

Cast-In-Place Concrete Curb and Gutter

Construction Joint

2- 1/2" Ø Dowels 18" Long

9" 9"

A A

PLAN

Cast-In-Place Concrete Curb or Lava Rock Curb

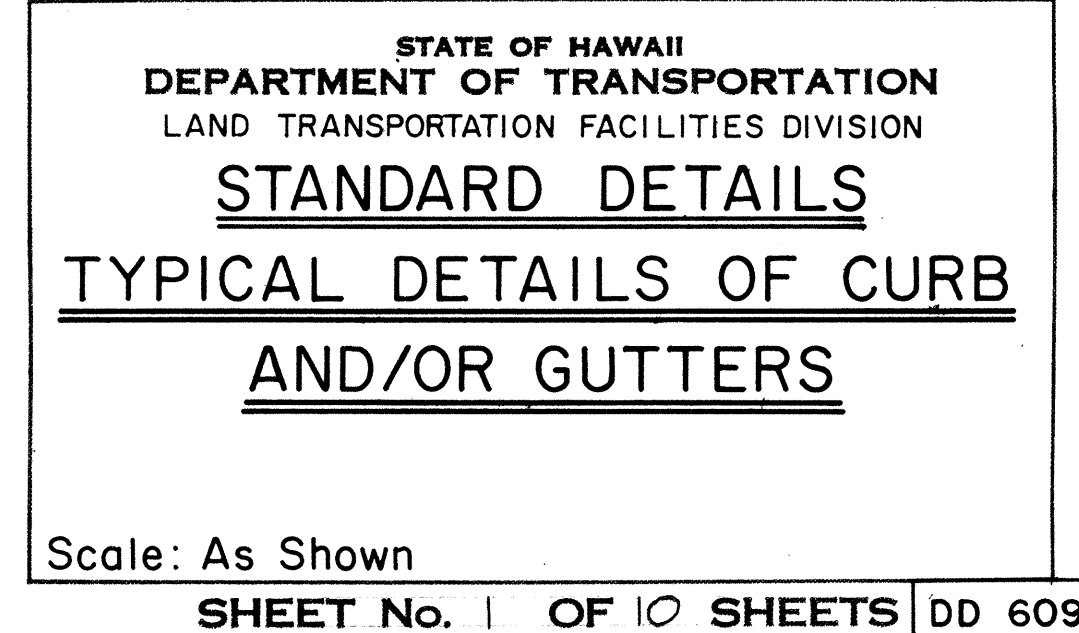
Mortar Joints

Cast-In-Place Gutter Type 2A

9" 9"

B B

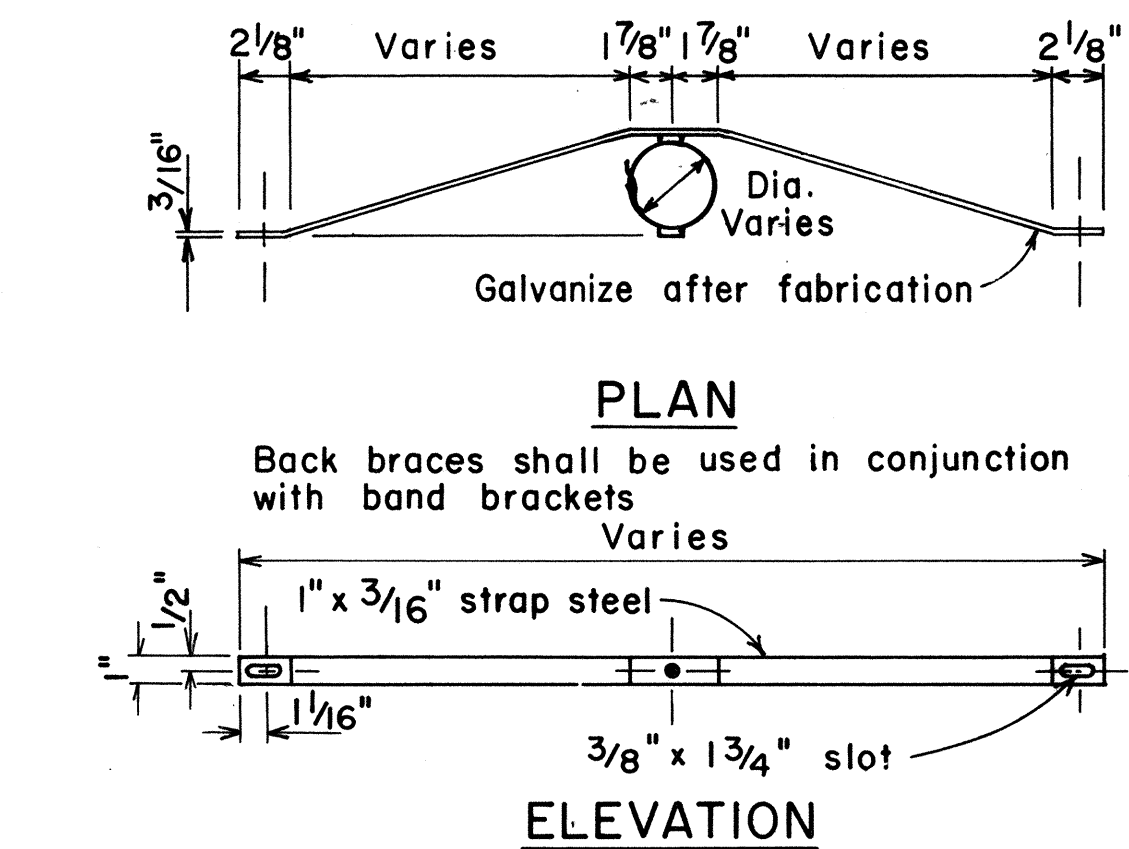
PLAN



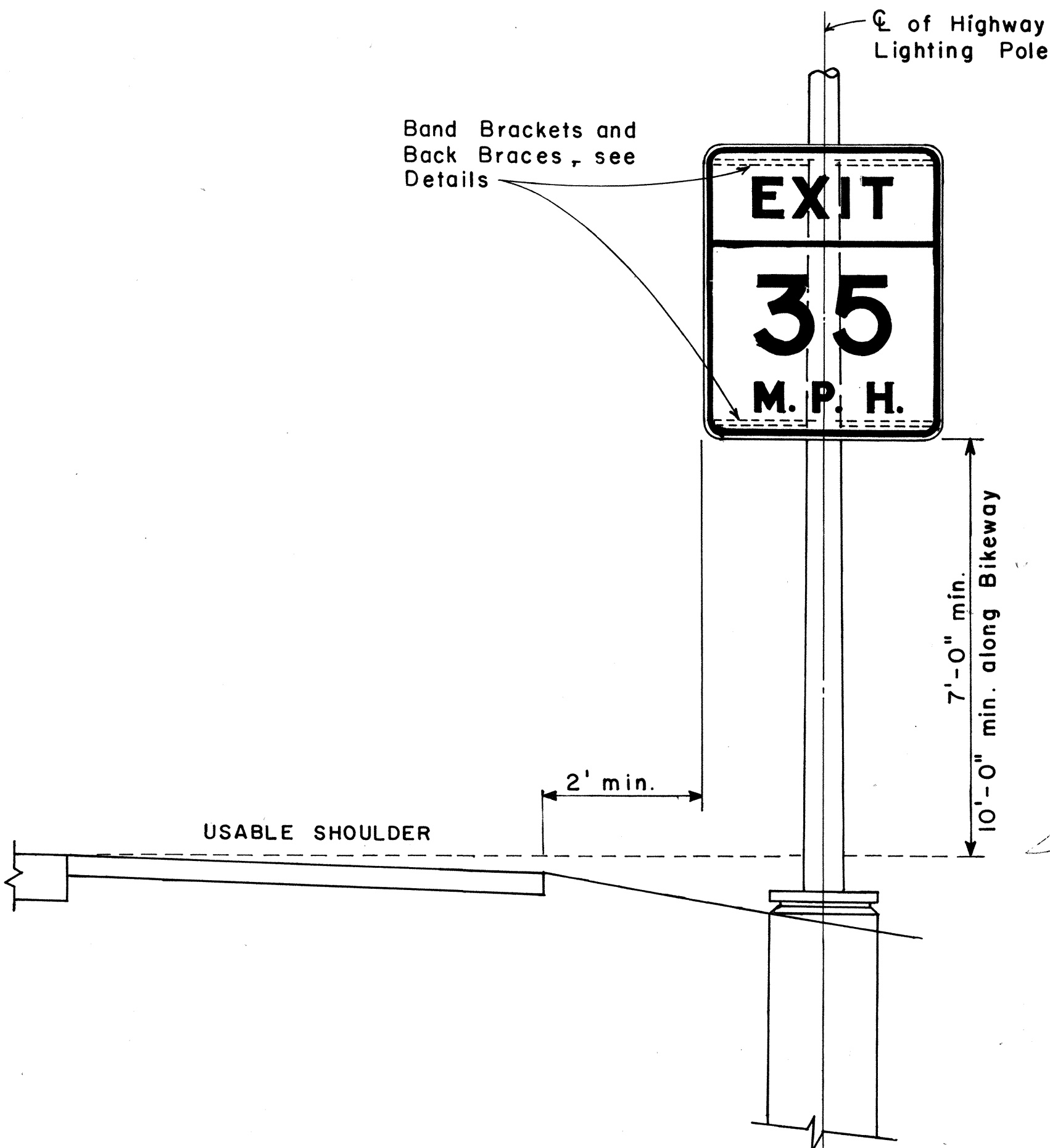
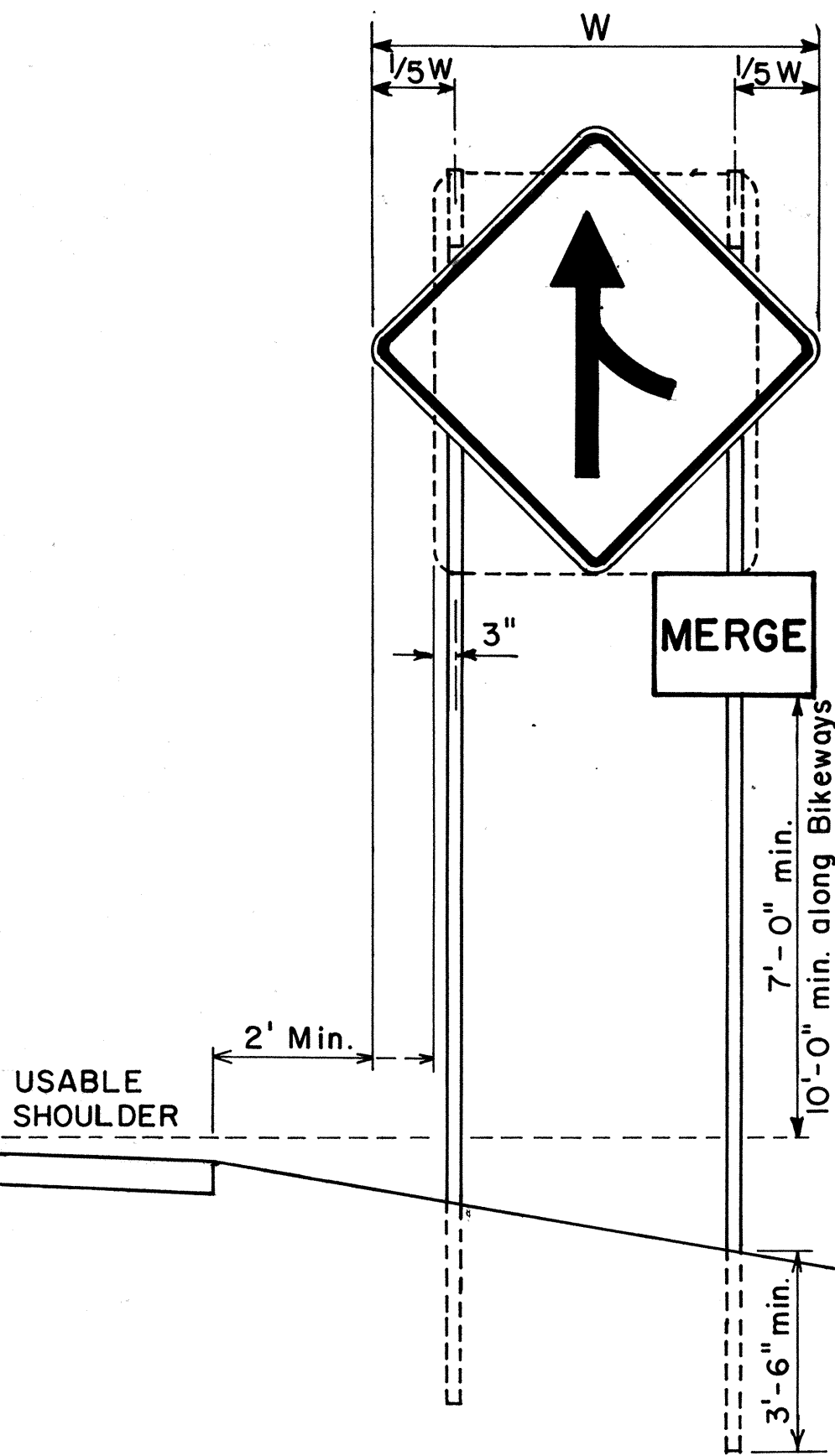
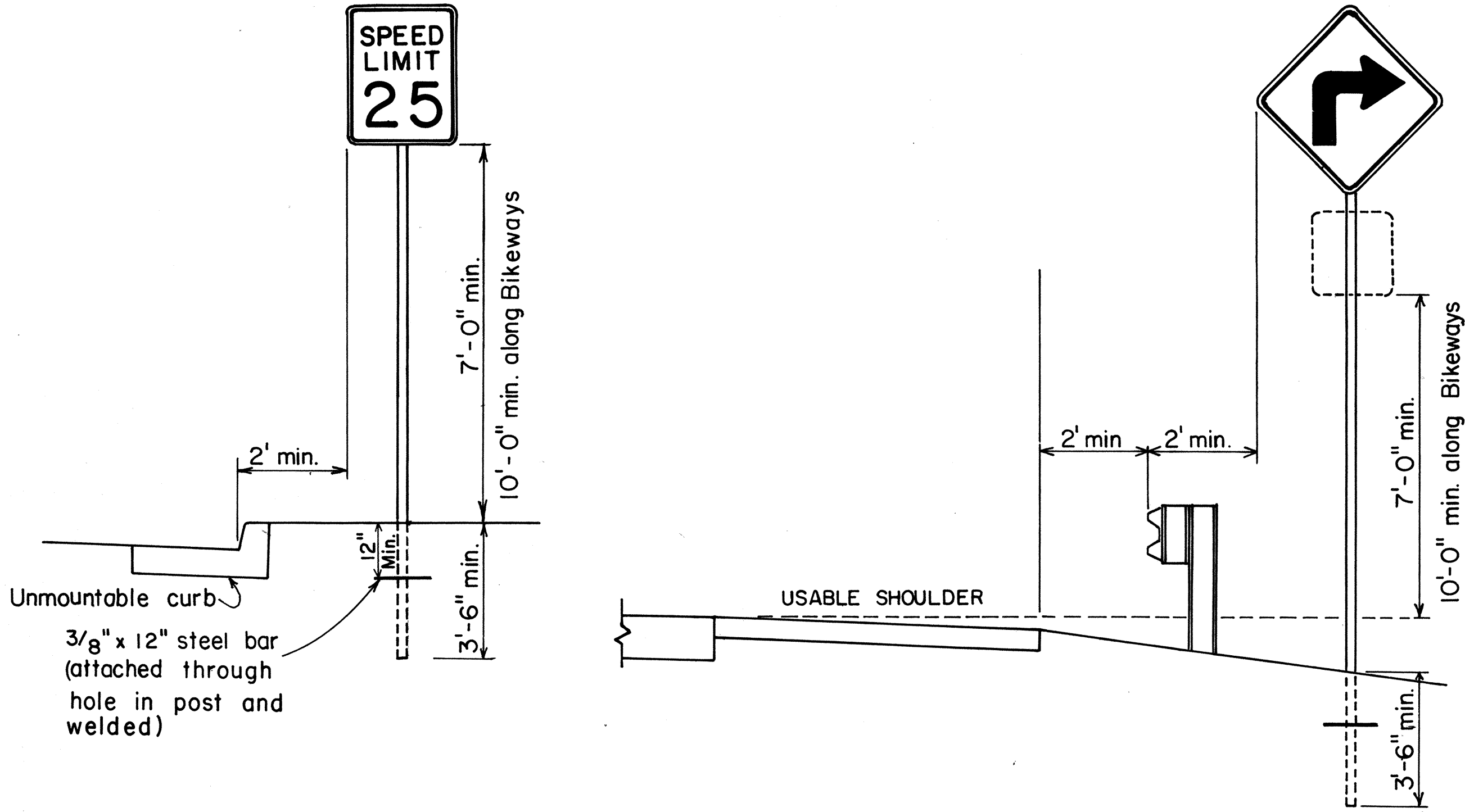
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	03A-02-79	1979	8	16

GENERAL NOTES

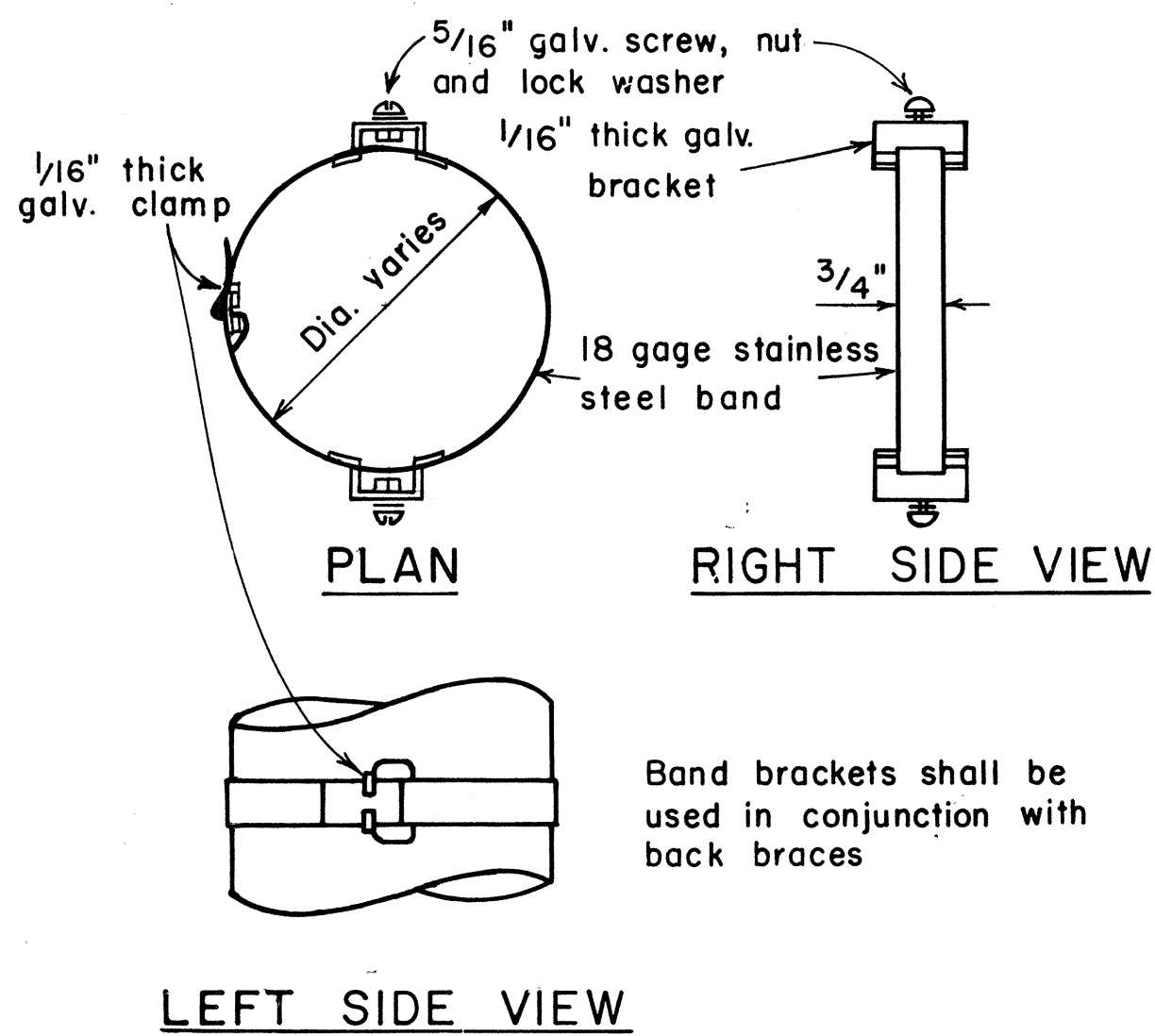
- 1. Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
- 2. All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- 3. All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
- 4. 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.
- 5. Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
- 6. (R) or (L) indicates right or left and shall be as shown on the plans.



BACK BRACE DETAILS
FOR BALANCED SIGN INSTALLATION



HEIGHT AND LATERAL LOCATION OF SIGNS
TYPICAL INSTALLATION



TYPICAL BAND BRACKET FOR
MOUNTING TRAFFIC SIGNS

APPROVAL RECOMMENDED:
Erich Tanaka 11/10/77
TRAFFIC ENGINEER DATE

APPROVED:
Shirley S. Nakai 11/15/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT-100 approved 12/30/69	H.T.	11/15/77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

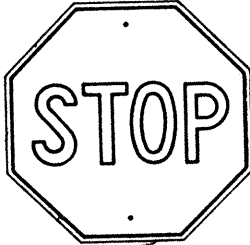
STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

SHEET NO. 2 OF 10 SHEETS DT 100

DATE	DESIGNED BY	CHECKED BY
11/15/77	H.T.	H.T.
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY
11/15/77	DESIGNED BY	CHECKED BY

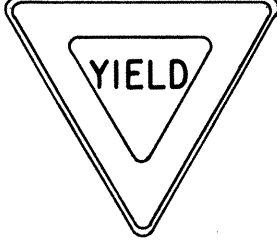
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	33A-02-79	1979	9	16



R1-1 30"x30"
R1-1-A 36"x36"

4-WAY

R1-3 12"x6"
R1-3-A 18"x9"



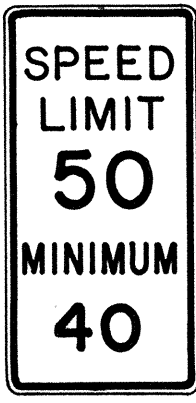
R1-2 36"x36"x36"
R1-2-A 48"x48"x48"



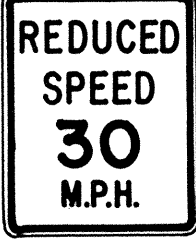
R2-1(50) 24"x30"
R2-1(50)-A 48"x60"



R2-2(40) 24"x24"
R2-2(40)-A 48"x48"



R2-4a(50/40) 24"x48"
R2-4a(50/40)-A 48"x96"



R2-5b(30) 24"x30"
R2-5b(30)-A 48"x60"



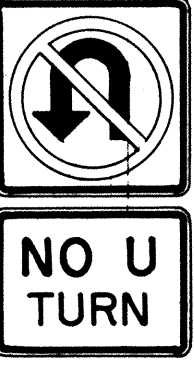
R3-1 24"x24"
24"x18"
R3-1-A 48"x48"
48"x36"



R3-2 24"x24"
24"x18"
R3-2-A 48"x48"
48"x36"



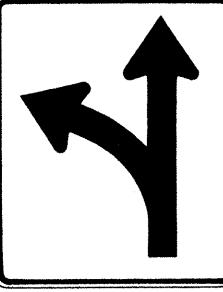
R3-3 24"x24"
R3-3-A 48"x48"



R3-4 24"x24"
24"x18"
R3-4-A 48"x48"
48"x36"



R3-5(L) 30"x36"
R3-5(L)-A 48"x60"



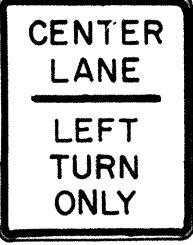
R3-6(L) 30"x36"
R3-6(L)-A 48"x60"



R3-7(R) 30"x30"
R3-7(R)-A 48"x48"



R3-8(L) 30"x30"
R3-8(L)-A 36"x36"
R3-8(L)-B 48"x48"



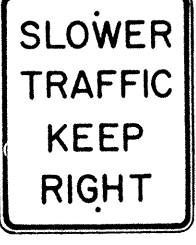
R3-9 24"x30"



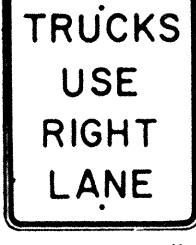
R4-1 24"x30"



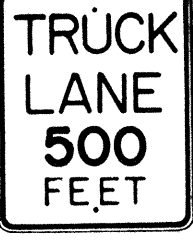
R4-2 24"x30"



R4-3 24"x30"
R4-3-A 48"x60"



R4-5 24"x30"



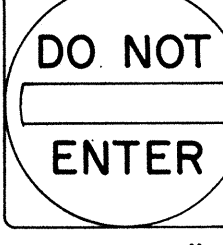
R4-6(500) 24"x30"



R4-7 24"x30"
24"x18"



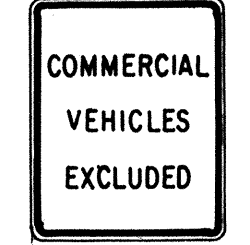
R4-8 24"x30"
24"x18"



R5-1 30"x30"
R5-1-A 48"x48"



R5-2 24"x24"
24"x18"



R5-4 24"x30"



R5-6 24"x24"
24"x18"



R5-9 36"x24"



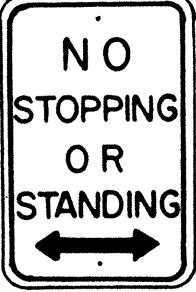
R6-1(R) 36"x12"



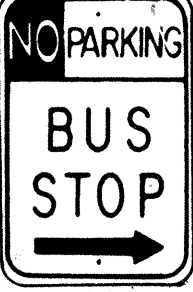
R6-2(R) 18"x24"



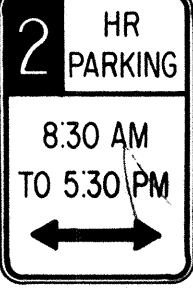
R7-1 12"x18"
R7-1-A 24"x30"



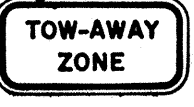
R7-4 12"x18"
R7-4-A 24"x30"



R7-107(R) 12"x18"



R7-108 12"x18"



R7-201 12"x6"
R7-201-A 24"x12"



R8-1 24"x30"



R8-2 24"x30"



R8-3 24"x30"



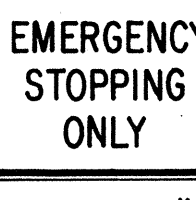
R8-4 30"x24"
R8-4-A 48"x36"



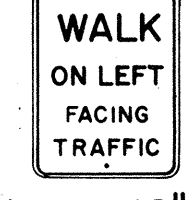
R8-5 24"x30"



R8-6 24"x30"



R8-7 30"x24"
R8-7-A 48"x36"



R9-1 18"x24"



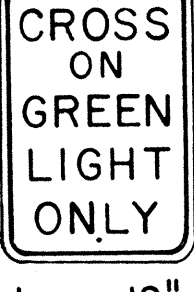
R9-2 12"x18"



R9-3 12"x18"



R9-4 18"x24"



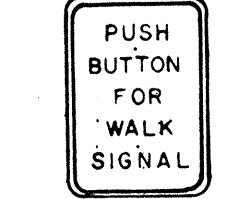
R10-1 12"x18"



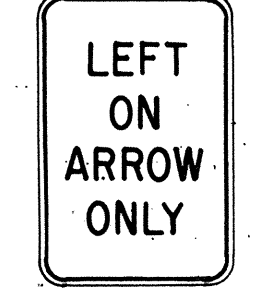
R10-2 12"x18"



R10-3 9"x12"



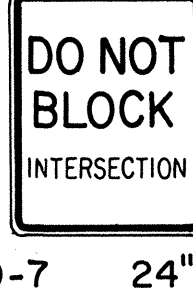
R10-4 9"x12"



R10-5 24"x30"



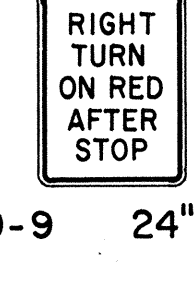
R10-6 24"x36"



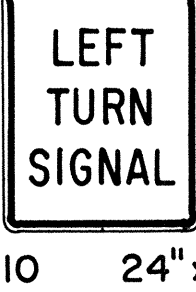
R10-7 24"x30"



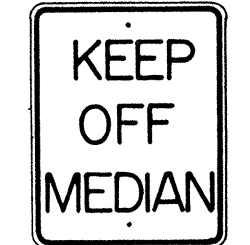
R10-8 24"x30"



R10-9 24"x30"



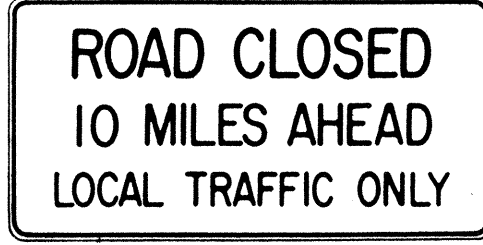
R10-10 24"x30"



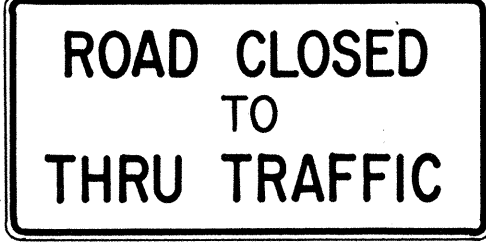
R11-1 24"x30"



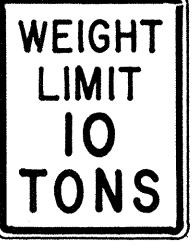
R11-2 48"x30"



R11-3(10) 60"x30"



R11-4 60"x30"



R12-1(10) 24"x30"

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 signs shall be reflectorized unless otherwise specified.
- All regulatory 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:

Erich Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:

Robert J. ... 3-28-72
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.	10/10/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

SHEET No. 3 OF 10 SHEETS DT 101

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES 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.	03A-02-70	1979	10	16

General Notes

- Sign details shall conform to the latest editions of the following FHWA publications:
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.

APPROVAL RECOMMENDED:
Eishi Tanaka 5/2/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Dakeishi 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
	Supersedes Sht. DT 103 approved 3/20/72	H.T.	5/3/78

STATE OF HAWAII LAND TRANSPORTATION FACILITIES DIVISION	
STANDARD DETAILS	
MISCELLANEOUS SIGNS	
NOT TO SCALE	DATE: MAY, 1978
SHEET No. 4 OF 10 SHEETS DT 103	

ALL WAY
R1-4 18"x 6"

REDUCED SPEED
35
AHEAD
R2-5d(35) 24"x 30"
R2-5d(35)-A 48"x 60"

SPEED LIMIT
ENFORCED
BY
VASCAR
4" Series D
- 4" Series C
- 3" Series D
- 5" Series C
R2-10 24"x 30"

CENTER LANE
ONLY
R3-9b 24"x 36"

BUS STOP
R7-107(R) 12"x 24"

RESERVED
PARKING
R7-8 12"x 18"
R7-8-A 24"x 30"

ANY TIME
R8-3a 24"x 24"
24"x 18"
R8-3a-A 48"x 48"

NO PED
XING
R9-3a 18"x 18"
18"x 12"
R9-3a-A 24"x 24"
24"x 18"

USE
CROSSWALK
R9-3b(R) 18"x 12"

USE
CROSSWALK
R9-3b(L) 18"x 12"

NO
TURN
ON
RED
R10-11a 24"x 30"

TURN
RIGHT
ANY TIME
WITH
CAUTION
4" Series C
R16-1 24"x 30"

NO
LEFT
TURN
ON
RED
- 4" Series D -
- 3" Series D -
- 2" Series D -
- 3" Series D -
R16-3 18"x 24"

NO
RIGHT
TURN
ON
RED
R16-4 18"x 24"

UNLICENSED
VEHICLES
BICYCLES, CYCLES
UNDER 5 H P,
PEDESTRIANS
KEEP OUT
FREEWAY
3" Series C
4" Series E
R16-5 36"x 42"

U
TURN
AHEAD
- 8" Series F
- 5" Series D
R16-6 24"x 30"

U
TURN
OK
8" Series F
5" Series D
R16-7 24"x 30"

MOTOR-DRIVEN
CYCLES
PROHIBITED
4" Series B
R5-8 30"x 24"

W17-1(L) 60"x 60"

STOP
AHEAD
W3-1a 36"x 36"
24"x 18"
W3-1a-A 48"x 48"
24"x 18"

YIELD
AHEAD
W3-2a 36"x 36"
24"x 18"
W3-2a-A 48"x 48"
24"x 18"

STOP
AHEAD
WHEN
FLASHING
6" Series C
W3-4 48"x 48"

TRUCK
CROSSING
W8-6 30"x 30"
W8-6-A 36"x 36"

THRU
TRAFFIC
MERGE
LEFT
6" Series E
W9-3(L) 48"x 48"

EQUESTRIAN
XING
W11-7 36"x 36"
24"x 18"
W11-7-A 48"x 48"
24"x 18"

FIRE
STATION
W11-8 36"x 36"
24"x 18"
W11-8-A 48"x 48"
24"x 18"

W11-9 36"x 36"
W11-9-A 48"x 48"

LIMITED
SIGHT
DISTANCE
W14-4 36"x 36"
W14-4-A 48"x 48"

DELAYED
GREEN
- 4" Series C -
W15-1 24"x 24"

ADVANCE
GREEN
W15-2 24"x 24"

END
FREEWAY
1/2 MI
8" Series E
CW16-1(1/2) 60"x 60"

RIGHT
LANE
EXIT
ONLY
8" Series E
W18-1 48"x 60"

SI-1 36"x 36"

S2-1 36"x 36"

SCHOOL
BUS STOP
AHEAD
S3-1 30"x 30"

8:00 AM
TO 3:30 PM
S4-1 24"x 10"
WHEN
CHILDREN
ARE PRESENT
S4-2 24"x 10"

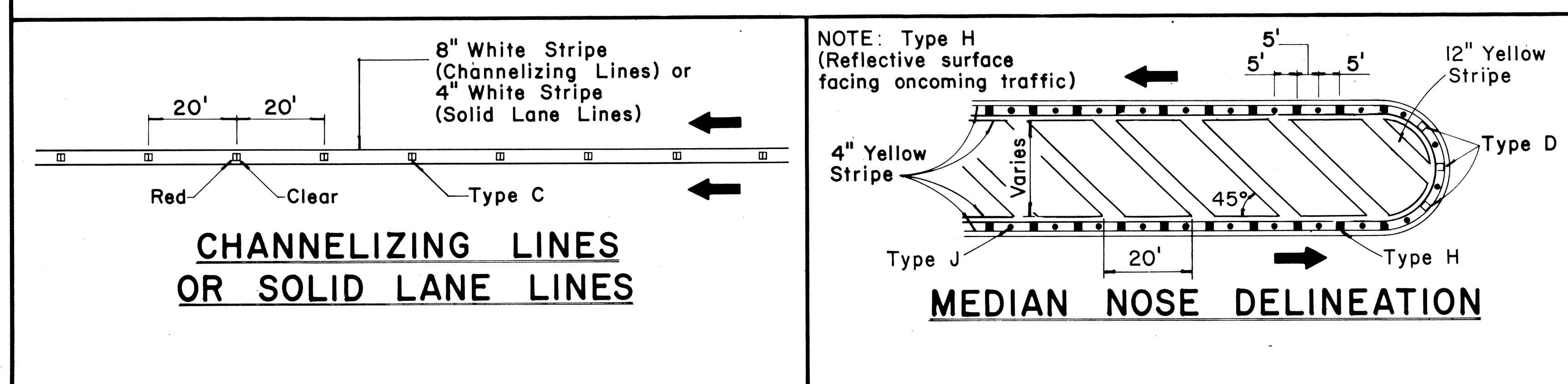
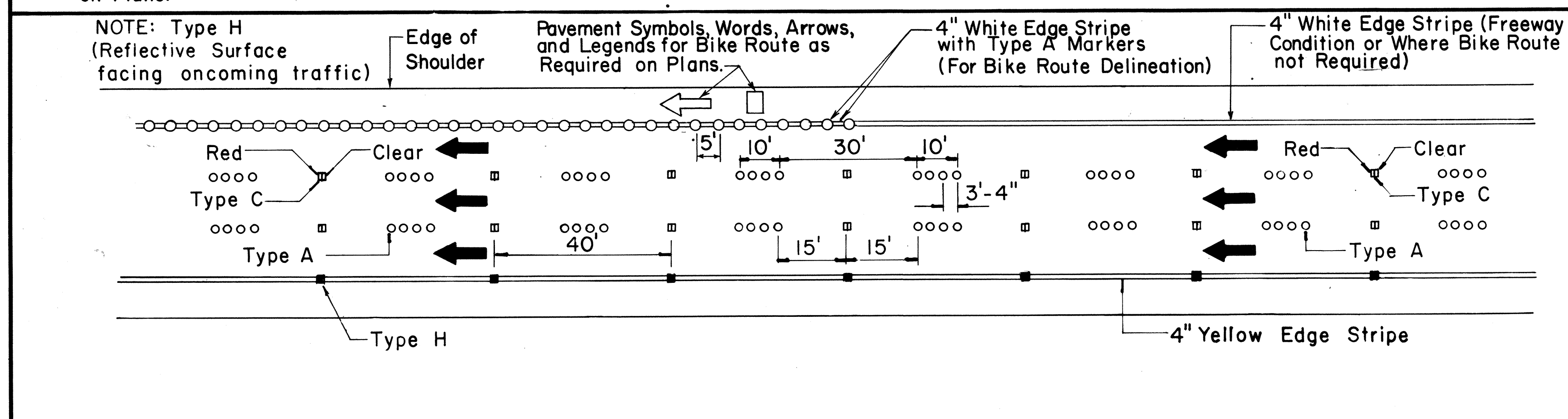
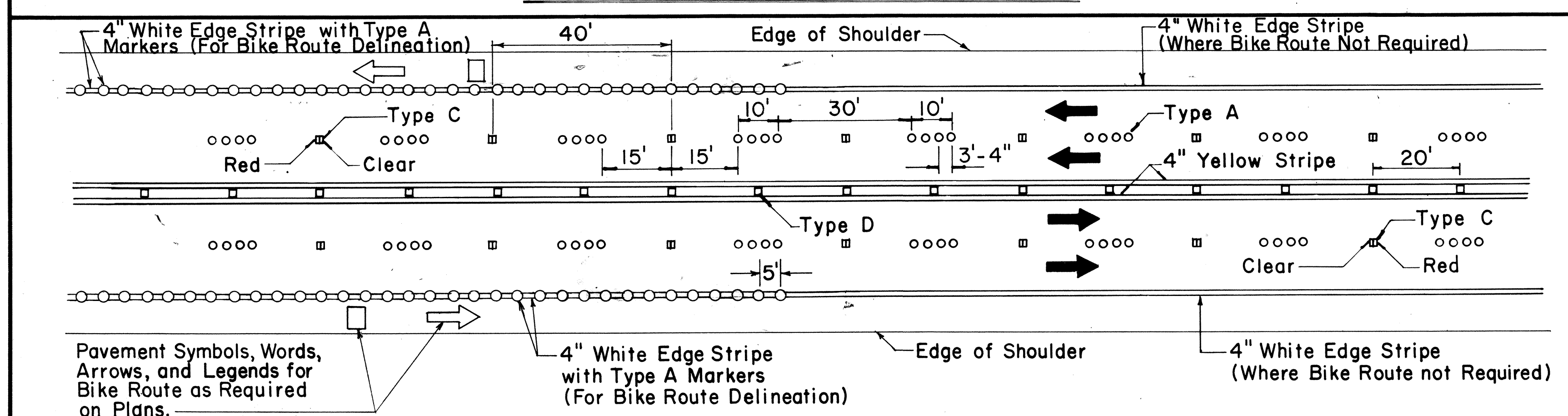
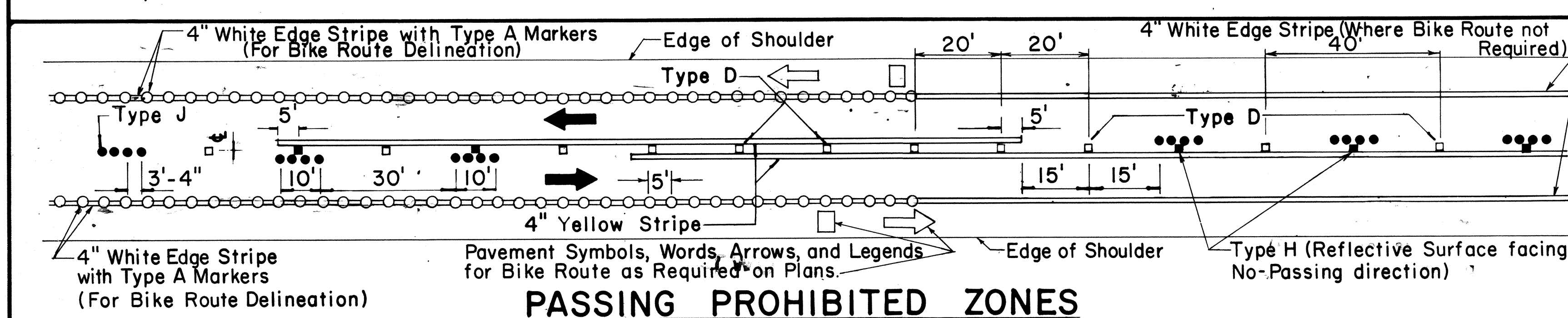
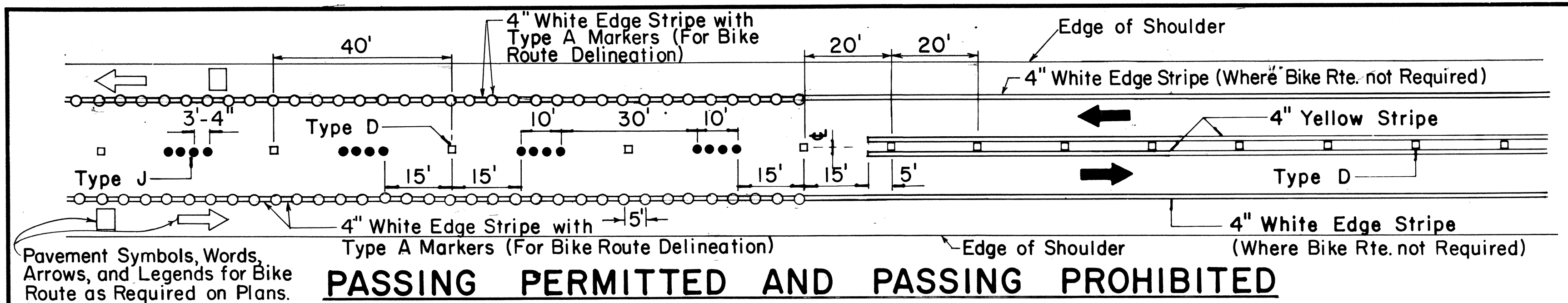
SCHOOL
S4-3 24"x 8"
WHEN
FLASHING
S4-4 24"x 10"

7" Series D
SIDEWALK
CLOSED
CW23-4 48"x 48"

USE
SIDEWALK
4" Series C
R18-1 24"x 18"

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES 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.	93A-02-79	1979	11	16

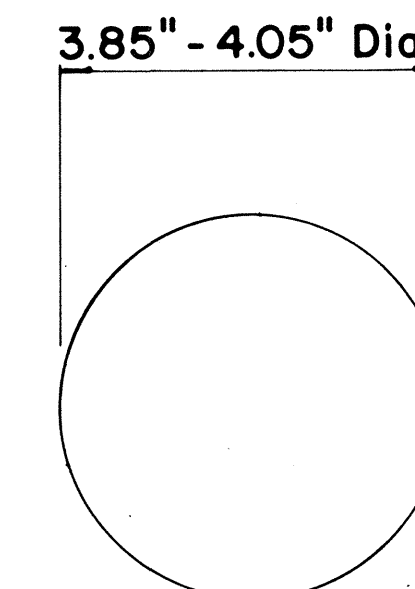


TWO - LANE

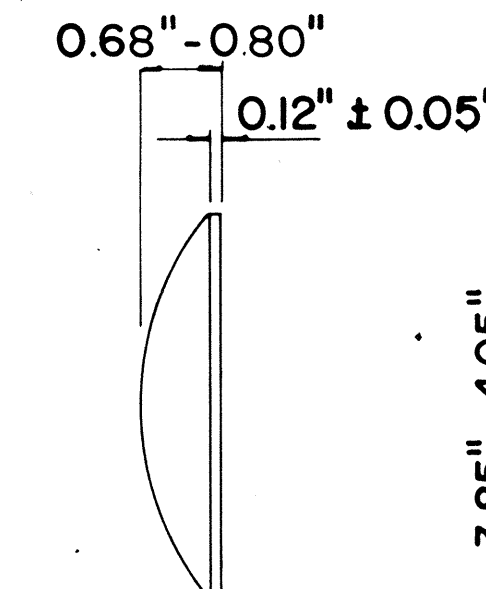
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

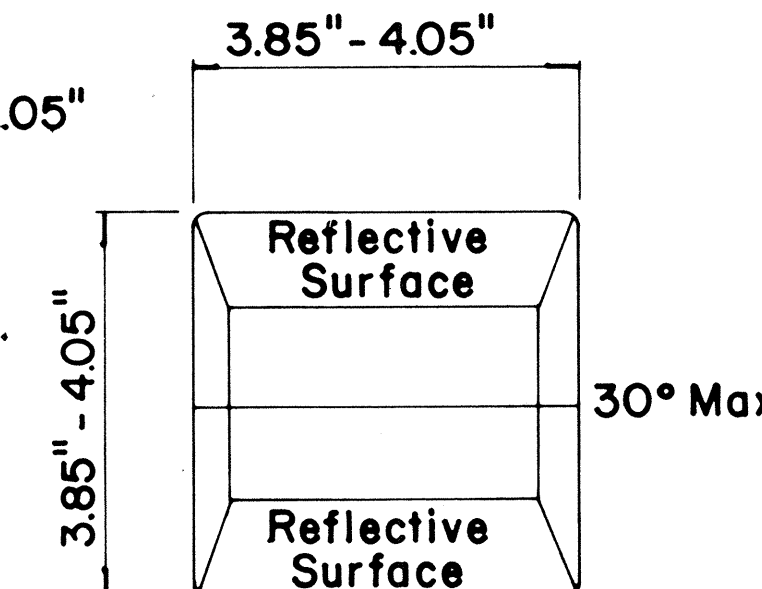
MISCELLANEOUS



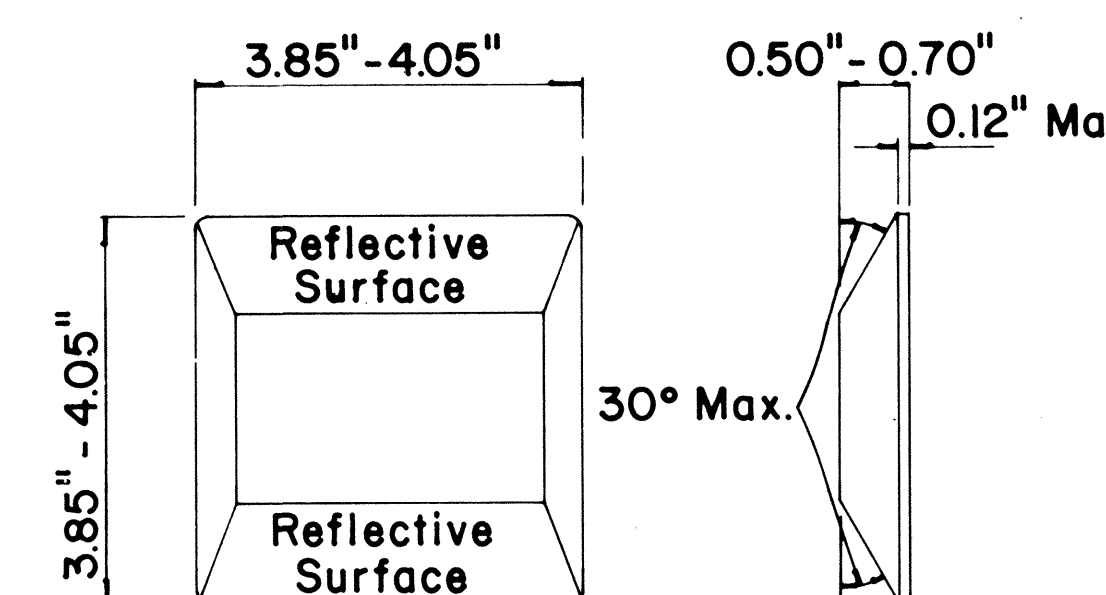
TYPE A
NON-REFLECTIVE WHITE MARKER



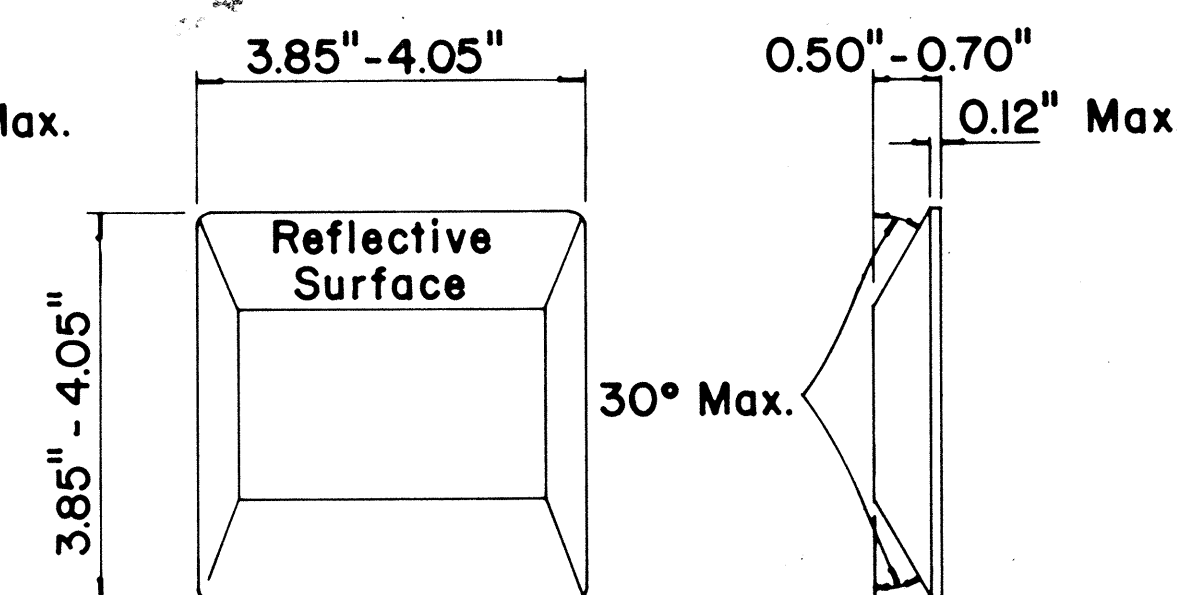
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-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:

Eiichi Tanaka 1/21/78
TRAFFIC ENGINEER DATE

APPROVED:

Harbert B. Zakaiah 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

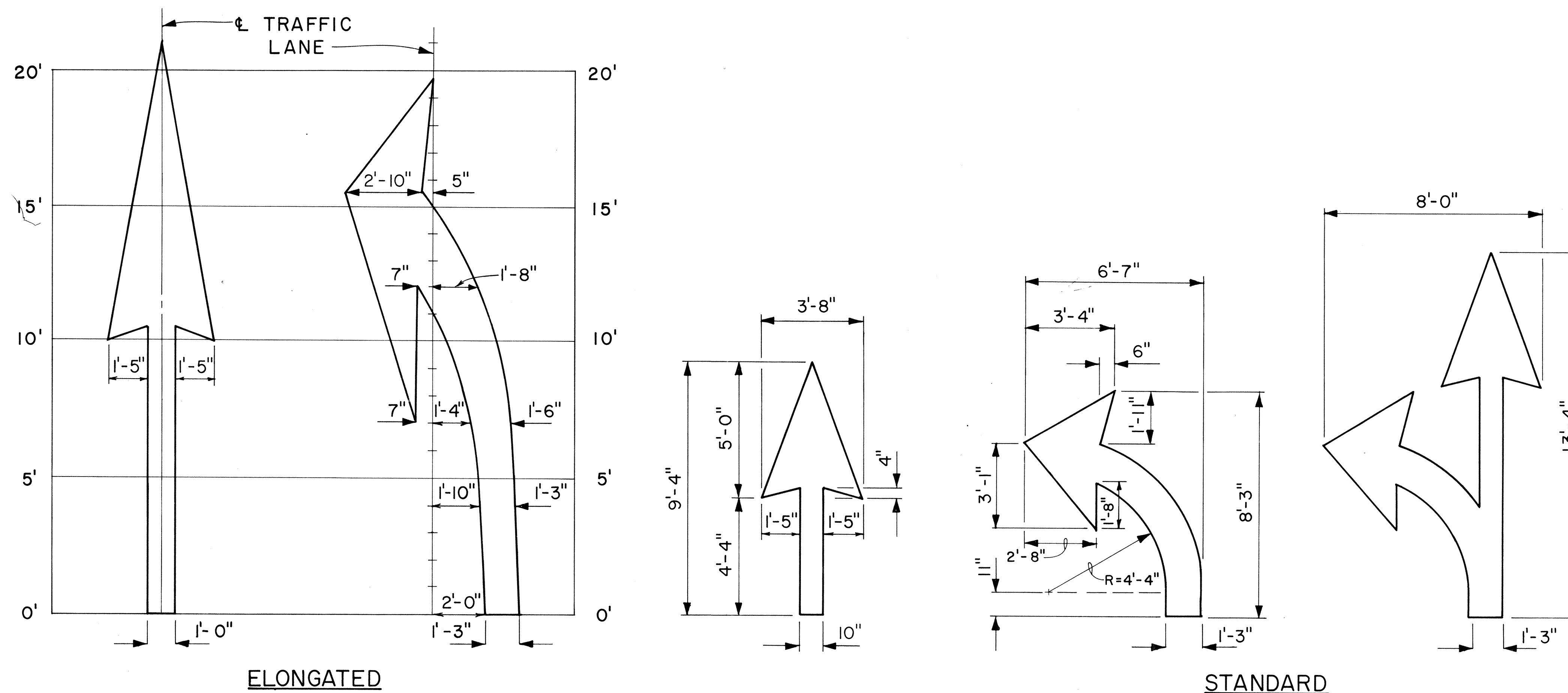
Not to Scale July 1978

SHEET No. 5 OF 10 SHEETS DT 300

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	03A-02-79	1979	12	16

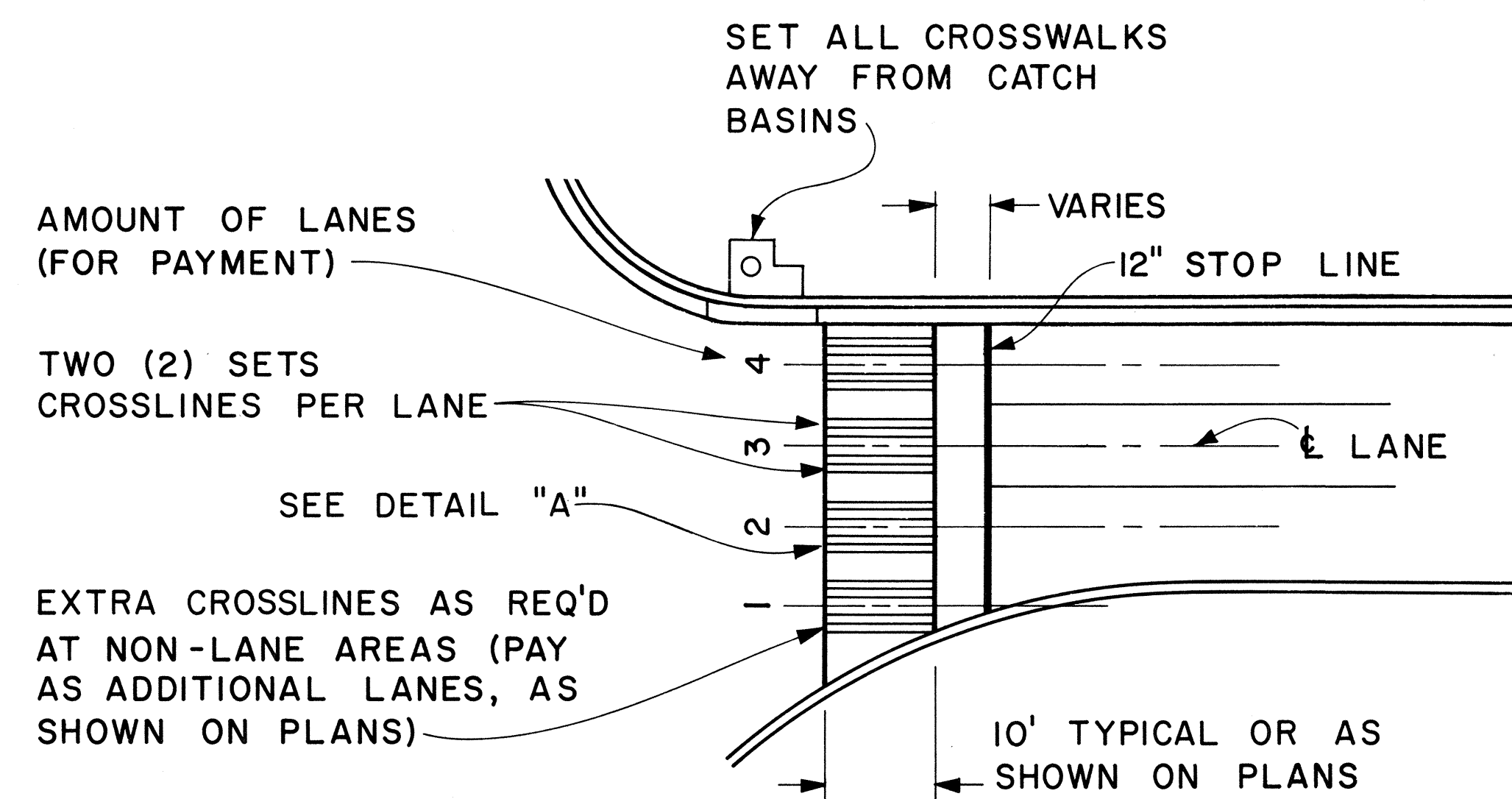
GENERAL NOTES:

1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and striping with the Engineer prior to performing work.
3. For additional pavement marking details, see sheet DT 300.

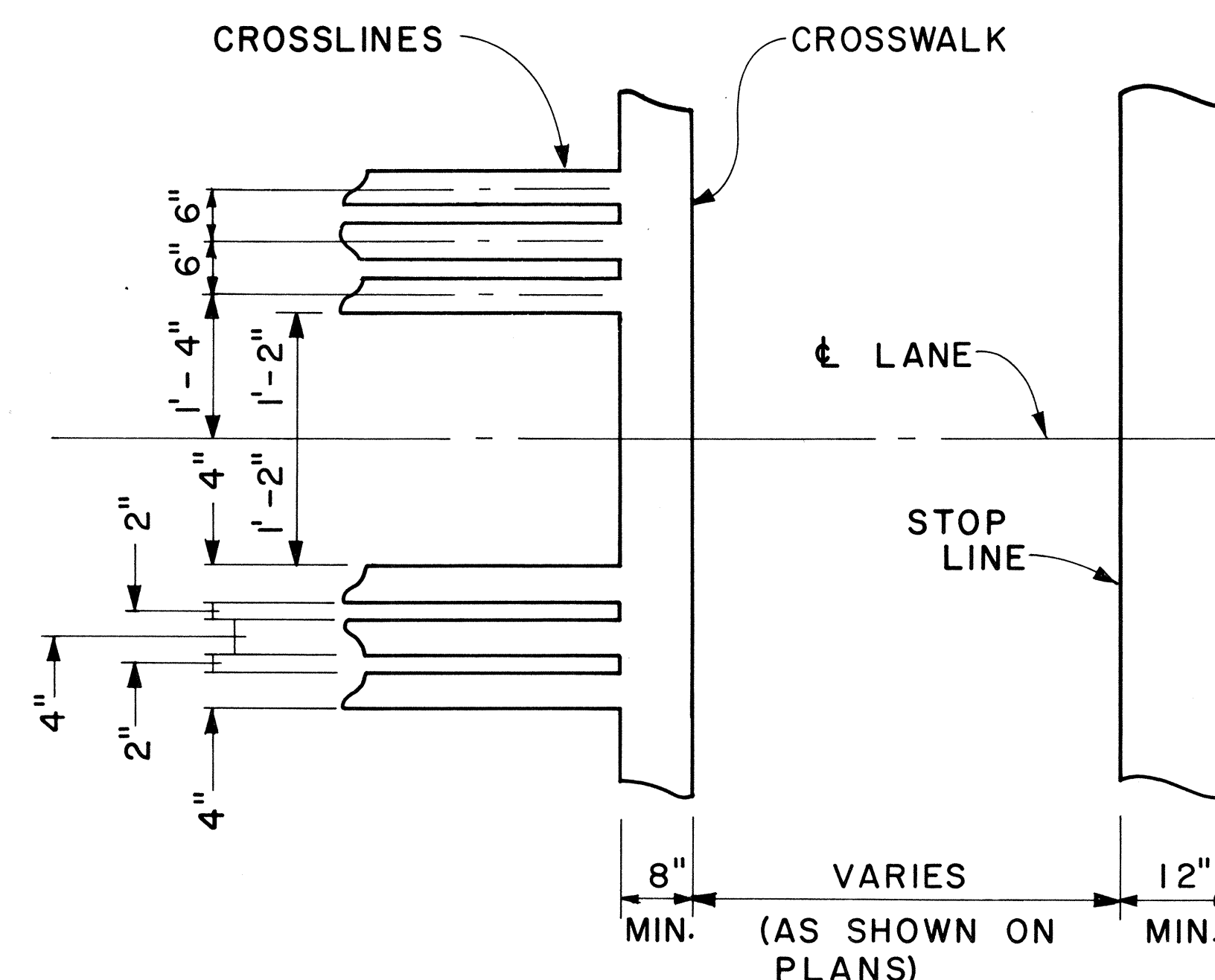


PAVEMENT ARROWS

Scale: 3/8" = 1'



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

APPROVAL RECOMMENDED: Erich Tanaka 5/2/78
TRAFFIC ENGINEER DATE

APPROVED: Harbert D. Zaleski 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

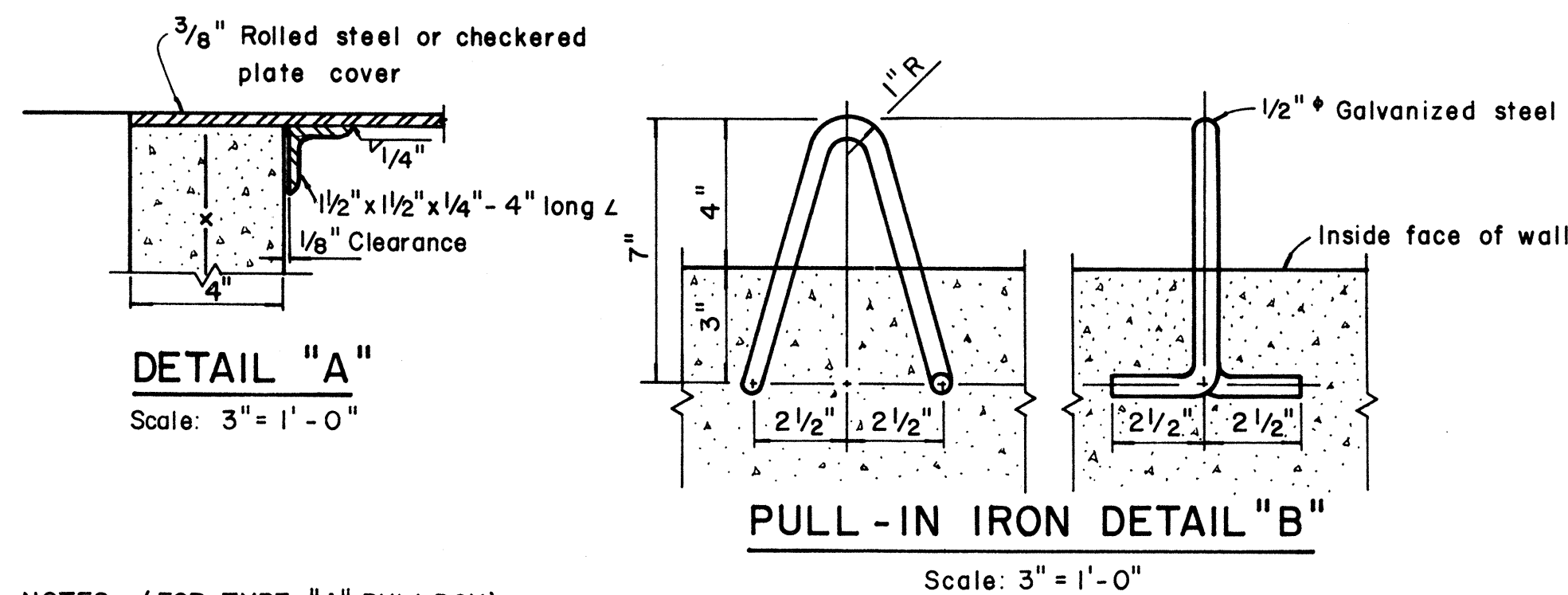
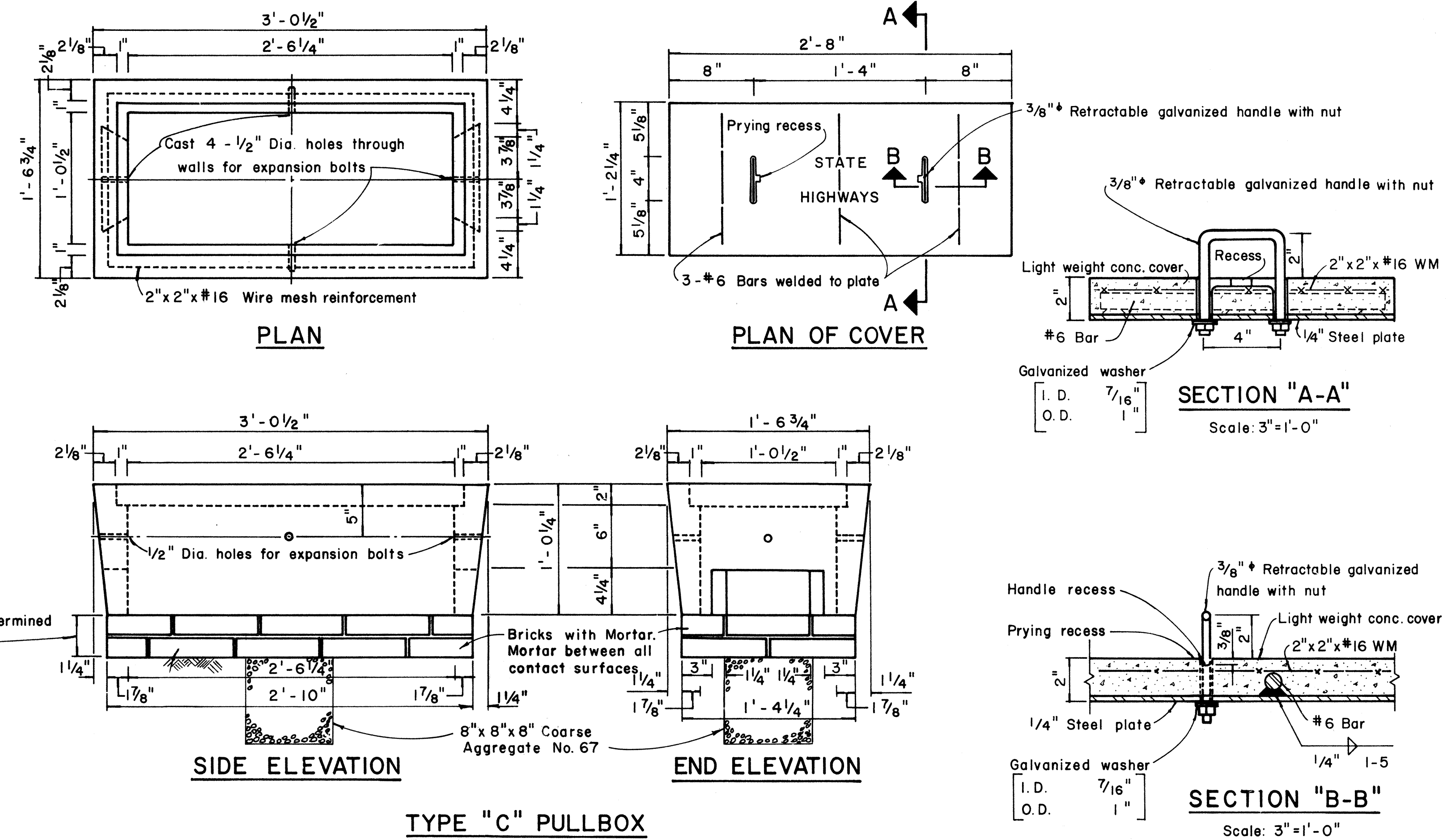
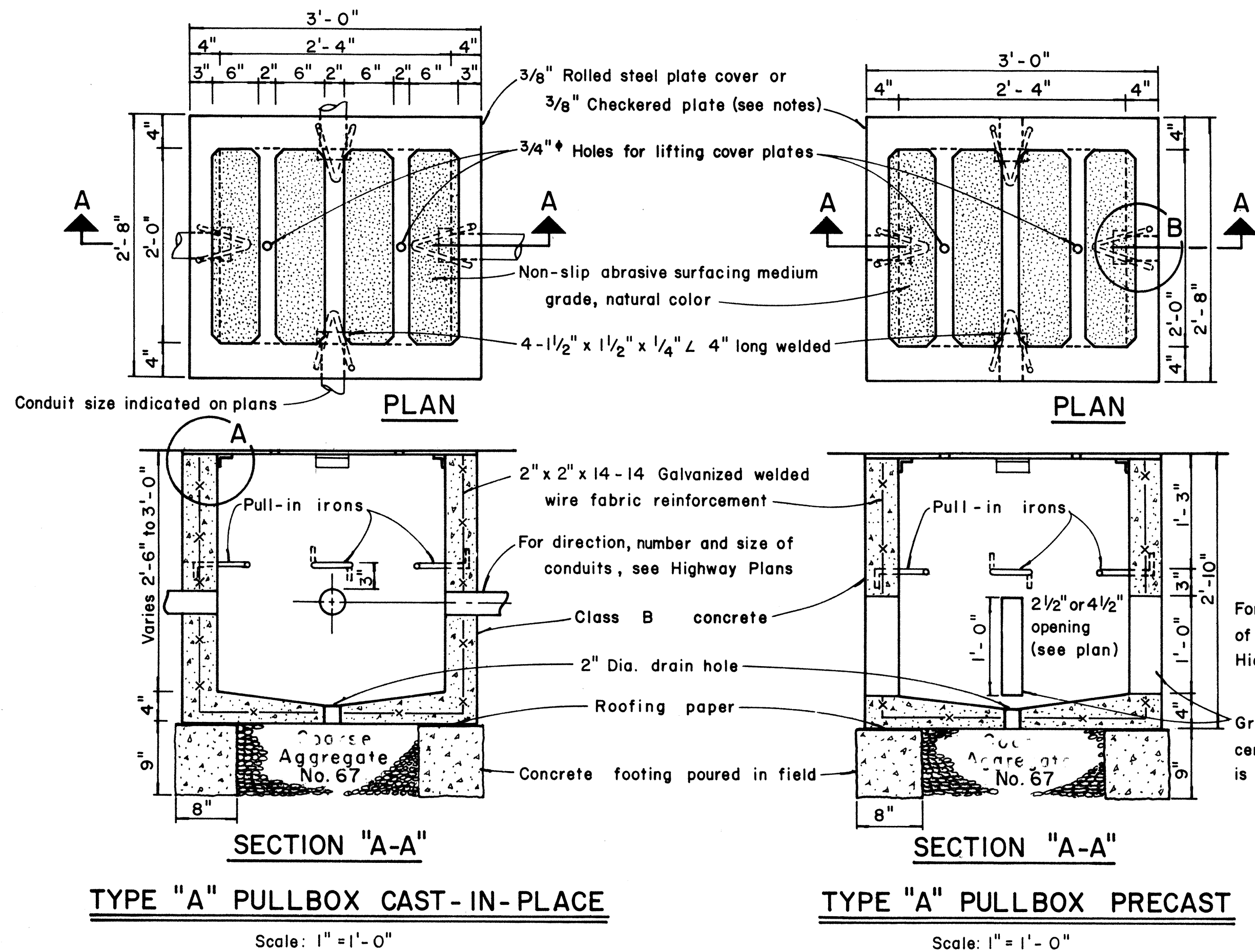
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978

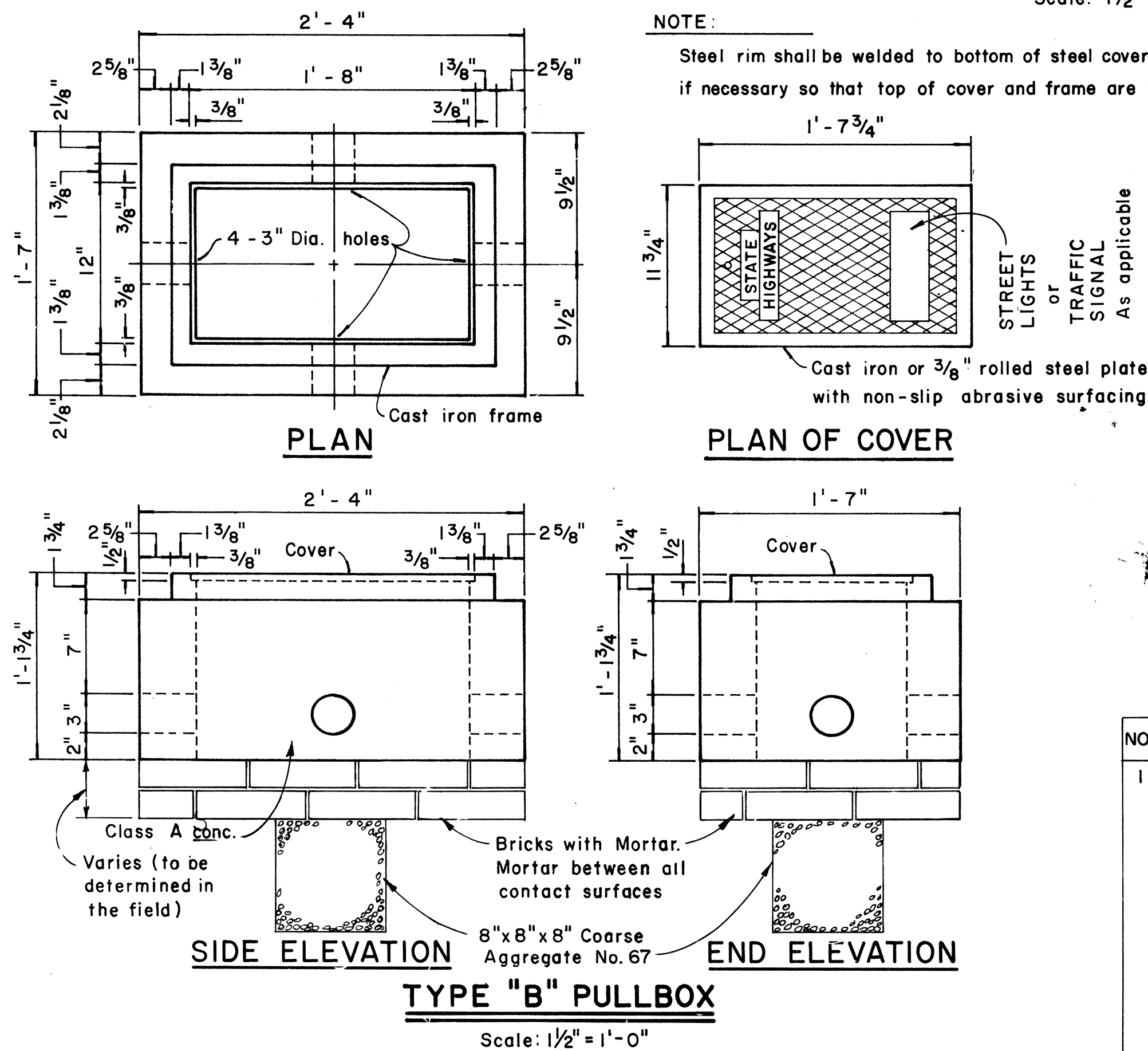
SHEET NO. 6 OF 10 SHEETS DT 306

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	93A-02-79	1979	14	16

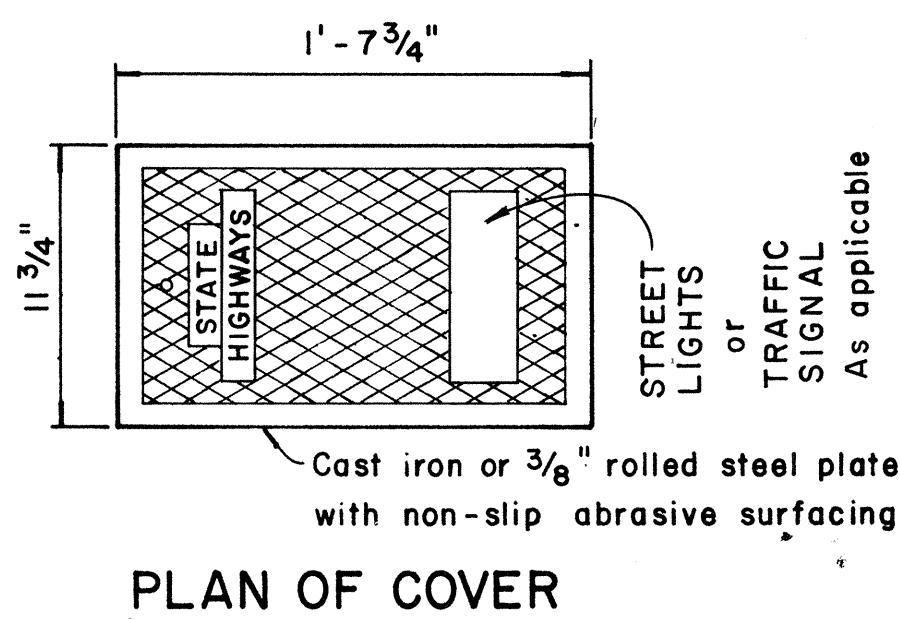


NOTES: (FOR TYPE "A" PULLBOX)

- 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.
- 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
- Pull irons shall be placed opposite each conduit slot.
- Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
- 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.



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

APPROVAL RECOMMENDED:
Enrique T. Tucka
TRAFFIC ENGINEER
DATE: 11/69

APPROVED:
John J. J. J.
ASSISTANT CHIEF, ENGINEERING
DATE: 12-30-69

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION LAND TRANSPORTATION FACILITIES DIVISION	
STANDARD DETAILS PULLBOXES	
Scale as noted	Date
SHEET No. 8 OF 10 SHEETS DT 401	

DATE	DESIGNED BY	CHECKED BY	QUANTITIES BY
ORIGINAL PLAN	DESIGNED BY	CHECKED BY	QUANTITIES BY

3'-0" square

3" cl.

#4 ties @ 12"

"d" bars

Diagram illustrating the construction details of a pile cap, showing the internal reinforcement and connection to the pile.

- Grounding type bushing**: Indicated at the top of the pile.
- Size and length of anchor bolts and diameter of bolt vary.**: Note regarding the anchor bolts.
- See manufacturer's literature.**: Reference to the manufacturer's literature.
- Form upper 6" of base.**: Indicated for the upper portion of the base.
- "d" bars**: Reinforcement bars shown within the cap.
- #4 ties @ 12"**: Reinforcement ties spaced at 12 inches.
- Place conc. neat.**: Instruction to place concrete neatly.
- To pullbox**: Indicated for the connection to the pullbox.
- 2"-90° elbow**: Indicated for the connection to the pullbox.
- Fin. grs.**: Finished grade line.
- "C"**: Dimension indicating the height of the cap.

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

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

See Note A

4"

See Note A

4"

See Note A

4" See Note A 4"

Technical drawing of a rectangular box. The drawing shows a perspective view of the box with a flange on the left side. Dimensions are indicated with arrows and text. The top edge is labeled "See Note A". The front edge is labeled "4" See Note A 4"". The side edge is labeled "4"". The bottom edge is labeled "4"". The drawing also shows a dashed line representing the hidden edge of the box.

Conduit extended above

Anchor Bolts to be furnished by Contractor

Top of Exist. $\frac{1}{2}$ "

1'-6"

Class B concrete

Bushings

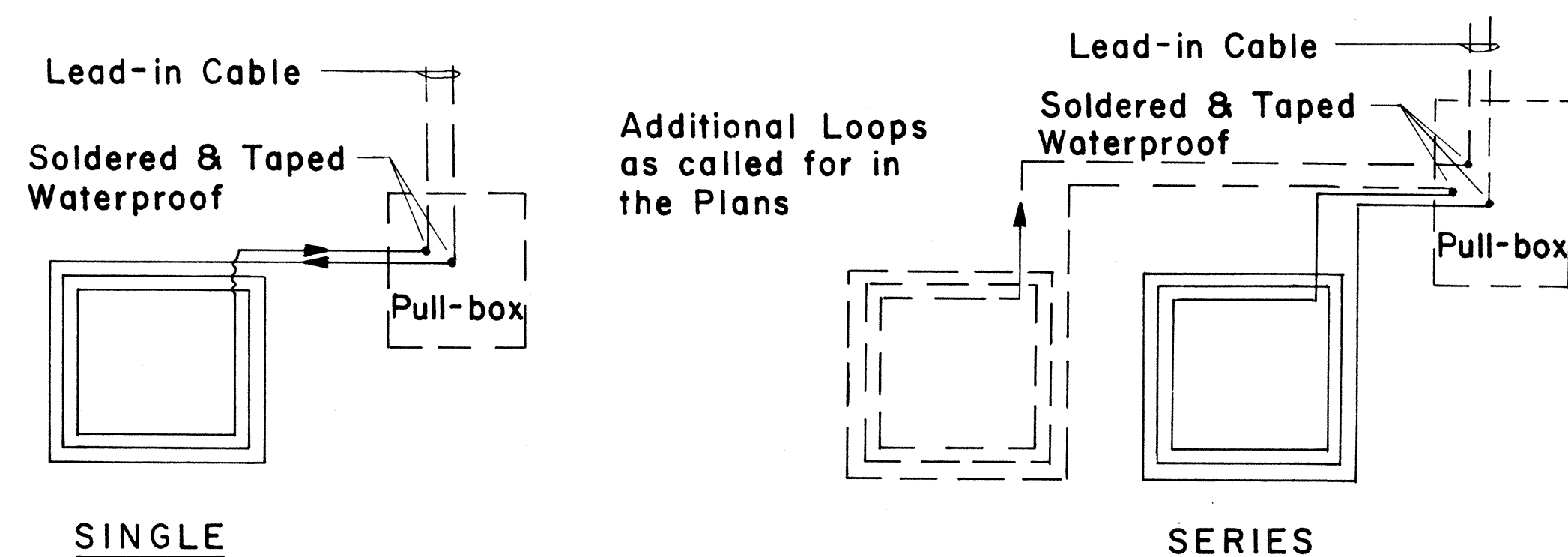
Conduits (for direction, size & No., see Plans)

Ground 5/8" x 8'-0"

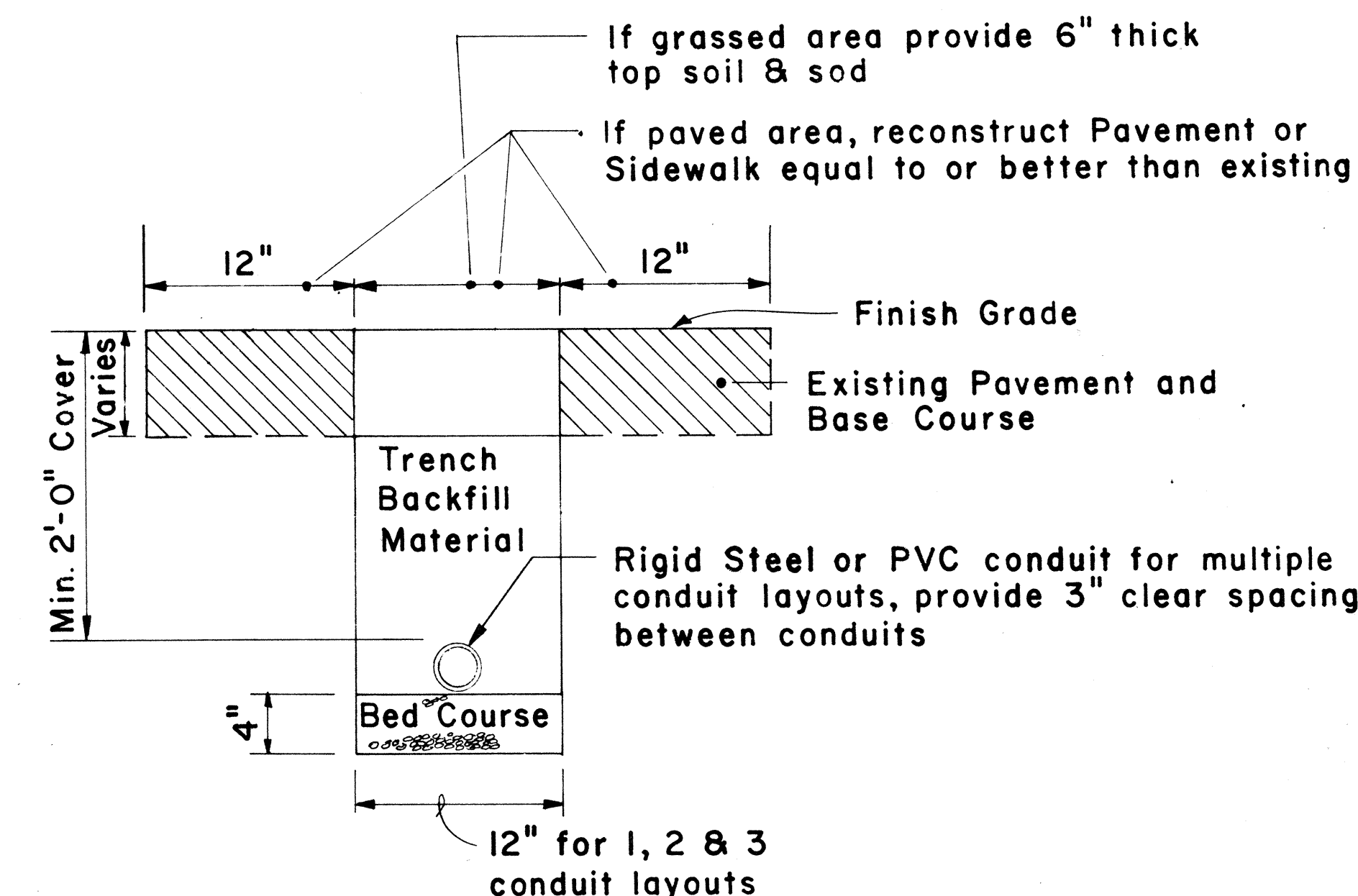
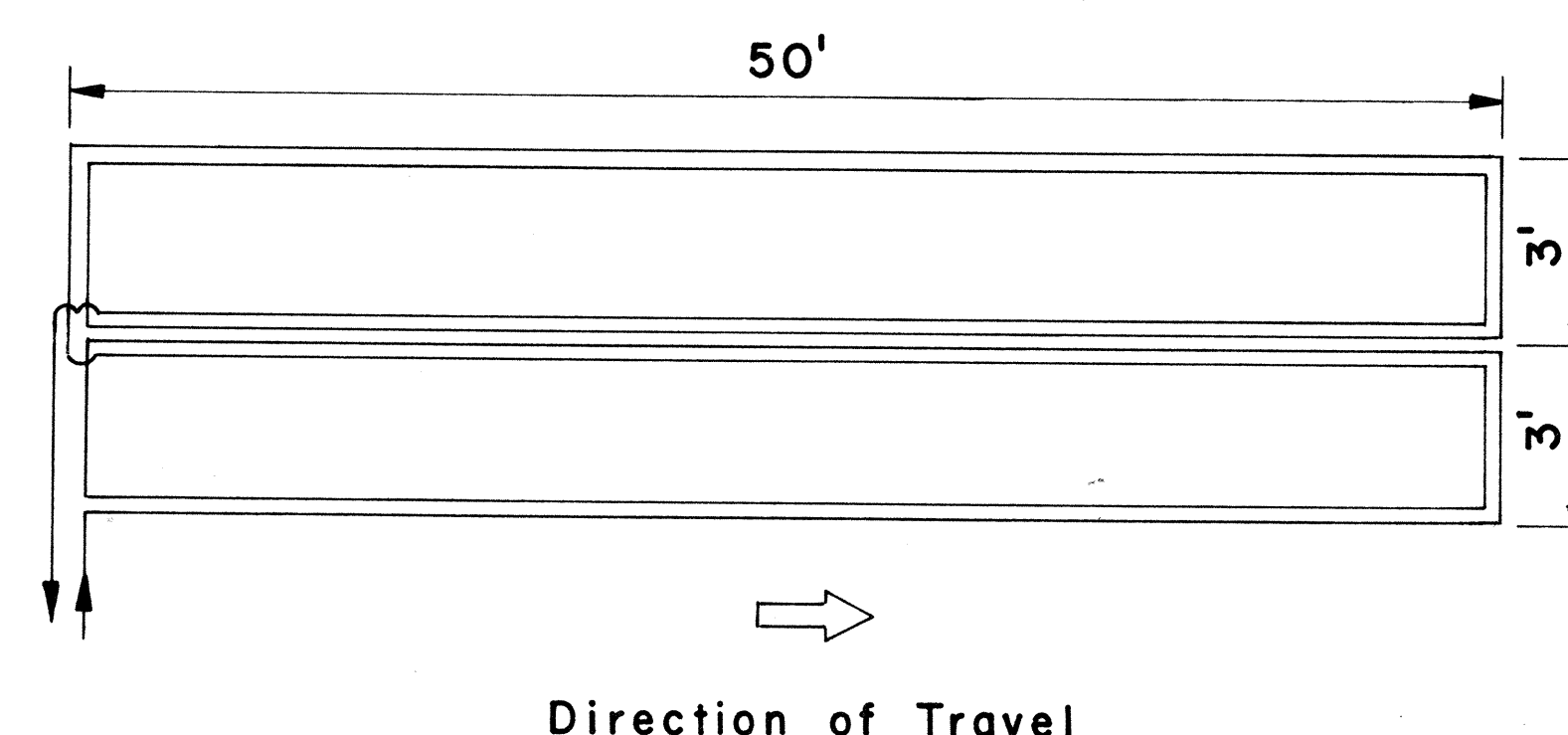
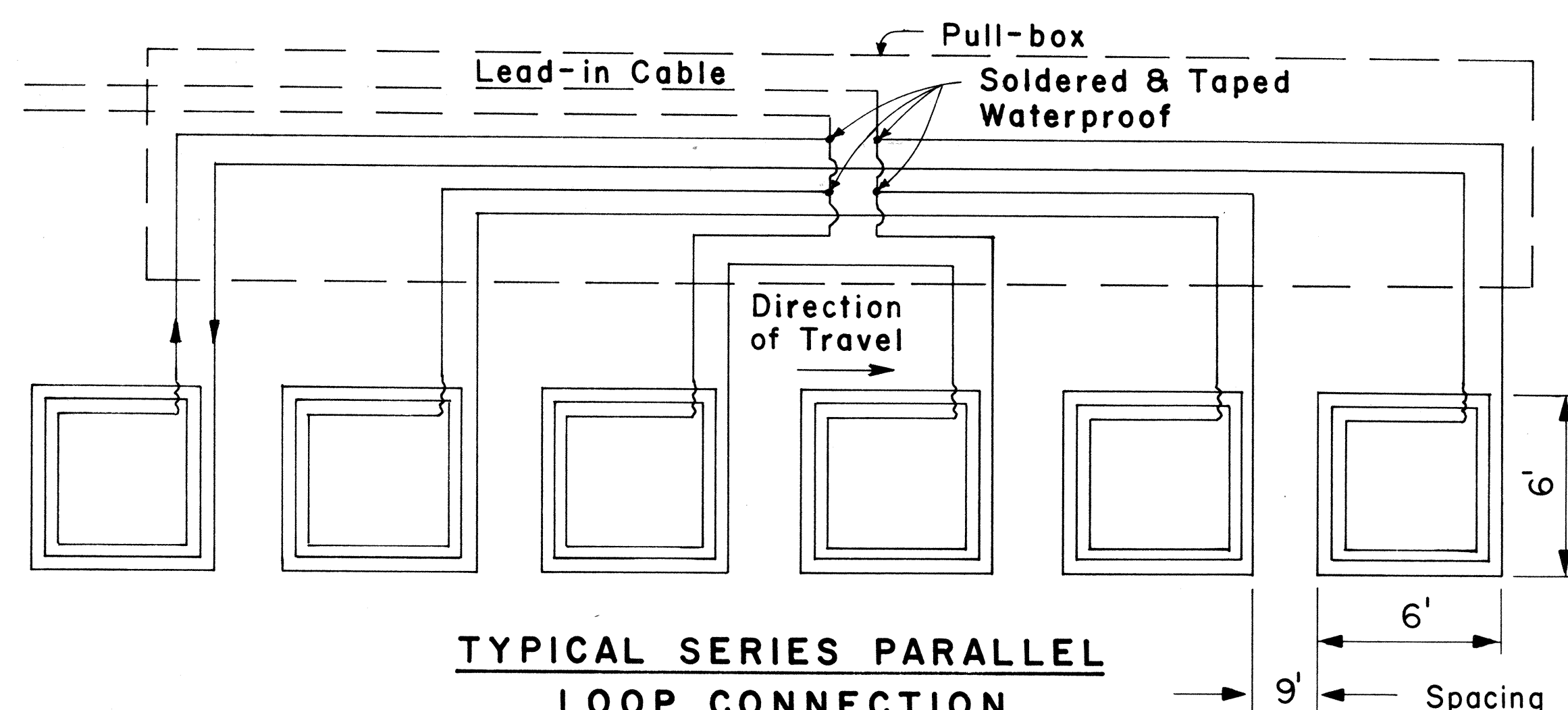
15 15

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

FED. ROAD DIST. NO.	STATE	FED-AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	03A-02-70	1970	16	16



TYPICAL LOOP CONFIGURATIONS
No Scale



NOTE:

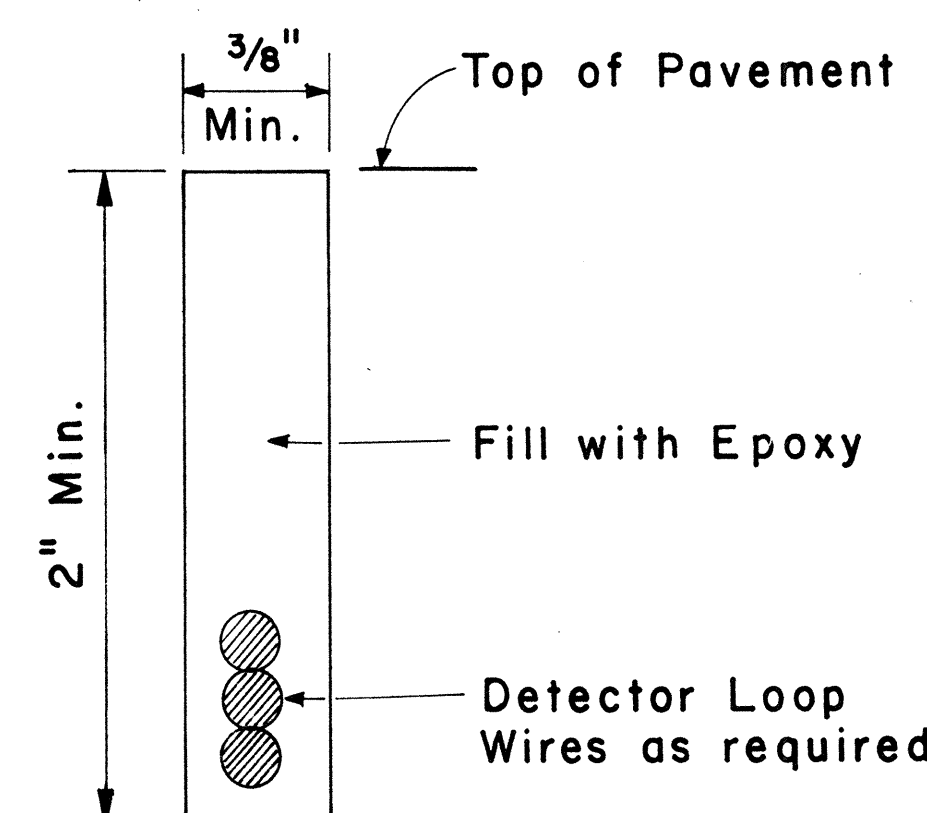
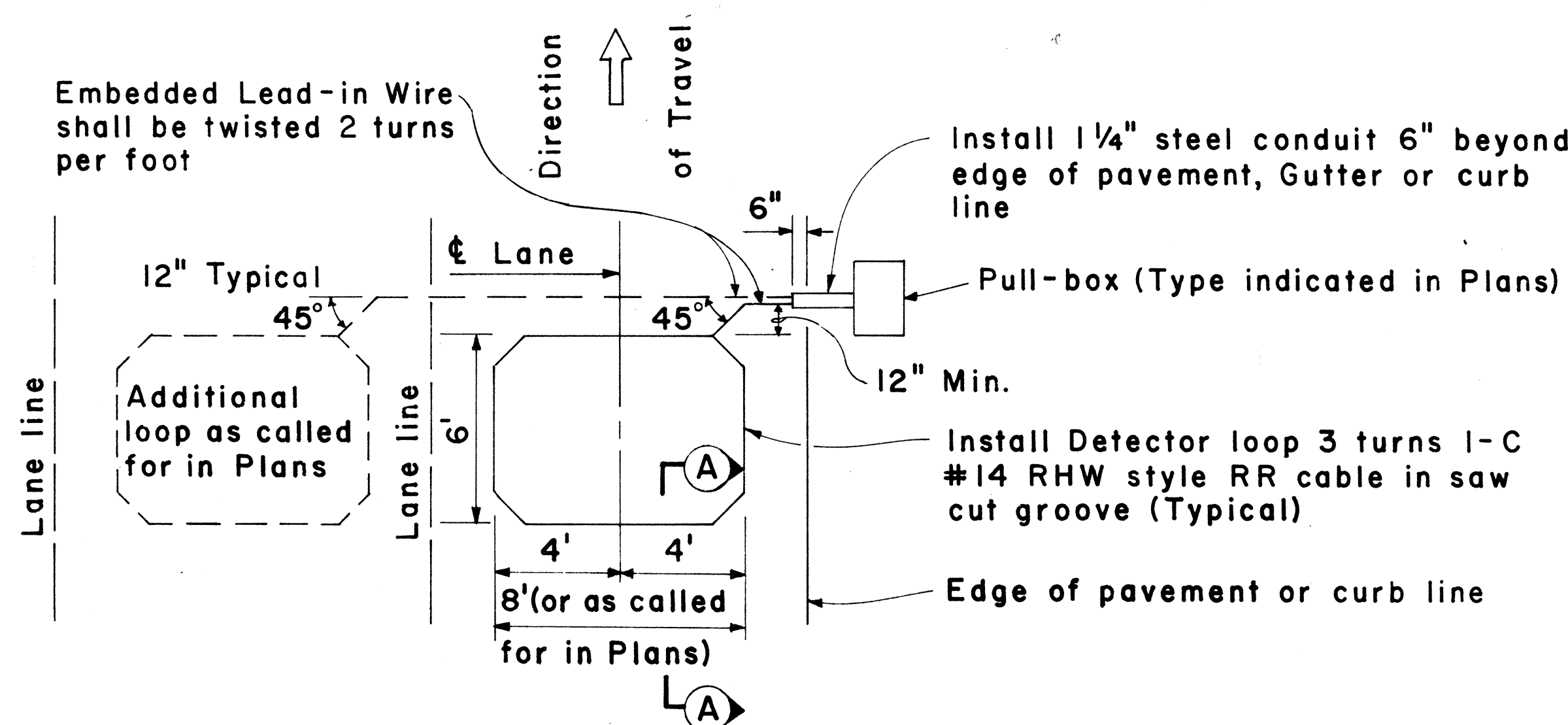
- All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.

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

APPROVED:
Hubert B. Ralston 3-5-76
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
**TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS**

Scale: As Noted
SHEET NO. 10 OF 10 SHEETS DT 405



DETECTION LOOP
Scale : As Shown

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY	DRAWN BY	
NOTE BOOK	DESIGNED BY	
	CHECKED BY	