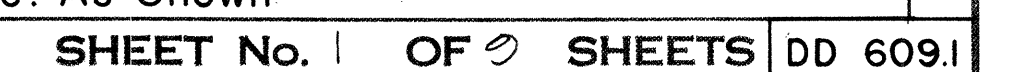
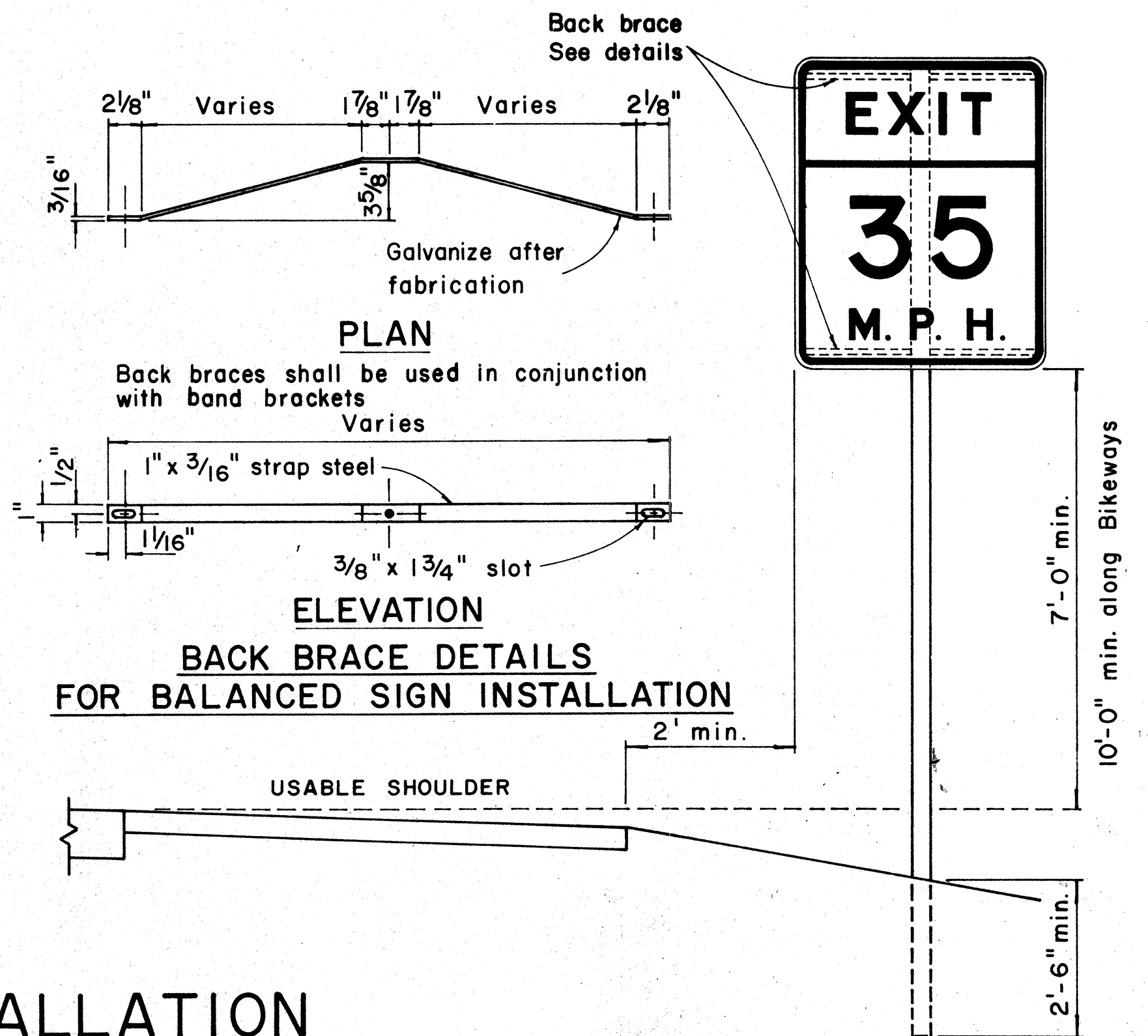
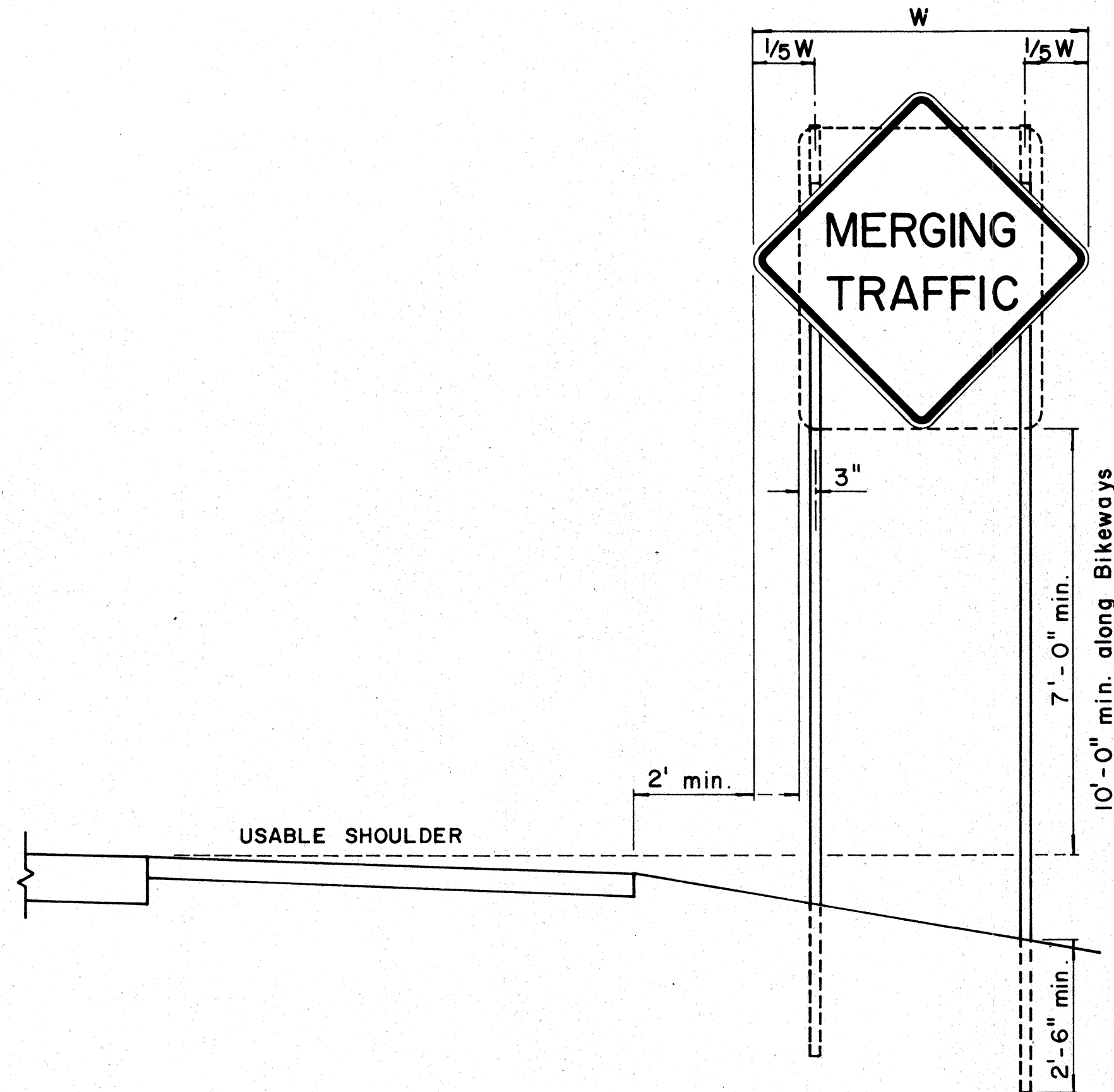
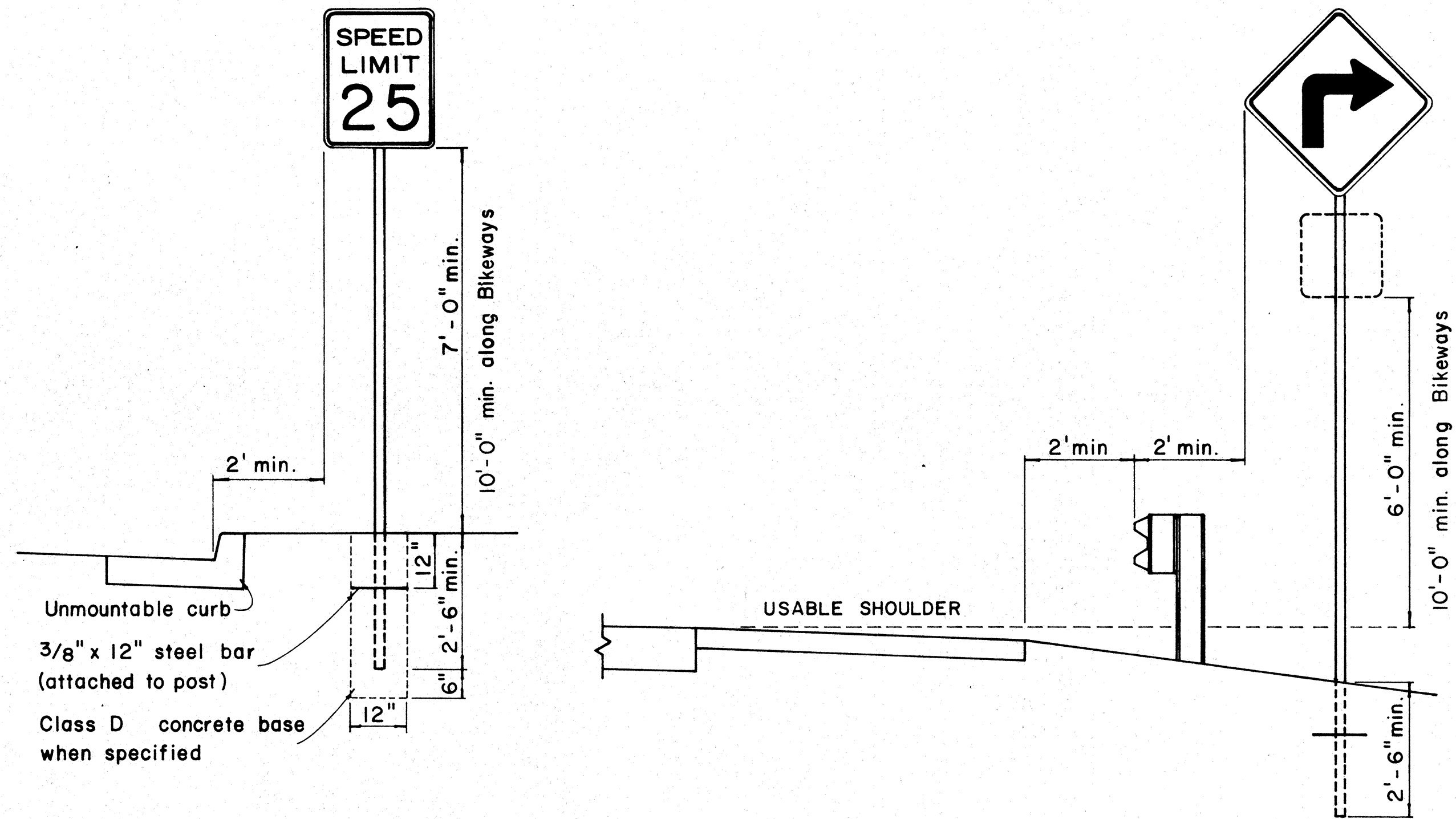


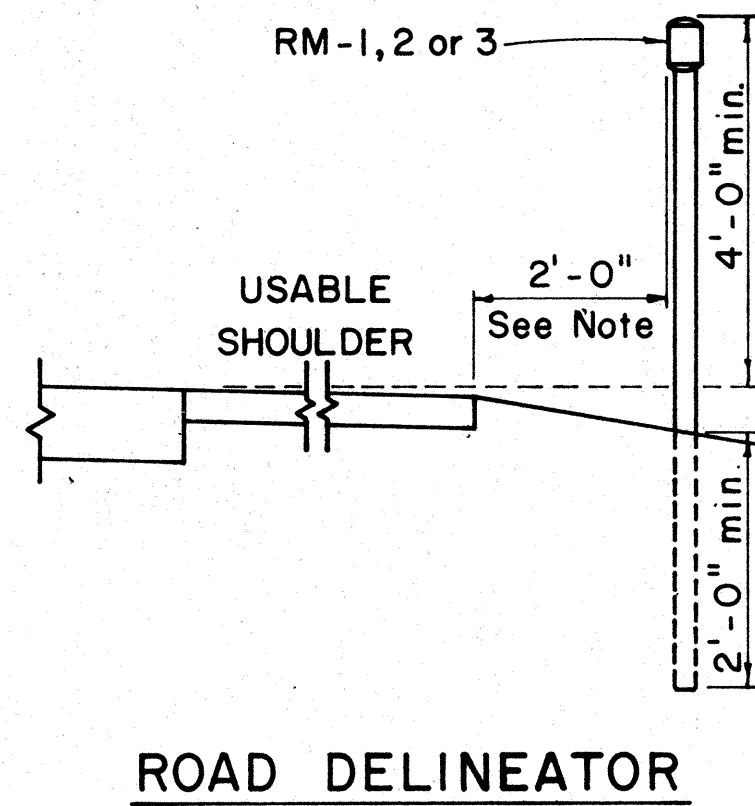
ORIGINAL PLAN	SURVEY PLOTTED BY..... DATE.....	
	DRAWN BY.....	at.....
NOTE BOOK	TRACED BY.....	at.....
	DESIGNED BY.....	at.....
	QUANTITIES BY.....	at.....
	CHECKED BY.....	at.....
No.		



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HA-018-120 F-000-1(6)	1977	10	11



HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



Galv. flanged channel
1/8" x 3/16" rolled section
post with a minimum
weight of 2 lbs. per ft.
Upper 2 ft. shall have
a single row of 3/8" holes
centered in the web at
1" o.c.

1/4" x 2" galv. bolt with nut
and lock washer

Galv. 1/2" x 1 1/2" square
tube post with a minimum
weight of 1.7 lbs per ft

1/4" x 1/2" galv.
bolt with nut
and lock washer

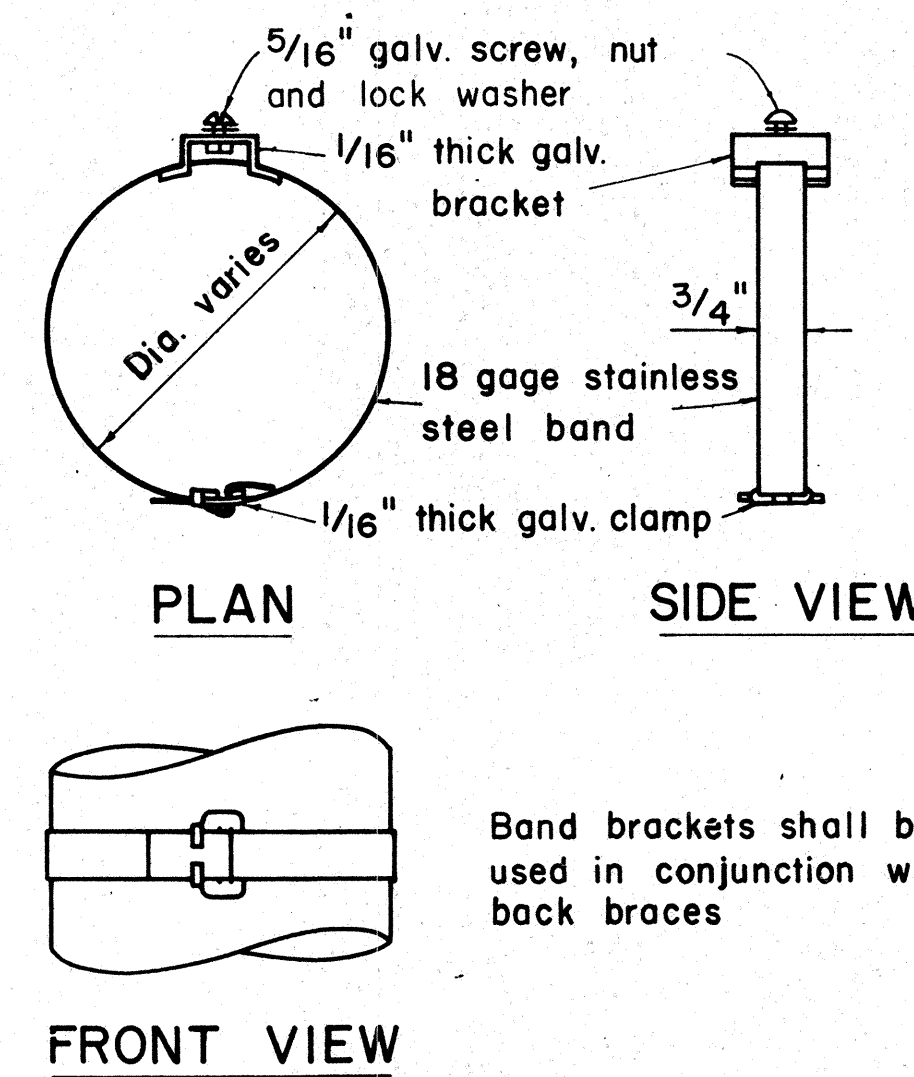
1'-5" x 6" x 0.063" anodized
aluminum plate with 3/8"
holes drilled as shown

Galvanized post

Finished
grade

TYPICAL SECTION OF ROAD DELINEATOR

TYPICAL DETAIL
HORIZONTAL REFLECTOR MARKER
RM-3H



GENERAL NOTES:

- Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 2" galv. standard pipe or two 2" x 2" galv. sq. tube post.
- Signs shall be attached to post with 5/16" galv. bolts with nuts and 7/8" x 0.06 stainless steel washers with neoprene rubber gasket.
- Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
- Reflector markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.
- Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
- (R) or (L) indicates right or left and shall be as shown on the plans.

APPROVAL RECOMMENDED:
Eishi Tanaka 12/22/63
TRAFFIC ENGINEER DATE

APPROVED:
John J. S. S. 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

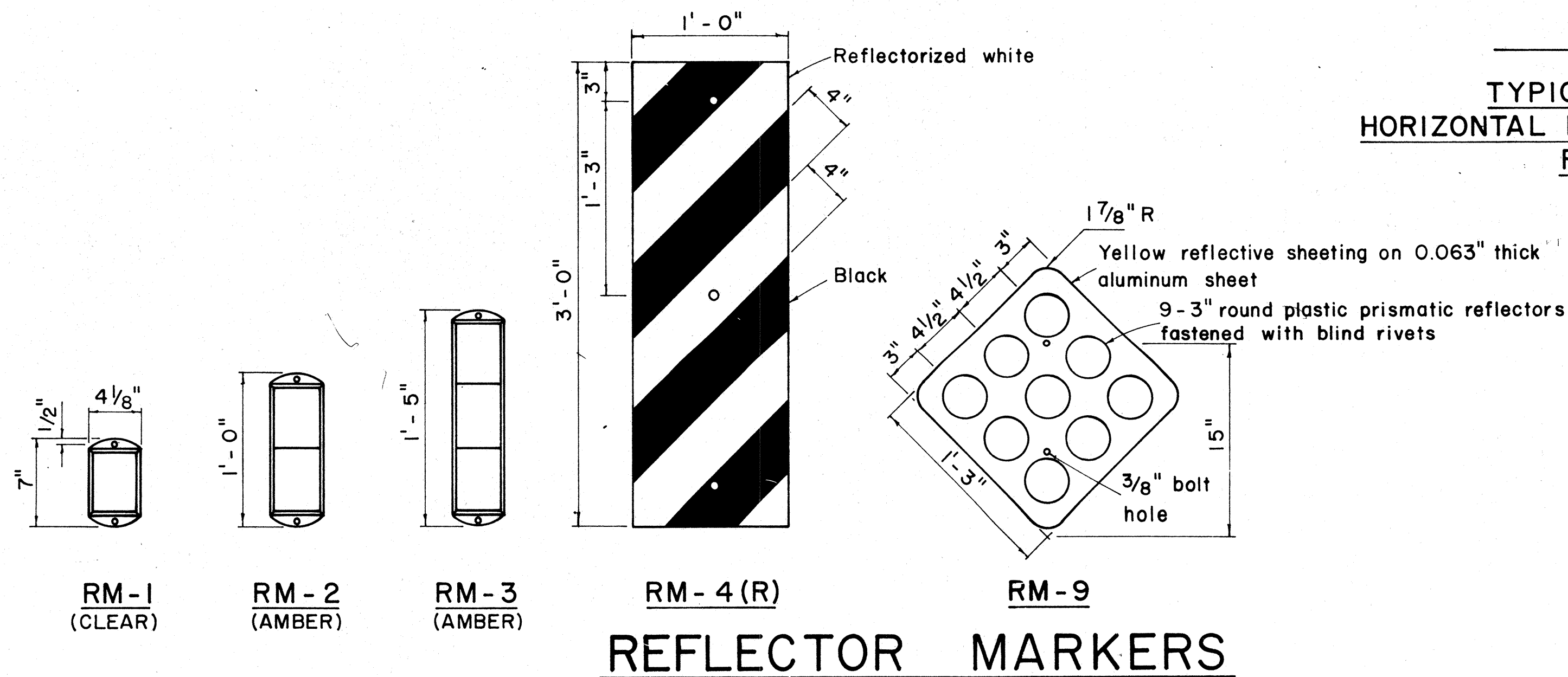
NO.	REVISION	APPROVED BY	DATE
1.	Revised Details.	H.F.	9-14-70

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale March, 1968

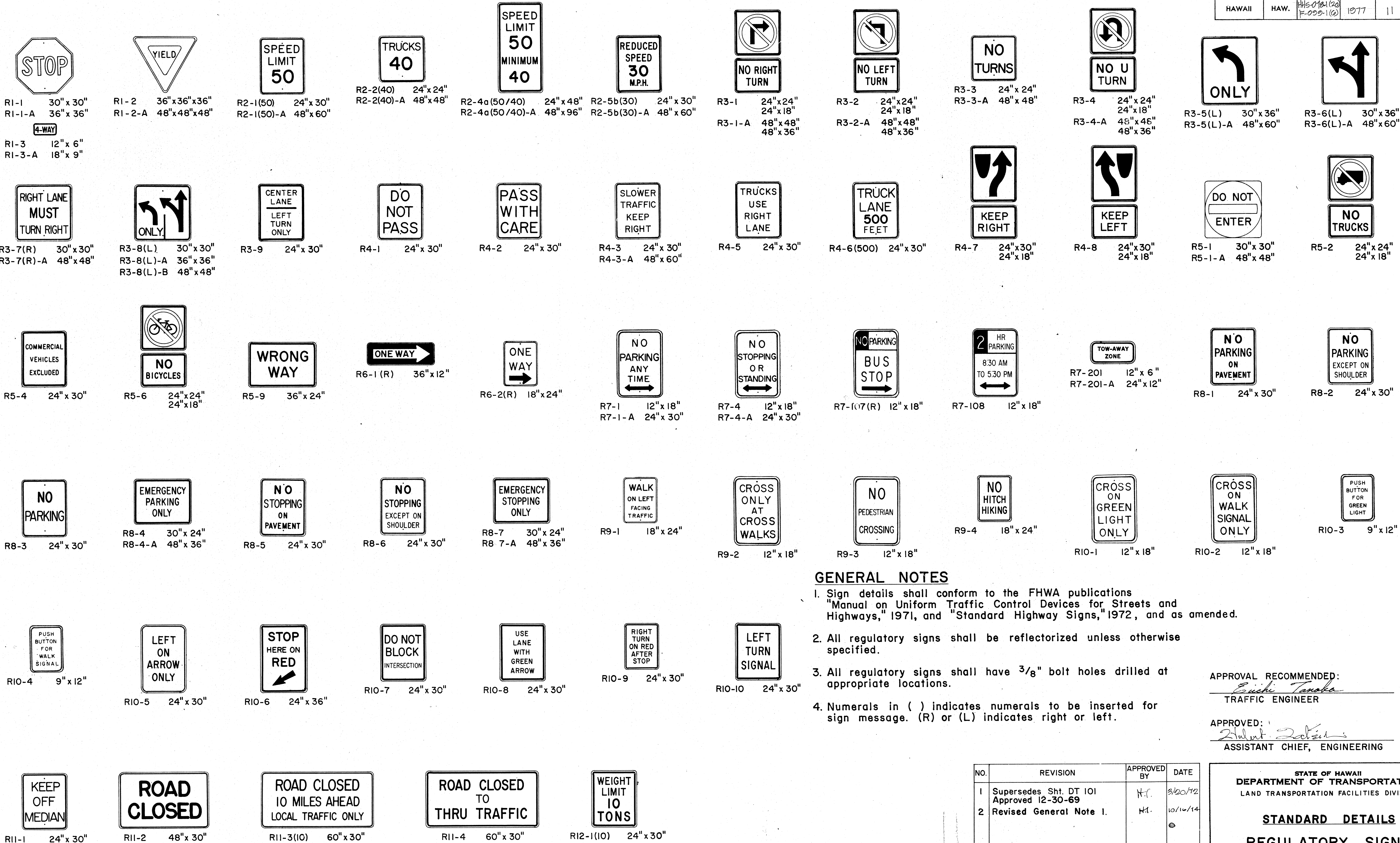
SHEET No. 2 OF 2 SHEETS DT 100



REFLECTOR MARKERS

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIS-0181(20) F-000-1(6)	1977	11	17



GENERAL NOTES

1. Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:
Eishi Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Robert J. ... 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1.	H.T.	10/16/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

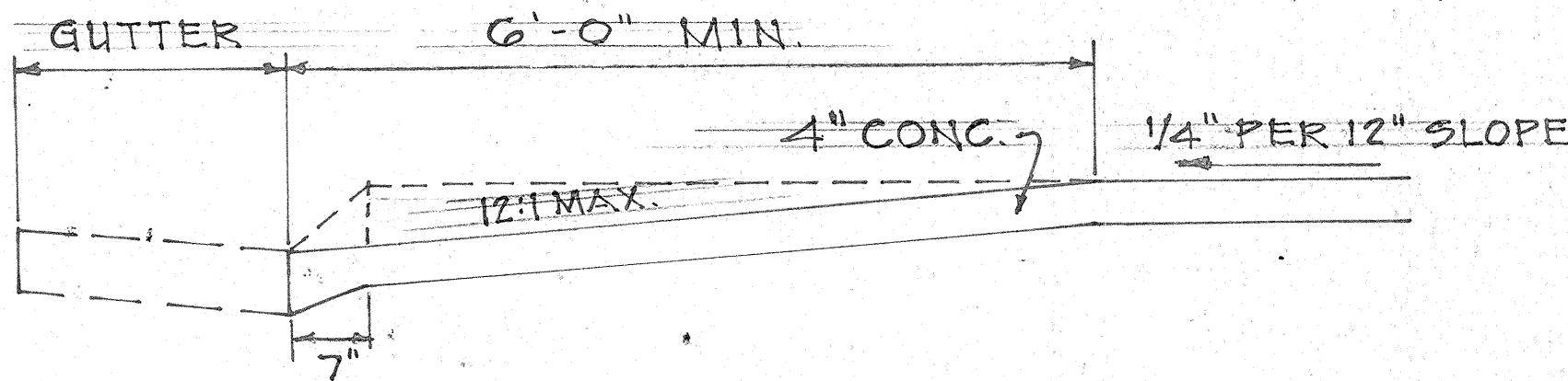
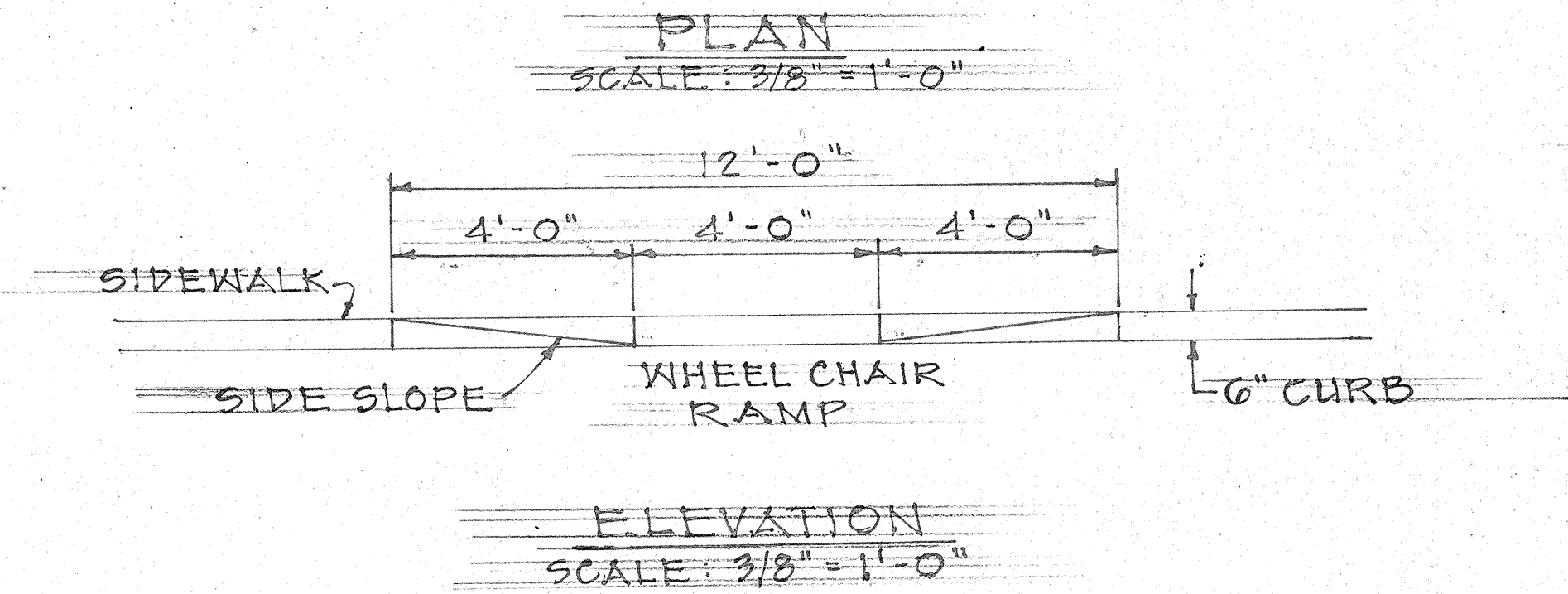
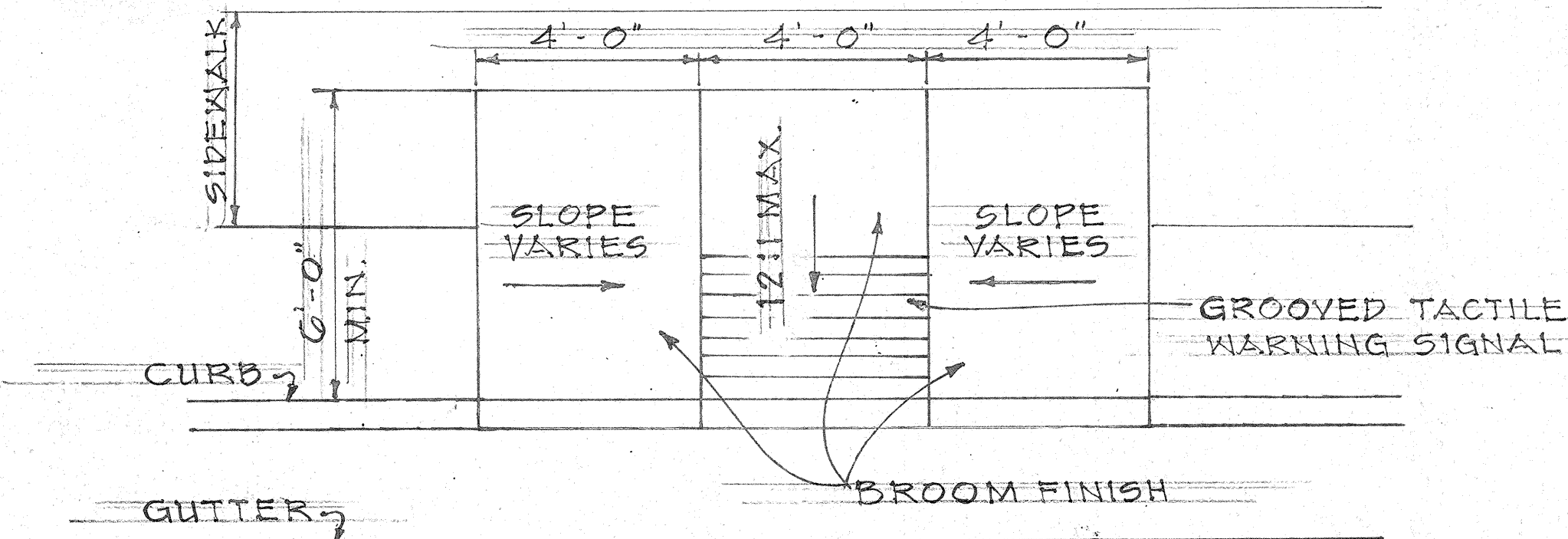
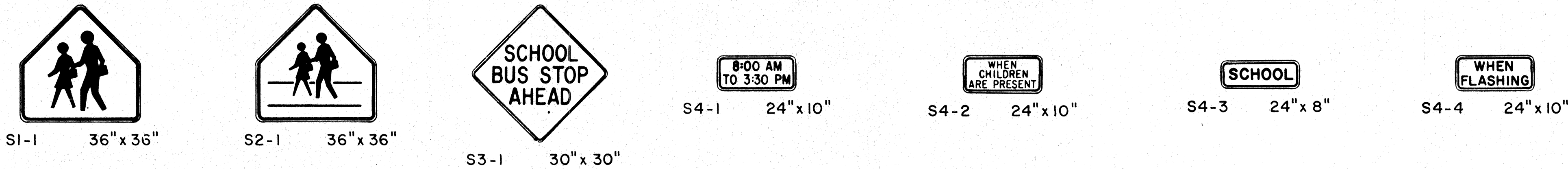
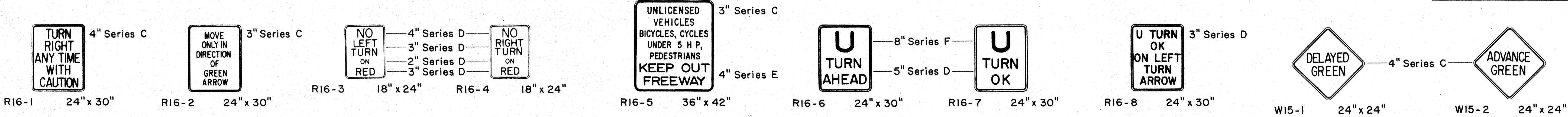
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

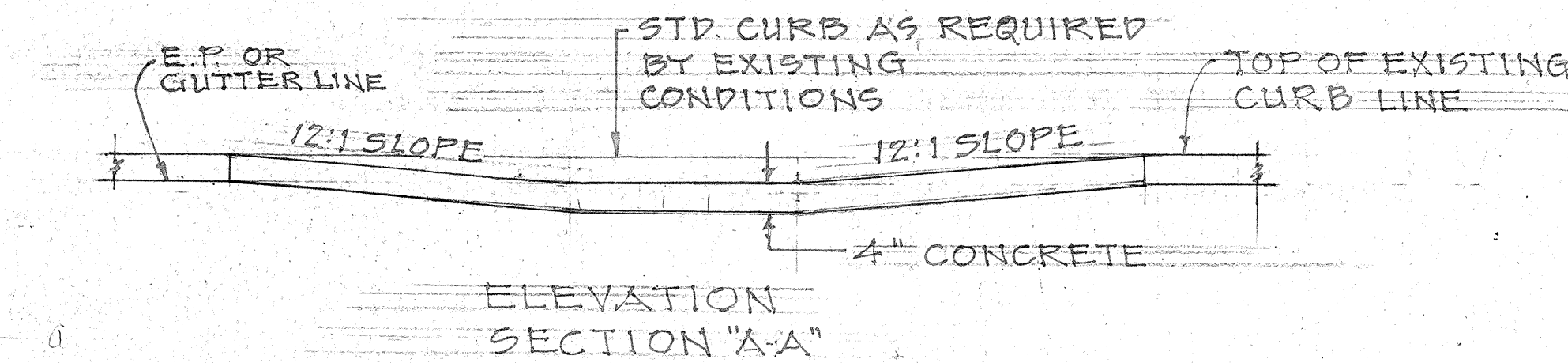
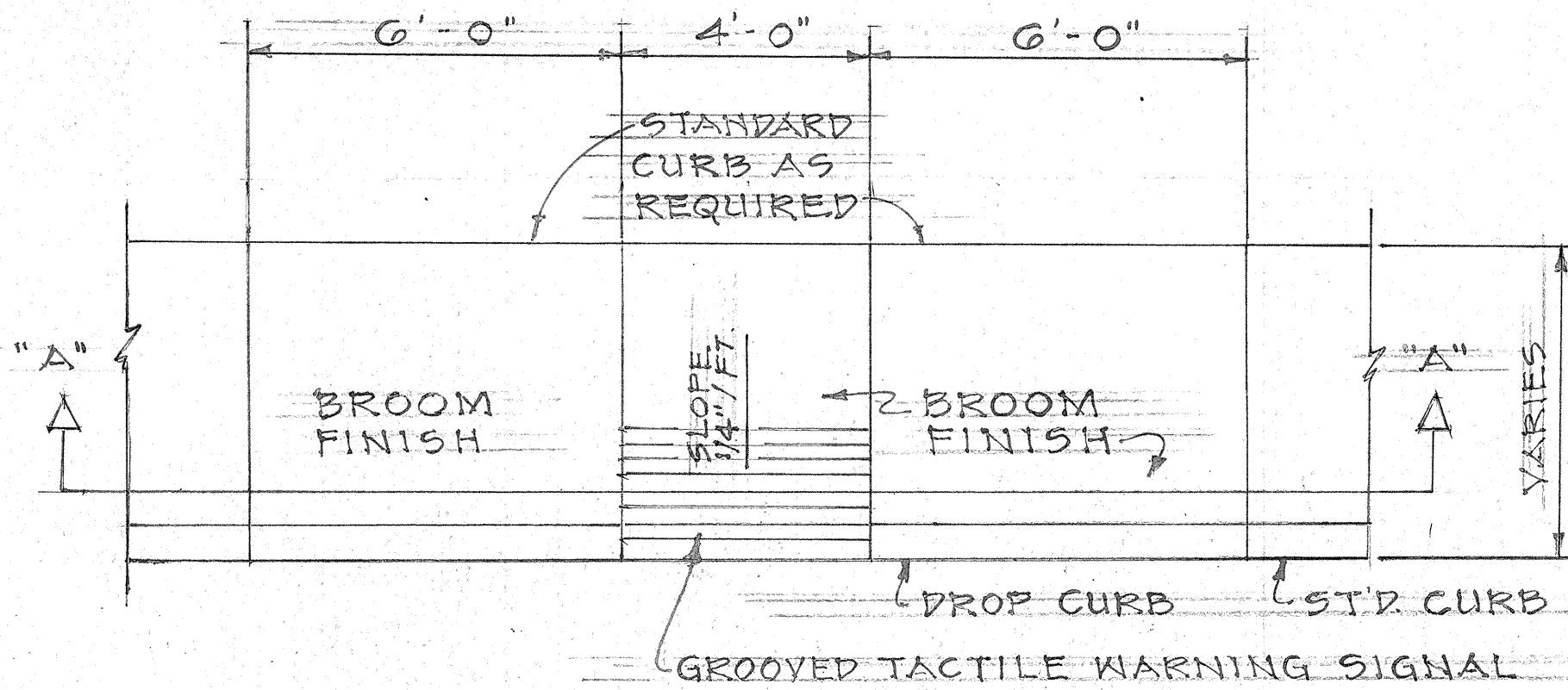
SHEET No. 3 OF 9 SHEETS DT 101

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

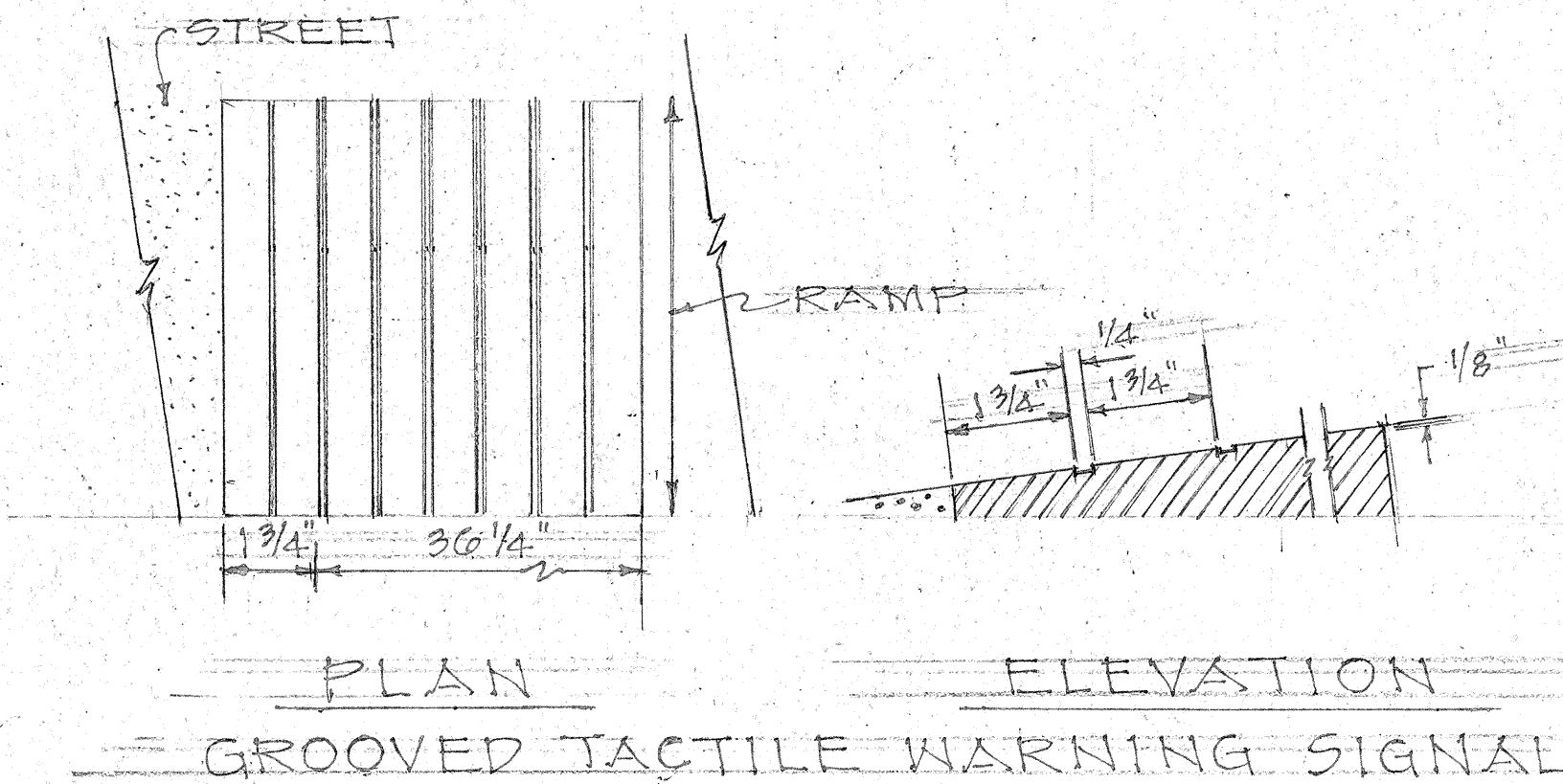
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	445-010-100 F0000-1(6)	1977	12	17



WHEEL CHAIR RAMP TYPE "D"
 USE WHEN IDEAL CONDITIONS EXIST



WHEELCHAIR RAMP - TYPE "B"
 USE AT SIDEWALKS WITH LESS THAN 6'-0" WIDTH



GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All regulatory and warning signs shall be reflectorized unless otherwise specified.
- All regulatory and warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:
Eishi Tanaka
 TRAFFIC ENGINEER
 3/17/12
 DATE

APPROVED:
Harold Zalside
 ASSISTANT CHIEF, ENGINEERING
 2-20-12
 DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 Approved 12-30-69	HC	3/20/12
2	Revised General Note 1	HC	10/16/14

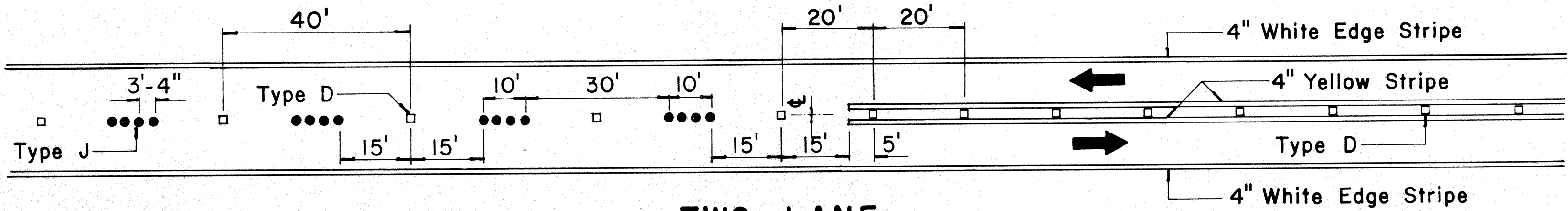
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS MISCELLANEOUS REGULATORY & WARNING SIGNS

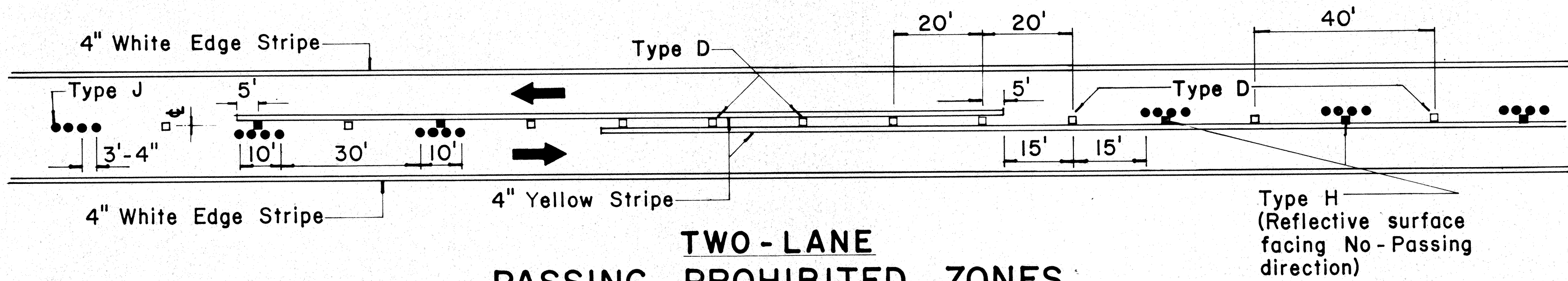
NOT TO SCALE
 SHEET No. 4 OF 9 SHEETS DT 103

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

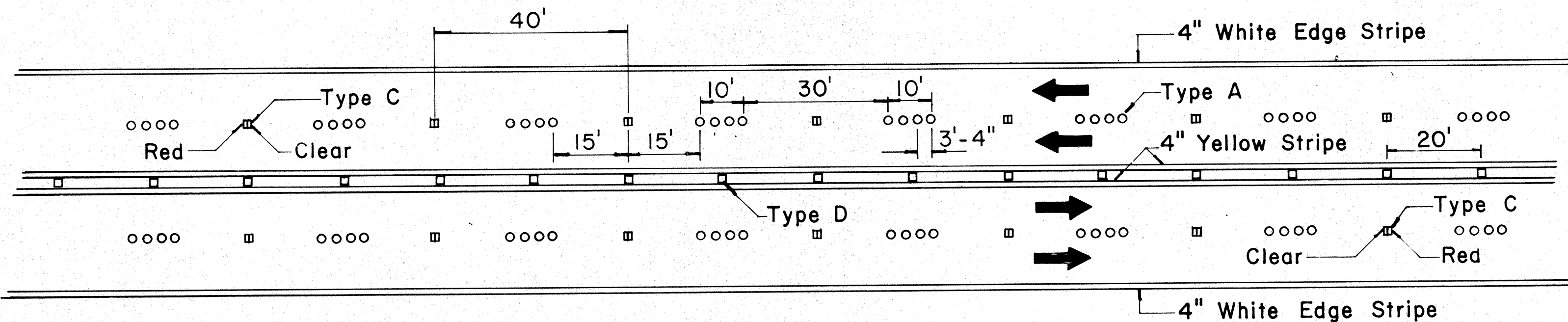
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	116-010-1(20) F-000-1(2)	1977	13	17



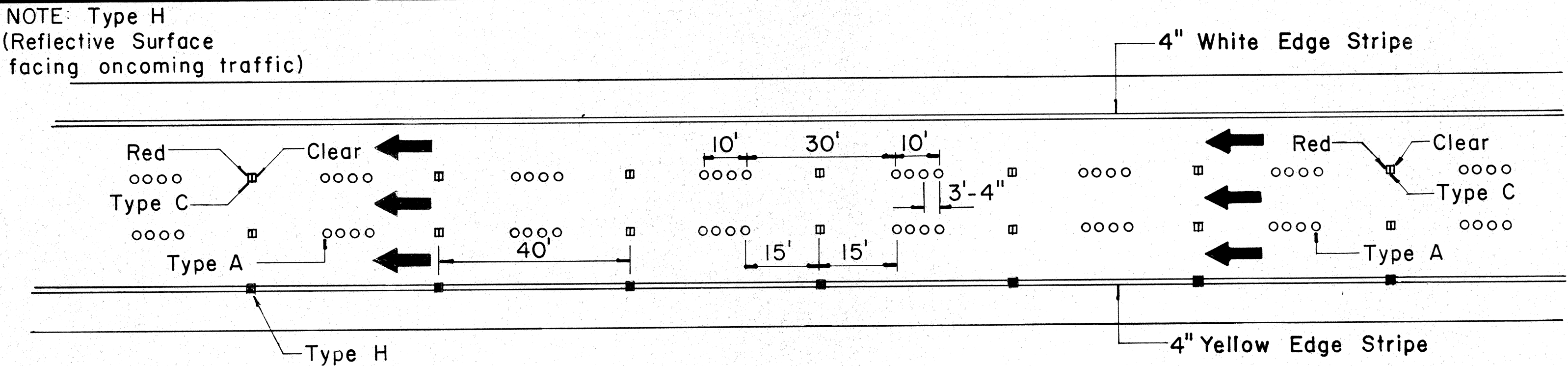
**TWO - LANE
PASSING PERMITTED AND PASSING PROHIBITED**



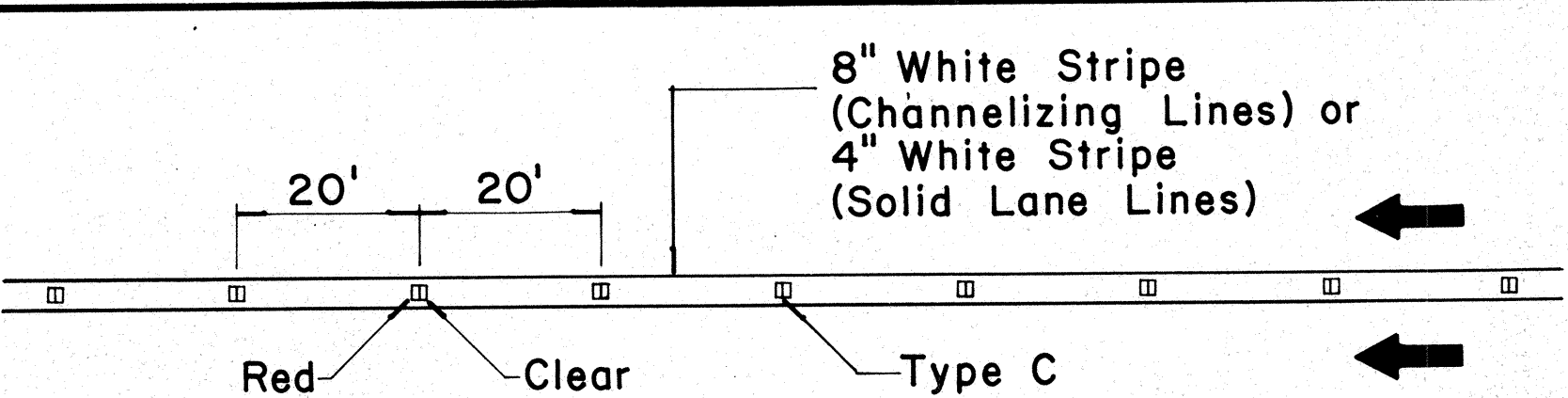
**TWO - LANE
PASSING PROHIBITED ZONES**



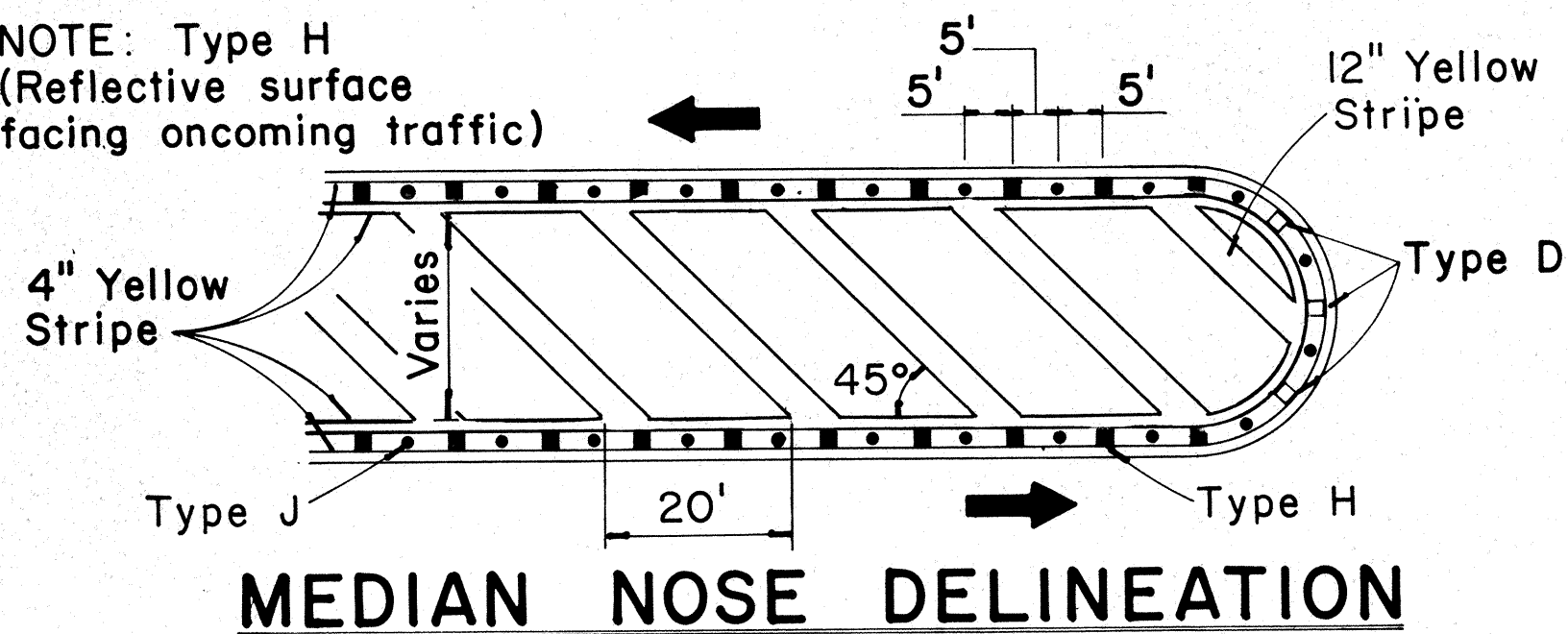
**MULTI - LANE
LANE LINES AND CENTER LINE**



NOTE: Type H
(Reflective Surface
facing oncoming traffic)



**CHANNELIZING LINES
OR SOLID LANE LINES**



NOTE: Type H
(Reflective surface
facing oncoming traffic)

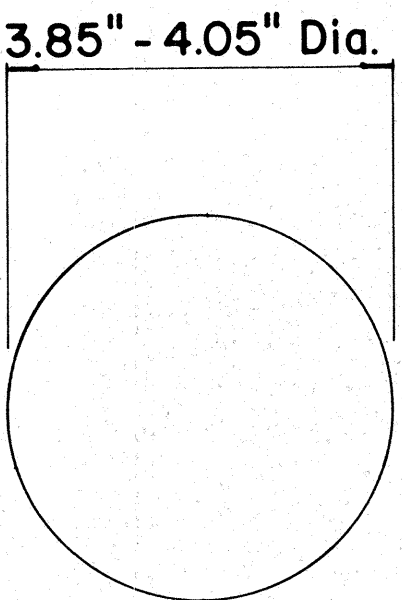
MEDIAN NOSE DELINEATION

TWO - LANE

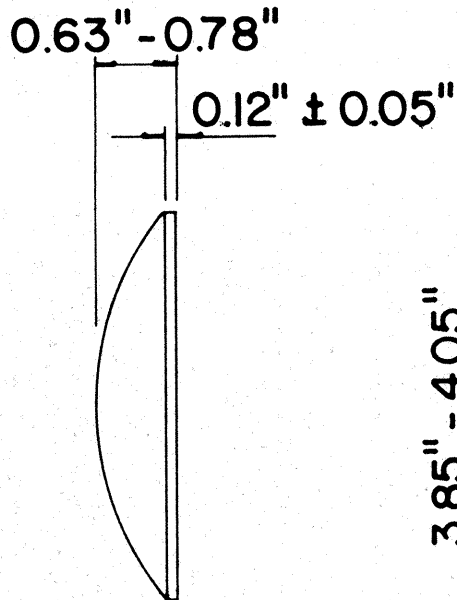
MULTI - LANE

**DIVIDED HIGHWAY
AND
FREEWAY**

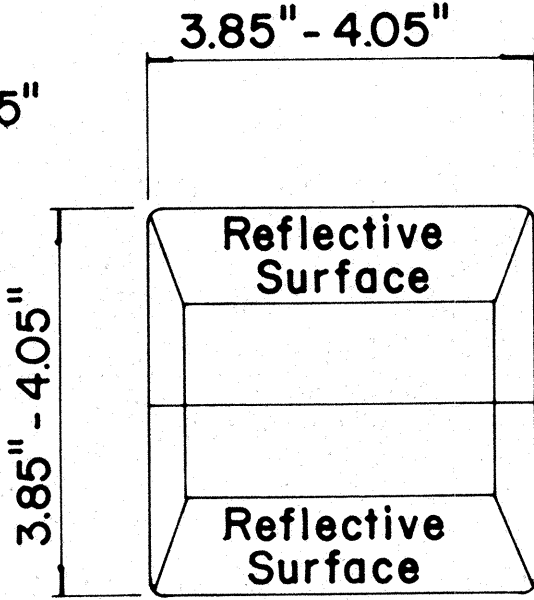
MISCELLANEOUS



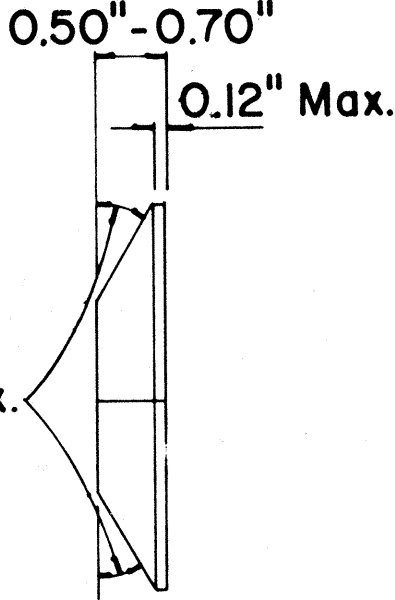
**TYPE A
NON - REFLECTIVE WHITE MARKER**



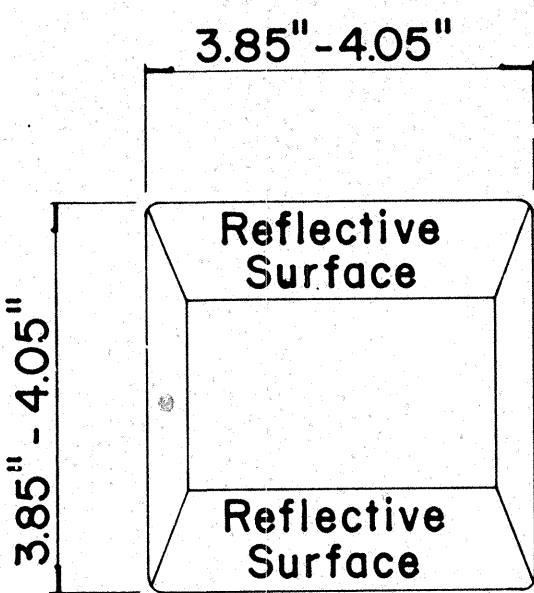
**TYPE J
NON - REFLECTIVE YELLOW MARKER**



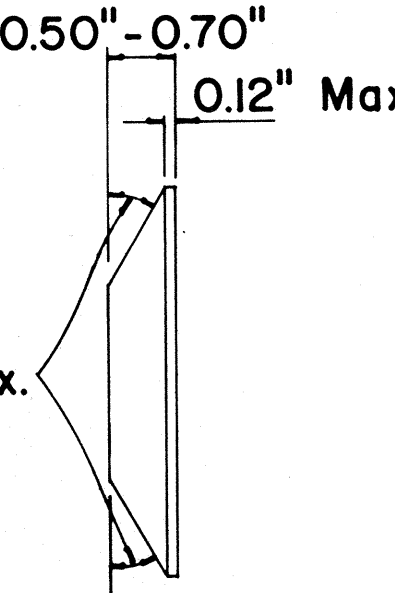
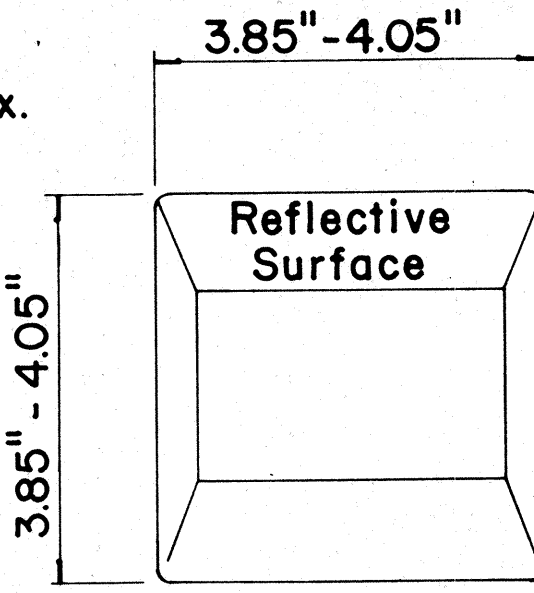
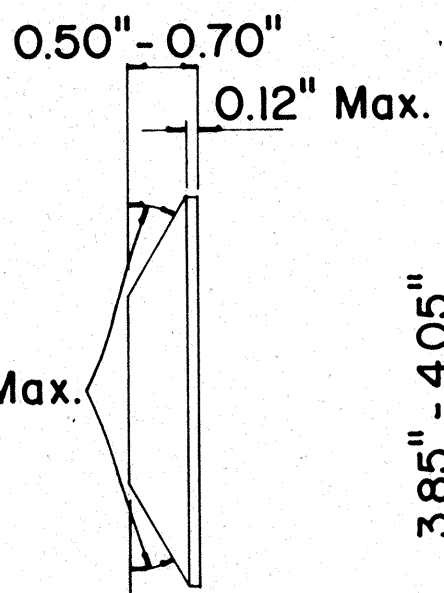
**TYPE C
RED - CLEAR REFLECTIVE MARKER**



**TYPE H
ONE - WAY YELLOW REFLECTIVE MARKER**



**TYPE D
TWO - WAY YELLOW REFLECTIVE MARKER**



GENERAL NOTES

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.

LEGEND

- Type A
- Type C
- Type D
- Type H
- Type J

APPROVAL RECOMMENDED:
Eichi Tanaka 11/18/71
TRAFFIC ENGINEER DATE

APPROVED:
Shigeru Sato 11/18/71
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.C.	10-27-72
2	Revised General Notes.	H.C.	10-27-72
3	Change 4" white edge stripe to 4" solid yellow edge stripe to left edge of a travel path and Add Type H Reflector Marker.	H.C.	5-22-74
4	Revised details, General Notes & Title Box.	H.C.	7-13-77

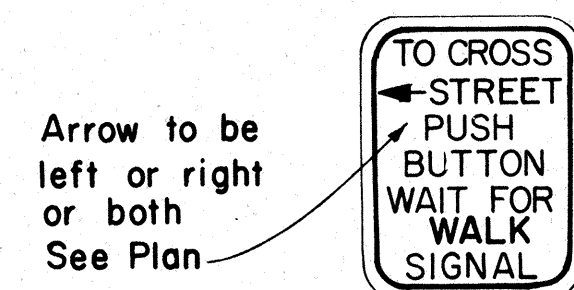
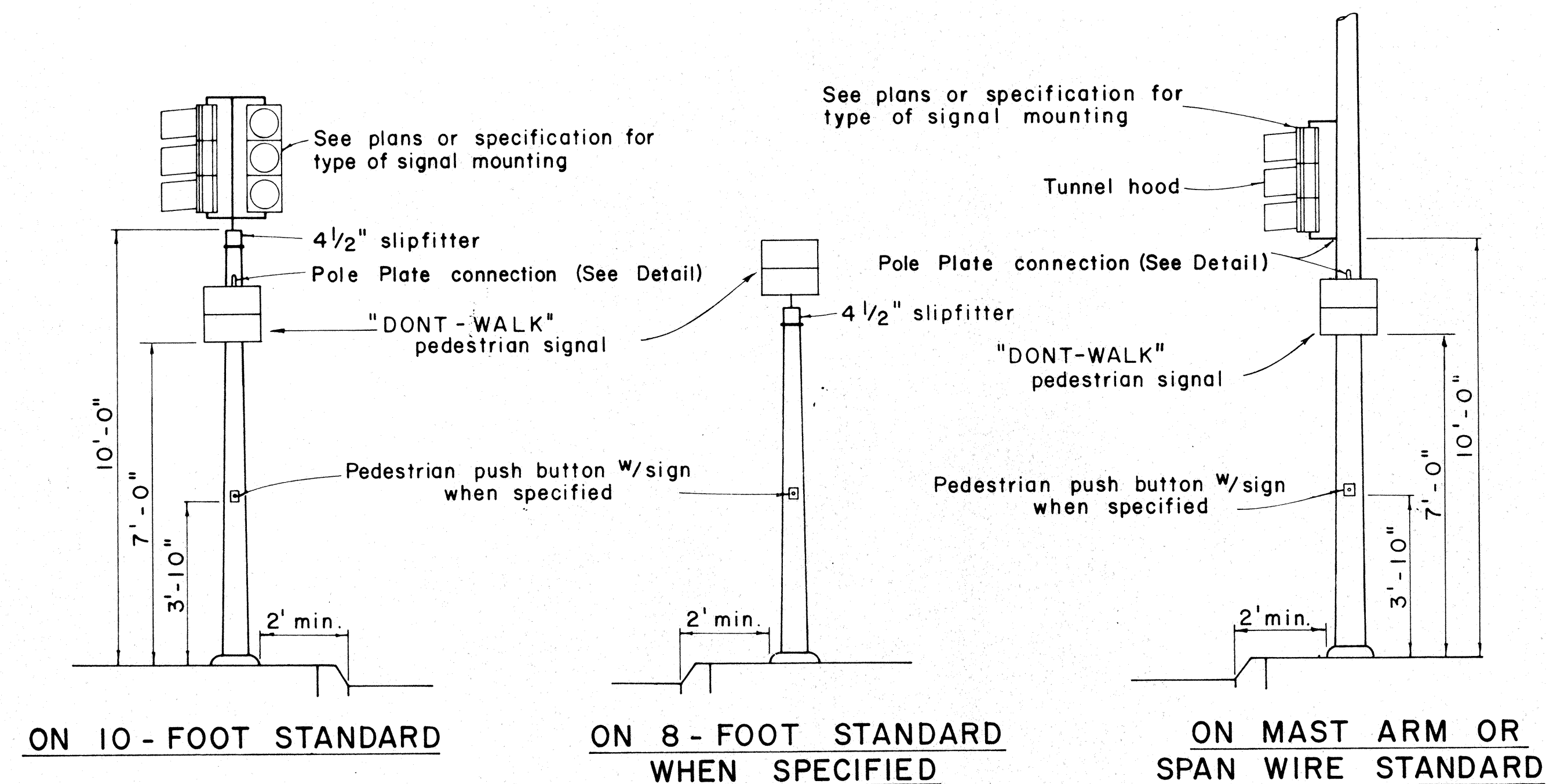
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS RAISED PAVEMENT MARKERS AND STRIPING

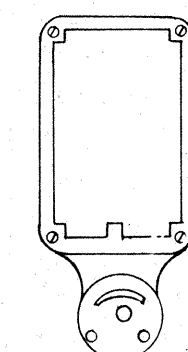
Not to Scale October 1971
SHEET No. 5 OF 9 SHEETS DT 300

DATE	_____
SURVEY PLOTTED BY	_____
PLAN	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HA-01B-1(20) F000-1(6)	1977	14	17



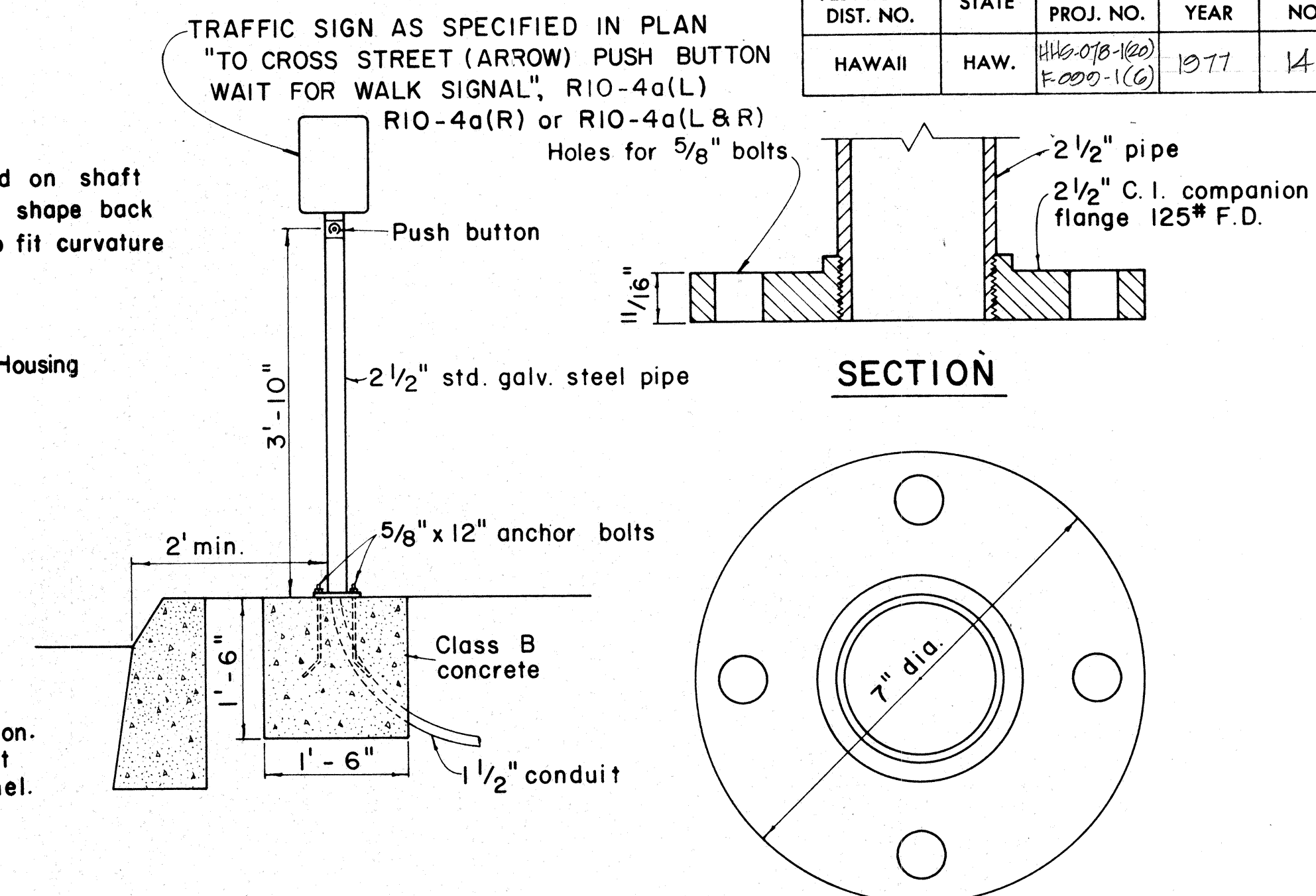
R10-4a(L)
5" x 7"



PEDESTRIAN
PUSH BUTTON

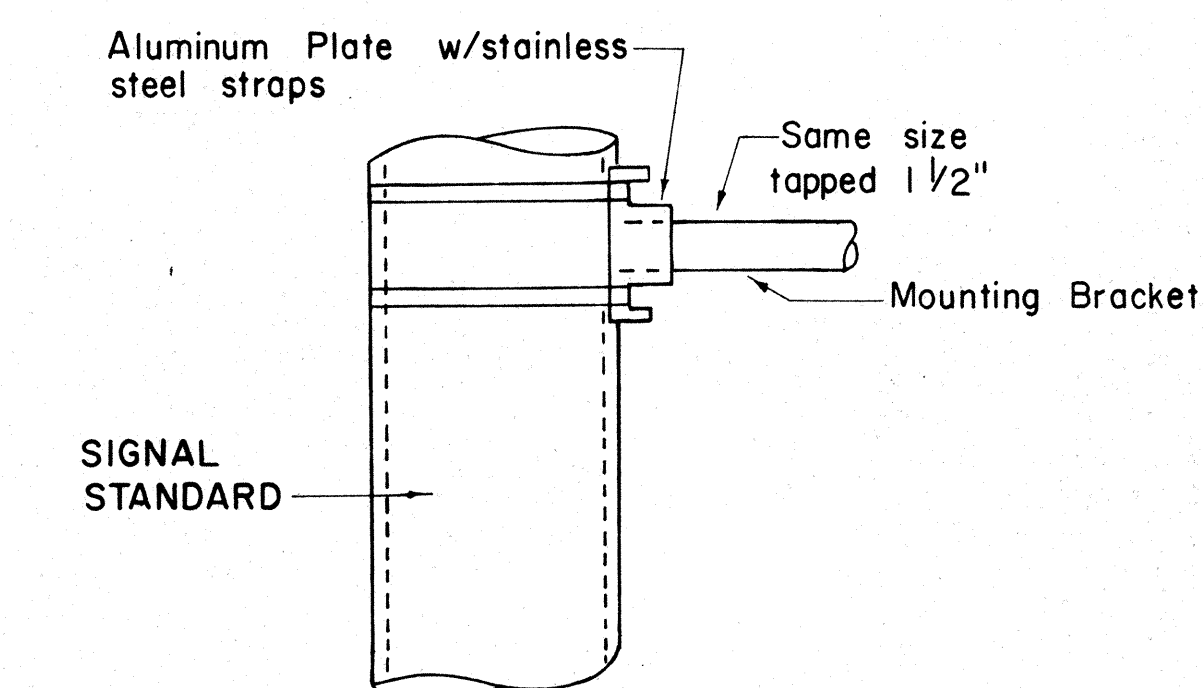
NOTE:

1. Conduits shall protrude 2" max. above finished surface of foundation.
2. Conduits shall slope away from pole foundation.
3. Post and base shall be painted with one coat of approved weather proof dark green enamel.

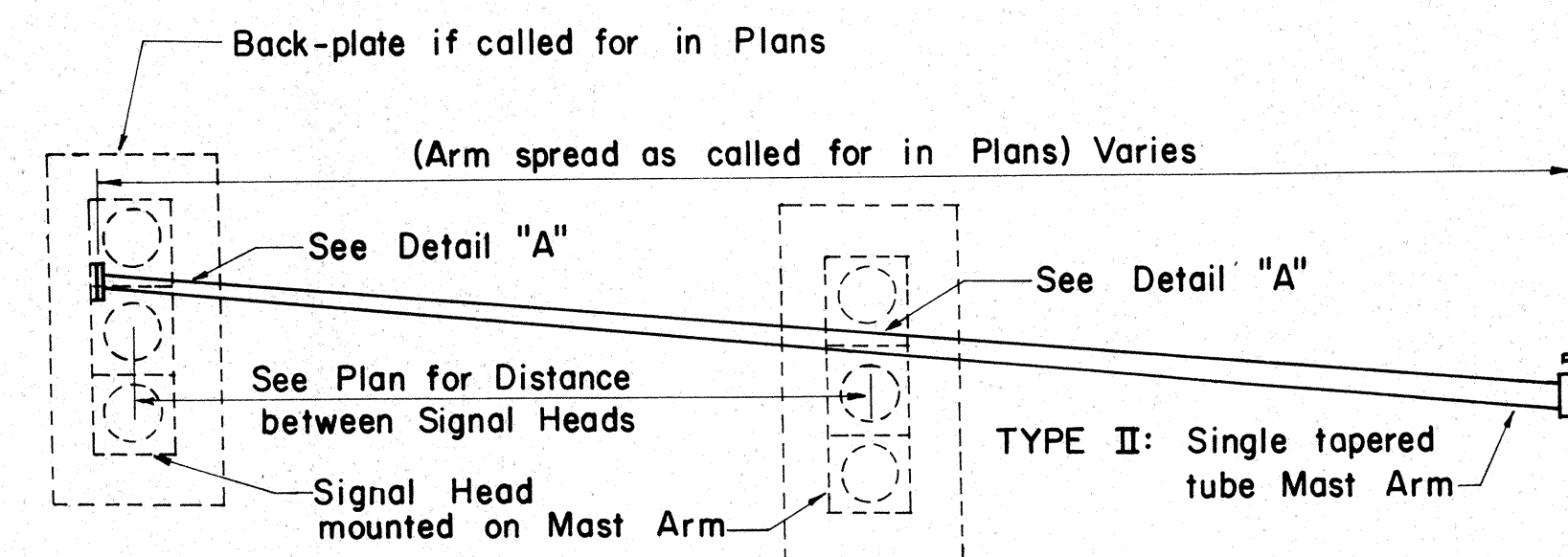


BASE DETAIL

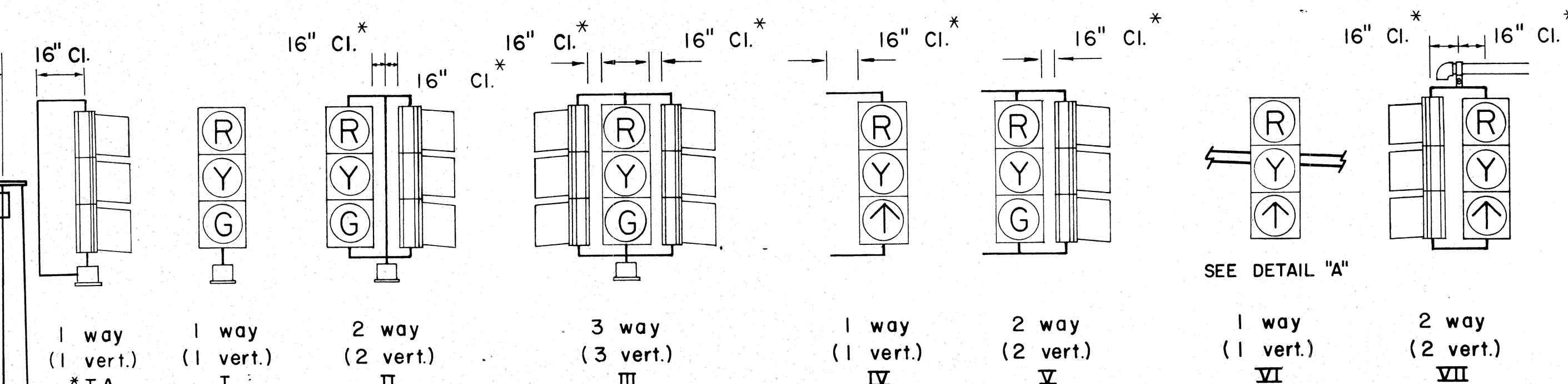
TYPICAL EQUIPMENT MOUNTINGS



DETAIL OF POLE PLATE CONNECTIONS

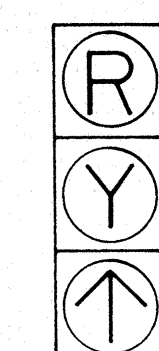


TYPE II: Single tapered
tube Mast Arm-

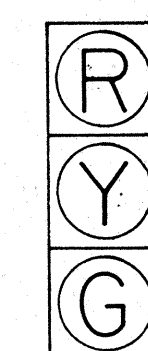


* Use with Programmed Visibility Signal

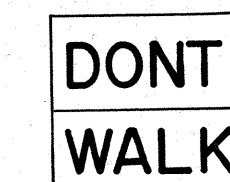
TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



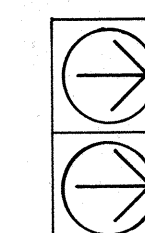
1 - Vertical
3 - Section



1 - Vertical
3 - Section



1 - Dont Walk
Walk



1 - Vertical
2 - Section

Yellow
Green

APPROVAL RECOMMENDED:

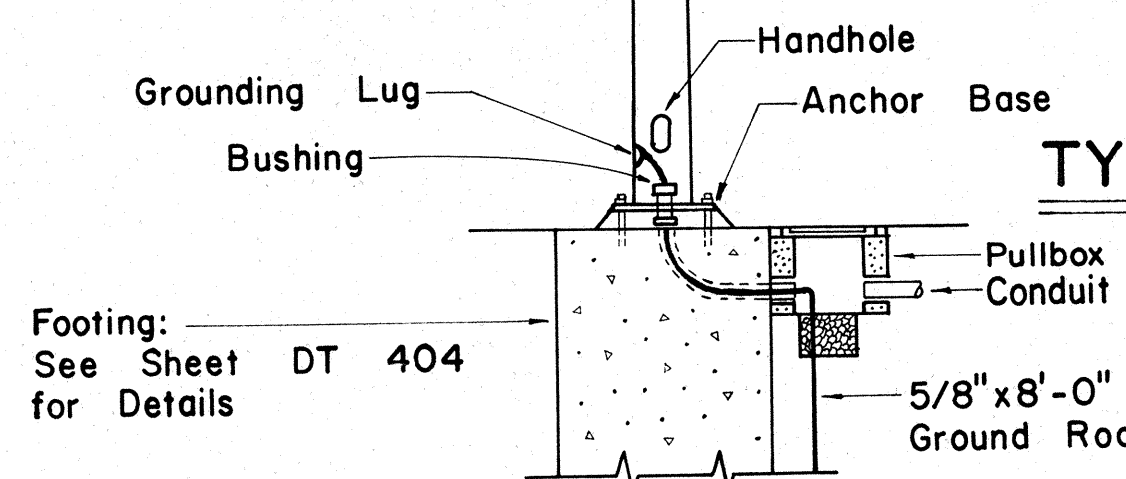
Eichi Tana
TRAFFIC ENGINEER

12/29/69
DATE

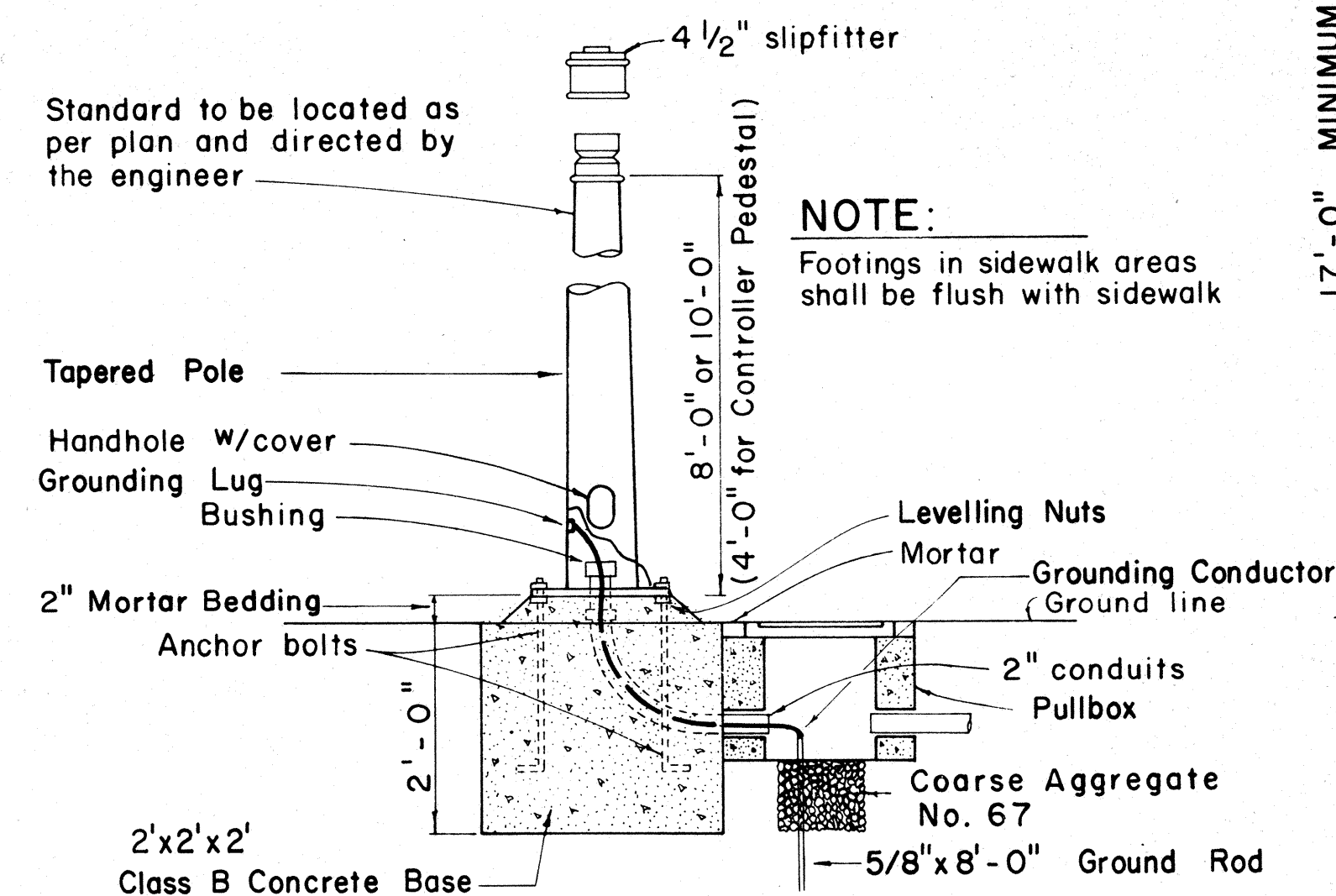
Shahid A. Shahid
ASSISTANT CHIEF, ENGINEERING

12/30/69
DATE

TYPICAL SIGNAL ARRANGEMENTS



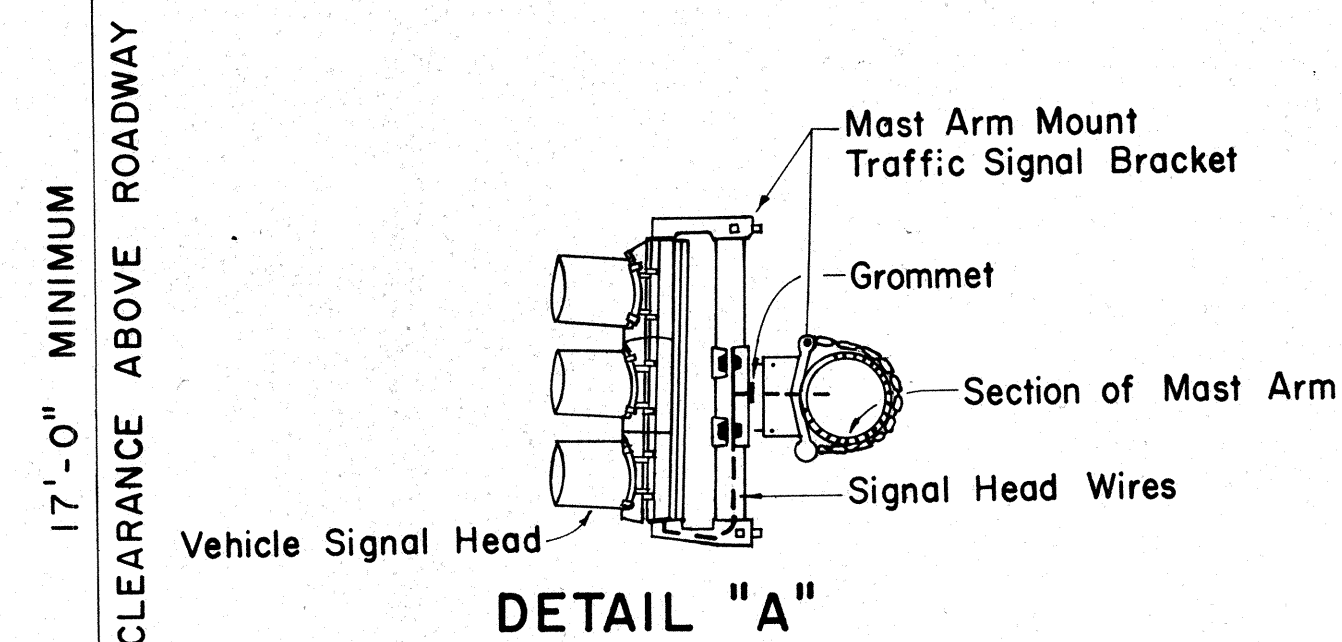
Footings: —
See Sheet
for Details



NOTE:

Footings in sidewalk areas shall be flush with sidewalk

TYPE I SIGNAL STANDARD
OR CONTROLLER PEDESTAL
AND FOOTING



TYPE II MAST ARM AND STANDARD

NO.	REVISION	APPROVED BY	DATE
1	Revise code nos. for Pedestrian Push Button signs.	H.T.	3/23/11
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5/11
3	Revise signal indications.	H.T.	3/22/11

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

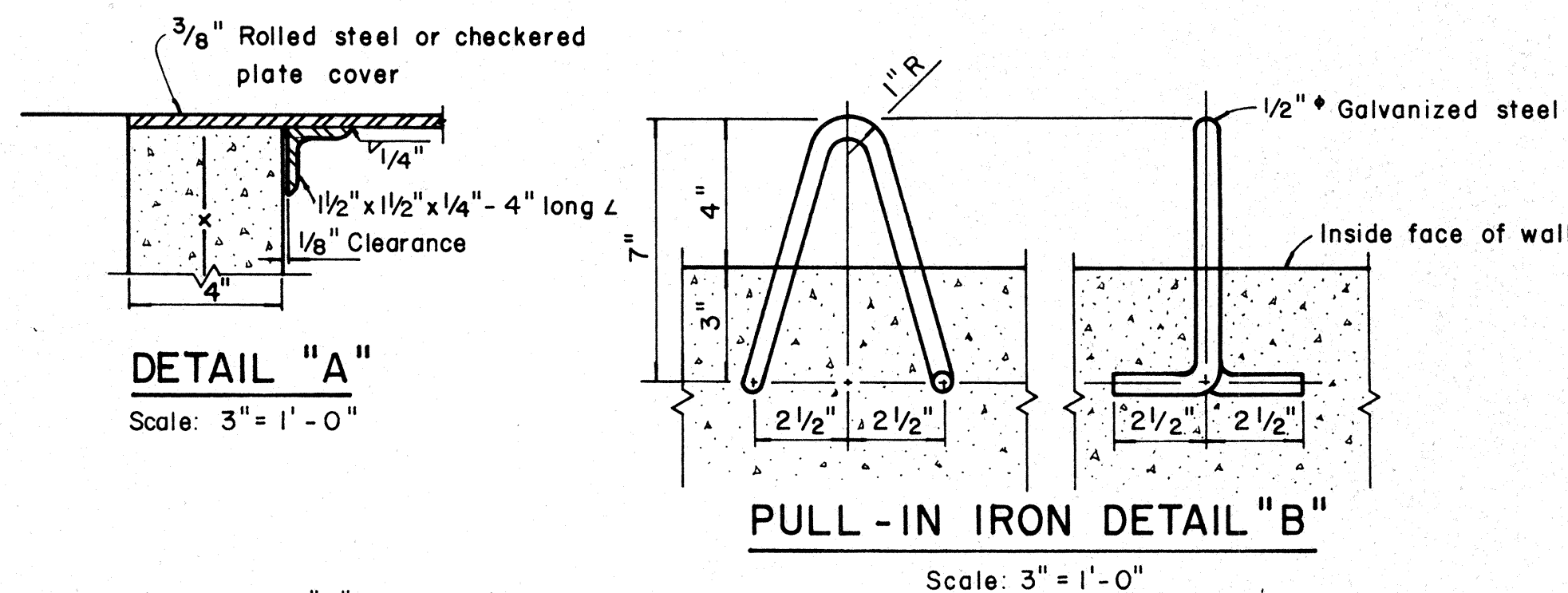
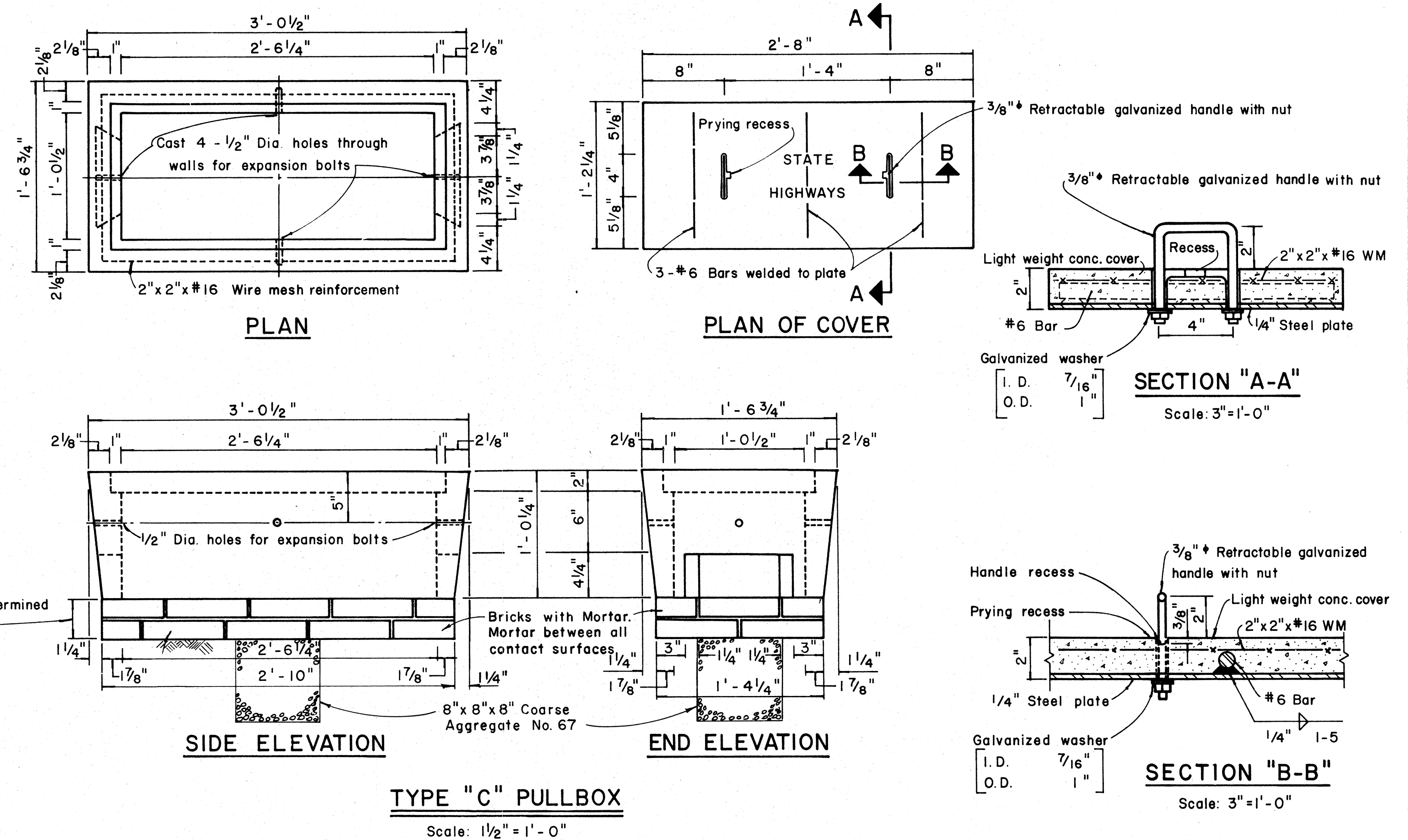
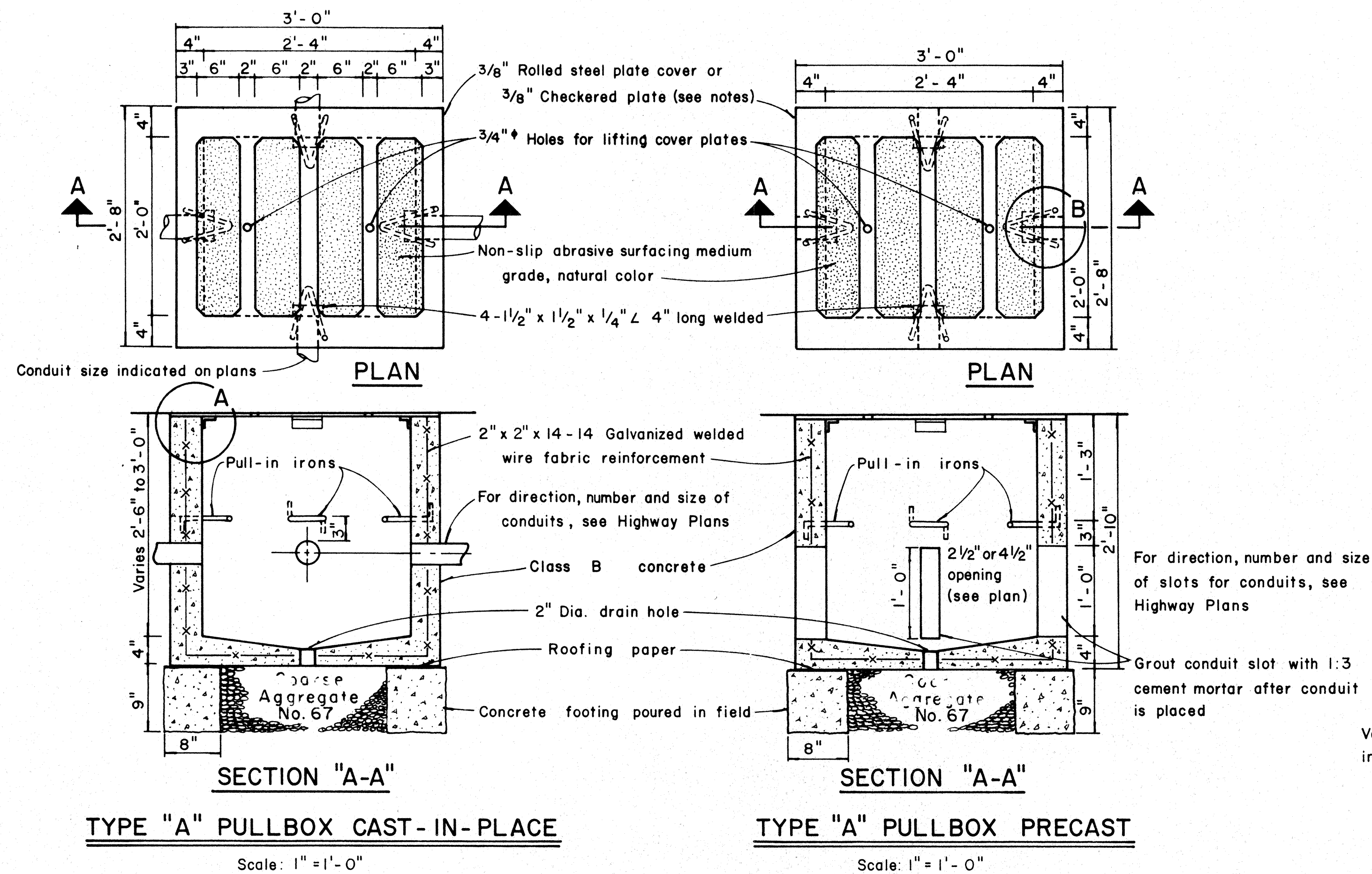
TRAFFIC SIGNAL SYSTEM

MISCELLANEOUS DETAILS

Not to Scale

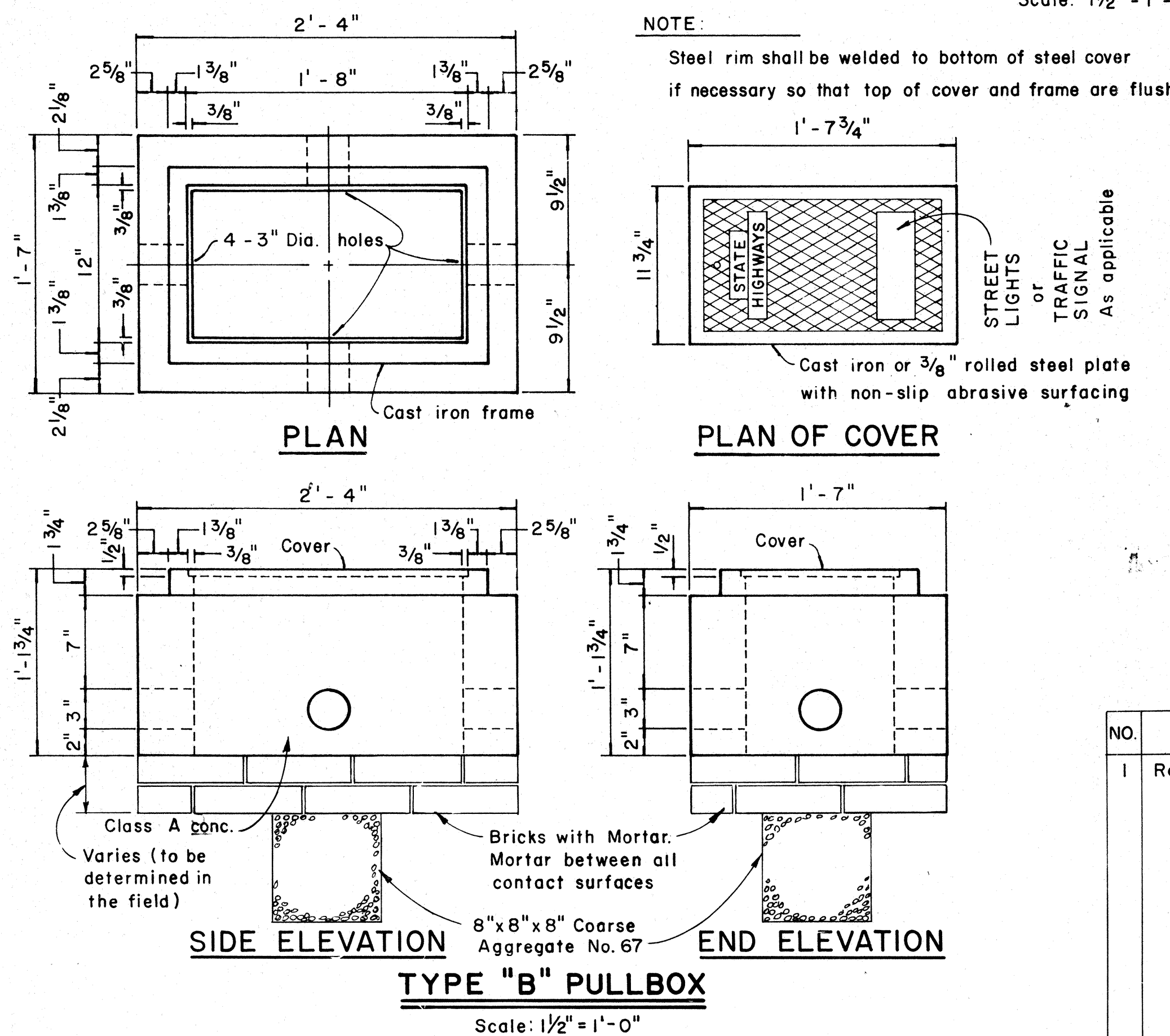
SHEET No. 6 OF 9 SHEETS DT 400

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HA-018-1(20) F-000-1(6)	1977	15	17



- NOTES: (FOR TYPE "A" PULLBOX)

1. $\frac{3}{8}$ " Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
2. $\frac{3}{8}$ " Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
3. Pull irons shall be placed opposite each conduit slot.
4. Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
5. Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.



NOTE :

Steel rim shall be welded to bottom of steel cover
if necessary so that top of cover and frame are flush

1' - 7³/₄"

STREET LIGHTS
or
TRAFFIC SIGNAL
As applicable

Cast iron or $\frac{3}{8}$ " rolled steel plate
with non-slip abrasive surfacing

PLAN OF COVER

TYPE "C" PULLBOX

Scale: $1\frac{1}{2}'' = 1' - 0''$

APPROVAL RECOMMENDED: Eishi Tanaka 12/ 69
TRAFFIC ENGINEER DATE

APPROVED: Wm. J. [Signature] 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

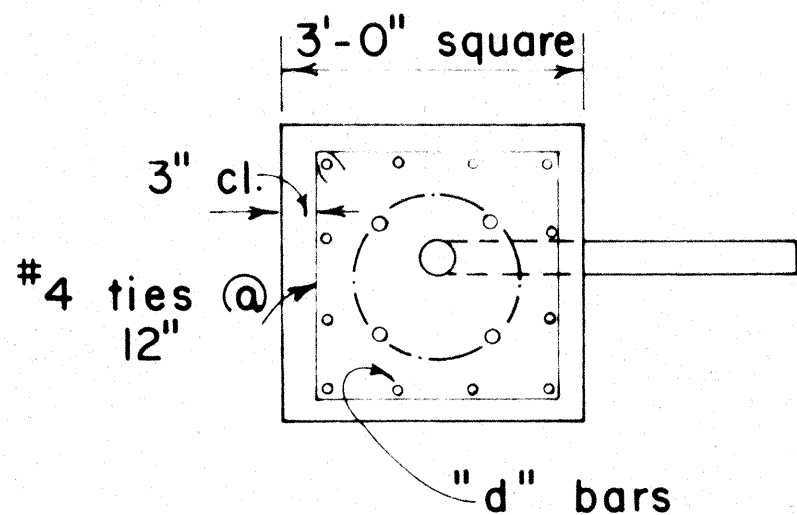
NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
PULLBOXES

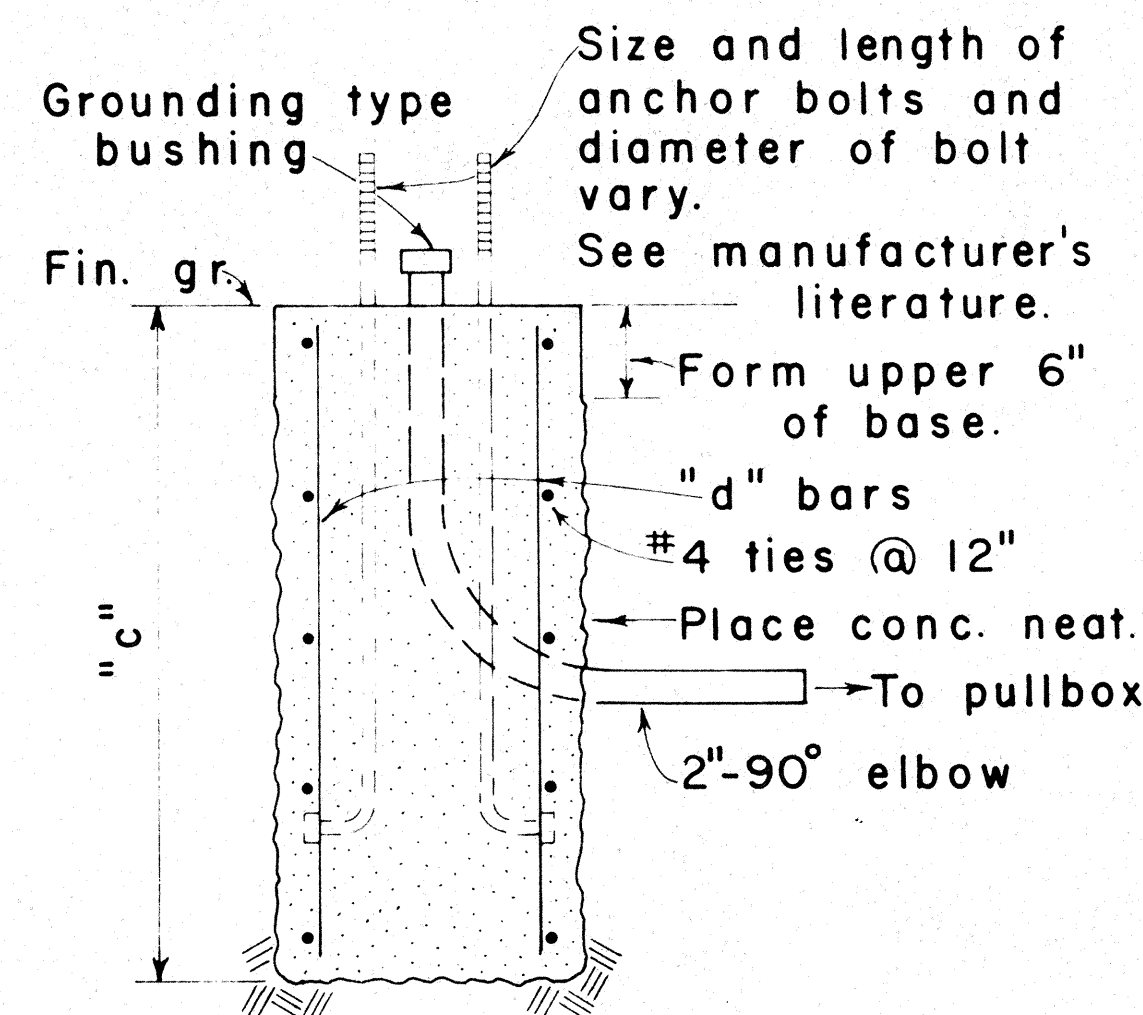
Scale as noted Date AUG. 5, 1977

SHEET No. 1 OF 2 SHEETS DT 401

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H116-010-1(22) P-000-1(6)	1977	16	17



PLAN - SECTION

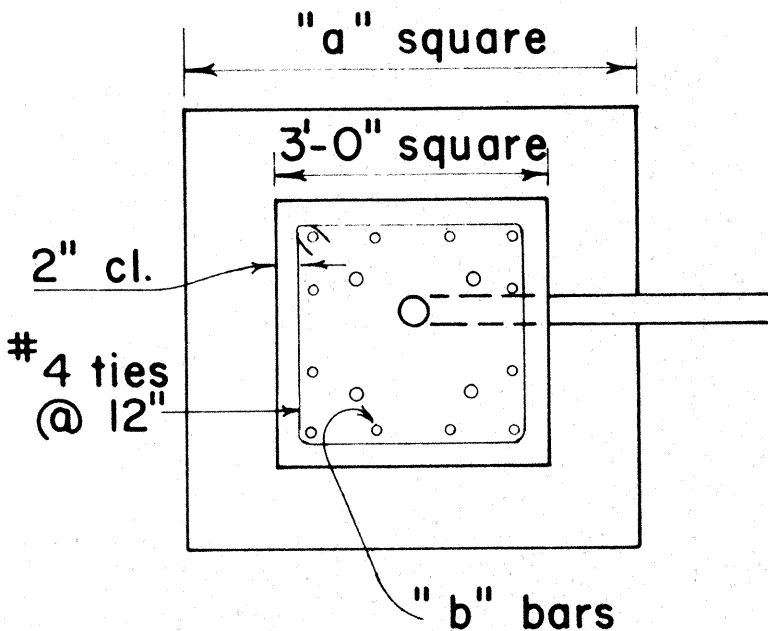


NOTE:
Concrete shall be Class B.

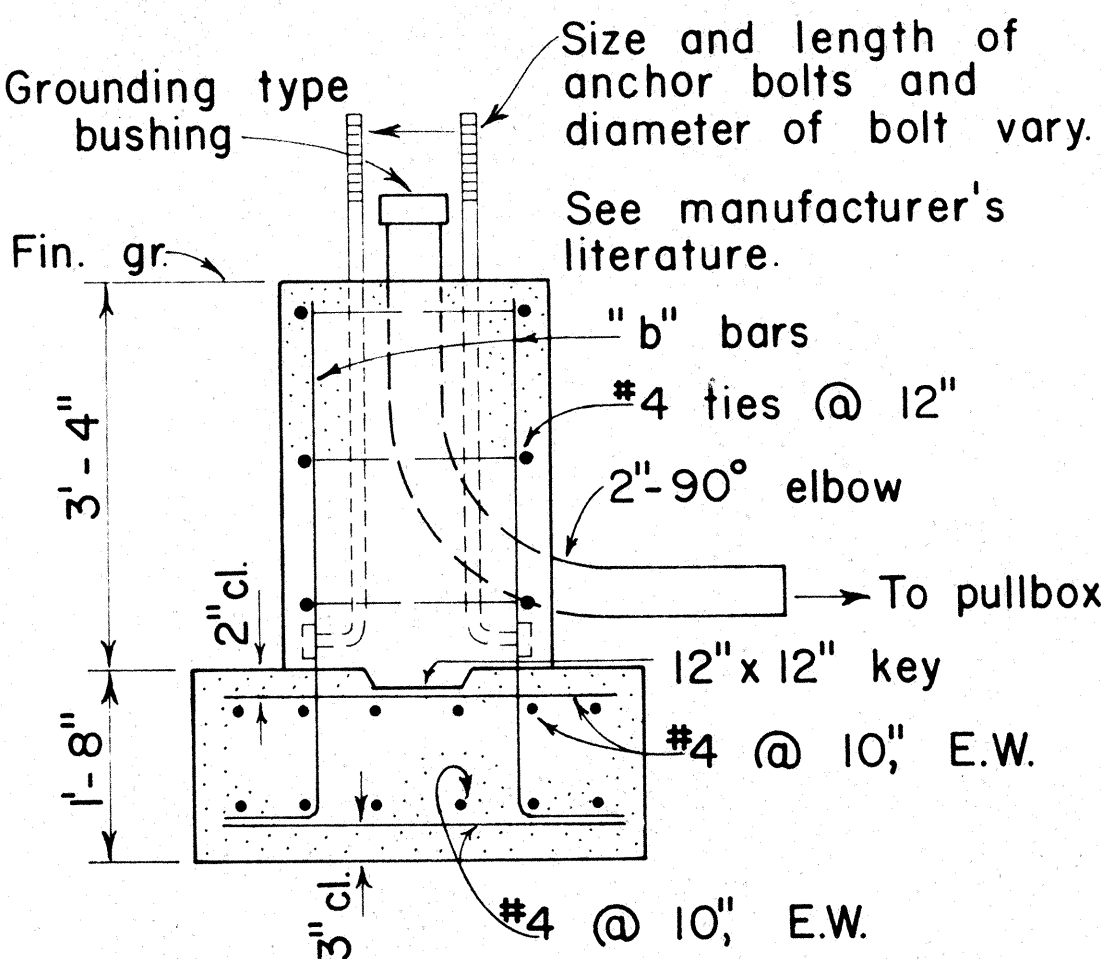
SECTION

MAST ARM LENGTH	"c"	"d" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #6
35'	7' - 0"	12 - #8
40'	8' - 0"	12 - #8

TYPE II



PLAN - SECTION



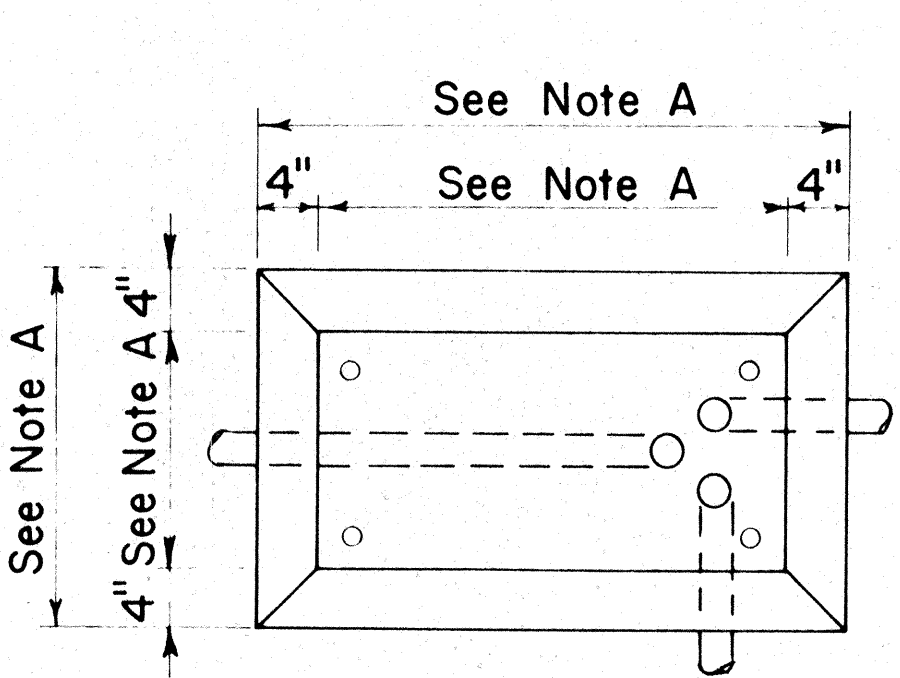
NOTE:
Concrete shall be Class B.

SECTION

MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

TYPE II A

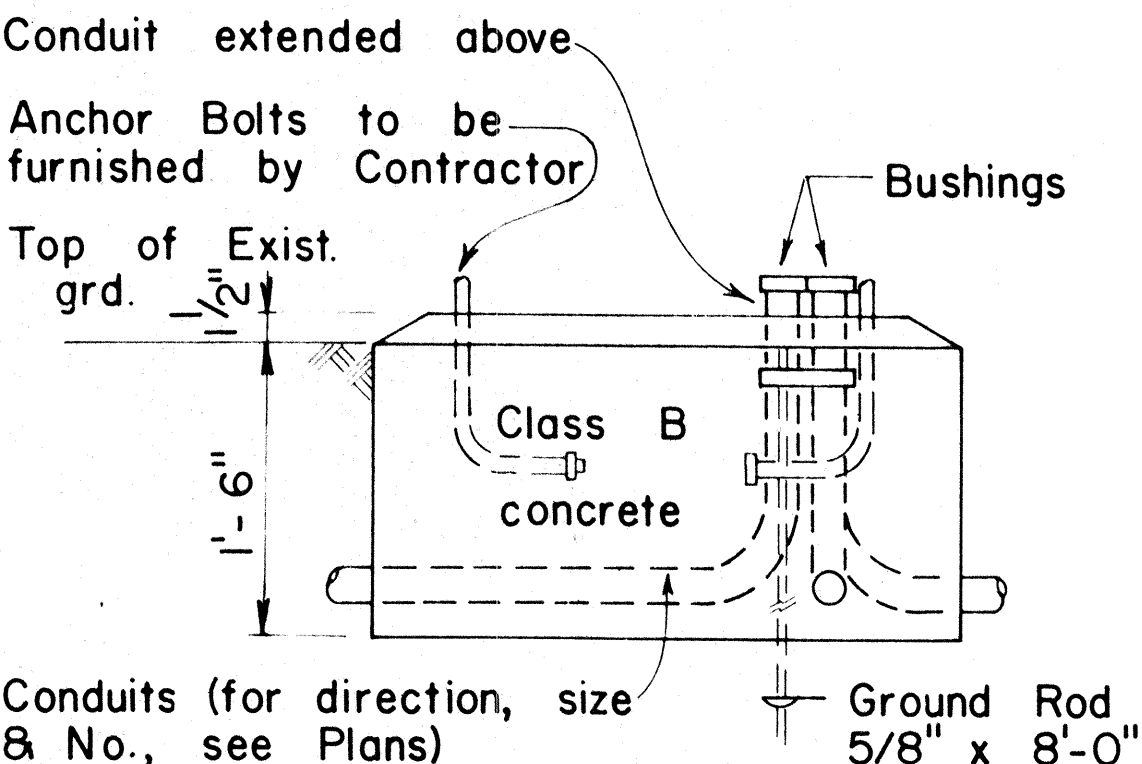
FOOTING FOR MAST ARM STANDARD



PLAN

CONCRETE BASE FOR CONTROLLER CABINET

- NOTES:
- Dimensions to be determined by the size of the Controller Cabinet to be furnished under this Contract.
 - Details of Conduits, Anchor Bolts, etc., are approximate only. Exact details shall be secured by the Contractor from Manufacturer.



ELEVATION

APPROVAL RECOMMENDED:
Erich Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Robert R. Sakai 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

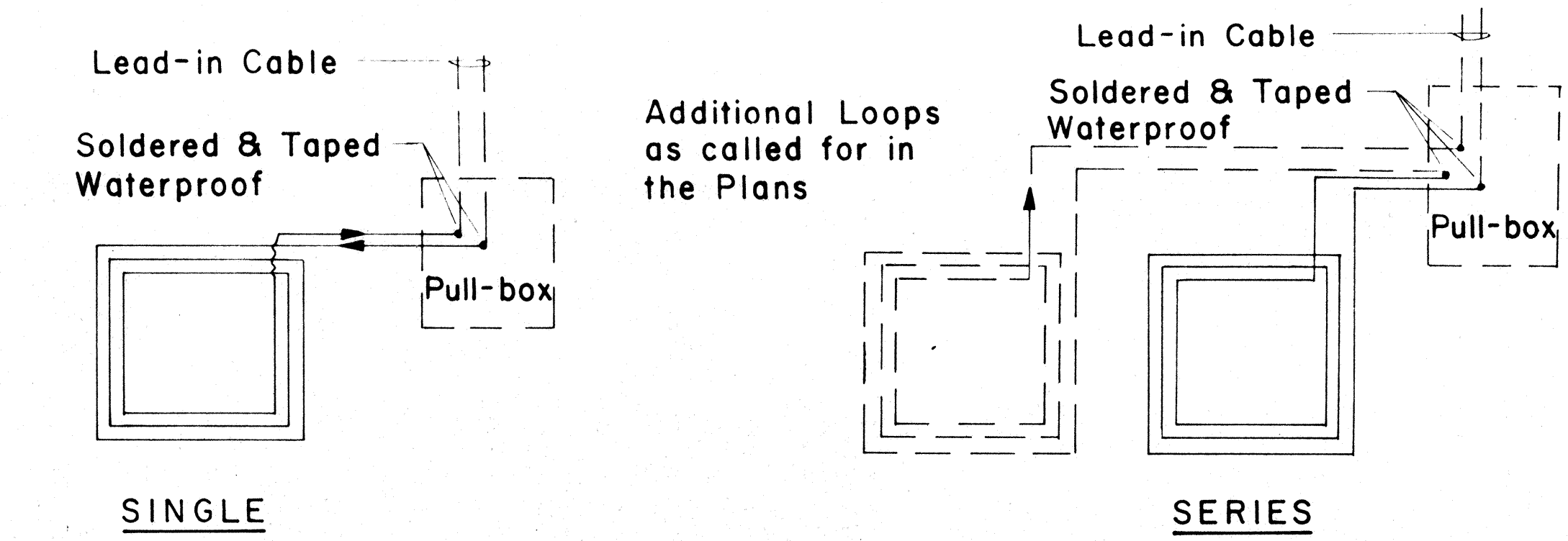
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

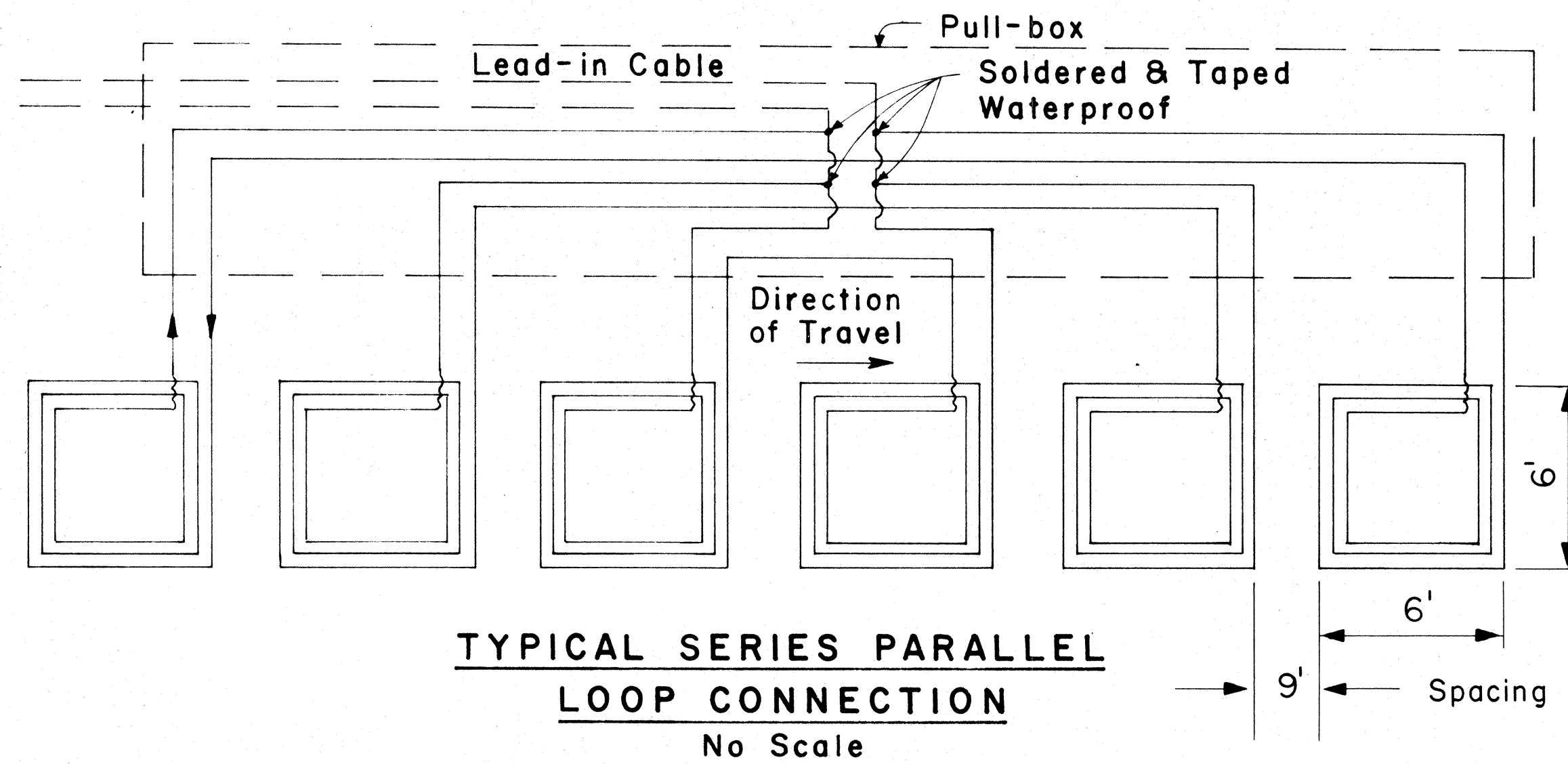
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

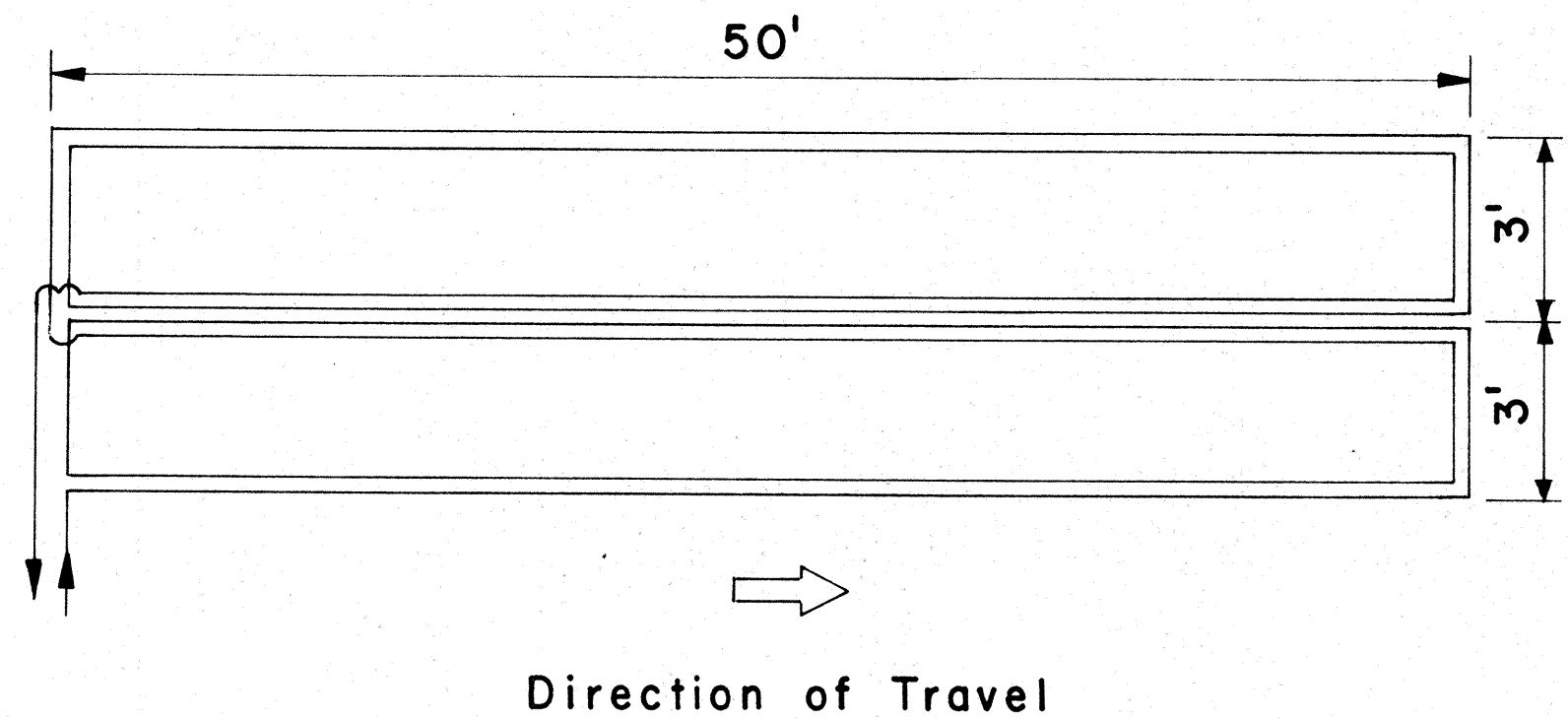
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	116-018-1(20) P.000-1(6)	1977	17	17



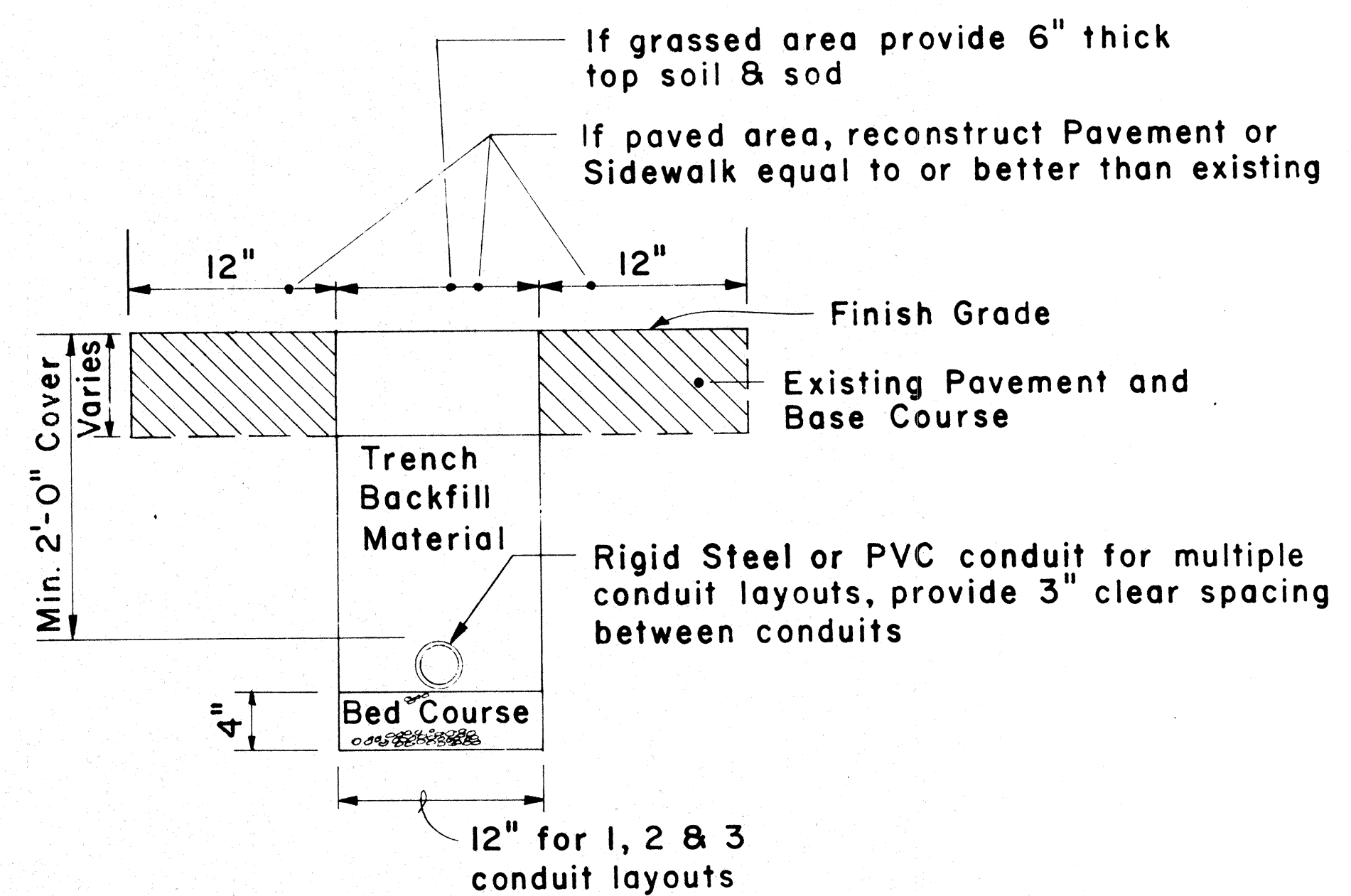
TYPICAL LOOP CONFIGURATIONS
No Scale



TYPICAL SERIES PARALLEL LOOP CONNECTION
No Scale

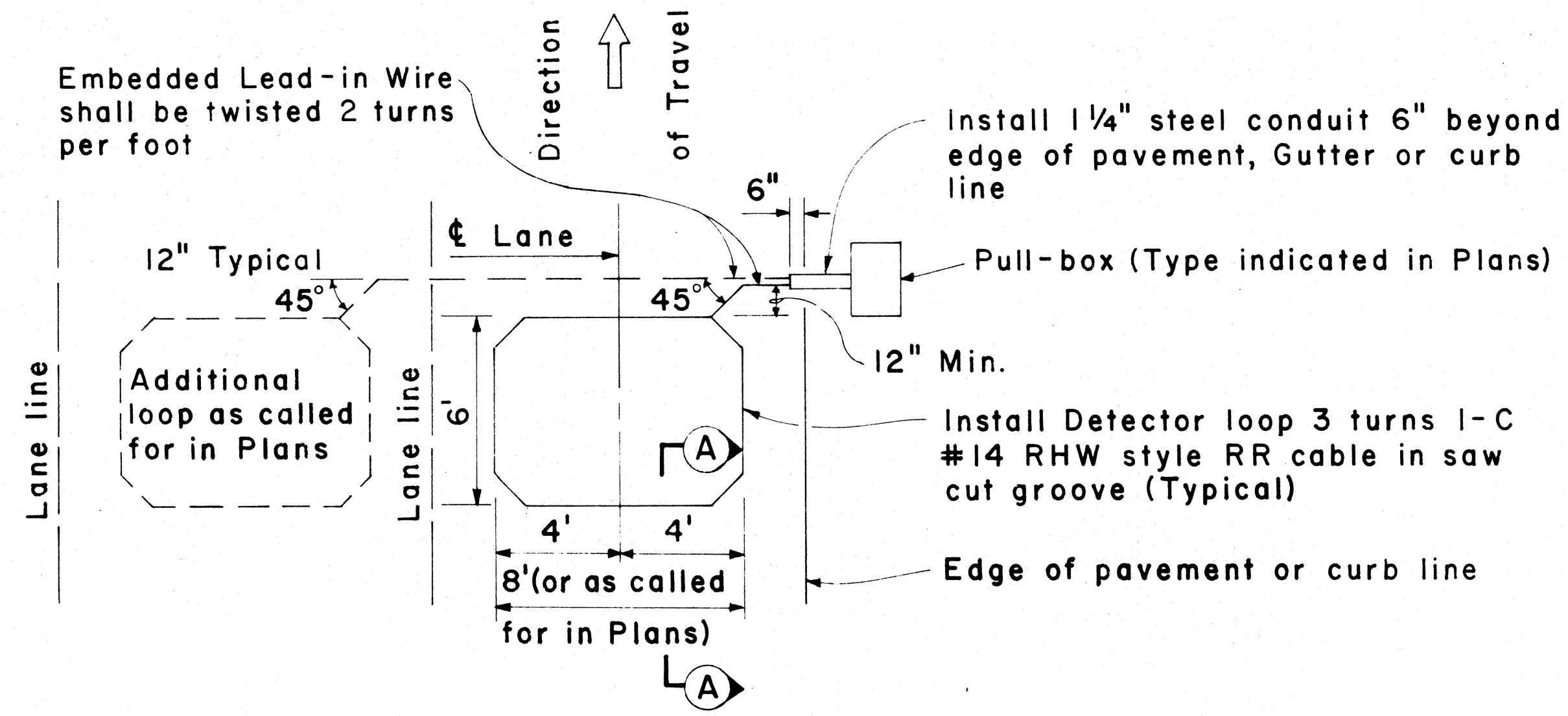


WIRING FOR 6' x 50' LOOP DETECTOR
No Scale

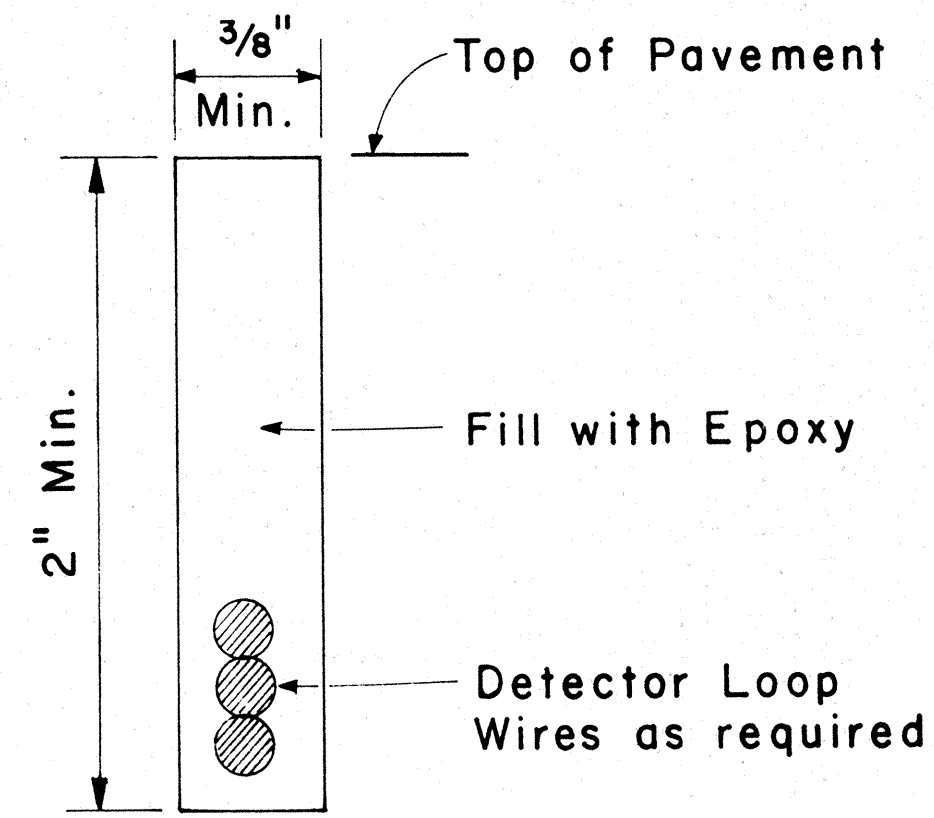


TYPICAL TRENCH SECTION FOR CONDUIT
Scale : 1 1/2" = 1' - 0"

NOTE:
1. All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.



PLAN - MULTIPLE LOOP LAYOUT
Scale : 1/4" = 1' - 0"



Detector Loop Saw-Cut SECTION A-A (TYPICAL)
No Scale

APPROVAL RECOMMENDED:
Euchi Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Richard B. Balazs 2-2-78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Add dimensions to Loop Configurations	1-1-78	9-22-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

**TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS**

Scale: As Noted
SHEET NO. 9 OF 9 SHEETS DT 405

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	