B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	1	24

NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
MAINE STATE HIGHWAY COMMISSION

PISCATAQUA RIVER BRIDGE
INTERSTATE ROUTE 95
PROJECT NO. I-95-1 (22) 16

PORTSMOUTH, NEW HAMPSHIRE
COUNTY OF ROCKINGHAM
TO
KITTERY, MAINE
COUNTY OF YORK

LENGTH OF PROJECT 0.853 MILES
CONTRACT NO. 6 - SURFACING, ELECTRICAL, SIGNS, & MISCELLANEOUS

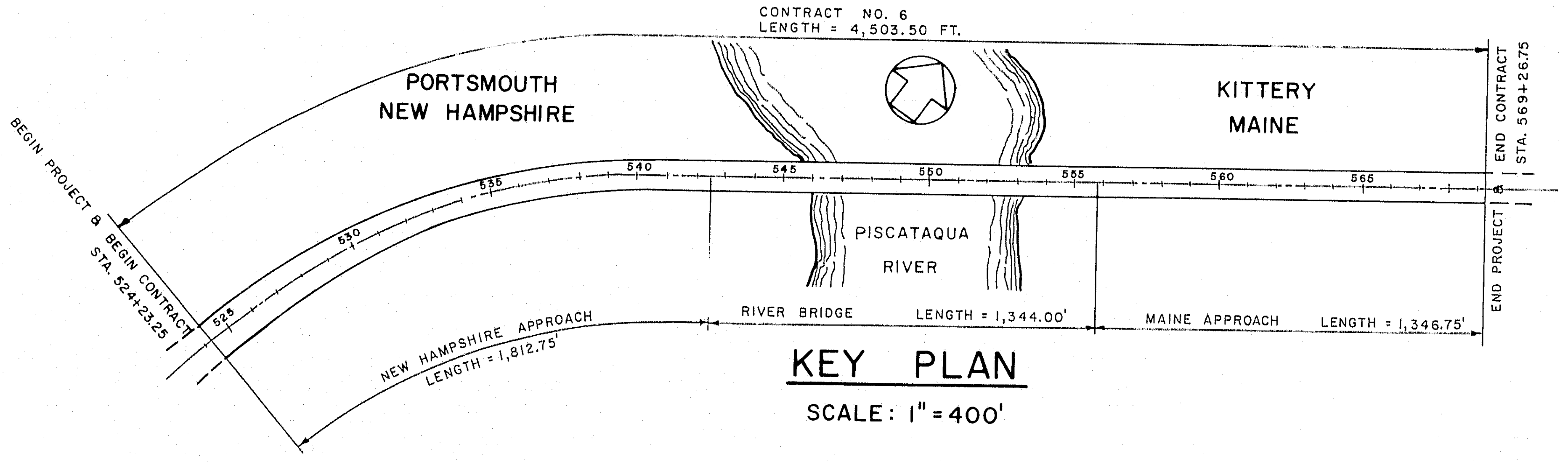
SPECIFICATIONS

1. MAINE STATE HIGHWAY COMMISSION. JUNE, 1968
2. SPECIAL PROVISIONS.
3. SUPPLEMENTAL SPECIFICATIONS.

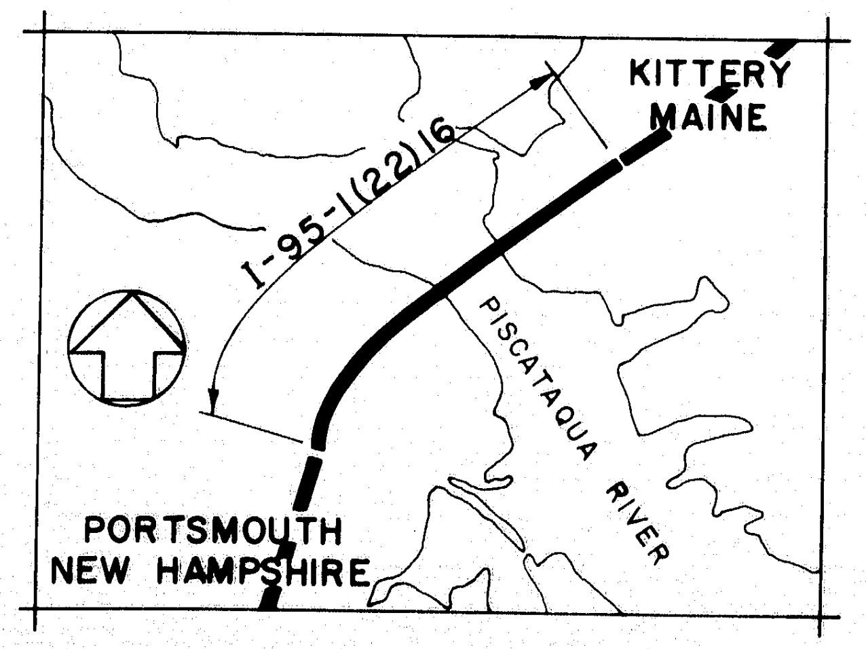
TRAFFIC

AADT 1990 ---------- 38,580
DHV ---------- 6,560
T ---------- 1 %
D ---------- 70 %
V ---------- 70 MPH

SHEET	CONTENTS
1	COVER SHEET
2	QUANTITY SUMMARY
3	GENERAL NOTES
4	PROJECT PLAN & ELEVATION
5-8	GENERAL PLAN & ELEVATION
9	TYPICAL SECTIONS
10	DECK GEOMETRY
11-12	SIGN BRIDGE AT STA. 523+91.75
13	CANTILEVER SIGN ARM AT STA. 534+80.89
14	SIGN HANGERS AT PANEL POINT M11 (STA. 546+98 & STA. 551+18)
15	SIGN HANGERS AT PANEL POINTS M16 (STA. 549+08) SIGN PANEL DETAIL
16	SIGN FACE MESSAGES
17	MESSAGE LAYOUT DETAILS
18-21	ELECTRICAL WORK
22	MISCELLANEOUS DETAILS
23	PAVEMENT MARKING
24	PIER PLATFORMS



KEY PLAN
SCALE: 1" = 400'



LOCATION MAP
SCALE: 1" = 2000'

APPROVED
NEW HAMPSHIRE DEPARTMENT OF
PUBLIC WORKS AND HIGHWAYS
Robert H. Whitaker
COMMISSIONER
Reuel W. Webb
CHIEF ENGINEER
APRIL 13, 1971
DATE

APPROVED
MAINE STATE HIGHWAY COMMISSION
David H. Stevens
CHAIRMAN
Bertrand R. Lachance
Steven D. Shaw
Sylvester L. Poor
CHIEF ENGINEER
APRIL 14, 1971
DATE

SYLVESTER L. POOR 107

PREPARED BY
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, NEW YORK
John J. Fiala
APRIL 8, 1971
DATE

AS BUILT
JHW 24 Apr. '73

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS
REGION 1
APPROVED
DIVISION ENGINEER
DATE

130-84

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	2	24

ITEM NUMBER	DESCRIPTION	UNIT	NEW HAMPSHIRE APPROACH		RIVER BRIDGE		MAINE APPROACH		TOTAL	
			ESTIMATED	AS BUILT	ESTIMATED	AS BUILT	ESTIMATED	AS BUILT	ESTIMATED	AS BUILT
203.25	GRANULAR BORROW	C.Y.	100	125					100	125
206.10	STRUCTURAL EARTH EXCAVATION - PIERS	C.Y.	180	210					180	210
403.091	HOT BITUMINOUS PAVEMENT, GRADING C, (CRUSHED LEDGE), BRIDGE WEARING COURSE	TON	2,312	2,745	1,569	1,557	1,563	1,730	5,444	6,032
403.14	ASPHALT CEMENT, HOT BITUMINOUS SURFACE PAVEMENTS	TON	185	195	126	107	125	120	436	422
502.23	STRUCTURAL CONCRETE, PIERS	C.Y.	90	86					90	86
503.12	REINFORCING STEEL, FABRICATED & DELIVERED	LB.	7,200	7,350					7,200	7,350
503.13	REINFORCING STEEL, PLACING	LB.	7.200	7,350					7,200	7,350
504.701	STRUCTURAL STEEL, FABRICATED, PAINTED, DELIVERED, & ERECTED - NEW HAMPSHIRE	L.S.	1	1					1	1
504.703	STRUCTURAL STEEL, FABRICATED, PAINTED, DELIVERED, & ERECTED - MAINE	L.S.					1	1	1	1
508.10	MEMBRANE WATERPROOFING	S.Y.	21,600	21,550	14,650	14,225	14,590	14,460	50,840	50,235
639.12	TESTING FACILITIES, BITUMINOUS MIXES	L.S.							1	1
639.13	TESTING FACILITIES, BITUMINOUS LIQUIDS & CEMENTS	L.S.							1	1
645.121	OVERHEAD GUIDE SIGNS STA. 523+91.75	L.S.	1	1					1	1
645.122	OVERHEAD GUIDE SIGNS STA. 534+80.89	L.S.	1	1					1	1
645.123	OVERHEAD GUIDE SIGNS STA. 546+98.00	L.S.			1	1			1	1
645.124	OVERHEAD GUIDE SIGNS STA. 549+08.00 (NORTHBOUND)	L.S.			1	1			1	1
645.125	OVERHEAD GUIDE SIGNS STA. 549+08.00 (SOUTHBOUND)	L.S.			1	1			1	1
645.126	OVERHEAD GUIDE SIGNS STA. 551+18.00	L.S.			1	1			1	1
645.60	THERMOPLASTIC COMPOUND REFLECTORIZED PAVEMENT MARKING	L.F.	6,316	10,568	7,526	7,393	7,543	7,336	21,385	25,297
655.201	ELECTRICAL WORK	L.S.	1	1					1	1
655.202	ELECTRICAL WORK	L.S.			1	1			1	1
655.203	ELECTRICAL WORK	L.S.					1	1	1	1
660.20	ON-THE-JOB TRAINING	MAN-HR.							1,000	—

AS BUILT
R.W. Christie 2/5/73

6

DESIGN – S.D.
TRACE –
CHECK – S.S. Nishimura

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION

INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

QUANTITY SUMMARY

SHEET 2 OF 24

130-85

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	3	24

SPECIFICATIONS

THE FOLLOWING SPECIFICATIONS GOVERN THE DESIGN AND CONSTRUCTION OF THIS PROJECT:

- DESIGN
  - AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
    - STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. TENTH EDITION, 1969
    - SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, 1968 EDITION
    - MANUAL FOR SIGNING AND PAVEMENT MARKING, 1970 EDITION
- CONSTRUCTION
  - STATE OF MAINE, STATE HIGHWAY COMMISSION
    - STANDARD SPECIFICATIONS - HIGHWAYS AND BRIDGES REVISION OF JUNE 1968
    - SUPPLEMENTAL SPECIFICATIONS
    - SPECIAL PROVISIONS FOR THE PROJECT

DIMENSIONS

ALL DIMENSIONS SHOWN IN PLAN VIEWS ARE HORIZONTAL AND AT A TEMPERATURE OF 45°.

DESIGN STRESSES

CONCRETE

F_C = 1,200 P.S.I.

REINFORCING STEEL

F_S = 20,000 P.S.I.

STRUCTURAL ALUMINUM (ALLOY 6061-T6)

AXIAL TENSION	10.0 K.S.I.	
FLEXURAL TENSION IN TUBES	12.0 K.S.I.	
AXIAL COMPRESSION IN TUBES	10.0 K.S.I.	$\frac{L}{R}$ LESS THAN 67
	$\frac{45{,}000}{\left(\frac{L}{R}\right)^2}$	$\frac{L}{R}$ GREATER THAN 67
FLEXURAL COMPRESSION IN TUBES	12.0 K.S.I.	$\frac{R}{T}$ LESS THAN 11
	$\frac{21.9}{\left(\frac{R}{T}\right)^{1/4}}$	$\frac{R}{T}$ BETWEEN 11 & 135

BOLT CAPACITIES (STAINLESS STEEL 50,000 P.S.I. YIELD POINT)

SIZE	CAPACITY IN SHEAR* (KIPS)	CAPACITY IN TENSION (KIPS)
3/4"	6.6	6.3
1"	12.0	11.3

* THREADS EXCLUDED FROM SHEAR PLANES

SURFACING

SURFACING SHALL BE HOT BITUMINOUS PAVEMENT, GRADING C, (CRUSHED LEDGE) BRIDGE WEARING COURSE. THE NOMINAL THICKNESS OF THE SURFACING IS 2 1/4 INCHES, INCLUDING THE THICKNESS OF THE MEMBRANE WATERPROOFING. THE THICKNESS SHALL BE VARIED IF NECESSARY AT END DAMS TO PROVIDE A FLUSH, SMOOTH RIDING SURFACE.

TOPS OF SCUPPERS HAVE BEEN SET 1/2" BELOW THE THEORETICAL ROADWAY SURFACE. THE WEARING SURFACE SHALL BE SLOPED TO THE TOPS OF SCUPPERS OVER A DISTANCE OF 12".

SIGN SUPPORT STRUCTURES

ALL MATERIAL SHALL BE 6061-T6 ALUMINUM ALLOY UNLESS OTHERWISE NOTED.

ALL BRACING SHALL BE CUT, MILLED, AND TRIMMED TO EXACT FIT BEFORE WELDING.

BOLTS, NUTS, AND WASHERS SHALL BE ASTM A276 STAINLESS STEEL, TYPE 304, COLD WORKED TO 50,000 PSI MINIMUM YIELD STRENGTH.

ALL WELDS SHALL BE CONSUMABLE ELECTRODE TYPE, USING ALUMINUM ALLOY 5356 AS FILLER MATERIAL.

CONCRETE

STRUCTURAL CONCRETE FOR THE WORK SHALL BE AS FOLLOWS:

USE	CLASS	CEMENT CONTENT SACKS/CU. YD.	AGGREGATE
FOUNDATIONS	A	6.5	CRUSHED STONE

ALL CONCRETE SHALL BE AIR-ENTRAINED AND HAVE AN EXPECTED 28 DAY COMPRESSIVE STRENGTH OF 3500 P.S.I.

REINFORCING STEEL

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

A615, GRADE 40 OR 60	DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT

BAR SIZES ARE IDENTIFIED BY THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK.

ALL DIMENSIONS IN THE BAR LISTS ARE OUT TO OUT DIMENSIONS.

REINFORCING BAR SIZES 2 THROUGH 11 SHALL BE SPLICED BY LAPPING AT LEAST 30 DIAMETERS.

REINFORCING BAR SPLICES IN ADDITION TO THOSE SHOWN ON THE PLANS MAY BE USED IF APPROVED BY THE ENGINEER.

REINFORCING BAR SPLICES SHOWN ON THE PLANS MAY BE OMITTED AND LONGER BARS USED IF APPROVED BY THE ENGINEER.

6

DESIGN – S. D.
TRACE –
CHECK – S. S. Nishizawa

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

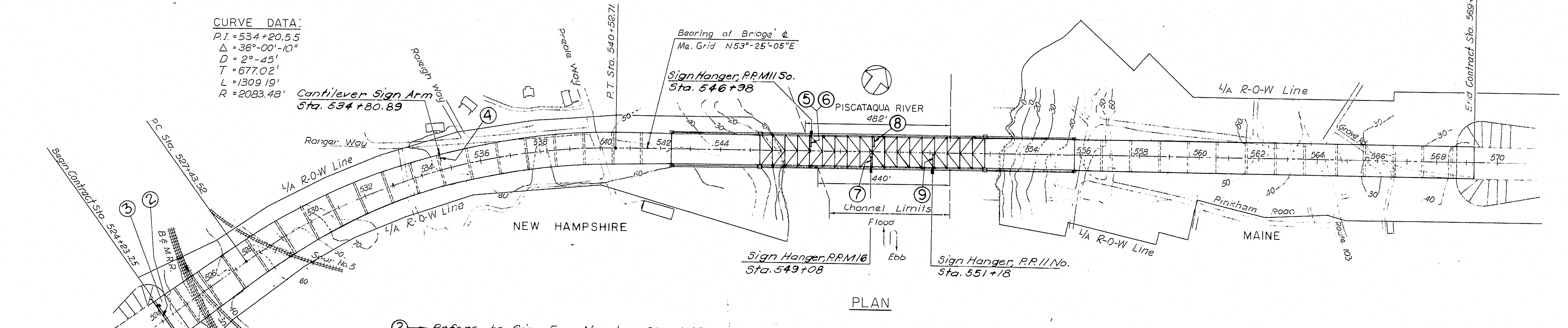
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

GENERAL NOTES

SHEET 3 OF 24

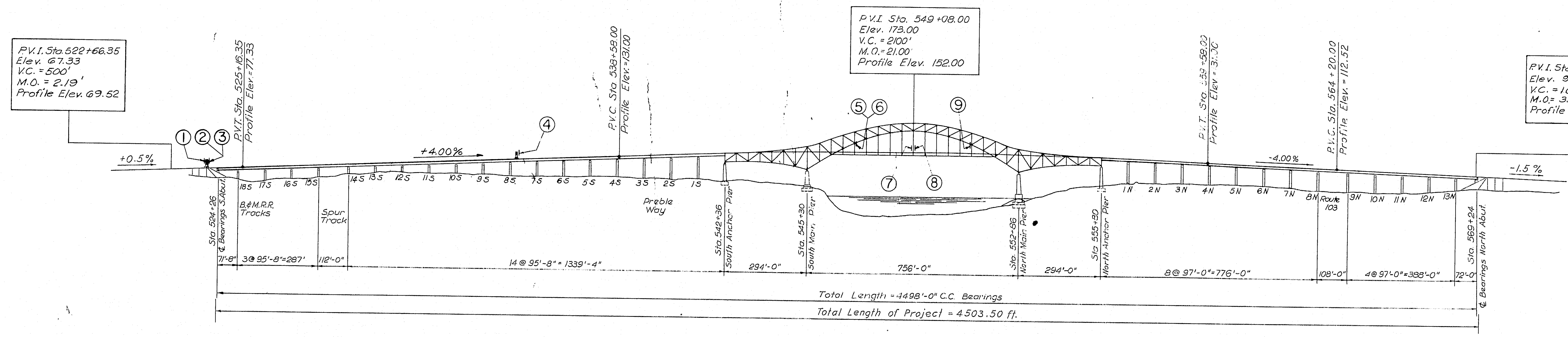
130-86

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	4	24



PLAN

② Refers to Sign Face Number, Sheet 16.



ELEVATION

Scale Hor. & Vert. 1" = 200'

6

DESIGN —
TRACE — S. Bradford
CHECK — R.W. Christie

BRIDGE NO.
IN CHARGE OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

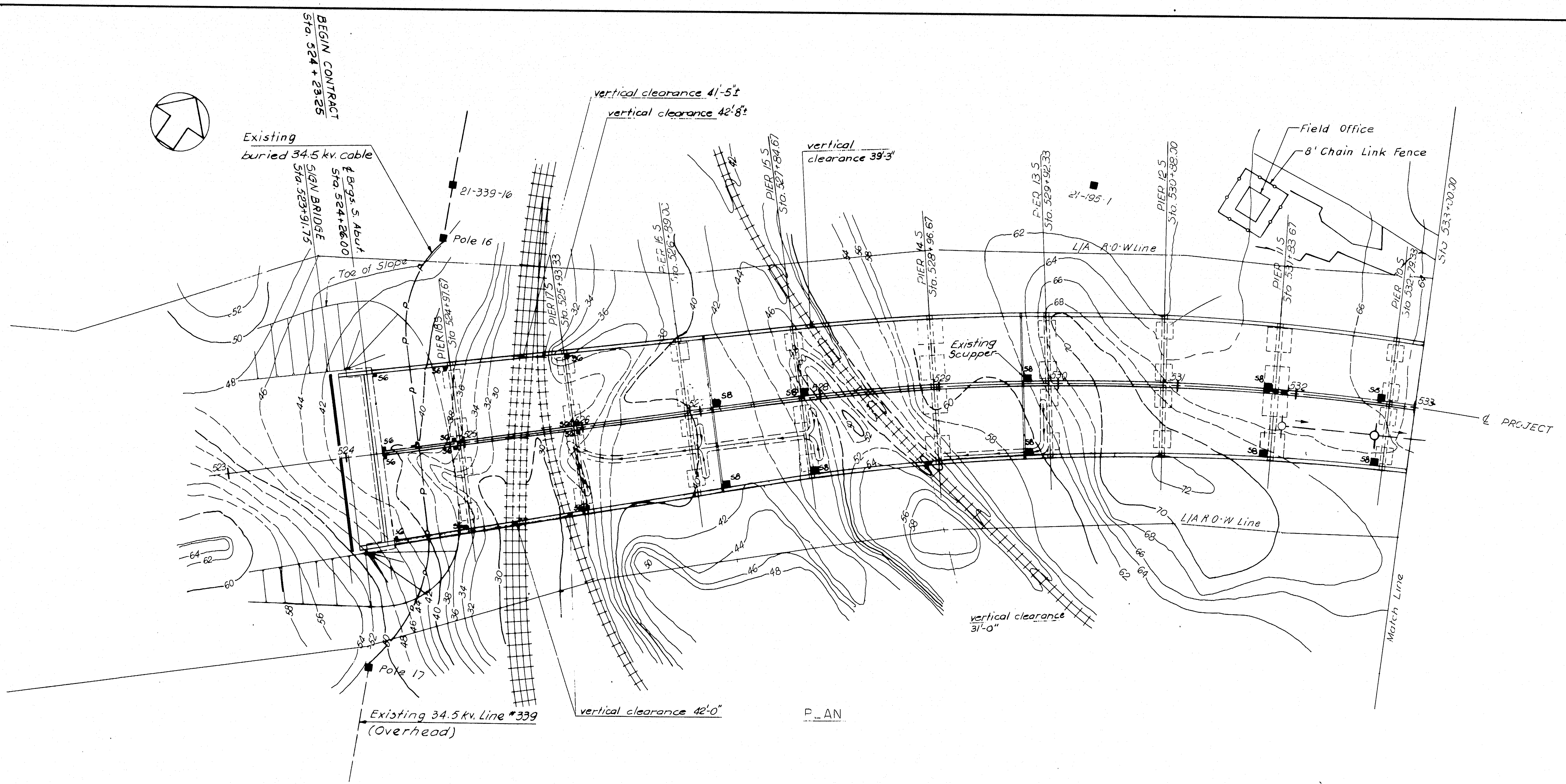
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

PROJECT
PLAN AND ELEVATION

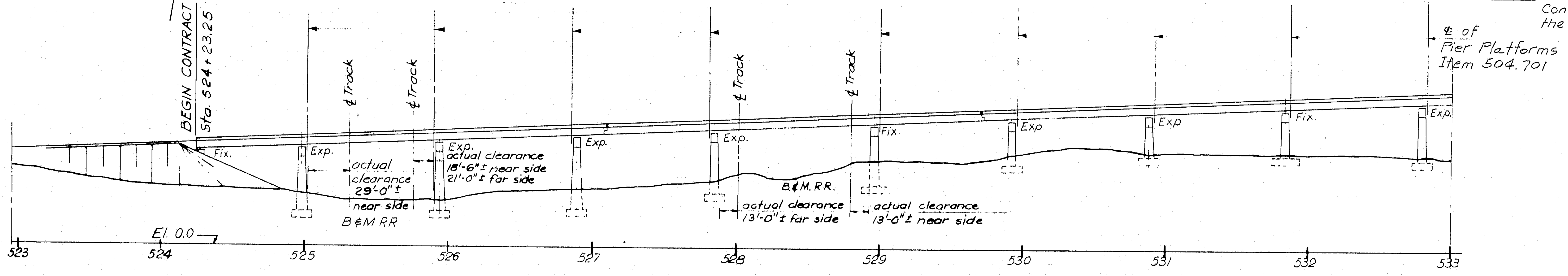
SHEET 4 OF 24

130-87

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	5	24



PLAN



ELEVATION

Scale Horiz. & Vert.: 1" = 50'

NOTE:

Contour lines and Topography show conditions prior to the construction of the River Bridge and Approaches.

6

DESIGN —
TRACE — S Bradford
CHECK — H. R. Cattley • R.W. Christie

BRIDGE NO.
IN CHARGE OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

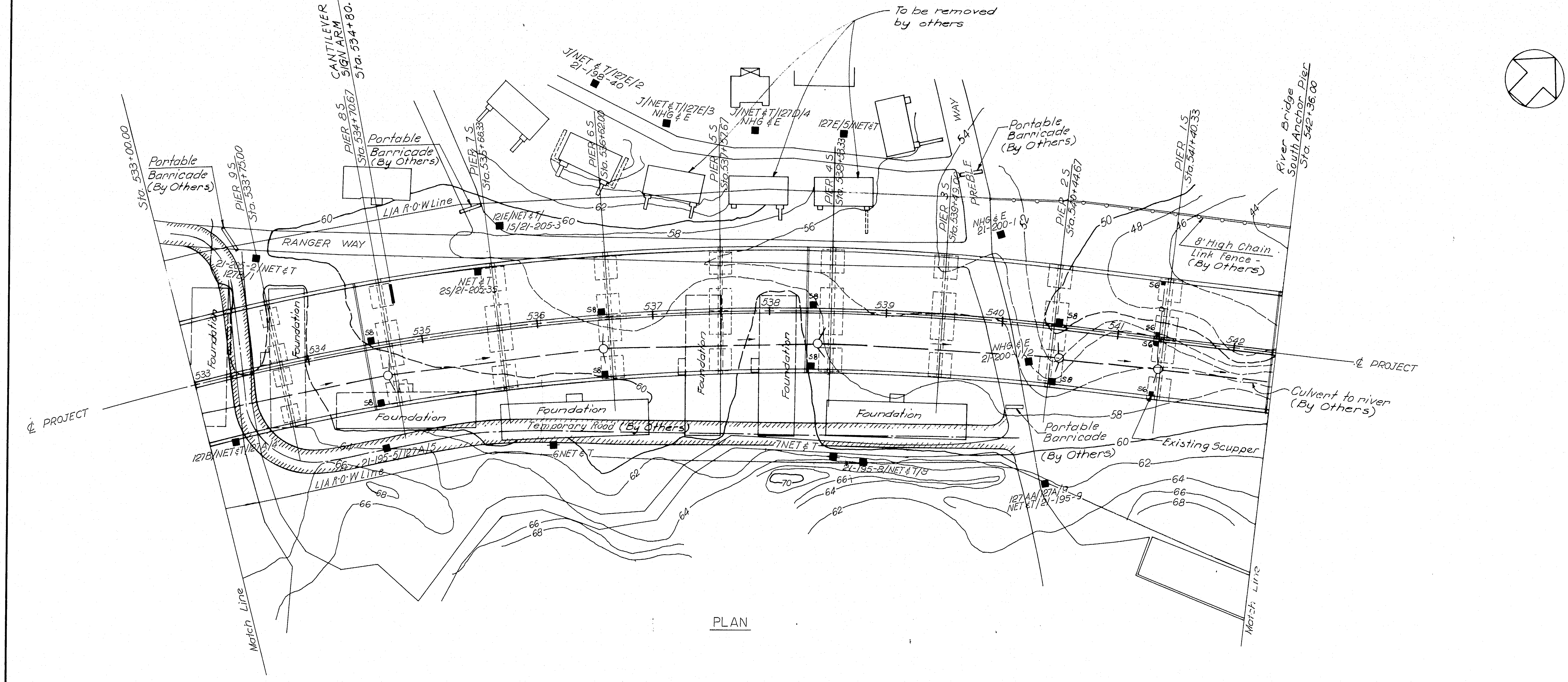
GENERAL PLAN & ELEVATION

STA. 524 + 25 - STA. 533+00

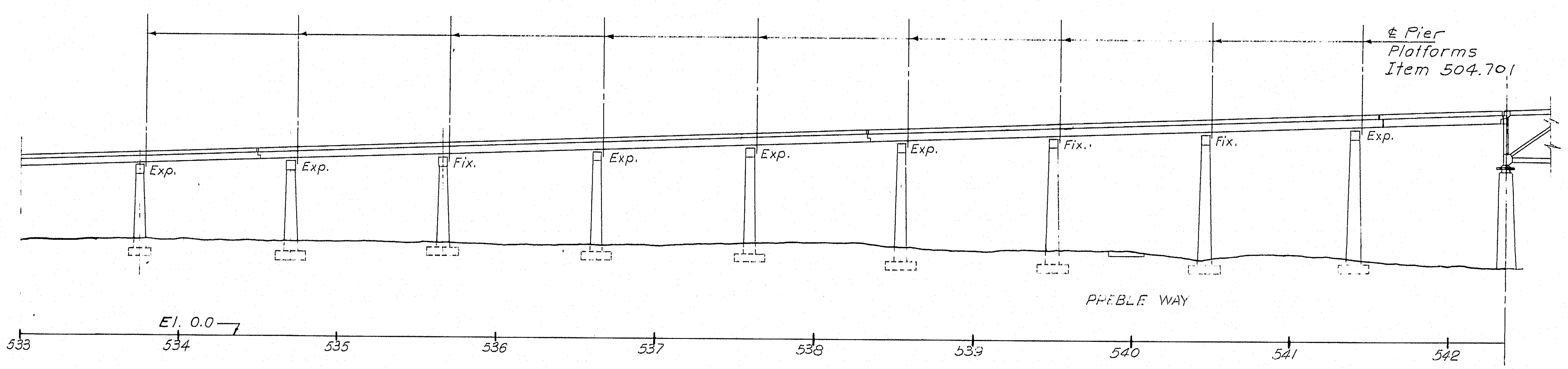
SHEET 5 OF 24

130-88

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	6	24



PLAN



ELEVATION

Scale Horiz. & Vert.: 1" = 50'

6

DESIGN —
TRACE — S. Bradford
CHECK — H.R. Cattley + R.W. Christie

BRIDGE NO.
IN CHARGE
OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

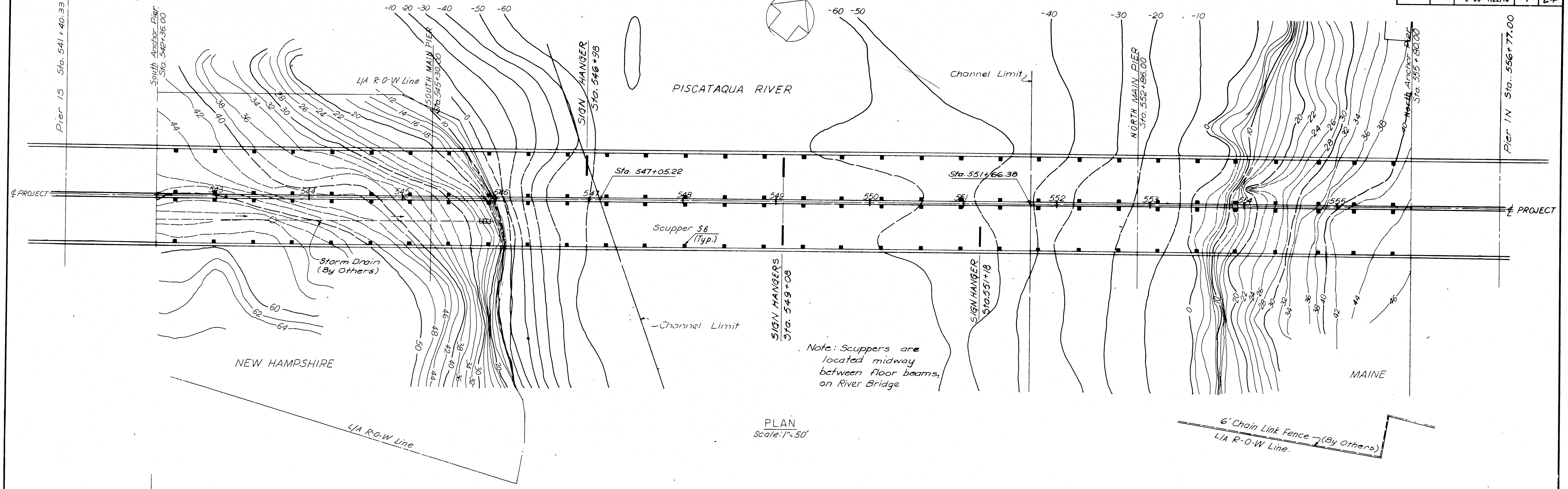
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

GENERAL PLAN & ELEVATION
STA. 533+00 - STA. 542+36

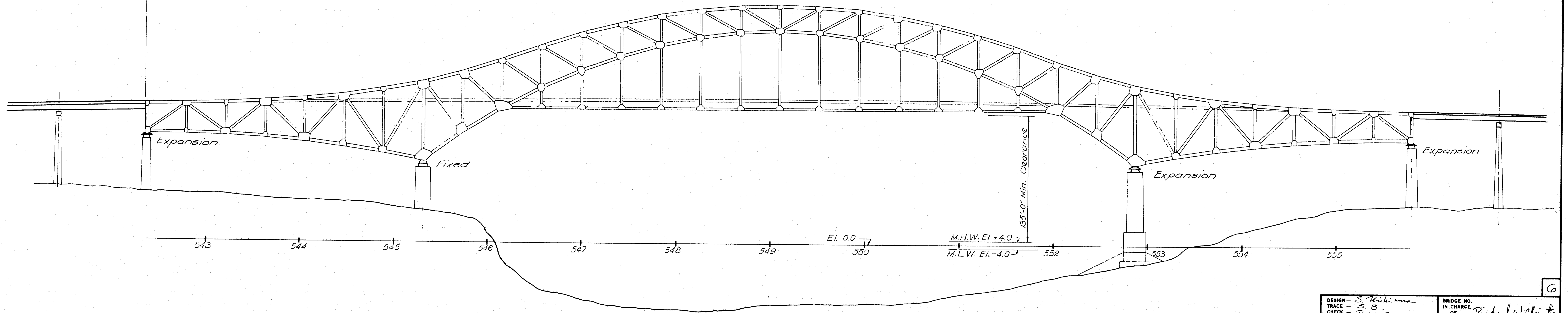
SHEET 6 OF 24

130-89.

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-1(22)16	7	24



PLAN
Scale: 1" = 50'



ELEVATION
Scale: 1" = 50'

6

DESIGN – S. Nishimura
TRACE – S. B.
CHECK – R. W. C.

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

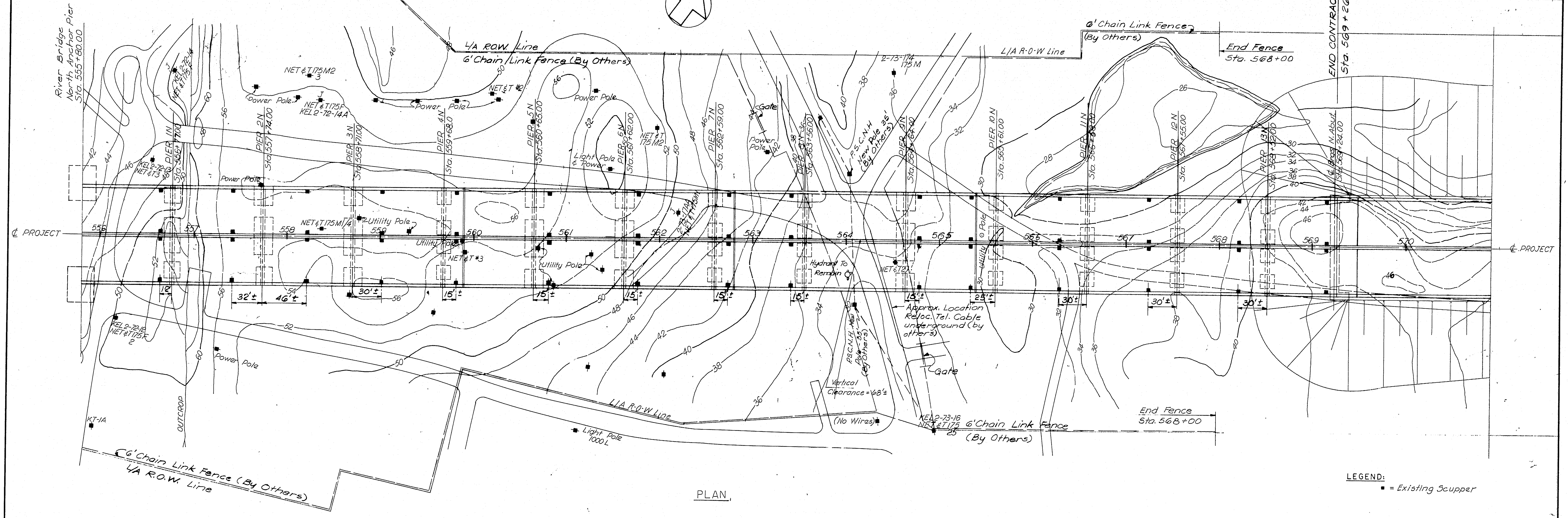
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

GENERAL PLAN & ELEVATION
STA. 542+36 - STA. 555+80

SHEET 7 OF 24

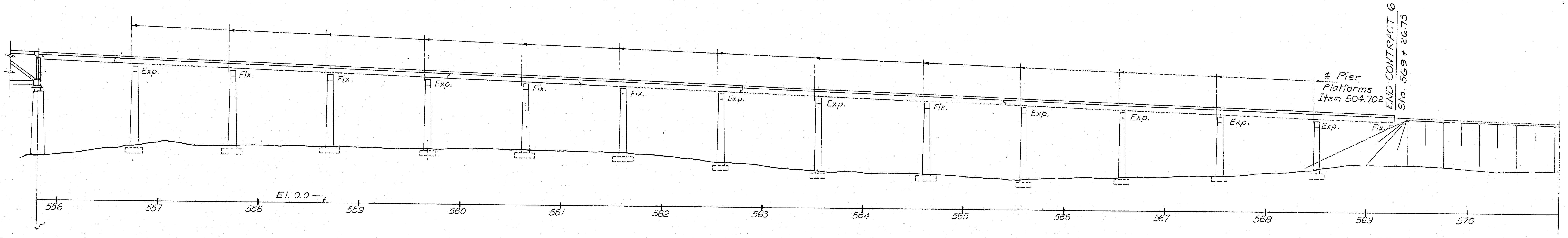
130-90

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	8	24



PLAN

LEGEND:
■ = Existing Scupper



ELEVATION
Scale Horiz. & Vert.: 1"=50'

6

DESIGN —
TRACE — J Bradford
CHECK — H.R. Cattley + R.W. Christie

BRIDGE NO.
IN CHARGE OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

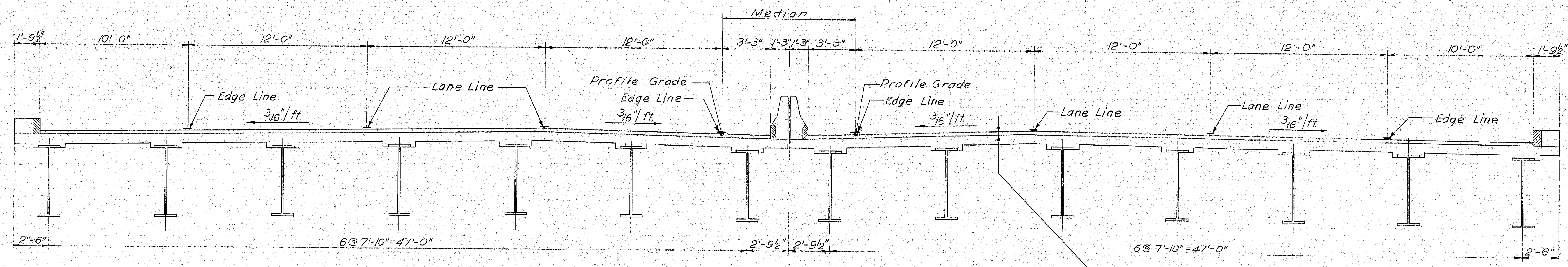
GENERAL PLAN & ELEVATION
STA. 555+80 - STA. 569+24

SHEET 8 OF 24

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

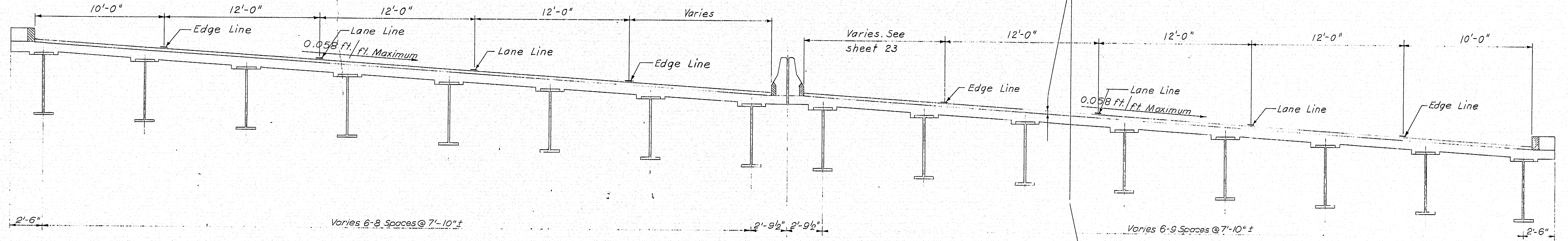
130-91

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	9	24

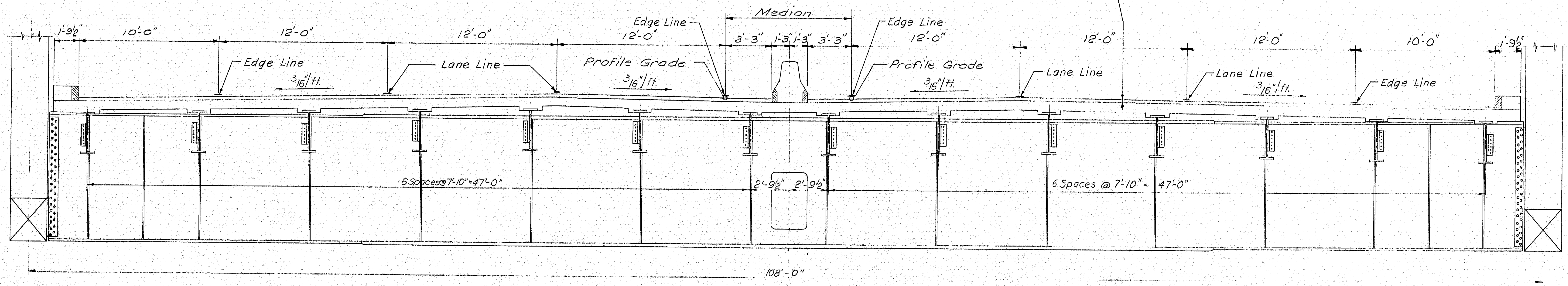


APPROACH SPANS - MAINE

2¼" THICK WEARING SURFACE & WATERPROOFING MEMBRANE ON EXISTING CONCRETE DECK. Items 403.091 & 508.10

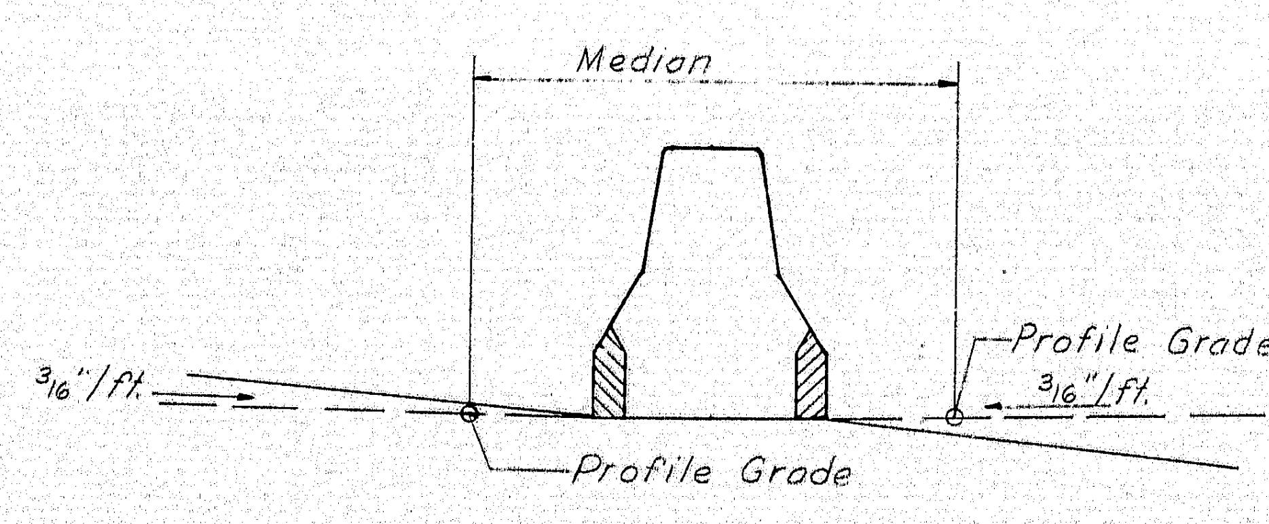


APPROACH SPANS - NEW HAMPSHIRE



TRUSS SPANS

Scale : ¼" = 1'-0"



GEOMETRY OF THEORETICAL PROFILE

No Scale

6

DESIGN – S. Nishimura
TRACE – C.J.
CHECK – R.W.C.

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

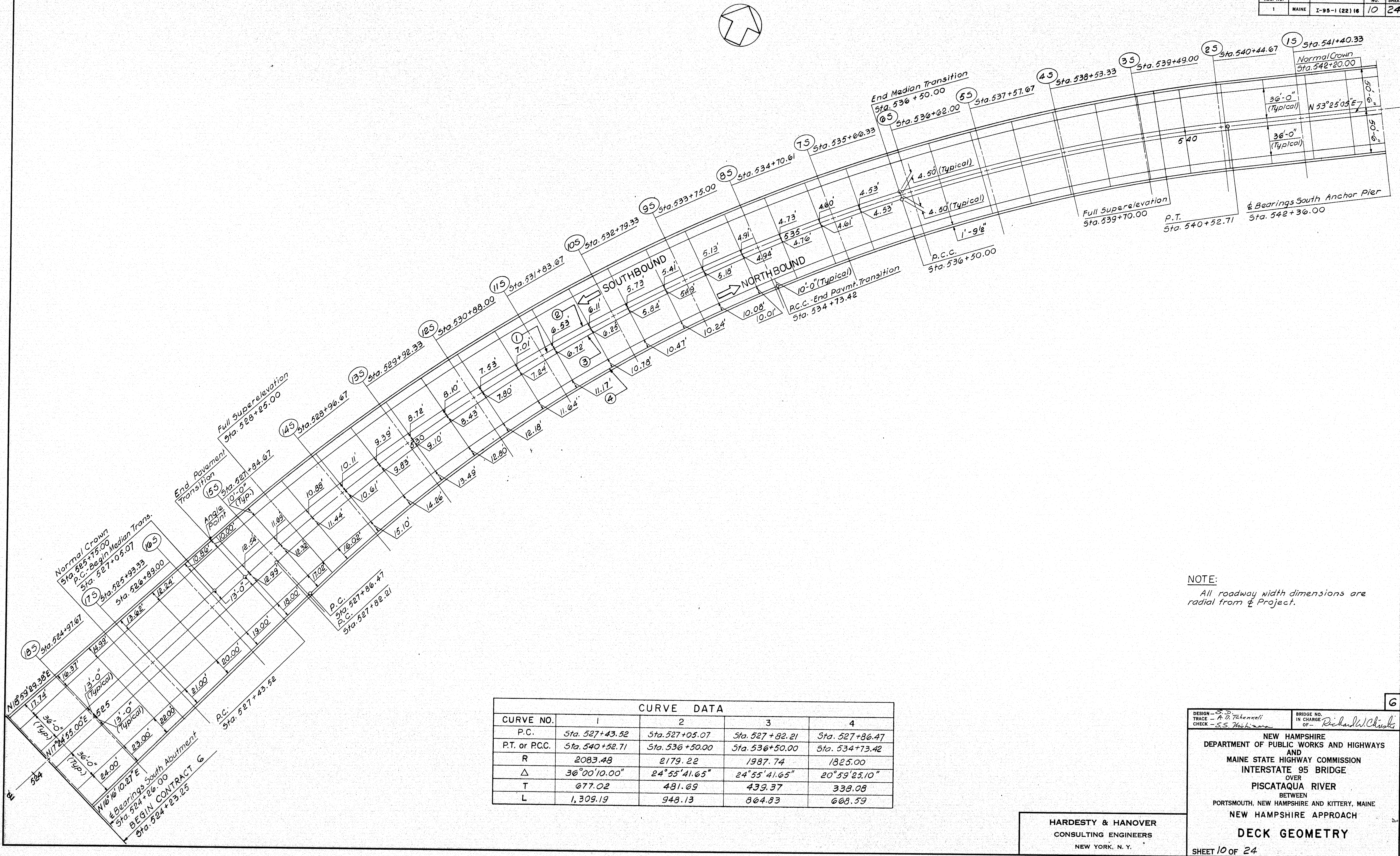
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

TYPICAL SECTIONS

SHEET 9 OF 24

130-92

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	10	24



NOTE:
All roadway width dimensions are radial from ℄ Project.

CURVE DATA				
CURVE NO.	1	2	3	4
P.C.	Sta. 527+43.52	Sta. 527+05.07	Sta. 527+82.21	Sta. 527+86.47
P.T. or P.C.C.	Sta. 540+52.71	Sta. 536+50.00	Sta. 536+50.00	Sta. 534+73.42
R	2083.48	2179.22	1987.74	1825.00
Δ	36°00'10.00"	24°55'41.65"	24°55'41.65"	20°59'25.10"
T	677.02	481.69	439.37	338.08
L	1,309.19	948.13	864.83	668.59

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

6

DESIGN – S. D.
TRACE – A. D. Tchenxeli
CHECK – S.S. Nishimura

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

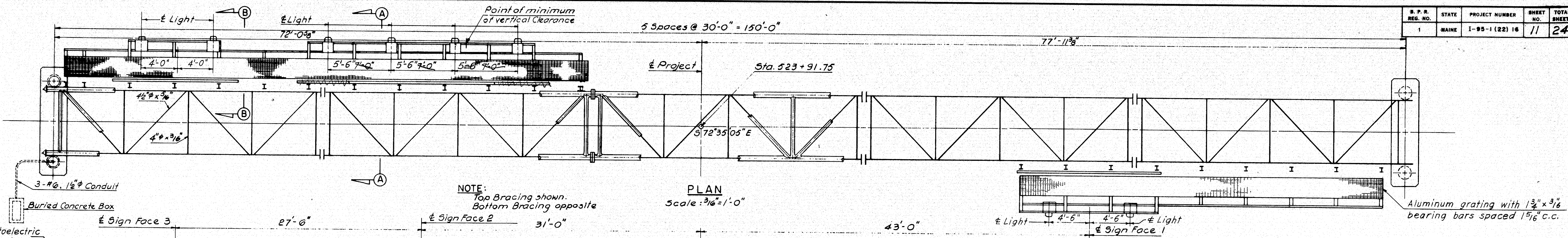
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE
NEW HAMPSHIRE APPROACH

DECK GEOMETRY

SHEET 10 OF 24

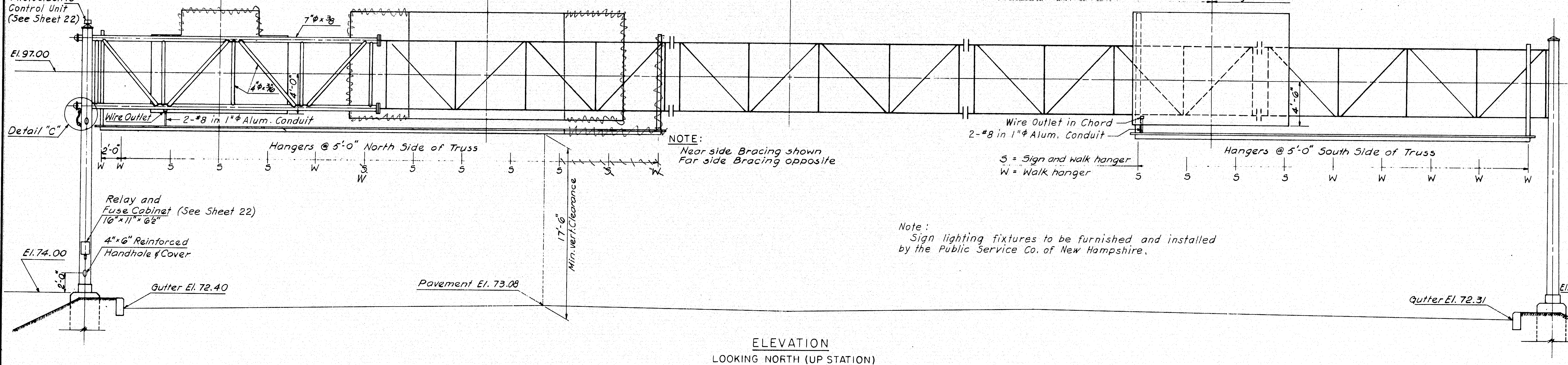
130-93

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	11	24



PLAN

Scale: 3/16"=1'-0"



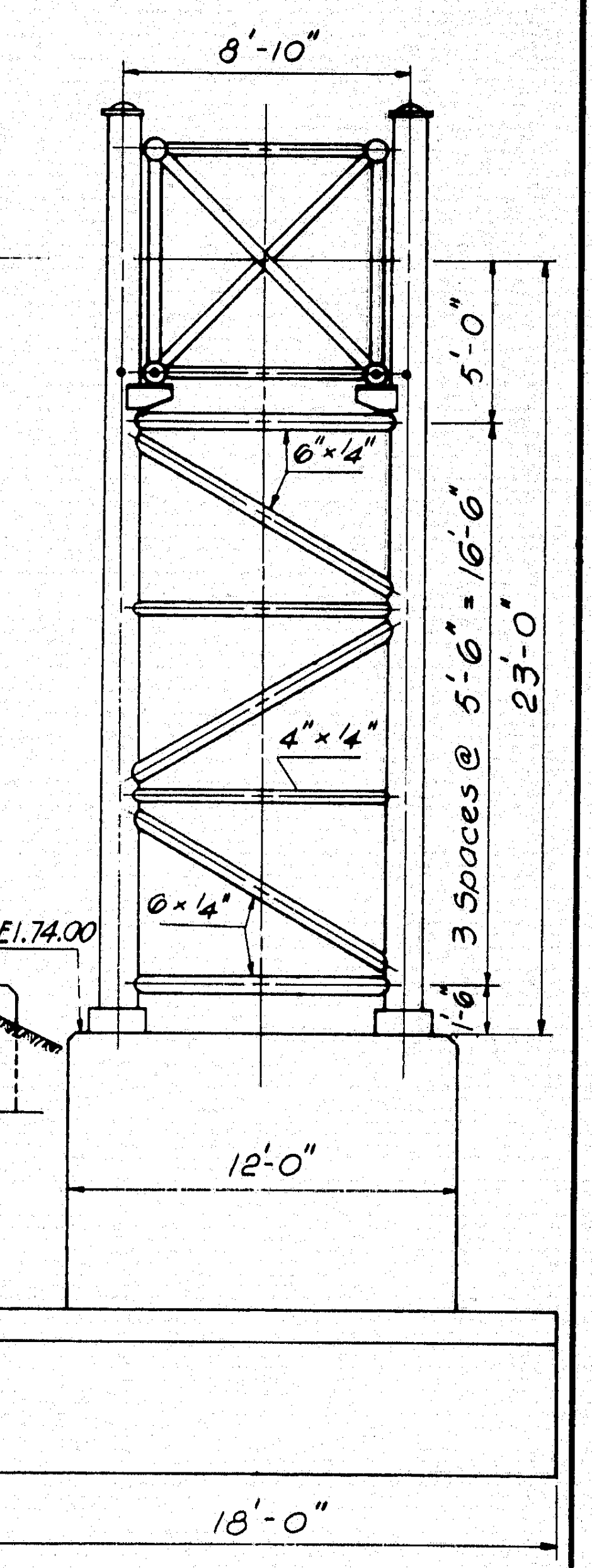
¢ Sign Face 3
27'-6"
¢ Sign Face 2
31'-0"
43'-0"
Photoelectric Control Unit (See Sheet 22)
7"φ x 3/8
El. 97.00
4"φ x 3/16
Detail "C"
Wire Outlet
2-#8 in 1"φ Alum. Conduit
2'-0"
Hangers @ 5'-0" North Side of Truss
W W S S S W S S S S S W
NOTE:
Near side Bracing shown
Far side Bracing opposite
Wire Outlet in Chord
2-#8 in 1"φ Alum. Conduit
S = Sign and walk hanger
W = Walk hanger
Hangers @ 5'-0" South Side of Truss
S S S S W W W W W
4'-6"
Relay and Fuse Cabinet (See Sheet 22)
16"x11"x 6 1/2"
4"x6" Reinforced Handhole & Cover
El. 74.00
Gutter El. 72.40
Pavement El. 73.08
17'-6" Min. Vert. Clearance
Note:
Sign lighting fixtures to be furnished and installed by the Public Service Co. of New Hampshire.
Gutter El. 72.31

ELEVATION

LOOKING NORTH (UP STATION)

(Handrail and intermediate Hangers not shown)

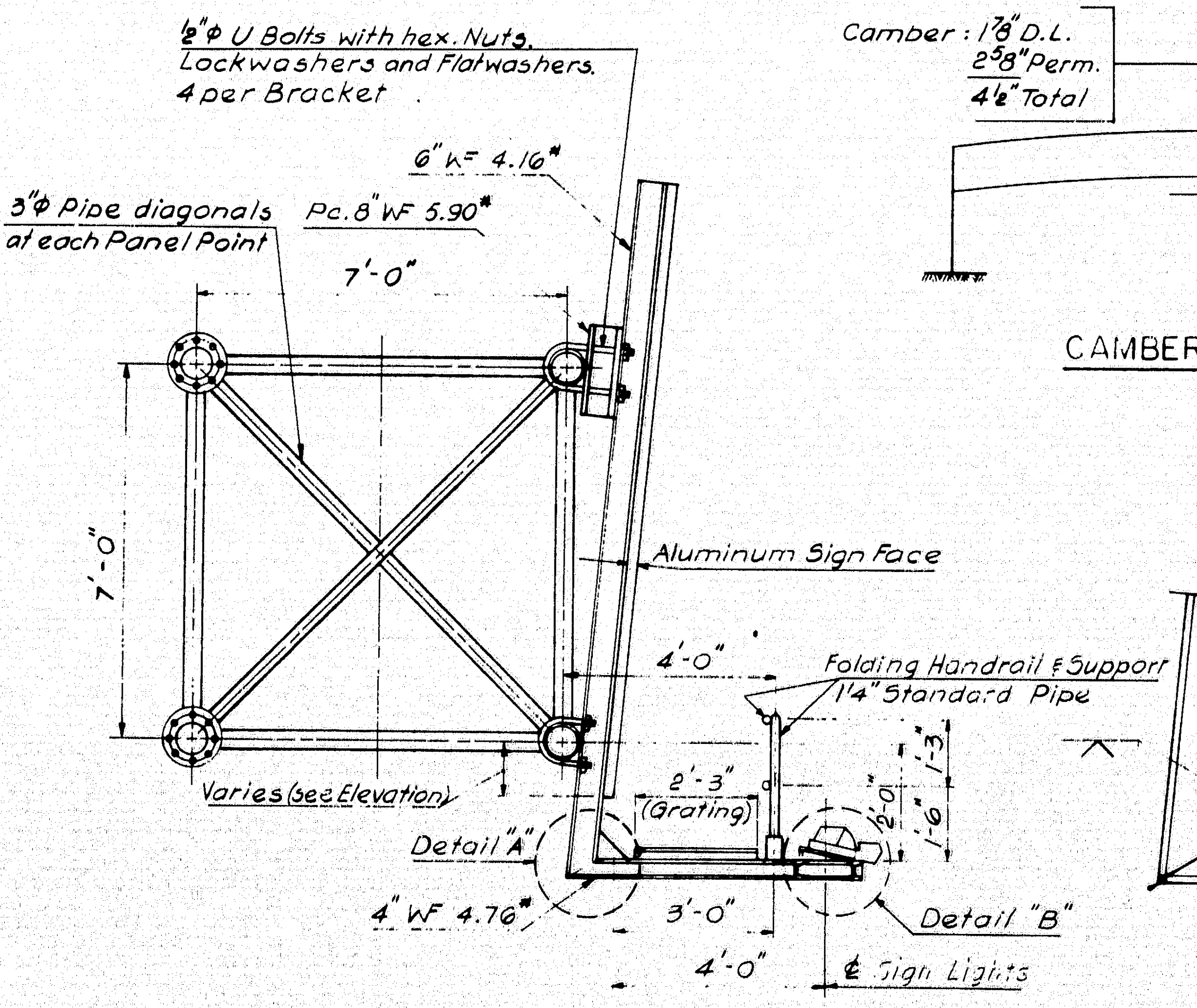
Scale: 3/16"=1'-0"



END ELEVATION

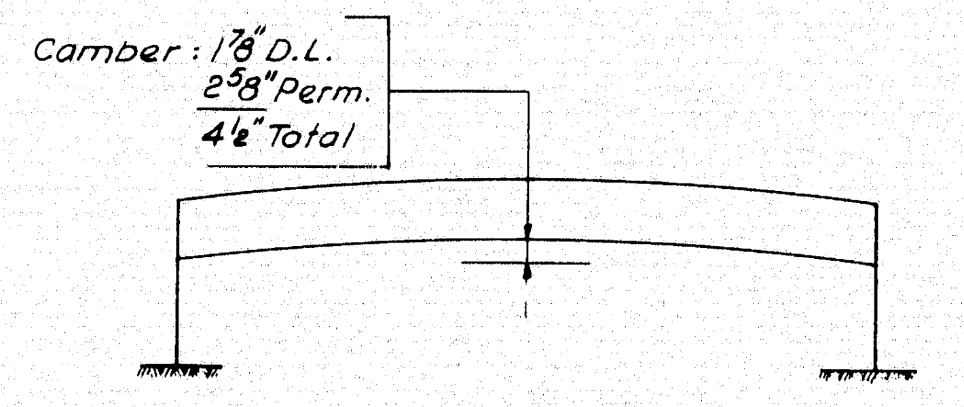
(Sign and Walkway not shown)

Scale: 3/16"=1'-0"

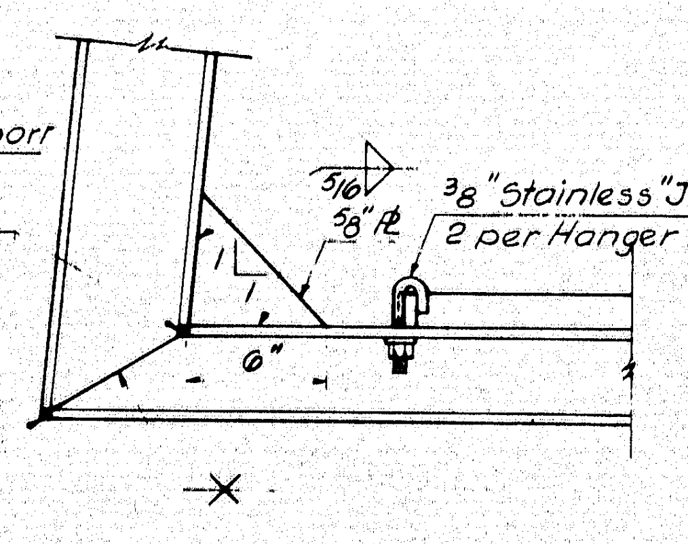


SECTION A-A
SIGN AND WALK HANGER DETAIL

Scale: 3/8"=1'-0"

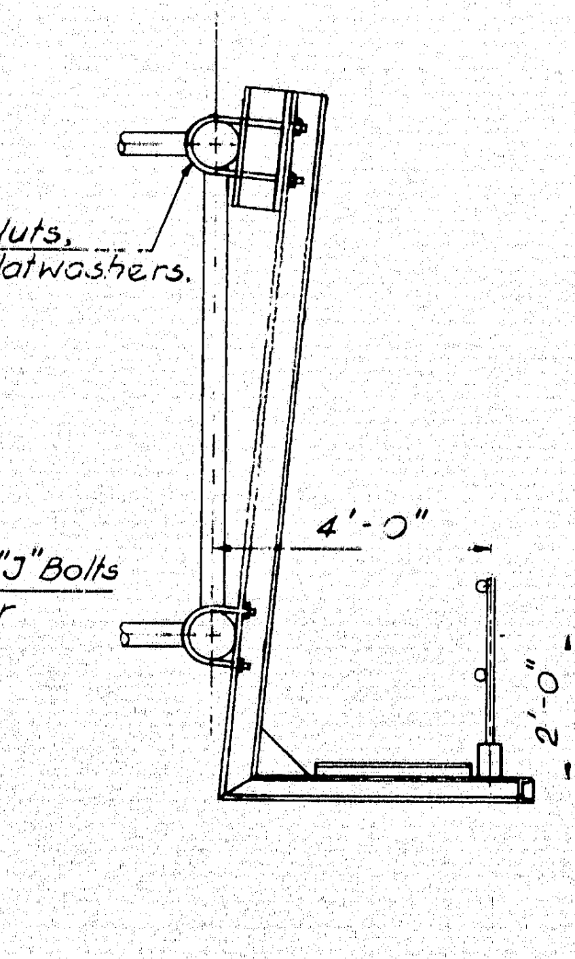


CAMBER DIAGRAM



DETAIL "A"

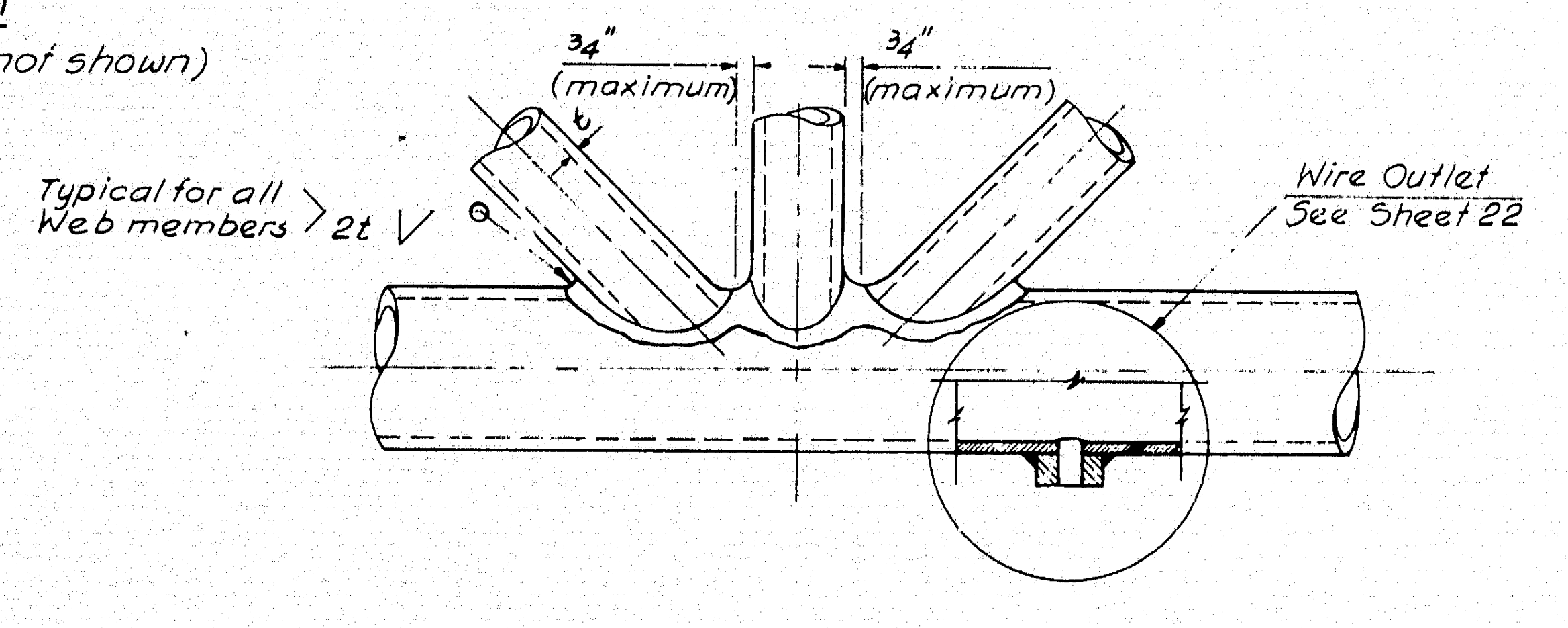
Scale: 1 1/2"=1'-0"



1/2"φ U Bolts with hex. Nuts, Lockwashers and Flatwashers. 4 per Bracket
4'-0"
2'-0"

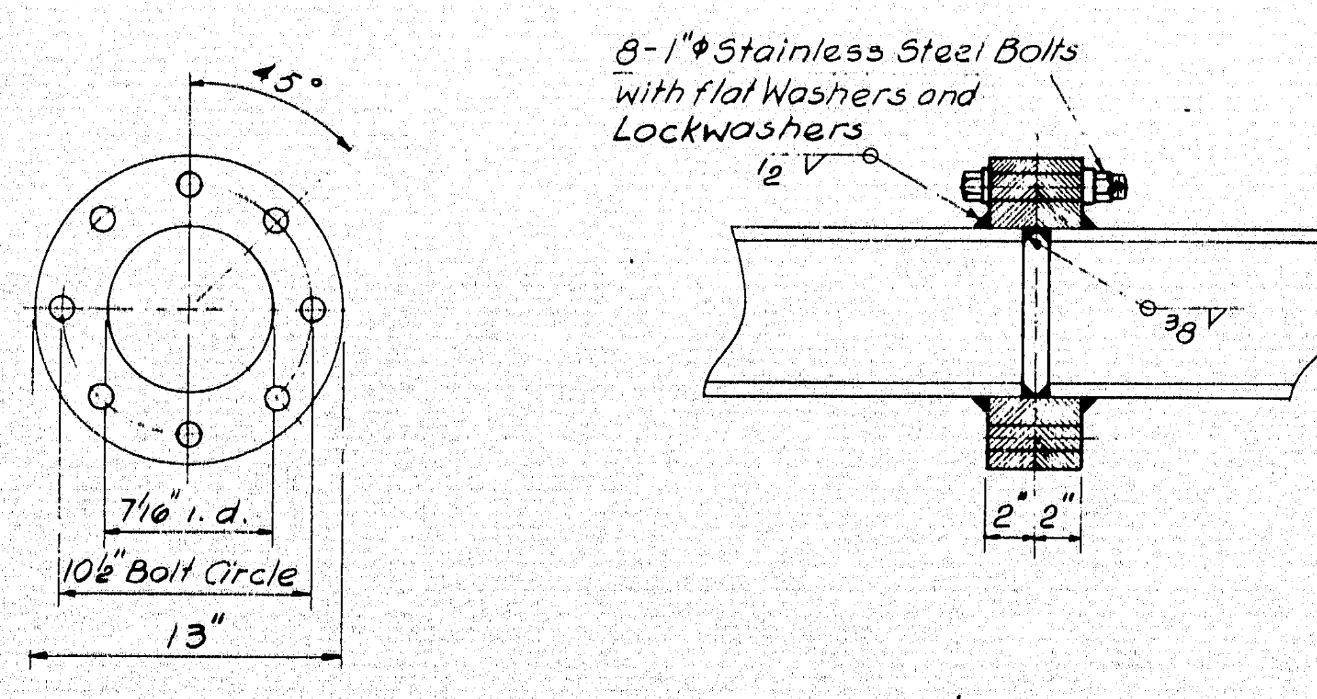
SECTION B-B
WALK HANGER DETAIL

Scale: 3/8"=1'-0"



WEB TO CHORD CONNECTION DETAIL

Scale: 1 1/2"=1'-0"



45°
8-1"φ Stainless Steel Bolts with flat Washers and Lockwashers
1/2" V
3/8" V
7 1/16" i.d.
10 1/2" Bolt Circle
13"
2"
2"

CHORD SPLICE DETAIL

Scale: 1 1/2"=1'-0"

AS BUILT

R.W. Christie 7/11/73

NOTES:

1. All material to be 6061-T6 Aluminum Alloy unless otherwise noted.
2. All welds to be consumable electrode type, using 5356 filler alloy.
3. All bracing to be cut, milled and trimmed to exact fit.
4. All bolts, nuts and washers to be type 304 Stainless Steel.
5. For Detail "B" see Sheet 12.
6. For Detail "C" see Sheet 22.
7. Handrail to be built in 15' to 20' lengths.
8. For Detail of conduit clamp see Sheet 22.

6

Design Wind Loads:
60 psf on Signs
86 psf on supports
78 psf on walks

DESIGN — T. C. Thompson
TRACE — A. P. Tchehkeli
CHECK — S. S. Nishimura

BRIDGE NO. IN CHARGE OF — Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

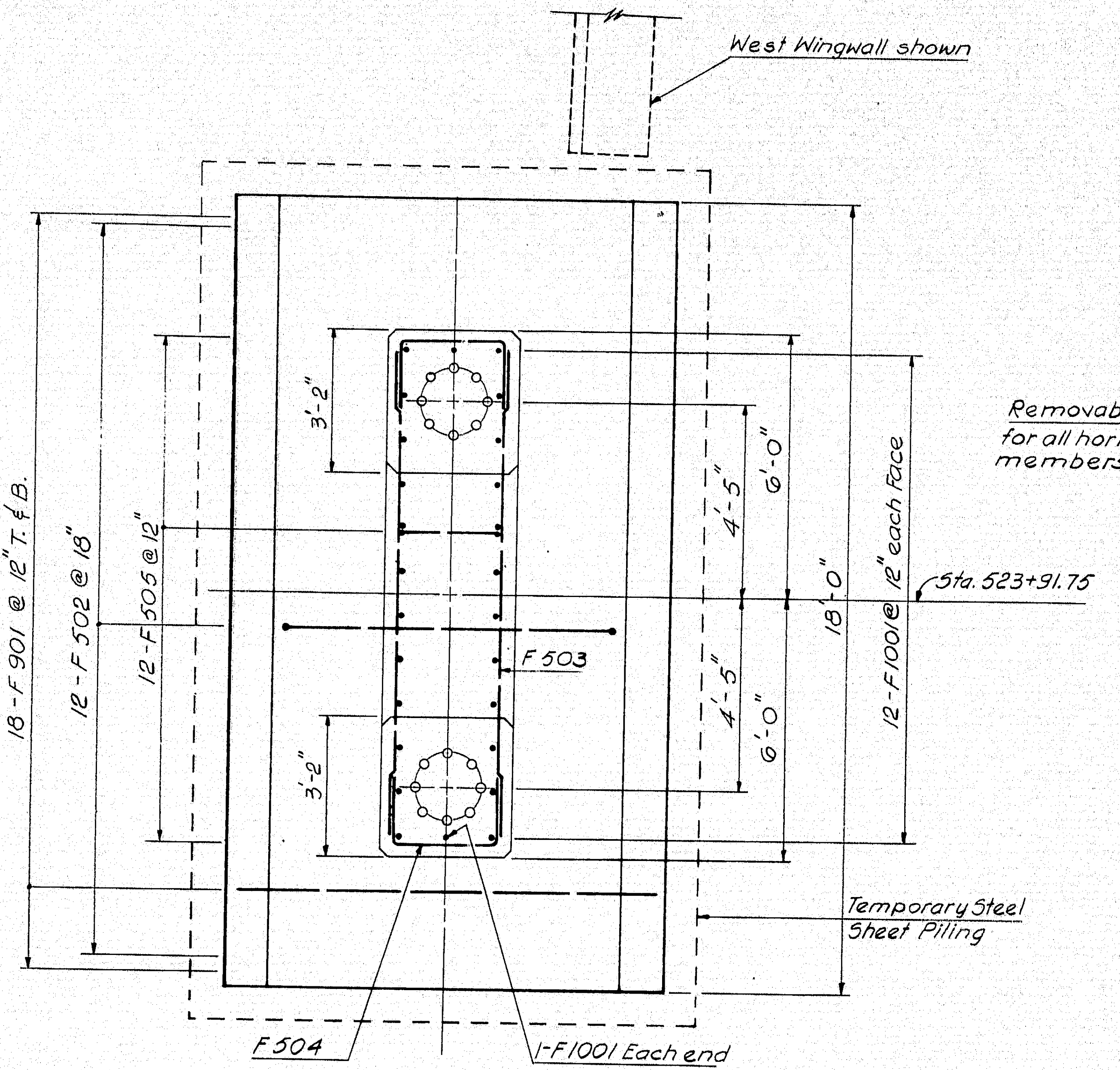
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

SIGN BRIDGE AT STA. 523+91.75
PLAN & ELEVATION

SHEET 11 OF 24

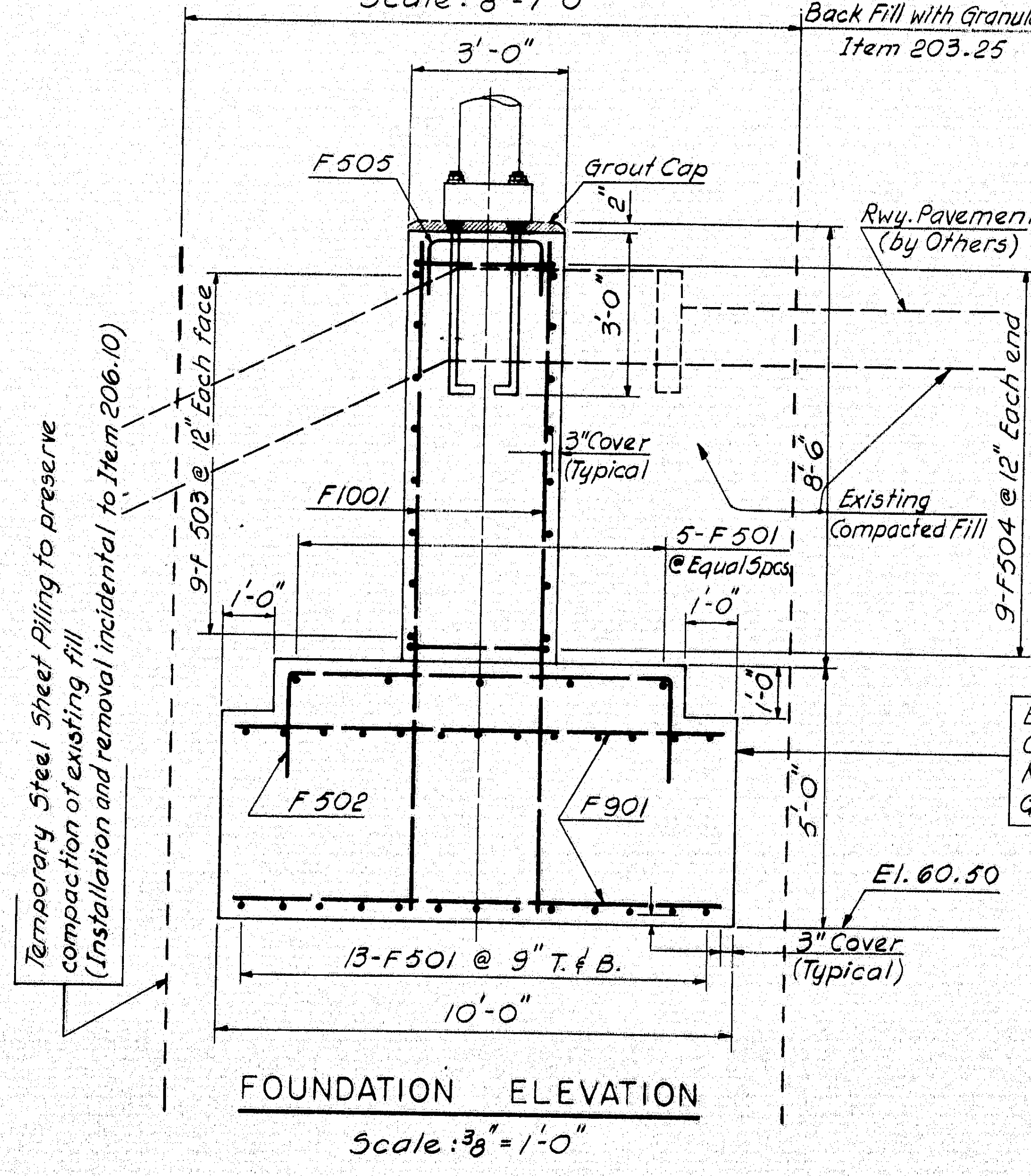
130-94

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-I (22) 16	12	24



FOUNDATION PLAN

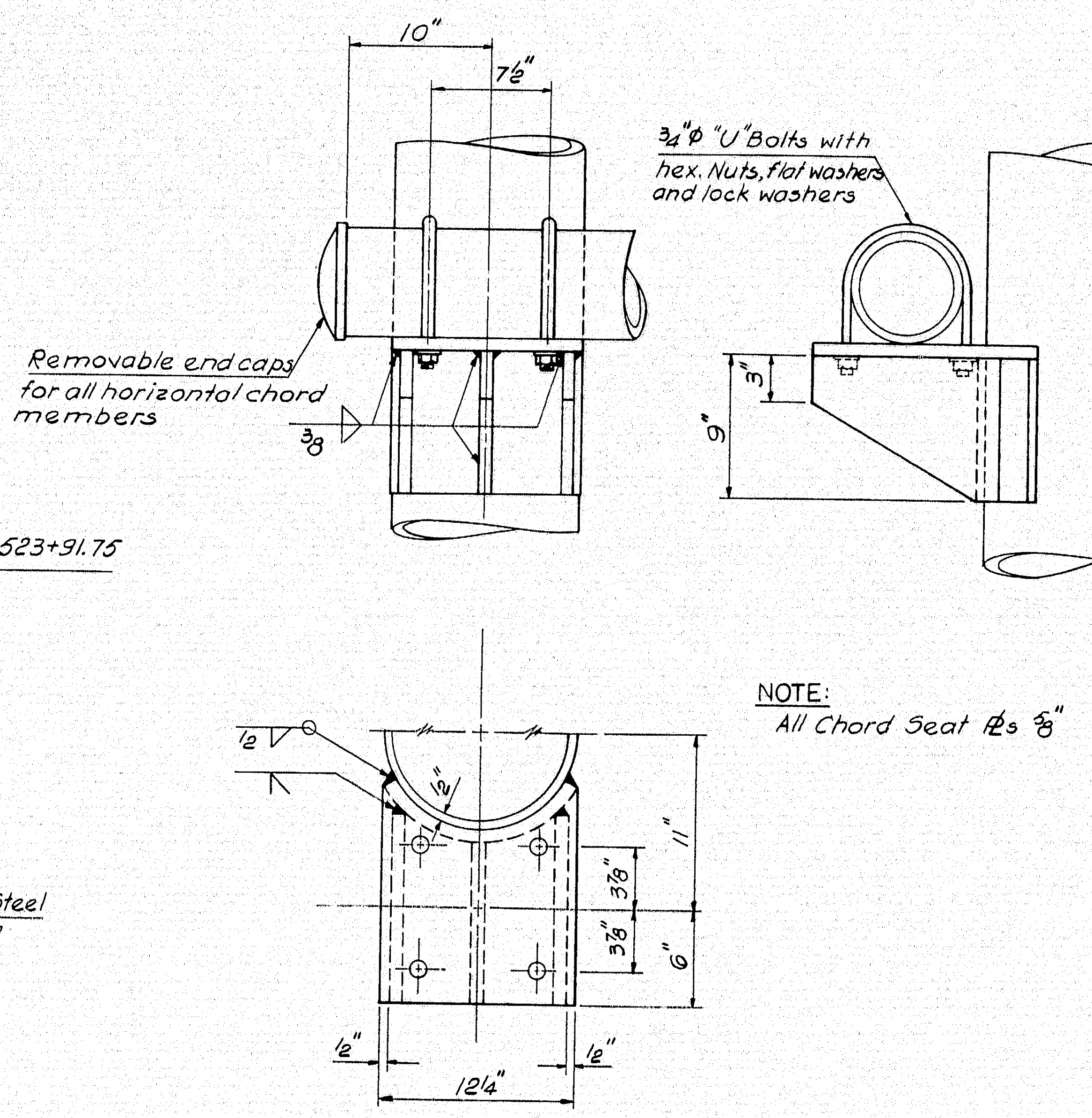
Scale: 3/8" = 1'-0"



FOUNDATION ELEVATION

Scale: 3/8" = 1'-0"

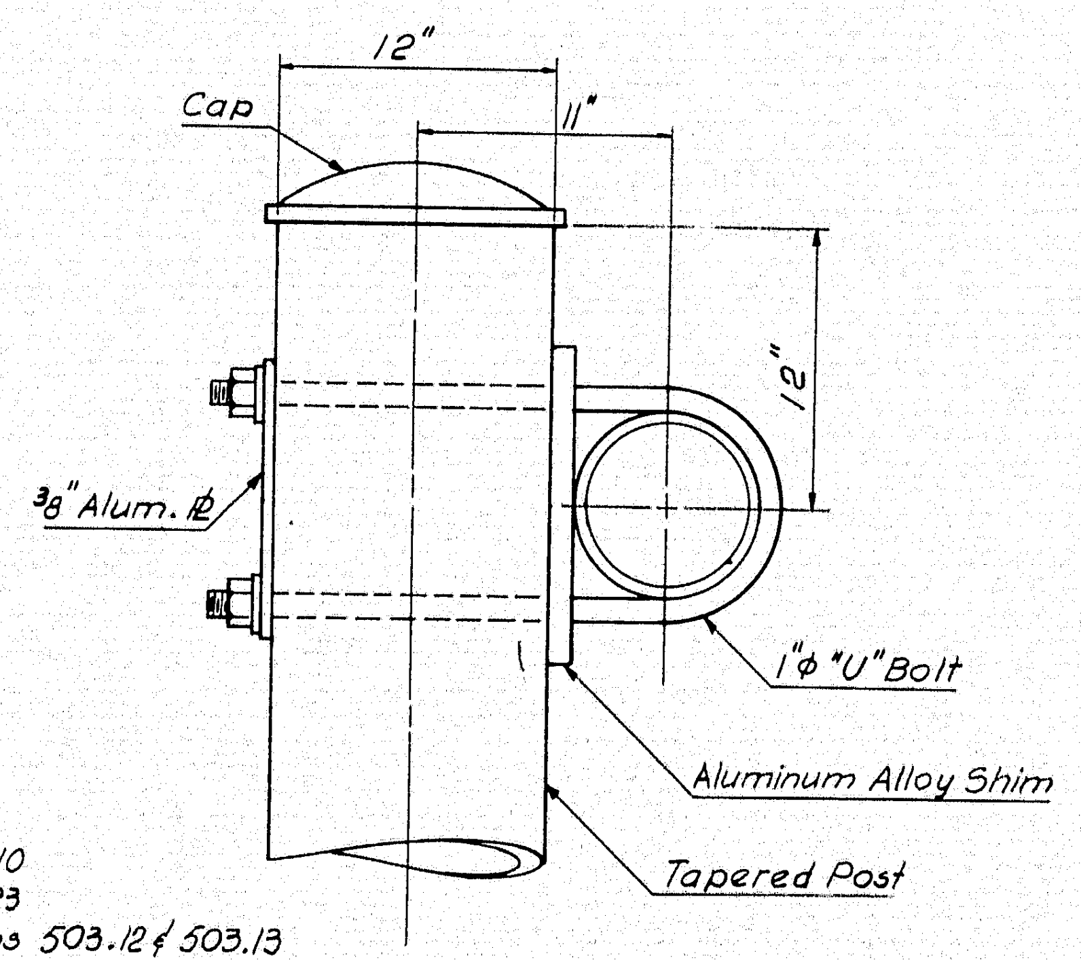
NOTE: The Contractor shall schedule his work so that Concrete work is completed, backfill placed to original grade, and sheet piles removed before the adjacent roadway is paved.


10"
7½"
Removable end caps for all horizontal chord members
3/8
3/4"φ "U" Bolts with hex. Nuts, flat washers and lock washers
3"
9"
1/2
1/2"
11"
3 3/8"
3 3/8"
6"
1/2"
12 1/4"
1/2"

NOTE:
All Chord Seat Pls 5/8"

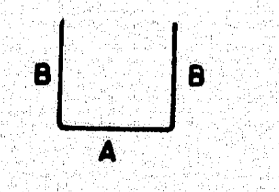
LOWER CHORD SEAT

Scale: 1½" = 1'-0"

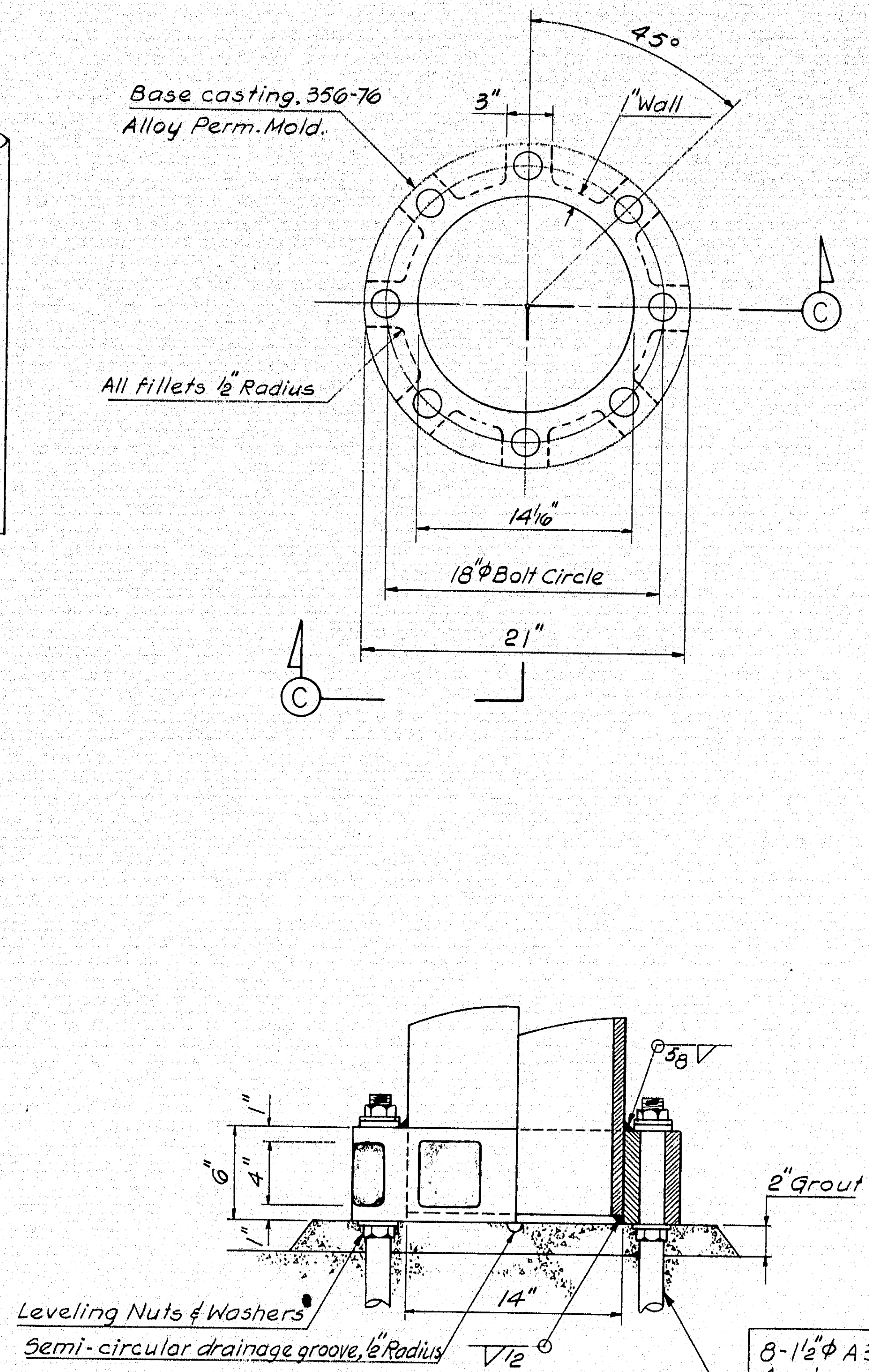


CLAMP FOR TOP CHORD

Scale: 1½" = 1'-0"



BAR TYPE 1



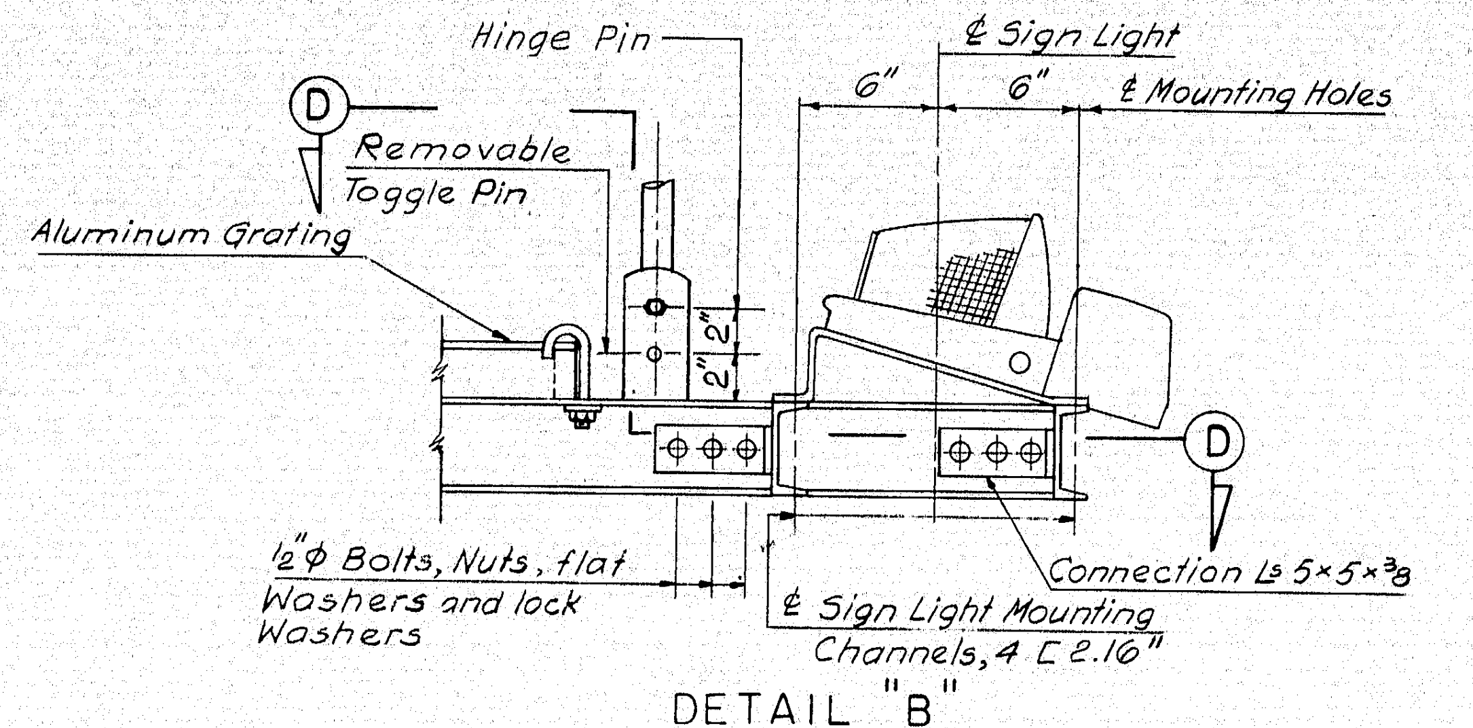
8-1½"φ A 307 galv. Steel hooked Anchor Bolts with 2 hex. Nuts, 2 flat Washers and 1 lock Washer per Bolt.
Bolts to have 3' embedment into Concrete.

Incidental to Item 502.23

SECTION C-C

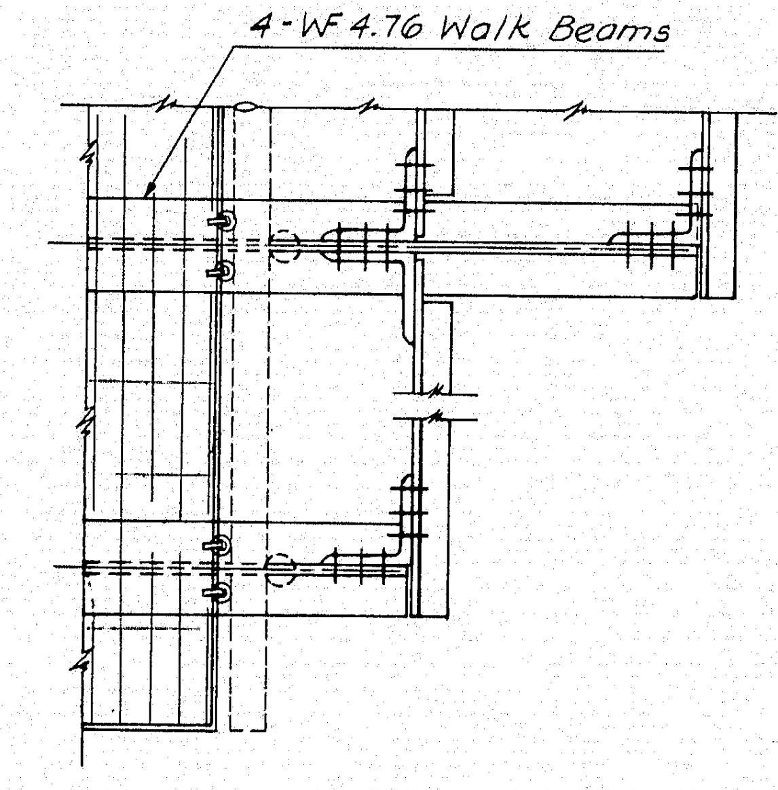
COLUMN BASE

Scale: 1½" = 1'-0"



DETAIL "B"

Scale: 1½" = 1'-0"



SECTION D-D

Scale: 1½" = 1'-0"

NOTES:

1. All material to be 6061-T6 Aluminum Alloy unless otherwise noted.
2. All welds to be consumable electrode type, using 5356 filler alloy.
3. All bracing to be cut, milled and trimmed to exact fit.
4. All bolts, nuts and washers to be type 304 Stainless Steel unless otherwise noted.
5. Column Base in contact with concrete shall be give a heavy coat of alkali-resistant bituminous paint before installation. Bituminous paint shall meet the requirements of U.S. Military Specification MIL-P-6883.

FOUNDATION REINFORCEMENT

*MARK	LENGTH	NO REQ'D	TYPE	DETAIL DIMENSIONS A	DETAIL DIMENSIONS B
F 501	17'-6"	62	Str.		
F 502	12'-0"	24	1	7'-6"	2'-3"
F 503	11'-6"	36	Str.		
F 504	5'-6"	36	1	2'-6"	1'-6"
F 505	5'-2"	24	1	2'-2"	1'-6"
F 901	9'-6"	72	Str.		
F1001	12'-9"	52	Str.		

* Initial numeral of bar mark indicates bar size.

6

DESIGN – T. C. Thompson
TRACE – A. D. Tchchkeli
CHECK – S. S. Nishimura

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

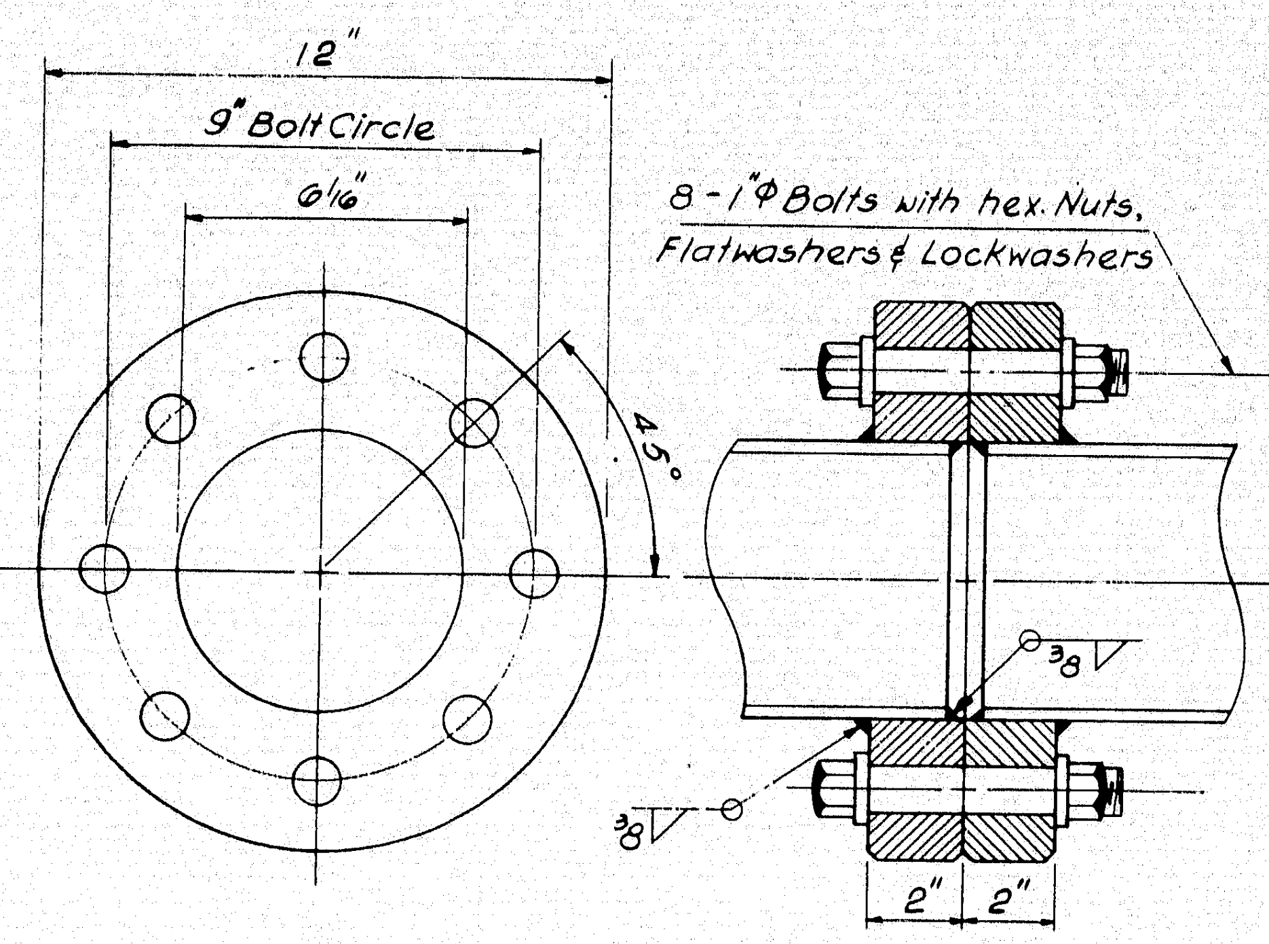
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

SIGN BRIDGE AT STA. 523 + 91.75
DETAILS

SHEET 12 OF 24

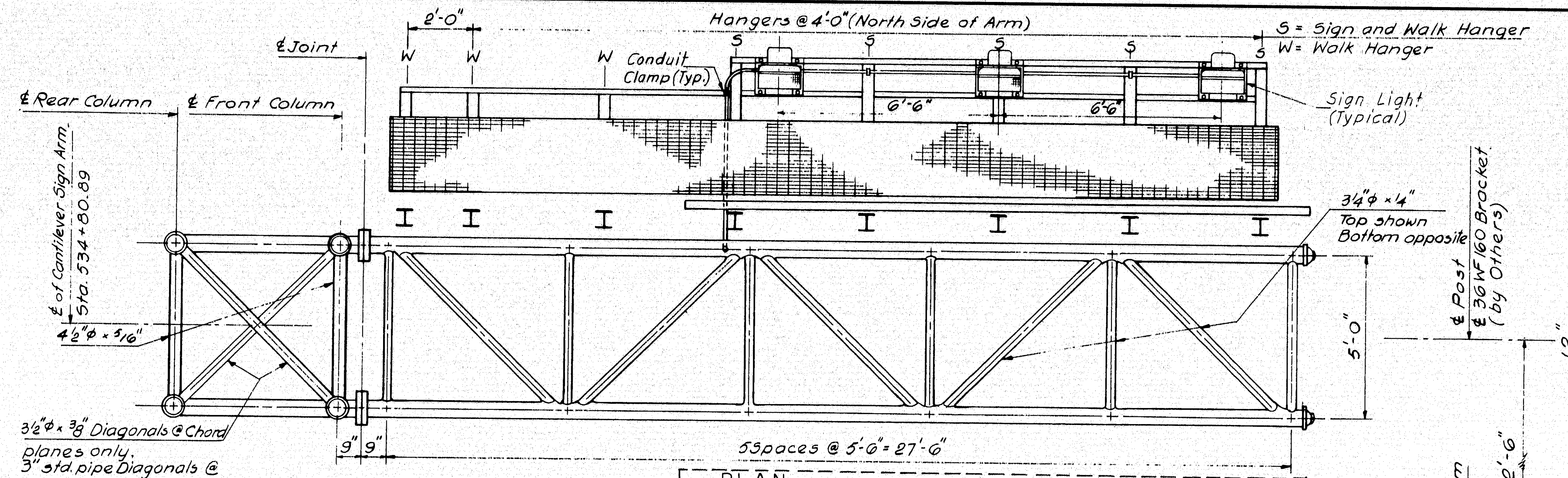
130-95

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	13	24



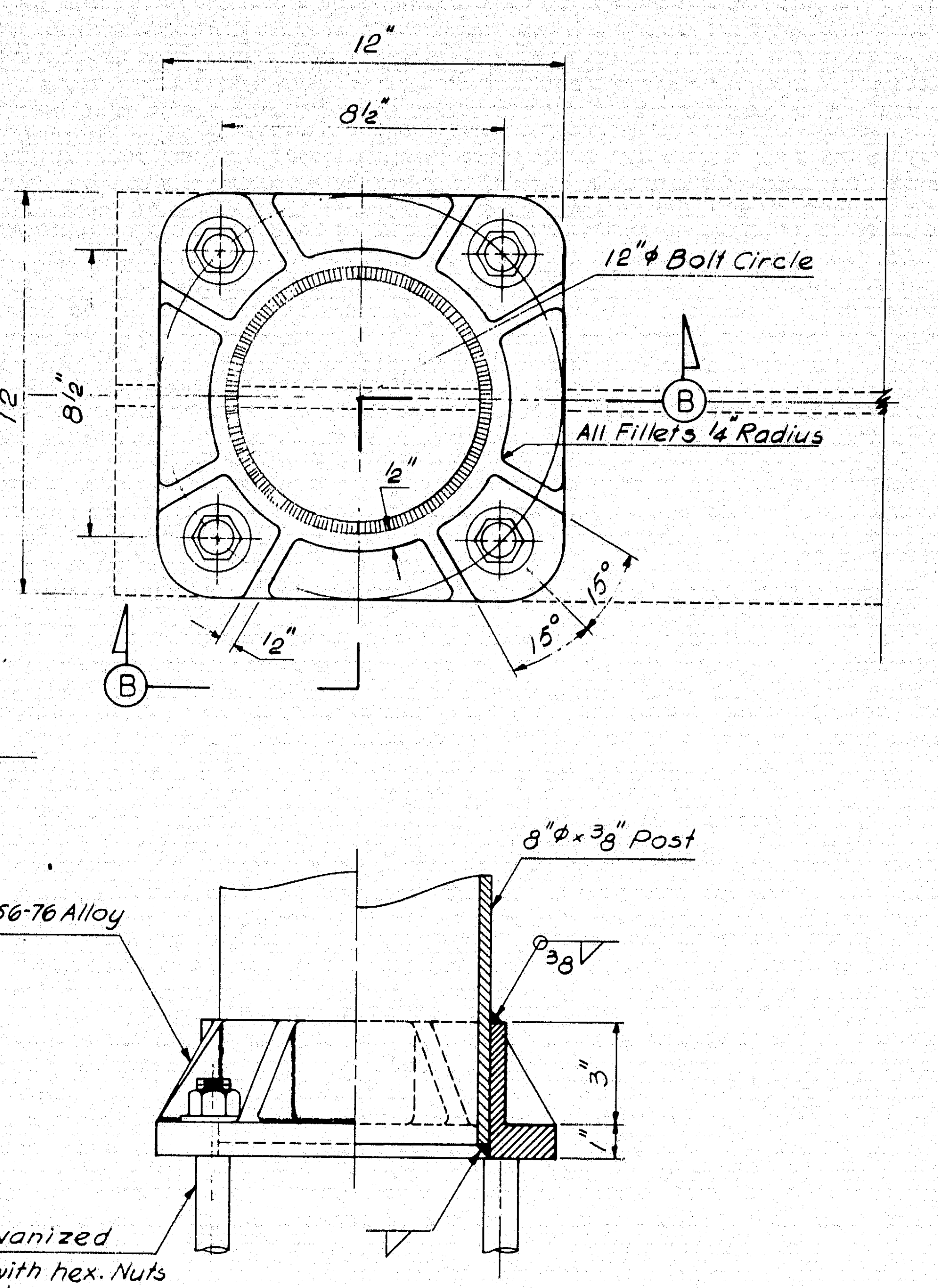
CHORD SPLICE DETAIL

Scale: 3" = 1'-0"


2'-0"
¢ Joint
W
W
W
Conduit Clamp (Typ.)
Hangers @ 4'-0" (North Side of Arm)
S
S
S
S
S
S = Sign and Walk Hanger
W = Walk Hanger
Sign Light (Typical)
6'-6"
6'-6"
¢ Rear Column
¢ Front Column
¢ of Cantilever Sign Arm. Sta. 534+80.89
4 1/2"Φ × 5/16"
3 1/2"Φ × 3/8" Diagonals @ Chord planes only. 3" std. pipe Diagonals @ other Panels
3 1/4"Φ × 1/4" Top shown Bottom opposite
¢ Post ¢ 36 WF 160 Bracket (by Others)
5'-0"
9"
9"
55 spaces @ 5'-6" = 27'-6"

PLAN

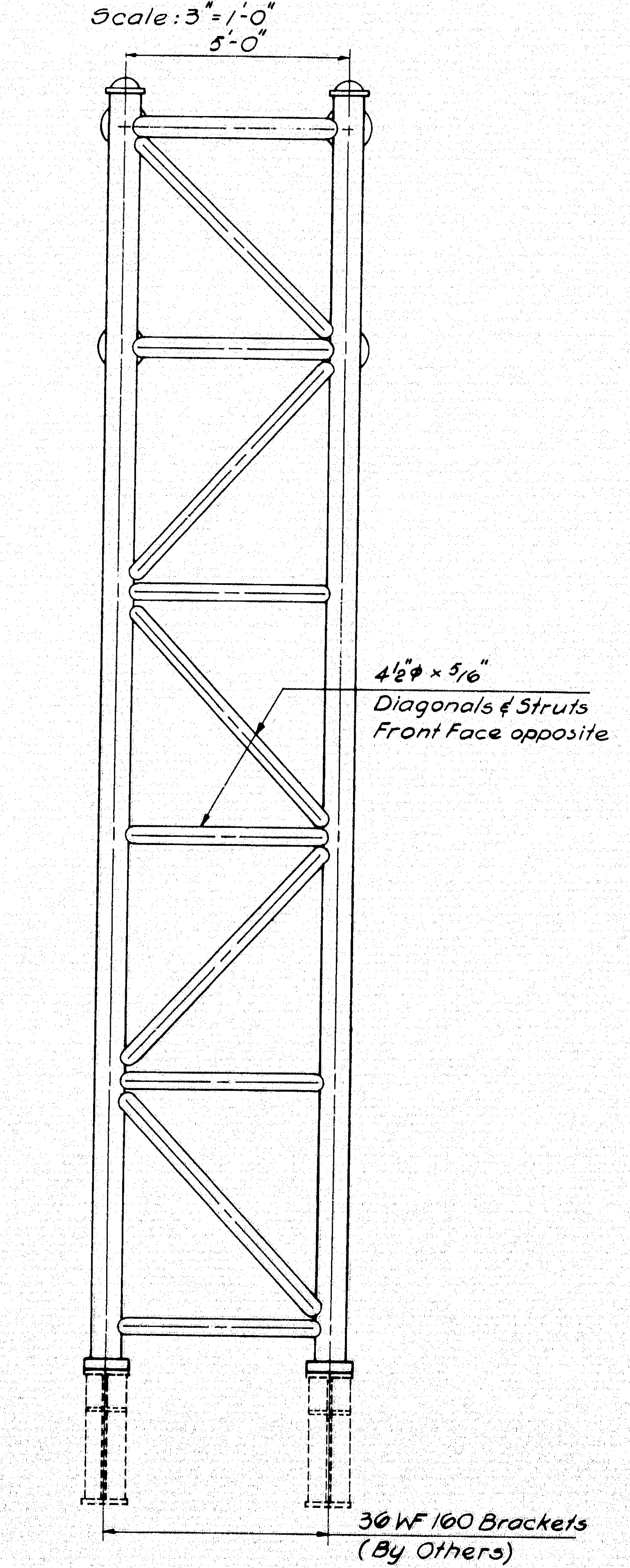
Scale: 3/8" = 1'-0"



SECTION B-B

POST BASE DETAIL

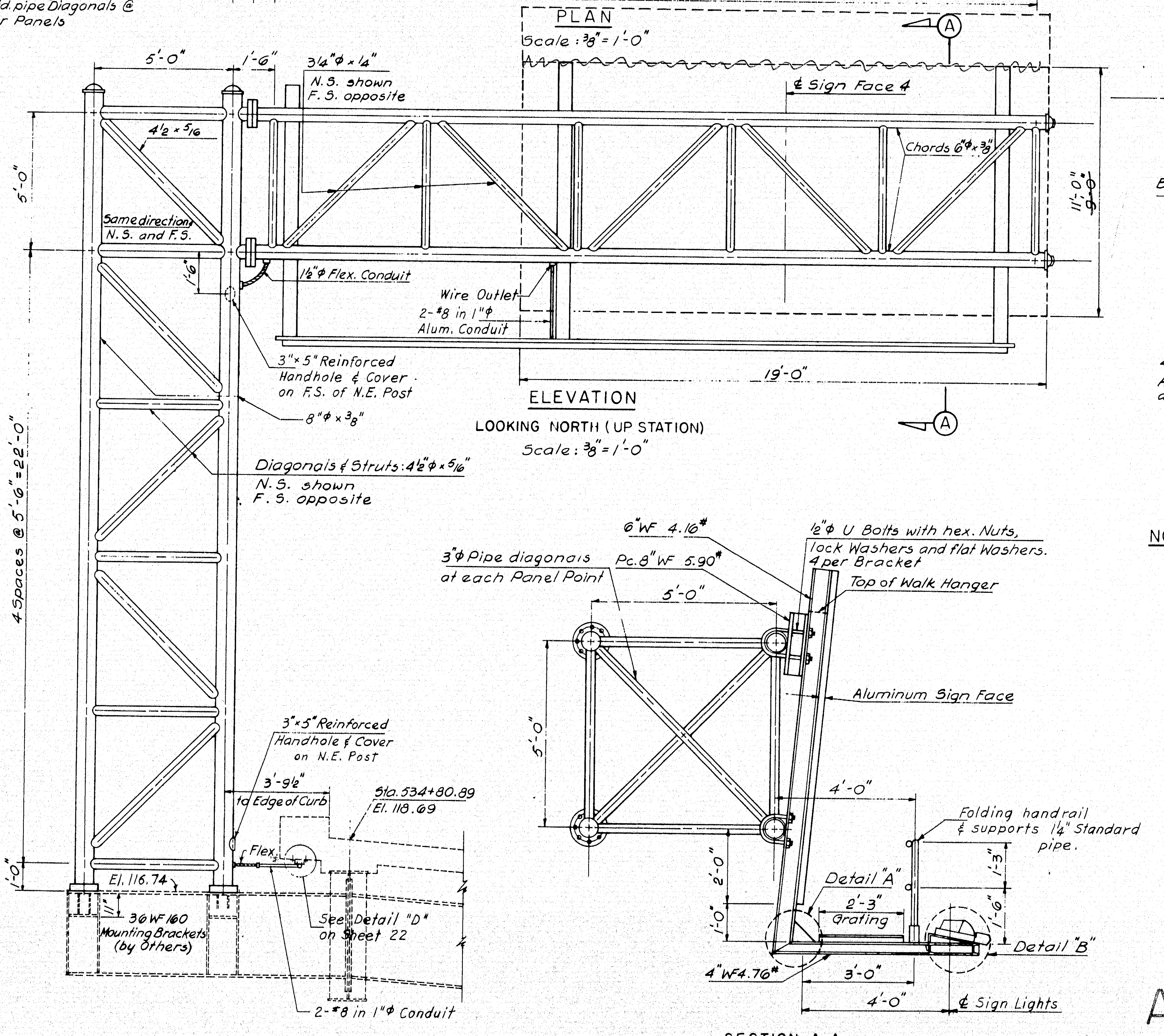
Scale: 3" = 1'-0"


5'-0"
4 1/2"Φ × 5/16" Diagonals & Struts Front Face opposite
36 WF 160 Brackets (By Others)

REAR ELEVATION

(SIGN AND WALKWAY NOT SHOWN)

Scale: 3/8" = 1'-0"


5'-0"
1'-6"
3 1/4"Φ × 1/4" N.S. shown F.S. opposite
A
¢ Sign Face 4
4 1/2 × 5/16
Chords 6"Φ × 3/8"
5'-0"
Same direction N.S. and F.S.
1'-6"
1 1/2"Φ Flex. Conduit
Wire Outlet
2-#8 in 1"Φ Alum. Conduit
11'-0"
9'-0"
3" × 5" Reinforced Handhole & Cover on F.S. of N.E. Post
8"Φ × 3/8"
19'-0"
A
Diagonals & Struts: 4 1/2"Φ × 5/16" N.S. shown F.S. opposite
4 Spaces @ 5'-6" = 22'-0"
1'-0"
3" × 5" Reinforced Handhole & Cover on N.E. Post
3'-9 1/2" to Edge of Curb
Sta. 534+80.89 El. 118.69
Flex.
El. 116.74
11"
36 WF 160 Mounting Brackets (by Others)
See Detail "D" on Sheet 22
2-#8 in 1"Φ Conduit
6"WF 4.16#
1/2"Φ U Bolts with hex. Nuts, lock Washers and flat Washers. 4 per Bracket
3"Φ Pipe diagonals at each Panel Point
Pc. 8"WF 5.90#
Top of Walk Hanger
5'-0"
Aluminum Sign Face
5'-0"
4'-0"
Folding handrail & supports 1 1/4" Standard pipe.
2'-0"
1'-3"
Detail "A"
2'-3"
Grating
1'-0"
1'-6"
Detail "B"
4"WF 4.76#
3'-0"
4'-0"
¢ Sign Lights

ELEVATION

LOOKING NORTH (UP STATION)

Scale: 3/8" = 1'-0"

SECTION A-A

SIGN AND WALK HANGER DETAIL

Scale: 1/2" = 1'-0"

NOTES:

1. All Material to be 6061-T6 Aluminum Alloy unless otherwise noted.
2. All Welds to be consumable electrode type, using 5356 filler alloy.
3. All Bracing to be cut, milled and trimmed to exact fit.
4. For Web to Chord connections and Wire Inlet details see Sheet 11.
5. All Bolts, Nuts and Washers to be Type 304 Stainless Steel, unless otherwise noted.
6. For Details "A" and "B" see Sheets 11 and 12 respectively.
7. Where Aluminum Base Castings contact Structural Steel, matching surfaces shall be given a prime coat of Zinc Chromate primer followed by one coat of Aluminum Metal paint.
8. Handrail to be built in 15' to 20' lengths.
9. Design wind loads:
   70 psf on signs
   100 psf on supports
   91 psf on walks
10. Sign lighting fixtures to be furnished and installed by the Public Service Company of New Hampshire.
11. For Detail of conduit clamp see Sheet 22.

6

AS BUILT

R.W. Christie 7/11/73

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.

DESIGN — T.C. Thompson
TRACE — A.D. Tchenkeli
CHECK — S.S. Nishimura

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

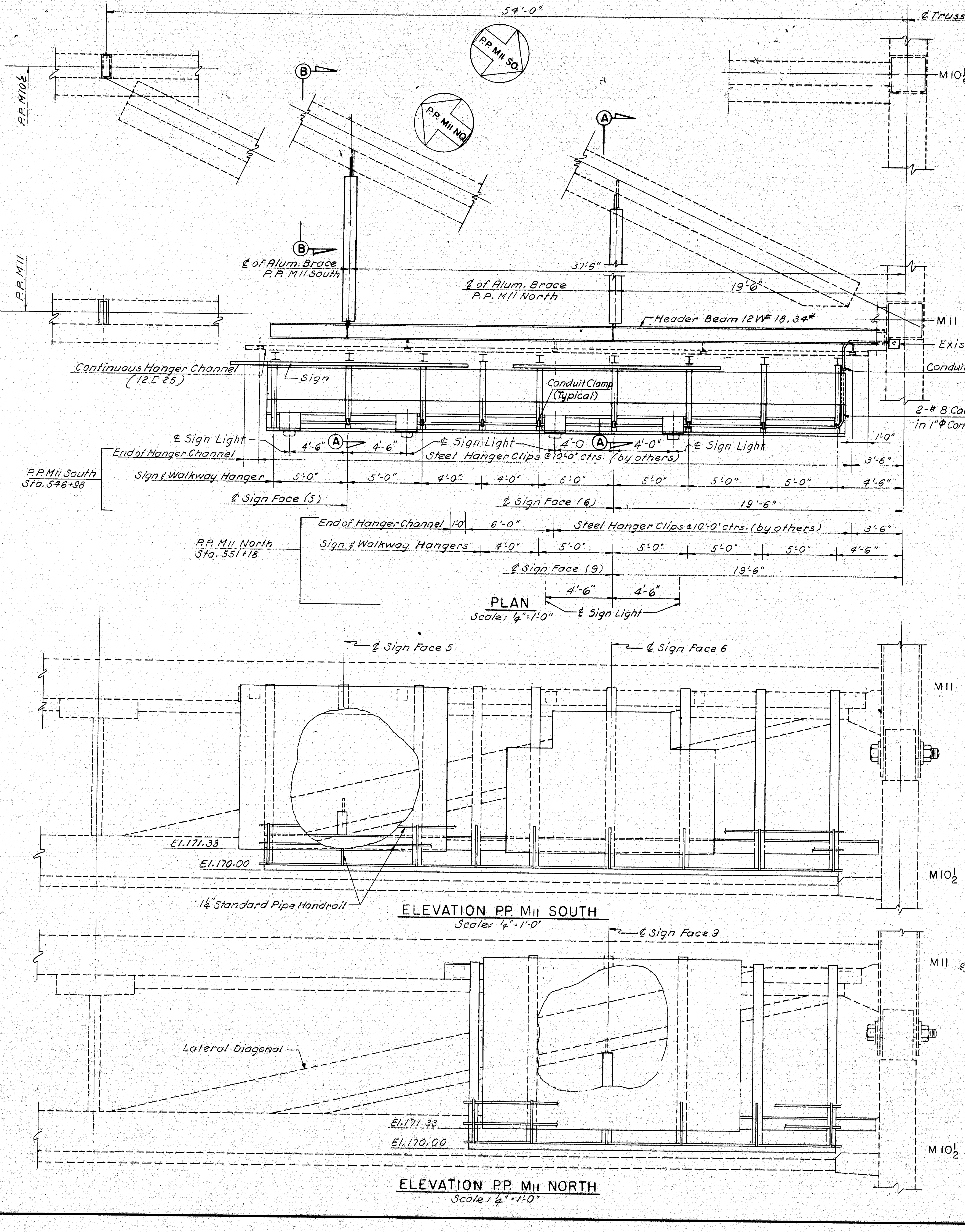
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

CANTILEVER SIGN ARM
AT STA. 534+80.89

SHEET 13 OF 24

130-96.

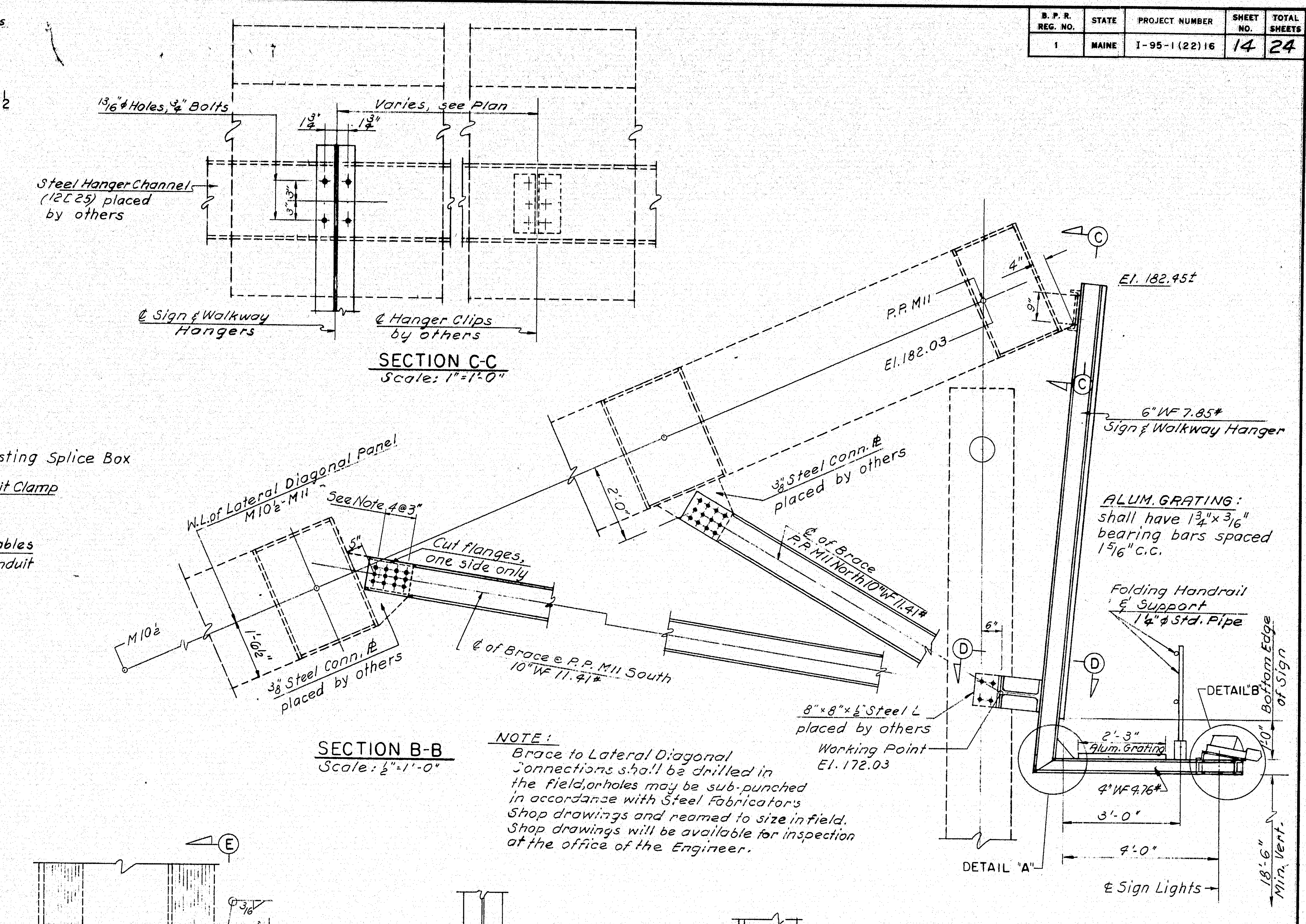
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	14	24



PLAN
Scale: ¼"=1'-0"

ELEVATION P.P. M11 SOUTH
Scale: ¼"=1'-0"

ELEVATION P.P. M11 NORTH
Scale: ¼"=1'-0"


13/16"⌀ Holes, ¾"⌀ Bolts
Varies, see Plan
Steel Hanger Channel (12 C 25) placed by others
℄ Sign & Walkway Hangers
℄ Hanger Clips by others
W.L. of Lateral Diagonal Panel M10½-M11
See Note 4 & 3"
Cut flanges, one side only
M10½
⅜" Steel Conn. ℞ placed by others
℄ of Brace @ P.P. M11 South 10"WF 11.41#
⅜" Steel Conn. ℞ placed by others
℄ of Brace P.P. M11 North 10"WF 11.41#
P.P. M11
El. 182.03
El. 182.45±
6"WF 7.85# Sign & Walkway Hanger
8"×8"×½" Steel L placed by others
Working Point El. 172.03
DETAIL "A"
DETAIL "B"
Folding Handrail & Support 1¼"⌀ Std. Pipe
Alum. Grating
4"WF 4.76#
2'-3"
3'-0"
4'-0"
Bottom Edge of Sign
℄ Sign Lights
18'-6" Min. Vert.

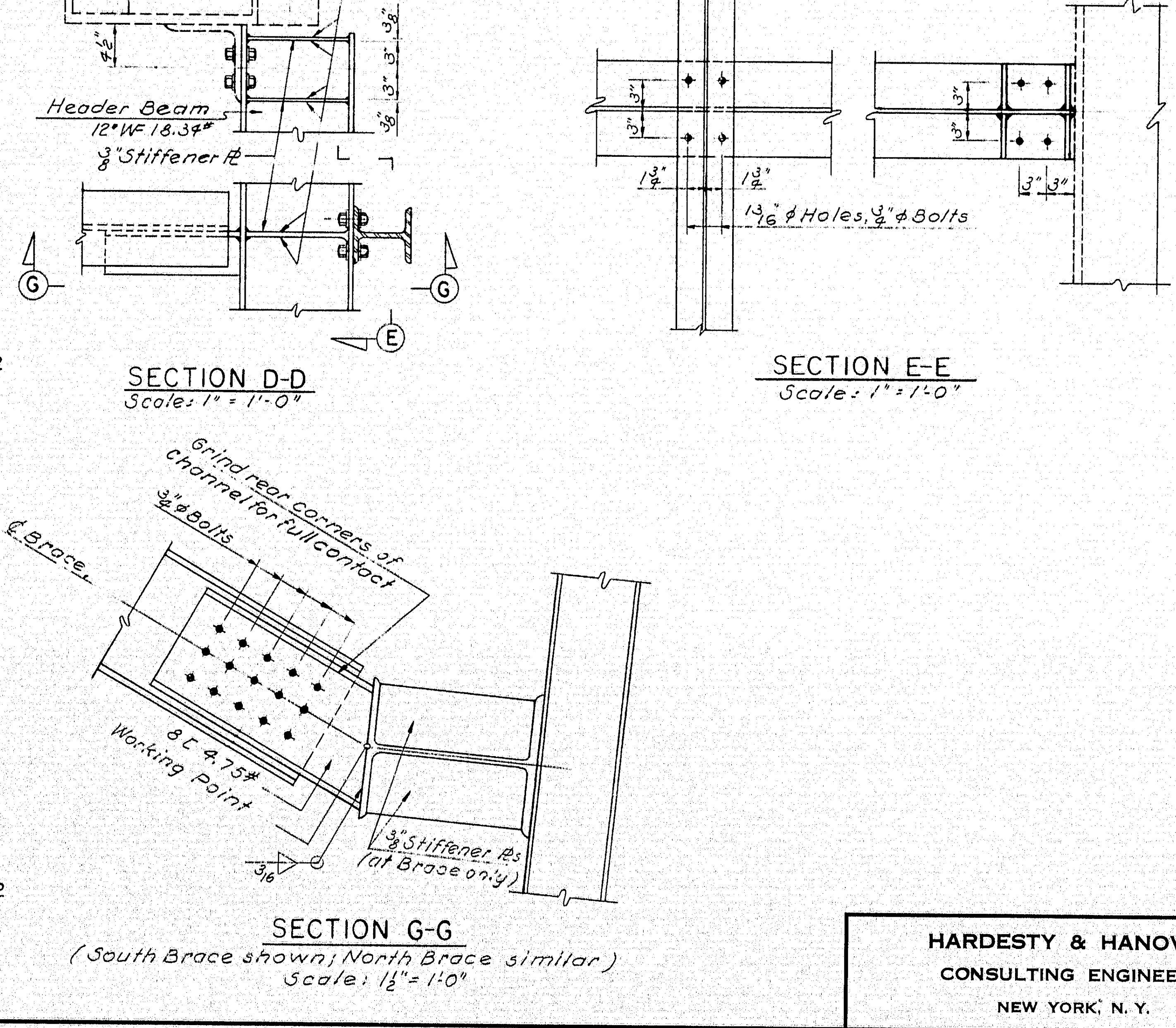
SECTION C-C
Scale: 1"=1'-0"

SECTION B-B
Scale: ⅛"=1'-0"

NOTE:
Brace to Lateral Diagonal Connections shall be drilled in the field, or holes may be sub-punched in accordance with Steel Fabricator's Shop drawings and reamed to size in field. Shop drawings will be available for inspection at the office of the Engineer.

ALUM. GRATING:
Shall have 1½"×3/16" bearing bars spaced 1 5/16" c.c.

SECTION A-A
Scale: ½"=1'-0"



SECTION D-D
Scale: 1"=1'-0"

SECTION E-E
Scale: 1"=1'-0"

SECTION G-G
(South Brace shown; North Brace similar)
Scale: 1½"=1'-0"

NOTES:
1. All Material to be 6061-T6 Aluminum Alloy unless otherwise noted.
2. All Welds to be consumable electrode Type, using 5356 Filler Alloy.
3. All Bolts, Nuts & Washers to be Stainless Steel.
4. All Bolts to be ⅞"⌀ unless otherwise noted.
5. Where Aluminum Surfaces are to contact Structural Steel, matching surfaces shall be given a prime coat of zinc chromate primer followed by one coat of aluminum metal paint.
6. For Details "A" & "B" see Sheet 11 & 12.
7. For Detail of conduit clamp see Sheet 22.
8. Design wind loads:
   83 psf on signs
   108 psf on supports
9. Handrail to be built in 15' to 20' lengths.
10. Sign lighting fixtures to be furnished and installed by the Public Service Co. of N.H.

6

DESIGN — T.C. Thompson
TRACE — J. Nynka
CHECK — S.S. Nishimura

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

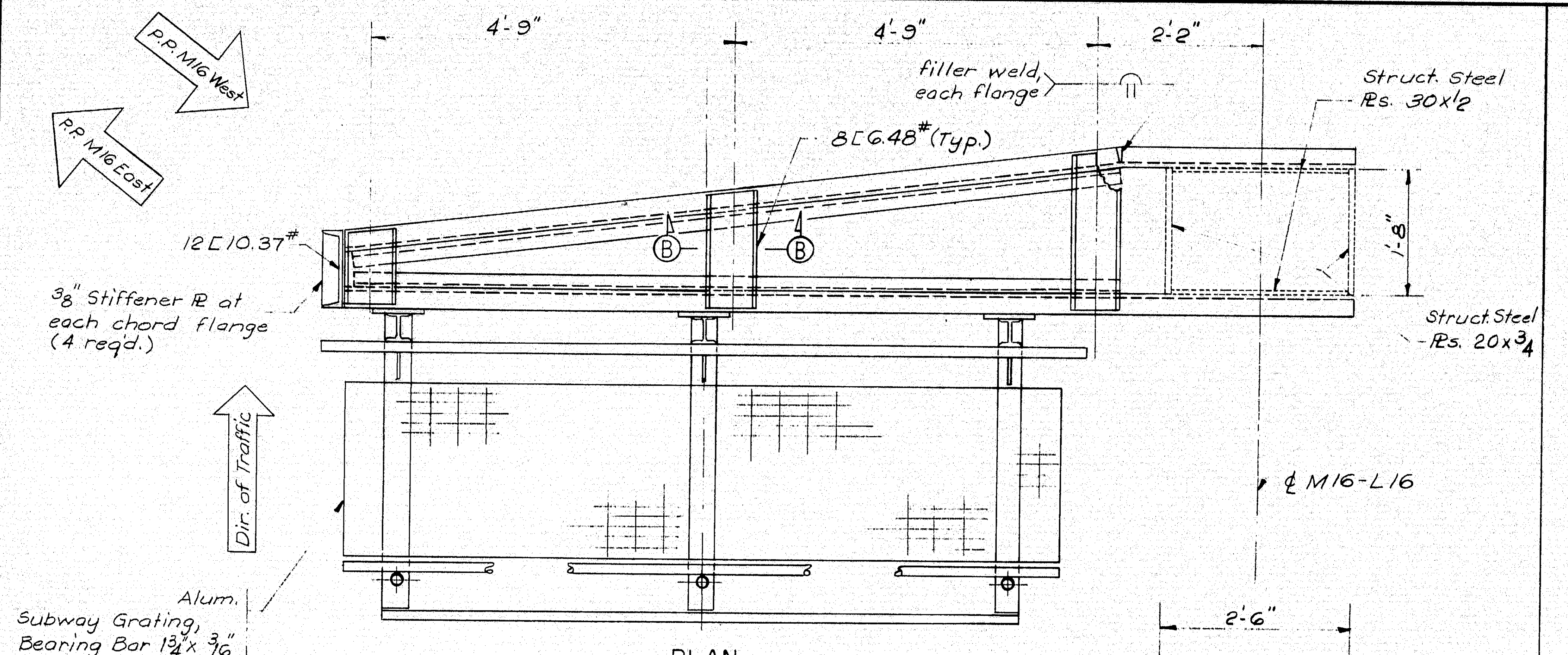
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

SIGN HANGER, PANEL POINTS
M11 NORTH AND M11 SOUTH

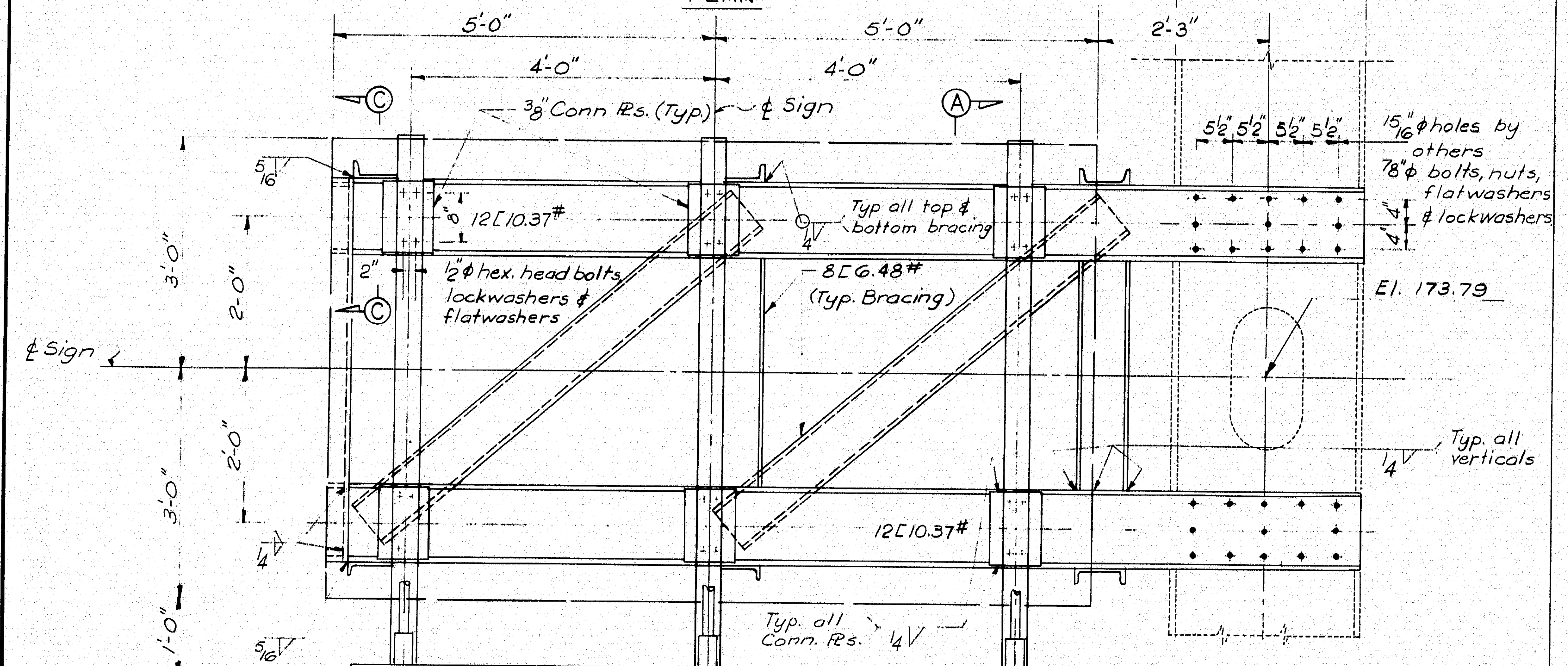
SHEET 14 OF 24

130-97

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22)16	15	24



PLAN



ELEVATION

Scale: ¾" = 1'-0"

NOTES:

All Material to be 6061-T6 Alum. Alloy unless otherwise noted.

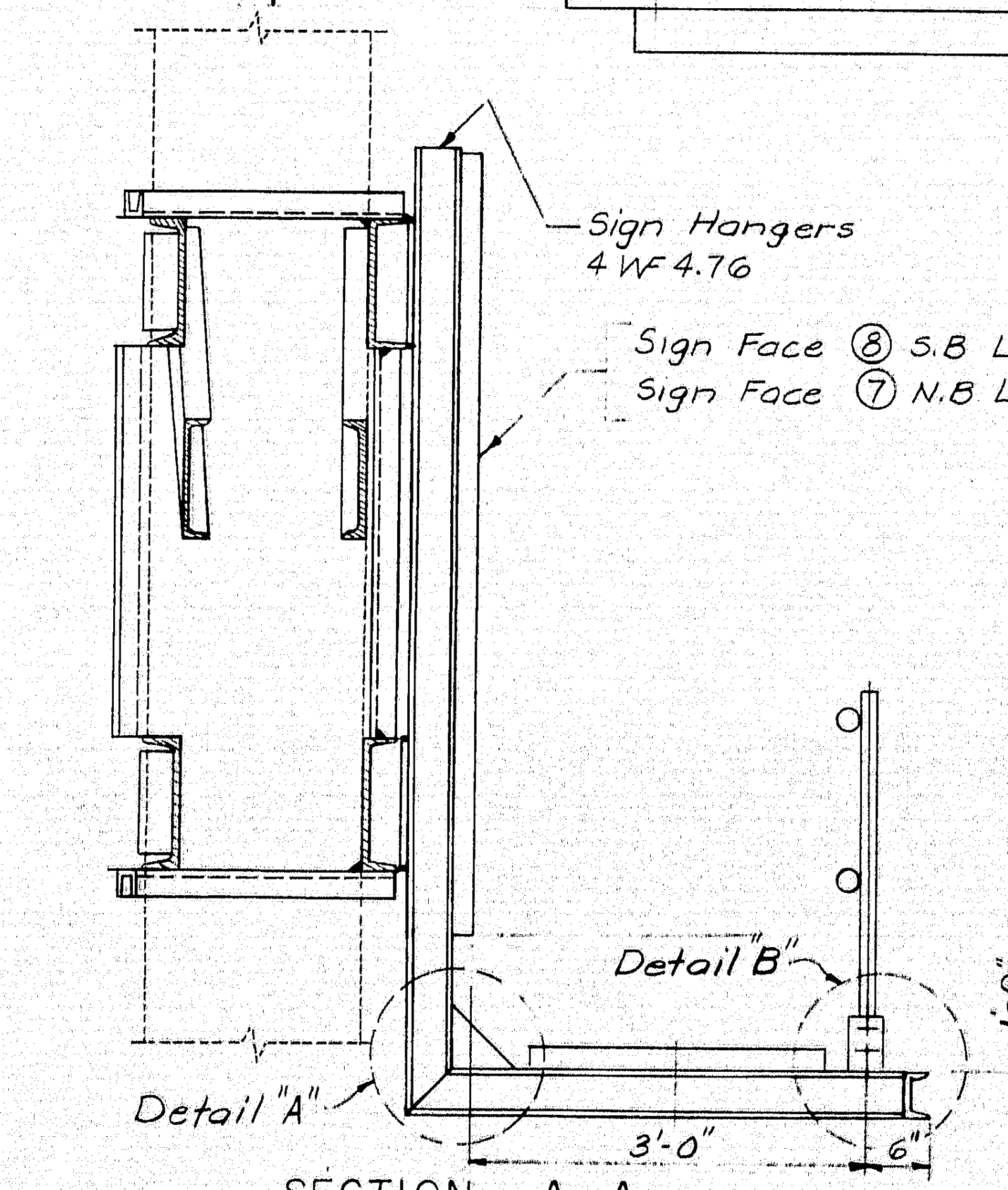
All Welds to be consumable electrode type, using 5356 filler alloy.

All bolts, nuts, and washers to be type 304 stainless steel.

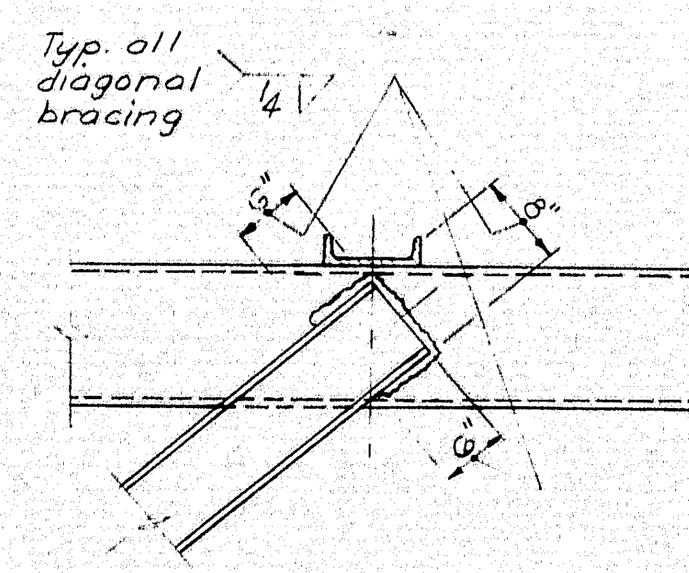
All bolts to be ⅞"ɸ unless otherwise noted.

Where aluminum surfaces are to be in contact with structural steel, matching surfaces shall be given a prime coat of zinc chromate primer followed by one coat of aluminum metal paint.

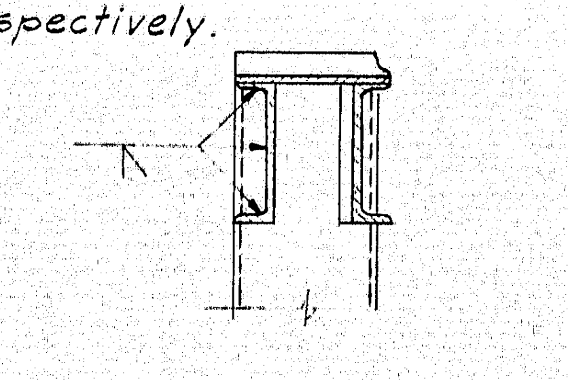
For Details "A" and "B" see sheets 11 & 12 respectively.



SECTION A-A



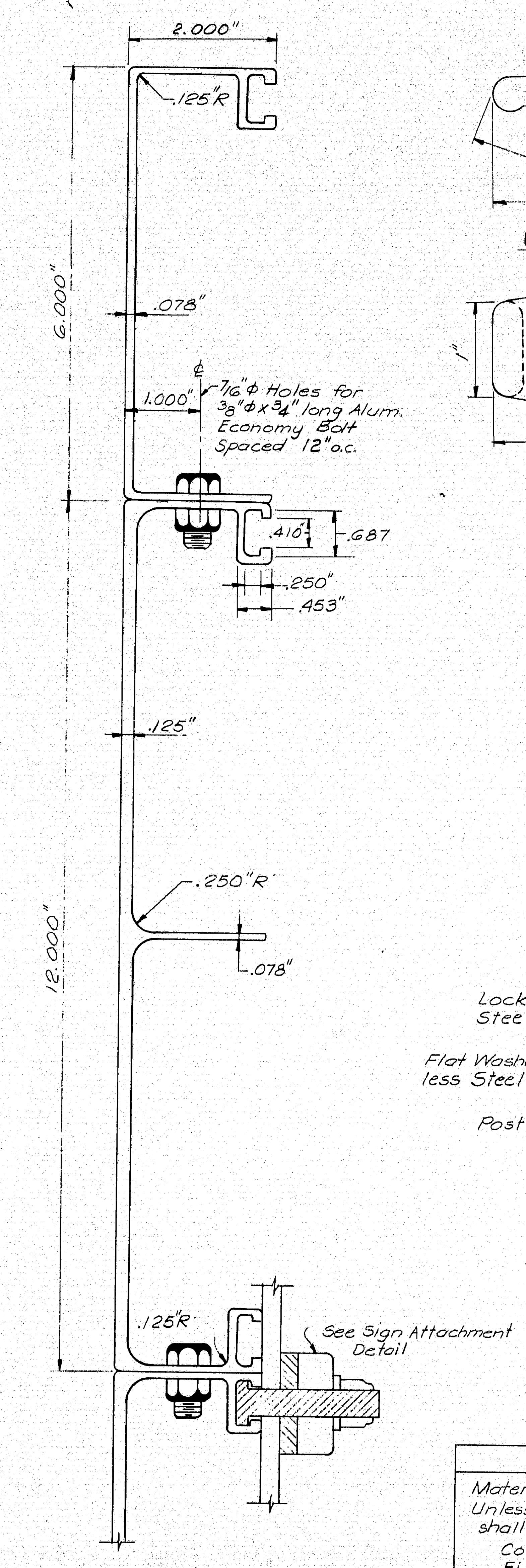
SECTION B-B



SECTION C-C

SIGNS AT PANEL POINTS M16 EAST & M16 WEST

Design wind: 83 psf

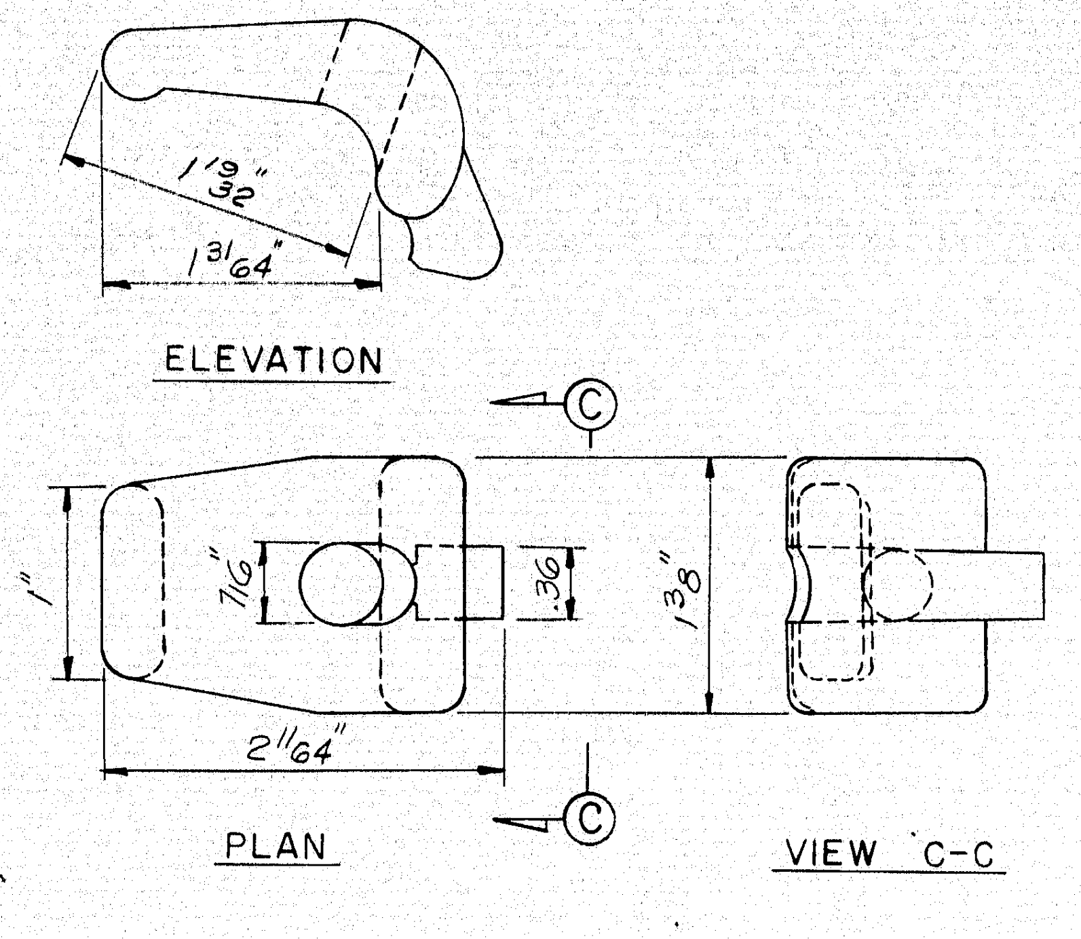


2.000"
.125"R
6.000"
.078"
1.000"
7/16"ɸ Holes for ⅜"ɸ x ¾" long Alum. Economy Bolt Spaced 12" o.c.
.410"
.687
.250"
.453"
.125"
.250"R
.078"
12.000"
.125"R
See Sign Attachment Detail

EXTRUDED PANEL SIGN

Material: use aluminum alloy 6063-T6 extruded panel

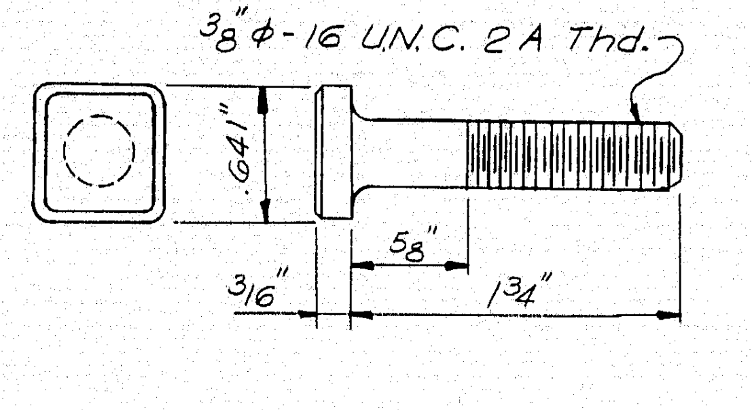
Scale: ¾ Size



POST CLIP

Material: Alum. Alloy 356-T6

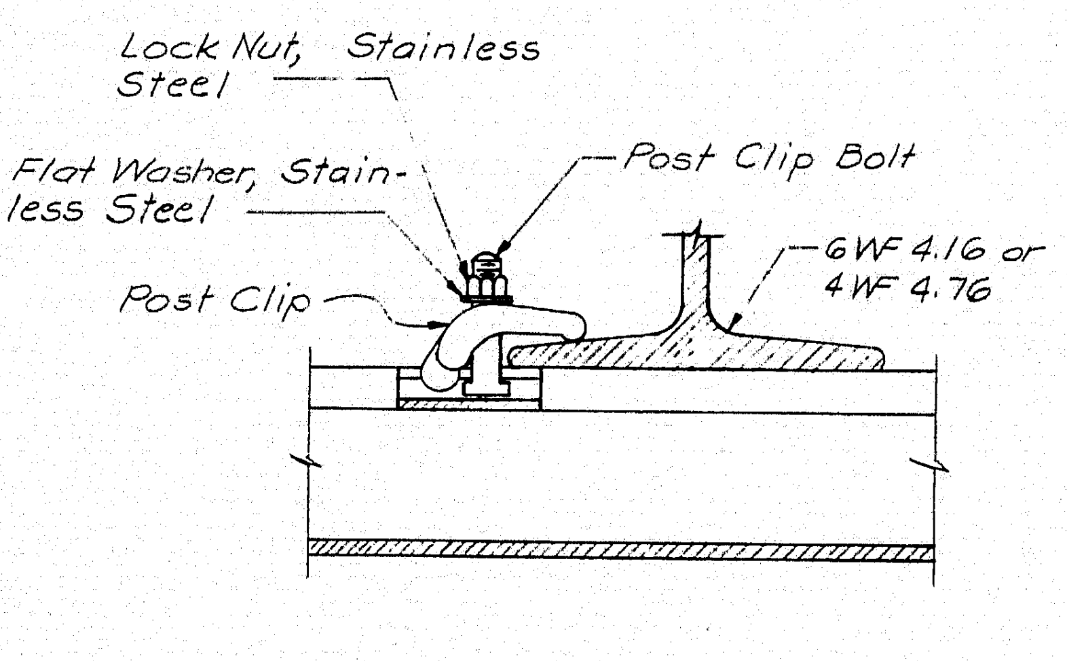
Full Scale



POST CLIP BOLT

Material: Stainless Steel

Full Scale



SIGN ATTACHMENT

For Tubular Sign Posts

½ Full Scale

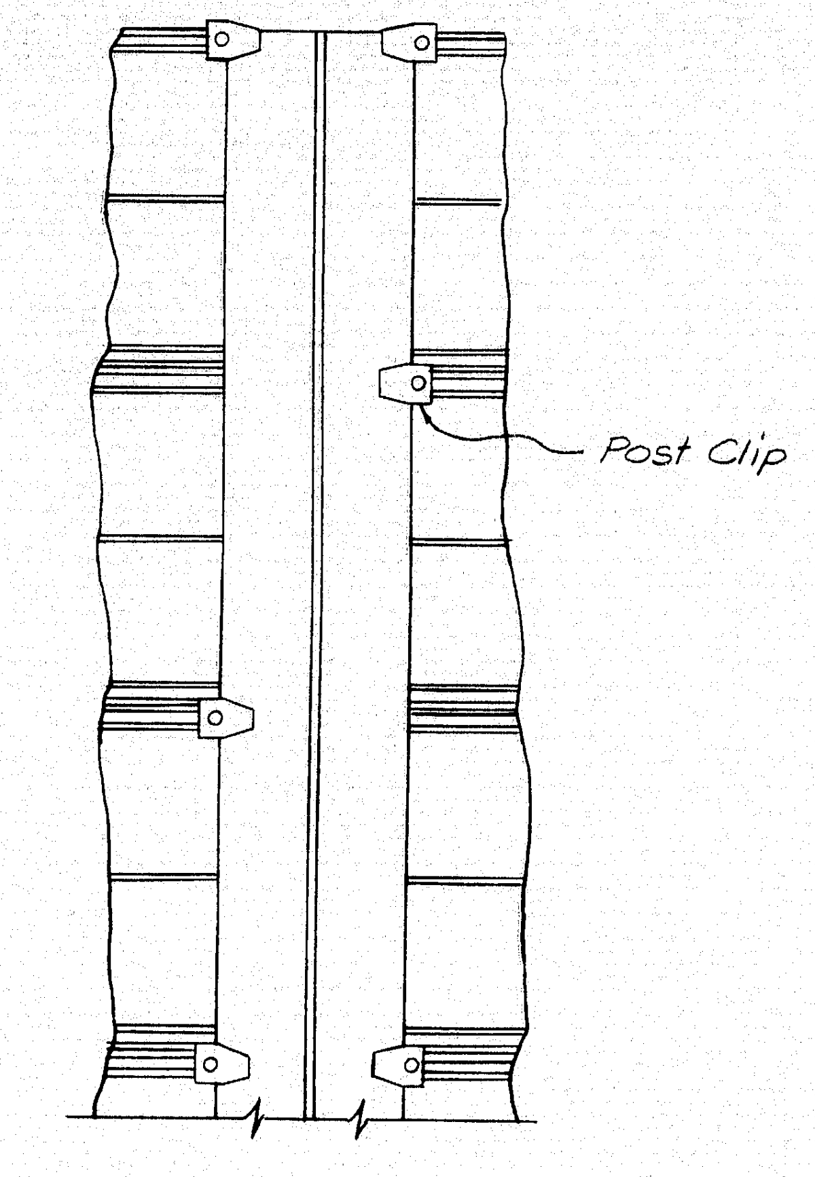
CASTING NOTES

Material: (356-T6) Aluminum Casting

Unless otherwise specified the following requirements shall be maintained

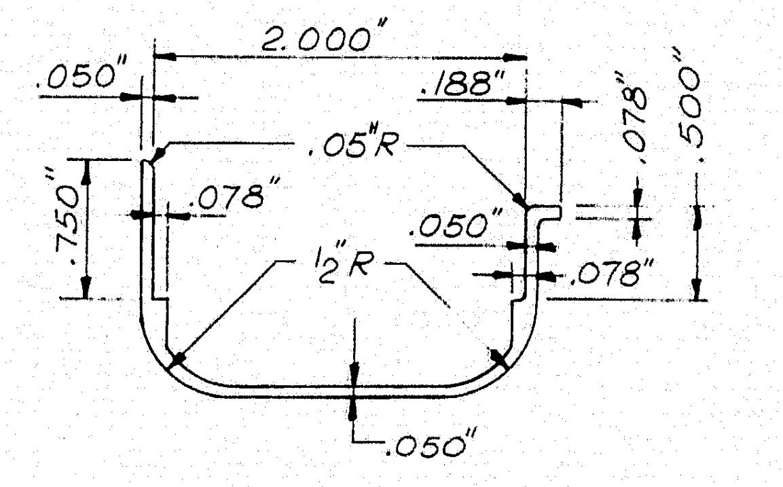
Corner Radii = ¼"
Fillets = ¼"
Wall Thickness = ± 1/32"
Draft Angles = 3°
All Casting Tolerances are +1/16"-0
Gates, Risers, and Seams trimmed flush

EXTRUDED SIGN PANEL & SIGN ATTACHMENT DETAILS



CLIP ARRANGEMENT

No Scale



EXTRUDED SIGN PANEL MOULDING

Full Scale

NOTE:

Provide Trim moulding on the vertical side of all extruded panel signs.

All Bolts, U-Bolts, Nuts, Flatwashers, & Lockwashers on this sheet shall be stainless steel (Type 304), unless otherwise noted.

6

DESIGN – T. C. Thompson
TRACE – A. R. Klein
CHECK – S. S. Nishimura

BRIDGE NO. IN CHARGE OF – Richard W. Christie

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

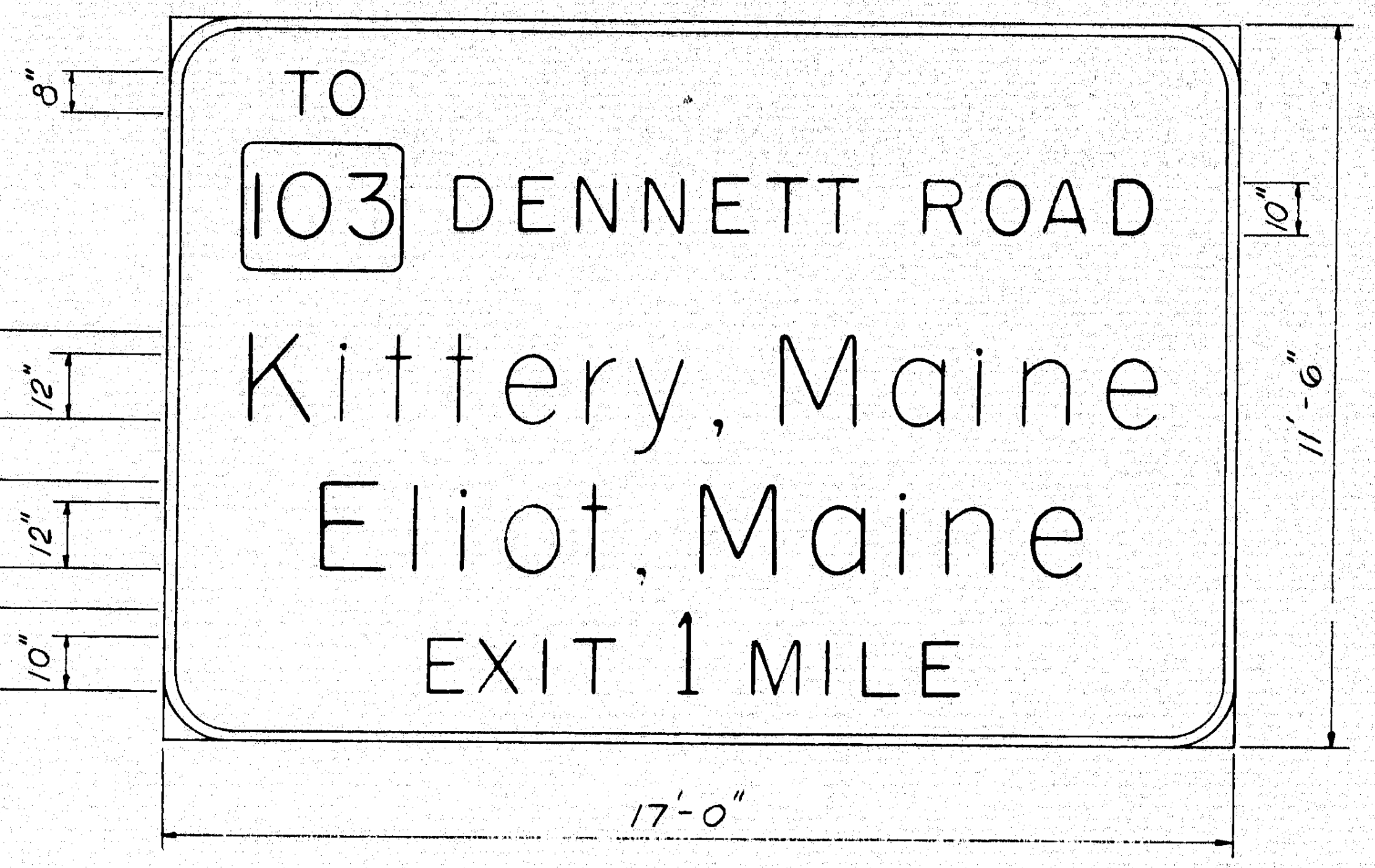
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

SIGN HANGERS
PANEL POINTS M16 EAST & M16 WEST
SIGN PANEL DETAILS

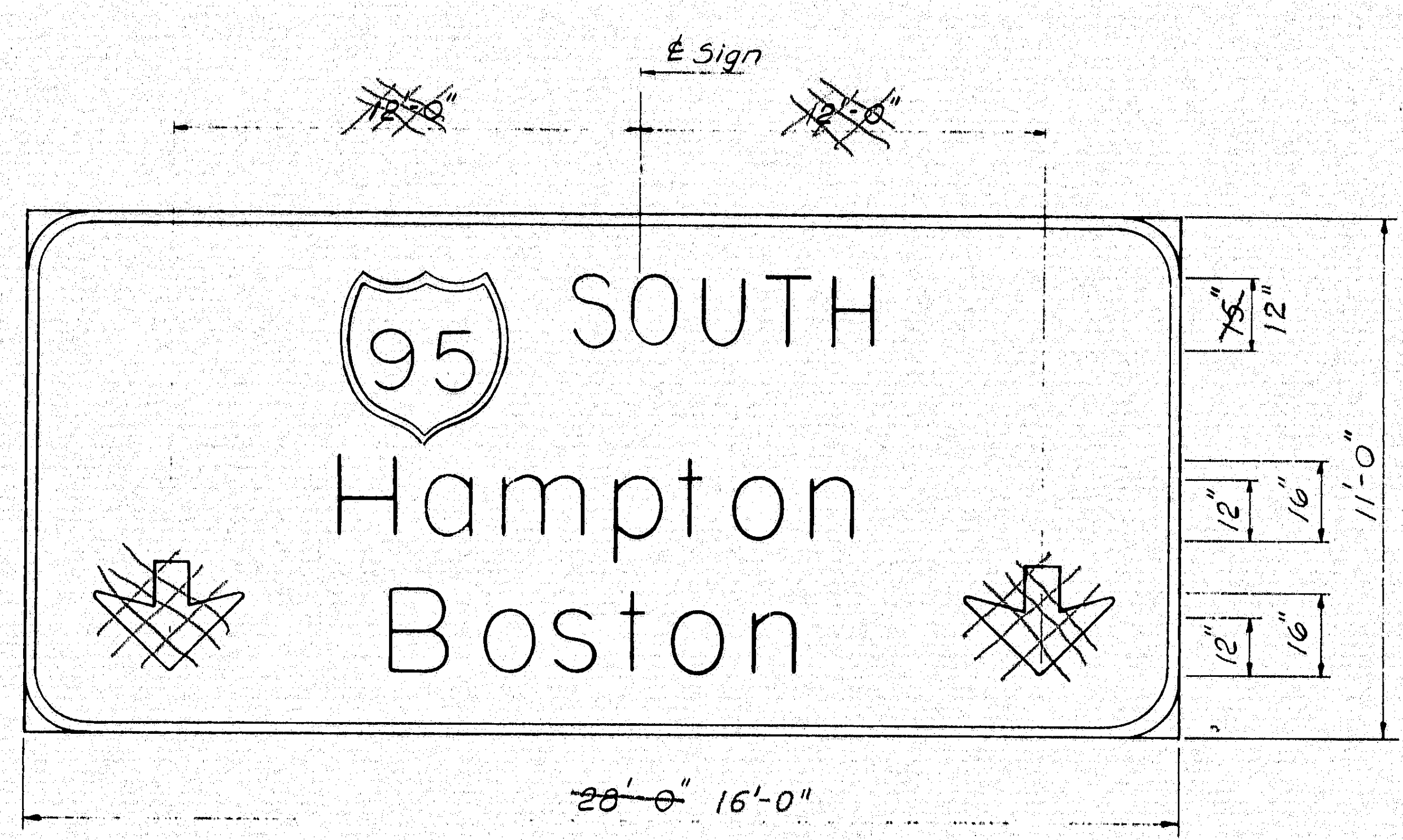
SHEET 15 OF 24

130-98

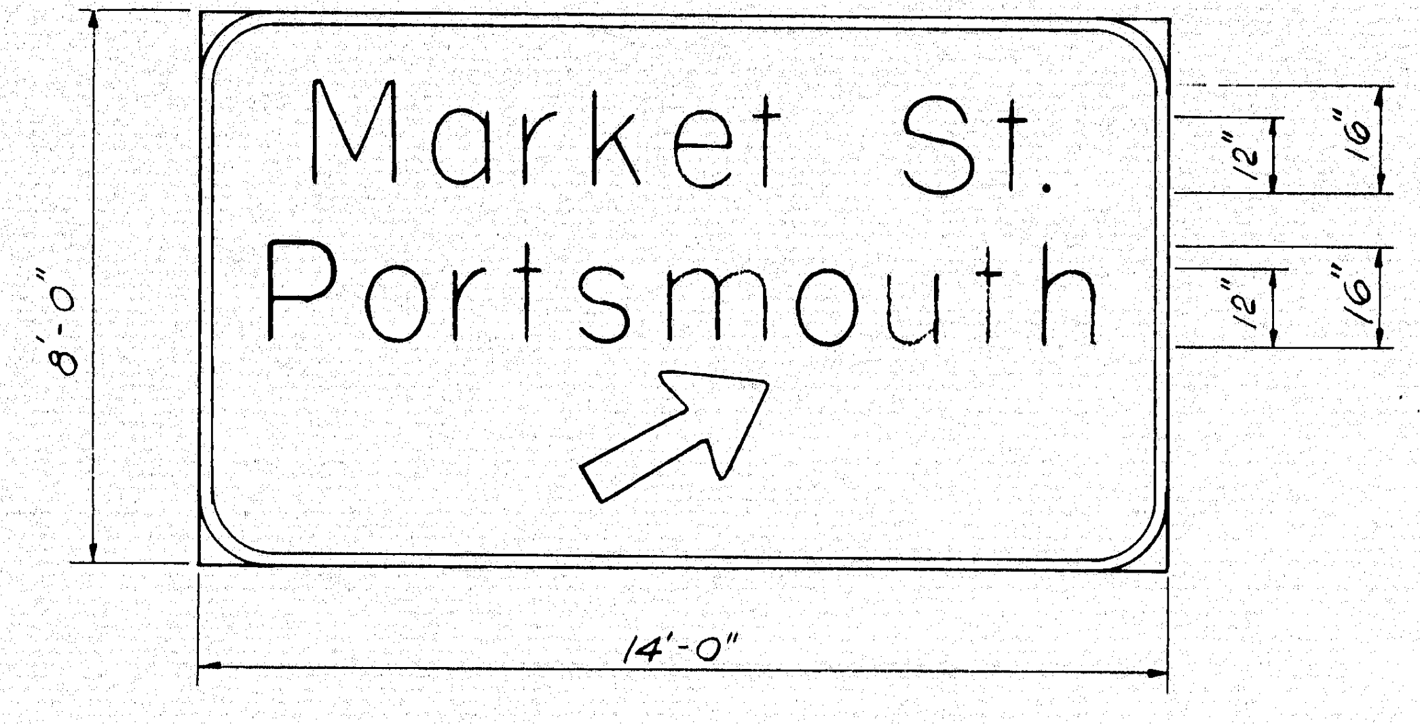
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	16	24



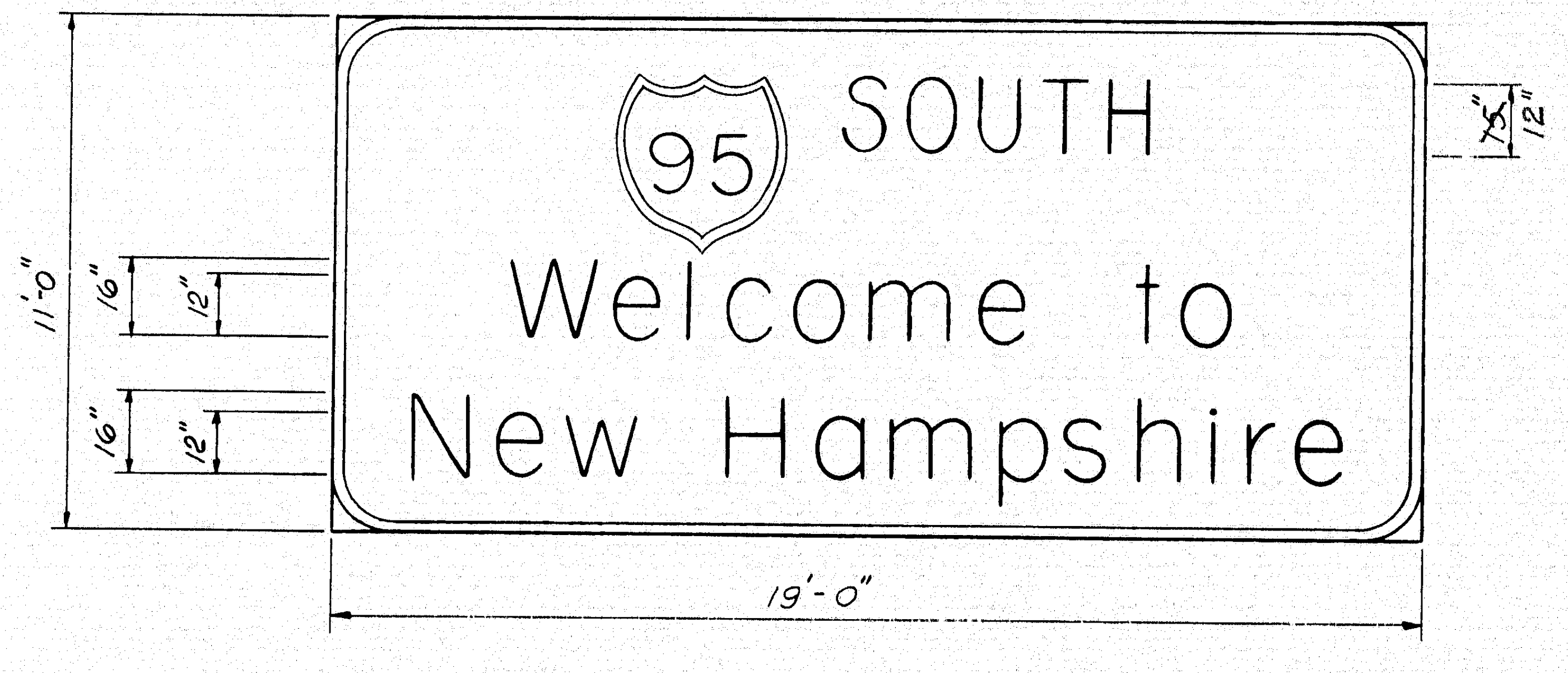
SIGN FACE 1



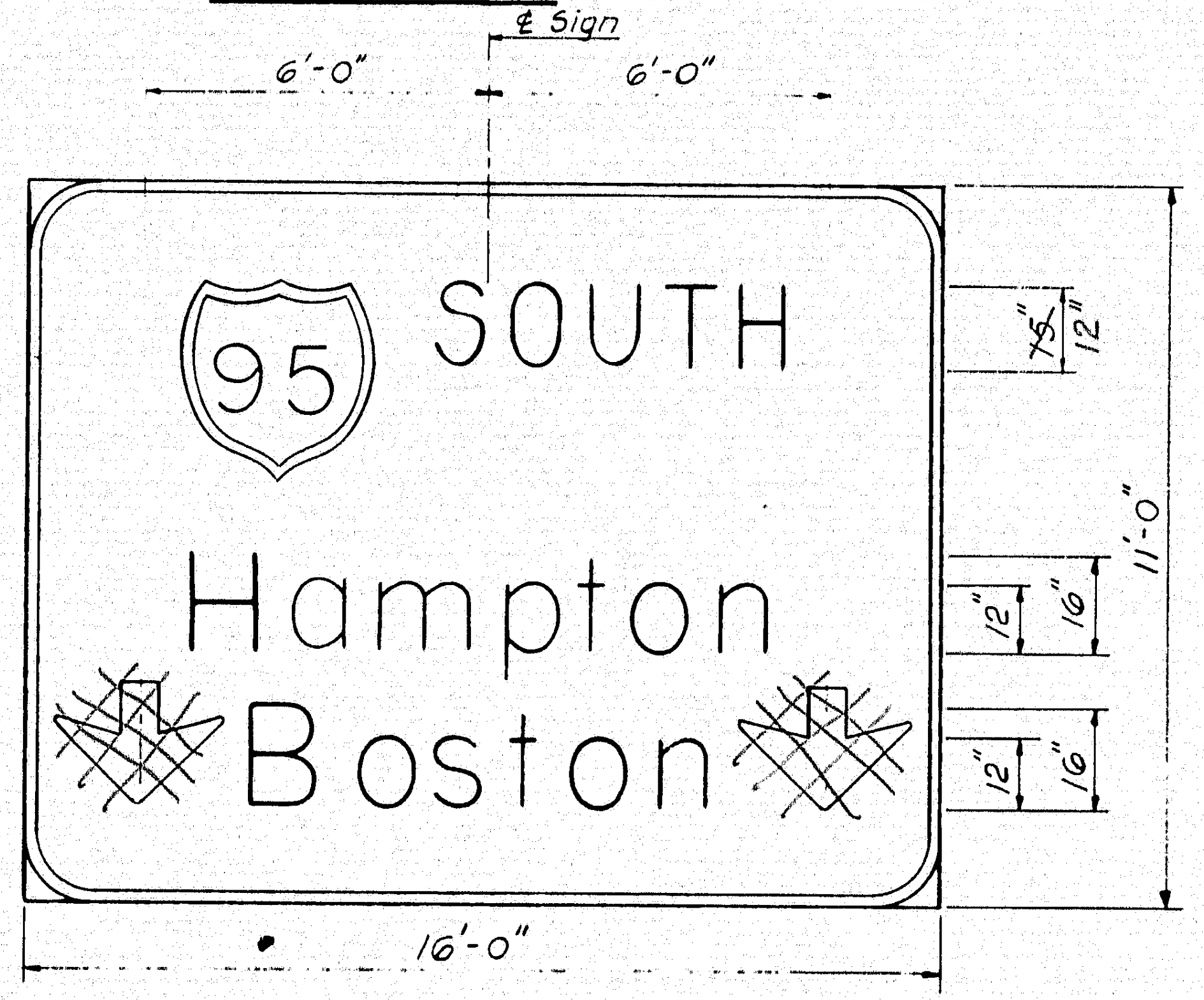
SIGN FACE 2



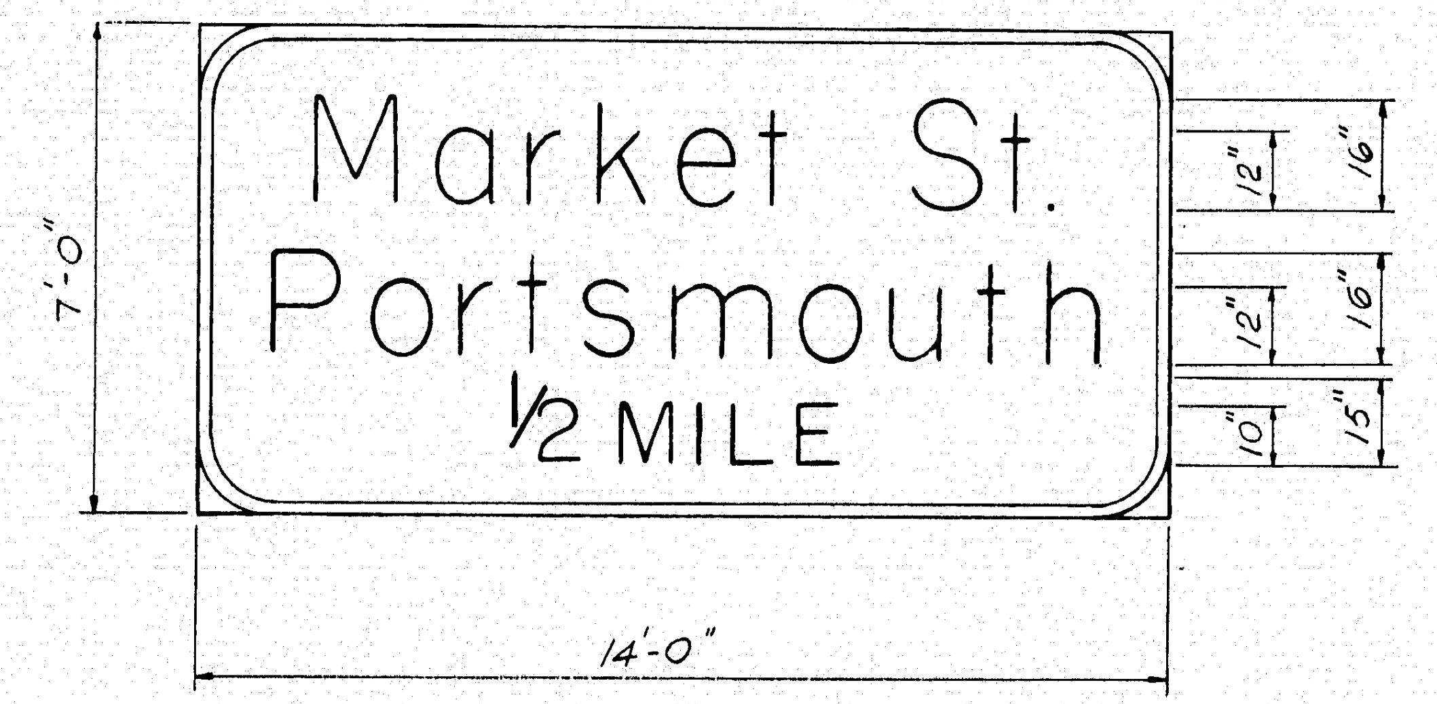
SIGN FACE 3



SIGN FACE 4

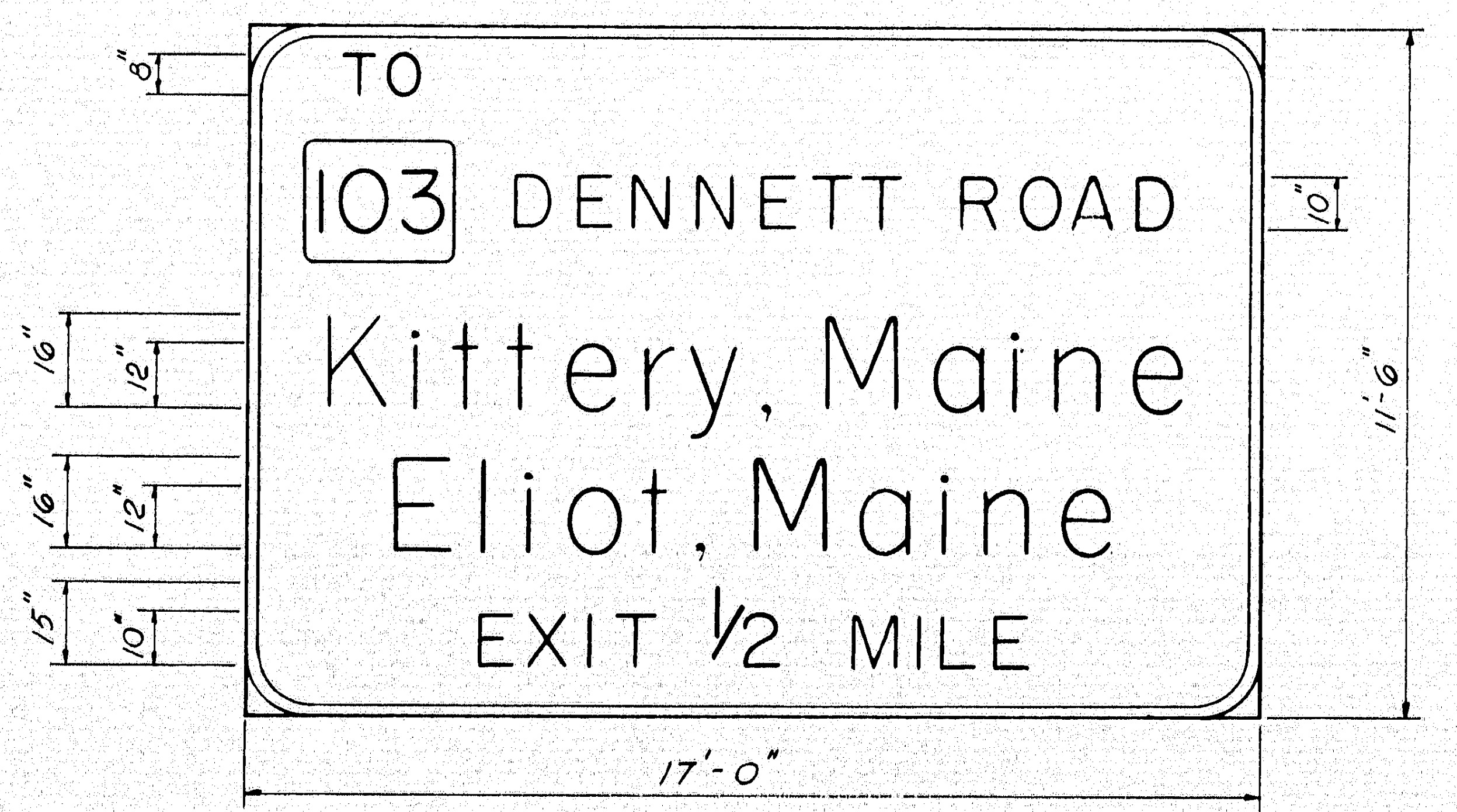


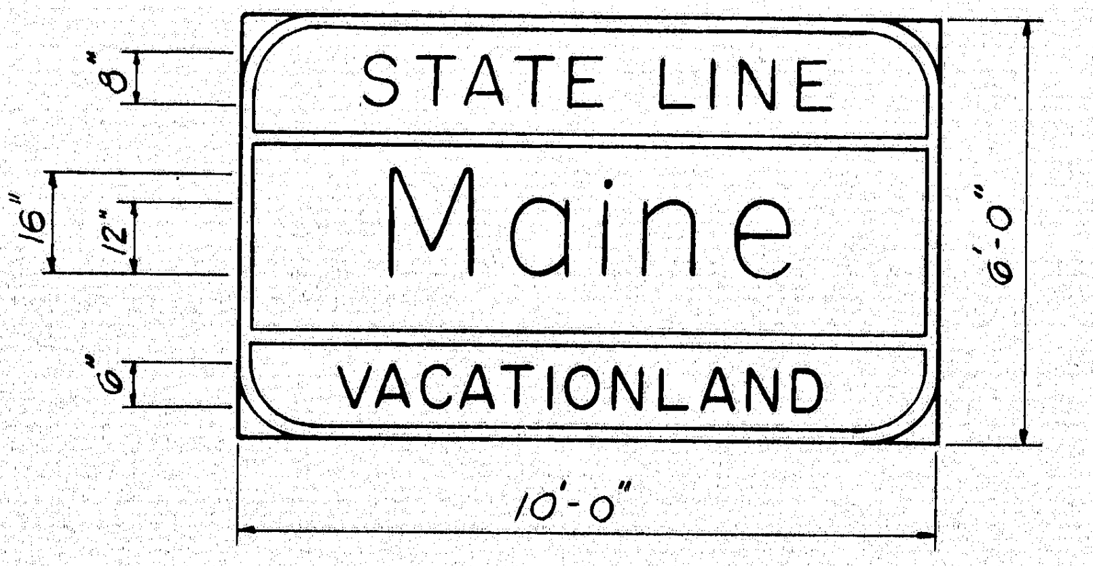
SIGN FACE 5



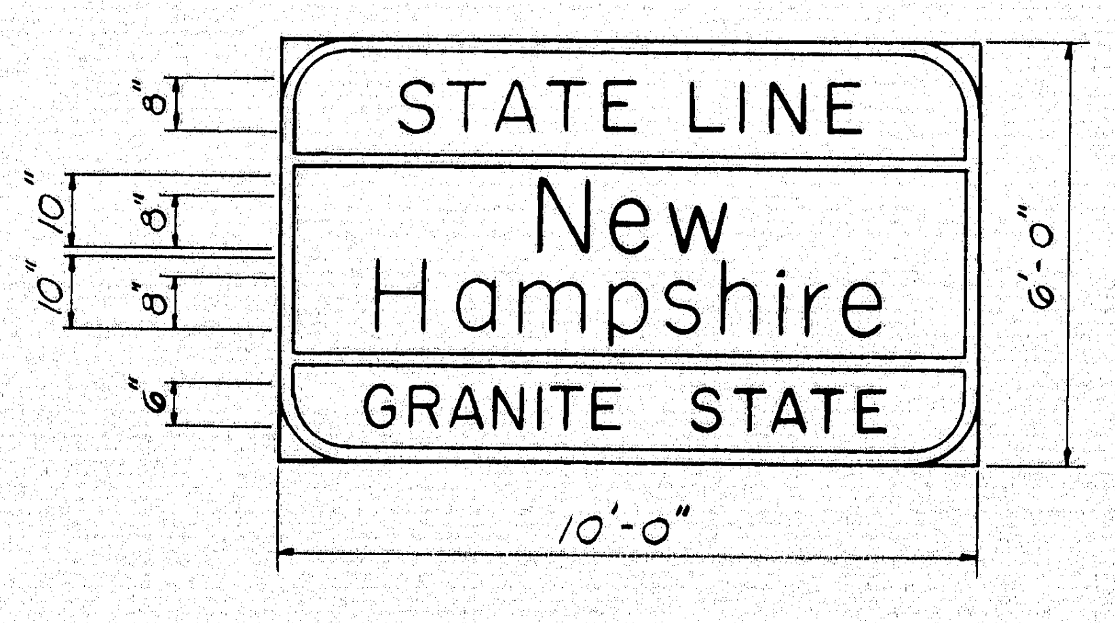
SIGN FACE 6

NOTE:
For Shield and Arrow dimensions see Sheet 17





SIGN FACE 7



SIGN FACE 8

SIGN FACE 9

AS BUILT
R.W. Christie 7/11/73

~~Scale: 3/8" = 1'-0"~~
NOT TO SCALE

6

DESIGN — T.C. Thompson
TRACE — A.D. Tchapkeli
CHECK — F.F. Wandworth

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.

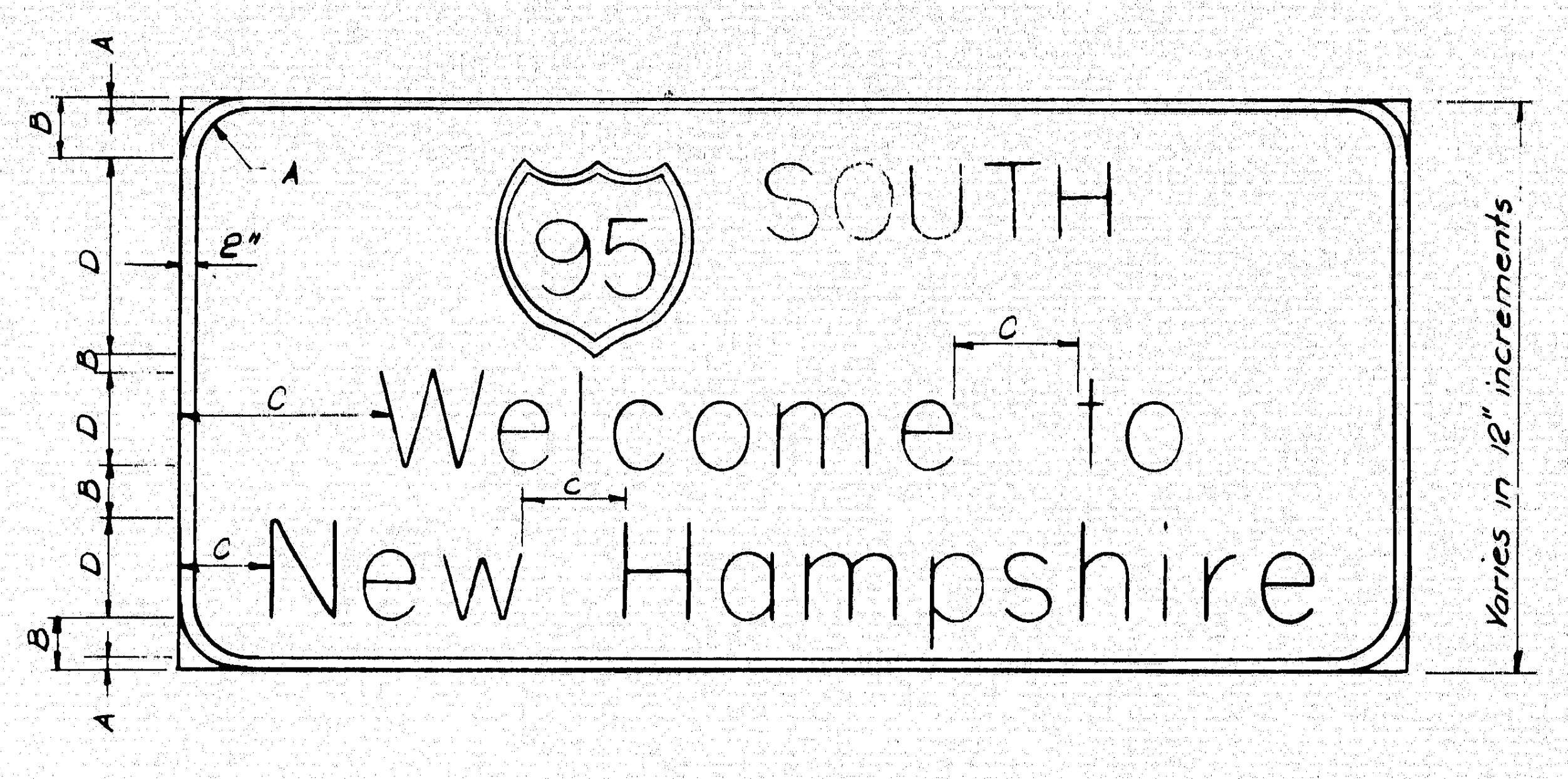
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

SIGN FACE MESSAGES

SHEET 16 OF 24

130-99

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1 (22) 16	17	24



NOTES-TYPICAL LAYOUT

A. Border: The border should be positioned on the edge of the sign. The corner radii should be approximately ⅛ the minimum dimension of the sign but not to exceed 12".

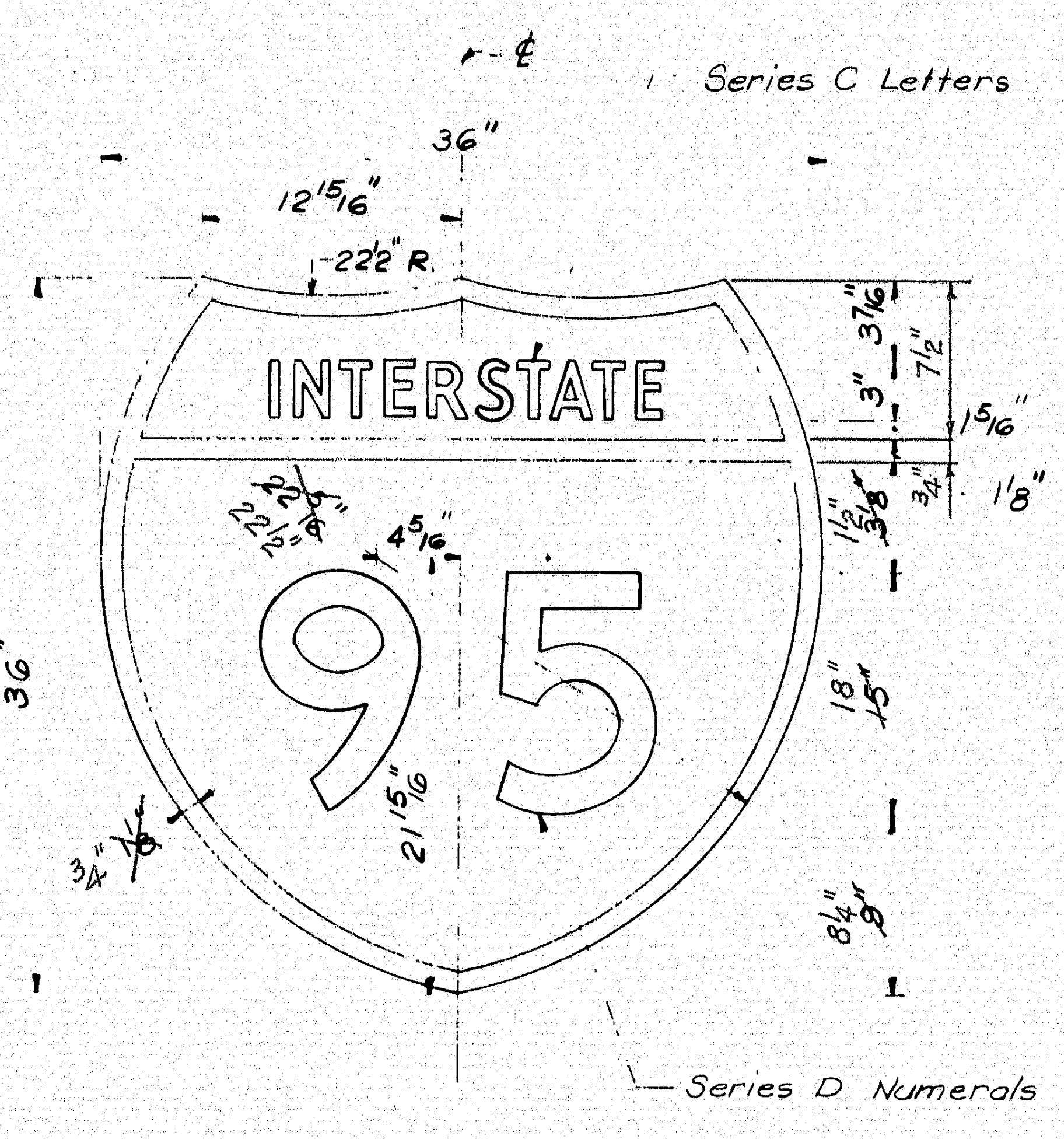
B. Vertical Spacing: Spacing between the top edge and the top line of copy, between bottom line and bottom edge, and between lines of copy should be approximately ½ the average of the upper case letter heights of adjacent lines of copy. When lower case descenders fall over upper case or lower case ascenders in the next lower line of copy the spacing should be increased to approximately ¾ the average of the upper case letter heights of the adjacent lines of copy. The spacing between sign edge and route markers or arrows should not be more than ½ the height of the largest upper case letter.

C. Horizontal Spacing: The spacing between words, words and border, or words and arrows in a line of copy should be approximately equal to the upper case letter height used in that line of copy. Each line should be optically centered.

D. Letter Height and Shield Size: Letter height and shield size should be as called for on the plans.

E. Letter Design: Intial capital letters (and numerals); Series E of the Standard Alphabets for Highway Signs, modified by widening the stroke width to approximately one-fifth the letter or numeral height.
Lower Case; Standard Lower Case Alphabets for Highway Signs.
(The above Standard Alphabets are available from the Federal Highway Admin., Washington , D.C.) 20591

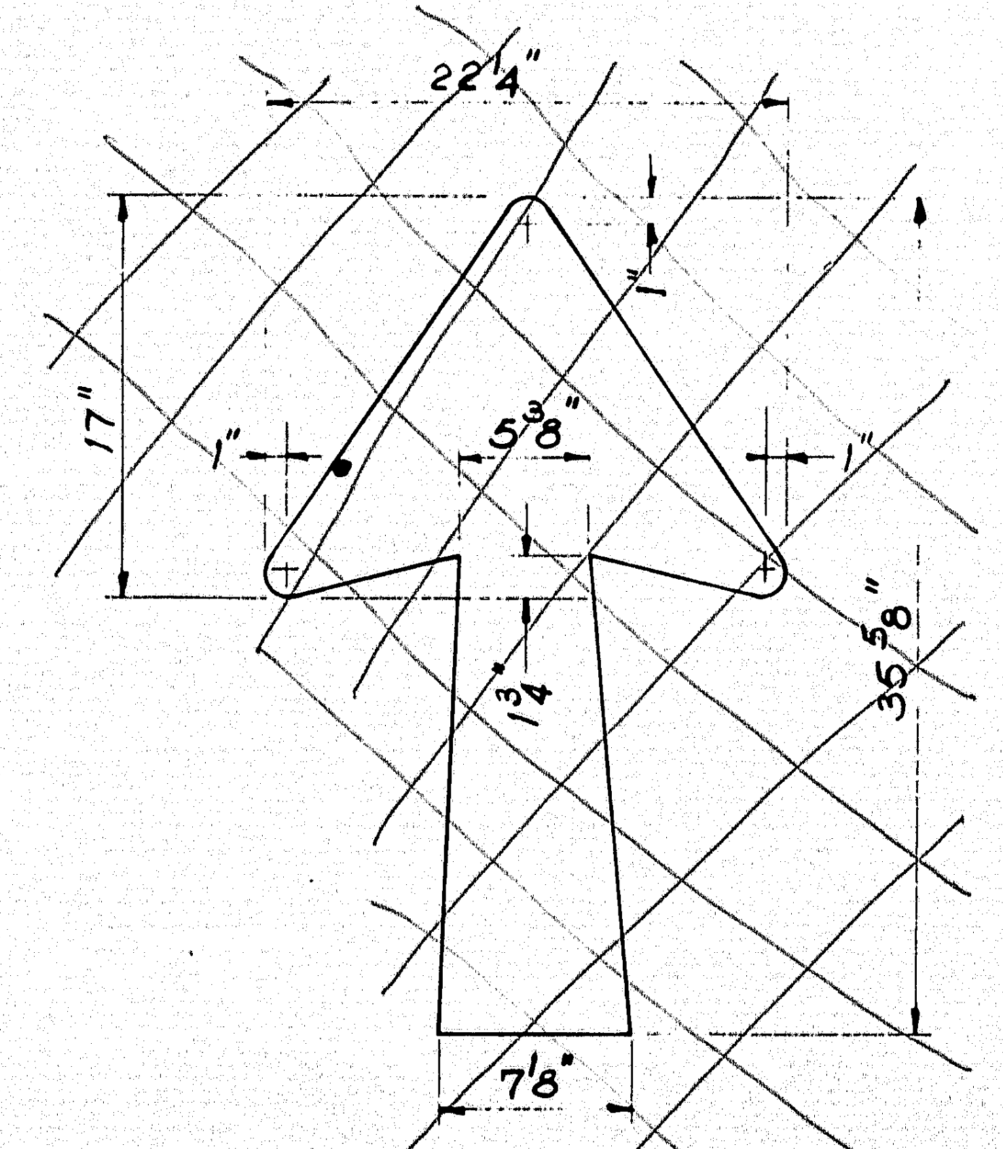
F. Colors: Border, Letters & Numbers- White Reflectorized
Background- Standard Interstate Green
Arrows- White Reflectorized



Colors: Interstate Letters-White Reflectorized,
Background - Red Reflectorized.
State and Numbers-White Reflectorized,
Background- Blue Reflectorized
Border- White Reflectorized

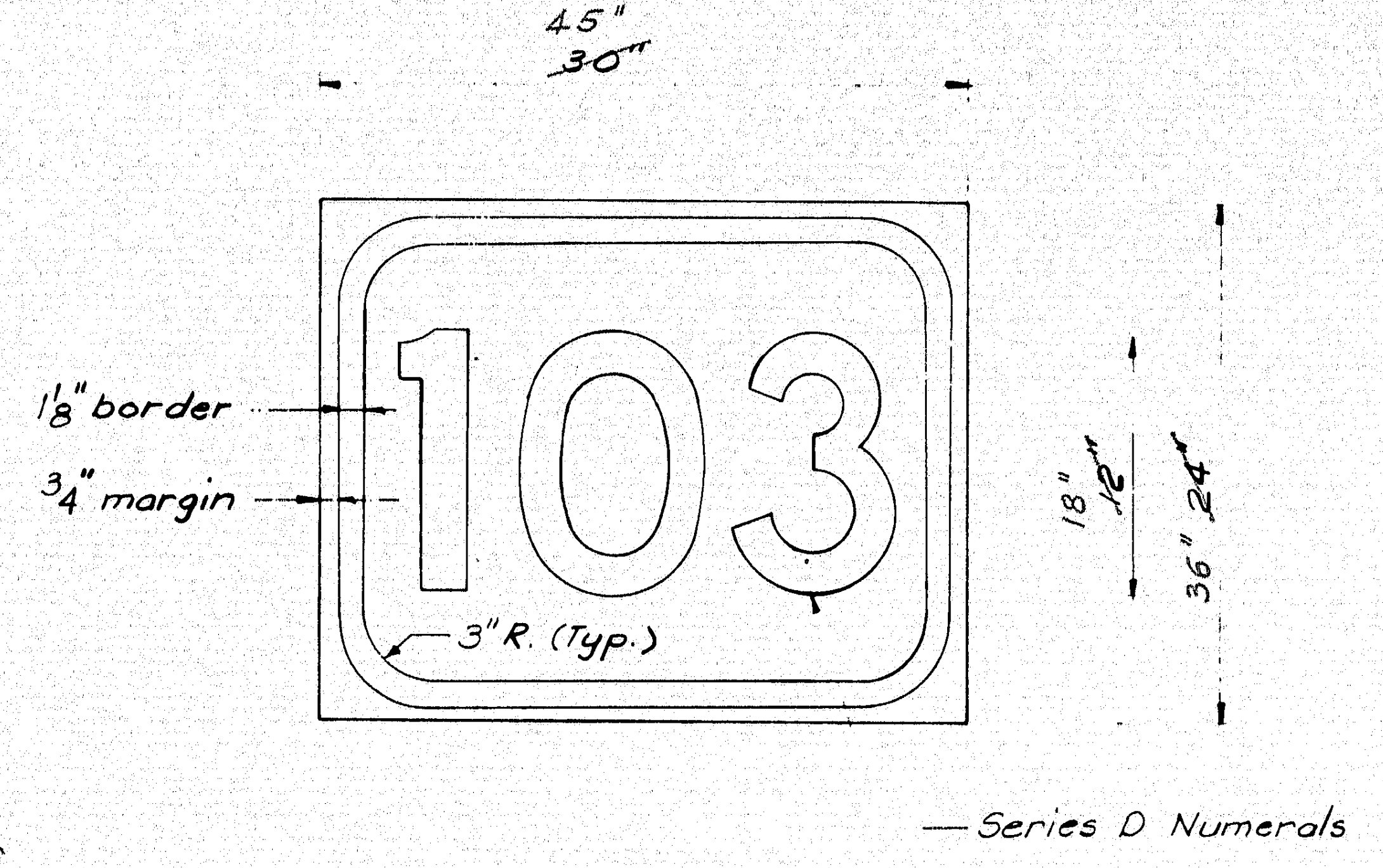
INTERSTATE SHIELD

~~Scale: 1½" = 1'-0~~
NOT TO SCALE



~~ARROW~~

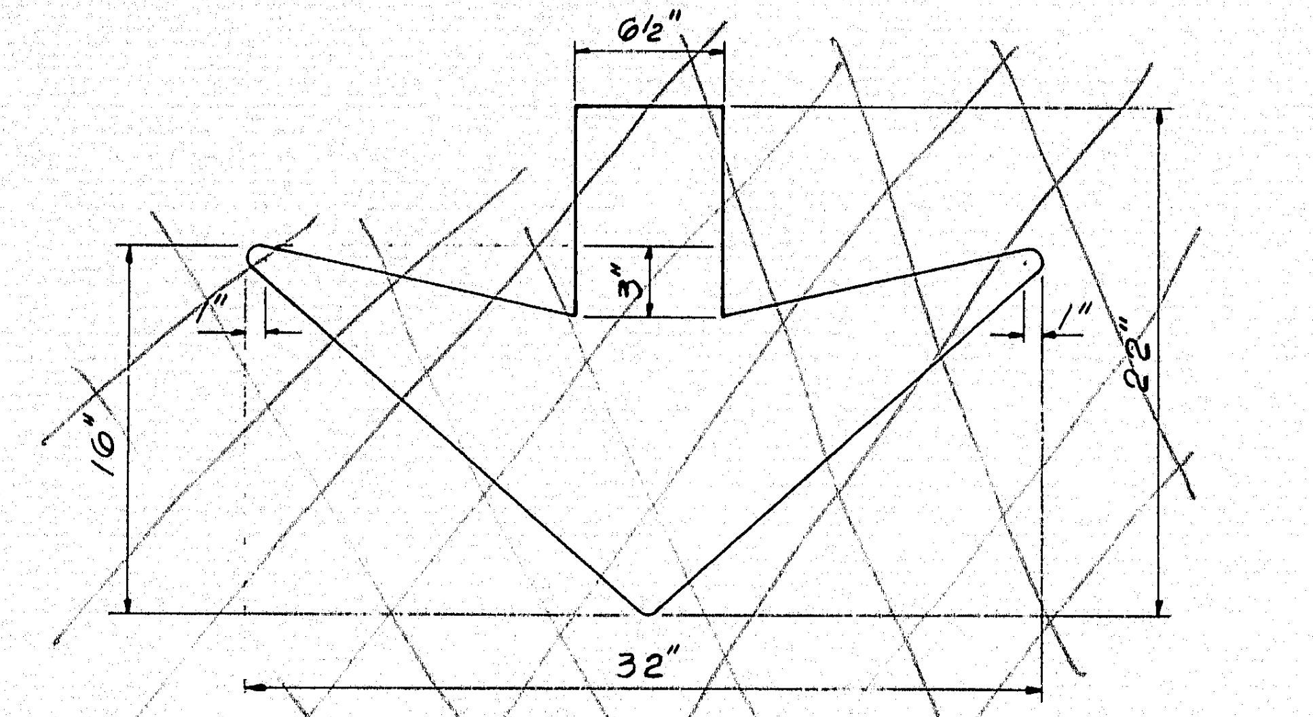
~~Scale 1½=1'-0"~~



Colors: Border & Numbers- Black
Background-White Reflectorized

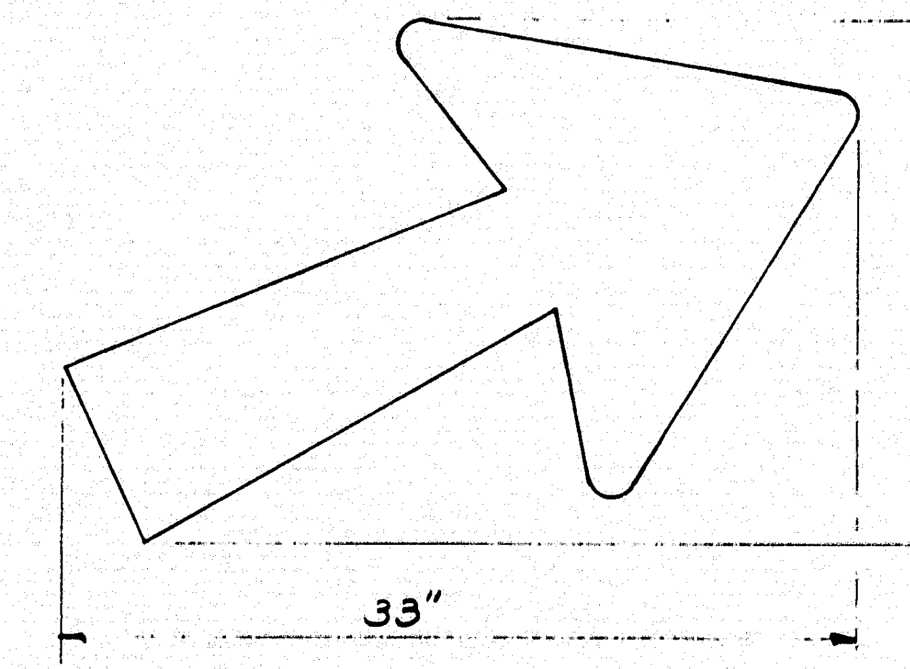
STATE ROUTE NUMBER

~~Scale: 1½" = 1'-0~~ NOT TO SCALE



DOWN ARROW

Scale: 1½" = 1'-0"



DIAGONAL ARROW

Scale: 1½ = 1'-0"

Note: Colors and Reflectorized Surfaces shall conform to the standards specified in the "A.A.S.H.O Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways," available from the A.A.S.H.O., 917 National Press Building, Washington 4, D.C., 1970 Edition.

AS BUILT
R. W. Christie 7/11/73

6

DESIGN — T. C. Thompson
TRACE — A. R. Klein
CHECK —
BRIDGE NO. IN CHARGE OF — Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

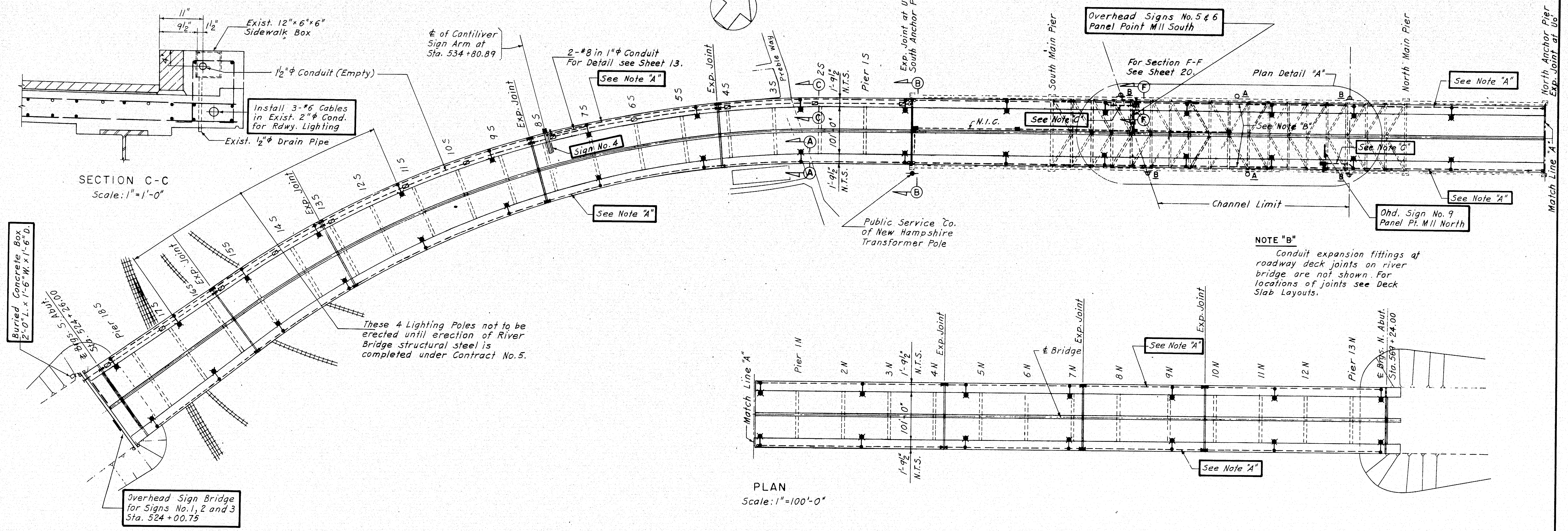
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

MESSAGE LAYOUT DETAILS

SHEET 17 OF 24

130-100

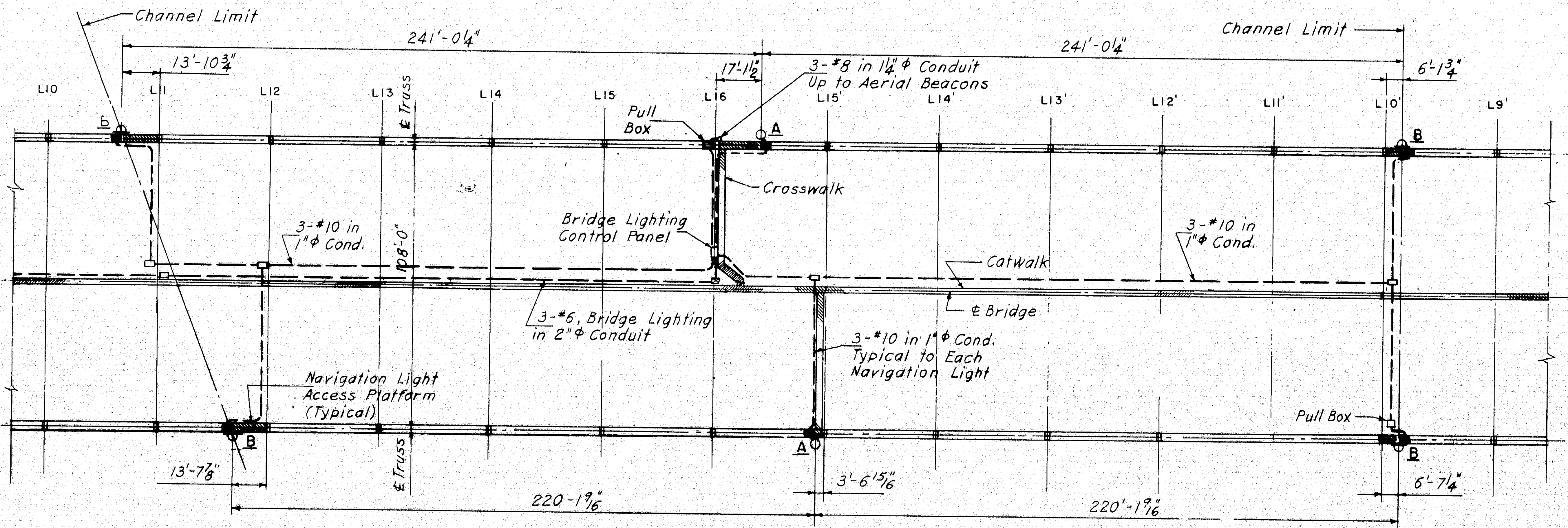
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	18	24


11"
9½"
1½"
Exist. 12"×6"×6" Sidewalk Box
1½"⌀ Conduit (Empty)
Install 3-#6 Cables in Exist. 2"⌀ Cond. for Rdwy. Lighting
Exist. ½"⌀ Drain Pipe
℄ of Cantiliver Sign Arm at Sta. 534+80.89
2-#8 in 1"⌀ Conduit For Detail see Sheet 13.
See Note "A"
Sign No. 4
Exp. Joint
85
75
65
55
45
35
25
105
95
115
125
135
145
155
165
175
Pier 18S
Pier 1S
Preble Way
1'-9½" N.T.S.
101'-0"
Exp. Joint at Uo South Anchor Pier
South Main Pier
North Main Pier
North Anchor Pier Exp. Joint at Uo
Overhead Signs No. 5 & 6 Panel Point M11 South
For Section F-F See Sheet 20.
Plan Detail "A"
N.I.C.
See Note "C"
See Note "B"
Channel Limit
Ohd. Sign No. 9 Panel Pt. M11 North
Match Line "A"
Public Service Co. of New Hampshire Transformer Pole
These 4 Lighting Poles not to be erected until erection of River Bridge structural steel is completed under Contract No. 5.
Buried Concrete Box 2'-0"L. × 1'-6"W. × 1'-6"D.
℄ Brgs. S. Abut. Sta. 524+26.00
Overhead Sign Bridge for Signs No. 1, 2 and 3 Sta. 524+00.75
Pier 1N
2N
3N
4N
5N
6N
7N
8N
9N
10N
11N
12N
Pier 13N
℄ Bridge
℄ Brgs. N. Abut. Sta. 569+24.00

SECTION C-C
Scale: 1"=1'-0"

PLAN
Scale: 1"=100'-0"

NOTE "B"
Conduit expansion fittings at roadway deck joints on river bridge are not shown. For locations of joints see Deck Slab Layouts.



PLAN DETAIL "A" BELOW ROADWAY
SCHEMATIC CONDUIT ARRANGEMENT
Scale: 1"=30'-0"

LEGEND

A ○ – Channel Center Light, 360° Green
B ◠ – Channel Margin Light, 180° Red
●—■ – Roadway Lighting Pole
☐ – Pull or Splice Box, 8"×8"×6"
☒ – Pull Box, 12"×12"×6"
■ – Splice Box, 6"×6"×4"
▨ – Sidewalk Box, 12"×6"×6"
– – – – Conduit (Size as Noted)
⧓ – Conduit Expansion Fitting

NOTE "A"
Install 3-#6 cables in existing 2"⌀ conduit for roadway lighting (typical).

NOTE "C"
Install 2-#6 cables in existing 1½"⌀ conduit for sign lighting circuit.

THE WORK TO BE PERFORMED UNDER CONTRACT 6 IS SHOWN IN THIS MANNER

☐

ALL OTHER ELECTRICAL WORK ON THIS DRAWING IS SHOWN FOR INFORMATION ONLY, AND IS NOT IN CONTRACT.

Notes:
1. For Section A-A see Sheet 21.
2. For Section B-B see Sheet 19.
3. For connections to overhead signs see Sheets 11, 13 and 14.

6

DESIGN – E.D.
TRACE – K.A.S.
CHECK – H.B. Hyatt

BRIDGE NO. IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

BRIDGE LIGHTING LAYOUT

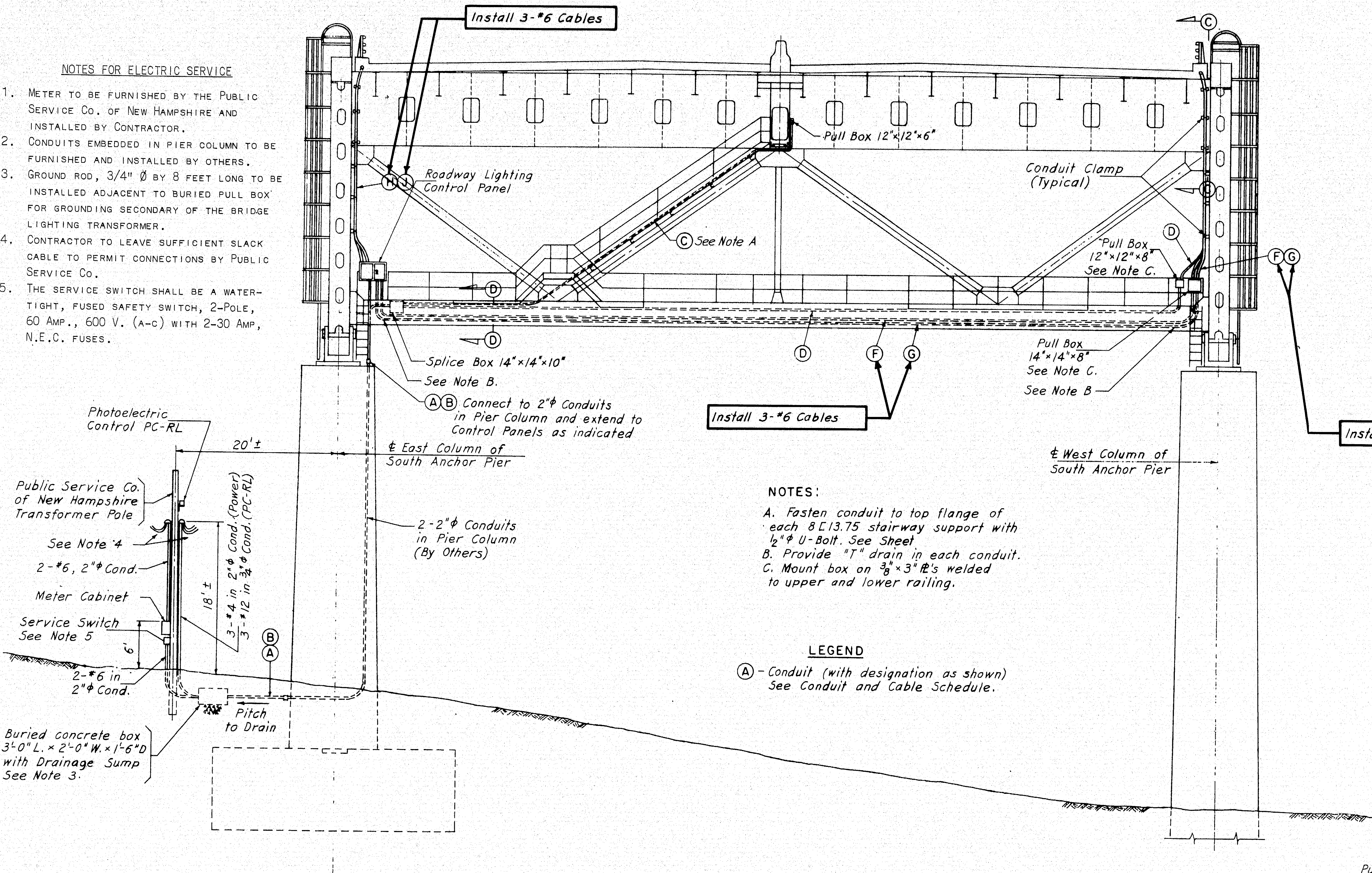
SHEET 18 OF 24

130-101

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	19	24

NOTES FOR ELECTRIC SERVICE

1. Meter to be furnished by the Public Service Co. of New Hampshire and installed by Contractor.
2. Conduits embedded in pier column to be furnished and installed by others.
3. Ground rod, 3/4" Ø by 8 feet long to be installed adjacent to buried pull box for grounding secondary of the bridge lighting transformer.
4. Contractor to leave sufficient slack cable to permit connections by Public Service Co.
5. The service switch shall be a water-tight, fused safety switch, 2-Pole, 60 Amp., 600 V. (a-c) with 2-30 Amp, N.E.C. fuses.


Install 3-#6 Cables
Ⓗ Ⓙ Roadway Lighting Control Panel
Pull Box 12"×12"×6"
Ⓒ See Note A
Conduit Clamp (Typical)
Ⓒ
Ⓓ
Pull Box 12"×12"×8" See Note C.
Ⓕ Ⓖ
Splice Box 14"×14"×10"
See Note B.
Ⓐ Ⓑ Connect to 2"ϕ Conduits in Pier Column and extend to Control Panels as indicated
Ⓓ Ⓕ Ⓖ
Install 3-#6 Cables
Pull Box 14"×14"×8" See Note C.
See Note B
Photoelectric Control PC-RL
20'±
℄ East Column of South Anchor Pier
℄ West Column of South Anchor Pier
Public Service Co. of New Hampshire Transformer Pole
See Note 4
2-#6, 2"ϕ Cond.
Meter Cabinet
Service Switch See Note 5
6'
18'±
3-#4 in 2"ϕ Cond. (Power)
3-#12 in 3/4"ϕ Cond. (PC-RL)
2-#6 in 2"ϕ Cond.
Ⓑ Ⓐ
2-2"ϕ Conduits in Pier Column (By Others)
Buried concrete box 3'-0" L. × 2'-0" W. × 1'-6" D with Drainage Sump See Note 3.
Pitch to Drain

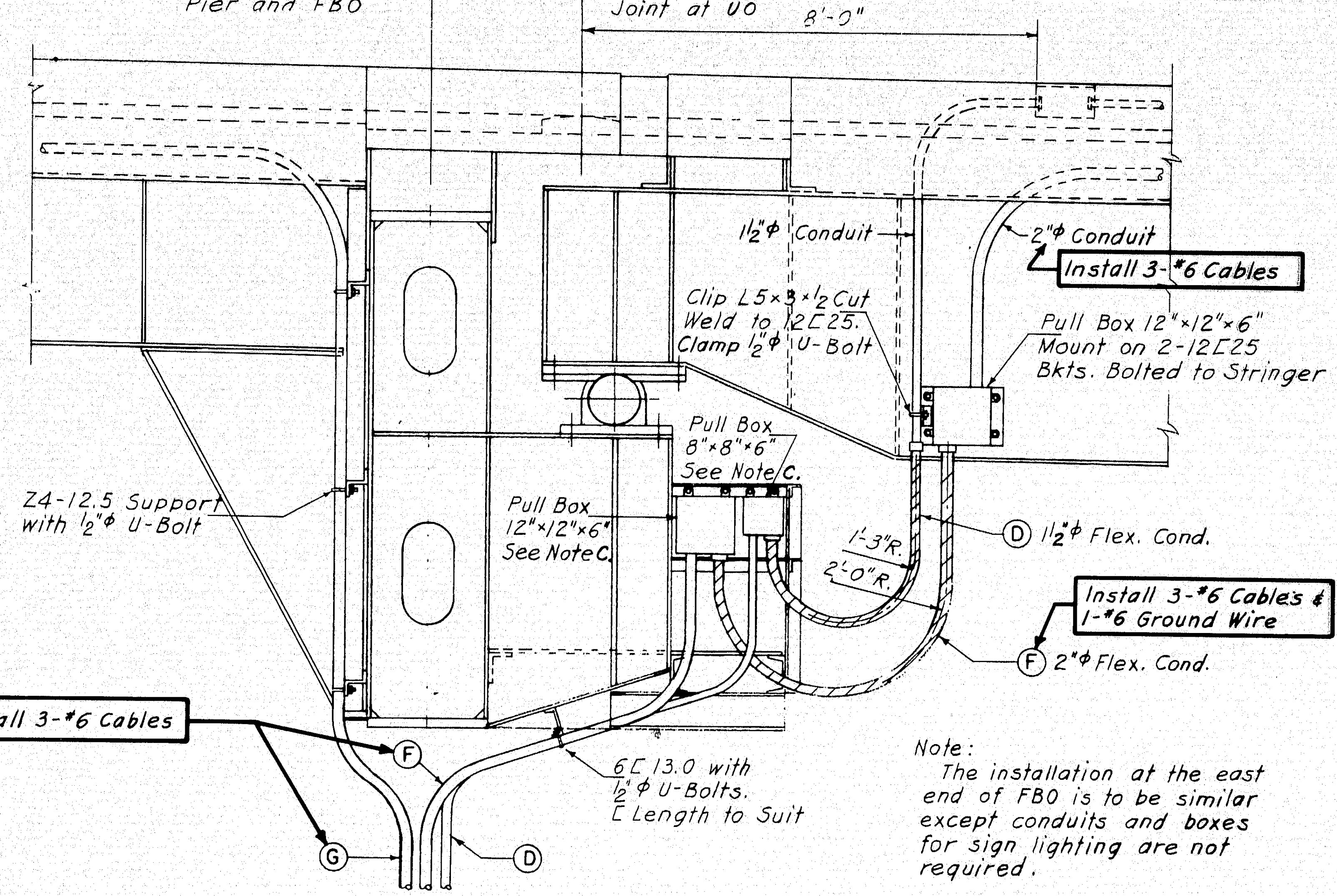
NOTES:

A. Fasten conduit to top flange of each 8 [13.75 stairway support with 1/2"ϕ U-Bolt. See Sheet
B. Provide "T" drain in each conduit.
C. Mount box on 3/8"×3" ℞'s welded to upper and lower railing.

LEGEND

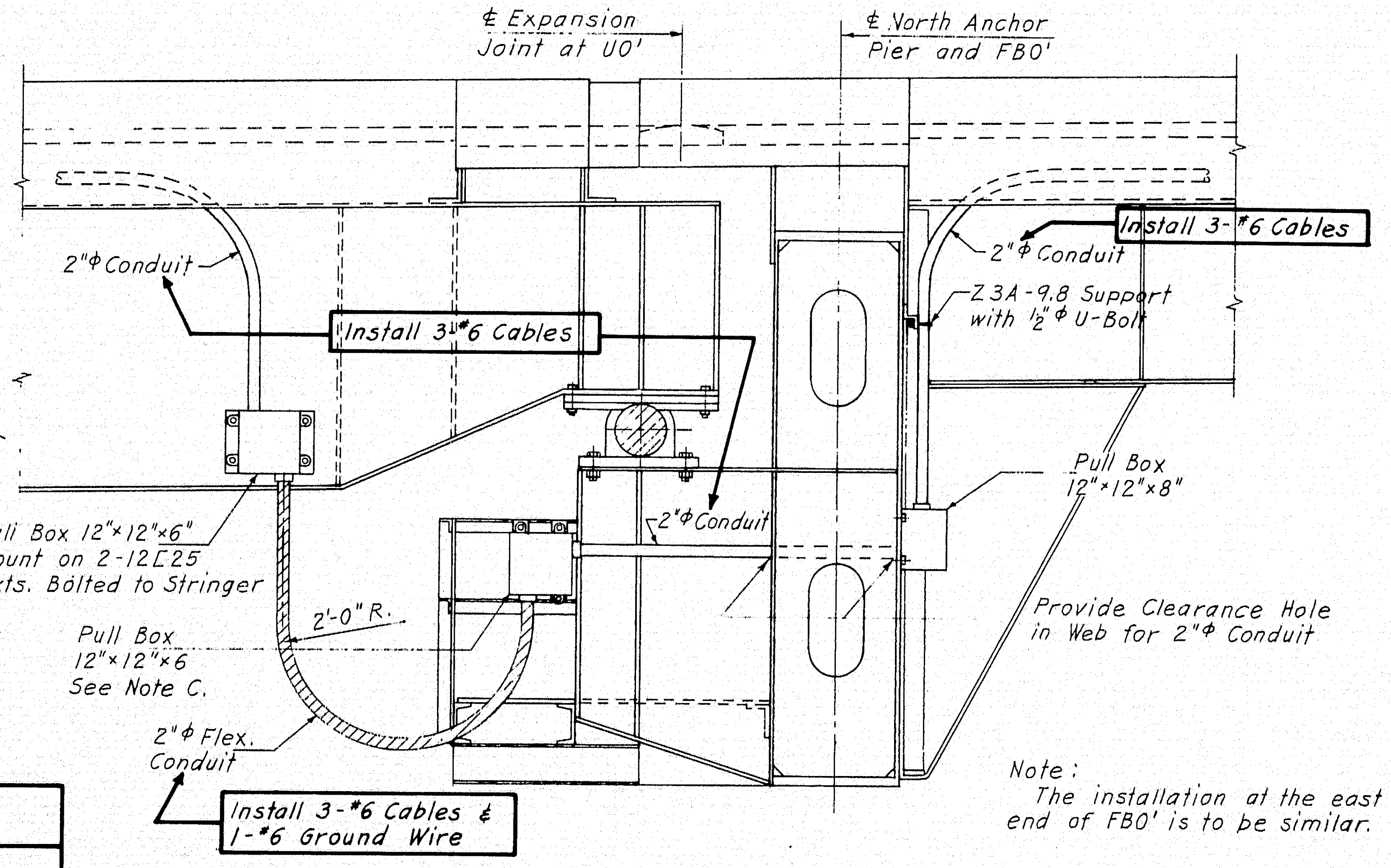
Ⓐ - Conduit (with designation as shown) See Conduit and Cable Schedule.

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


℄ South Anchor Pier and FBO
℄ Expansion Joint at U0
8'-0"
1 1/2"ϕ Conduit
2"ϕ Conduit
Install 3-#6 Cables
Clip L5×3×1/2 Cut Weld to 12[25. Clamp 1/2"ϕ U-Bolt
Pull Box 12"×12"×6" Mount on 2-12[25 Bkts. Bolted to Stringer
Z4-12.5 Support with 1/2"ϕ U-Bolt
Pull Box 8"×8"×6" See Note C.
Pull Box 12"×12"×6" See Note C.
1'-3"R.
2'-0"R.
Ⓓ 1 1/2"ϕ Flex. Cond.
Install 3-#6 Cables & 1-#6 Ground Wire
Ⓕ 2"ϕ Flex. Cond.
Install 3-#6 Cables
Ⓕ
Ⓖ
Ⓓ
6[13.0 with 1/2"ϕ U-Bolts. [Length to Suit

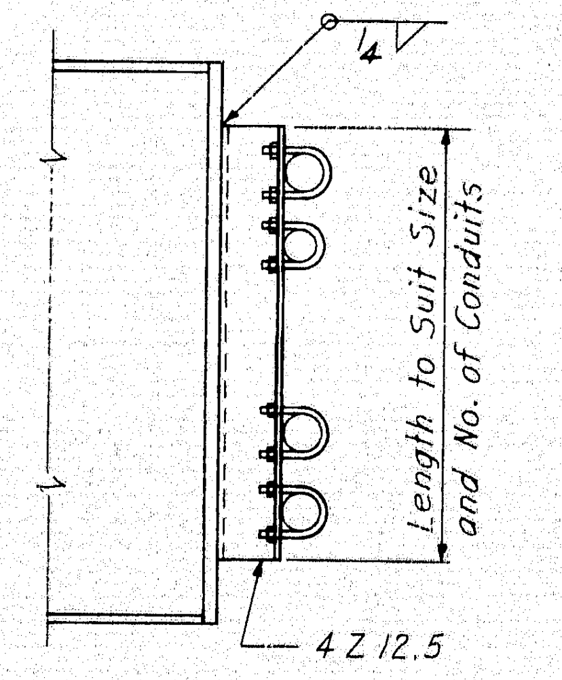
Note:
The installation at the east end of FBO is to be similar except conduits and boxes for sign lighting are not required.

SECTION C-C
Scale: 1/2" = 1'-0"


℄ Expansion Joint at U0'
℄ North Anchor Pier and FBO'
2"ϕ Conduit
Install 3-#6 Cables
2"ϕ Conduit
Install 3-#6 Cables
Z3A-9.8 Support with 1/2"ϕ U-Bolt
2"ϕ Conduit
Pull Box 12"×12"×8"
Pull Box 12"×12"×6" Mount on 2-12[25 Bkts. Bolted to Stringer
2'-0"R.
Pull Box 12"×12"×6 See Note C.
2"ϕ Flex. Conduit
Install 3-#6 Cables & 1-#6 Ground Wire
Provide Clearance Hole in Web for 2"ϕ Conduit

Note:
The installation at the east end of FBO' is to be similar.

SECTION C'-C'
Scale: 1/2" = 1'-0"



NOTES FOR CONDUIT SUPPORTS:

1. All conduit brackets to be detailed on Structural Steel shop drawings.
2. The spacing of brackets shall not exceed 5 feet.
3. All U-bolts to be 3/8" diameter min., hot-dip galvanized.

SECTION D-D
TYPICAL SUPPORT FOR CONDUITS
MOUNTED ON STEEL MEMBERS
Scale: 1/2" = 1'-0"

CONDUIT AND CABLE SCHEDULE

Designation	Size	Cables	Used for
A	2"ϕ	3-#4 3-#12	Rdwy. Ltg. Supply Photocell PC-RL
B	2"ϕ	2-#6 1-#6	Bridge Ltg. Service Ground Wire
C	2"ϕ	3-#6	Bridge Lighting
D	1 1/2"ϕ	10 Ga. Pull Wire	Spare
F	2"ϕ	10 Ga. Pull Wire	S.W. Rdwy. Ltg. Ckt.
G	2"ϕ	10 Ga. Pull Wire	N.W. Rdwy. Ltg. Ckt.
H	2"ϕ	10 Ga. Pull Wire	S.E. Rdwy. Ltg. Ckt.
J	2"ϕ	10 Ga. Pull Wire	N.E. Rdwy. Ltg. Ckt.

CONTRACT 6

The work to be performed under Contract 6 is indicated in this manner

The work shall consist of the installation of four feeders to distribute power for roadway and sign lighting, complete from the Control Panel to the equipment on the bridge. Each feeder shall be connected to the proper circuit breaker in the Control Panel.

All other electrical work on this drawing is shown for information only, and is not in Contract.

NOTE:
For Section Marks B-B see Sheet 18.

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.

6

DESIGN — E.D.
TRACE — K.A.S.
CHECK — H.B. Hyatt

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

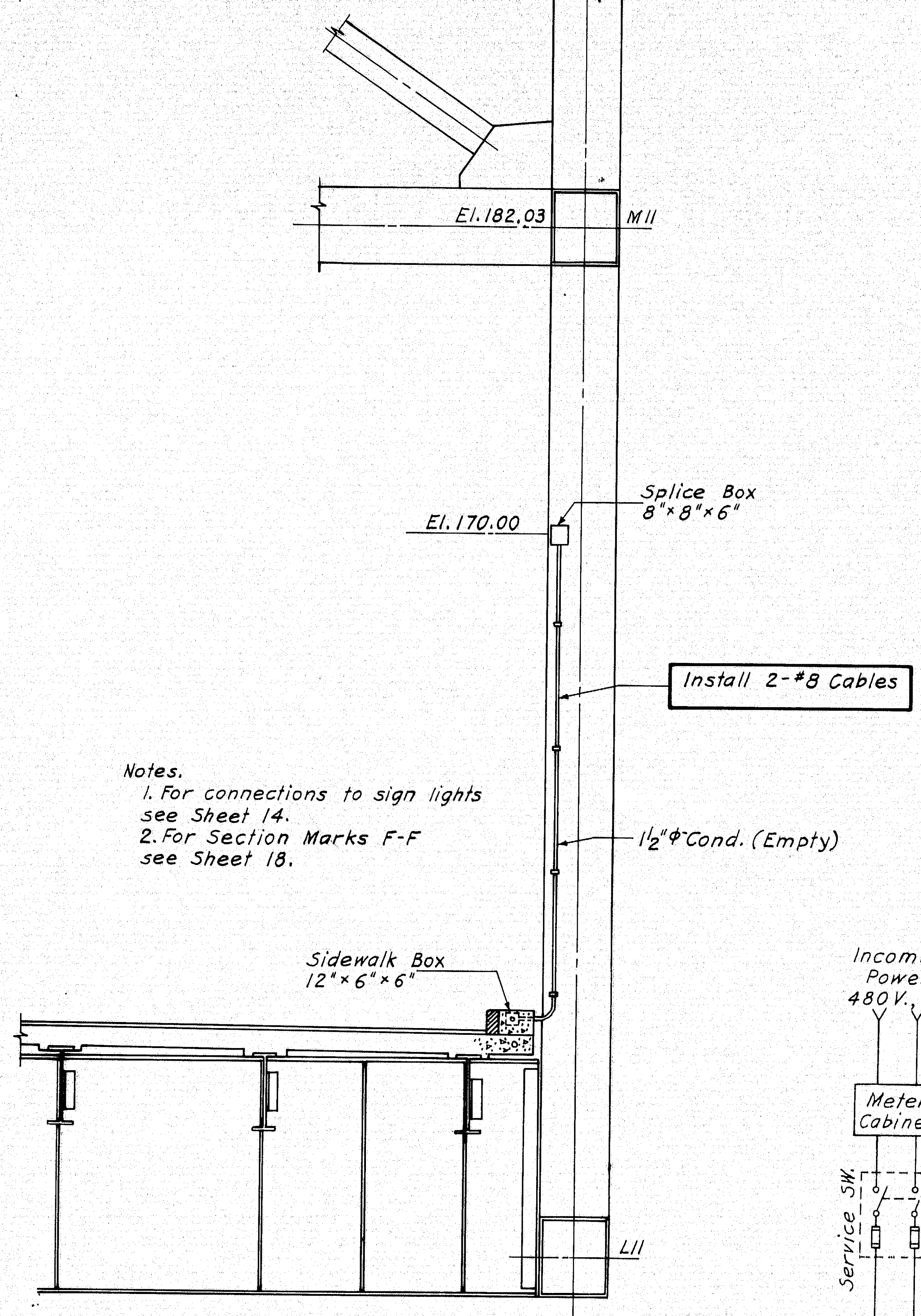
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

CONDUIT DETAILS

SHEET 19 OF 24

130-102

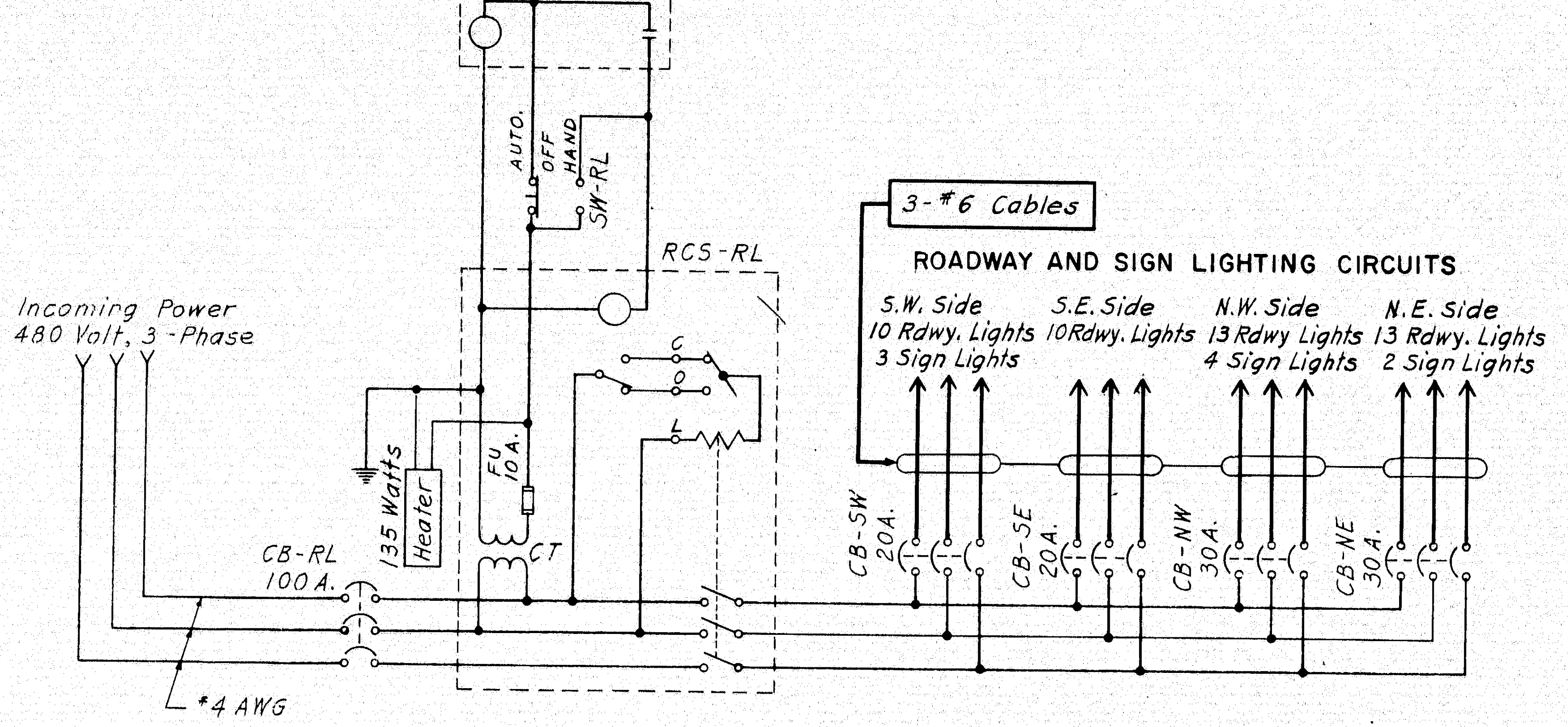
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	20	24



Notes.
1. For connections to sign lights see Sheet 14.
2. For Section Marks F-F see Sheet 18.

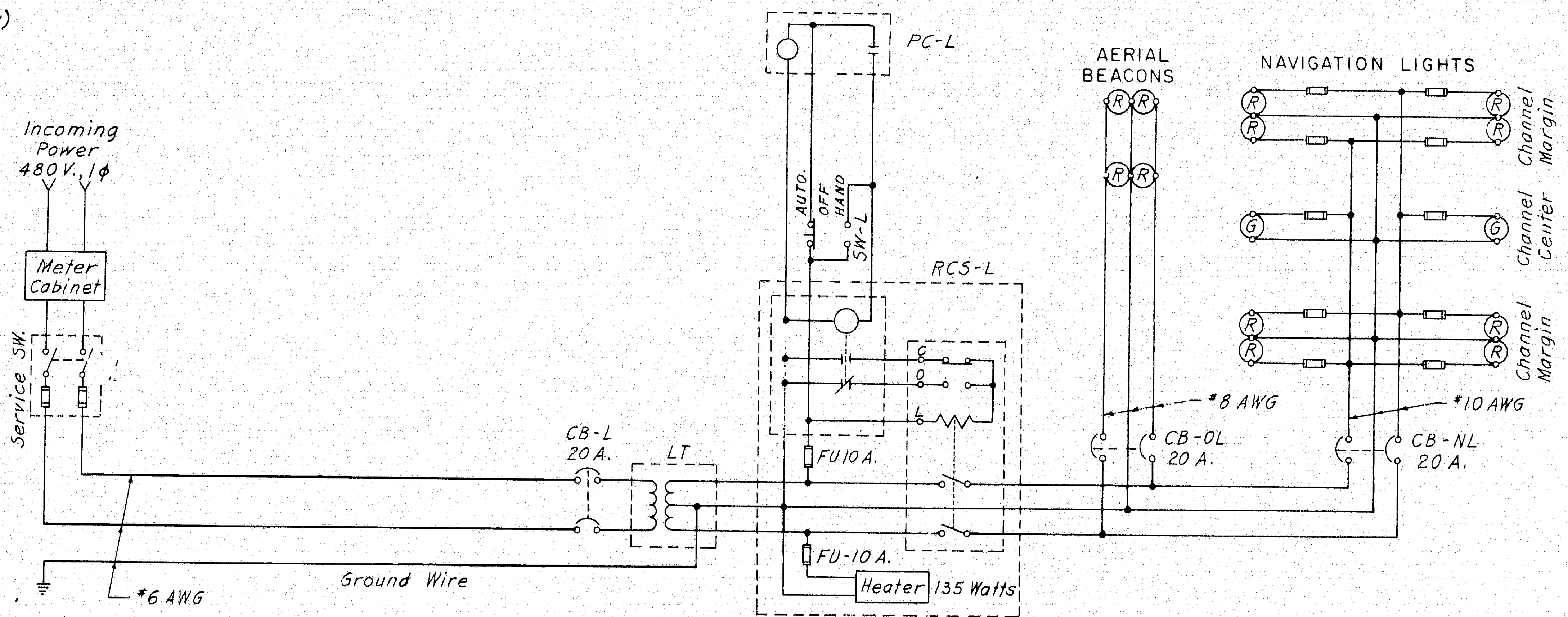
SECTION F-F

ELEVATION AT PP11 SOUTH SHOWN
ELEVATION AT PP11 NORTH SIMILAR
Scale: ¼" = 1'-0"



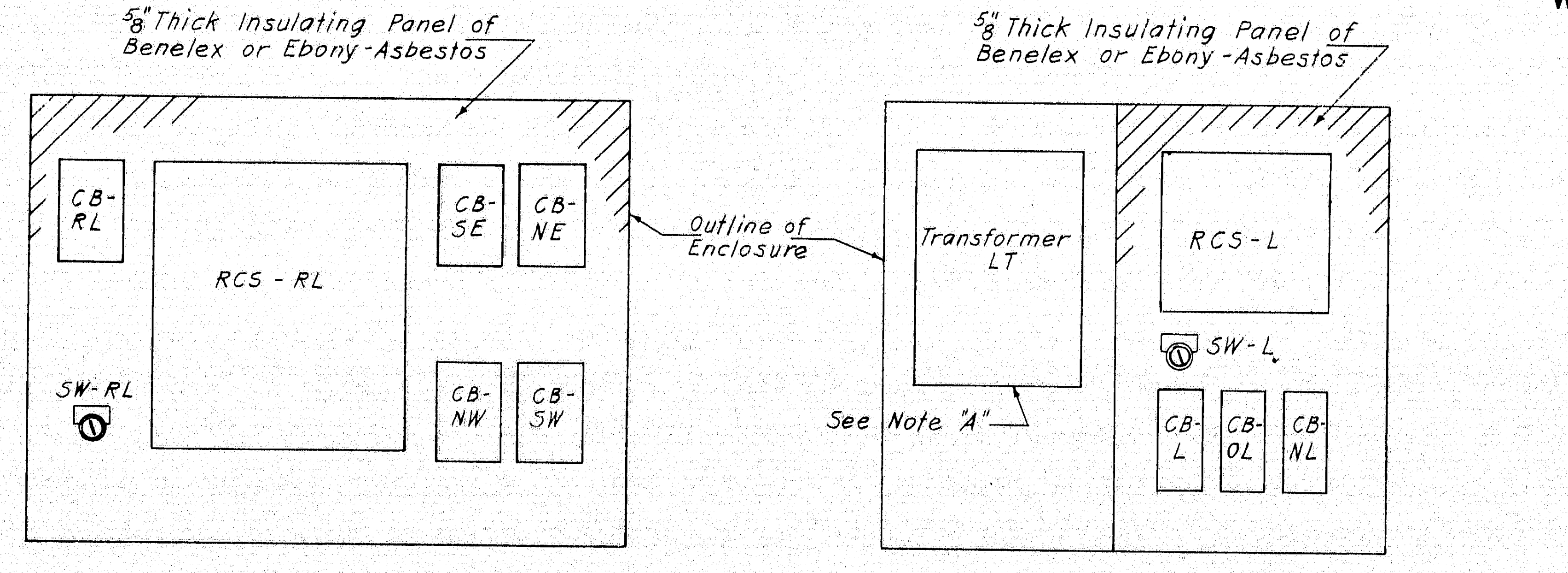
WIRING DIAGRAM - ROADWAY AND SIGN LIGHTING

Not to Scale



WIRING DIAGRAM - BRIDGE LIGHTING

Not to Scale


5/8" Thick Insulating Panel of Benelex or Ebony-Asbestos
CB-RL
RCS-RL
CB-SE
CB-NE
CB-NW
CB-SW
SW-RL
Outline of Enclosure
5/8" Thick Insulating Panel of Benelex or Ebony-Asbestos
Transformer LT
See Note "A"
RCS-L
SW-L
CB-L
CB-OL
CB-NL

ROADWAY LIGHTING

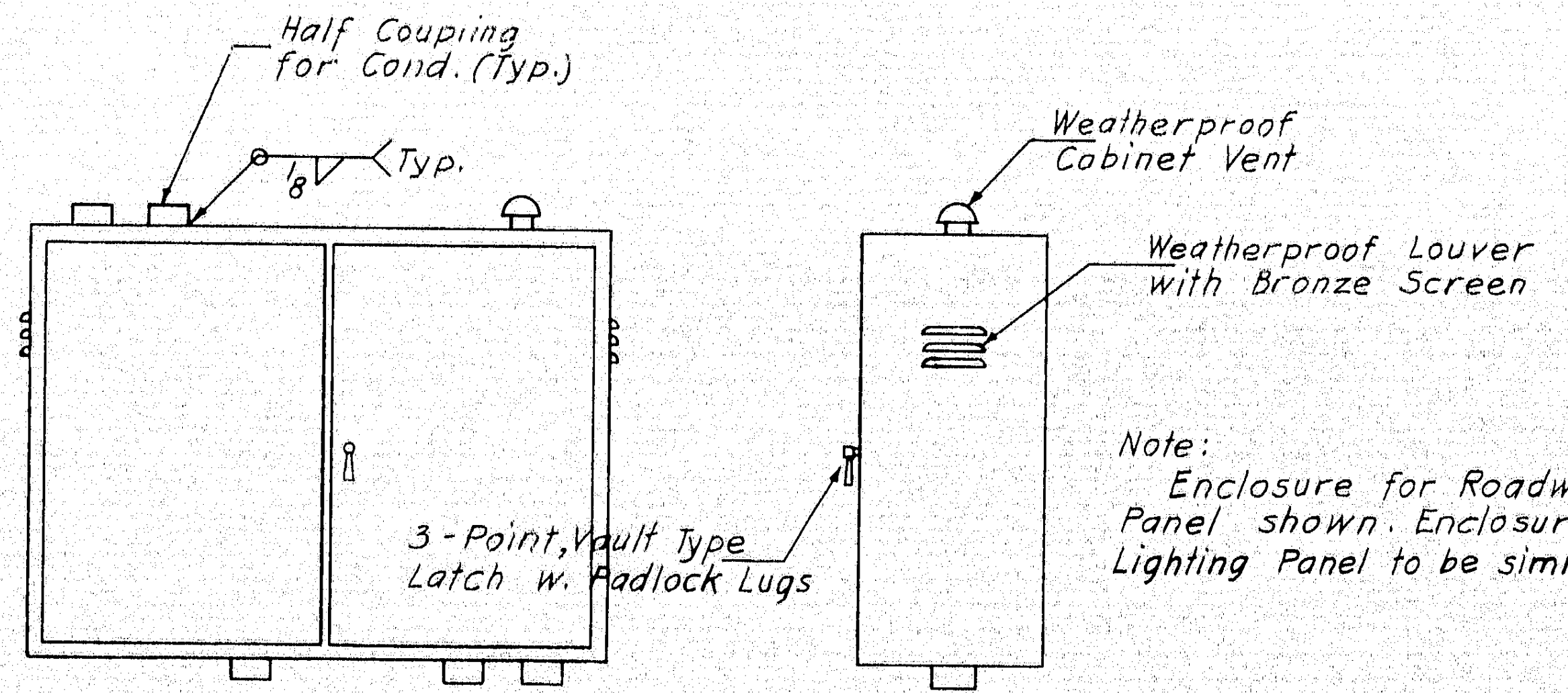
BRIDGE LIGHTING

Note: Fuses, terminal blocks and strip heaters are not shown.

Note "A"
Back of cabinet to be suitably reinforced for supporting the transformer.

CONTROL PANEL ARRANGEMENTS

Not to Scale


Half Coupling for Cond. (Typ.)
Typ.
⅛"
Weatherproof Cabinet Vent
Weatherproof Louver with Bronze Screen
3-Point, Vault Type Latch w. Padlock Lugs

Note:
Enclosure for Roadway Lighting Panel shown. Enclosure for Bridge Lighting Panel to be similar.

DETAILS OF ENCLOSURE

Scale: 1" = 1'-0"

SCHEDULE OF APPARATUS

DESIGNATION	NO. REQ'D.	DESCRIPTION
		ROADWAY LIGHTING PANEL
CB-RL	1	Air circuit breaker, 3P., 100 A., 600 V.
CB-SE, CB-SW	2	Air circuit breaker, 3P., 20 A., 600 V.
CB-NE, CB-NW	2	Air circuit breaker, 3P., 30 A., 600 V.
RCS-RL	1	Remote control switch, 3P., 60 A., 600 V.
		electrically-operated, mechanically-held,
		with 200 va, 480/120 V. control
		transformer and auxiliary relay for
		120-volt, 2-wire control. All mounted
		on common panel.
PC-RL	1	Photoelectric control unit, 120 V.
		Turn on - 2 ft.c., Turn off - 5 ft.c.
SW-RL	1	Selector switch, 3-position, "Auto-Off-Hand"
		BRIDGE LIGHTING PANEL
CB-L	1	Air circuit breaker, 2P., 20 A., 600 V.
LT	1	Transformer, outdoor-type, 5 Kva,
		480/120 V. with 4-2½ percent taps
		above and below rated primary.
CB-OL, CB-NL	2	Air circuit breaker, 2P., 20 A., 240 V.
RCS-L	1	Remote control switch, 2P., 30 A., 600 V.
		electrically-operated, mechanically-held,
		with 120-volt control and auxiliary relay
		for 2-wire control. On common panel.
PC-L	1	Photoelectric control unit, 120 V.
		Turn on - 35 ft.c., Turn off - 58 ft.c.
SW-L	1	(Same as SW-RL)

CONTRACT 6

THE WORK TO BE PERFORMED UNDER CONTRACT 6 IS INDICATED IN THIS MANNER

THE WORK SHALL CONSIST OF THE INSTALLATION OF FOUR FEEDERS TO DISTRIBUTE POWER FOR ROADWAY AND SIGN LIGHTING, COMPLETE FROM THE CONTROL PANEL TO THE EQUIPMENT ON THE BRIDGE. EACH FEEDER SHALL BE CONNECTED TO THE PROPER CIRCUIT BREAKER IN THE CONTROL PANEL.

ALL OTHER ELECTRICAL WORK ON THIS DRAWING IS SHOWN FOR INFORMATION ONLY, AND IS NOT IN CONTRACT.

6

DESIGN — E.D.
TRACE — K.A.S.
CHECK — H. B. Hyatt

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

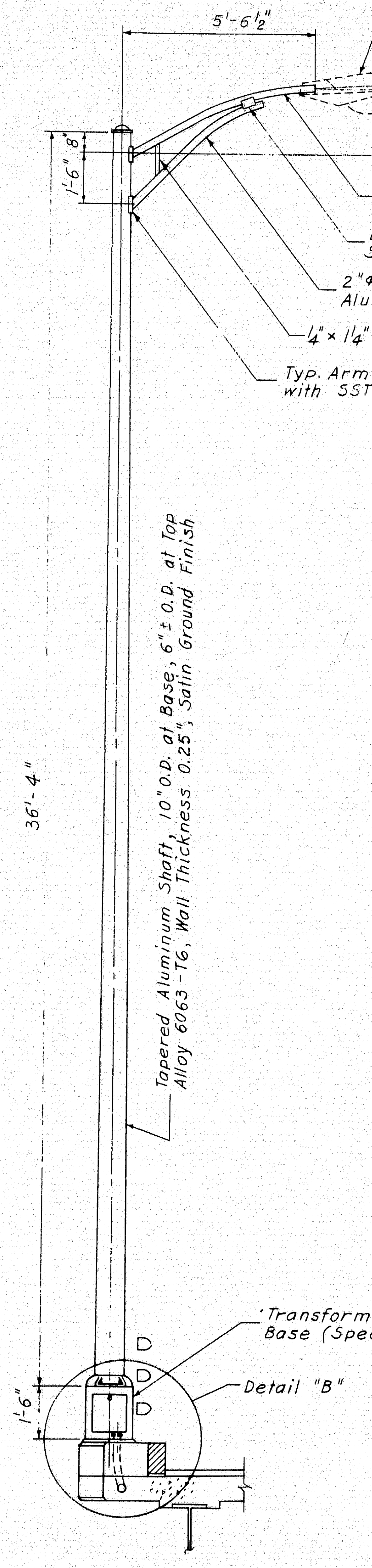
PANELS AND WIRING DIAGRAMS

SHEET 20 OF 24

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

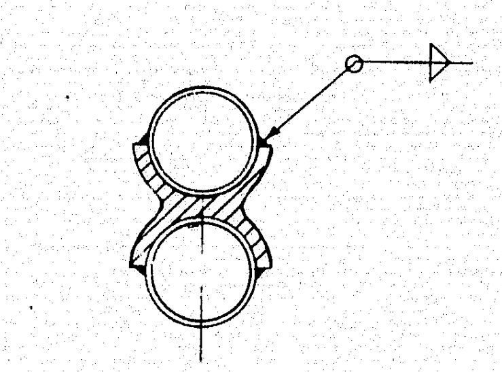
130-103

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	21	24

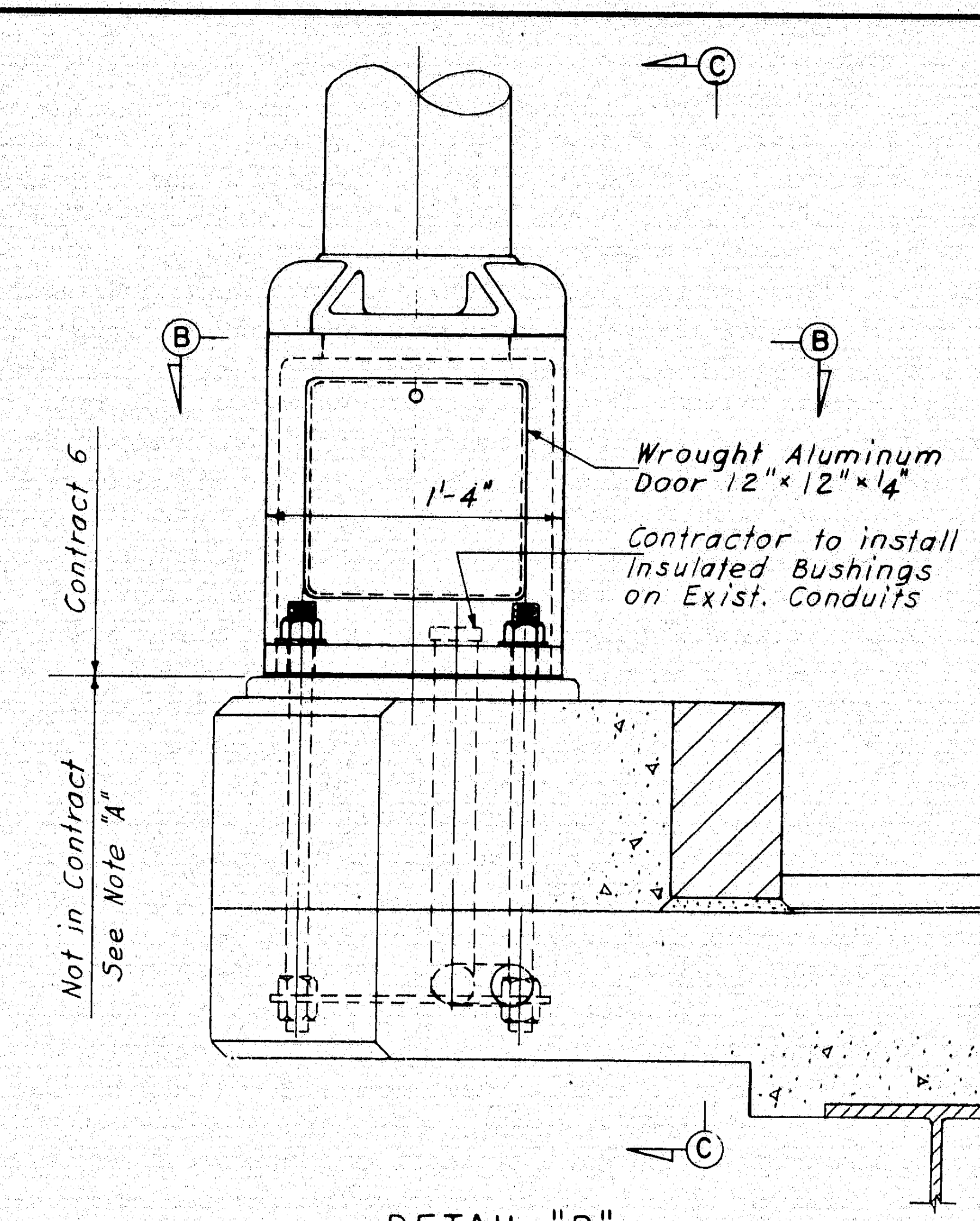


Mercury Luminaire to be Furnished and Installed by Public Service Co. of N.H.
5'-6½"
3°
2'-0"
1'-6"
8"
Tapered Elliptical Arm Alum. Alloy 6063-T6
Extruded Connector See Detail "A"
2"Φ Std. Pipe Brace Alum. Alloy 6061-T6
¼" × 1¼" Alum. Bar
Typ. Arm Plate with SST Bolts
36'-4"
Tapered Aluminum Shaft, 10" O.D. at Base, 6" ± O.D. at Top Alloy 6063-T6, Wall Thickness 0.25", Satin Ground Finish
Transformer Base (Special)
Detail "B"
1'-6"

SECTION A-A
TYPICAL ROADWAY LIGHT
Scale: ⅜" = 1'-0"



DETAIL "A"
Scale: 3" = 1'-0"

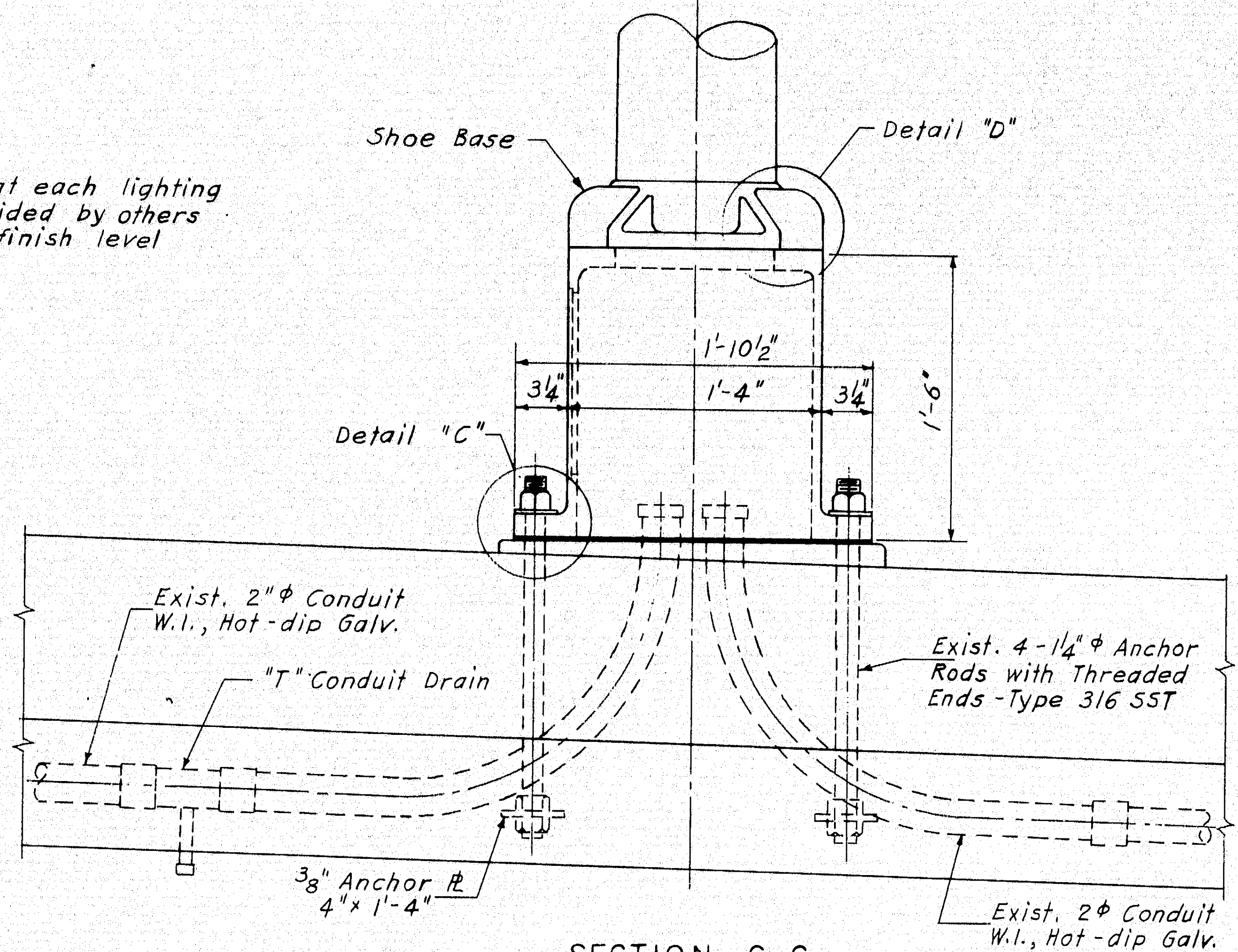


C
B
B
1'-4"
Wrought Aluminum Door 12" × 12" × ¼"
Contractor to install Insulated Bushings on Exist. Conduits
Contract 6
Not in Contract See Note "A"
C

DETAIL "B"
Scale: 1½" = 1'-0"

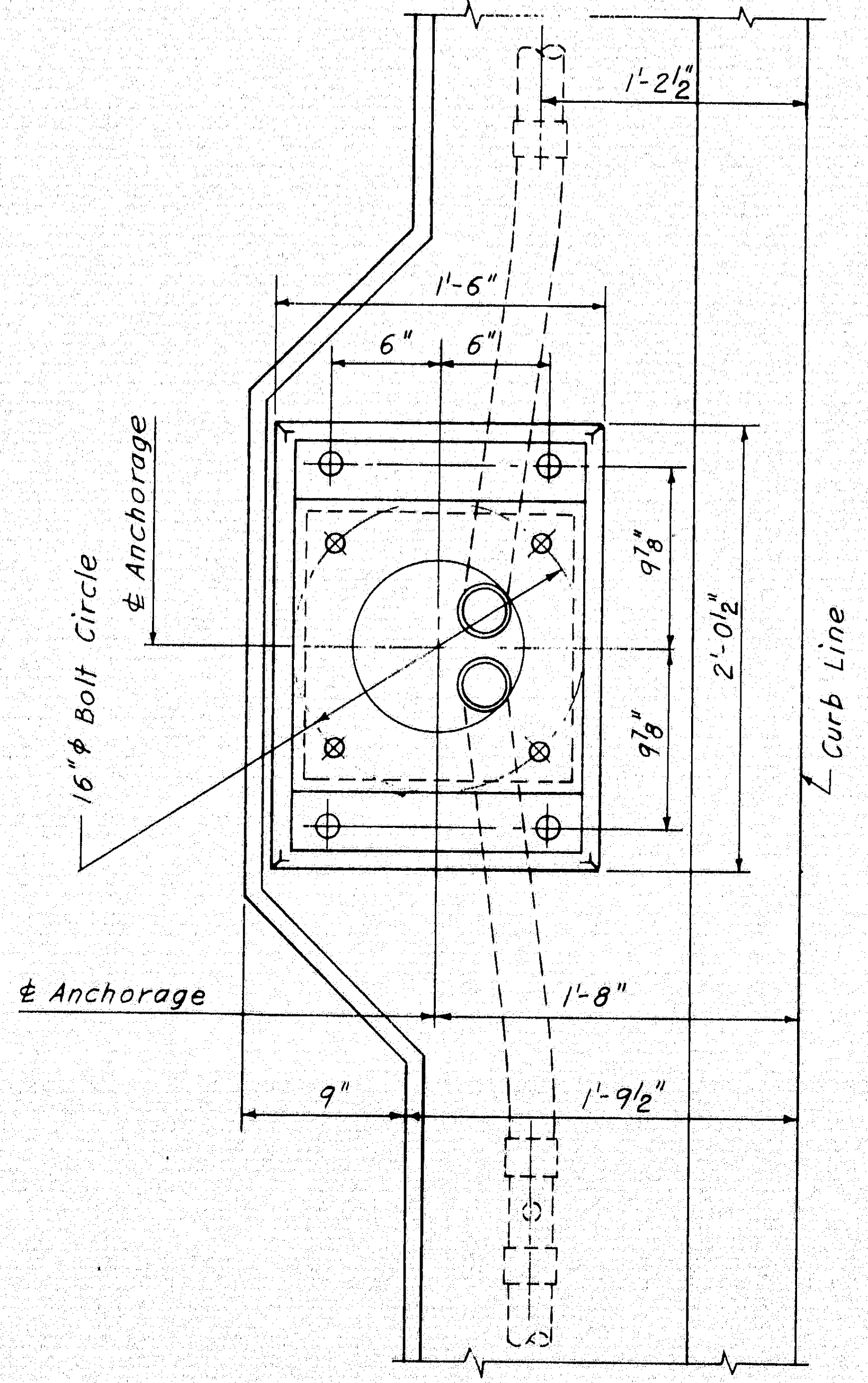
NOTE "A"

A concrete pad at each lighting pole has been provided by others with a steel trowel finish level to within ± 1/32".

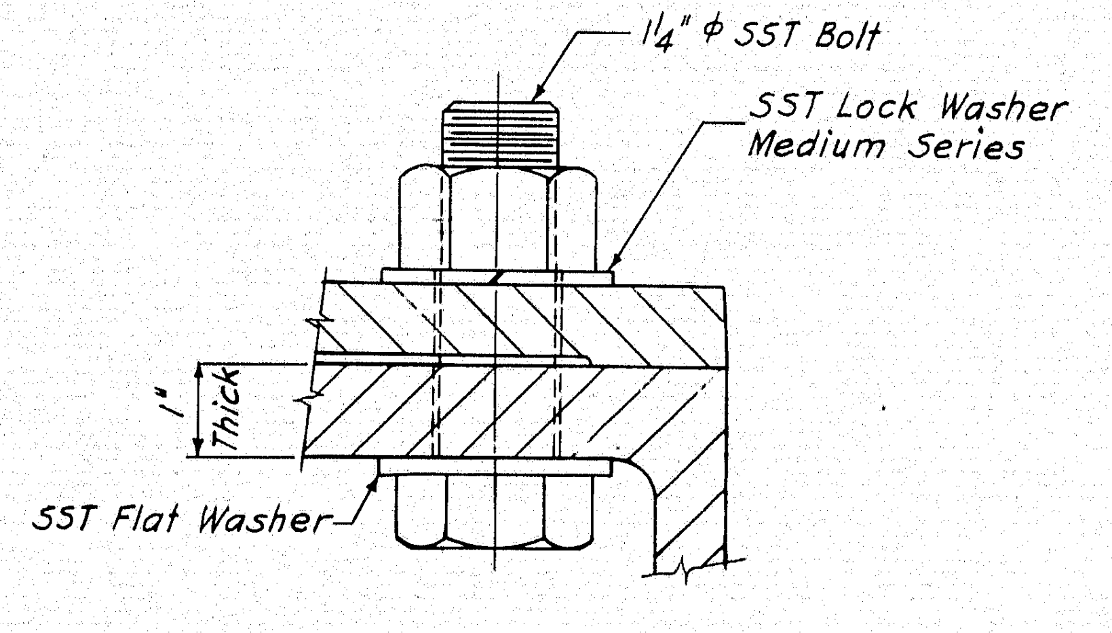


Shoe Base
Detail "D"
1'-10½"
3¼"
1'-4"
3¼"
1'-6"
Detail "C"
Exist. 2"Φ Conduit W.I., Hot-dip Galv.
"T" Conduit Drain
Exist. 4-1¼"Φ Anchor Rods with Threaded Ends-Type 316 SST
⅜" Anchor PL 4" × 1'-4"
Exist. 2Φ Conduit W.I., Hot-dip Galv.

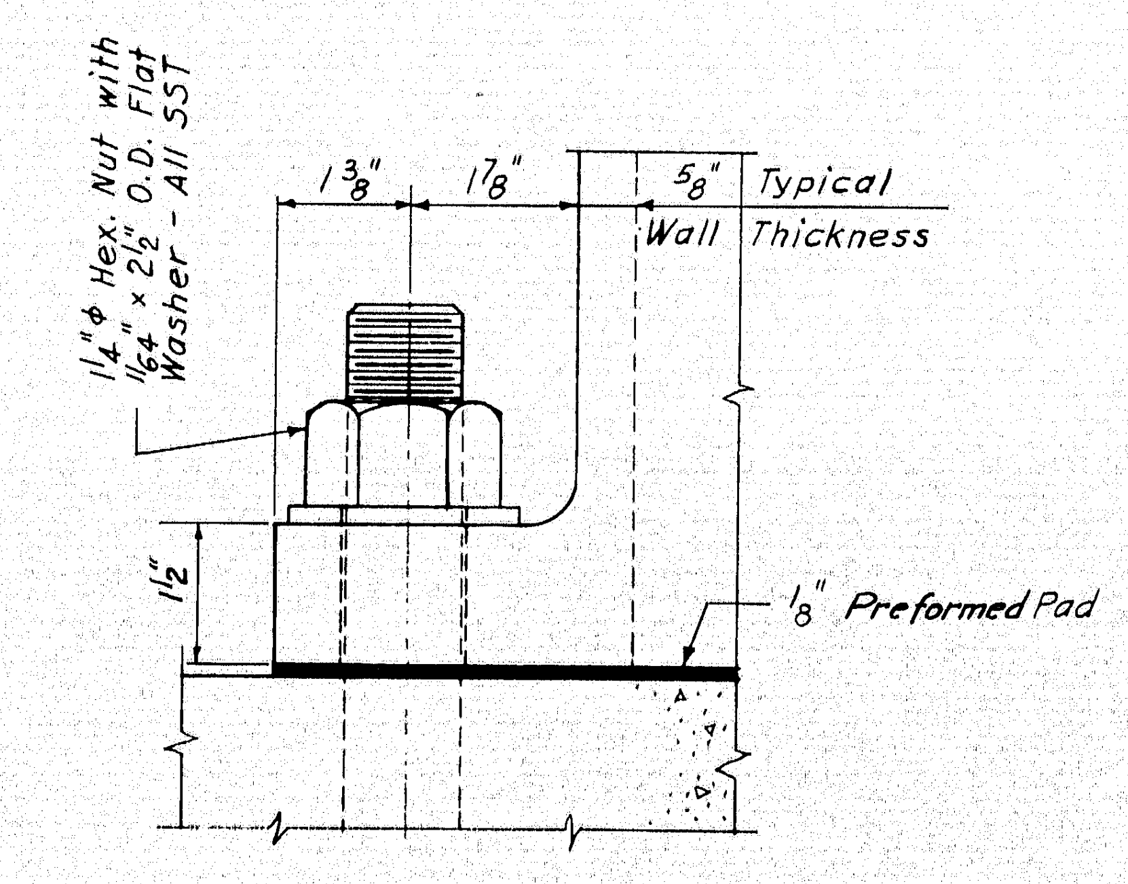
SECTION C-C
Scale: 1½" = 1'-0"



SECTION B-B
Scale: 1½" = 1'-0"

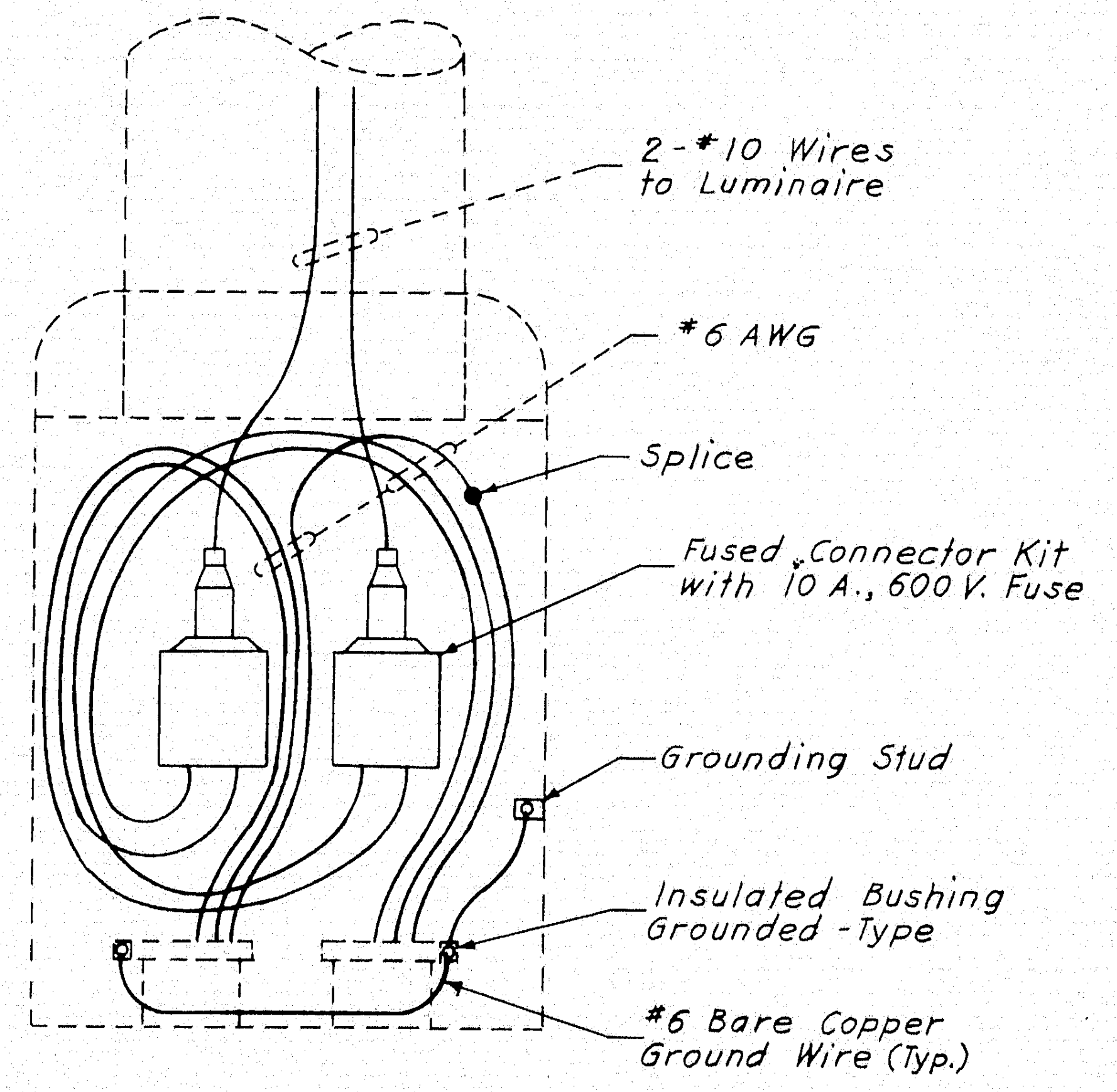


DETAIL "D"
Scale : Half Size



1¼"Φ Hex. Nut with 1 1/64" × 2½" O.D. Flat Washer - All SST
1⅜"
1⅞"
⅝" Typical Wall Thickness
1½"
⅛" Preformed Pad

DETAIL "C"
Scale: Half Size



2-#10 Wires to Luminaire
#6 AWG
Splice
Fused Connector Kit with 10 A., 600 V. Fuse
Grounding Stud
Insulated Bushing Grounded-Type
#6 Bare Copper Ground Wire (Typ.)

TYPICAL CONNECTIONS
IN POLE BASE
Not to Scale

Note:
For Section Marks A-A see Sheet 18.

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

6

DESIGN — E. D.
TRACE — K. A. S.
CHECK — H. B. Hyatt

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

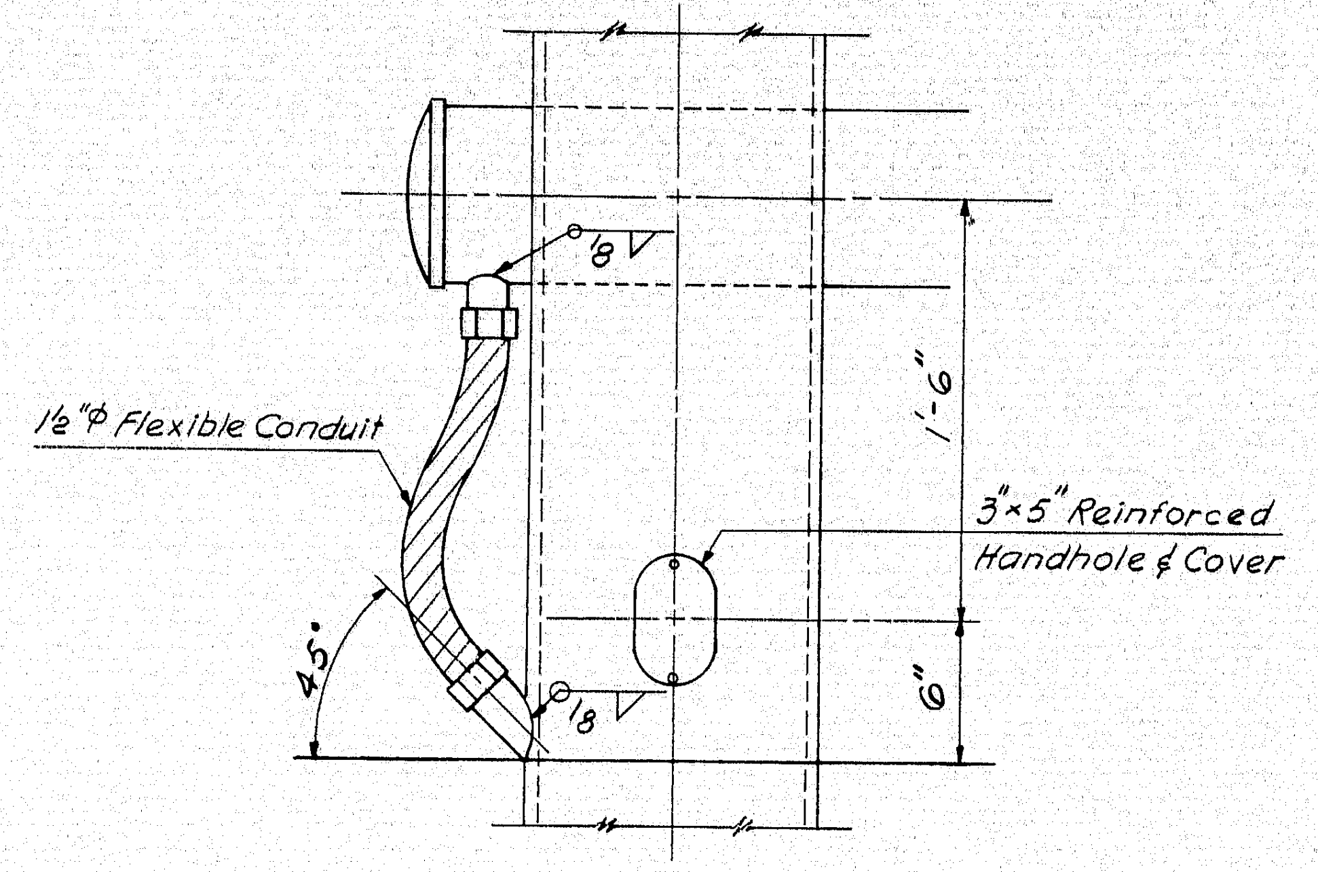
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

ROADWAY LIGHTING DETAILS

SHEET 21 OF 24

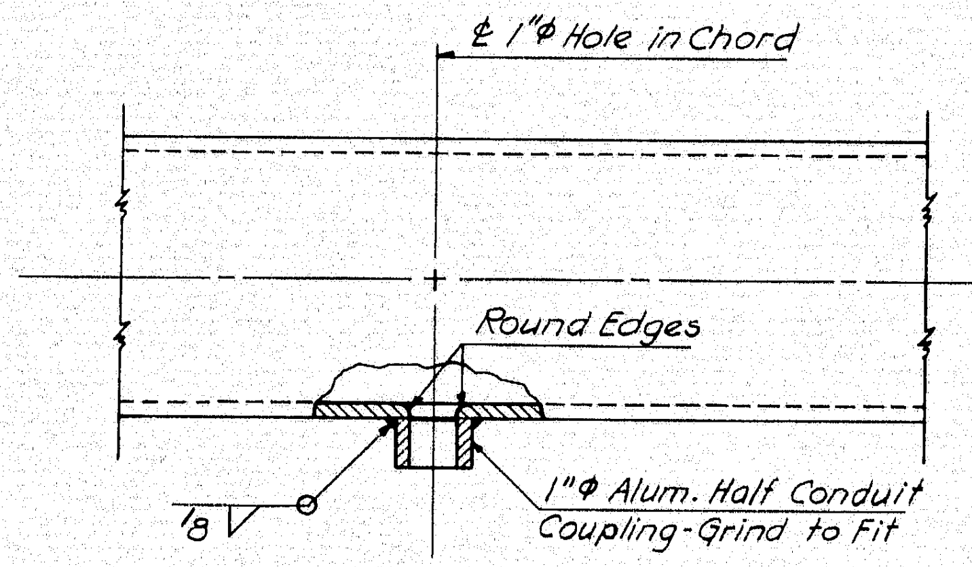
130-104

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	22	24



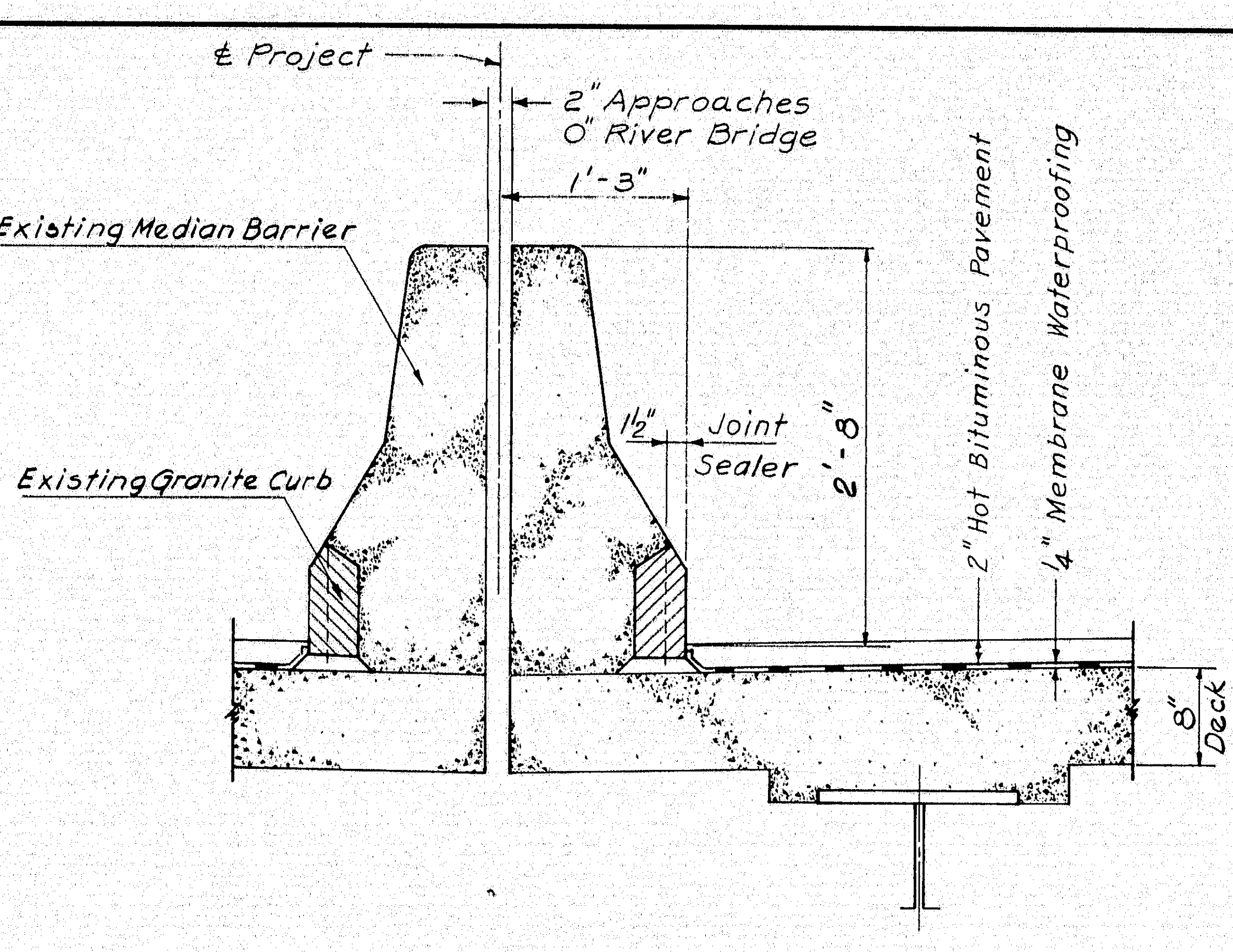
DETAIL "C"

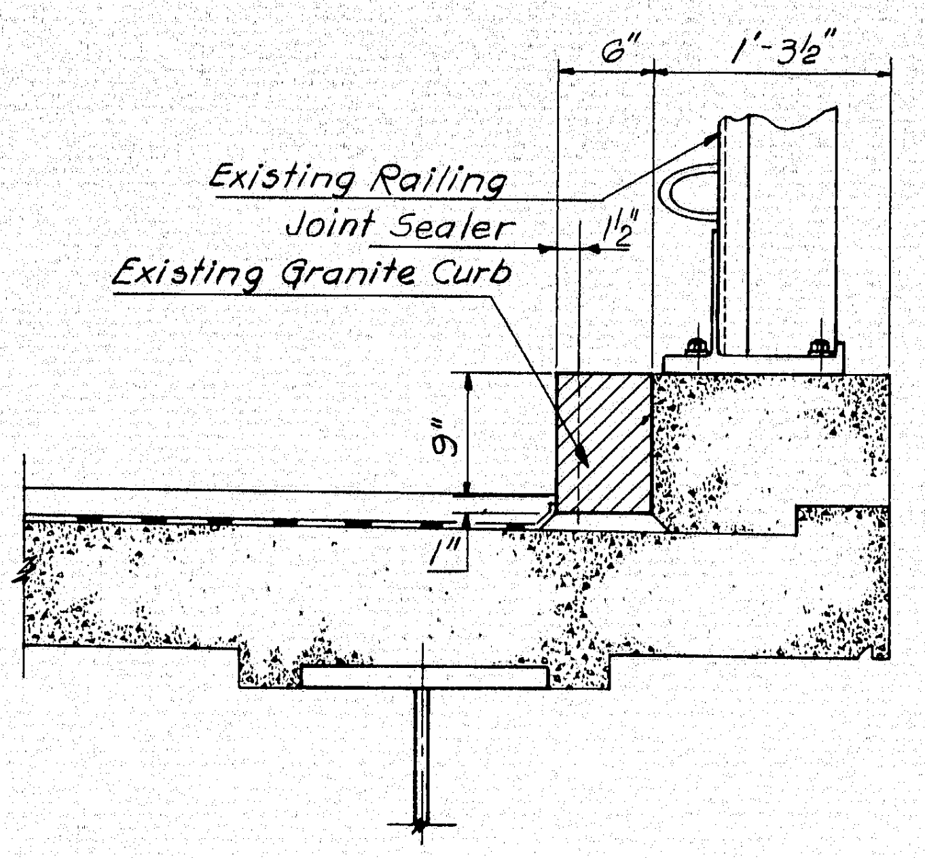
Scale: 1½" = 1'-0"



DETAIL OF WIRE OUTLET

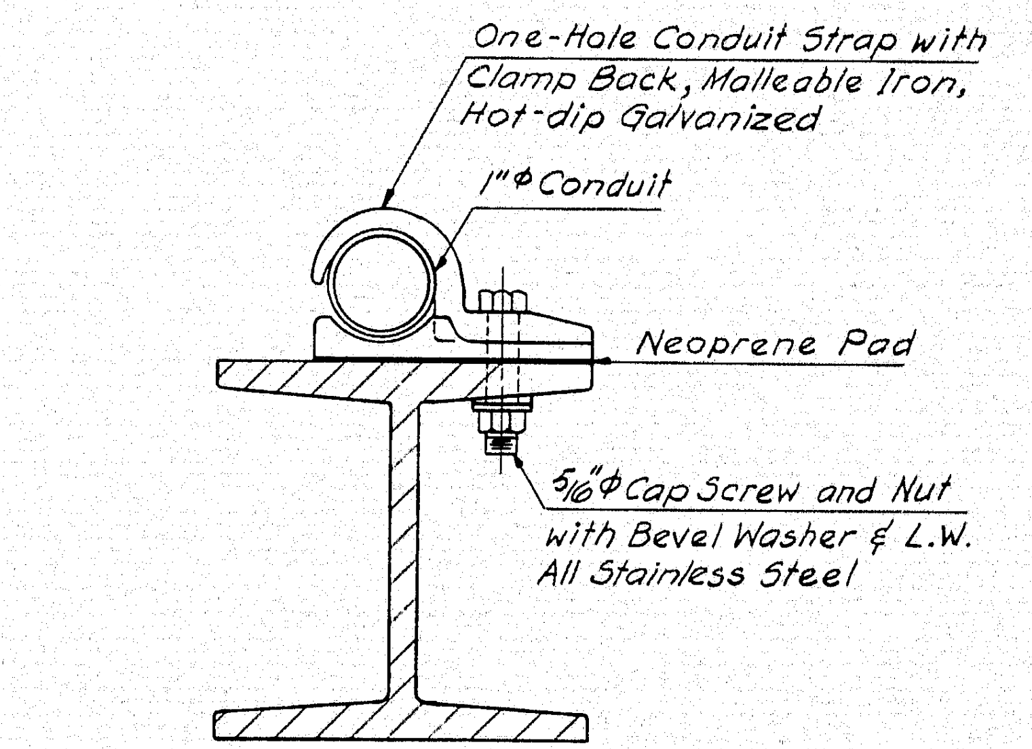
Scale: 3" = 1'-0"





CROSS SECTION OF ROADWAY

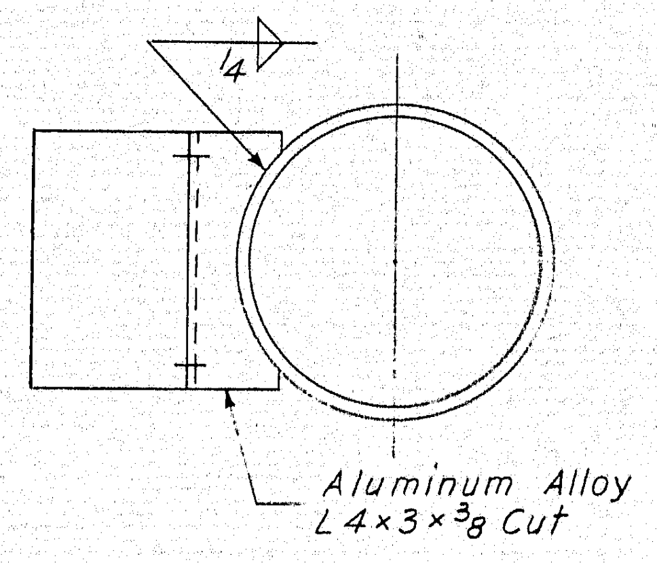
Scale: 1" = 1'-0"


One-Hole Conduit Strap with Clamp Back, Malleable Iron, Hot-dip Galvanized
1"⌀ Conduit
Neoprene Pad
5/16"⌀ Cap Screw and Nut with Bevel Washer & L.W. All Stainless Steel

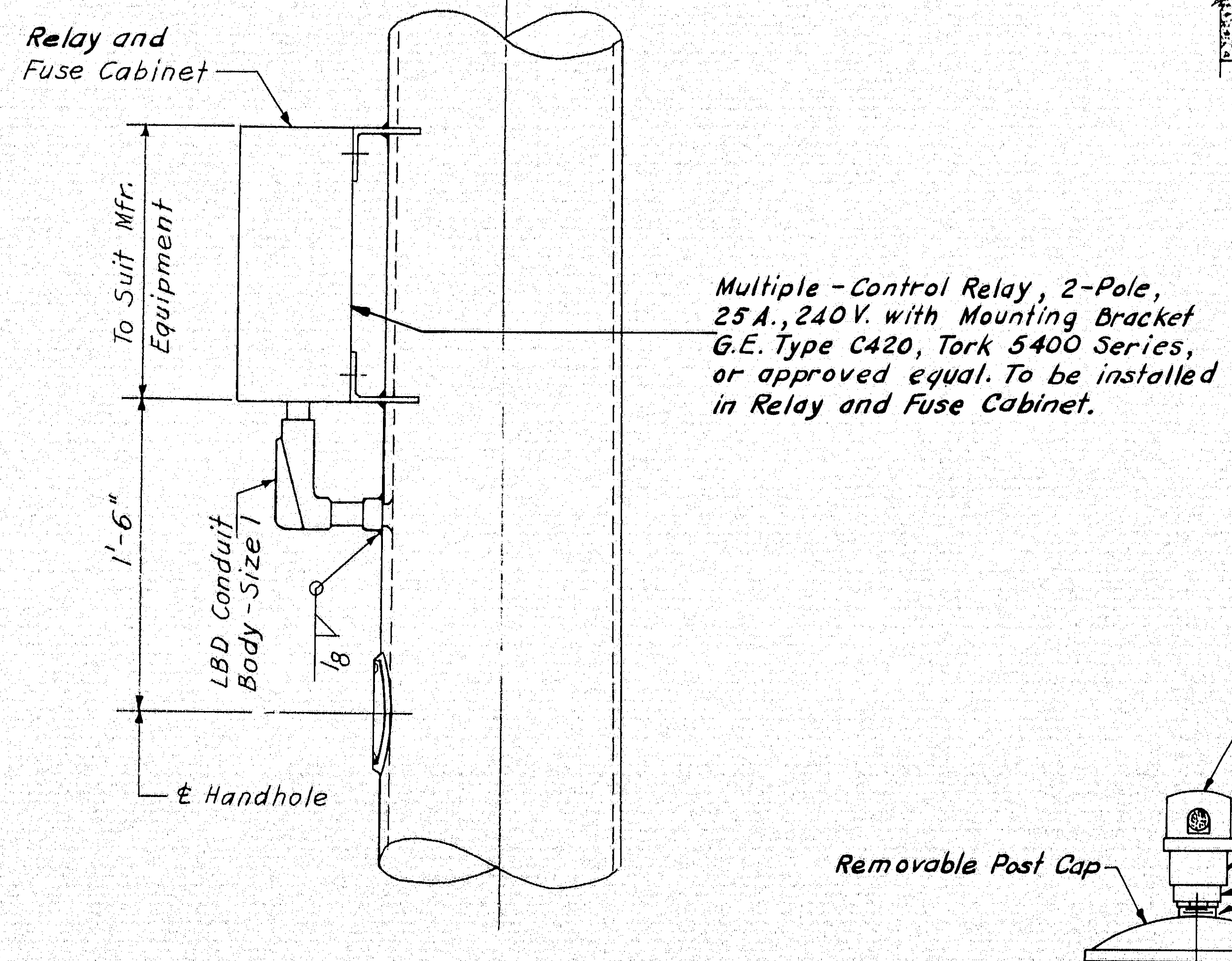
Note: One-hole conduit straps to be spaced not more than 4'-0" o.c.

TYPICAL CONDUIT CLAMP

Scale: Half-Size

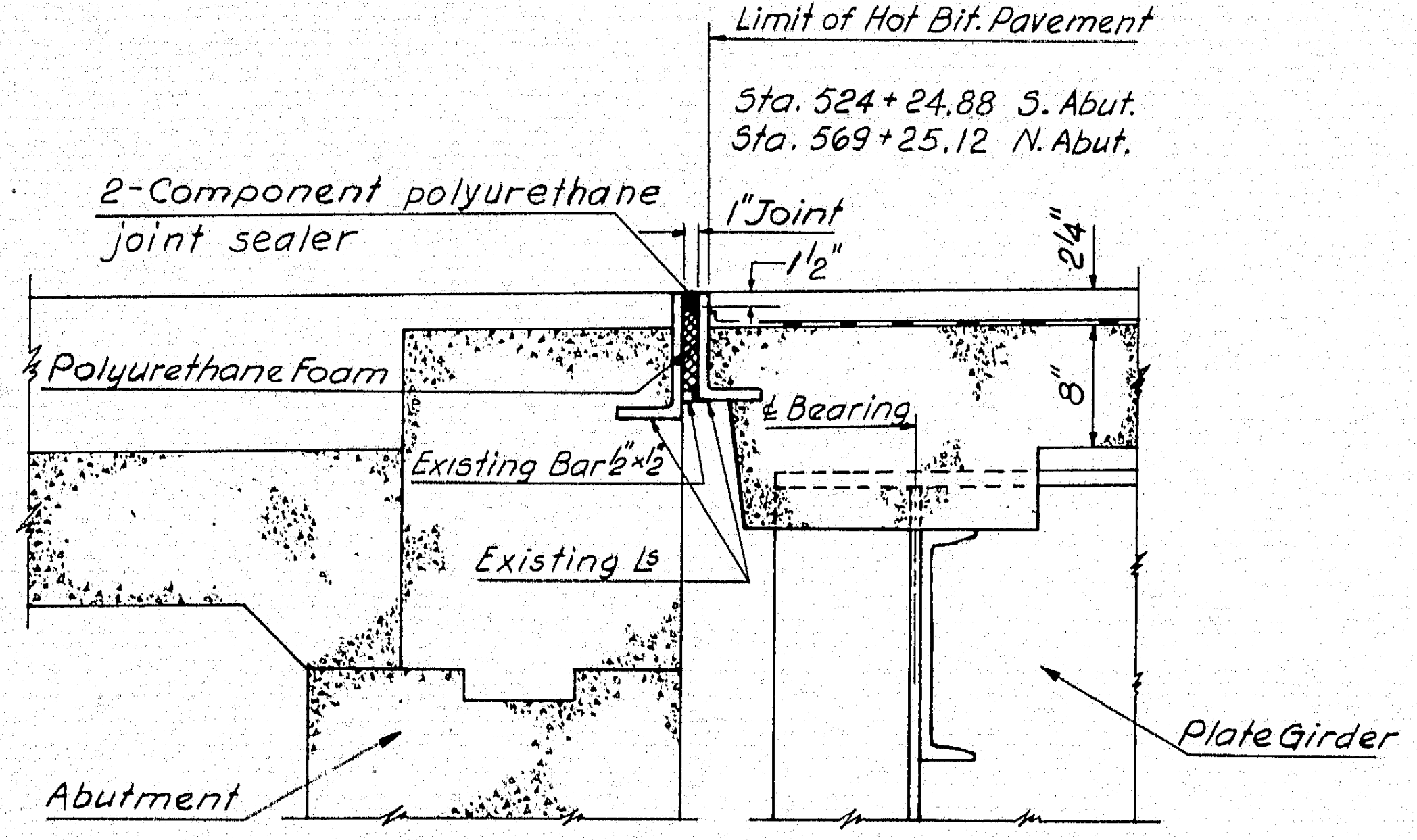


PLAN


Relay and Fuse Cabinet
To Suit Mfr. Equipment
Multiple-Control Relay, 2-Pole, 25A., 240V. with Mounting Bracket G.E. Type C420, Tork 5400 Series, or approved equal. To be installed in Relay and Fuse Cabinet.
1'-6"
LBD Conduit Body-Size
1/8
℄ Handhole

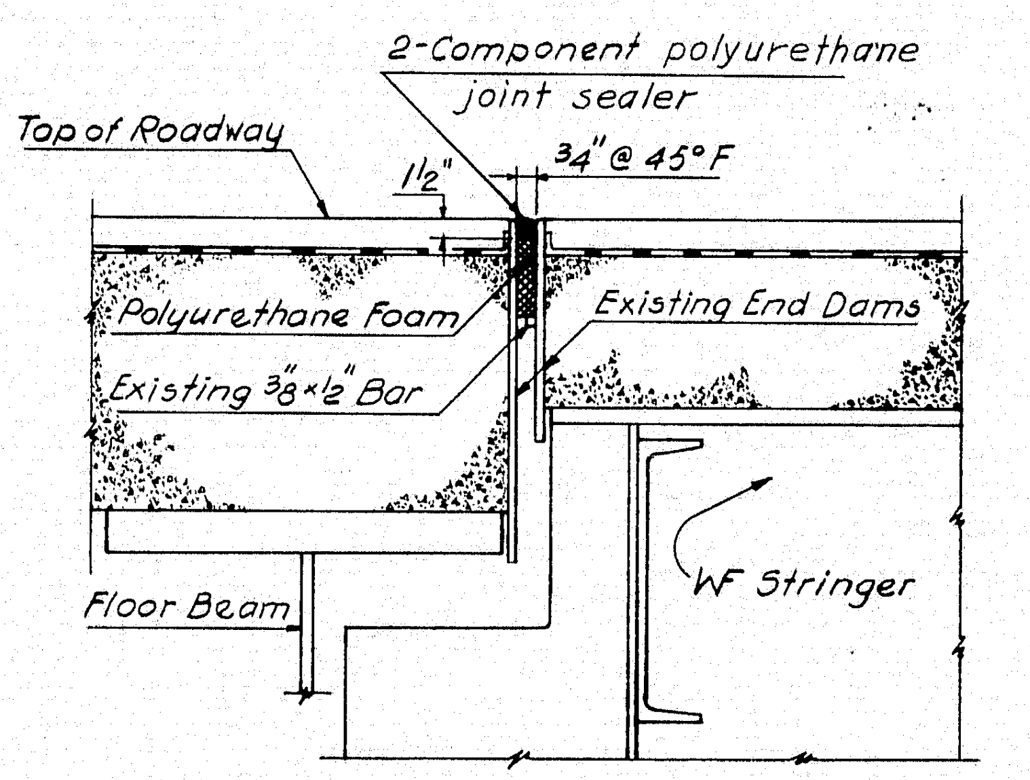
MOUNTING DETAIL OF FUSE CABINET AT SIGN BRIDGE

Scale: 1½" = 1'-0"



JOINT DETAIL AT ABUTMENTS

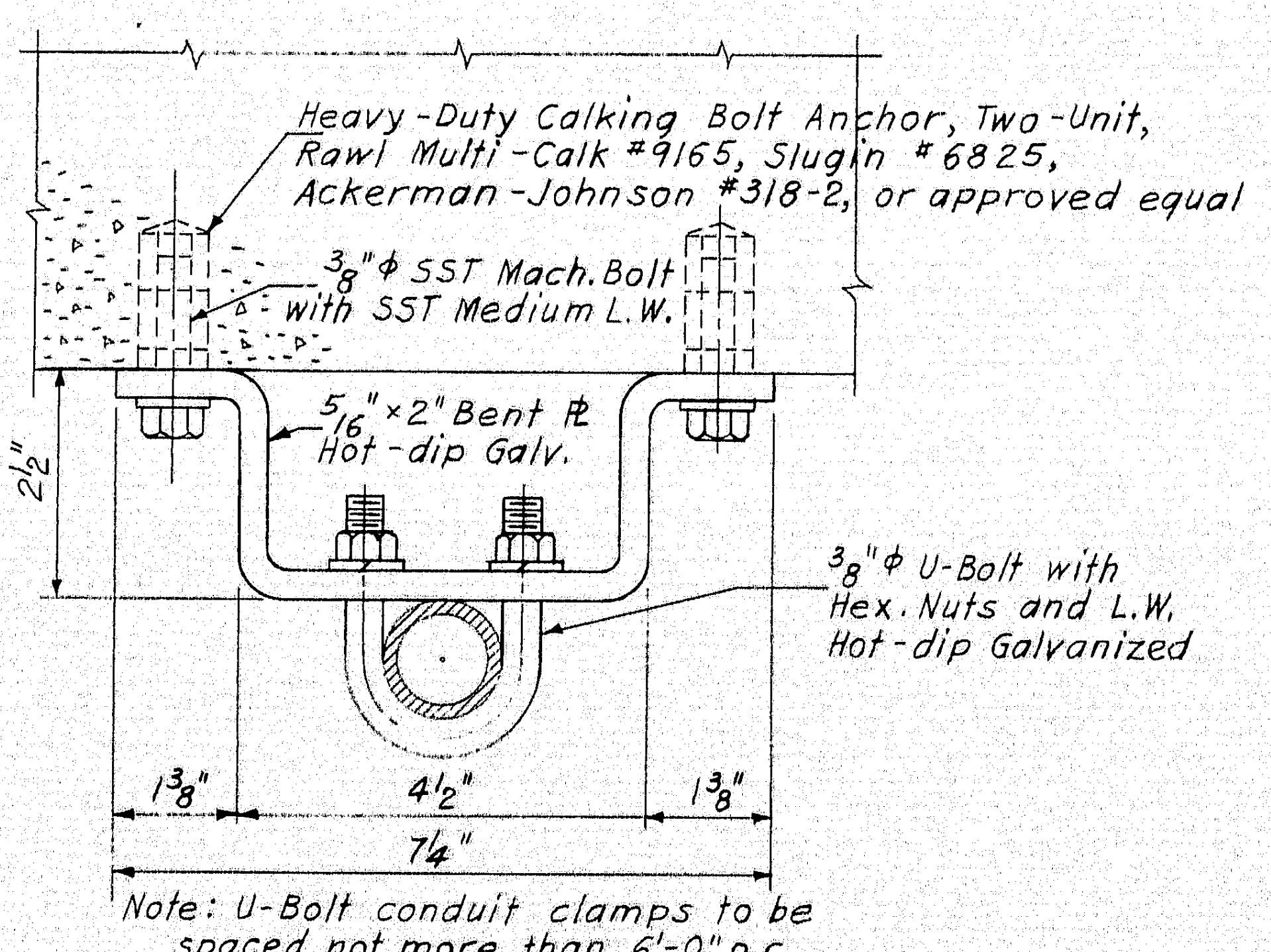
Scale: 1" = 1'-0"



JOINT DETAIL ON RIVER BRIDGE

Scale: 1" = 1'-0"

NOTE: Exposed metal surfaces of roadway joints have been painted with zinc-rich epoxy paint.

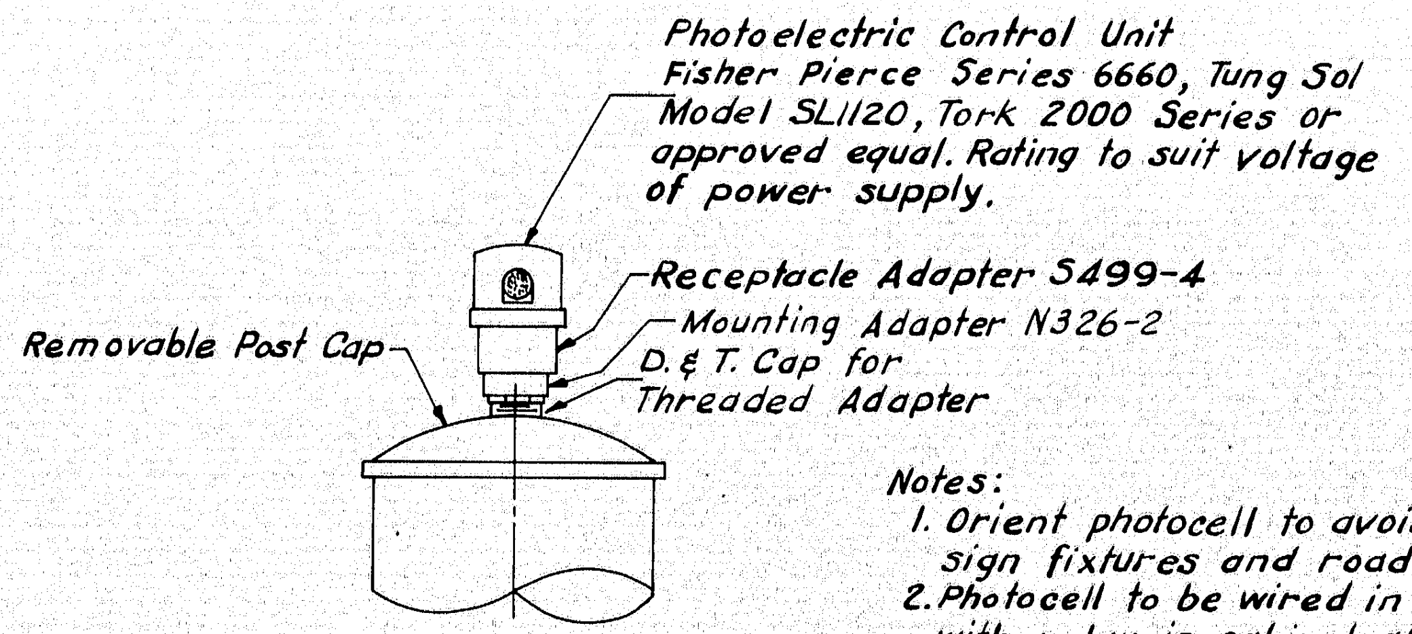

Heavy-Duty Calking Bolt Anchor, Two-Unit, Rawl Multi-Calk #9165, Slugin #6825, Ackerman-Johnson #318-2, or approved equal
3/8"⌀ SST Mach. Bolt with SST Medium L.W.
5/16"×2" Bent ℔ Hot-dip Galv.
2½"
3/8"⌀ U-Bolt with Hex. Nuts and L.W. Hot-dip Galvanized
1 3/8"
4½"
1 3/8"
7¼"

Note: U-Bolt conduit clamps to be spaced not more than 6'-0" o.c.

DETAIL "D"

Scale: Half-Size

Note: For location of Detail "D" see Sh. 13.


Photoelectric Control Unit Fisher Pierce Series 6660, Tung Sol Model SL1120, Tork 2000 Series or approved equal. Rating to suit voltage of power supply.
Receptacle Adapter 5499-4
Mounting Adapter N326-2
D. & T. Cap for Threaded Adapter
Removable Post Cap

DETAIL OF PHOTOCELL AT SIGN BRIDGE

Scale: 1½" = 1'-0"

Notes:
1. Orient photocell to avoid direct light from sign fixtures and roadway lights.
2. Photocell to be wired in conjunction with relay in cabinet at base of post. Contractor to submit wiring diagram for approval by the Engineer.

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

6

DESIGN —
TRACE — A. D. Tchenkeli
CHECK — S. S. Nishimura

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

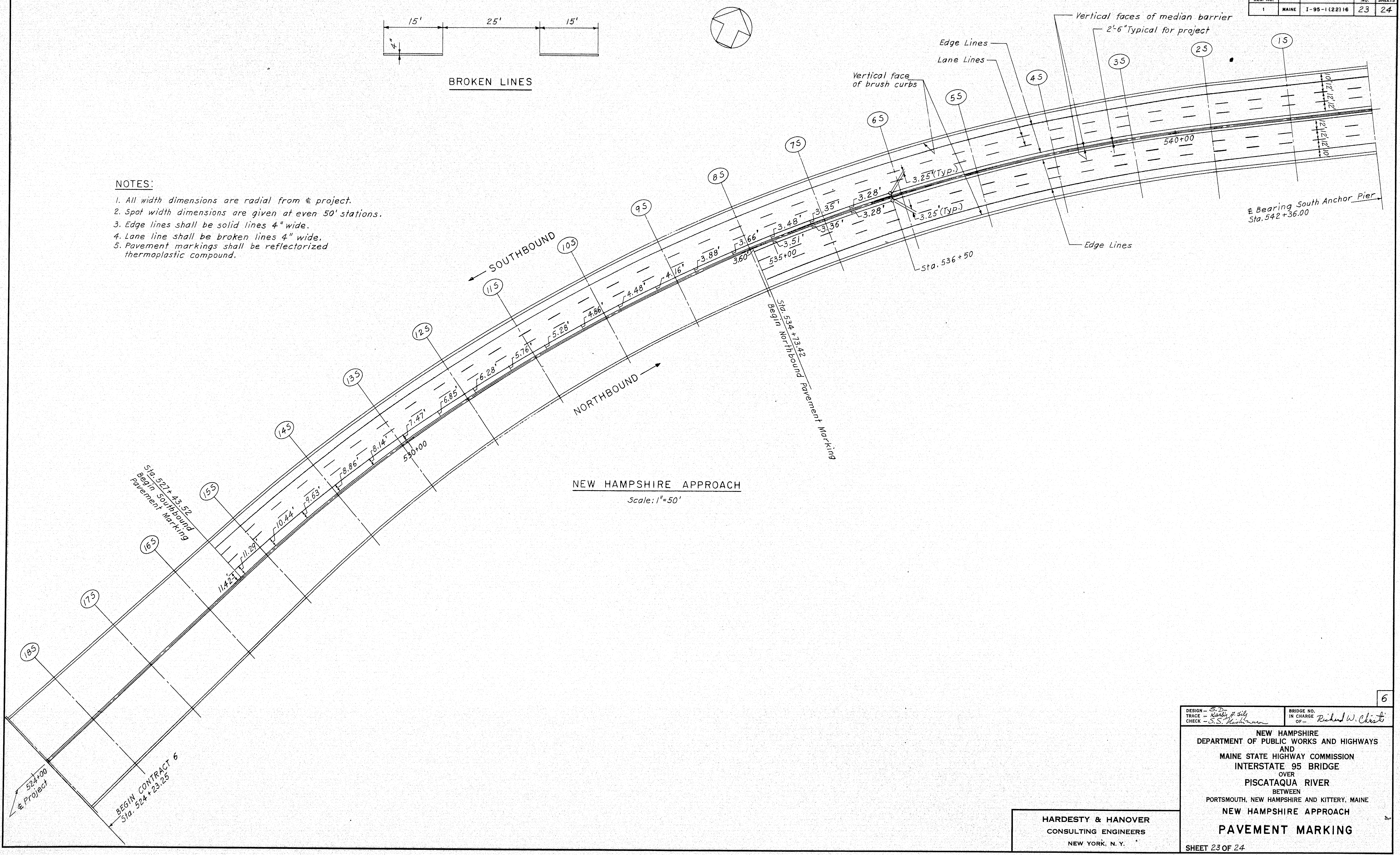
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

MISCELLANEOUS
DETAILS

SHEET 22 OF 24

130-105

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	23	24



BROKEN LINES

NEW HAMPSHIRE APPROACH

Scale: 1" = 50'

NOTES:

1. All width dimensions are radial from ℄ project.
2. Spot width dimensions are given at even 50' stations.
3. Edge lines shall be solid lines 4" wide.
4. Lane line shall be broken lines 4" wide.
5. Pavement markings shall be reflectorized thermoplastic compound.

6

DESIGN – S. D.
TRACE – Karlis A. Sily
CHECK – S. S. Nishimura

BRIDGE NO.
IN CHARGE OF – Richard W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE
NEW HAMPSHIRE APPROACH

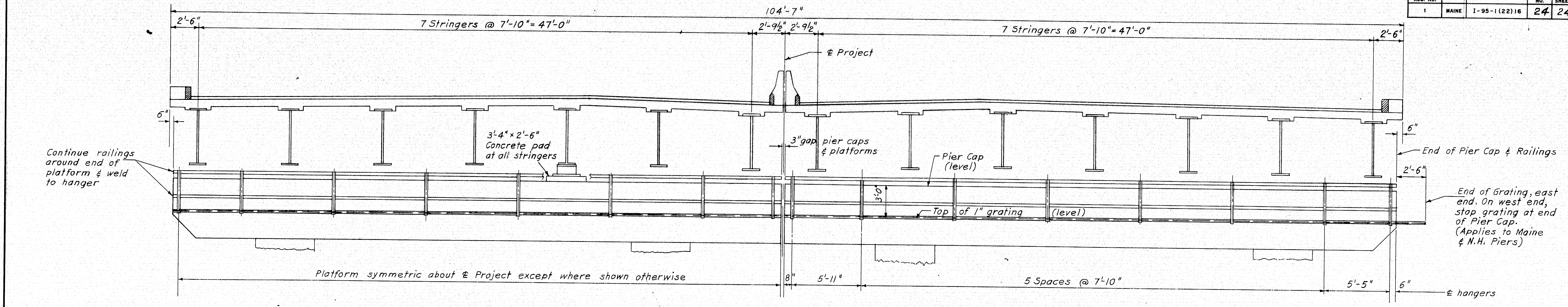
PAVEMENT MARKING

SHEET 23 OF 24

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

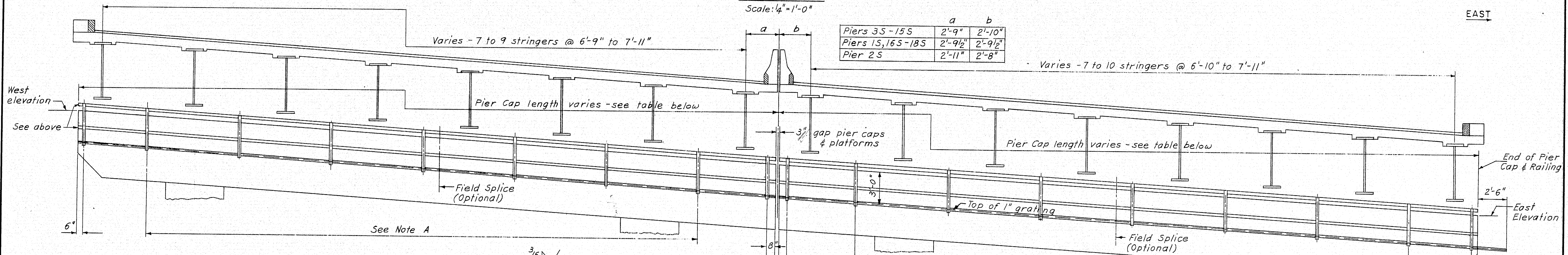
130-106

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(22)16	24	24

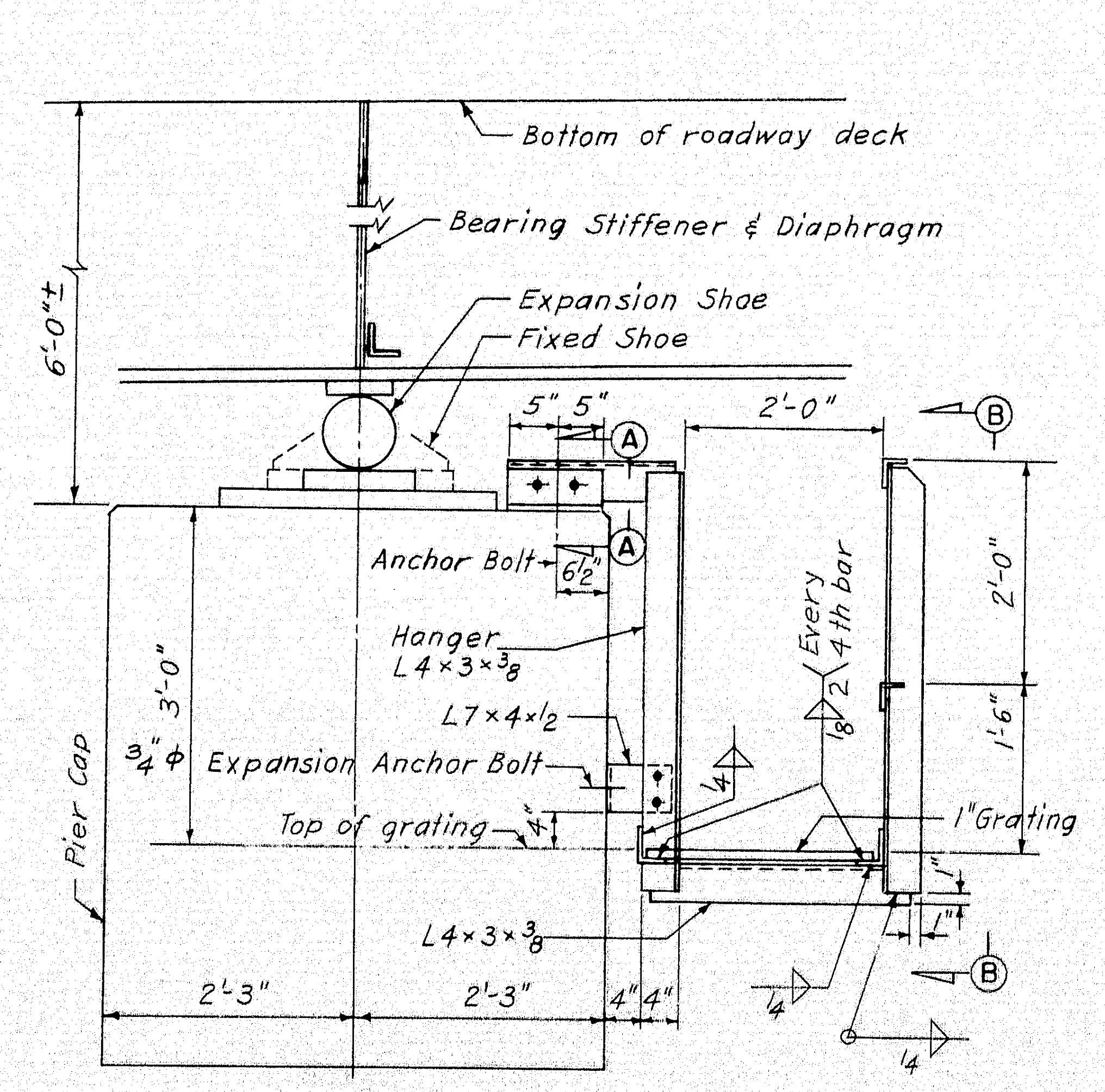

104'-7"
2'-6"
7 Stringers @ 7'-10" = 47'-0"
2'-9 1/2"
2'-9 1/2"
7 Stringers @ 7'-10" = 47'-0"
2'-6"
¢ Project
6"
3'-4" × 2'-6" Concrete pad at all stringers
3" gap pier caps ¢ platforms
Pier Cap (level)
6"
End of Pier Cap ¢ Railings
2'-6"
Continue railings around end of platform ¢ weld to hanger
3'-0"
Top of 1" grating (level)
End of Grating, east end. On west end, stop grating at end of Pier Cap. (Applies to Maine ¢ N.H. Piers)
Platform symmetric about ¢ Project except where shown otherwise
8"
5'-11"
5 Spaces @ 7'-10"
5'-5"
6"
¢ hangers

MAINE PIERS

Scale: 1/4" = 1'-0"

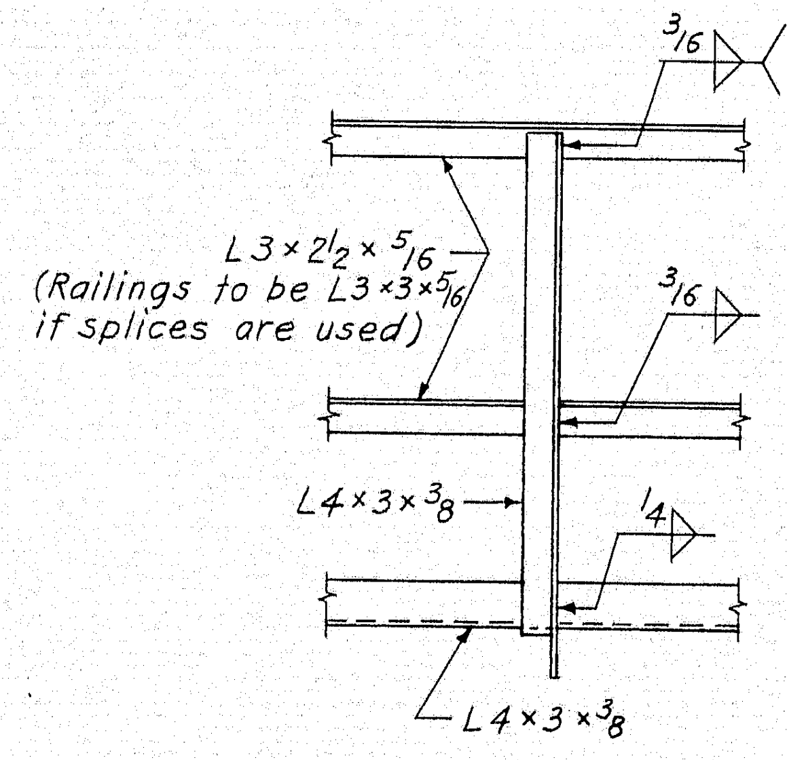

WEST
EAST
Varies - 7 to 9 stringers @ 6'-9" to 7'-11"
a
b
Varies - 7 to 10 stringers @ 6'-10" to 7'-11"
West elevation
See above
Pier Cap length varies - see table below
3" gap pier caps ¢ platforms
Pier Cap length varies - see table below
End of Pier Cap ¢ Railing
3'-0"
Field Splice (Optional)
Top of 1" grating
2'-6"
East Elevation
6"
See Note A
8"
8"
Field Splice (Optional)
See Note A
6"

	a	b
Piers 3S - 15S	2'-9"	2'-10"
Piers 1S, 16S - 18S	2'-9 1/2"	2'-9 1/2"
Pier 2S	2'-11"	2'-8"



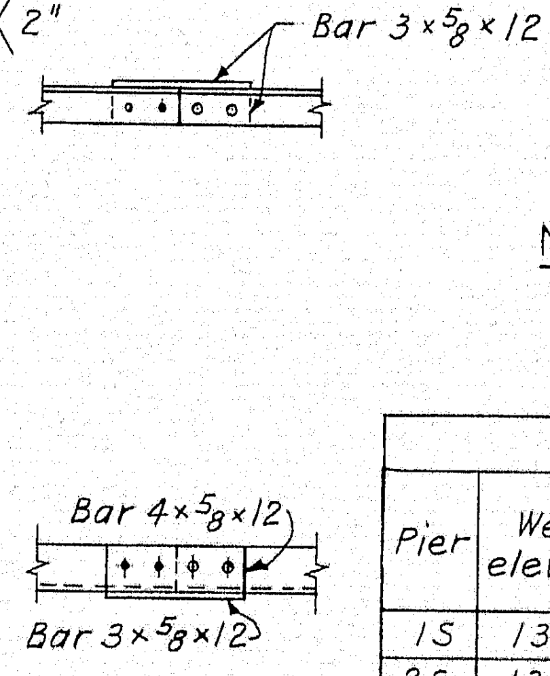
SECTIONAL VIEW

Scale: 3/4" = 1'-0"

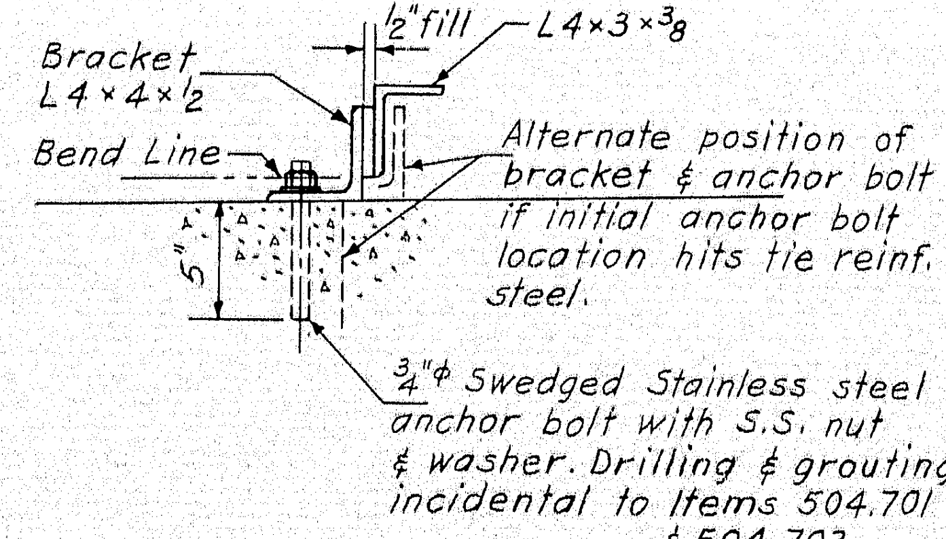

3/16
2"
L3 × 2 1/2 × 5/16 (Railings to be L3 × 3 × 5/16 if splices are used)
3/16
L4 × 3 × 3/8
1/4
L4 × 3 × 3/8

VIEW B-B

Scale: 3/4" = 1'-0"



FIELD SPLICES


1/2" fill
L4 × 3 × 3/8
Bracket L4 × 4 × 1/2
Bend Line
5"
Alternate position of bracket ¢ anchor bolt if initial anchor bolt location hits tie reinf. steel.
3/4" ϕ Swedged Stainless steel anchor bolt with S.S. nut ¢ washer. Drilling ¢ grouting incidental to Items 504.701 ¢ 504.703

SECTION A-A

Scale: 1 1/2" = 1'-0"

NEW HAMPSHIRE PIERS

Scale: 1/4" = 1'-0"

Note A: Hangers to be spaced equally at approximate midpoint between stringers. Max. hanger spacing to be 8'-0".

	SOUTHBOUND				NORTHBOUND			
Pier	West elevation	Stringer Spacing	No. of Hangers required	Length of Pier Cap	East elevation	Stringer Spacing	No. of Hangers required	Length of Pier Cap
1S	134.62	7'-10"	8	51'-9 1/2"	132.74	7'-10"	8	51'-9 1/2"
2S	132.88	7'-10"	8	51'-11"	128.77	7'-10"	8	51'-8"
3S	130.39	7'-10"	8	51'-9"	124.57	7'-10"	8	51'-10"
4S	126.82	7'-10"	8	51'-9"	120.91	7'-10"	8	51'-10"
5S	122.93	7'-10"	8	51'-9"	117.09	7'-10"	8	51'-10"
6S	119.09	7'-10"	8	51'-9"	113.27	7'-10"	8	51'-10"
7S	115.25	7'-10 3/16"	8	51'-9 15/16"	109.41	7'-10 3/16"	8	51'-11"
8S	111.46	7'-10 11/16"	8	52'-1"	105.58	7'-10 3/4"	8	52'-2 7/16"
9S	107.66	6'-9 7/8"	9	52'-6 3/16"	101.71	6'-10 5/16"	9	52'-10 3/16"
10S	103.85	6'-10 15/16"	9	53'-1 5/8"	97.80	7'-0 1/4	9	53'-11 9/16"
11S	100.02	7'-0 5/16"	9	53'-11 1/4"	93.85	7'-2 15/16	9	55'-6 5/8"
12S	96.26	7'-2"	9	54'-11"	89.89	7'-6 1/2"	9	57'-7 11/16"
13S	92.49	7'-4"	9	56'-0 15/16"	85.92	7'-10 7/8	9	60'-2 3/16"
14S	88.68	7'-6 5/16"	9	57'-5 1/16"	81.85	7'-3 9/16"	10	63'-2 5/16"
15S	83.64	7'-9 1/2"	9	59'-3 3/8"	77.94	7'-9 5/16"	10	67'-0 1/2"
16S	78.32	7'-1"	10	61'-5 1/2"	76.02	7'-2 5/16"	11	69'-6 1/8"
17S	73.42	7'-4 15/16"	10	64'-1 1/16"	72.97	7'-4"	11	71'-5 1/8"
18S	69.37	7'-8 7/8"	10	66'-8 11/16"	69.27	7'-7 3/8"	11	73'-4 1/16"

NOTES:

1. Platform steel, except grating, shall conform to ASTM A588.
2. Grating shall be hot-dip galvanized.
3. Platform bolts shall be 3/4" ϕ A325 bolts.
4. Construction drawings of existing piers ¢ superstructure shall be available to the Contractor in the office of the Engineer.
5. Maine platforms are on south faces of piers. For N.H. platforms, see Sh. 5 ¢ 6.
6. Pier caps have a contant slope from east end to west end.

6

DESIGN — S.D.
TRACE — Karly A. Sily
CHECK — S.S. Nishimura

BRIDGE NO.
IN CHARGE OF — Richard W. Christie

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

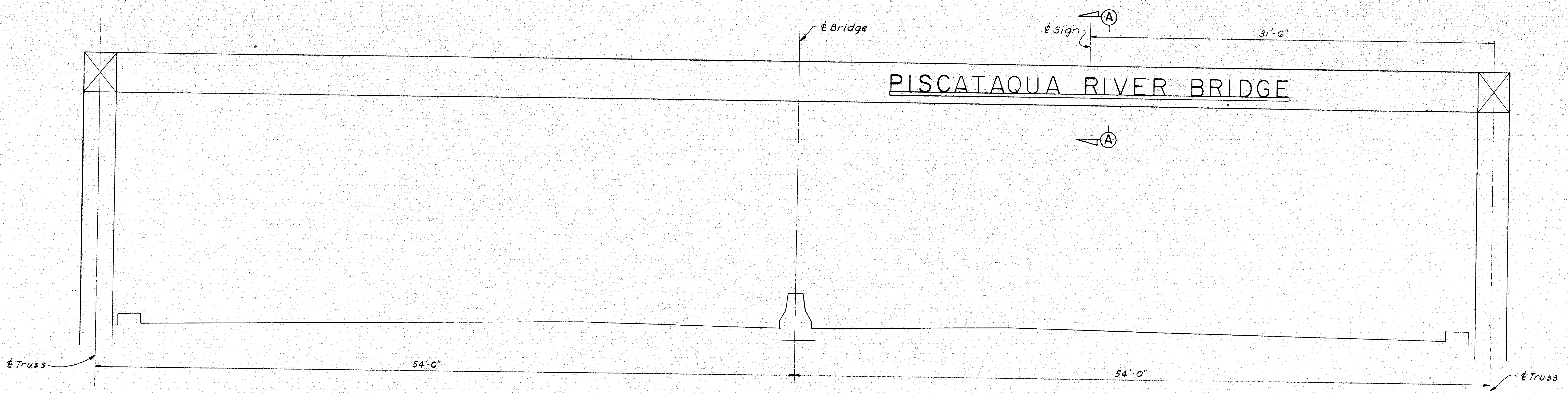
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

PIER PLATFORMS

SHEET 24 OF 24

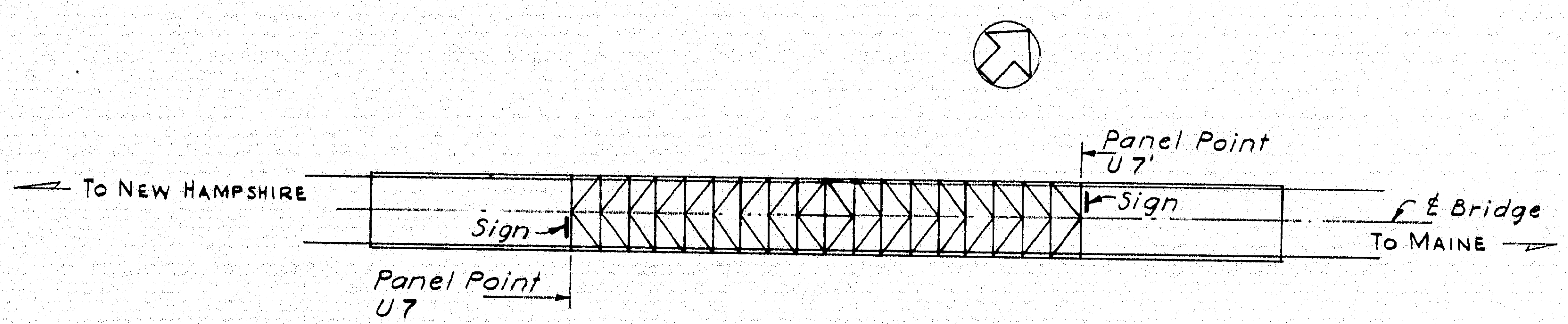
130-107

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1 — 95 — 1 (21)		



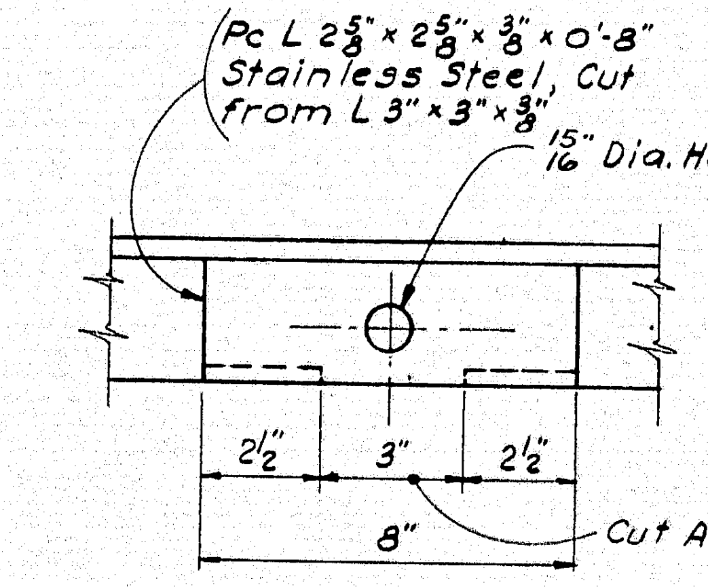
CROSS SECTION AT PORTAL STRUT

Scale: ¼" = 1'-0"



SIGN LOCATION PLAN

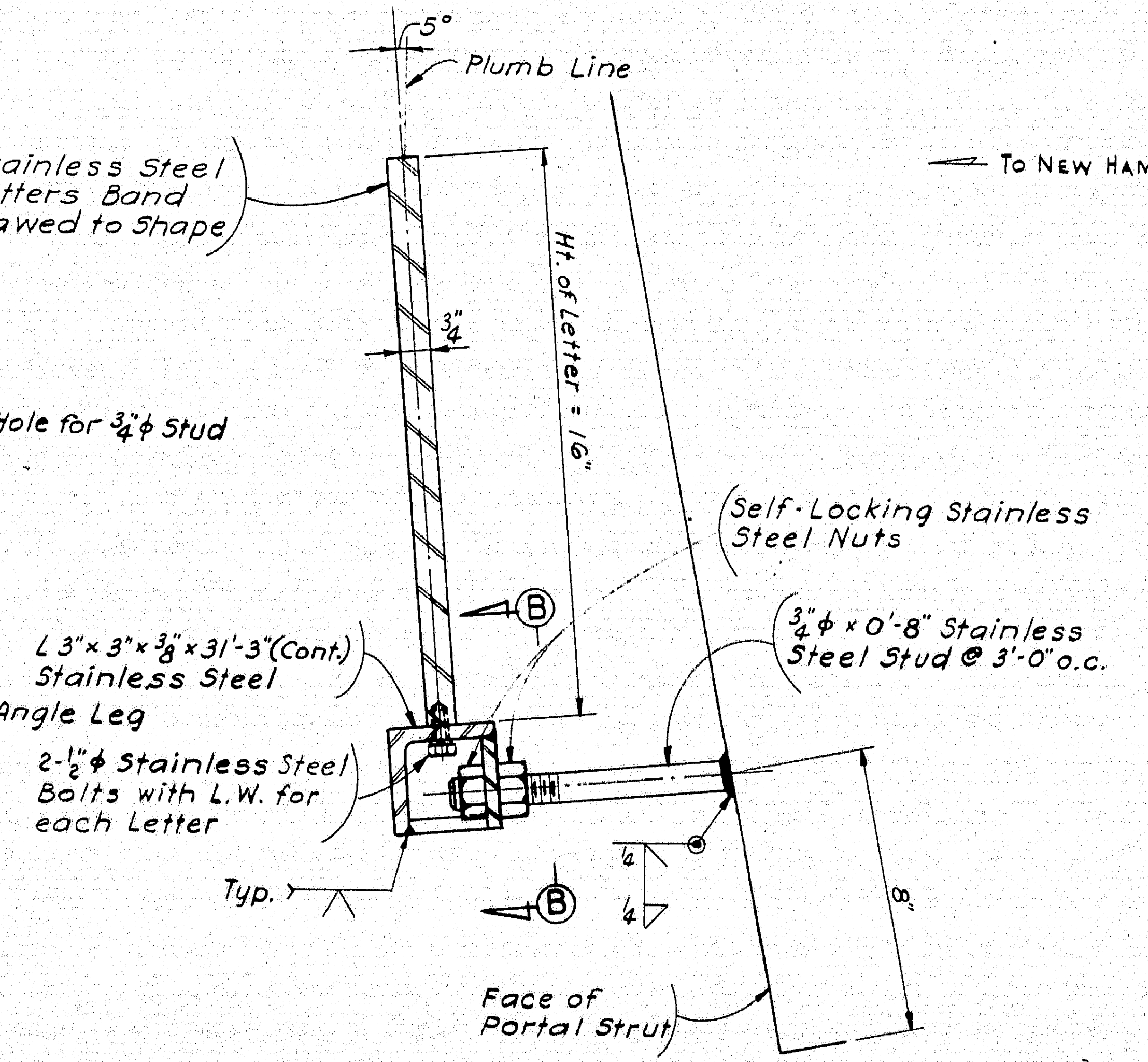
Scale 1" = 200'



Pc L 2⅝" × 2⅝" × ⅜" × 0'-8" Stainless Steel, Cut from L 3" × 3" × ⅜"
15/16" Dia. Hole for ¾"ϕ Stud
2½"
3"
2½"
8"
Cut Angle Leg

SECTION B-B

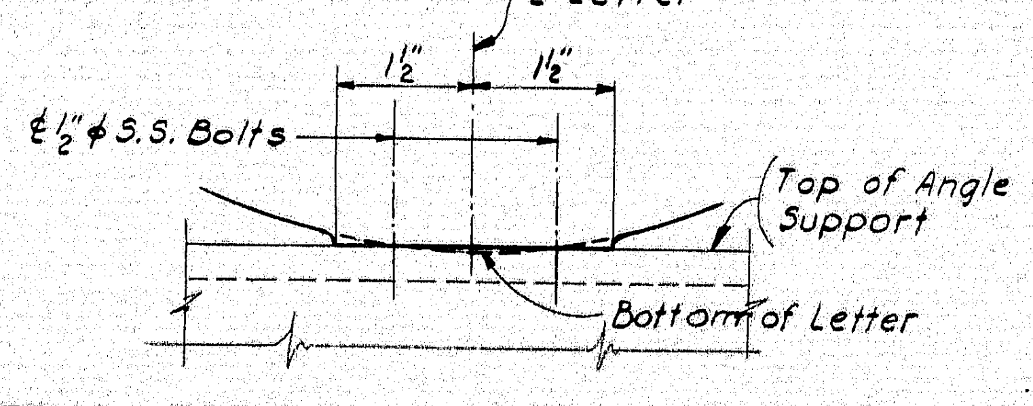
Scale 3" = 1'-0"



5°
Plumb Line
Stainless Steel Letters Band Sawed to Shape
¾"
Ht. of Letter = 16"
Self-Locking Stainless Steel Nuts
B
L 3" × 3" × ⅜" × 31'-3" (Cont.) Stainless Steel
¾"ϕ × 0'-8" Stainless Steel Stud @ 3'-0" o.c.
2-½"ϕ Stainless Steel Bolts with L.W. for each Letter
Typ.
¼
¼
B
8"
Face of Portal Strut

SECTION A-A

Scale 3" = 1'-0"



DETAIL FOR ROUND BOTTOM LETTERS

Scale: 6" = 1'-0"

SPECIFICATIONS FOR SIGNS

Fabricated Stainless Steel letters band sawed from ¾" plate conforming to Type 302, ASTM A 240.

The letters shall be 16" high and shall conform to the style, size and spacing for Series E, "Standard Alphabets for Highway Signs" by the U.S. Department of Commerce.

Edges of the letters shall be left with the band saw finish and the corners broken to remove the sharp angle. The viewing surface of the letters shall be given a No. 4 finish. The bottom edge of each letter shall be milled so that the faces of the letters, as installed, will be in a single plane. The bottom edge of curved letters shall be provided with a flat surface 3" long for mounting. The bottom edge of each letter shall be drilled and tapped for 2-½" Stainless Steel bolts with lock washers. Bolting Material shall be Type 304 Stainless Steel.

The letters shall be mounted on a continuous Stainless Steel angle as shown on this drawing. These angles shall be connected as shown. Exposed surfaces of the angles shall have a No. 4 finish.

The electrodes to be used for all welding as called for on the drawing, shall conform to E 308-16 as specified in the pamphlet A5.4 of the American Welding Society.

Complete shop drawings shall be submitted for approval.

AS BUILT
R.W. Christie 2/5/73

6

DESIGN —
TRACE — F.Mc.
CHECK — RWC

BRIDGE NO.
IN CHARGE OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

PORTAL STRUT SIGNS

SHEET X-1 OF

130-108

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1 — 95 — 1 (21)		

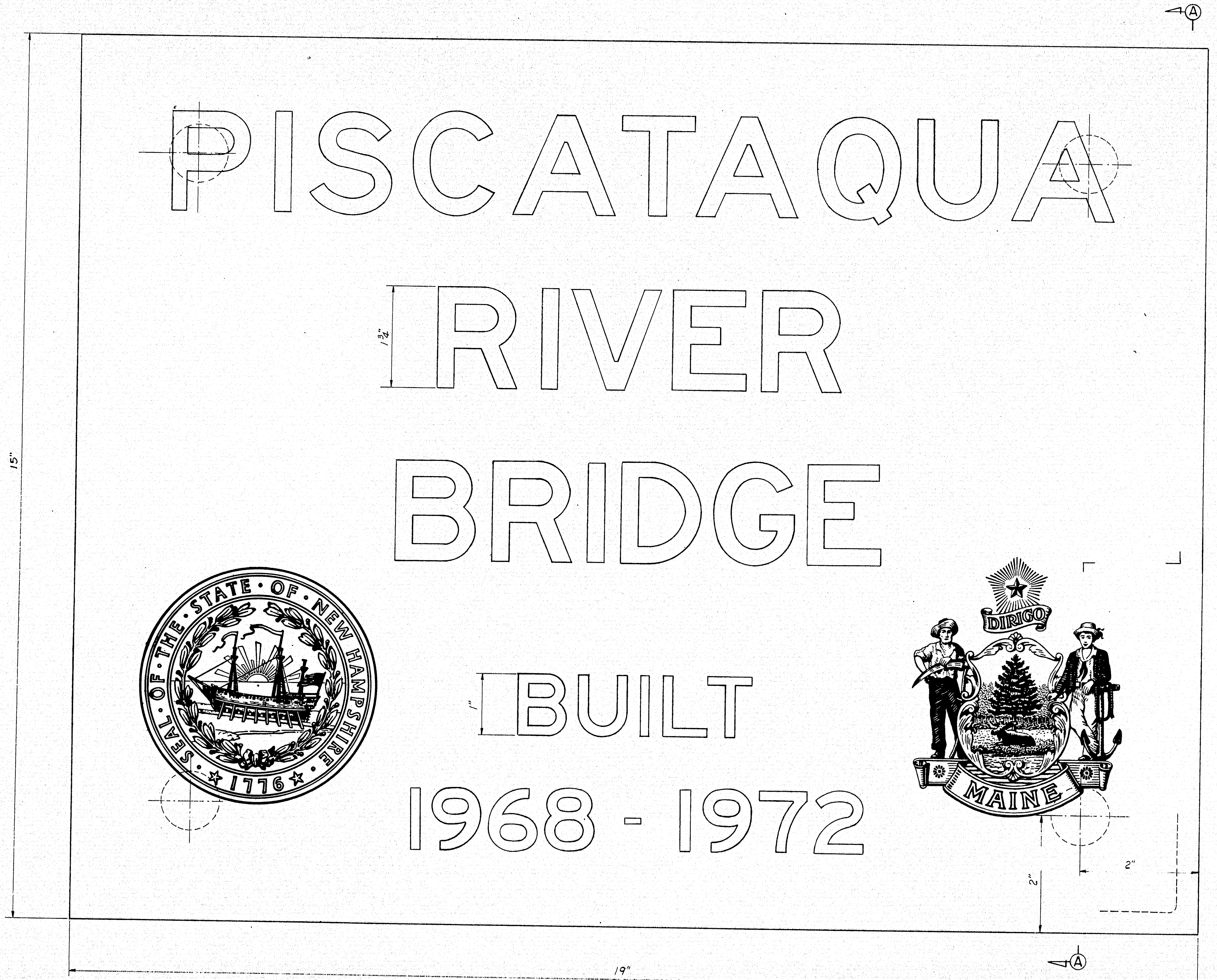
SPECIFICATIONS FOR PLAQUES

The plaques are to be cast of virgin ingots (Copper Alloy No. 836, ASTM B 62). Castings shall be free of pits and gas holes, and all letters and numerals shall be sharp. The plaques shall have plain edge borders with raised letters, numerals and State Seals integrally cast. The letters, numerals and returned edges are to have a satin finish. The background shall have a contrasting dark statuary color of stippled texture. The State Seals shall have a dark statuary color, highlighted to reveal the design.

After finishing, the plaques shall be sprayed with two coats of exterior acrylic lacquer. Block style lettering shall be used and the size of the letters, numerals and Seals shall be as shown on this drawing.

The Contractor shall submit a full size rub-off of each style for approval prior to casting.

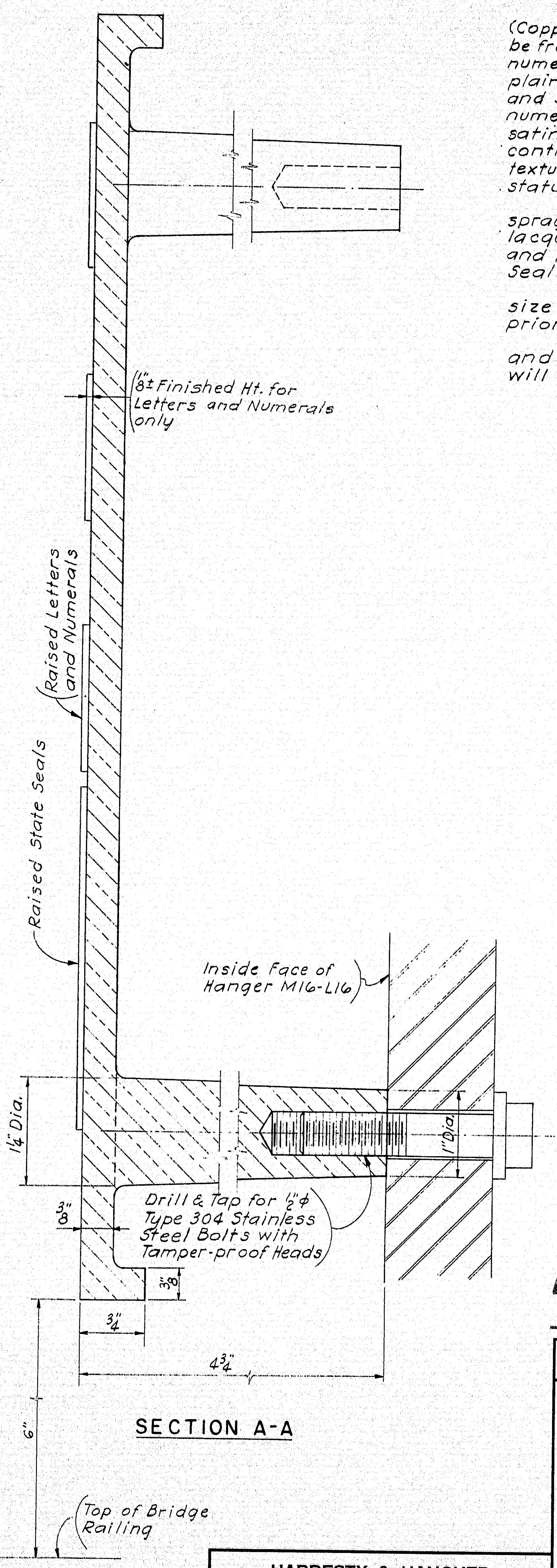
Installation, including the layout and drilling of 9/16" ϕ holes in the hangers, will be included as part of the work.



ELEVATION

Full Size

ONE PLAQUE WITH SEALS AS SHOWN - FOR WEST TRUSS
ONE PLAQUE WITH SEALS REVERSED - FOR EAST TRUSS


1/8"± Finished Ht. for Letters and Numerals only
Raised Letters and Numerals
Raised State Seals
Inside Face of Hanger M16-L16
1¼" Dia.
1" Dia.
Drill & Tap for ½" ϕ Type 304 Stainless Steel Bolts with Tamper-proof Heads
3/8"
3/8"
¾"
4¾"
6"
Top of Bridge Railing

SECTION A-A

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

AS BUILT
R. W. Christie 2/5/73

6

DESIGN —
TRACE — F. Mc.
CHECK — RWC

BRIDGE NO.
IN CHARGE OF — R. W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

MID - SPAN PLAQUES

SHEET X-2 OF

130-109

Price Change

Superseding Simplex C-L-P 4200 dated June 24, 1968

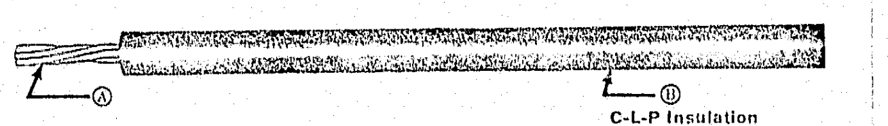
SIMPLEX
C-L-P 4200
January 2, 1969

COPPER
C-L-P
Single Conductor
TYPE RHH OR RHW
600 Volts
Subject to Change Without Notice

C-L-P® POWER CABLES

CROSS-LINKED POLYETHYLENE INSULATION
TYPE RHH OR RHW
Dry Locations 90°C Wet or Dry Locations 75°C
Specify C-L-P 4200 COPPER CONDUCTOR

APPLICATIONS: Underwriters' Listed for use at 90°C Conductor Temperature in dry locations or at 75°C conductor temperature in wet or dry locations. All sizes bear U.L. Type RHH or RHW labels and may be installed in conduit or other recognized raceway as general purpose wiring for control, switchboard, lighting and power circuits in residential and commercial buildings, industrial plants, and for utility substations, meters and generating plants.



SPECIFICATIONS

Ⓐ Single conductor solid and Class B Stranded, annealed copper per ASTM B-3, IPCEA Standard, S-19-81, 4th Edition (NEMA WC3-1964) Part 2, and Underwriters' Lab. Rubber-Insulated Wires and Cables Standard No. 44, latest revision.

Ⓑ Simplex specially compounded thermosetting cross-linked polyethylene, does not require further covering. Wall thicknesses are in accordance with Underwriters' Laboratory and National Electrical Code requirements for Types RHH and RHW. C-L-P combines outstanding resistance to heat and water with exceptional resistance to chemicals, abrasion, crushing, flame and weathering in accordance with Simplex Specification 400, and meets the applicable requirements of U.L. Standard No. 44 and Interim Standard #2 to IPCEA No. S-66-524 (NEMA WC7).

Product Number	Awg Or MCM	Strand	Insul. Thick. Inches	② Approx. Gross Wgt. Lbs./1000'	Approx. O.D. Inches	③ Conduit Size	① Standard Packaging	④ Stock Colors	⑤ Amperes Per Conductor RHW 75°C	⑤ Amperes Per Conductor RHH 90°C
76100	14	1	.047	30	.17	½	500' Coils Or 2500' N.R.R.	1	15	15
*76101	14	7	.047	30	.17	½		1	15	15
*76102	12	1	.047	40	.18	½		1	20	20
*76103	12	7	.047	40	.19	½		1	20	20
*76104	10	1	.047	50	.20	½		1	30	30
*76105	10	7	.047	60	.22	½		1	30	30
76106	8	1	.062	80	.26	¾	500' Coils Or 1000' To 4000' N.R.R.	1	45	50
*76107	8	7	.062	90	.28	¾		1	45	50
*76108	6	7	.062	130	.32	1		1	65	70
*76109	4	7	.062	200	.37	1		1	85	90
*76110	2	7	.062	290	.43	1¼		1	115	120
*76111	1	19	.078	390	.51	1½	1000' To 4000' N.R.R.	1	130	140
*76112	1/0	19	.078	470	.54	1½		1	150	155
*76113	2/0	19	.078	580	.59	1½		1	175	185
*76114	3/0	19	.078	710	.64	2		1	200	210
*76115	4/0	19	.078	890	.70	2		1	230	235
*76116	250	37	.094	1070	.78	2½	1000' To 2000' N.R.R.	1	255	270
76117	300	37	.094	1270	.84	2½		1	285	300
*76118	350	37	.094	1460	.89	2½		1	310	325
76119	400	37	.094	1660	.94	3		1	335	360
*76120	500	37	.094	2040	1.03	3		1	380	405
76121	600	61	.109	2480	1.14	3½	500' To 1000' N.R.R.	1	420	455
*76122	750	61	.109	3050	1.25	3½		1	475	500
*76123	1000	61	.109	4030	1.41	4		1	545	585

P.O. #1481

Job: Piscataqua River Bridge #6

*Stock Items ® Simplex Registered Trade Mark

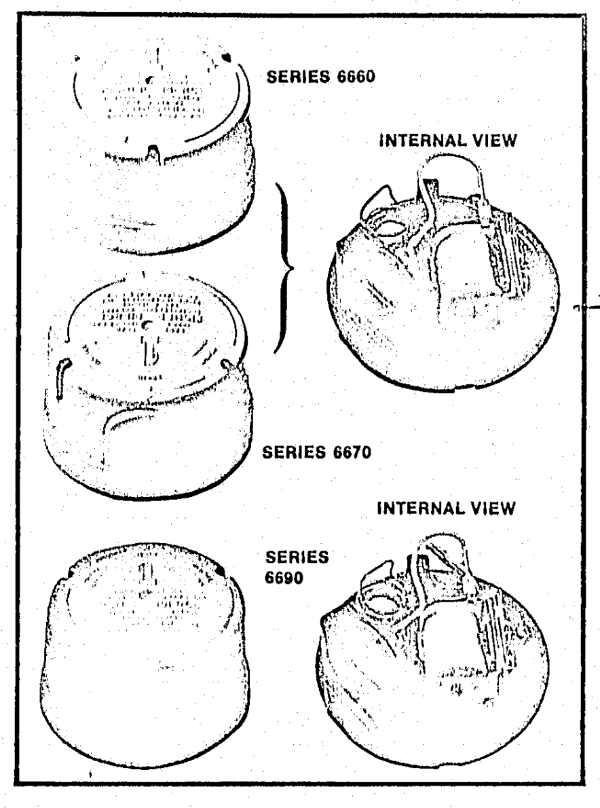
NOTES

Pricing Instructions: Refer to Section 40, Subsection 42, for detailed information.
Terms: 2% 10th Proximo, net cash last day of month following date of invoice based on material value only.
All shipments will be invoiced at the prices in effect on the date of shipment.
Prices are F.O.B. shipping point, freight allowed to any freight station or common carrier delivery point in continental United States, except Alaska and Hawaii, on shipments of 500 lbs. or more. Shipments to Alaska, Hawaii, and foreign points, are F.O.B. Shipping point, freight allowed to dock, port of embarkation. All shipments less than 500 lbs. are F.O.B. shipping point, no freight allowance and will be shipped freight collect.
Quantities within 10 percent of the next higher footage column may be priced from the next higher column.
Minimum net dollar value per item on stock cables is $50.00; on non-stock cables 1000 feet and $500.00 per item.

① Desired packaging should be specified on orders. Option of standard packages as shown. Alternate packaging on request. Non-returnable reels will be used unless otherwise specified.
② Net weight of cable may be approximated by taking 84% of listed gross weight.
③ Conduit sizes based on 3 Single Conductors in a Conduit — 40% Fill per 1965 N. E. Code.
④ Stock Colors: Number indicates number of colors available. 1-Black.
⑤ Amperes per conductor based on 3 Single Conductors in a single or exposed Conduit, 30°C Ambient per 1965 National Electric Code.
Jacket Legend: Surface Printed "SIMPLEX C-L-P 4200 TYPE RHH OR RHW (Size) 600V".
Architects and Engineers Specifications: The following is recommended when a purchasing specification is desired. "The cable shall be Simplex C-L-P 4200 and shall meet U.L. requirements for TYPE RHH or RHW 600V".

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
AUG 27 1971
BY H. B. Hyatt

Simplex WIRE AND CABLE COMPANY, Cambridge, Mass. 02139

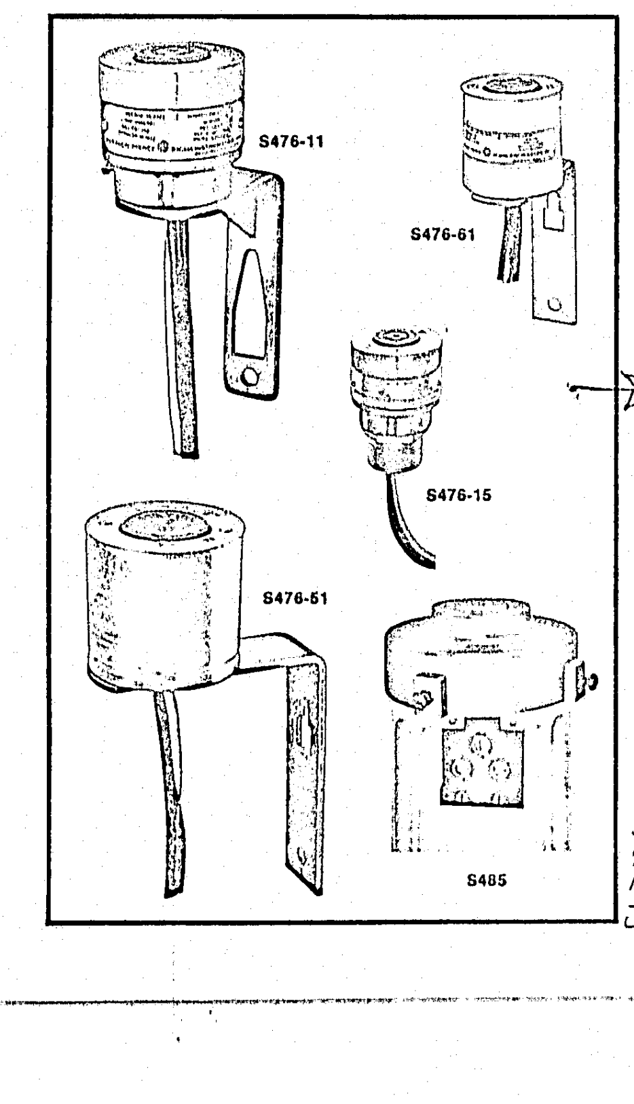


SERIES 6600 Outdoor Lighting Controls

Series 6600 "twist-lock" type Outdoor Lighting Controls provide three component, low profile design, a no-chatter AC relay and positive lightning and surge protection. Conservatively rated for at least 5000 operations, these rugged, economical controls will switch 1000 watt or 1800 volt-ampere loads for years of trouble-free operation.

Model No.	Voltage	(3) Wattage	(1) Base Size	Relay	Lightning Arrester	(2) Turn On-Off
6660	120	1000W	3¼"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6660-ESS	120	1000W	3¼"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6662-ESS	120	1000W	3¼"	N. C. SPST	Deluxe Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6672	240	1000W	3¼"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6690B	105 to 285	1000W	3¼"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6690B-ESS	105 to 285	1000W	3¼"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6694	480	1000W	3¼"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.

NOTE (1) All units available with 3¾" cover base size, if required. To order 3¾" wide skirt, (for replacement of old G. E. style photo-controls), change last digit of model number to 7. Example: 6660 ➤ 6667.
NOTE (2) Many non-standard turn-on and turn-off ratios are available for special applications, i.e. tunnels, etc.
NOTE (3) For higher wattages, see multiple relays.



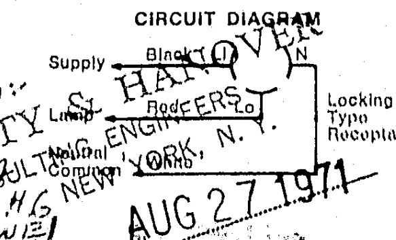
SERIES S400 Mounting Adapters For SERIES 6600 Outdoor Lighting Controls

For pole, crossarm, pipe and conduit mounting —
Fisher Pierce offers a large variety of adapters with plug-in, twist-lock receptacles for mounting. 360-degree rotation for orienting control. Three standard color-coded, No. 10 AWG leads, approximately 18 inches long.

Model No.	Description
S476-11	Rugged, cast aluminum receptacle and bracket. Side screw adjustment for control rotation and tightening on bracket hub. For wall or pole mounting.
S476-15	Receptacle and connection for conduit mounting through IPS threaded 1¼" hole. Three 18", No. 10 AWG, color coded leads.
S476-51	Receptacle and bracket. Economical, one-piece, aluminum construction. For North orientation, loosen bottom screw. For wall or pole mounting.
S476-61	Economical, aluminum construction receptacle for direct conduit ½" IPS threaded connection and throw-away vertical wall bracket with standard locknut for pipe, pole, wall or crossarm mounting.
S485	Receptacle and cover fit any pole, round or fluted, up to 4½" O.D. and 3" or more I.D. Screw terminals accept No. 8 AWG stranded wire. Insulated clamp at bottom of terminal board provides strain relief. All cast aluminum with stainless steel screws.

NOTE (1) All Receptacles Wired
Red — Load
White — Neutral
Black — Supply

CIRCUIT DIAGRAM

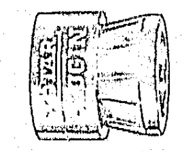


THE DOLE CO.
P.O. 1482
JOB. PISCATAQUA
RIVER BRIDGE #6
KITTERY MAINE

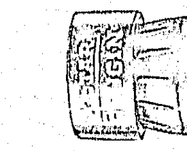
APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
AUG 27 1971
BY H. B. Hyatt

THE DOLE COMPANY

The basic unit of Slugin consists of a rustproof alloy* cone — either plain or threaded — fitted with a lead expansion sleeve. On being properly installed, a set of two or more units practically "fuses" with the masonry itself. Heavy-weight fixtures, such as industrial machinery and dock loading fenders normally subjected to great loads and stresses, are safely, securely and permanently anchored with Star Slugin.



CAT. No. 6800-2 1-unit Plain



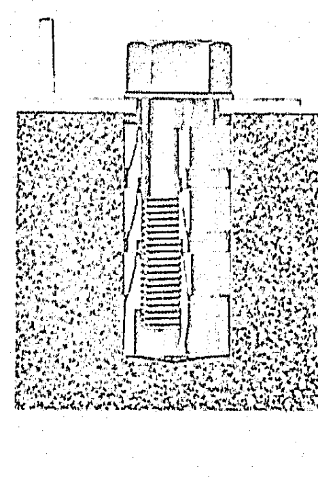
CAT. No. 6800-3 1-unit Threaded

*Alloy cone is compounded of Zinc, Aluminum, Copper and Magnesium. Zamak-5 specifications show these strengths:
Tensile —47,600 lbs. per sq. in.
Shear —38,000 lbs. per sq. in.
Compression—87,000 lbs. per sq. in.

SPECIFICATIONS

PLAIN TYPE (See Note) Catalog Number	Shipping Weight of 100 (Single Unit Sets)	Bolt Size	Drill Size	Quantity in Standard Package Single Unit Sets	Quantity in Standard Carton Single Unit Sets	Shipping Weight of 100 Single Unit Sets	THREADED TYPE Catalog Number
6815-00200	2 lbs.	1/4"	1/2"	100	500	2 lbs.	6815-00300
6825-00200	5 lbs.	3/8"	3/4"	50	250	5 lbs.	6825-00300
6835-00200	10 lbs.	1/2"	1"	50	250	14 lbs.	6835-00300
6845-00200	13 lbs.	5/8"	1 1/8"	50	100	16 lbs.	6845-00300
6855-00200	25 lbs.	3/4"	1 3/8"	25	50	30 lbs.	6855-00300
6860-00200	33 lbs.	7/8"	1 1/2"	25	50	42 lbs.	6860-00300
6865-00200	39 lbs.	1"	1 5/8"		25	49 lbs.	6865-00300
*6870-00200	92 lbs.	1 1/8"	2"		25	113 lbs.	*6870-00300
*6875-00200	114 lbs.	1 1/4"	2 1/8"		25	136 lbs.	*6875-00300
*6885-00200	148 lbs.	1 1/2"	2 3/8"		25	188 lbs.	*6885-00300

Note: Use square head bolts on 1/2", and smaller sizes - Use hexagon head on all larger sizes.
* Threaded and plain cones in these sizes are malleable iron.

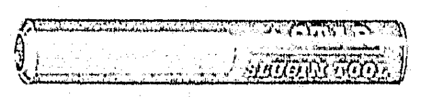


For permanent installation, lead sleeve is expanded over cone to exert uniform radial pressure around entire circumference of hole. Lead fills all crevices of masonry.

Precision-cast alloy cone is ribbed to grip lead sleeve and prevent turning when work is bolted into place. Inside taper of lead sleeve assures centering on shoulder of cone.

Extended base on threaded cone permits adjustment for various thicknesses of work. Internal precision-cast threads fit standard machine screws or bolts.

Increased holding power is obtained by use of additional units to meet required specifications. Installation is permanent though fixtures may be removed at will.



CAT. No. 6800-7

Recommended for best results when installing Slugin Anchors. If Star Setting Tools are not at hand, ordinary pipe of proper length and diameter may be used.

SPECIFICATIONS

Catalog Number	Bolt Size of Tool	Depth of Bore	Over All Length	Shipping Weight Each
6815-00700	1/4"	4"	6"	1/4 lb.
6825-00700	3/8"	5 1/2"	8"	1/2 lb.
6835-00700	1/2"	5 1/2"	8"	1 lb. 4 oz.
6845-00700	5/8"	6"	10"	[illegible] oz.
6855-00700	3/4"	7"	10"	1 lb. 13 oz.
6860-00700	7/8"	9"	[illegible]	[illegible] oz.
6865-00700	1"	12"	[illegible]	3 lb. [illegible] oz.

10 P.O. #1482 Job: Piscataqua River Bridge Location: Kittery, Maine

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
AUG 27 1971
BY H. B. Hyatt

6

13/32 x 1½ inch FUSES

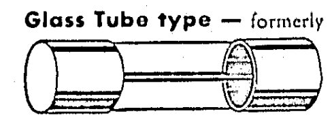
BUSS FUSES, 13/32 x 1½ Inch

Test specifications on AGU, ABU, BAF, BAN and MIN — carry 110%, open at 135% within 1 hour.

35 to 60 ampere open at 300% in 2 to 4 seconds when tested in a standard 30 ampere test circuit

These fuses in sizes larger than 30 ampere are not recommended as clips or fuse holder would not permit fuses to carry such high currents. If surges or starting currents make heavier fuses necessary use FNM Fusetron fuses.

Glass Tube type — formerly called 5AG.

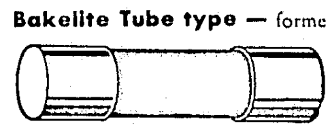


Listed by Underwriters' Laboratories, Inc. in 3 amp. and smaller sizes.

Voltage	Symbol	Amperes
250 or less	AGU	1, 2, 3 or 4
32 or less	AGU	5, 10, 15, 20, 25, 30, 35, 40, 50 or 60

Carton quantity 10, shelf package 100. Shipping weight 1.8 lbs. per 100.

Bakelite Tube type — formerly called 5AB.



Because of higher voltage ratings the use of BAF or BAN fuses is recommended instead of ABU fuses.

Voltage	Symbol	Amperes
250 or less	ABU	1, 2, 3 or 5
32 or less	ABU	10, 15, 20, 25, 30, 35, 40, 50 or 60

Carton quantity 10, shelf package 100. Shipping weight 1.17 lbs. per 100.

Laminated Tube type

Often called "midget type".
250 volt sizes listed by Underwriters' Laboratories, Inc

Voltage	Symbol	Amperes
250 or less	BAF	1, 3, 6, 10 or 15
125 or less	BAF	20, 25 or 30

Carton quantity 10, shelf package 100. Shipping weight 1.3 lbs. per 100

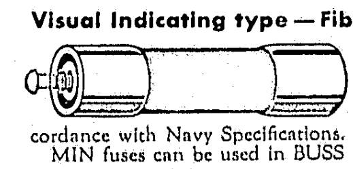
Fibre Tube type

BAN fuses are BAF fuses with a fibre tube to give greater mechanical strength.

Voltage	Symbol	Amperes
250 or less	BAN	1, 3, 6, 10, 15, 20, 25 or 30

Carton quantity 10, shelf package 100. Shipping weight 1.4 lbs. per 100

Visual Indicating type — Fibre tube



Red button on indicating pin extends from end of fuse when fuse is blown. Made in accordance with Navy Specifications.

MIN fuses can be used in BUSS HPC-C fuseholders.

Voltage	Symbol	Amperes
250 or less	MIN	1, 2, 3, 5, 10 or 15
125 or less	MIN	20, 25 or 30

Carton quantity 10, shelf package 100. Shipping weight 1.5 lbs per 100

Signal or Visual Indicating type

MIC fuses have a silver plated indicating pin. Pin can be used as visual indicator as in a BUSS HPC-C fuseholder—or can be used to actuate a signal by using fuses in BUSS Signal fuse block.

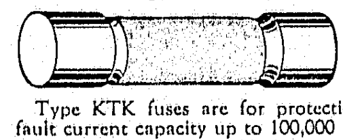
250 volt sizes listed by Underwriters' Laboratories, Inc.

Voltage	Symbol	Amperes
250 or less	MIC	1, 2, 3, 5, 10 or 15
32 or less	MIC	20, 25 or 30

Carton quantity 10, shelf package 100. Shipping weight 1.5 lbs. per 100.

LIMITRON FUSES

High Interrupting Capacity



13/32 x 1½ inch

Type KTK fuses are for protection of circuits having fault current capacity up to 100,000 amperes, AC only.

Listed by Underwriters' Laboratories Inc.

0 to 15 ampere sizes listed by Canadian Standards Assn.

Test specifications — carry 110%, open at 135% in 1 hour or less.

Voltage	Symbol	Amperes
600 or less	KTK	1/10, 1/8, 2/10, 1/4, 3/10, 1/2, 3/4, 1, 1½, 2, 3, 4, 5, 6, 8, 10, 15, 20, 25 or 30

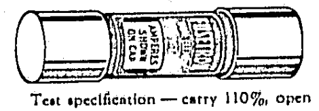
Type **KLM** is the military version of Type KTK fuses, made in conformity and tested to meet the requirements of Specification MIL-F-15160-D. They have an interrupting rating on voltages of 500 of 68,000 amperes AC or DC. Available in same ampere ratings as Type KTK fuses.

Carton quantity 10, shelf package 100. Shipping weight 1.8 lbs. per 100.

FUSETRON FIBRE TUBE FUSES, 13/32 x 1½ Inch

DUAL-ELEMENT — SLOW BLOWING TYPE

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.



Test specification — carry 110%, open at 135% within 1 hour.

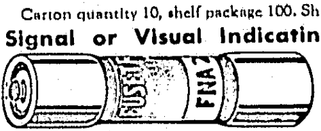
See Blowing Time Charts, page 22.

125 and 250 volt sizes listed by Underwriters' Laboratories, Inc.

Voltage	Symbol	Amperes
250 or less	FNM	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10, 8/10, 1, 1⅛, 1¼, 14/10, 16/10, 18/10, 2, 2¼, 2½, 28/10, 32/10, 3½, 4, 4½, 5, 56/10, 6¼, 7, 8, 9 or 10
125 or less	FNM	12 or 15
32 or less	FNM	20, 25 or 30

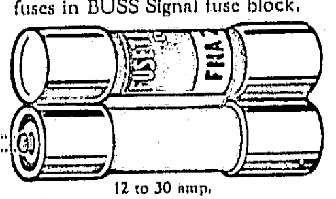
Carton quantity 10, shelf package 100. Shipping weight 1.5 lbs. per 100

Signal or Visual Indicating type — FNA are FNM Fusetron fuses with silver plated indicating pin which extends from fuse when fuse is blown.



1/8 to 10 amp

In sizes up to 10 amperes can be used in BUSS HPC-C fuseholder or if desired pin can be used to actuate a signal by using fuses in BUSS Signal fuse block.



12 to 30 amp.

Fuses in sizes larger than 10 ampere have a dual tube construction. They can be used in BUSS Signal fuse blocks but not in the HPC-C fuseholder.

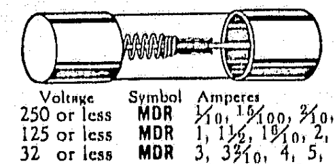
See Blowing Time Chart, page 22.

0 to 15 ampere sizes listed by Underwriters' Laboratories, Inc.

Voltage	Symbol	Amperes
250 or less	FNA	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10 or 8/10
125 or less	FNA	1, 1⅛, 1¼, 14/10, 16/10, 18/10, 2, 2¼, 2½, 28/10, 3, 32/10, 3½, 4, 4½, 5, 56/10, 6, 6¼, 7, 8, 10, 12 or 15
32 or less	FNA	20, 25 or 30

0 to 10 amps. Carton quantity 10. Shipping weight 1.5 lbs. per 100
12 to 30 amps. Carton quantity 5. Shipping weight 3.0 lbs. per 100

FUSETRON GLASS TUBE FUSES, 13/32 x 1½ Inch



Dual-element type. Same as FNM above listed except glass tube instead of fibre tube.

Voltage	Symbol	Amperes
250 or less	MDR	1/10, 15/100, 2/10, 3/10, 4/10, 1/2, 6/10 or 8/10
125 or less	MDR	1, 1½, 16/10, 2, or 2½
32 or less	MDR	3, 32/10, 4, 5, 6¼, 8, 10, 15, 20, 25, 30, 35 or 40

Carton quantity 10, shelf package 100. Shipping weight 1.9 lbs. per 100

TRON FNQ time-delay FUSES

TRON FNQ Time-Delay fuses are designed primarily for the protection of motor control transformers being applied at 440 to 480 volts. This midget type fuse has an interrupting rating of 10,000 amperes at 500 volts. FNQ fuses may be sized close to the control transformer full load rating because of their inherent time-delay, avoiding needless blows which might otherwise occur from harmless transient currents.

These fuses may also be applied in other circuits up to 500 volts that require time-delay and have space limitations. These fuses can be used in BUSS HPC fuseholders and 13/32 x 1½" fuse blocks.

Test specification — carry 110%, open at 135% within 1 hour.

Voltage	Symbol	Amperes
500 or less	FNQ	1/4, 8/10, 1, 16/10, 2, 32/10, 3½, 4, 6, 7, 10

Carton quantity 10, Shipping Weight 1.5 lbs. per 100.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
AUG 27 1971
BY H. B. Hyatt

P.O. 1290 Job: Piscataqua River Bridge Location: Kittery, Maine

---

ELASTIMOLD® FUSED CONNECTOR KIT STYLE 82S

FOR COPPER LINE SIDE
FOR ALUMINUM OR COPPER LOAD SIDE

② PAGE 10
1 OCT. 1969

Fused Y connector for low voltage aluminum or copper line side cables and copper load side cables. Applications include use in street and highway lighting, flood lighting, as well as power distribution circuits. Line side cables are attached in the connector with screw terminal fittings. The load side cable is attached with a compression fitting.

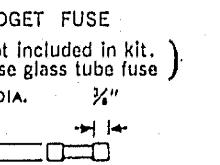
ORDERING INSTRUCTIONS

Line Side Cable Entrances:
- Select in TABLE Ⓦ the letter symbol that represents* your overall cable dia.
- Select in TABLE Ⓧ the number symbol that represents your conductor size.

Load Side Cable Entrance:
- Select in TABLE Ⓨ the letter symbol that represents* your overall cable dia.
- Select in TABLE Ⓩ the number symbol that represents your conductor size.

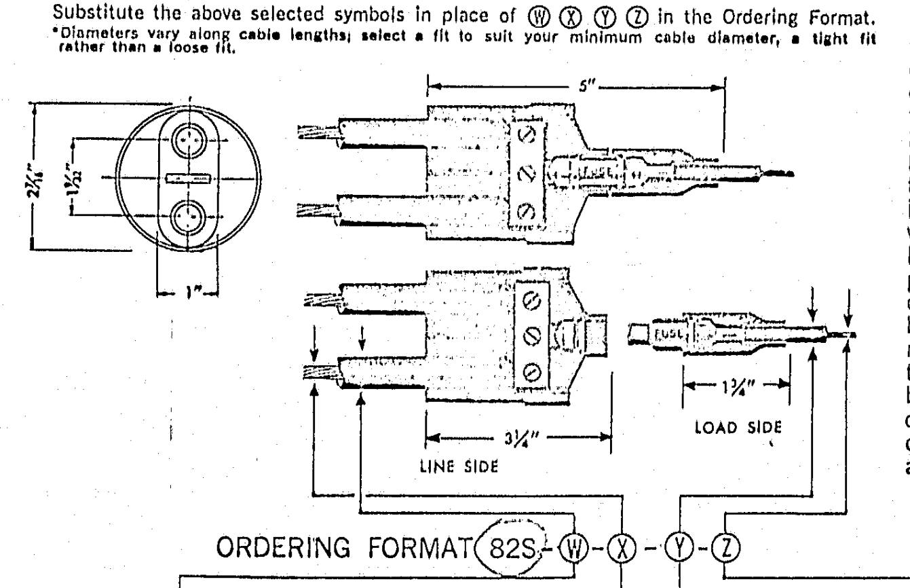
Substitute the above selected symbols in place of Ⓦ Ⓧ Ⓨ Ⓩ in the Ordering Format.
*Diameters vary along cable lengths; select a fit to suit your minimum cable diameter, a tight fit rather than a loose fit.

MIDGET FUSE
(Fuse not included in kit. Do not use glass tube fuse)



Midget fuses are known to be available in the following capacities:
600 volts or less, 1/10 to 30 amps
32 volts or less, 1/10 to 60 amps

Any standard midget, ferrule type fuse (except glass tube) may be used in this connector. A fuse capable of interrupting the short circuit capacity of the supply circuit must be used. Usually the fuse housed in the ELASTIMOLD FUSED CONNECTOR will carry more than listed amperage, but its short circuit protection will be normal. For close limits, such as the running protection of a motor, the capacity of the fuse should be determined experimentally, since the size of the attached conductors, ambient temperature, and other installation factors may over or under rate the fusing action.



ORDERING FORMAT 82S-Ⓦ-Ⓧ-Ⓨ-Ⓩ

CABLE DIAMETER Min.	CABLE DIAMETER Max.	Symbol for Ⓦ
.155"	.260"	A
.195	.260	B
.250	.330	C
.320	.380	DA
.370	.430	DB
.420	.505	EA
.495	.585	EB
.575	.685	FA
.675	.785	FB

ALUMINUM OR COPPER CONDUCTOR (AWG) Concentric Stranded	Solid	Symbol for Ⓧ Copper and Aluminum
#8	—	4
#6	—	3
#4	—	2
#2	—	1

CABLE DIAMETER Min.	CABLE DIAMETER Max.	Symbol for Ⓨ
.120"	.160"	S
.155	.205	A
.195	.260	B
.250	.330	C
.320	.430	D

CONDUCTOR (AWG) Concentric Stranded	Solid	Symbol for Ⓩ Copper	Symbol for Ⓩ Alum.
#14, #16	#12, #14	8	8A
#10, #12	#8, #10	6	6A
#8	#6	4	4A
#6	#4	3	3A

EXAMPLE

If the line side cable outside diameter Ⓦ is .54" and the conductor Ⓧ is #2 stranded, and the load side cable outside diameter Ⓨ is .29" and the conductor Ⓩ is #12 stranded, an 83S-EB-1-C6 connector kit should be ordered.

92 CAT# 82S-C-3-B-6

ELASTIMOLD DIVISION AMERACE·ESNA
ESNA Park • Hackettstown, N.J. 07840/(201) 852-1122

FOR INSTALLATION INSTRUCTIONS SEE SECTION 9, PAGE 5

THE DOLE CO. P.O.# 1290
JOB PISCATAQUA RIVER BRIDGE #6
KITTERY, ME

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
AUG 27 1971
BY H. B. Hyatt

Submitted by:
THE DOLE COMPANY

6

HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVENUE
NEW YORK, N.Y. 10017

HENRY W FISCHER
EGBERT R HARDESTY
JOHN J. FIALA
CLINTON D HANOVER, JR (1945-65)

ASSOCIATE ENGINEERS
RALPH F BARTLEY
PETER L. BOTTONE
RICHARD W. CHRISTIE
MICHAEL C CUSANO
H EVERETT DRUGGE
WILLIAM J GRAHAM
BERNARD A. GRAND
BERNARD HABER
HENRY B HYATT
EDMUND A. KMIOTEK
IRVING SCHNEIDER
EUGENE S TULICH
S STARR WALBRIDGE

August 27, 1971

Cianbro Corporation
P. O. Box D
Pittsfield, Maine 04967

Attention: Mr. George Ackerman

Re: Piscataqua River Bridge
Project No. I-95-1(22)16
Contract No. 6

Gentlemen:

With reference to your transmittals of August 11, 1971, we return herewith 7 copies each of the following catalog cuts, approved:

Elastimold, Page 10, Fused Connector Kit 82S
Buss, Page 5, Limitron Fuses Type KTK
Star, Pages 10 and 11, Slugin #6825-00200
and #6825-00300
Simplex, C-L-P4200, Power Cables, #6 and #10 AWG
Fisher-Pierce, Photocell, Model No. 6660 and
Mounting Adapter, Model No. S476-15

We assume that the voltage rating of the Model 6660 photocell has been selected to suit the voltage on the incoming feeder to the sign bridge. A combined wiring diagram of the photocell and relay must be prepared and submitted for approval.

Very truly yours,

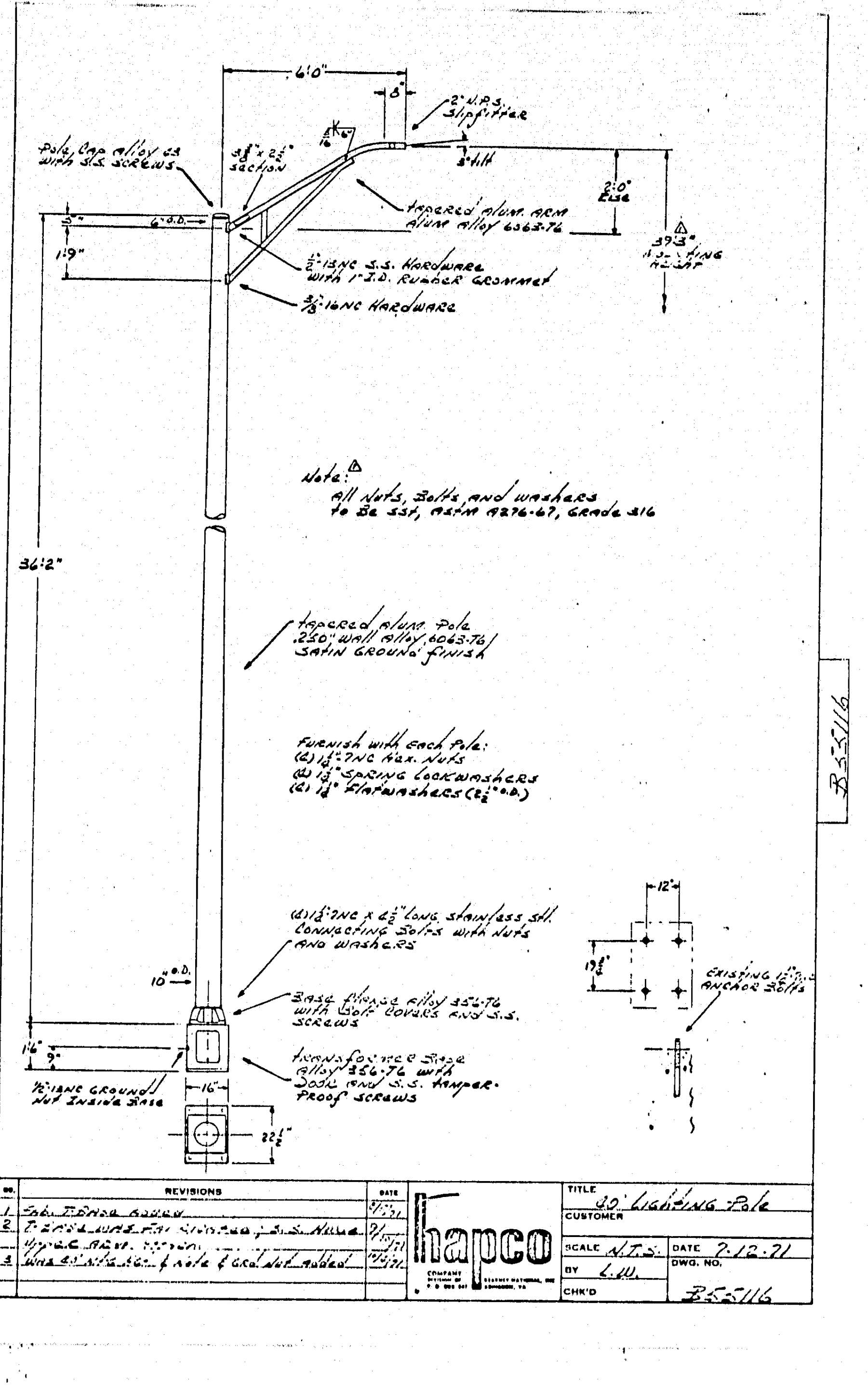
HARDESTY & HANOVER

H. B. Hyatt

Encl.

cc: F. S. Foster ✓
w/encl.
P. G. Pariseau

130-110


6'0"
8"
2" I.P.S. Slipfitter
Pole Cap Alloy 43 with S.S. Screws
3/8" x 2 1/2" section
3" rise
2'0" Rise
tapered alum. arm Alum Alloy 6063-T6
39'3" mounting height
6" O.D.
1'9"
1/2"-13NC S.S. Hardware with 1" I.D. Rubber Grommet
3/8"-16NC Hardware
Note: All Nuts, Bolts and washers to be SST, ASTM A276-67, Grade 316
36'2"
tapered alum. Pole .250" wall Alloy 6063-T6 Satin Ground finish
Furnish with each Pole: (4) 1 1/2"-7NC Hex. Nuts (4) 1 1/2" Spring Lockwashers (4) 1 1/2" Flatwashers (2 1/2" O.D.)
(4) 1 1/2"-7NC x 6 1/2" Long stainless stl. Connecting bolts with Nuts and washers
10" O.D.
Base flange Alloy 356-T6 with bolt covers and S.S. screws
1'6"
9"
1/2"-13NC Ground Nut Inside Base
transformer Base Alloy 356-T6 with Door and S.S. tamper-proof screws
16"
22 1/2"
12"
17 1/2"
Existing 1 1/2" anchor bolts
B35116

No.	REVISIONS	DATE
1	Sub. T-Base added	2/1/71
2	T-Base was For Kirchee, S.S. Nuts Hapco Rev.	2/1/71
3	Was 40' Nts ... & note & Grd. Nut added	10/1/71

hapco

TITLE 40' Lighting Pole
CUSTOMER
SCALE N.T.S. DATE 7-12-71
BY L.W. DWG. NO.
CHK'D B35116

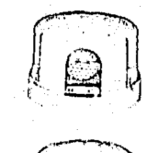
APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY V. B. Hyatt OCT 20 1971

Fisher Pierce mounting adapters simplify installation of all Series 6600 photoelectric lighting controls on many types of installed equipment that do not conform to latest EEI-NEMA specifications and therefore are not directly compatible with Series 6600 units. These include luminaires, ornamental pole tops, streetlight brackets, poles, and crossarms. Mounting adapters also permit installing the newer, low-profile, ruggedly housed controls as replacements for glass-covered Fisher Pierce S64400 and 64400 GE tube-type controls. Installations thus converted meet EEI specification TDJ-148 and NEMA specification SH-16-1962.

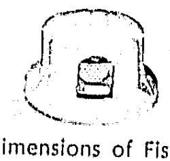
Dimensional accuracy assures perfect mating of Fisher Pierce adapters with existing equipment. This precision construction, combined with exceptional durability in all environments, adds the economy of permanence to low initial cost. Plug-in, twist-to-lock receptacles, used where space permits, accept No. 10 AWG wire, a feature that simplifies and speeds installation. Leads are 18 inches in length, color-coded, and can be removed, where existing wires are to be used, simply by turning a screw. The North reference line is clearly marked for proper control orientation.

EEI-NEMA COMPATIBILITY

The triple-blade locking plug, removable neoprene gasket, and all dimensions of Series 6600 controls conform to EEI-NEMA specifications. The Photofeedback 6650B, the Standard 6660, and the Duo-Volt® 6690B, as well as all other controls of the 6600 Series, are each available in two models, one for mounting on surfaces up to 3 inches in diameter and the other on surfaces up to 3 5/8 inches in diameter. The latter wide-base models have "7" as the last digit of the model number, as "6667".

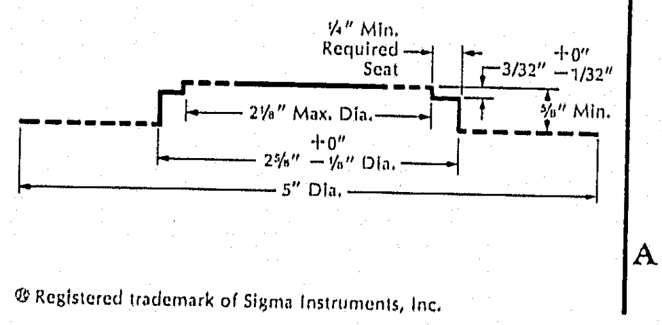


Series 6600 controls fit luminaires and adapters with mounting surfaces up to 3 inches in diameter. This is the Standard 6660.



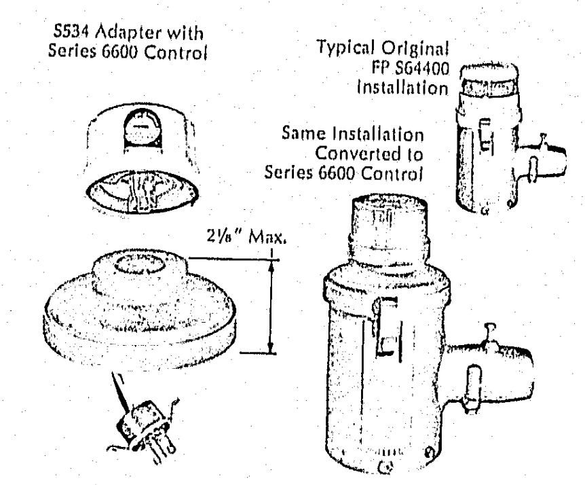
Series 6600 controls using "7" as the fourth digit of the model number — as Model 6667 — fit larger mounting bases, up to 3 5/8 inches in diameter.

All dimensions of Fisher Pierce mounting adapters fall within the limiting profile of the EEI-NEMA standard. The control gasket seats on the adapter to provide an effective seal which is further protected by the 3/8-inch covering lip of the control housing.



® Registered trademark of Sigma Instruments, Inc.

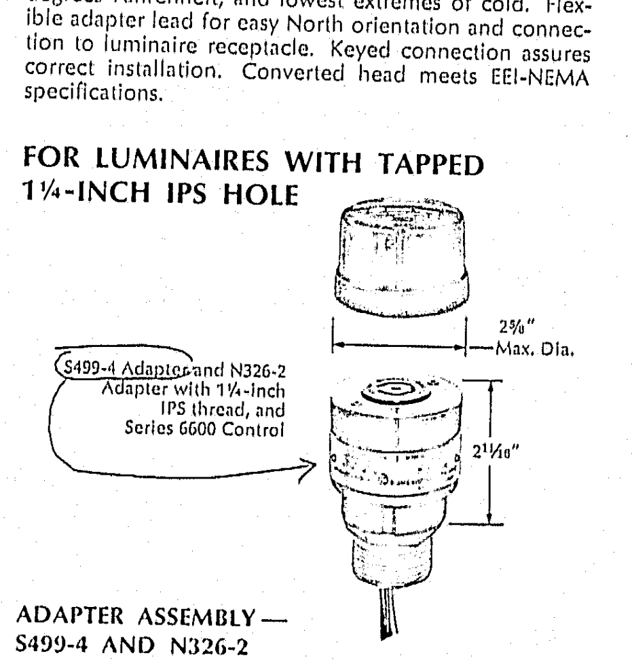
FOR LUMINAIRES THAT ACCEPT FISHER PIERCE S64400 TUBE-TYPE CONTROLS


S534 Adapter with Series 6600 Control
Typical Original FP S64400 Installation
Same Installation Converted to Series 6600 Control
2 1/8" Max.

S534 ADAPTER

Permits conversion from glass-covered control to any Series 6600 control, including models featuring polycarbonate housing capable of withstanding stone, pellet, shot, or severe hail bombardment, constant heat to 250 degrees Fahrenheit, and lowest extremes of cold. Flexible adapter lead for easy North orientation and connection to luminaire receptacle. Keyed connection assures correct installation. Converted head meets EEI-NEMA specifications.

FOR LUMINAIRES WITH TAPPED 1 1/4-INCH IPS HOLE


2 5/8" Max. Dia.
S499-4 Adapter and N326-2 Adapter with 1 1/4-inch IPS thread, and Series 6600 Control
2 11/16"

ADAPTER ASSEMBLY — S499-4 AND N326-2
For conduit mounting on tapped 1 1/4-inch hole.

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY V. B. Hyatt JUN 29 1970

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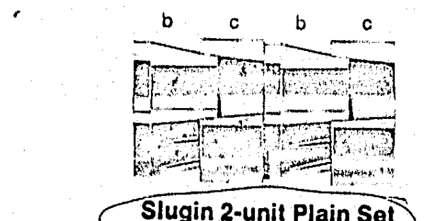
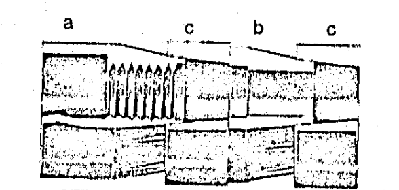
ine Screw
lt Fasteners



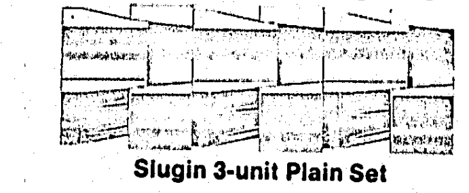
Slugin 2-unit Plain Set

consists of 2 plain cones—b, 2 lead sleeves—c



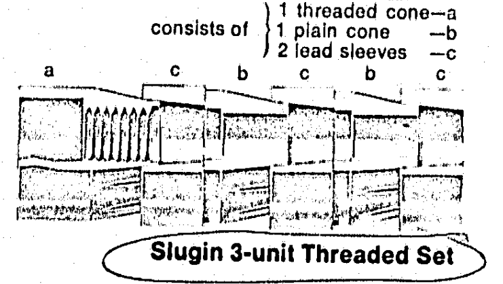
Slugin 2-unit Threaded Set

consists of 1 threaded cone—a, 1 plain cone —b, 2 lead sleeves —c



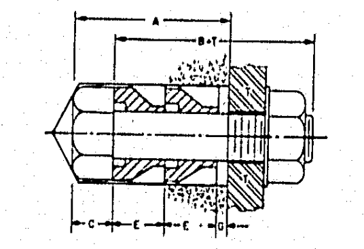
Slugin 3-unit Plain Set

consists of 3 plain cones—b, 3 lead sleeves—c



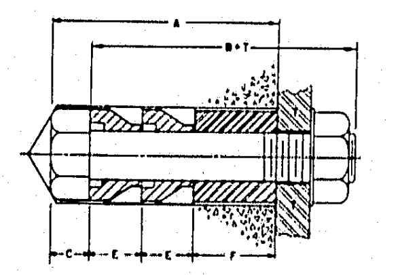
Slugin 3-unit Threaded Set

consists of 1 threaded cone—a, 2 plain cones —b, 3 lead sleeves —c

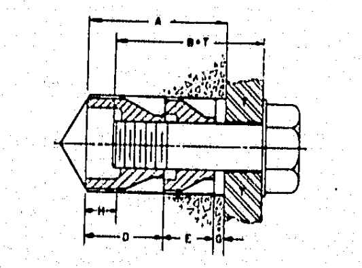


1. Standard Installation Plain Set

- A. Hole depth for recommended number of units
- B. Dimension to be added to "T" (thickness of fixture) to determine length of bolt
- C. Height of bolt head
- D. Height of Slugin Threaded Unit compacted in hole
- E. Height of Slugin Plain Unit compacted in hole
- F. Length of bearing sleeve (not supplied)
- G. Clearance between top of anchor and surface of masonry
- H. Depth of counterbore in threaded unit
- T. Thickness of fixture to be fastened



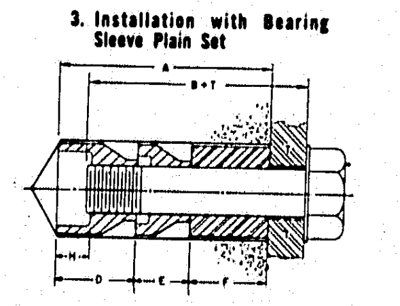
3. Installation with Bearing Sleeve Plain Set



2. Standard Installation Threaded Set

Special Notes:

1. For installation of Slugin Plain Type, use square-head bolts for sizes up to 1/2" diameter. For sizes 5/8" diameter and larger, use hexagon-head bolts only.
2. Bearing sleeve is recommended to take up void between top of Slugin and surface of masonry. Ordinary pipe of proper length and diameter is satisfactory. Deep-setting of Slugin increases holding power.
3. Safe working loads are dependent on proper installation of Sugin in good quality masonry. A four-to-one safety factor is allowed.



4. Installation with Bearing Sleeve Threaded Set

SPECIFICATIONS

Catalog Number	Bolt Dia. Inches	Ultimate Strength of Standard Bolts		Drill Size and Hole Dia.	Recommended No. of Units	*Allowable Safe Loads in 3000lb concrete		STANDARD INSTALLATION											INSTALLATION USING BEARING SLEEVE										
								PLAIN SET See Drawing 1					THREADED SET See Drawing 2						PLAIN SET See Drawing 3					THREADED SET See Drawing 4					
		Tension	Shear			Tension in Lbs.	Shear Bearing in Lbs	A	B	C	E	G	A	B	D	E	G	H	A	B	C	E	F	A	B	D	E	F	H
6815-00200	1/4	1750	1200	1/2	2	400	200	1 1/16	1 1/8	3/16	3/8	1/8	7/8	13/16	1/4	3/8	1/8	3/32	1 5/16	1 1/8	3/16	3/8	1/8	1	11/32	1/4	3/8	1/8	3/32
6815-00300																													
6825-00200	3/8	4400	3055	3/4	2	1000	500	1 7/16	1 1/2	3/16	1/2	1/8	1 3/16	1	11/16	1/2	1/8	1/8	1 13/16	1 1/2	3/16	1/2	1/2	1 11/16	1 5/8	11/16	1/2	1/2	1/8
6825-00300																													
6835-00200	1/2	8200	5670	1	2	2000	900	1 11/16	1 3/4	7/16	5/16	1/8	1 5/16	1 3/16	7/8	9/16	1/8	3/16	2 3/16	2 1/2	7/16	9/16	5/8	2 3/16	1 13/16	7/8	9/16	5/8	3/16
6835-00300																													
6845-00200	5/8	13150	9100	1 1/8	3	3000	1200	2 1/8	2 3/16	5/16	9/16	1/8	2 1/16	1 13/16	15/16	9/16	1/8	3/16	3 1/8	3 5/16	9/16	9/16	5/8	2 13/16	2 9/16	15/16	9/16	5/8	3/16
6845-00300																													
6855-00200	3/4	19650	13600	1 3/8	3	4500	1350	2 5/8	2 13/16	11/16	11/16	1/8	2 11/16	2 1/4	1 3/16	11/16	1/8	1/8	4	4 1/16	11/16	11/16	1 1/8	3 13/16	3 1/2	1 3/16	11/16	1 1/8	1/8
6855-00300																													
6860-00200	7/8	27250	18900	1 1/2	3	5500	1500	3 1/16	3 1/4	13/16	3/4	1/8	3	2 1/8	1 3/8	3/4	1/8	7/16	4 15/16	5	13/16	3/4	1 3/8	4 3/4	4 1/8	1 3/8	3/4	1 3/8	3/16
6860-00300																													
6865-00200	1	35800	24800	1 3/4	3	7000	1700	3 1/2	3 15/16	15/16	15/16	1/8	3 5/8	2 11/16	1 1/2	15/16	1/8	1/4	5 1/2	5 11/16	15/16	15/16	1 5/8	5 1/2	4 11/16	1 1/2	15/16	1 5/8	1/4
6865-00300																													
6870-00200	1 1/8	45100	31200	2	3	9000	2000	4 1/8	4 13/16	1	1 1/4	1/8	4 1/8	3 13/16	2 1/8	1 1/4	1/8	1	6 1/8	6 13/16	1	1 1/4	2	[illegible]	[illegible]	2 1/8	1 1/4	[illegible]	1
6870-00300																													
6875-00200	1 1/4	57800	40000	2 1/8	3	9000	2000	5 3/16	5 1/8	1 1/16	1 3/8	1/8	5 3/16	4 3/16	2 3/16	1 3/8	1/8	1 1/16	7 3/16	7 1/8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 3/8	2	[illegible]
6875-00300																													
6885-00200	1 1/2	84100	58000	2 1/2	3	9000	2000	5 9/16	5 5/8	1 3/16	1 1/2	1/8	5 7/8	4 1/4	2 9/16	1 1/2	1/8	1 1/8	7 7/8	7 1/8	[illegible]	[illegible]	[illegible]	7 5/16	[illegible]	[illegible]	1 1/2	[illegible]	[illegible]
6885-00300																													

*4 to 1 safety factor.

~~P.O. 1482 Job: Piscataqua River Bridge Location: Kittery, Maine~~

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY V. B. Hyatt AUG 27 1971

SIMPLEX
C-L-P 4200
January 2, 1969

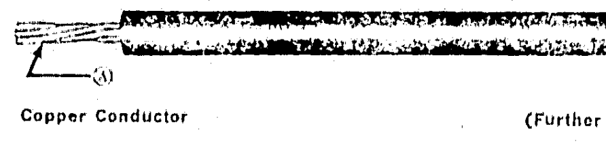
C-L-P® POWER CABLES

CROSS-LINKED POLYETHYLENE INSULATION TYPE RHH OR RHW

Dry Locations 90°C Wet or Dry Locations 75°C
Specify C-L-P 4200 COPPER CONDUCTOR

COPPER
C-L-P
Single Conductor
TYPE RHH OR RHW
600 Volts
Subject to Change Without Notice

APPLICATIONS: Underwriters' Listed for use at 90°C Conductor Temperature in dry locations or at 75°C conductor temperature in wet or dry locations. All sizes bear U.L. Type RHH or RHW labels and may be installed in conduit or other recognized raceway as general purpose wiring for control, switchboard, lighting and power circuits in residential and commercial buildings, industrial plants, and for utility substations, meters and generating plants.



Copper Conductor

C-L-P Insulation (Further Covering not Required)

SPECIFICATIONS

Ⓐ Single conductor solid and Class B Stranded, annealed copper per ASTM B-3, IPCEA Standard, S-19-81, 4th Edition (NEMA WC3-1964) Part 2, and Underwriters' Lab. Rubber-Insulated Wires and Cables Standard No. 44, latest revision.

Ⓑ Simplex specially compounded thermosetting cross-linked polyethylene, does not require further covering. Wall thicknesses are in accordance with Underwriters' Laboratory and National Electrical Code requirements for Types RHH and RHW. C-L-P combines outstanding resistance to heat and water with exceptional resistance to chemicals, abrasion, crushing, flame and weathering in accordance with Simplex Specification 400, and meets the applicable requirements of U.L. Standard No. 44 and Interim Standard #2 to IPCEA No. S 66-524 (NEMA WC7).

Price Change

P.O. #1481

Job: Piscataqua River Bridge #6

Product Number	Awg Or MCM	Strand	Insul. Thick. Inches	② Approx. Gross Wgt. Lbs./1000'	Approx. O.D. Inches	③ Conduit Size	① Standard Packaging	④ Stock Colors	⑤ Amperes Per Conductor RHW 75°C	RHH 90°C
76100	14	1	.047	30	.17	1/2	500' Coils Or 2500' N.R.R.	1	15	15
•76101	14	7	.047	30	.17	1/2		1	15	15
•76102	12	1	.047	40	.18	1/2		1	20	20
•76103	12	7	.047	40	.19	1/2		1	20	20
•76104	10	1	.047	50	.20	1/2		1	30	30
•76105	10	7	.047	60	.22	1/2		1	30	30
76106	8	1	.062	80	.26	3/4	500' Coils Or 1000' To 4000' N.R.R.	1	45	50
~~•76107~~	~~8~~	~~7~~	.062	90	.28	3/4		1	45	50
~~•76108~~	~~6~~	~~7~~	.062	130	.32	1		1	~~65~~	~~70~~
•76109	4	7	.062	200	.37	1		1	~~85~~	~~90~~
•76110	2	7	.062	290	.43	1 1/4		1	115	120
•76111	1	19	.078	390	.51	1 1/2	1000' To 4000' N.R.R.	1	130	140
•76112	1/0	19	.078	470	.54	1 1/2		1	150	155
•76113	2/0	19	.078	580	.59	1 1/2		1	175	185
•76114	3/0	19	.078	710	.64	2		1	200	210
•76115	4/0	19	.078	890	.70	2		1	230	235
•76116	250	37	.094	1070	.78	2 1/2	1000' To 2000' N.R.R.	1	255	270
76117	300	37	.094	1270	.84	2 1/2		1	285	300
•76118	350	37	.094	1460	.89	2 1/2		1	310	325
76119	400	37	.094	1660	.94	3		1	335	360
•76120	500	37	.094	2040	1.03	3		1	380	405
76121	600	61	.109	2480	1.14	3 1/2	500' To 1000' N.R.R.	1	420	455
•76122	750	61	.109	3050	1.25	3 1/2		1	475	500
•76123	1000	61	.109	4030	1.41	4		1	545	585

•Stock Items ® Simplex Registered Trade Mark

NOTES

Pricing Instructions: Refer to Section 40, Subsection 42, for detailed information.

Terms: 2% 10th Proximo, net cash last day of month following date of invoice based on material value only.
All shipments will be invoiced at the prices in effect on the date of shipment.
Prices are F.O.B. shipping point, freight allowed to any freight station or common carrier delivery point in continental United States, except Alaska and Hawaii, on shipments of 500 lbs. or more. Shipments to Alaska, Hawaii, and foreign points, are F.O.B. Shipping point, freight allowed to dock, port of embarkation. All shipments less than 500 lbs. are F.O.B. shipping point, no freight allowance and will be shipped freight collect.
Quantities within 10 percent of the next higher footage column may be priced from the next higher column.
Minimum net dollar value per item on stock cables is $50.00; on non-stock cables 1000 feet and $500.00 per item.

① Desired packaging should be specified on orders. Option of standard packages as shown. Alternate packaging on request. Non-returnable reels will be used unless otherwise specified.

② Net weight of cable may be approximated by taking 84% of listed gross weight.

③ Conduit sizes based on 3 Single Conductors in a Conduit — 40% Fill per 1965 N. E. Code.

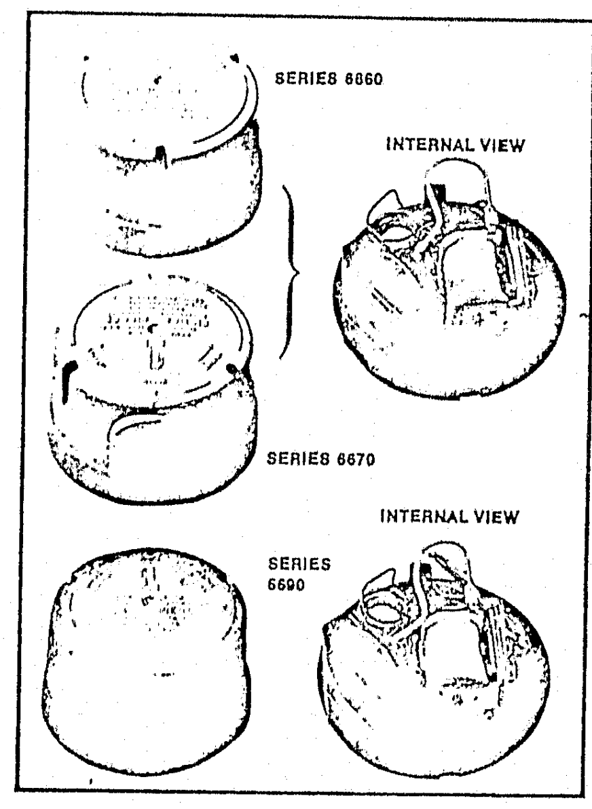
④ Stock Colors: Number indicates number of colors available. 1-Black.

⑤ Amperes per conductor based on 3 Single Conductors in a single or exposed Conduit, 30°C Ambient per 1965 National Electric Code.
Jacket Legend: Surface Printed "SIMPLEX C-L-P 4200 TYPE RHH OR RHW (Size) 600V".

Architects and Engineers Specifications: The following is recommended when a purchasing specification is desired. "The cable shall be Simplex C-L-P 4200 and shall meet U.L. requirements for TYPE RHH or RHW 600V."

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY V. B. Hyatt AUG 27 1971

Simplex WIRE AND CABLE COMPANY, Cambridge, Mass. 02139



SERIES 6600 Outdoor Lighting Controls

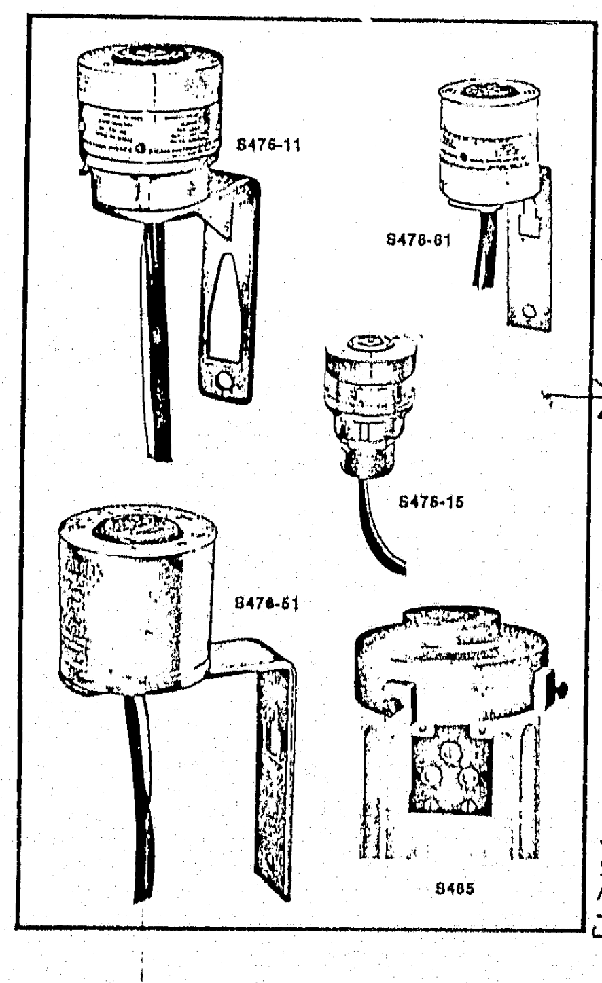
Series 6600 "twist-lock" type Outdoor Lighting Controls provide three component, low profile design, a no-chatter AC relay and positive lightning and surge protection. Conservatively rated for at least 5000 operations, these rugged, economical controls will switch 1000 watt or 1800 volt-ampere loads for years of trouble-free operation.

Model No.	Voltage	(3) Wattage	(1) Base Size	Relay	Lightning Arrester	(2) Turn On-Off
6660	120	1000W	3 1/4"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6660-ESS	120	1000W	3 1/4"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6662-ESS	120	1000W	3 1/4"	N. C. SPST	Deluxe Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6672	240	1000W	3 1/4"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6690B	105 to 285	1000W	3 1/4"	N. C. SPST	Gap	On 1 f. c. ± .5 Off 10 f. c. max.
6690B-ESS	105 to 285	1000W	3 1/4"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.
6694	480	1000W	3 1/4"	N. C. SPST	Expulsion	On 1 f. c. ± .5 Off 10 f. c. max.

NOTE (1) All units available with 3 3/4" cover base size, if required. To order 3 3/4" wide skirt, (for replacement of old G. E. style photo-controls), change last digit of model number to 7. Example: 6660 ➤ 6667.

NOTE (2) Many non-standard turn-on and turn-off ratios are available for special applications, i.e. tunnels, etc.

NOTE (3) For higher wattages, see multiple relays.

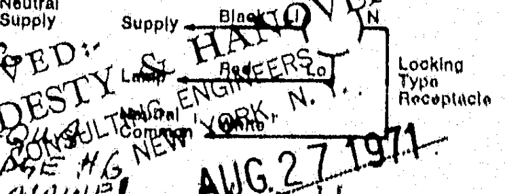


SERIES S400 Mounting Adapters For SERIES 6600 Outdoor Lighting Controls

For pole, crossarm, pipe and conduit mounting —
Fisher Pierce offers a large variety of adapters with plug-in, twist-lock receptacles for mounting. 360-degree rotation for orienting control. Three standard color-coded, No. 10 AWG leads, approximately 18 inches long.

Model No.	Description
S476-11	Rugged, cast aluminum receptacle and bracket. Side screw adjustment for control rotation and tightening on bracket hub. For wall or pole mounting.
S476-15	Receptacle and connection for conduit mounting through IPS threaded 1 1/4" hole. Three 18", No. 10 AWG, color coded leads.
S476-51	Receptacle and bracket. Economical, one-piece, aluminum construction. For North orientation, loosen bottom screw. For wall or pole mounting.
S476-61	Economical, aluminum construction receptacle for direct conduit 1/2" IPS threaded connection and throw-away vertical wall bracket with standard locknut for pipe, pole, wall or crossarm mounting.
S485	Receptacle and cover fit any pole, round or fluted, up to 4 1/2" O.D. and 3" or more I.D. Screw terminals accept No. 8 AWG stranded wire. Insulated clamp at bottom of terminal board provides strain relief. All cast aluminum with stainless steel screws.

NOTE (1) All Receptacles Wired
Red — Load
White — Neutral
Black — Supply

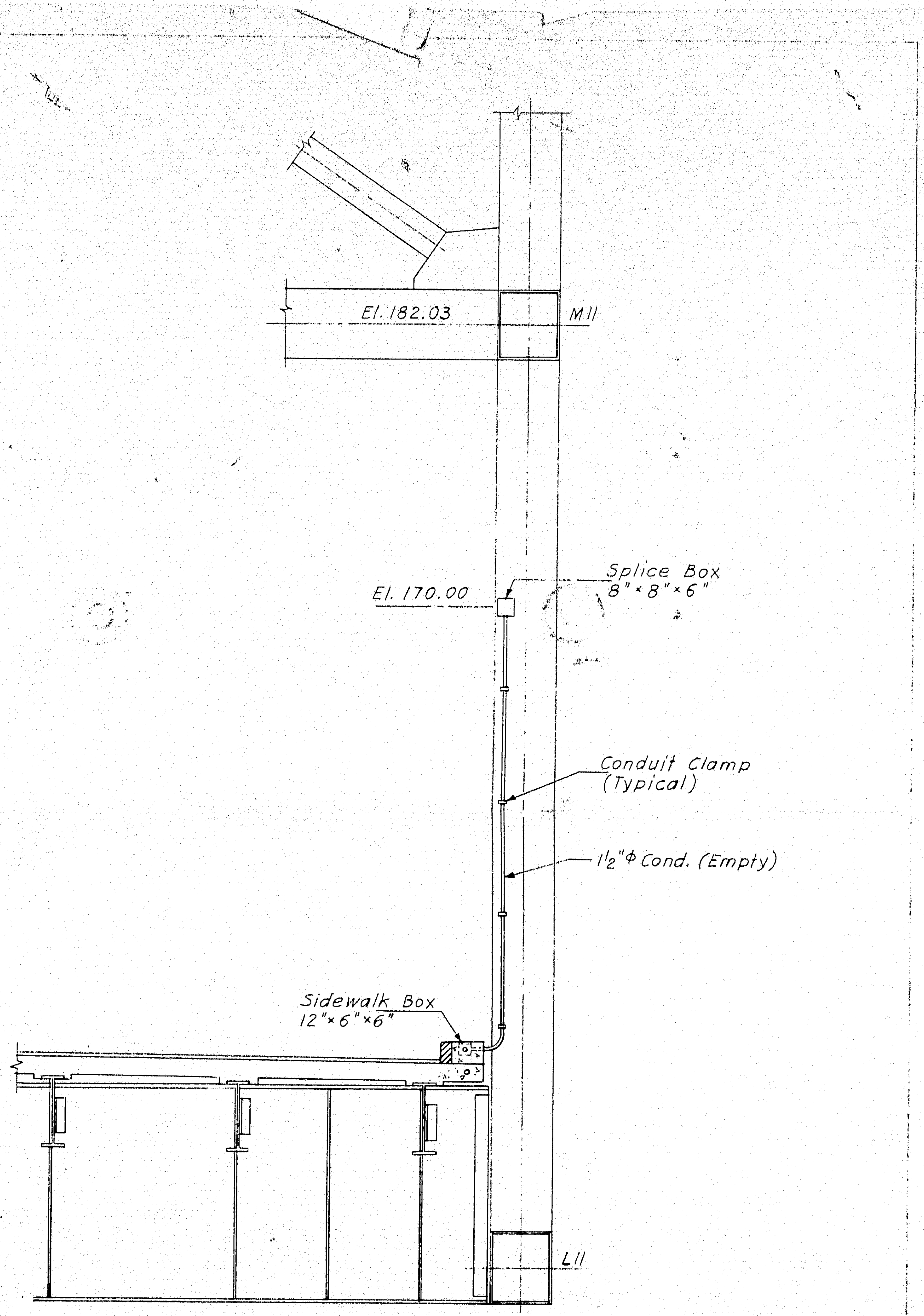


THE DOLE CO.
P.O. 1482
JOB. PISCATAQUA
RIVER BRIDGE #6
KITTERY MAINE

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY V. B. Hyatt AUG 27 1971

Submitted by:
THE DOLE COMPANY

130-111



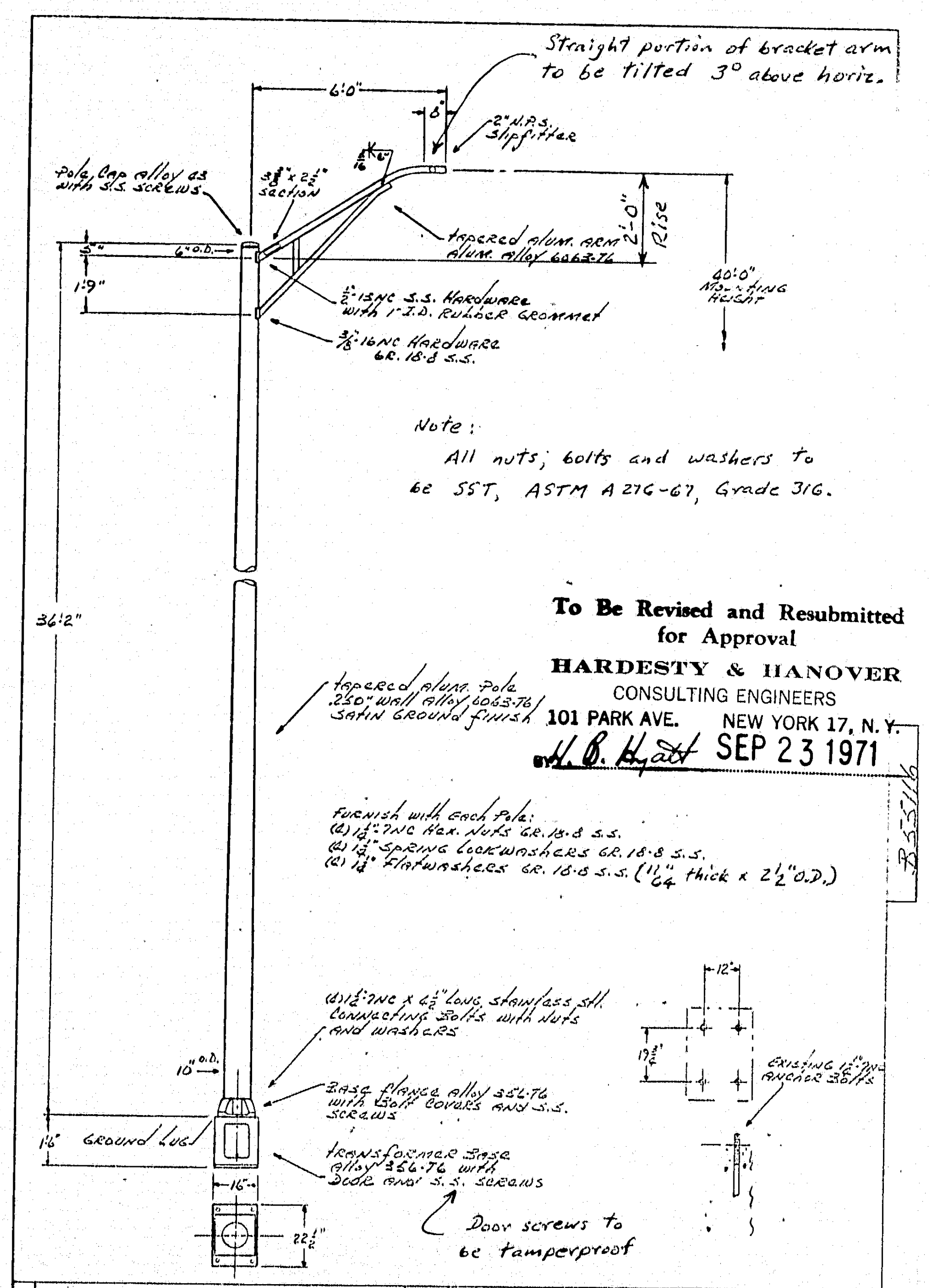
SECTION F-F
ELEVATION AT PP11 SOUTH
Scale: ¼" = 1'-0"

Note:
The installation at PP11
North is to be similar.

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
RIVER BRIDGE
CONDUIT FOR FUTURE SIGNS
3/3/71
Dwg. SK-E1

HBH



Straight portion of bracket arm to be tilted 3° above horiz.
6'0"
8"
2" N.P.S. slipfitter
Pole Cap alloy 43 with S.S. screws
3⅜" x 2½" section
5/16
6"
tapered alum. arm alum. alloy 6063-T6
2'-0"
Rise
40'0" Mounting Height
5"
6" O.D.
1'9"
½"-13NC S.S. Hardware with 1" I.D. rubber grommet
⅜"-16NC Hardware GR. 18-8 S.S.
36'2"
tapered alum. pole .250" wall alloy 6063-T6 satin ground finish
10" O.D.
1'6"
Ground Lug
16"
22½"
12"
19¾"
(4) 1¼"-7NC x 4½" long stainless stl. connecting bolts with nuts and washers
Base flange alloy 356-T6 with bolt covers and S.S. screws
transformer base alloy 356-T6 with door and S.S. screws
Existing 1¼"-7NC anchor bolts

Note:
All nuts, bolts and washers to be SST, ASTM A 276-67, Grade 316.

To Be Revised and Resubmitted
for Approval
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK 17, N.Y.
BY H. B. Hyatt SEP 23 1971

Furnish with each pole:
(4) 1¼"-7NC Hex. Nuts GR. 18-8 S.S.
(4) 1¼" Spring Lockwashers GR. 18-8 S.S.
(4) 1¼" Flatwashers GR. 18-8 S.S. (11/64" thick x 2½" O.D.)

Door screws to be tamperproof

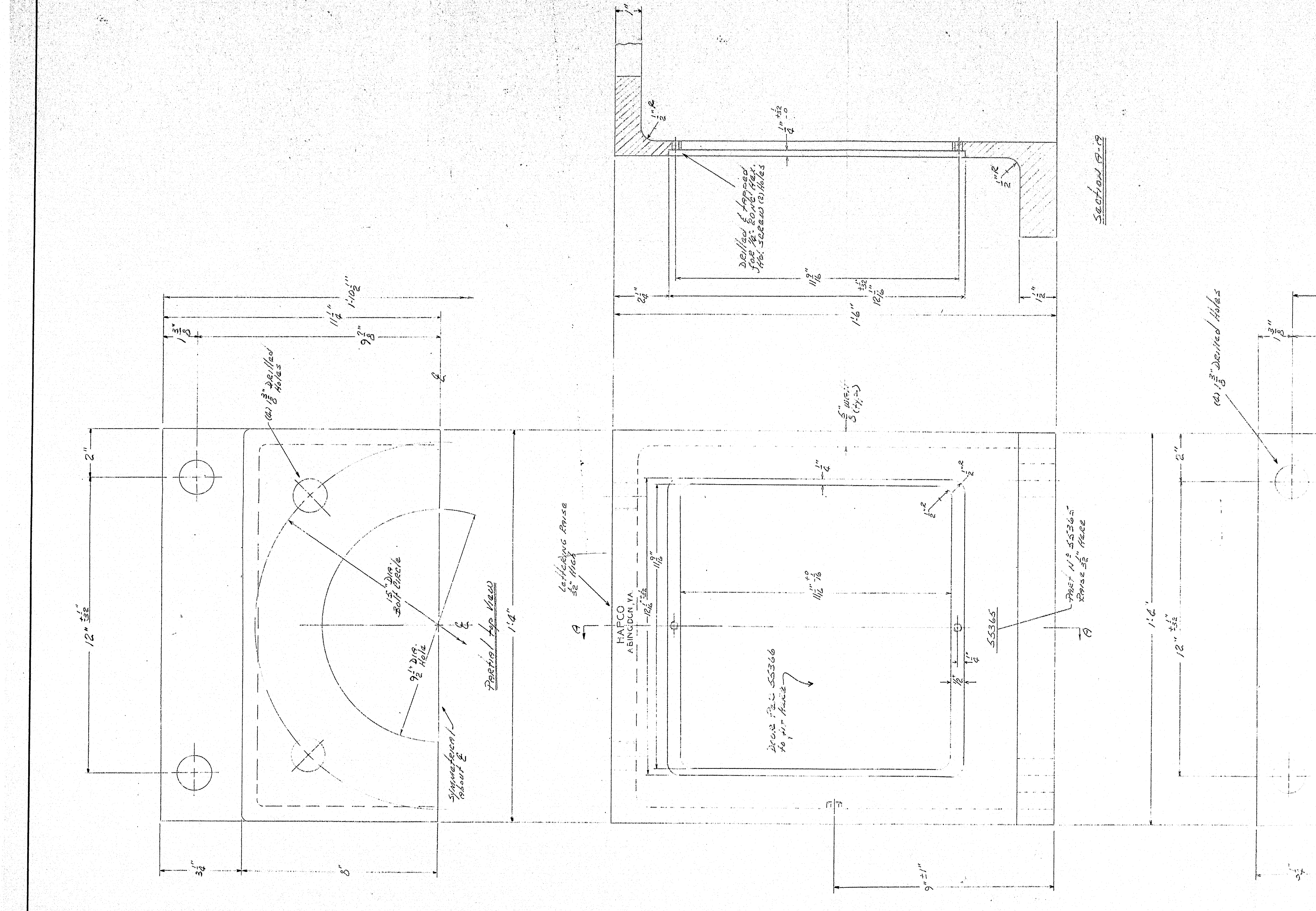
NO.	REVISIONS	DATE
1	Fab. T-Base added	8/6/71
2	T-Base was fabricated; S.S. Hdwe. upper arm attach.	9/16/71

hapco
COMPANY DIVISION OF KEARNEY NATIONAL, INC.
P.O. BOX 547 ABINGDON, VA.

TITLE 40' Lighting Pole
CUSTOMER
SCALE N.T.S.
DATE 2-12-71
BY L.W.
CHK'D
DWG. NO. B55116

B55116

130-112



Notes:
1. Alum. Alloy 356-T6
2. Sand Casting (Wood Pattern)
3. Draft As Required
4. Unmarked Radii 1/8"
5. Commercial Tolerances
6. Bottom and top surfaces to be as flat as possible
(to be machined if necessary)

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY H. B. Hyatt OCT 20 1971

SCALE 1/2" = 1"	REVISIONS	BY	DATE
DATE 9-10-71			
DR'N. L.W. CKD.			
AP'VD.			

TITLE 13' High Transformer Base
NO. DAC365

130-113

CHARLES BRUNING CO. – FIVE HUNDRED

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1 — 95 — 1 (21)		

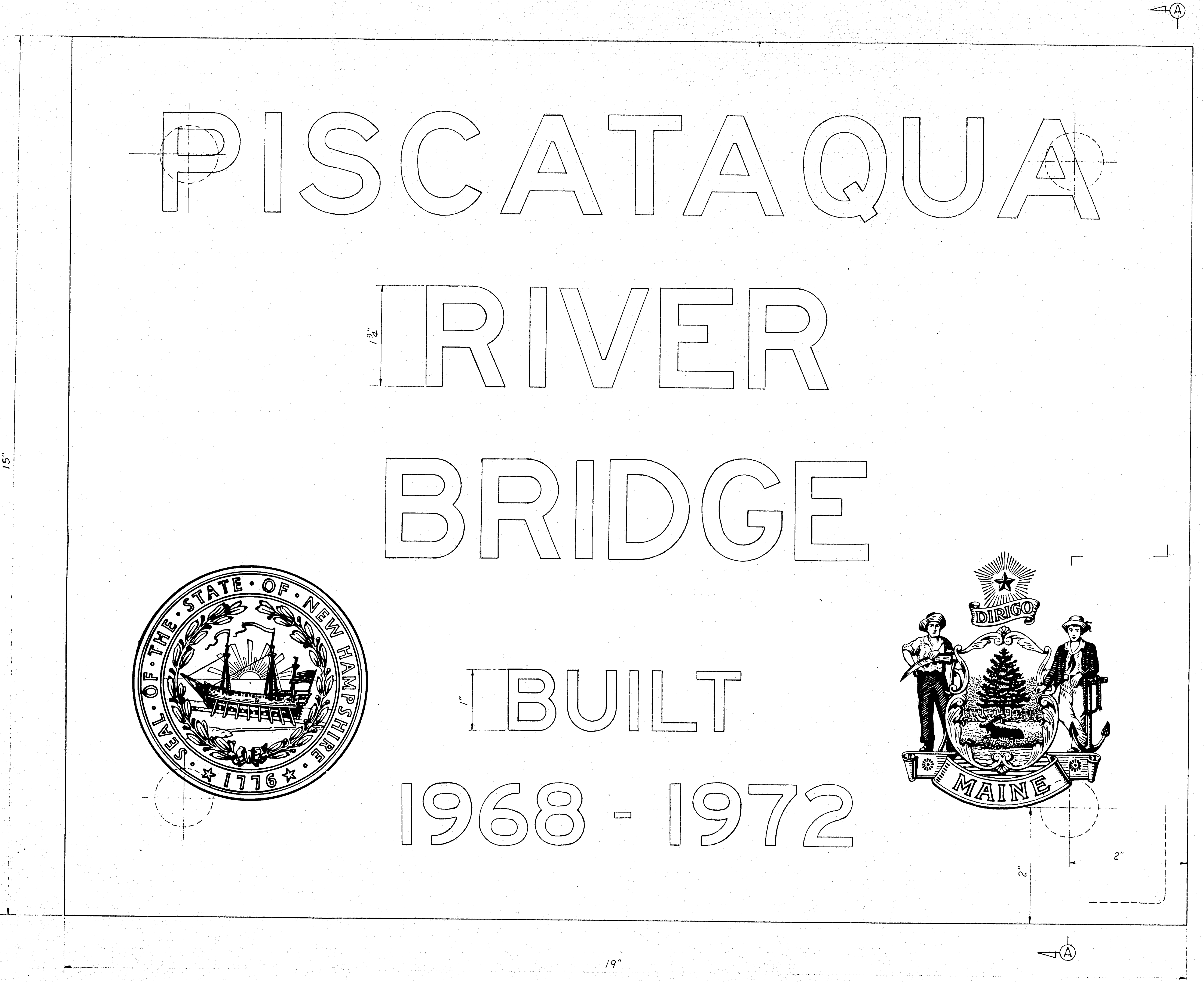
SPECIFICATIONS FOR PLAQUES

The plaques are to be cast of virgin ingots (Copper Alloy No. 836, ASTM B 62). Castings shall be free of pits and gas holes, and all letters and numerals shall be sharp. The plaques shall have plain edge borders with raised letters, numerals and State Seals integrally cast. The letters, numerals and returned edges are to have a satin finish. The background shall have a contrasting dark statuary color of stippled texture. The State Seals shall have a dark statuary color, highlighted to reveal the design.

After finishing, the plaques shall be sprayed with two coats of exterior acrylic lacquer. Block style lettering shall be used and the size of the letters, numerals and Seals shall be as shown on this drawing.

The Contractor shall submit a full size rub-off of each style for approval prior to casting.

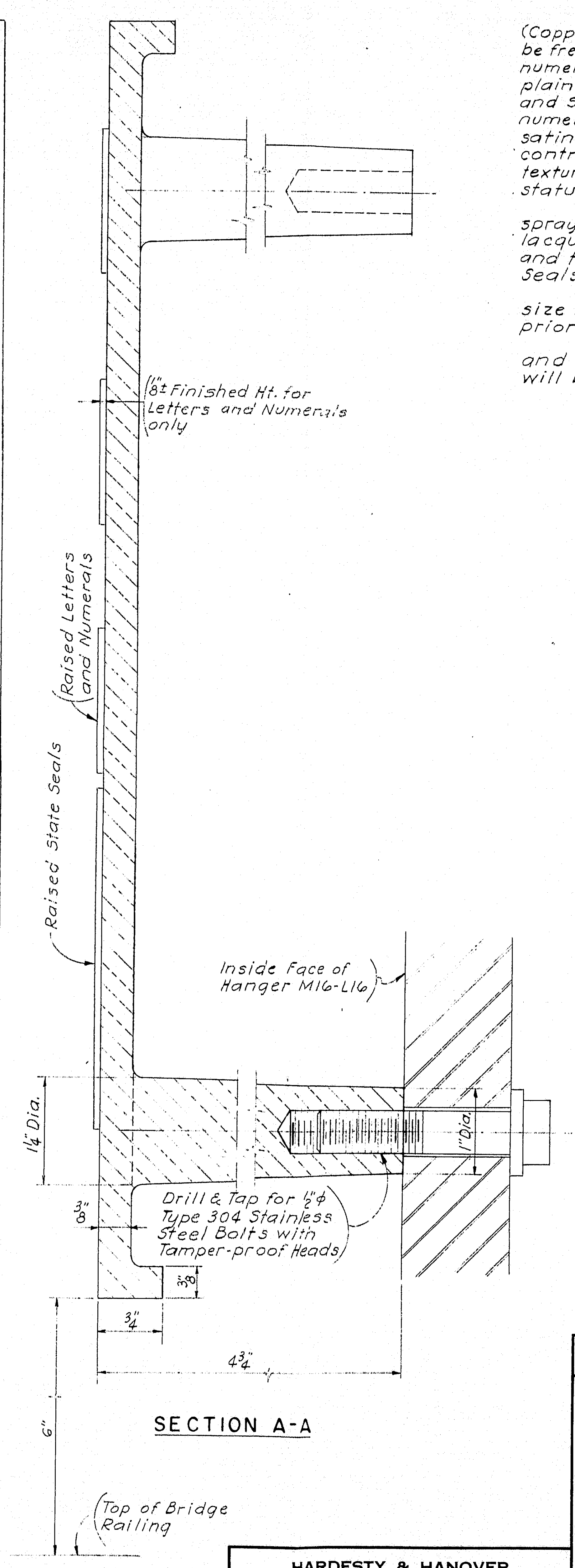
Installation, including the layout and drilling of 9/16" ϕ holes in the hangers, will be included as part of the work.



ELEVATION

Full Size

One Plaque with Seals as Shown - For West Truss
One Plaque with Seals Reversed - For East Truss


1/8" ± Finished Ht. for Letters and Numerals only
Raised Letters and Numerals
Raised State Seals
Inside Face of Hanger M16-L16
1¼" Dia.
1" Dia.
Drill & Tap for ½" ϕ Type 304 Stainless Steel Bolts with Tamper-proof Heads
3/8"
3/8"
3/4"
4 3/4"
6"
Top of Bridge Railing

SECTION A-A

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

6

DESIGN —
TRACE — F.Mc.
CHECK — RWC

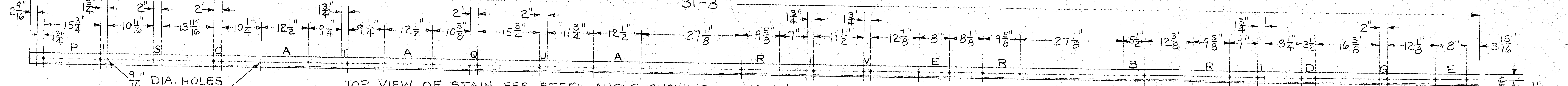
BRIDGE NO.
IN CHARGE OF — R.W. Christie

NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

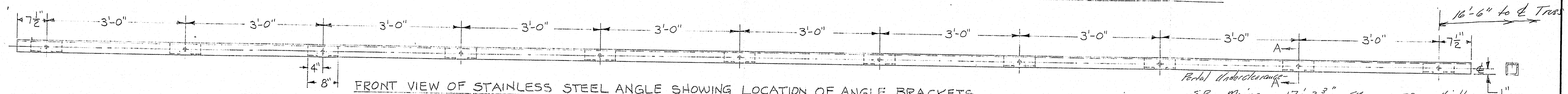
MID - SPAN PLAQUES

SHEET X-2 OF

130 - 114

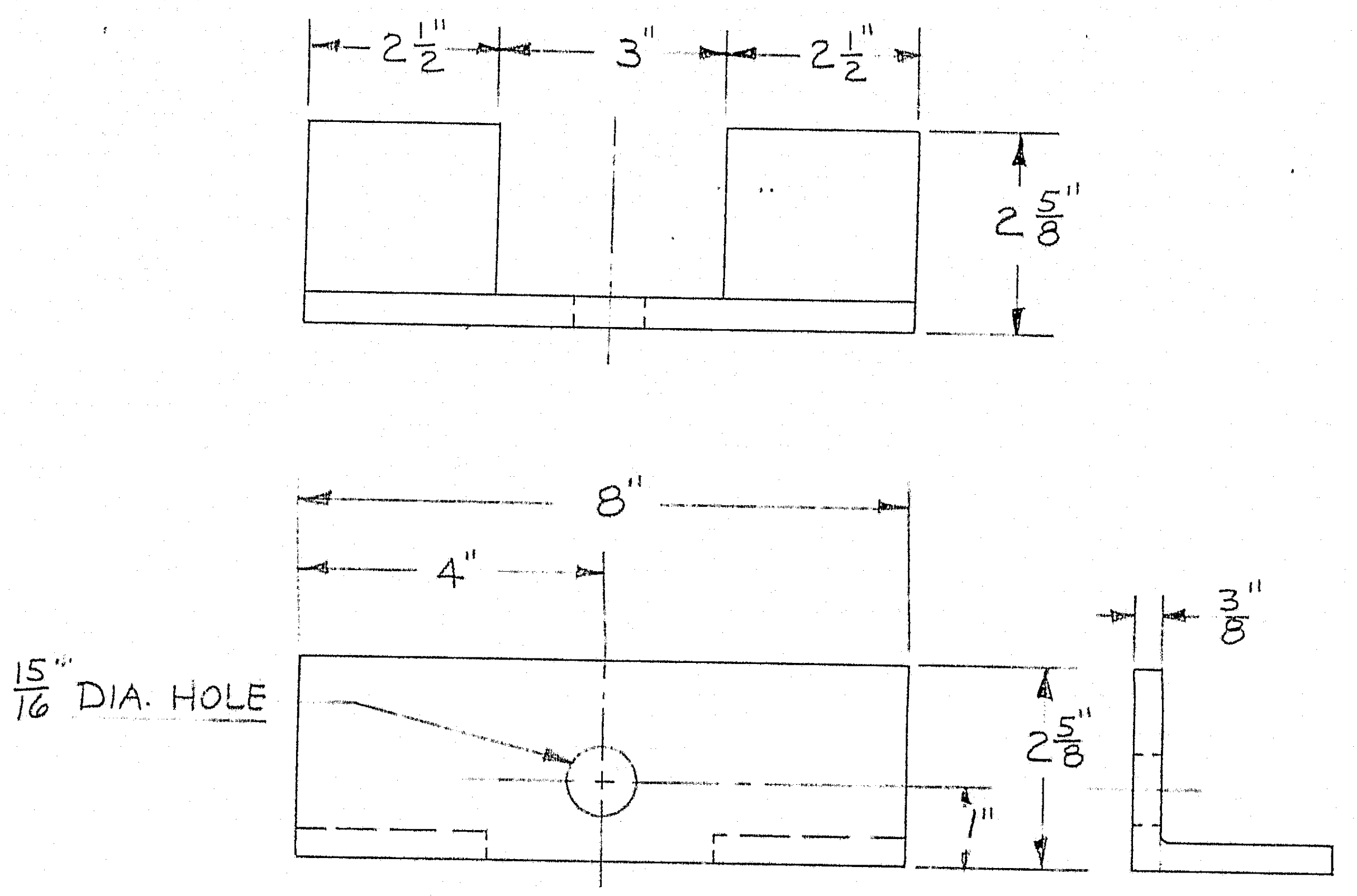


TOP VIEW OF STAINLESS STEEL ANGLE SHOWING LOCATION OF HOLES TO BOLT LETTERS TO ANGLE - 2 ANGLES REQ'D.



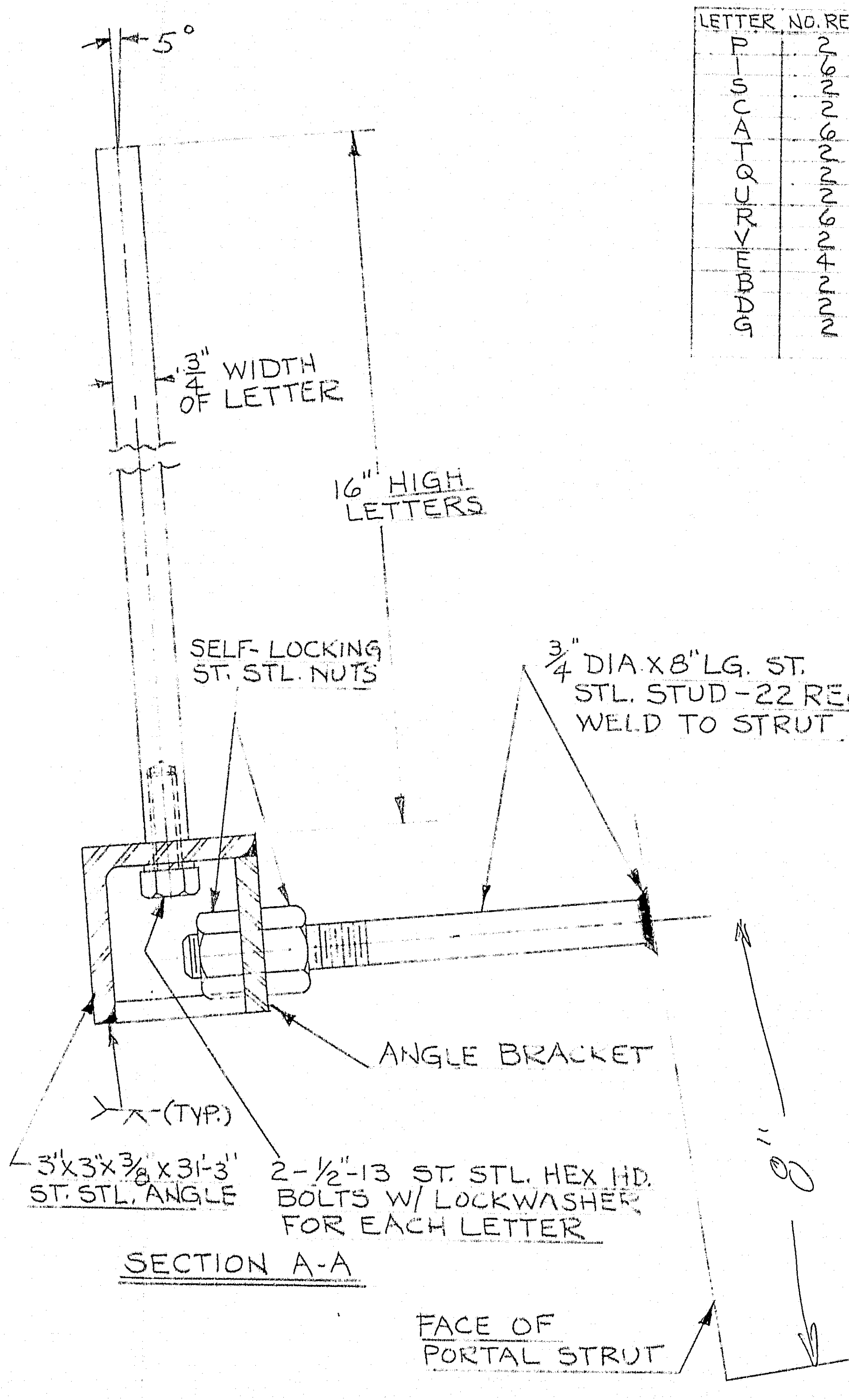
FRONT VIEW OF STAINLESS STEEL ANGLE SHOWING LOCATION OF ANGLE BRACKETS

Portal Underclearance -
SB Maine 17'-3⅜" FM 10-28-72 W Hinckley
NB Maine 17'-3¼" J Gilmore
NB N.H. 17'-3¾"
SB N.H. 17'-3½"



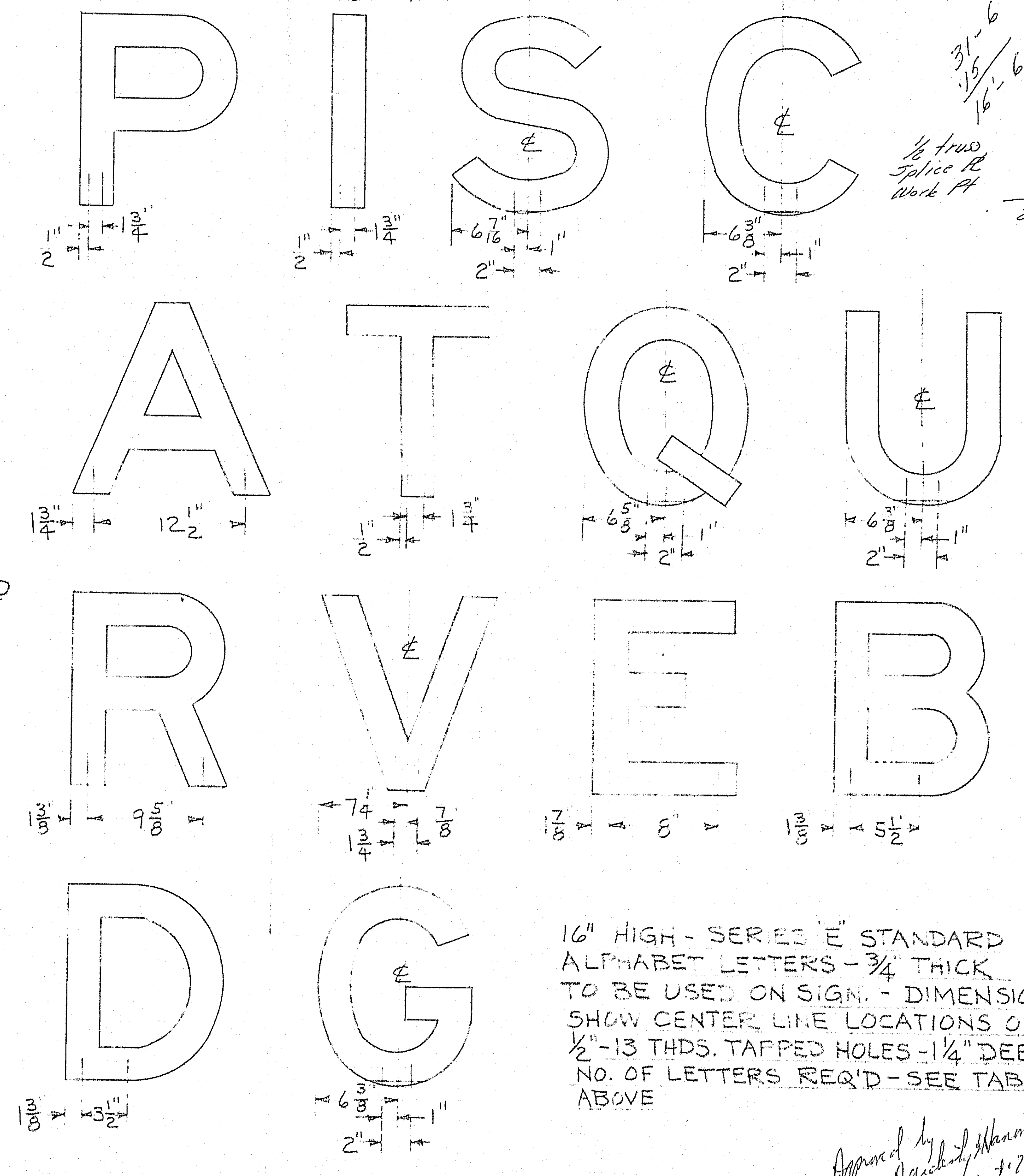
ANGLE BRACKET 22 REQ'D.
TO BE MADE FROM 3"X3"X3/8" STAINLESS STEEL ANGLE

NOTES:-
FABRICATED STAINLESS STEEL LETTERS BAND SAWED FROM ¾" PLATE CONFORMING TO TYPE 302, ASTM A 240. THE LETTERS SHALL BE 16" HIGH & SHALL CONFORM TO THE STYLE, SIZE, & SPACING FOR SERIES E, "STANDARD ALPHABETS FOR HIGHWAY SIGNS" BY THE U.S. DEPT. OF COMMERCE.
EDGES OF THE LETTERS SHALL BE LEFT WITH THE BAND SAW FINISH & CORNERS BROKEN TO REMOVE THE SHARP ANGLE. THE VIEWING SURFACE OF THE LETTERS SHALL BE GIVEN A NO. 4 FINISH. THE BOTTOM EDGE OF EACH LETTER SHALL BE MILLED SO THAT THE FACES OF THE LETTERS, AS INSTALLED, WILL BE IN A SINGLE PLANE. THE BOTTOM EDGE OF CURVED LETTERS SHALL HAVE A FLAT SURFACE 3" LONG FOR MOUNTING.
THE BOTTOM EDGE OF EACH LETTER SHALL BE DRILLED & TAPPED FOR 2 - ½"-13 STAINLESS STEEL BOLTS WITH LOCKWASHERS. BOLTING MATERIAL SHALL BE TYPE 304 STAINLESS STEEL. THE LETTERS SHALL BE MOUNTED ON A CONTINUOUS STAINLESS STEEL ANGLE AS SHOWN ON THIS DRAWING. THESE ANGLES SHALL BE CONNECTED AS SHOWN. EXPOSED SURFACES OF THE ANGLES SHALL HAVE A NO. 4 FINISH.
THE ELECTRODES TO BE USED FOR ALL WELDING AS CALLED FOR ON THE DWG. SHALL CONFORM TO E308-16 AS SPECIFIED IN THE PAMPHLET A5.4 OF THE AMERICAN WELDING SOCIETY.


5°
¾" WIDTH OF LETTER
16" HIGH LETTERS
SELF-LOCKING ST. STL. NUTS
¾" DIA X 8" LG. ST. STL. STUD - 22 REQ'D WELD TO STRUT
ANGLE BRACKET
(TYP.)
∠ 3"X3"X3/8"X31'-3" ST. STL. ANGLE
2 - ½"-13 ST. STL. HEX HD. BOLTS W/ LOCKWASHER FOR EACH LETTER
8"
FACE OF PORTAL STRUT

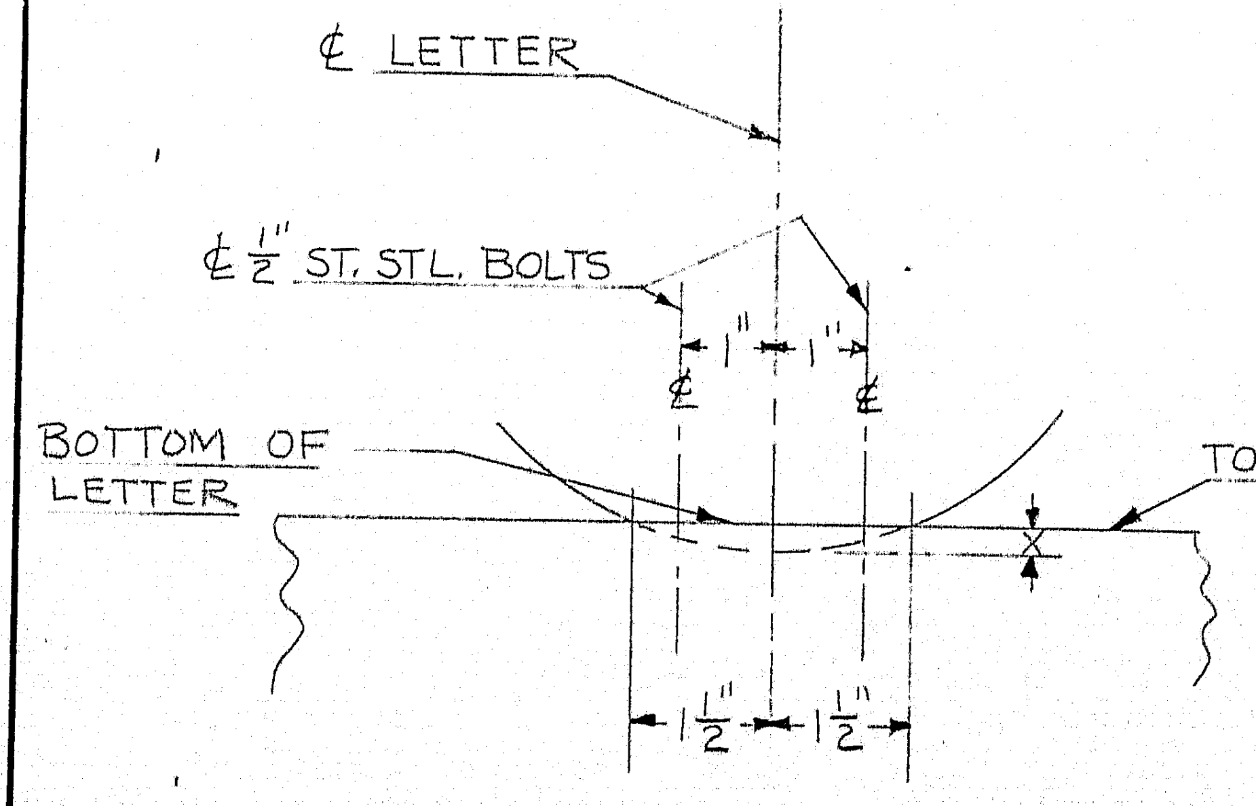
SECTION A-A

LETTER	NO. REQ'D
P	2
I	6
S	2
C	2
A	6
T	2
Q	2
U	2
R	6
V	2
E	4
B	2
D	2
G	2



31'-6
15
16'-6
½ truss 1'-3
Splice Pl 0-1½"
Work Pt 1'-1½"
2'-6"

16" HIGH - SERIES "E" STANDARD ALPHABET LETTERS - ¾" THICK TO BE USED ON SIGN. - DIMENSIONS SHOW CENTER LINE LOCATIONS OF ½"-13 THDS. TAPPED HOLES - 1¼" DEEP - NO. OF LETTERS REQ'D - SEE TABLE ABOVE



"X" = PORTION OF LETTER WHICH NORMALLY FALLS BELOW STRAIGHT LETTERS - FLATTEN BOTTOM OF LETTER AS SHOWN

DETAIL FOR ROUND BOTTOM LETTERS

NOTE - SPECIFICATIONS SHOWN ARE FOR TWO COMPLETE SIGNS.

Approved by Hardesty & Hanover 27 Oct '72 JHW

STATE NEW HAMPSHIRE & MAINE
PROJ. NO. I-95-1(21)
PISCATAQUA RIVER BRIDGE
COUNTY

UNITED HIGHWAY SIGN CO., INC.
847 HANOVER RD. SO. MERIDEN, CONNECTICUT 06450

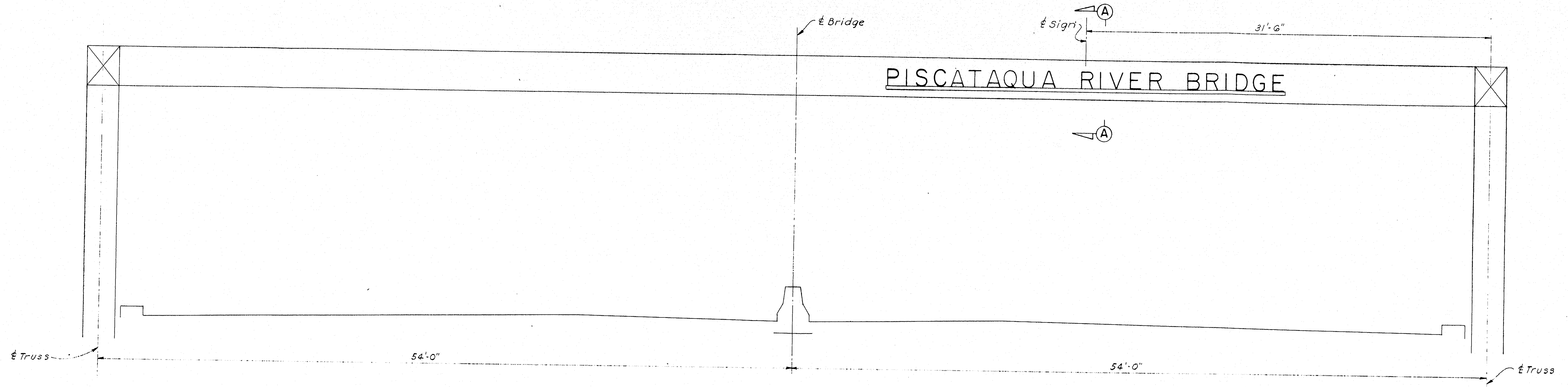
REVISIONS
10-16-72 WB

TITLE DETAILS OF SIGN FOR THE PISCATAQUA RIVER BRIDGE

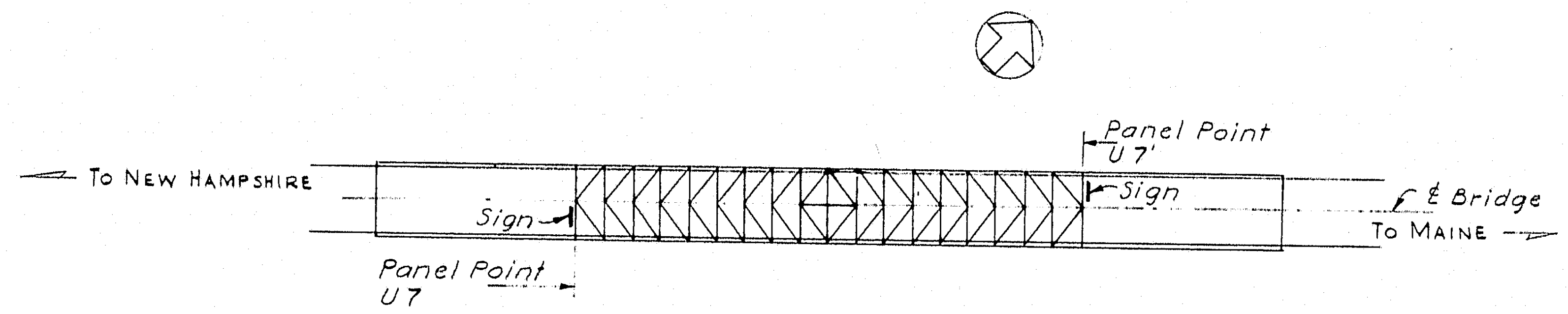
DR. BY WB	SCALE	DRAWING NUMBER
CK. BY	DATE 10-6-72	SF-1
APP. BY	SHEET 1 OF 1	

130-115

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1 — 95 — 1 (21)		



CROSS SECTION AT PORTAL STRUT
Scale: $\frac{1}{4}$" = 1'-0"



SIGN LOCATION PLAN
Scale 1" = 200'

SPECIFICATIONS FOR SIGNS

Fabricated Stainless Steel letters band sawed from $\frac{3}{4}$" plate conforming to Type 302, ASTM A 240.

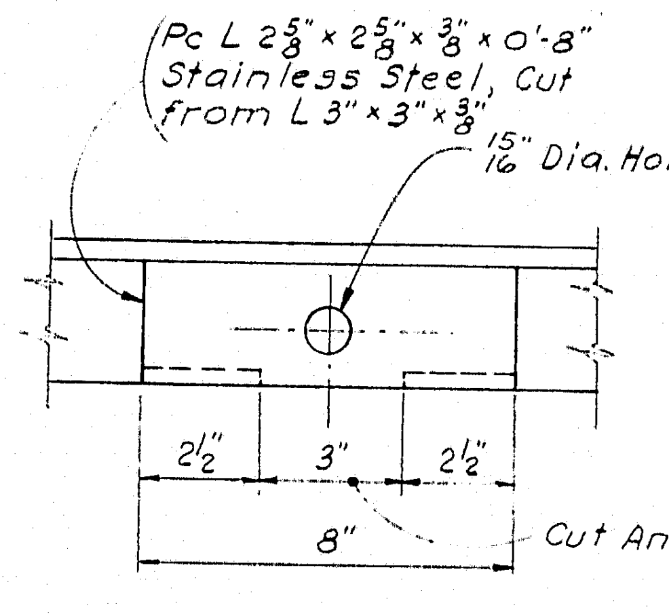
The letters shall be 16" high and shall conform to the style, size and spacing for Series E, "Standard Alphabets for Highway Signs" by the U.S. Department of Commerce.

Edges of the letters shall be left with the band saw finish and the corners broken to remove the sharp angle. The viewing surface of the letters shall be given a No. 4 finish. The bottom edge of each letter shall be milled so that the faces of the letters, as installed, will be in a single plane. The bottom edge of curved letters shall be provided with a flat surface 3" long for mounting. The bottom edge of each letter shall be drilled and tapped for 2-$\frac{1}{2}$" Stainless Steel bolts with lock washers. Bolting Material shall be Type 304 Stainless Steel.

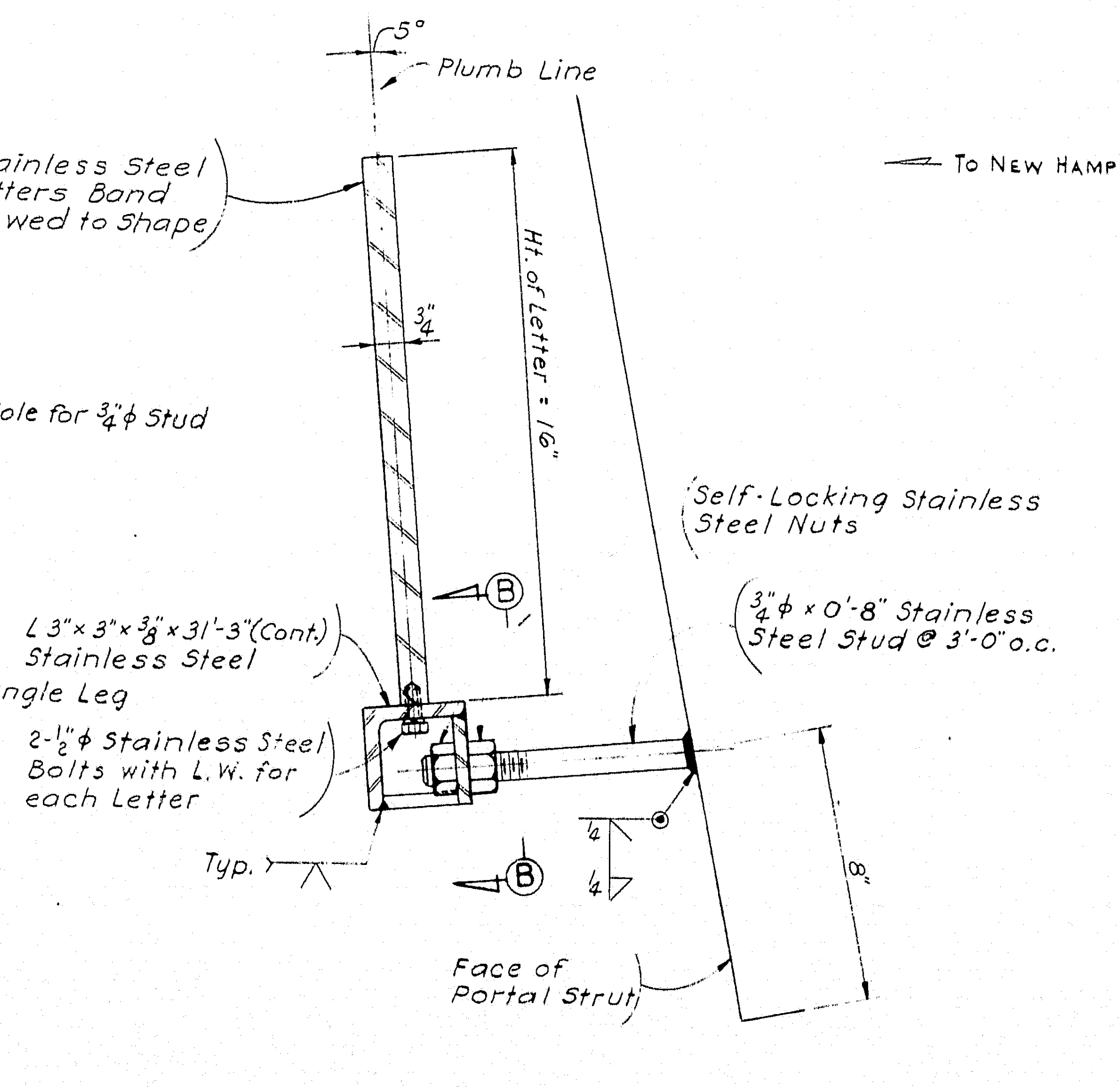
The letters shall be mounted on a continuous Stainless Steel angle as shown on this drawing. These angles shall be connected as shown. Exposed surfaces of the angles shall have a No. 4 finish.

The electrodes to be used for all welding as called for on the drawing, shall conform to E 308-16 as specified in the pamphlet A5.4 of the American Welding Society.

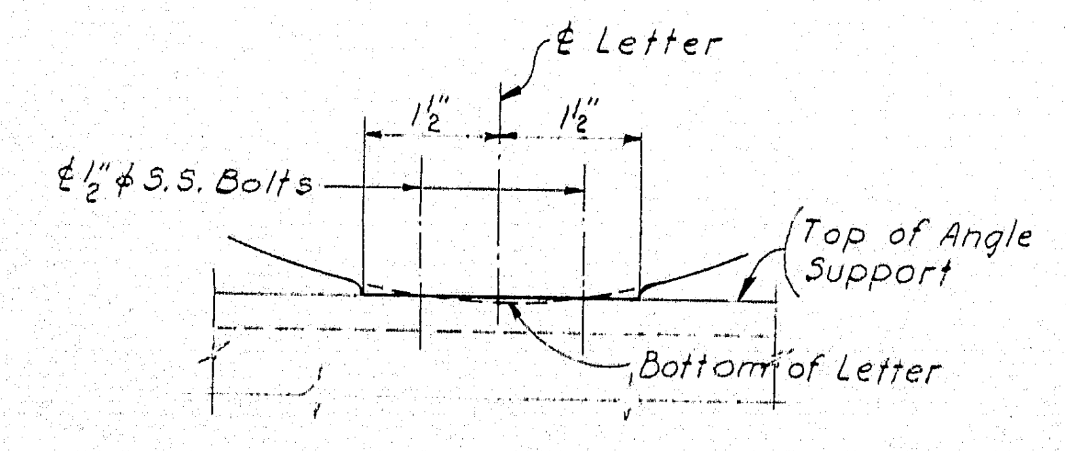
Complete shop drawings shall be submitted for approval.


Pc L 2$\frac{5}{8}$" × 2$\frac{5}{8}$" × $\frac{3}{8}$" × 0'-8" Stainless Steel, Cut from L 3" × 3" × $\frac{3}{8}$"
$\frac{15}{16}$" Dia. Hole for $\frac{3}{4}$"φ Stud
2$\frac{1}{2}$"
3"
2$\frac{1}{2}$"
8"
Cut Angle Leg

SECTION B-B
Scale 3" = 1'-0"


5°
Plumb Line
Stainless Steel Letters Band Sawed to Shape
$\frac{3}{4}$"
Ht. of Letter = 16"
Self-Locking Stainless Steel Nuts
B
$\frac{3}{4}$"φ × 0'-8" Stainless Steel Stud @ 3'-0" o.c.
L 3" × 3" × $\frac{3}{8}$" × 31'-3" (Cont.) Stainless Steel
2-$\frac{1}{2}$"φ Stainless Steel Bolts with L.W. for each Letter
Typ.
B
$\frac{1}{4}$
$\frac{1}{4}$
8"
Face of Portal Strut

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



DETAIL FOR ROUND BOTTOM LETTERS
Scale: 6" = 1'-0"

6

DESIGN —
TRACE — F.Mc.
CHECK — Rwc

BRIDGE NO.
IN CHARGE OF — R.W. Christie

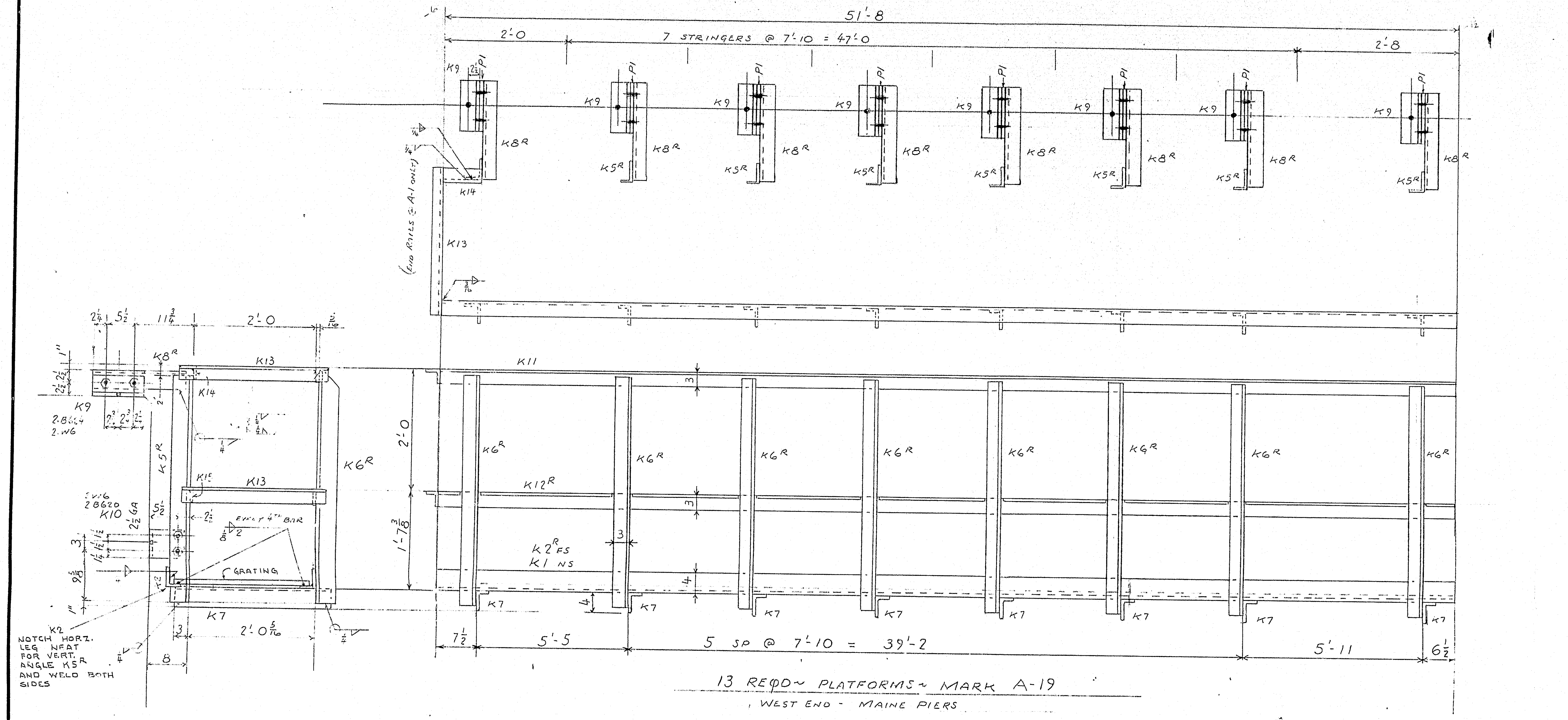
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

PORTAL STRUT SIGNS

SHEET X-1 OF

130-116

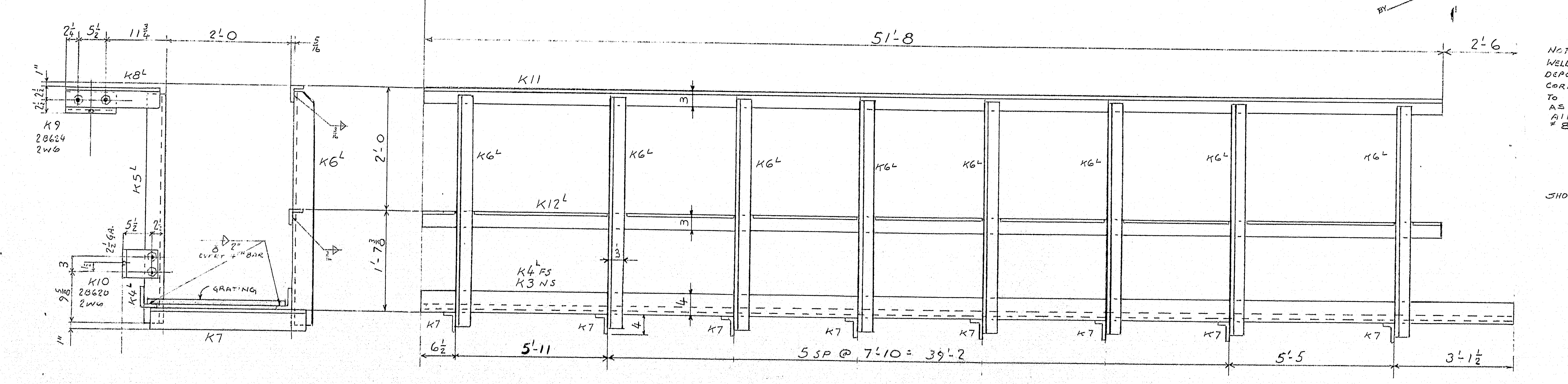


13 REQD ~ PLATFORMS ~ MARK A-19

WEST END - MAINE PIERS

APPROVED
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
OCT 18 1971
BY

TOP VIEW OPP. HD & SIMILAR TO ABOVE



13 REQD ~ PLATFORMS ~ MARK B-19 EAST END - MAINE PIERS

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
A-19	13		PLATFORM	51	8		
B-19	13		do	54	2		
	13	K1	L4 × 3 × 3/8	51	8		A-588 STL
	13	K2R	do	51	8		NOTCH 3' LEG FOR L4 × 3 × 3/8 HAR
	13	K3	do	54	2		
	13	K4R	do	54	2		NOTCH 3' LEG FOR HAR
	208	K5 R/L	do	3	8 3/8		
	208	K6 R/L	do	3	9 3/8		
	208	K7	do	2	6 5/16		
	208	K8 R/L	L4 × 3 × 3/8	1	6 1/2		
	208	K9	L4 × 4 × 1/2		10		
	208	K10	L7 × 4 × 1/2		5 1/2		
	26	K11	L3 × 2 1/2 × 5/16	51	8		
	26	K12 R/L	L do	51	8		
	26	K13	L do	2	4 11/16		
	13	K14	L do		7 1/2		
	13	K15	L3 × 2 1/2 × 5/16		7 1/2		
	416	B620	3/4 φ A325 BOLT		2		H.S. HVY. HEX NUTS SEMI-FIN. HEX HD BOLT
	416	B624	do		2 1/2		do
	832	W6	3/4 φ HRD WASHER				UNDER NUT
	208	P1	BAR 3 × 1/2		10		A-588 STL
		~	GRATING SECT.				SEE BORDEN CO DWG 1
		~	do				do

JOB NO. 4981 DWG. NO. 19

208 - 3/4 φ 20 [illegible]
WITH HEX HD BOLT

208 - 3/4 φ SS [illegible] BOLT

NOTE:
WELDING ELECTRODES SHALL DEPOSIT WELD METAL HAVING CORROSION RESISTANCE SIMILAR TO THE BASE METAL.
ASTM A316-64T
AIRCO ELECTRODES
8016-C1.

SHOP BOLTS HAND TIGHT

NEW HAMPSHIRE DEPT OF PUBLIC WORKS
MAINE STATE HIGHWAY COMMISSION

REFERENCE DRAWINGS: 24 OF 24

HOLES: 13/16 φ

FIELD CONN: ANCHOR BOLTS, EXP. BOLTS,

METHOD B - BLAST CLEANING - RED LEAD READY-MIXED PAINT

PAINT: ONE COAT AASHO DESIGNATION M72, TYPE III

FINAL

APPR.		8-30-71
APPR.		10-13-71
SHOP		10-6-71
F. & O.		
DRAWN		7-22-71
CHECKED	SPH	10-6-71
REVISION	SPH	10-6-71
REVISION		
REVISION		

ITEM 504.703

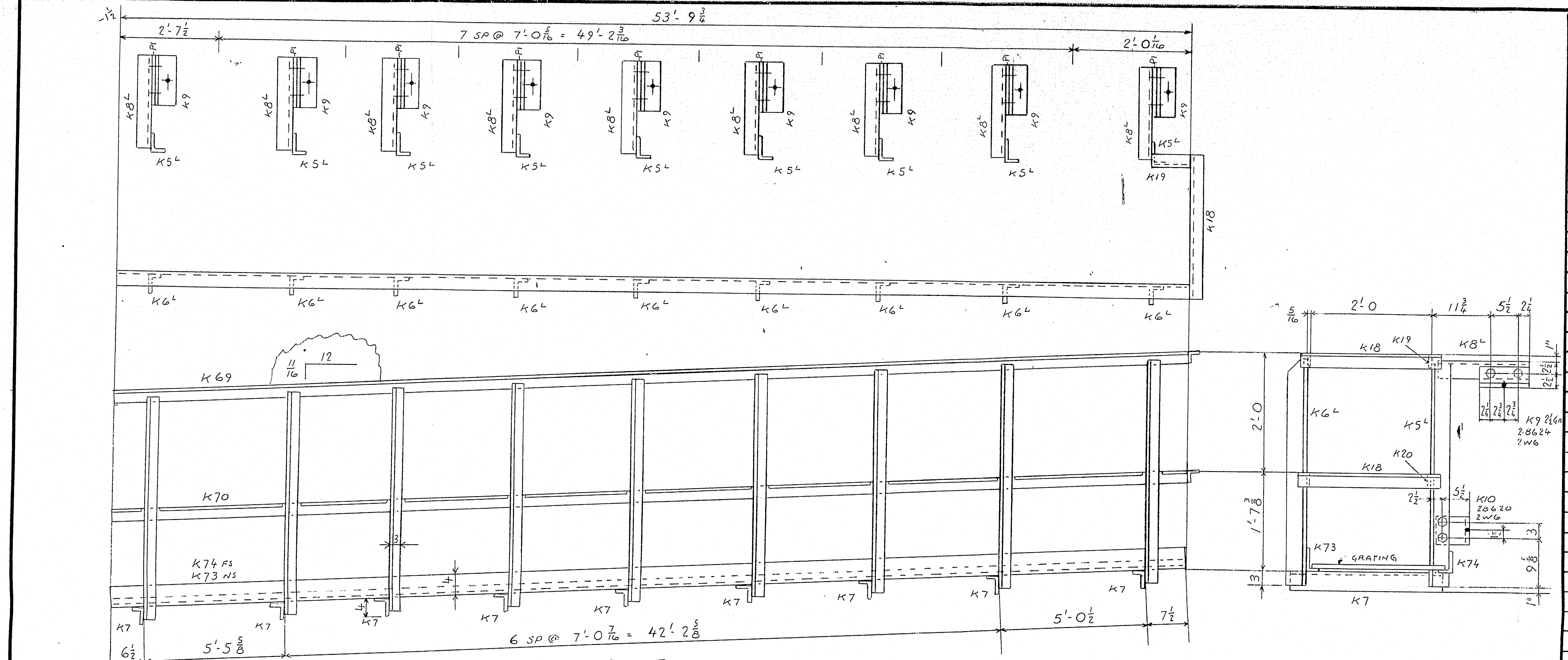
MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PIER PLATFORMS
INTERSTATE 95 BRIDGE OVER PISCATAQUA RIVER
BETWEEN PORTSMOUTH, N.H., & KITTERY, MAINE

CUSTOMER CIANBRO CORPORATION
ARCHITECT HARDESTY & HANOVER, CONSULT. ENGRS.

JOB NO. 4981 DWG. NO. 19

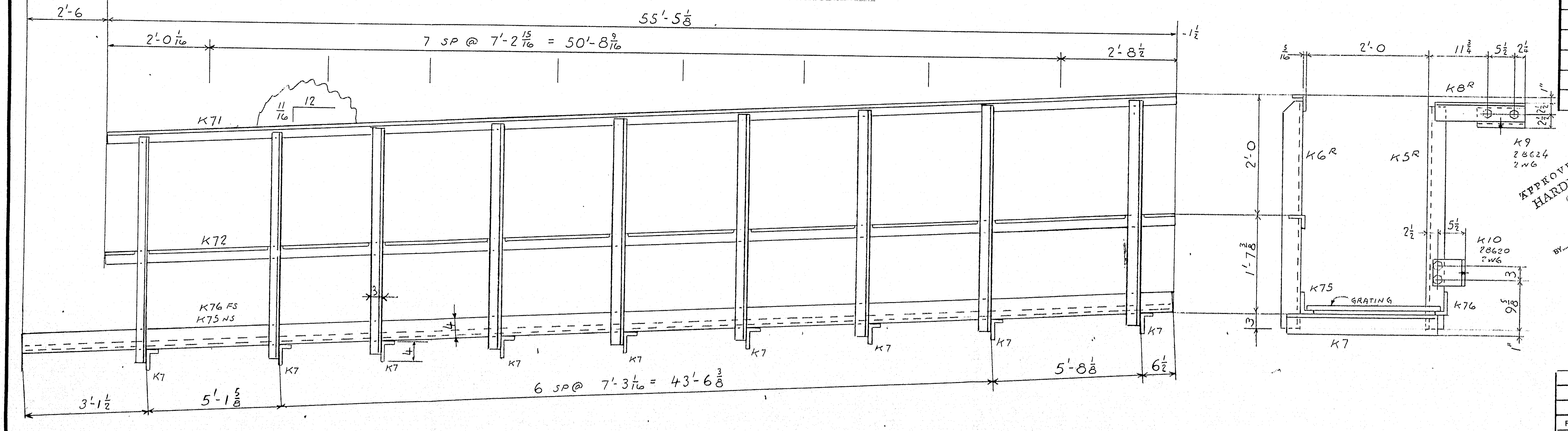
130-117



ONE REQD PLATFORM – MARK A-11

WEST SIDE – PIER 11-S

TOP VIEW SIMILAR & OH TO A-9



APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
OCT 18 1971
BY

FINAL

SEE DWG 1? FOR TYP WELDS & ELECTRODE TYPE

SHOP BOLTS HAND TIGHT

ONE REQD PLATFORM – MARK B-11

EAST SIDE – PIER 11-S

BILL OF MATERIAL JOB NO. 4981 DWG. NO. 11

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
A-11	1		PLATFORM				
B-11	1		do				
	18	K5 R/L	L4×3×3/8	3	8 3/8		A-588 STL
	18	K6 R/L	do	3	9 3/8		
	18	K7	do	2	6 5/16		
	18	K8 R/L	L4×3×3/8	1	6½		
	18	K9	L4×4×½		10		
	18	K10	L7×4×½		5½		
	2	K18	L3×3×5/16	2	5 11/16		
	1	K19	L do		7½		
	1	K20	L do		7½		
	1	K69	L do	53	10¾		
	1	K70	L do	53	10¾		
	1	K71	L do	55	6 1/8		
	1	K72	L3×3×5/16	55	6 1/8		
	1	K73	L4×3×3/8	53	10¾		
	1	K74	L do	53	10¾		
	1	K75	L do	58	0 1/8		
	1	K76	L4×3×3/8	58	0 1/8		
	36	B620	¾φ A325 BOLT		2		
	36	B624	do		2½		
	72	W6	¾φ HRD WASHER				
	18	P1	BAR 3×3/8		10		A-588 STL
		~	GRATING				SEE BORDEN [illegible] DWG 2
		~	do				do

18 [illegible]

18 [illegible] BOLT

CUSTOMER ORDER NO.:

REFERENCE DRAWINGS:

HOLES: 13/16 φ

FIELD CONN: ¾φ [illegible] ¾φ [illegible] BOLT

METHOD B BLAST CLEANING

PAINT: ONE COAT – RED LEAD READY-MIXED PAINT – AASHO DESGN. M72 TYPE III

ITEM 504.701

MEGQUIER & JONES CORP.
1156 BROADWAY
SOUTH PORTLAND, MAINE 04106

PIER PLATFORMS
INTERSTATE 95 BRIDGE OVER PISCATAQUA RIVER
BETWEEN PORTSMOUTH, N.H., & KITTERY, MAINE

CUSTOMER CIANBRO CORPORATION

ARCHITECT HARDESTY & HANOVER CONSULT. ENGRS

APPR.		8-30-71
APPR.		10-13-71
SHOP		10-13-71
F. & O.		
DRAWN		7-30-71
CHECKED	SPH	10-12-71
REVISION	SPH	10-12-71
REVISION		
REVISION		

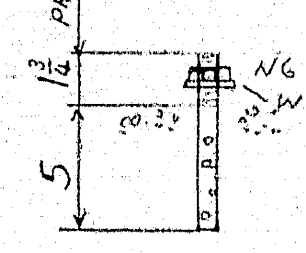
JOB NO. 4981 DWG. NO. 11

130-118

SHIP BILL OF MATERIAL

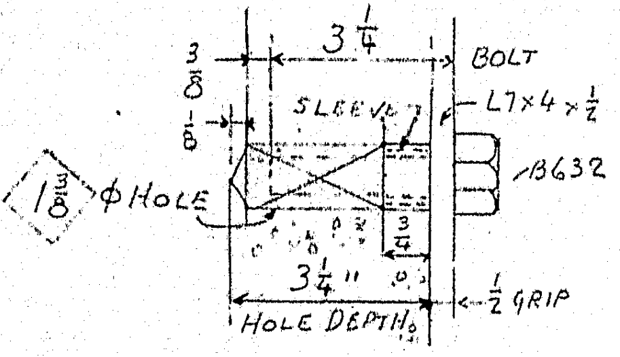
JOB NO. 4981 DWG. NO. 1-A

MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
A-1A	159		$\frac{3}{4}\phi$ A325 BOLT	$2\frac{1}{4}$		0 EXTRA
B-1A	159		$\frac{3}{4}\phi$ HRD WASHER			
C-1A	527		$\frac{3}{4}\phi$ SS SWEDGE BOLT	$6\frac{3}{4}$		0 EXTRA TYPE 316 ST. STL
	527	N6	$\frac{3}{4}\phi$ SS NUT			do
	527	W6	$\frac{3}{4}\phi$ SS WASHER			do
D-1A	527		2U. THD RAWL ANCHOR			0 EXTRA
E-1A	527	B632	$\frac{3}{4}\phi$ S.S. BOLTS	$3\frac{1}{4}$		No NUT TYPE 316 ST. STL
F-1A	527		$\frac{3}{4}\phi$ GALV PIPE	$\frac{3}{4}$		



527 REQD ~ $\frac{3}{4}\phi$ S.S. SWEDGE BOLT ~

MARK C-1A



2 U. CINCH ANCHOR - THREADED SET.

527 REQD ~ 2U. THD CINCH ANCHOR SETS

MARK D-1A

MARK E-1A

MARK F-1A

CUSTOMER ORDER NO.:
REFERENCE DRAWINGS:
HOLES:
FIELD CONN:
PAINT: NONE

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY S.N. OCT 18 1971

FINAL

ITEM 504.701 & 504.703

MEGQUIER & JONES CORP.
33 PEARL STREET PORTLAND, MAINE 04102

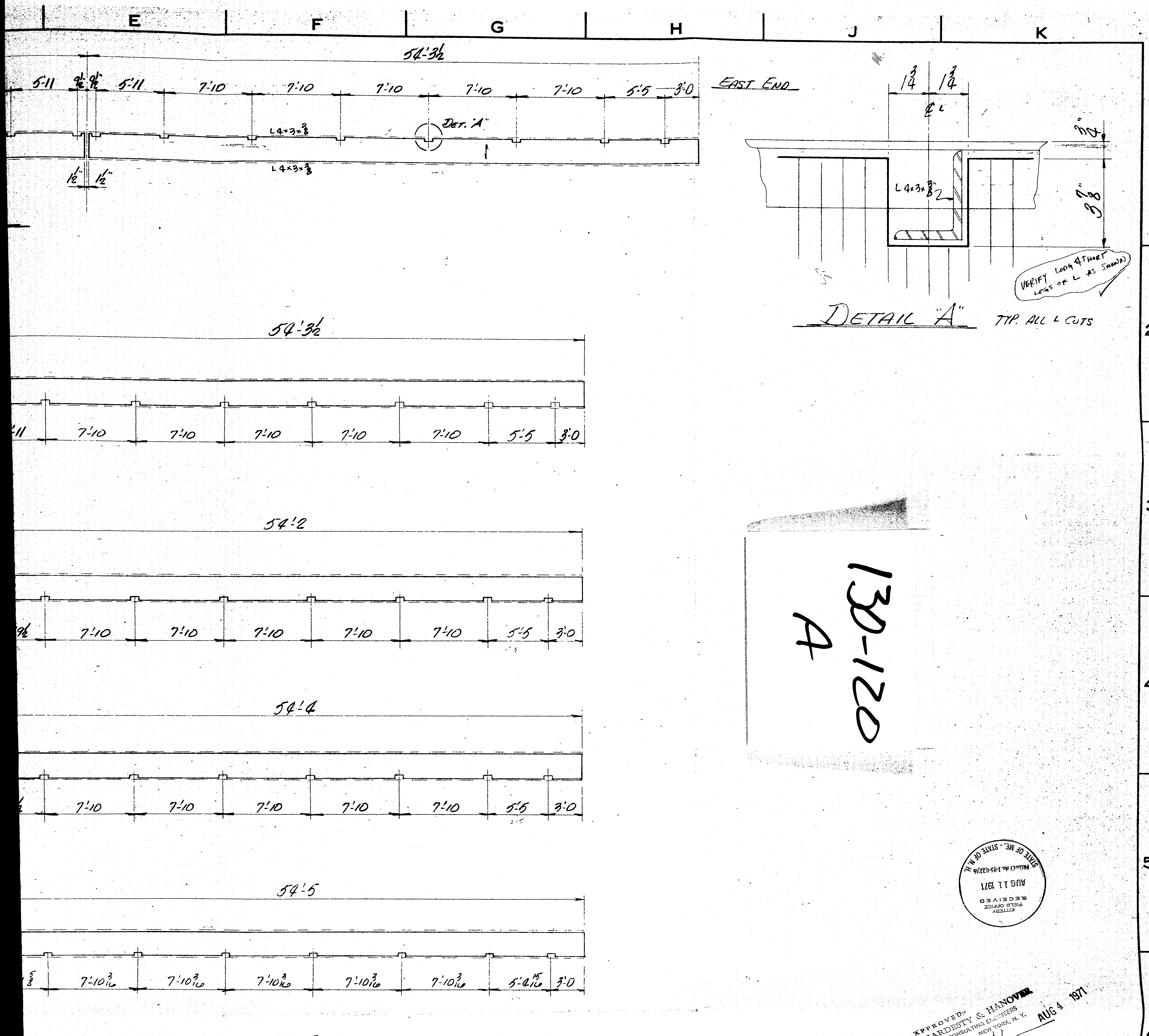
PIER PLATFORMS
INTERSTATE-95 BRIDGE OVER PISCATAQUA RIVER

CUSTOMER CIANBRO CORPORATION
ARCHITECT HARDESTY & HANOVER CONSULT. ENGR

JOB NO. 4981 DWG. NO. 1-A

APPR.		8-30-71
APPR.		10-13-71
SHOP		10-13-71
F. & O.		
DRAWN	GW	8-4-71
CHECKED	SPH	10-13-71
REVISION	SPH	10-13-71
REVISION		
REVISION		

130-120
A



APPROVED: HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
AUG 4 1971
BY S.S.N.

RECEIVED
KITTERY FIELD OFFICE
AUG 11 1971
PROJECT No. I-95-1(22)16
STATE OF ME. - STATE OF N. H.

RECEIVED
JUL 29 1971
MEGQUIER & JONES CORP.

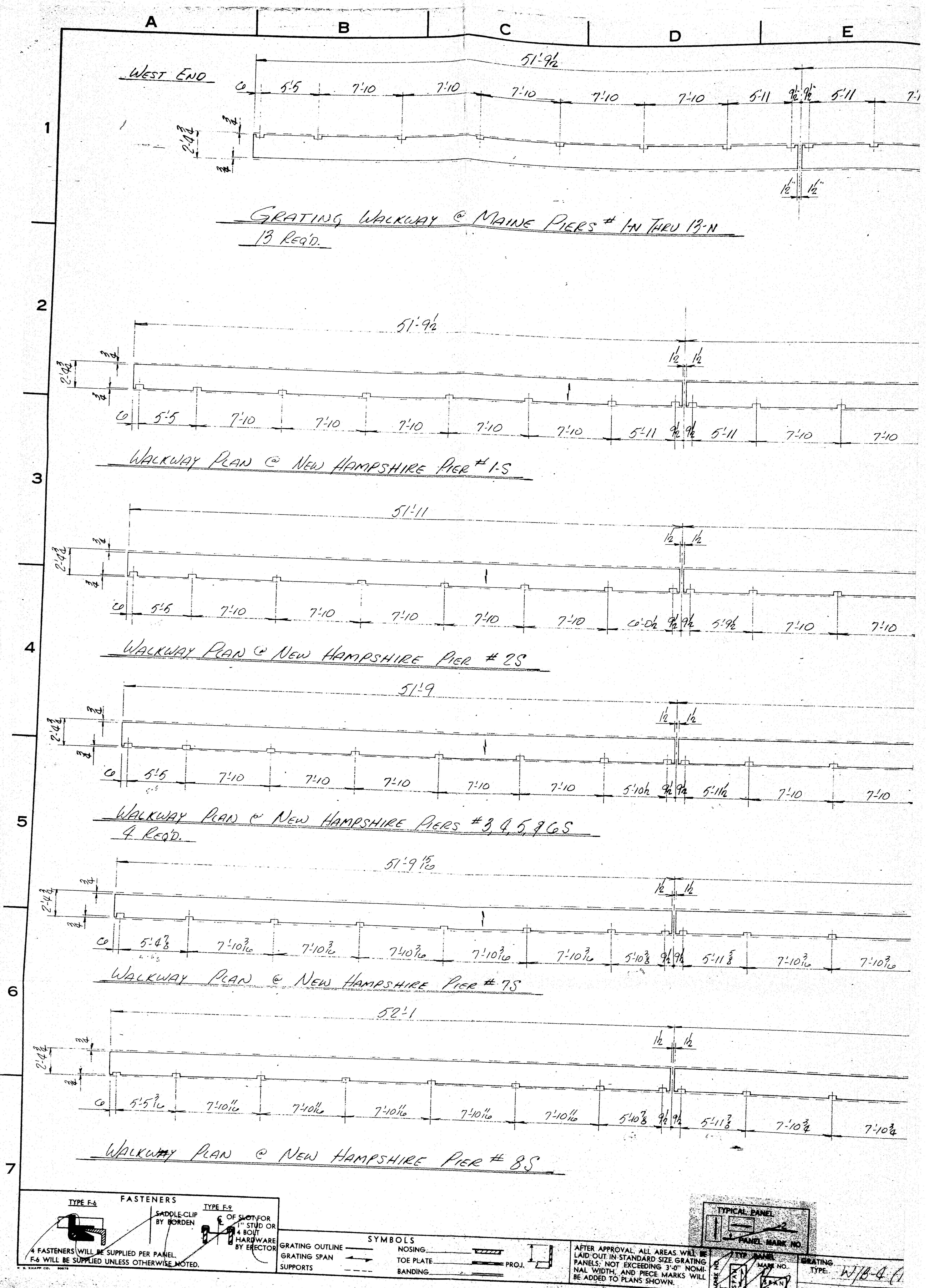
ISSUE	DATE	BY	REVISION
1st	7-26-71	JJD	

PANEL MK. PREFIX THIS DWG.
EREC.

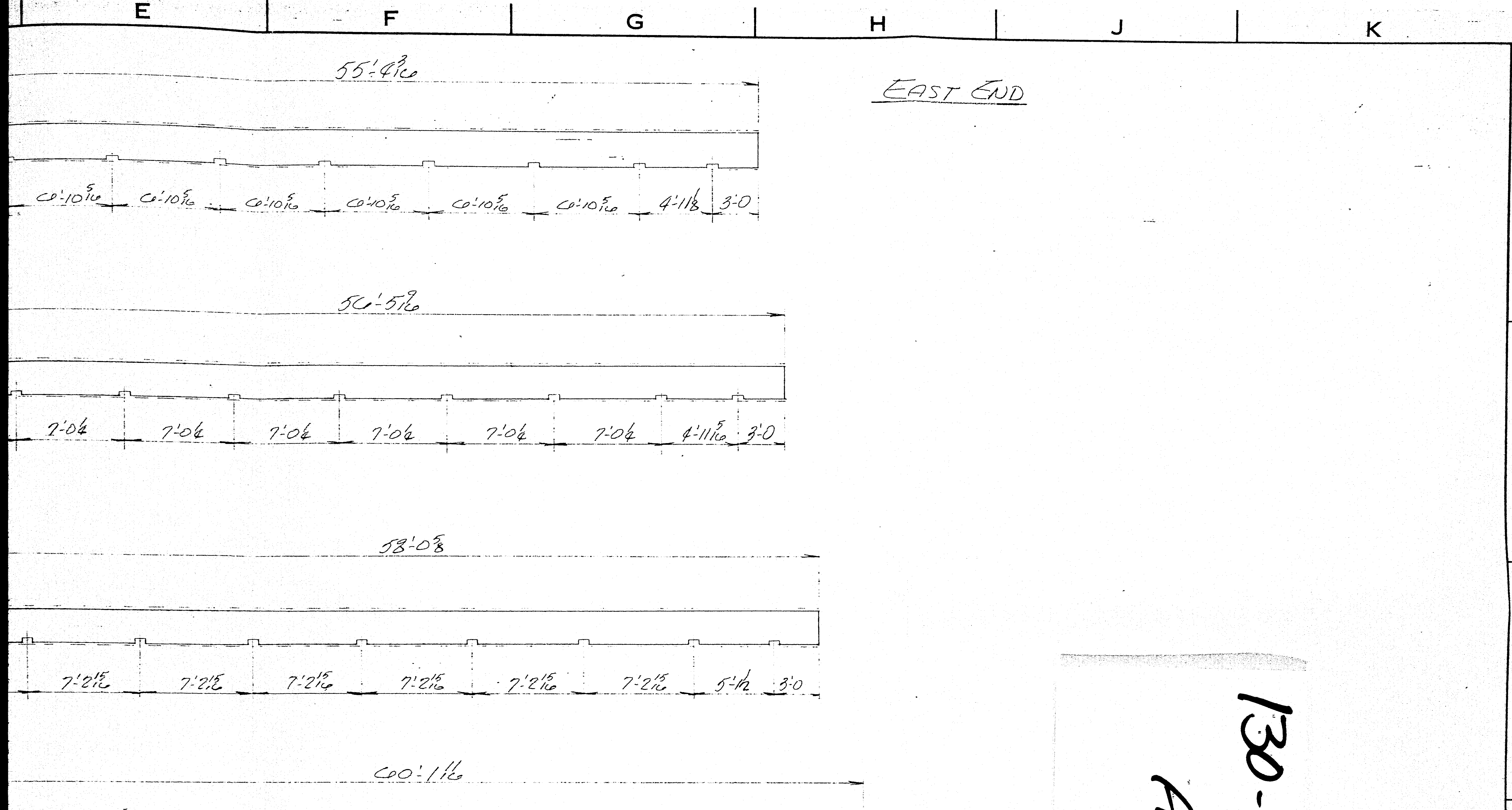
GRATING TYPE: W/B-4 (1×3/16)
FINISH: GALVANIZED
MADE: Jack J. Dose
CH'K'D: R. L.
APP.:
P. O. NO.: 511
JOB NO.:
REQ. NO.:
REF. DWG.
OWNER:
CUSTOMER: MEGQUIER & JONES CORP.
ENGINEER:
TITLE: WALKWAY GRATING
JOB: PISCATAQUA RIVER BRIDGE
ELEV.:

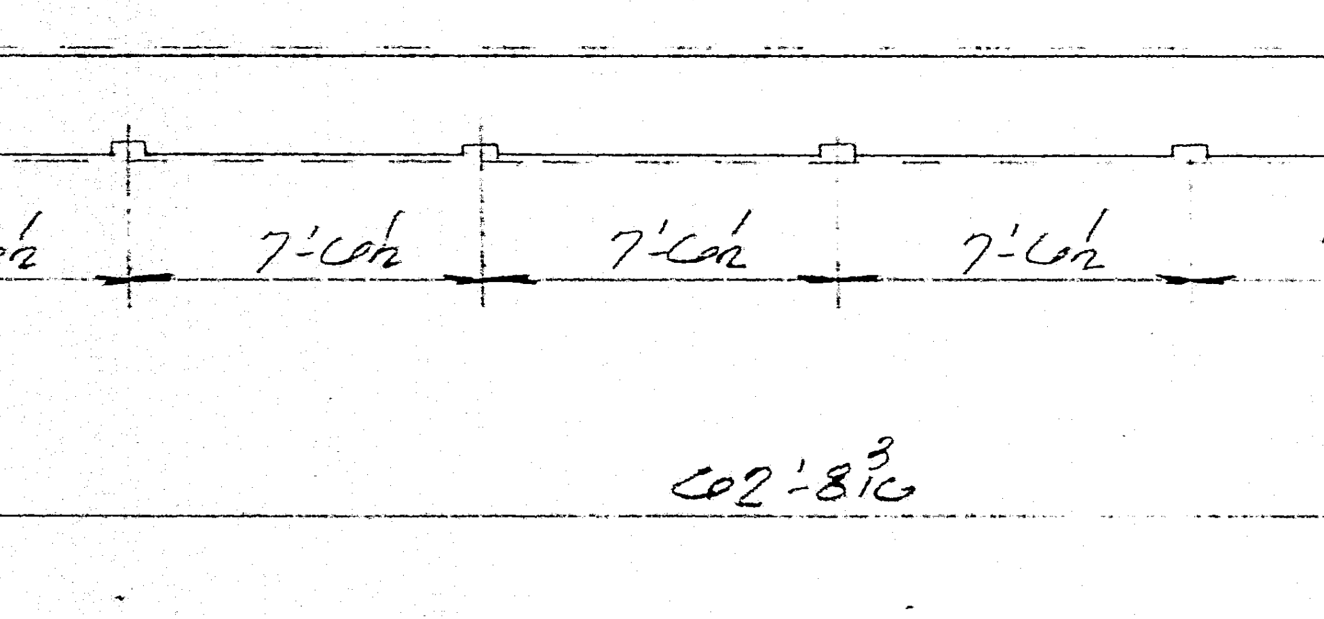
BORDEN METAL PRODUCTS CO
P. O. BOX 172
0C-1-1853
130-120

130-120
B


A
B
C
D
E
1
2
3
4
5
6
7
WEST END
51'-9½
6
5'-5
7'-10
5'-11
9½
1½
2'-4¾
¾
GRATING WALKWAY @ MAINE PIERS # 1-N THRU 13-N
13 REQ'D.
WALKWAY PLAN @ NEW HAMPSHIRE PIER # 1-S
51'-11
6'-0½
5'-9½
WALKWAY PLAN @ NEW HAMPSHIRE PIER # 2S
51'-9
5'-10½
5'-11½
WALKWAY PLAN @ NEW HAMPSHIRE PIERS # 3, 4, 5, & 6S
4 REQ'D.
51'-9 15/16
5'-4⅞
7'-10 3/16
5'-10⅜
5'-11⅝
WALKWAY PLAN @ NEW HAMPSHIRE PIER # 7S
52'-1
5'-5 3/16
7'-10 11/16
5'-10⅞
5'-11⅞
7'-10¾
WALKWAY PLAN @ NEW HAMPSHIRE PIER # 8S
FASTENERS
TYPE F-6
SADDLE-CLIP BY BORDEN
TYPE F-9
℄ OF SLOT FOR 1" STUD OR 4 BOLT HARDWARE BY ERECTOR
4 FASTENERS WILL BE SUPPLIED PER PANEL.
F-6 WILL BE SUPPLIED UNLESS OTHERWISE NOTED.
R. S. KNAPP CO. 90675
SYMBOLS
GRATING OUTLINE
GRATING SPAN
SUPPORTS
NOSING
TOE PLATE
BANDING
PROJ.
AFTER APPROVAL, ALL AREAS WILL BE LAID OUT IN STANDARD SIZE GRATING PANELS, NOT EXCEEDING 3'-0" NOMINAL WIDTH, AND PIECE MARKS WILL BE ADDED TO PLANS SHOWN.
TYPICAL PANEL
PANEL MARK NO.
MARK NO.
SPAN
TYP PANEL
GRATING
TYPE: W/B-4 (1
FINISH: GALVAN

130-121
A





KITTERY FIELD OFFICE RECEIVED
AUG 11 1971
PROJECT No. I-95-1(22)16
STATE OF ME. - STATE OF N.H.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY S.S.N. AUG 4 1971

RECEIVED
JUL 29 1971
MEGQUIER & JONES CORP.

1 sep
2 prin

TYPICAL PANEL
2
PANEL MARK NO.
TYP. PANEL MARK NO.
SPAN

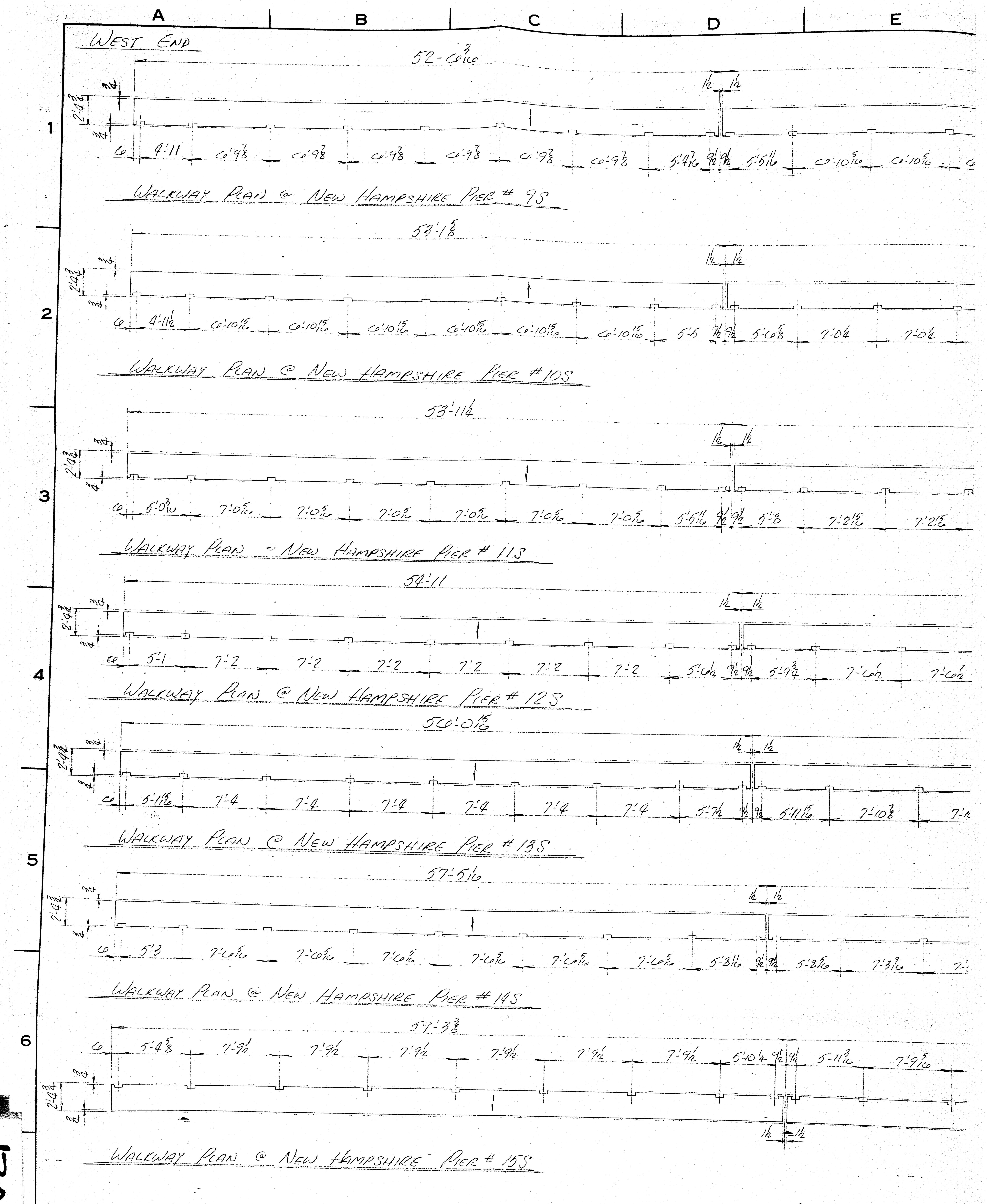
PANEL MK. PREFIX THIS DWG.	EREC.		
	1st	7-26-71	JJD.
	ISSUE	DATE	BY	REVISION

GRATING TYPE: W/B-4 (1×3/16)	MADE: Jack J. Dose	P. O. NO.: 511	REF. DWG.
FINISH: GALVANIZED	CH'K'D: R.L.	JOB NO.:	OWNER:
	APP.:	REQ. NO.:	CUSTOMER: Megquier & Jones Corp.
			ENGINEER:

TITLE: Walkway Grating
JOB: Piscataqua River Bridge
ELEV:

BORDEN METAL PRODUCTS CO.
P. O. BOX 172
ELIZABE
DWG
DC-1-1853
130-121

130-121
A



WALKWAY PLAN @ NEW HAMPSHIRE PIER # 9S

WALKWAY PLAN @ NEW HAMPSHIRE PIER #10S

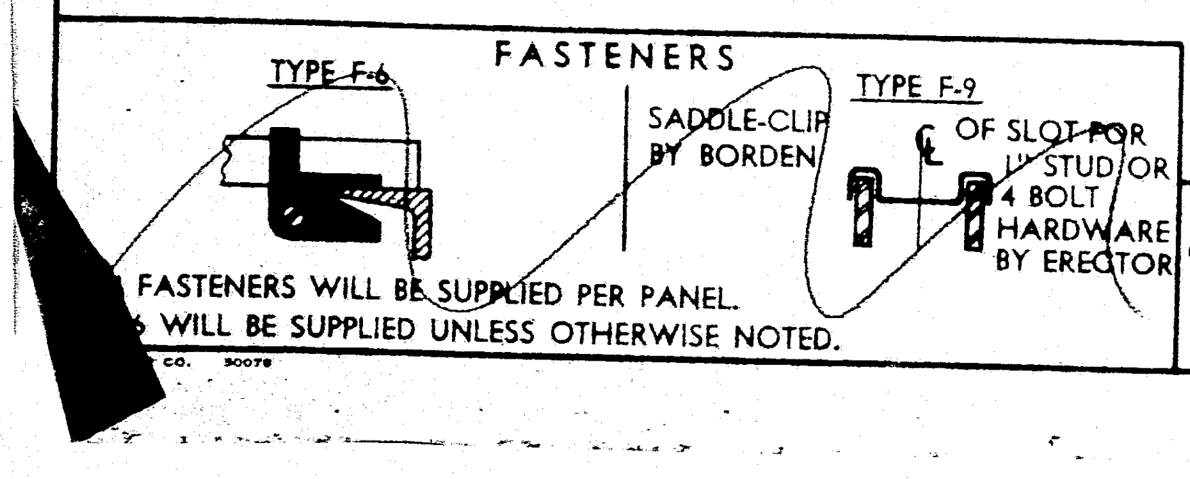
WALKWAY PLAN @ NEW HAMPSHIRE PIER # 11S

WALKWAY PLAN @ NEW HAMPSHIRE PIER # 12S

WALKWAY PLAN @ NEW HAMPSHIRE PIER # 13S

WALKWAY PLAN @ NEW HAMPSHIRE PIER # 14S

WALKWAY PLAN @ NEW HAMPSHIRE PIER # 15S



FASTENERS

FASTENERS WILL BE SUPPLIED PER PANEL.
WILL BE SUPPLIED UNLESS OTHERWISE NOTED.

CO. 30078

SYMBOLS

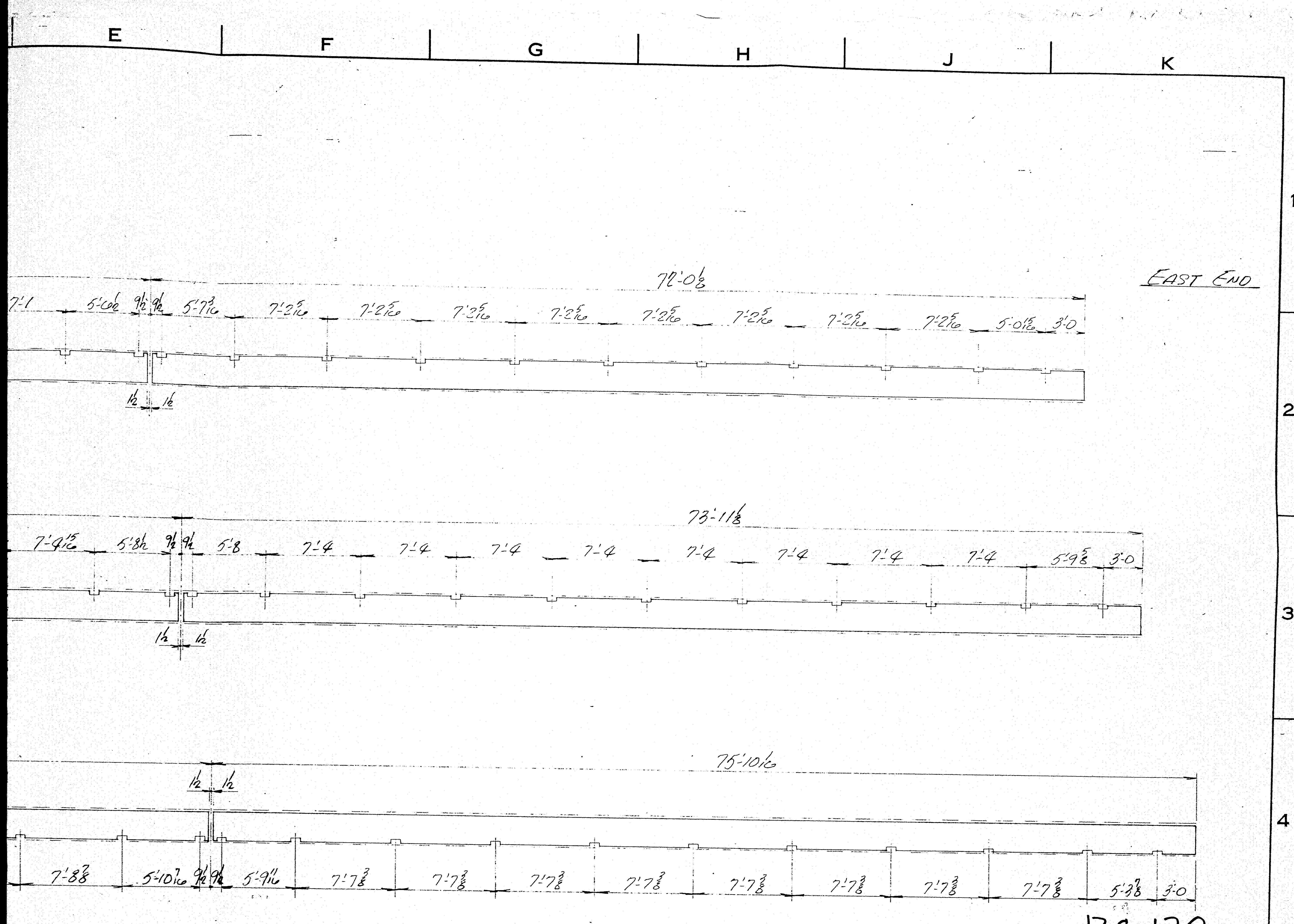
GRATING OUTLINE	———	NOSING	▨
GRATING SPAN	←→	TOE PLATE	PROJ.
SUPPORTS	– – –	BANDING	═

AFTER APPROVAL, ALL AREAS WILL BE LAID OUT IN STANDARD SIZE GRATING PANELS, NOT EXCEEDING 3'-0" NOMINAL WIDTH, AND PIECE MARKS WILL BE ADDED TO PLANS SHOWN.

TYPICAL PANEL
2
PANEL MARK NO.

TYP. PANEL
MARK NO.
SPAN
MARK NO.
SPAN

GRATING TYPE: W/B-4
FINISH: GALVANI



130-122

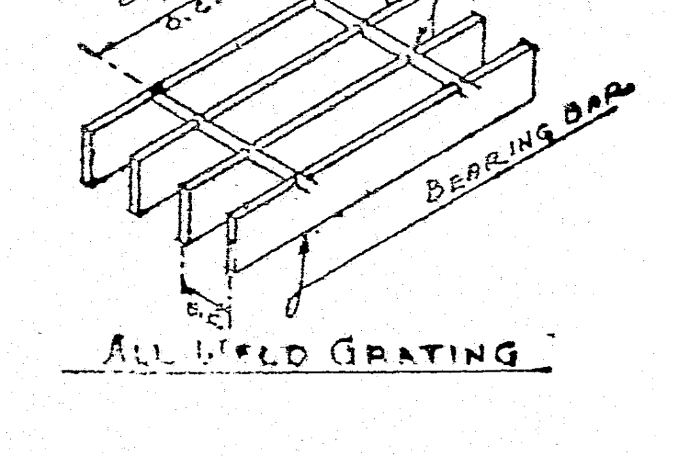
KITTERY FIELD OFFICE
RECEIVED
AUG 11 1971
PROJECT No. I-95-1(22)16
STATE OF ME. - STATE OF N.H.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY S.S.N. AUG 4 1971

RECEIVED
JUL 29 1971
MEGQUIER & JONES CORP.

1 sepia
2 prints

130-122
A



ALL WELD GRATING

PANEL
2
PANEL MARK NO.
PANEL MARK NO.
SPAN

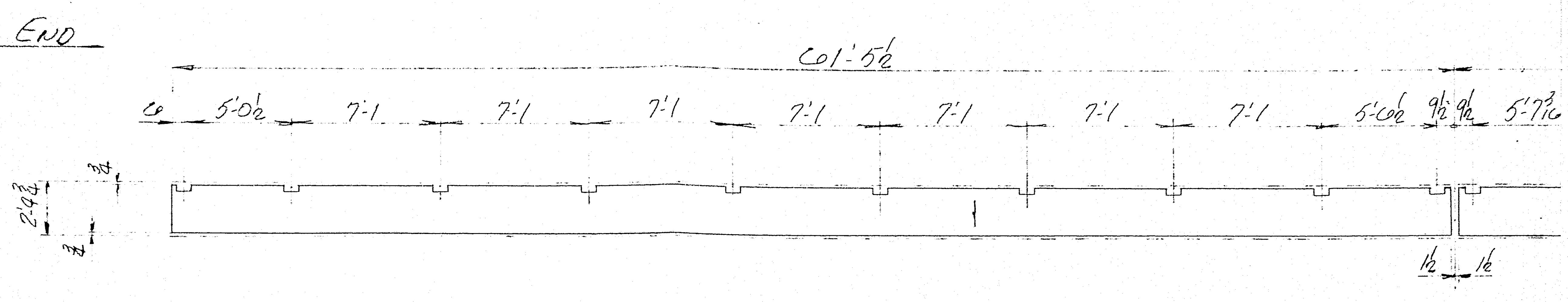
GRATING TYPE: W/B-4 (1×3/16)	MADE: Jack J. Dosé	P. O. NO.: 511	REF. DWG. OWNER:	TITLE: WALKWAY GRATING
	CH'K'D: R.L.	JOB NO.:	CUSTOMER: MEGQUIER & JONES CORP.	JOB: PISCATAQUA RIVER BRIDGE
FINISH: GALVANIZED	APP.:	REQ. NO.:	ENGINEER:	ELEV:

PANEL MK. PREFIX THIS DWG.	EREC.			
	1st	7-26-71	J.J.D.	
	ISSUE	DATE	BY	REVISION

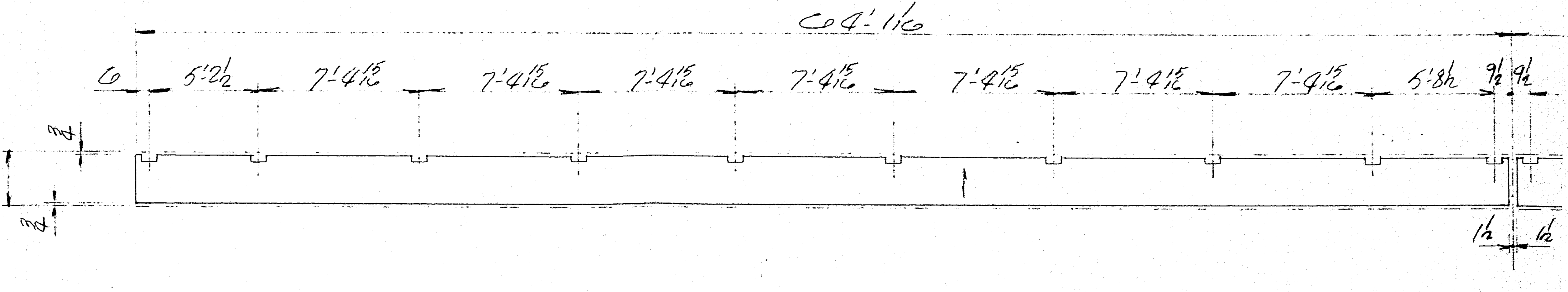
BORDEN METAL PRODUCTS CO.
P. O. BOX 172 ELIZABETH, N. J.
OC-1-1853 DWG. NO. 3

130-122

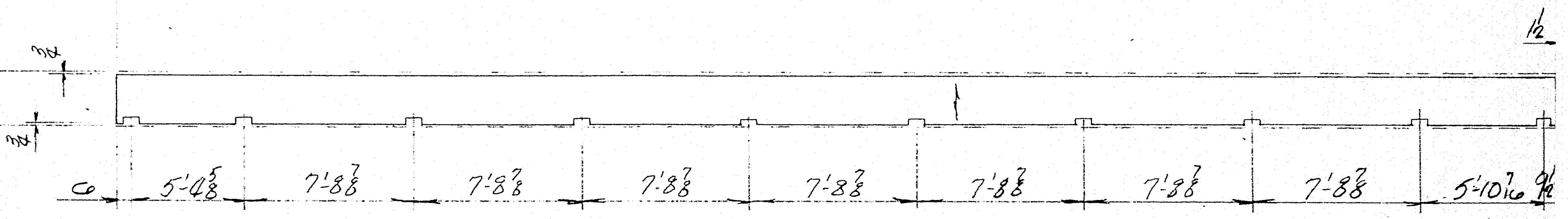
WEST END



WALKWAY PLAN @ NEW HAMPSHIRE PIER #16S

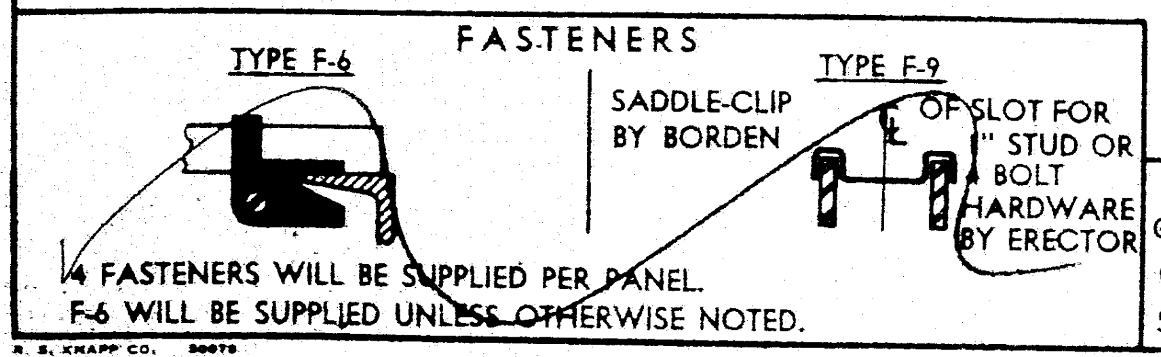


WALKWAY PLAN @ NEW HAMPSHIRE PIER #17S



WALKWAY PLAN @ NEW HAMPSHIRE PIER #18S

130-122
B



FASTENERS

SADDLE-CLIP BY BORDEN

HARDWARE BY ERECTOR

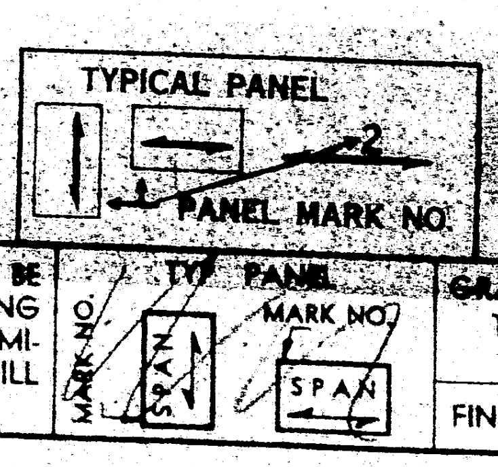
4 FASTENERS WILL BE SUPPLIED PER PANEL.
F-6 WILL BE SUPPLIED UNLESS OTHERWISE NOTED.

R. S. KNAPP CO.

SYMBOLS

GRATING OUTLINE	———	NOSING	▨
GRATING SPAN	⟷	TOE PLATE	▬ PROJ.
SUPPORTS	– – –	BANDING	═

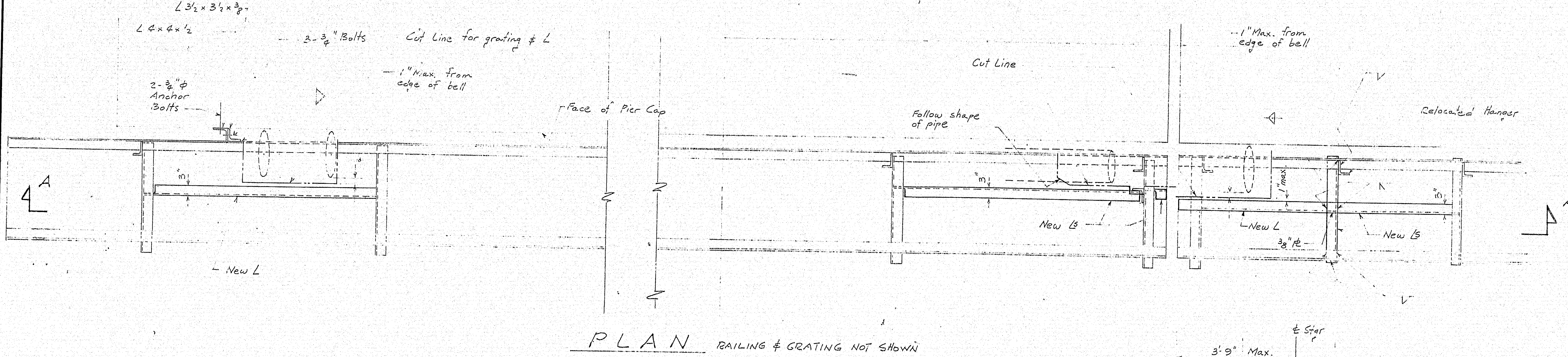
AFTER APPROVAL, ALL AREAS WILL BE LAID OUT IN STANDARD SIZE GRATING PANELS, NOT EXCEEDING 3'-0" NOMINAL WIDTH, AND PIECE MARKS WILL BE ADDED TO PLANS SHOWN.



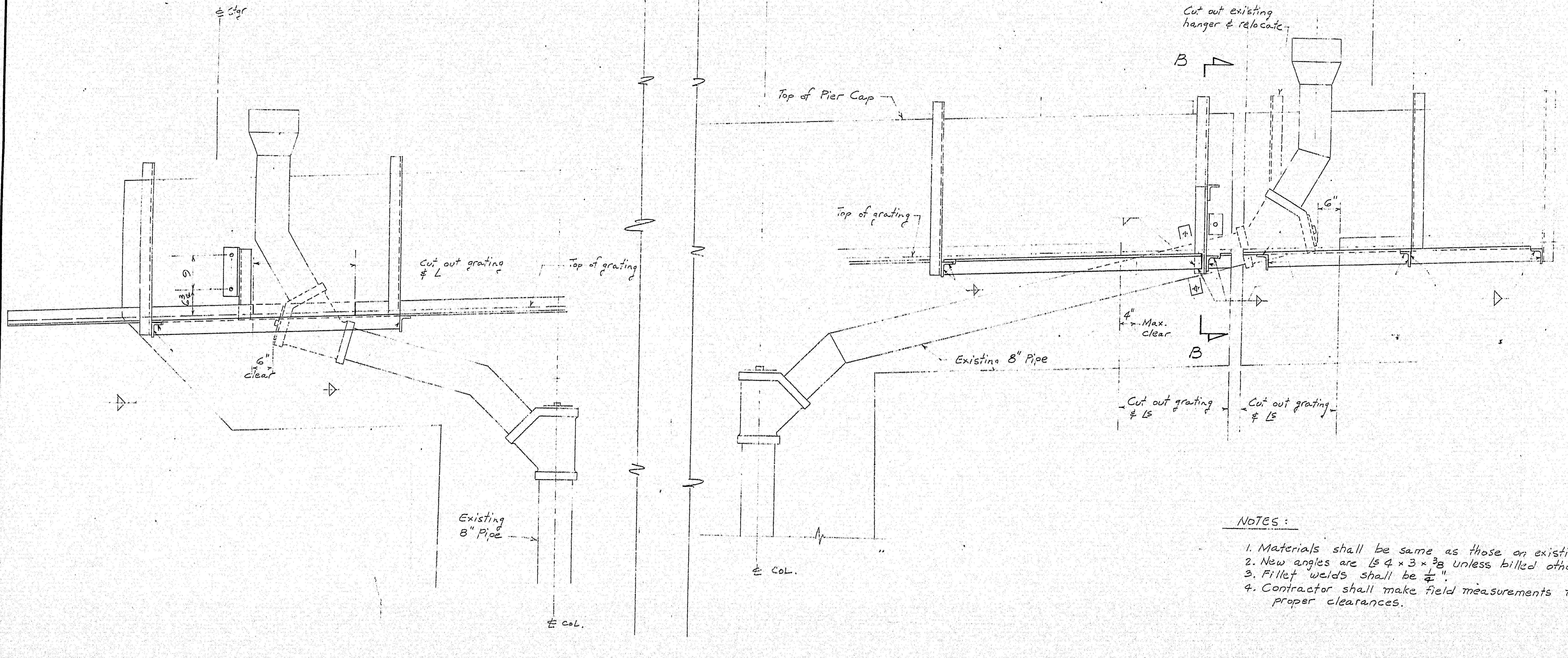
GRATING TYPE: W/B-4

FINISH: GALVA

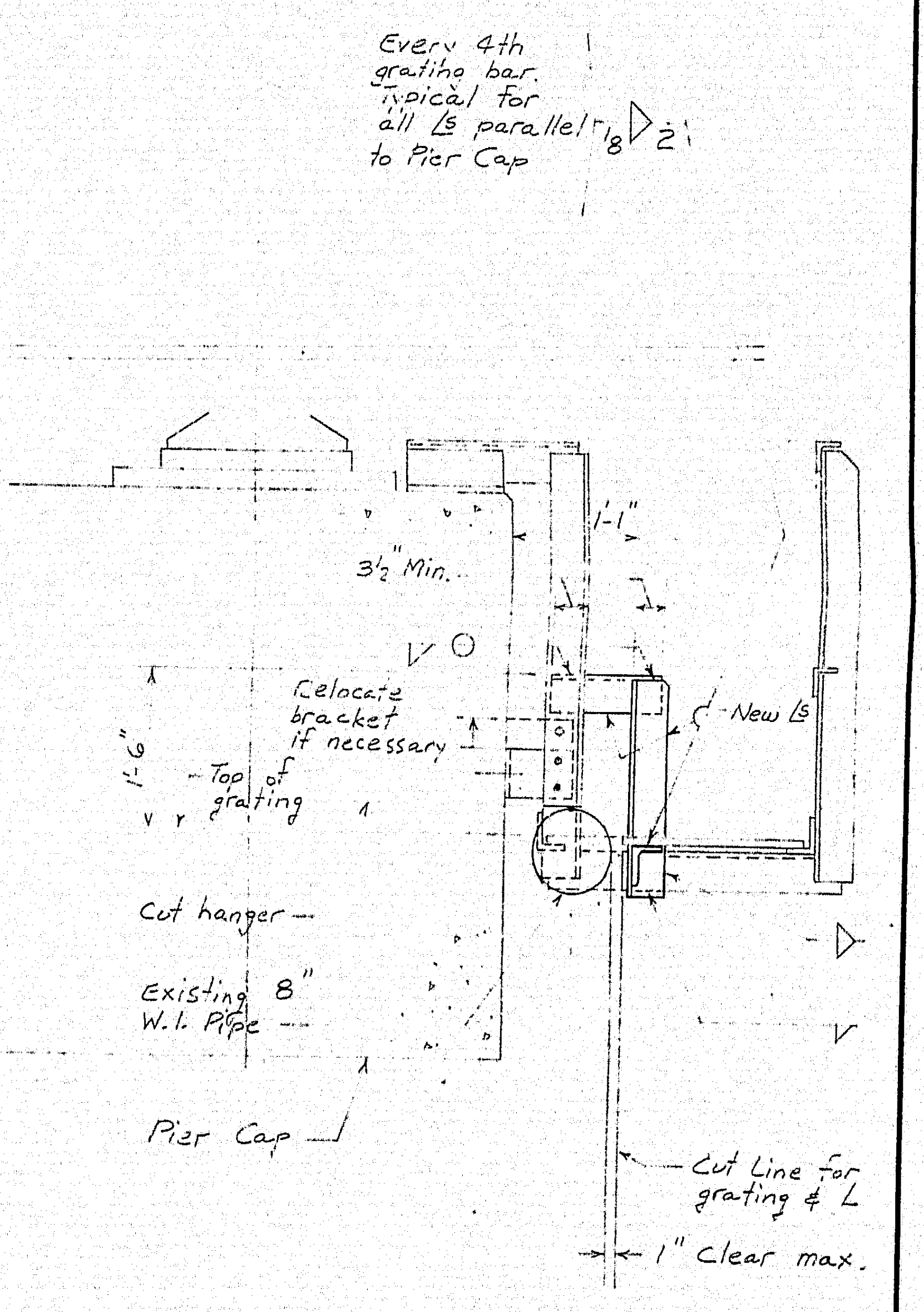
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-1(21)		



PLAN
RAILING & GRATING NOT SHOWN



SECTION A-A



SECTION B-B

NOTES:

1. Materials shall be same as those on existing platforms.
2. New angles are Ls 4 × 3 × ⅜ unless billed otherwise.
3. Fillet welds shall be ¼".
4. Contractor shall make field measurements to assure proper clearances.

6

DESIGN —
TRACE —
CHECK — S.N. 3-9-72

BRIDGE NO.
IN CHARGE OF —

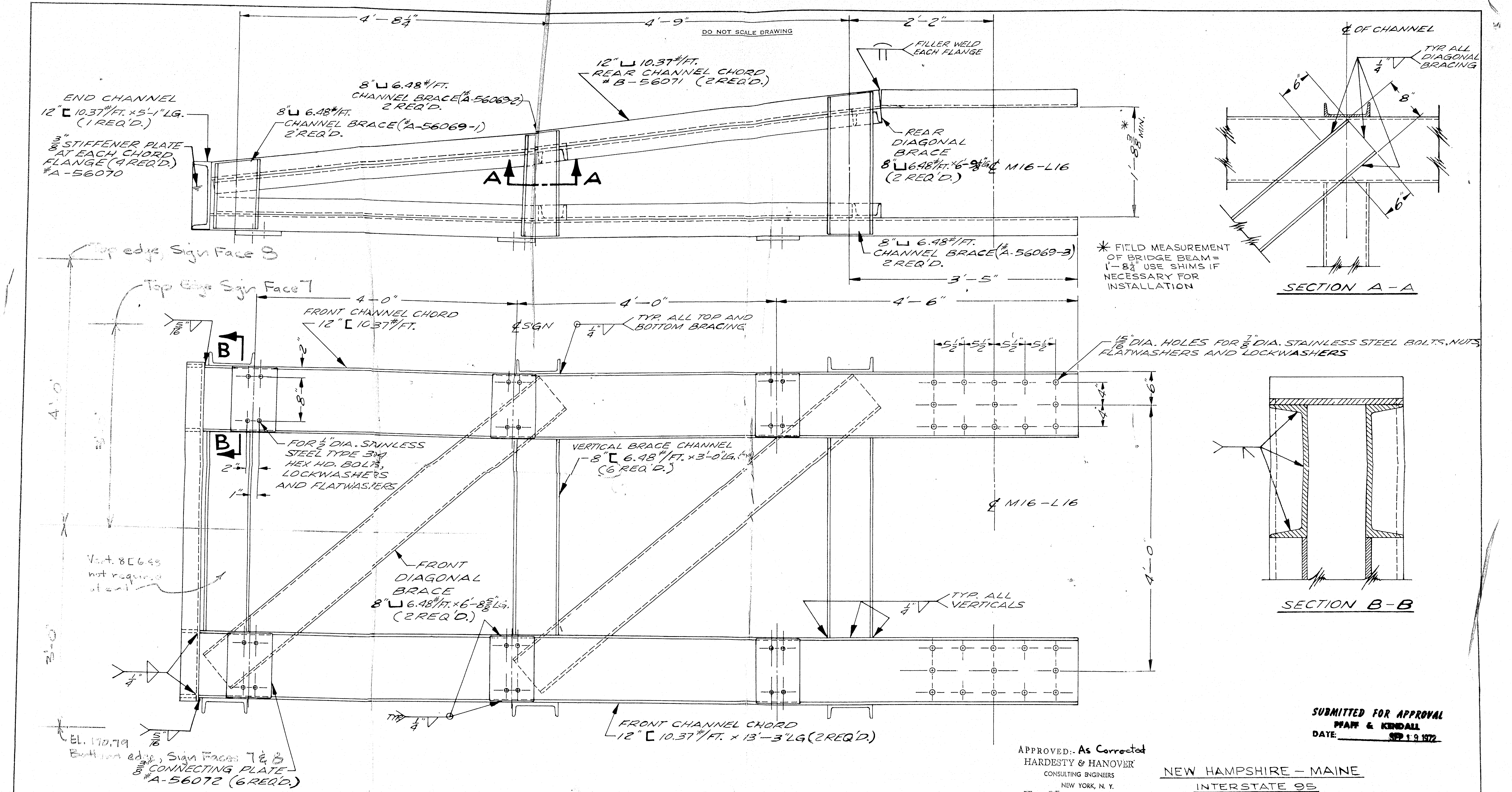
NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
AND
MAINE STATE HIGHWAY COMMISSION
INTERSTATE 95 BRIDGE
OVER
PISCATAQUA RIVER
BETWEEN
PORTSMOUTH, NEW HAMPSHIRE AND KITTERY, MAINE

HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.

MODIFICATIONS TO
PIER 25 PLATFORMS

SHEET 1 OF 1

130-123


4'-8¼"
4'-9"
2'-2"
DO NOT SCALE DRAWING
FILLER WELD EACH FLANGE
12" ⊔ 10.37#/FT. REAR CHANNEL CHORD #B-56071 (2 REQ'D.)
8" ⊔ 6.48#/FT. CHANNEL BRACE (#A-56069-2) 2 REQ'D.
END CHANNEL 12" [10.37#/FT. × 5'-1" LG. (1 REQ'D.)
8" ⊔ 6.48#/FT. CHANNEL BRACE (#A-56069-1) 2 REQ'D.
3/8" STIFFENER PLATE AT EACH CHORD FLANGE (4 REQ'D.) #A-56070
A
A
REAR DIAGONAL BRACE 8" ⊔ 6.48#/FT. × 6'-9⅝" LG. (2 REQ'D.)
℄ M16-L16
1'-8⅜" MIN. *
8" ⊔ 6.48#/FT. CHANNEL BRACE (#A-56069-3) 2 REQ'D.
3'-5"
* FIELD MEASUREMENT OF BRIDGE BEAM = 1'-8¾" USE SHIMS IF NECESSARY FOR INSTALLATION
℄ OF CHANNEL
TYP. ALL DIAGONAL BRACING
¼"
6"
8"
6"
SECTION A-A
Top edge, Sign Face 8
Top Edge Sign Face 7
4'-0"
4'-0"
4'-6"
FRONT CHANNEL CHORD 12" [10.37#/FT.
℄ SIGN
¼"
TYP. ALL TOP AND BOTTOM BRACING
5½" 5½" 5½" 5½"
15/16" DIA. HOLES FOR ⅞" DIA. STAINLESS STEEL BOLTS, NUTS, FLATWASHERS AND LOCKWASHERS
5/16"
B
B
2"
8"
6"
4"
FOR ½" DIA. STAINLESS STEEL TYPE 304 HEX HD. BOLTS, LOCKWASHERS AND FLATWASHERS
2"
1"
VERTICAL BRACE CHANNEL 8" [6.48#/FT. × 3'-0" LG. (6 REQ'D.)
℄ M16-L16
4'-0"
4'-0"
3'-0"
Vert. 8[6.48 not required at end
FRONT DIAGONAL BRACE 8" ⊔ 6.48#/FT. × 6'-8⅝" LG. (2 REQ'D.)
¼"
TYP. ALL VERTICALS
SECTION B-B
¼"
TYP. ¼"
5/16"
EL. 190.79
Bottom edge, Sign Faces 7 & 8
3/8" CONNECTING PLATE #A-56072 (6 REQ'D.)
FRONT CHANNEL CHORD 12" [10.37#/FT. × 13'-3" LG (2 REQ'D.)

SUBMITTED FOR APPROVAL
PFAFF & KENDALL
DATE: SEP 19 1972

NOTE:
1. — ALL MATERIALS TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE NOTED.
2. — ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE USING 5356 FILLER ALLOY.
3. — ALL BOLTS, NUTS AND WASHERS TO BE TYPE 304 STAINLESS STEEL. 40,000 P.S.I. MIN. YIELD POINT.
4. — WHERE ALUMINUM SURFACES ARE TO BE IN CONTACT WITH STRUCTURAL STEEL, MATCHING SURFACES SHALL BE GIVEN A PRIME COAT OF ZINC CHROMATE PRIMER FOLLOWED BY ONE COAT OF ALUMINUM METAL PAINT IN THE FIELD.
5. — SEE DWG. # G-56180 FOR WALKWAY DETAILS

APPROVED:- As Corrected
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY T. C. [illegible]
SEP 28 1972

NEW HAMPSHIRE – MAINE
INTERSTATE 95
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
CONTRACT NO. 6

ALTERATIONS				
ALT.	DESCRIPTION	DATE	BY	CH

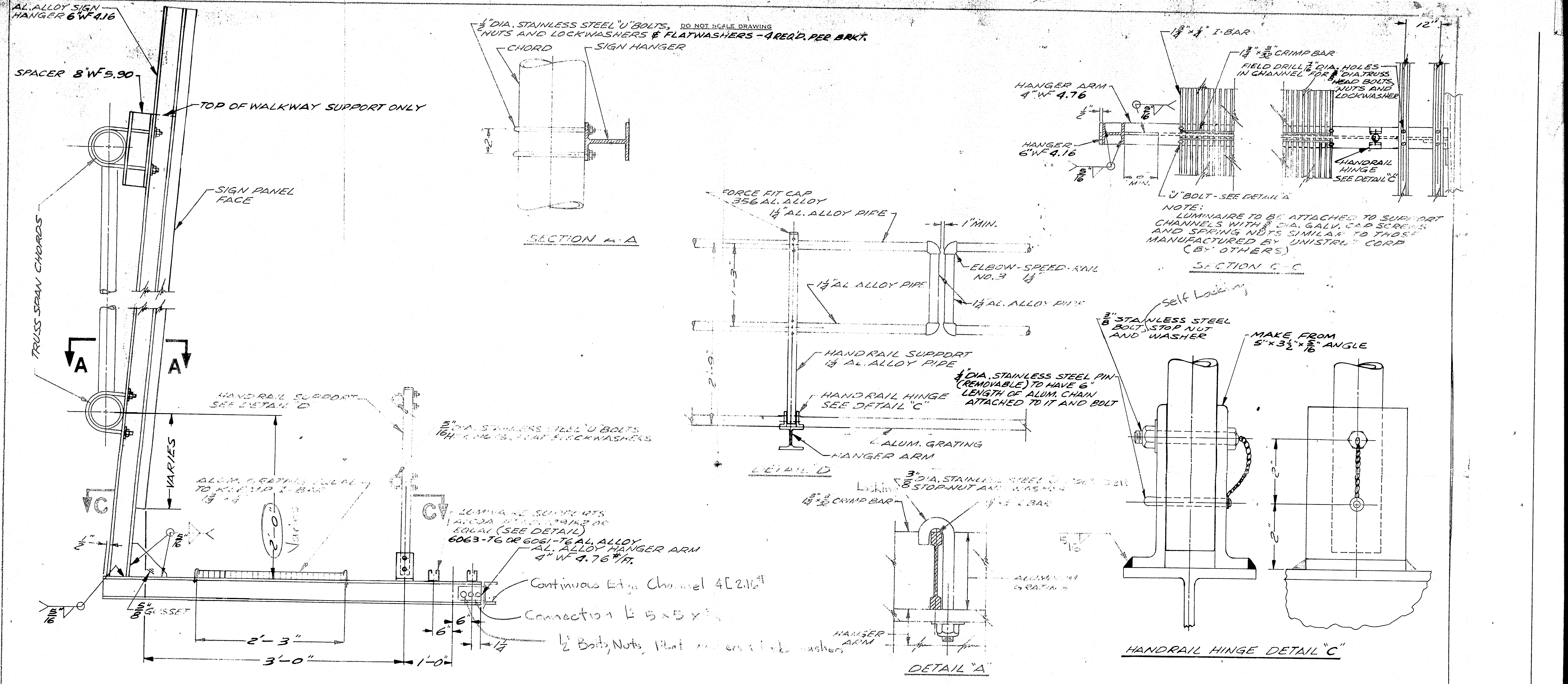
S. O. NO. 4636-N

MATERIAL
STOCK SIZE
FINISH OR TEMPER
UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: DECIMALS ± FRACTIONS ± ANGLES ±
CUSTOMER

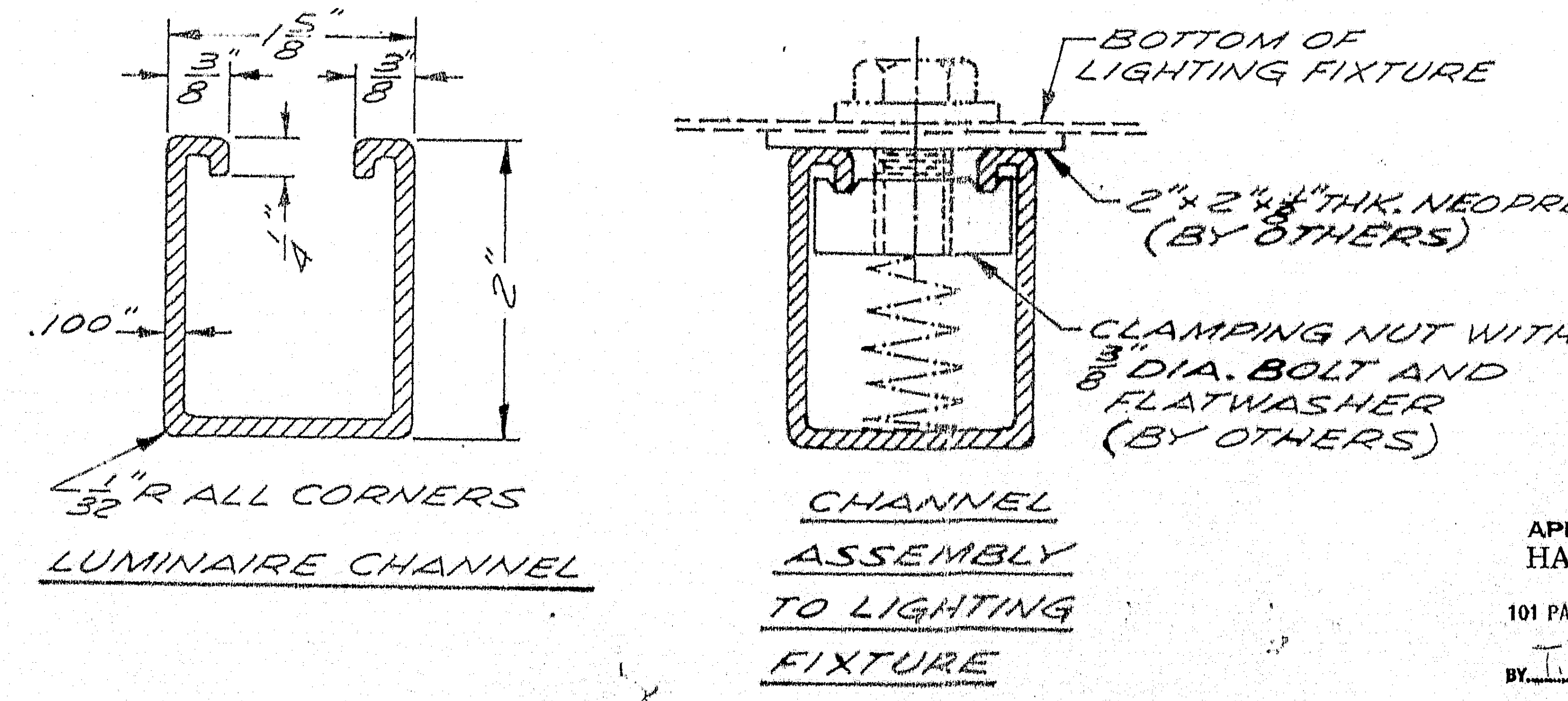
PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.
TITLE BRIDGE MOUNT
M16 EAST AND M16 WEST
DR. AJP DATE 8-30-72
CH. [illegible] 9-15-72
APP.
SCALE: 1½" = 1'-0"
DWG. NO. G-56073

130-124

HUDSON BLUE PRINT CO. INC. 29419


AL. ALLOY SIGN HANGER 6"WF 4.16
SPACER 8"WF 5.90
TOP OF WALKWAY SUPPORT ONLY
SIGN PANEL FACE
TRUSS SPAN CHORDS
A
A
C
C
HANDRAIL SUPPORT SEE DETAIL "D"
5/16" DIA. STAINLESS STEEL 'U' BOLTS, HEX NUTS, FLAT & LOCKWASHERS
VARIES
ALUM. GRATING EQUAL TO KLEMP I-BAR 1 3/4" × 1/4"
2'-0"
Varies
LUMINAIRE SUPPORTS ALCOA STD. 129152 OR EQUAL (SEE DETAIL) 6063-T6 OR 6061-T6 AL. ALLOY
AL. ALLOY HANGER ARM 4" WF 4.76#/FT.
Continuous Edge Channel 4[2.16#
Connection ∟ 5×5×
1/2 Bolts, Nuts, Flat washers & Lock washers
1/2"
5/16
5/16
5/8" GUSSET
2'-3"
3'-0"
1'-0"
6"
6"
1/4
3/8" DIA. STAINLESS STEEL "U" BOLTS, NUTS AND LOCKWASHERS & FLATWASHERS - 4 REQ'D. PER BRKT.
DO NOT SCALE DRAWING
CHORD
SIGN HANGER
2"
SECTION A-A
FORCE FIT CAP 356 AL. ALLOY
1 1/4" AL. ALLOY PIPE
1" MIN.
ELBOW-SPEED-RAIL NO. 3 1 1/4"
1 1/4" AL. ALLOY PIPE
1 1/4" AL. ALLOY PIPE
1'-3"
2'-0"
HANDRAIL SUPPORT 1 1/4" AL. ALLOY PIPE
HANDRAIL HINGE SEE DETAIL "C"
ALUM. GRATING
HANGER ARM
DETAIL "D"
1 3/4" × 1/4" I-BAR
1 3/4" × 3/32" CRIMP BAR
FIELD DRILL 7/16" DIA. HOLES IN CHANNEL FOR 3/8" DIA. TRUSS HEAD BOLTS, NUTS AND LOCKWASHER
12"
HANGER ARM 4"WF 4.76
HANGER 6"WF 4.16
1/2"
5/16
5/16
6" MIN.
"U" BOLT - SEE DETAIL "A"
HANDRAIL HINGE SEE DETAIL "C"
NOTE: LUMINAIRE TO BE ATTACHED TO SUPPORT CHANNELS WITH 3/8" DIA. GALV. CAP SCREWS AND SPRING NUTS SIMILAR TO THOSE MANUFACTURED BY UNISTRUT CORP. (BY OTHERS)
SECTION C-C
3/8" DIA. STAINLESS STEEL "U" BOLT, Self Locking STOP-NUT AND WASHER
1 3/4" × 3/32" CRIMP BAR
1 3/4" × 1/4" I-BAR
ALUMINUM GRATING
HANGER ARM
DETAIL "A"
3/8" STAINLESS STEEL BOLT, Self Locking STOP NUT AND WASHER
MAKE FROM 5" × 3 1/2" × 5/16" ANGLE
1/4" DIA. STAINLESS STEEL PIN (REMOVABLE) TO HAVE 6" LENGTH OF ALUM. CHAIN ATTACHED TO IT AND BOLT
2"
2"
5/16
HANDRAIL HINGE DETAIL "C"

SIGN HANGER ERECTION DETAIL


1 5/8"
3/8"
3/8"
.100"
2"
1 1/32"R ALL CORNERS
LUMINAIRE CHANNEL
BOTTOM OF LIGHTING FIXTURE
2" × 2" × 1/8" THK. NEOPRENE PAD (BY OTHERS)
CLAMPING NUT WITH 3/8" DIA. BOLT AND FLATWASHER (BY OTHERS)
CHANNEL ASSEMBLY TO LIGHTING FIXTURE

NOTE:

1.– ALL STAINLESS STEEL HARDWARE TO BE PER A.S.T.M. A-276 TYPE 304 - PASSIVATED

2.– ALTERNATE GRATING PER BORDEN METAL PROD. TYPE B-9. (1 3/4" × 3/16" BEARING BAR ON 1 3/16" CENTERS)

3.– HANDRAIL TO BE BUILT IN 15 FT. TO 20 FT. LENGTHS. as shown on Dwg. - SK 64175

4.– ALL MATERIAL TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE NOTED

5.– ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE USING 5356 FILLER ALLOY.

6.– BRACKET SPACING - 5 FT. MAXIMUM.

Submitted For Approval
Dec. 17, 1971

STATE OF MAINE

INTERSTATE 95

APPROVED:- AS CORRECTED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N.Y. 10017
BY T. C. Thompson JAN 21 1972

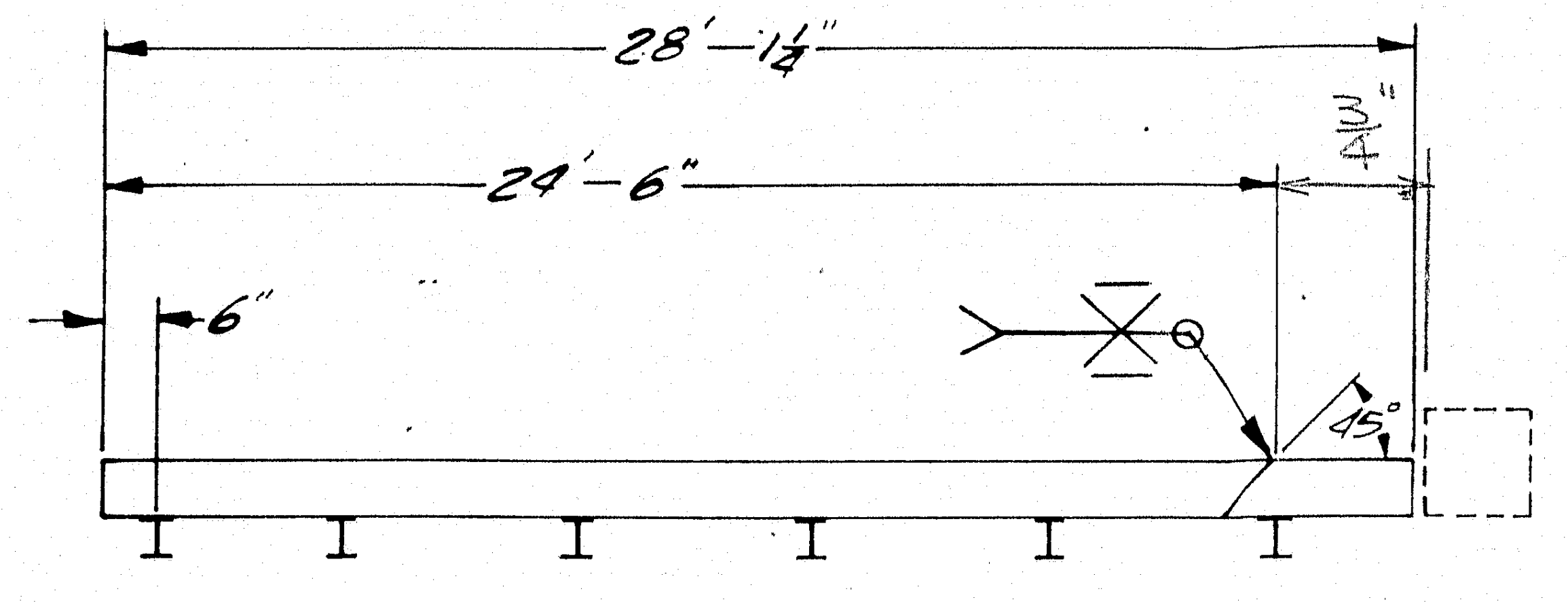
3433-N

SIGN HANGER & WALKWAY DETAILS

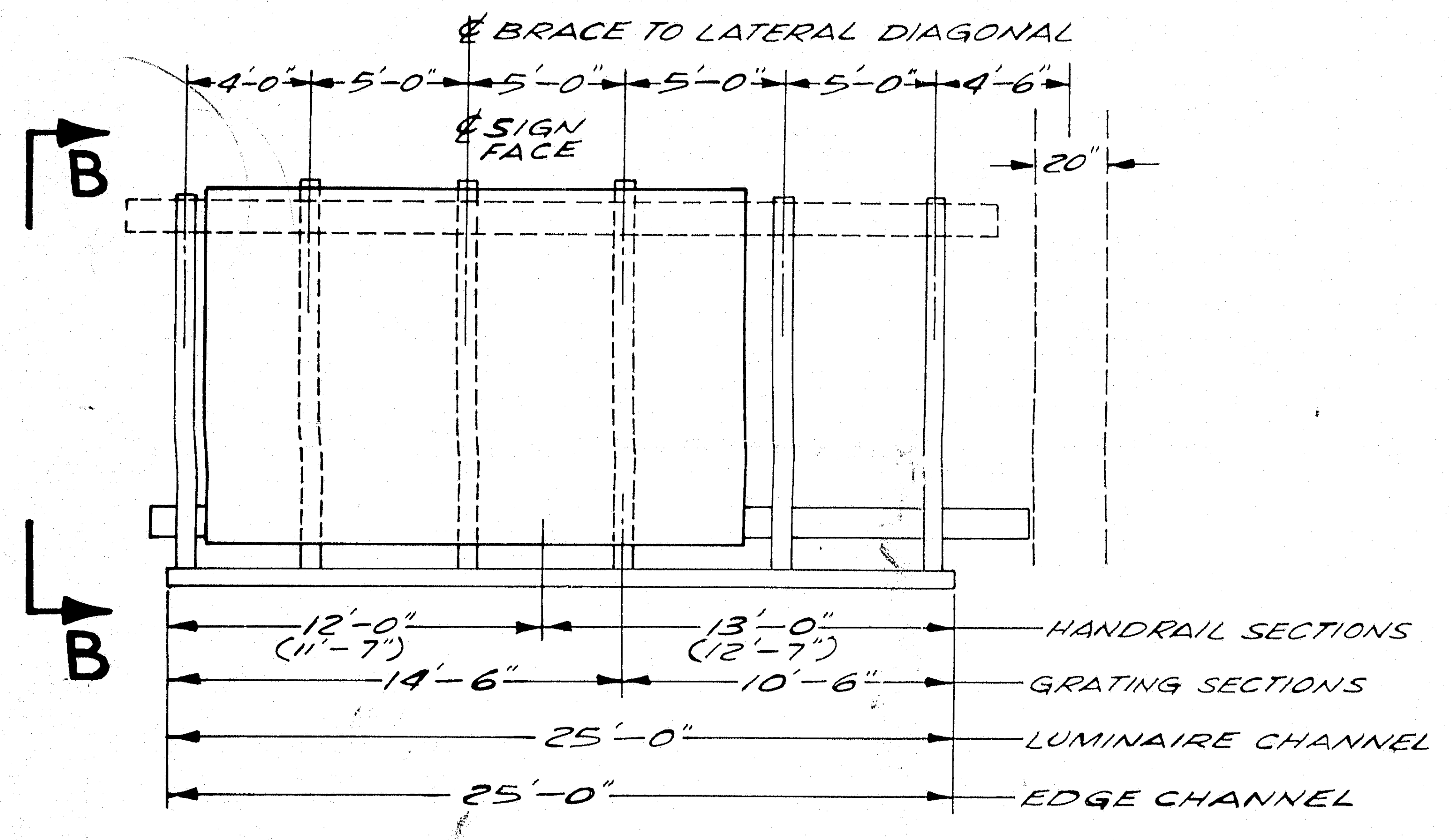
AJP 12-3-71
12-15-71
G-53553
NONE

130-125

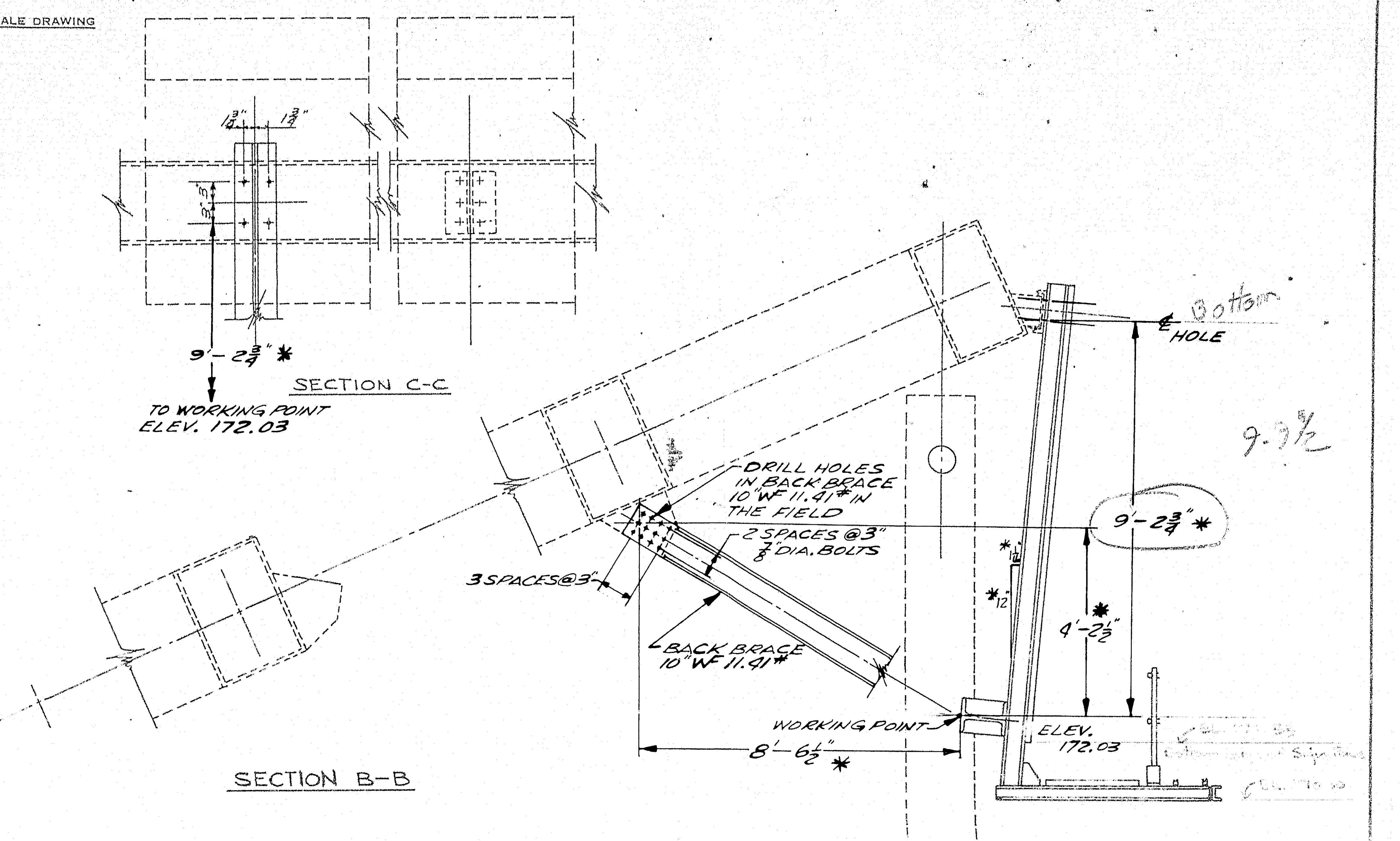
DO NOT SCALE DRAWING



PLAN VIEW OF HEADER BEAM



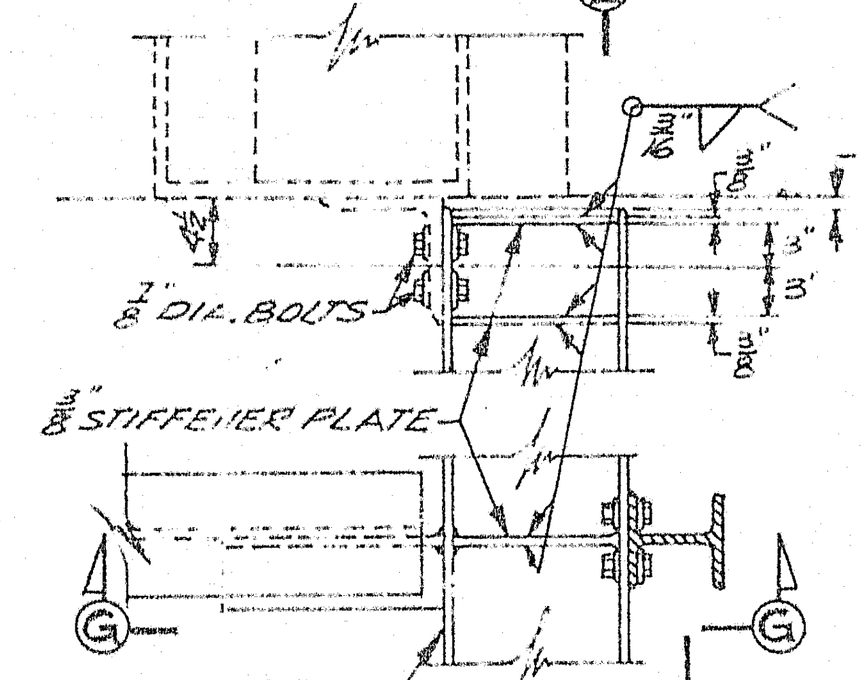
ELEVATION SIGN #9 17'-0" x 11'-6"



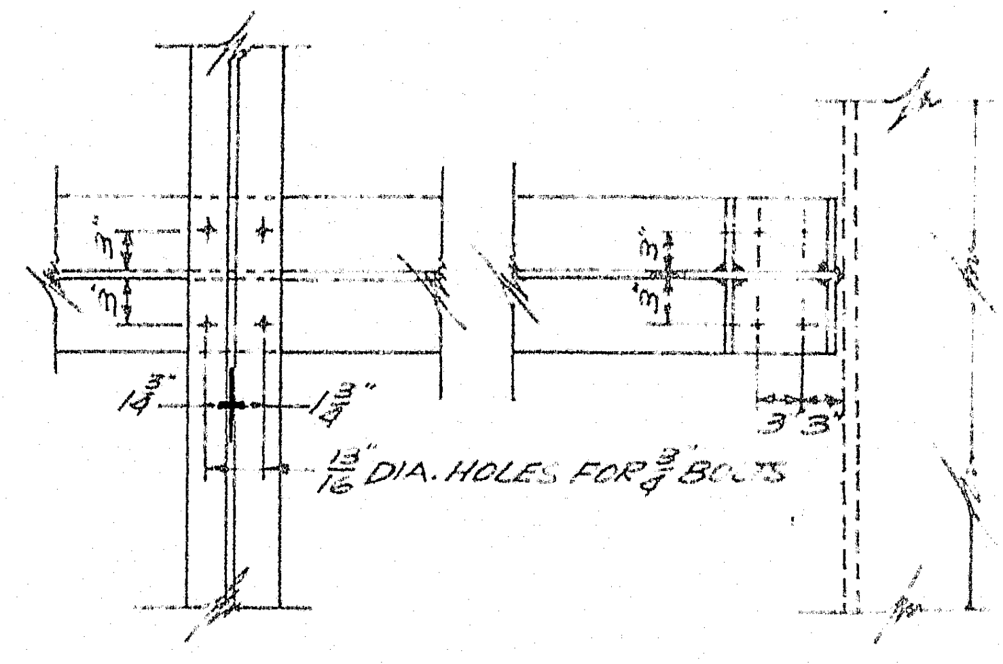
SECTION C-C

SECTION B-B

* THESE DIMENSIONS DETERMINED BY FIELD SURVEY



SECTION D-D

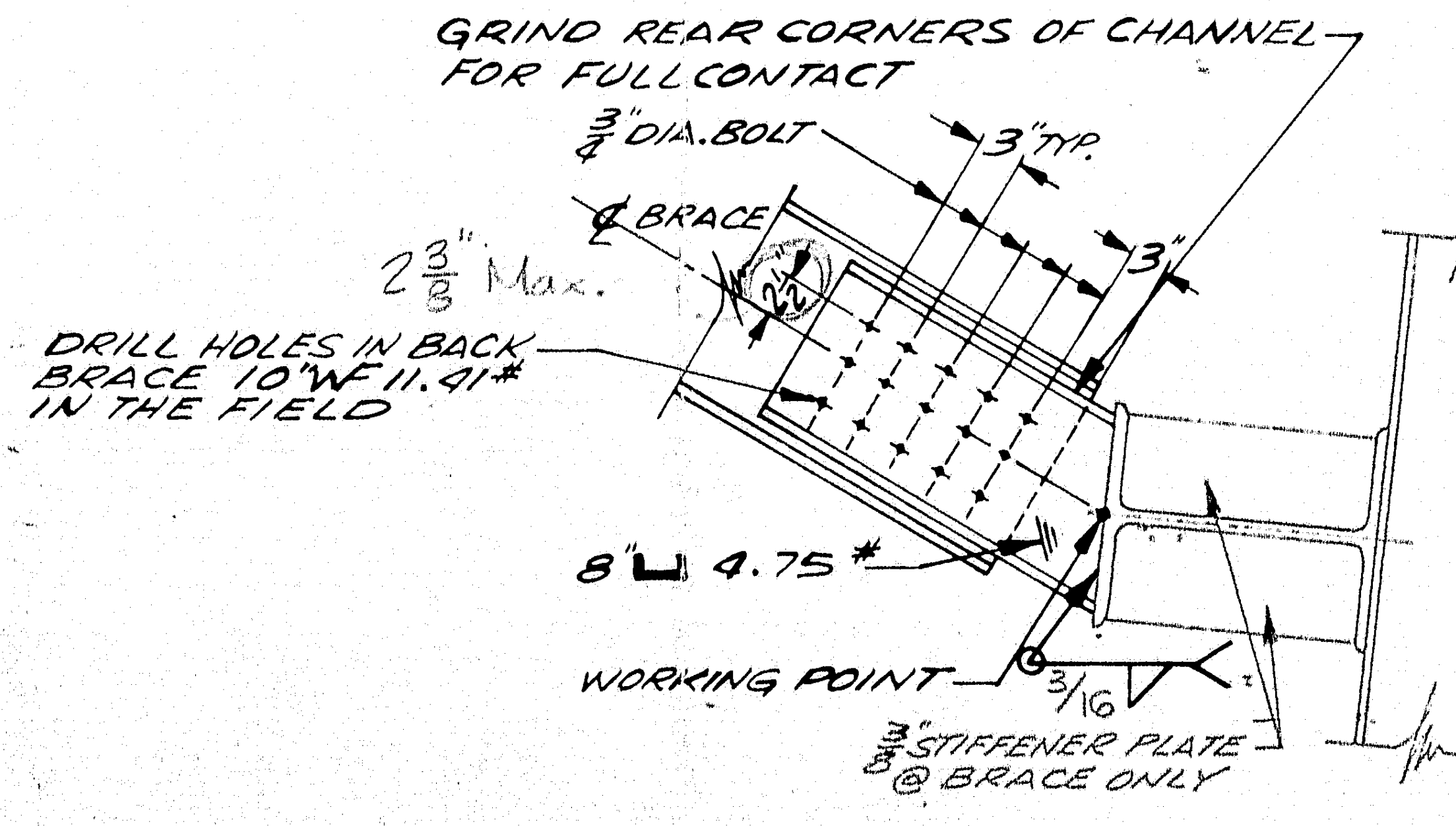


SECTION E-E

NOTES:

1. —ALL MATERIAL TO BE 6061-T6 ALUMINUM ALLOY UNLESS OTHERWISE NOTED.
2. —ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE USING 5356 AS FILLER MATERIAL.
3. —ALL BOLTS, NUTS AND WASHERS TO BE STAINLESS STEEL. 40,000 P.S.I. MIN. YIELD POINT
4. —WHERE ALUMINUM SURFACES ARE TO CONTACT STRUCTURAL STEEL MATCHING SURFACES SHALL BE GIVEN PRIME COAT OF ZINC CHROMATE PRIMER FOLLOWED BY ONE COAT OF ALUMINUM METAL PAINT IN THE FIELD.
5. — SEE DWG # G-56180 FOR WALKWAY DETAILS
6. —THE WELDS OF THE HEADER BEAM SPLICE SHALL BE CHECKED BY THE DIE PENETRANT METHOD. INSPECTED DYE

After grinding flush, all surfaces of



GRIND REAR CORNERS OF CHANNEL FOR FULL CONTACT
¾" DIA. BOLT
℄ BRACE
3" TYP.
3"
2⅜" Max.
DRILL HOLES IN BACK BRACE 10"WF 11.41# IN THE FIELD
8" ⊔ 4.75#
WORKING POINT
3/16
⅜" STIFFENER PLATE @ BRACE ONLY

SECTION G-G

SUBMITTED FOR APPROVAL
PFAFF & KENDALL
DATE: SEP 19 1972

APPROVED:- As Corrected
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY T. C. Thompson
SEP 28 1972

NEW HAMPSHIRE — MAINE
INTERSTATE 95
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
CONTRACT NO. 6

130-126

S. O. NO. 4636-N

ALTERATIONS

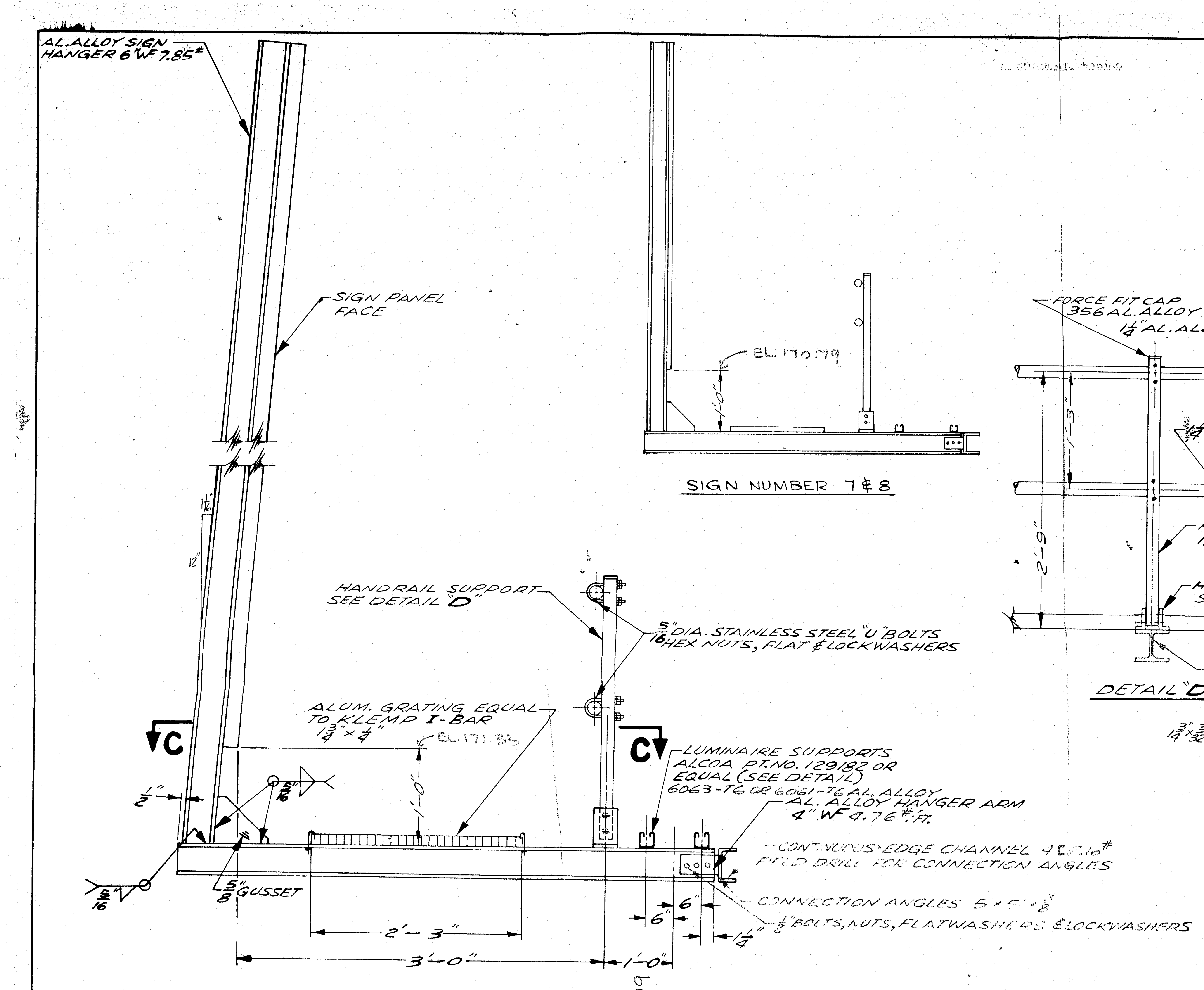
ALT.	DESCRIPTION	DATE	BY	CH

MATERIAL
STOCK SIZE
FINISH OR TEMPER
UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: DECIMALS ± FRACTIONS ± ANGLES ±
CUSTOMER

PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N.

TITLE
BRIDGE MOUNTED SIGN
#9 ℄ P.P. M11 NORTH

DR. AUP DATE 9-18-72
CH.
APP.
SCALE NONE
DWG. NO. G-56179


AL. ALLOY SIGN HANGER 6"WF 7.85#
SIGN PANEL FACE
$1\frac{1}{16}$"
12"
HANDRAIL SUPPORT SEE DETAIL "D"
$\frac{5}{16}$"DIA. STAINLESS STEEL "U" BOLTS HEX NUTS, FLAT & LOCKWASHERS
ALUM. GRATING EQUAL TO KLEMP I-BAR $1\frac{3}{4}$"×$\frac{1}{4}$"
EL. 171.33
1'-0"
C
C
$\frac{1}{2}$"
$\frac{5}{16}$"
$\frac{5}{16}$"
$\frac{5}{8}$" GUSSET
LUMINAIRE SUPPORTS ALCOA PT.NO. 129182 OR EQUAL (SEE DETAIL) 6063-T6 OR 6061-T6 AL. ALLOY
AL. ALLOY HANGER ARM 4".WF 4.76#/FT.
CONTINUOUS EDGE CHANNEL 4[2.16# FIELD DRILL FOR CONNECTION ANGLES
CONNECTION ANGLES 5×5×$\frac{3}{8}$
$\frac{1}{2}$"BOLTS, NUTS, FLATWASHERS & LOCKWASHERS
6"
6"
$1\frac{1}{4}$"
2'-3"
3'-0"
1'-0"
EL. 170.79
1'-0"

SIGN NUMBER 7 & 8

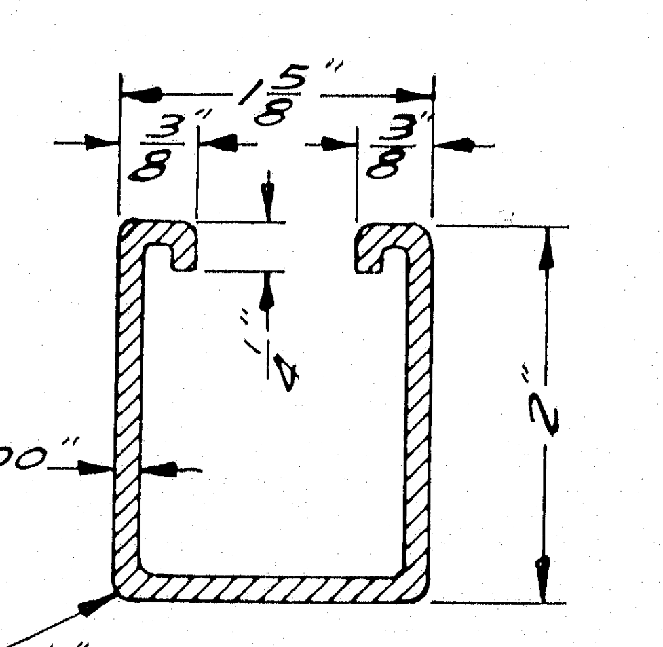
SIGN HANGER ERECTION DETAIL

SIGN NUMBER 5, 6 & 9

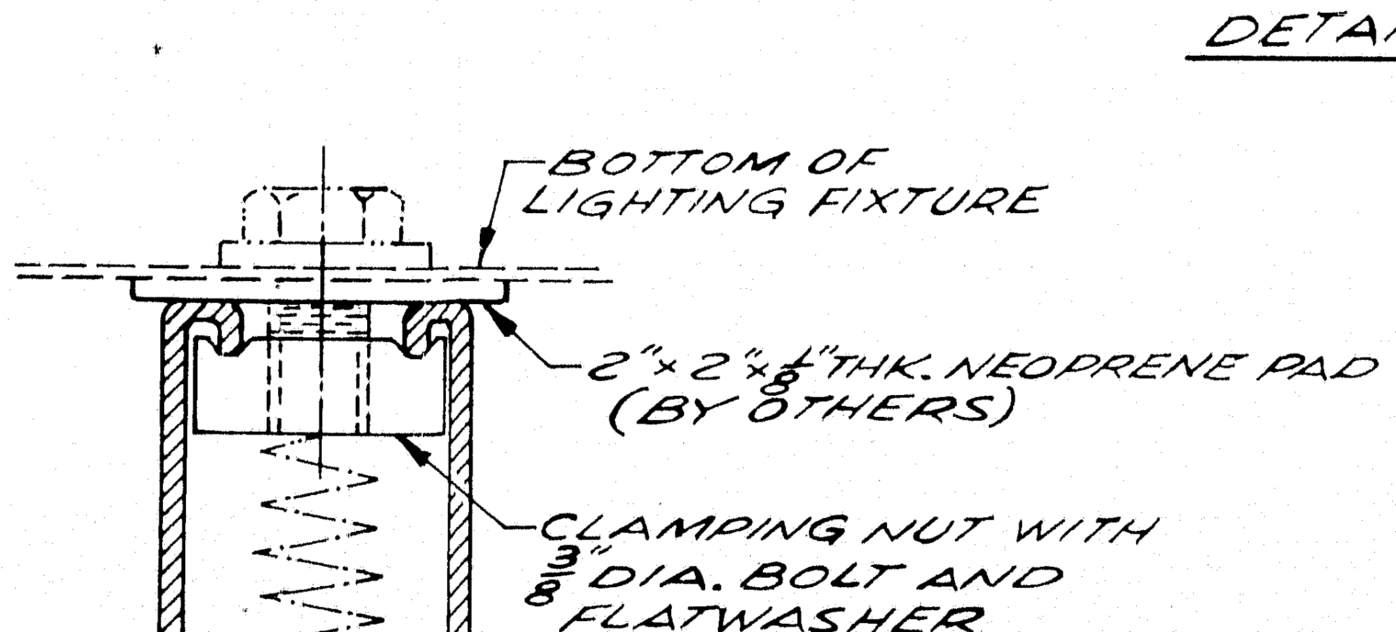
dwgs G-56173 & G56179

NOTE:

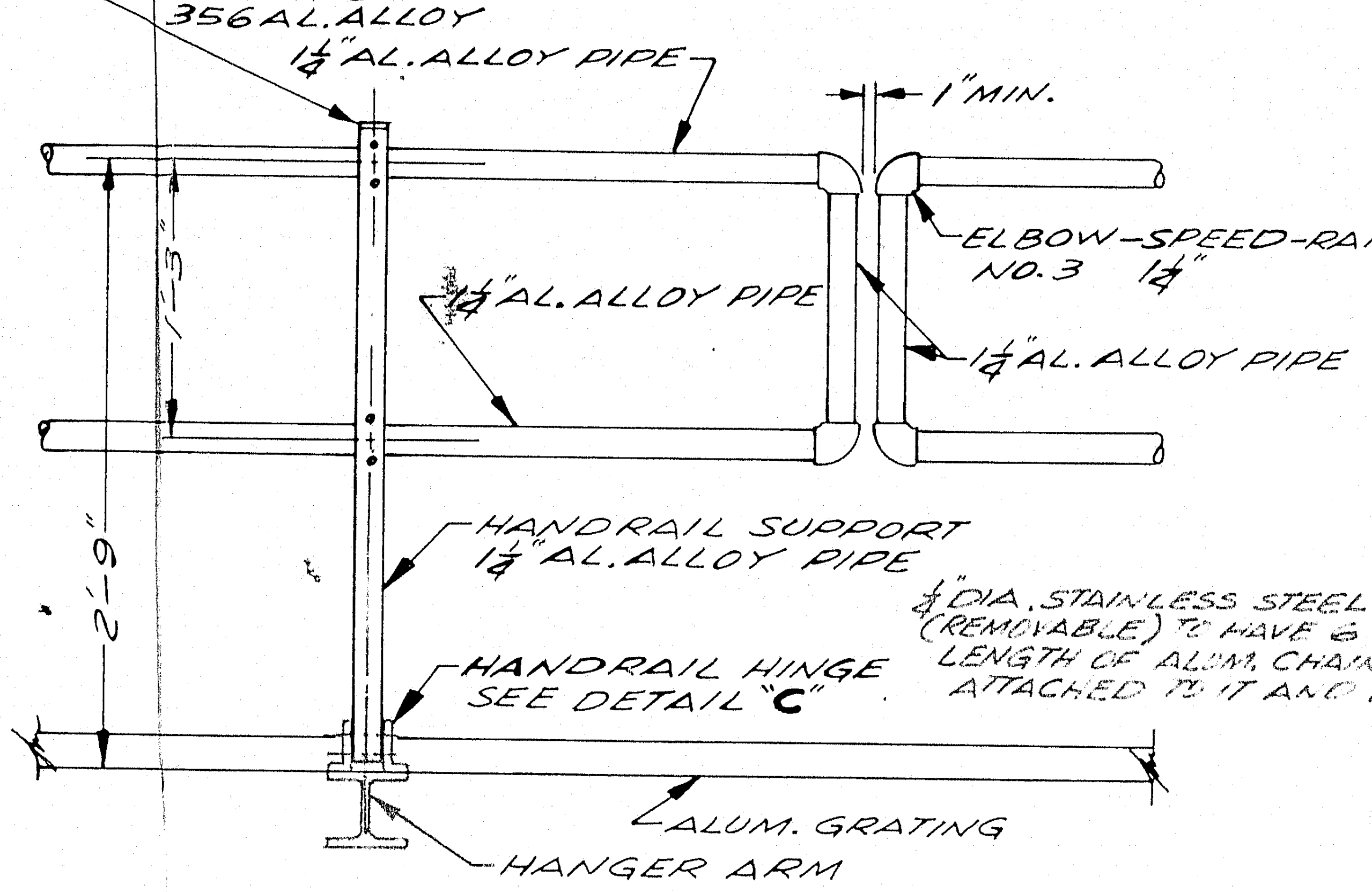
1. —ALL STAINLESS STEEL HARDWARE TO BE PER A.S.T.M. A-276 TYPE 304-PASSIVATED, 40,000 P.S.I. MIN. YIELD POINT
2. —ALTERNATE GRATING PER BORDEN METAL PROD. TYPE B-9. ($1\frac{3}{4}$"×$\frac{3}{16}$" BEARING BAR ON $1\frac{3}{16}$" CENTERS)
3. —HANDRAIL TO BE BUILT IN 15 FT. TO 20 FT. LENGTHS, See
4. —ALL MATERIAL TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE NOTED
5. —ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE USING 5356 FILLER ALLOY.
6. —BRACKET SPACING—5 FT. MAXIMUM.



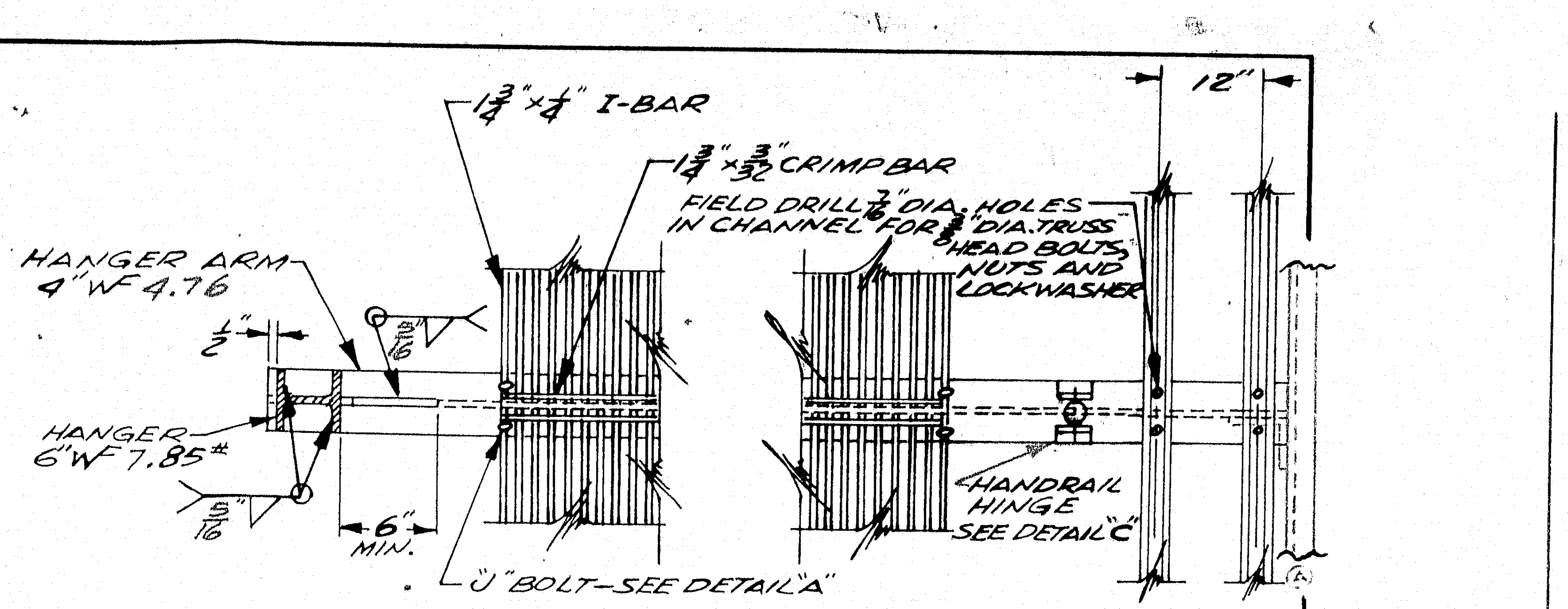
LUMINAIRE CHANNEL


BOTTOM OF LIGHTING FIXTURE
2"×2"×$\frac{1}{8}$" THK. NEOPRENE PAD (BY OTHERS)
CLAMPING NUT WITH $\frac{3}{8}$" DIA. BOLT AND FLATWASHER (BY OTHERS)

CHANNEL ASSEMBLY TO LIGHTING FIXTURE

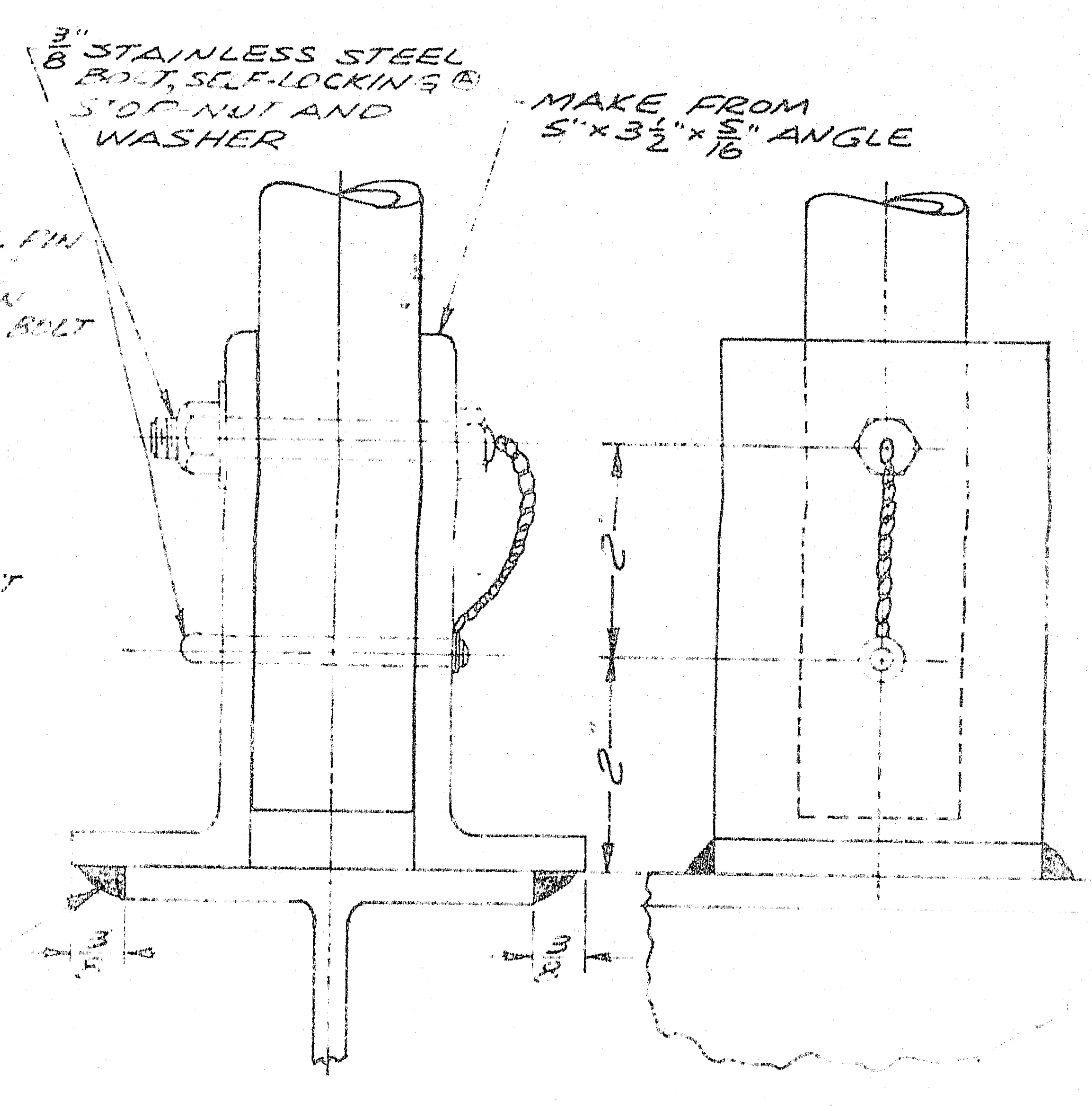

FORCE FIT CAP 356 AL. ALLOY
$1\frac{1}{4}$" AL. ALLOY PIPE
1" MIN.
ELBOW—SPEED-RAIL NO.3 $1\frac{1}{4}$"
$1\frac{1}{4}$" AL. ALLOY PIPE
$1\frac{1}{4}$" AL. ALLOY PIPE
1'-3"
2'-9"
HANDRAIL SUPPORT $1\frac{1}{4}$" AL. ALLOY PIPE
HANDRAIL HINGE SEE DETAIL "C"
ALUM. GRATING
HANGER ARM

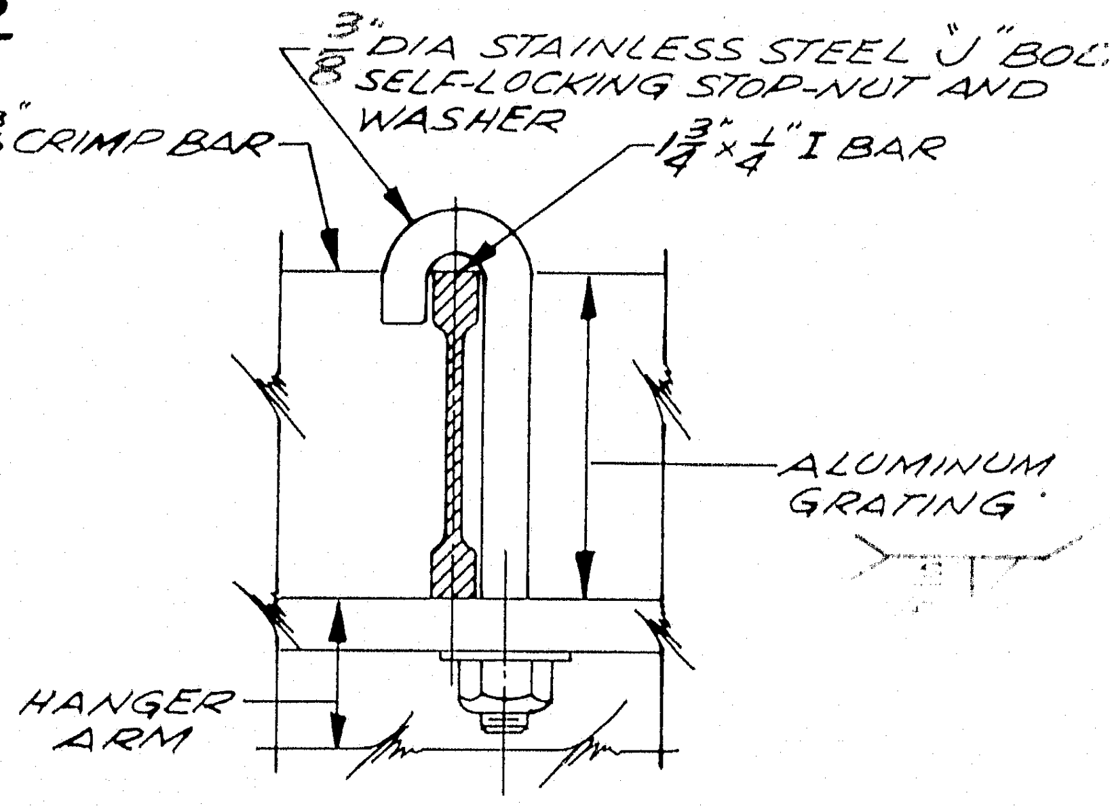
DETAIL "D"


$1\frac{3}{4}$"×$\frac{1}{4}$" I-BAR
$1\frac{3}{4}$"×$\frac{3}{32}$" CRIMP BAR
FIELD DRILL $\frac{7}{16}$" DIA. HOLES IN CHANNEL FOR $\frac{3}{8}$" DIA. TRUSS HEAD BOLTS, NUTS AND LOCKWASHER
12"
HANGER ARM 4"WF 4.76
$\frac{1}{2}$"
$\frac{5}{16}$"
HANGER 6"WF 7.85#
$\frac{5}{16}$"
6" MIN.
"U" BOLT—SEE DETAIL "A"
HANDRAIL HINGE SEE DETAIL "C"

NOTE:
LUMINAIRE TO BE ATTACHED TO SUPPORT CHANNELS WITH $\frac{3}{8}$" DIA. GALV. CAP SCREWS AND SPRING NUTS SIMILAR TO THOSE MANUFACTURED BY UNISTRUT CORP. (BY OTHERS)

SECTION C-C


$\frac{3}{8}$" STAINLESS STEEL BOLT, SELF-LOCKING STOP-NUT AND WASHER
MAKE FROM 5"×$3\frac{1}{2}$"×$\frac{5}{16}$" ANGLE
$\frac{1}{4}$" DIA. STAINLESS STEEL PIN (REMOVABLE) TO HAVE 6" LENGTH OF ALUM. CHAIN ATTACHED TO IT AND BOLT
2"
2"
$\frac{3}{16}$
$\frac{3}{16}$


$\frac{3}{8}$" DIA STAINLESS STEEL "J" BOLT SELF-LOCKING STOP-NUT AND WASHER
$1\frac{3}{4}$"×$\frac{3}{32}$" CRIMP BAR
$1\frac{3}{4}$"×$\frac{1}{4}$" I BAR
ALUMINUM GRATING
HANGER ARM

DETAIL "A"

HANDRAIL HINGE DETAIL "C"

NEW HAMPSHIRE — MAINE
PISCATAQUA RIVER BRIDGE
INTERSTATE ROUTE 95
PROJECT NO. I-95-1(22)1
CONTRACT NO. 6

SUBMITTED FOR APPROVAL
PFAFF & KENDALL
DATE SEP 19 1972

APPROVED: As Corrected
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY T. C. Tang
SEP 28 1972

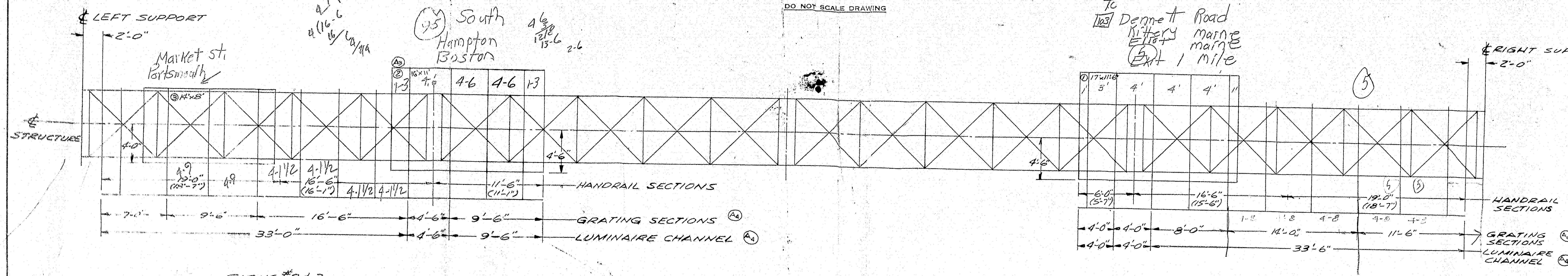
ALTERATIONS				
ALT	DESCRIPTION	DATE	BY	CH

PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.
TITLE SIGN HANGER & WALKWAY DETAILS
BY AVP 9-1972
CH
APP
SCALE NONE
DWG. NO. G-56180

S.O. NO. 4636-10

130-127

DO NOT SCALE DRAWING

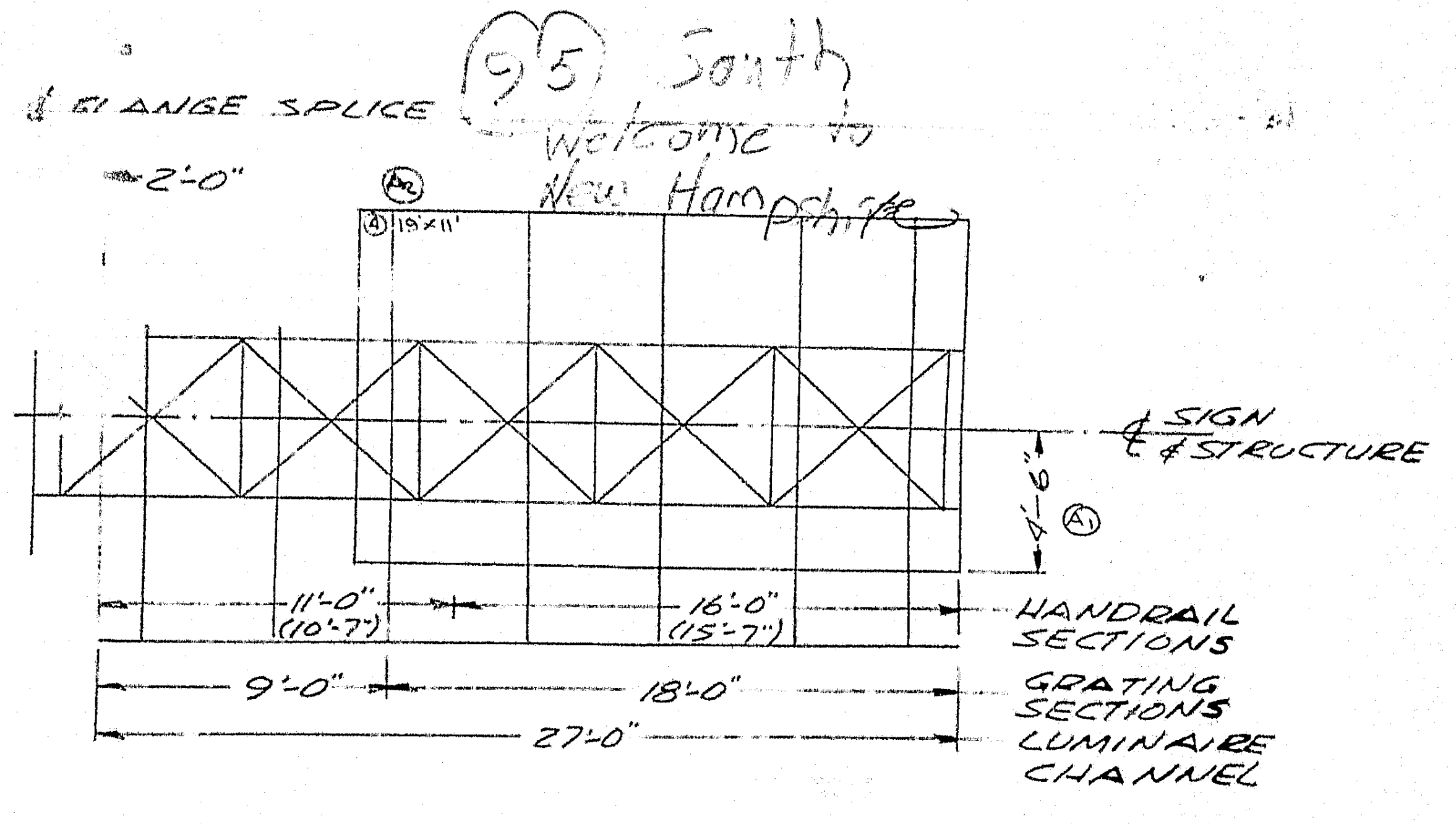


SIGNS #2 & 3
MOUNTED ON FAR SIDE

150' SPAN
STATION 523+91.75

SIGN #1
MOUNTED ON NEAR SIDE

13-6



CANTILEVER STRUCTURE ARM
STA. 534+80.89
SIGN #4 MOUNTED ON FAR SIDE

NOTE:
HORIZONTAL HANDRAIL PIPE LENGTHS ARE SHOWN IN PARENTHESIS

SUBMITTED FOR APPROVAL
MAY 30, 1972

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY ....son
JUN 1 1972

NEW HAMPSHIRE-MAINE
INTERSTATE 95
Ⓐ1 PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22) 16
CONTRACT NO. 6

130-128

ALTERATIONS

ALT.	DESCRIPTION	DATE	BY	CH
A1	ADDED INFO.			
A2	SIGN #4 WAS 19'-9"			
A3	SIGN #2 WAS 28'×11'			
A4	REVISED LENGTHS	5-25-72	AJF	

S. O. NO. 3433-N

MATERIAL

STOCK SIZE

FINISH OR TEMPER

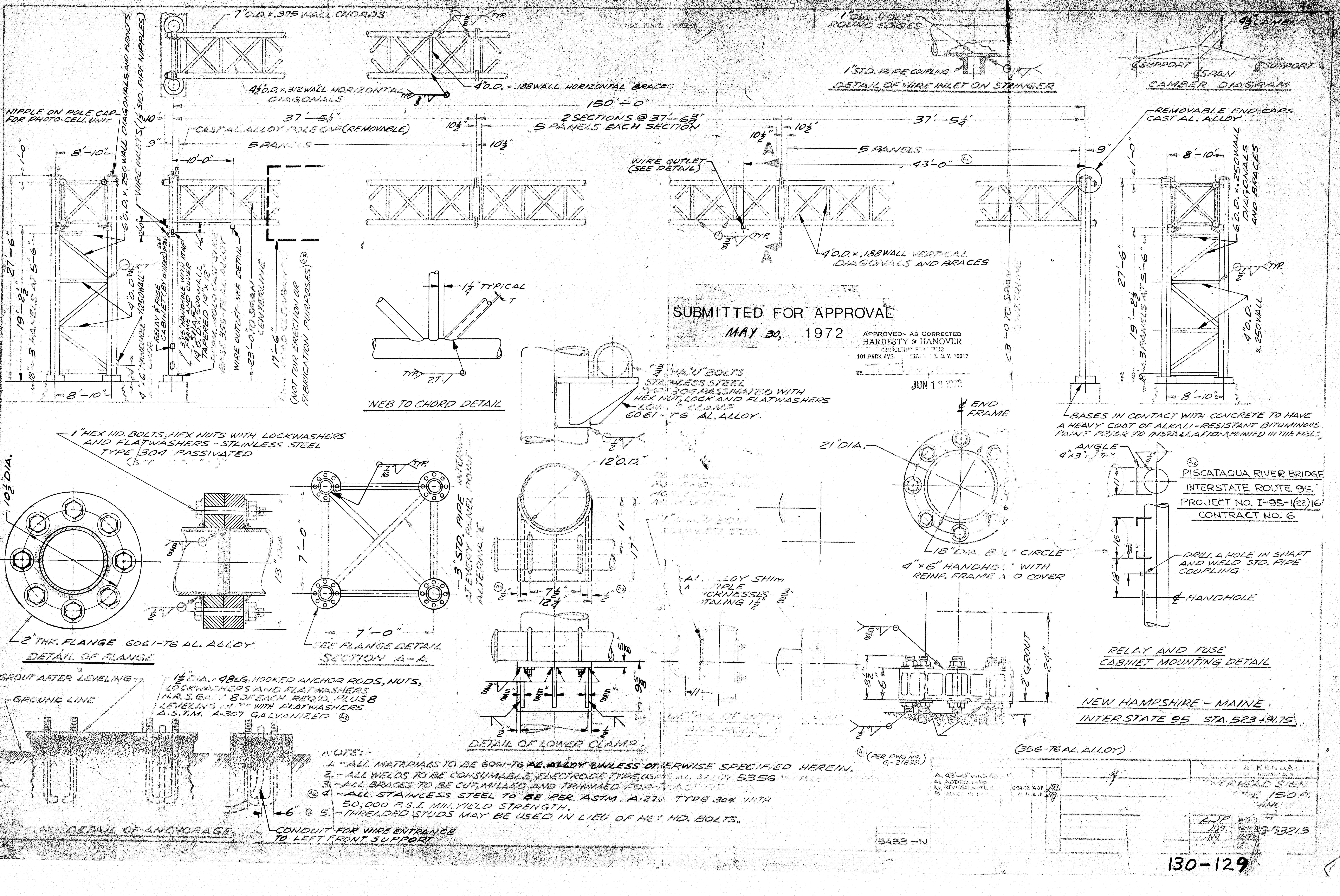
UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: DECIMALS ± FRACTIONS ± ANGLES ±

CUSTOMER

PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.

TITLE WALKWAY INSTALLATION

DR. JPB DATE 12-16-71
CH.
APP. JFP DATE 12-16-71
SCALE: 3/16" = 1'-0"
DWG. NO. SKG-4175


7"O.D. x .375 WALL CHORDS
4½"O.D. x .312 WALL HORIZONTAL DIAGONALS
4"O.D. x .188 WALL HORIZONTAL BRACES
TYP.
NIPPLE ON POLE CAP FOR PHOTO-CELL UNIT
6"O.D. x .250 WALL DIAGONALS AND BRACES
WIRE INLETS (1½" STD. PIPE NIPPLES)
CAST AL. ALLOY POLE CAP (REMOVABLE)
150'-0"
37'-5¼"
2 SECTIONS @ 37'-6¾"
5 PANELS EACH SECTION
10½"
9"
5 PANELS
8'-10"
10'-0"
1'-0"
27'-6"
19'-2½"
3 PANELS AT 5'-6"
4"O.D. x .250 WALL
4" x 6" HANDHOLE
RELAY & FUSE CABINET (BY OTHERS) SEE DETAIL
3"x5" HANDHOLE WITH REINF. FRAME AND COVER
14"O.D. x .500 WALL SHAFT TAPERED 14" x 12"
BASE 356-T6 AL. ALLOY
WIRE OUTLET - SEE DETAIL
23'-0" TO SPAN CENTERLINE
17'-6"
(NOT FOR ERECTION OR FABRICATION PURPOSES)
1¼" TYPICAL
T
2T
WEB TO CHORD DETAIL
1" DIA. HOLE ROUND EDGES
1" STD. PIPE COUPLING
DETAIL OF WIRE INLET ON STRINGER
4½" CAMBER
℄ SUPPORT
℄ SPAN
℄ SUPPORT
CAMBER DIAGRAM
REMOVABLE END CAPS CAST AL. ALLOY
WIRE OUTLET (SEE DETAIL)
A
43'-0" (A1)
4"O.D. x .188 WALL VERTICAL DIAGONALS AND BRACES
63'-0" TO SPAN CENTERLINE
6"O.D. x .250 WALL DIAGONALS AND BRACES
4"O.D. x .250 WALL
BASES IN CONTACT WITH CONCRETE TO HAVE A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS PAINT PRIOR TO INSTALLATION (PAINTED IN THE FIELD)
¾" DIA. "U" BOLTS STAINLESS STEEL TYPE 309 PASSIVATED WITH HEX NUT, LOCK AND FLATWASHERS
LOWER CLAMP 6061-T6 AL. ALLOY
1" HEX HD. BOLTS, HEX NUTS WITH LOCKWASHERS AND FLATWASHERS - STAINLESS STEEL TYPE 304 PASSIVATED
10½" DIA.
13"
2" THK. FLANGE 6061-T6 AL. ALLOY
DETAIL OF FLANGE
7'-0"
7/16
3" STD. PIPE INTERNAL AT EVERY PANEL POINT ALTERNATE
SEE FLANGE DETAIL
SECTION A-A
12"O.D.
11"
17"
7½"
12¼"
DETAIL OF LOWER CLAMP
21" DIA.
℄ END FRAME
18" DIA. B.C. CIRCLE
4" x 6" HANDHOLE WITH REINF. FRAME AND COVER
AL. ALLOY SHIM MULTIPLE THICKNESSES TOTALING 1½"
2" GROUT
24"
(356-T6 AL. ALLOY)
ANGLE 4"x3"
DRILL A HOLE IN SHAFT AND WELD STD. PIPE COUPLING
℄ HANDHOLE
RELAY AND FUSE CABINET MOUNTING DETAIL
GROUT AFTER LEVELING
GROUND LINE
1½" DIA. x 48 LG. HOOKED ANCHOR RODS, NUTS, LOCKWASHERS AND FLATWASHERS H.R.S. GALV. 8 OF EACH REQ'D. PLUS 8 LEVELING NUTS WITH FLATWASHERS A.S.T.M. A-307 GALVANIZED (A2)
6"
CONDUIT FOR WIRE ENTRANCE TO LEFT FRONT SUPPORT
DETAIL OF ANCHORAGE

SUBMITTED FOR APPROVAL
MAY 30, 1972

APPROVED:- As Corrected
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N.Y. 10017
BY
JUN 1 ? 1972

NOTE:-
1. - ALL MATERIALS TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE SPECIFIED HEREIN.
2. - ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE, USING AL. ALLOY 5356
3. - ALL BRACES TO BE CUT, MILLED AND TRIMMED FOR EXACT FIT
(A2) 4. - ALL STAINLESS STEEL TO BE PER ASTM A-276 TYPE 304 WITH 50,000 P.S.I. MIN. YIELD STRENGTH.
(B) 5. - THREADED STUDS MAY BE USED IN LIEU OF HEX HD. BOLTS.

(A1) (PER DWG NO. G-21838)

(A2)
PISCATAQUA RIVER BRIDGE
INTERSTATE ROUTE 95
PROJECT NO. I-95-1(22)16
CONTRACT NO. 6

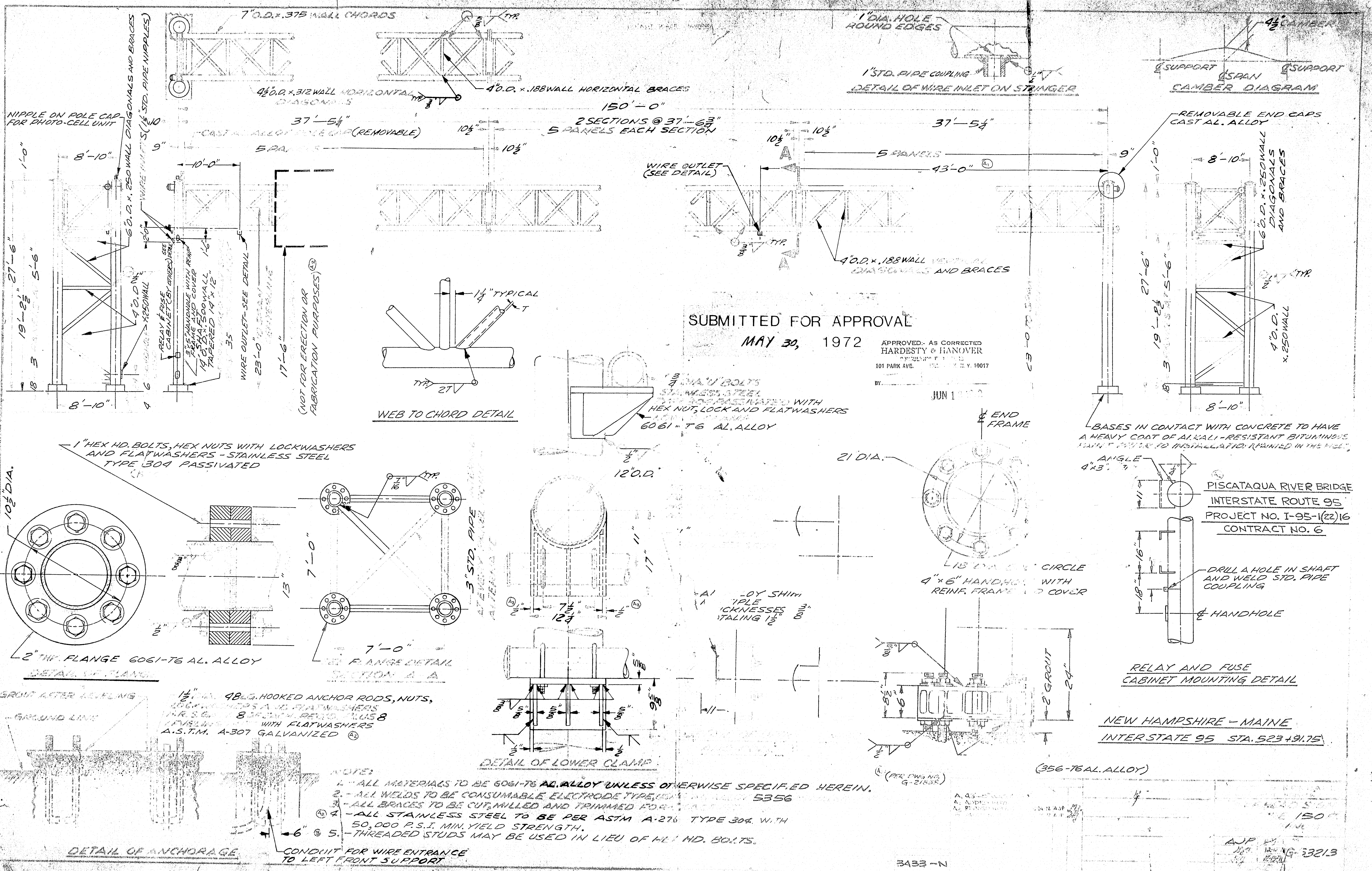
NEW HAMPSHIRE - MAINE
INTERSTATE 95 STA. 523+91.75

A1 43'-0" WAS [illegible]
A2 ADDED INFO.
A2 REVISED NOTE 4 5-24-72 AJP
B ADDED NOTE 5 [illegible] AJP

[illegible] & KENDALL
OVERHEAD SIGN
[illegible] 150 FT.
AJP
G-53213

3433-N

130-129


7"O.D.×.375 WALL CHORDS
4½"O.D.×.312 WALL HORIZONTAL DIAGONALS
4"O.D.×.188 WALL HORIZONTAL BRACES
1"DIA. HOLE ROUND EDGES
1"STD. PIPE COUPLING
DETAIL OF WIRE INLET ON STRINGER
4½" CAMBER
℄ SUPPORT
℄ SPAN
℄ SUPPORT
CAMBER DIAGRAM
NIPPLE ON POLE CAP FOR PHOTO-CELL UNIT
6"O.D.×.250 WALL DIAGONALS AND BRACES
WIRE INLETS (1½" STD. PIPE NIPPLES)
CAST AL. ALLOY POLE CAP (REMOVABLE)
150'-0"
37'-5¼"
2 SECTIONS @ 37'-6¾"
5 PANELS EACH SECTION
37'-5¼"
10½"
10½"
10½"
10½"
5 PANELS
5 PANELS
43'-0"
9"
9"
8'-10"
10'-0"
1'-0"
27'-6"
5'-6"
19'-2¾"
3
18
6
4
8'-10"
4"O.D. ×.250 WALL
RELAY & FUSE CABINET (BY OTHERS)
WIRE OUTLET-SEE DETAIL
23'-0"
17'-6"
(NOT FOR ERECTION OR FABRICATION PURPOSES)
WIRE OUTLET (SEE DETAIL)
TYP.
A
A
4"O.D.×.188 WALL VERTICAL DIAGONALS AND BRACES
REMOVABLE END CAPS CAST AL. ALLOY
8'-10"
1'-0"
6"O.D.×.250 WALL DIAGONALS AND BRACES
27'-6"
5'-6"
19'-8¾"
4"O.D. ×.250 WALL
8'-10"
1¼" TYPICAL
27
WEB TO CHORD DETAIL
¾" DIA. 'U' BOLTS STAINLESS STEEL TYPE 304 PASSIVATED WITH HEX NUT, LOCK AND FLATWASHERS
6061-T6 AL. ALLOY
12"O.D.
11"
17"
7½"
12¾"
½"
½"
ALLOY SHIM MULTIPLE THICKNESSES TOTALING 1½"
℄ END FRAME
21 DIA.
18 DIA. BOLT CIRCLE
4"×6" HANDHOLE WITH REINF. FRAME AND COVER
BASES IN CONTACT WITH CONCRETE TO HAVE A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS PAINT PRIOR TO INSTALLATION (PAINTED IN THE FIELD)
ANGLE 4"×3"
DRILL A HOLE IN SHAFT AND WELD STD. PIPE COUPLING
℄ HANDHOLE
16"
18"
11
1"HEX HD. BOLTS, HEX NUTS WITH LOCKWASHERS AND FLATWASHERS - STAINLESS STEEL TYPE 304 PASSIVATED
10½" DIA.
13"
½"
2" THK. FLANGE 6061-T6 AL. ALLOY
DETAIL OF FLANGE
7'-0"
7'-0"
3"STD. PIPE
FLANGE DETAIL SECTION A-A
DETAIL OF LOWER CLAMP
⅝"
⅝"
⅝"
9⅝"
½"
½"
8½"
6
2" GROUT
24"
(PER DWG. NO. G-21638)
RELAY AND FUSE CABINET MOUNTING DETAIL
GROUT AFTER LEVELING
GROUND LINE
1½" DIA. 48 REQ. HOOKED ANCHOR RODS, NUTS, FLATWASHERS PLUS 8 WITH FLATWASHERS A.S.T.M. A-307 GALVANIZED
6"
CONDUIT FOR WIRE ENTRANCE TO LEFT FRONT SUPPORT
DETAIL OF ANCHORAGE
(356-T6 AL. ALLOY)

SUBMITTED FOR APPROVAL
MAY 30, 1972

APPROVED:- AS CORRECTED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N.Y. 10017
BY
JUN 1 1972

NOTE:
1. - ALL MATERIALS TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE SPECIFIED HEREIN.
2. - ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE, USING 5356
3. - ALL BRACES TO BE CUT, MILLED AND TRIMMED FOR
Ⓐ 4. - ALL STAINLESS STEEL TO BE PER ASTM A-276 TYPE 304 WITH 50,000 P.S.I. MIN. YIELD STRENGTH.
Ⓑ 5. - THREADED STUDS MAY BE USED IN LIEU OF HEX HD. BOLTS.

PISCATAQUA RIVER BRIDGE
INTERSTATE ROUTE 95
PROJECT NO. I-95-1(22)16
CONTRACT NO. 6

NEW HAMPSHIRE - MAINE
INTERSTATE 95 STA. 523+91.75

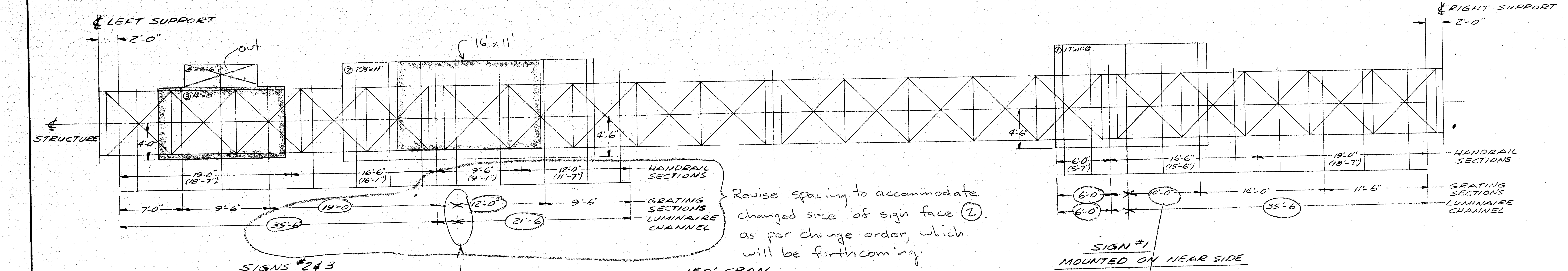
150

AJP
G-53213

3A33-N

130-129

DO NOT SCALE DRAWING



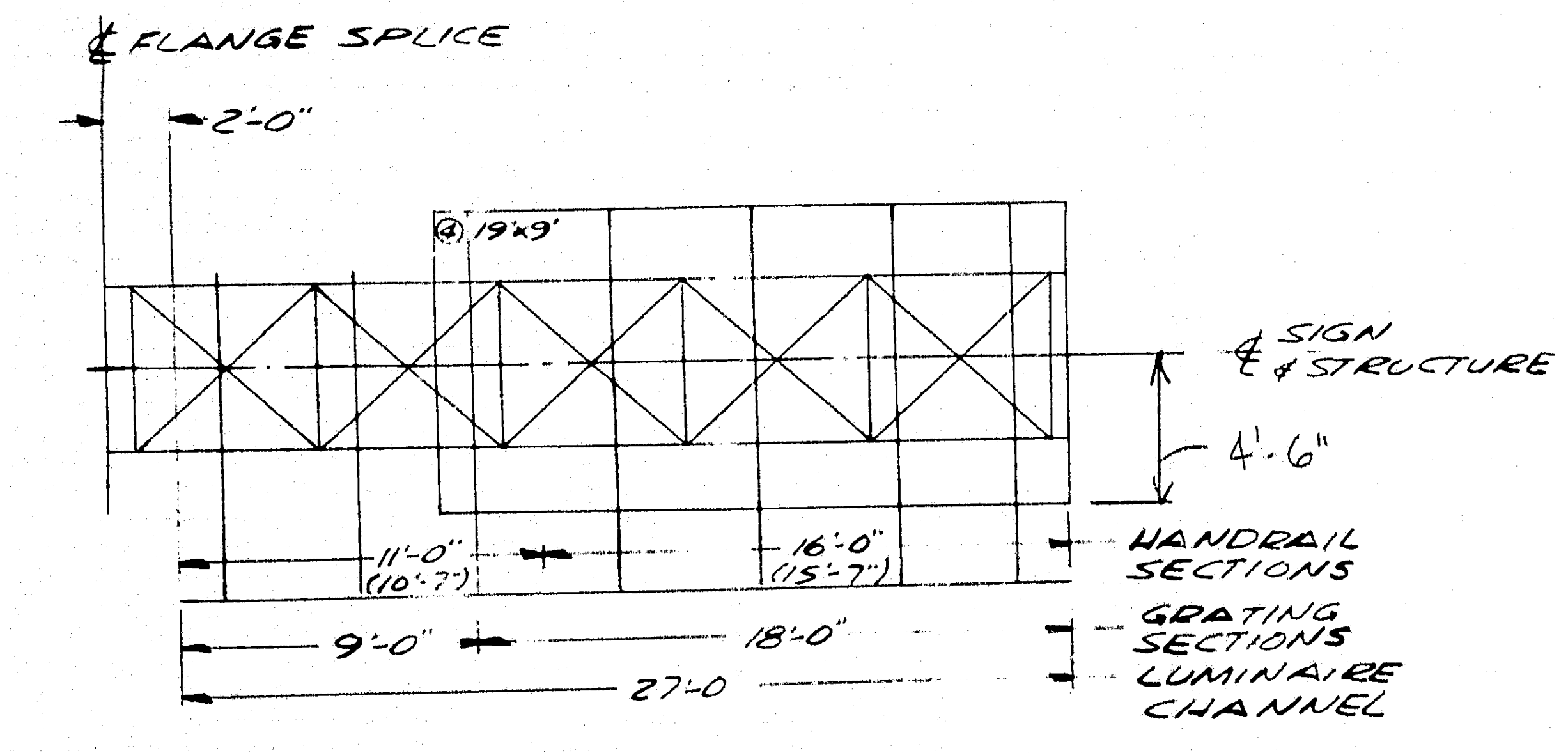
SIGNS #2&3
MOUNTED ON FAR SIDE

150' SPAN
STATION 523+91.75

SIGN #1
MOUNTED ON NEAR SIDE

Revise spacing to accommodate changed size of sign face ②. as per change order, which will be forthcoming.

No cantilever walk or Luminaire channel joints. Make joints @hanger.



CANTILEVER STRUCTURE ARM
STA. 534+80.89
SIGN #4 MOUNTED ON FAR SIDE

NOTE:
HORIZONTAL HANDRAIL PIPE LENGTHS ARE SHOWN IN PARENTHESIS

Piscataqua River Bridge
Interstate Route 95
Project No. I-95-1(22) 6
Contract No 6

To Be Revised and Resubmitted
For Approval
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N. Y. 10017
BY T. C. Thompson JAN 21 1972

NEW HAMPSHIRE-MAINE
INTERSTATE 95

Submitted For Approval
Dec. 17, 1971

ALTERATIONS				
ALT.	DESCRIPTION	DATE	BY	CH

S. O. NO. 3433-N

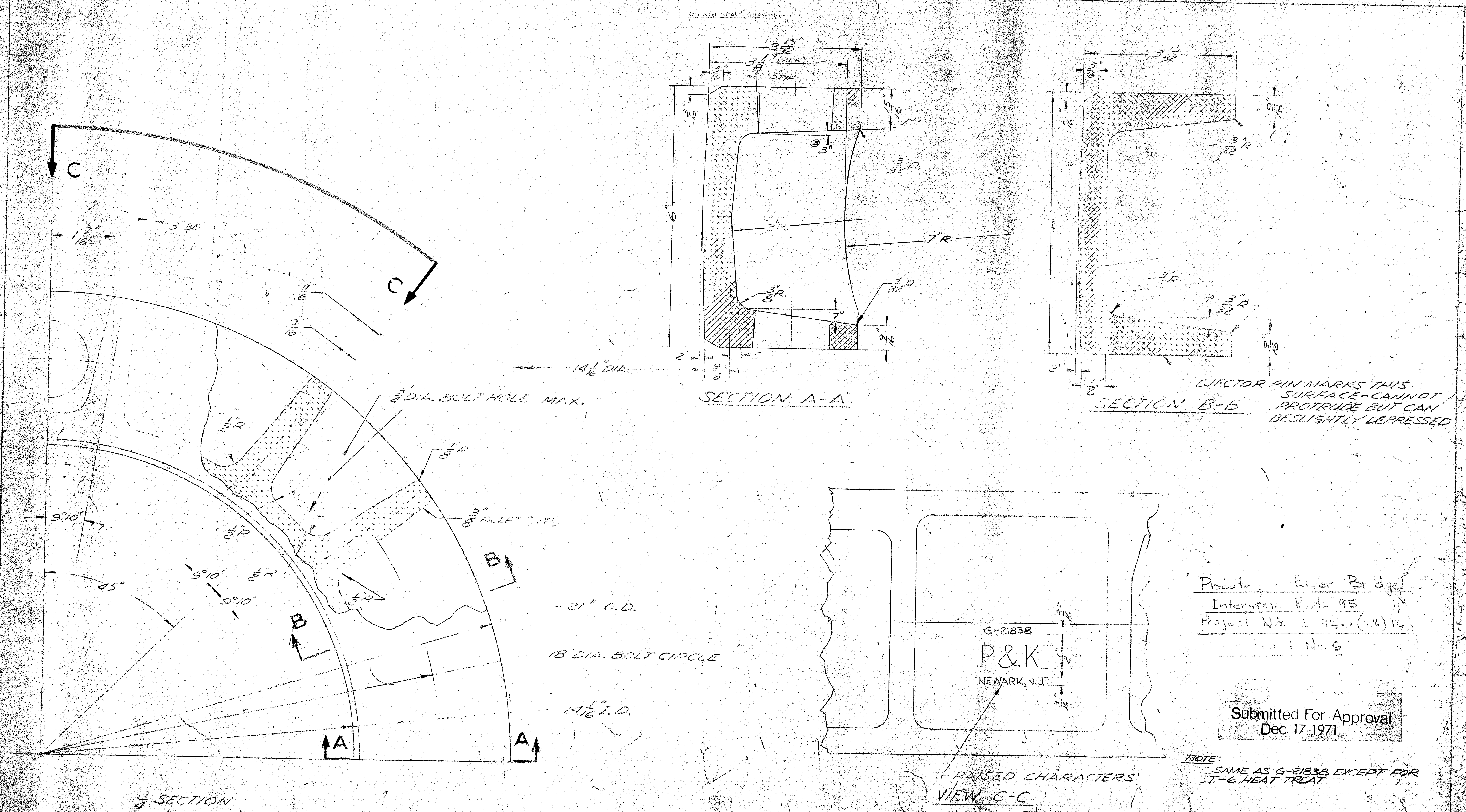
MATERIAL
STOCK SIZE
FINISH OR TEMPER
UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: DECIMALS ± FRACTIONS ± ANGLES ±
CUSTOMER

PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.

TITLE WALKWAY INSTALLATION

DR. JPB DATE 12-16-71
CH.
APP. AG 12-16-71
SCALE: 3/16" = 1'-0"
DWG. NO. SKG-4175

130-130



Piscataqua River Bridge
Interstate Route 95
Project No. I-95-1 (26) 16
Contract No. 6

Submitted For Approval
Dec. 17, 1971

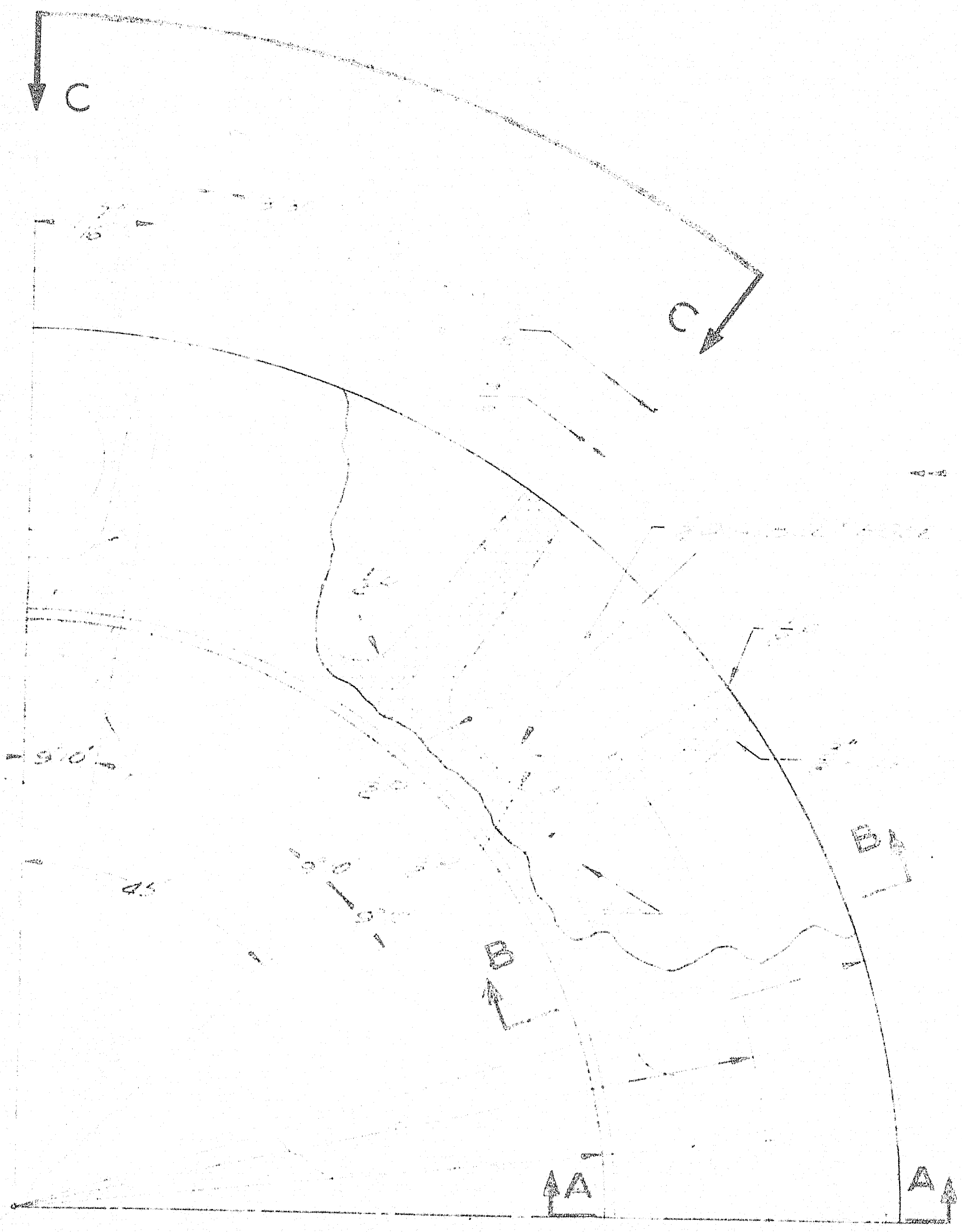
NOTE:
SAME AS G-21838 EXCEPT FOR T-6 HEAT TREAT

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
JAN 21 1972
BY T.C. [illegible]

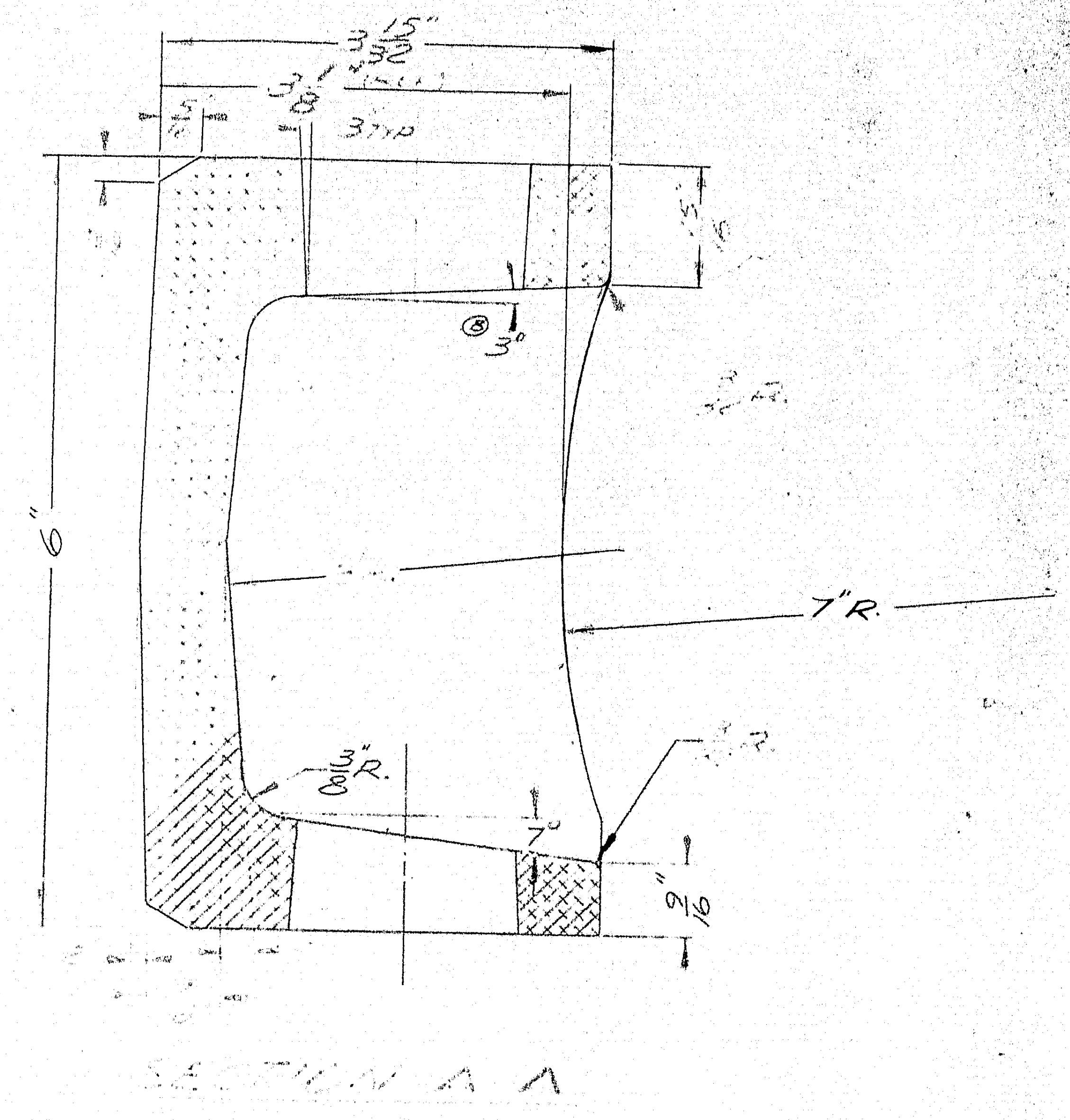
ALTERATIONS
DESCRIPTION DATE BY

MATERIAL 356 CAST AL. ALLOY
STOCK SIZE
FINISH OR TEMPER T-6
UNLESS OTHERWISE SPECIFIED TOLERANCES DECIMALS FRACTIONS ANGLES

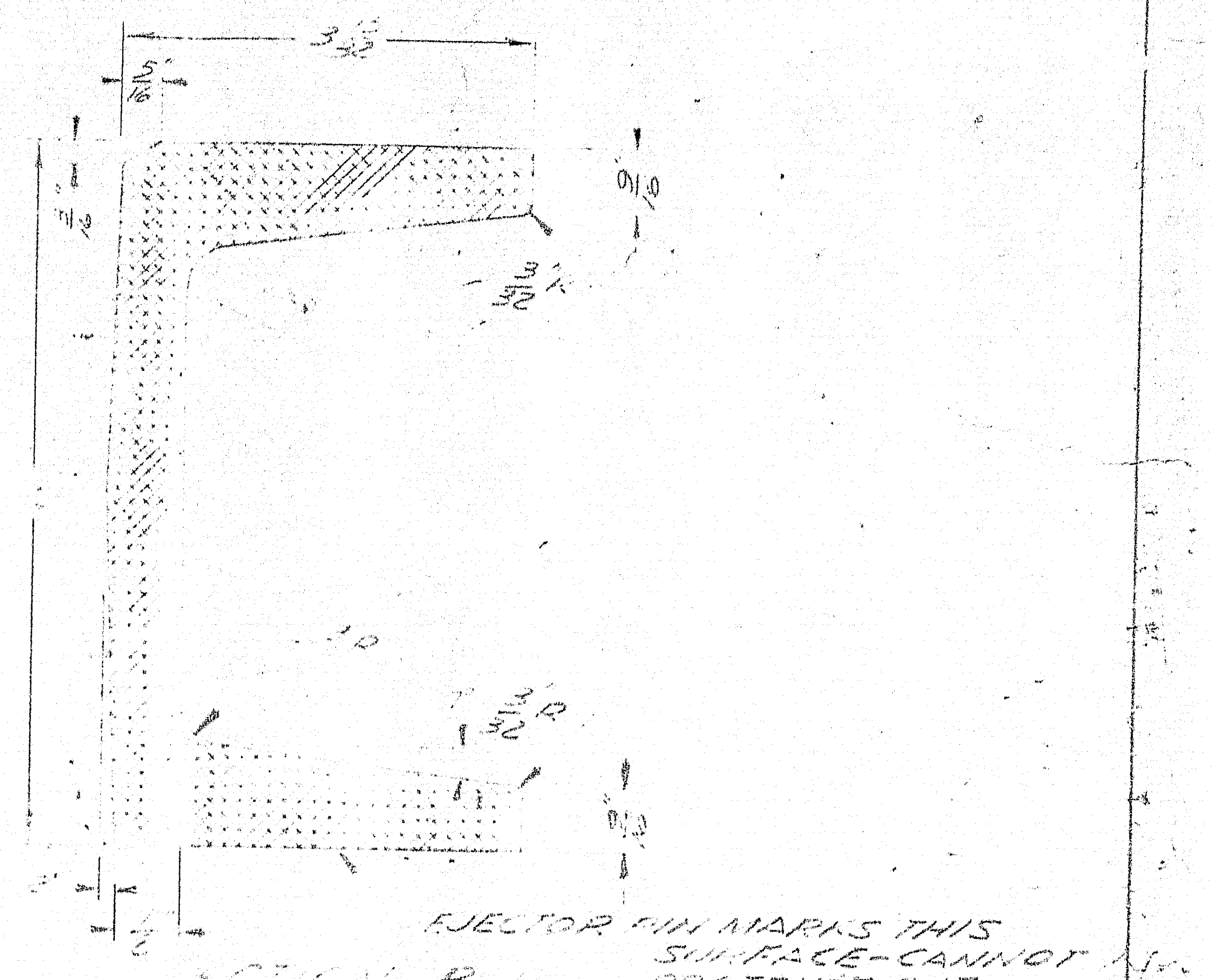
PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N.J.
TITLE 14" RB-1
BASE
PERMANENT MOLD



¼ SECTION

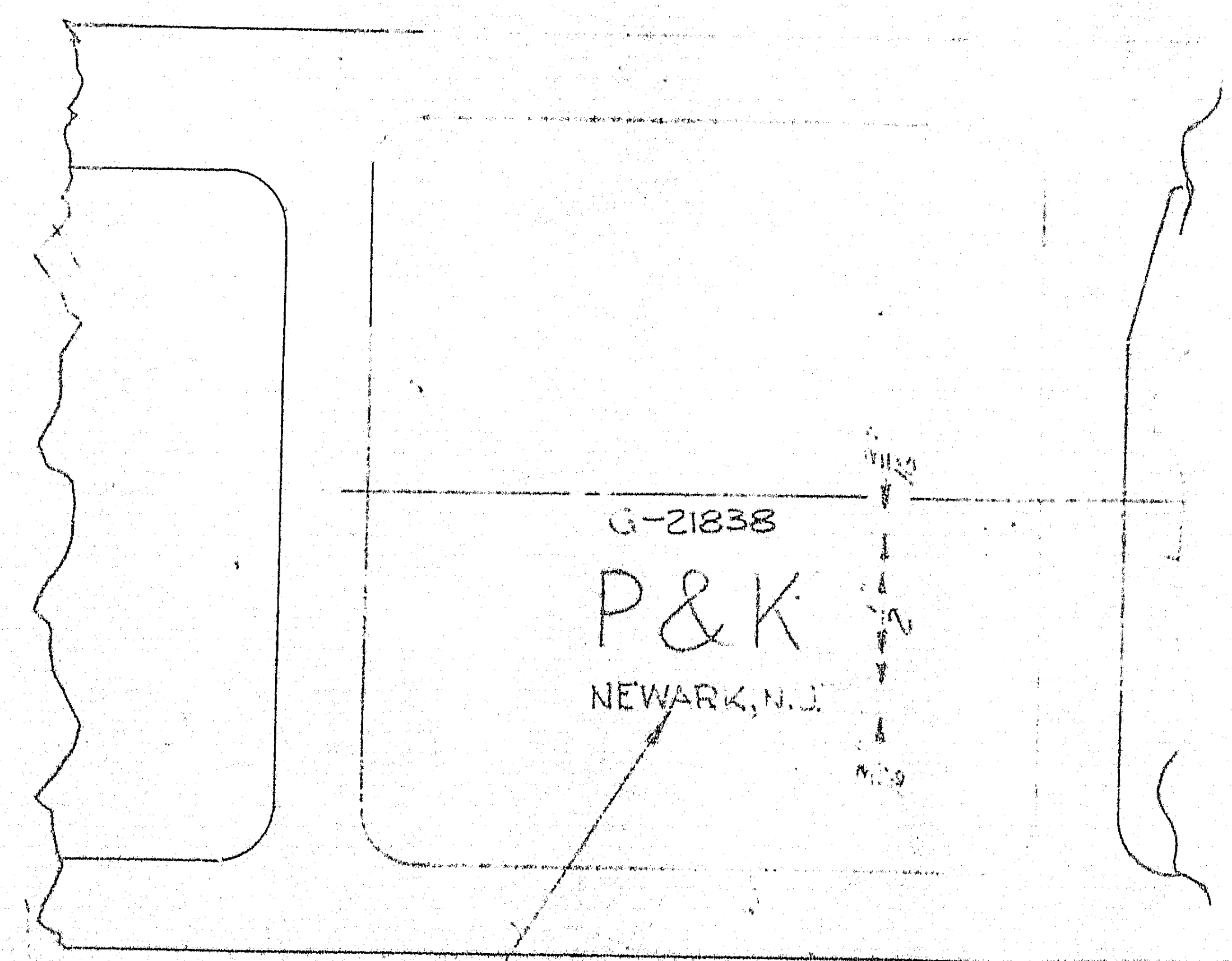


SECTION A-A



SECTION B-B

EJECTOR PIN MARKS THIS SURFACE-CANNOT PROTRUDE BUT CAN BE SLIGHTLY DEPRESSED



RAISED CHARACTERS

VIEW C-C

Submitted For Approval
Dec. 17, 1971

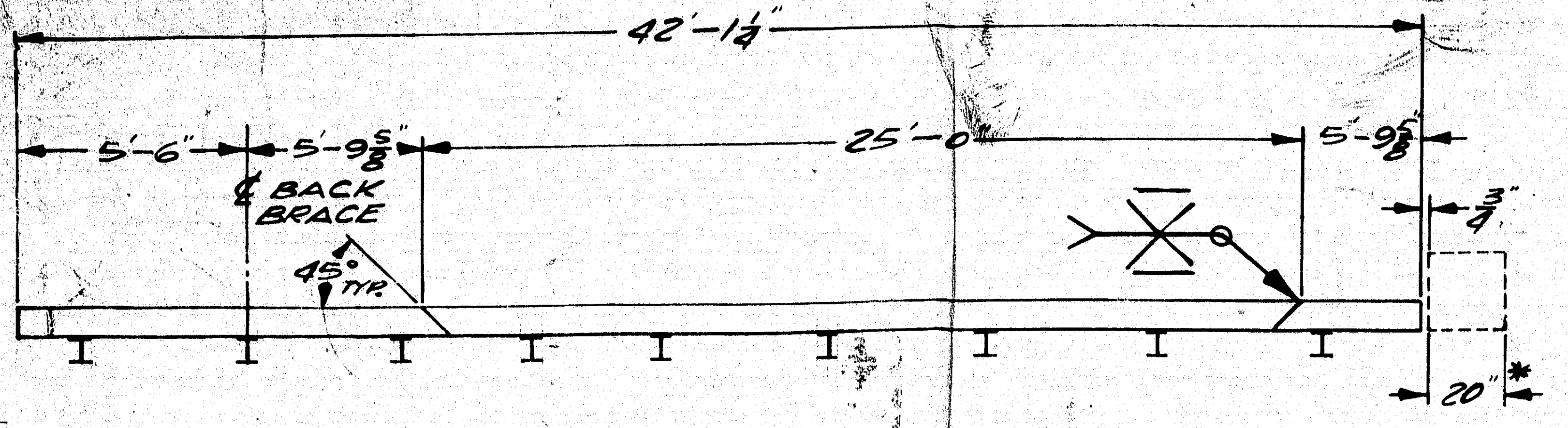
NOTE:
SAME AS G-21838 EXCEPT FOR T-6 HEAT TREAT

APPROVED:-
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY T. C. Thompson JAN 21 1972

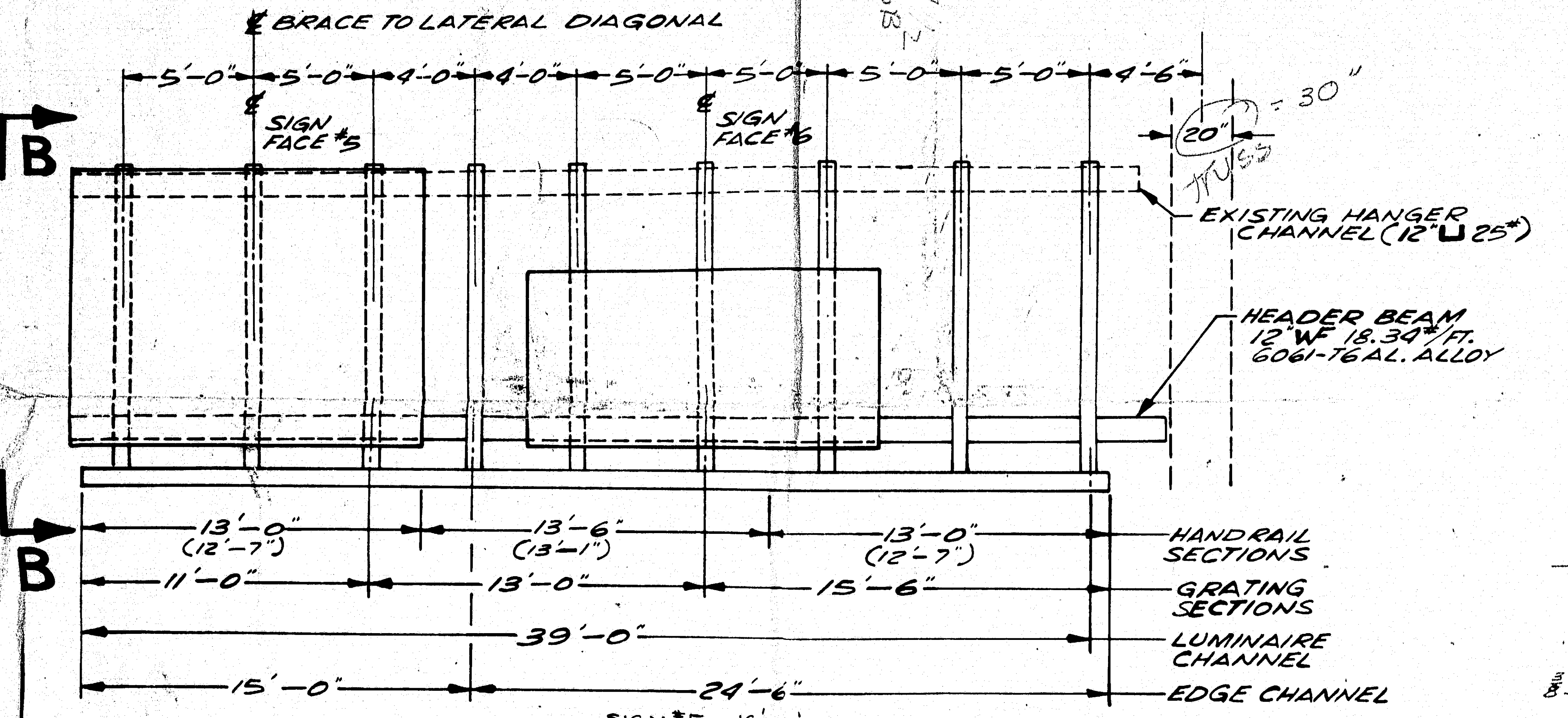
MATERIAL	356 CAST AL. ALLOY
STOCK SIZE	
FINISH OR TEMPER	T-6
PFAFF & KENDALL 84 FOUNDRY ST. NEWARK 5, N. J.	
TITLE	14 RB-1 BASE PERMANENT MOLD
DR.	AJP
DWG. NO.	G21838
SCALE	1" = 1"

130-131

DO NOT SCALE DRAWING

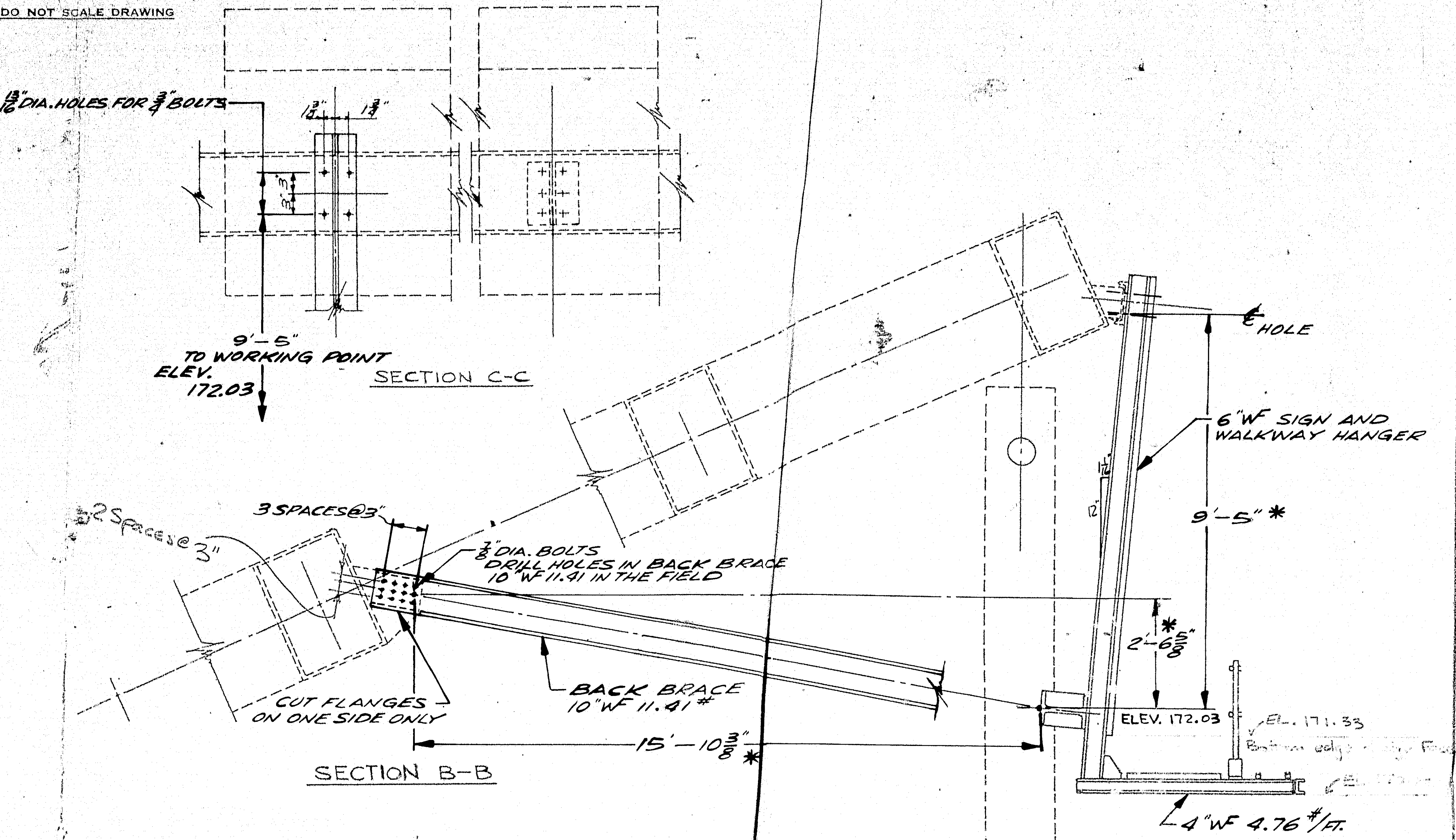


PLAN VIEW OF HEADER BEAM



ELEVATION

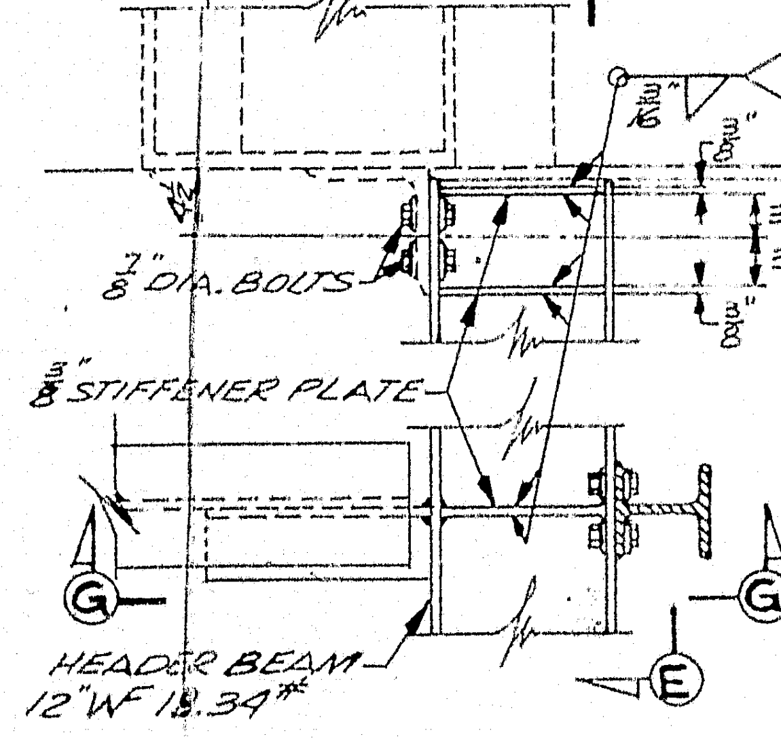
SIGN #5 16'×11'
SIGN #6 14'×7'



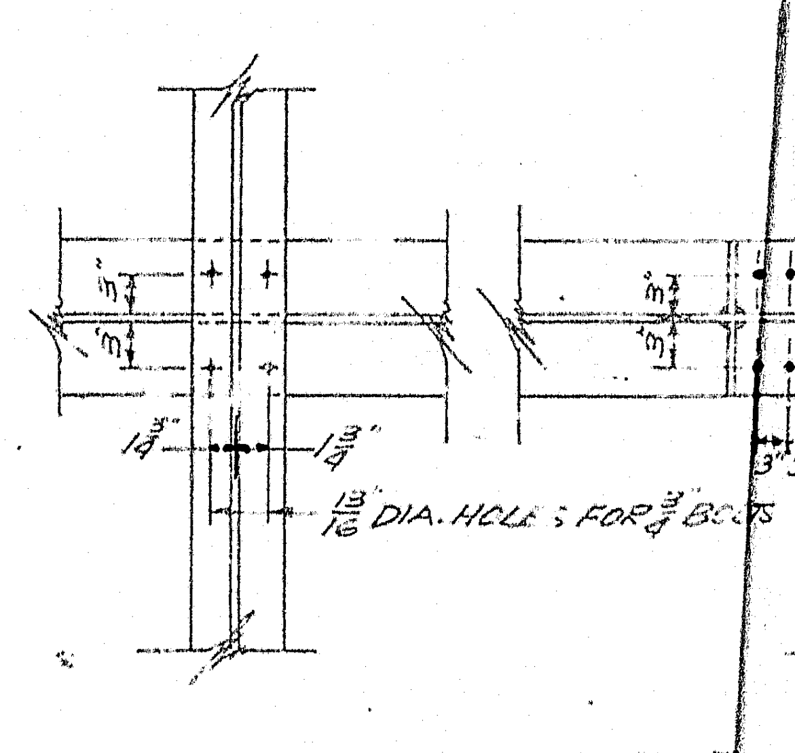
SECTION C-C

SECTION B-B

* THESE DIMENSIONS DETERMINED BY FIELD SURVEY.



SECTION D-D

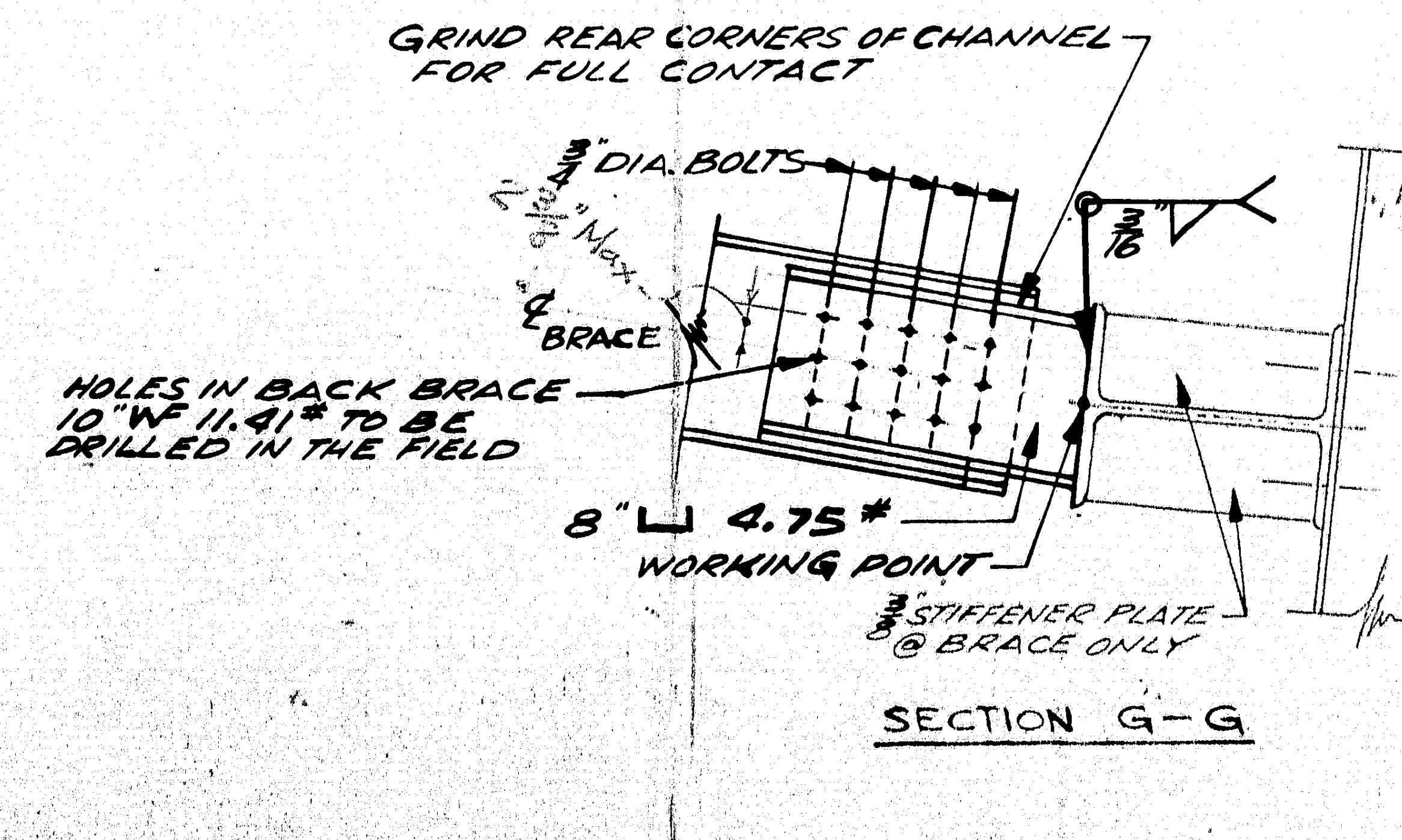


SECTION E-E

NOTES:

1. —ALL MATERIAL TO BE 6061-T6 ALUMINUM ALLOY UNLESS OTHERWISE NOTED.
2. —ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE USING 5356 AS FILLER MATERIAL.
3. —ALL BOLTS, NUTS AND WASHERS TO BE STAINLESS STEEL. 4[illegible] P.S.I. MIN. YIELD POINT
4. —WHERE ALUMINUM SURFACES ARE TO CONTACT STRUCTURAL STEEL MATCHING SURFACES SHALL BE GIVEN PRIME COAT OF ZINC CHROMATE PRIMER FOLLOWED BY ONE COAT OF ALUMINUM METAL PAINT IN THE FIELD.
5. — SEE DWG # G-56180 FOR WALKWAY DETAILS
6. —THE WELDS OF THE HEADER BEAM SPLICE SHALL BE CHECKED BY THE DIE PENETRANT METHOD. [illegible] DYE

After grinding flush, all [illegible]



GRIND REAR CORNERS OF CHANNEL FOR FULL CONTACT
3/4" DIA. BOLTS
2 1/2" Max.
℄ BRACE
3/16"
HOLES IN BACK BRACE 10" WF 11.41# TO BE DRILLED IN THE FIELD
8" ⊔ 4.75#
WORKING POINT
3/8" STIFFENER PLATE @ BRACE ONLY

SECTION G-G

SUBMITTED FOR APPROVAL
PFAFF & KENDALL
DATE: SEP 19 1972

APPROVED: As Corrected
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N. Y.
BY
SEP 28 1972

NEW HAMPSHIRE — MAINE
INTERSTATE 95
PISCATAQUA RIVER BRIDGE
PROJECT NO. I-95-1(22)16
CONTRACT NO. 6

ALTERATIONS				
ALT.	DESCRIPTION	DATE	BY	CH.

S. O. NO. 4636-N

MATERIAL
STOCK SIZE
FINISH OR TEMPER
UNLESS OTHERWISE SPECIFIED TOLERANCES SHALL BE: DECIMALS ± FRACTIONS ± ANGLES ±
CUSTOMER

PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.

TITLE
BRIDGE MOUNT SIGNS
#5 & #6 @ P.P. M11 SOUTH

DR. AJP
DATE 9-18-72
CH.
APP.
SCALE NONE
DWG. NO. G-56178

130-132

NOTES:

THESE NOTES PERTAIN TO SIGNS ON SF-2 THRU SF-4

SIGN PANELS - TO BE MADE OF .125" THICK EXTRUDED ALUMINUM PLANKS OF THE BUTT TYPE, ALLOY 6063-T6 ASTM B-221. SIDE TRIM MOLDING TO BE OF THE SAME MATERIAL AS EXTRUDED PLANKS.

BACKGROUND - TO BE INTERSTATE GREEN REFLECTIVE SCOTCHLITE, ENGINEER GRADE.

RIVETS - COPY, BORDER, & OVERLAY SHIELDS TO BE FASTENED TO SIGN WITH ALUM. RIVETS OF THE PULL THROUGH TYPE.

OVERLAY SHIELDS - INTERSTATE SHIELD - TO BE OF .080" GAUGE ALUM. ALLOY 6061-T6 WITH INTERSTATE RED & BLUE REFLECTIVE BACKGROUND.

*INT. - DRAFTSMAN'S ABBREVIATION, ACTUAL SHIELD TO BE BUILT IN ACCORDANCE WITH THE A.A.S.H.O. MANUAL.

ROUTE MARKER - TO BE OF .080" GAUGE ALUM. ALLOY 6061-T6 WITH BLACK OPAQUE NUMERALS & BORDER ON PARKWAY SILVER REFLECTIVE BACKGROUND.

NOTE ON DIMENSIONS - LARGE NUMBER IS FULL INCHES, EXPONENT IS NUMBER OF 1/8 INCHES (EX. $7^3 = 7\frac{3}{8}$)

LETTER DESIGN - INITIAL CAPITAL LETTERS (AND NUMERALS); SERIES E OF THE STANDARD ALPHABETS FOR HIGHWAY SIGNS MODIFIED BY WIDENING THE STROKE WIDTH TO APPROXIMATELY ONE-FIFTH THE LETTER OR NUMERAL HEIGHT. - LOWER CASE; - STANDARD LOWER CASE ALPHABETS FOR HIGHWAY SIGNS. (THE ABOVE STANDARD ALPHABETS ARE AVAILABLE FROM THE FEDERAL HIGHWAY ADMIN. - WASHINGTON, D.C.) - COLOR: WHITE REFLECTORIZED.

APPROVED:
HARDESTY & HANOVER
CONSULTING ENGINEERS
NEW YORK, N.Y.
MAY 26 1972
BY

STATE NEW HAMPSHIRE & MAINE
PROJ. NO. I-95-1(22)16
COUNTY

UNITED HIGHWAY SIGN CO., INC.
847 HANOVER RD. SO. MERIDEN, CONNECTICUT 06450

REVISIONS
4-24-72 WB
5-9-72 WB

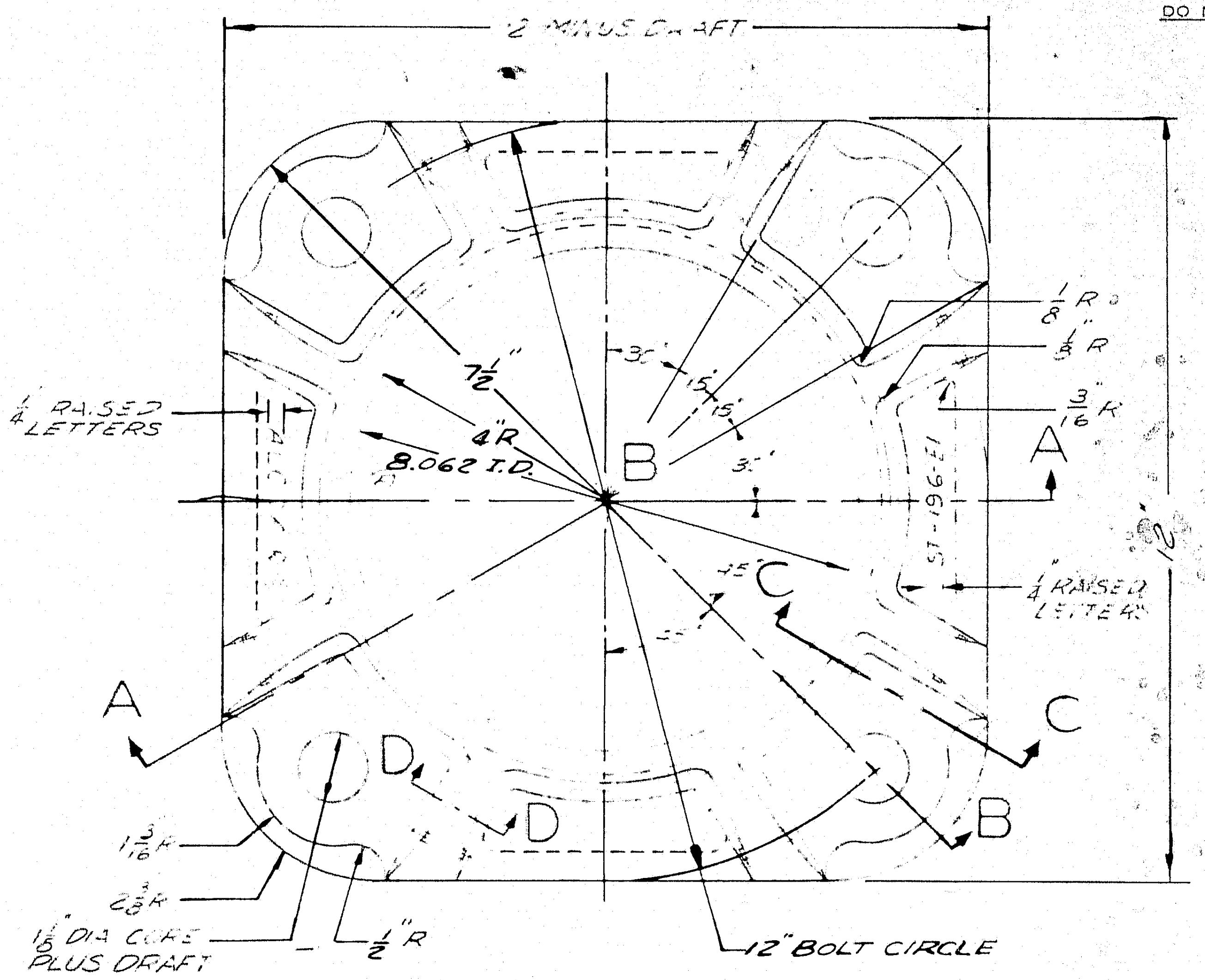
TITLE PISCATAQUA RIVER BRIDGE
SIGN FACE DETAILS - NOTES

DR. BY WB	SCALE	DRAWING NUMBER
CK. BY	DATE 2-29-72	SF-1
APP. BY	SHEET 1 OF 4	

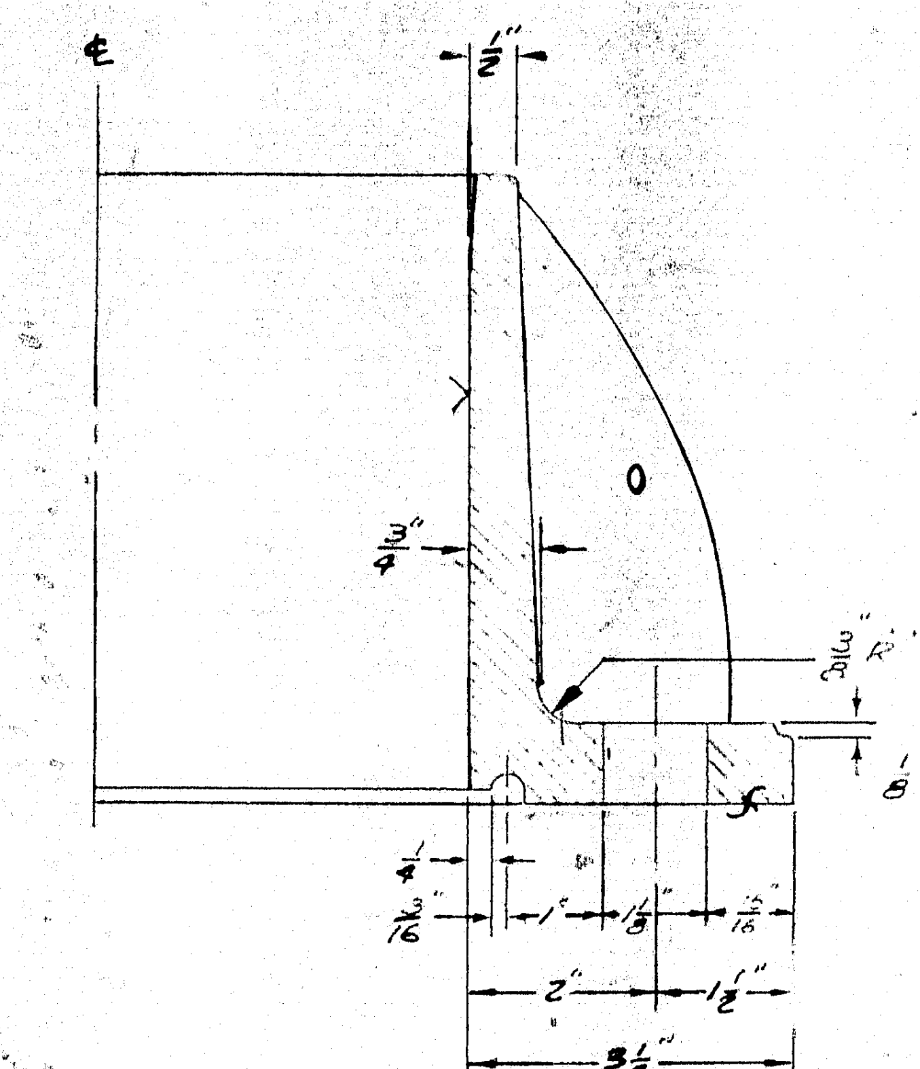
130-133

BRUNING

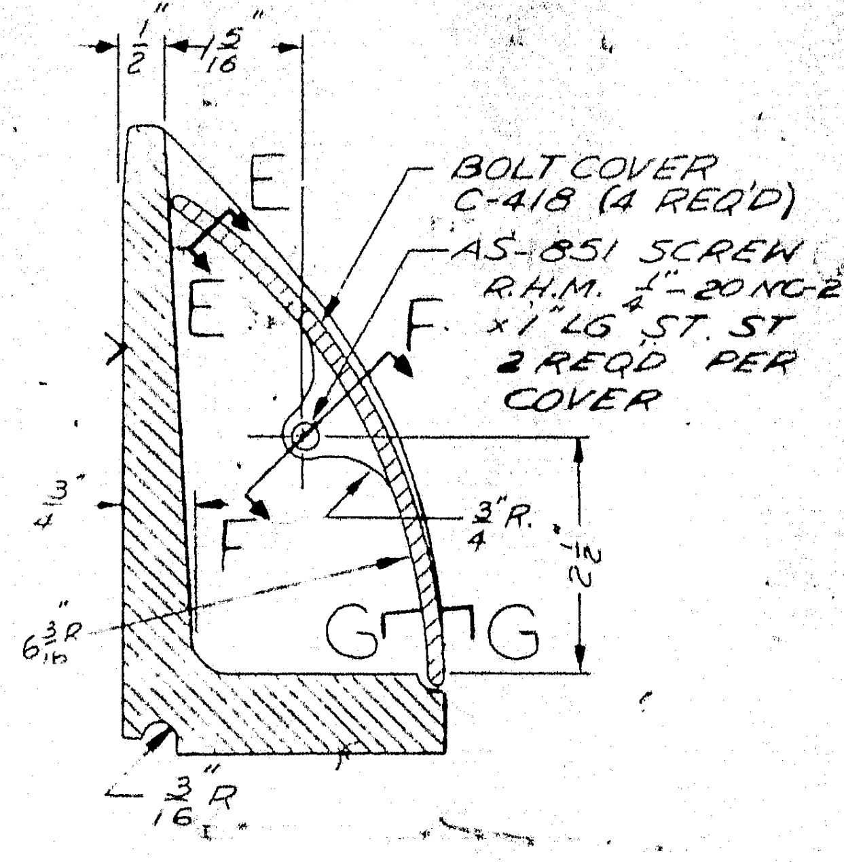
DO NOT SCALE DRAWING



PLAN VIEW

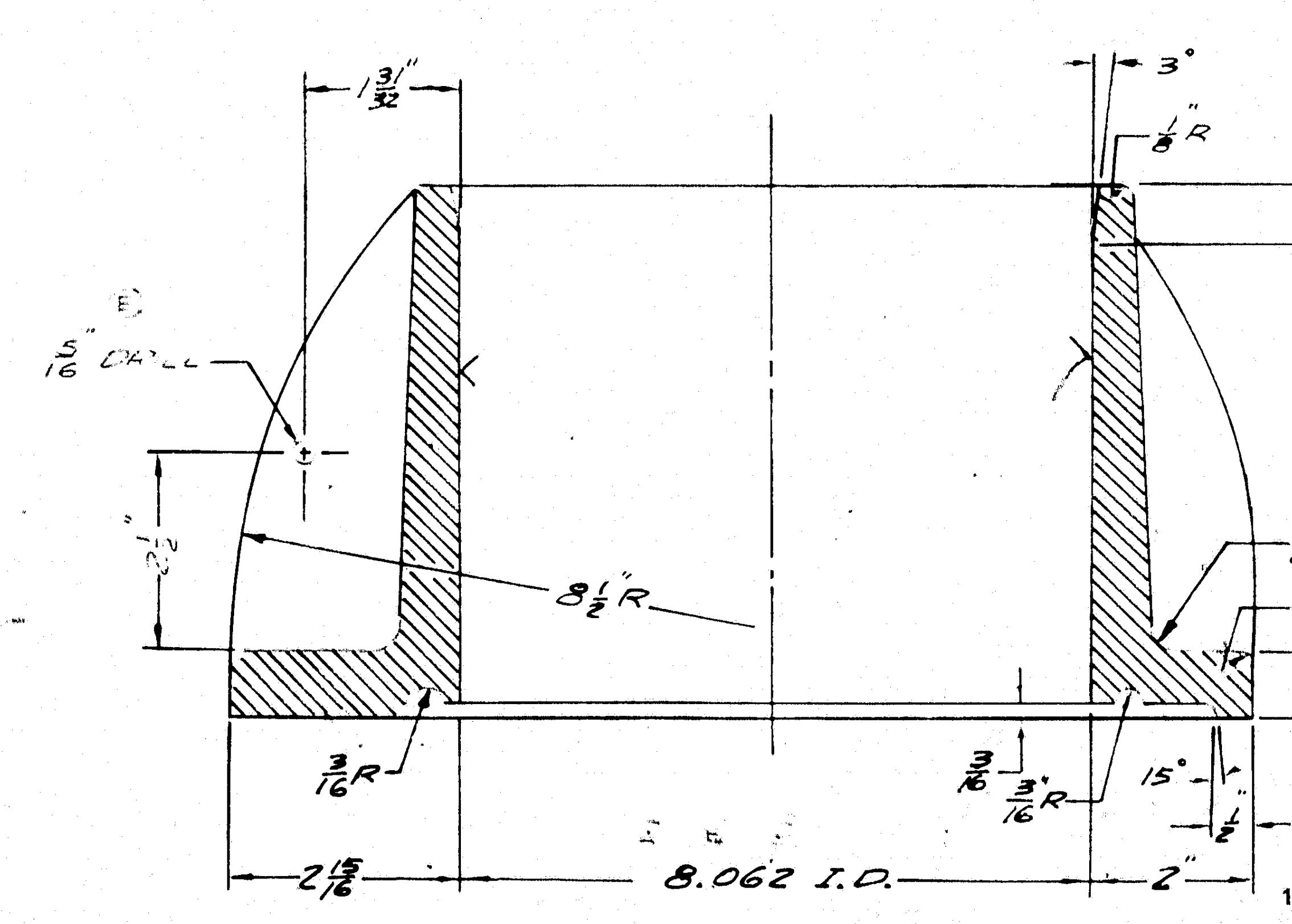


SECTION B-B

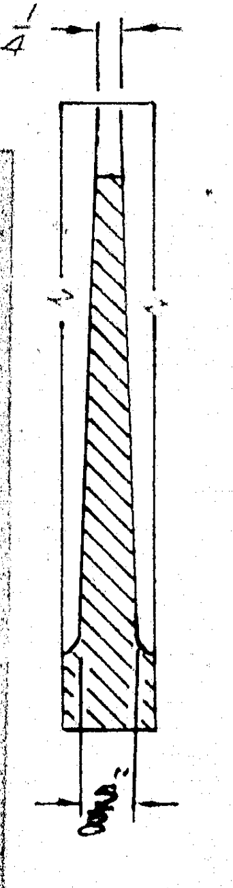

1/2"
1/16
E
F
G
BOLT COVER C-418 (4 REQ'D)
AS-851 SCREW R.H.M. 1/4"-20 NC-2 x 1" LG ST. ST 2 REQ'D PER COVER
3/4" R.
3/16" R

SECTION C-C

Piscataqua River Bridge
Interstate Route 95
Project. No. I-95-1(22)16
Contr. No. 6

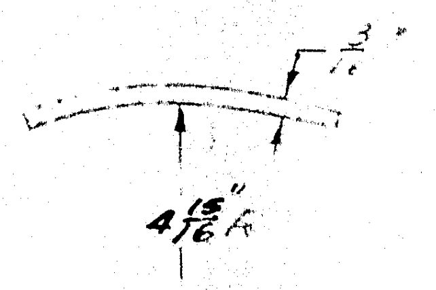


SECTION A-A

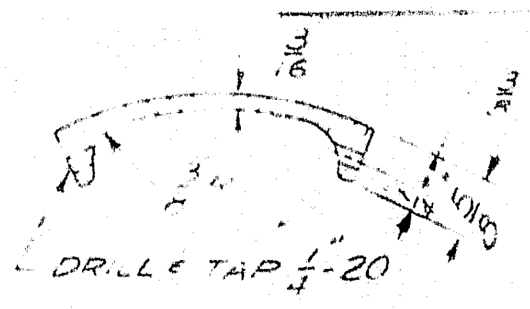


SECTION D-D

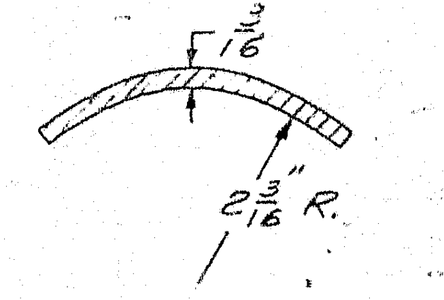
Submitted For Approval
Dec. 17, 1971



SECTION E-E



SECTION F-F



SECTION G-G

NOTES

1 UNSPECIFIED DRAFT 3° MAX; GATES & RISERS TRIMMED FROM FLUSH TO 1/32", CASTING TOLERANCE ± 1/32".
2 FLANGE DESIGNED FOR 20,000 FT POUND MOMENT ULTIMATE LOAD
3 S=SURFACE TO BE ROUGH GROUND OR TURNED
4. SMOOTH TURN BORE ASSEMBLE TUBE WITH A PRESS FIT OF .010 TO .050.
5. WHEN ASSEMBLING TUBE TO FLANGE, COAT O.D. OF TUBE & I.D. OF FLANGE WITH "LUBRI-KOTE" A-1040-CR MEALY GREASE & OIL CO. CLEVE. OHIO OR EQUIVALENT THEN COAT O.D OF TUBE WITH ALUMILASTIC" CONSISTENCY "C" T-6
6 MAST FLANGES, ALUM. CORP. OF AMERICA ALLOY #356-T-4
7 NUT COVERS, ALUM CORP. OF AMERICA ALLOY # 43
8 ⊳ = SURFACE TO BE MACHINE FINISHED

APPROVED:- As CORRECTED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N. Y. 10017
BY T. C. Thompson JAN 21 1972

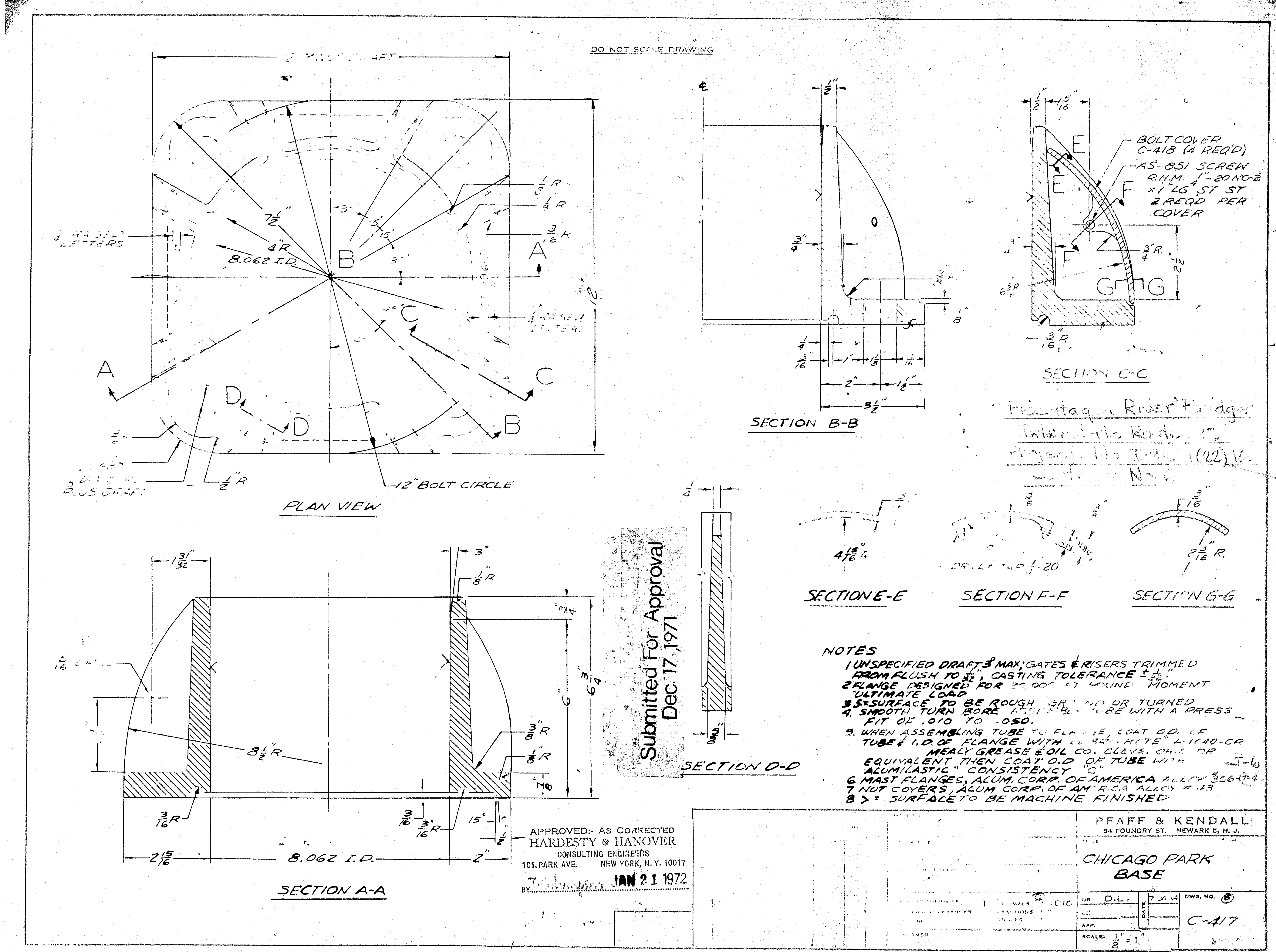
PFAFF & KENDALL
84 FOUNDRY ST. NEWARK 5, N. J.

TITLE
CHICAGO PARK
BASE

DECIMALS ± .010
FRACTIONS
ANGLES

DR D.L. DATE 7-24-64
CH.
APP.
SCALE 1/2" = 1"
DWG. NO. C-417

130-134



Submitted For Approval
Dec. 17, 1971

Piscataqua River Bridge
Interstate Route 95
Project No. I-95-1(22)16
Contract No. 6

NOTES

1 UNSPECIFIED DRAFT 3° MAX; GATES & RISERS TRIMMED FROM FLUSH TO 1/32", CASTING TOLERANCE ± 1/32".
2 FLANGE DESIGNED FOR 20,000 FT POUND MOMENT ULTIMATE LOAD
3 ≶=SURFACE TO BE ROUGH GROUND OR TURNED
4. SMOOTH TURN BORE ASSEMBLE TUBE WITH A PRESS FIT OF .010 TO .050.
5. WHEN ASSEMBLING TUBE TO FLANGE, COAT O.D. OF TUBE & I.D. OF FLANGE WITH "CORR-KOTE" L-1040-CR MEALY GREASE & OIL CO. CLEVE. OHIO OR EQUIVALENT THEN COAT O.D OF TUBE WITH "ALUMILASTIC" CONSISTENCY "C"
6 MAST FLANGES, ALUM. CORP. OF AMERICA ALLOY 356-T4. T-6
7 NUT COVERS, ALUM CORP. OF AMERICA ALLOY # 43
8 > = SURFACE TO BE MACHINE FINISHED

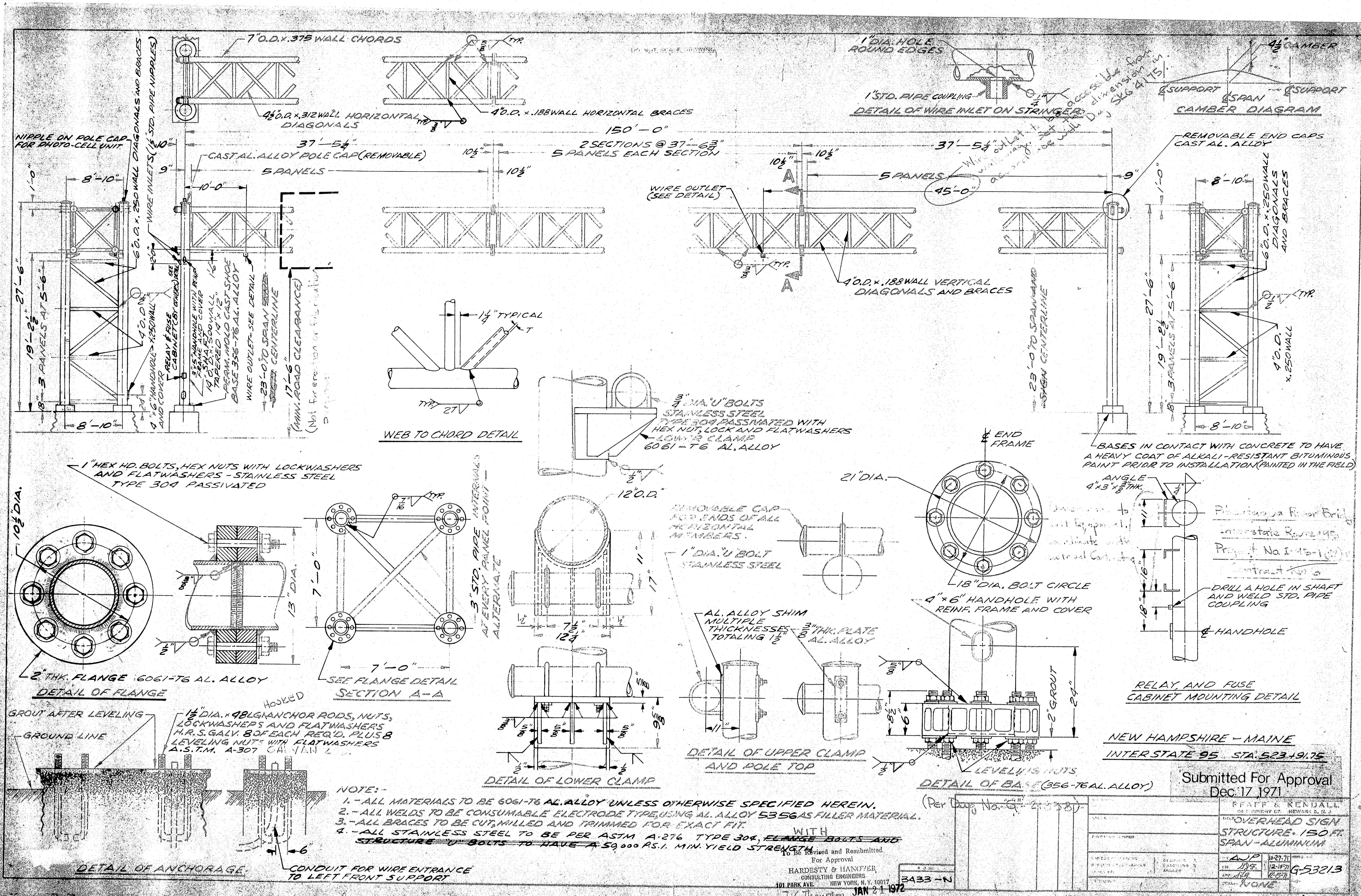
APPROVED:- As CORRECTED
HARDESTY & HANOVER
CONSULTING ENGINEERS
101. PARK AVE. NEW YORK, N. Y. 10017
BY JAN 21 1972

PFAFF & KENDALL
64 FOUNDRY ST. NEWARK 5, N. J.

CHICAGO PARK
BASE

DR D.L. DATE 7-X-4
CH.
APP.
SCALE ½" = 1"
DWG. NO. ⑥ C-417

130-134


7" O.D. x .375 WALL CHORDS
4½" O.D. x .312 WALL HORIZONTAL DIAGONALS
4" O.D. x .188 WALL HORIZONTAL BRACES
TYP.
150'-0"
37'-5¼"
2 SECTIONS @ 37'-6¾"
5 PANELS EACH SECTION
5 PANELS
45'-0"
9"
10½"
NIPPLE ON POLE CAP FOR PHOTO-CELL UNIT
CAST AL. ALLOY POLE CAP (REMOVABLE)
6" O.D. x .250 WALL DIAGONALS AND BRACES
WIRE INLETS (1¼" STD. PIPE NIPPLES)
4" O.D. x .250 WALL
4" x 6" HANDHOLE WITH REINF. FRAME AND COVER
RELAY & FUSE CABINET (BY OTHERS)
3.5 HANDHOLE WITH REINF. FRAME AND COVER
14" O.D. x .500 WALL TAPERED TO 12" O.D.
14" x 12" CAST SHOE BASE 356-T6 AL. ALLOY
WIRE OUTLET - SEE DETAIL
23'-0" TO SPAN CENTERLINE
17'-6" (MIN. ROAD CLEARANCE)
27'-6"
19'-2½"
3 PANELS AT 5'-6"
8'-10"
10'-0"
1'-0"
WIRE OUTLET (SEE DETAIL)
4" O.D. x .188 WALL VERTICAL DIAGONALS AND BRACES
A
1" DIA. HOLE ROUND EDGES
1" STD. PIPE COUPLING
DETAIL OF WIRE INLET ON STRINGER
Wire outlet to be accessible from walkway. Set dimension from ... with Dwg SK6 4175
4½" CAMBER
℄ SUPPORT
℄ SPAN
CAMBER DIAGRAM
REMOVABLE END CAPS CAST AL. ALLOY
6" O.D. x .250 WALL DIAGONALS AND BRACES
4" O.D. x .250 WALL
1¼" TYPICAL
WEB TO CHORD DETAIL
¾" DIA. "U" BOLTS STAINLESS STEEL TYPE 304 PASSIVATED WITH HEX NUT, LOCK AND FLATWASHERS
LOWER CLAMP 6061-T6 AL. ALLOY
END FRAME
21" DIA.
18" DIA. BOLT CIRCLE
4" x 6" HANDHOLE WITH REINF. FRAME AND COVER
BASES IN CONTACT WITH CONCRETE TO HAVE A HEAVY COAT OF ALKALI-RESISTANT BITUMINOUS PAINT PRIOR TO INSTALLATION (PAINTED IN THE FIELD)
ANGLE 4" x 3" x ⅜" THK.
DRILL A HOLE IN SHAFT AND WELD STD. PIPE COUPLING
℄ HANDHOLE
RELAY AND FUSE CABINET MOUNTING DETAIL
Piscataqua River Bridge
Interstate Route 95
Project No. I-95-1
Contract No. 6
1" HEX HD. BOLTS, HEX NUTS WITH LOCKWASHERS AND FLATWASHERS - STAINLESS STEEL TYPE 304 PASSIVATED
10½" DIA.
13" DIA.
2" THK. FLANGE 6061-T6 AL. ALLOY
DETAIL OF FLANGE
7'-0"
3" STD. PIPE INTERNAL AT EVERY PANEL POINT - ALTERNATE
SEE FLANGE DETAIL
SECTION A-A
12" O.D.
REMOVABLE CAP FOR ENDS OF ALL HORIZONTAL MEMBERS
1" DIA. "U" BOLT STAINLESS STEEL
DETAIL OF LOWER CLAMP
AL. ALLOY SHIM MULTIPLE THICKNESSES TOTALING 1½"
⅜" THK. PLATE AL. ALLOY
DETAIL OF UPPER CLAMP AND POLE TOP
2" GROUT
24"
LEVELING NUTS
DETAIL OF BASE (356-T6 AL. ALLOY)
(Per Dwg. No. "G" 21338)
GROUT AFTER LEVELING
GROUND LINE
1½" DIA. x 48" LG. HOOKED ANCHOR RODS, NUTS, LOCKWASHERS AND FLATWASHERS H.R.S. GALV. 8 OF EACH REQ'D. PLUS 8 LEVELING NUTS WITH FLATWASHERS A.S.T.M. A-307
6"
CONDUIT FOR WIRE ENTRANCE TO LEFT FRONT SUPPORT
DETAIL OF ANCHORAGE

NEW HAMPSHIRE - MAINE

INTERSTATE 95 STA. 523+91.75

NOTE:-

1. - ALL MATERIALS TO BE 6061-T6 AL. ALLOY UNLESS OTHERWISE SPECIFIED HEREIN.
2. - ALL WELDS TO BE CONSUMABLE ELECTRODE TYPE, USING AL. ALLOY 5356 AS FILLER MATERIAL.
3. - ALL BRACES TO BE CUT, MILLED AND TRIMMED FOR EXACT FIT.
4. - ALL STAINLESS STEEL TO BE PER ASTM A-276 TYPE 304, WITH ~~FLANGE BOLTS AND STRUCTURE "U" BOLTS TO HAVE A~~ 59,000 P.S.I. MIN. YIELD STRENGTH

To Be Revised and Resubmitted
For Approval
HARDESTY & HANOVER
CONSULTING ENGINEERS
101 PARK AVE. NEW YORK, N.Y. 10017
BY T.C. Thompson JAN 21 1972

3433-N

Submitted For Approval
Dec 17 1971

PFAFF & KENDALL
NEWARK, N.J.

OVERHEAD SIGN STRUCTURE - 150 FT. SPAN - ALUMINUM

AJP 10-27-71
CH. 12-15-71
12-15-71
SCALE NONE

G-53213

130-135