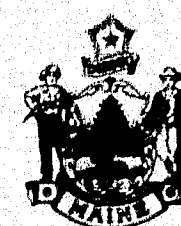


STATE OF MAINE
STATE HIGHWAY COMMISSION

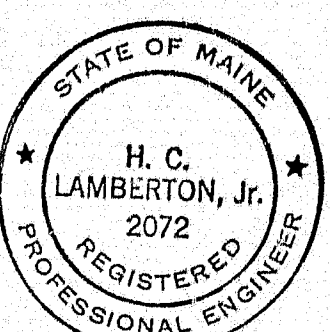


INTERSTATE 95
OVER
FOXCROFT ROAD
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
FEDERAL AID PROJECT NO. I-95-9(24)298
LENGTH OF PROJECT 0.025 MILE

PROJECT COMPLETED 10 NOV. '66

TRAFFIC

| INTERSTATE 95 | FOXCROFT ROAD |
|-----------------------------|---------------|
| 490 ----- A.D.T. 1966 ----- | 470 |
| 770 ----- A.D.T. 1986 ----- | 660 |
| 90 ----- D.H.V. ----- | 80 |
| 14% ----- T. ----- | 14% |
| 60% ----- D. ----- | 60% |
| 60 MPH ----- V. ----- | 50 MPH |



HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK BOSTON KANSAS CITY
H. C. Lambert, Jr. 9/2/64
DATE

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION 1
APPROVED
DIVISION ENGINEER DATE

APPROVED
MAINE STATE HIGHWAY COMMISSION
Paul H. Thayer 9-9-64
CHAIRMAN
Carl M. Stapp 9-9-64
Benjamin G. Lechante 9-9-64
Wynne 9-9-64
CHIEF ENGINEER

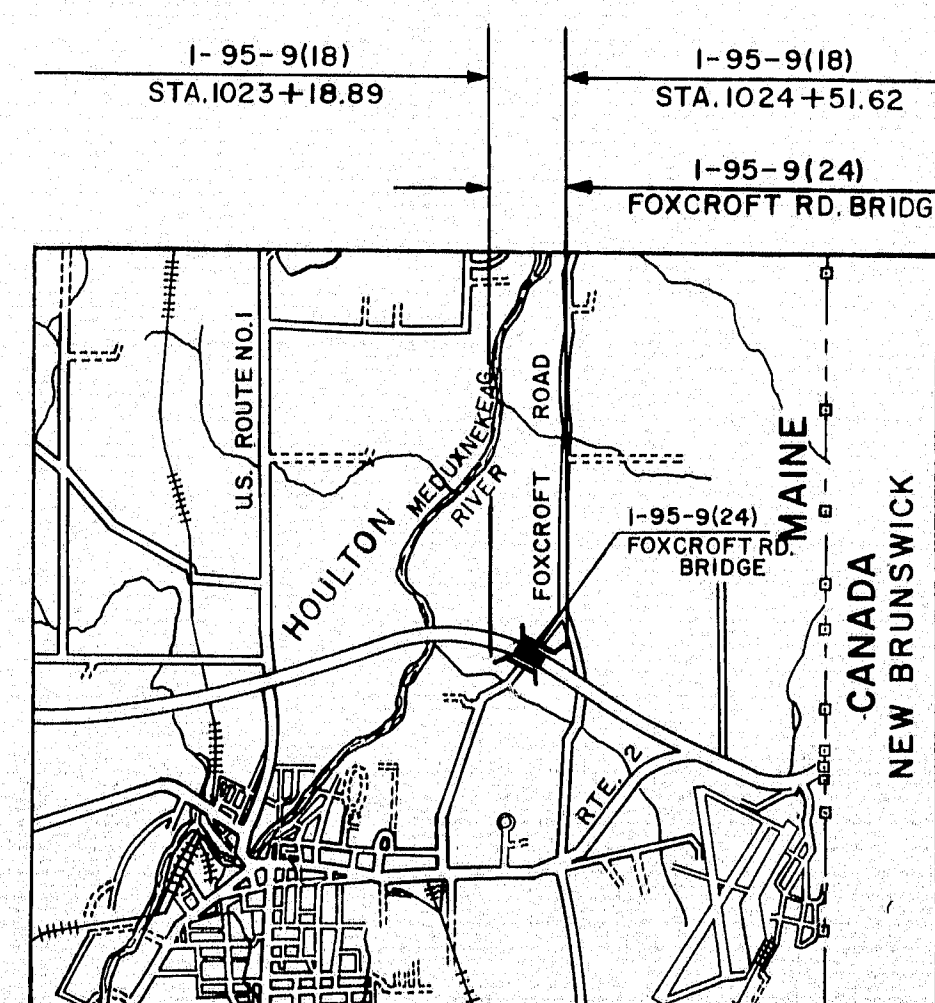
SURVEY CROSS SECTION SCALES } HORZ. 1"=50' VERT. 1"=5'
INTERSTATE 1"=10' FOXCROFT ROAD 1"=5'

INDEX OF SHEETS

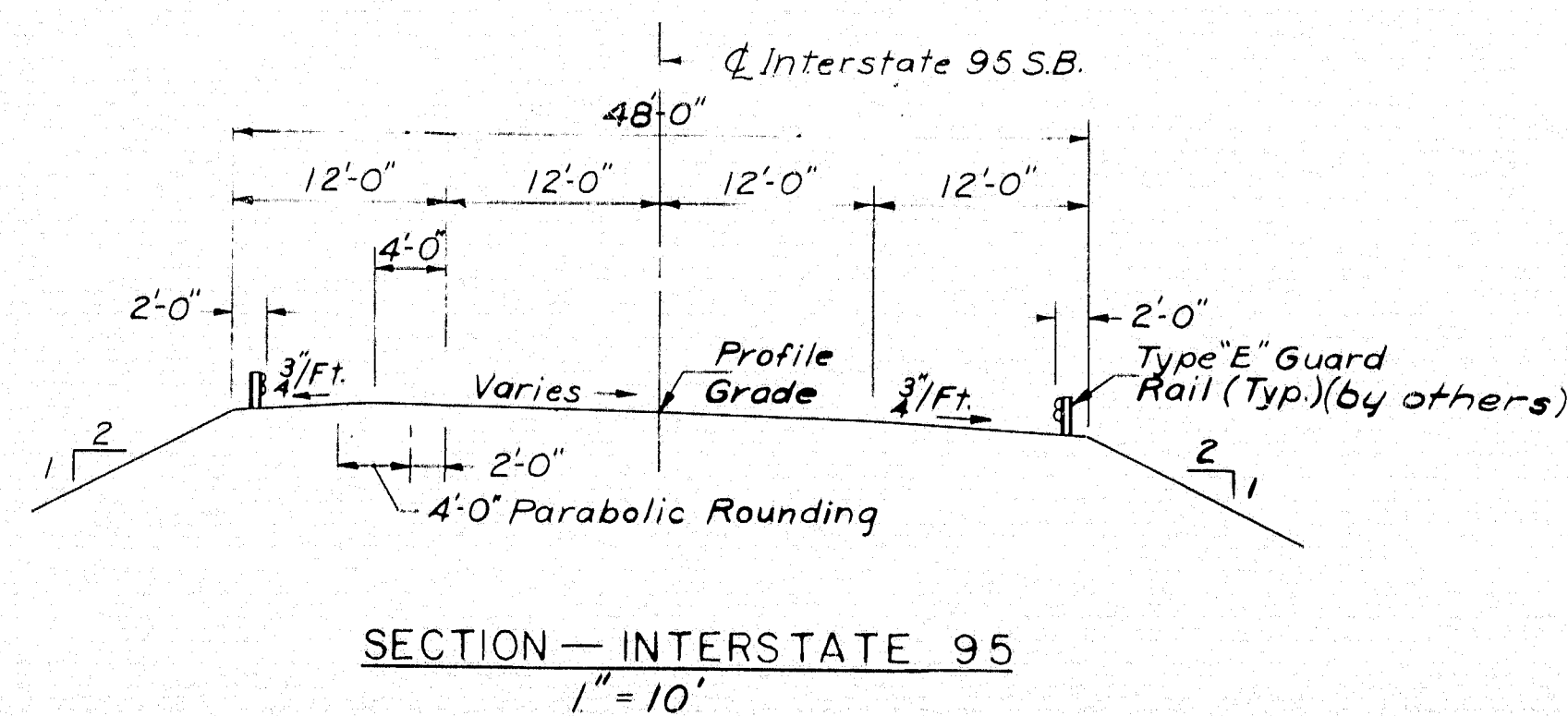
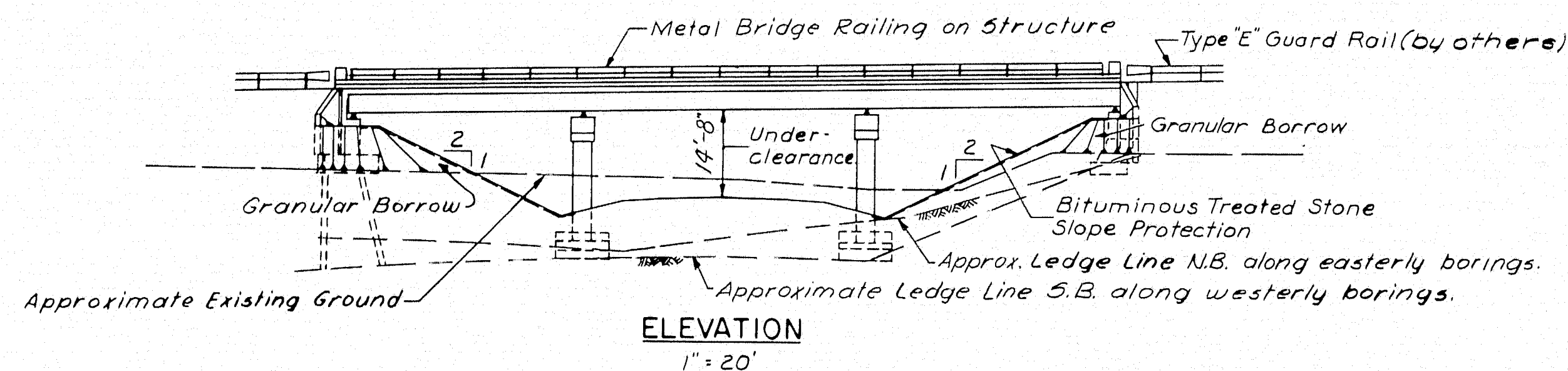
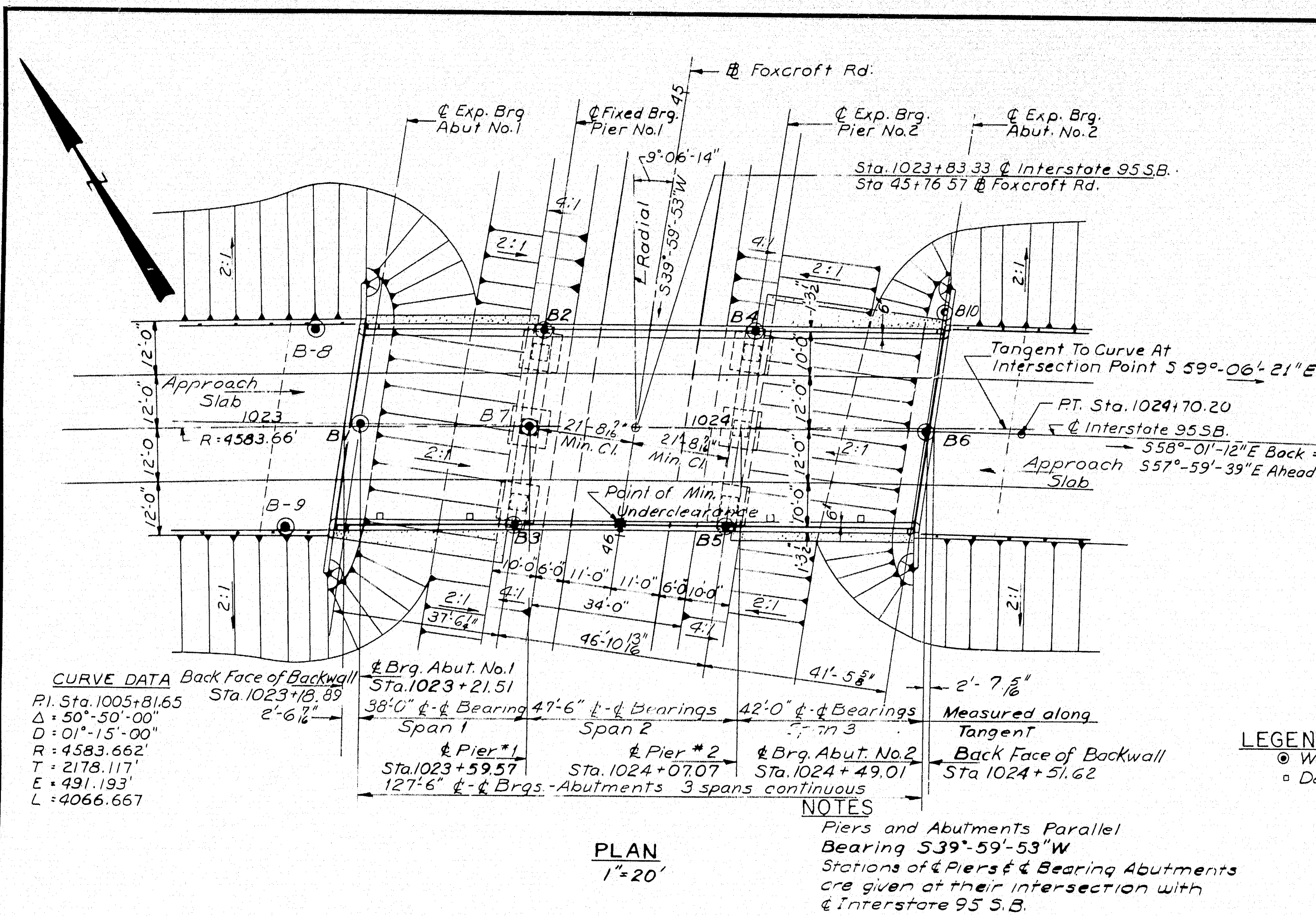
- 1 ----- TITLE SHEET
- 2 ----- GENERAL PLAN & QUANTITIES
- 3 ----- PLANS, PROFILES & TYPICAL SECTIONS
- 4-5 ----- CROSS SECTIONS - S.B. ROADWAY
- 6 ----- CROSS SECTIONS - FOXCROFT ROAD
- 7-8 ----- FOUNDATION SURVEY
- 9 ----- ABUTMENT NO. 1
- 10 ----- ABUTMENT NO. 2 - APPROACH SLAB
- 11 ----- PIERS
- 12 ----- STRUCTURAL STEEL & BLOCKING
- 13 ----- SUPERSTRUCTURE
- 14 ----- SLOPE PROTECTION
- 15 ----- REINFORCING STEEL

STANDARD DETAILS SHEETS

- BD 101-64 ----- BEARING DETAILS
BD 103-64 ----- BEAM SPLICES
BD 104-64 ----- DIAPHRAGMS ARMORED JOINT,
SHEAR CONNECTORS, DRAIN
BD 107-64 ----- STEEL RAIL
BD 108-64 ----- ALUMINUM RAIL
ENGINEERS FIELD OFFICES NOV. 1964



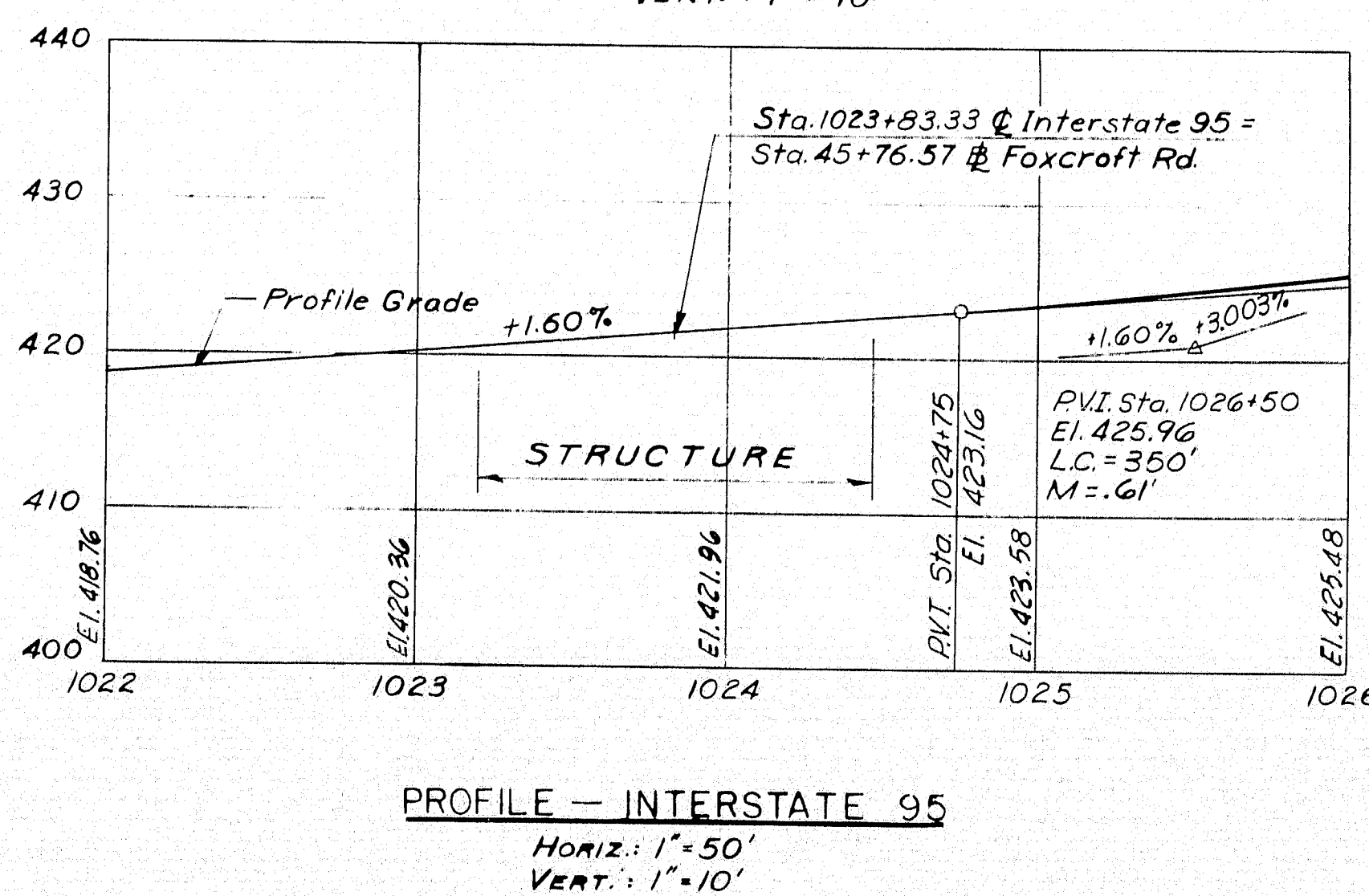
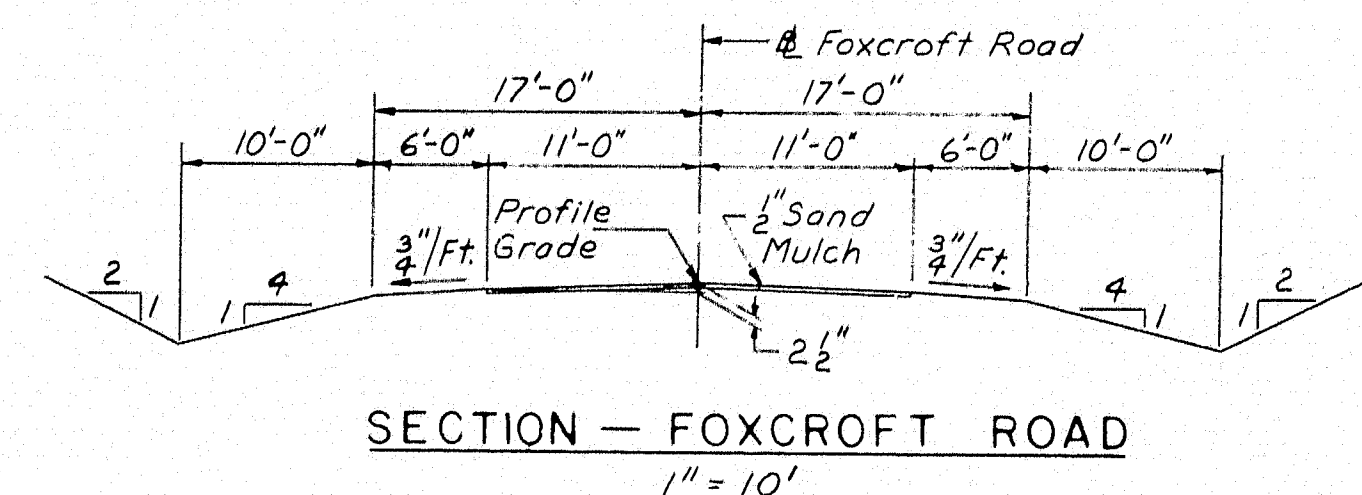
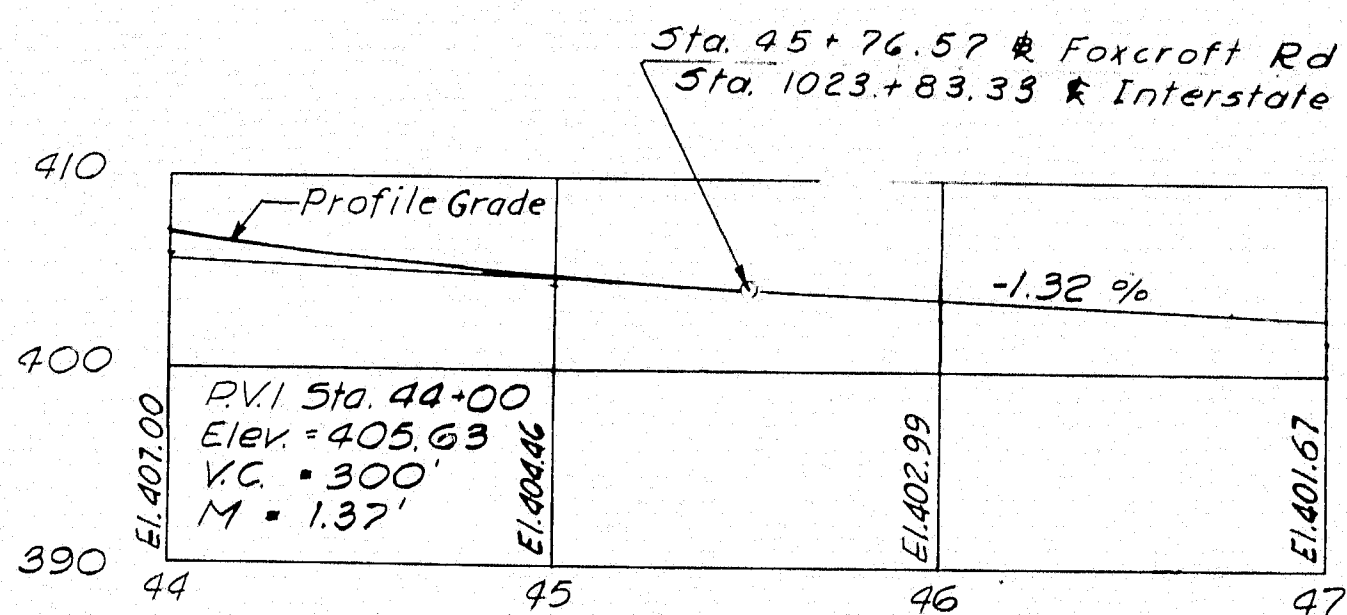
LOCATION MAP
APPROX. SCALE - 1" = 1 MILE



| ESTIMATE OF QUANTITIES | | | | |
|------------------------|--|----------|----------|-------------------|
| Item No. | Description | Unit | Quantity | Bridge Quantities |
| 204-12 | Struct. Earth Exc. Abutments & Retaining Walls | Cu. Yds. | 35 | 35 Cu. Yds. |
| 204-13 | Struct. Rock Exc. Abutments & Retaining Walls | Cu. Yds. | 5 | 5 Cu. Yds. |
| 204-14 | Struct. Earth Exc. Piers | Cu. Yds. | 269 | 269 Cu. Yds. |
| 204-15 | Struct. Rock Exc. Piers | Cu. Yds. | 14 | 14 Cu. Yds. |
| 205-9 | Granular Borrow | Cu. Yds. | 6500 | |
| 302-7 | Gravel Base Course (1 P.M.) | Cu. Yds. | 425 | |
| 701-33 | Portland Cem. Conc. Abutments & Retaining Walls | Cu. Yds. | 176 | 176 Cu. Yds. |
| 701-35 | Portland Cem. Conc. Piers | Cu. Yds. | 109 | 109 Cu. Yds. |
| 701-40 | Portland Cem. Conc. Rdwy. & Sidw. Slabs on Steel Bridges | Cu. Yds. | 158 | 158 Cu. Yds. |
| 701-55 | Curing Box for Conc. Cylinders | Each | 1 | 1 Each |
| 702-103 | Struct. Steel, Fabricated & Delivered | L.S. | L.S. | Lump Sum |
| 702-104 | Struct. Steel, Erection | L.S. | L.S. | Lump Sum |
| 702-105 | Struct. Steel, Field Painting | L.S. | L.S. | Lump Sum |
| 705-13 | Reinforcing Steel, Delivered | Lbs. | 74,500 | 74,500 Lbs. |
| 705-14 | Reinforcing Steel, Placing | Lbs. | 74,500 | 74,500 Lbs. |
| 708-16 | Steel H-Beam Piles 42 Lbs./Ft. | Lin. Ft. | 240 | 240 Lin. Ft. |
| 805-8 | Bridge Rail | Lin. Ft. | 250 | 250 Lin. Ft. |
| 807-11 | Epoxy Resin Surface Sealant | Sq. Yds. | 120 | 120 Sq. Yds. |
| 901-24 | Vertical Bridge Curb - Type 1 | Lin. Ft. | 260 | 260 Lin. Ft. |
| 901-25 | Vertical Bridge Curb - Type 1 - Circular | Lin. Ft. | 12 | 12 Lin. Ft. |
| 908-10 | Loom (1 P.M.) | Cu. Yds. | 50 | |
| 910-13 | Seeding Method No. 2 | Units | 8 | |
| 912-7 | Hay Mulch | Tons | 0.5 | |
| 913-8 | Bituminous Treated Stone Slope Protection | Sq. Yds. | 500 | |
| 913-9 | Bituminous Concrete Gutter | Tons | 7 | |
| 938-1 | Warning Lights & Illuminating Signs | Group | 2 | |
| 939-9 | Field Office, Type "C" | L.S. | L.S. | |

LEGEND
 • Wash Boring
 • Denotes Type "B" Bridge Drain

Estimated Weight of Structural Steel including drains is 126,400 Lbs.



NOTES
 1. All fill within the limits as shown on Profiles 3 shall be placed by the controlled density method.
 2. Size of stone in granular borrow through which abutment piles are driven, should not exceed 6" and concentrations of stones in the area shall be avoided.
 3. Place granular borrow to elevation of abutment footing before driving piles.

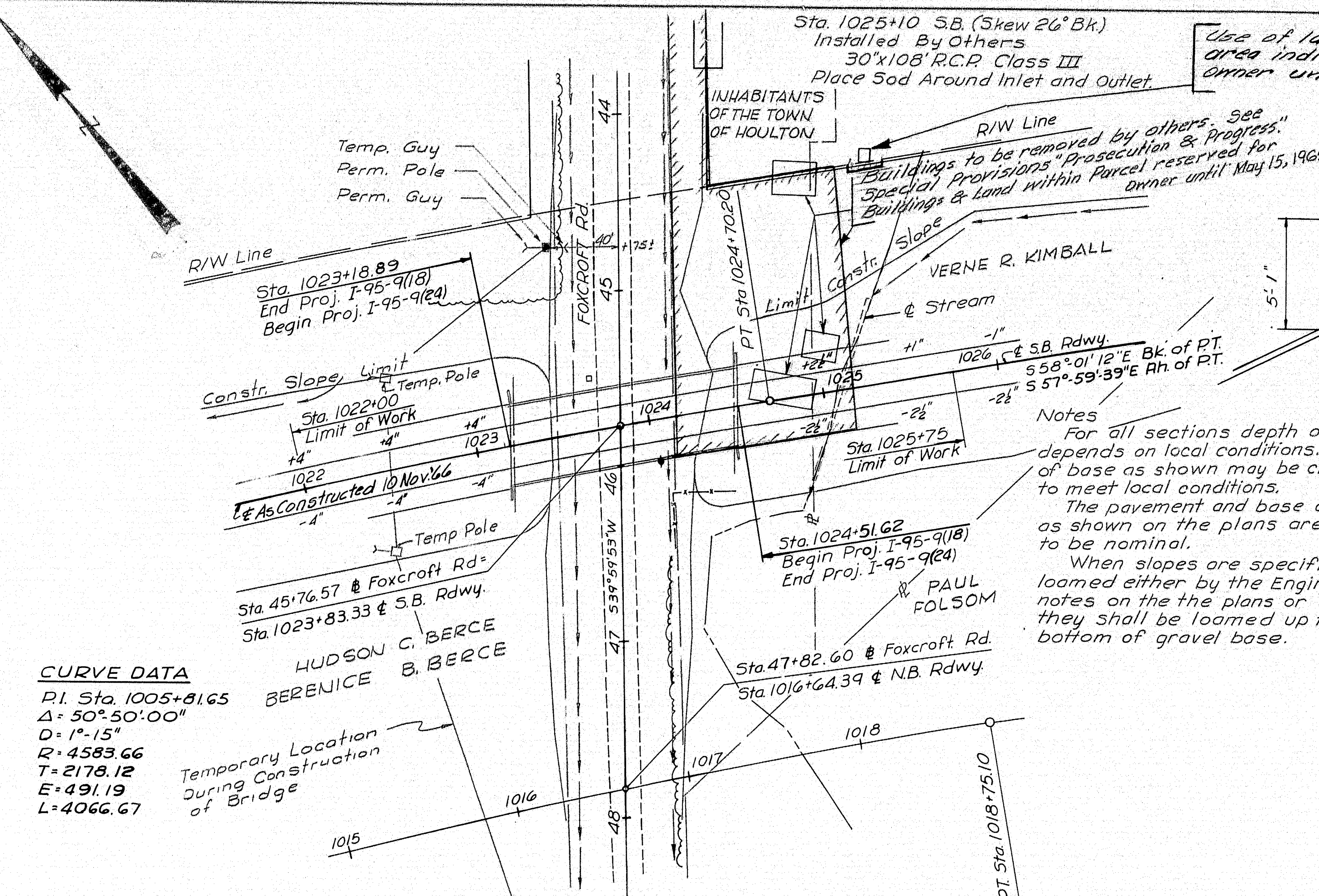
SPECIFICATIONS
DESIGN:
 A.A.S.H.O. Standard Specifications for Highway Bridges 1961 with Interim Specifications 1961, 1962, 1963 & 1964.
CONTRACT:
 State of Maine, State Highway Commission, Standard Specifications for Highways and Bridges, Revision of January 1956 and Supplemental Specifications, of February 1960.
LIVE LOADING
 HS-20-44 (Modified for Interstate).
FOUNDATIONS
 Abutment No. 1: 108 Pile End Bearing Piles (37 Ton Capacity)
 Abutment No. 2: Spread Footing on Ledge - 4.6 Tons/sq. ft.
 Piers: Spread Footings on Ledge - 9.4 Tons/sq. ft.
ALLOWABLE STRESSES
 Concrete ($n=10$) $f_c = 1800$ p.s.i.
 Reinforced Steel Int. Grade $f_s = 20,000$ p.s.i.
 Structural $f_s = 20,000$ p.s.i. (A.S.T.M. A36)
CONCRETE CLASSIFICATION
 All Concrete to be Class "A"

DESIGN - G.H. DETAIL R.D.F.
 CHECK - V.A.V.
 BRIDGE NO. SURVEY - PLOT -
 STATE HIGHWAY COMMISSION
 BRIDGE DIVISION
 INTERSTATE 95
 OVER
 FOXCROFT ROAD
 IN THE TOWN OF
 HOULTON
 AROOSTOOK COUNTY
 GENERAL PLAN & QUANTITIES
 SHEET 2 OF 15 AUGUSTA, MAINE JANUARY 1965

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK BOSTON KANSAS CITY

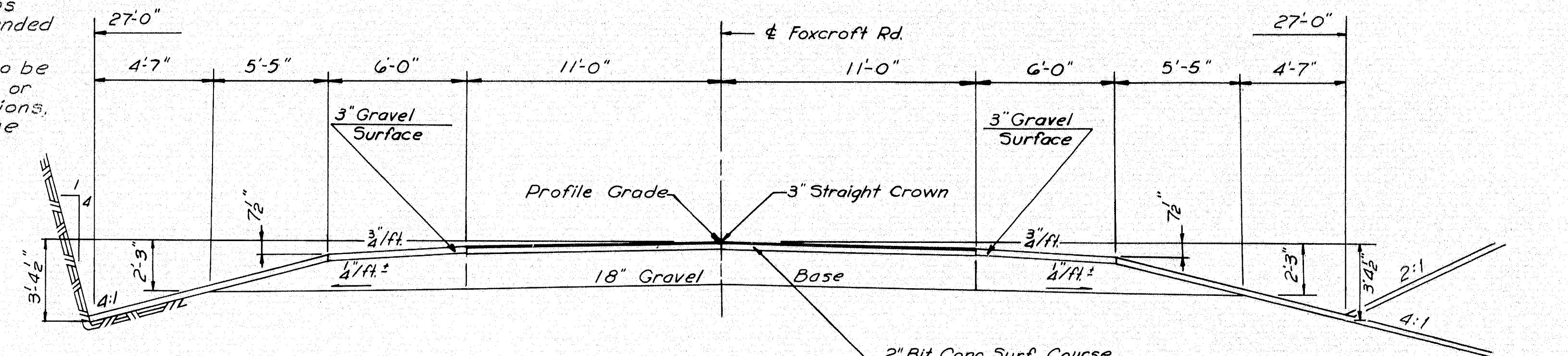
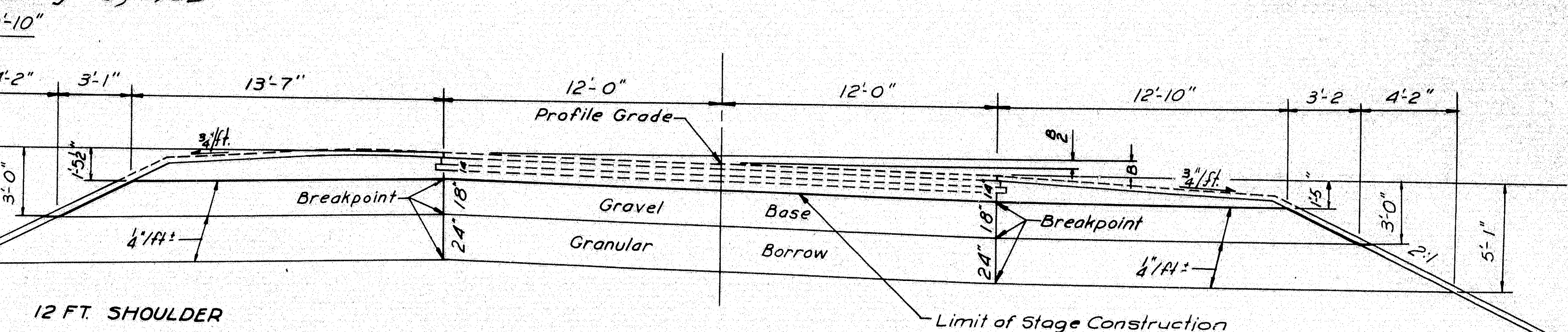
96-123 HOULTON

| PLAN | DATE | BY |
|----------|------|----|
| SURVEYED | | |
| NOTED | | |
| ALIGNED | | |
| CHECKED | | |
| NO. | | |



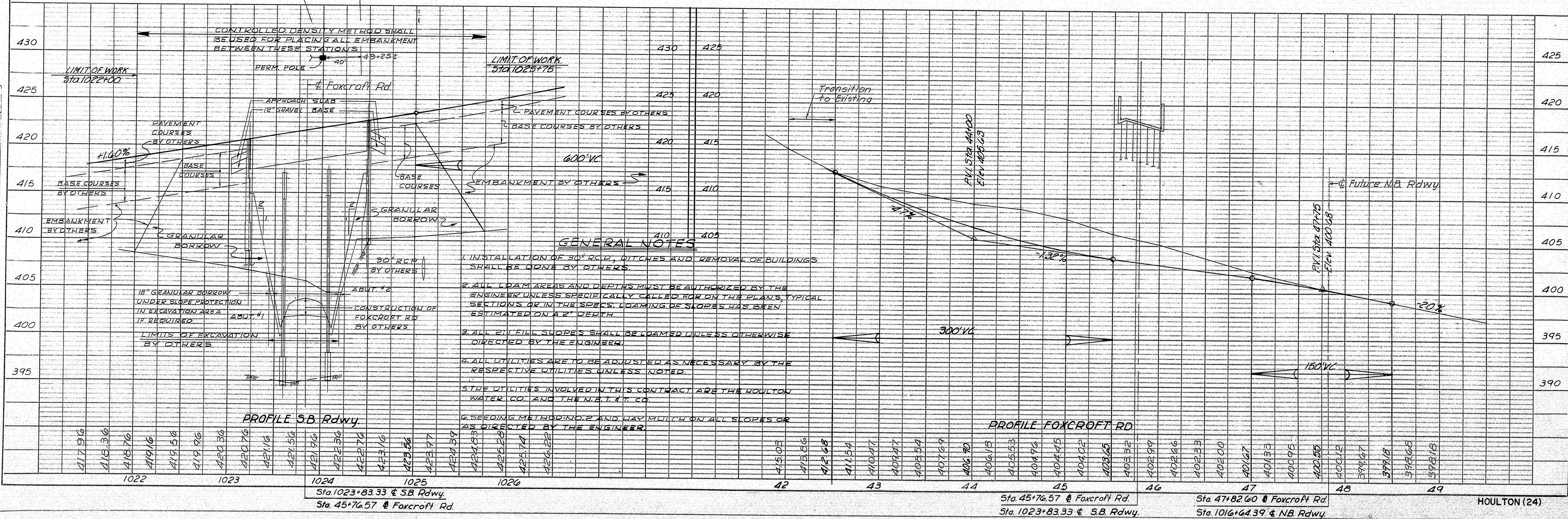
CURVE DATA
 P.I. Sta. 1005+81.65
 $\Delta = 50^\circ 50' 00''$
 $D = 1^\circ 15'$
 $R = 4583.66$
 $T = 2178.12$
 $E = 491.19$
 $L = 4066.67$

Notes
 For all sections depth of ditch depends on local conditions. Depth of base as shown may be changed to meet local conditions.
 The pavement and base depths as shown on the plans are intended to be nominal.
 When slopes are specified to be loamed either by the Engineer or notes on the plans or sections, they shall be loamed up to the bottom of gravel base.



TYPICAL SECTION
 FOXCROFT RD.
 (To Be Built By Others)

| PROFILE | DATE | BY |
|--------------------------|------|----|
| SURVEYED | | |
| NOTED | | |
| GRADES CHECKED | | |
| STRUCTURE NOTATIONS OK'D | | |
| NO. | | |



GENERAL NOTES
 1. INSTALLATION OF 30" R.C.P. DITCHES AND REMOVAL OF BUILDINGS SHALL BE DONE BY OTHERS.
 2. ALL LOAM AREAS AND DEPTHS MUST BE AUTHORIZED BY THE ENGINEER UNLESS SPECIFICALLY CALLED FOR ON THE PLANS, TYPICAL SECTIONS OR IN THE SPECS. LOAMING OF SLOPES HAS BEEN ESTIMATED ON A 2' DEPTH.
 3. ALL EXISTING SLOPES SHALL BE LOAMED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 4. ALL UTILITIES ARE TO BE ADJUSTED AS NECESSARY BY THE RESPECTIVE UTILITIES UNLESS NOTED.
 5. THE UTILITIES INVOLVED IN THIS CONTRACT ARE THE HOULTON WATER CO. AND THE N.B.T. & T. CO.
 6. SEEDING METHOD NO. 2 AND LAY MULCH ON ALL SLOPES OR AS DIRECTED BY THE ENGINEER.

HUTCHINSON
C.E.A. D.M.M. 1-64
8-64

12/3

4

422.75

+4" -4"

46

55

400

1024+55

FULL SECTION STA. 1024+55

STA. 1024+51.62

END PROJECT 1-95-9(24)

BEGIN PROJECT 1-95-9(18)

422.44

400

1024+30

O SECTION STA. 1024+30

421.16

390

1023+50

O SECTION 1023+45

STA. 1023+18.89

BEGIN PROJECT 1-95-9(24)

END PROJECT 1-95-9(18)

FULL SECTION STA. 1023+15

420.36

+4"

-4"

52

50

390

1023+00

390

1022+00

LIMIT OF WORK
STA. 1022+00

417.16

60

50

390

1021+00

390

| S.P.A. REG. NO. | STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|----------------|--------------|-----------------|
| 1 | MAINE | 1-95-9(24) | 4 | 15 |

(24)

1021+00 1024+50

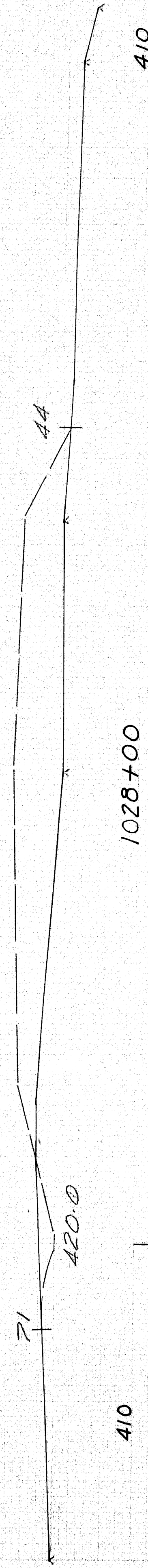
H.N.T. & B. 1-64
C.E.A. D.M.M. 8-64

12,13

4



430.48

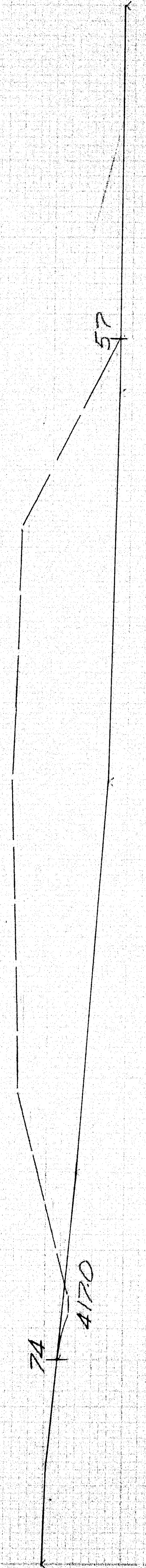


1028+00

410



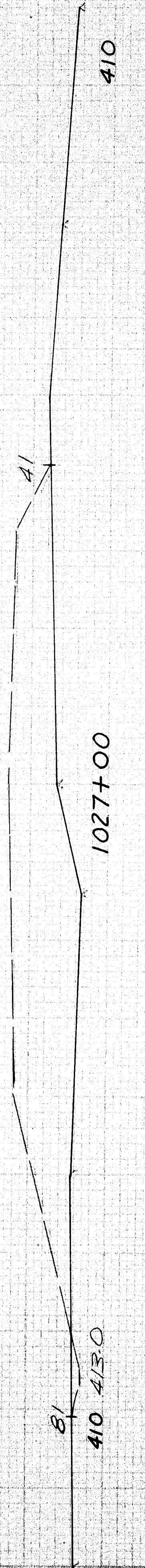
429.33



1027+59

400

427.78



1027+00

410 413.0

425.48

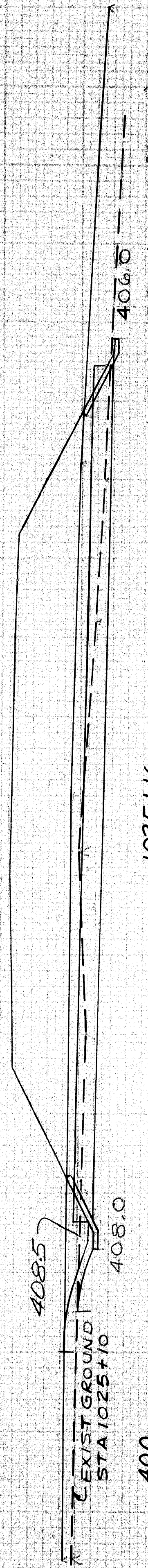


1026+00

400

LIMIT OF WORK STA. 1025+75

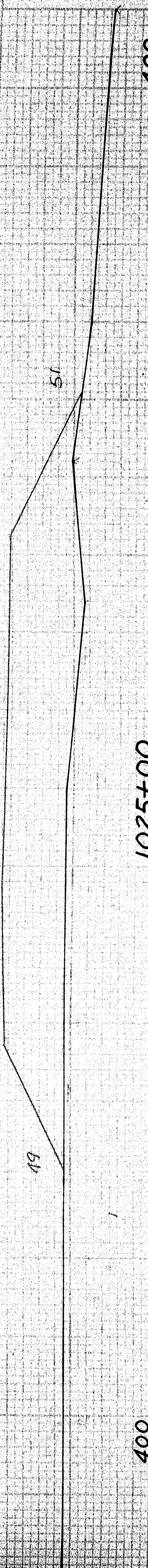
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1025+16

400

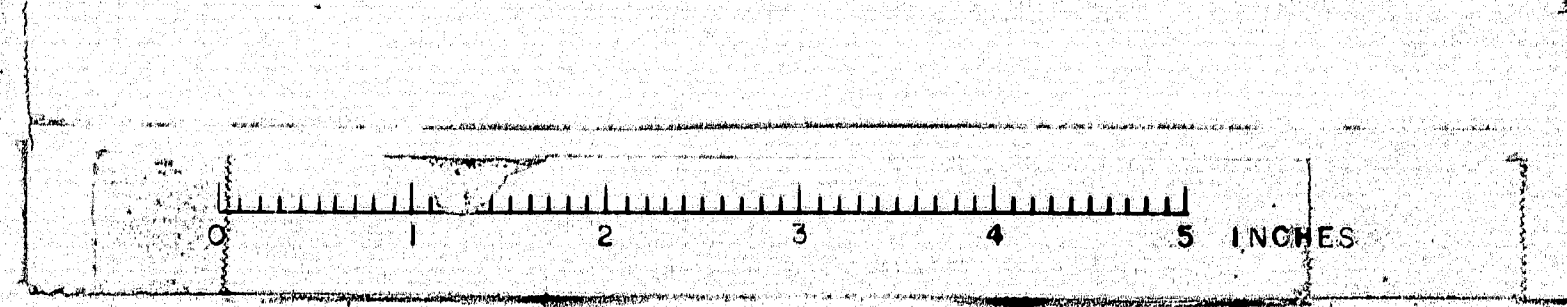
423.58



1025+00

400

| S.P.R. | STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|--------|-------|----------------|-----------|--------------|
| 1 | MAINE | 1-10-10 | 5 | 15 |



1025+0 1028+0

HNTSB
C.E.A. D.M.M.
12-63
8-64

15

4

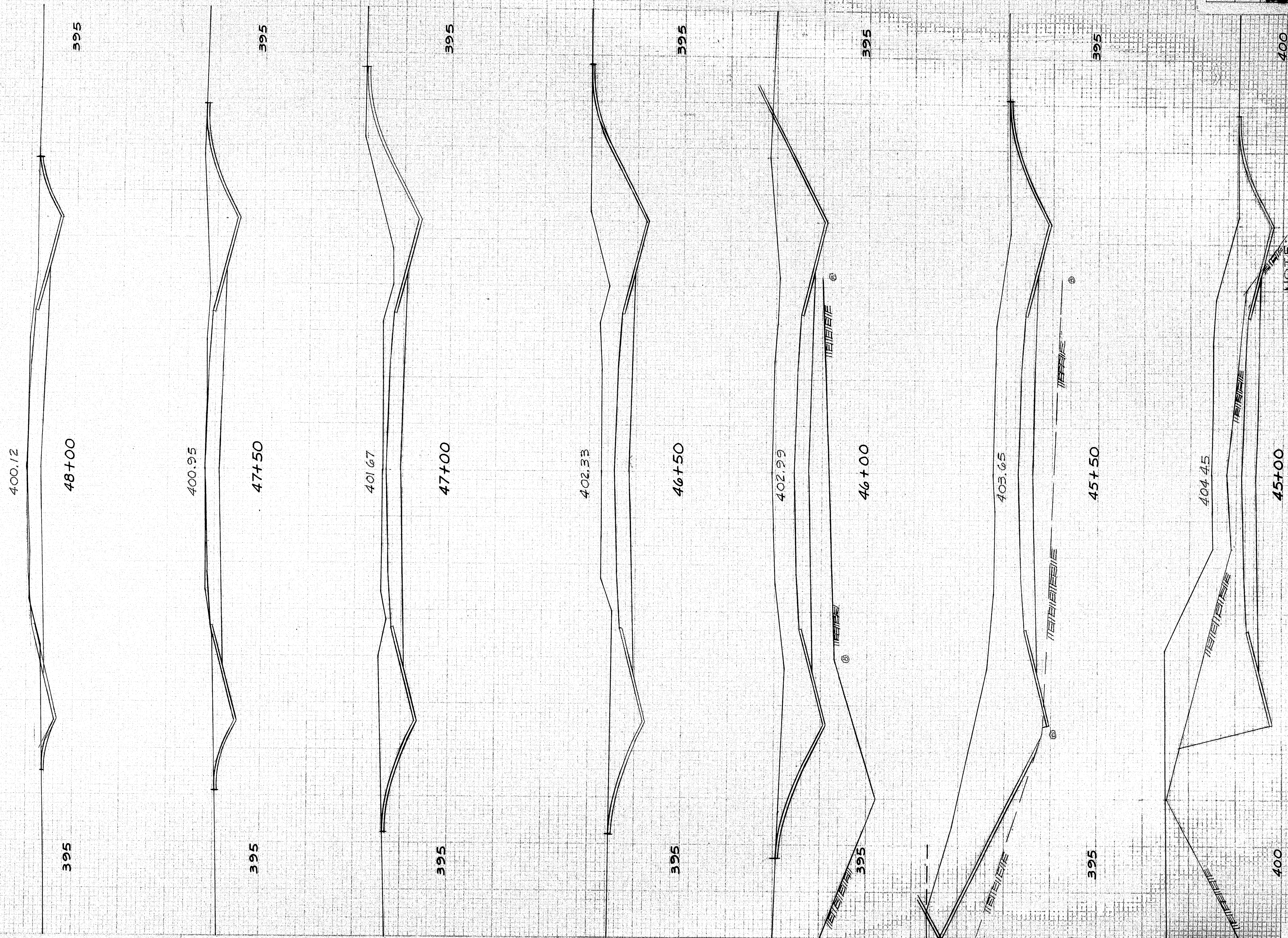
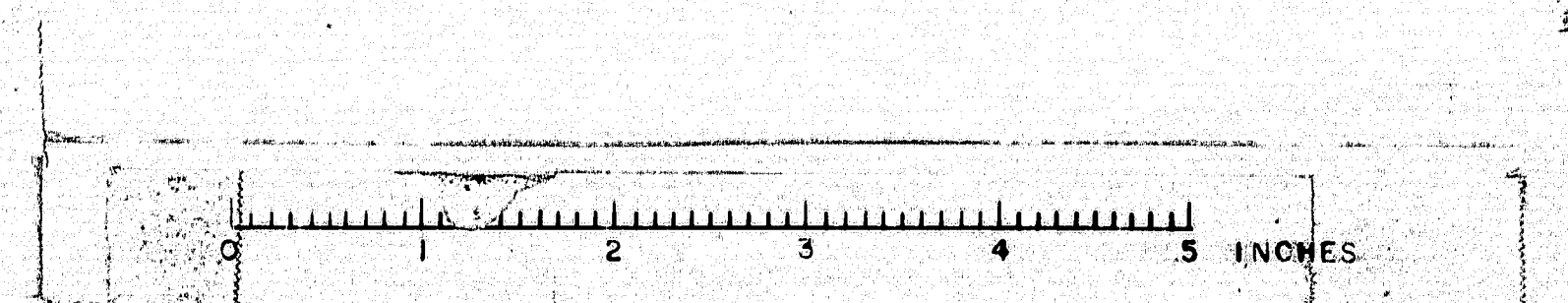
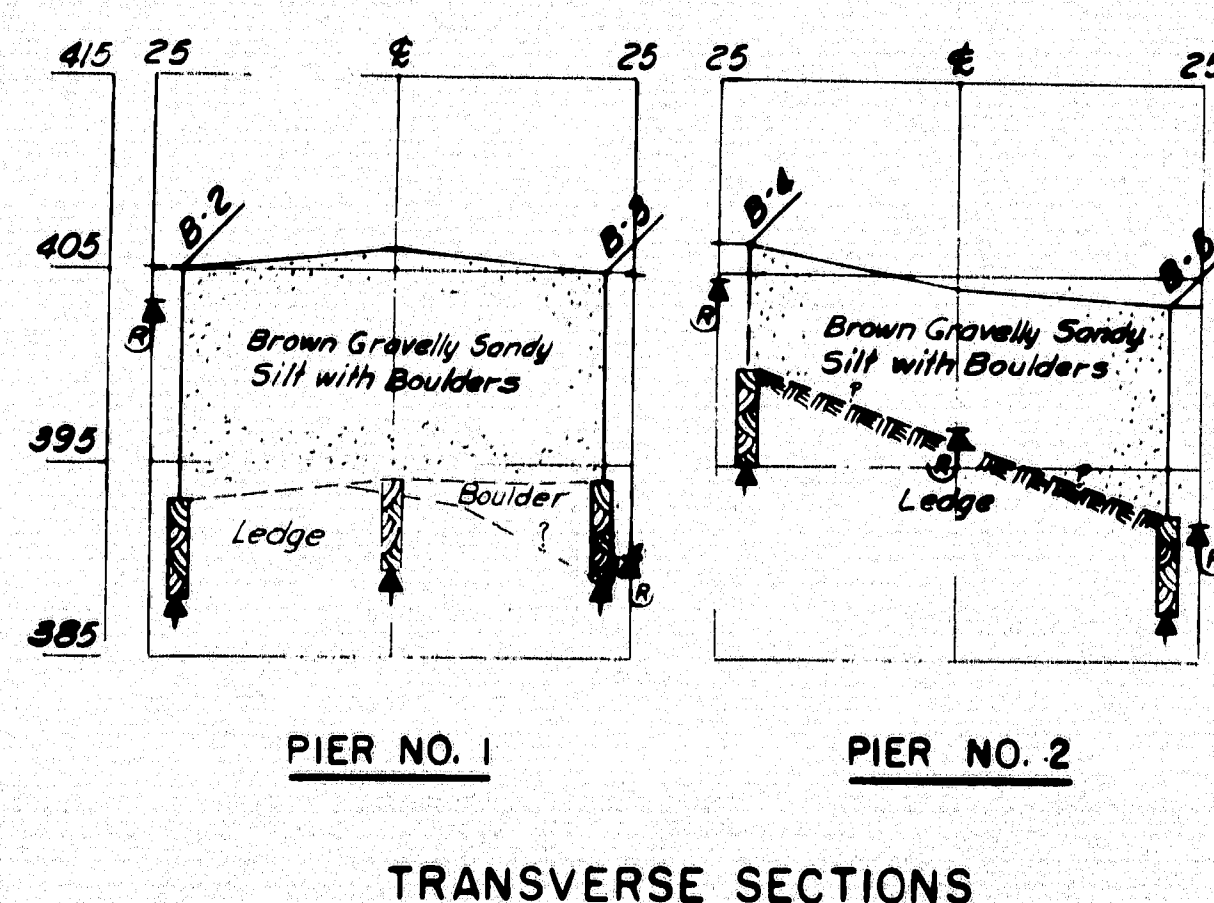
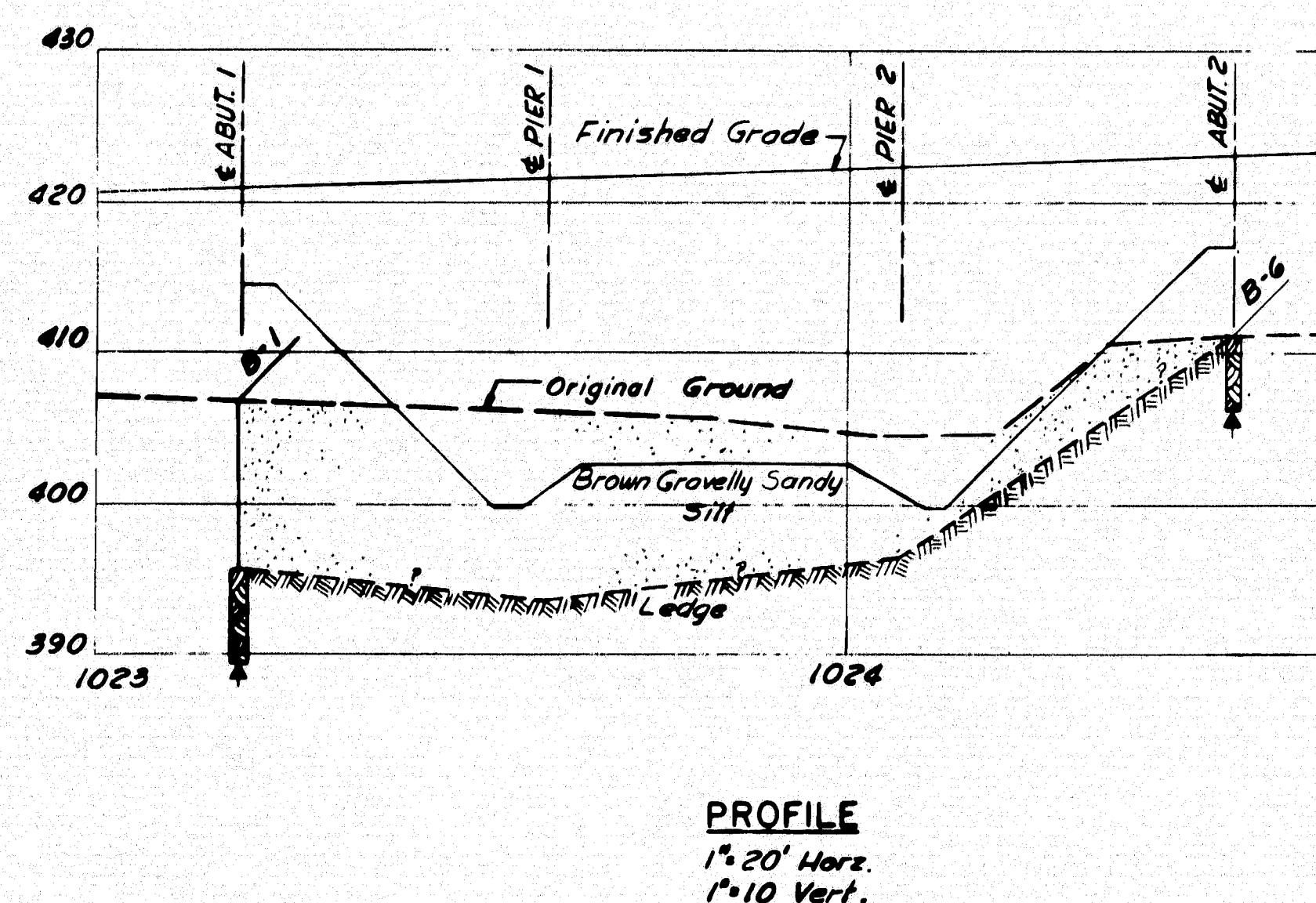
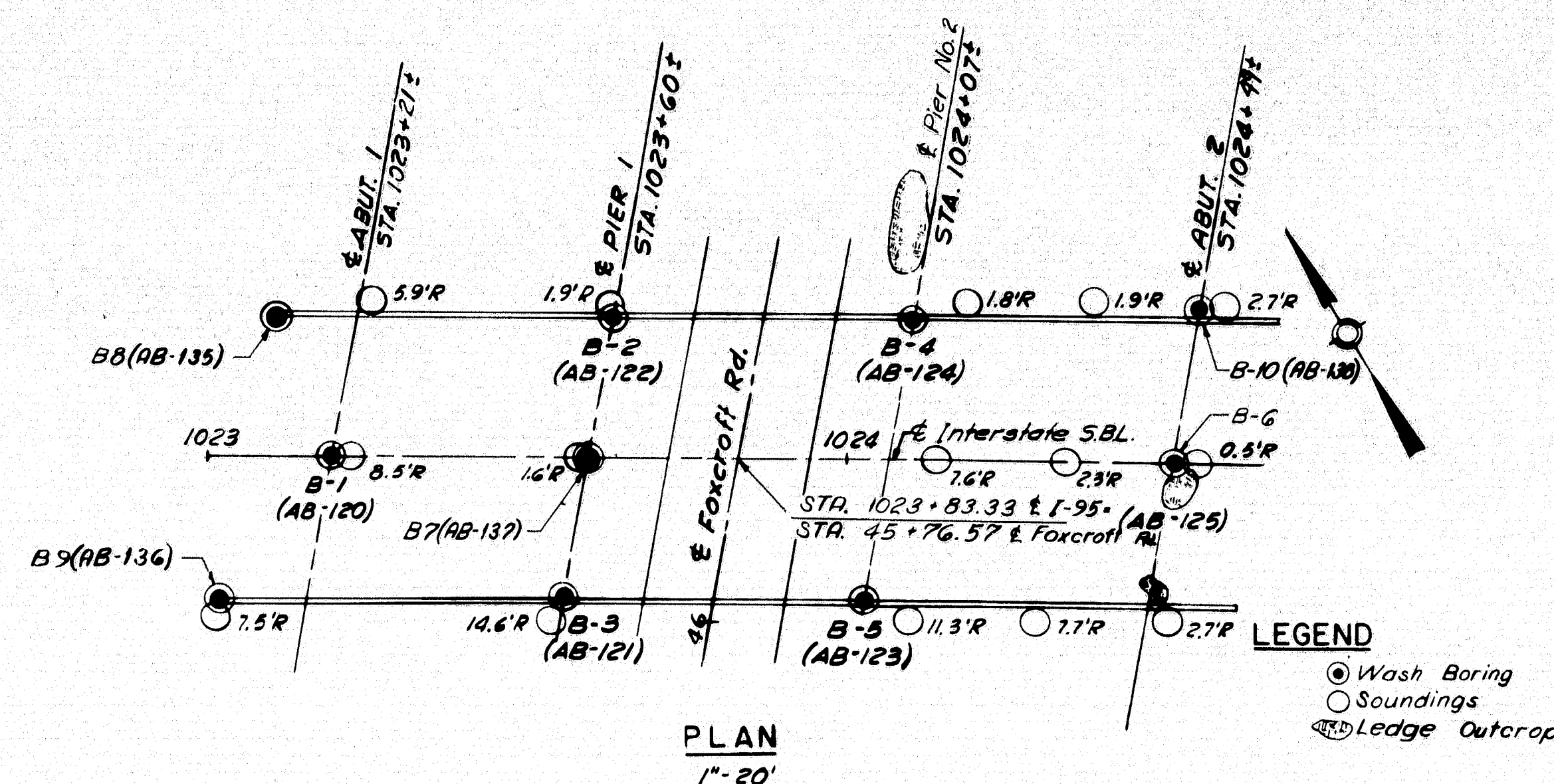


PLATE 3, CROSS SECTION
REVISED & ADDED TO
BY J. G. IMPERIAL, 1963



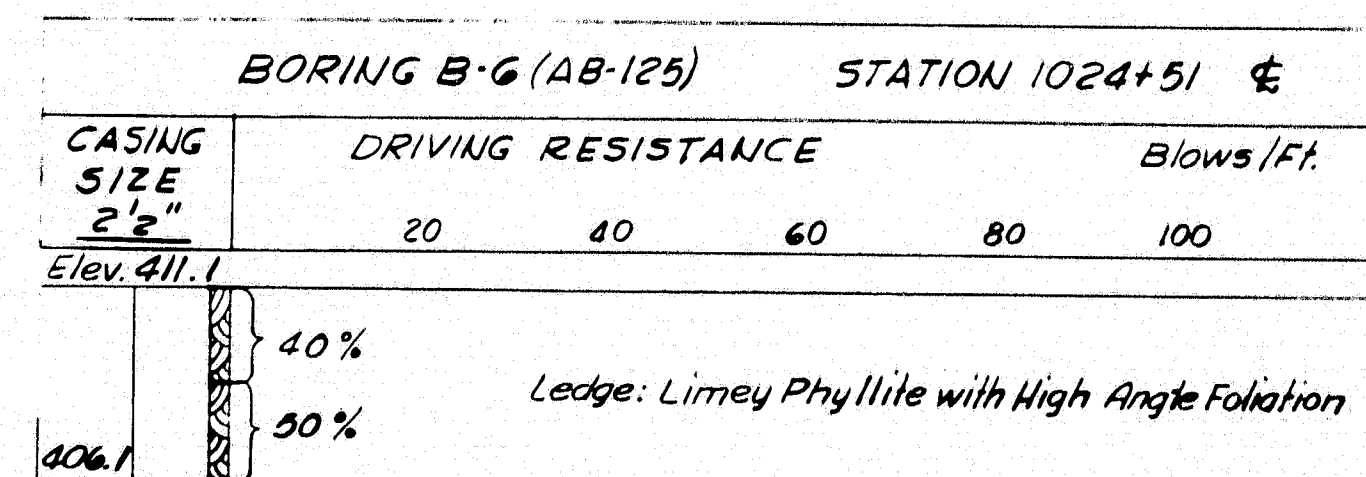
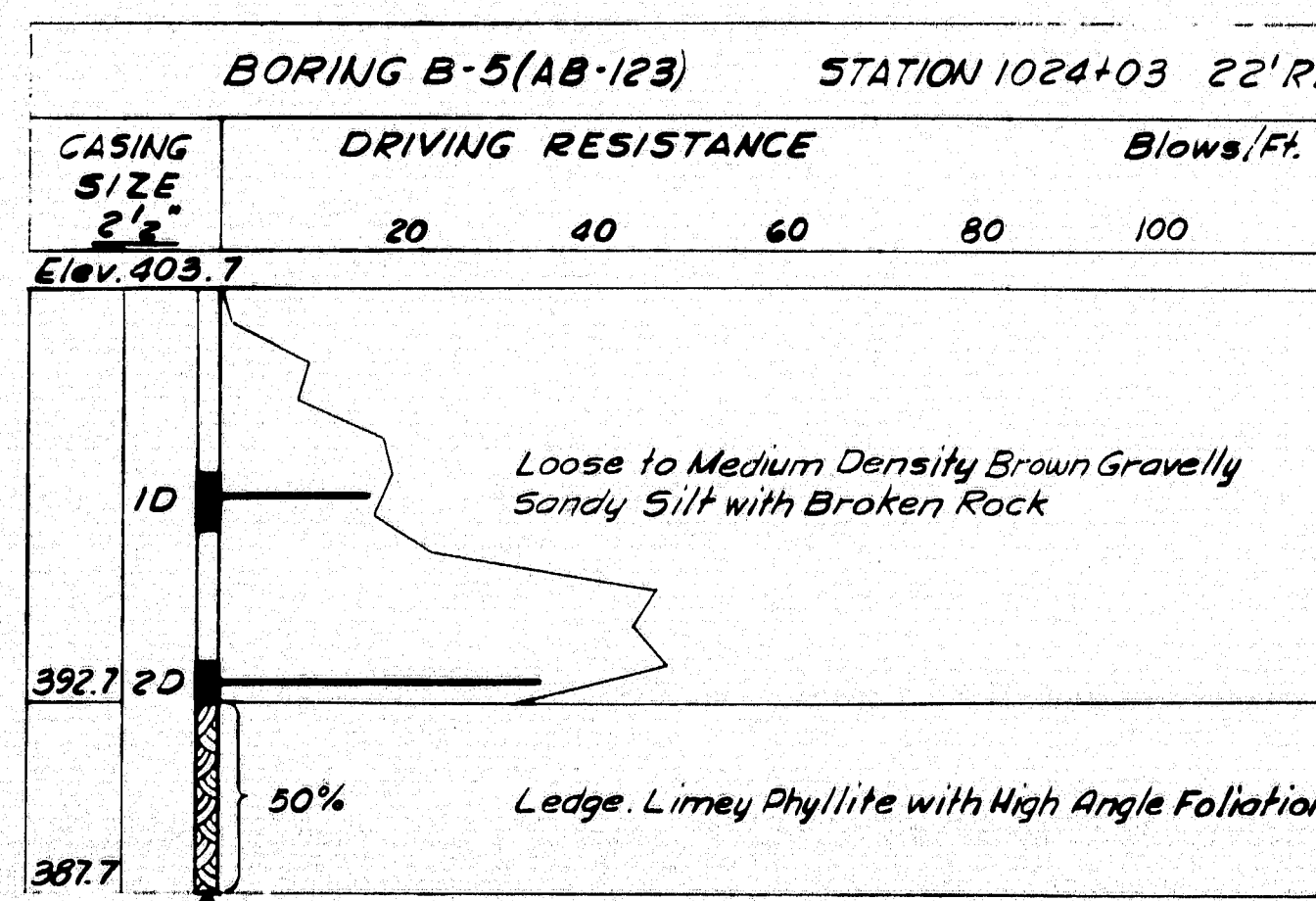
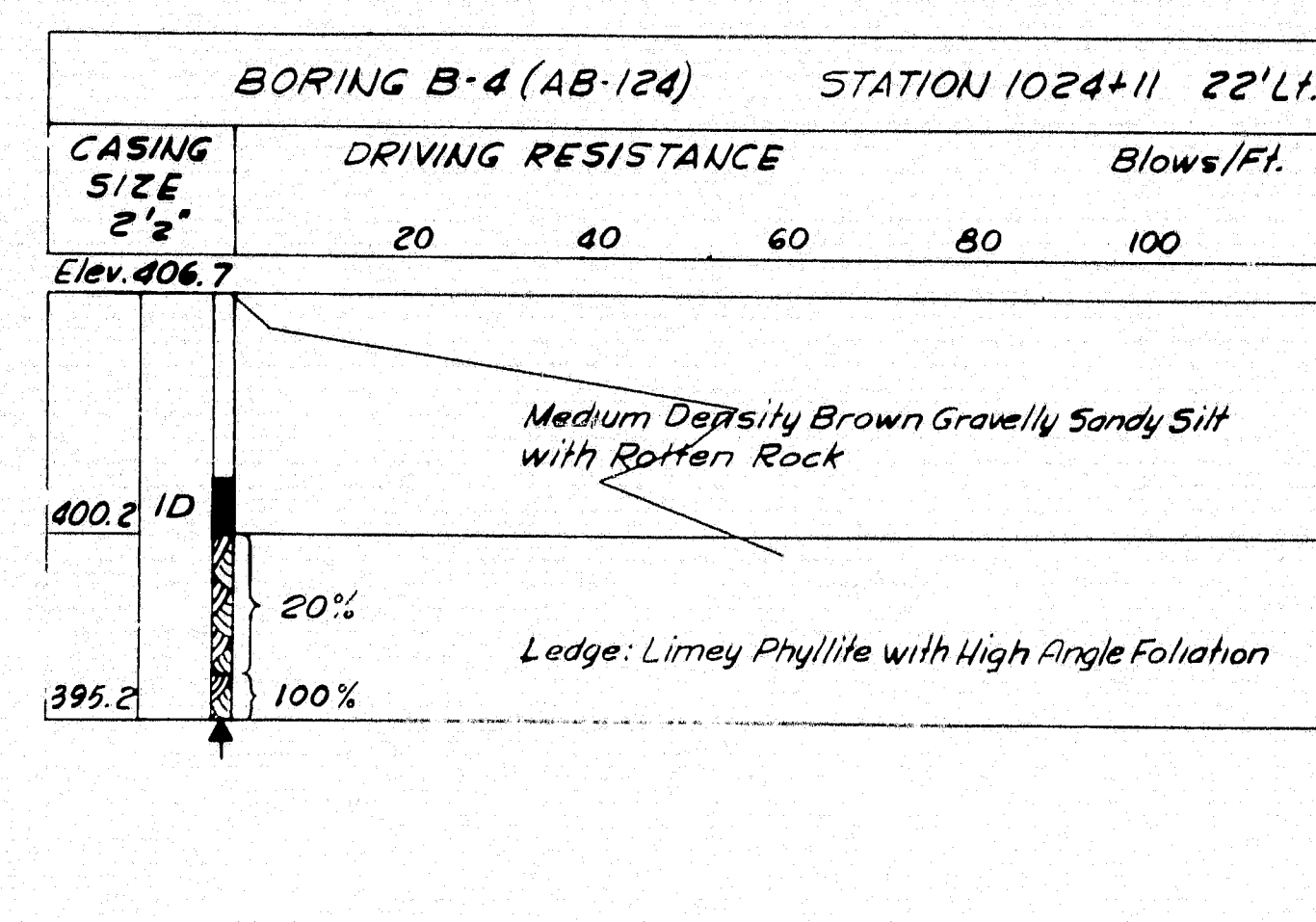
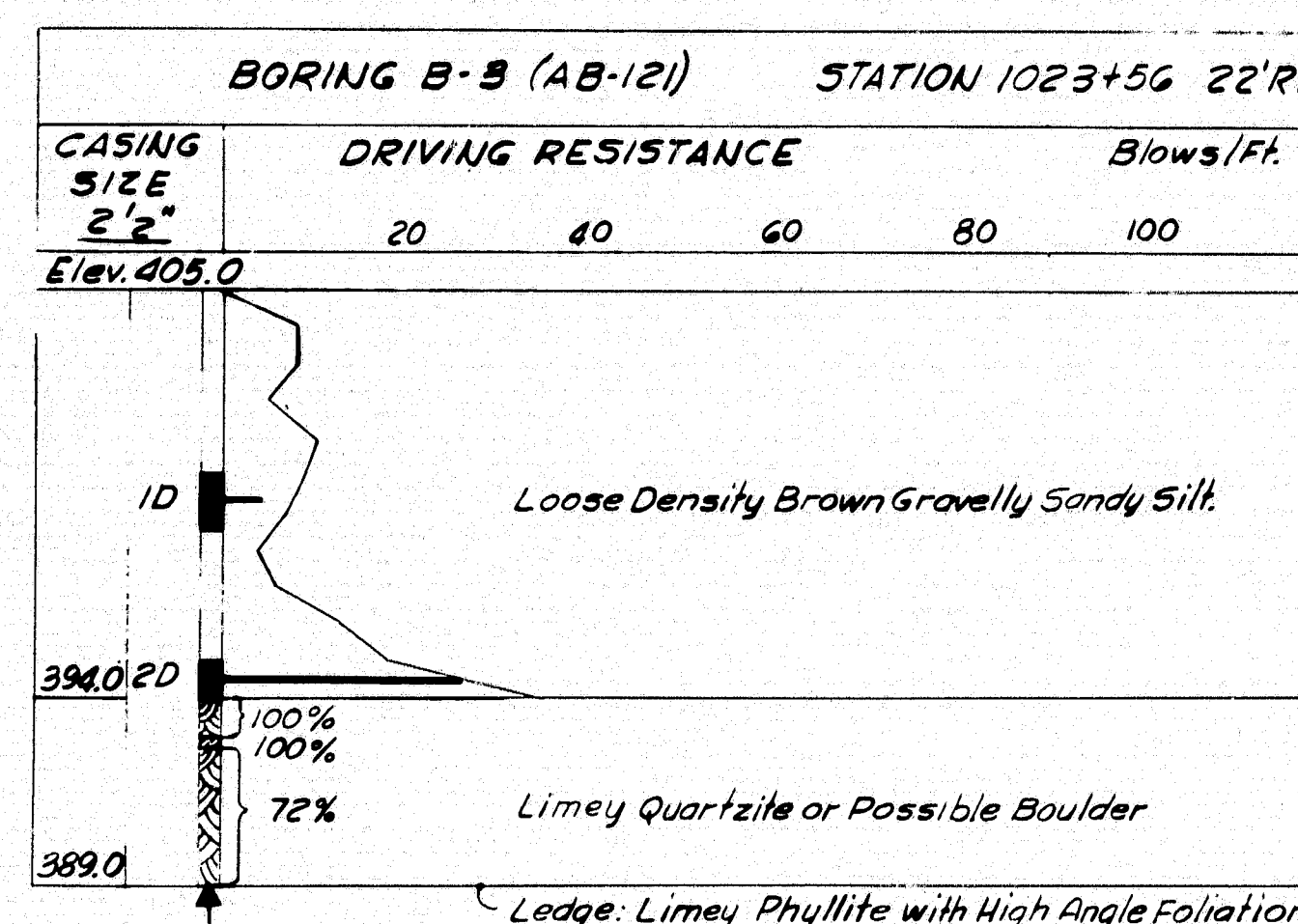
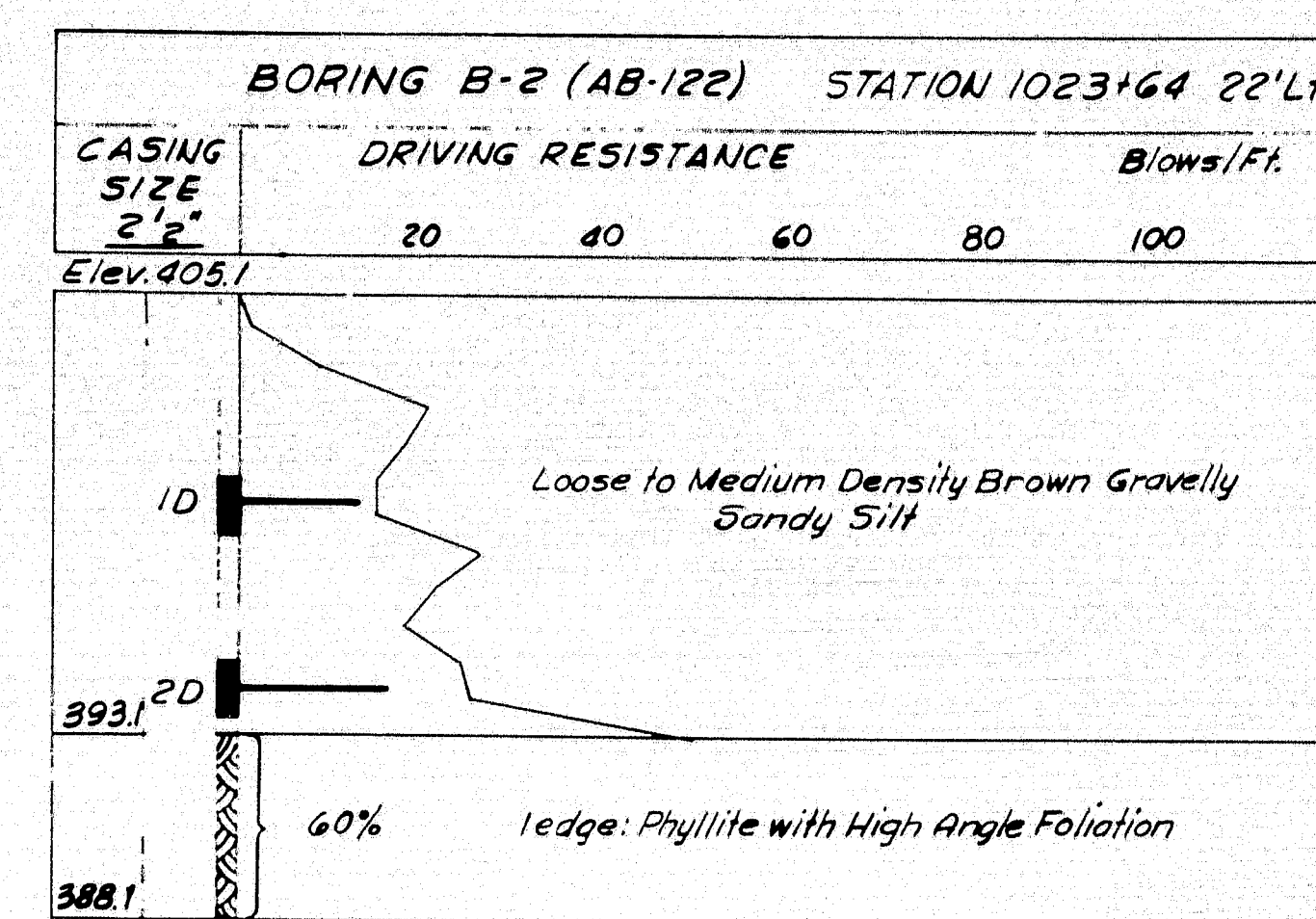
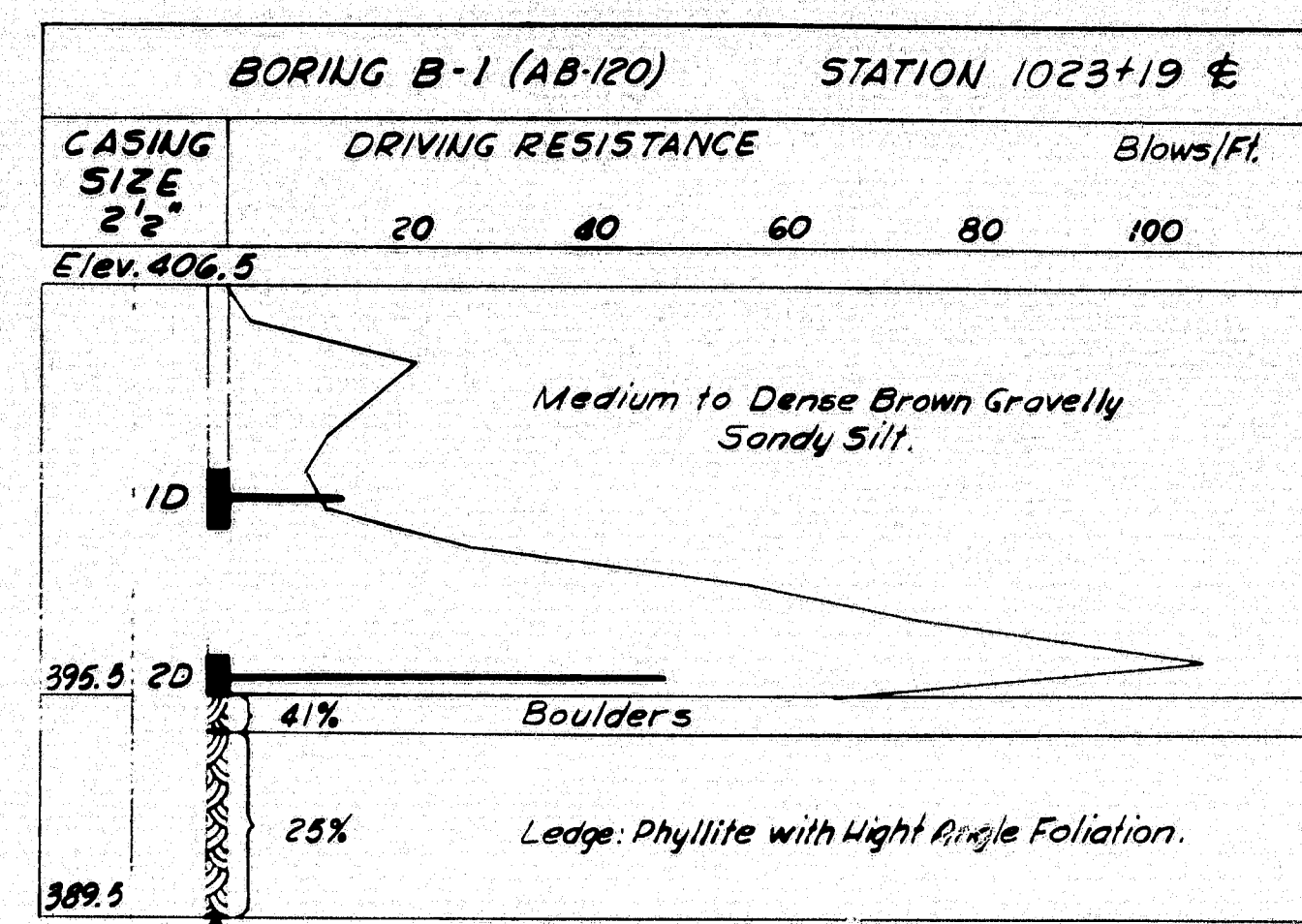
| R.P.R. | STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|--------|-------|----------------|-----------|--------------|
| 1 | MAINE | 100 | 6 | 15 |

NOTE:
FOR INFORMATION ONLY.
FOX CROFT ROAD TO BE
BUILT BY OTHERS.



BORING NOTES

- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow.
- Location of sample or sample attempt.
- S. & W. Sampler #1290's
- Number of blows required to drive spoon or rubbing one foot with 350 ft. lbs. of energy per blow
- Bottom of boring (May not be bottom of soil strata)
- Refusal of drill rods or casing (May not be ledge)
- Locations cored by diamond bit and per cent recovery of rock



DESIGN—
TRACE—
CHECK— P.R.N.

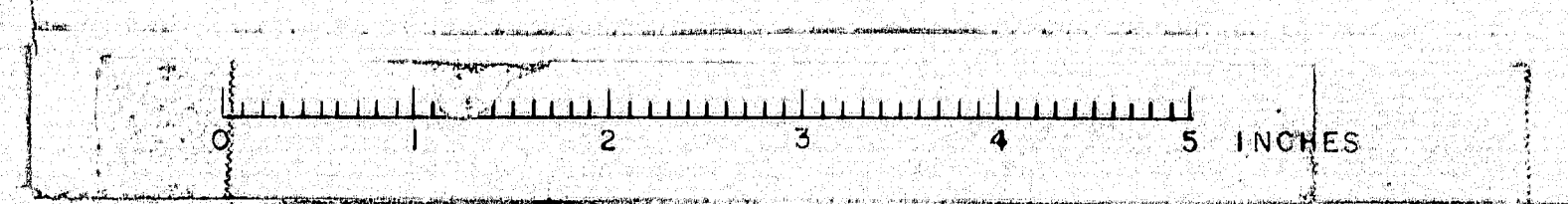
DETAIL J.A.
SURVEY—
PLOT—

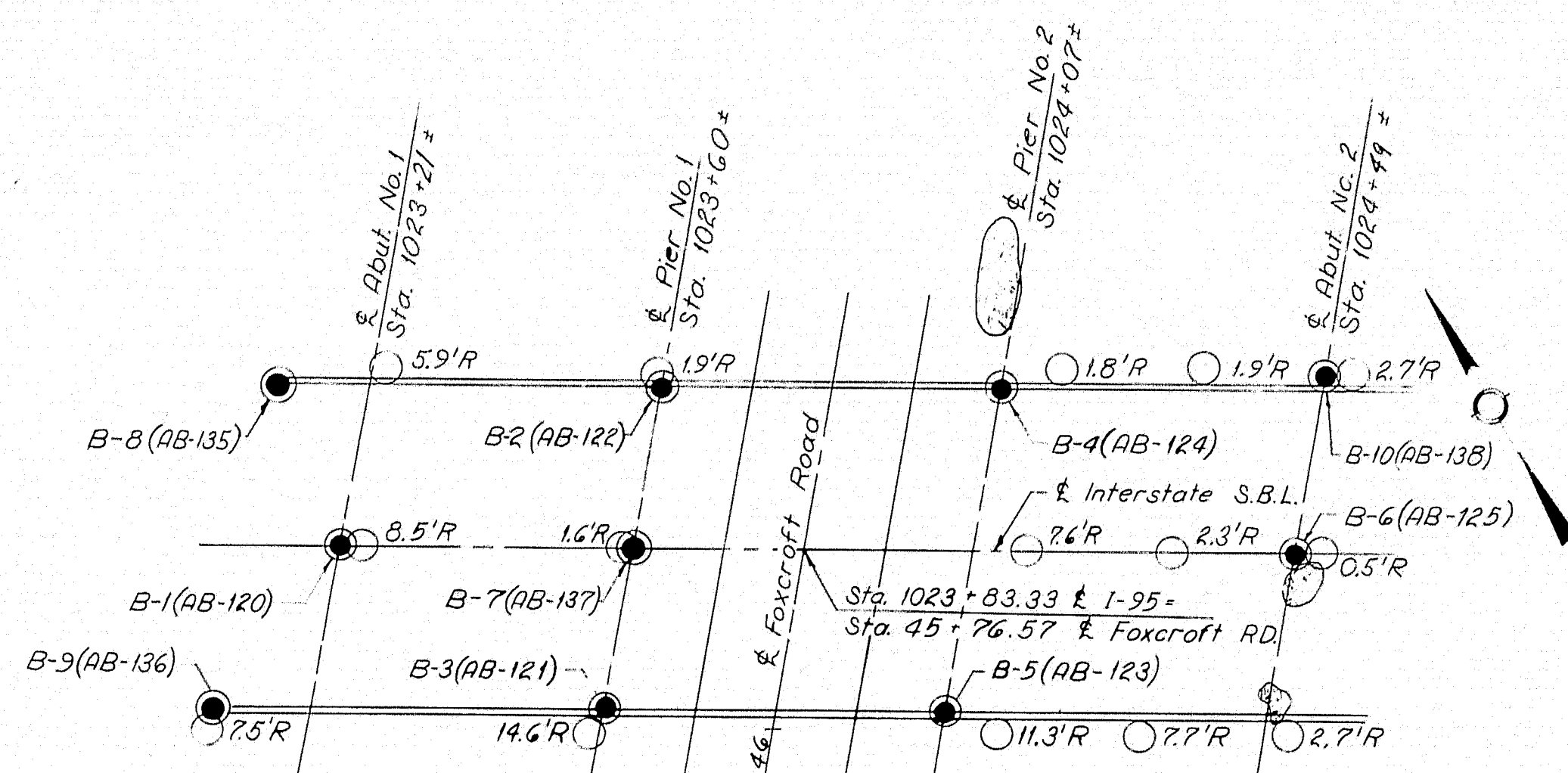
BRIDGE NO.
SURVEY—
PLOT—

STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
FOXCRIFT ROAD
IN THE TOWN OF
HOULTON
AROSTOOK COUNTY
FOUNDATION SURVEY
SHEET 7 OF 15 AUGUSTA, MAINE JANUARY 1965

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK BOSTON KANSAS CITY

96-128 HOULTON





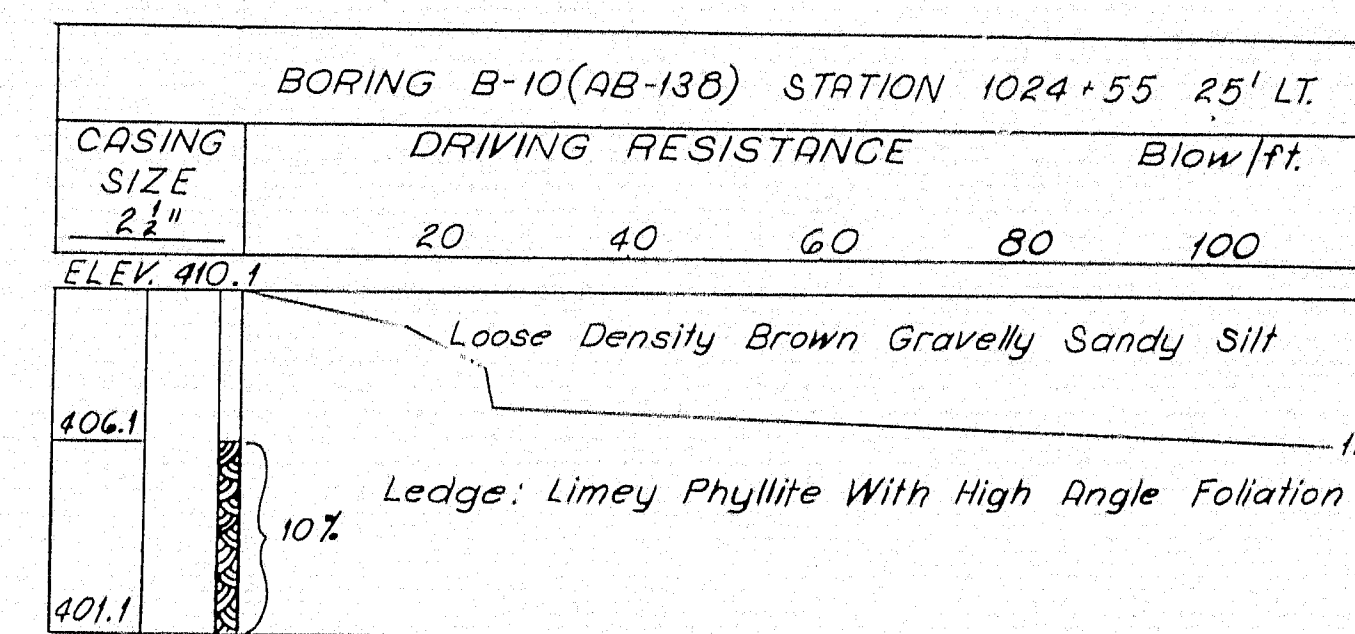
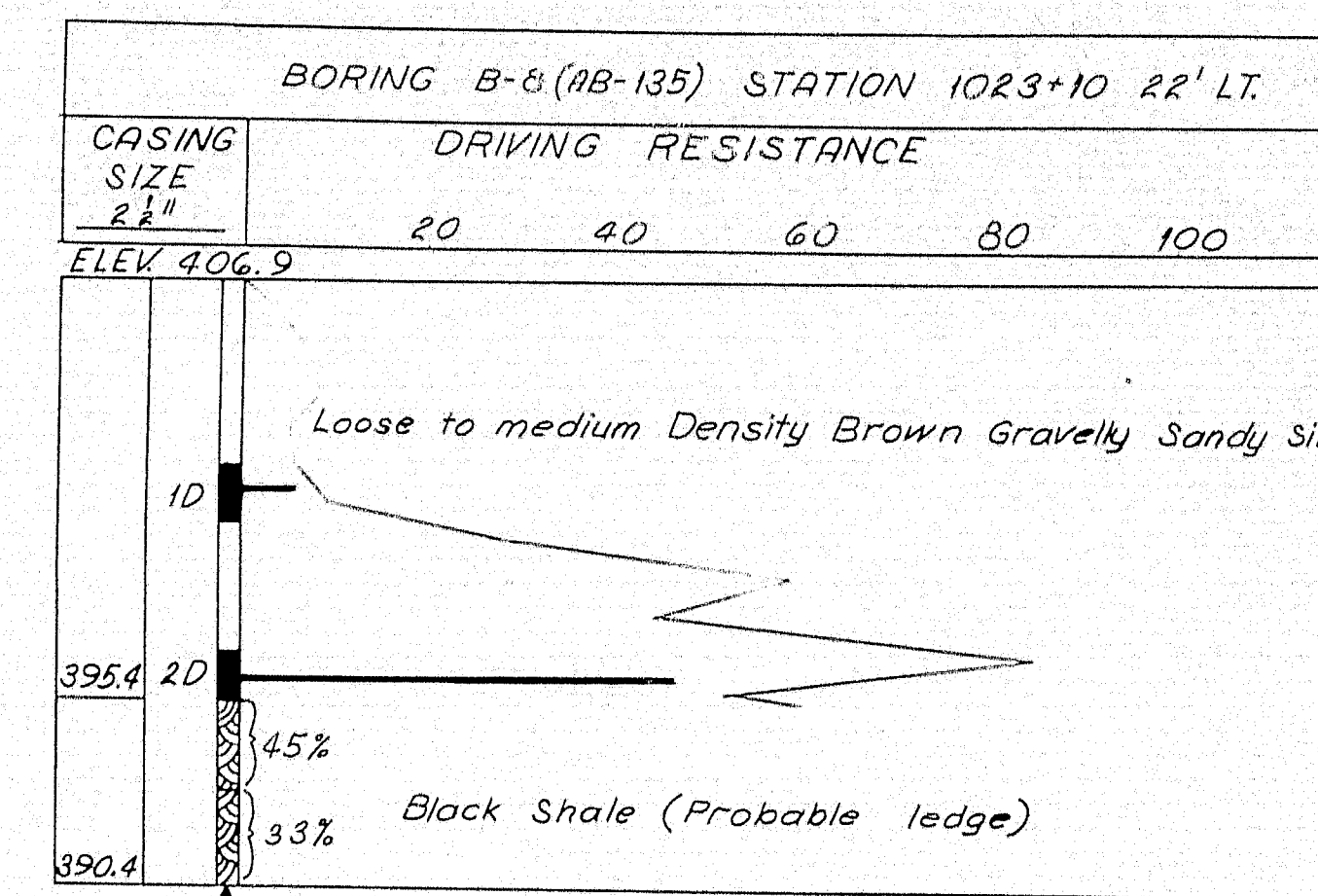
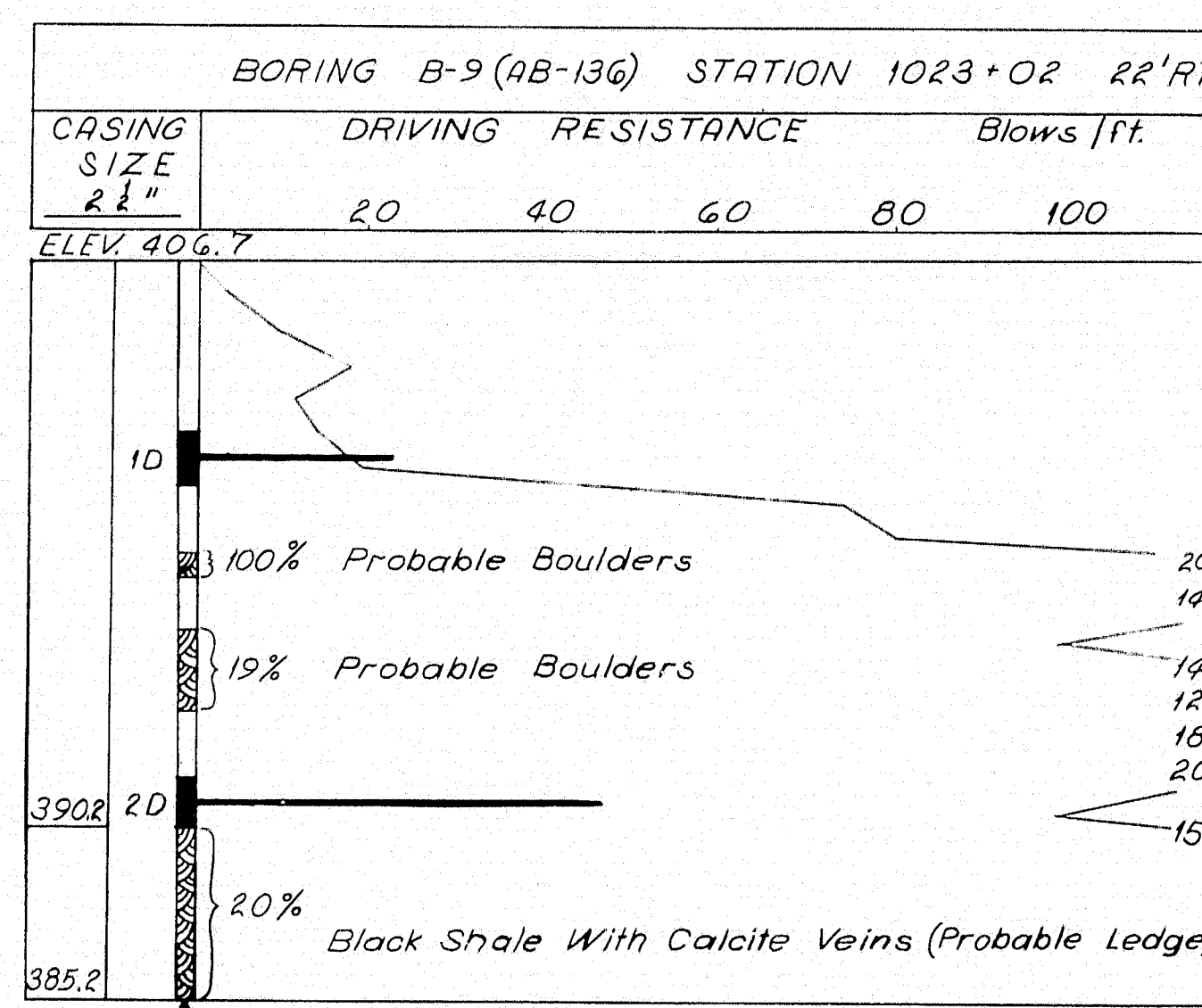
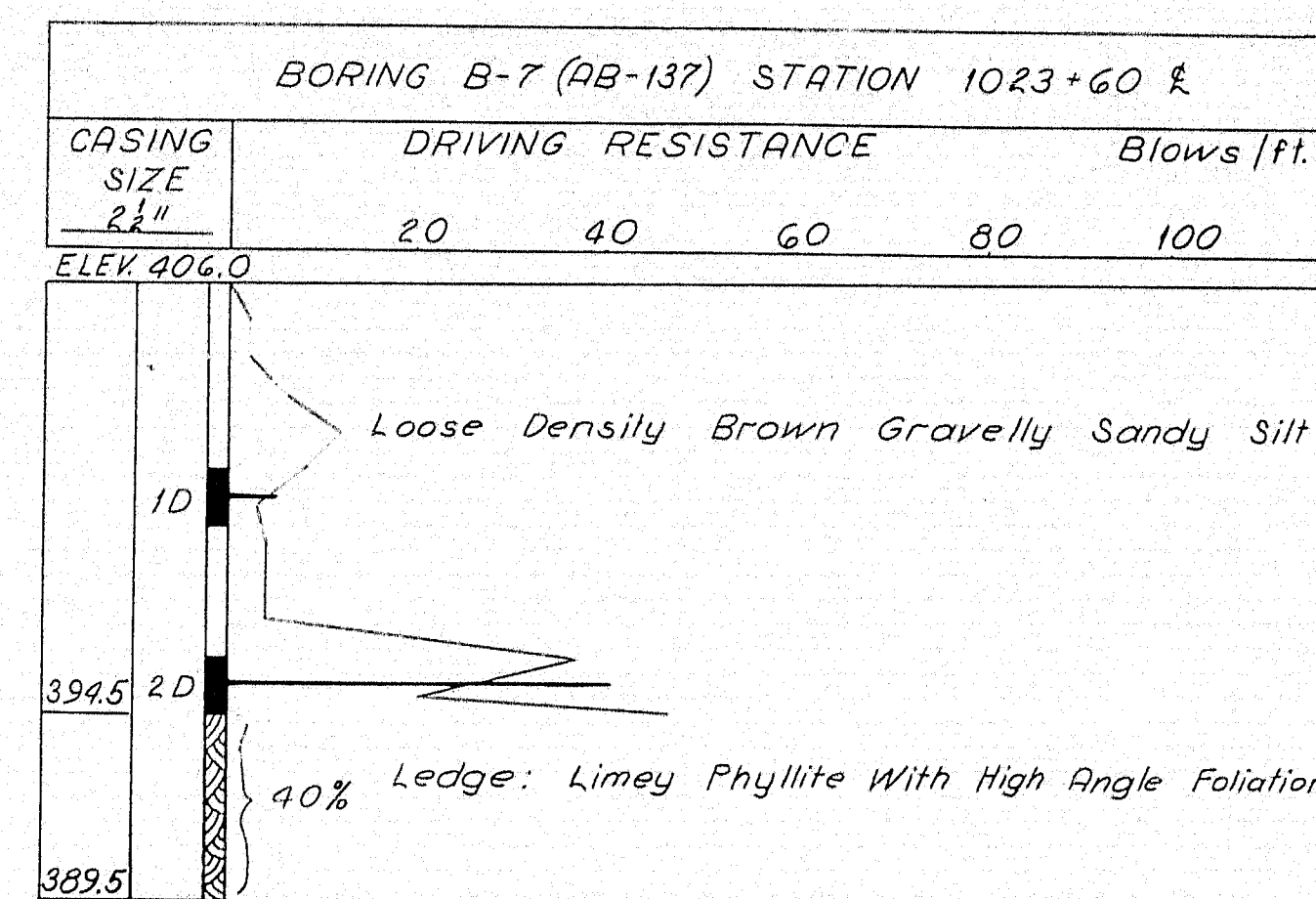
PLAN
1" = 20'

LEGEND

- Wash Boring
- Sounding
- ⊙ Ledge Outcrop

BORING NOTES

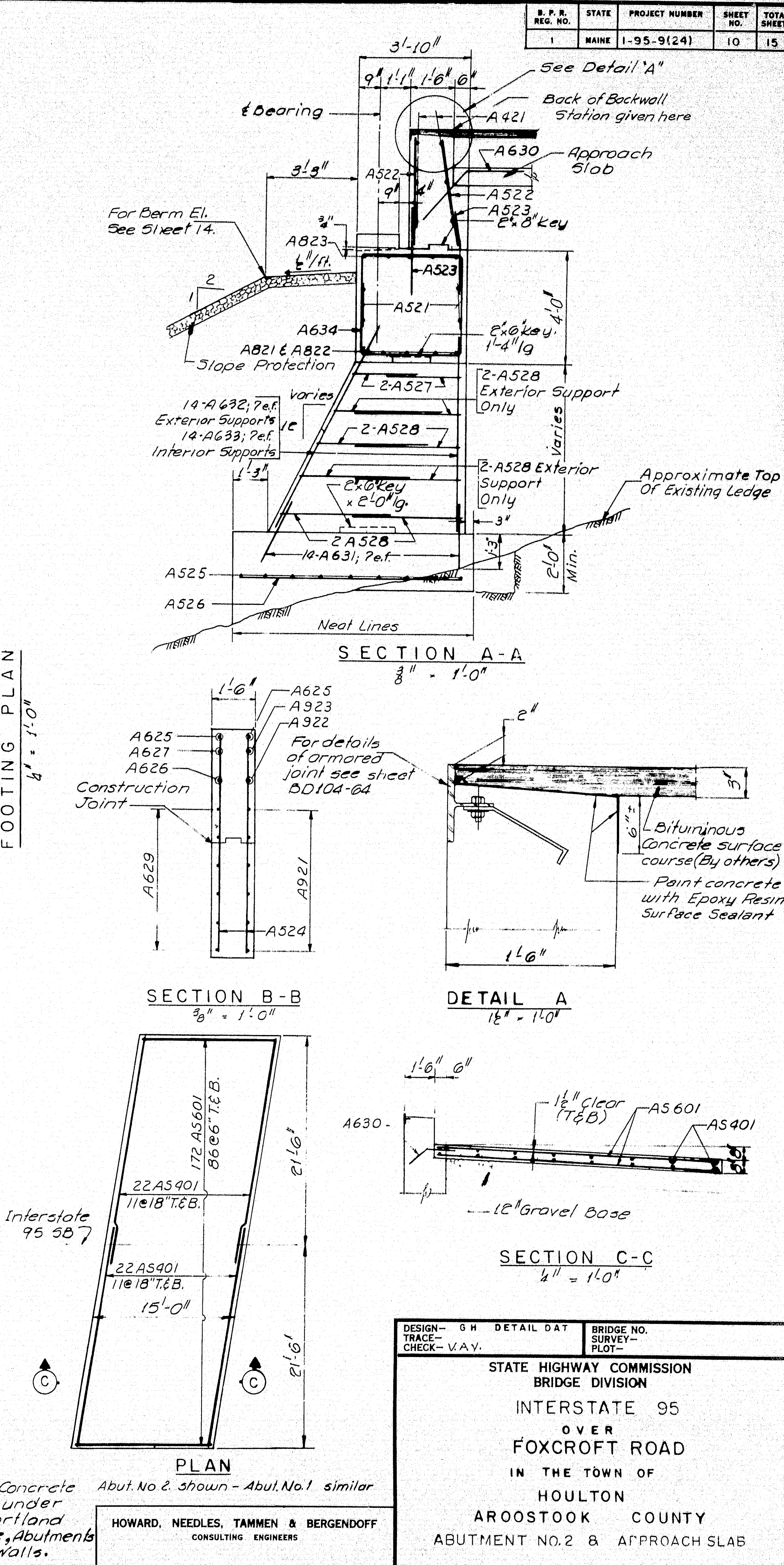
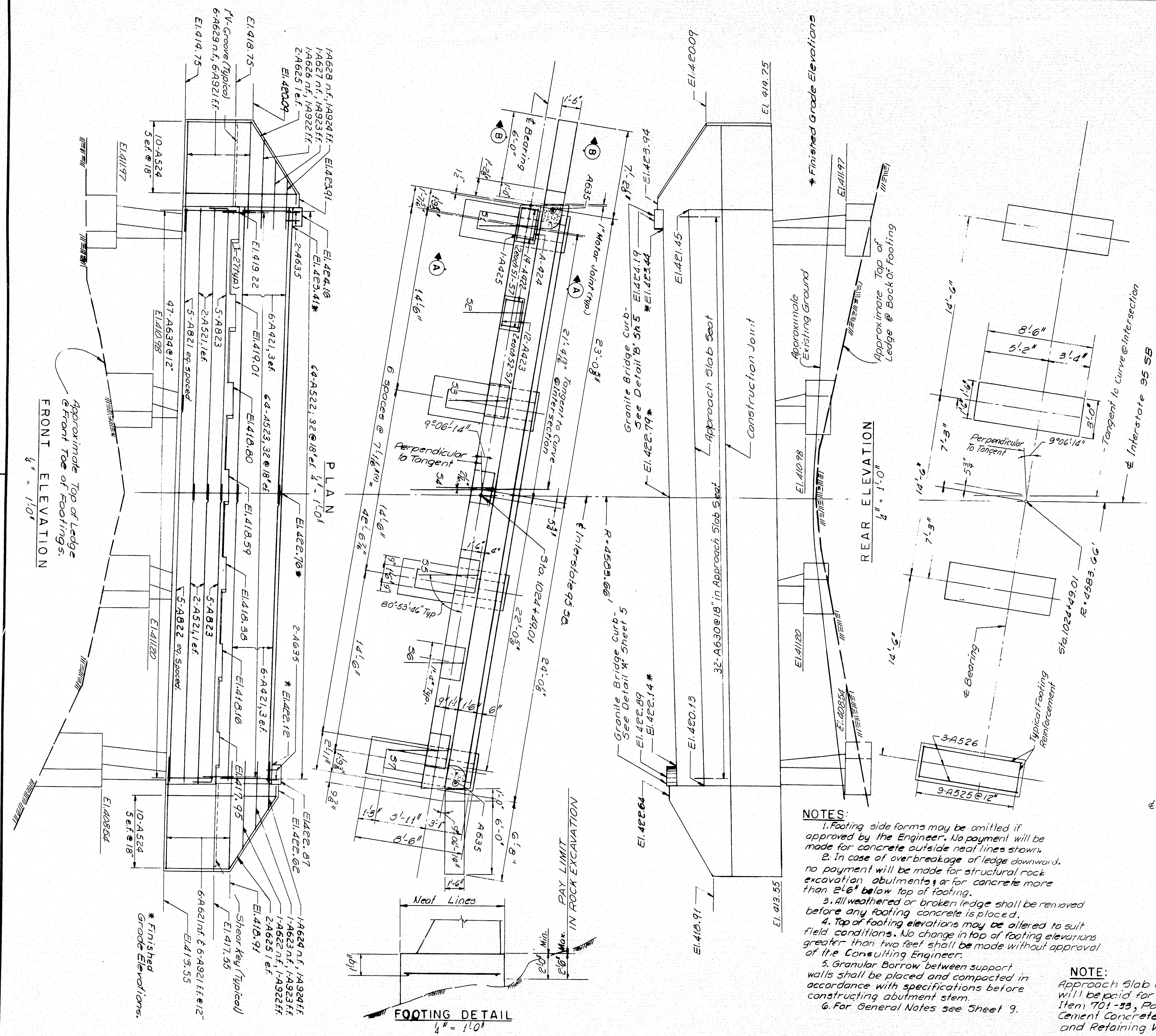
- Number of blows required to drive extra heavy casing one foot with 400 ft lbs. of energy per blow.
- Location of sample or sample attempt.
- S.F.H. Sampler #1290's
- Number of blows required to drive spoon or tubing one foot with 300 ft lbs. of energy per blow
- Bottom of boring (May not be bottom of soil strata)
- 70% Locations cored by diamond bit and per cent recovery of rock.



| | | |
|---|-----------------|----------------------------------|
| DESIGN - TRACE - CHECK - P.R.N. | DETAIL - R.P.K. | BRIDGE NO. SURVEY - PLOT - |
| STATE HIGHWAY COMMISSION BRIDGE DIVISION | | |
| INTERSTATE 95 OVER FOX CROFT ROAD IN THE TOWN OF HOULTON AROOSTOOK COUNTY FOUNDATION SURVEY | | |
| SHEET 8 OF 15 AUGUSTA, MAINE JANUARY 1965 | | |

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK BOSTON KANSAS CITY

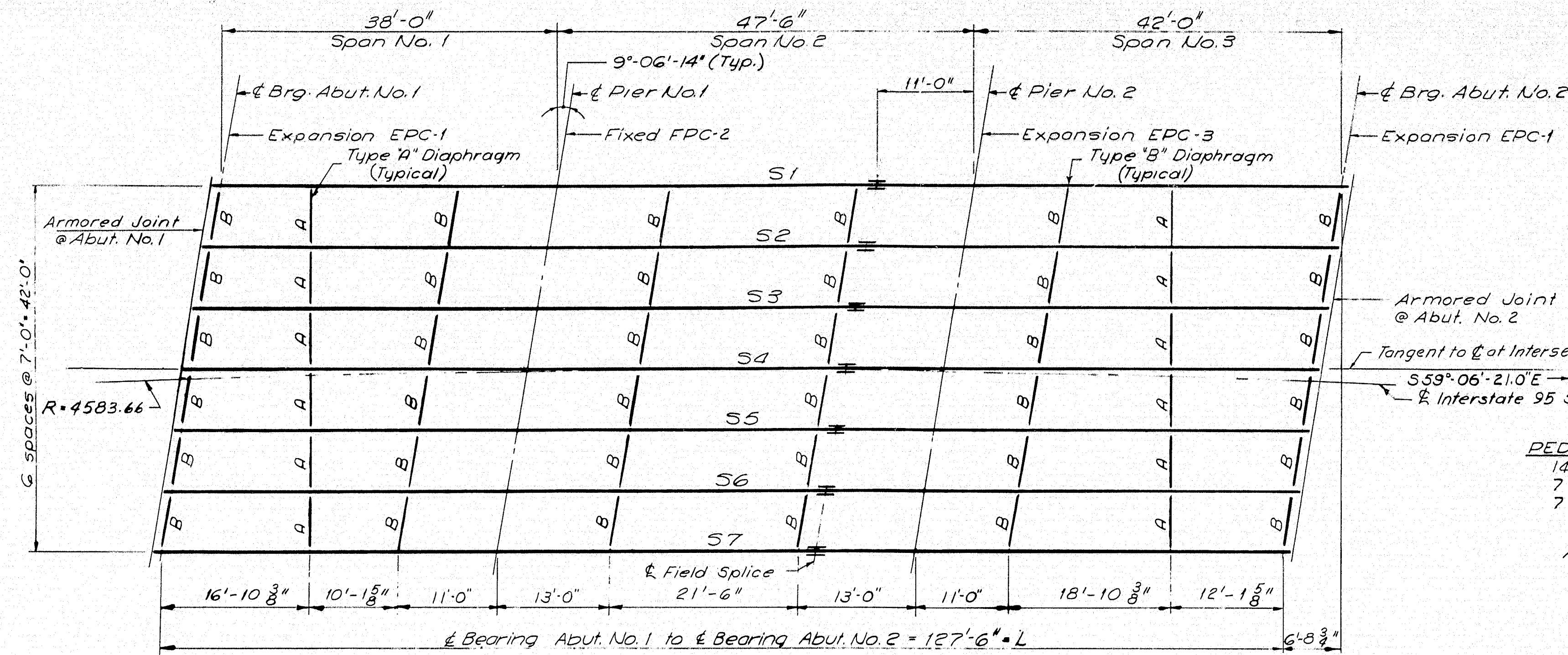
96-129 HOULTON



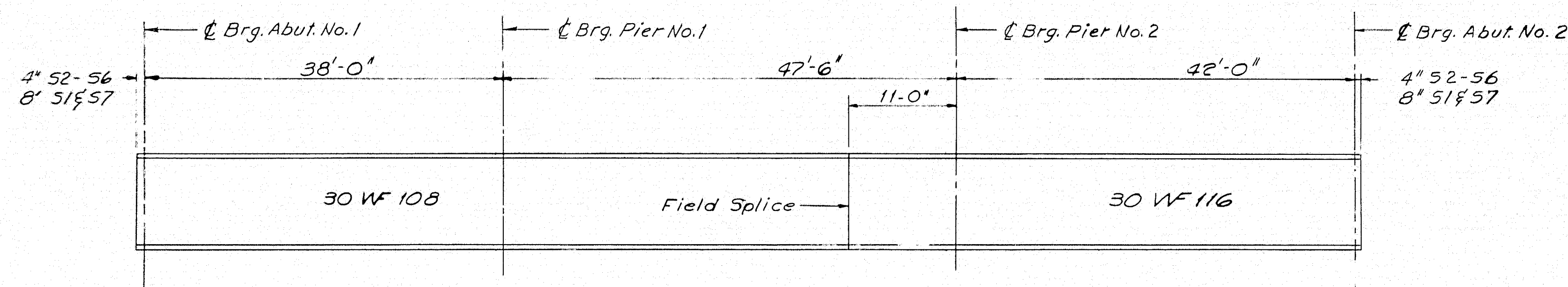
NOTES:

1. Footing side forms may be omitted if approved by the Engineer. No payment will be made for concrete outside neat lines shown.
2. In case of overbreakage of ledge downward, no payment will be made for structural rock excavation abutments or for concrete more than 2'-6" below top of footing.
3. All weathered or broken ledge shall be removed before any footing concrete is placed.
4. Top of footing elevations may be altered to suit field conditions. No change in top of footing elevations greater than two feet shall be made without approval of the Consulting Engineer.
5. Granular Borrow between support walls shall be placed and compacted in accordance with specifications before constructing abutment stem.
6. For General Notes see Sheet 9.

NOTE:
Approach Slab Concrete will be paid for under Item 701-33, Portland Cement Concrete, Abutments and Retaining Walls.



ERECTION DIAGRAM
1" = 10'



TYPICAL STRINGER ELEVATION
All Dimensions Are Horizontal

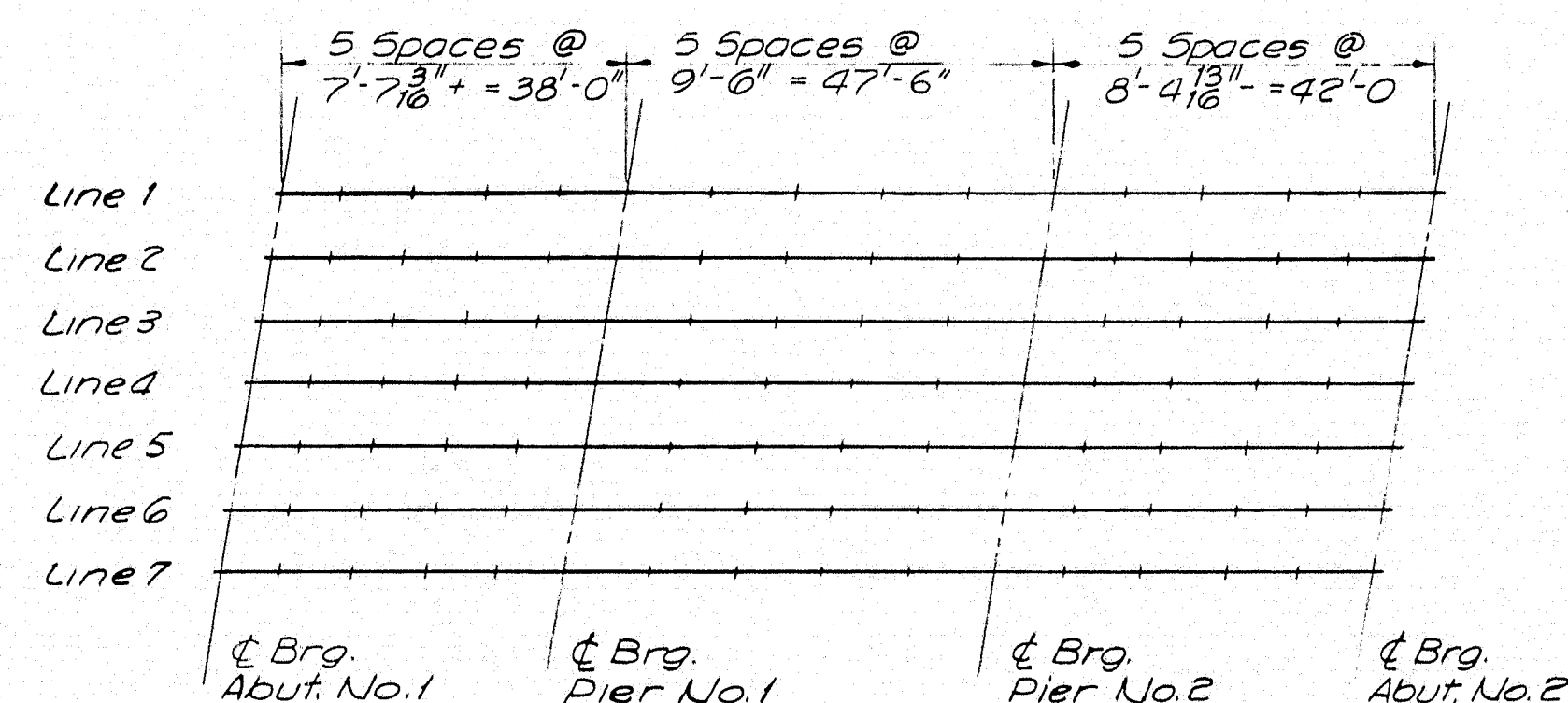


DIAGRAM OF BLOCKING POINTS

| Line | Span No. 1 | Span No. 2 | Span No. 3 |
|--------|------------|------------|------------|
| Line 1 | +1556% | +1651% | +1651% |
| Line 2 | +1557% | +1655% | +1655% |
| Line 3 | +1560% | +1655% | +1655% |
| Line 4 | +1562% | +1660% | +1660% |
| Line 5 | +1562% | +1660% | +1660% |
| Line 6 | +1564% | +1660% | +1660% |
| Line 7 | +1566% | +1662% | +1662% |

BEAM GRADES

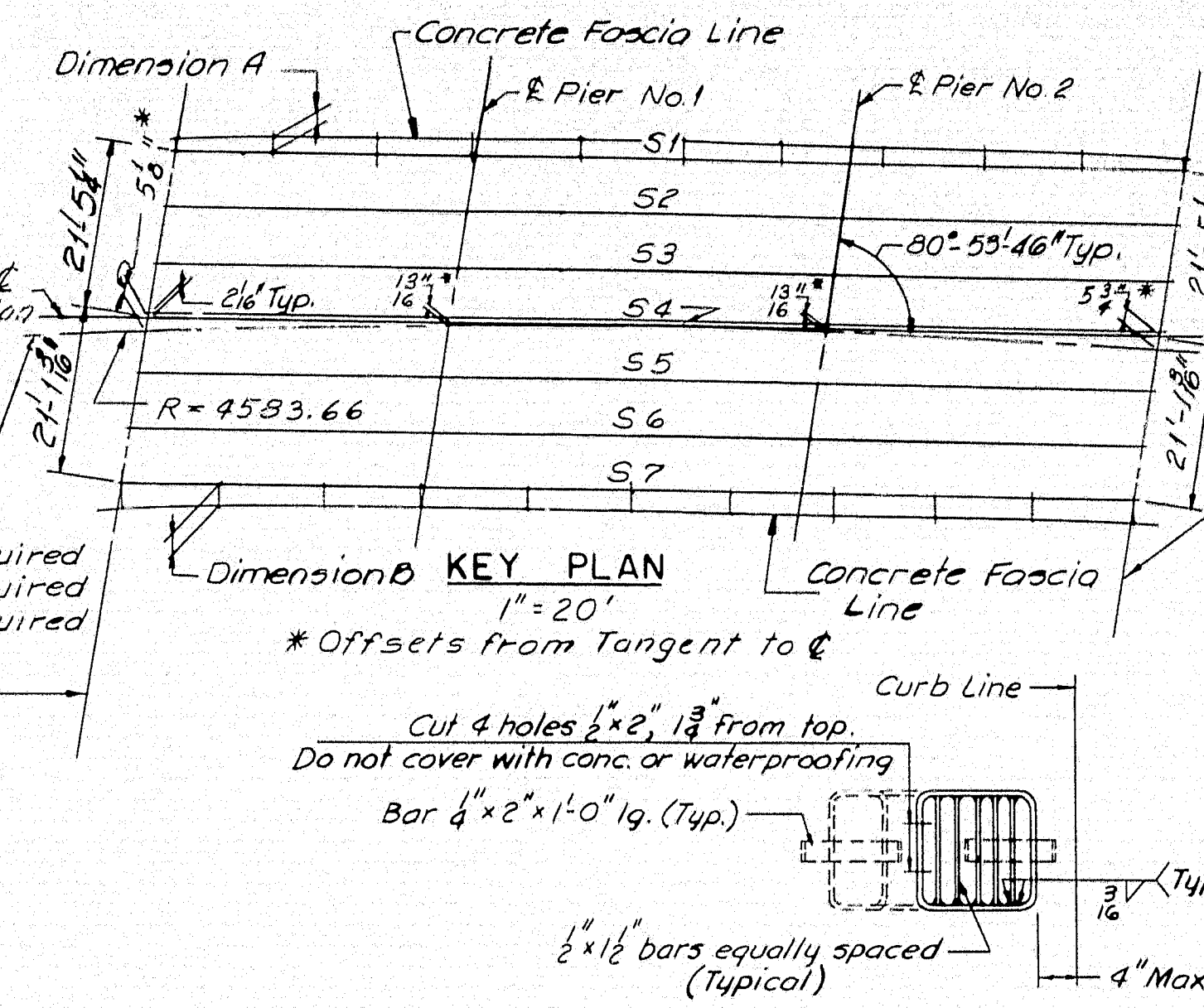
| Line | Abut. No. 1 | SPAN NO. 1 | | | | Pier No. 1 | SPAN NO. 2 | | | | Pier No. 2 | SPAN NO. 3 | | | | Abut. No. 2 |
|--------|-------------|------------|------------|------------|------------|------------|------------|--------|--------|--------|------------|------------|------------|------------|------------|-------------|
| | | 7'-7 3/8" | 15'-2 3/8" | 22'-9 3/8" | 30'-4 1/8" | | 9'-0" | 19'-0" | 28'-0" | 38'-0" | | 8'-4 1/8" | 16'-9 3/8" | 25'-2 3/8" | 33'-7 3/8" | |
| Line 1 | 420.59 | 420.72 | 420.84 | 420.96 | 421.07 | 421.19 | 421.34 | 421.50 | 421.65 | 421.80 | 421.94 | 422.09 | 422.23 | 422.37 | 422.50 | 422.63 |
| Line 2 | 420.38 | 420.51 | 420.63 | 420.75 | 420.86 | 420.97 | 421.13 | 421.29 | 421.44 | 421.58 | 421.73 | 421.88 | 422.02 | 422.16 | 422.29 | 422.41 |
| Line 3 | 420.16 | 420.29 | 420.42 | 420.53 | 420.65 | 420.76 | 420.92 | 421.08 | 421.23 | 421.37 | 421.52 | 421.66 | 421.81 | 421.95 | 422.08 | 422.20 |
| Line 4 | 419.95 | 420.08 | 420.20 | 420.32 | 420.43 | 420.55 | 420.71 | 420.86 | 421.02 | 421.16 | 421.31 | 421.45 | 421.60 | 421.74 | 421.87 | 421.99 |
| Line 5 | 419.74 | 419.87 | 419.99 | 420.11 | 420.22 | 420.34 | 420.49 | 420.65 | 420.80 | 420.95 | 421.10 | 421.24 | 421.39 | 421.53 | 421.66 | 421.78 |
| Line 6 | 419.52 | 419.65 | 419.78 | 419.89 | 420.01 | 420.12 | 420.28 | 420.44 | 420.59 | 420.74 | 420.89 | 421.03 | 421.18 | 421.32 | 421.45 | 421.57 |
| Line 7 | 419.31 | 419.44 | 419.56 | 419.68 | 419.79 | 419.91 | 420.07 | 420.23 | 420.38 | 420.52 | 420.67 | 420.82 | 420.96 | 421.11 | 421.24 | 421.36 |

BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS

| Dimension | Abut. No. 1 | Span No. 1 | Span No. 2 | Span No. 3 | Abut. No. 2 |
|-------------|-------------|------------|------------|------------|-------------|
| Dimension A | 1'-9" | 1'-10 3/8" | 2'-0 1/8" | 2'-0 1/8" | 1'-9" |
| Dimension B | 2'-1 1/8" | 2'-9 1/8" | 2'-7 3/8" | 2'-5 3/8" | 2'-1 1/8" |
| Point A | 420.64 | 420.85 | 421.06 | 421.25 | 421.46 |
| Point B | 419.23 | 419.44 | 419.65 | 419.84 | 420.06 |

For location of dimensions A and B, and points A and B see Sheet 13

PEDESTALS
14 EPC-1 Required
7 EPC-3 Required
7 FPC-2 Required



PLAN

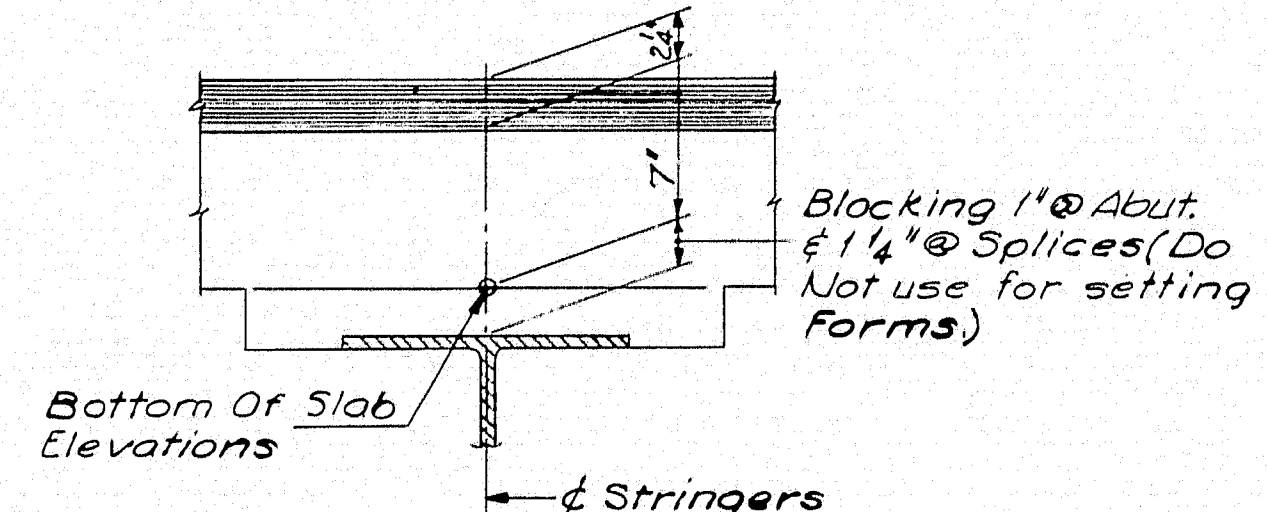
BRIDGE DRAINS

BRIDGE DRAIN NOTES:

- Two bridge drains on south side, Spans 1 and 3.
- For approximate location see Sheet 2, exact position to be determined in field.

DEAD LOAD DEFLECTION DIAGRAM

ALL DEFLECTIONS IN INCHES
No shop camber required
Natural mill camber to be placed up

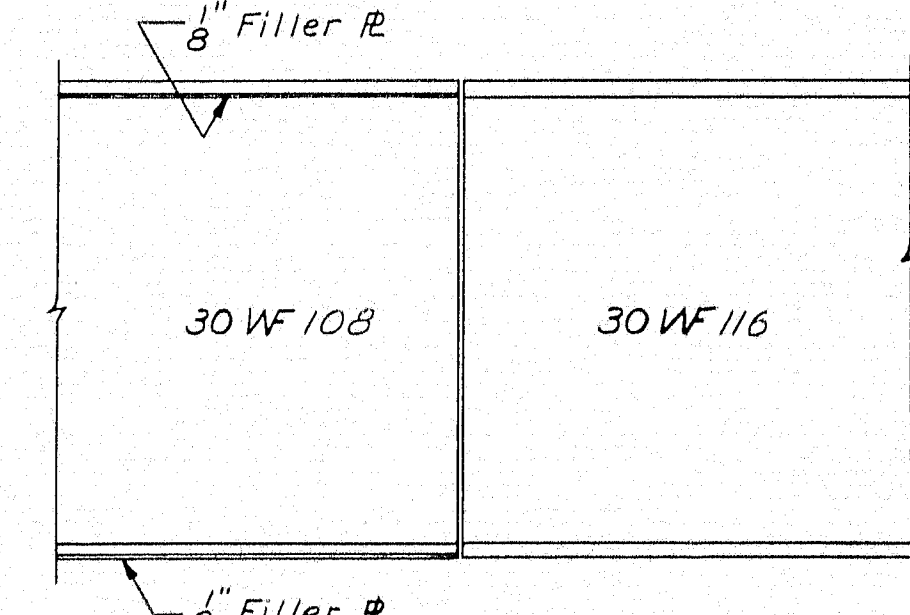


BLOCKING DETAIL

No Scale

NOTE:

To compensate for dead load deflections as well as possible irregularities in beams, set the bottom of slab elevations at the points indicated before any of the slab formwork is started.



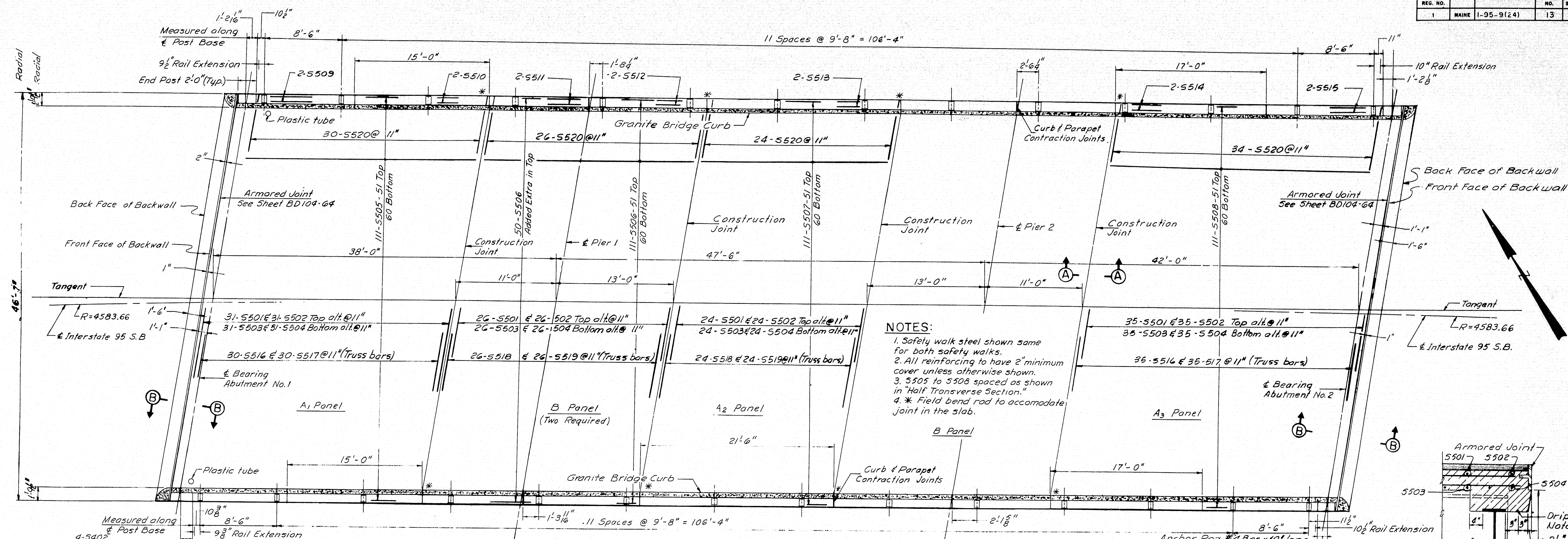
SPICE DETAIL

NOTE:

For additional splice details, see Standard Details BD103-64.

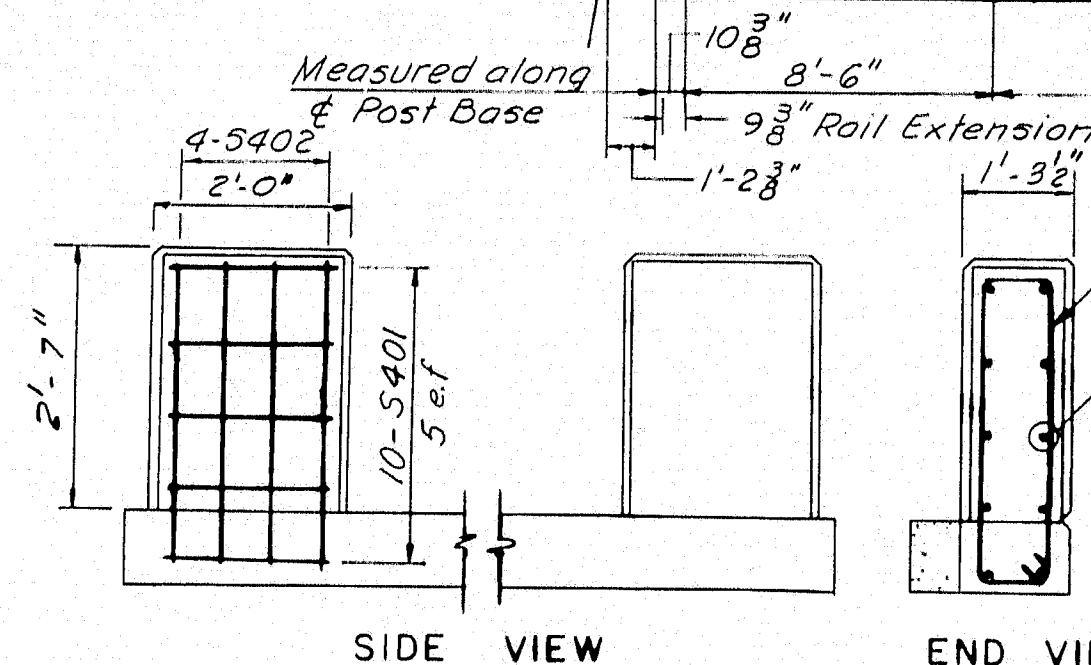
| | | |
|--|-----------------|----------------------------------|
| DESIGN - G.H. TRACE - CHECK - R.R.N. | DETAIL - P.B.D. | BRIDGE NO. SURVEY - PLOT - |
| STATE HIGHWAY COMMISSION BRIDGE DIVISION | | |
| INTERSTATE 95 OVER FOX CROFT ROAD IN THE TOWN OF HOULTON | | |
| AROOSTOOK COUNTY STRUCTURAL STEEL & BLOCKING | | |
| SHEET 12 OF 15 AUGUSTA, MAINE JANUARY 1965 | | |

96-133 HOULTON



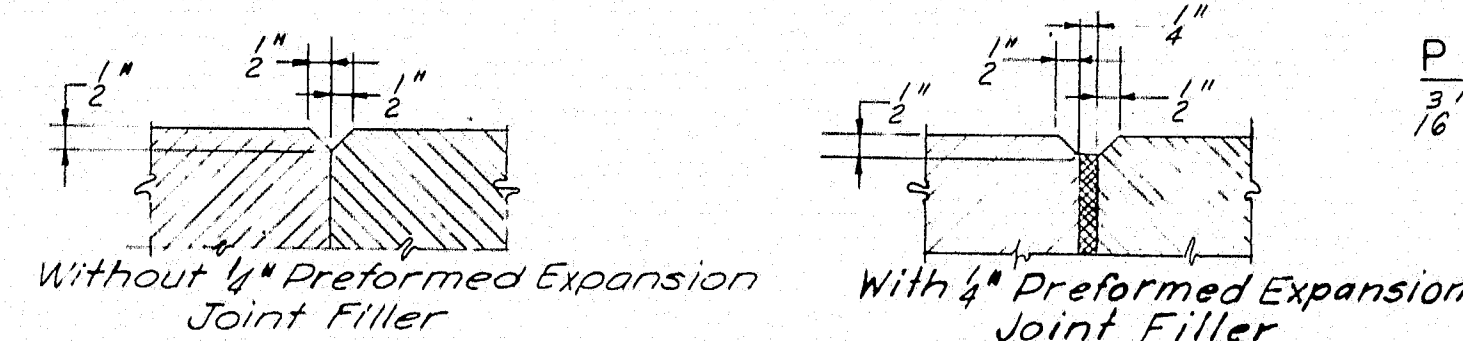
NOTES:

1. Safety walk steel shown same for both safety walks.
2. All reinforcing to have 2" minimum cover unless otherwise shown.
3. S505 to S508 spaced as shown in "Half Transverse Section."
4. * Field bend rod to accommodate joint in the slab.

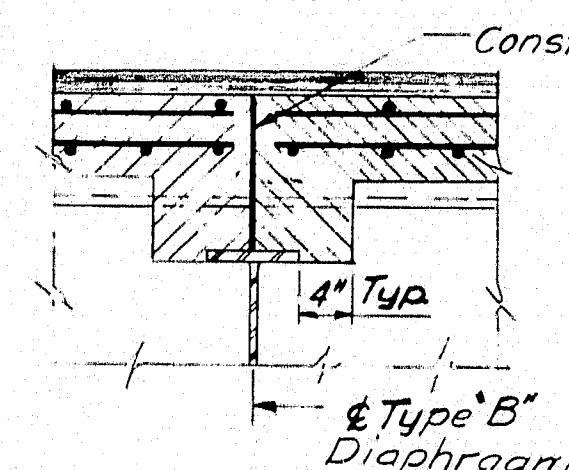


SIDE VIEW
END POST DETAIL
No Scale

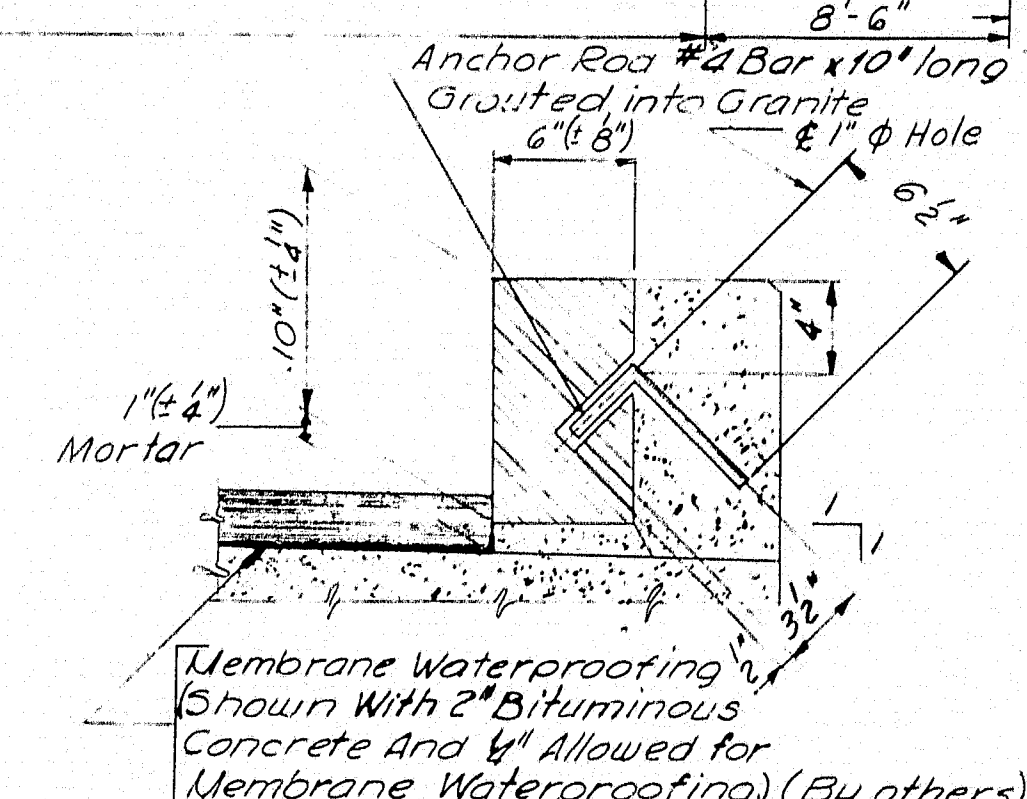
END VIEW



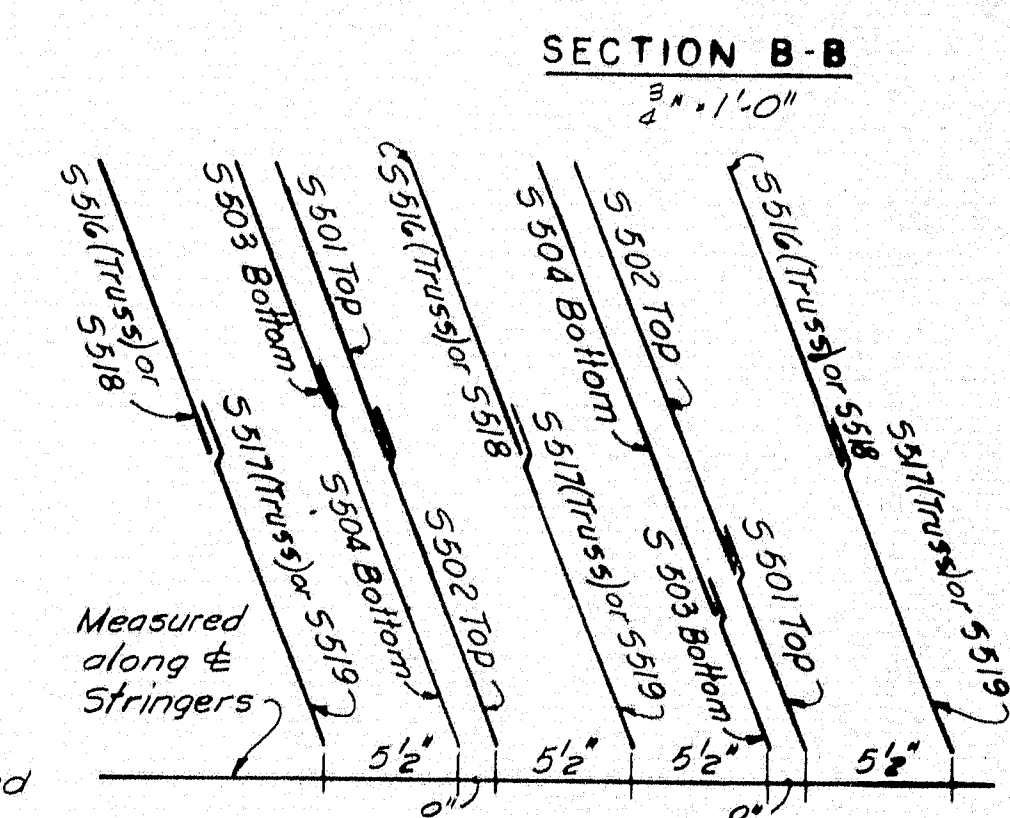
PLAN
3/8" = 1'-0"



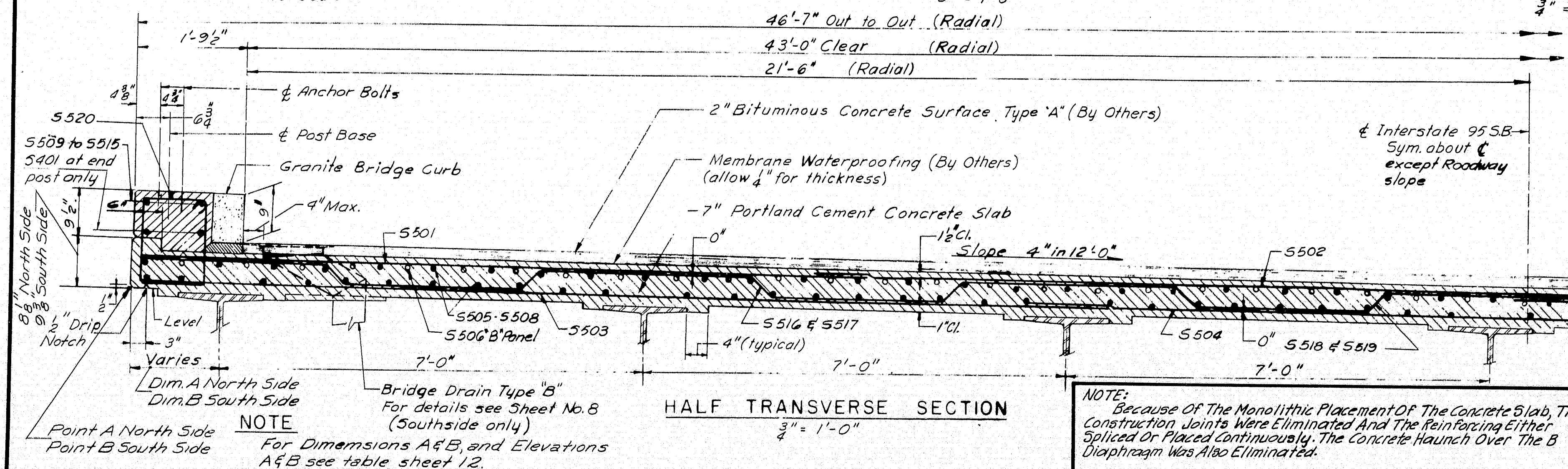
SECTION A-A
3/4" = 1'-0"



TYPICAL CURB SECTION
1/2" = 1'-0"



TYPICAL REINFORCING PATTERN



HALF TRANSVERSE SECTION
3/4" = 1'-0"

GENERAL SUPERSTRUCTURE NOTES

1. At joints in curbs & granite bridge curbs over piers, use 1/4" preformed expansion joint filler. At all other curb joints, break the bond between concrete surfaces with a suitable grade of asphalt paint. Form 'V' Grooves on outside face of curb and slab at each vertical joint.
2. At low points in slabs, place a plastic tube 1" through the slab for drainage. Exact location to be determined in the field. Do not cover the tube with waterproofing. This work will be incidental to contract items. Tube shall extend 2' below bottom of slab. Place tube to drip clear of bridge seat.
3. For bridge rail, see Standard Details, BD107-G4 & BD108-G4.
4. Place concrete in 'A' panels before placing concrete in 'B' panels.
5. Granite Bridge Curb means Vertical Bridge Curb Type 1 and will be paid for under Item 901-24.
6. Payment for concrete in End Post will be paid for under Item 701-40.

NOTE: Because of the Monolithic Placement of the Concrete Slab, the Construction Joints were Eliminated and the Reinforcing Either Spliced or Placed Continuously. The Concrete Haunch Over the B Diaphragm was Also Eliminated.

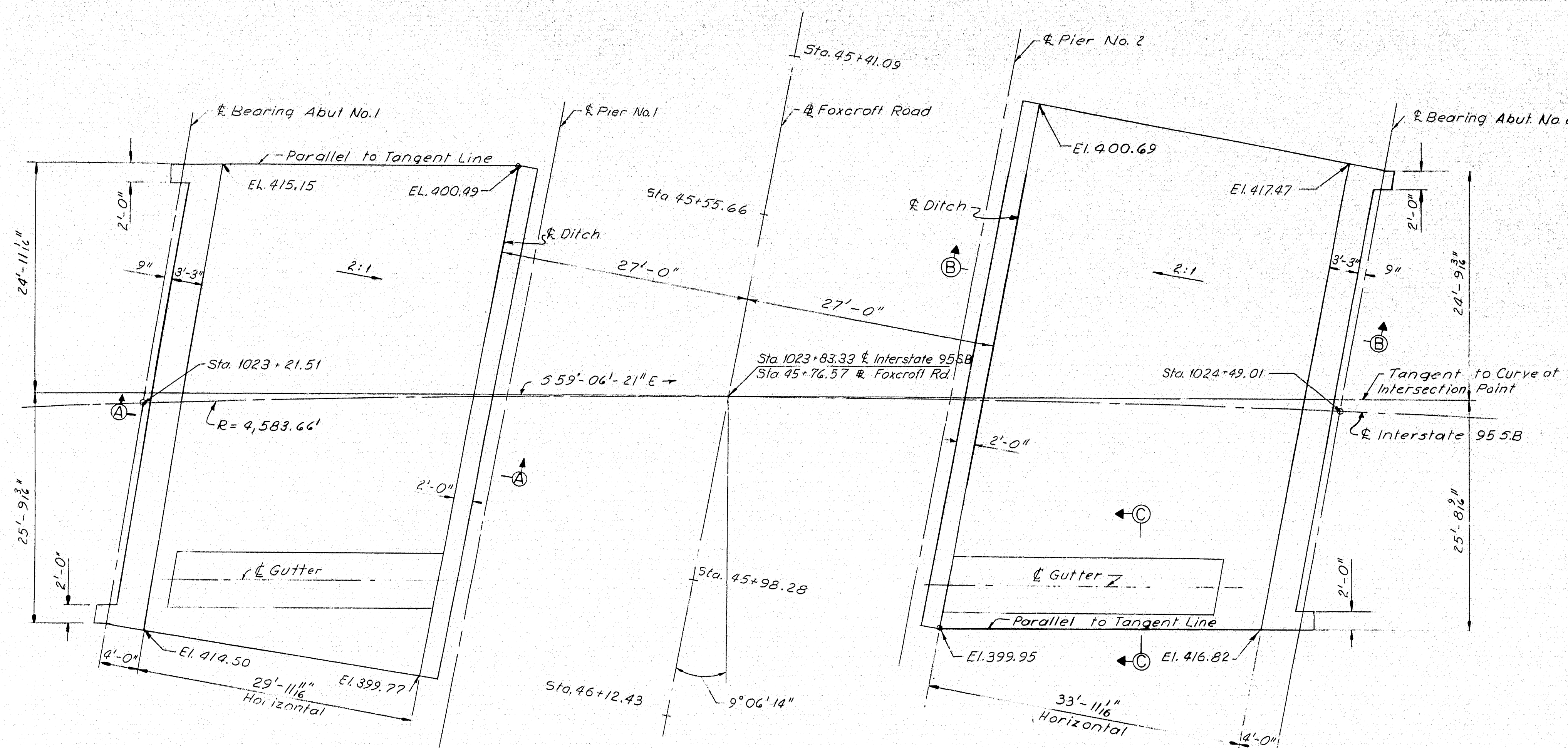
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CONSULTING ENGINEERS

NEW YORK BOSTON KANSAS CITY

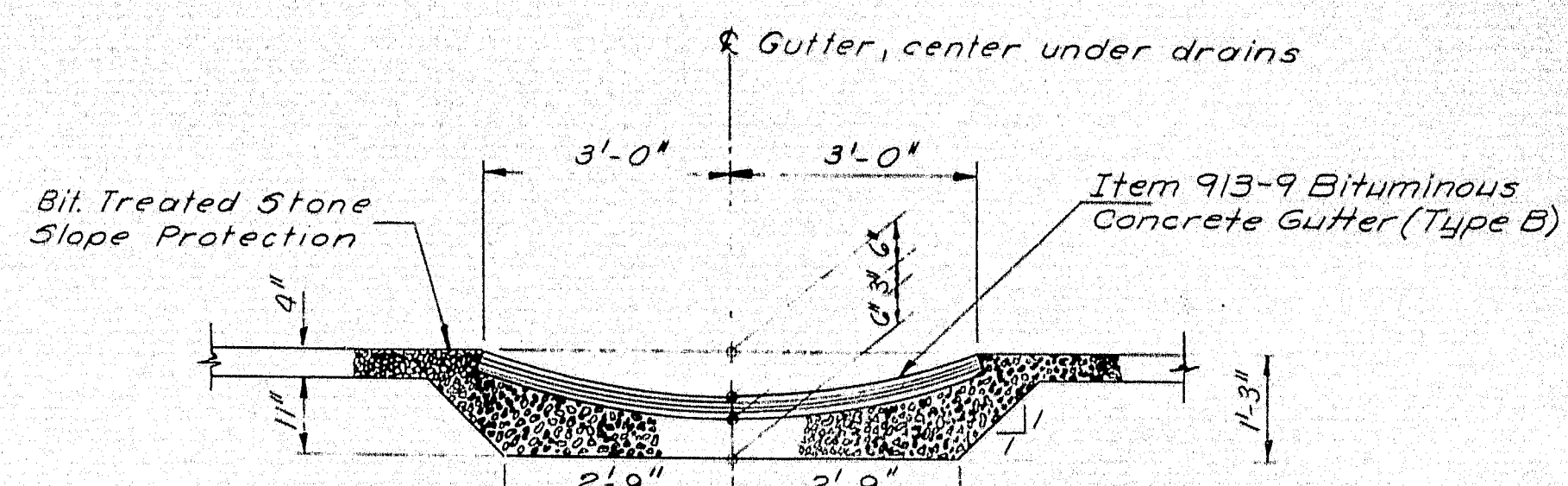
| | | |
|--|--------------|--------------|
| DESIGN-G.H. | DETAIL-N.K. | BRIDGE NO. |
| TRACE- | CHECK-V.A.V. | SURVEY-PLOT- |
| STATE HIGHWAY COMMISSION BRIDGE DIVISION | | |
| INTERSTATE 95 OVER FOXCROFT ROAD IN THE TOWN OF HOULTON ARROOSTOOK COUNTY | | |
| SUPERSTRUCTURE | | |
| SHEET 13 OF 15 AUGUSTA, MAINE JANUARY 1965 | | |

96-134 HOULTON

| S. P. R. REG. NO. | STATE | PROJECT NUMBER | SHEET NO. | TOTAL SHEETS |
|-------------------|-------|----------------|-----------|--------------|
| | MAINE | 95-9(24) | 14 | 15 |

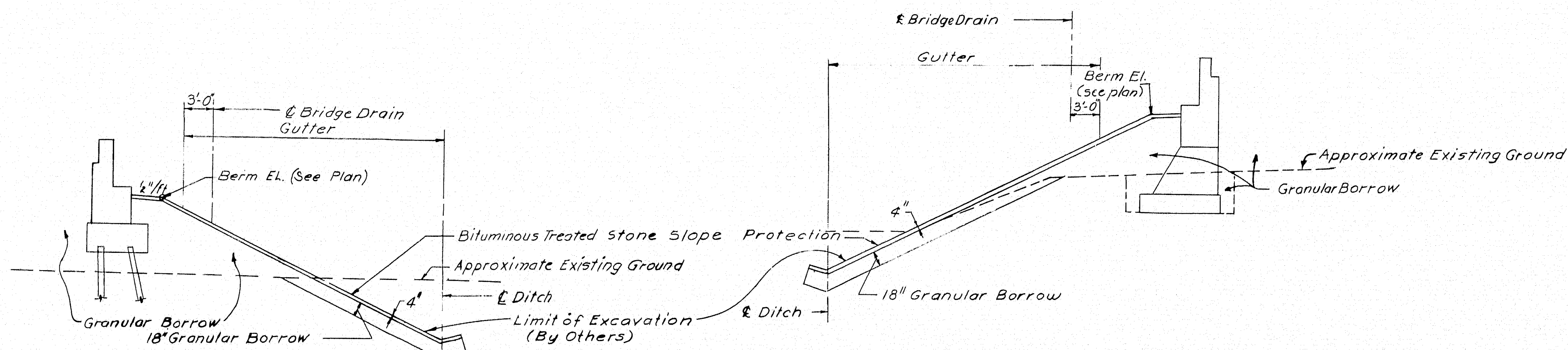


PLAN
1/8" = 1'-0"



BITUMINOUS CONCRETE GUTTER
SECTION C-C
1/2" = 1'-0"

NOTE:
Payment for Bituminous Treated Stone Slope Protection placed beneath the gutter shall be made at the contract unit price for Item 913-8 Bituminous Treated Stone Slope Protection, "per square yard."



SECTION A-A
1/8" = 1'-0"

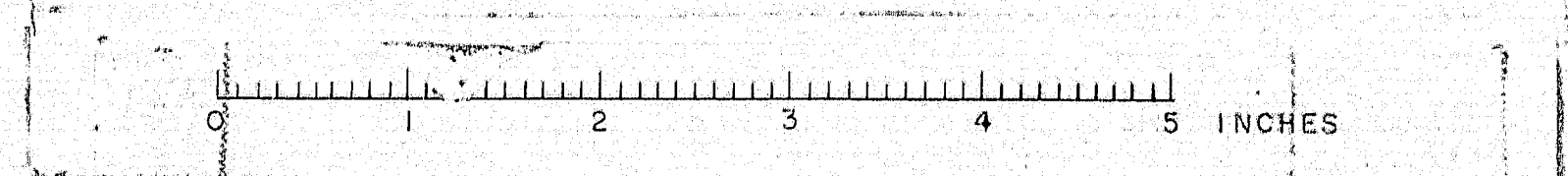
SECTION B-B
1/8" = 1'-0"

NOTE:
Provide Granular Borrow in Excavation under slope protection to depth shown.
The 18" of Granular Borrow under the slope protection may be reduced or omitted, if in the opinion of the Engineer the existing material is suitable.
Payment for any excavation required for slope protection will be made under the appropriate Item for Structural Excavation, Piers Items 204-14 and 204-15.

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CONSULTING ENGINEERS
NEW YORK BOSTON KANSAS CITY

| | | |
|---|-----------------|--------------------------------|
| DESIGN- TRACE- CHECK-K.A.V. | DETAIL - R.P.K. | BRIDGE NO. SURVEY- PLOT- |
| STATE HIGHWAY COMMISSION BRIDGE DIVISION | | |
| INTERSTATE 95 OVER FOXCROFT ROAD IN THE TOWN OF HOULTON AROOSTOOK COUNTY SLOPE PROTECTION | | |
| SHEET 14 OF 15 AUGUSTA, MAINE JANUARY 1965 | | |

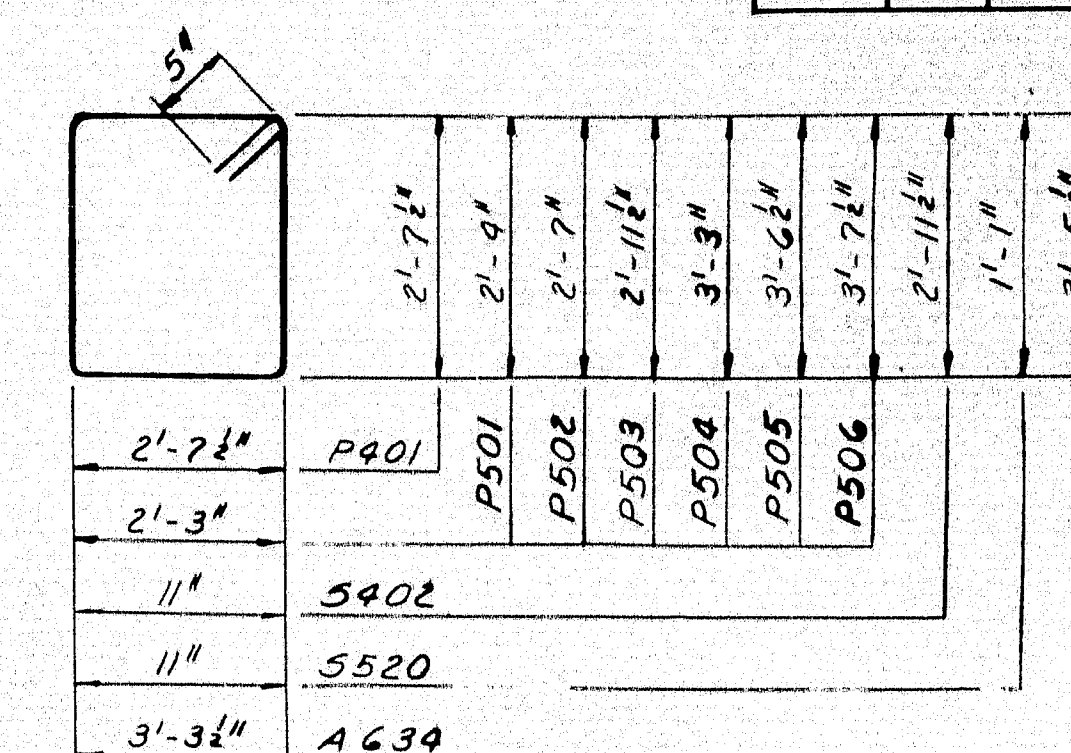
96-135 HOULTON



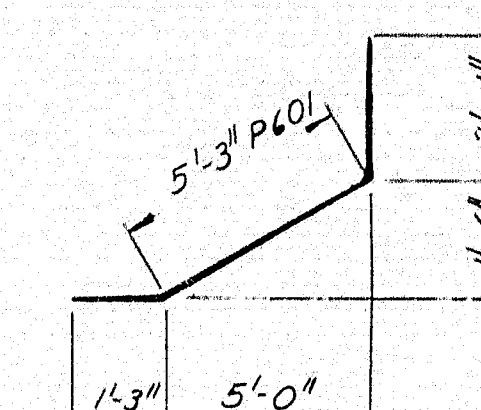
| MARK | SIZE | NUMBER | LENGTH | INCR | LOCATION |
|----------------|------|--------|------------------|---------------|--------------------|
| ABUTMENT NO. 1 | | | | | |
| STRAIGHT BARS | | | | | |
| A401 | 4 | 6 | 23'-6" | | Backwall |
| A402 | 4 | 6 | 29'-9" | | Backwall |
| A501 | 5 | 10 | 23'-6" | | Stem |
| A502 | 5 | 10 | 24'-6" | | Stem |
| A503 | 5 | 69 | 4'-0" | | Backwall |
| A504 | 5 | 32 | 3'-0" | | Stem & Backwall |
| A507 | 5 | 15 | 6'-6" | | Footing & Stem |
| A508 | 5 | 17 | 7'-2" | | " |
| A509 | 5 | 32 | 2'-6" | | Footing & Stem |
| A510 | 5 | 10 | 5'-10" to 11'-8" | 2 Groups of 5 | Wingwall |
| A511 | 5 | 10 | 8'-4" | 2 Groups of 5 | Wingwall |
| A606 | 6 | 1 | 8'-0" | | Wingwall |
| A607 | 6 | 1 | 6'-6" | | " |
| A608 | 6 | 1 | 5'-0" | | " |
| A609 | 6 | 5 | 8'-6" | | Wingwall |
| A610 | 6 | 28 | 5'-6" | | Footing |
| A611 | 6 | 44 | 25'-0" | | Footing |
| A613 | 6 | 4 | 1'-0" | | Curb Dowels |
| A901 | 9 | 12 | 8'-9" | | Wingwall |
| A902 | 9 | 1 | 7'-3" | | " |
| A903 | 9 | 1 | 6'-0" | | " |
| A904 | 9 | 1 | 4'-6" | | " |
| A905 | 9 | 1 | 8'-3" | | " |
| A906 | 9 | 1 | 6'-6" | | " |
| A907 | 9 | 1 | 5'-0" | | Wingwall |
| BENT BARS | | | | | |
| A403 | 4 | 14 | 4'-4" | | Pads |
| A404 | 4 | 12 | 5'-6" | | " |
| A405 | 4 | 1 | 5'-8" | | " |
| A406 | 4 | 1 | 6'-0" | | Pads |
| A505 | 5 | 15 | 7'-0" | | Stem |
| A506 | 5 | 17 | 7'-8" | | Stem |
| A601 | 6 | 7 | 8'-0" | | Wingwall |
| A602 | 6 | 1 | 6'-6" | | " |
| A603 | 6 | 1 | 5'-0" | | " |
| A604 | 6 | 1 | 3'-6" | | " |
| A605 | 6 | 4 | 7'-8" | | Wingwall |
| A612 | 6 | 32 | 3'-0" | | Approach Slab Seat |
| ABUTMENT NO. 2 | | | | | |
| STRAIGHT BARS | | | | | |
| A421 | 4 | 12 | 24'-0" | | Backwall |
| A521 | 5 | 8 | 24'-0" | | Stem |
| A522 | 5 | 64 | 4'-0" | | Backwall |
| A523 | 5 | 64 | 3'-0" | | Stem & Backwall |
| A524 | 5 | 20 | 5'-0" to 10'-6" | 4 Groups of 5 | Wingwall |
| A525 | 5 | 36 | 2'-6" | | Footing |
| A526 | 5 | 12 | 8'-0" | | Footing |
| A626 | 6 | 1 | 6'-9" | | Wingwall |
| A627 | 6 | 1 | 5'-3" | | " |
| A628 | 6 | 1 | 3'-9" | | " |
| A629 | 6 | 6 | 8'-6" | | Wingwall |
| A631 | 6 | 56 | 2'-6" | | Footing |

| MARK | SIZE | NUMBER | LENGTH | INCR | LOCATION |
|----------------------------|------|--------|---------|------|-----------------------|
| ABUTMENT NO. 2 (CONTINUED) | | | | | |
| STRAIGHT BARS | | | | | |
| A632 | 6 | 28 | 7'-6" | | Exterior Support Wall |
| A633 | 6 | 28 | 5'-0" | | Interior Support Wall |
| A635 | 6 | 4 | 1'-0" | | Curb Dowels |
| A821 | 8 | 5 | 17'-6" | | Stem |
| A822 | 8 | 5 | 31'-0" | | Stem |
| A921 | 9 | 12 | 8'-9" | | Wingwall |
| A922 | 9 | 2 | 7'-3" | | " |
| A923 | 9 | 2 | 5'-9" | | " |
| A924 | 9 | 2 | 4'-3" | | Wingwall |
| BENT BARS | | | | | |
| A422 | 4 | 14 | 4'-6" | | Pads |
| A423 | 4 | 12 | 5'-6" | | " |
| A424 | 4 | 1 | 6'-0" | | " |
| A425 | 4 | 1 | 5'-8" | | Pads |
| A527 | 5 | 8 | 6'-6" | | Support Wall |
| A528 | 5 | 24 | 8'-6" | | Support Wall |
| A621 | 6 | 6 | 8'-0" | | Wingwall |
| A622 | 6 | 1 | 6'-6" | | " |
| A623 | 6 | 1 | 5'-0" | | " |
| A624 | 6 | 1 | 3'-6" | | " |
| A625 | 6 | 4 | 7'-8" | | Wingwall |
| A630 | 6 | 32 | 3'-0" | | Approach Slab Seat |
| A634 | 6 | 47 | 14'-4" | | Stem |
| A823 | 8 | 10 | 25'-11" | | Stem |
| APPROACH SLAB | | | | | |
| STRAIGHT BARS | | | | | |
| A5401 | 4 | 88 | 22'-3" | | Approach Slab |
| A5601 | 6 | 344 | 14'-6" | | Approach Slab |
| PIERS 1 & 2 | | | | | |
| STRAIGHT BARS | | | | | |
| P602 | 6 | 8 | 23'-5" | | Pier Cap |
| P603 | 6 | 8 | 21'-8" | | Pier Cap |
| P604 | 6 | 26 | 6'-0" | | Footing |
| P605 | 6 | 32 | 5'-6" | | Footing |
| P701 | 7 | 30 | 6'-6" | | Footing |
| P801 | 8 | 16 | 16'-3" | | Pier Cap |
| P802 | 8 | 12 | 34'-0" | | " |
| P803 | 8 | 16 | 32'-6" | | Pier Cap |
| P901 | 9 | 88 | 5'-2" | | Columns, Dowels |
| P902 | 9 | 16 | 12'-0" | | Columns |
| P903 | 9 | 24 | 18'-4" | | " |
| P904 | 9 | 12 | 20'-0" | | " |
| P905 | 9 | 12 | 20'-10" | | " |
| P906 | 9 | 24 | 18'-10" | | Columns |
| BENT BARS | | | | | |
| P401 | 4 | 100 | 11'-4" | | Column Ties |

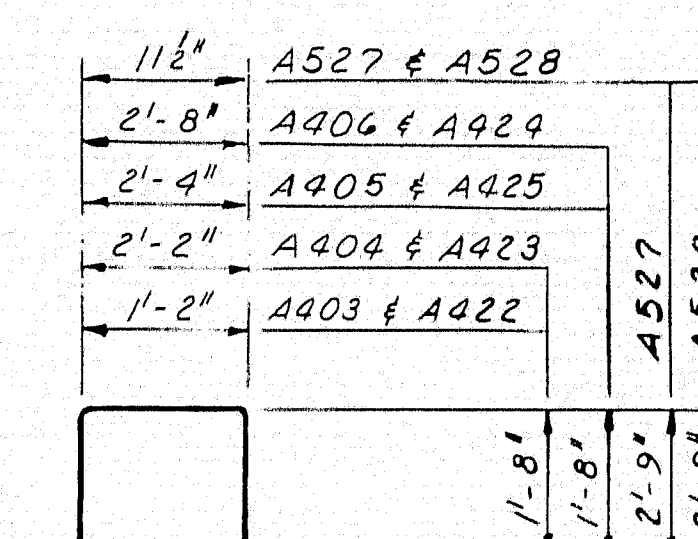
| MARK | SIZE | NUMBER | LENGTH | INCR | LOCATION |
|--------------------|------|--------|---------|------|-----------------------------|
| PIERS 1 & 2 (CONT) | | | | | |
| BENT BARS | | | | | |
| P501 | 5 | 8 | 10'-0" | | Pier Cap Stirrups |
| P502 | 5 | 8 | 10'-6" | | " |
| P503 | 5 | 8 | 11'-3" | | " |
| P504 | 5 | 8 | 11'-10" | | " |
| P505 | 5 | 8 | 12'-5" | | " |
| P506 | 5 | 70 | 12'-7" | | Pier Cap Stirrups |
| P601 | 6 | 16 | 8'-7" | | Pier Cap |
| SUPERSTRUCTURE | | | | | |
| STRAIGHT BARS | | | | | |
| S401 | 4 | 40 | 1'-8" | | End Post |
| S501 | 5 | 142 | 13'-3" | | Slab Transverse |
| S502 | 5 | 142 | 34'-9" | | " |
| S503 | 5 | 142 | 14'-9" | | " |
| S504 | 5 | 142 | 31'-3" | | Slab Transverse |
| S505 | 5 | 111 | 27'-7" | | Slab Longitudinal |
| S506 | 5 | 322 | 23'-8" | | " |
| S507 | 5 | 111 | 21'-2" | | " |
| S508 | 5 | 111 | 31'-7" | | Slab Longitudinal |
| S509 | 5 | 4 | 12'-7" | | Parapet Transverse |
| S510 | 5 | 4 | 14'-8" | | " |
| S511 | 5 | 8 | 10'-8" | | " |
| S512 | 5 | 8 | 12'-8" | | " |
| S513 | 5 | 4 | 21'-2" | | " |
| S514 | 5 | 4 | 16'-8" | | " |
| S515 | 5 | 4 | 14'-6" | | Parapet Transverse |
| BENT BARS | | | | | |
| S402 | 4 | 16 | 8'-7" | | End Post |
| S516 | 5 | 65 | 25'-5" | | Slab Transverse (Truss Bar) |
| S517 | 5 | 65 | 24'-11" | | " |
| S518 | 5 | 76 | 25'-9" | | " |
| S519 | 5 | 76 | 23'-11" | | Slab Transverse (Truss Bar) |
| S520 | 5 | 280 | 4'-10" | | Parapet Transverse |



A634, P401, P501 THRU P506, S402, & S520

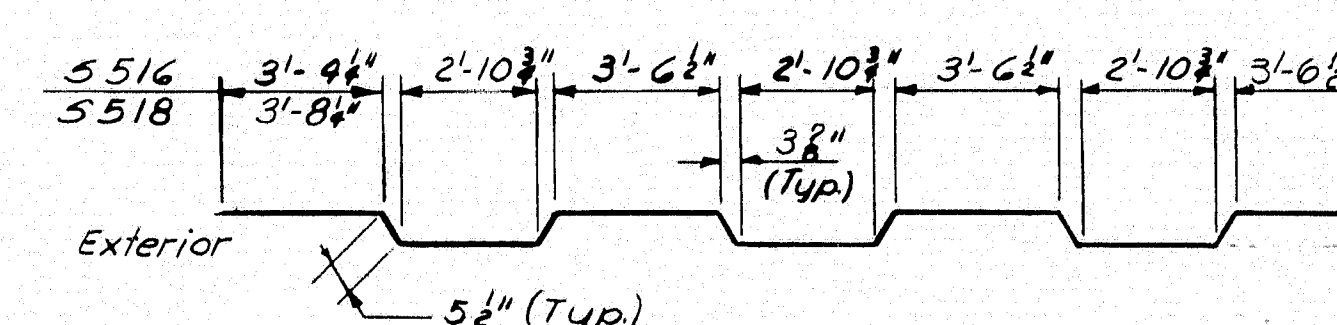


P601

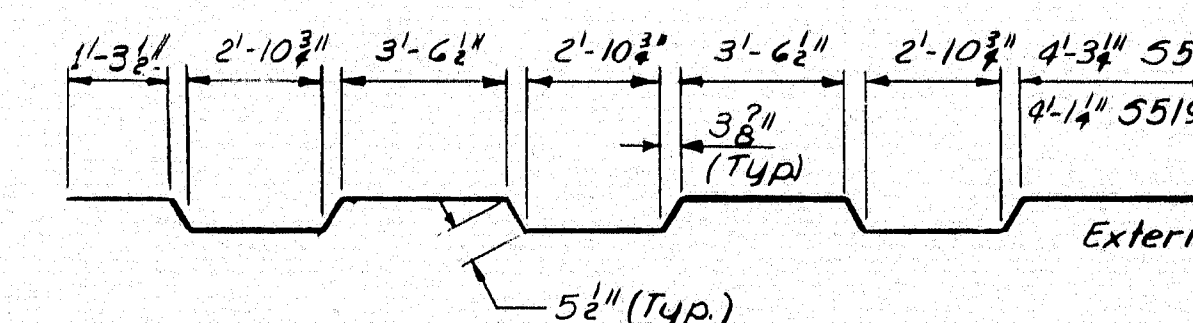


A403 THRU A406 A422 THRU A425, A527, & A528

A505 & A506



S516, S518



S517, S519

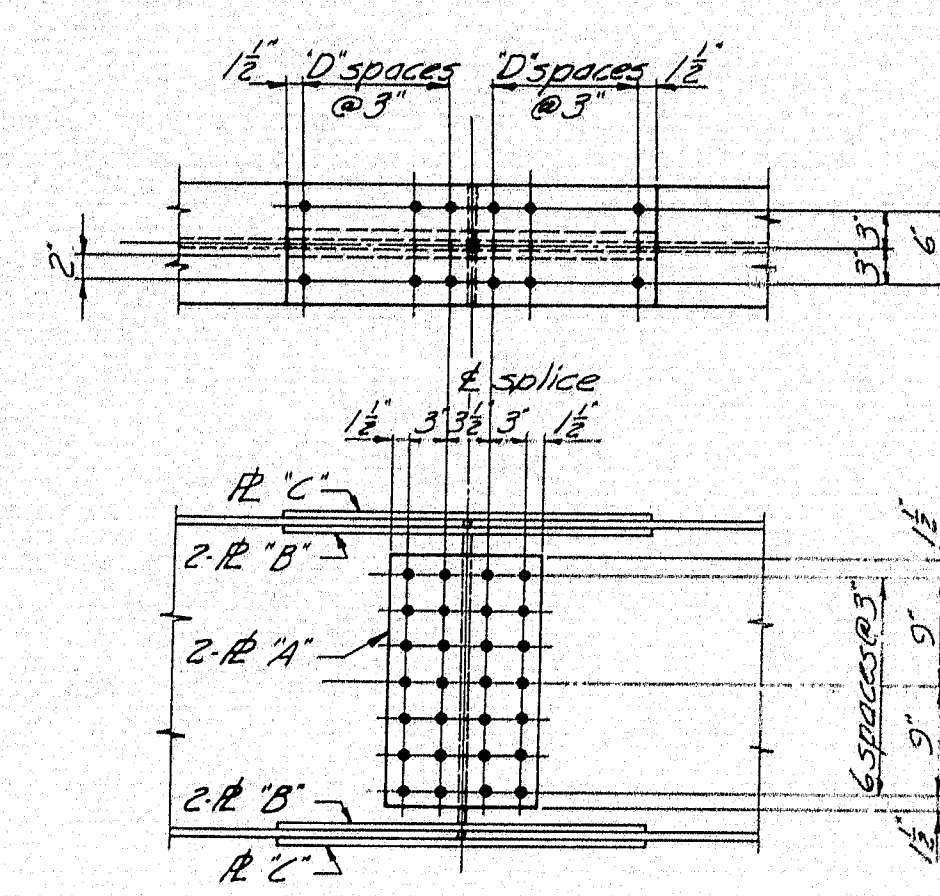
NOTES:
1. All dimensions are to the center of bars.
2. All reinforcing bars shall be intermediate grade steel.
3. Reinforcing steel to have 1" minimum cover, unless otherwise shown.

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CONSULTING ENGINEERS

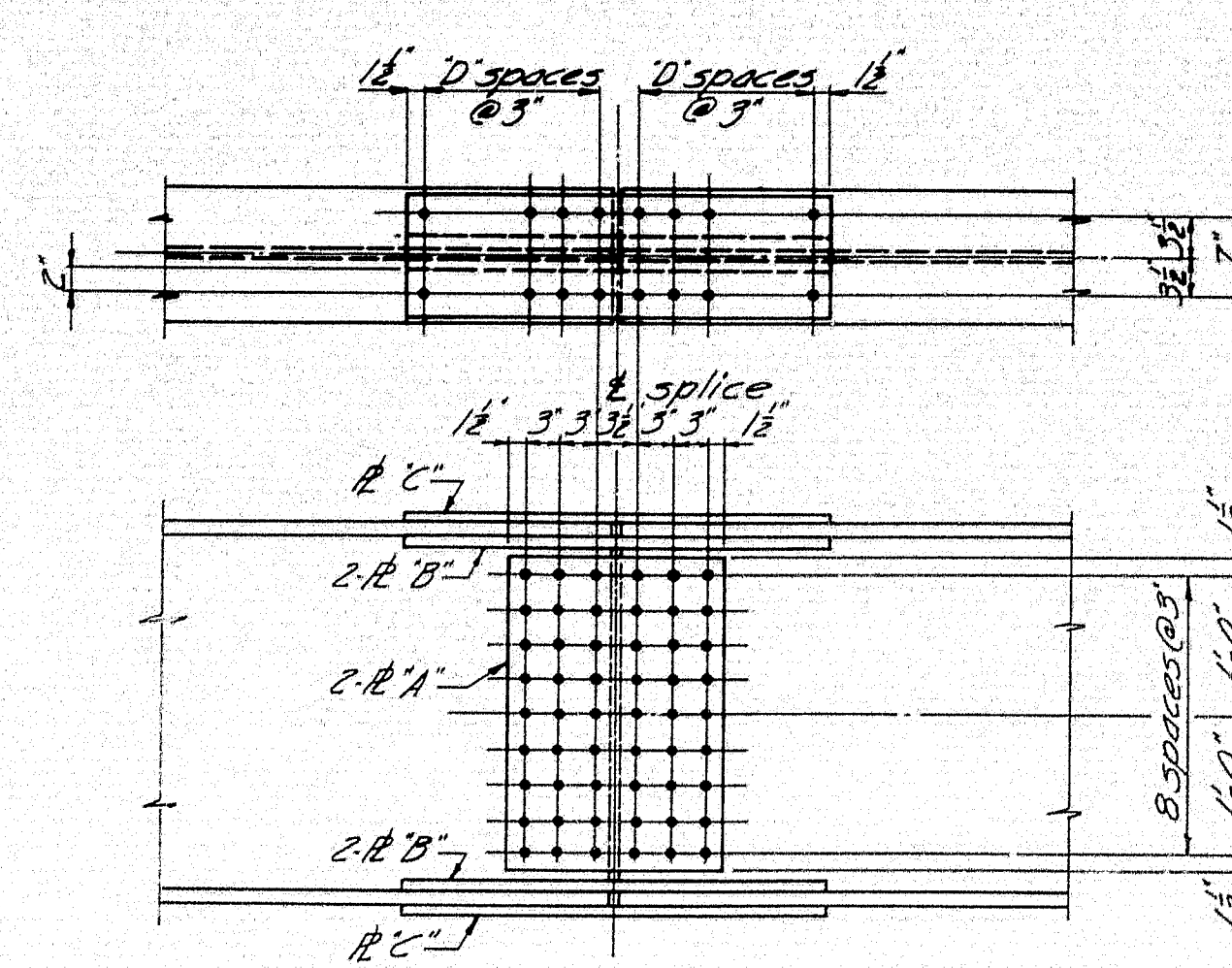
NEW YORK BOSTON KANSAS CITY

DESIGN-TRACE-CHECK-REVISION
DETAIL- R.P.L. BRIDGE NO. SURVEY- PLOT-
STATE HIGHWAY COMMISSION
BRIDGE DIVISION
INTERSTATE 95
OVER
FOXCROFT ROAD
IN THE TOWN OF
HOULTON
AROCSTOCK COUNTY
REINFORCING STEEL
SHEET 15 OF 15 AUGUSTA, MAINE JANUARY 1965

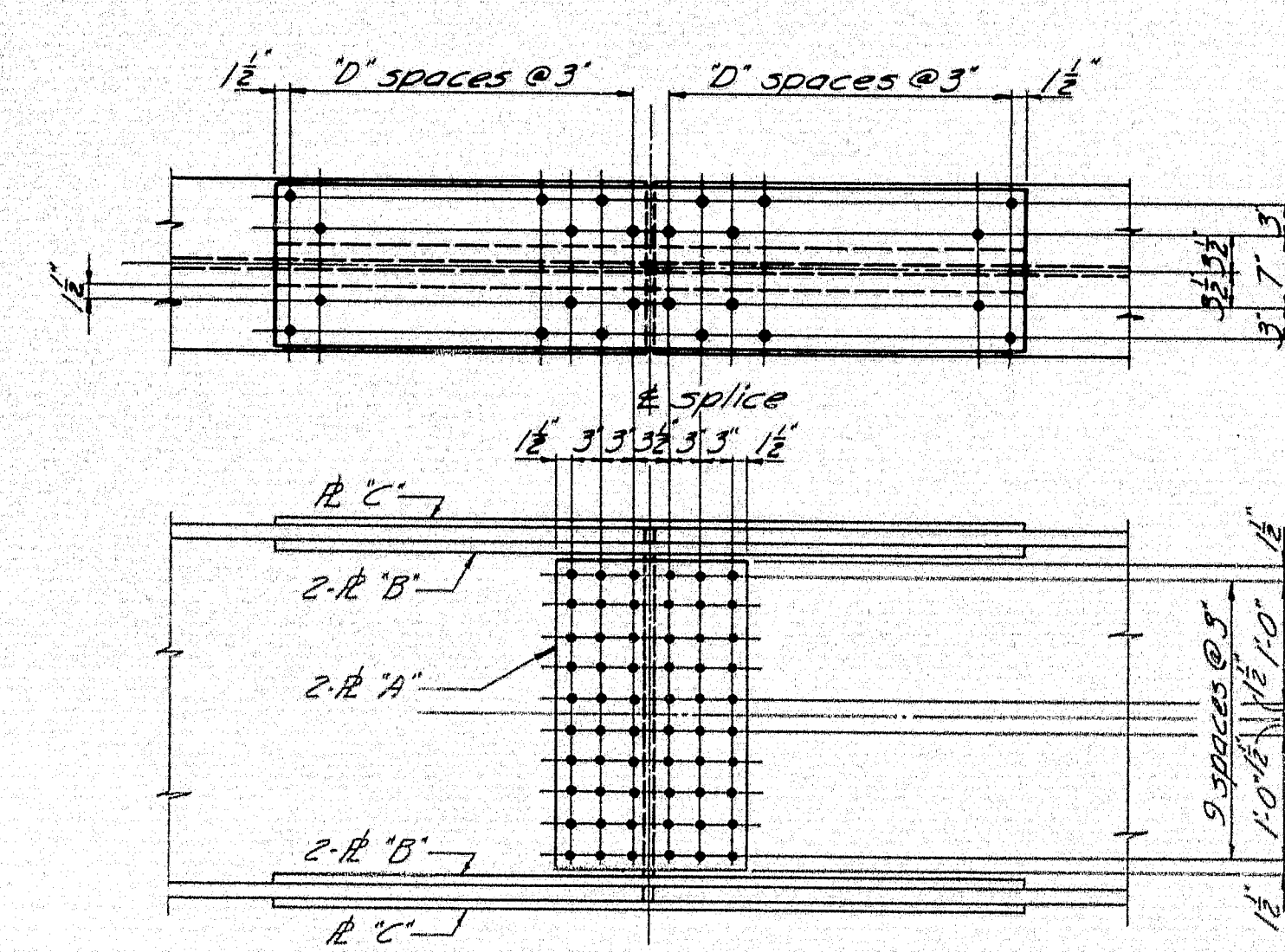
96-136 HOULTON



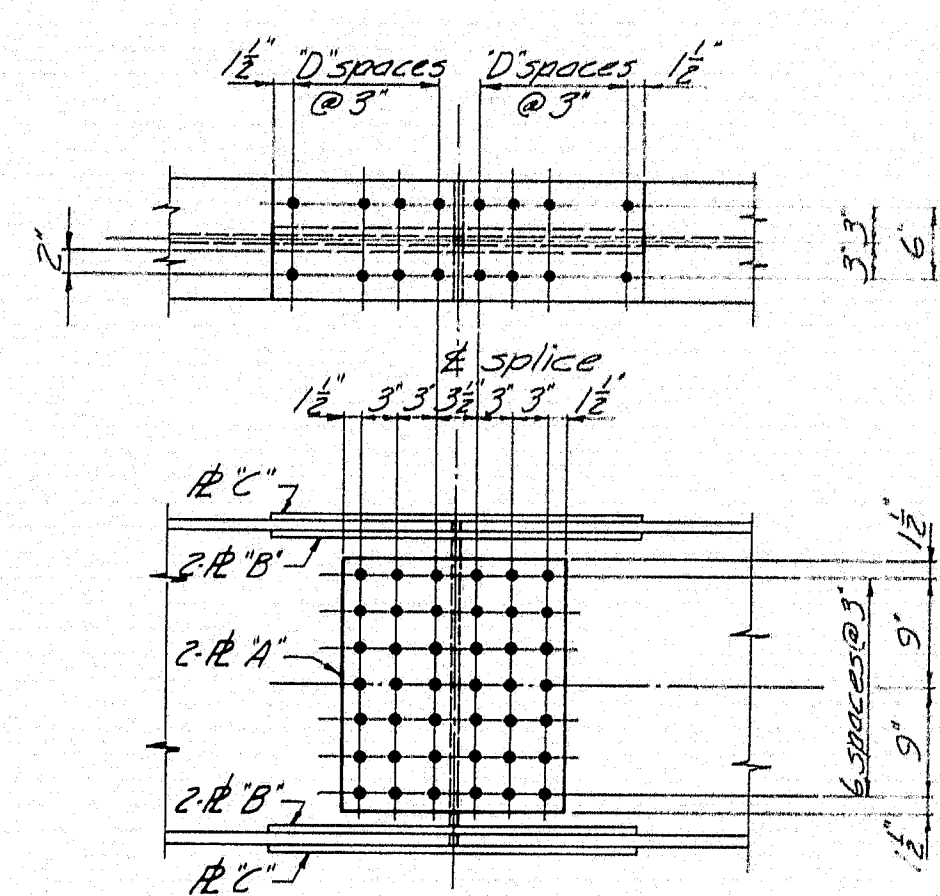
27 WF 84



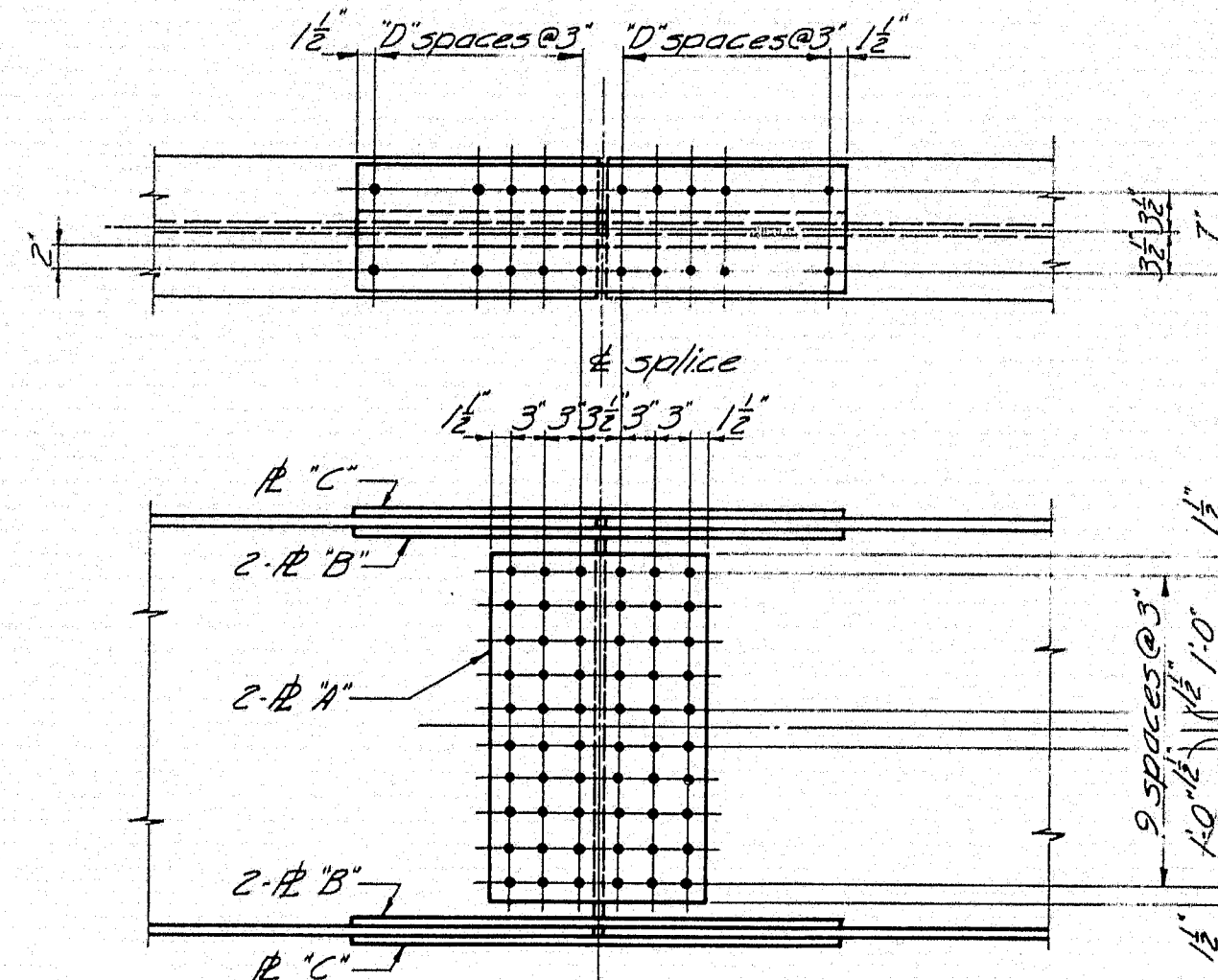
33 WF 118, 130, 141, 152



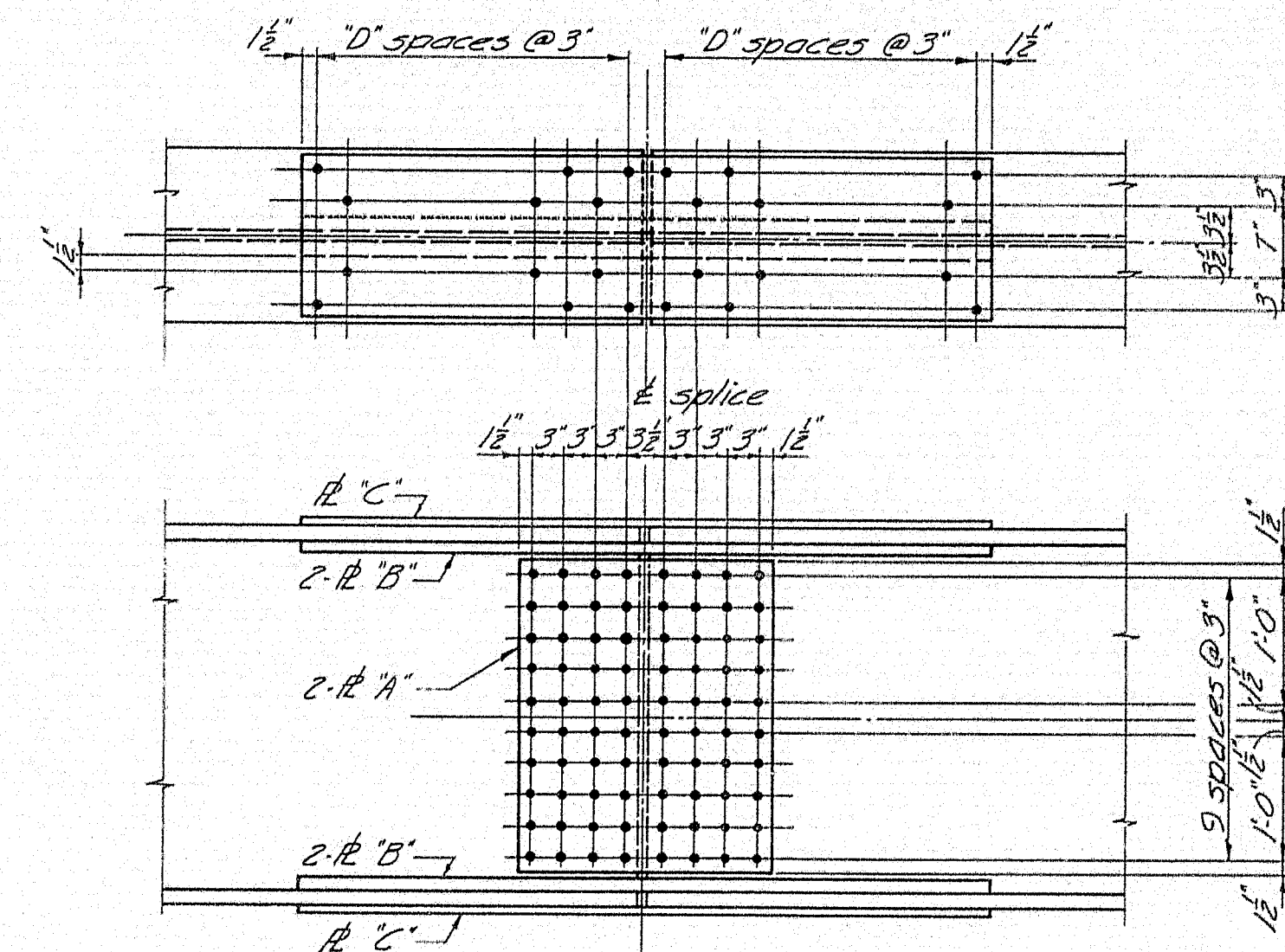
36 WF 245, 280



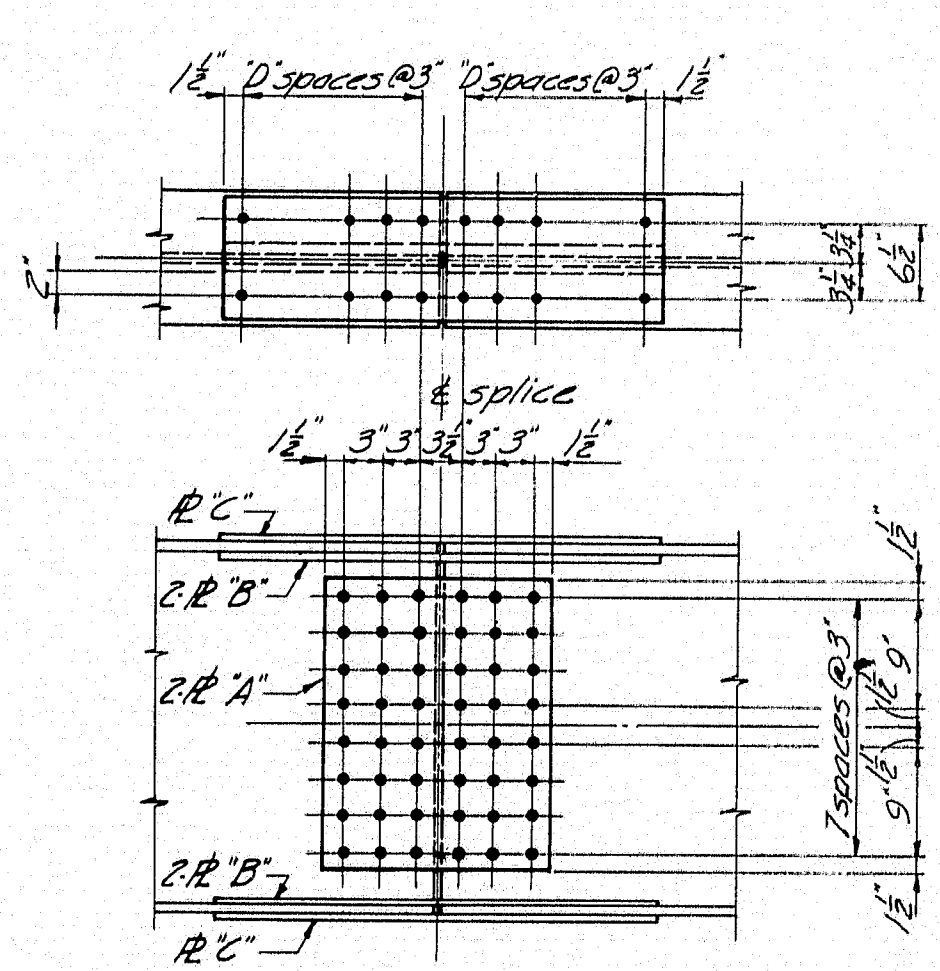
27 WF 94, 102, 114



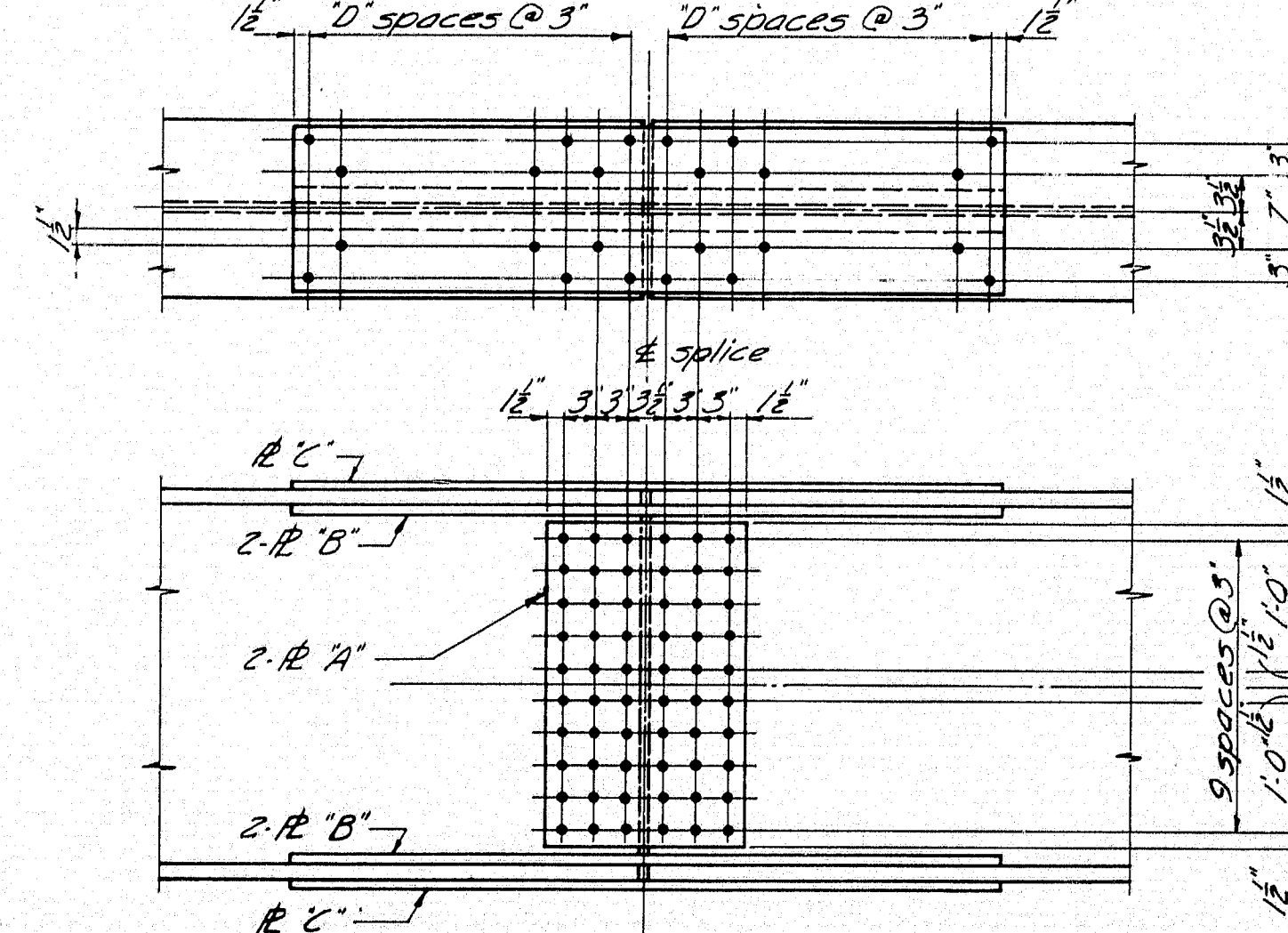
36 WF 135, 150, 160, 170, 182, 194



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

| SPlice DESIGN, PLATES AND FLANGE HOLES | | | | | | |
|--|--------------------|------------------|--|---------------------------------|----------------------------------|-----|
| BEAM | BEND. M. | SHEAR | PLATE "A" | PLATE "B" | PLATE "C" | "D" |
| 27 WF 84 | 3070 ^K | 111 ^K | 12 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 3 |
| 27 WF 94 | 3520 ^K | 119 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 3 |
| 27 WF 102 | 3862 ^K | 126 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 4 |
| 27 WF 114 | 4341 ^K | 140 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 4 |
| 30 WF 99 | 3921 ^K | 139 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 3 |
| 30 WF 108 | 4360 ^K | 147 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 4 |
| 30 WF 116 | 4780 ^K | 152 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 4 |
| 30 WF 124 | 5170 ^K | 159 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 4 |
| 30 WF 132 | 5539 ^K | 168 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 10 x ¹ / ₂ | 5 |
| 33 WF 118 | 5287 ^K | 164 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 4 |
| 33 WF 130 | 5978 ^K | 173 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 5 |
| 33 WF 141 | 6604 ^K | 181 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 5 |
| 33 WF 152 | 7193 ^K | 191 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 6 |
| 36 WF 135 | 6473 ^K | 191 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 4 |
| 36 WF 150 | 7436 ^K | 202 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 5 |
| 36 WF 160 | 8005 ^K | 212 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 6 |
| 36 WF 170 | 8574 ^K | 221 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 6 |
| 36 WF 182 | 9204 ^K | 237 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x ¹ / ₂ | 11 x ¹ / ₂ | 7 |
| 36 WF 194 | 9838 ^K | 253 ^K | 13 ¹ / ₂ x ¹ / ₂ | 4 x 1 | 11 x ¹ / ₂ | 8 |
| 36 WF 230 | 12574 ^K | 247 ^K | 13 ¹ / ₂ x ¹ / ₂ | 6 x 1 | 16 x ¹ / ₂ | 10 |
| 36 WF 245 | 13441 ^K | 260 ^K | 13 ¹ / ₂ x ¹ / ₂ | 6 x 1 | 16 x ¹ / ₂ | 11 |
| 36 WF 260 | 14330 ^K | 276 ^K | 13 ¹ / ₂ x ¹ / ₂ | 6 x ¹ / ₂ | 16 x ¹ / ₂ | 12 |
| 36 WF 280 | 15351 ^K | 291 ^K | 13 ¹ / ₂ x ¹ / ₂ | 6 x ¹ / ₂ | 16 x ¹ / ₂ | 13 |
| 36 WF 300 | 16676 ^K | 312 ^K | 24 ¹ / ₂ x ¹ / ₂ | 6 x ¹ / ₂ | 16 x ¹ / ₂ | 14 |

GENERAL NOTES

1. Splice connections to be made with $\frac{5}{8}$ " ϕ high tensile strength bolts. Holes to be $\frac{1}{8}$ " ϕ .
2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.
3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.
4. See design details for slopes of beams in order to correctly fabricate bevels at the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts.....A-325
Splice Plates.....A-36

DESIGN SPECIFICATIONS

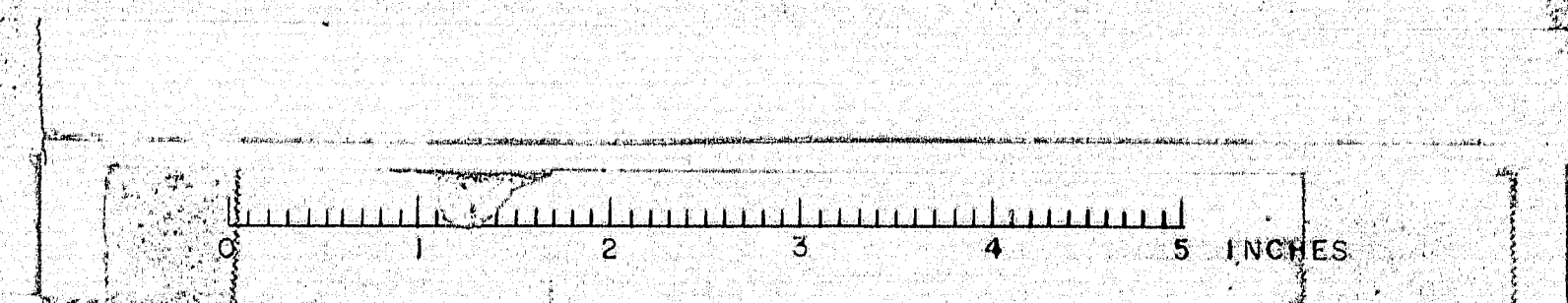
AASHTO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

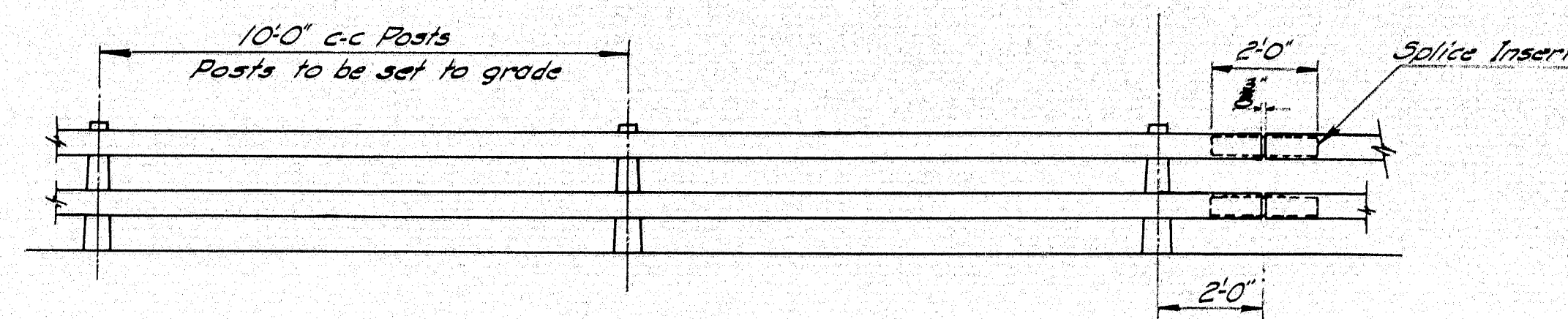
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 103-64)
BEAM SPLICES

JANUARY 1964

96-138

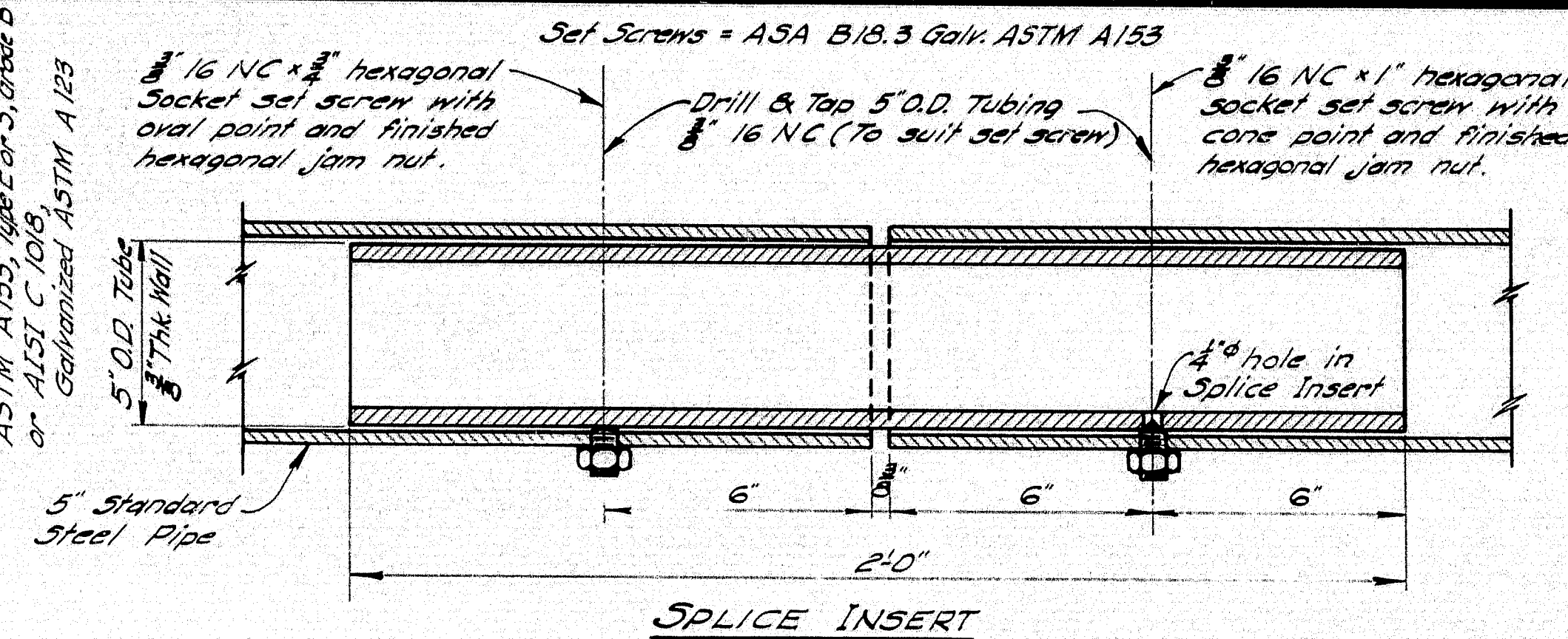




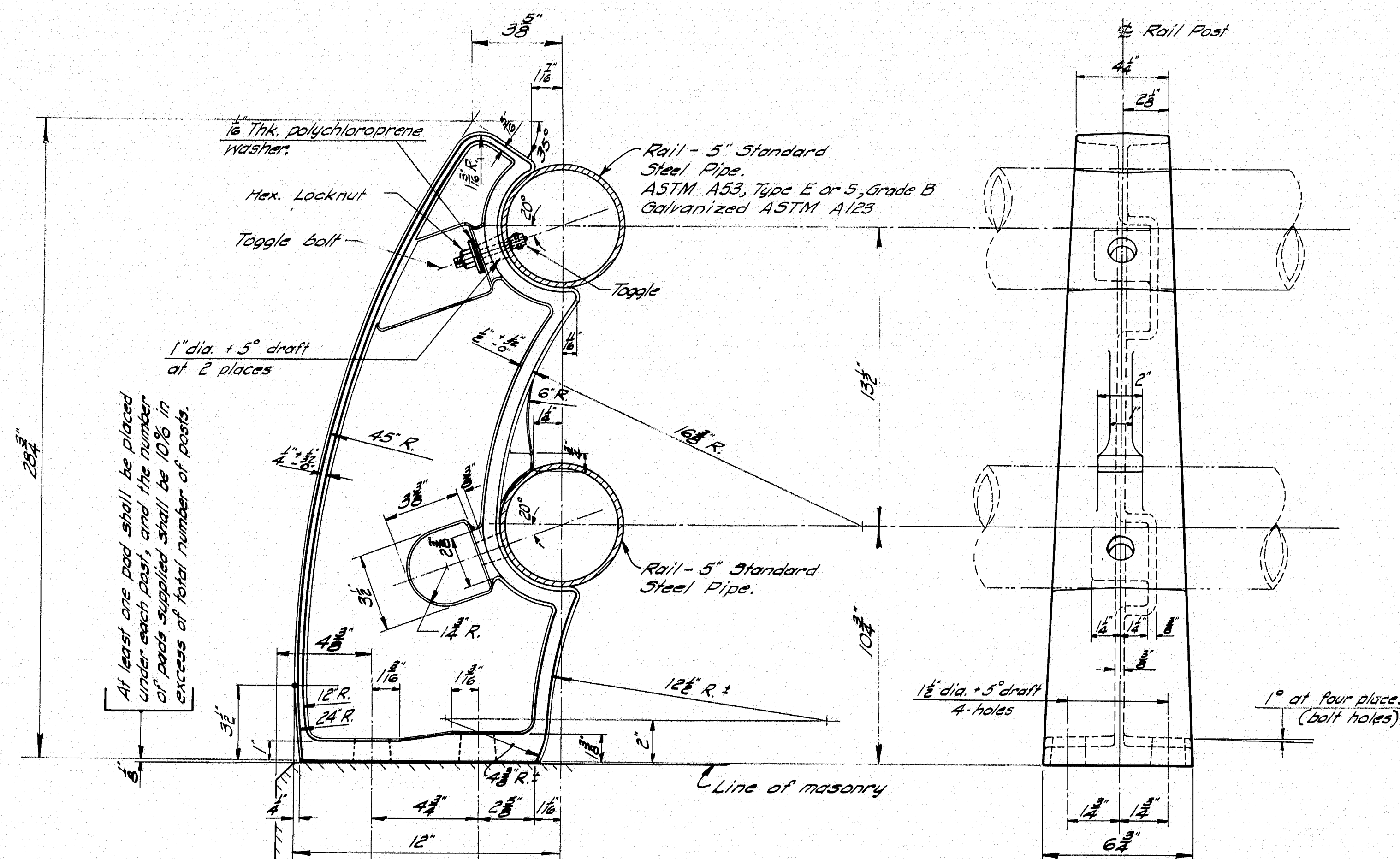
RAIL ELEVATION

Lengths of rail shall be attached to a minimum of (4) four rail posts, whenever possible, and in any case never less than (2) two.

ASTM A153, Type E or S, Grade B
or A151 C 1018,
Galvanized ASTM A123

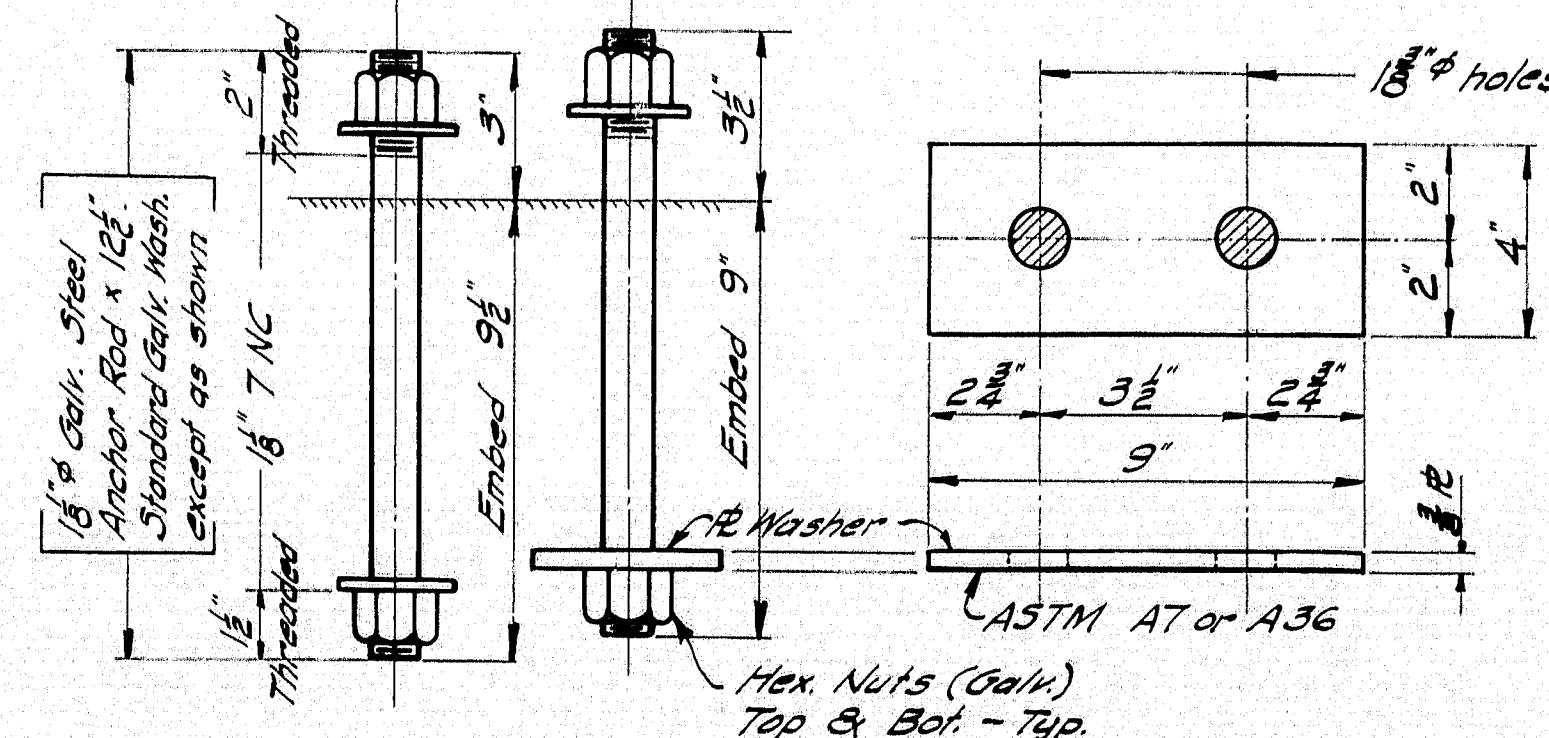


SPlice INSERT



RAIL POST

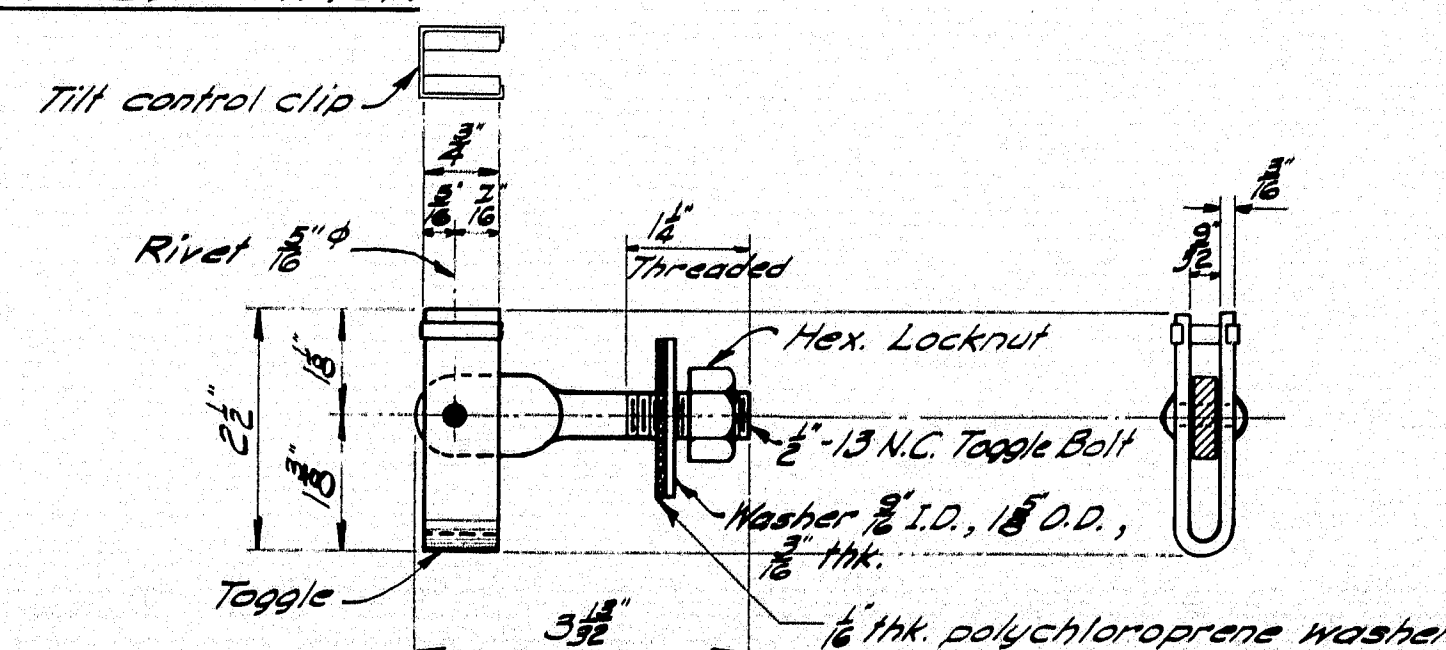
ASTM A27, Grade 65-35, Galvanized ASTM A153



RAIL POST ANCHORAGE

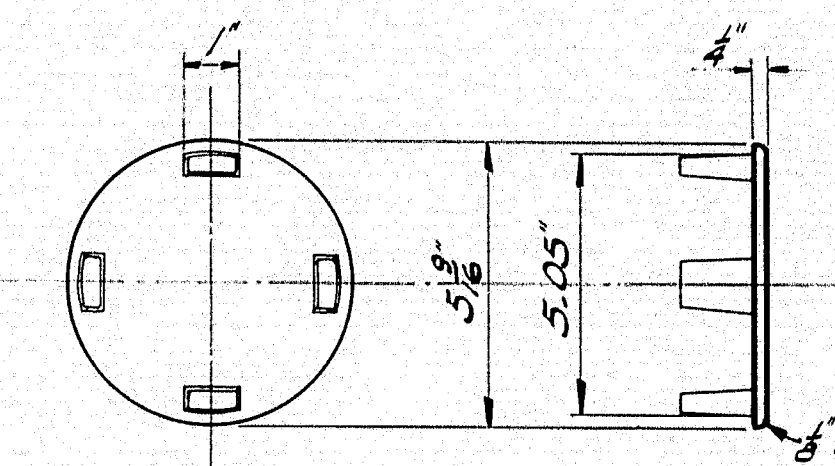
Bolts, Nuts, & Std. Washers = ASTM A325 Galvanized ASTM A153

FRONT ELEVATION



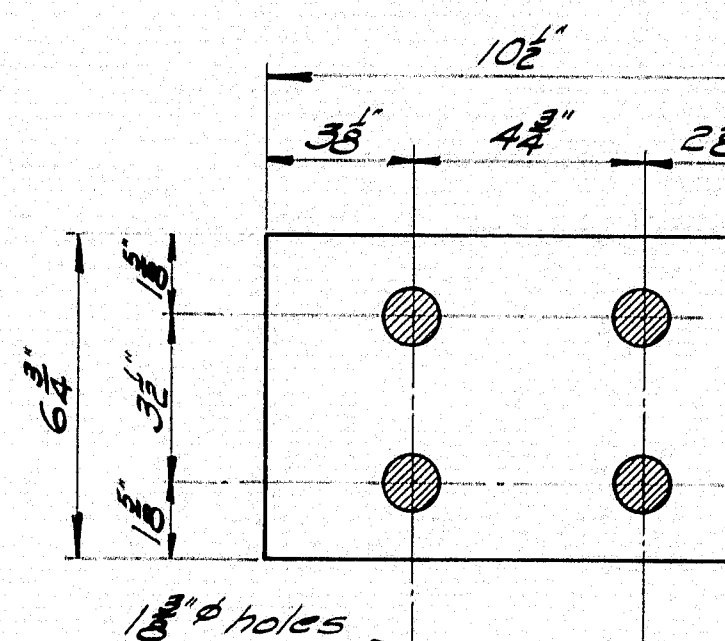
TOGGLE BOLT DETAIL

Cadmium Plate metal parts ASTM A165-55, Type N5, .0005" thick



RAIL CAP

ASTM A27, Grade 65-35, Galv. ASTM A153



PAD

At each rail post
See Article 702-80 Supplemental Specifications
of Feb. 1960.

DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications
Int. 1 (64)

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

(BD 107 - 64)

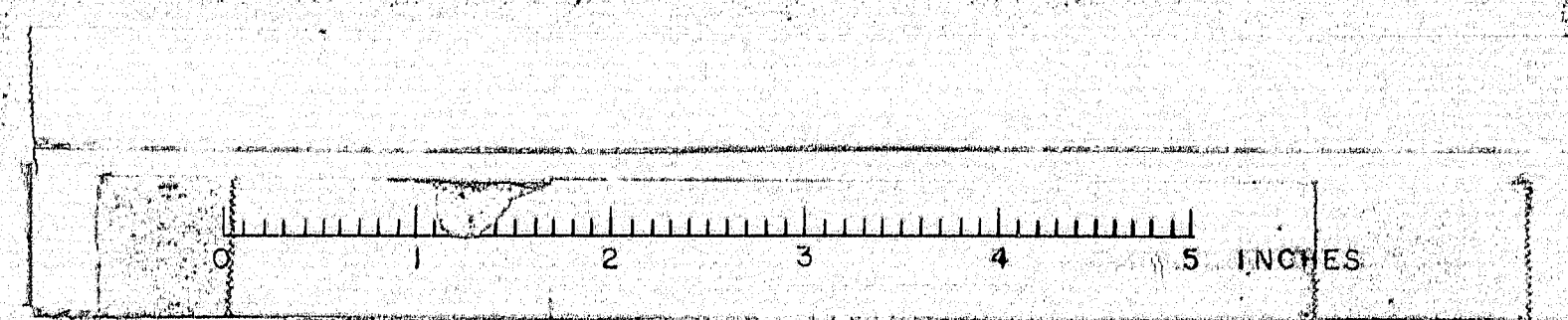
STEEL RAIL

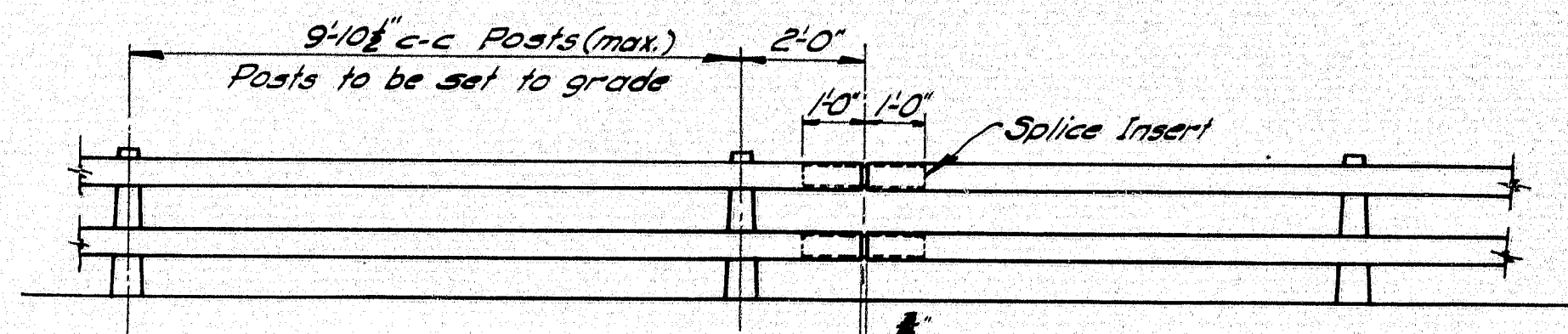
(2-BAR PIPE RAIL)

CAST POST

OCT. 1964

96-140



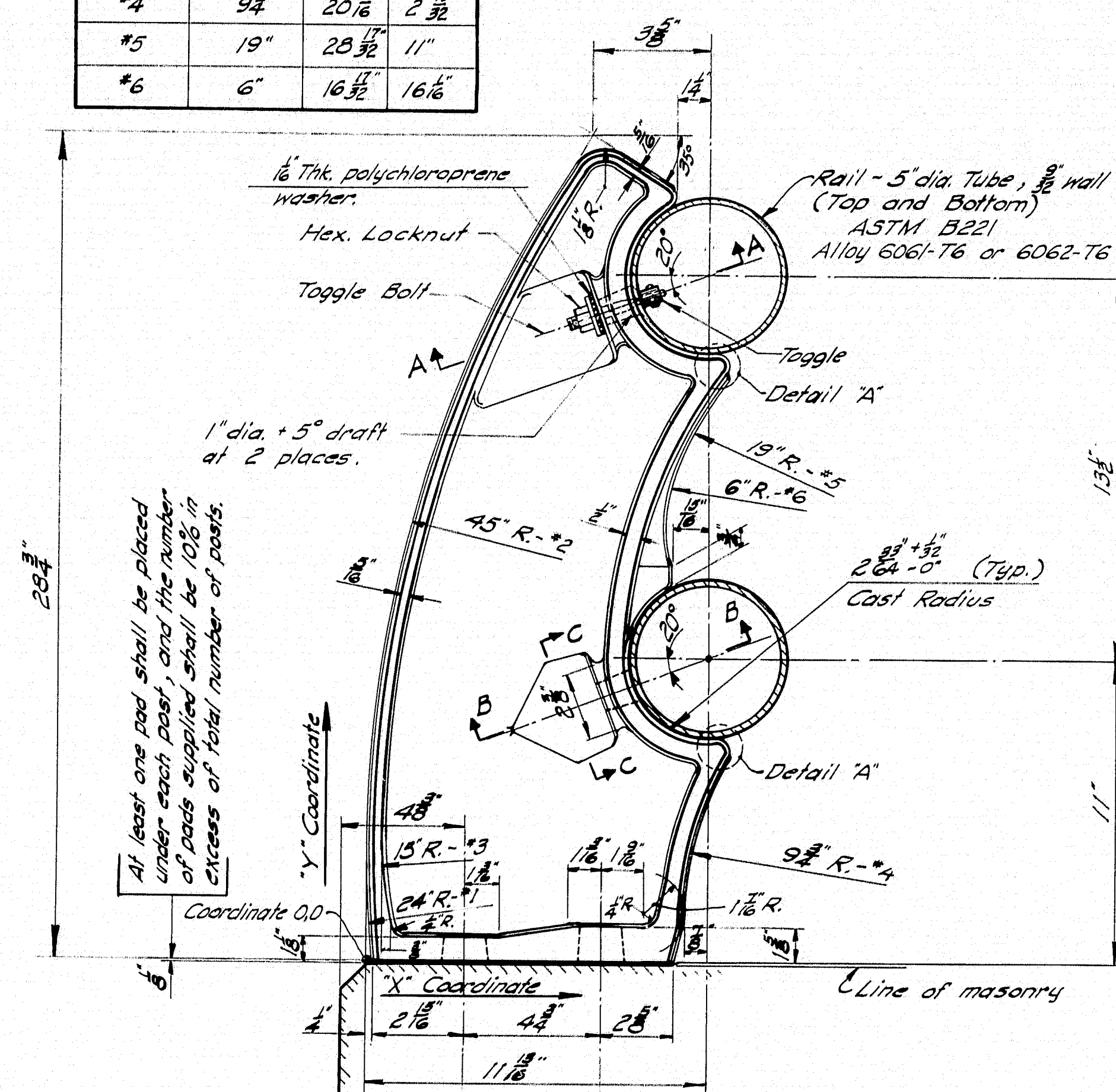


RAIL ELEVATION

△ ORIGIN LOCATION-PRINCIPAL CURVES

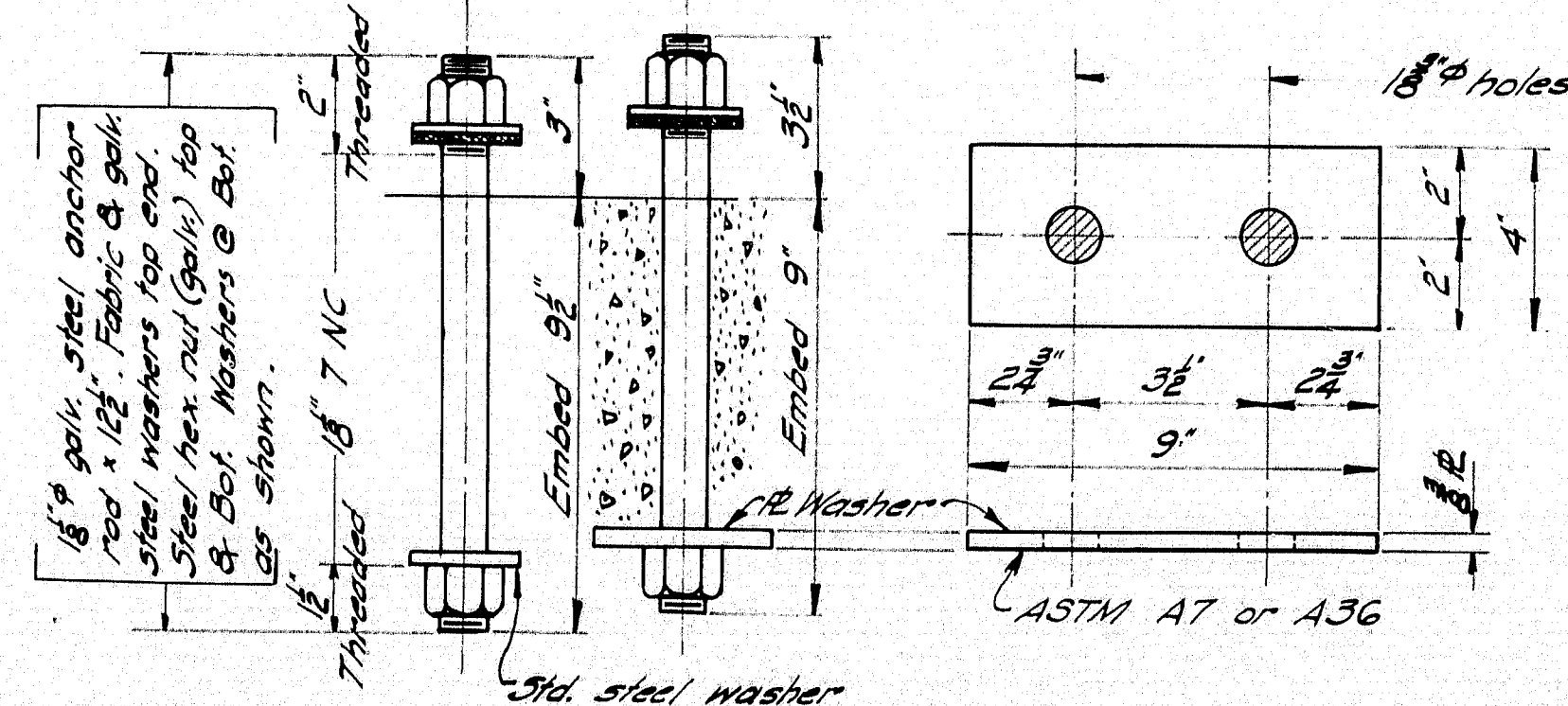
| Curve | Radius | "X" | "Y" |
|-------|--------|---------|---------|
| *1 | 24" | 24" | 3 3/8" |
| *2 | 45" | 45" | 2 3/8" |
| *3 | 15" | 15 1/2" | 4 3/8" |
| *4 | 9 3/4" | 20 1/8" | 2 3/8" |
| *5 | 19" | 28 3/8" | 11" |
| *6 | 6" | 16 3/8" | 16 1/8" |

Lengths of rail shall be attached to a minimum of (4) four rail posts, whenever possible, and in any case never less than (2) two.



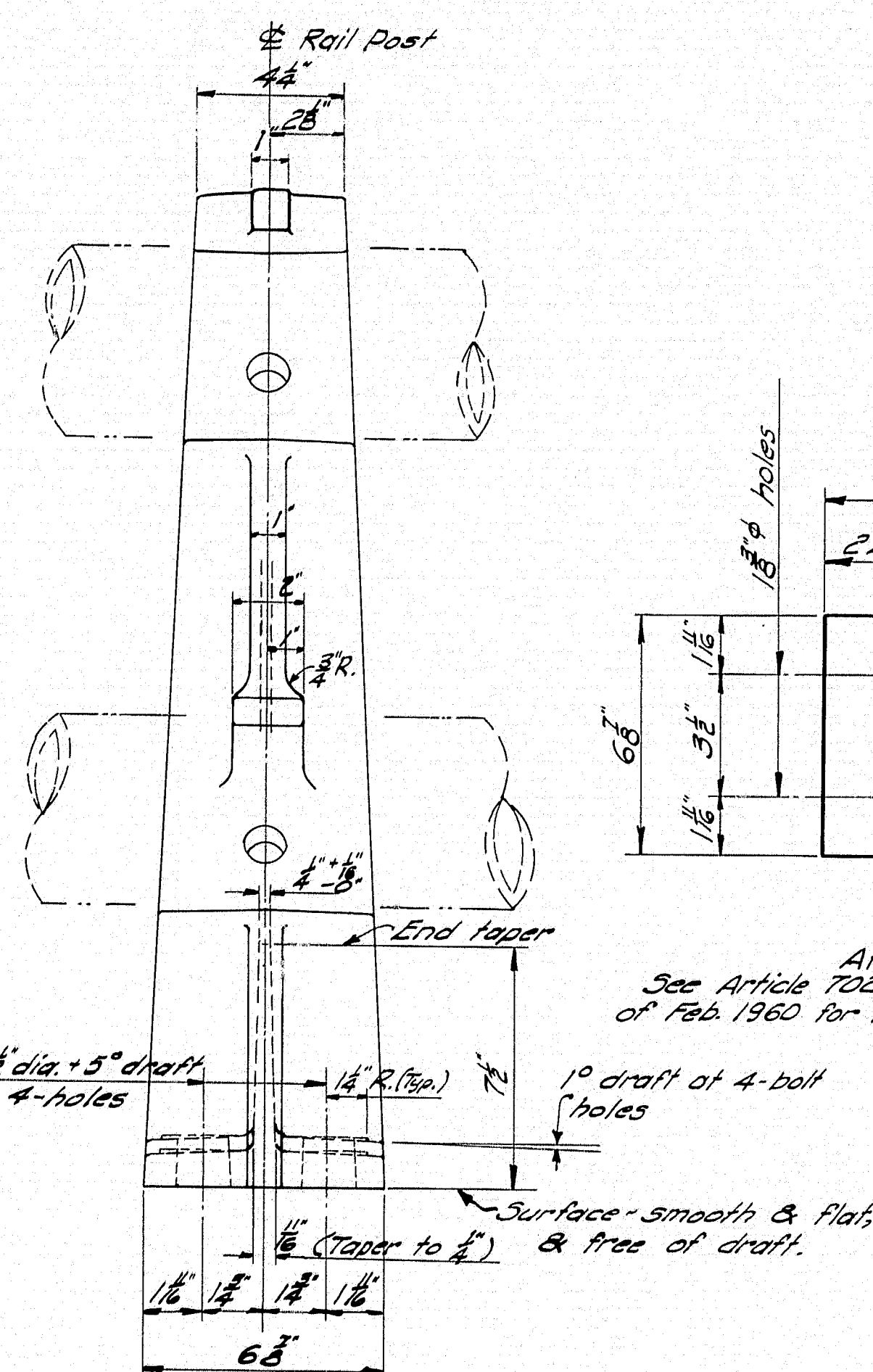
RAIL POST

Aluminum Association Alloy A344-T4

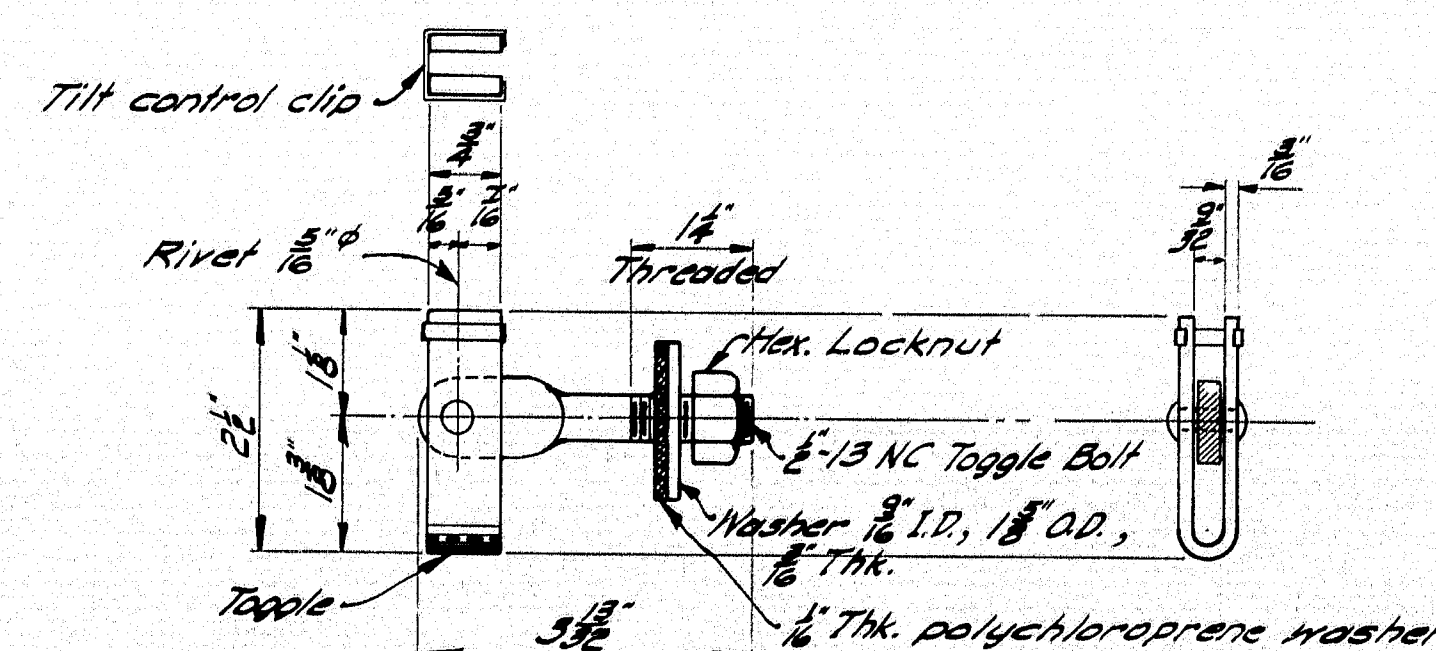


RAIL POST ANCHORAGE

Bolts, Nuts & Std. Washers = ASTM A325 Galvanized ASTM A153

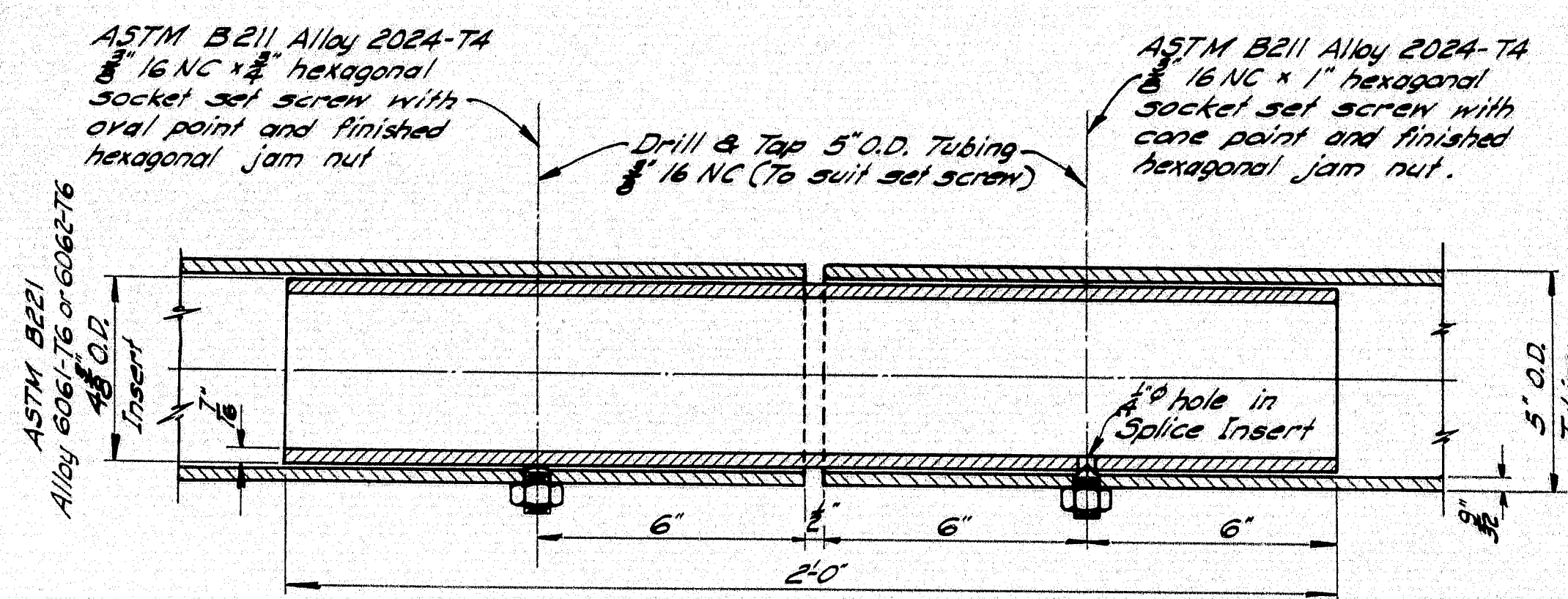


FRONT ELEVATION

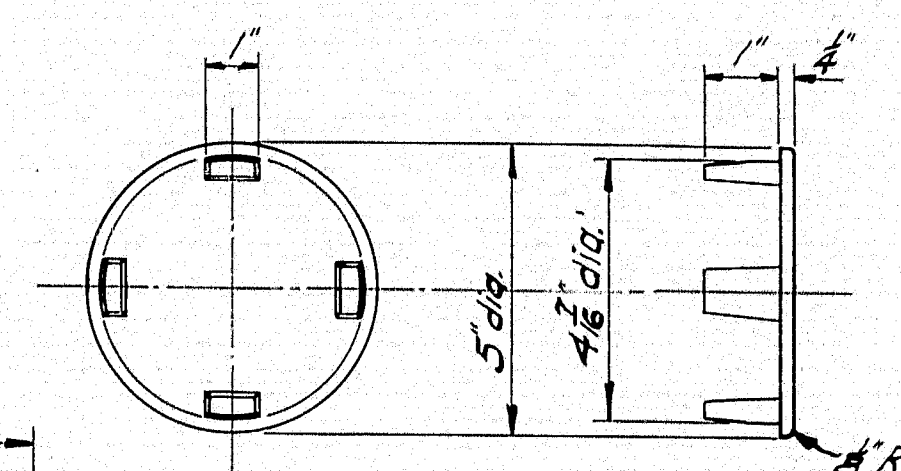


TOGGLE BOLT DETAIL

Cadmium Plate metal parts ASTM A165-35, Type N3, .0005" thick

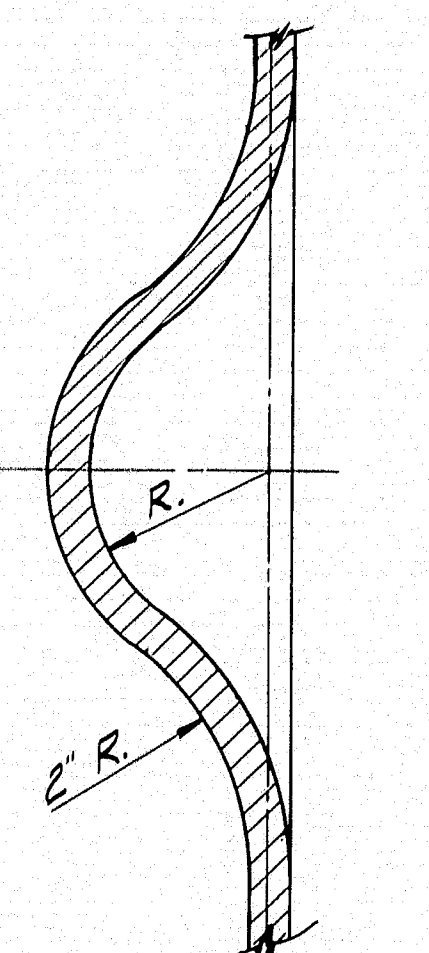


SPLICE

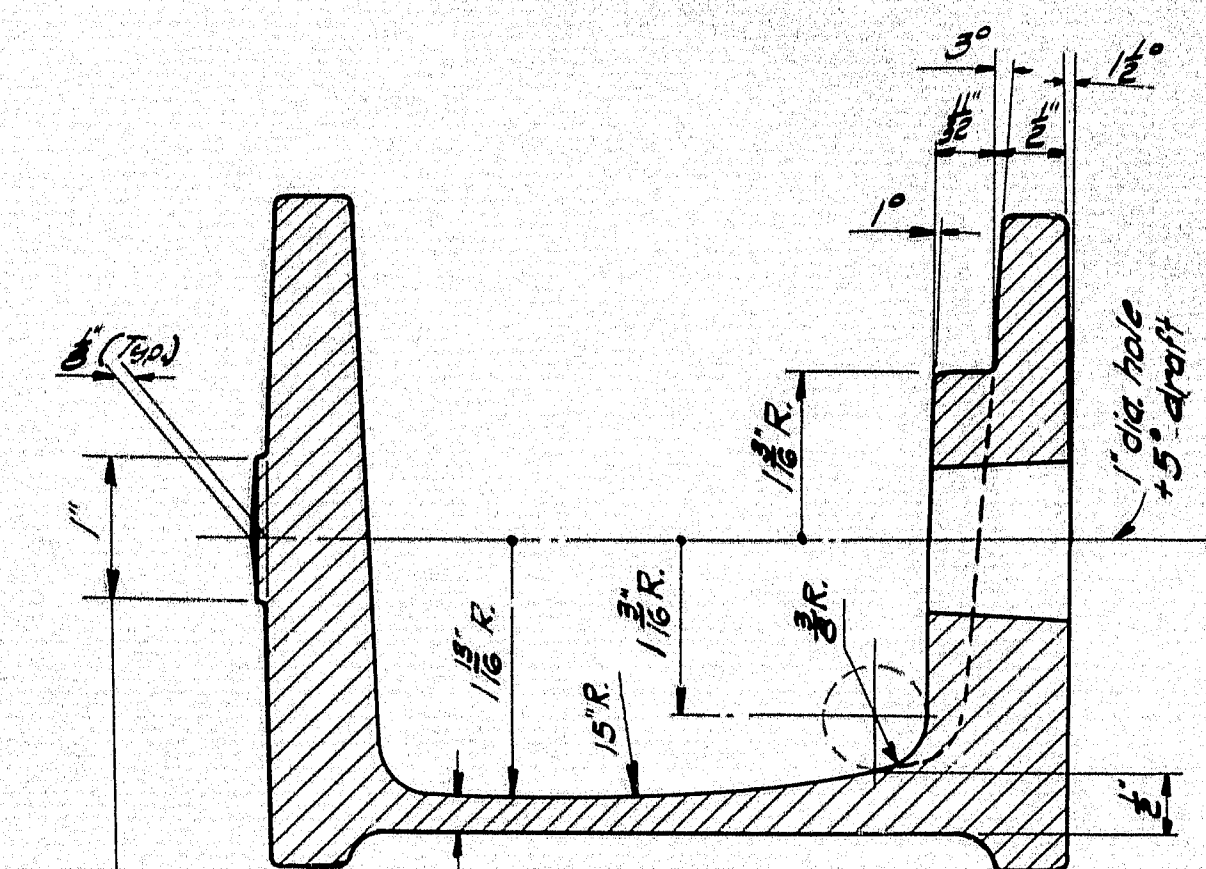


RAIL CAP

ASTM B26 Alloy 5670 A or 55 A

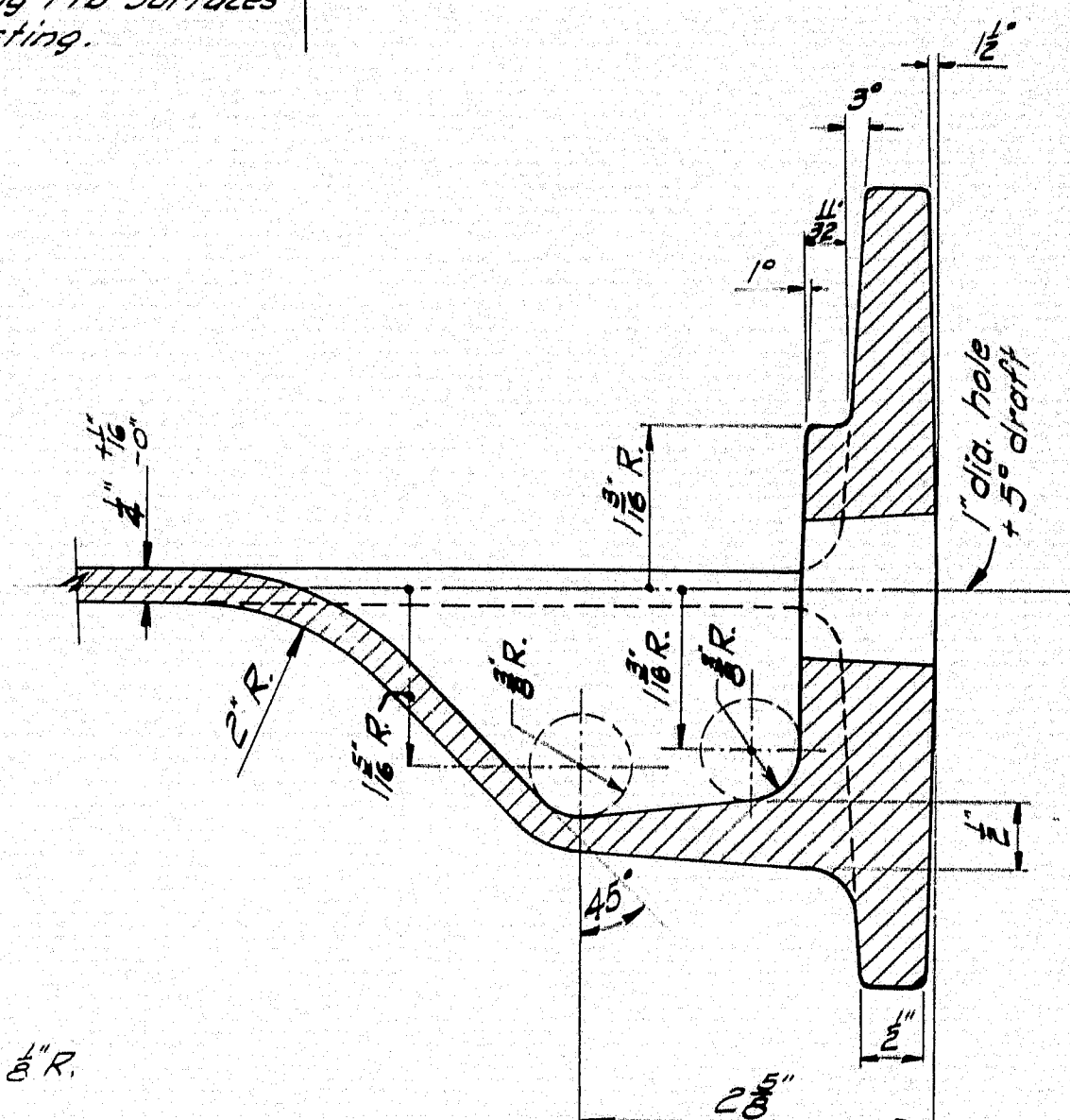


SECTION C-C



SECTION A-A

Casting to be supplied with a 60 grid ball-grind finish on all gating rib surfaces around entire casting.



SECTION B-B

DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications Int. I (64).

A344-T4 Alloy to meet the Specification outlined by Aluminum Association.

ALTERATION:

△ - Added Detail 'A' and Origin Location-Principal Curves. Nov. 19, 1964.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 108-64)
ALUMINUM RAIL
2-BAR (TUBE RAIL)
CAST POST

OCT. 1964

96-141