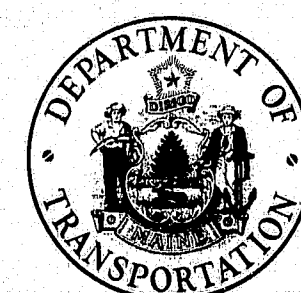


STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION



BUREAU OF HIGHWAYS  
INTERSTATE 95 NORTHBOUND  
OVER  
OLD ROUTE 159 AND B. & A.R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
PROJECT NO. I-IG-95-9(82)269  
PROJECT LENGTH 0.034 MILES

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

SPECIFICATIONS

DESIGN - A.A.S.H.T.O. Standard Specifications for Highway  
Bridges 1973 and Interim Specifications 1974, 1975,  
1976, 1977.

CONTRACT - State of Maine Highway Commission Standard  
Specifications Highways and Bridges, Revisions of  
June 1968.

DESIGN LOADING

LIVE LOADING ----- HS20-44

MATERIALS

CONCRETE ----- Wearing Surface and Curbs

Class "AA"

All Other Class "A"

REINFORCING STEEL ----- A.S.T.M. A615 Grade 60

STRUCTURAL STEEL ----- Beams & Field Splice Plates

-A.S.T.M. A572

All Other A.S.T.M. A36

High Strength Bolts A.S.T.M. A325

BASIC ALLOWABLE STRESSES

CONCRETE -----  $f_c = 1,200$  psi.  $N=10$

REINFORCING STEEL -----  $f_s = 24,000$  psi.

STRUCTURAL STEEL ----- A.S.T.M. A572 Grade 50  $f_s = 27,000$  psi.

A.S.T.M. A36 -----  $f_s = 20,000$  psi.

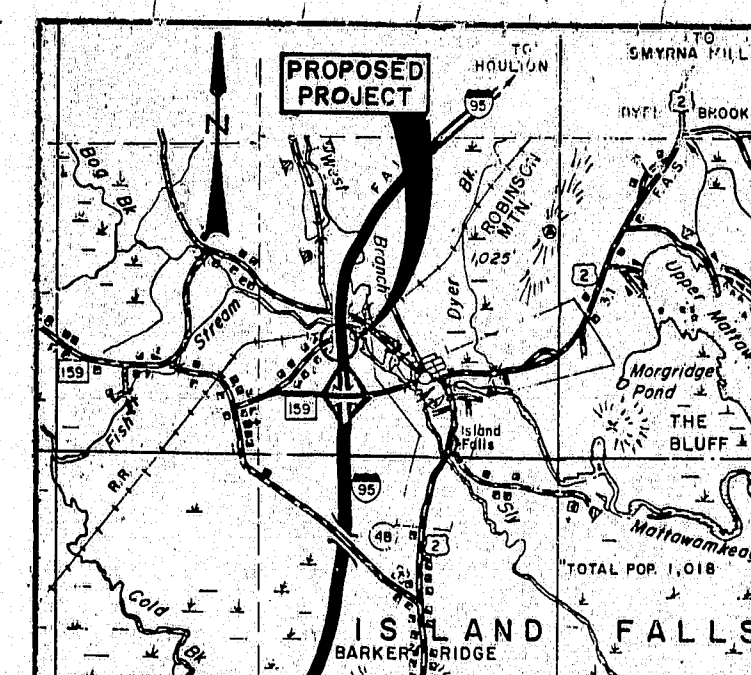
A.S.T.M. A325 -----  $f_v = 13,500$  psi.

NOTE:

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

TRAFFIC DATA

A.D.T. 1978 - 1268  
A.D.T. 1998 - 1860  
D.H.V. 266  
T. (%) 9%  
D. (%) 100%  
V. \_\_\_\_\_  
P.S.D. (%) \_\_\_\_\_  
18 KIPS \_\_\_\_\_



LOCATION MAP

SCALE IN MILES

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	Title Sheet
2.	Quantity Sheet
3.	General Plan
4.	Profile
5.	Foundation Survey & Boring Details
6.	Footing Abutment No. 1
7.	Footing Abutment No. 2
8.	Abutment No. 1
9.	Abutment No. 2
10.	Wing Details No. 1 & 2
11.	Wing Details No. 3 & 4
12.	End Post & Rail Details
13.	Approach Slab
14.	Slope Protection
15.	Pier
16-17.	Structural Steel
18.	Superstructure
19-20.	Reinforcing Steel Schedule

STANDARDS

21.	BD 101-74 Bearing Pedestals
22.	BD 104-77 Armored Joint & Shear Connectors
23.	BD 113-78 Diaphragms & Crossframes
24.	BD 114-77 Aluminum Bridge Railing
25.	Field Office 12 Aug. 1969 Rev.

APPROVED:

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

DATE

COMMISSIONER

BUREAU DIRECTOR & CHIEF ENGINEER

APRIL 13, 1978

APRIL 13, 1978

"As Built" 1979  
7-1-80

UNITED STATES  
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
REGION I

APPROVED:

DIVISION ADMINISTRATOR

DATE

166-133



PROJECT DESIGN ENGINEER (Signature)	DATE	5/18
	BY	MAC
	DESIGN - CHECKED	ECB
	REVISIONS	5/18
PLANS		
FIELD CHANGES		

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.25	Granular Borrow	4700	C.Y.
203.26	Gravel Borrow	200	C.Y.
206.10	Str. Earth Excav. - Piers	150	C.Y.
501.212	Steel H-beam Piles 42 lbs./ft.	2018	L.F.
501.216	Steel H-beam Piles 73 lbs./ft.	336	L.F.
502.21	Structural Concrete, Abuts. & Retaining Walls	310	C.Y.
502.23	Structural Concrete, Piers	95	C.Y.
502.26	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	Nec.	L.S.
502.29	Structural Concrete, Wearing Surface on Bridges	Nec.	L.S.
502.31	Structural Concrete, Approach Slabs	Nec.	L.S.
503.12	Reinforcing Steel, Fab. & Delivered	92,700	Lb.
503.13	Reinforcing Steel, Placing	92,700	Lb.
504.70	Structural Steel, Fab. & Delivered	Nec.	L.S.
504.71	Structural Steel, Erection	Nec.	L.S.
505.08	Shear Connectors	Nec.	L.S.
506.14	Field Painting, Structural Steel	Nec.	L.S.
507.141	Aluminum Bridge Railing, Type "A"	360	L.F.
512.07	French Drains (Stones Only)	18	C.Y.
513.20	Aggregate for Slope Protection	400	S.Y.
513.21	Bituminous Material for Slope Protection	600	Gal.
514.06	Curing Box for Concrete Cylinders	1	Each
515.20	Protective Coating for Concrete Surfaces	1000	S.Y.
609.13	Vertical Bridge Curb - Type I	354	L.F.
610.09	Hand Laid Riprap	50	C.Y.
610.12	Portland Cement for Riprap Grout	20	Bbl.
618.15	Temporary Seeding	10	Lb.
619.12	Mulch	13	Unit

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
629.05	Labor, Straight Time	10	M. Hr.
631.13	Bulldozer (Inc. op)	10	Hour
631.171	Truck - small (Inc. op)	10	Hour
631.22	Front End Loader (Inc. op)	10	Hour
634.521	Trenching for Direct Buried Tel. Cable	515	L.F.
639.09	Field Office, Type B	1	Each
656.50	Baled Hay, in place	10	Each
656.51	Sandbags, in place	10	Each
657.201	Seed and Application, Method A	13	Unit
659.10	Mobilization	Nec.	L.S.

Estimate of Lump Sum Quantities			
502.26	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	239	C.Y.
502.29	Structural Concrete, Wearing Surface on Bridges	78	C.Y.
502.31	Structural Concrete, Approach Slabs	33	C.Y.
504.70	Structural Steel, Fab. & Delivered	248,700	Lb.
504.71	Structural Steel, Erection	248,700	Lb.
505.08	Shear Connectors	2220	Lb.
506.14	Field Painting, Structural Steel	248,700	Lb.

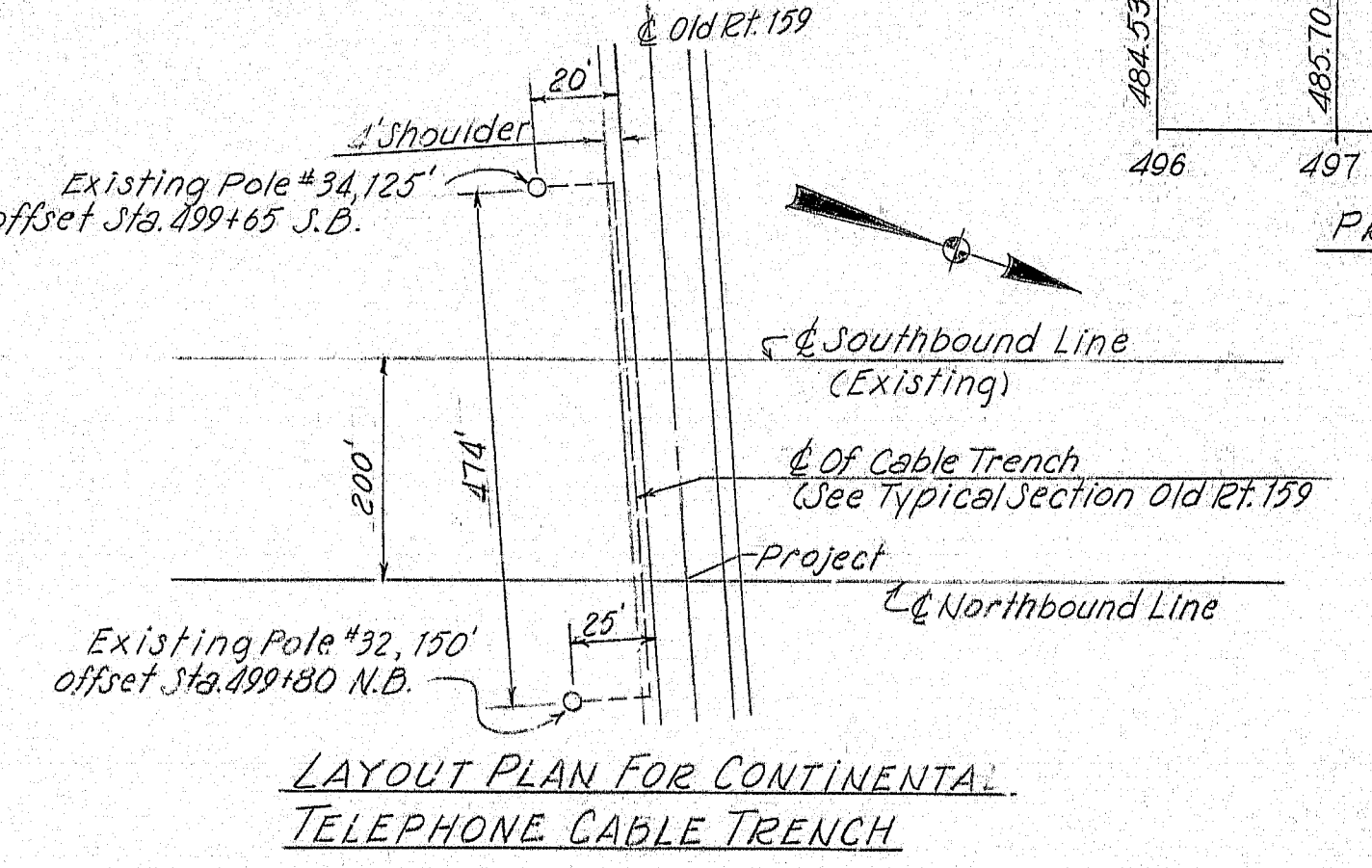
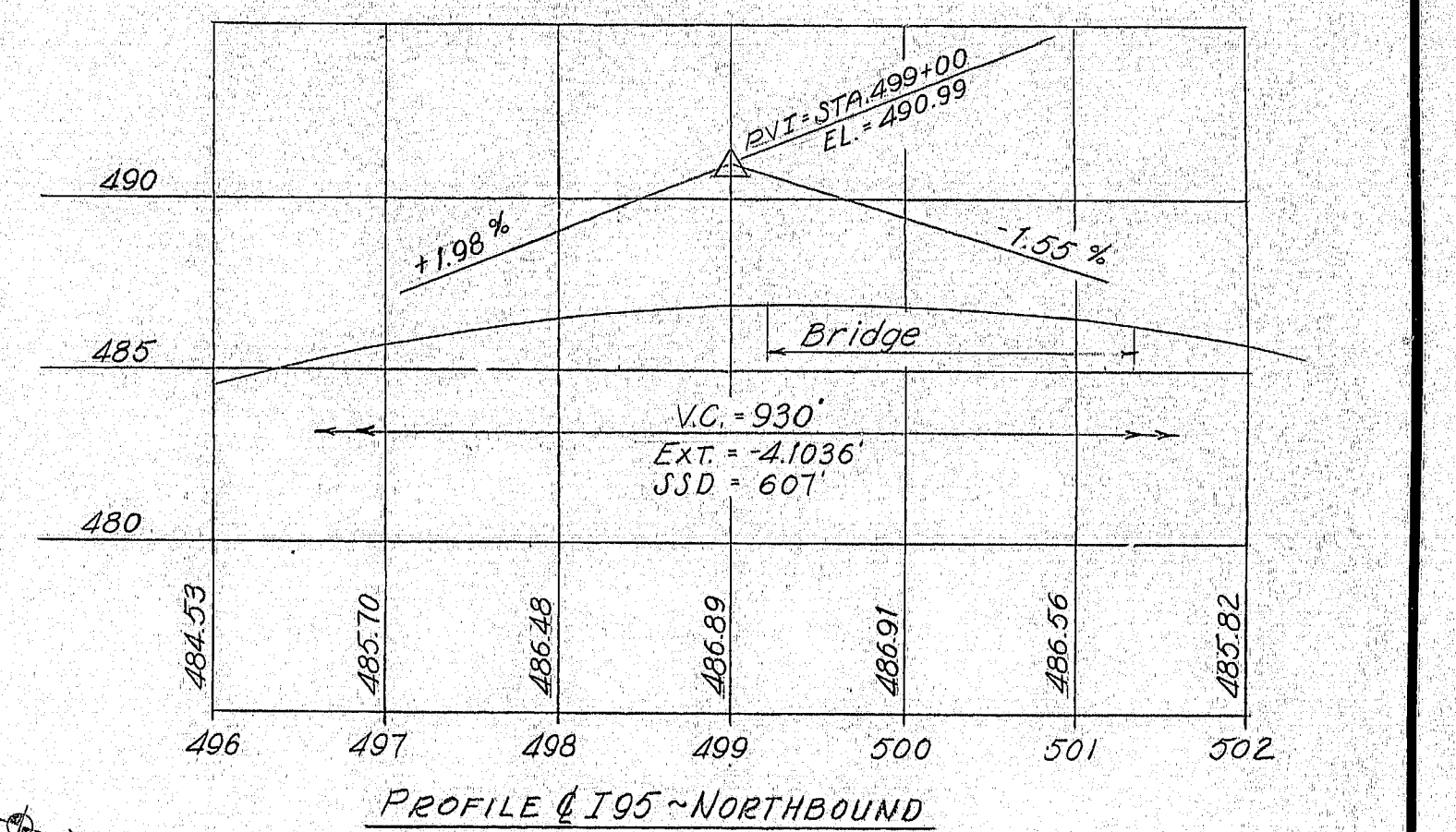
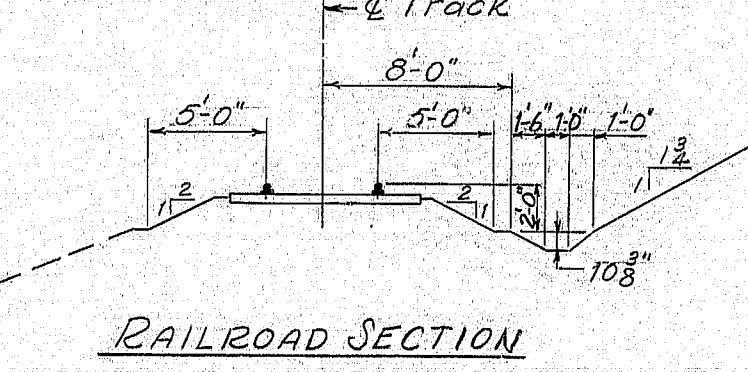
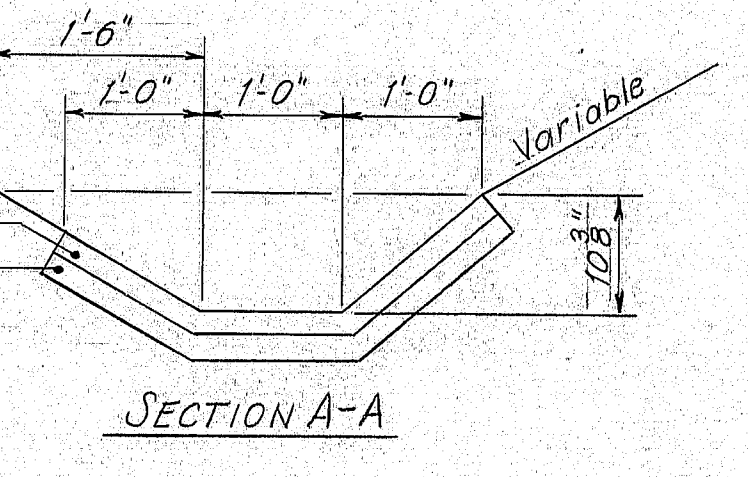
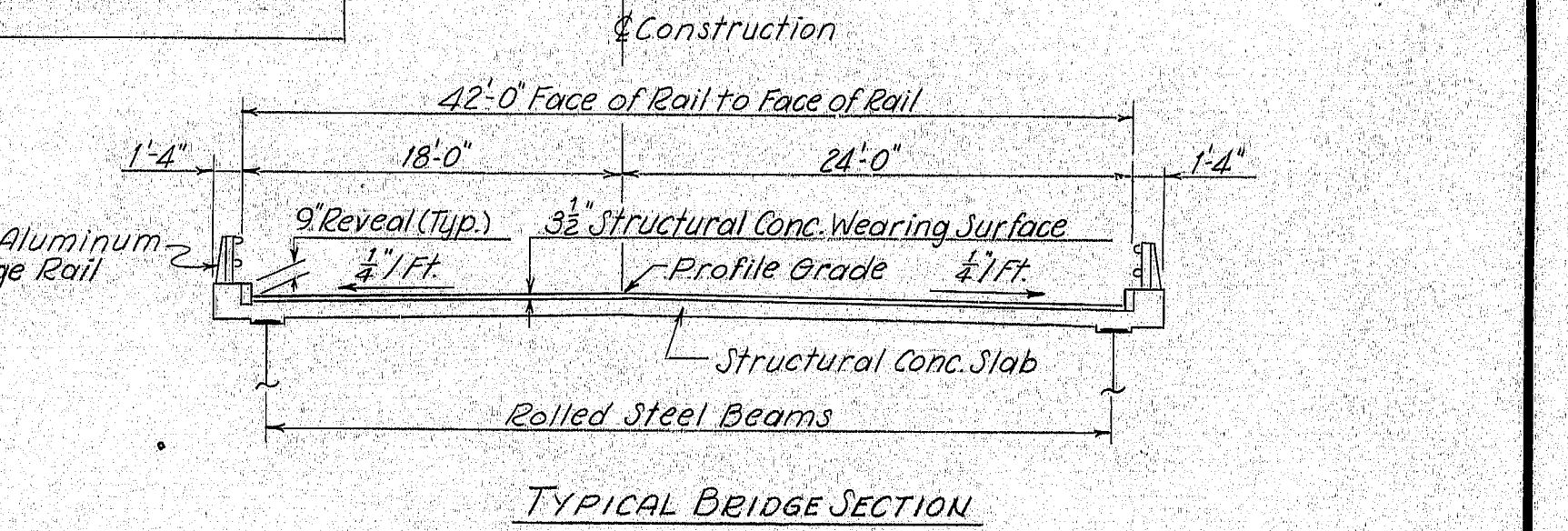
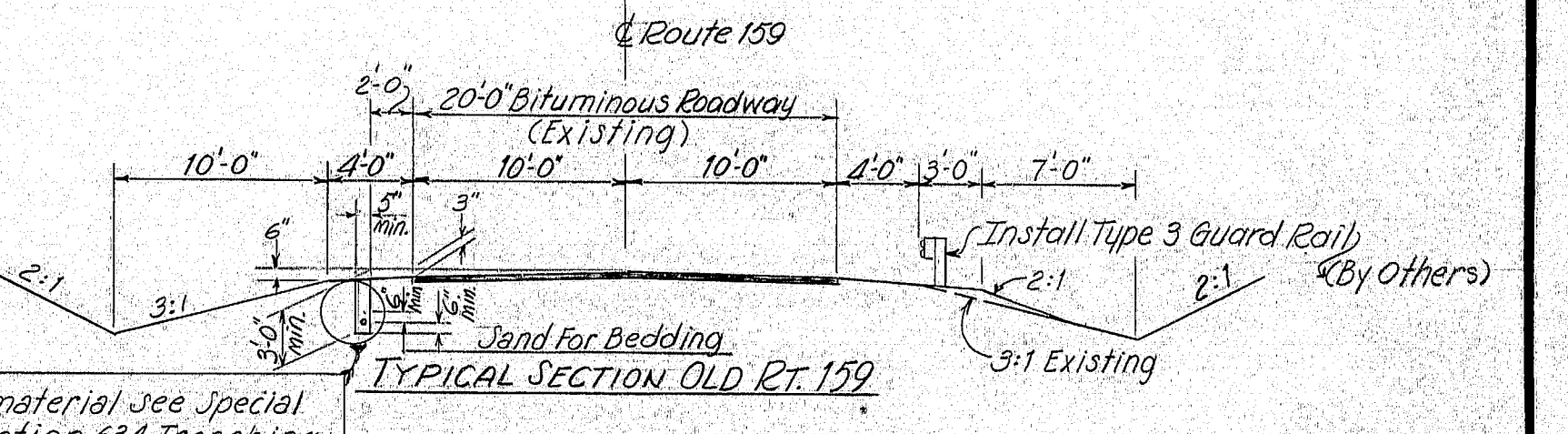
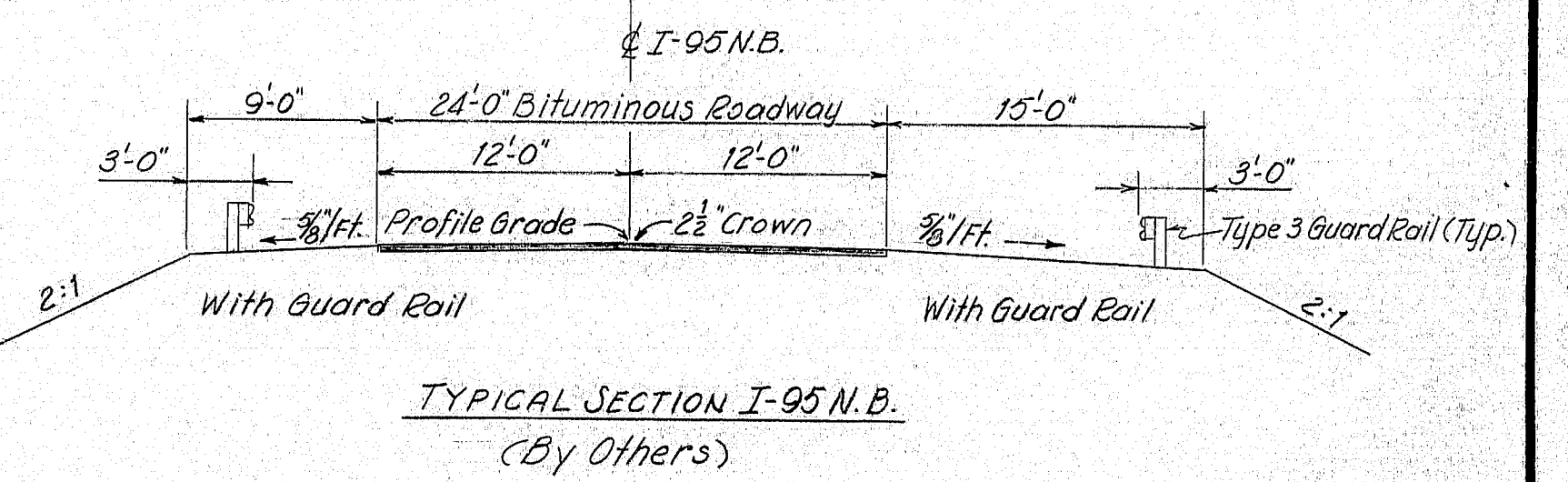
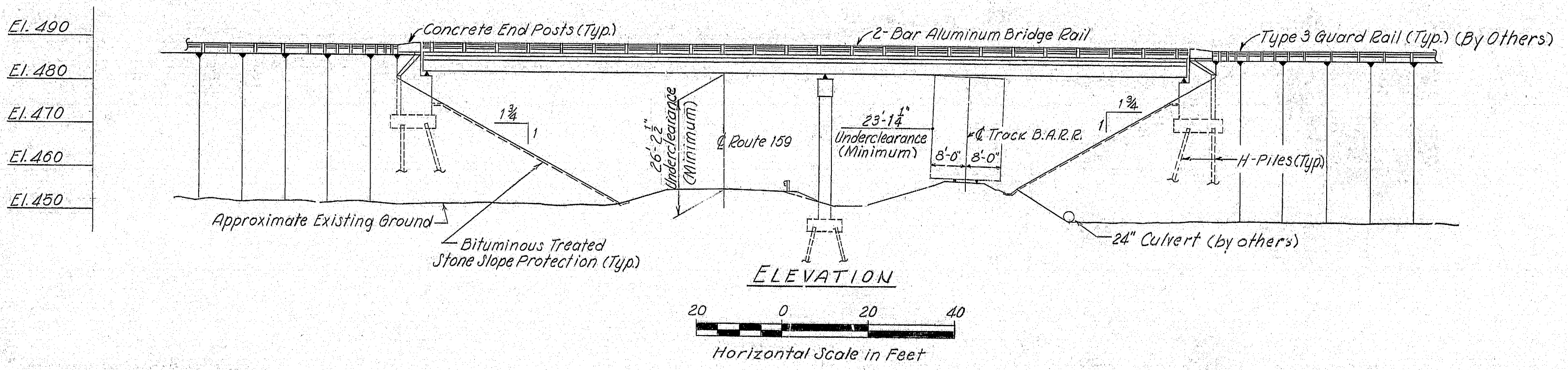
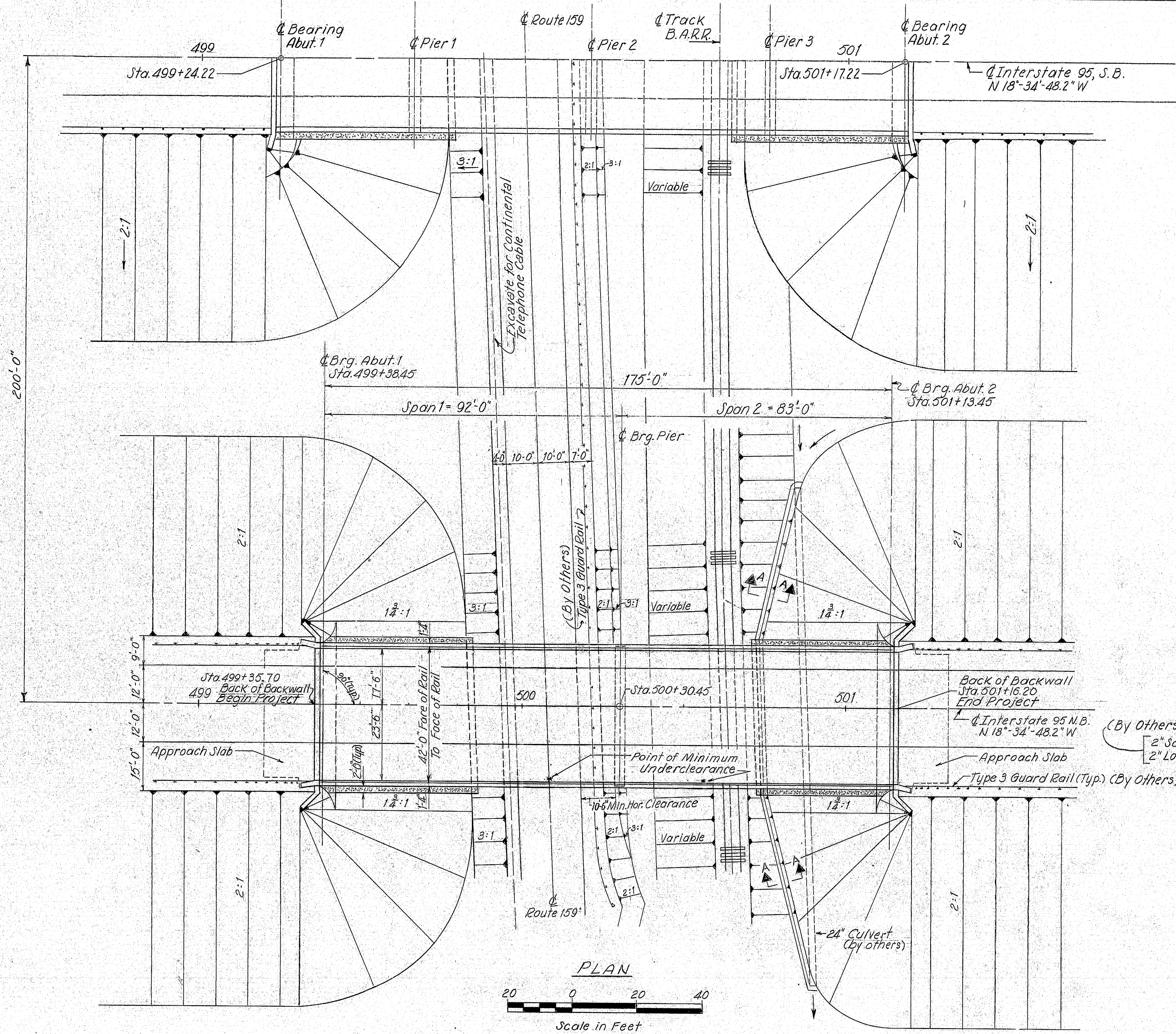
F.R.W. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	2	25

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
INTERSTATE 95 NB OVER OLD RTE. 159 AND B. & A. R.R. IN THE TOWN OF ISLAND FALLS AROOSTOOK COUNTY
QUANTITIES SHEET 2 OF 25 AUGUSTA, MAINE June 1978

166-134



F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	3	25



REFERENCES:  
M.D.O.T. Field Survey Notebook #1407

BRIDGE NO. 1403

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY

GENERAL PLAN

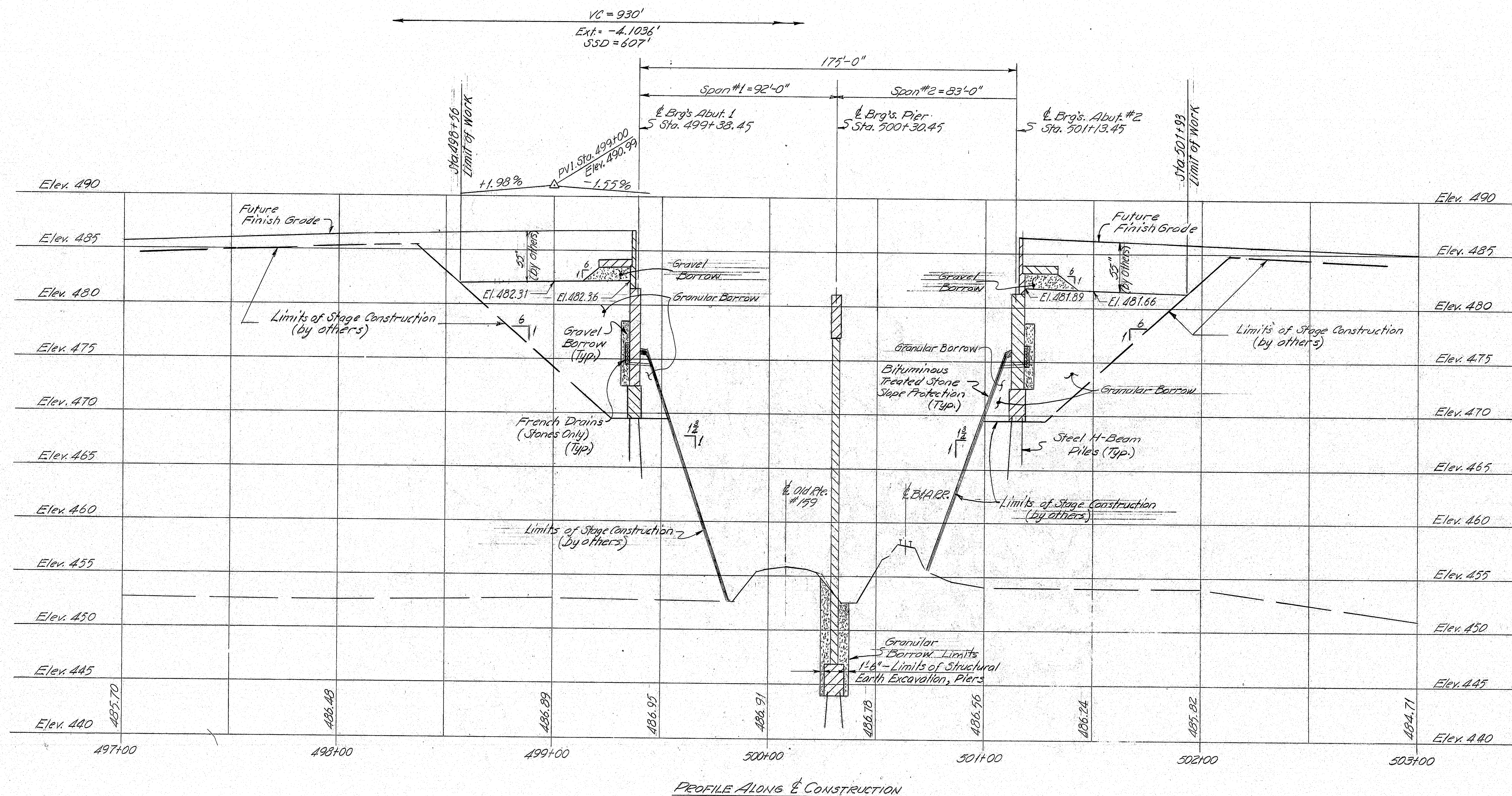
SHEET 3 OF 25 AUGUSTA, MAINE June, 1975

166-135

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	6-77
CHECKED	5-78
REVISIONS	
FIELD CHANGES	



F.R.W.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	4	25



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	FWM	12/17
CHECKED	ERC	5-28
REVISIONS		
FIELD CHANGES		

PLANS

As Built 1979  
Bwg 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

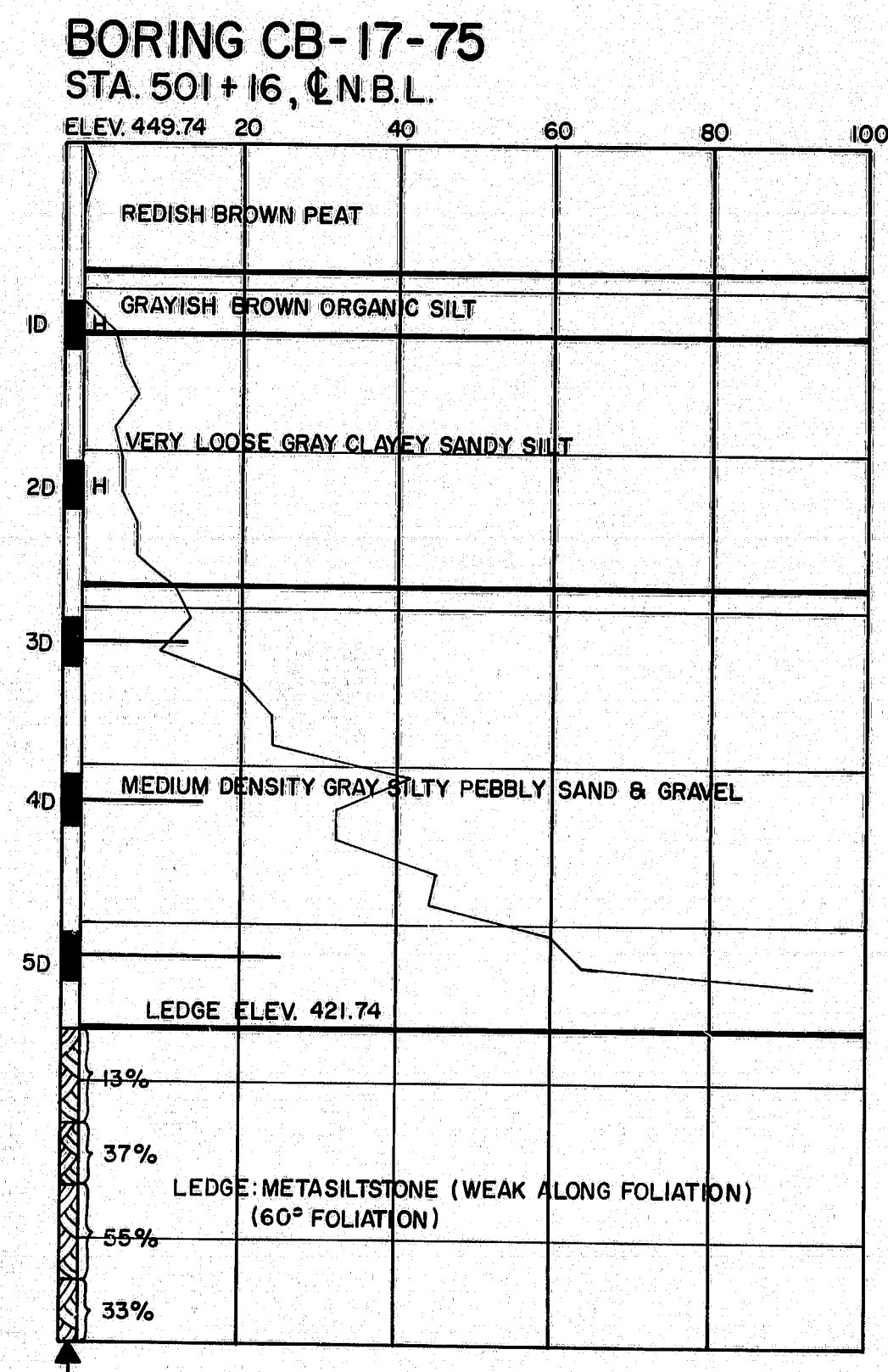
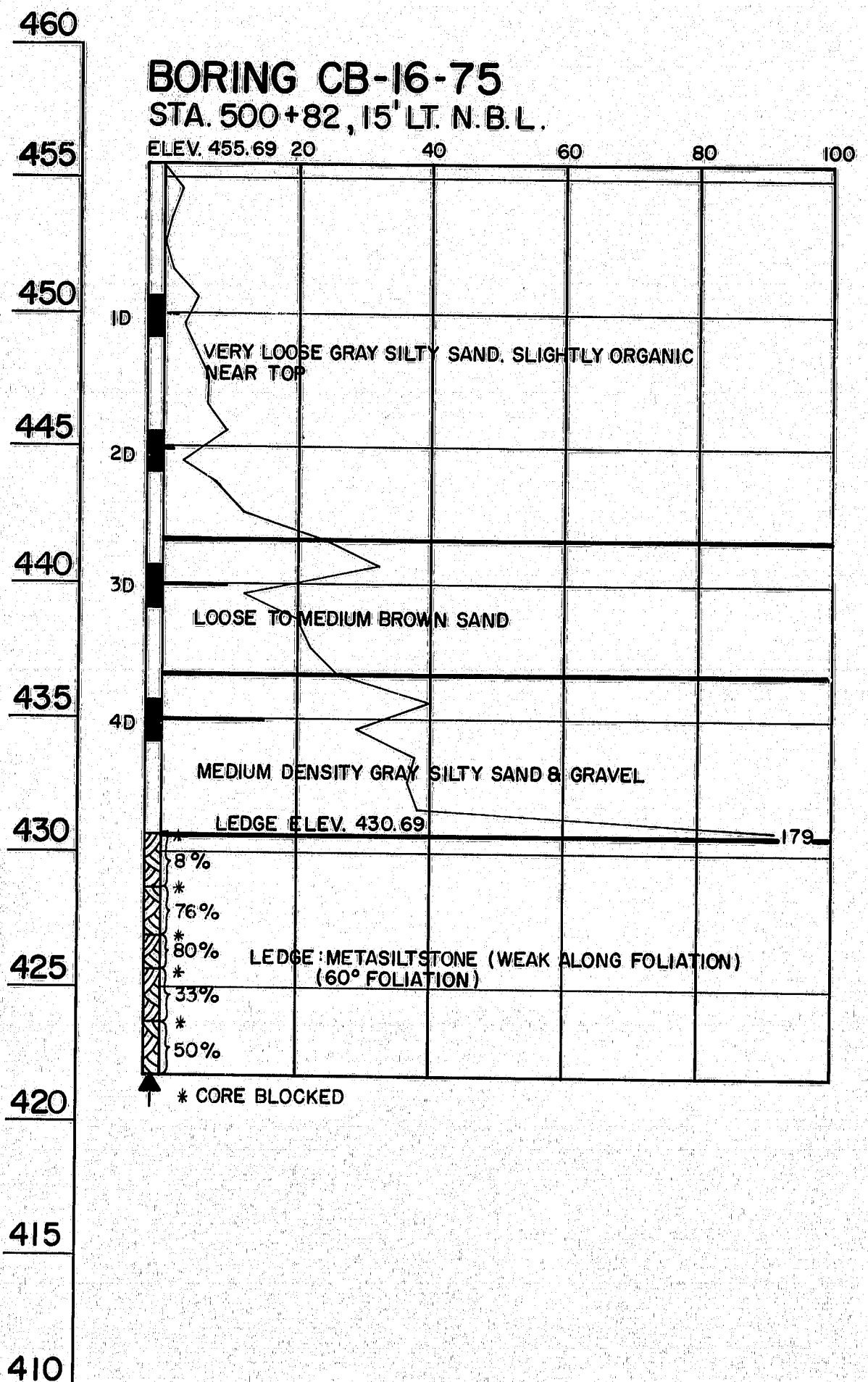
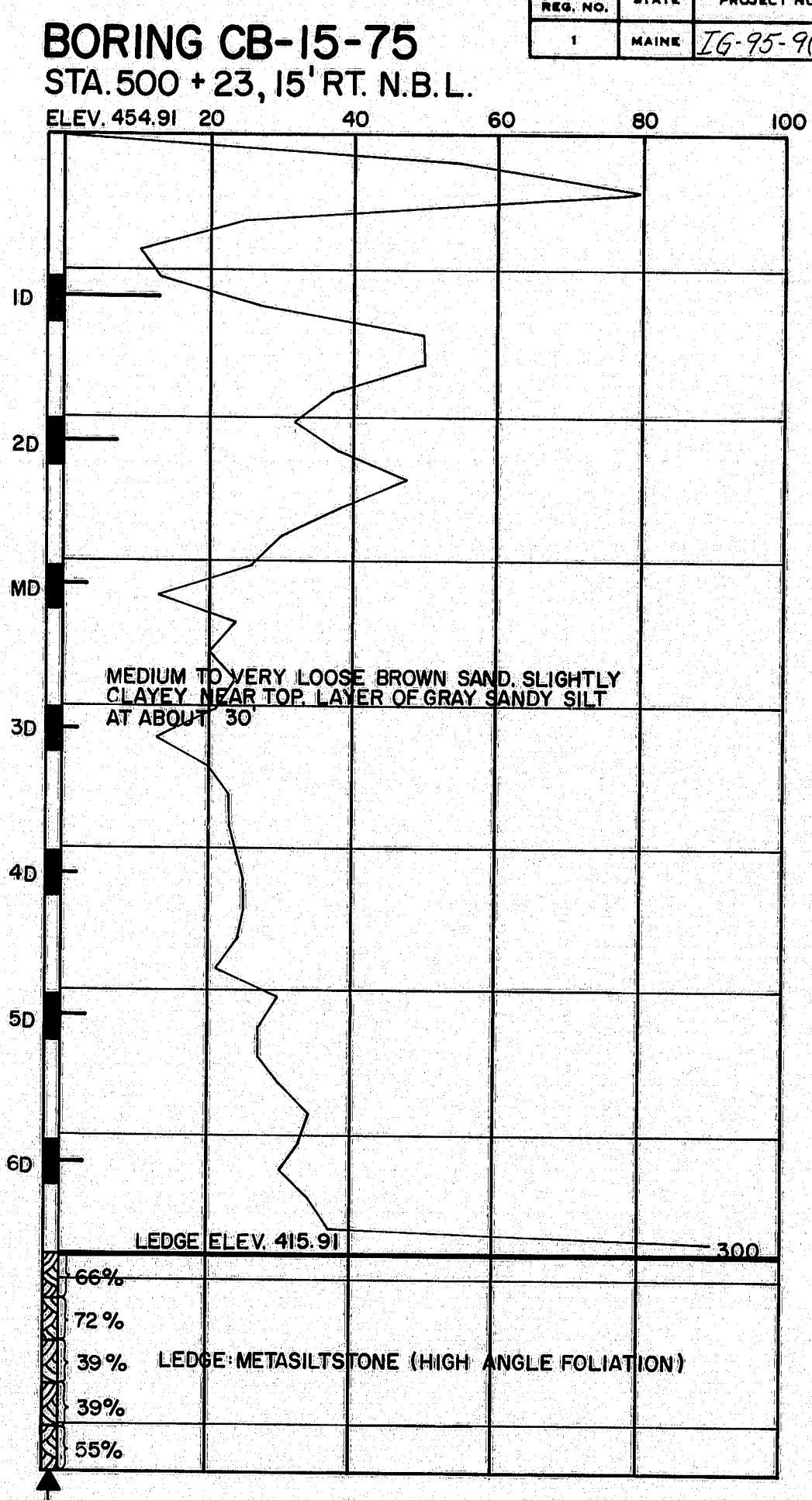
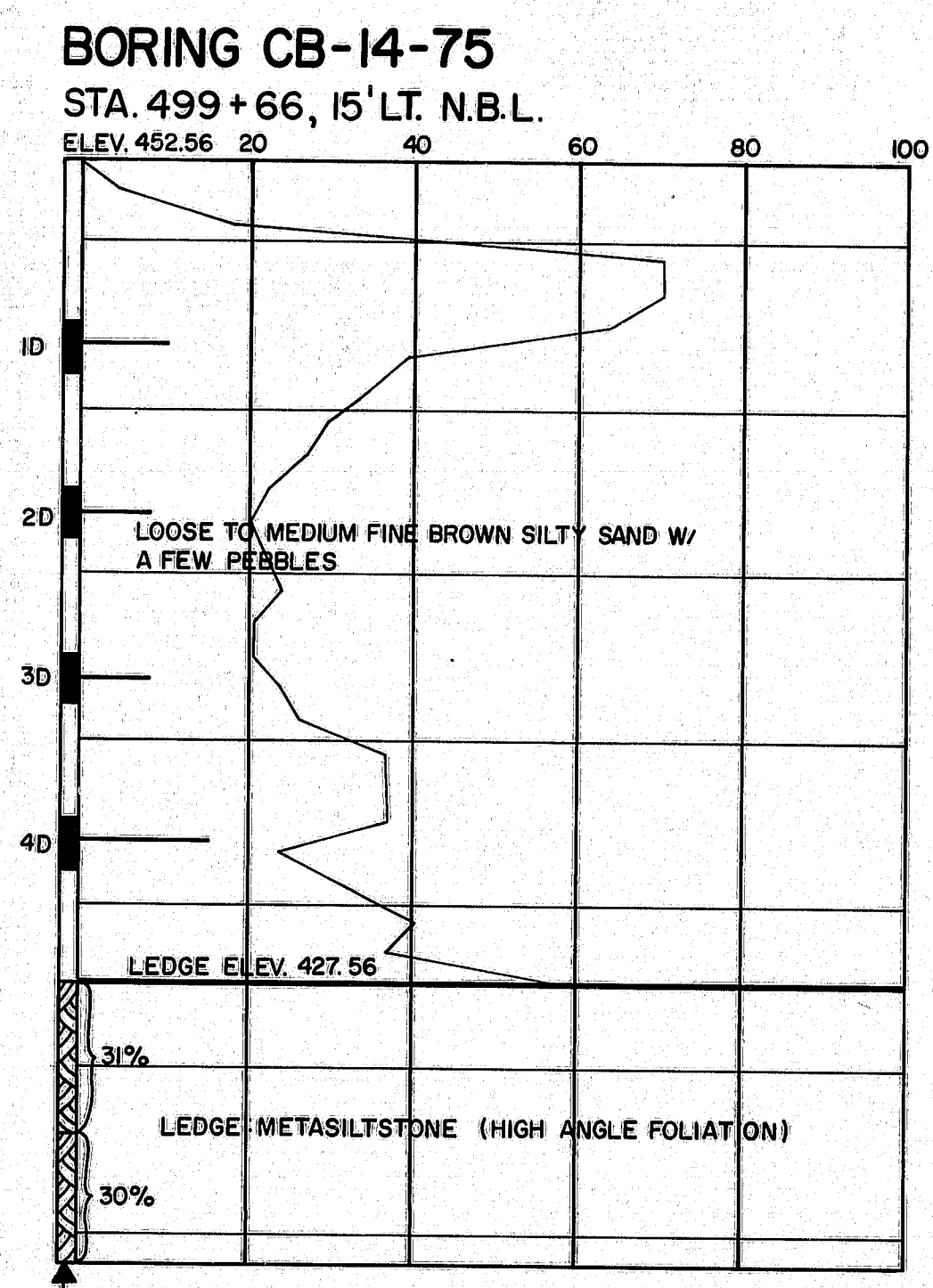
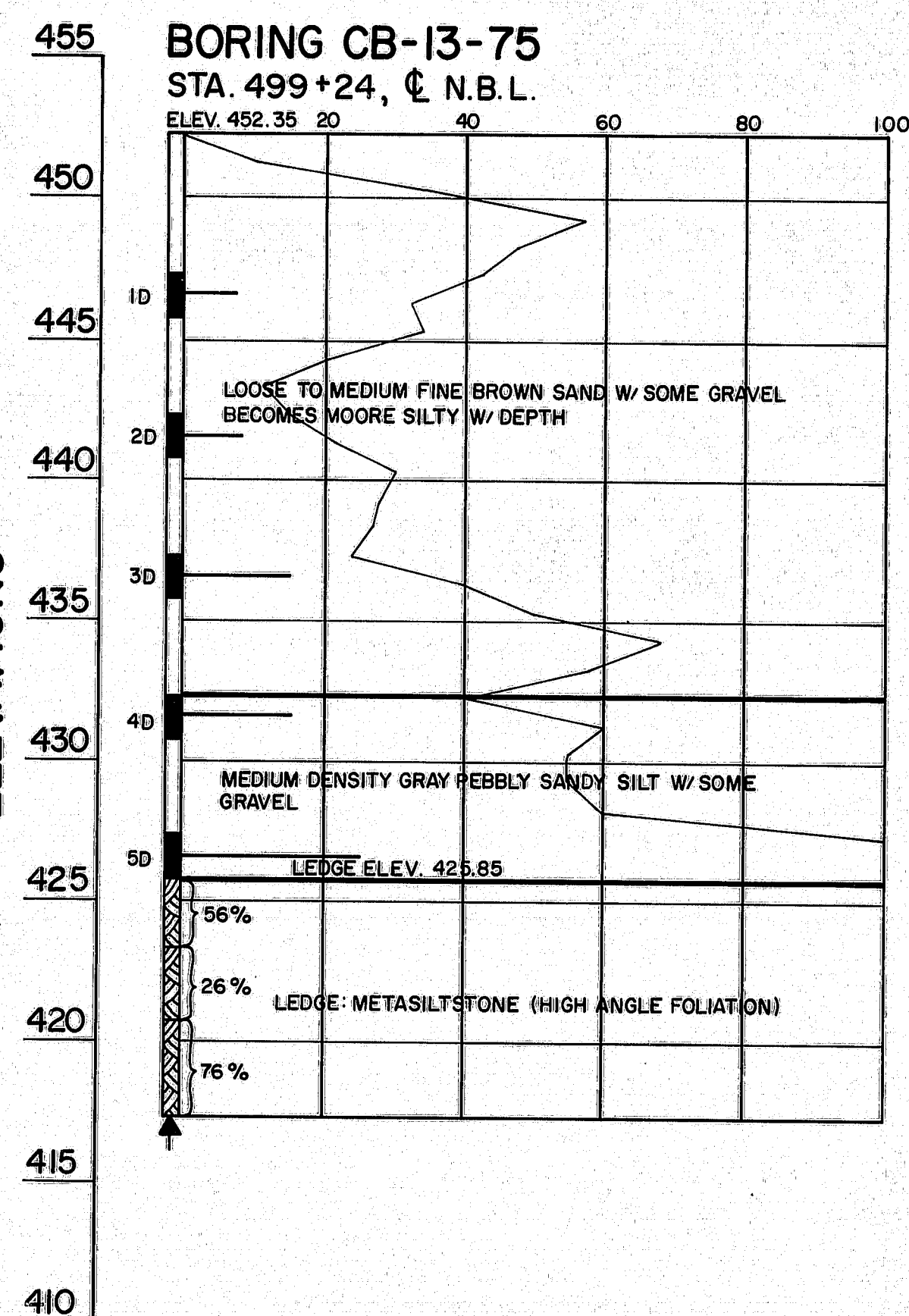
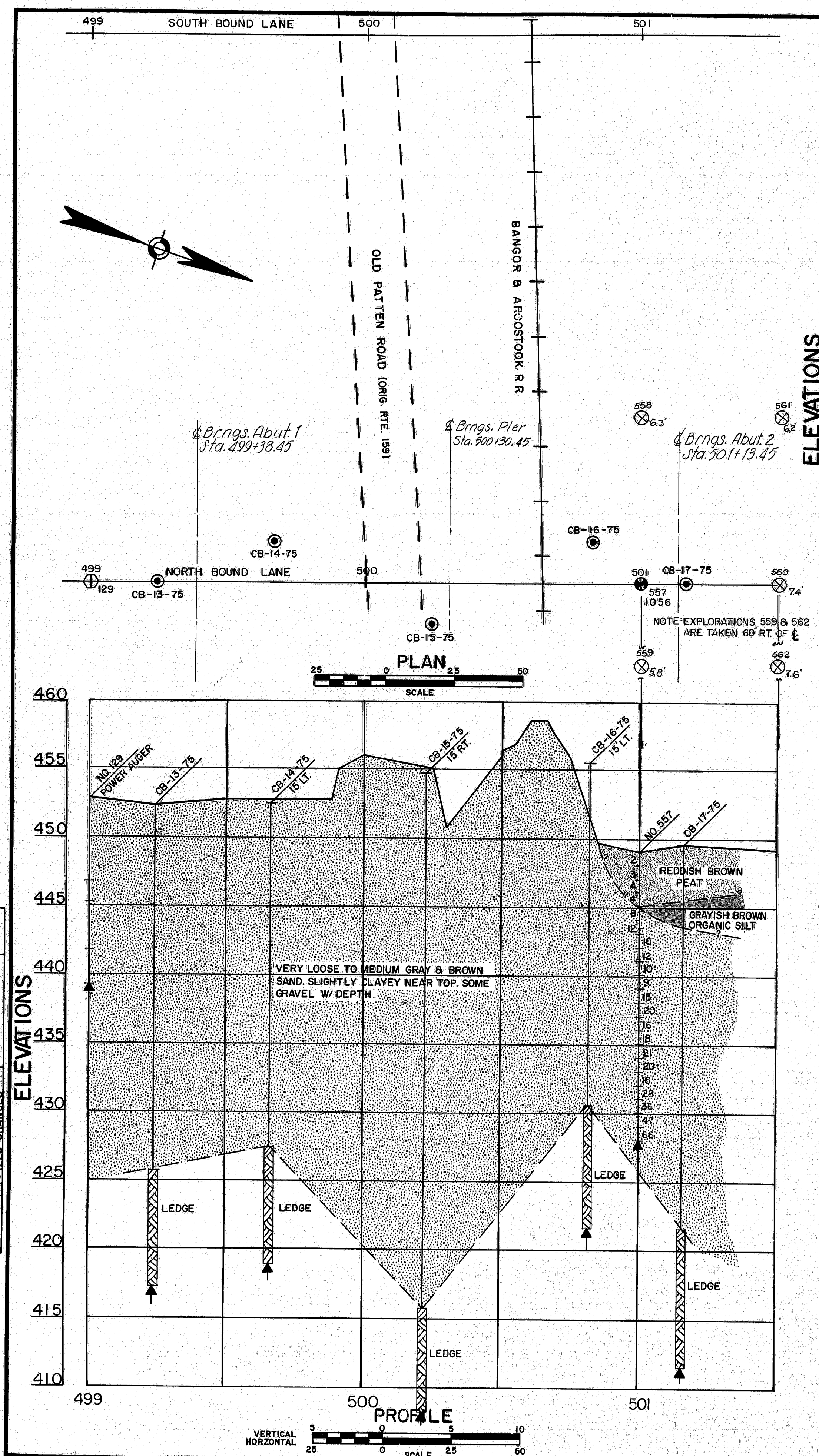
INTERSTATE 95 NB  
OVER  
OLD RTE.159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
PROFILE

SHEET 4 OF 25 AUGUSTA, MAINE June 1978

166-136



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



**BORING NOTES**

All samples and vials are made ahead of casing

Water elevation

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

Location of sample or sample attempt

Number and type of dry sample

S & H Sampler # 1290's

Unsuccessful sample attempt and type of sampler

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

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

Locations cored by diamond bit and per cent recovery of rock

Sampling spoon or seamless tubing driven by static weight of drill rods and hammer

Note 2 1/2" casing used on all borings

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B. & A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY**

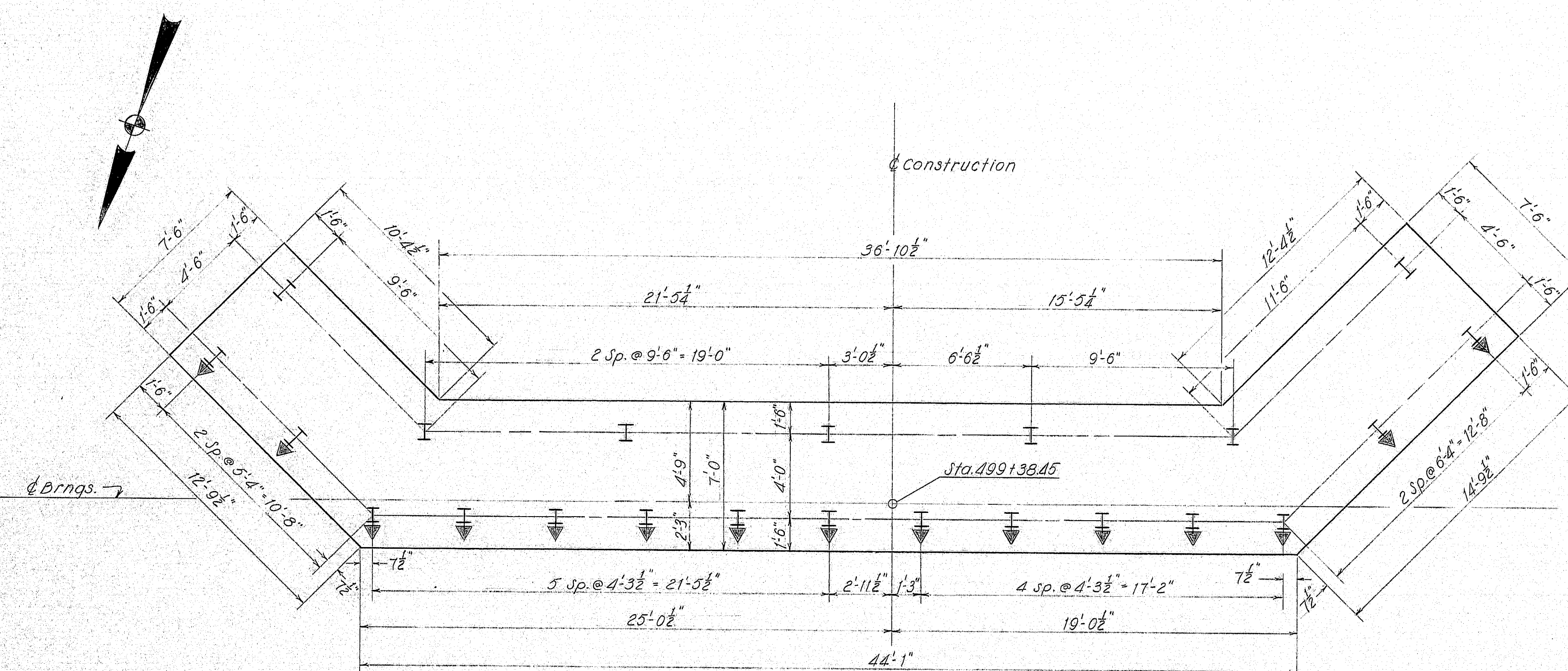
**BORING DETAILS**

SHEET 5 OF 25 AUGUSTA, MAINE June 1978

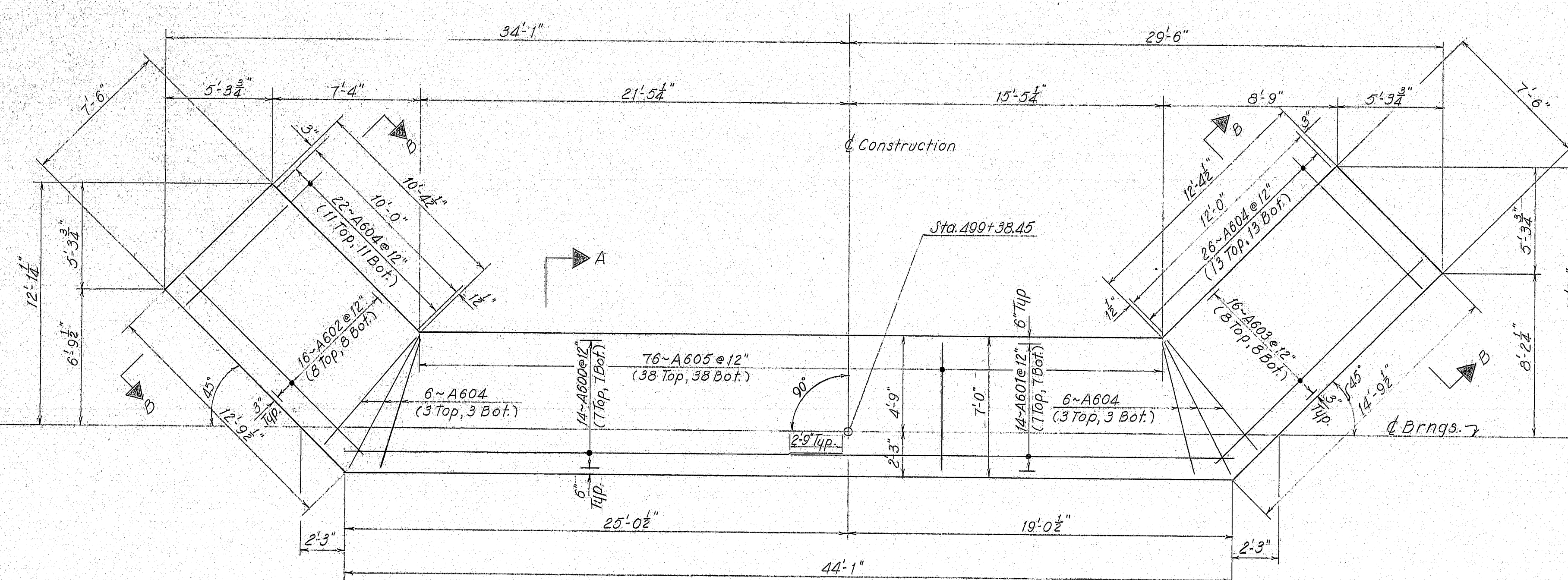
166-137



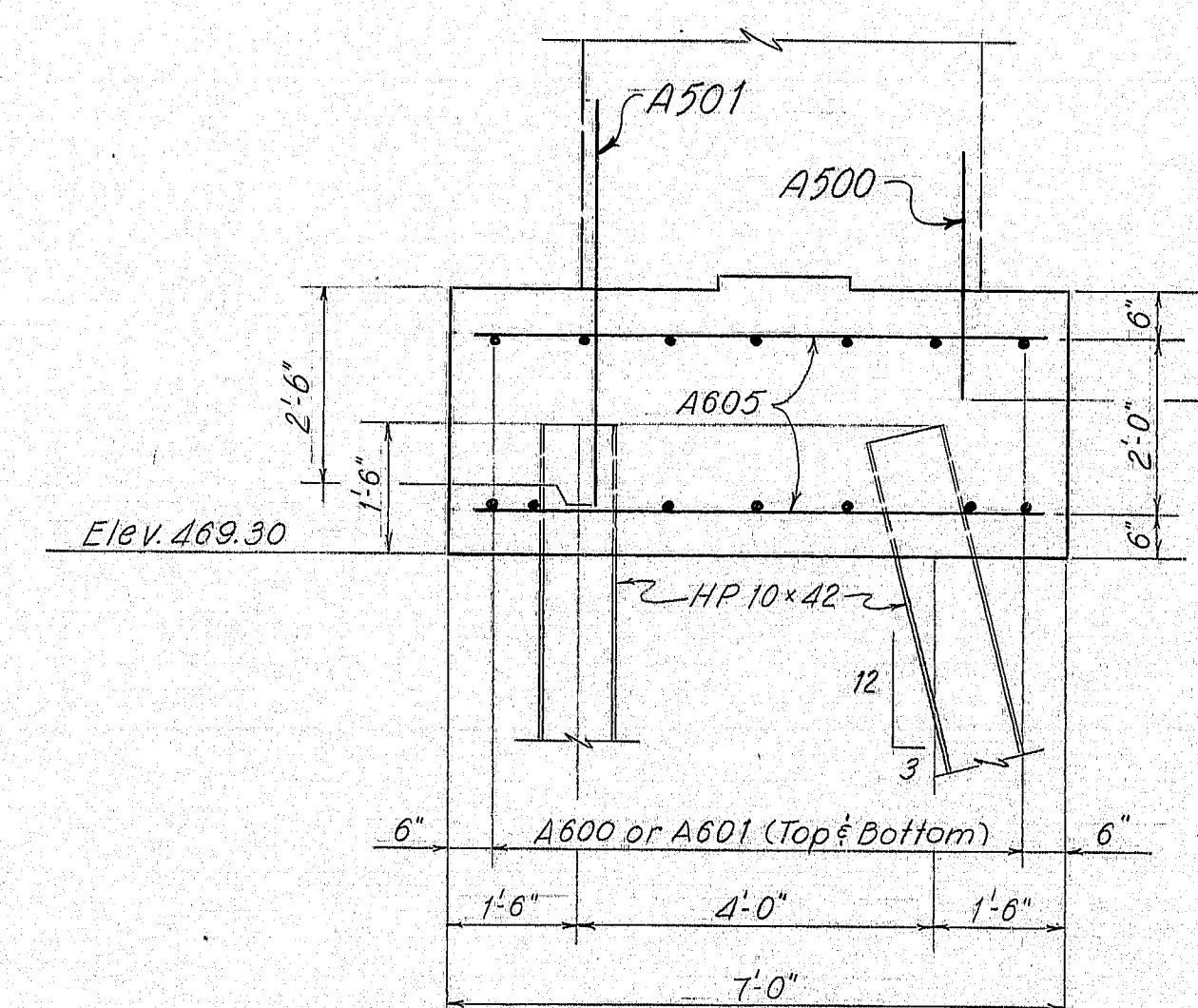
F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-75-9(82)	6	25



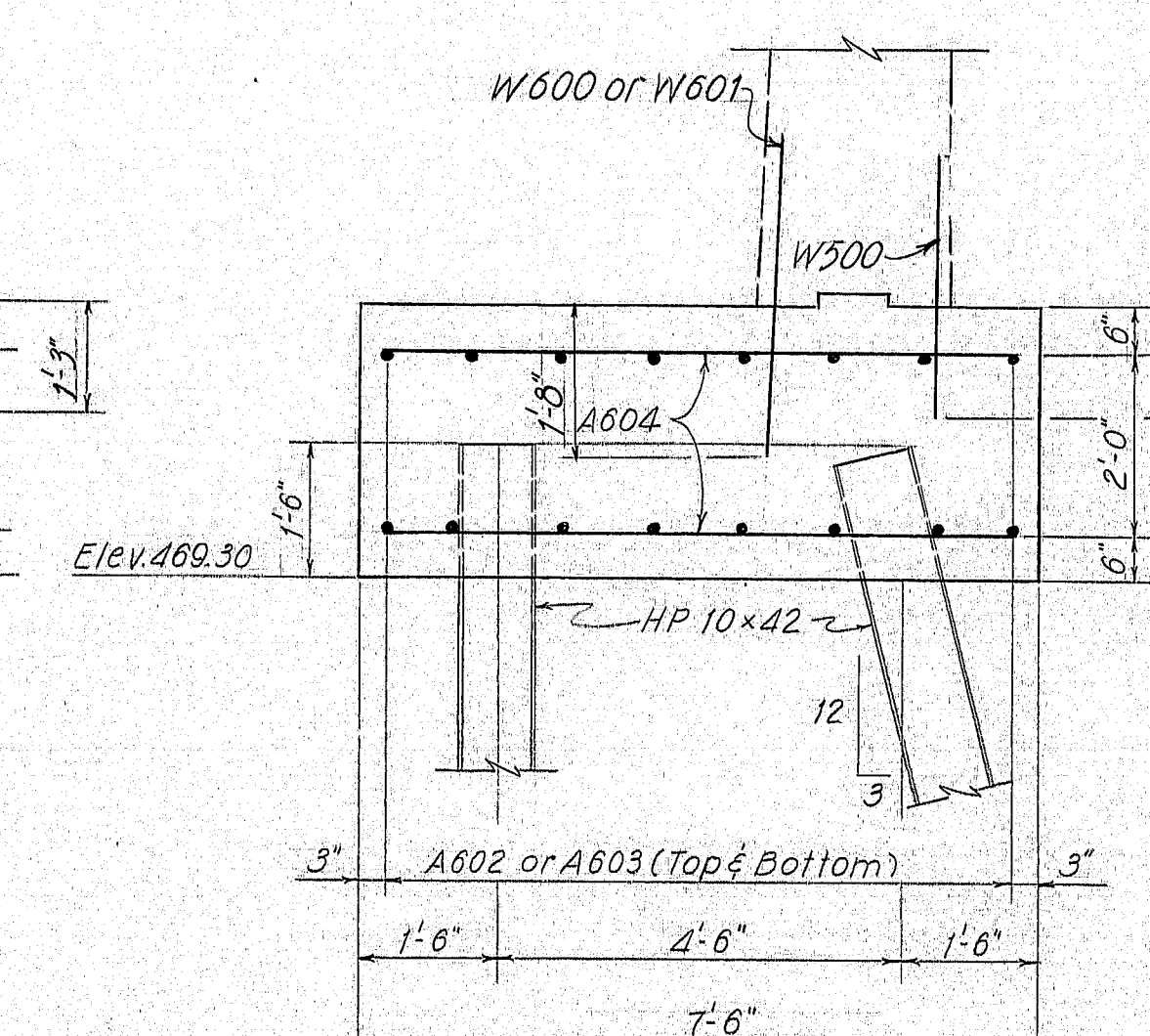
PILE PLAN ~ ABUTMENT 1



FOOTING PLAN ~ ABUTMENT 1



SECTION A-A



SECTION B-B

#### REFERENCES

For Pointed Reinforced Pile Tip Detail  
see Standard Detail Sheet (BD 104-77)  
Sheet #22.  
For placement of Rooting Dowels see Sheet #8.

#### PILE NOTES

1. Piles shall be driven to ledge or practical refusal.
2. All piles shall have Pointed Reinforced Pile Tips as shown on Standard Detail BD 104-77.
3. Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
4. Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
5. Embedment of piles in footings may vary between 1'-0" and 2'-0", and the actual embedment length up to a maximum of 1'-6" will be included in the measurement for payment.
6. Piles marked H, shall be battered 3 inches per foot in the direction of the arrow.
7. Maximum pile loads: 51.6 tons (Abutments).
8. Following are pile locations, number of piles required, size of piles and estimated driven lengths:

Abutment No. 1 22 ~ HP 10x42 @ 44'  
Abutment No. 2 21 ~ HP 10x42 @ 30'

As Bu. 14 1979  
ZMS 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY

FOOTING - ABUTMENT NO. 1

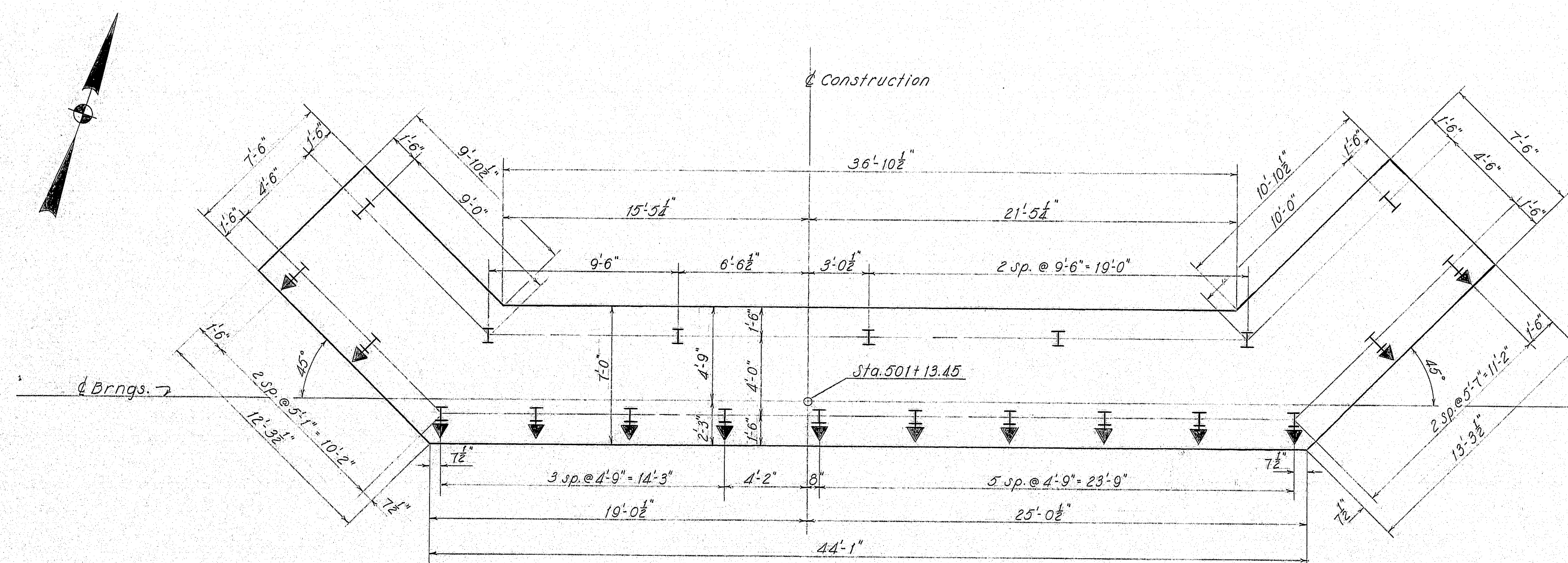
SHEET 6 OF 25 AUGUSTA, MAINE June 1978

166-138

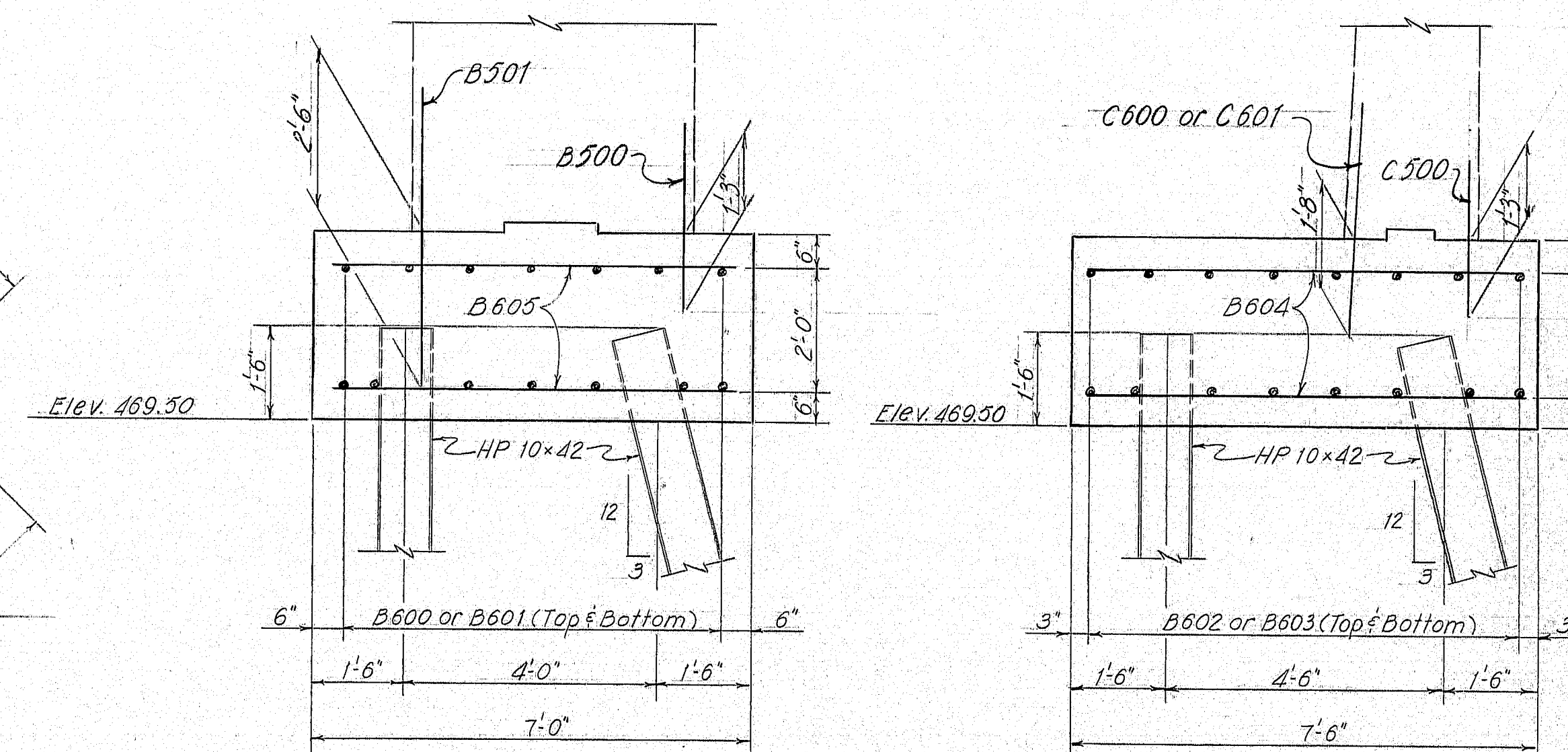
PROJECT DESIGN ENGINEER	BY	DATE
PLANS	EMM/ELM	8-77
CHECKED	RCB	3-78
REVISIONS		
FIELD CHANGES		



F.R.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-75-9(82)	7	25



PILE PLAN ~ ABUTMENT 2



SECTION A-A

SECTION B-B

#### ABUTMENT NOTES

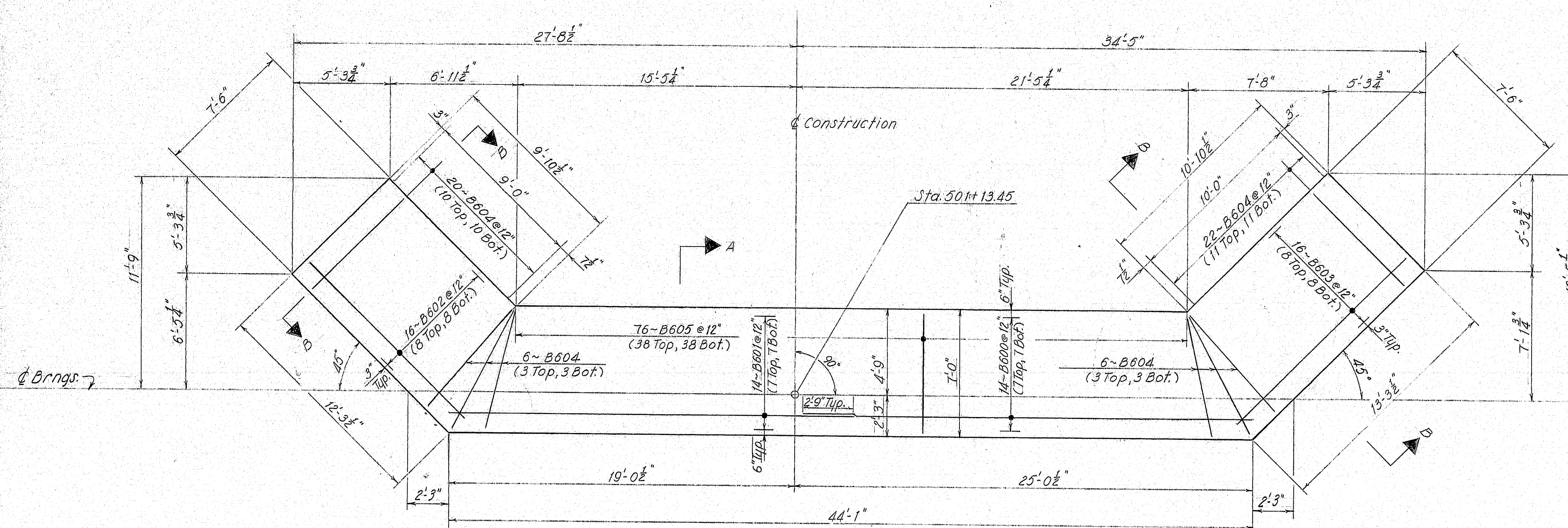
1. Chamfer all exposed edges of concrete a consistent dimension between  $\frac{1}{4}$ " and  $\frac{3}{8}$ " inclusive, unless otherwise indicated.
2. Reinforcing steel shall have 2 inches cover unless otherwise indicated.
3. Place reinforcing steel in bridge seats to clear anchor bolts.
4. Break bond at vertical contraction joints by a method approved by the Engineer.
5. Polyvinylchloride waterstops as shown on Standard Details BD-104T shall be placed in all vertical contraction and construction joints.
6. Waterstops are not required in horizontal construction joints.
7. Protective coating for concrete surfaces shall be applied to the following areas: Top of concrete curbs, Top of abutment parapets, Top of backwall and 1'-0" down back of backwall.
8. Place 4" diameter drains in breastwall at 20 foot maximum spacing. Exact location to be determined by the Engineer in the field. Place 1 weeper in each wing.
9. Welding to reinforcing steel will be allowed in the top 2' of the abutment backwall.
10. To allow for the adjustment for movement due to dead load deflections of the superstructure, and to aid in the proper alignment of the joint armor, the concrete which anchors the portion of the joint armor in the top of the abutment backwall shall be placed after all superstructure structural slab concrete is in place, unless other methods, which will provide the proper alignment of the joint armor, are approved by the Engineer.

#### REFERENCES

For Painted Reinforced Pile Tip Detail  
See Standard Detail Sheet (BD 104-TT) Sheet # 22  
For Pile Notes see Sheet # 6  
For placement of Footing Dowels see Sheets # 49, 10 & 11

As B.O.H. 1979  
E.M.J. 5-1-80

PROJECT DESIGN ENGINEER	DATE
BY	1-8-77
DESIGN - DETAIL	1-8-77
CHECKED	2-8-77
REVISIONS	
FIELD CHANGES	



FOOTING PLAN ~ ABUTMENT 2

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY

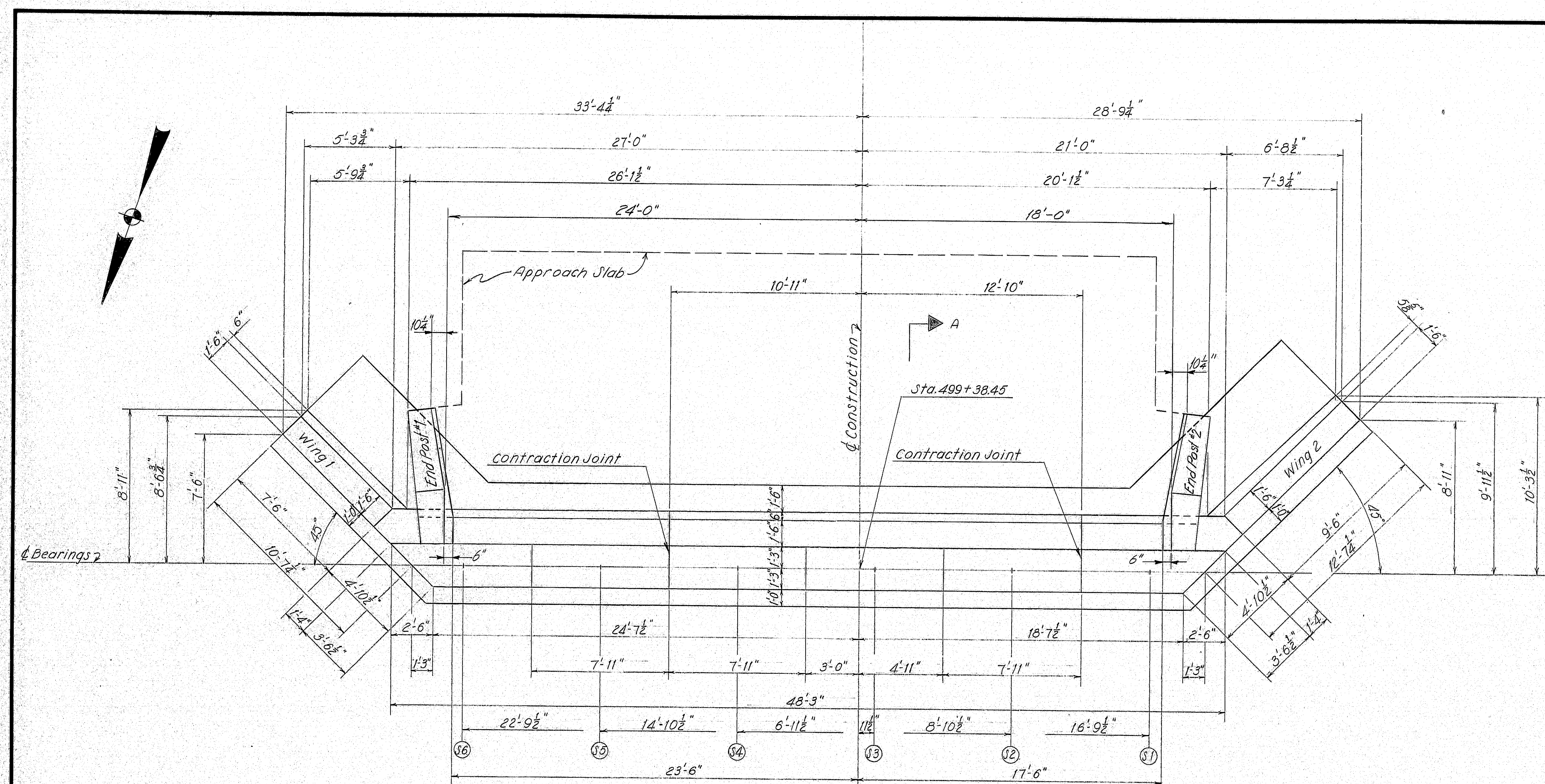
FOOTING - ABUTMENT NO. 2

SHEET 7 OF 25 AUGUSTA, MAINE June 1978

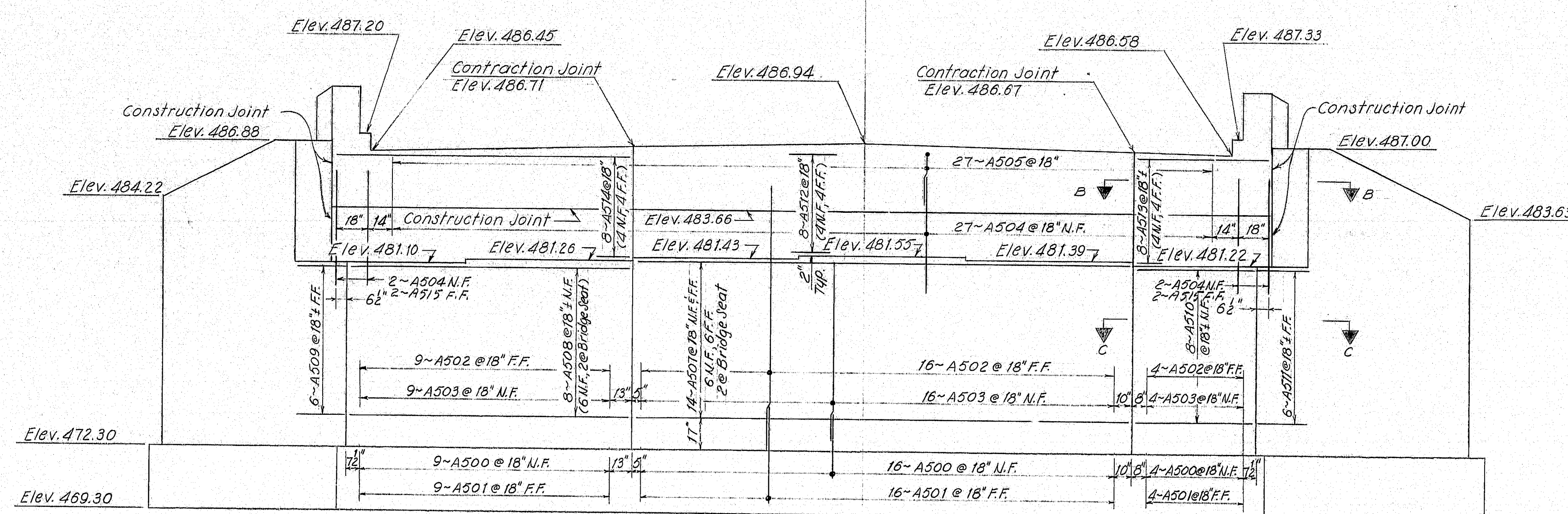
166-139



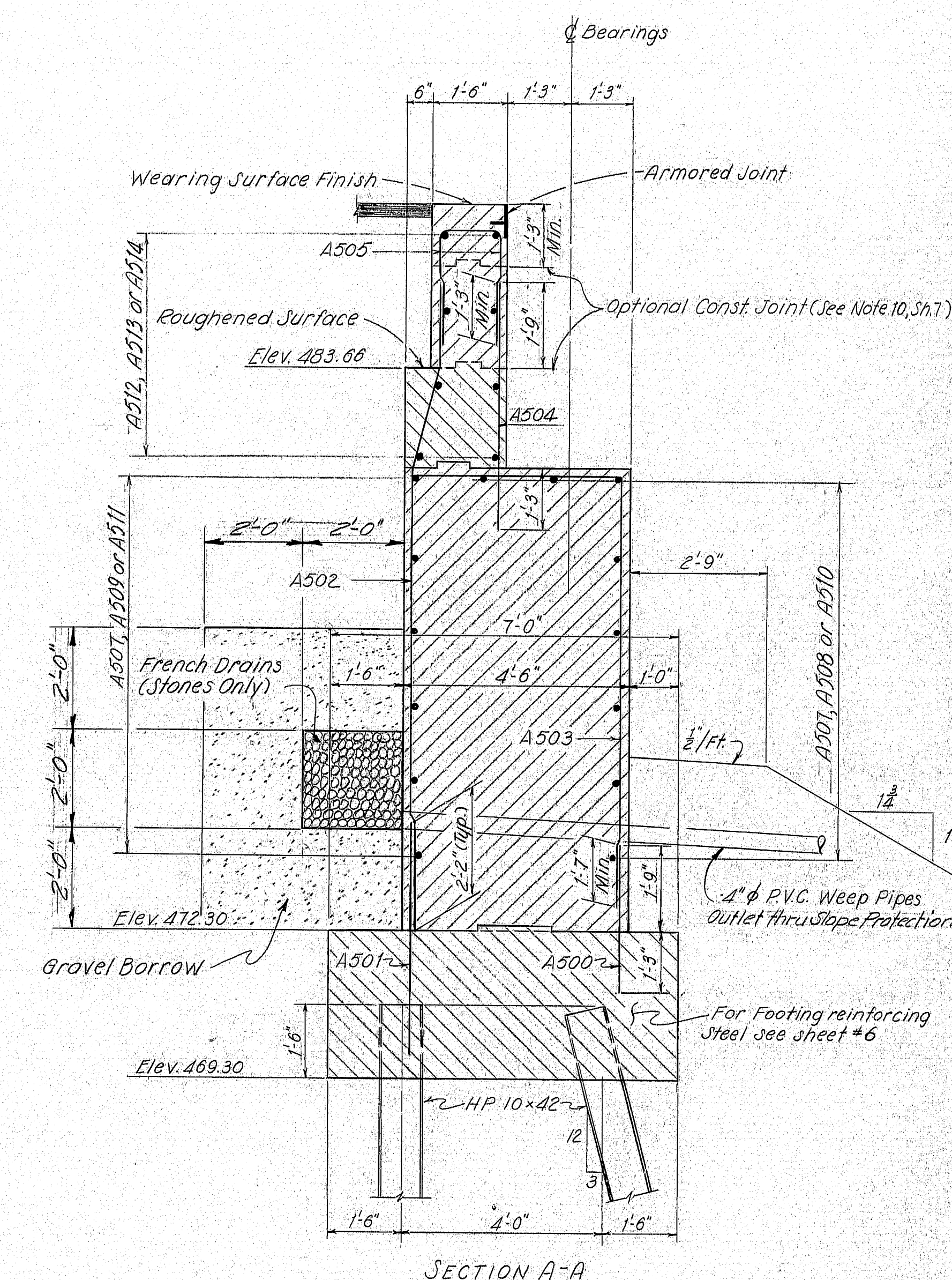
F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	8	25



PLAN



ELEVATION



SECTION A-A

# REFERENCES

For End Post Details see Sheet #12  
 For Approach Slab Details see Sheet #13  
 For Abutment Notes see Sheet #7  
 For Footing & Footing Sections see Sheets #6 & 7  
 For Wing Sections see Sheets #10 & 11  
 For Slope Protection Details see Sheet #14  
 For Contraction & Construction Joint Detail see Standard Detail Sheet BD 104-77, Sheet #22  
 For Armored Joint Details and Water Stop see Standard Detail Sheet BD 104-77, Sheet #22  
 For Pile Notes see sheet #6  
 For Sections B-B & C-C, see Sheet #10

As Built 1979  
 2013 5-1-80

PROJECT DESIGN ENGINEER	DATE
BY	8-77
DESIGN - CHECKED	12-8
REVISIONS	
FIELD CHANGES	

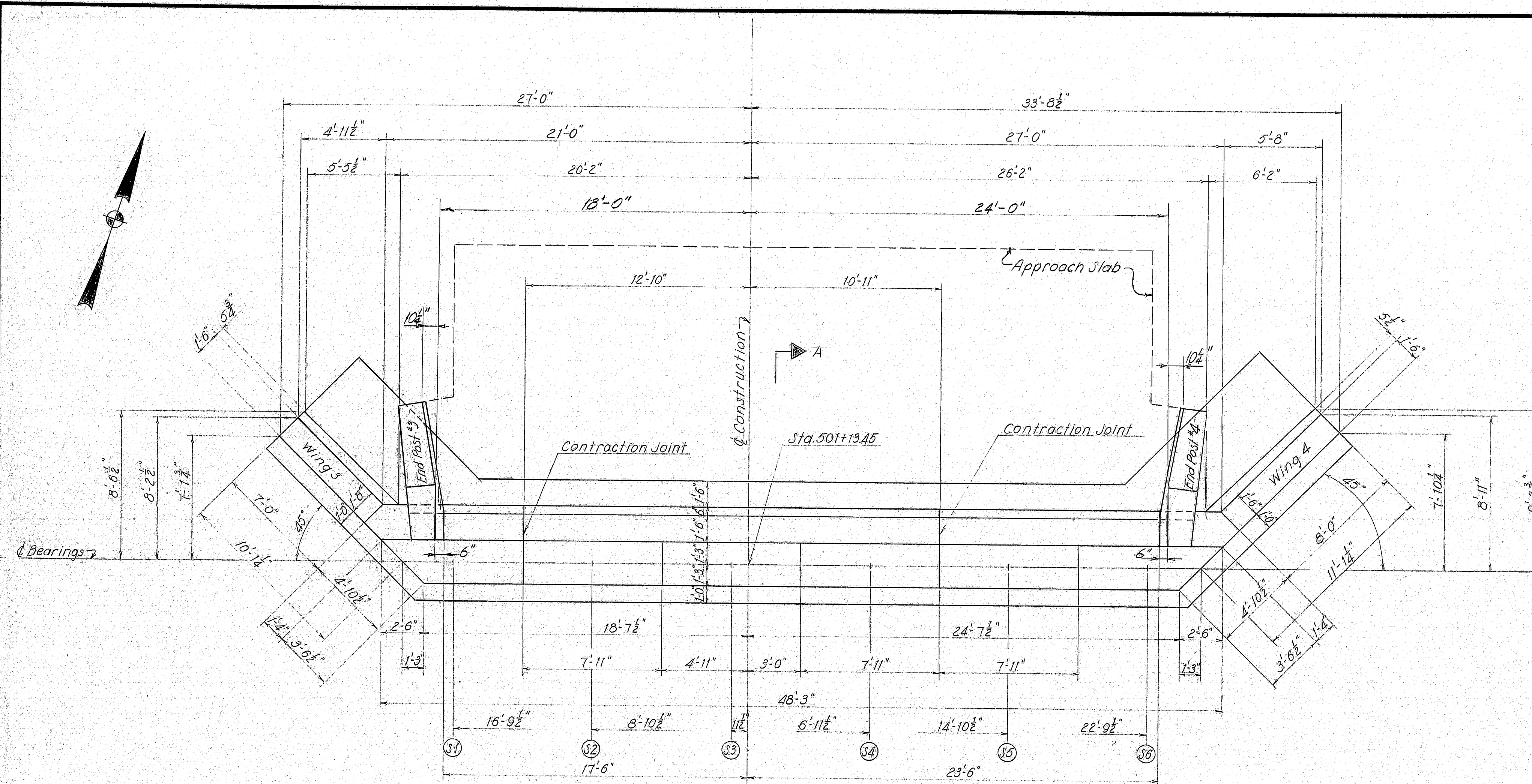
STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 INTERSTATE 95 NB  
 OVER  
 OLD RTE. 159 AND B&A. R.R.  
 IN THE TOWN OF  
 ISLAND FALLS  
 AROOSTOOK COUNTY  
 ABUTMENT NO. 1

SHEET 8 OF 25 AUGUSTA, MAINE June 1978

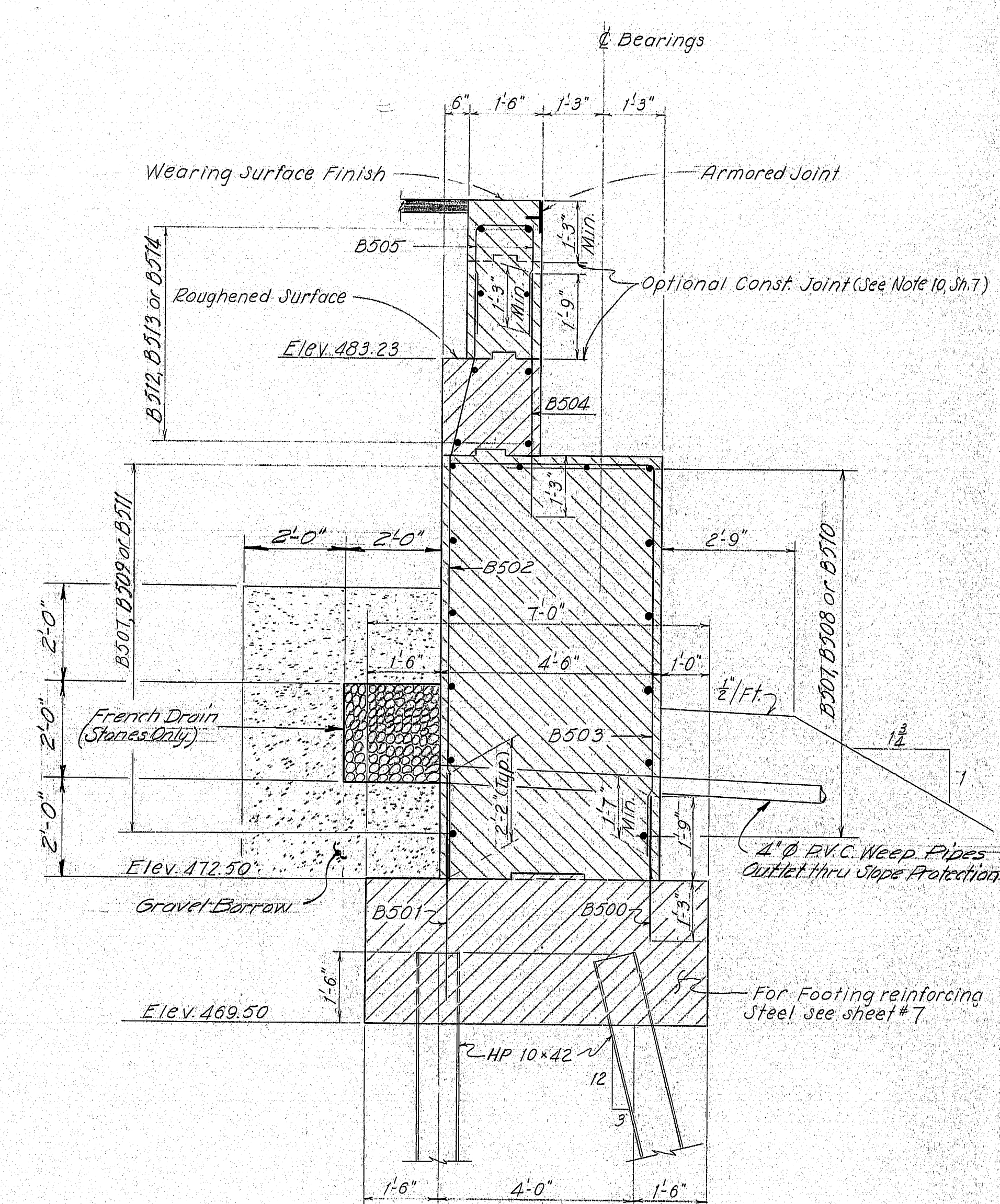
166-140



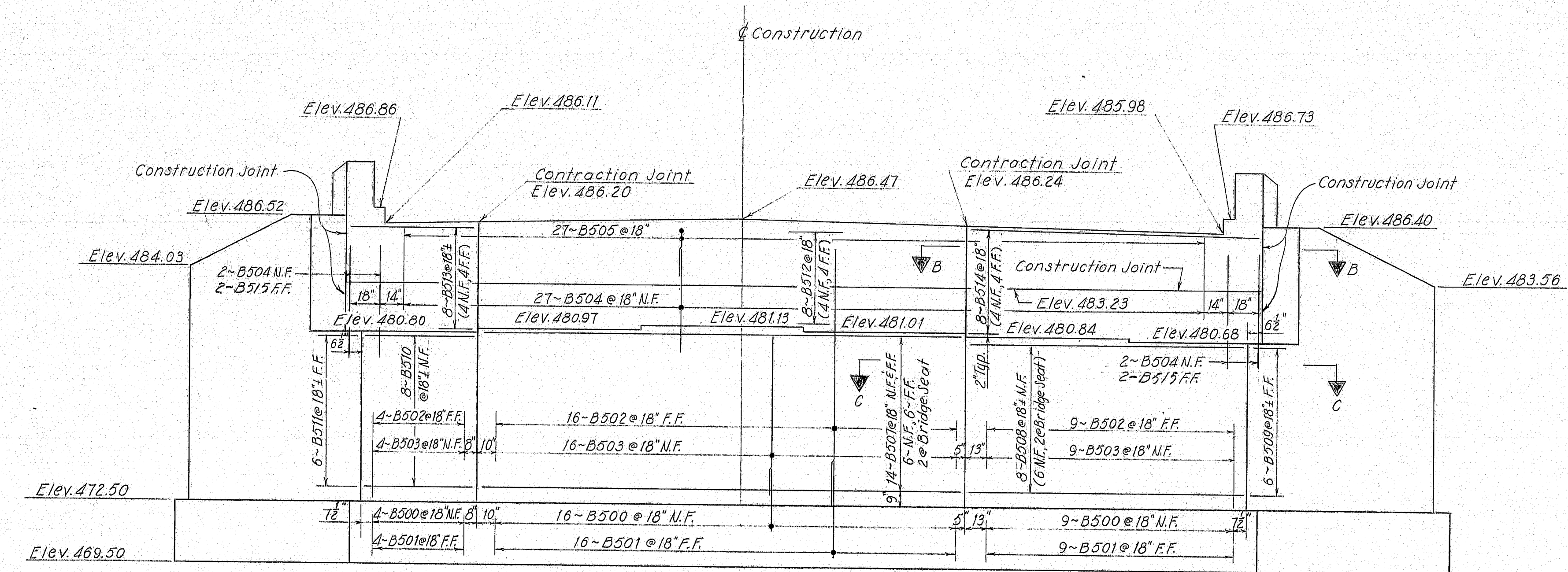
F.R.W.A. SHEET NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	9	25



PLAN



SECTION A-A



ELEVATION

- REFERENCES**
- For End Post Details see Sheet # 12
  - For Approach Slab Details see Sheet # 13
  - For Abutment Notes see Sheet # 7
  - For Footing & Footing Sections see Sheet # 7
  - For Wing Sections see Sheet # 11
  - For Slope Protection Details see Sheet # 14
  - For Construction & Construction Joint Detail see Standard Detail Sheet BD 104-77, Sheet # 22
  - For Armored Joint Details and Water Stop see Standard Detail Sheet BD 104-77, Sheet # 22
  - For Pile Notes see Sheet # 6
  - For Sections B-B & C-C, see Sheet # 11

As B.O.H. 1979  
R.W.J. 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

**INTERSTATE 95 NB**  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
ARROOSTOOK COUNTY

ABUTMENT NO. 2  
SHEET 9 OF 25 AUGUSTA, MAINE June 1978

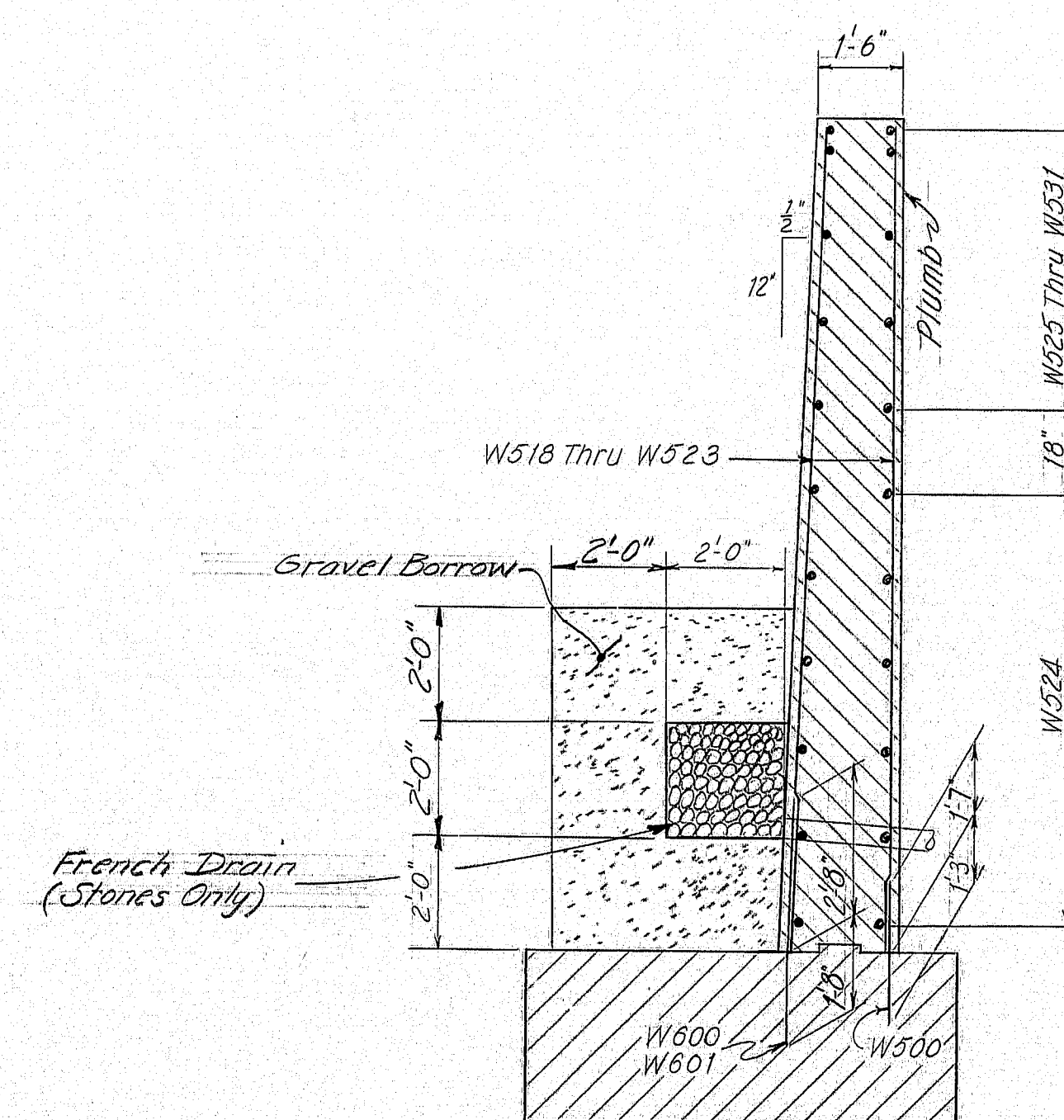
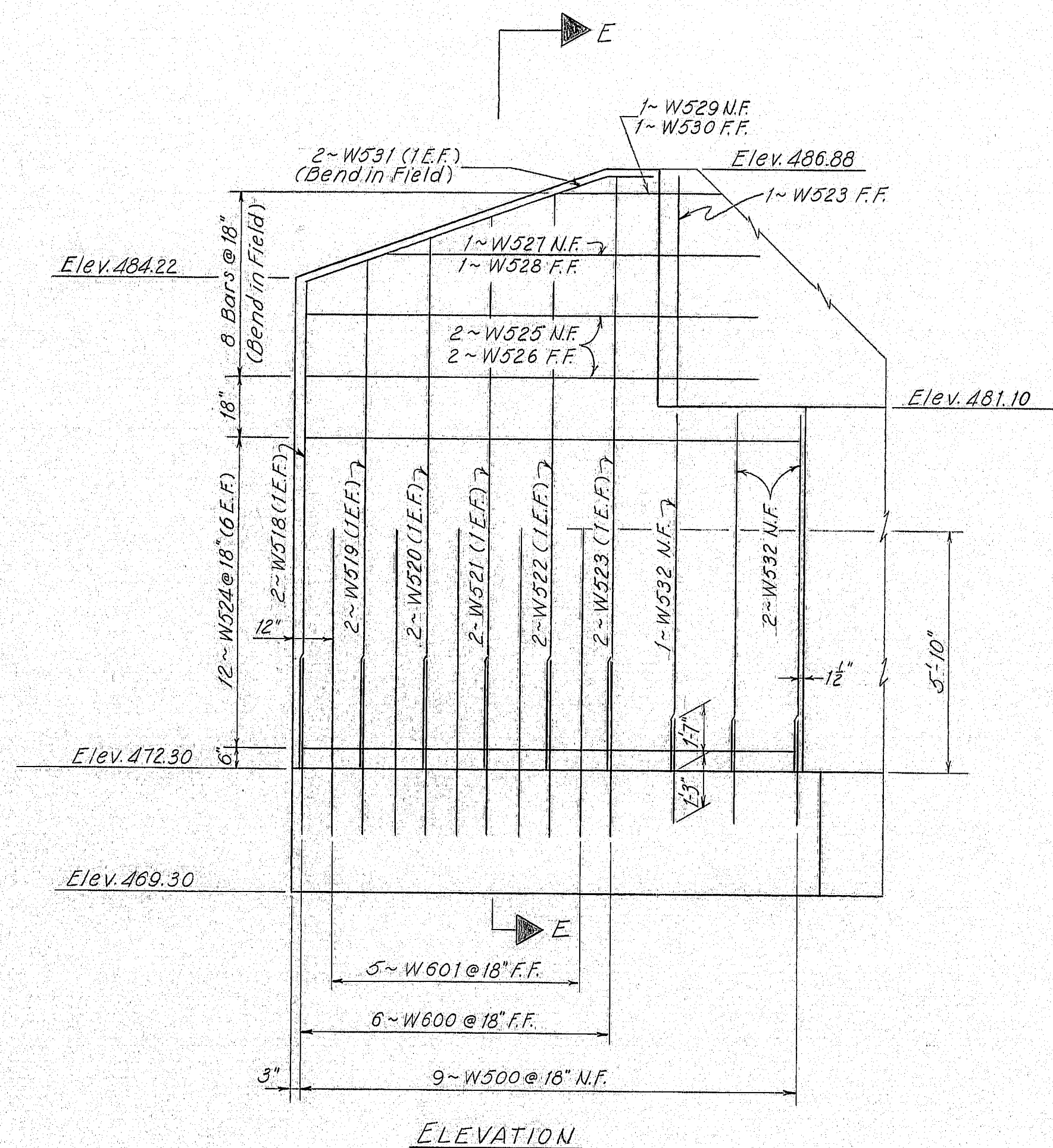
166-1A

PROJECT DESIGN ENGINEER	DATE
BY	8-11
DESIGN - DETAILED	8-11
CHECKED	5-78
REVISIONS	
FIELD CHANGES	

JANUARY 1988

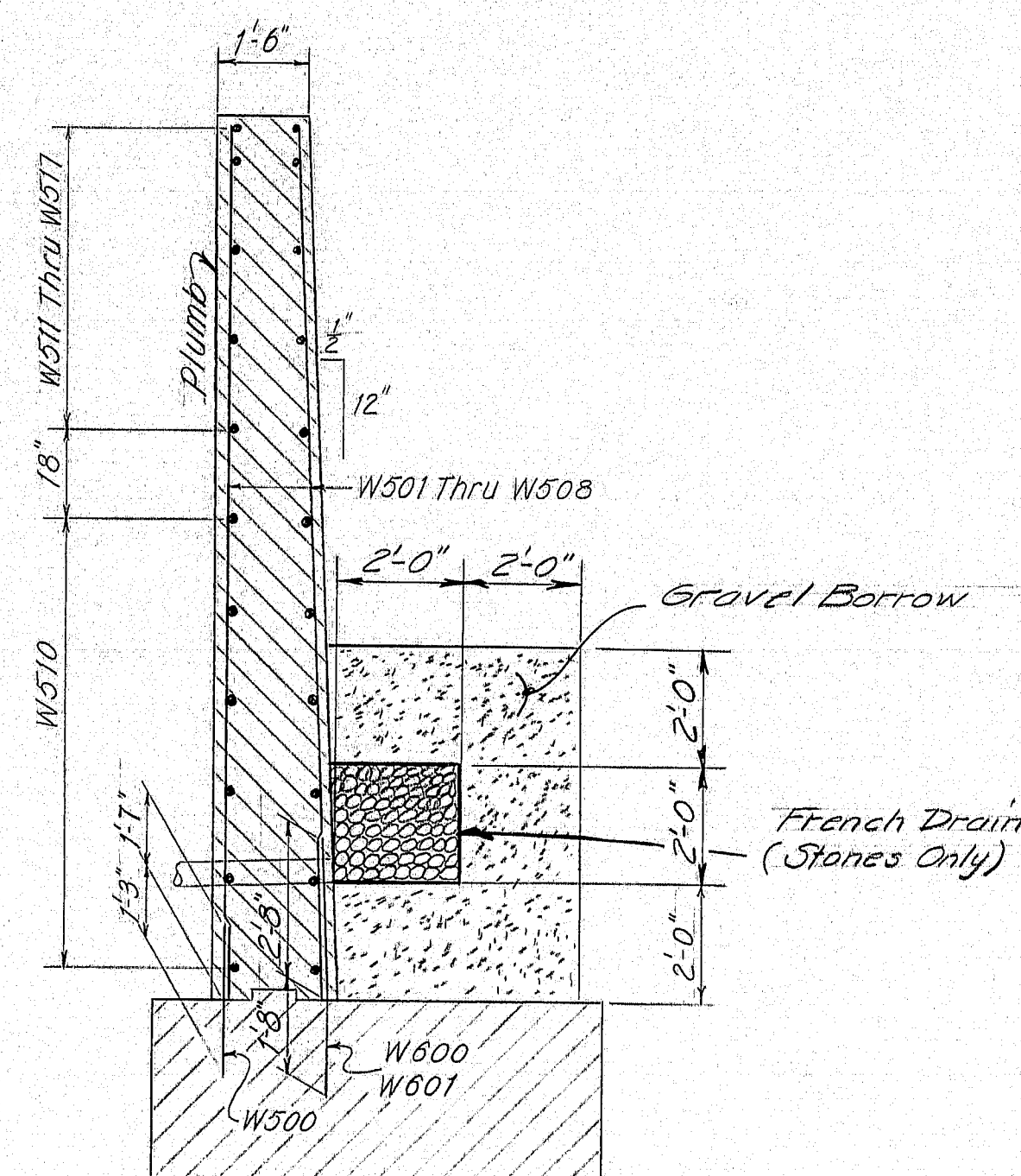


F.R.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	10	25



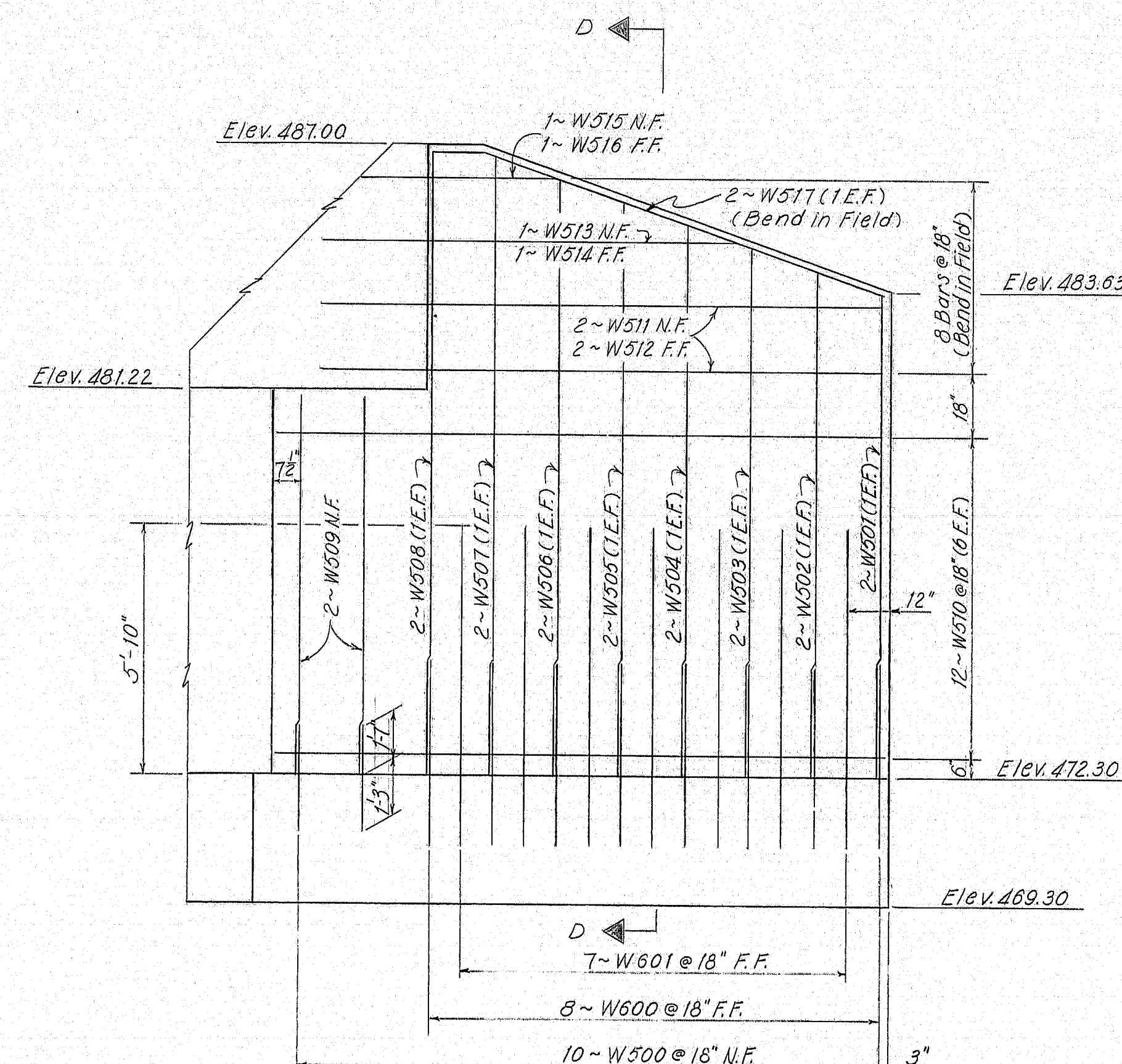
SECTION E-E

WING 1

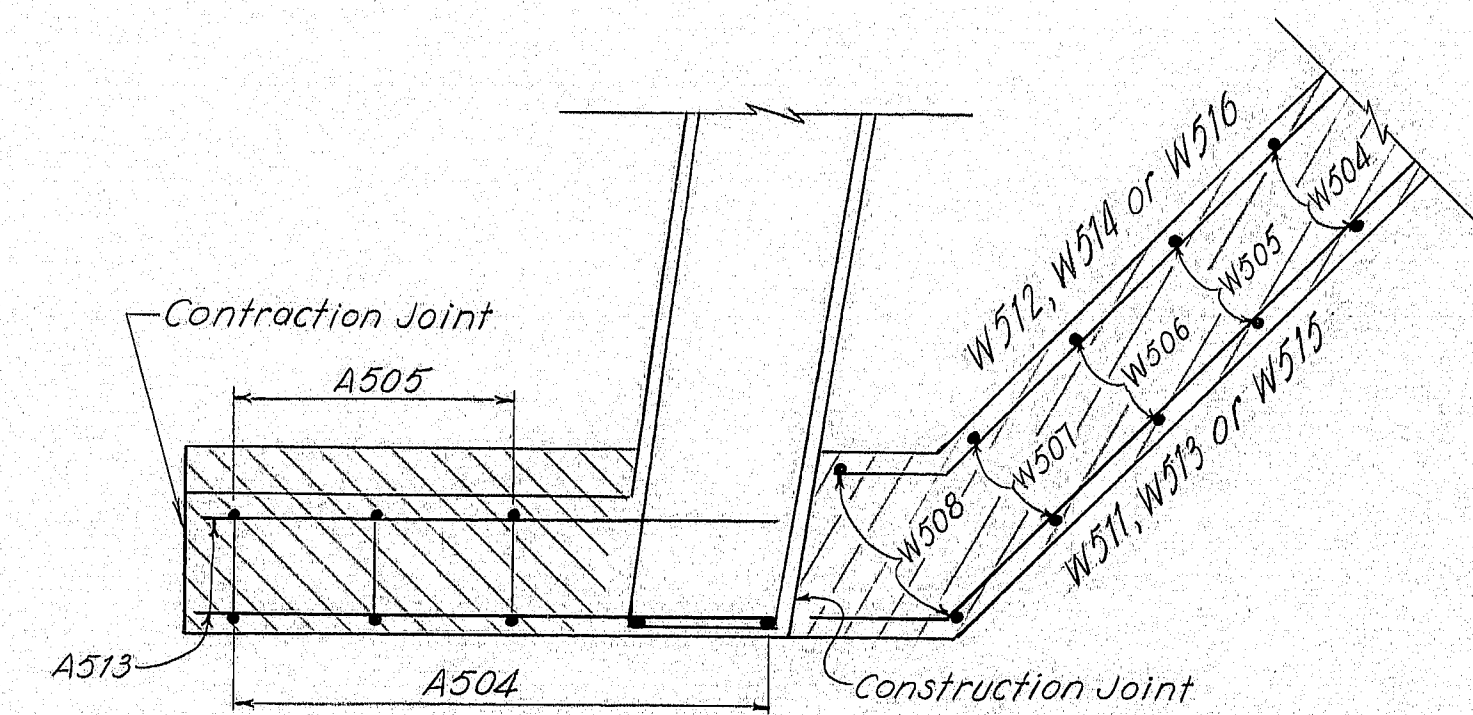


SECTION D-D

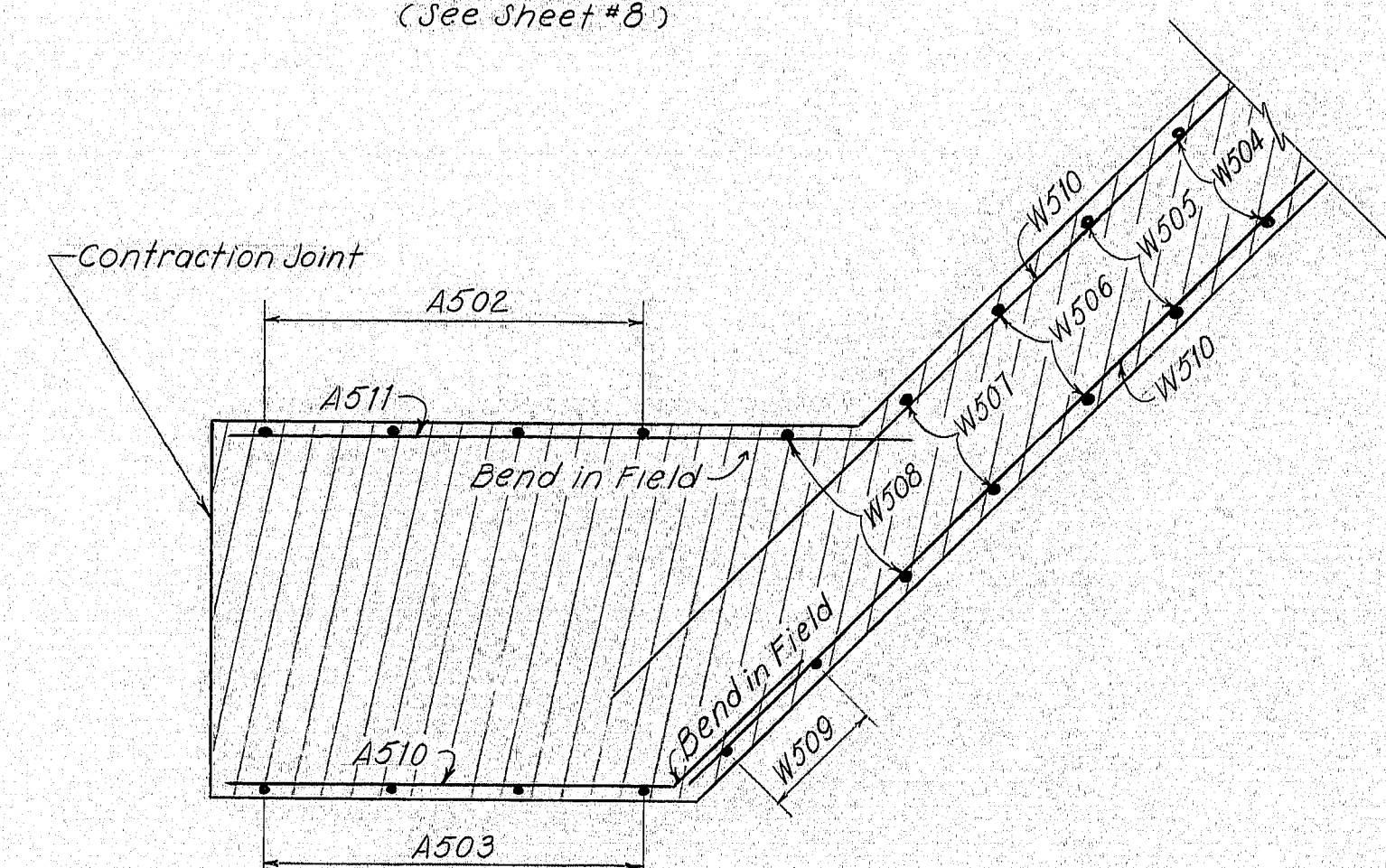
WING 2



ELEVATION



SECTION B-B  
(See Sheet #8)



SECTION C-C  
(See Sheet #8)

Note: For Footing Reinforcing Steel  
See Sheet #6

As Built 1979

Rev. 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
ARROOSTOOK COUNTY  
WINGS NO. 1 & NO. 2

SHEET 10 OF 25 AUGUSTA, MAINE JUNE 1978

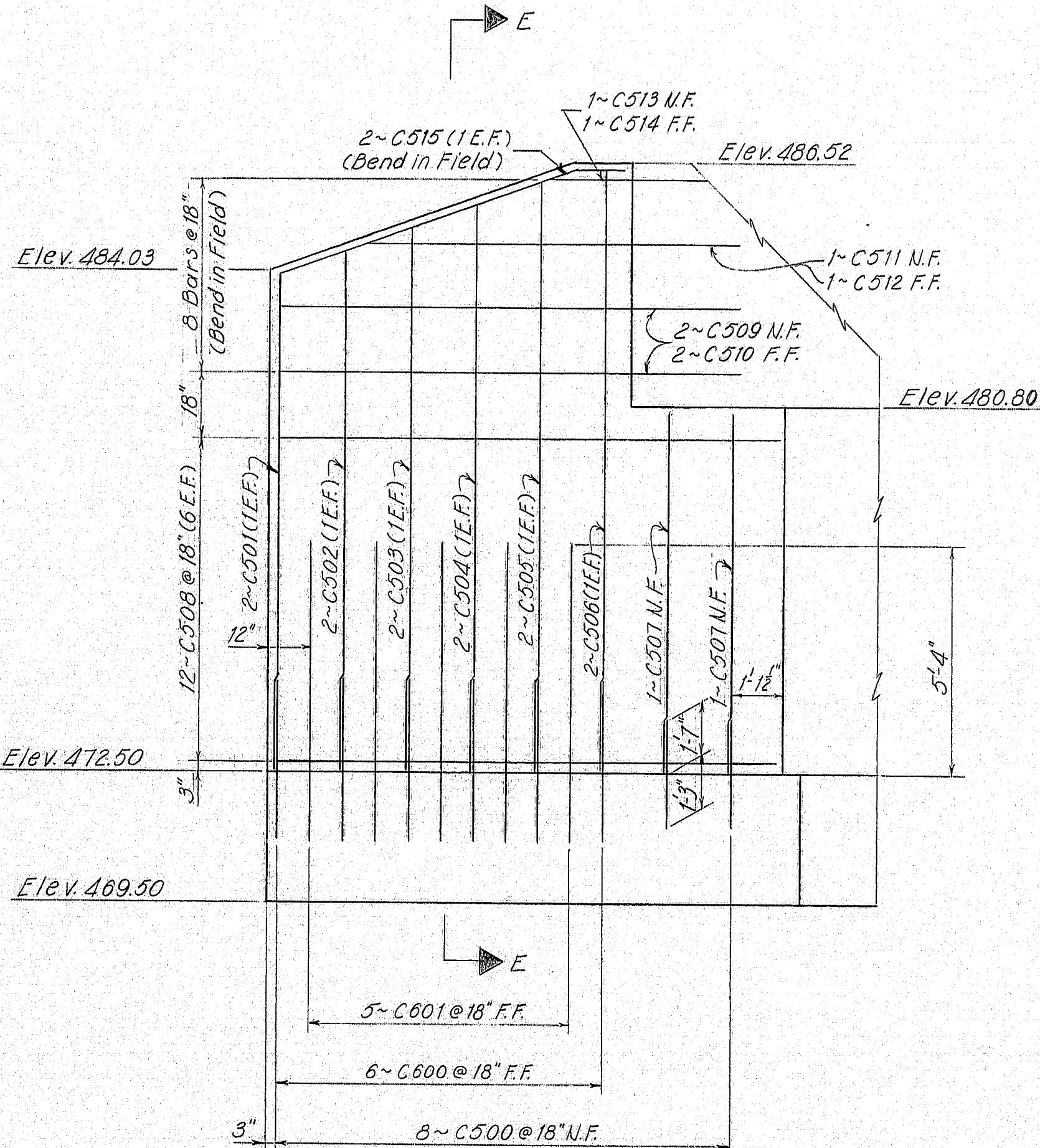
166-142

PROJECT DESIGN ENGINEER	DATE
DESIGN - DETAILED	8-77
CHECKED	5-78
REVISIONS	
FIELD CHANGES	

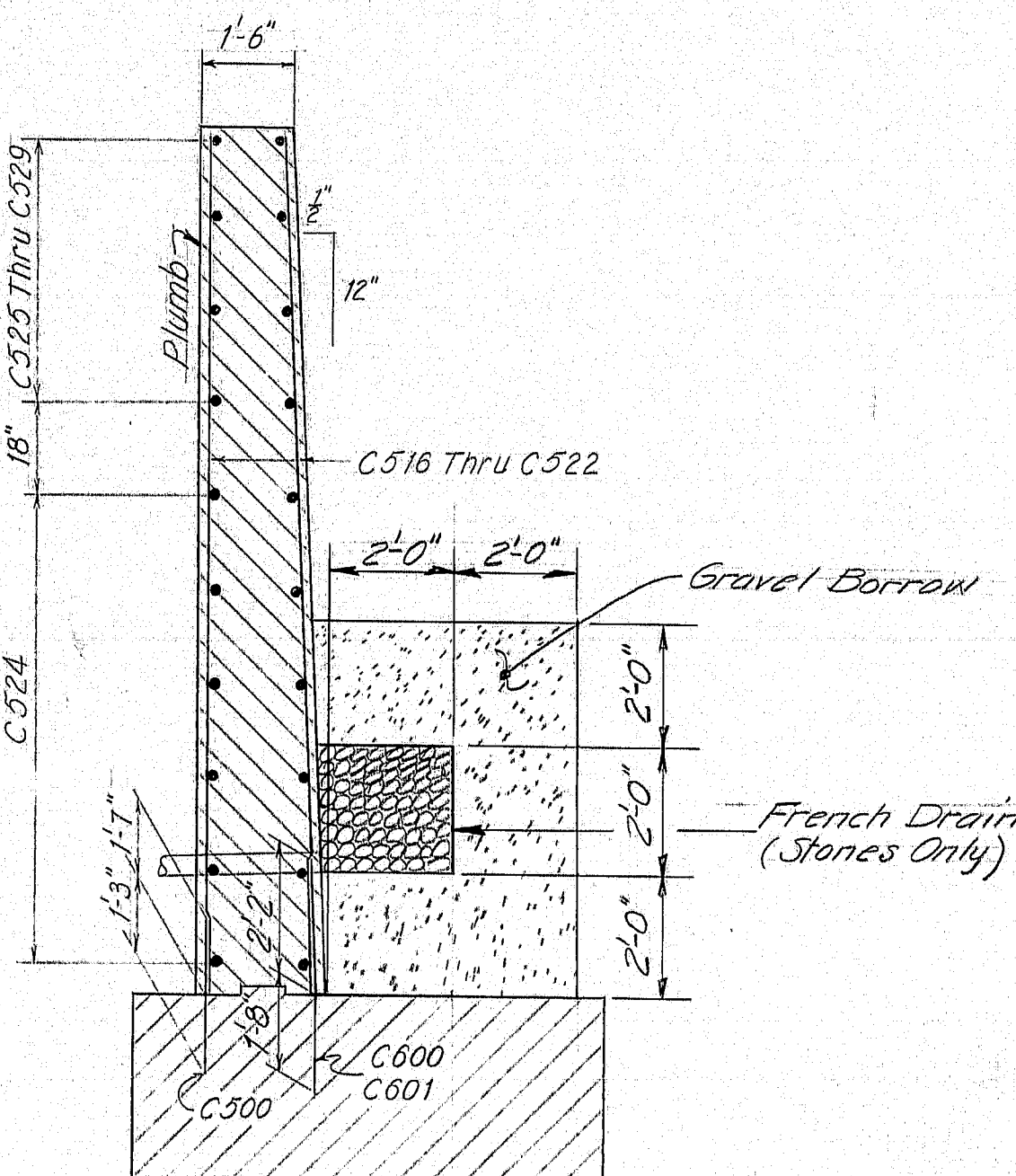
JANUARY 1988



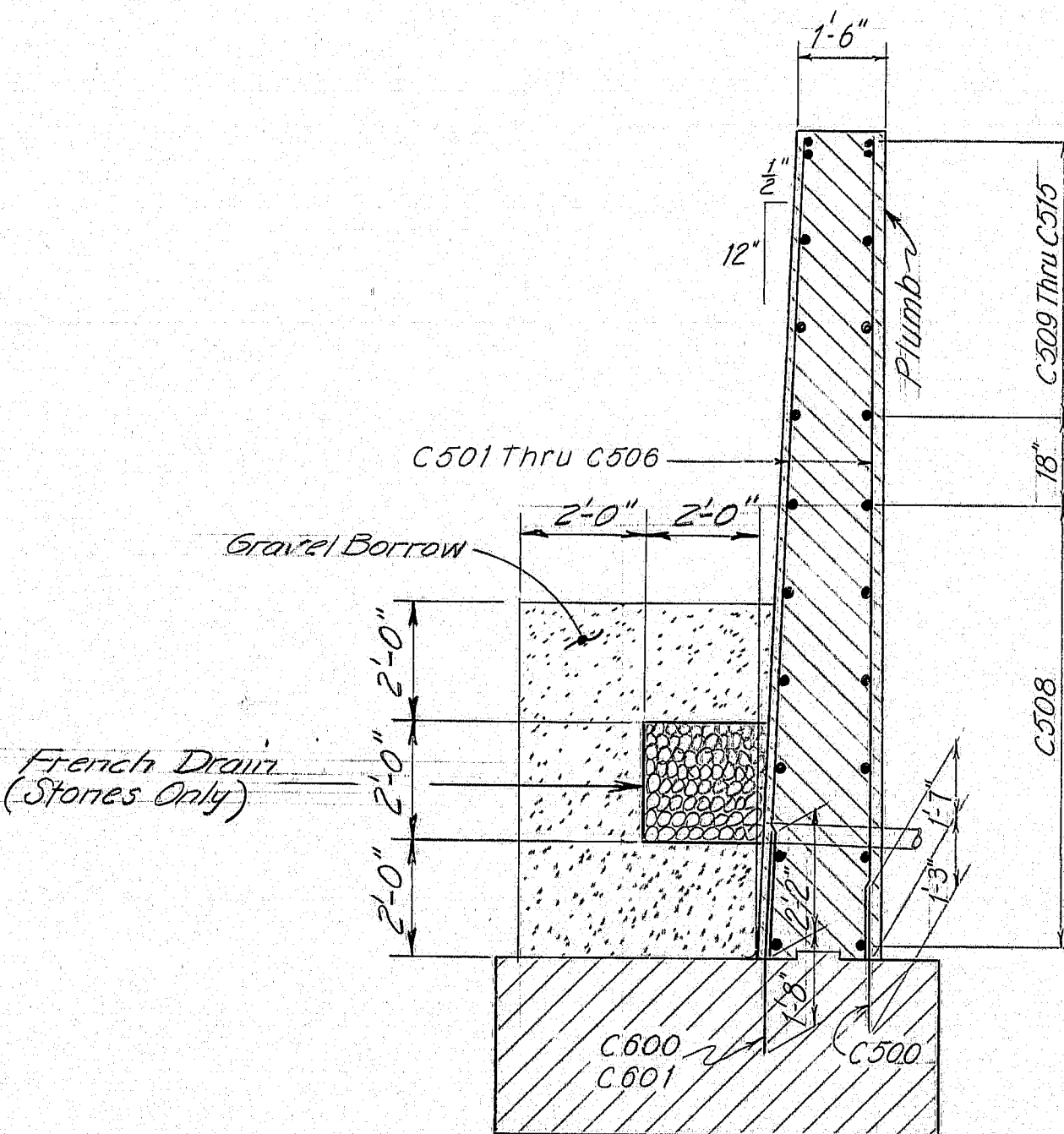
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IG-95-9(82)	11	25



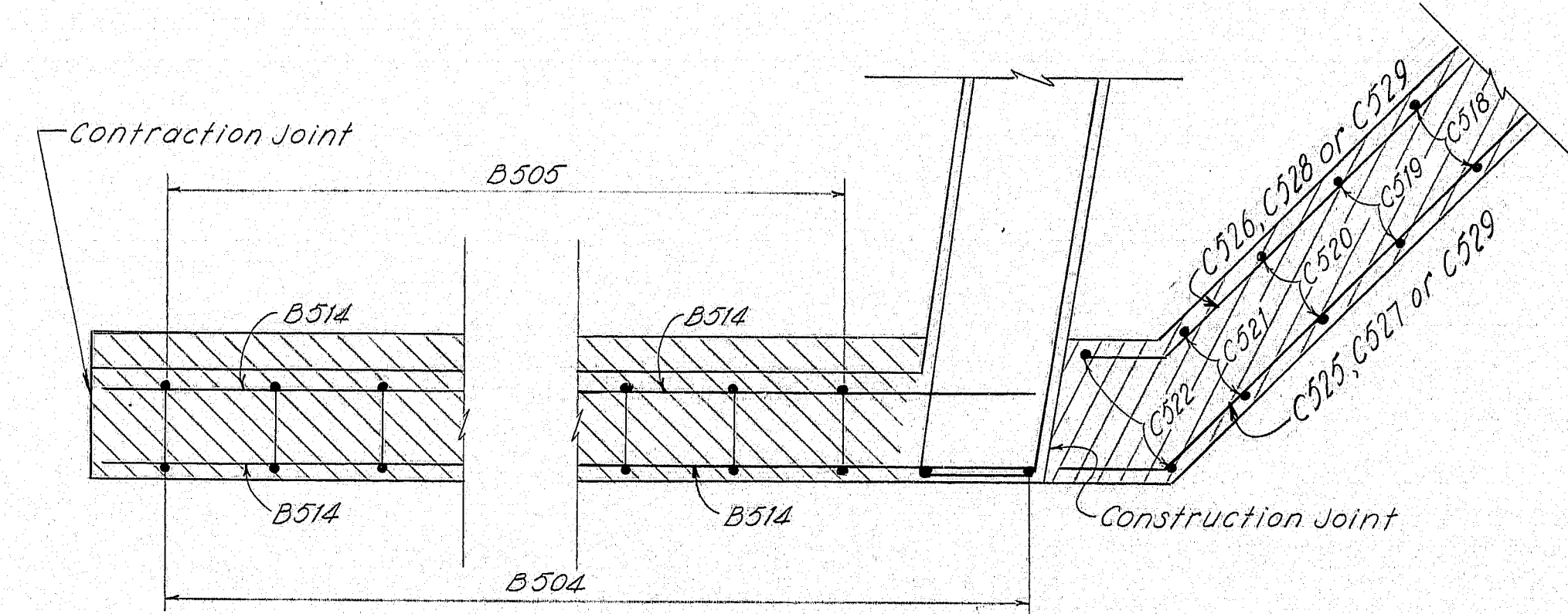
### ELEVATION



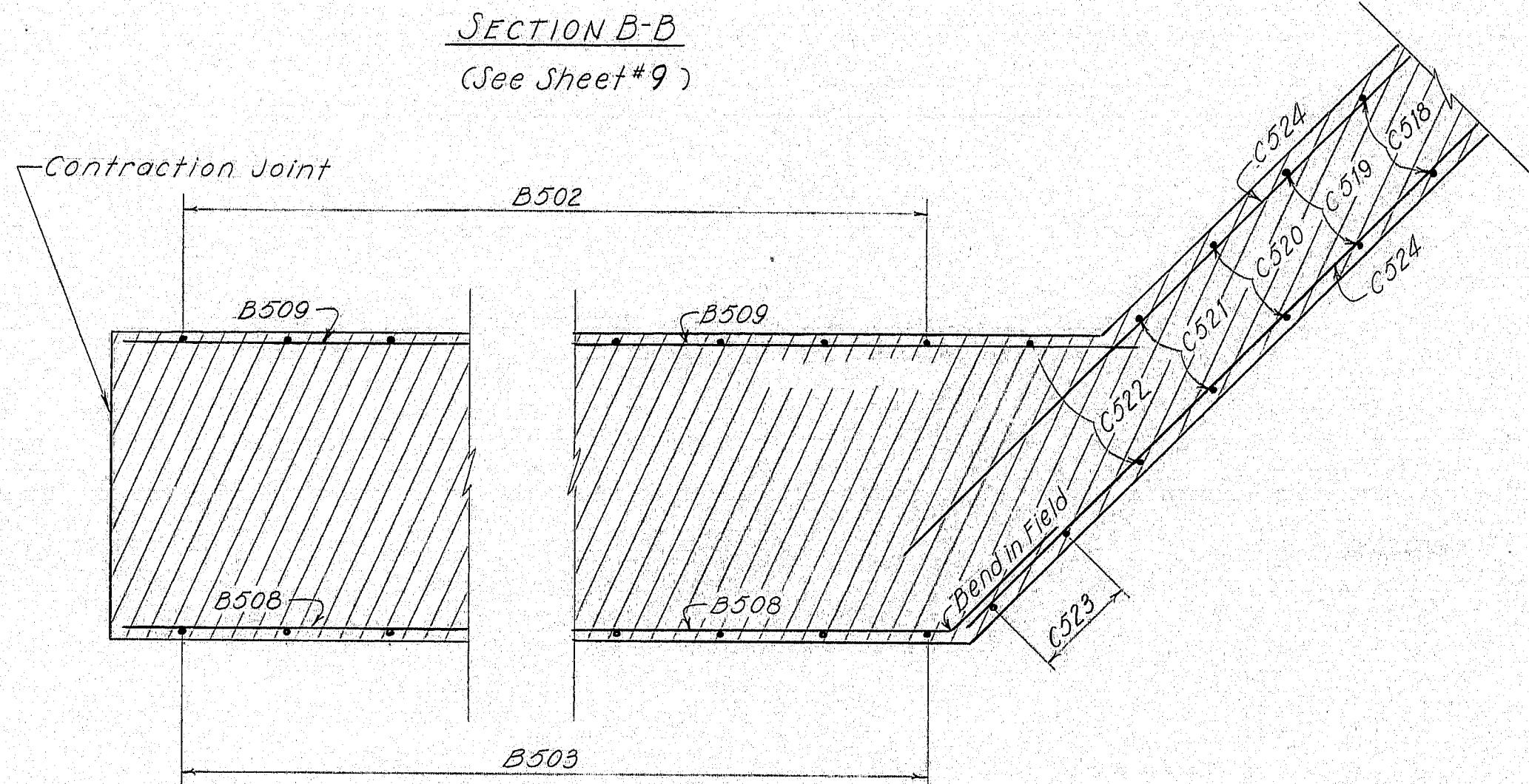
SECTION D-1



SECTION E-4



SECTION B-E  
(See Sheet # 9)



SECTION C-  
(See Sheet #9)

As Bu. It 1979  
RMJ 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

---

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
WINGS NO. 3 & NO. 4

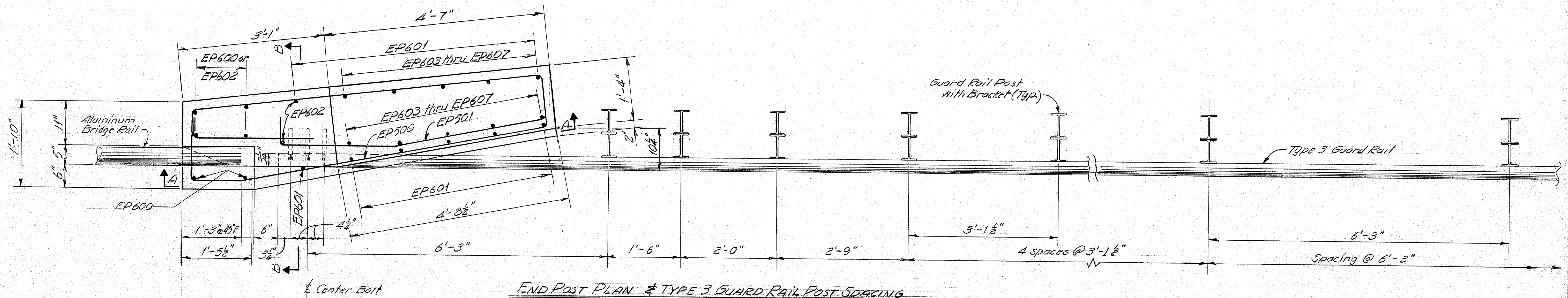
SHEET 11 OF 25 AUGUSTA, MAINE June 1978

Note: For Footing Reinforcing Ste  
See Sheet #7

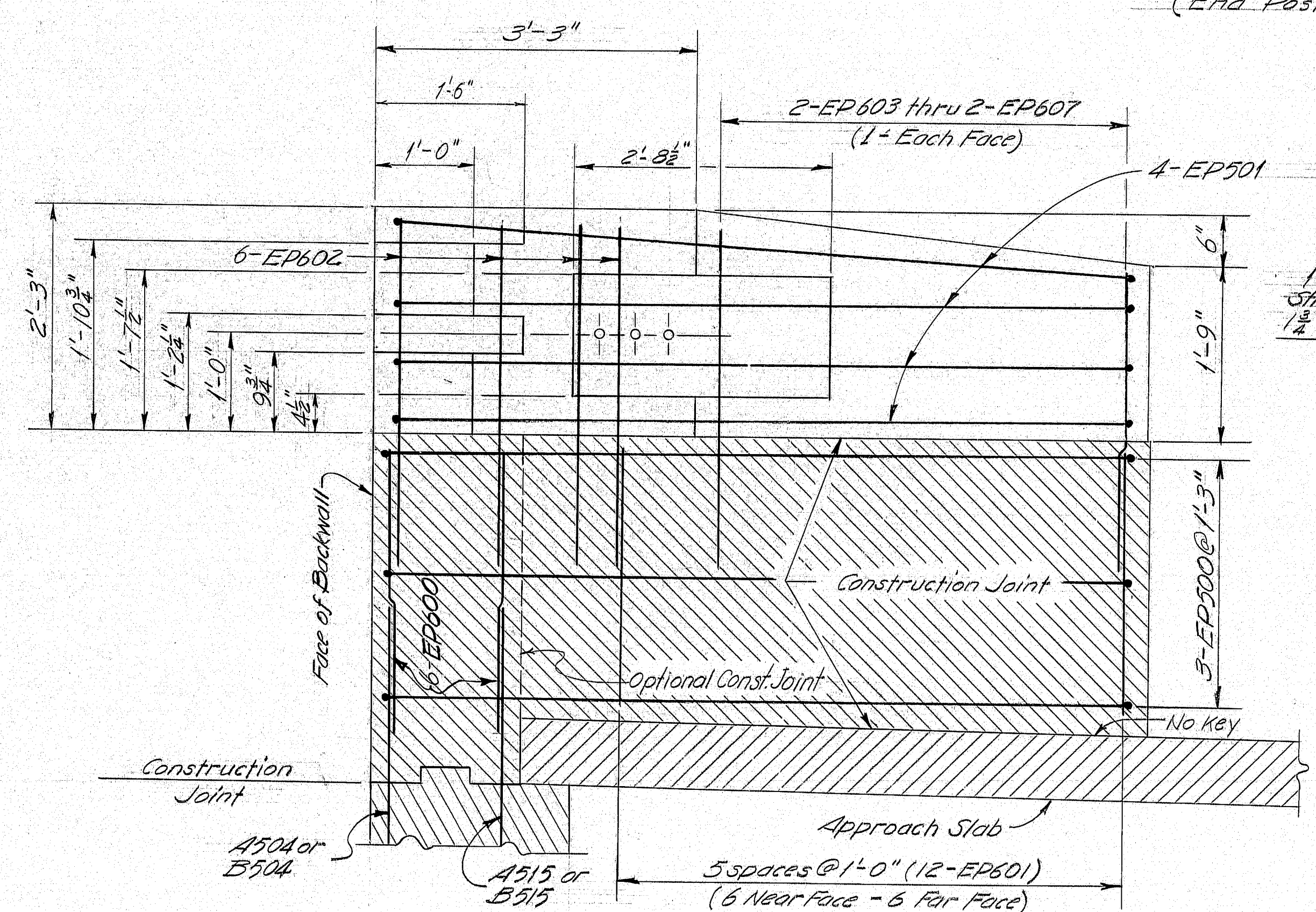
166-143



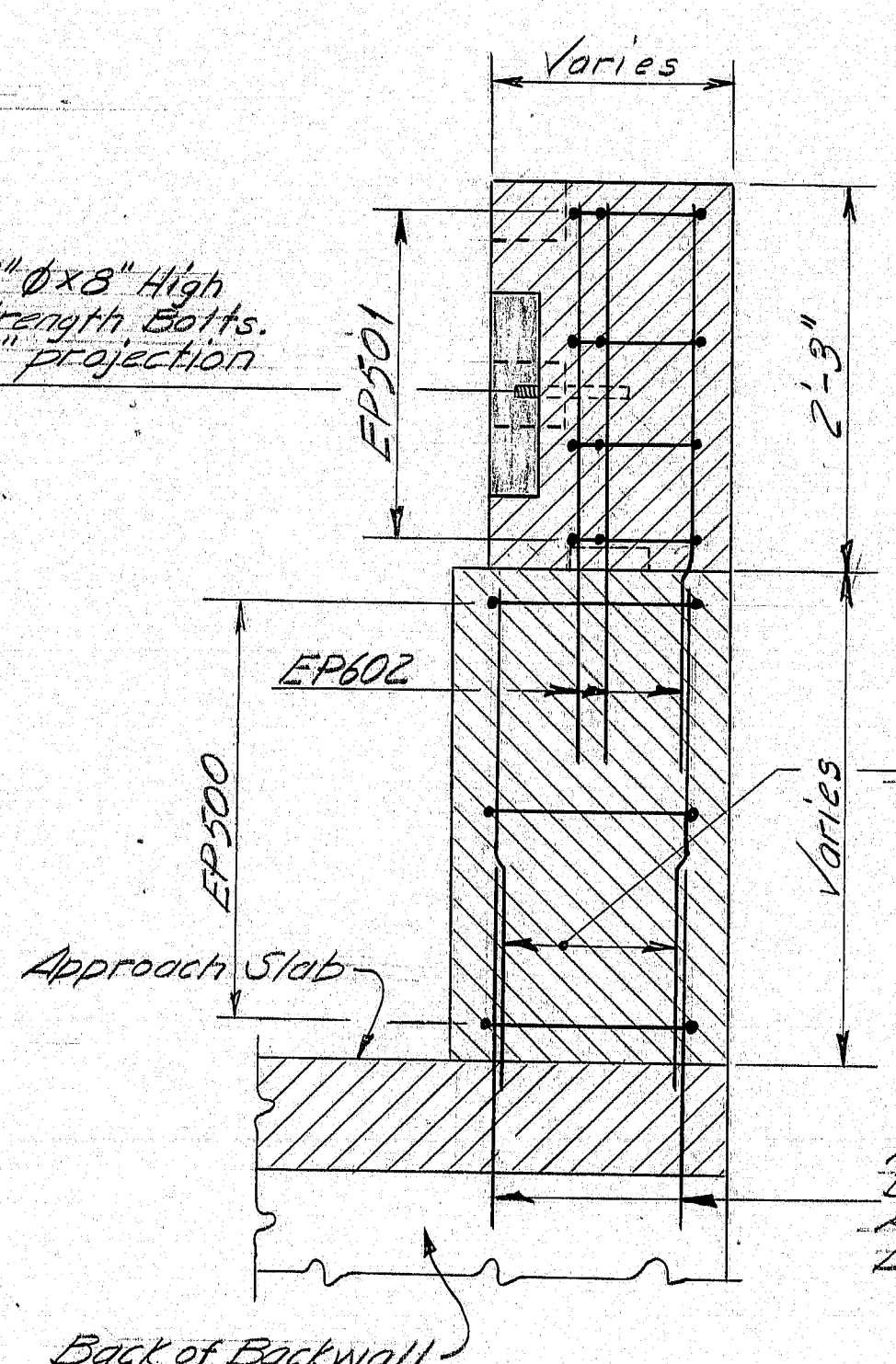
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	12	25



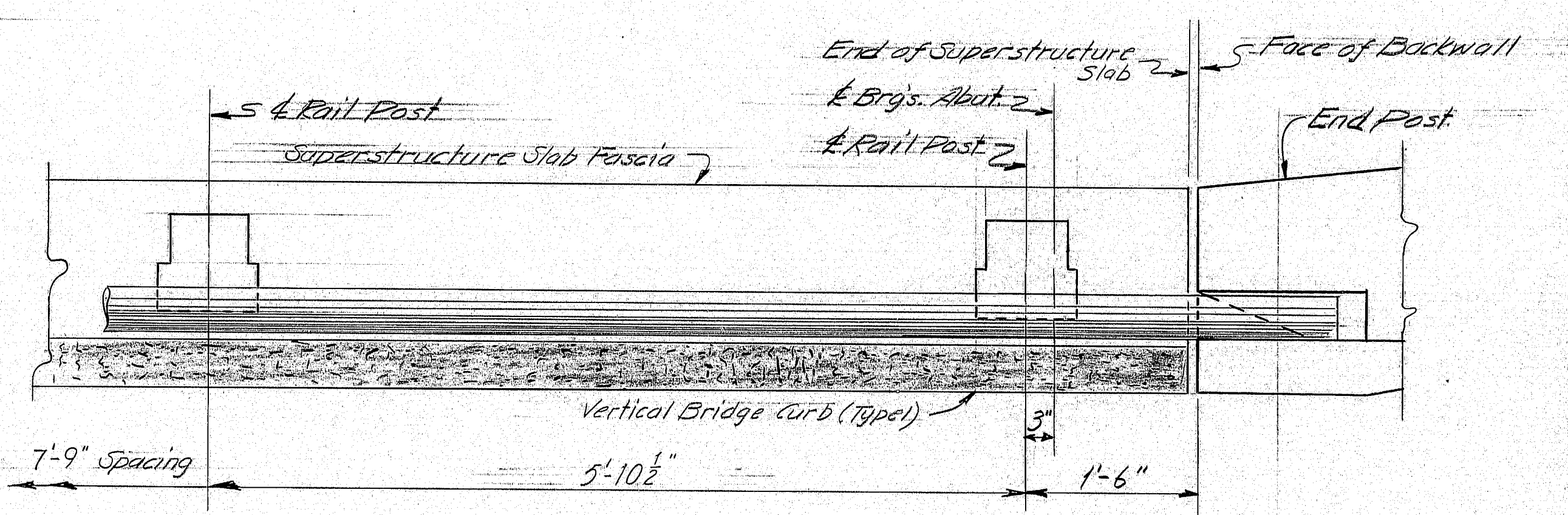
**END POST PLAN & TYPE 3 GUARD RAIL POST SPACING**  
(End Post #1 & #3 Shown, #2 & #4 Opposite Hand)



**SECTION A-A**



**SECTION B-B**



**BRIDGE RAIL POST SPACING**

**REFERENCES**

- 1) For End Post Locations and Abutment Details see Sheets No. 8 & 9
- 2) For Superstructure Rail Post Spacing see Sheet No. 18
- 3) For Bridge Rail Details see Standard Details (BD 11A-77) Sheet No. 24

**NOTES**

- 1) Chamfer all exposed edges of concrete a consistent dimension between 1/4" & 3/4" inclusive, unless otherwise indicated.
- 2) Reinforcing steel shall have 2 inches cover unless otherwise indicated.
- 3) Protective Coating for Concrete Surfaces: All exposed faces of End Posts.

As Built 1979

RMJ 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**INTERSTATE 95 NB**  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
END POST & RAIL DETAILS  
SHEET 12 OF 25 AUGUSTA, MAINE June 1978

166-144

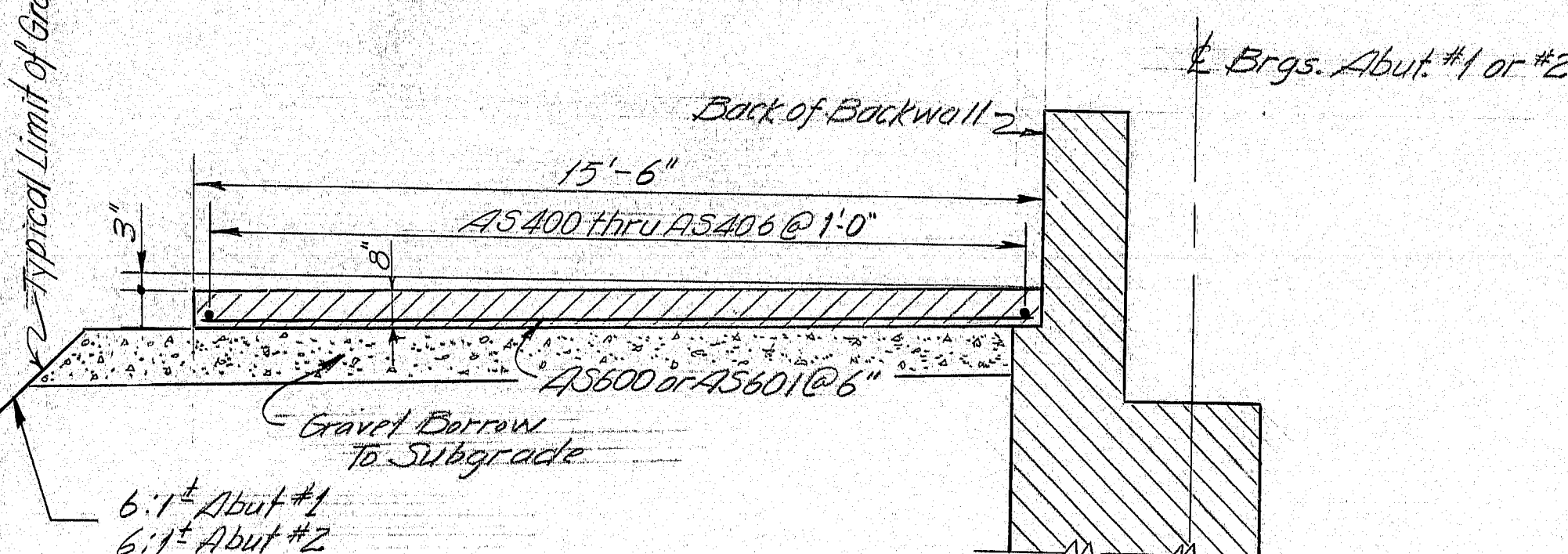
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	RMJ	4-78
CHECKED	RCB	5-78
REVISIONS		
FIELD CHANGES		
<b>PLANS</b>		



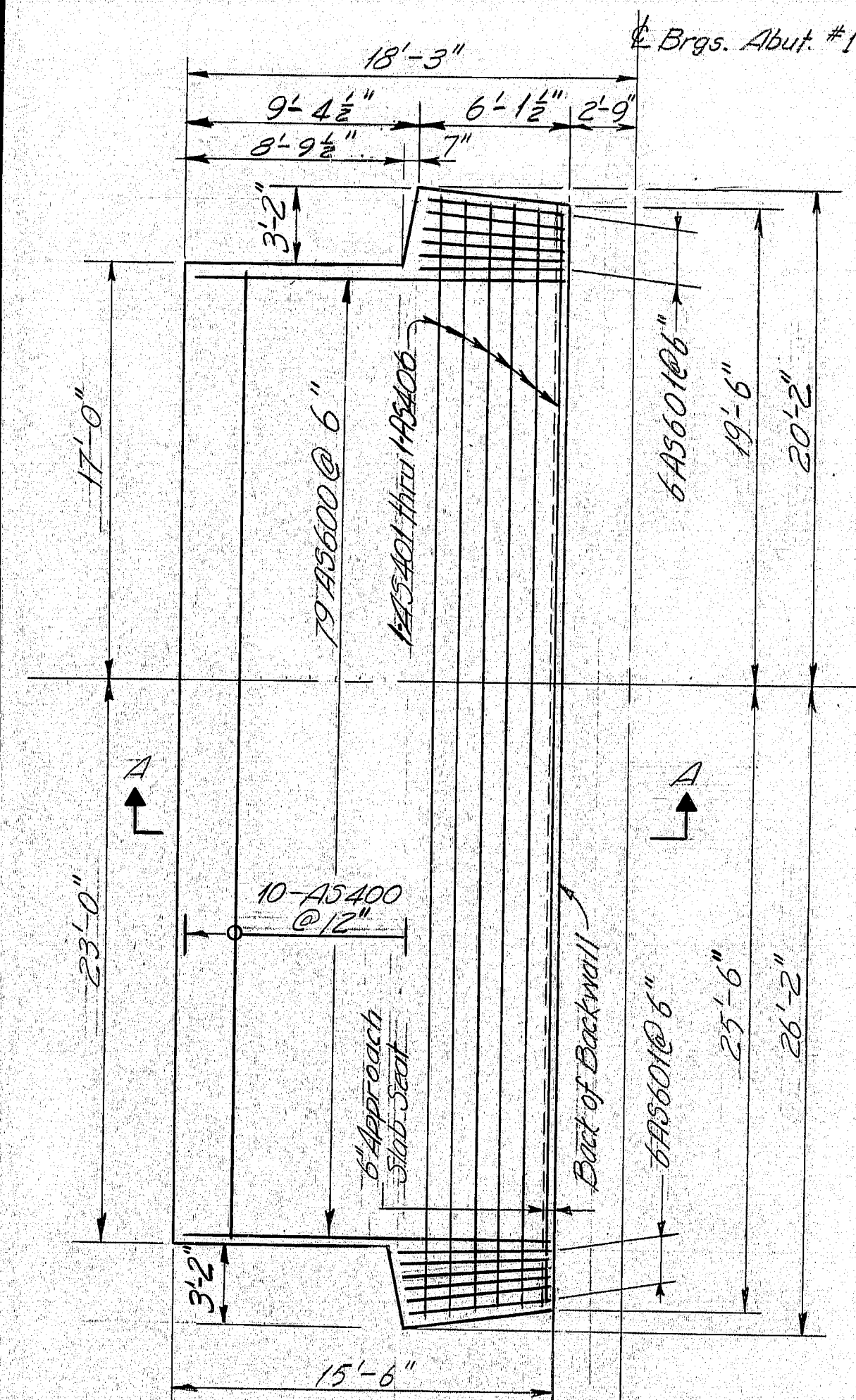
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	AWD	4-78
CHECKED	RLB	5-78
REVISIONS		
FIELD CHANGES		

PLANS

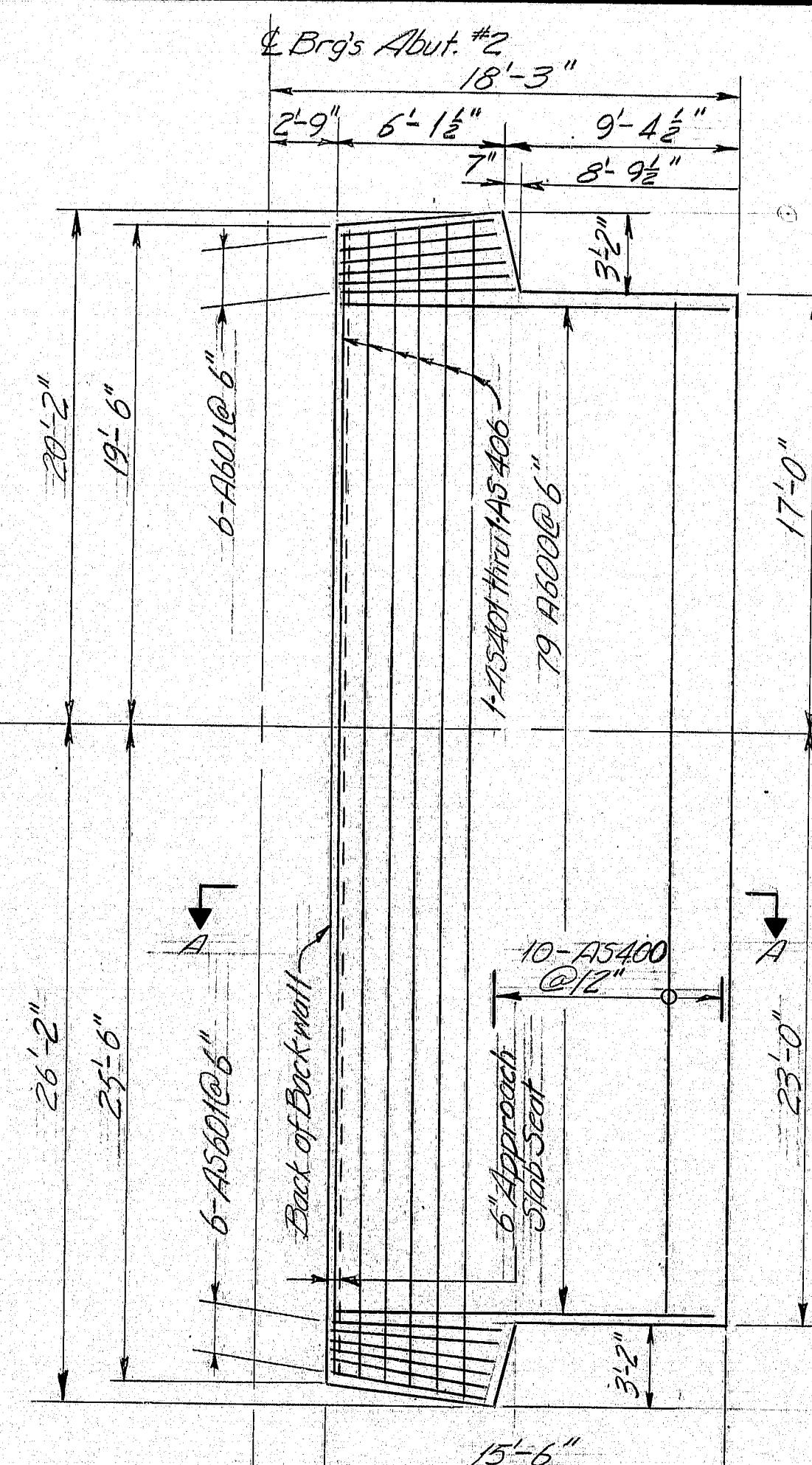
Typical Limit of Gravel Borrow



SECTION A-A

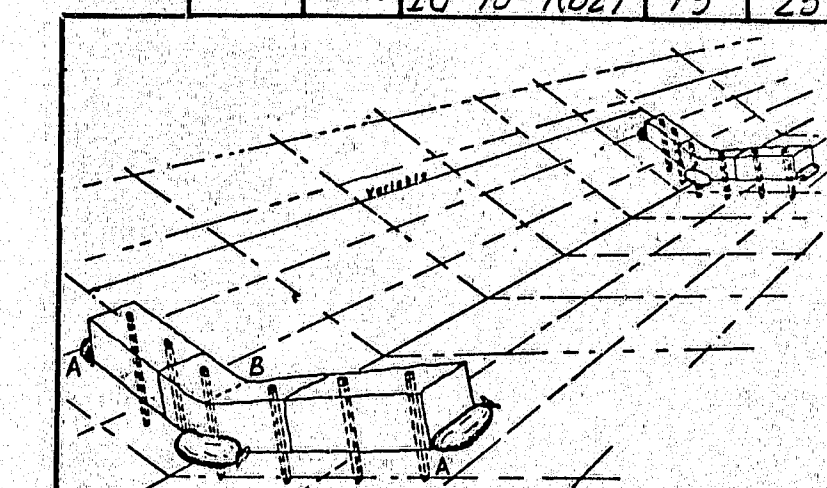


PLAN-APPROACH SLAB  
ABUTMENT #1



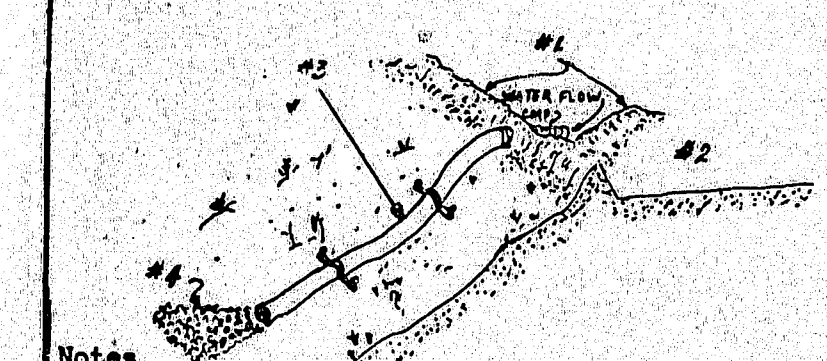
PLAN-APPROACH SLAB  
ABUTMENT #2

F.H.W.A. SHEET NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	13	25



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

EROSION CHECK for DITCH



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

TEMPORARY BERM and SLOPE DRAIN

TEMPORARY EROSION CONTROL

As Built 1979  
Rm 3 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

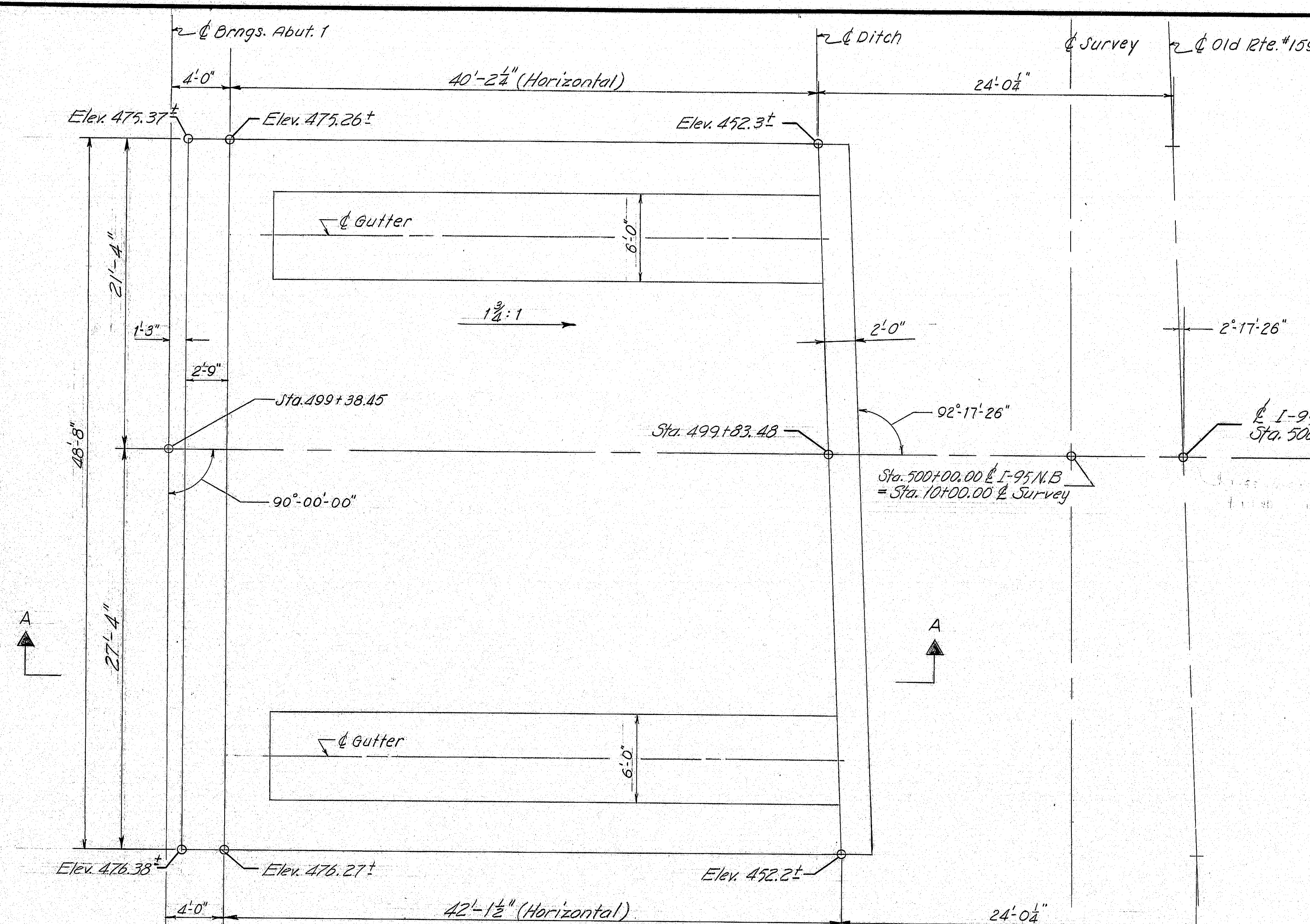
INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY

APPROACH SLAB  
SHEET 13 OF 25 AUGUSTA, MAINE June 1978

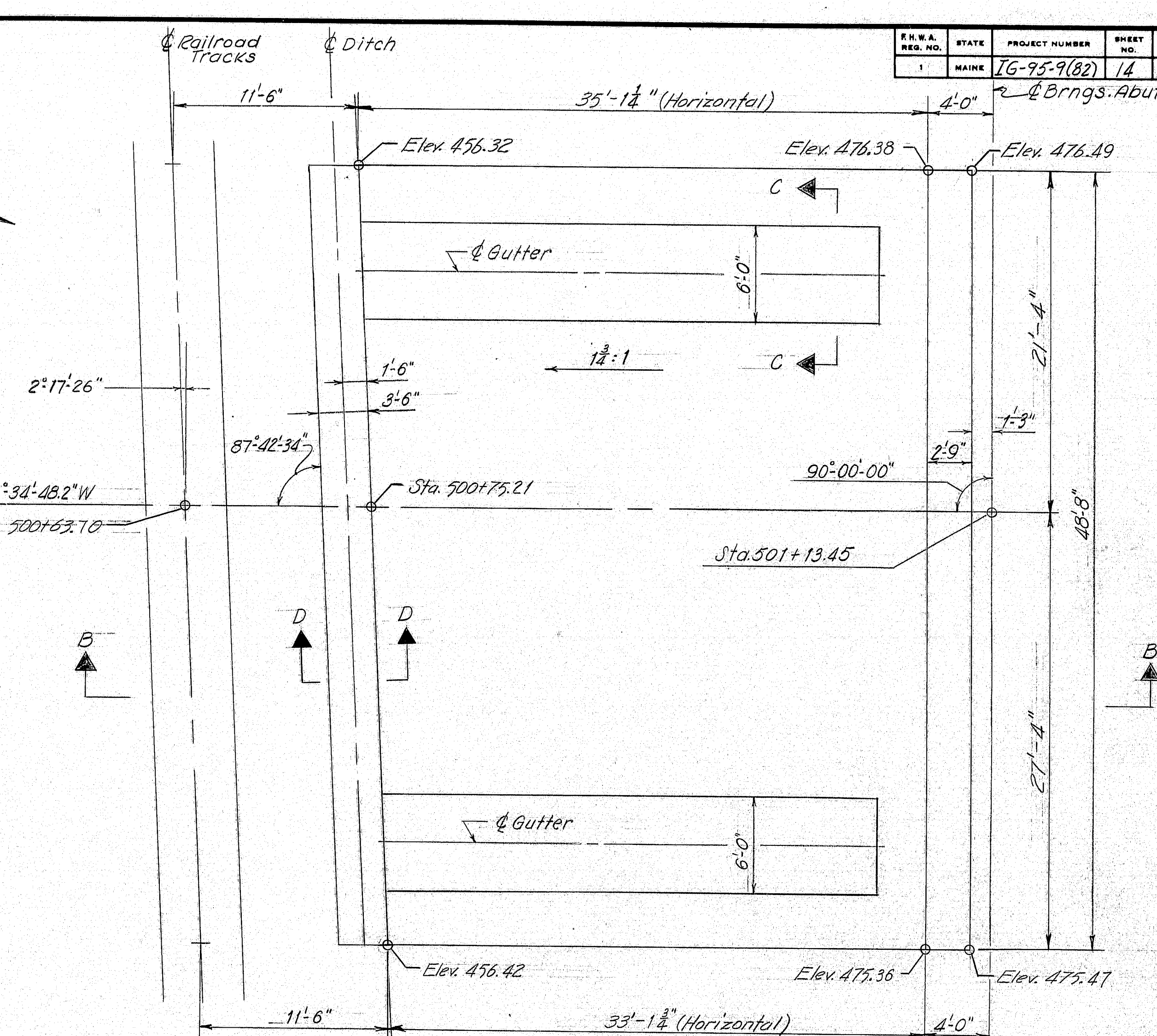
166-145



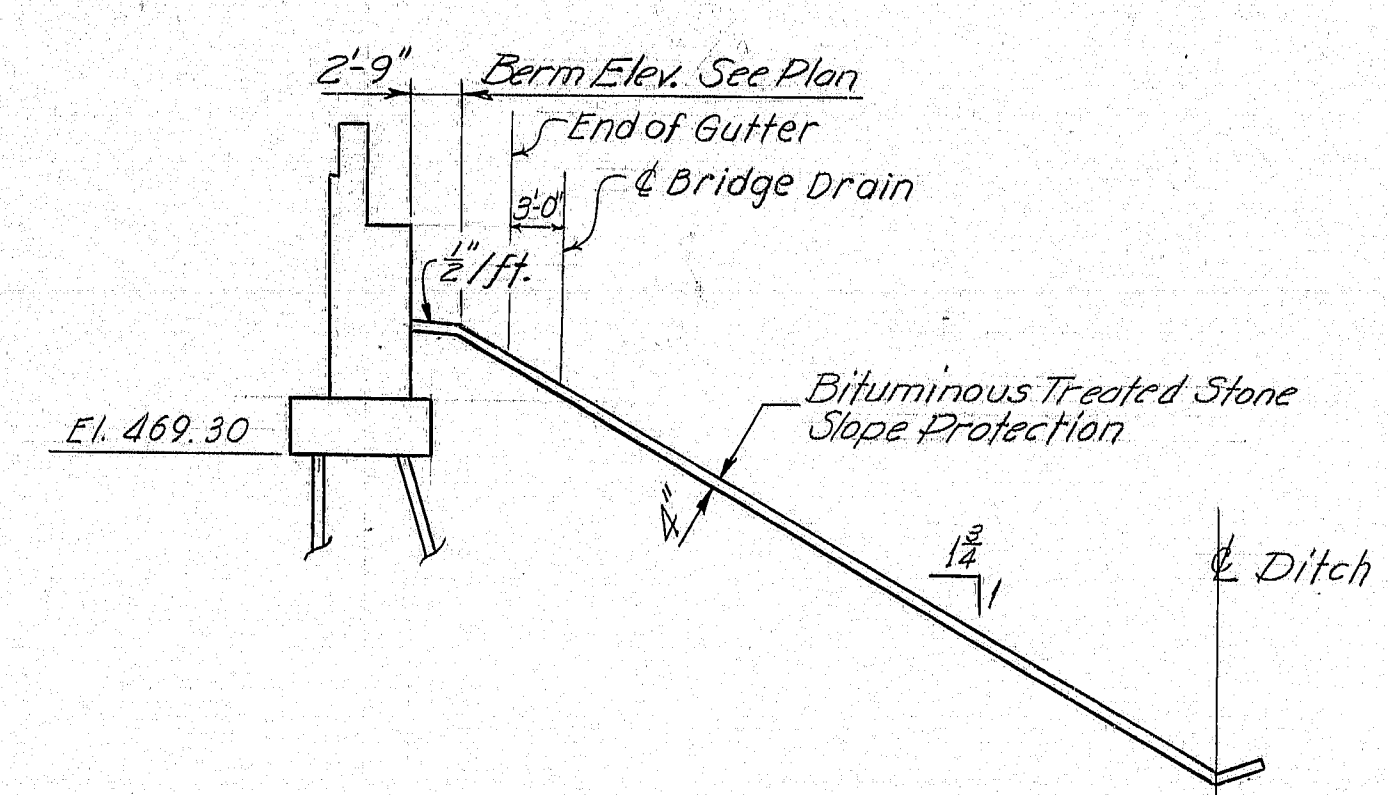
F.R.W.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	14	25



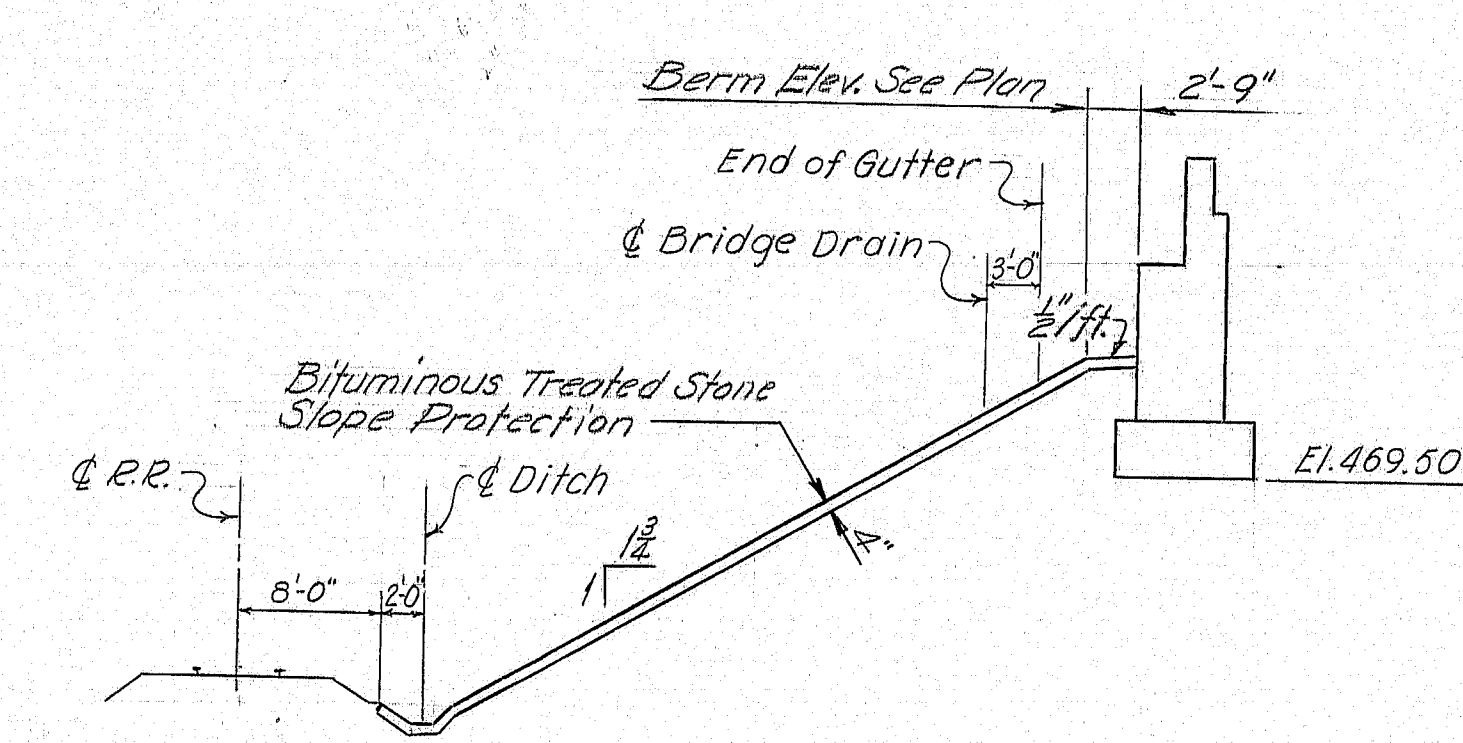
PLAN - ABUTMENT #1



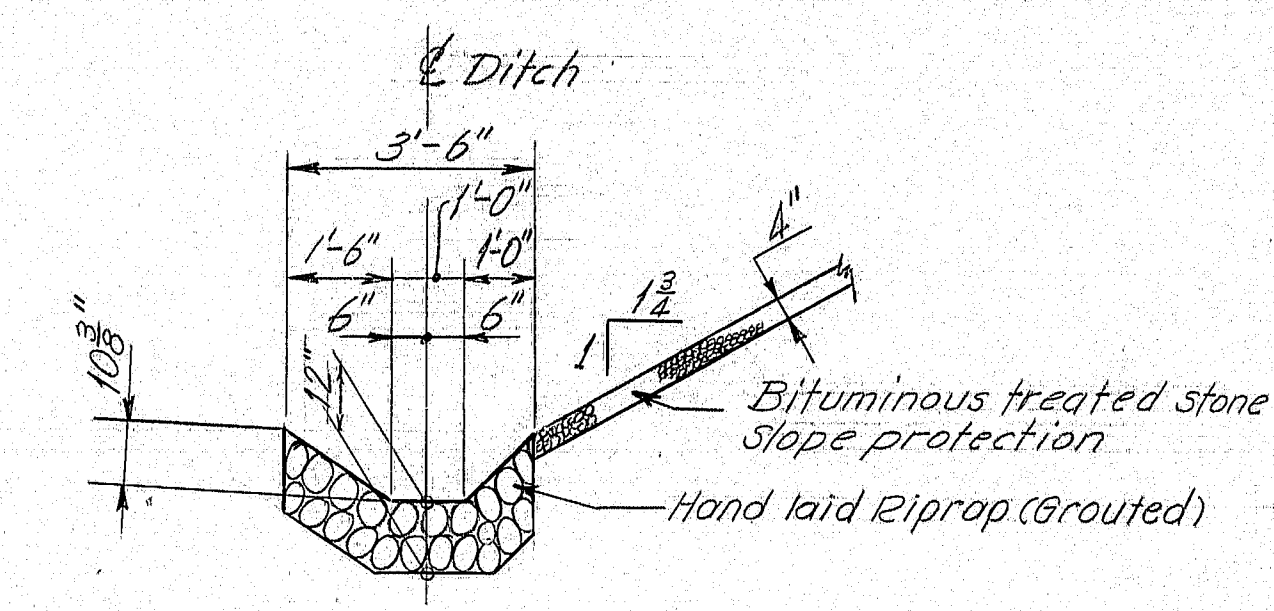
PLAN - ABUTMENT #2



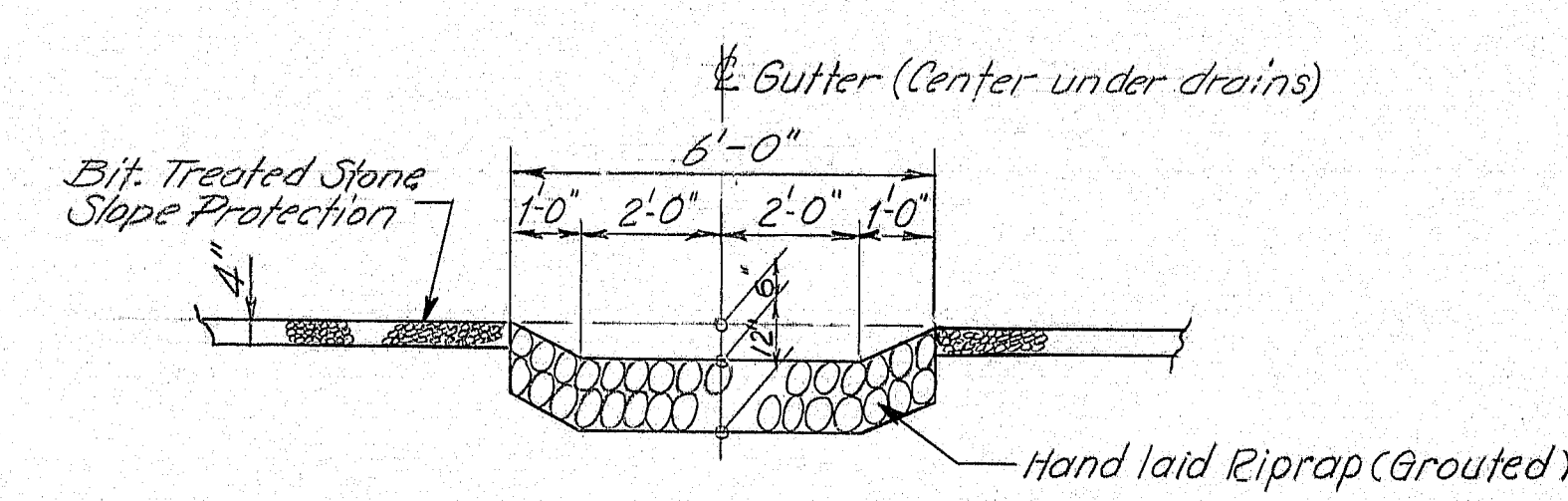
SECTION A-A



SECTION B-B



SECTION D-D



SECTION C-C

REFERENCES

1. For location of Drains see Sheet # 18

As Built 1979  
R.M.J. 5-1-80

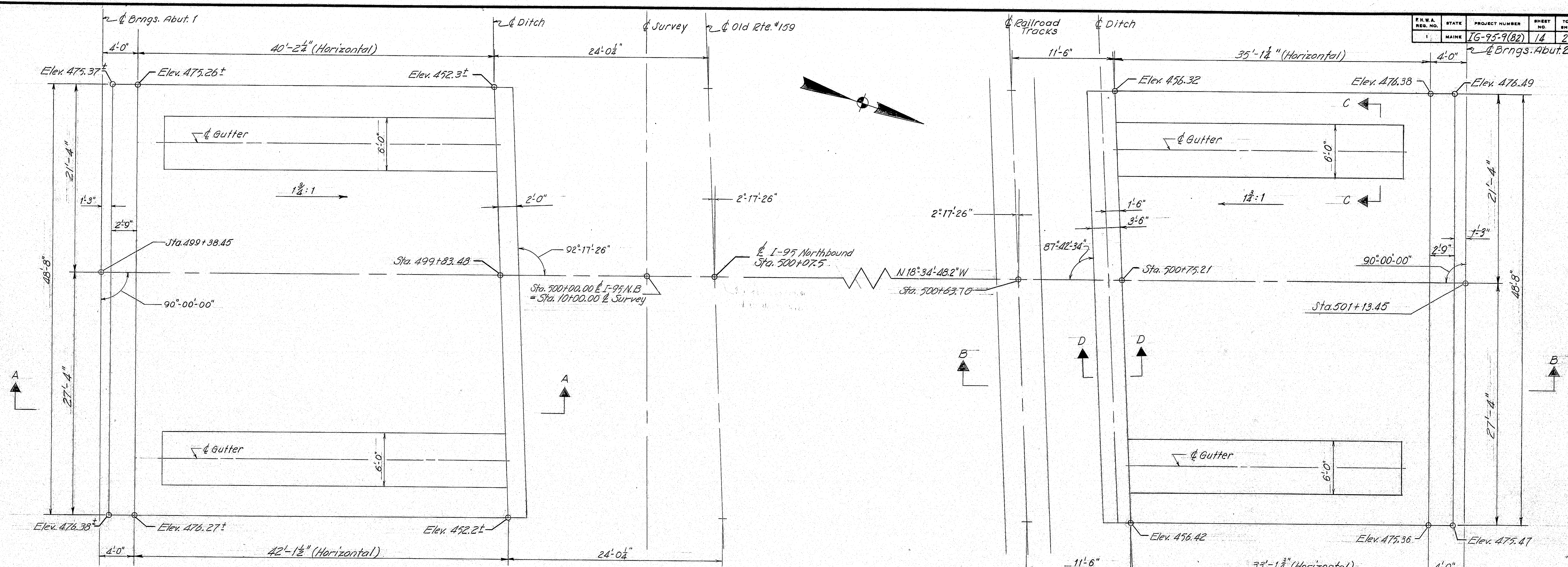
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
  
INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
SLOPE PROTECTION  
SHEET 14 OF 25 AUGUSTA, MAINE June 1978

166-146

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	RWD	5-77
CHECKED	CWA	5-77
REVISIONS	CLS	5-78
FIELD CHANGES		

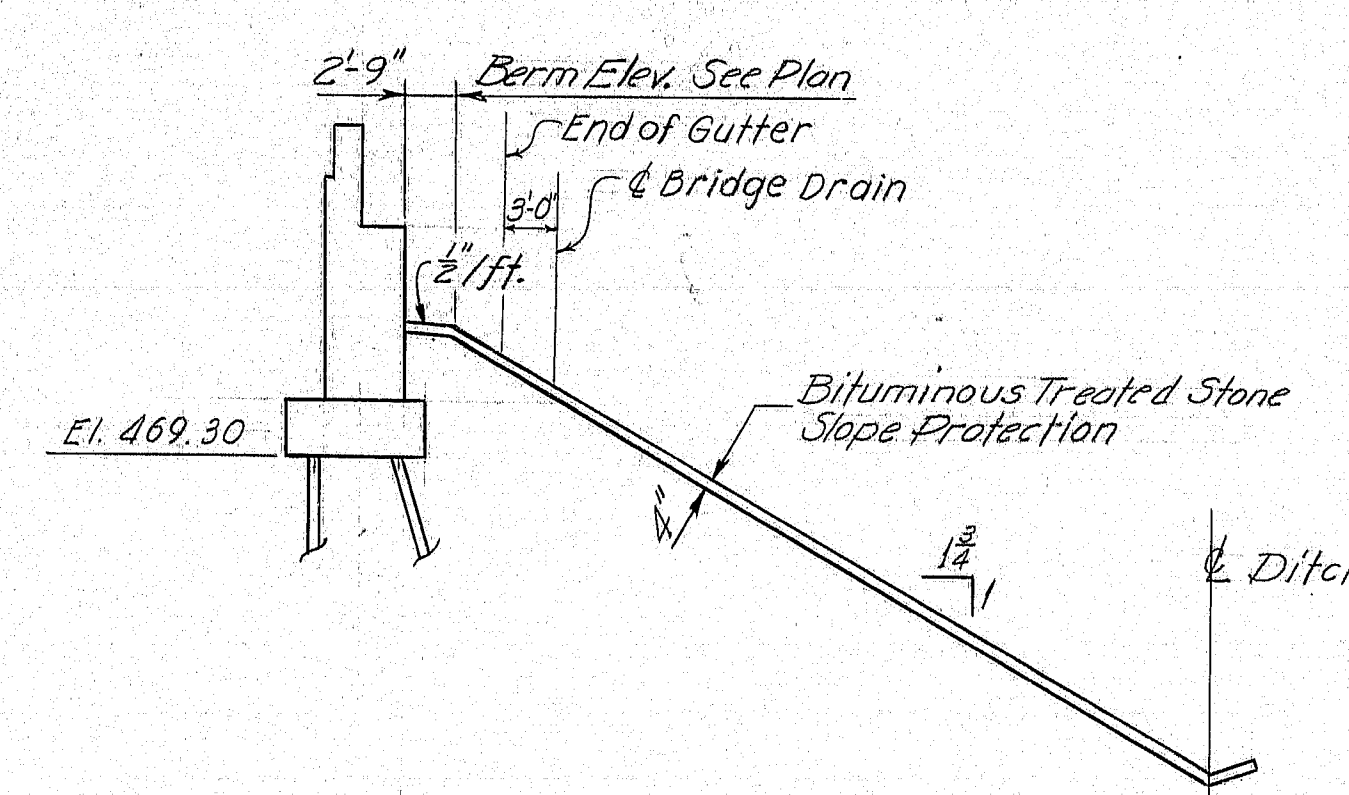


F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	14	25

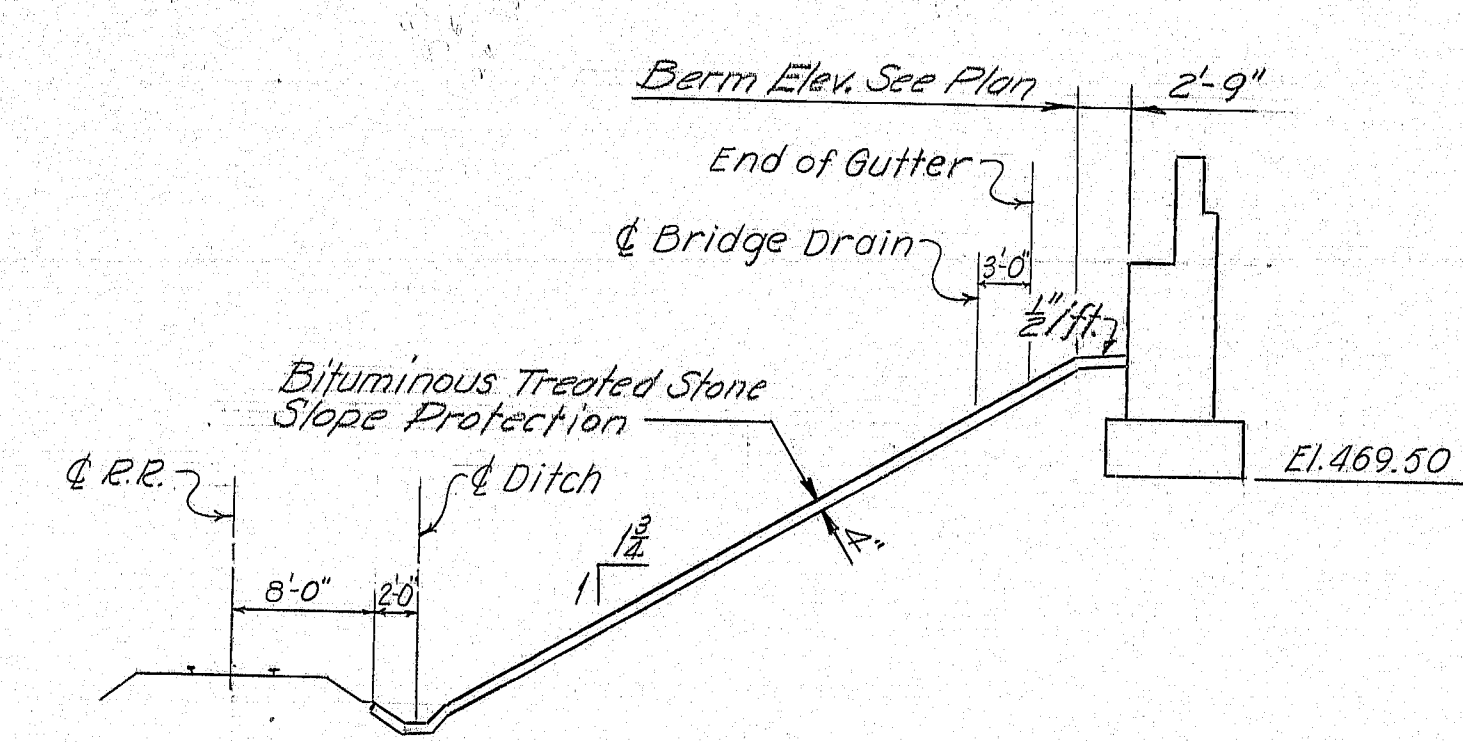


PLAN - ABUTMENT #1

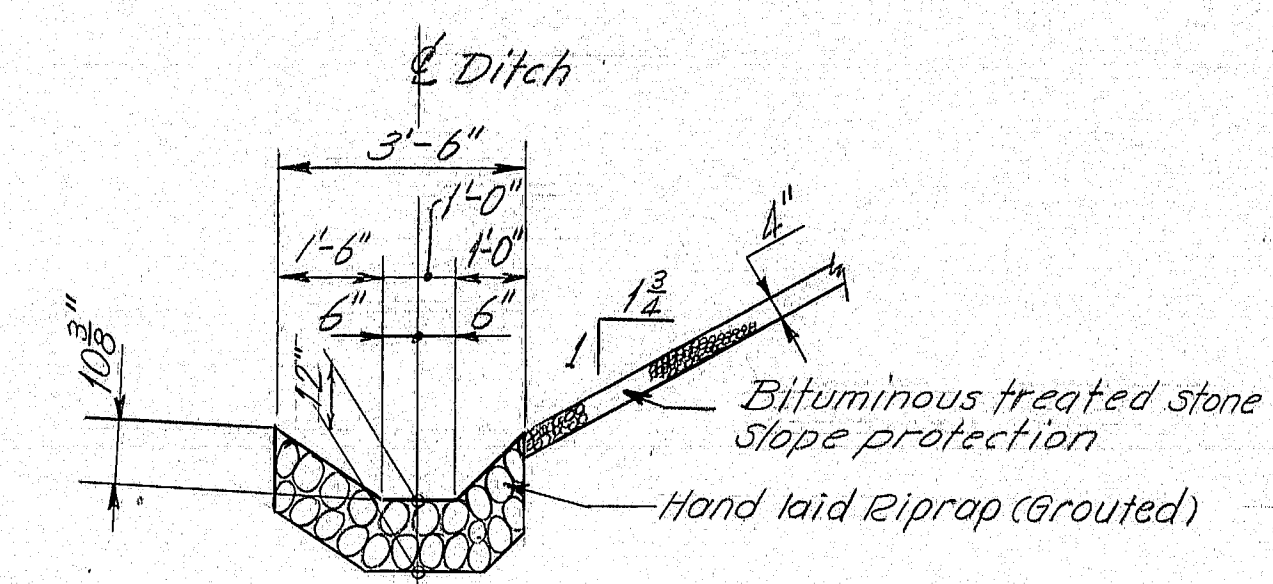
PLAN - ABUTMENT #2



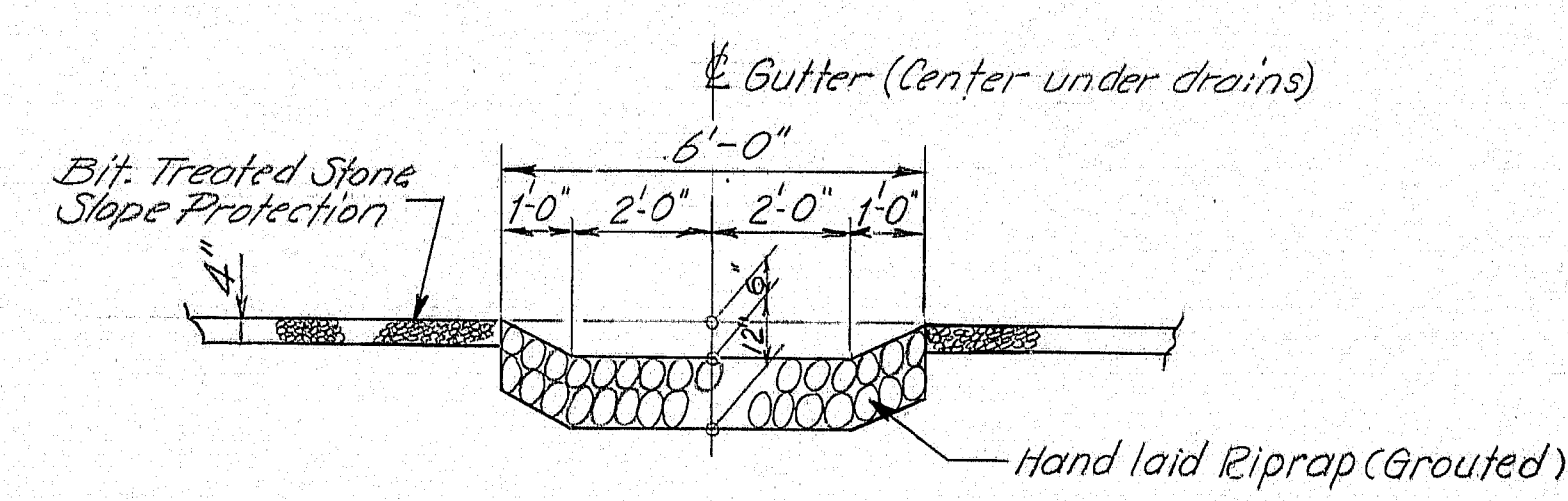
SECTION A-A



SECTION B-B



SECTION D-D



SECTION C-C

REFERENCES  
1. For location of Drains see Sheet #18

As Built 1979  
RMS 5-1-80

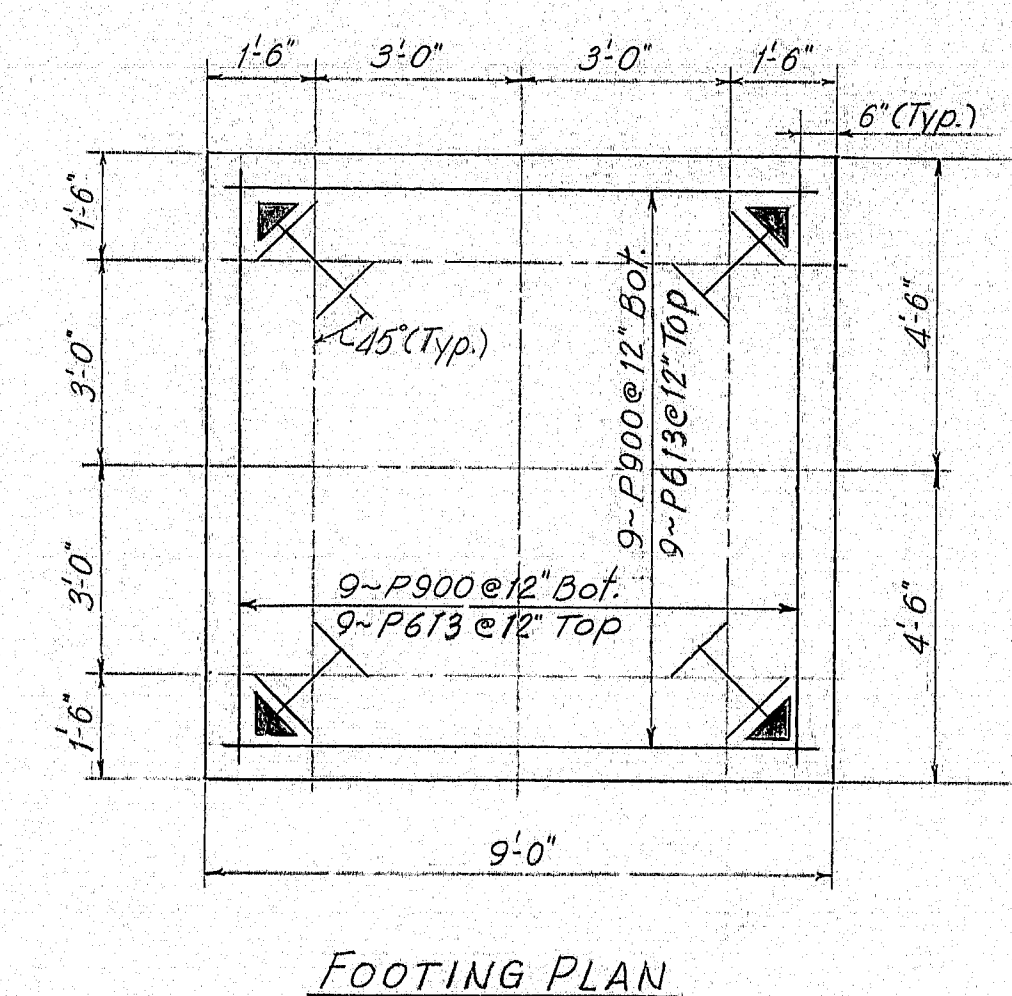
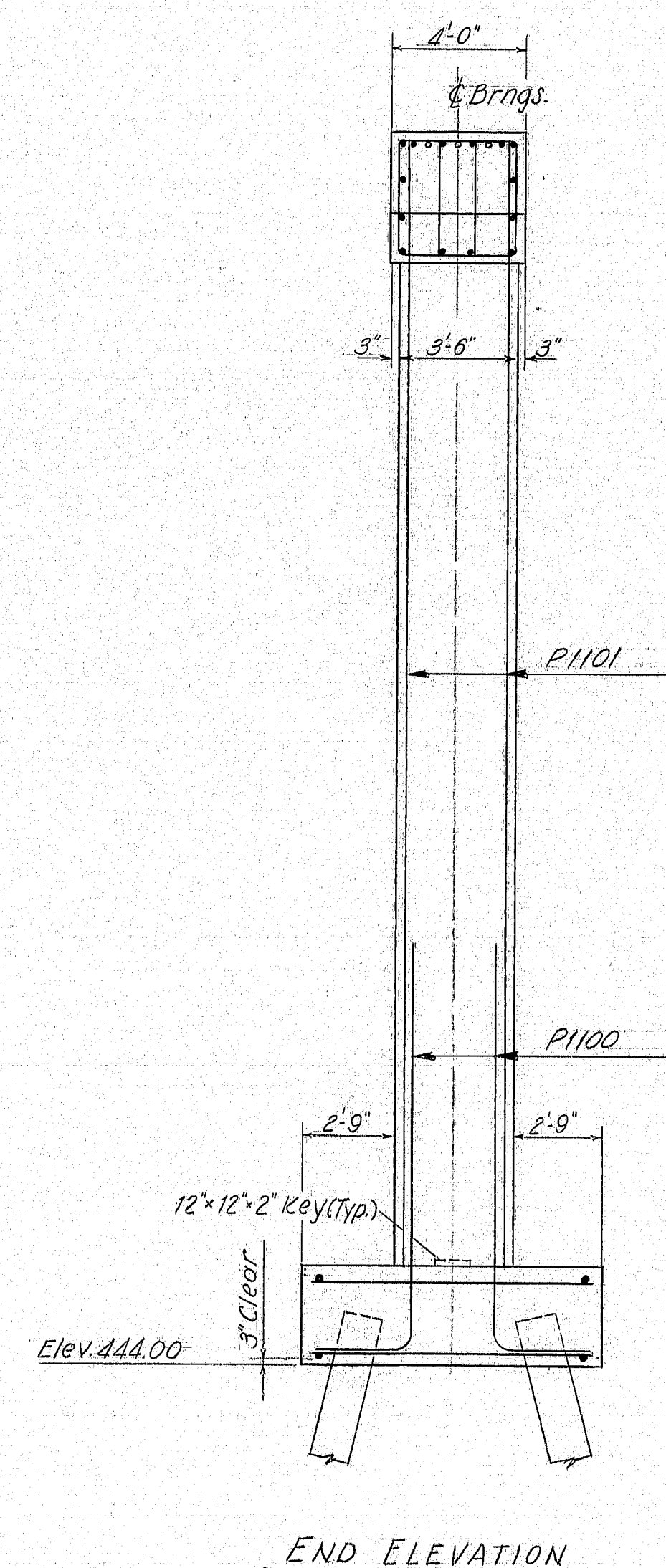
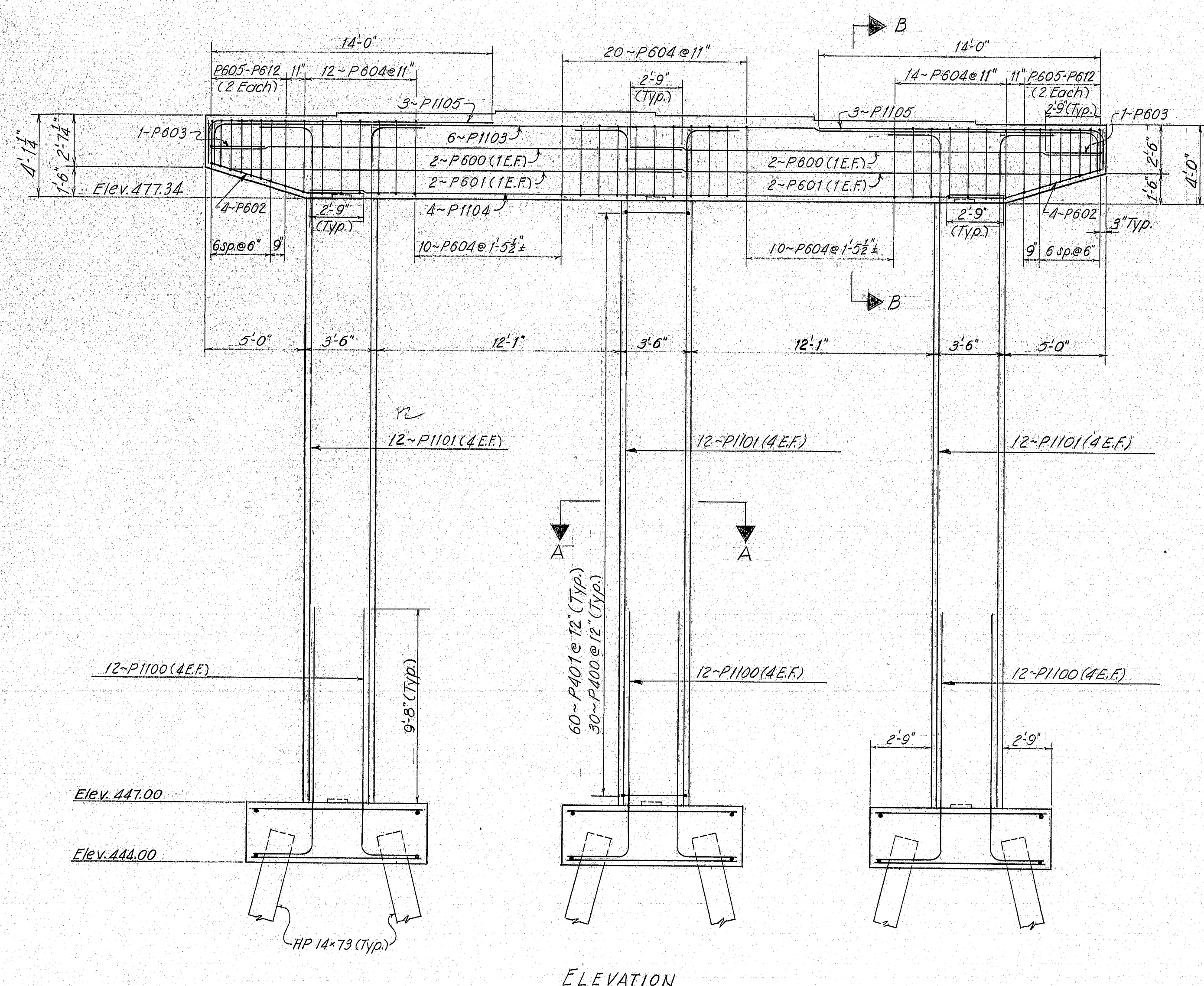
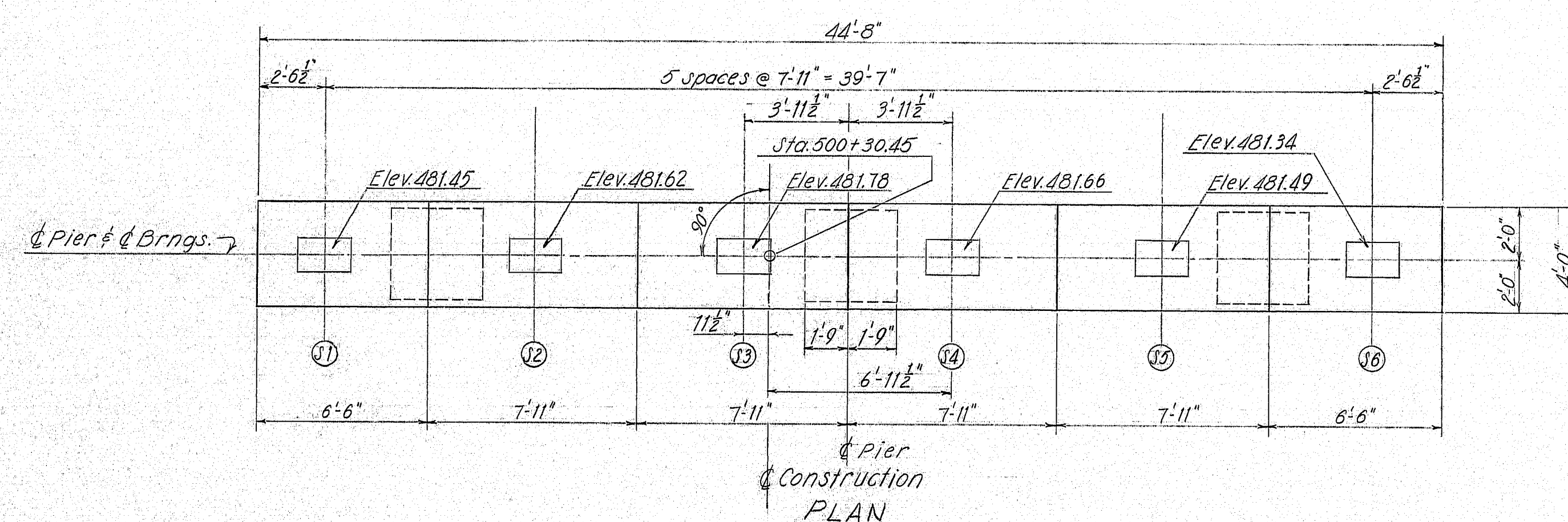
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
  
INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
SLOPE PROTECTION  
SHEET 14 OF 25 AUGUSTA, MAINE June 1978

166-146

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	RWD	8-77
CHECKED	CLB	5-78
REVISIONS		
FIELD CHANGES		

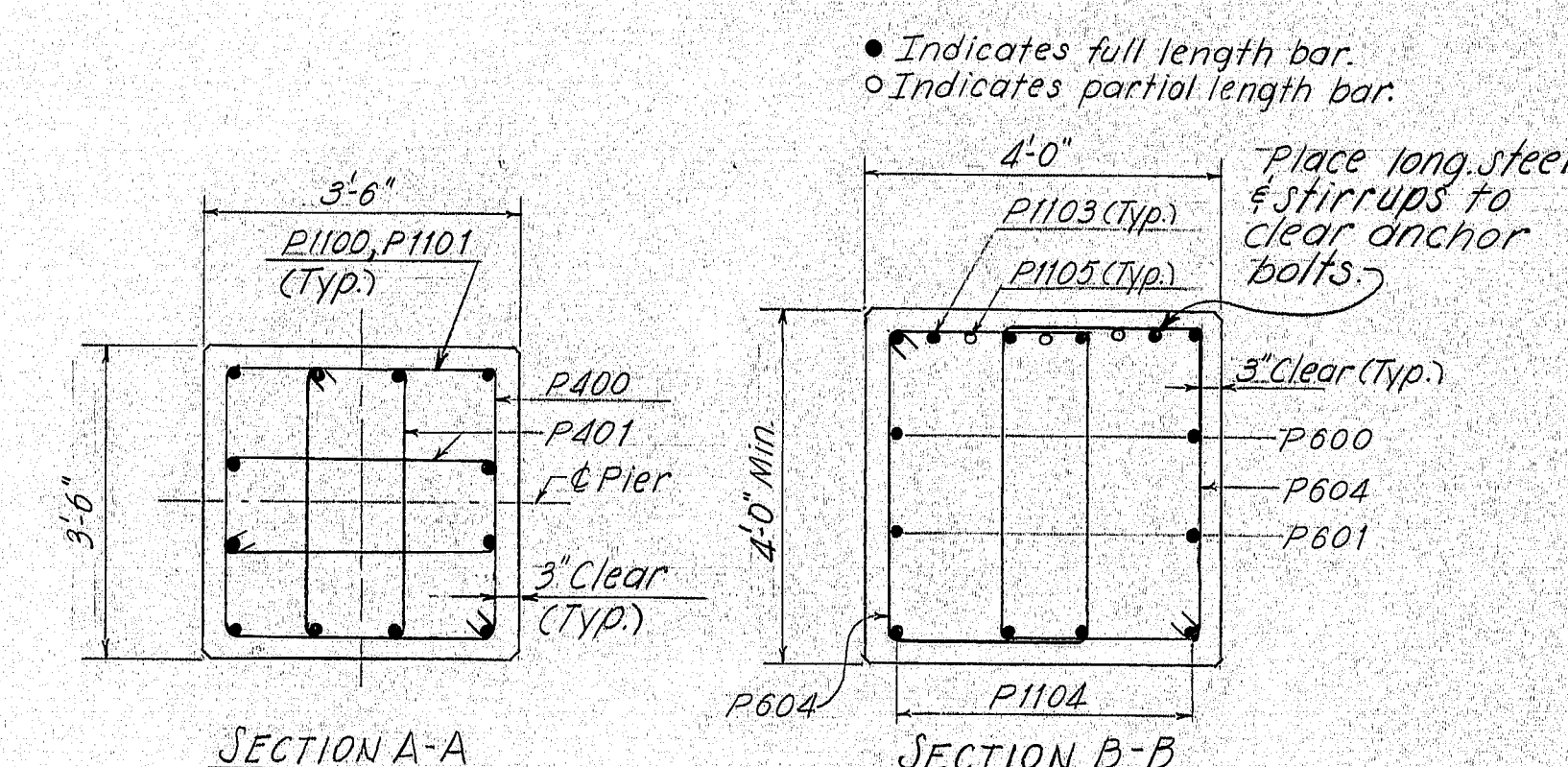


F.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	15	25



- PIER NOTES**
1. Chamfer all exposed edges of concrete a consistent dimension between  $\frac{1}{2}$  and  $\frac{3}{4}$  inclusive, unless otherwise indicated.
  2. Reinforcing steel shall have 3 inches minimum cover unless otherwise indicated.
  3. Place reinforcing steel on bridge seats to clear anchor bolts.
  4. Maximum pile loads: 82.3 tons (Pier).
  5. Following are number of piles required, size of piles and estimated driven lengths:  
12-HP 14x73 @ 28'

- DESIGN CRITERIA**
1. Critical AASHTO loading-Group II.
  2. Wind- 100 mph.



PROJECT DESIGN ENGINEER	DATE
DESIGN-DETAILED	2/7/78
REVISIONS	3-78
FIELD CHANGES	

As Built 1979  
2m3 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

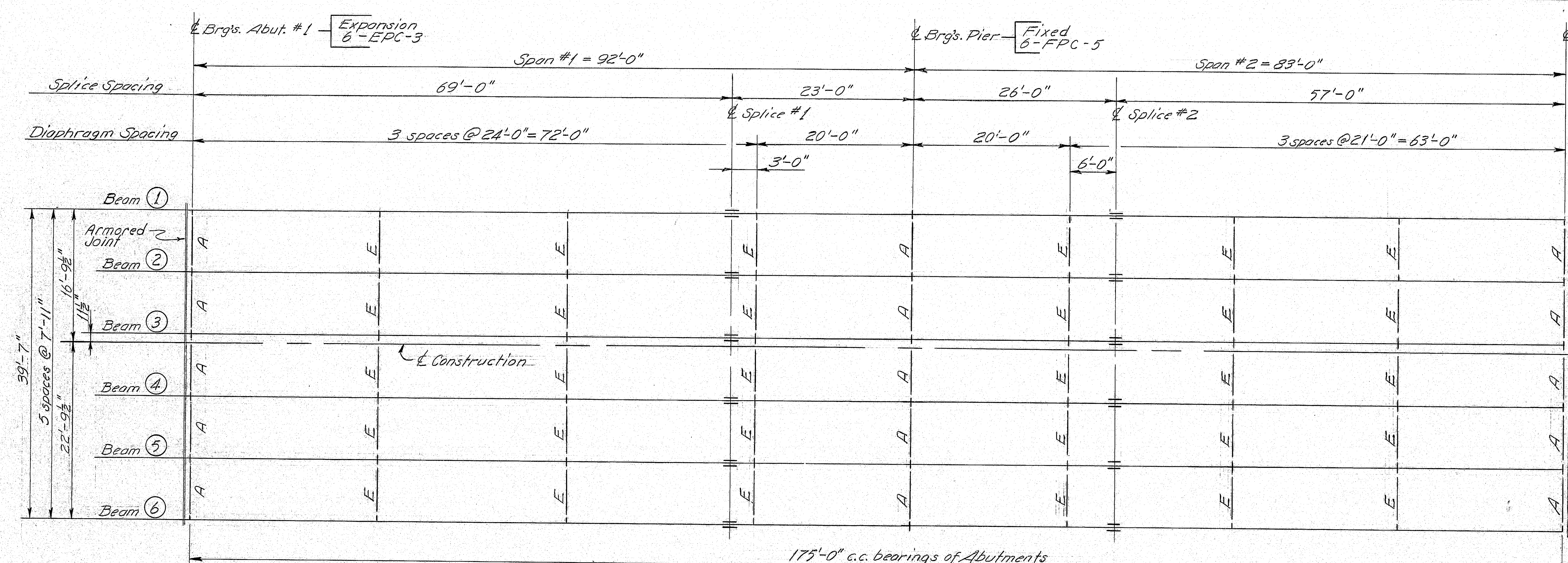
**INTERSTATE 95 NB**  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
PIER

SHEET 15 OF 25 AUGUSTA, MAINE June 1978

166-147



F.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IG-95-9(82)	16	25



### STRUCTURAL STEEL NOTES

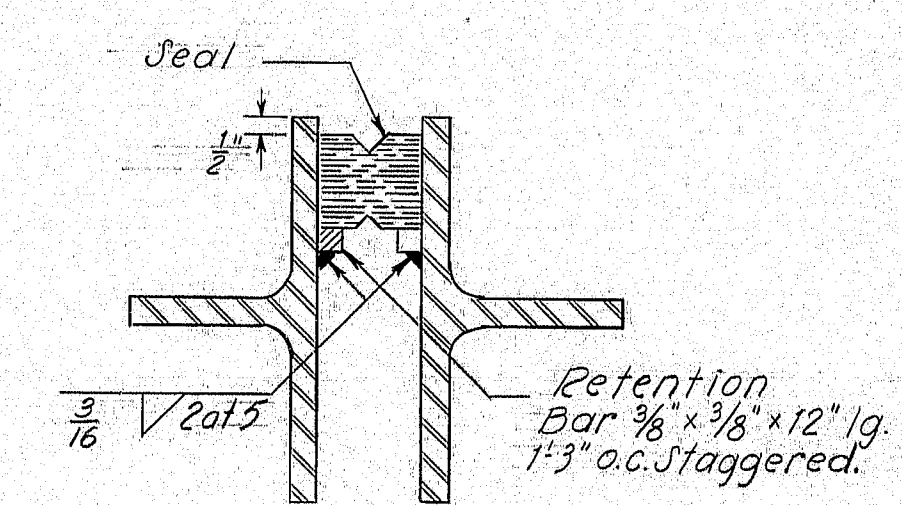
1. Camber as shown, is computed to compensate for all dead load deflections and for the curvature of the finish grade profile.
2. Bearing stiffeners shall be plumb after erection and dead loading of the structure. (At Pier only.)
3. Diaphragm connection plates may be either plumb or normal to the top flange.
4. Filler plates may be ASTM 36 steel and mill tests for filler plate material will not be required.
5. Effective September 1, 1978, structural shapes rolled to the new dimensions may be substituted on a one to one basis for the sections called for on the design plans.

### BASIC ALLOWANCE STRESSES

STRUCTURAL STEEL: ASTM A572 —  $f_y = 27,000 \text{ psi}$   
 ASTM A36 —  $f_y = 20,000 \text{ psi}$

### MATERIALS

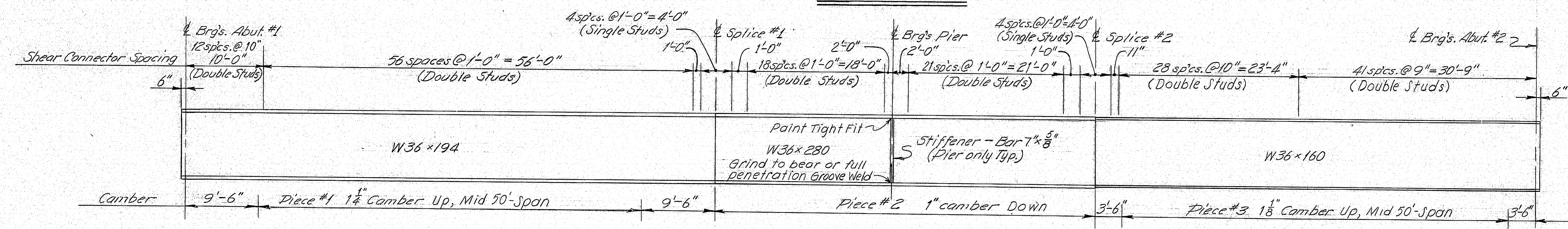
STRUCTURAL STEEL: Beams & Splice Plates — ASTM A572  
 High Strength Bolts — ASTM A325  
 All other — ASTM A36



### SEAL ARRANGEMENT (In Armored Joint)

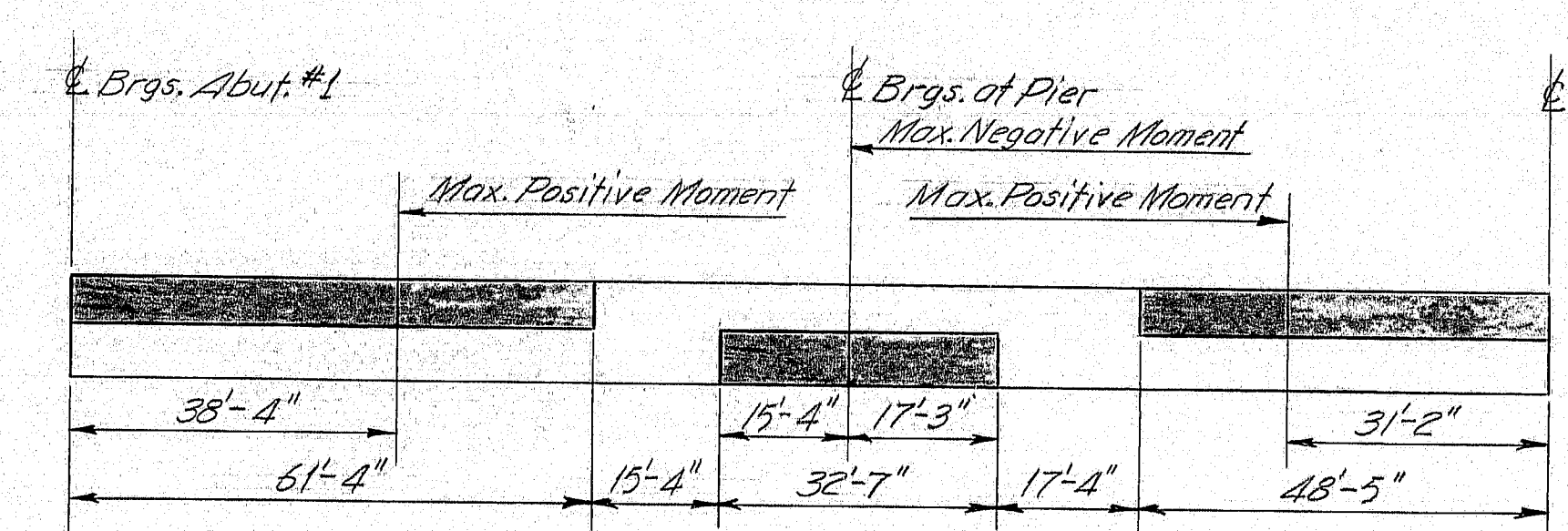
1. The seals to be furnished shall have a minimum Movement Rating of:  
 Abut. 1 =  $1/8$ "  
 Abut. 2 =  $1/4$ "
2. The joint opening will vary depending on the dimensions of the seal selected by the Contractor. The joint opening shall be set according to the opening shown on the approved "Armored Joint" shop detail drawings.
3. The seal shall be approved by the Engineer prior to fabrication of the armored joint.

### FRAMING PLAN

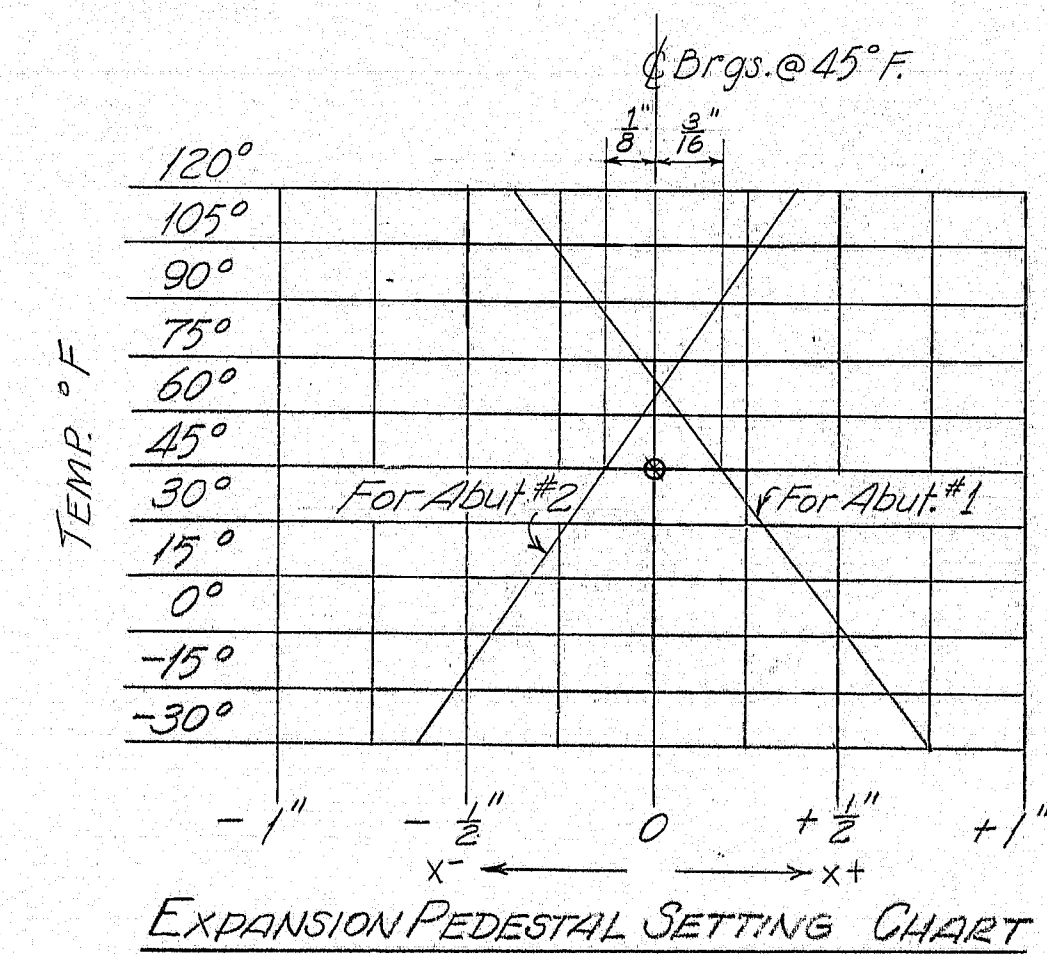


### SHEAR CONNECTOR LAYOUT

370 Studs each beam ~ 6 Beams = 2220 Total (2,220\*)



Note: Shaded areas are always in Compression, other areas are in tension or have stress reversal.



### ROCKER BEARING SETTING

Note: Settings are after erecting structural steel and before concrete slab is placed. This table compensates for longitudinal movement due to temperature change and dead load deflection. Rocker setting data as shown shall be used as a guide only. No extra payment will be made for resetting of the rocker bearings subsequent to the original setting made by the contractor, as required by the Engineer to make the rocker settings conform with paragraph four (4) of Subsection 504.58.

### REFERENCES

1. Bearing Pedestals See Sheet #21 (BD 101-74).
2. Diaphragms See Sheet #23 (BD 113-78).
3. Bottom of Slab Elevations See Sheet #17.
4. Armored Joint Details & Shear connectors. See Sheet #22 (BD 104-77).
5. For Camber Diagram See Sheet #17.

As Built 1979

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
 OVER  
 OLD RTE. 159 AND B. & A. R.R.  
 IN THE TOWN OF  
 ISLAND FALLS  
 AROOSTOOK COUNTY  
 STRUCTURAL STEEL

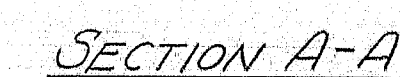
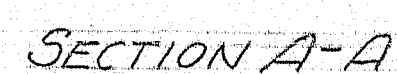
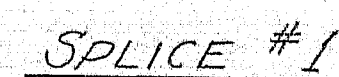
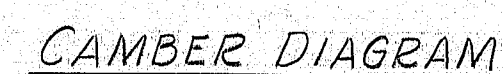
SHEET 16 OF 25 AUGUSTA, MAINE June 1978

166-148

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAIL	RWD/GWM	8/75
CHECKED	ER	5-78
REVISIONS		
FIELD CHANGES		



BOTTOM OF SLAB ELEVATIONS																					
POINTS		1	2	3	4	5	6	7	8	9	POINTS		1	2	3	4	5	6	7	8	POINTS
BRAINS	①	485.59	485.67	485.73	485.76	485.76	485.74	485.69	485.62	485.56	485.50	485.49	485.47	485.46	485.46	485.44	485.41	485.35	485.27	485.16	485.12
	②	485.76	485.83	485.89	485.92	485.93	485.90	485.85	485.79	485.72	485.67	485.65	485.63	485.63	485.62	485.61	485.57	485.52	485.43	485.33	485.30
	③	485.92	486.00	486.06	486.09	486.09	486.07	486.02	485.95	485.89	485.83	485.82	485.80	485.79	485.79	485.77	485.74	485.68	485.60	485.49	485.44
	④	485.80	485.87	485.93	485.96	485.97	485.94	485.89	485.83	485.76	485.71	485.70	485.67	485.67	485.66	485.65	485.61	485.56	485.47	485.37	485.34
	⑤	485.63	485.71	485.77	485.80	485.80	485.78	485.73	485.66	485.60	485.54	485.53	485.51	485.50	485.50	485.48	485.45	485.39	485.31	485.20	485.17
	⑥	485.47	485.54	485.60	485.63	485.64	485.61	485.56	485.50	485.43	485.38	485.37	485.34	485.34	485.34	485.33	485.32	485.28	485.23	485.14	485.04



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B.&A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROSTOOK COUNTY  
STRUCTURAL STEEL

SHEET 17 OF 25 AUGUSTA, MAINE June 1988

SHEET 17 OF 25 AUGUSTA, MAINE June 1978

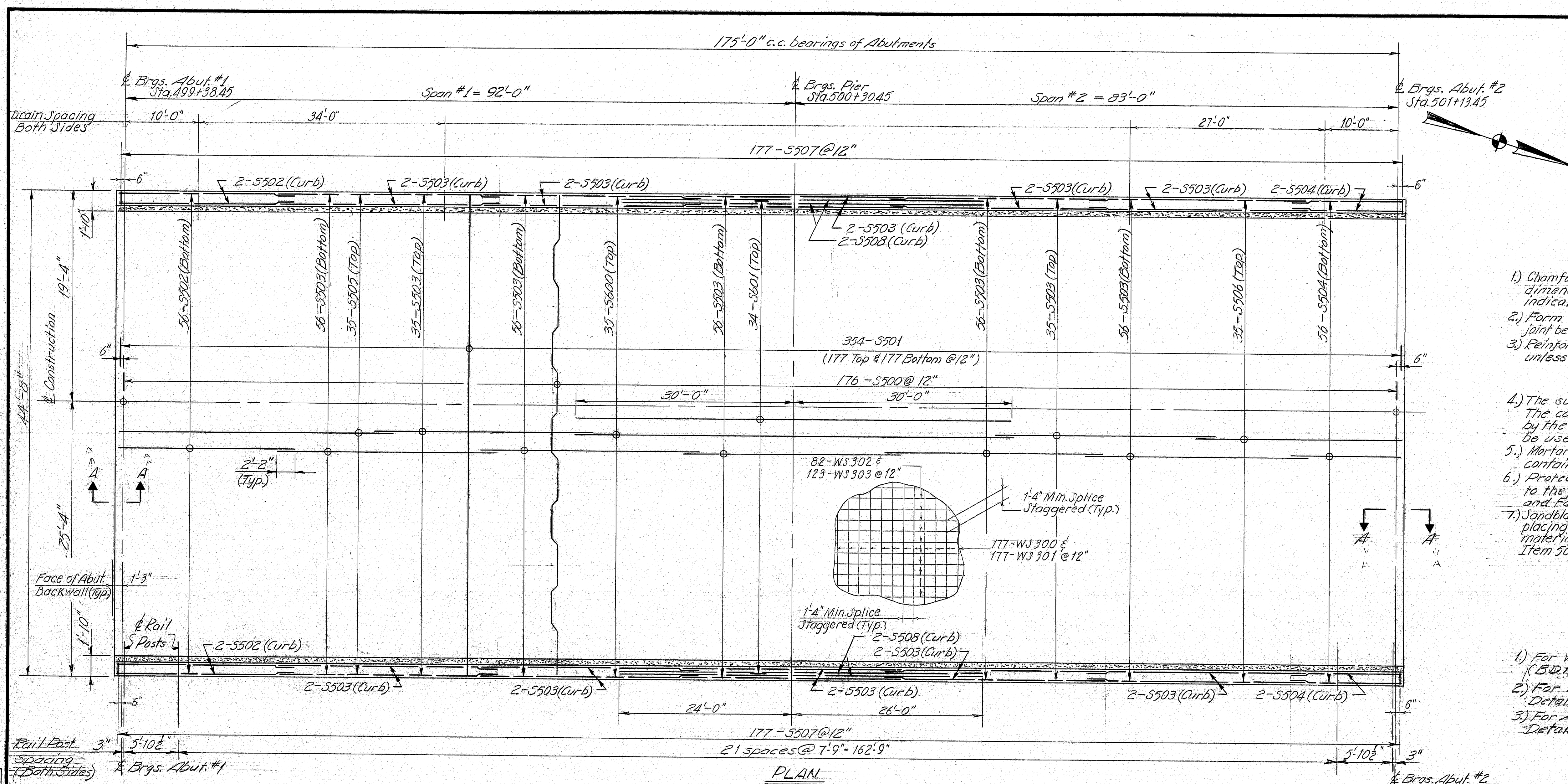
15-TRUSTEE 166-140 203-1

166-140

100 197



F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	76-95-9(82)	18	25

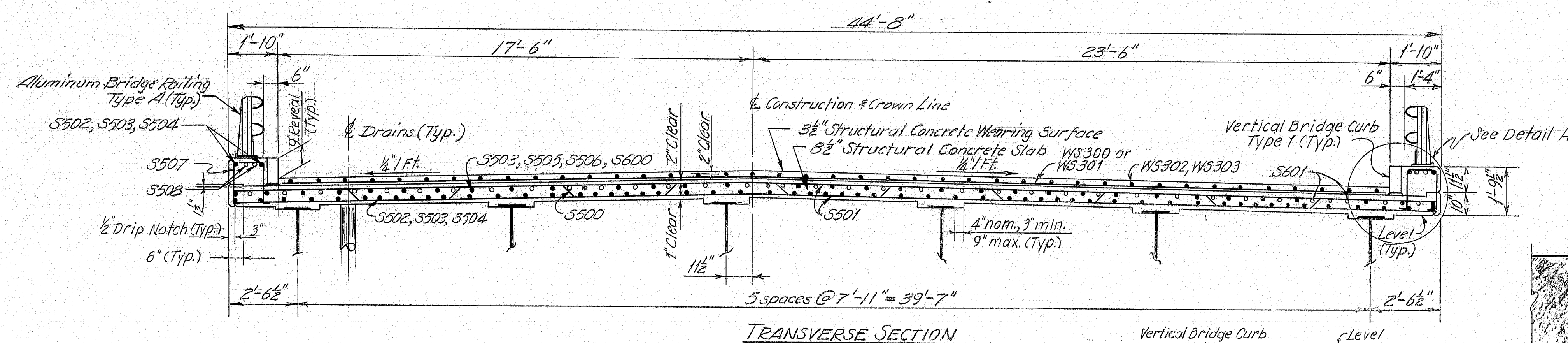


## SUPERSTRUCTURE NOTES

- 1) Chamfer all exposed edges of concrete a consistent dimension between  $\frac{1}{2}$ " and  $\frac{3}{4}$ " inclusive, unless otherwise indicated.
- 2) Form a 1" V-groove on the fascias, at the horizontal joint between the curb and the slab.
- 3) Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.
- 4) The superstructure slab shall be placed continuously. The contractor's method of placement shall be approved by the Engineer. Approved self-retarding admixture shall be used when authorized by the Engineer.
- 5) Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
- 6) Protective Coating for Concrete Surfaces shall be applied to the following areas: Wearing Surface, Top of Concrete Curb and Fascias down to drip notch.
- 7) Sandblast the top of the roadway slab and clean thoroughly before placing Structural Concrete Wearing Surface. Payment for all material, equipment and labor shall be considered incidental to Item 502.29 Str. Conc. Wearing Surface on Bridges.

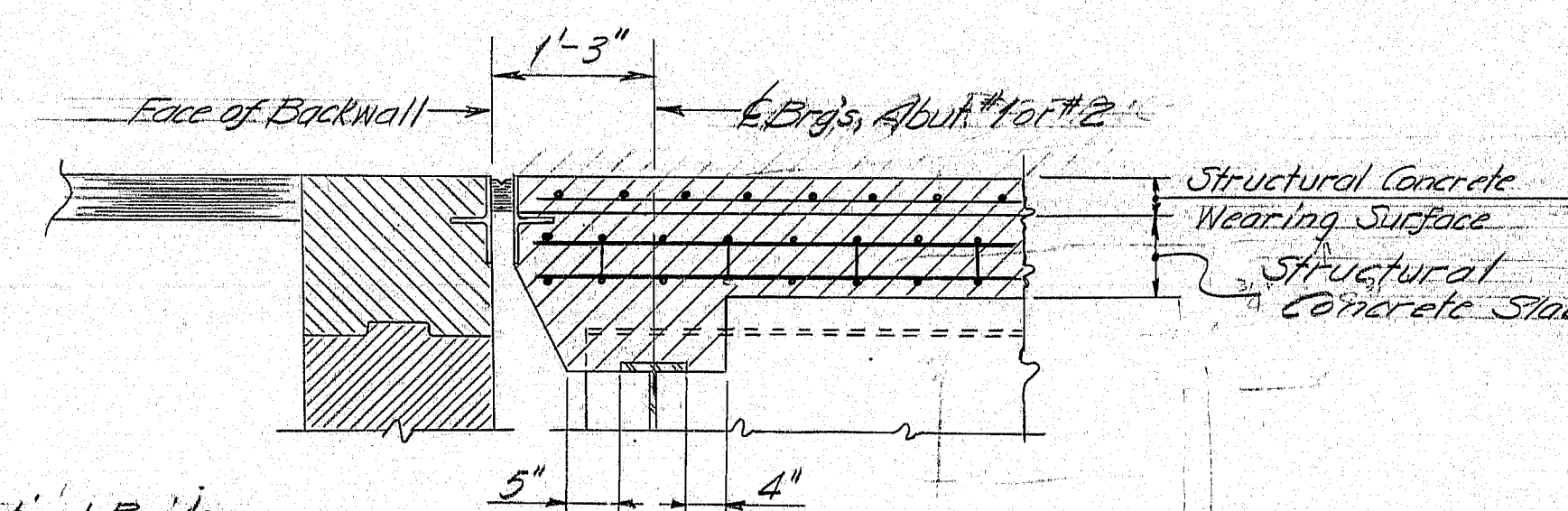
## REFERENCES

- 1) For Vertical Bridge Curb Details see Standard Details (BD-104-77) Sheet No. 22
- 2) For Aluminum Bridge Railing Details see Standard Details (BD-114-77) Sheet No. 24
- 3) For Armored Joint and Drain Details see Standard Details (BD-104-77) Sheet No. 22



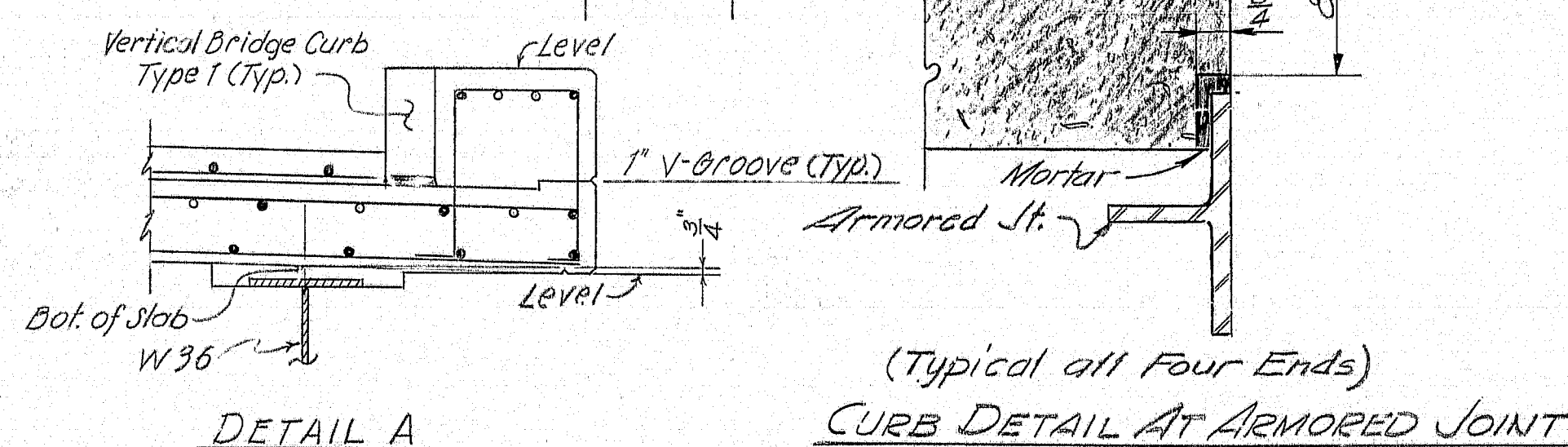
TRANSVERSE SECTION

Note: West half of wearing surface used for polymer impregnation experimental project



SECTION A-A

As Boilt 1979  
Rm 3.5.1.80



(Typical all Four Ends)  
CURB DETAIL AT ARMORED JOINT

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE.159 AND B.8A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY.  
SUPERSTRUCTURE

SHEET 18 OF 25 AUGUSTA, MAINE June 1976

166-150

893-1 8



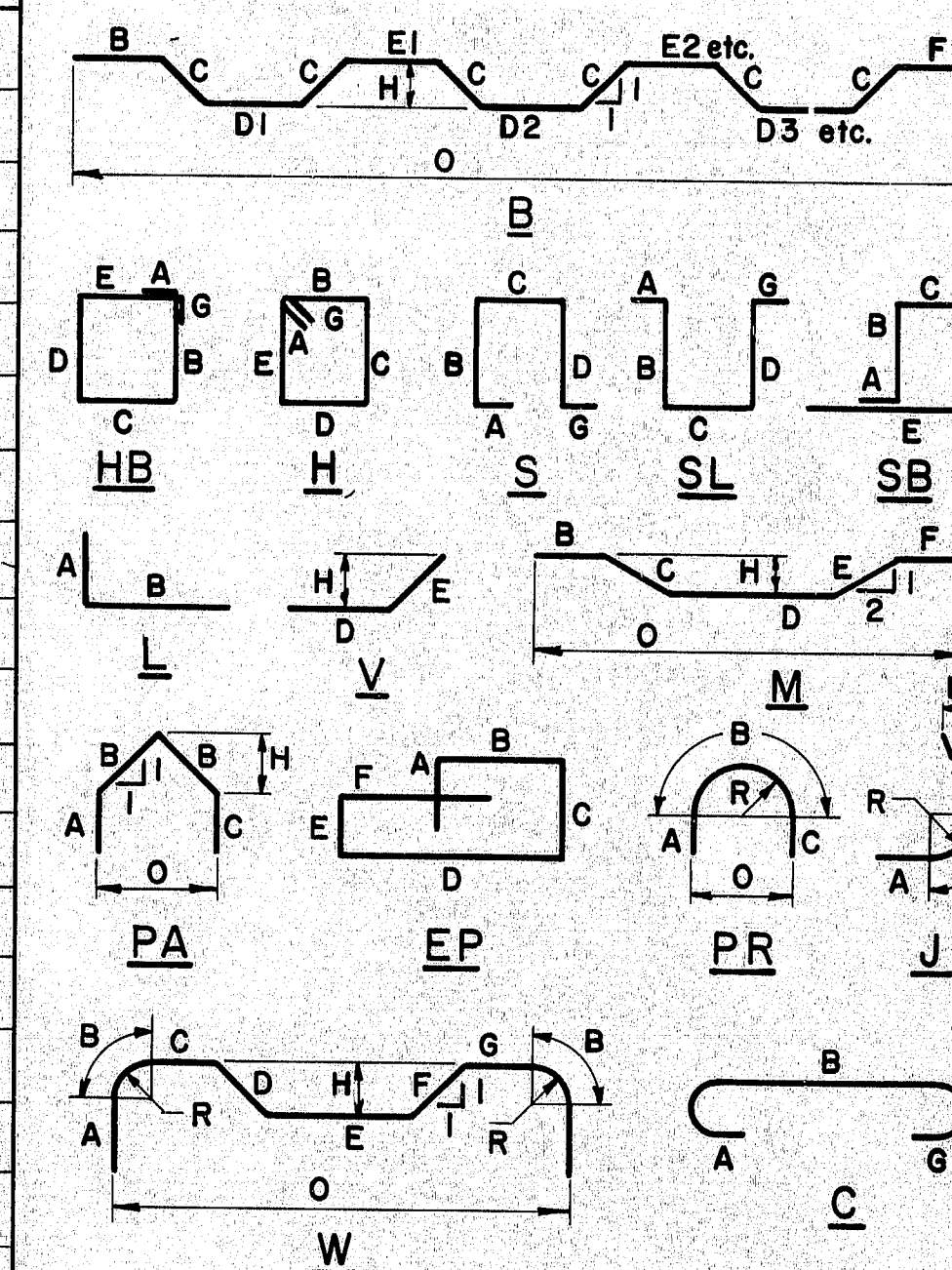
DATE 5-78  
BY RUM/GEW  
DESIGN - DETAIL  
CHECKED  
REVISIONS  
FIELD CHANGES  
PLANS

# REINFORCING STEEL SCHEDULE

STRAIGHT BARS				BENT BARS			
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION
ABUTMENT # 1				SUPERSTRUCTURE (Continued)			
A500	29	3'-0"	Abutment - Dowels	S505	35	37'-2"	Slab
A501	29	4'-8"	Abutment - Dowels	S506	35	28'-2"	Slab
A502	29	12'-8"	Abutment	S508	4	50'-0"	Curbs
A504	31	5'-6"					
A507	14	23'-5"		S600	35	60'-0"	Slab
A508	8	14'-11"		S601	34	60'-0"	Slab
A509	6	15'-11"					
A510	8	7'-0"		WING # 2			
A511	6	8'-2"		W500	19	2'-10"	Footings - Wing #1 & #2
A512	8	23'-5"		W501	2	11'-2"	Wing
A513	8	6'-2"		W502	2	11'-9"	
A514	8	14'-1"		W503	2	12'-3"	
A515	4	5'-6"	Abutment	W504	2	12'-9"	
A600	14	24'-10"	Footings	W505	2	13'-3"	
A601	14	22'-0"		W506	2	13'-9"	
A602	16	12'-6"		W507	2	14'-3"	
A603	16	14'-6"		W508	2	14'-6"	
A604	60	7'-0"		W509	2	8'-10"	
A605	76	6'-6"	Footings	W510	12	14'-1"	
				W511	2	11'-11"	
				W512	2	10'-8"	
ABUTMENT # 2				W513	1	8'-5"	
B500	29	3'-0"	Abutment - Dowels	W514	1	7'-2"	
B501	29	4'-8"	Abutment - Dowels	W515	1	4'-2"	
B502	29	12'-6"	Abutment	W516	1	2'-10"	
B504	31	5'-6"		W517	2	11'-0"	Wing
B507	14	23'-5"					
B508	8	14'-11"		W600	14	4'-3"	Footings - Wing #1 & #2
B509	6	15'-11"		W601	12	7'-6"	Footings - Wing #1 & #2
B510	8	7'-0"					
B511	6	8'-2"		WING # 1			
B512	8	23'-5"		W518	2	11'-10"	Wing
B513	8	6'-2"		W519	2	12'-4"	
B514	8	14'-1"		W520	2	12'-10"	
B515	4	5'-6"	Abutment	W521	2	13'-5"	
				W522	2	13'-11"	
B600	14	24'-10"	Footings	W523	2	14'-4"	
B601	14	22'-0"		W524	12	12'-0"	
B602	16	12'-0"		W525	2	9'-11"	
B603	16	13'-0"		W526	2	8'-8"	
B604	54	7'-0"		W527	1	8'-0"	
B605	76	6'-6"	Footings	W528	1	6'-8"	
				W529	1	3'-7"	
				W530	1	2'-4"	
SUPERSTRUCTURE				W531	2	8'-10"	
S501	354	44'-4"	Slab	W532	3	8'-8"	Wing
S502	60	24'-4"	Slab & Curbs				
S503	370	30'-0"	Slab & Curbs				
S504	60	15'-4"	Slab & Curbs				

FHWA	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	16-95-9(82)	19	25

## TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

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

Reinforcing Bar: ASTM A615 Grade 60

## GENERAL NOTES

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

As B.O.I.T 1979 Rev. 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B. & A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
REINFORCING STEEL SCHEDULE

SHEET 19 OF 25 AUGUSTA, MAINE JUNE 1978

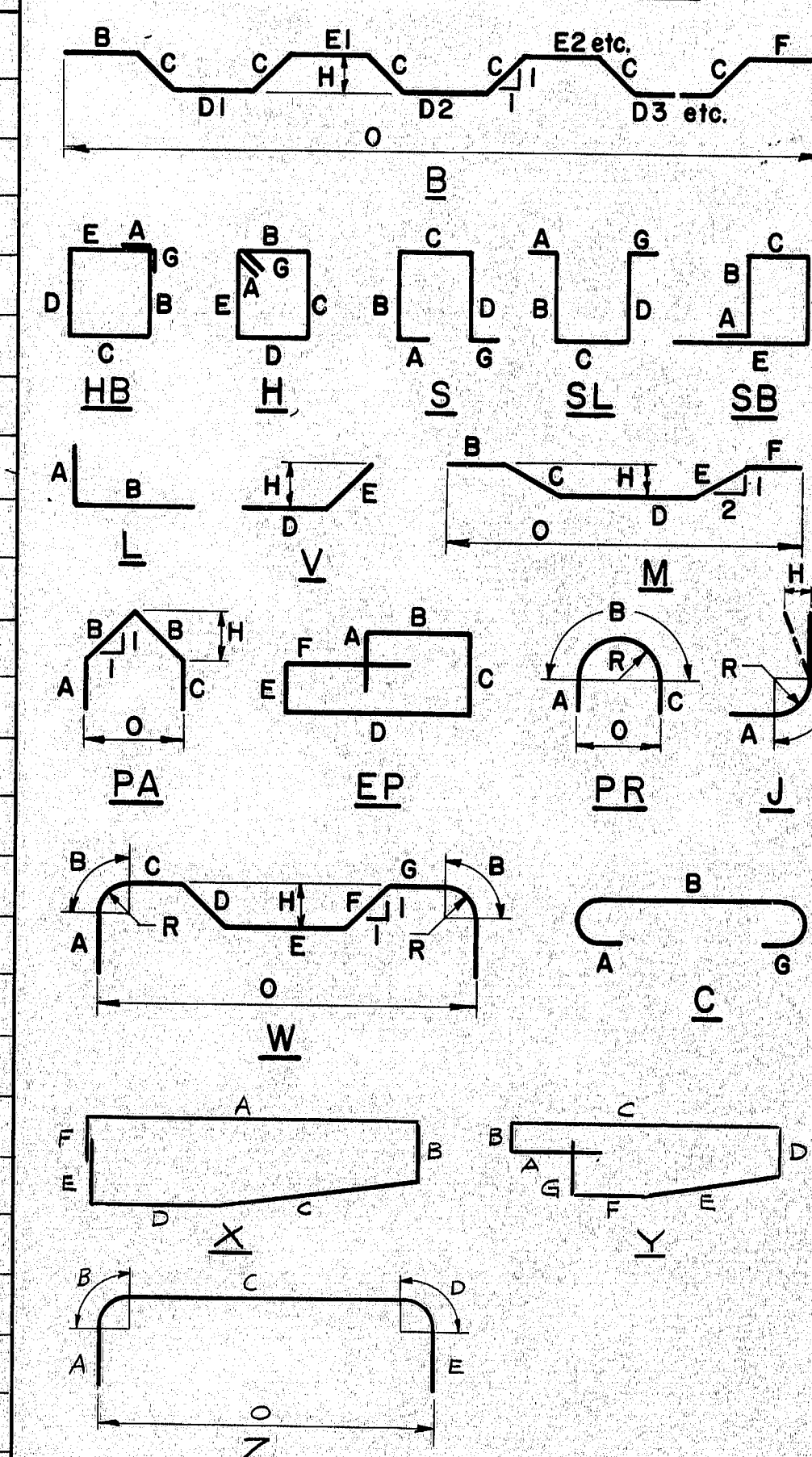
166-151



# REINFORCING STEEL SCHEDULE

FHWA  
RES. NO. 1  
STATE MAINE  
PROJECT NUMBER 26-95-7(82)  
SHEET NO. 20  
TOTAL SHEETS 25

## TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

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

Reinforcing Bar: ASTM A615 Grade 60

## GENERAL NOTES

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

As Built 1979 Draw 5-1-80

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

INTERSTATE 95 NB  
OVER  
OLD RTE. 159 AND B. & A. R.R.  
IN THE TOWN OF  
ISLAND FALLS  
AROOSTOOK COUNTY  
REINFORCING STEEL SCHEDULE

SHEET 20 OF 25 AUGUSTA, MAINE June 1978

166-152

## STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION
PIER							
P600	4	23'-6"	Cap				
P601	4	22'-7"	Cap				
P613	34	8'-6"	Footing				
P900	34	8'-6"	Footing				
P1104	4	34'-8"	Cap				
DECK							
WS300	177	22'-0"	Wearing Surface				
WS301	177	20'-0"					
WS302	82	30'-11"					
WS303	123	40'-0"	Wearing Surface				
APPROACH SLAB							
AS400	20	39'-8"	Approach Slab				
AS401	2	44'-4"					
AS402	2	44'-3"					
AS403	2	45'-0"					
AS404	2	45'-4"					
AS405	2	45'-3"					
AS406	2	46'-0"					
AS500	153	15'-0"					
AS601	24	5'-7"	Approach Slab				
END POSTS							
EP600	24	2'-10"	End Posts				
EP601	48	2'-7"					
EP602	24	3'-6"					
EP603	3	3'-5"					
EP604	3	3'-4"					
EP605	3	3'-2"					
EP606	3	3'-1"					
EP607	3	3'-0"	End Posts				

## BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
PIER														
P400	90	13'-0"	H	6"	3'-0"	3'-0"	3'-0"	3'-0"	-	6"				Column
P401	180	9'-2"	H	6"	1'-1"	3'-0"	1'-1"	3'-0"	-	6"				Column
P602	3	7'-8"	V	-	-	-	2'-9"	4'-11"	-	-	1'-5"		7"	Cap
P603	2	9'-0"	S	-	2'-9"	3'-6"	2'-9"	-	-	0"				
P604	66	12'-4"	H	6"	2'-2"	3'-6"	2'-2"	3'-6"	-	6"				
P605	4	11'-5"	H	6"	2'-2"	3'-2"	2'-2"	3'-2"	-	6"				
P606	4	11'-3"	H	6"	2'-2"	2'-11 1/2"	2'-2"	2'-11 1/2"	-	6"				
P607	4	11'-0"	H	6"	2'-2"	2'-10"	2'-2"	2'-10"	-	6"				
P608	4	10'-8"	H	6"	2'-2"	2'-8"	2'-2"	2'-8"	-	6"				
P609	4	10'-4"	H	6"	2'-2"	2'-6"	2'-2"	2'-6"	-	6"				
P610	4	10'-1"	H	6"	2'-2"	2'-4 1/2"	2'-2"	2'-4 1/2"	-	6"				
P611	4	9'-9"	H	6"	2'-2"	2'-2 1/2"	2'-2"	2'-2 1/2"	-	6"				
P612	4	9'-6"	H	6"	2'-2"	2'-1"	2'-2"	2'-1"	-	6"				Cap
P1100	36	14'-11"	J	2'-1"	11"	11'-11"	-	-	-	-			7"	Footing
P1101	36	36'-3"	J	2'-1 1/2"	11"	33'-5"							7"	Column
P1103	6	47'-8"	Z	1'-5"	11"	43'-0"	11"	1'-5"	-	-	-	44'-2"	7"	Cap
P1105	6	15'-9"	J	1'-5"	11"	13'-5"							7"	Cap
END POSTS														
EP500	12	17'-11"	X	7'-4"	1'-2"	6'-5"	1'-1"	1'-4"	7"					End Posts
EP501	16	17'-7"	Y	2'-6"	7"	7'-4"	1'-0"	3'-3"	2'-4"	7"				" "

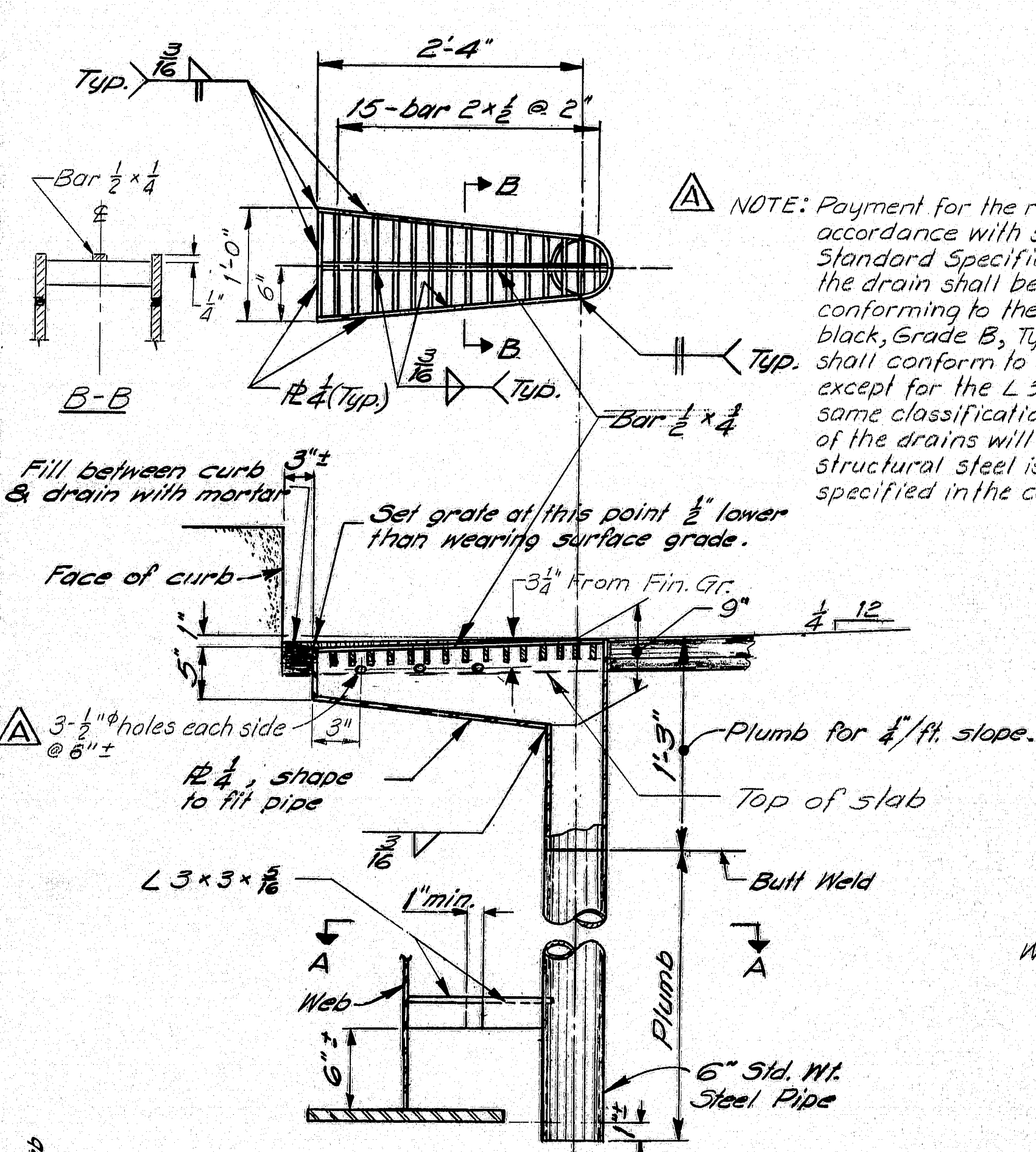
MARK NO. LENGTH TYPE A B C D E F G H O R LOCATION

DATE 5-78  
BY RWA/GKW  
DESIGN - DETAIL  
CHECKED  
REVISIONS  
FIELD CHANGES  
PLANS

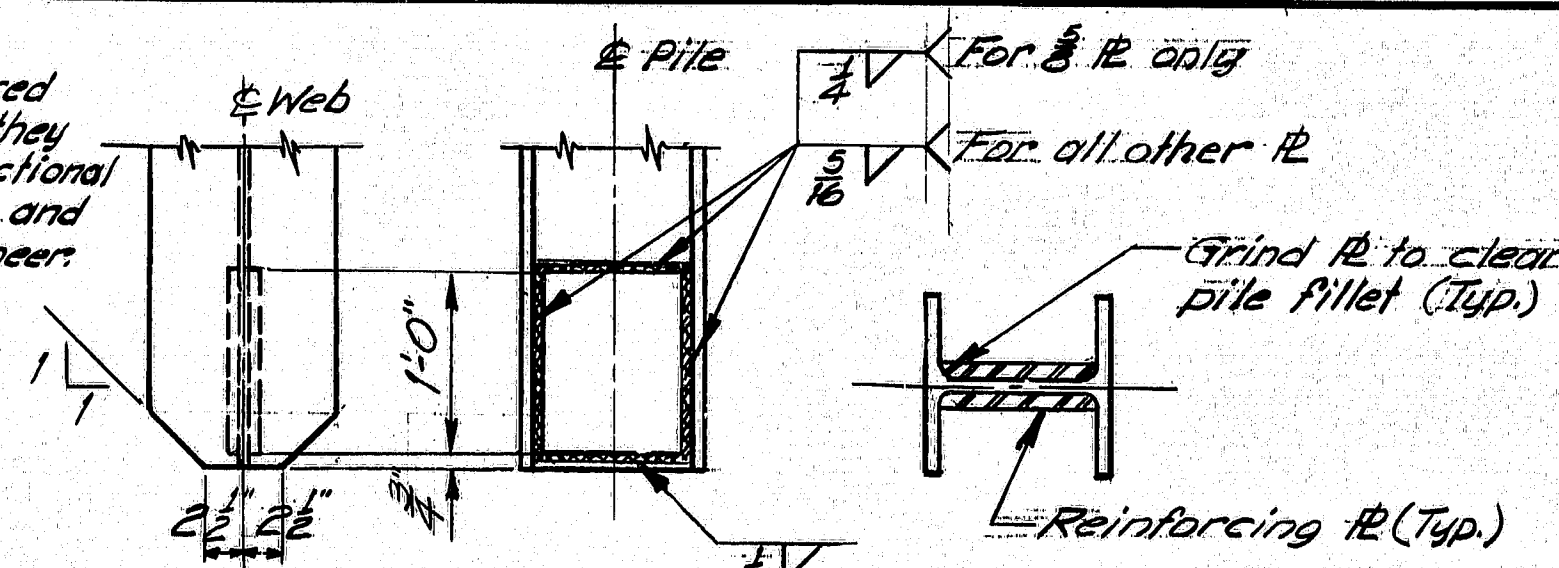


166-153





**NOTE:**  
Alternate pointed reinforced pile tips may be used if they have at least the cross-sectional area of the pile tip shown, and are approved by the Engineer.

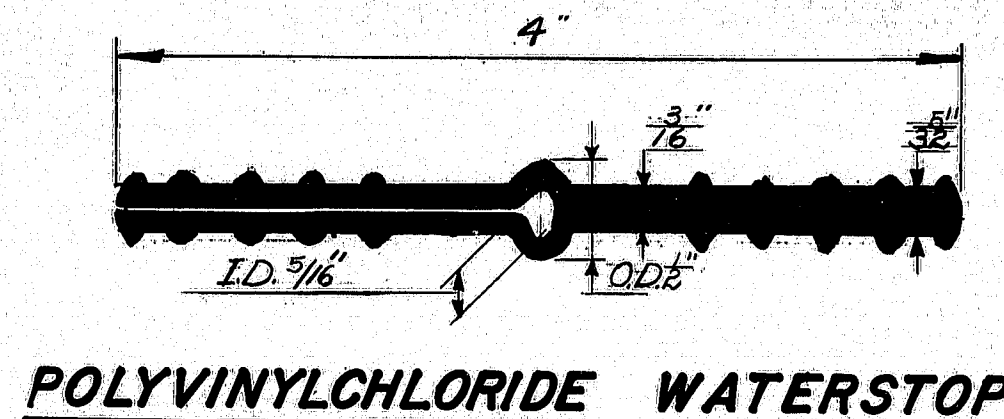
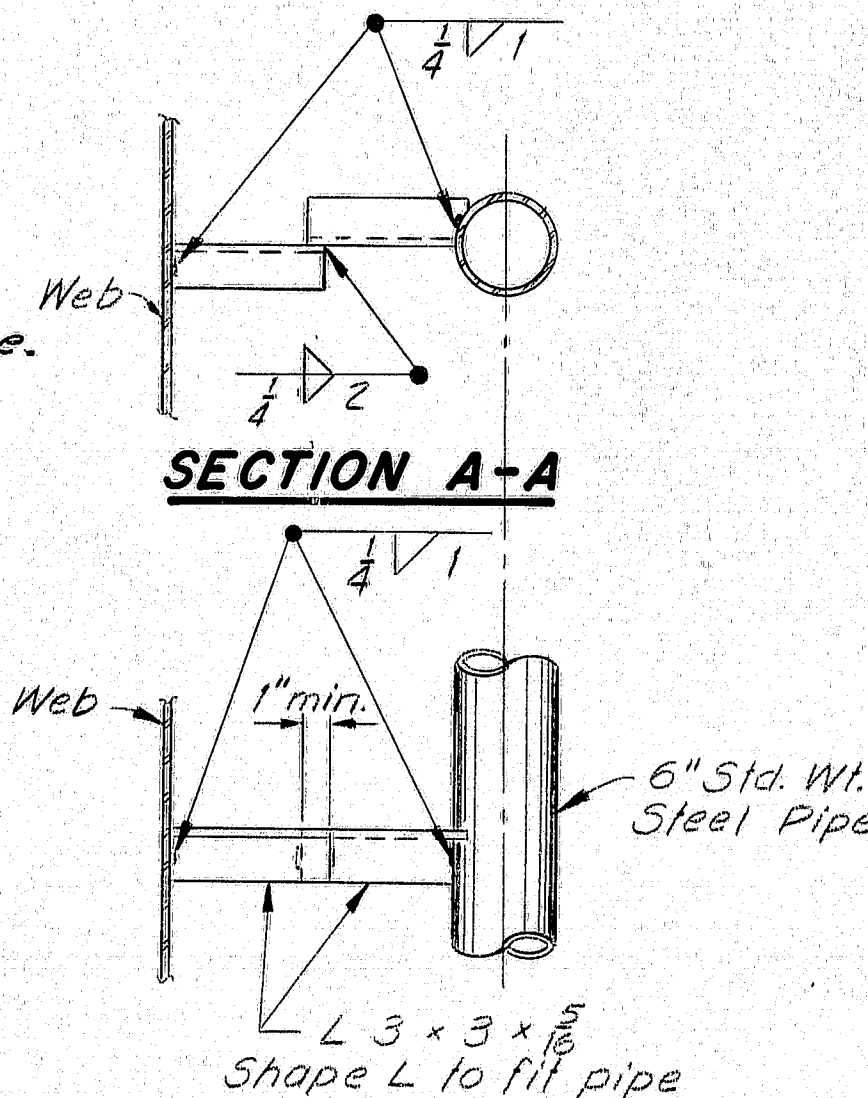


### POINTED REINFORCED PILE TIP

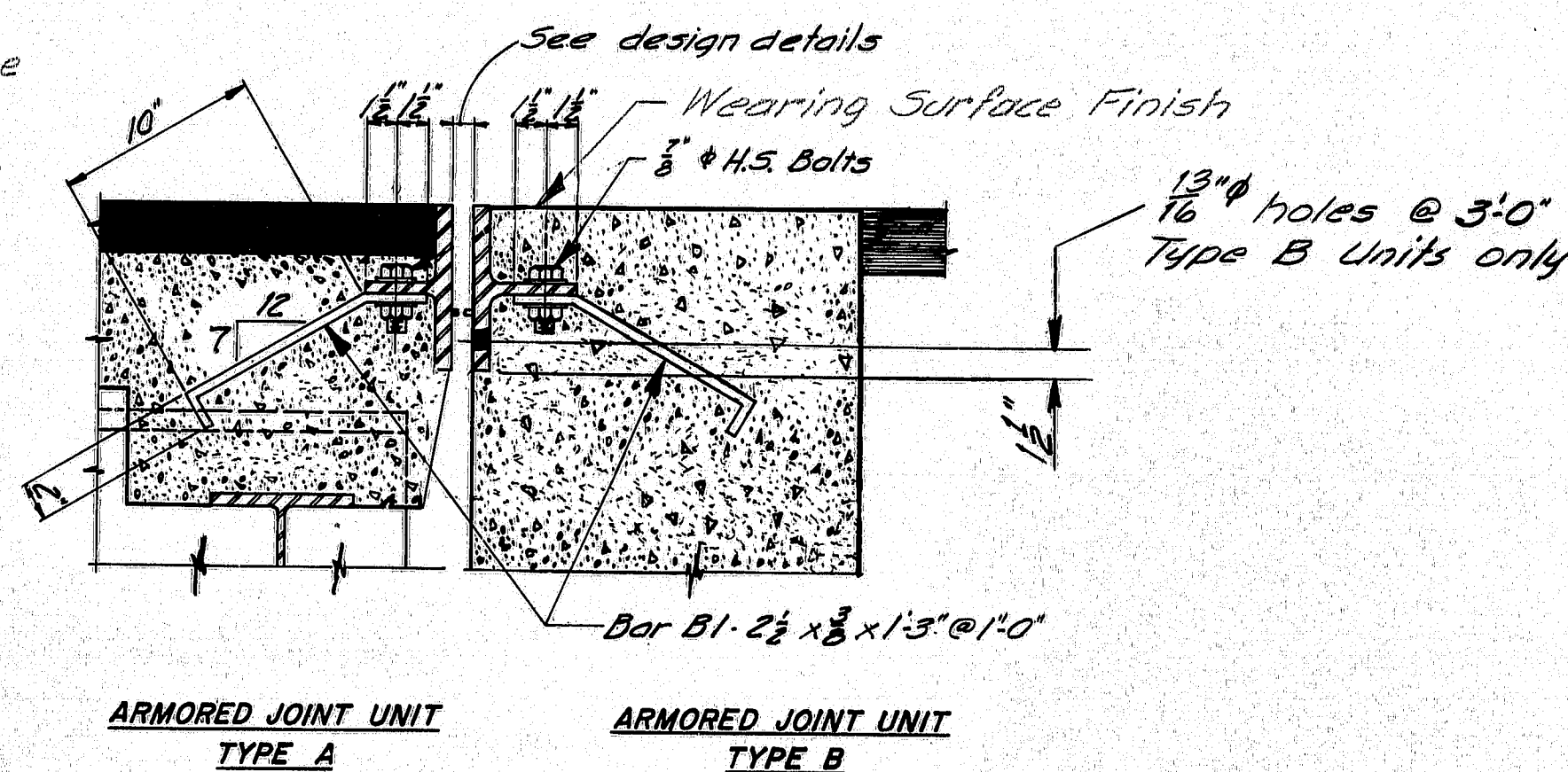
**NOTE:** Plates may be shop or field welded

PILE SIZE	REINFR. R. SIZE
HP 10 x 42	8# x 1/2" x 1'-0"
HP 10 x 57	8# x 3/4" x 1'-0"
HP 12 x 53	10# x 3/4" x 1'-0"
HP 12 x 74	10# x 1" x 1'-0"
HP 14 x 73	12# x 3/4" x 1'-0"
HP 14 x 89	12# x 1" x 1'-0"

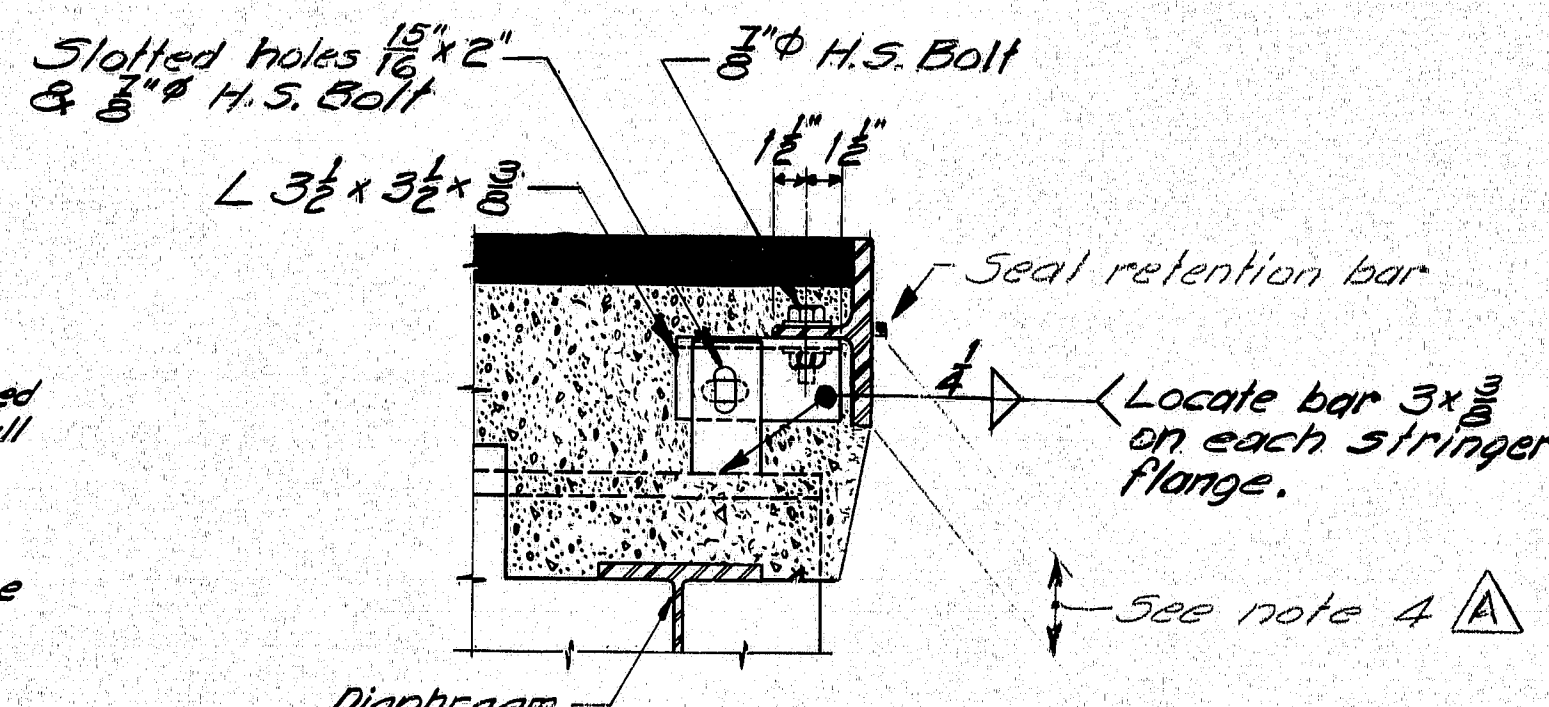
### SECTION A-A



### POLYVINYLCHLORIDE WATERSTOP

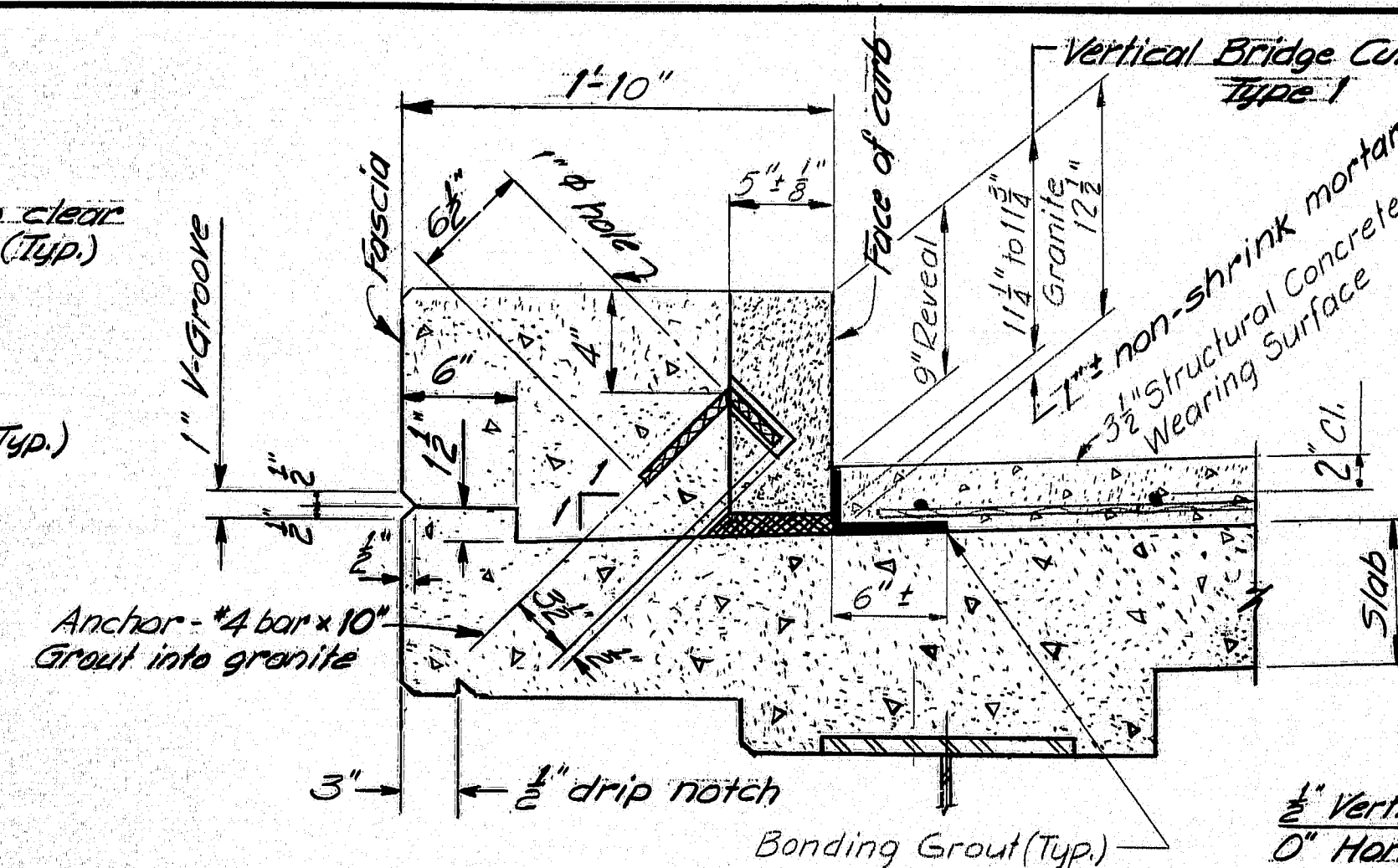


### SECTION D-D

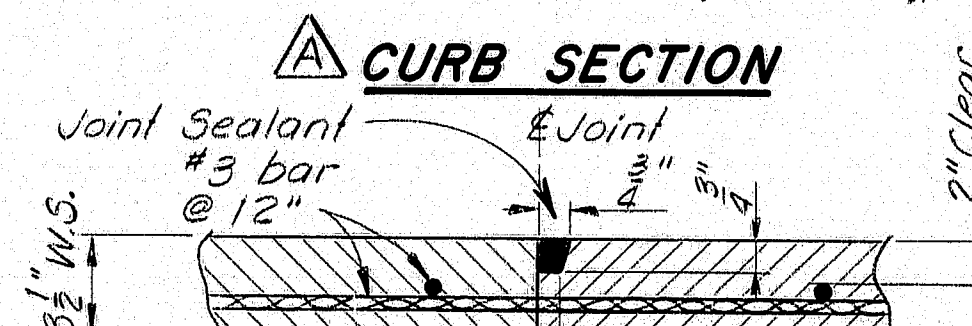


### SECTION E-E

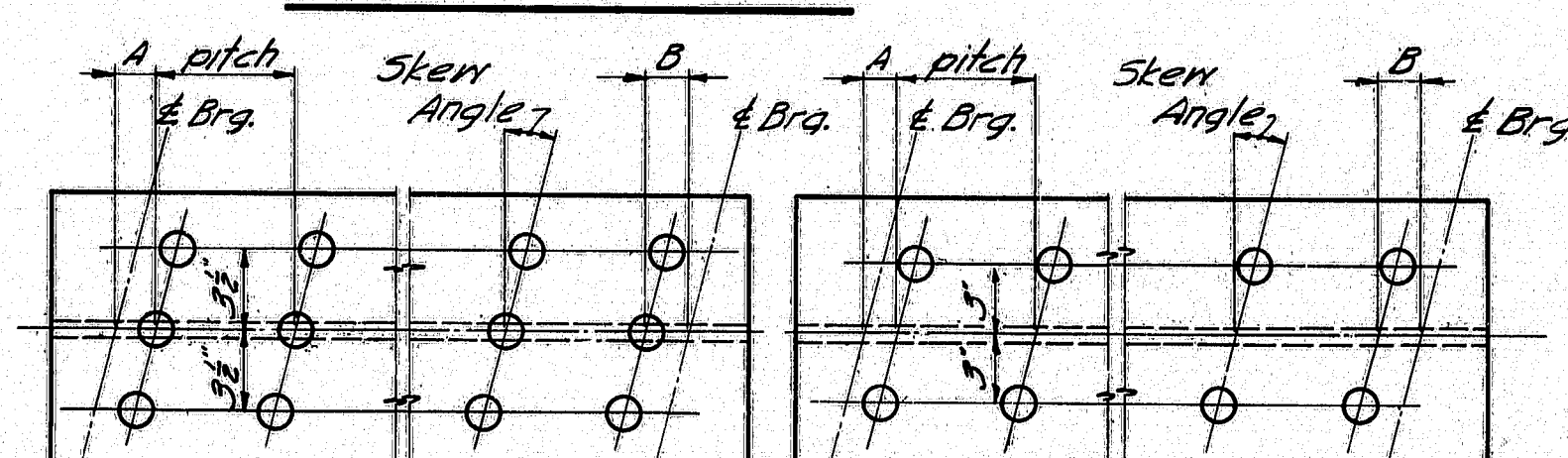
Showing Adjustment Device  
Armored Joint Unit Type A only  
After Unit is in final position  
weld 1/2" bar to angle with 1/2" fillet



### CURB SECTION



### CONSTRUCTION JOINT



### TRIPLE STUDS

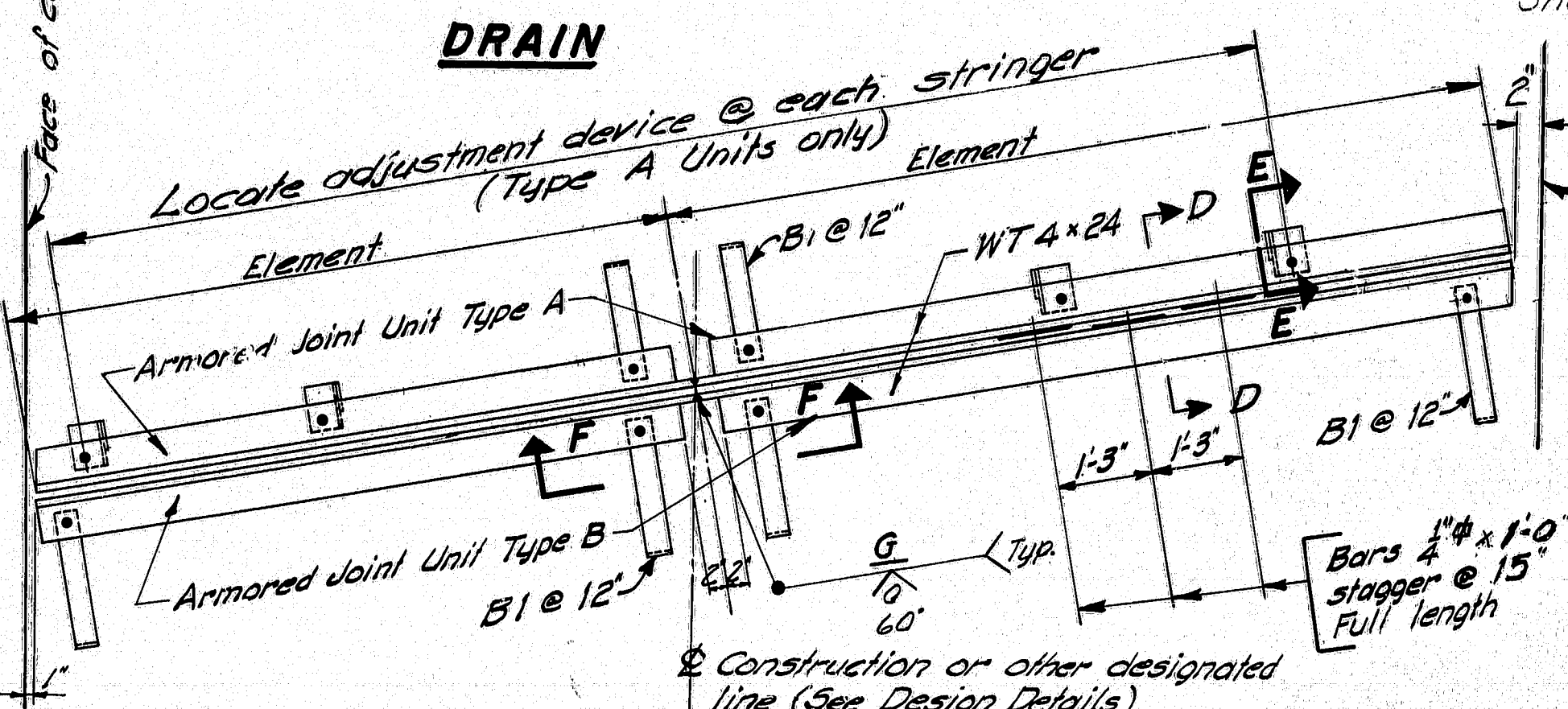
### DOUBLE STUDS

### STUD DETAIL

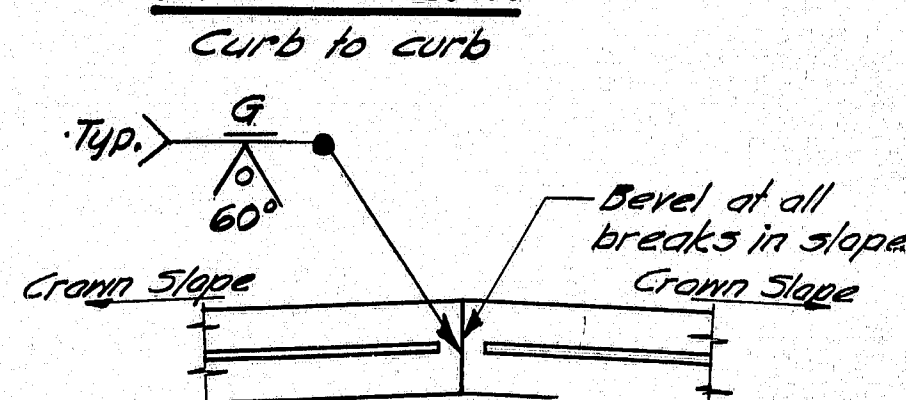
1. Studs shall be granular or solid flux filled and automatically and welded to top flange in the shop or field.
2. See the design details for Dimensions "A" & "B", stud pitch and skew angle for studs.

### SHEAR CONNECTORS

**NOTE** Use only those items called for on design details. In case of conflict between these Standard Details and design details, the requirements of the design details shall be followed.



### HALF PLAN



### HALF PLAN

Fascia to fascia

### NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two (2) Type A Armored Joint Units shall be used.
2. When more elements than two (2) are required by the design details, the elements of both units shall be field welded together in the same manner as shown in Section F-F.
3. Armored Joints to be paid for as Structural Steel.
4. All structural steel shall be A36. When structural steel is specified to be unpainted, the armored joint shall receive three coats of shop paint, on exposed areas of flanges below seal retention bars.

### ARMORED JOINT

An armored joint consists of two armored joint units. See note 1.

REVISIONS	DATE
Added holes and note to roadway drain.	
Add Note 4 to Armored Joint notes.	
Eliminate Hot Bit Pav't.	
Change curb and granite widths and added a concrete wearing surface.	

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**STANDARD DETAILS**  
(BD 104-77)  
**ARMORED JOINT, DRAIN**  
**SHEAR CONNECTORS**  
**MISC. STRUCTURAL DETAILS**



F.H.A. DES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	76-75-7(82)	23	25

# FABRICATION NOTES

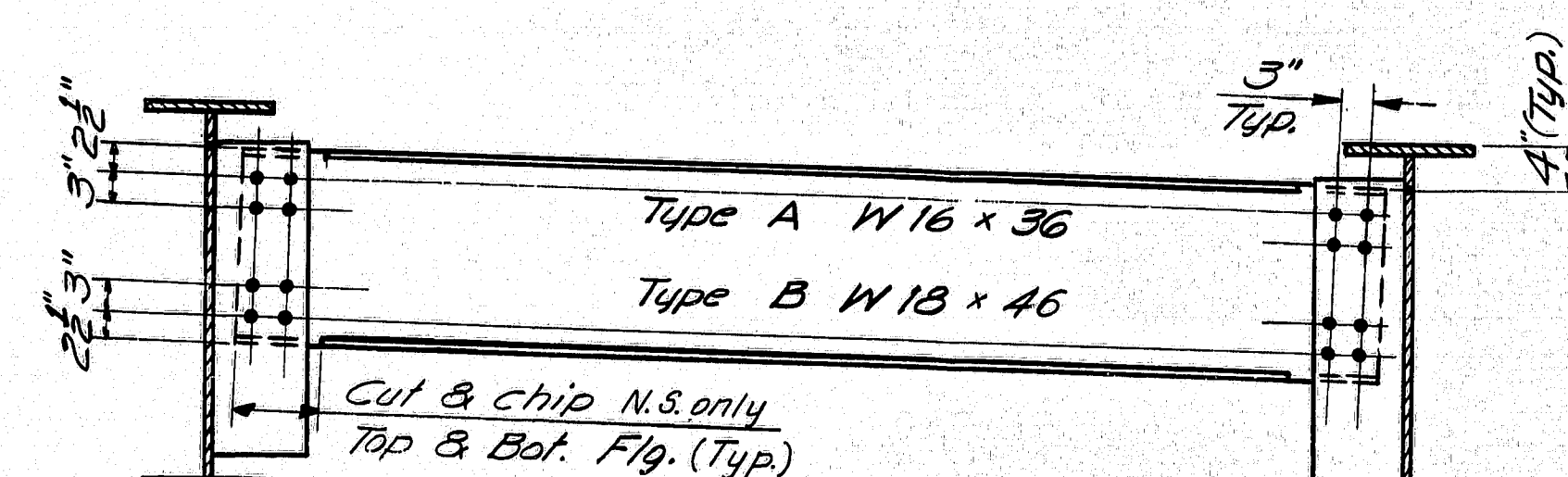
- 1.) All bolts shall be  $\frac{7}{8}$ " H.S. Bolts. Holes for bolts shall be  $\frac{1}{16}$ "  $\phi$  and edge-distances shall be  $\frac{1}{2}$ " min. unless otherwise shown.
- 2.) Connection Plates and gusset plates shall have a minimum thickness of  $\frac{3}{8}$ " and shall have sufficient width to provide erection clearances. For bearing stiffeners or intermediate stiffeners and for bent connection plates the plate size will be given on the design details.
- 3.) Connection Plates shall be fastened to web plates by fillet welds as shown. All fillet welds shall be the minimum size as specified in A.A.S.H.T.O. Standard Specifications for Highway Bridges, Art. I. 7. 26, unless otherwise shown on design plans.
- 4.) Connection Plates shall be  $\frac{1}{2}$ " clear from flanges, except as indicated by notes 5 & 6.
- 5.) Connection Plates on welded beams and girders shall extend to the top flange in areas where the top flange is always in compression.
- 6.) Connection Plates shall extend to the bottom flange at points where lateral bracing is attached and on welded beams and girders in areas where the bottom flange is always in compression.
- 7.) When a connection plate is extended to a flange it shall fit within  $\frac{1}{16}$ " except if the design details show it is to be welded.
- 8.) Bearing Stiffeners at end bearings shall extend to both top and bottom flanges and shall be welded to both flanges. Weld at bottom flange shall be a full penetration weld. Weld at top flange shall be a fillet weld both sides (see Note 3).
- 9.) Bearing Stiffeners at other than end bearings shall extend to both top and bottom flanges, shall be welded to the bottom flange with a full penetration weld and shall fit within  $\frac{1}{16}$ " at top flange.
- 10.) Intermediate Stiffeners shall extend to both top and bottom flanges, shall be welded to the compression flange with a fillet weld on both sides (see Note 3) and shall fit within  $\frac{1}{16}$ " at the tension flange.
- 11.) Use only those items called for on the design details. In case of conflict between these standard details and design details, the design details shall be followed.
- 12.) All dimensions shown as "\_\_\_ ± 1" are variable in order to allow a series of crossframes to have the same slopes and/or dimensions.
- 13.) All connection plates and stiffeners that are extended to a flange shall be clipped  $3\frac{1}{2}$ ", except as indicated by note 14.
- 14.) Bearing stiffeners at end bearings shall be clipped 1" at top and bottom. Bearing stiffeners at all other bearings and intermediate stiffeners shall be clipped 1" at the compression flange.
- 15.) For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M. - A588 or A242. For bridges specified to be painted the steel for diaphragms and connection plates shall be A.S.T.M. - A36, except other steel classifications may be used subject to the approval of the Engineer.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION

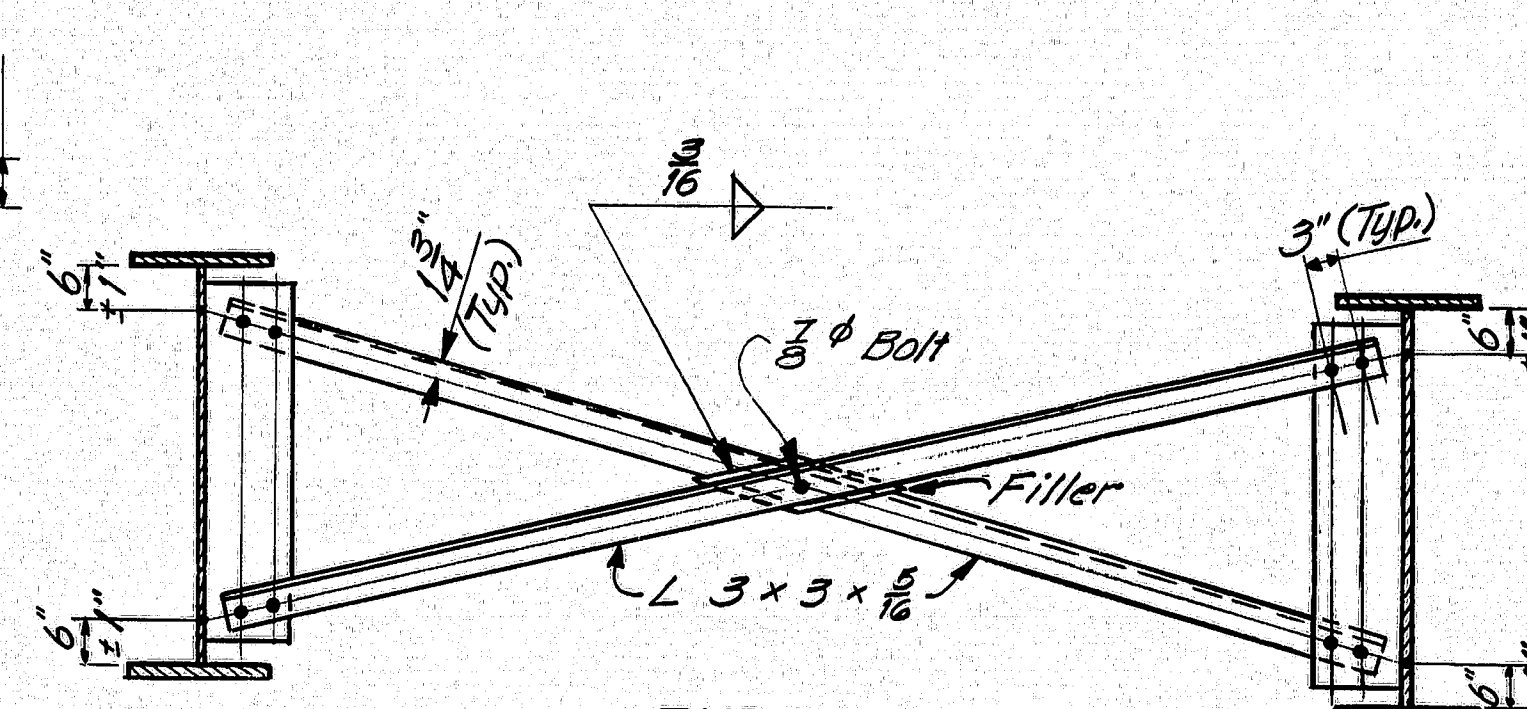
## STANDARD DETAILS (BD 113 - 78) DIAPHRAGMS & CROSSFRAMES

SHEET 23 OF 25 AUGUSTA, MAINE June 1978

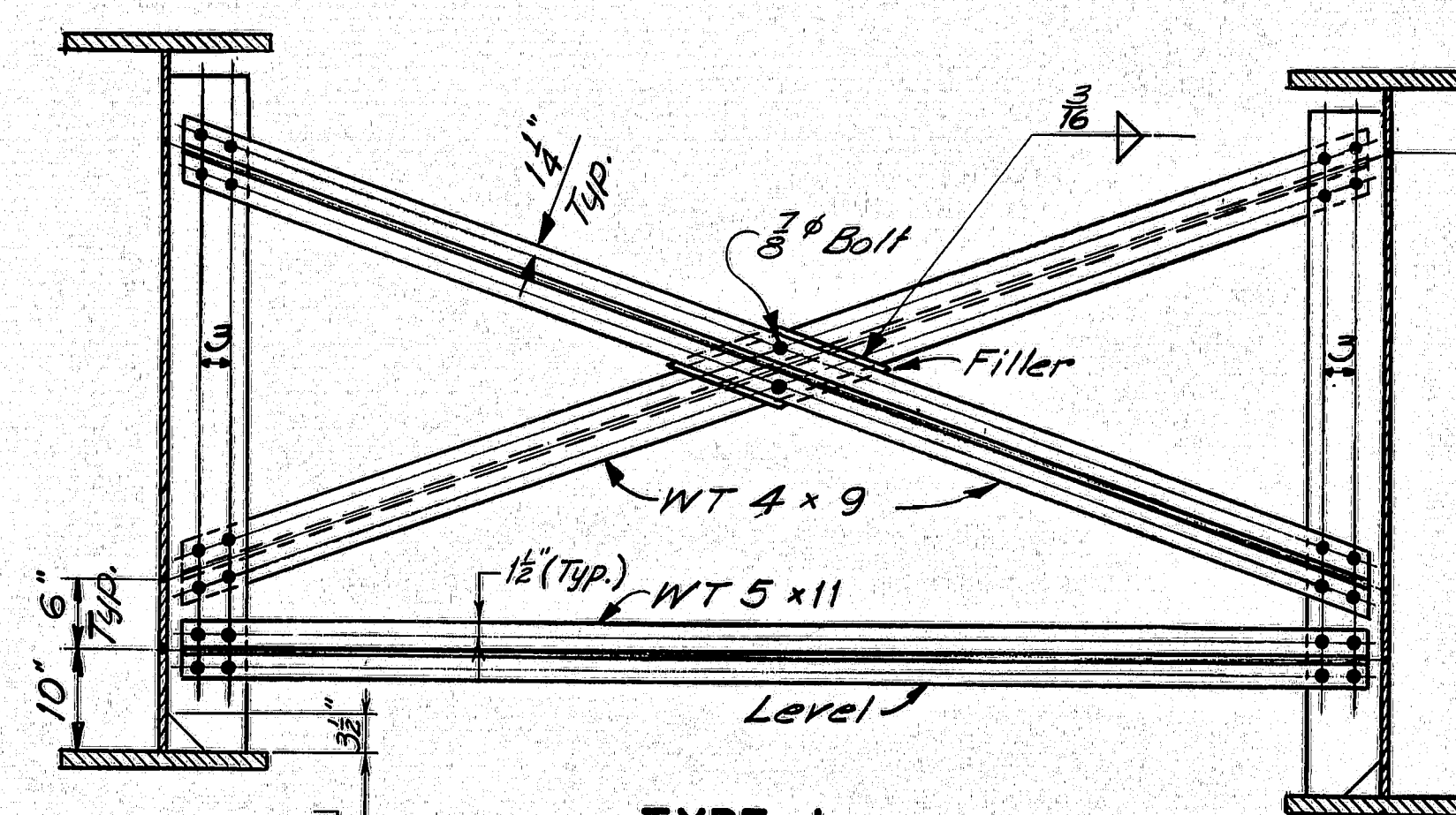
166-155



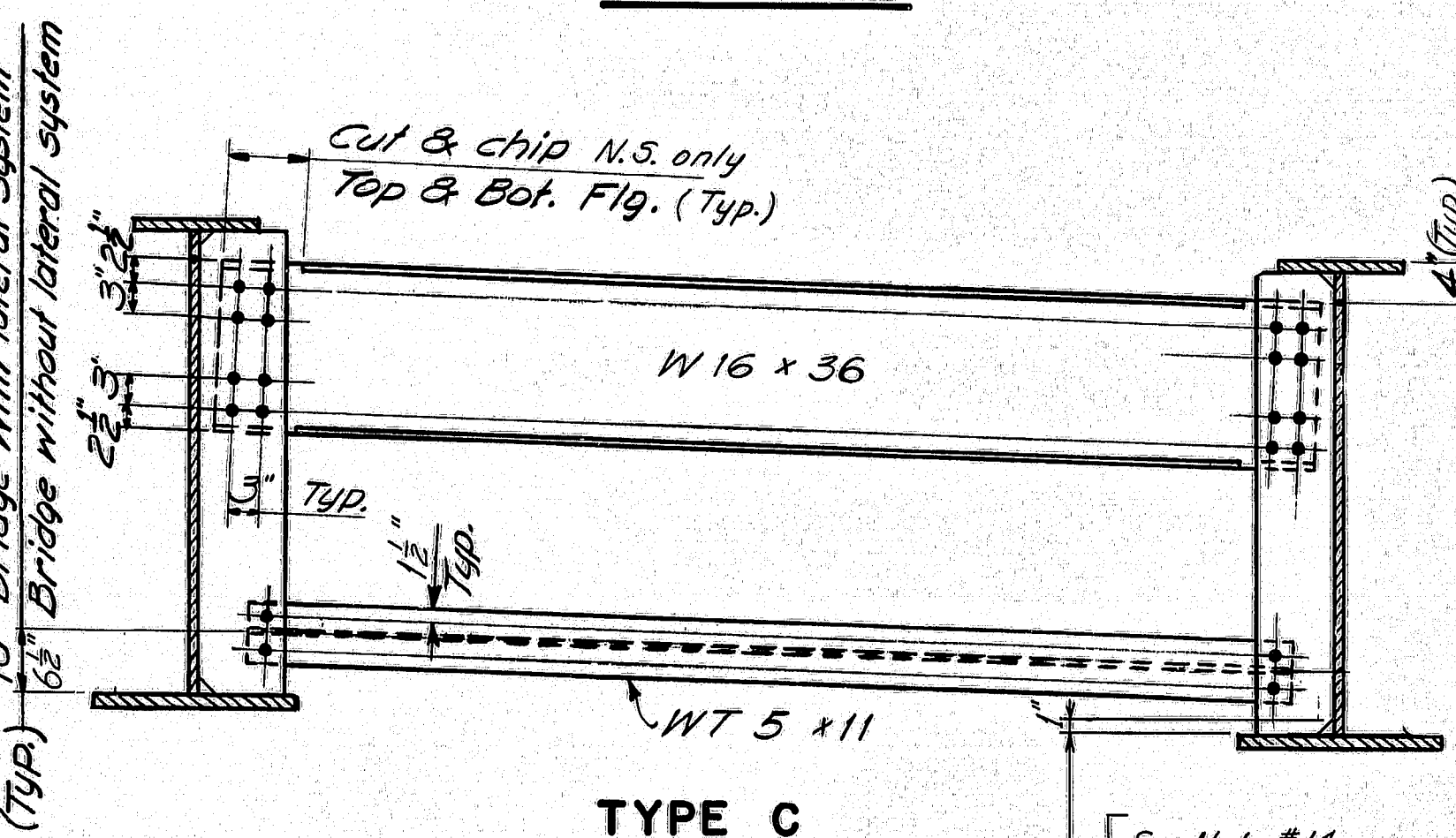
TYPE A & B



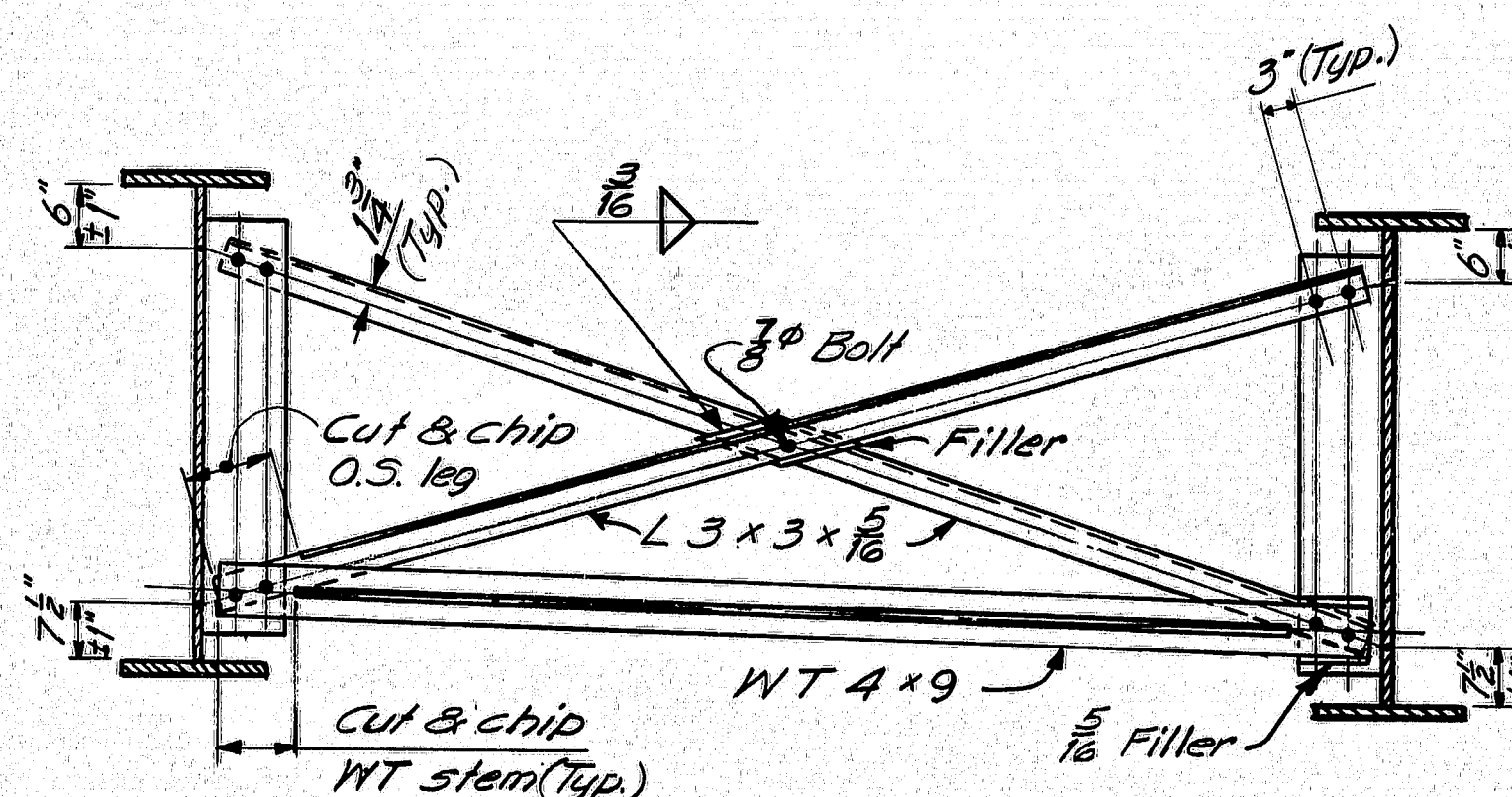
TYPE G



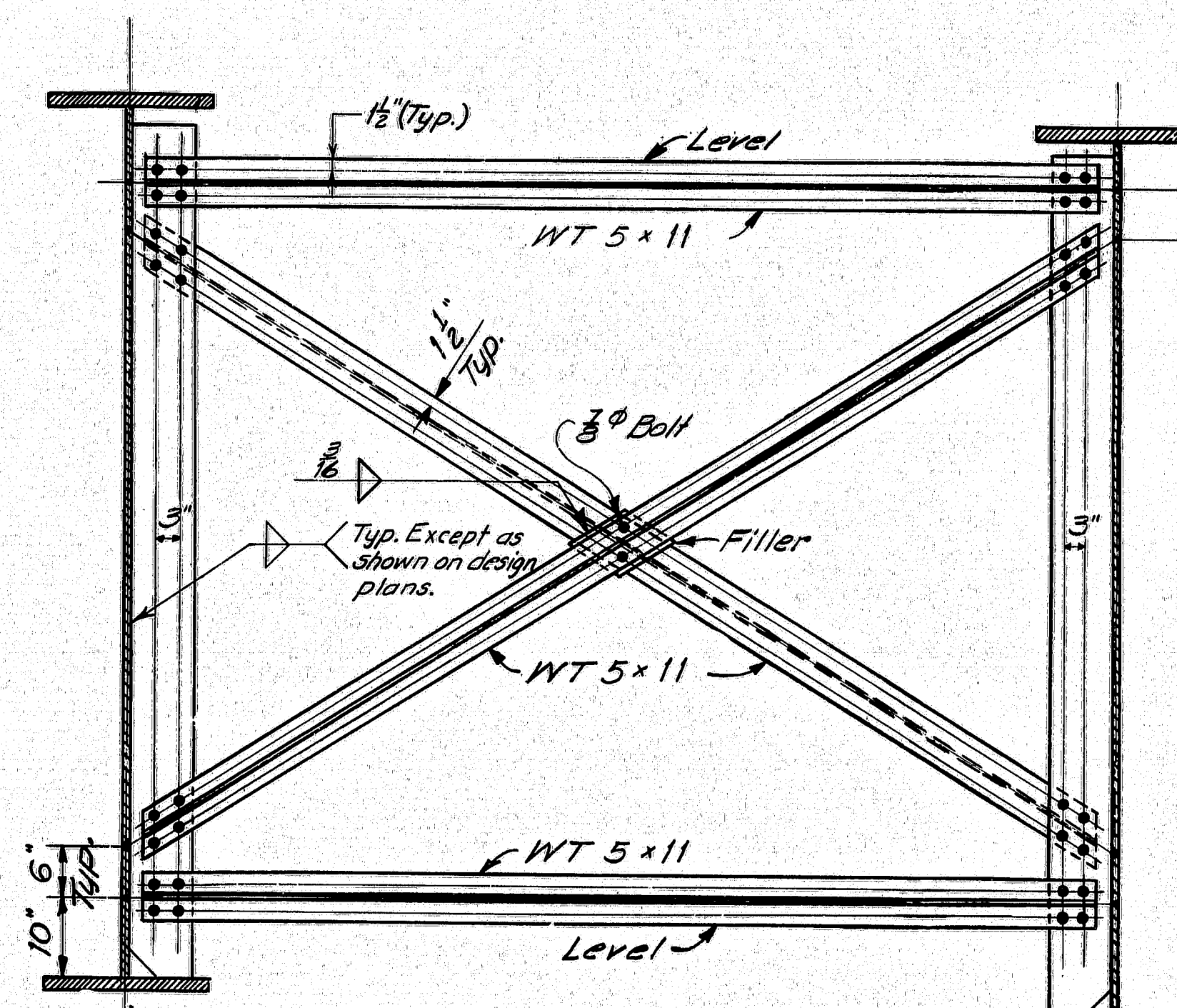
TYPE L



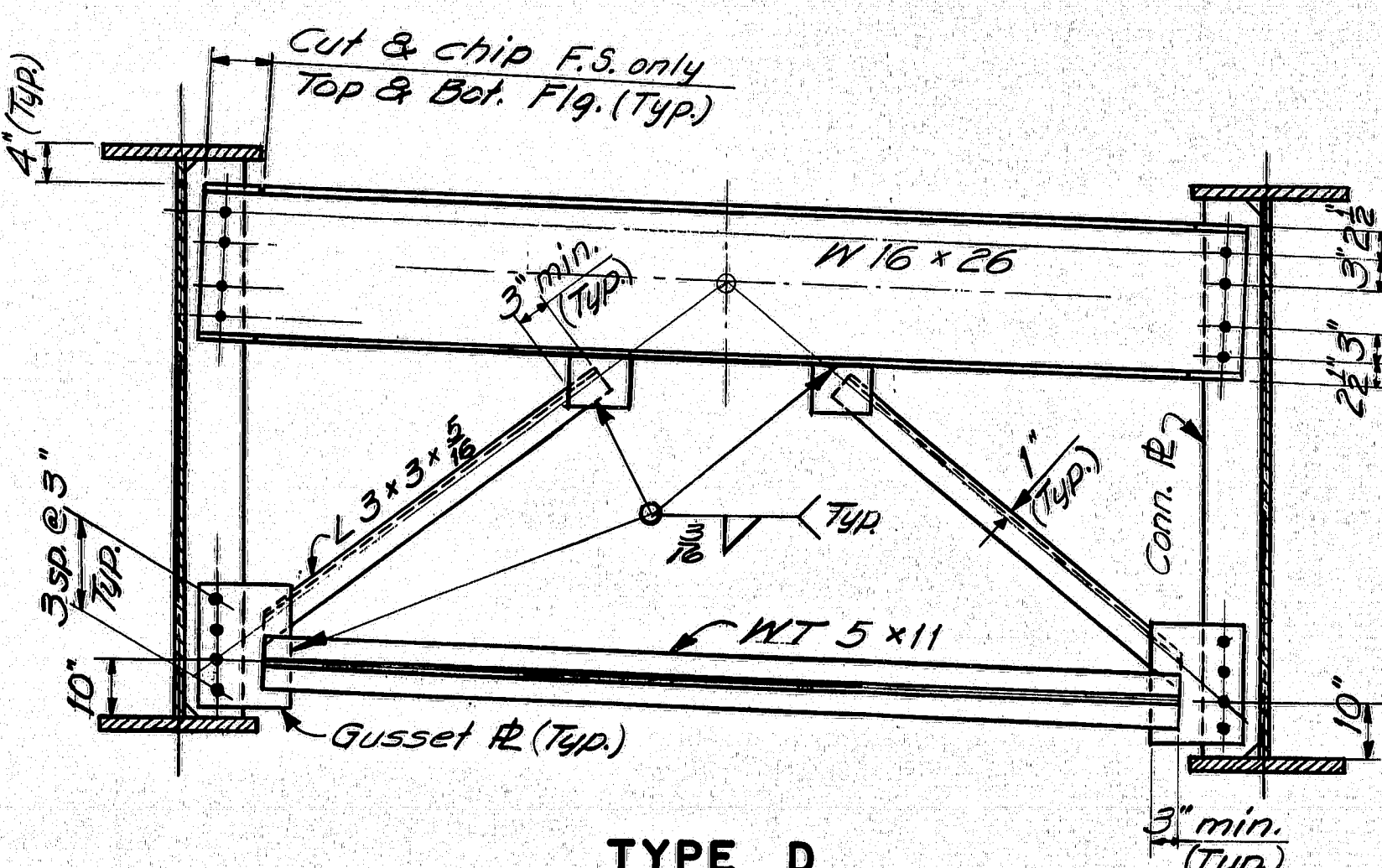
TYPE C



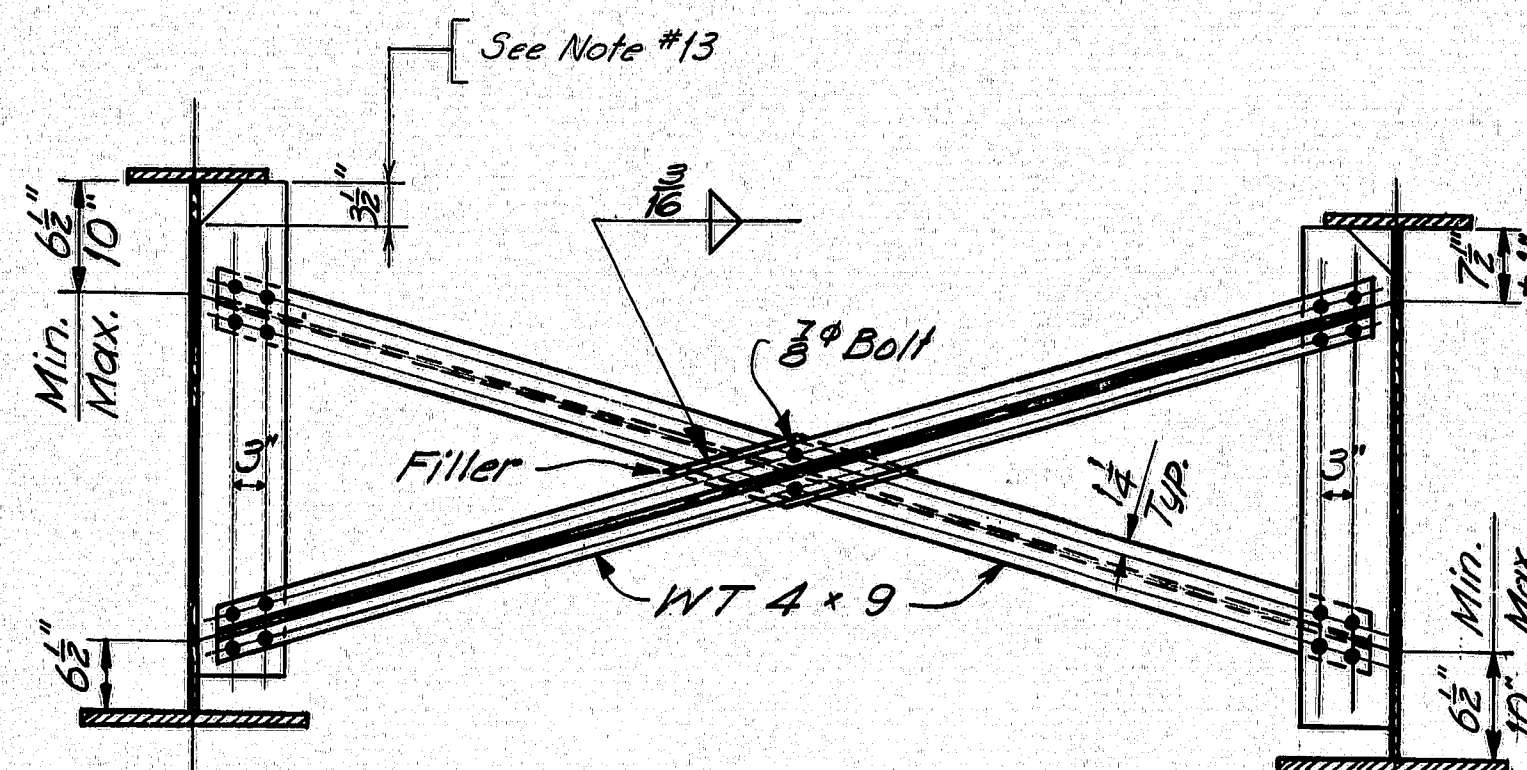
TYPE H



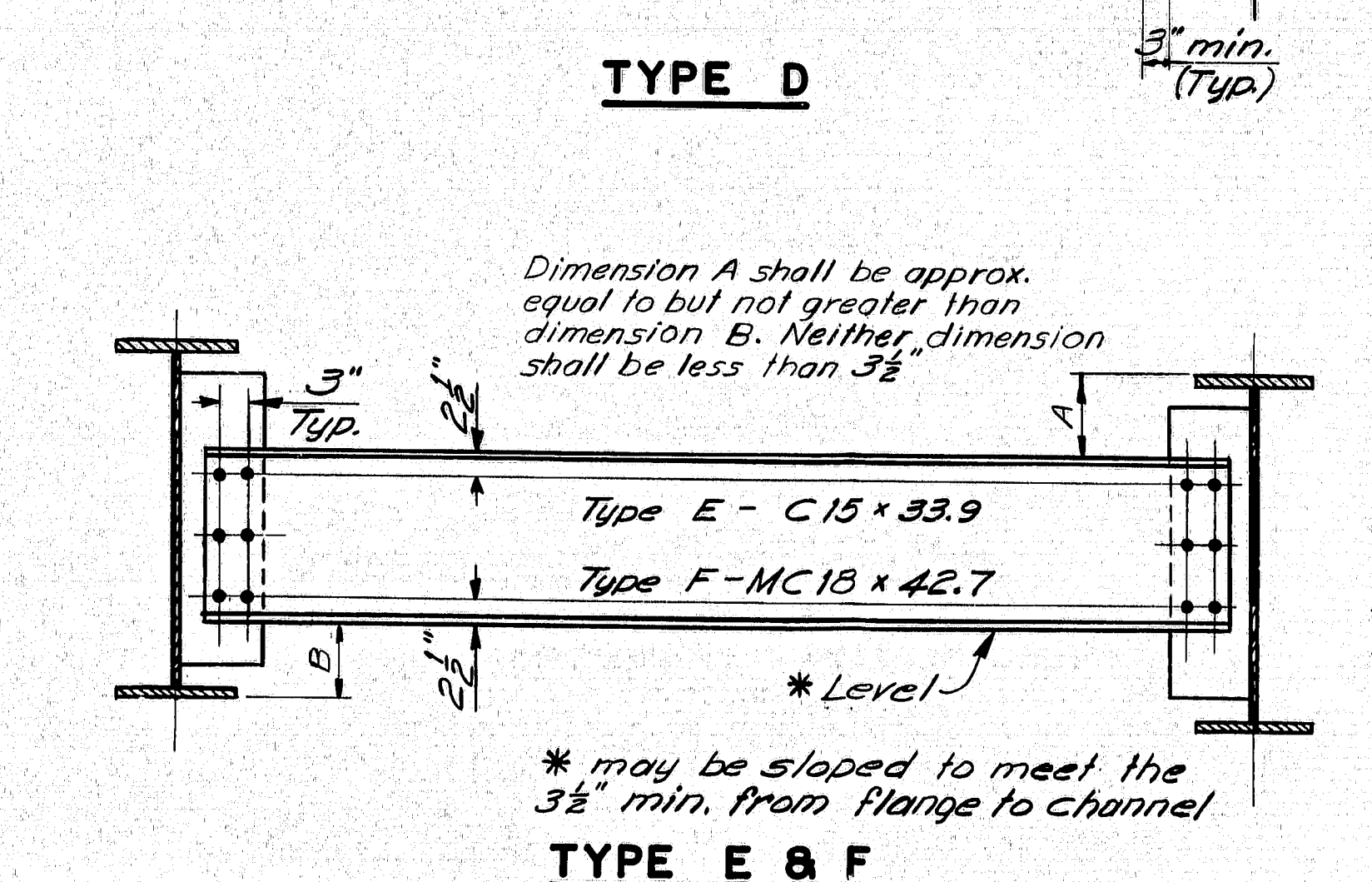
TYPE M



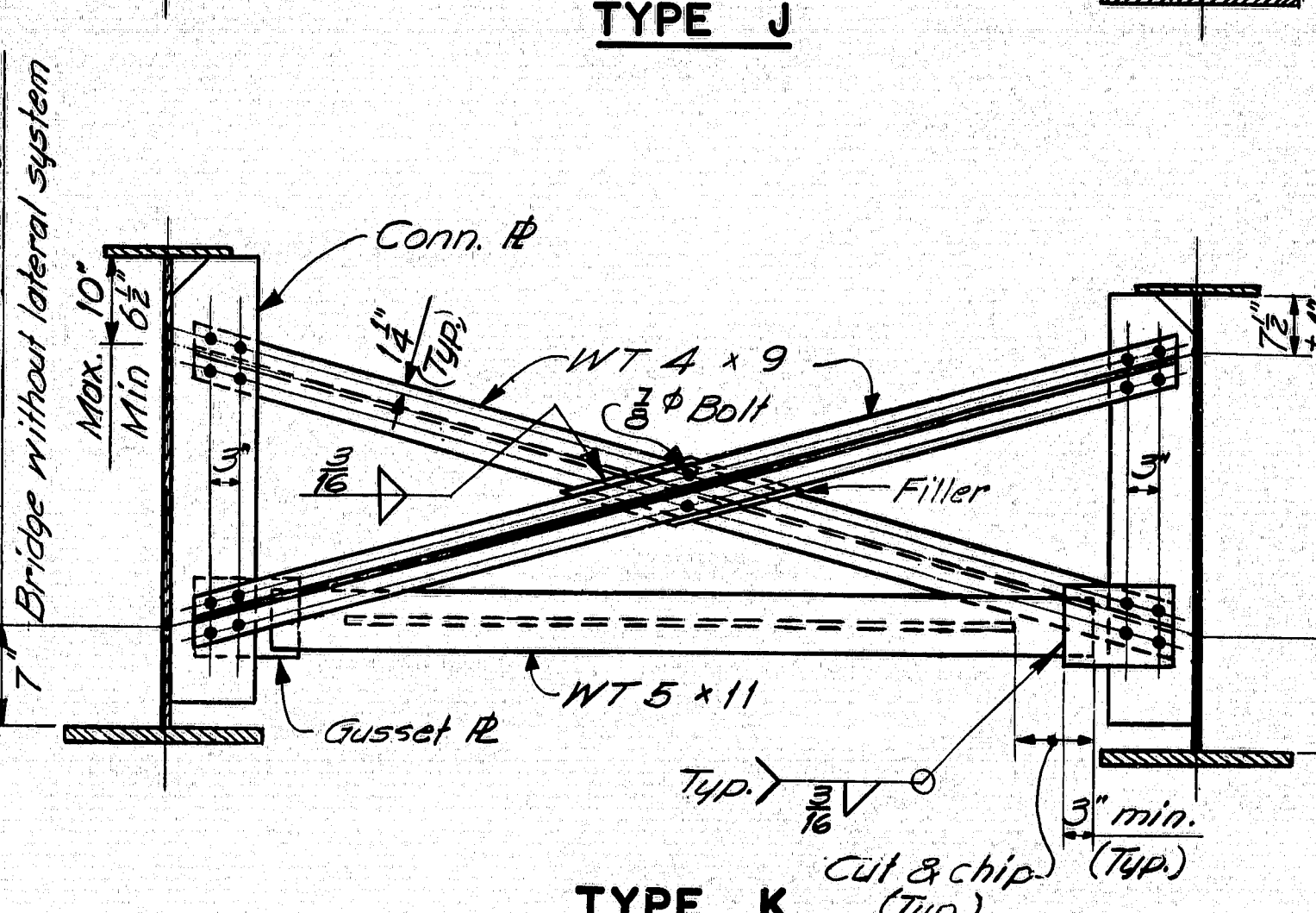
TYPE D



TYPE J



TYPE E & F



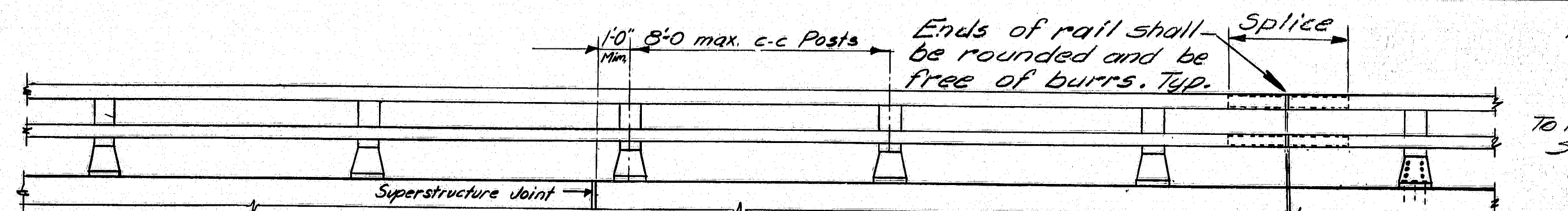
TYPE K

DESIGN - DETAILED	BY	DATE
REVISIONS		
FIELD CHANGES		
PLANS		



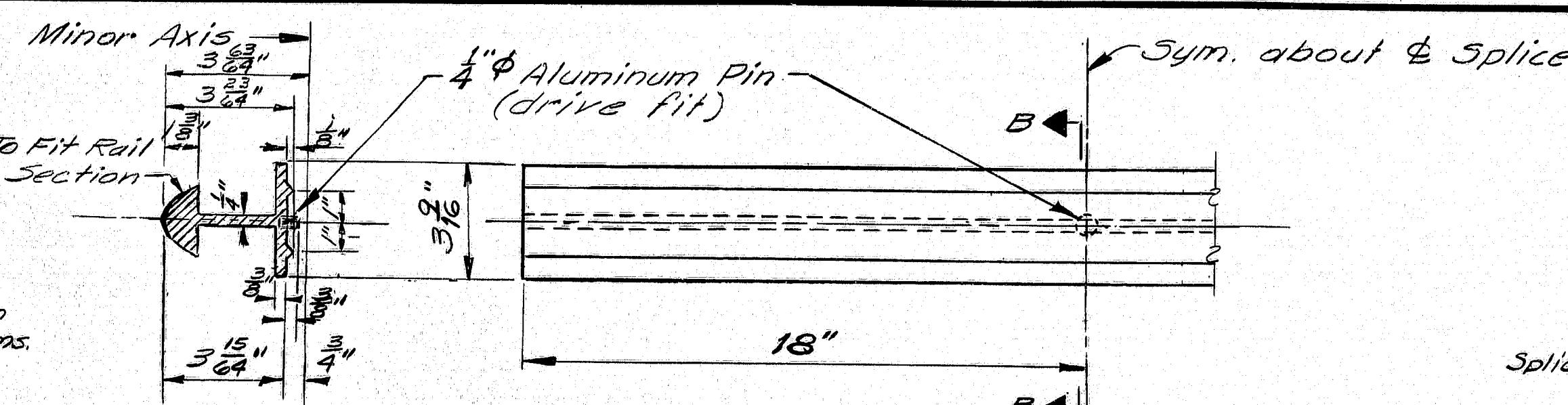
F.H.W.A. RES. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IG-95-9(82)	24	25

DESIGN SPECIFICATIONS  
AASHTO Standard Specifications  
for Highway Bridges 1973, and  
Interims 1974, '75, '76, '77



### RAILING - ELEVATION

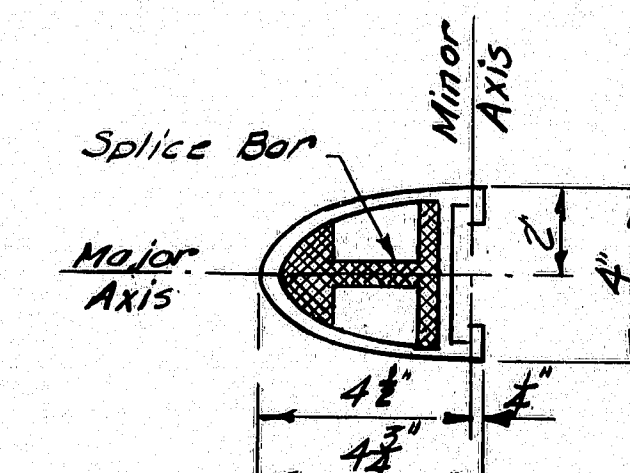
Lengths of rail shall be attached to a minimum of four (4) rail posts wherever possible, and in any case never less than two (2). Rail posts are to be set normal to grade unless otherwise shown on the Bridge Plans.



### SECTION B-B

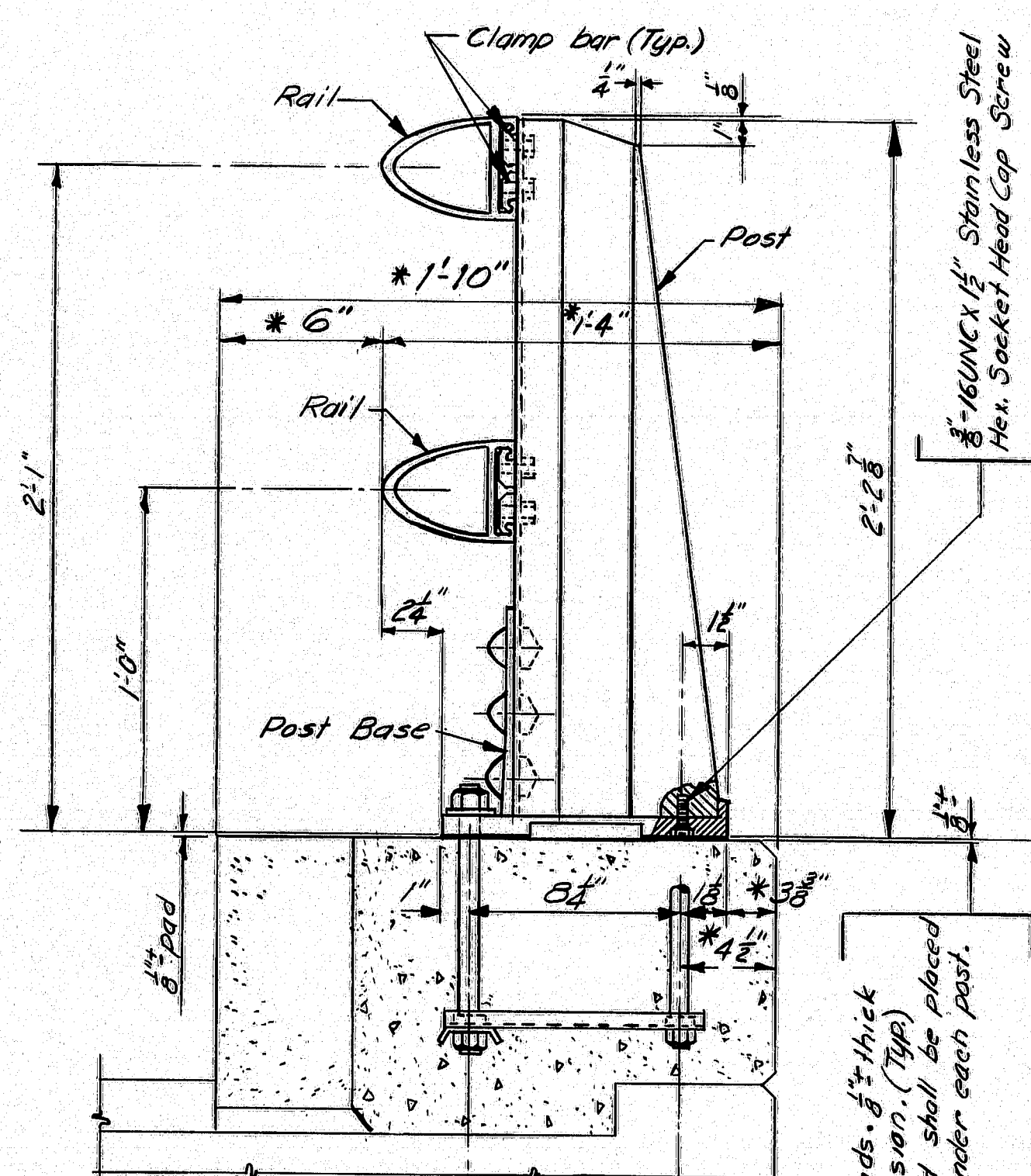
### SPLICE BAR

Alternate splice bars may be substituted if approved by the Engineer



### RAIL SECTION

See "Rail Detail"



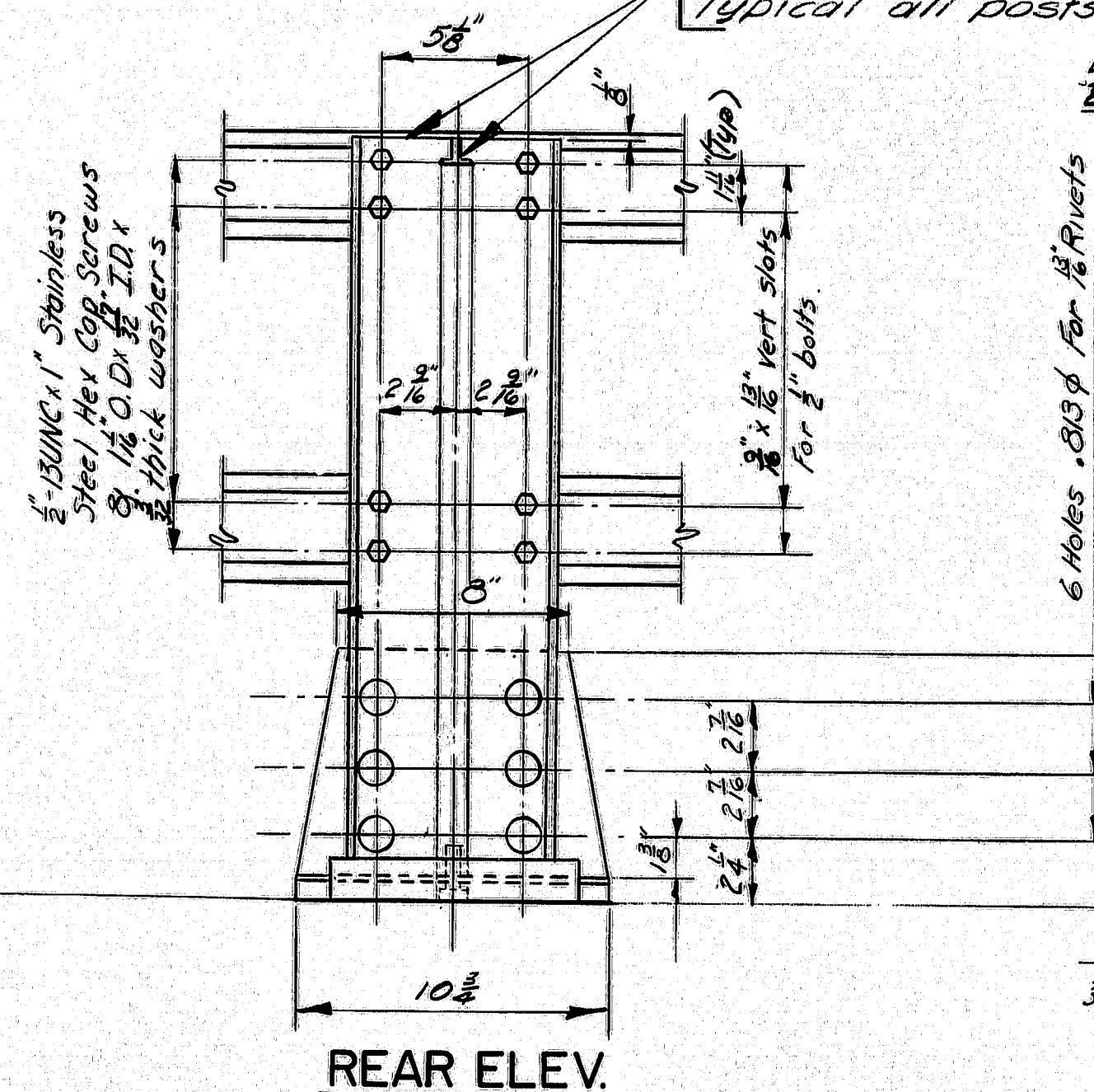
### BRIDGE RAILING (Assembly)

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

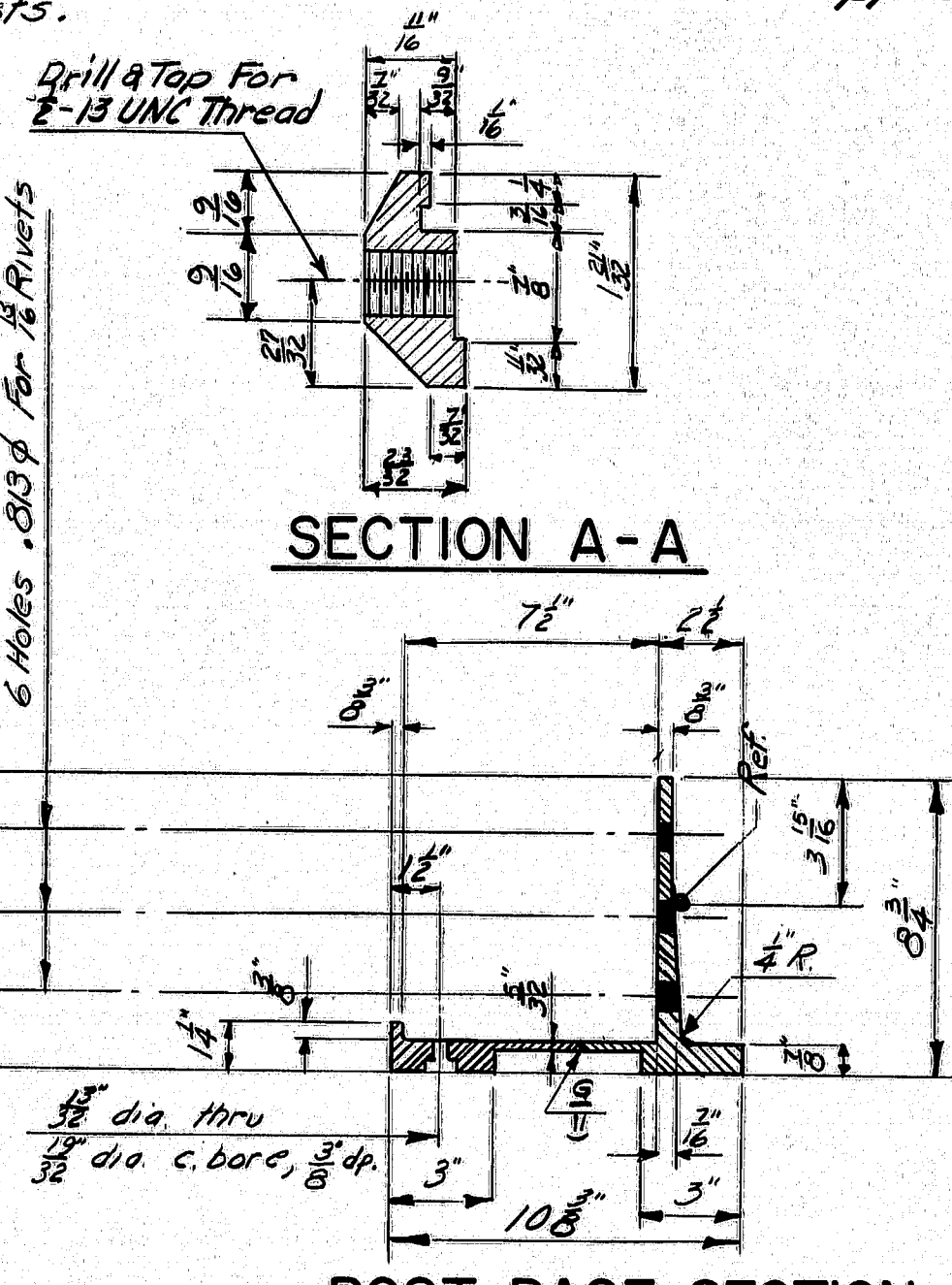
2 Anchor Bolts

2 Anchor Bolts

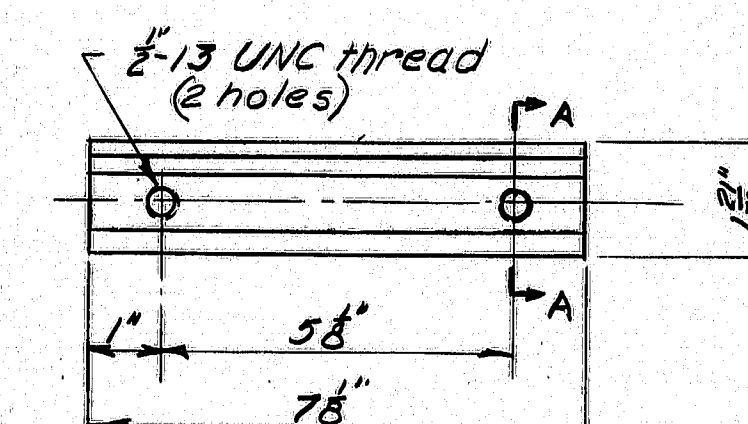
Preformed Pads, 1/2" thick after compression. (Typ.) At least one pad shall be placed at front & back under each post.



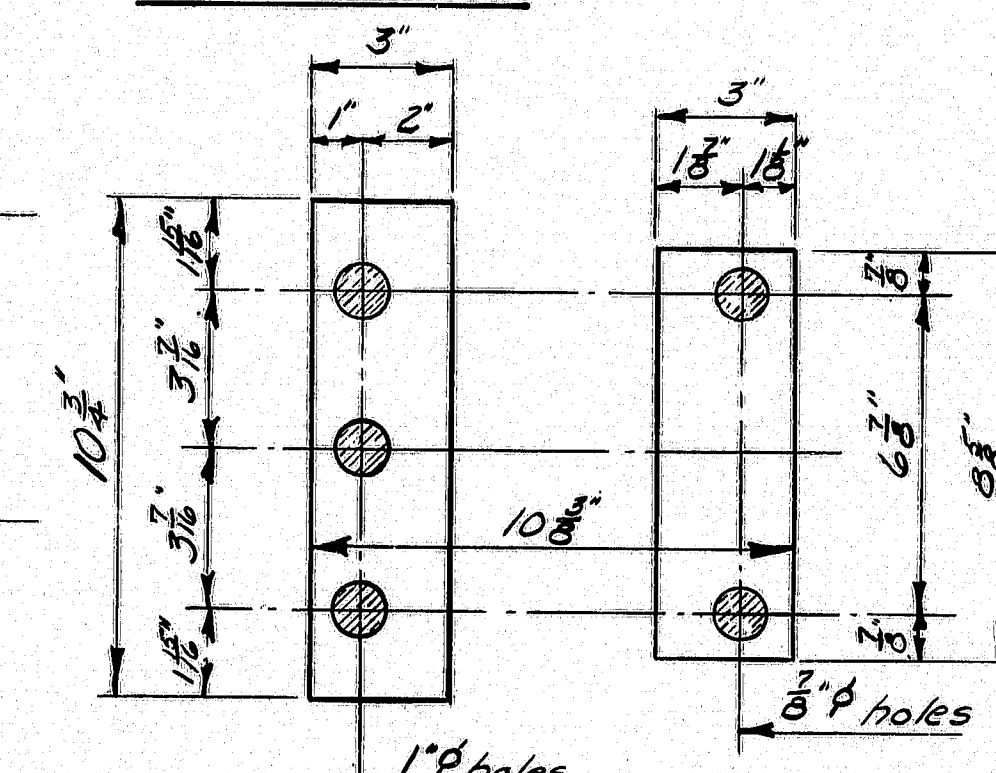
### REAR ELEV.



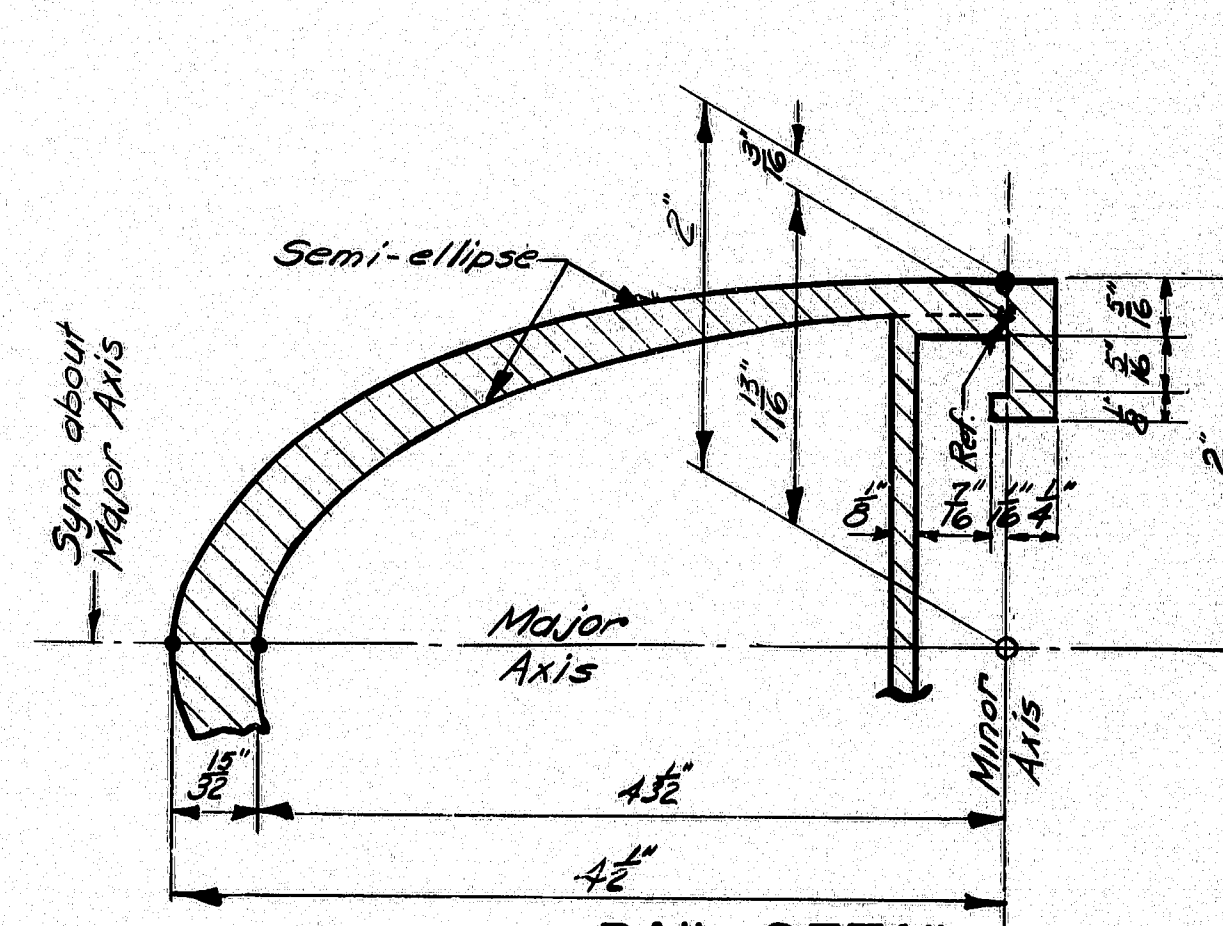
### POST BASE SECTION



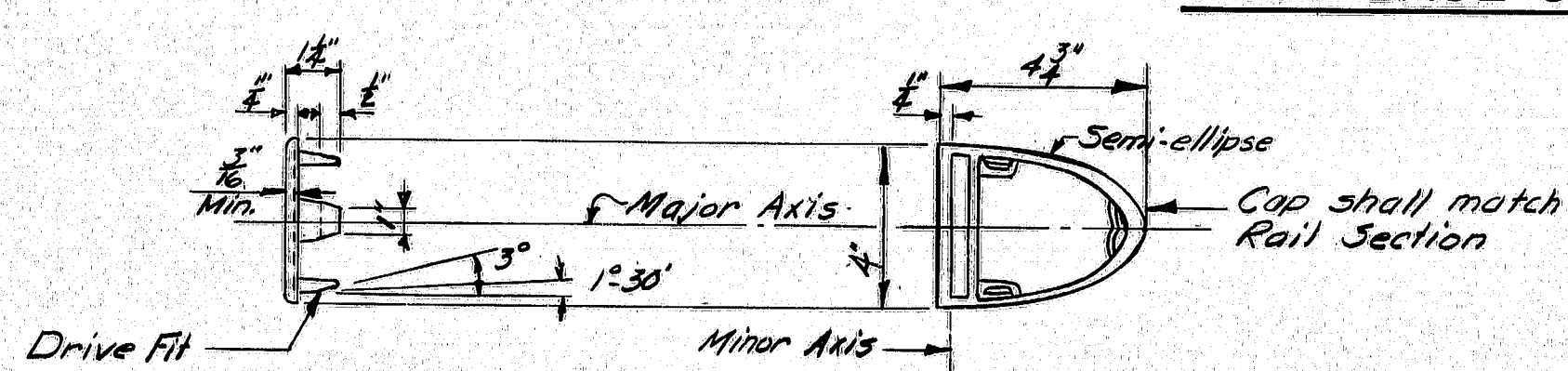
### CLAMP BAR



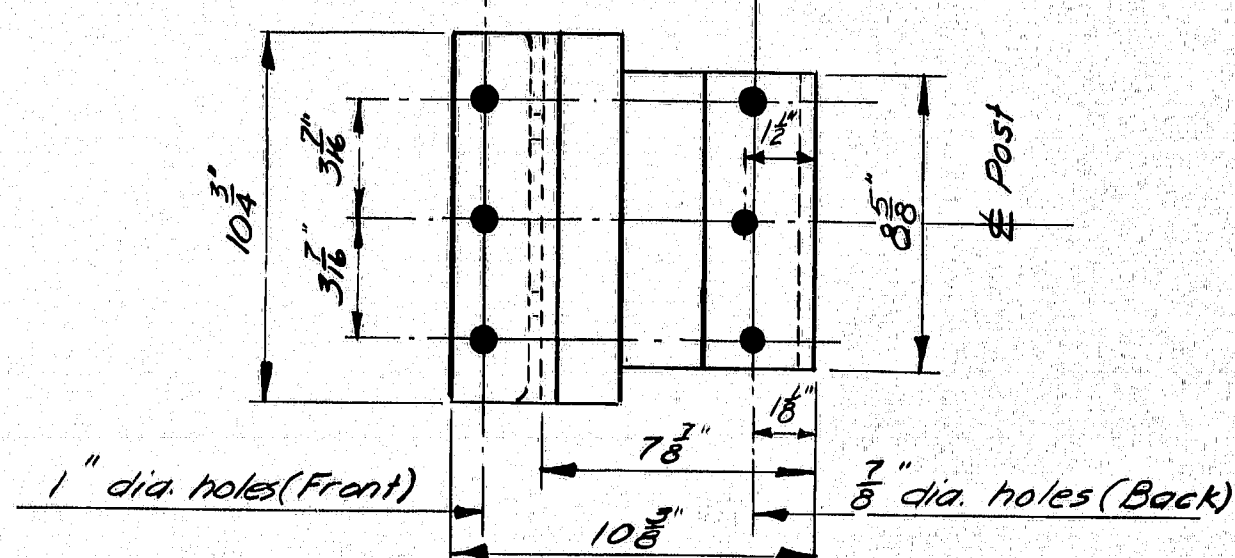
### PREFORMED PADS



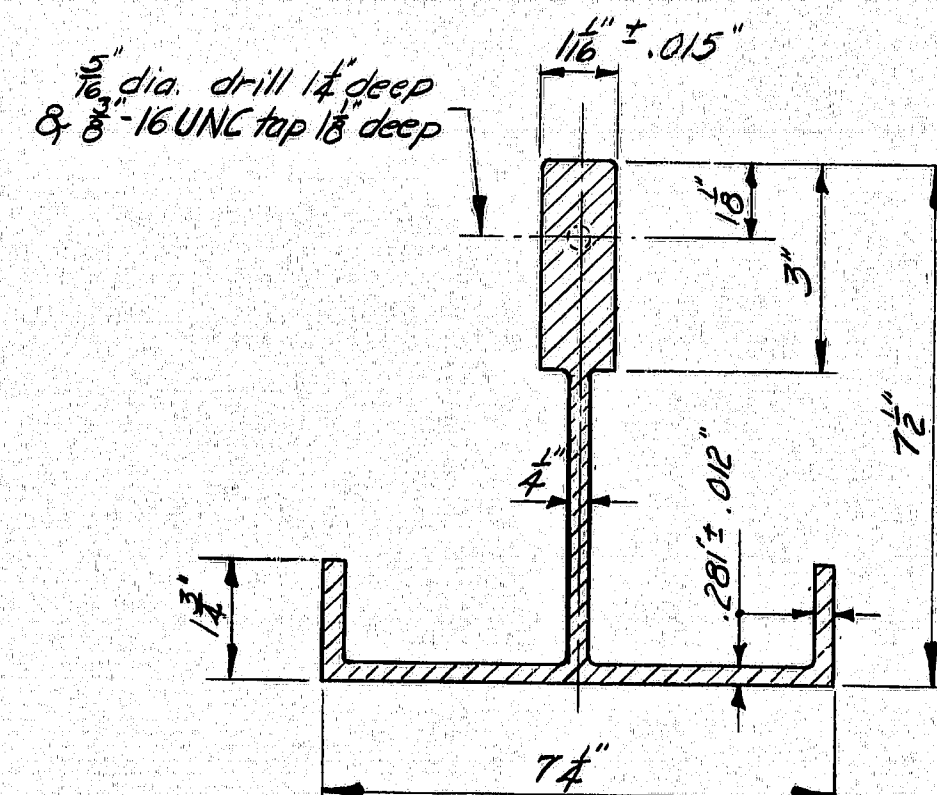
### RAIL DETAIL



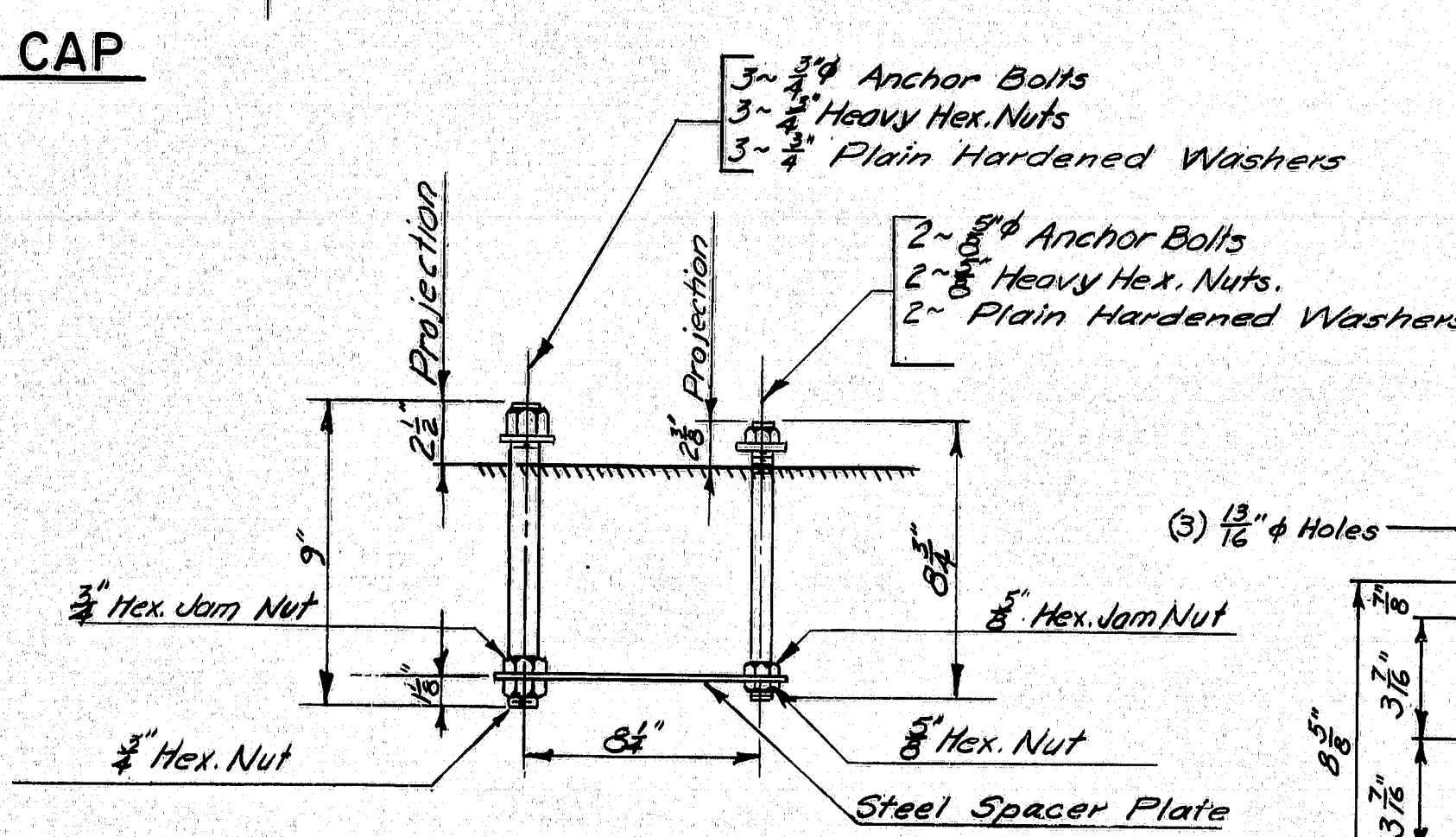
### RAIL CAP



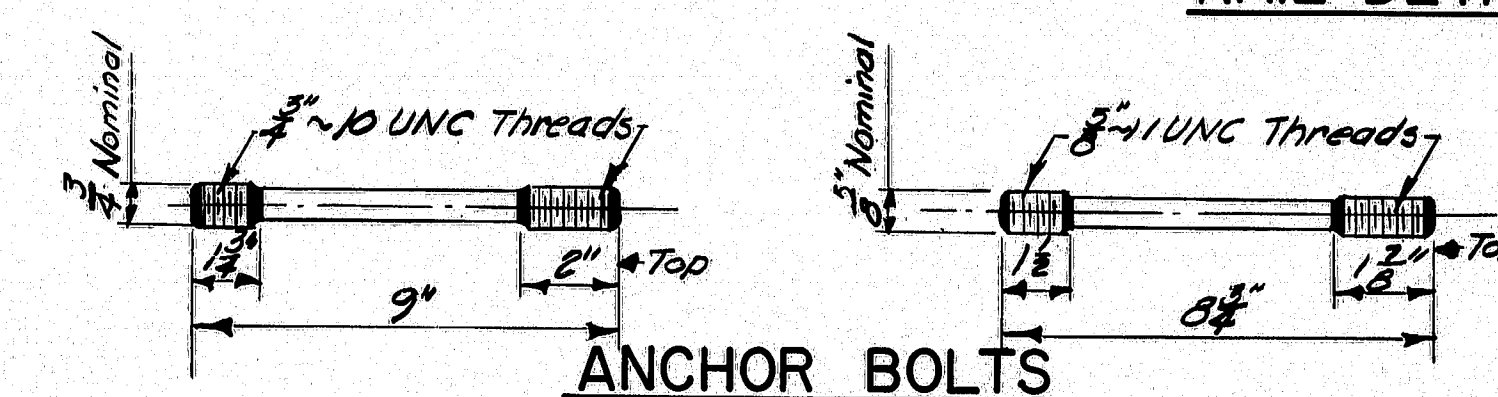
### POST BASE (Bottom View)



### POST SECTION

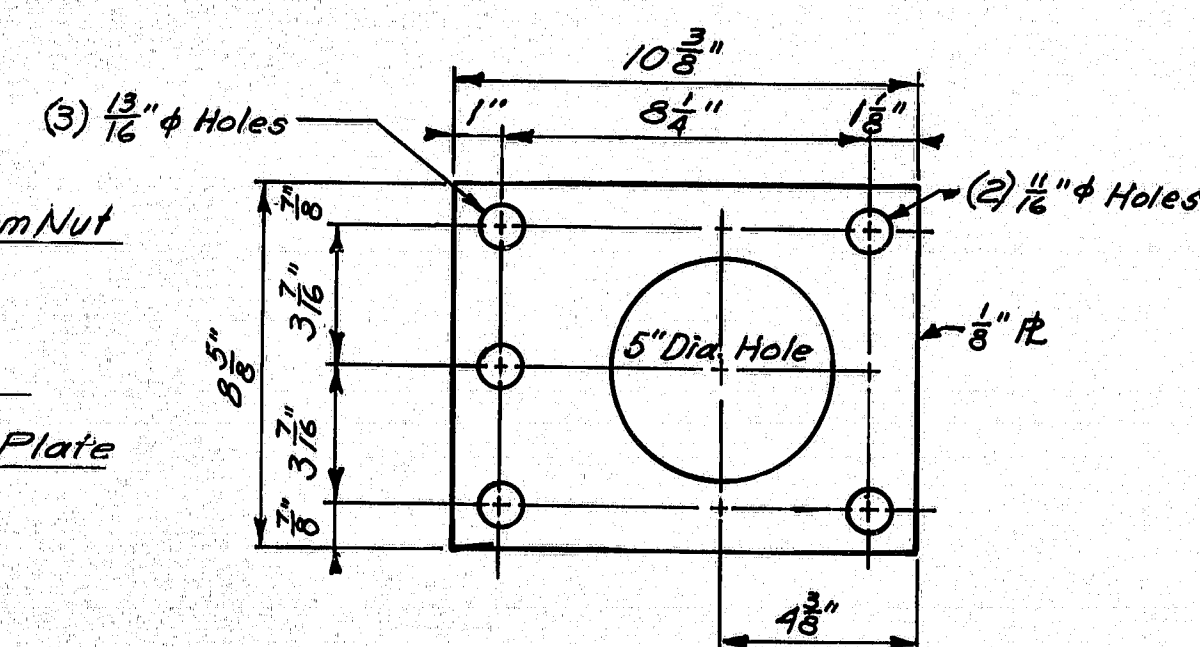


### RAIL POST ANCHORAGE (Assembly)



### ANCHOR BOLTS

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



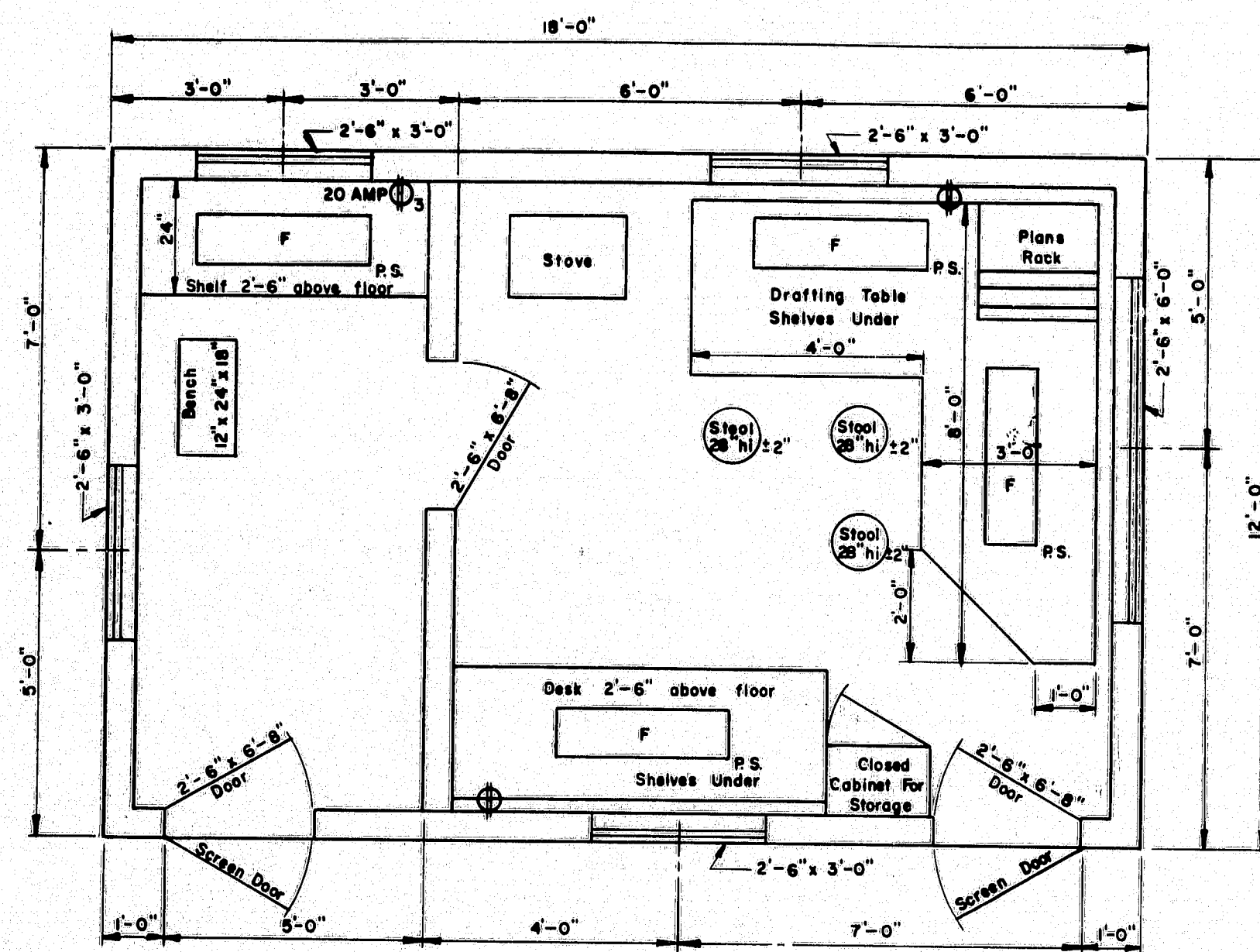
### STEEL SPACER PLATE (For Anchorage)

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
**STANDARD DETAILS**  
(BD 114-77)  
**ALUMINUM BRIDGE RAILING**  
2-BAR (SEMI-ELLIPSE)  
TYPE "A"  
SHEET 24 OF 25 AUGUSTA, MAINE DEC. 1977

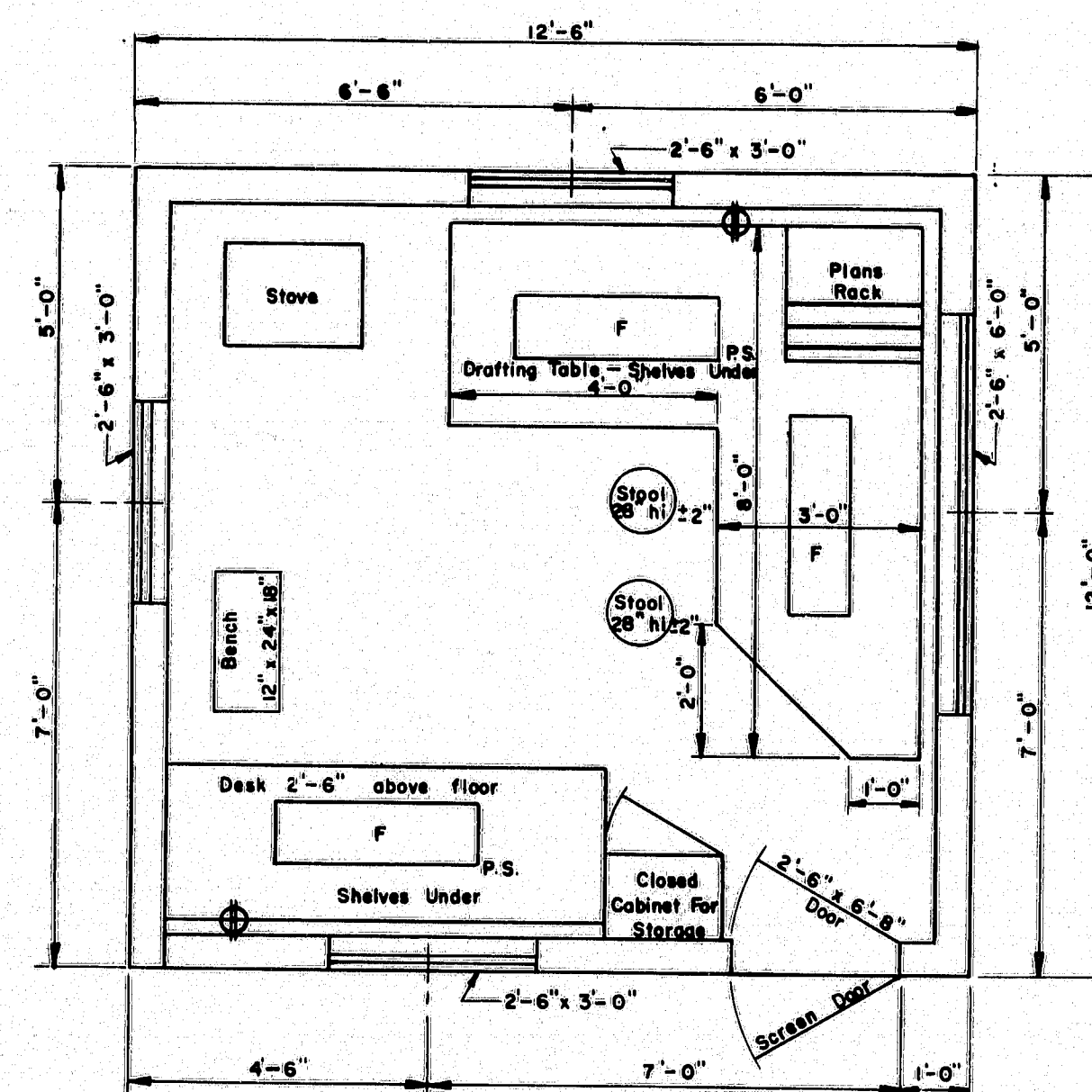
166-156

DESIGN - DETAILED	BY	DATE
1/1/77	K. Leach	1/1/77
CHECKED	BY	DATE
1/1/77	1/1/77	1/1/77
REVISIONS	BY	DATE
1/1/77	1/1/77	1/1/77
FIELD CHANGES	BY	DATE
1/1/77	1/1/77	1/1/77
PLANS	BY	DATE
1/1/77	1/1/77	1/1/77

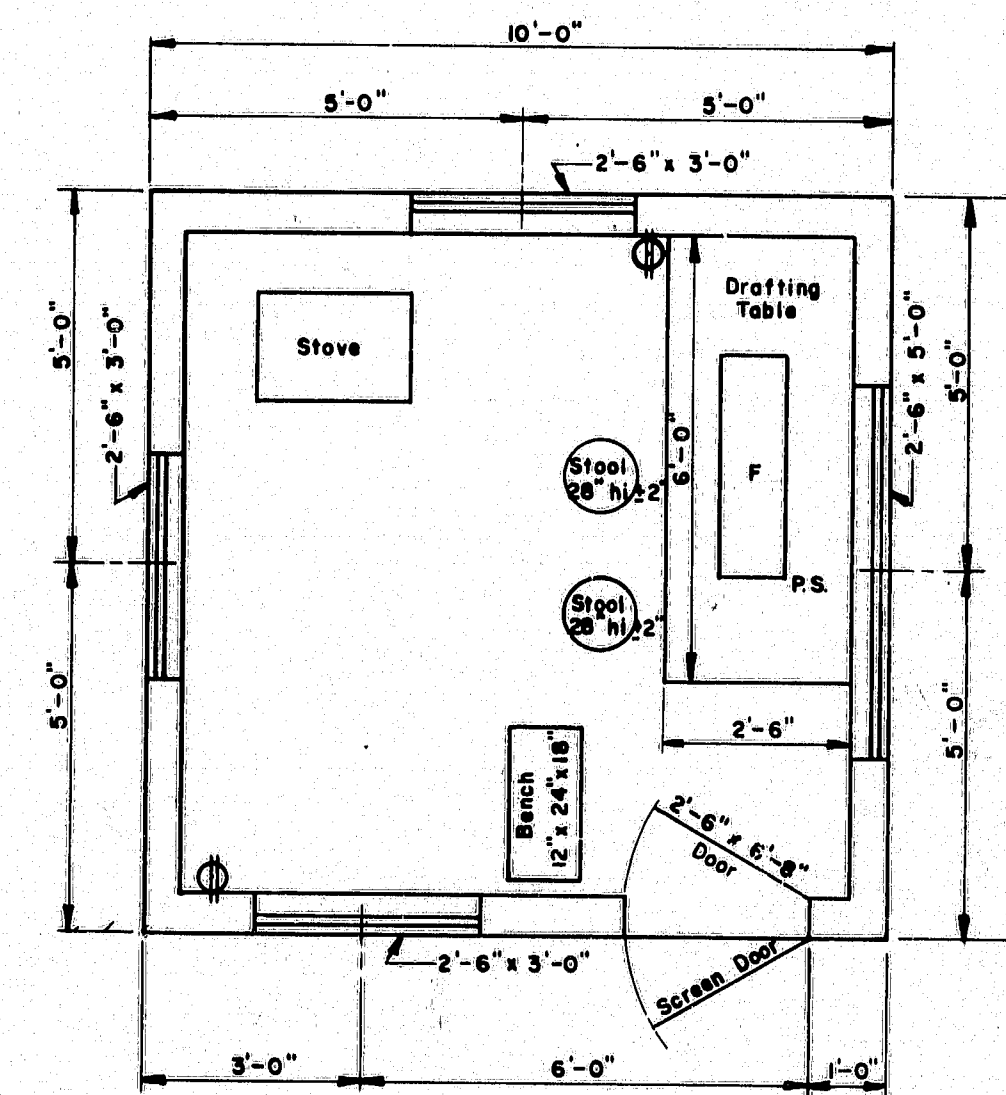




FLOOR PLAN  
TYPE "A"

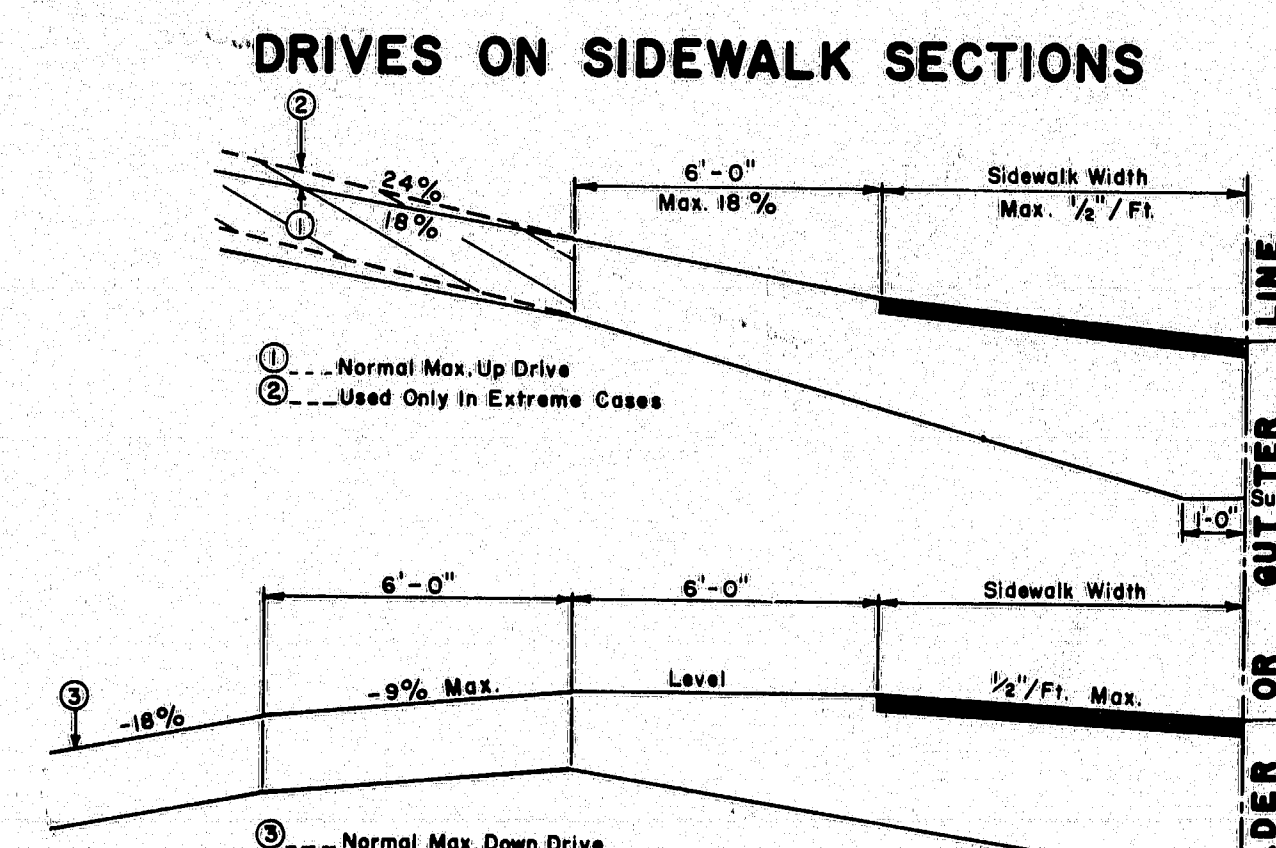


FLOOR PLAN  
TYPE "B"



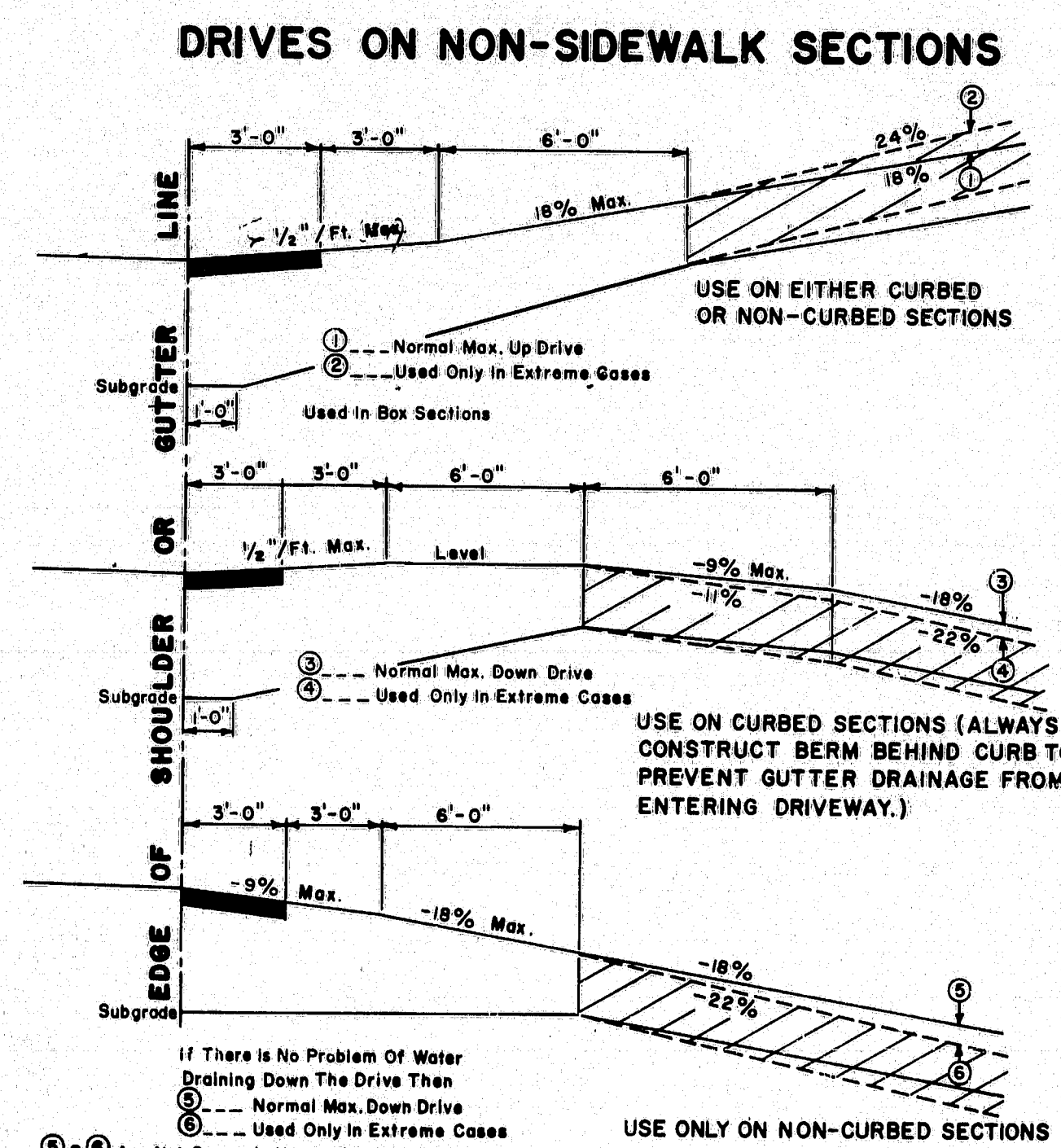
FLOOR PLAN  
TYPE "C"

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



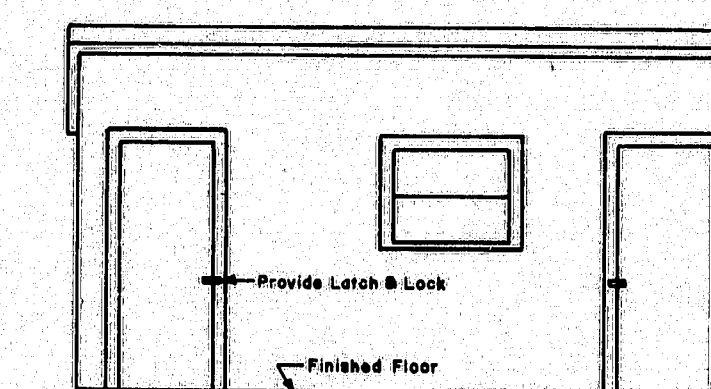
- GENERAL NOTES**
- The sidewalk width shall be paved in all cases.
  - All residential or commercial drives 10% and over shall be paved.

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

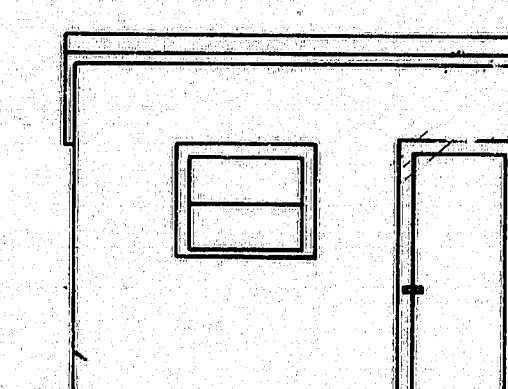


- GENERAL NOTES**
- The first 3' shown as pavement shall be paved only when abutting a paved area.
  - All residential or commercial drives 10% and over shall be paved.

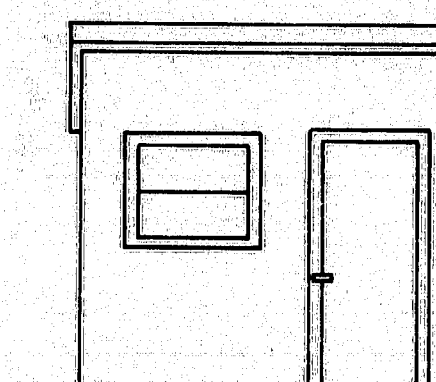
- NOTES ON MAXIMUM DRIVEWAY PROFILES**
- These profiles are a guide for the majority of cases, but should be field checked when the main line grade is steep (4% to 6% or greater) or the angle of approach to the drive is unusual.
  - Generally the majority of drives on a project will be built with flatter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



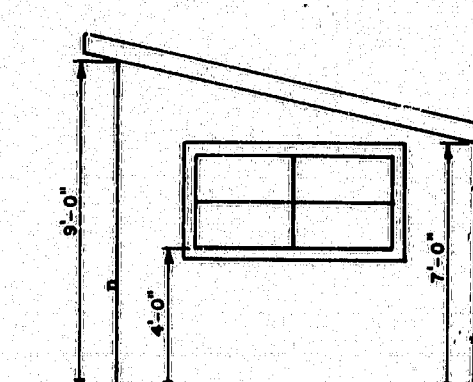
FRONT ELEVATION  
TYPE "A"



FRONT ELEVATION  
TYPE "B"



FRONT ELEVATION  
TYPE "C"



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

**REVISIONS**

PLATE	DATE	BY	REVISION
1	5-16-73		

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
AUGUSTA, MAINE

**STANDARD DETAILS**

DRIVEWAY DETAILS  
FIELD OFFICES  
TESTING LABORATORY

AUG. 1969

166-157