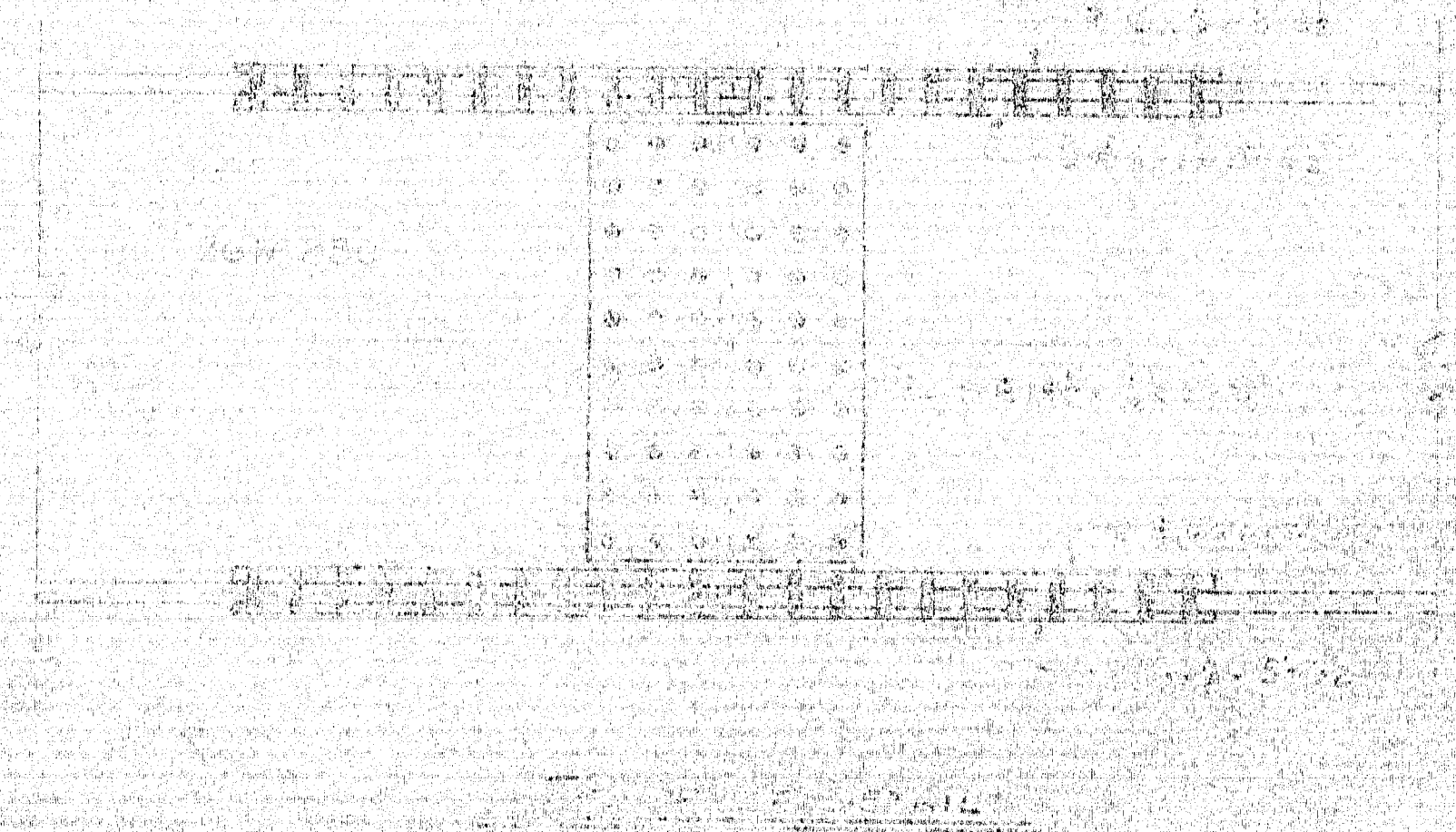


DETAIL OF DIAPHRAGM AT SPAN

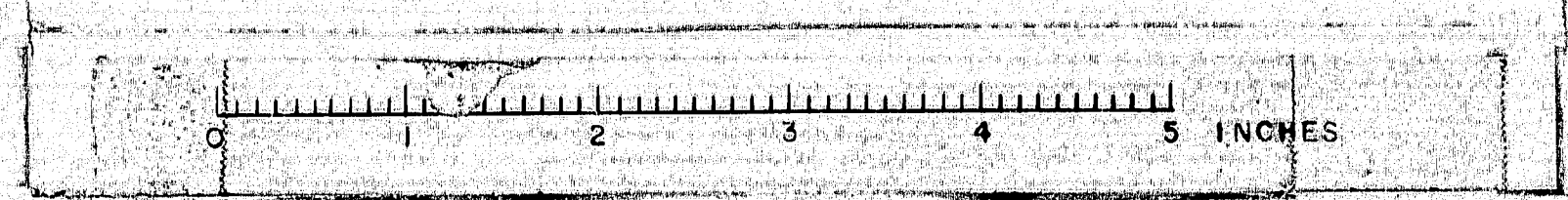


SHOP CONNECTIONS: WELD  
FIELD CONNECTIONS: BOLT & WELD  
HOLES: 1/4"  
PAINT: GALV. IN. MAINT. SECS.

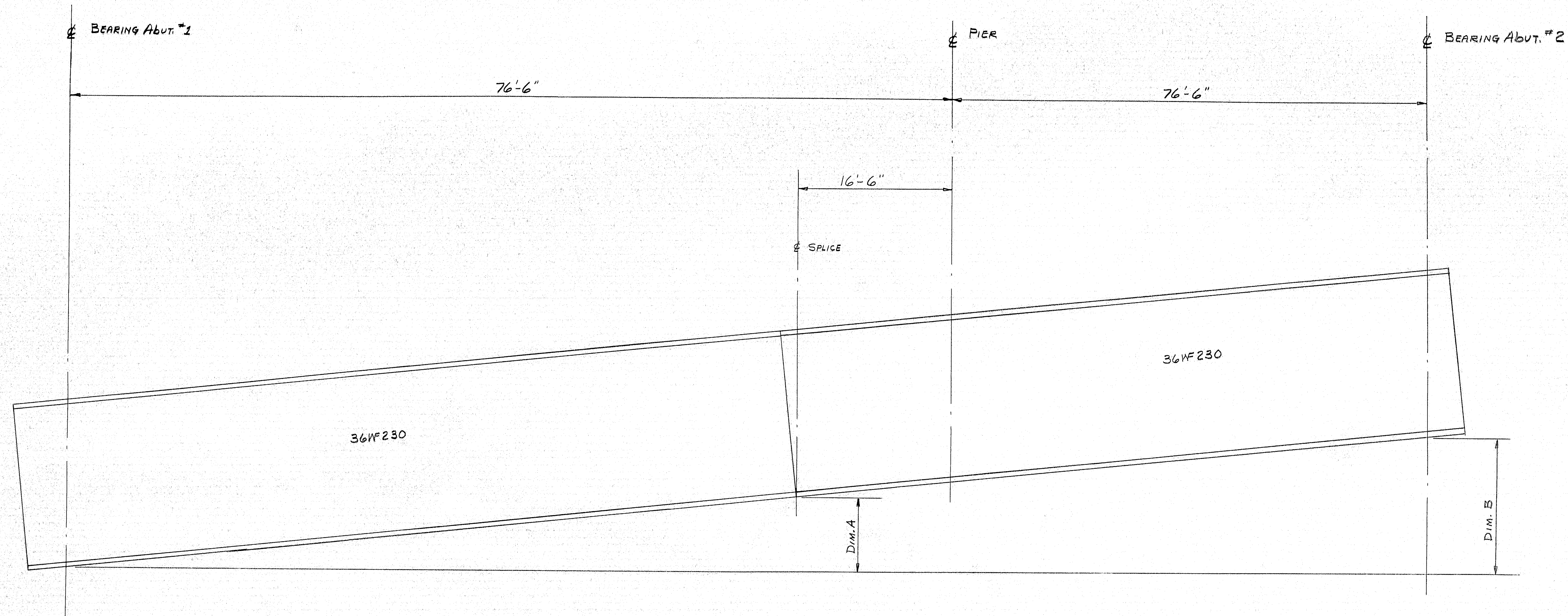
Proj. No. I-95-9(23)297

FRAMING PLAN SOUTHBOUND		
Burrage & Martin Inc. Brewer, Maine		
5 STATE	8-9-65	INTERSTATE ROUTE 95
3 CUST.	4-30-65	HAULTON, MAINE
2 SHOP	4-30-65	CUSTOMER: CALHOUN ENGINEERS INC.
2 FA.	4-14-65	DESIGNER: STATE HIGHWAY DEPT.
DRAWN	3-1-65	ORDER: 100-100
REVISION		DWG. NO. 94-115-E2
REVISION		
REVISION		

94-115







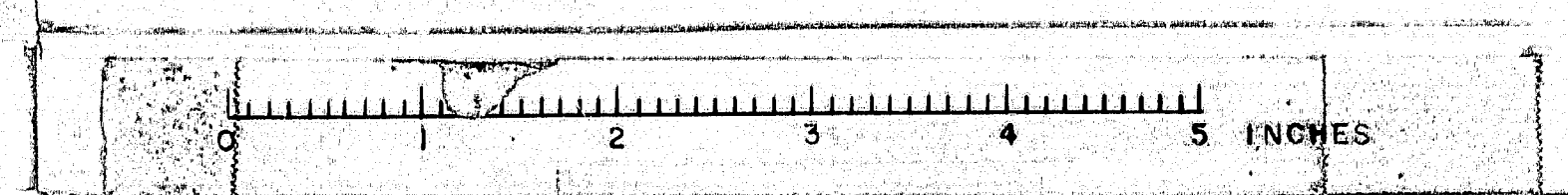
# ELEVATIONS

NORTHBOUND		
LINE	DIM. A	DIM. B
A	1'-4"	2'-3 $\frac{3}{8}$ "
B	1'-4 $\frac{5}{16}$ "	2'-4 $\frac{7}{16}$ "
C	1'-4 $\frac{7}{16}$ "	2'-5 $\frac{9}{16}$ "
D	1'-5 $\frac{1}{8}$ "	2'-5 $\frac{9}{16}$ "
E	1'-5 $\frac{3}{8}$ "	2'-6 $\frac{1}{4}$ "
F	1'-5 $\frac{5}{8}$ "	2'-6 $\frac{13}{16}$ "

SOUTHBOUND		
LINE	DIM. A	DIM. B
A	0'-5 $\frac{1}{2}$ "	1'-0 $\frac{1}{8}$ "
B	0'-5 $\frac{1}{2}$ "	1'-0 $\frac{1}{8}$ "
C	0'-5 $\frac{9}{16}$ "	1'-0 $\frac{1}{4}$ "
D	0'-5 $\frac{5}{8}$ "	1'-0 $\frac{5}{16}$ "
E	0'-5 $\frac{11}{16}$ "	1'-0 $\frac{7}{16}$ "
F	0'-5 $\frac{1}{16}$ "	1'-0 $\frac{1}{2}$ "

SHOP CONNECTIONS:  
FIELD CONNECTIONS: 8" H.S. BOLTS  
HOLES:  $\frac{1}{8}$ " U.N.  
PAINT: STATE OF MAINE SPEC'S.

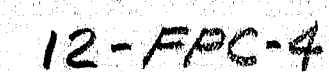
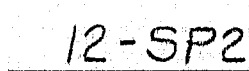
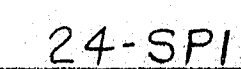
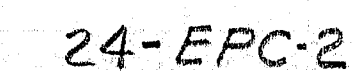
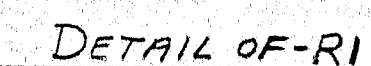
ELEVATIONS BOTH LANES			
PRINT ISSUE		<i>Bancroft &amp; Martin Inc.</i> Brewer, Maine	
5	STATE	8-9-65	INTERSTATE 95 OVER U.S. ROUTE #1
3	CUST.	4-30-65	PROJ. NO. I-95-9(23) 297
2	SHOP	4-30-65	HOULTON, MAINE
2	FA.	4-14-65	CUSTOMER CALLAHAN BROTHERS INC.
DRAWN	4-14-65	C.J.M.	DESIGNER STATE HIGHWAY COMM.
REVISION			
REVISION			
REVISION			
ORDER VERBAL		DWG. B65-22-E3	



94-116



No paint on anchor bolts- oil threads. No paint on top surface and  $\frac{3}{8}$ " down from top on sides of sole plates. Coat with boiled linseed oil. No paint on Surfaces finished ASA 250. Coat with hot mixture of white lead and tallow. No paint on surfaces finished ASA 125.

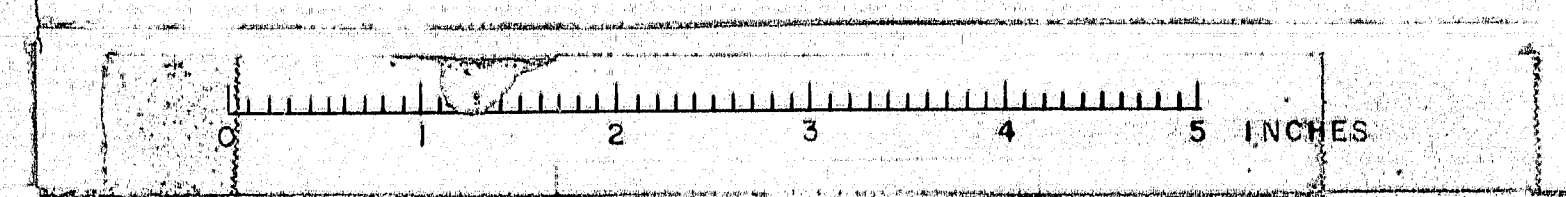


SHOP CONNECTIONS: WELD { PREHEAT TO 50°F  
ETO LOW-HYDROGEN  
OR SAW-1  
FIELD CONNECTIONS: BOLT  
HOLES: 1 3/8" Ø U.N.  
PAINT: STATE OF MAINE SPECS.

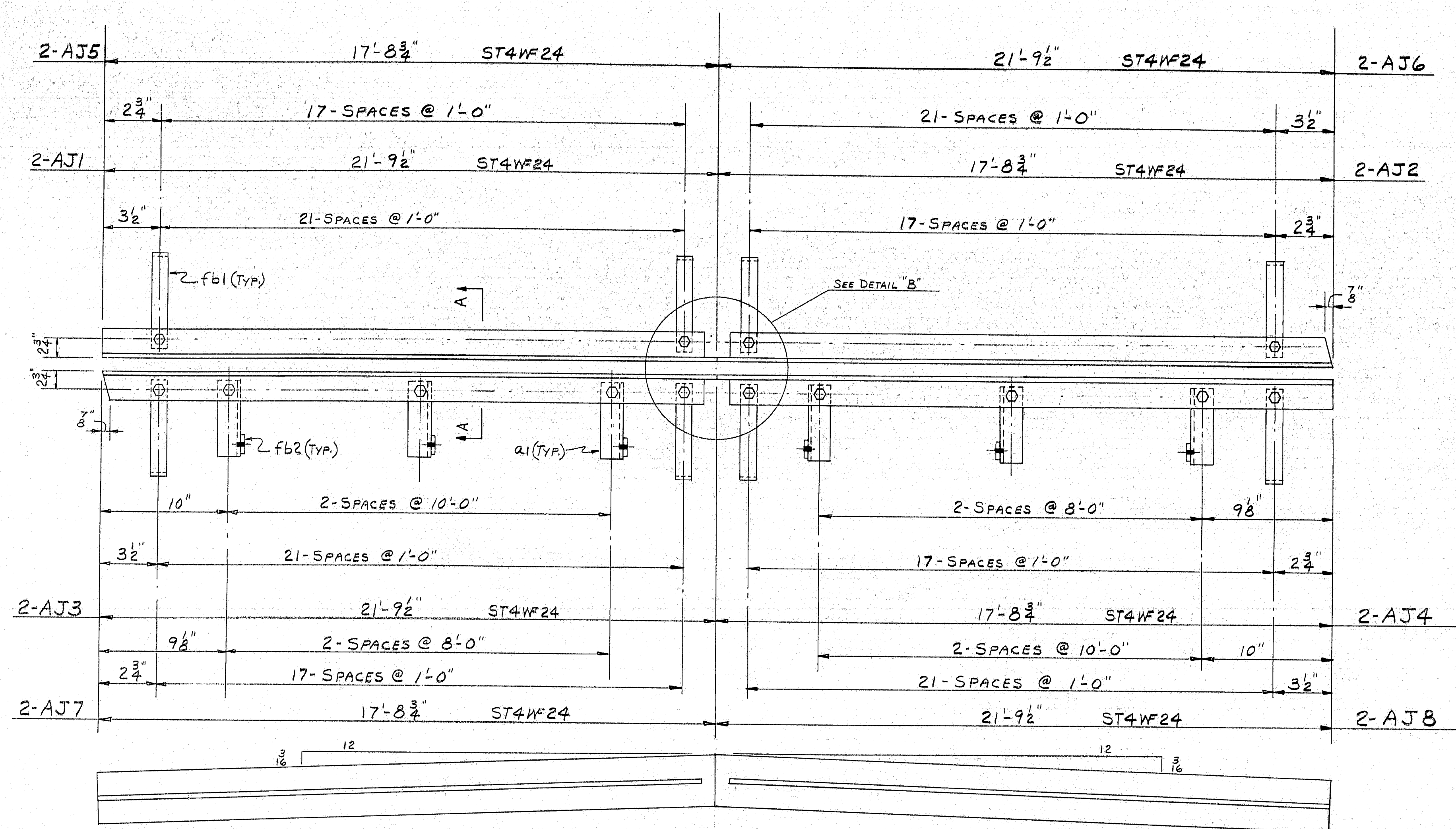
Proj. No. I-95-9(23)297

## BEARING PEDESTALS

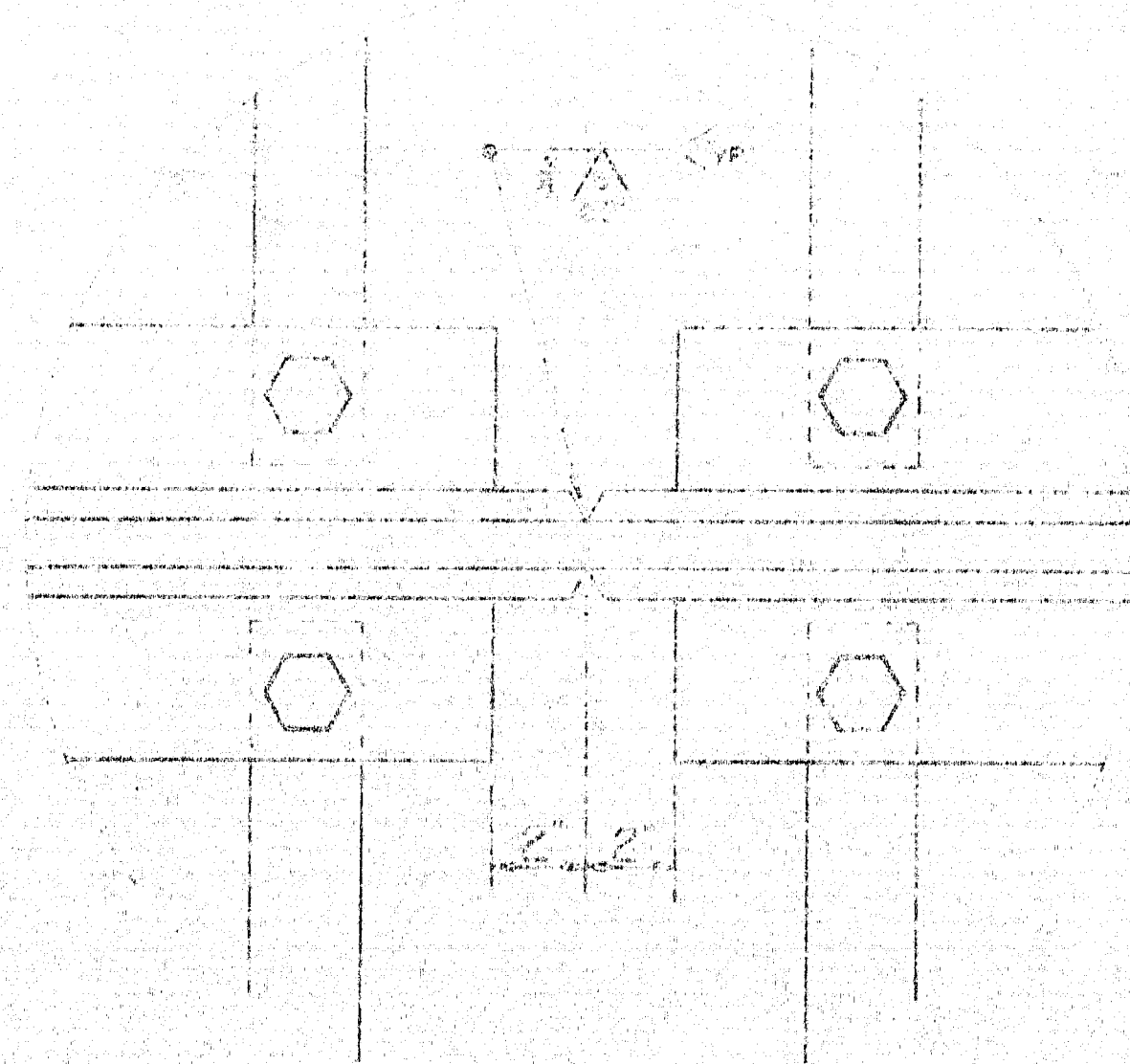
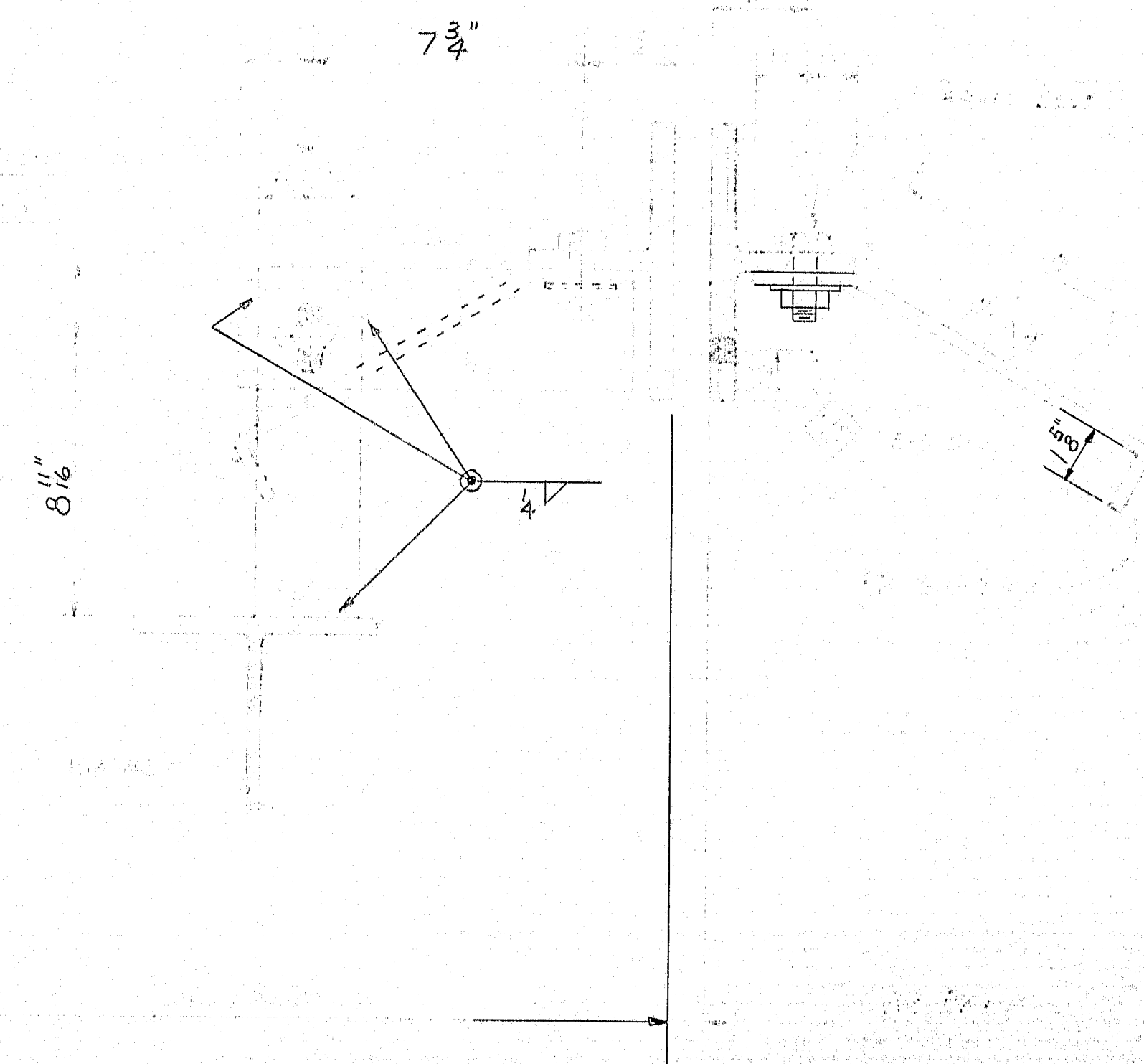
PRINT ISSUE		<i>Bancroft &amp; Martin Inc.</i> <i>Brewer, Maine</i>	
5	STATE 8-9-65	INTERSTATE 95 OVER U.S. ROUTE #1 HOULTON, MAINE	
3	CUST. 4-30-65		
2	PORT REG. 4-30-65		
2	F.A. 4-14-65	CUSTOMER <i>CALLAHAN BROTHERS INC.</i> DESIGNER <i>STATE HIGHWAY COMM.</i>	
DRAWN	4-5-65 C.J.M.		
REVISION		ORDER <i>VERBAL</i>	
REVISION			
REVISION			
		DWG. <i>B65-22-S1</i>	







SHIP		BILL OF MATERIAL				DWG. B65-22-S2	
MARK	NO	MARK	SHAPE	LENGTH	WT.	REMARKS	
AJ1	2		ST4WF24	21' 9 1/2"		A36	
AJ2	2			17' 8 3/4"			
AJ3	2			21' 9 1/2"			
AJ4	2			17' 8 3/4"			
AJ5	2			17' 8 3/4"			
AJ6	2			21' 9 1/2"			
AJ7	2			17' 8 3/4"			
AJ8	2			21' 9 1/2"			
		24	Q1	3/8 x 3/8 x 3/8	0 11/4	24-L	A36
		320	fb1	FB 2 1/2 x 3/8	1 3	BENT	do
		24	fb2	FB 3/8 x 3/8	0 10/16		do
		350	SHOP	3/8 H.S. BUT	0 24	HEAVY HEX. NUTS	A325
		350	SHOP	3/8 H.S. WASHERS			A325

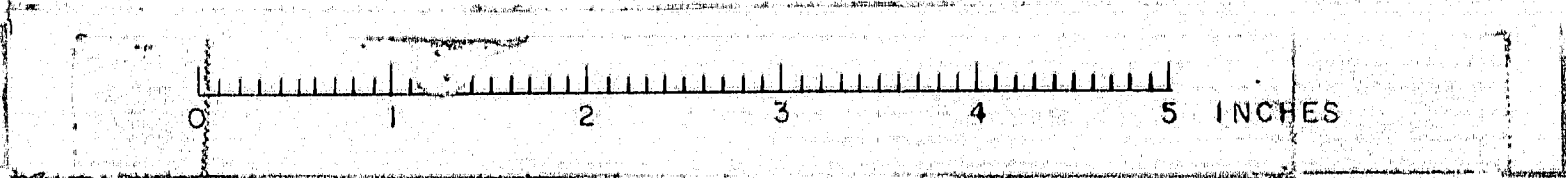


DETAIL "B"

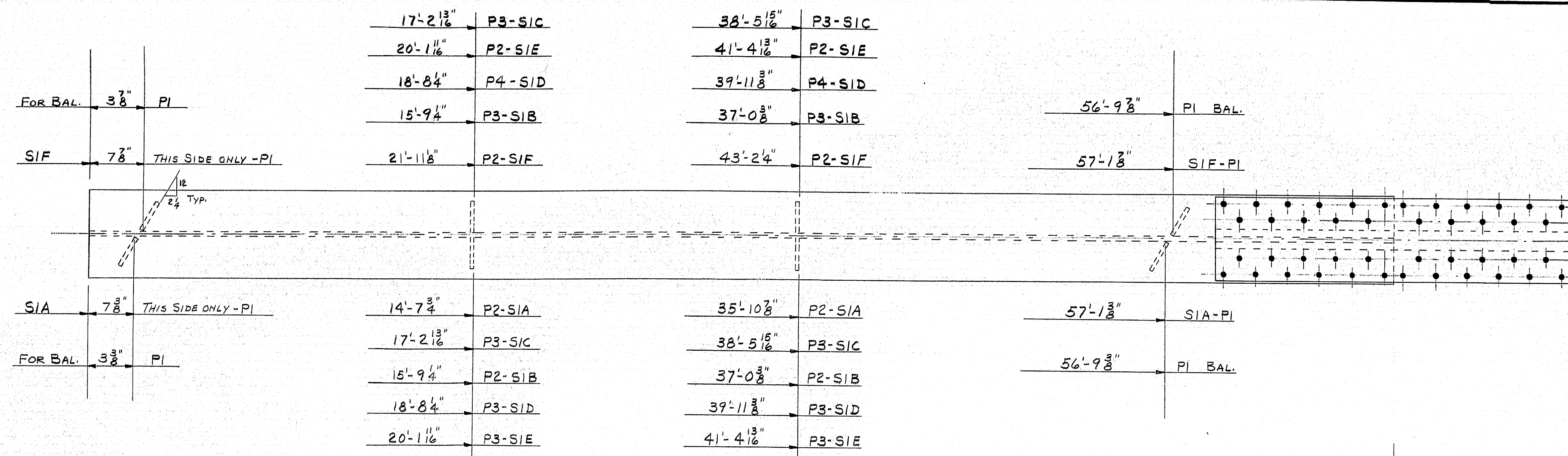
SHOP CONNECTIONS: WELD (E-70 LOW-HYDROGEN)  
FIELD CONNECTIONS: WELD  
HOLES: 1/8" U.N.  
PAINT: STATE OF MAINE SPEC'S.

ARMORED JOINT		NORTHBOUND & SOUTHBOUND	
		Brancoff & Martin Inc. Brancoff, Maine	
5	STATE	8-9-65	INTERSTATE 95 OVER U.S. ROUTE #1
3	CUST	4-30-65	PROJ. NO. I-95-9 (23) 297
5	SHOP	4-30-65	HOULTON, MAINE
2	E.A.	4-14-65	CUSTOMER CALLAHAN BROTHERS INC.
1	REVISION	4-6-65 C.J.M.	DESIGNER STATE HIGHWAY COMMISSION
		ORDER VERBAL	DWG. B65-22-S2

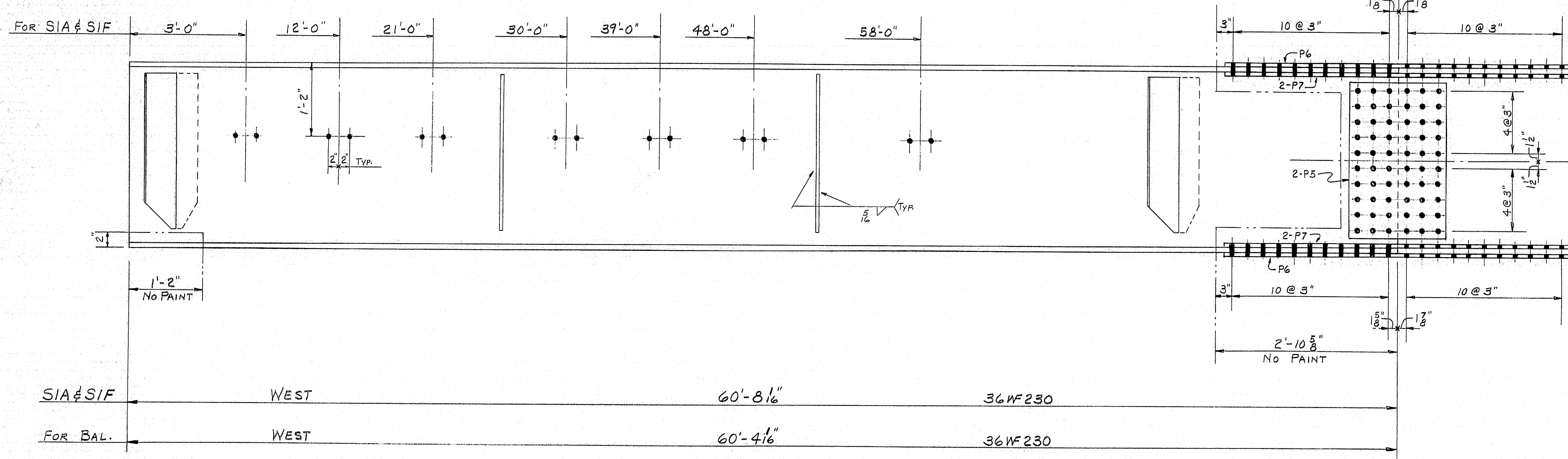
94-118







SHIP		BILL OF MATERIAL			DWG. B65-22-S3	
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
SIA	1		36WF230	60' 8 1/2"		A36
SIB	1		}	60' 4 1/2"		
SIC	1			60' 4 1/2"		
SID	1			60' 4 1/2"		
SIE	1			60' 4 1/2"		
SIF	1		do	60' 8 1/2"		
	20	P1	R 6 x 3/8	2	6	
	8	P2	do	2	6	
	10	P3	do	2	6	
	2	P4	do	2	6	
	12	P5	R 18 1/2 x 1 1/2	2	6	
	12	P6	R 16 x 5/8	5	6 1/2	
	24	P7	R 6 x 1	5	6 1/2	
					</	

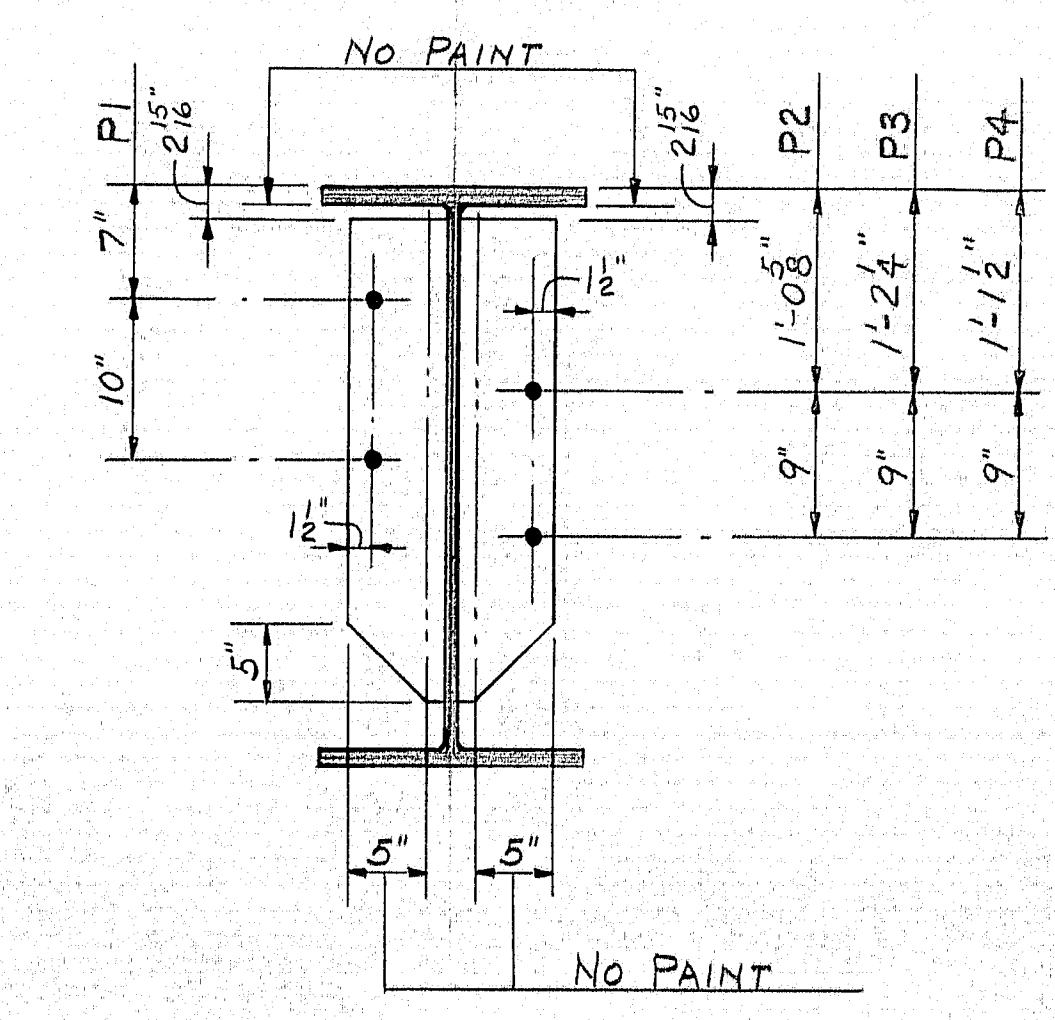


NOTE: CONTROL FOR DIAPHRAGM  
LOCATION AT E OF TOP FLANGE.

ONE EACH  
SIA-SIB-SIC-SID-SIE-SIF

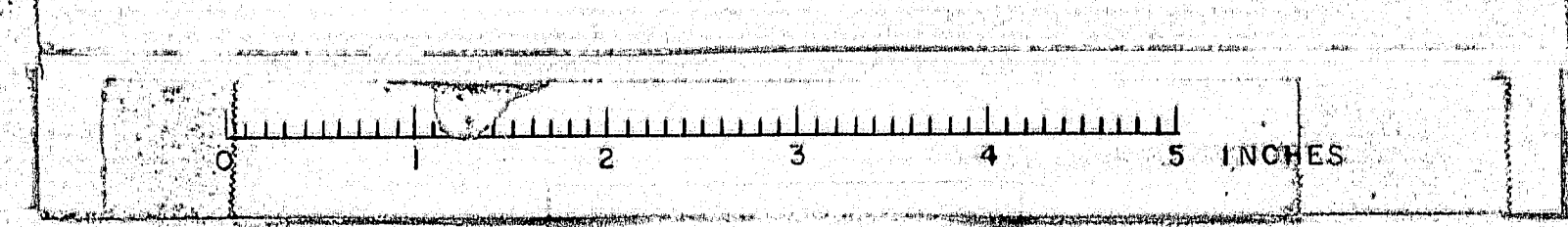
PLACE ANY NATURAL  
CAMBER UP.

MARK THESE BEAMS  
NORTHBOUND.



SHOP CONNECTIONS: WELD (E-70 LOW-HYDROGEN)  
FIELD CONNECTIONS: 3/8" H.S. BOLTS  
HOLES: 15/16"  
PAINT: STATE OF MAINE SPEC'S.

STRINGERS SPAN #1 NORTHBOUND			
PRINT ISSUE		Bancroft & Martin Inc. Brewer, Maine	
5	STATE	8-9-65	INTERSTATE 95 OVER U.S. ROUTE #1
3	CUST.	4-30-65	PROJ. No. I-95-9(23) 297
5	SHOP	4-30-65	HOULTON, MAINE
2	P.A.	4-14-65	CUSTOMER CALLAHAN BROTHERS INC.
DRAWN	4-7-65	C.J.M.	DESIGNER STATE HIGHWAY COMM.
REVISION			
REVISION			
REVISION			
ORDER VERBAL		DWG. B65-22-S3	

























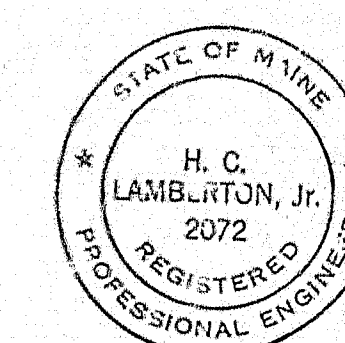
# STATE OF MAINE STATE HIGHWAY COMMISSION



## INTERSTATE 95 OVER U.S. ROUTE NO. 1 IN THE TOWN OF HOULTON AROOSTOOK COUNTY FEDERAL AID PROJECT NO. I-95-9(23)297 LENGTH OF PROJECT 0.030 MILE

### TRAFFIC

INTERSTATE 95	U.S. ROUTE NO. 1
1080 ----- A.D.T. 1966 -----	5260
1690 ----- A.D.T. 1986 -----	8210
210 ----- D.H.V. -----	990
14% ----- T. -----	14%
60% ----- D. -----	70%
60 MPH ----- V. -----	50 MPH



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

*H.C. Lamberton, Jr.* 11-24-64  
DATE

PROJECT COMPLETED 10 NOV'66

APPROVED  
MAINE STATE HIGHWAY COMMISSION DATE  
*Carl M. Stephen* CHAIRMAN 12-2-64  
*Richard G. LaCharité* 12-2-64  
*William J. ...* CHIEF ENGINEER 12-2-64

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

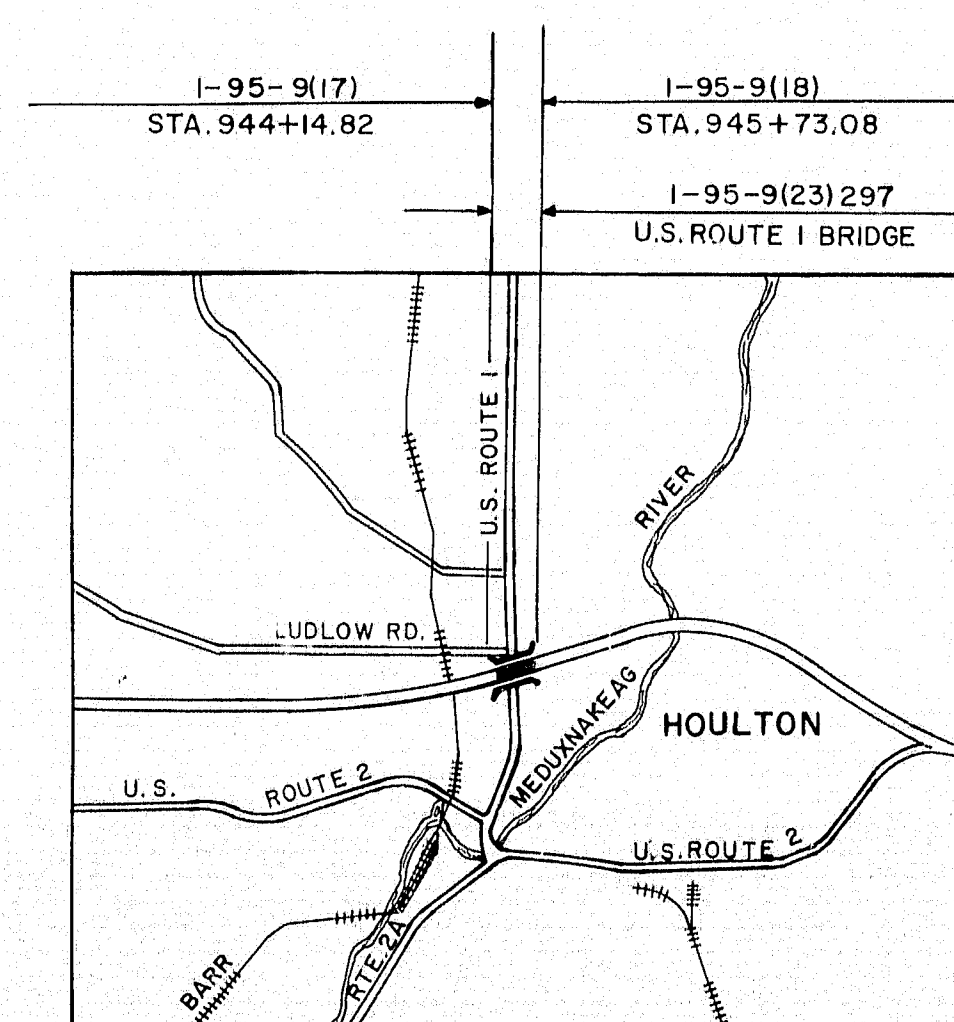
SURVEY CROSS SECTION SCALES } HOR. 1"=20' VERT. 1"=5'  
INTERSTATE 1"=10' U.S. ROUTE NO. 1 1"=5'

### INDEX OF SHEETS

1. TITLE SHEET
2. GENERAL PLAN & QUANTITIES
3. TYPICAL SECTIONS & MAINLINE PROFILES
4. PLAN & RTE. 1 PROFILE
- 5-8. MAINLINE CROSS SECTIONS
- 9-11. RTE. 1 CROSS SECTIONS
12. FOUNDATION SURVEY
13. ABUTMENT NO. 1 S.B.
14. ABUTMENT NO. 2 S.B. AND APPROACH SLAB
15. ABUTMENT NO. 1 N.B.
16. ABUTMENT NO. 2 N.B. AND APPROACH SLAB
17. PIERS
18. STRUCTURAL STEEL & BLOCKING
19. SUPERSTRUCTURE
20. SLOPE PAVING
21. REINFORCING STEEL

### STANDARD DETAILS SHEETS

- BD 101-64 BEARING DETAILS  
BD 103-64 BEAM SPLICES  
BD 104-64 DIAPHRAGMS, ARMORED JOINT,  
SHEAR CONNECTORS, DRAIN  
BD 107-64 STEEL RAIL  
BD 108-64 ALUMINUM RAIL



LOCATION MAP  
APPROX. SCALE - 1" = 1 MILE

96-101 HOULTON (23)



# **SPECIFICATIONS**

## **DESIGN:**

A. A. S. H. O. Standard Specifications for Highway Bridges 1961 with Interim Specifications, 1961, 1962, 1963 & 1964.

## **CONTRACT:**

State of Maine, 31<sup>st</sup> Highway Commission Standard Specifications for Highways and Bridges, Revision of January 1956 and Supplemental Specifications of Feb. 1960.

## **LIVE LOADING**

H520-44 (Modified for Interstate)

## **FOUNDATIONS**

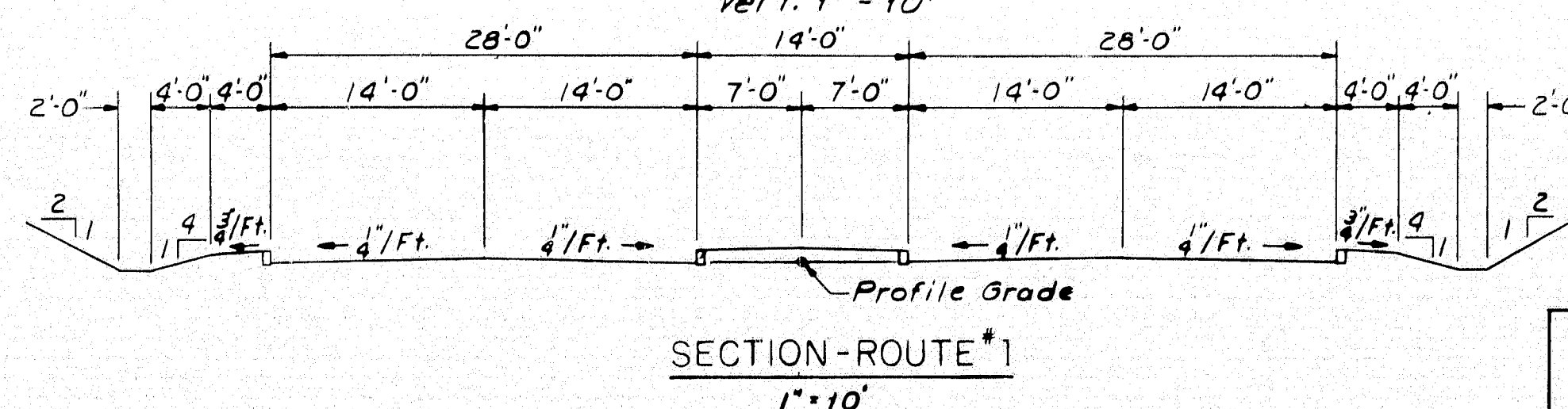
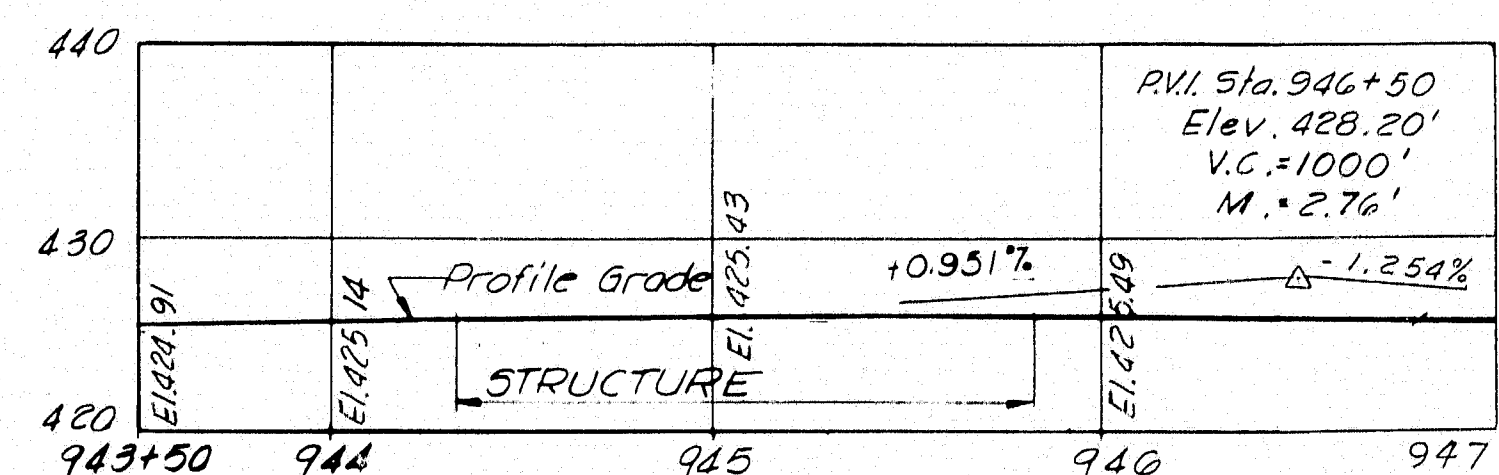
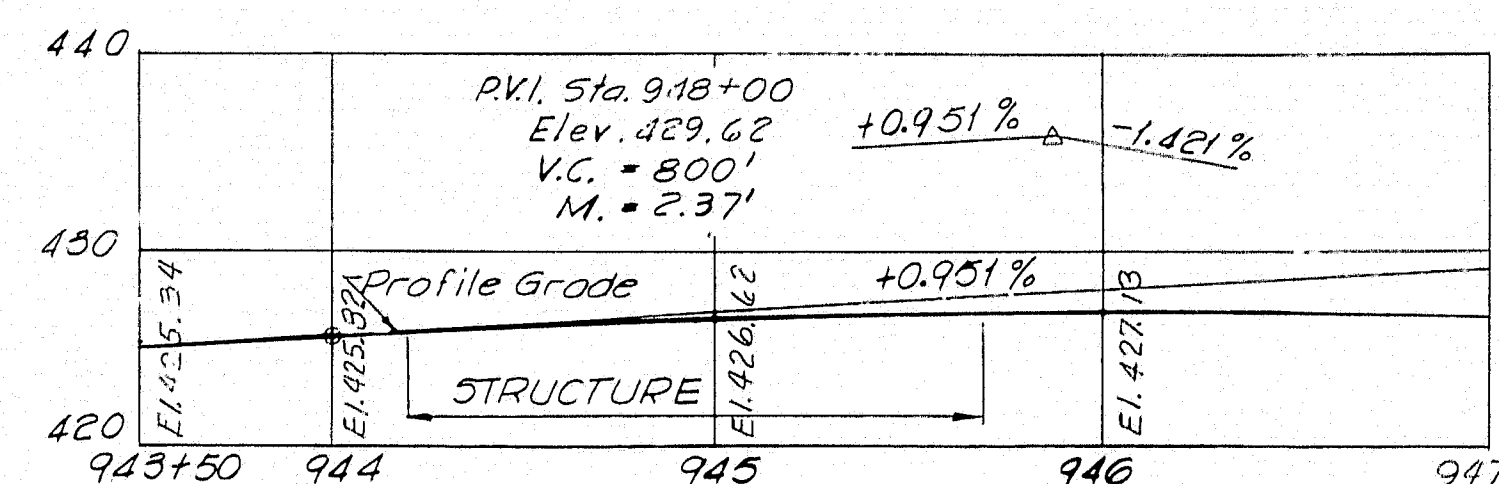
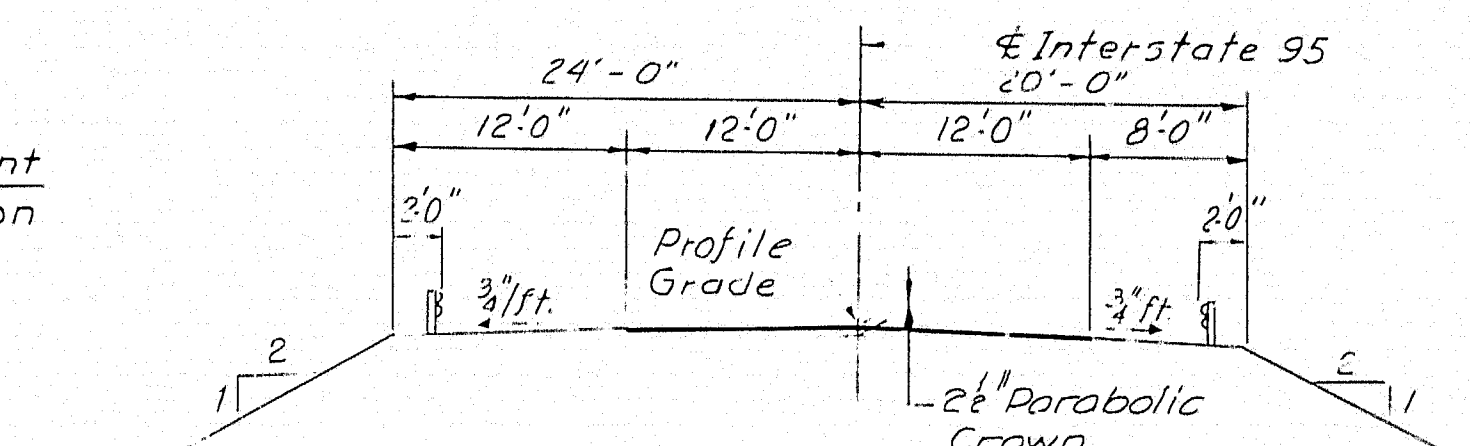
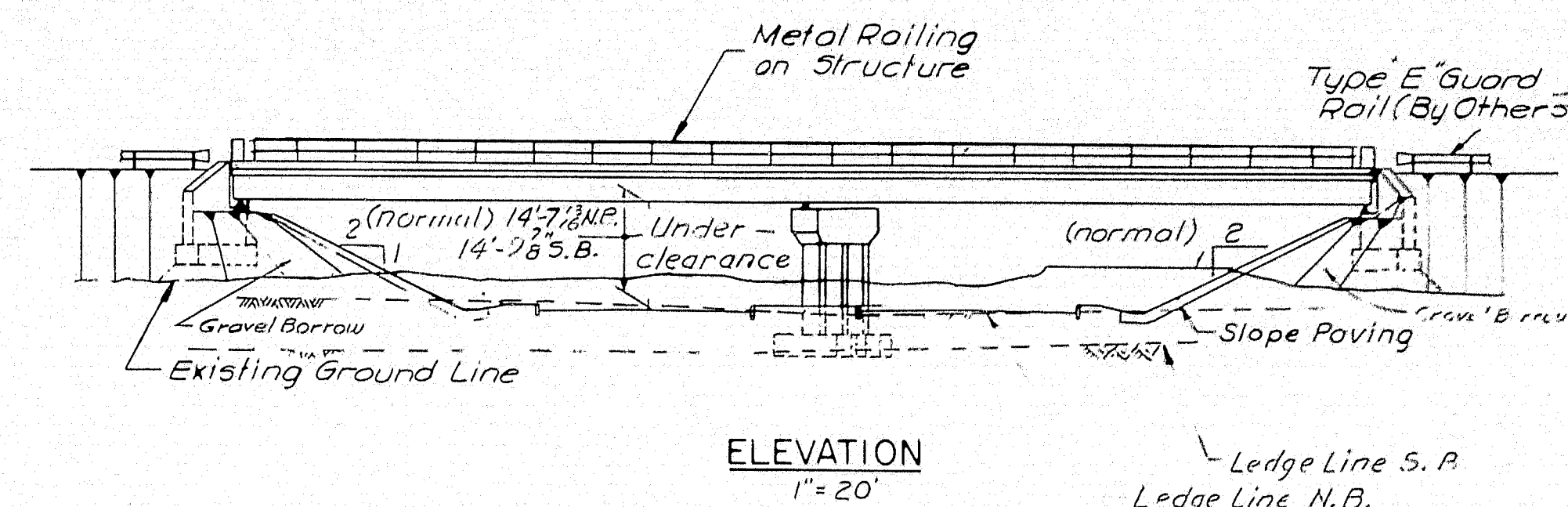
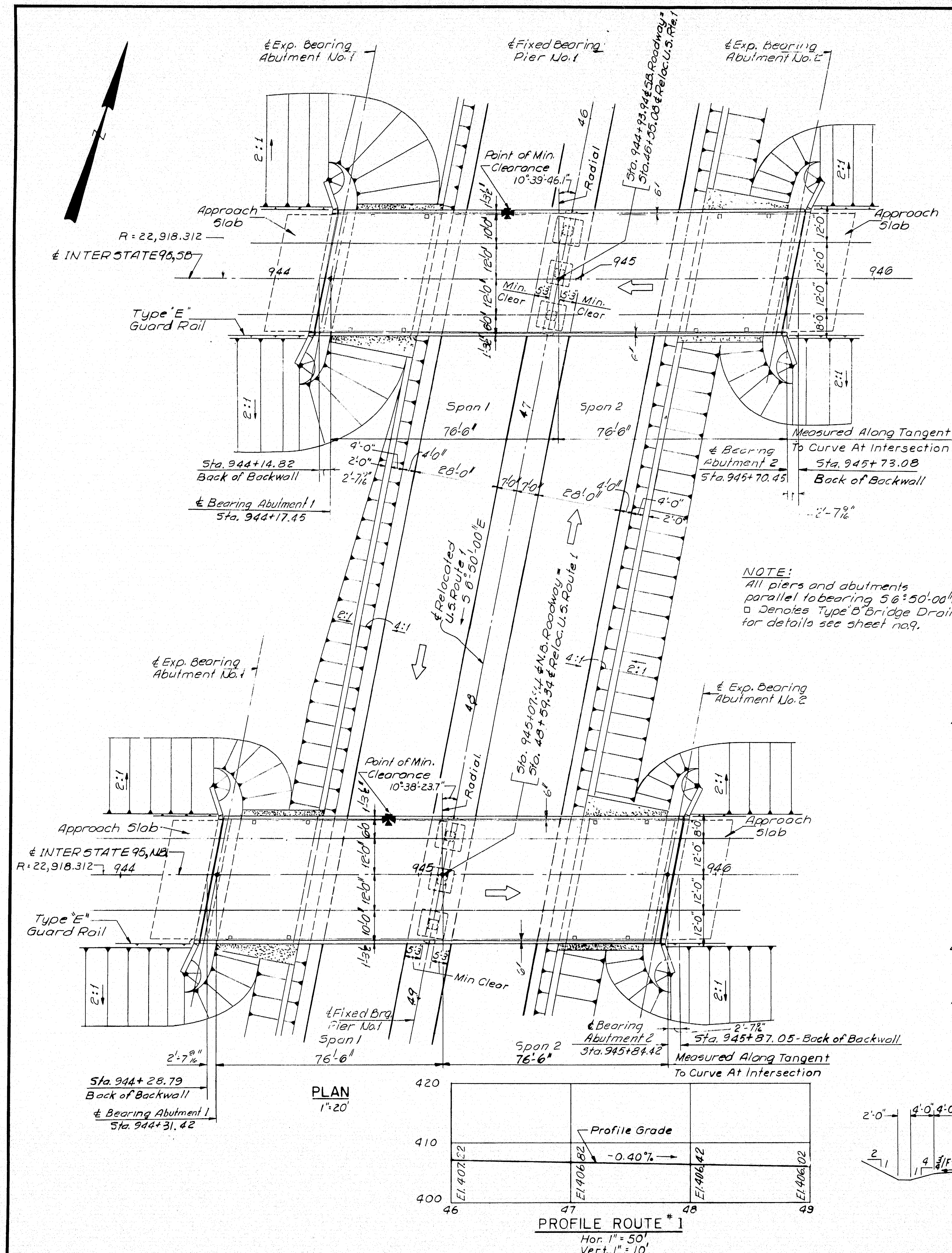
Abutments No. 1 & No. 2, Maximum Design Soil Pressure, 2.6 tons/sq. ft.  
:r No. 1 Spread Footings on Ledge 4.8 tons/sq. ft.

## **ALLOWABLE STRESSES**

Concrete (f<sub>c</sub> = 10) ~ f<sub>c</sub> = 1200 p.s.i.  
Reinforcing Steel, Int. Grade ~ f<sub>s</sub> = 20,000 p.s.i.  
Structural Steel ~ f<sub>s</sub> = 20,000 p.s.i. (A572M436)

## **CONCRETE CLASSIFICATION**

All concrete shall be Class "A" except concrete for slope paving shall be Class "Y".



Item No.	Description	Unit	Quantity	Bridge Quantities
203-9	Earth Excavation	Cu Yds.	400	
204-12	Struct. Earth Excavation, Abutments & Retaining Walls	Cu Yds.	53	53 Cu Yds.
204-14	Struct. Earth Excavation, Piers	Cu Yds.	27	27 Cu Yds.
204-15	Struct. Back Excavation, Piers	Cu Yds.	80	80 Cu Yds.
205-9	Granular Borrow	Cu Yds.	19,000	
205-12	Gravel Borrow (I.P.M.)	Cu Yds.	1,800	
302-7	Gravel Base Course (I.P.M.)	Cu Yds.	1,575	
701-33	Port. Cem. Conc. Abutments & Retaining Walls	Cu Yds.	469	469 Cu Yds.
701-35	Portland Cement Concrete, Piers	Cu Yds.	99	99 Cu Yds.
701-40	Port. Cem. Conc. Raily & Sawlik Slab-on-Steel Bridges	Cu Yds.	354	354 Cu Yds.
701-55	Curing Box for Concrete Cylinders	Each	1	Each
702-103	Structural Steel, Fabricated & Delivered	Lump Sum		Lump Sum
702-104	Structural Steel, Erection	Lump Sum		Lump Sum
702-105	Structural Steel, Field Painting	Lump Sum		Lump Sum
703-3	Reinforcing Steel, Delivered	Lbs.	133,800	133,800 Lbs.
705-14	Reinforcing Steel, Pacing	Lbs.	133,800	133,800 Lbs.
805-8	Bridge Rail	Lin. Ft.	604	604 Lin. Ft.
807-11	Epoxy Resin Surface Sealant	Sq. Yds.	247	247 Sq. Yds.
808-6	Slope Paving	Sq. Yds.	808	
901-24	Vertical Bridge Curb-Type 1	Lin. Ft.	620	620 Lin. Ft.
901-25	Vertical Bridge Curb-Type 1-Circular	Lin. Ft.	23	23 Lin. Ft.
908-10	Loom (I.P.M.)	Cu Yds.	275	
910-13	Seeding-Merlin No. 2	Units	43	
912-7	Hay Mulch	Tons	2.5	
938-1	Warning Lights and Illuminating Signs	Group	2	

Estimated weight of Structural Steel including drains is 498,200 Lbs.

## **NOTE:**

All fill within the limits as shown on Profile Sheet #3 shall be placed by the controlled density method.

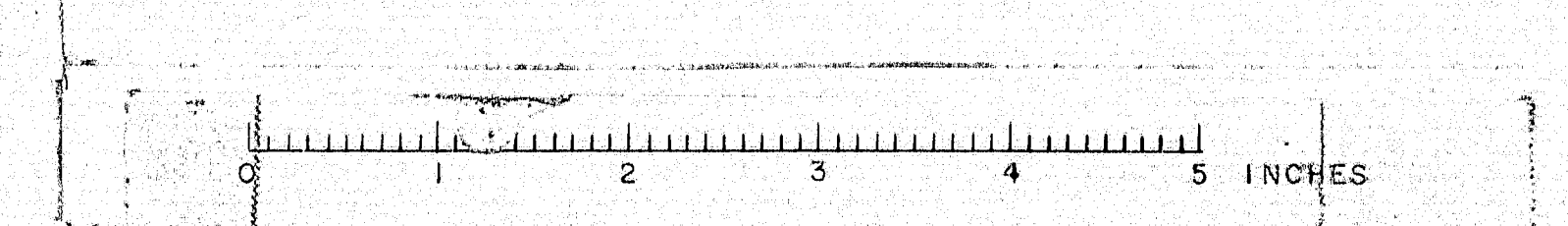
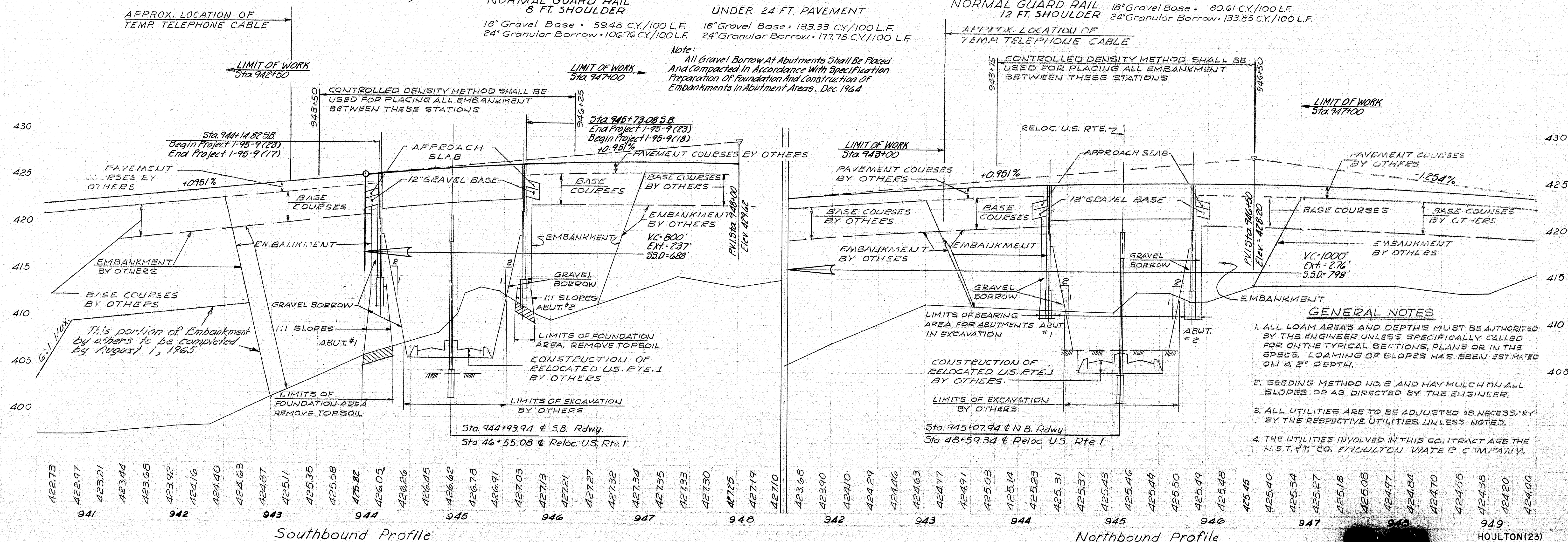
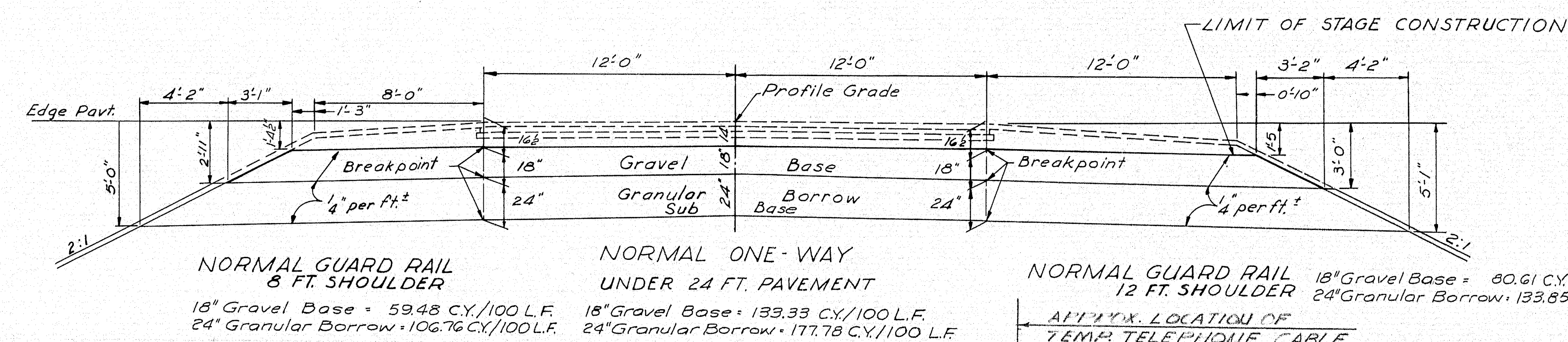
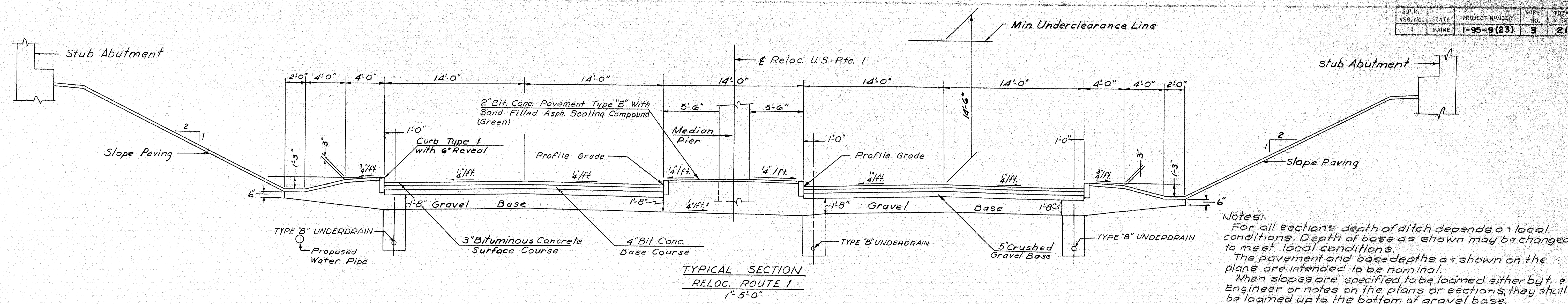
DESIGN-TRACE-CHECK-ARR.	DETAIL-D.A.T.	BRIDGE NO. SURVEY-PLOT

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION  
**INTERSTATE 95**  
OVER  
**U.S. ROUTE 1**  
IN THE TOWN OF  
**HOULTON**  
ARROOSTOOK COUNTY  
GENERAL PLAN AND QUANTITIES

SHEET 2 OF 21 AUGUSTA, MAINE DECEMBER 1, 1964

**96-102** HOULTON (23)





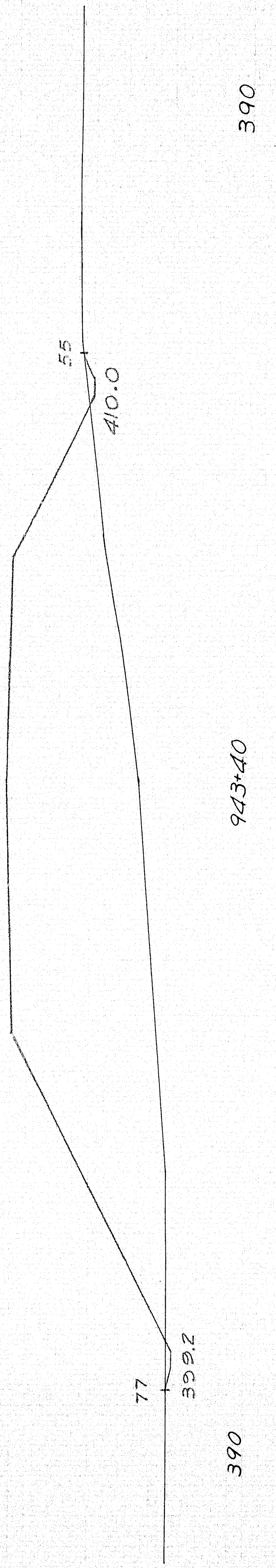






4

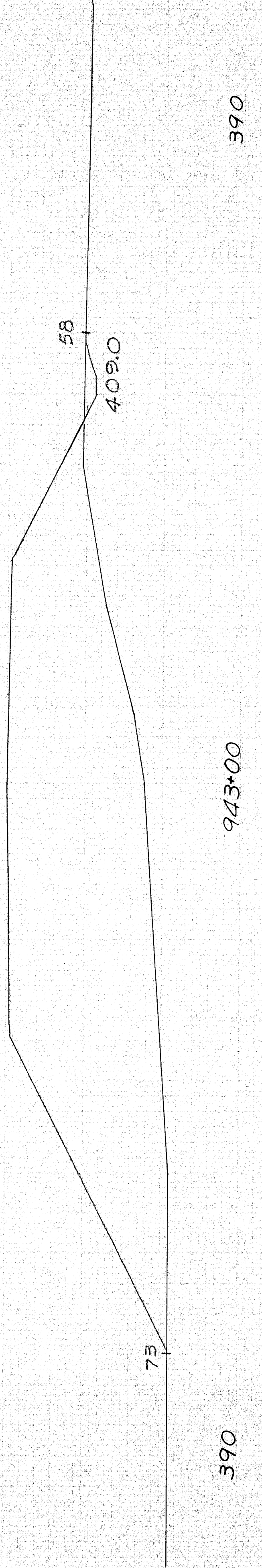
425 25



943+40

390

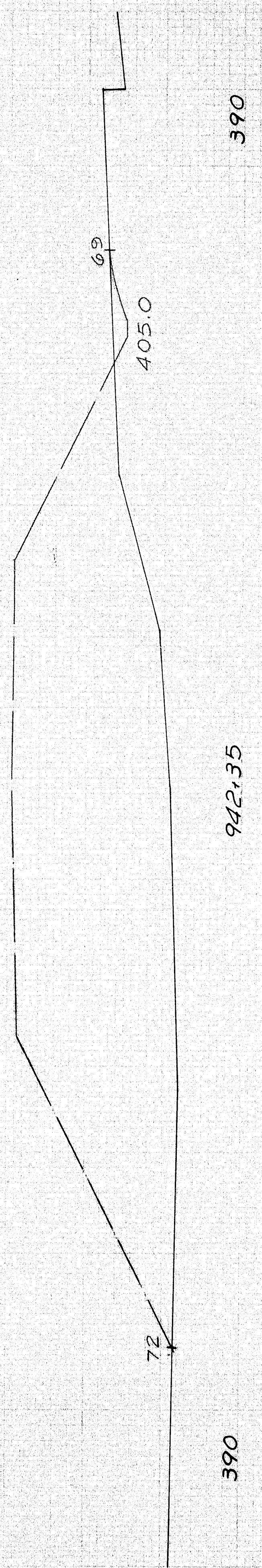
424 87



943+00

390

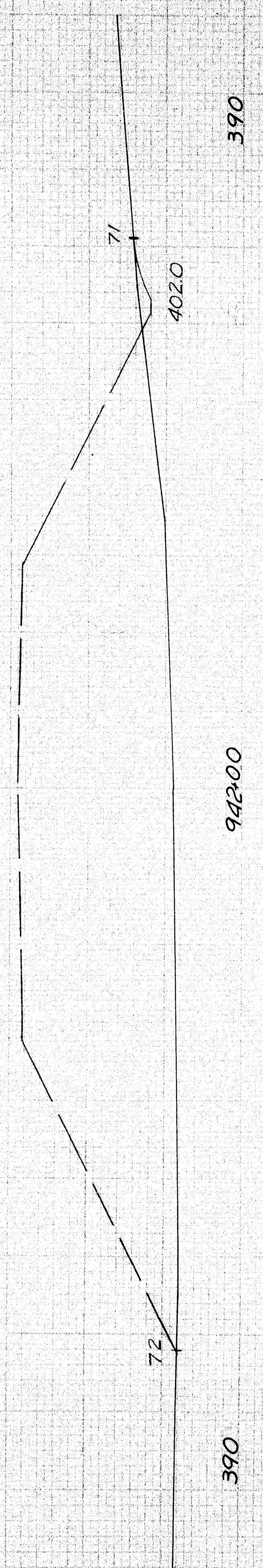
424 25



942+35

390

423 92



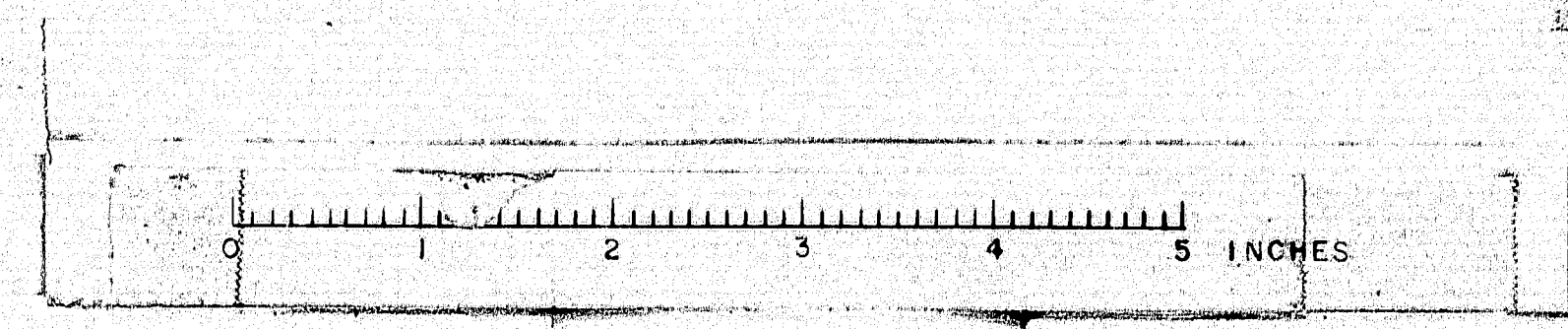
942+00

390

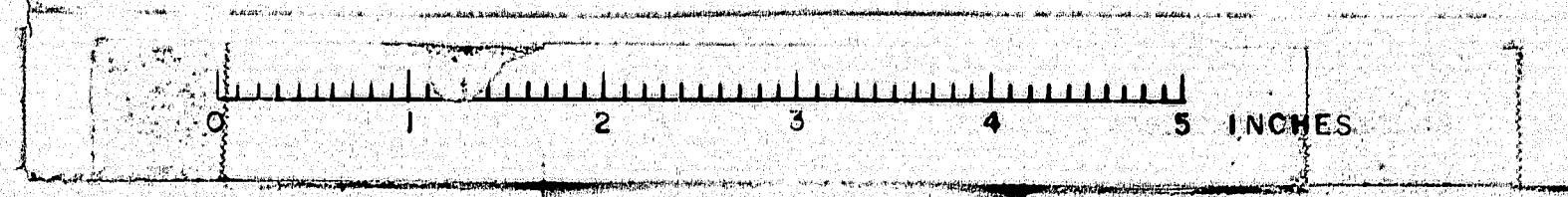
422 97

941+00

390







42687

400

949+00

42725

46 58  
413.0

400

948+00

42734

49 59  
412.5

400

947+00

LIMIT OF WORK  
STA. 947+00

42713

54 62  
410.0

400

946+00

FULL SECTION STA. 945+80  
STA. 945+73.08  
END PROJECT 1-95-9(23)  
BEGIN PROJECT 1-95-9(18)  
O SECTION STA. 945+50  
42662

NOTE:  
JUTE MATTING WEAVE "H"  
SHALL BE INSTALLED BY OTHERS

400

945+00

O SECTION STA. 944+45  
STA. 944+14.82  
BEGIN PROJECT 1-95-9(23)  
END PROJECT 1-95-9(17)  
42582

55

400

944+00

FULL SECTION STA. 944+10

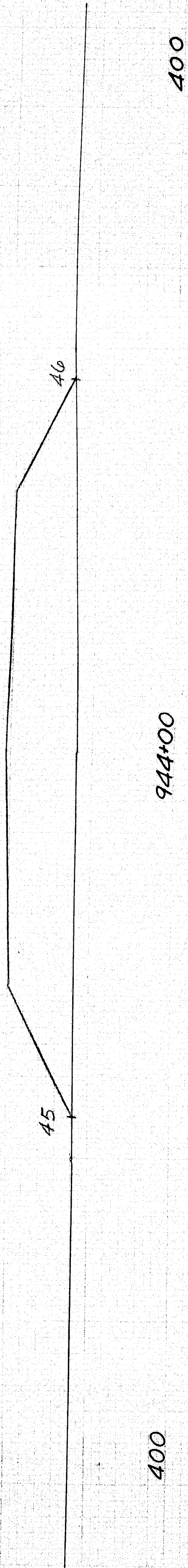
390



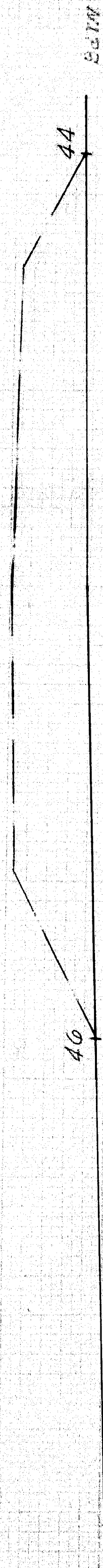
SEA +00 8/14/41

4

425 14

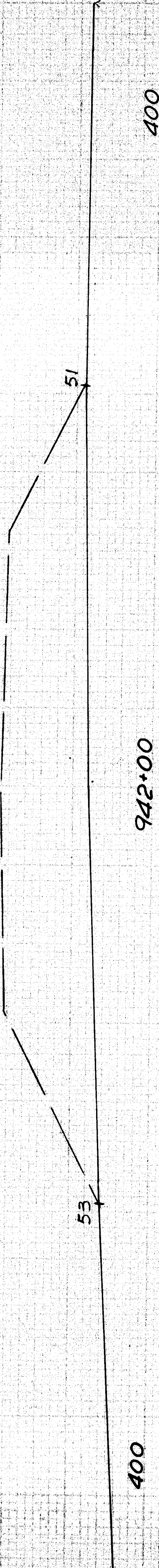


424 63



943 00  
LIMIT OF WORK  
STA 943 00

423 90



422 97



422 02



940 00 944 00



SECTIONAL  
SURVEY  
FILE NO.

FILE  
SURVEY  
FILE NO.

NO.

SEA +0.0 81034

424.38

400

949+00

400

424.97

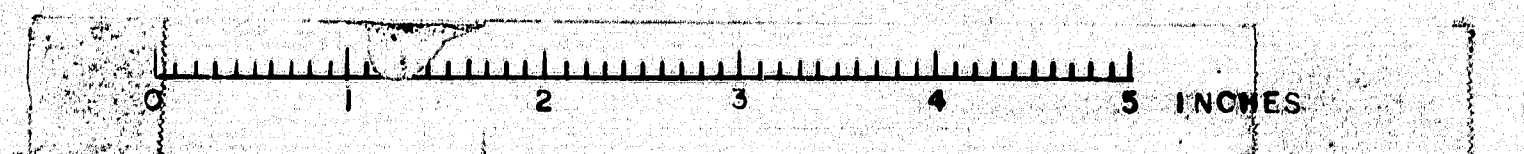
52

71

400

948+00

400



425.34

55 4:1

2:1

64

410

947+00

410

LIMIT OF WORK  
STA. 947+00

425.49

69

2:1

2:1

70

408.9

409.0

400

946+00

400

FULL SECTION STA. 945+95

425.37

400

945+75

400

O SECTION STA. 945+70

425.31

400

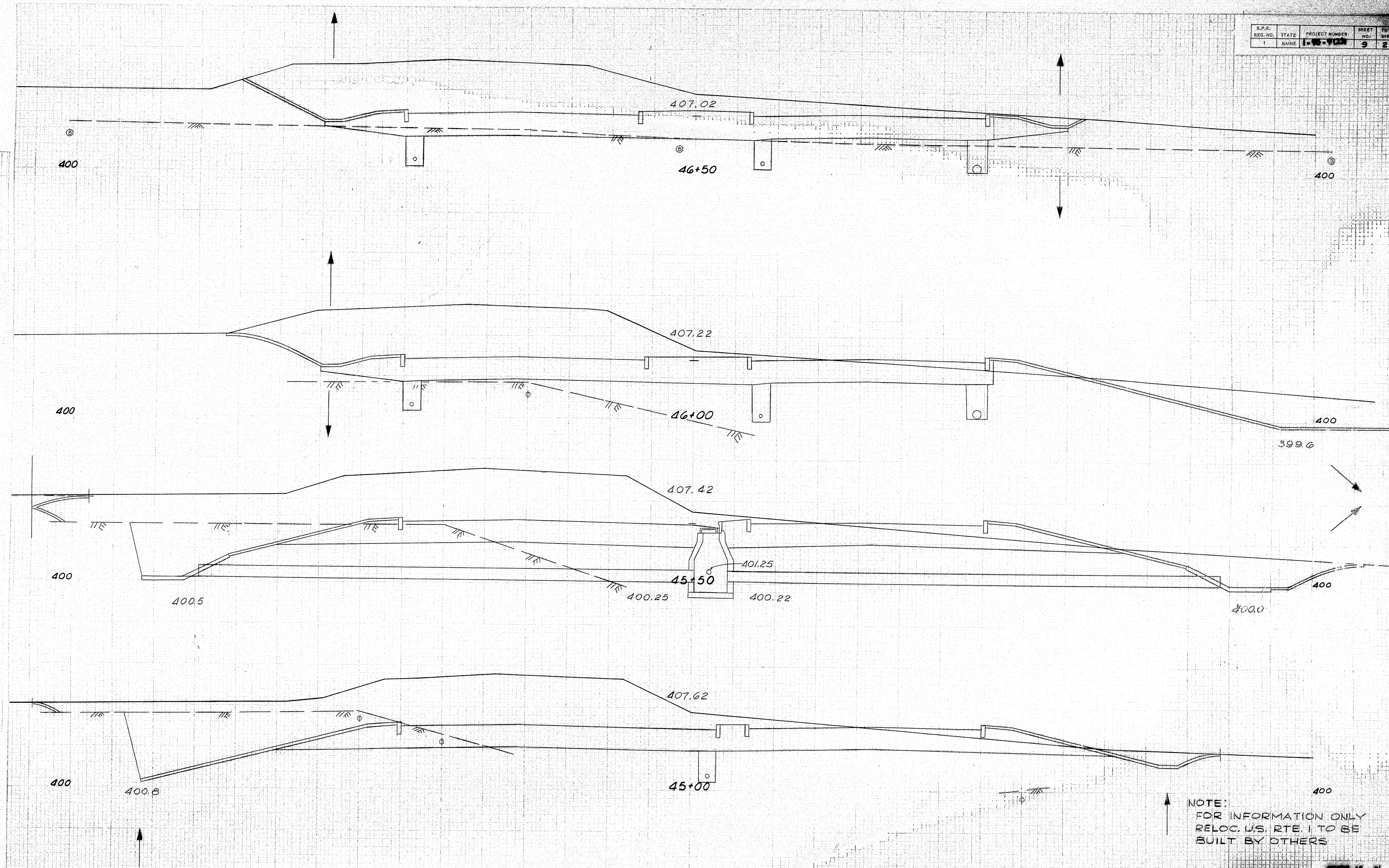
944+50

400

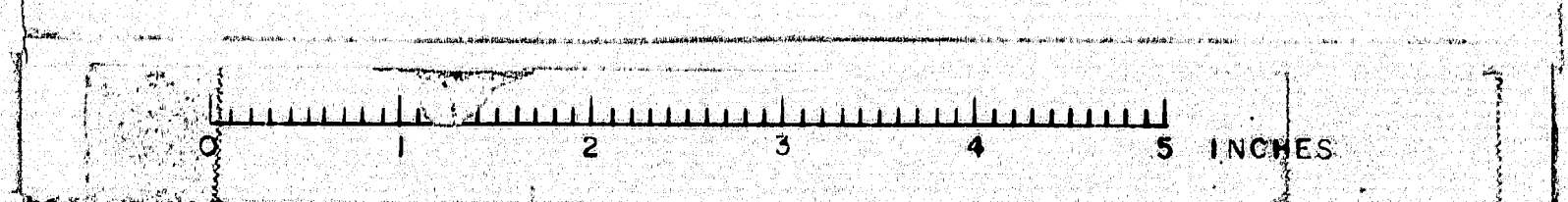
O SECTION

FULL SECTION STA. 944+25



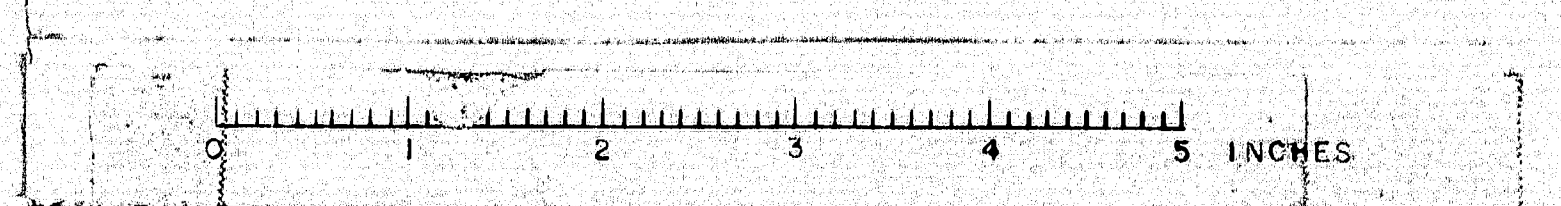
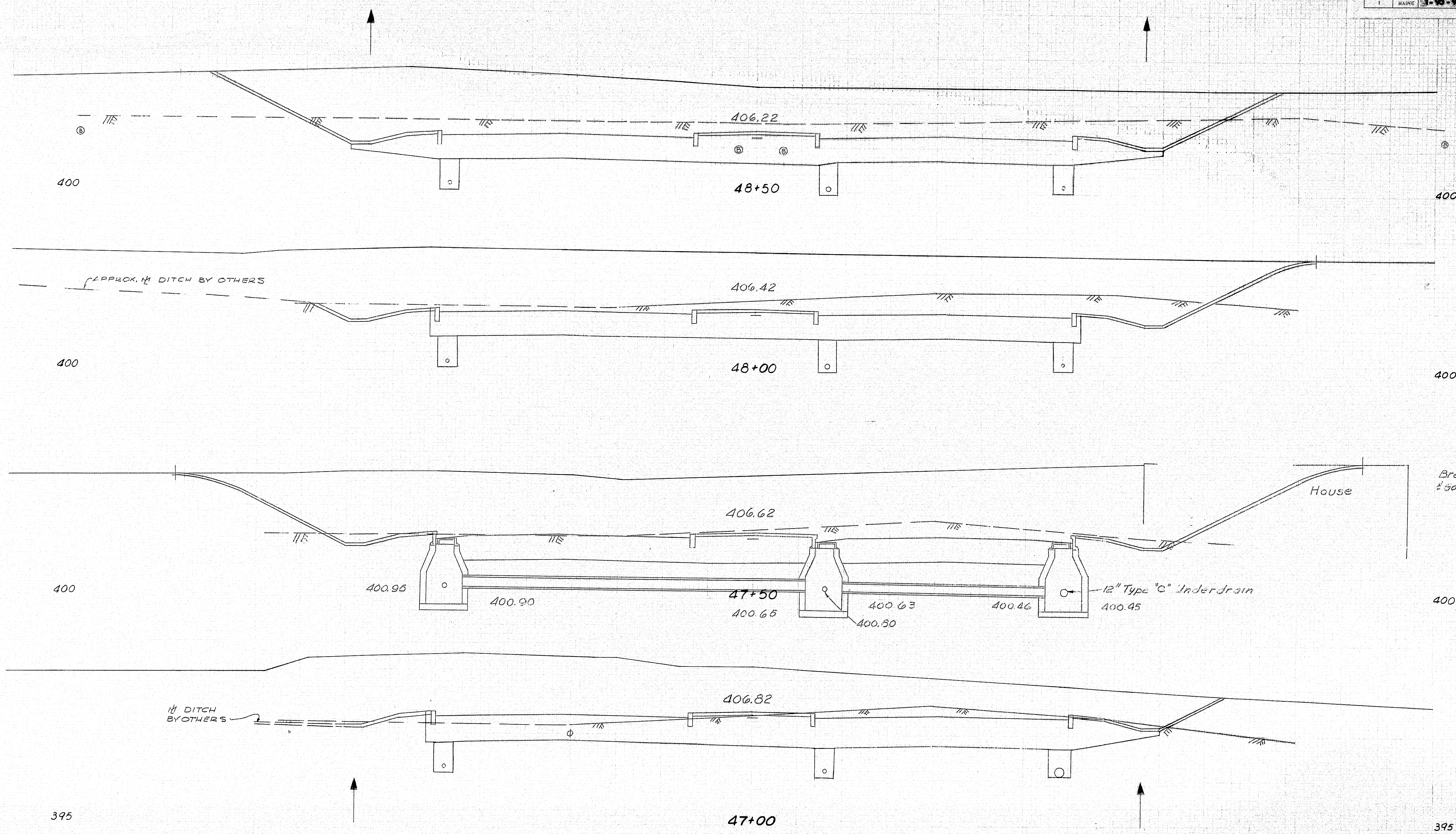


NOTE:  
FOR INFORMATION ONLY  
RELOC. U.S. RTE. 1 TO BE  
BUILT BY OTHERS





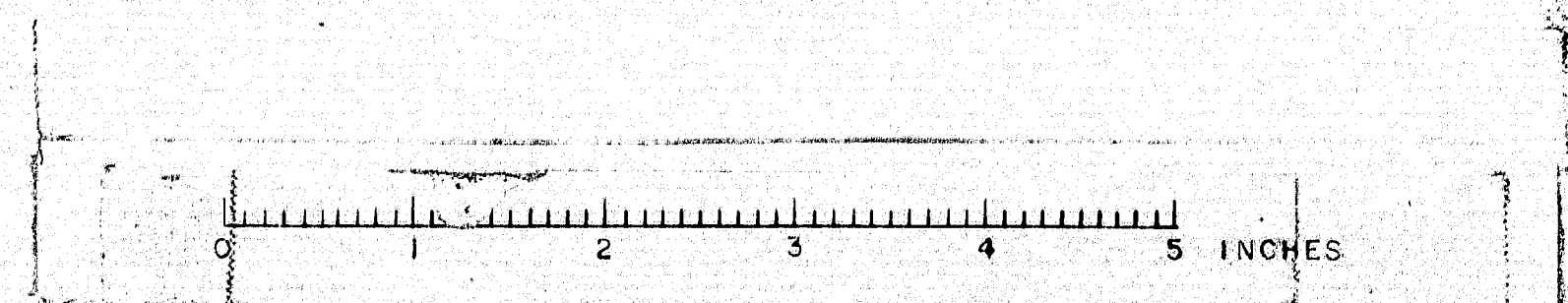
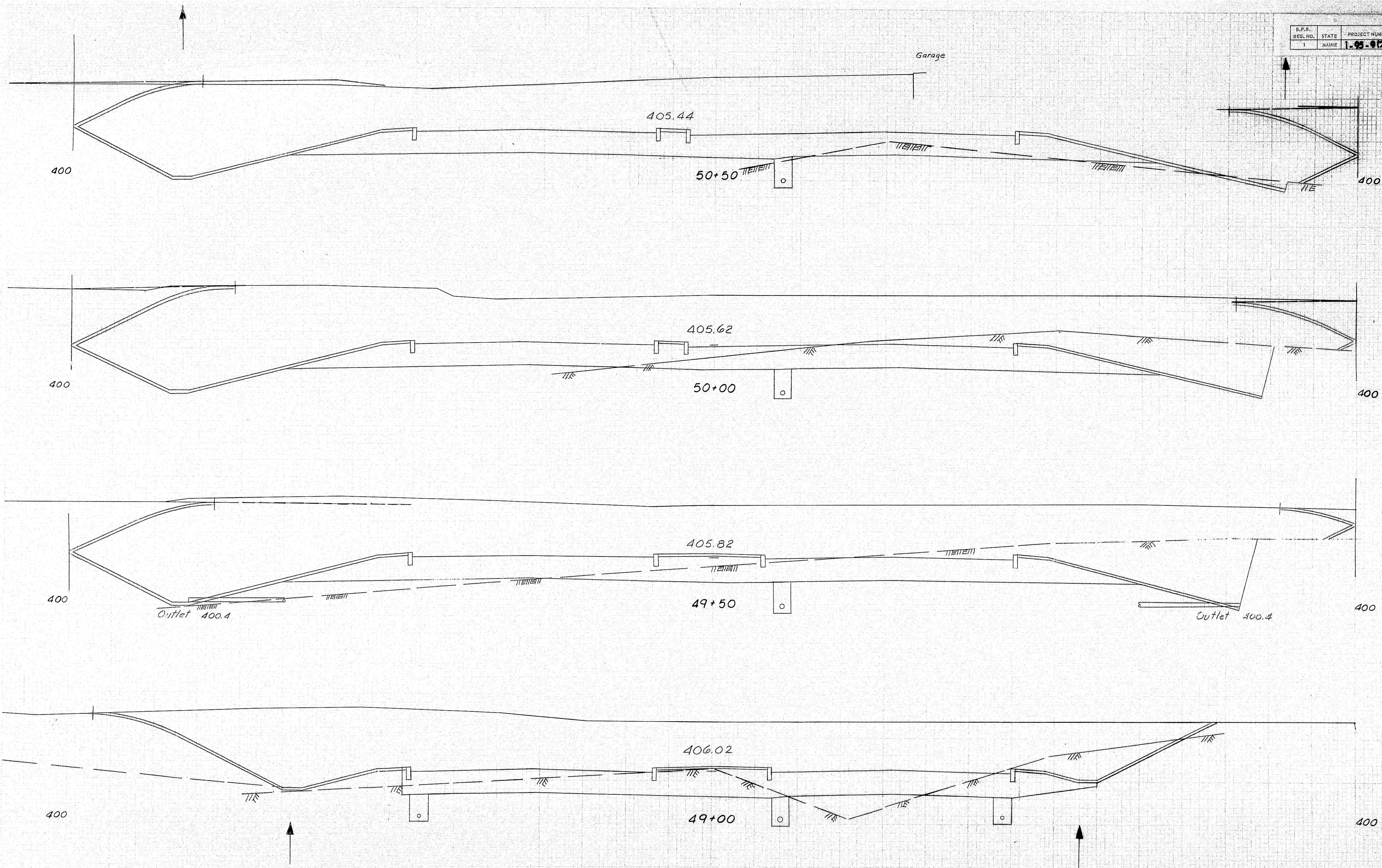
B.P.R.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-900	10	21



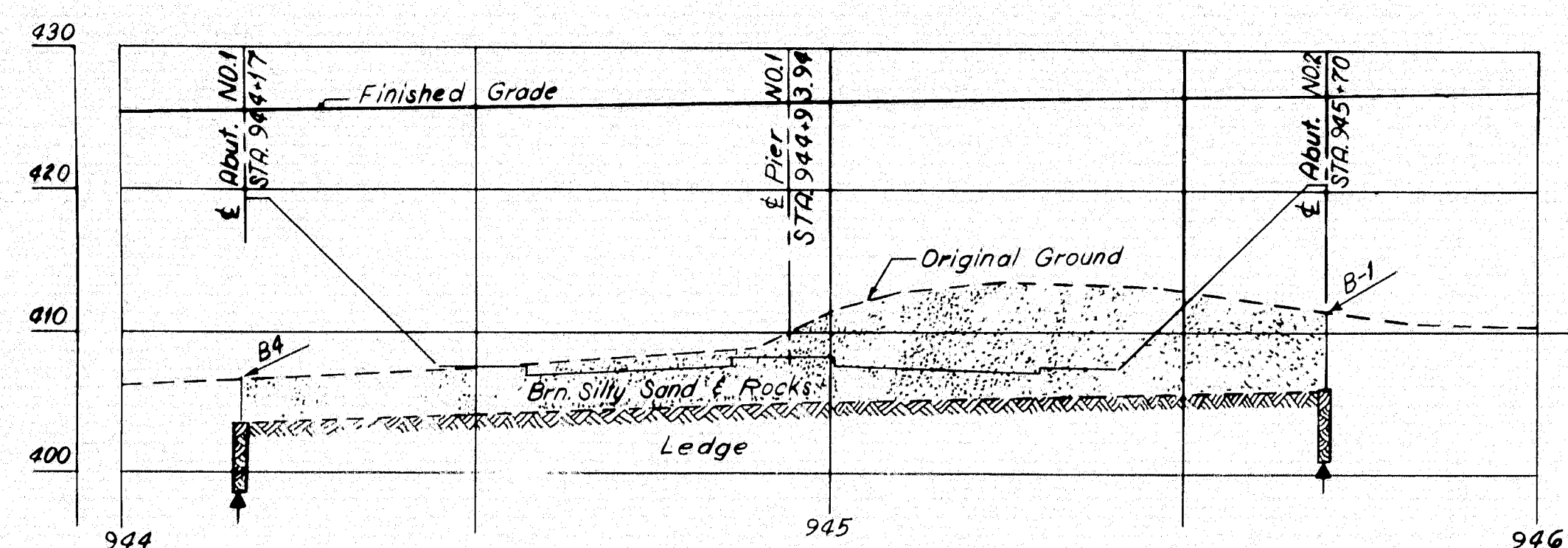
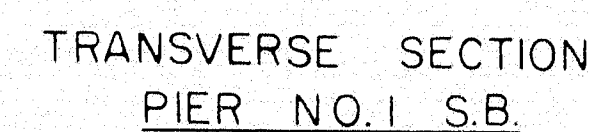
(23)



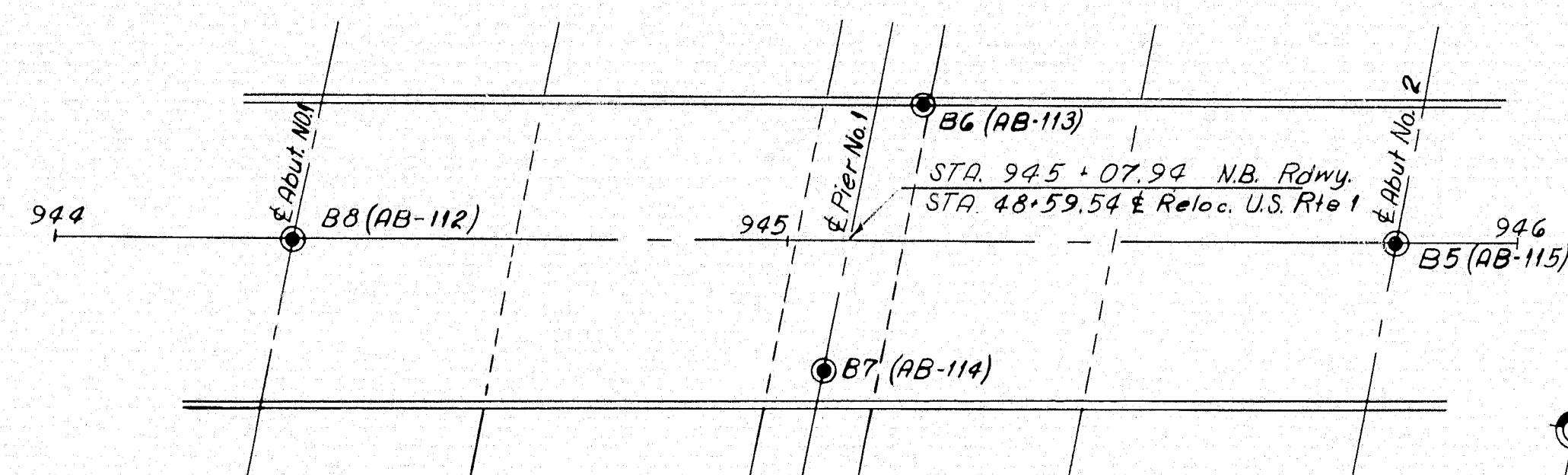
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-023	11	21





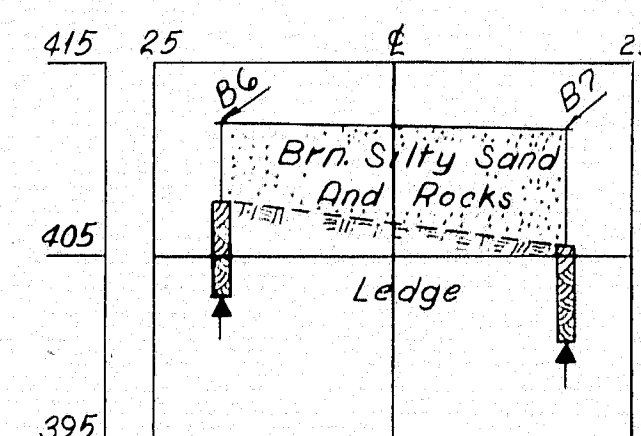


PROFILE SOUTHBOUND  
1" = 20' Horiz.  
1" = 10' Vert.

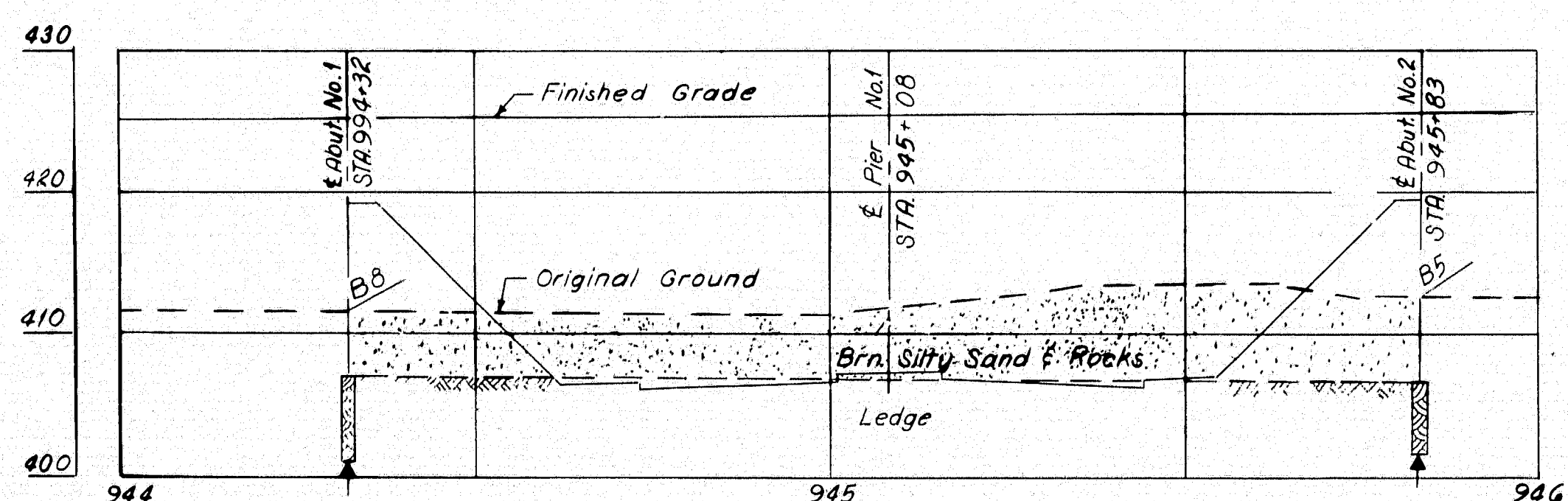


PLAN

1" = 20'



TRANSVERSE SECTION  
PIER NO. 1 N.B.

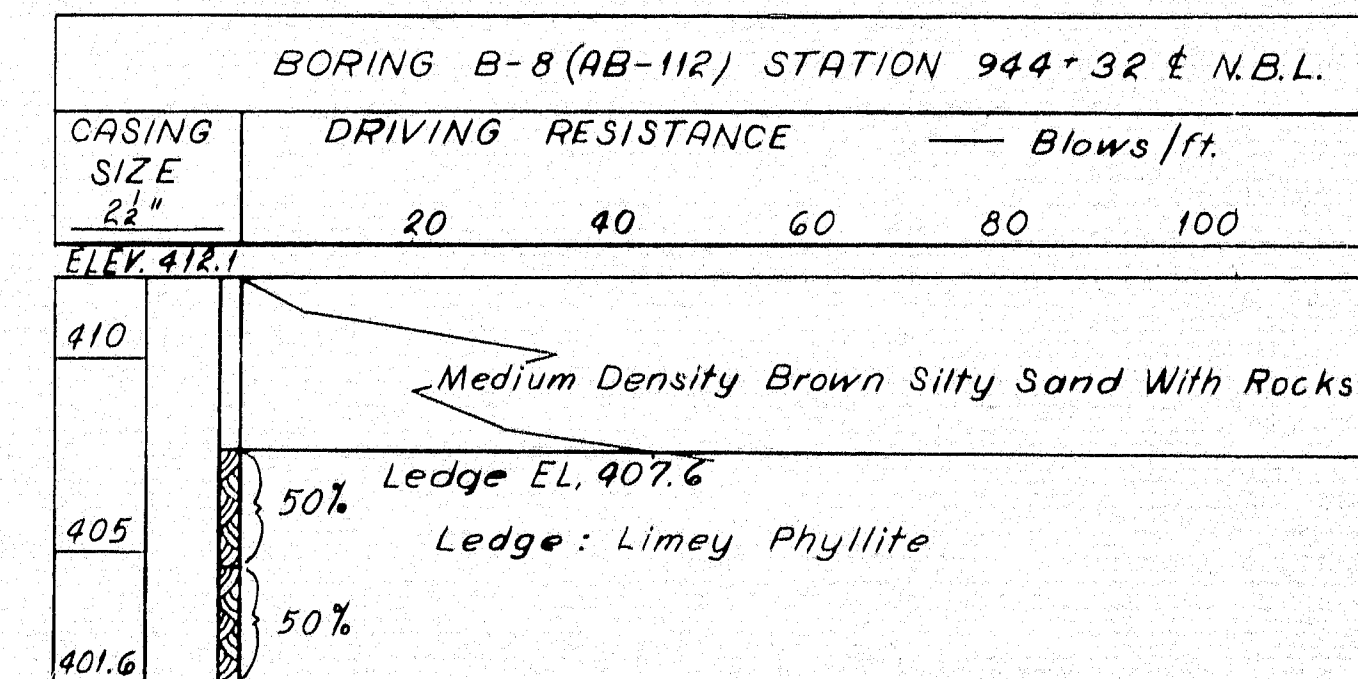
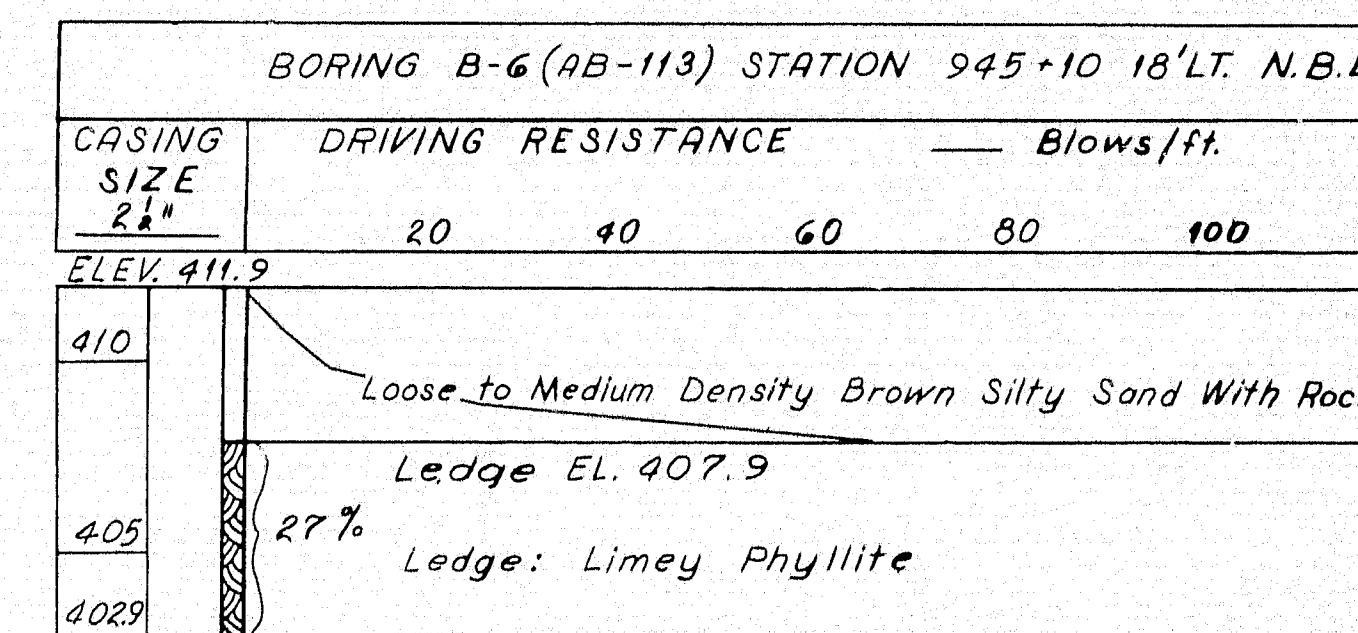
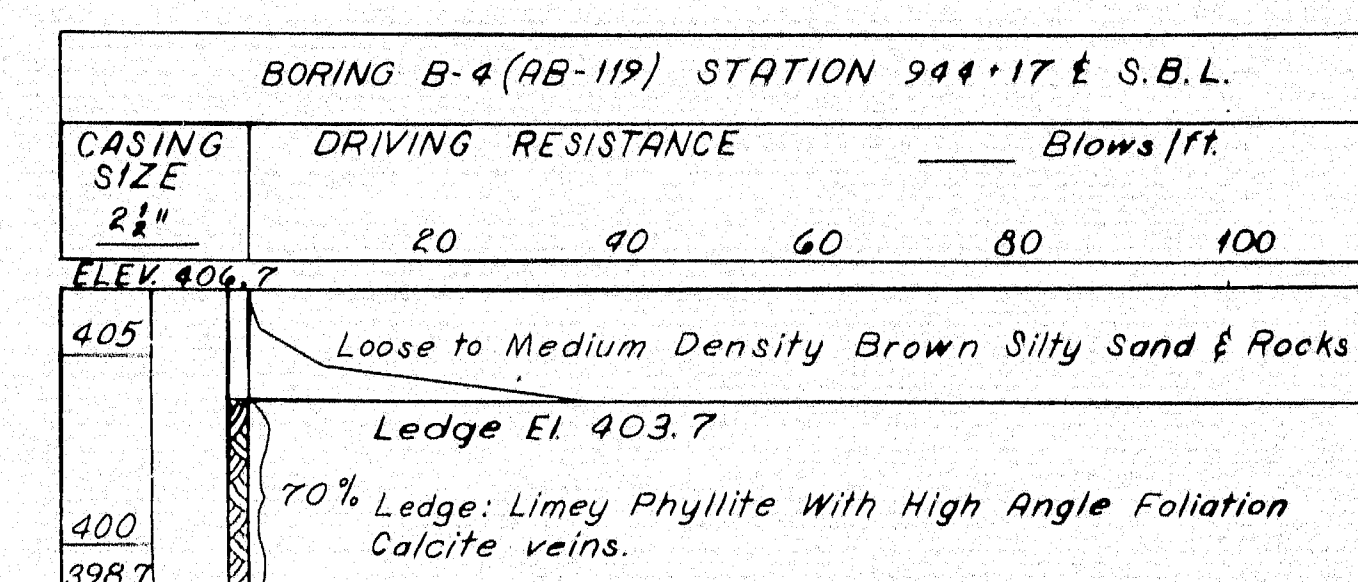
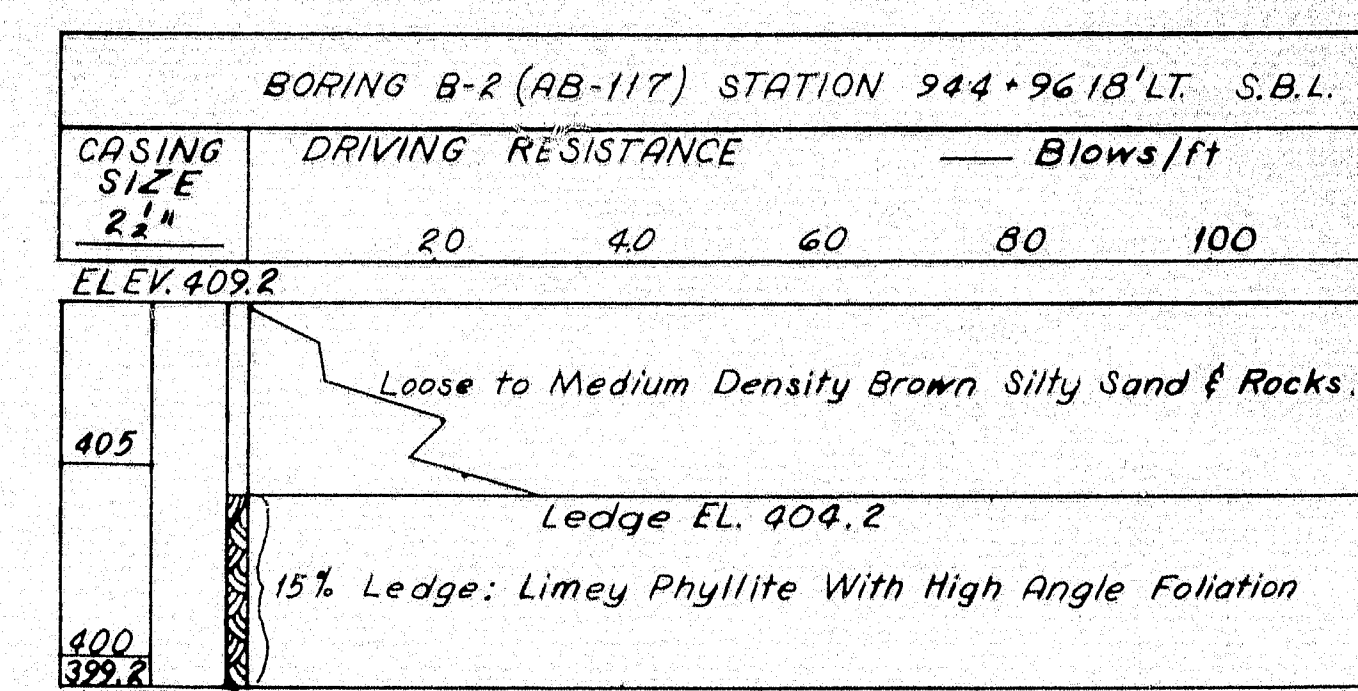
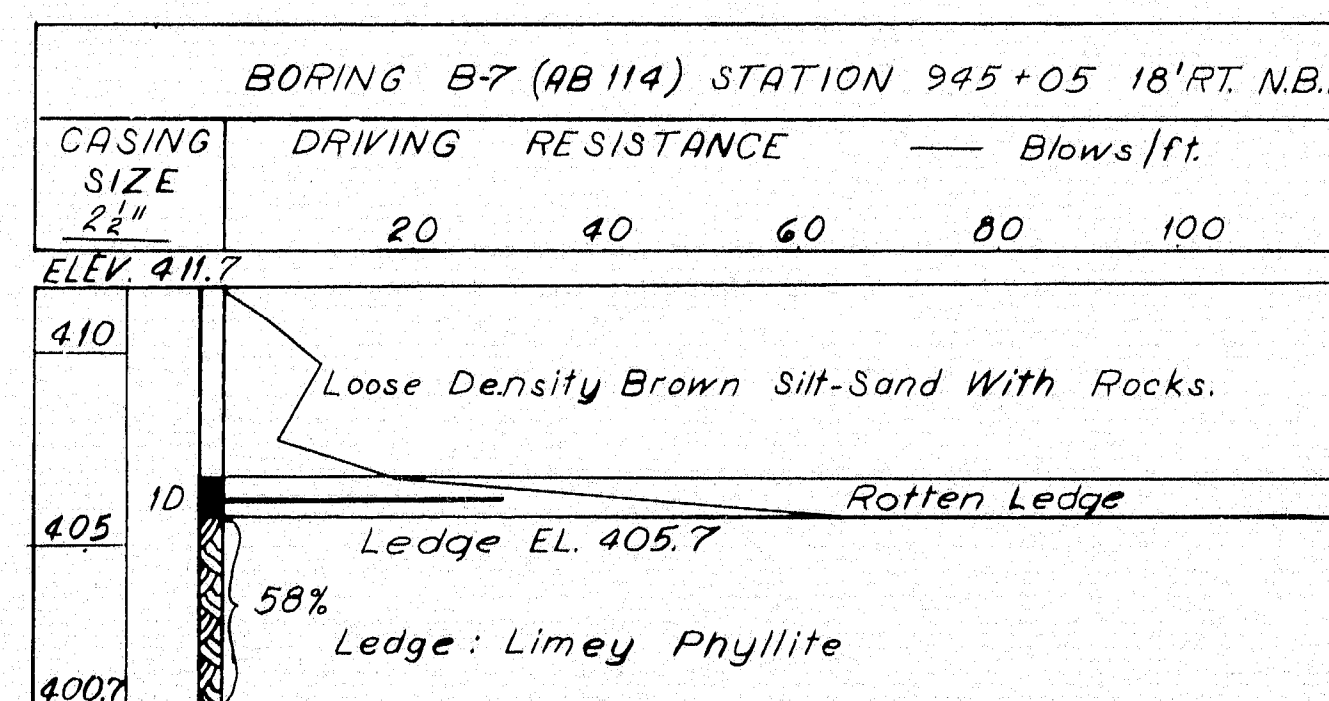
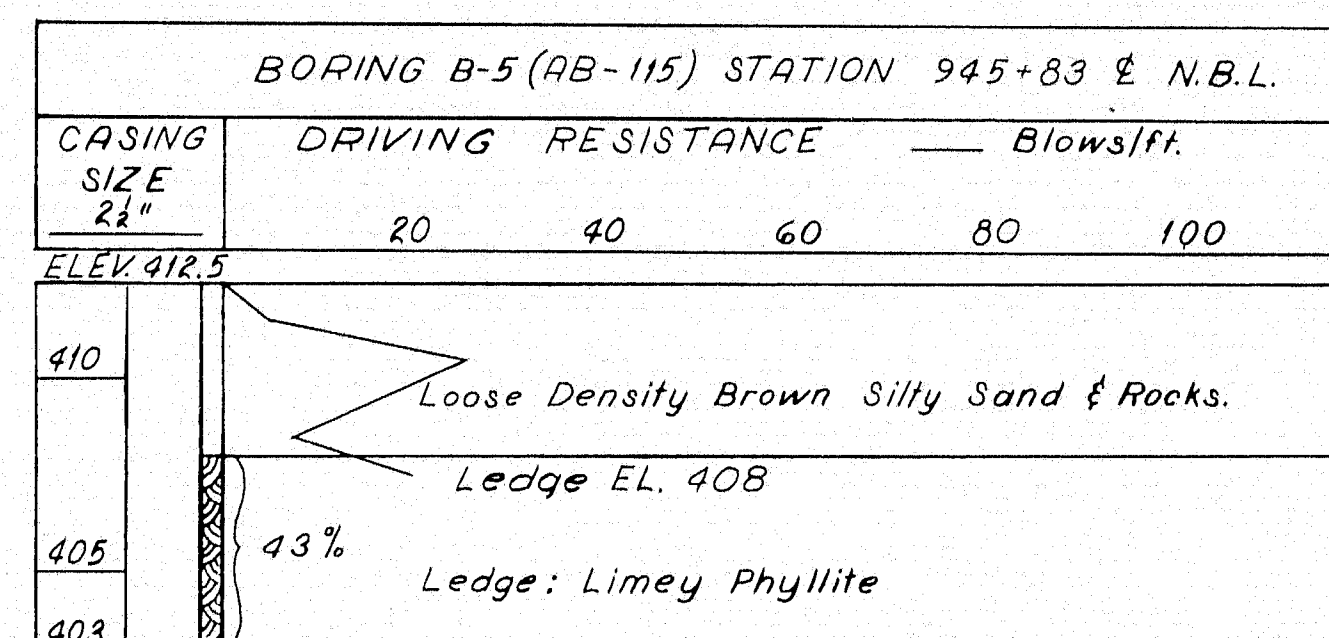
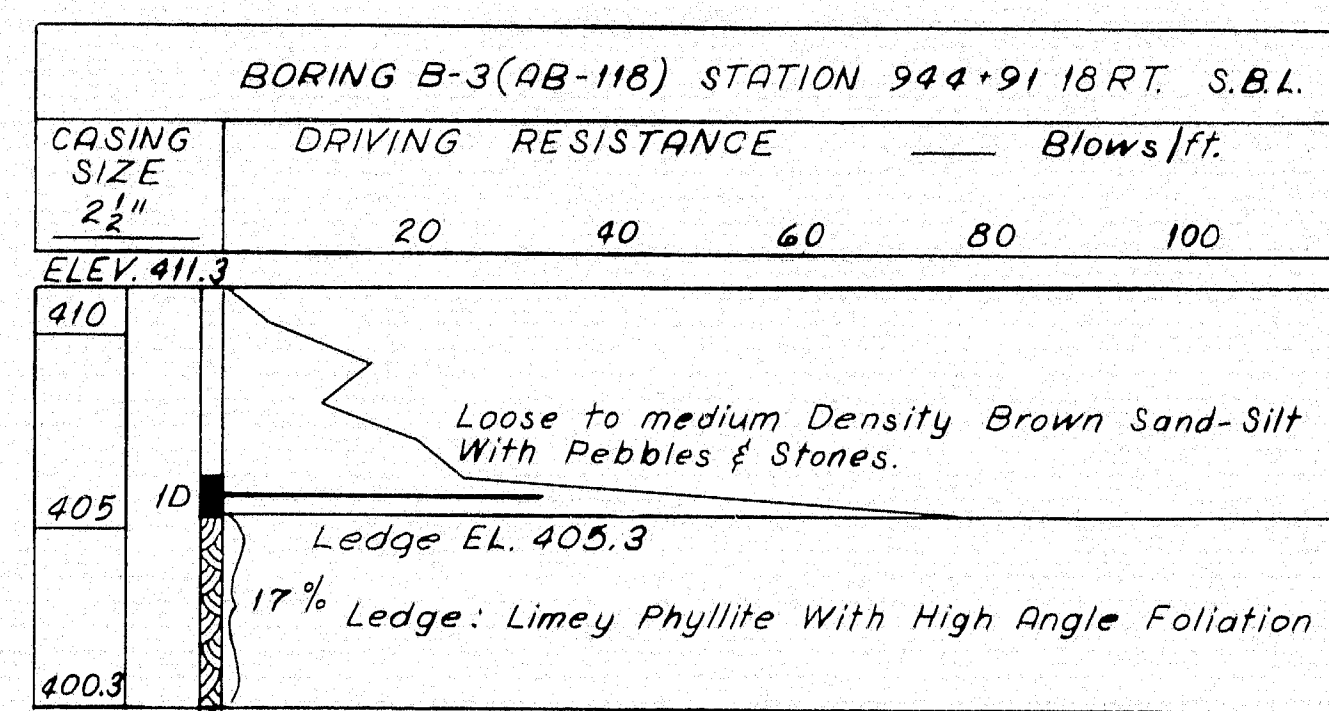


PROFILE NORTHBOUND  
1" = 20' Horiz.  
1" = 10' Vert.

LEGEND:  
● Wash Borings

LEGEND:  
 ● Wash Borings

BORING B-1(AB-116) STATION 945 + 70 E. S.B.L.				
CASING SIZE 2 1/2"	DRIVING RESISTANCE — Blows/ft.			
	20	40	60	80
ELEV #11.3				
410	Medium Density Brown Sand & Rocks.			
405				
	Ledge EL. 405.8			
	80% Ledge: Limey Phyllite			
400.8				



2 Number of blows required to drive extra heavy casing one foot  
 with 400 ft. lbs. of energy per blow.  
 # Location of sample or sample attempt  
 ID S.F.H. Sampler #1290's  
 # Number of blows required to drive spoon or tubing one foot  
 with 350 ft. lbs. of energy per blow.  
 # Bottom of boring (May not be bottom of soil strata)  
 MD Unsuccessful sample attempt and type of sampler  
 70% Location cored by diamond bit and percent recovery of rock

**HOWARD, NEEDLES, TAMMEN & BERGENDOFF**  
CONSULTING ENGINEERS

NEW YORK                      BOSTON                      KANSAS CITY

DESIGN--  
TRACE--  
CHECK--

DETAIL R.P.K.  
BRIDGE NO.  
SURVEY--  
PLOT--

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION  
INTERSTATE 95  
OVER  
US ROUTE 1  
IN THE TOWN OF  
HOULTON  
ARROSTOOK COUNTY  
FOUNDATION SURVEY

SHEET 28 OF 21 AUGUSTA, MAINE DECEMBER 1961

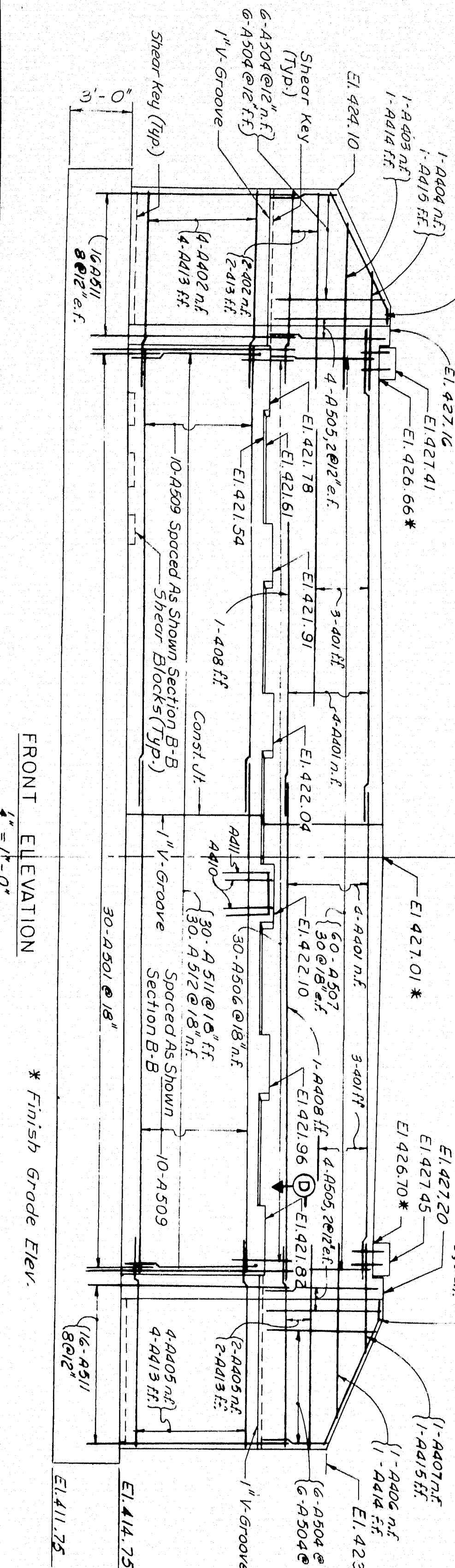
06-102 HOULTON (23)



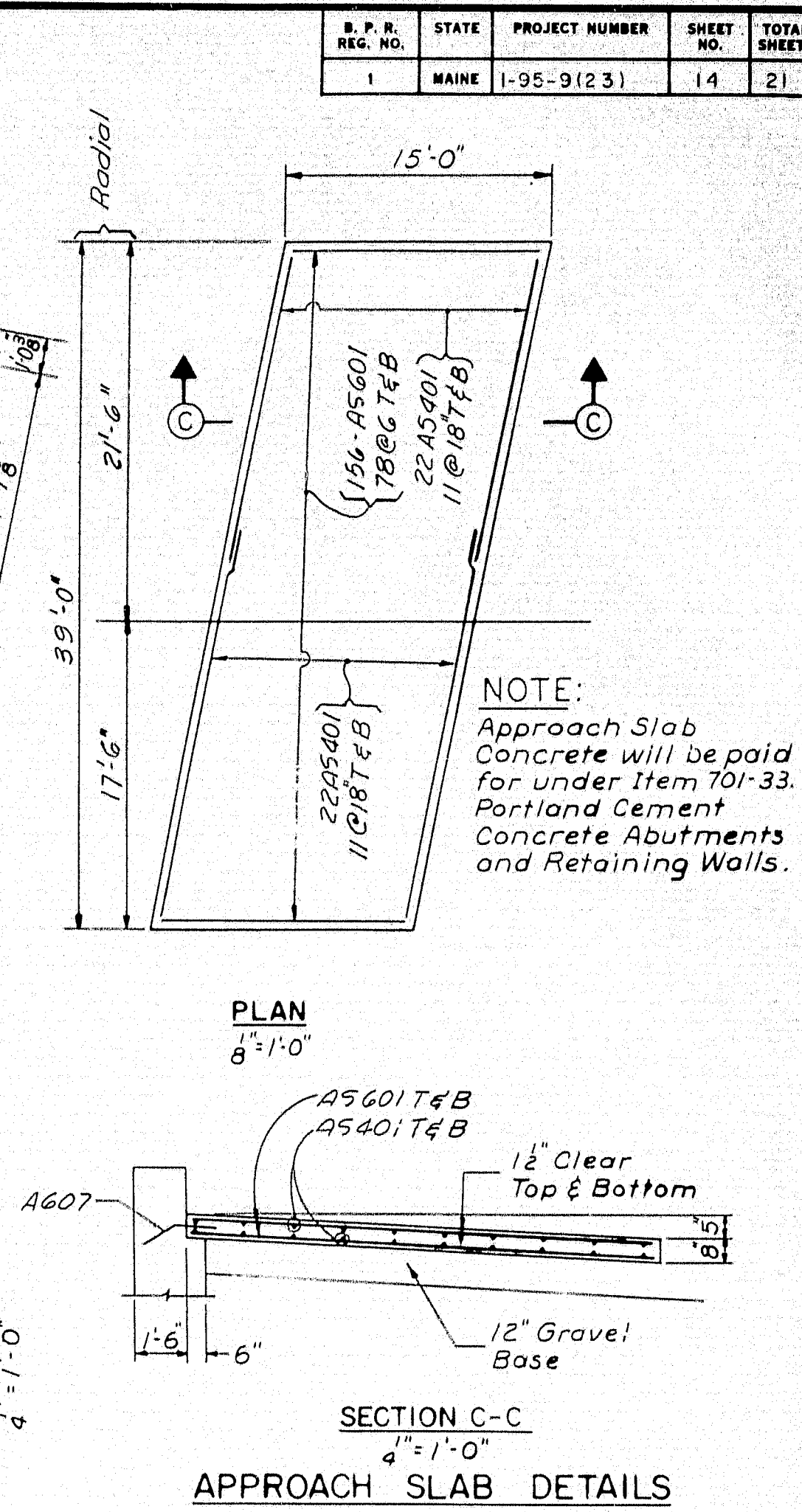
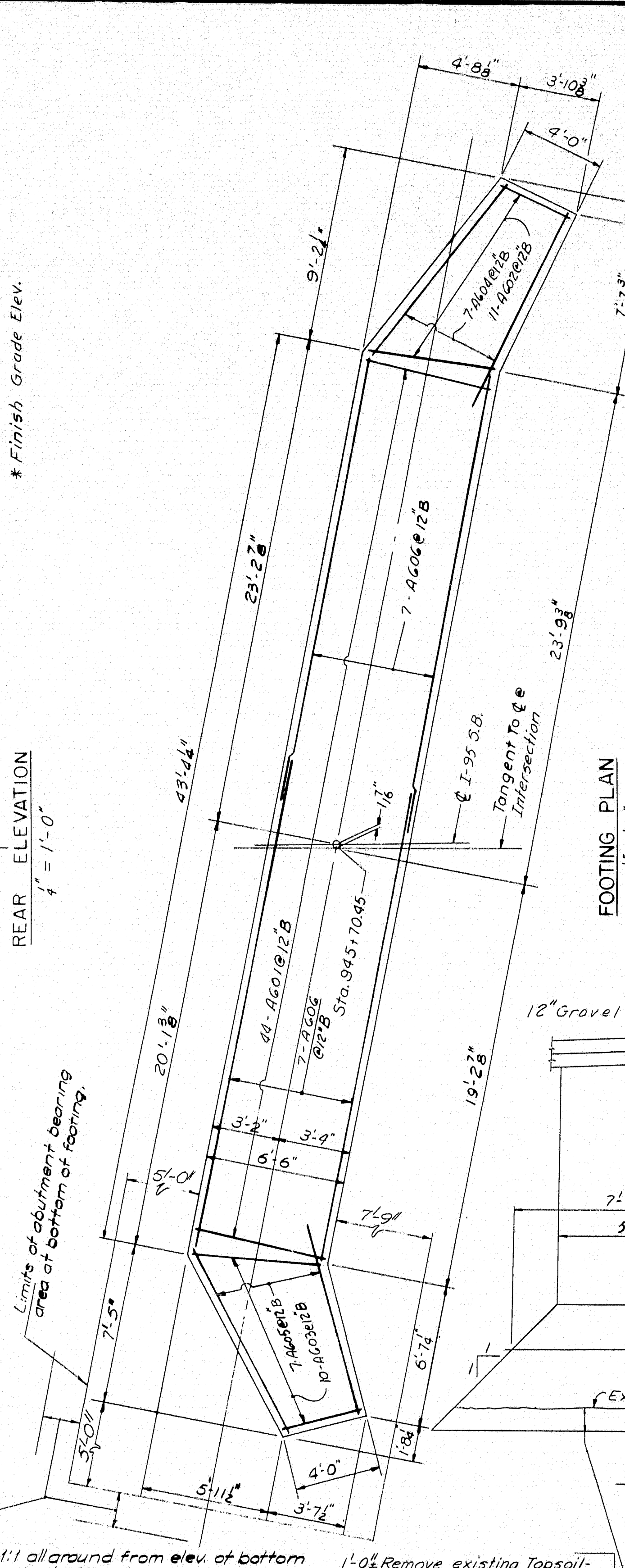
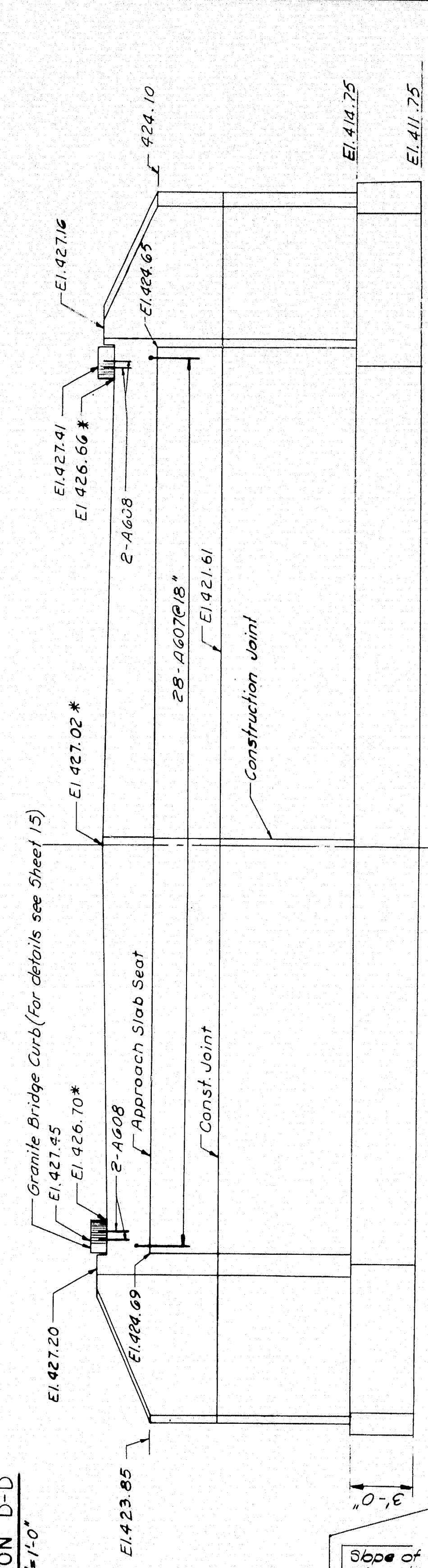
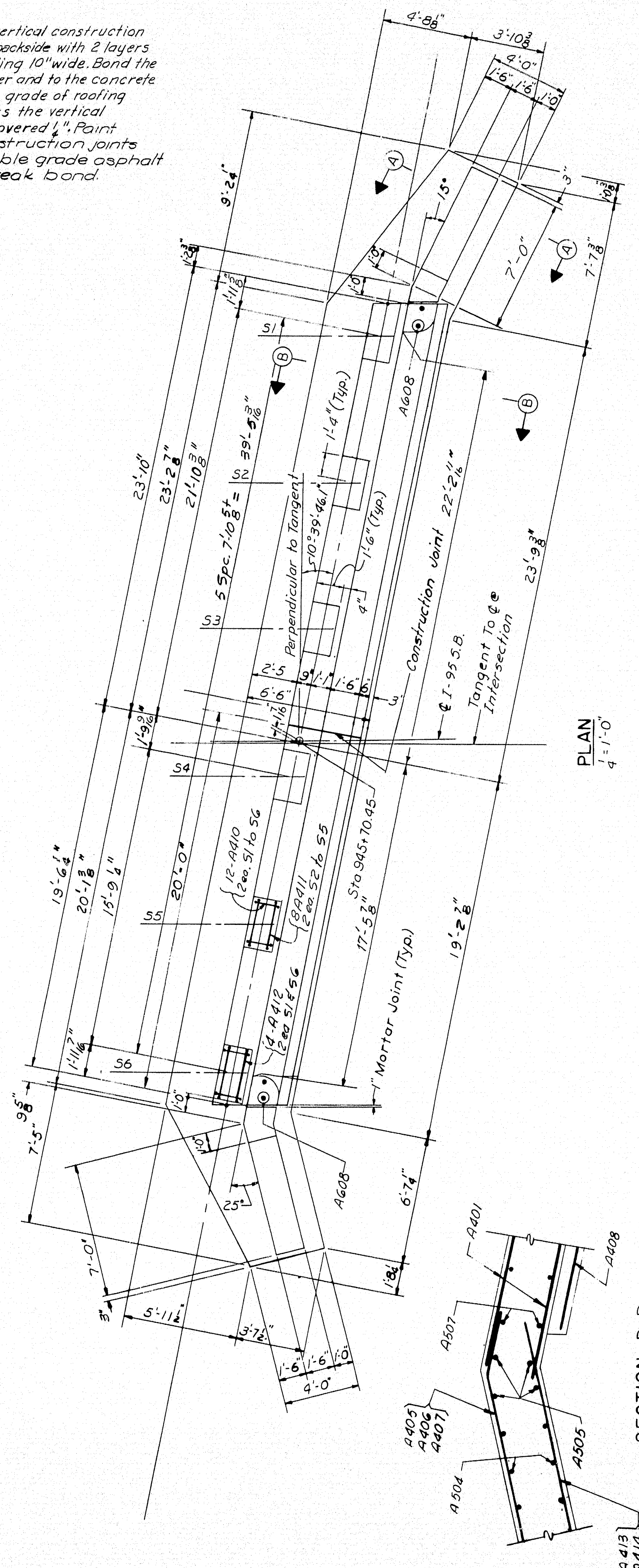




S. P. H. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-9(23)	14	21



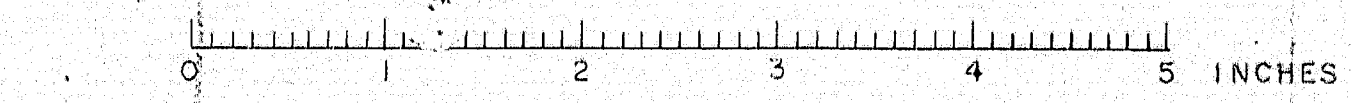
NOTES:  
Cover the vertical construction joints on the backside with 2 layers of heavy roofing 10" wide. Bond the layers together and to the concrete with a suitable grade of roofing cement. Recess the vertical areas to be covered 1". Paint vertical construction joints with a suitable grade asphalt paint to break bond.



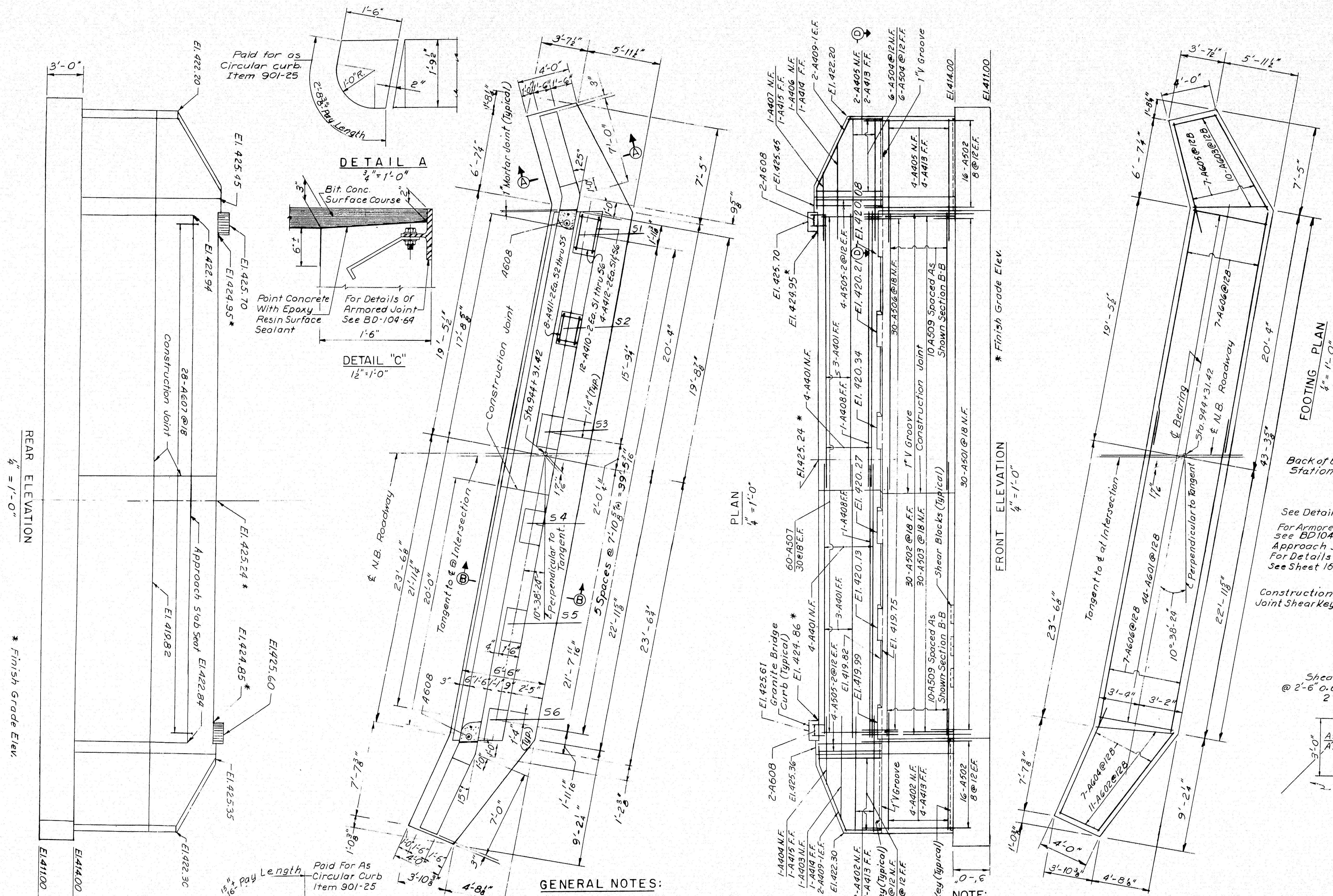
NOTES:  
1. For Section A-A & B-B, see Sheet 13.  
2. For General Notes, see Sheet 13.

STATE HIGHWAY COMMISSION  
BRIDGE DIVISION  
INTERSTATE 95 S.B.  
OVER  
U.S. ROUTE 1  
IN THE TOWN OF  
HOULTON  
AROSTOOK COUNTY  
ABUTMENT NO2 S.B. & APPROACH SLAB  
SHEET 14 OF 21 AUGUSTA, MAINE DECEMBER 1964

96-114 HOULTON (23)







**NOTE:**  
 Grout A608 bars into  $1\frac{1}{2}''$  holes in stone prior to setting stone on backwall. Drill  $1\frac{1}{2}''$  holes in backwall to suit A608 bars.  
 Payment for drilling for and grouting of A608 bars to be included in the price for Item 705-14, Reinforcing Steel, Placing.

- GENERAL NOTES:**
1. For Approach Slab Details see Sheet 16.
  2. Point Bridge Seat face of backwall and  $1'-0''$  below top of Slope paving on face and ends of breast wall with Gray Epoxy Resin Surface Sealant.
  3. Reinforcing steel to have 3" minimum cover unless otherwise shown.
  4. For Section D-D see Sheet 14.
  5. Maximum Design Soil Pressure = 2.6 Tons/sq. ft.
  6. N.F. denotes near face  
 F.F. denotes far face  
 E.F. denotes each face

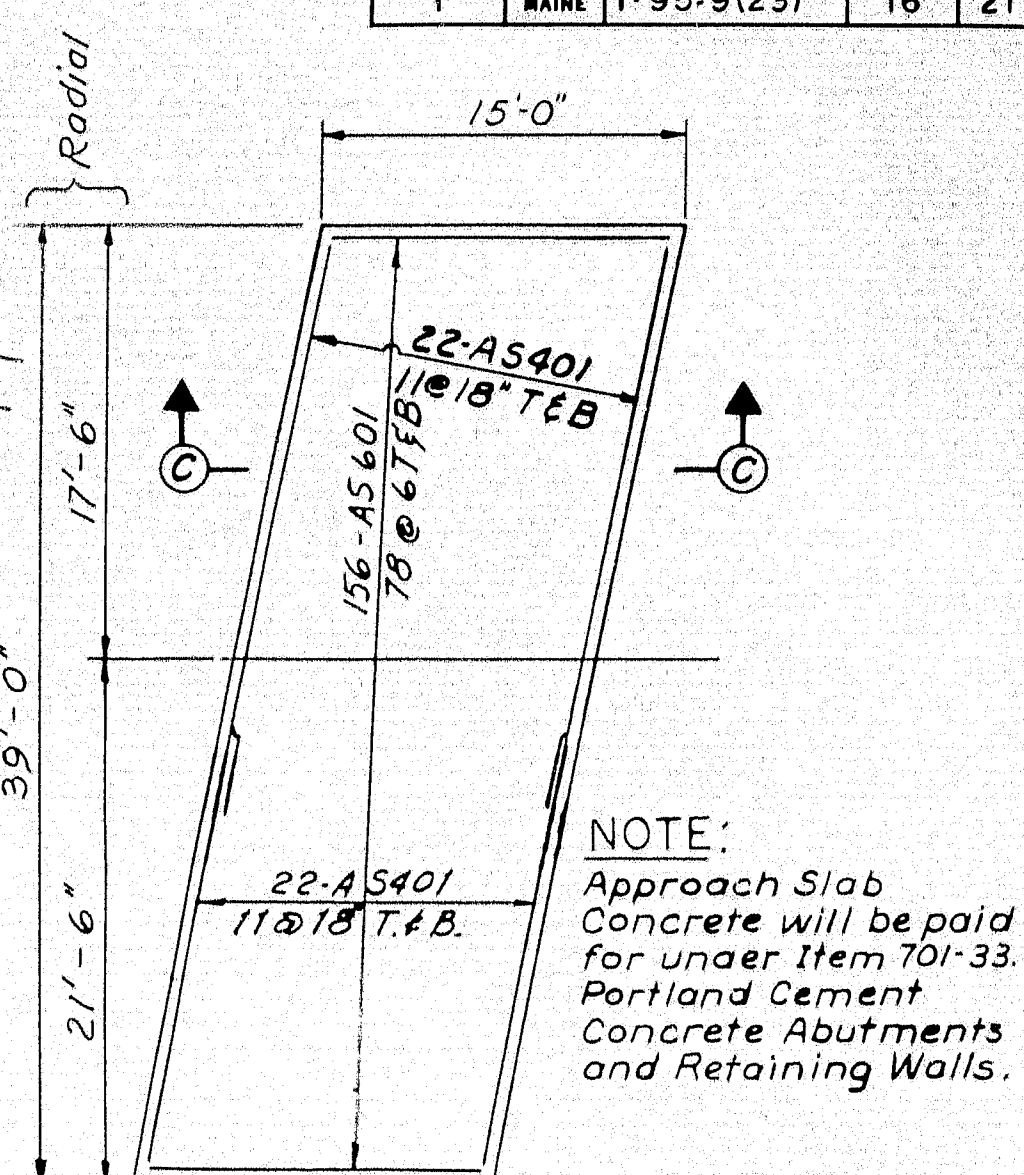
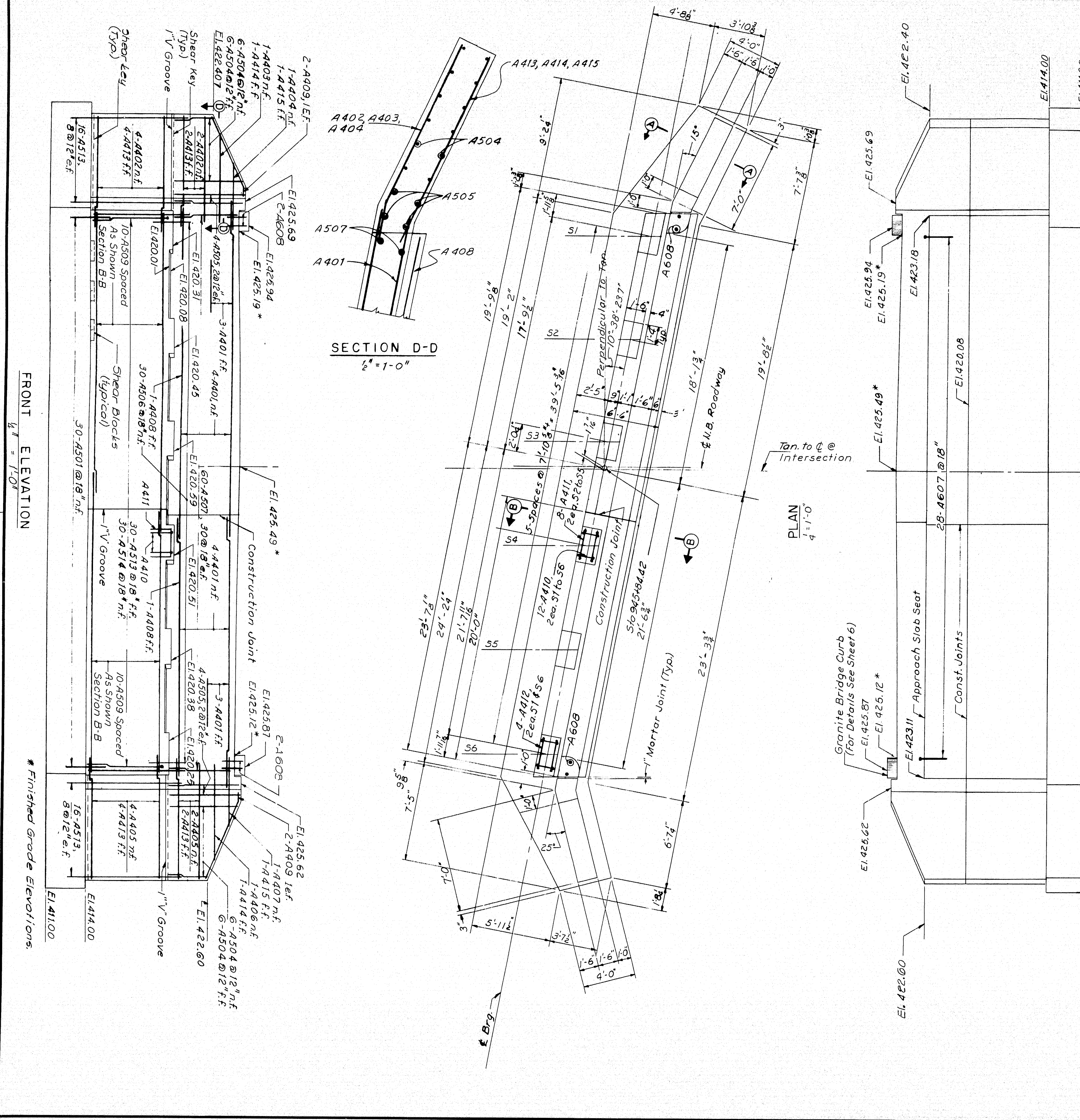
**NOTE:**  
 Cover the vertical construction joints on the backside with 2 layers of heavy roofing 10" wide. Bond the layers together and to the concrete with a suitable grade of roofing cement. Recess the vertical areas to be covered 4". Paint vertical construction joints with a suitable grade asphalt point to break bond.

HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS

DESIGN-G.H.	DETAIL-R.F.	BRIDGE NO.
TRACE-C.W.V.	PLOT-	SURVEY-
STATE HIGHWAY COMMISSION BRIDGE DIVISION		
INTERSTATE 95 N.B. OVER U.S. ROUTE 1 IN THE TOWN OF HOULTON AROSTOOK COUNTY ABUTMENT NO. 1 N.B.		
SHEET 15 OF 21 AUGUSTA, MAINE DECEMBER 1964		

**96-115 HOULTON (23)**





**NOTES:**  
 For sections A-A and B-B see sheet 6.  
 For General Notes see sheet 6.

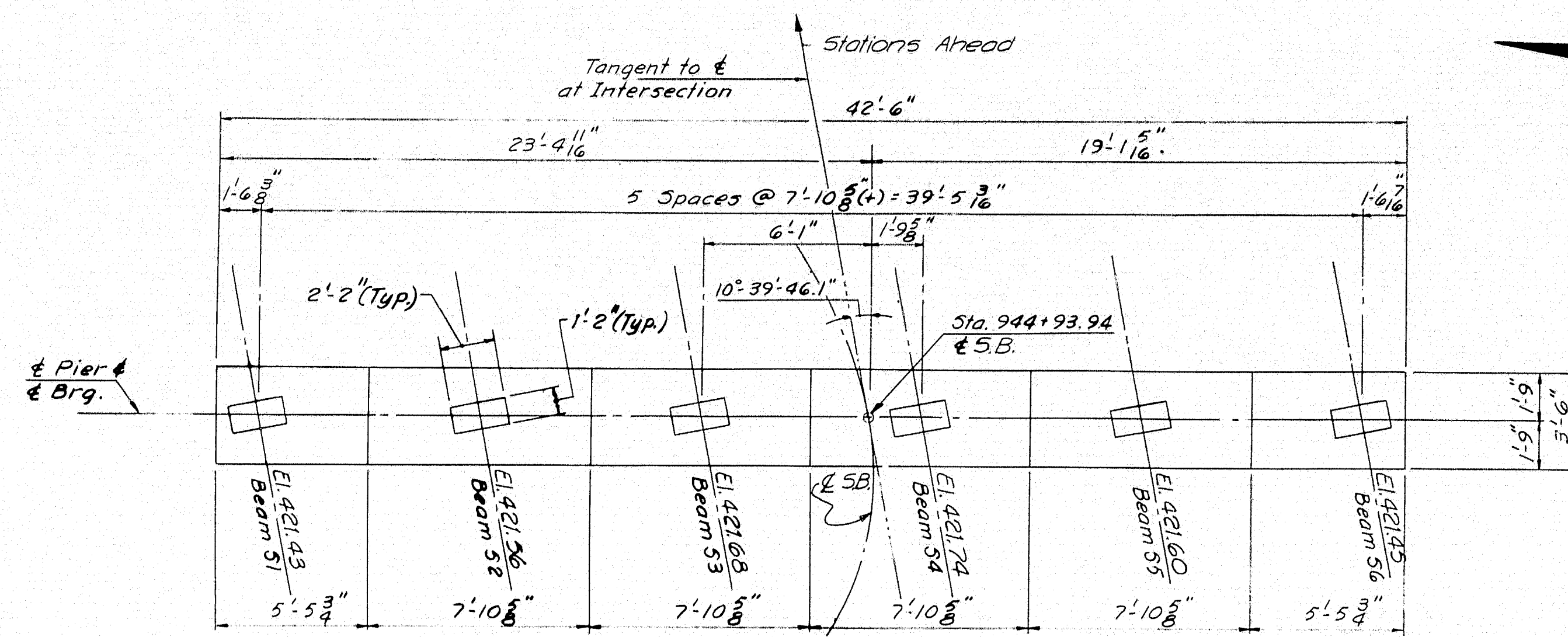
**NOTE:**  
 Cover the vertical construction joints on the backside with 2 layers of heavy roofing 10" wide. Band the layers together and to the concrete with a suitable grade of roofing cement. Recess the vertical areas to be covered 4". Paint vertical construction joint with a suitable grade of asphalt paint to break bond.

DESIGN - G.H.	DETAIL - R.D.F.	BRIDGE NO. SURVEY - PLOT
STATE HIGHWAY COMMISSION BRIDGE DIVISION		
INTERSTATE 95 N.B. OVER U.S. ROUTE 1 IN THE TOWN OF HOULTON AROSTOOK COUNTY ABUTMENT NO. 2 N.B. & APPROACH SLAB		
SHEET 16 OF 21 AUGUSTA, MAINE DECEMBER 12, 1994		

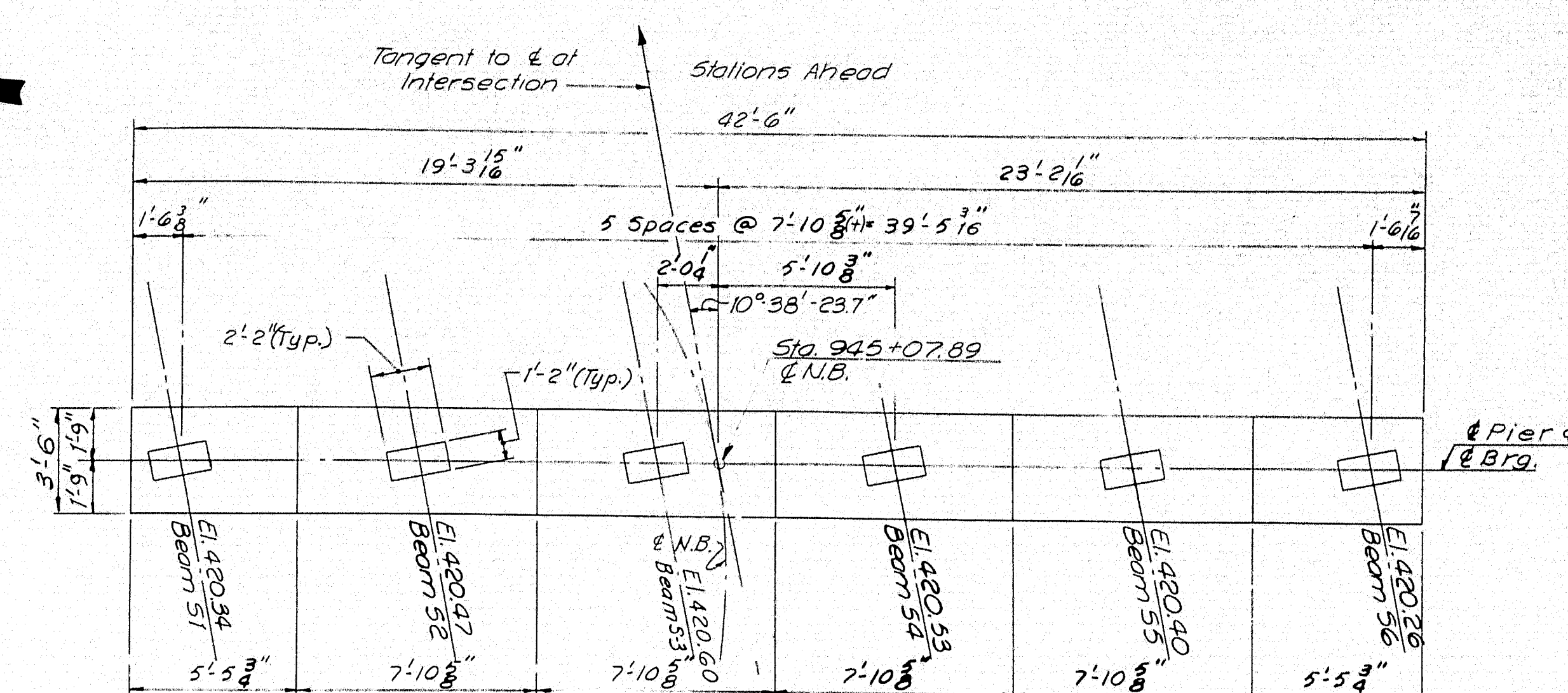
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 NEW YORK BOSTON KANSAS CITY

96-116 HOULTON (23)

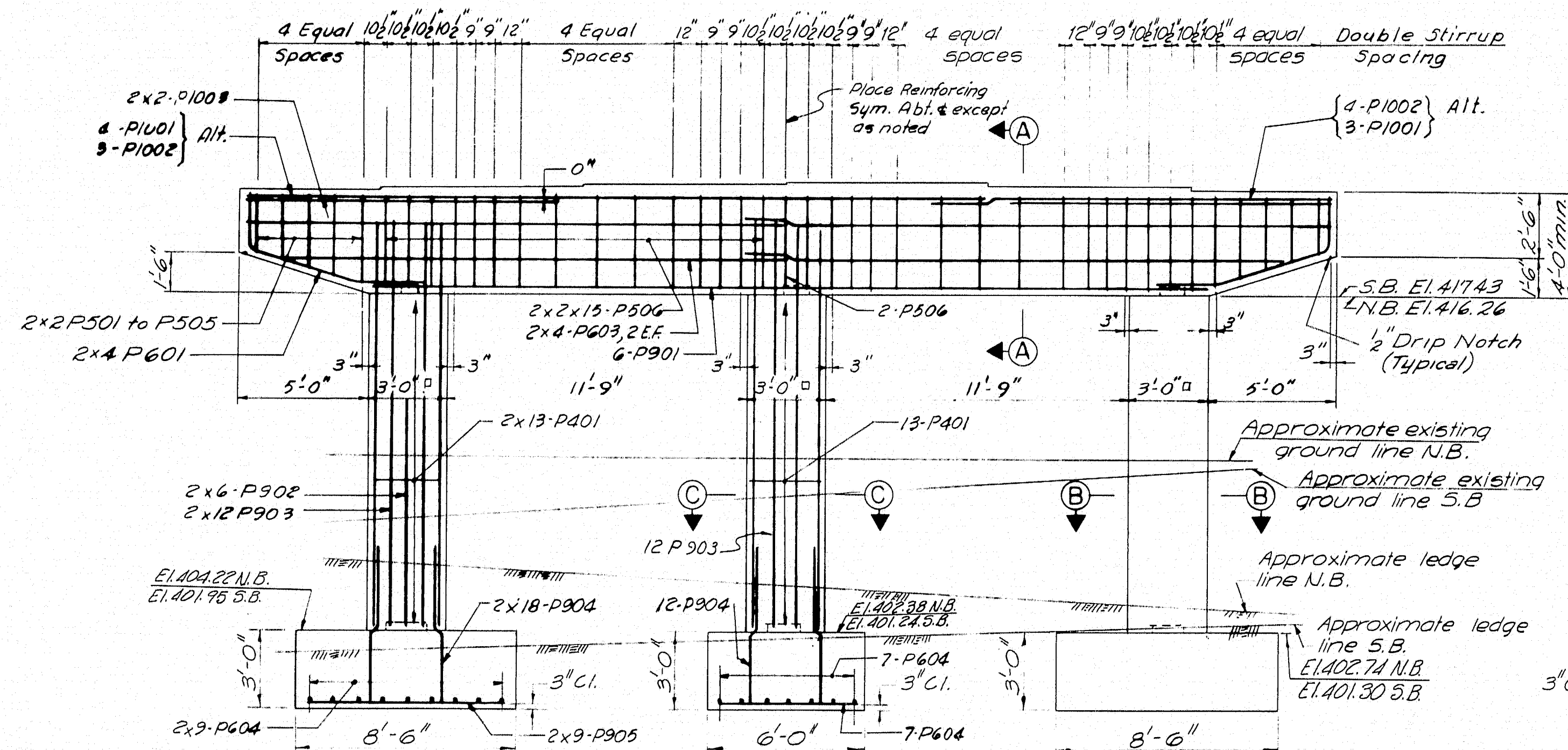




PLAN S.B.  
1/4" = 1'-0"

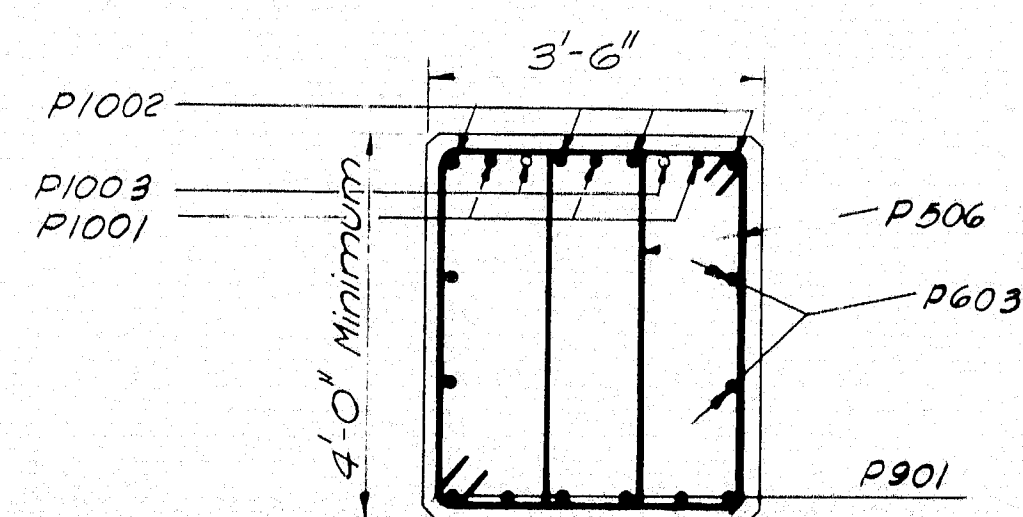


PLAN N.B.  
1/4" = 1'-0"

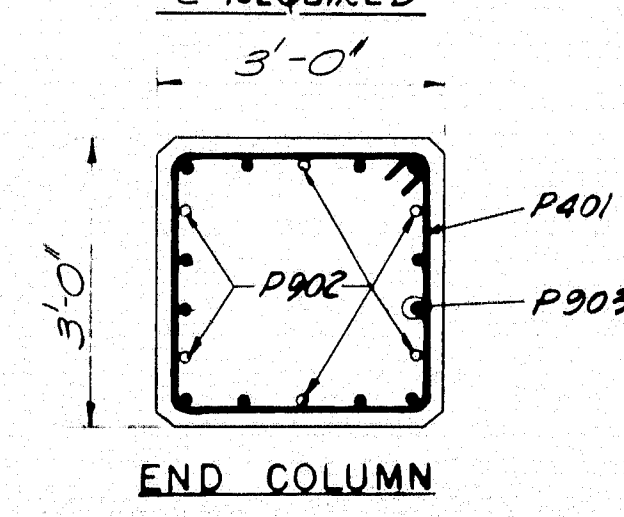


FRONT ELEVATION  
1/4" = 1'-0"

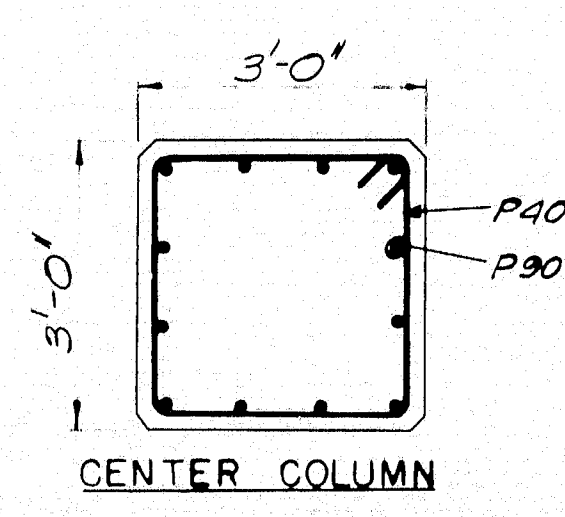
NOTE: Reinforcing shown is typical for each pier  
2 REQUIRED



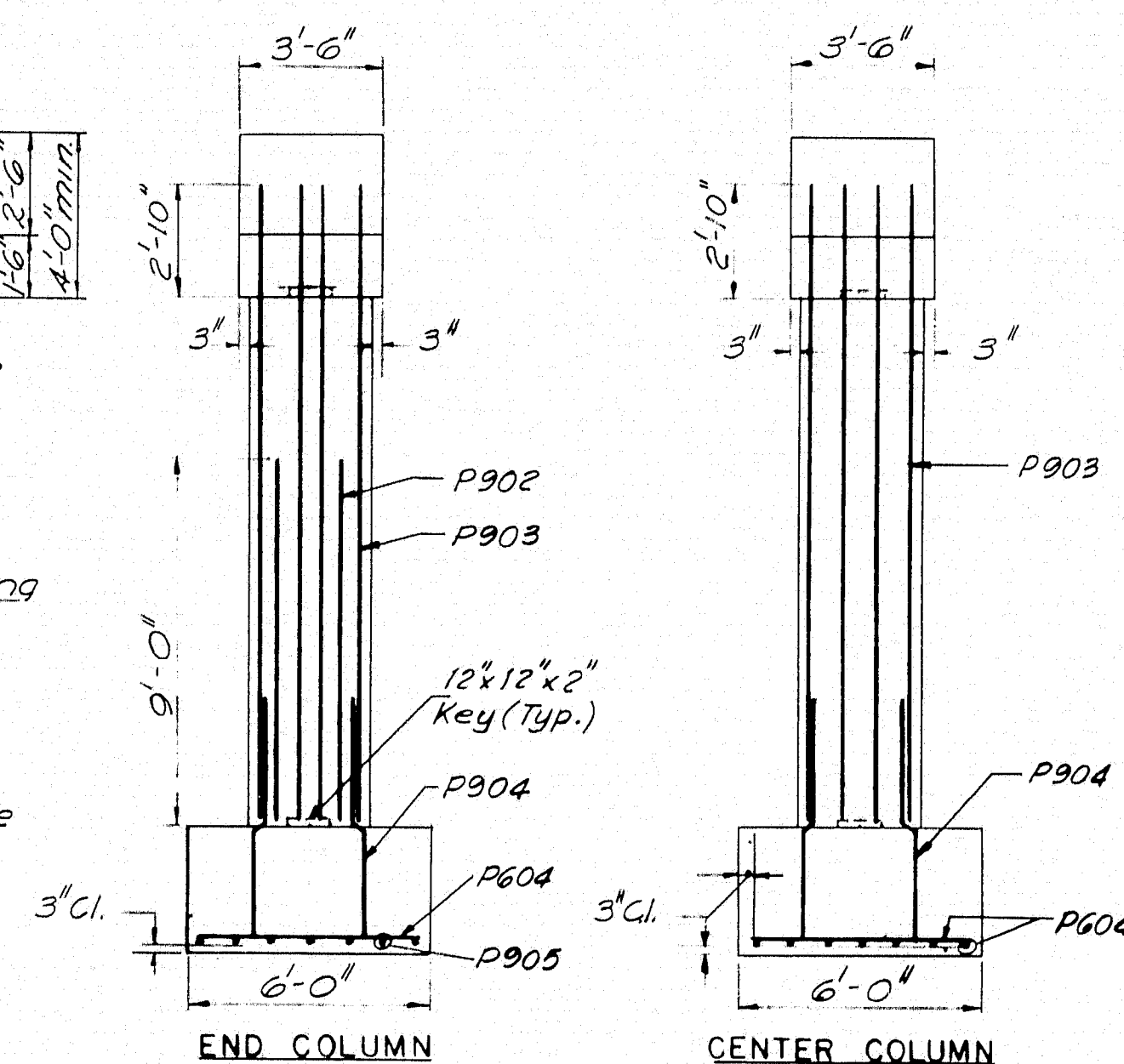
SECTION A-A  
1/4" = 1'-0"



SECTION B-B  
1/4" = 1'-0"

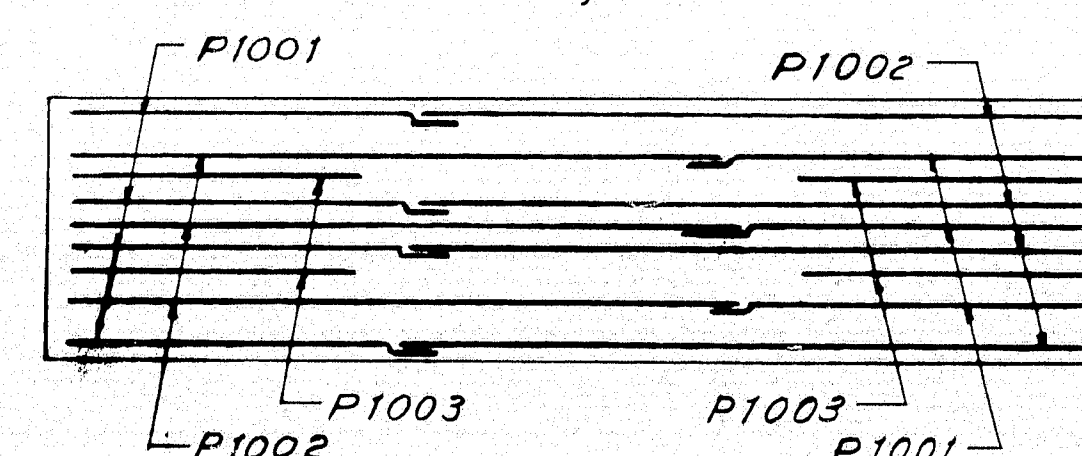


SECTION C-C  
1/4" = 1'-0"

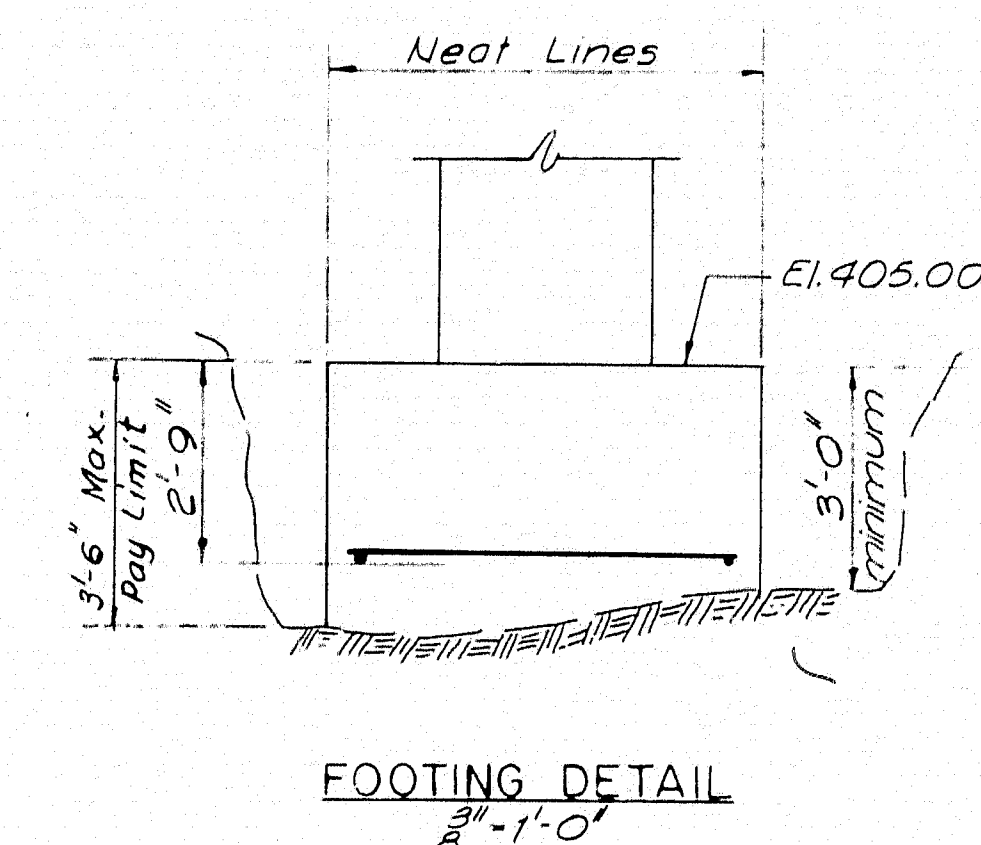


END ELEVATION  
1/4" = 1'-0"

NOTES:  
o Indicates cut-off bars  
• Indicates full length bars



CAP REINFORCING PATTERN  
No Scale



#### NOTES:

1. Footing side form may be omitted if approved by the Engineer. No payment will be made for concrete outside the neat lines shown.
2. In case of over breakage of ledge downward no payment will be made for Structural Rock Excavation Piers; or for concrete more than 3'-6" below top of footing elevation shown.
3. All weathered or broken ledge shall be removed before any footing concrete is placed.

#### NOTES:

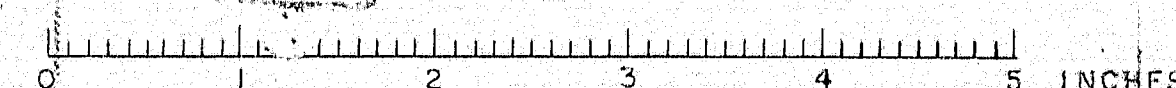
1. Reinforcing steel to have 2" cover unless otherwise shown.
2. Maximum footing pressure:  
Group I 56 tons/s.f.  
Group VI 88 tons/s.f.
3. Dress bearing areas 1" larger all around than masonry plates to exact elevations shown.
4. Top of footing elevations may be altered to suit field conditions. No change in top of footing elevations greater than two feet shall be made without approval of the consulting Engineer.
5. E.F. denotes Each Face.
6. Reinforcing in pier cap to be placed to clear anchor bolts.

DESIGN - G.H. DETAIL - B.V.	BRIDGE NO. SURVEY - PLOT -
TRACE - P.R.N.	
STATE HIGHWAY COMMISSION BRIDGE DIVISION INTERSTATE 95 OVER U.S. ROUTE 1 IN THE TOWN OF HOULTON ARROOSTOOK COUNTY PIERS	

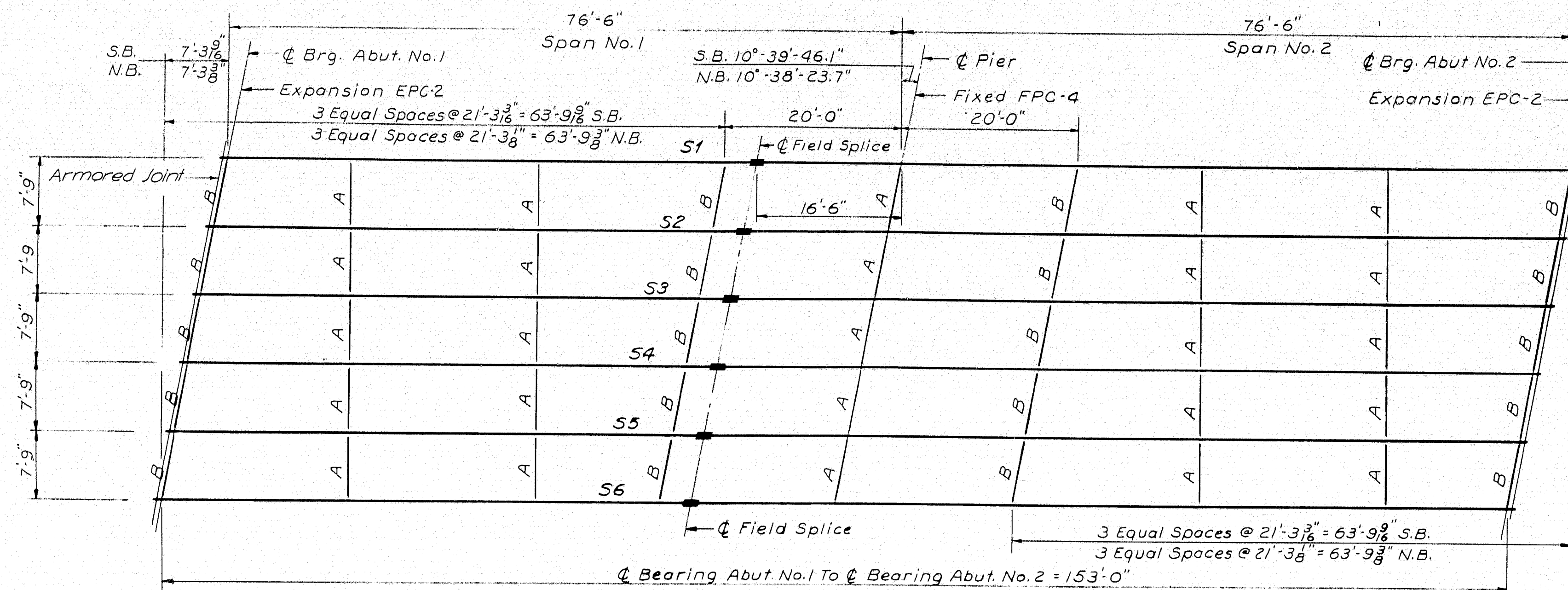
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
NEW YORK BOSTON KANSAS CITY

SHEET 17 OF 21 AUGUSTA, MAINE DECEMBER 1964

96-117 HOULTON (23)





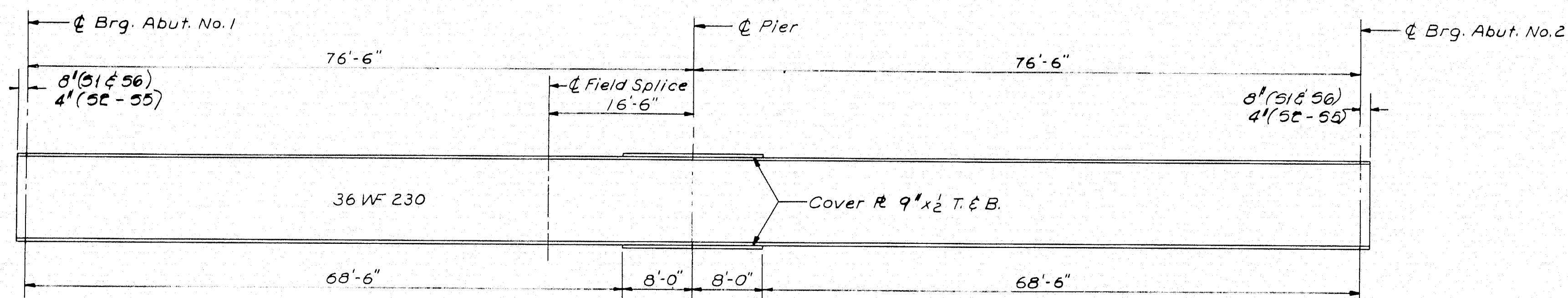


ERECTOR DIAGRAM

1" = 10'  
N.B. & S.B. Similar Except As Noted

PEDESTALS

12 EPC-2 Required  
6 FPC-4 Required } X2



TYPICAL STRINGER ELEVATION

All Dimensions Are Horizontal

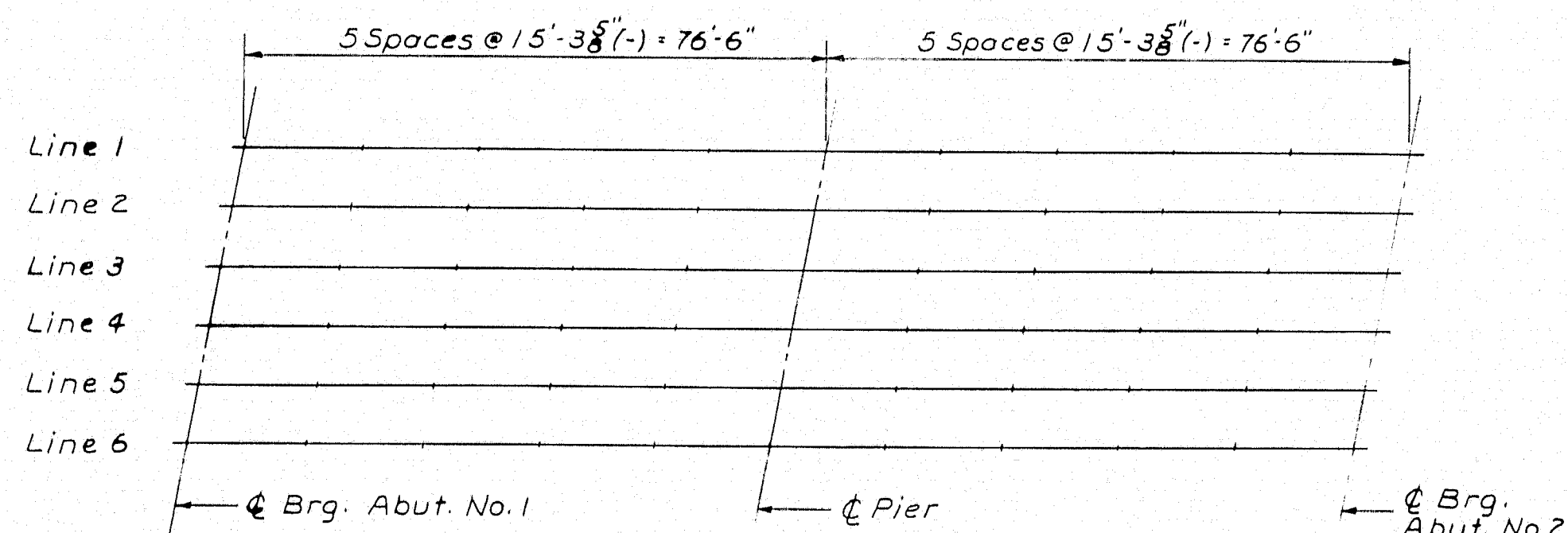
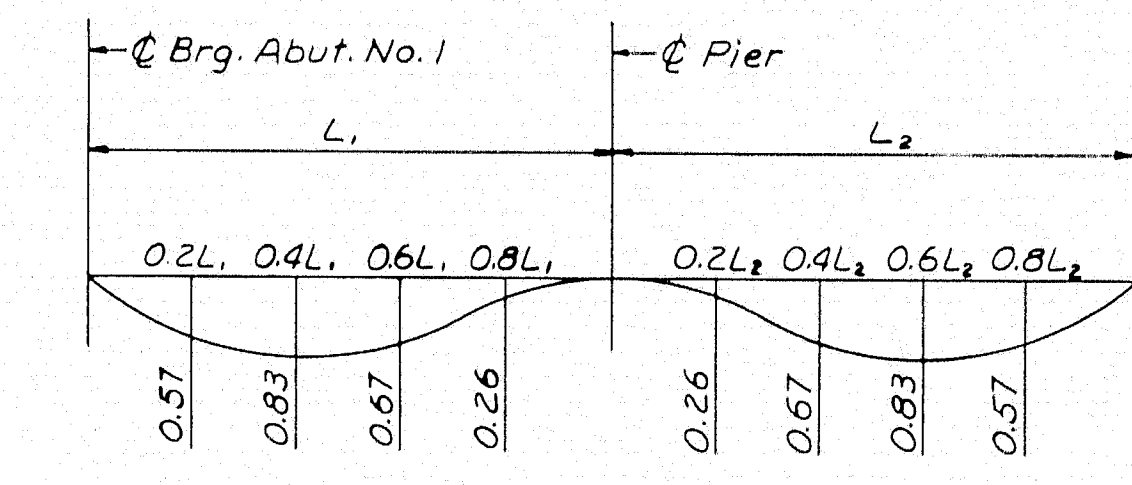


DIAGRAM OF BLOCKING POINTS

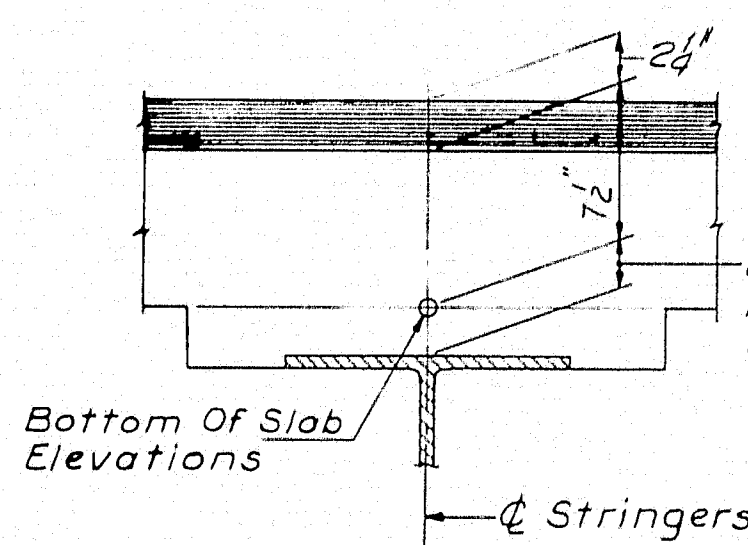
	60'-0"	93'-0"
Line 1	+0.765% S.B. +2.217% N.B.	+0.594% S.B. +1.064% N.B.
Line 2	+0.768% S.B. +2.250% N.B.	+0.598% S.B. +1.097% N.B.
Line 3	+0.772% S.B. +2.283% N.B.	+0.602% S.B. +1.140% N.B.
Line 4	+0.783% S.B. +2.383% N.B.	+0.601% S.B. +1.118% N.B.
Line 5	+0.788% S.B. +2.417% N.B.	+0.605% S.B. +1.151% N.B.
Line 6	+0.792% S.B. +2.450% N.B.	+0.610% S.B. +1.183% N.B.

BEAM GRADES



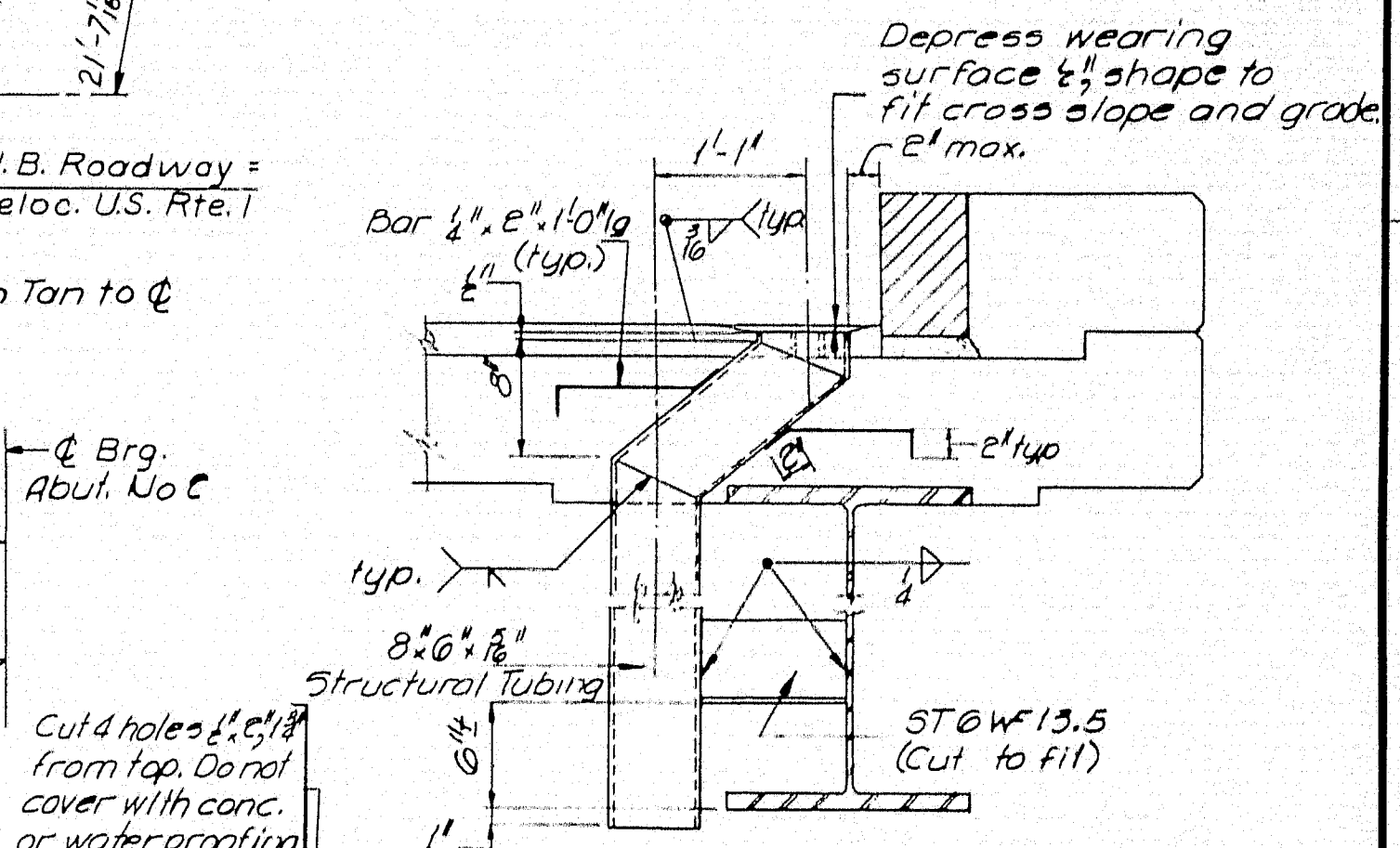
DEAD LOAD DEFLECTION DIAGRAM

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



BLOCKING DETAIL

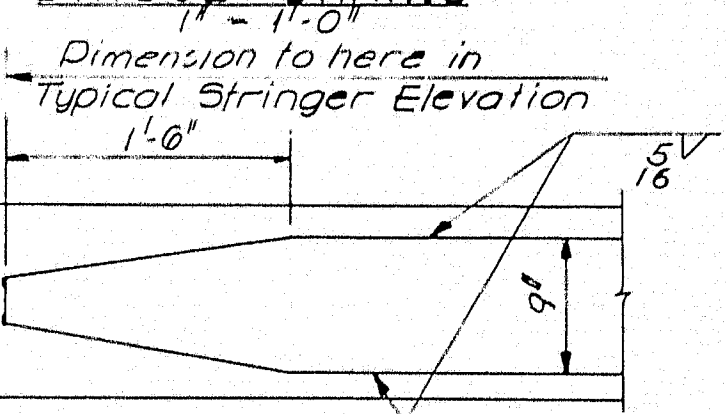
No Scale



ELEVATION BRIDGE DRAIN NOTES:

Two bridge drains on each side Span 1 & 2. For approximate location see sheet 2, exact position to be determined in field.

BRIDGE DRAINS



COVER PLATE DETAIL

1" = 1'-0"

BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS N.B.											
	Abut. No. 1	SPAN NO. 1				Pier	SPAN NO. 2				Abut. No. 2
		15'-3 3/8"	30'-7 1/4"	45'-10 3/8"	61'-2 3/8"		15'-3 3/8"	30'-7 1/4"	45'-10 3/8"	61'-2 3/8"	
Line 1	424.14	424.24	424.30	424.32	424.32	424.32	424.37	424.42	424.44	424.42	424.38
Line 2	424.27	424.37	424.43	424.45	424.45	424.46	424.50	424.55	424.57	424.56	424.51
Line 3	424.40	424.50	424.56	424.59	424.58	424.59	424.63	424.68	424.71	424.69	424.65
Line 4	424.33	424.43	424.49	424.52	424.51	424.52	424.56	424.61	424.64	424.62	424.58
Line 5	424.19	424.29	424.35	424.38	424.38	424.38	424.43	424.48	424.50	424.49	424.44
Line 6	424.05	424.15	424.21	424.24	424.24	424.25	424.29	424.34	424.37	424.35	424.31
Point A	424.09	424.19	424.25	424.27	424.27	424.27	424.32	424.37	424.39	424.37	424.33
Point B	424.00	424.10	424.16	424.19	424.19	424.20	424.24	424.29	424.32	424.30	424.26

BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS S.B.											
	Abut. No. 1	SPAN NO. 1				Pier	SPAN NO. 2				Abut. No. 2
		15'-3 3/8"	30'-7 1/4"	45'-10 3/8"	61'-2 3/8"		15'-3 3/8"	30'-7 1/4"	45'-10 3/8"	61'-2 3/8"	
Line 1	424.83	425.01	425.16	425.26	425.34	425.42	425.54	425.67	425.76	425.82	425.84
Line 2	424.95	425.13	425.28	425.39	425.46	425.55	425.67	425.79	425.89	425.95	425.97
Line 3	425.08	425.26	425.40	425.51	425.59	425.67	425.79	425.92	426.02	426.08	426.10
Line 4	425.13	425.32	425.46	425.57	425.65	425.74	425.86	425.98	426.08	426.14	426.16
Line 5	424.98	425.17	425.32	425.43	425.51	425.59	425.71	425.84	425.94	426.00	426.02
Line 6	424.84	425.02	425.17	425.28	425.36	425.45	425.57	425.70	425.80	425.86	425.88
Point A	424.78	424.96	425.11	425.21	425.29	425.37	425.49	425.62	425.71	425.77	425.79
Point B	424.79	424.97	425.12	425.23	425.31	425.40	425.52	425.65	425.75	425.81	425.83

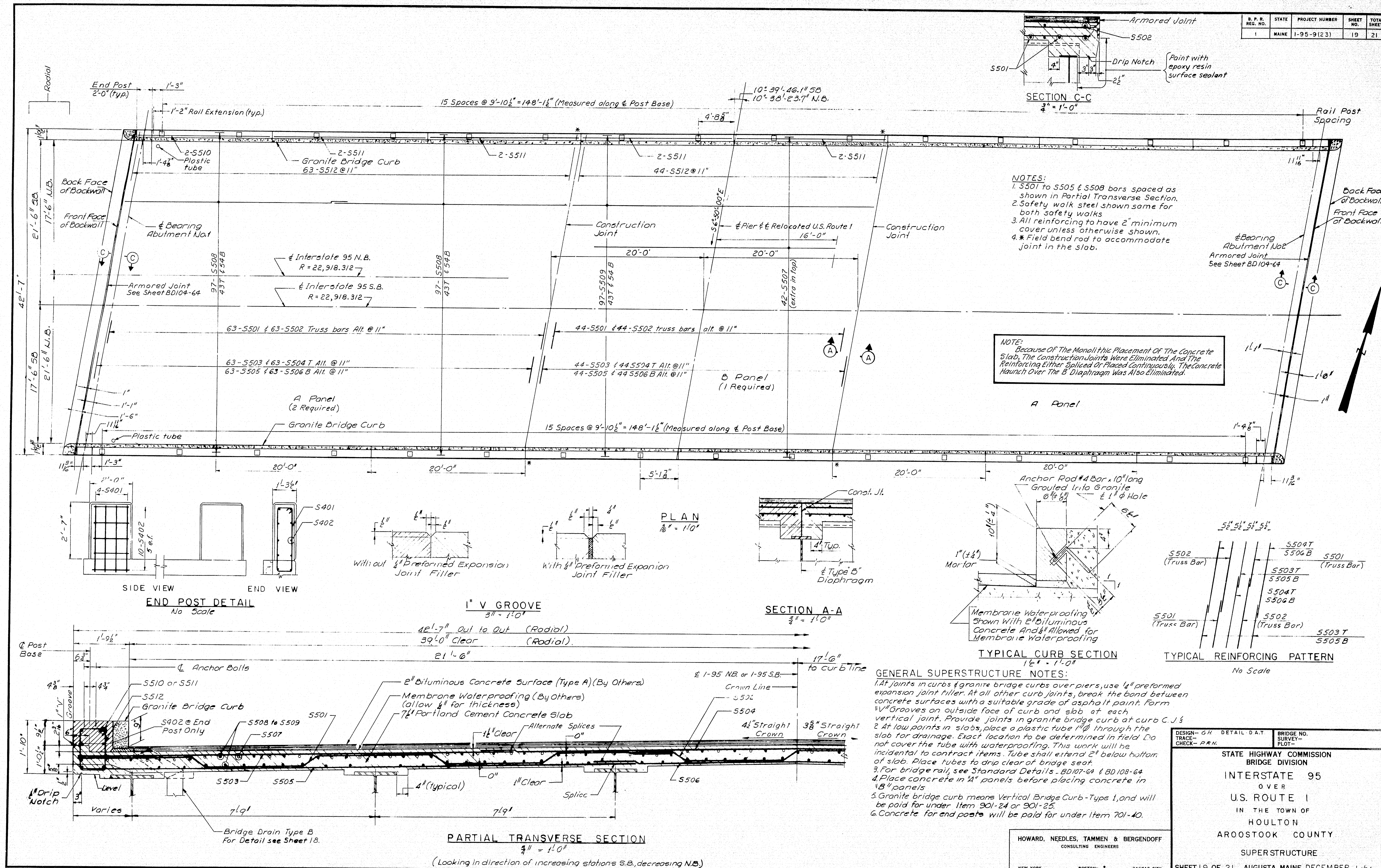
NOTE:

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

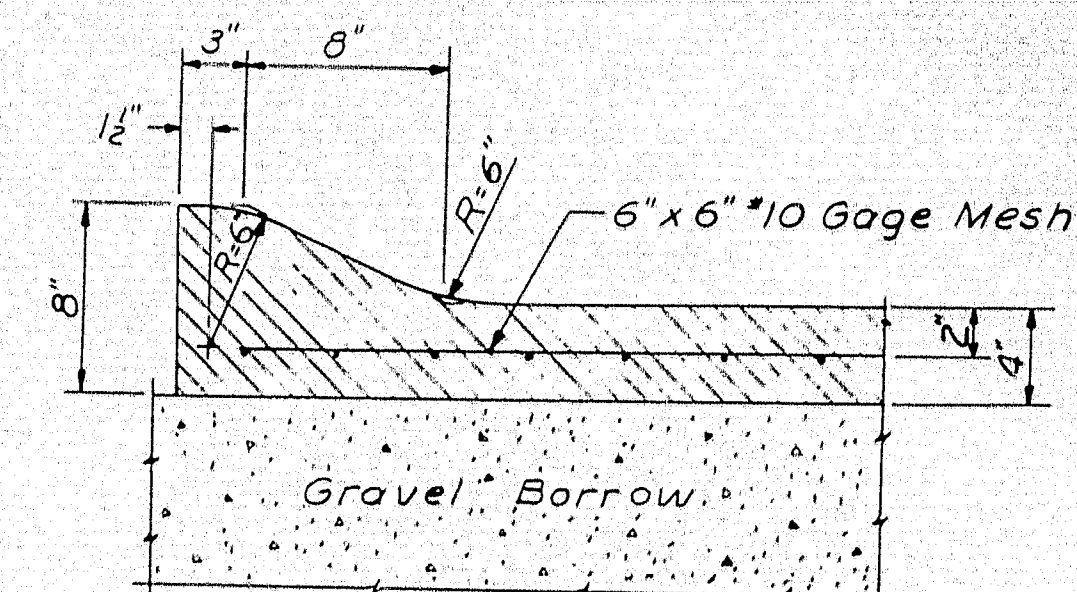
DESIGN - G.H. TRACE - KAN & REN	DETAIL - R.D.F.	BRIDGE NO. SURVEY - PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION		
INTERSTATE 95 OVER U.S. ROUTE 1 IN THE TOWN OF HOULTON, AROSTOOK COUNTY STRUCTURAL STEEL & BLOCKING		
SHEET 18 OF 21 AUGUSTA, MAINE DECEMBER 1964		

96-118 HOULTON (23)

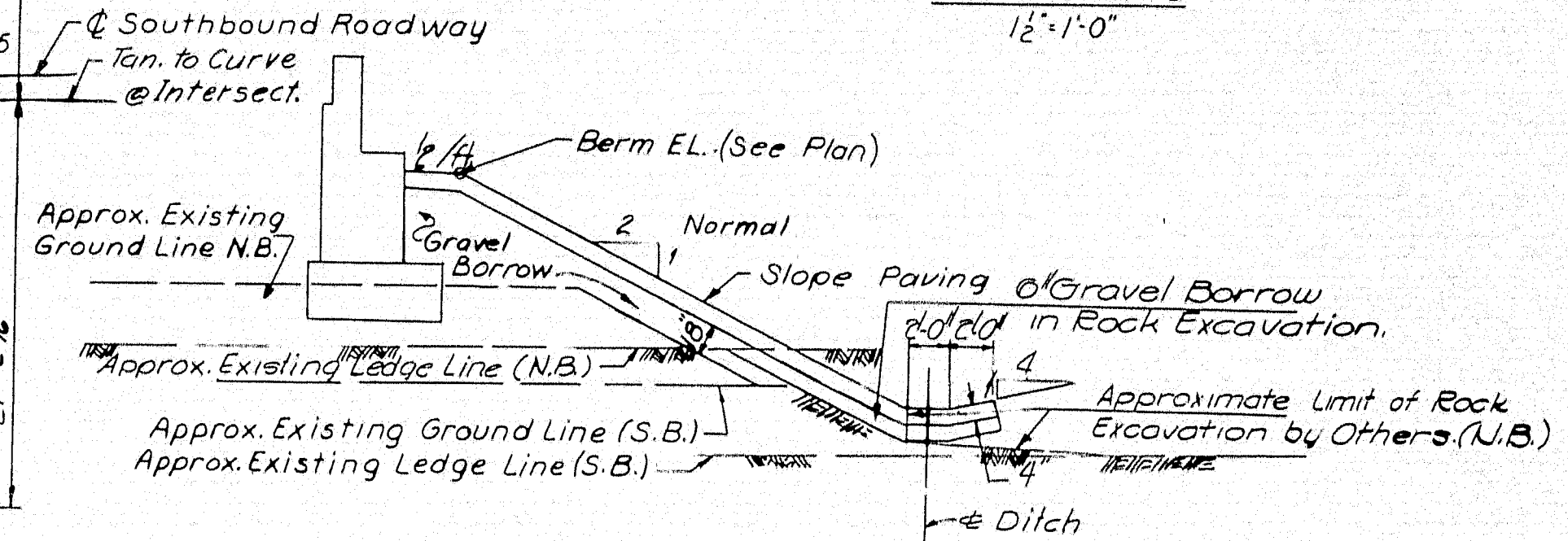






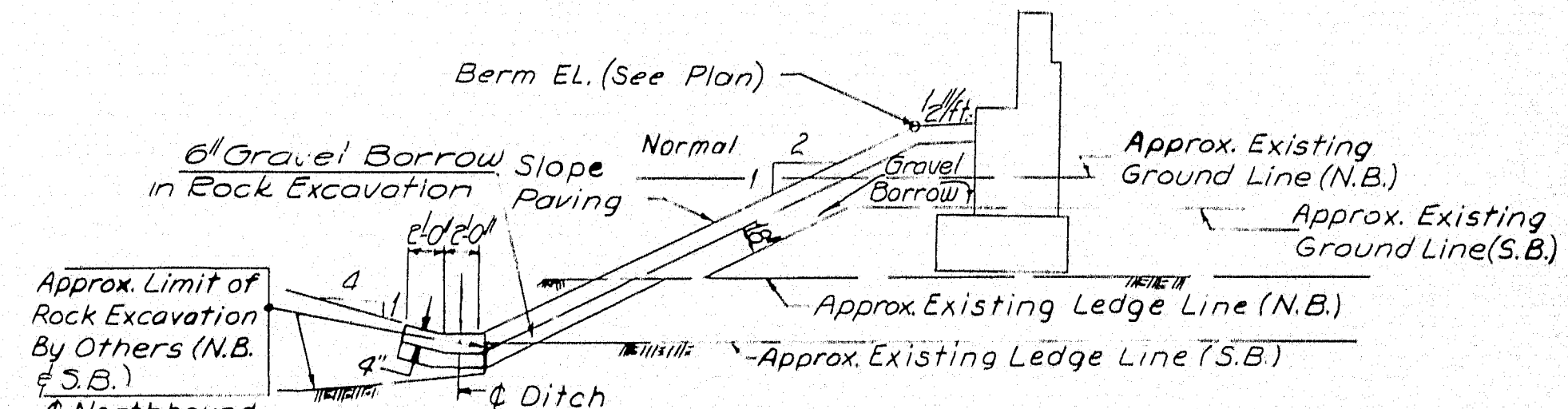


SECTION C-C  
1 1/2" x 1'-0"



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

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

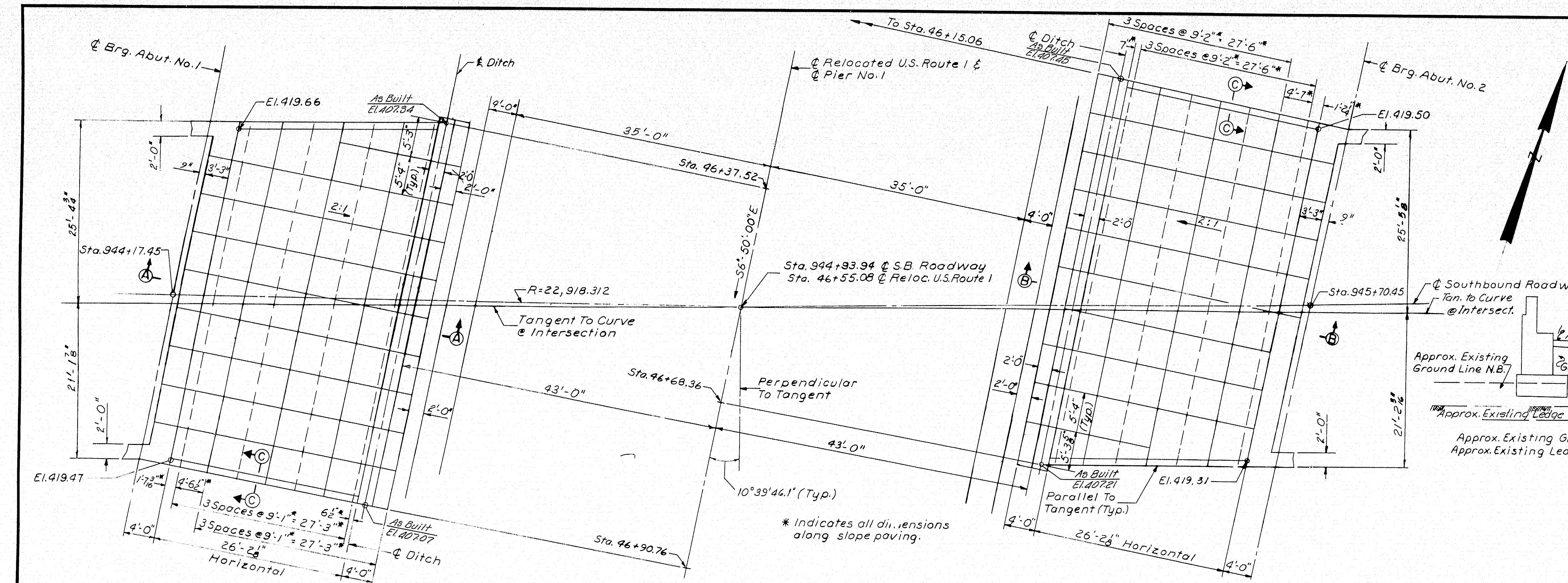


SECTION B-B  
1/8" x 1'-0"

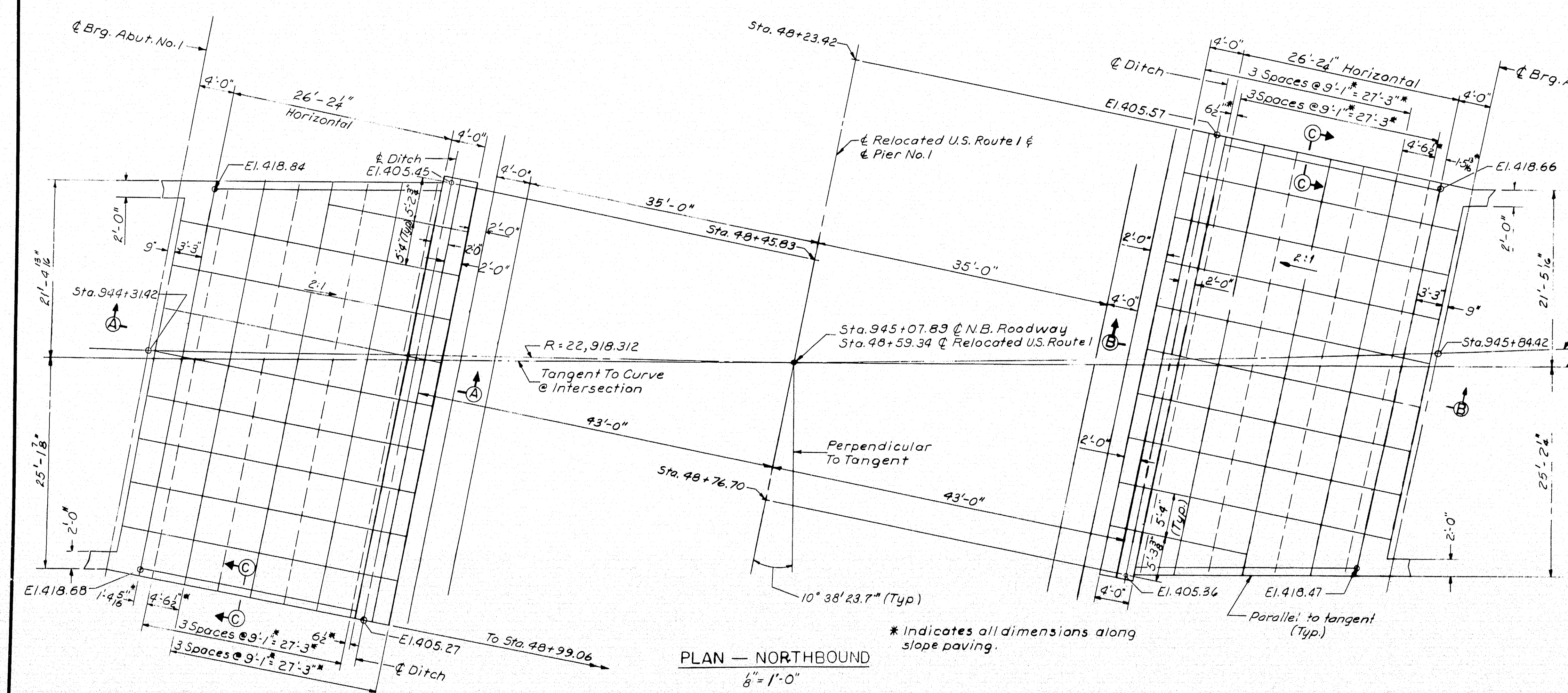
- NOTES:
- Slope paving shall conform to section 808 of the Supplemental Specifications dated February 1960 and as modified in Oct. 1964.
  - Break bond of construction joints with a coat of Asphalt Paint.
  - Reinforce with #10 gage 6" x 6" steel mesh, not to pass through construction joints.
  - Dummy Joints shall be made with a sidewalk edging tool to a depth of 4"

DESIGN - G. H. DETAIL - RPK	BRIDGE NO. SURVEY - PLOT -
TRACE -	
CHECK - P. R. N.	
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95 OVER U.S. ROUTE 1	
IN THE TOWN OF HOULTON	
ARROOSTOOK COUNTY	
SLOPE PAVING	
SHEET 20 OF 21 AUGUSTA, MAINE DECEMBER 1964	

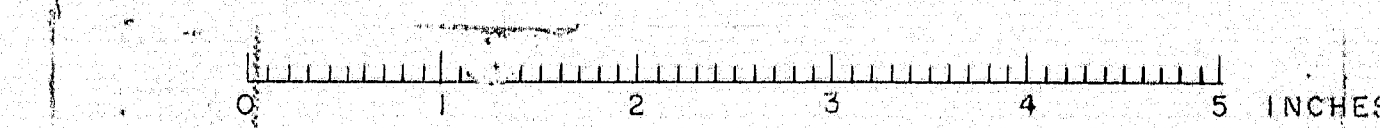
96-120 HOULTON (23)



PLAN - SOUTHBOUND  
1/8" x 1'-0"



PLAN - NORTHBOUND  
1/8" x 1'-0"





### ABUTMENT 1 Southbound

MARK	SIZE	NUMBER	LENGTH	INCR.	LOCATION
STRAIGHT BARS					
A5401	4	44	20'-3"		Approach Slab
A401	4	14	23'-3"		Backwall
A408	4	2	22'-3"		Backwall
A413	4	12	9'-0"		Wingwall
A414	4	2	7'-3"		"
A415	4	2	4'-8"		Wingwall

A501	5	30	3'-4"		Footings Dowels
A502	5	62	9'-0"		Stem & Wingwall
A504	5	24	3'-6"	7"	Wingwall
A505	5	8	5'-3"		Stem
A506	5	30	3'-0"		"
A507	5	60	4'-7"		"
A509	5	20	22'-3"		Stem

A5601	6	156	14'-6"		Approach Slab
A601	6	44	6'-0"		Footings
A602	6	11	3'-6"	3"	"
A603	6	10	3'-6"	3 1/4"	"
A604	6	7	10'-0"		"
A605	6	7	9'-3"		"
A606	6	14	22'-6"		Footings
A608	6	4	1'-0"		Curb Dowels

BENT BARS					
A402	4	6	9'-0"		Wingwall
A403	4	1	7'-3"		"
A404	4	1	4'-8"		"
A405	4	6	8'-11"		"
A406	4	1	7'-2"		"
A407	4	1	4'-7"		"
A409	4	4	7'-8"		Wingwall
A410	4	12	4'-0"		Pads
A411	4	8	5'-2"		"
A412	4	4	5'-8"		Pads
A503	5	30	8'-11"		Stem
A607	6	28	3'-6"		Approach Slab Dowels

### ABUTMENT 1 Northbound

STRAIGHT BARS					
A5401	4	44	20'-3"		Approach Slab
A401	4	14	23'-3"		Backwall
A408	4	2	22'-3"		Wingwall
A413	4	12	9'-0"		Backwall
A414	4	2	7'-3"		Wingwall
A415	4	2	4'-8"		Wingwall

A501	5	30	3'-4"		Footings Dowels
A502	5	62	9'-0"		Stem & Wingwall
A504	5	24	3'-6"	7"	Wingwall
A505	5	8	5'-3"		Stem
A506	5	30	3'-0"		Wingwall
A507	5	60	4'-7"		Stem
A509	5	20	22'-3"		Wingwall
A5601	6	156	14'-6"		Approach Slab
A601	6	44	6'-0"		Footings
A602	6	11	3'-6"	3"	"
A603	6	10	3'-6"	3 1/4"	"
A604	6	7	10'-0"		"
A605	6	7	9'-3"		"
A606	6	14	22'-6"		Footings
A608	6	4	1'-0"		Curb Dowels

BENT BARS					
A40	4	6	9'-0"		Stem
A40	4	1	7'-3"		"
A40	4	1	4'-8"		"
A405	4	6	8'-11"		Stem

### ABUTMENT 1 Northbound (Continued)

MARK	SIZE	NUMBER	LENGTH	INCR.	LOCATION
BENT BARS					
A406	4	1	7'-2"		Stem
A407	4	1	4'-7"		"
A408	4	4	7'-8"		Stem
A410	4	12	4'-0"		Pads
A411	4	8	5'-2"		"
A412	4	4	5'-8"		Pads
A503	5	30	8'-11"		Stem
A607	6	28	3'-6"		Approach Slab Dowels

### ABUTMENT 2 Southbound

STRAIGHT BARS					
A5401	4	44	20'-3"		Approach Slab
A401	4	14	23'-3"		Stem
A408	4	2	22'-3"		"
A413	4	12	9'-0"		"
A414	4	2	7'-3"		"
A415	4	2	4'-8"		Stem

A501	5	30	3'-4"		Footings Dowels
A504	5	24	3'-6"	7"	4 Groups of 6 Stem
A505	5	8	5'-3"		"
A506	5	30	3'-0"		"
A507	5	60	4'-7"		"
A509	5	20	22'-3"		"
A511	5	62	9'-10"		Stem

A5601	6	156	14'-6"		Approach Slab
A601	6	44	6'-0"		Footings
A602	6	11	3'-6"	3"	"
A603	6	10	3'-6"	3 1/4"	"
A604	6	7	10'-0"		"
A605	6	7	9'-3"		"
A606	6	14	22'-6"		Footings
A608	6	4	1'-0"		Curb Dowels

BENT BARS					
A402	4	6	9'-0"		Stem
A403	4	1	7'-3"		"
A404	4	1	4'-8"		"
A405	4	6	8'-11"		"
A406	4	1	7'-2"		"
A407	4	1	4'-7"		"
A409	4	4	7'-8"		Stem
A410	4	12	4'-0"		Pads
A411	4	8	5'-2"		"
A412	4	4	5'-8"		Pads
A512	5	30	9'-10"		Stem
A607	6	28	3'-6"		Approach Slab Dowels

### ABUTMENT 2 Northbound

STRAIGHT BARS					
A5401	4	44	20'-3"		Approach Slab
A401	4	14	23'-3"		Stem
A408	4	2	22'-3"		"
A413	4	12	9'-0"		"
A414	4	2	7'-3"		"
A415	4	2	4'-8"		Stem

A501	5	30	3'-4"		Footings Dowels
A504	5	24	3'-6"	7"	4 Groups of 6 Stem
A505	5	8	5'-3"		"
A506	5	30	3'-0"		"
A507	5	60	4'-7"		"
A509	5	20	22'-3"		"
A513	5	62	9'-2"		Stem

A5601	6	156	14'-6"		Approach Slab
-------	---	-----	--------	--	---------------

### ABUTMENT 2 Northbound (Continued)

MARK	SIZE	NUMBER	LENGTH	INCR.	LOCATION
STRAIGHT BARS					
A601	6	44	6'-0"		Footings
A602	6	11	3'-6"	3"	"
A603	6	10	3'-6"	3 1/4"	"
A604	6	7	10'-0"		"
A605	6	7	9'-3"		"
A606	6	14	22'-6"		Footings
A608	6	4	1'-0"		Curb Dowels

BENT BARS					
A402	4	6	9'-0"		Stem
A403	4	1	7'-3"		"
A404	4	1	4'-8"		"
A405	4	6	8'-11"		"
A406	4	1	7'-2"		"
A407	4	1	4'-7"		Stem
A409	4	4	7'-8"		Wingwall
A410	4	12	4'-0"		Pads
A411	4	8	5'-2"		Pads
A412	4	4	5'-8"		Pads
A514	5	30	9'-2"		Stem
A607	6	28	3'-6"		Approach Slab Dowels

### PIER 1 Southbound

BENT BARS					
P401	4	39	11'-4"		Column
P501	5	4	9'-7"		Cap
P502	5	4	10'-2"		"
P503	5	4	10'-9"		"
P504	5	4	11'-4"		"
P505	5	4	11'-11"		"
P506	5	62	12'-1"		Cap
P601	6	8	8'-8"		Cap
P603	6	8	21'-9"		Cap
P604	6	32	5'-6"		Footings

STRAIGHT BARS					
P901	9	6	32'-6"		Cap
P902	9	12	9'-0"		Column
P903	9	36	13'-10"		Column
P904	9	48	5'-8"		Footings
P905	9	18	8'-0"		Footings

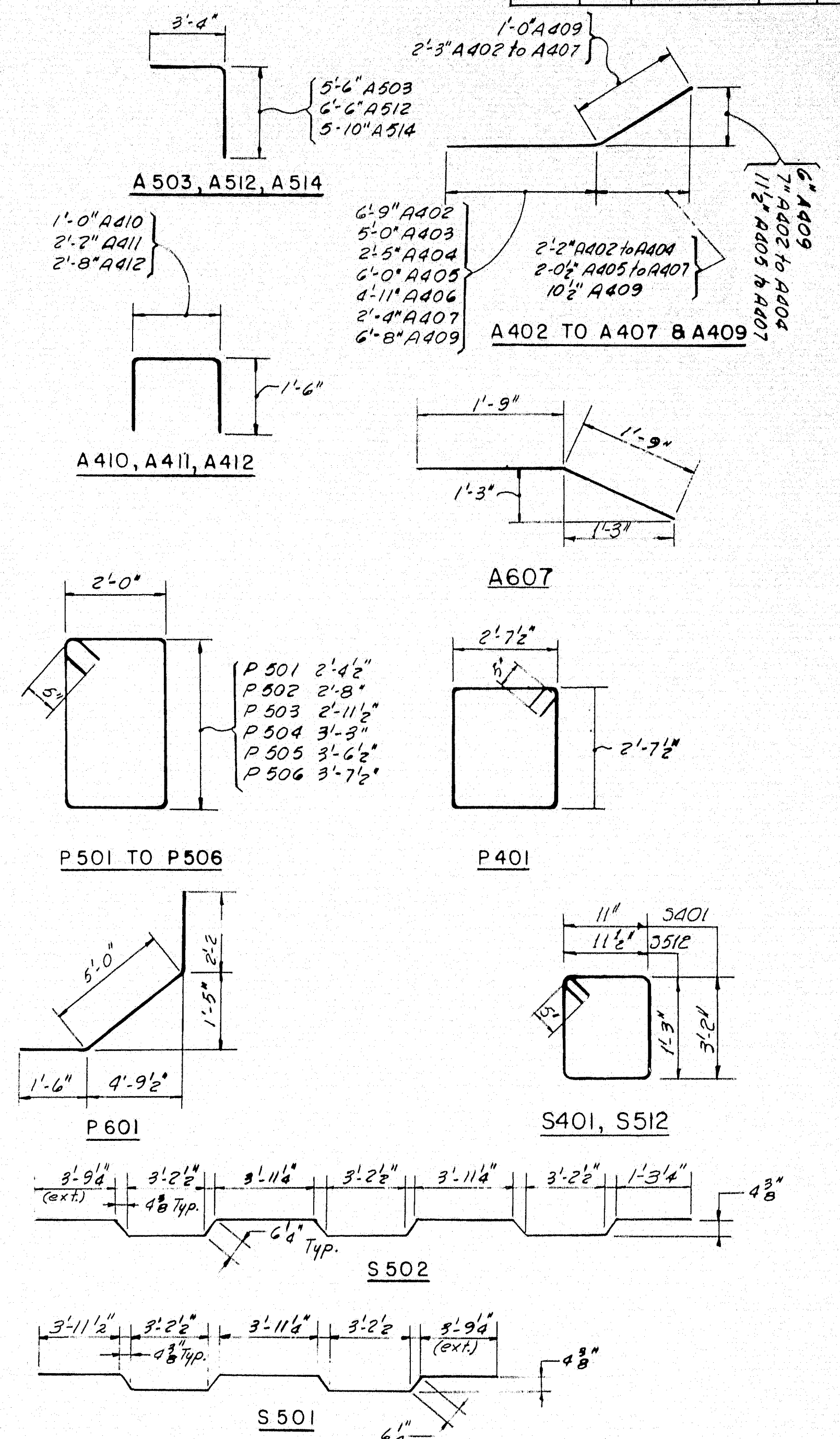
P1001	10	7	15'-8"		Cap
P1002	10	7	30'-5"		"
P1003	10	4	12'-0"		Cap

### SUPERSTRUCTURE SOUTHBOUND

STRAIGHT BARS					
S402	4	40	1'-8"		End Post
S503	5	170	14'-6"		Slab Transverse
S504	5	170	30'-6"		"
S505	5	170	18'-6"		"
S506	5	170	26'-6"		"
S507	5	42	32'-0"		Slab Transverse
S508	5	388	29'-6"		Slab Longitudinal
S509	5	97	39'-8"		Slab Longitudinal
S510	5	8	16'-10"		Safety Walk
S511	5	24	19'-8"		Safety Walk

BENT BARS					
S401	4	16	9'-0"		End Post
S501	5	170	20'-2"		Slab Truss Bar
S502	5	170	25'-8"		Slab Truss Bar
S512	5	340	5'-3"		Safety Walk

Northbound same as Southbound



### NOTES:

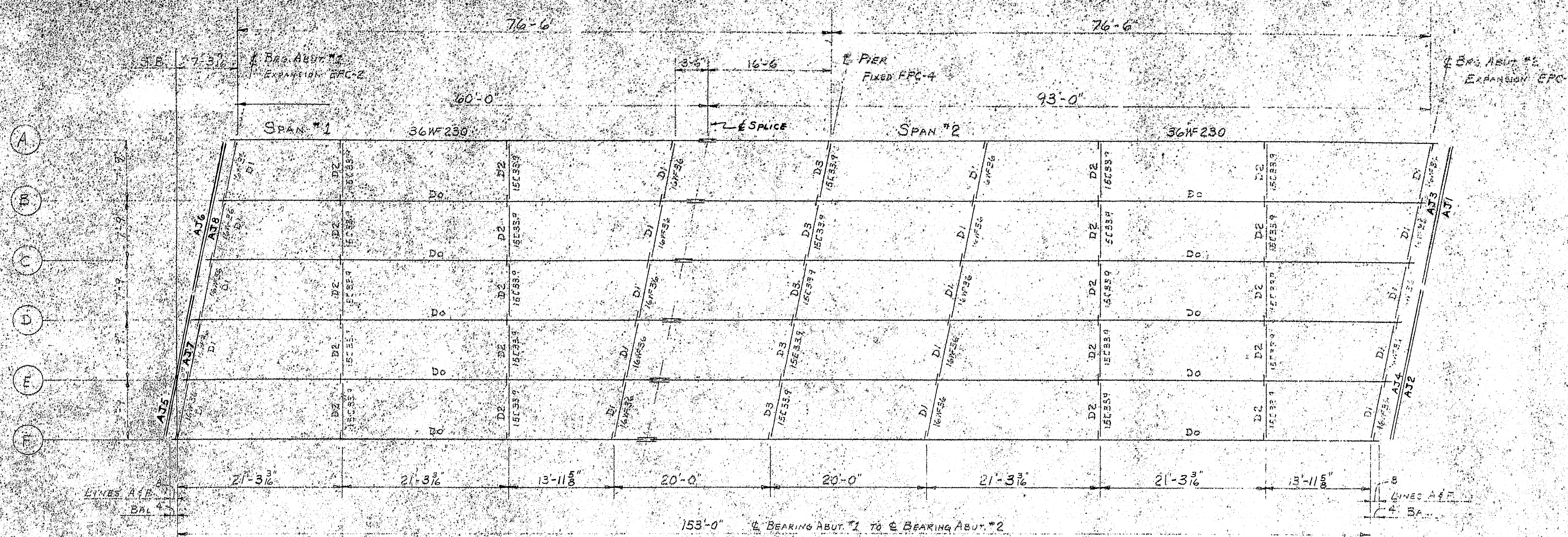
1. All dimensions are to the center of bars.
2. All reinforcing bars shall be intermediate grade steel.
3. Reinforcing steel to have 1" minimum cover, unless otherwise shown.

DESIGN - TRACE - CHECK - P. R. N.	DETAIL - U. R. A.	BRIDGE NO. SURVEY PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION		
INTERSTATE 95 OVER U.S. ROUTE 1		
IN THE TOWN OF HOULTON AROSTOOK COUNTY		
REINFORCING STEEL		
SHEET 21 OF 21 AUGUSTA, MAINE DECEMBER 1964		

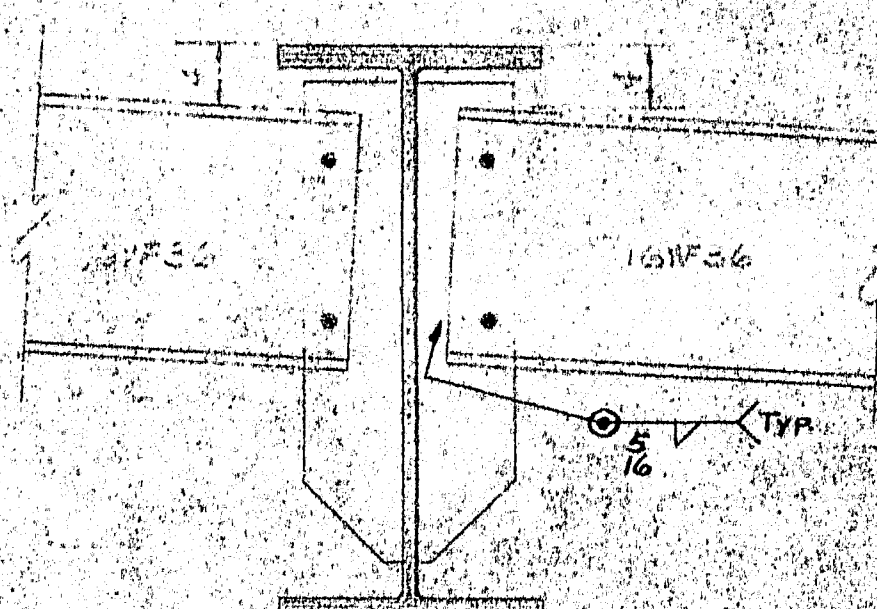
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
NEW YORK BOSTON KANSAS CITY

96-121 HOULTON (23)



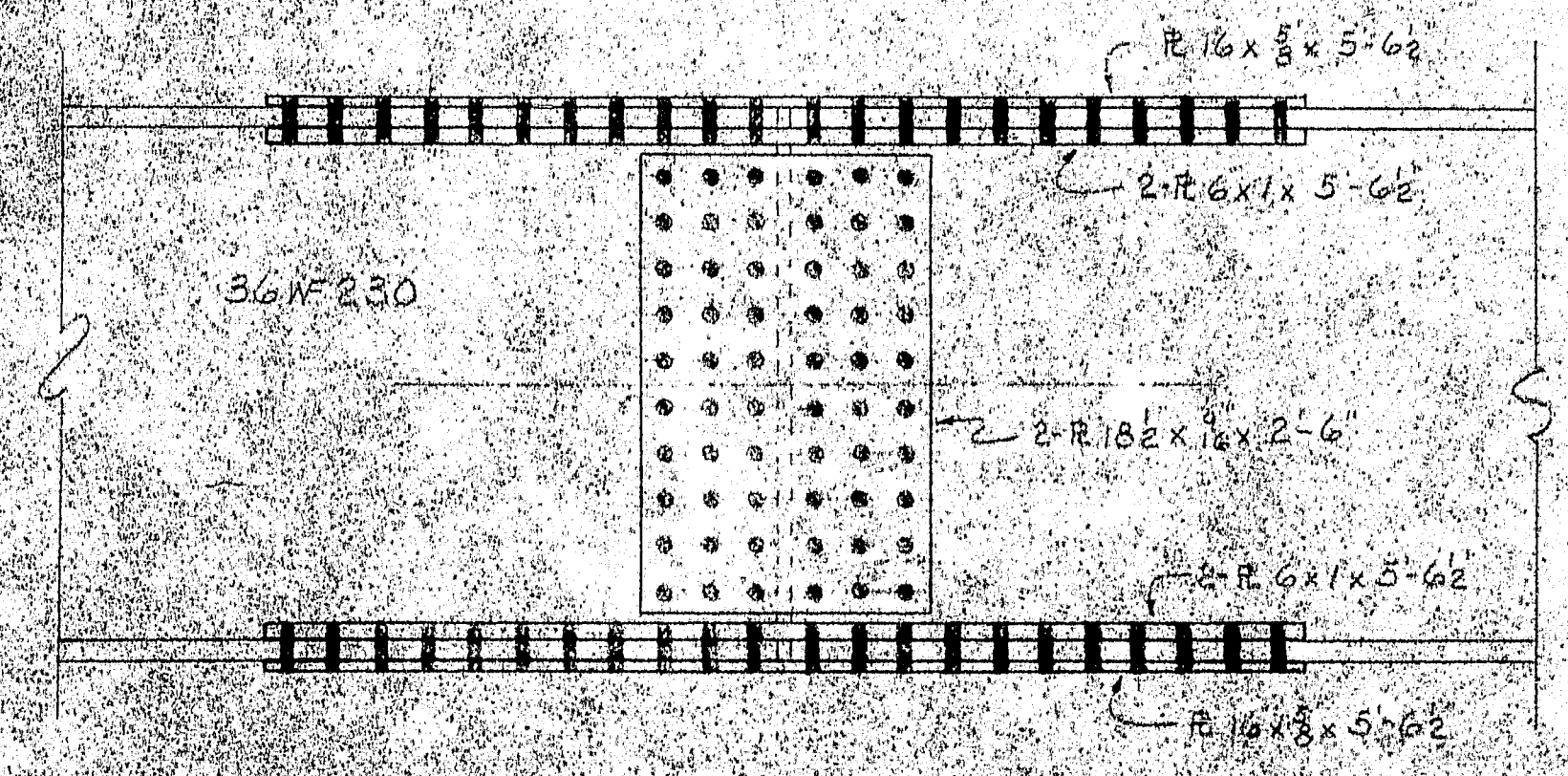


FRAMING PLAN

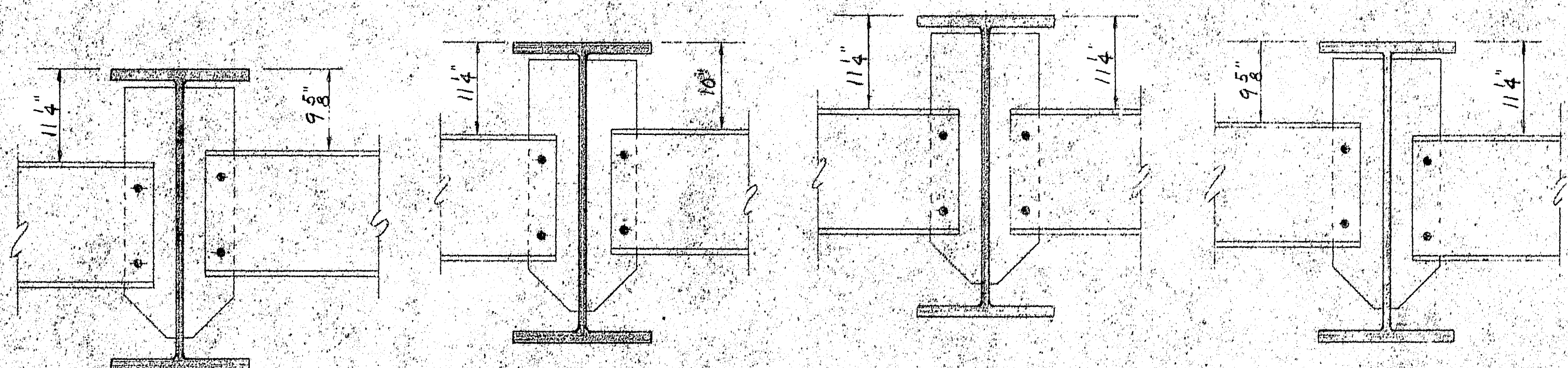


TYP. DETAIL AT 15E33.9

44-3/8" H.S. BOLTS 4" (FLANGE) T.F.B.  
60-3/8" H.S. BOLTS 3" (WEB)



TYP. SPLICE DETAIL

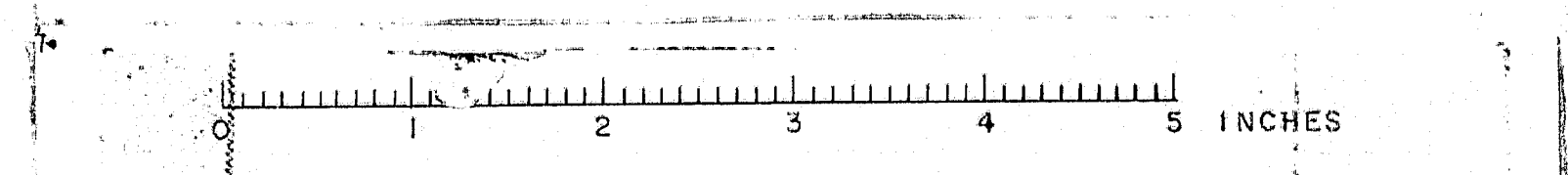


DETAIL OF DIAPHRAGMS AT 15E33.9

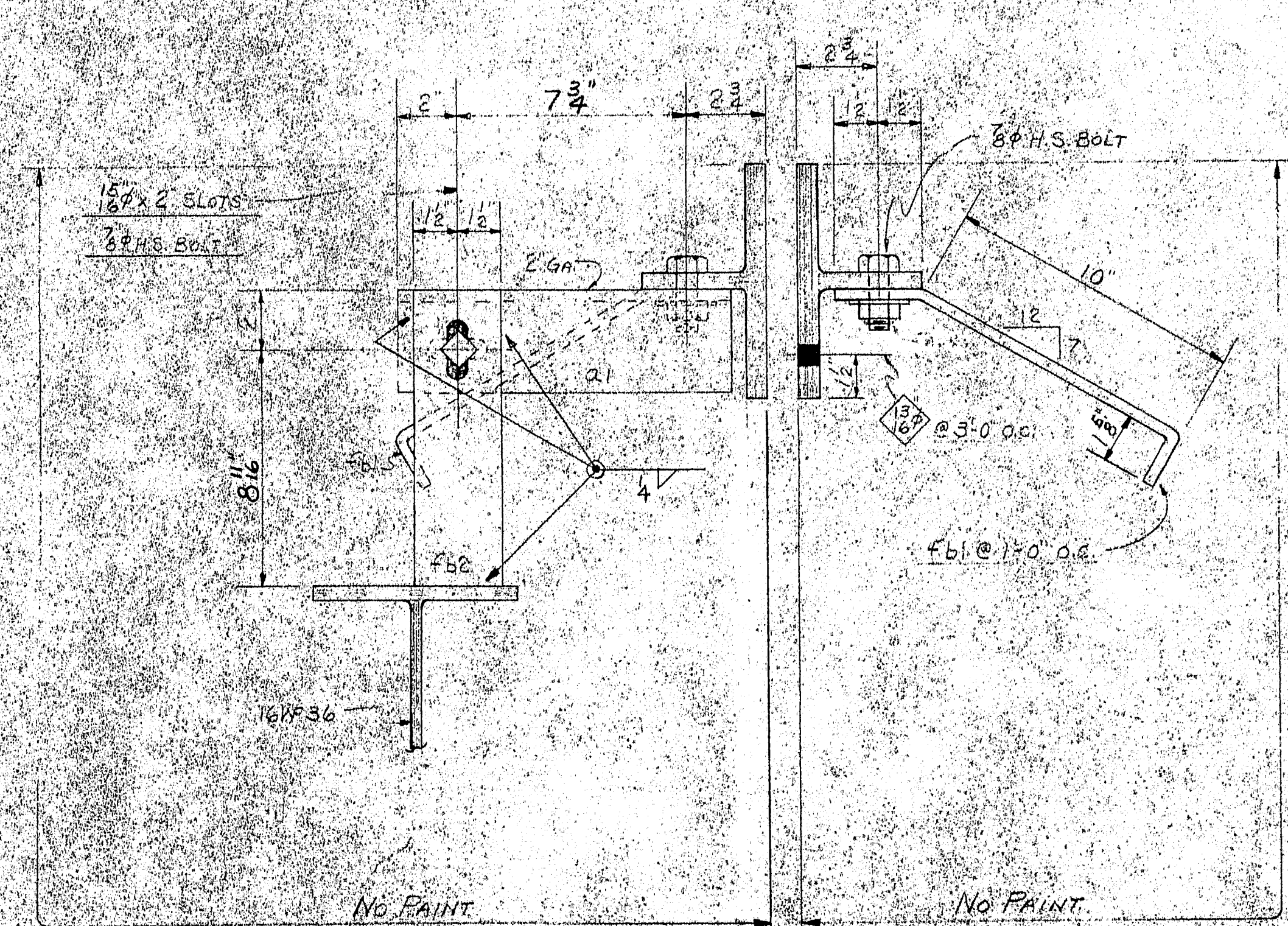
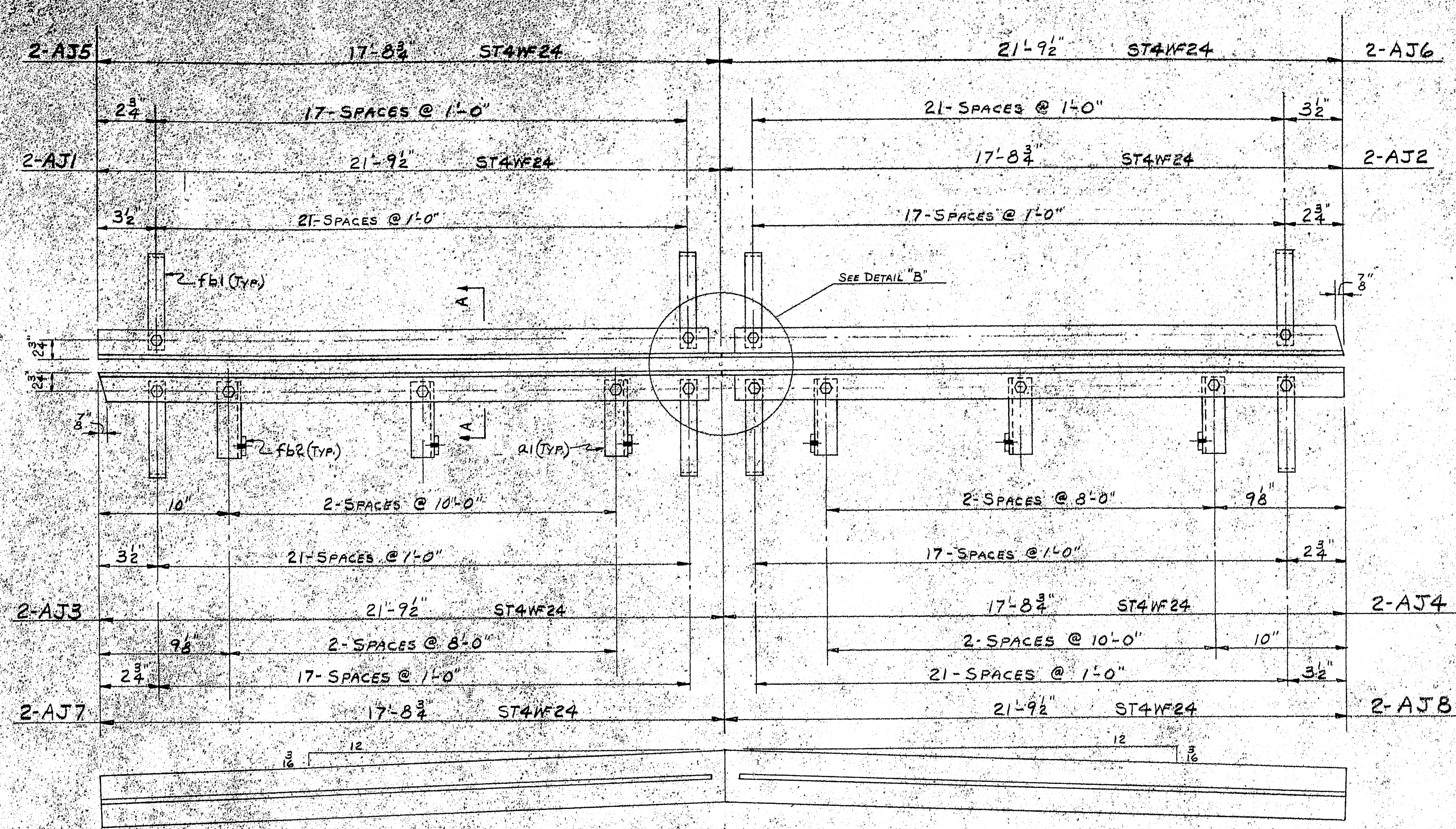
SHOP CONNECTIONS: WELD  
FIELD CONNECTIONS: BOLT 3/8" H.S. & WELD  
HOLES: 15/16"  
PAINT: STATE OF MAINE SPEC

PROJ. No. I-95-9(23)297

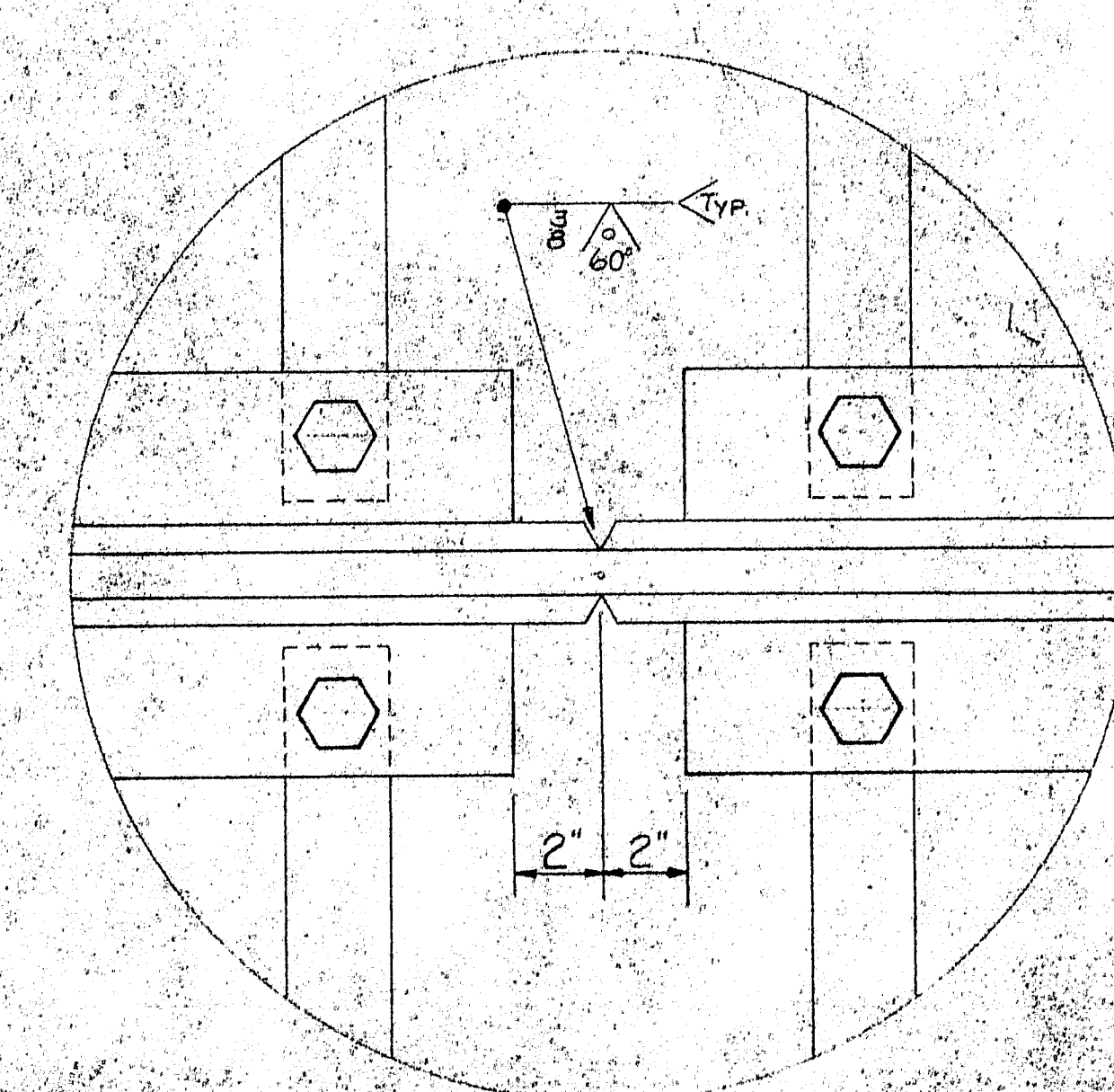
FRAMING PLAN SOUTHBOUND			
PRINT	ISSUE	Bancroft & Martin Inc. Brewer, Maine	
5	STATE		
3	CUST.	INTERSTATE 95 OVER U.S. ROUTE 1 HOULTON, MAINE	
2	SHOP		
2	P.A.	CUSTOMER: CALAHAN BROTHERS INC. DESIGNER: STATE HIGHWAY COMMISSION	
DRAWN	4-1-65 C.T.M.		
REVISION		ORDER 1/4" P.A.S. TING 5/1/65	
REVISION			







SECTION A-A

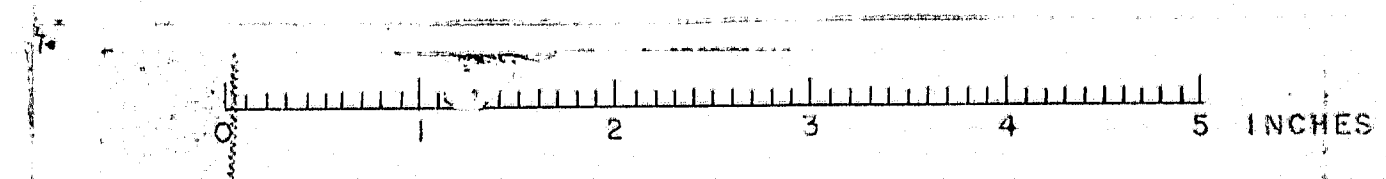


DETAIL B

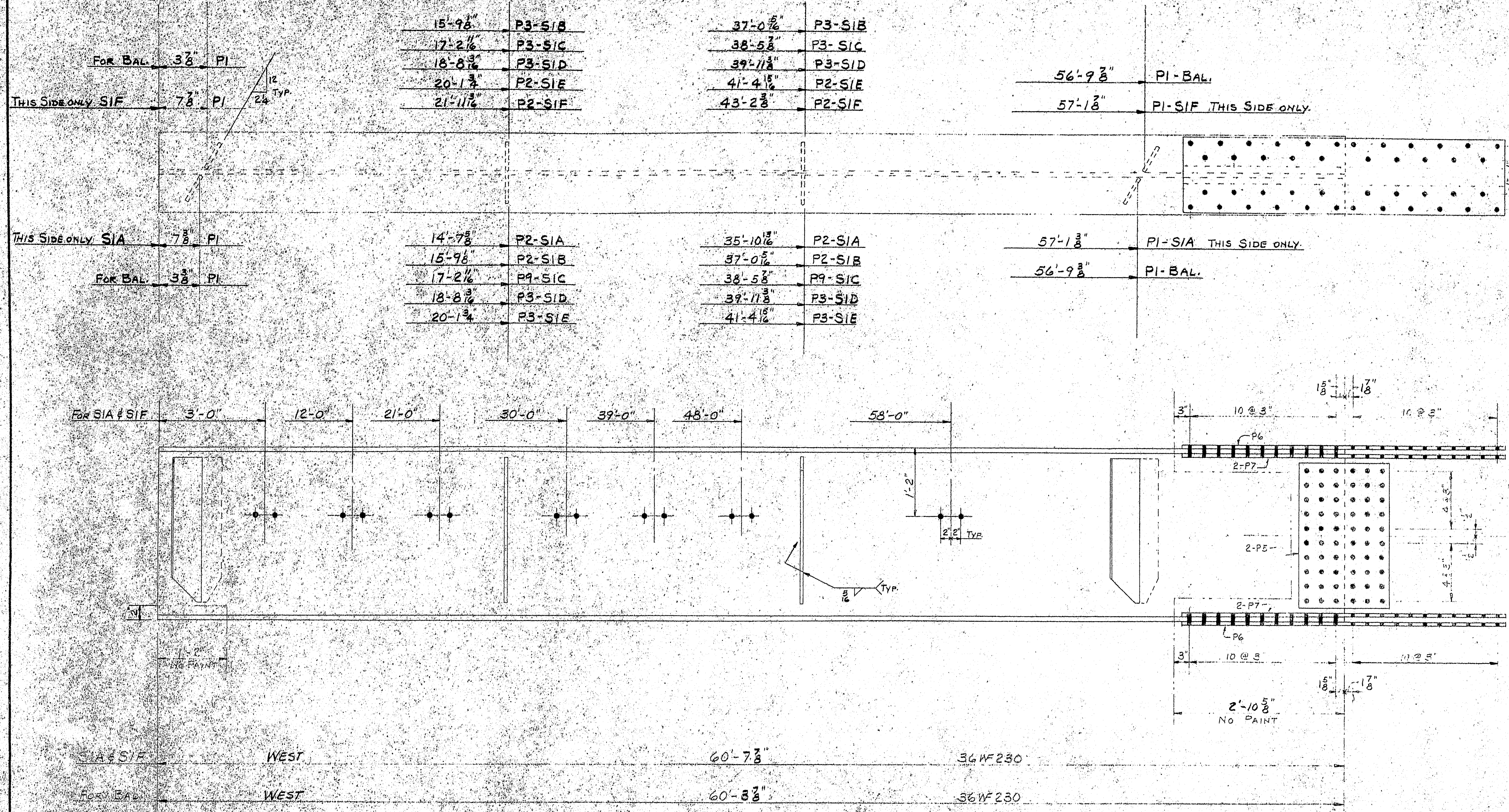
SHIP		BILL OF MATERIAL				DWG. B-45-22-52	
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS	
AJ1	2		ST4WF24	21' 9 1/2"		A36	
AJ2	2			17' 8 3/4"			
AJ3	2			21' 9 1/2"			
AJ4	2			17' 8 3/4"			
AJ5	2			21' 9 1/2"			
AJ6	2			17' 8 3/4"			
AJ7	2			21' 9 1/2"			
AJ8	2			17' 8 3/4"			
	24	Q1	3/2 x 3/2 x 3/8	0	114	24-L	A36
	320	FB1	FB 2 1/2 x 3/8	1	3	BENT	do
	24	FB2	FB 3 x 3/8	0	10 1/6		do
	350	SHOP	3/8" H.S. BOLT	0	24	HEAVY HEX NUTS	A325
	350	SHOP	3/8" H.S. WASHERS				A325

SHOP CONNECTIONS: WELD (E-70 LOW-HYDROGEN)  
 FIELD CONNECTIONS: WELD  
 HOLES: 1/8" U.N.  
 PAINT: STATE OF MAINE SPECS.

ARMORED JOINT NORTHBOUND & SOUTHBOUND			
Banerjee & Martin Inc. Brewer, Maine			
5 STATE	8-9-65	INTERSTATE 95 OVER U.S. ROUTE #1	
3 CUST	4-30-65	Proj. No. I-95-9(23) 297	
5 SHOP	4-30-65	MOLTON, MAINE	
2 FA	4-14-65	CUSTOMER CALLAHAN BROTHERS INC.	
DRAWN	4-6-65 G.S.M.	DESIGNER STATE HIGHWAY COMMISSION	
REVISION		ORDER VERBAL	
REVISION		DWG. B-45-22-52	





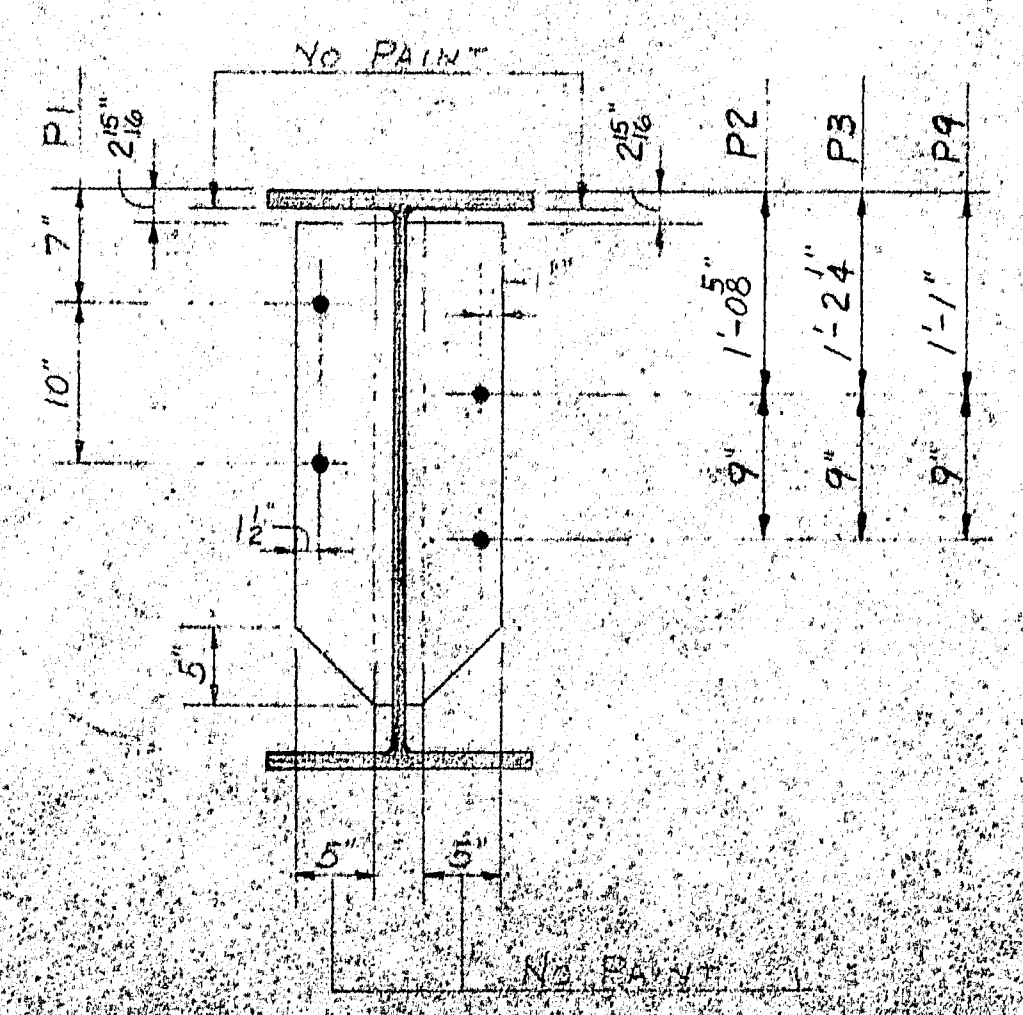


NOTE: CONTROL FOR DIAPHRAGM LOCATION AT 2" OF TOP FLANGE

PLACE ANY NATURAL CAMBER UP

ONE EACH  
SIA-SIB-SIC-SID-SIE-SIF

MARK THESE BEAMS  
SOUTHBOUND



SHIP		BILL OF MATERIAL				DWG
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
SIA	1		36W230	60' 7 3/8"		136
SIB	1			60' 8 3/8"		
SIC	1			60' 8 3/8"		
SID	1			60' 8 3/8"		
SIE	1			60' 8 3/8"		
SIF	1			60' 7 3/8"		
	20	P1	R6x3	26		
	8	P2	40	26		
	10	P3	40	26		
	2	P4	40	26		
	12	P5	R13x12	26		
	12	P6	R16x12	26		
	24	P7	R6x1	562		

SHOP CONNECTIONS: WELD E-70 LOW HYDROGEN  
FIELD CONNECTIONS: 3/4" H.S. BOLTS & WELD  
HOLES: 15/16"  
PAINT: STATE OF MAINE SPECS

PRINT ISSUE		STRINGERS SPAN #1 SOUTH BOUND	
		Bancroft & Martin Inc. Brewer, Maine	
5 STATE	8-7-65	INTERSTATE 25 OVER U.S. ROUTE #1	
3 CUST	4-30-65	PROJ. NO. 7-92-9 (25' 247)	
5 SHOP	4-30-65	HAULTON, MAINE	
2 FA	4-14-65	CUSTOMER: LAMAR BROTHERS, INC.	
DRAWN	4-7-65 C.J.W.	DESIGNER: S.T. HARRIS	
REVISION		ORDER 1/21/61	
REVISION		DWG 55-2-55	

