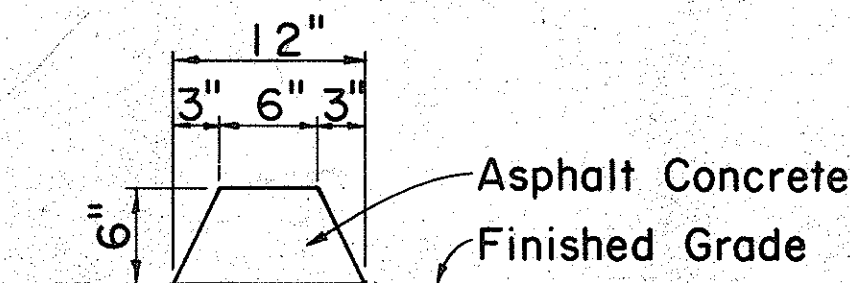
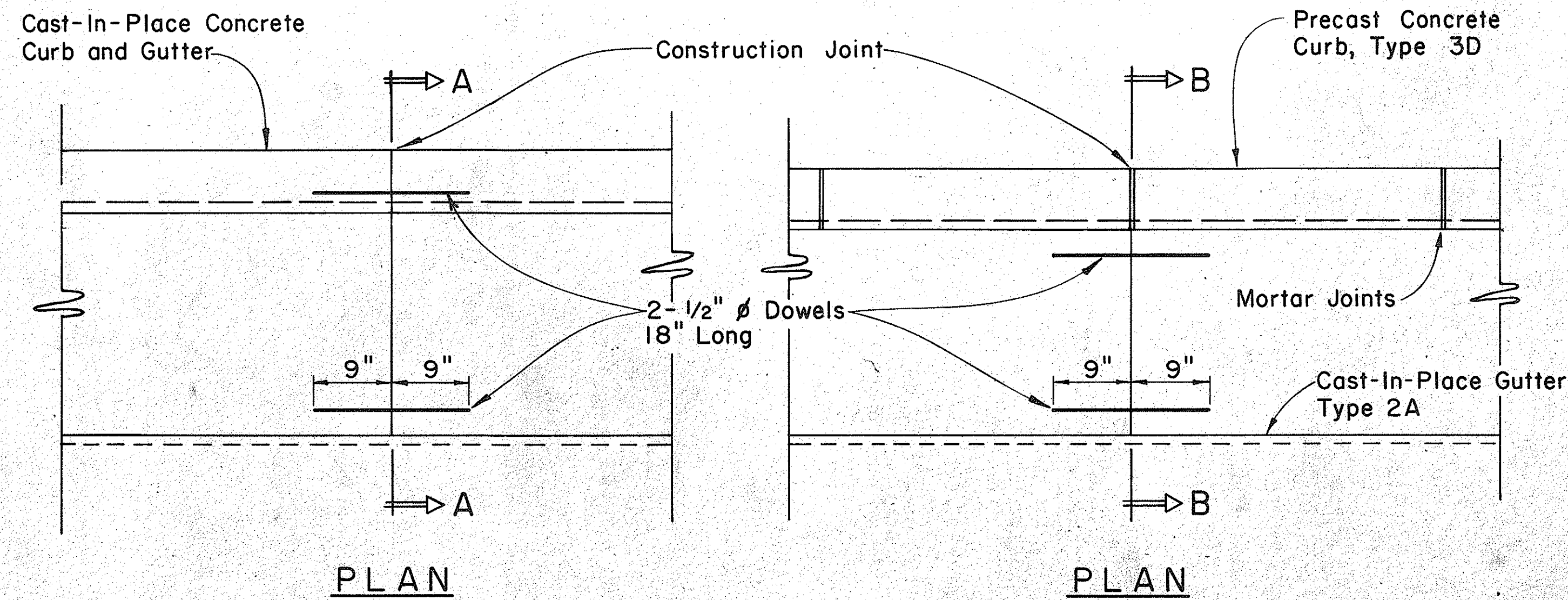
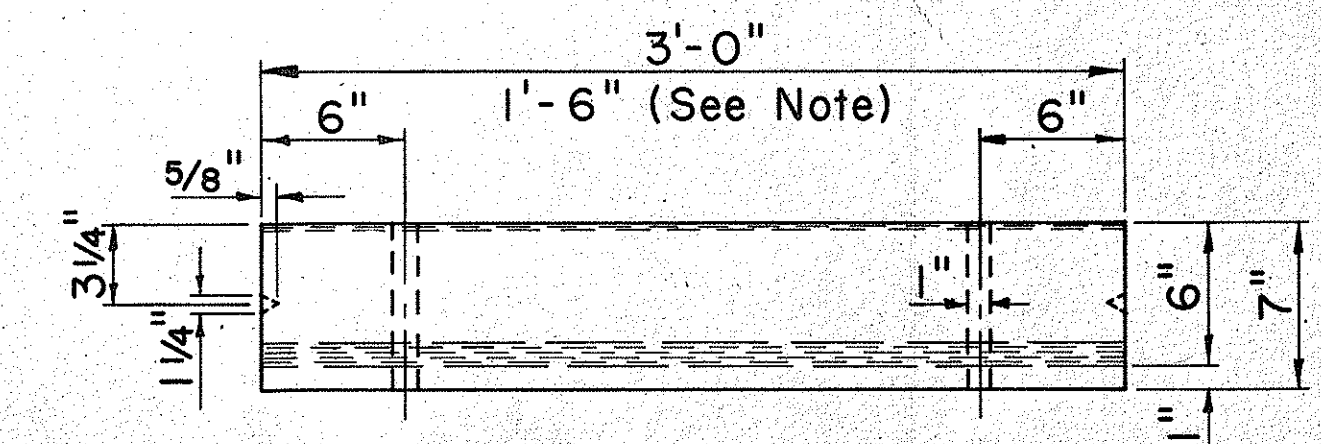


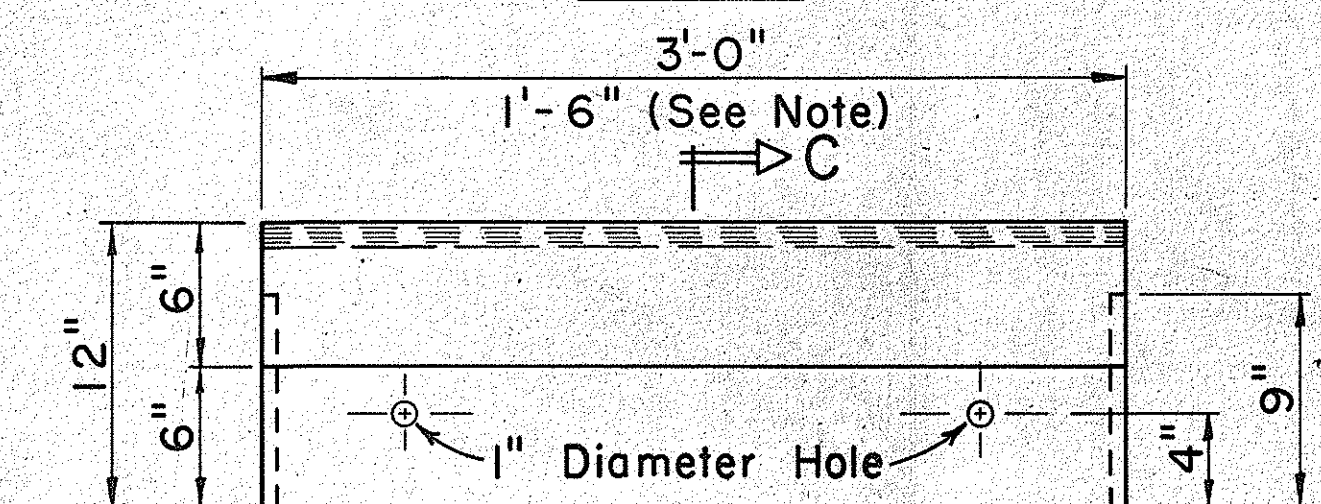
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	12	25



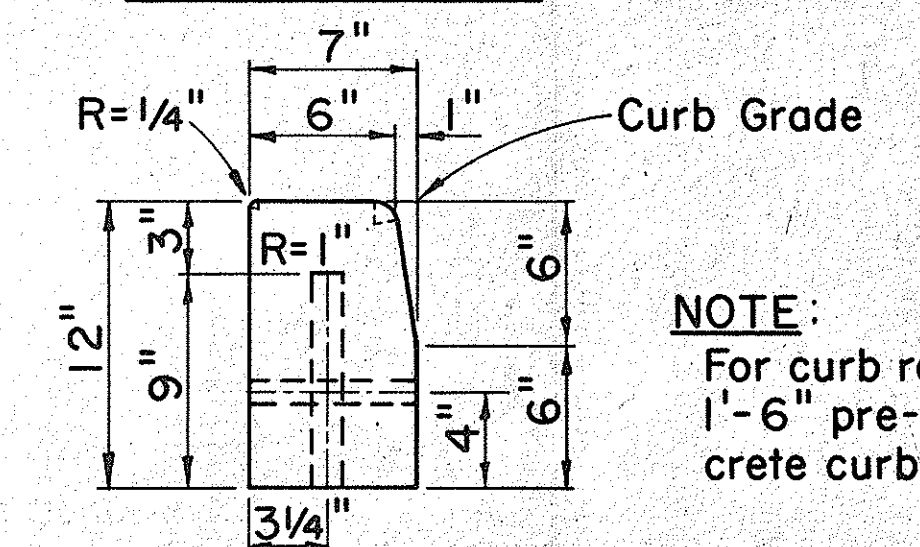
CURB, TYPE 6
BITUMINOUS CURB
 Scale: 1 1/2" = 1'-0"



PLAN



SECTION C-C

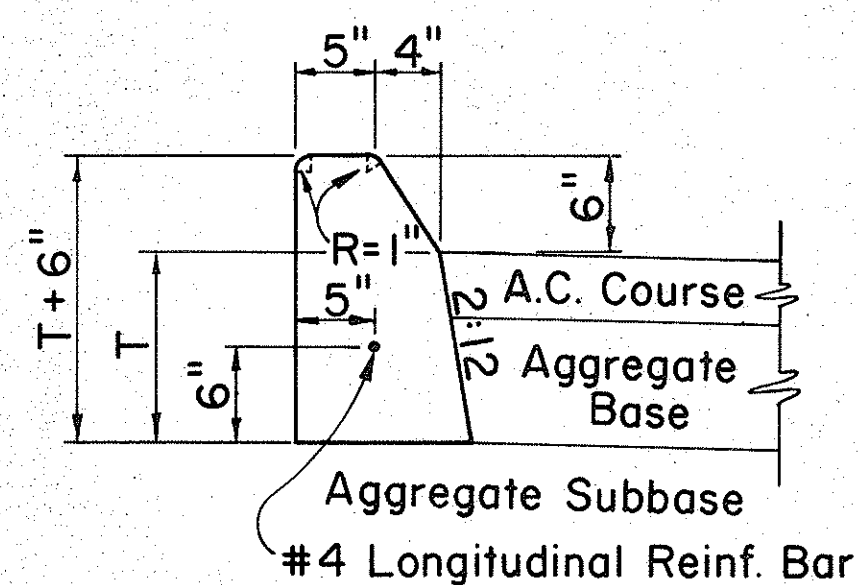
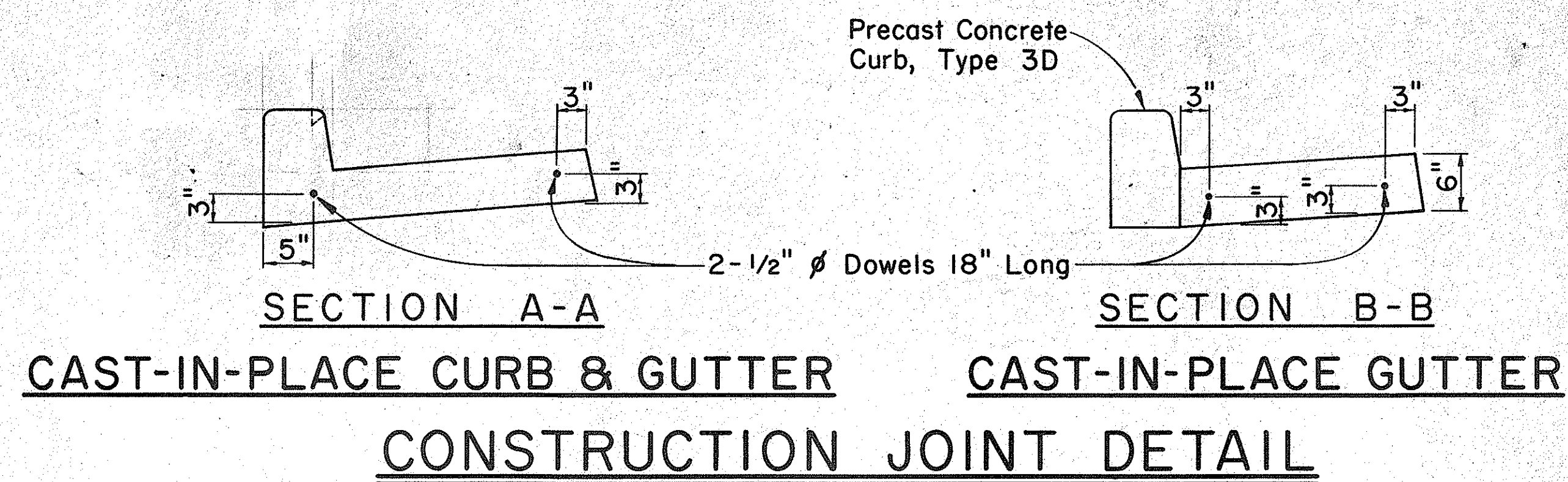


CURB, TYPE 3D

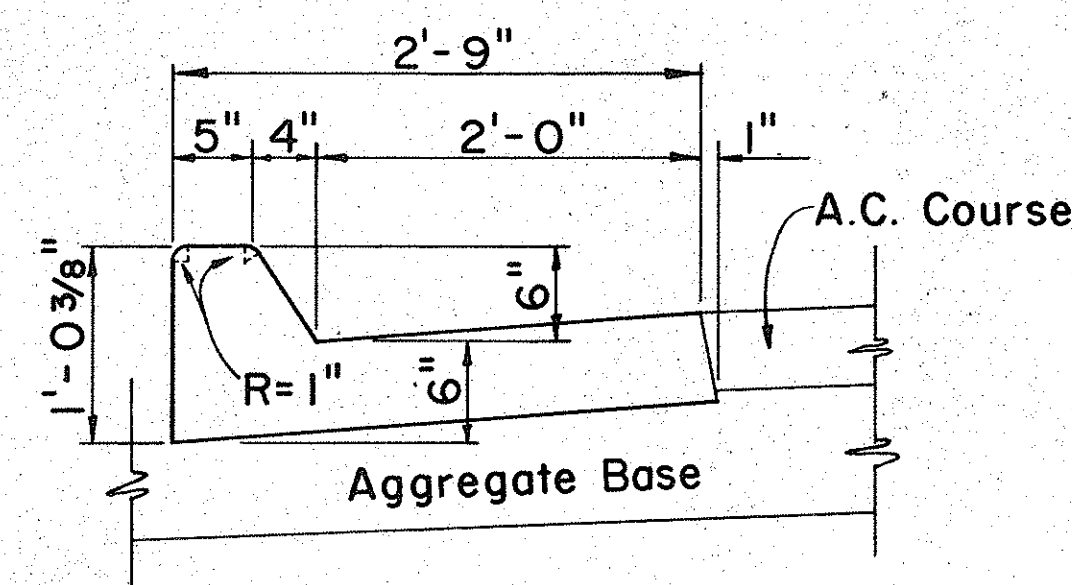
PRE-CAST CONC. CURB
 Scale: 1 1/2" = 1'-0"

NOTES

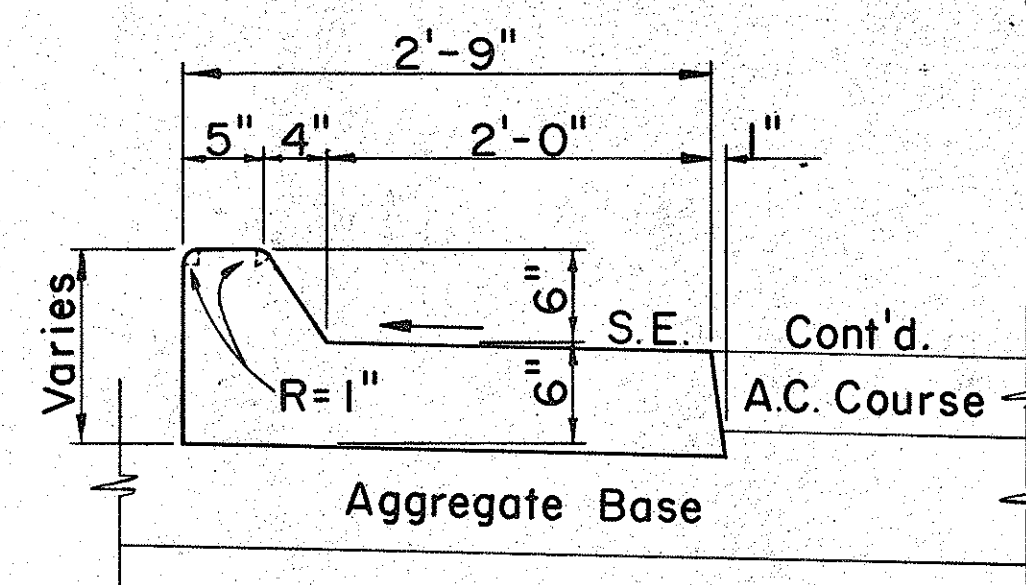
1. Cast-In-Place P.C.C. Gutters shall be longitudinally broom finished.
2. Curb, Type 2A, Curb & Gutter, Type 2AG, and Curb & Gutter, Type 2AGM are to be used only for reconstructing short segments of existing curbs and/or gutters of the same type.
3. The top of all types of concrete curbs, including driveway curbs shall be longitudinally broom finished.



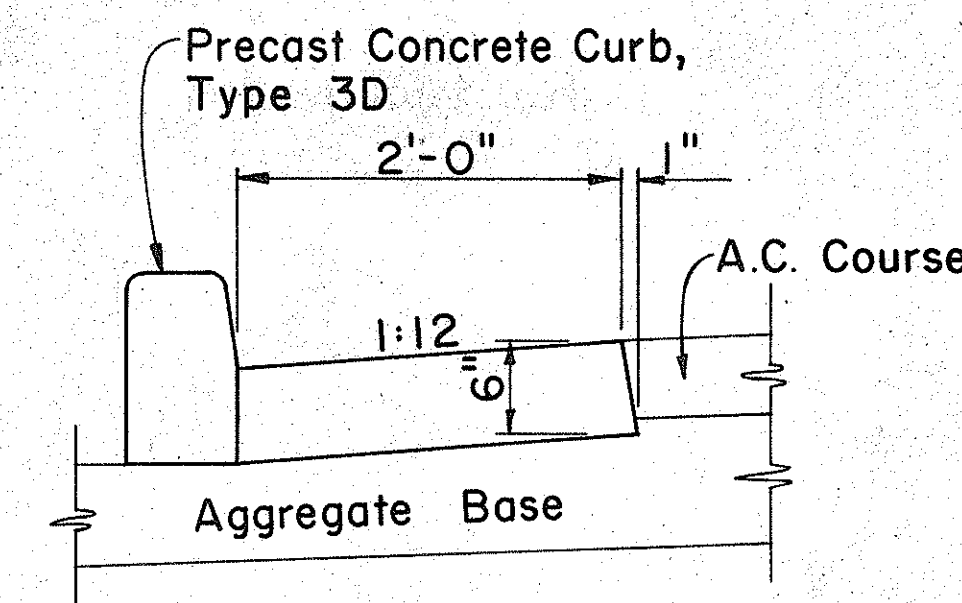
CURB, TYPE 2A



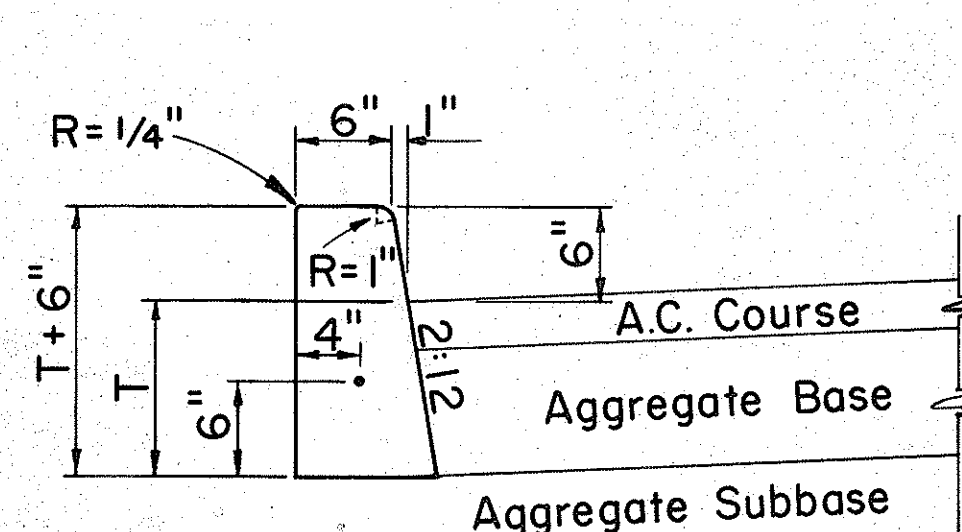
CURB & GUTTER, TYPE 2AG



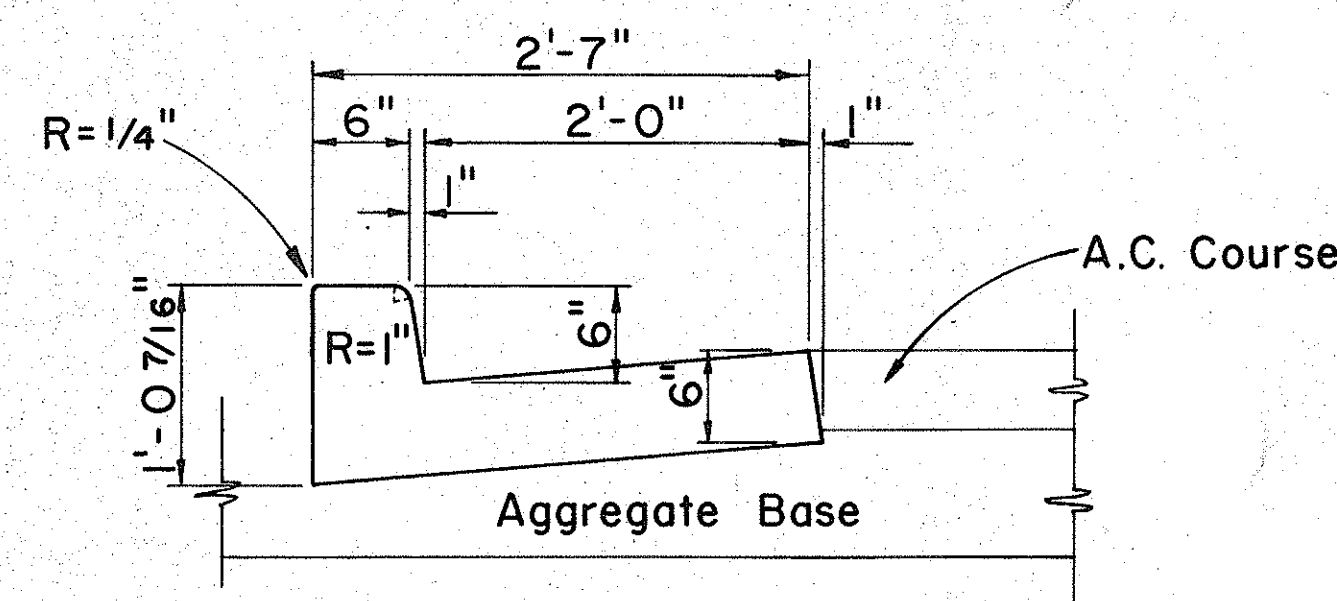
CURB & GUTTER, TYPE 2AGM



GUTTER, TYPE 2A



CURB, TYPE 2D



CURB & GUTTER, TYPE 2DG

CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS
 Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:
 HIGHWAY DESIGN ENGINEER 12-4-69
 DATE

APPROVED:
 ASSISTANT CHIEF, ENGINEERING 12-10-59
 DATE

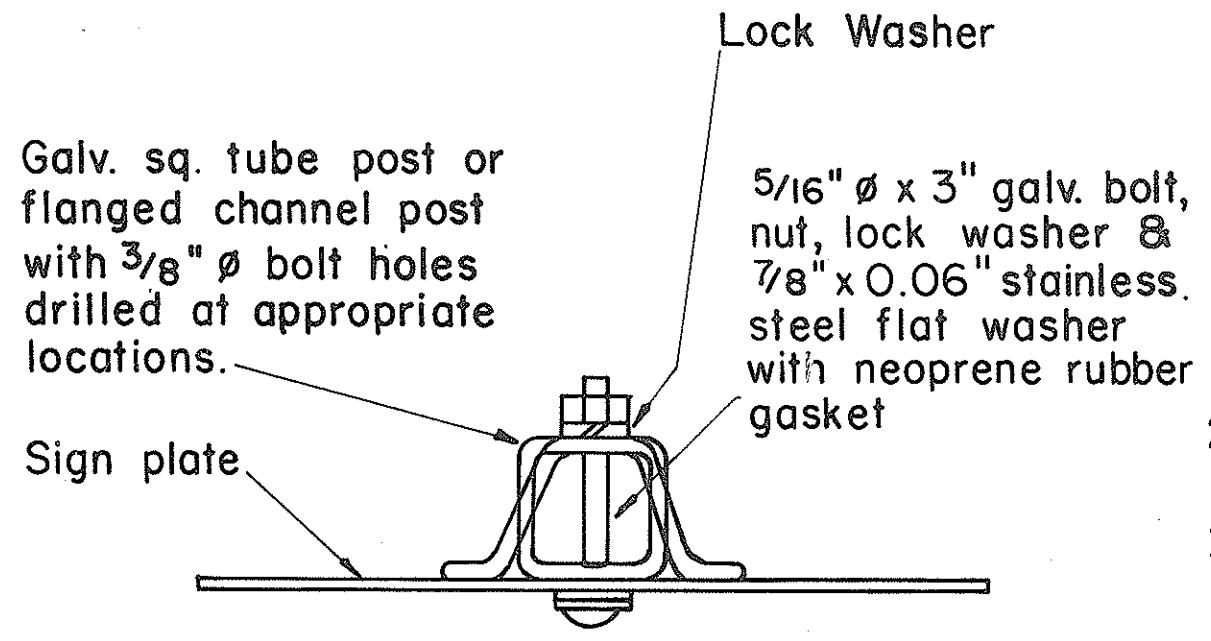
NO.	REVISION	APPROVED BY	DATE
1	Add Notes, Deleted Gutter, Type 2G	[Signature]	11-26-84

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS TYPICAL DETAILS OF CURB AND/OR GUTTERS
Scale: As Shown
SHEET No. 11 OF 14 SHEETS DD 6091

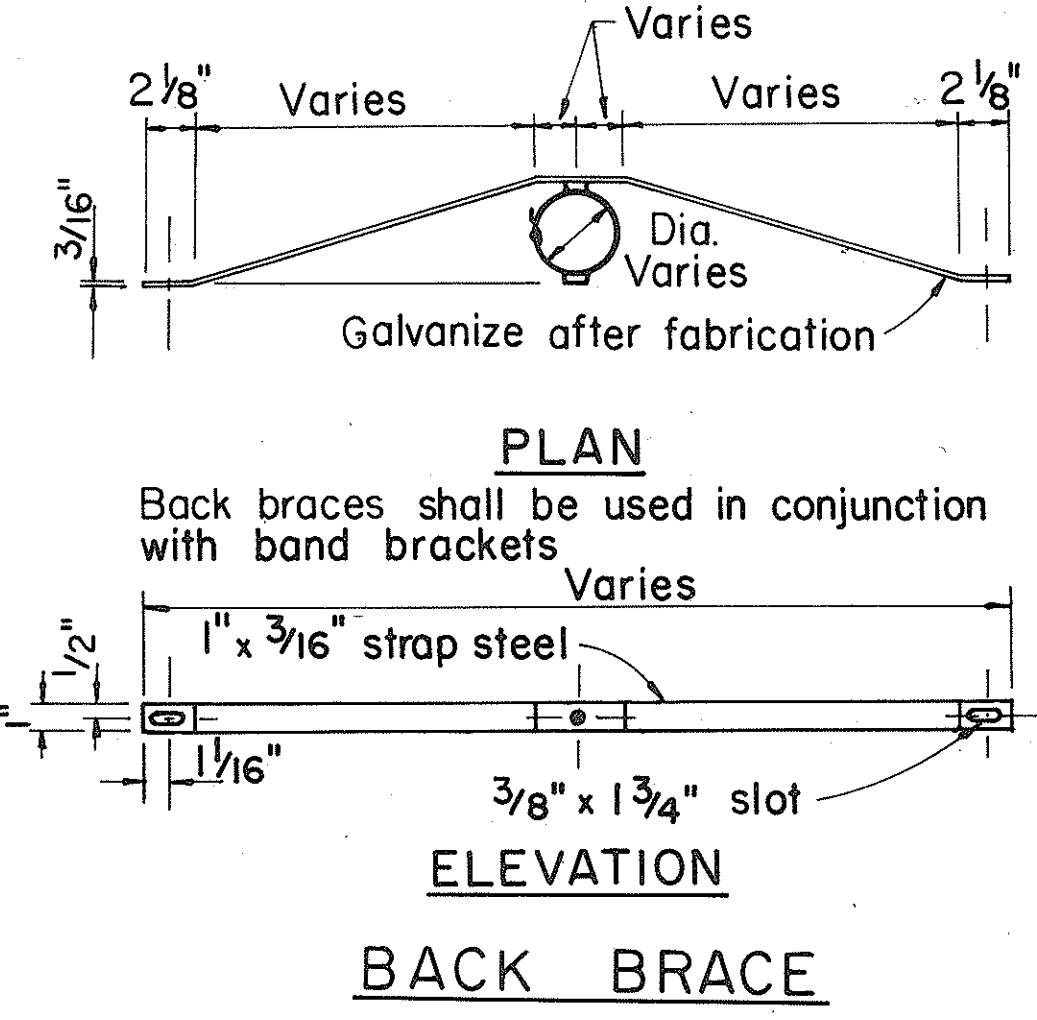
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72A-01-85	1985	13	25

GENERAL NOTES

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on objects other than sign posts (i.e. on highway lighting poles) as follows:
 - Signs 48" and wider but less than 10 sq. ft. in area shall be mounted with a minimum of two sets of band bracket and back braces.
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shown on the plans.
- See plans for special details of signs along bikeways.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.

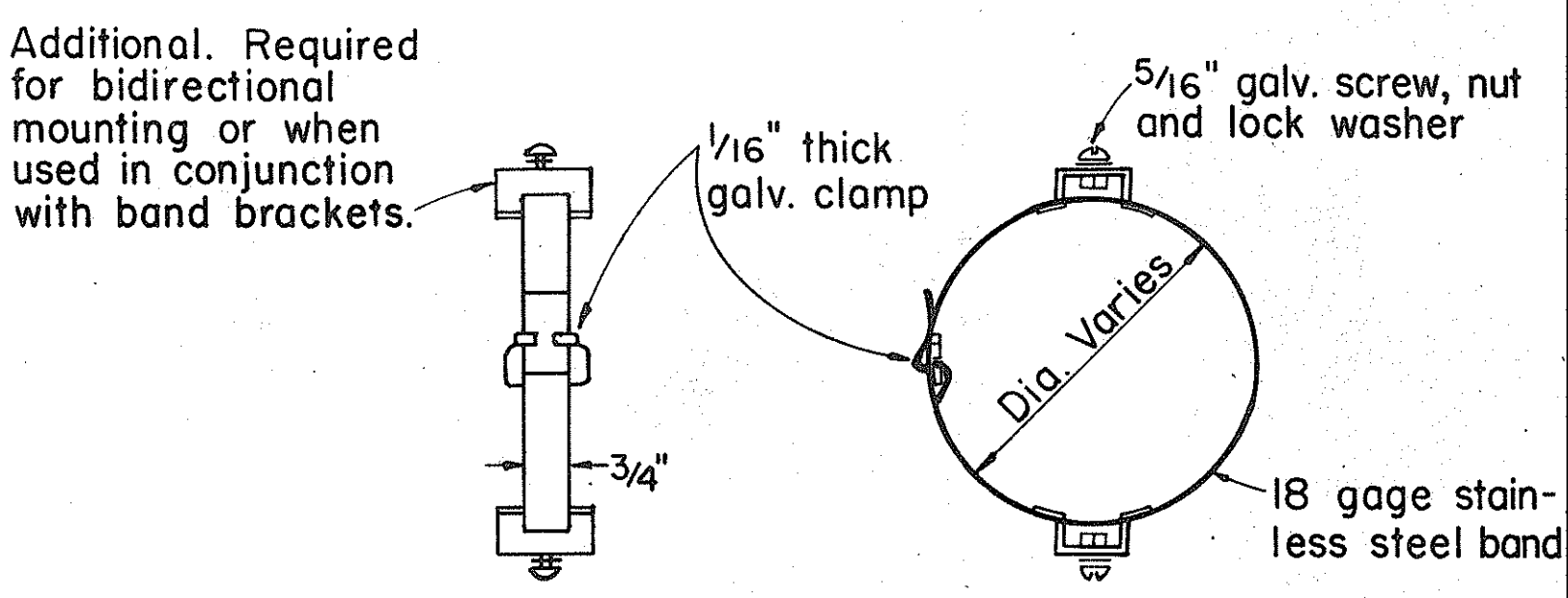


GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



TYPICAL MOUNTING DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 100 approved 11/15/77	[Signature]	10-18-83



BAND BRACKET

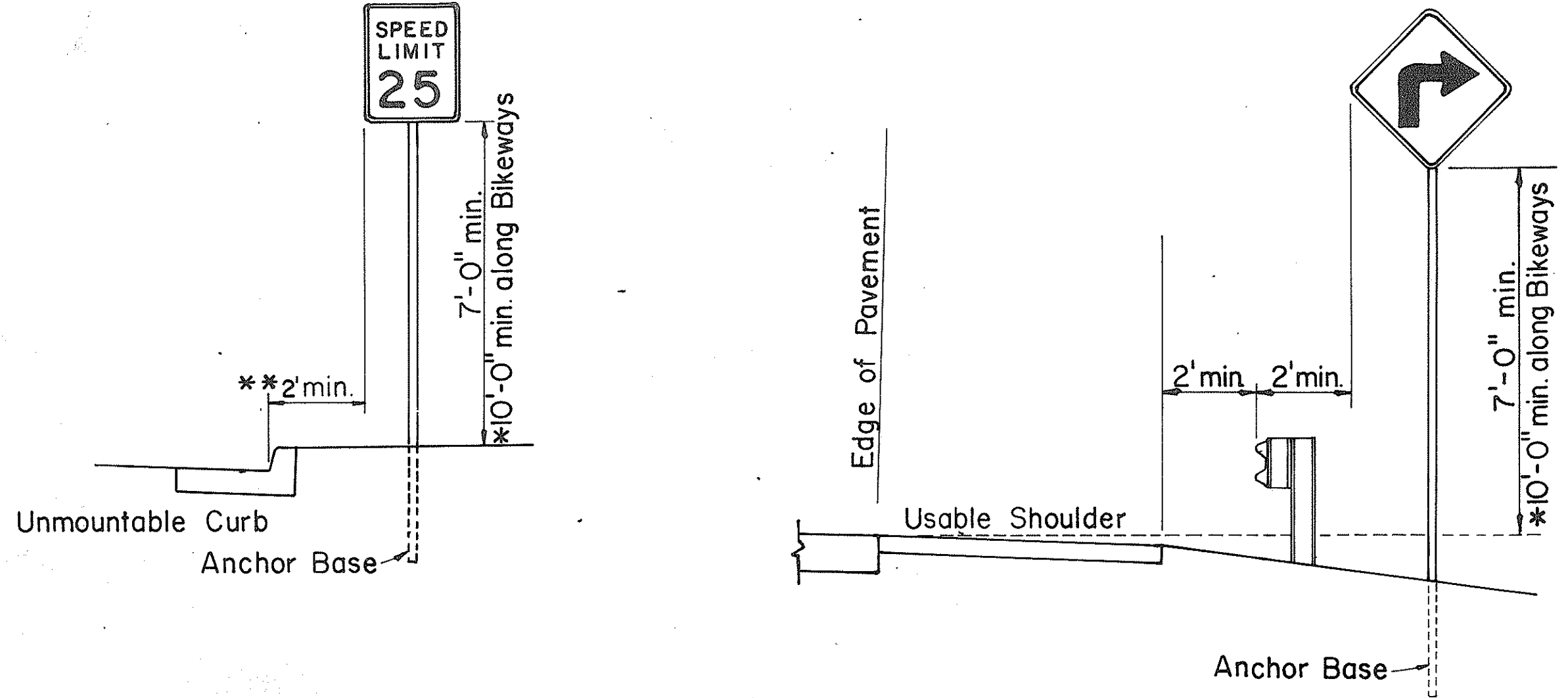
APPROVAL RECOMMENDED:
 [Signature] 10/14/83
 TRAFFIC ENGINEER DATE

APPROVED:
 [Signature] 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

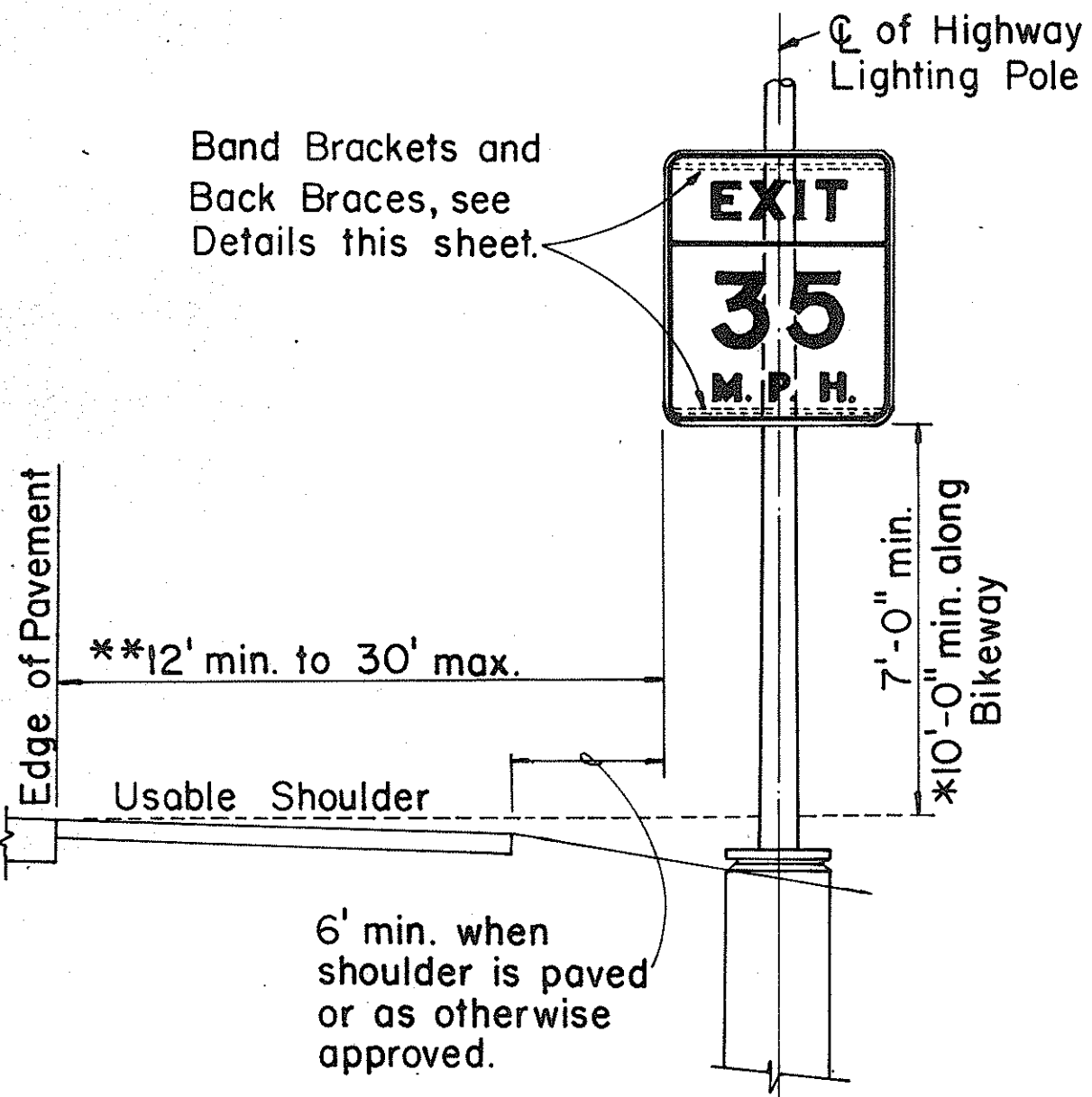
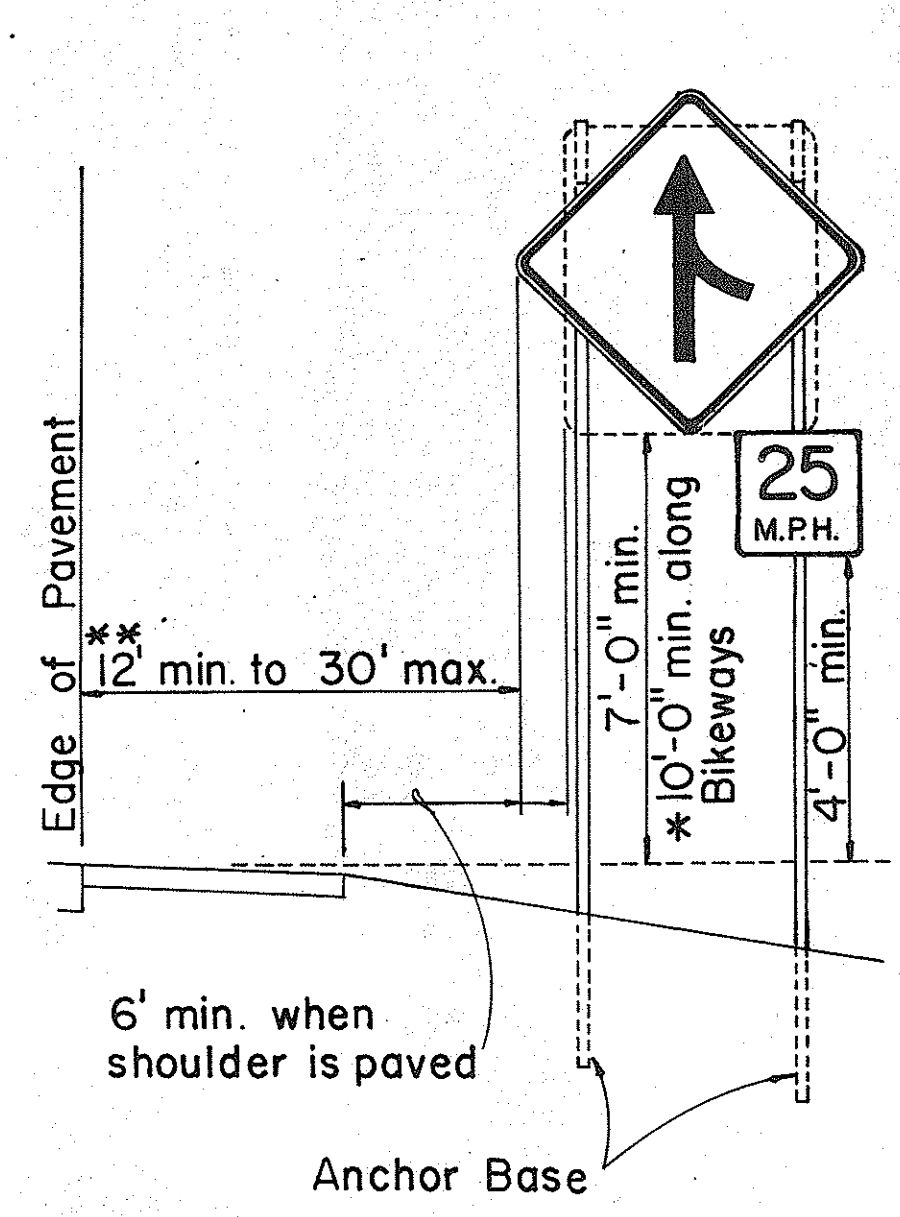
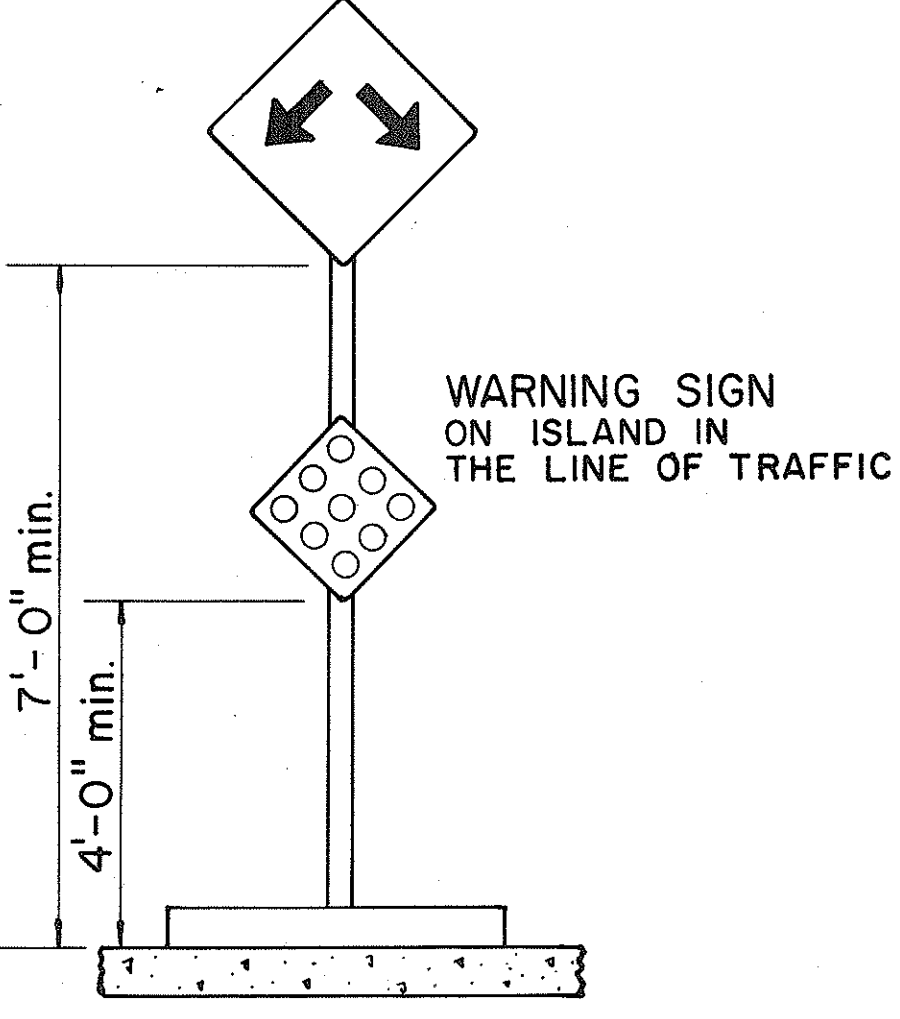
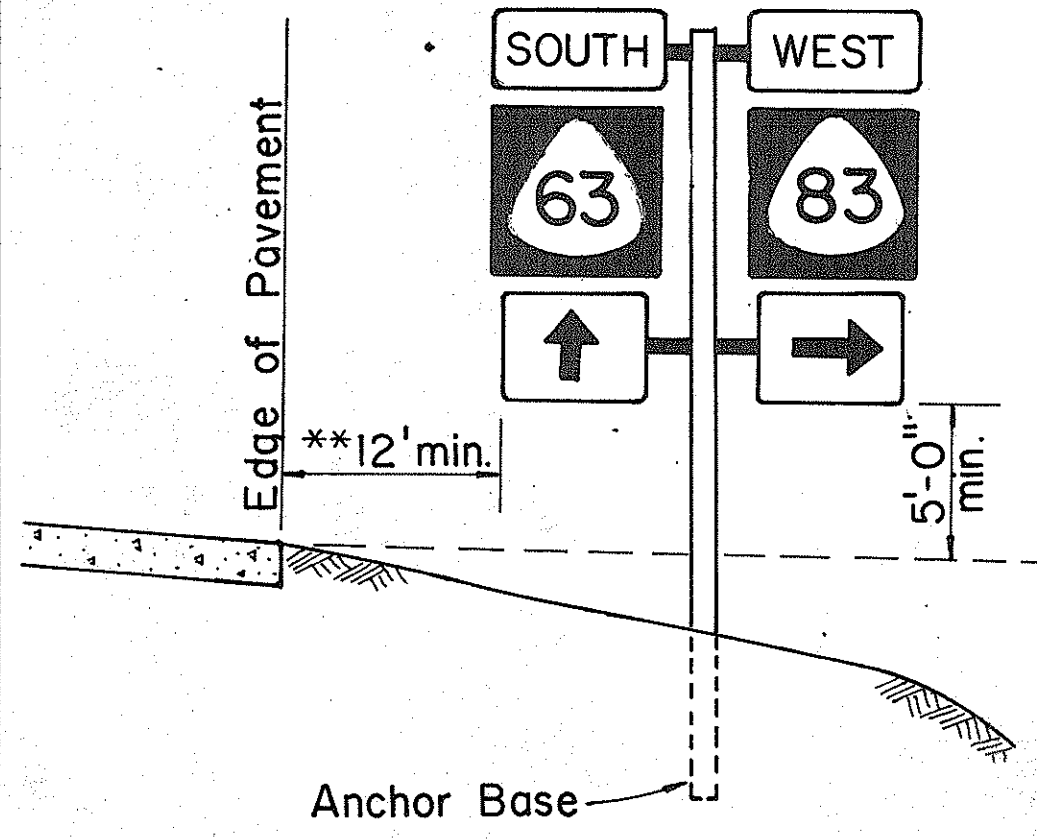
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET No. X2 OF 14 SHEETS DT 100



ROADSIDE ASSEMBLY RURAL DISTRICT



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	14	25

A or A,	C	C,
36"	6"	-
48"	9"	19"
60"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 4.

GENERAL NOTES

- Sign posts and base posts shall be flanged channel type structural steel conforming to ASTM A 499 and galvanized in accordance with ASTM A 123.
NOMINAL DIMENSIONS:
2.50 lbs./ft. - 3.125" x 1.562"
4.00 lbs./ft. - 3.500" x 1.750"
- Retainer - Spacer Strap shall be AISI 1020 steel and galvanized in accordance with ASTM A 123.
- Retainer and Connector Bolts shall be 5/16 - 18 UNC x 1.75" long hex. head, integral flange conforming to ASTM A 354 Grade BC. Nuts shall be 5/16 - 18 UNC hex. head, integral flange conforming to ASTM A 563 Grade D. All bolts and nuts shall be cadmium plated per Federal spec. QQP 416 B, Class 2, Type 2.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = $A \times B \times H$
Therefore, if sign area (A x B) is known,
Maximum H = $\frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area (A x B) = $\frac{\text{Factor}}{H}$

APPROVAL RECOMMENDED:

Erich Tanaka 9/2/82
TRAFFIC ENGINEER DATE

APPROVED:

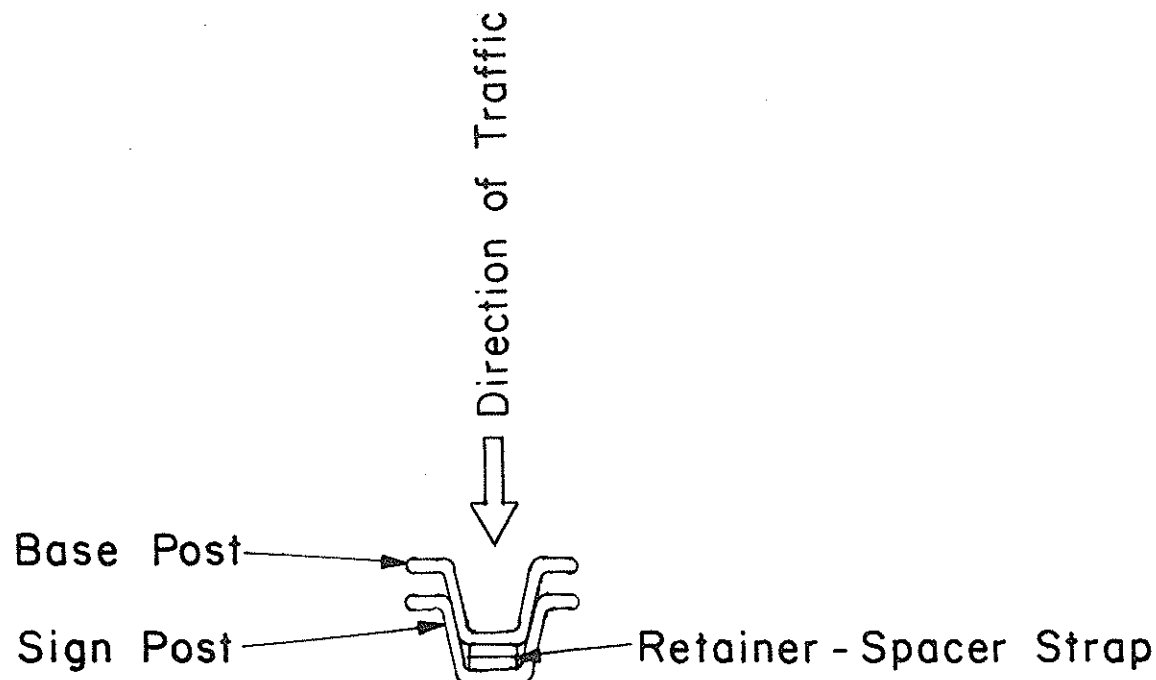
Harold S. Sato 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

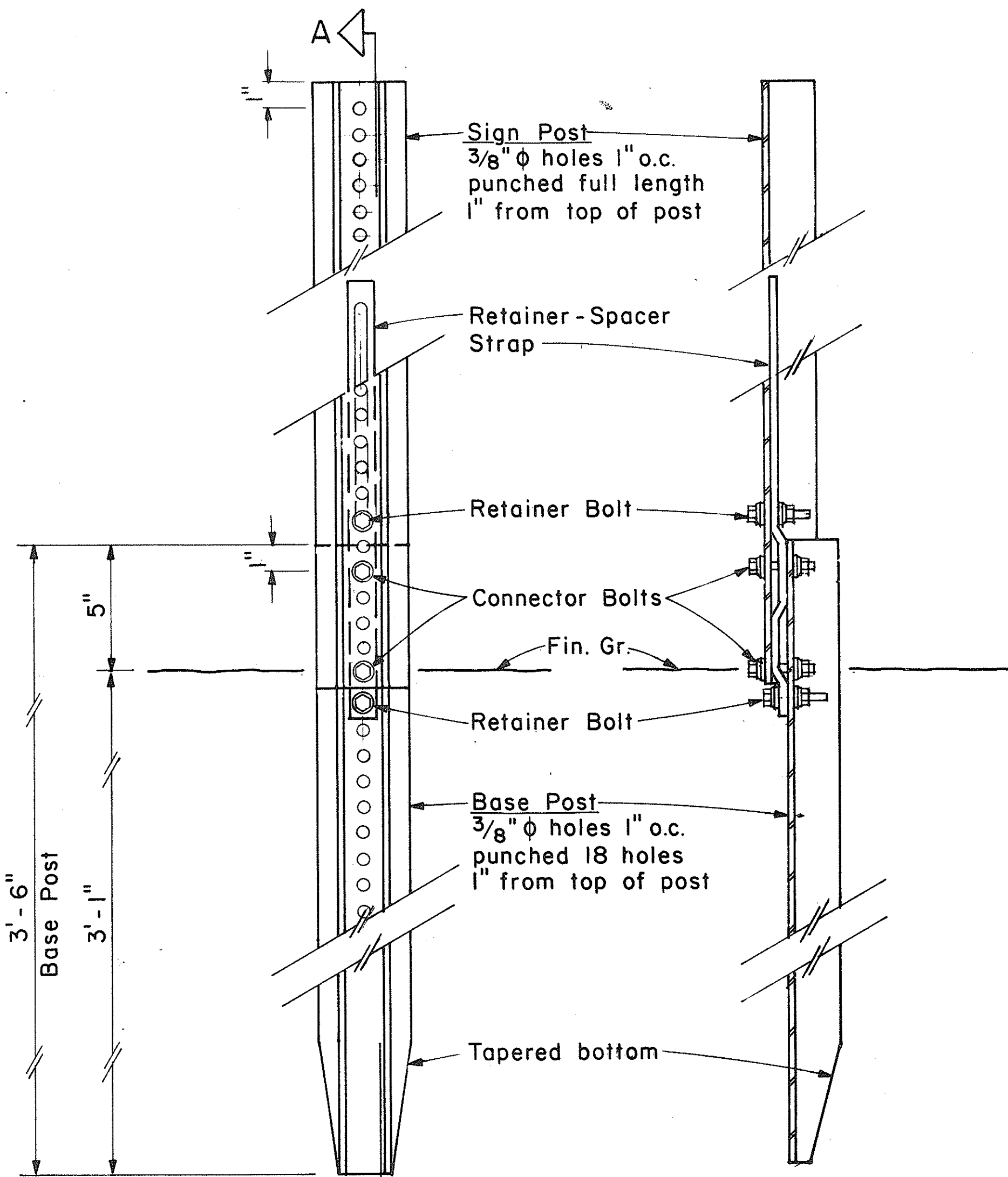
STANDARD DETAILS
GALVANIZED FLANGED CHANNEL
SIGN POST MOUNTING

Scale: As Shown Date: Sept. 1982

SHEET NO. 13 OF 14 SHEETS DT 100A



TOP VIEW

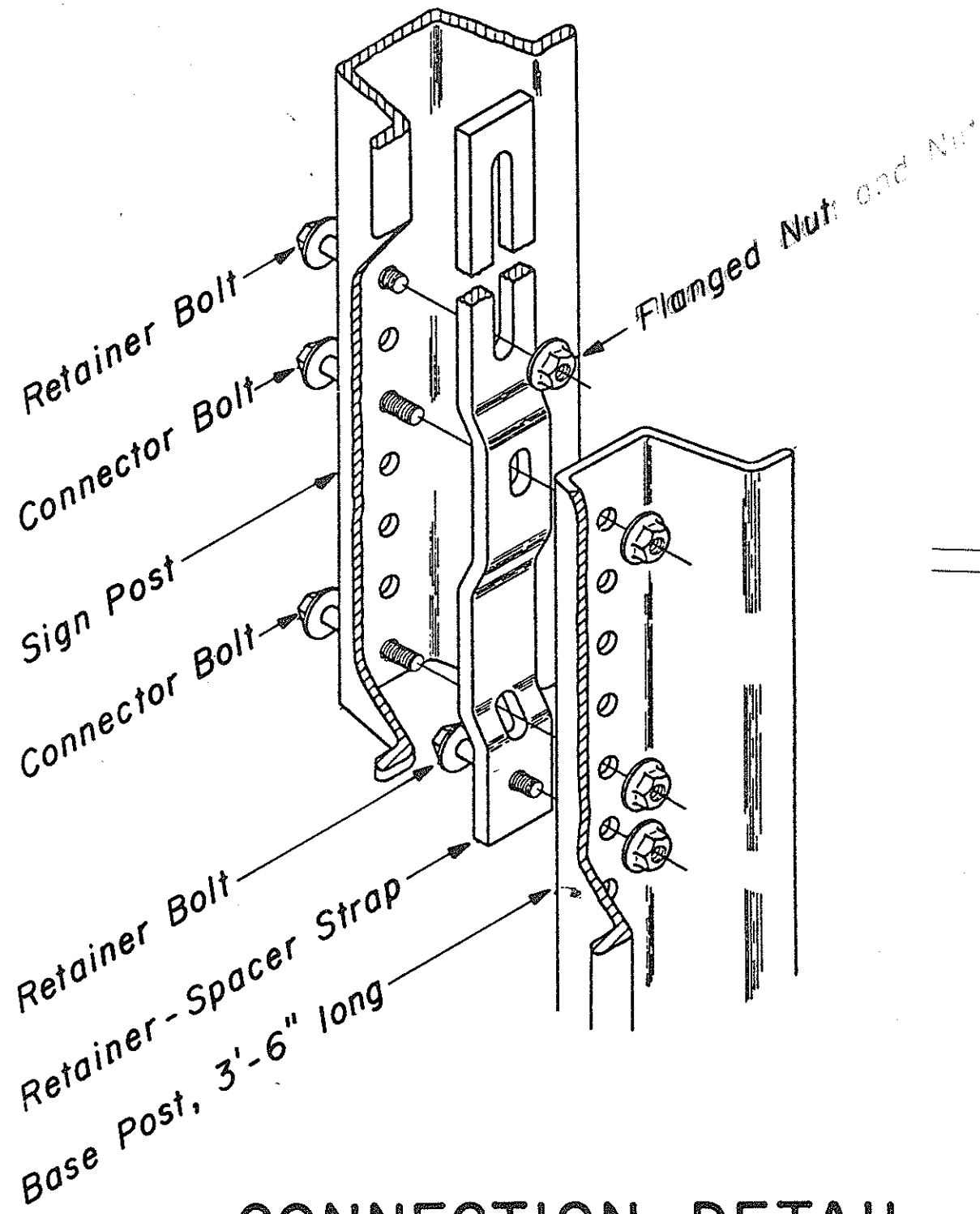


SECTION "A-A"

BACK VIEW

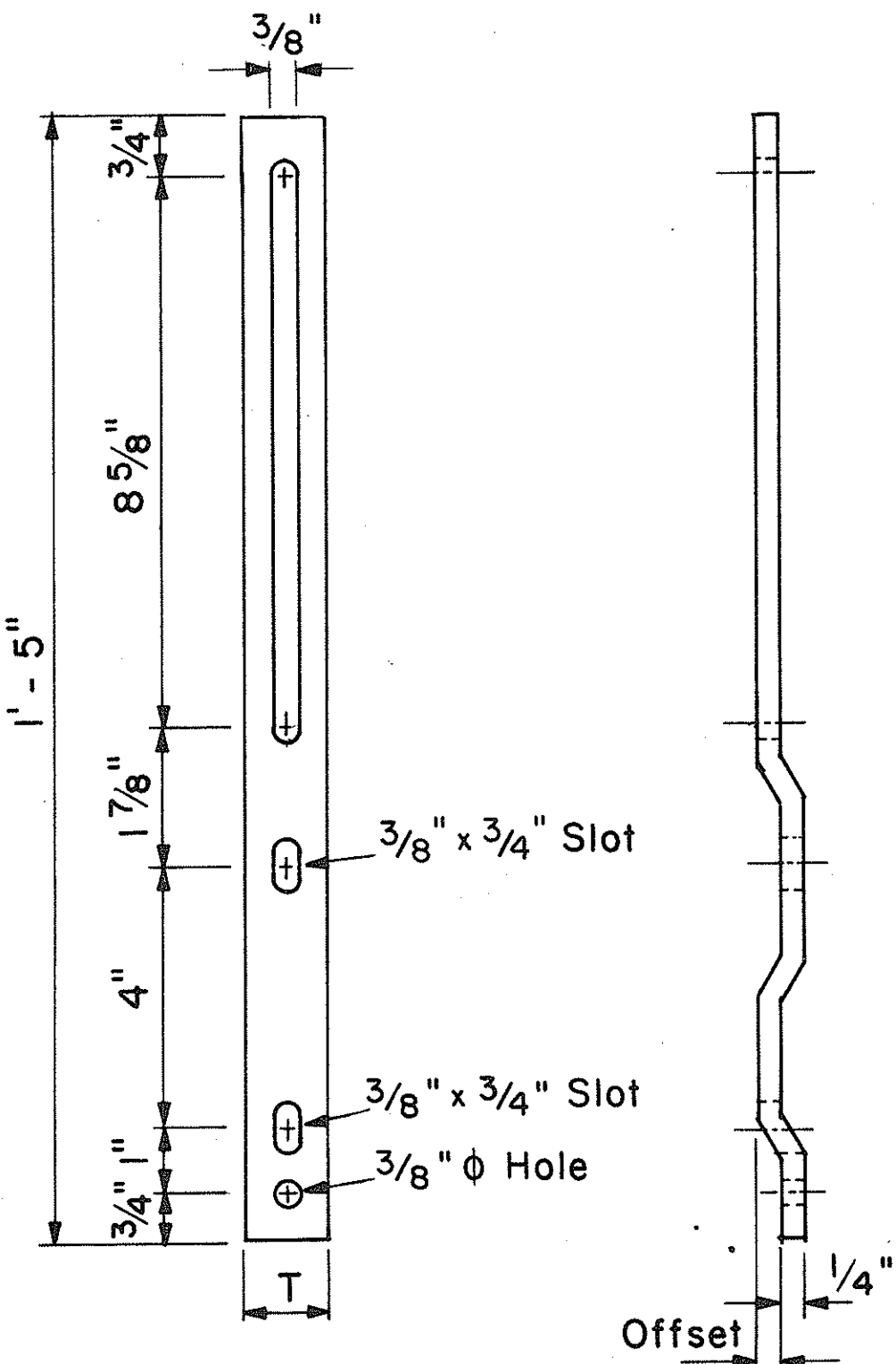
ANCHOR BASE DETAIL

Scale: 3" = 1' - 0"



CONNECTION DETAIL

Not to Scale

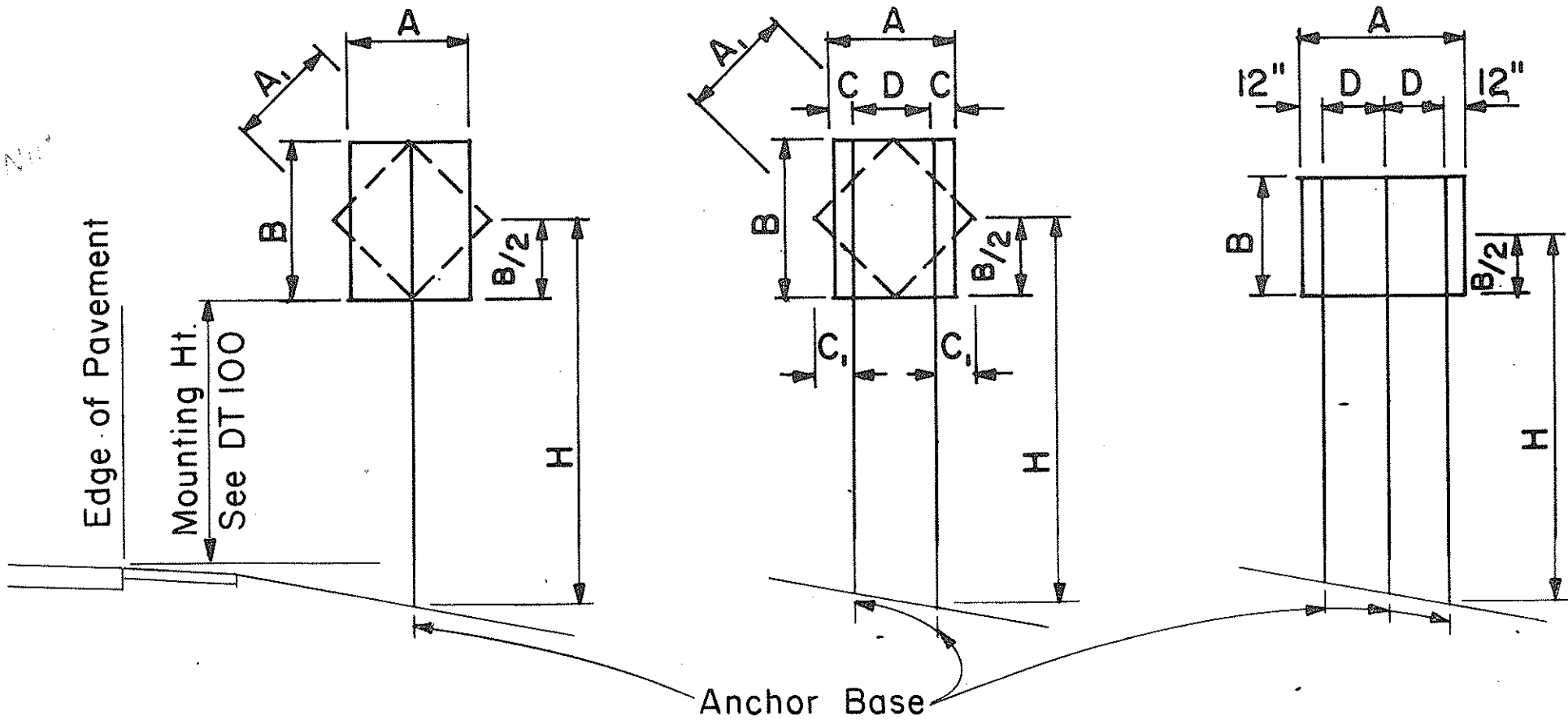


RETAINER-SPACER STRAP

Not to Scale

RETAINER-SPACER STRAP

Post Size	T	Offset
2.50 lbs./ft.	1.00"	0.145"
4.00 lbs./ft.	1.12"	0.280"



1-POST Sign area 10 sq. ft. and less
2-POST Sign area greater than 10 sq. ft. or A = 48" - 60"
3-POST A = greater than 60"

TYPICAL INSTALLATION

Not to Scale

FLANGED CHANNEL: 1-POST INSTALLATION

Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75	
4.00 lbs./ft.	112	-	-	-	-	-	9.33	

FLANGED CHANNEL: 2-POST INSTALLATION

Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	124	17.71	15.50	13.77	12.40	11.27	10.33	
4.00 lbs./ft.	241	34.43	30.13	26.78	24.10	21.91	20.08	

FLANGED CHANNEL: 3-POST INSTALLATION

Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	187	26.71	23.38	20.78	18.70	17.00	15.58	
4.00 lbs./ft.	362	51.71	45.25	40.22	36.20	32.91	30.17	

WINDLOAD CHARTS

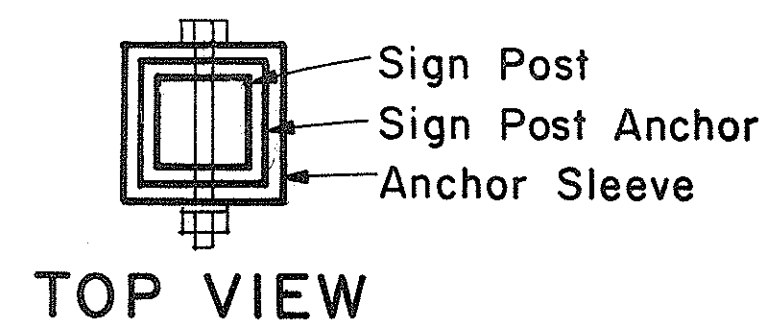
NO.	REVISION	APPROVED BY	DATE

ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

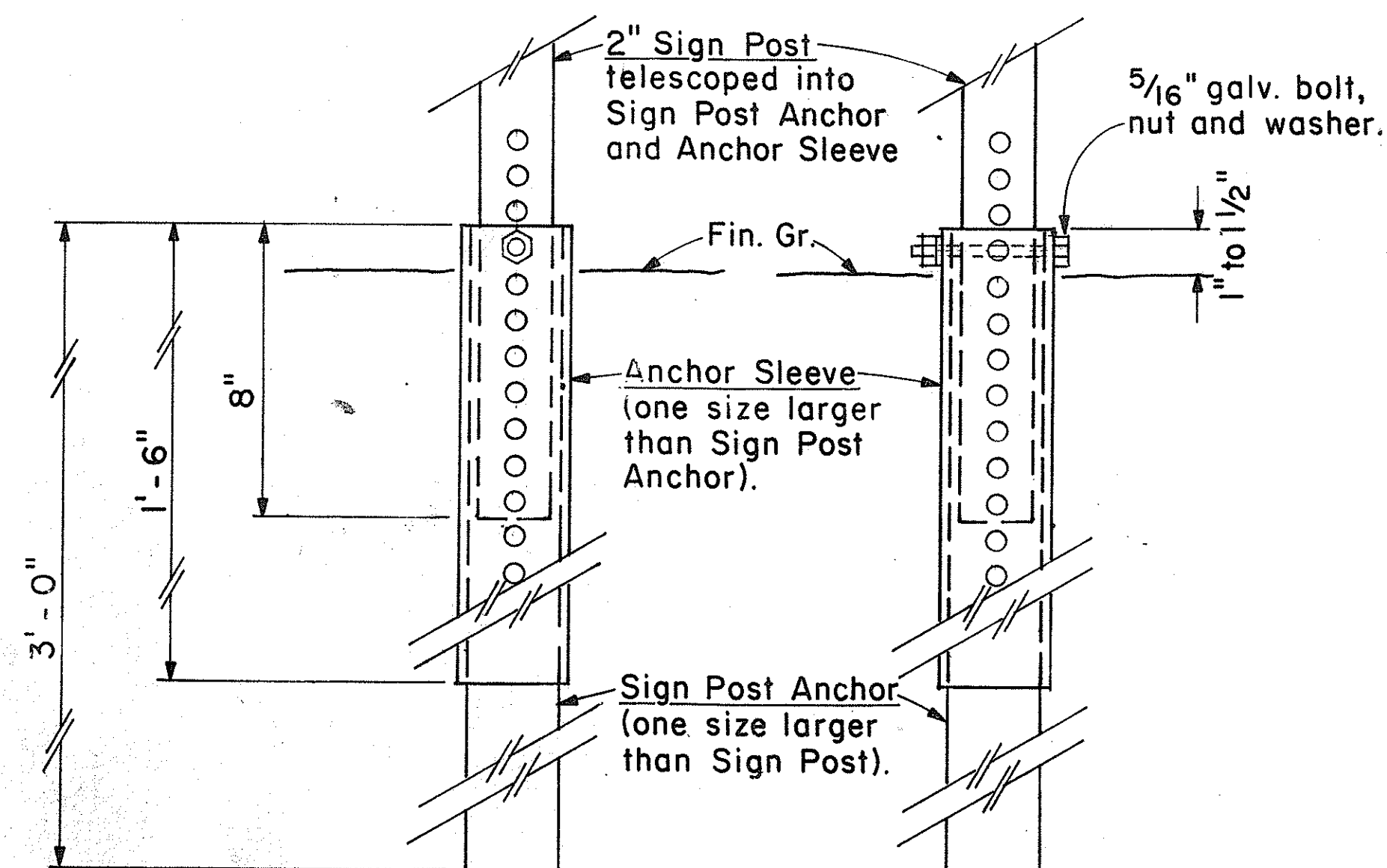
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	15	25

GENERAL NOTES

- Square tube sign posts shall conform to Subsection 713.11(C) Square Tube Posts of the Specifications.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- Square tube posts shall be perforated with $\frac{7}{16}$ " ϕ holes, 1" o.c., 4 sides, along entire length of post.
- All posts shall be 12 gage unless otherwise specified or shown on the plans.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = $A \times B \times H$
Therefore, if sign area ($A \times B$) is known,
Maximum $H = \frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area ($A \times B$) = $\frac{\text{Factor}}{H}$



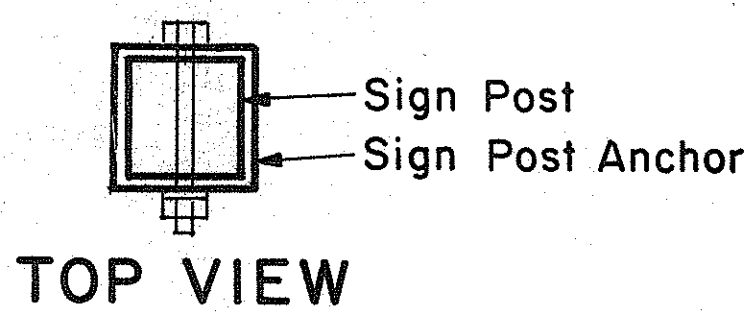
TOP VIEW



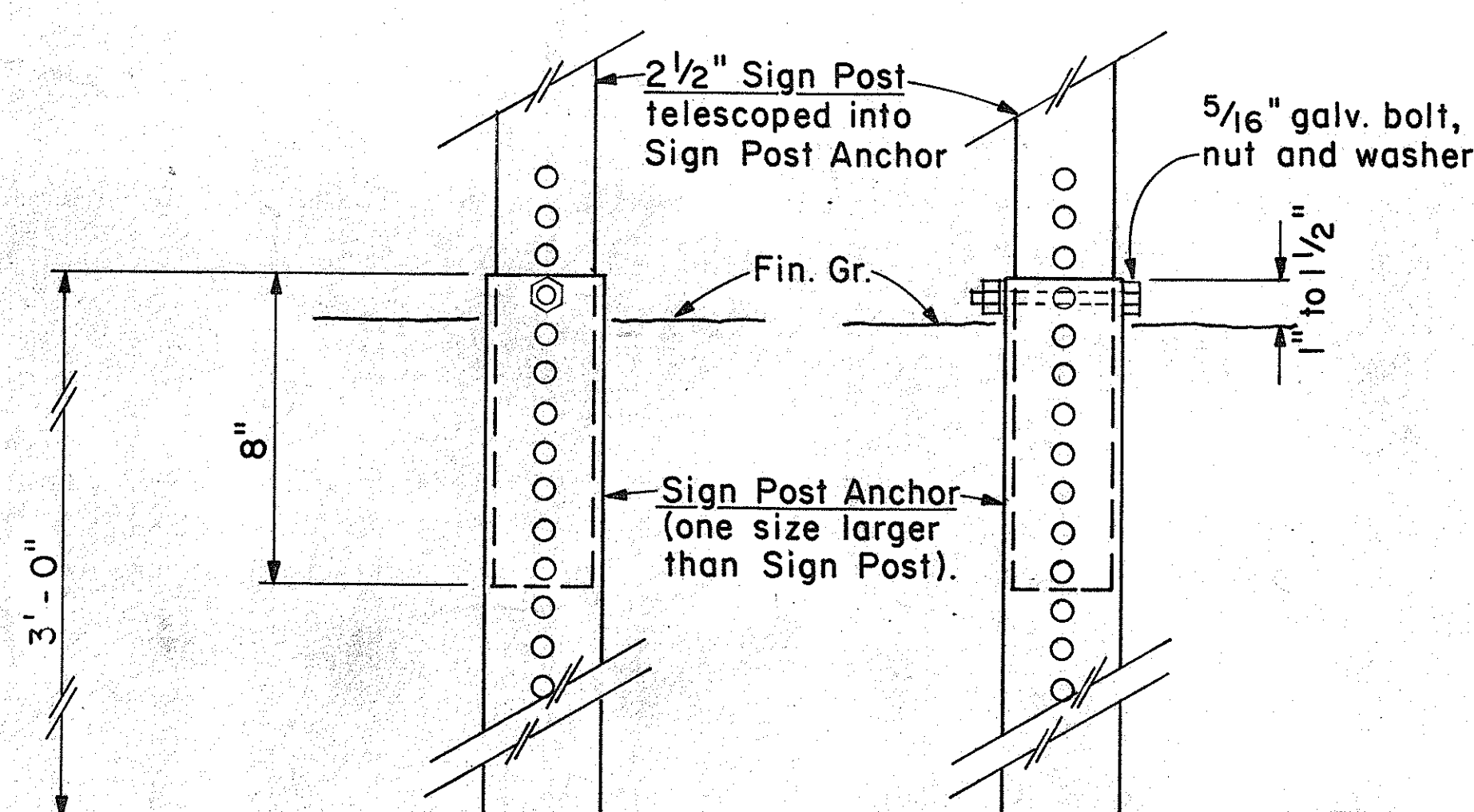
BACK VIEW

SIDE VIEW

2" SIGN POST INSTALLATION



TOP VIEW



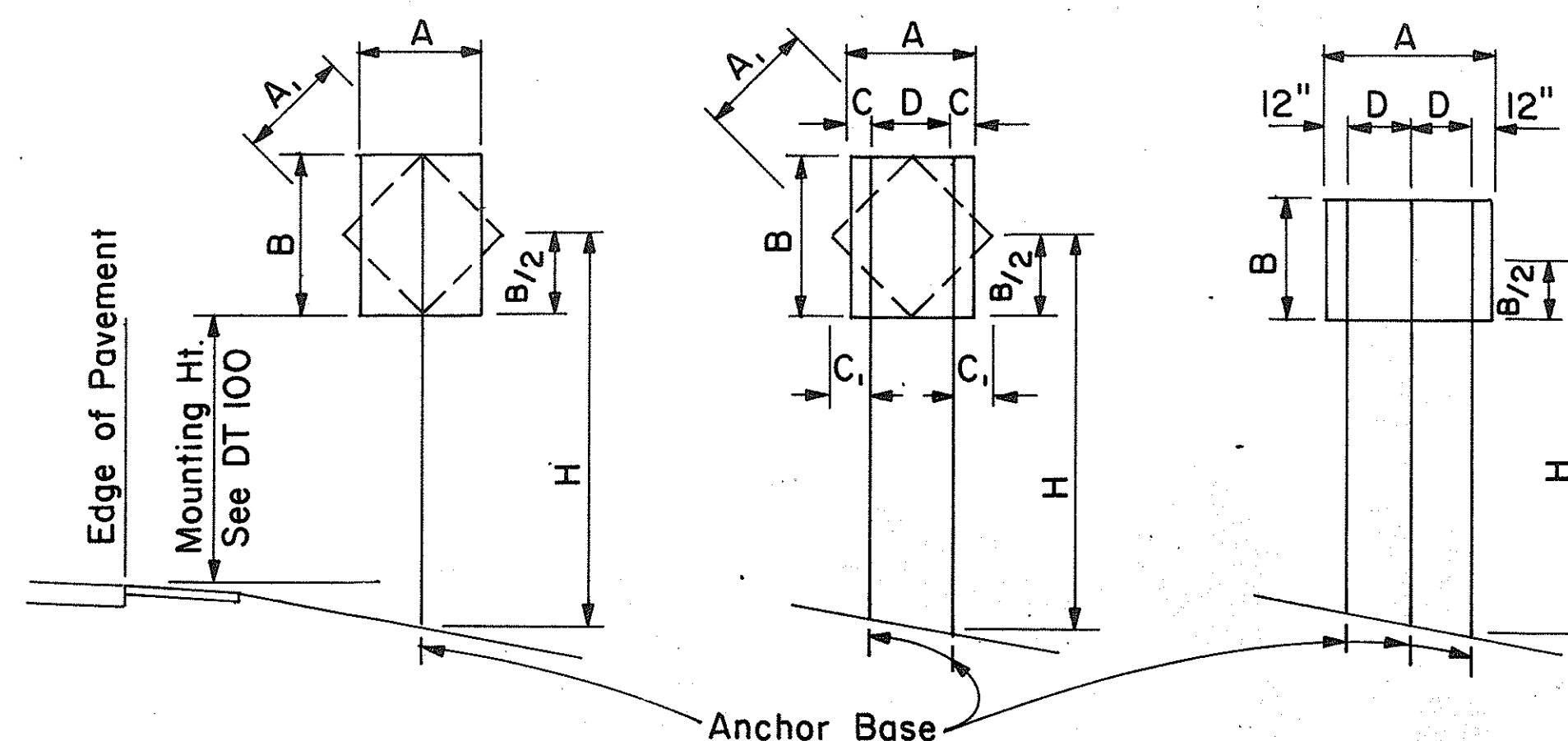
BACK VIEW

SIDE VIEW

2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



1 - POST

2 - POST

3 - POST

Sign area 10 sq. ft. and less Sign area greater than 10 sq. ft. or A = 48" - 60" A = greater than 60"

TYPICAL INSTALLATION

Not to Scale

SQUARE TUBE: 1- POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	62	8.8	7.7	6.8	6.1	5.6	4.8
2 1/2"	107	-	-	-	-	9.6	8.8

A x B (Area, sq. ft.)

SQUARE TUBE: 2- POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	122	17.4	15.2	13.5	12.2	11.0	10.1
2 1/2"	212	30.2	26.5	23.5	21.1	19.2	17.6
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5

A x B (Area, sq. ft.)

SQUARE TUBE: 3- POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	183	26.0	22.8	20.3	18.2	16.6	15.2
2 1/2"	318	45.4	39.5	35.2	31.5	28.8	26.5
2 1/2", 10 ga.	388	55.0	48.5	43.0	38.5	35.0	32.0

A x B (Area, sq. ft.)

WINDLOAD CHARTS

APPROVAL RECOMMENDED:

Eishi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

APPROVED:

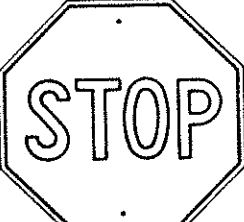
Harbert Salsishi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION STANDARD DETAILS GALVANIZED SQUARE TUBE SIGN POST MOUNTING Scale: As Shown Date: Sep. 1982 SHEET No. 14 OF 14 SHEETS DT 100B	
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ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	TRACED BY	
	CHECKED BY	

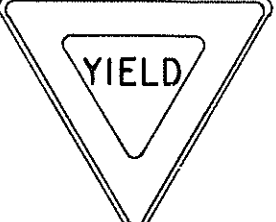
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	22A-01-85	1985	16	25



R1-1 30" x 30"
R1-1-A 36" x 36"

4-WAY

R1-3 12" x 6"
R1-3-A 18" x 9"



R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



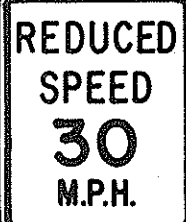
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"



R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



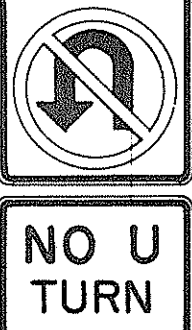
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"



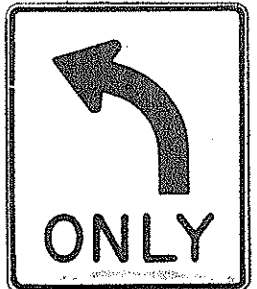
R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"



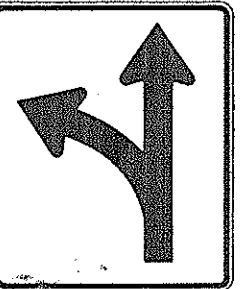
R3-3 24" x 24"
R3-3-A 48" x 48"



R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 48"
48" x 36"



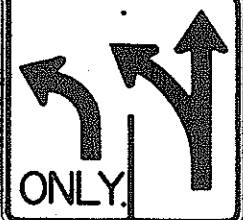
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"



R3-8(L) 30" x 30"
R3-8(L)-A 36" x 36"
R3-8(L)-B 48" x 48"



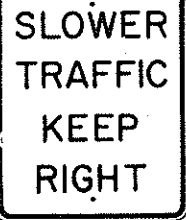
R3-9 24" x 30"



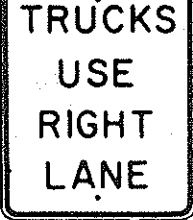
R4-1 24" x 30"



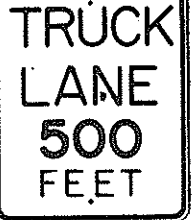
R4-2 24" x 30"



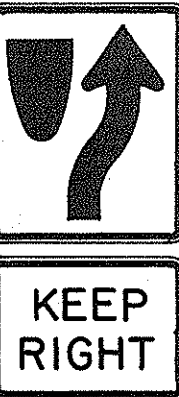
R4-3 24" x 30"
R4-3-A 48" x 60"



R4-5 24" x 30"



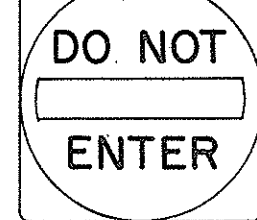
R4-6(500) 24" x 30"



R4-7 24" x 30"
24" x 18"



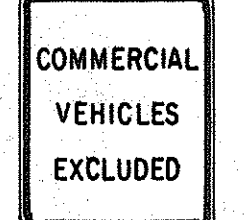
R4-8 24" x 30"
24" x 18"



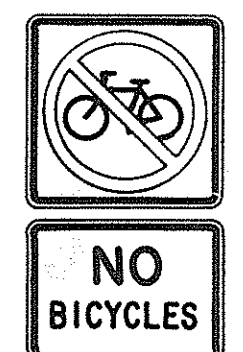
R5-1 30" x 30"
R5-1-A 48" x 48"



R5-2 24" x 24"
24" x 18"



R5-4 24" x 30"



R5-6 24" x 24"
24" x 18"



R5-9 36" x 24"



R6-1 (R) 36" x 12"



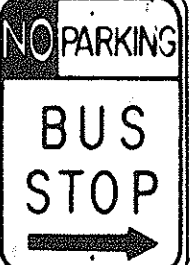
R6-2(R) 18" x 24"



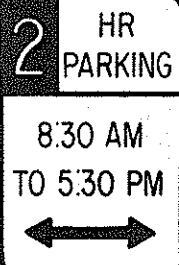
R7-1 12" x 18"
R7-1-A 24" x 30"



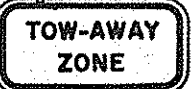
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-1-7(R) 12" x 18"



R7-108 12" x 18"



R7-201 12" x 6"
R7-201-A 24" x 12"



R8-1 24" x 30"



R8-2 24" x 30"



R8-3 24" x 30"



R8-4 30" x 24"
R8-4-A 48" x 36"



R8-5 24" x 30"



R8-6 24" x 30"



R8-7 30" x 24"
R8-7-A 48" x 36"



R9-1 18" x 24"



R9-2 12" x 18"



R9-3 12" x 18"



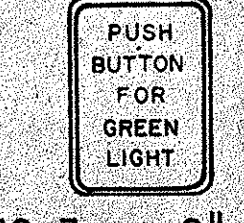
R9-4 18" x 24"



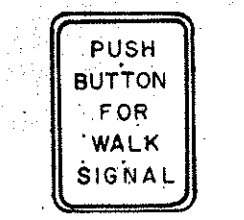
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



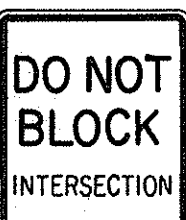
R10-4 9" x 12"



R10-5 24" x 30"



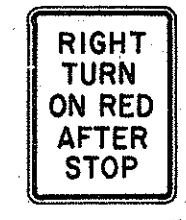
R10-6 24" x 36"



R10-7 24" x 30"



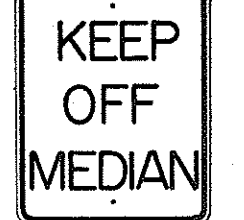
R10-8 24" x 30"



R10-9 24" x 30"



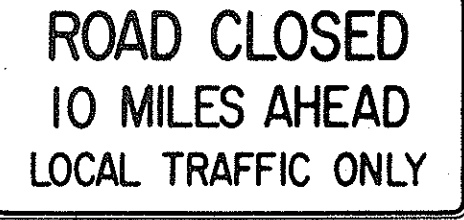
R10-10 24" x 30"



R11-1 24" x 30"



R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

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.
- All signs shall be erected without educational plaques unless called for in the plans.

APPROVAL RECOMMENDED:

Enishi Tanaka

TRAFFIC ENGINEER

DATE 3/17/72

APPROVED:

Halbert Zabin

ASSISTANT CHIEF, ENGINEERING

DATE 3-20-72

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.	10/12/74
3	Added General Note 5	H.T.	11/9/79

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

STANDARD DETAILS

REGULATORY SIGNS

NOT TO SCALE

SHEET No. X5 OF 14 SHEETS DT 101

DATE

SURVEY PLOTTED BY

DRAWN BY

CHECKED BY

NOTE BOOK

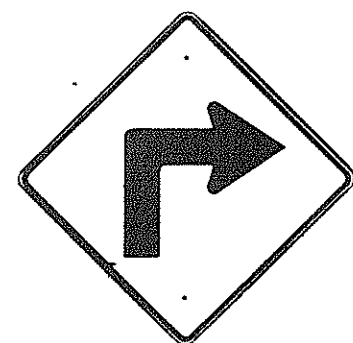
NO.

ORIGINAL PLAN

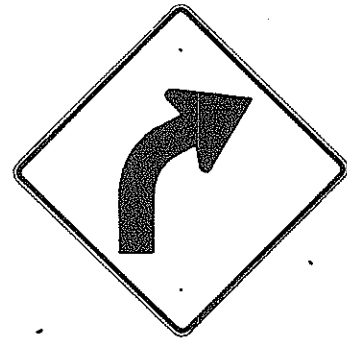
LA 5207

16

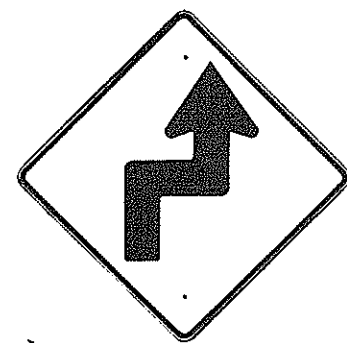
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	92A-01-85	1985	17	25



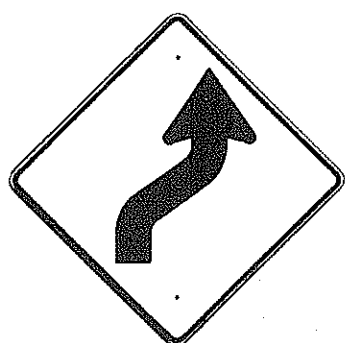
W1-1(R) 30"x 30"
W1-1(R)-A 48"x 48"



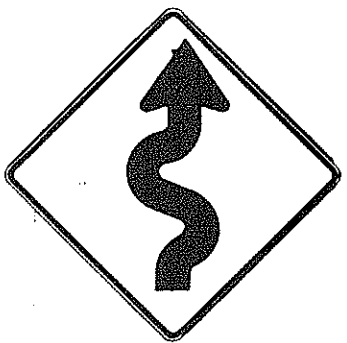
W1-2(R) 30"x 30"
W1-2(R)-A 48"x 48"



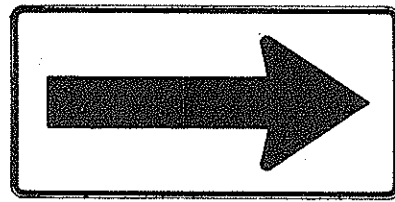
W1-3(R) 30"x 30"
W1-3(R)-A 48"x 48"



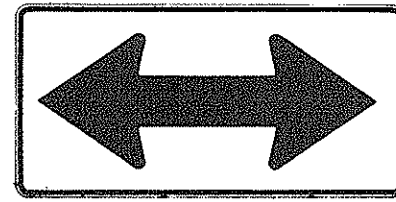
W1-4(R) 30"x 30"
W1-4(R)-A 48"x 48"



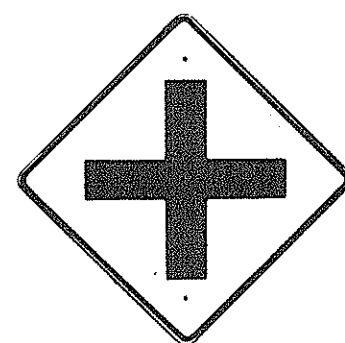
W1-5(R) 30"x 30"
W1-5(R)-A 48"x 48"



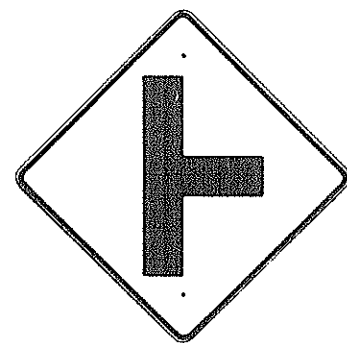
W1-6 48"x 24"



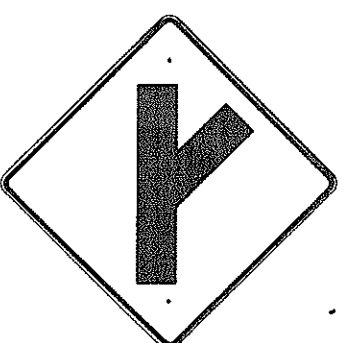
W1-7 48"x 24"



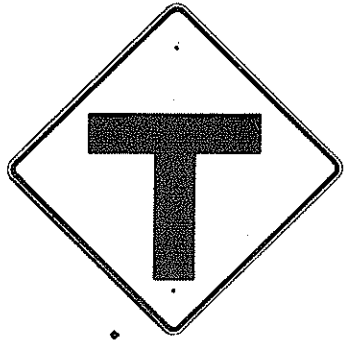
W2-1 30"x 30"
W2-1-A 48"x 48"



W2-2 30"x 30"
W2-2-A 48"x 48"



W2-3(R) 30"x 30"
W2-3(R)-A 48"x 48"



W2-4 30"x 30"
W2-4-A 48"x 48"



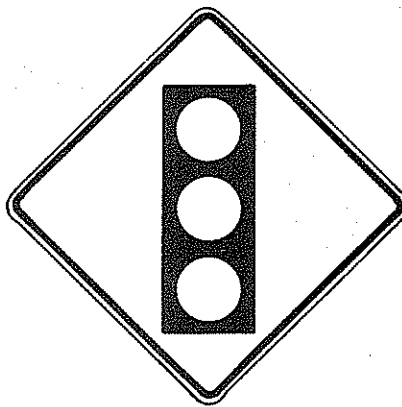
W2-5 30"x 30"
W2-5-A 48"x 48"



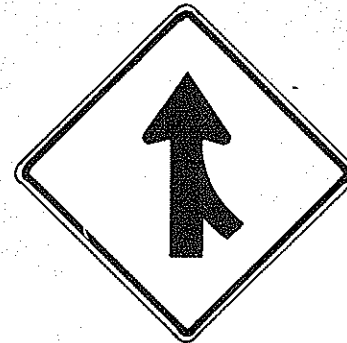
W3-1 30"x 30"
W3-1-A 36"x 36"



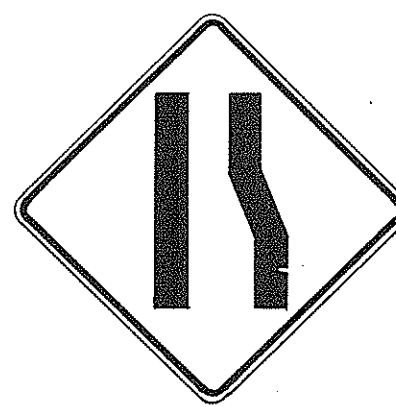
W3-2 30"x 30"
W3-2-A 36"x 36"



W3-3 36"x 36"
24"x 18"



W4-1(R) 30"x 30"
24"x 18"
W4-1(R)-A 48"x 48"
24"x 18"



W4-2(R) 36"x 36"
W4-2(R)-A 48"x 48"



W5-1 36"x 36"



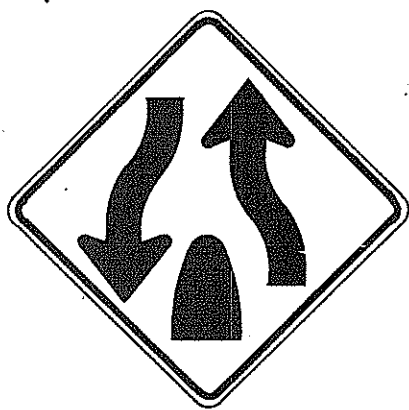
W5-2 30"x 30"
W5-2-A 36"x 36"



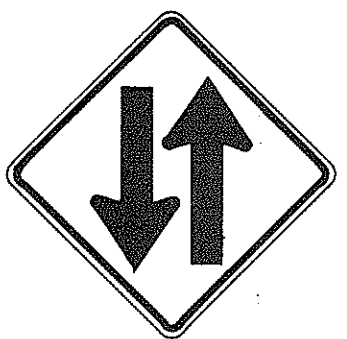
W5-3 36"x 36"



W6-1 36"x 36"
24"x 18"



W6-2 36"x 36"
24"x 18"



W6-3 30"x 30"
24"x 18"
W6-3-A 36"x 36"
24"x 18"
W6-3-B 48"x 48"
24"x 18"



W7-1 30"x 30"
24"x 18"
W7-1-A 36"x 36"
24"x 18"



W7-2 24"x 18"



W8-1 30"x 30"
W8-1-A 36"x 36"



W8-2 30"x 30"
W8-2-A 36"x 36"



W8-3 30"x 30"
W8-3-A 36"x 36"



W8-4 30"x 30"
W8-4-A 36"x 36"



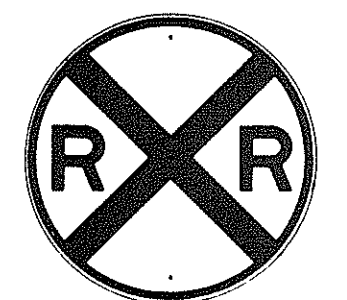
W8-5 30"x 30"
24"x 18"
W8-5-A 36"x 36"
24"x 18"



W9-1(R) 30"x 30"
W9-1(R)-A 36"x 36"
W9-1(R)-B 48"x 48"



W9-2(L) 36"x 36"
W9-2(L)-A 48"x 48"



W10-1 36" Diameter



W11-1 30"x 30"
24"x 18"
W11-1-A 36"x 36"
24"x 18"



W11-2 30"x 30"
24"x 18"
W11-2-A 36"x 36"
24"x 18"



W11-4 30"x 30"
24"x 18"
W11-4-A 36"x 36"
24"x 18"



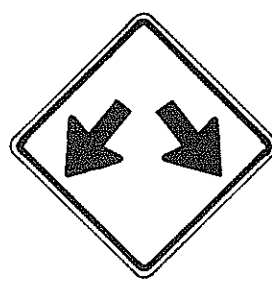
W11-5 30"x 30"
24"x 18"
W11-5-A 36"x 36"
24"x 18"



W14-1 30"x 30"



W14-3 36"x 48" x 48"



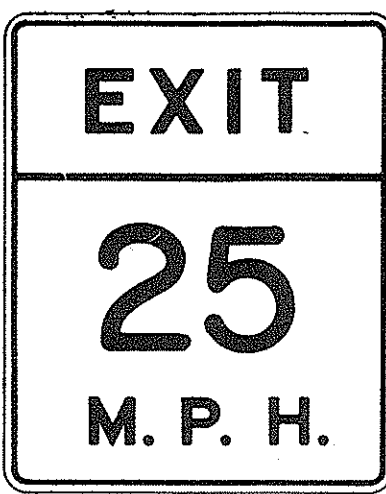
W12-1 24"x 24"
W12-1-A 36"x 36"
W12-1-B 48"x 48"



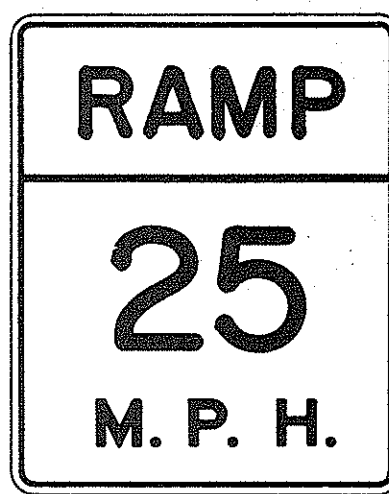
W12-2(12'-6") 36"x 36"
24"x 18"



W13-1(25) 18"x 18"
W13-1(25)-A 24"x 24"



W13-2(25) 48"x 60"



W13-3(25) 48"x 60"

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 warning signs shall be reflectorized unless otherwise specified.
- All 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.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
TRAFFIC ENGINEER

3/17/82
DATE

APPROVED:
ASSISTANT CHIEF, ENGINEERING

3-20-82
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note 1	H.T.	10/16/14
3	Revised General Note 5	M.H.	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS WARNING SIGNS

NOT TO SCALE

SHEET No. 16 OF 14 SHEETS DT 102

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	18	25



CW20-1a 48" x 48"



CW20-2d 48" x 48"



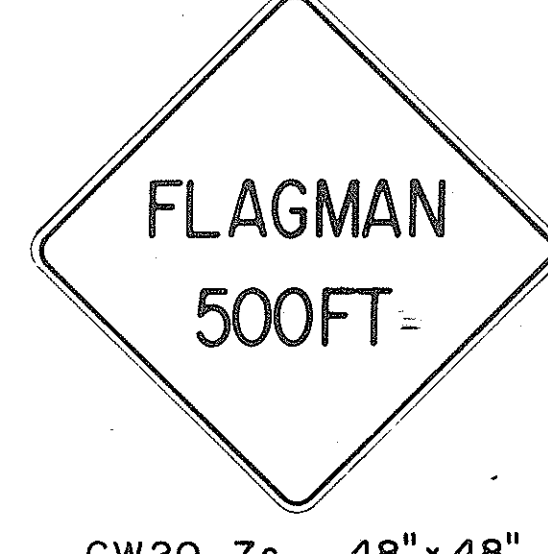
CW20-3b 48" x 48"



CW20-4d 48" x 48"



CW20-5d(L) 48" x 48"



CW20-7c 48" x 48"



CW21-1 30" x 30"



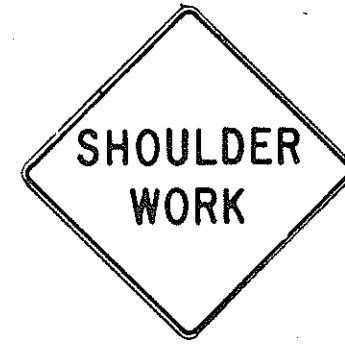
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



CW21-6 30" x 30"



CW22-1b 48" x 48"



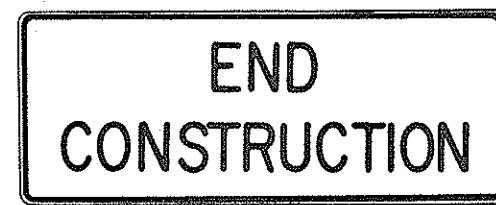
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



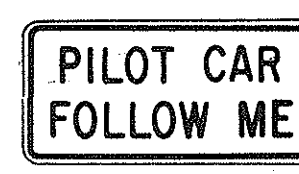
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



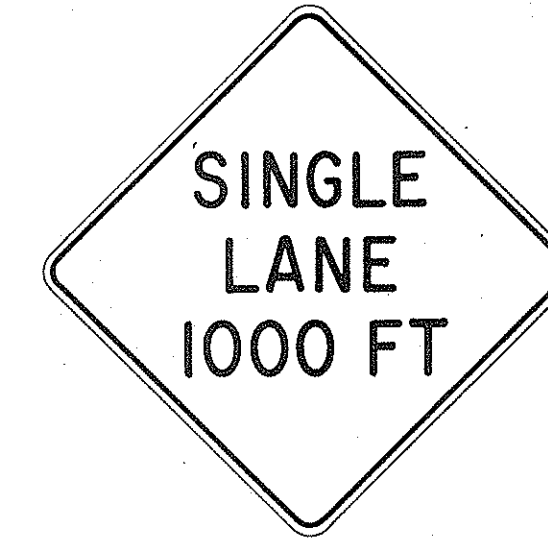
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

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 construction signs shall be reflectorized.
- All construction 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.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT,
c-500 FT and d-AHEAD.

APPROVAL RECOMMENDED:

Erich Tanaka
TRAFFIC ENGINEER

3/21/72
DATE

APPROVED:

Walter D. Smith
ASSISTANT CHIEF, ENGINEERING

3/23/72
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/23/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 2	H.T.	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

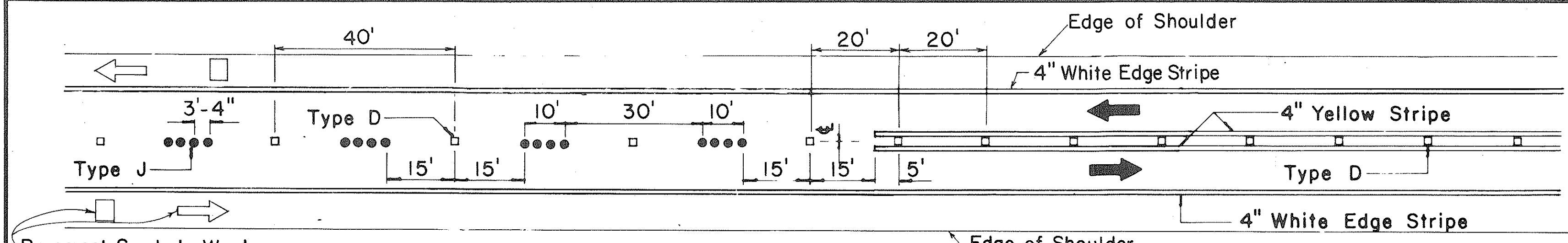
STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. X7 OF 14 SHEETS DT 104

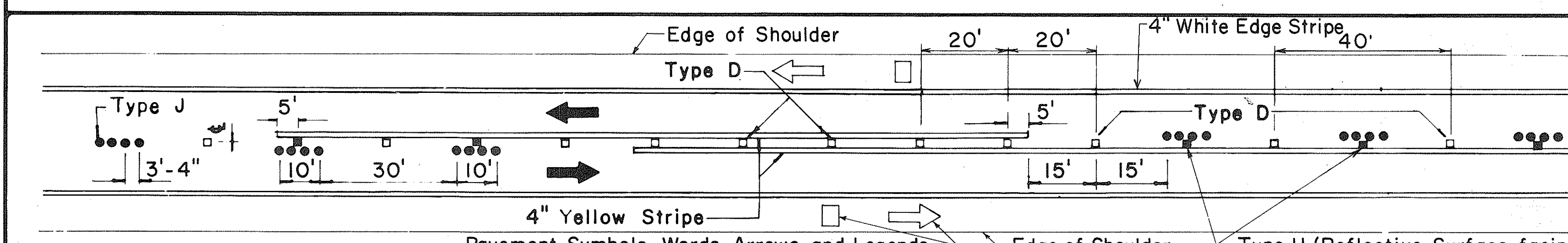
ORIGINAL PLAN	SURVEY PLATTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	FILED BY	
	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	19	25



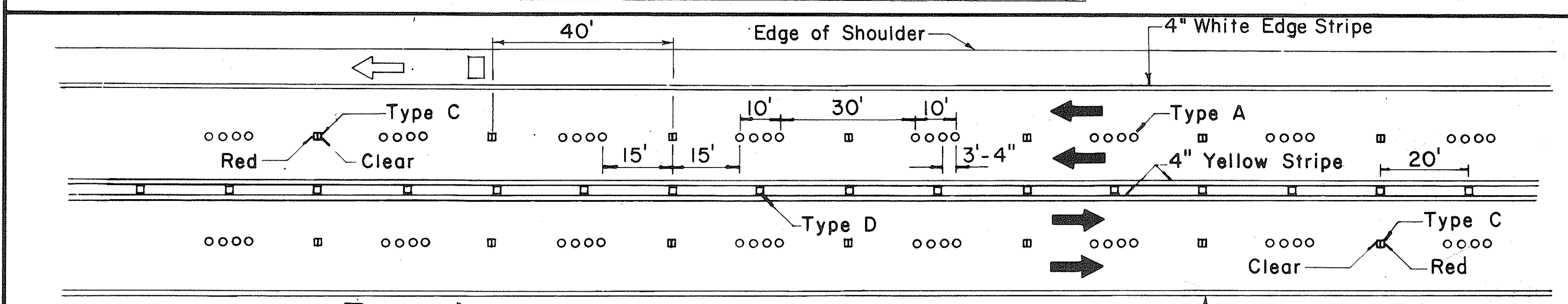
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED

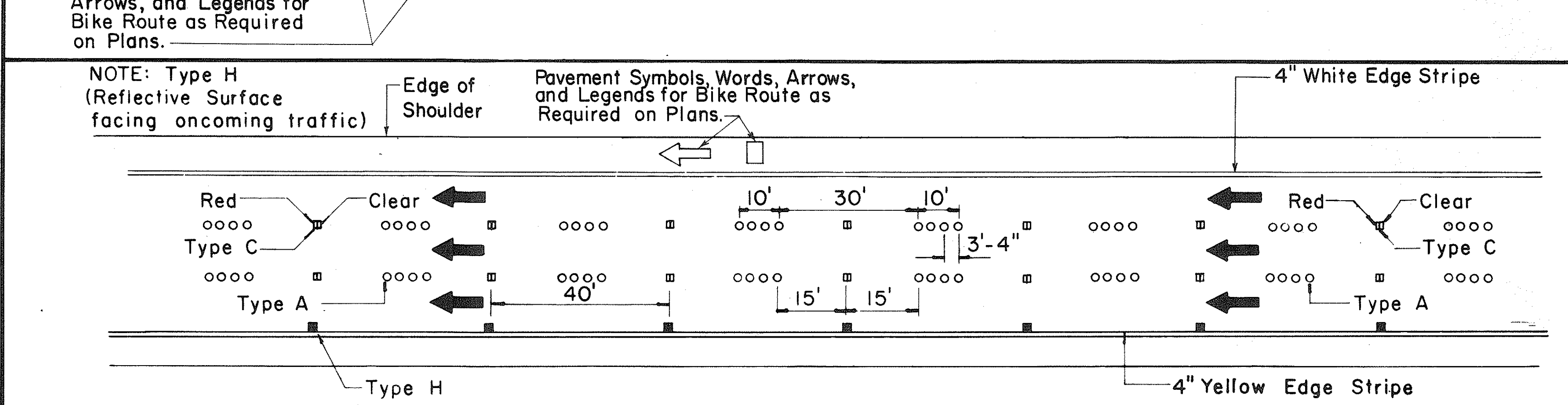


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

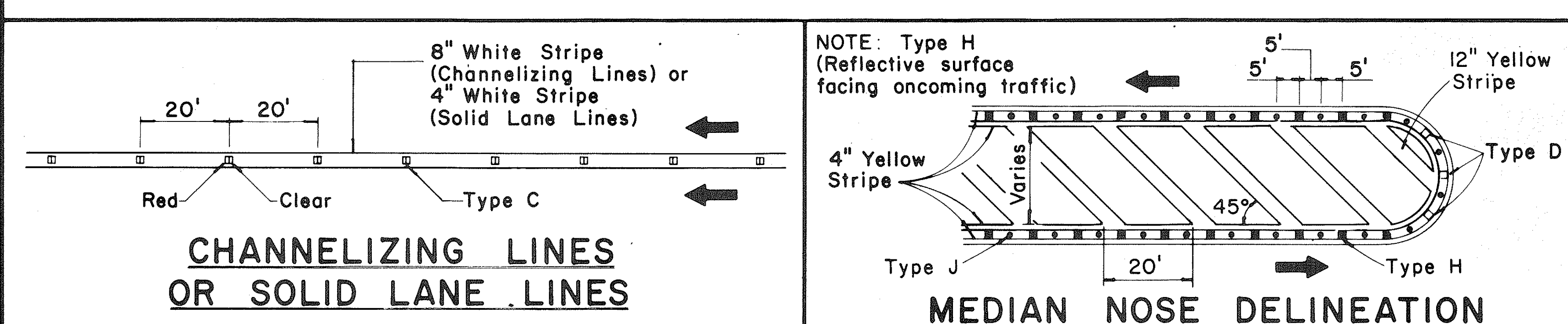
PASSING PROHIBITED ZONES



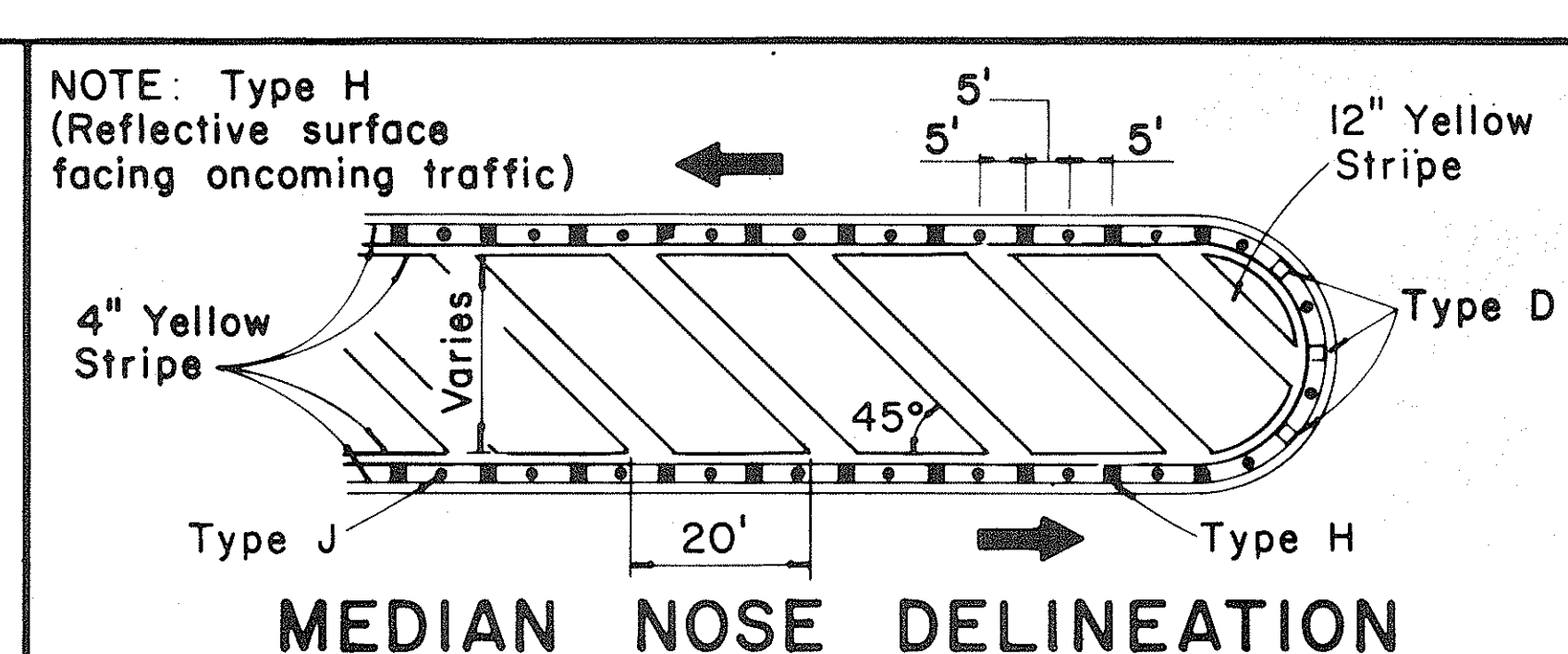
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



NOTE: Type H (Reflective Surface facing oncoming traffic)



CHANNELIZING LINES OR SOLID LANE LINES



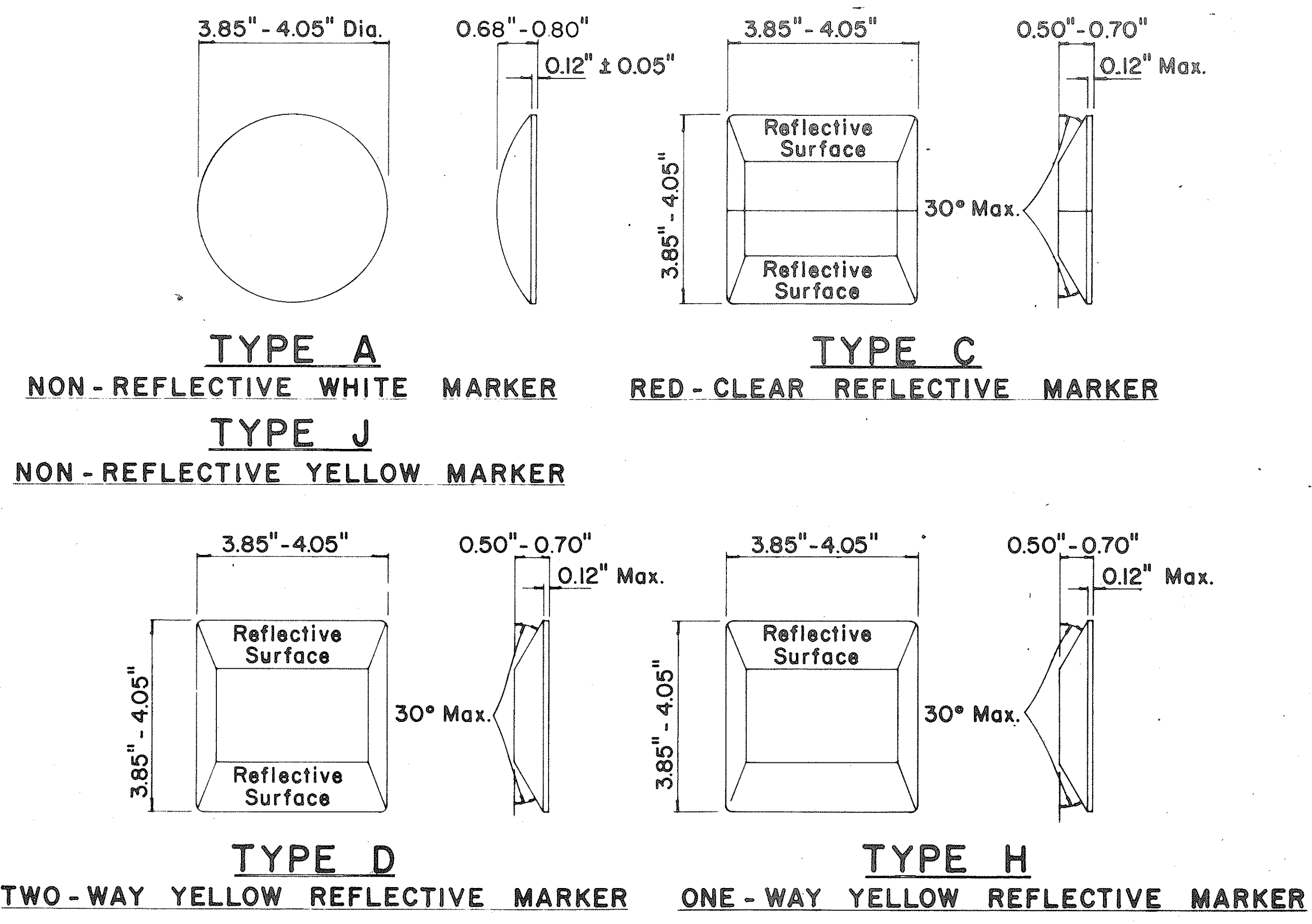
MEDIAN NOSE DELINEATION

TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



GENERAL NOTES

1. Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. 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.
3. Edge lines shall not be continued through intersections and shall not be broken for driveways unless otherwise shown or directed.

LEGEND

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

APPROVAL RECOMMENDED:
Erich Tanaka 7/21/78
 TRAFFIC ENGINEER DATE

APPROVED:
Herbert A. Zalewski 1/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.C.	1/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.C.	10/15/79
3	Added General Note 3. Revised left edge stripe.	H.C.	9-28-83

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

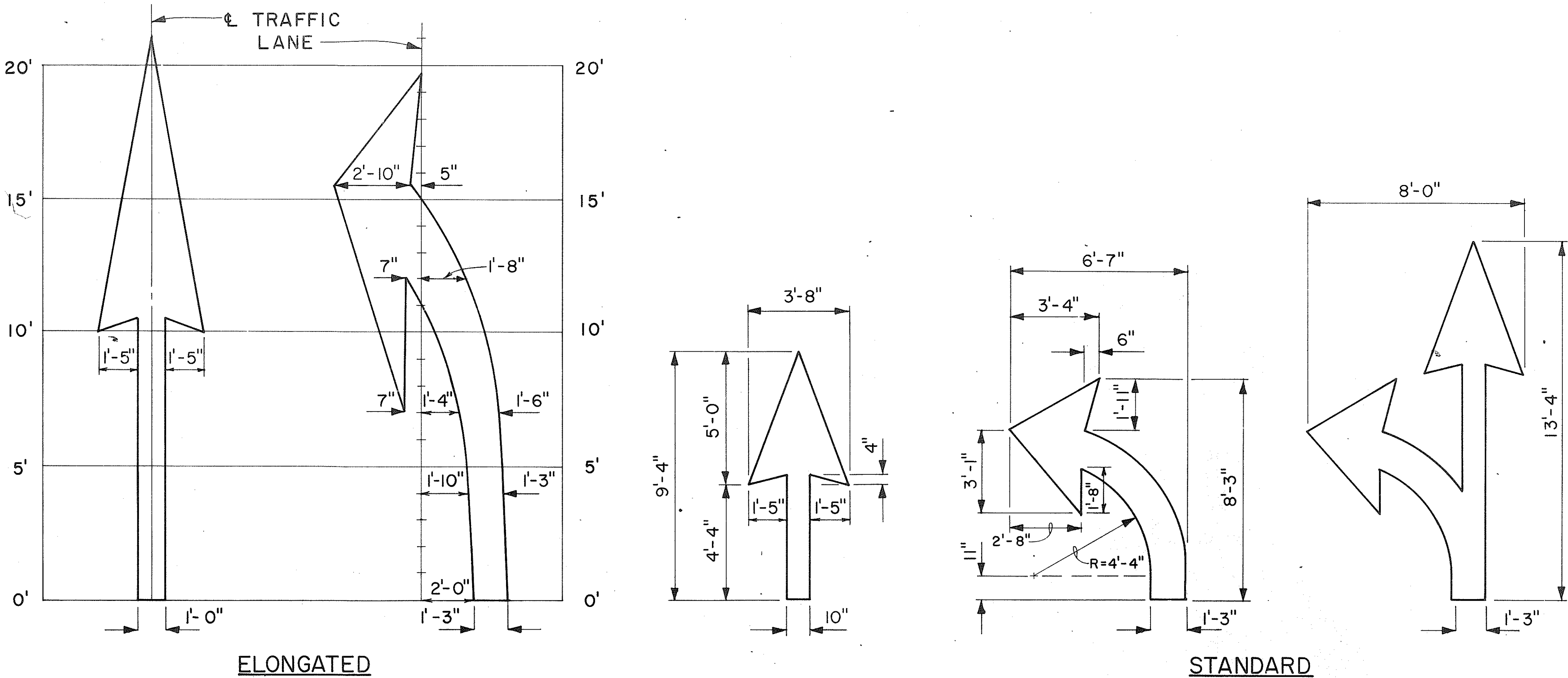
STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

Not to Scale July 1978
 SHEET No. X3 OF 14 SHEETS DT 300

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

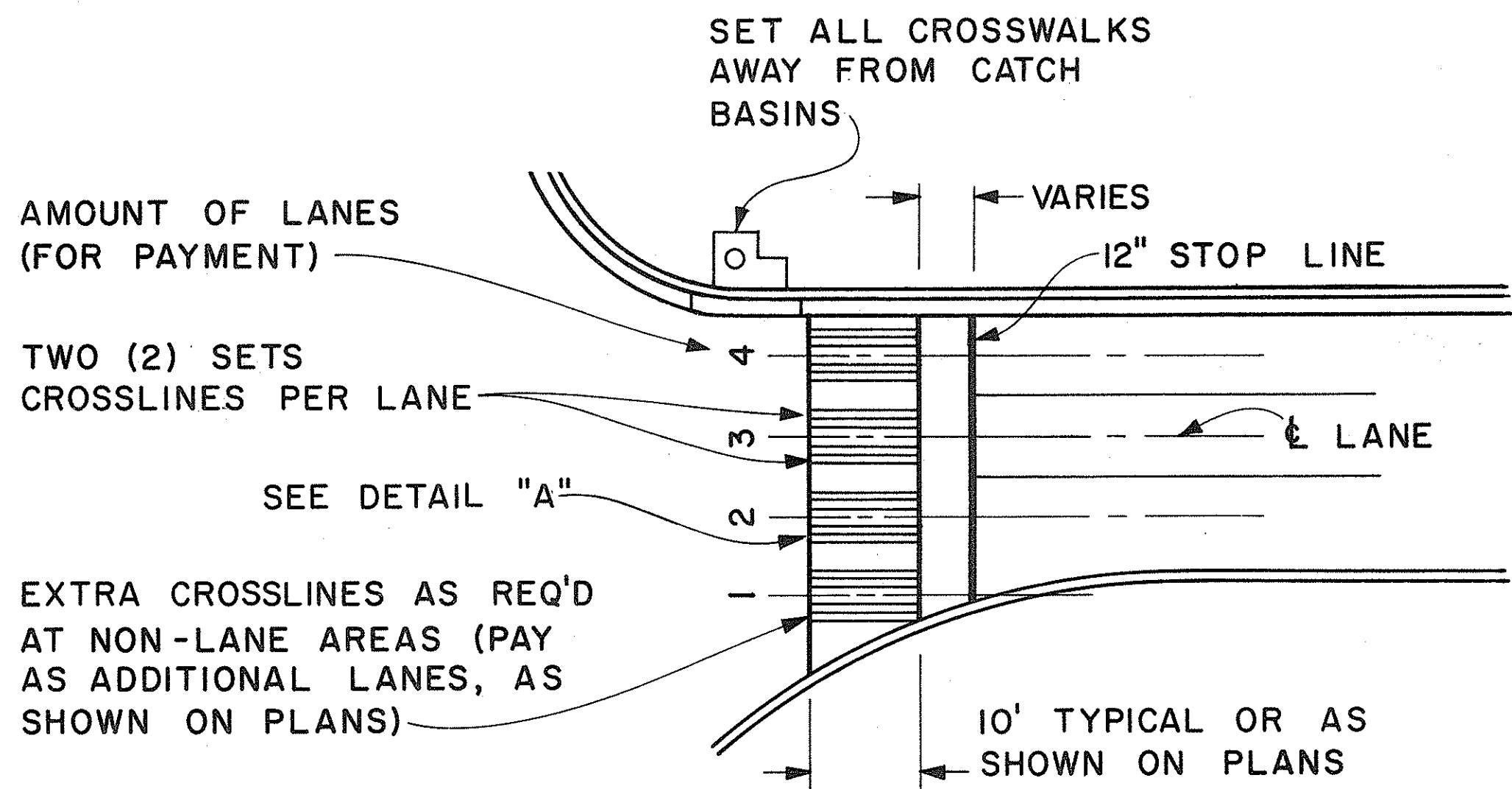
GENERAL NOTES:

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.

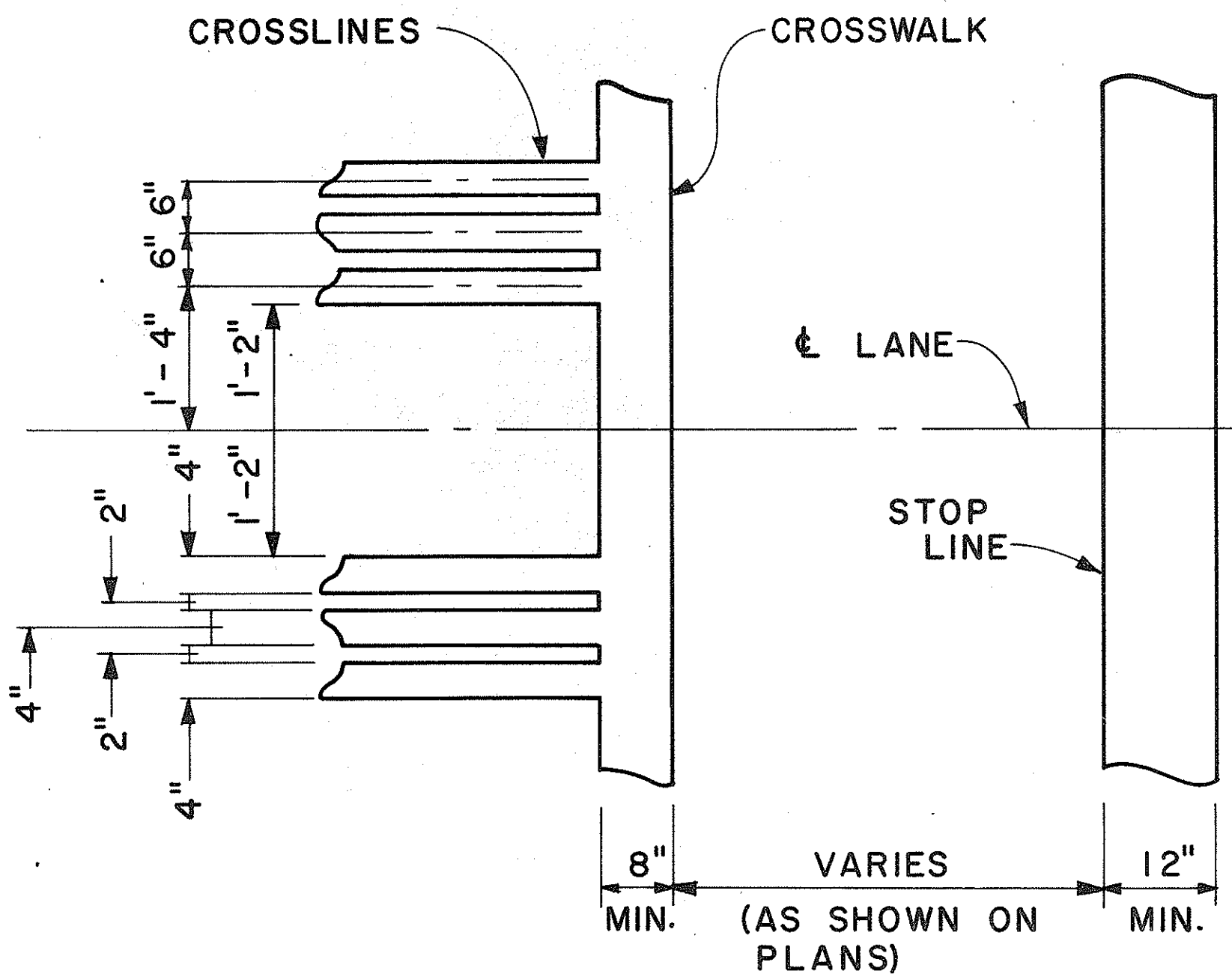


PAVEMENT ARROWS

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 W. Zaleski 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

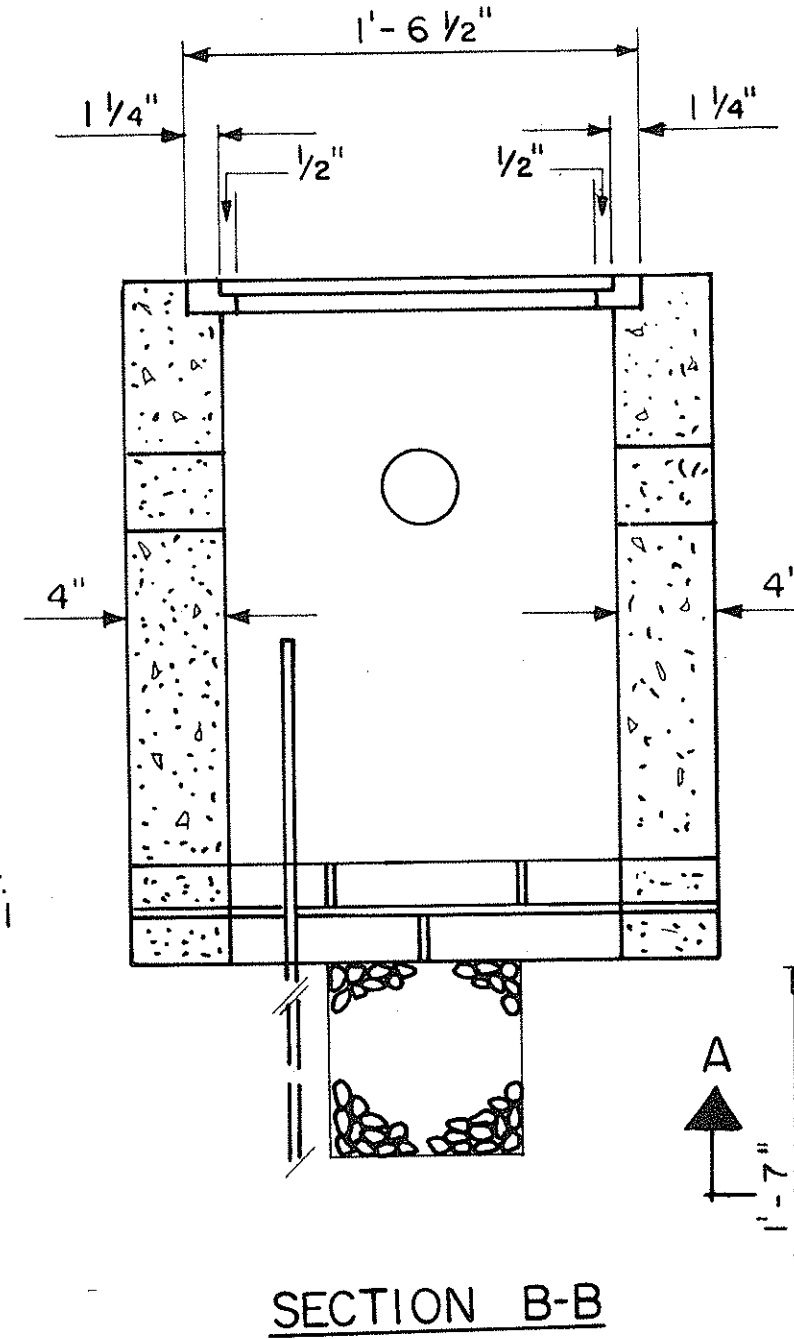
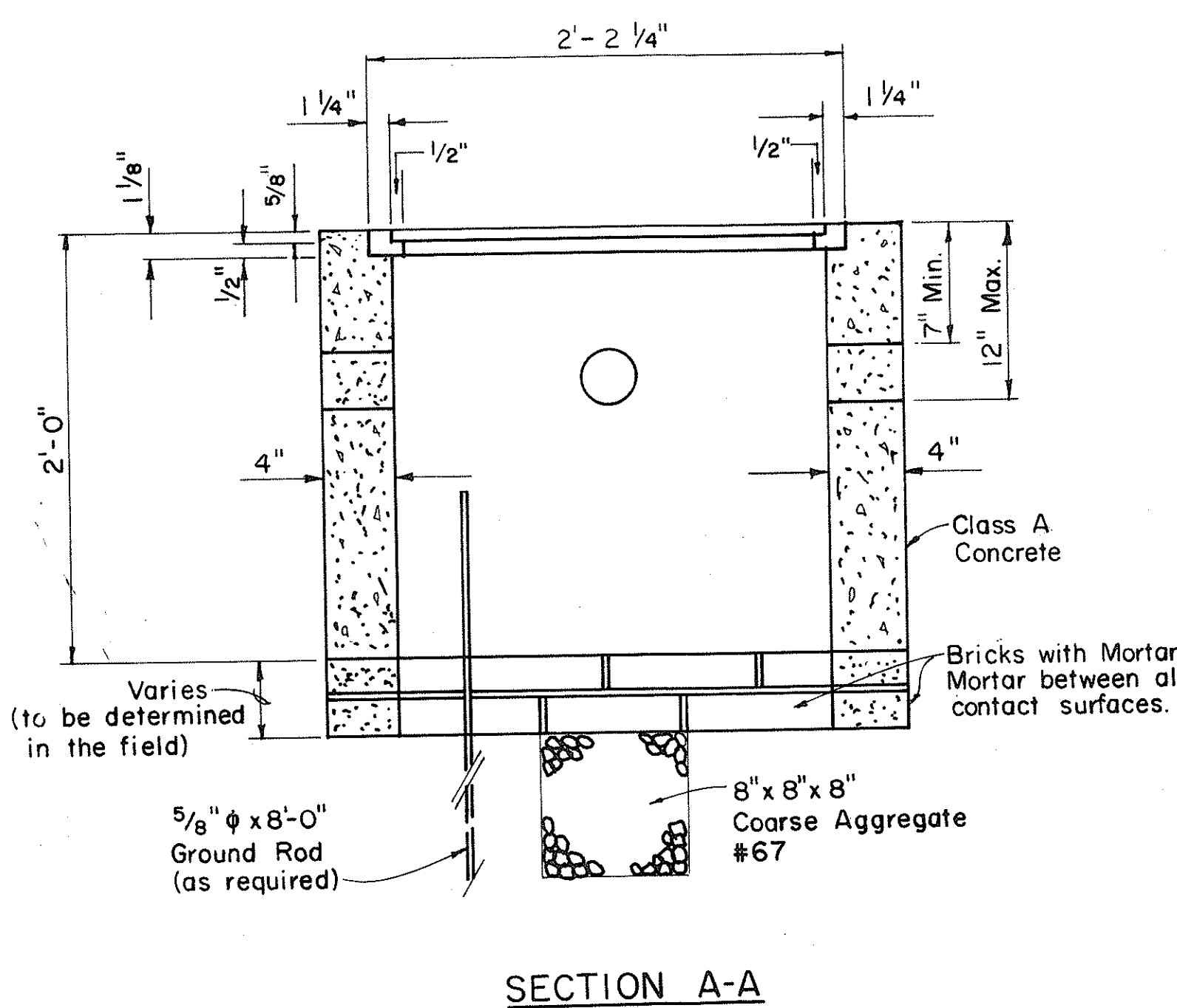
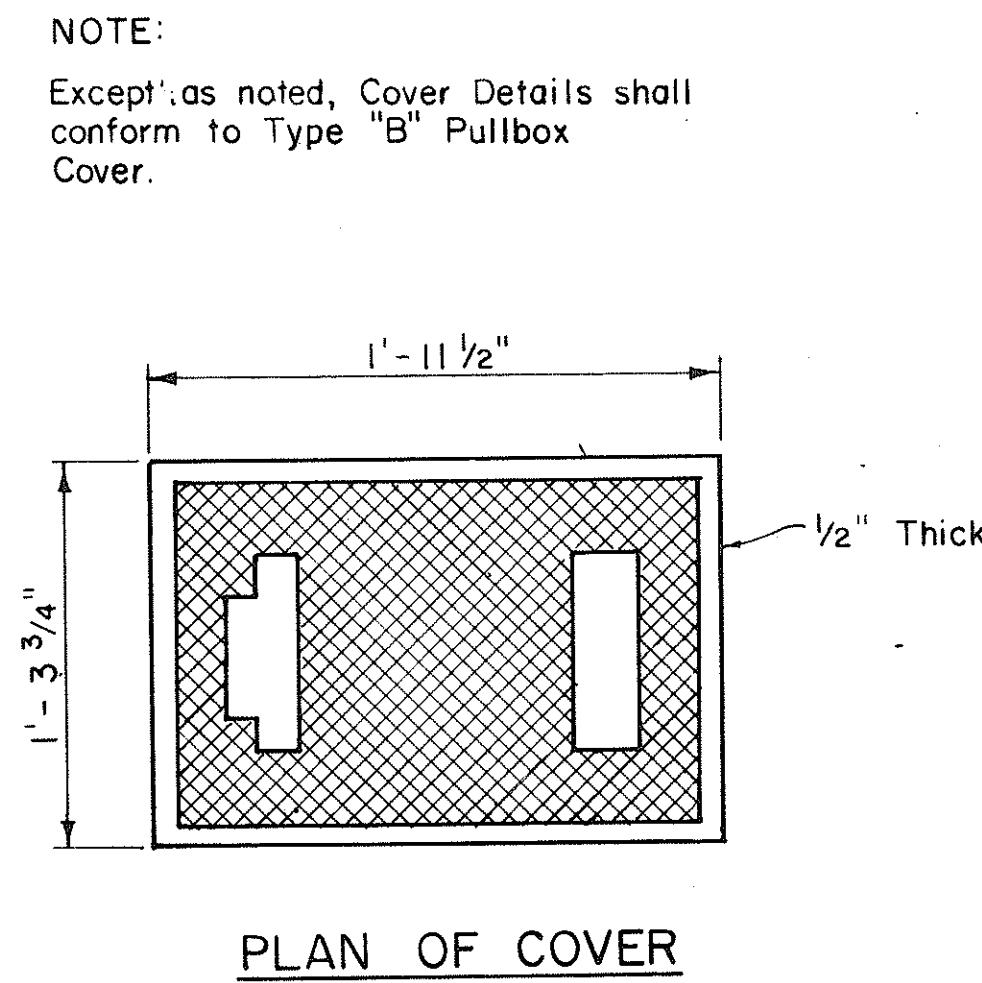
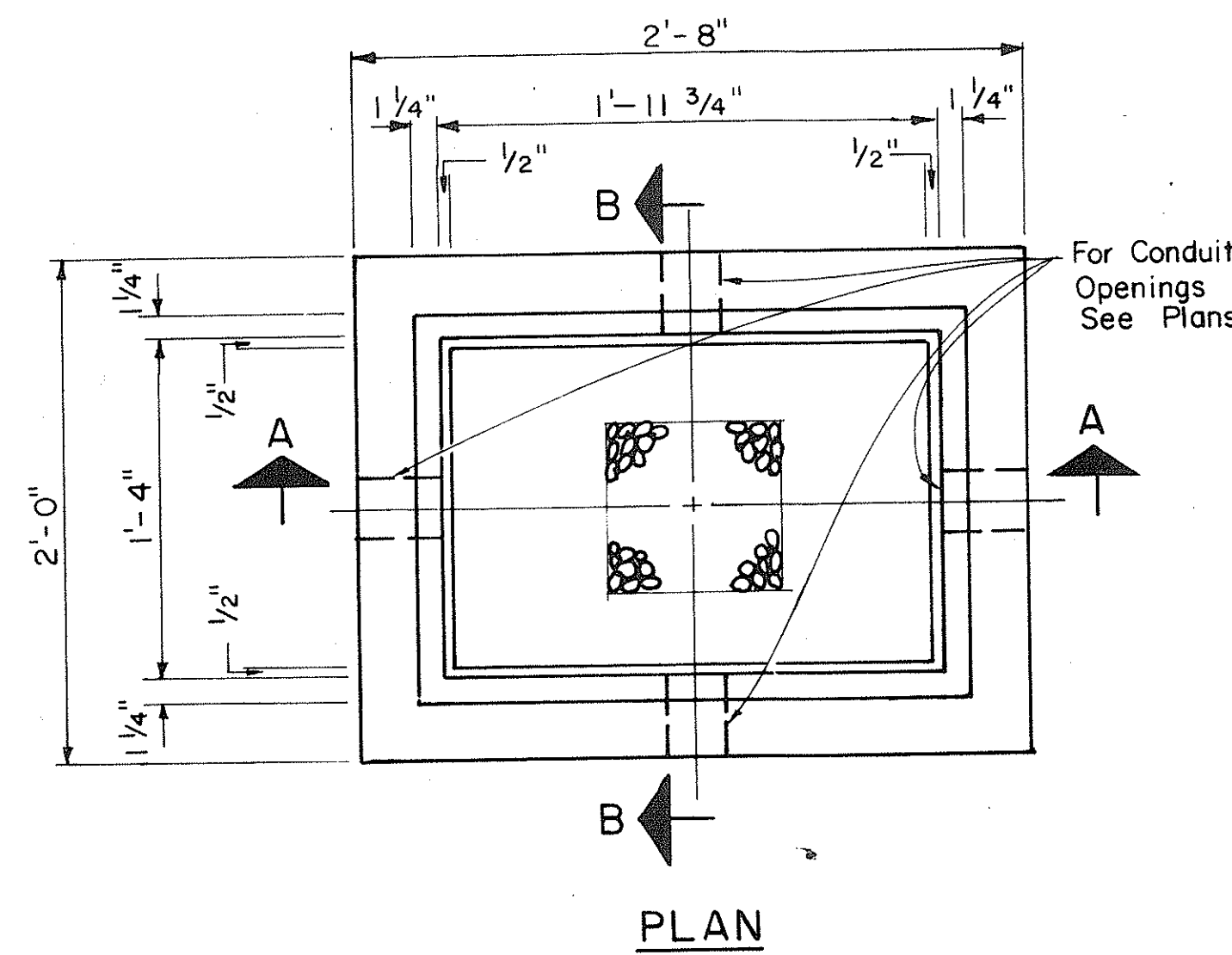
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

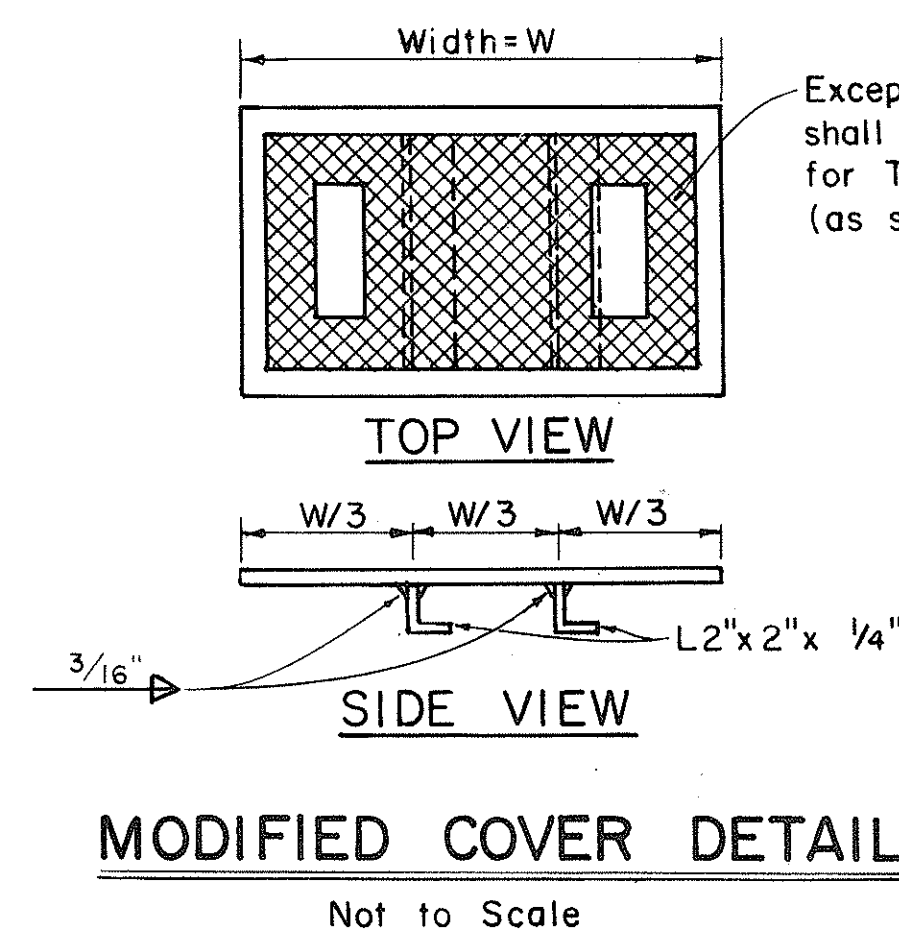
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
SHEET No. X⁹ OF 14 SHEETS DT 306

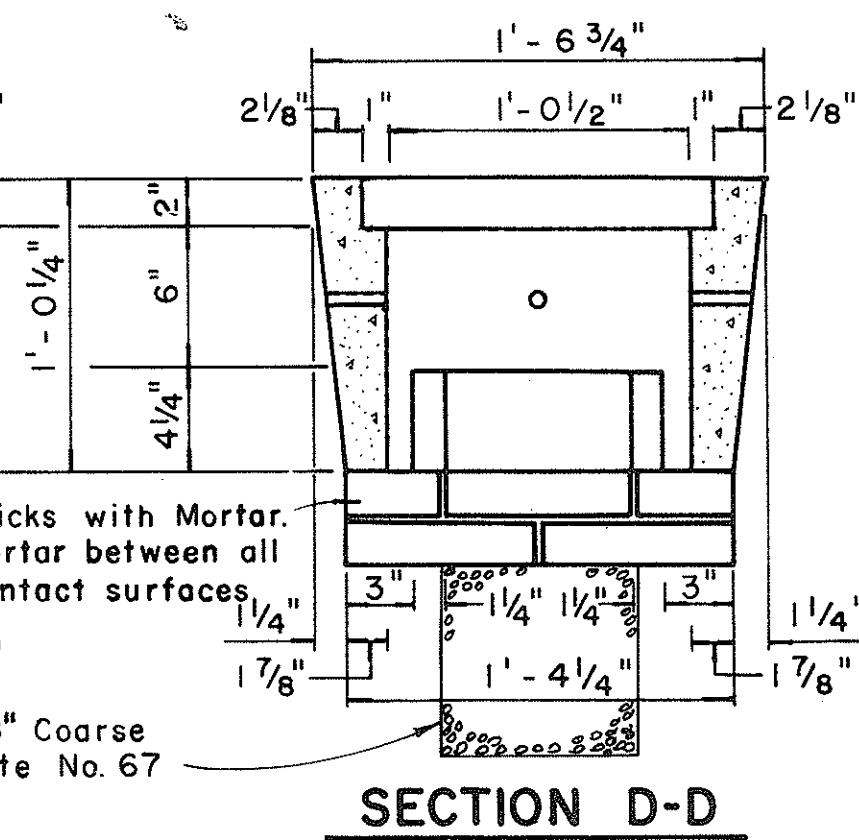
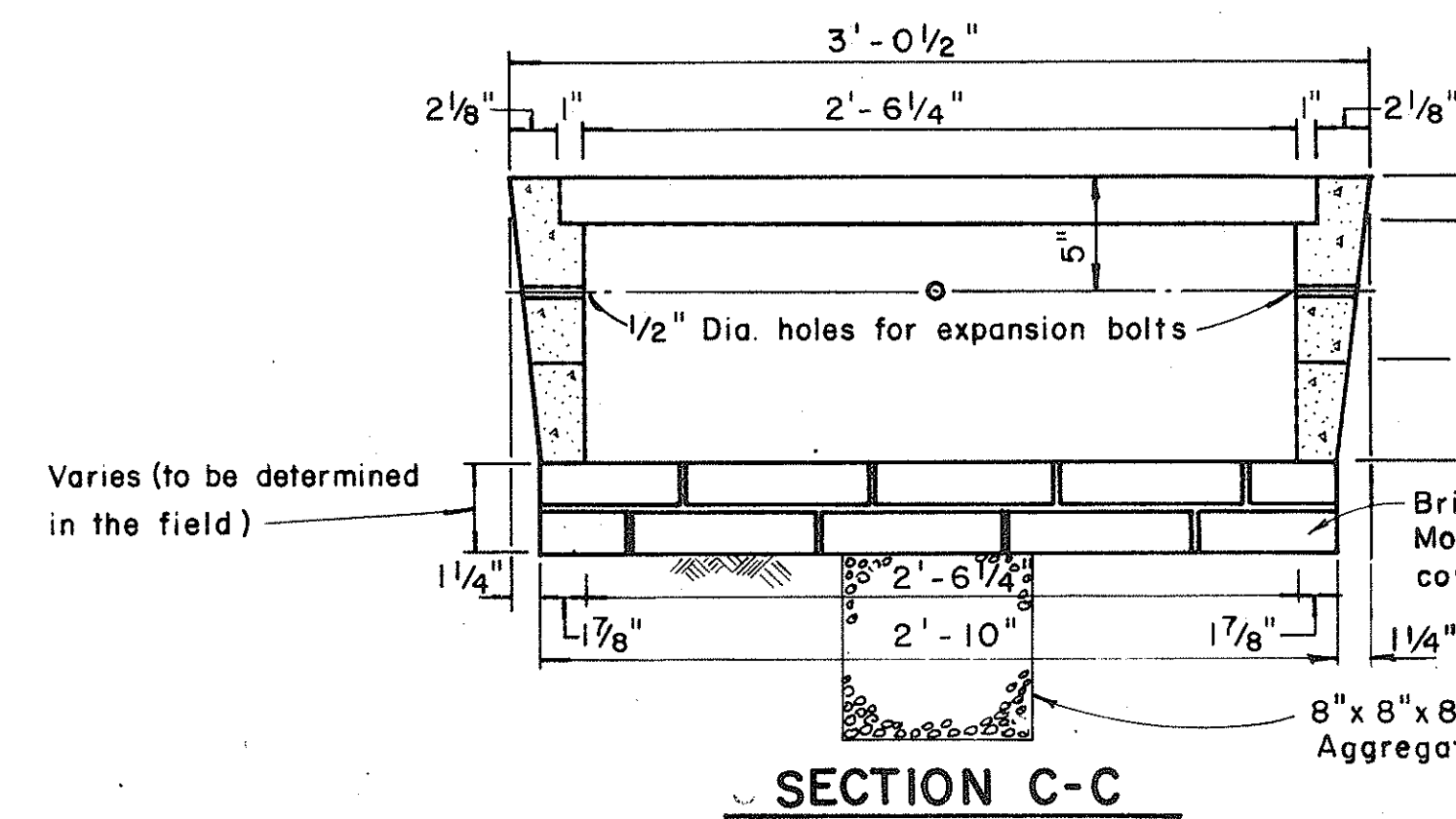
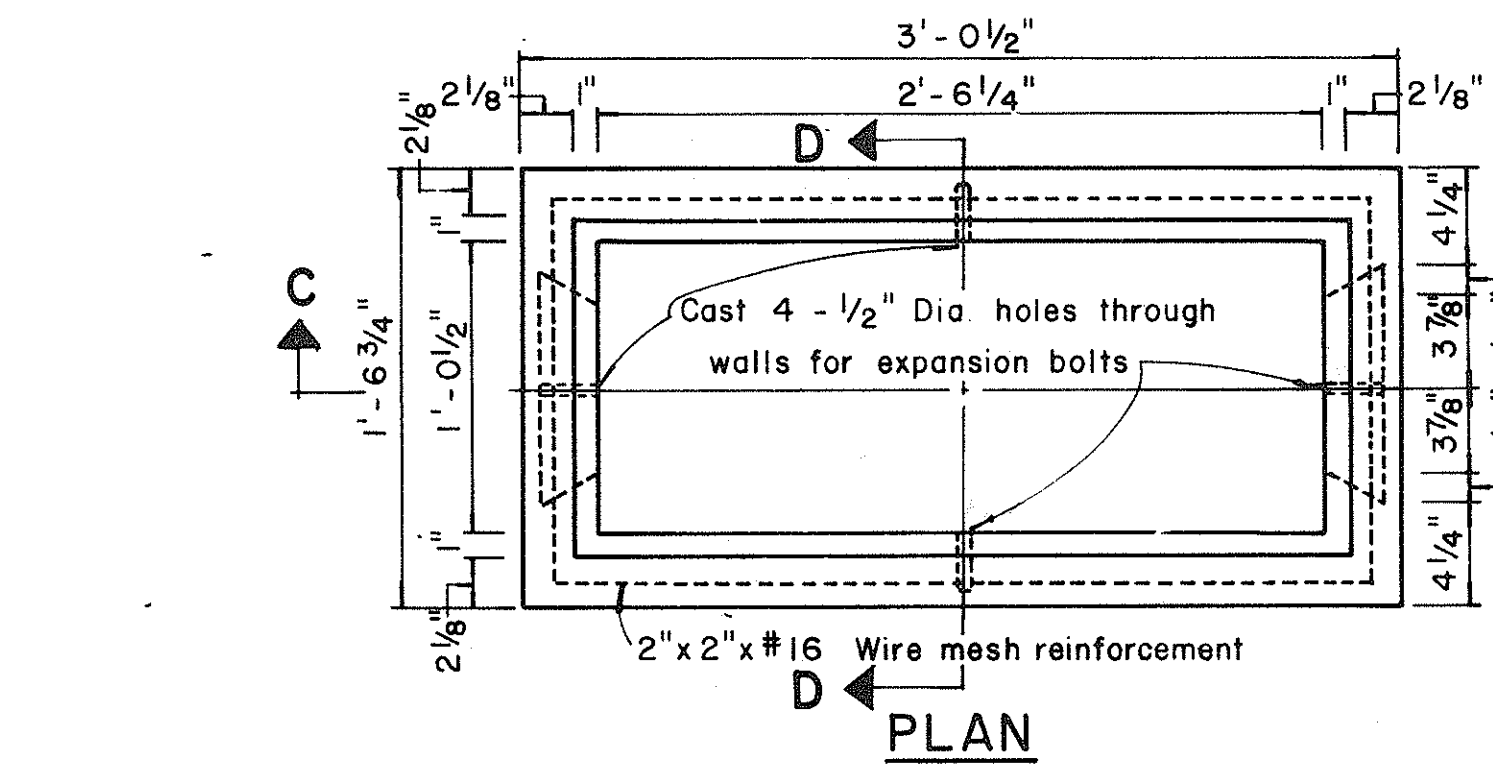
FED. ROAD DIST. NO.	STATF	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	22	25



TYPE "A" PULLBOX
Scale: 1 1/2" = 1'-0"

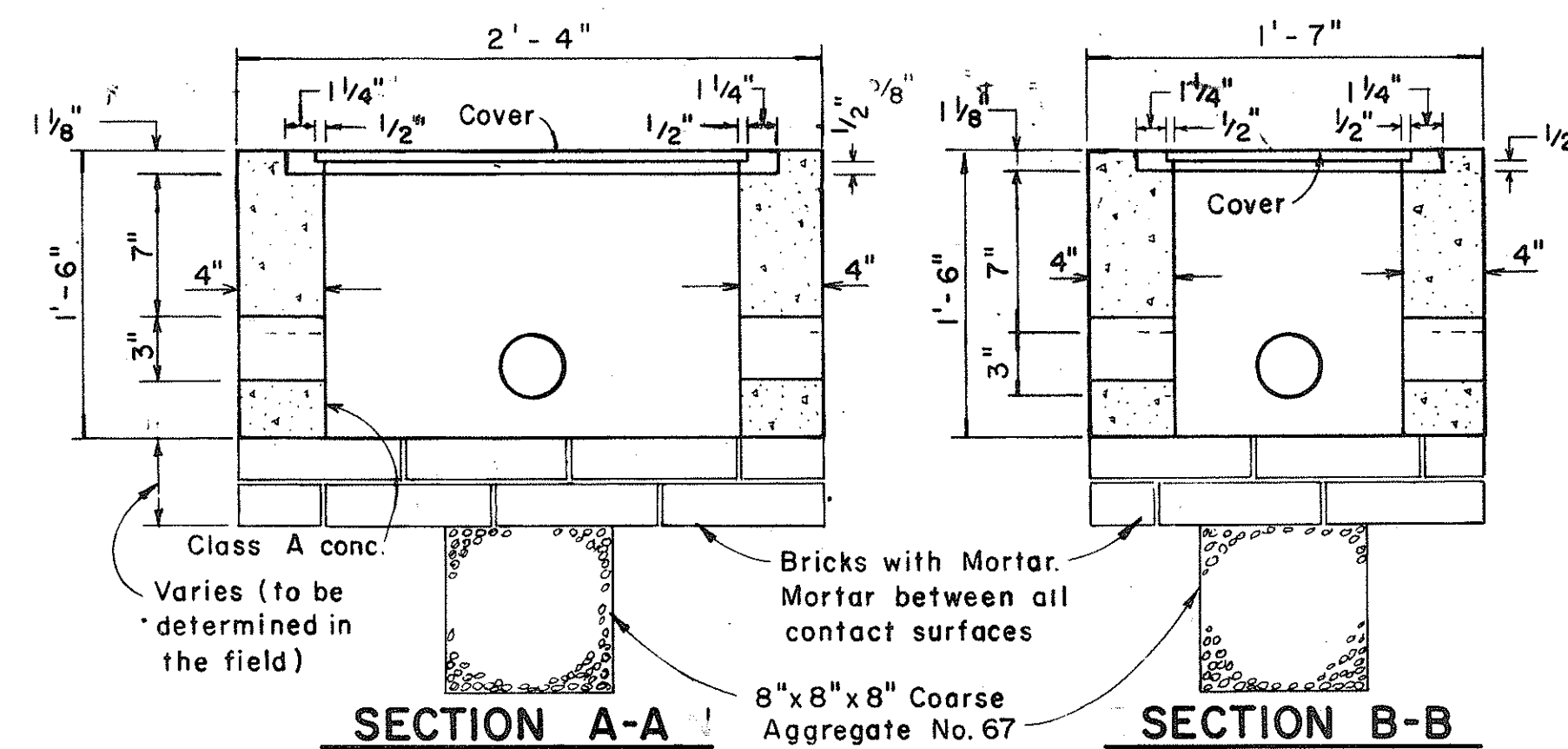
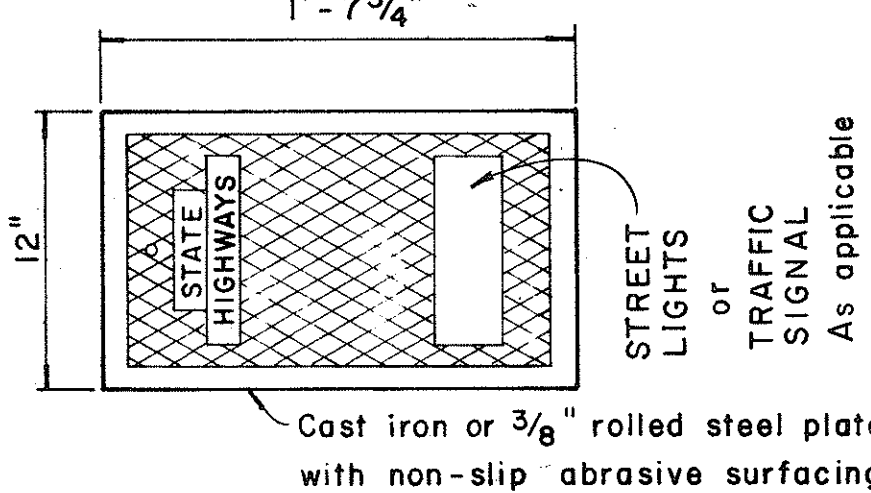
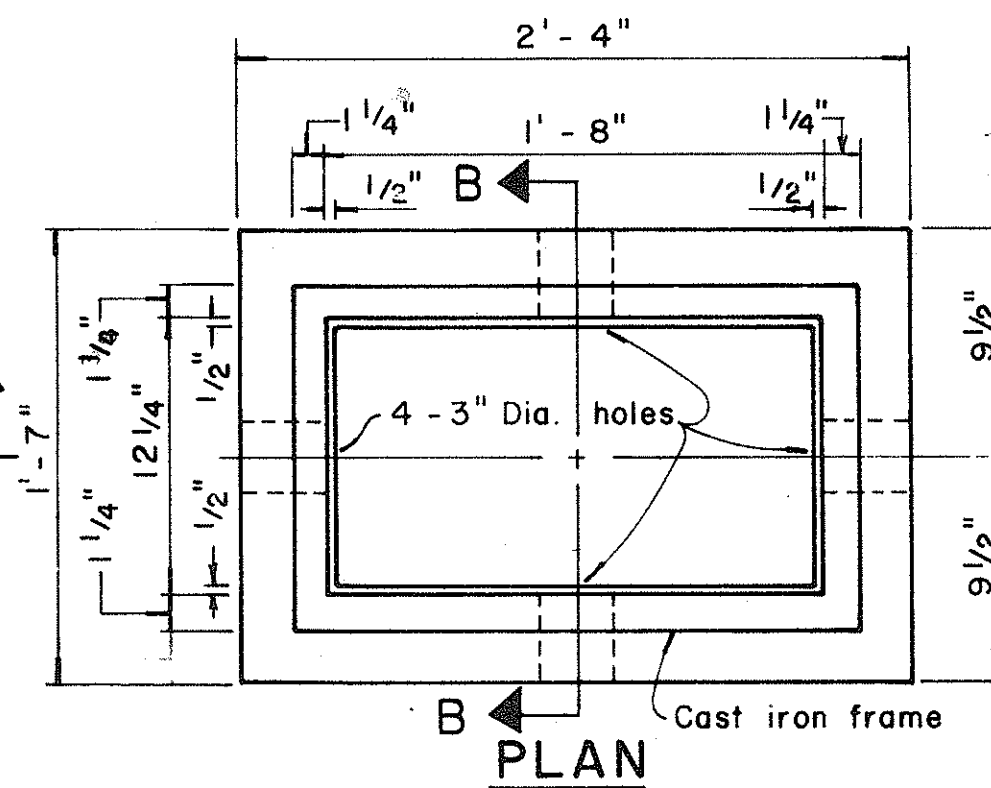


NOTE:
Hot dip galvanize after fabrication.
Modified cover shall be furnished when called for on plans.

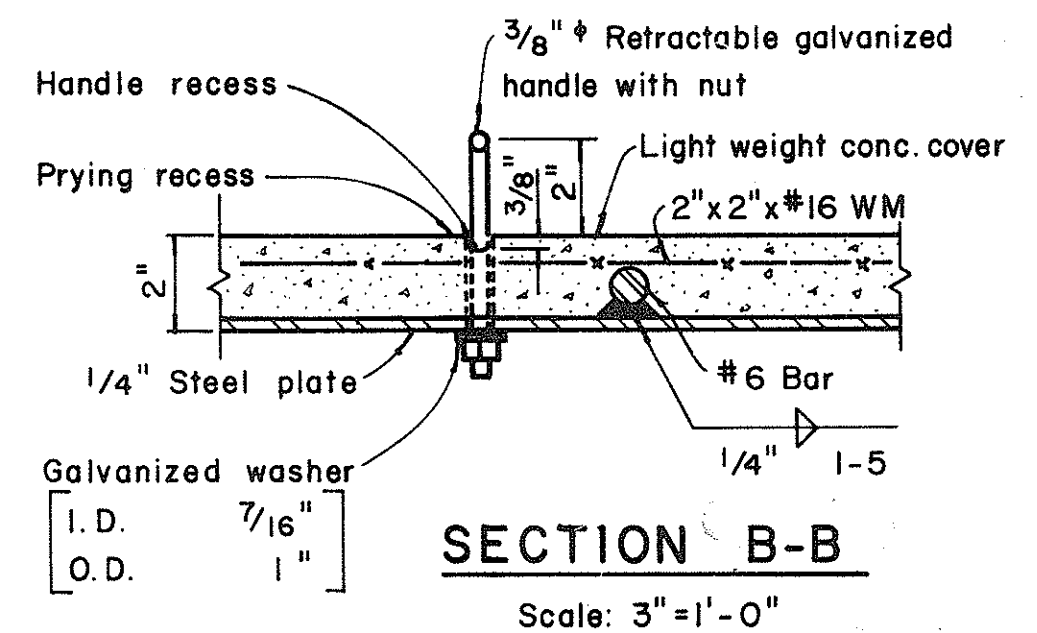
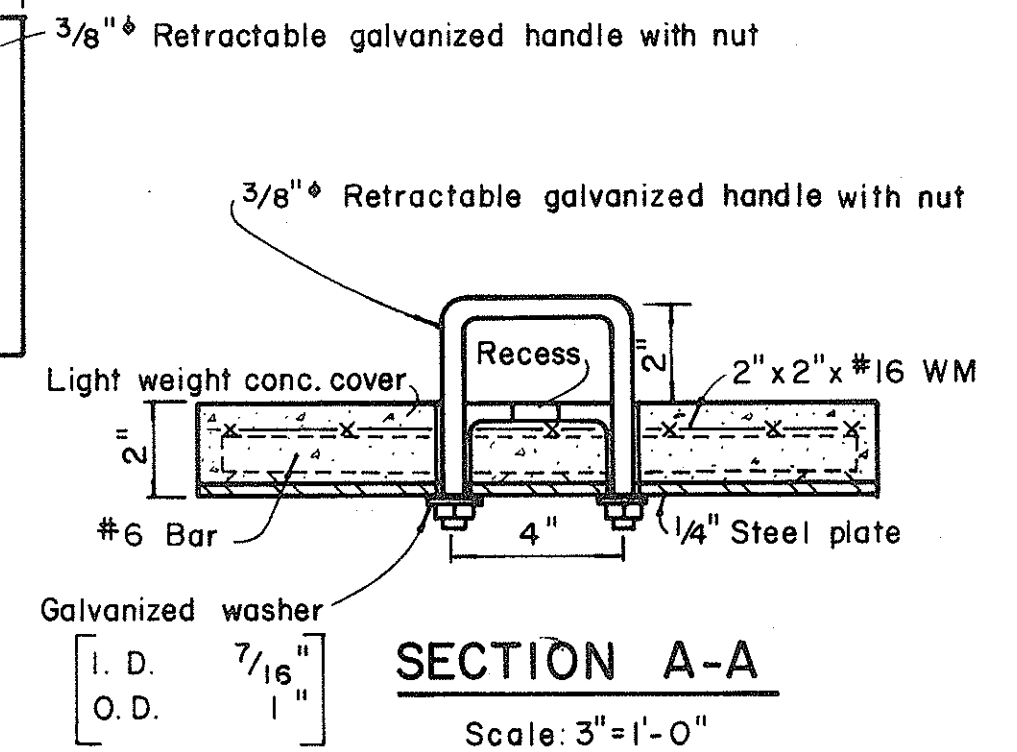


TYPE "C" PULLBOX
Scale: 1 1/2" = 1'-0"

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



TYPE "B" PULLBOX
Scale: 1 1/2" = 1'-0"

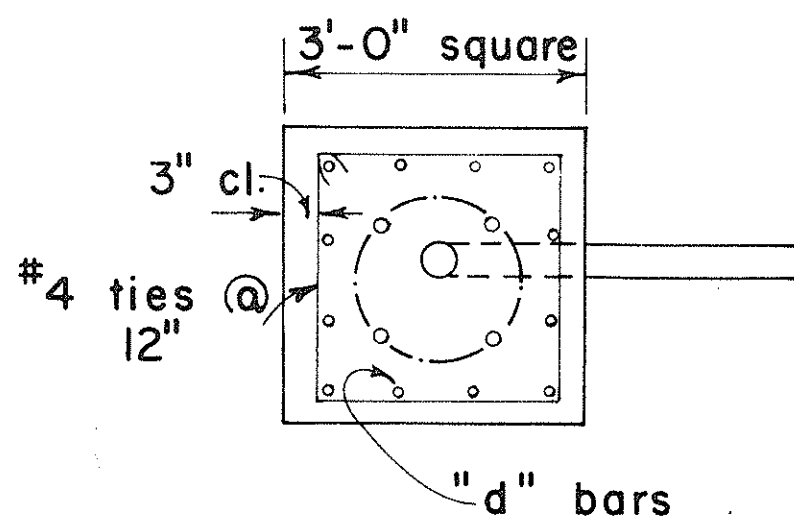


APPROVAL RECOMMENDED:
TRAFFIC ENGINEER
DATE: 12/29/89

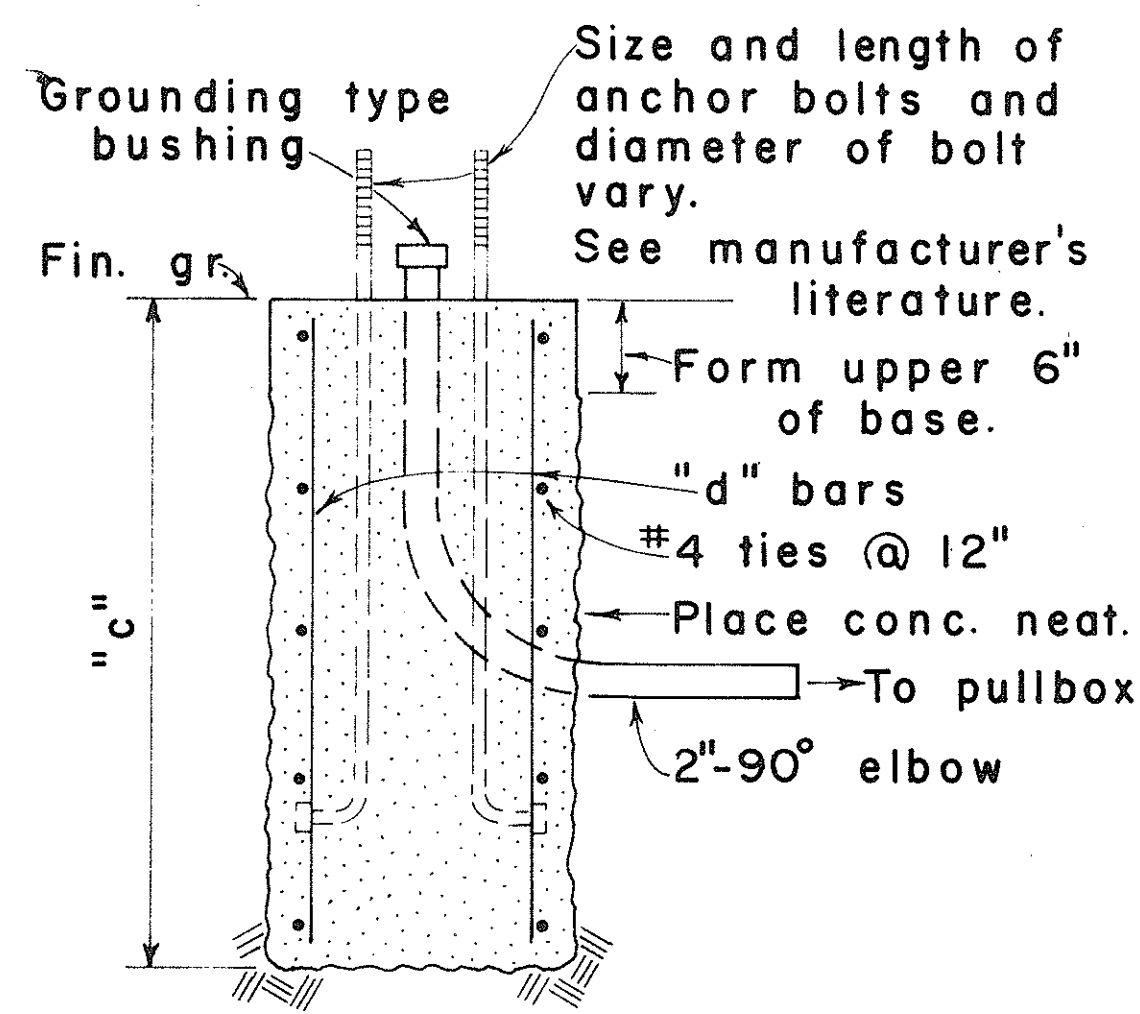
APPROVED:
ASSISTANT CHIEF, ENGINEERING
DATE: 12-29-89

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	8-5-76
2	Revised Type "A" Pullbox & Added Modified Cover.	H.T.	1-31-80
3	Revised Type B & C Pullbox details.	H.T.	2-1-83

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS PULLBOXES
Scale as noted Date SHEET No. XII OF 14 SHEETS DT 401



PLAN - SECTION

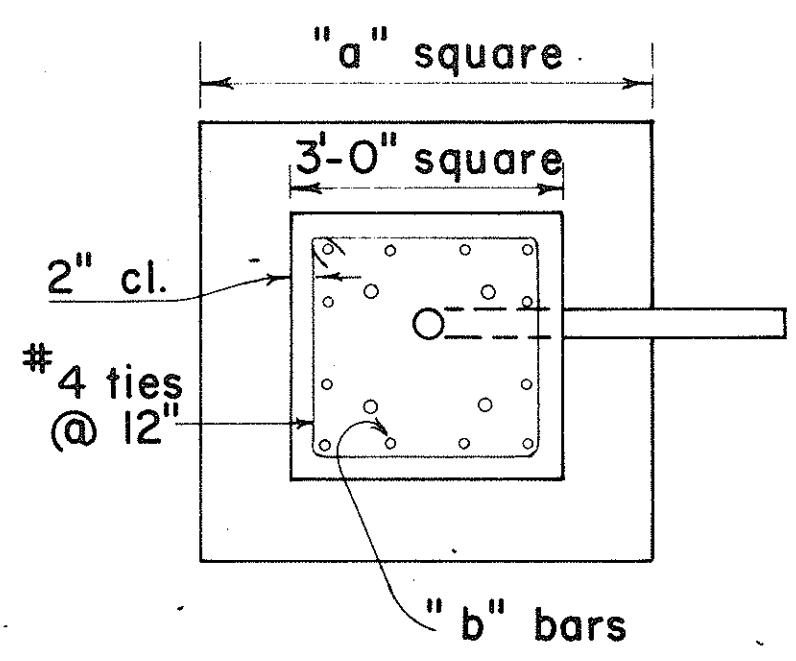


NOTE:
Concrete shall be Class B.

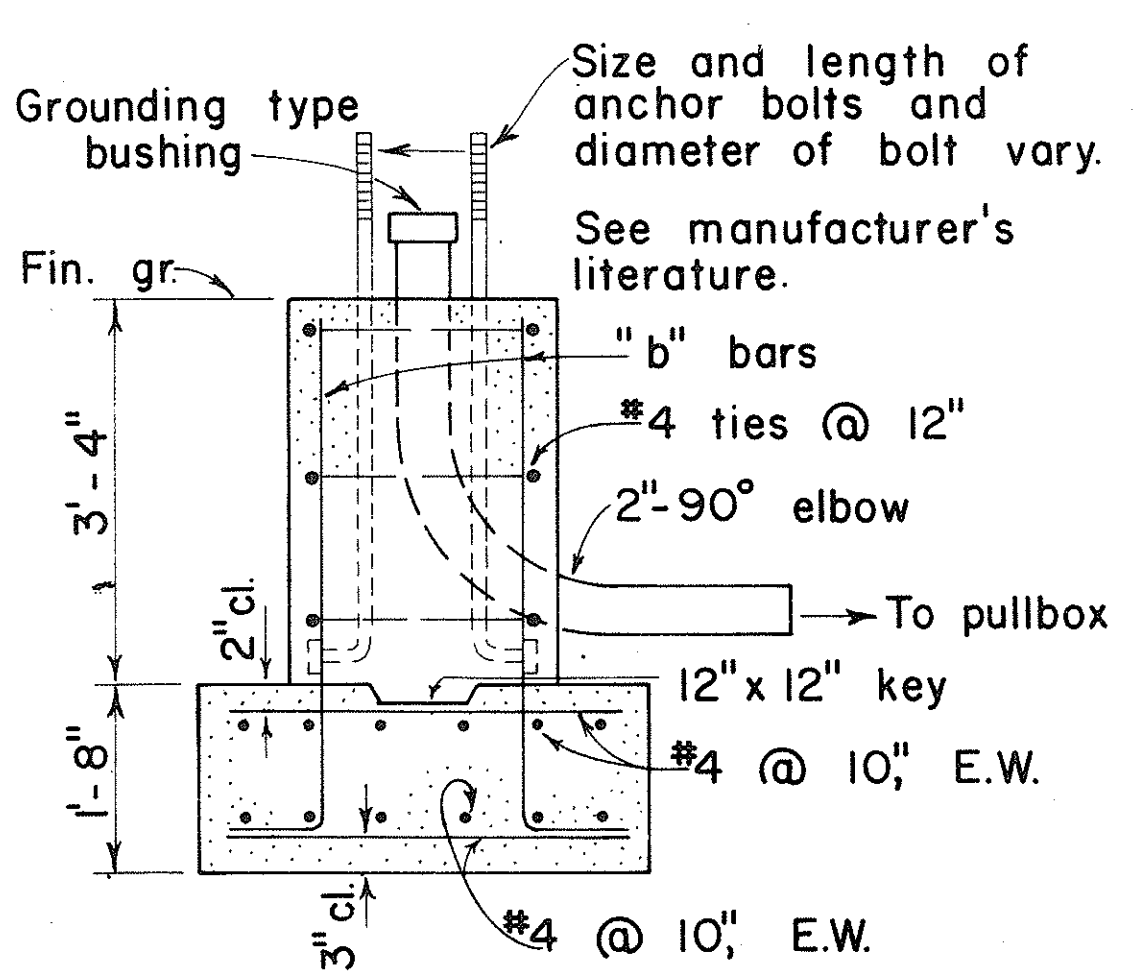
SECTION

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



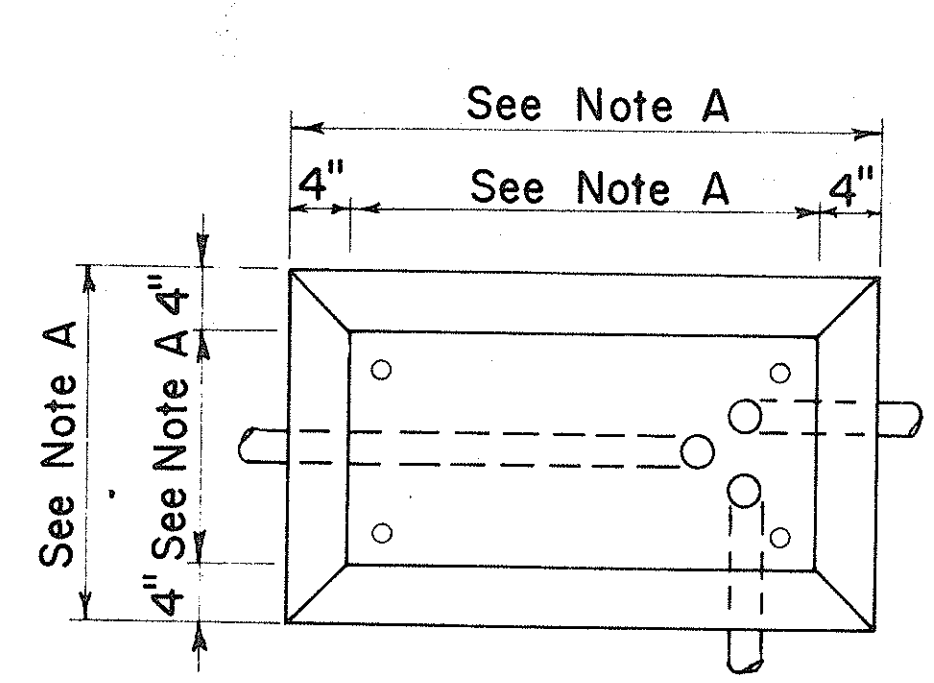
NOTE:
Concrete shall be Class B.

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

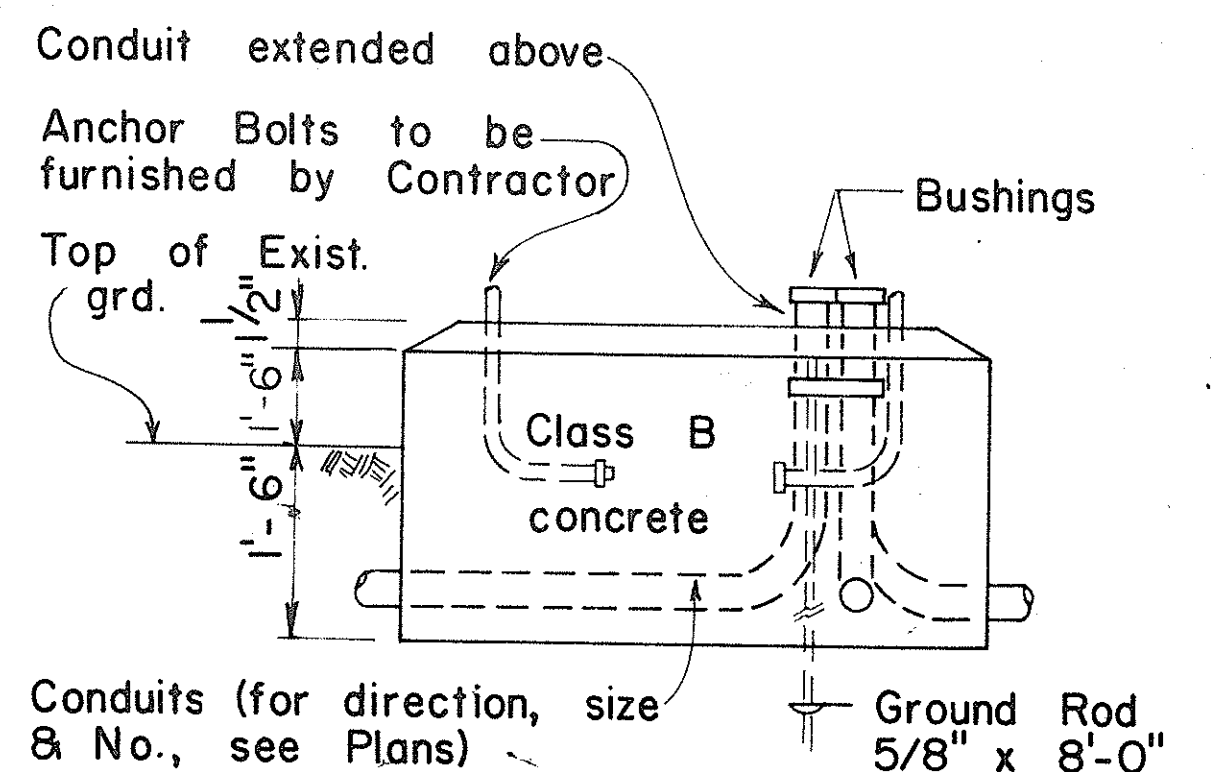
TYPE IIA

FOOTING FOR MAST ARM STANDARD



PLAN

CONCRETE BASE FOR CONTROLLER CABINET



ELEVATION

- 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.

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

APPROVED:
Hubert A. Puleo 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Cabinet Base Design	<i>[Signature]</i>	1-31-85

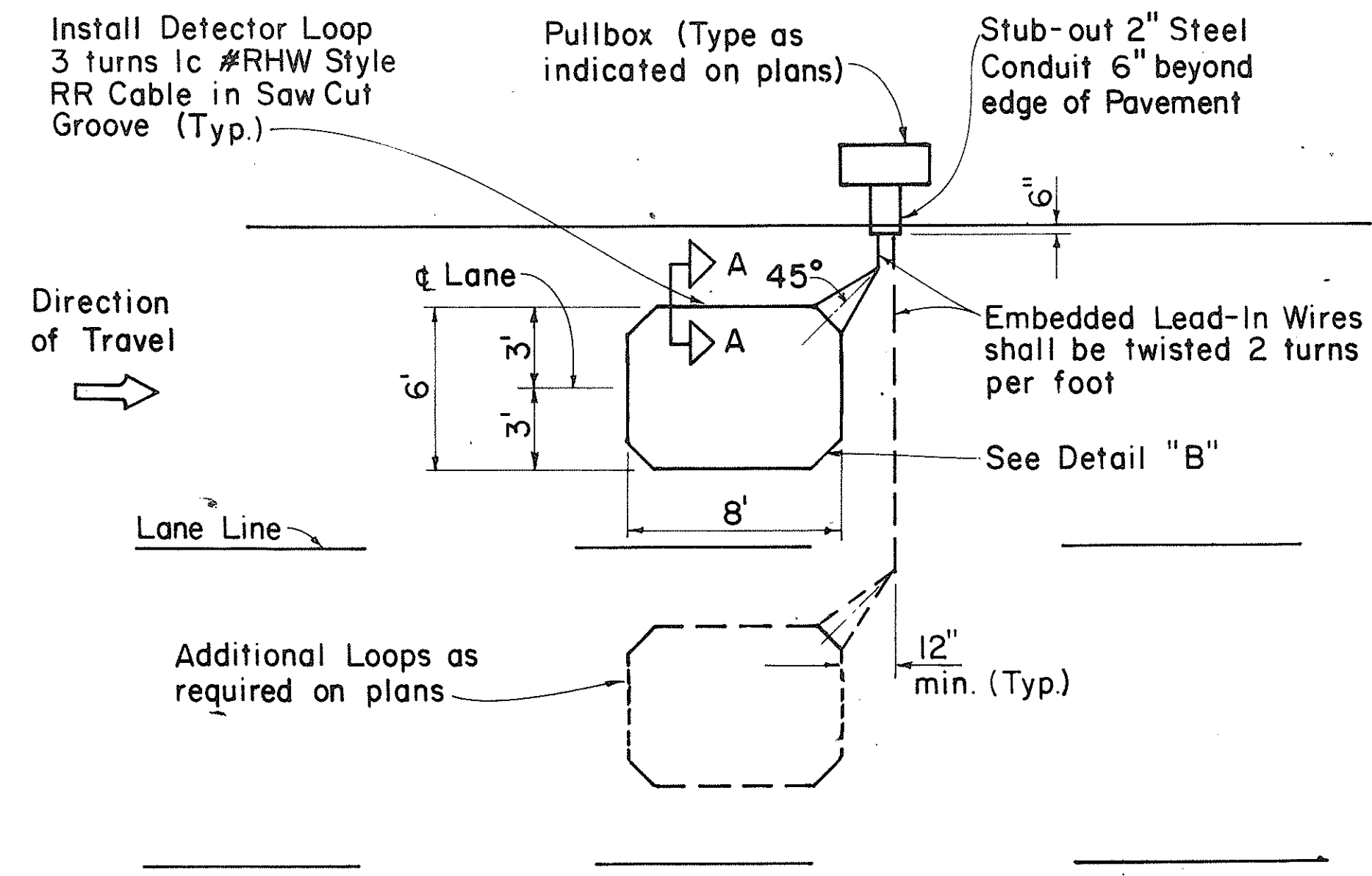
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

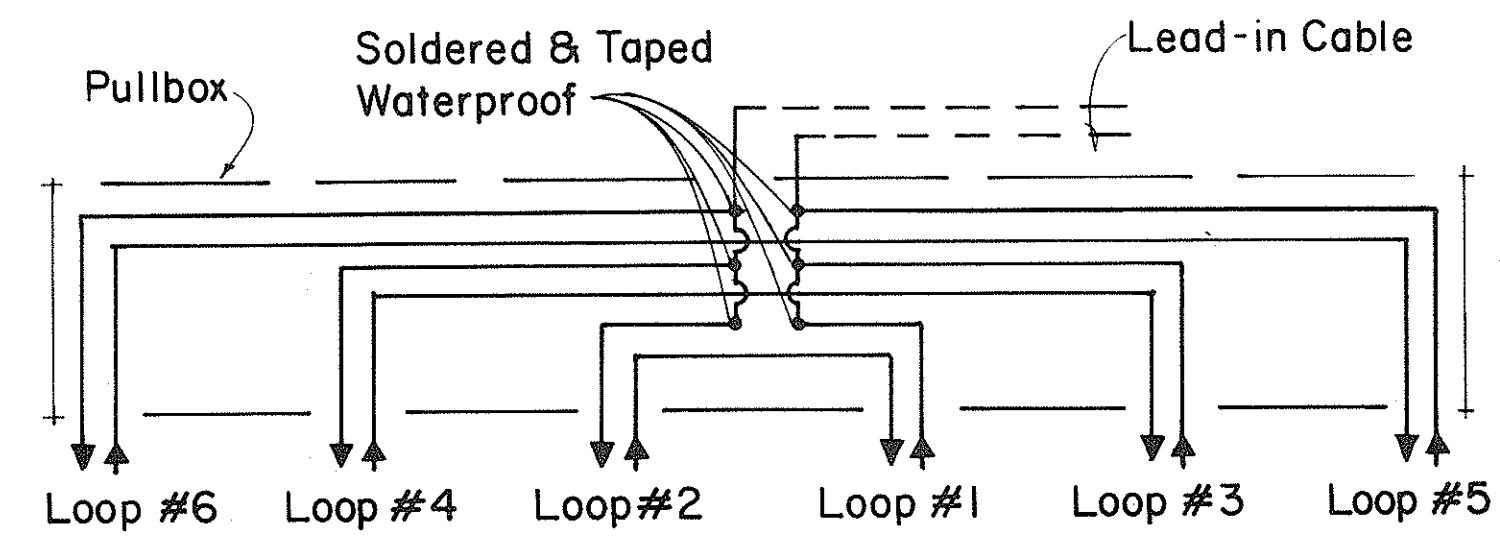
Not to Scale
SHEET NO. 12 OF 14 SHEETS DT404

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	92A-01-85	1985	24	25

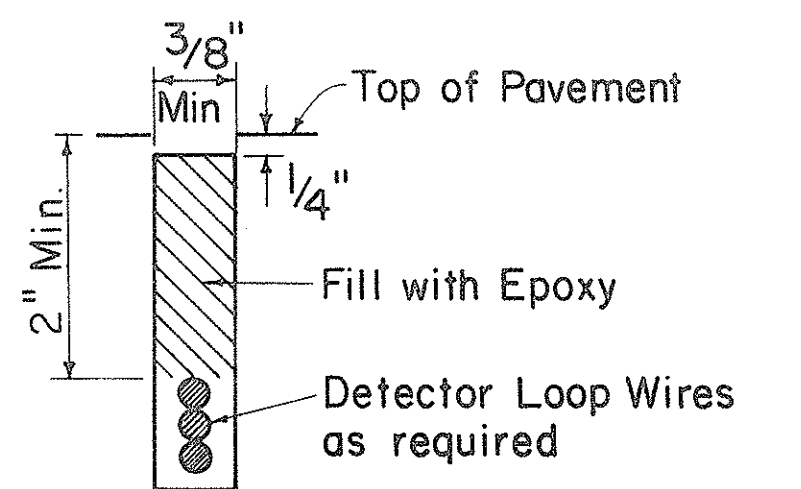


SINGLE LOOP LAYOUT



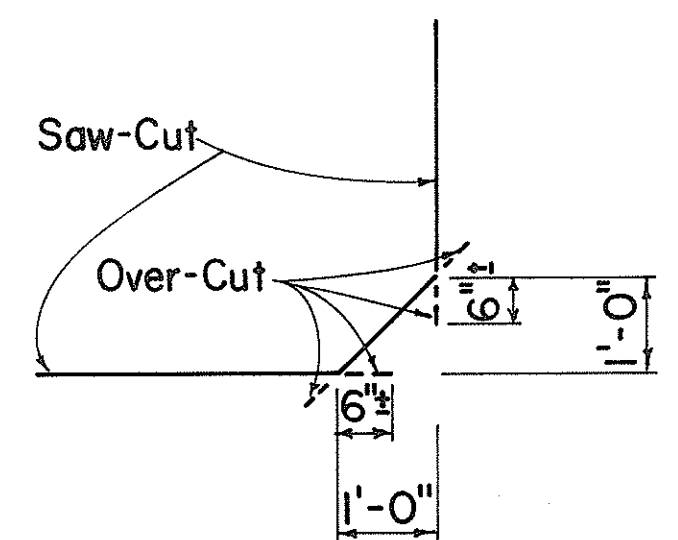
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

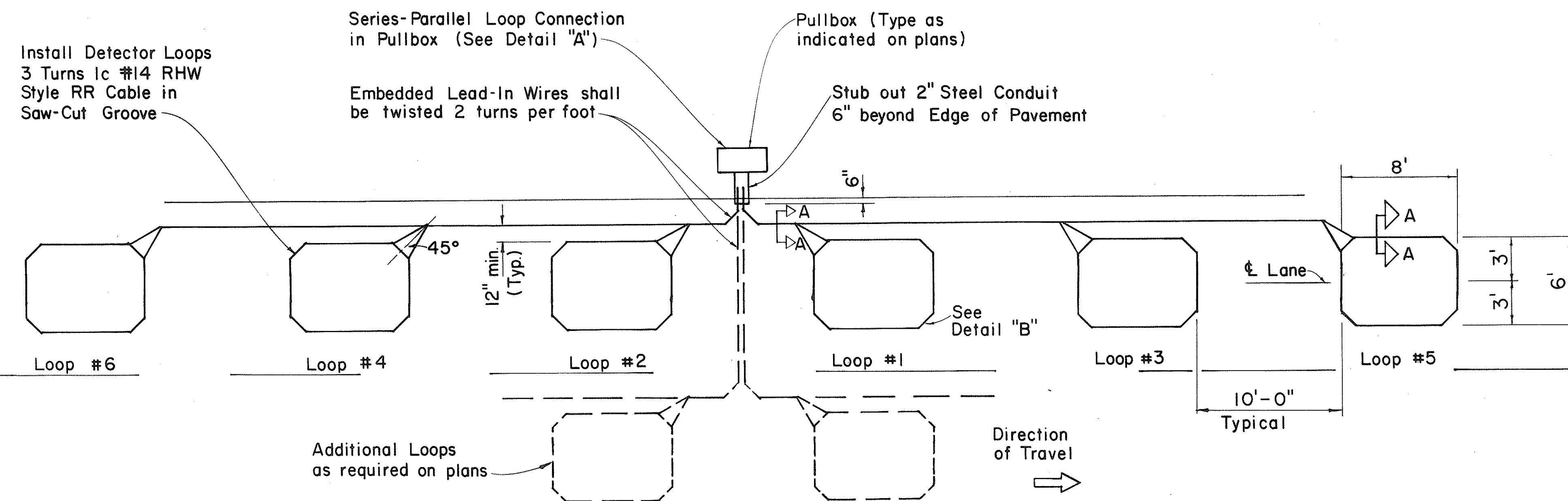


DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)

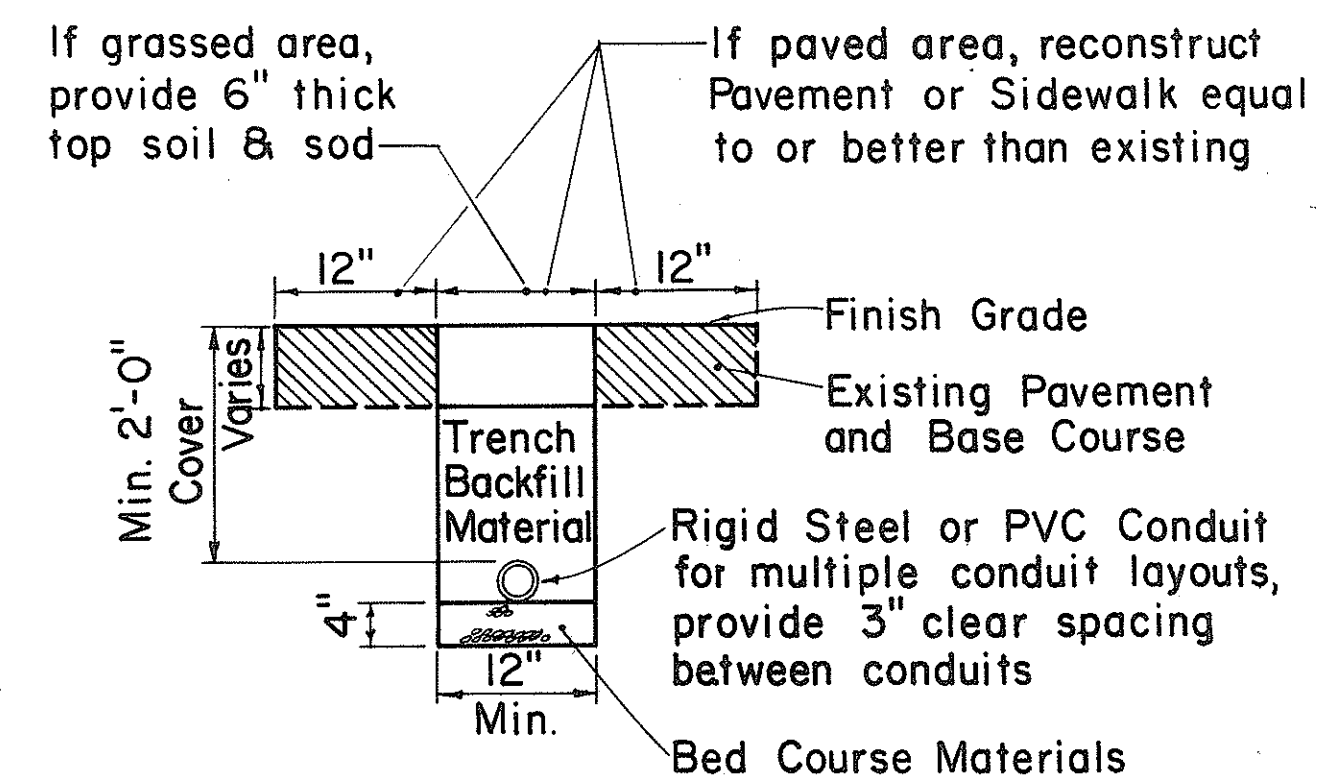
Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:

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

APPROVAL RECOMMENDED:

Enishi Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:

Shabour Zafar 9/30/80
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	9/30/80
2	Revised Section A-A	H.T.	5/15/81
3	Revised Loop Design & Deleted Wiring Diagram	H.T.	2-4-85

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

LOOP DETECTORS

Not to Scale

ORIGINAL PLAN

DATE

SURVEY PLOTTED BY

DRAWN BY

TRACED BY

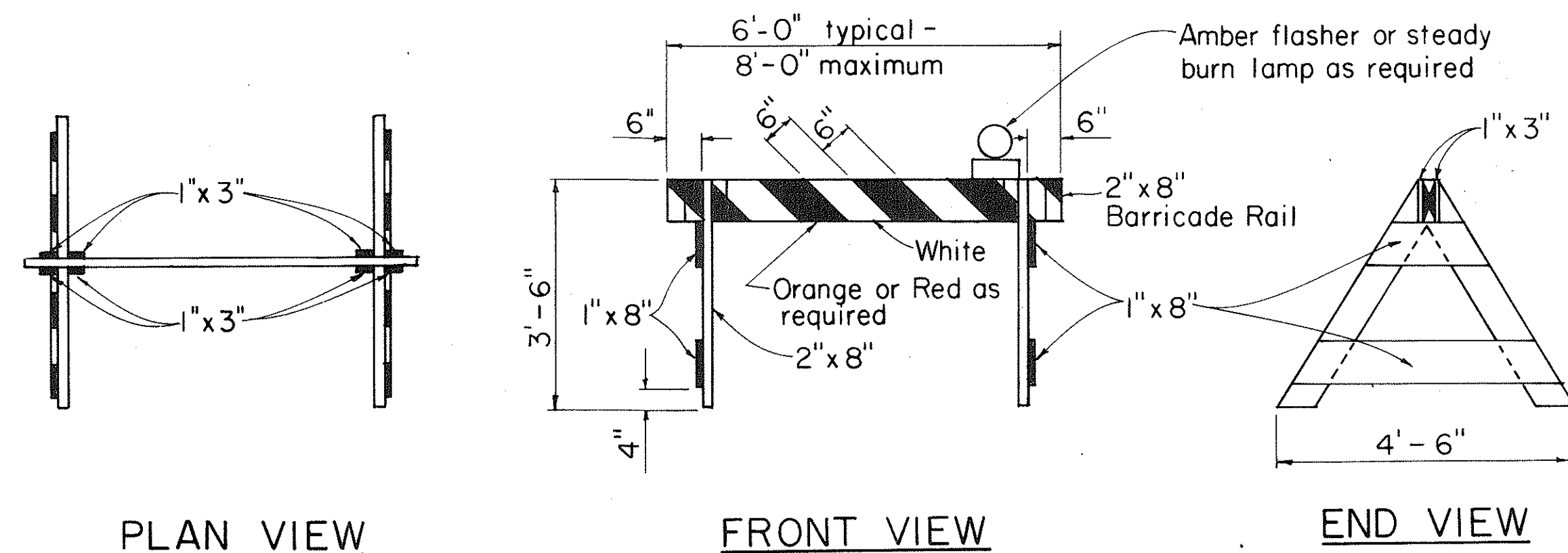
DESIGNED BY

QUANTITIES BY

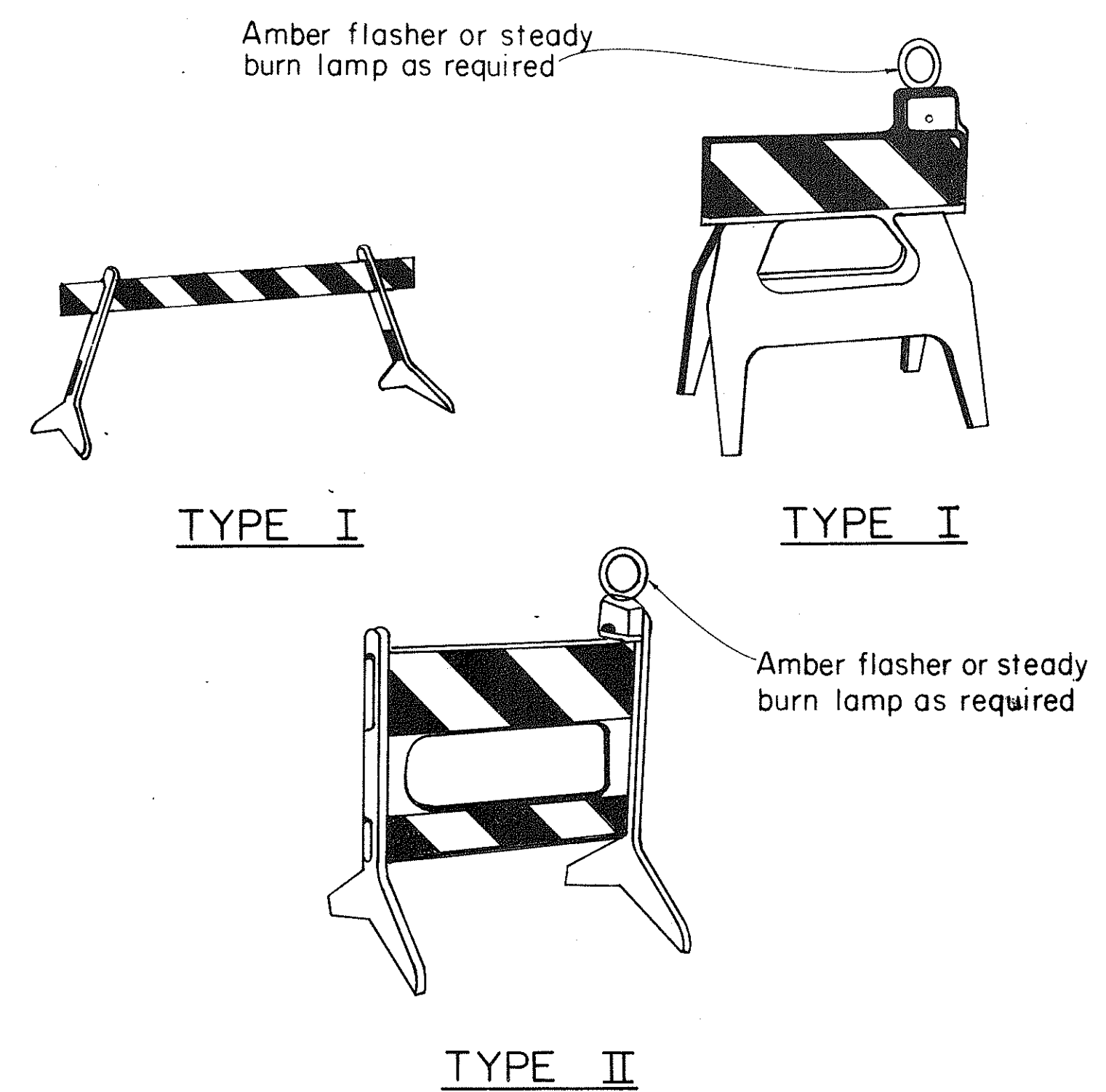
CHECKED BY

No.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	22A-01-85	1985	25	25

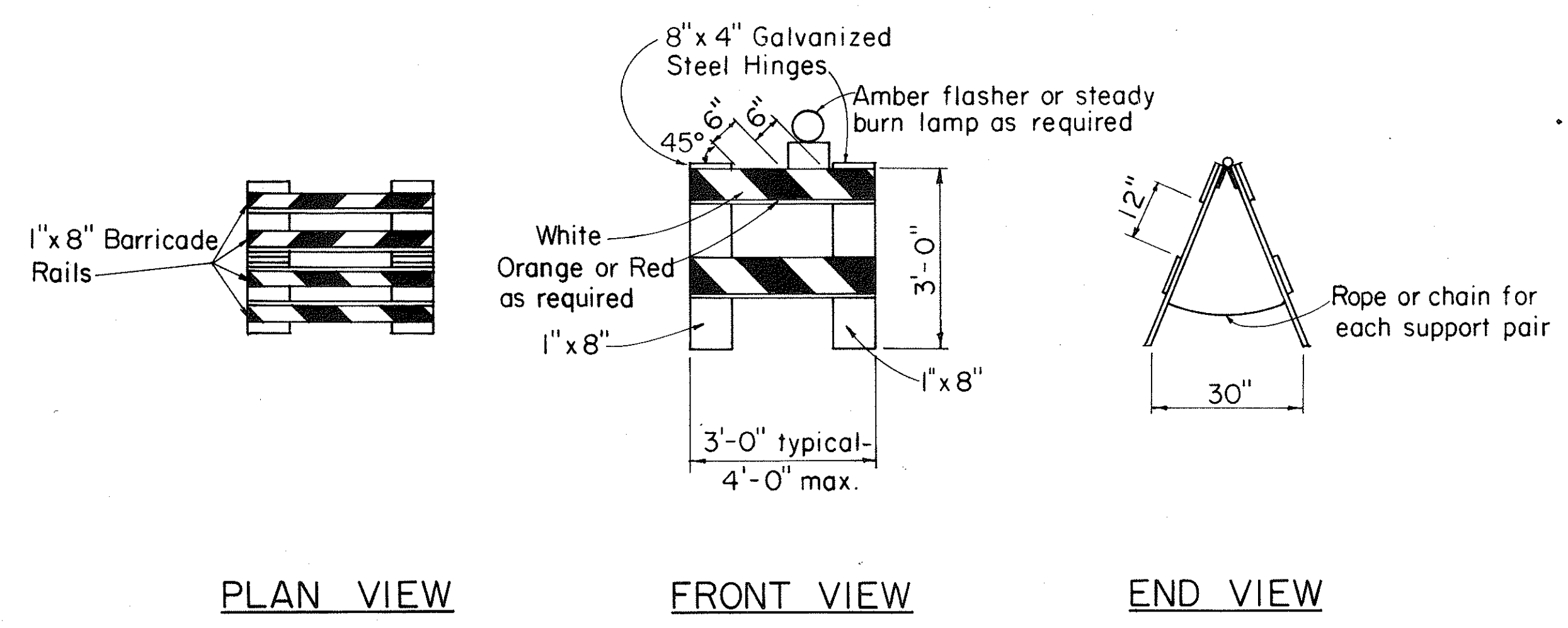


TYPE I BARRICADE
Scale: 1/2" = 1'-0"

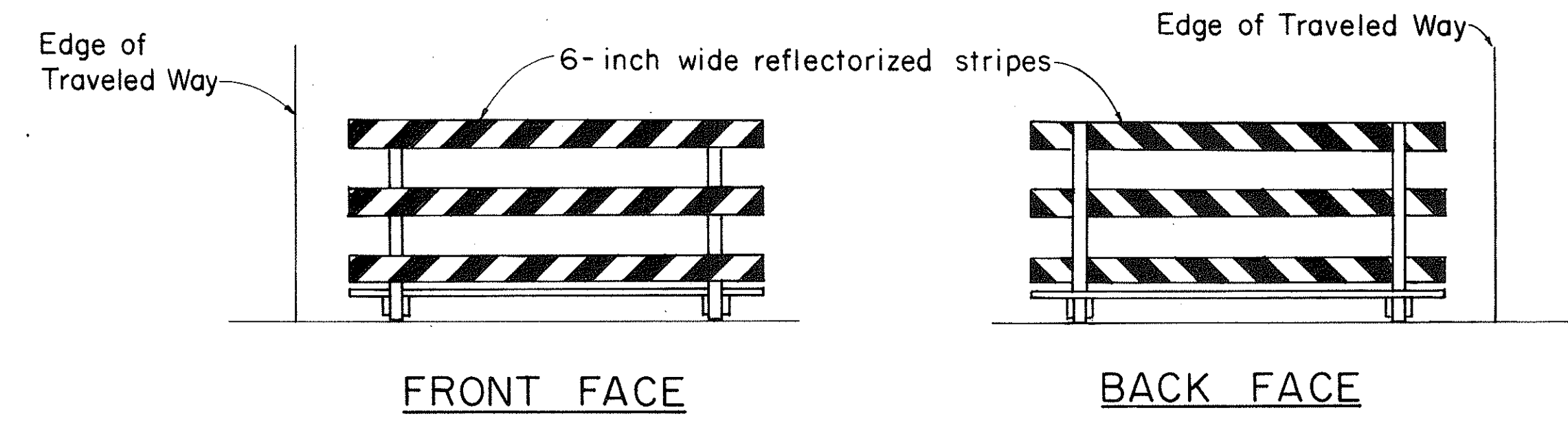


PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale

*Shop Drawings must be submitted for approval.

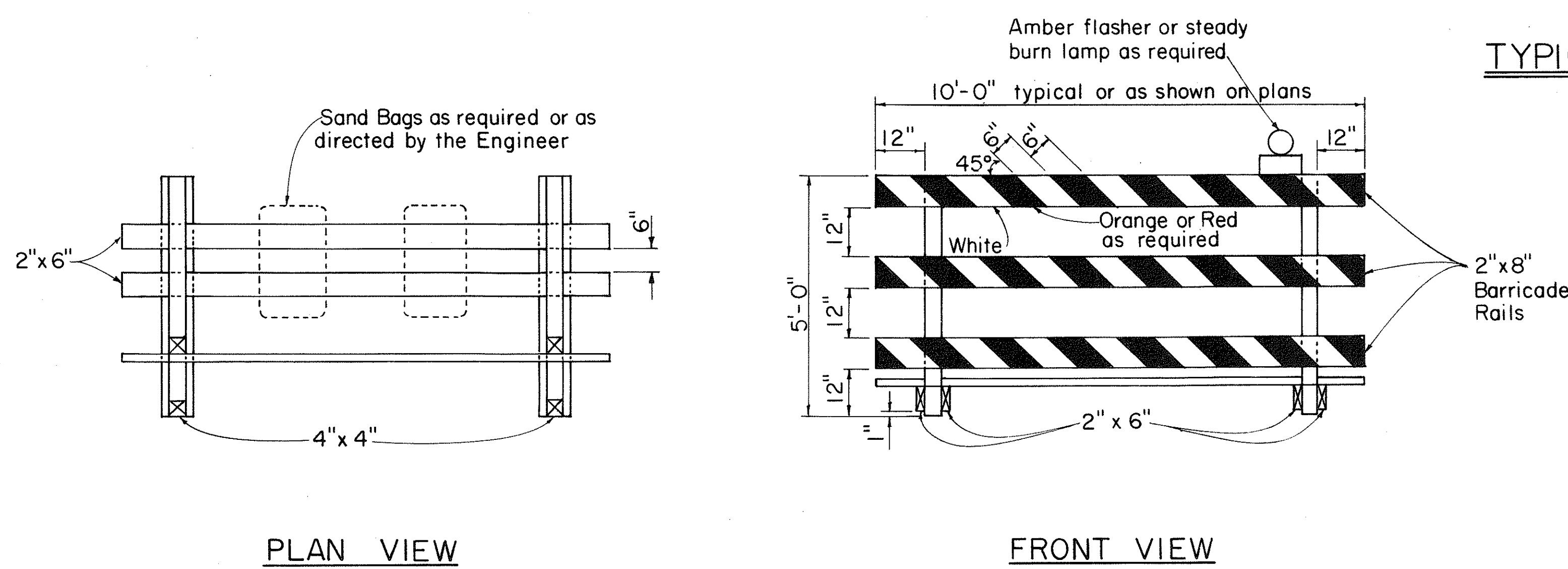


TYPE II BARRICADE
Scale: 1/2" = 1'-0"



TYPICAL BARRICADE STRIPING DETAILS**
Not to Scale

** Similar for Types I & II



TYPE III BARRICADE
Scale: 1/2" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes DT 800 Approved 12/30/69	Mr.	10/23/81

APPROVAL RECOMMENDED:
Eichi Tanaka 10/21/81
TRAFFIC ENGINEER DATE

APPROVED:
Shubert S. S. S. 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET No. 14 OF 14 SHEETS DT 800

DATE	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
DESIGNED BY	
DRAWN BY	
PLANNED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	