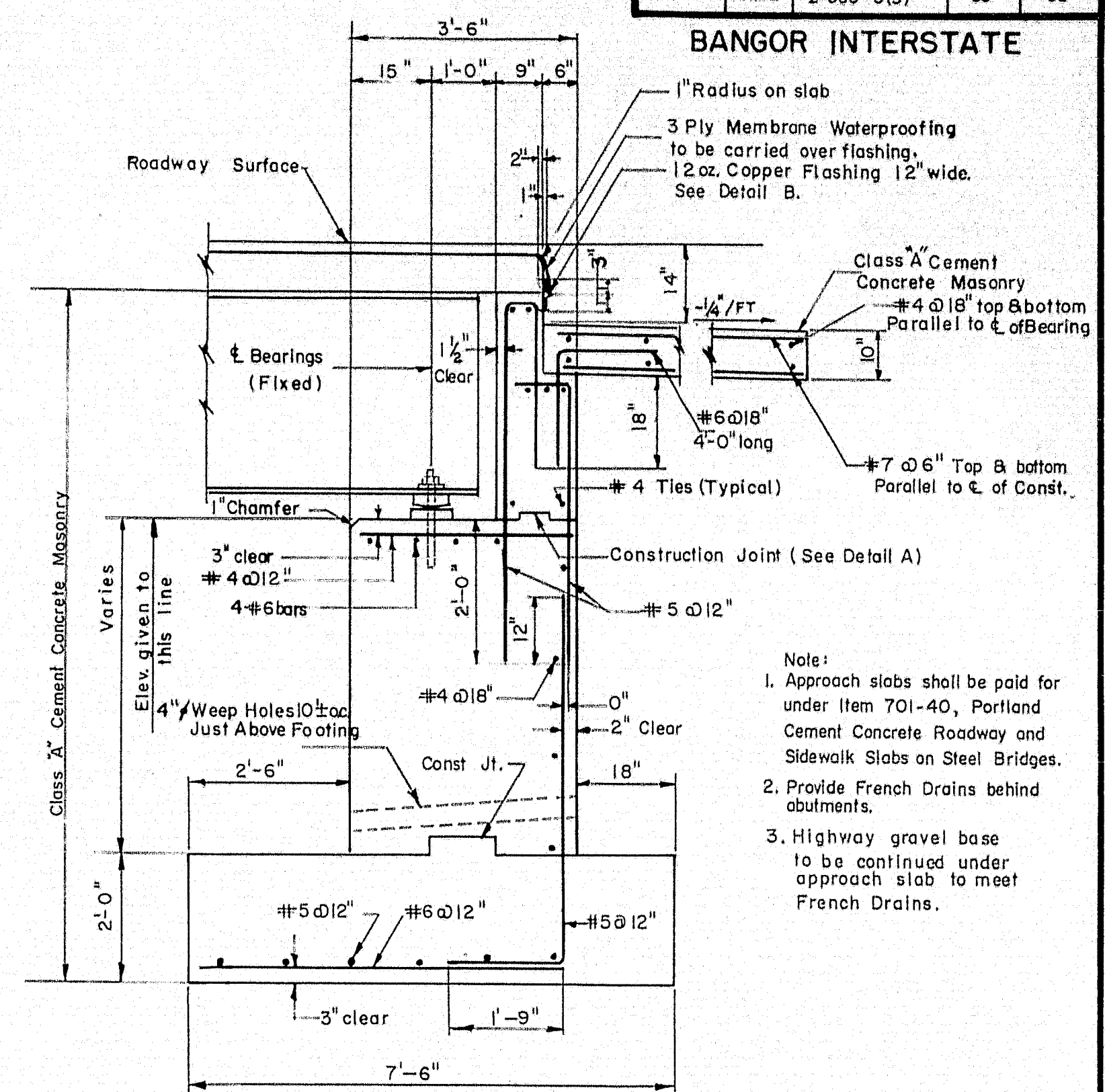


WING REINFORCING LAYOUT

Scale: $\frac{1}{4}'' = 1'-0''$

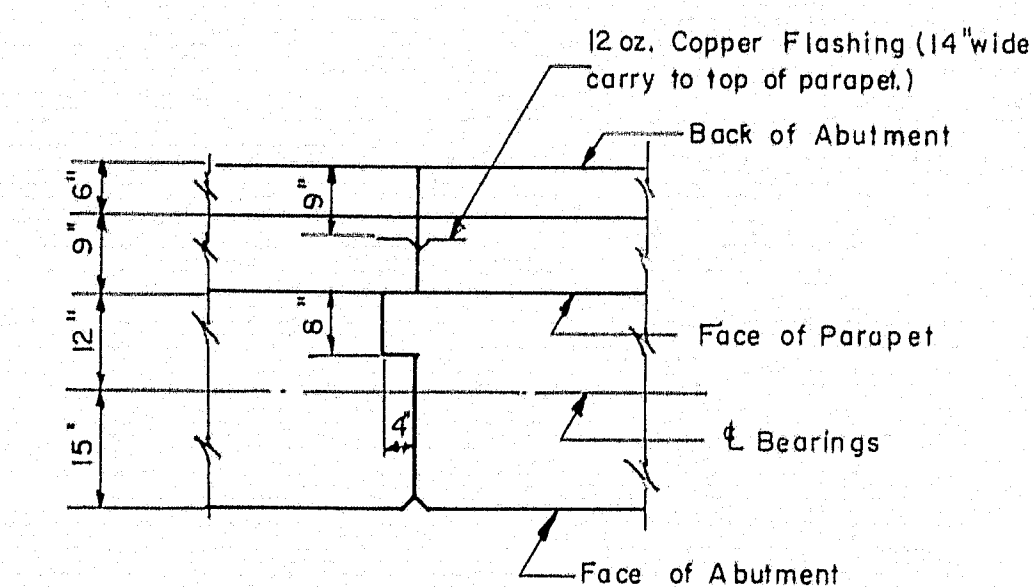


SECTION A-A



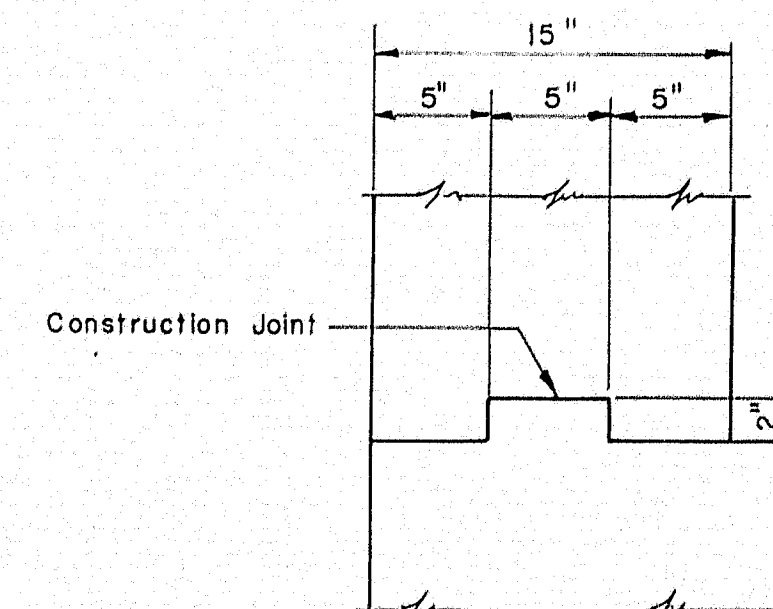
TYPICAL ABUTMENT SECTION

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



ABUTMENT CONSTRUCTION JOINT
Reinforcement to run through Construction Joint

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



DETAIL A

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

Note: Concrete in backwall not to be placed until Structural Steel has been erected and utilities are in place. Construction Joint to be at or above Bridge Seat Elevation.

THE CLARKSON ENGINEERING CO., INC.

| | | | | |
|--------|--------|----------|-------------|------------|
| DESIGN | Y.E. | CHECK | R.F. & H.P. | BRIDGE NO. |
| DRAWN | D.A.T. | APPROVED | W.A.H. | SURVEY |
| | | | | PLOT |

STATE HIGHWAY COMMISSION

STATE HIGHWAY # 80

UNDER

OHIO STREET

IN THE CITY OF

BANGOR

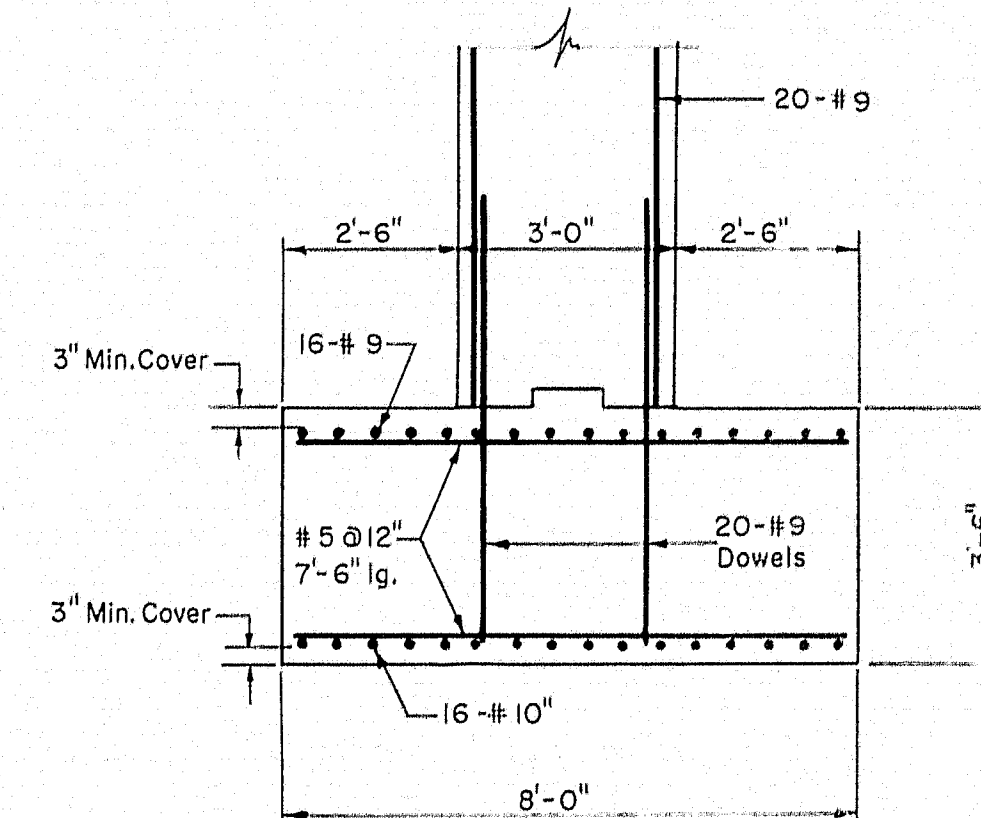
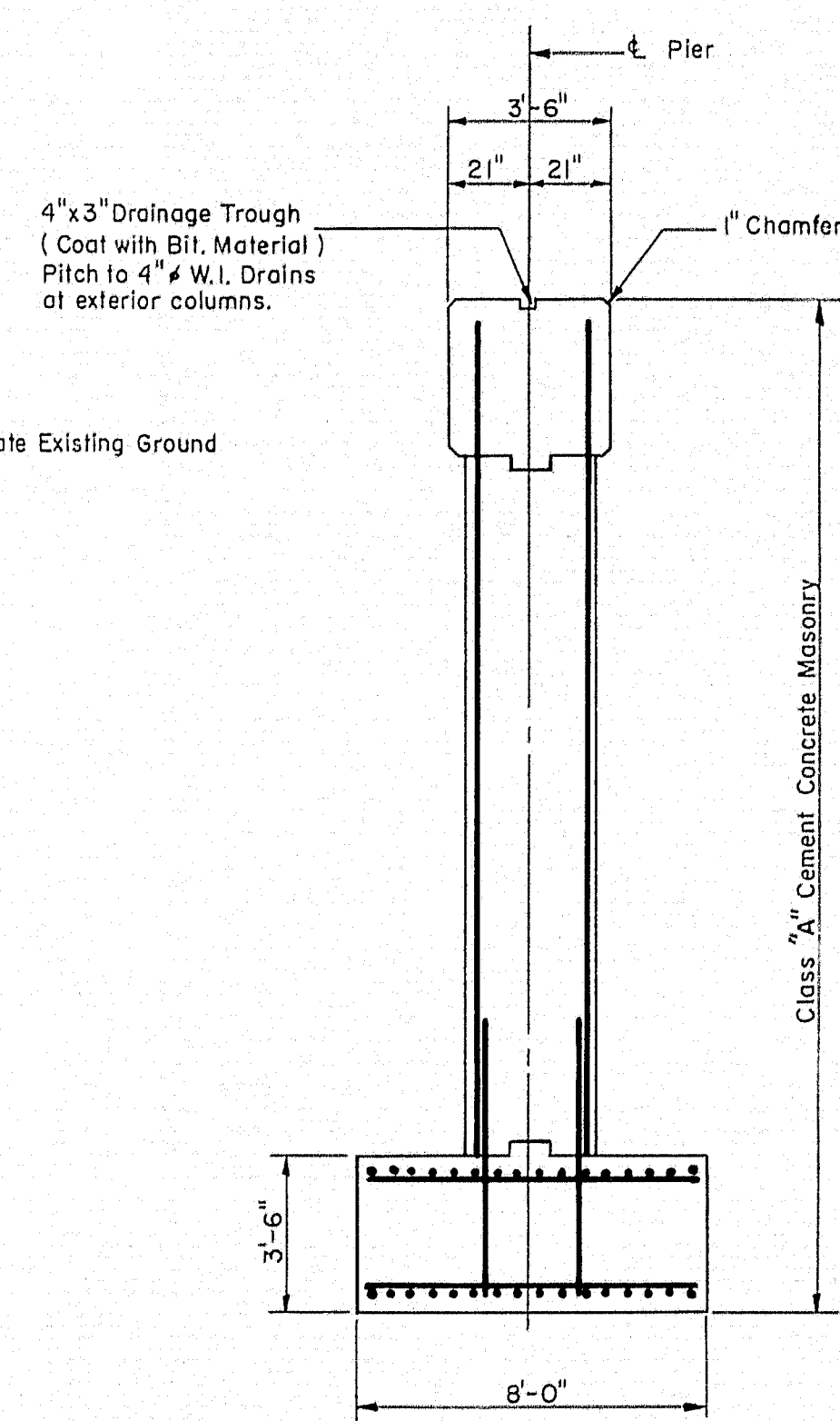
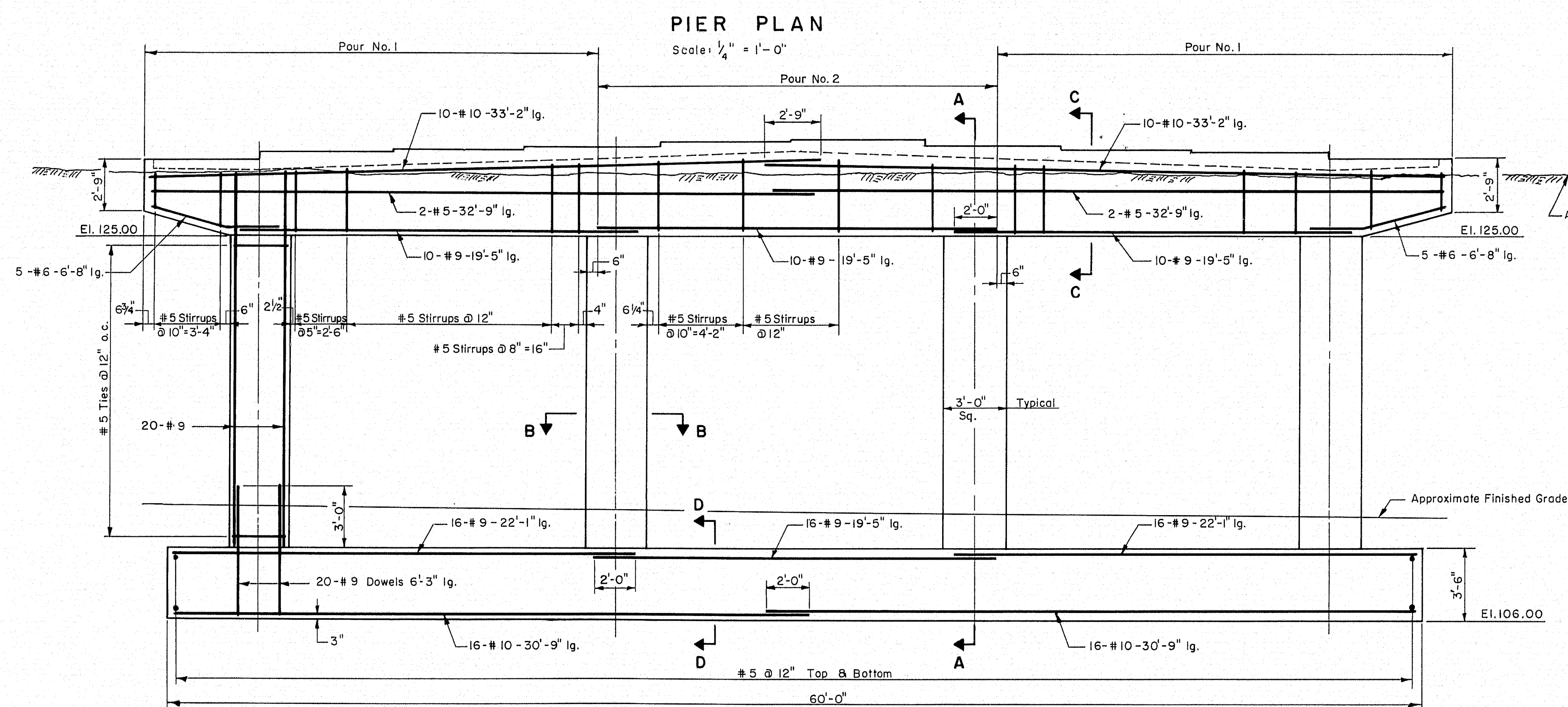
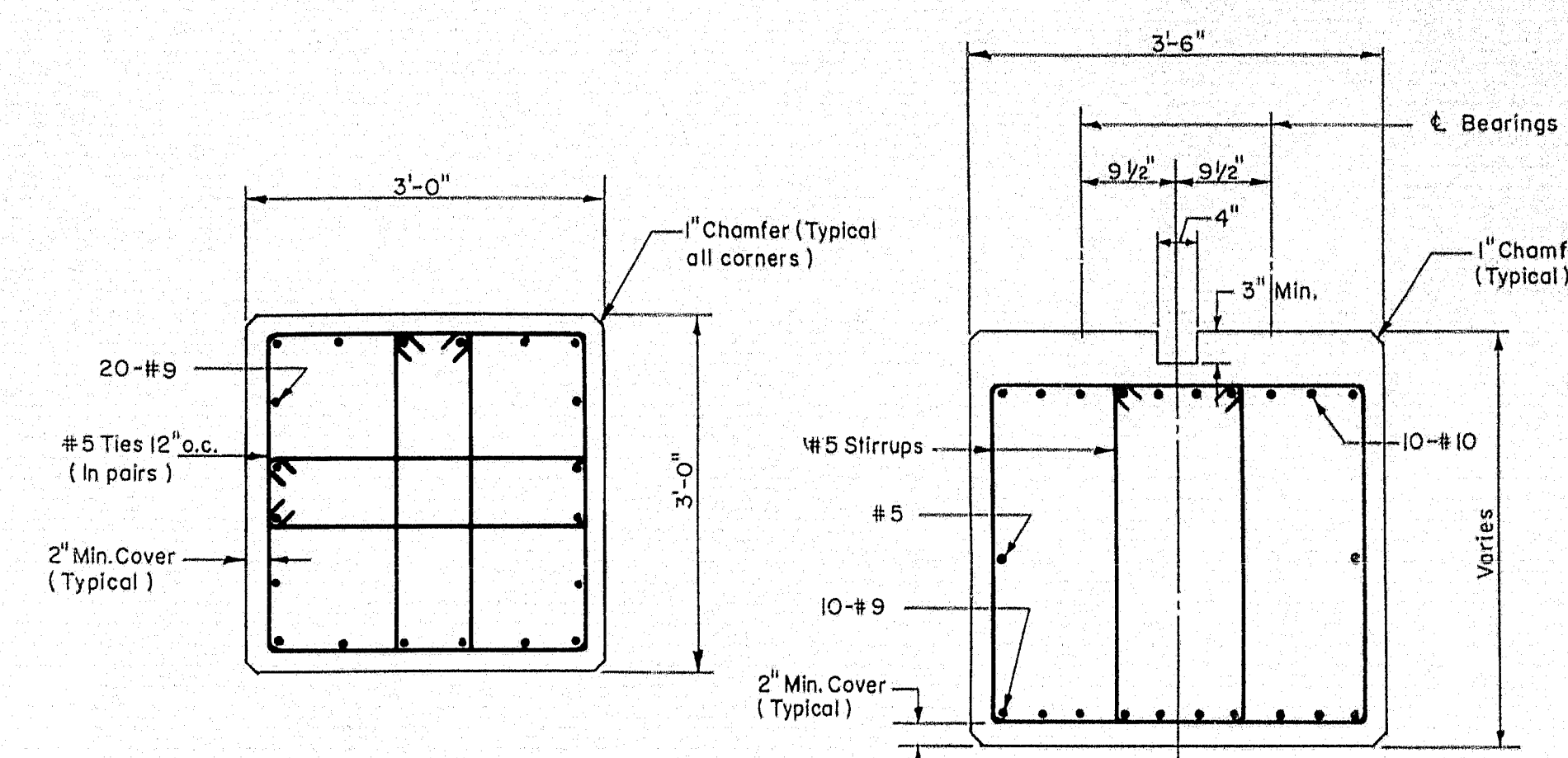
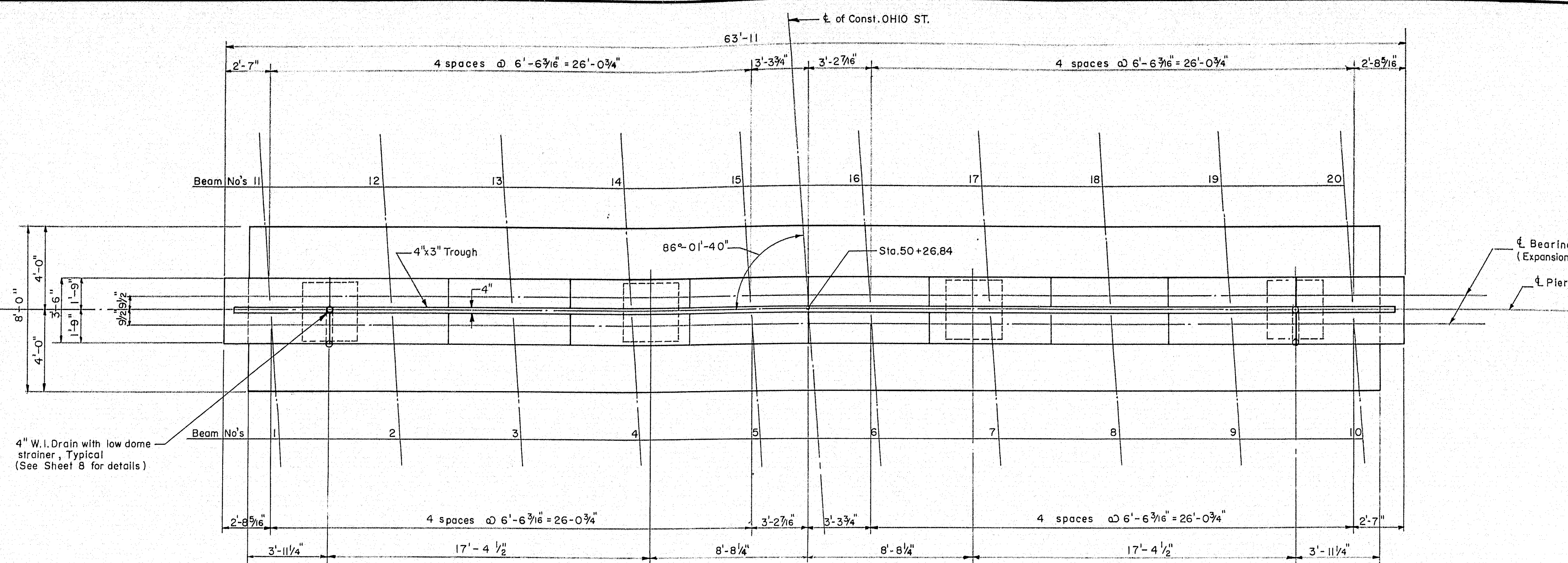
PENOBSCOT COUNTY

ABUTMENTS

SHEET 4 OF 8 AUGUSTA, MAINE

| B.P.R. REG. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------|--------------|-----------------|
| 1 | MAINE | I-080-8(3) | 34 | 62 |

BANGOR INTERSTATE



| Beam No. | Elevations | Beam No. |
|----------|------------|----------|
| 1 | 128.41 | 11 |
| 2 | 128.59 | 12 |
| 3 | 128.73 | 13 |
| 4 | 128.87 | 14 |
| 5 | 129.00 | 15 |
| 6 | 129.01 | 16 |
| 7 | 128.88 | 17 |
| 8 | 128.75 | 18 |
| 9 | 128.62 | 19 |
| 10 | 128.44 | 20 |

THE CLARKESON ENGINEERING CO., INC.

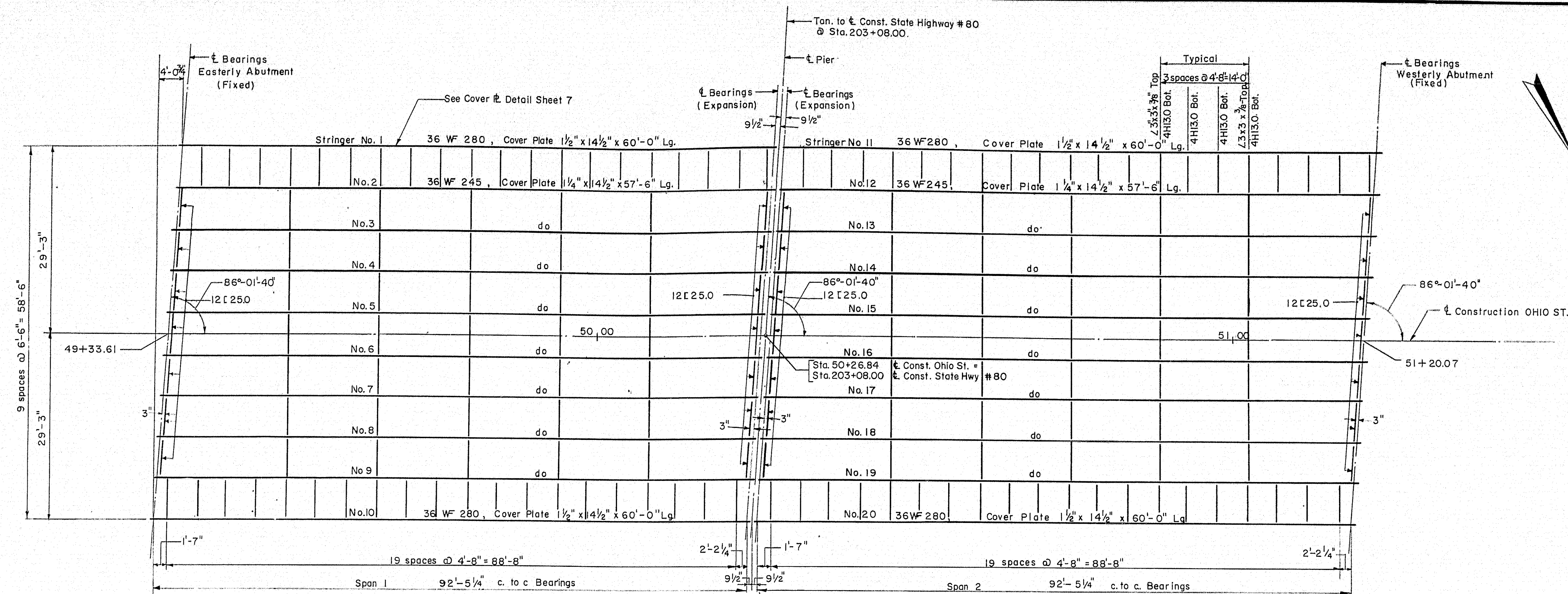
| | | |
|--------------------|---------------------------|----------------|
| DESIGN R.F. | CHECK Y.E. & H.P. | BRIDGE NO. |
| DRAWN D.A.T & E.K. | APPROVED W.A.H. C.J.M. | SURVEY PLOT |

STATE HIGHWAY COMMISSION
STATE HIGHWAY #80
UNDER
OHIO STREET
IN THE CITY OF
BANGOR
PENOBSCOT COUNTY
PIER

SHEET 5 OF 8 AUGUSTA, MAINE

| B.P.R. REG. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-------|-------------|-----------|--------------|
| 1 | MAINE | 1-080-8(3) | 35 | 62 |

BANGOR INTERSTATE

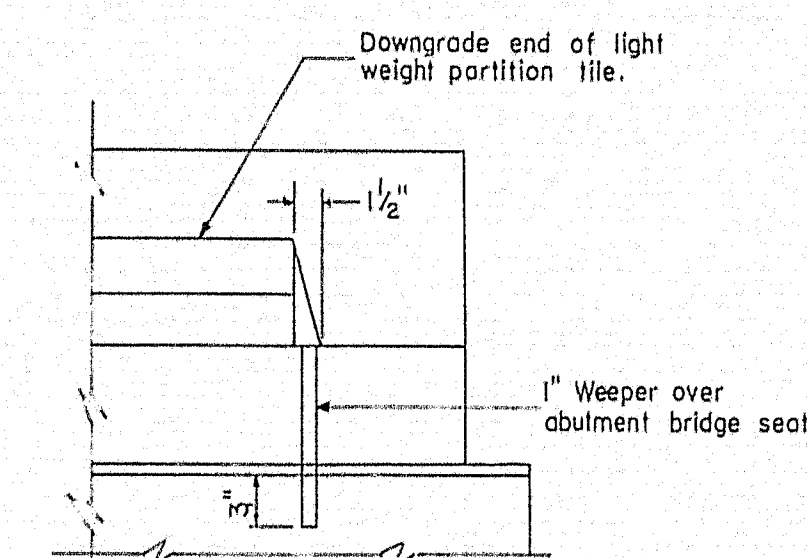


FRAMING PLAN

Scale: 3/32" = 1'-0"

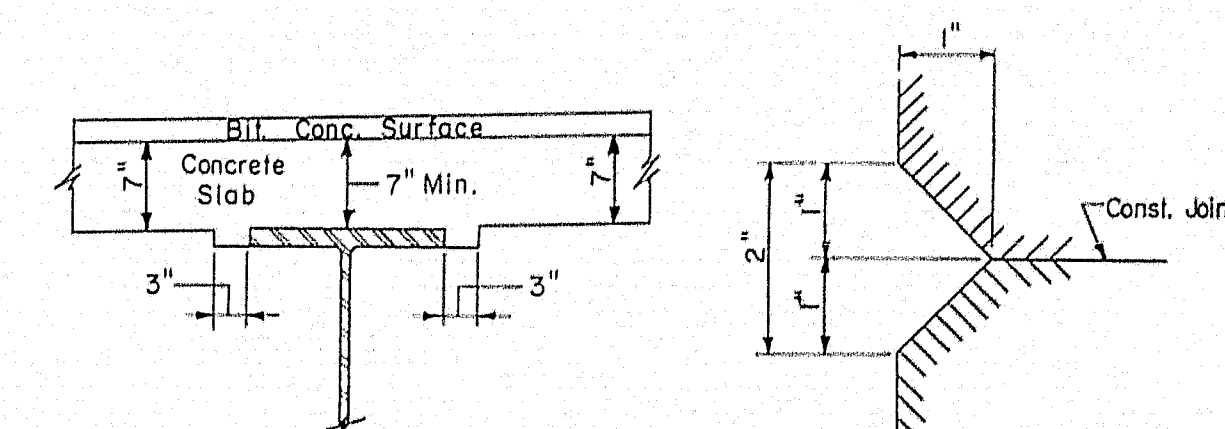
Note: All intermediate diaphragms to be I8 C427
See Detail on Sheet 7

Camber Note: All beams to be cambered to the extent that the bridge deck under full dead load will follow as nearly as practicable the design profile, and in no case with less camber than is likely to remain permanent. The proposed camber diagram shall be submitted to the Engineer for approval.



DETAIL B

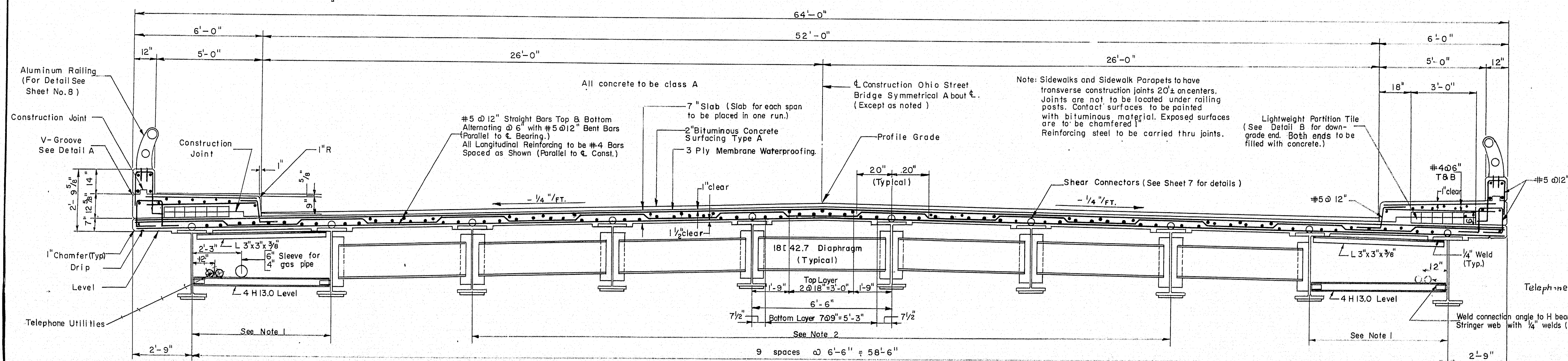
Scale: 1" = 1'-0"



DETAIL OF HAUNCH

Scale: 3/4" = 1'-0"

DETAIL A



TYPICAL CROSS SECTION

Scale: 3/8" = 1'-0"

THE CLARKSON ENGINEERING CO., INC.

DESIGN R.F. CHECK Y.E. & H.P. BRIDGE NO. SURVEY
DRAWN D.A.T. APPROVED C.J.M. PLOT

STATE HIGHWAY COMMISSION

STATE HIGHWAY # 80

UNDER

OHIO STREET

IN THE CITY OF

BANGOR

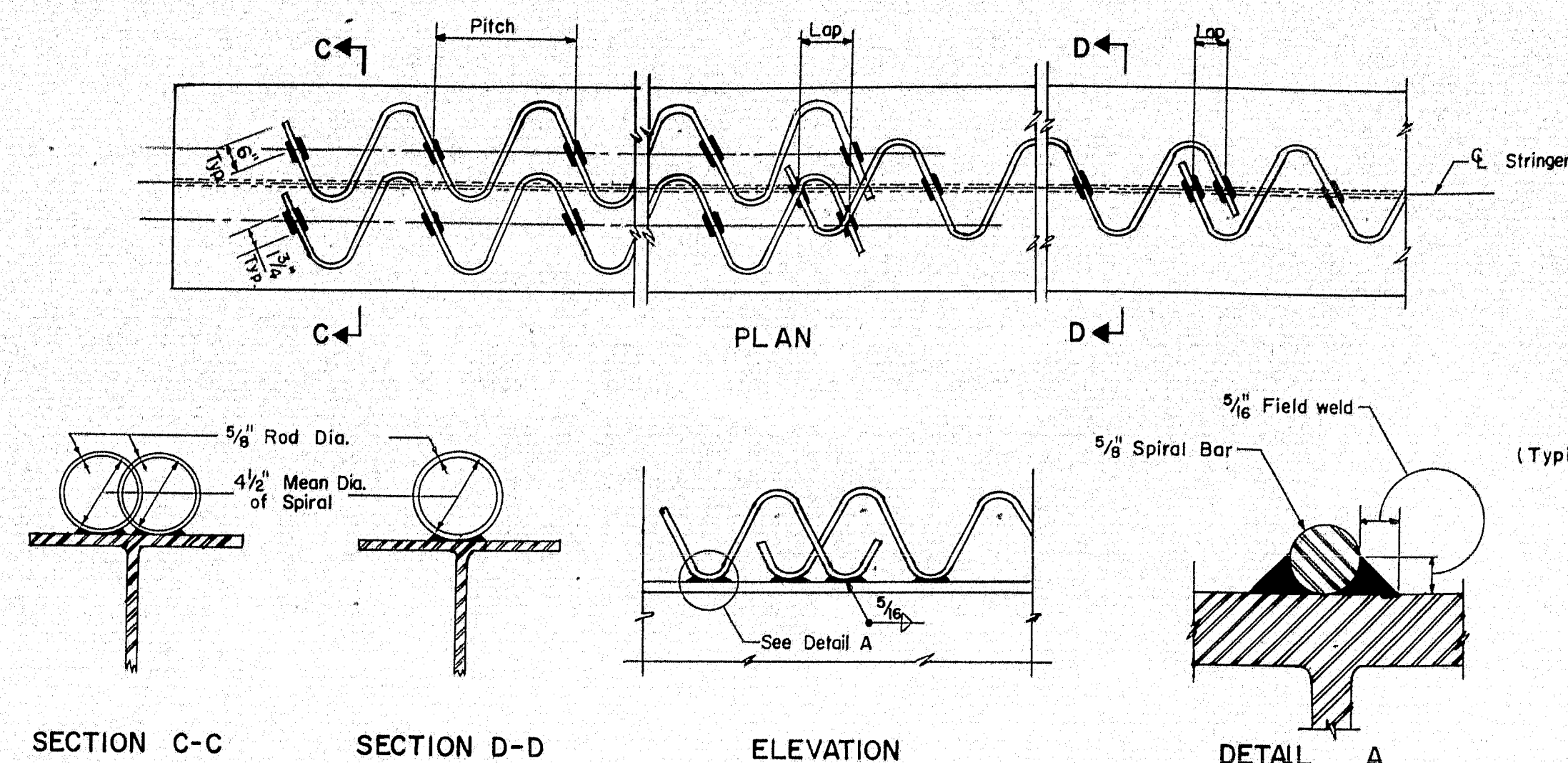
PENOBSCOT COUNTY

FRAMING PLAN & TYPICAL CROSS SECTION

SHEET 6 OF 8 AUGUSTA, MAINE

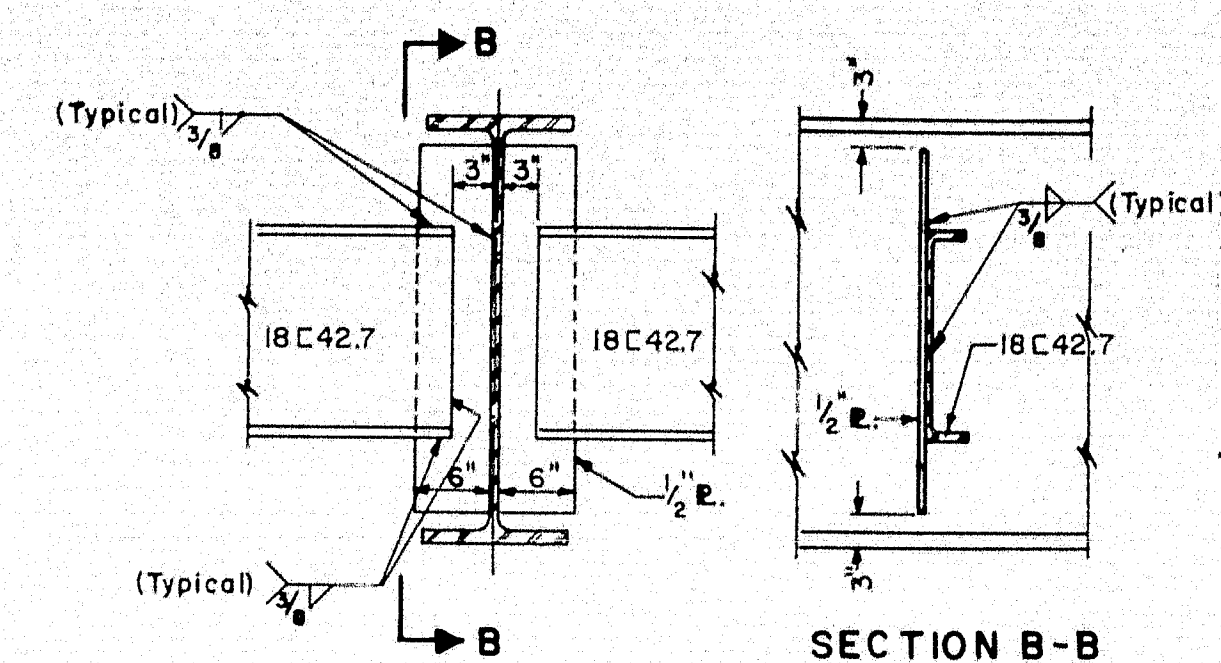
| B.P.R. REG. NO. | STATE | PROJECT NO. | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------|--------------|-----------------|
| 1 | MAINE | 1-080-8(3) | 36 | 62 |

BANGOR INTERSTATE



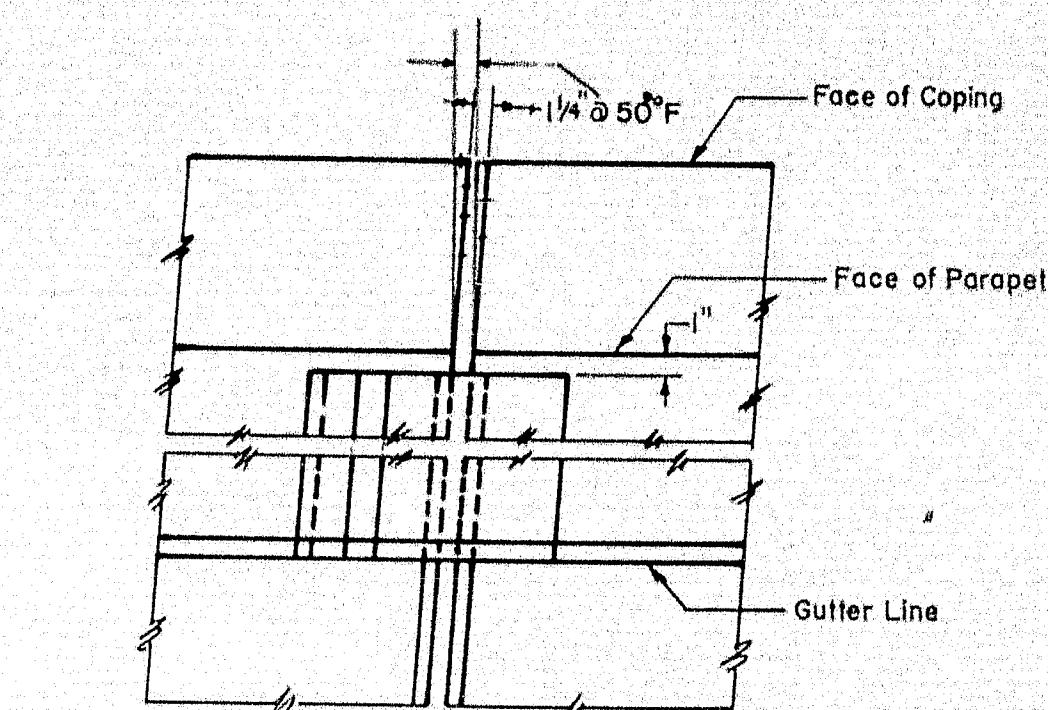
WELDED END DIAPHRAGM CONNECTION

Scale: 3/4" = 1'-0"



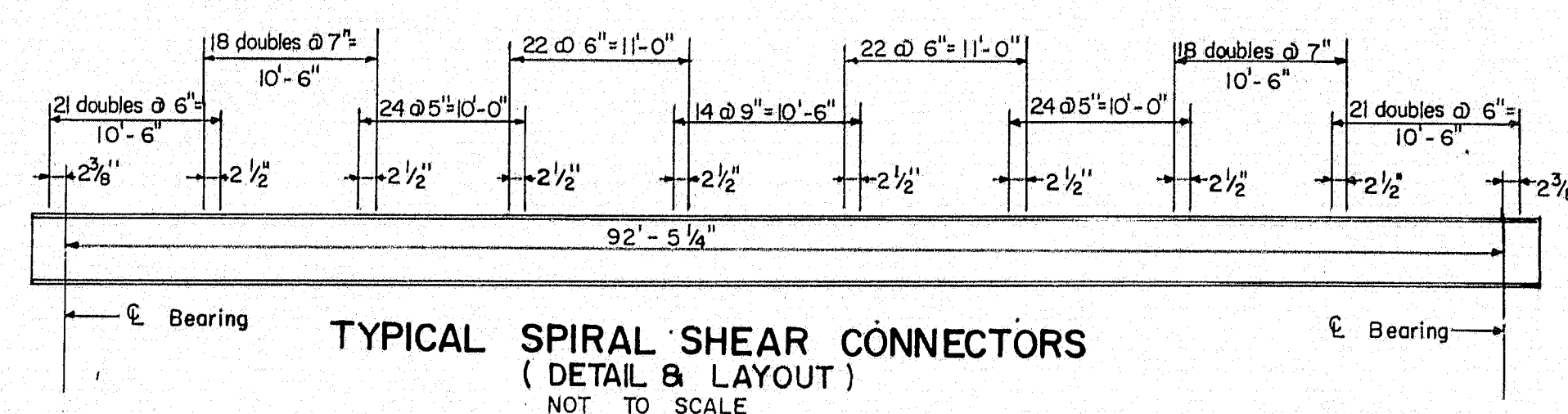
WELDED DIAPHRAGM CONNECTION

Scale: 3/4" = 1'-0"

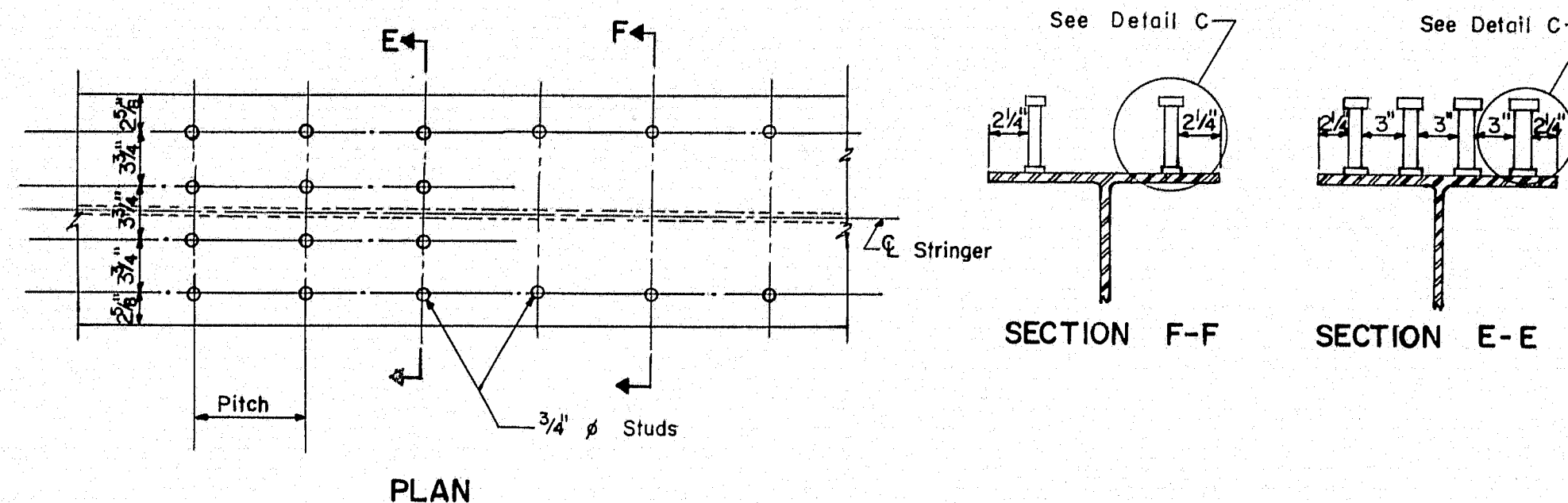


PLAN OF EXPANSION JOINT

Scale: 1" = 1'-0"



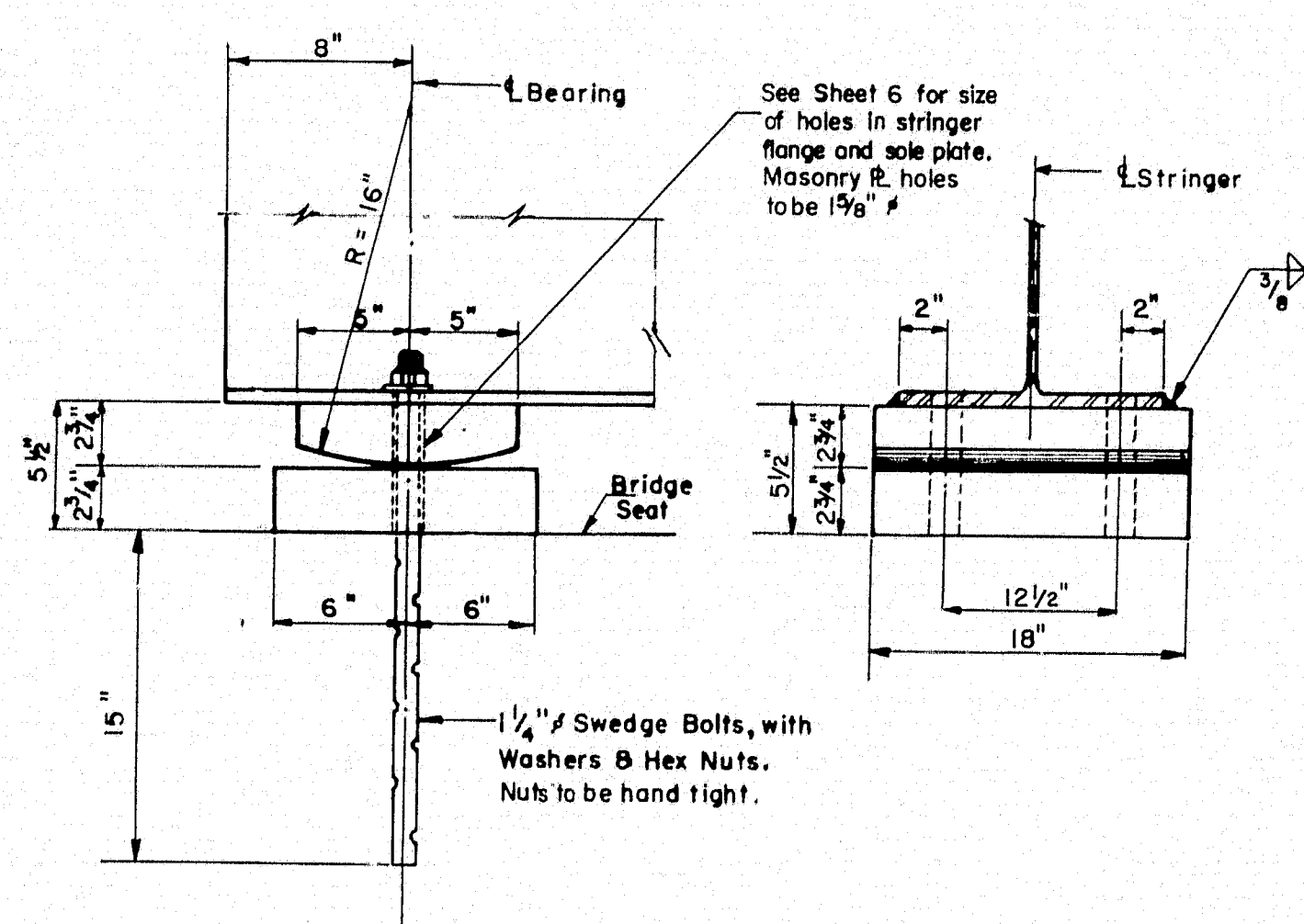
TYPICAL SPIRAL SHEAR CONNECTORS
(DETAIL & LAYOUT)
NOT TO SCALE



PLAN

SECTION F-F

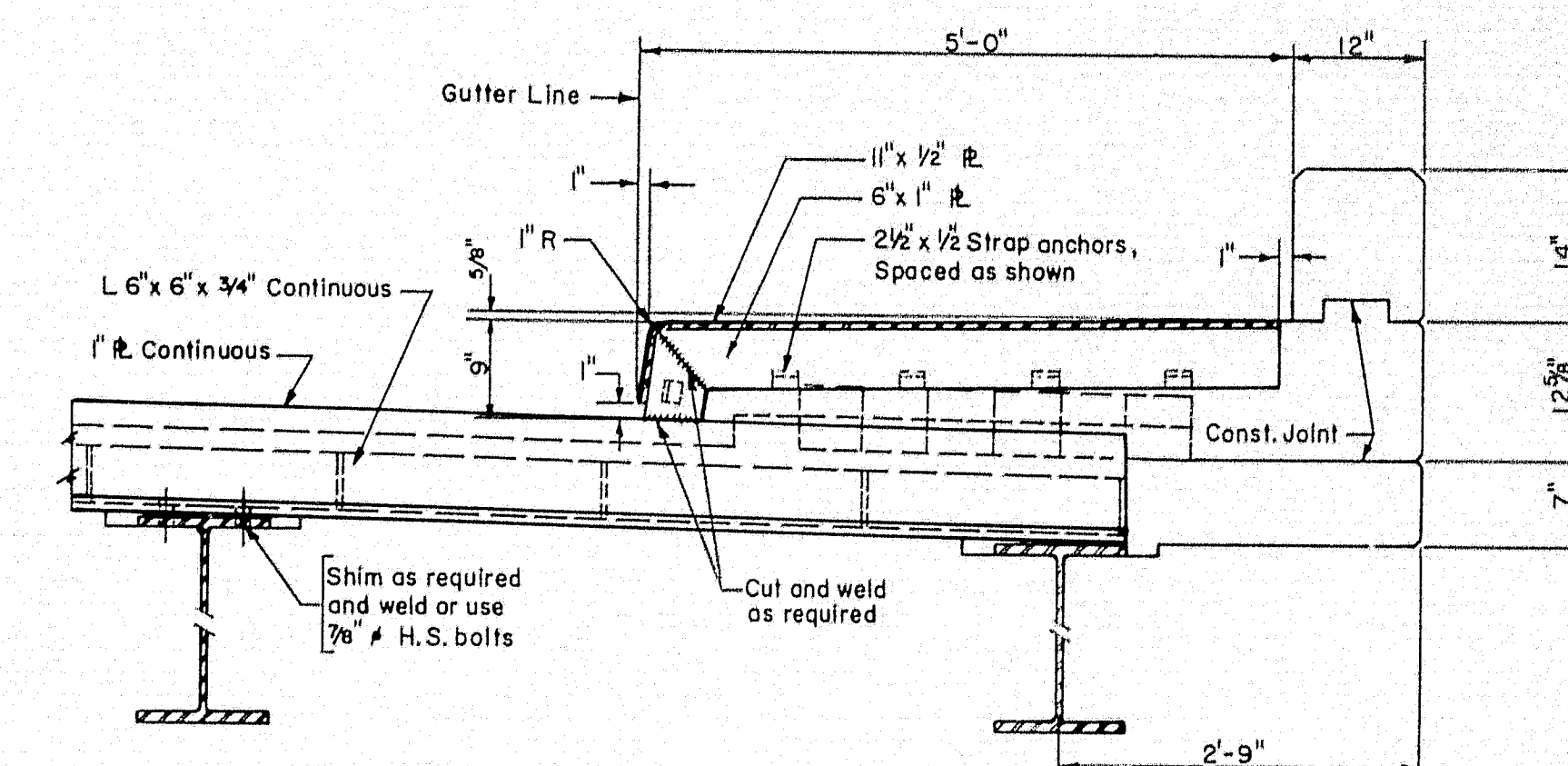
SECTION E-E



FIXED BEARING DETAIL

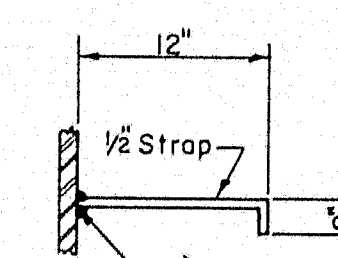
Scale: 1 1/2" = 1'-0"

Note: Welds to be shop or field welded.



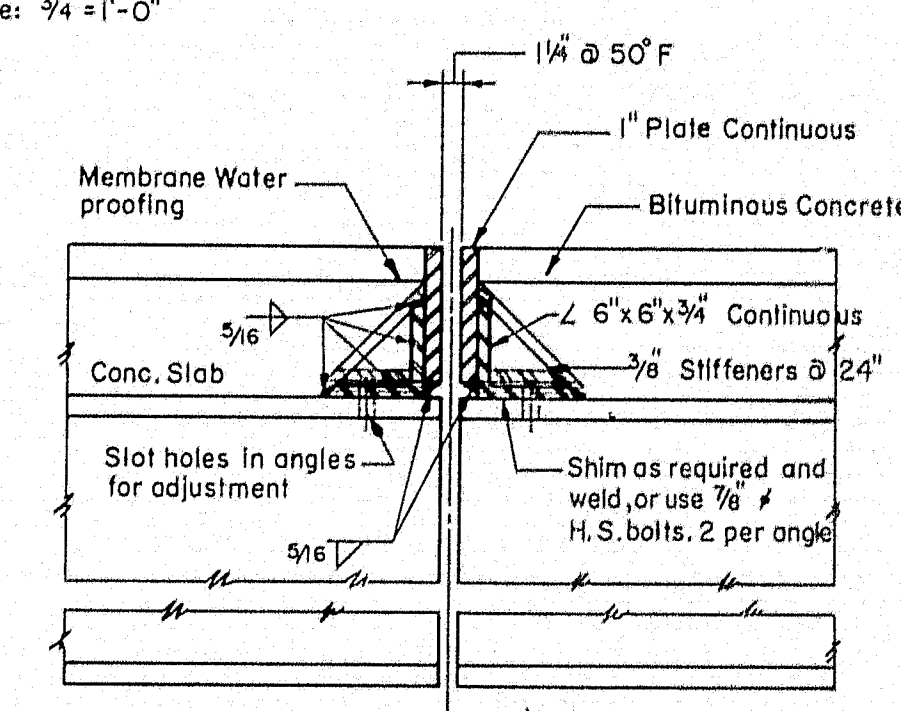
SIDEWALK EXPANSION JOINT DETAIL

Scale: 3/4" = 1'-0"



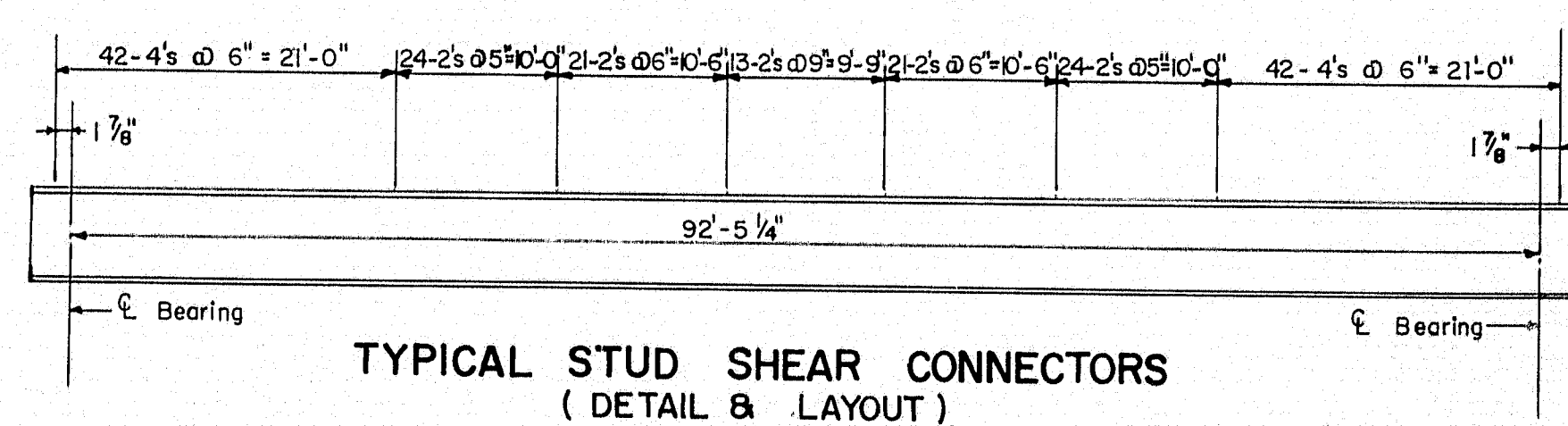
DETAIL B

Scale: 1" = 1'-0"

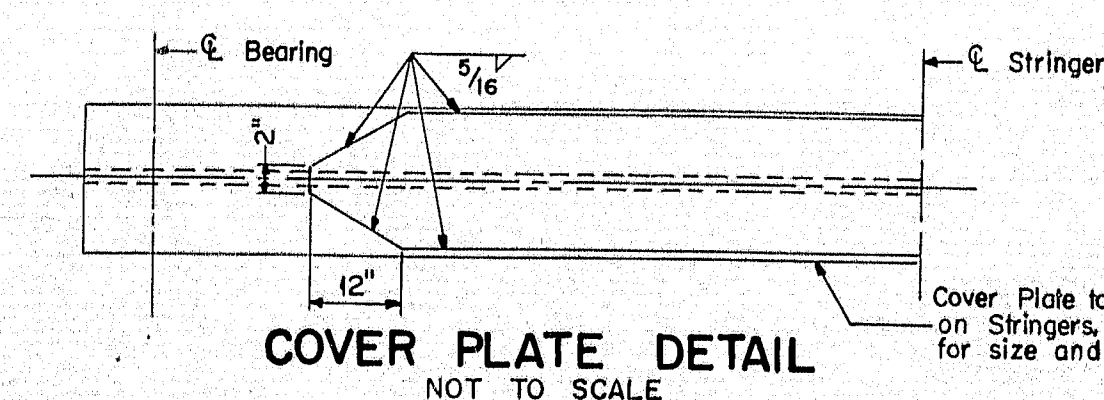


ROADWAY EXPANSION JOINT

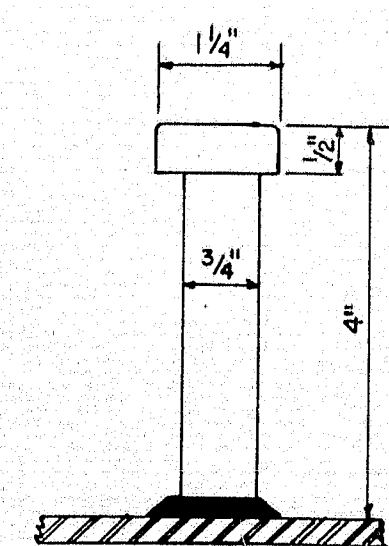
Scale: 1" = 1'-0"



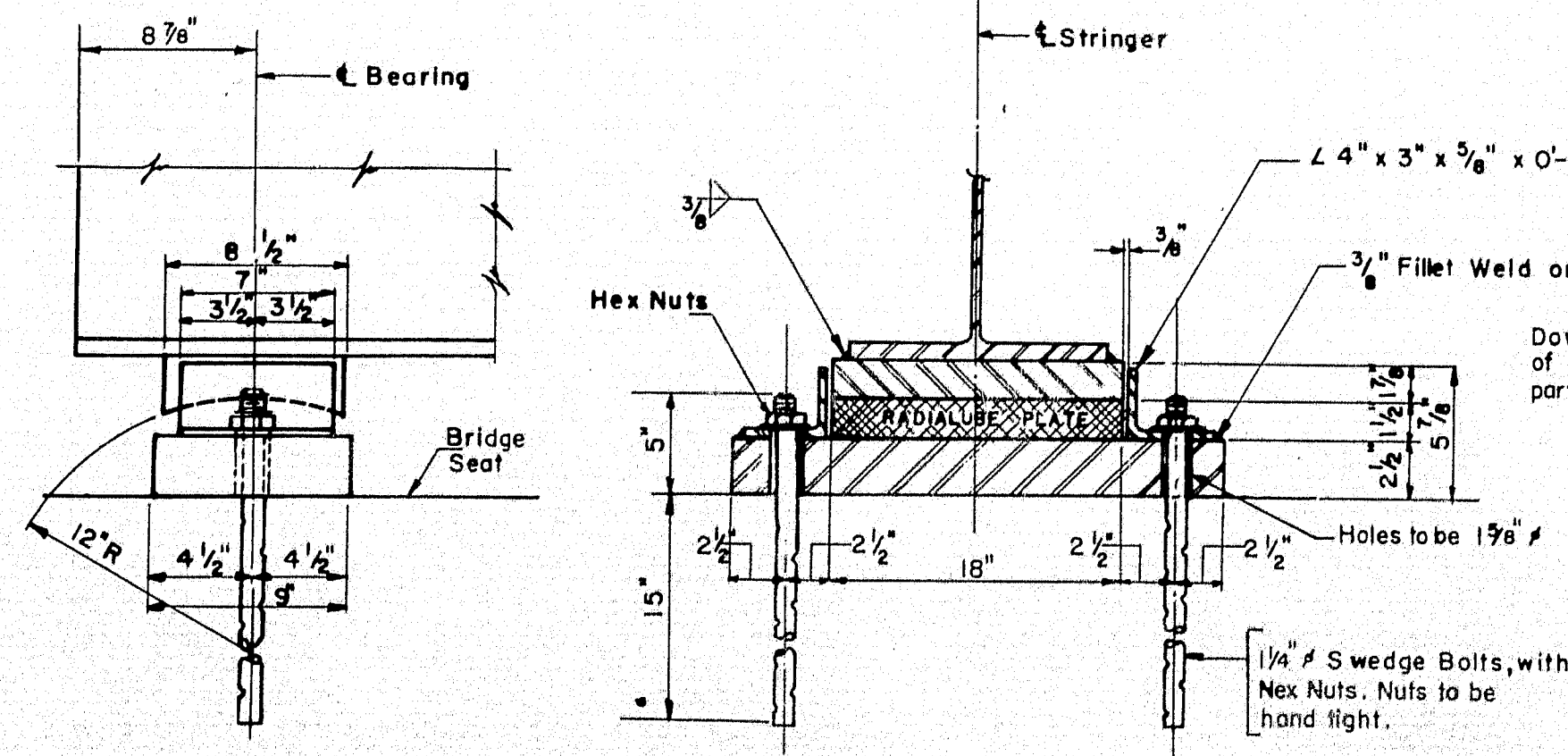
TYPICAL STUD SHEAR CONNECTORS
(DETAIL & LAYOUT)
NOT TO SCALE



COVER PLATE DETAIL
NOT TO SCALE



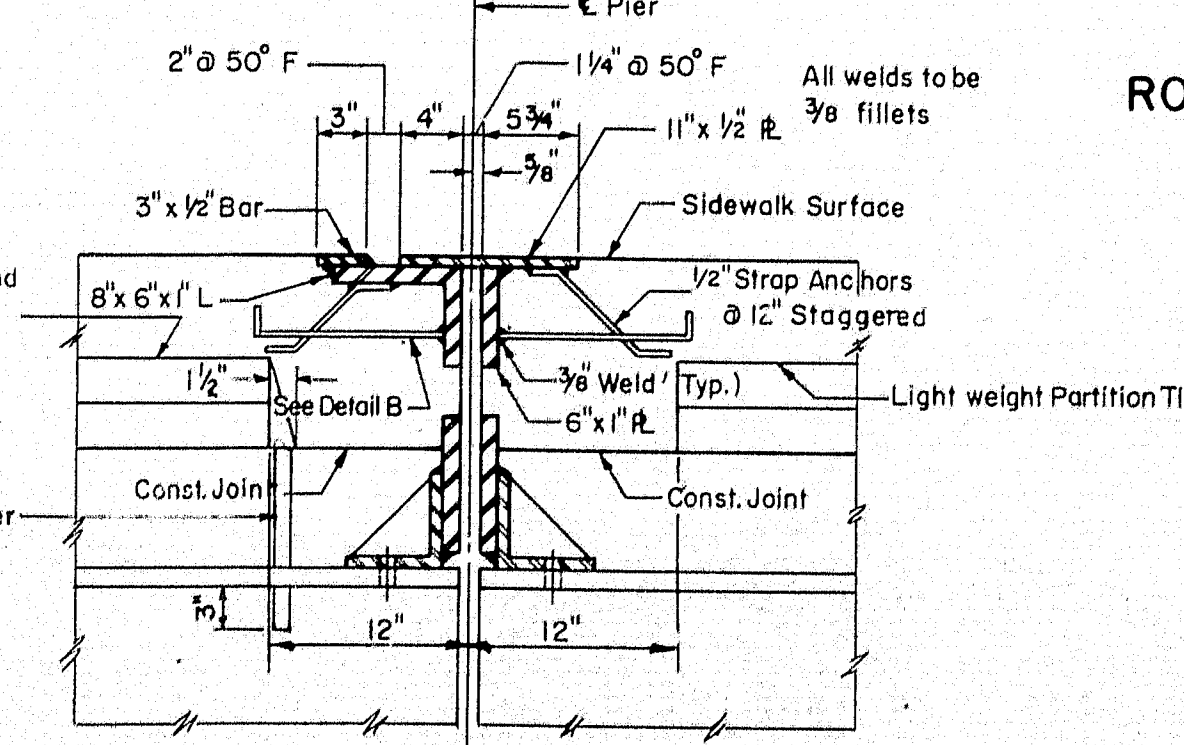
DETAIL C



EXPANSION BEARING DETAIL

Scale: 1 1/2" = 1'-0"

Note: All anchor bolts to be centered true before bearing plates are set in position.



SIDEWALK EXPANSION JOINT

Scale: 1" = 1'-0"

Note: Similar joint to be carried down face of curb to within 1" of Roadway Surface.

THE CLARKSON ENGINEERING CO., INC.

| DESIGN | CHECK | H.P. | BRIDGE NO. |
|----------------------|-----------------|--------|------------|
| DRAWN D.A.T., B.E.K. | APPROVED W.A.H. | SURVEY | PLOT |

STATE HIGHWAY COMMISSION
STATE HIGHWAY # 80
UNDER

OHIO STREET
IN THE CITY OF
BANGOR

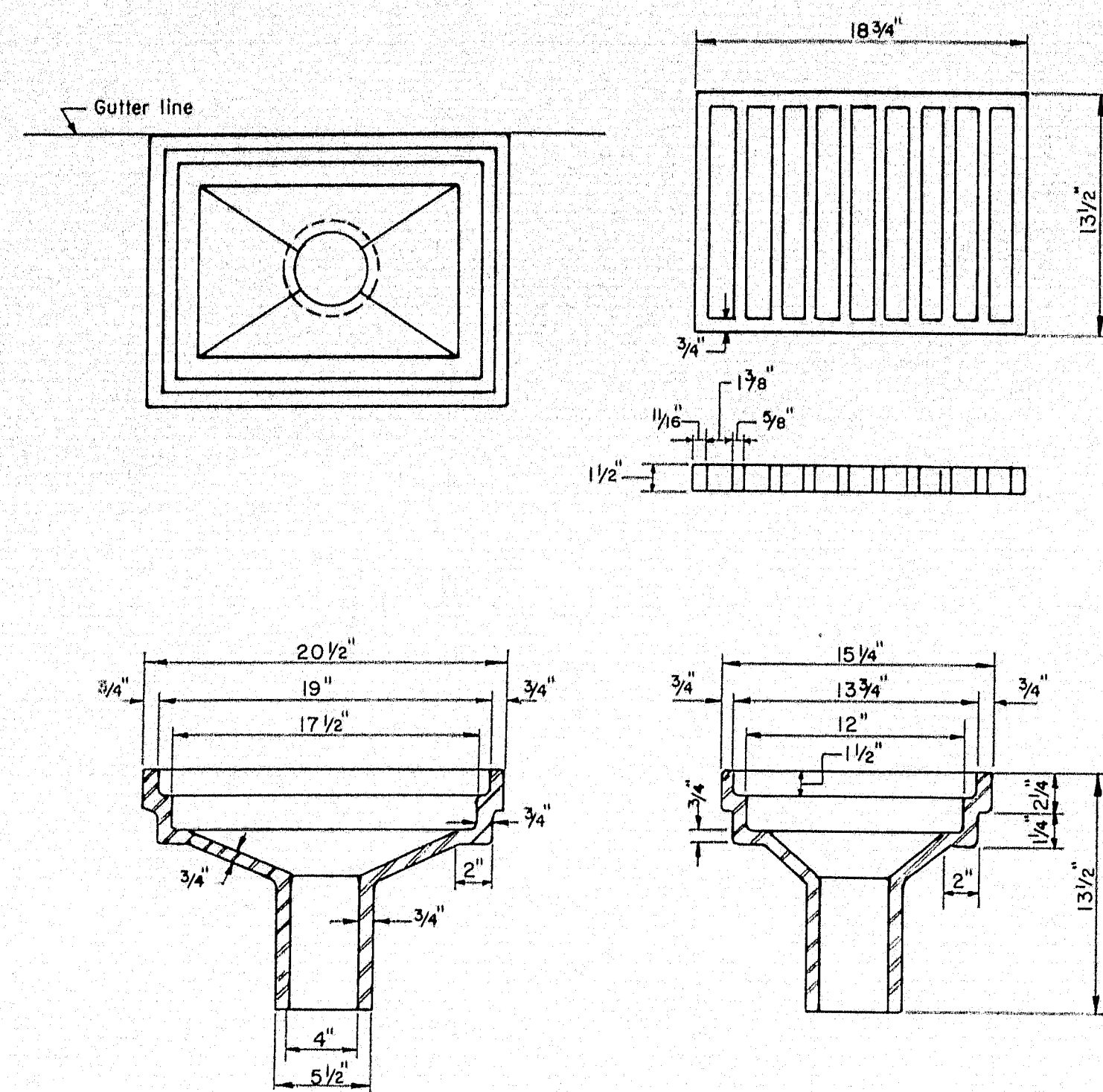
PENOBSCOT COUNTY

SUPERSTRUCTURE DETAILS

SHEET 7 OF 8 AUGUSTA, MAINE

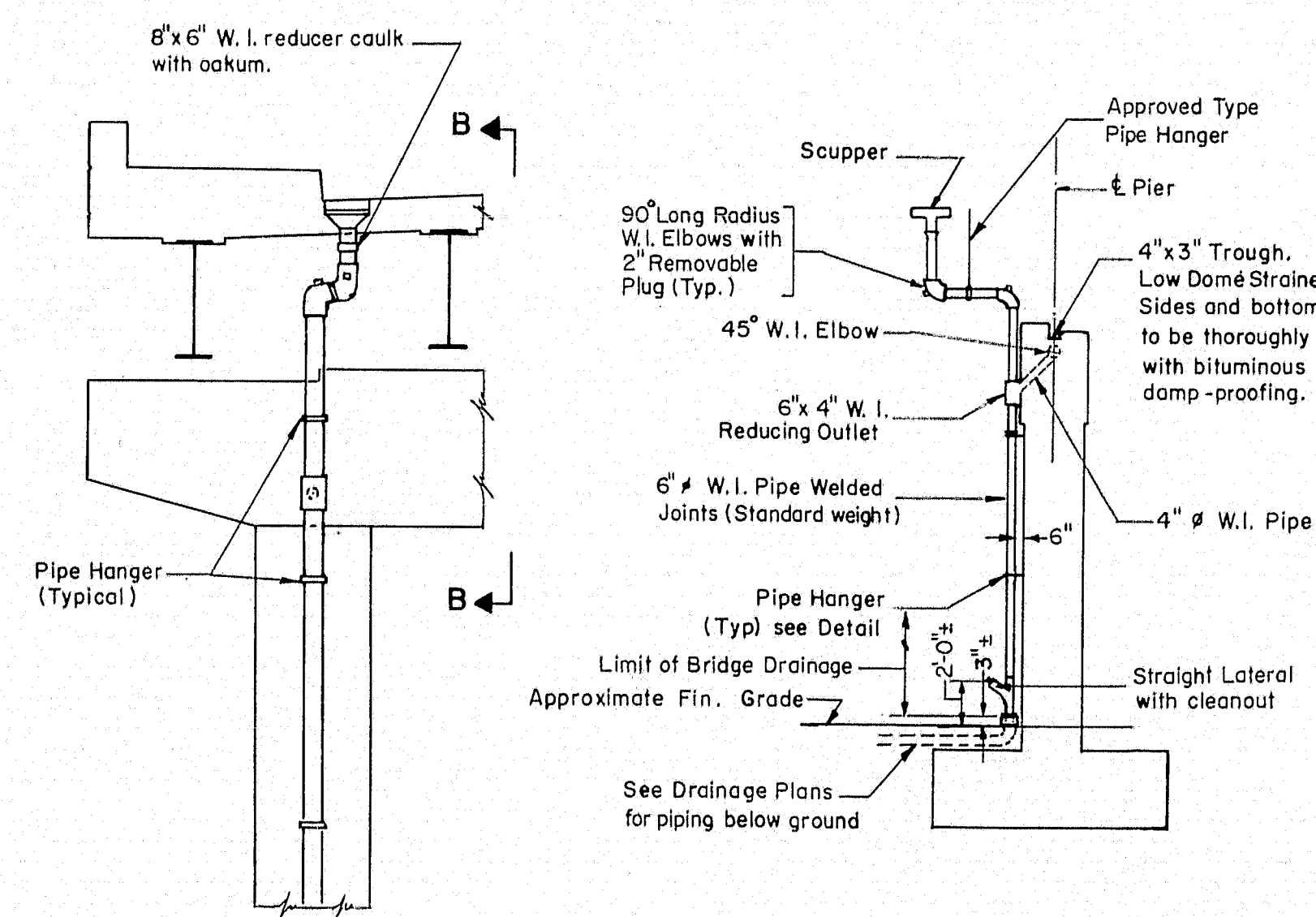
| BPR. REG. NO. | STATE | PROJECT NO | SHEET NO | TOTAL SHEETS |
|------------------|-------|------------|-------------|-----------------|
| I | MAINE | I-080-8(3) | 37 | 62 |

BANGOR INTERSTATE



SCUPPER DETAILS

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

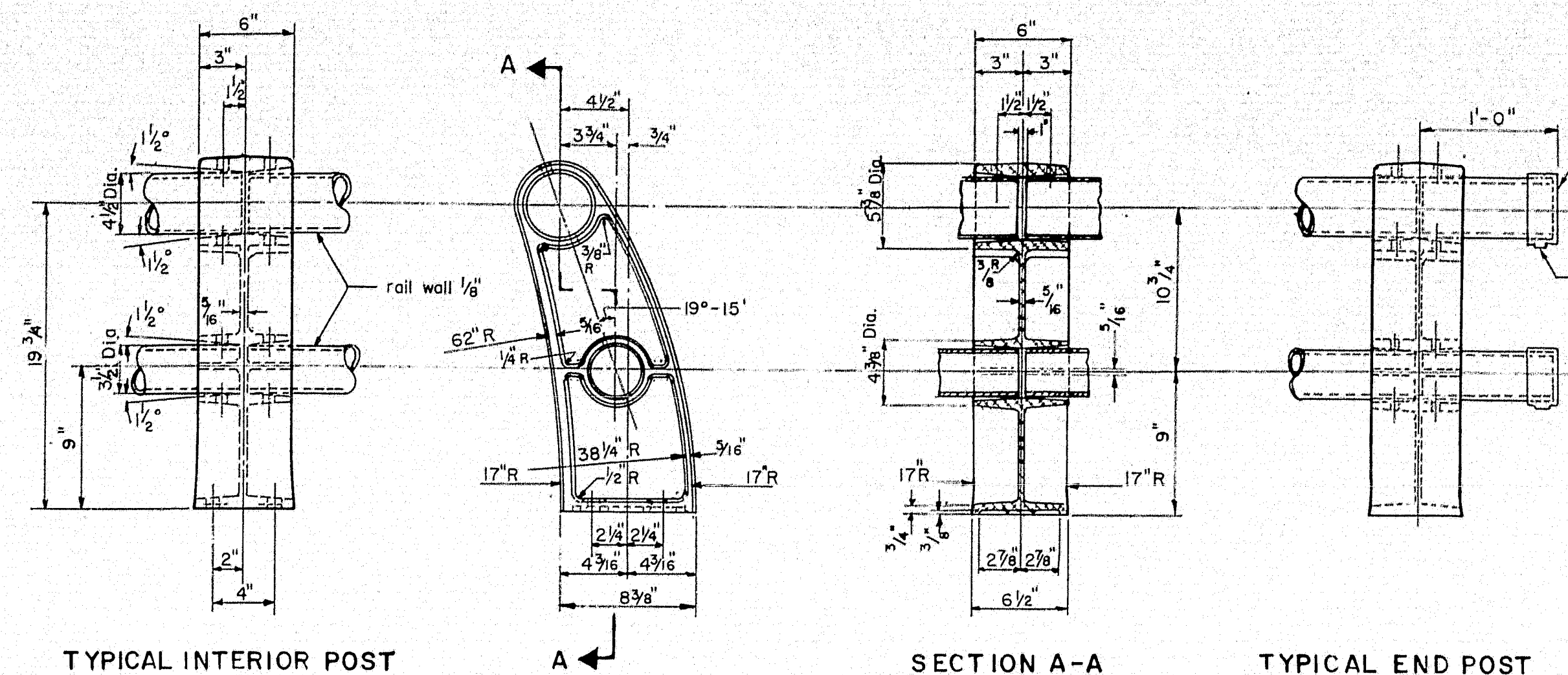


SECTION B-B

No Scale

PIPE DETAILS AT SCUPPERS

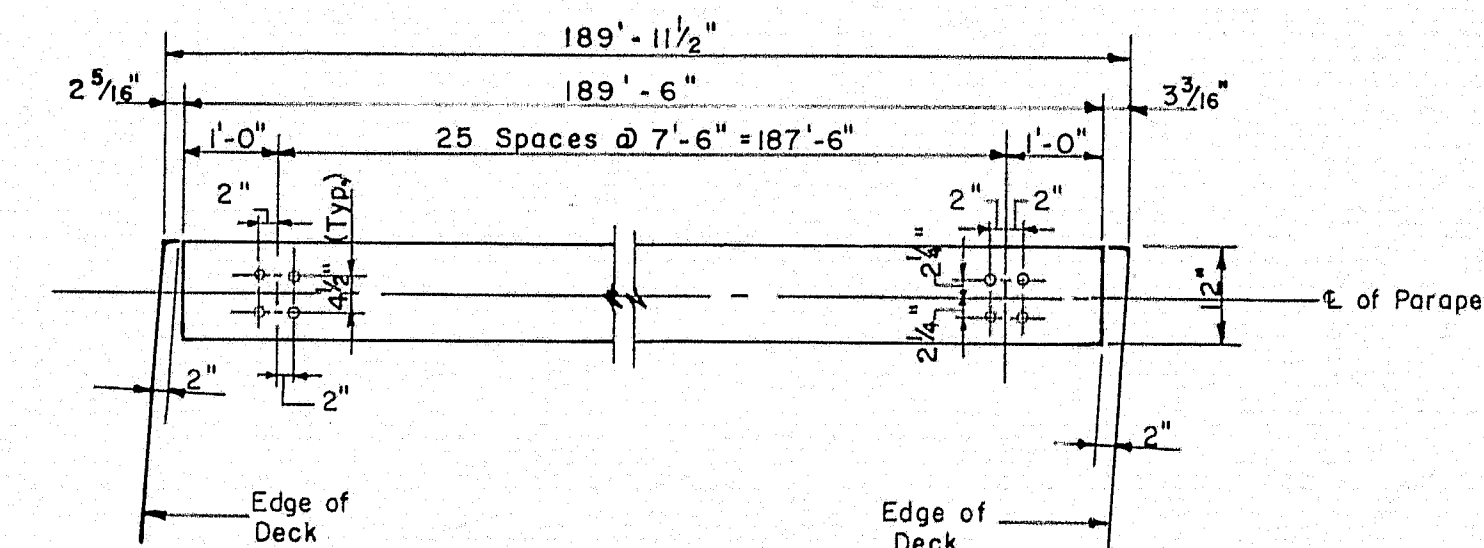
Scale: $\frac{1}{4}'' = 1' - 0''$



ALUMINUM RAILING DETAILS

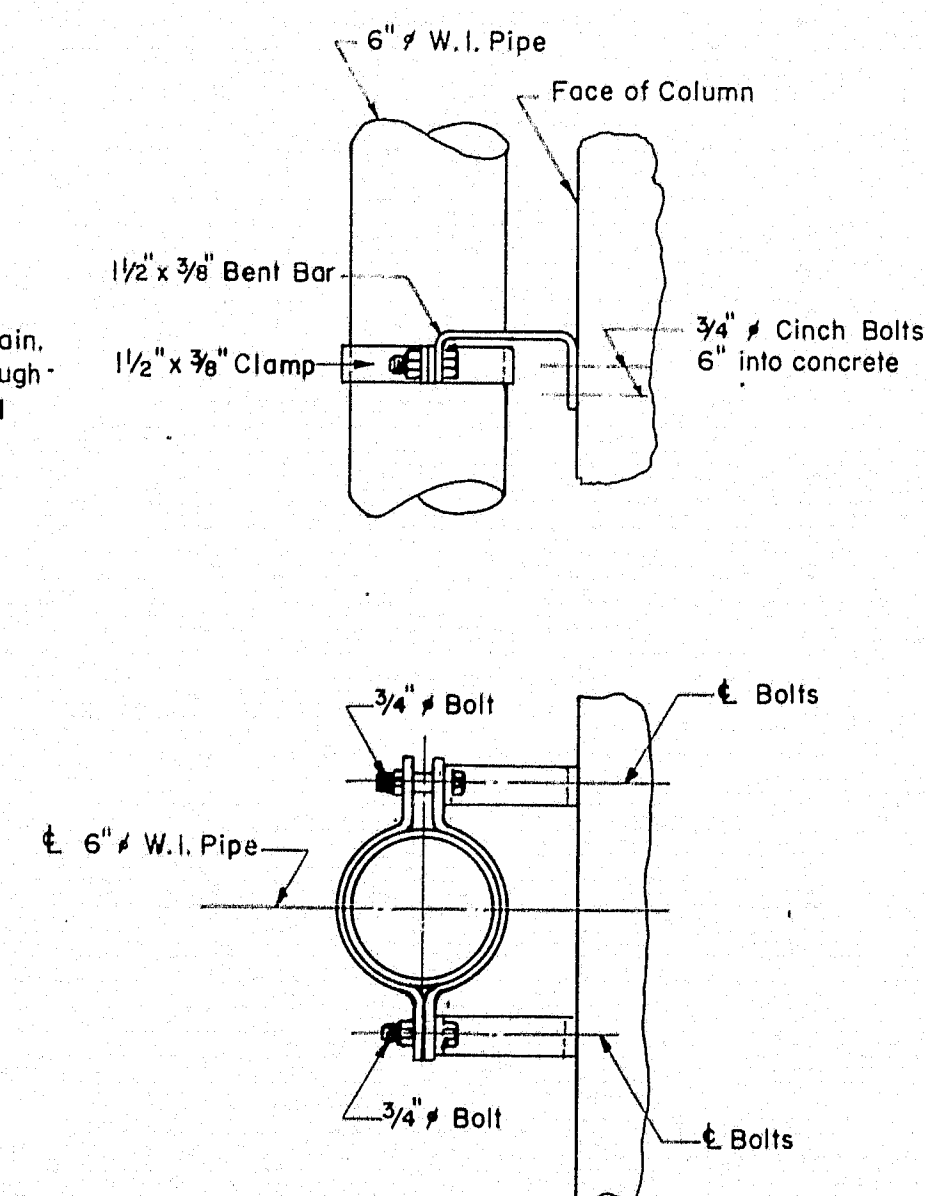
Scale: $1\frac{1}{2}'' = 1'-0''$

- Notes: 1. Any variation in railing dimensions shall be submitted for approval.
2. Aluminum Alloy Anchor Bolts, Nuts & Washers.
3. All anchor bolts to be $\frac{3}{4}" \text{ } \phi$ (Set 12" min. into concrete)



SOUTHERLY RAILING ANCHOR BOLT LAYOUT
NORTHERLY RAILING ANCHOR BOLT LAYOUT (OPP. HAND)

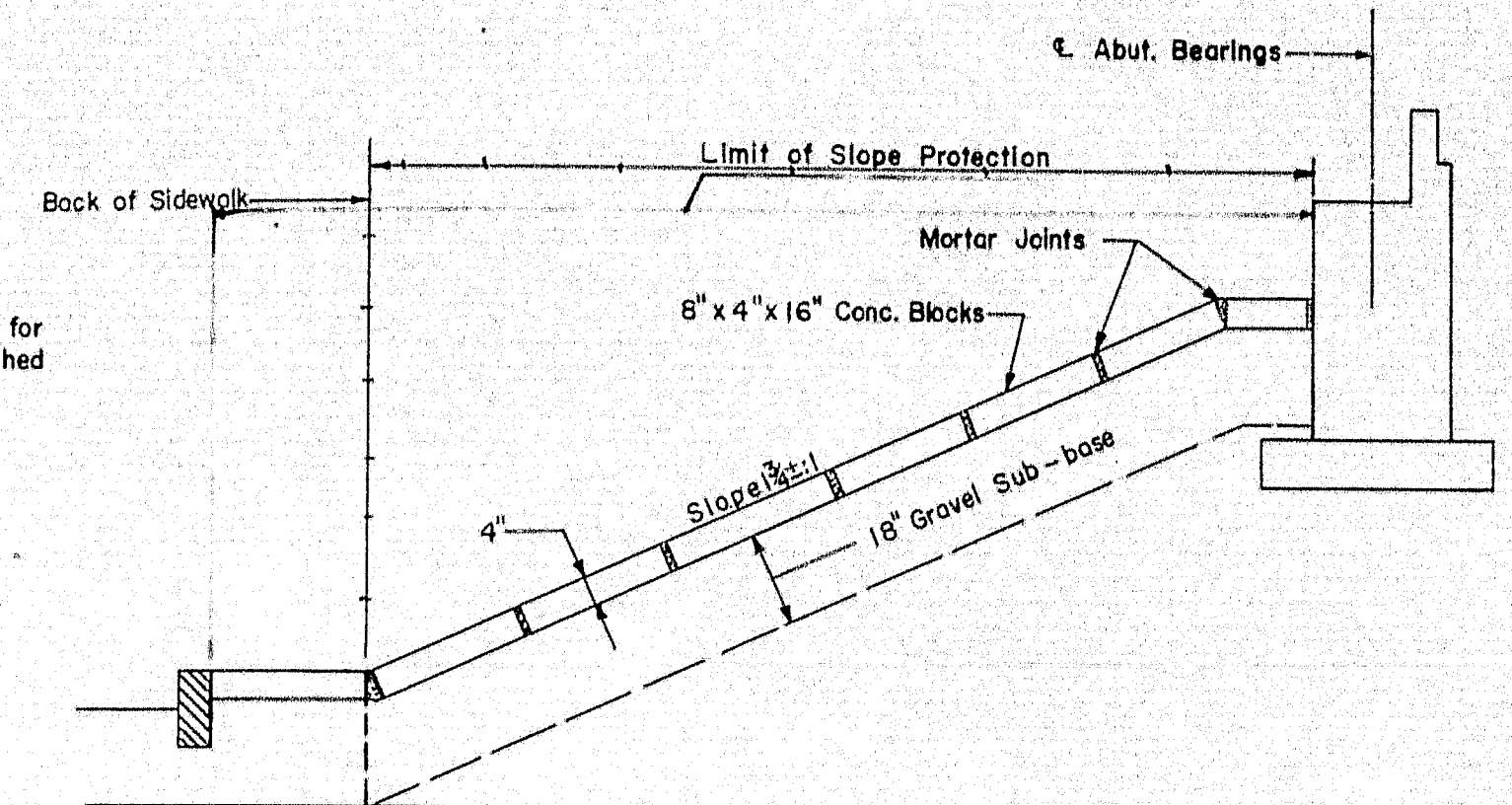
Scale : $\frac{1}{2}$ " = 1'-0"



PIPE HANGER DETAILS

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

- Notes: 1. All pipes and fittings to be W.I. standard weight with horizontal runs on 2% grade.
2. All joints to be welded except as shown.
3. For location of scuppers see Sheet No. 3
4. The contractor shall submit complete drawings of the piping system to the Engineer for approval.



SLOPE DETAIL

No Scale

| | | |
|-------------------------------------|-----------------|------------|
| THE CLARKESON ENGINEERING CO., INC. | | |
| DESIGN | CHECK H.P. | BRIDGE NO. |
| DRAWN D.A.T. | W.A.H. | SURVEY |
| | APPROVED C.J.M. | PLOT |

STATE HIGHWAY COMMISSION

STATE HIGHWAY #80

UNDER

OHIO STREET

IN THE CITY OF

BANGOR

'PENOBSCOT COUNTY

DETAILS

SHEET 8 OF 8 AUGUSTA, MAINE