

# **DESIGN SPECIFICATIONS** A.A.S.H.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1957.

**LOADING**  
H20-S16-44 AS MODIFIED FOR INTERSTATE.  
R = 18,000 R<sub>2</sub> = 1,200 n = 10

**CONTRACT SPECIFICATIONS**  
STATE OF MAINE, STATE HIGHWAY COMMISSION  
STANDARD SPECIFICATIONS REVISION OF JAN. 1956.

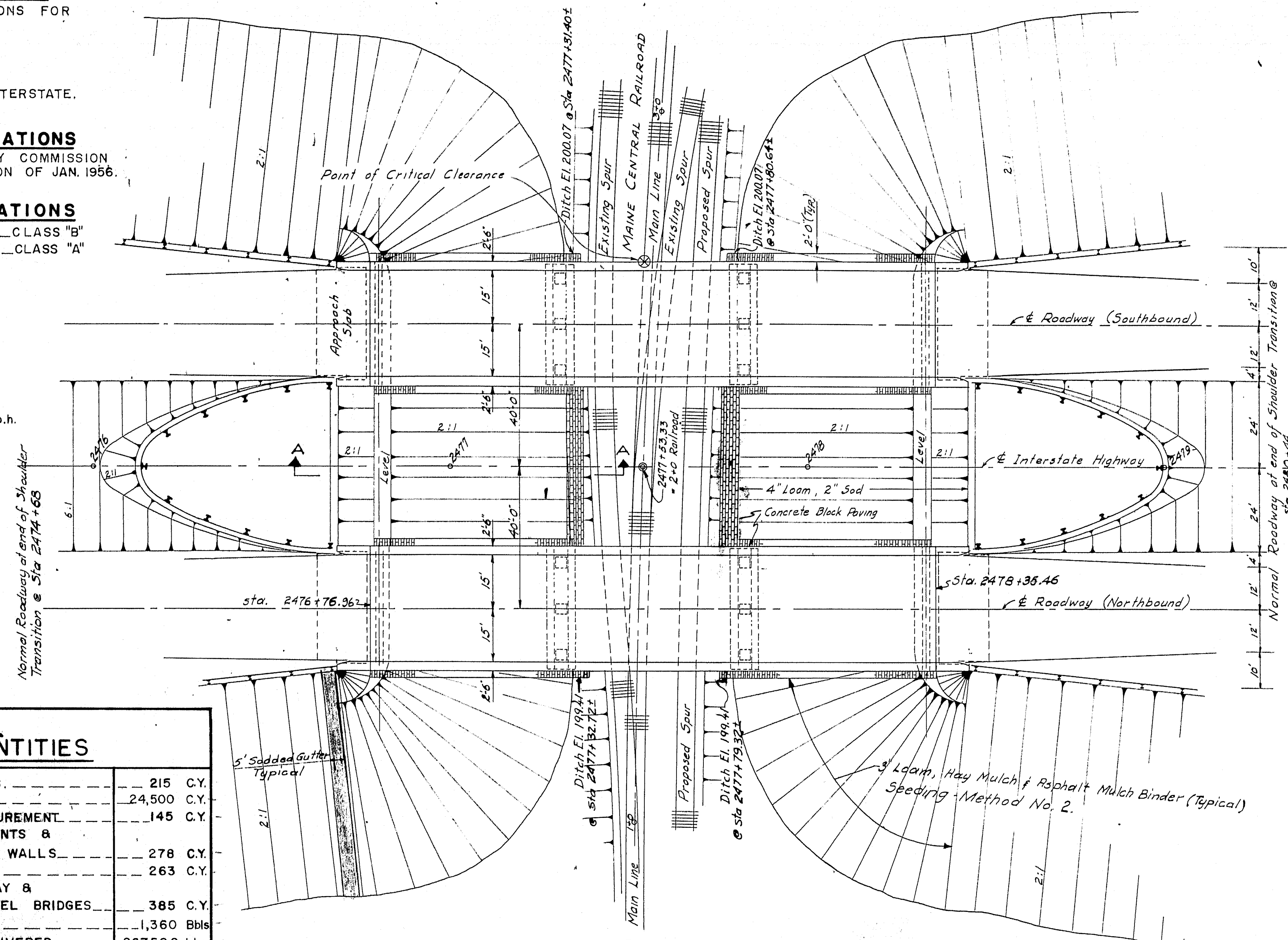
**CONCRETE CLASSIFICATIONS**  
ABUTMENT FOOTINGS CLASS "B"  
ALL OTHER CONCRETE CLASS "A"

## **TRAFFIC**

ADT. 1960 6110  
ADT. 1980 8520  
D.H.V. 11020  
D. 60 %  
T. 11 %  
V. 60 m.p.h.

## **BRIDGE ESTIMATE QUANTITIES**

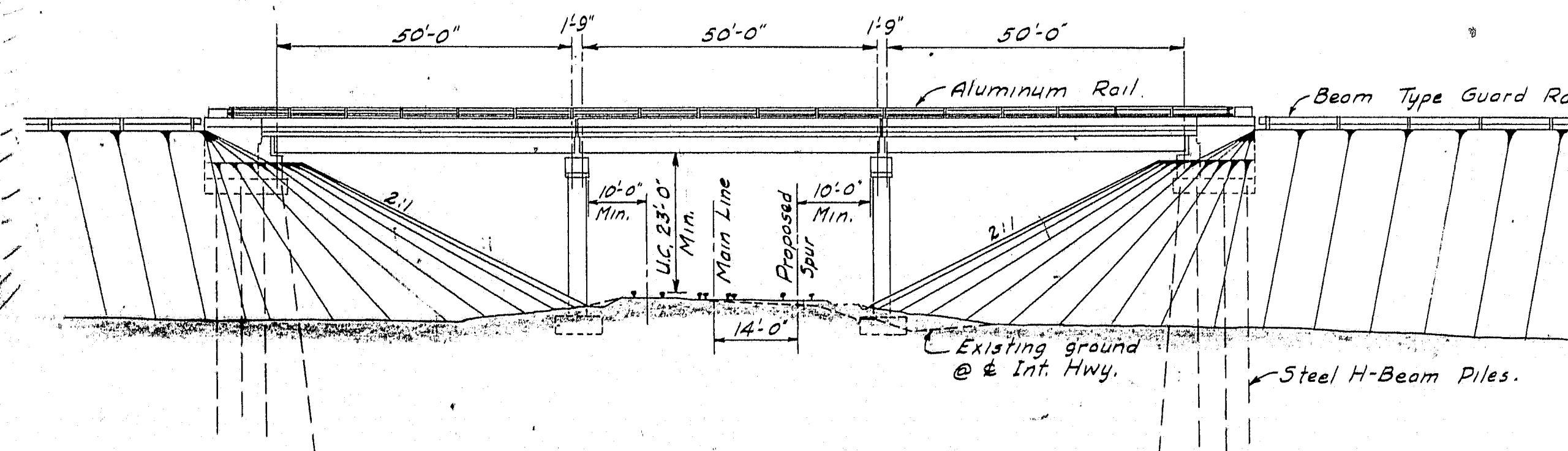
STRUCTURAL EARTH EXCAVATION, PIERS.	215 C.Y.
GRANULAR BORROW	24,500 C.Y.
GRAVEL BASE COURSE, IN PLACE MEASUREMENT	145 C.Y.
PORTLAND CEMENT CONCRETE, ABUTMENTS & RETAINING WALLS	278 C.Y.
PORTLAND CEMENT CONCRETE, PIERS	263 C.Y.
PORTLAND CEMENT CONCRETE, ROADWAY & SIDEWALK SLABS ON STEEL BRIDGES	385 C.Y.
PORTLAND CEMENT	1,360 Bbls
STRUCTURAL STEEL, FABRICATED & DELIVERED	267,500 Lbs.
STRUCTURAL STEEL, ERECTION	267,500 Lbs.
STRUCTURAL STEEL, FIELD PAINTING	267,500 Lbs.
BRONZE OR COPPER-ALLOY BEARING & EXPANSION PLATES, DELIVERED	289 Lbs.
BRONZE OR COPPER-ALLOY BEARING & EXPANSION PLATES, PLACING	289 Lbs.
REINFORCING STEEL, DELIVERED	136,400 Lbs.
REINFORCING STEEL, PLACING	136,400 Lbs.
SHEAR CONNECTORS, RAILROAD BRIDGE	L.S.
STEEL H-BEAM PILES 42 Lbs/Ft.	1,680 L.F.
ALUMINUM RAIL	665 L.F.
SLOPE PAVING	1,150 S.Y.
LOAM BORROW	205 C.Y.
SODDING	650 S.Y.
SEEDING - METHOD #2	15 Units
HAY MULCH	1.5 Tons
ASPHALT MULCH BINDER	70 Gals.



**PLAN**

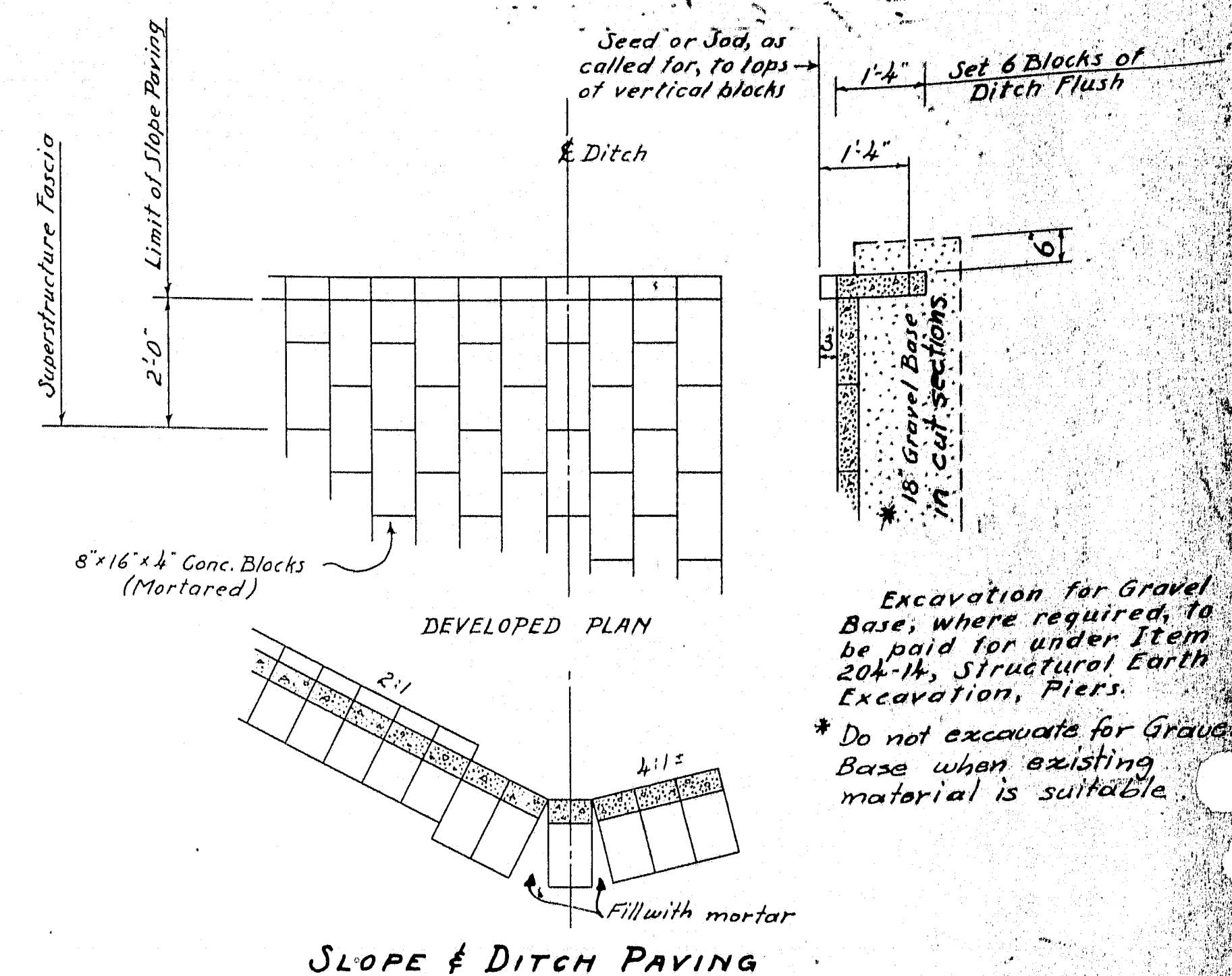
Scale: 1" = 20'

This contract includes roadway construction up to the top of the gravel base course only.

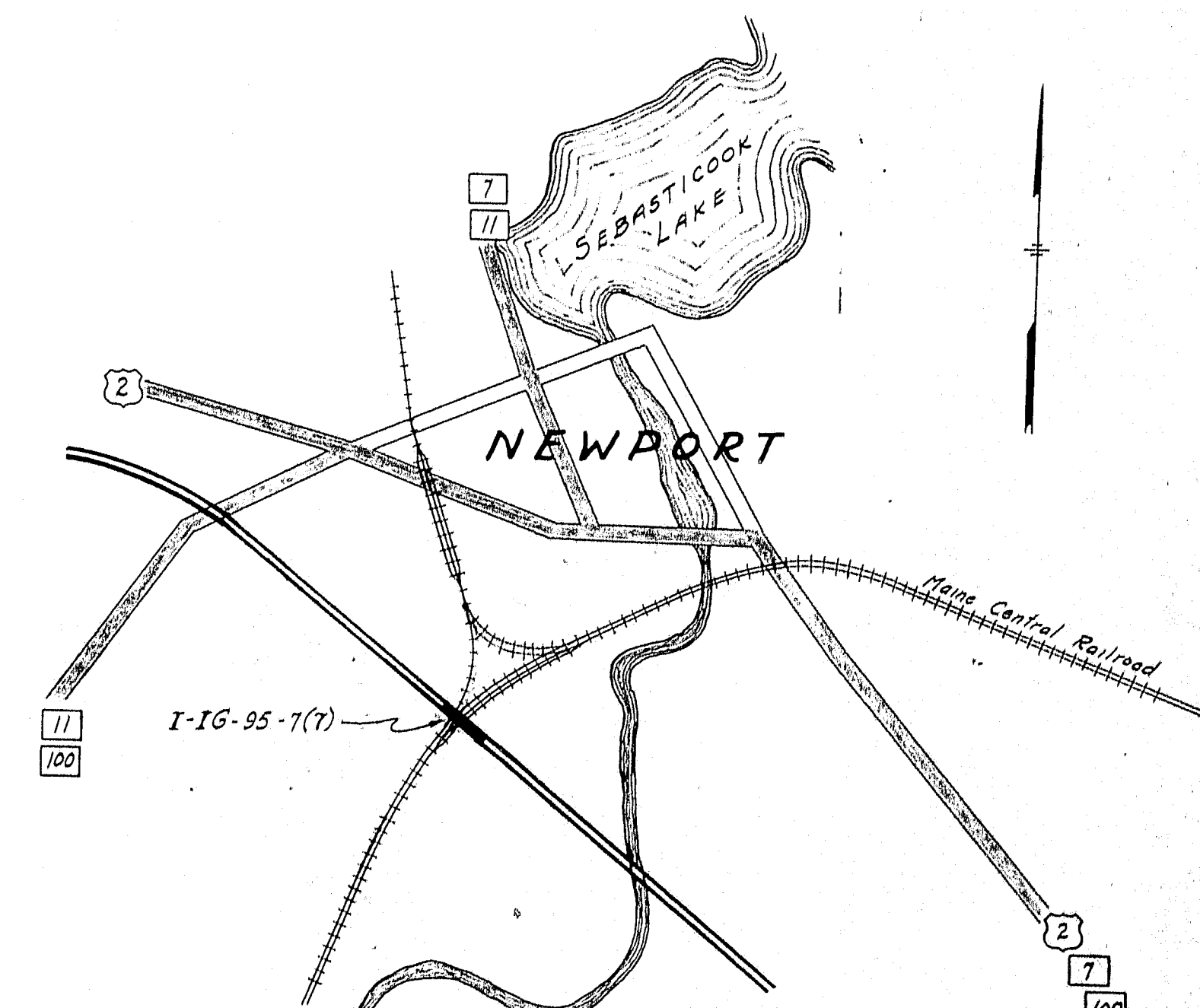


**ELEVATION**

Scale: 1" = 20'

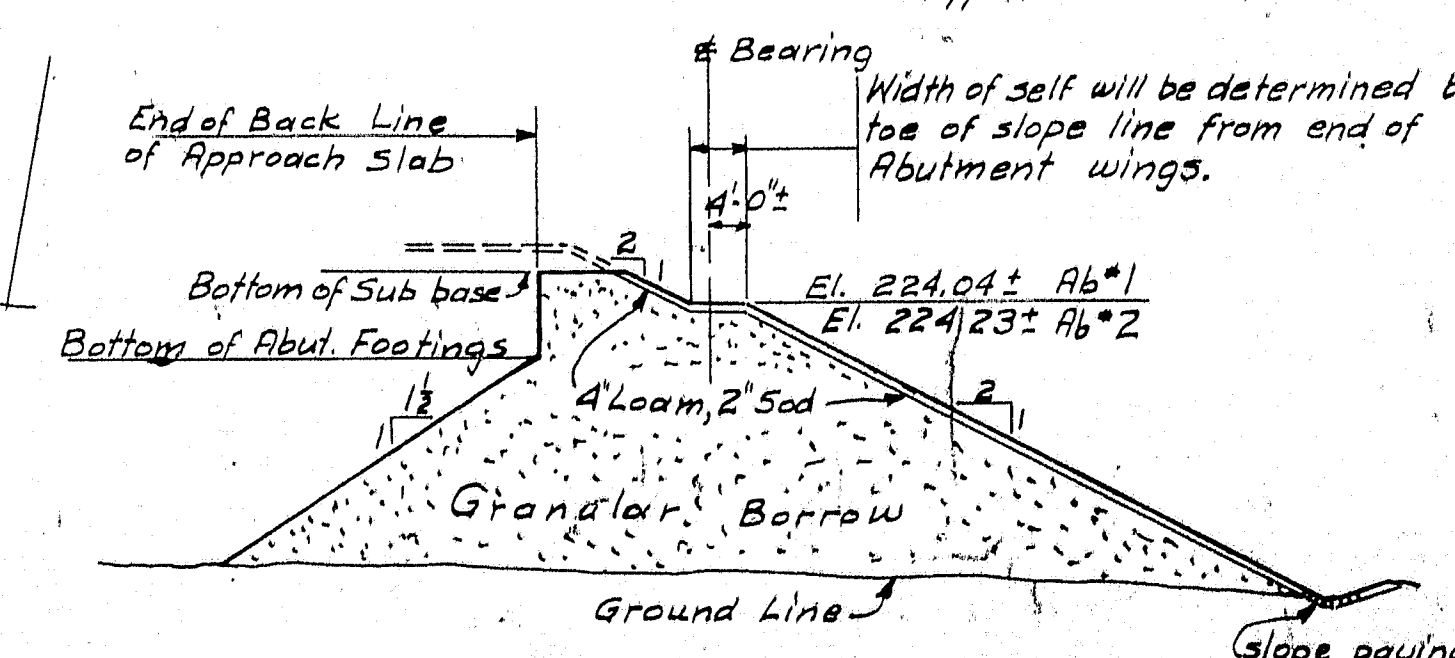


Excavation for Gravel Base, where required, to be paid for under Item 204-H, Structural Earth Excavation, Piers.  
\* Do not excavate for Gravel Base when existing material is suitable.



**LOCATION MAP**

Approx. Scale: 1" = 4 mi.



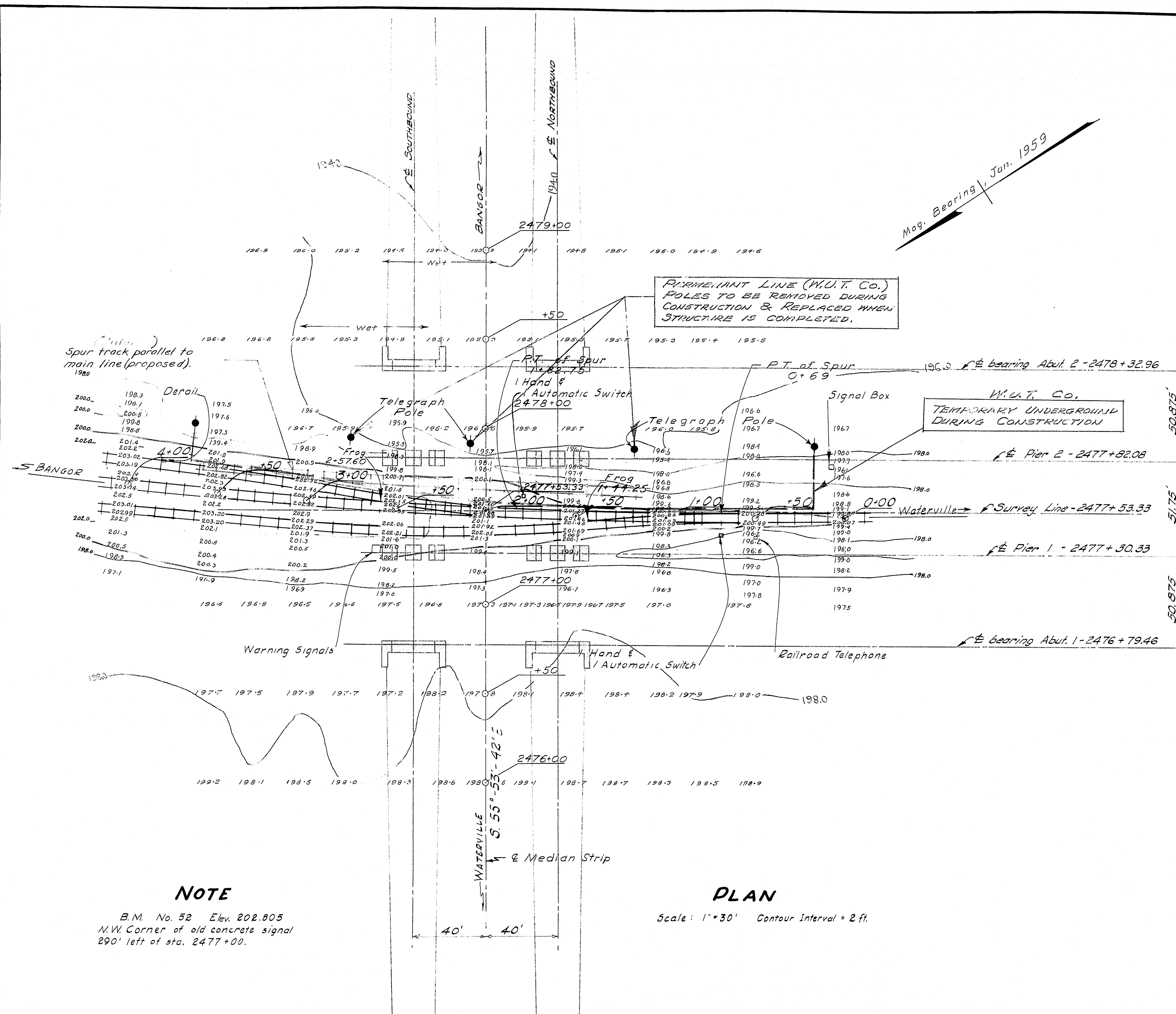
**SECTION A-A**

Scale: 1" = 20'

PLAN - F.B.F. TRACE - T.H.K. CHECK - T.H.K.	BRIDGE NO. SURVEY PLOT
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
<b>RAILROAD BRIDGE</b>	
OVER	
<b>MAINE CENTRAL RAILROAD</b>	
IN THE TOWN OF	
<b>NEWPORT</b>	
<b>PENOBSCOT COUNTY</b>	
GENERAL PLAN	
SHEET 1 OF 11 AUGUSTA, MAINE	

1582



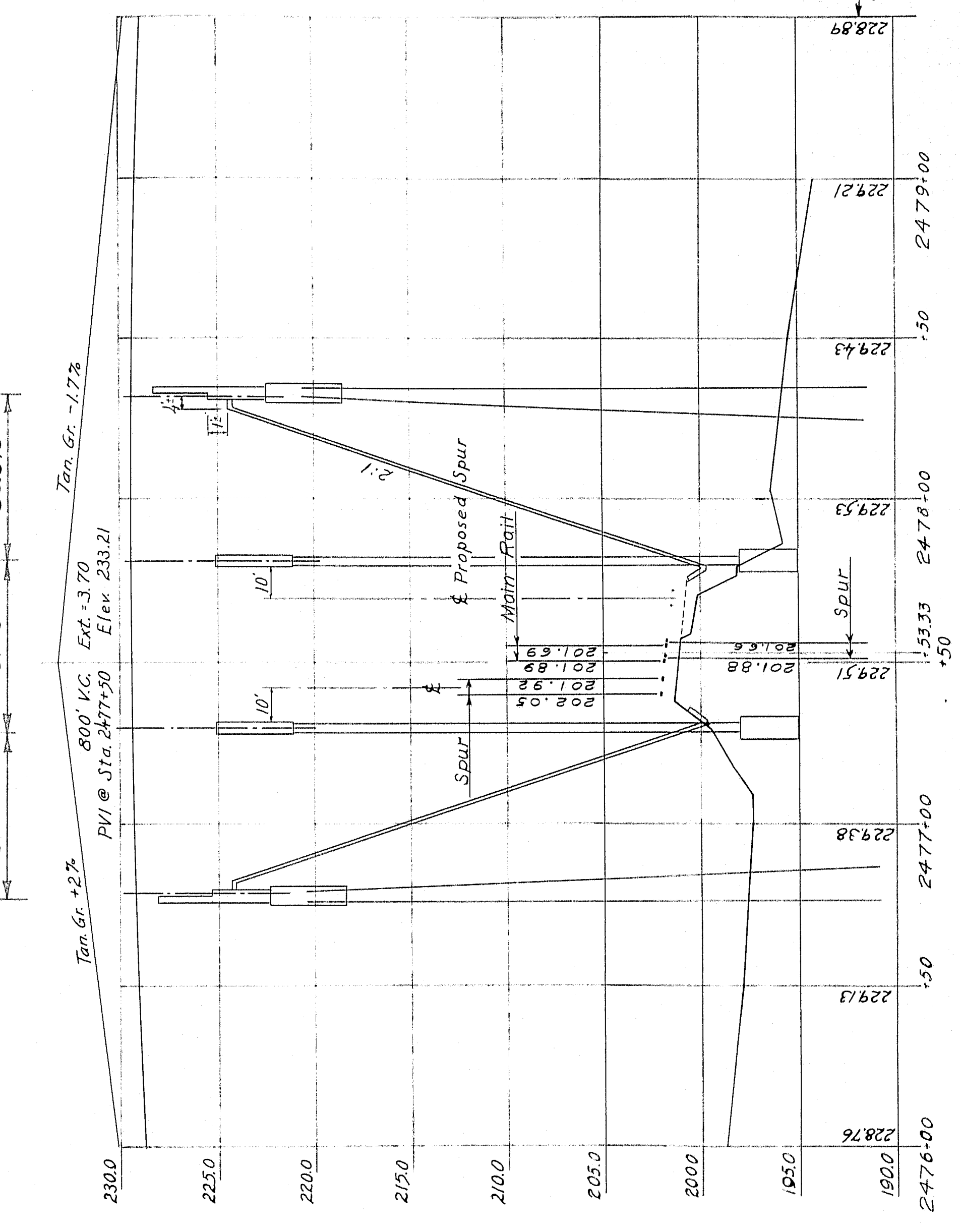


# NOTE

B.M. No. 52 Elev. 202.805  
N.W. Corner of old concrete signal  
290' left of sta. 2477+00.

# PLAN

Scale: 1"=30' Contour Interval = 2 ft.



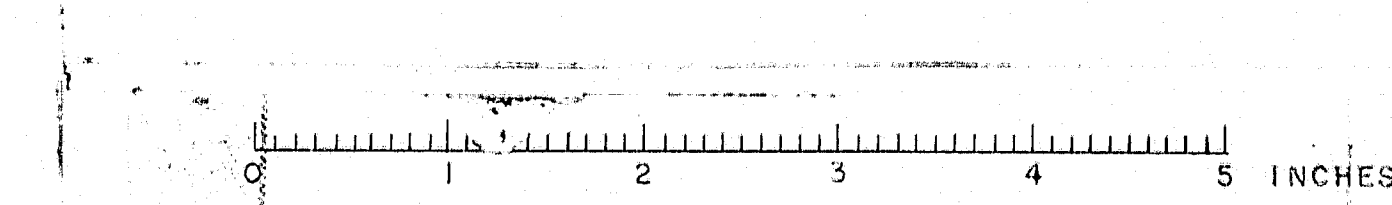
# PROFILE

See Sheet #1 for Details of  
Slope & Ditch Paving

Horiz. Scale: 1"=30' Vert. Scale: 1"=5'

DESIGN: J.R. FORTIER	BRIDGE NO. BLAKE
TRACE: T.H.K.	SURVEY PLOT
CHECK: J.R. FORTIER	
STATE HIGHWAY COMMISSION	
BRIDGE DIVISION	
RAILROAD BRIDGE	
OVER	
MAINE CENTRAL RAILROAD	
IN THE TOWN OF	
NEWPORT	
PENOBSCOT COUNTY	
SURVEY	
SHEET 2 OF 11 AUGUSTA, MAINE JAN. 1959	

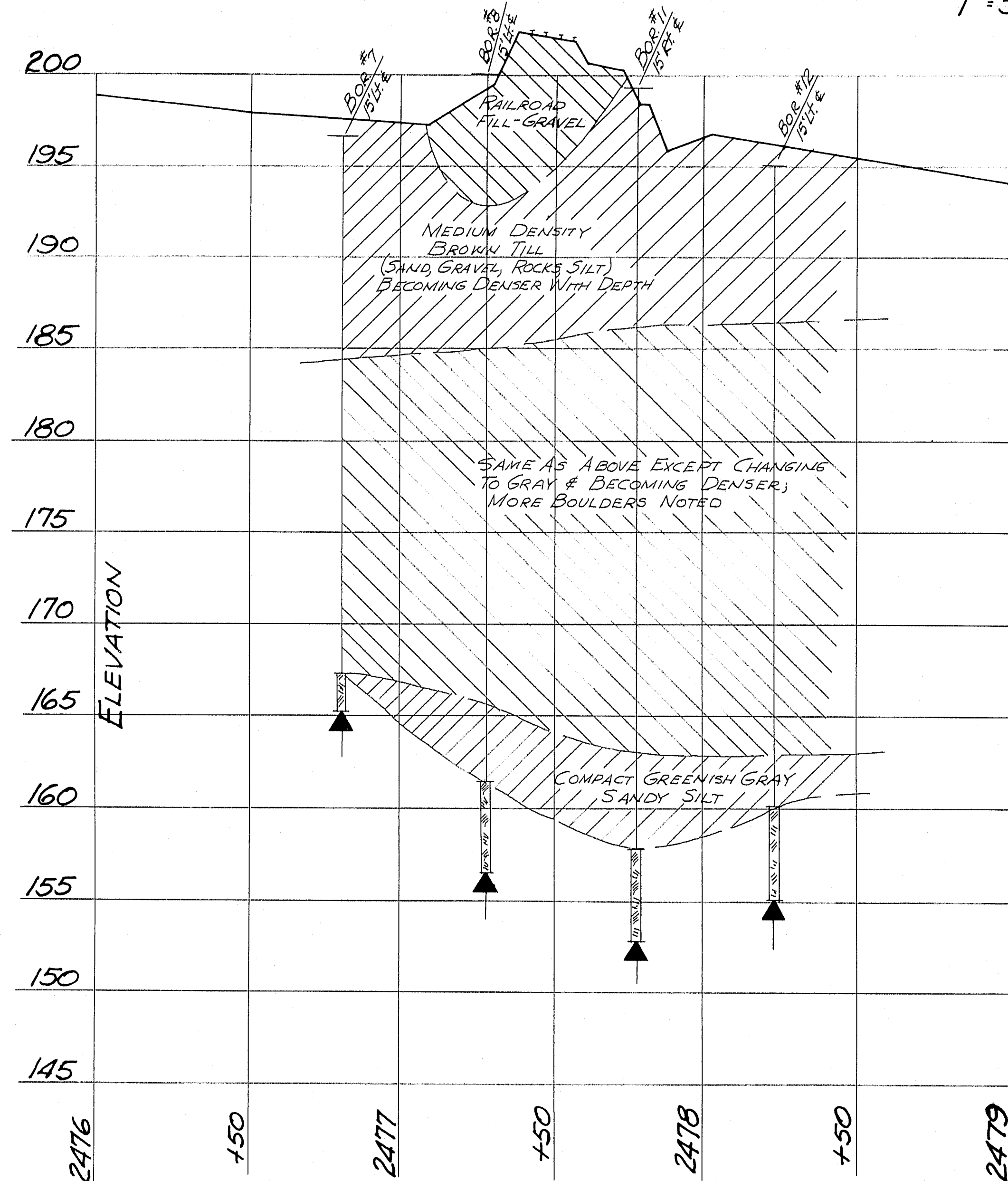
M-1583



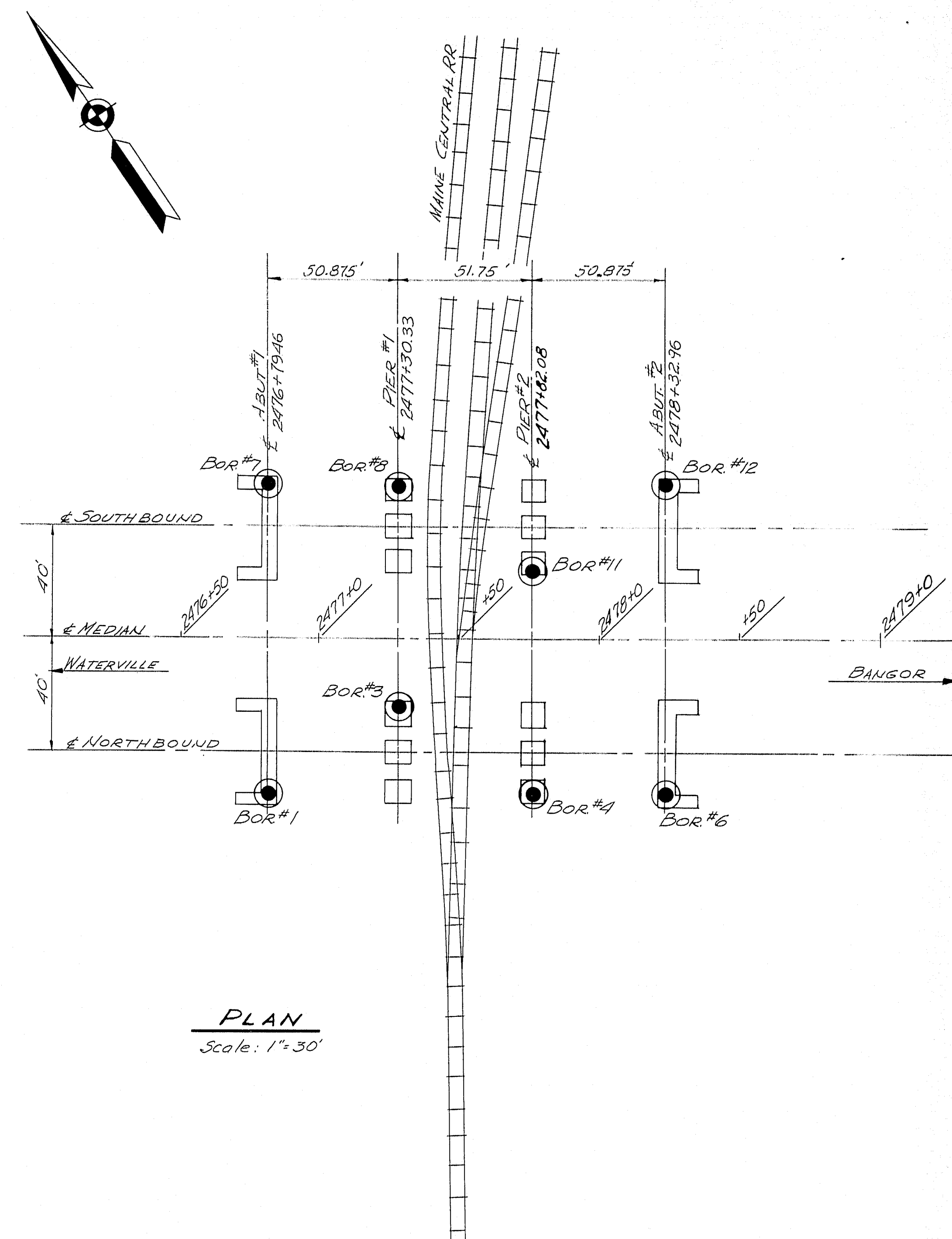
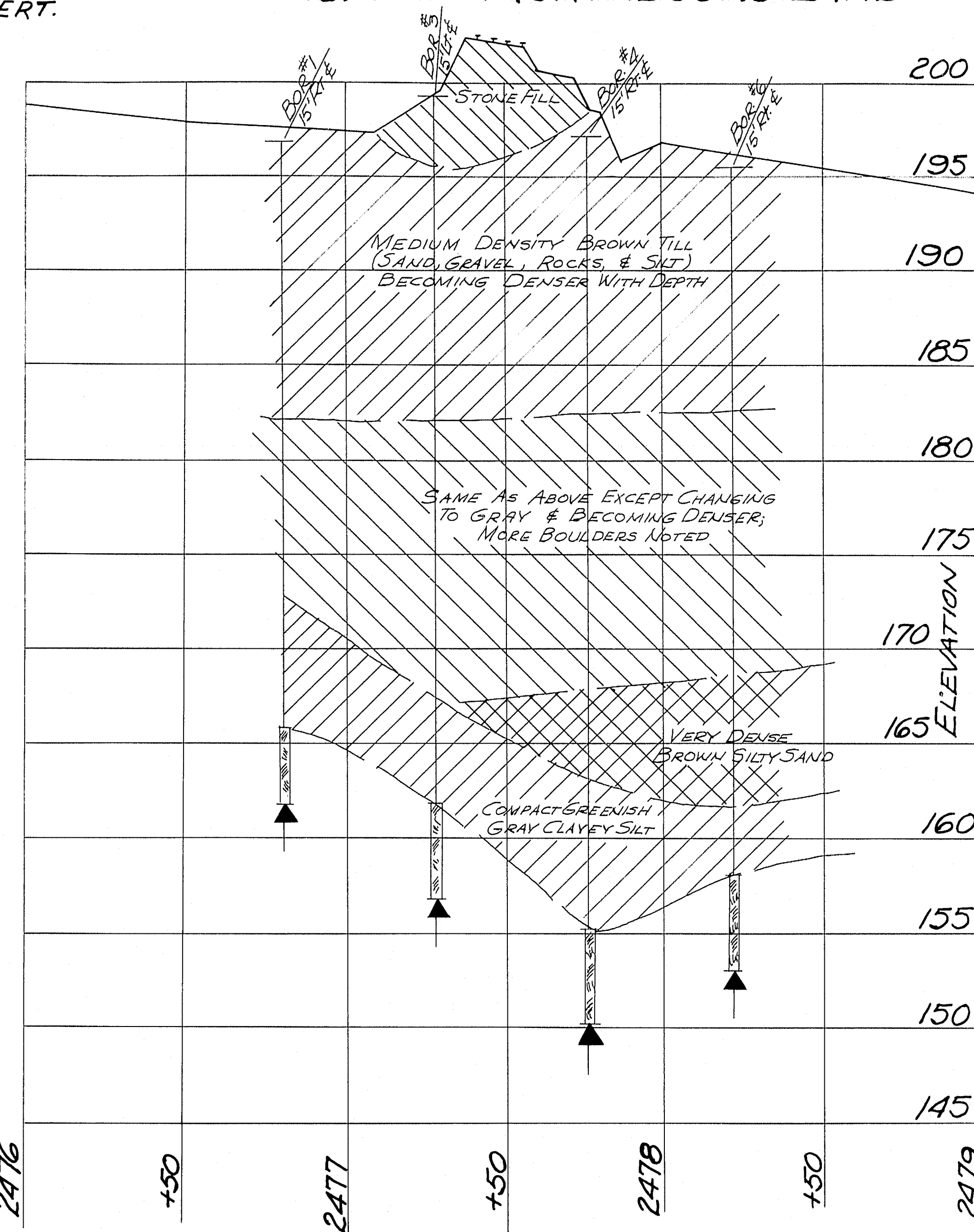
D. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-16-95-7(7)	11	76

PROFILE - SOUTHBOUND LANE

SCALE:  
1"=30' HOR.  
1"=5' VERT.



PROFILE - NORTHBOUND LANE



PLAN  
Scale: 1"=30'

DESIGN - F.M.B.  
TRACE - F.M.V.  
CHECK - T.H.K.

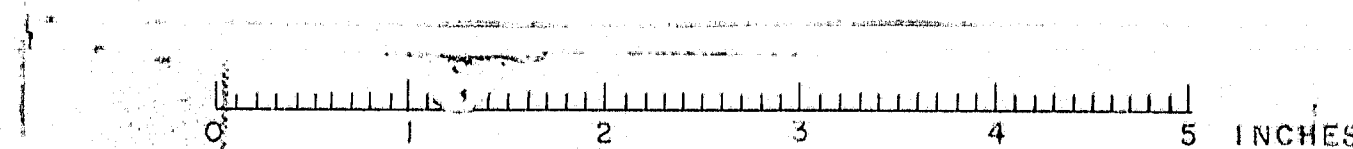
BRIDGE NO.  
SURVEY -  
PLOT -

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION

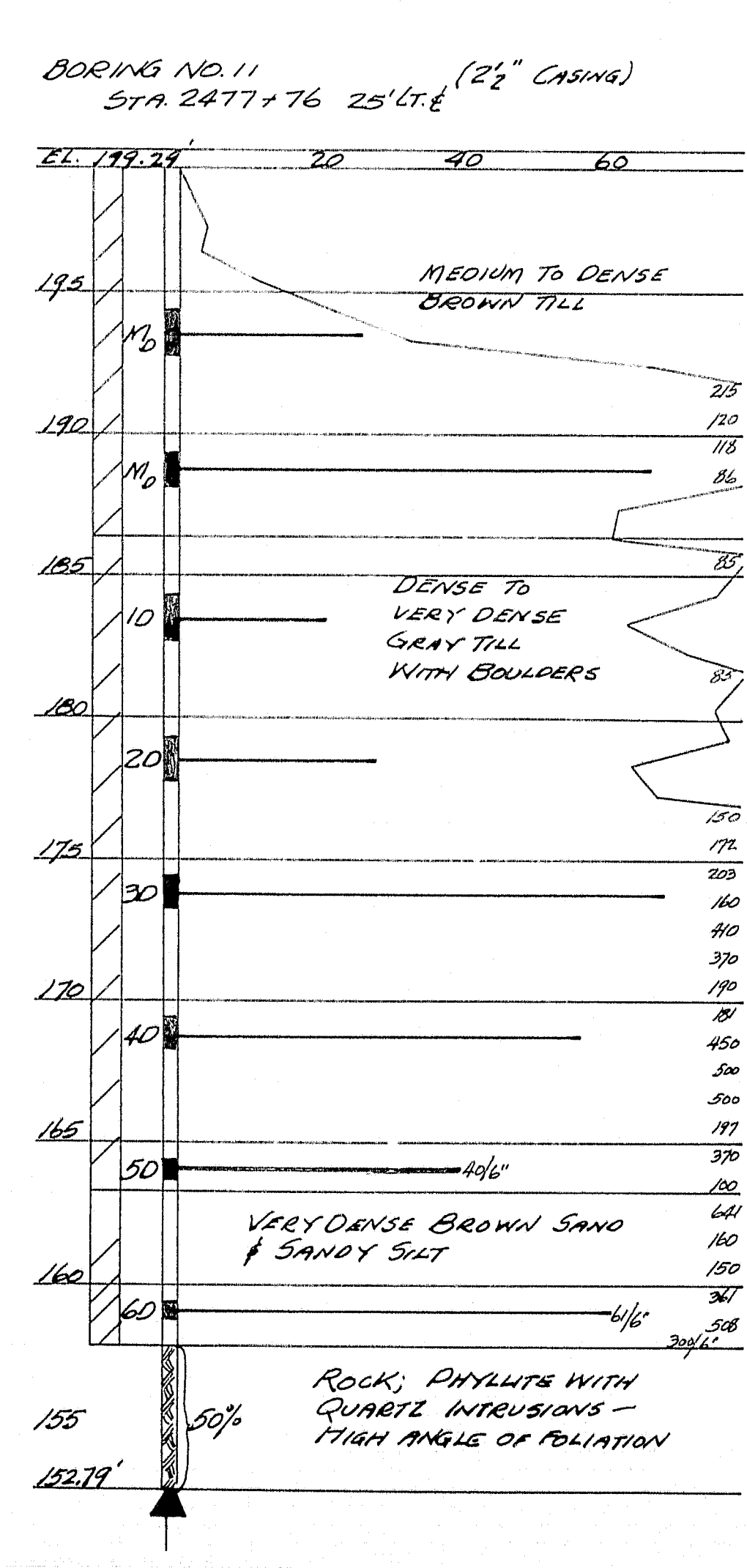
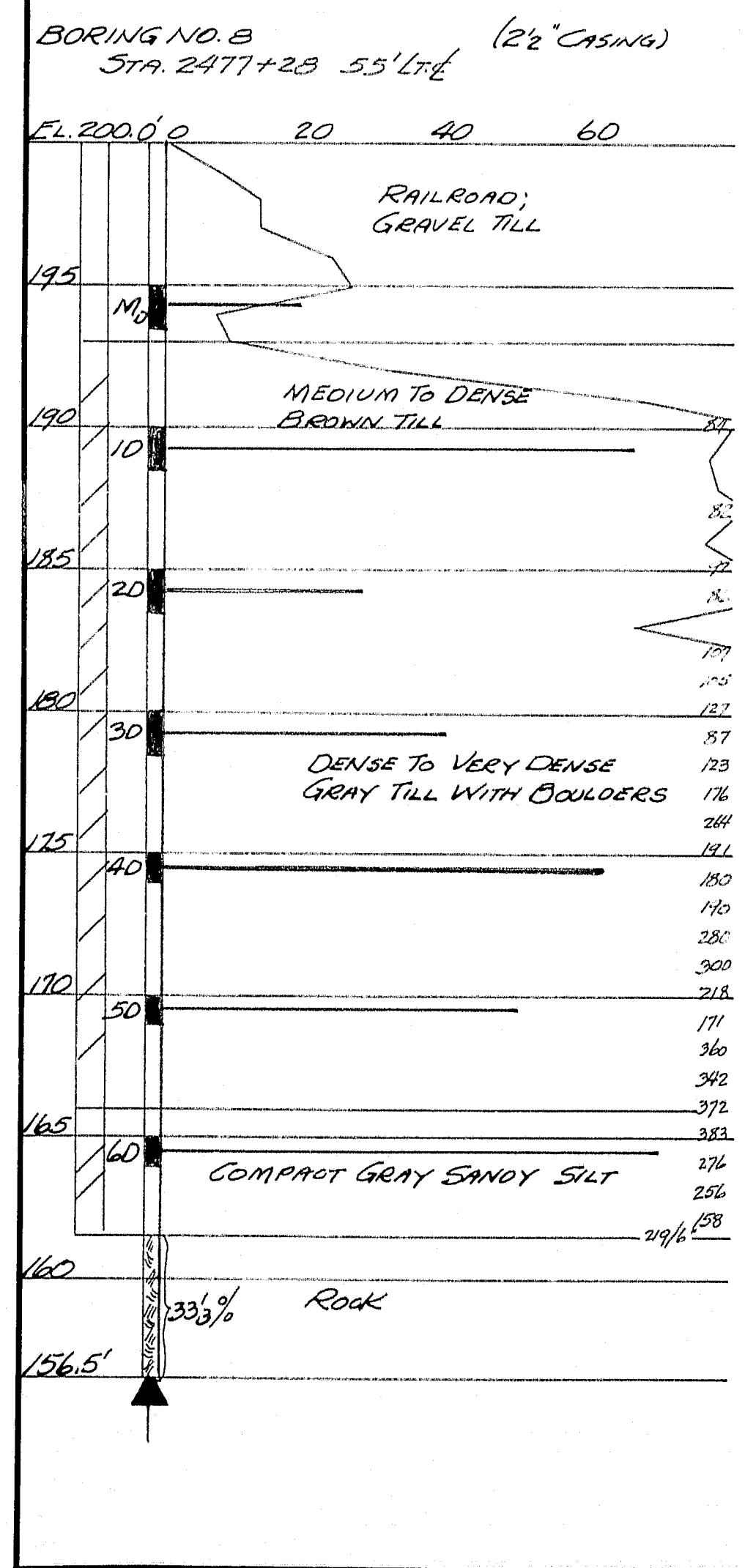
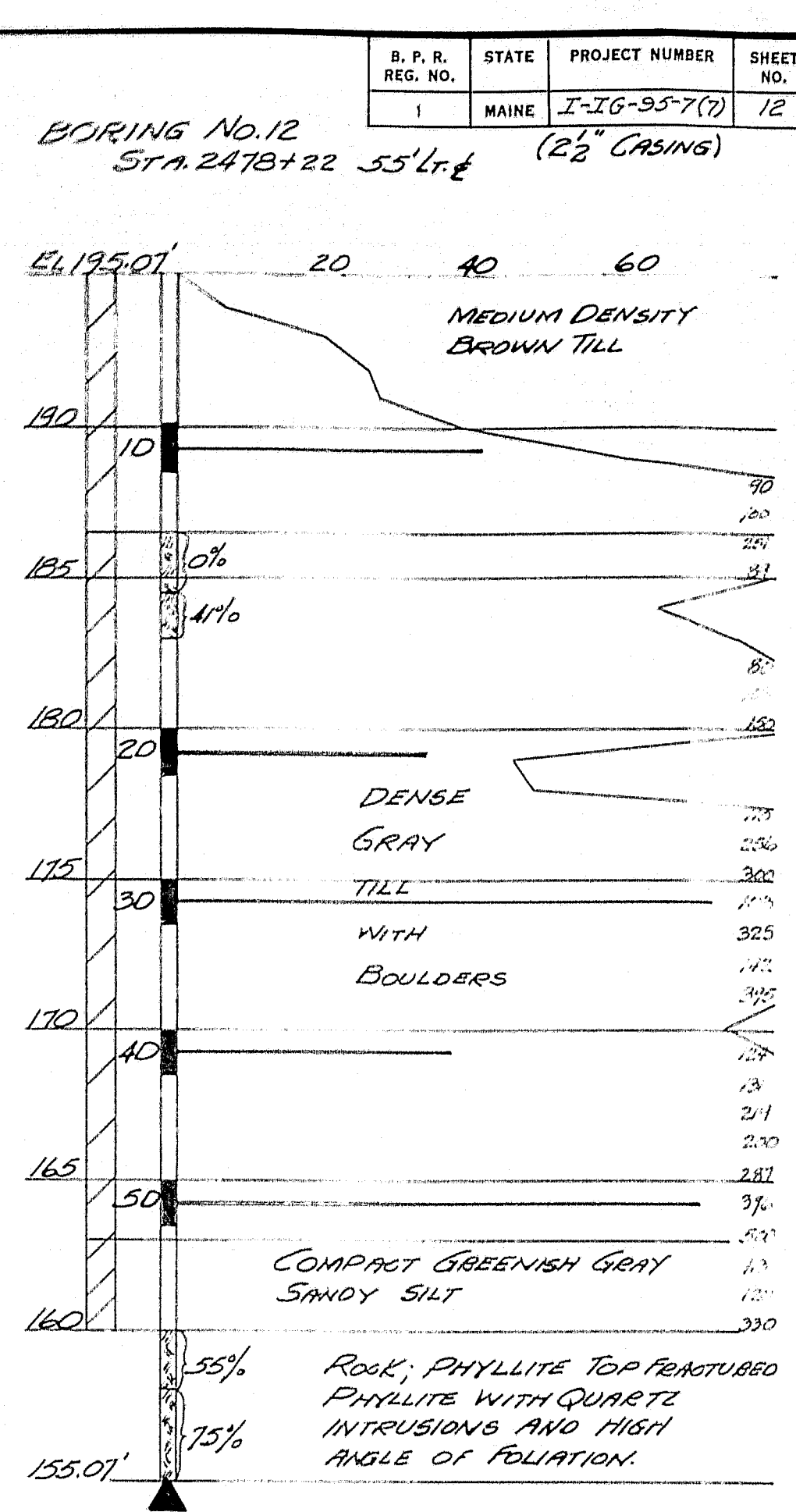
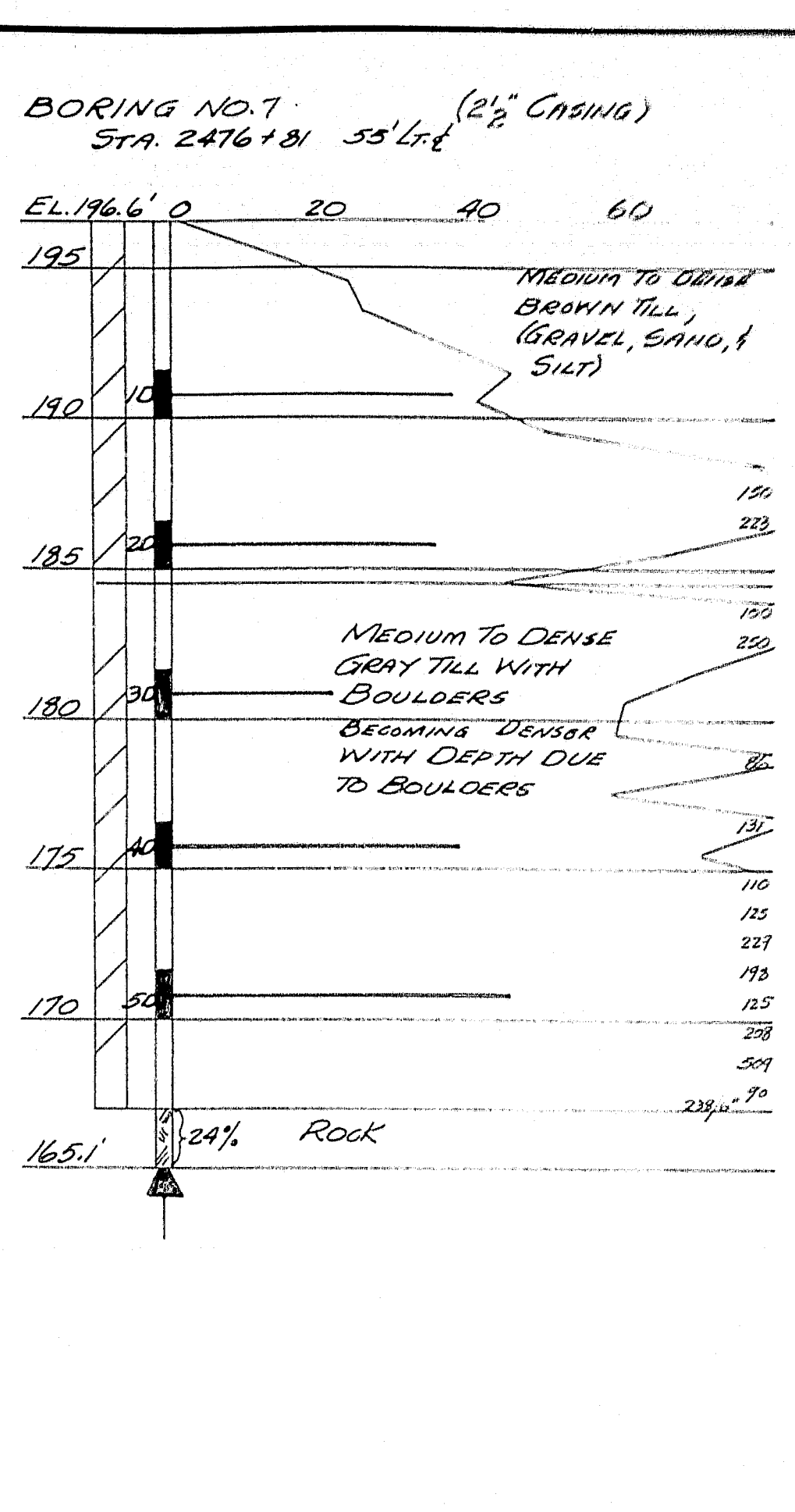
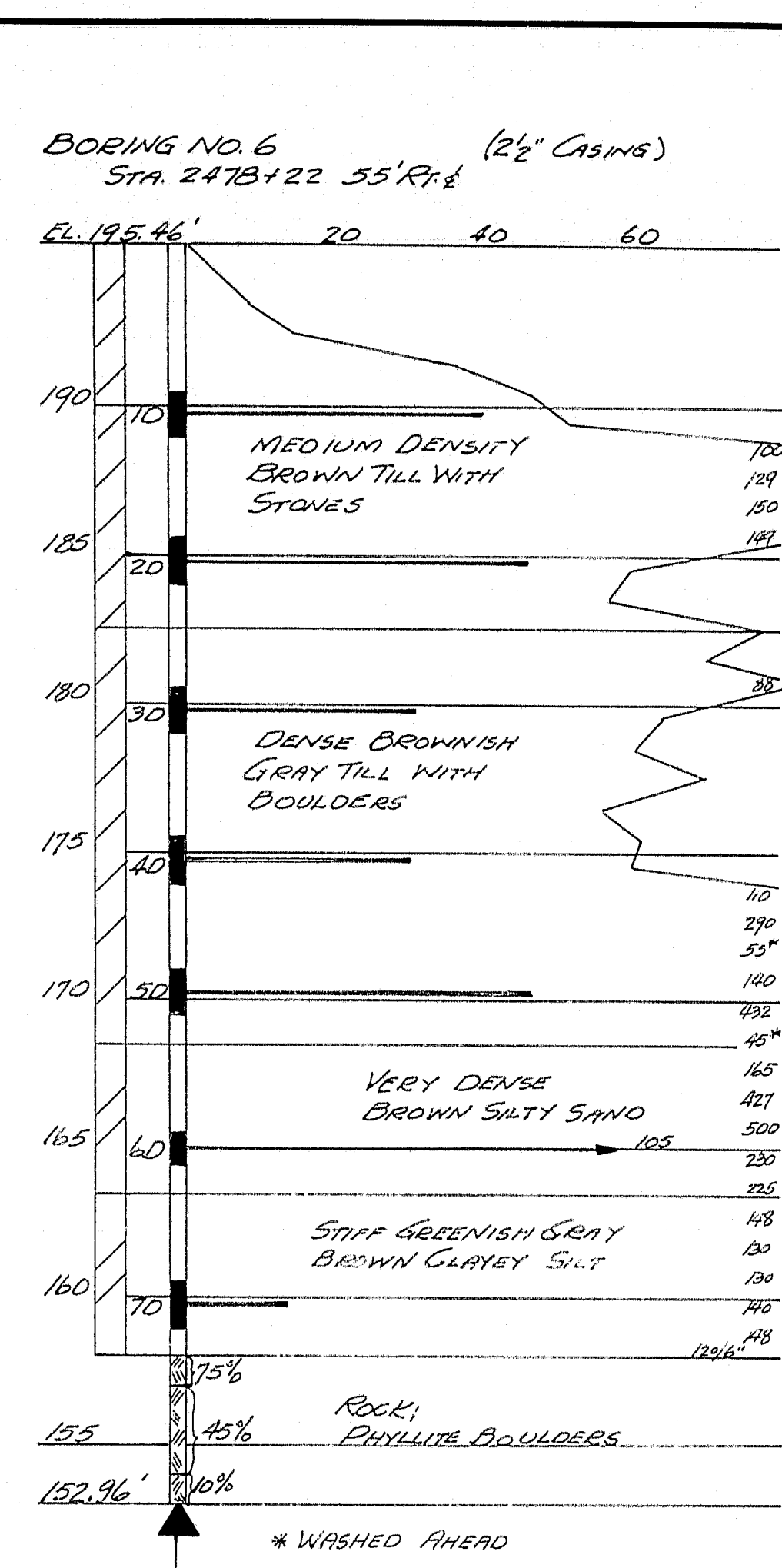
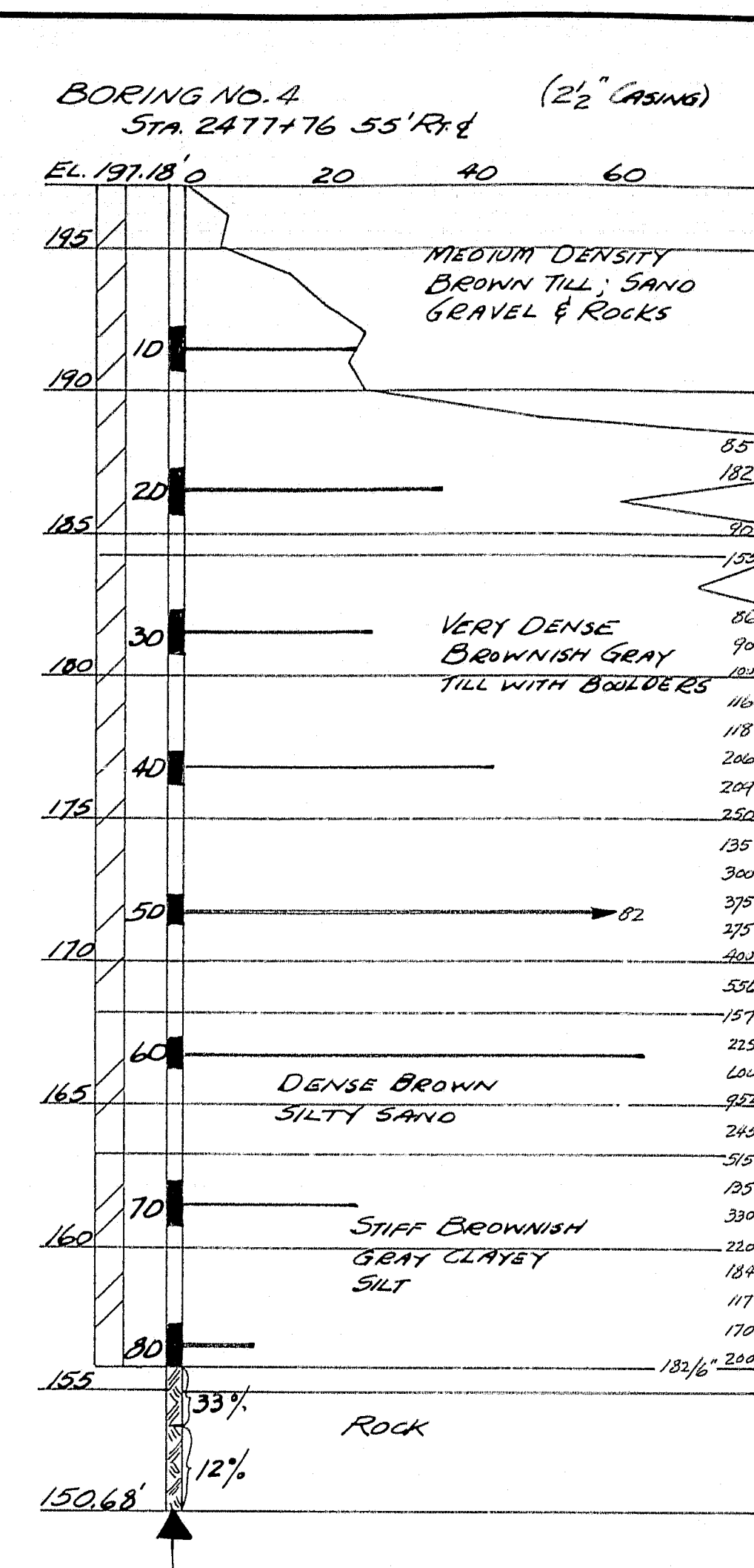
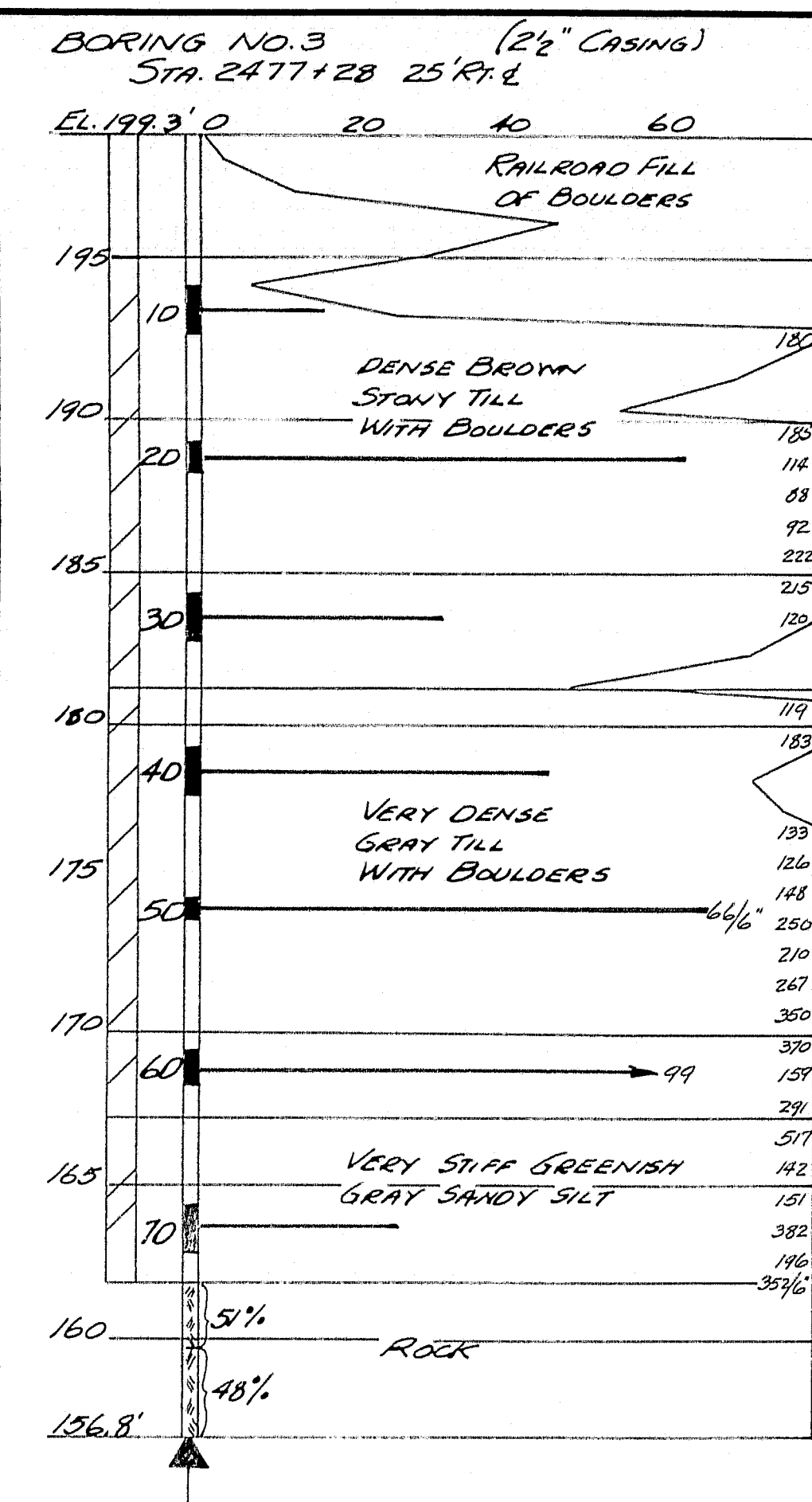
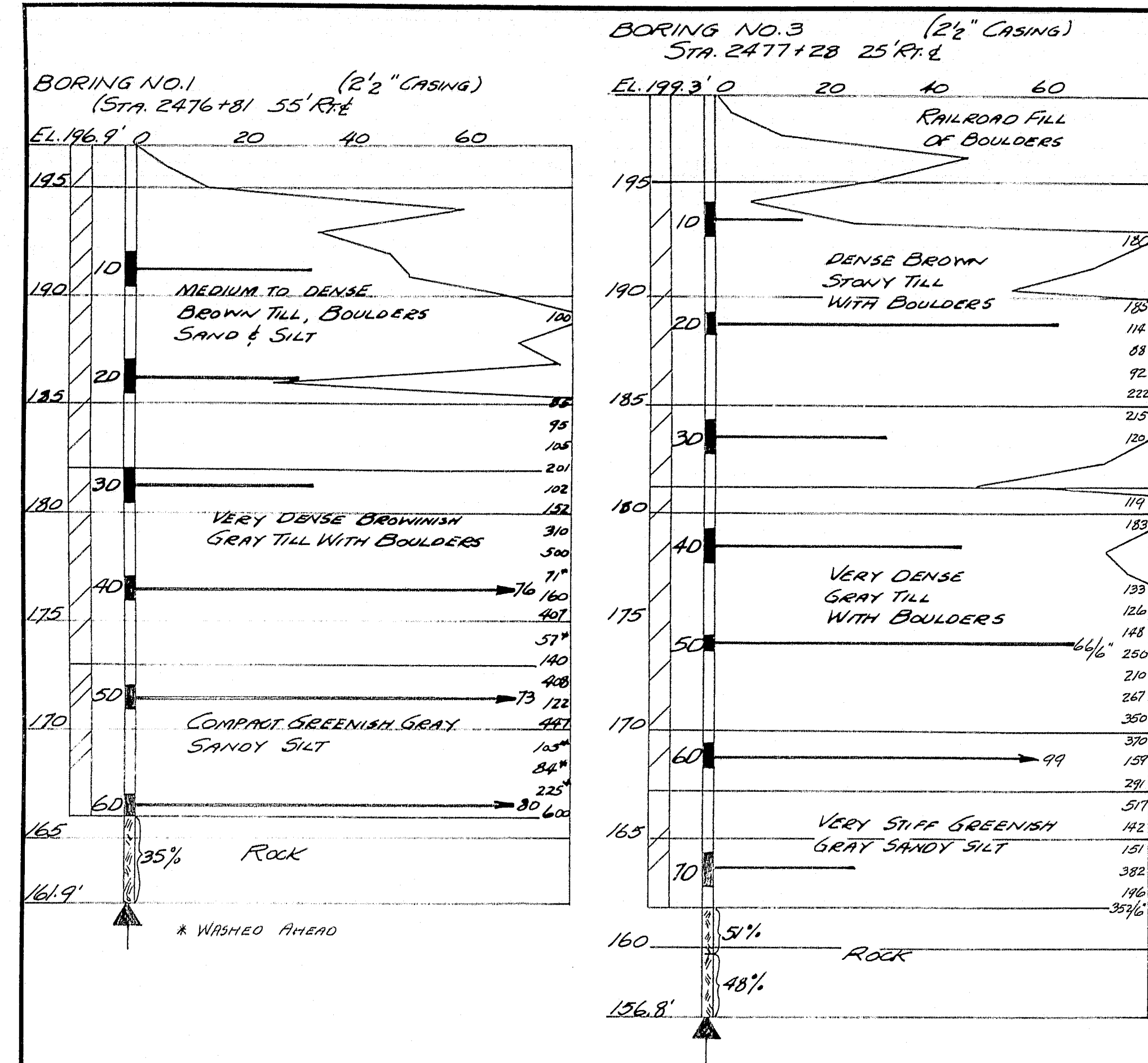
RAILROAD BRIDGE  
OVER  
MAINE CENTRAL RAILROAD  
IN THE TOWN OF  
NEWPORT  
PENOBSCOT COUNTY

SOIL PROFILE  
SHEET 3 OF 11 AUGUSTA, MAINE AUG. 1960

M-1584







**BORING LOG  
DRIVING RESISTANCE  
(Blows/ft.)**

**NOTES**

Graphical Number of blows of 275' hammer falling 18 inches required to drive extra heavy casing one foot.

10 Location and designation of dry samples taken in 5 ft. sampler #290s.

11 Unsuccessful attempts to secure dry sample indicated this, followed by type of sampler.

Graphical Number of blows of 275' hammer falling 15" required to drive spoon or tubing one foot.

Bottom of boring.

71% Percent more of rock core by non-saturated.

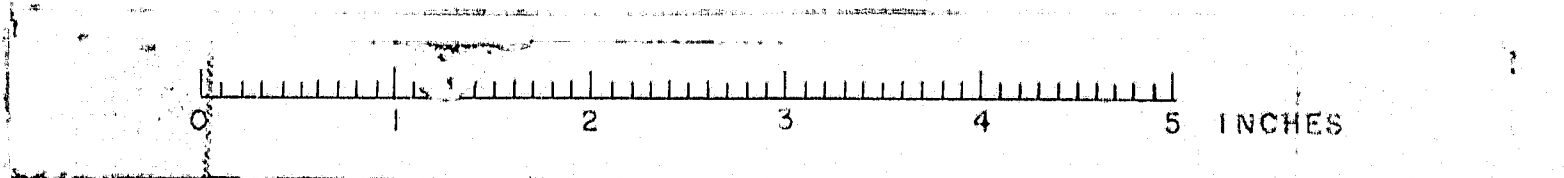
DESIGN - F.B.	BRIDGE NO.
TRACE - E.M.	SURVEY -
CHECK - F.H.L.	PLOT -

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION

**RAILROAD BRIDGE  
OVER  
MAINE CENTRAL RAILROAD  
IN THE TOWN OF  
NEWPORT  
PENOBSCOT COUNTY  
BORINGS**

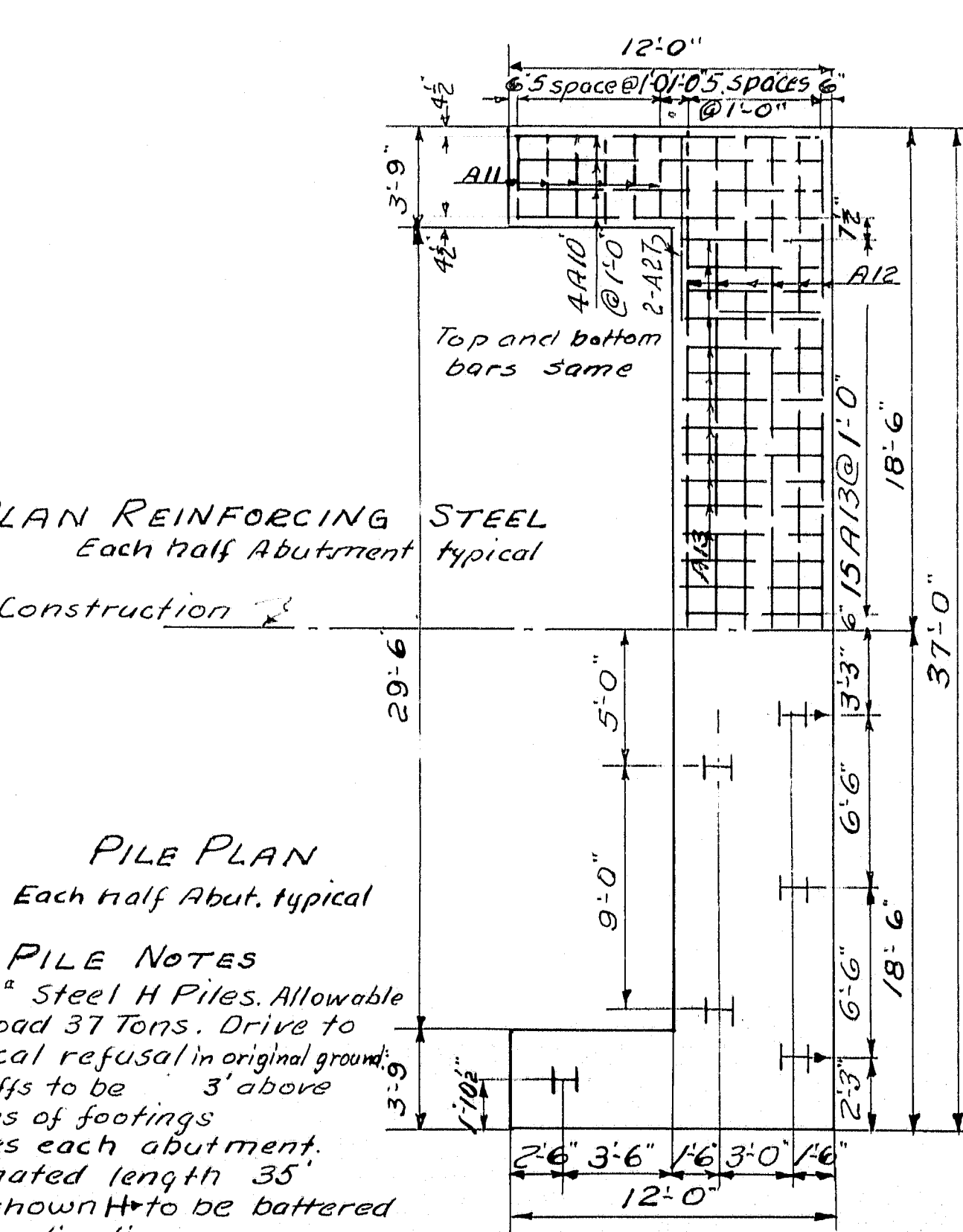
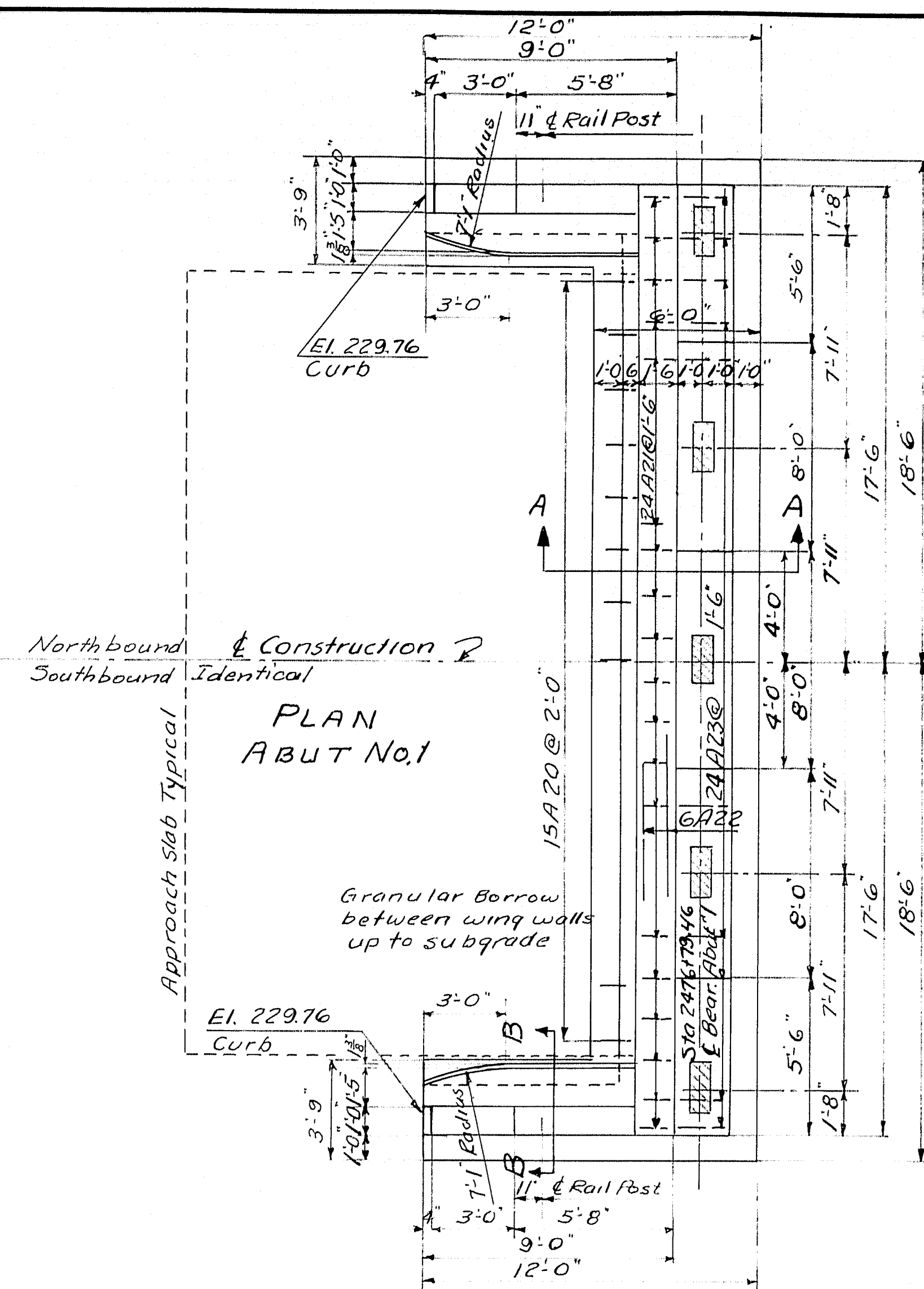
SHEET 4 OF 11 AUGUSTA, MAINE AUG. 1960.

M-1585



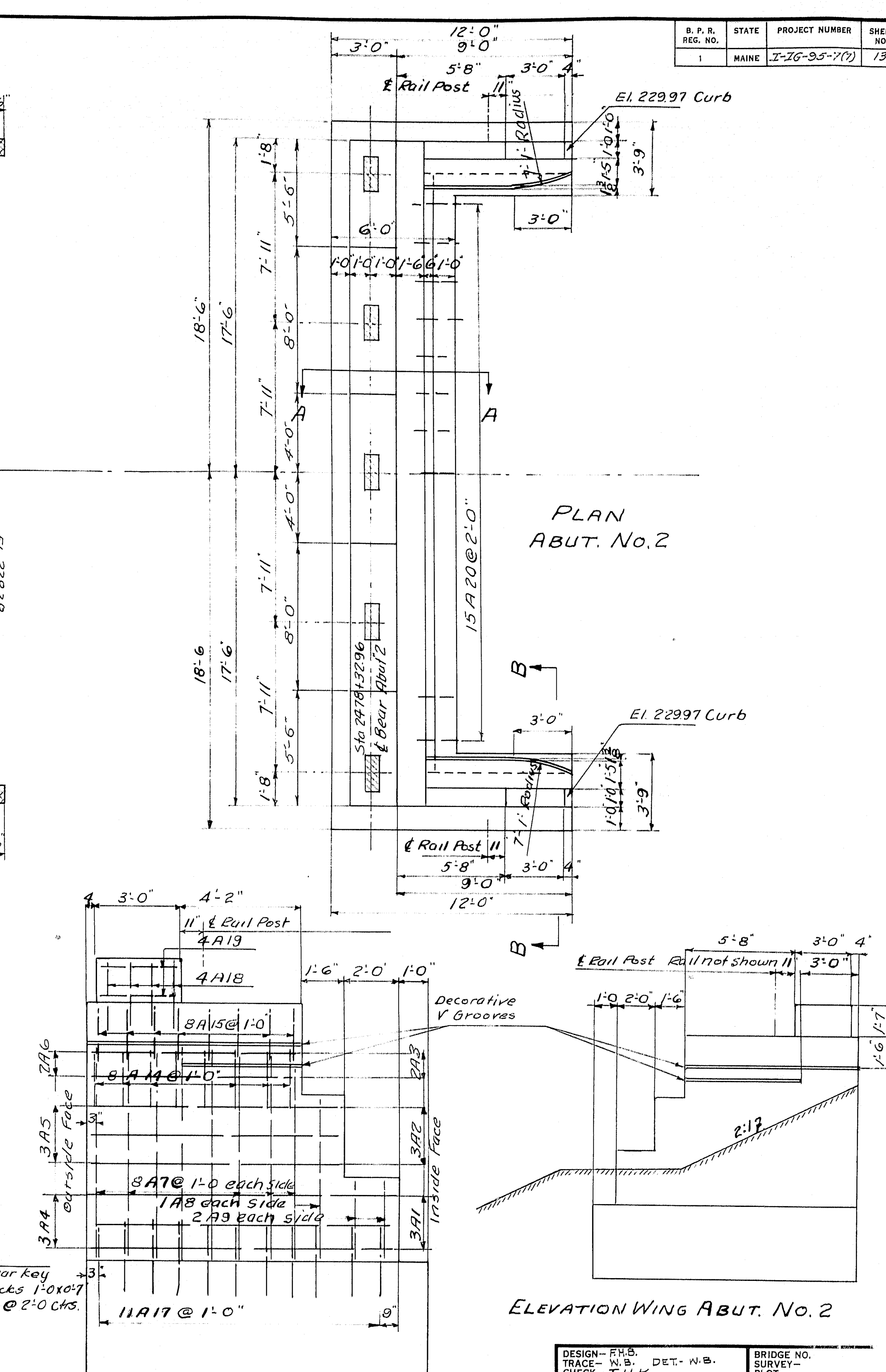
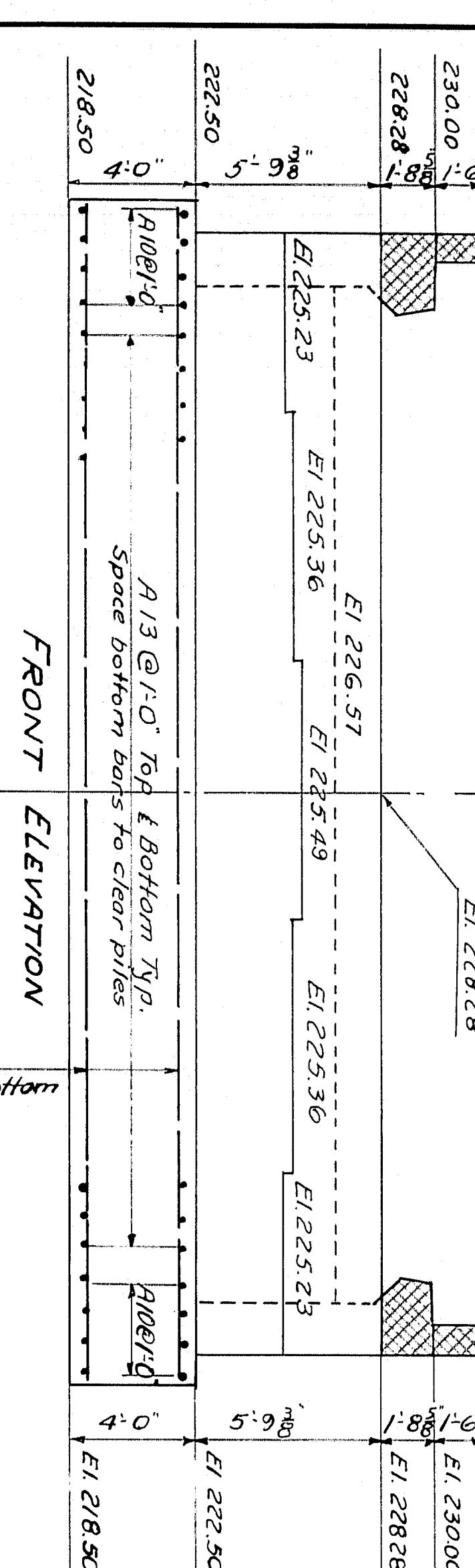
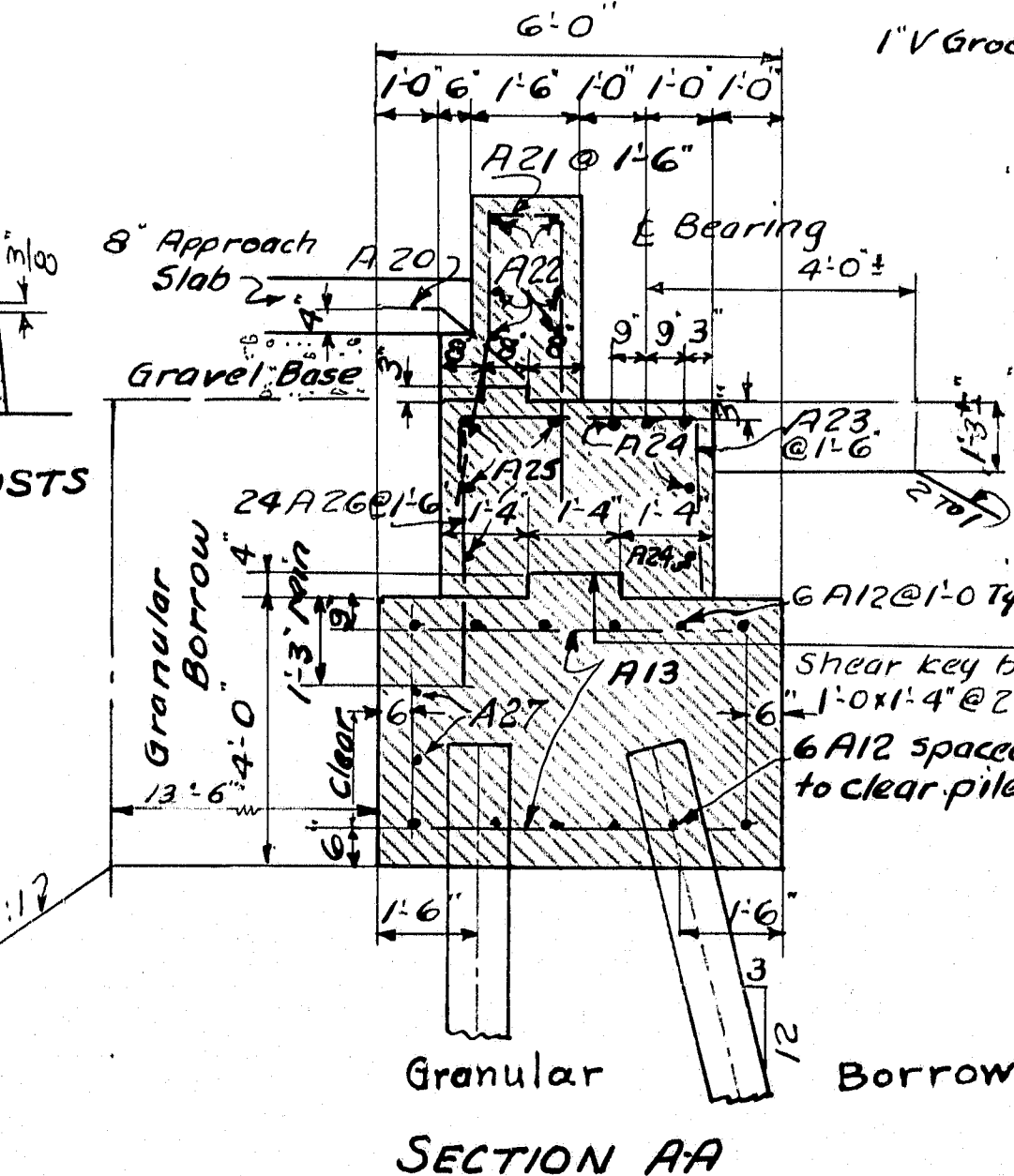
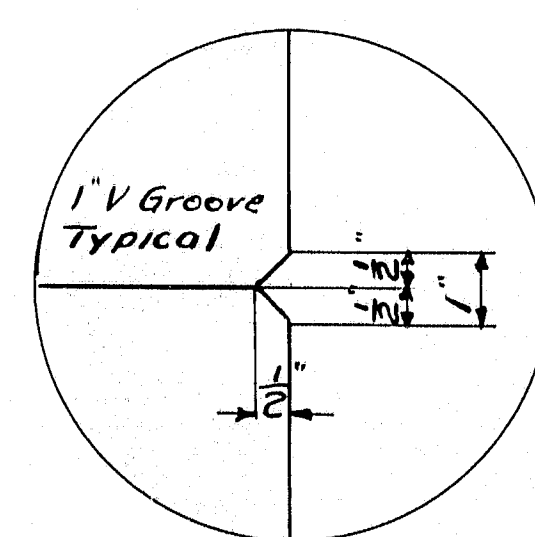
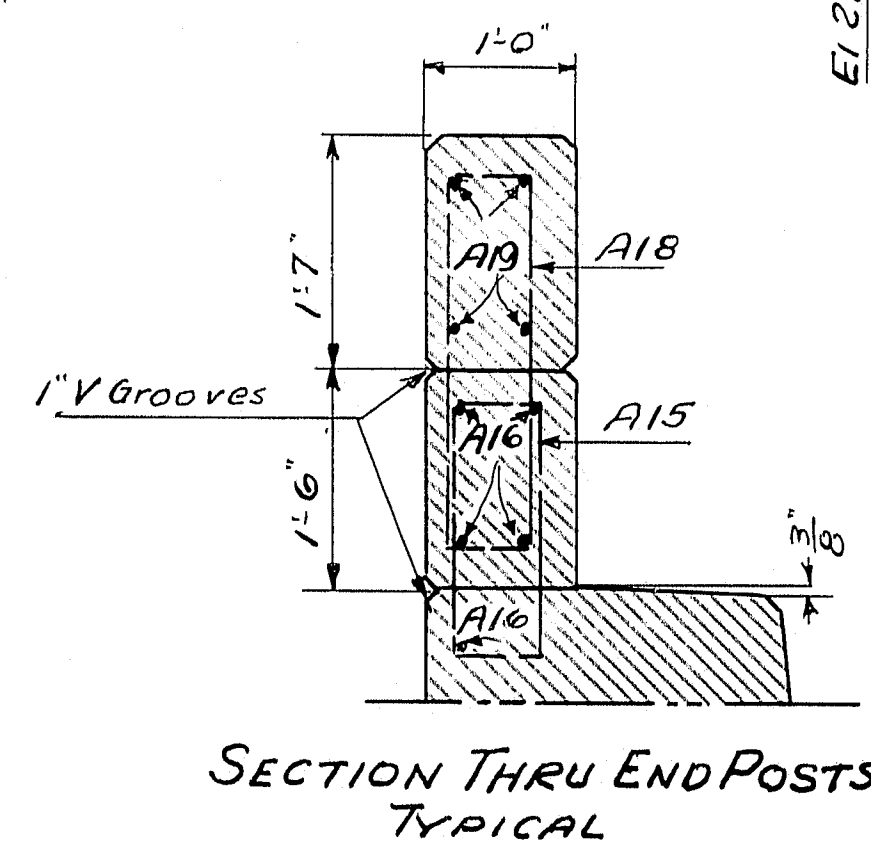


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-26-95-7(7)	13	76



**PILE PLAN**  
Each half Abut. typical

**PILE NOTES**  
10"x42" Steel H Piles. Allowable pile load 37 Tons. Drive to practical refusal in original ground. Cut-offs to be 3' above bottoms of footings.  
12 Piles each abutment. Estimated length 35'. Piles shown to be battered 3/12 in direction shown.



**ELEVATION WING ABUT. No. 1**  
Typical all Abutments

Dress shaded areas on bridge seats 1" larger all around than size of masonry plates and to exact elevations shown. All chamfers to be 1/2" unless otherwise noted and all V-grooves to be 1". Place reinforcing steel in bridge seats to clear anchor bolts. Footings to be class B concrete. Remainder of abutments to be class A concrete.

**ELEVATION WING ABUT. No. 2**

DESIGN - R.H.S.  
TRACE - N.B.  
CHECK - T.H.K.

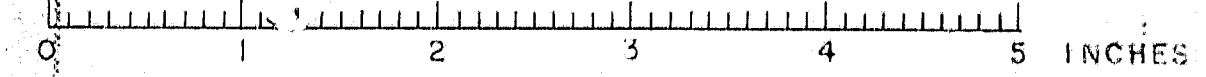
BRIDGE NO.  
SURVEY  
PLOT

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION

**RAILROAD BRIDGE**  
OVER  
**MAINE CENTRAL RAILROAD**  
IN THE TOWN OF  
**NEWPORT**  
**PENOBSCOT COUNTY**  
ABUTMENTS

SHEET 5 OF 11 AUGUSTA, MAINE AUG. 1960

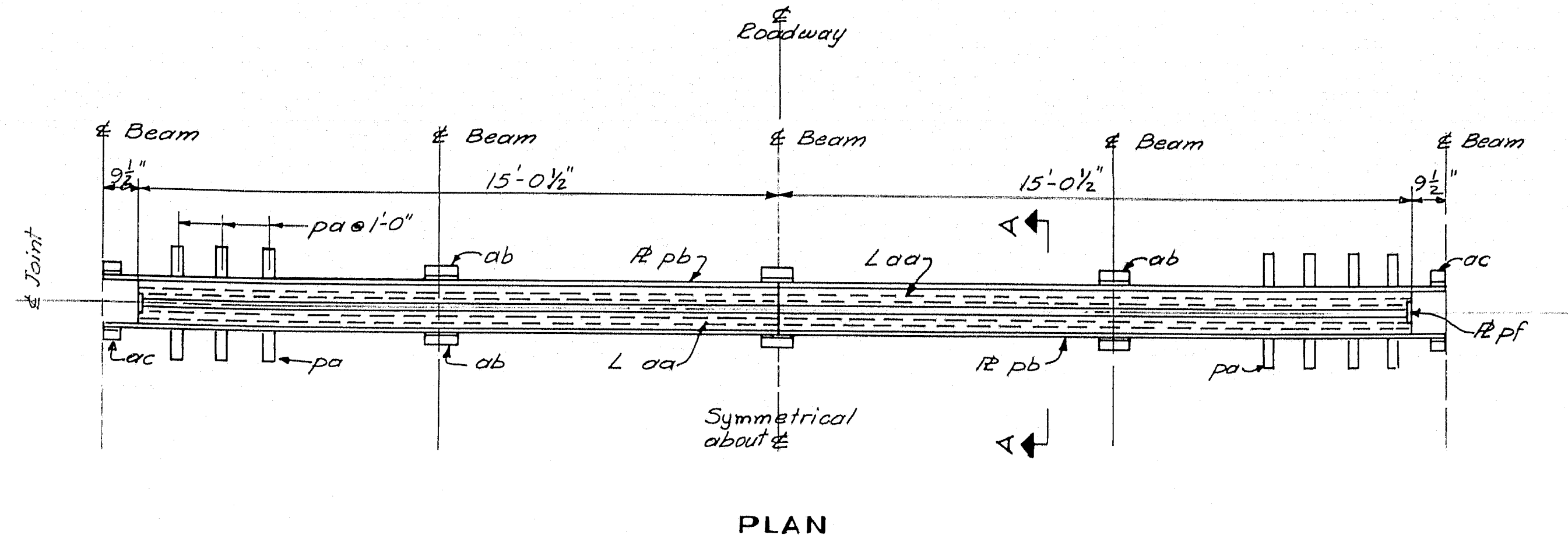
M-1586



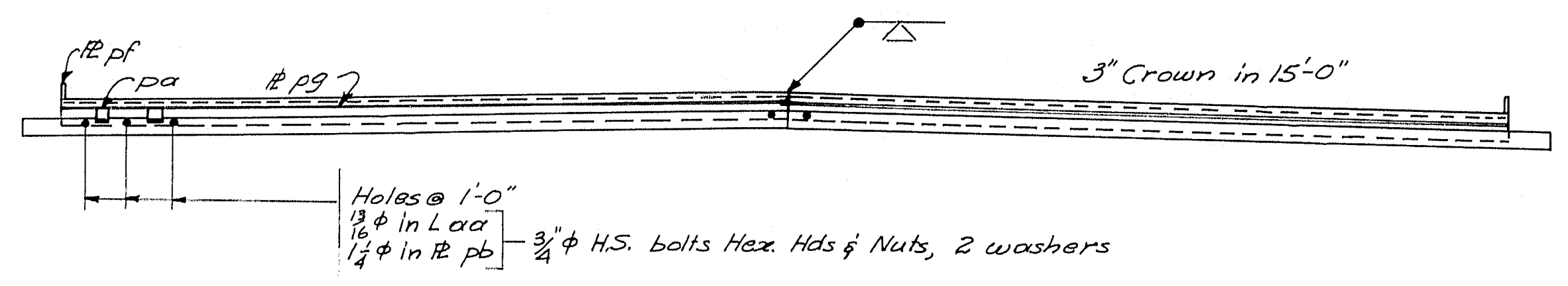








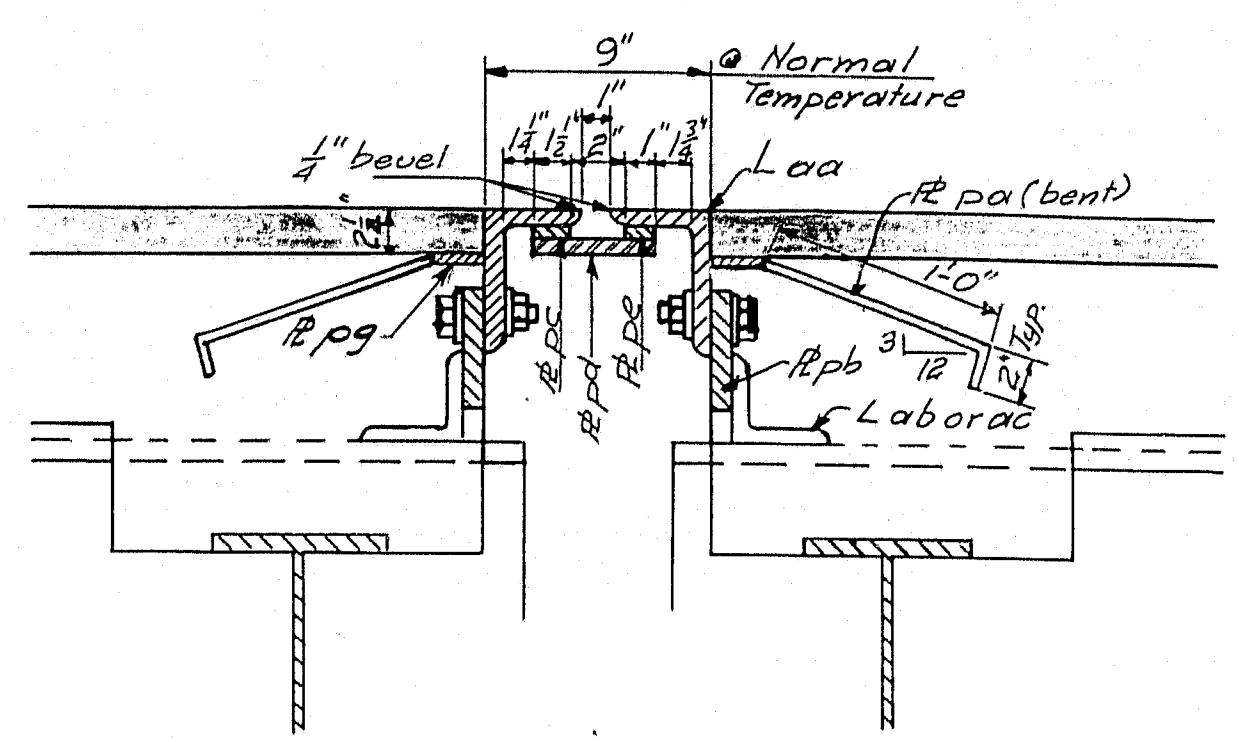
PLAN



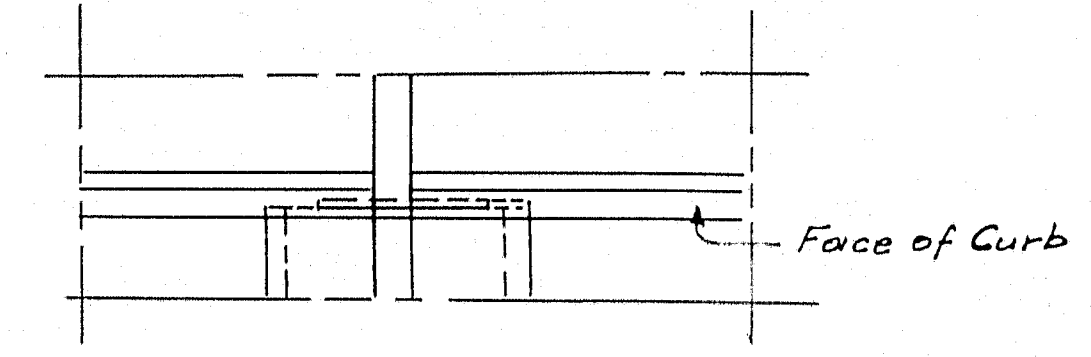
ELEVATION

**ARMORED JOINT**

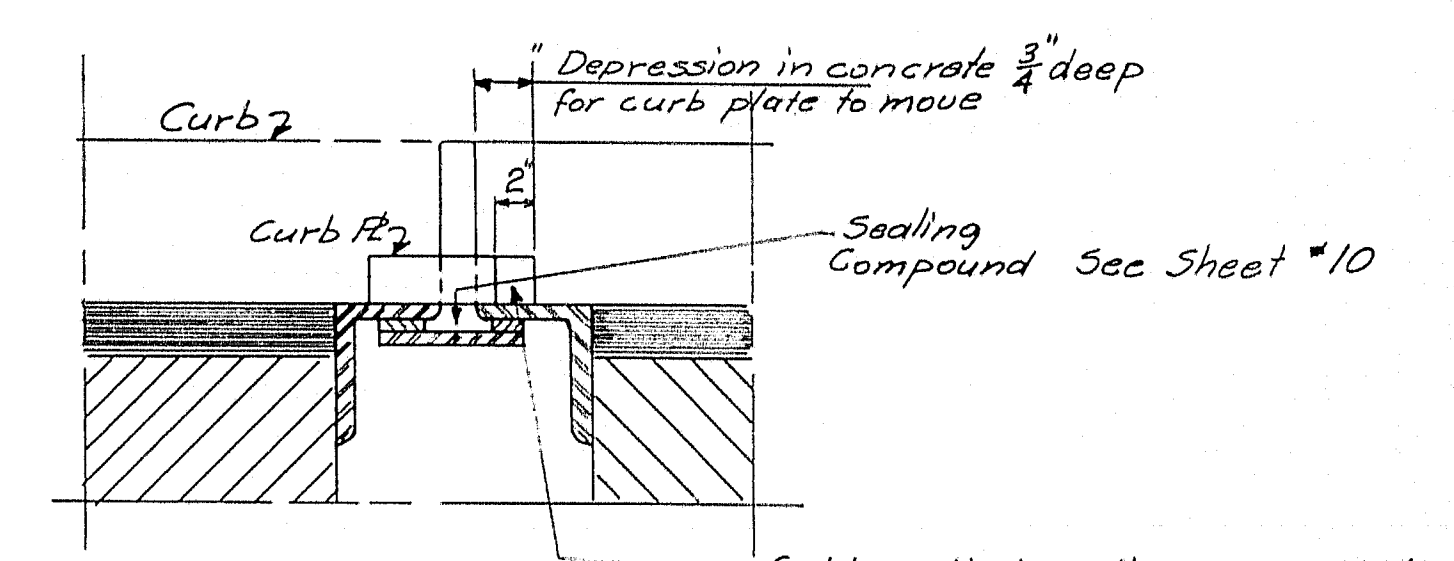
4 Required  
No Shop Paint



SECTION A-A



PLAN

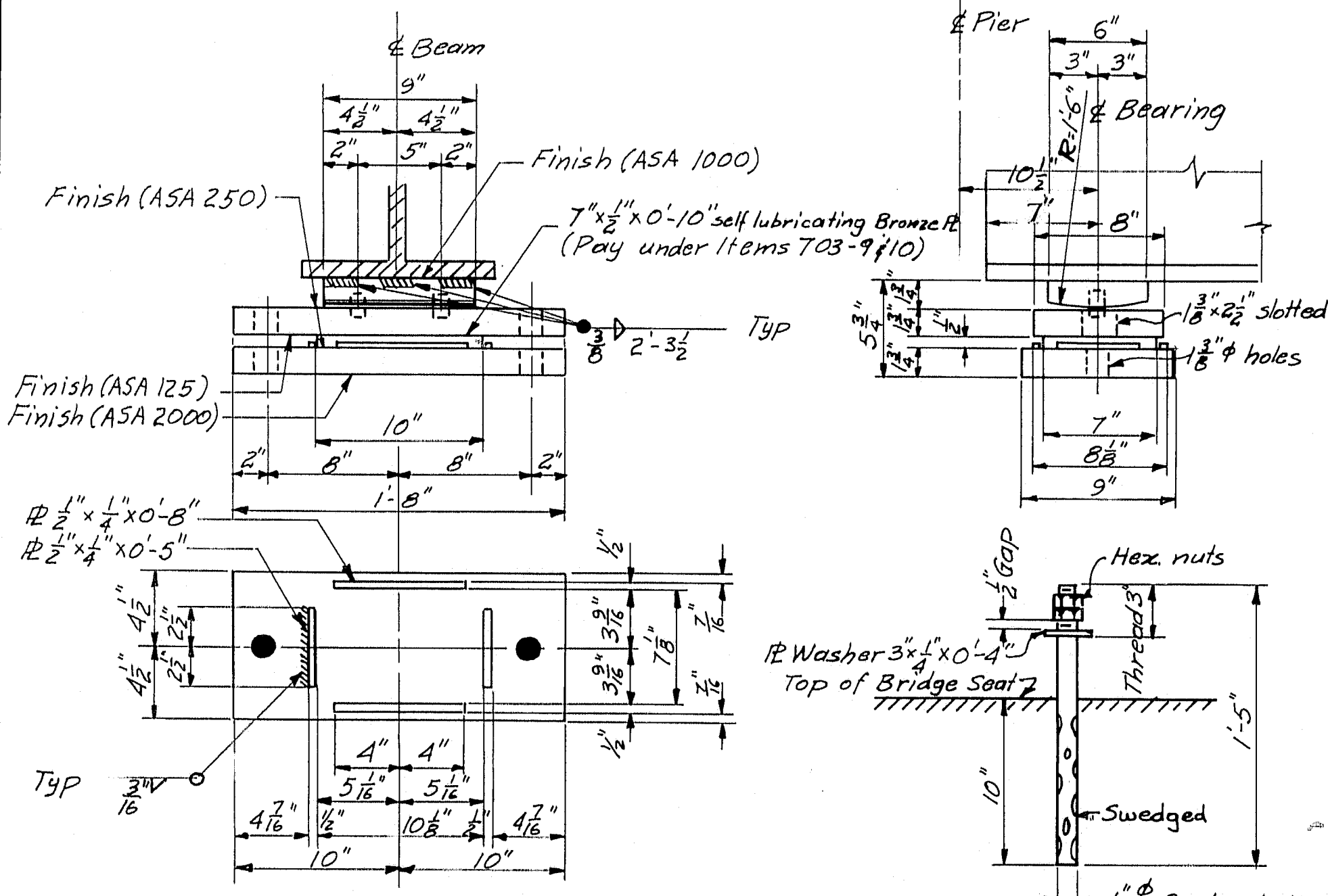


SECTION AT CURB

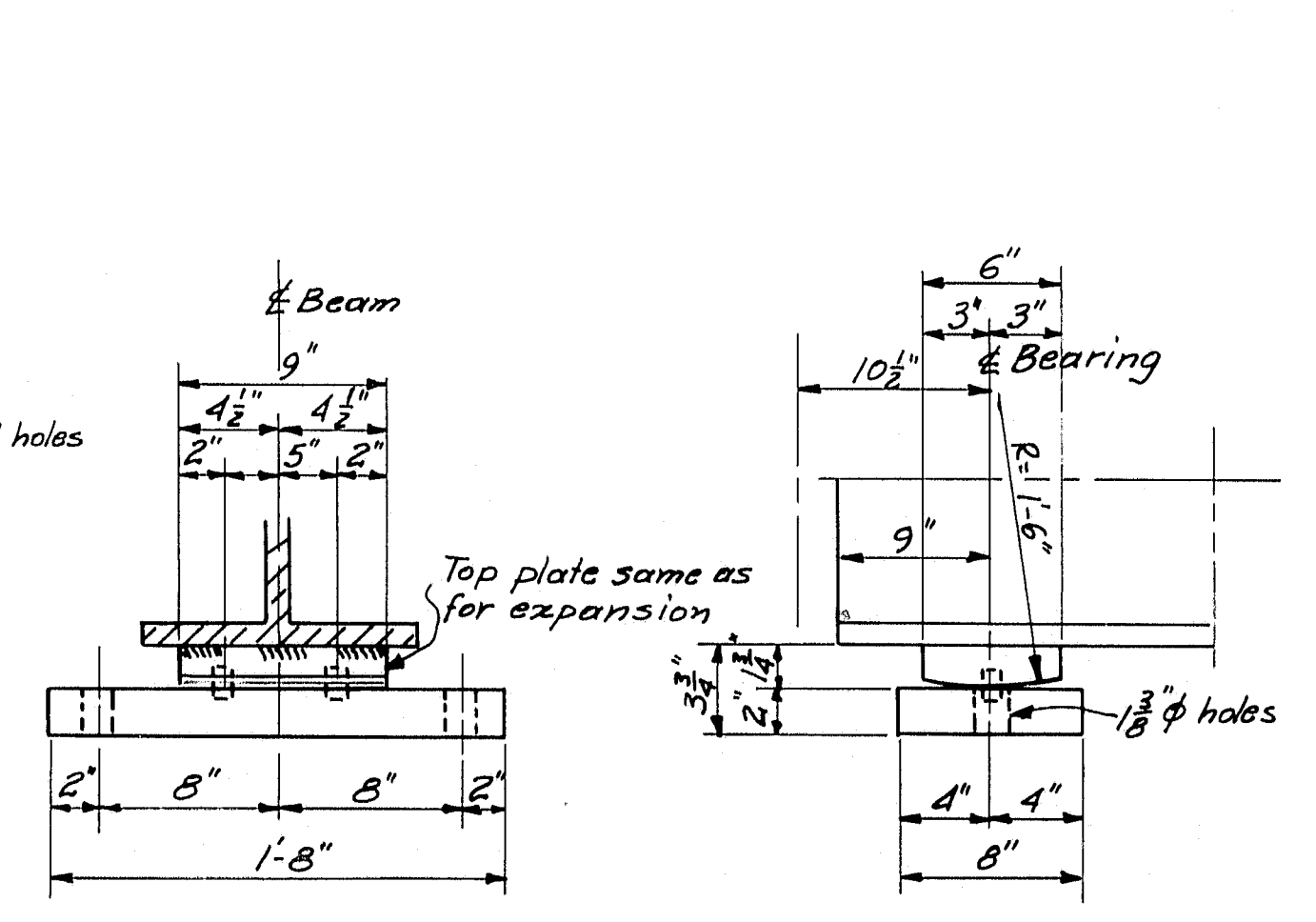
Gold applied sealing compound gray in color (Servicised products Corporation) (Vertical or equal) to be placed in back of and flush with steel curb plate.

**MATERIALS**

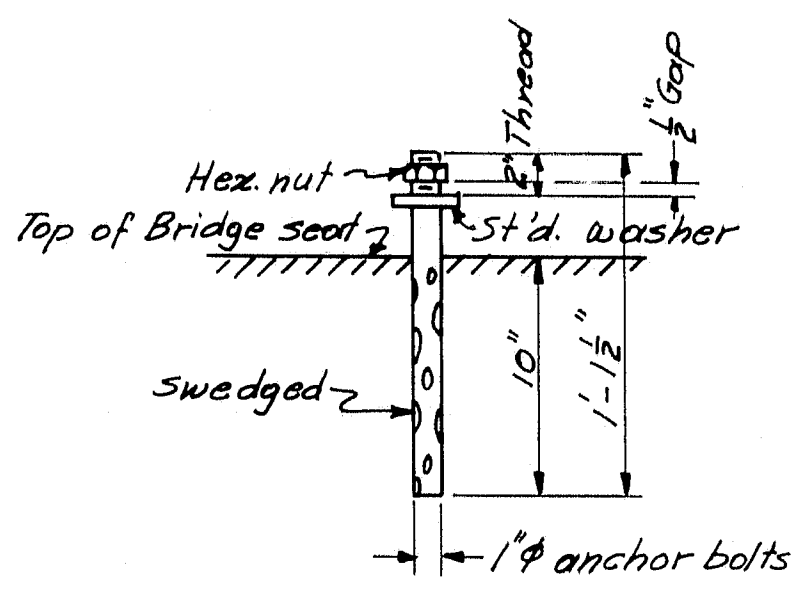
- L-6x4x3/4\"/>
- L-4x4x3/4\"/>
- L-4x4x1/2\"/>
- R-1 1/2\"/>
- R-2 x 1/2\"/>
- R-1 1/2\"/>
- R-6 x 3/4\"/>
- R-1 1/2\"/>
- R-4 1/2\"/>
- R-1 1/2\"/>
- R-2 x 1/2\"/>
- R-2 x 1/2\"/>



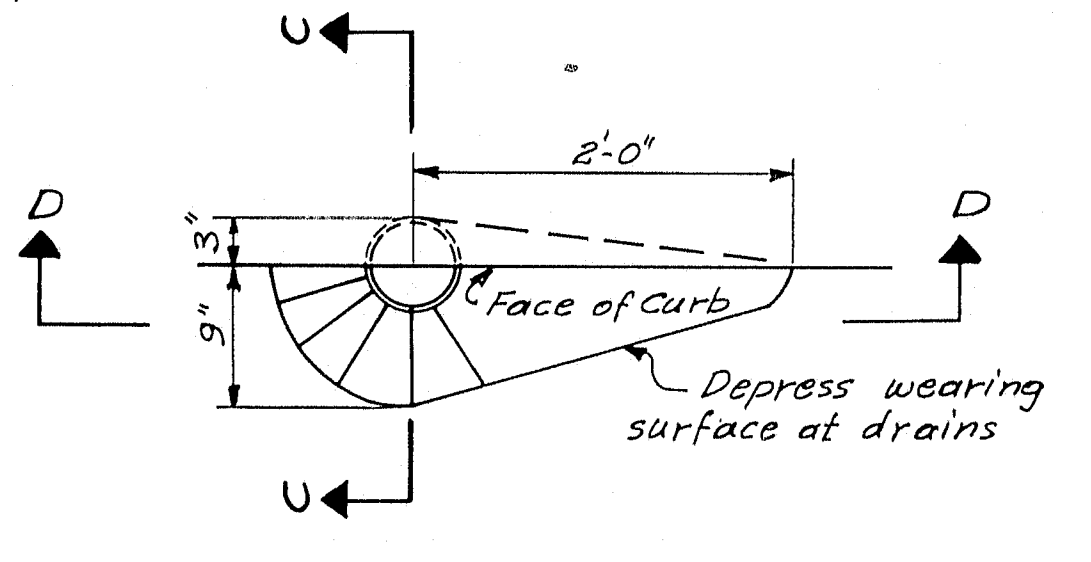
**EXPANSION BEARING**  
30 Required



**FIXED BEARING**  
30 Required

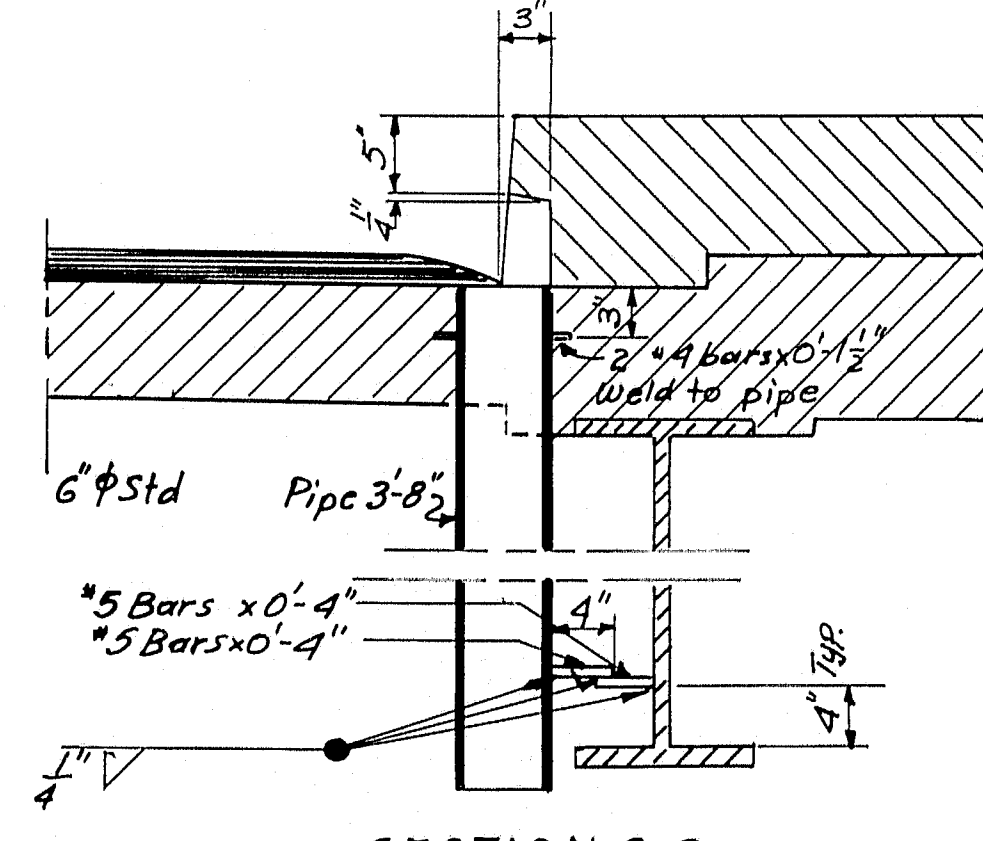


**TYPICAL PINTLE DETAIL**



**SECTION D-D**

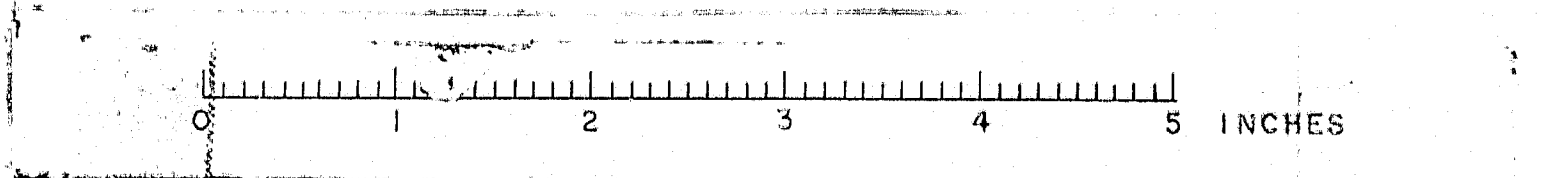
**DRAIN DETAIL**  
24 Required See Sh 10 for location  
Drains shall be paid for as structural steel, fabricated, delivered and erected under Items 702-103 and 702-104.



**SECTION C-C**

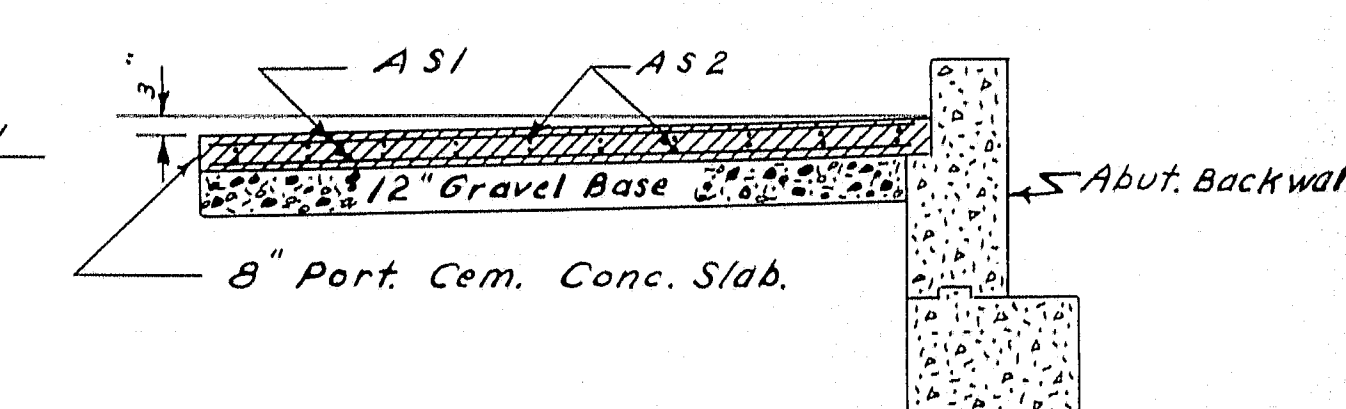
DESIGN - A. B. P.	DET. A. E. G.	BRIDGE NO.
TRACE - C. K. P.		SURVEY -
CHECK - J. H. K.		PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION		
RAILROAD BRIDGE OVER MAINE CENTRAL RAILROAD IN THE TOWN OF NEWPORT PENOBSCOT COUNTY		
STRUCTURAL STEEL		
SHEET 8 OF 11 AUGUSTA, MAINE AUG. 1960		

M-1589



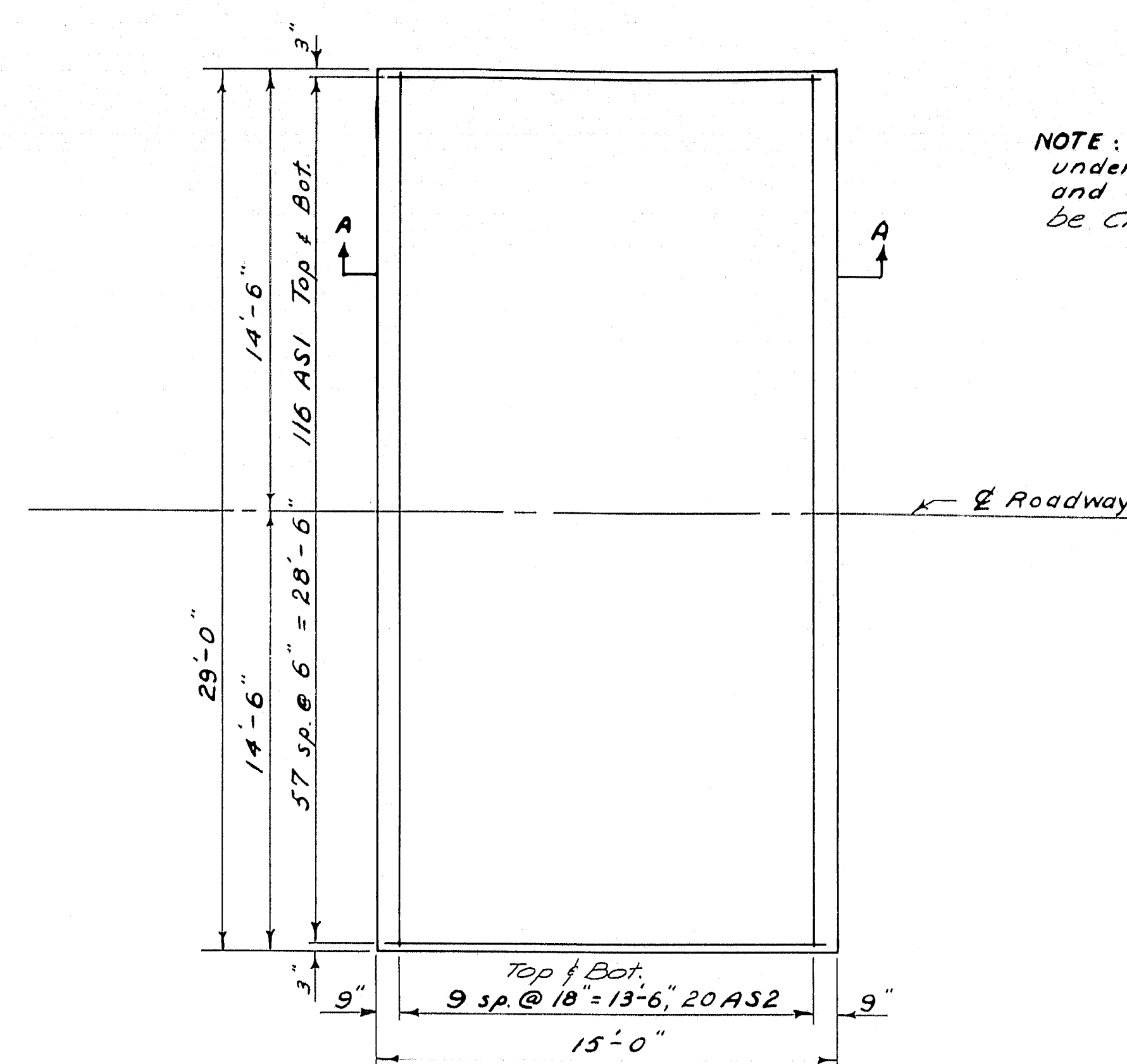


NOTE: Concrete in approach slab will be paid for under Item 701-40, Portland Cement Concrete, Roadway and Sidewalk Slabs on Steel Bridges. Concrete shall be Class A.



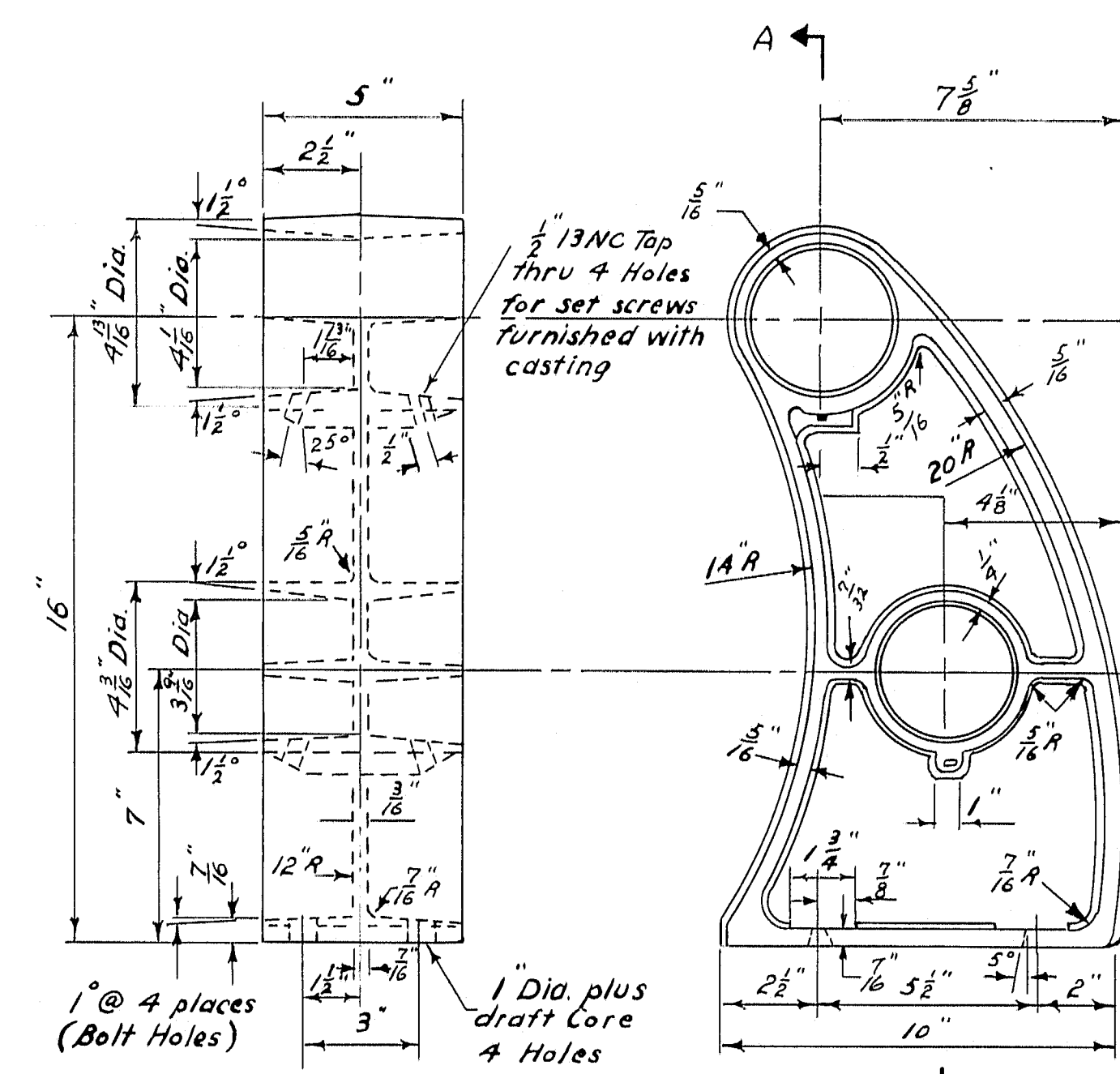
Reinforcing steel 1" clear top and bottom

SECTION A-A



PLAN

APPROACH SLAB

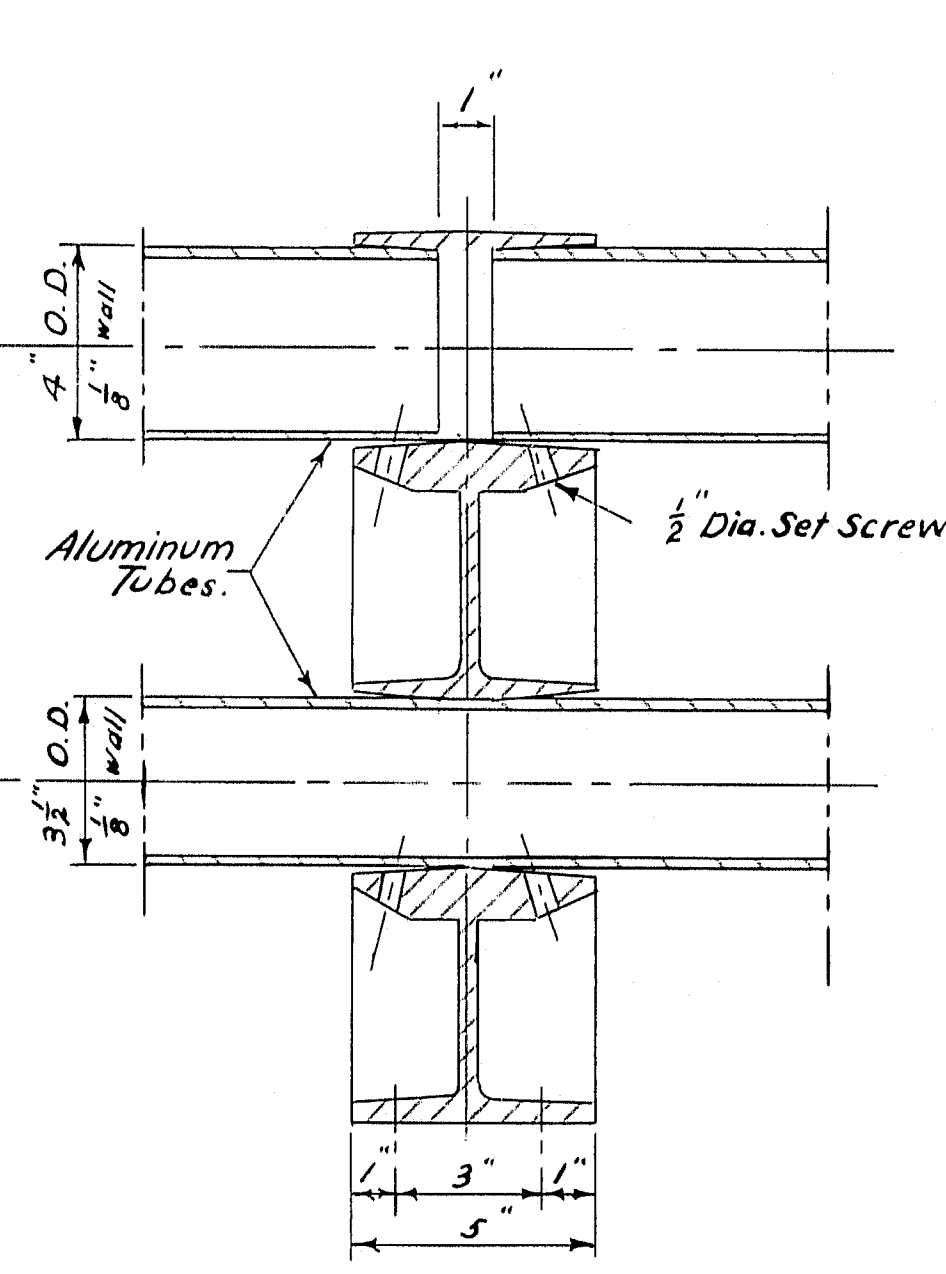


REAR ELEVATION

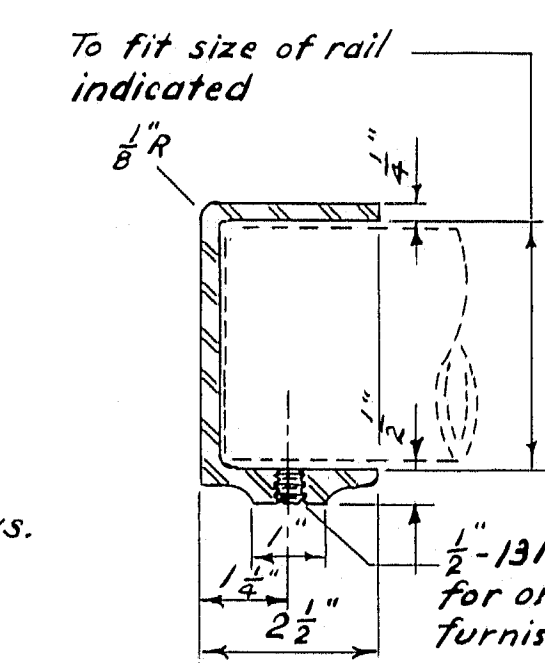
END ELEVATION

POST DETAILS

Note: Individual bars shall be two panels long where possible. Joints in top and bottom bars shall not occur at the same post.

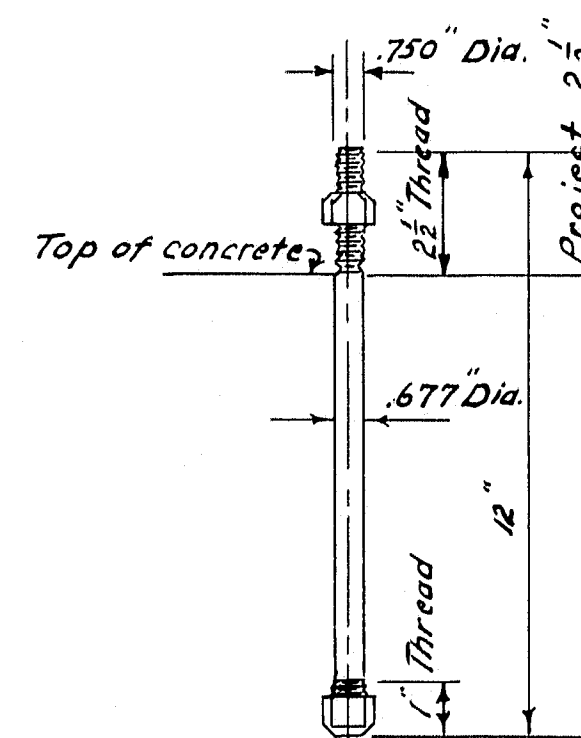


SECTION A-A



Note: One 1/2" set screw per tube to be set tight, the others set to bear.

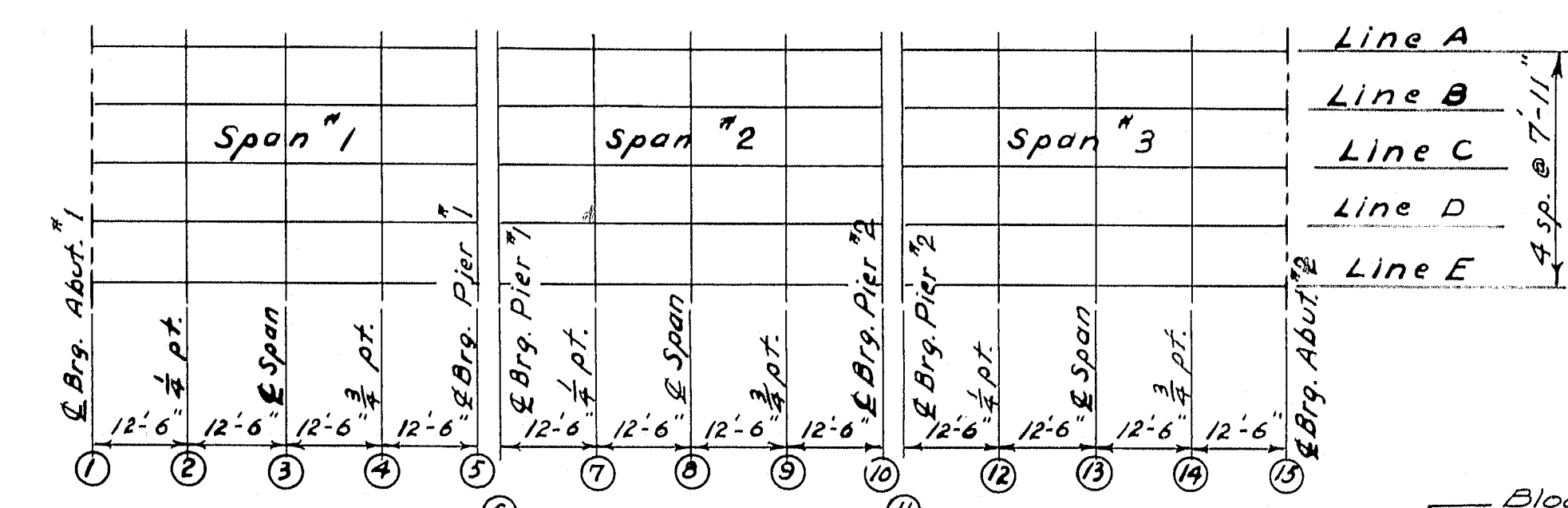
RAIL CAP DETAILS



ANCHOR BOLT DETAIL

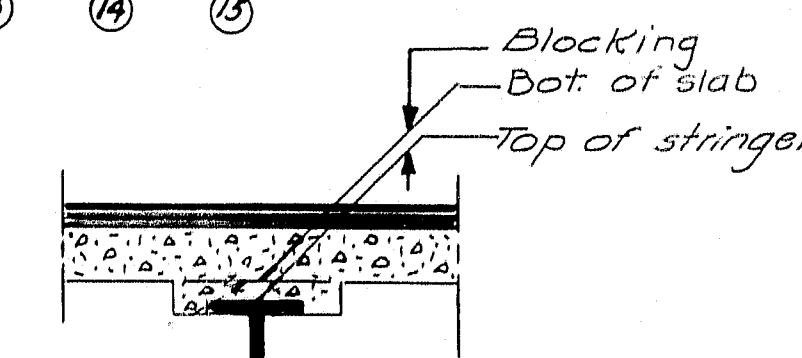
4 Req'd each post

Set anchor bolts normal to the grade of the parapet.



BLOCKING DIAGRAM

Both Structures



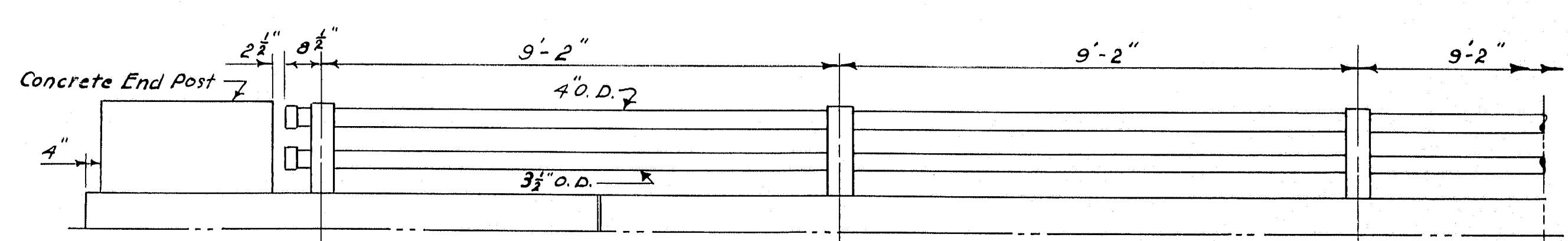
Note: 1 1/2" nominal blocking used at Abuts. & Piers. Not to be used in setting forms.

BLOCKING DETAIL

Note: Work this sheet with sheet #10

Point	BOTTOM OF SLAB ELEVATIONS*														
	NORTH BOUND							SOUTH BOUND							
Line A	228.26	228.34	228.41	228.43	228.44	228.44	228.50	228.53	228.53	228.53	228.53	228.53	228.53	228.53	228.44
Line B	228.39	228.48	228.54	228.57	228.57	228.57	228.63	228.66	228.66	228.66	228.66	228.66	228.66	228.66	228.57
Line C	228.52	228.61	228.67	228.70	228.70	228.70	228.76	228.79	228.79	228.79	228.79	228.80	228.80	228.80	228.71
Line D	228.34	228.43	228.50	228.53	228.53	228.53	228.59	228.62	228.62	228.62	228.62	228.62	228.62	228.62	228.57
Line E	228.26	228.34	228.41	228.43	228.44	228.44	228.50	228.53	228.53	228.53	228.53	228.53	228.53	228.53	228.44

NOTE: In order that the roadway slab may conform to the profile and cross-sections shown on these plans, the above table of elevations is given. Elevations for the bottom of the slab, which are computed to compensate for dead load deflections, must be established before slab forms are started. \* 9/4 below finished bituminous surface.



SIDE ELEVATION

ALUMINUM RAIL DETAILS

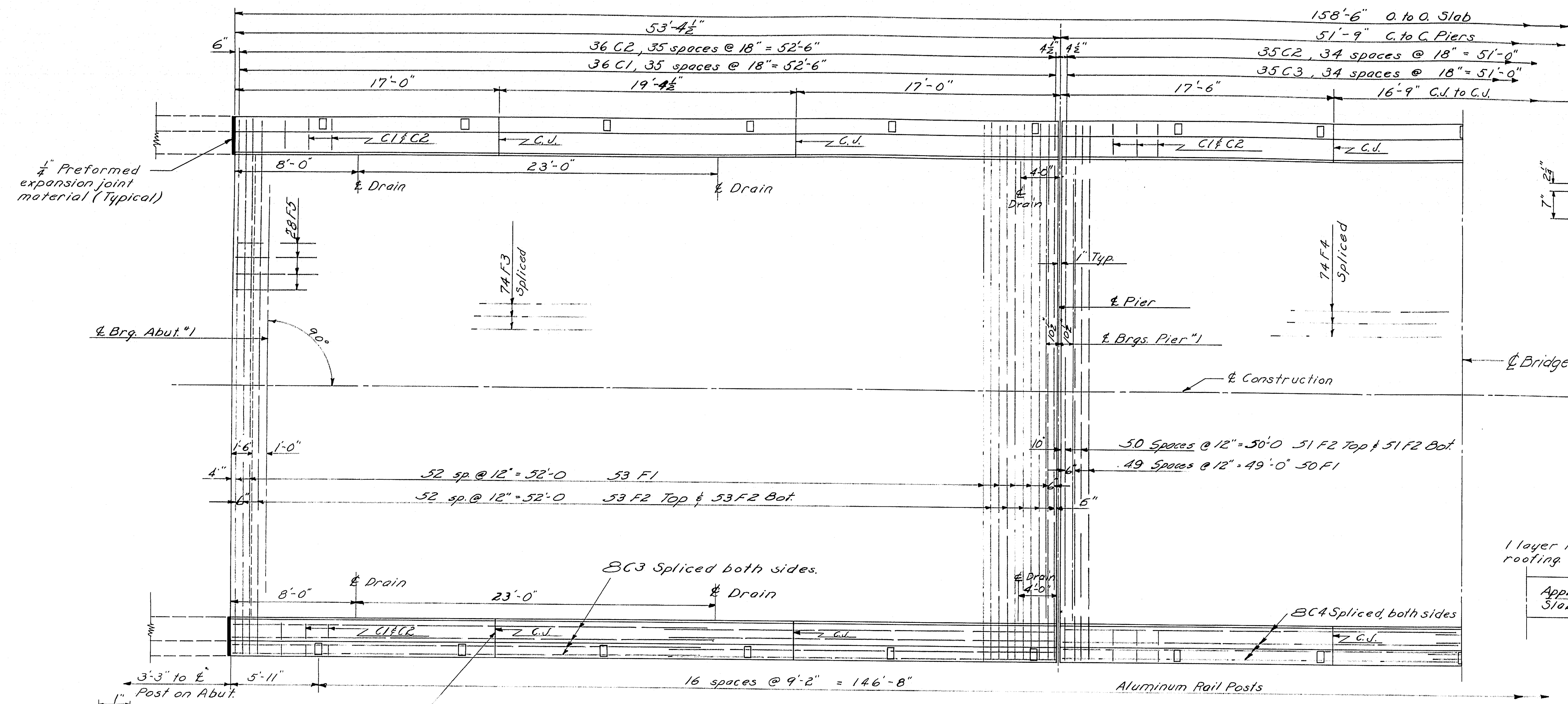
Note: Furnish 1/2" aluminum alloy shims for providing adjustment in height of Rail Posts. The number of shims to be one-half the number of posts.

DESIGN - A.B.P. CHECK - C.F. HALL  
 STATE HIGHWAY COMMISSION  
 BRIDGE DIVISION  
**RAILROAD BRIDGE**  
 OVER  
**MAINE CENTRAL RAILROAD**  
 IN THE TOWN OF  
**NEWPORT**  
**PENOBSCOT COUNTY**  
 DETAILS  
 SHEET 9 OF 11 AUGUSTA, MAINE AUG. 1960

M-1590

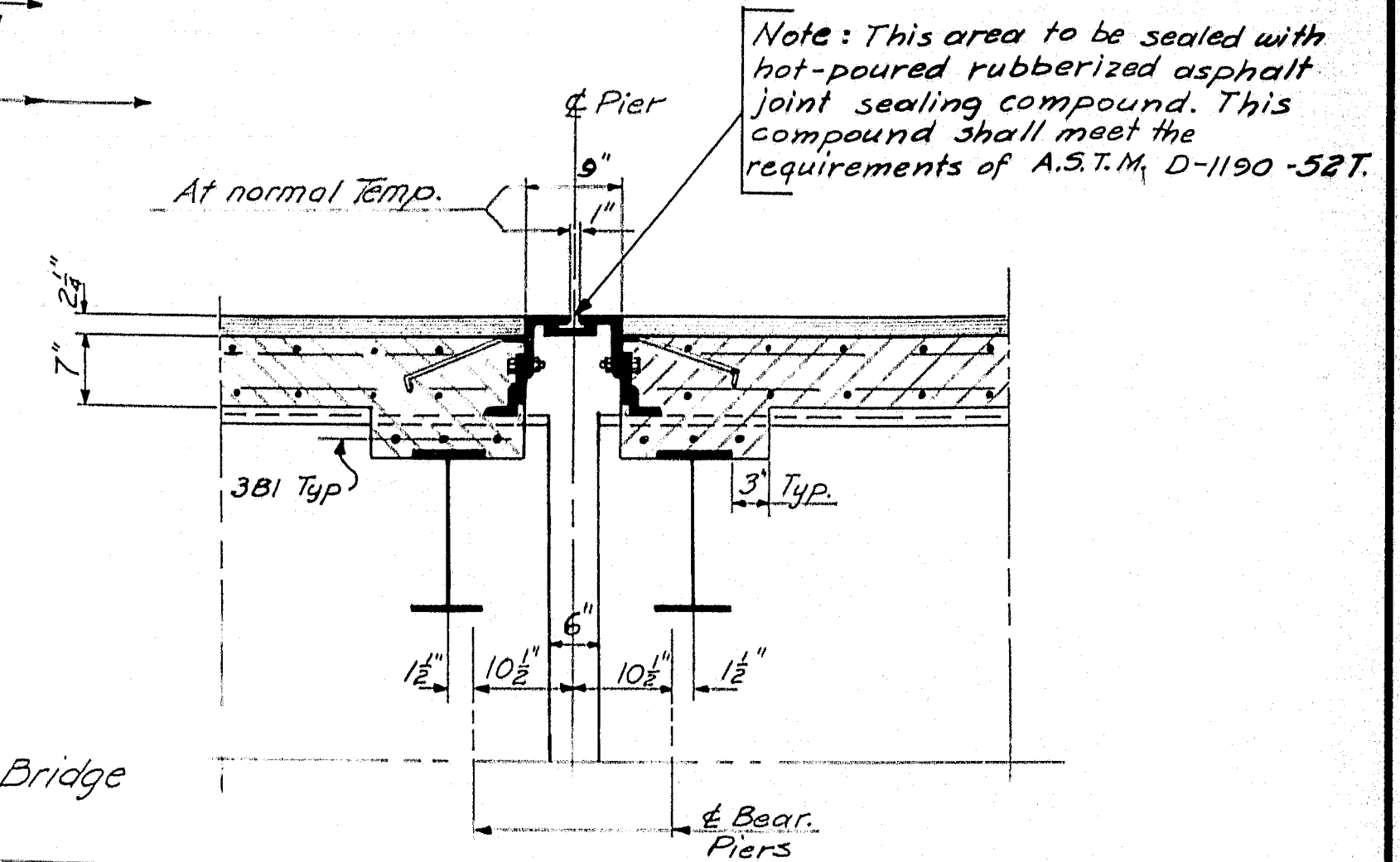


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-16-95-7(1)	13	76

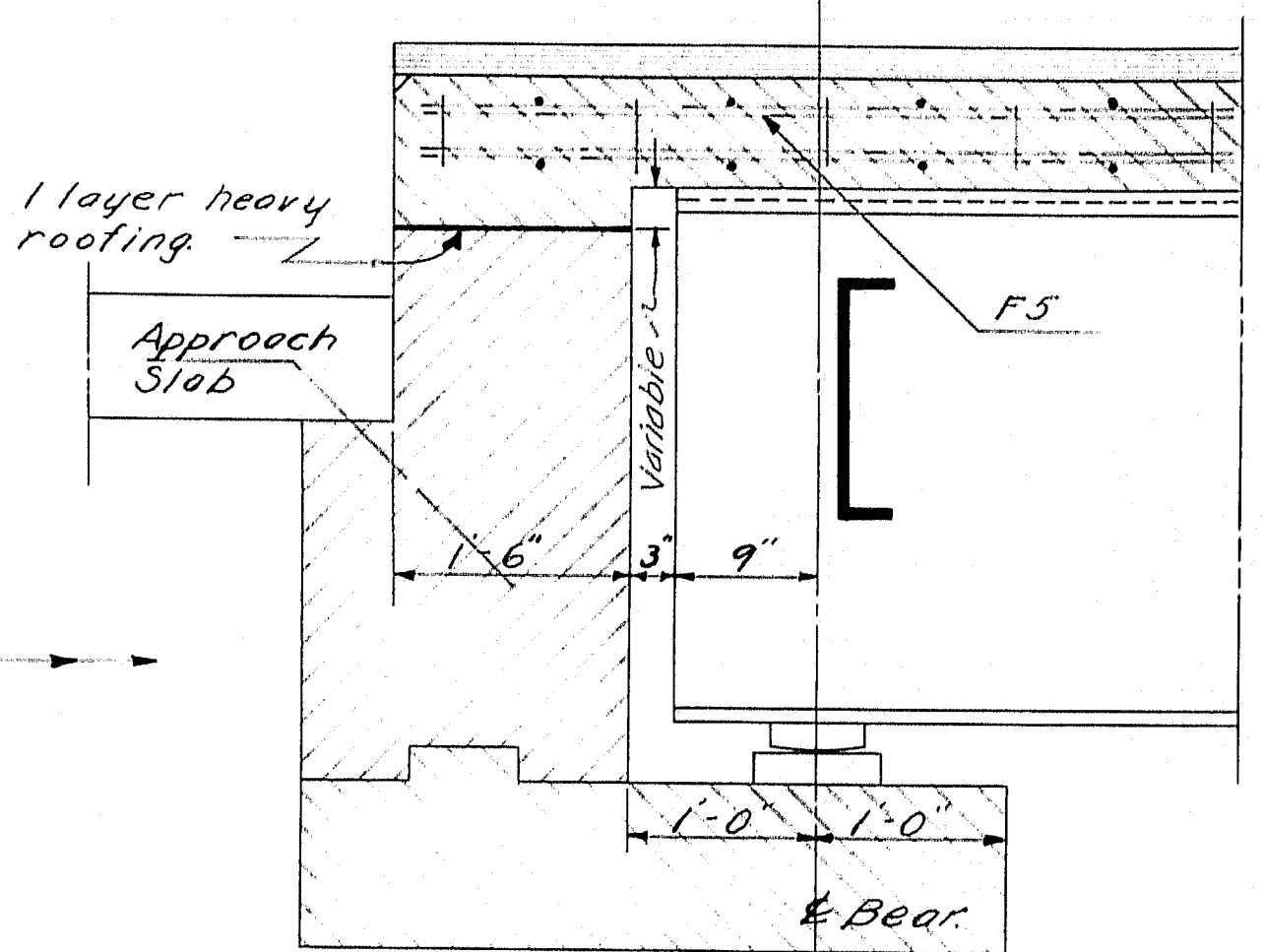


### PART PLAN SOUTHBOUND STRUCTURE

Rotate 180° for opposite end.  
Northbound Structure similar.



### SECTION AT PIERS

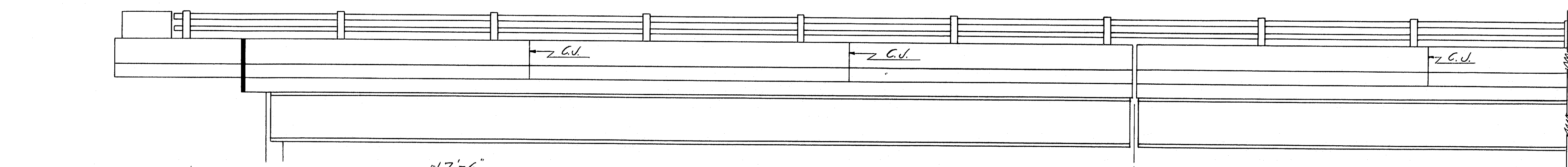


### SECTION AT ABUTS.

### NOTE

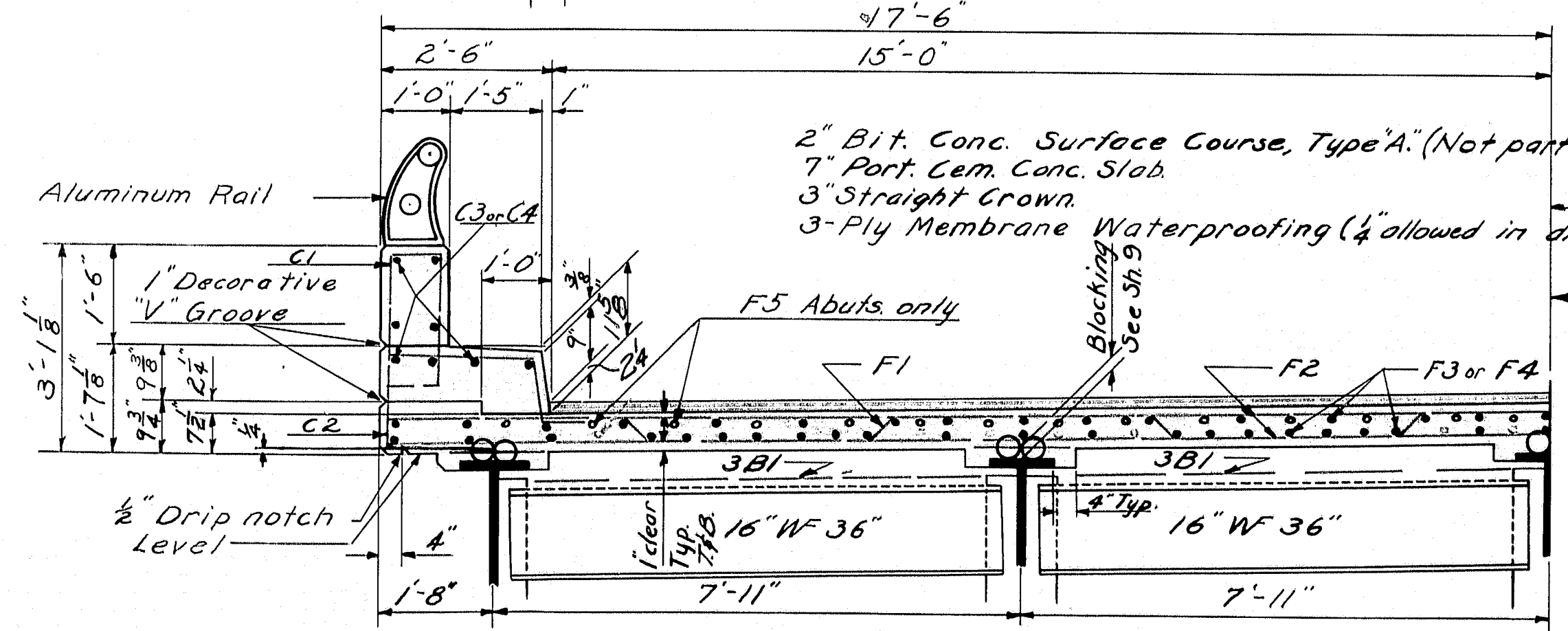
The curb steel is to be in place before the concrete slab is placed.  
The rail curb steel is to be in place before concrete curbs are placed.  
The vertical construction joints are to be coated with a suitable grade of asphaltic paint applied to the contact surface.  
Concrete for curbs is not to be placed until concrete in superstructure slab has been in place for a minimum period of 7 days. During the 7 day period form work may be placed but hand equipment only shall be allowed on the slab.

### DETAIL 1" V-GROOVE

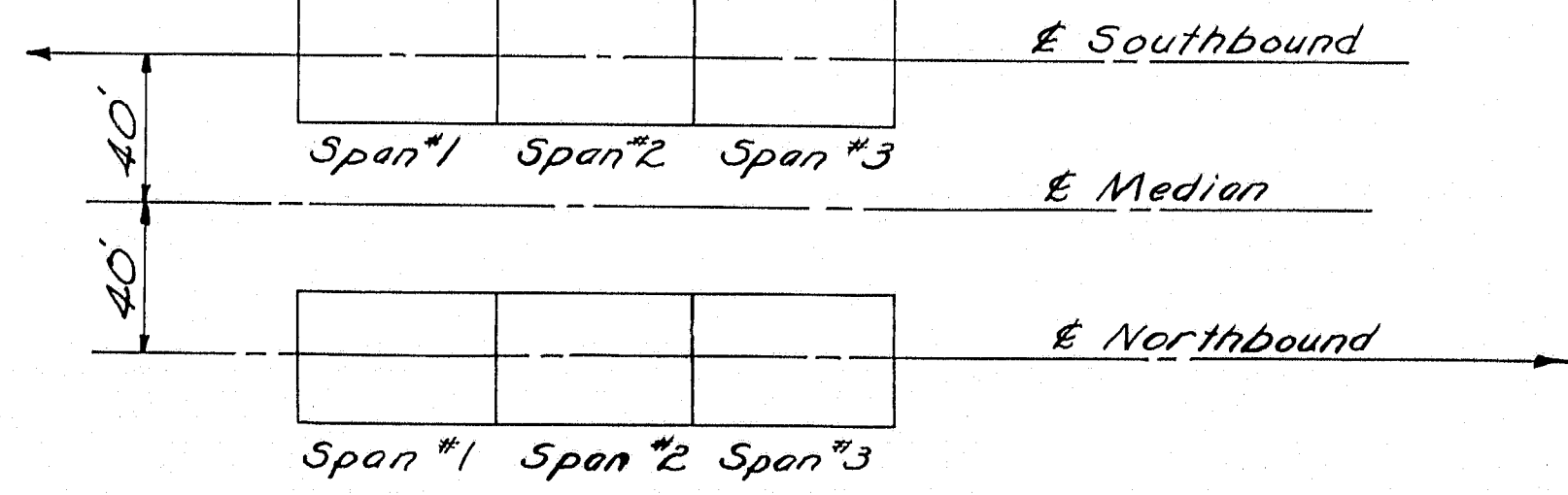


### PART SIDE ELEVATION

References:  
Structural Sh. # 7/8  
Blocking Sh. # 9  
Drains Sh. # 8  
Rail Details Sh. # 9



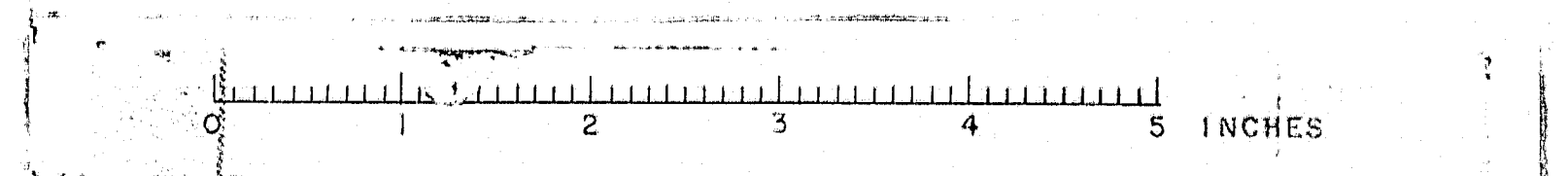
### HALF TRANSVERSE SECTION AT PIER JOINT.



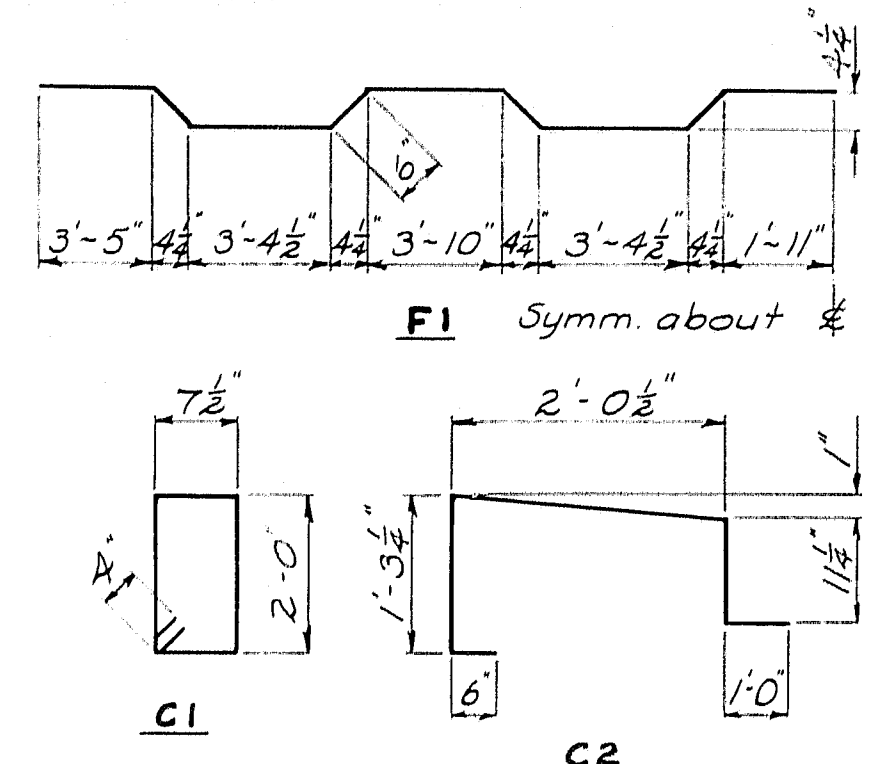
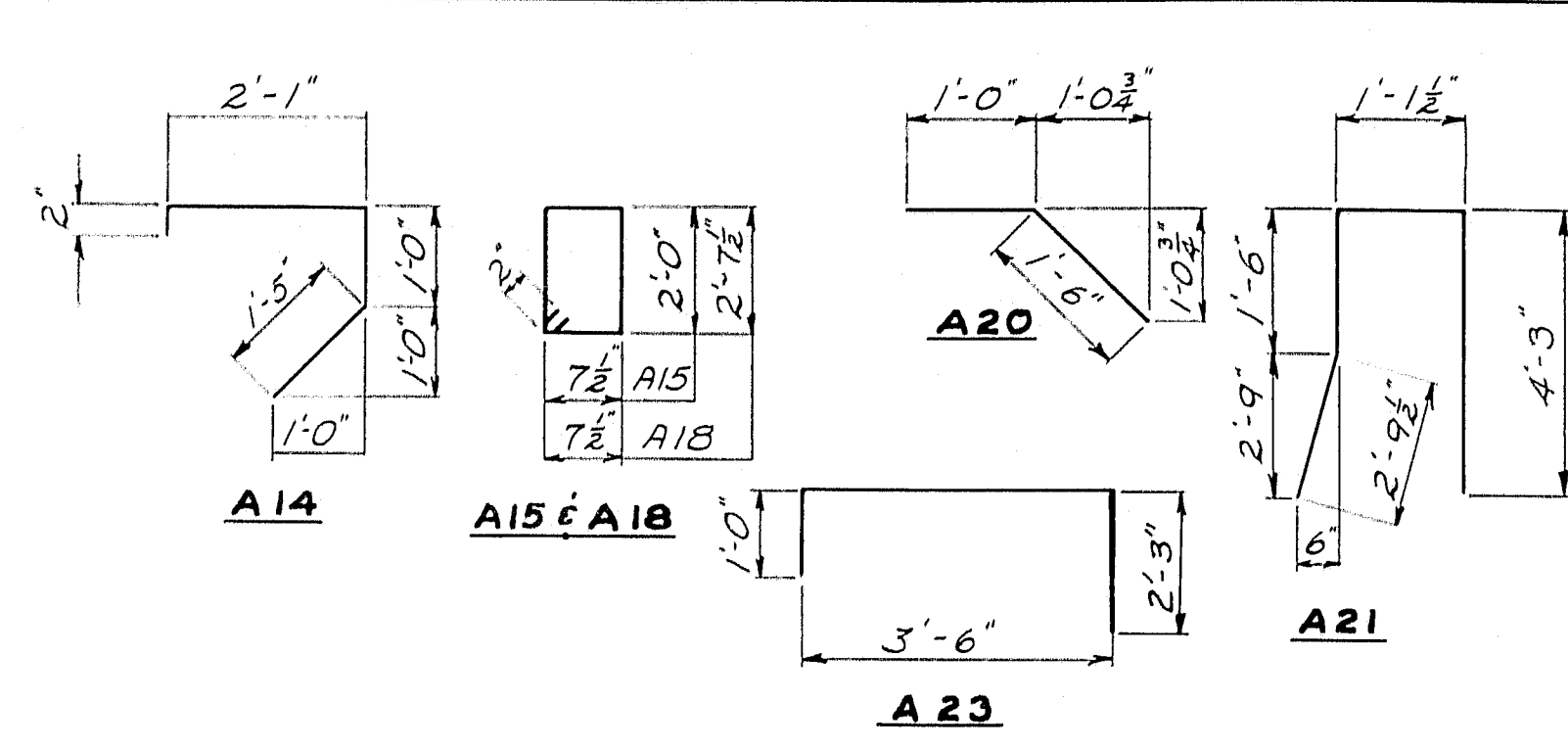
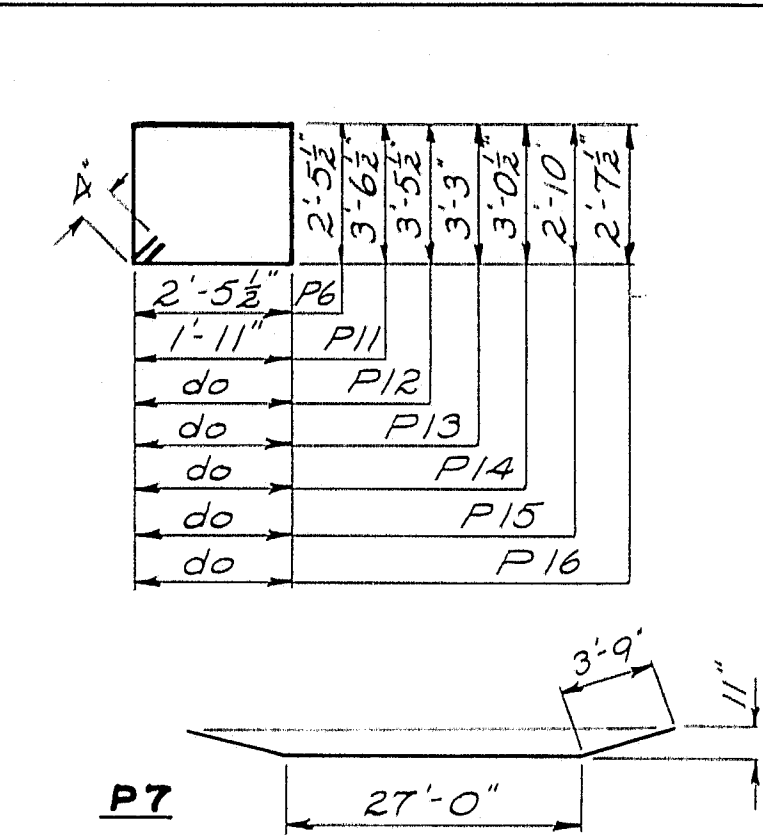
KEY  
Location plan (see location map) Sheet #1

DESIGN - E. H. B.	DET. - H. D. H.	BRIDGE NO.
TRACE - E. H. B.	SURVEY -	BRIDGE DIVISION
CHECK - T. H. K.	PLOT -	
STATE HIGHWAY COMMISSION,		
BRIDGE DIVISION		
RAILROAD BRIDGE		
OVER		
MAINE CENTRAL RAILROAD		
IN THE TOWN OF		
NEWPORT		
PENOBSCOT COUNTY		
SUPERSTRUCTURE		
SHEET 10 OF 11	AUGUSTA, MAINE	AUG. 1960

M-1591





REINFORCING STEEL SCHEDULE																			
SUPERSTRUCTURE					ABUTMENTS										PIERS				
																			
F1 Symm about $\frac{1}{2}$					A14 A15 A18 A20 A21 A23										P7				
C1 C2																			
Dimensions to $\frac{1}{2}$ of bars																			
BENT BARS					BENT BARS										BENT BARS				
Mark	Size	No.	Length	Location	Mark	Size	No.	Length	Location	Mark	Size	No.	Length	Location	Mark	Size	No.	Length	Location
F1	#6	312	35'-10"	Slab	A14	#4	64	4'-8"	Curb	A20	#6	60	2'-6"	Backwall	P6	#4	276	10'-6"	Columns
C1	#5	428	5'-11"	Curb	A15	#4	64	5'-7"	Rail Curb	A21	#5	96	9'-8"	"	P7	#8	20	34'-6"	Cap
C2	#5	428	5'-9"	Curb	A18	#4	32	6'-10"	End Post	A23	#4	96	6'-9"	Bridgeseat	P11	#5	176	11'-7"	"
															P12	16	11'-5"	"	
															P13	16	11'-0"	"	
															P14	16	10'-7"	"	
															P15	16	10'-2"	"	
															P16	#5	16	9'-9"	"

Design: Bailey

Design: Bailey

Design: C.S.A.

DESIGN - F.H.G.  
TRACE - " "  
CHECK - T.H.K.

BRIDGE NO. \_\_\_\_\_  
SURVEY - PLOT - \_\_\_\_\_

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION

**RAILROAD BRIDGE**  
OVER  
**MAINE CENTRAL RAILROAD**  
IN THE TOWN OF  
**NEWPORT**  
**PENOBSCOT COUNTY**

REINFORCING STEEL  
SHEET // OF // AUGUSTA, MAINE AUG. 1960

M-1592

