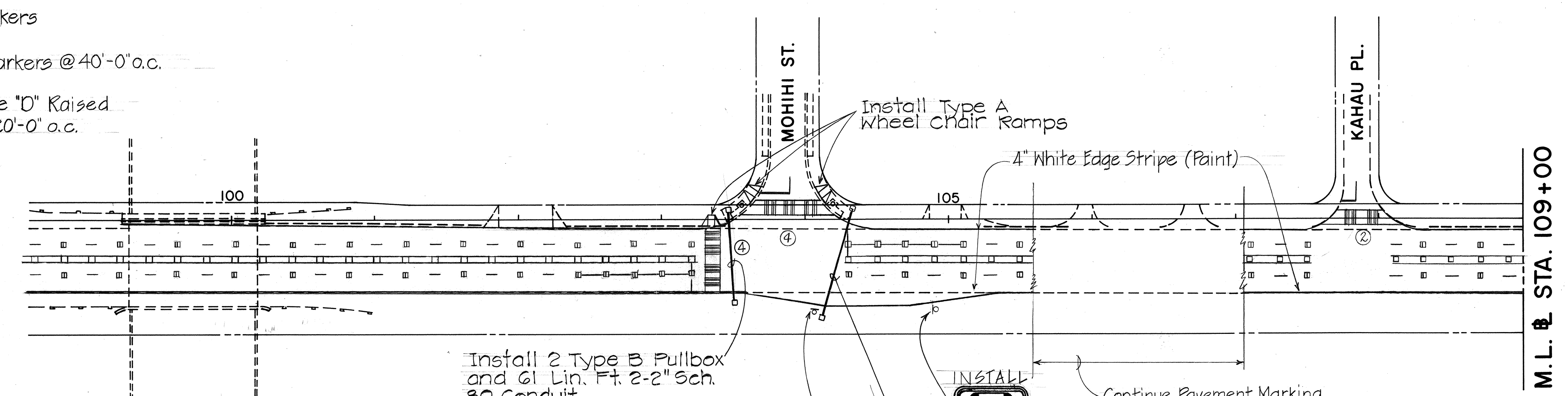
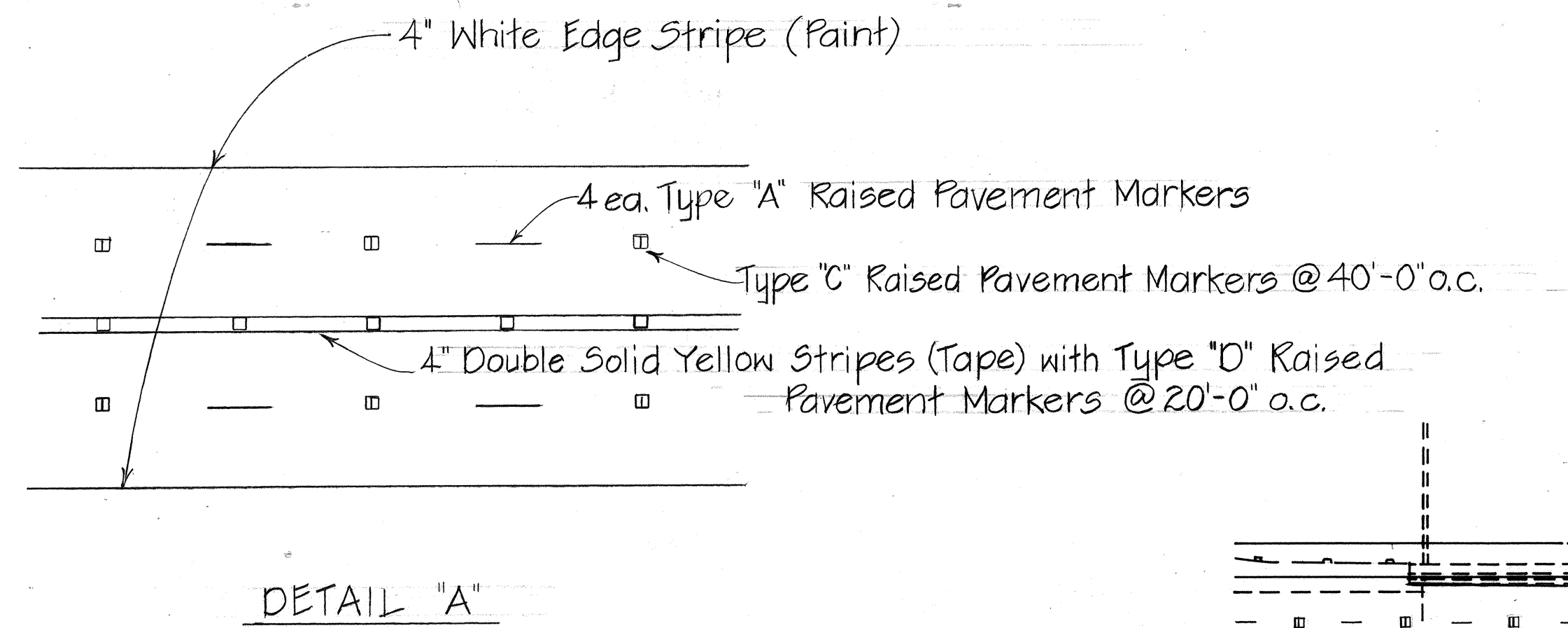


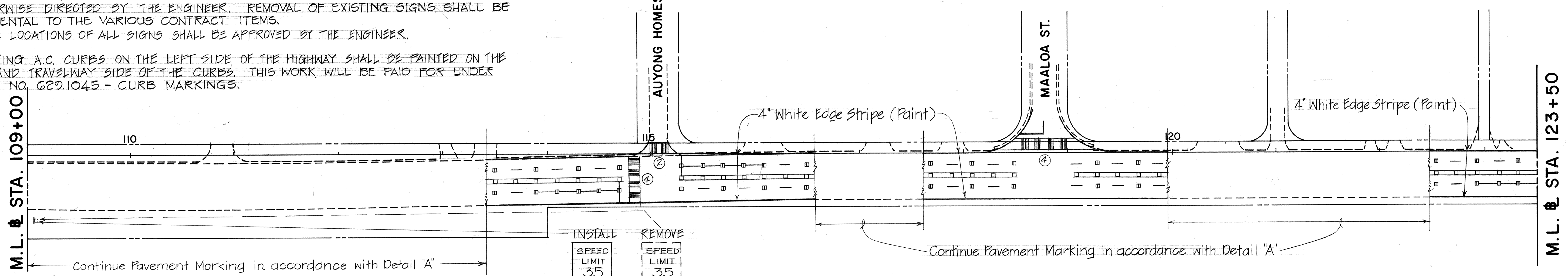
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-1(7)	1984	24	39



GENERAL NOTES

1. LOCATIONS OF ALL NEW PAVEMENT MARKINGS SHALL BE STAKED OUT BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
2. EXISTING PAVEMENT MARKINGS NOT INCORPORATED IN THE FINAL TRAFFIC PATTERN SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. COSTS SHALL BE INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
3. RAISED PAVEMENT MARKINGS SHALL NOT BE PLACED WITHIN CROSSWALKS.
4. STOP LINES SHALL BE LOCATED NOT LESS THAN 40 FEET NOR MORE THAN 120 FEET FROM THE EXISTING TRAFFIC SIGNAL FACES AS DIRECTED BY THE ENGINEER. FINAL LOCATIONS OF ALL STOP LINES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. EXISTING SIGNS NOT SHOWN ON THESE PLANS SHALL REMAIN AS POSTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. REMOVAL OF EXISTING SIGNS SHALL BE INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
6. FINAL LOCATIONS OF ALL SIGNS SHALL BE APPROVED BY THE ENGINEER.
7. EXISTING A.C. CURBS ON THE LEFT SIDE OF THE HIGHWAY SHALL BE PAINTED ON THE TOP AND TRAVELWAY SIDE OF THE CURBS. THIS WORK WILL BE PAID FOR UNDER ITEM NO. 629.1045 - CURB MARKINGS.

8. ALL NEW SIGNS INSTALLED ALONG THE FOOTPATH SHALL HAVE A 10'-0" MINIMUM VERTICAL CLEARANCE.



LEGEND

- 4 EACH TYPE "A" RAISED PAVEMENT MARKERS
- TYPE "C" RAISED PAVEMENT MARKERS @ 40'-0" o.c.
- 8" WHITE STRIPE (TAPE) WITH TYPE "C" RAISED PAVEMENT MARKERS @ 20'-0" o.c.
- 4" DOUBLE SOLID YELLOW STRIPES (TAPE) WITH TYPE "D" RAISED PAVEMENT MARKERS @ 20'-0" o.c.
- CROSSWALK (TAPE) & STOP LINE (TAPE). ALL STOP LINES SHALL BE 10'-0" FROM CROSSWALK UNLESS OTHERWISE NOTED. THE CIRCLED NUMBER INDICATES THE NUMBER OF LANES FOR PAYMENT.

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

6/1/84	Added General Note No. 8 per Addendum No. 1.
DATE	REVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING

FARRINGTON HWY. RESURFACING
Vicinity of Ulehawa Stream
Bridge to Piliokoe Bridge

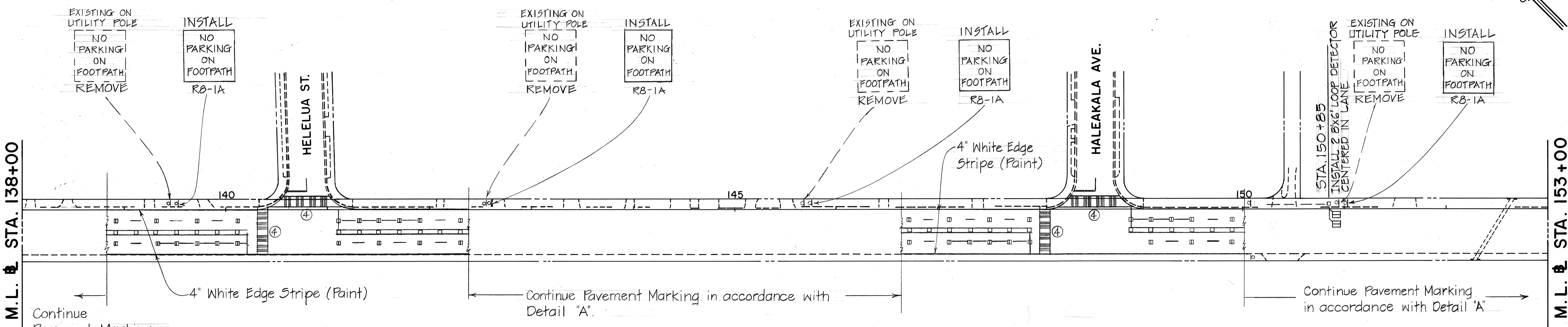
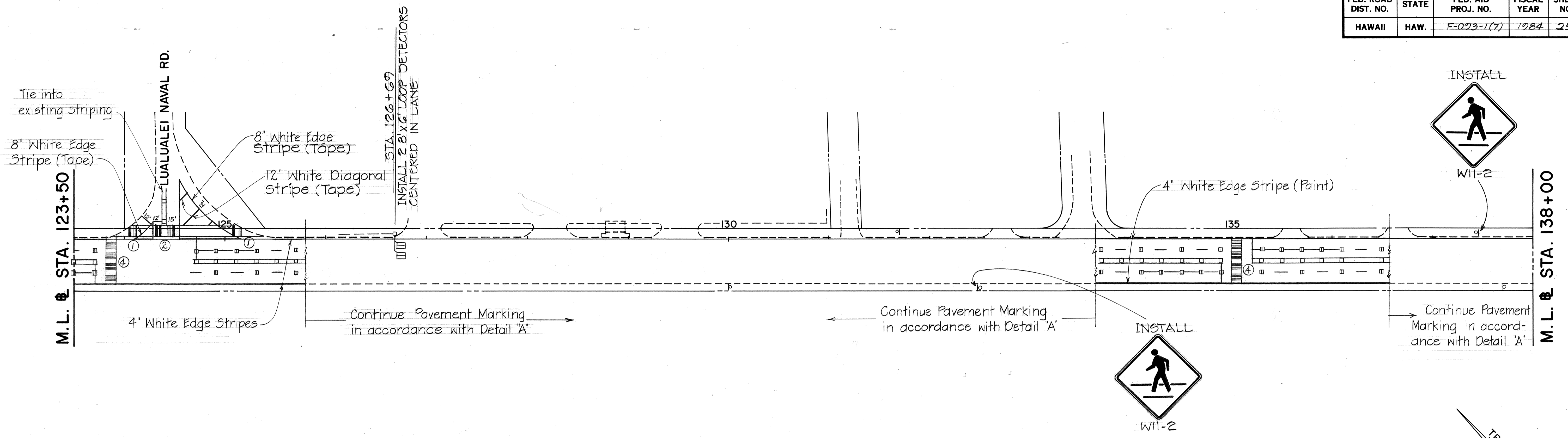
F.A. PROJECT NO. F-093-1(7)

SCALE: AS SHOWN DATE: DEC. 1983

SHEET NO. 1 OF 16 SHEETS

ADD. 24R

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-023-1(7)	1984	25	39



TRAFFIC SIGNAL NOTES

1. Deactivation of all traffic detectors shall be accomplished by the City & County of Honolulu, DOTs, Traffic Signal Section; Contact Carl Hagiwara at 523-4261 seven (7) days in advance for this service. Once deactivated, the Contractor must reconstruct, if required and install new loop detectors in one (1) working day.
2. Exact locations of Preformed Inductive Vehicle Loop detectors shall be staked out in the field by the Contractor and approved by the Engineer prior to installation.
3. The locations of conduits and pullboxes shall be staked out in the field by the Contractor & approved by the Engineer prior to construction & installation.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING

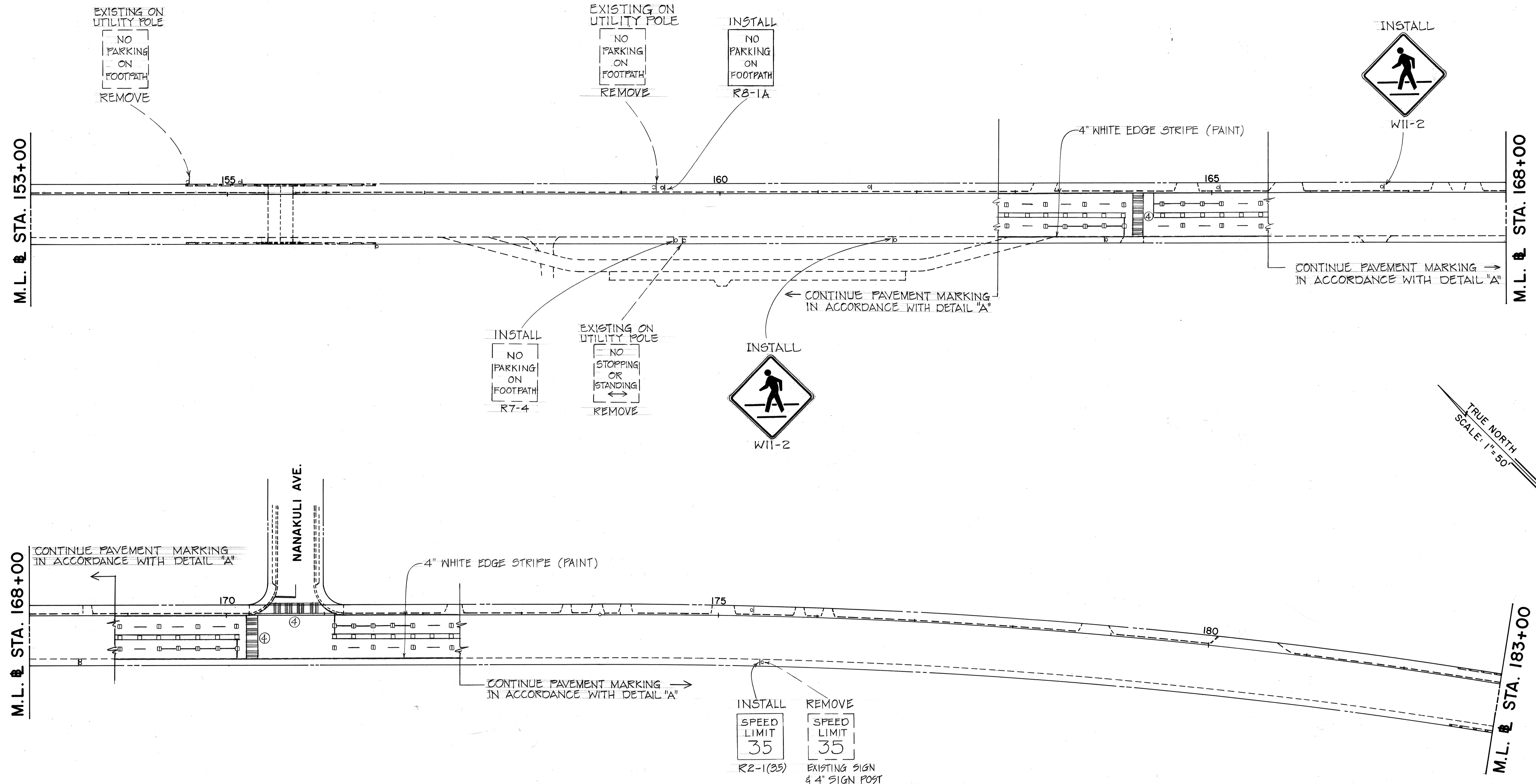
FARRINGTON HWY. RESURFACING
Vicinity of Ulehawa Stream
Bridge to Piliokoe Bridge
F.A. PROJECT NO. F-023-1(7)

SCALE: AS SHOWN DATE: DEC. 1983

SHEET No. 2 OF 16 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-1(7)	1984	26	39



TRUE NORTH
SCALE: 1"=50'

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKING

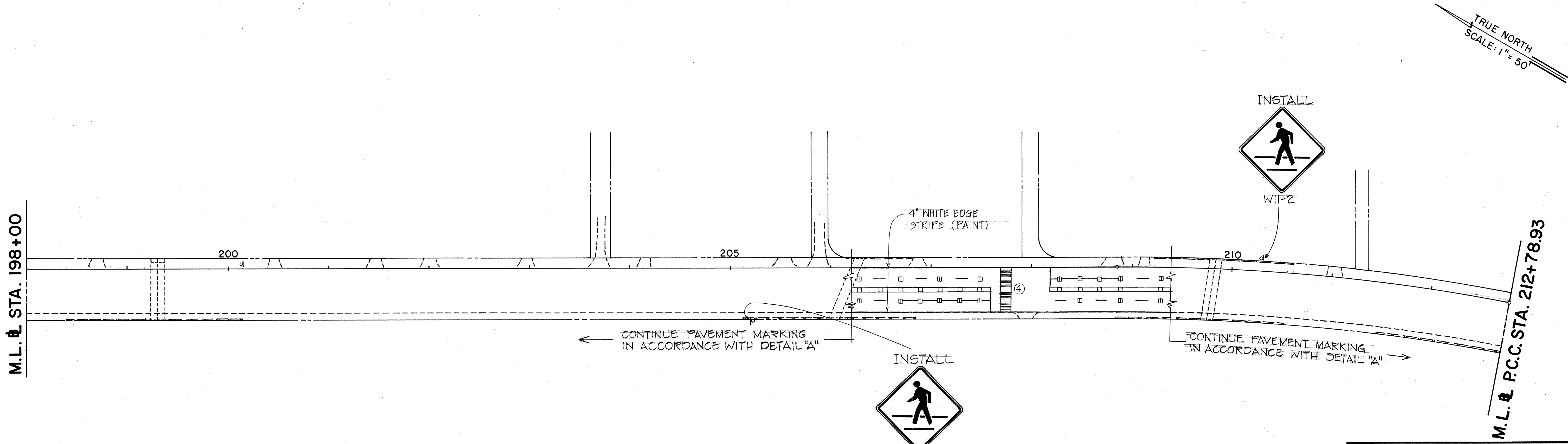
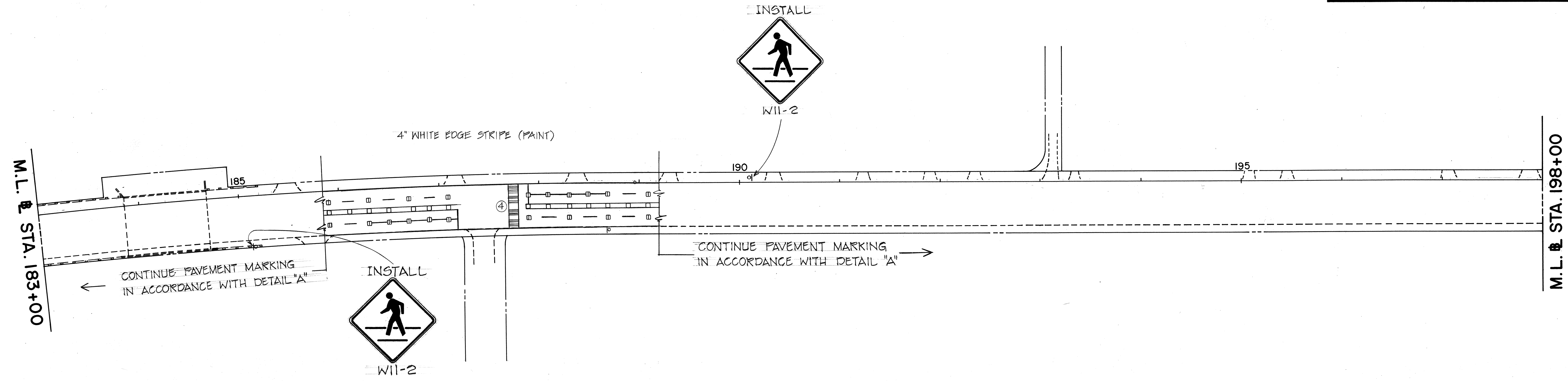
FARRINGTON HWY. RESURFACING
Vicinity of Uehawa Stream
Bridge to Piliokoe Bridge

F.A. PROJECT NO. F-093-1(7)

SCALE: AS SHOWN DATE: DEC. 1983

SHEET NO. 3 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-023-1(7)	1984	27	39

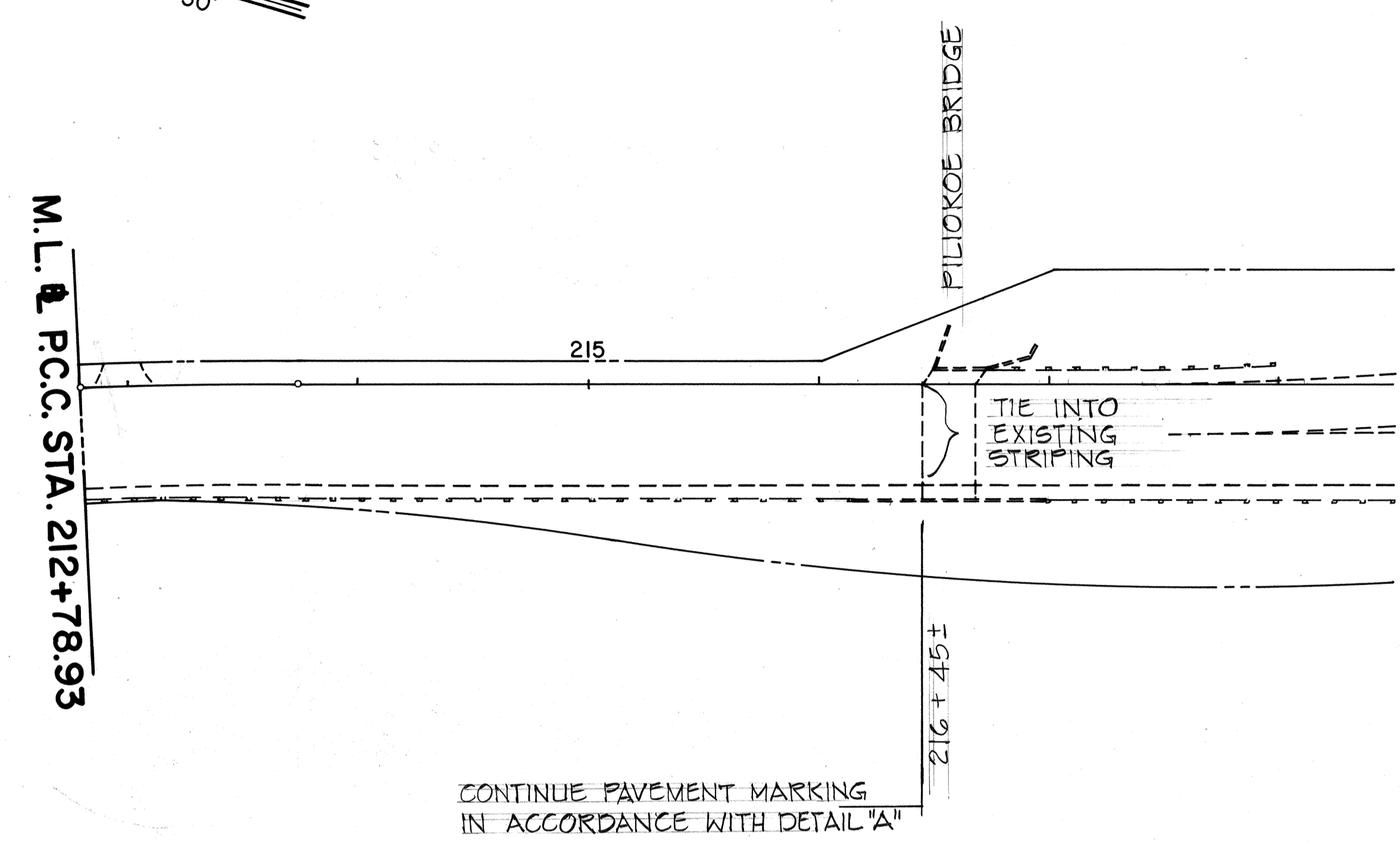


SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGNING & PAVEMENT MARKING
FARRINGTON HWY. RESURFACING
Vicinity of Ulehawa Stream
Bridge to Piliokoe Bridge
P.A. PROJECT NO. F-023-1(7)
SCALE: AS SHOWN DATE: DEC. 1983
SHEET No. 4 OF 16 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-1(7)	1984	28	39

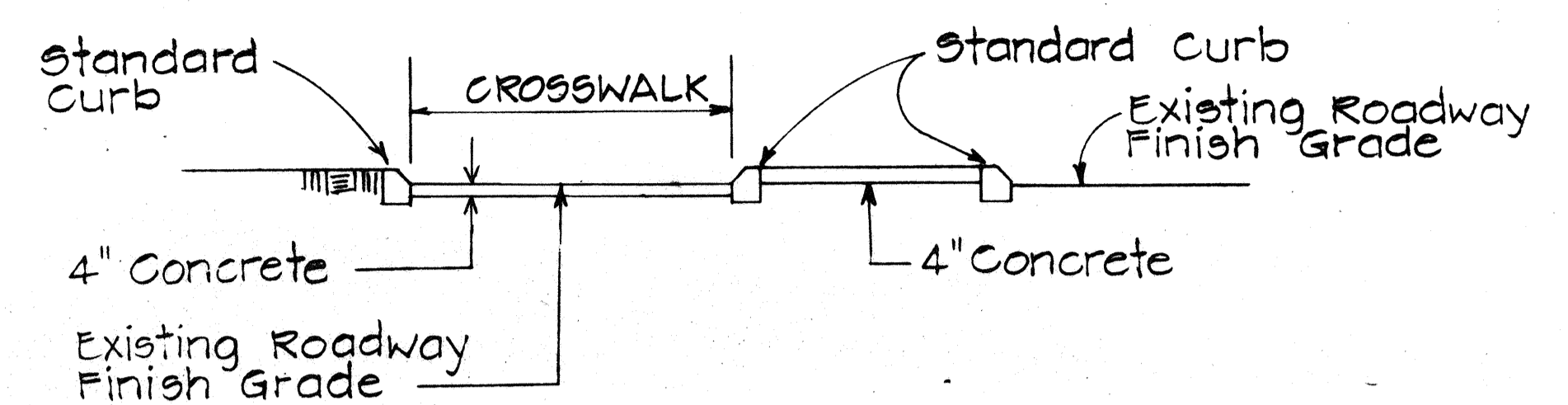
TRUE NORTH
SCALE: 1" = 50'



ORIGINAL PLAN	NO.
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGNING & PAVEMENT MARKING
FARRINGTON HWY. RESURFACING
Vicinity of Ulehawa Stream
Bridge to Piliokoe Bridge
P.A. PROJECT NO. F-093-1(7)
SCALE: AS SHOWN DATE: DEC. 1983
SHEET No. 5 OF 16 SHEETS

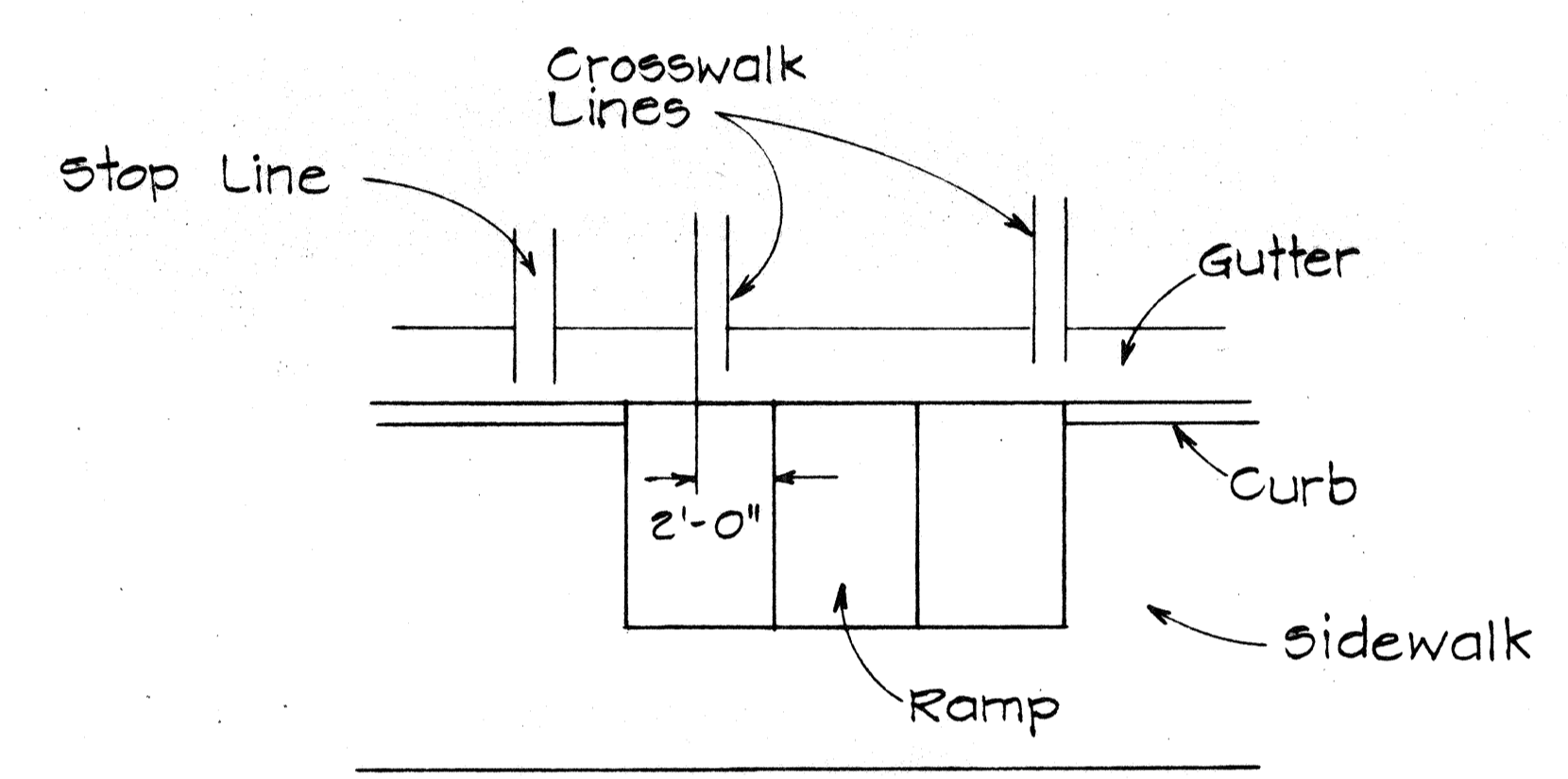
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F0931(7)	1984	29	39



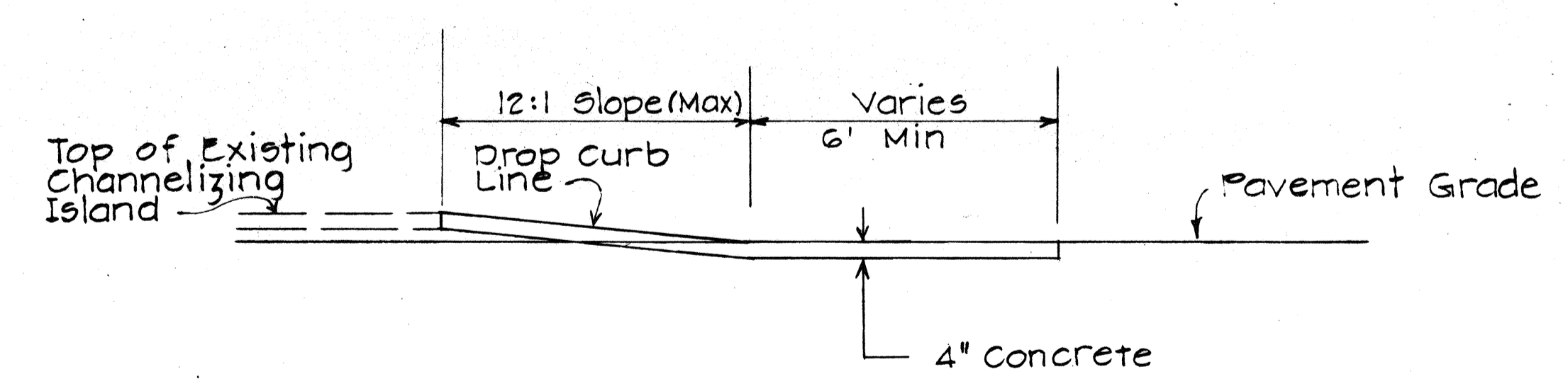
SECTION "A-A"

Use at Median Nose Crossings
Scale: 1" = 5'

For Additional Details, See Type "C" Wheel Chair Ramp



TYPICAL INSTALLATION AT CROSSWALKS
Scale: 1" = 5'



SECTION "B-B"

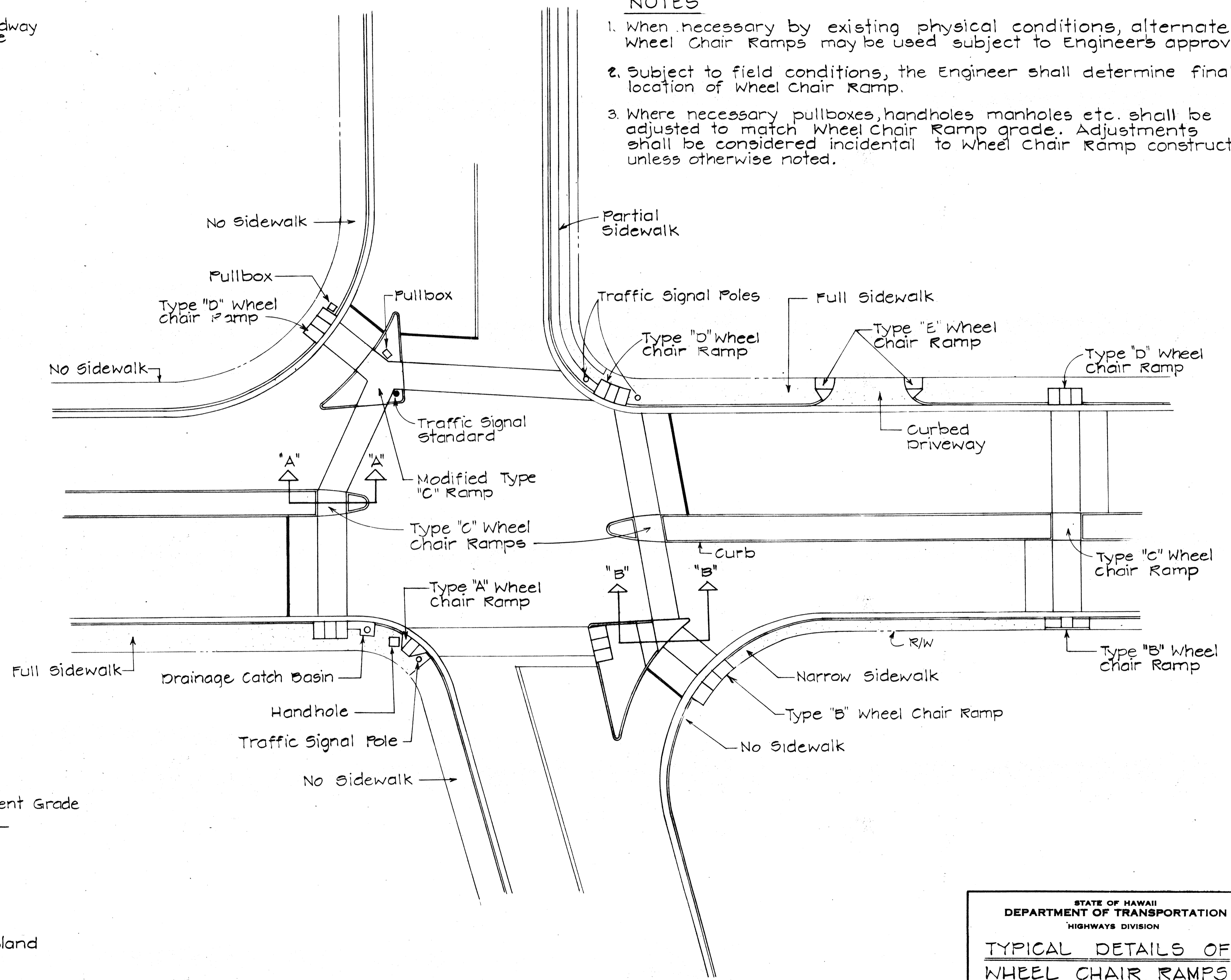
TYPE "B" MODIFIED WHEEL CHAIR RAMP

Use at Intersection of 2 Crosswalks On Channelizing Island
Scale: 3/8" = 1'

For Additional Details See Type "B" Wheelchair Ramp

NOTES

1. When necessary by existing physical conditions, alternate Wheel Chair Ramps may be used subject to Engineers approval.
2. Subject to field conditions, the Engineer shall determine final location of Wheel Chair Ramp.
3. Where necessary pullboxes, handholes manholes etc. shall be adjusted to match Wheel Chair Ramp grade. Adjustments shall be considered incidental to Wheel Chair Ramp construction, unless otherwise noted.



TYPICAL WHEEL CHAIR RAMPS
Scale: 1" = 20'

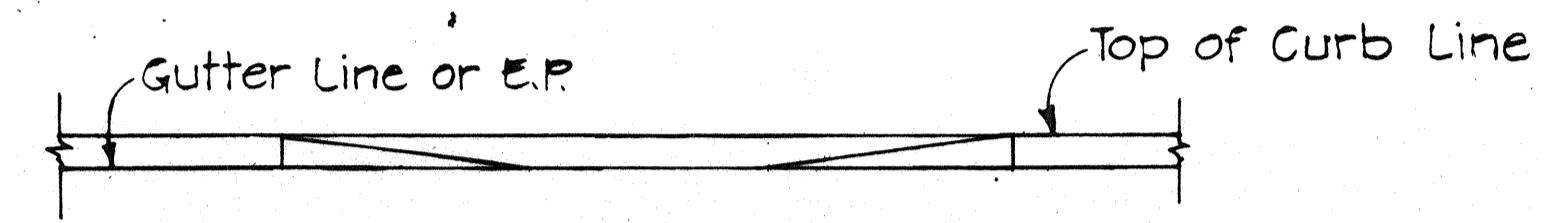
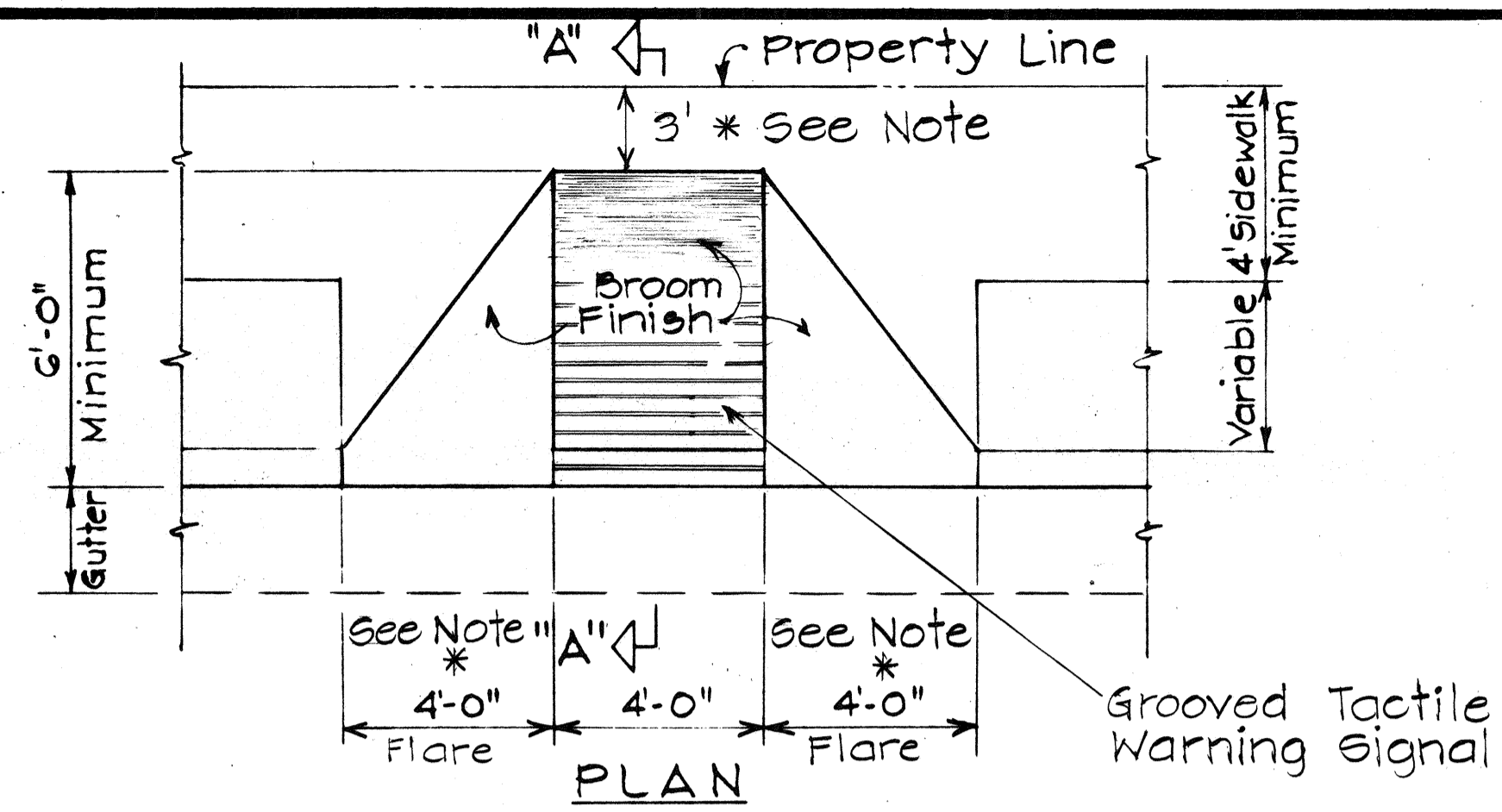
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
DESIGNED BY	.....
QUANTITIES BY	.....
CHECKED BY	.....
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

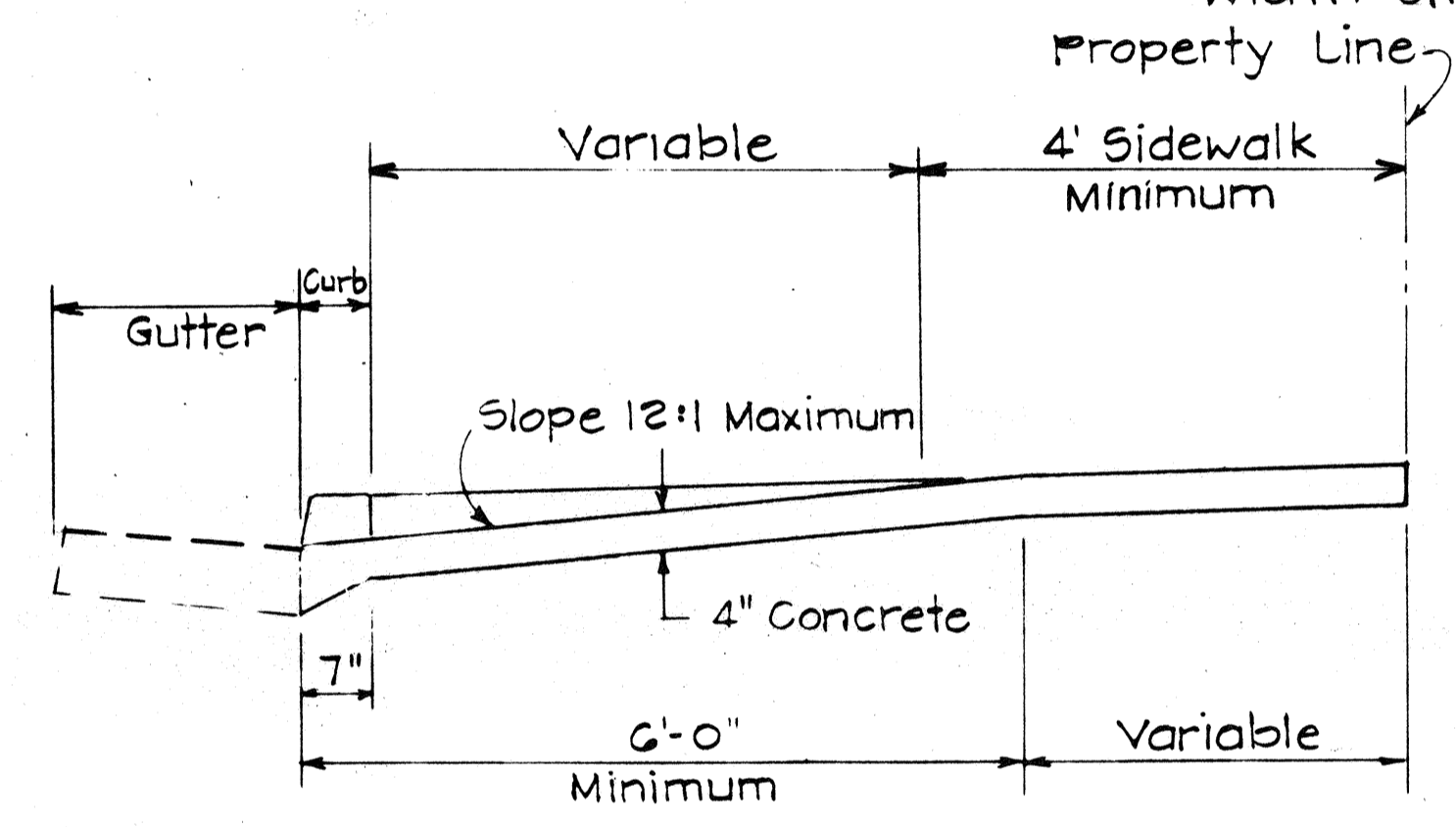
TYPICAL DETAILS OF WHEEL CHAIR RAMPS

FARRINGTON HWY. RESURFACING
VIC. OF ULEHAWA STR. BR. TOW. PILIOKOE BR.
F.A. PROJ. NO. F-093-1(7)
Scale: As Shown May, 1978
SHEET NO. 6 OF 16 SHEETS

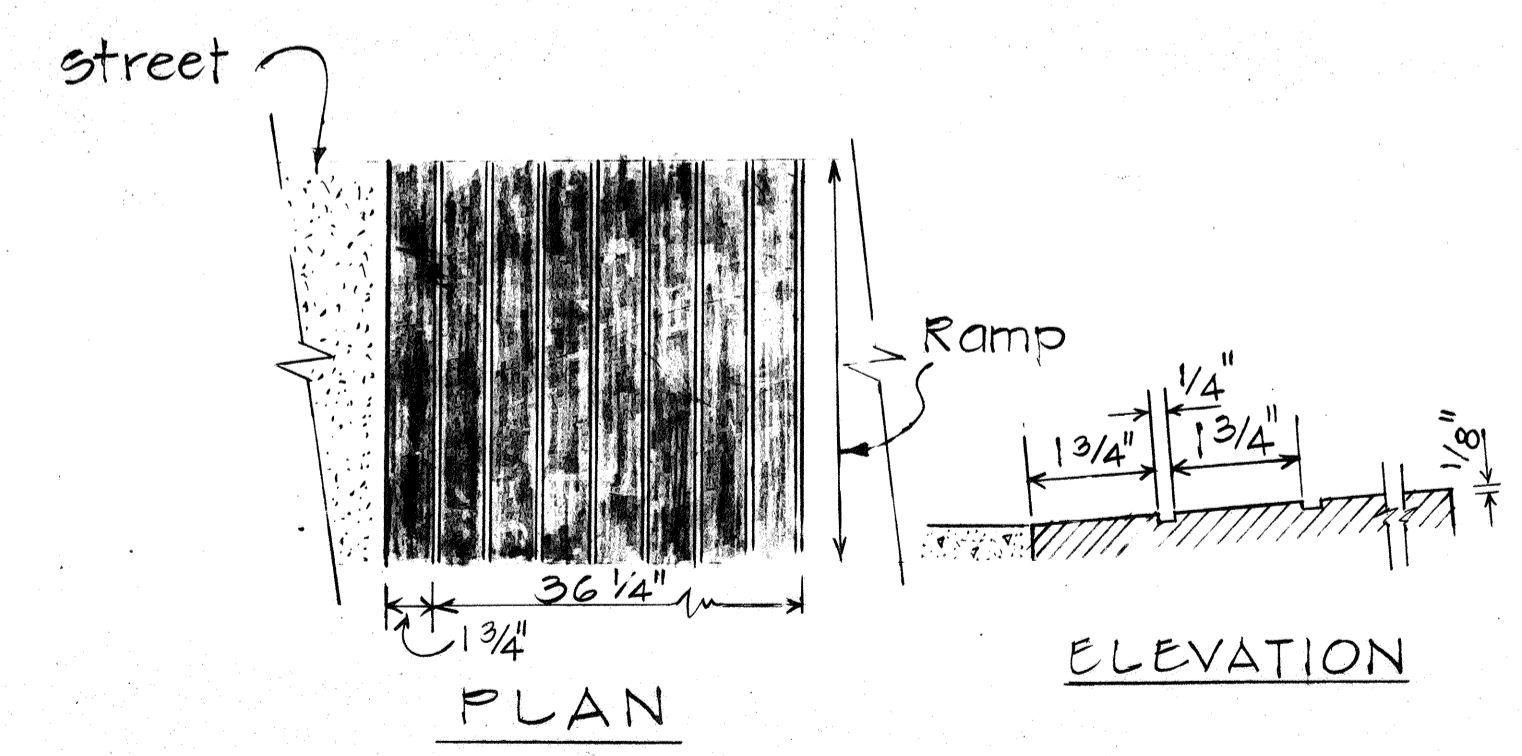
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F093-1(7)	1984	30	39



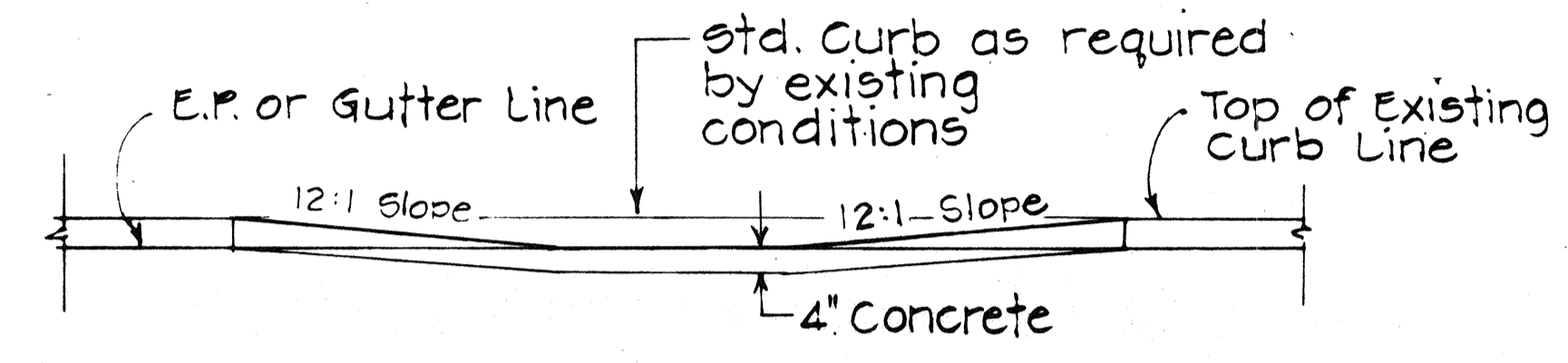
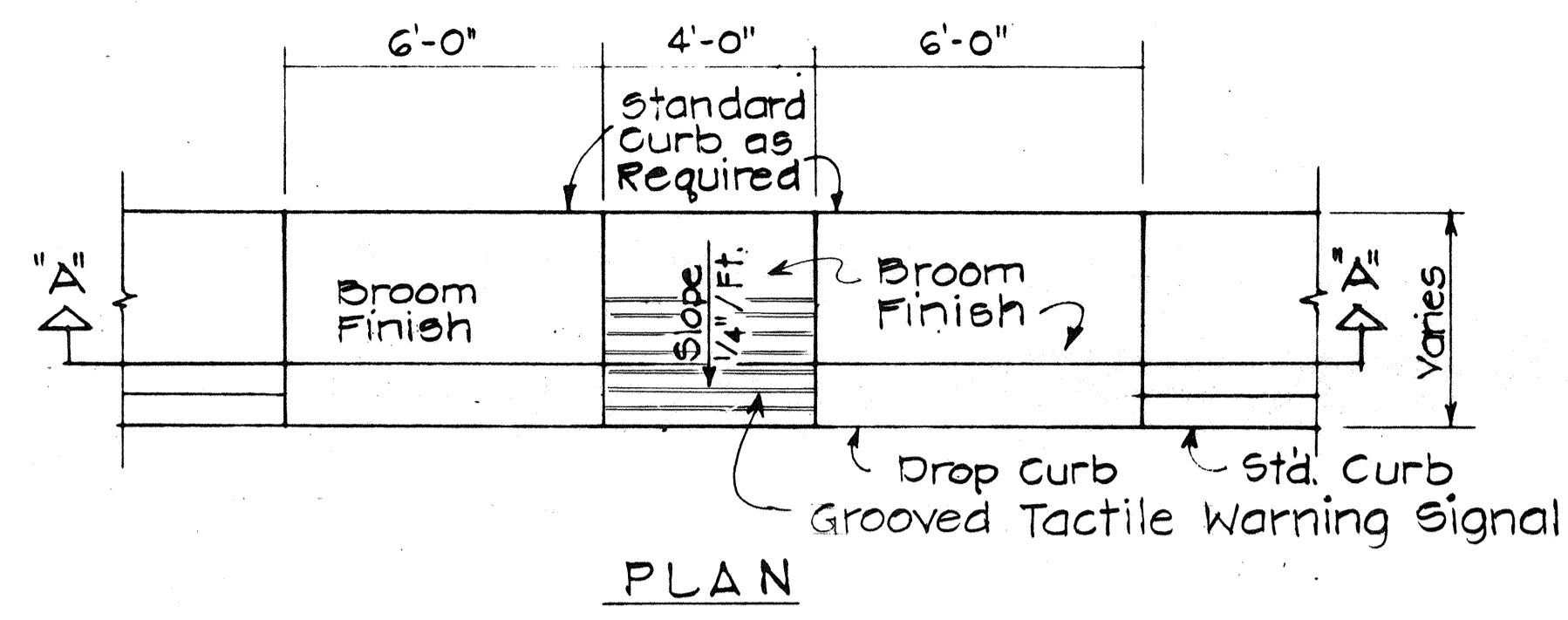
ELEVATION
* Where dimension is less than 3', Flare width shall be 5'



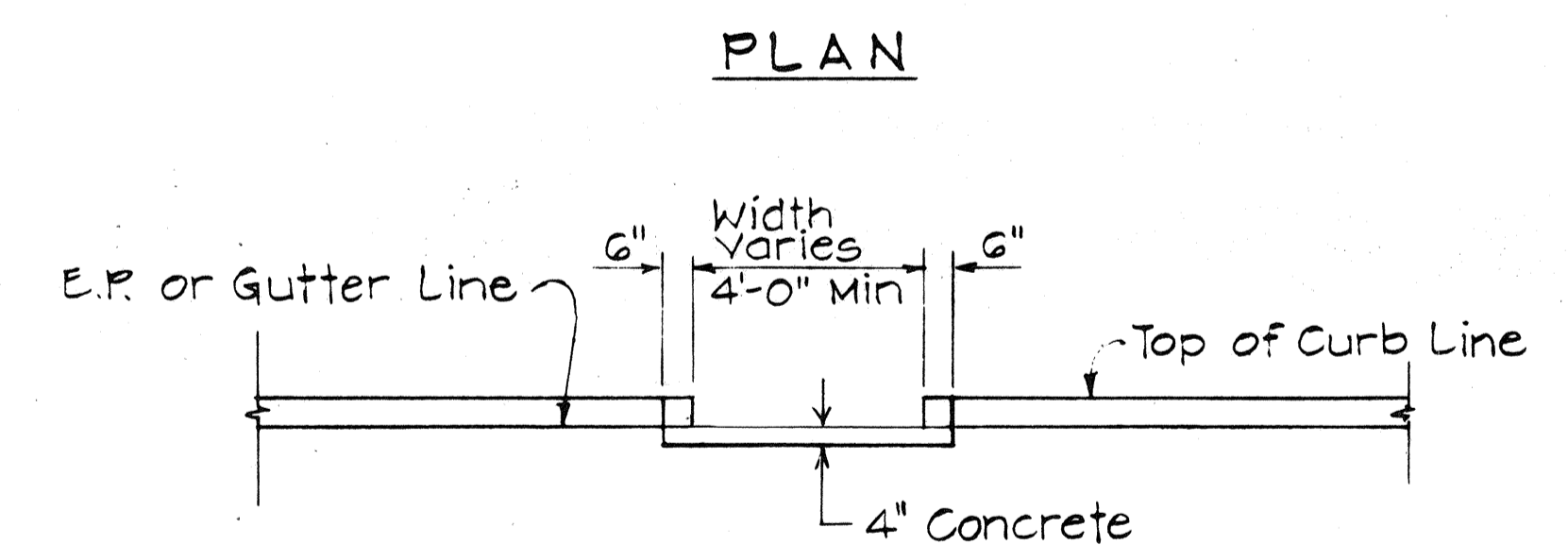
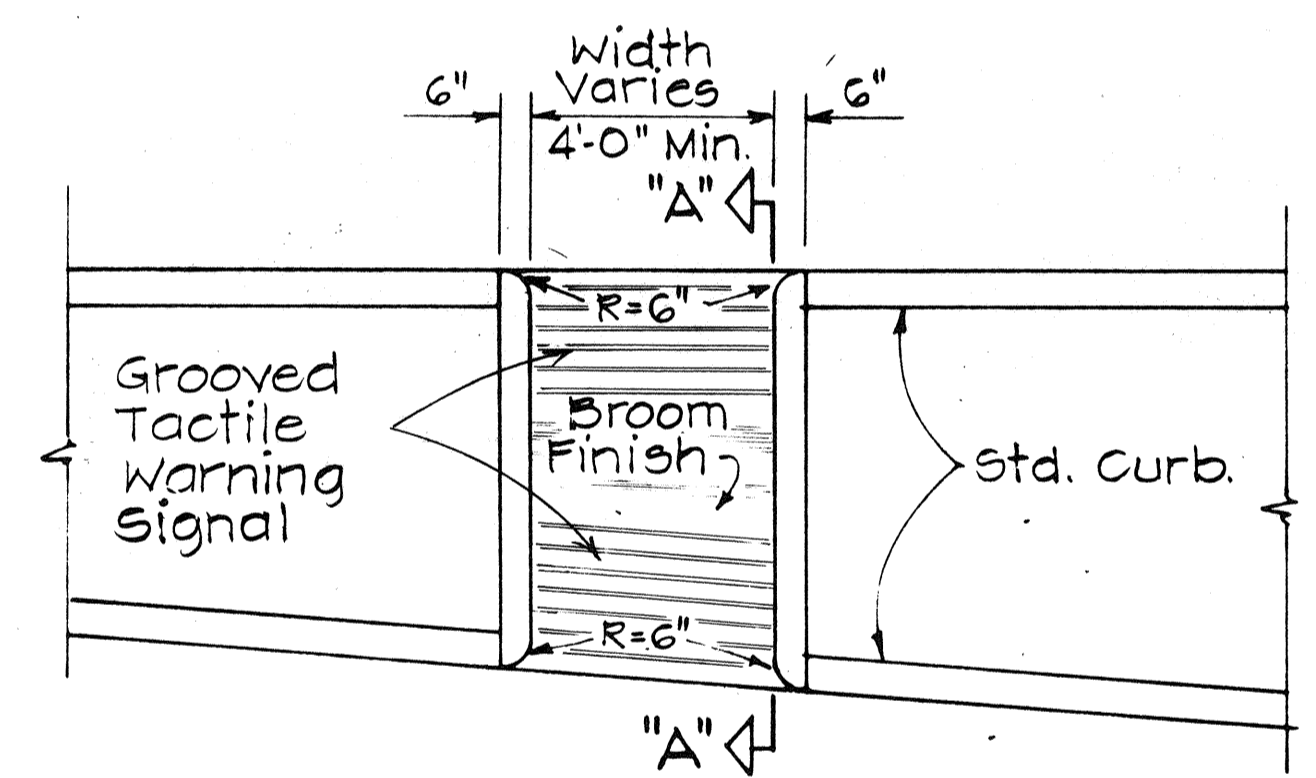
SECTION "A-A"
WHEELCHAIR RAMP - TYPE "A"
USE WHERE OBSTRUCTIONS EXIST



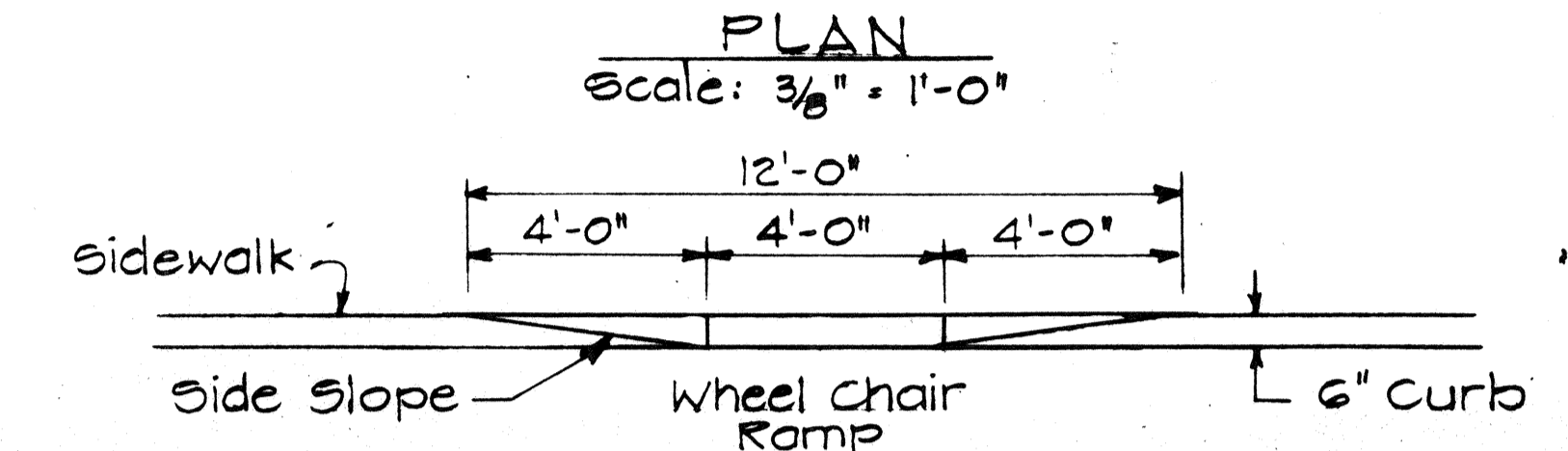
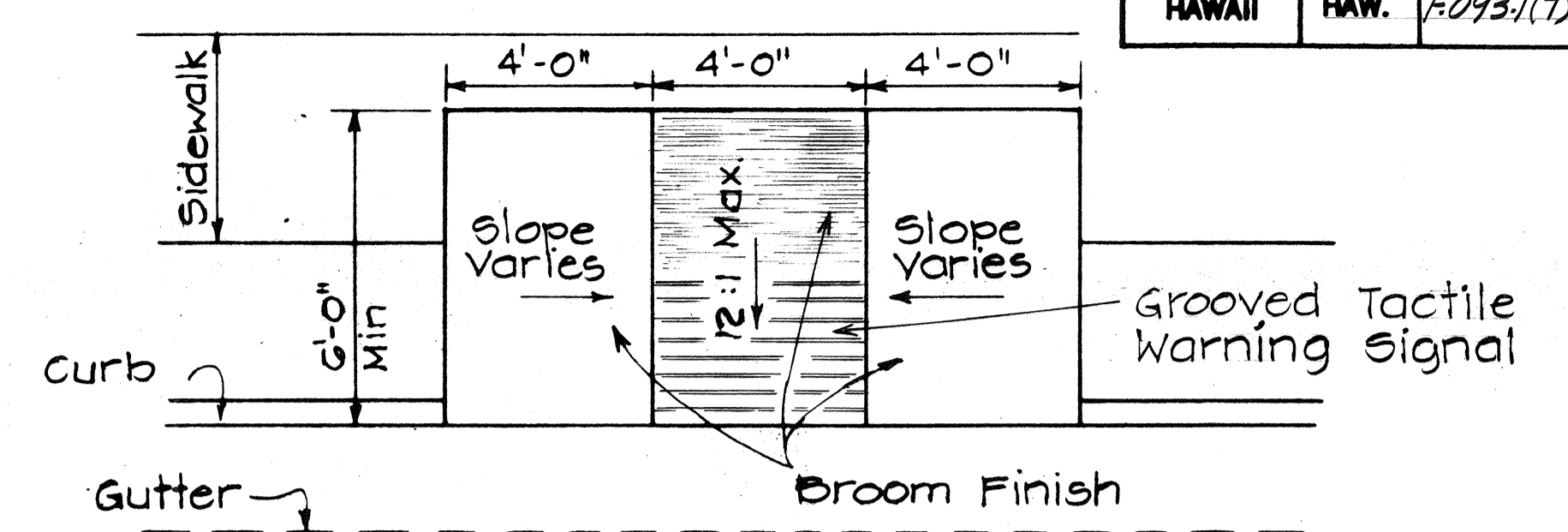
GROOVED TACTILE WARNING SIGNAL



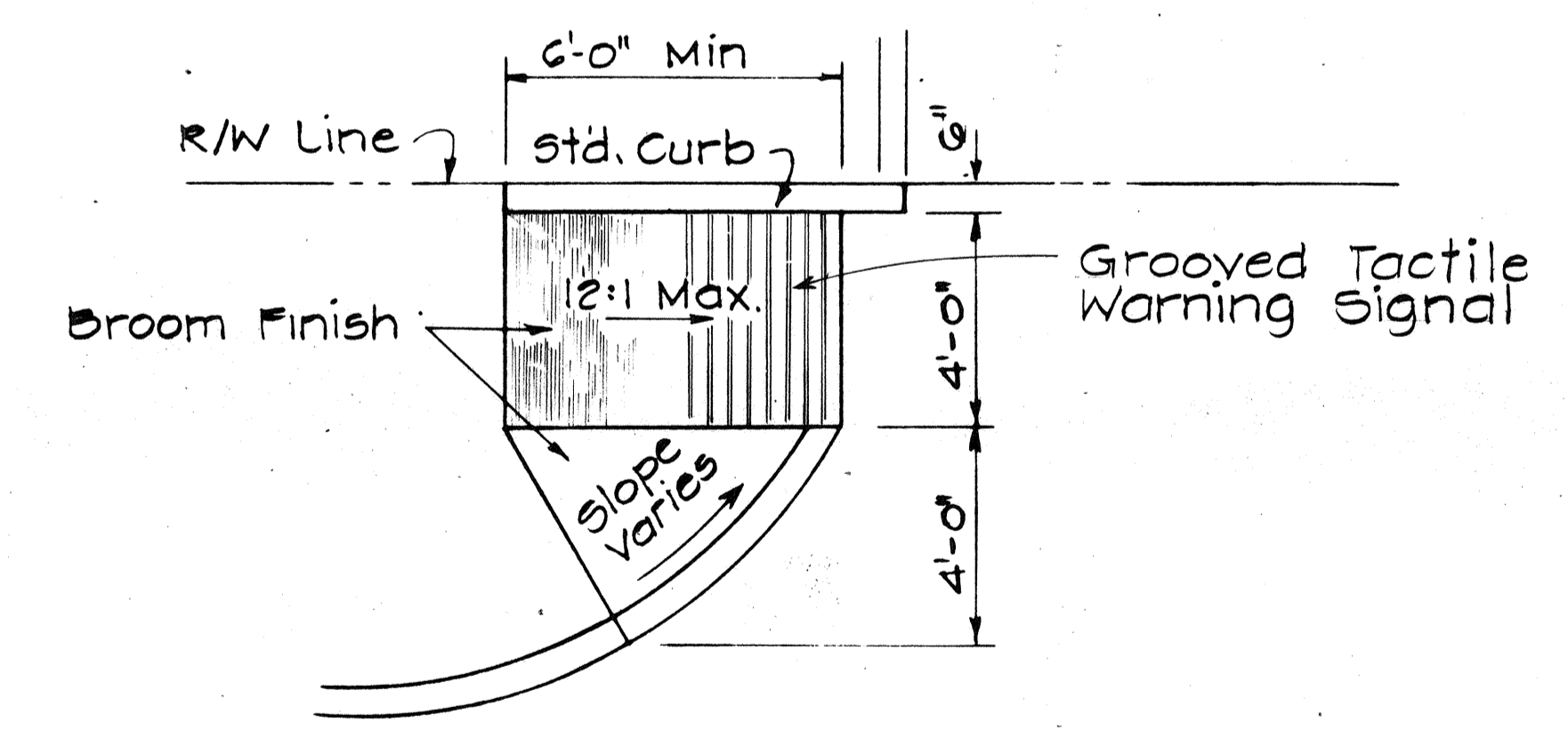
ELEVATION SECTION "A-A"
WHEELCHAIR RAMP - TYPE "B"
USE AT SIDEWALKS WITH LESS THAN 6'-0" WIDTH



ELEVATION
SECTION "A-A"
WHEELCHAIR RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS



ELEVATION
Scale: 3/8" = 1'-0"
SECTION "A-A"
Scale: 3/8" = 1'-0"
TYPICAL SECTION
Scale: 3/4" = 1'-0"
WHEELCHAIR RAMP - TYPE "D"
USE WHEN IDEAL CONDITIONS EXIST



WHEELCHAIR RAMP - TYPE "E"
USE AT CURBED DRIVEWAYS
Scale: 3/8" = 1'-0"

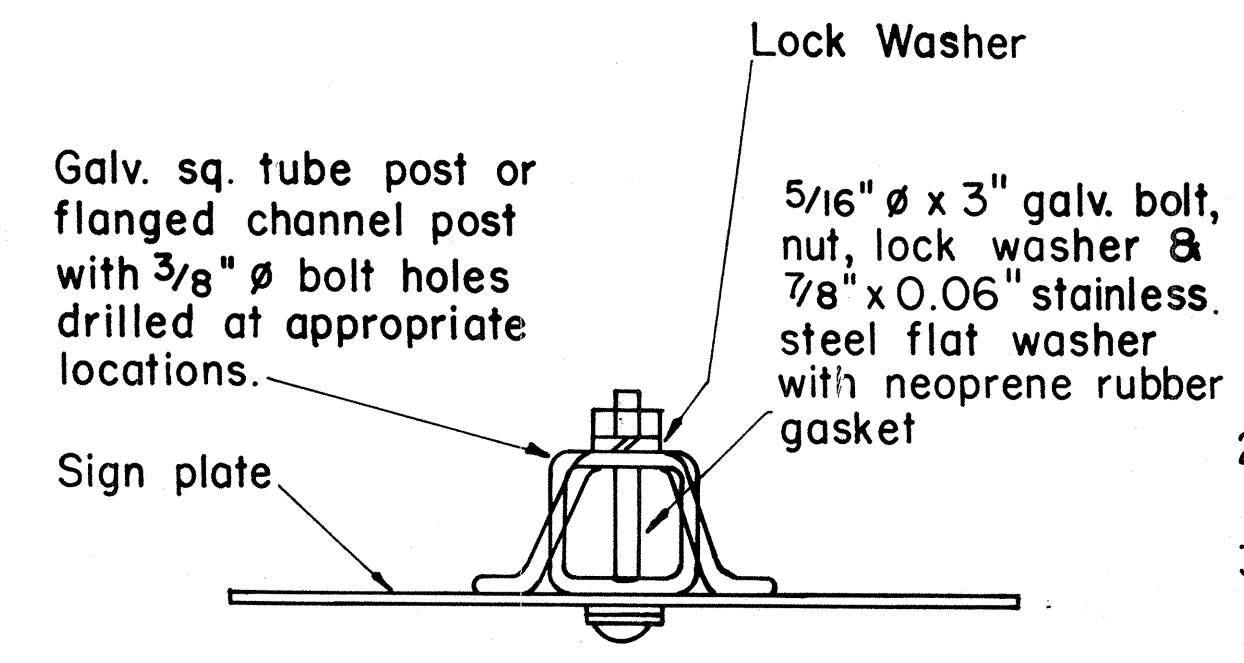
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPICAL DETAILS OF WHEEL CHAIR RAMPS
FARRINGTON HWY. RESURFACING
VIC. OF ULEHAWA STR. BR. TOW. PILIOKOE BR.
E.A. PROJ. NO. F-093-1(7)
Scale: As Shown May, 1978
SHEET NO. 7 OF 16 SHEETS

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

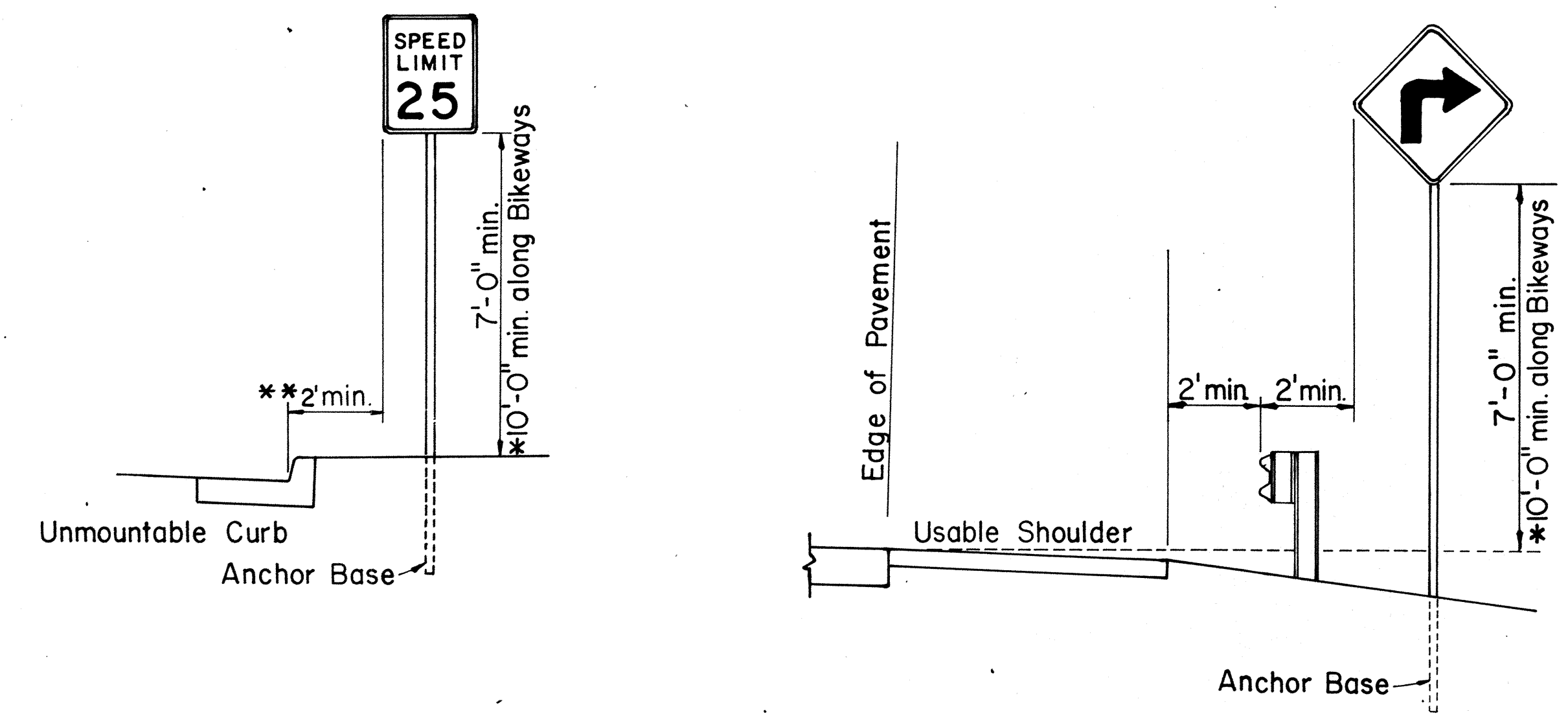
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-1(7)	1984	31	39

GENERAL NOTES

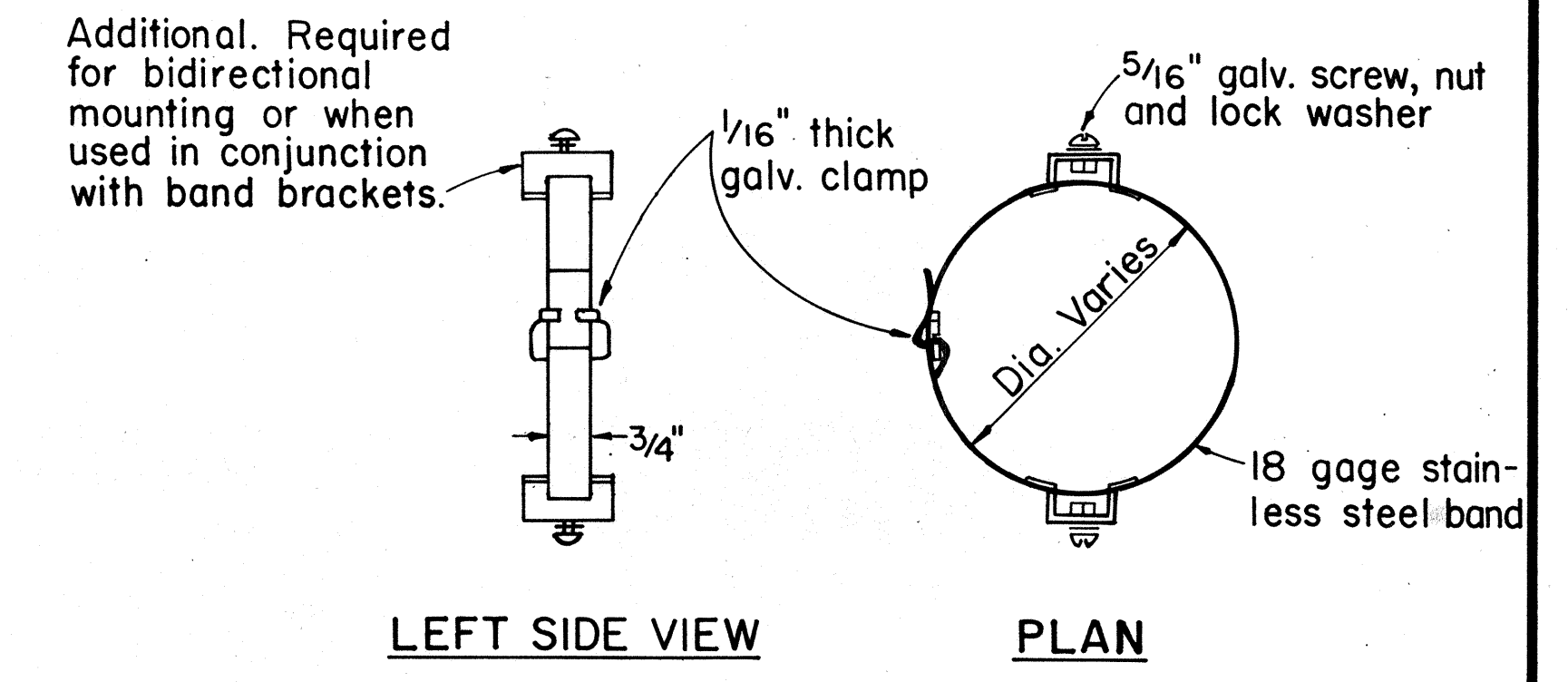
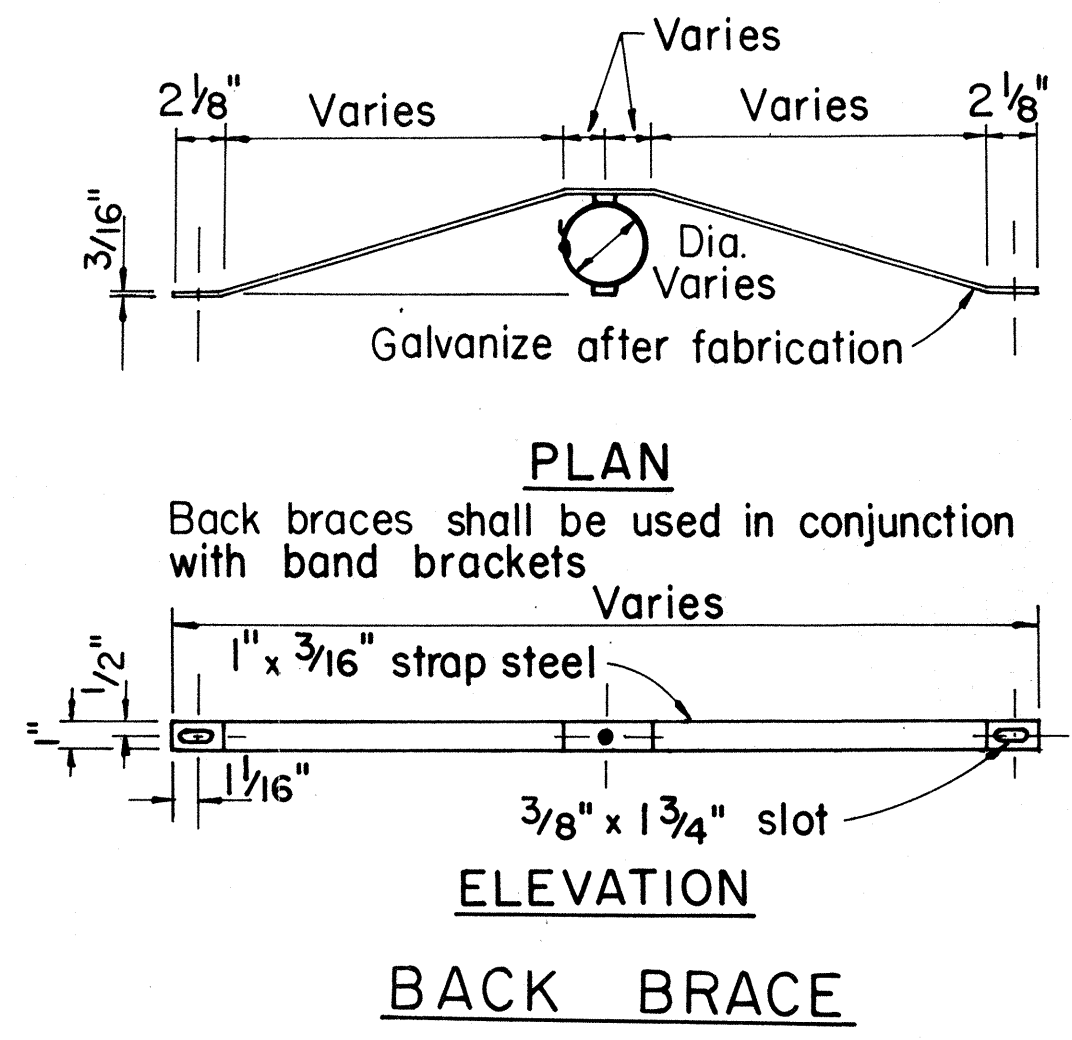
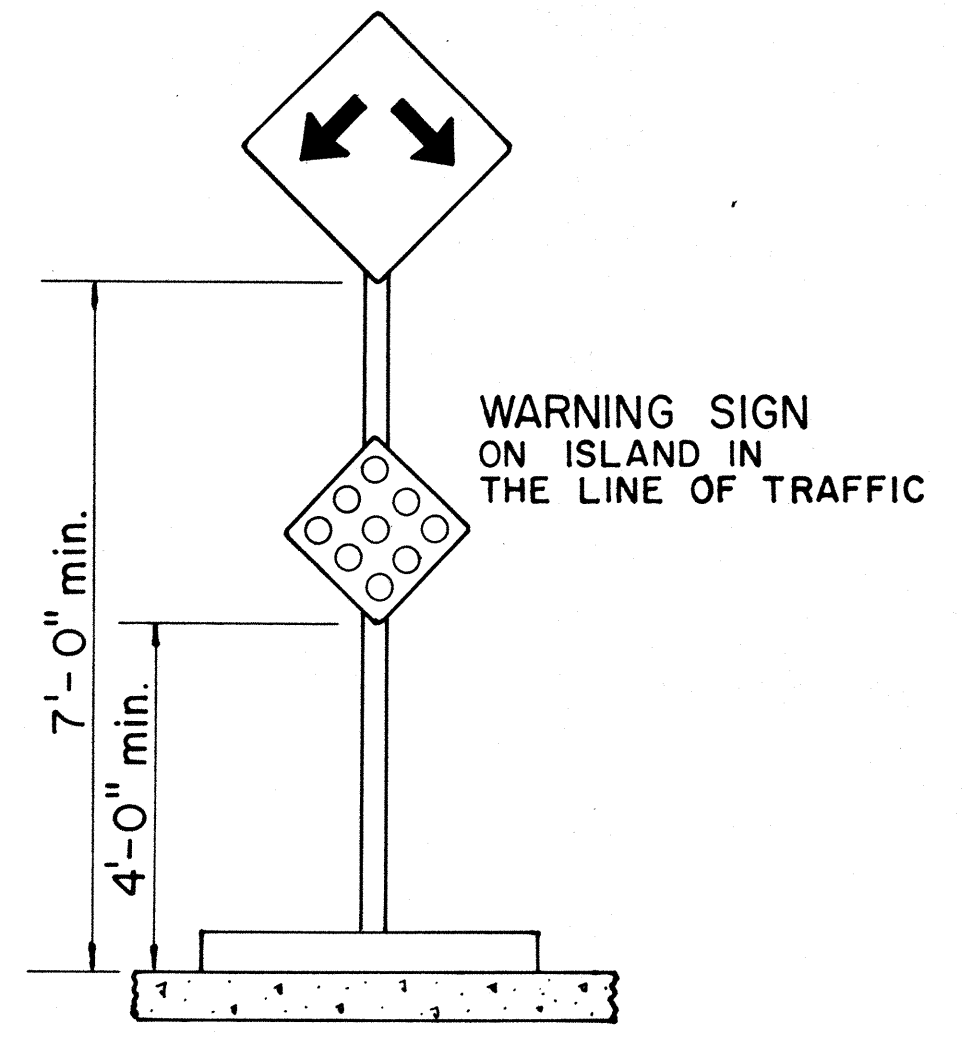
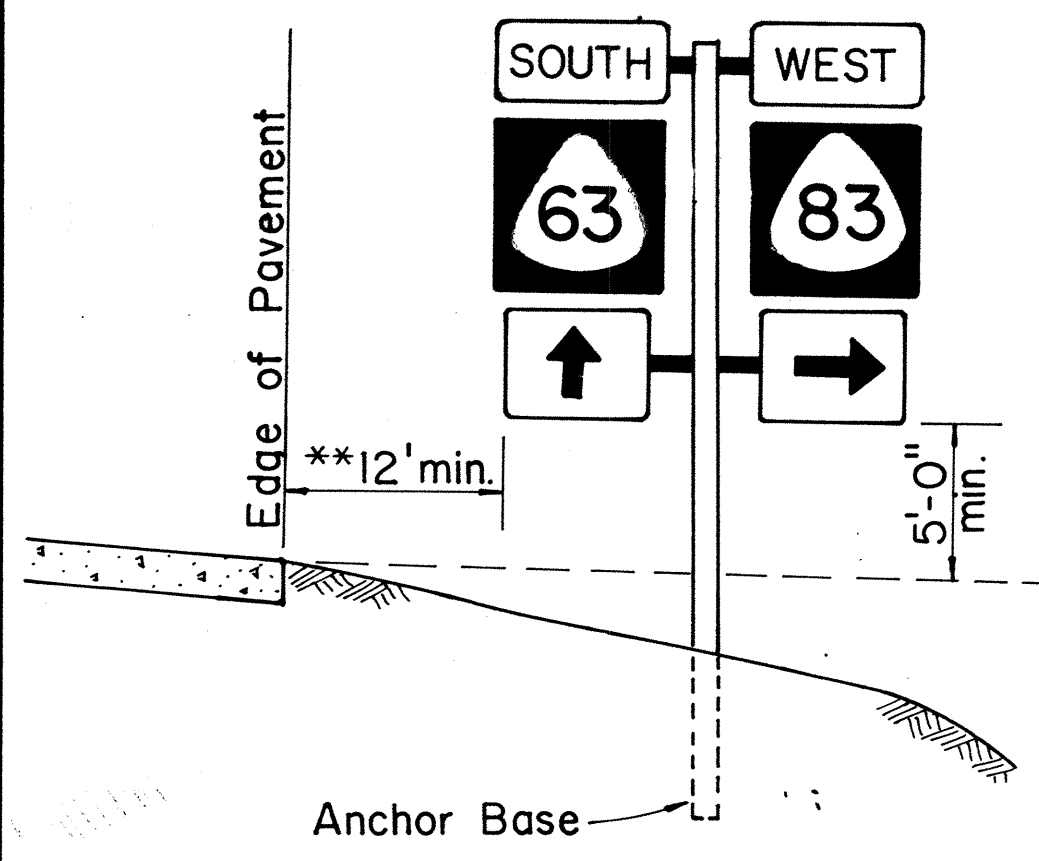
- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or 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



ROADSIDE ASSEMBLY RURAL DISTRICT



TYPICAL MOUNTING DETAILS

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

APPROVAL RECOMMENDED:
Eiichi Tanaka 10/14/83
 TRAFFIC ENGINEER DATE

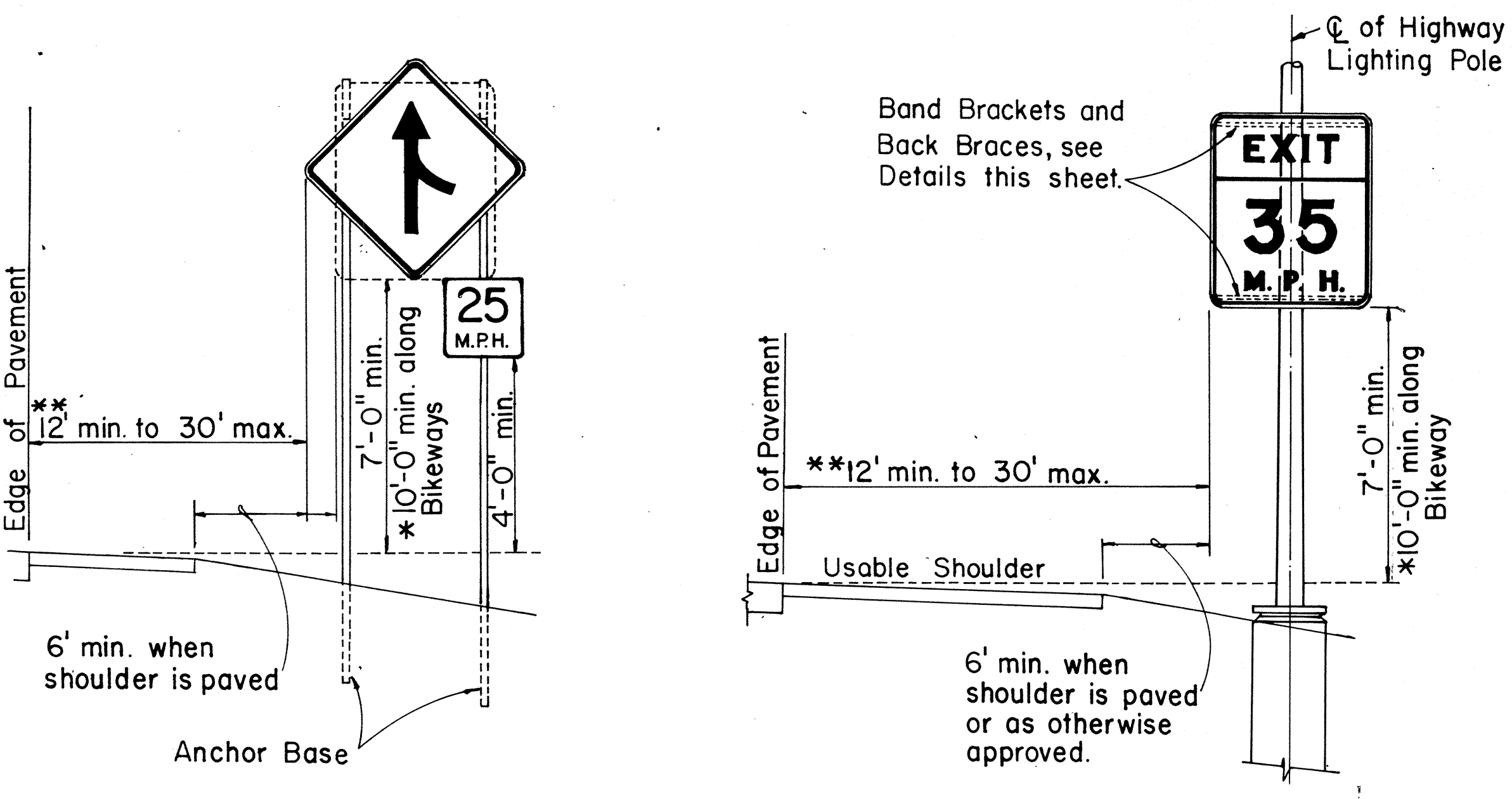
APPROVED:
[Signature] 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET No. 31 OF 16 SHEETS DT 100



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED 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.	F-093-1(7)	1984	32	39

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:

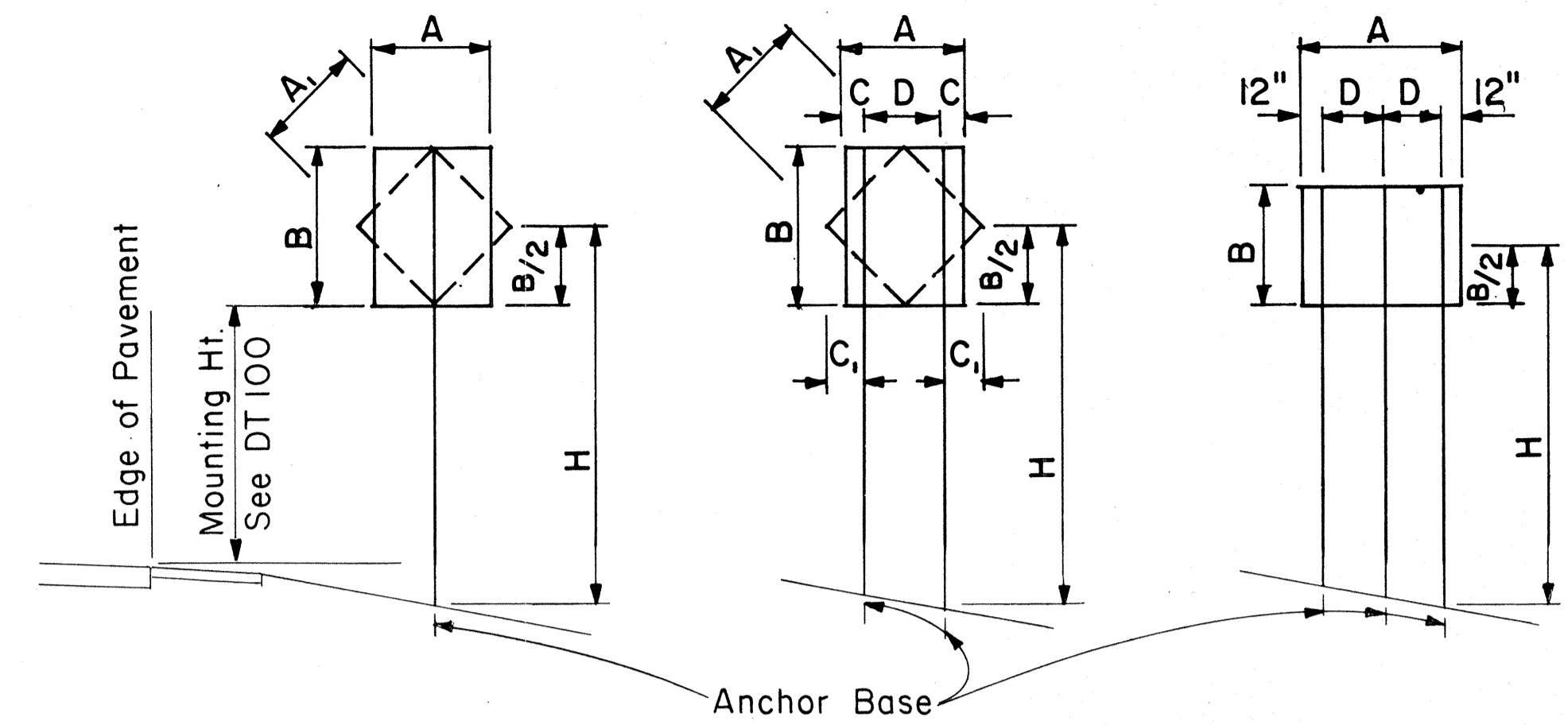
Eiichi Tanaka 9/12/82
TRAFFIC ENGINEER DATE

APPROVED:
Richard J. ... *alolson*
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. 9 OF 16 SHEETS DT 100A



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	AxBxH (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

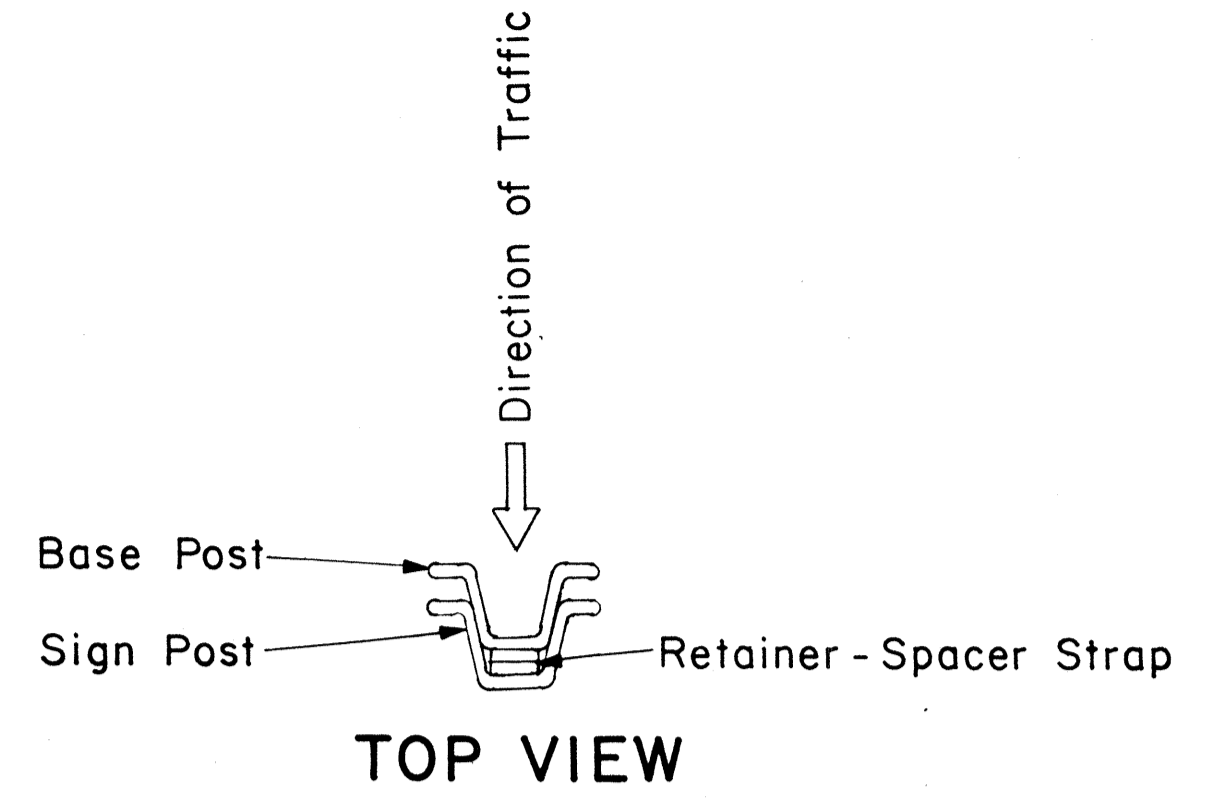
Post Size	AxBxH (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	124	17.71	15.50	13.77	12.40	11.27	10.33	
4.00 lbs./ft.	241	34.43	30.13	26.78	24.10	21.91	20.08	

FLANGED CHANNEL: 3-POST INSTALLATION

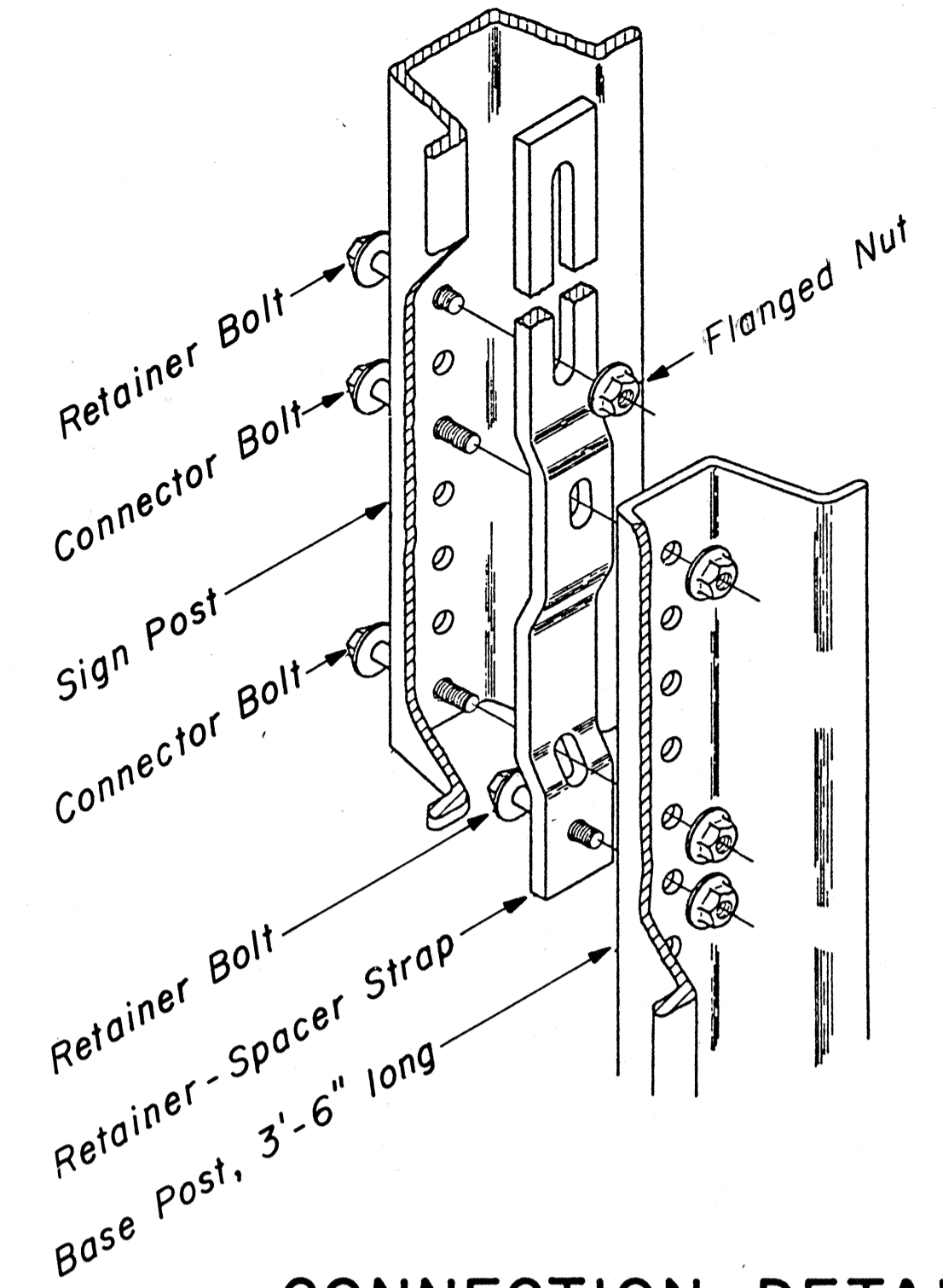
Post Size	AxBxH (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	187	26.71	23.38	20.78	18.70	17.00	15.58	
4.00 lbs./ft.	362	51.71	45.25	40.22	36.20	32.91	30.17	

WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE

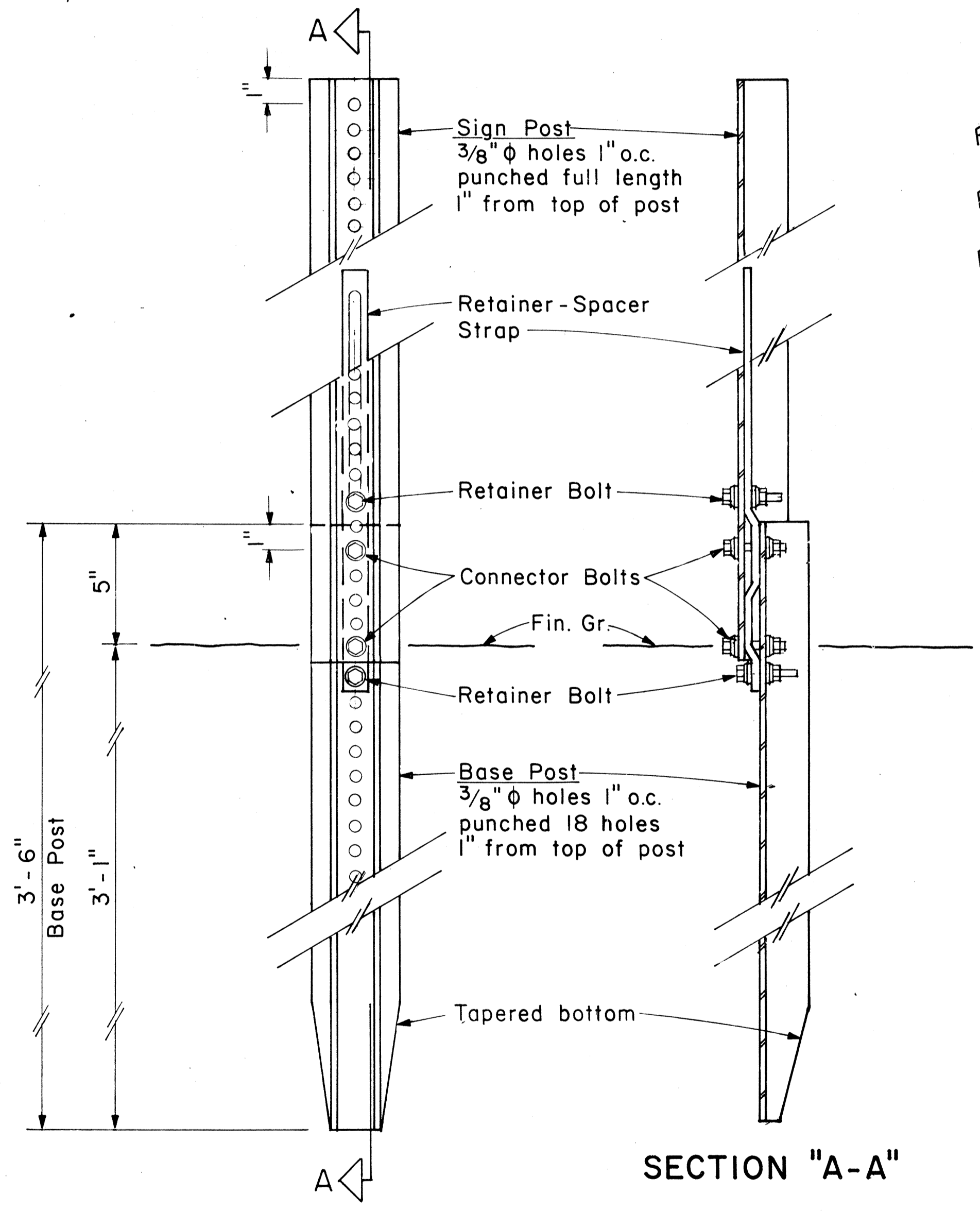


TOP VIEW



CONNECTION DETAIL

Not to Scale

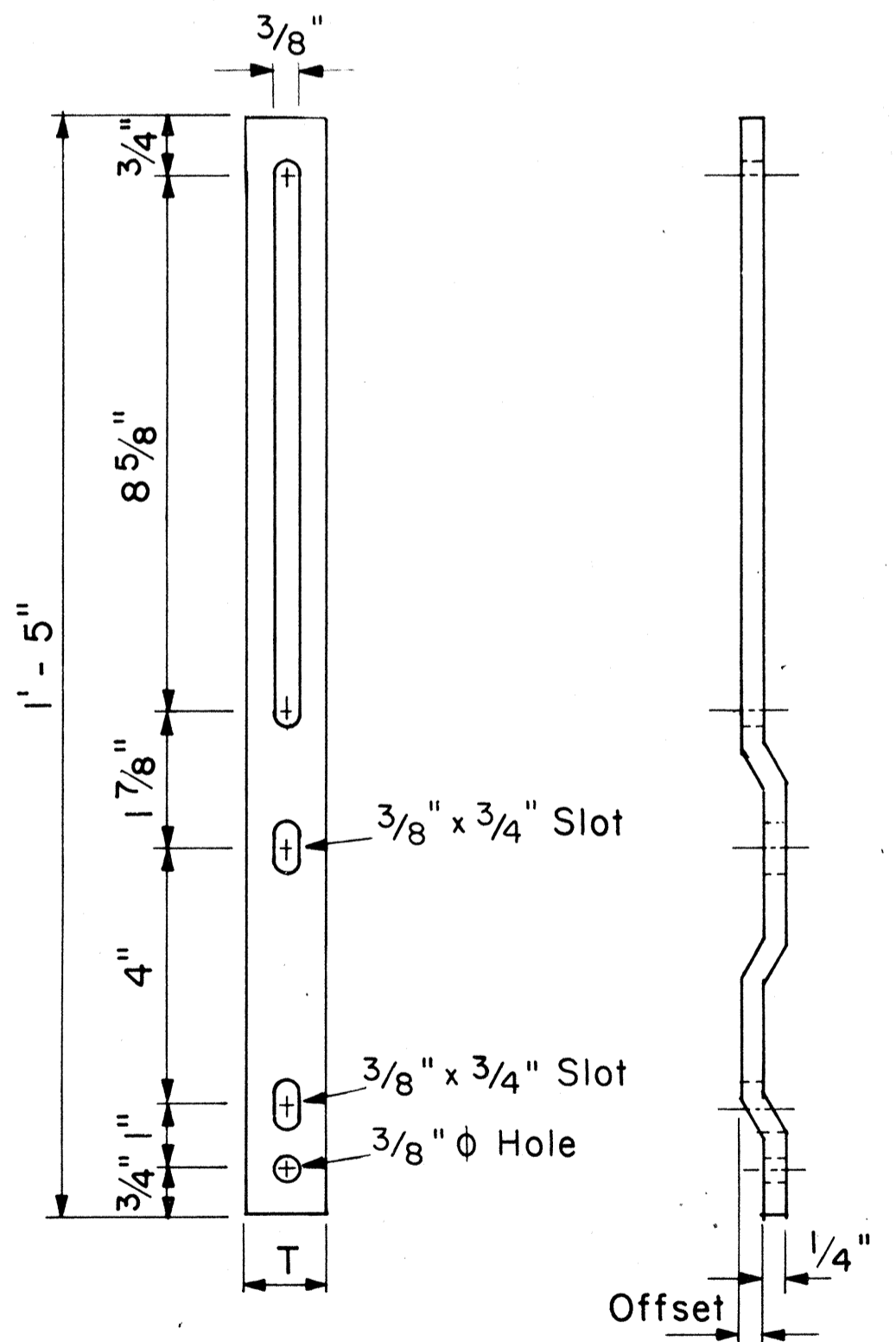


SECTION "A-A"

BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



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"

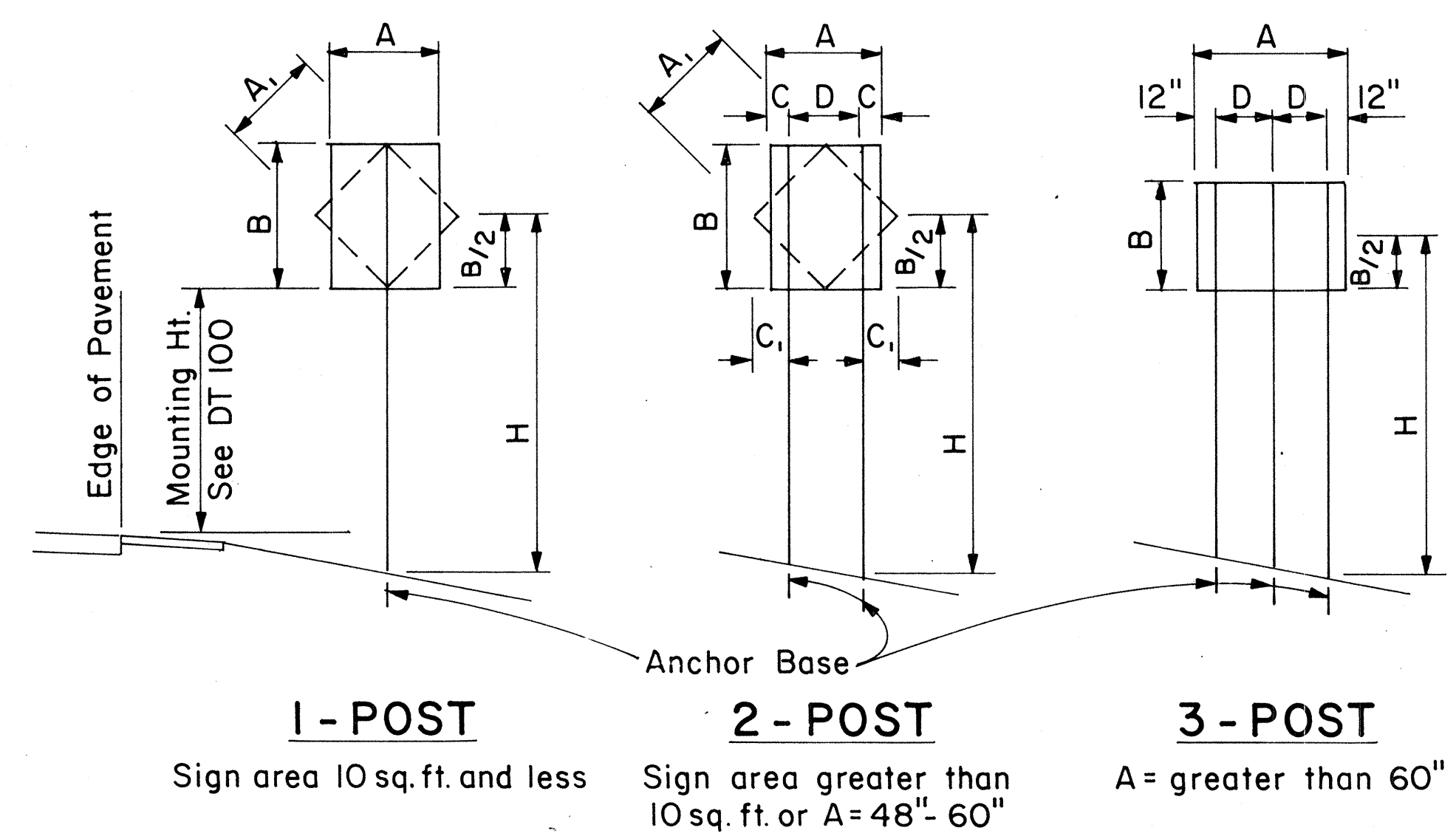
DATE: _____
 SURVEY DOTTED BY: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. _____

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 x B) is known,
 $Maximum\ H = \frac{Factor}{sign\ area(A \times B)}$
and if H is known,
 $Maximum\ sign\ area(A \times B) = \frac{Factor}{H}$

A or A ₁	C	C ₁
36"	6"	-
48"	9"	19"
60"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 2.



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

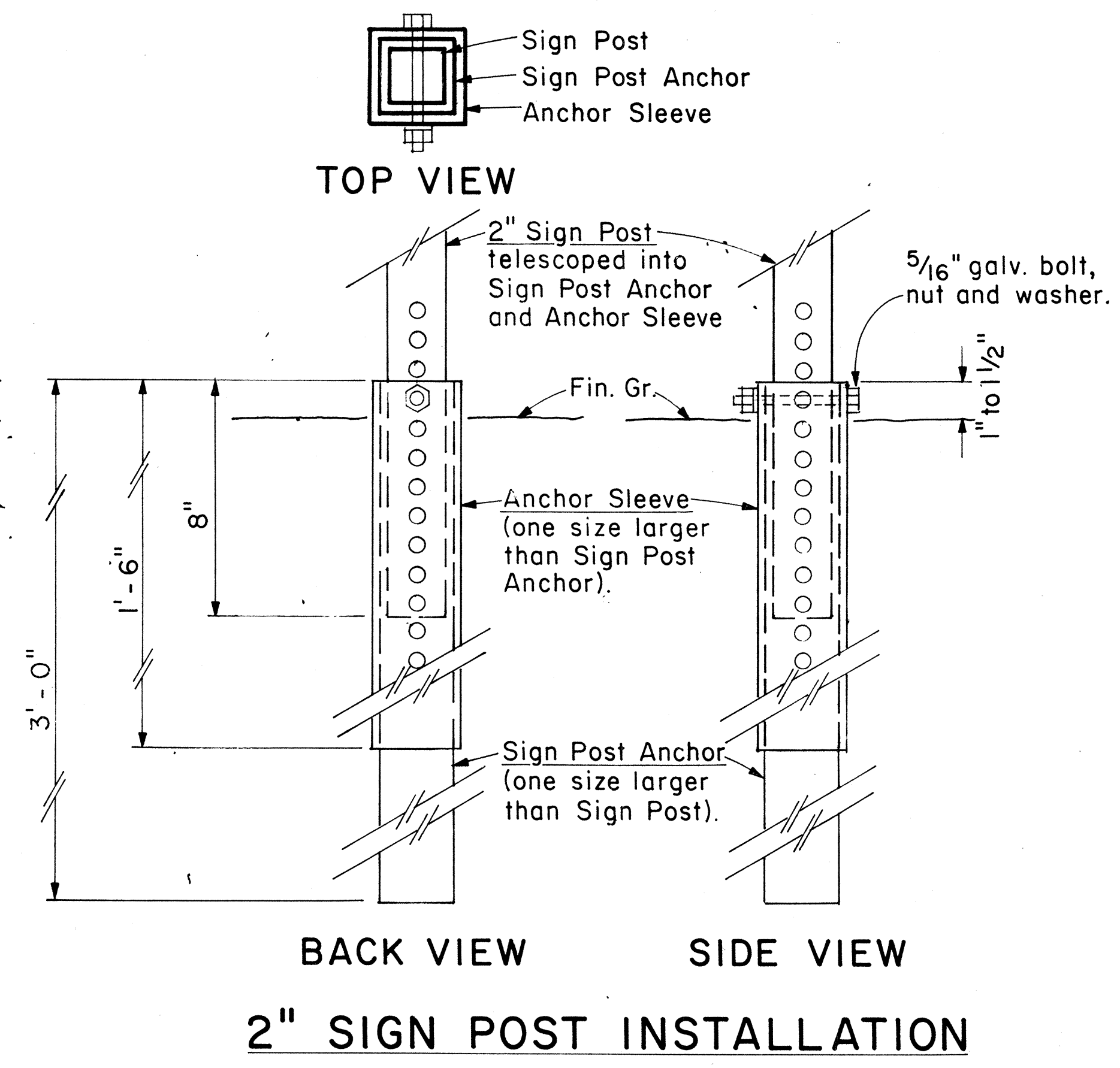
Not to Scale

SQUARE TUBE: 1- POST INSTALLATION		H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
Post Size	A x B x H (Factor)	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	

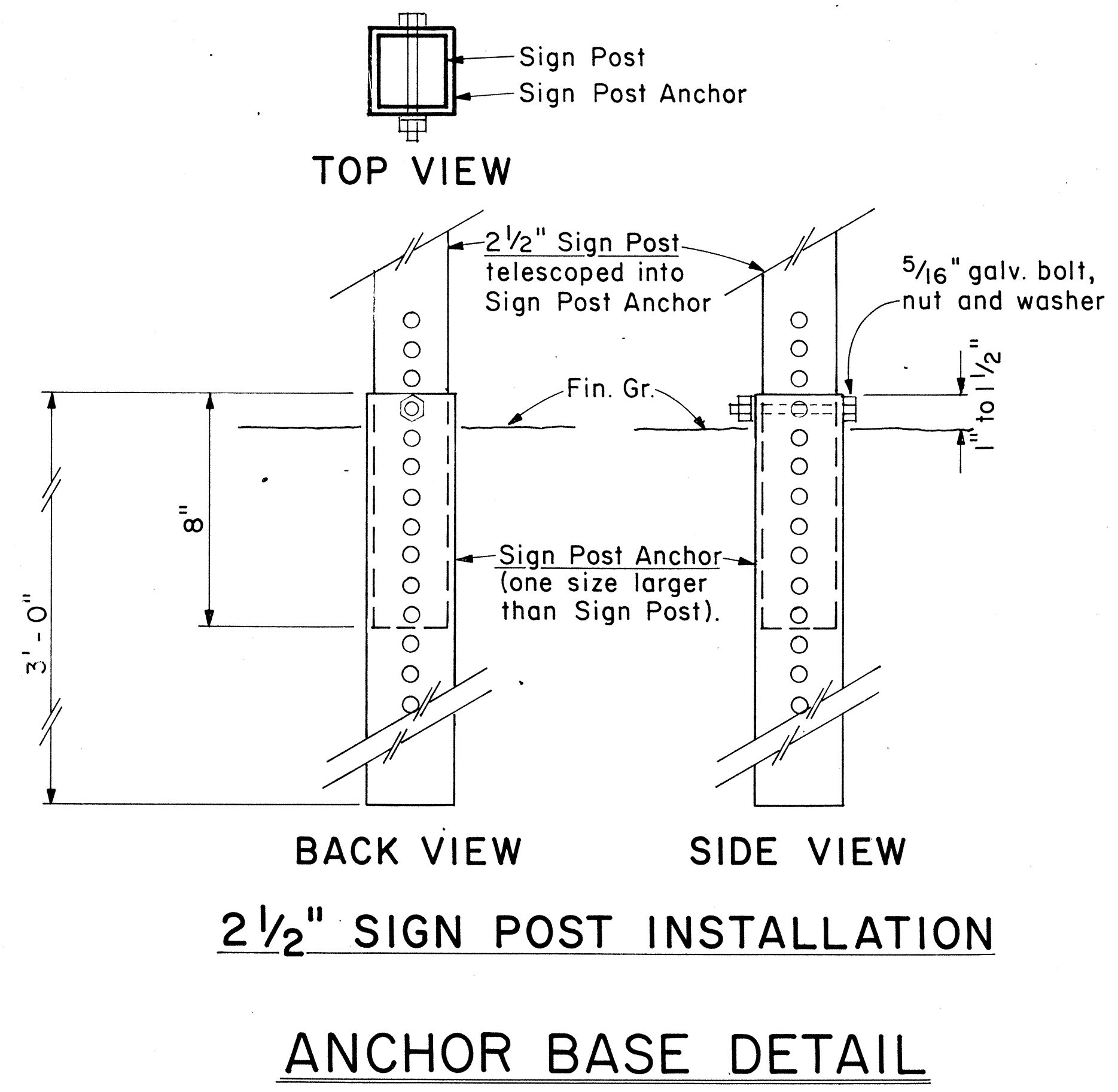
SQUARE TUBE: 2- POST INSTALLATION		H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
Post Size	A x B x H (Factor)	7	8	9	10	11	12	
2"	122	17.4	15.2	13.5	12.2	11.0	10.1	
2 1/2"	212	30.2	26.5	23.5	21.1	19.2	17.6	
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5	

SQUARE TUBE: 3- POST INSTALLATION		H = Ground Level to Midpoint (ft.)						A x B (Area, sq. ft.)
Post Size	A x B x H (Factor)	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	

WINDLOAD CHARTS



2" SIGN POST INSTALLATION



2 1/2" SIGN POST INSTALLATION
ANCHOR BASE DETAIL
Scale: 3" = 1'-0"


DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
NOTE BOOK: _____
No. _____

APPROVAL RECOMMENDED:
Eishi Tanaka 9/2/82
TRAFFIC ENGINEER DATE
APPROVED:
Robert Sakishi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

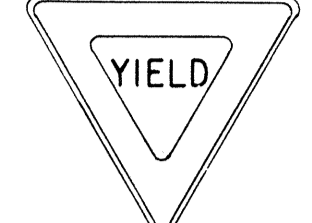
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING
Scale: As Shown Date: Sepi. 1982
SHEET No. 10 OF 18 SHEETS DT100B


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-117	1984	34	39



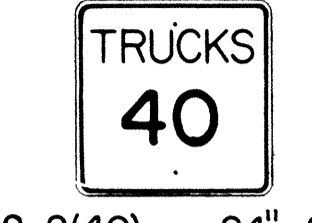
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



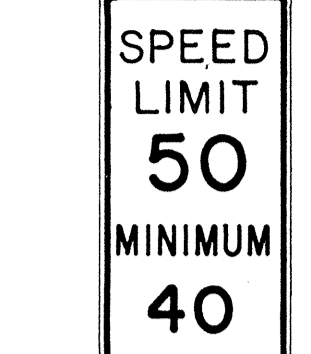
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



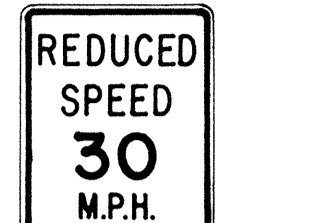
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



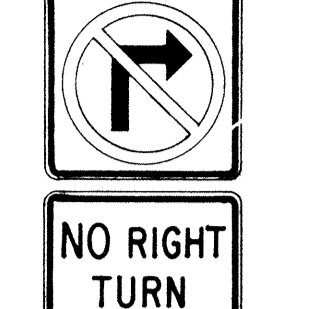
R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"



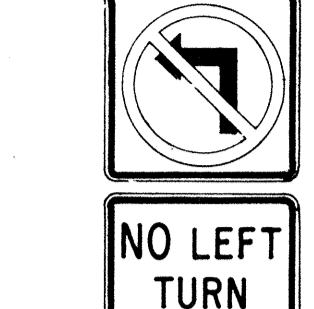
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"




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



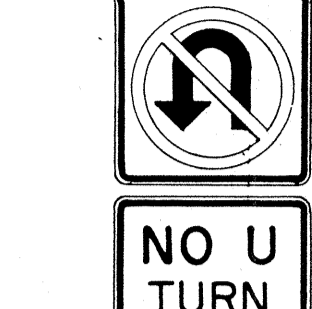
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"




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



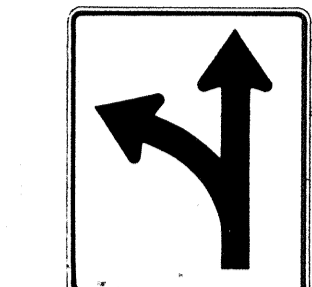
R3-3 24" x 24"
R3-3-A 48" x 48"




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



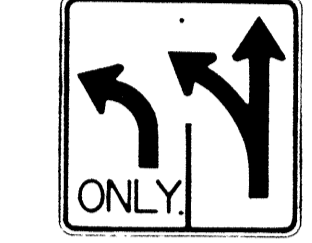
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



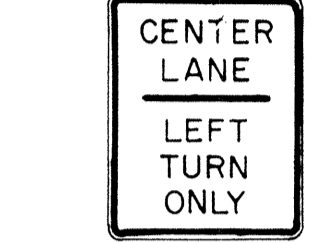
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"




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



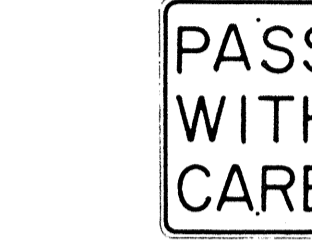
R3-8(L) 30" x 30"
R3-8(L)-A 36" x 36"
R3-8(L)-B 48" x 48"




R3-9 24" x 30"



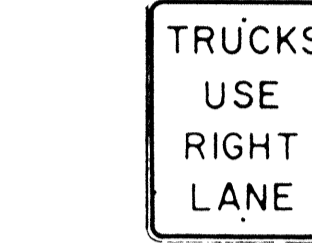
R4-1 24" x 30"




R4-2 24" x 30"




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




R4-5 24" x 30"



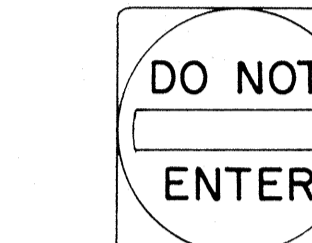
R4-6(500) 24" x 30"




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



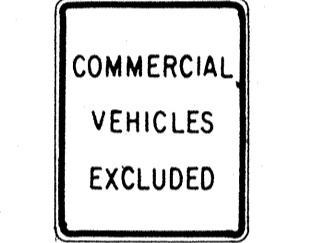
R4-8 24" x 30"
24" x 18"




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



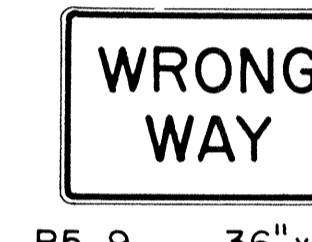
R5-2 24" x 24"
24" x 18"



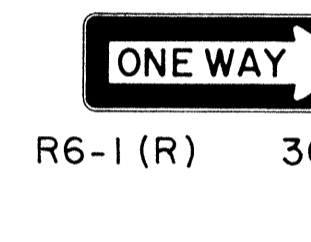
R5-4 24" x 30"




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"



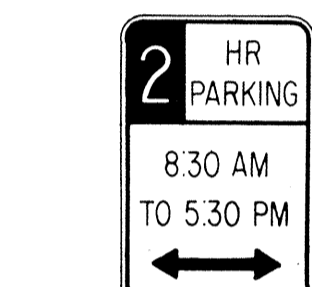
R7-1 12" x 18"
R7-1-A 24" x 30"



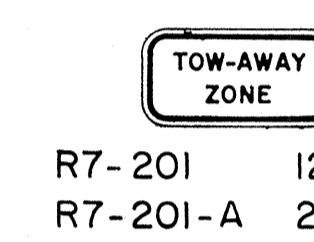
R7-4 12" x 18"
R7-4-A 24" x 30"




R7-1.7(R) 12" x 18"



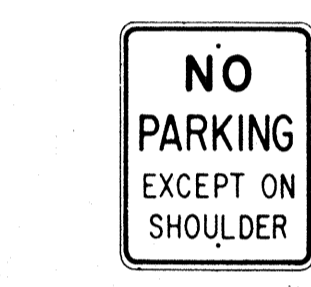
R7-108 12" x 18"




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



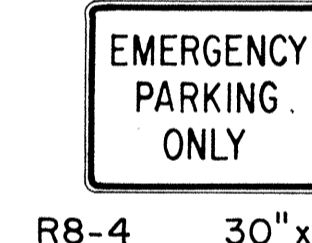
R8-1 24" x 30"




R8-2 24" x 50"




R8-3 24" x 30"



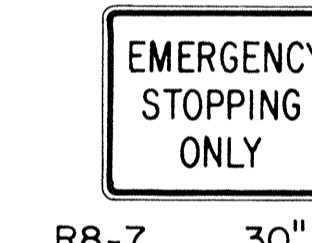
R8-4 30" x 24"
R8-4-A 48" x 36"



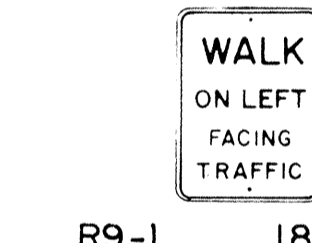
R8-5 24" x 30"




R8-6 24" x 30"




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



R9-1 18" x 24"



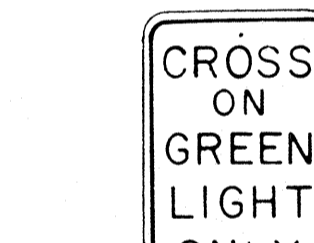
R9-2 12" x 18"



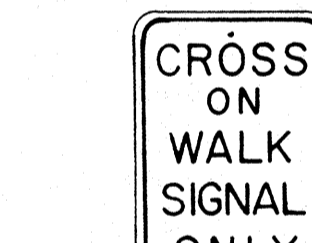
R9-3 12" x 18"



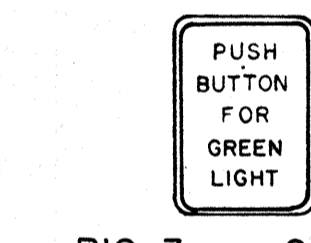
R9-4 18" x 24"



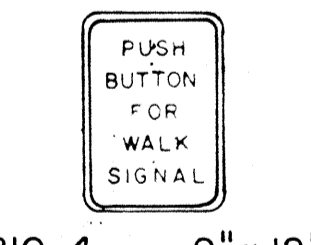
R10-1 12" x 18"



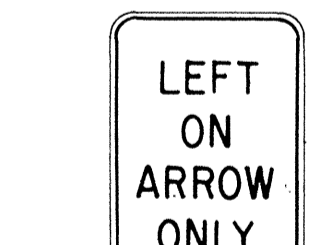
R10-2 12" x 18"




R10-3 9" x 12"



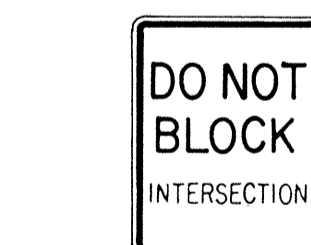
R10-4 9" x 12"



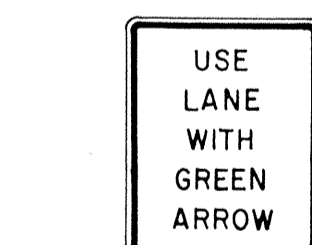
R10-5 24" x 30"



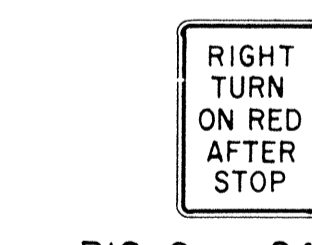
R10-6 24" x 36"



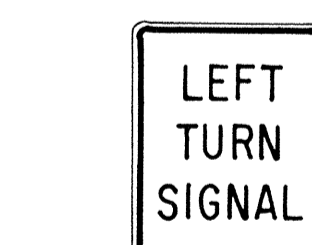
R10-7 24" x 30"




R10-8 24" x 30"




R10-9 24" x 30"



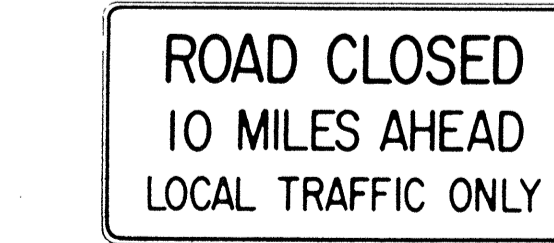
R10-10 24" x 30"



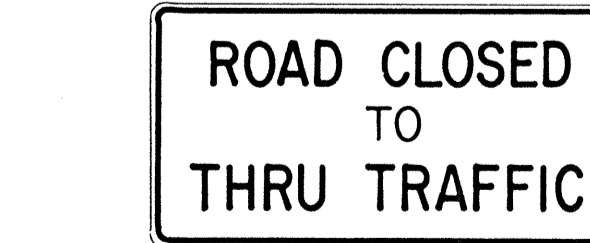
R11-1 24" x 30"




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:
Etsuki Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
John P. Salsbery 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.F.	3/20/72
2	Revised General Note 1	H.F.	10/14/74
3	Added General Note 5	H.F.	10/14/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

SHEET No. 11 OF 16 SHEETS DT 101

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
CHECKED BY: _____
DESIGNED BY: _____
NOTE BOOK No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-093-1(7)	1984	35	39



CW20-1a 48"x48"



CW20-2d 48"x48"



CW20-3b 48"x48"



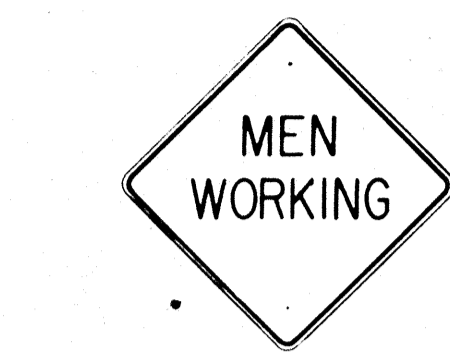
CW20-4d 48"x48"



CW20-5d(L) 48"x48"



CW20-7c 48"x48"



CW21-1 30"x30"



CW21-2 30"x30"



CW21-3 36"x36"



CW21-4 36"x36"



CW21-5 30"x30"



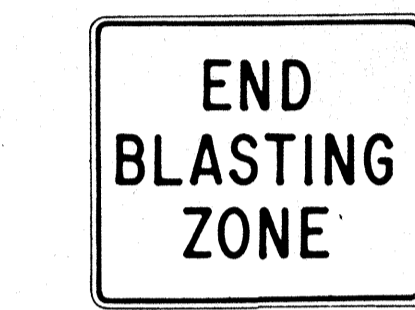
CW21-6 30"x30"



CW22-1b 48"x48"



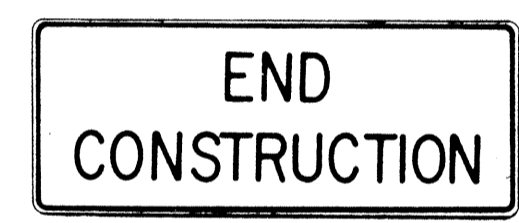
CW22-2 42"x36"



CW22-3 42"x36"



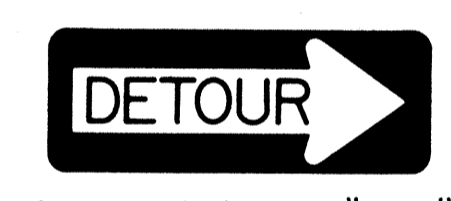
CG20-1(5) 60"x36"



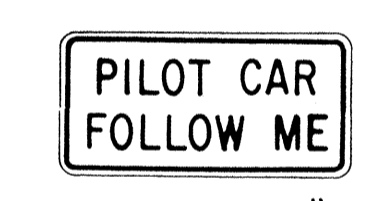
CG20-2 60"x24"



CM4-9(R) 30"x24"



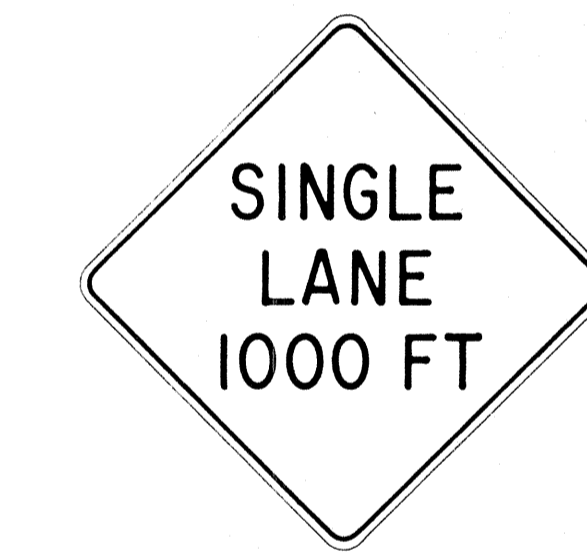
CM4-10(R) 48"x18"



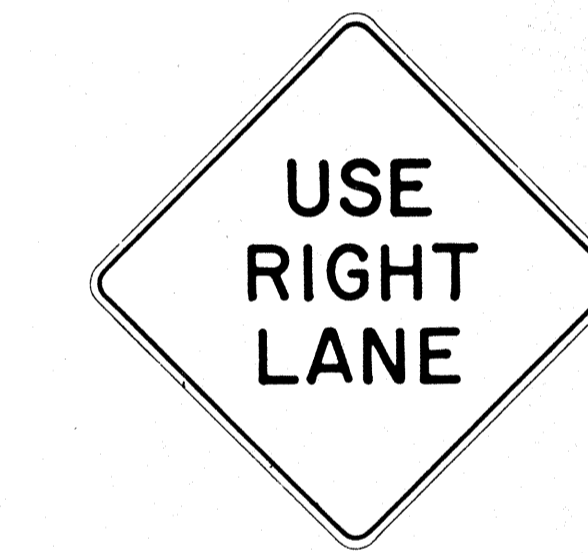
CG20-4 36"x18"



CW23-1 36"x36"



CW23-2b 48"x48"



CW23-3(R) 48"x48"

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
DATE 3/21/72

APPROVED:
Arthur Sakai
ASSISTANT CHIEF, ENGINEERING
DATE 2/23/72

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

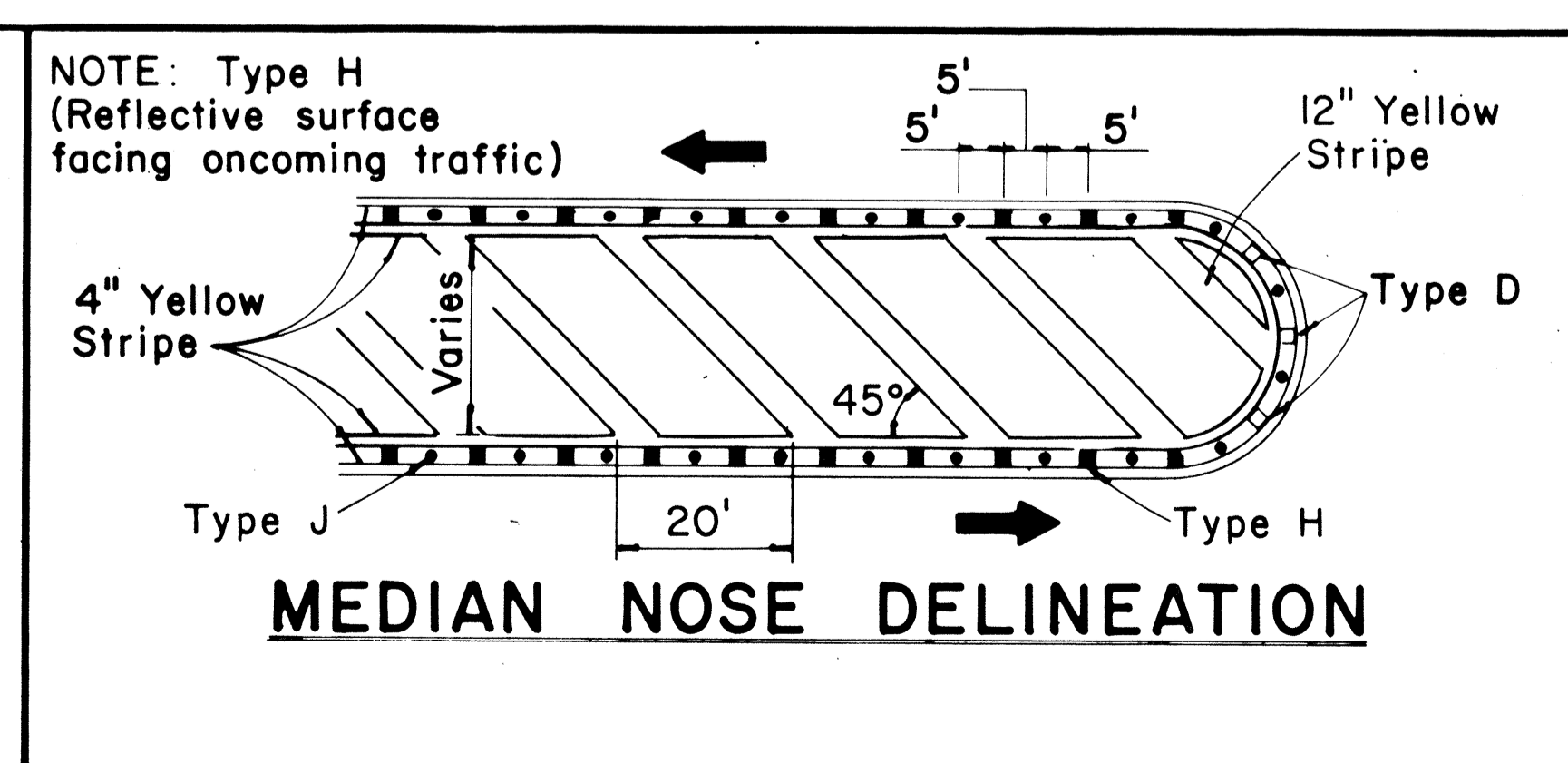
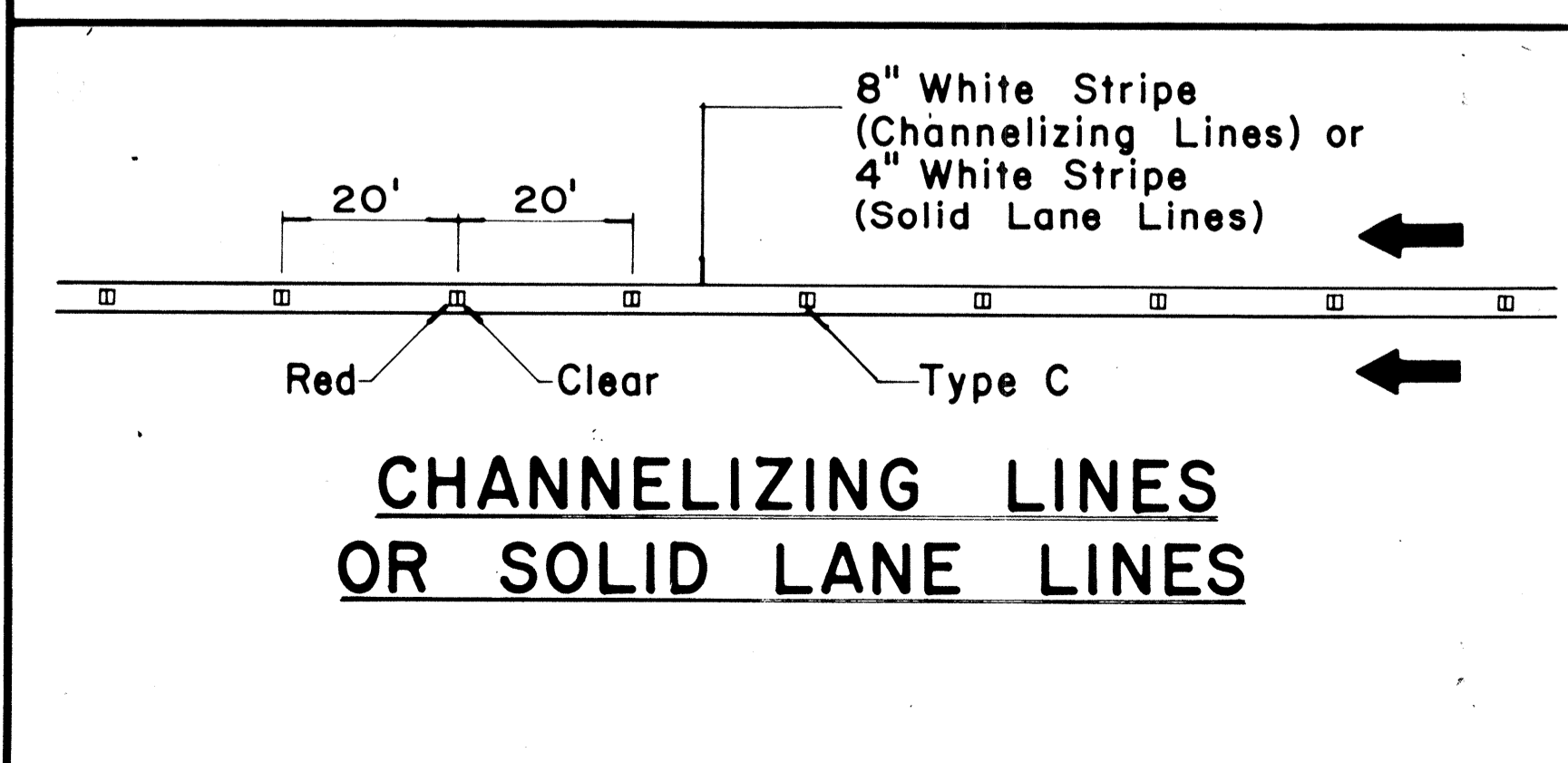
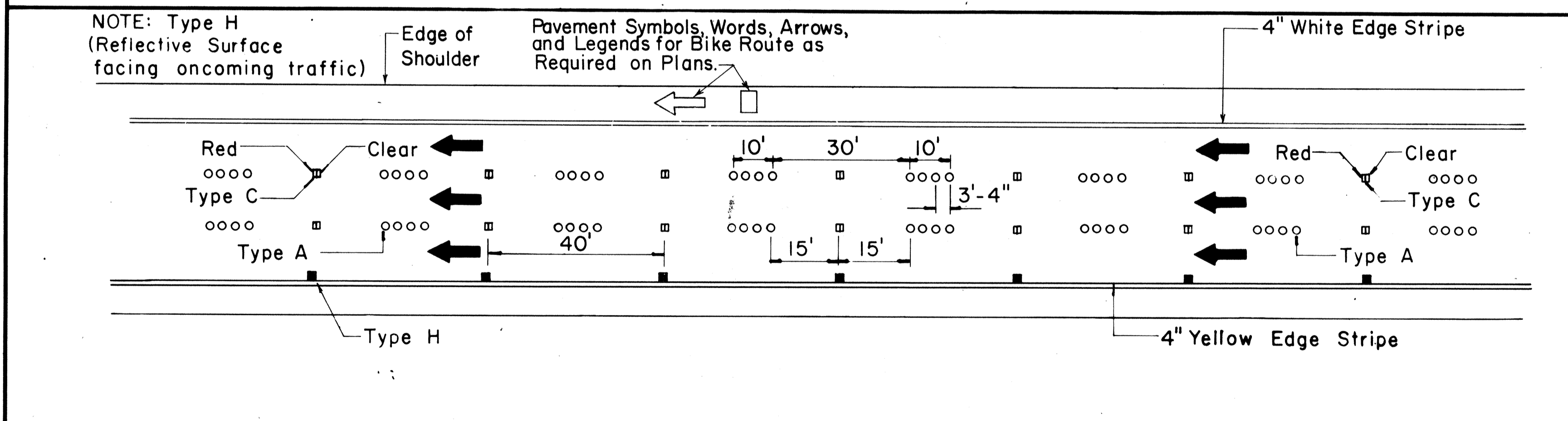
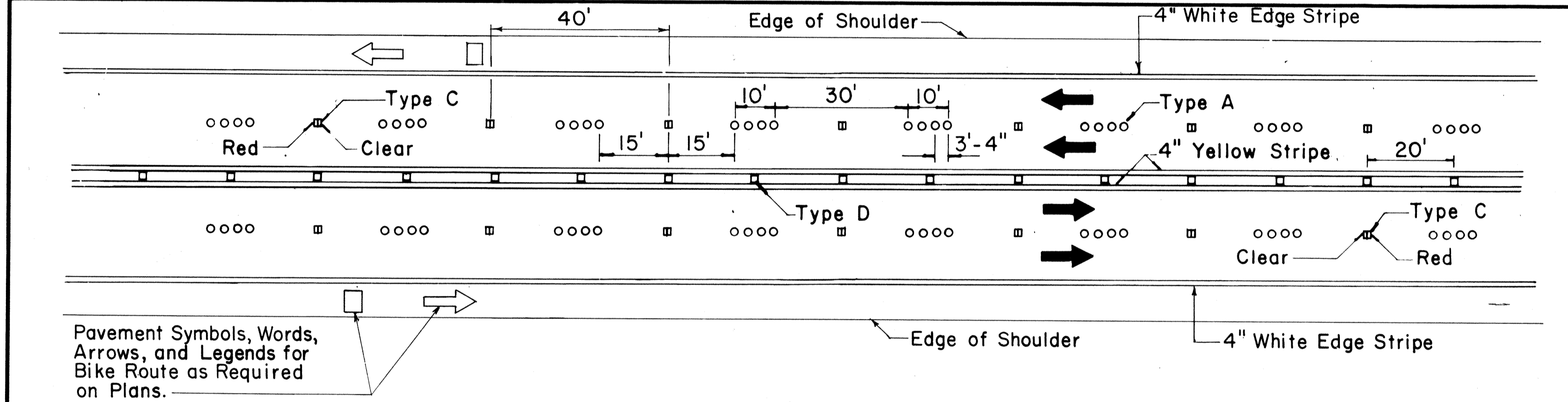
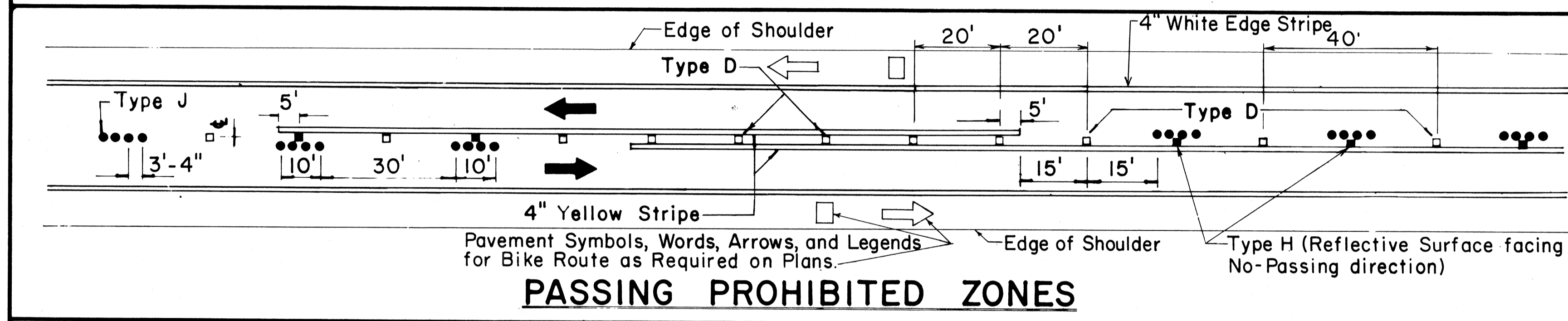
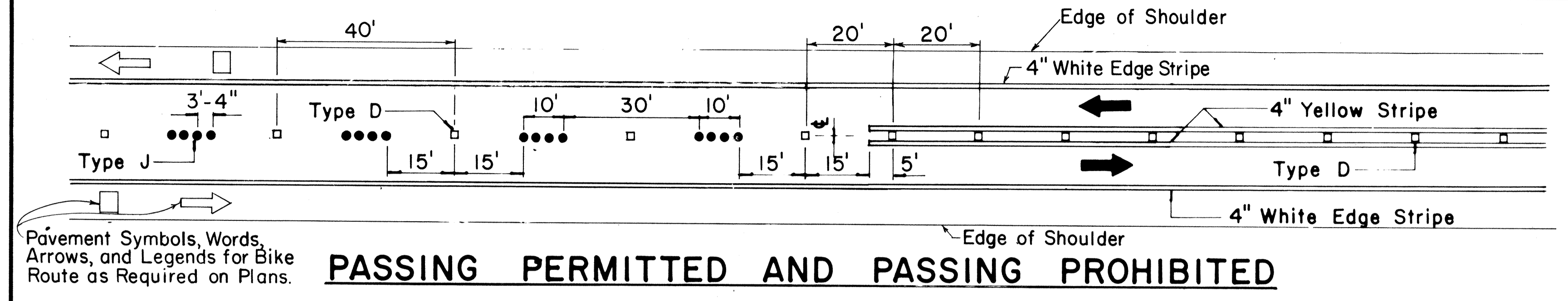
STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. 12 OF 16 SHEETS DT 104

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F093-1(7)	1984	36	39

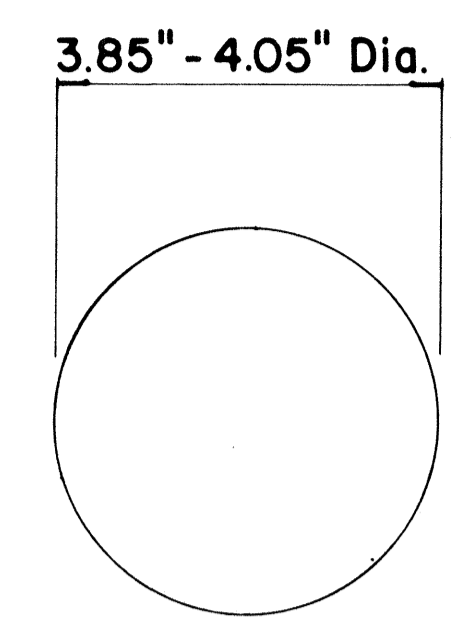


TWO - LANE

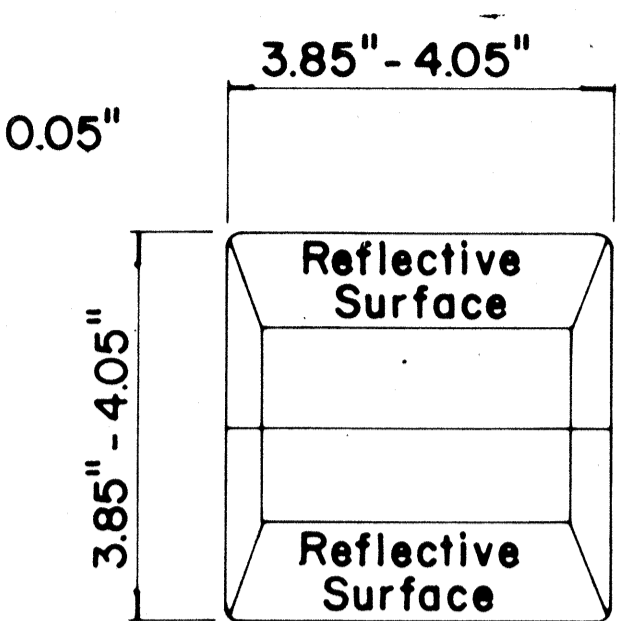
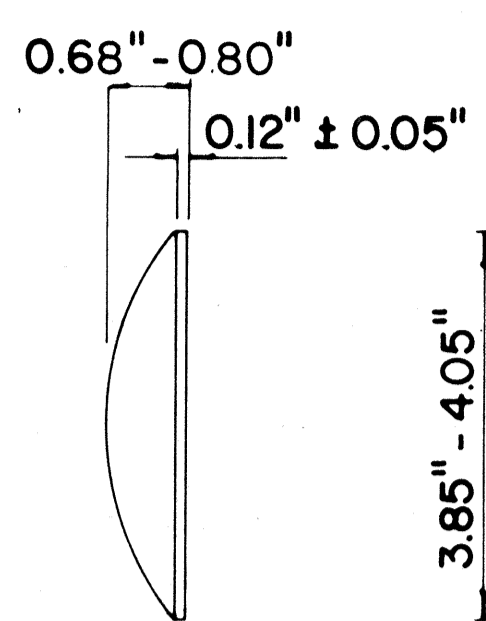
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

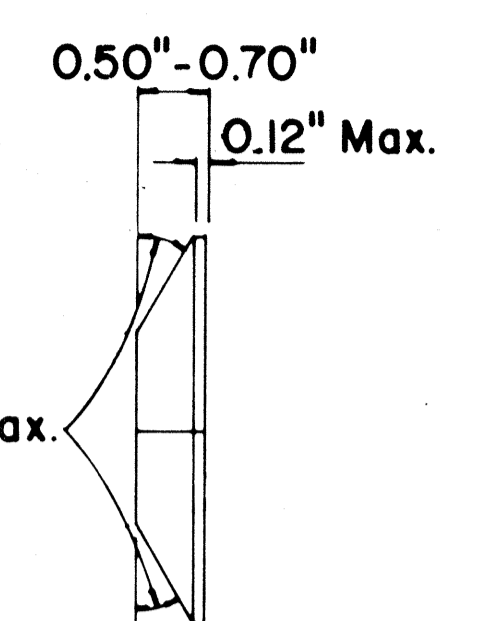
MISCELLANEOUS



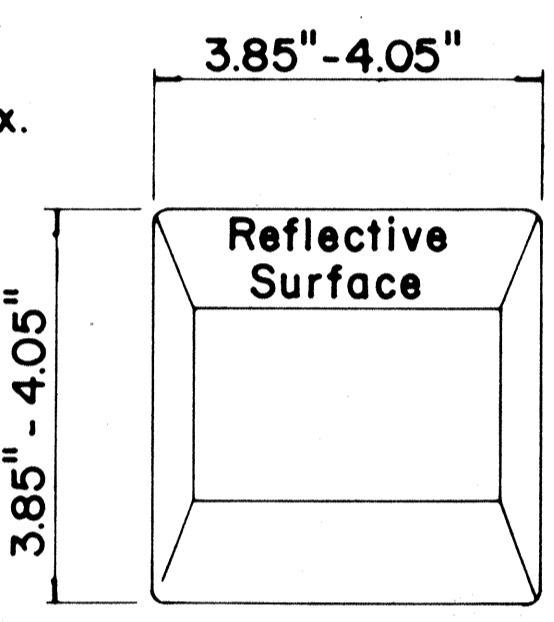
TYPE A
NON-REFLECTIVE WHITE MARKER
TYPE J
NON-REFLECTIVE YELLOW MARKER



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.
- 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:
Ericki Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Herbert J. Zakeich 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

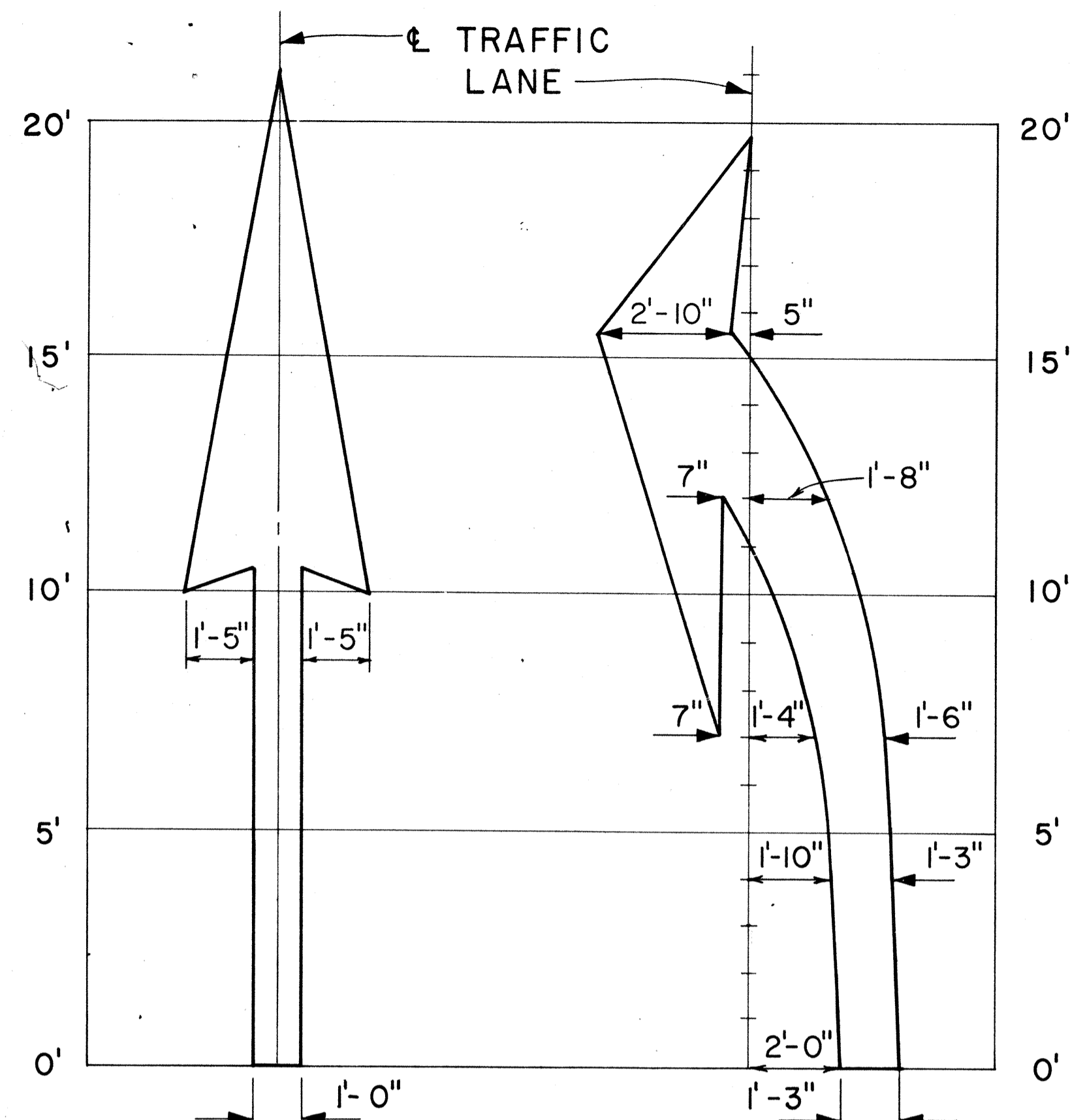
Not to Scale July 1978
SHEET No. 13 OF 16 SHEETS DT 300

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

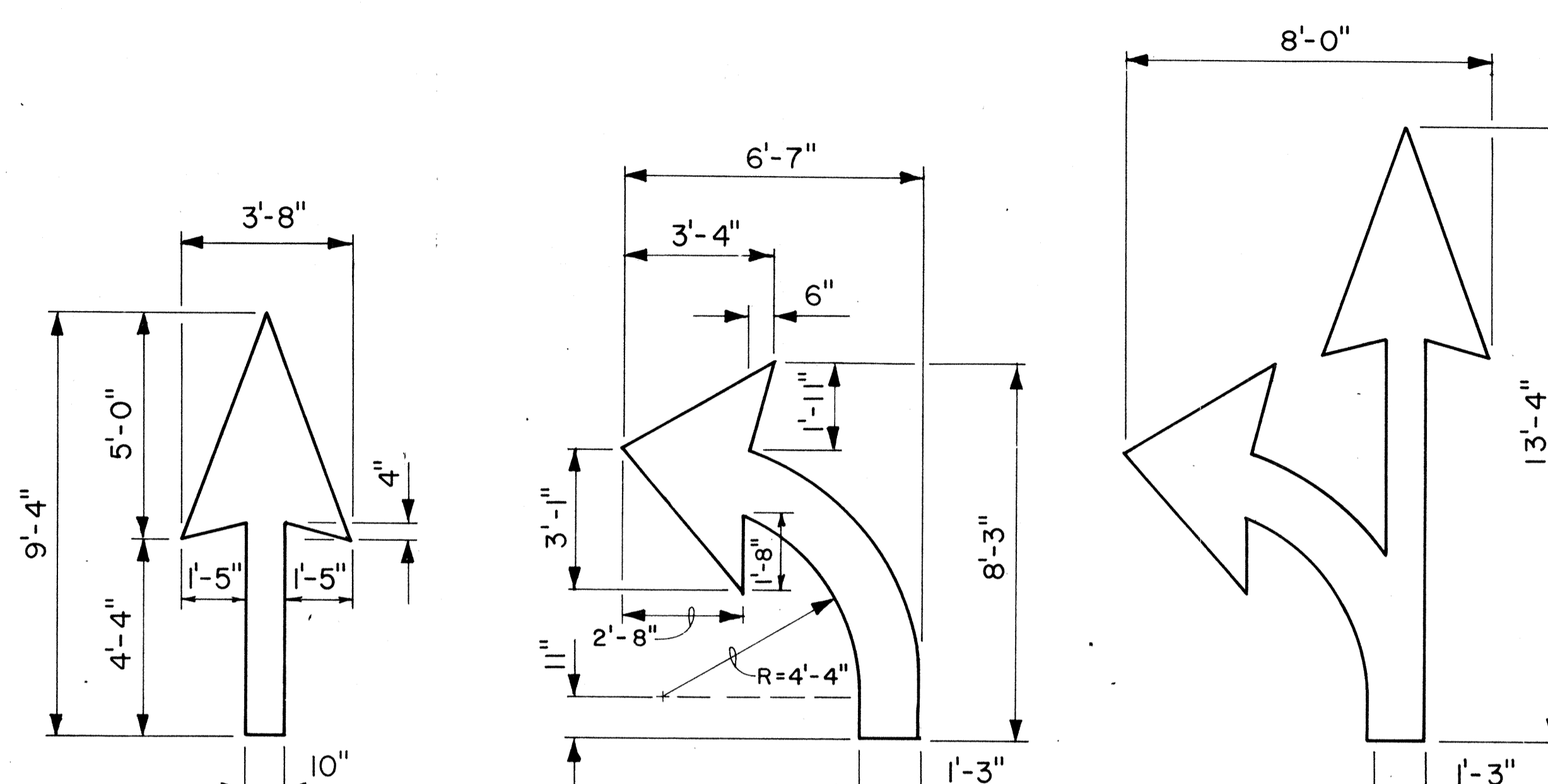
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F093-1(7)	1984	37	39

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.



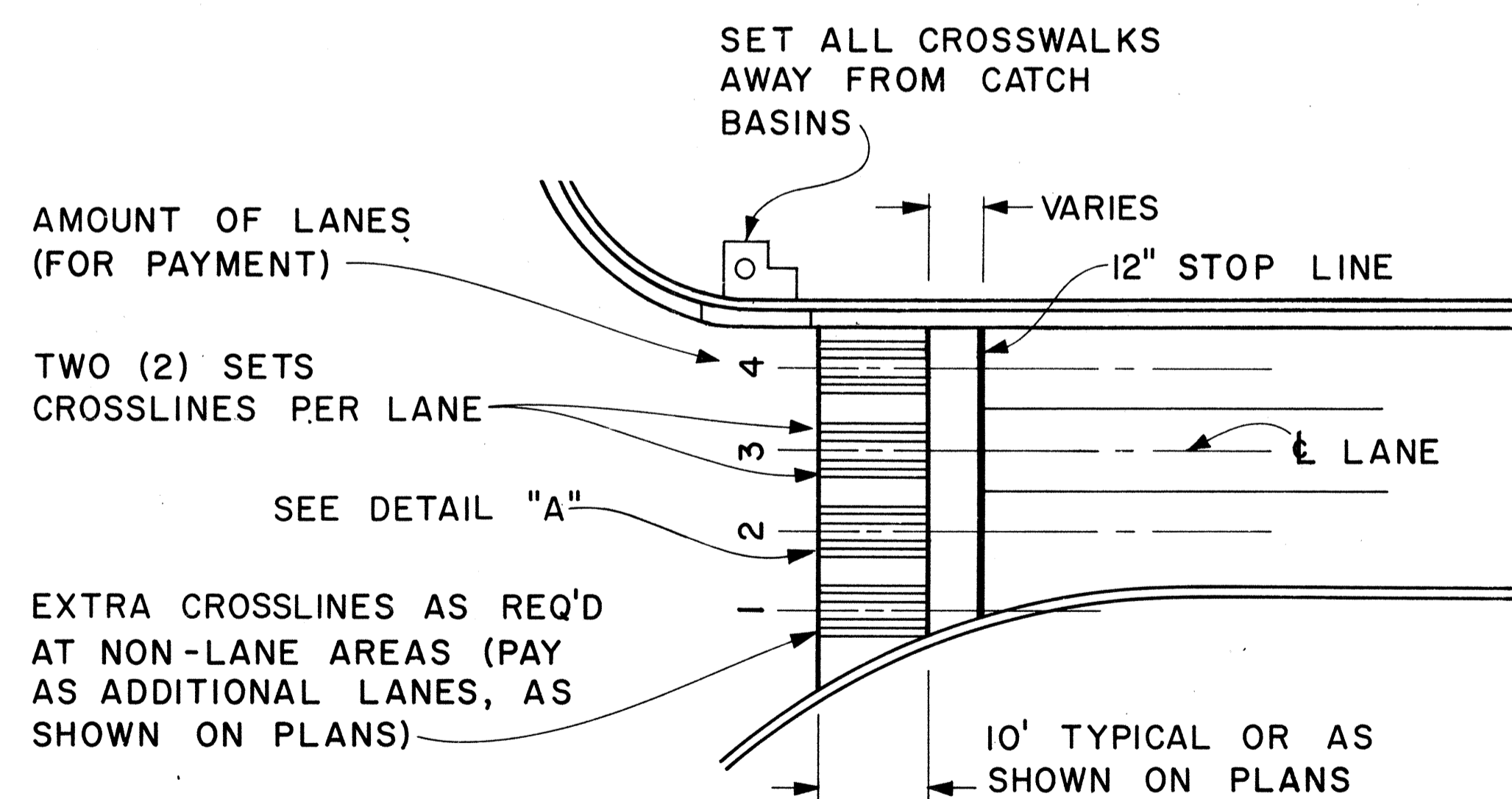
ELONGATED



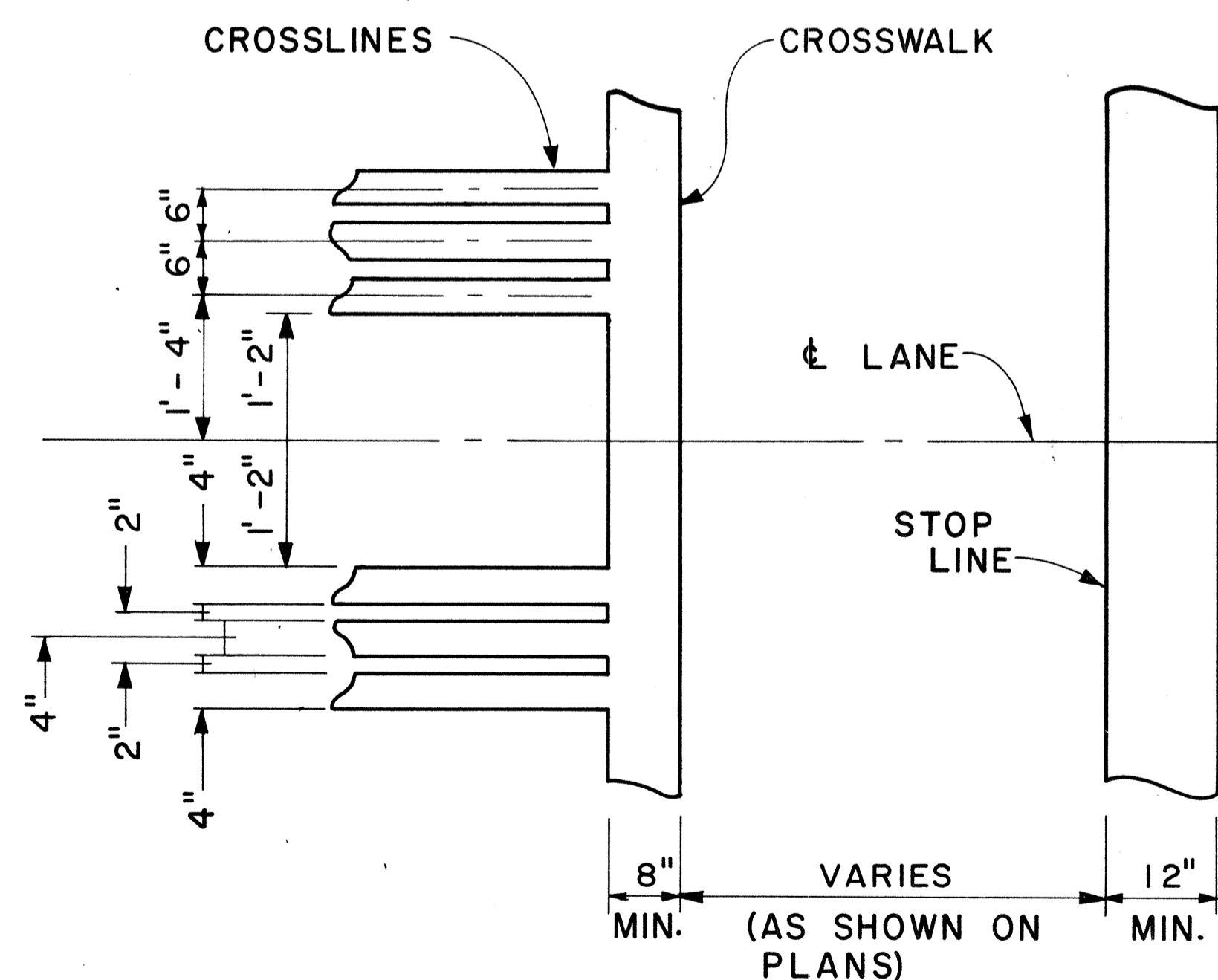
STANDARD

PAVEMENT ARROWS

Scale: 3/8" = 1'



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

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

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

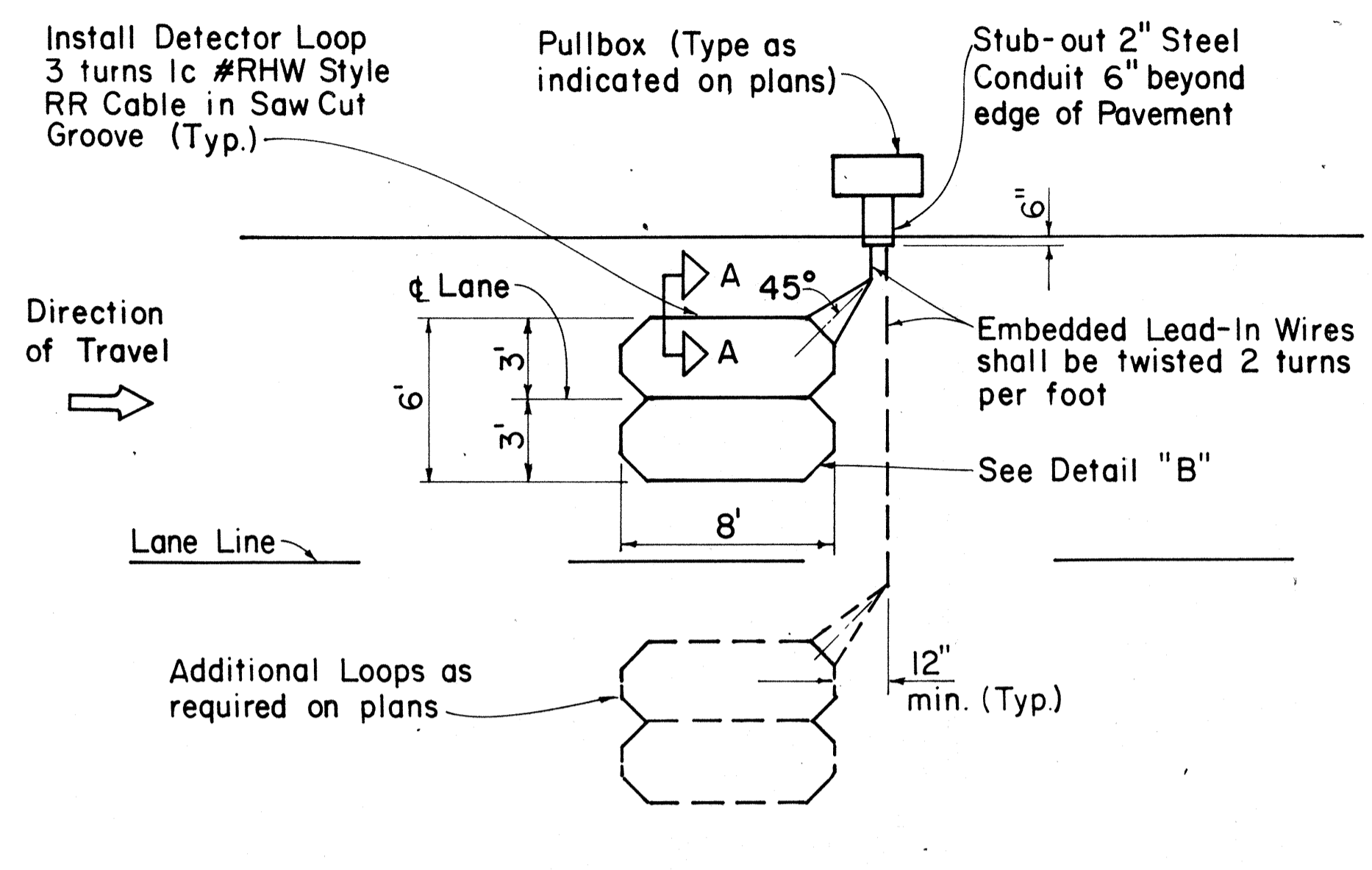
APPROVED:
Harbert S. Rakiahi 5/3/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

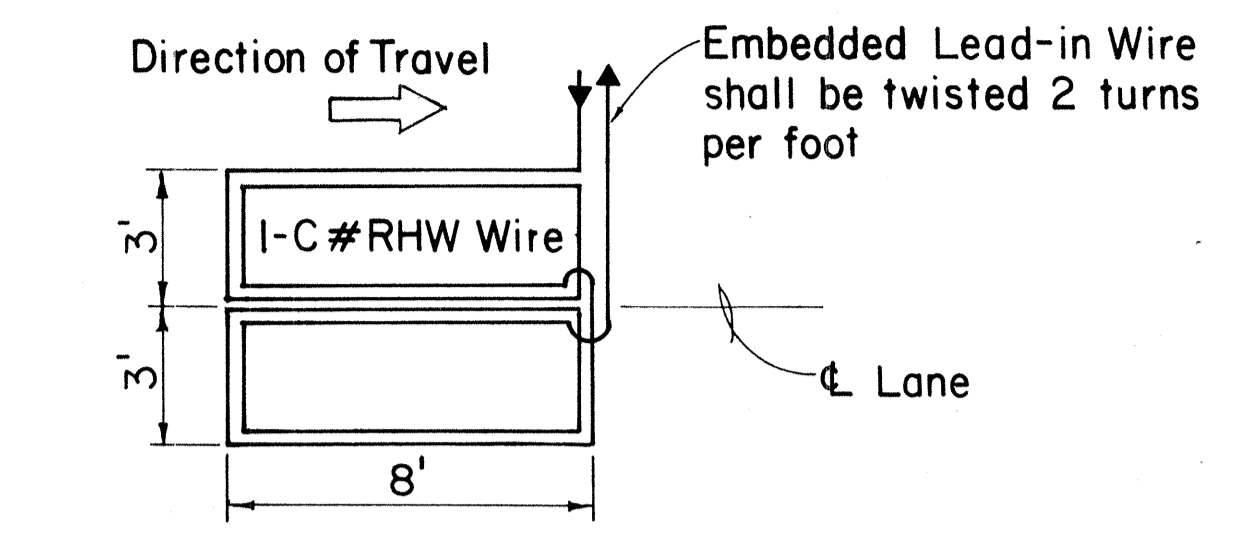
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
 SHEET No. 14 OF 16 SHEETS DT 306

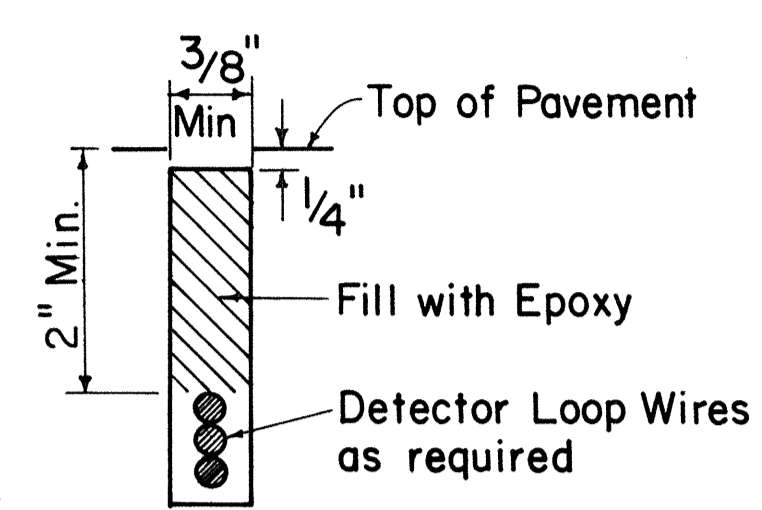
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HAWAII	HAW.	F0931(7)	1984	38	39



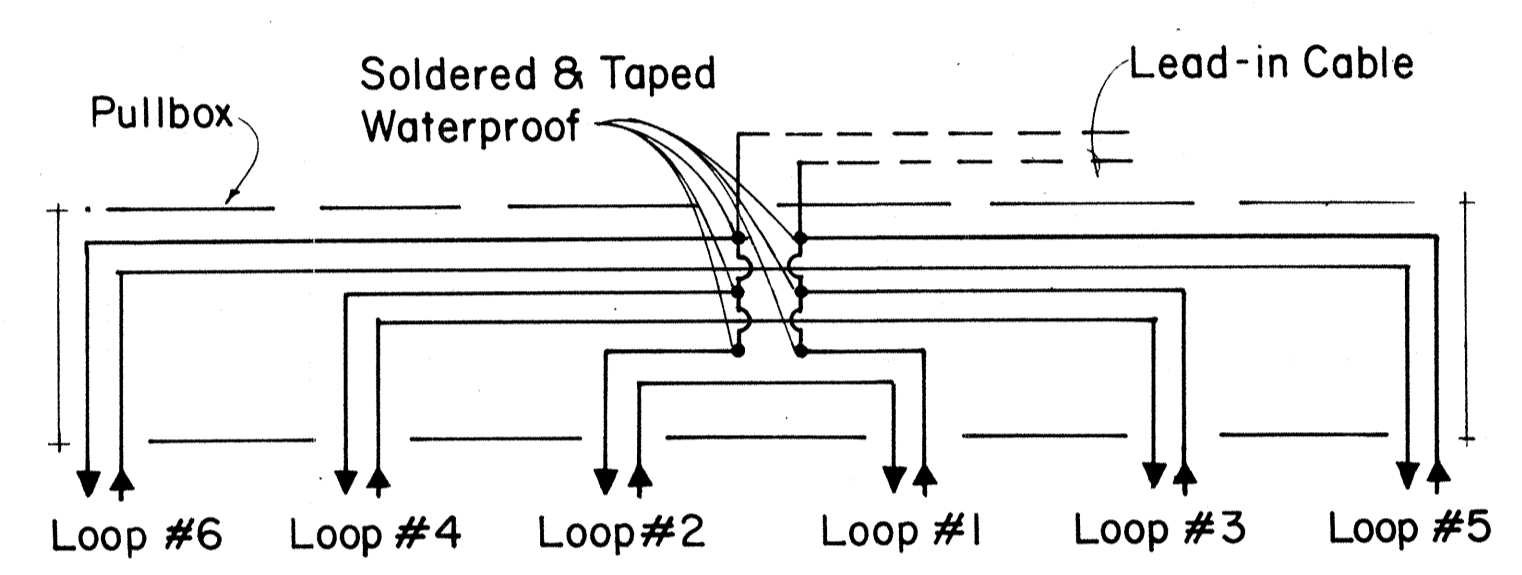
SINGLE LOOP LAYOUT



WIRING DIAGRAM

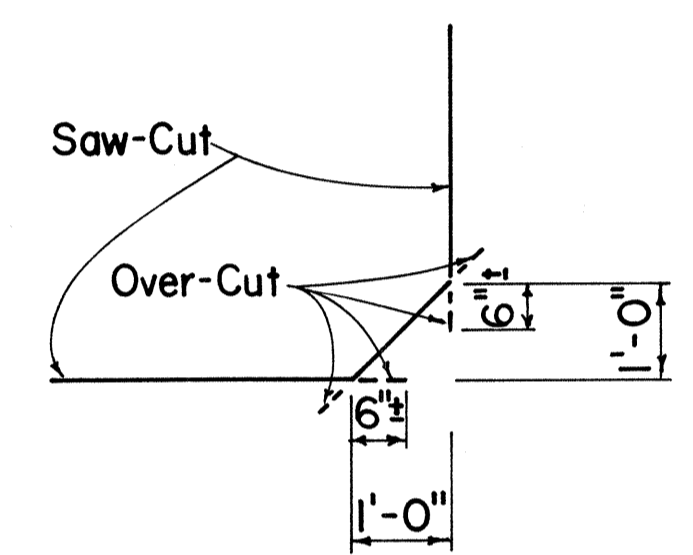


DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)

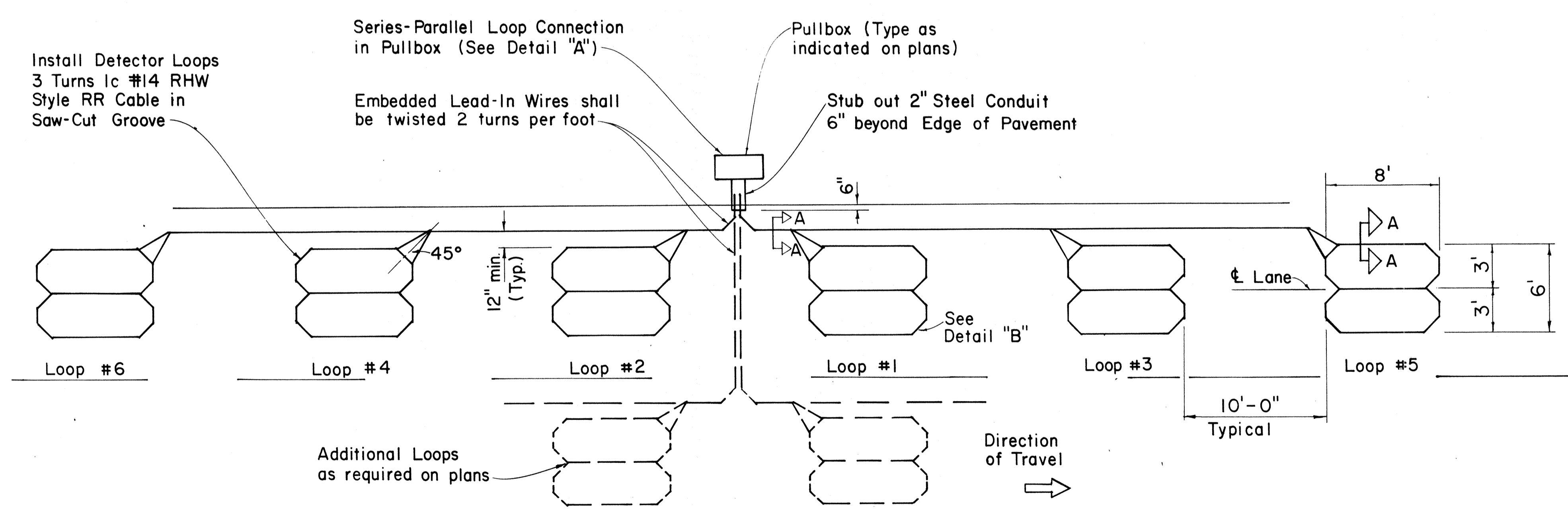


TYPICAL SERIES-PARALLEL LOOP CONNECTION

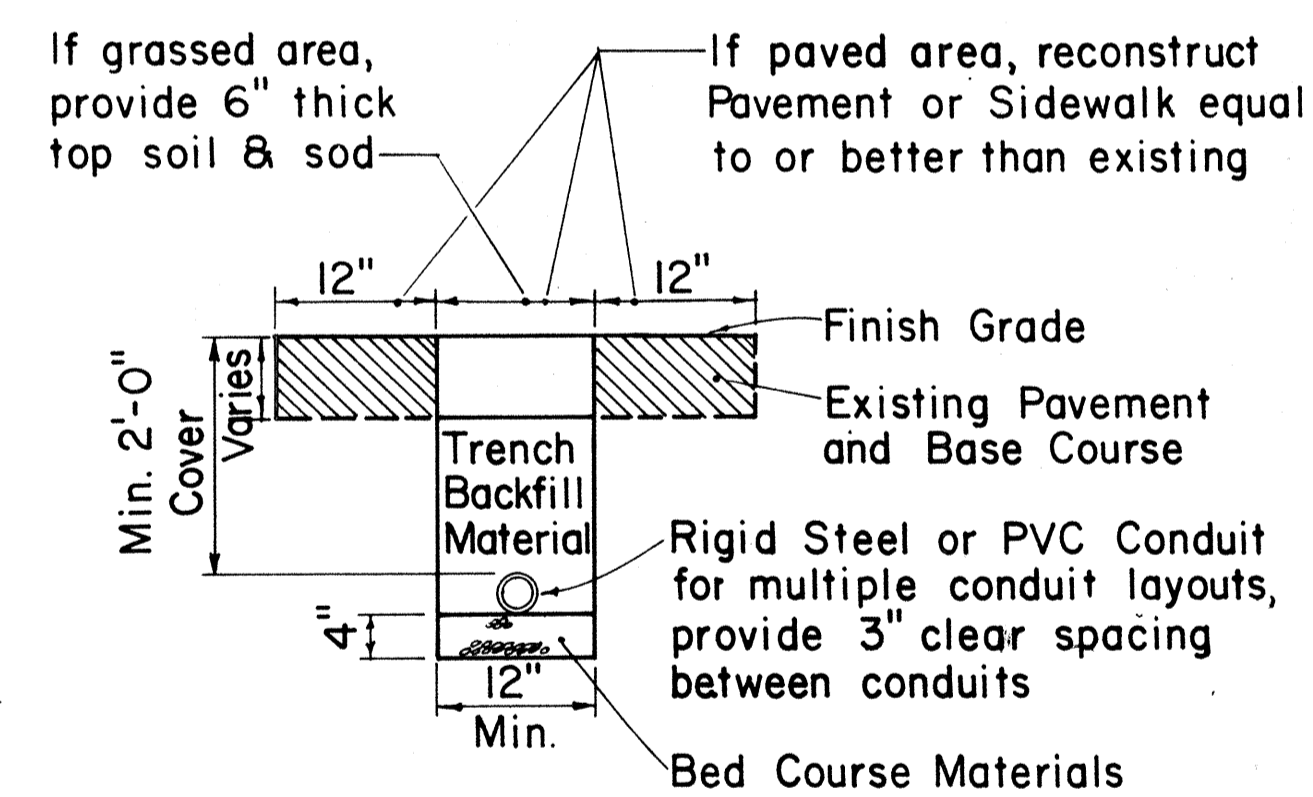
Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

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

APPROVAL RECOMMENDED:
Eiichi Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:
Shigeru Sakaiishi 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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

LOOP DETECTORS

Not to Scale

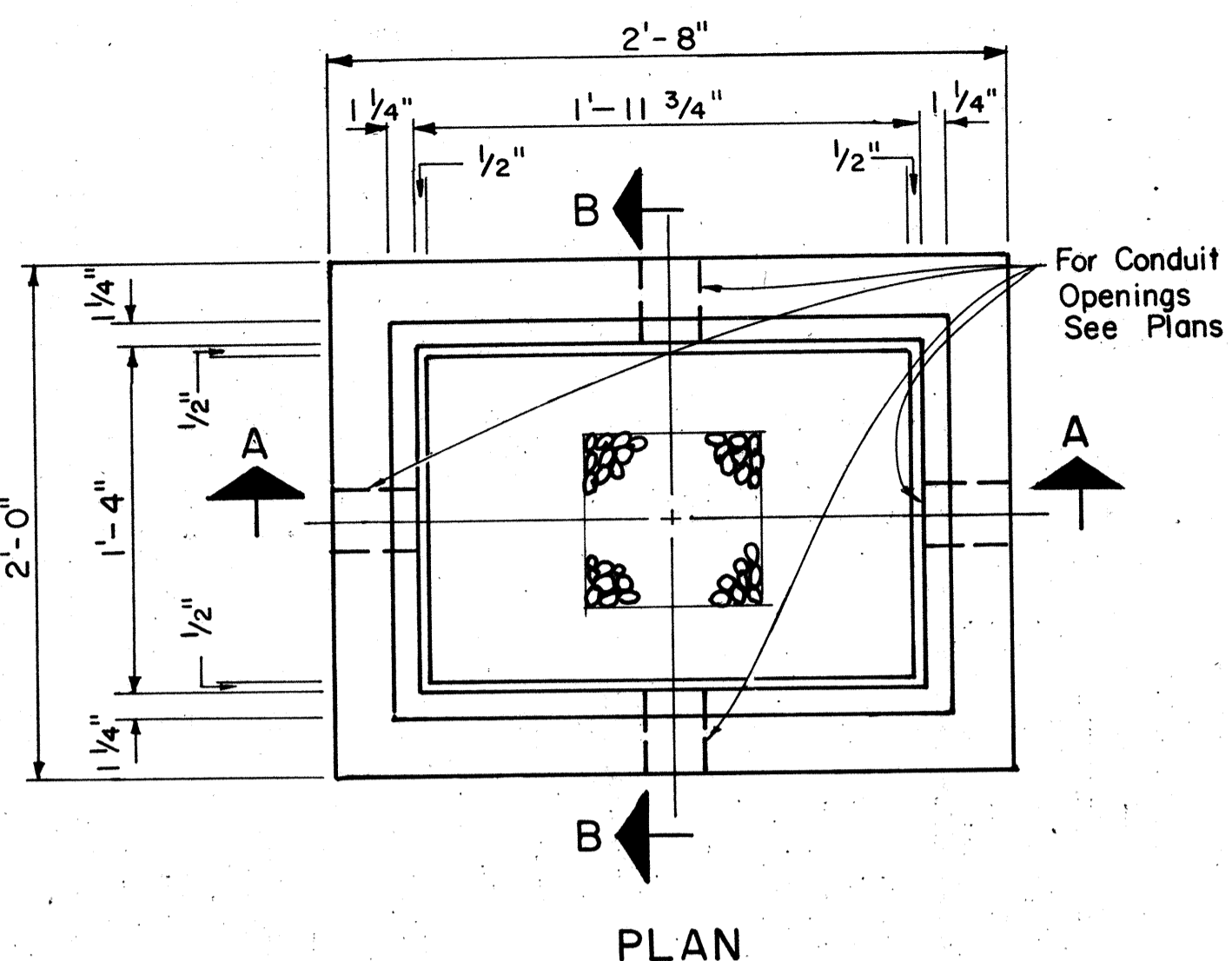
SHEET NO. 15 OF 16 SHEETS DT 405

ORIGINAL PLAN
NOTE BOOK
No.

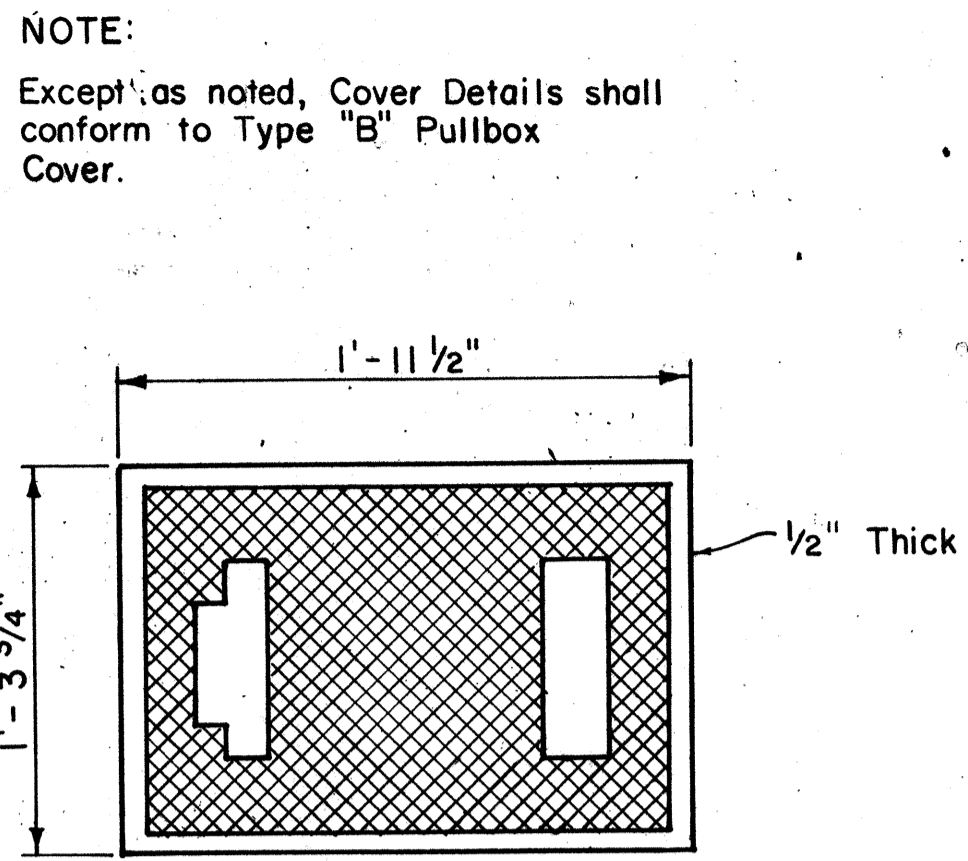
SURVEY PLOTTED BY
DATE

DRAWN BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

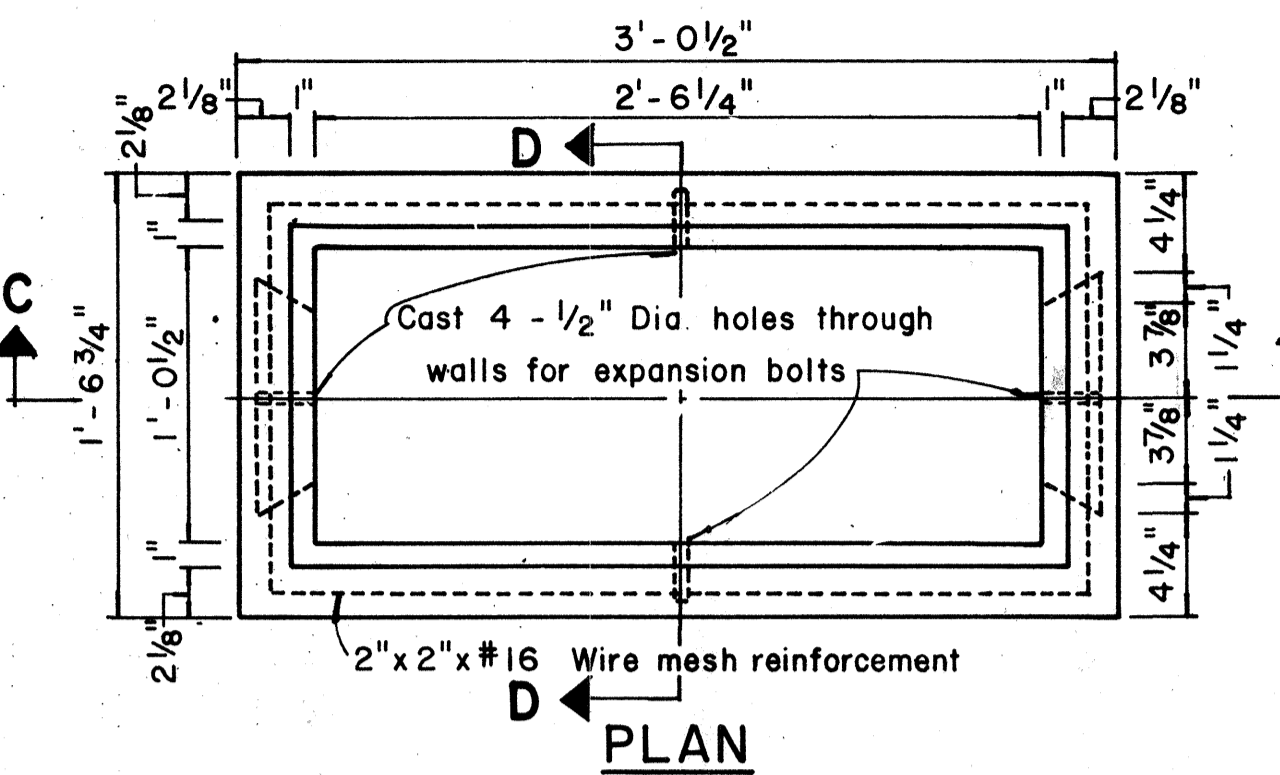
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F093(17)	1984	39	39



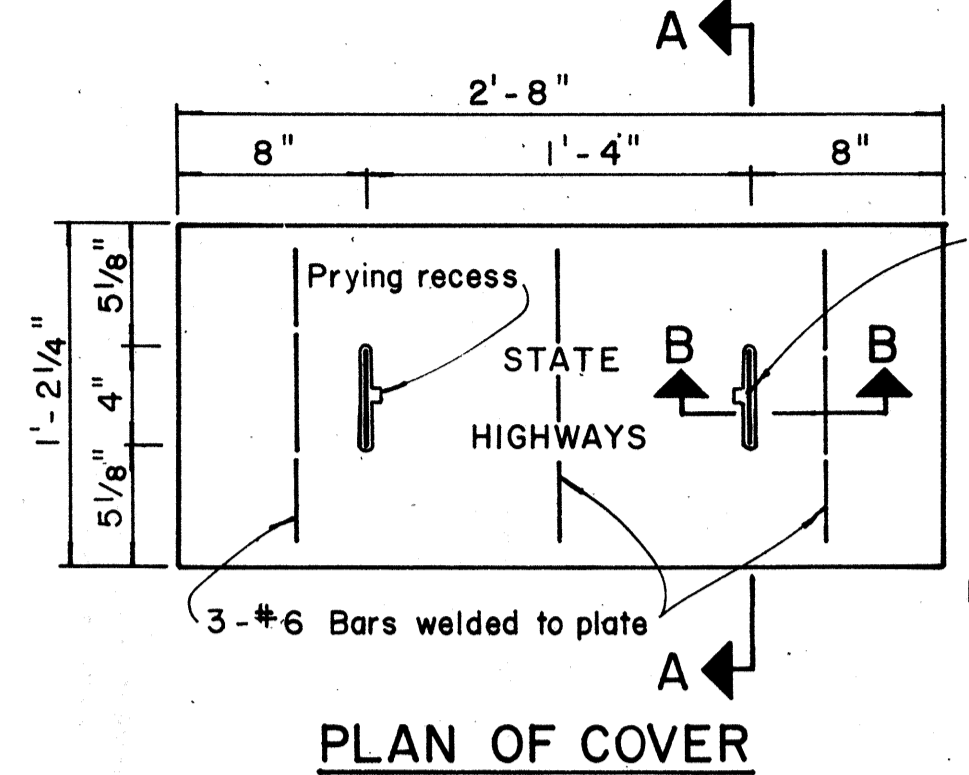
PLAN



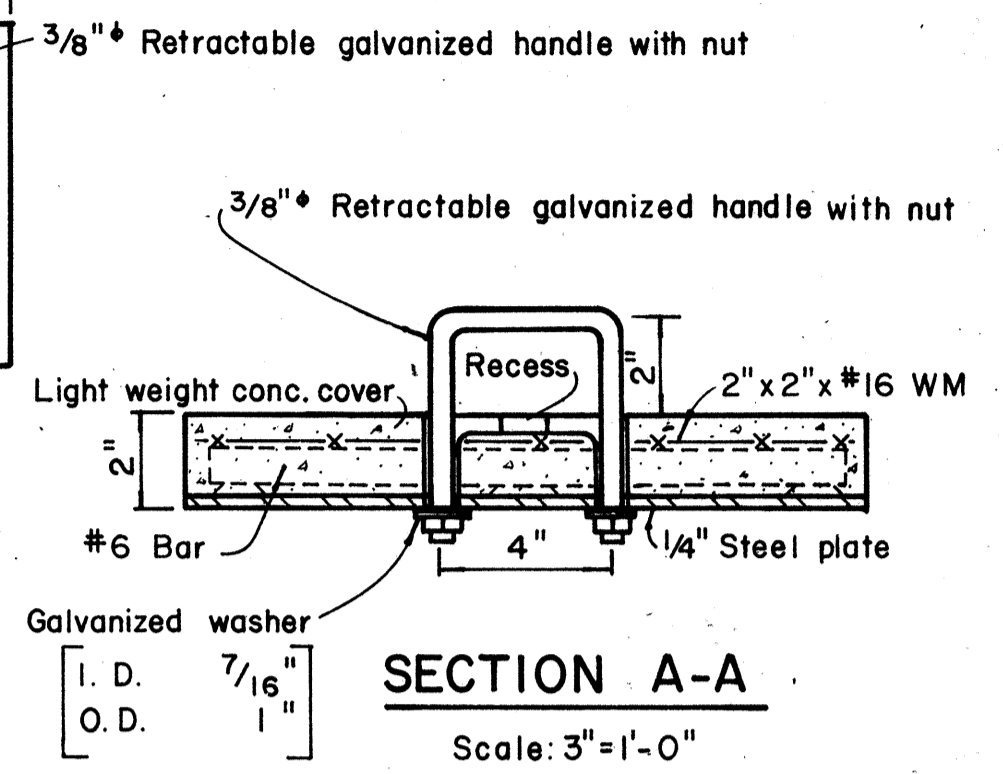
PLAN OF COVER



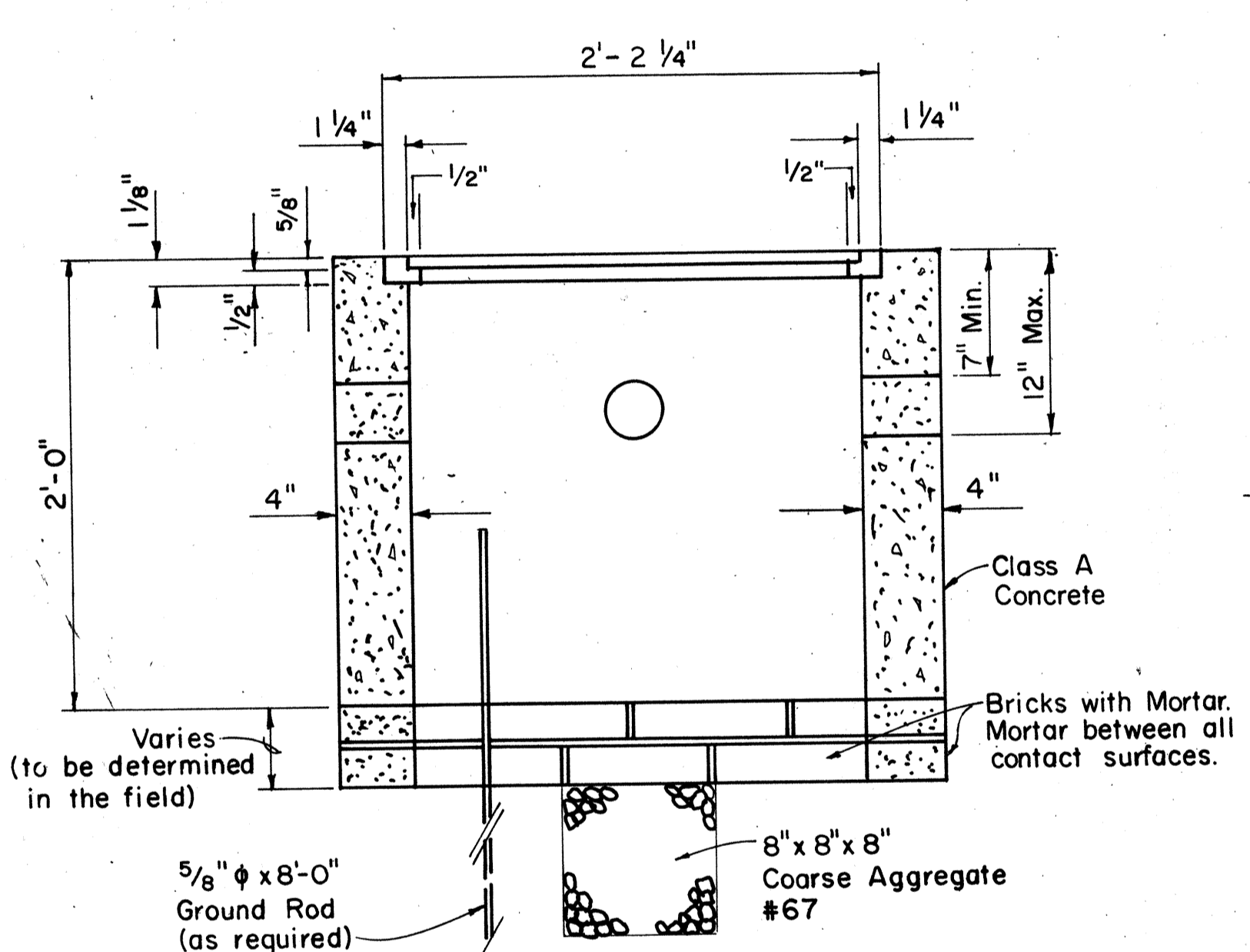
PLAN



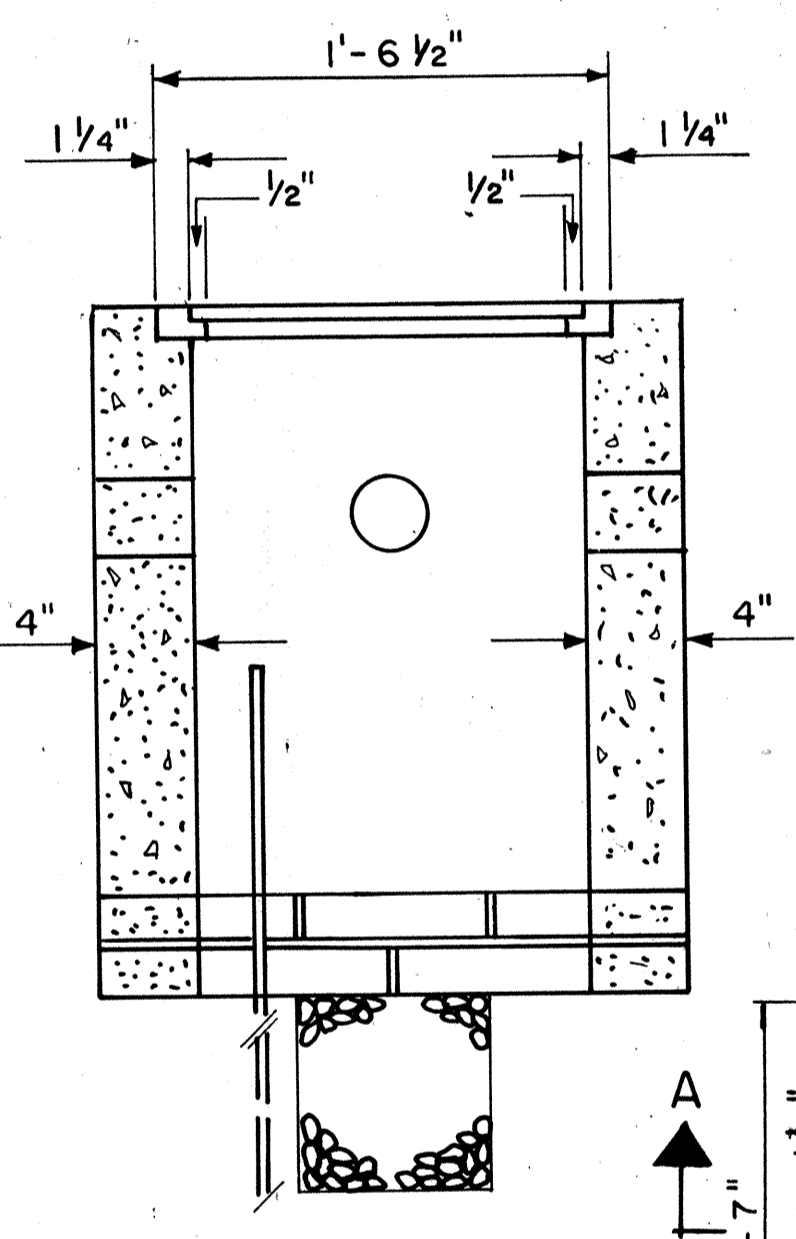
PLAN OF COVER



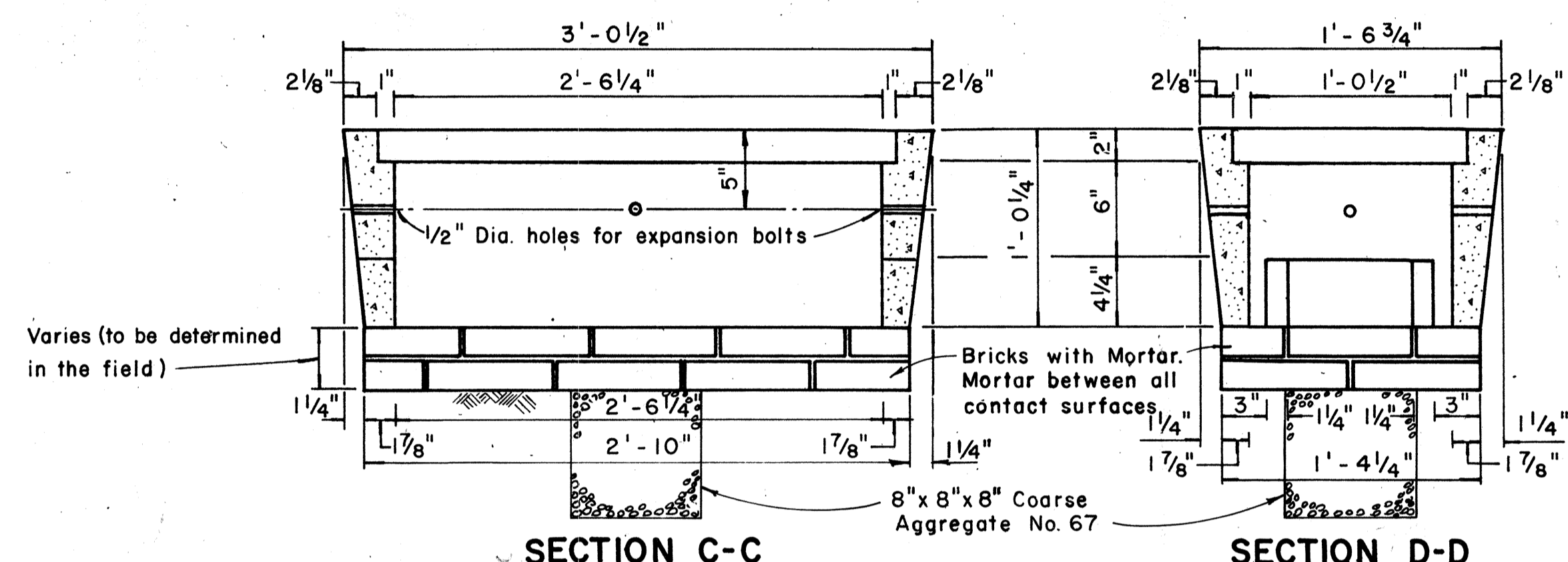
SECTION A-A



SECTION A-A



SECTION B-B

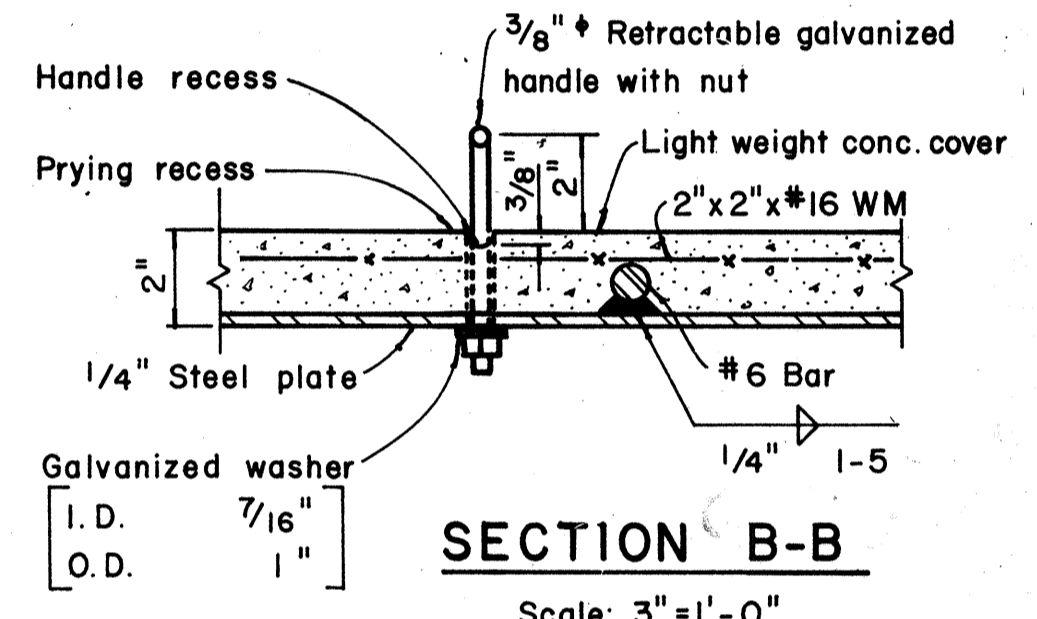


SECTION C-C

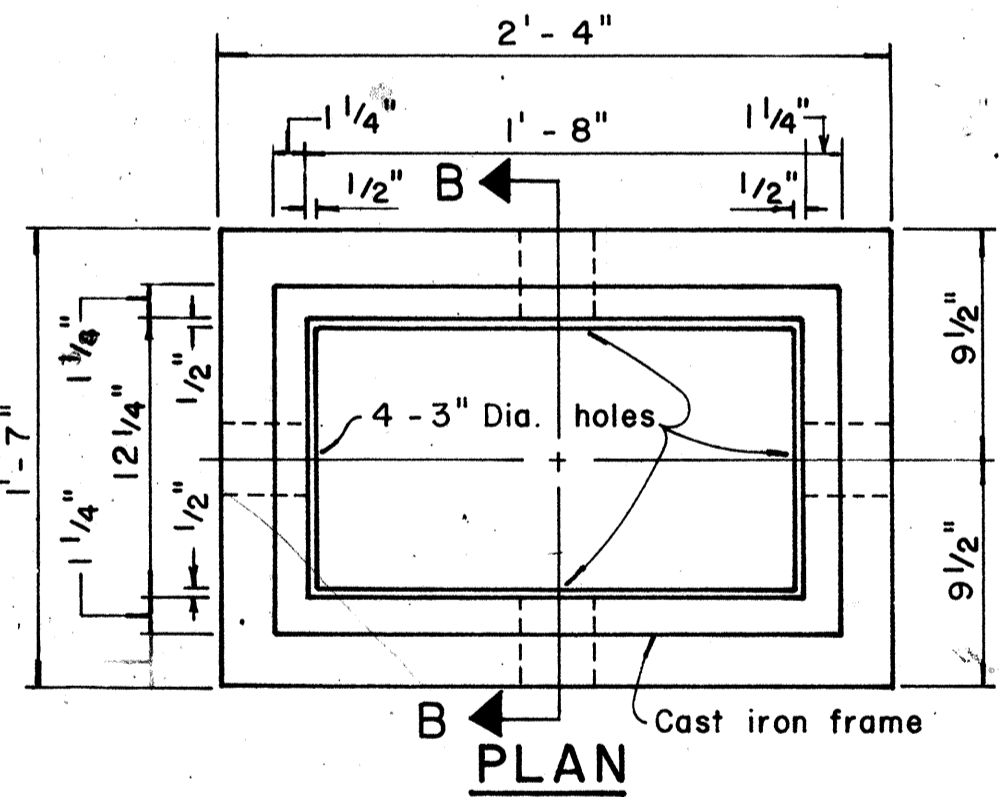
SECTION D-D

TYPE "C" PULLBOX

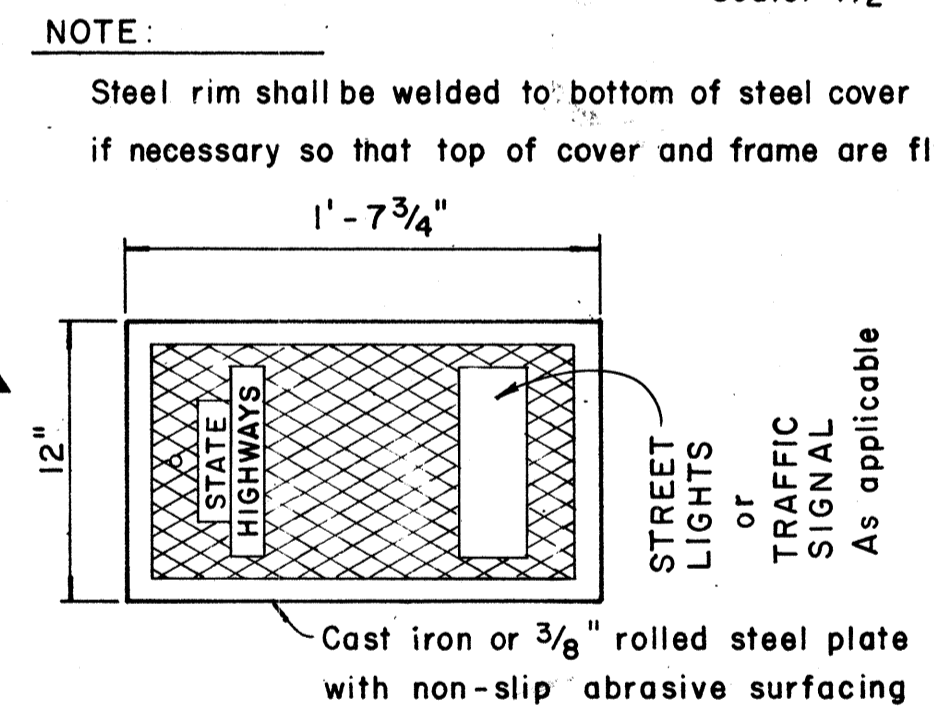
Scale: 1 1/2" = 1'-0"



SECTION B-B



PLAN



PLAN OF COVER

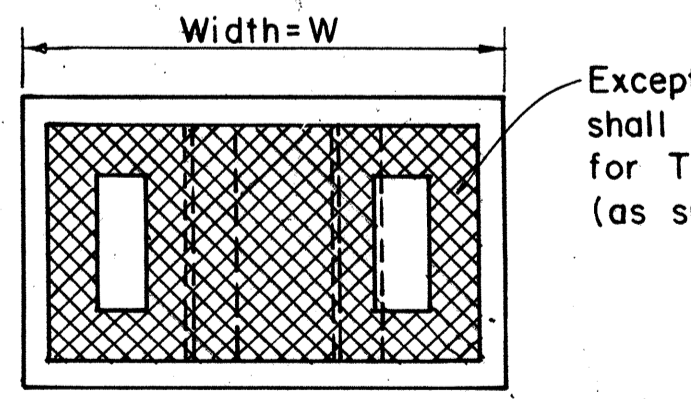
NOTE:

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

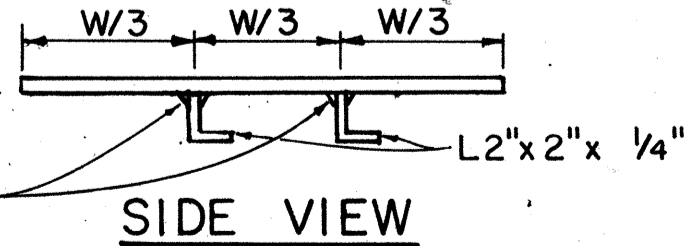
1'-7 3/4"

STREET LIGHTS OR TRAFFIC SIGNAL As applicable

Cast iron or 3/8" rolled steel plate with non-slip abrasive surfacing



TOP VIEW



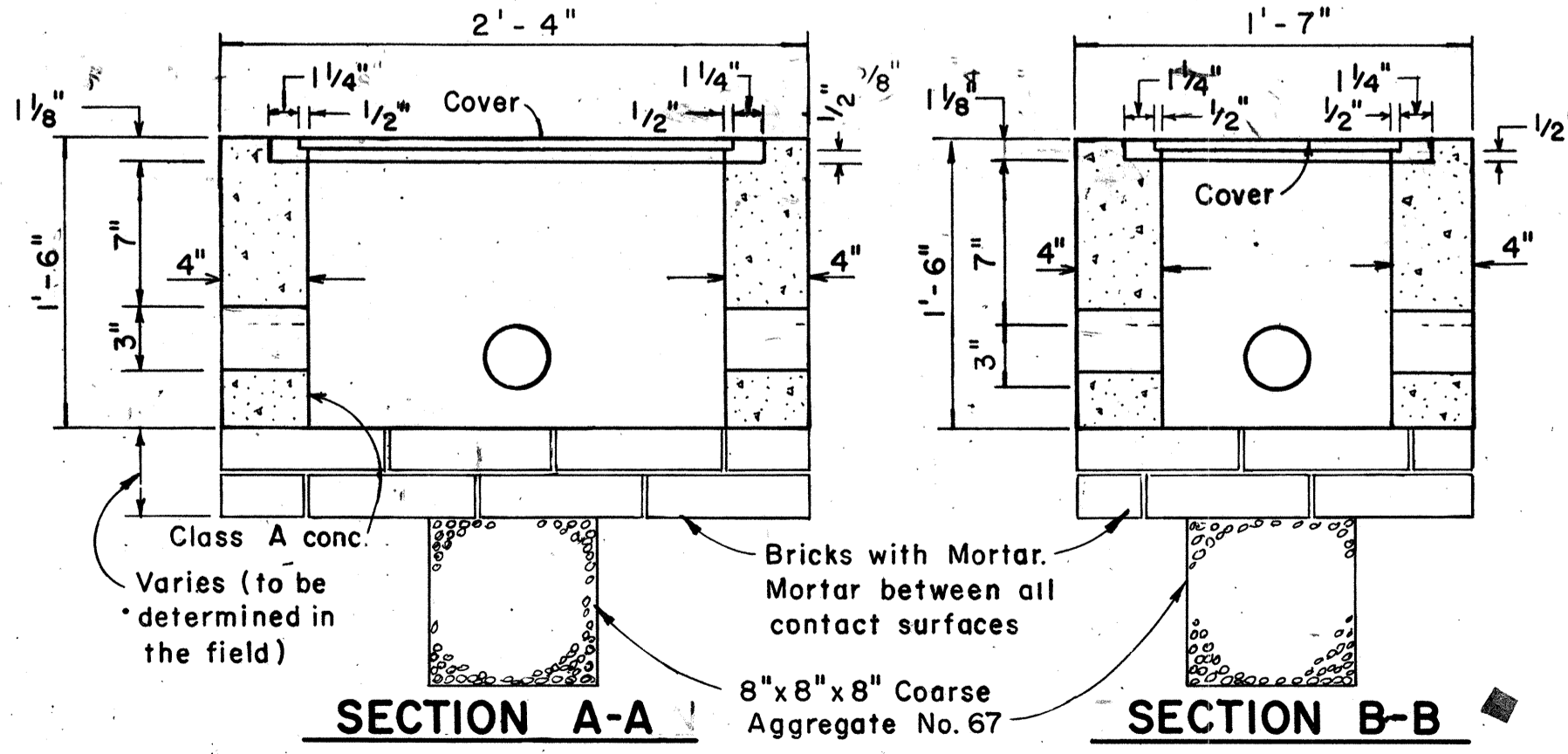
SIDE VIEW

MODIFIED COVER DETAIL

Not to Scale

Except where noted, details shall conform to cover details for Type "A" or Type "B" Pullbox (as specified on plans).

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



SECTION A-A

SECTION B-B

TYPE "B" PULLBOX

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

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

APPROVAL RECOMMENDED:
[Signature] 12/29/62
TRAFFIC ENGINEER DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
PULLBOXES

Scale as noted Date

SHEET No. 16 OF 16 SHEETS DT 401

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