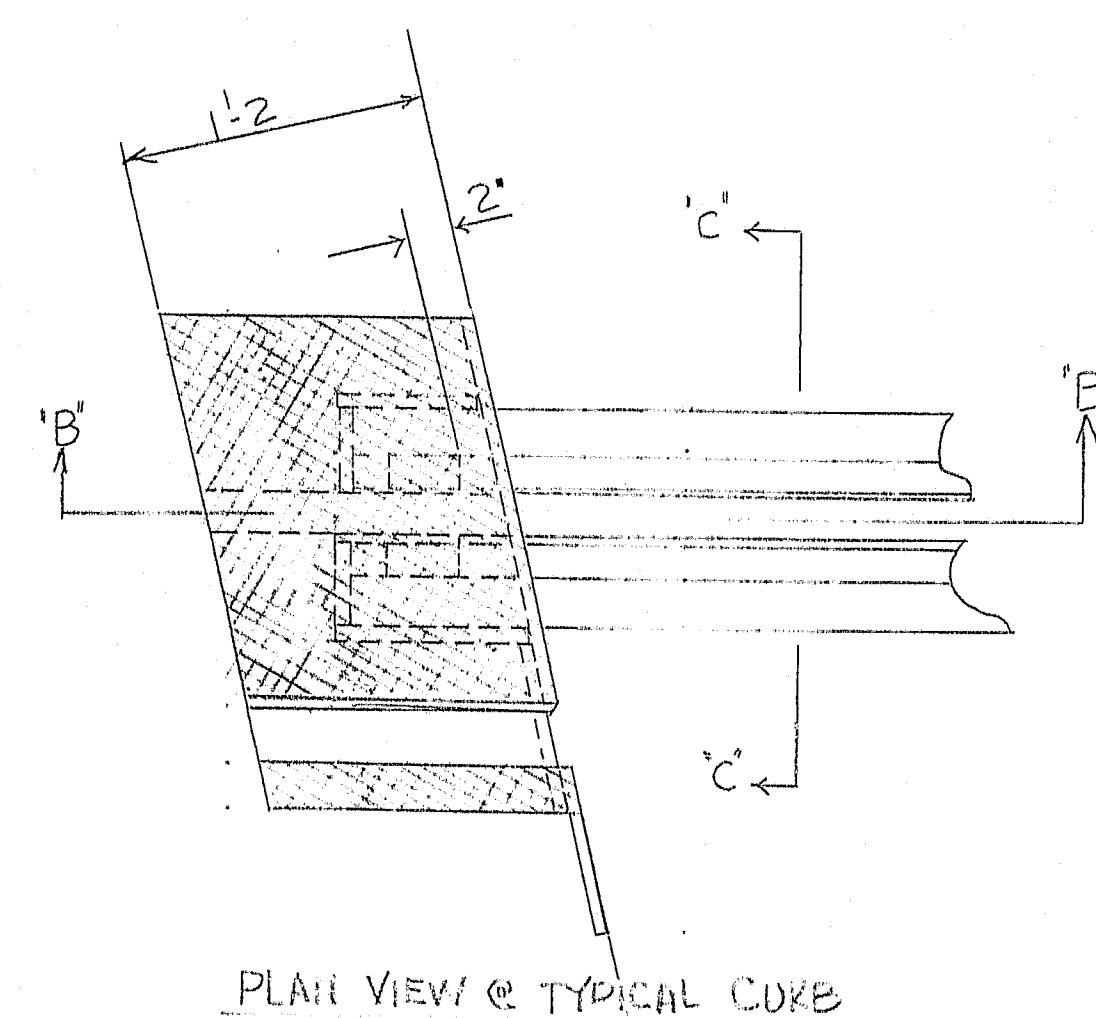
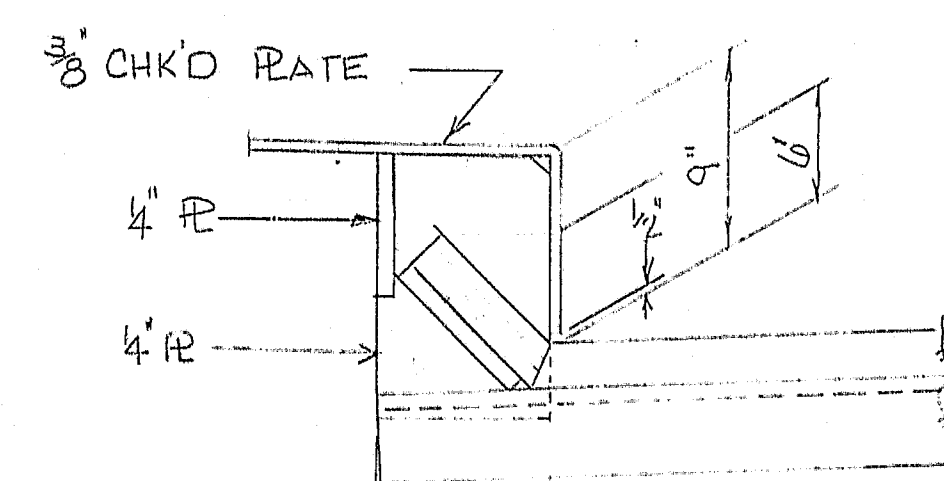


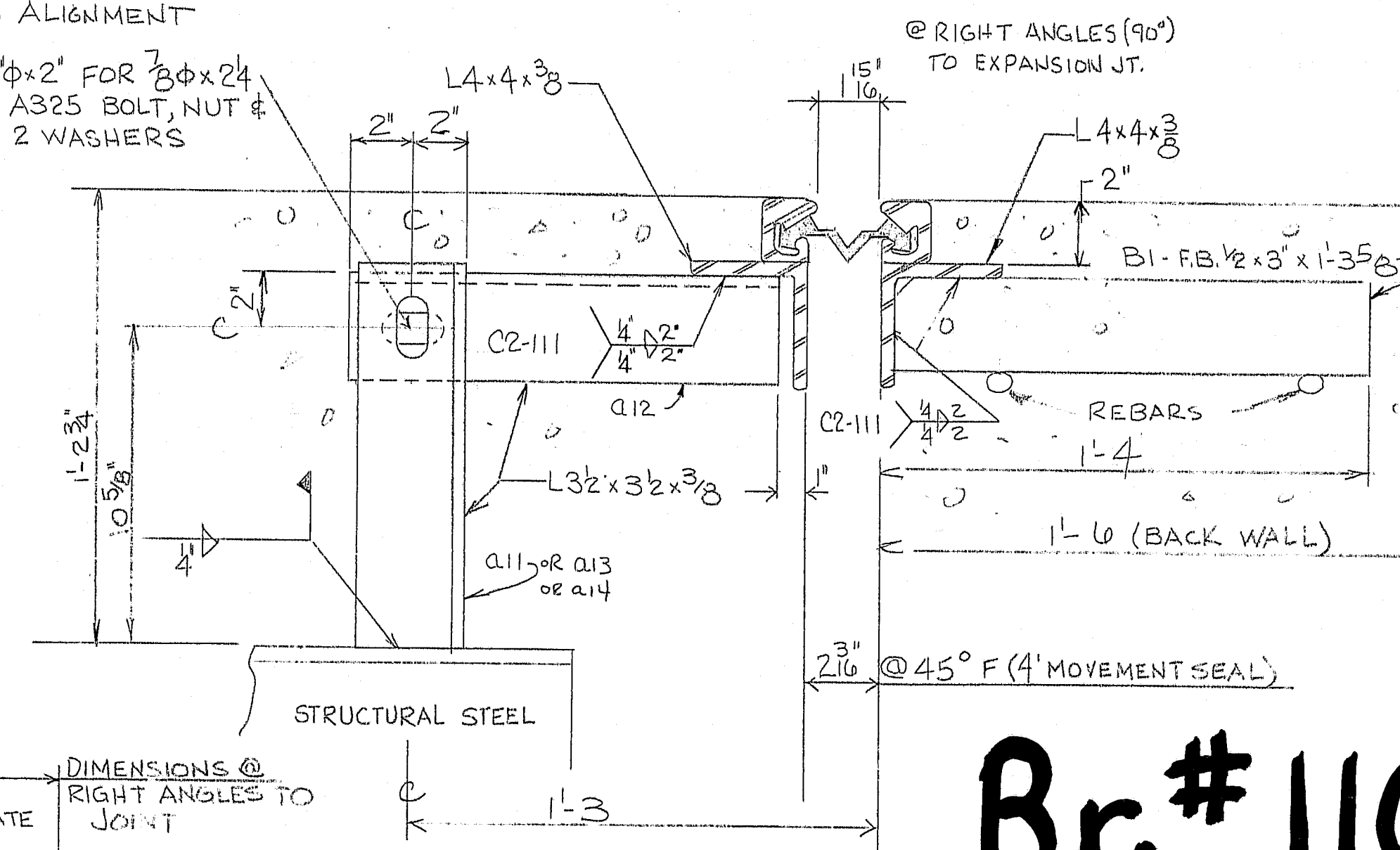
TO USE FOR FIELD ADJUSTING
HEIGHT & ALIGNMENT



PLAN VIEW @ TYPICAL CURB



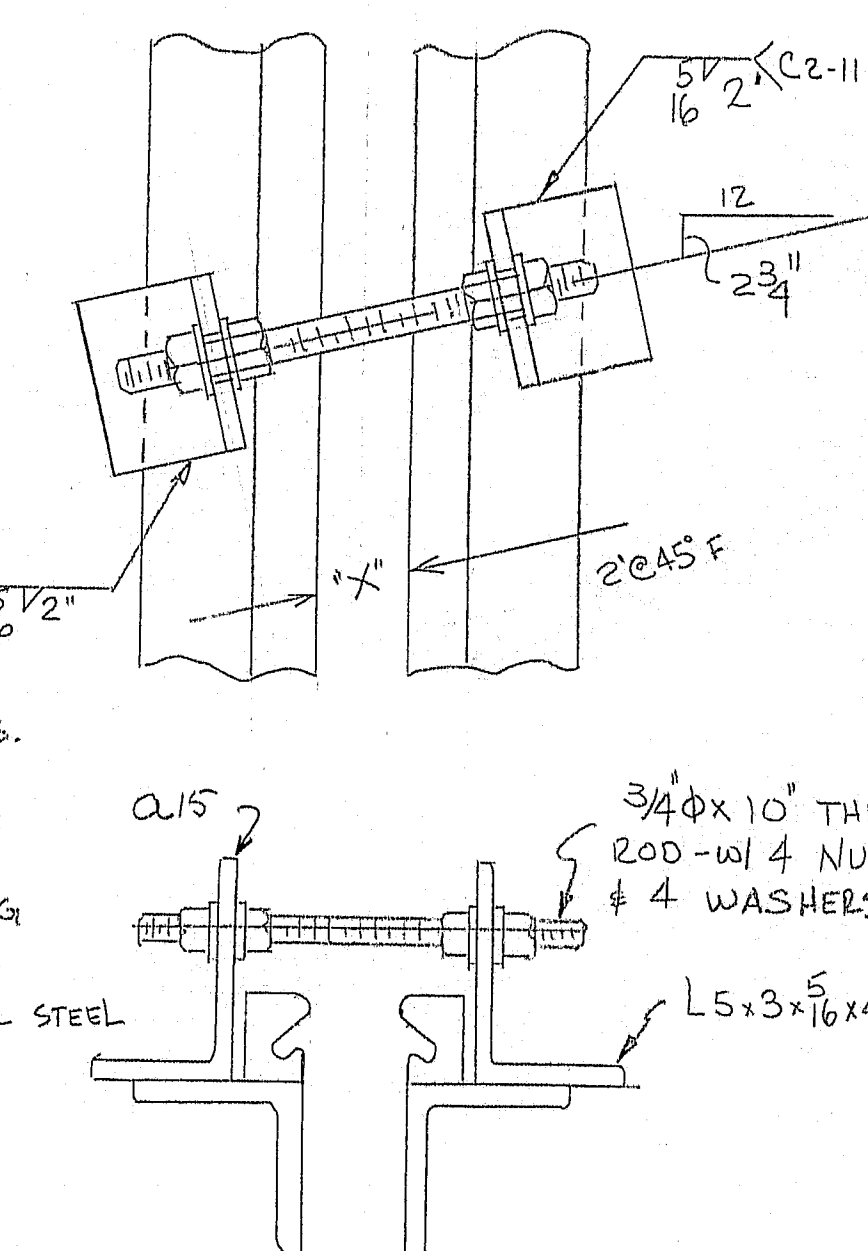
SECTION "B-B"



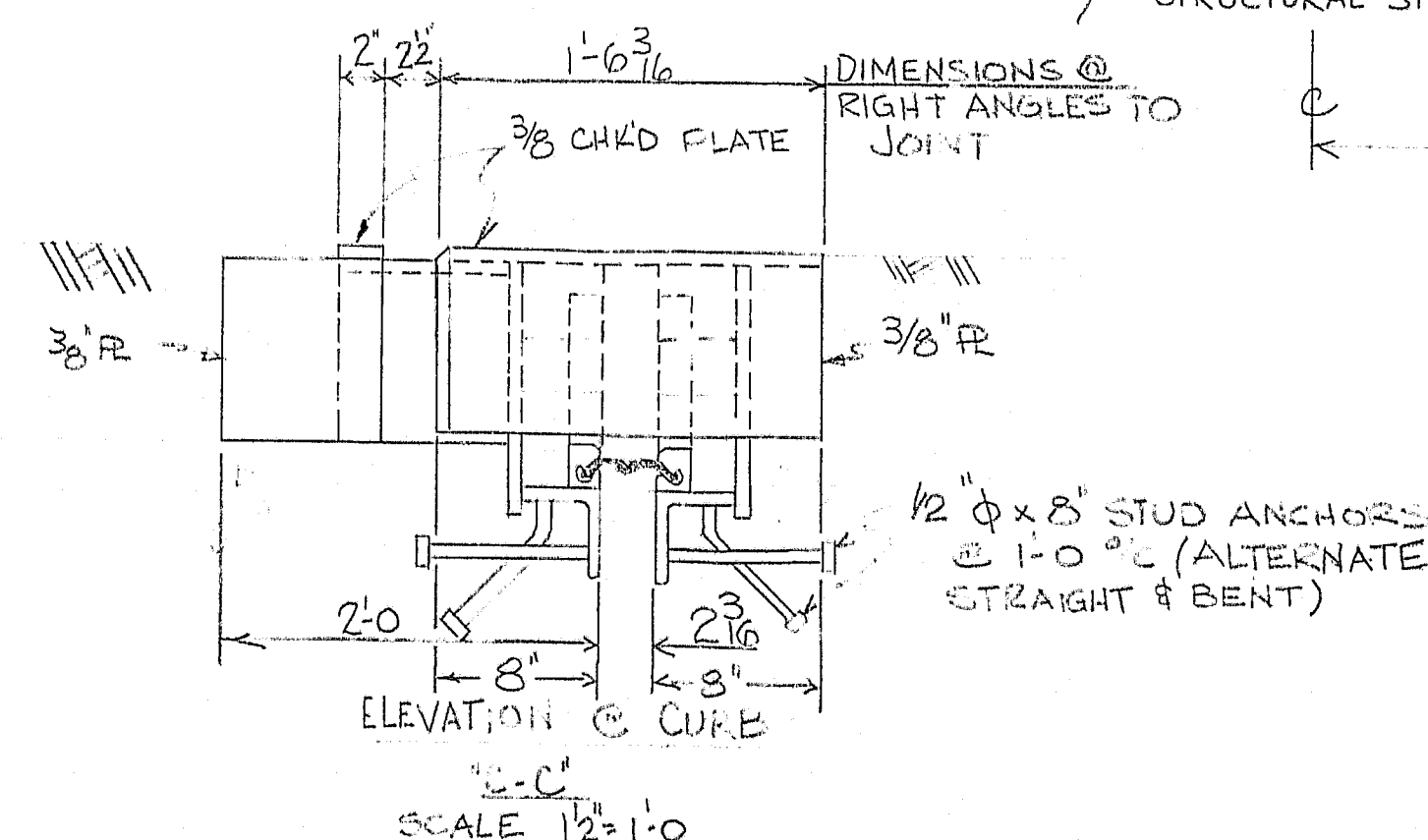
SECTION "A-A"
SCALE 3" = 1'-0"

Br.# 1104

- INSTALLATION: C-111 $\frac{5}{16}$ " $\sqrt{2}$ "
1. PLACE UNIT IN LOCATION, LINE UP CURBS.
 2. WELD B1 TO REBARS.
 3. CHECK "X" DIMENSION ACCORDING TO CHART ON SHEET 29 OF 35, AND ADJUST AS REQ'D BY MOVING NUTS ON THE ROD.
 4. FIELD WELD ALL TO STRUCTURAL STEEL
 5. REMOVE 15x3x9/16 $\frac{1}{2}$ " THICK ROD.



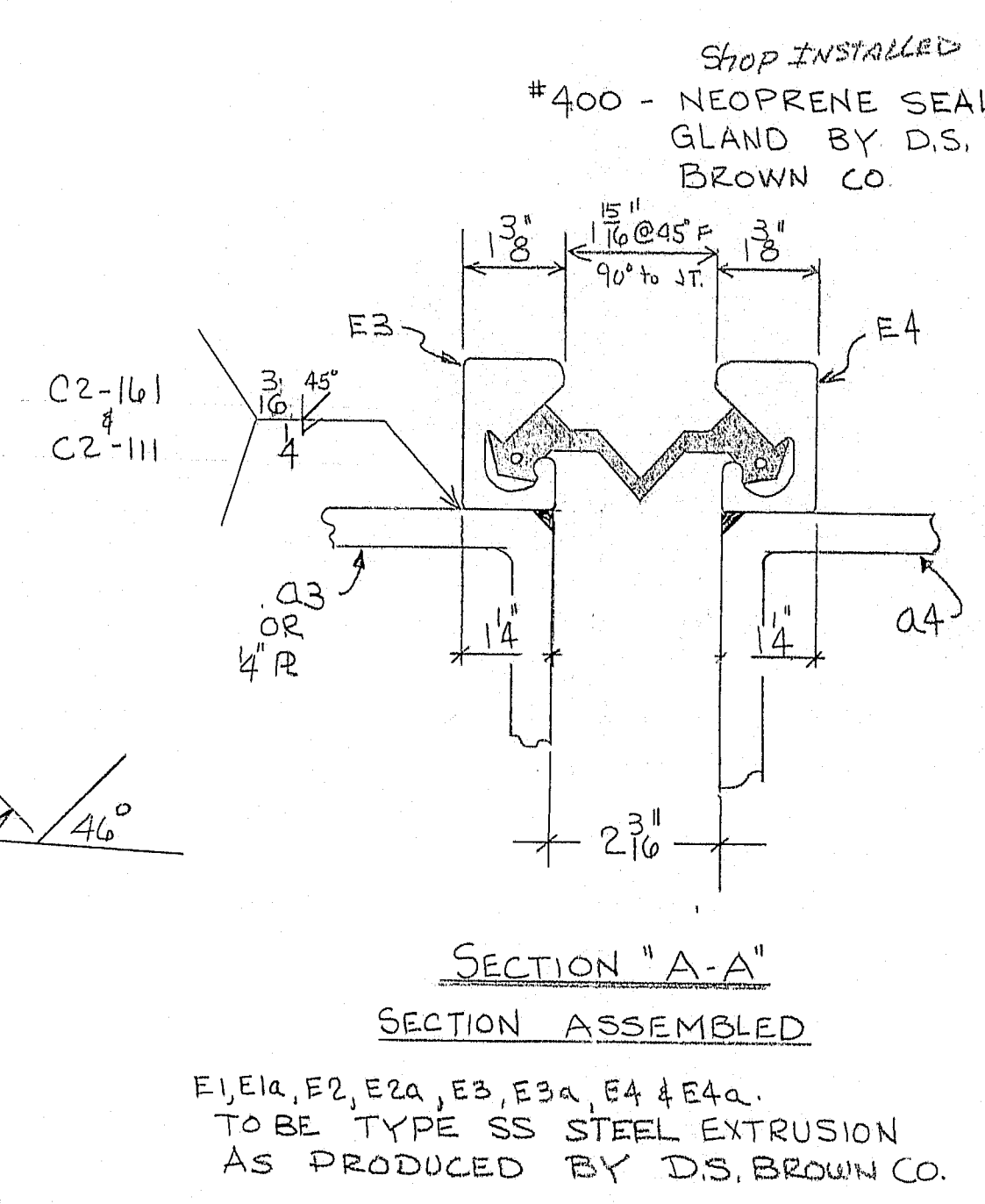
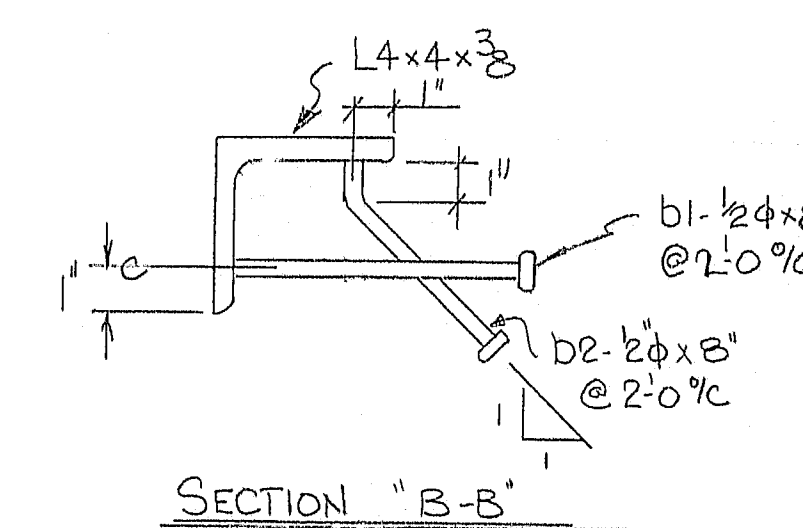
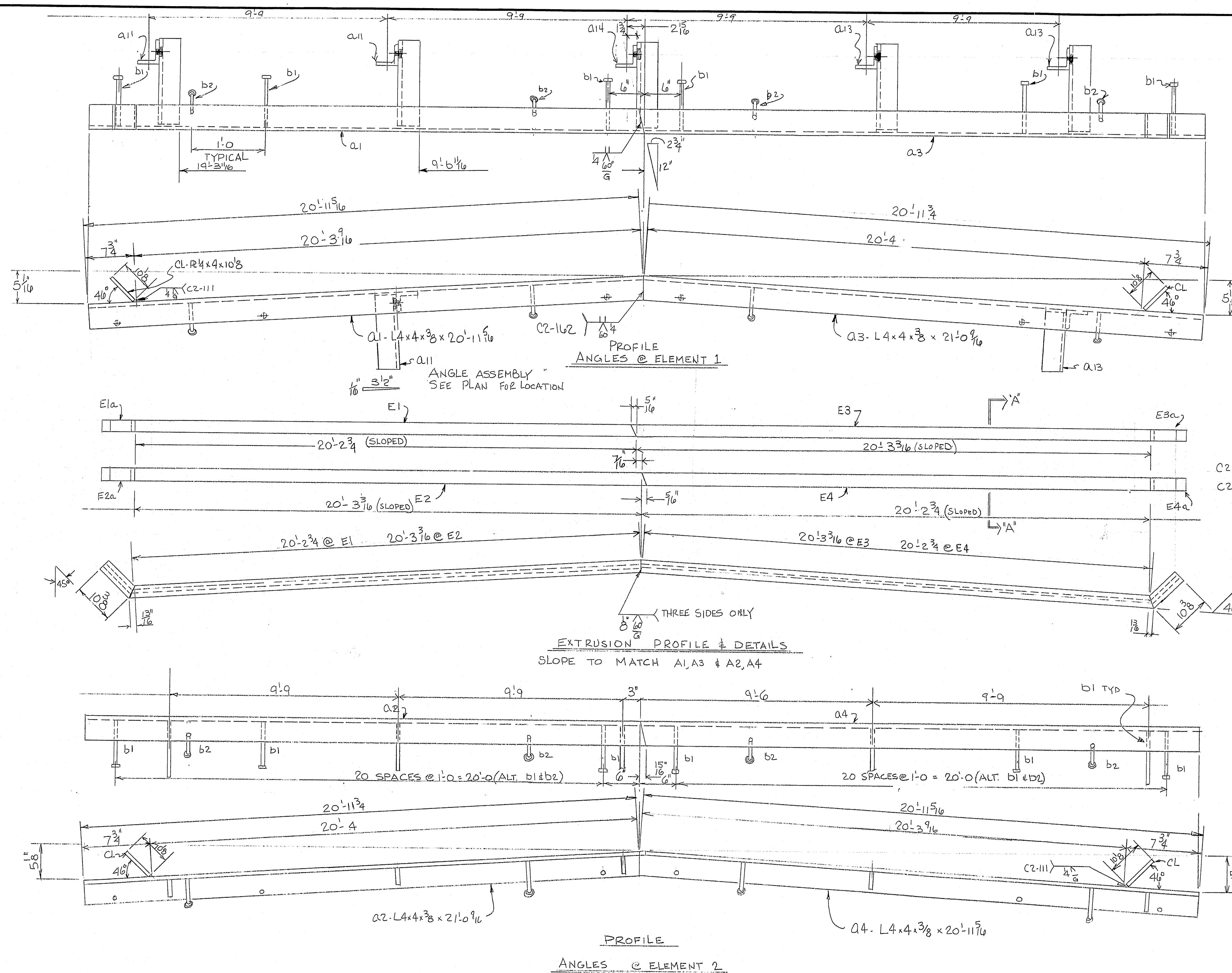
SHIPPING DETAIL @ $\pm 4.0\%$
Ship with seal intact



SCALE $1\frac{1}{2}'' = 1'-0''$

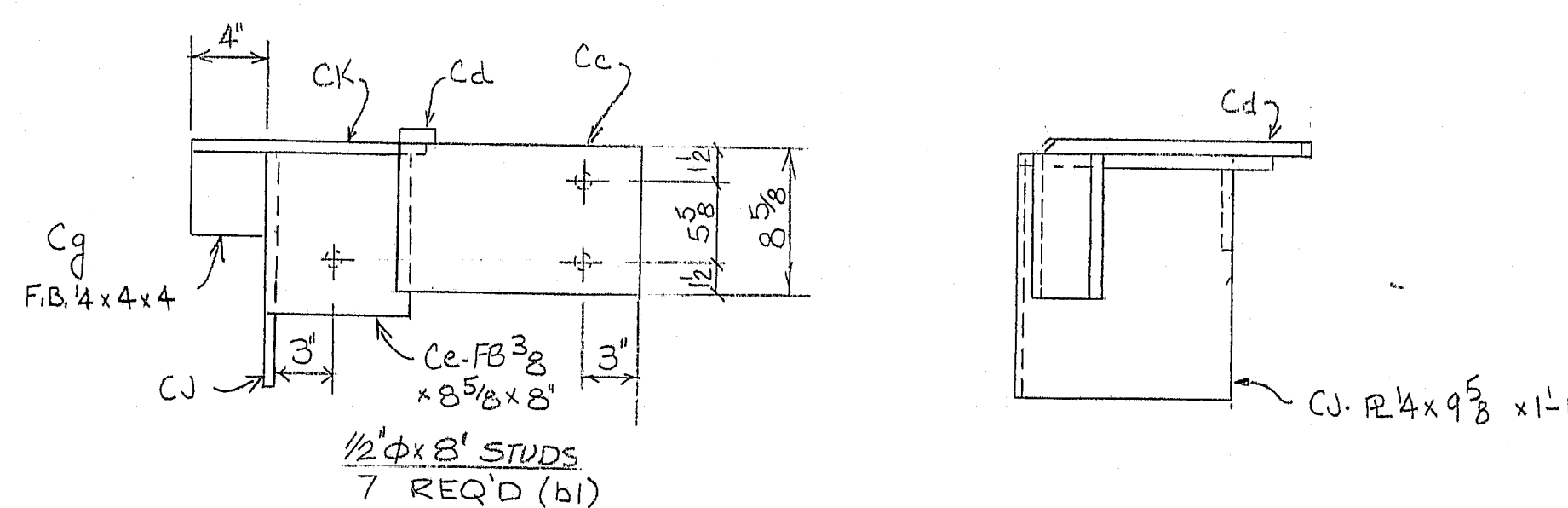
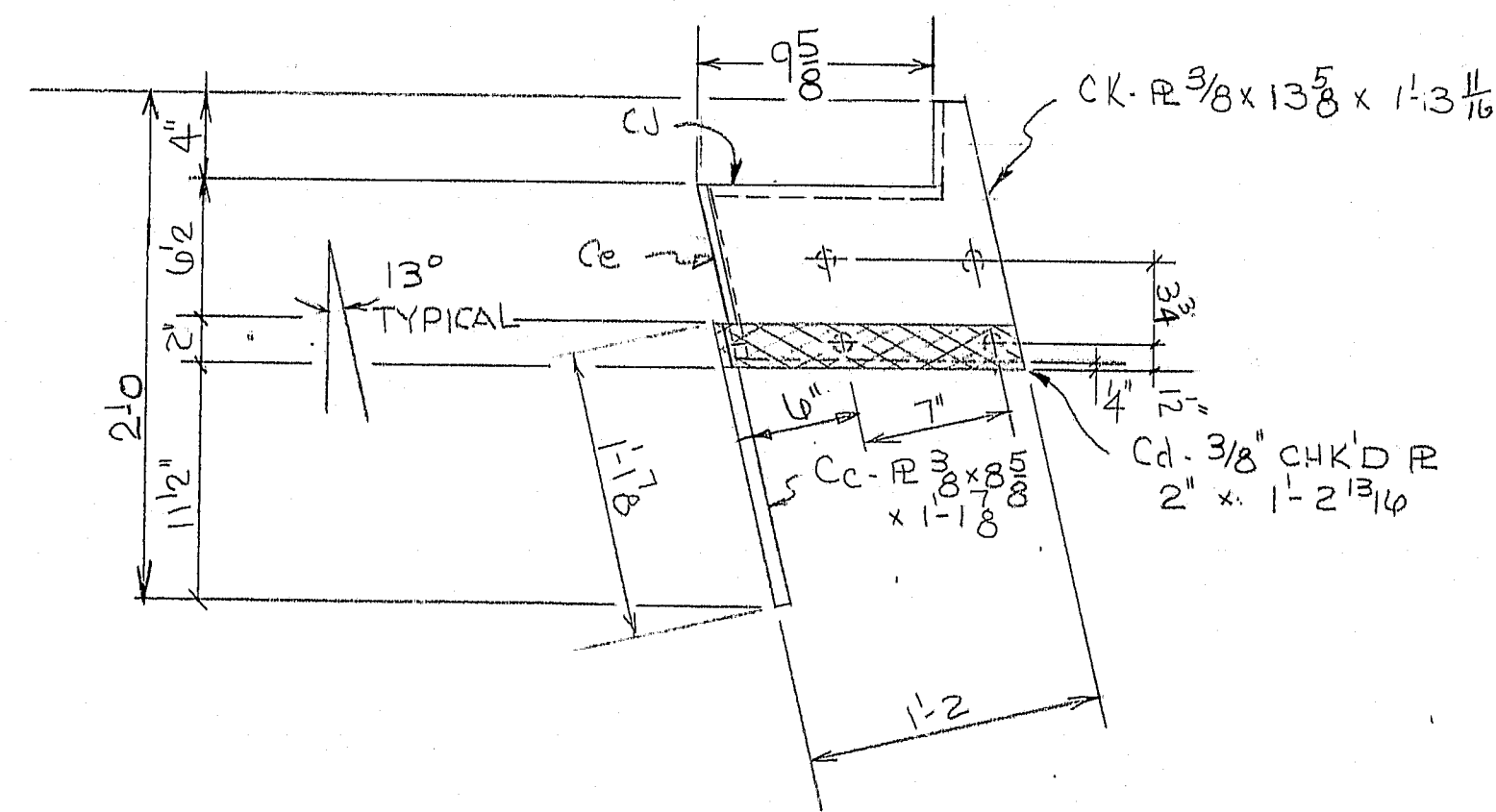
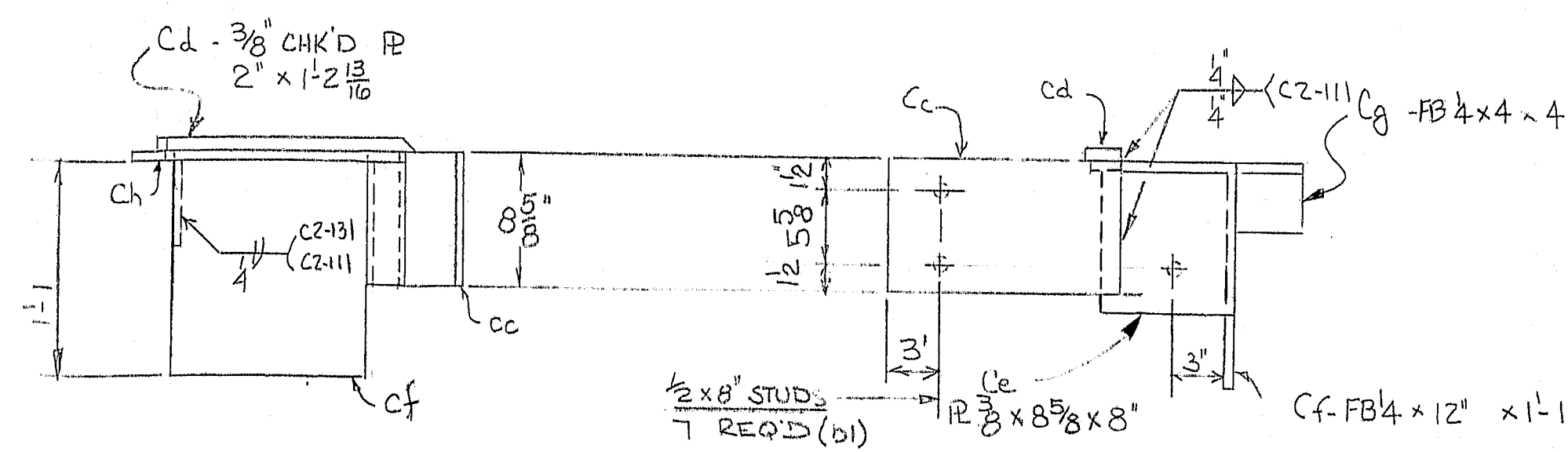
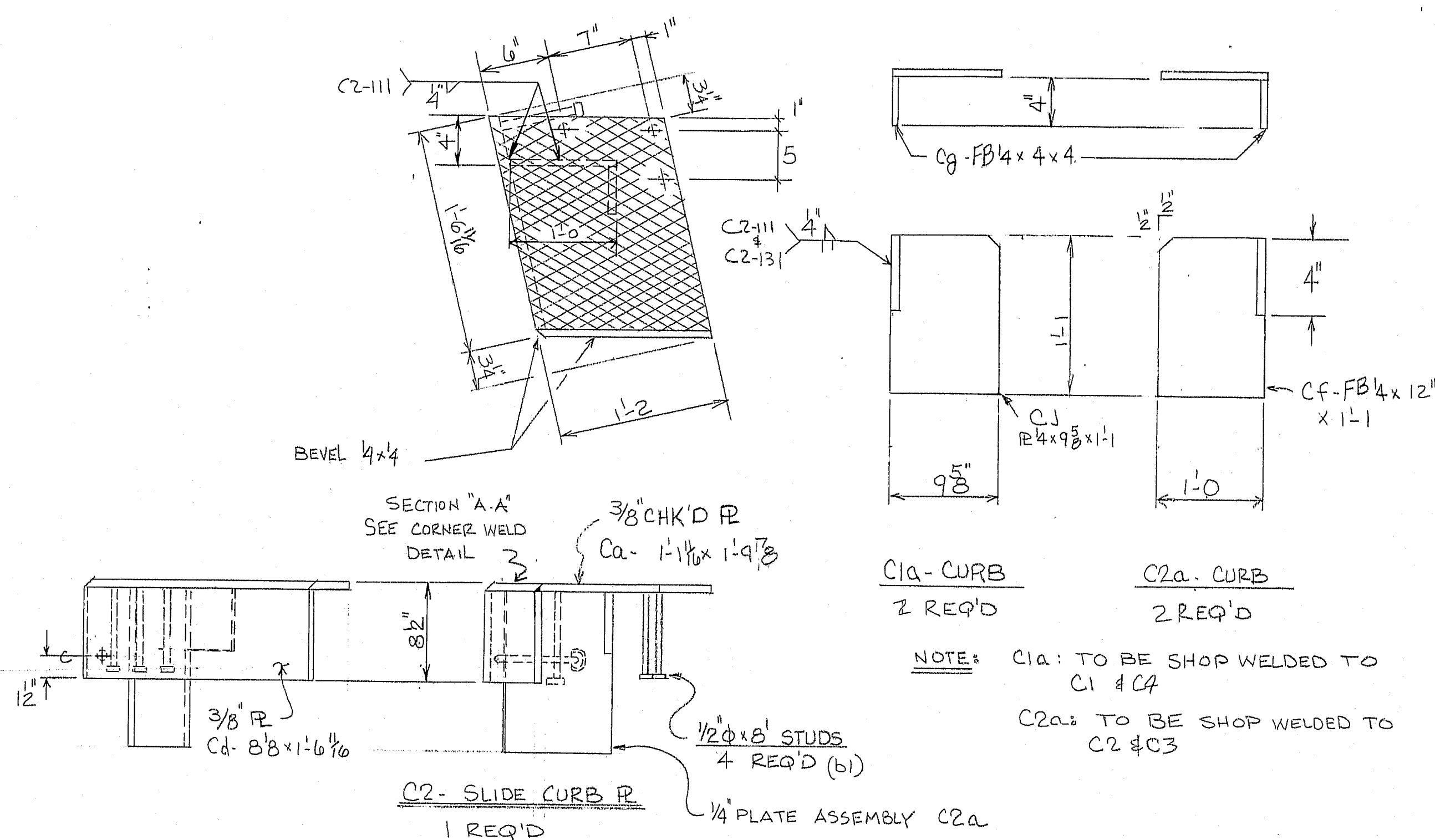
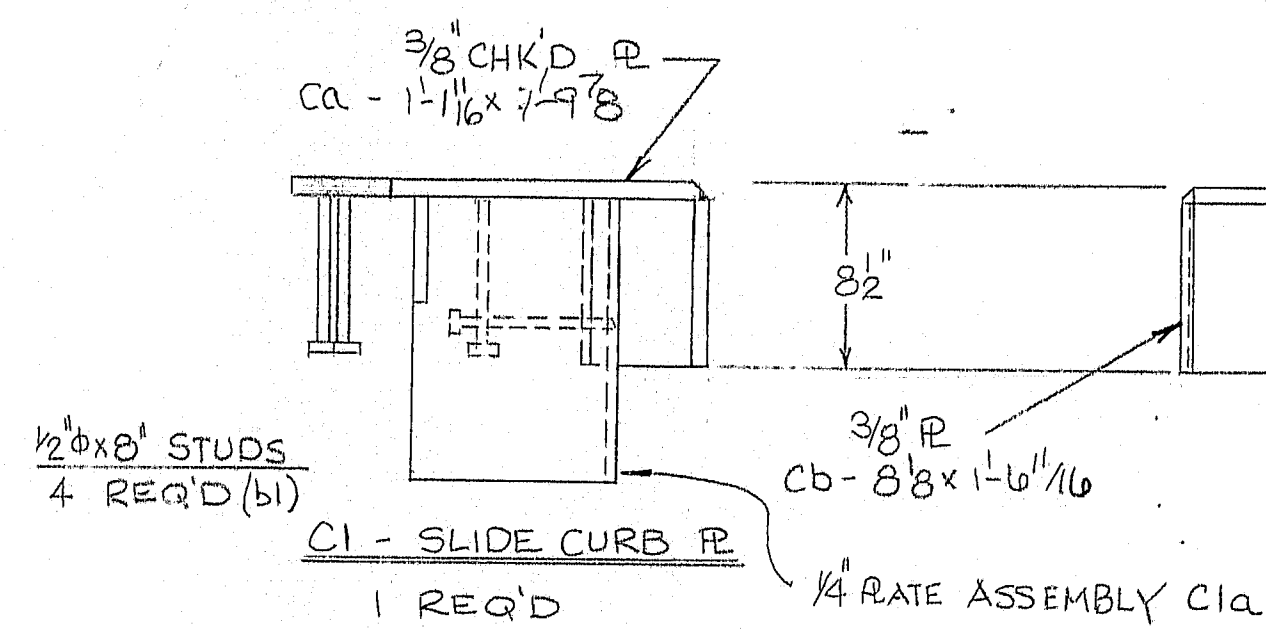
R89-498

AIRPORT ROAD BRIDGE OVER I-97 PROJECT NO. I-95+9(102)297 HOULTON, MAINE		
NOR-WAY BUILDING SPECIALTIES LTD P.O. BOX 333 NORWICH, VERMONT 05055		
FABRICATOR: ATLAS METAL PRODUCTS CO INC. HUDSON, MASS		
DESIGNER:	APPROVED BY	CONTRACTOR CITY
DATE: 2/3/84		HOULTON
CONTRACTOR: REED & REED WOOLOWMA CT. 04579		
TITLE:	DRAWING NUMBER	
ERECTION PLAN	5168-E1	



AIRPORT ROAD BRIDGE OVER I-95	
PROJECT NO. I-95-9(102)297	
HOULTON, MAINE	
NOR-WAY BUILDING SPECIALTIES LTD.	
P.O. BOX 333	
NORWICH, VERMONT 05055	
FABRICATOR: ATLAS METAL PRODUCTS CO. INC.	
HUDSON, MASS.	
DATE: 2/5/84	APPROVED BY: J. LARSON
CONTRACTOR: REED & REED	WOOLWORTH, I.E. 04370
TITLE: DETAILS	5168-F1

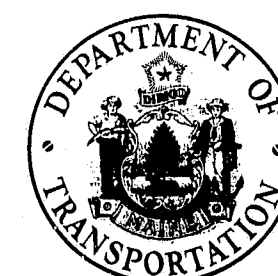
R89-499



AIRPORT ROAD BRIDGE OVER I-95 PROJECT NO. I-95-9(102)297 HOULTON, MAINE	
NOR-WAY BUILDING SPECIALTIES LTD. P.O. BOX 333 NORWICH, VERMONT 05055	
FABRICATOR: ATLAS METAL PRODUCTS CO. INC. HUDSON, MASS	
SCALE: DATE: 2/13/84	APPROVED BY [Signature] J. LARSON
CONTRACTOR: REED & REED WOOLWICH ME. 04374	
TITLE: DETAILS, Bill of MATERIAL	DRAWING NUMBER 5168-F2

R89-500

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BUREAU OF HIGHWAYS
HOULTON
AROOSTOOK COUNTY
MAINE FEDERAL AID INTERSTATE
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
PROJECT NO. I-95-9(102)297
TOTAL LENGTH 0.000 MILES

SPECIFICATIONS

DESIGN: AASHTO, Specifications for Highway Bridges, 1977; and Interim Specifications thru and including 1982. (Load Factor Design)

CONTRACT: State of Maine, Department of Transportation, Standard Specifications, Highway and Bridges, Revision of June 1981.

DESIGN LOADING

LIVE LOAD ----- HS 25 (500,000 CYCLES)

MATERIALS

CONCRETE: Slope Protection ----- Class Y
All Other ----- Class A

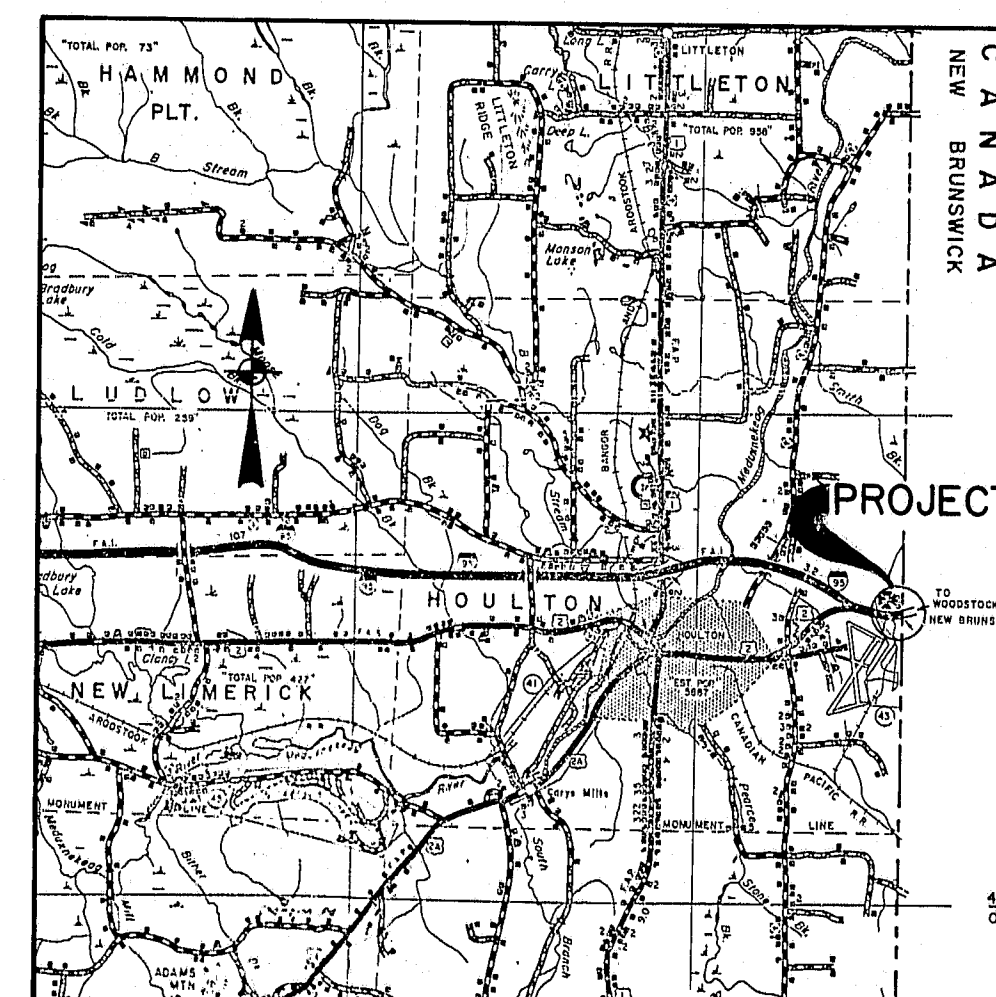
REINFORCING STEEL ----- ASTM A615, Grade 60
STRUCTURAL STEEL:
Hybrid Beams ----- ASTM A36 & ASTM A572, Grade 50
Diaphragms, Bearings & Expansion Device ----- ASTM A36
Drains ----- ASTM A53 and A36
High Strength Bolts ----- ASTM A325
All Other ----- ASTM A36

BASIC ALLOWABLE STRESSES

CONCRETE ----- $f'_c = 3000$ psi, $n = 9$
REINFORCING STEEL ----- $f_y = 60,000$ psi
STRUCTURAL STEEL:
ASTM A572 ----- $f_y = 50,000$ psi
ASTM A36 ----- $f_y = 36,000$ psi
ASTM A53 ----- $f_y = 36,000$ psi
ASTM A325 ----- $f_y = 33,000$ psi

NOTE

ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE 1981) AND SUPPLEMENTS THERETO, EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.



LOCATION MAP
SCALE IN MILES

TRAFFIC DATA

A.D.T. 840 1980
A.D.T. 1350 2000
D.H.V. 230
T. (%) 10
D. (%) 60
V. 45 mph

UTILITIES

TELEPHONE - NEW ENGLAND TEL. & TEL. CO.
ELECTRICITY - MAINE PUBLIC SERVICE CO.
GOVERNMENT SERVICES ADMINISTRATION (G.S.A.)

INDEX OF SHEETS

DESCRIPTION	PAGE
TITLE SHEET	1
QUANTITIES	2
GENERAL PLAN	3
FOUNDATION SURVEY	4
BORING DETAIL	5
PROFILE AND CONSTRUCTION LIMITS	6
CONCRETE SLOPE PROTECTION	7
FOOTINGS & ABUTMENT NOTES	8
ABUTMENT NO. 1	9
ABUTMENT NO. 2	10
ABUTMENT DETAILS	11-14
APPROACH SLAB & ARCHITECTURAL TREATMENT	15
PIER	16
FRAMING PLAN	17
STRUCTURAL STEEL	18
SIGN SUPPORTS	19
BLOCKING	20
SUPERSTRUCTURE	21
REINFORCING STEEL SCHEDULE	22-23

STANDARD DETAILS

DESCRIPTION	DATE	REV. DATE	PAGE
BD 100-81 BEARING PEDESTALS	JUNE 1981		24
BD 101-81 BEARING PEDESTALS	JUNE 1981		25
BD 113-81 DIAPHRAGMS & CROSSFRAMES	JUNE 1981	JAN. 1983	26
BD 114-81 ALUMINUM BRIDGE RAILING	JUNE 1981	JULY 1983	27
BD 120-81 CONCRETE END POSTS	JUNE 1981	JAN. 1983	28
BD 125-82 EXPANSION DEVICE	AUG. 1982	JAN. 1983	29
BD 126-81 MISCELLANEOUS DETAILS	JUNE 1981	JUNE 1983	30
BD 127-81 MISCELLANEOUS DETAILS	JUNE 1981	JULY 1983	31
④ EROSION CONTROL, ETC.	NOV. 1980	DEC. 1981	32
MAINTENANCE OF TRAFFIC IN CONSTRUCTION ZONES	MAR. 1980	APR. 1980	33-35

APPROVED:

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
COMMISSIONER

DATE

2/3/81

ACTING DEPUTY COMMISSIONER & CHIEF ENGINEER

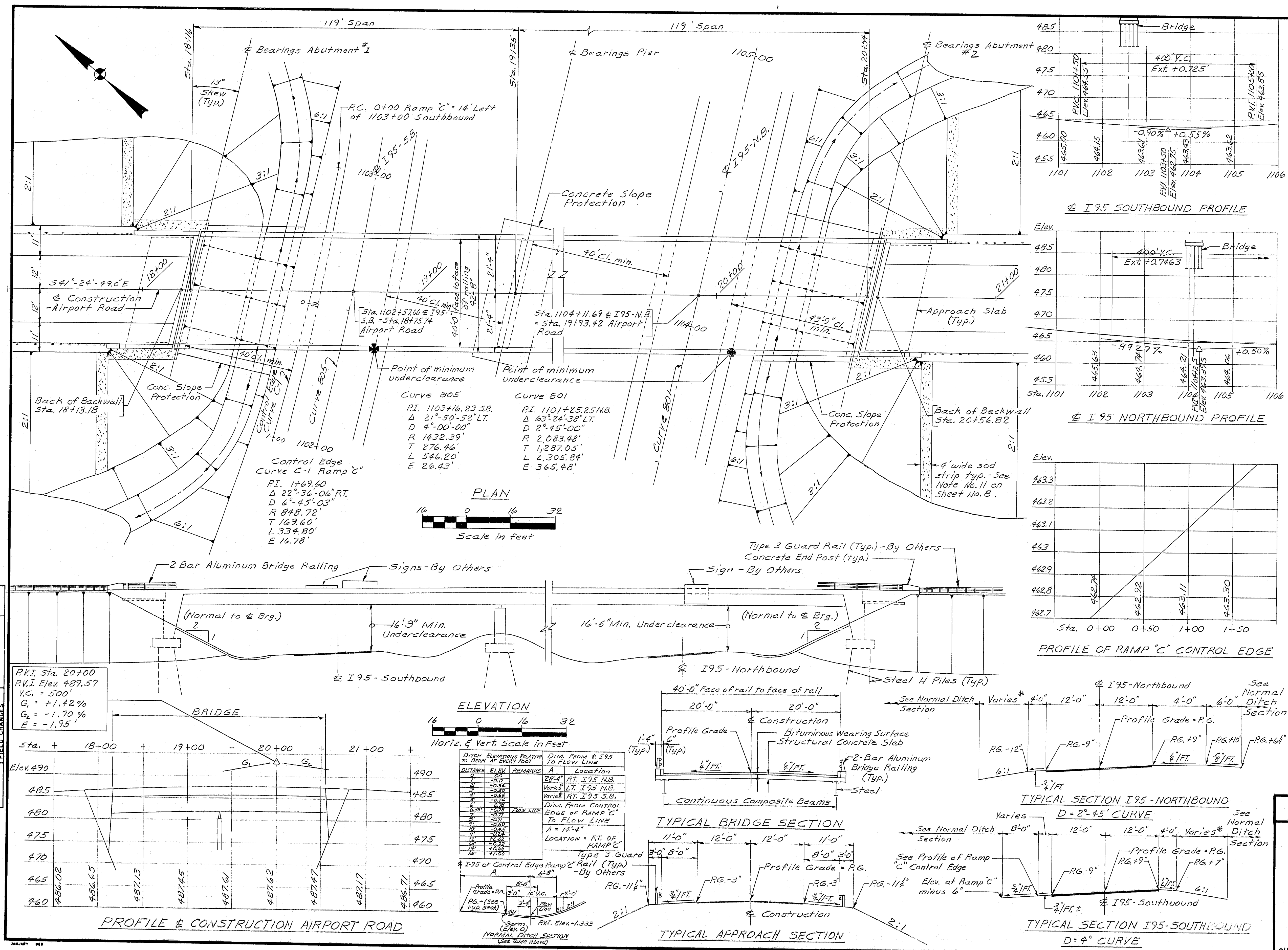
2/3/81

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION I

APPROVED:

DIVISION ADMINISTRATOR DATE

R92-07



F.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	3	3

PROJECT DESIGN ENGINEER	CDU	BY	DATE
DESIGN - DETAILED	10/1/88	WLB	2-79
CHECKED			
REVISIONS			
FIELD CHANGES			

R92-09

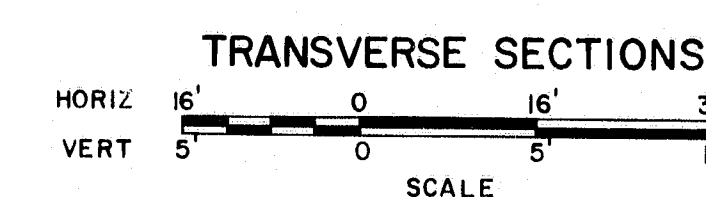
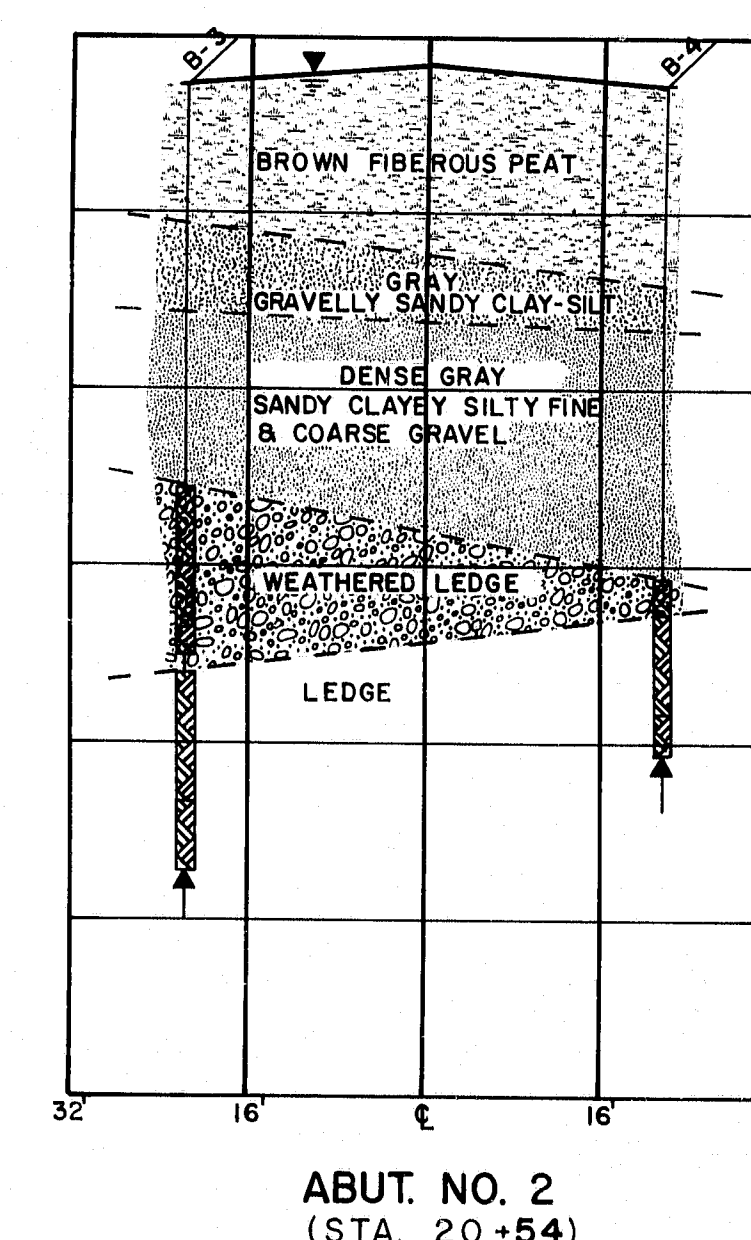
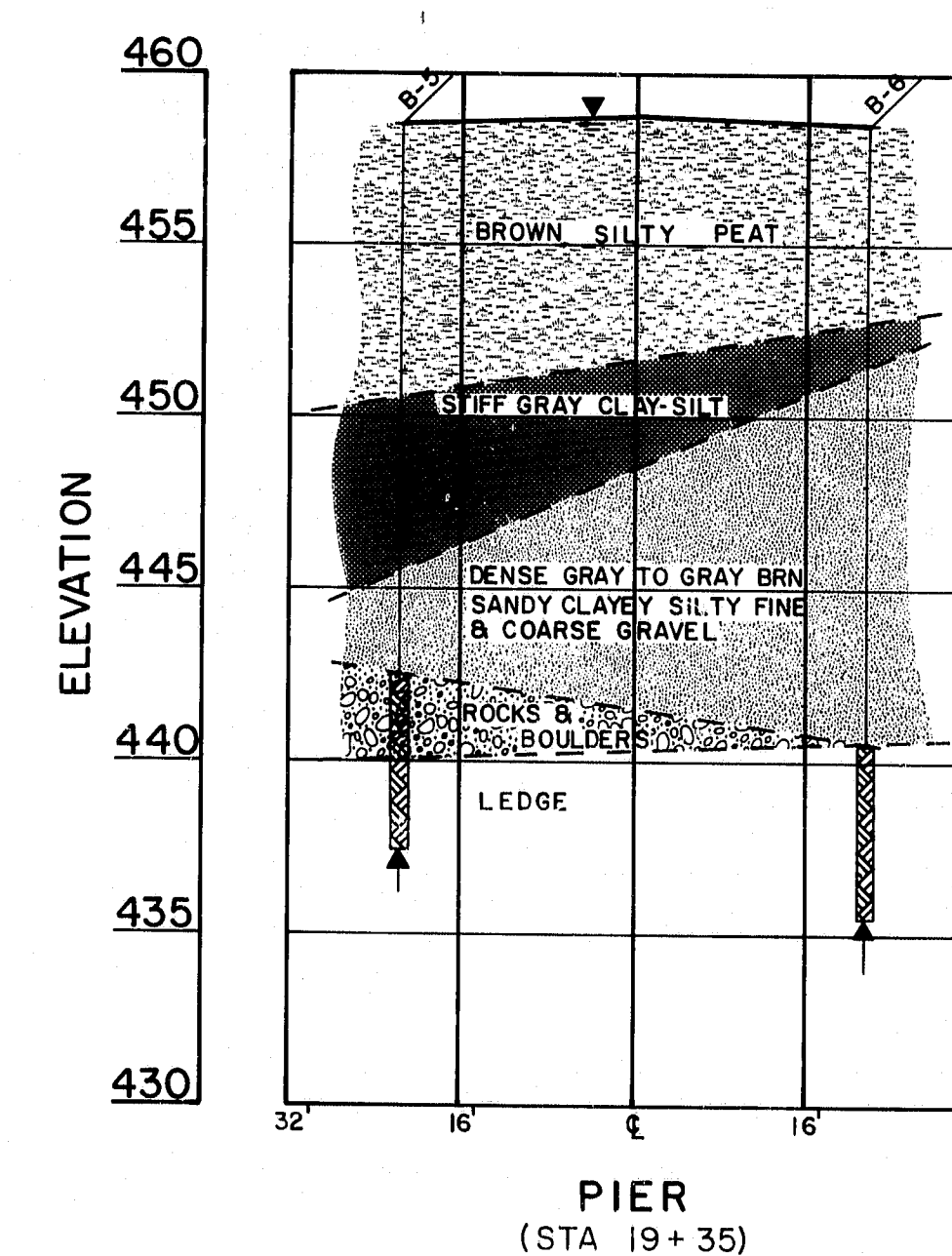
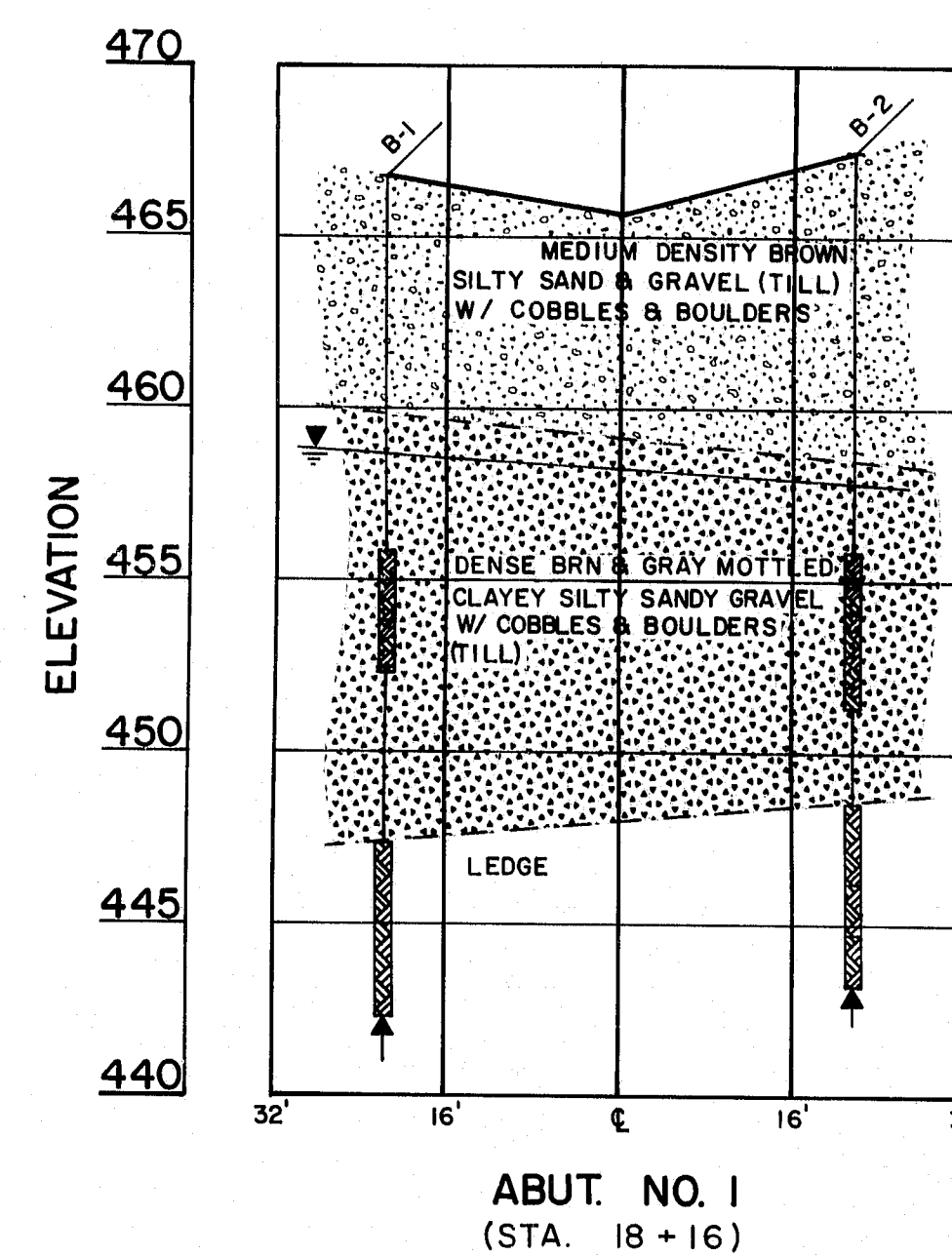
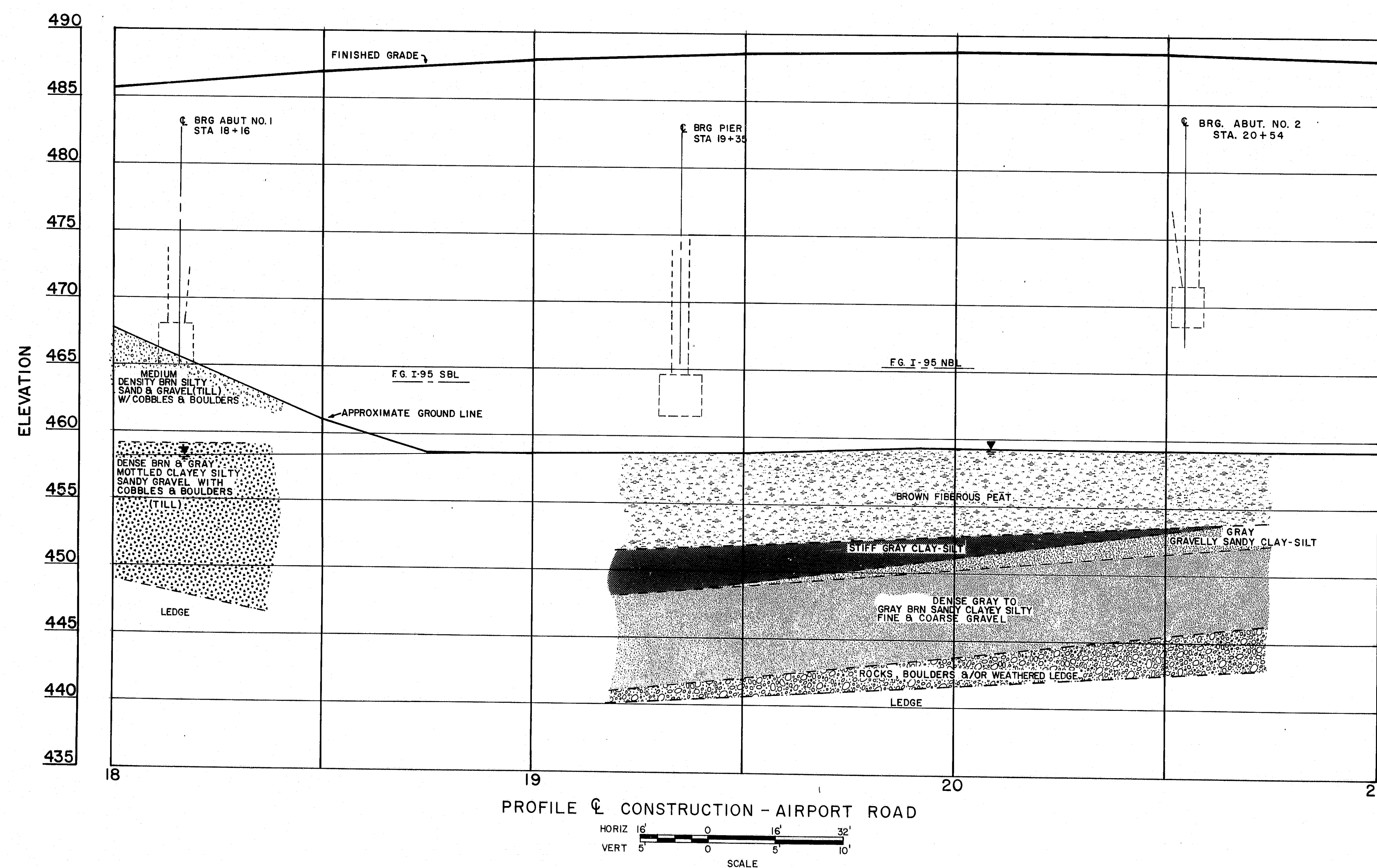
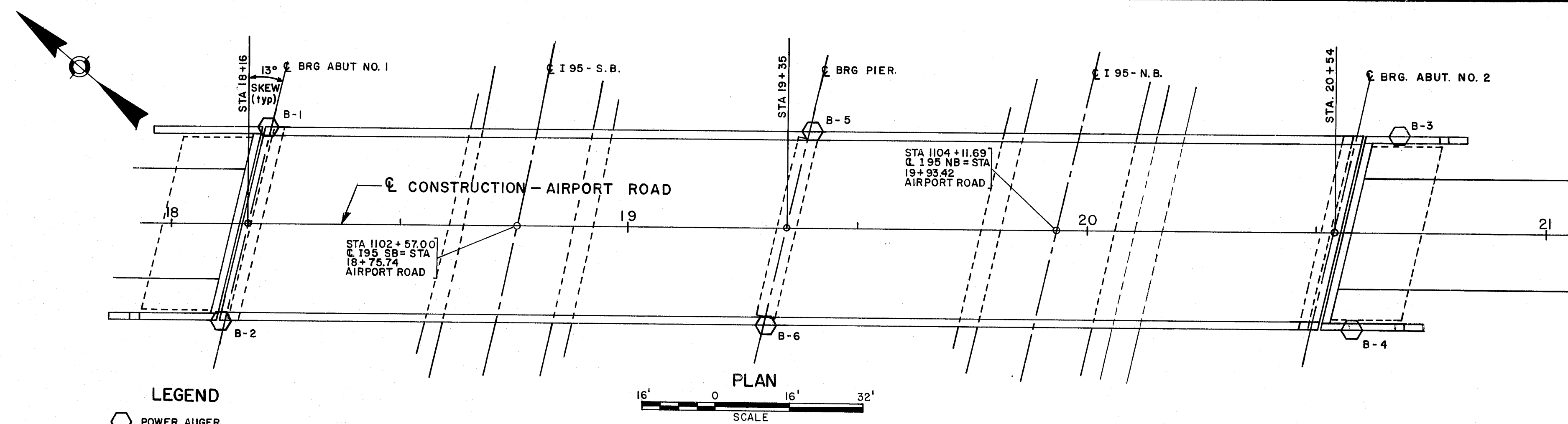
* See Sections H-A, B-B & C-C on Pier Sheet 16 for location.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY

GENERAL PLAN
SHEET 3 OF 35 AUGUSTA, MAINE July 1988

F.H.W.A. NO. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	4	35



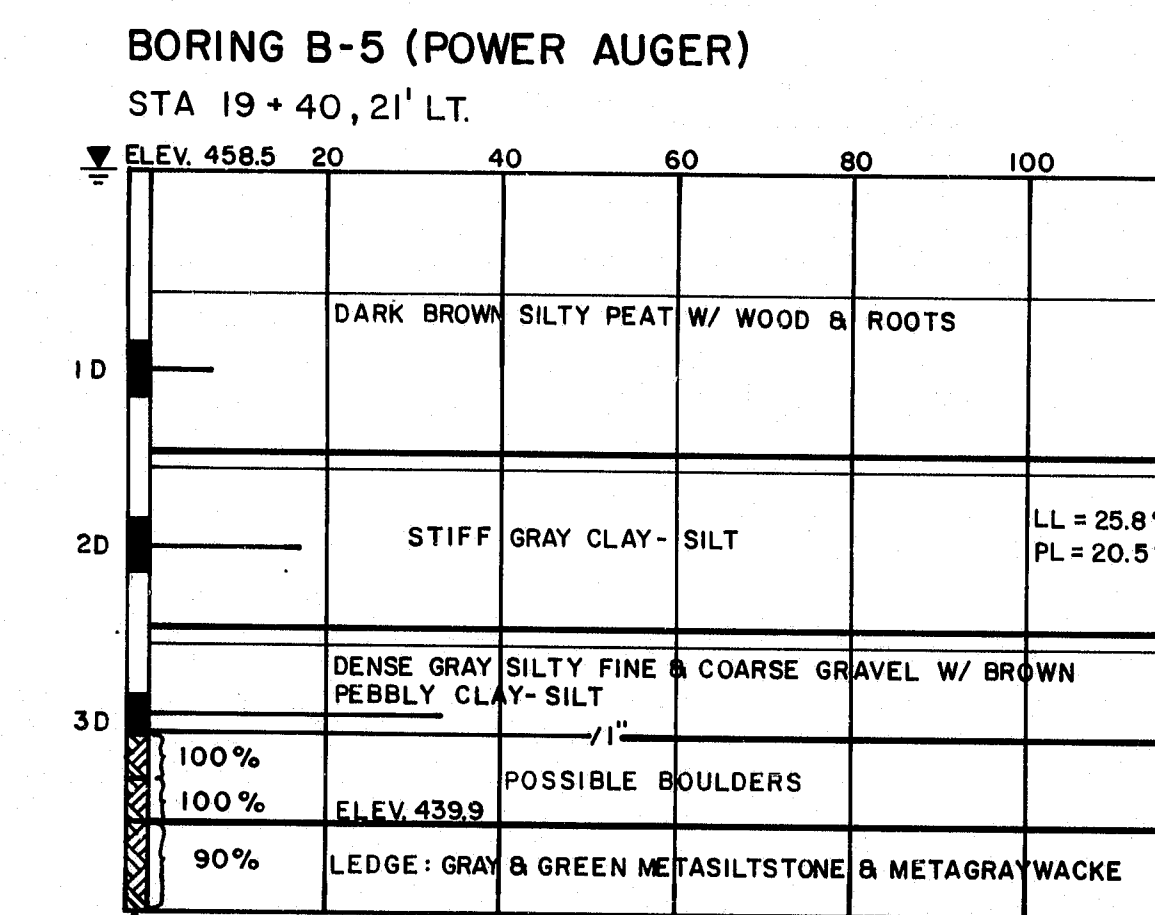
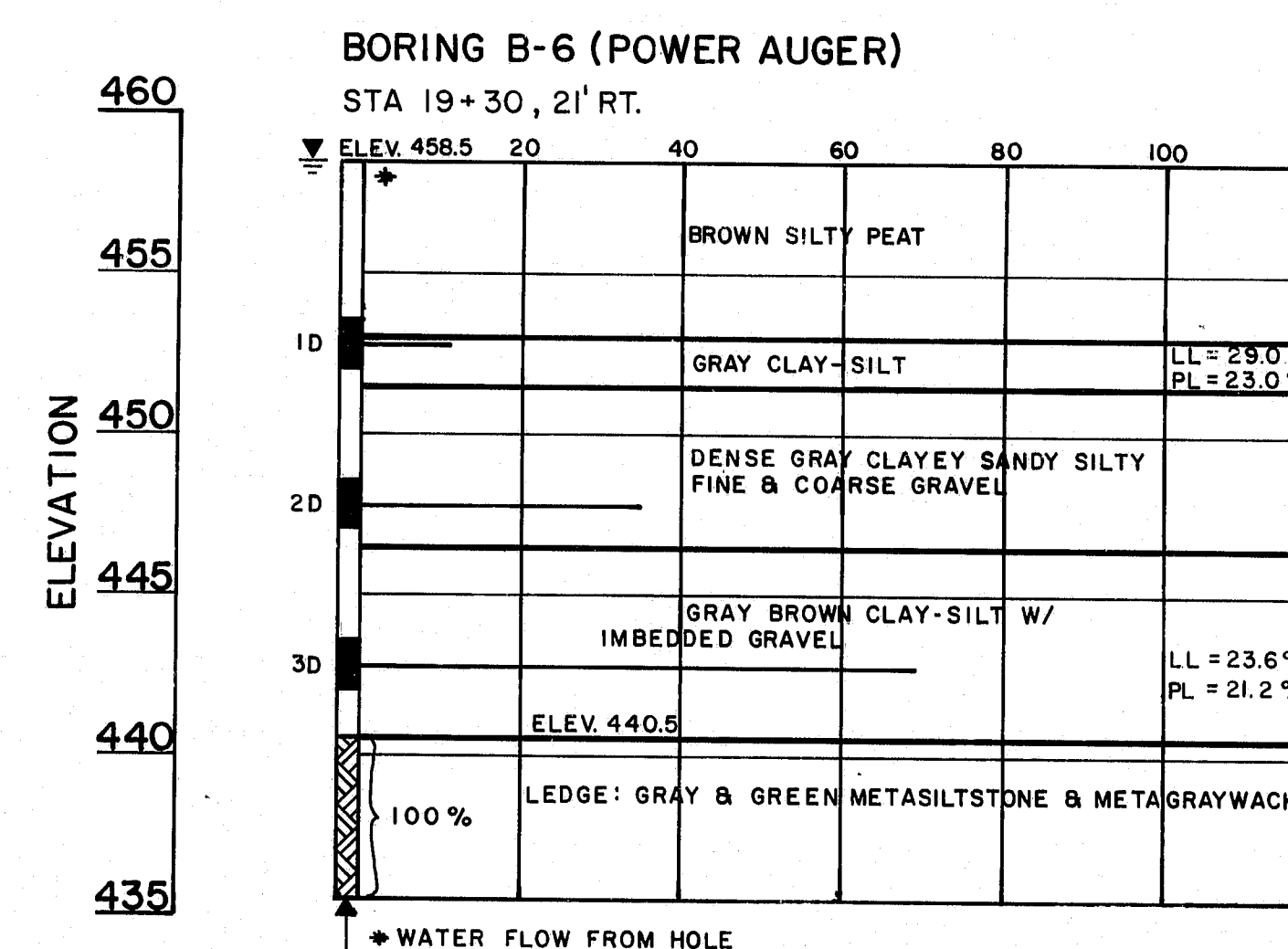
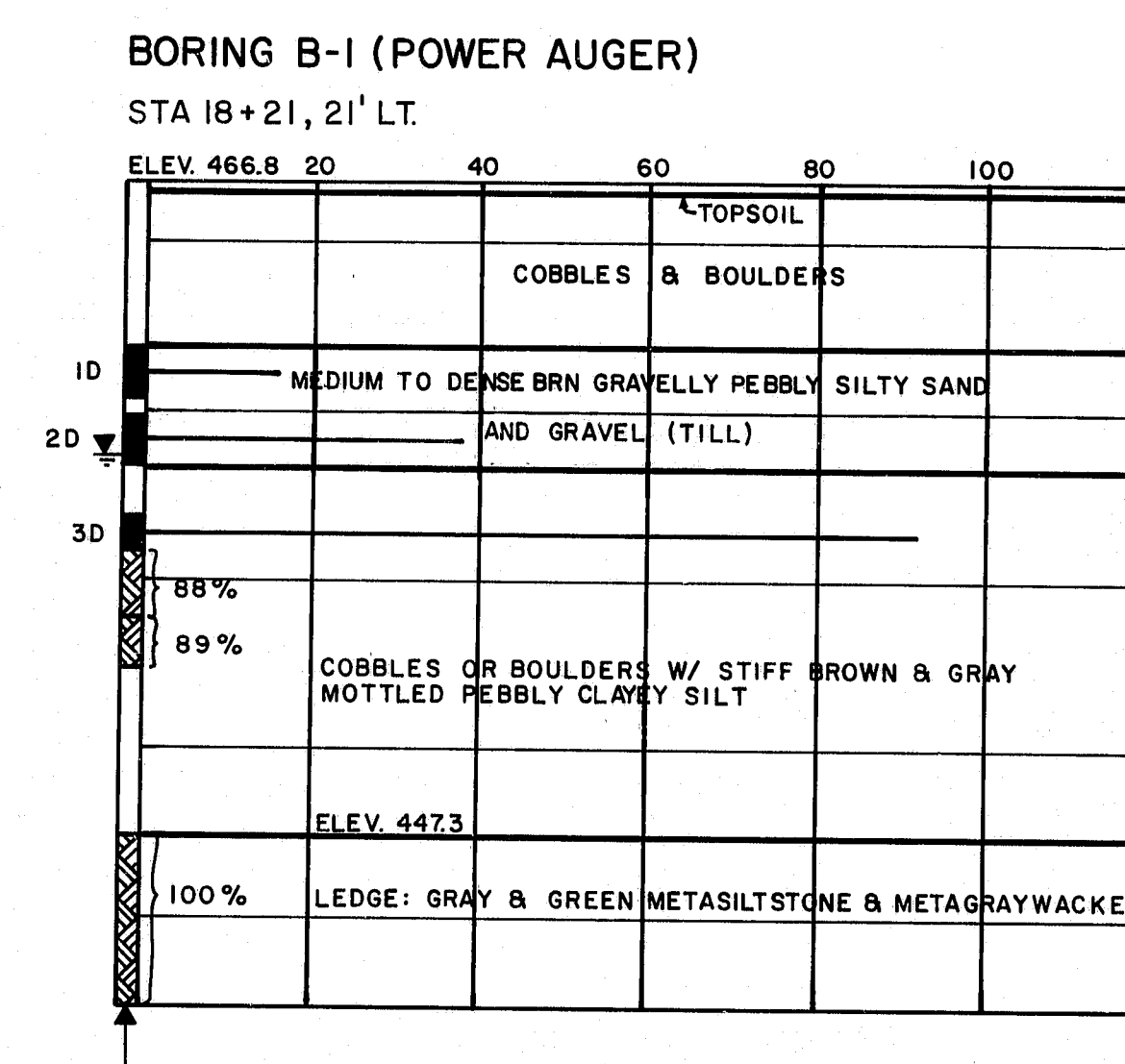
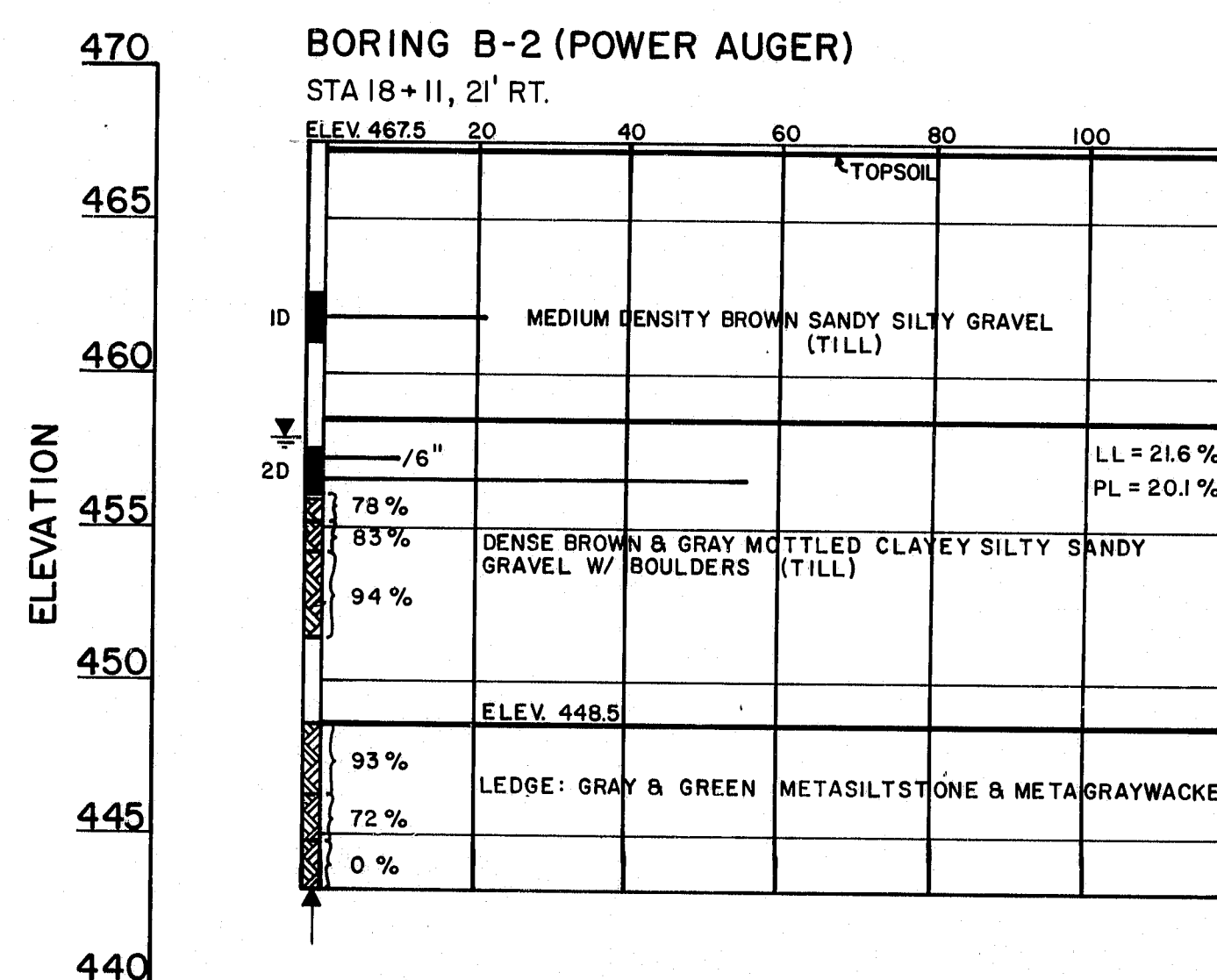
R92-10

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY

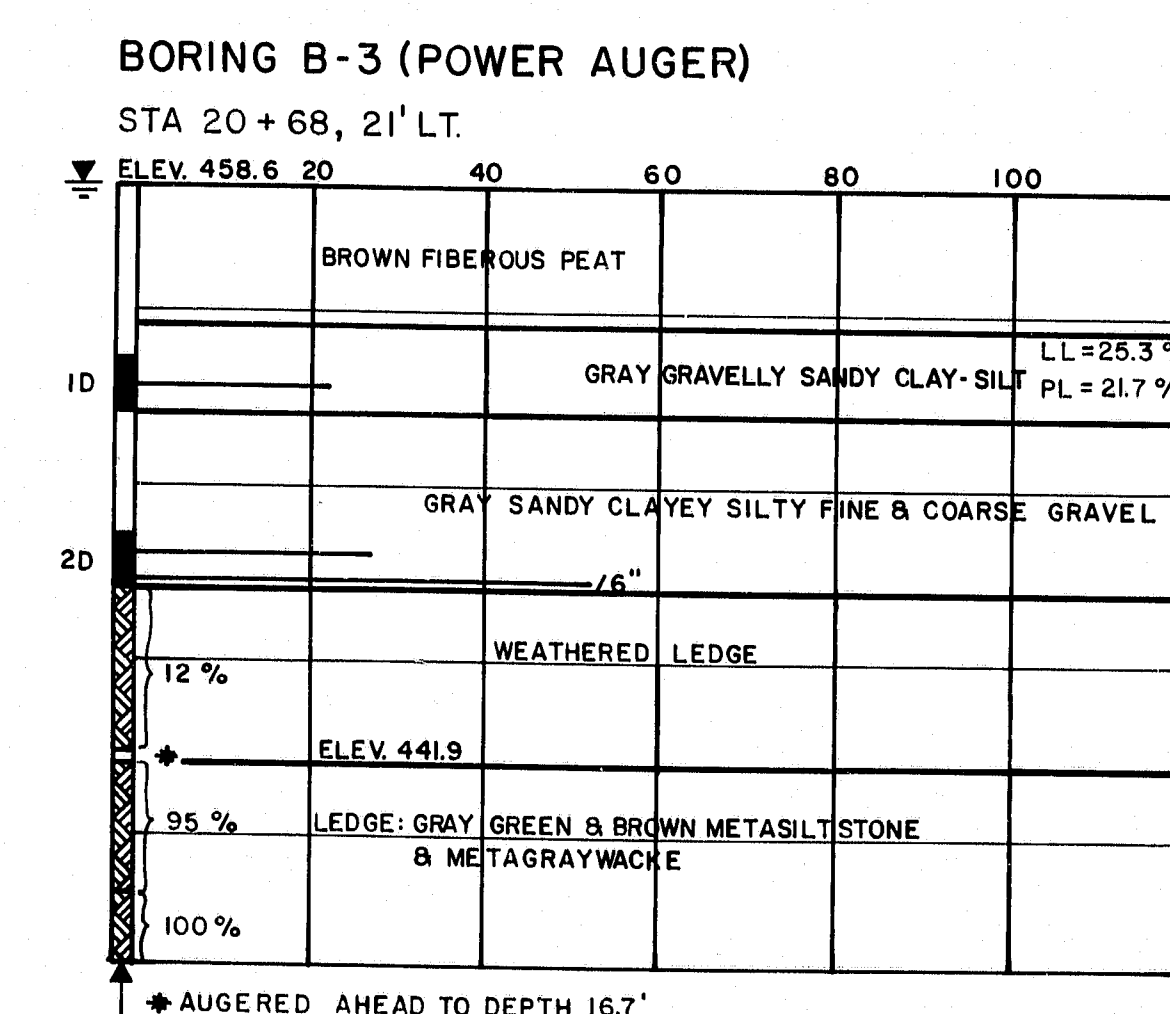
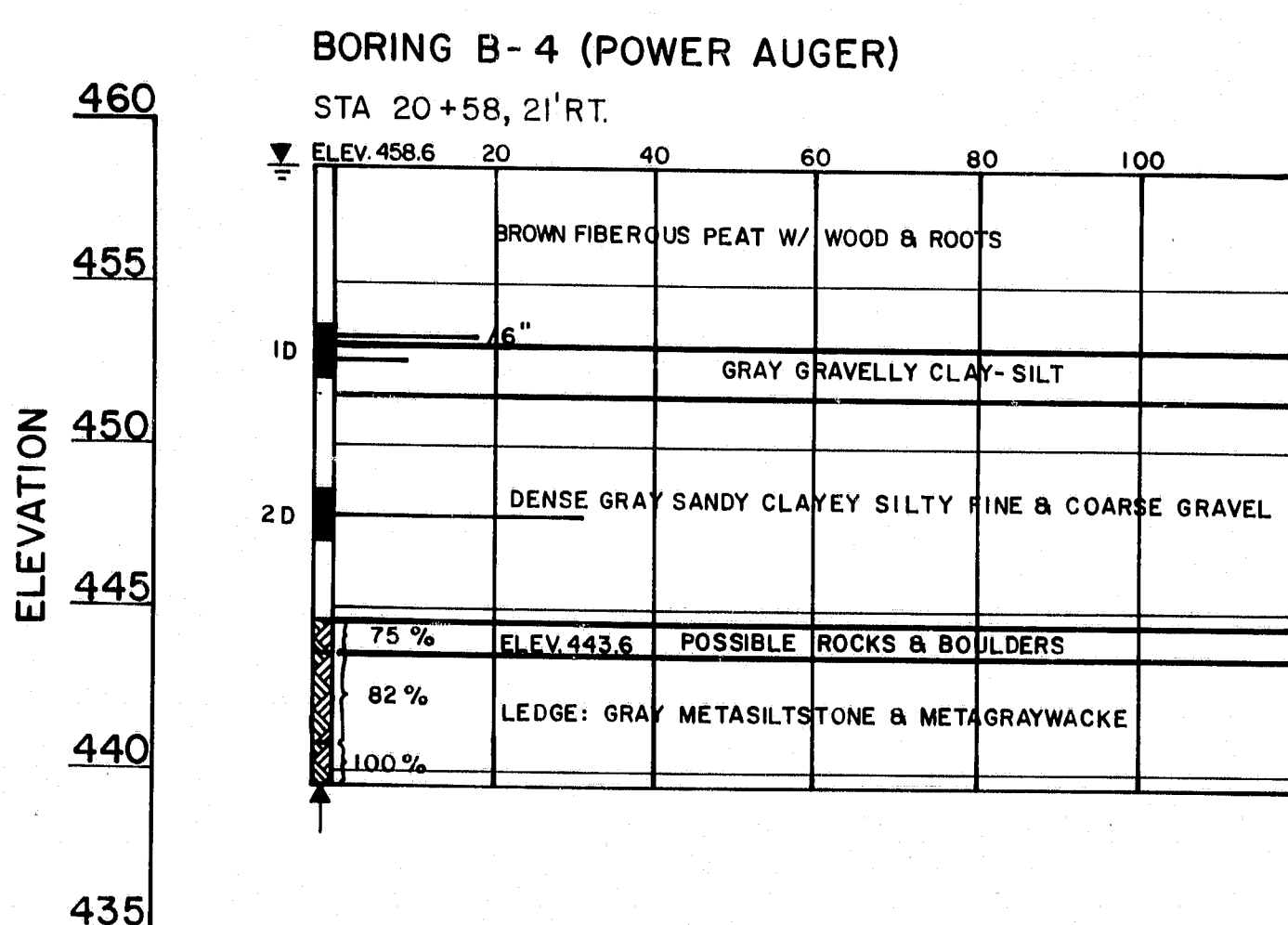
FOUNDATION SURVEY
SHEET 4 OF 35 AUGUSTA, MAINE AUG. 1979

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	5	35



BORING NOTES

- All samples are made ahead of casing
- Water elevation
- Location of sample or sample attempt
- Number and type of dry sample S & H Sampler 1290's
- Number of blows required to drive spoon 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



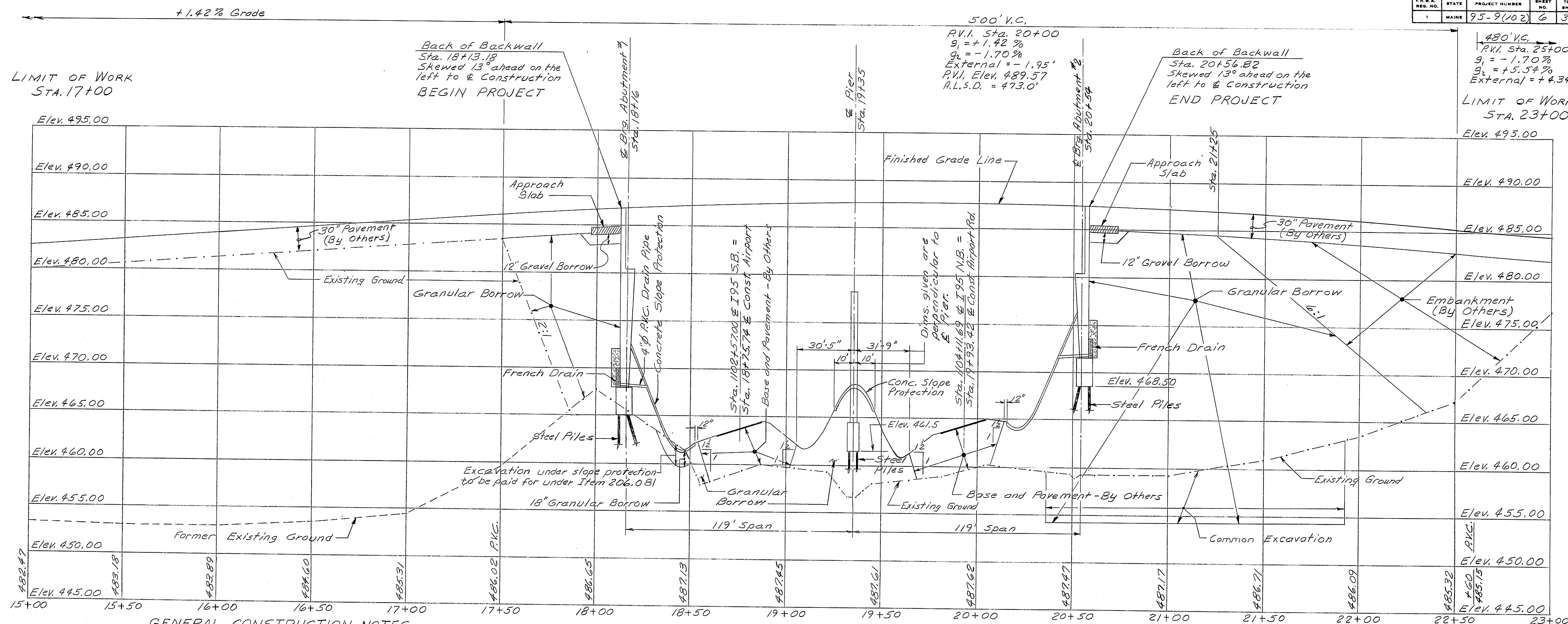
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
BORING DETAIL
SHEET 5 OF 35 AUGUSTA, MAINE AUG. 1979

R92-11

PROJECT DESIGN ENGINEER	CDP	BY	DATE
DESIGN - DETAILED		5/1/5	5/1/5
CHECKED			
REVISIONS			

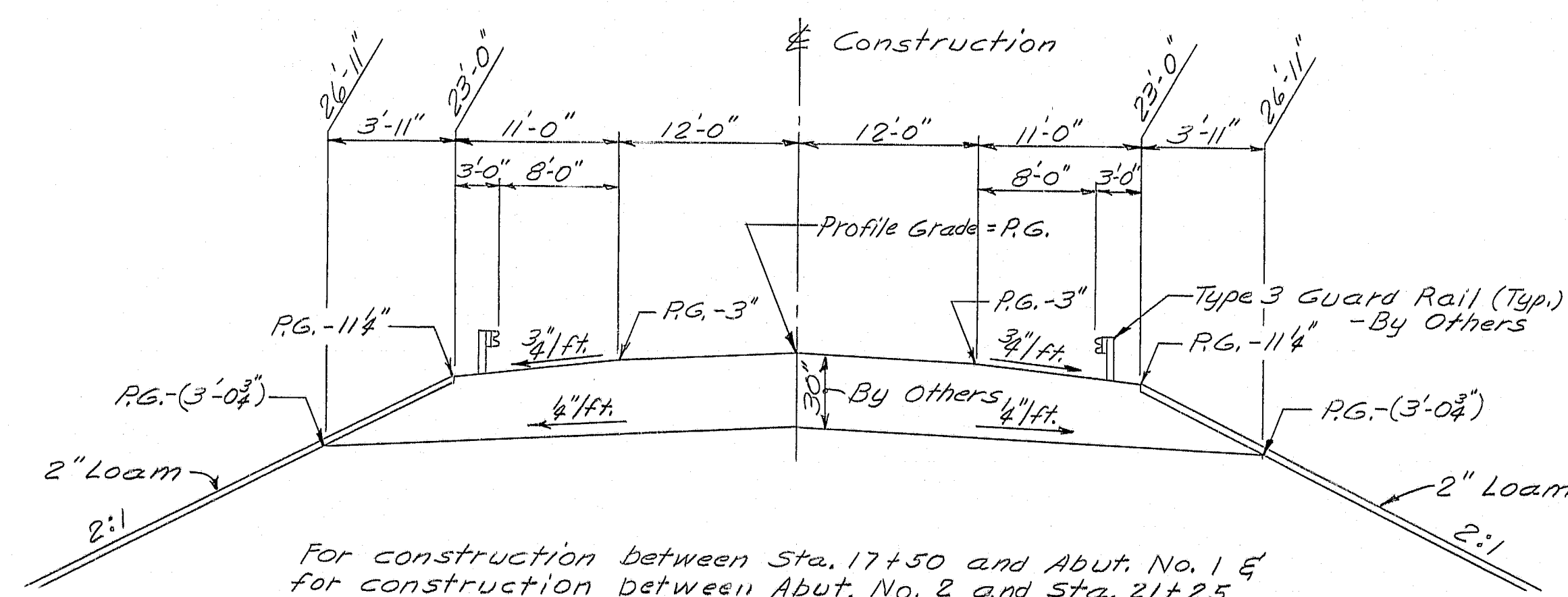
PLANS

PROJ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	6	35



- GENERAL CONSTRUCTION NOTES**
1. Side slopes shall be loamed unless otherwise directed by the Engineer.
 2. Seeding - Method No. 2 and Mulch all slopes as directed by the Engineer.
 3. Loam depth is 2" nominal.
 4. The Utilities involved in this contract are:
Telephone - New England Tel. & Tel. Co.
Electricity - Maine Public Service Co.
Government Services Administration (G.S.A.)
 5. All Utilities Facilities shall be adjusted by the respective Utility unless noted.
 6. For easements, construction limits and right of way lines refer to RIGHT OF WAY MAP.

PROFILE & CONSTRUCTION - AIRPORT ROAD



For construction between Sta. 17+50 and Abut. No. 1 & for construction between Abut. No. 2 and Sta. 21+25.

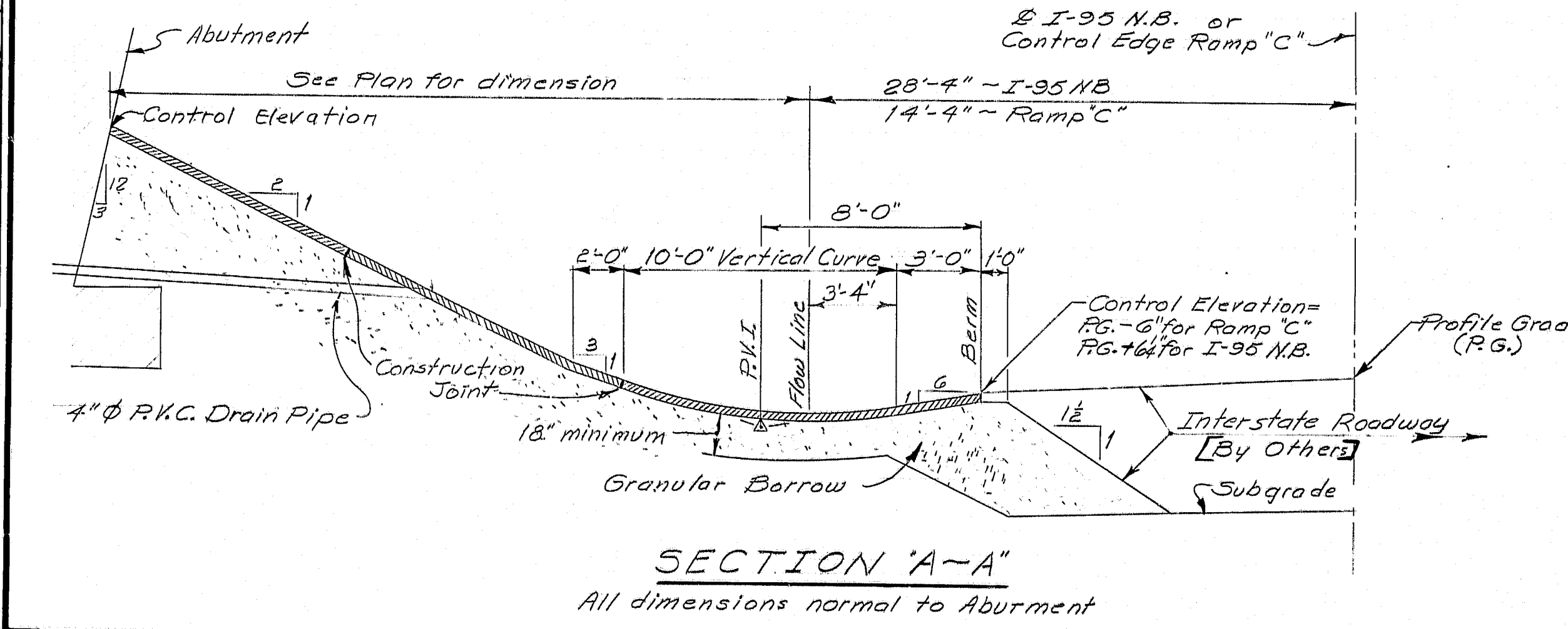
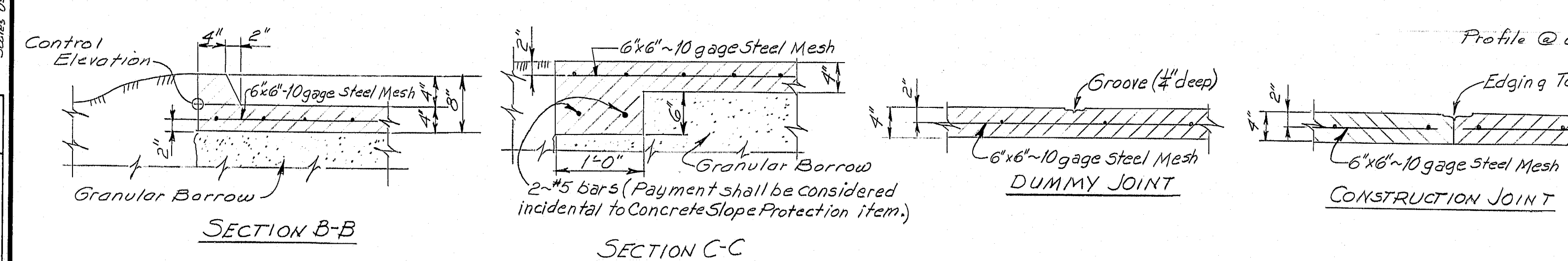
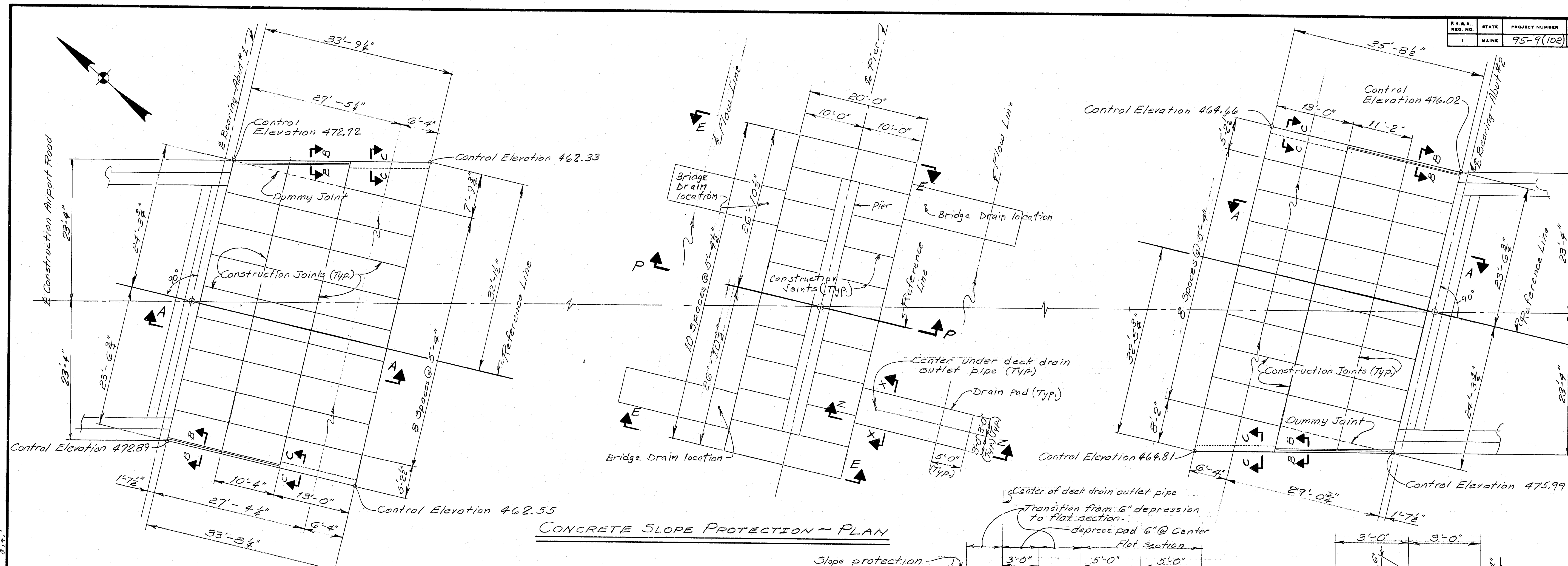
TYPICAL APPROACH SECTION AIRPORT ROAD

R92-12

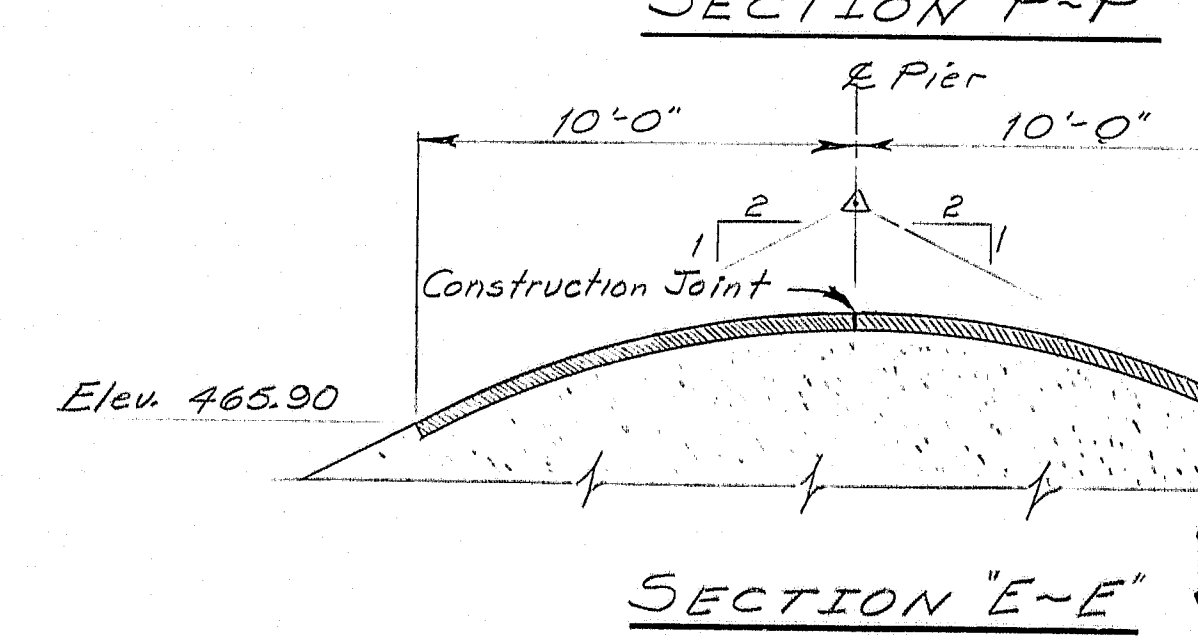
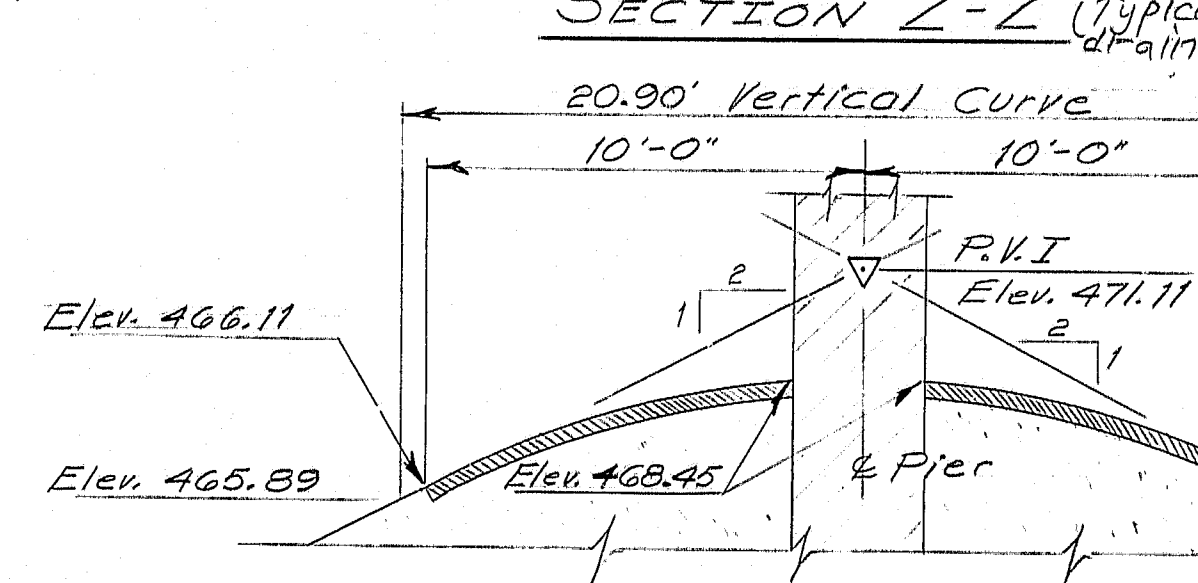
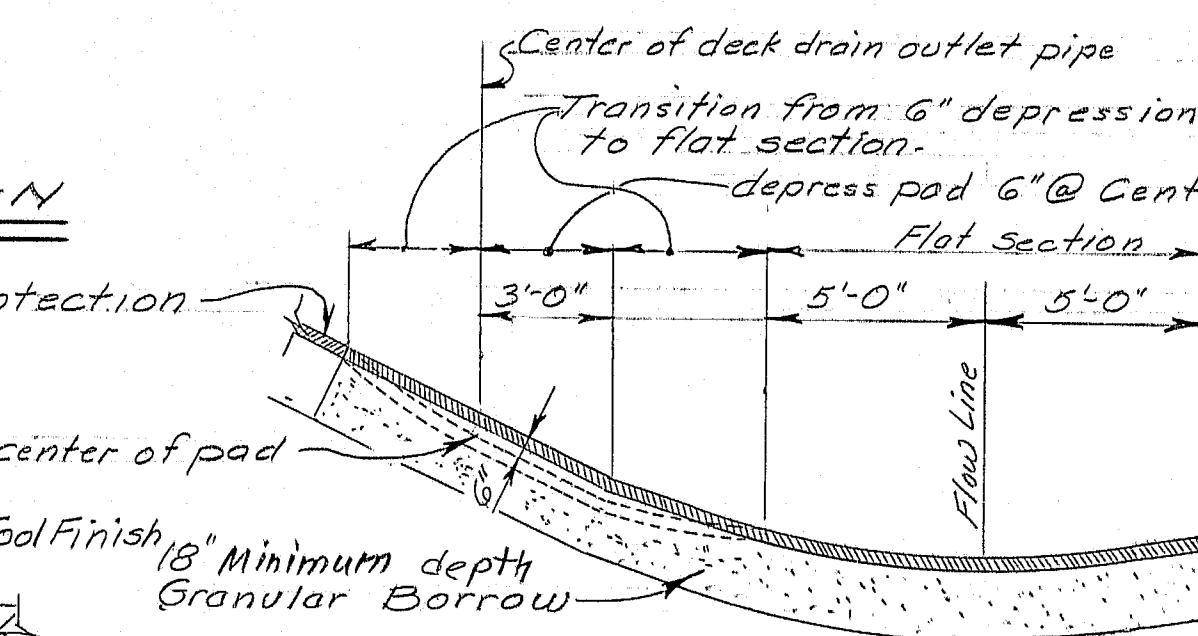
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
**AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY**
PROFILE AND CONSTRUCTION LIMITS
SHEET 6 OF 35 AUGUSTA, MAINE July 1993

PROJECT DESIGN ENGINEER	CDH	DATE	12-90
DESIGN - DETAILED	BY	CDH	12-90
CHECKED	WJG	CDH	12-90
REVISIONS			
FIELD CHANGES			

F.R.M.A. SHEET NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	7	35



Distance	Elevation	Remarks
0	00	Berm
1'	-0.17	
2'	-0.34	
3'	-0.50	R.K.C.
4'	-0.64	
5'	-0.74	
6'	-0.78	
6.33'	-0.78	Flow line
7'	-0.77	
8'	-0.71	
8'	-1.933	R.K.I.
9'	-0.60	
10'	-0.45	
11'	-0.24	
12'	+0.02	
13'	+0.33	P.K.T. & C.J.
14'	+0.66	
15'	+1.00	



- NOTES:**
- 1-Steel mesh shall not pass through any construction joint.
 - 2-Break the bond in construction joints by a method approved by the Engineer.
 - 3-Portland Cement Concrete for slope protection and drain pads shall be Class V.
 - 4-Drain pads shall be constructed after bridge drains are in place and the ditches which are being done by others are formed.
 - 5-Drain pads will be paid for under Item 513.09, Slope Protection-Portland Cement Concrete.

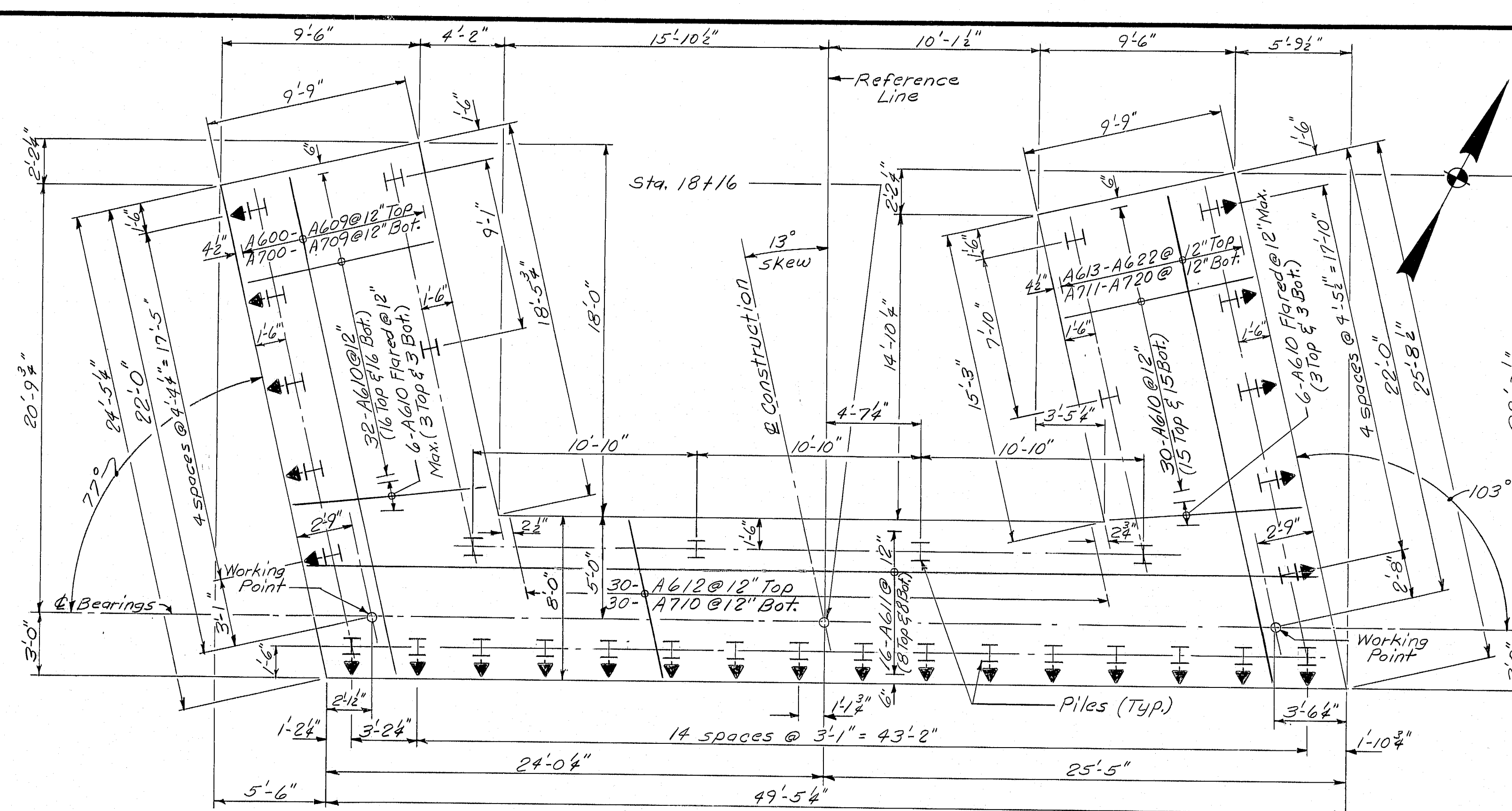
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
CONCRETE SLOPE PROTECTION
SHEET 7 OF 35 AUGUSTA, MAINE JULY 1983

R92-13

PROJECT DESIGN ENGINEER	DATE
BY	6-79
CHECKED	8-81
DESIGNED	
FIELD CHANGES	

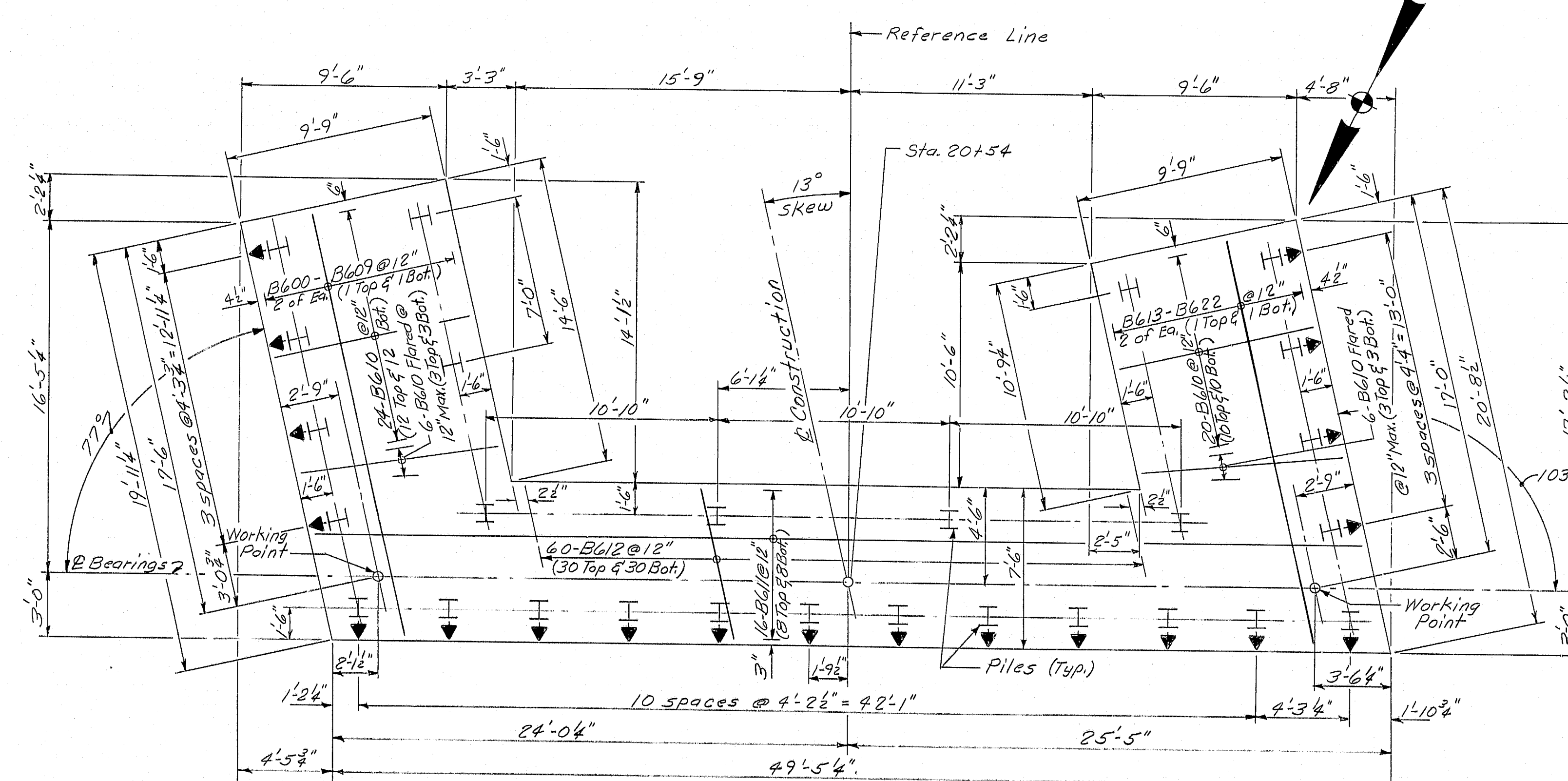
PROJECT DESIGN ENGINEER	DATE
CDW	1-81
CHECKED	1-81
DESIGN-DETAILED	1-81
REVISIONS	1-81
FIELD CHANGES	1-81

BRUNING 44-132-45710



ABUTMENT NO. 1 FOOTING PLAN

Note: Before placing footing concrete see abutments sheets # 9 & 10 for footing dowel layout.



ABUTMENT NO. 2 FOOTING PLAN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-9 (102)	8	35

ABUTMENT NOTES

- Chamfer all exposed edges of concrete a consistent dimension between 1/2" and 3/4" inclusive, unless otherwise indicated.
- Place reinforcing steel in bridge seats to clear anchor bolts.
- Reinforcing steel shall have 2 inches cover unless otherwise indicated.
- Break bond at vertical contraction joints by a method approved by the Engineer.
- Polyvinylchloride waterstops as shown on Standard Details BD 127-81 shall be placed in all vertical contraction and construction joints.
- Waterstops are not required in horizontal construction joints.
- Protective coating for concrete surfaces shall be applied to the following areas:
Top of concrete curbs.
All exposed surfaces of Concrete End Posts.
- Place 4" diameter drains in breastwall and wings at 20 foot maximum spacing. Exact location to be determined by the Engineer in the field.
- Welding of reinforcing steel will be allowed in the top 2' of the abutment backwall.
- 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.
- Place a 4' wide strip of sod along the abutment wings and down the fall line beyond end of wings to original ground.
- The Granite Bridge Curbs on the return wings shall not be notched as shown on the Standard Details sheet BD 126-81. At the Contractor's option, Granite Bridge Curb Type 1A may be used in place of Granite Bridge Curb Type 1B on the return wings only. Payment for the Type 1A Bridge Curb shall be made under Item # 609.132.

PILE NOTES

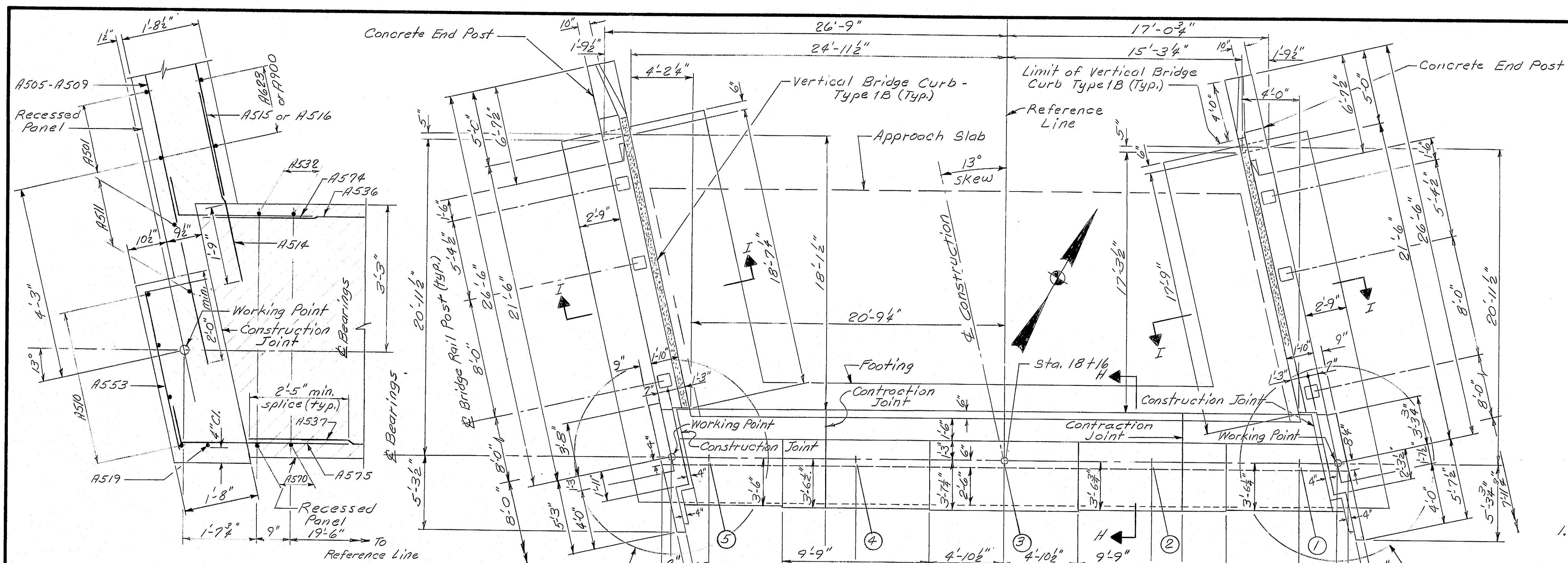
- Piles shall be driven to ledge or practical refusal.
- All piles shall have Pointed Reinforced Pile Tips as shown on Standard Details BD 127-81.
- Alternate types of Pointed Reinforced Pile Tips may be used if they have at least the cross-sectional area of the Pointed Reinforced Pile Tip shown on the plans and are approved by the Engineer.
- Estimated driven lengths of piles are determined from available soils information with no allowance for uncertain pile penetration.
- 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.
- Piles marked thus \rightarrow shall be battered in the direction of the arrow, 3 inches per foot at the breastwall and 4 inches per foot at the wingwall.
- Maximum pile loads: 55.5 Tons
- Following are pile locations, number of piles required, size of piles and estimated driven lengths:

Abutment No. 1	34 - HP 10 x 42 x 18'-0"
Abutment No. 2	14 - HP 10 x 42 x 26'-6"
Abutment No. 2	13 - HP 10 x 42 x 28'-0"

R92-14

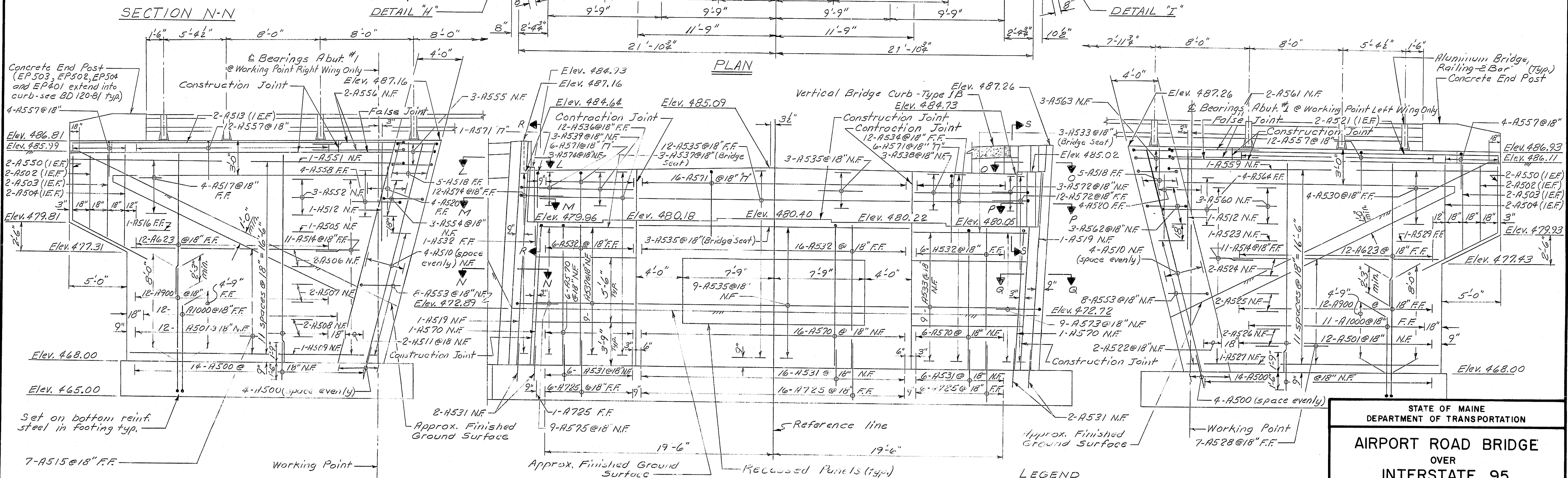
STATE OF MAINE DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE OVER INTERSTATE 95 IN THE TOWN OF HOULTON AROOSTOOK COUNTY FOOTINGS & ABUTMENT NOTES SHEET 8 OF 35 AUGUSTA, MAINE JULY 1983

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-9(102)	9	35



NOTES

1. Shaded areas indicate "Recessed Panels" in Elevation View.



LEGEND
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

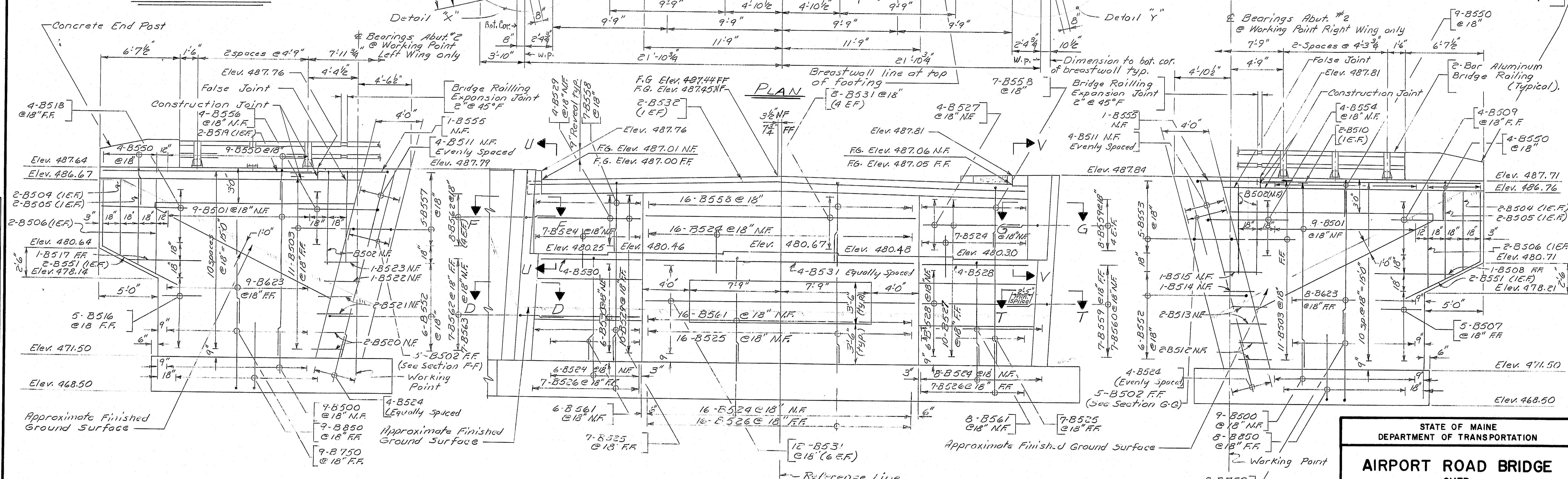
LEFT WING

R92-15

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
ABUTMENT NO. 1
SHEET 9 OF 35 AUGUSTA, MAINE July 1935

[illegible]

Before placing curb concrete,
see End Post Details
BD 120-8/



RIGHT WING

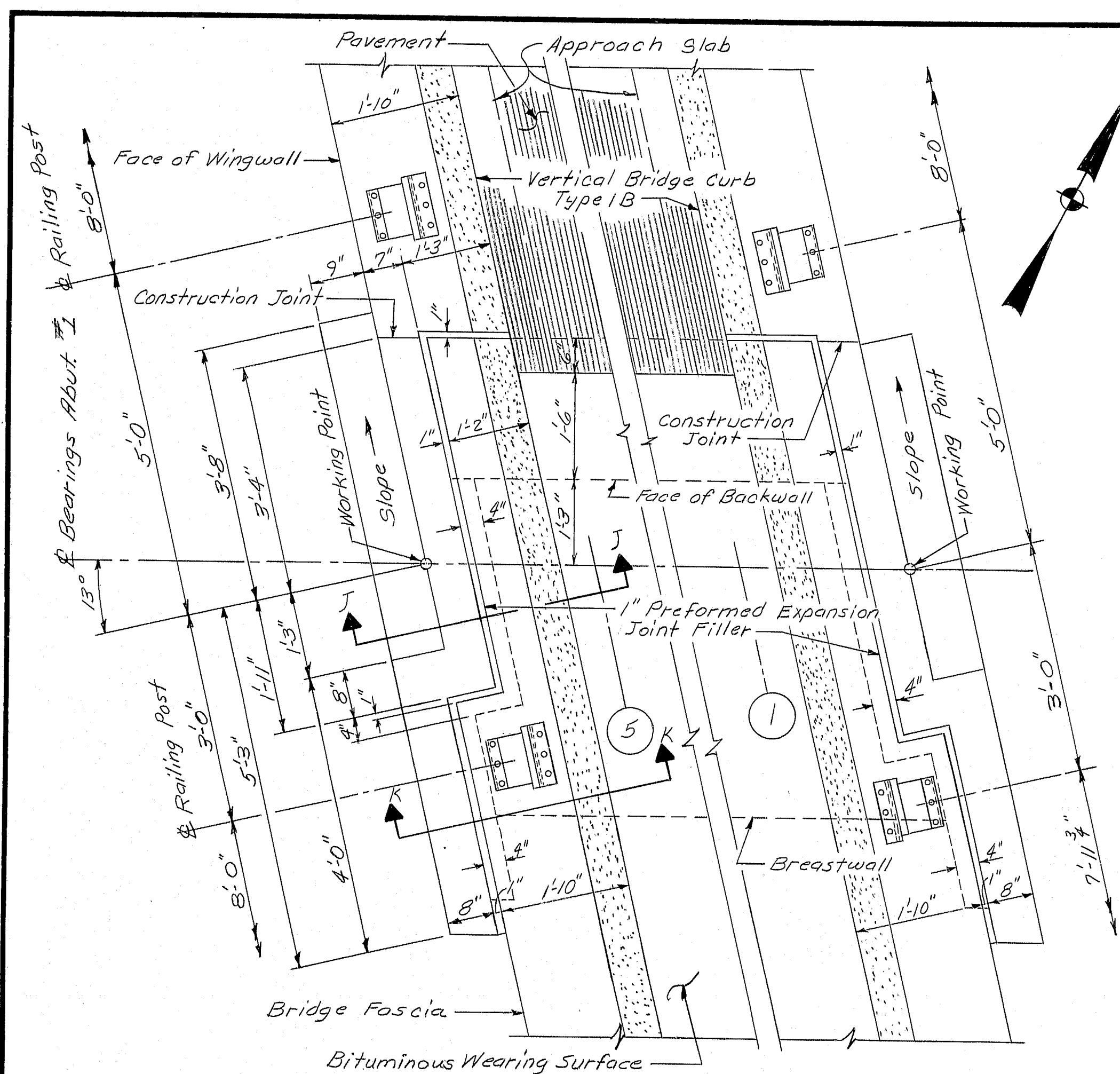
RIGHT WING
R92-1E

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
ABUTMENT NO. 2

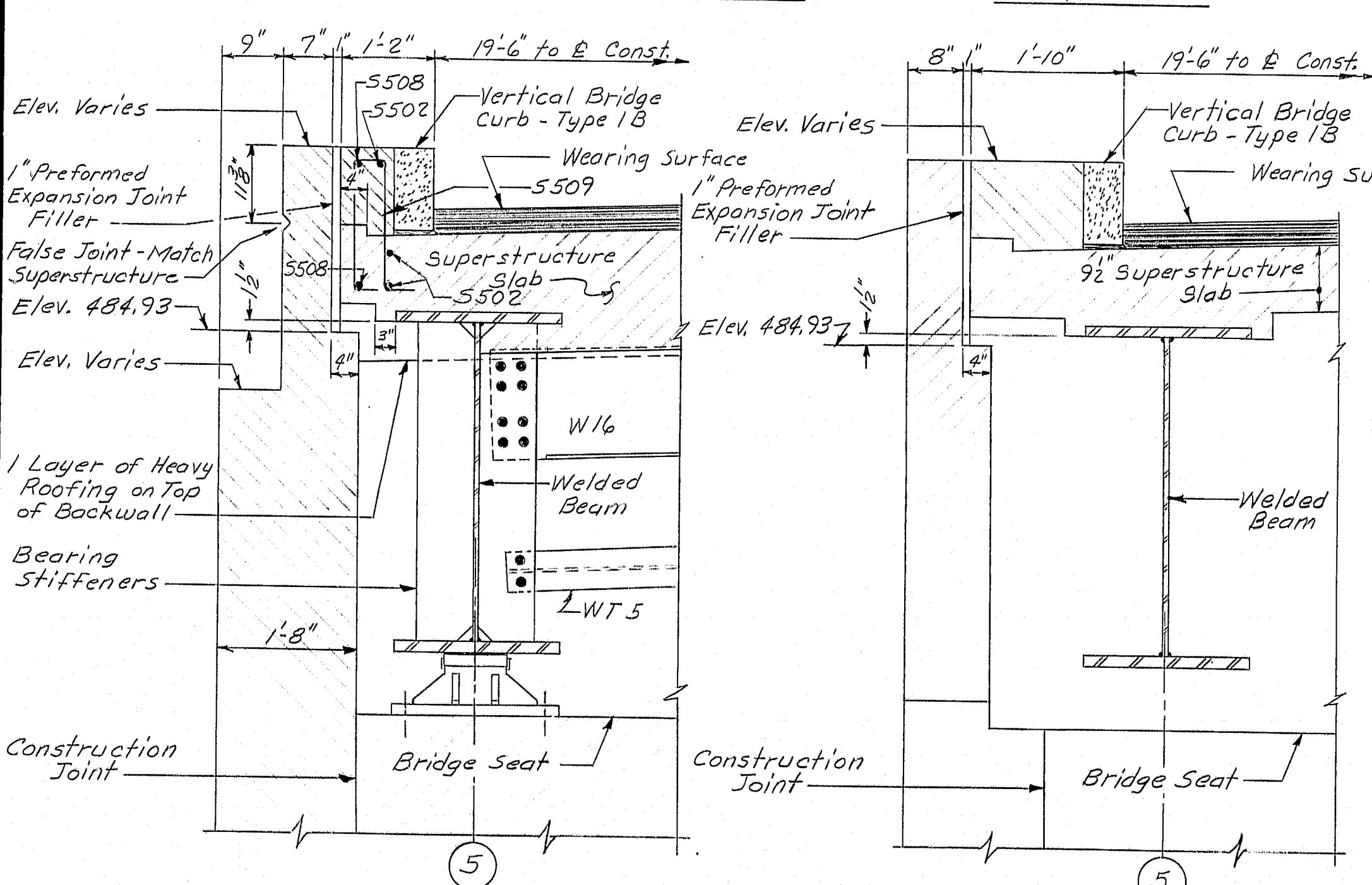
SHEET 4 OF 35 AUGUSTA, MAINE JULY 1988

F.R.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	11	35



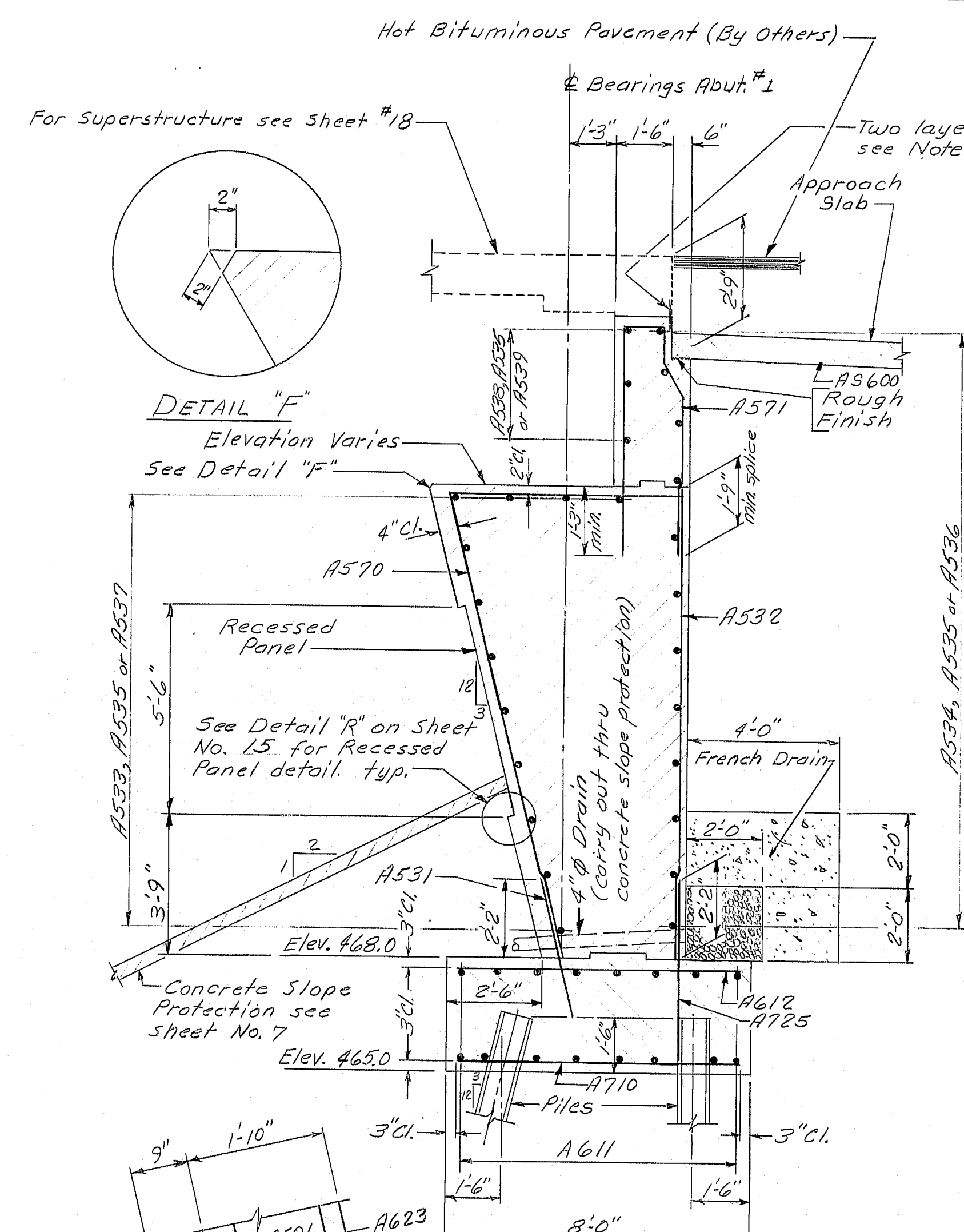
DETAIL "H"

DETAIL "I"

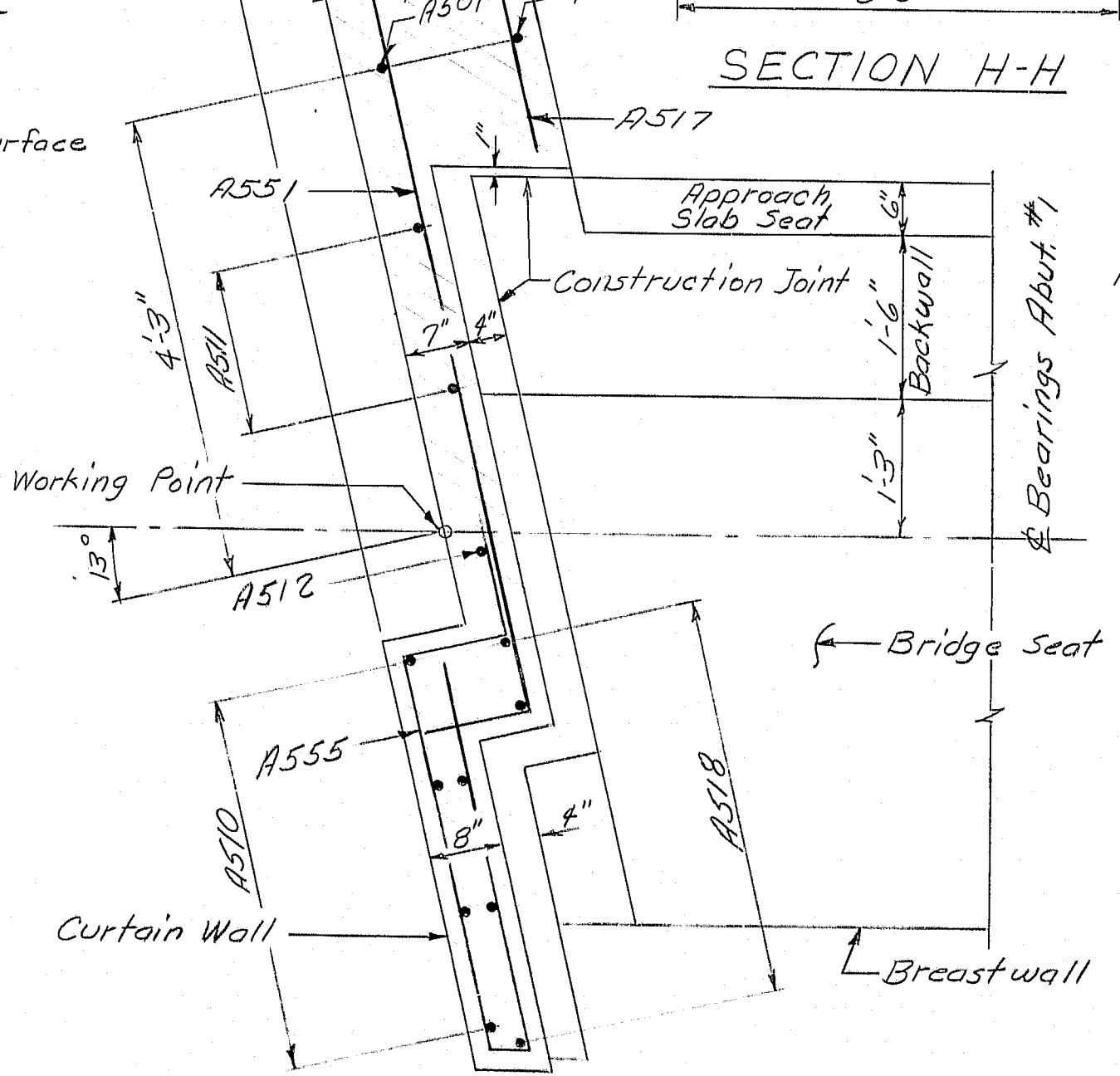


SECTION J-J

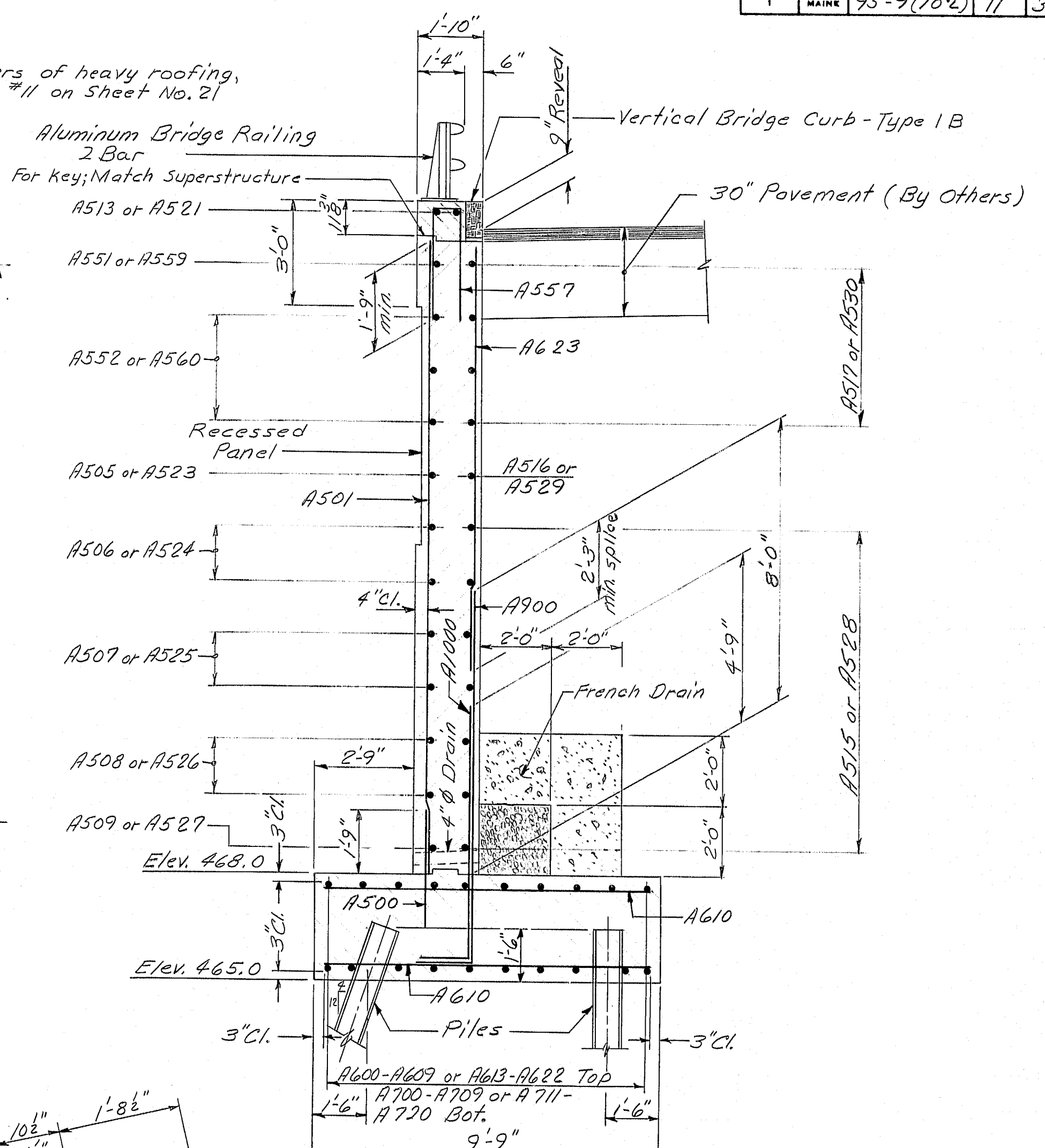
SECTION K-K



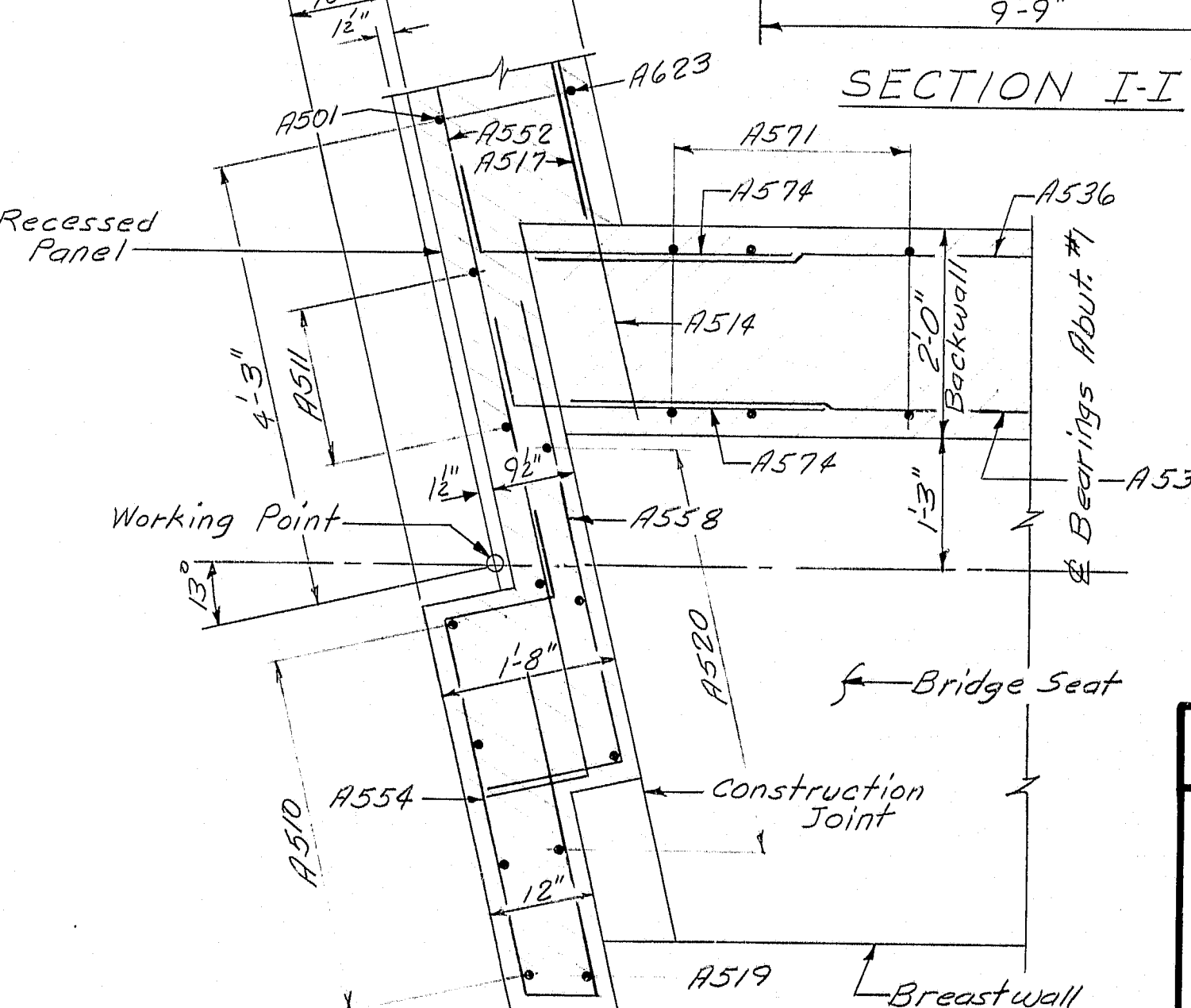
SECTION H-H



SECTION L-L



SECTION I-I



SECTION M-M

Abutment No. 1 Details

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
ARROOSTOOK COUNTY

ABUTMENT DETAILS

SHEET 11 OF 35 AUGUSTA, MAINE July 1983

R92-17

PROJECT DESIGN ENGINEER CDV	DATE
DESIGN - DETAILED	1/81
CHECKED	1/81
REVISIONS	
FIELD CHANGES	

BRUNING 44-132 45710

SECTION P-P

SECTION 0-1

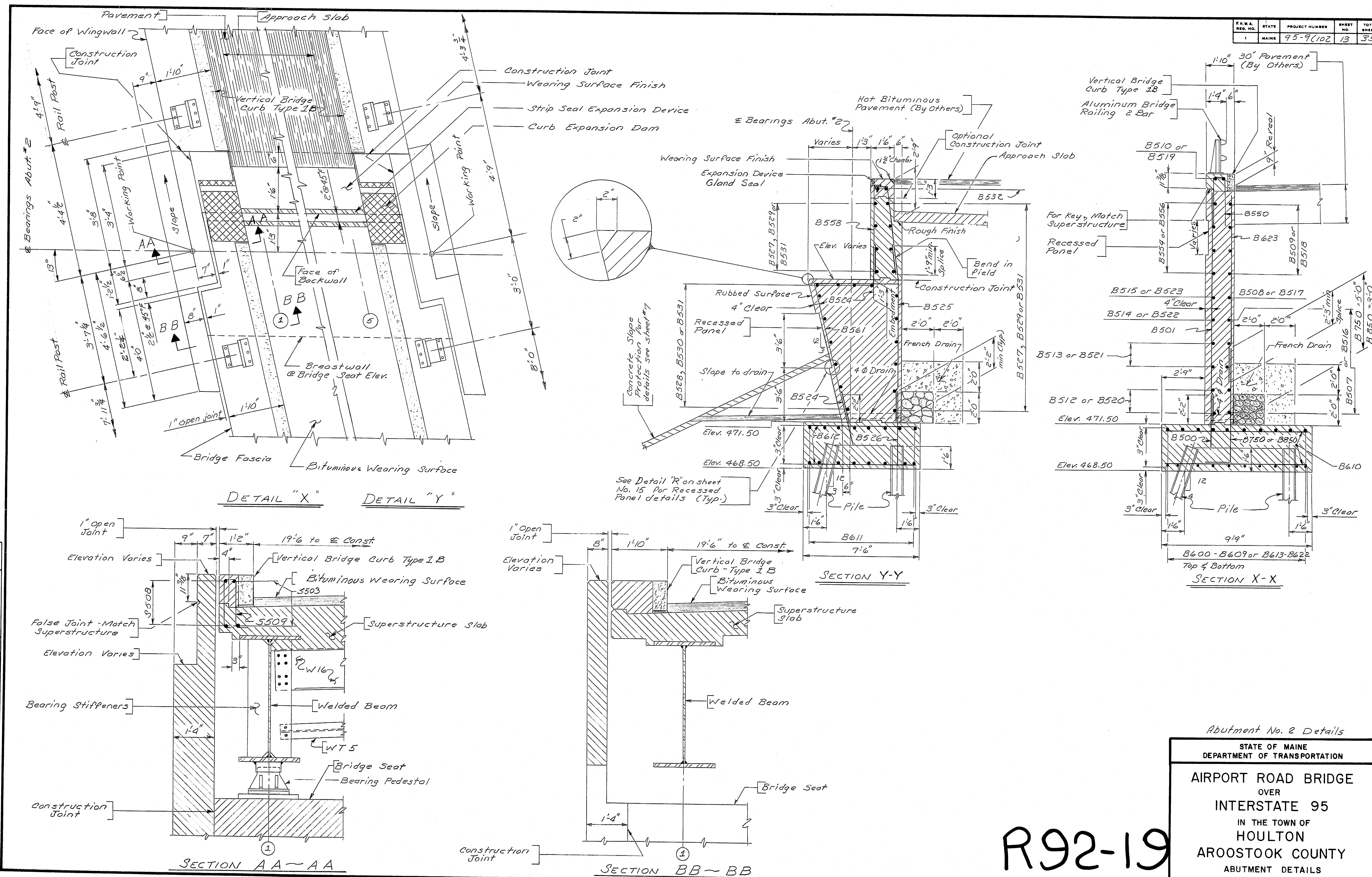


R92-18

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
ABUTMENT DETAILS

SHEET 12 OF 35 AUGUSTA, MAINE July 1988

F.R.A.	STATE	PROJECT NUMBER	SHEET	TOTAL
1	MAINE	95-9(102)	13	35



Abutment No. 2 Details

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
ABUTMENT DETAILS

SHEET 13 OF 35 AUGUSTA, MAINE July 1983

R92-19

Note: Reinf. shown as located below approach slab seat.

Approach slab seat

Bridge seat

Breastwall

Construction Joint

Working Point

SECTION G-G

F.H.W.A. REV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	14	3

Note: Reinf. shown as located below approach slab seat.

Approach slab seat

B558 "U"

B529

B503

B562

B529

2'-0"

Backwall

1'-3"

Bridge seat

Construction Joint

Breastwall

B518

B536

B501

18"

18"

B502

4'-9"

13"

Working Point

B557

B502

2 Bearings-Abut #2

PROJECT DESIGN ENGINEER	C.D.H.	BY		DATE	
DESIGN - DETAILED			C.D.H.	BEW	2-81
CHECKED			NLS		3-81
REVISIONS					
FIELD CHANGES					

REVISIONS	
FIELD CHANGES	

RUNNING 44-132 45710

[illegible]

Vertical Bridge Curb
Type I/B

Mortar
Non-Shrink Mortar

B554

Construction Joint
on Joint
Approach Slab
Seat

6"

2'-0"

1'-3"

Backwall

B515

Construction Joint
(Backwall only)

Bearings - Abut #2

Expansion Device

Gland Seal

B553

B502 N.F.
(Space as shown in
section G-G above)

Bridge Seat

B552

R92-20

Abutment No. 2 Details

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROSTOOK COUNTY

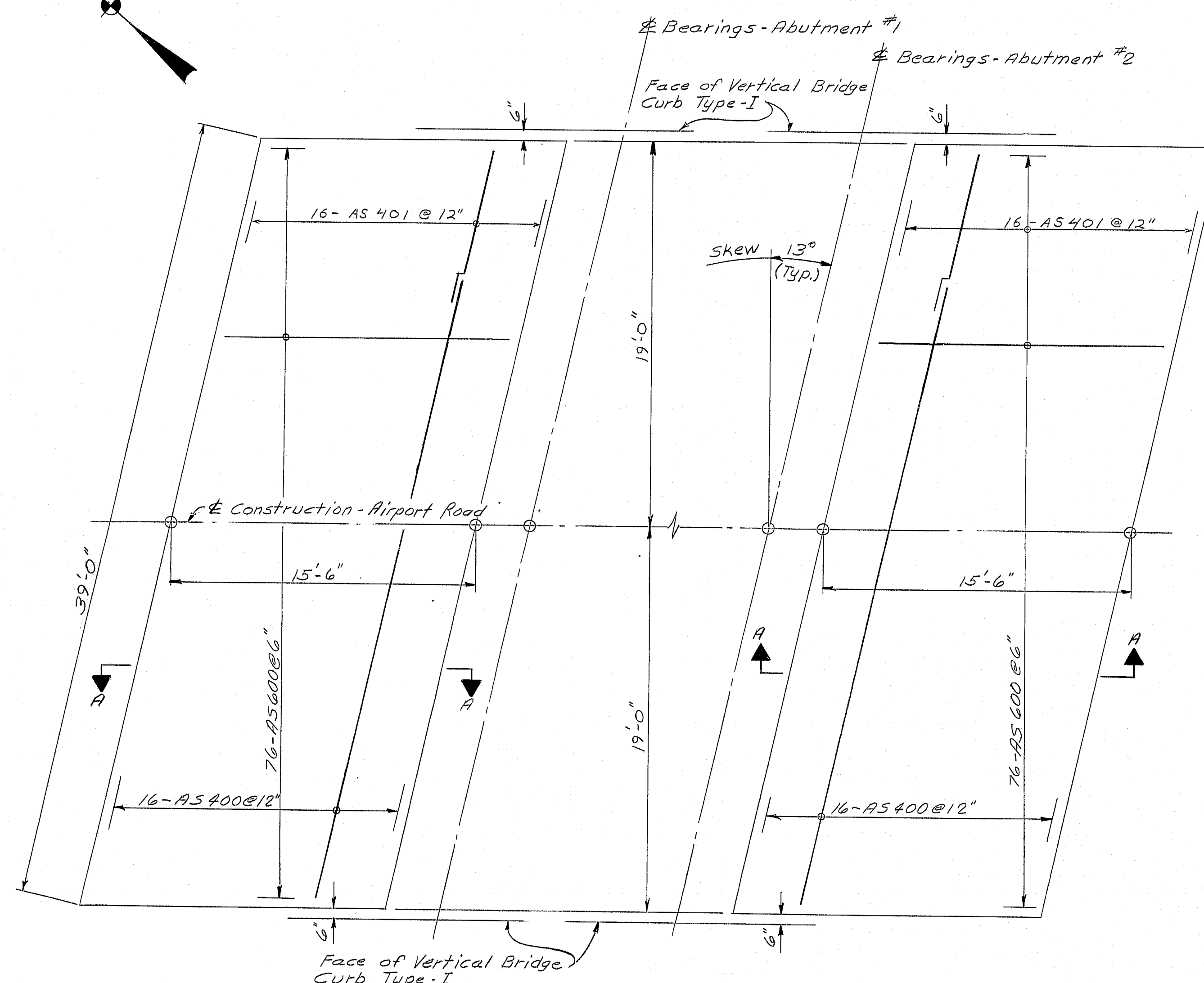
ABUTMENT DETAILS

SHEET 14 of 35 AUGUSTA, MAINE July 1983

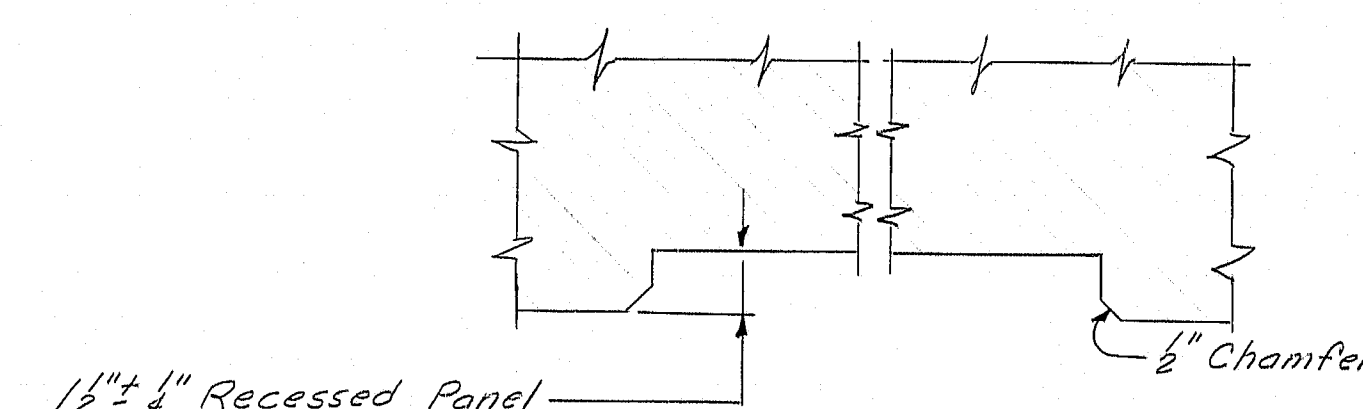
F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9 (102)	15	35

ARCHITECTURAL TREATMENT NOTES

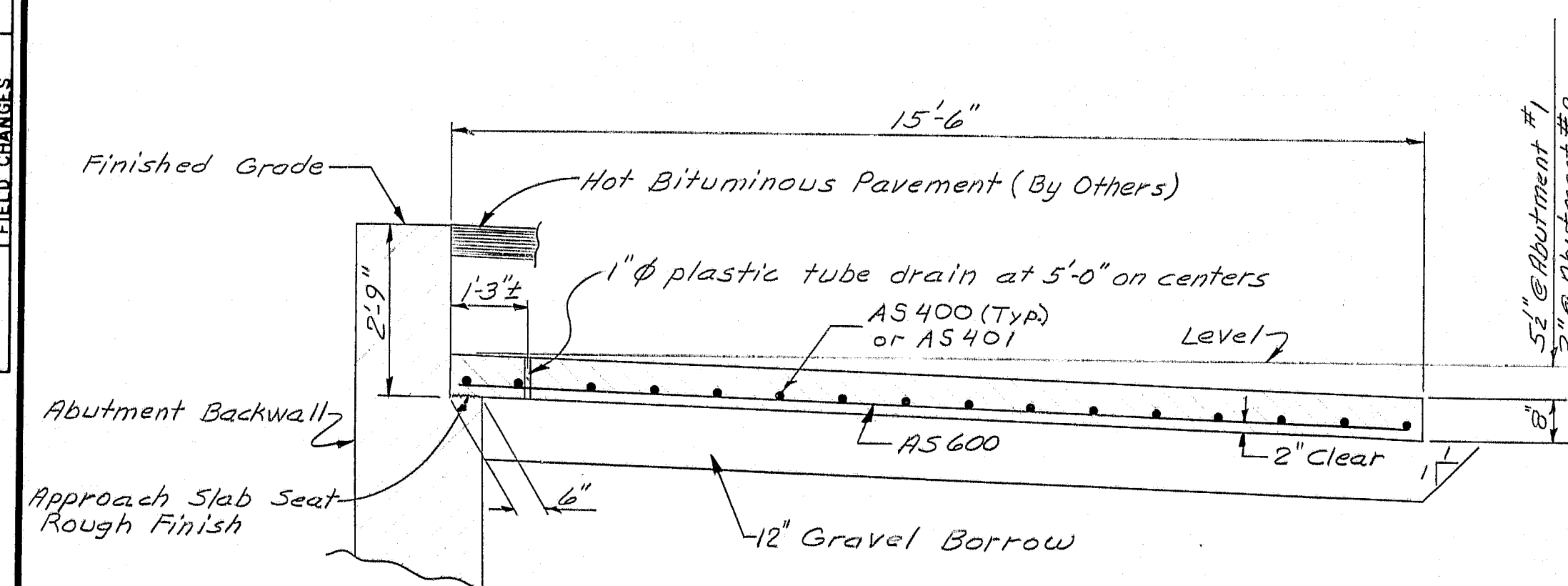
1. Special care shall be exercised so that form joints at the exposed face of concrete shall be tight.
2. In order to insure a consistent surface texture for the areas to be architecturally treated, concrete aggregate shall be from the same source and portland cement shall be from the same manufacturer throughout the entire placement of the abutment wings and breastwalls and pier.
3. No deduction in the concrete pay volume shall be made for the recessed panels in the architectural treatment.



PLAN - APPROACH SLABS



DETAIL "R"
(Section showing Recessed Panel)



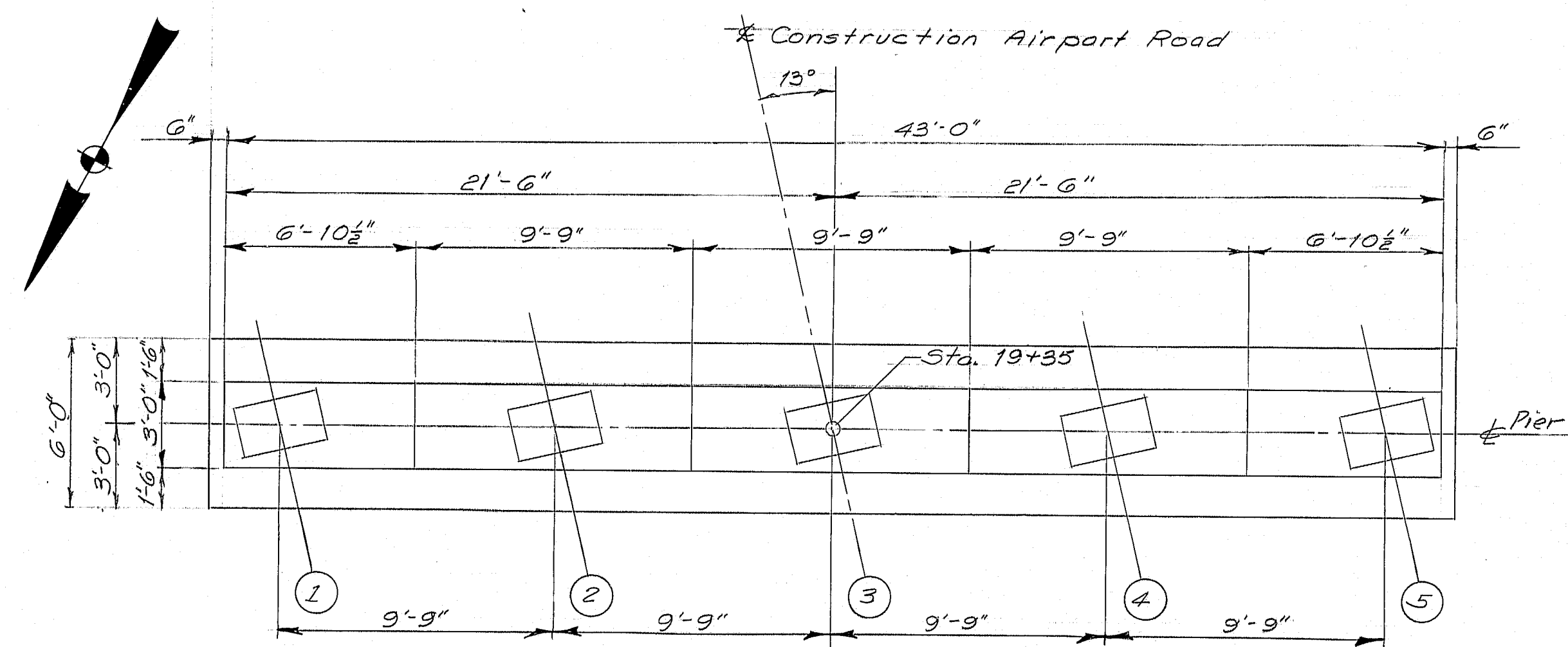
SECTION "A-A"

PROJECT DESIGN ENGINEER	DATE	BY
CDH	7-8	NEW
CHECKED	7-8	NEW
REVISIONS		
FIELD CHANGES		

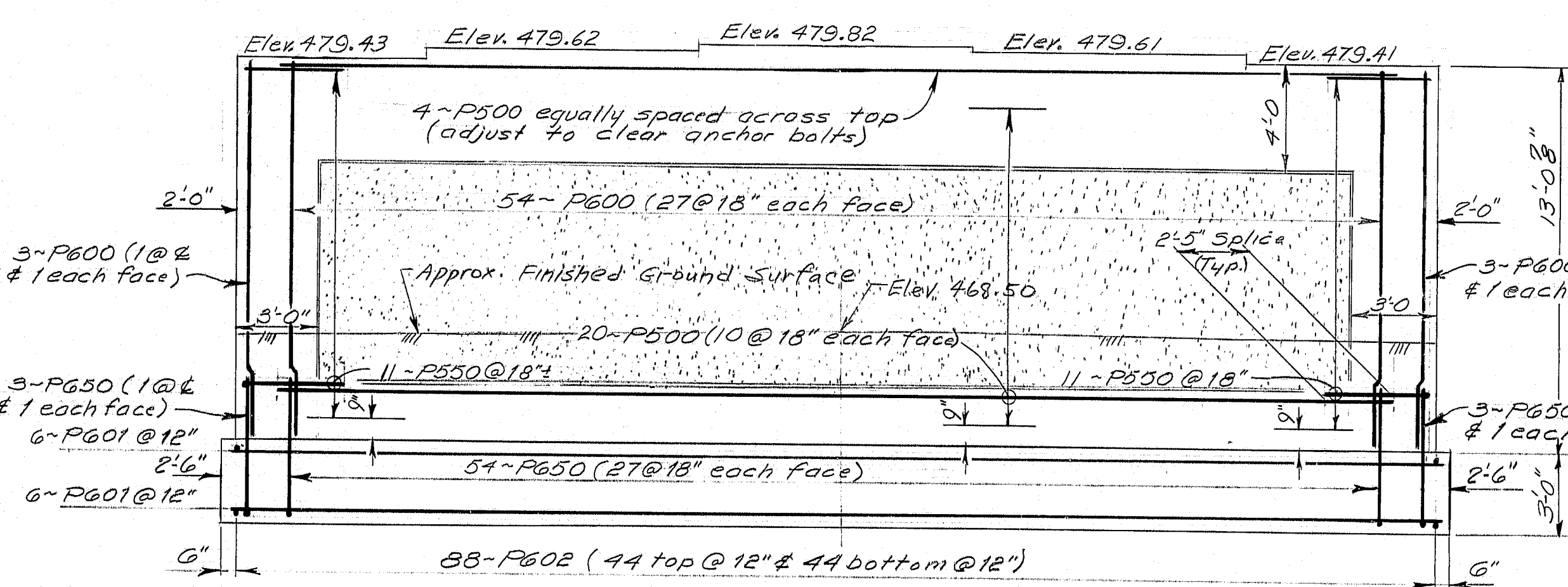
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
APPROACH SLAB & ARCH'L TREATMENT
SHEET 15 OF 35 AUGUSTA, MAINE July, 1993

R92-21

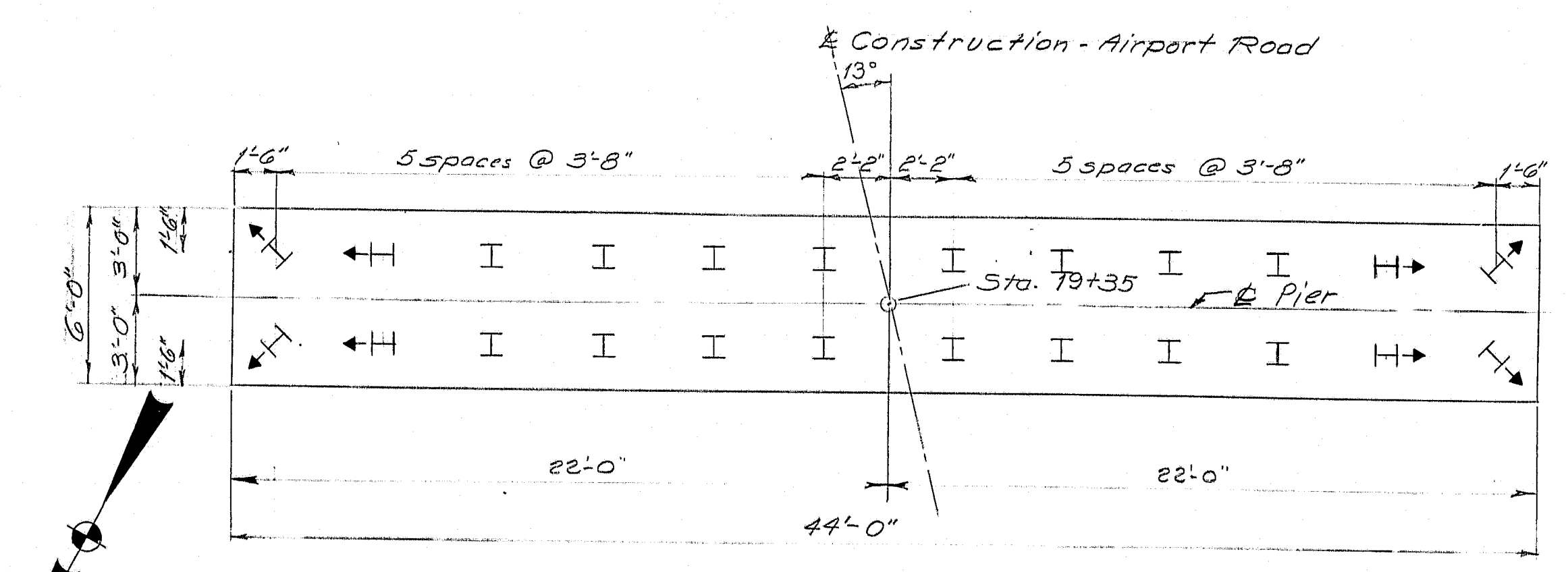
F.R.A. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	16	35



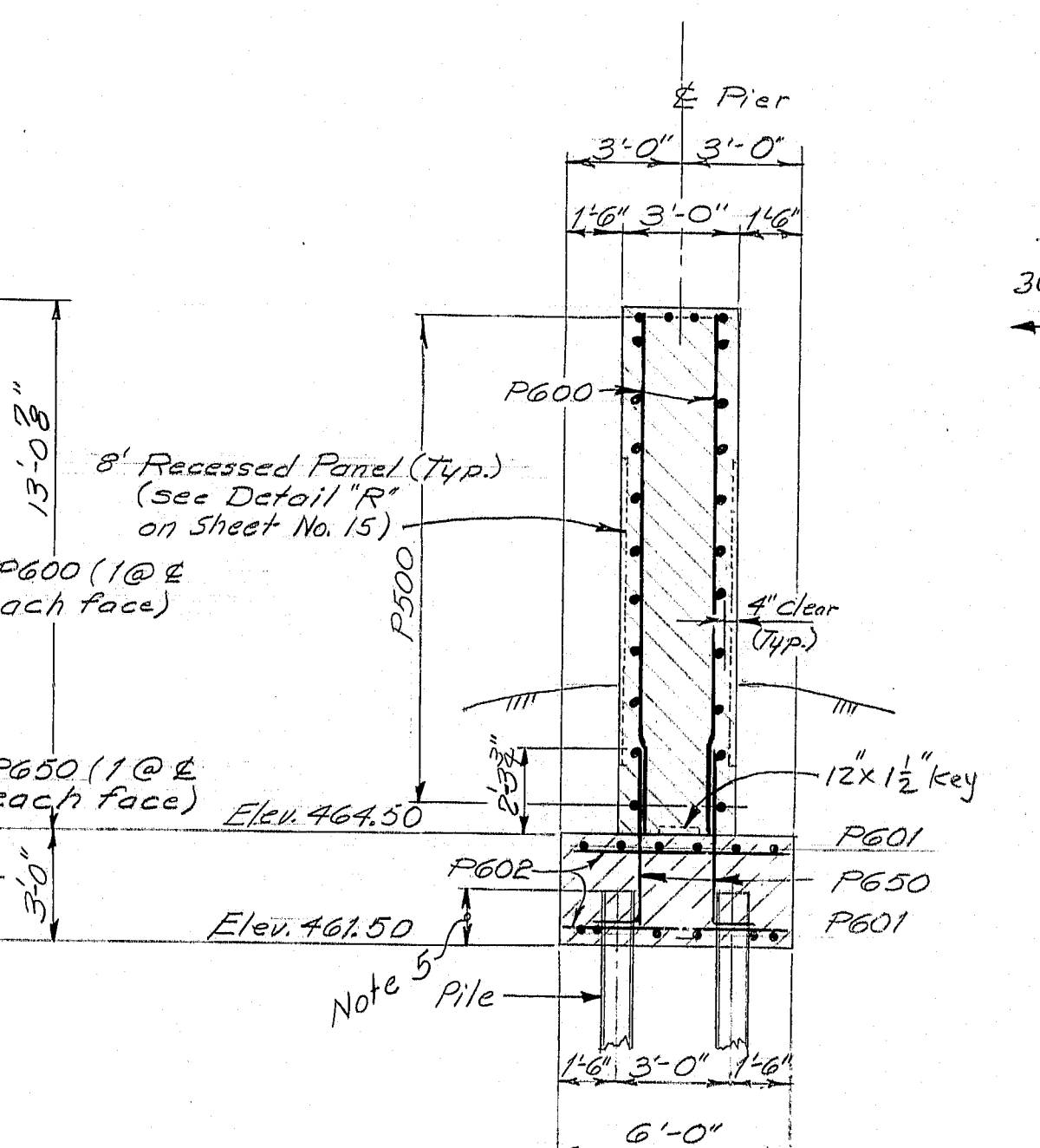
PLAN-LAYOUT



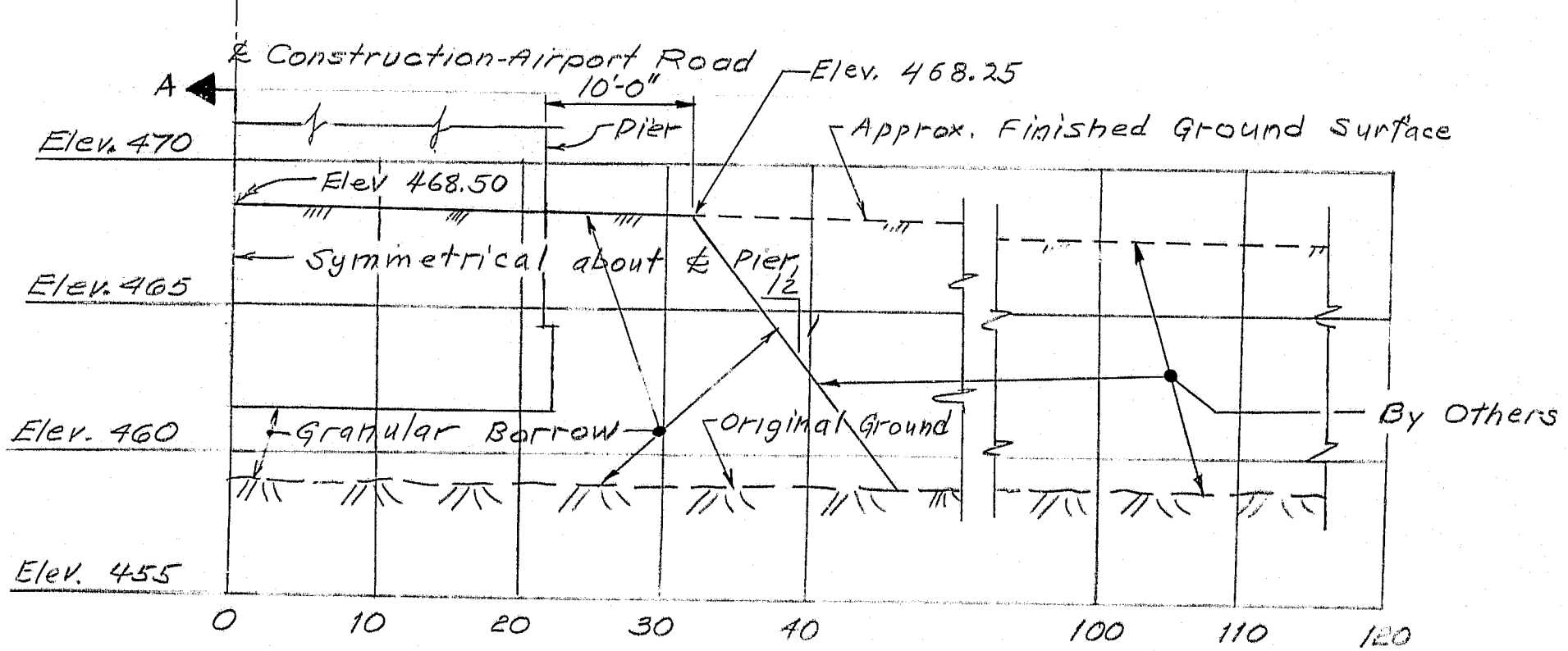
ELEVATION



FOOTING AND PILE PLAN



TYPICAL SECTION



PROFILE ALONG & MEDIAN

PIER NOTES:

- 1- Chamfer all exposed edges of concrete a consistent dimension between $\frac{1}{4}$ and $\frac{3}{4}$, unless otherwise indicated.
- 2- Reinforcing steel shall have 3" inches minimum cover unless otherwise indicated.
- 3- Place reinforcing steel in top of pier shaft to clear anchor bolts.
- 4- Design Criteria:
Critical AASHTO Loading - Group III.
Wind - 100mph.

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 Details BD 127-81.
- 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 footing may vary between 1'-0" and 2'-0". The actual embedment length up to a maximum of 1'-6" will be included in the measurement for payment.
- 6- Piles marked thus H, shall be battered 2" inches per foot in the direction of the arrow.
- 7- Maximum pile loads: 55.5 tons.
- 8- The following are pile locations, number of piles required, size of piles and estimated driven lengths.
Pier - 24-HP10 x 42 @ 23 feet.

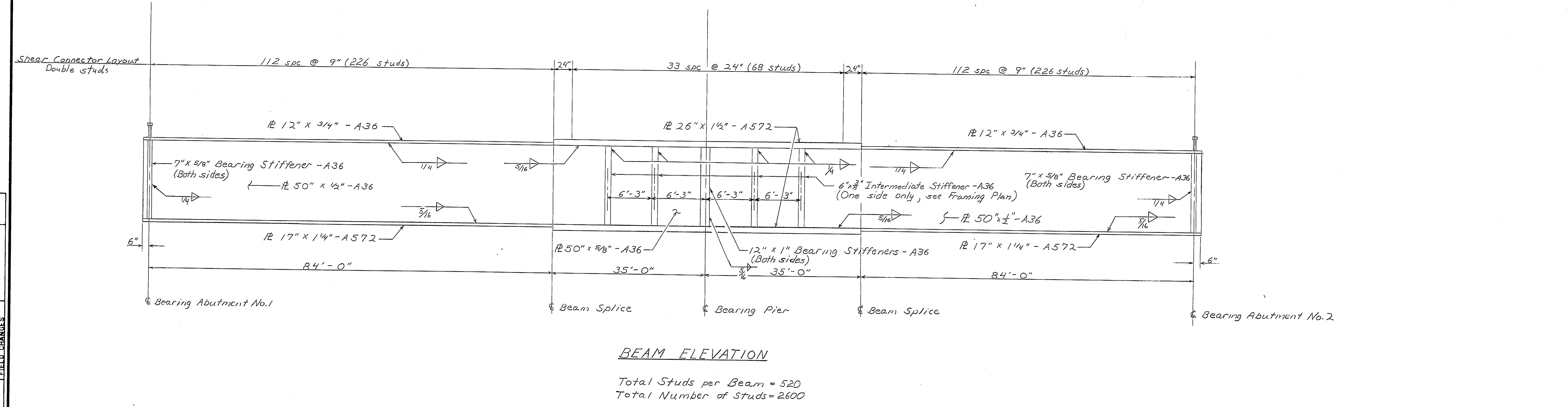
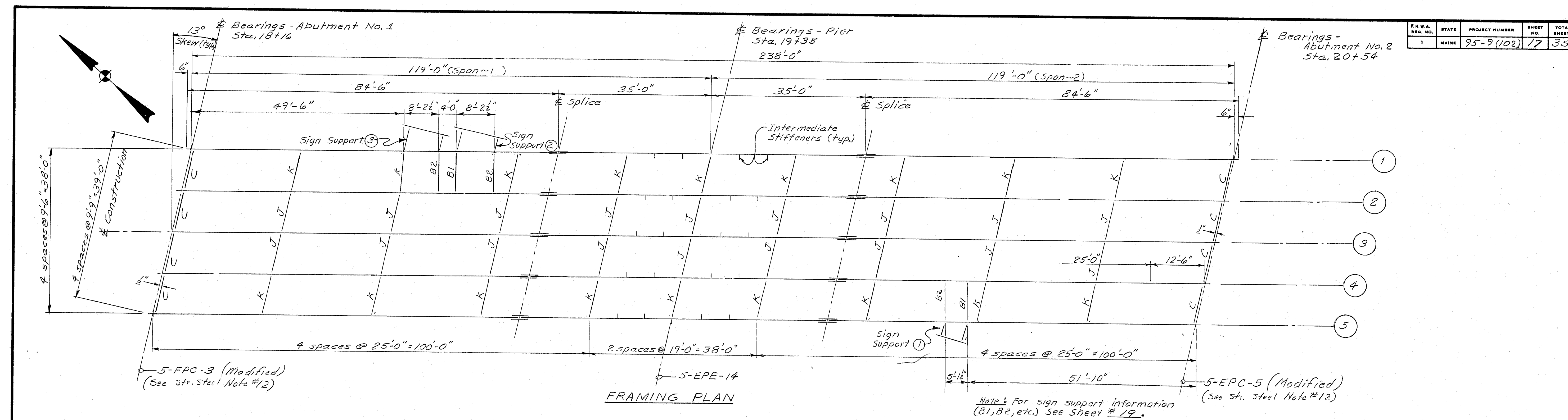
PROJECT DESIGN ENGINEER	DATE
COH	4-23-83
DESIGN DETAIL	BY
CON	LRL
CHECKED	WLB
REVISIONS	
FIELD CHANGES	
PLANS	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

**AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
PIER**

SHEET 16 OF 35 AUGUSTA, MAINE July 1983

R92-22



PROJECT DESIGN ENGINEER	CD	BY	DATE
DESIGN - DETAILED	CD	REW/STH	7/78
CHECKED	MLR		8-81
REVISIONS			
FIELD CHANGES			

R92-23

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY

FRAMING PLAN
SHEET 17 OF 35. AUGUSTA, MAINE JULY, 1983

F.R.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	18	35

STRUCTURAL STEEL NOTES

1. Camber ordinates, as shown, are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.
2. No transverse butt weld splices will be allowed in the flange plates or web plates within 10 feet from the points of maximum negative moment or maximum positive moment.
3. Sections of flange plates or web plates between transverse butt weld splices or from field splices shall be not less than 20 feet in length unless otherwise shown on the plans.
4. Butt weld splices in flanges shall be not less than one foot from transverse welds in the web plates.
5. One longitudinal butt weld splice in the web will be allowed in the haunched sections of the girders. Feather edges between the longitudinal welds and the bottom flanges will not be allowed.
6. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.
7. Cross frame or diaphragm connection plates may be either plumb or normal to the top flange.

8. Filler plates may be ASTM A36 steel and mill tests for filler plate material will not be required.

BASIC ALLOWABLE STRESSES

9. STRUCTURAL STEEL:
 ASTM A572 Grade 50 ————— $f_y = 50,000 \text{ psi}$
 ASTM A36 ————— $f_y = 36,000 \text{ psi}$
 ASTM A325 ————— $f_u = 33,000 \text{ psi}$

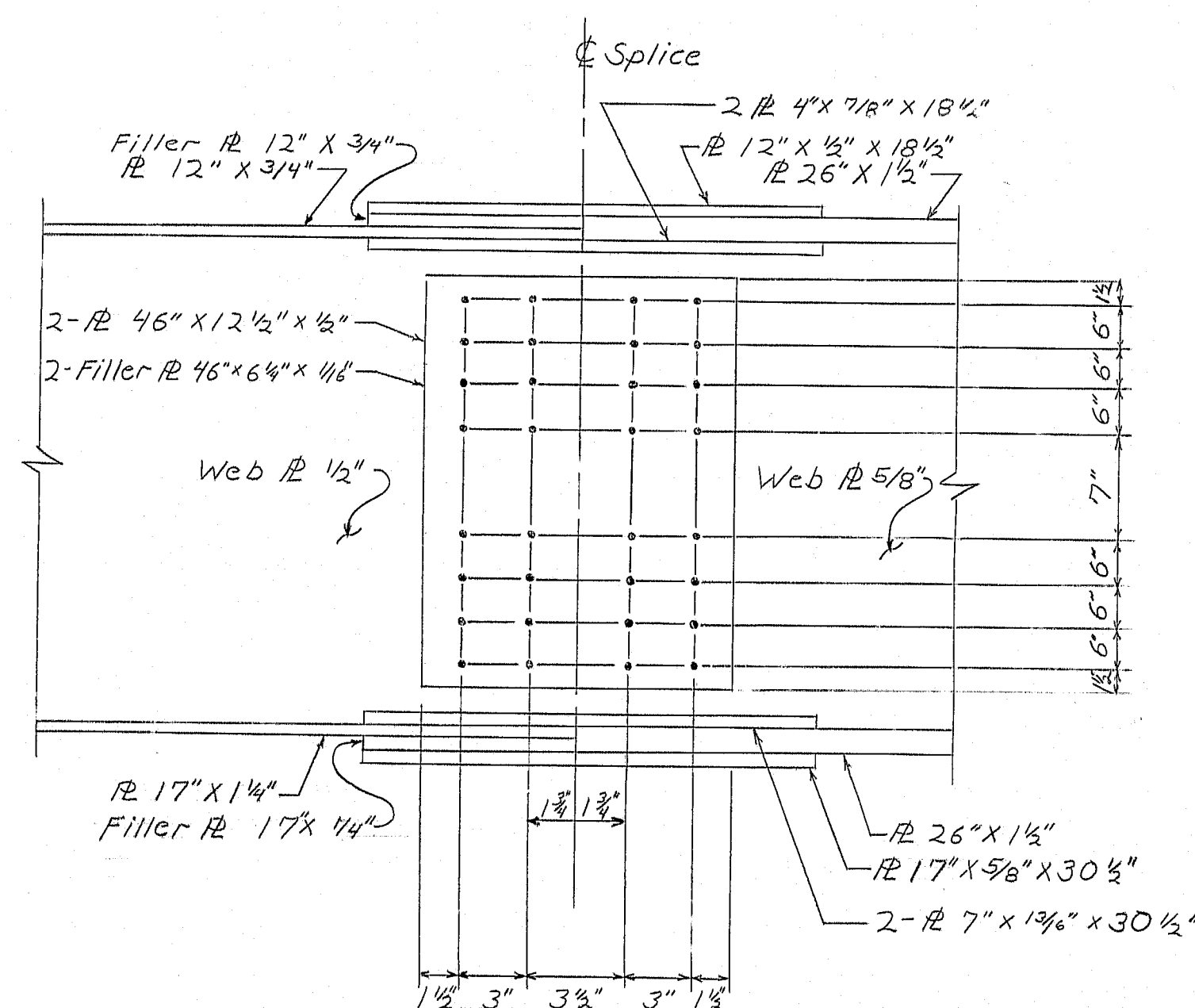
MATERIALS

10. STRUCTURAL STEEL:
 Beam Flanges ——— ASTM A572 Grade 50 or A36
 (See beam elevations)
 High Strength Bolts ——— ASTM A325
 All Other ————— ASTM A36

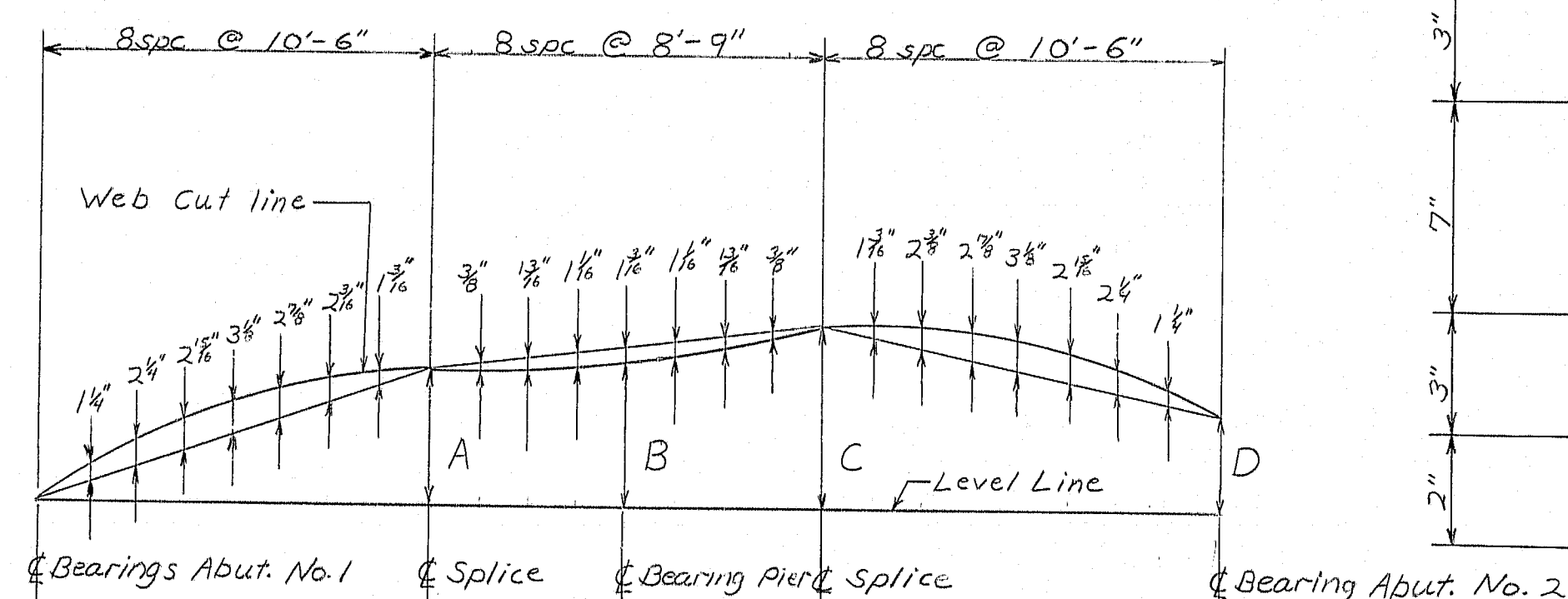
11. Bearing stiffeners on the exterior face of stringers ① and ③ shall be normal to the web.

12. Abutment bearings EPC-5 and FPC-3 shown on the Standard Details 80-101-81 shall be modified as follows: change "C" dimension from 9" to 14".

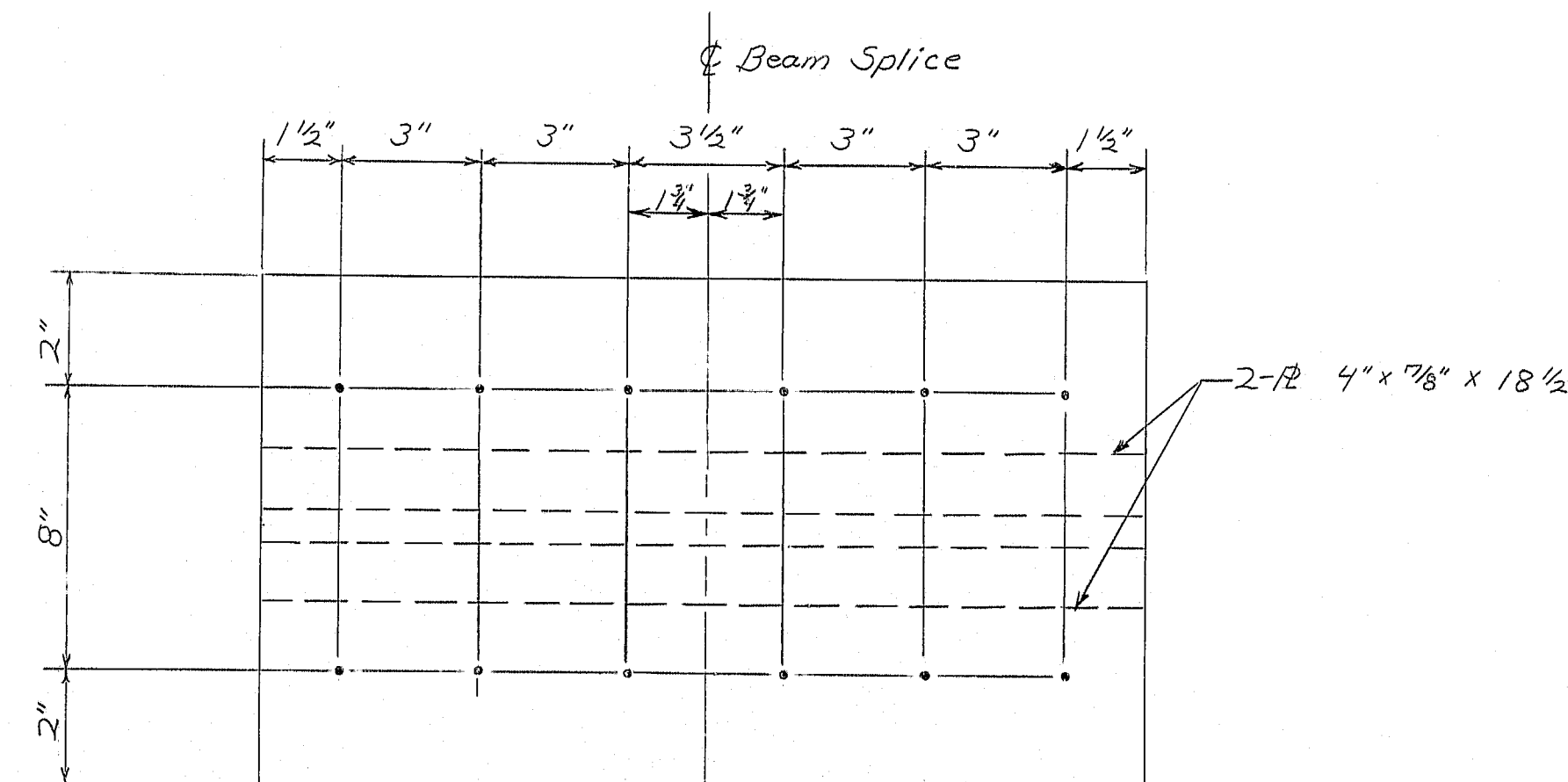
13. Splice connections shall be made with $\frac{7}{8}" \phi$ ASTM A 325 Type 1 high strength bolts. Holes shall be $\frac{1}{8}" \phi$.



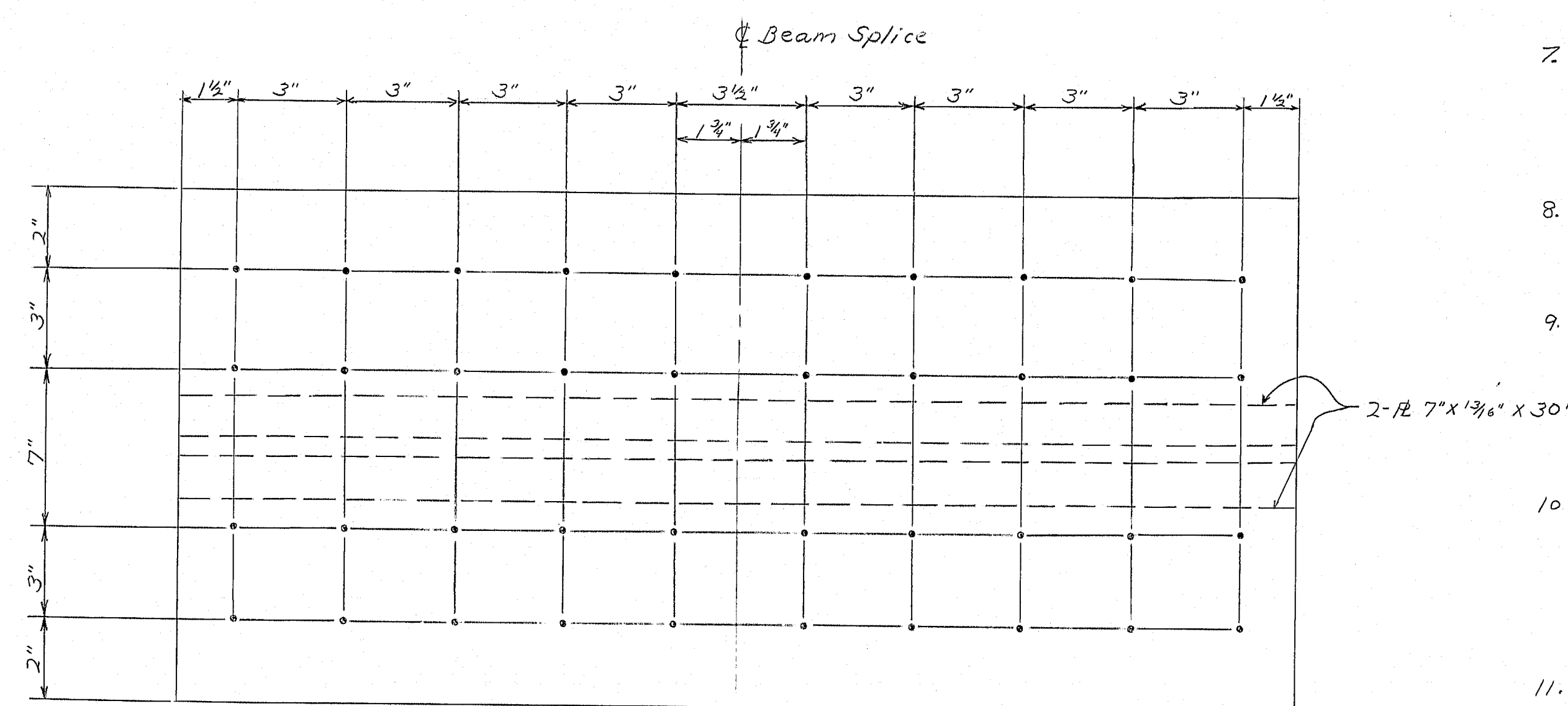
BEAM SPICE ELEVATION



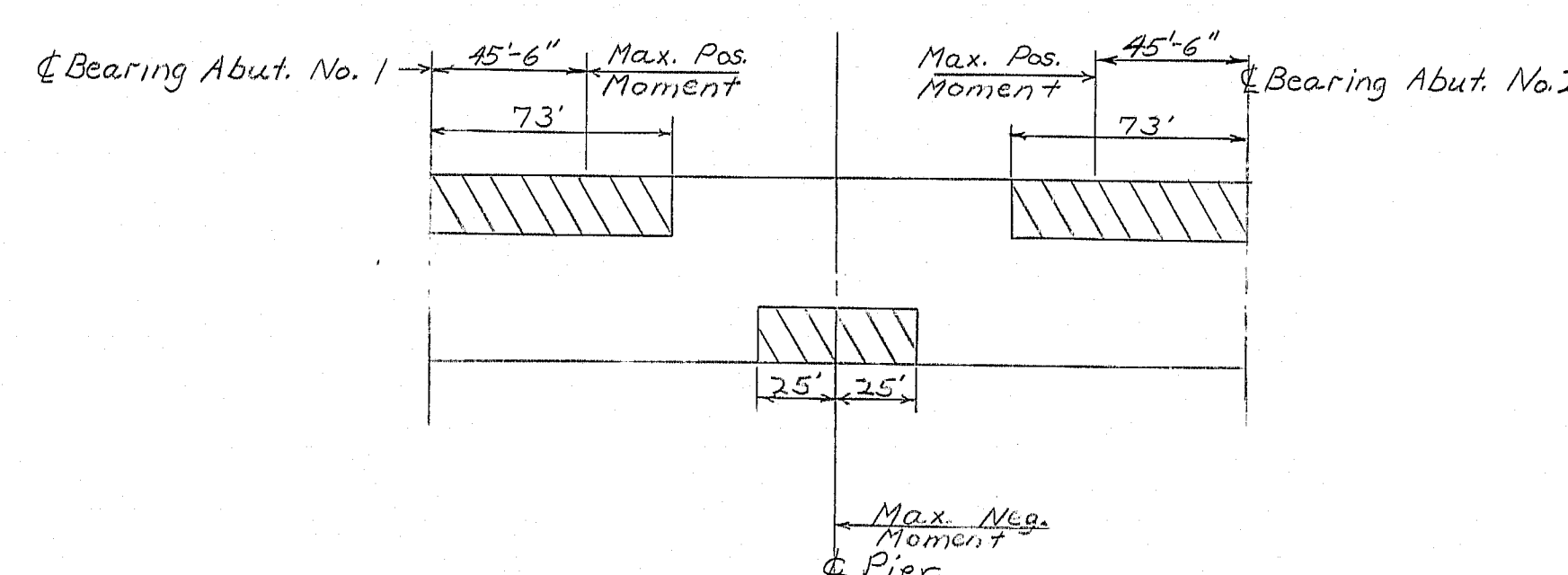
CAMBER DIAGRAM & TABLE



PLAN VIEW TOP SPICE PLATE



PLAN VIEW BOTTOM SPICE PLATE



BEAM STRESS DIAGRAM

Note: Cross hatched areas are always in compression.

PROJECT DESIGN ENGINEER	DATE
CDH	4-79
CHECKED	BY
WLB	EBL
REVISIONS	FIELD CHANGES

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
STRUCTURAL STEEL

SHEET 18 OF 35 AUGUSTA, MAINE JULY, 1983

R92-24

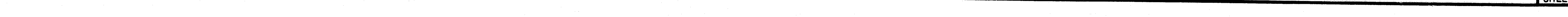
Sign # Dimension	①	②	③
a	5'-1½"	8'-2½"	8'-2½"
b	5'-0"	8'-0"	8'-0"
c	3'-6"	3'-6"	3'-7"
d	4'-7¾"	5'-4¼"	5'-5¾"
e	0'-5¾"	0'-5¾"	0'-4⅝"
f	0'-5¾"	0'-5⅝"	0'-4⅝"
g	8'-6"	13'-0"	11'-0"
h	7'-6"	7'-6"	5'-6"
i	0'-8"	0'-8"	1'-8"
j	2'-7"	2'-7"	1'-7"
k	2'-9½"	2'-9½"	2'-9½"
L	—	0'-0⅞"	0'-0⅞"

~~SIGN #1~~
~~I-95 N.B. Right Lane~~
 To Canada
 1954
 ↓

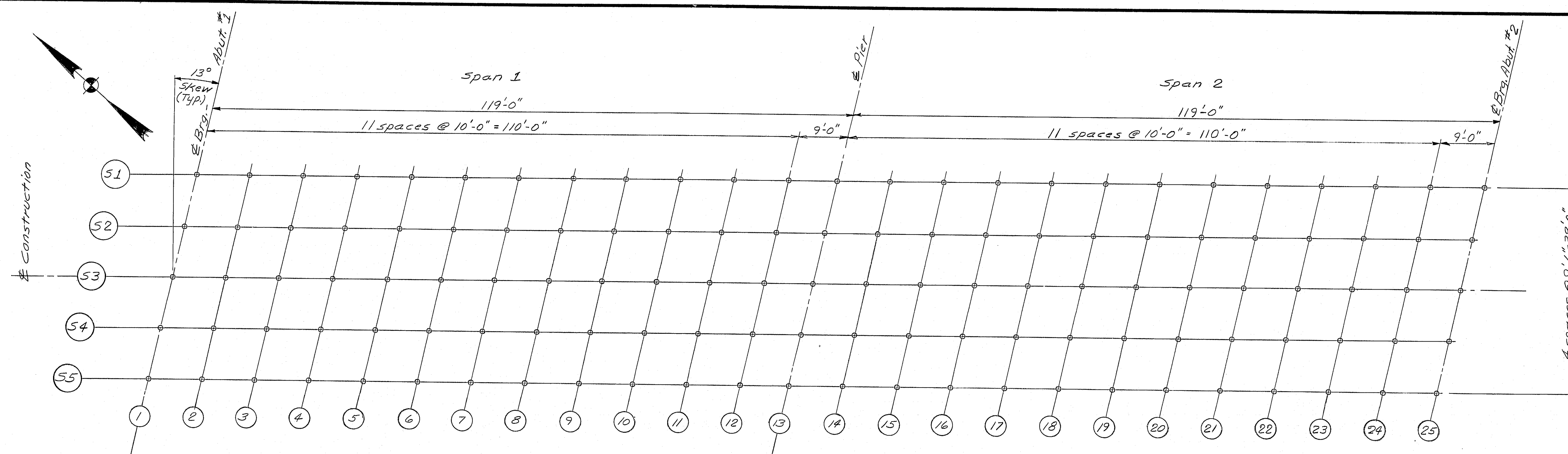
SIGN #2
 I-95 S.B. Left Lane
 Houlton
 Exit 3 Miles

SIGN #3
 I-95 S.B. Right Lane
 South Houlton →

203-1 2000

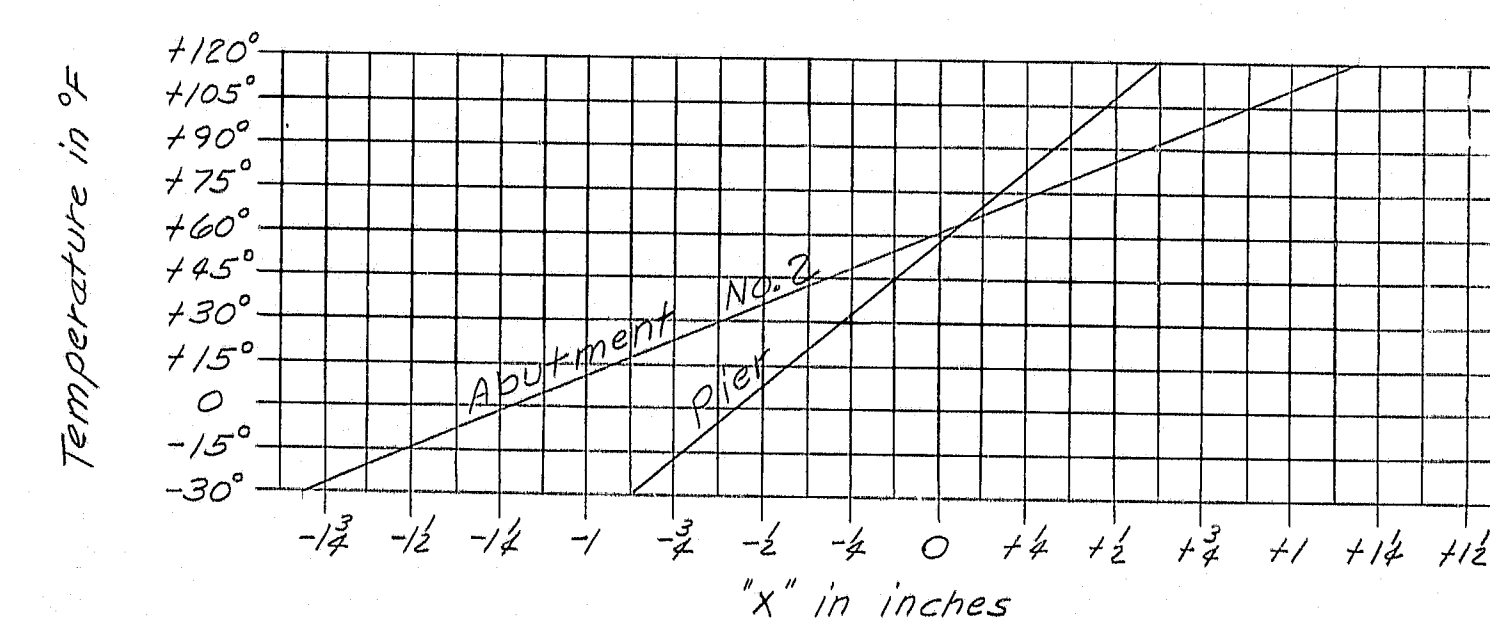


F.R.W.A.	STATE	PROJECT NUMBER	SHEET	TOTAL
1	MAINE	95-9(102)	20	35

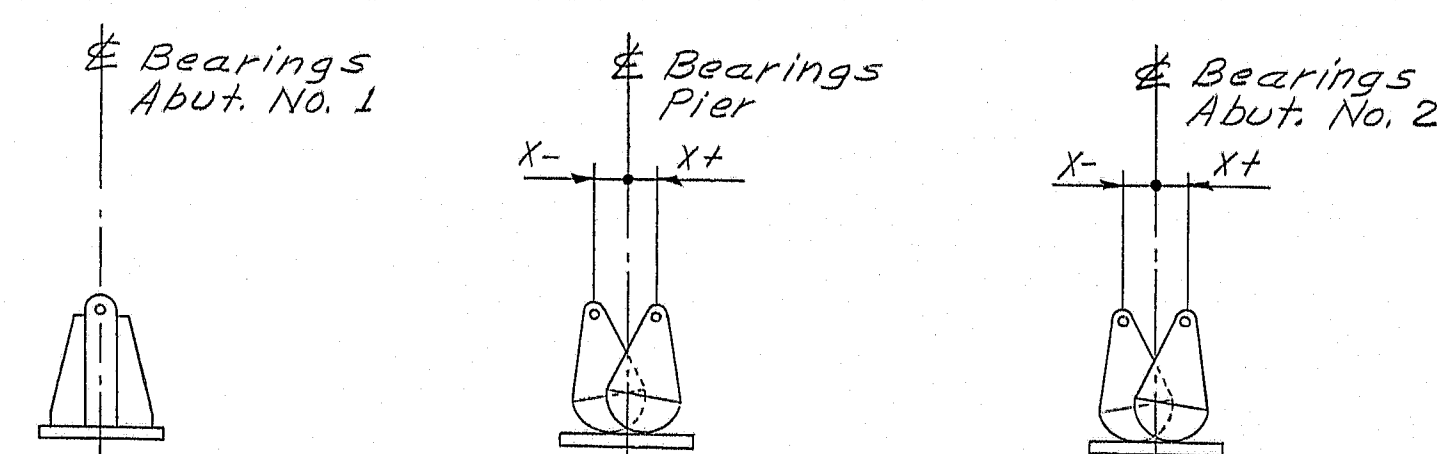


BLOCKING LAYOUT

		BOTTOM OF SLAB																								
Span Points		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Abut. #1	10	20	30	40	50	60	70	80	90	100	110	Pier	10	20	30	40	50	60	70	80	90	100	110	Abut. #2	
Stringers	51	485.41	485.58	485.74	485.88	485.98	486.06	486.10	486.13	486.13	486.13	486.12	486.12	486.13	486.17	486.21	486.27	486.32	486.36	486.39	486.39	486.36	486.29	486.20	486.09	485.97
	52	485.58	485.76	485.92	486.06	486.17	486.24	486.29	486.31	486.32	486.31	486.31	486.31	486.32	486.36	486.41	486.47	486.52	486.56	486.59	486.59	486.56	486.50	486.41	486.30	486.18
	53	485.76	485.94	486.10	486.24	486.35	486.42	486.47	486.50	486.50	486.50	486.50	486.52	486.55	486.60	486.66	486.72	486.76	486.79	486.79	486.76	486.70	486.62	486.50	486.39	
	54	485.54	485.72	485.88	486.02	486.13	486.21	486.26	486.29	486.30	486.29	486.29	486.30	486.31	486.35	486.40	486.46	486.52	486.56	486.59	486.60	486.57	486.51	486.43	486.31	486.20
	55	485.32	485.50	485.66	485.81	485.92	486.00	486.05	486.08	486.09	486.09	486.08	486.07	486.11	486.15	486.20	486.26	486.32	486.37	486.40	486.40	486.38	486.32	486.23	486.13	486.02



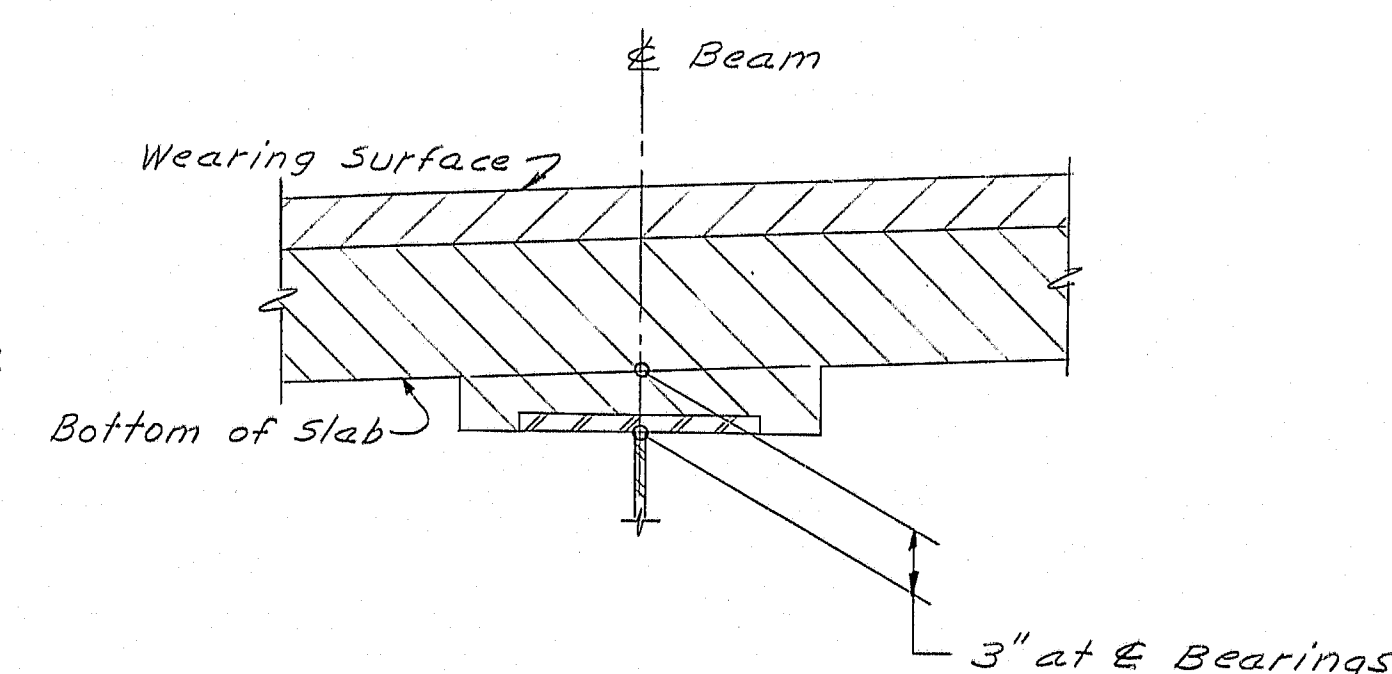
BEARING SETTING CHART



BEARING SETTING DETAIL

NOTE:

The Bearing Setting Chart indicates the required final position of the bearings. It is anticipated that the bearings at the Pier will move 6 inch and the bearings at Abutment No. 2 will move 5/8 inches away from the fixed bearings due to the placement of the superstructure concrete. No separate payment will be made for resetting bearings to the final position if an adjustment is required.



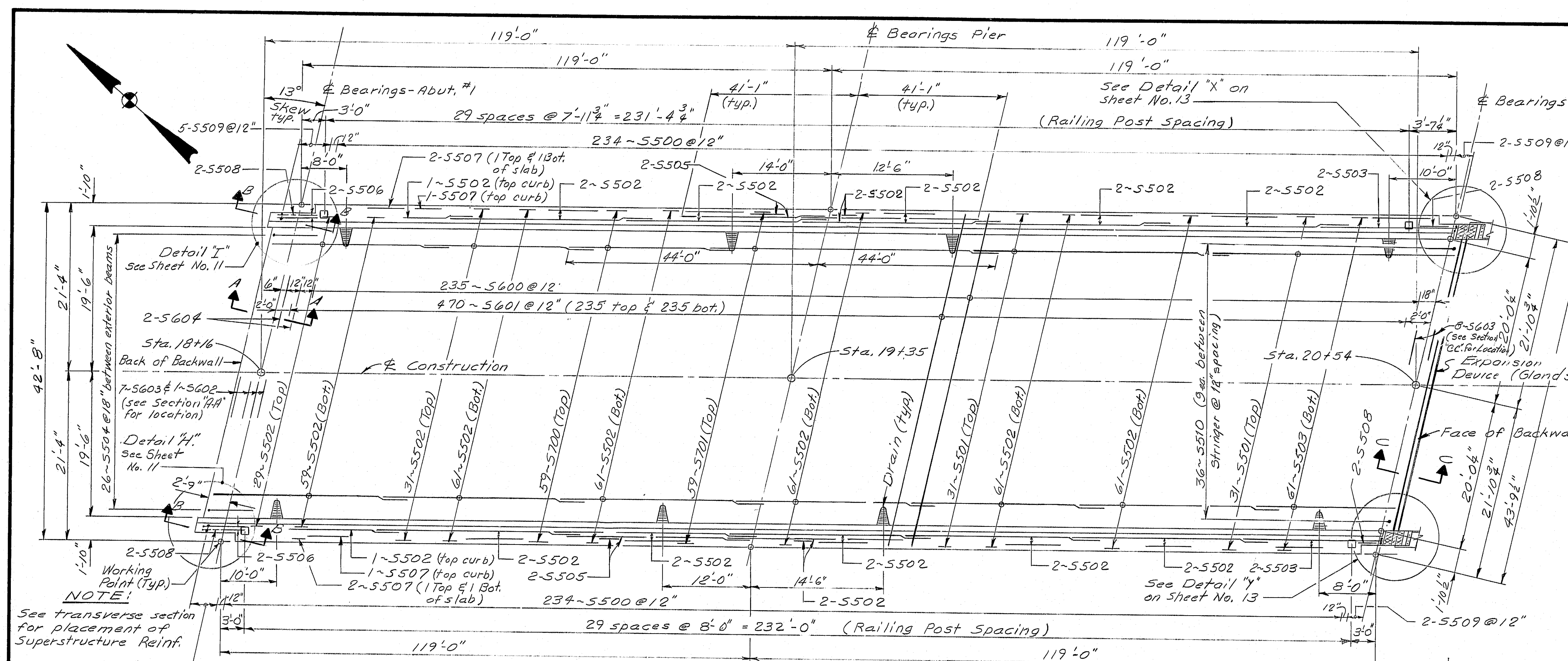
BLOCKING DETAIL

Blocking (theoretical) not to be used in setting forms.

R92-26

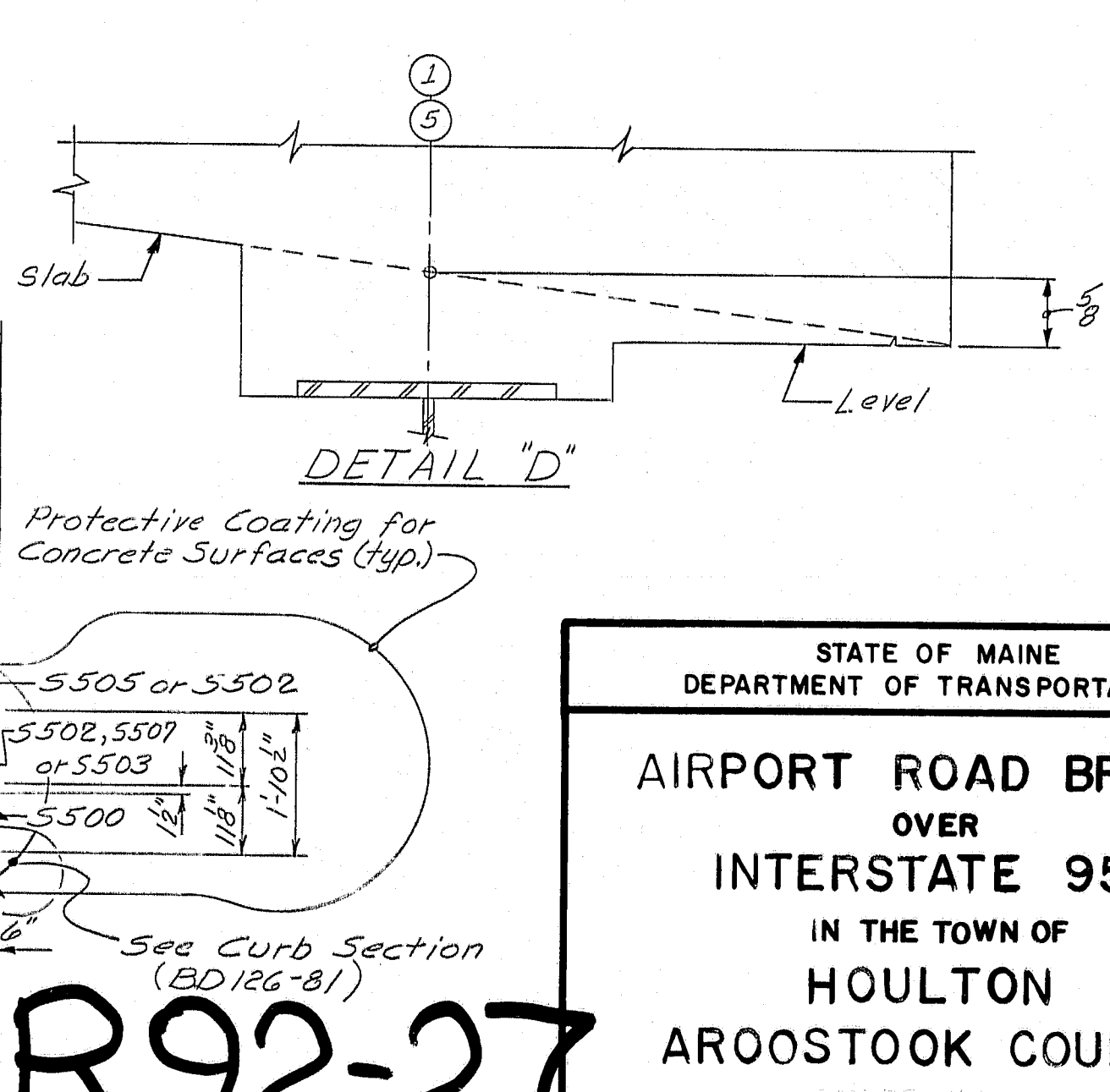
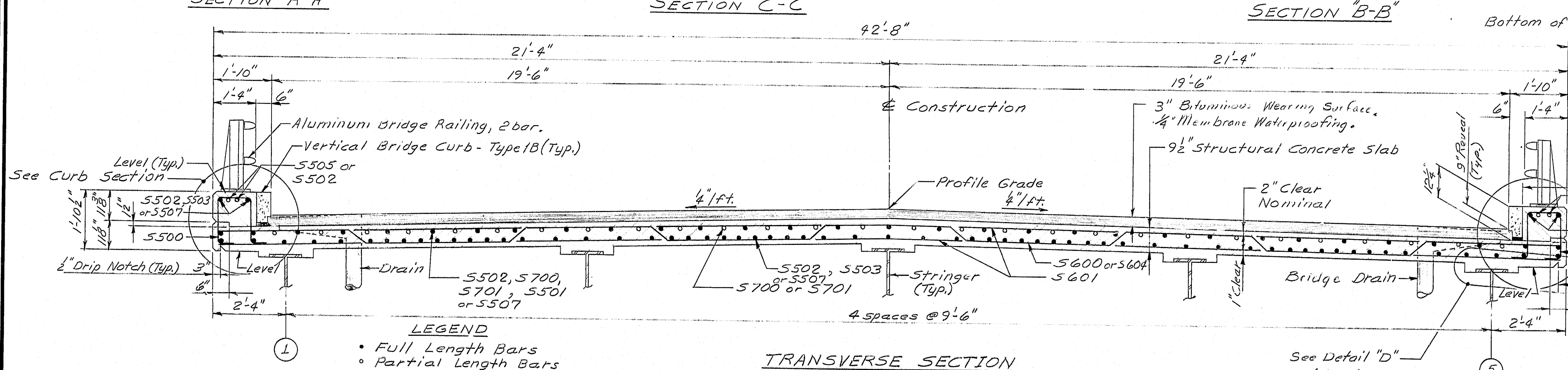
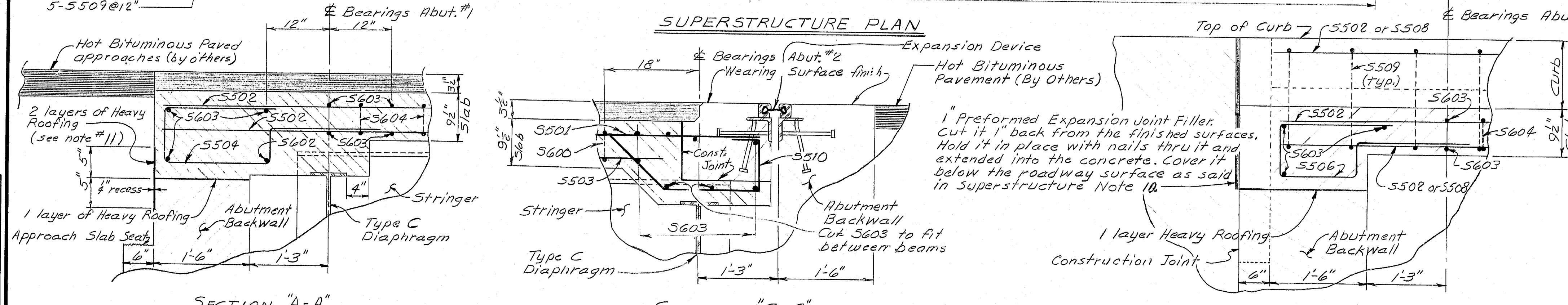
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY
BLOCKING
SHEET 20 OF 35 AUGUSTA, MAINE July 1983

F.R.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	27	35



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 inch V-groove on the fascias at the horizontal joint between the curb and slab.
3. Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.
4. Reinforcing steel splices shall be for: #5 bars 1'-9", #6 bars 2'-3" and #7 bars 3'-0".
5. The superstructure slab shall be placed in one continuous operation. The Contractor's method of placement shall be approved by the Engineer. The concrete shall be kept plastic for the full length of the structure during placement. Approved set retarding admixtures may be used when authorized by the Engineer.
6. Protective Coating for Concrete Surfaces shall be applied to the following areas:
a. concrete curbs and concrete fascia down to drip notch and 1' down end of slab @ Abutment No. 1
b. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
7. Place plastic tube drains between the concrete floor slab and the Bituminous wearing surface as described in Subsection 502.17 and Standard Details BD/26-81.
8. Provide an Expansion Device at Abutment No. 2 that shall have a total movement of 3 inches.
9. The vertical and horizontal joints between the superstructure slab and the backface of Abutment No. 1 backwall, shall be covered with two layers of Heavy Roofing 10' wide. Coat the concrete and each layer of roofing as applied with plastic roofing cement. Recess the area covered 4".
10. Adjust reinforcing steel to fit around the drains in a manner approved by the Engineer. Do not cut transverse reinf. bars.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
**AIRPORT ROAD BRIDGE
OVER
INTERSTATE 95
IN THE TOWN OF
HOULTON
AROOSTOOK COUNTY**
SUPERSTRUCTURE
SHEET 27 OF 35 AUGUSTA, MAINE July 1985

R92-27

DATE 2-97
 DESIGNED BY CDR BY
 CHECKED BY NLB
 FIELD CHANGES
 PLANS

REINFORCING STEEL SCHEDULE																											
STRAIGHT BARS													BENT BARS														
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
ABUTMENT NO. 1				FOOTING - ABUTMENT NO. 1				APPROACH SLABS				ABUTMENT NO. 1															
A500	36	3'-3"	Dowels	A600	1	24'-0"	Longitudinal	A5400	32	30'-0"	Approach Slabs	A550	4	13'-2"	V				5'-8"	7'-6"			6'-8 1/2"				Wing - End
A501	24	17'-9"	Wing - Vert.	A601	1	24'-3"		A5401	32	9'-6"	" "	A551	1	29'-1"	L	1'-0"	28'-1"										Wing - Horiz. - Top
A502	4	6'-7"		A602	1	24'-6"		A5600	152	15'-0"	" "	A552	3	29'-5"	L	1'-0"	28'-5"										Wing - Horizontal
A503	4	7'-4"		A603	1	24'-8"						A553	16	5'-0"	L	1'-5"	3'-7"										Wing - Corner
A504	4	8'-1"		A604	1	24'-11"		PIERS				A554	3	9'-8"	Q	0'-10"	1'-0"	3'-8"	0'-8"	3'-6"			0'-2"			Right - Curtain	
A505	1	26'-6"	Wing - Horiz.	A605	1	25'-2"		P500	24	40'-0"	Horizontal	A555	3	9'-5"	Q	0'-10"	1'-0"	3'-8"	0'-4"	3'-7"			0'-1"				do
A506	2	22'-6"		A606	1	25'-5"		P600	60	14'-7"	Vertical	A556	2	7'-9"	L	1'-0"	6'-9"										Curb
A507	2	21'-9"		A607	1	25'-8"		P601	12	43'-6"	Footings	A557	32	8'-0"	S	-	3'-6"	1'-0"	3'-6"			-					Curb "U"
A508	2	21'-0"		A608	1	25'-10"		P602	88	5'-6"	Footings	A558	4	5'-10"	L	1'-4"	4'-6"										Right - Curtain W
A509	1	20'-3"		A609	1	26'-1"						A559	1	29'-5"	L	1'-0"	28'-5"										Wing - Horiz. - Top
A510	8	19'-6"	Wing - Vert	A610	24	9'-3"	Transverse	END POSTS				A560	3	29'-9"	L	1'-0"	28'-9"										Wing - Horizontal
A511	2	18'-10"		A611	16	48'-11"	Longitudinal	EP401	40	1'-10"	End Post Dowels	A561	2	8'-0"	L	1'-0"	7'-0"										Curb
A512	2	9'-0"		A612	30	7'-8"	Transverse	EP405	24	1'-5"	End Post	A562	3	9'-6"	R	0'-10"	1'-0"	3'-8"	0'-8"	3'-4"			0'-8"				Left - Curtain W
A513	2	22'-11"	Curb - Right	A613	1	23'-0"	Longitudinal	EP508	16	5'-3"	End Post	A563	3	9'-4"	R	0'-10"	1'-0"	3'-8"	0'-4"	3'-6"			0'-1"				do
A514	22	4'-6"	Wings - Horiz.	A614	1	23'-3"						A564	4	6'-5"	L	1'-4"	5'-1"										do
A515	7	18'-4"	Wing - Horiz.	A615	1	23'-6"																					
A516	1	22'-0"		A616	1	23'-9"																					
A517	4	23'-4"		A617	1	23'-11"																					
A518	10	3'-10"	Curtain Wall	A618	1	24'-2"						A570	30	18'-0"	T	6'-0"	12'-0"						3'-0"				Breastwall - Vert
A519	2	17'-1"		A619	1	24'-5"						A571	29	13'-3"	D	-	5'-9"	1'-2"	1'-0"	1'-0"	4'-4"	-	0'-6"				Backwall "U"
A520	8	6'-0"		A620	1	24'-8"						A572	15	4'-0"	O	0'-10"	3'-2"						0'-2 1/2"				Corner Bars
A521	2	22'-6"	Curb - Left	A621	1	24'-11"						A573	9	5'-6"	O	0'-10"	4'-8"						0'-2 1/2"				do
A522	2	19'-0"	Wing - Vert.	A622	1	25'-1"						A574	15	4'-0"	P	0'-10"	3'-2"						0'-2 1/2"				do
A523	1	26'-5"	Wing - Horiz.									A575	9	5'-6"	P	0'-10"	4'-8"						0'-2 1/2"				do
A524	2	22'-7"																									do
A525	2	21'-10"		A700	1	24'-0"	Longitudinal					A900	24	12'-3"	L	1'-7"	10'-8"										Wing - Dowels
A526	2	21'-1"		A701	1	24'-3"						A1000	23	9'-3"	L	1'-10"	7'-5"										Wing - Dowels
A527	1	20'-4"		A702	1	24'-6"																					
A528	7	17'-6"		A703	1	24'-8"																					
A529	1	21'-0"		A704	1	24'-11"																					
A530	4	22'-6"		A705	1	25'-2"																					
A531	32	3'-9"	Dowels - Breastwall	A706	1	25'-5"						P550	22	9'-8"	S	-	3'-8"	2'-4"	3'-8"			-					Shaft
A532	29	12'-2"	Breastwall - Vert.	A707	1	25'-8"						P650	60	6'-0"	L	1'-0"	5'-0"										Footings
A533	12	9'-1"	Breastwall - Horiz.	A708	1	25'-10"																					
A534	12	8'-2"		A709	1	26'-1"																					
A535	27	23'-2"		A710	30	7'-8"	Transverse					END POSTS															
A536	12	9'-7"		A711	1	23'-0"	Longitudinal					EP402	16	4'-9"	S	-	2'-1"	0'-7"	2'-1"			-					End Post
A537	12	8'-6"		A712	1	23'-3"						EP403	16	4'-9"	H	0'-4 1/2"	1'-0"	1'-0"	1'-0"	1'-0"			0'-4 1/2"				
A538	3	8'-6"	Backwall - Horiz.	A713	1	23'-6"						EP404	16	3'-1"	S	-	1'-3"	0'-7"	1'-3"			-					
A539	3	9'-2"	Backwall - Horiz.	A714	1	23'-9"																					
				A715	1	23'-11"						EP501	16	5'-3"	V				3'-0"	2'-3"			0'-4"				
				A716	1	24'-2"						EP502	12	6'-7"	S	-	2'-9"	0'-7"	2'-9"			0'-6"					
				A717	1	24'-5"						EP503	8	6'-6"	S	-	2'-9"	0'-6"	2'-9"			0'-6"					
A623	24	12'-3"	Wing - Vert.	A718	1	24'-8"						EP504	4	8'-1"	H	0'-5 1/2"	2'-9"	0'-10"	2'-9"	0'-10"			0'-5 1/2"				
				A719	1	24'-11"																					
A725	29	4'-11"	Dowels - Breastwall	A720	1	25'-1"																					

FWWA REV. NO.	STATE MAINE	PROJECT NUMBER 95-9(102)	SHEET NO. 22	TOTAL SHEETS 35
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TYPE-BENDING DIAGRAMS

All dimensions are out to out of reinf. bar
 Bending details and hooks shall conform to the recommendations of ACI Standard 315-63.
 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.

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION

**AIRPORT ROAD BRIDGE
 OVER
 INTERSTATE 95
 IN THE TOWN OF
 HOULTON
 AROOSTOOK COUNTY**

REINFORCING STEEL SCHEDULE
 SHEET 22 OF 35 AUGUSTA, MAINE 7/24/1993

R92-28

REINFORCING STEEL SCHEDULE																											
STRAIGHT BARS												BENT BARS															
MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	LOCATION	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
<u>ABUTMENT NO. 2</u>												<u>FOOTING - ABUTMENT NO. 2</u>															
B500	18	3'-11"	Wing - Vert.	B600	2	19'-6"	Longitudinal	5501	62	39'-9"	Longitudinal	B550	26	8'-0"	S	-	3'-6"	1'-0"	3'-6"								
B501	18	15'-0"	do	B601	2	19'-9"		5502	450	40'-6"	do	B551	4	13'-2"	V				5'-8"	7'-6"				6'-8 1/2"			Wing - Vert.
B502	14	8'-0"	do	B602	2	20'-0"		5503	65	9'-0"	do	B552	12	4'-8"	L	1'-0"	3'-8"										do
B503	22	4'-6"	Wing - Horiz.	B603	2	20'-3"						B553	5	9'-5"	R	0'-10"	1'-0"	3'-8"	0'-4"	3'-7"				0'-1"			Wing - Horiz.
B504	4	6'-8"	Wing - Vert.	B604	2	20'-5"		5505	4	44'-0"	Curb	B554	4	23'-8"	L	1'-0"	22'-8"										do
B505	4	7'-5"	do	B605	2	20'-8"						B555	2	8'-0"	L	1'-0"	7'-0"										do
B506	4	8'-4"	do	B606	2	20'-11"		5507	6	35'-6"	Curb	B556	4	23'-10"	L	1'-0"	22'-10"										do
B507	5	13'-2"	Wing - Horiz.	B607	2	21'-2"		5508	8	7'-0"	Curb	B557	5	9'-6"	Q	0'-10"	1'-0"	3'-8"	0'-4"	3'-8"				0'-1"			Curtain Wall
B508	1	15'-10"	do	B608	2	21'-4"						B558	30	12'-2"	N	5'-8"	0'-10"	5'-8"							0'-9"		Backwall
B509	4	18'-3"	do	B609	2	21'-7"	Longitudinal	5601	470	43'-5"	Transverse	B559	15	3'-7"	O	0'-10"	2'-9"								0'-2 1/4"		do
B510	2	17'-6"	do	B610	56	9'-3"	Transverse	5602	1	38'-6"	Haunch Abut #1	B560	7	5'-2"	O	0'-10"	4'-4"								0'-2 1/4"		Breastwall
B511	8	16'-6"	Wing - Vert.	B611	16	48'-11"	do	5603	15	41'-11"	Haunches	B561	30	14'-3"	T	5'-6"	8'-9"								2'-3"		do
B512	2	15'-7"	Wing - Horiz.	B612	60	7'-2"	Transverse					B562	15	3'-7"	V				2'-9"	0'-10"					0'-9 3/4"		do
B513	2	16'-4"	do	B613	2	20'-1"	Longitudinal					B563	7	5'-2"	V				4'-4"	0'-10"					0'-9 3/4"		do
B514	1	16'-10"	do	B614	2	19'-11"		5700	59	31'-0"	Longitudinal																
B515	1	20'-0"	do	B615	2	19'-8"		5701	59	60'-0"	Longitudinal																
B516	5	13'-10"	Wing - Horiz.	B616	2	19'-5"																					
B517	1	16'-8"		B617	2	19'-2"																					
B518	4	18'-10"		B618	2	19'-0"																					

TYPE-BENDING DIAGMS

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

1. 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
2. Letter of Marks A, P, & S locates bars of Abutments, Piers, and Superstructure parts respectively.

R92-29

NOTE: At the location of bearing seats the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are on the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 6" and min. slope of 1/8 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

A.S.T.M. STEEL CLASSIFICATION

1. Charpy V-Notch tests are not required for steel used in bearing pedestals.
2. When structural steel is specified to be unpainted, all steel including anchor bolts shall be A588 unpainted.
3. When structural steel is specified to be painted, all steel including anchor bolts shall be A36.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 101 - 81)

BEARING PEDESTALS

R92-31

REVISIONS

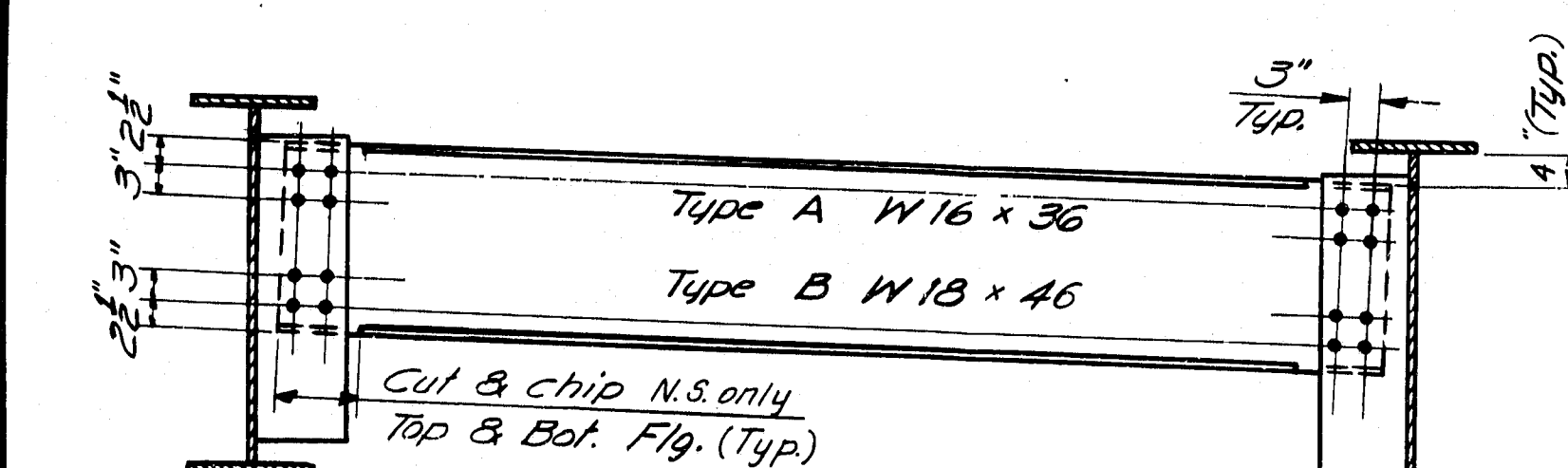
DATE _____

SHEET 25 OF 35 AUGUSTA, MAINE JUNE 196

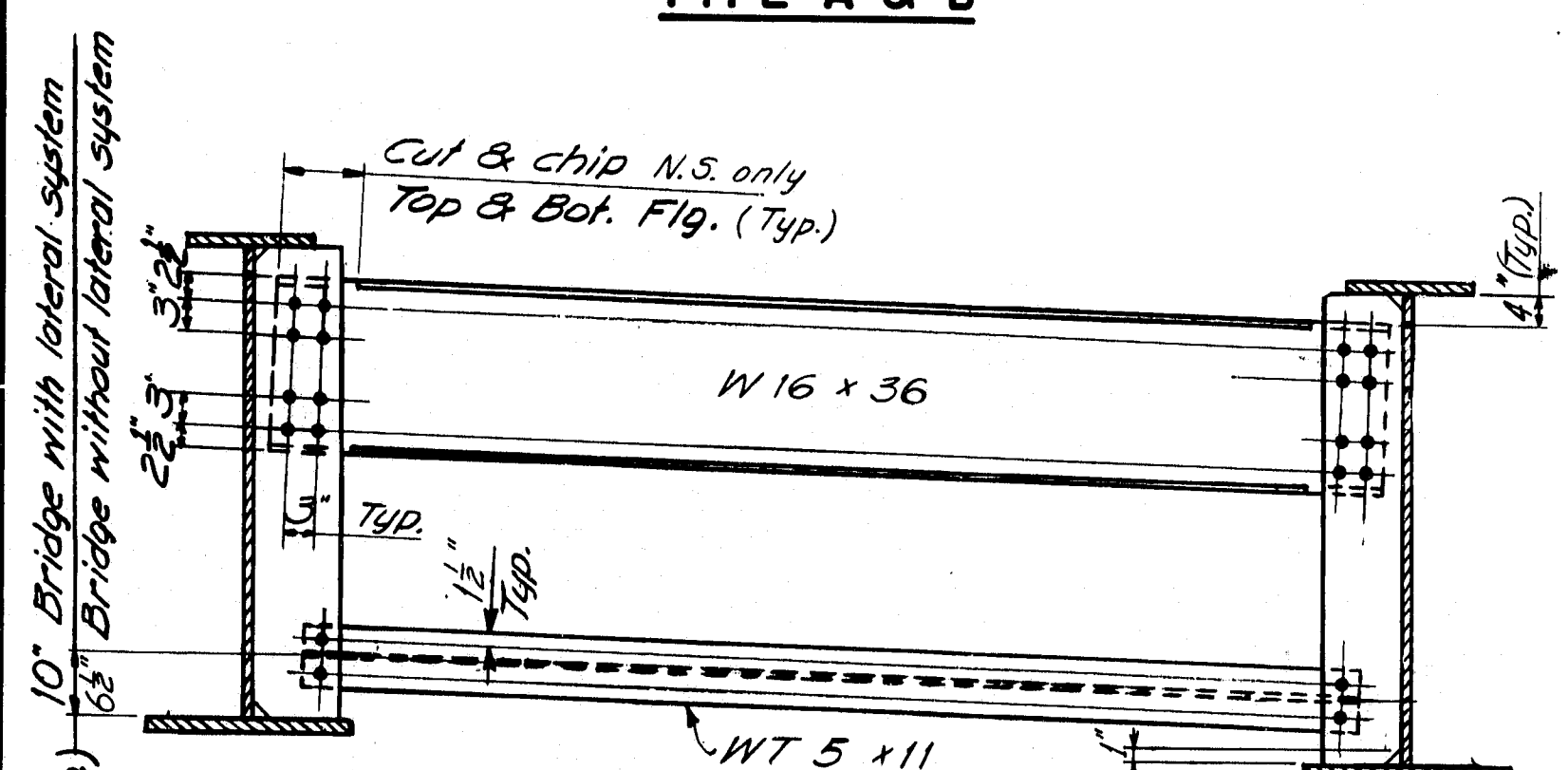
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-9(102)	26	35

FABRICATION NOTES

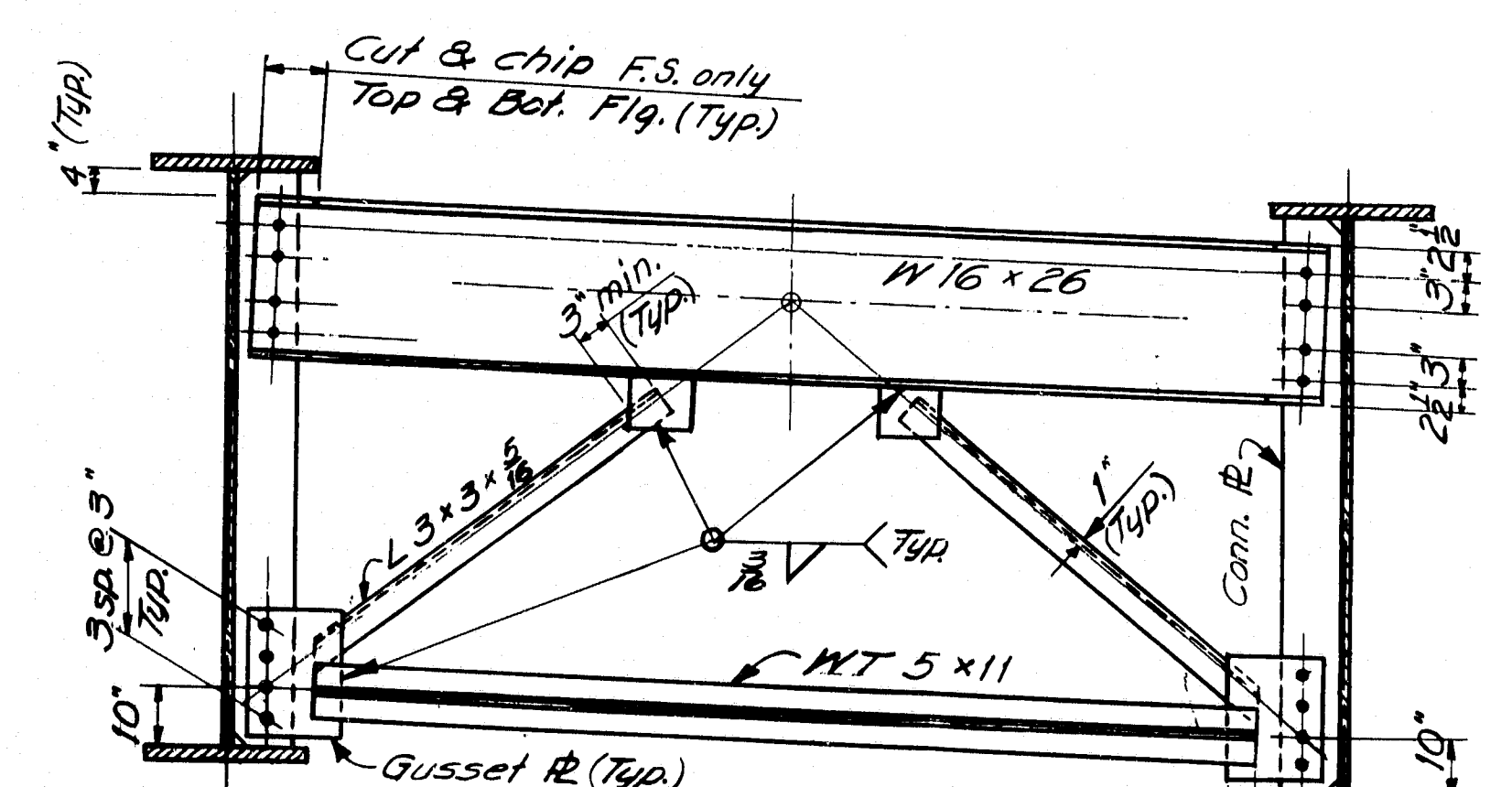
- 1.) All bolts shall be 7/8" H.S. Bolts. Hole sizes for bolts shall conform to Section 504.23 of the Standard Specifications, and edge-distances shall be 1 1/2" min. unless otherwise shown.
- 2.) Connection Plates and gusset plates shall have a minimum thickness of 3/8" and shall have sufficient width to provide erection clearances. For bearing stiffeners or intermediate stiffeners and for bent connection plates the plate size will be given on the design drawings.
- 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. 1.7.21, unless otherwise shown on design drawings.
- 4.) Connection Plates shall be 3/4" 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 1/16" except if the design drawings 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 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 1/16" at the tension flange.
- 11.) Use only those items called for on the design drawings. In case of conflict between these standard details and design drawings, the design drawings 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 3/4", except as indicated by note 14.
- 14.) Bearing stiffeners at end bearings shall be clipped 1/2" at top and bottom. Bearing stiffeners at all other bearings shall be clipped 1/2" at the compression flange.
- 15.) For unpainted applications all steel for diaphragms and crossframes shall be A.S.T.M. A588. 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.



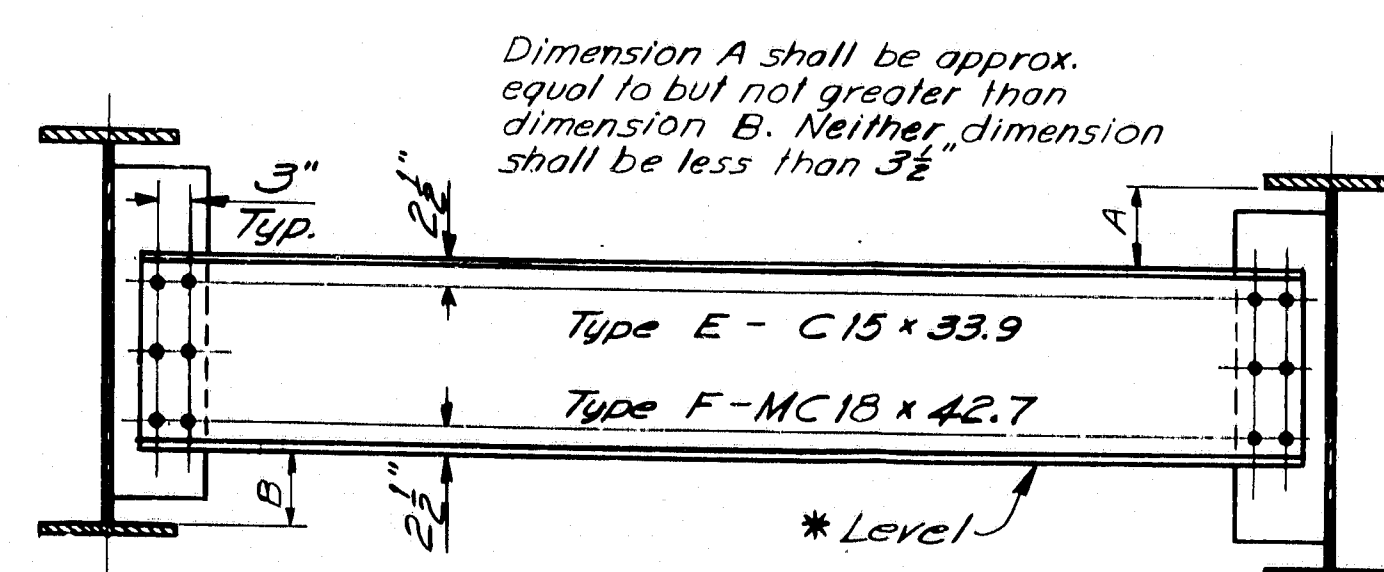
TYPE A & B



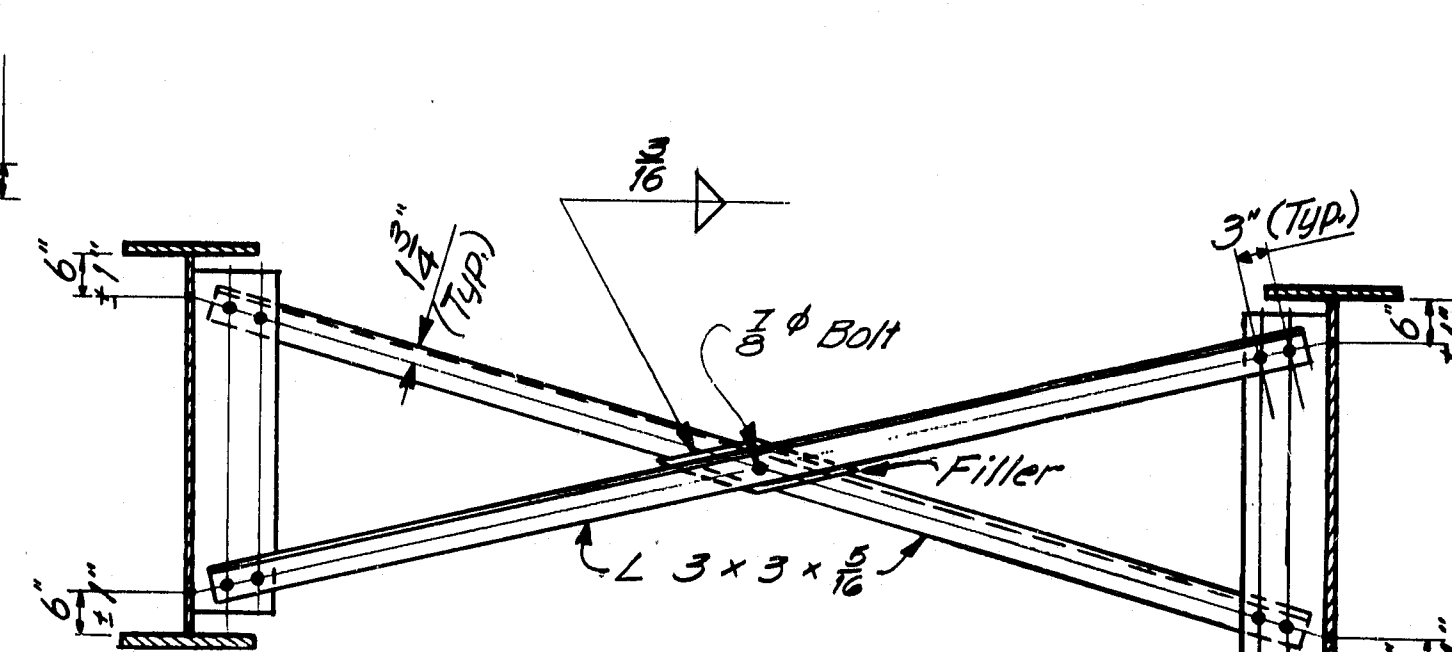
TYPE C



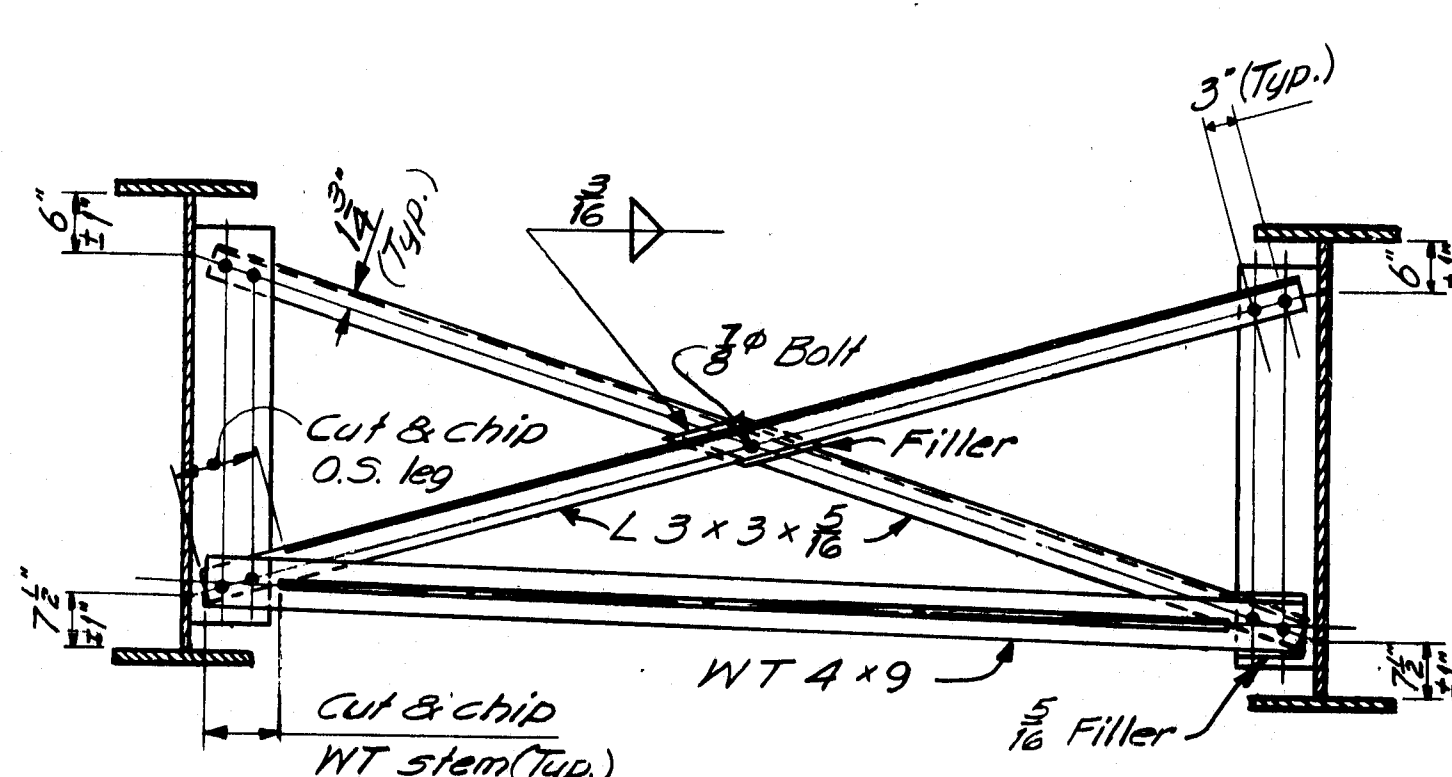
TYPE D



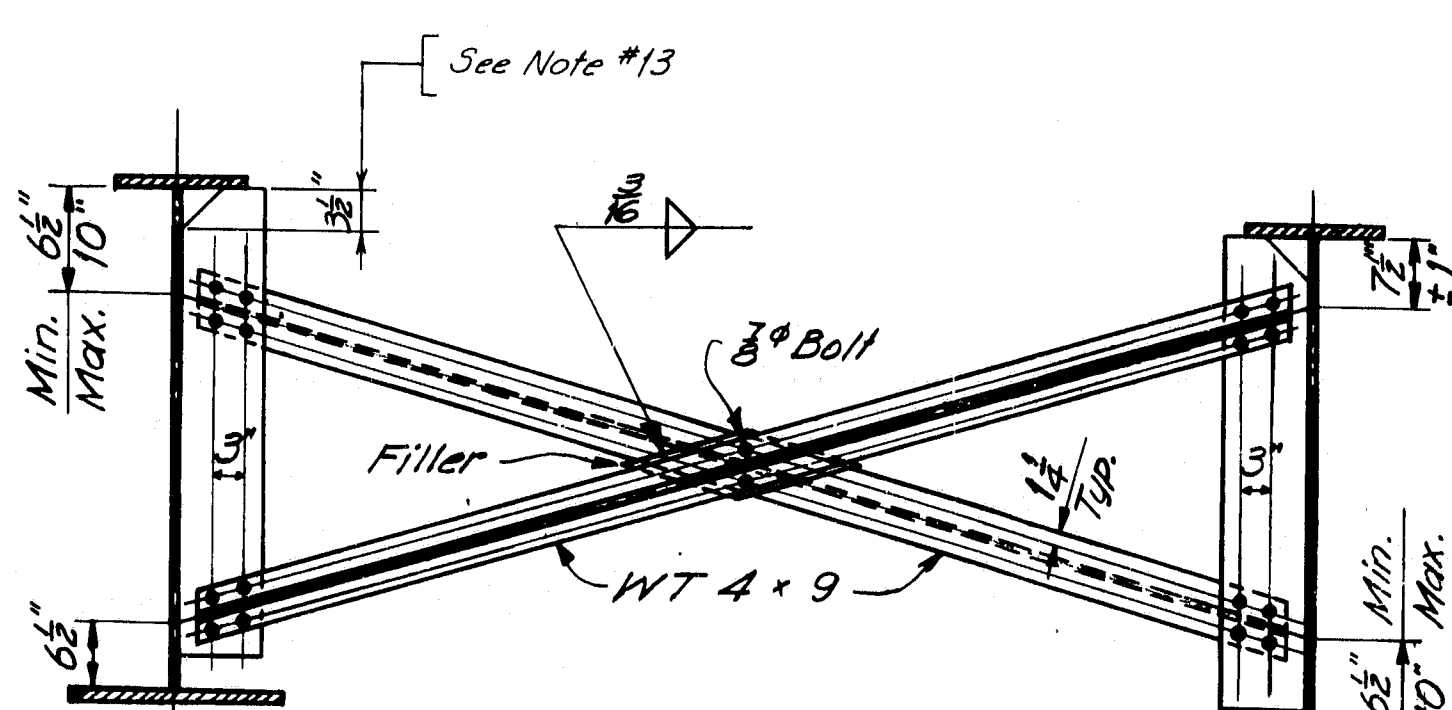
TYPE E & F



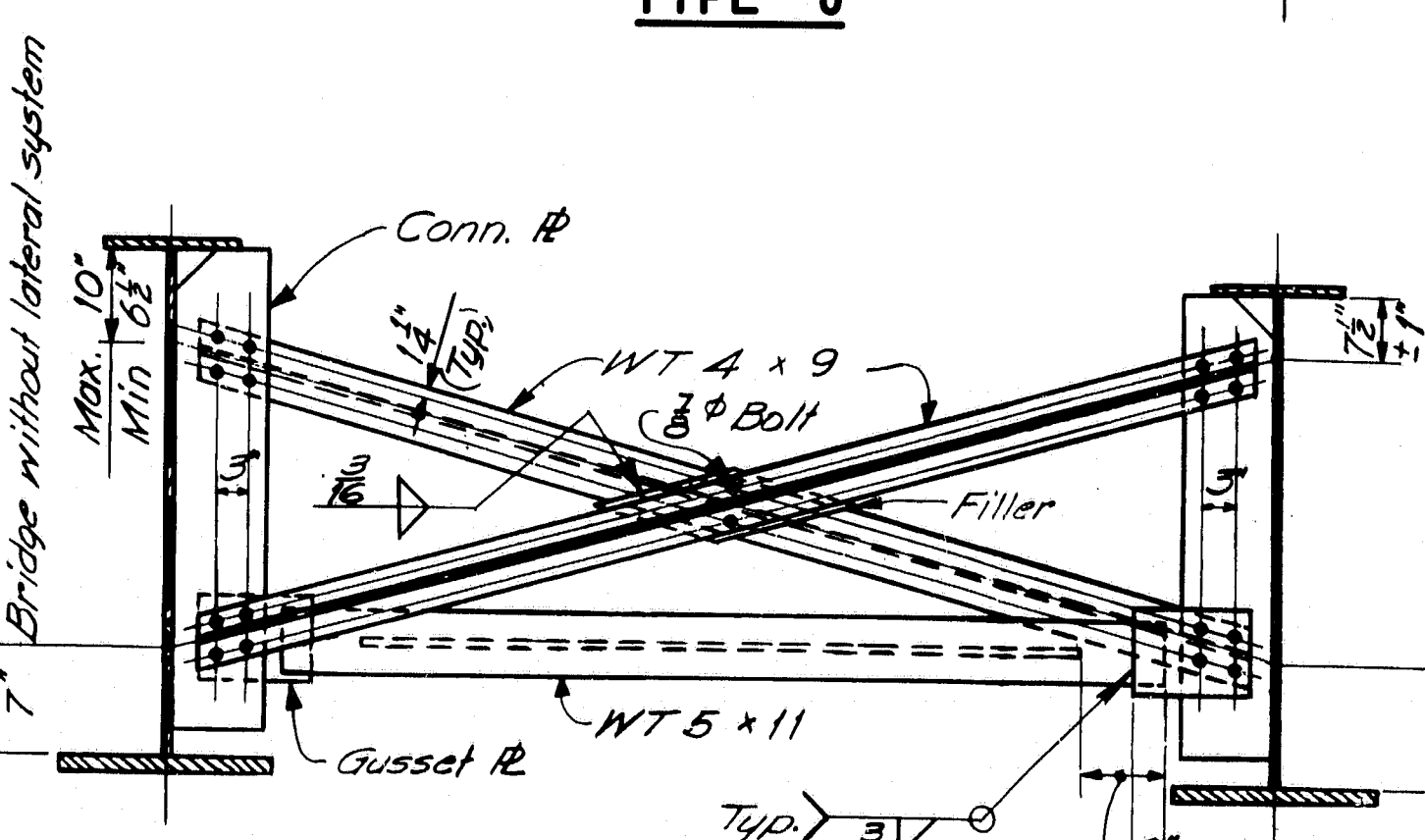
TYPE G



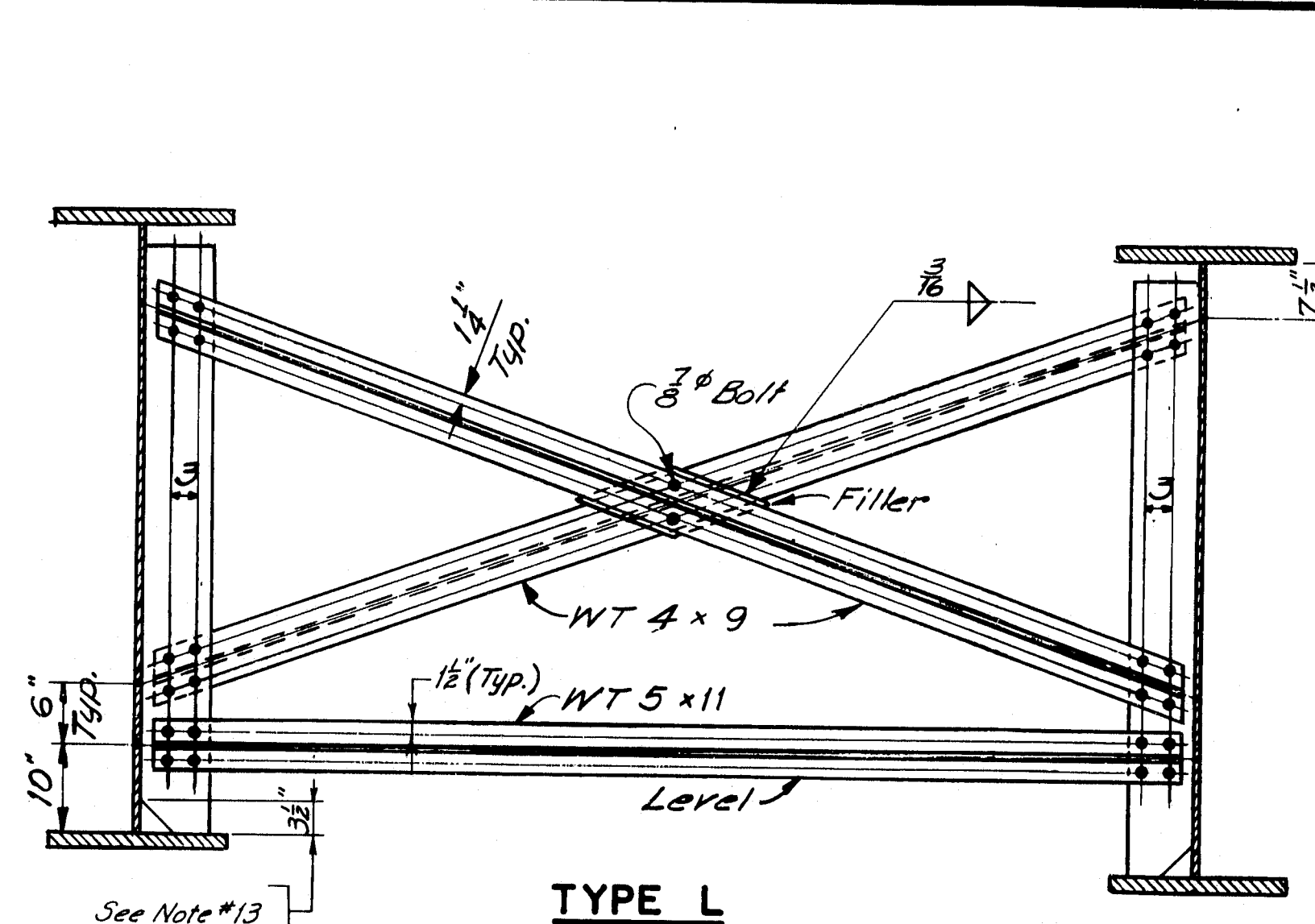
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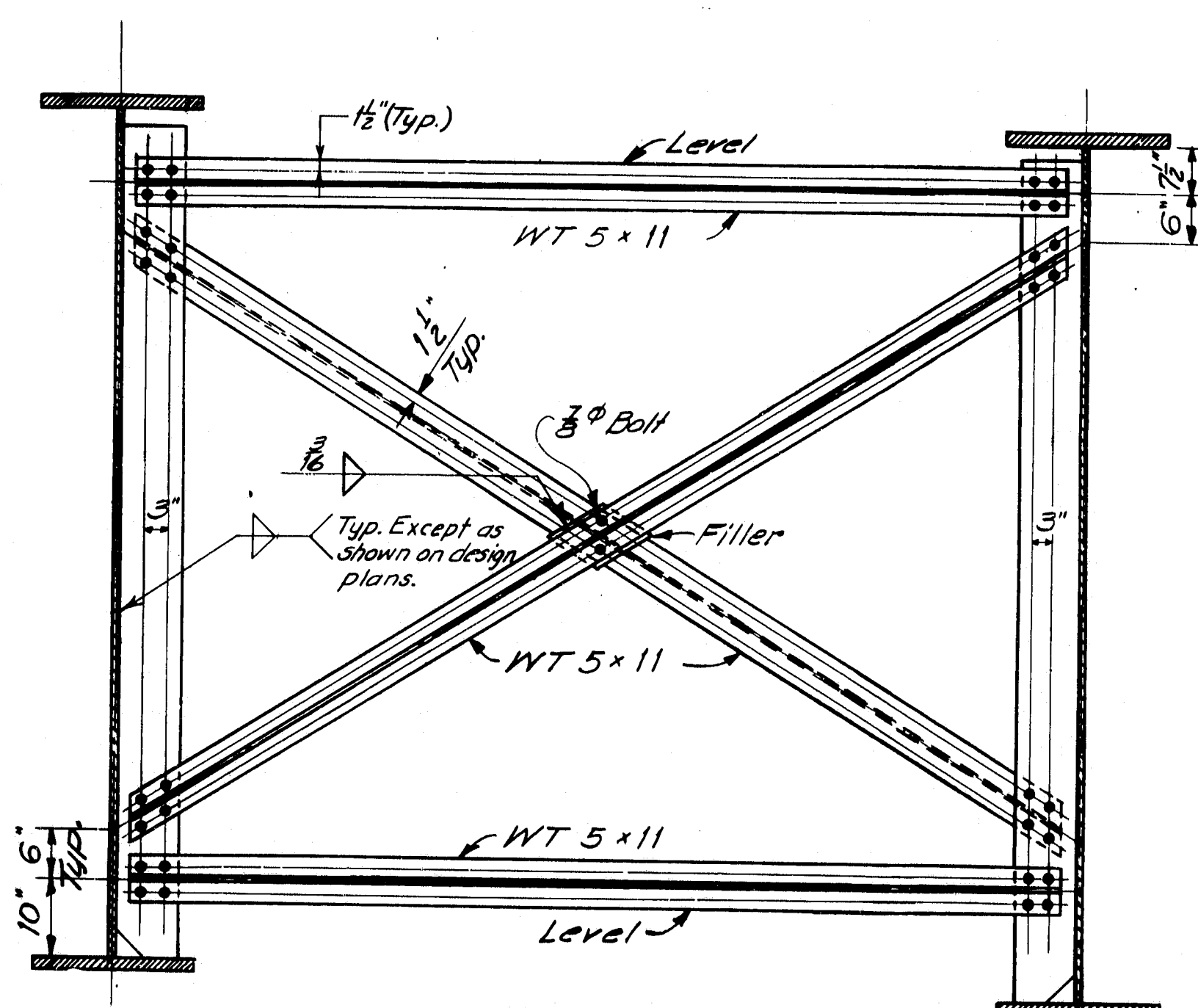
TYPE J



TYPE K



TYPE L



TYPE M

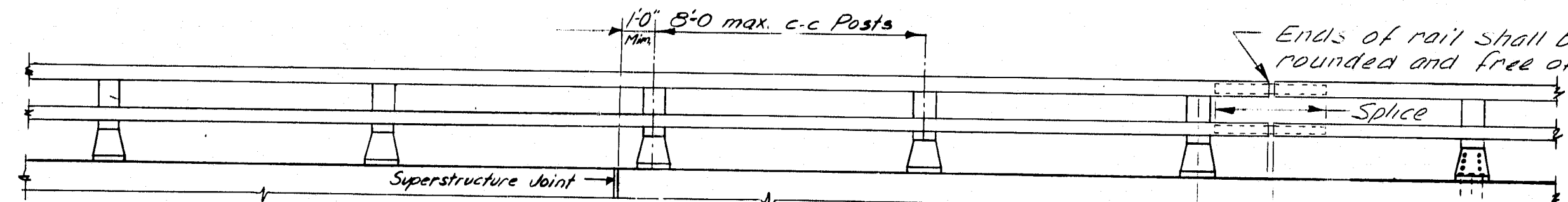
R92-32

REVISIONS	DATE
Revised Notes 2, 3, 7, & 11	1-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS
(BD 113-81)
DIAPHRAGMS & CROSSFRAMES

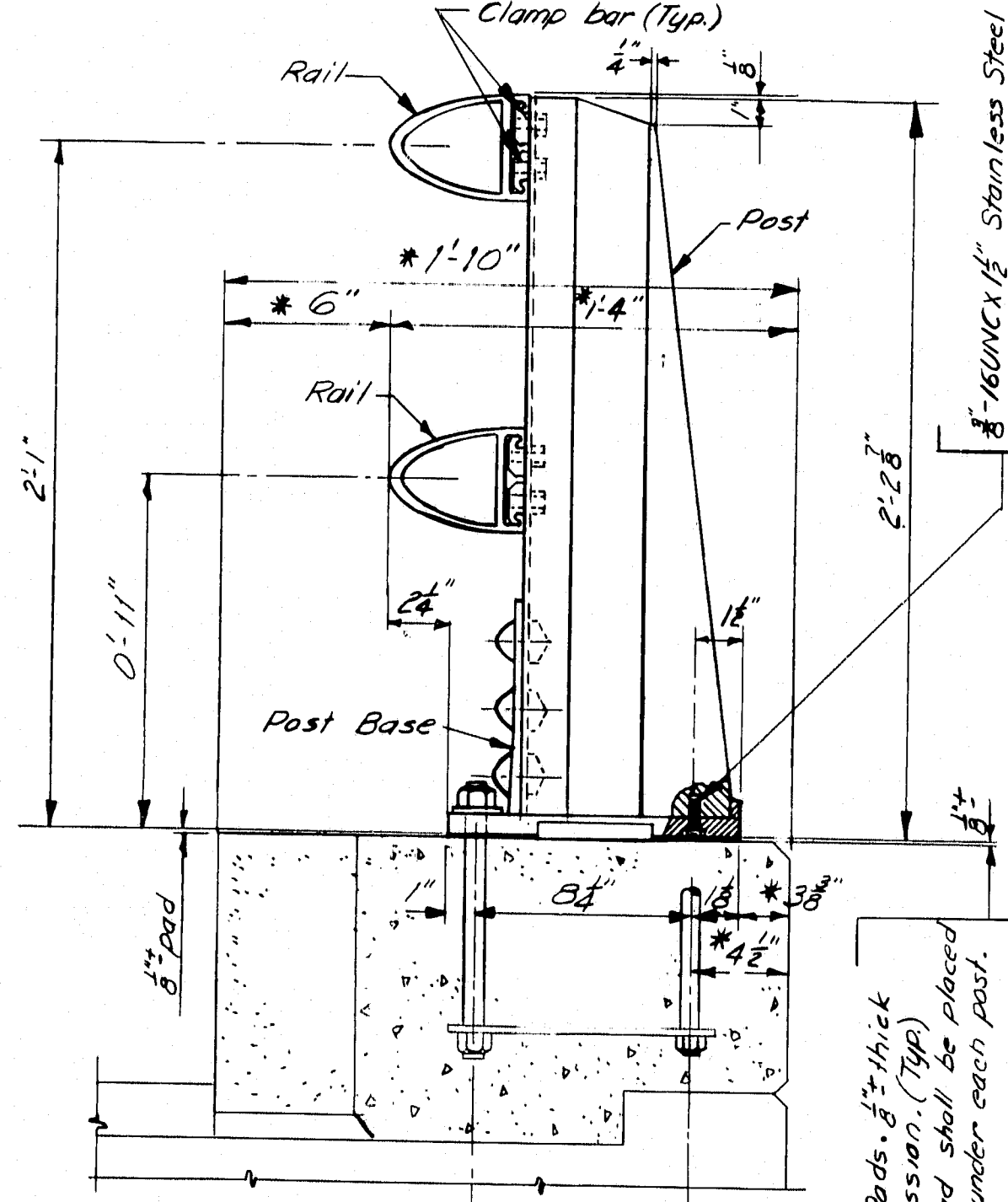
SHEET 26 OF 35 AUGUSTA, MAINE JUNE 1981

DESIGN NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9 (102)	27	35



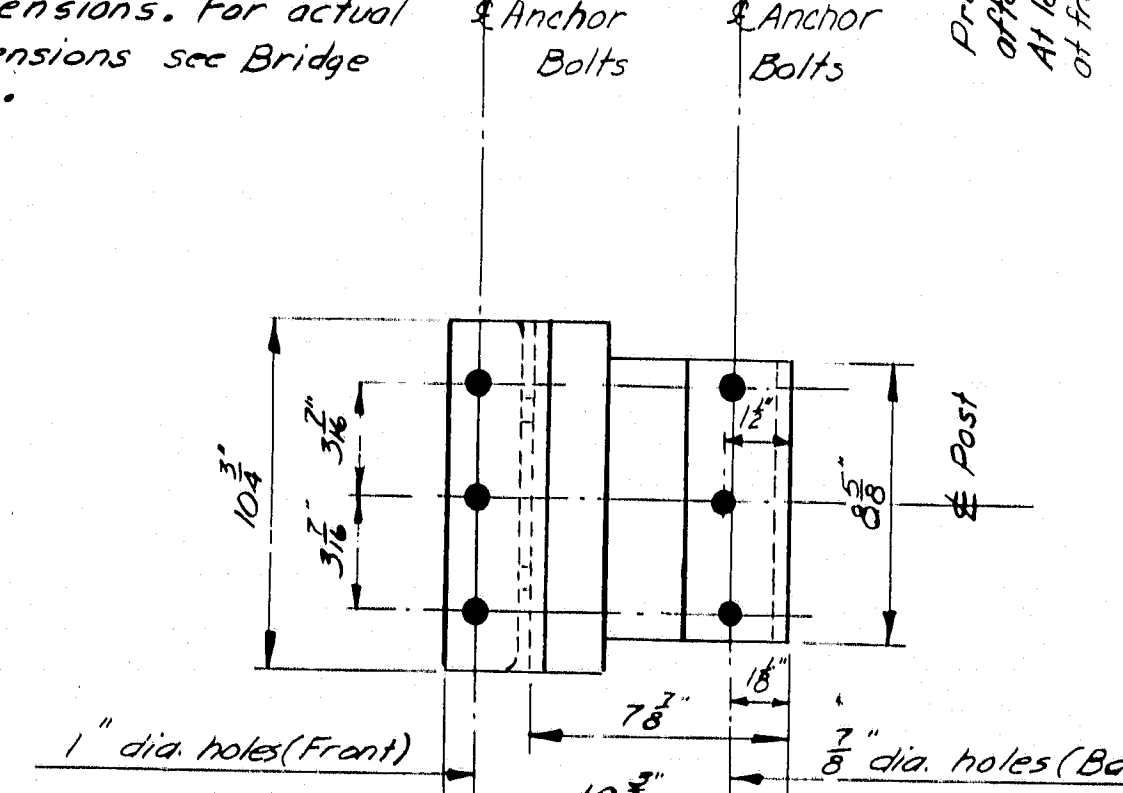
RAILING - ELEVATION

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.

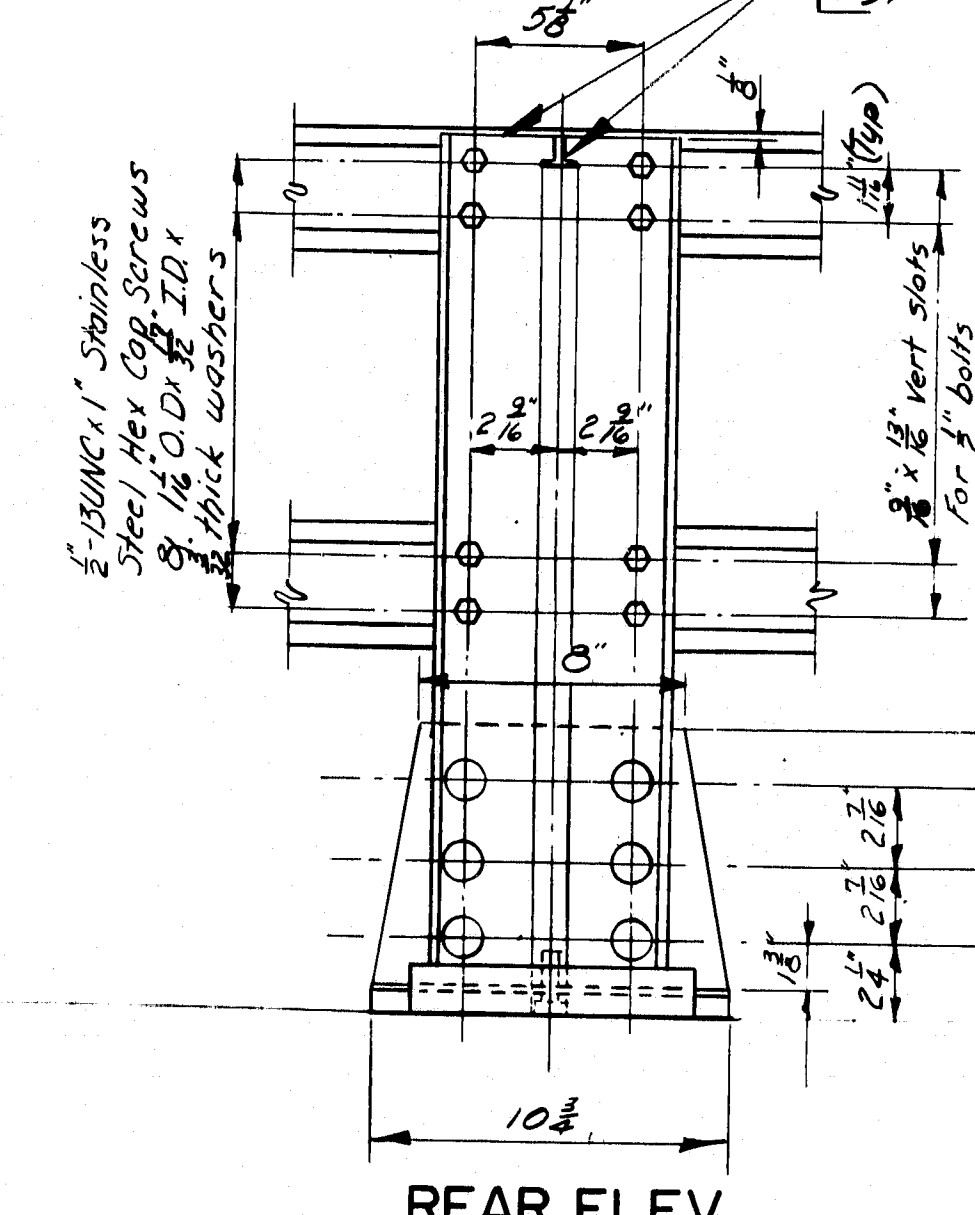


BRIDGE RAILING (Assembly)

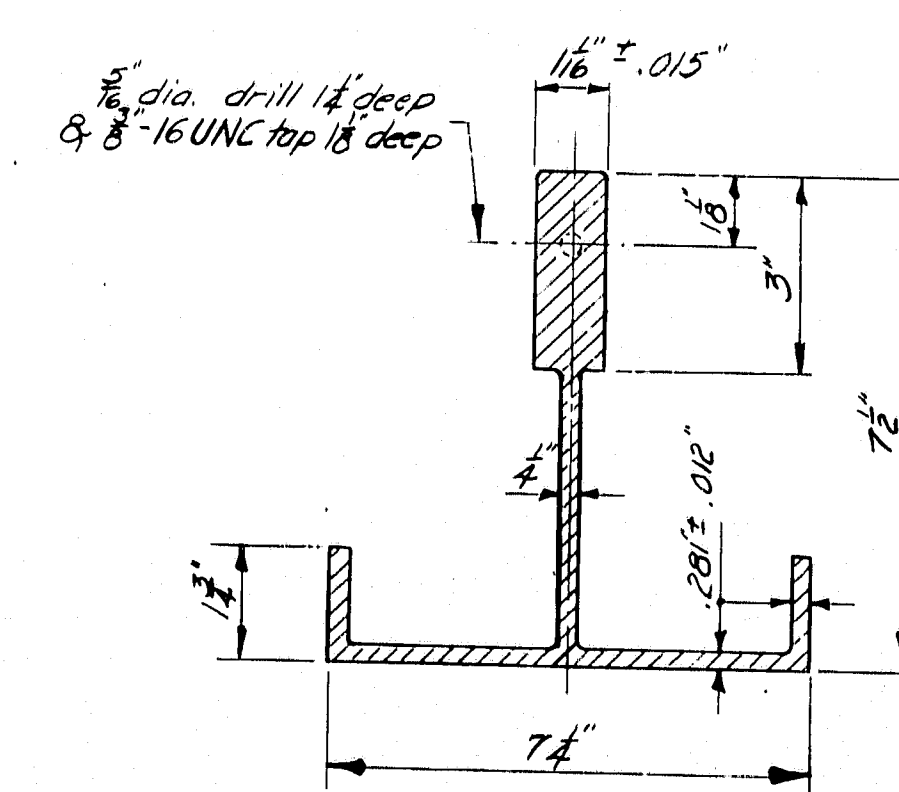
* Preferable minimum dimensions. For actual dimensions see Bridge Plan.



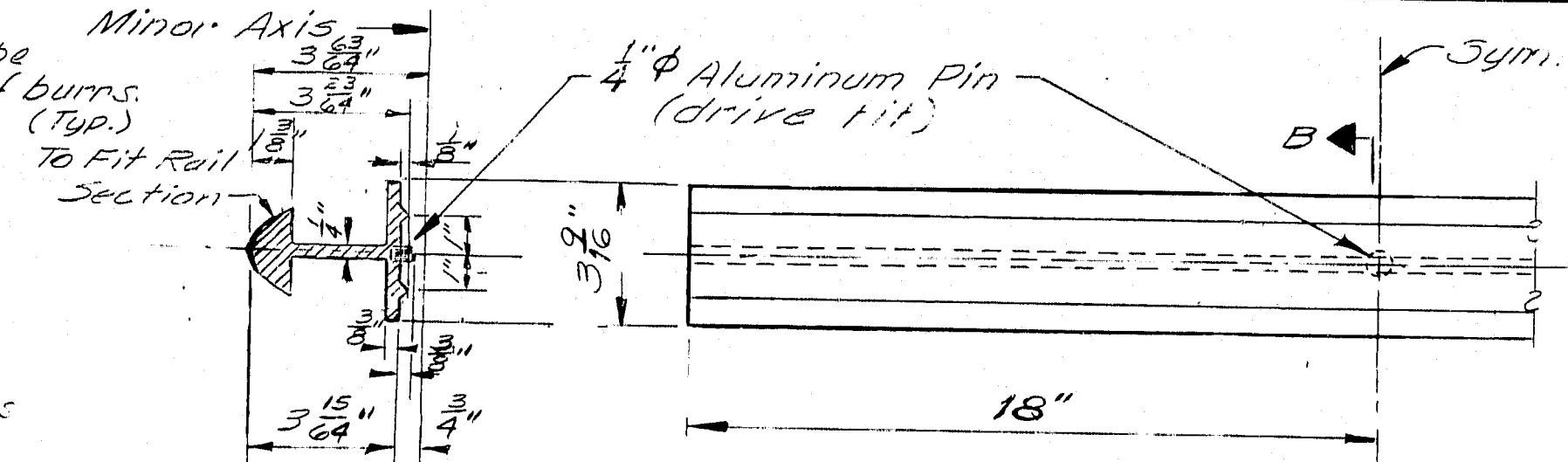
POST BASE (Bottom View)



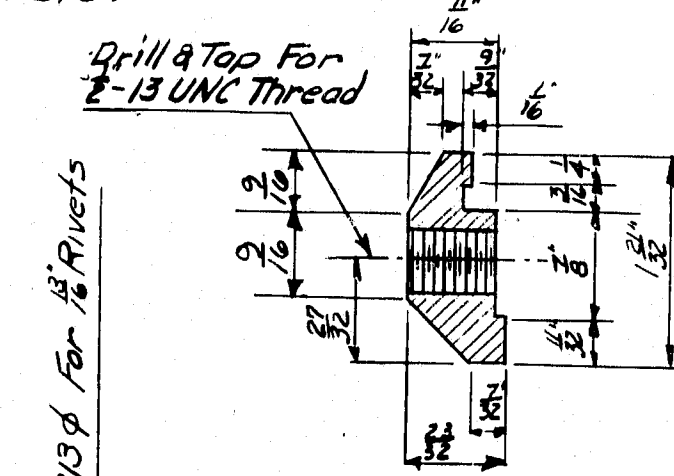
REAR ELEV.



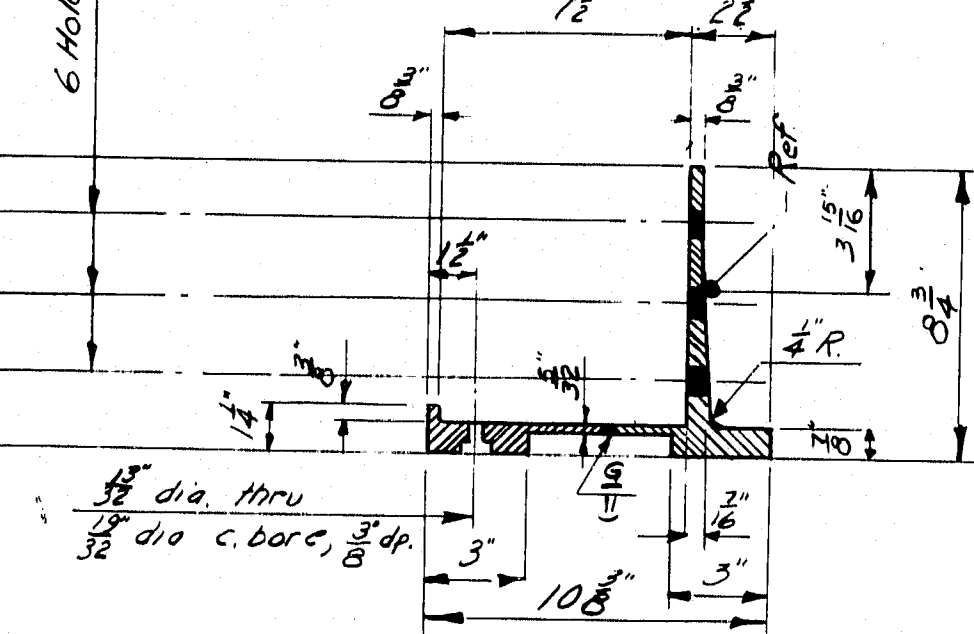
POST SECTION



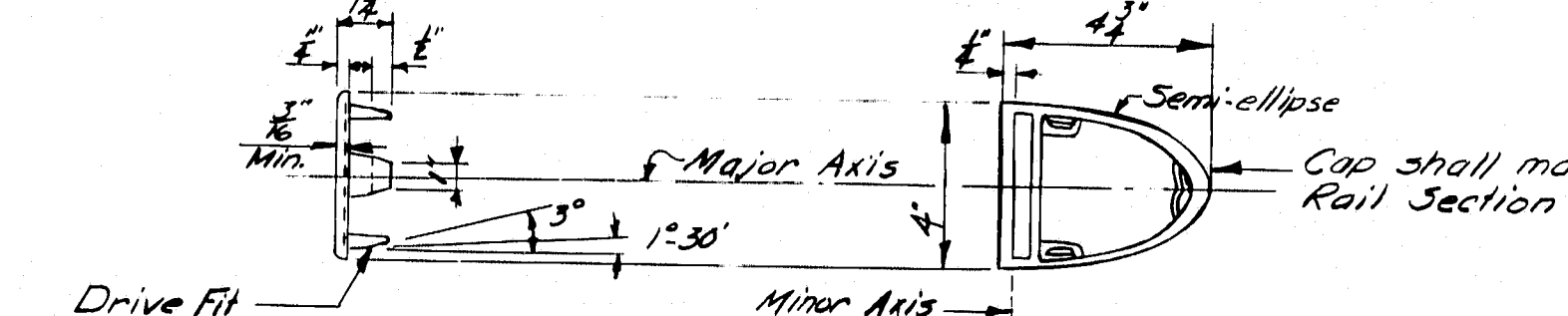
SECTION B-B



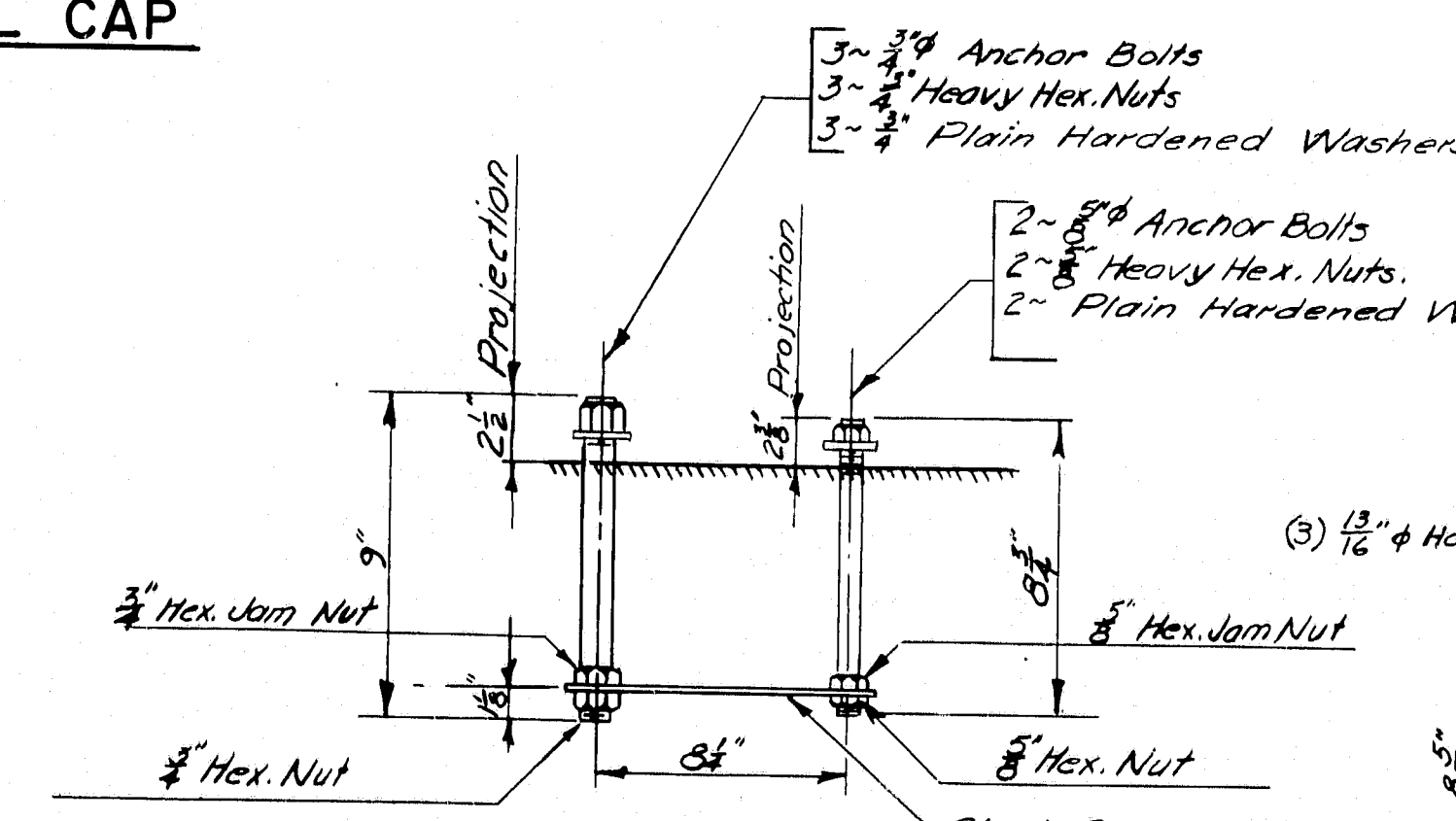
SECTION A-A



POST BASE SECTION



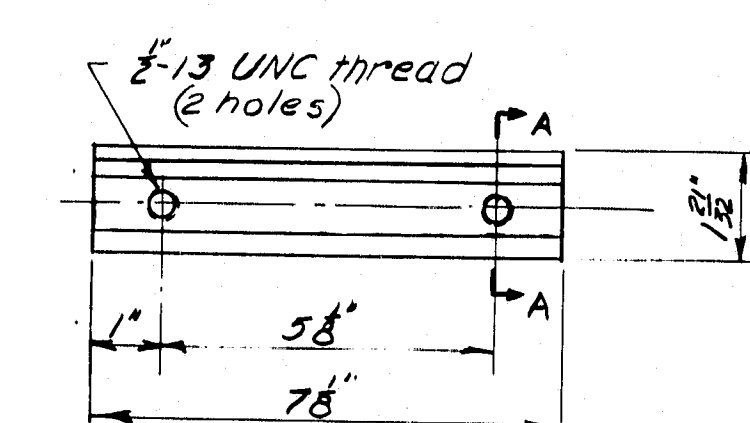
RAIL CAP



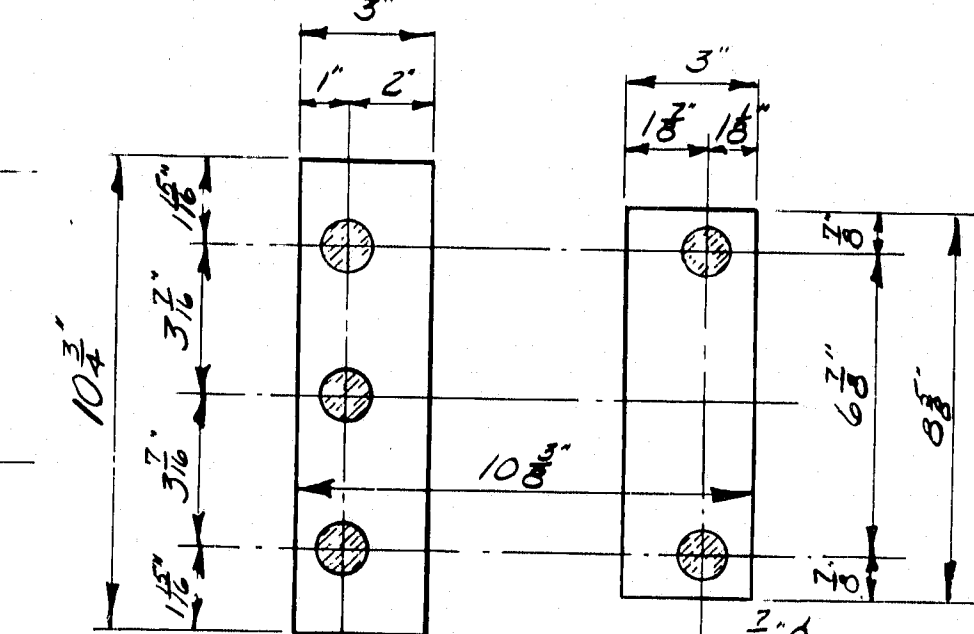
RAIL POST ANCHORAGE (Assembly)

R92-33

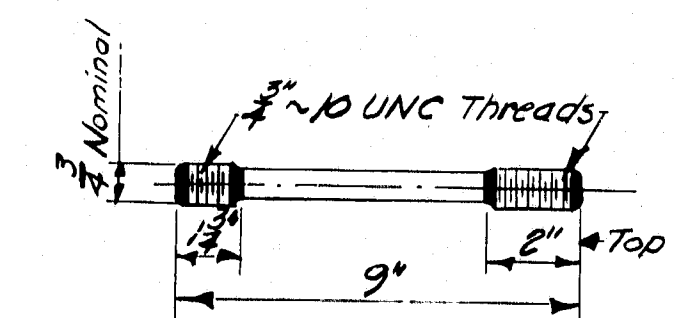
Alternate splice bars may be substituted if approved by the Engineer



CLAMP BAR

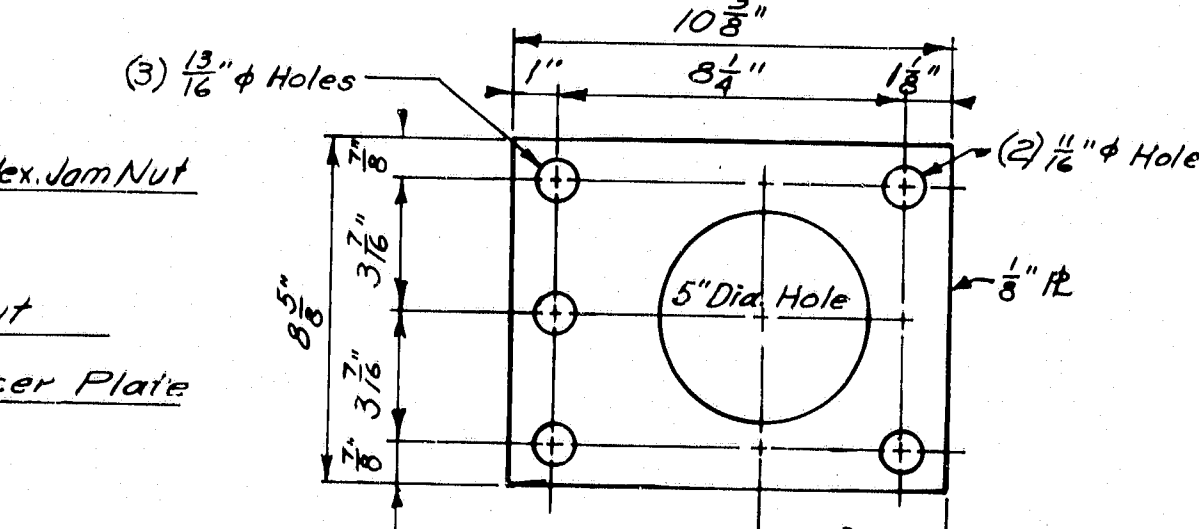


PREFORMED PADS

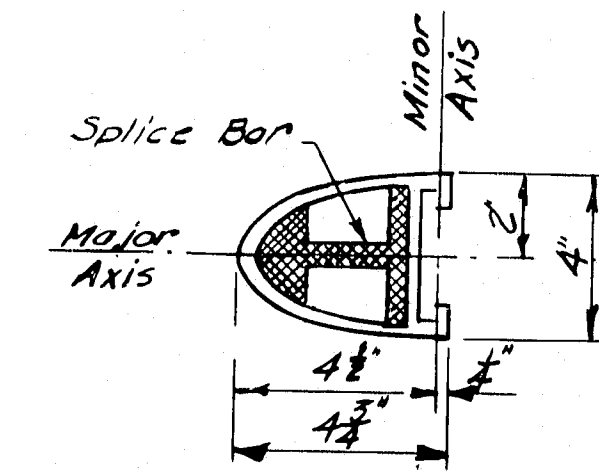


ANCHOR BOLTS

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 pitch diameter of the threads.

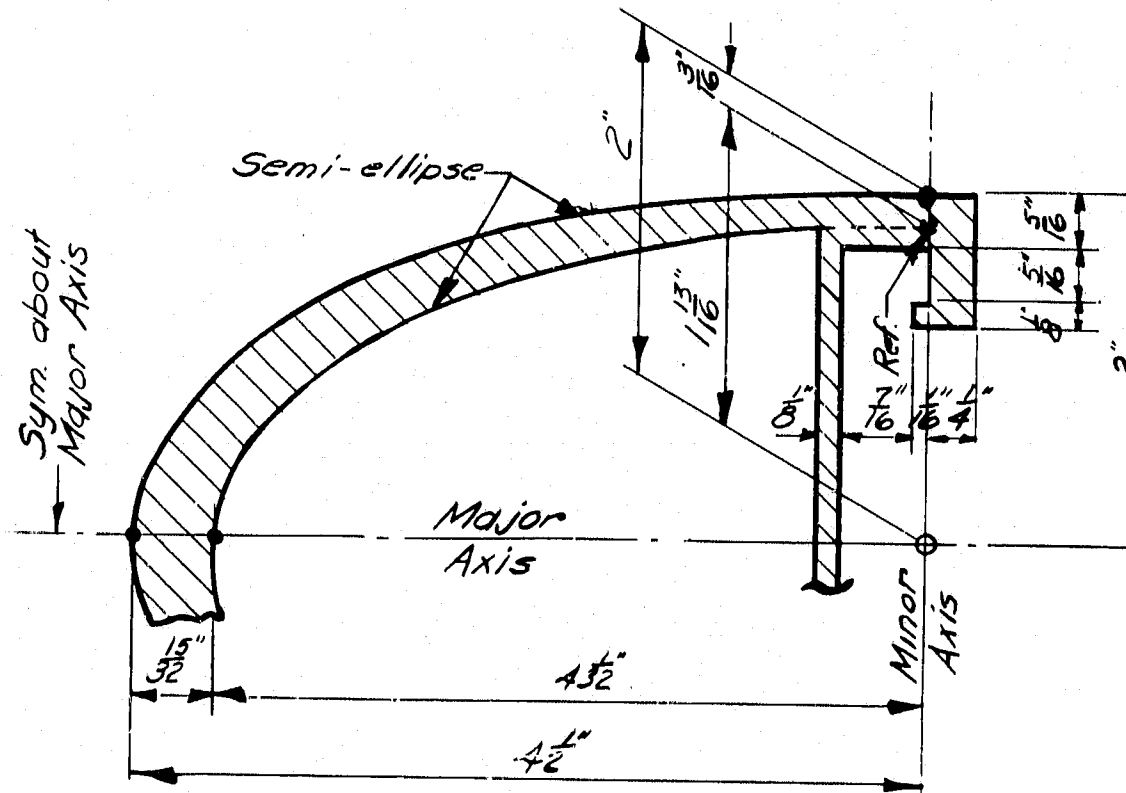


STEEL SPACER PLATE (For Anchorage)



RAIL SECTION

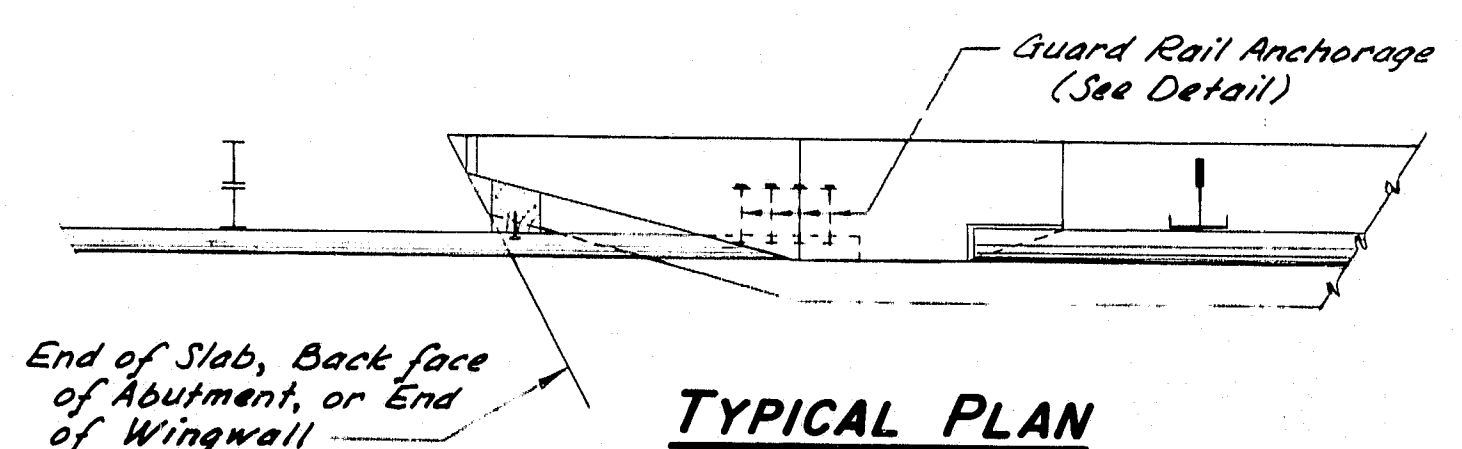
See "Rail Detail"



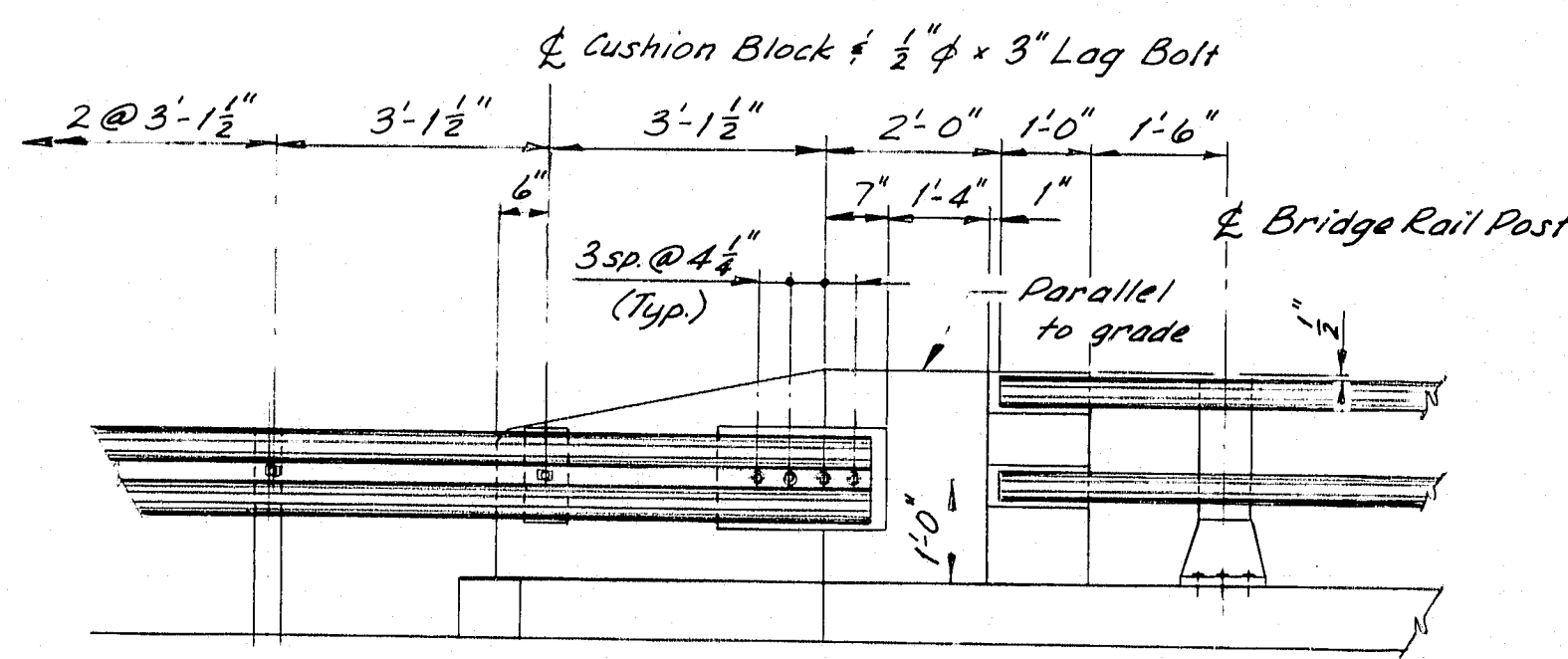
RAIL DETAIL

REVISIONS	DATE
STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
STANDARD DETAILS (BD 114 - 81) ALUMINUM BRIDGE RAILING 2 - BAR (SEMI-ELLIPSE)	
SHEET 27 OF 35 AUGUSTA, MAINE	JUNE 1981

FWA	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	95-9(102)	28	35

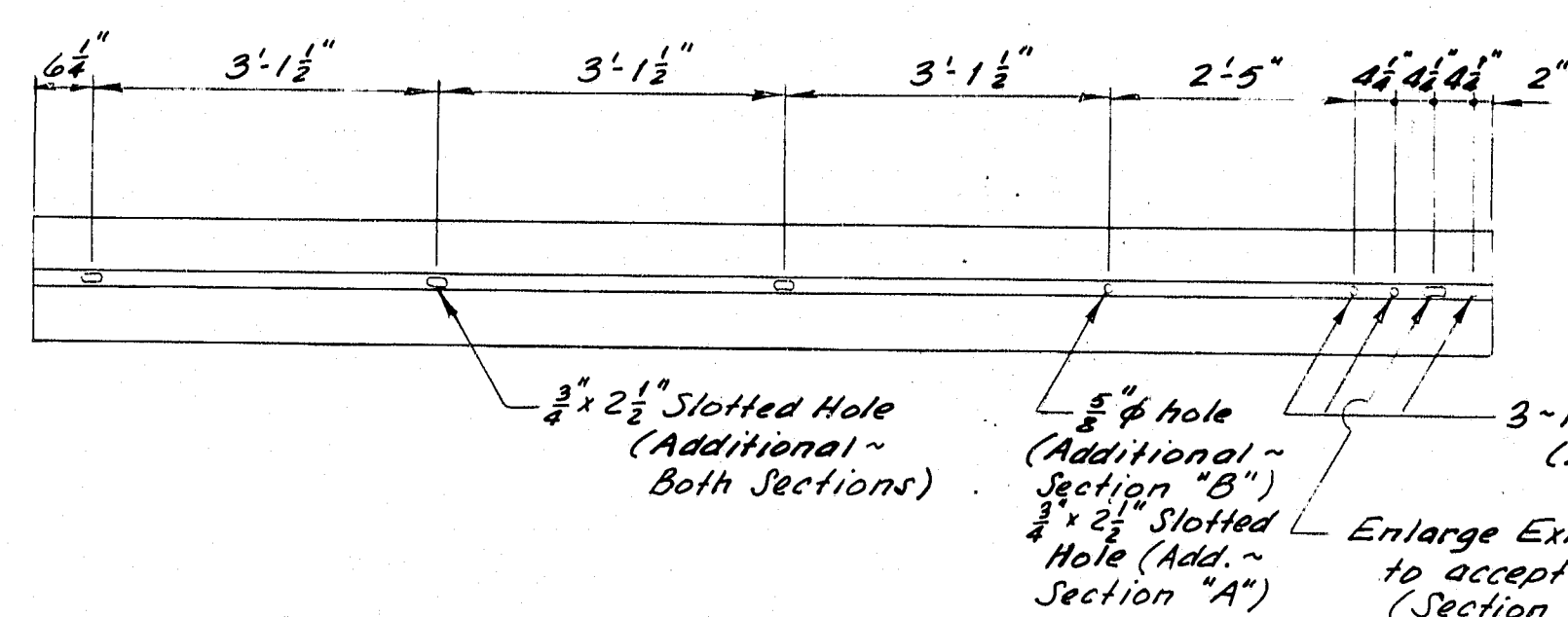


TYPICAL PLAN

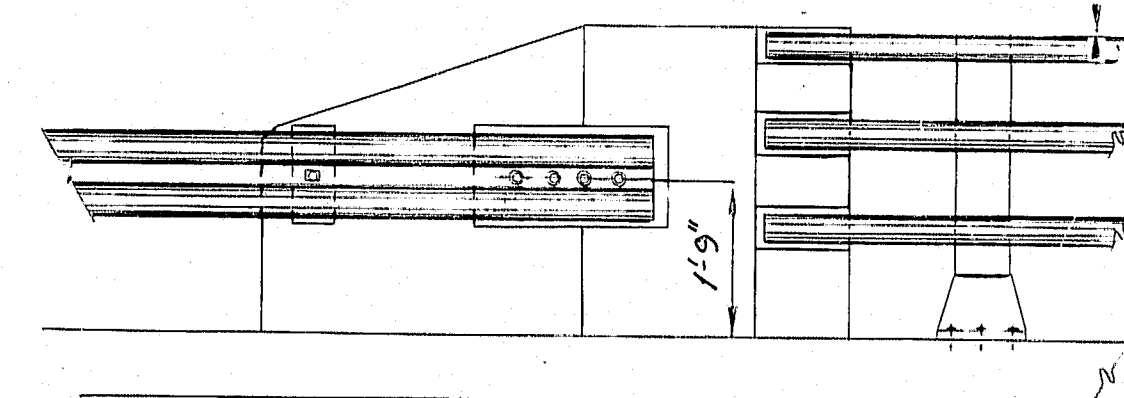


ELEVATION

2-Bar Bridge Rail (Aluminum or Steel)

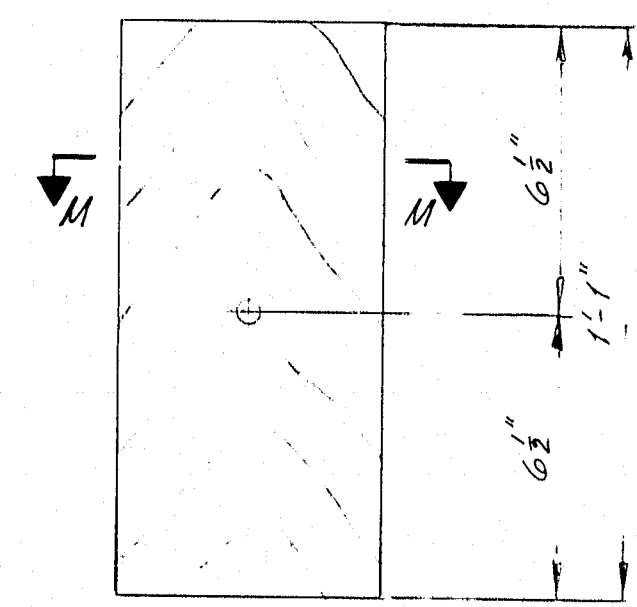


MODIFIED GUARD RAIL SECTIONS
(See Note #6)

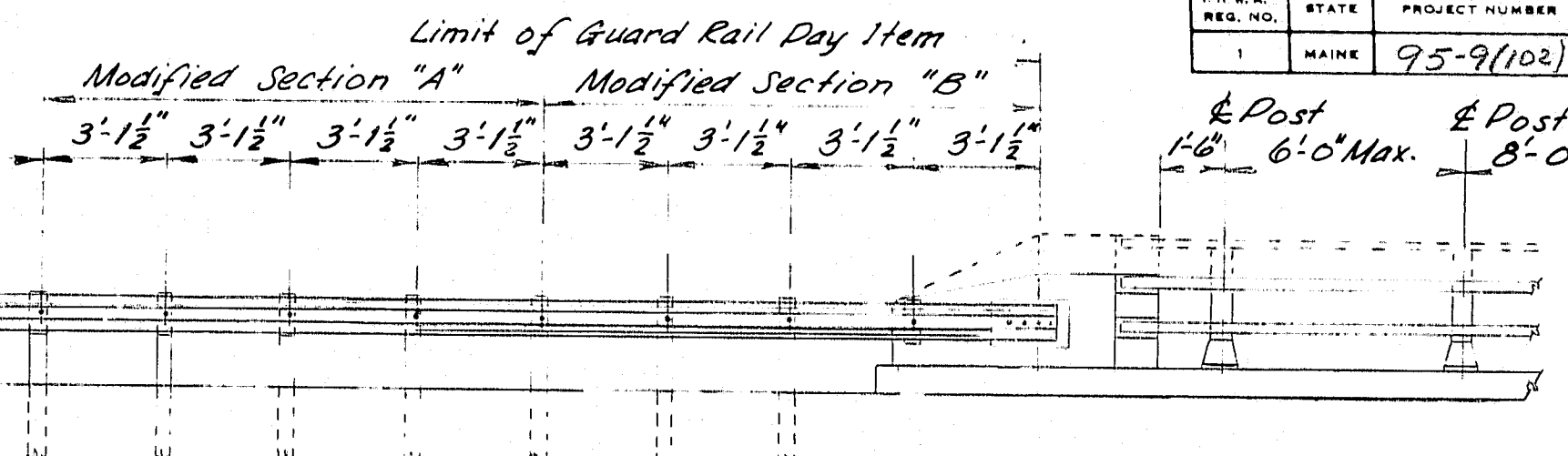


ELEVATION

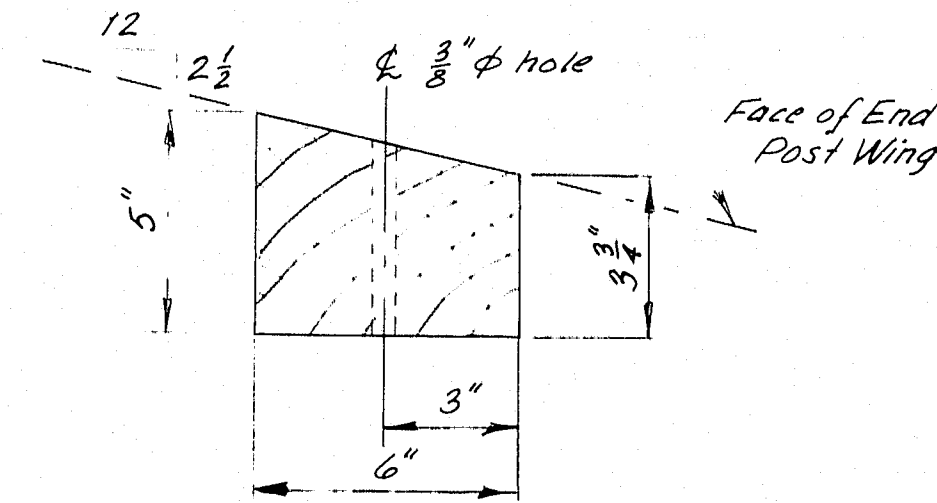
3-Bar Bridge Rail (Aluminum or Steel)



CUSHION BLOCK
(See Note #7)



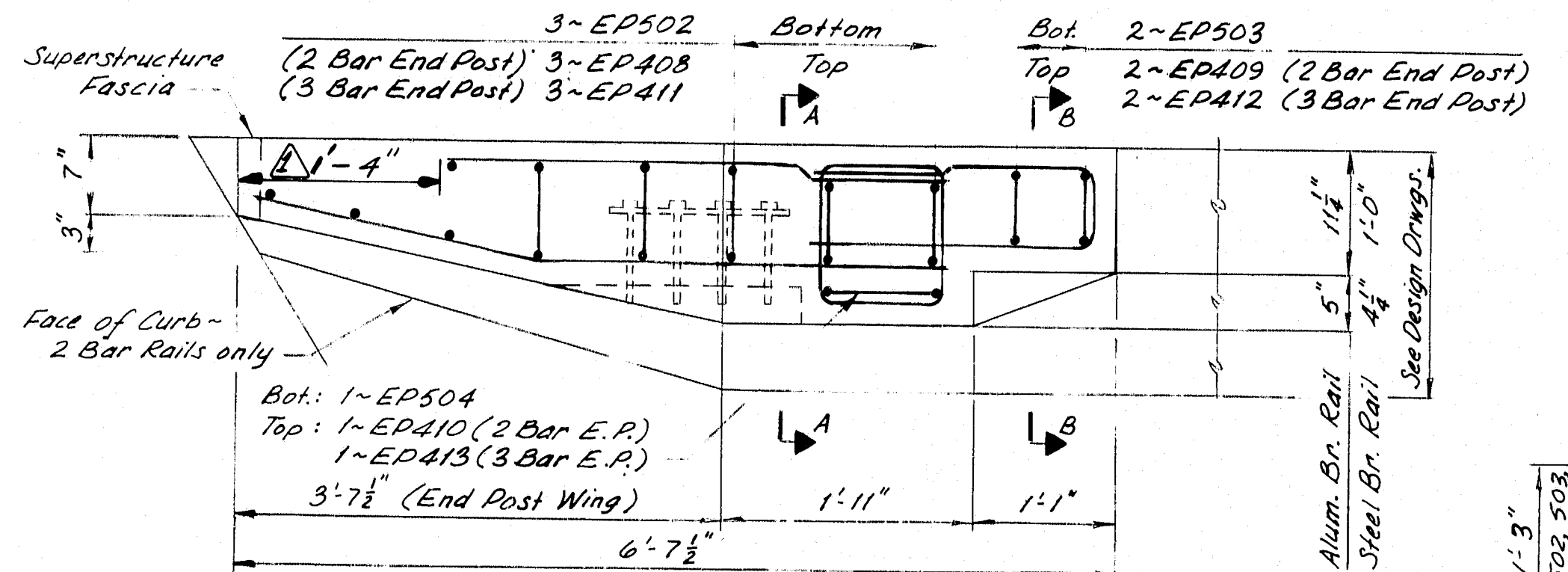
RAILING - ELEVATION



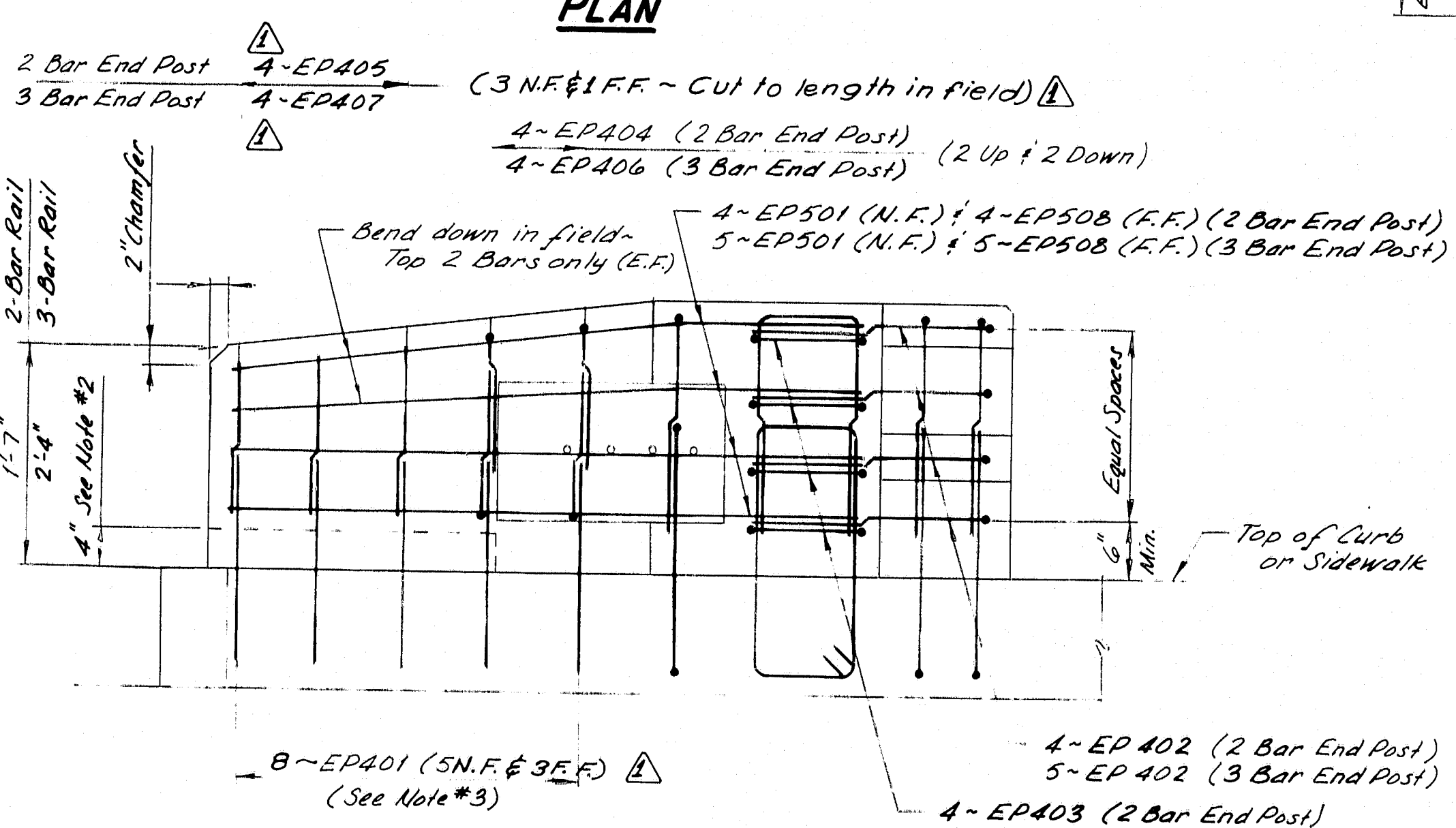
SECTION M-M

NOTES

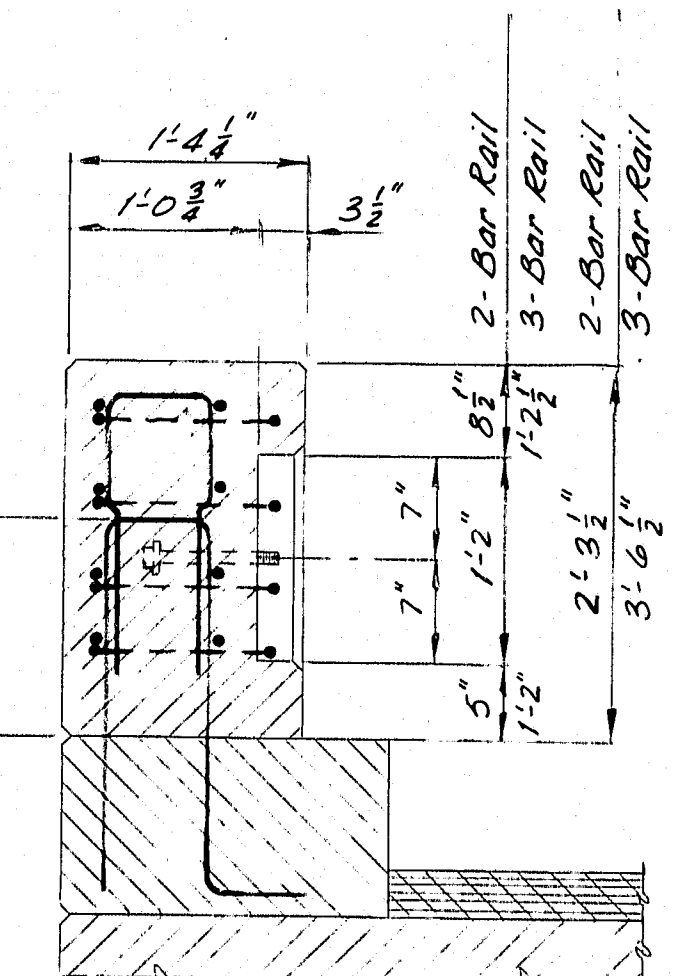
- For locations of End Posts on the structure, see Design Drawings.
- At times, an End Post Wing may be cantilevered for all or part of its length. For details, see Design Drawings.
- If an End Post Wing is cantilevered, bars EP401 to be omitted as needed.
- When End Post Wing is cantilevered more than 2'-0", all #5 bars shall be replaced by #7 bars.
- Nuts for $\frac{3}{4}$ " anchor bolts shall be incidental to Guard Rail Pay Item. Nuts shall conform to ASTM A363, Grade DH, galvanized in accordance with ASTM A153, or Grade C3, plain.
- Additional holes in the Modified Guard Rail Sections may be made by drilling, punching, or any other method that produces a neat, clean hole of the required size. Burning of holes will not be allowed.
- Cushion Block material shall be as specified for Wood Posts in Subsection 710.07 (a). Payment for Cushion Blocks and Lag Bolts shall be incidental to the Guard Rail Pay Item.
- Reinforcing Steel shall have 2" min. concrete cover.
- After installation of Guard Rail is complete, upset the thread on the anchor bolts in three places around each bolt, at the junction of the nut and the exposed thread, with a center punch or similar tool.
- Guard Rail Anchorage shall be incidental to the applicable concrete pay item.
- End Posts shall be constructed normal to grade unless otherwise shown on Design Drawings.



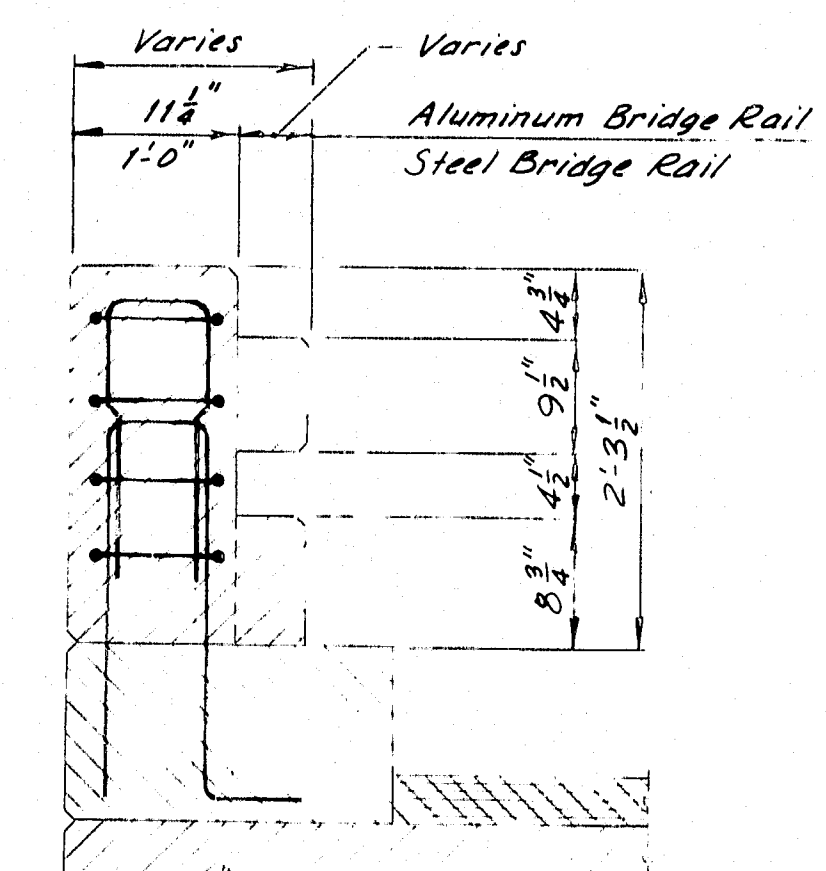
PLAN



ELEVATION

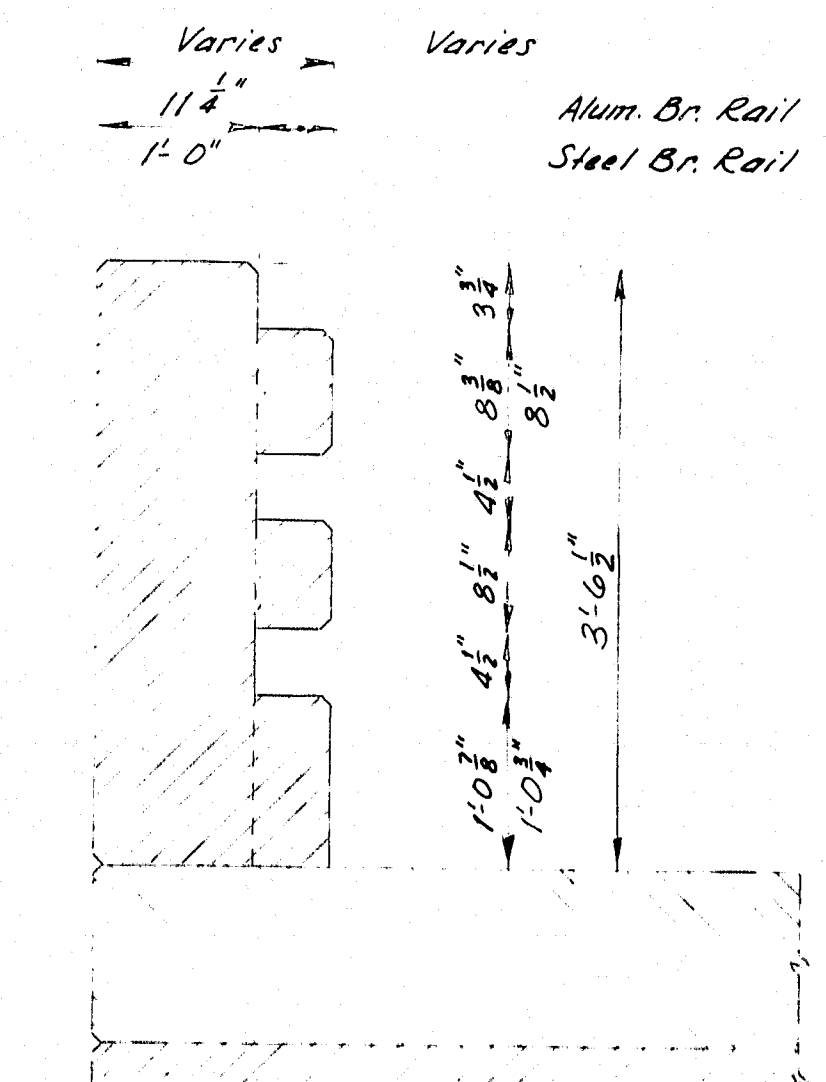


SECTION A-A



SECTION B-B

2-Bar Bridge Rail (Aluminum or Steel)

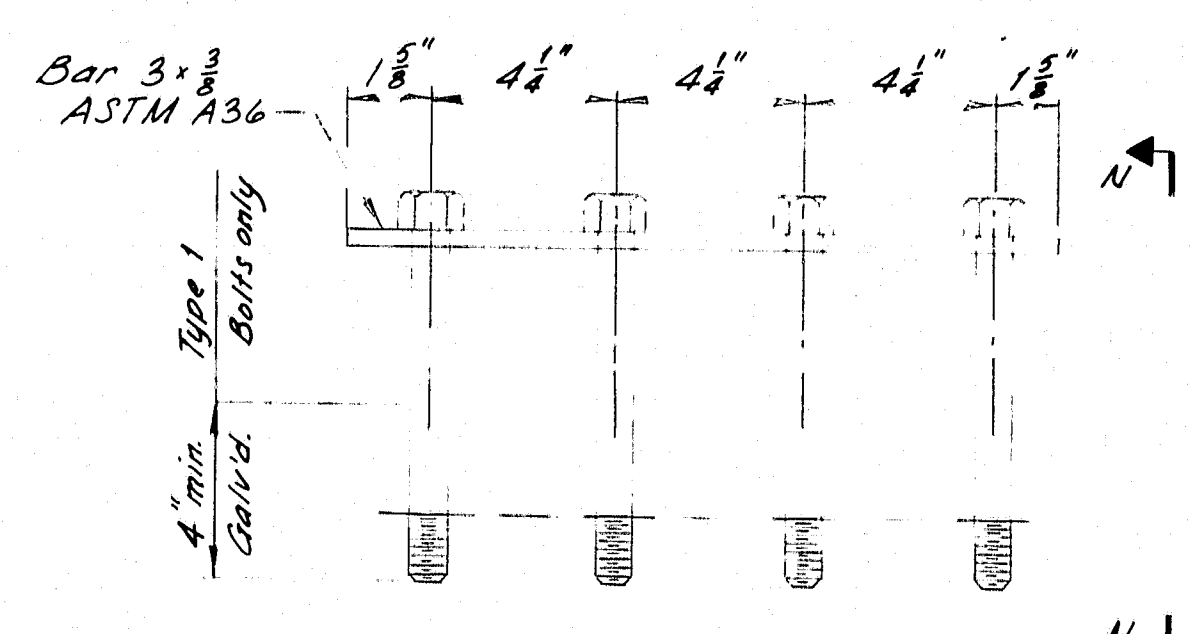


SECTION B-B

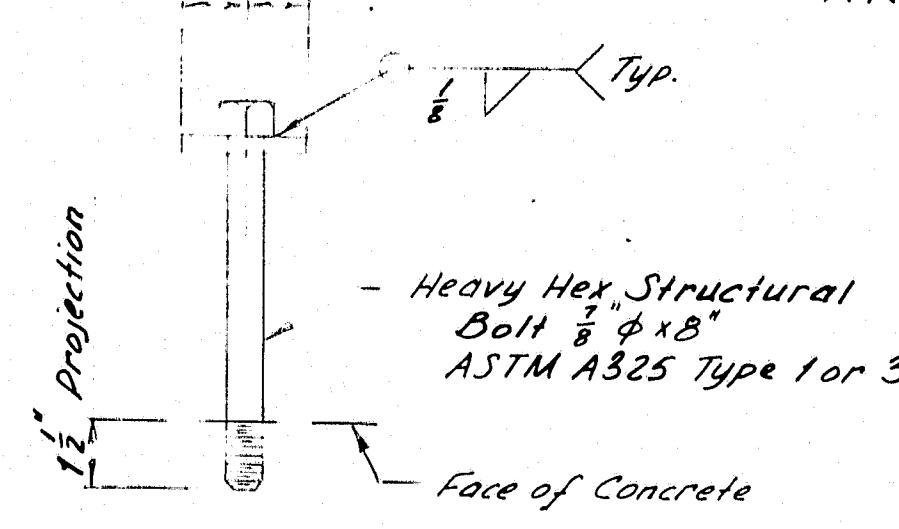
3-Bar Bridge Rail (Aluminum or Steel)

LEGEND

N.F. = Near Face E.F. = Each Face
F.F. = Far Face



GUARD RAIL ANCHORAGE

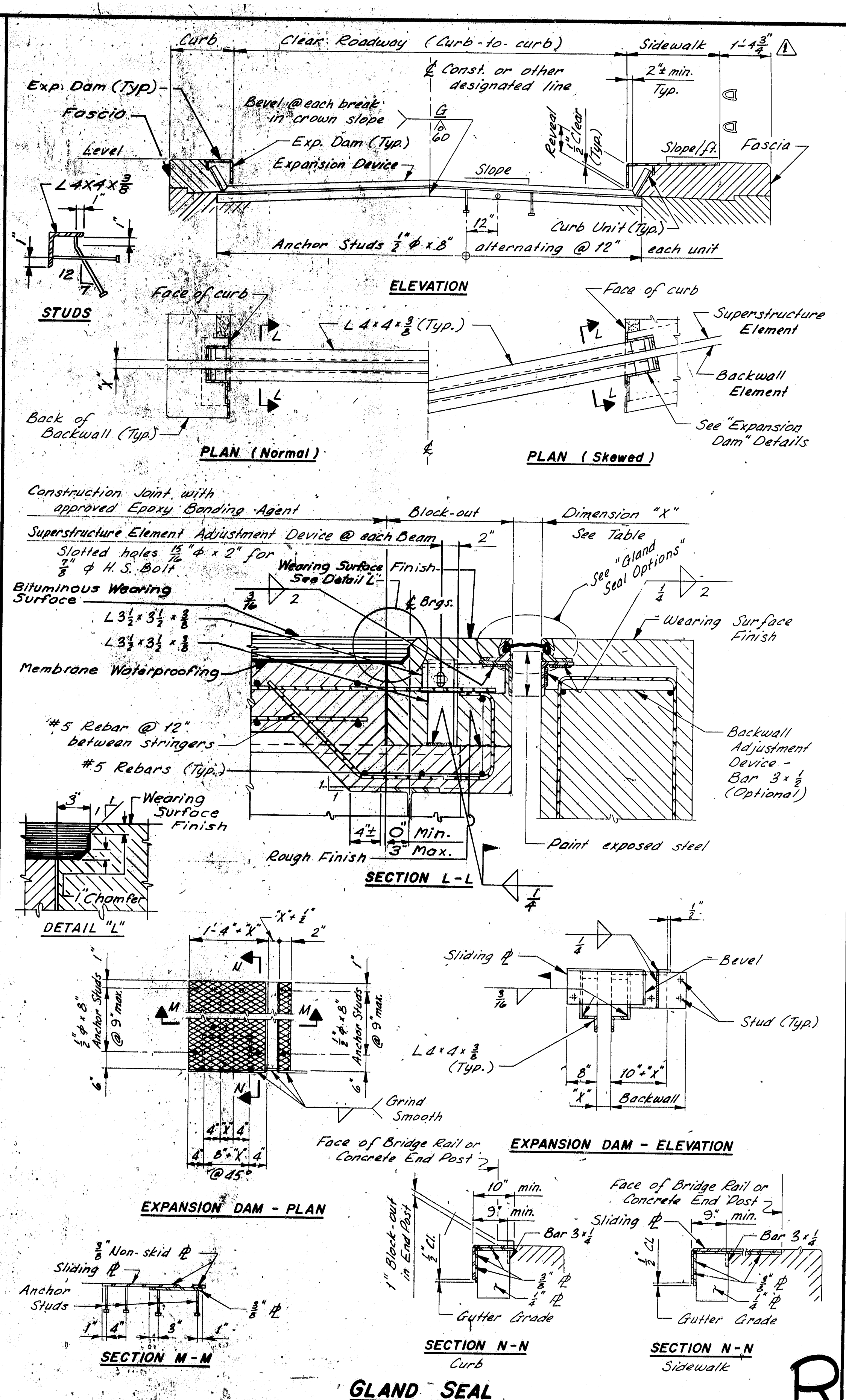
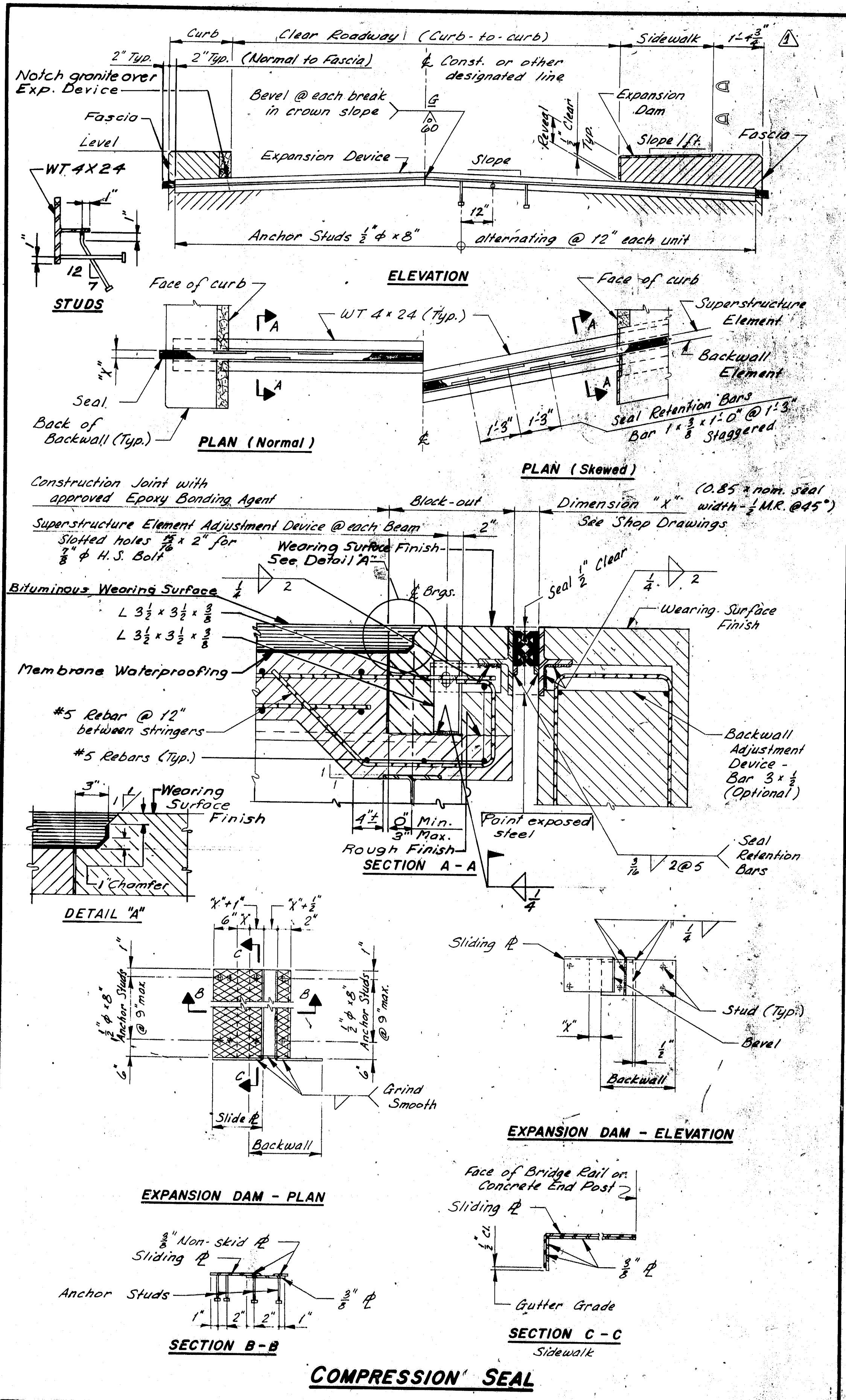


VIEW N-N

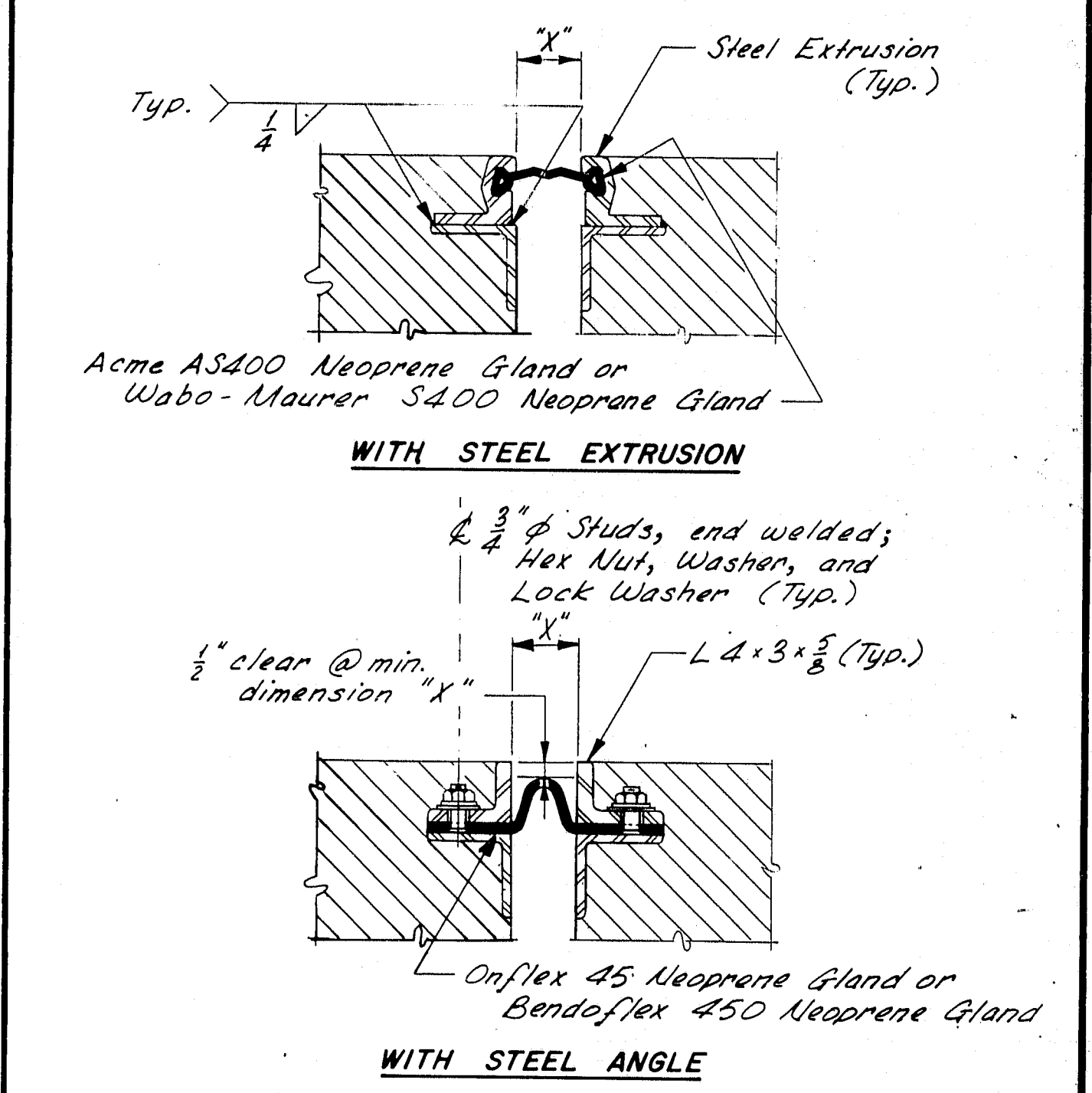
REVISIONS	DATE
General Revisions	1-83

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS (BD 120-81)
CONCRETE END POSTS

R92-34



- NOTES:**
- Each Expansion Device Unit consists of one pair of matching Elements and Expansion Dams as required. At joints over Piers, two Superstructure Elements shall be used.
 - Welding to reinforcing steel will be allowed in the top 1'-6" of the Abutment backwall.
 - See Design Drawings for dimensions, slopes, skew, and all other information necessary to fabricate and install the units. Expansion Devices shall be installed normal to grade.
 - The concrete in the Superstructure Adjustment Device Block-out may be placed with the Sidewalk, and Curb Concrete.



GLAND SEAL SETTING TABLE

Total Movement Required*	Dim. "X" (Measured parallel to & of Roadway) TEMPERATURE (°F)											
	120°	105°	90°	75°	60°	45°	30°	15°	0°	-15°	-30°	
1 1/2"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	1 7/8"	2"	2 1/8"	2 1/4"	2 1/2"	2 3/4"	2 3/4"
2"	1 1/4"	1 1/2"	1 3/4"	1 7/8"	2"	2 1/8"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	2 3/4"	2 3/4"
2 1/2"	1 3/4"	1 7/8"	2"	2 1/8"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"
3"	2"	2 1/8"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"

* Multiply expanding length of Superstructure, in feet, by 0.125 in./ft. Max. Dimension "X" allowed = 3 1/2" @ -30°F

REVISIONS

REVISIONS	DATE
General Revisions	1-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

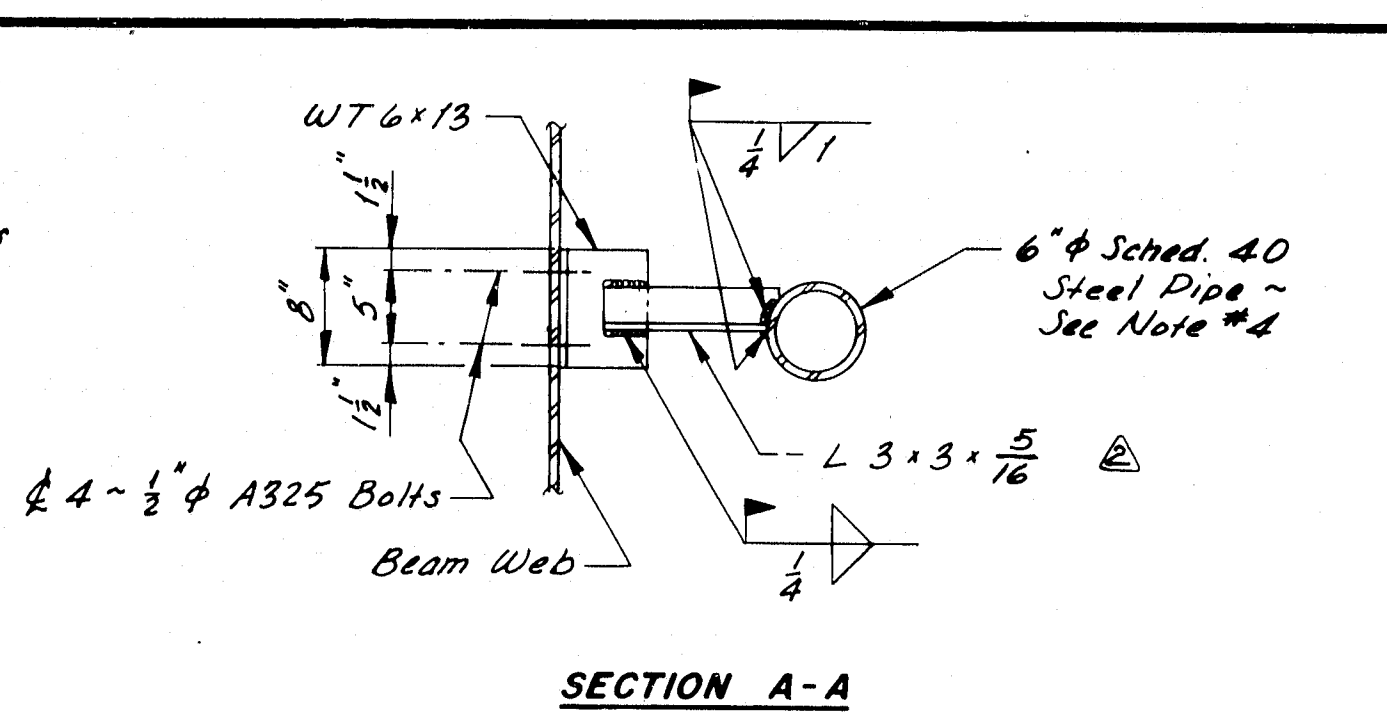
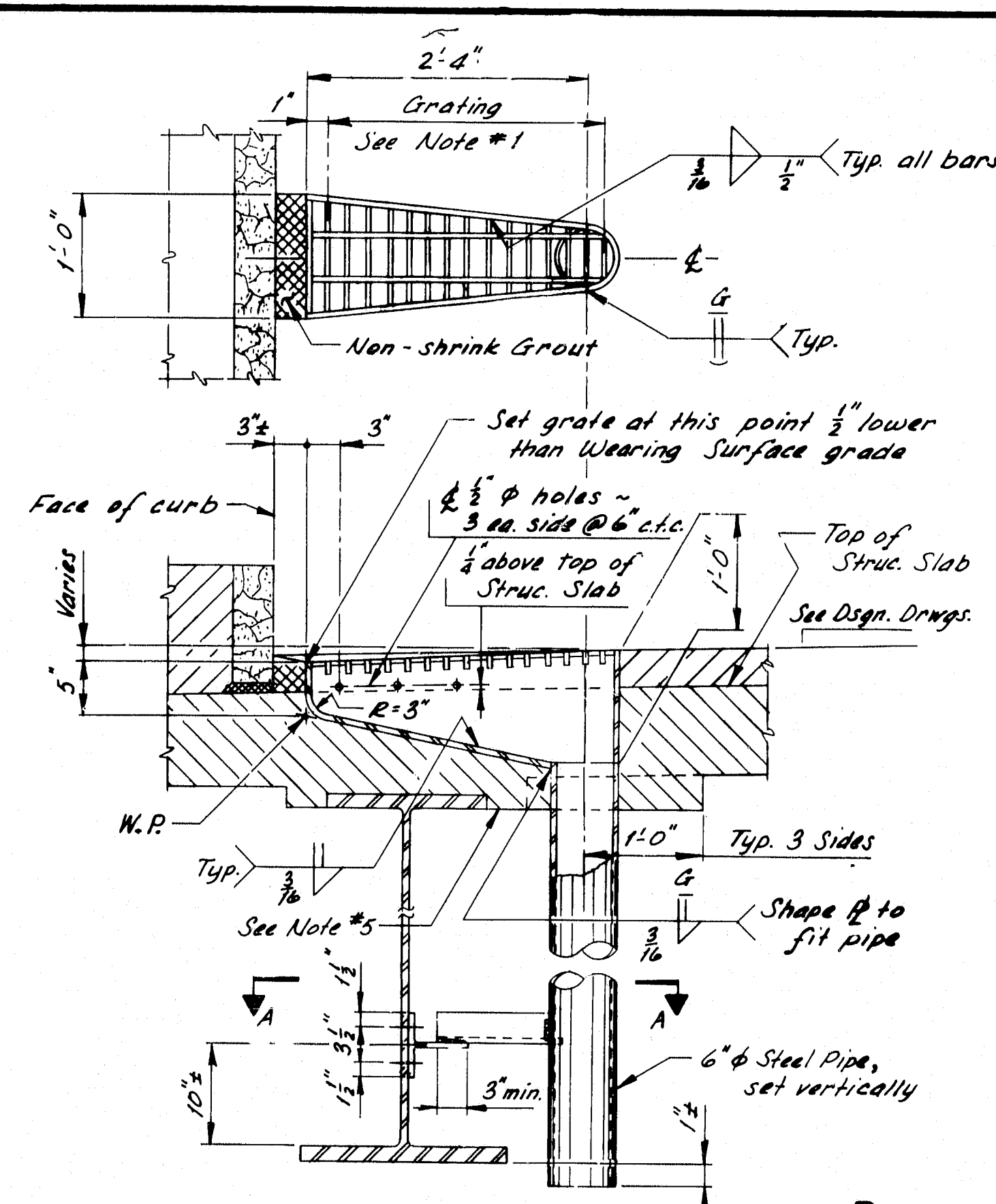
STANDARD DETAILS
(BD 125 - 82)
(FOR USE WITH BITUMINOUS WEARING SURFACE)

EXPANSION DEVICE
COMPRESSION SEAL
GLAND SEAL

R92-35

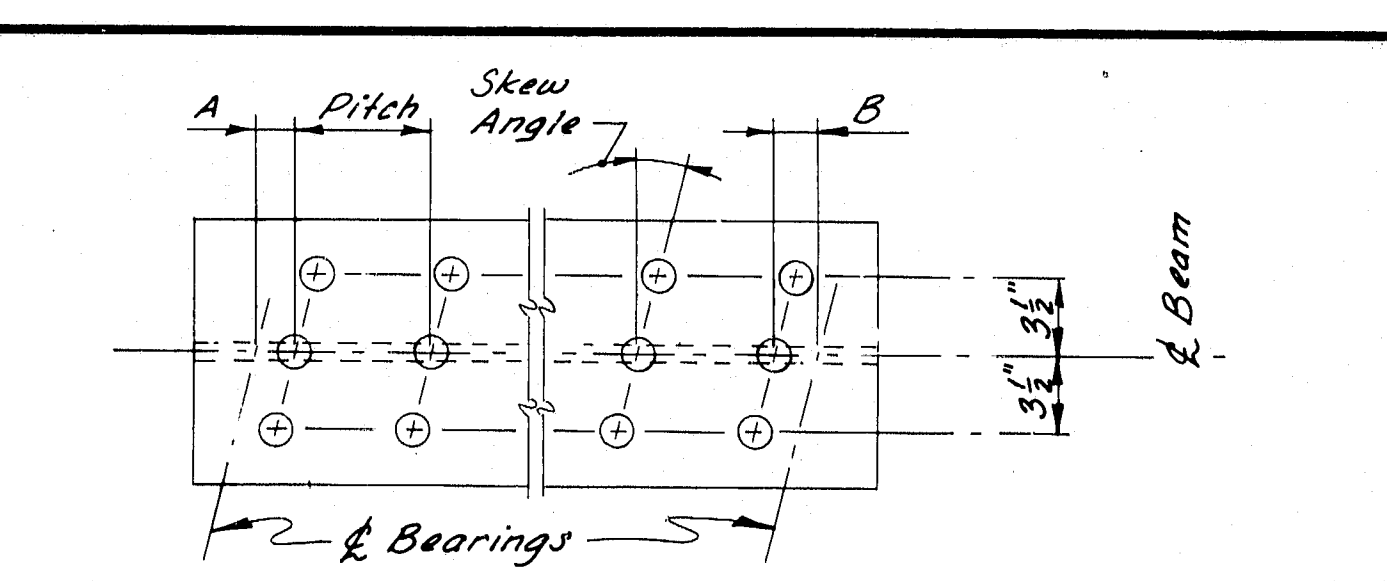
SHEET 27 OF 35 AUGUSTA, MAINE AUGUST 1982

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	95-9 (102)	30	35

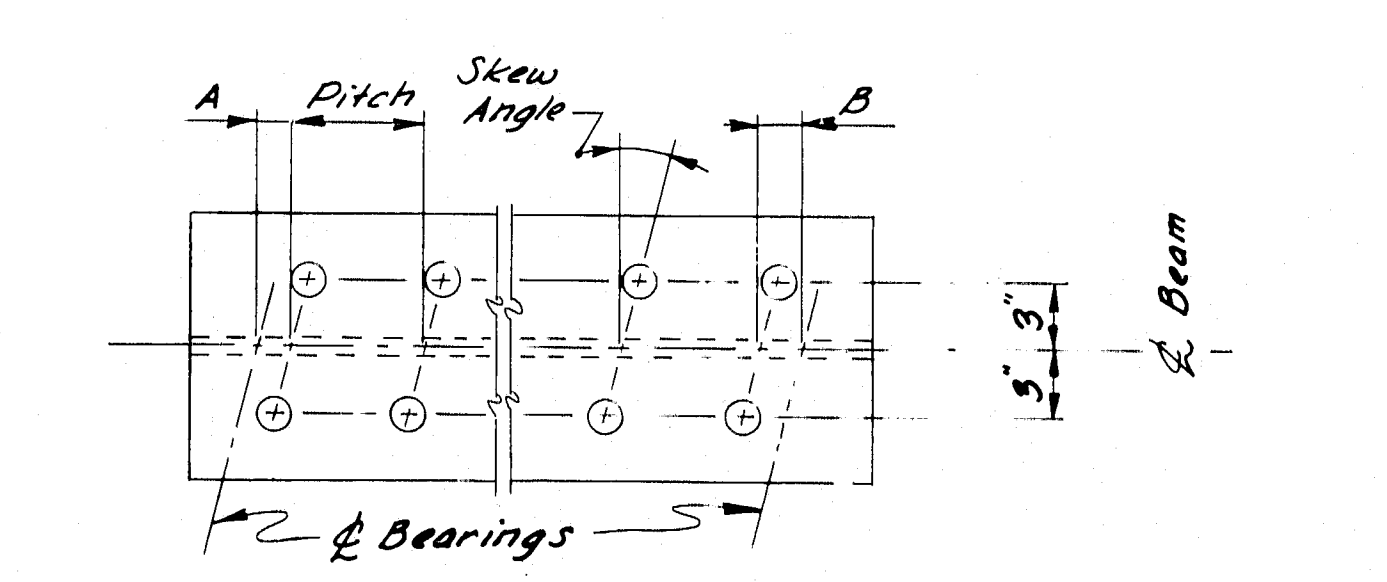


- NOTES:**
- Grating shall be a commercial heavy-duty grating with 1 1/2" x 3" bearing bars spaced at 2 3/8" c.t.c., and 3/4" x 3/4" cross bars spaced at 4" c.t.c.
 - Plates shall be A.S.T.M. A36, 1/2" thick.
 - WT 6x13 shall be of the same material as the beam web.
 - At the option of the Contractor, the Bridge Drain may be modified to allow the use of T.S. 6x6x1/2 conforming to A.S.T.M. A501 or A.S.T.M. A500, Gr. "A", in place of the 6" steel pipe.
 - If the minimum thickness of concrete below the Drain is 2" or less, the haunch shall be extended as shown.
 - Painting will not be required when the structural steel is specified to be unpainted.
 - Payment for Bridge Drain shall be as specified under subsection 502.19 of the Standard Specifications.

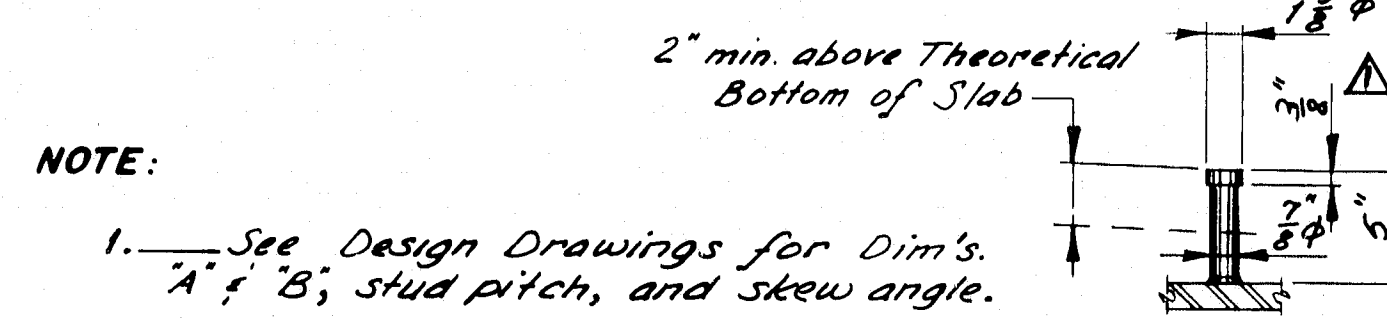
BRIDGE DRAIN



TRIPLE STUDS

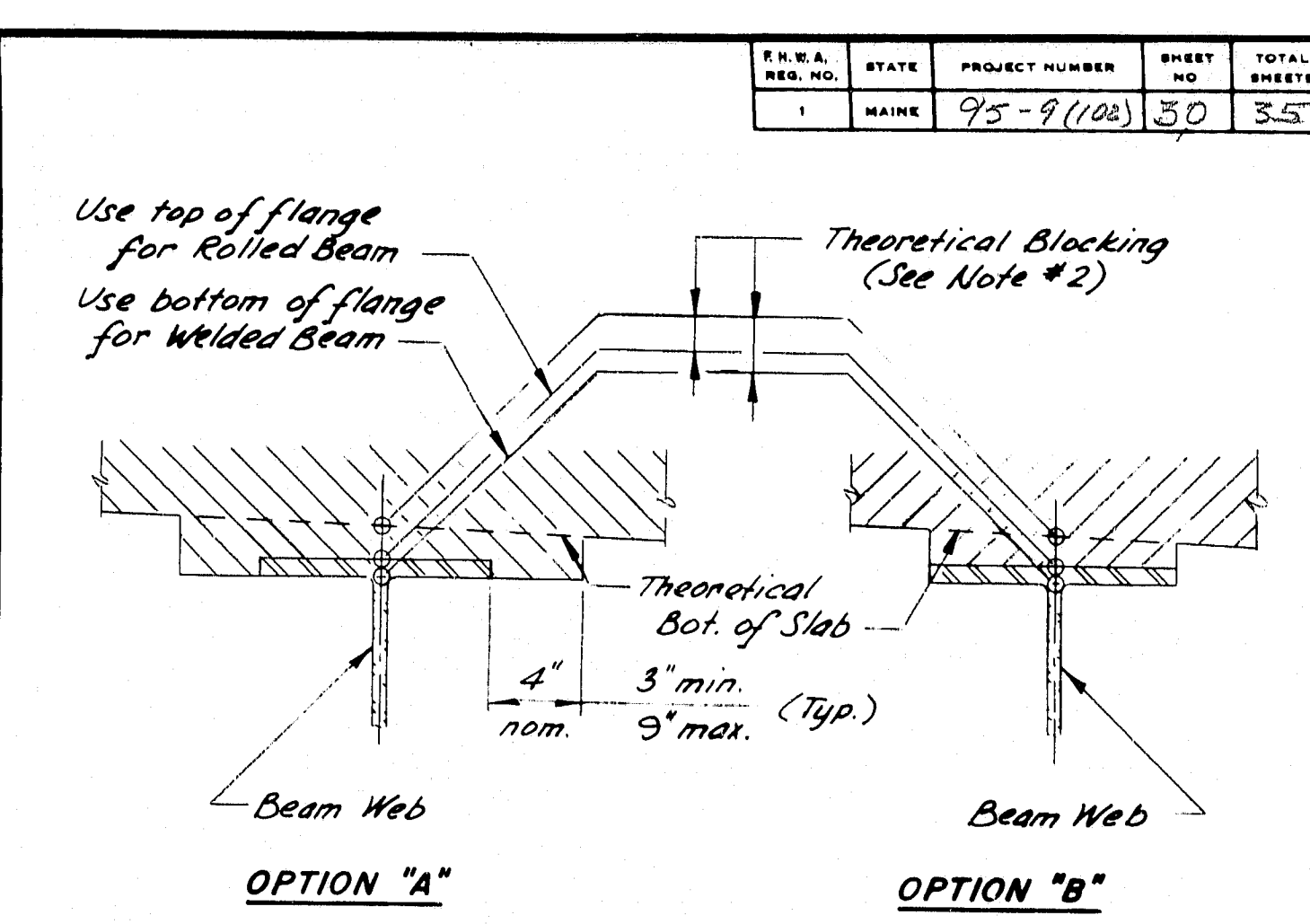


DOUBLE STUDS



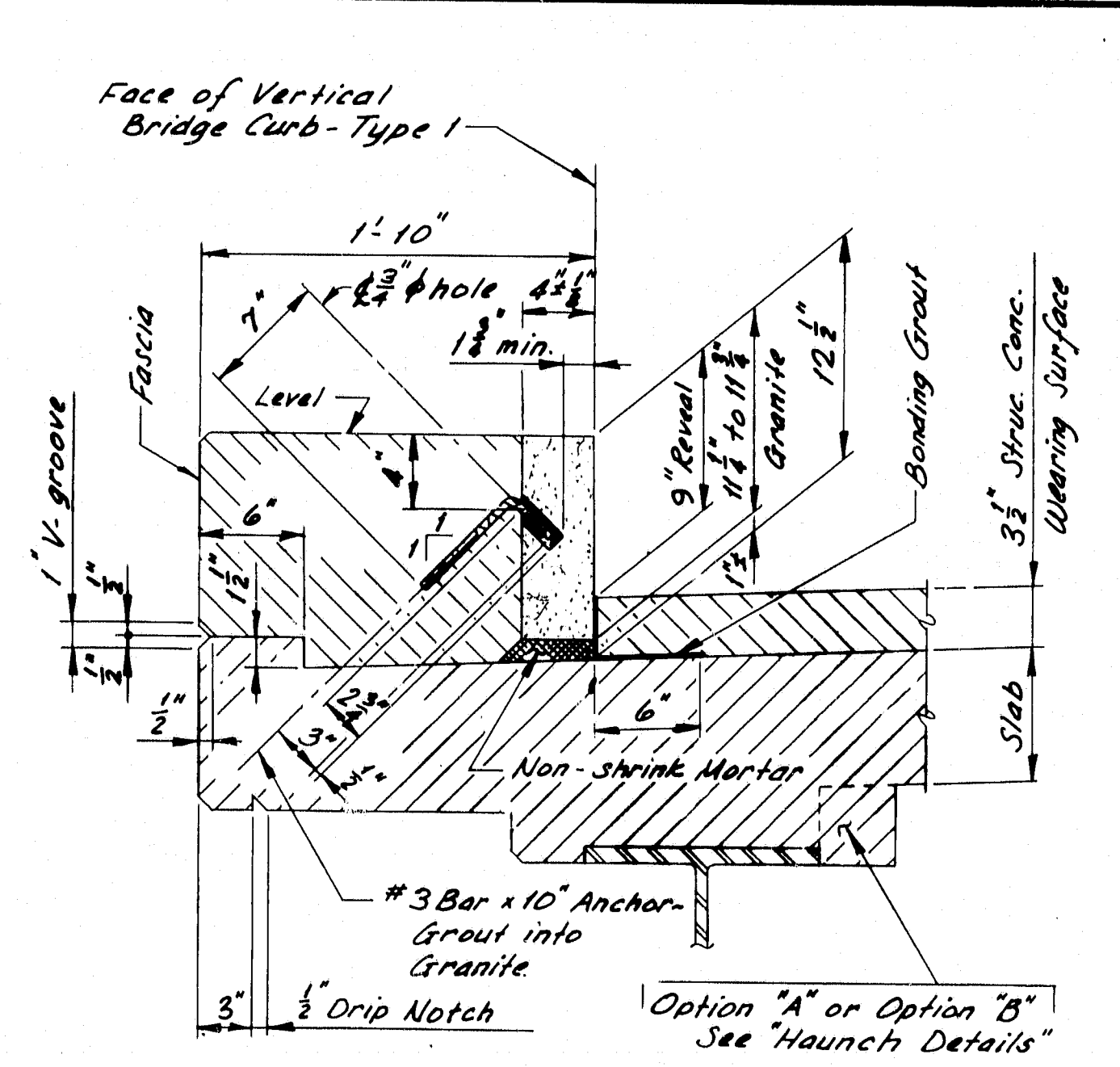
- NOTE:**
- See Design Drawings for Dim's. "A", "B", stud pitch, and skew angle.

SHEAR CONNECTORS

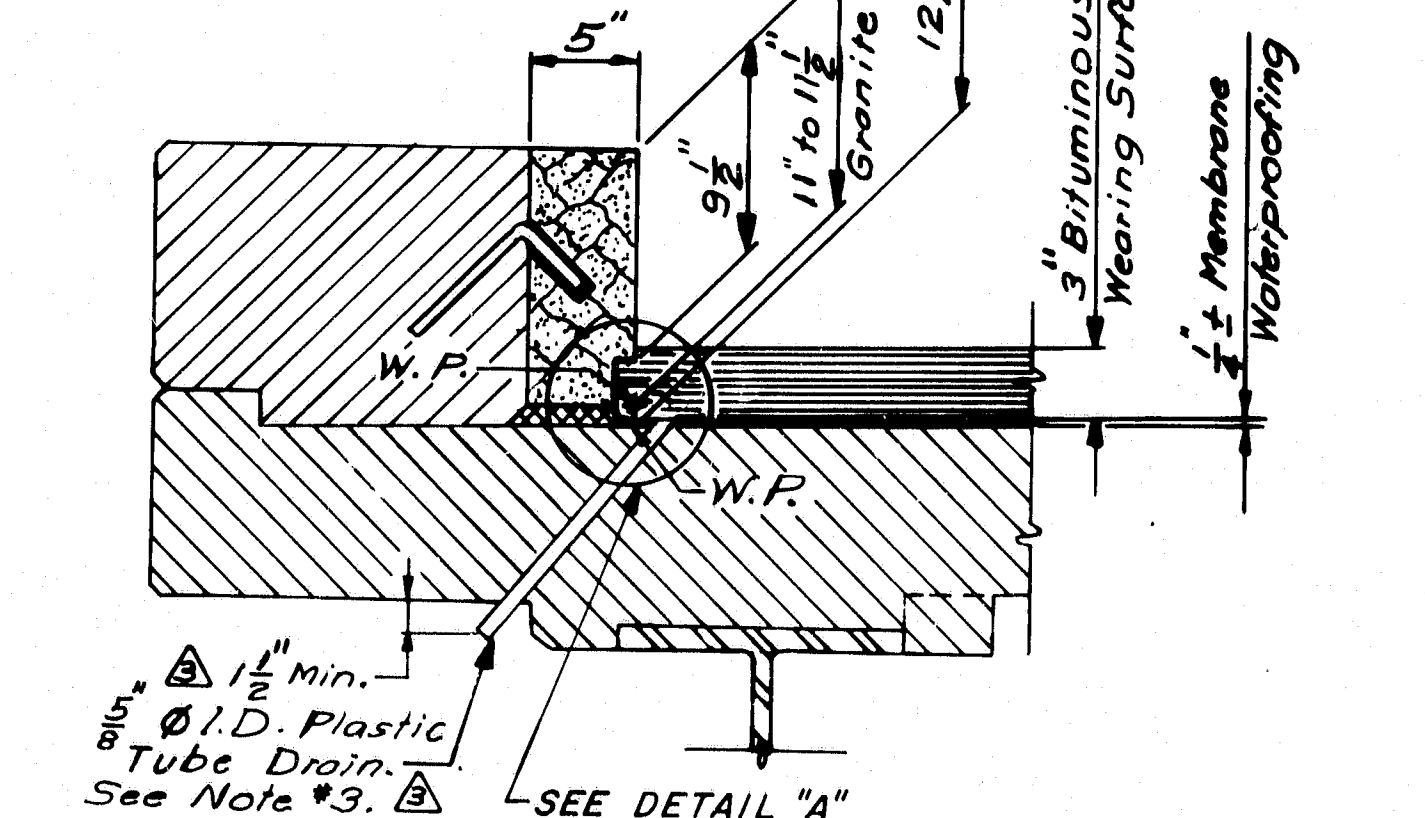
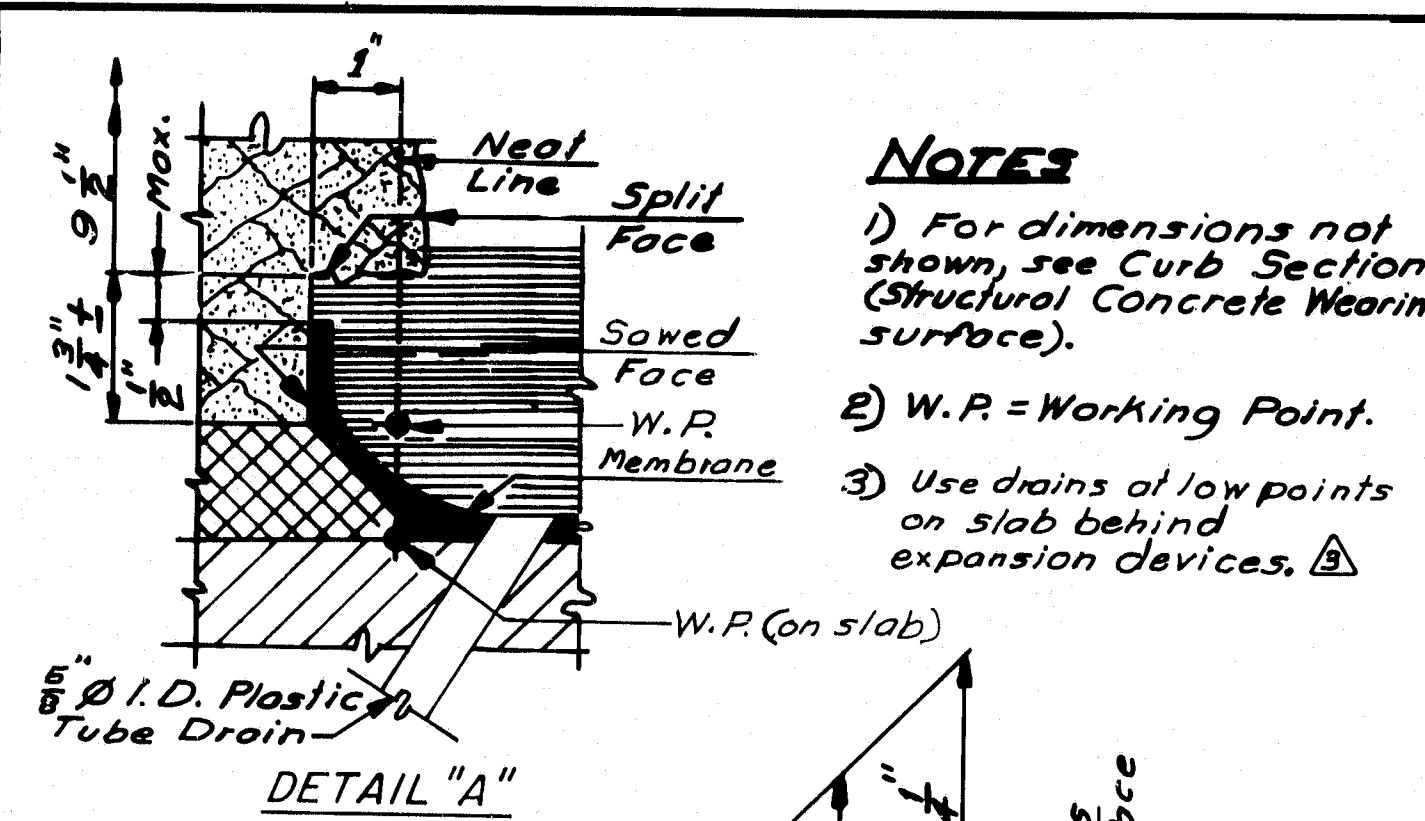


- NOTE:**
- Haunch Option "A" or Option "B" may be used at the Contractor's discretion. Only one option shall be used on each structure, except that Option "A" must always be used on the fascia side of all fascia beams and on beams designed without shear connectors.
 - Theoretical Blocking shall be as indicated on Design Drawings.
 - Do not use Theoretical Blocking for setting of form-work.

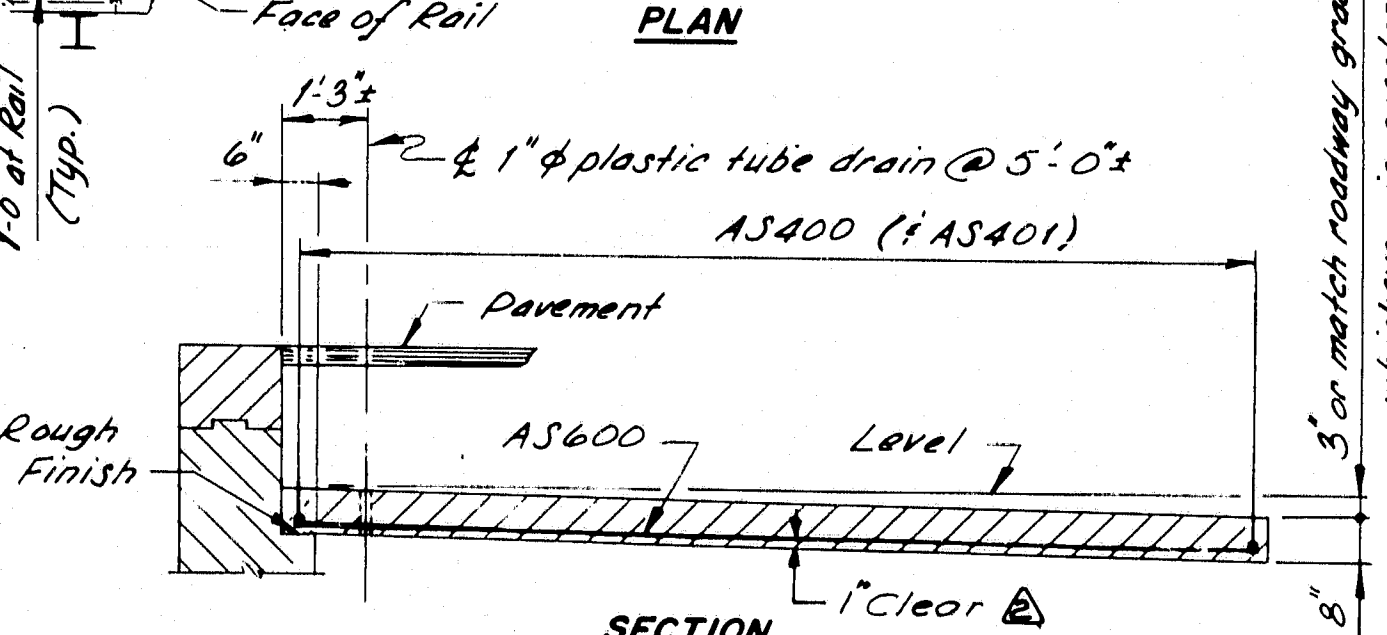
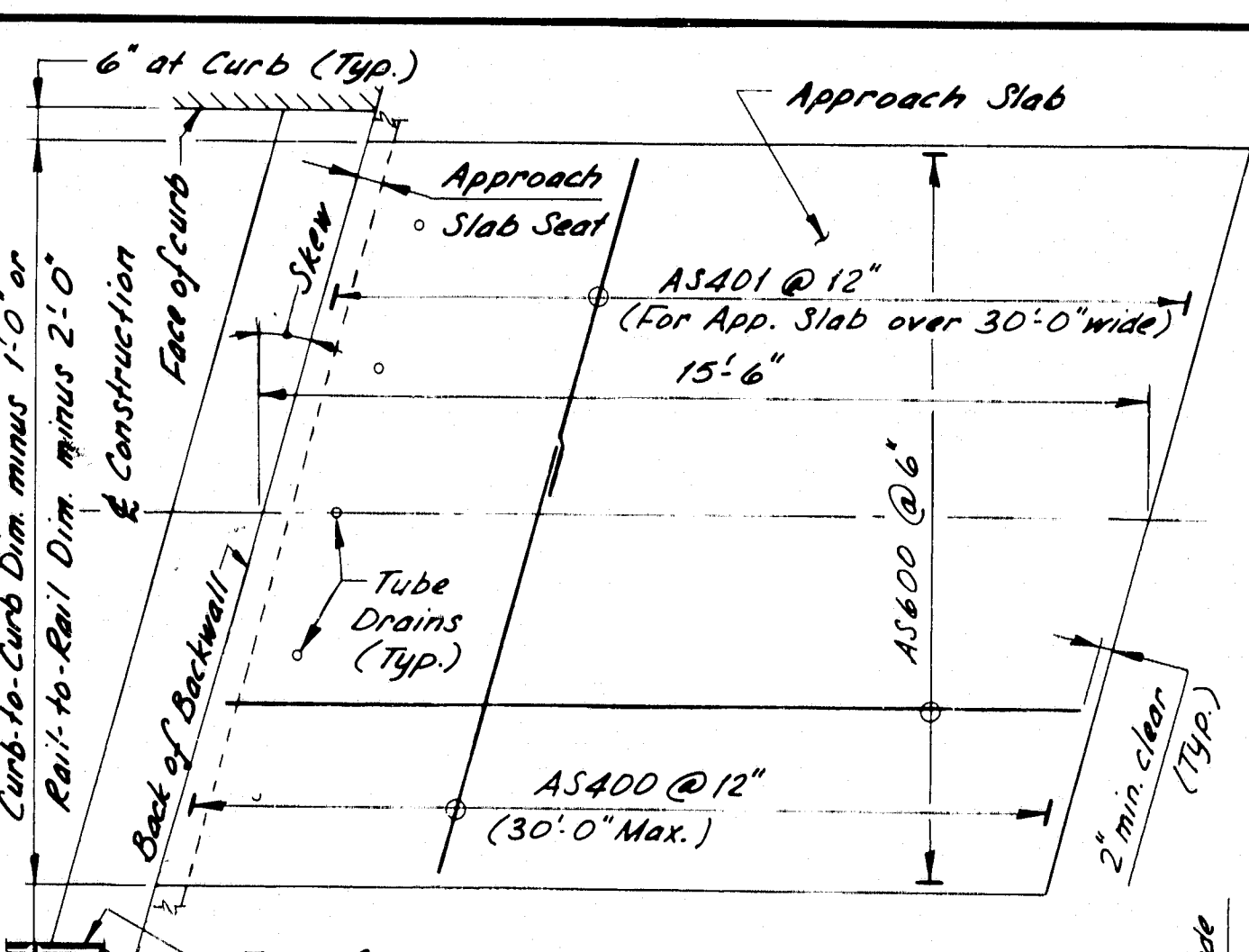
HAUNCH DETAILS



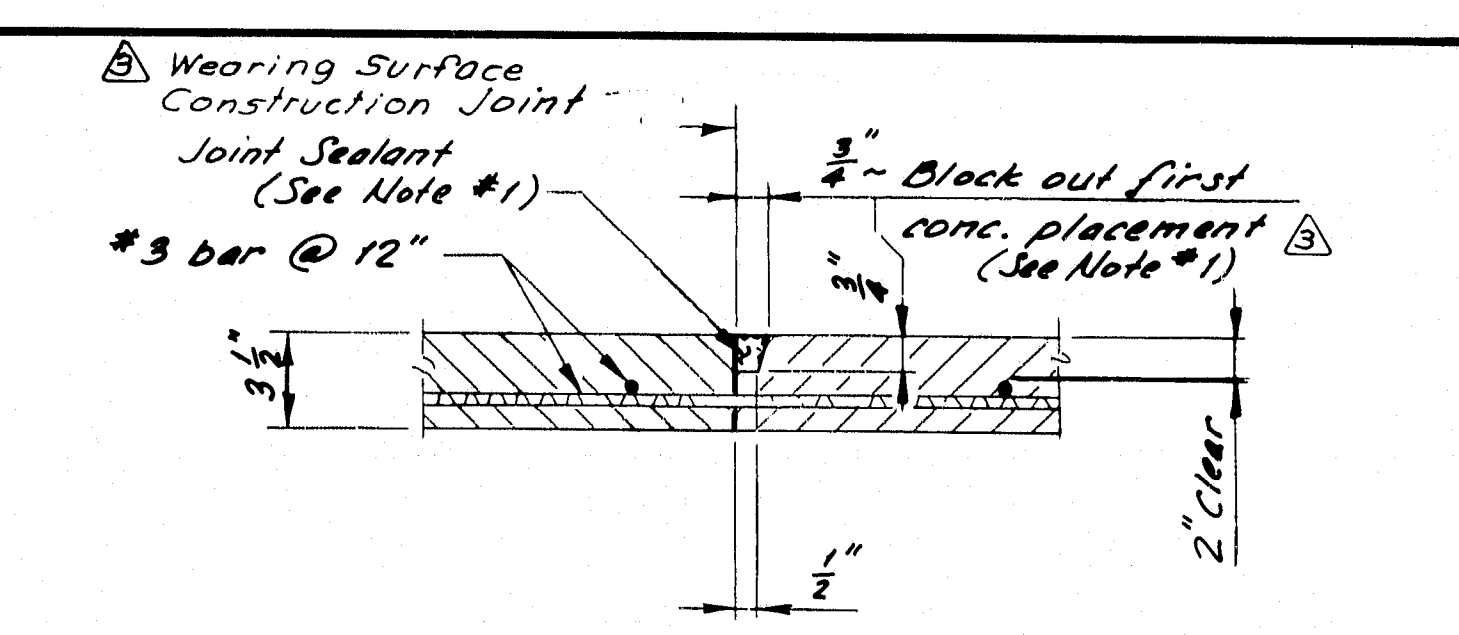
CURB SECTION TYPE 1A
(STRUCTURAL CONCRETE WEARING SURFACE)



CURB SECTION TYPE 1B
(BITUMINOUS WEARING SURFACE)



APPROACH SLAB



- NOTE:**
- Use Black-out and Sealant only at Wearing Surface Construction Joints over Structural Slab Construction Joints. At all other joints, brush joint with neat cement paste before making adjacent concrete placement.

STRUCTURAL CONCRETE WEARING SURFACE

REVISIONS	DATE
Revised Stud Detail	3-82
Added Curb Section	7-82
Added Plastic Tube Drain & modified Structural Concrete Wearing Surface	11-82
Revise Curb Anchorage	2-83
Revise Curb Title	6-83

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
(BD 126-81)

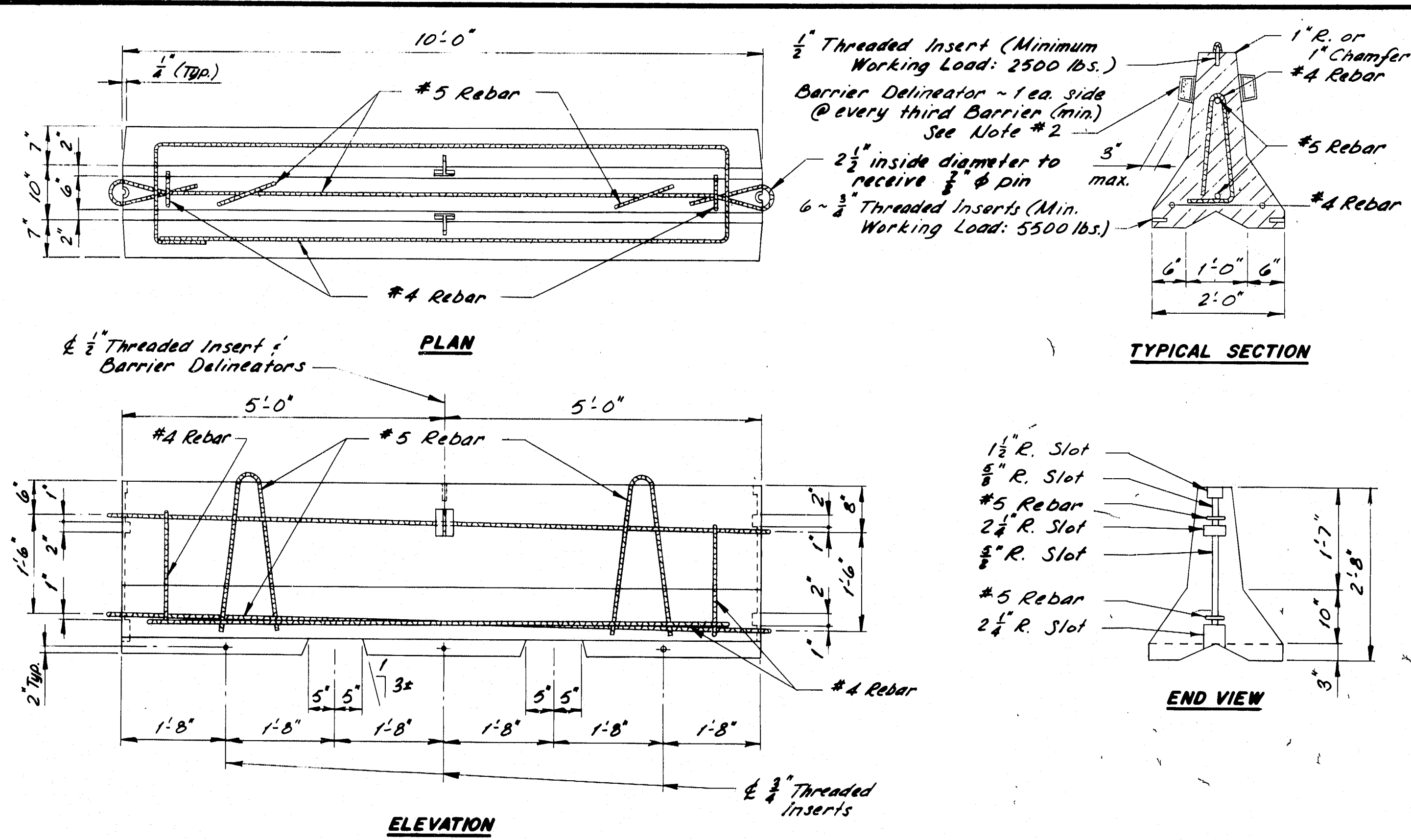
MISCELLANEOUS DETAILS
BRIDGE DRAIN - SHEAR CONNECTORS
STRUC. CONC. WEAR. SURFACE
CURB SECTION - APPROACH SLAB
HAUNCH DETAILS

SHEET 30 OF 35 AUGUSTA, MAINE JUNE 1981

PROJECT DESIGN ENGINEER	DATE
BY [Signature]	12/81
DESIGN - CHECKED	DATE
BY [Signature]	12/81
REVISIONS	DATE
1. [Signature]	12/81
FIELD CHANGES	DATE
1. [Signature]	12/81

R92-36

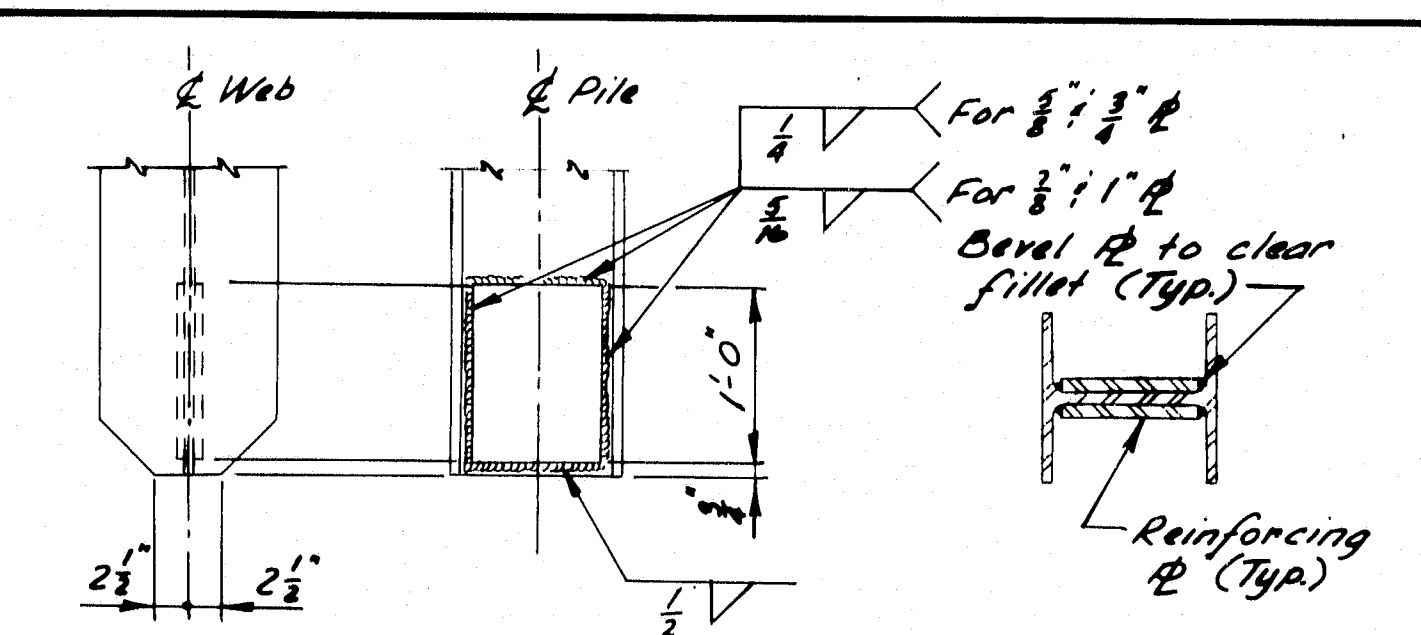
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
MAINE	195-9(102)	31	35



NOTES:

- The reinforcing steel, and connections, lifting arrangement, and sizes and locations of hold-down inserts are advisory only. It shall be the Contractor's responsibility to provide adequate reinforcing, and connections, lifting points, and hold-down arrangements.
- Barrier Delineators shall be bi-directional with a minimum effective reflect area of 8.0 square inches as approved by the Engineer. The Reflector shall preferably be of Methyl Methacrylate, and the Housing of Acrylonitrile Butadiene Styrene.

TEMPORARY CONCRETE BARRIER - TYPE 1

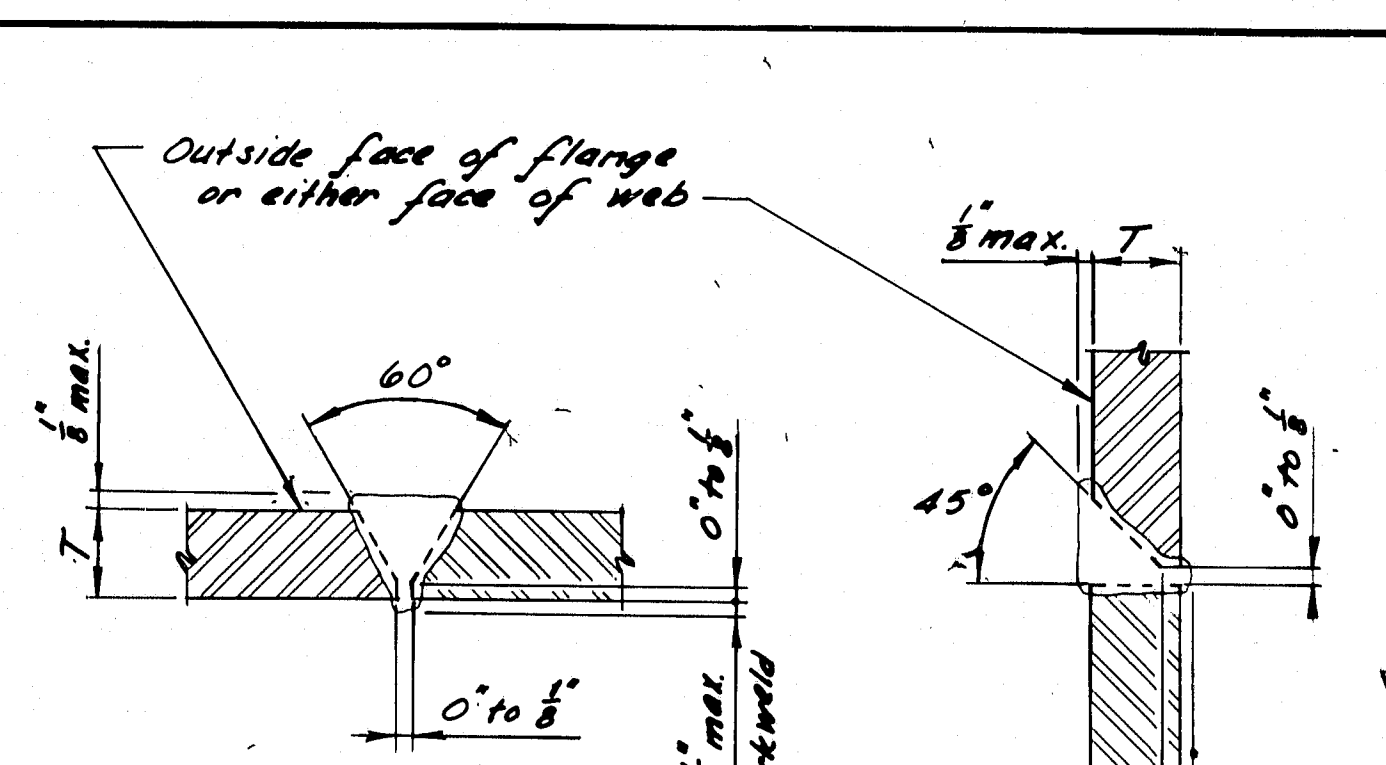


Pile Size	Reinf. R Size	Pile Size	Reinf. R Size
HP 10x42	8 3/4" x 5/8" x 1'-0"	HP 13x60	11 1/2" x 3/4" x 1'-0"
HP 10x57	8 3/4" x 7/8" x 1'-0"	HP 13x73	11 1/2" x 7/8" x 1'-0"
HP 12x53	10 3/4" x 3/4" x 1'-0"	HP 13x87	11 1/2" x 1" x 1'-0"
HP 12x63	10 3/4" x 3/4" x 1'-0"	HP 14x73	12 1/2" x 7/8" x 1'-0"
HP 12x74	10 3/4" x 7/8" x 1'-0"	HP 14x89	12 1/2" x 1" x 1'-0"

NOTES:

- 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.
- Plates may be shop or field welded.
- Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.

POINTED REINFORCED PILE TIP

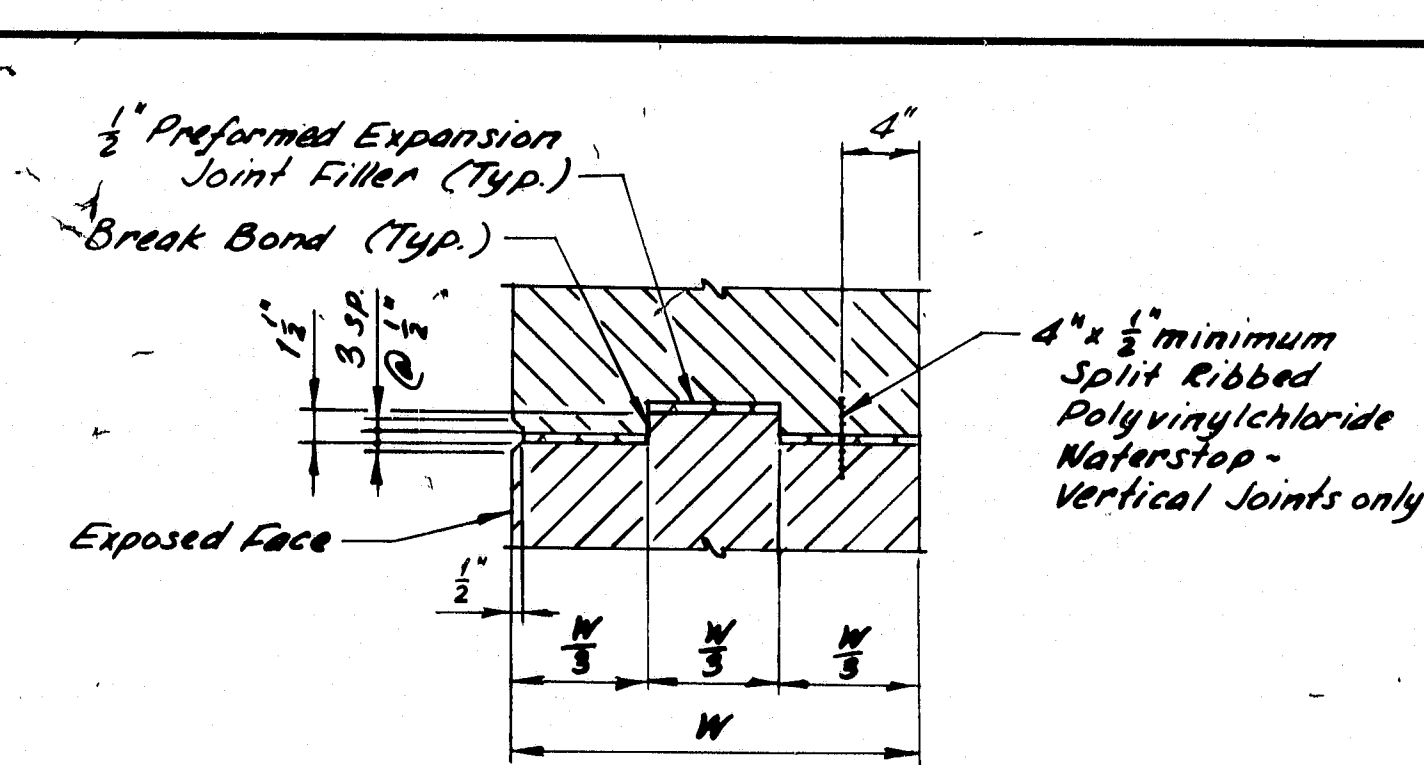


T	Min. No. Passes
1/2"	3
3/4"	4
1"	5

NOTES:

- All cutting shall be done with the use of a mechanical guide.
- Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.
- Gauge root before welding second side.

PILE SPLICE

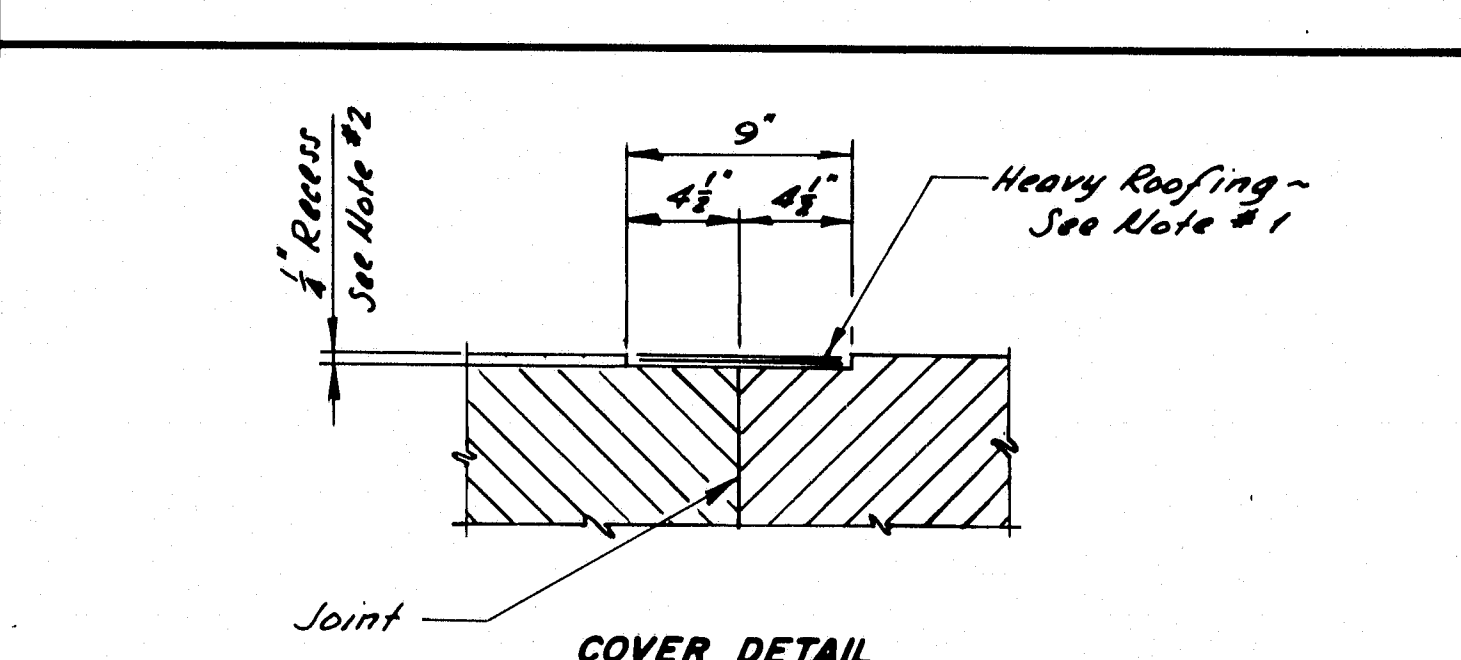


T	Min. No. Passes
1/2"	3
3/4"	4
1"	5

NOTES:

- All cutting shall be done with the use of a mechanical guide.
- Use Manual Shielded Metal-Arc Process and 6010, 6011, or 6012 electrodes, unless a different process has been approved by the Engineer.
- Electrodes shall be dry when used, in accordance with the provisions of A.W.S. Spec. D1.1, as amended by AASHTO.
- Gauge root before welding second side.

CONCRETE JOINTS



- Where called for, cover horizontal and vertical construction, contraction, or expansion joints with two (2) 9" wide layers of heavy roofing felt. Coat the concrete and back of each layer as applied with plastic roofing cement.
- Recess the covered area 1/4" unless otherwise indicated on Design Drawings.

CONCRETE JOINT COVER

R92-37

Added 13 HP's	7-83
REVISIONS	Date

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS (BD 127-81)
MISCELLANEOUS DETAILS
TEMP. CONC. BARRIER - TYPE 1
POINTED REINF. PILE TIP
PILE SPLICE - CONC. JOINTS
CONCRETE JOINT COVER

NOTE:
When much is excavated to a depth greater or less than what is shown on the plans, the lateral limits for payment shall be determined as shown or as specifically directed by the engineer.

Excavation for pipe culverts in grubbing and muck areas. Pay Earth Excav. or Muck Excav. as designated.

MUCK EXCAVATION PAY LIMITS

When directed by the engineer, waste material shall be used in this area, except that waste shall not be placed in fills designed with slopes of 2:1 or less. No additional payment will be made for this work.

DISPOSAL OF WASTE MATERIALS
(Waste Storage Area)

MUCK EXCAVATION AND WASTE DISPOSAL
SPECIFICATION SECTION 203

SLOPE BLANKET-BACKSLOPE

SLOPE BLANKET-FILL SLOPE

SECTION A-A

HAND LAID RIP RAP DOWNSPOUT

Construct berm ditch as shown on the plans or as directed by the engineer. Where a 2:1 slope is not practical, use a 1 1/2:1 slope.

Where "x" = 5 or less, "y" = x, otherwise "y" = 5. To avoid property damage and to save shade trees, this formula may be modified by the engineer.

For all sections, depth of ditch depends on local conditions.

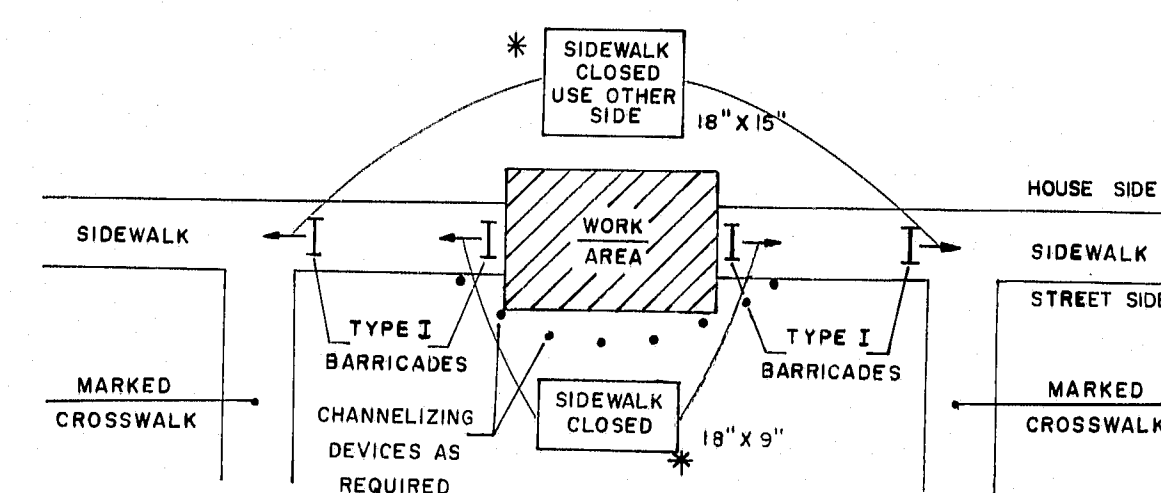
BERM DITCH
SPECIFICATION SECTIONS 203 & 616
DITCHES AND SLOPES

WIRE STAPLE

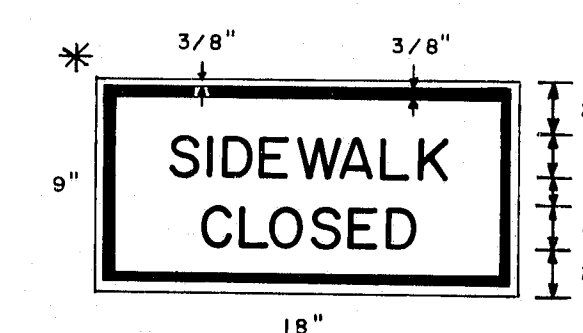
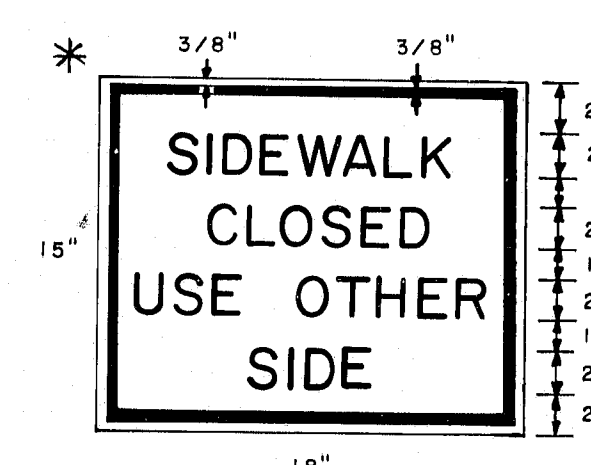
Staple spacing at 3' 5/8" along mesh except at 4' overlap which shall be at 1/2" 5/8".

F.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE		33	35

* NON-REFLECTORIZED WHITE BACKGROUND, BLACK TEXT
AND BORDER-2" SERIES C UPPER CASE LETTERS

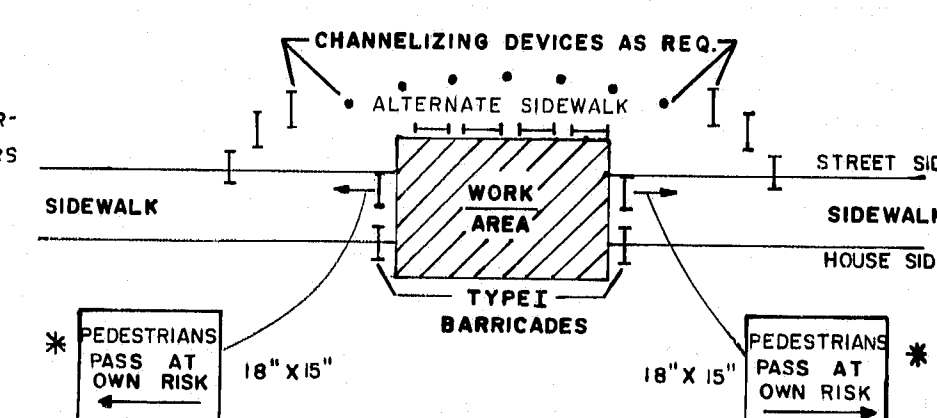


**SIDEWALK CLOSURE
WITHOUT ALTERNATE SIDEWALK**

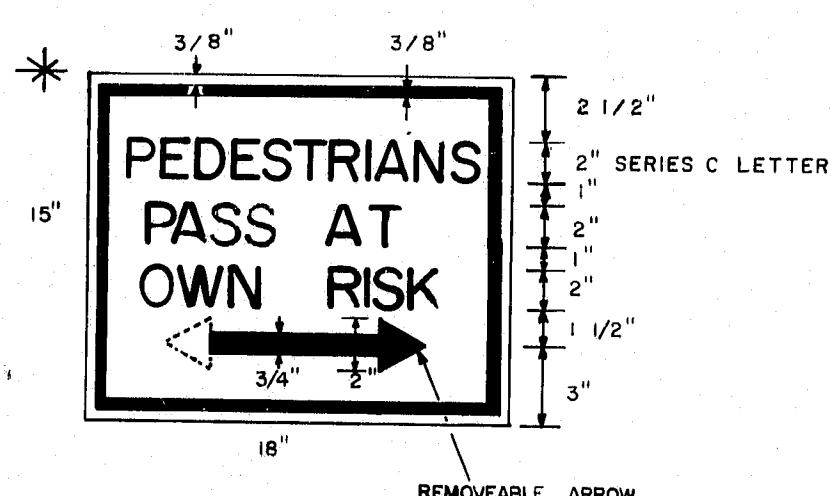


A

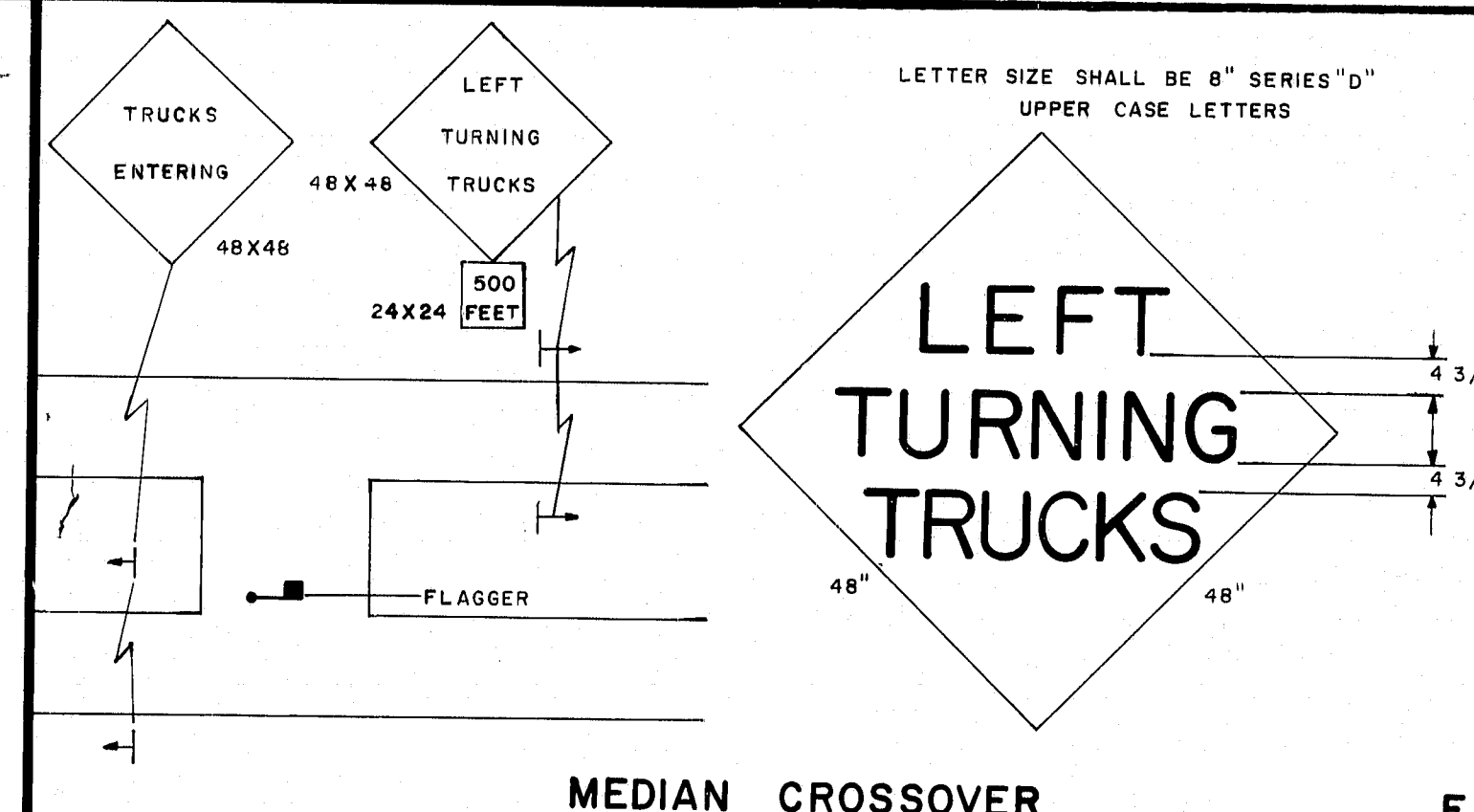
* NON-REFLECTORIZED WHITE BACK-
GROUND, BLACK TEXT AND BORDER-
2" SERIES C UPPER CASE LETTERS



**SIDEWALK CLOSURE
WITH ALTERNATE SIDEWALK**



B



E

GENERAL NOTES

- Distances shown for sign placement are nominal, exact locations shall be determined by the Engineer.
- Grades on temporary roadways through the construction zone used by the public shall not exceed 10 percent.
- Advisory speed consistent with prevailing conditions shall be as determined by the Engineer.
- Use shaded signs when specified in the Special Provisions.
- The length of tapers shall be determined from the following formulae:

If S is equal to or less than 40 MPH
 $L = (W \times S \times S) / 60$

If S is equal to or greater than 45 MPH
 $L = WS$

Where:

L = taper length in feet

S = operating speed in MPH

W = width of roadway to be closed in feet

Taper lengths shall be rounded to the nearest five feet.

It may be required to extend lane closure tapers to provide a smooth transition where geometric alignment reduces sight distance.

- The maximum longitudinal spacing of channelizing devices shall conform to the following:

- 50 feet through work areas
- A distance in tapers equal to the numerical value of the operating speed, i.e., 45 MPH = 45 feet
- In all areas not covered above maximum spacing shall be as follows:

Radius of curve	Spacing
60' to 300'	25'
300' to 700'	50'
700' to 1000'	75'
over 1000'	5 times the operating speed

The maximum transverse spacing in tapers shall be determined from the following formula:

$$D = (W \times S) / L$$

Where:

D = transverse spacing in feet

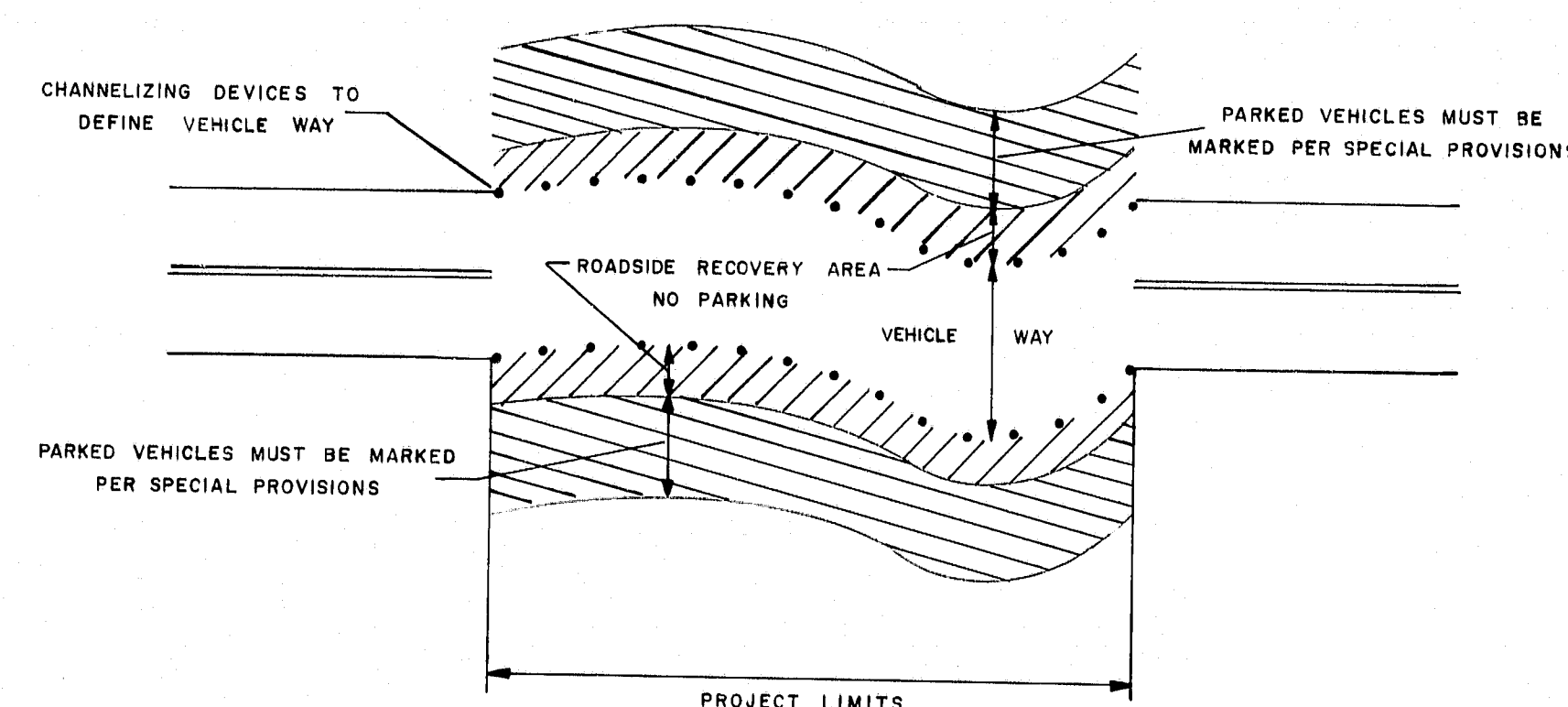
W = width of roadway to be closed in feet

L = taper length in feet

S = operating speed in MPH

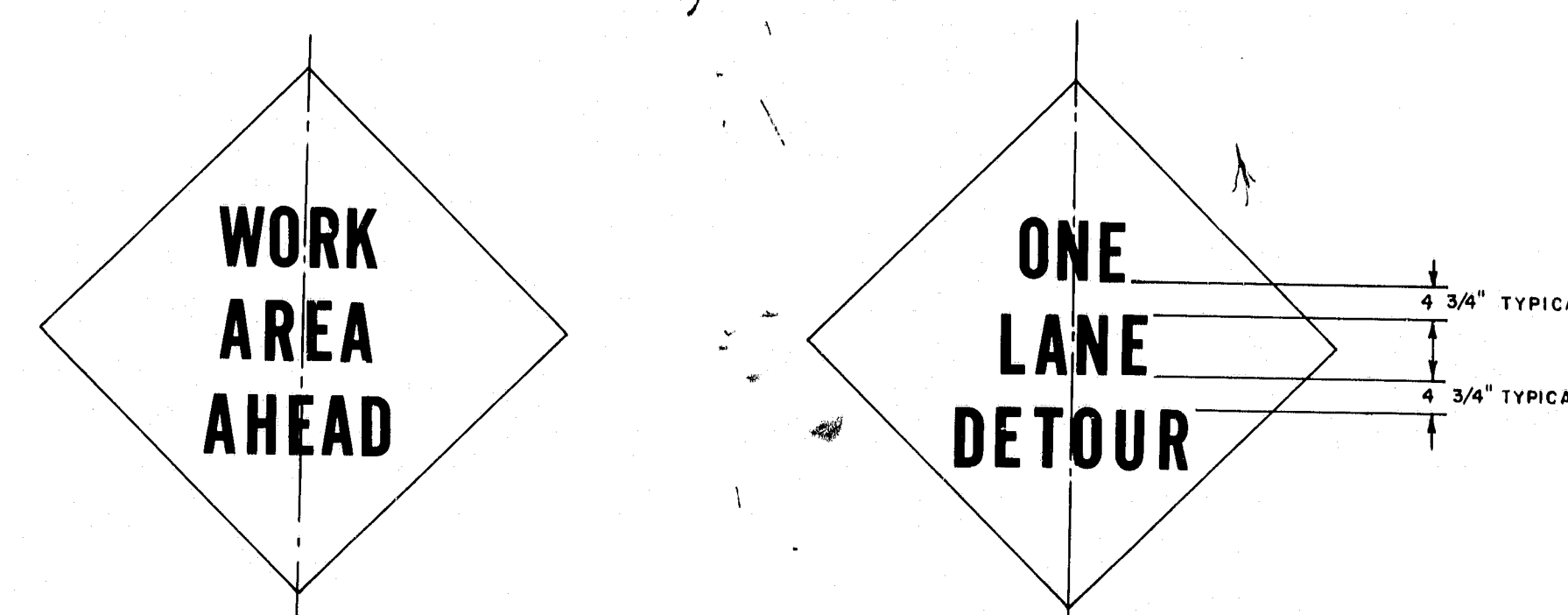
- BORDER DIMENSIONS AND LEGEND DESIGN SHALL CONFORM TO THE STANDARD HIGHWAY SIGNS BOOKLET.

ALL DIMENSIONS AND OTHER REQUIREMENTS AS
SPECIFIED IN THE SPECIAL PROVISIONS



ROADSIDE RECOVERY AREA

CONSTRUCTION WARNING SIGN DETAIL



- Letter size shall be 8" Series 'D'.
- Border dimensions and legend design shall conform to "Standard Highway Signs".

D

PROJECT ENGINEER	DATE
DESIGN - DETAIL	
CHECKED	
REVISIONS	
FIELD CHANGES	
PLANS	

REVISIONS

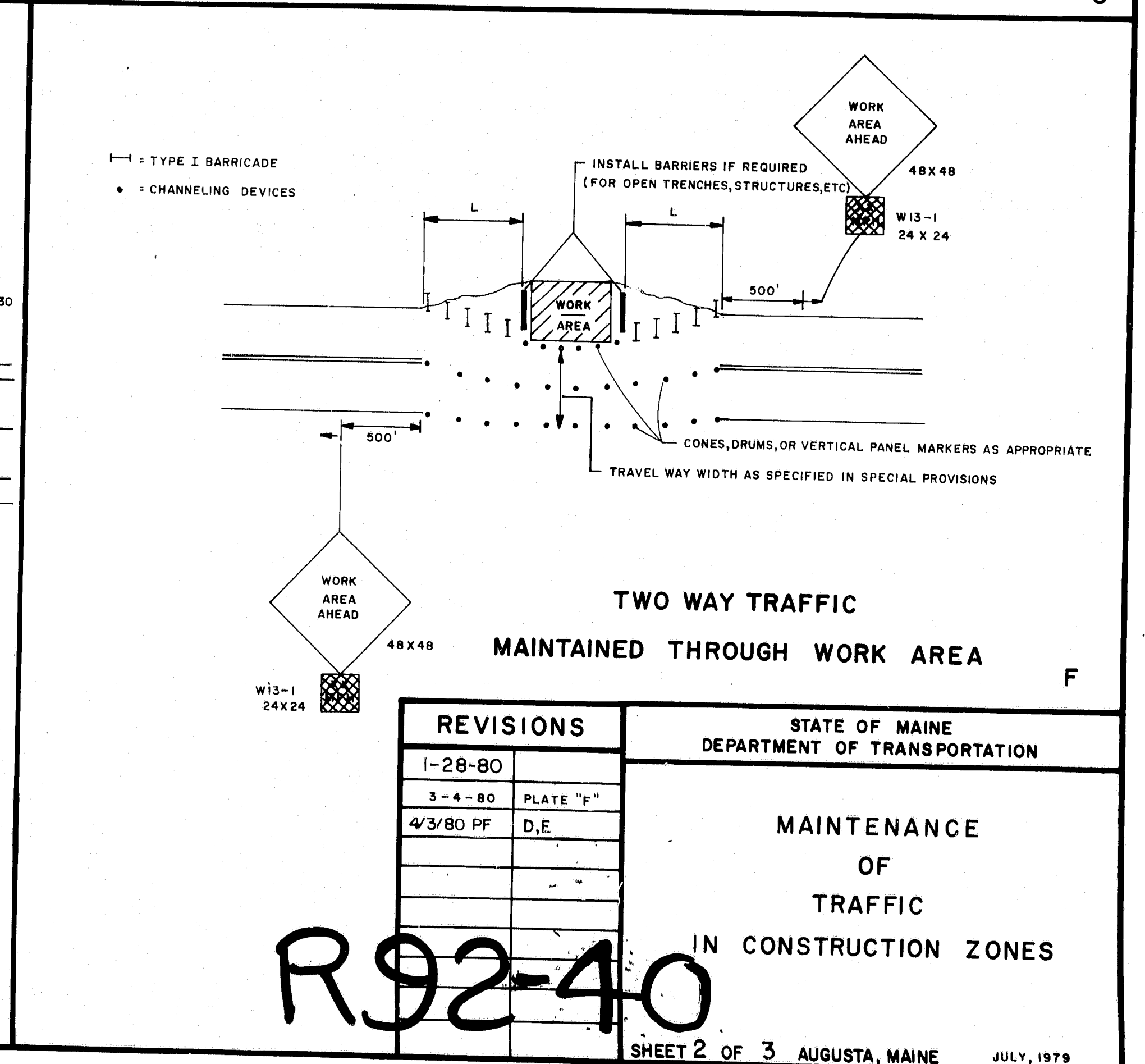
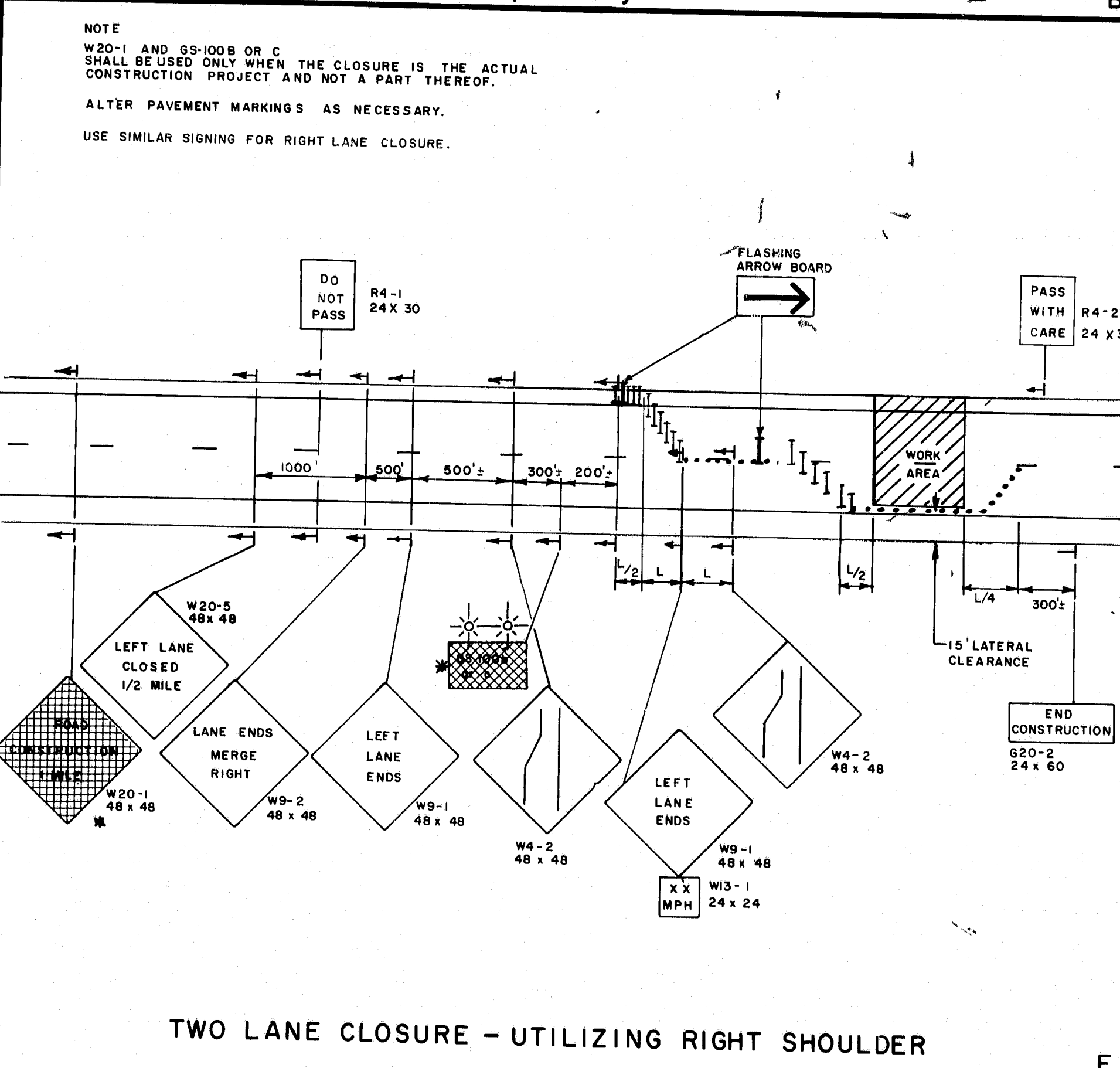
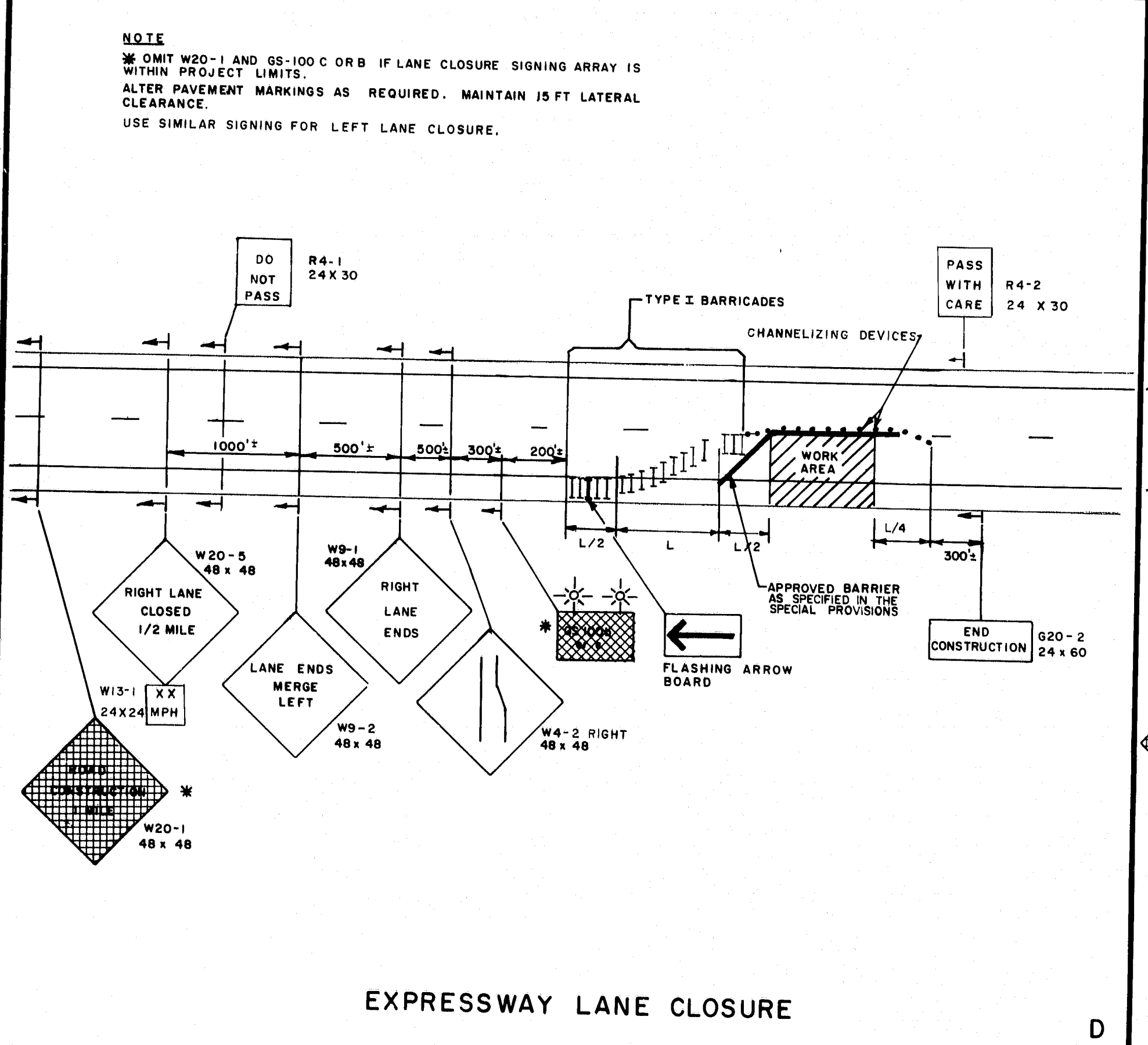
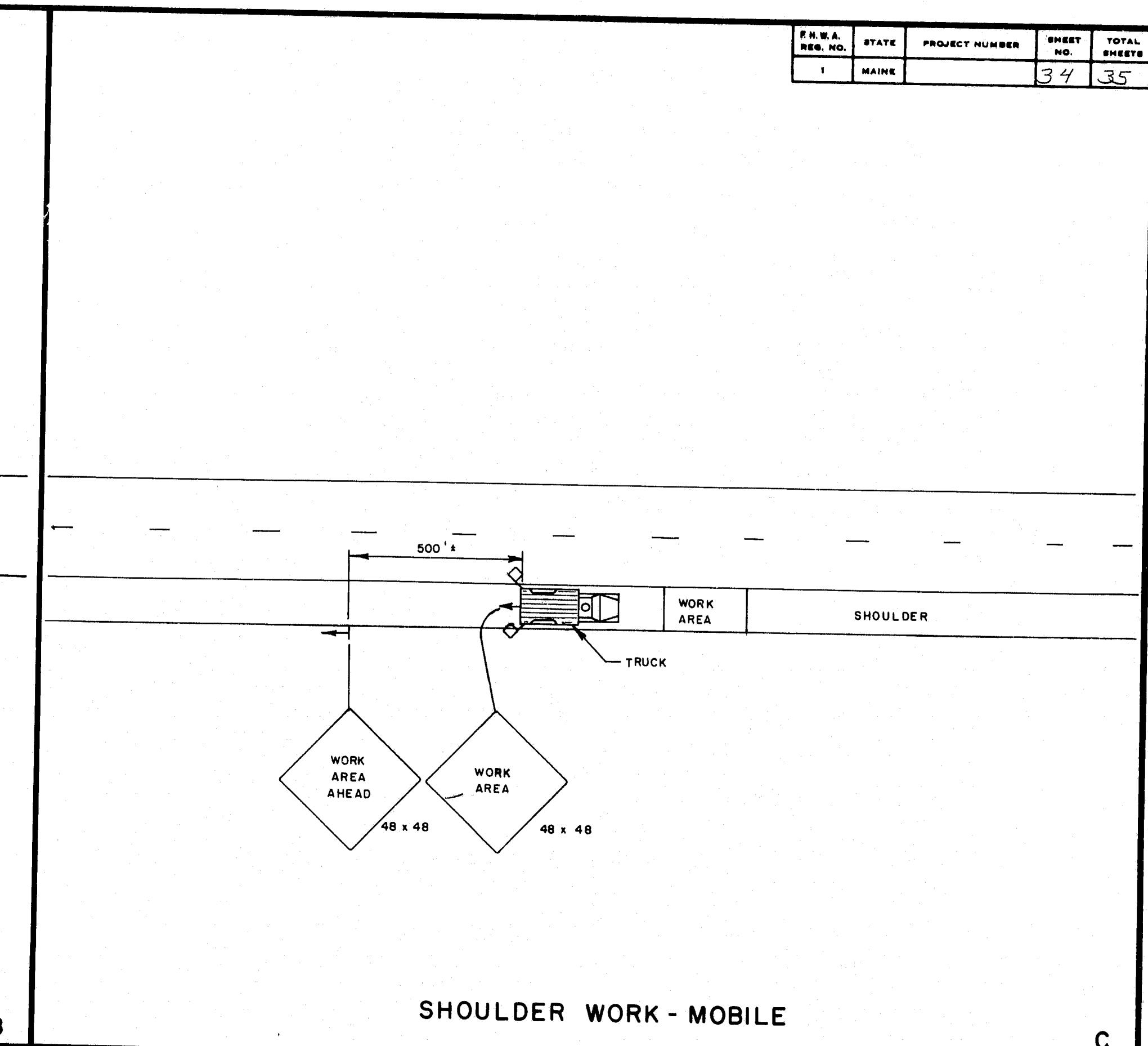
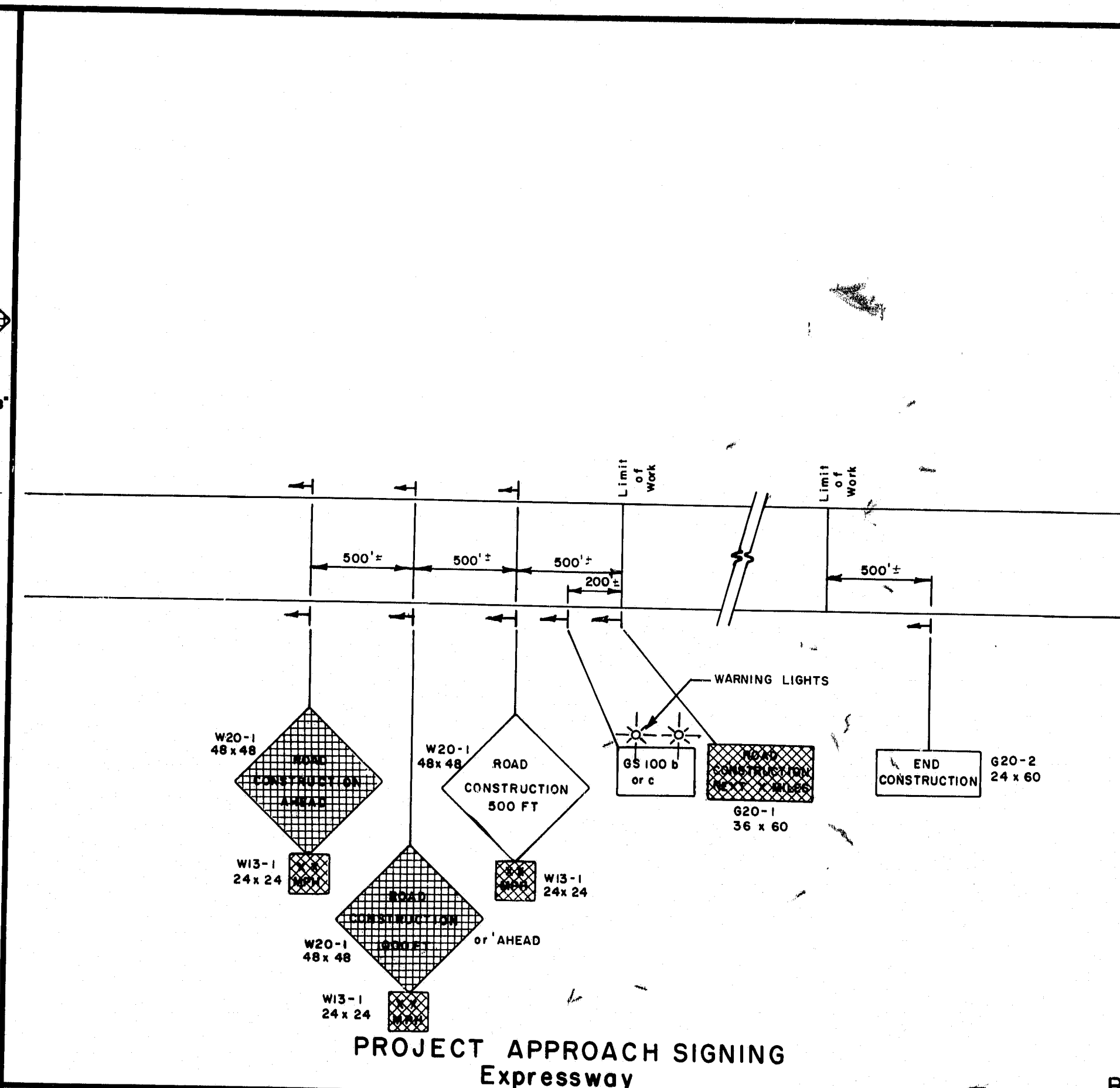
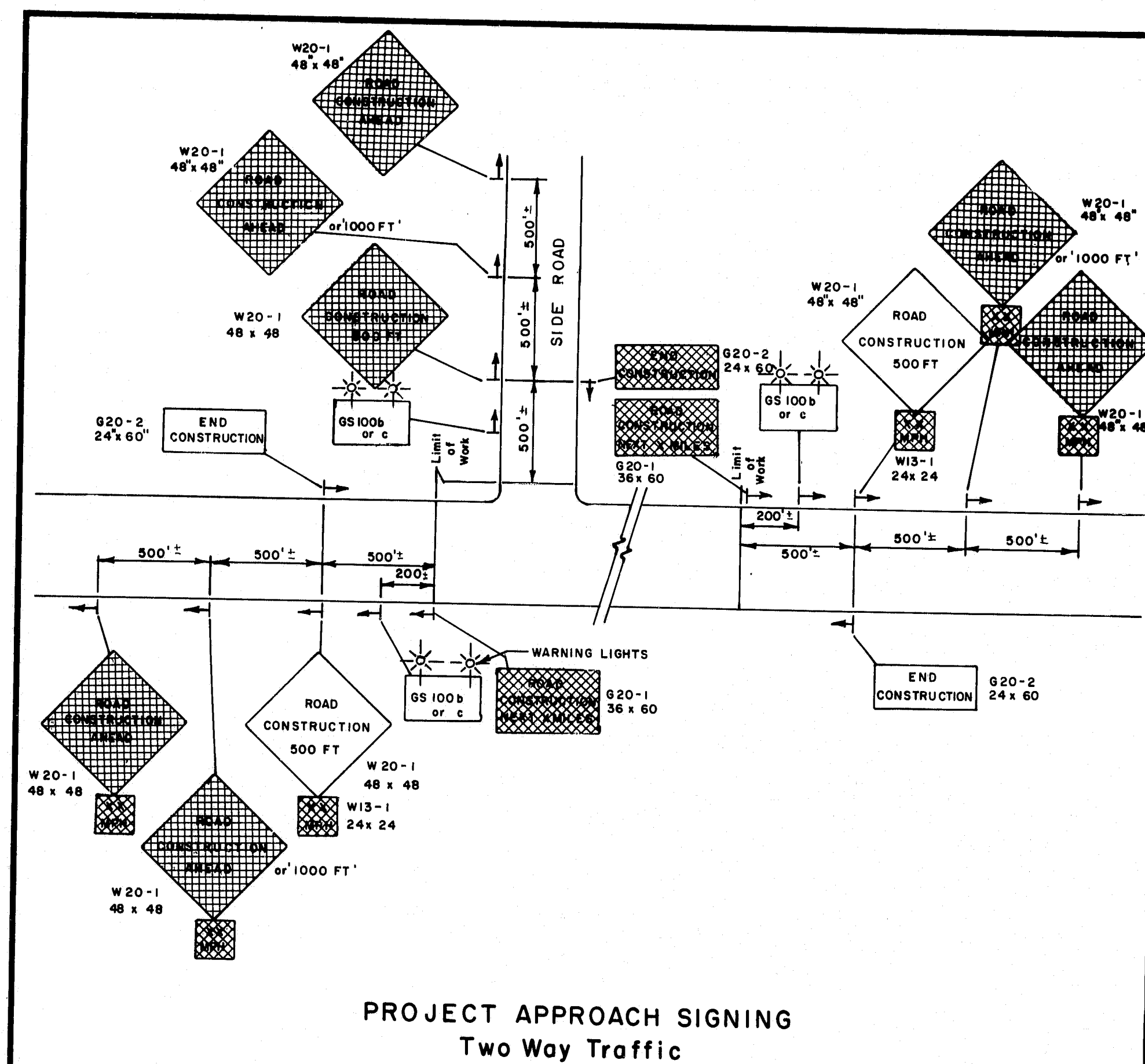
3-4-80	GENERAL NOTES
4/3/80 PF	A,B,C,G,N

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

SHEET 1 OF 3 AUGUSTA, MAINE

R92-39



R.N.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE		34	35

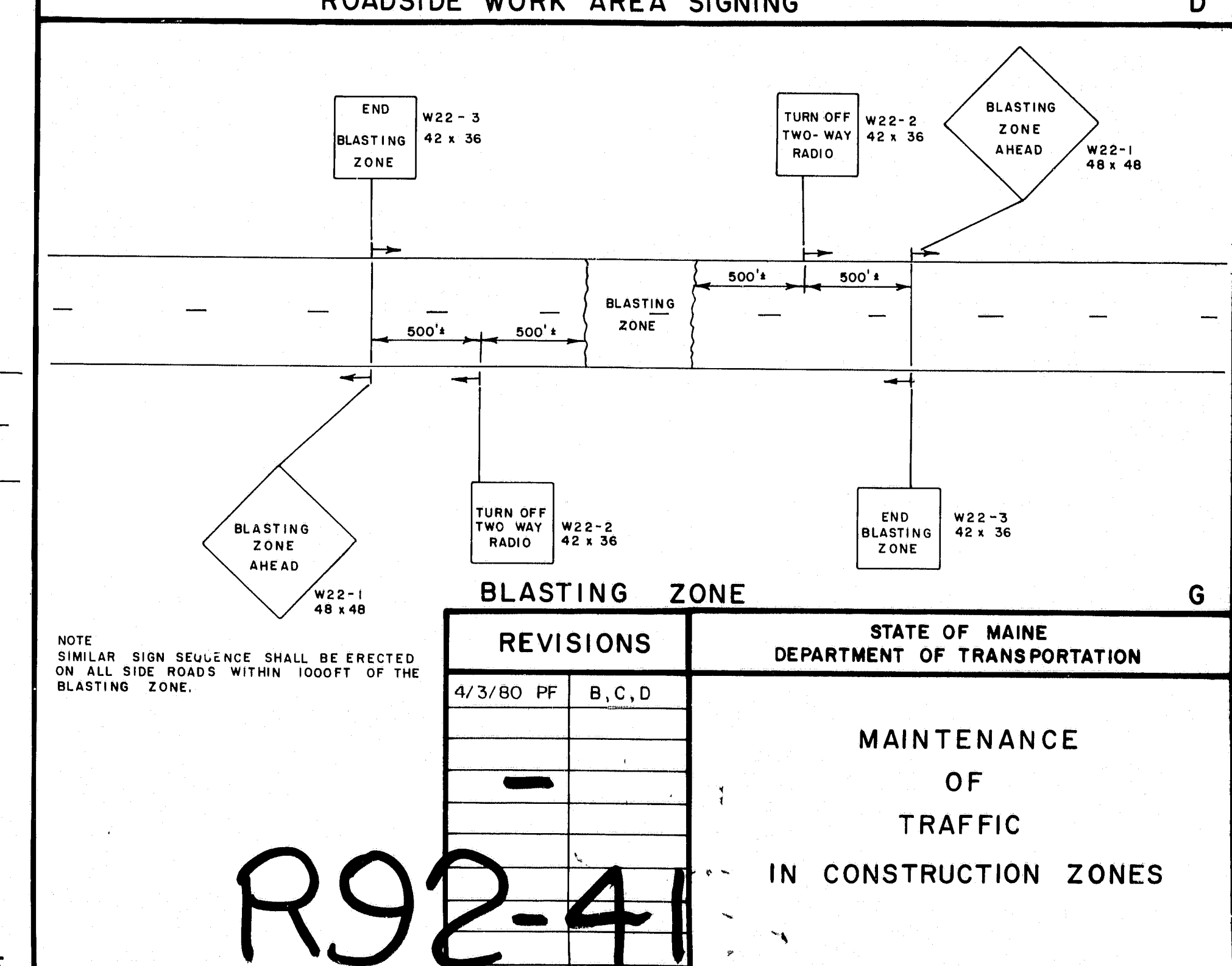
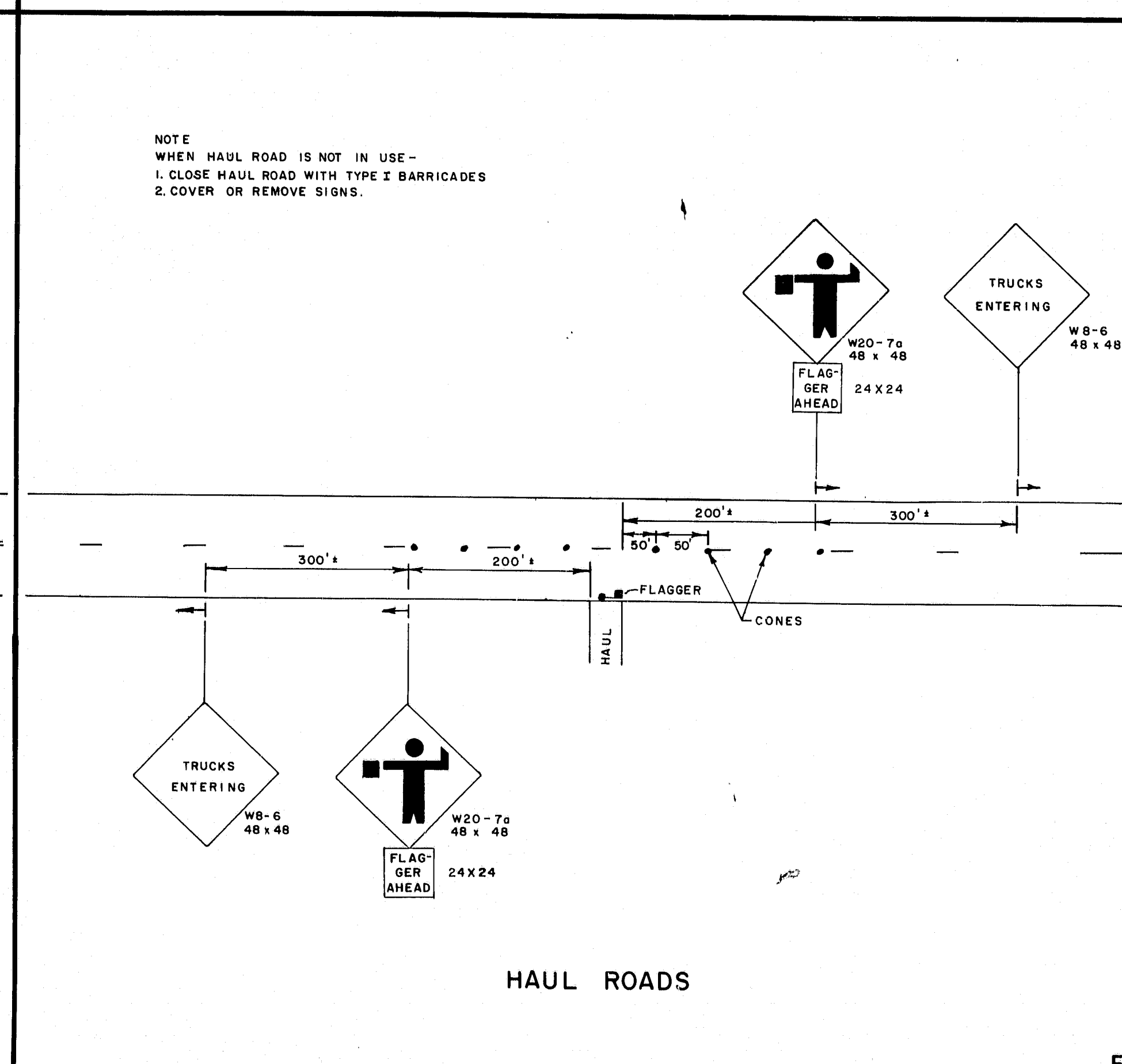
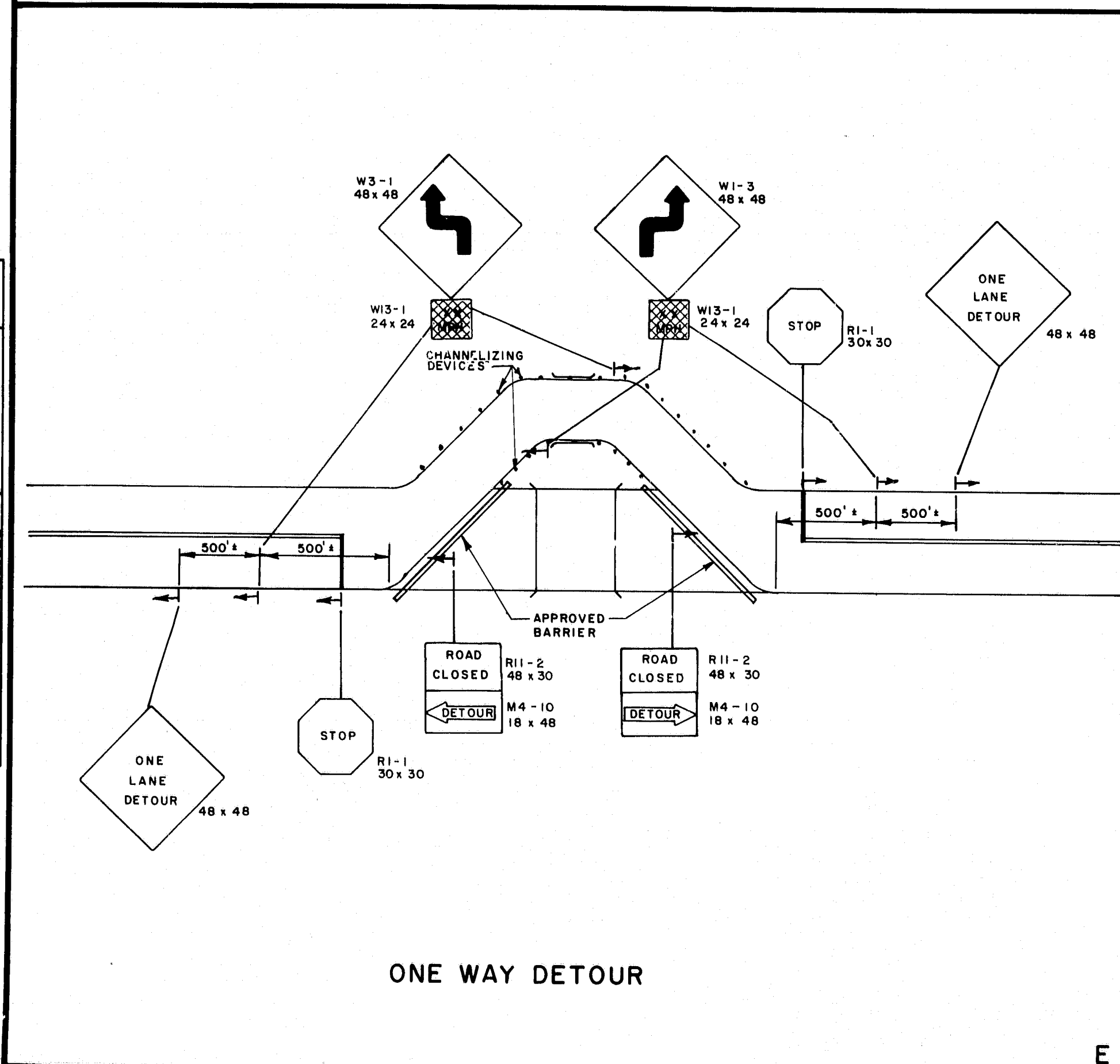
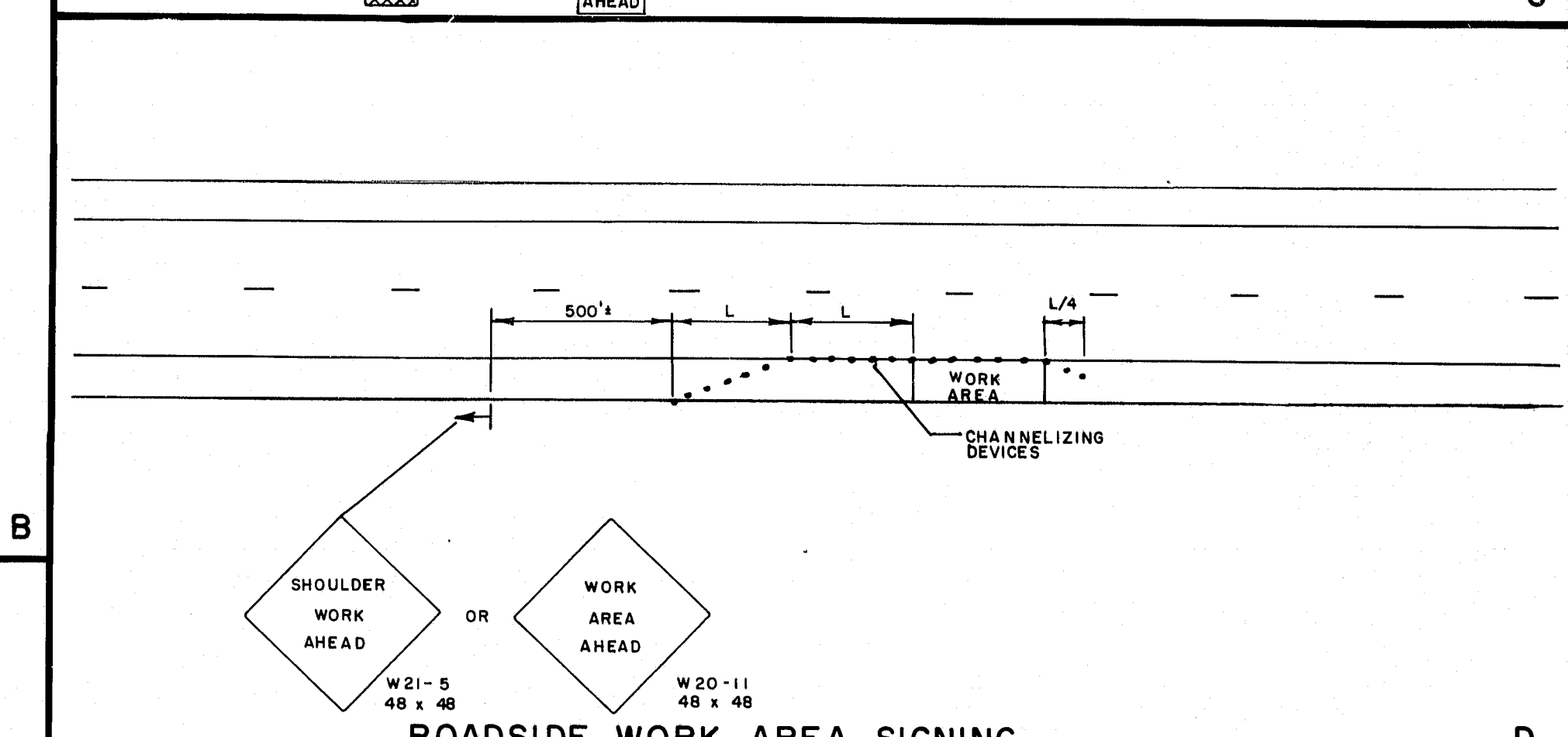
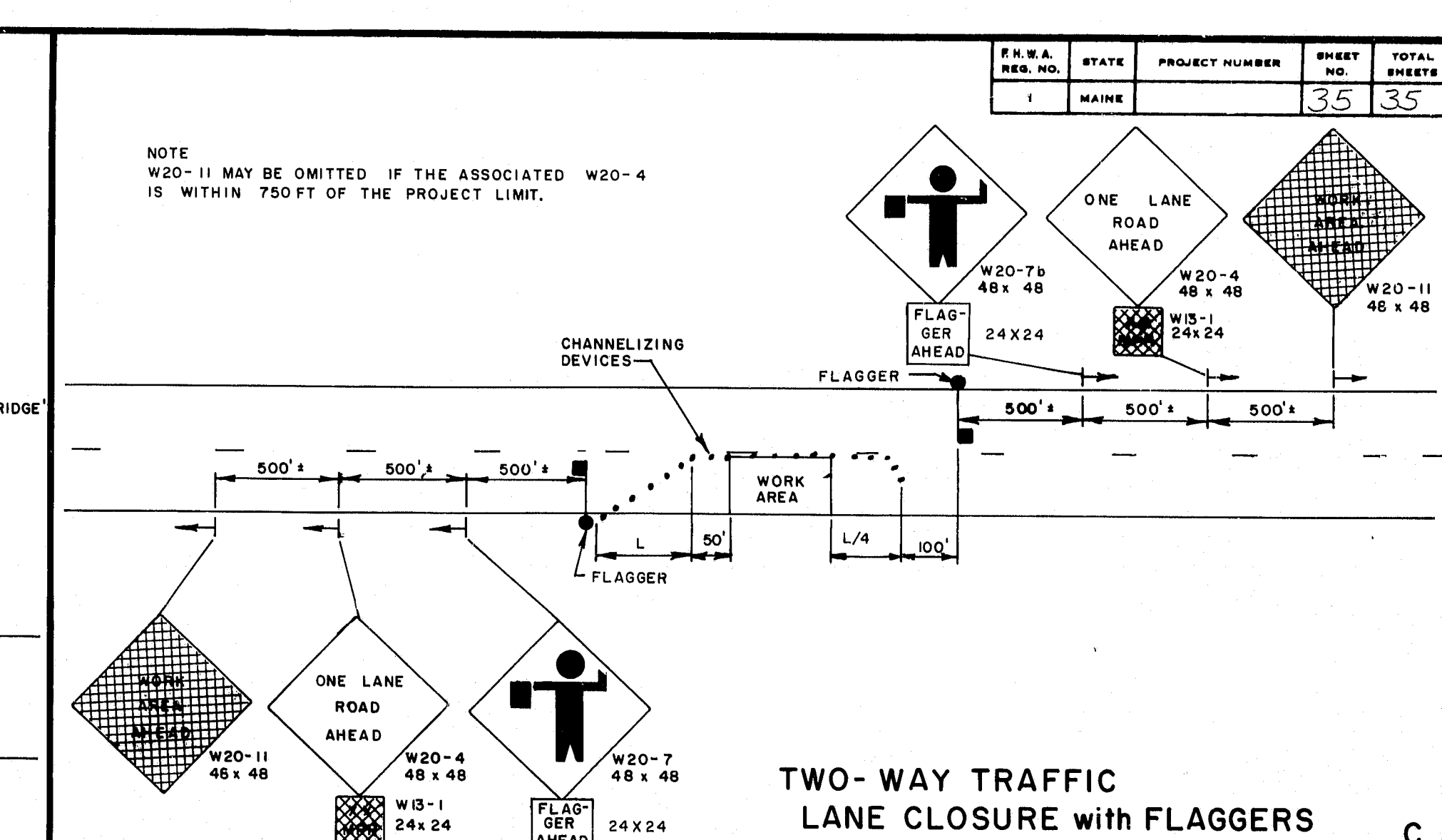
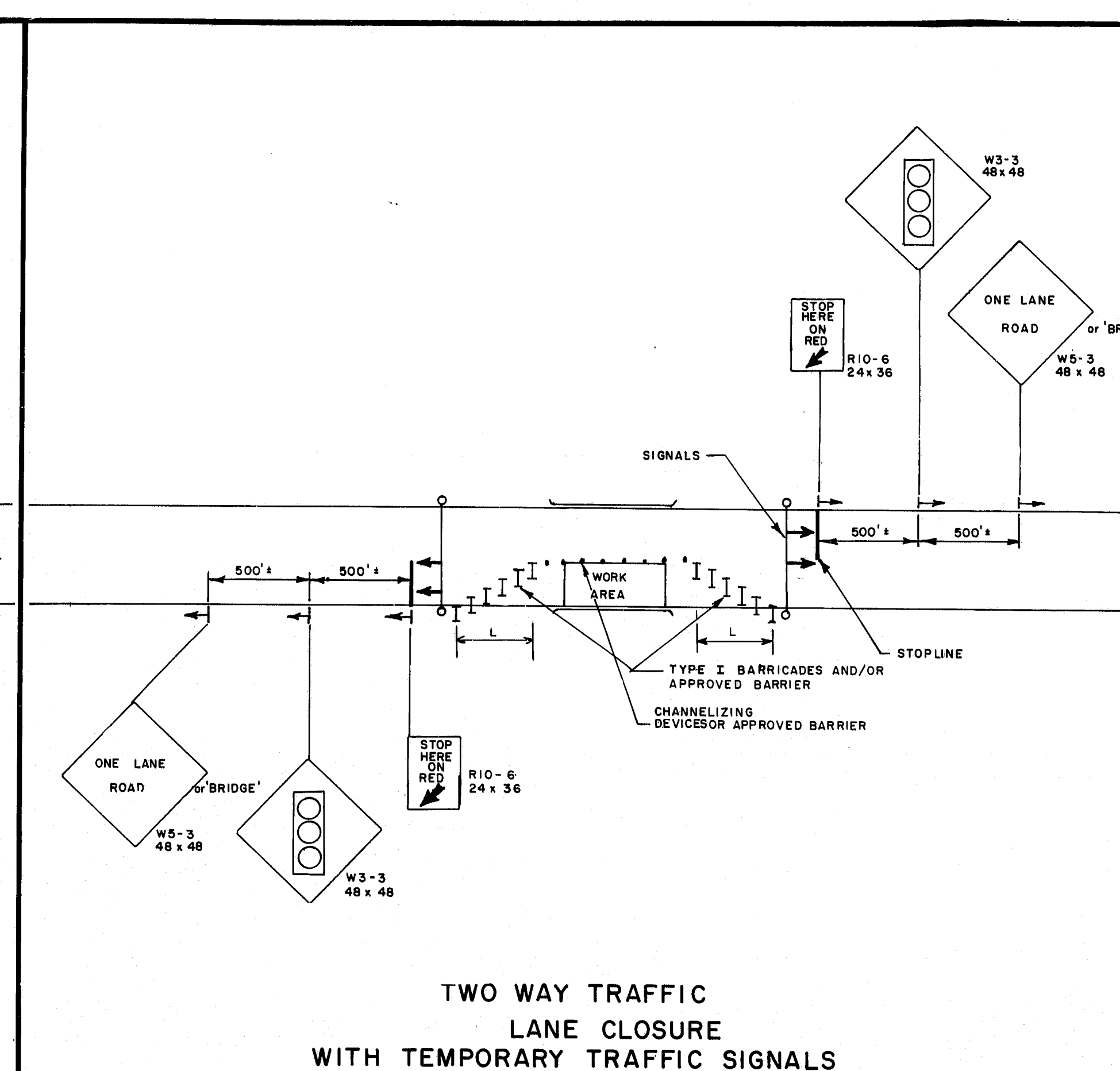
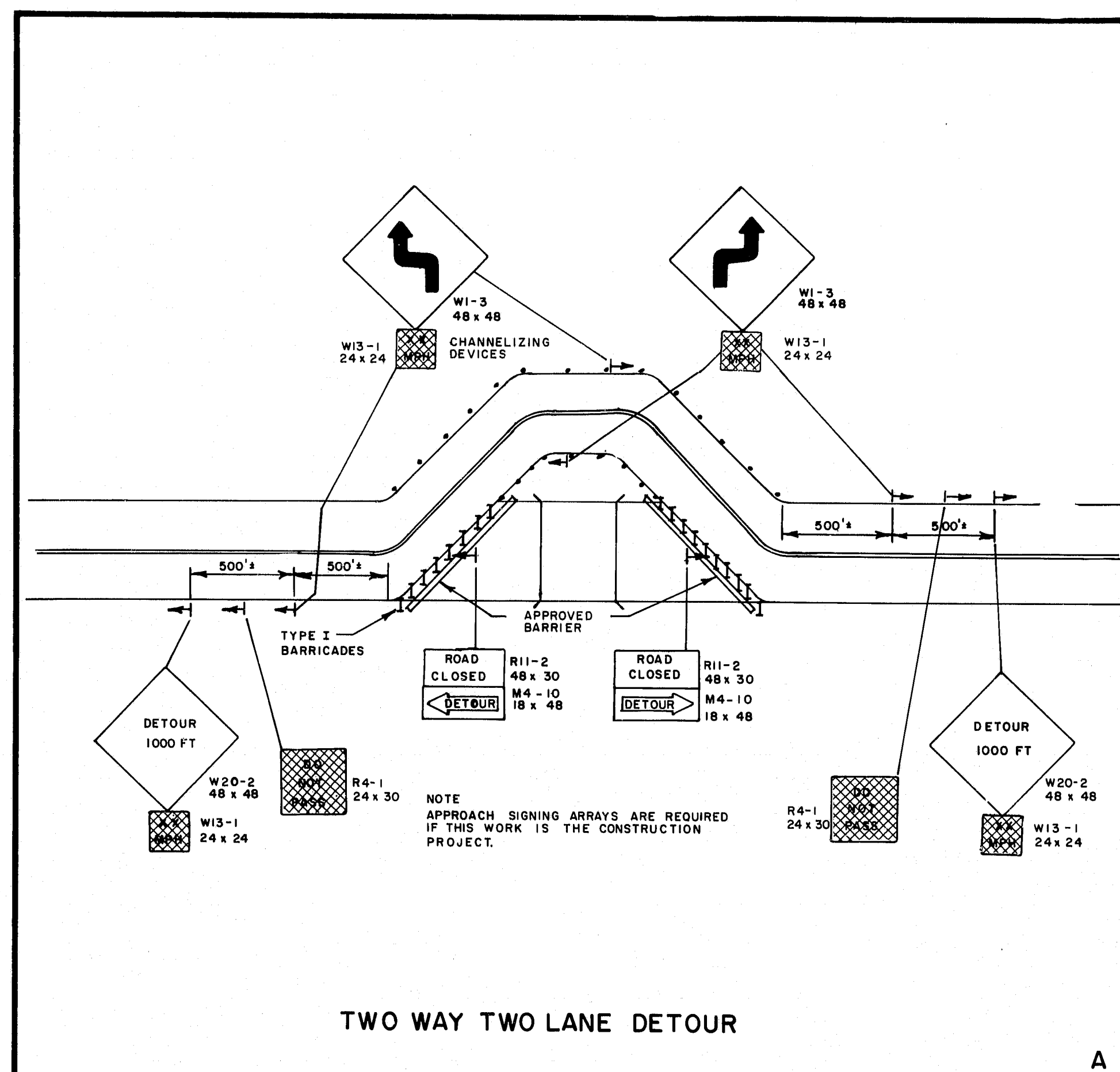
REVISIONS	
1-28-80	
3-4-80	PLATE "F"
4/3/80 PF	D,E

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

R92-40^{IN}

SHEET 2 OF 3 AUGUSTA, MAINE JULY, 1979



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

REVISIONS	
4/3/80 PF	B, C, D
-	
2-4	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

MAINTENANCE
OF
TRAFFIC
IN CONSTRUCTION ZONES

SHEET 3 OF 3 AUGUSTA, MAINE JULY, 197