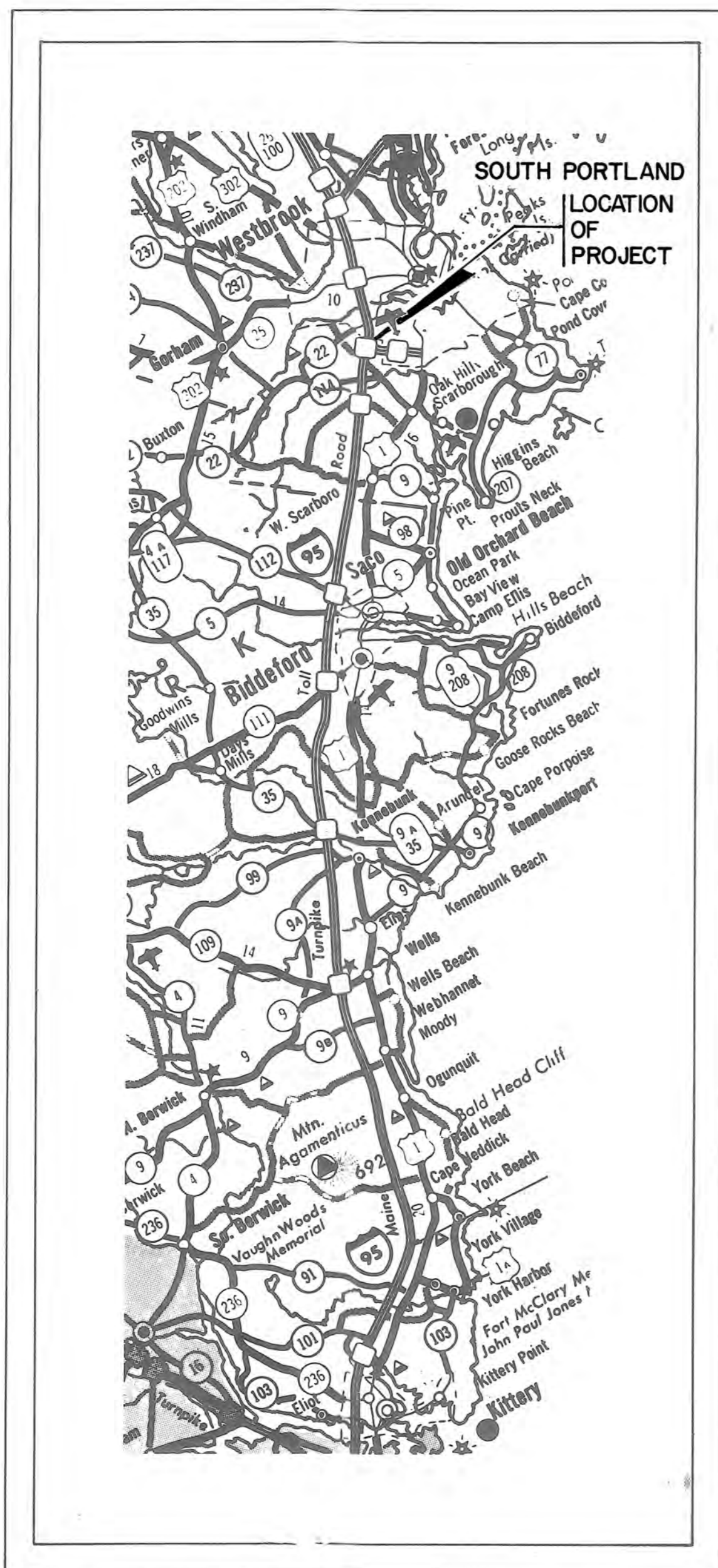


MAINE TURNPIKE AUTHORITY MAINE TURNPIKE

YORK TO AUGUSTA



PROJECT MAP

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

COMMISSIONER _____
BUREAU DIRECTOR AND CHIEF ENGINEER _____ DATE _____

HAROLD T. WILEY, CHAIRMAN
ROBERT K. PACIOS, VICE CHAIRMAN
ABRAHAM LEIBOWITZ, MEMBER
SAMUEL COHEN, MEMBER
GEORGE N. CAMPBELL JR., MEMBER EX-OFFICIO
BRIAN S. FARWELL, ACTING EXECUTIVE DIRECTOR
DAVID H. STEVENS, SECRETARY & TREASURER

CONTRACT 83.2

TOLL PLAZA EXPANSION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
ENGINEERS · ARCHITECTS · PLANNERS
BOSTON

Carl J. Meller



INDEX OF SHEETS

1	TITLE SHEET
2	QUANTITIES & GENERAL NOTES
3-9	TOLL PLAZA PLANS & DETAILS
10-13	MECHANICAL PLANS & DETAILS
14	PLAN, PROFILE & TYPICAL SECTION
15-16	CROSS SECTIONS

APPROVED:

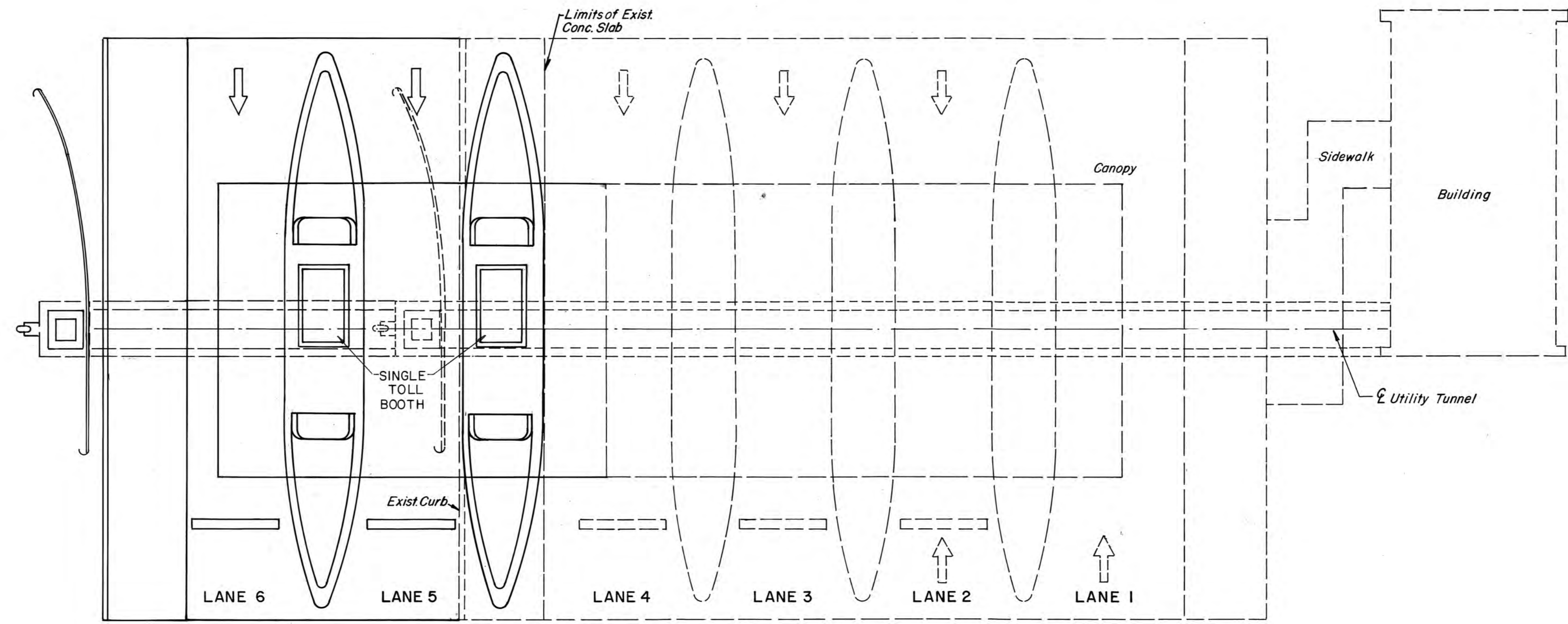
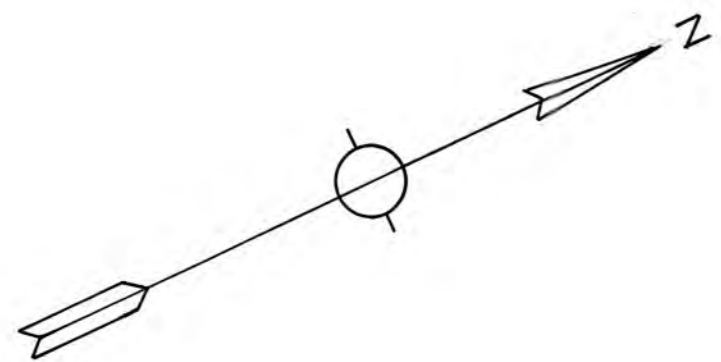
MAINE TURNPIKE AUTHORITY

CHAIRMAN

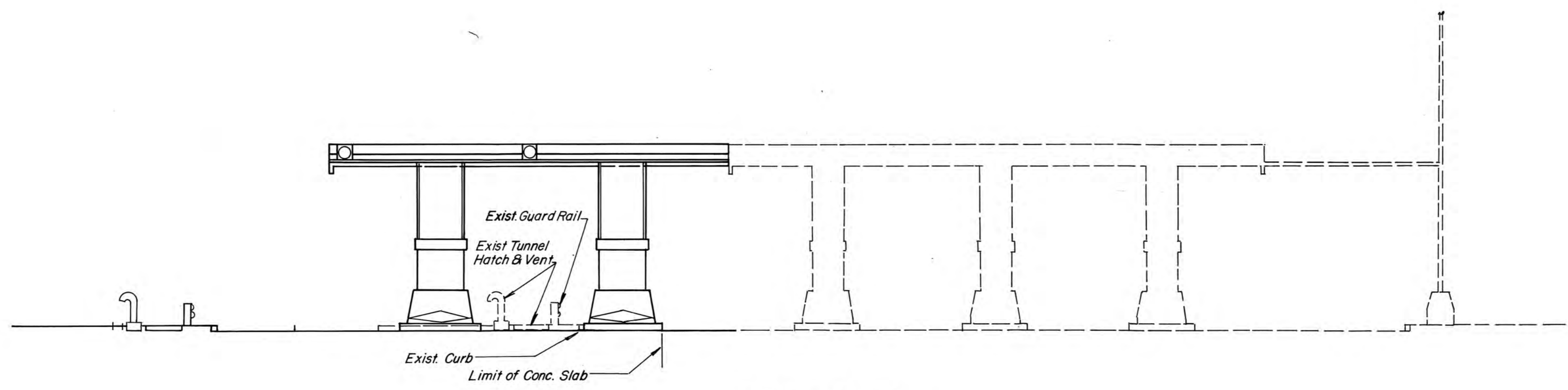
EXECUTIVE DIRECTOR

DATE _____

4-15



PLAN



EAST ELEVATION
1/8" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	R.W.B. 8-22-83	
		TRACED	C.J.W. 8-22-83	
		CHECKED	R.A.L. 8-22-83	
				J.P.W.

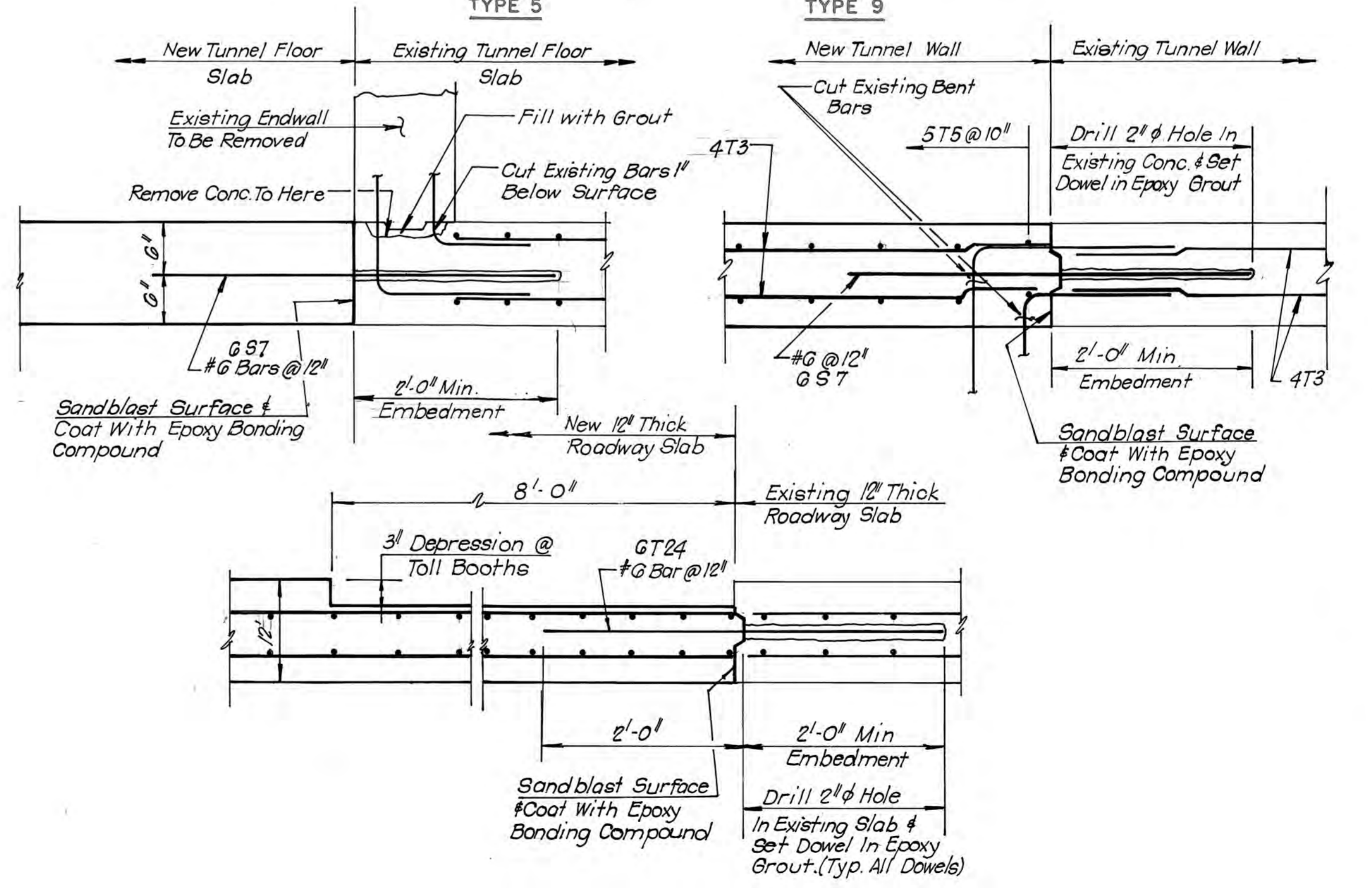
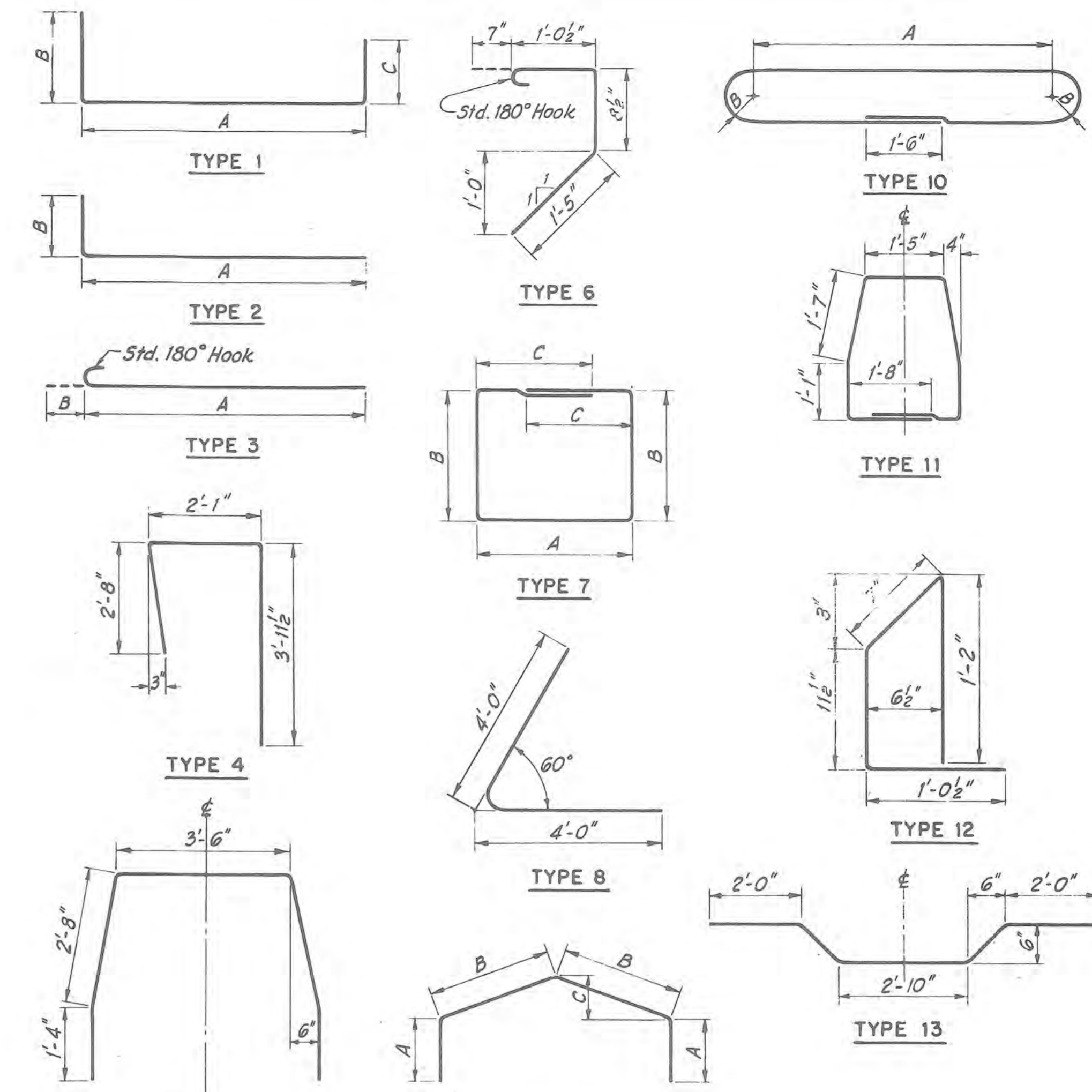
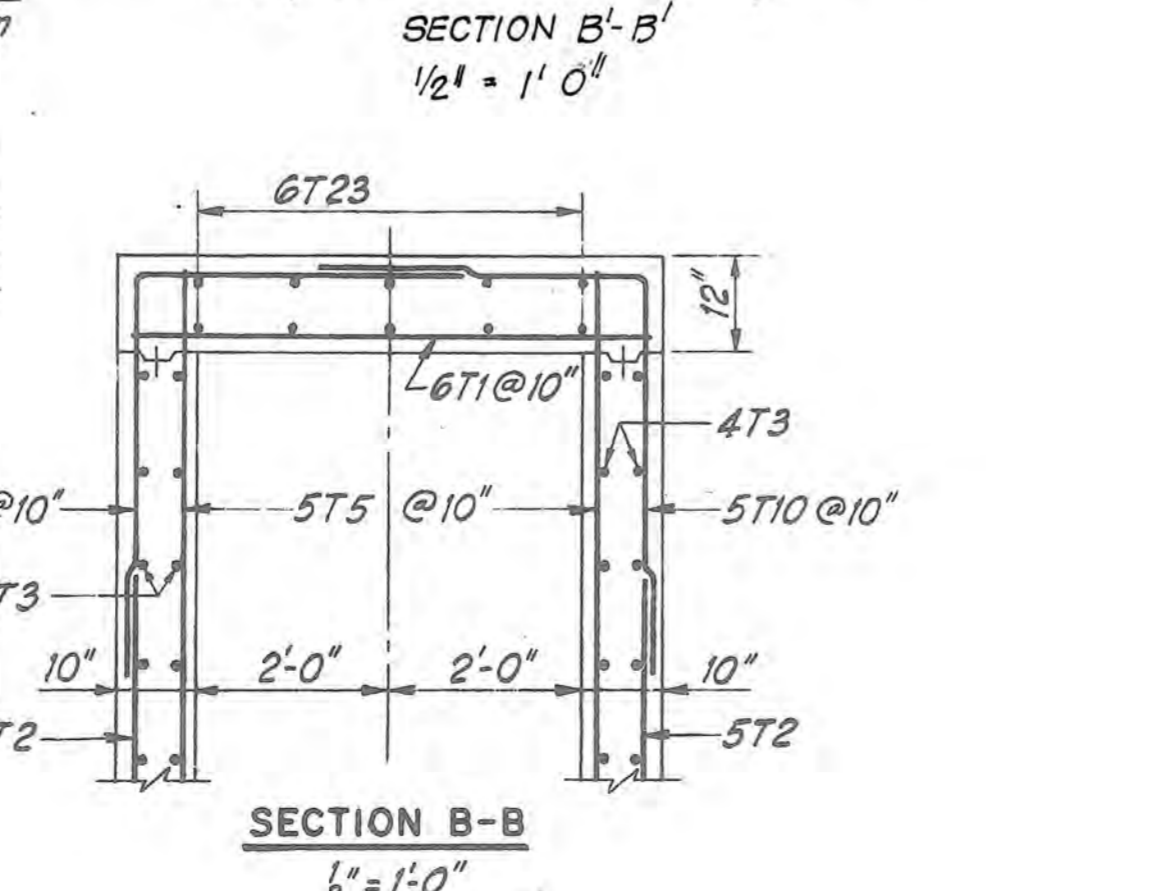
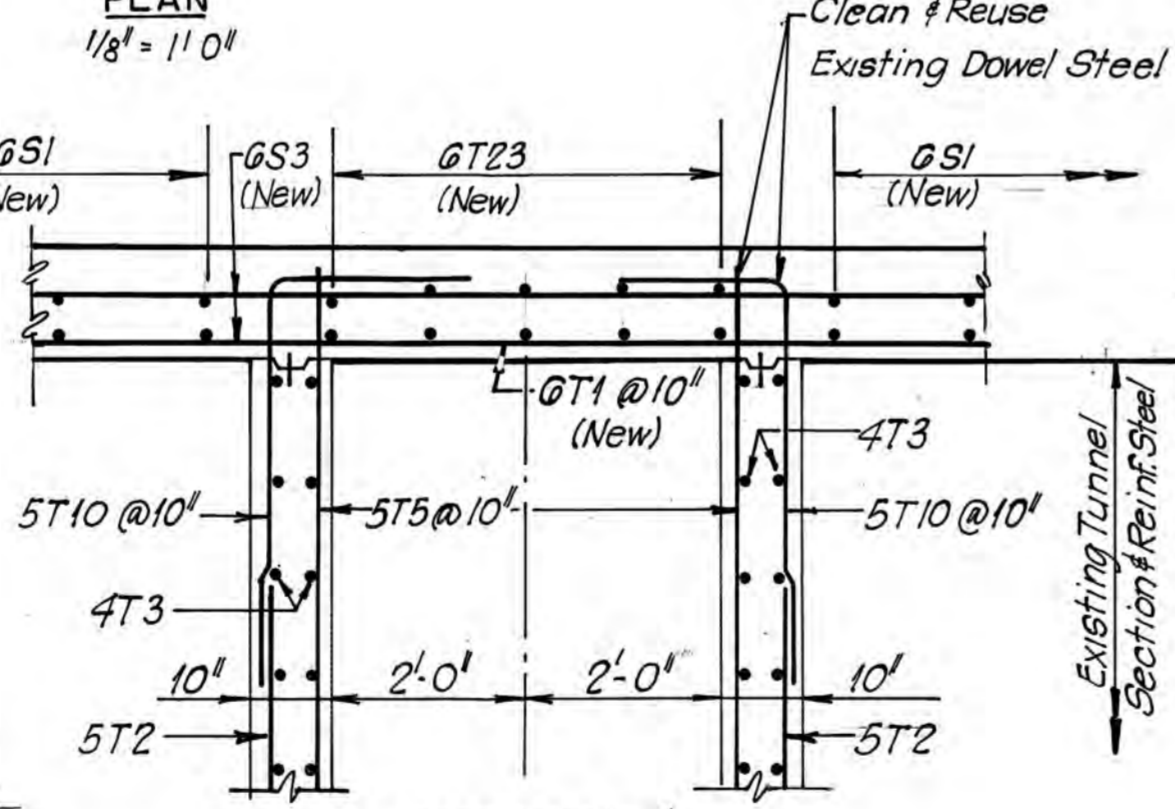
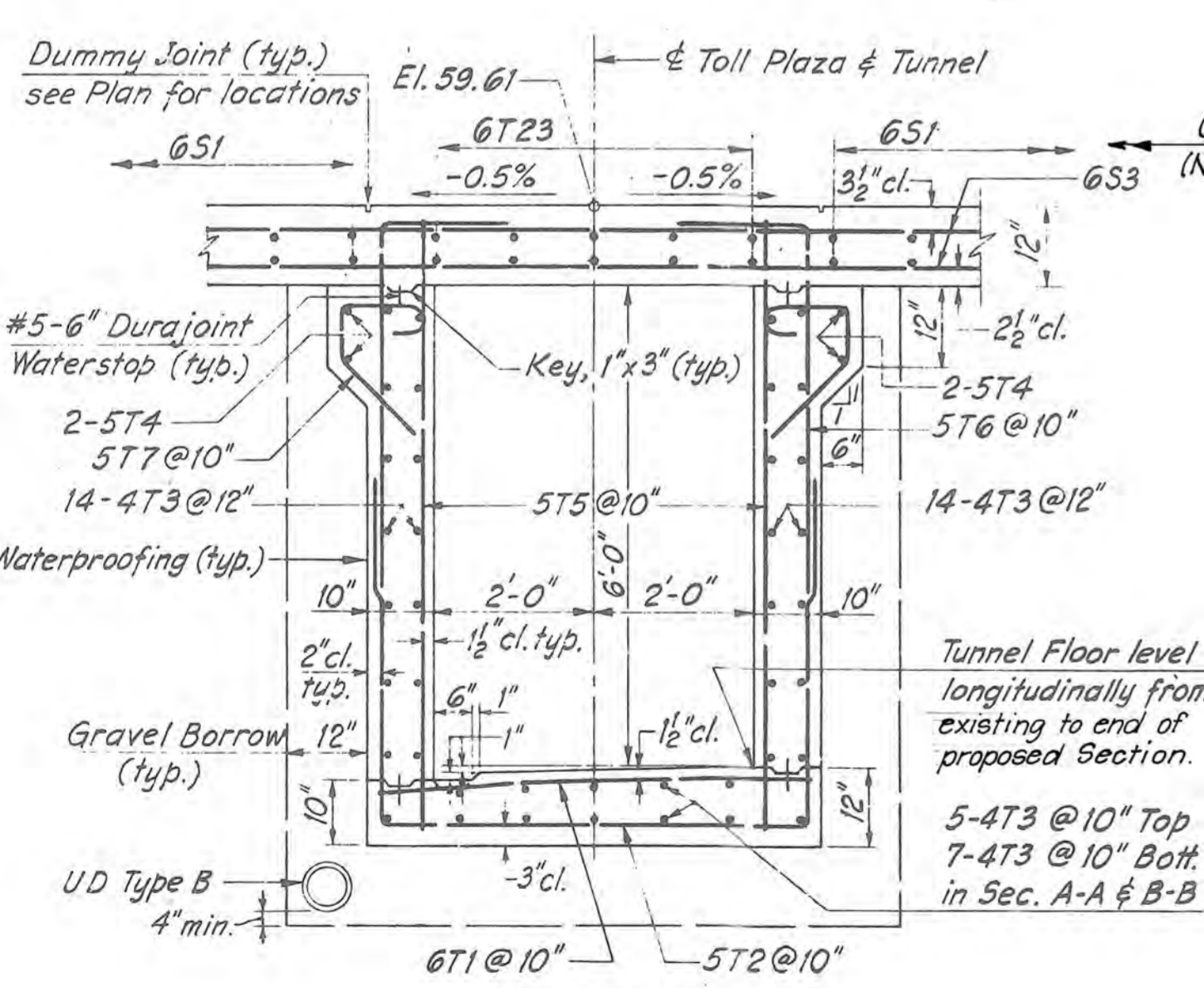
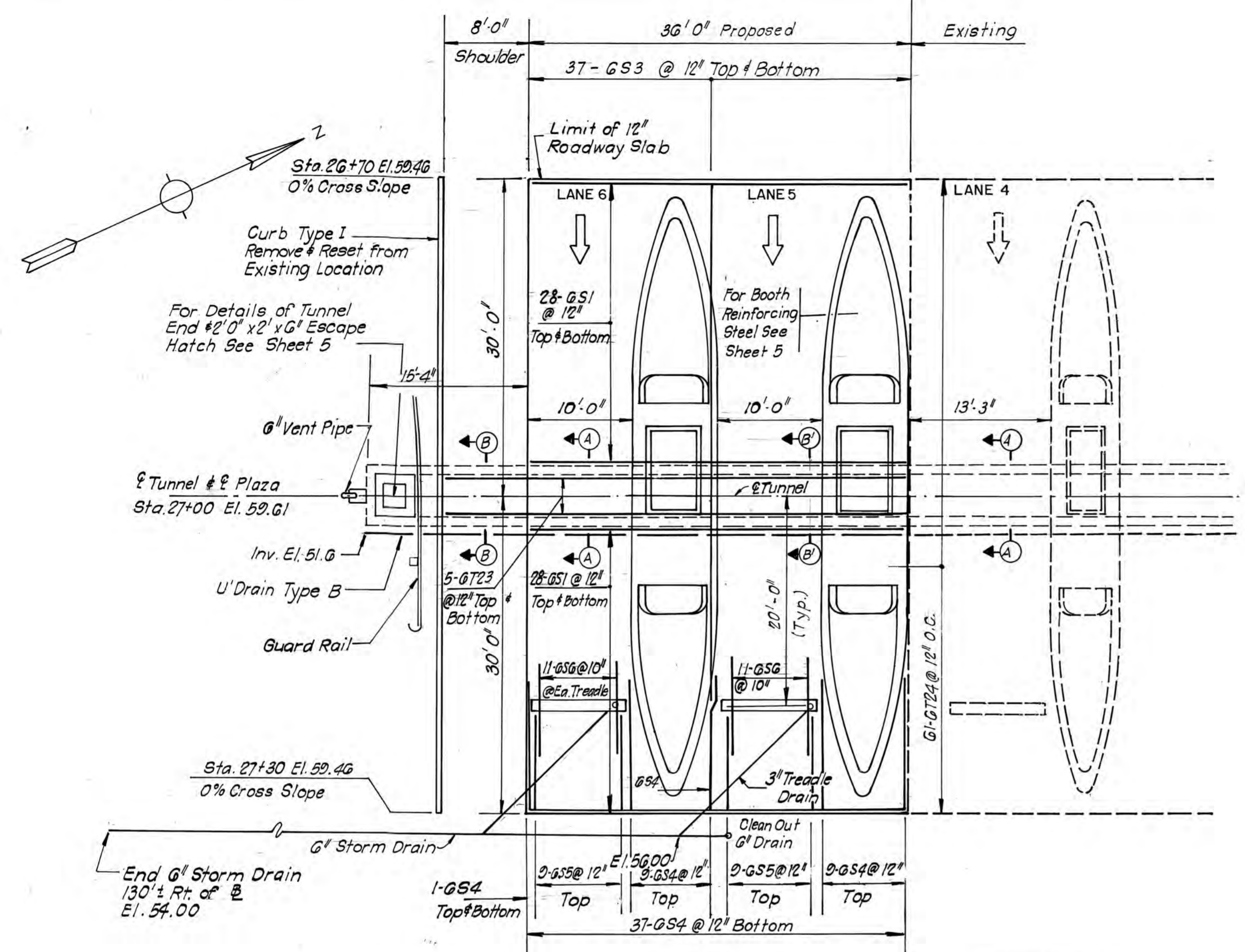
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 1-YORK TO PORTLAND

TOLL BOOTHS & CANOPY
 PLAN & ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 BOSTON

SCALE:
 SHEET NO. **3**

Scanning America 000000-004903



BAR MARK	NO	LENGTH	TYPE	A	B	C
4T3	40	35'-0"	STR			
4T11	14	4'-6"	2	2'-10"	1'-8"	
4T14	14	5'-4"	2	3'-3"	2'-1"	
4T16	4	4'-10"	STR			
4T17	1	15'-3"	7	3'-9"	3'-3"	2'-6"
4T18	1	11'-11"	7	2'-11"	2'-5"	2'-1"
4T19	10	3'-9"	12			
4T21	14	3'-8"	STR			

5T2	43	14'-4"	1	5'-4"	4'-6"	4'-6"
5T4	4	20'-4"	STR			
5T5	68	7'-6"	STR			
5T7	26	3'-0"	6			
5T8	16	7'-3"	STR			
5T10	18	7'-11"	2	4'-6"	3'-5"	
5T12	4	5'-6"	2	4'-3"	1'-3"	
5T13	4	8'-7"	2	6'-9"	1'-10"	
5T15	2	10'-6"	1	7'-2"	2'-4"	1'-0"
5T22	4	14'-4"	1	7'-2"	4'-10"	2'-4"

GT1	63	5'-4"	STR			
GT23	10	43'-8"	STR			
GT24	61	4'-0"	STR			Slab Dowels

GS1	112	35'-8"	STR			
GS3	74	49'-0"	STR			
GS4	56	12'-6"	STR			
GS5	18	9'-0"	STR			
GS6	22	8'-3"	13			
GS7	18	4'-0"	STR			Tunnel Dowels
GS8	16	8'-0"	8			

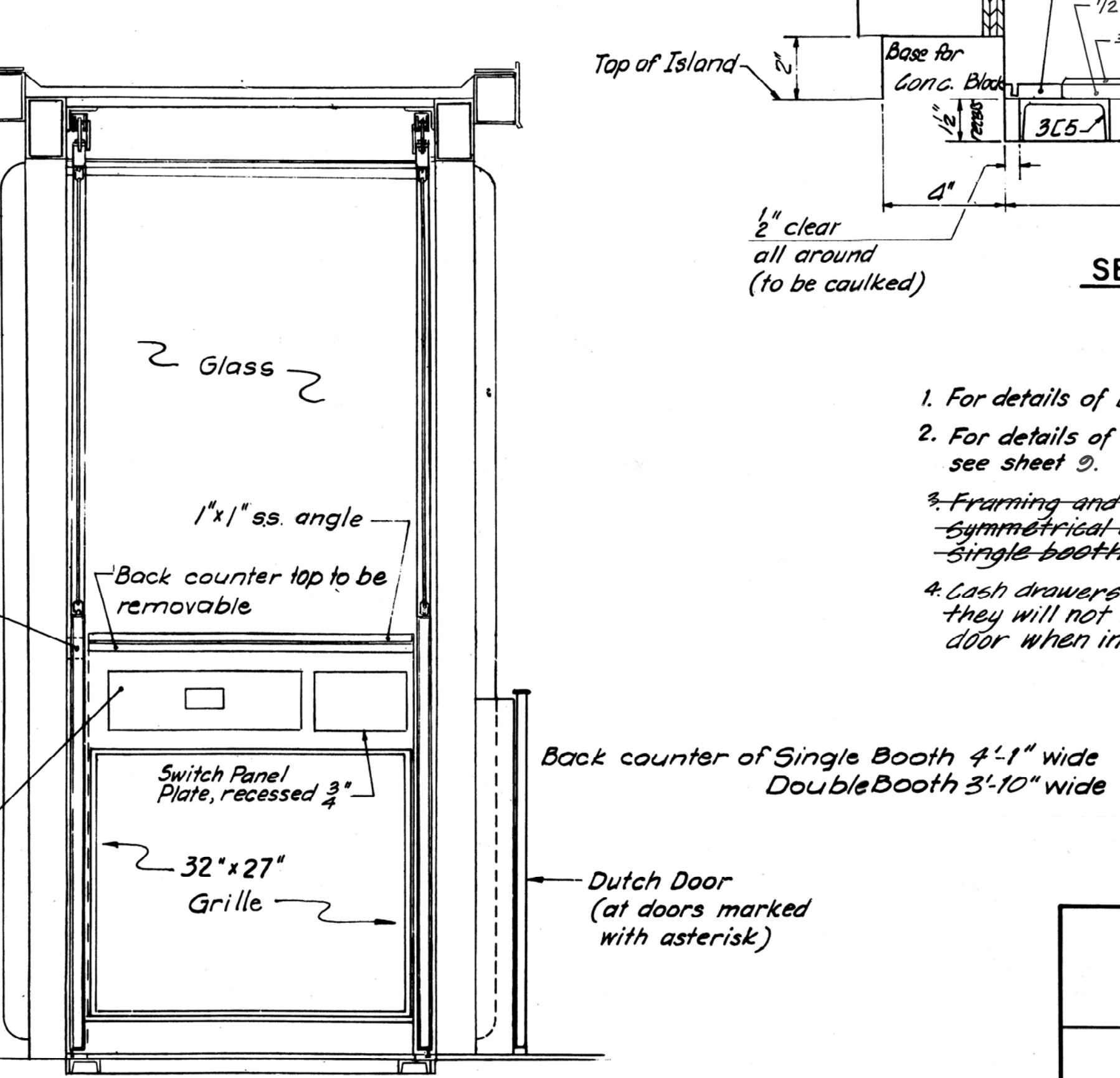
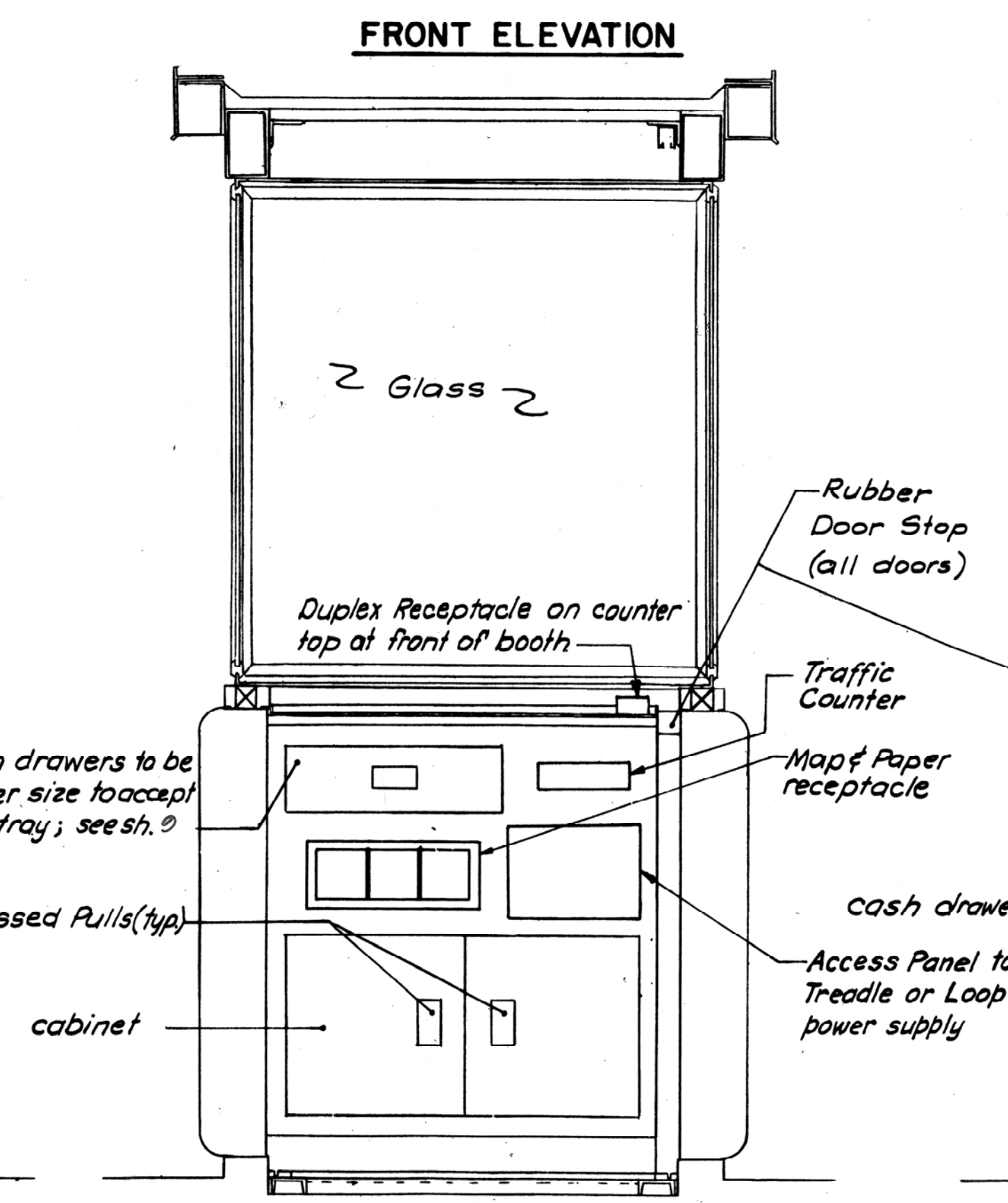
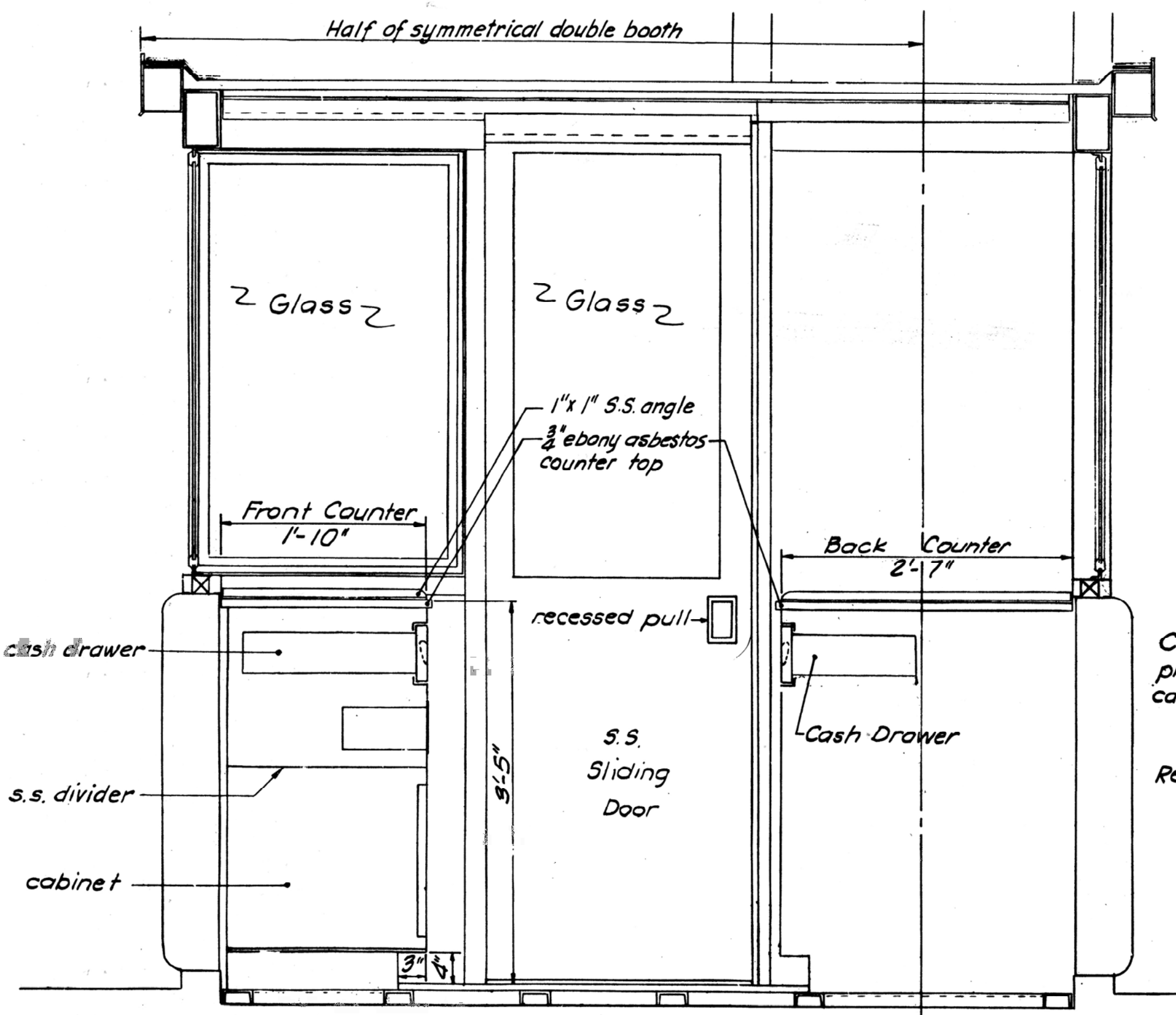
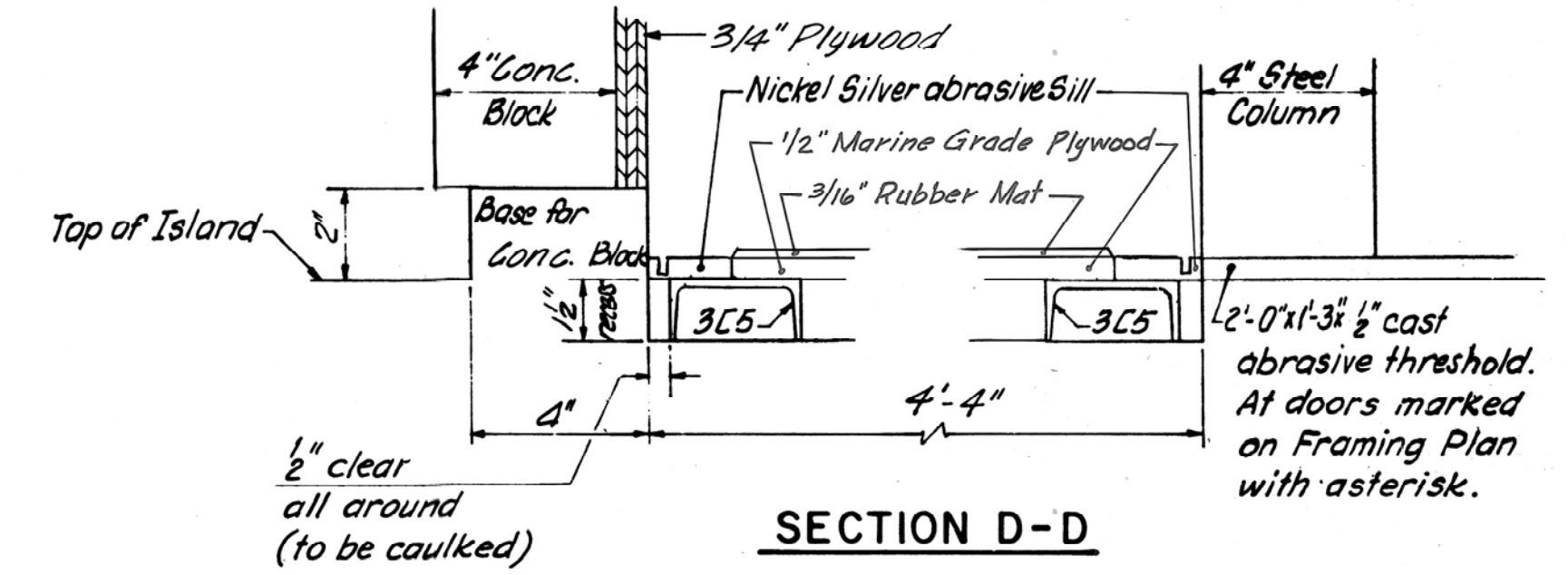
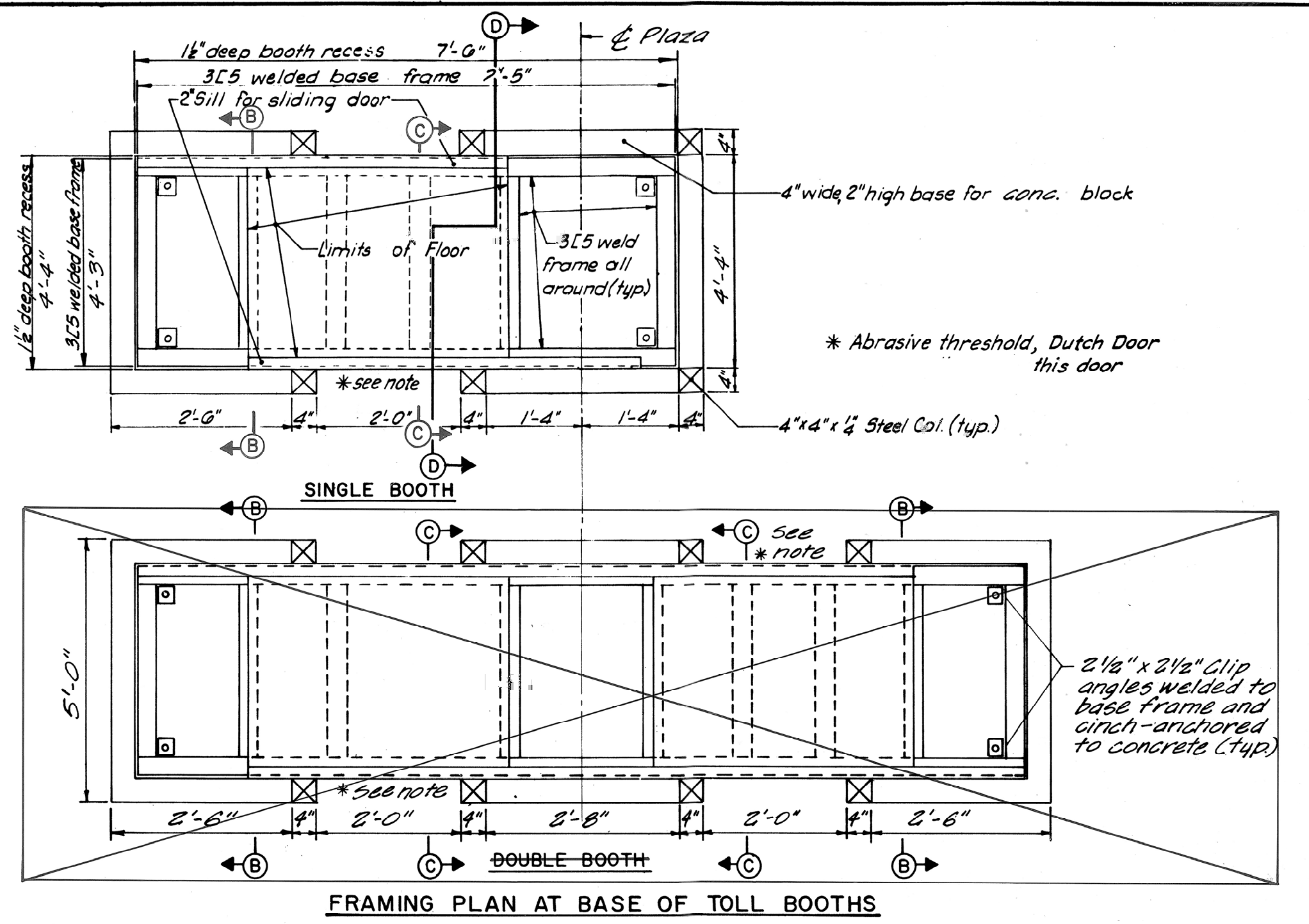
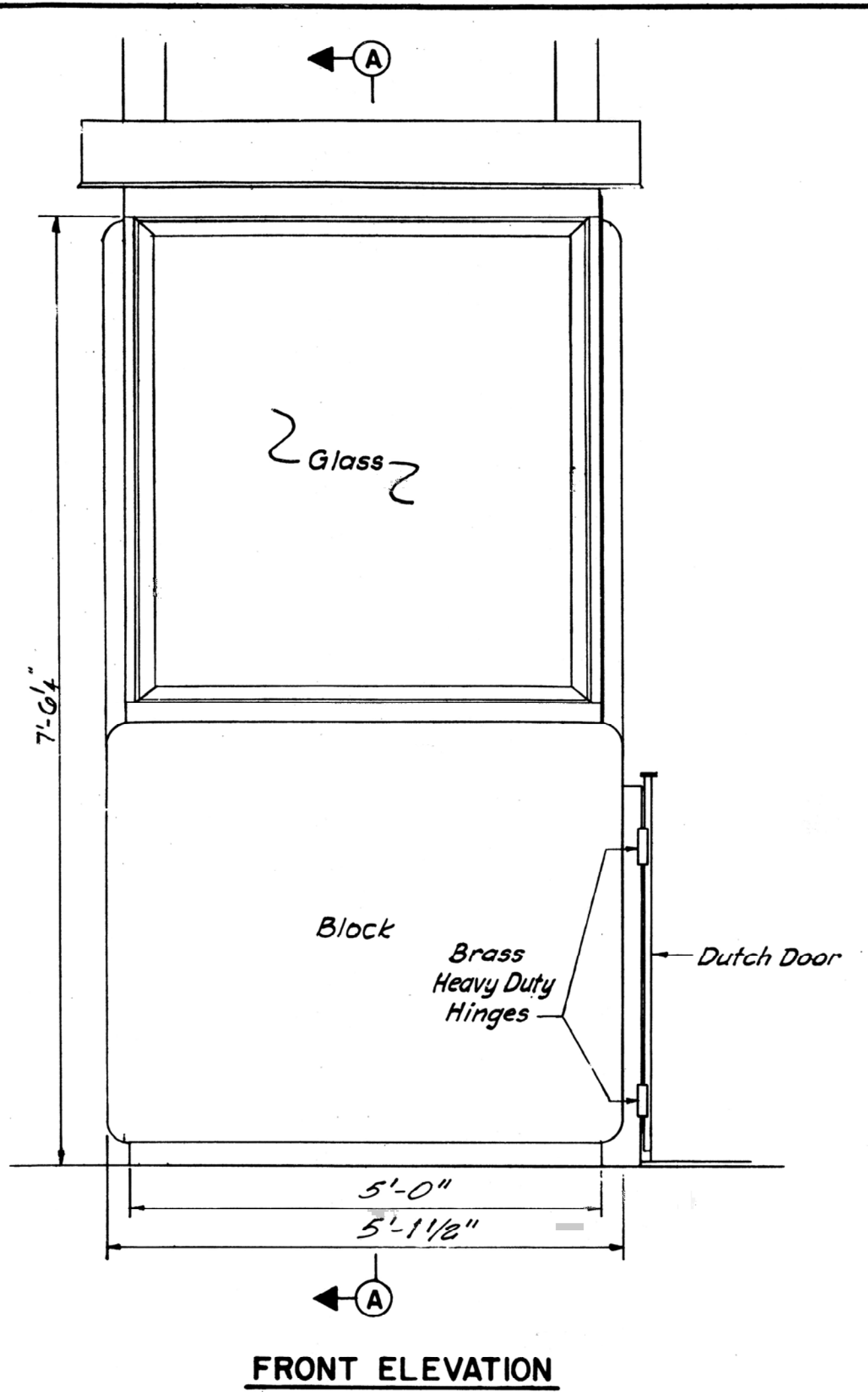
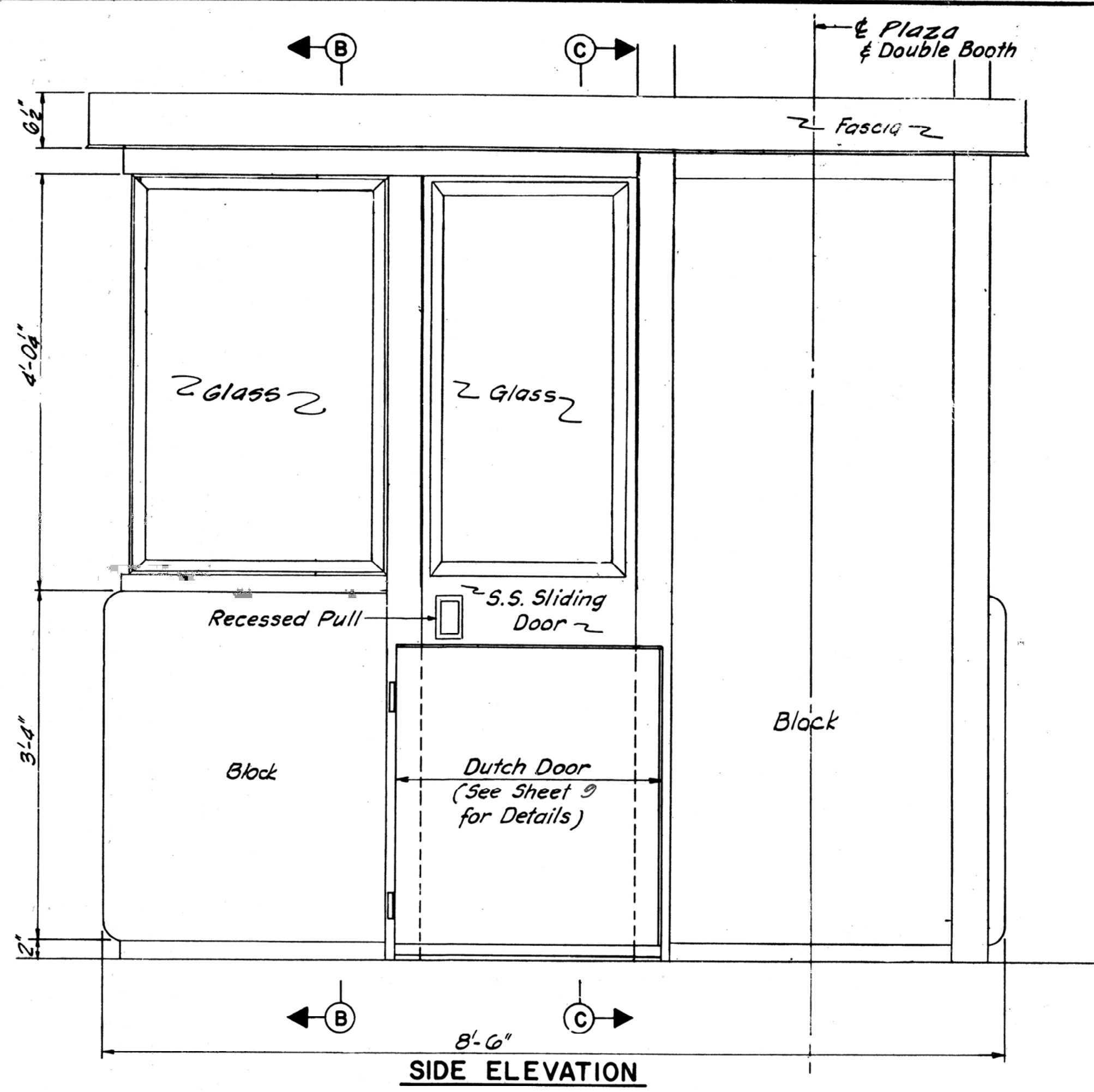
4B1	18	28'-0"	STR			
4B4	4	17'-4"	3	16'-10"	0'-6"	
4B5	8	15'-4"	3	14'-10"	0'-6"	
4B6	8	11'-4"	3	10'-10"	0'-6"	
4B7	8	6'-6"	3	6'-0"	0'-6"	
4B8	4	2'-0"	1	0'-10"	0'-7"	0'-7"
4B9	4	2'-6"	1	1'-4"	0'-7"	0'-7"
4B10	40	6'-6"	STR			
4B11A	4Ea	3'-0"	9	0'-10"	0'-8"	0'-10"
70N		8'-8"	9	1'-2"	3'-1"	0'-10"
4B12	16	12'-10"	5			
4B13	24	8'-9"	4			
4B14	24	5'-0"	STR			
4B15A	4Ea	15'-0"	7	4'-10"	2'-0"	3'-1"
70C		16'-0"	7	5'-10"	1'-10"	3'-4"
4B16	120	2'-4"	2	1'-2"	1'-2"	

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

TOLL PLAZA PLAN

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
BOSTON

SCALE:
SHEET No. 4



1. For details of booth construction see sheet 8
2. For details of cash tray and map receptacle see sheet 9.
3. Framing and shell of double booth are symmetrical about B and same as single booth.
4. Cash drawers are to be so located that they will not interfere with the sliding door when in the open position.

NO.	REVISION	BY	DATE	IN CHARGE OF
	MADE	R.W.B.	8-22-83	J.P.W.
	TRACED	C.J.W.	8-22-83	
	CHECKED	R.A.L.	8-22-83	

SECTION A-A

SECTION B-B

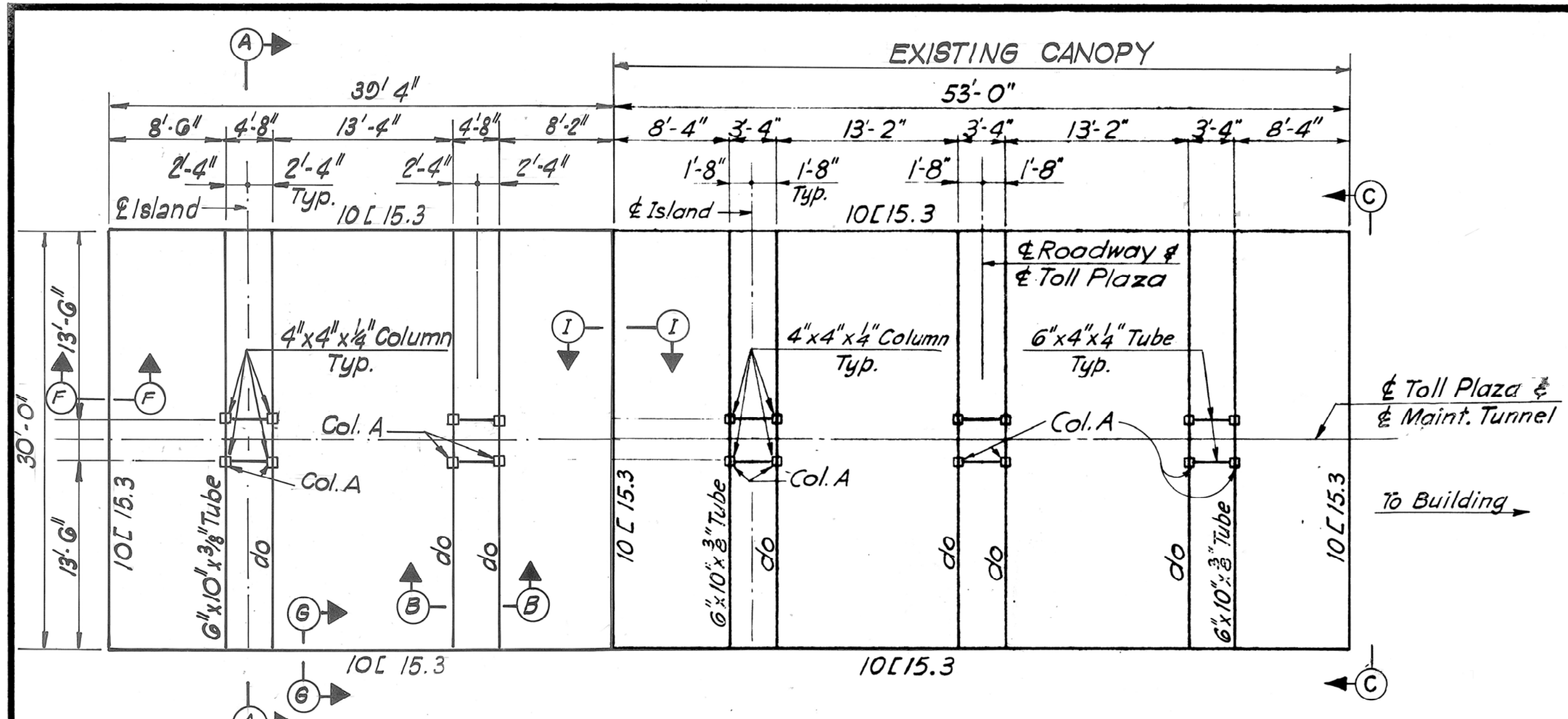
SECTION C-C

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

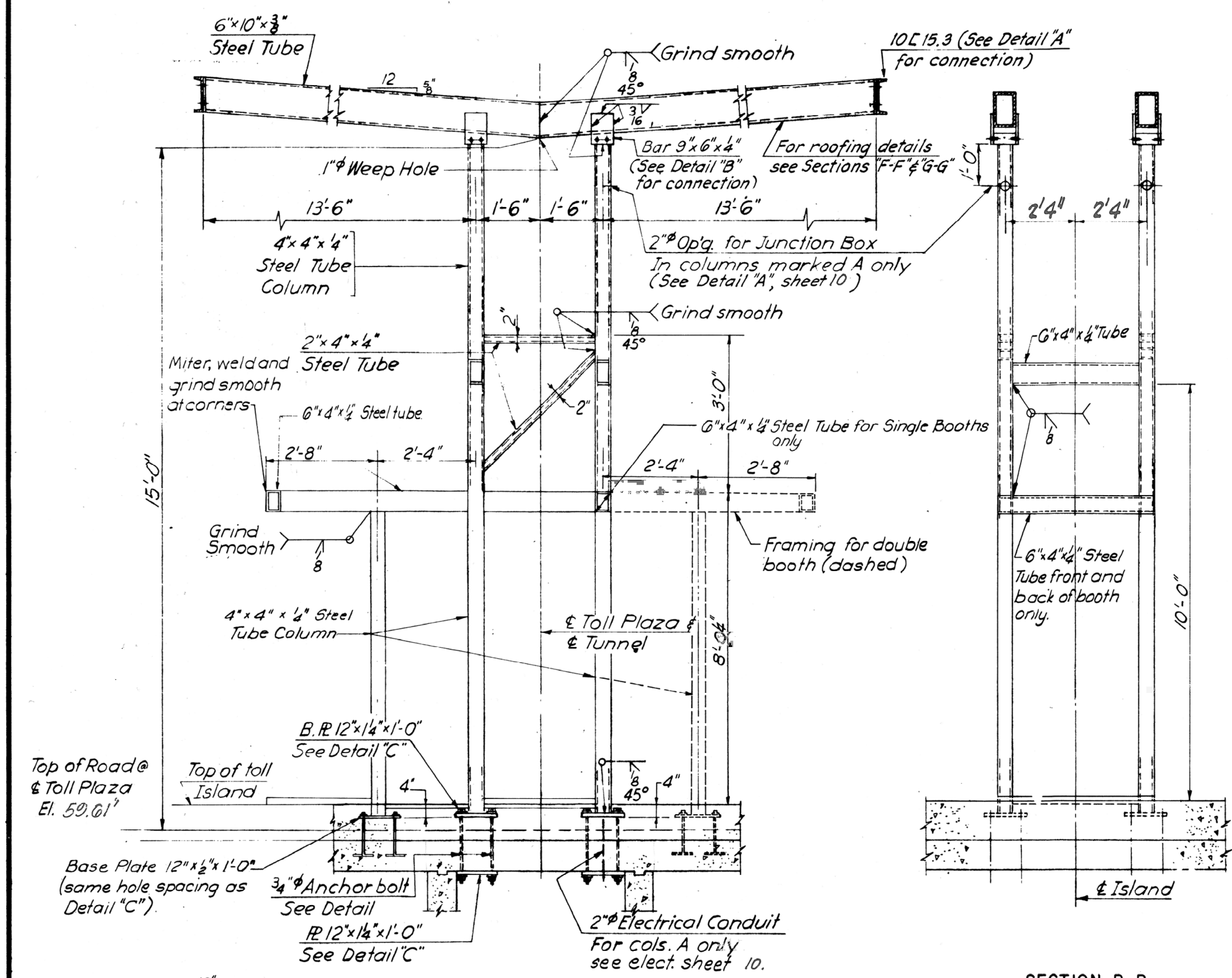
TOLL BOOTHS
 ELEVATIONS & SECTIONS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 BOSTON

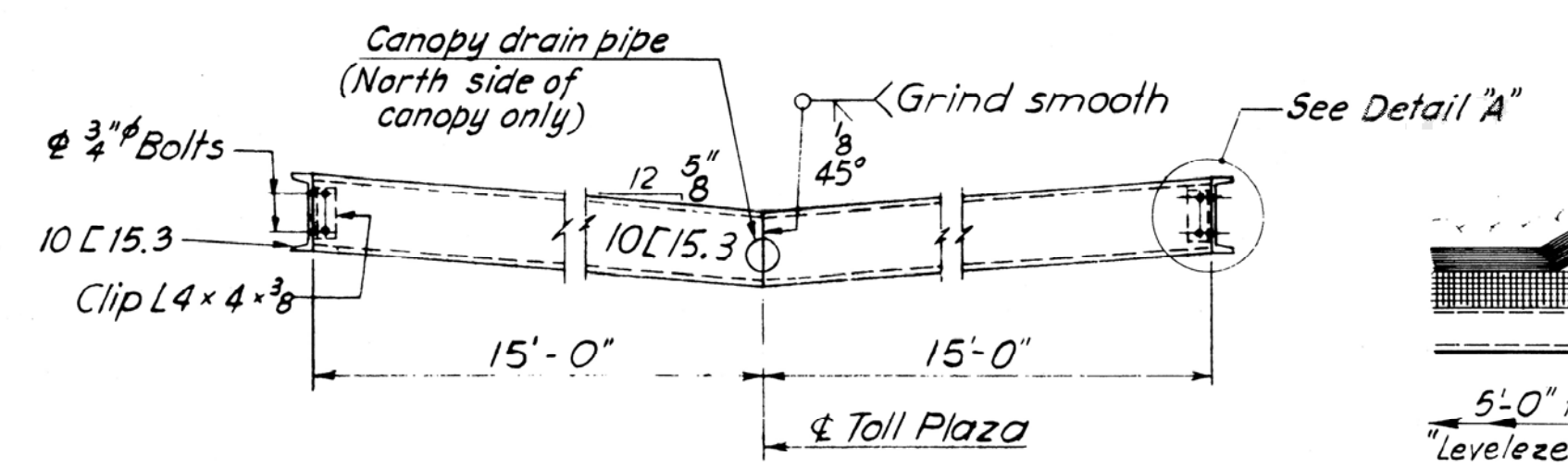
SCALE:
 SHEET NO. 7



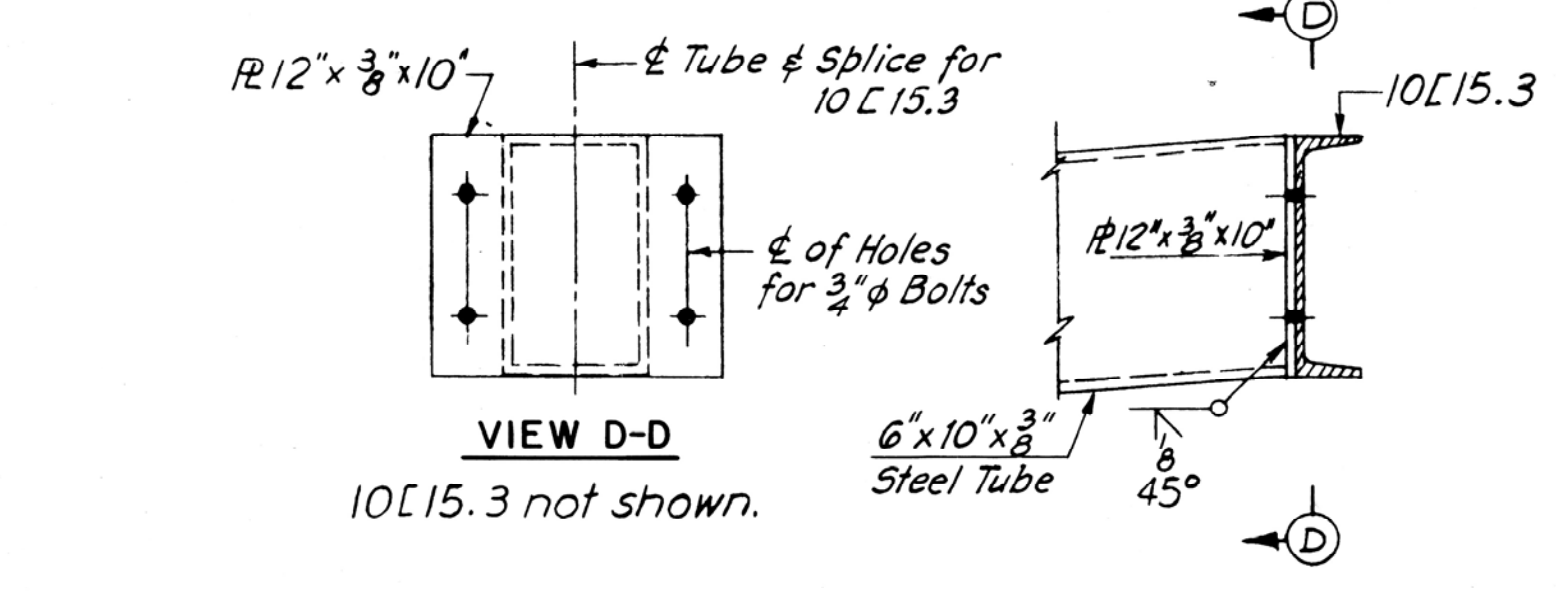
CANOPY FRAMING PLAN



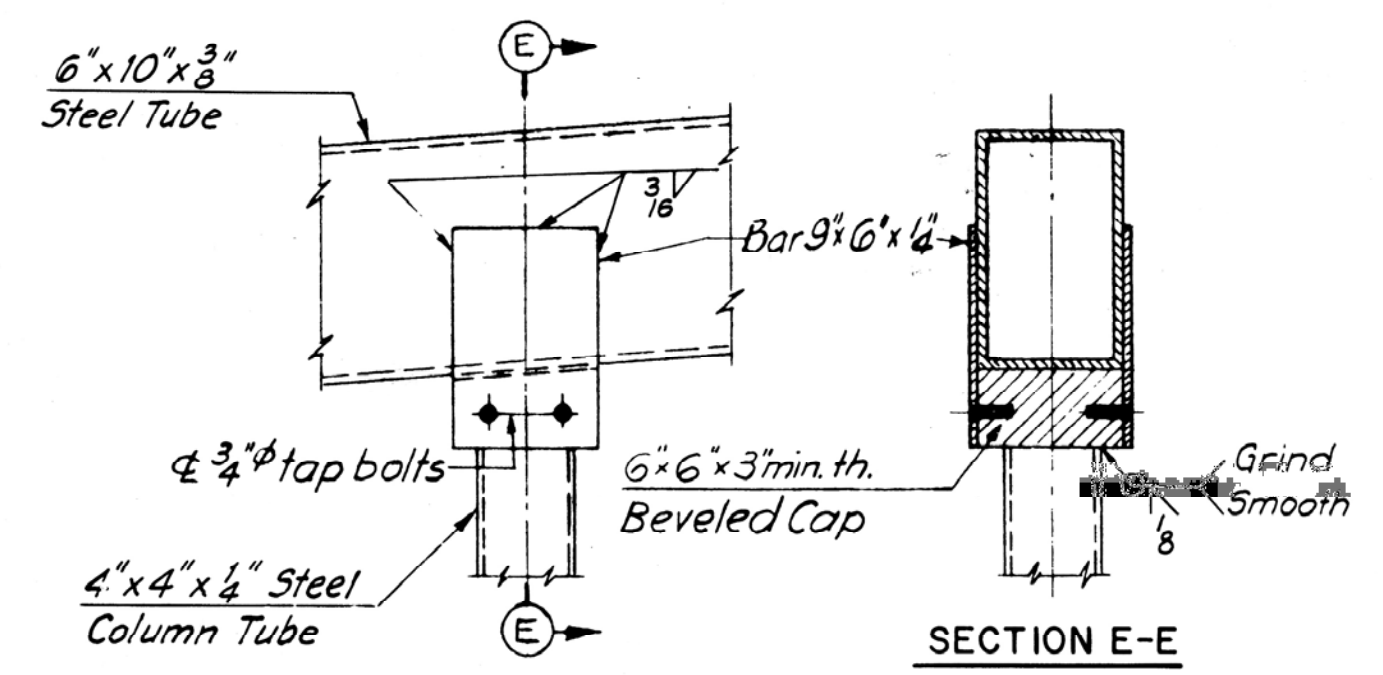
BOOTH & CANOPY FRAMING ELEVATIONS



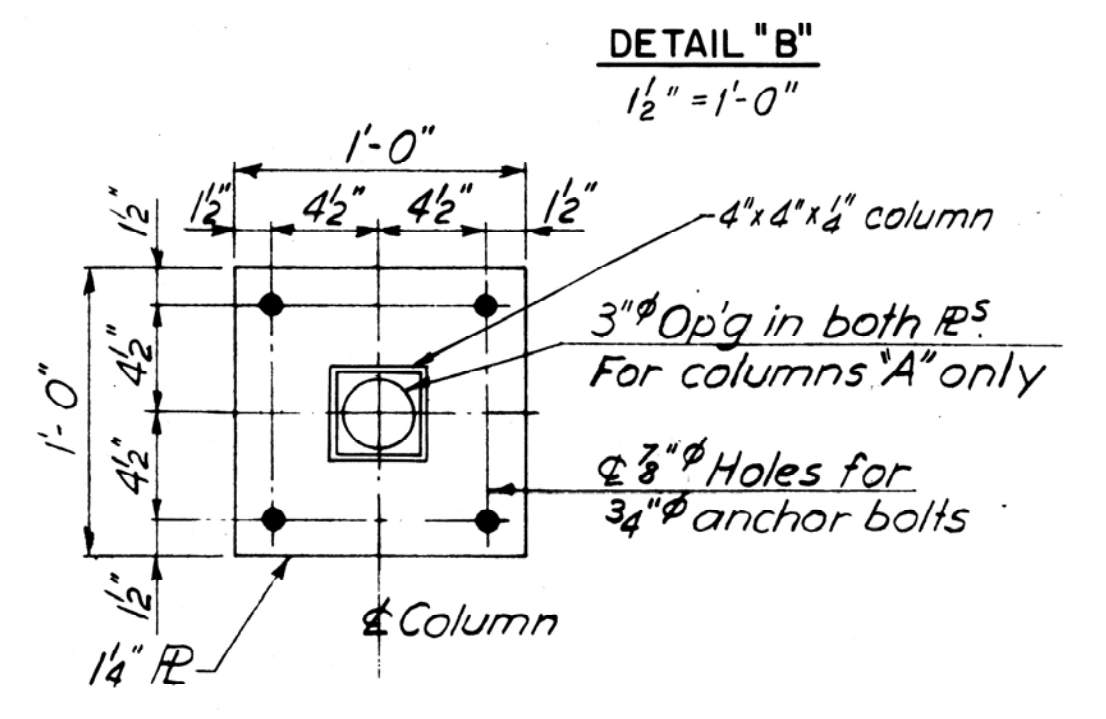
VIEW C-C
1/2" = 1'-0"



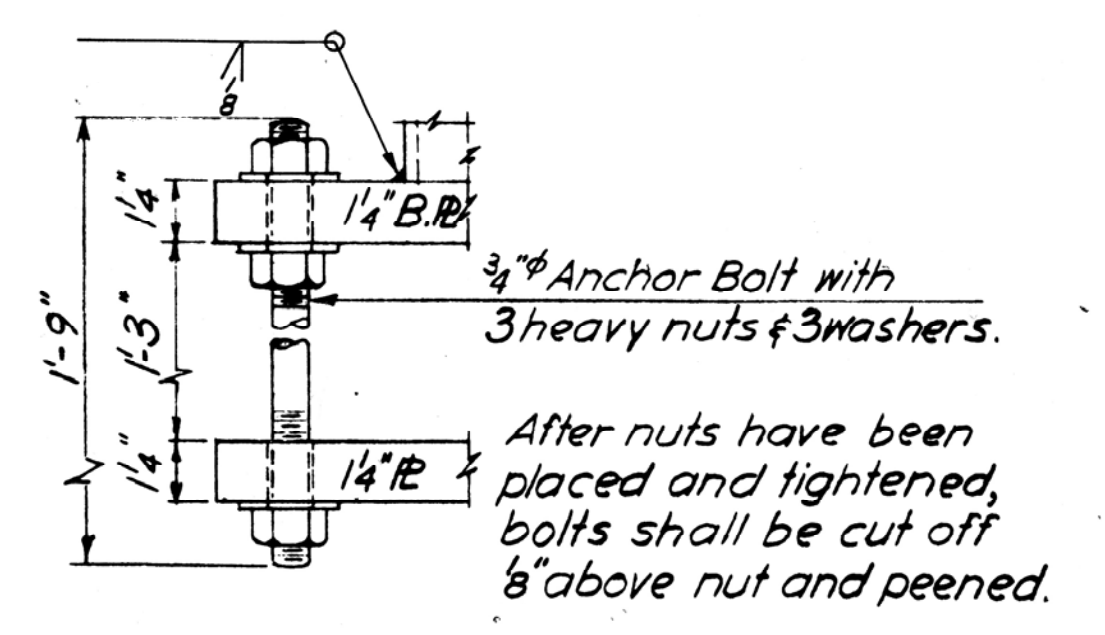
VIEW D-D
10L15.3 not shown.



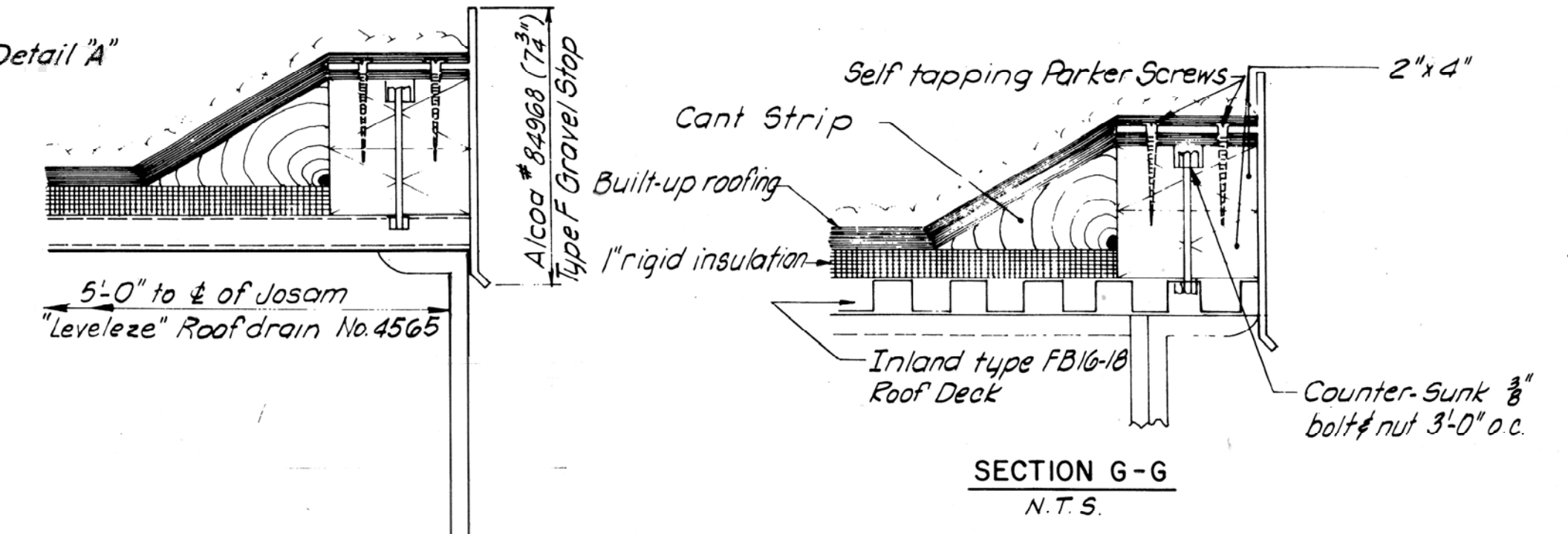
SECTION E-E



DETAIL "B"

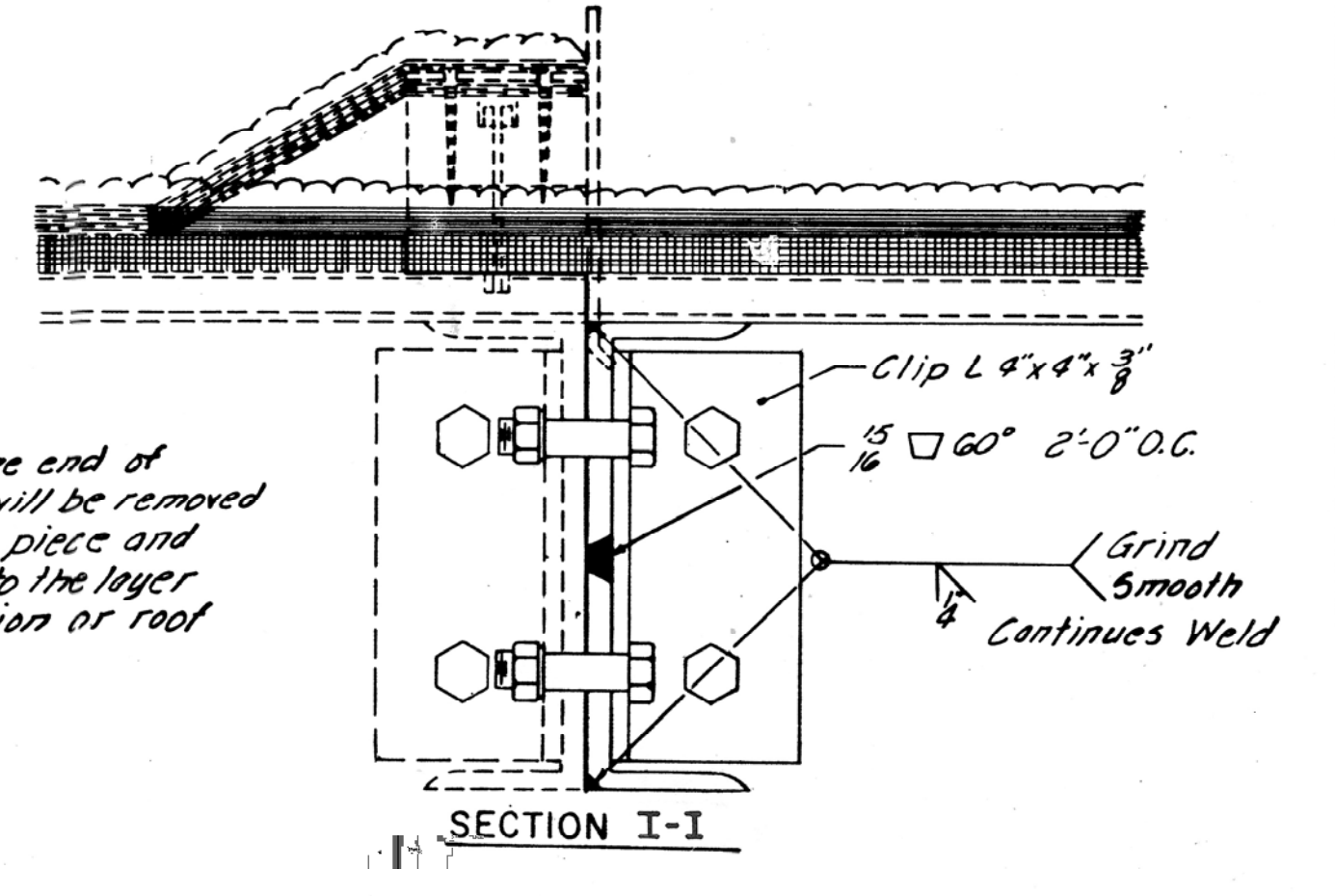


ANCHOR BOLT DETAILS
3" = 1'-0"



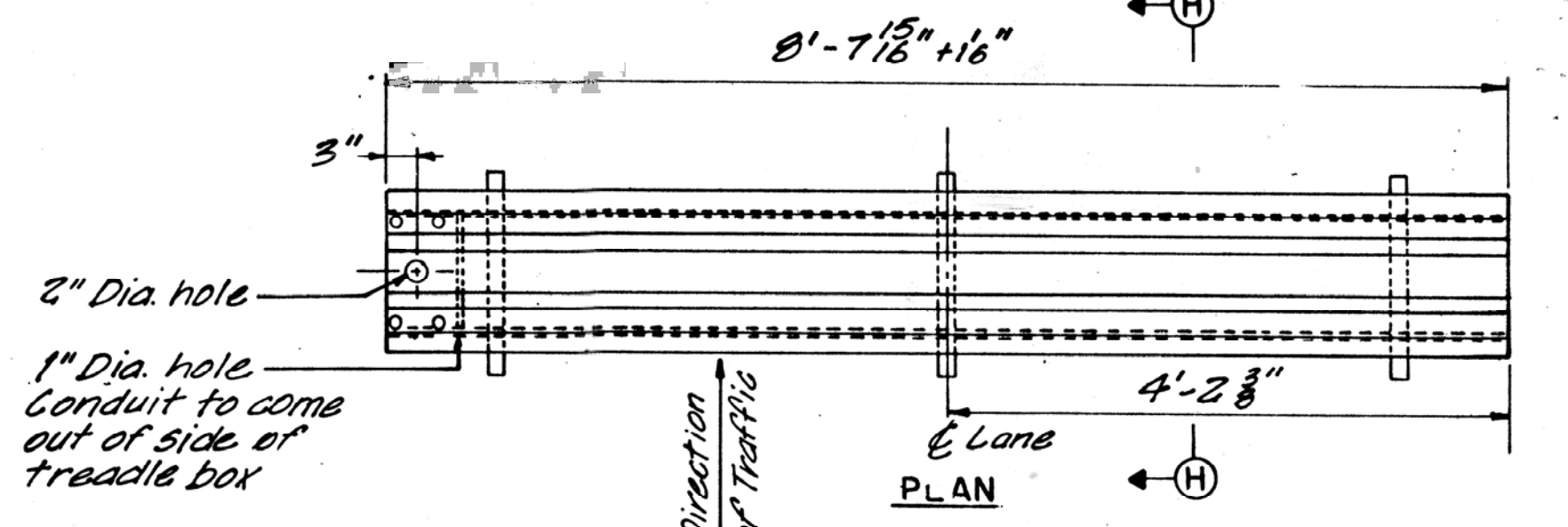
SECTION G-G
N.T.S.

SECTION F-F
N.T.S.



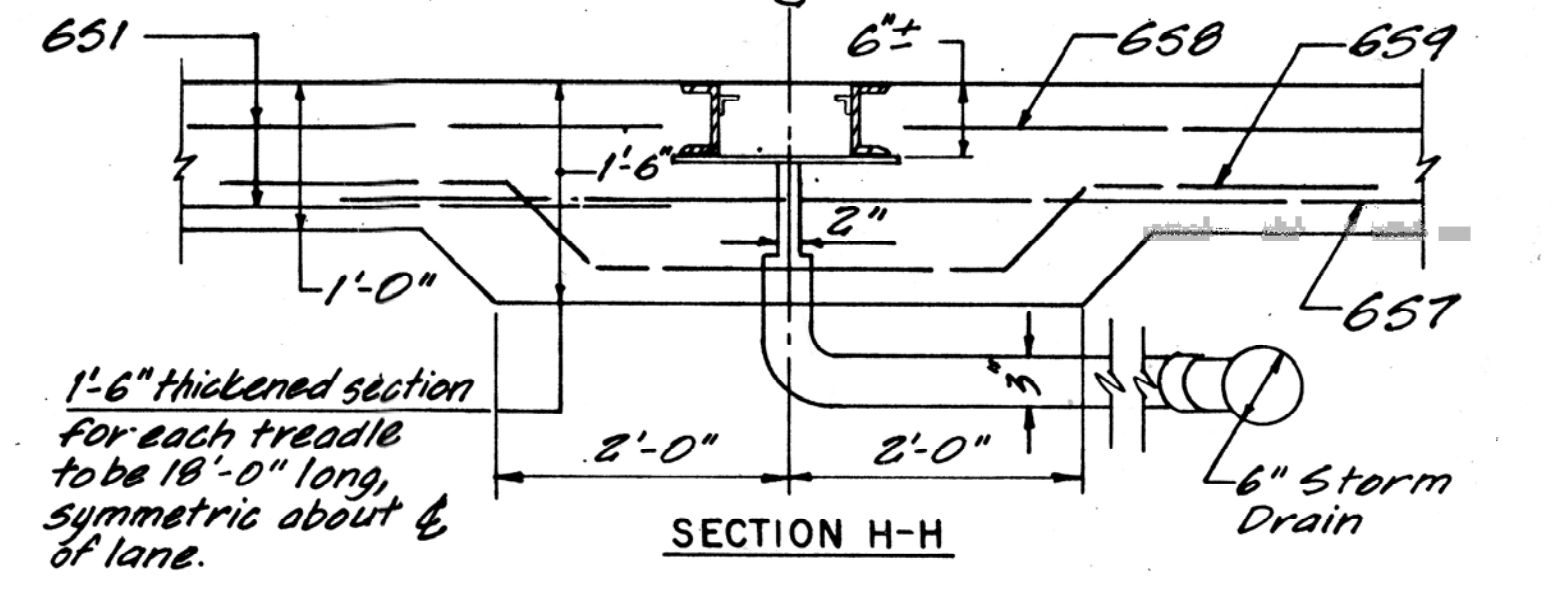
SECTION I-I

Note: Water stops at the end of existing Canopy will be removed back to the cant piece and stripped down to the layer of rigid insulation of roof deck.



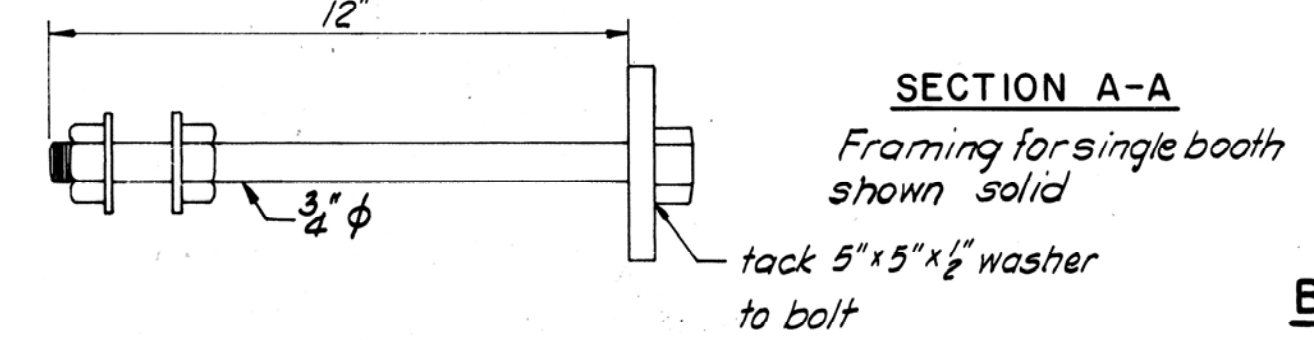
LANE PLAN

Treadle frame to be as manufactured by Automatic Toll Systems Inc. or approved equal. Dimension for drain and electrical connection to be verified with frame manufacturer.



SECTION H-H

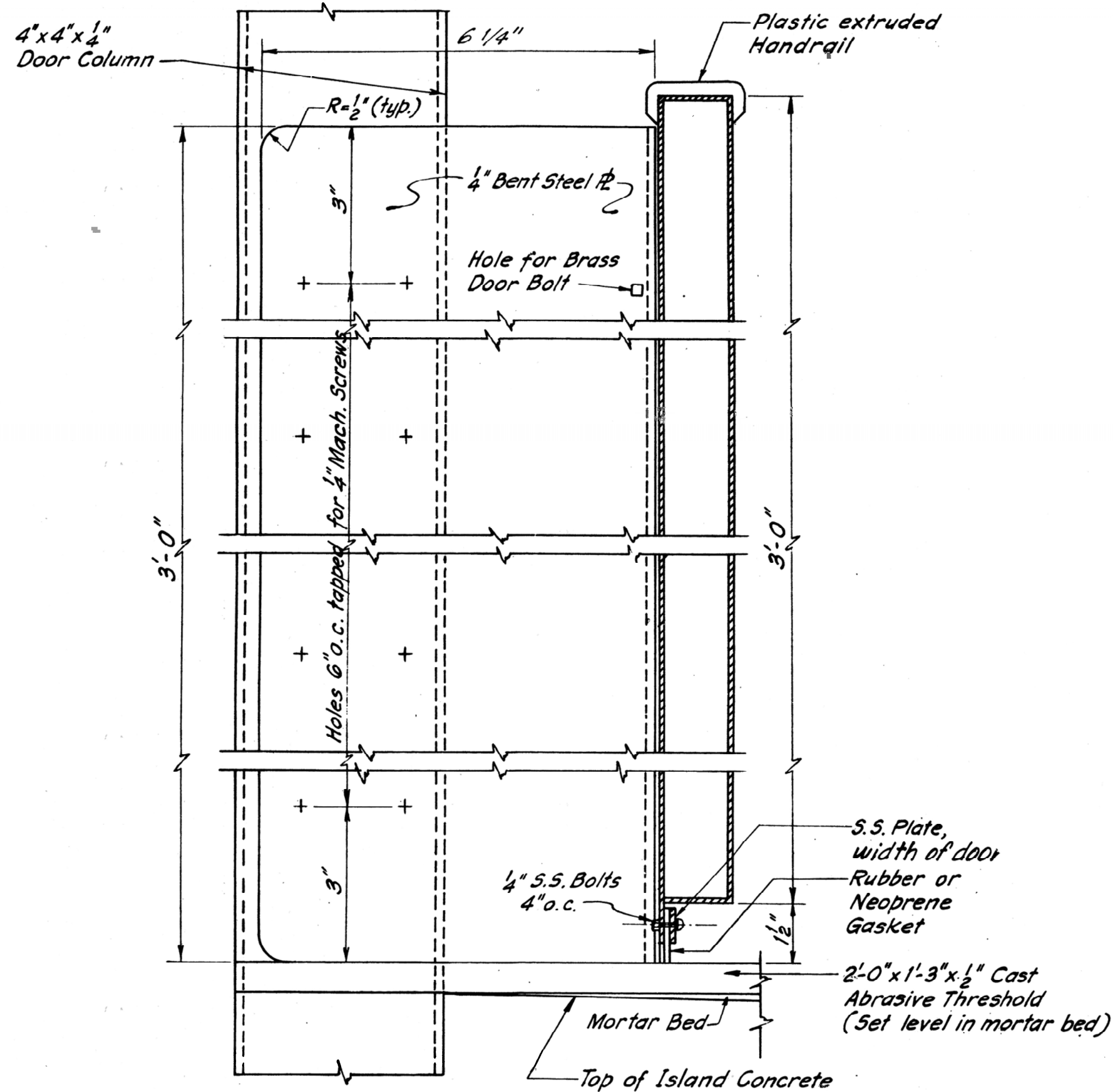
8 FT. TREADLE FRAME INSTALLATION



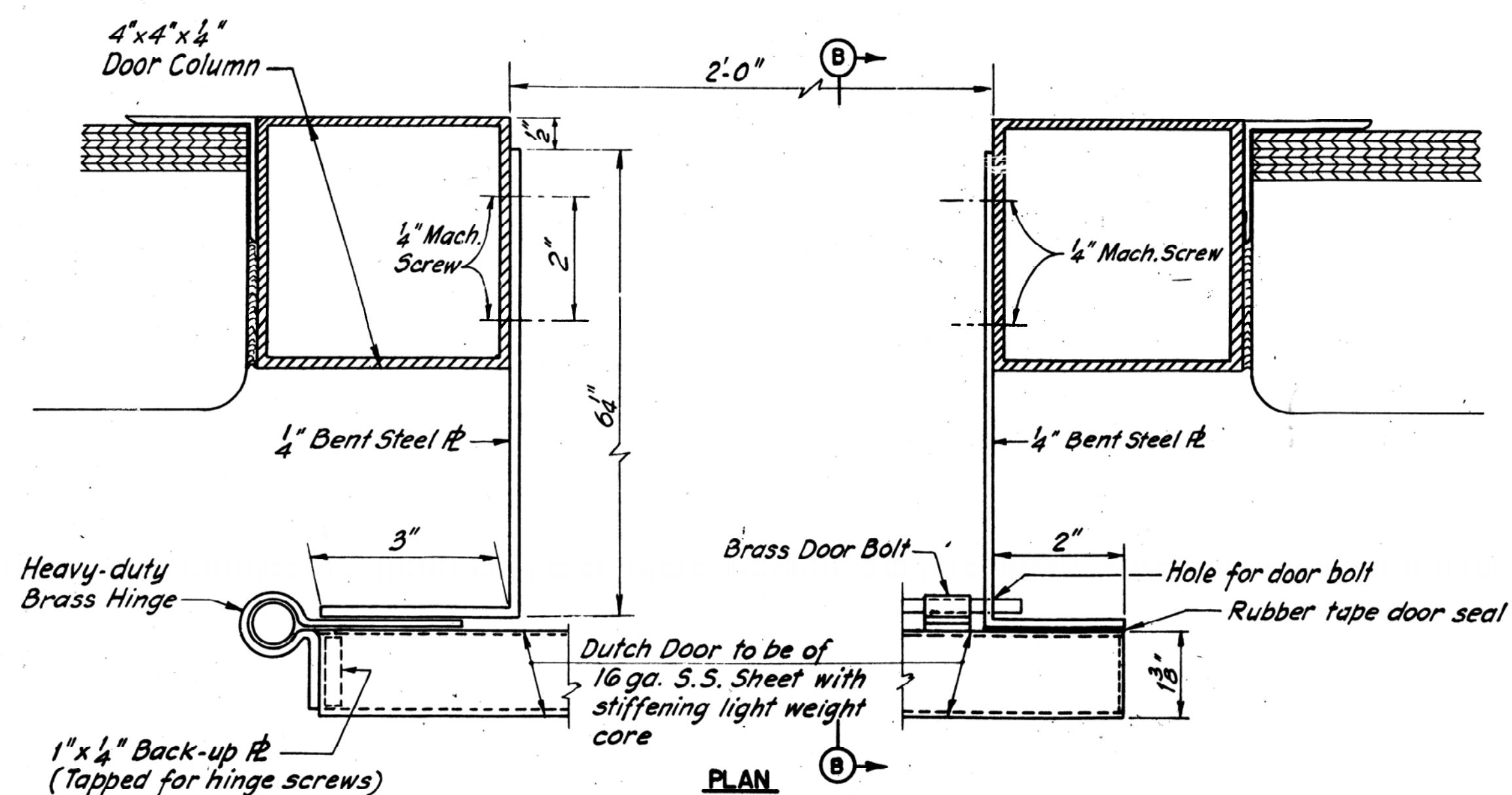
SECTION A-A
Framing for single booth shown solid

ANCHOR BOLT FOR 1/2" BASE PLATE

MAINE TURNPIKE AUTHORITY	
MAINE TURNPIKE	
TOLL BOOTHS & CANOPY FRAMING & DETAILS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS BOSTON	SCALE: SHEET NO. 6

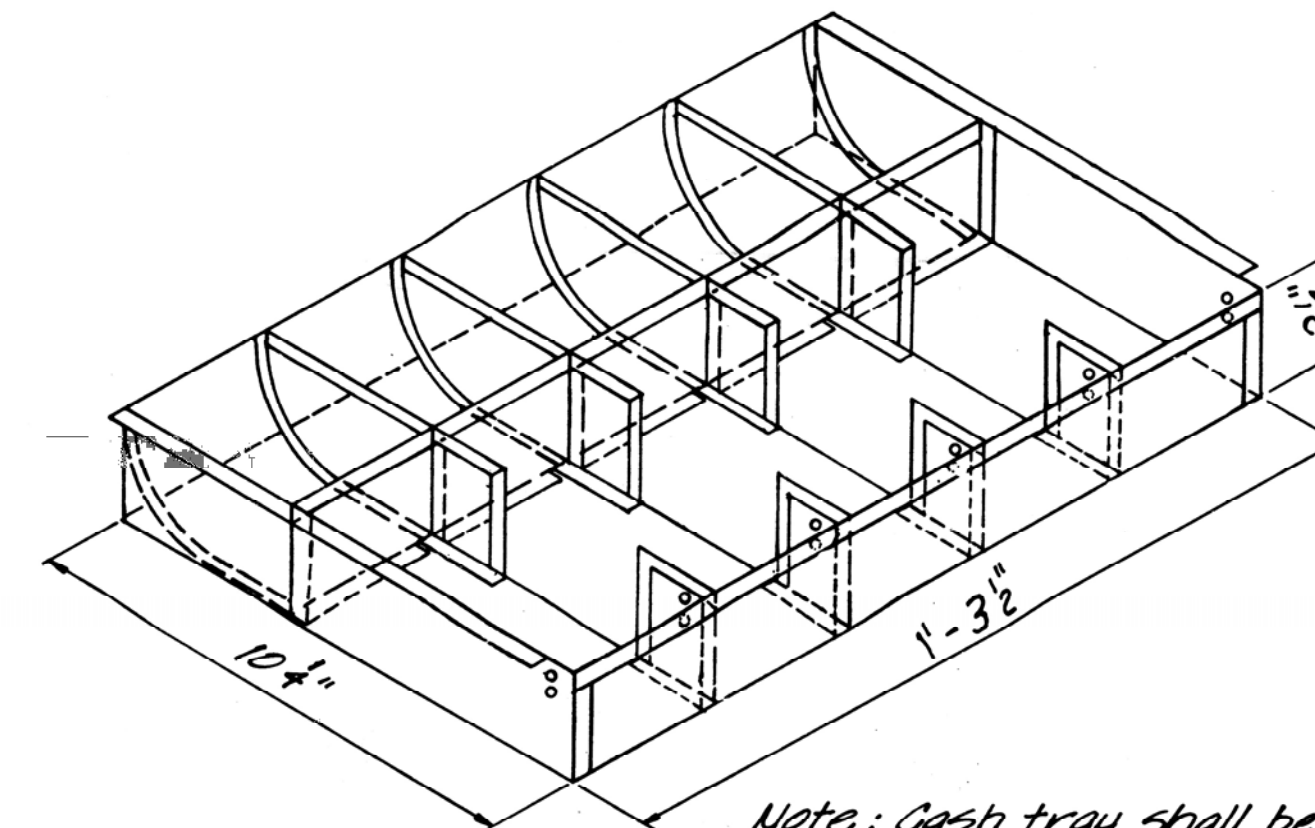


SECTION B-B



DUTCH DOOR DETAILS

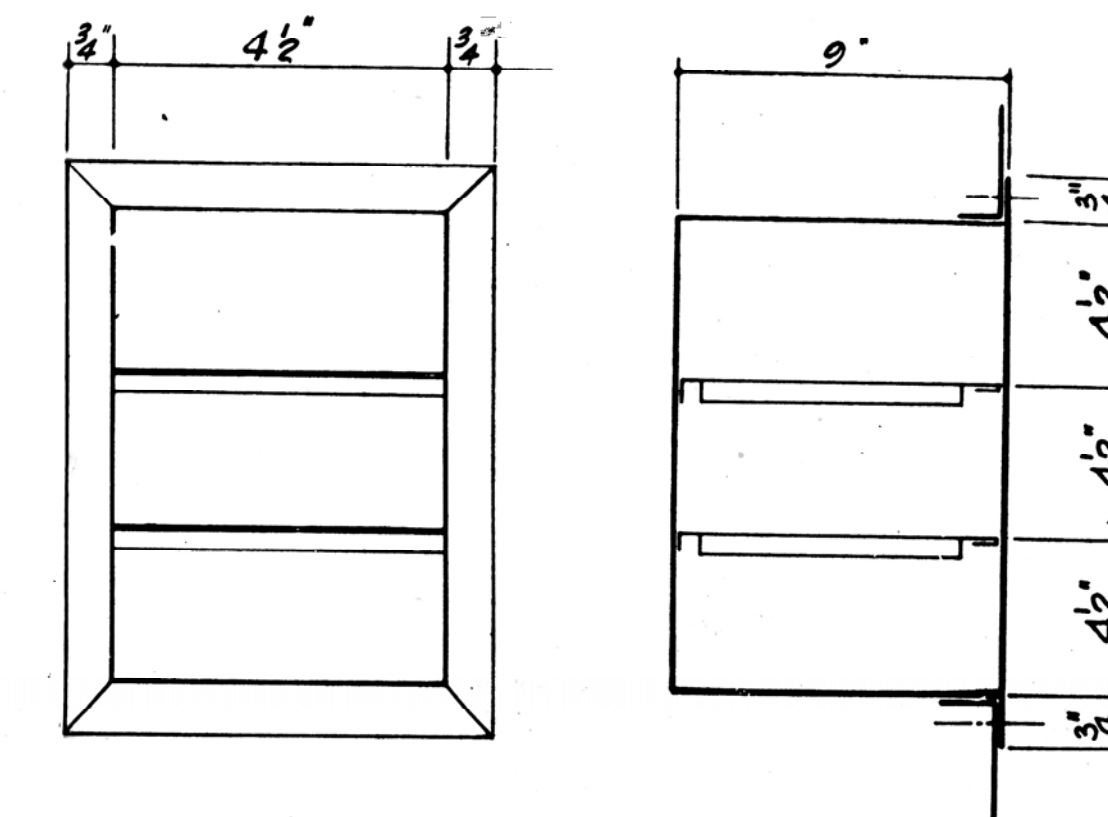
Half Size



CASH TRAY INSERT

3'-1'-0"

Note: Cash tray shall be Model 18-T as manufactured by Indiana Cash Drawer Co.

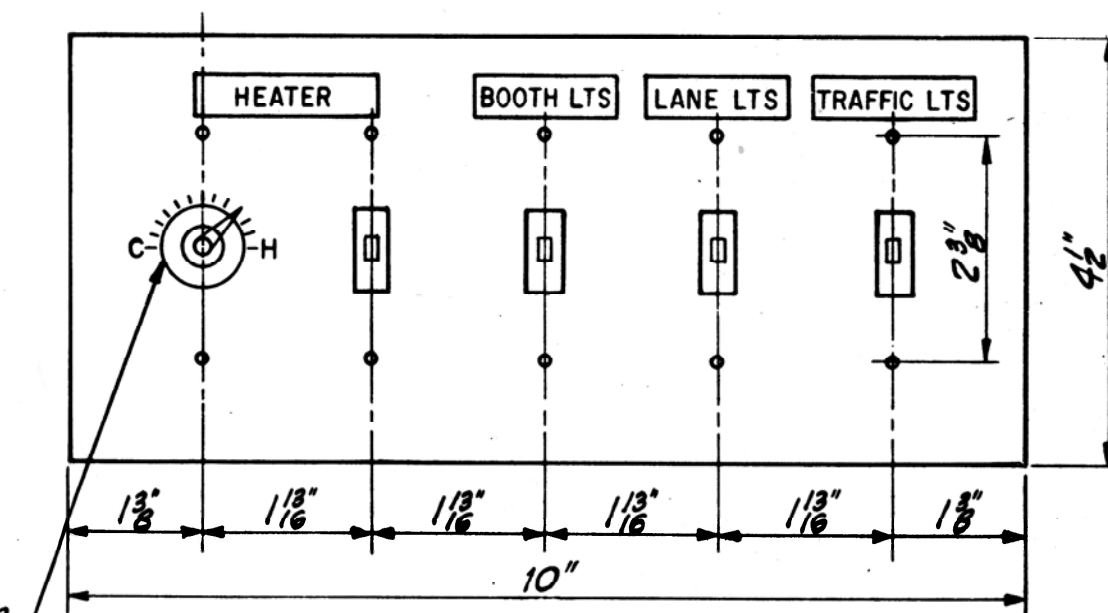


ELEVATION

SECTION

MAP & PAPER RECEPTACLE

Not to Scale



Modulation, Valve Control (See Heating Specification)

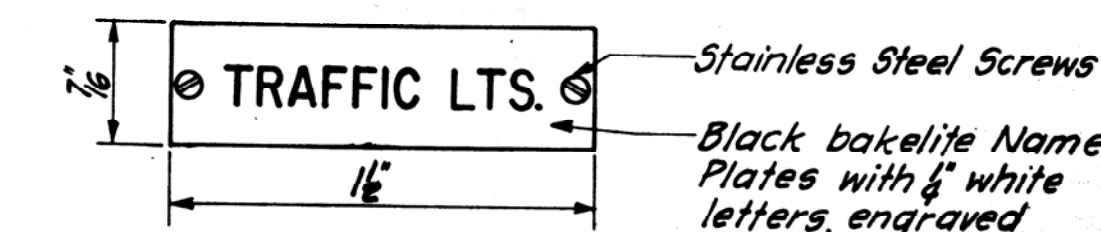
SWITCH PANEL PLATE DETAIL

Half Size

Note: Plate shall be Stainless Steel .040" Recessed 3/8" into face of Counter.

SWITCH SCHEDULE:

- Heater - 20A (Furnished by Heating Mfg.)
- Double Booth Lts - 20A - 2-pole Hubbell Cat. No. 2972
- Single Booth Lts - 20A - 1-pole Hubbell Cat. No. 2971
- Lane Lts - 30A - 1-pole Hubbell Cat. No. 2923
- Traffic Lts - 20A - 3-way Hubbell Cat. No. 2973, or 20A - 1-pole Hubbell Cat. No. 2971 as req'd.

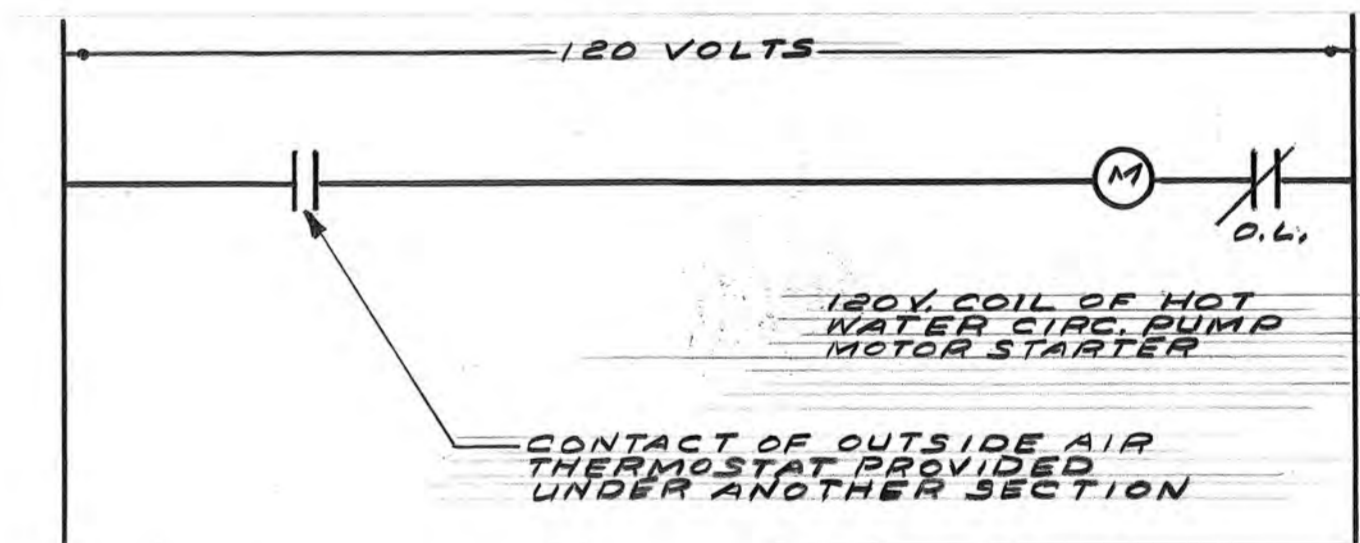
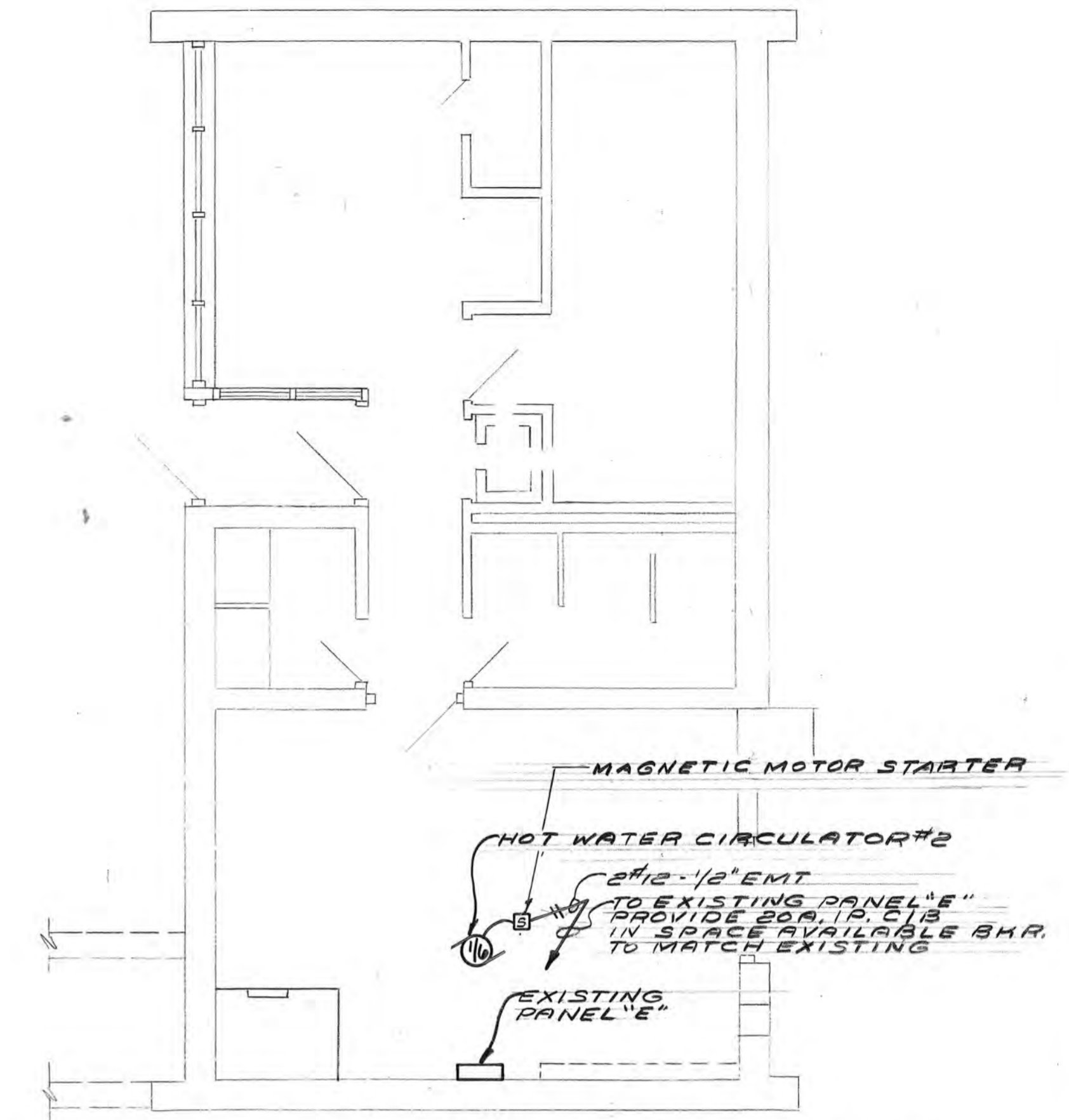
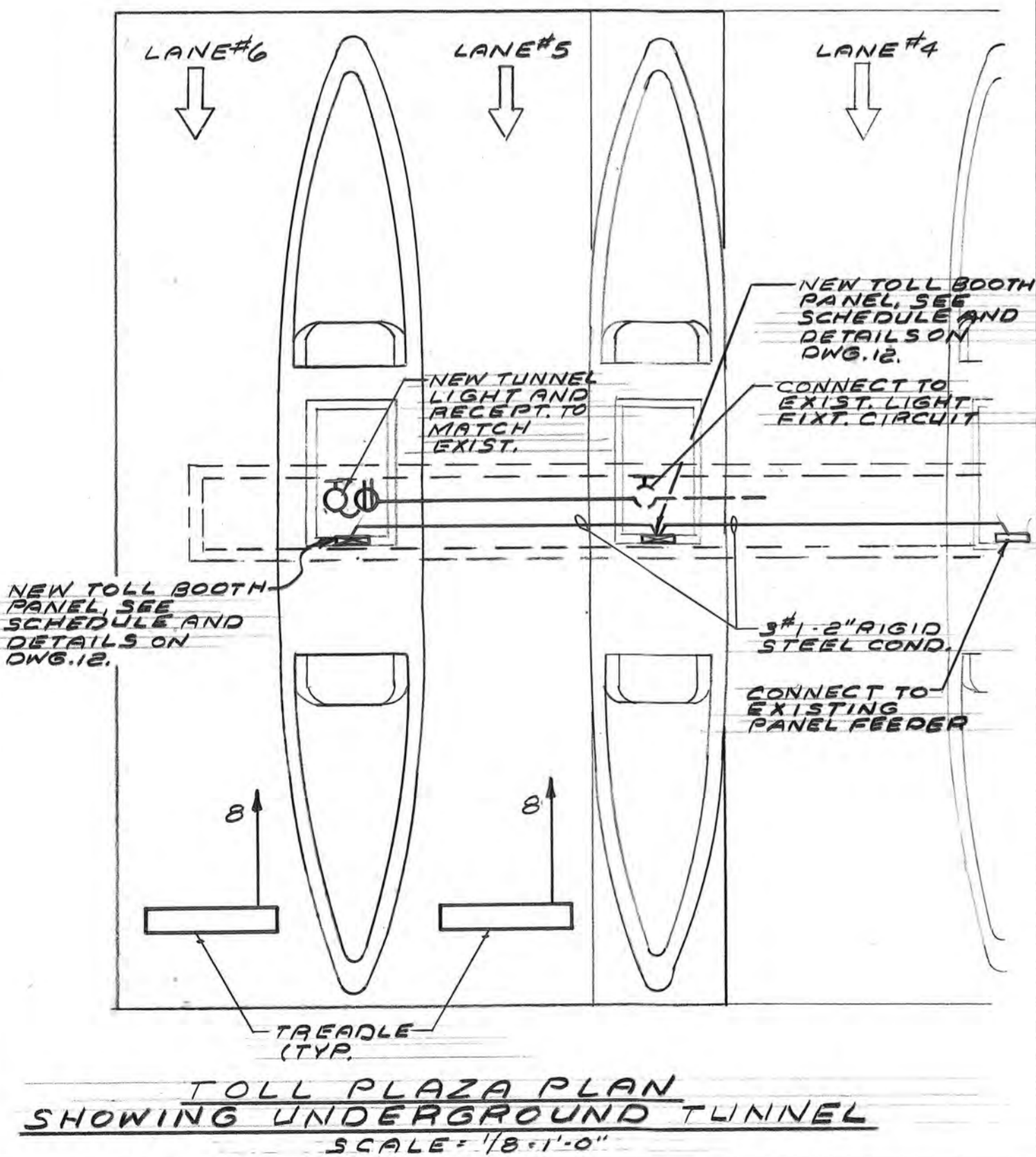
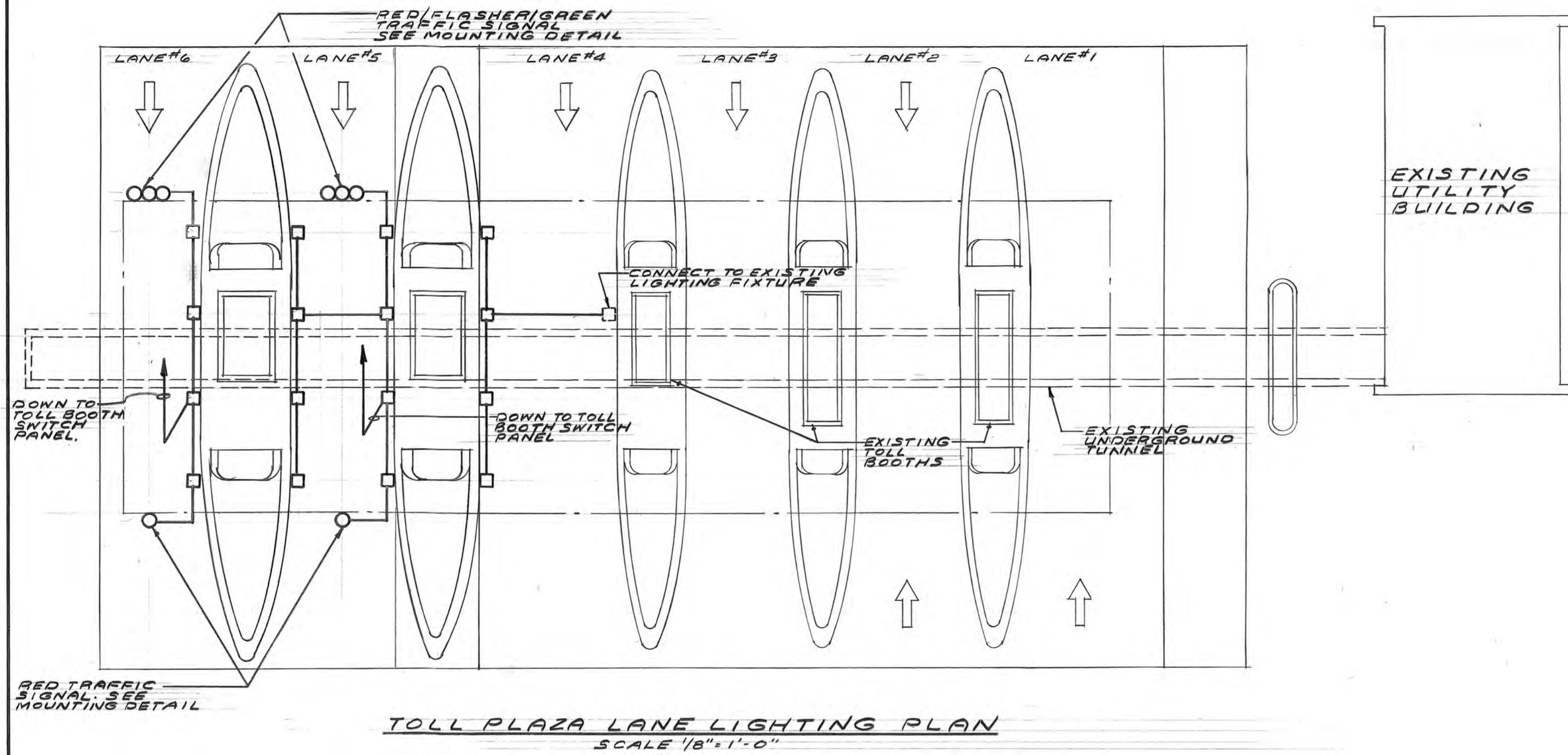


TYPICAL NAME PLATE

No Scale

NO.	REVISION	BY	DATE
		MADE	R.W.B. 8-22-83
		TRACED	C.J.W. 8-22-83
		CHECKED	K.A.L. 8-22-83
		IN CHARGE OF	J.P.W.

MAINE TURNPIKE AUTHORITY MAINE TURNPIKE	
MISCELLANEOUS DETAILS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS BOSTON	SCALE: SHEET NO. 9



NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	R.J.M.	
		TRACED	R.J.M.	
		CHECKED	R.J.H.	

STATE OF MAINE
 RAIMUND G. VANDERWEIL, JR.
 3702
 REGISTERED PROFESSIONAL ELECTRICAL ENGINEER

R.G. Vanderweil Engineers, Inc.
 38 Chauncy Street, Boston, Massachusetts 02111

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

TOLL PLAZA PLANS
 ELECTRICAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 BOSTON

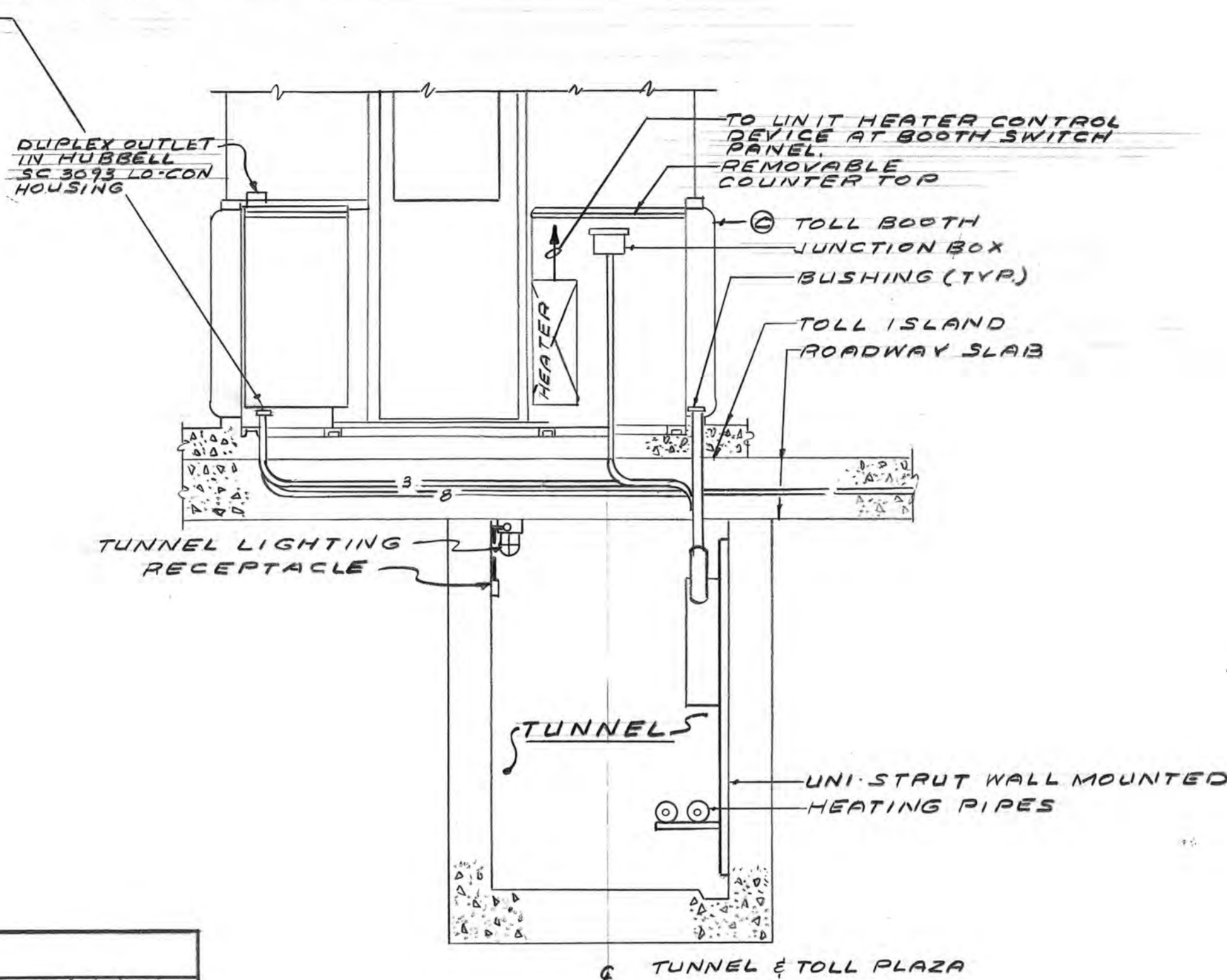
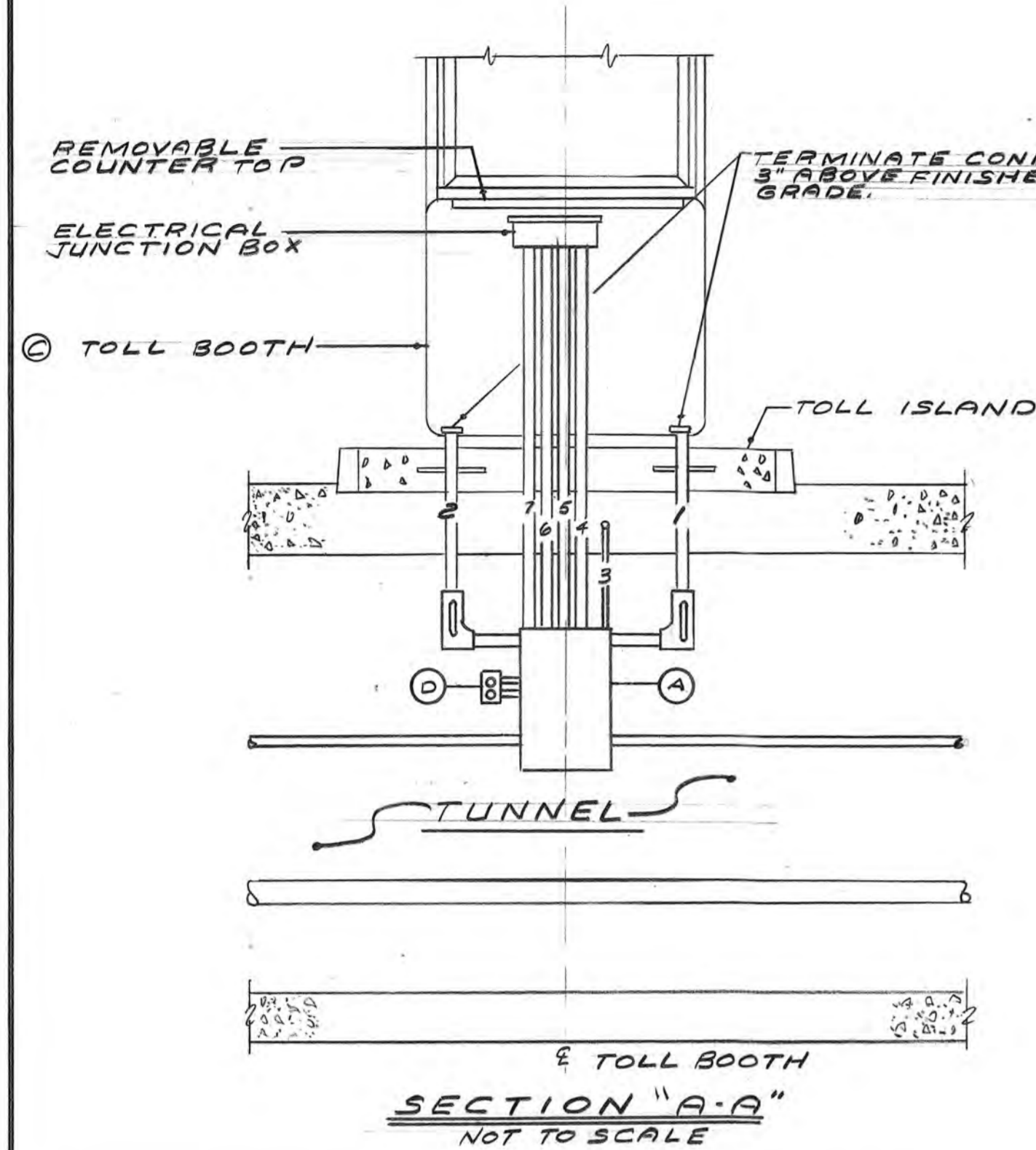
SCALE:
 SHEET NO. 11

TOLL PLAZA EQUIPMENT SCHEDULE

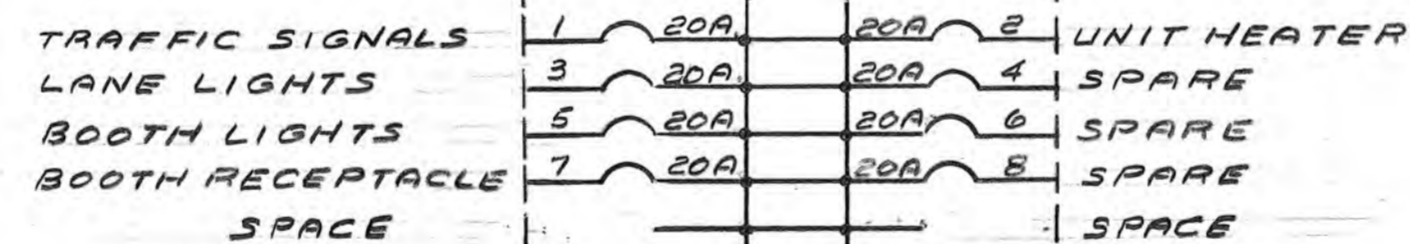
- Ⓐ TOLL ISLAND CIRCUIT BREAKER PANEL
- Ⓑ BOOTH HEATING UNIT
- Ⓒ TOLL BOOTH
- Ⓓ DUPLEX RECEPTACLE IN F.D. BOX TO MATCH EXISTING

NOTES

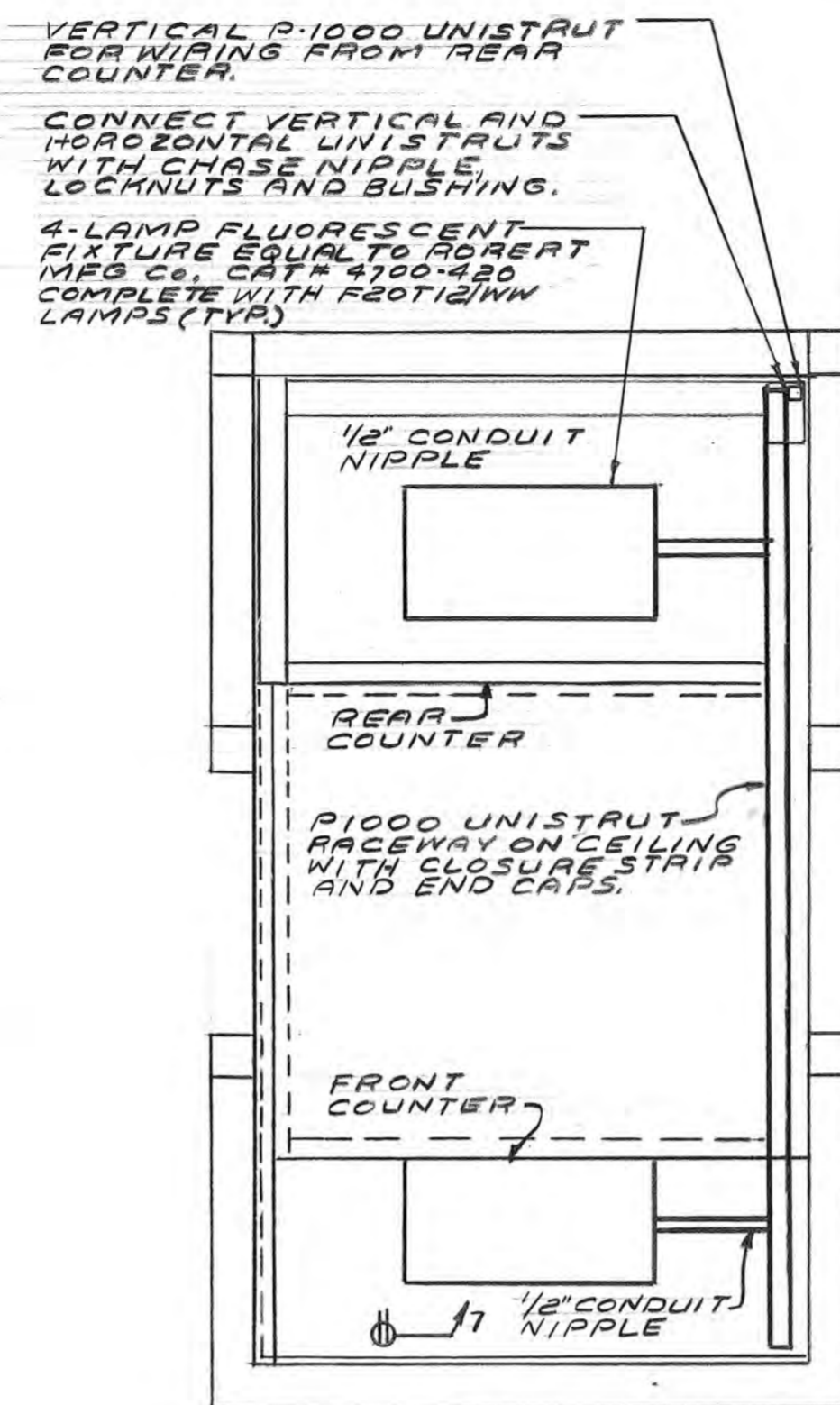
1. ALL HORIZONTAL RUNS SHALL BE INSTALLED IN TUNNEL ROOF OR ROADWAY SLAB. ALL VERTICAL RUNS FROM PANEL BOXES ON TUNNEL WALL TO ROOF SLAB SHALL BE EXPOSED.
2. CONTINUE THE EXISTING UNISTRUT SUPPORT SYSTEM COMPLETE WITH NEW CHANNEL FITTINGS AND CONNECTIONS FOR MOUNTING CONDUITS AND PIPING.
3. BOTH ENDS OF ALL CONDUITS SHALL BE IDENTIFIED WITH BRASS WRAP-AROUND TAGS EMBOSSED WITH 1/4" HIGH NUMBERS. TAGS SHALL BE EQUAL TO SETON NAME PLATES CO.'S CABLE MARKERS.
4. CONDUIT IN BACK OF BOOTH TO BE LOCATED IN CONJUNCTION WITH SPACE REQUIREMENTS FOR MECHANICAL EQUIPMENT.



SECTION "B-B"
SCALE: 1/2" = 1'-0"



TYPICAL TOLL ISLAND CIRCUIT BREAKER PANEL ARRANGEMENT

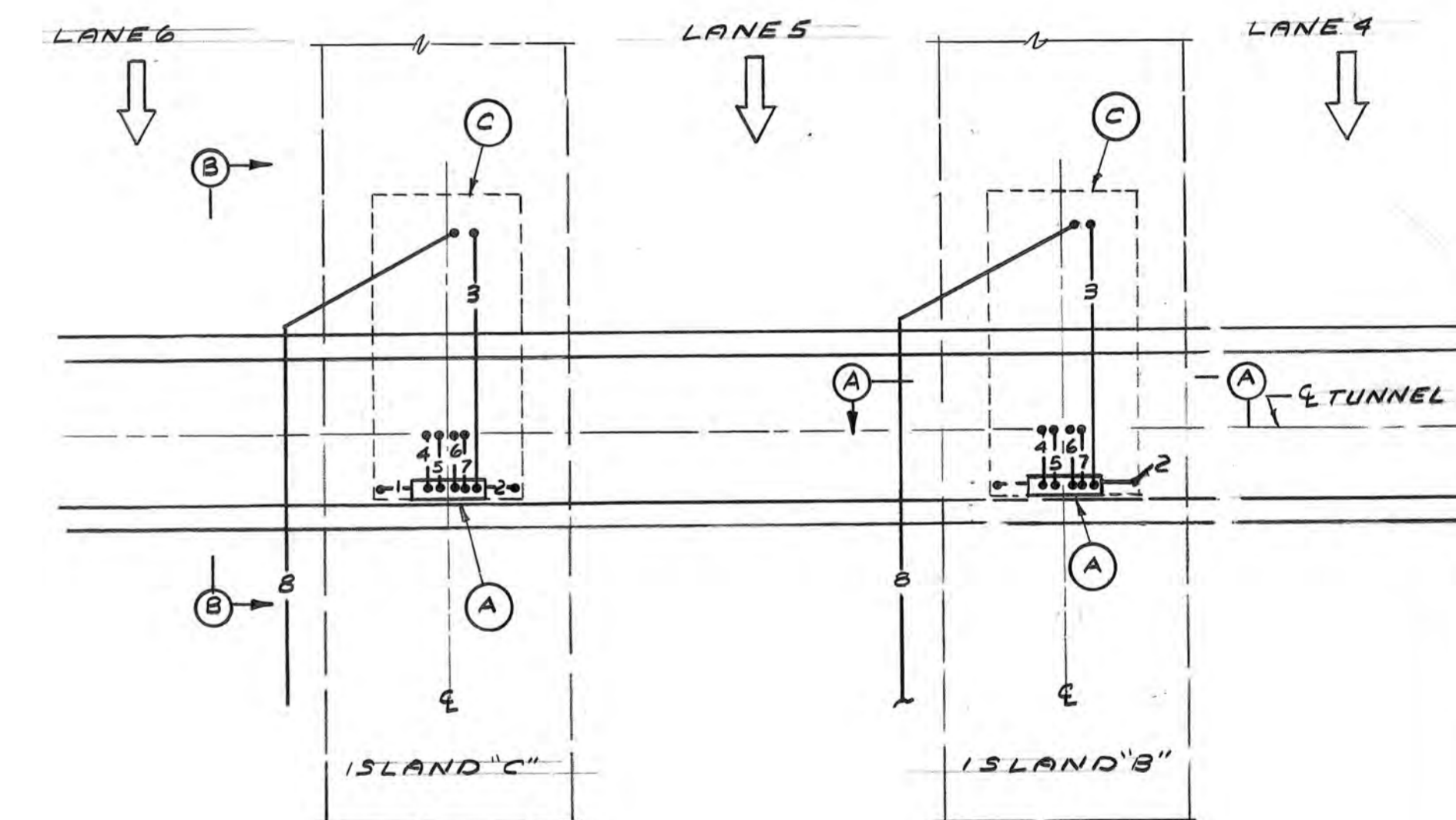


TOLL BOOTH LIGHTING PLAN
SCALE: 3/4" = 1'-0"

SYMBOL LIST	
SYMBOL	DESCRIPTION
○	LIGHTING FIXTURES
—	BRANCH CIRCUIT WIRING SEE SPECIFICATIONS
—	CIRCUITRY TURNING UP
—	CIRCUITRY TURNING DOWN
⊕	DUPLEX RECEPTACLE, 125 V. 2P. 3W 20A. GROUNDING TYPE.
⊙	MOTOR, PROVIDED UNDER ANOTHER SECTION.

CONDUIT SCHEDULE			
CONDUIT NO.	DESIGNATION	FOR	CONDUIT SIZE
1	RED-GREEN SIGNAL LIGHTS AND LANE LIGHTS	CANOPY	1 1/4"
2	SPARE	CANOPY	1 1/4"
3	BOOTH DUPLEX RECEPTACLE	BOOTH	1"
4	UNIT HEATER CONTROLS	BOOTH	1"
5	RED-GREEN SIGNAL LIGHTS AND LANE LIGHTS	BOOTH	1 1/4"
6	BOOTH LIGHTS	BOOTH	1"
7	SPARE	BOOTH	1 1/4"
8	TREADLE	BOOTH	1 1/2"

PANELBOARD SCHEDULE									
No.	BKR OR FUSE		MAIN BUS		MAKE	CATALOG NO	MOUNTING LOCATION	REMARKS	
	NO.	POLE	AMP	AMP					
	8	1	20						
PANEL TYPE FOR WIRING				100	120/240	SQUARE D	NQ08-3L	SURFACE IN TUNNEL	

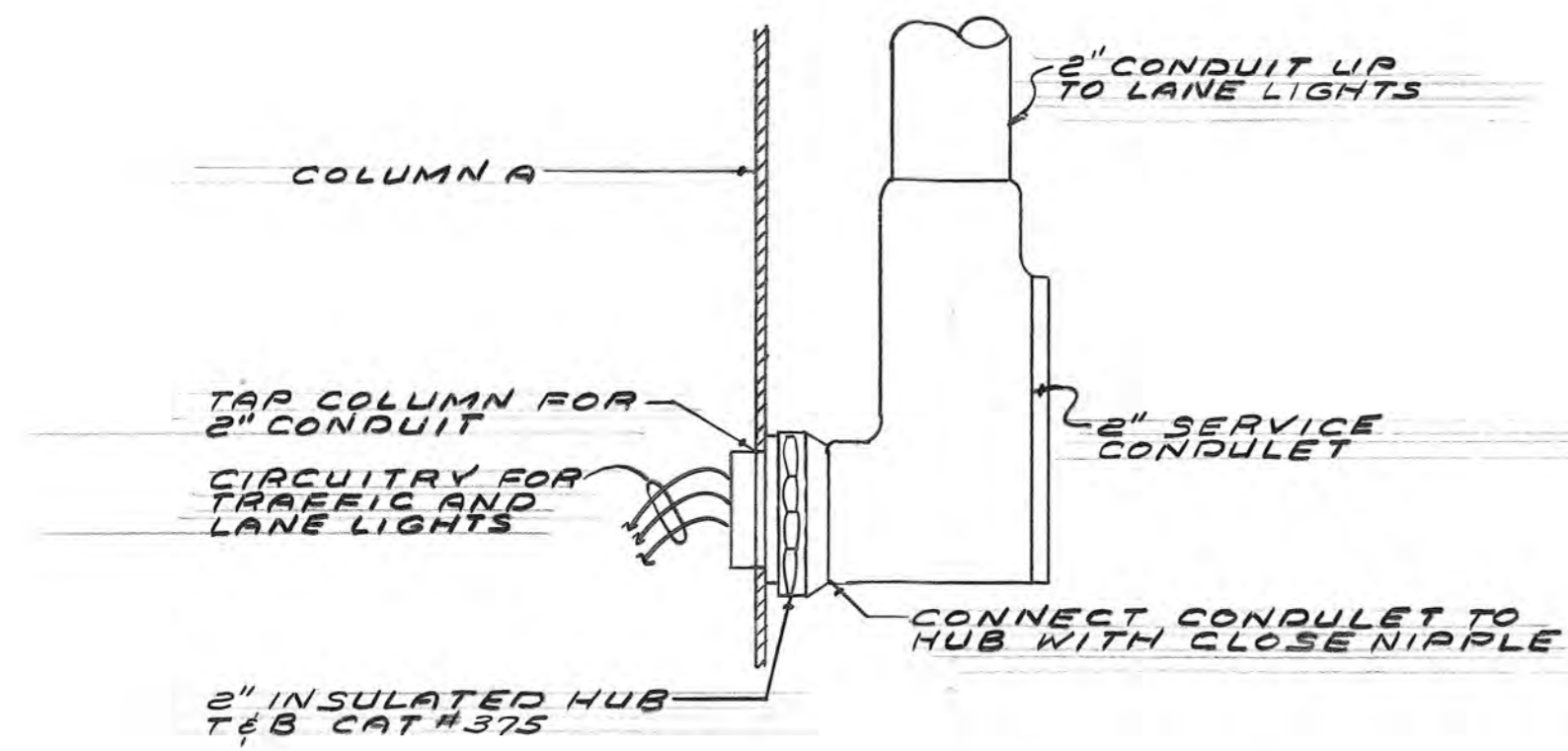


PLAN OF CONDUIT ROUTING
SCALE: 1/4" = 1'-0"

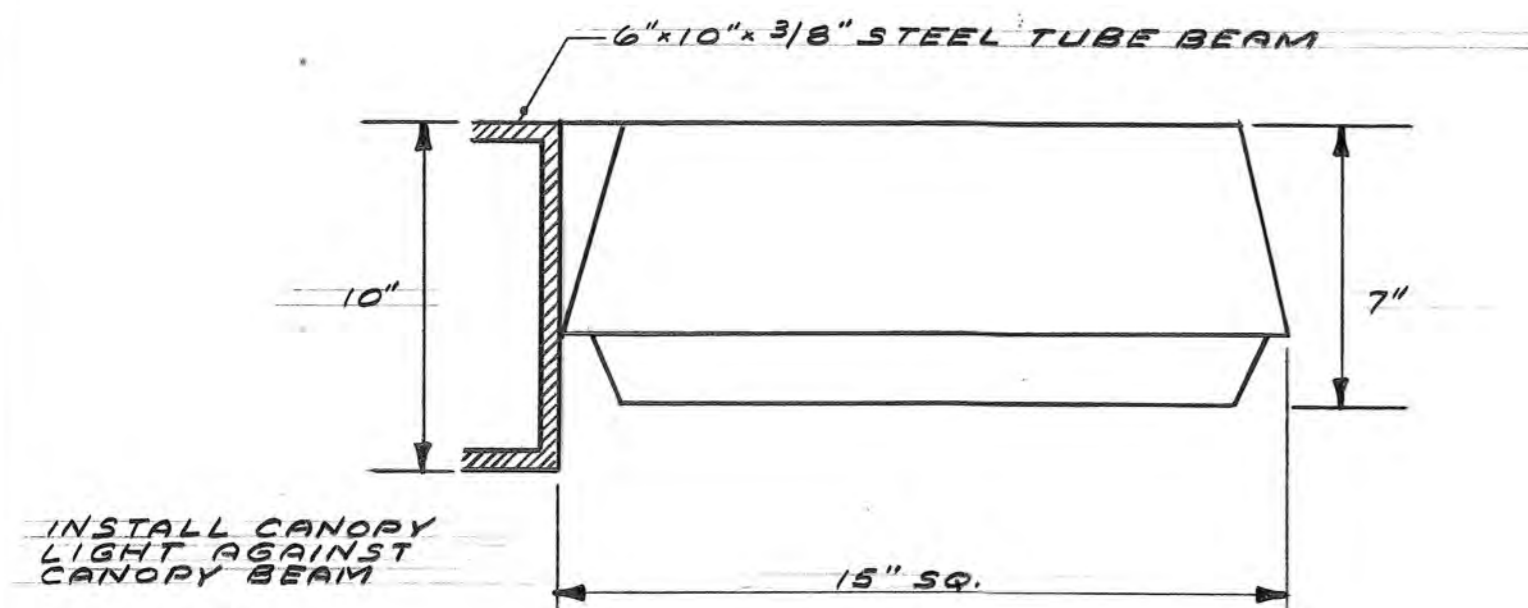
NO.	REVISION	BY	DATE
		MADE	A.J.M.
		TRACED	A.J.M.
		CHECKED	A.J.N.
		IN CHARGE OF	<i>Ray Miller</i>

STATE OF MAINE
 RAIMUND G. VANDERWELL, JR.
 3702
 REGISTERED PROFESSIONAL ENGINEER
 R.G. Vanderwell Engineers, Inc.
 38 Chauncy Street, Boston, Massachusetts 02111

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 TOLL BOOTH DETAILS
 ELECTRICAL
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 BOSTON
 SCALE:
 SHEET NO. 12

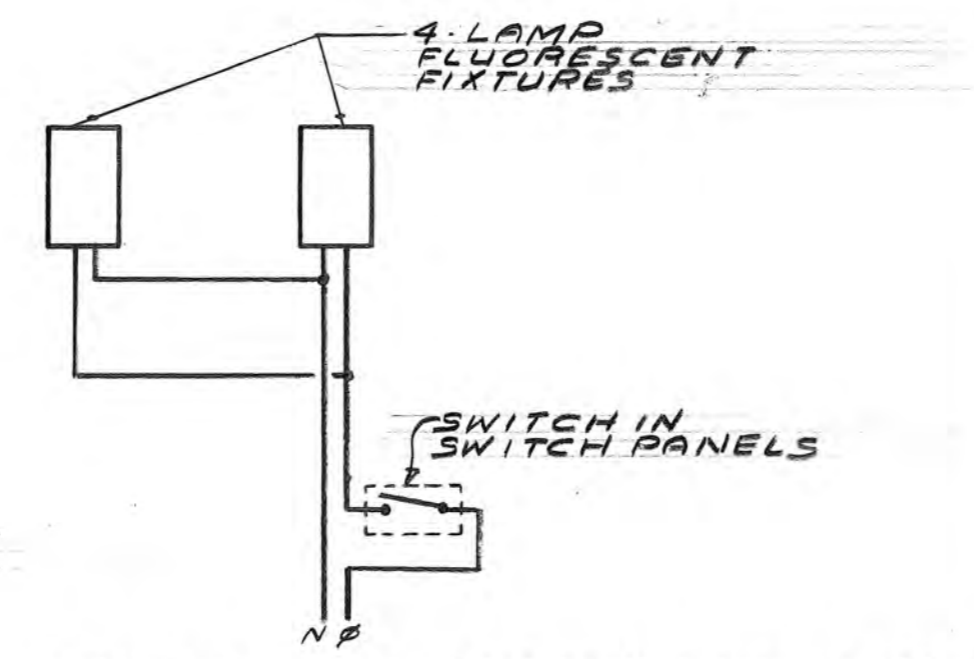


DETAIL "A"
NOT TO SCALE

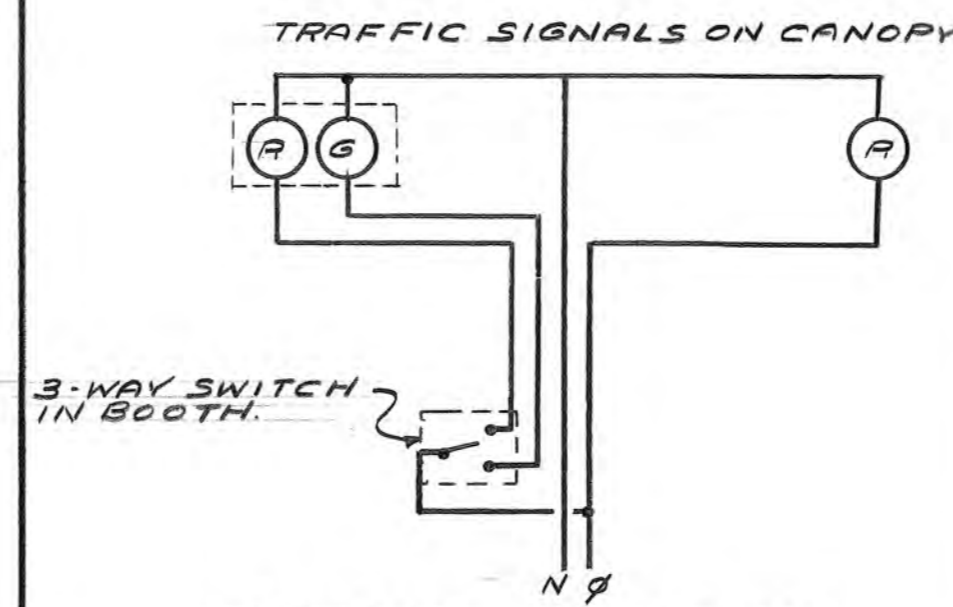


CANOPY LIGHT DETAIL
NOT TO SCALE

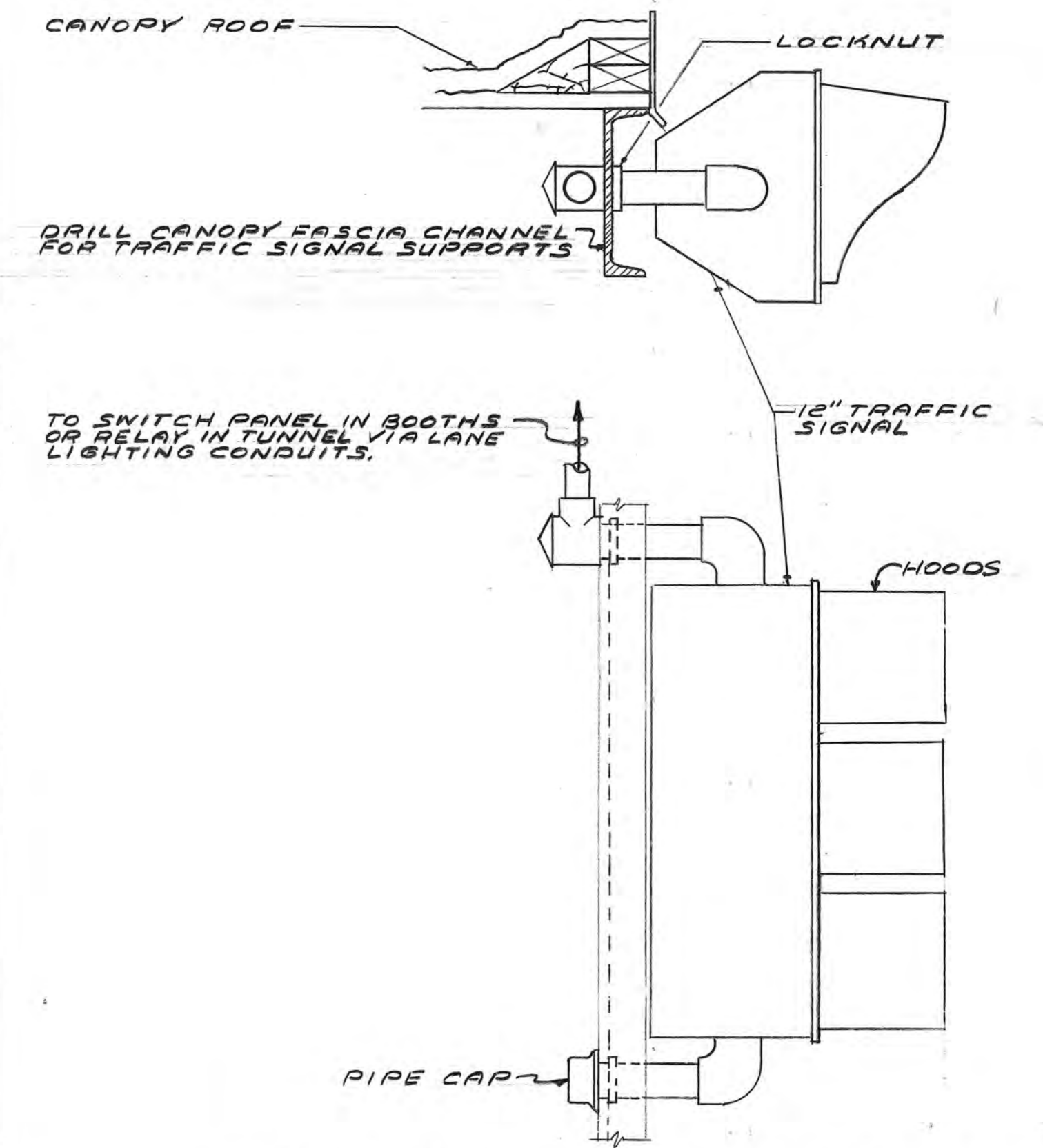
NOTE: CANOPY LIGHT TO BE MANUFACTURED BY HUBBELL CATALOG No. 5-917-120C. PROVIDE TYPE H39KC-T17510X MERCURY VAPOR LAMP EACH FIXTURE.



SINGLE TOLL BOOTH LIGHTING PLAN WIRING DIAGRAM
NOT TO SCALE



TRAFFIC SIGNALS ON CANOPY TRAFFIC CONTROL WIRING DIAGRAM
NOT TO SCALE



TRAFFIC SIGNAL LIGHTING DETAILS
NOT TO SCALE

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	A.J.M.	
		TRACED	A.J.M.	
		CHECKED	A.J.M.	
				<i>Ray Kallen</i>



R.G. Vanderweil Engineers, Inc.
38 Chauncy Street, Boston, Massachusetts 02111

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE

DETAIL SHEET
ELECTRICAL

HOWARD, NEEDLES, TAMMEN & BERGENDOFF SCALE:
CONSULTING ENGINEERS
BOSTON

SHEET NO. 13

ITEM G0G.203 TWISTED END SECTION

STA. 20+25± TO STA. 20+50± RT.
STA. 20+50± TO STA. 20+75± RT.

ITEM G0G.30 REMOVE AND RESET GUARD RAIL

STA. 20+50± TO STA. 27+50± RT. 100 L.F.
STA. 20+75± TO STA. 31+50± RT. 125 L.F.

ITEM G34.20 POLYETHYLENE JUNCTION BOX

STA. 20+45± RT.

ITEM G34.21 2" P.V.C. CONDUIT IN TRENCH

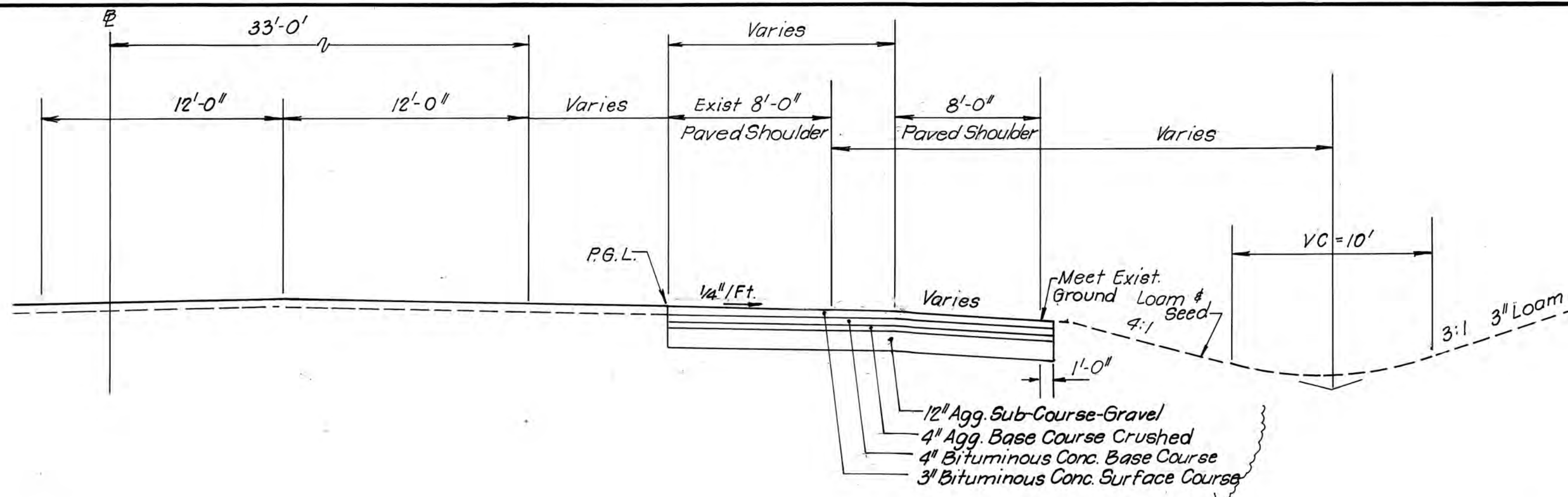
STA. 23+40± TO STA. 28+80± RT. 540 L.F.
STA. 20+45± TO STA. 20+45± RT. 15 L.F.
STA. 20+45± TO STA. 31+50± RT. 205 L.F.

ITEM G34.22 RELOCATING LAMP POST & FOUNDATIONS

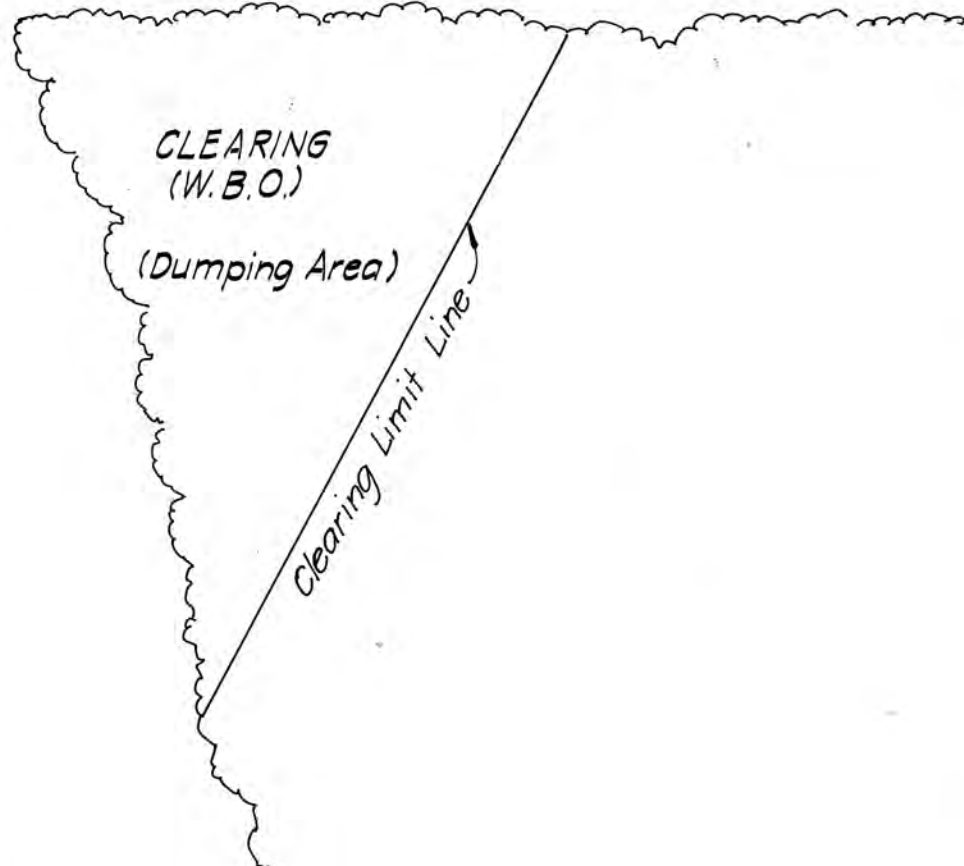
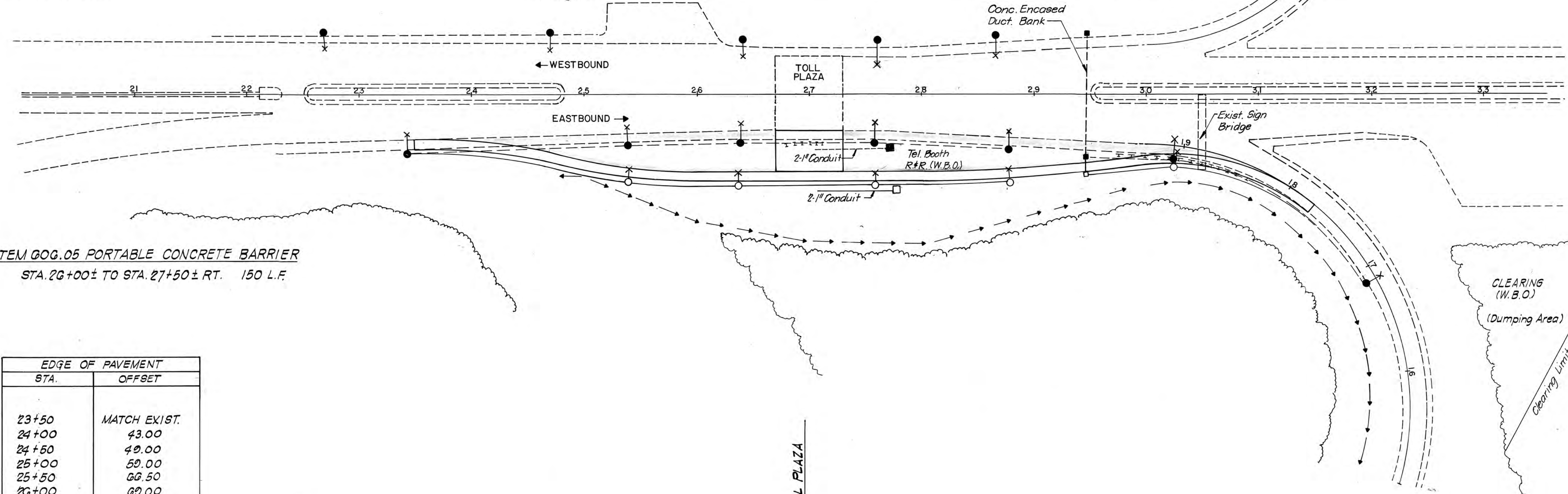
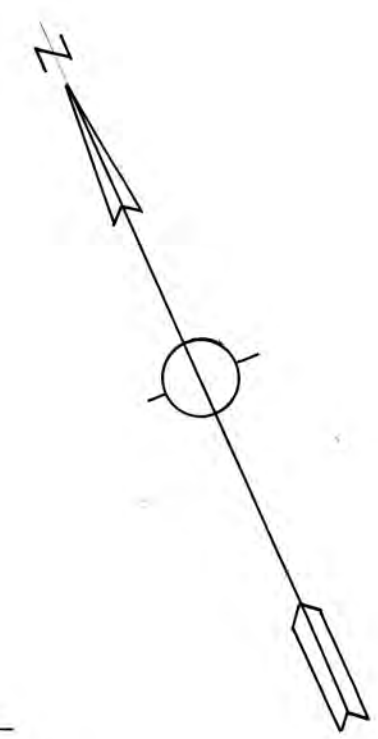
STA. 25+40± RT.
STA. 26+40± RT.
STA. 27+60± RT.
STA. 28+80± RT.
STA. 30+25± RT.

ITEM G0G.05 PORTABLE CONCRETE BARRIER

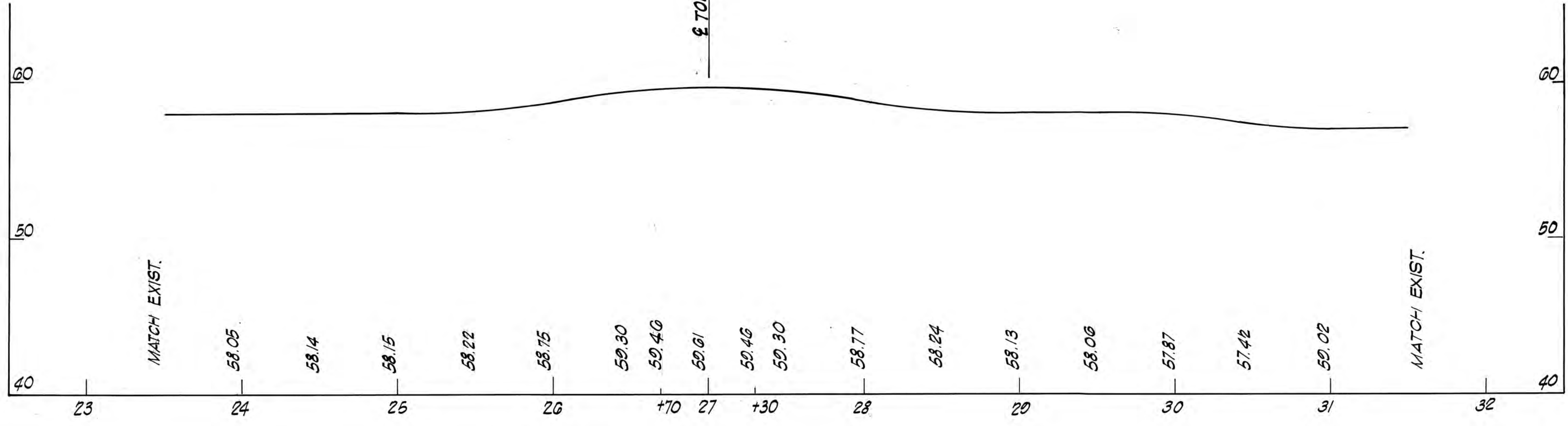
STA. 20+00± TO STA. 27+50± RT. 150 L.F.



- LEGEND**
- X Exist. Hwy. Lights
 - X Proposed Hwy. Lights
 - Exist. Junction Box
 - Proposed Junction Box
 - Exist. Tel. Booth
 - Proposed Tel. Booth



EDGE OF PAVEMENT	
STA.	OFFSET
23+50	MATCH EXIST.
24+00	43.00
24+50	40.00
25+00	50.00
25+50	60.50
26+00	60.00
28+00	60.00
28+50	68.00
29+00	65.00
29+50	60.00
30+00	54.00
30+50	55.00
31+00	68.00
31+50	MATCH EXIST.



NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	R.W.B. 8-22-83	
		TRACED	C.J.W. 8-22-83	
		CHECKED	R.A.L. 8-22-83	

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 1-YORK TO PORTLAND

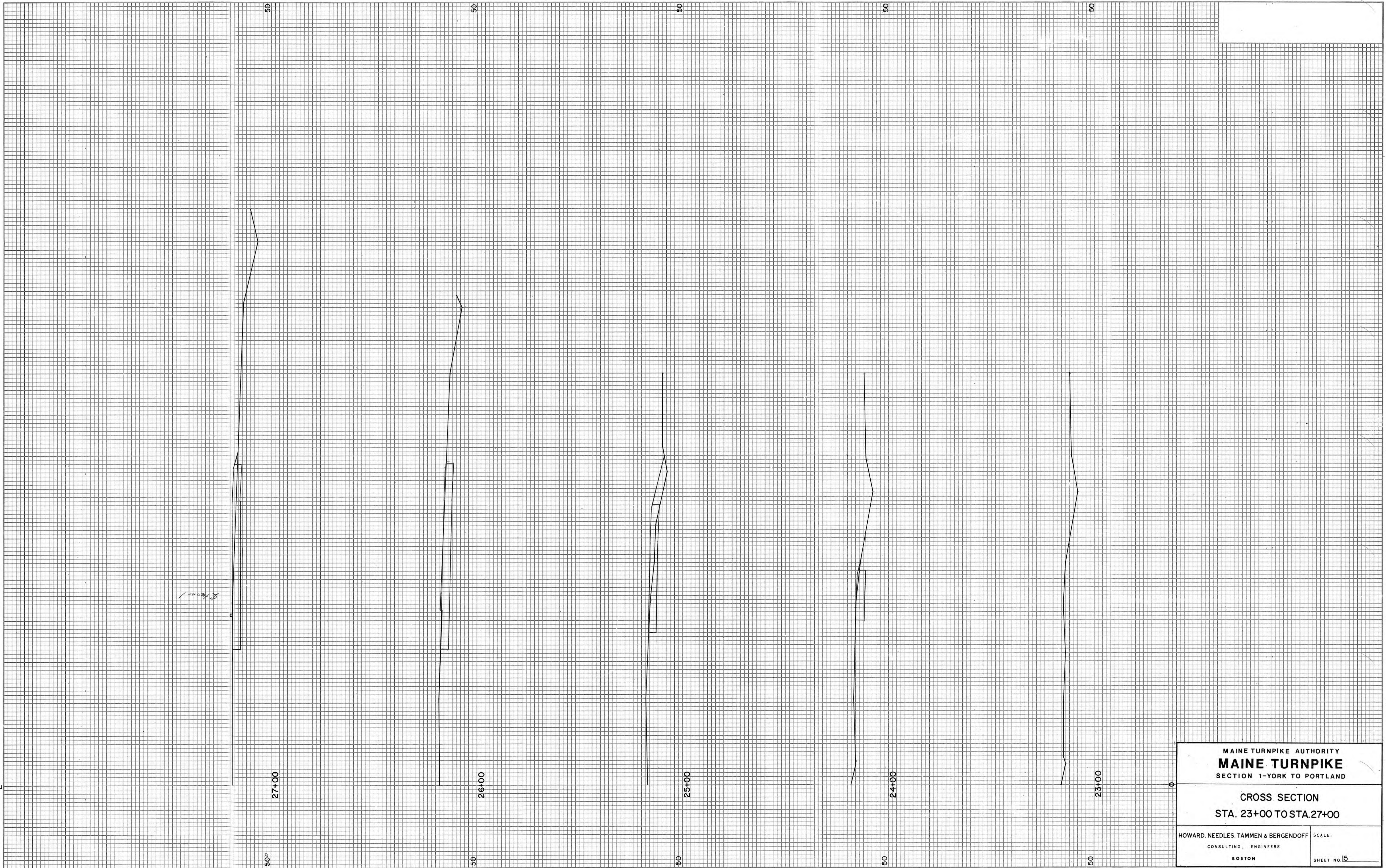
PLAN, PROFILE & TYPICAL SECTION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
BOSTON

SCALE
SHEET NO 14

FINAL SURVEY NOTE BOOK NO. _____	SURVEYED BY _____	DATE _____
	TEMP. PLATE AREAS CHECKED _____	

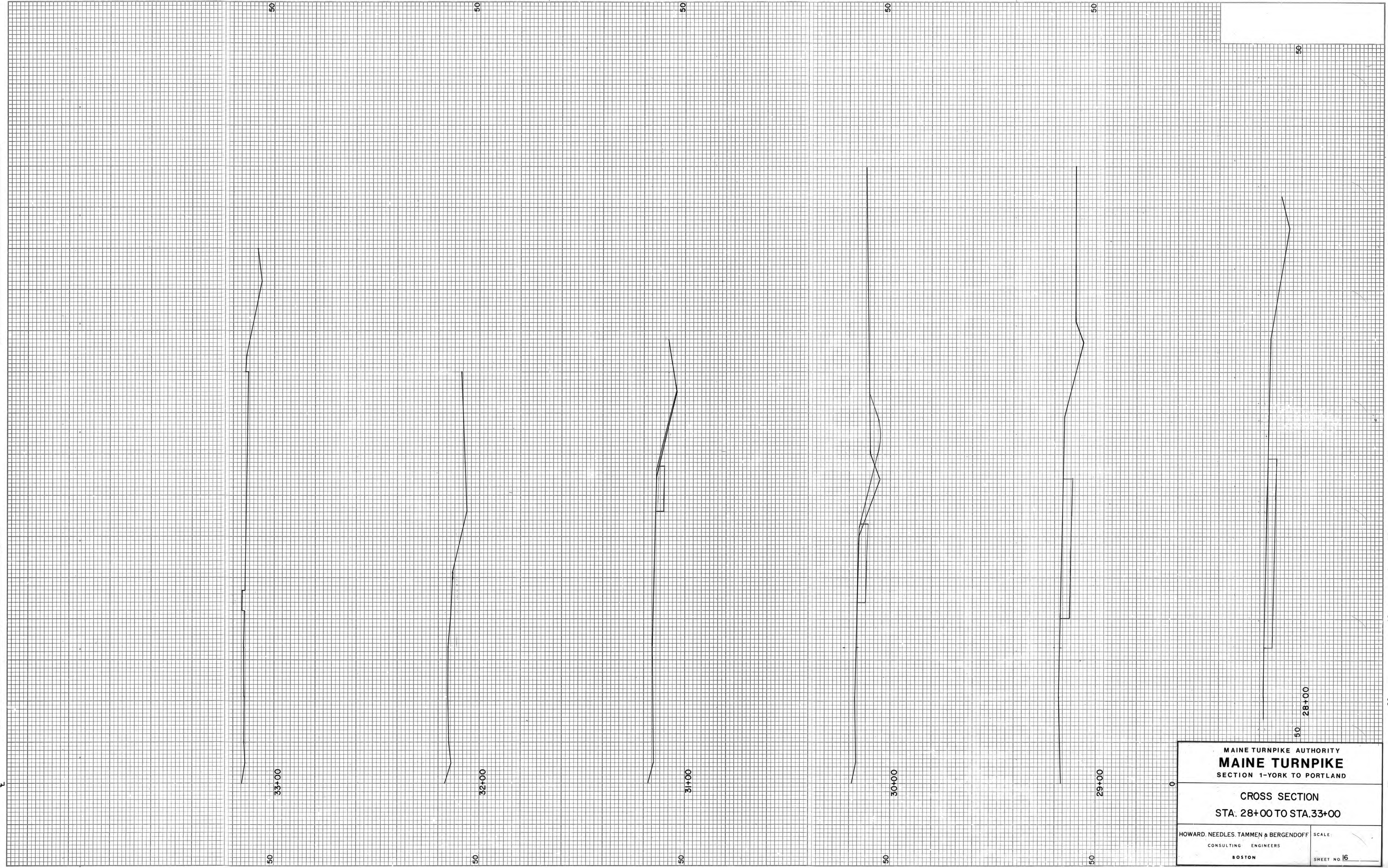
ORIGINAL SURVEY NOTE BOOK NO. _____	SURVEYED BY _____	DATE _____
	TEMP. PLATE AREAS CHECKED _____	



MAINE TURNPIKE AUTHORITY MAINE TURNPIKE SECTION 1-YORK TO PORTLAND	
CROSS SECTION STA. 23+00 TO STA. 27+00	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS BOSTON	SCALE: SHEET NO. 15

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		



MAINE TURNPIKE AUTHORITY	
MAINE TURNPIKE	
SECTION 1-YORK TO PORTLAND	
CROSS SECTION	
STA: 28+00 TO STA.33+00	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS BOSTON	SCALE: SHEET NO. 16