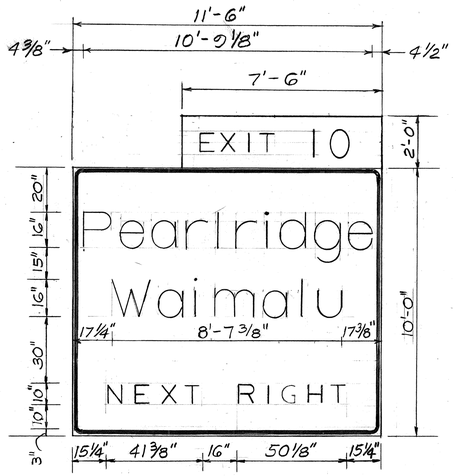
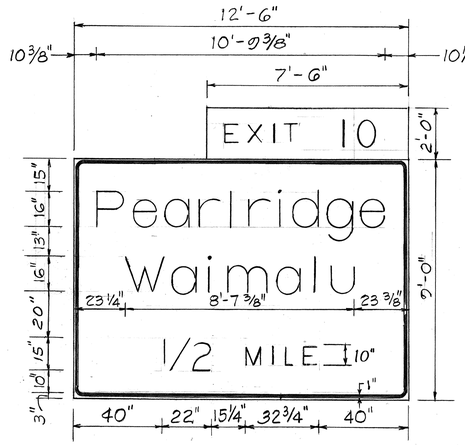
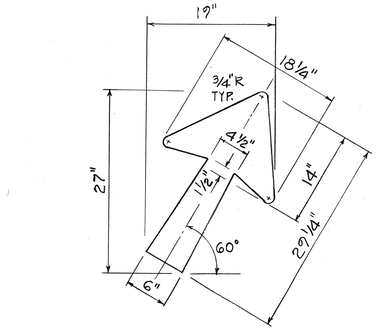
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	38	62



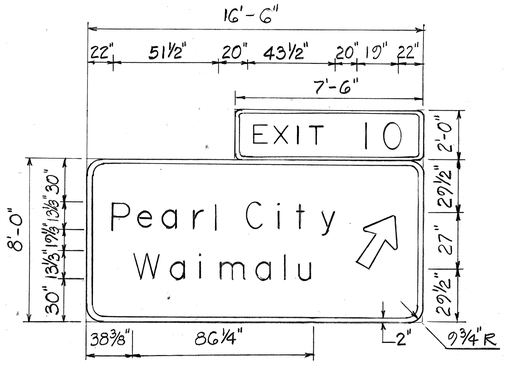
OVERLAY
℄ STA. 58+90± RT.
Scale: 3/8" = 1'-0"



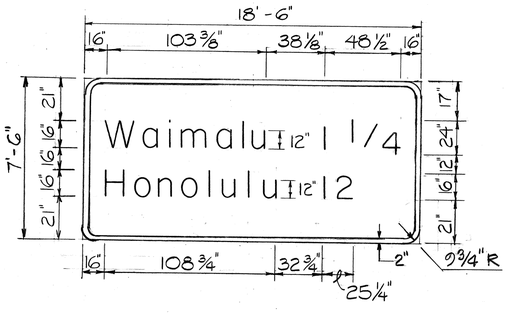
OVERLAY
℄ STA. 33+63± RT.
Scale: 3/8" = 1'-0"



TYPE "A" DIAGONAL ARROW DETAIL
N.T.S.



OVERLAY
℄ Sta. 95+60 ± LT.
N.T.S.



NEW
℄ Sta. 527+75 ± RT.
N.T.S.

SIGNING SCHEDULE

℄ STA.	SIGN	DESCRIPTION OF WORK
527+75± Median	RM-4's	Install RM-4 on Structure No. 1 piers facing Inbound and Outbound Direction.
527+75± Rt.	Waimalu Honolulu	Remove Exist. Sign Supports and Footings. Install New Sign on Waiawa Rd. Overpass.
33+63± Rt.	Pearlridge Waimalu 1/2 MILE	Refurbish Exist. Expressway and Exit No. Sign w/Overlay Panels.
58+90± Rt.	Pearlridge Waimalu NEXT RIGHT	Refurbish Exist. Expressway and Exit No. Sign w/Overlay Panels.
95+60± Lt.	Pearl City Waimalu ↗	Refurbish Exist. Expressway and Exit No. Sign w/Overlay Panels.
95+60± Median	RM-4's	Install RM-4 on Kaahumanu Overpass Structure piers facing Inbound and Outbound Direction.
~~102+00 Lt.~~	~~Pearl City Waimalu~~ ↗	~~Refurbish Exist. Expressway and Exit No. Sign w/Overlay Panels.~~
139+00 Median	RM-4's	Install RM-4 on Kaonohi Overpass Structure piers facing Inbound and Outbound Direction.
Kaonohi, Kaamilo, and Aiea Hts. Rd. overpasses, inbound	Expressway signs, Exit no. panels	Refurbish Exist. Expressway and Exit no. Signs w/Overlay Panels.

SIGNING NOTES

1. Signs shall conform to the latest editions and amendments of the following FHWA Publications:
   a. "Manual on Uniform Traffic Control Devices for Street and Highways" (MUTCD).
   b. "Standard Highway Signs," and
   c. "Standard Alphabets for Highway Signs."
2. Letter Size
   a. When letters are all uppercase, use Series "E".
   b. When initial uppercase letters is used in conjunction with lowercase letters, use Series "E" (M) for uppercase letter.
3. Borders shall be 2-inches wide unless otherwise noted and corner radii shall be approximately one eighth of the lesser side dimension of the sign. The maximum corner radius shall be 12-inches.
4. New sign panels shall be laminated aluminum or extruded aluminum.
5. Overlays shall be as specified in Section 621 of the Special Provisions.
6. The Contractor shall verify the locations and dimensions of existing Expressway sign panels and supports.
7. The final position of sign panels above the roadway shall be approved by the Engineer.
8. Removal of existing sign posts, supports and footage shall be incidental to the various signing contract items.
9. The Contractor shall not use any impacting device in relocating signs onto overpass structures.
10. Existing Exit Number Signs on Destination Signs to be refurbished with new overlay panels shall also be refurbished.
11. Existing Carpool/Restricted lane signs and posts, ℄ Sta. 150+00± to 229+50±, shall be removed.
12. All median signs located where inside shoulder widths are 2 feet or less shall have minimum mounting height of 10 feet.
13. Outbound Carpool signing shall be covered when outb. Carpool lane is not opened to traffic.

DATE	REVISION
6/1/86	Revised overlay panel Messages. Added Signing Notes. Added Exit Number Signs. Revised Signing Schedule.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING DETAILS, NOTES AND SCHEDULE
ADDITIONAL LANES
INTERSTATE ROUTE H-1
F.A.I. PROJ. No. IR-HI-1(193)

Scale: As Noted — Sept. 1985

SHEET No. T1 OF 19 SHEETS

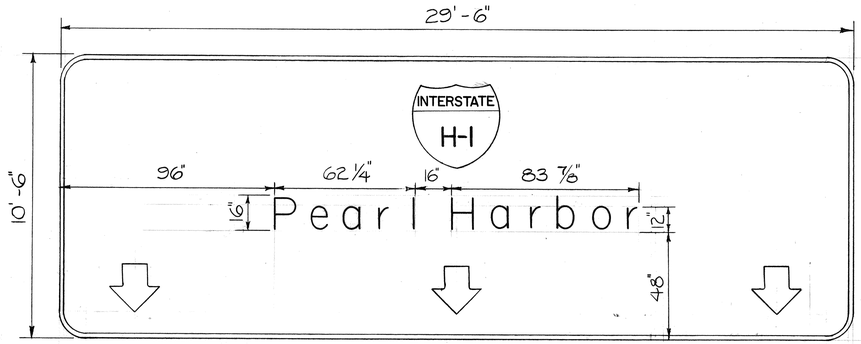
C.O. 38

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

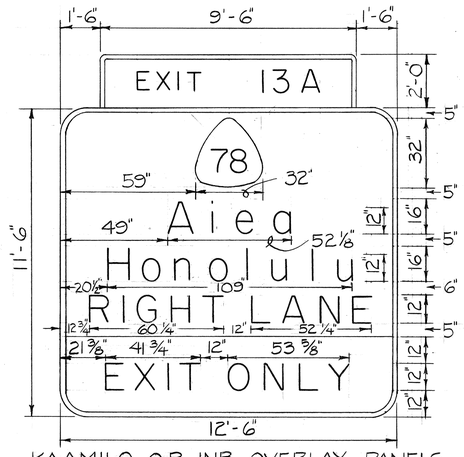
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1 (193)	1986	38	62

CARPOOL LANE SIGNING

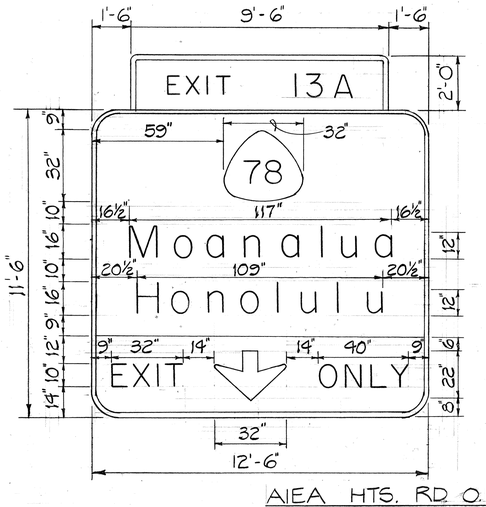
℄	STA.	SIGN
H-2	471+20± LT. INB.	R3-10
"	477+45± LT. INB.	R3-10A
H-1	502+00± LT. INB.	R3-10
	512+00± LT. INB.	R3-20A
	520+00± LT. INB.	R3-10A
	528+25± INB. (Waiawa Rd. OP)	R3-11A
	9+00± INB.	R3-20A
	19+00± "	R3-10A
	29+00± "	R3-20A
	39+00± "	R3-10A
	49+00± "	R3-20A
	59+00± "	R3-10A
	69+00± "	R3-20A
	79+00± "	R3-10A
	89+00± "	R3-20A
	89+00± ~~OUTB.~~	R3-12
	95+00± INB. ~~& OUTB.~~ (Kaahumanu St. OP)	R3-11A
	105+00± INB. ~~& OUTB.~~	R3-20A
	115+00± " " "	R3-10A
	125+00± " " "	R3-20A
	139+00± INB. ~~& OUTB.~~ (Kaonohi St. OP)	R3-11A
	150+00± INB. ~~& OUTB.~~	R3-20A
	160+00± " " "	R3-10A
	172+50± " " " (Kaamilo St. OP)	R3-11A
	181+50± INB. & OUTB. (Mahiko Pedestrian OP)	R3-11A
	192+00± INB. ~~& OUTB.~~ (Aiea Hts. Dr. OP)	R3-11A
	204+50± INB. ~~& OUTB.~~ (Kaimakani St. OP)	R3-11A
	215+00± INB. ~~& OUTB.~~	R3-20A
	221+00± " " (Moanalua Rd. OP)	R3-11A
	229+50± INB. ~~& OUTB.~~ (Ramp WE OP)	R3-11A

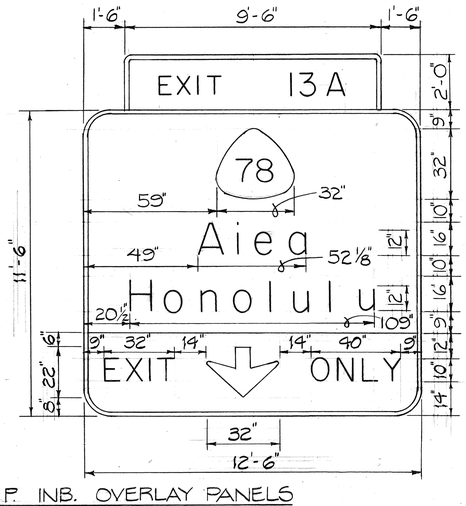


KAONOHI O.P. INB. OVERLAY PANELS

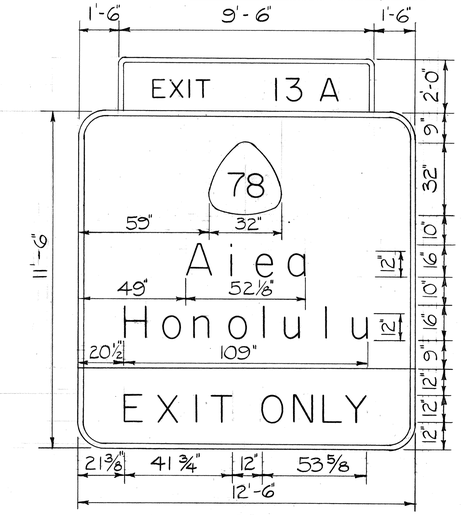


KAAMILO O.P. INB. OVERLAY PANELS





AIEA HTS. RD O.P. INB. OVERLAY PANELS



KAONOHI O.P. INB. OVERLAY PANELS

Date	Revision
11/13/87	Revised Aiea Hts. Rd. O.P. Inb. Panels Message.
8/22/86	Expressway sign details added.
7/1/86	This Sheet added.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING DETAILS AND SCHEDULE

INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI PROJ. NO. IR-HI-1(193)

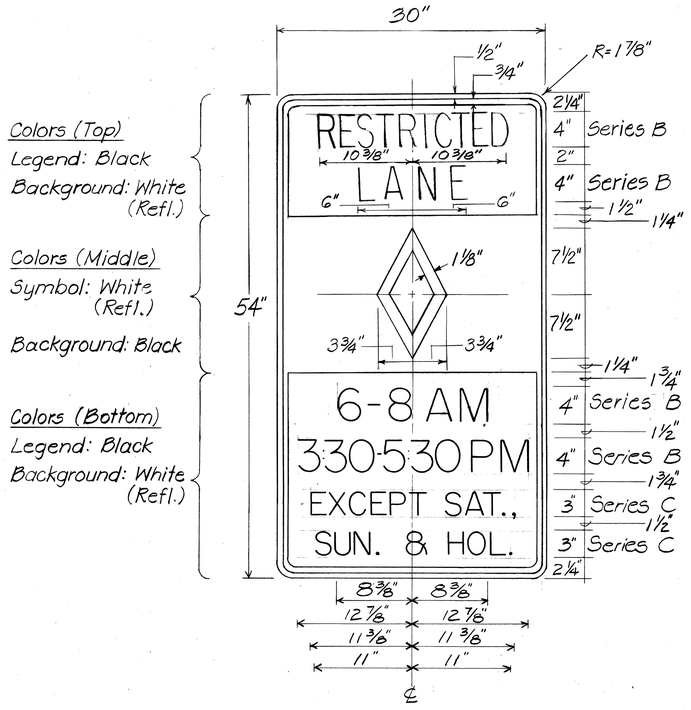
Scale: 3/8" = 1'-0" Date: July, 1985

SHEET No. OF SHEETS

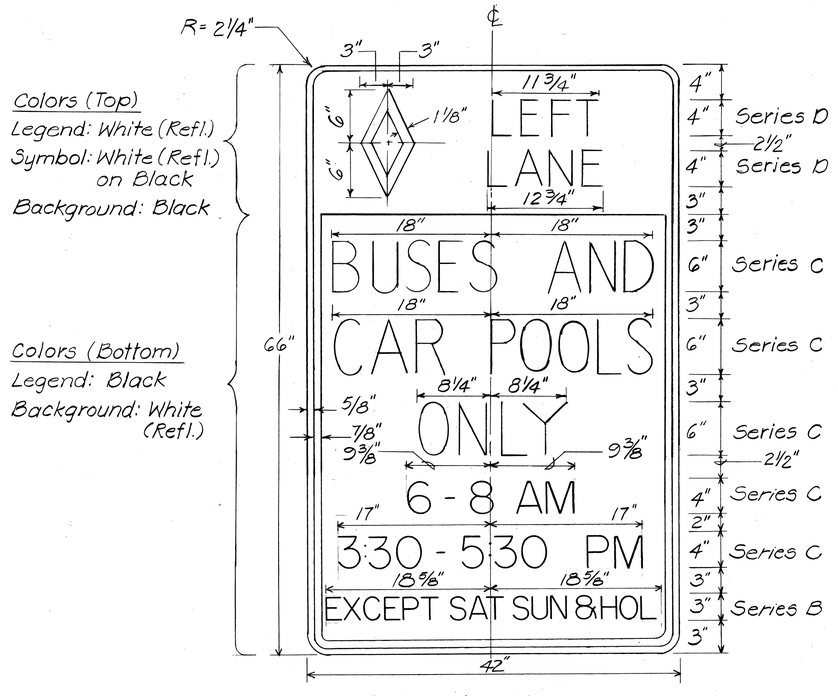
C.O. 38 S-1

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

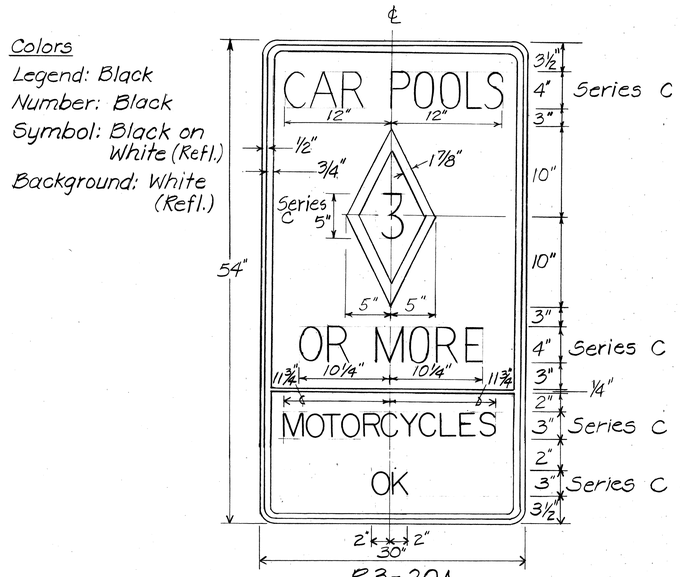
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	38	62



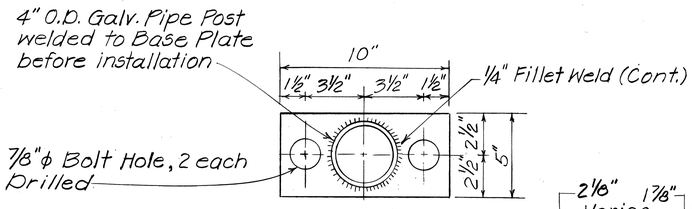
R3-10A
N.T.S.



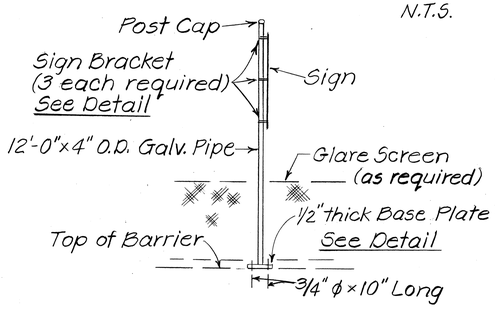
R3-11A
N.T.S.



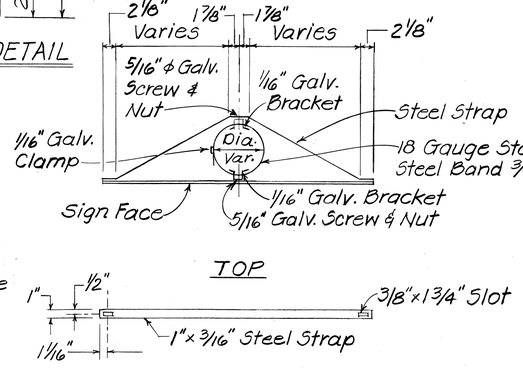
R3-20A
N.T.S.



BASE PLATE DETAIL
N.T.S.



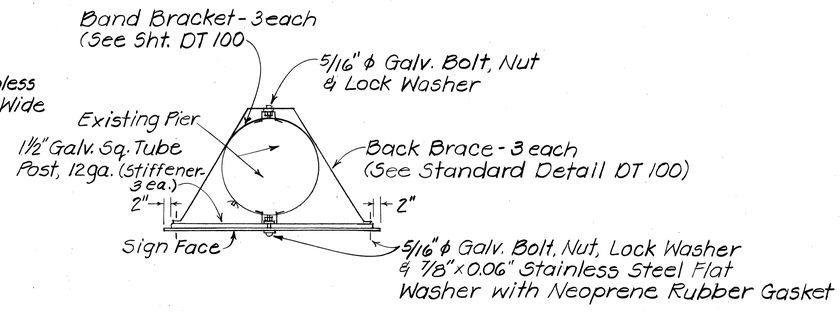
ELEVATION



FRONT

SIGN MOUNTED ON CONCRETE BARRIER
N.T.S.

SIGN BRACKET DETAIL
N.T.S.



TOP VIEW

SIGN MOUNTING DETAIL @ BRIDGE PIER
N.T.S.

Date	Revision
7/1/86	This Sheet added

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING NOTES & DETAILS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI PROJ. NO. IR-HI-1(193)

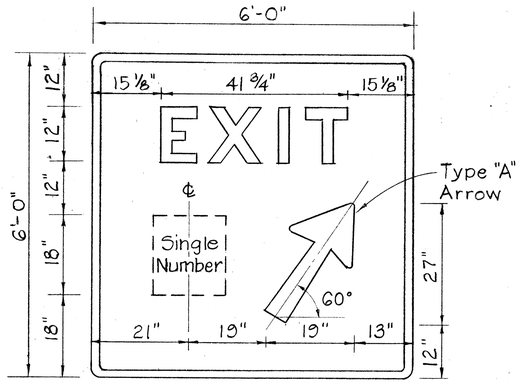
Scale: As Shown Date: July, 1985

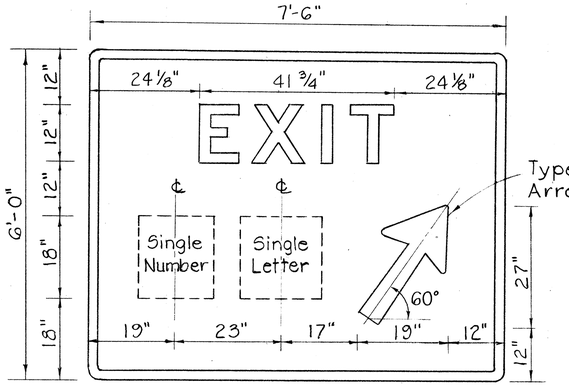
SHEET No. OF SHEETS

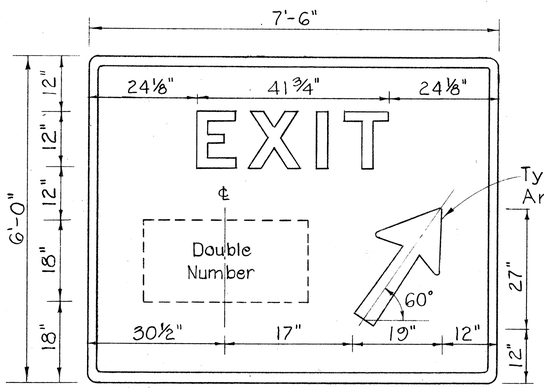
ORIGINAL PLAN
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE
NOTE BOOK
No.

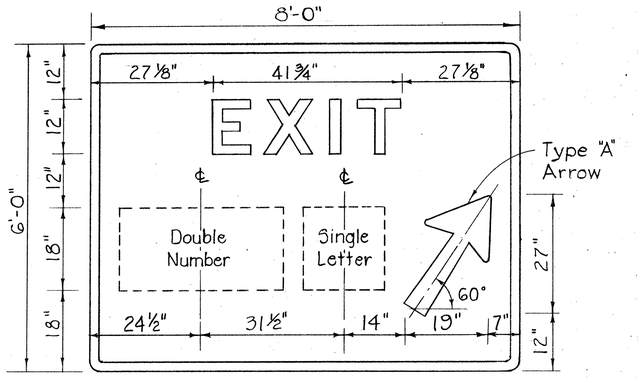
C.O. 38 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H-1(193)	1986	38	62



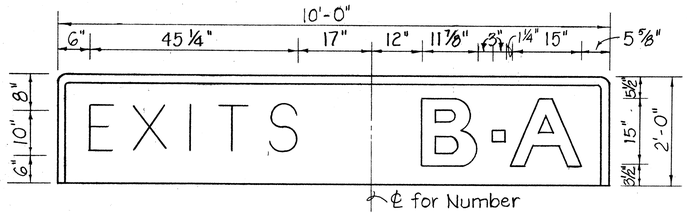




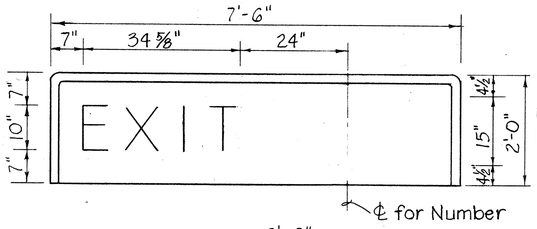


GORE EXIT SIGNS

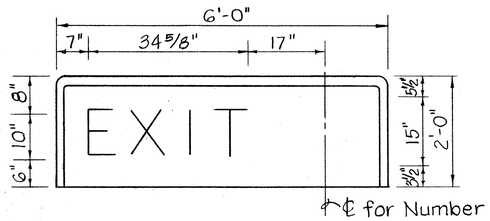
Scale: ¾"=1'-0"



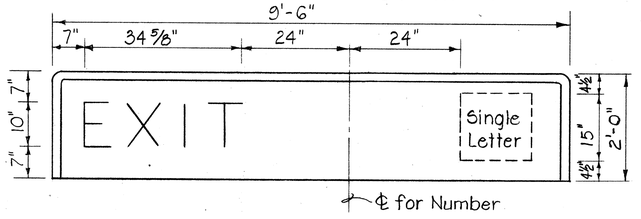
Single Number w/Double Letter



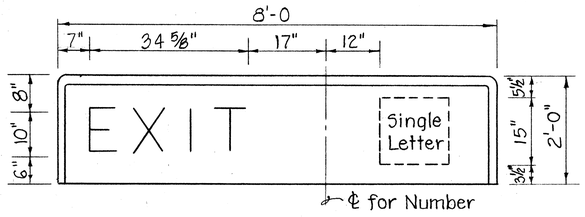
Double Numbers Use 15" Numbers



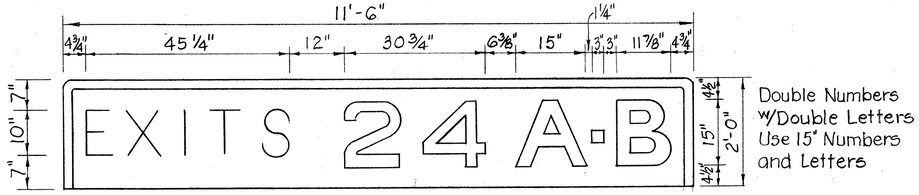
Single Number



Double Number w/Single Letter Use 15" Numbers and Letters



Single Number w/Single Letter

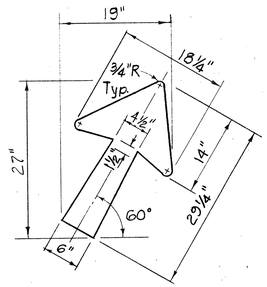


Double Numbers w/Double Letters Use 15" Numbers and Letters

EXIT NUMBER PANELS

Scale: ¾"=1'-0"

1. Design of Exit Number Panels shall conform to plans and specifications for either the Expressway or Destination Sign to which the Exit Number Panel will be attached.
2. Sign message shall be lettered in uppercase according to Standard Alphabets for Highway Signs, FHWA, 1966. Use Series "E" letters unless otherwise noted.
3. Arrows, Borders, and Route Markers shall conform with details as shown on plans.
4. Contractor shall submit for approval, shop drawings for the attachment of Exit Number Panels to Sign Panels.



TYPE "A" DIAGONAL ARROW DETAIL
N.T.S.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL EXIT NUMBER SIGN PANEL LAYOUT

Scale: As Shown

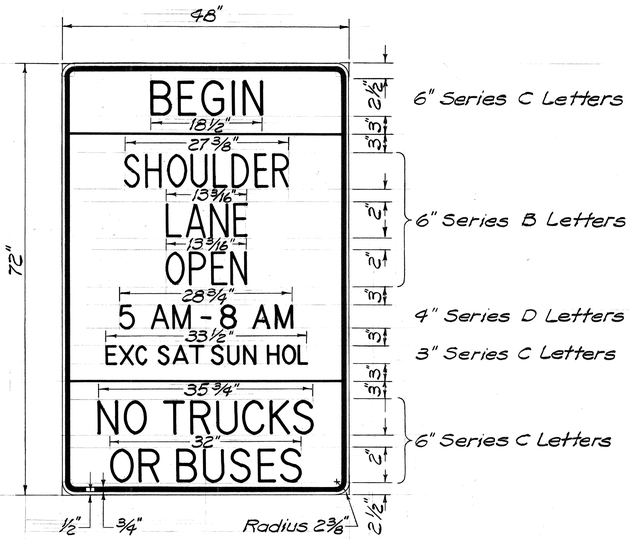
SHEET No. OF SHEETS

C.O. 38 S-3

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

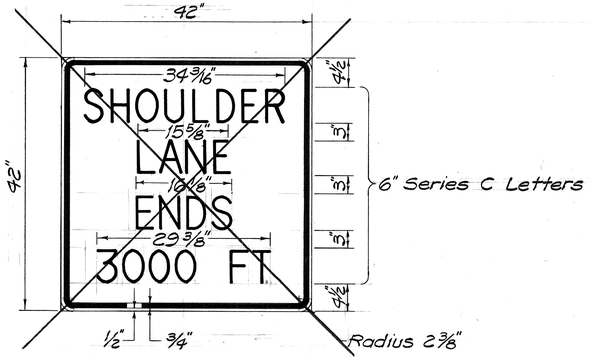
K+E ® TRACING PAPER

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	C038 S-4	62

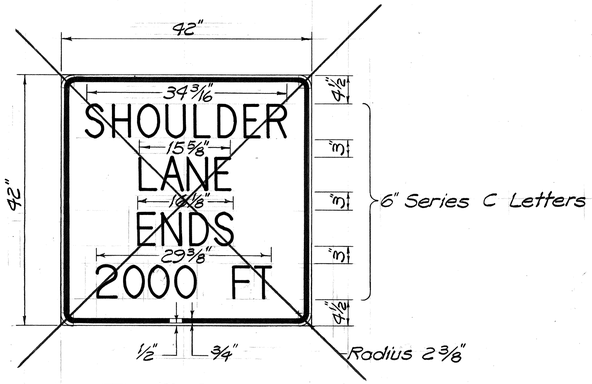


Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

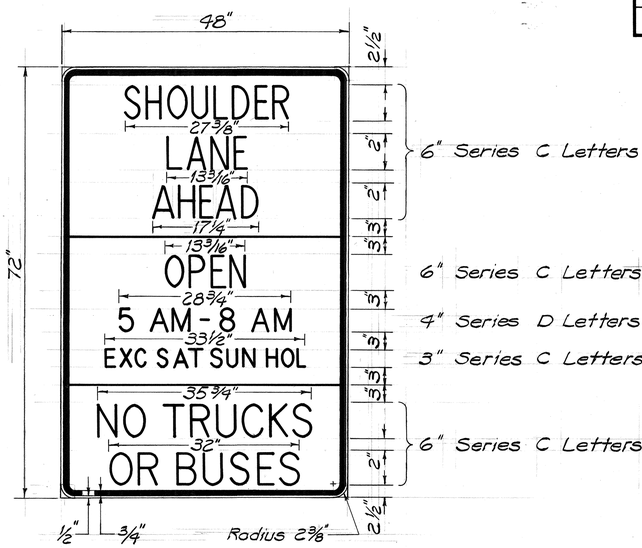
R16-9
Scale: 1"=1'-0"



D-1
Scale: 1"=1'-0"

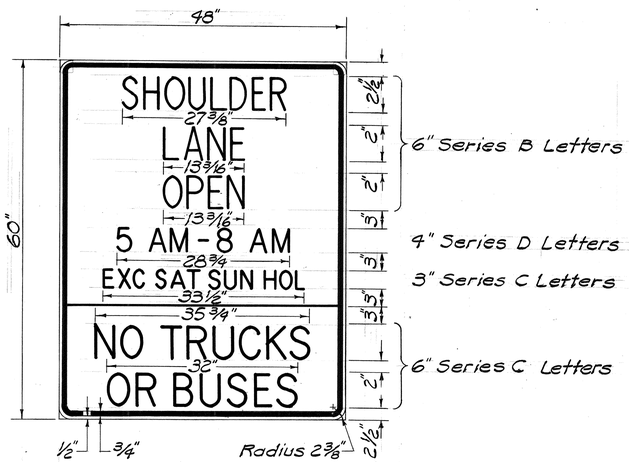


D-2
Scale: 1"=1'-0"



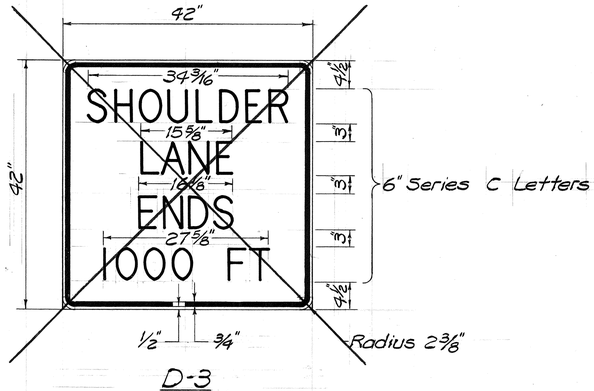
Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

R16-11
Scale: 1"=1'-0"

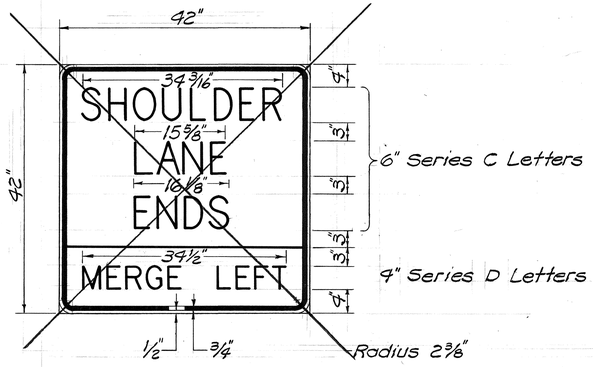


Use 2-Post Flanged Channel
Installation 4.00 Lbs/Ft.

R16-10
Scale: 1"=1'-0"



D-3
Scale: 1"=1'-0"



D-4
Scale: 1"=1'-0"

DATE	REVISION
10/5/87	Added Sign Layouts for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN LAYOUTS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. NO. IR-HI-1(193)

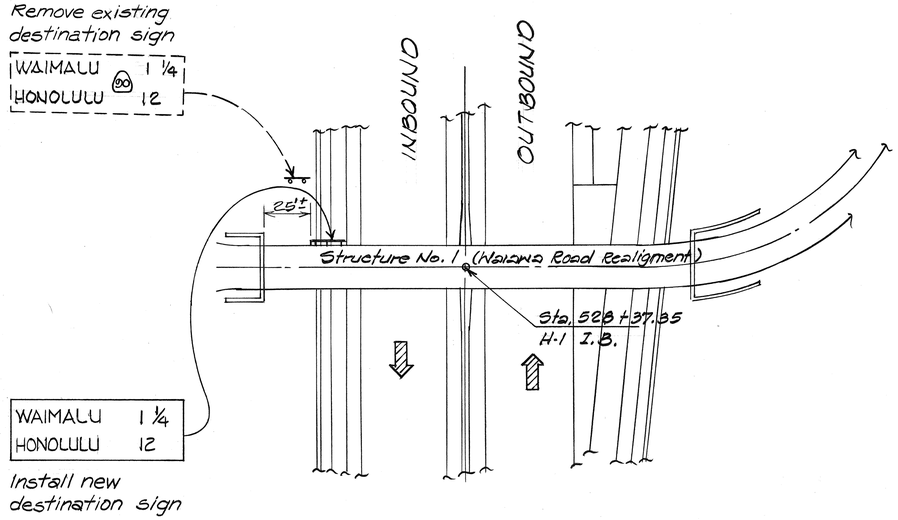
Scale: As Shown Date: Oct, 1987

SHEET No. 71d OF 19 SHEETS

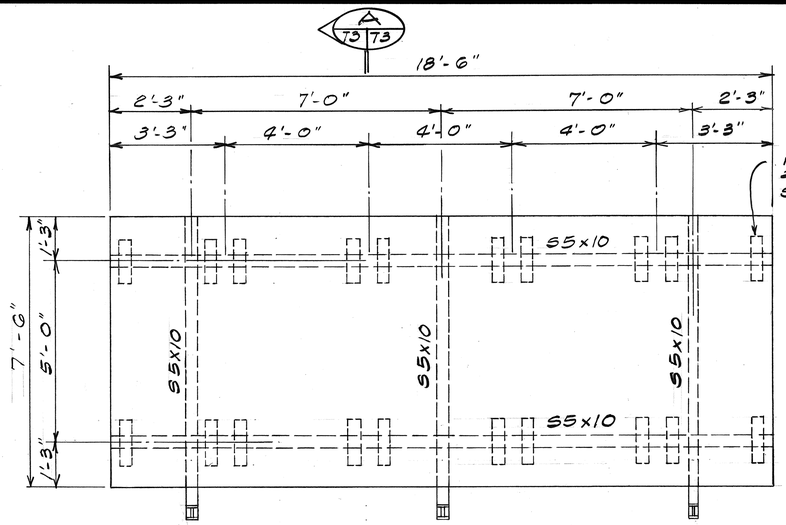
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
No.	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

C.O. 38 S-4

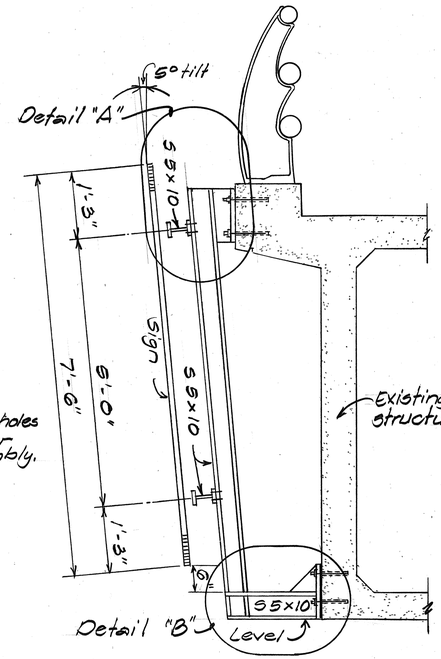
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1985	39	62

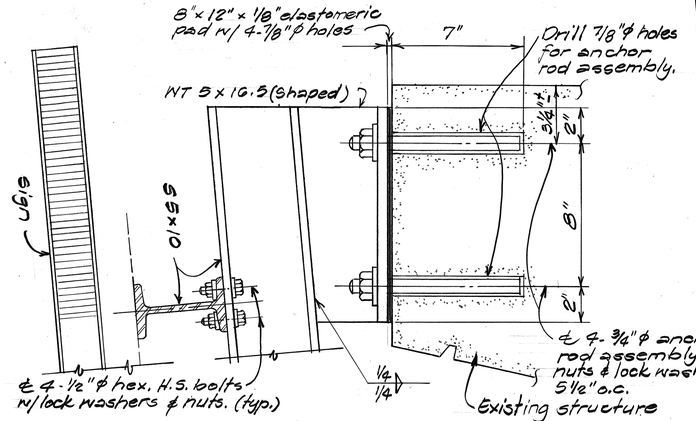


LAYOUT PLAN
Scale: 1" = 40'



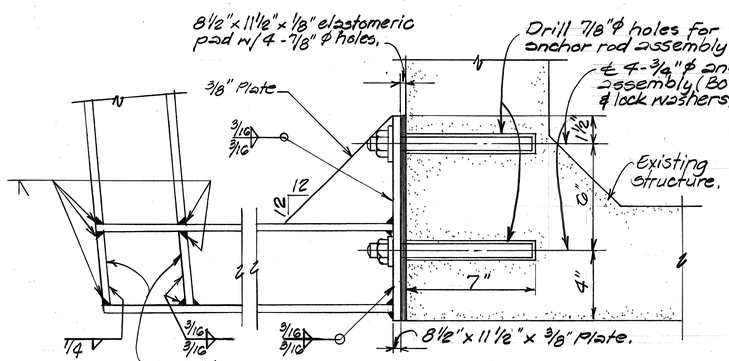
ELEVATION ~ FORMER GROUND MOUNTED SIGN E-27
Scale: 1/2" = 1'-0"





DETAIL "A"
Scale: 3" = 1'-0"

SECTION T3 T3
Scale: 3/4" = 1'-0"



DETAIL "B"
Scale: 3" = 1'-0"

GENERAL NOTES

MATERIALS:

1. Structural steel shapes, plates & bars shall conform to ASTM A-36.
2. Anchor rod assemblies shall conform to ASTM A-325.
3. All structural steel assemblies and hardware shall be hot-dip galvanized after fabrication, except for stainless steel connectors.
4. All aluminum to steel connectors to be stainless steel.
5. An appropriate adhesive anchor system shall be used to anchor the bolts in the concrete.

CONSTRUCTION REQUIREMENTS:

1. The Contractor shall remove the existing ground mounted Sign E-27 from its present support and reinstall it on the structure as indicated in the plans. He shall repair any damage to the sign structure including changes in the sign mounting locations.
2. All work shall be done by workmen skilled in the trade and workmanship shall be first class, conforming to the applicable requirements of the plans.
3. All dimensions for sign bracket assemblies shall be verified by the Contractor before fabrication and any discrepancy shall be promptly reported to the Engineer.
4. No percussion or impact drills shall be permitted in drilling holes in the existing structure.
5. Care shall be taken to not damage existing reinforcing during the drilling operation. Any unused drilled holes shall be filled with a suitable epoxy grout as approved by the Engineer.
6. All aluminum in contact with steel or concrete to be properly protected to prevent corrosion.
7. Except as noted otherwise, all vertical dimensions are measured plumb.

GENERAL:

1. All elastomeric pads shall be secured against displacement with adhesives approved by the Engineer.
2. All work involved in the relocation of the sign, including all materials, labor and equipment necessary for the removal, repair and reinstallation of the sign, shall be paid for under Item No. 621.1500 "Relocate Existing Destination Sign on to Overpass Structure."
3. Existing materials removed and not used in the work as determined by the Engineer, shall be stock piled at the job site. Removal of existing sign support posts and footings, including stock piling and/or disposal, shall be incidental to Item No. 621.1500.
4. If copies of existing plans of Structure No. 1 are needed, they may be obtained from the State DOT Highway office at 869 Punchbowl St. in Honolulu.

DATE	REVISION
10/3/86	Install new sign in lieu of relocation.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DESTINATION SIGN RELOCATION
NOTES AND DETAILS
INTERSTATE ROUTE H-1
F.A.I. Proj. No. IR-HI-1(193)
Scale: As Noted Date: Sept. 1985

SHEET No. T2 OF 19 SHEETS

C.O. 39

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	40	62

HIGHWAY LIGHTING SCHEDULE

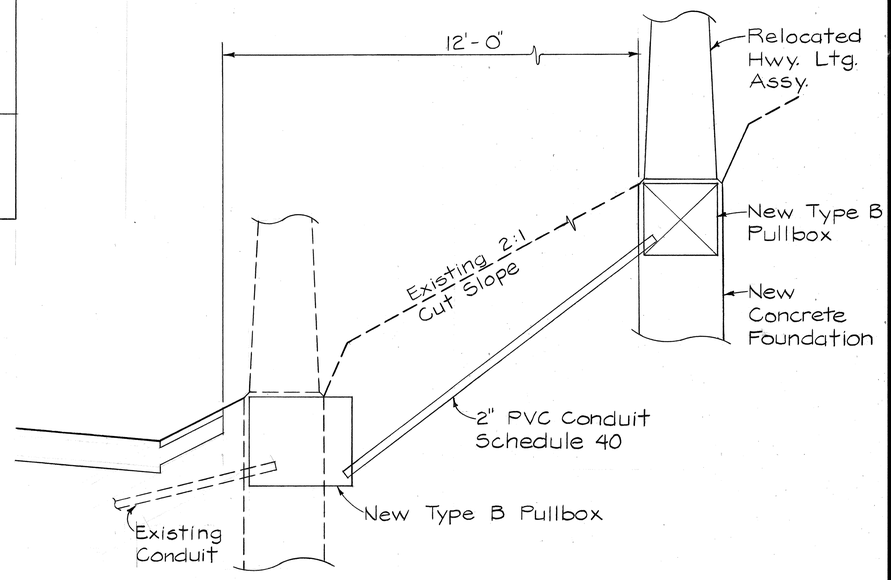
℄ STA.	DESCRIPTION OF WORK
511+20± RT.	Breakaway Coupling & Skirt
512+20±	
512+65±	
514+20±	
515+60±	
517+10±	
518+55±	
520+05±	
521+50±	
523+00±	
524+50±	
526+00±	
527+65±	
529+00±	
530+45±	
532+00±	
66+85±	
68+55±	
70+25±	
71+95±	
76+25±	
92+30±	
93+90±	
95+60±	
97+50±	
99+50±	
125+95±	New Conc. Base & Breakaway Coupling & Skirt
127+90±	
129+55±	
131+80±	
133+75±	
135+85±	
137+65±	
139+75±	
141+70±	
143+65±	
151+50±	
153+45±	
155+45±	
157+40±	
159+35±	
161+30±	
171+15±	
173+15±	
175+10±	

HIGHWAY LIGHTING SCHEDULE

℄ STA.	DESCRIPTION OF WORK
75+35± LT.	Breakaway Coupling & Skirt
77+00±	
77+65±	
80+30±	
81+95±	
83+60±	
85+25±	
126+95±	New Conc. Base & Breakaway Coupling & Skirt
128+90±	
130+85±	
132+80±	
134+75±	
136+70±	
138+65±	
140+70±	
142+70±	
144+65±	
152+50±	
154+45±	
156+40±	
158+40±	
160+35±	
162+30±	
172+15±	Breakaway Coupling & Skirt
174+10±	New Conc. Base & Breakaway Coupling & Skirt
176+10±	
506+00 RT.	Breakaway Coupling & Skirt
503+90	New Conc. Base & Breakaway Coupling & Skirt
507+90	
509+80	

HIGHWAY LIGHTING NOTES

1. The final locations of all highway lighting equipment shall be approved by the Engineer.
2. All existing highway lighting standards as shown on the Highway Lighting Schedule shall have breakaway support couplings and skirt covers installed. Those requiring new concrete bases shall be relocated as close to the existing standard as possible.
3. All existing Highway Lighting Standards shall be operable during the Contractor's non-working hours.
4. The Contractor shall assume that existing utilities may exist, although not shown. The Contractor shall verify the locations of existing utilities with the respective owners prior to start of construction. Any damage to existing utilities shall be repaired at the Contractor's expense.



TYPICAL DETAIL

RELOCATION OF HIGHWAY LIGHTING ASSEMBLY

Date	Revision
7/1/86	Additional Highway Lighting Adjusted. Highway Lighting Slope Relocation Detail Added.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

HIGHWAY LIGHTING NOTES AND SCHEDULE
ADDITIONAL LANES
INTERSTATE ROUTE H-1
F.A.I. PROJ. No. IR-HI-1(193)

Sept. 1985

SHEET No. T3 OF 19 SHEETS

C.O. 40

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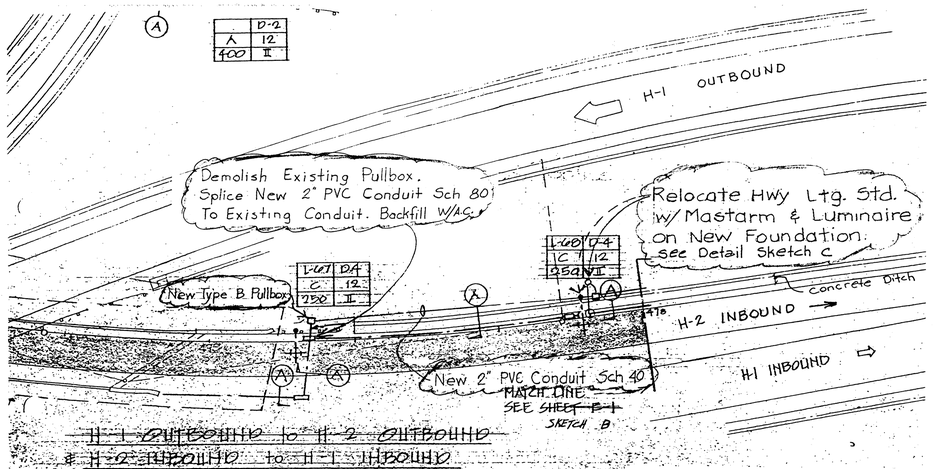
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

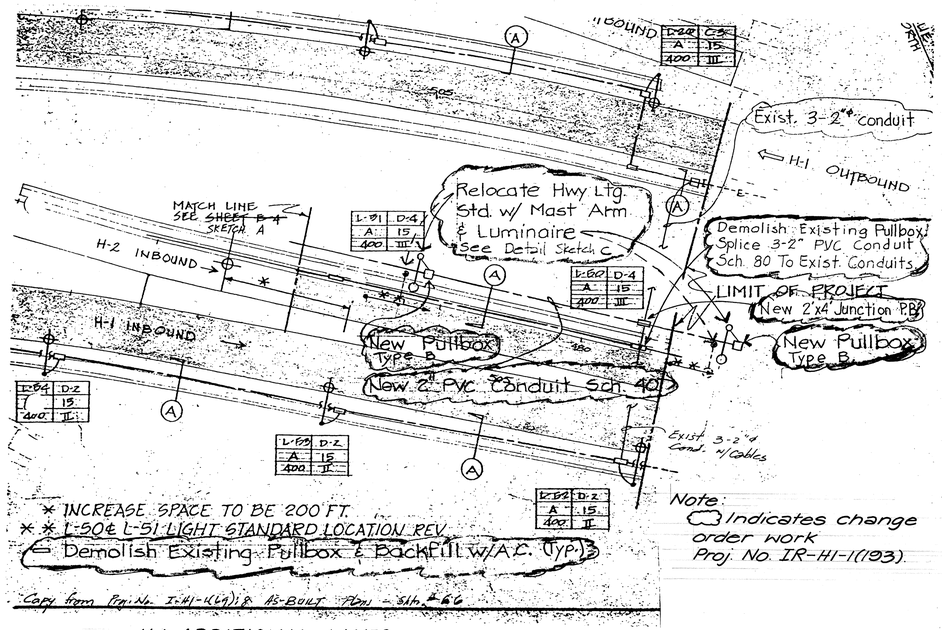
A.9.6

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(103)	1985	405-1	62



H-1 ADDITIONAL LANES
WAIWA I.C. TOWARD HALAWA I.C.

Change Order No. 12
Sketch A



H-1 ADDITIONAL LANES
WAIWA I.C. TOWARD HALAWA I.C.

Change Order No. 12
Sketch B

Note:
The above sketches are for the relocations of three (3) existing highway light standard at H-2 (I.B.) Sta 475+50± to 482+00±. Detail C refer to the above sketches is the same as the the Typical Detail for Relocation of Highway Lighting Assemble found on Sheet No. C0.40.

Note:
This tracing prepared during "As-Built" posting.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RELOCATION OF HIGHWAY LIGHTING STANDARD

INTERSTATE ROUTE H-1
F.A.I. Proj. No. IR-HI-1(103)

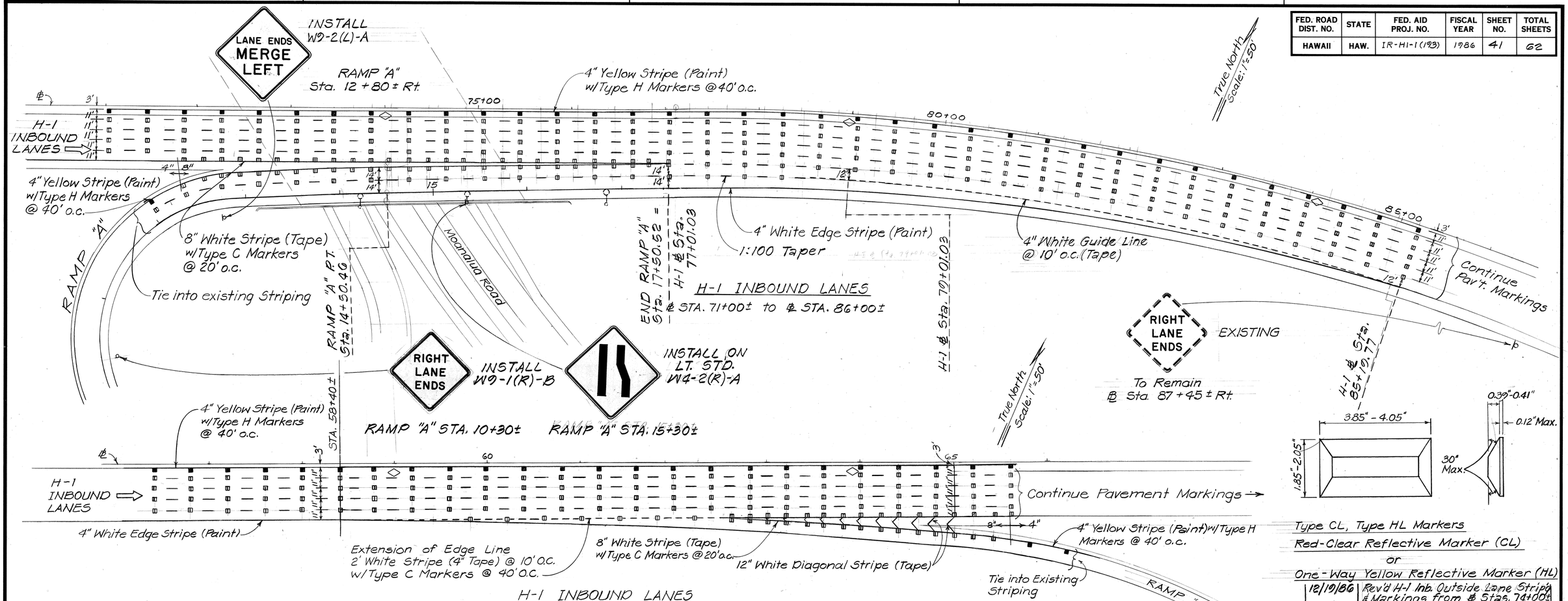
Not to Scale Date: Feb. 1980

SHEET No. / OF / SHEETS

C.040S-1

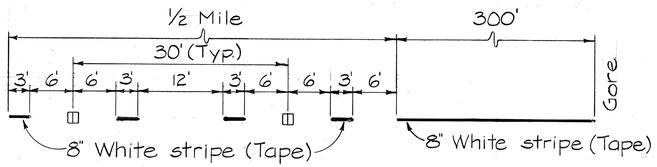
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	41	62

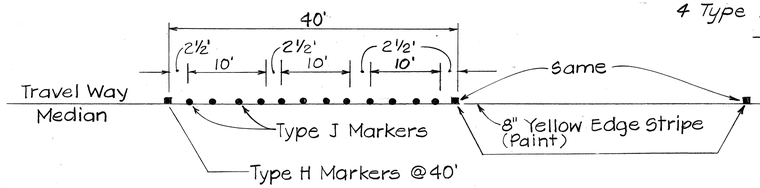


Type CL, Type HL Markers
Red-Clear Reflective Marker (CL)
or
One-Way Yellow Reflective Marker (HL)

DATE	REVISION
12/19/86	Rev'd H-1 Inb. Outside Lane Strip'g & Markings from ℄ Stas. 74+00± to 85+20± & Ramp "A" Strip'g & Markings from Stas. 14+50± to 17+50±. Relocated & added signs.
6/1/86	Deleted H-1 Inb. Lane Details ℄ Sta. 509+10 to 516+00. Added H-1 Inb. Lane Details & Sign ℄ Sta. 71+00 to 86+00. Revised H-1 Inb. ℄ Sta. 58+40 to 63+30 and Ramp C Pavement Markings.
1/7/86	Revised Inside E.P. Striping Detail



LANE DROP STRIPE
Scale: 1"= 10'-0"



INSIDE E.P. STRIPING DETAIL

℄ STA. 95+00± TO 95+40± INB. (KAAHUMANU OVERPASS)
℄ STA. 134+03± TO 141+77± INB. (KAONOHI OVERPASS)
℄ STA. 523+31± TO 530+93± INB. (STRUCTURE NO.1 OVERPASS)

N.T.S.

H-1 INBOUND LANES
℄ STA. 58+40± to ℄ STA. 63+30±

LEGEND

- 4" Yellow Edge Stripe (Paint) w/Type H Pavement Markers @ 40' o.c.
- 4" White Edge Stripe (Paint)
- 4 Each Type A Pavement Markers
- Type C Pavement Markers @ 40' o.c.
- 4 Type A — 4" White Stripe (Tape) Lane Change Restriction Striping
- Pavement Diamond Symbol @ 500' O.C.

PAVEMENT MARKING NOTES

1. Locations of all new pavement markings shall be staked out in the field 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. Cost will be paid for under item No. 629.3000 - Removal of existing pavement markings.
3. Final pavement striping and markings installed in settlement construction areas shall be in accordance with details shown on Sht. Nos. T16-T18.
4. Details of Type C and Type H Markers on Sht. No. T16 shall be deleted and replaced with details of Type CL and Type HL Markers as shown on this sheet. All references to Type C and Type H Markers in the plans shall mean Type CL and Type HL Markers.

PAVEMENT MARKING NOTES (con't.)

5. Pavement Diamond symbols shall be installed for the I.B. carpool lanes @ 500' O.C. - H-1 I.B. Sta. 503+00 to H-1 I.B. Sta. 174+90.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING DETAILS, LEGEND AND NOTES

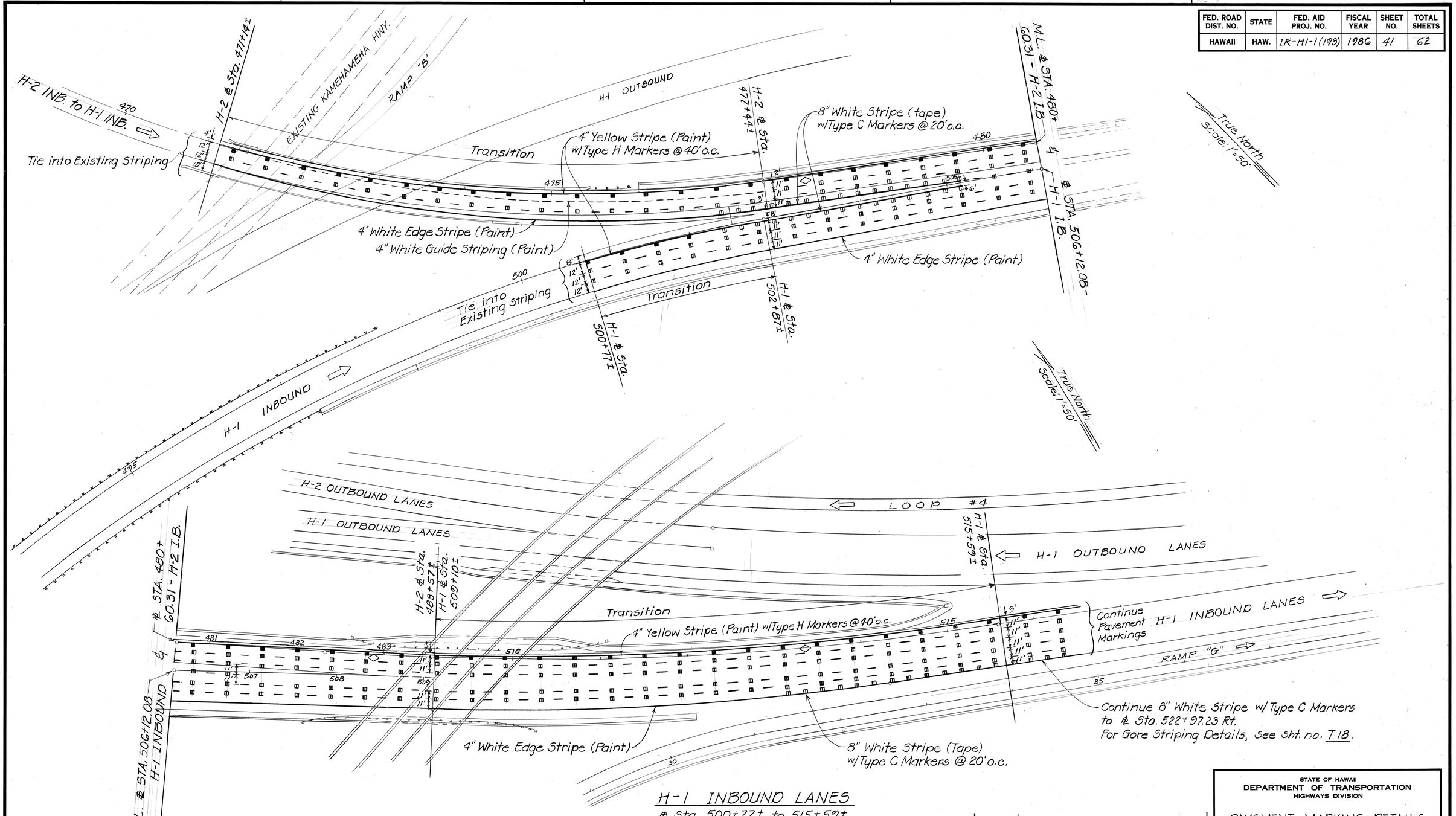
INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI PROJ. NO. IR-HI-1(193)

Scale: As Shown Date: Sept. 1985

SHEET No. T4 OF 19 SHEETS

C.O. ADD. 41

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	41	62



H-1 INBOUND LANES
℄ Sta. 500+77± to 515+59±

H-2 INBOUND LANES
℄ Sta. 471+14± to 483+57±

Date	Revision
7/1/86	This Sheet added

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING DETAILS AND NOTES

INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI PROJ. NO. IR-HI-1(193)

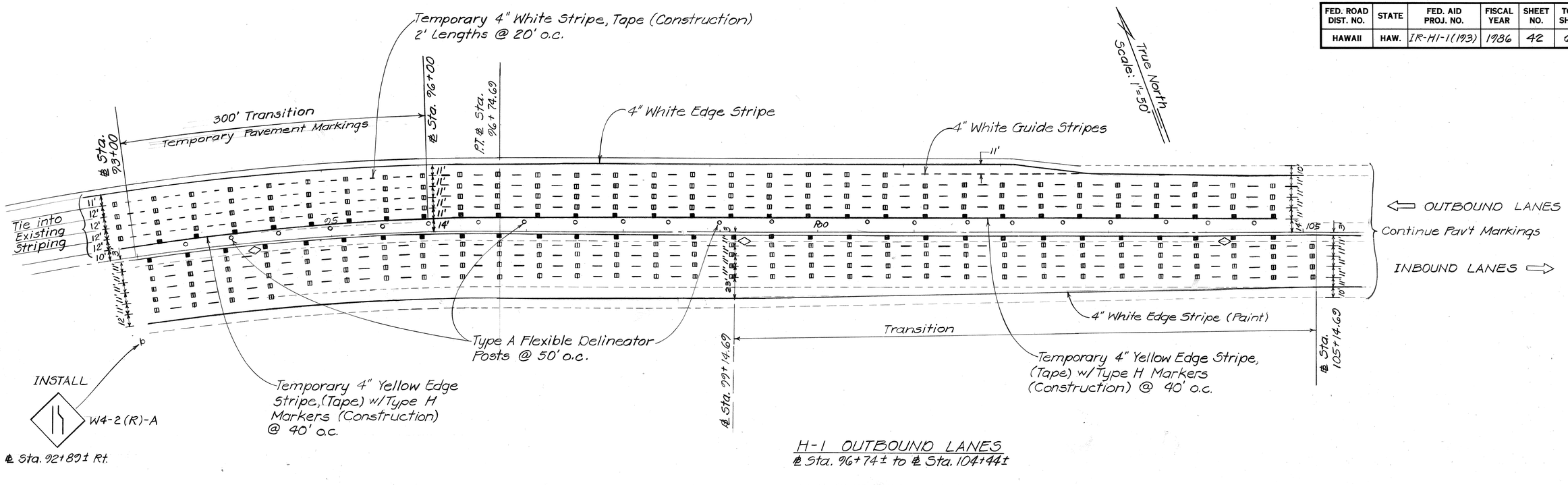
Scale: As Shown Date: July 1986

SHEET No. OF SHEETS

C.O. 41S-1

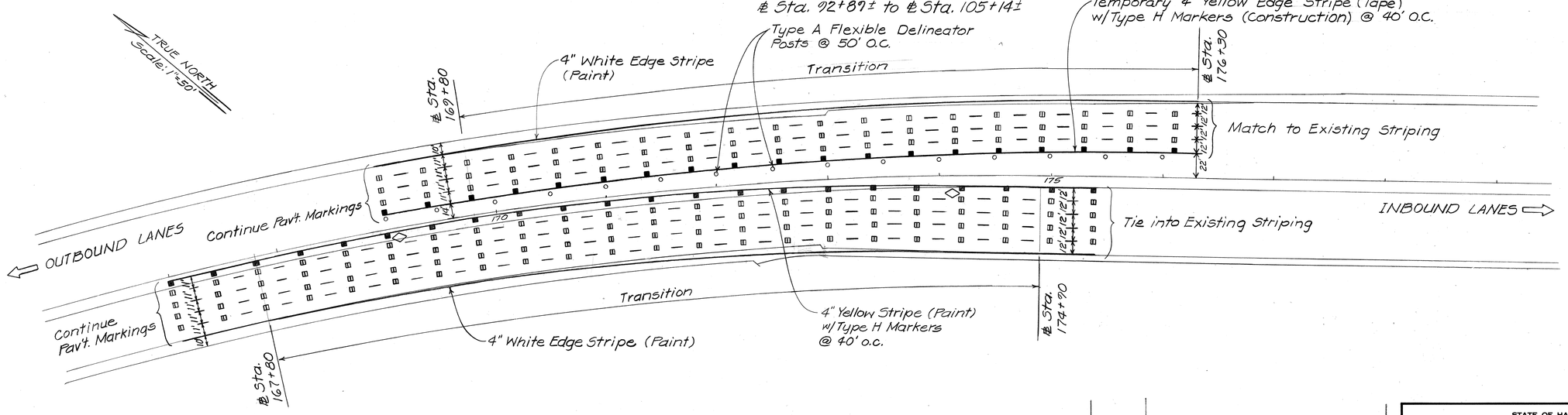
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	42	62



H-1 OUTBOUND LANES
℄ Sta. 96+74± to ℄ Sta. 104+44±

H-1 INBOUND LANES
℄ Sta. 92+89± to ℄ Sta. 105+14±



H-1 OUTBOUND LANES
℄ Sta. 169+80± to ℄ Sta. 176+30±

H-1 INBOUND LANES
℄ Sta. 167+80± to ℄ Sta. 174+90±

DATE	REVISION
6/11/86	Revised Pavement Markings ℄ Sta. 92+89 to 105+14. Added Sign ℄ Sta. 92+89± Rt.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKING DETAILS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
FAI PROJ. NO. IR-HI-1(193)

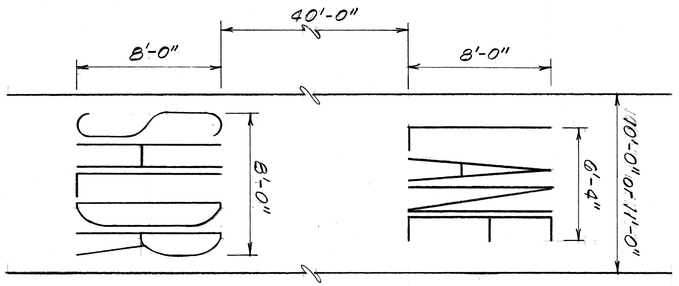
Scale: As Shown Date: Sept. 1985

SHEET NO. T5 OF 19 SHEETS

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

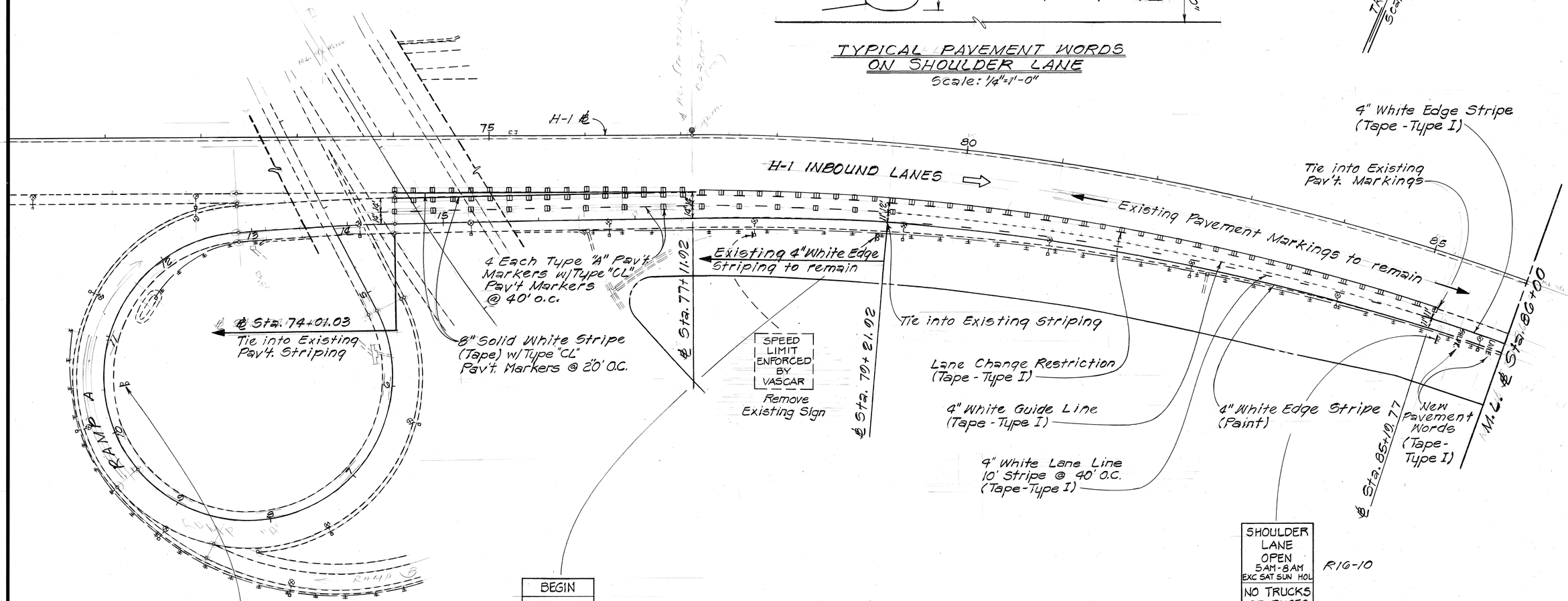
C.O. 42

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	CO 42 S-1	62



TYPICAL PAVEMENT WORDS ON SHOULDER LANE
Scale: 1/2"=1'-0"

TRUE NORTH
Scale: 1"=50'



DATE	REVISION
10/5/87	Revised Pavement Markings and Added Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. No. IR-HI-1(193)

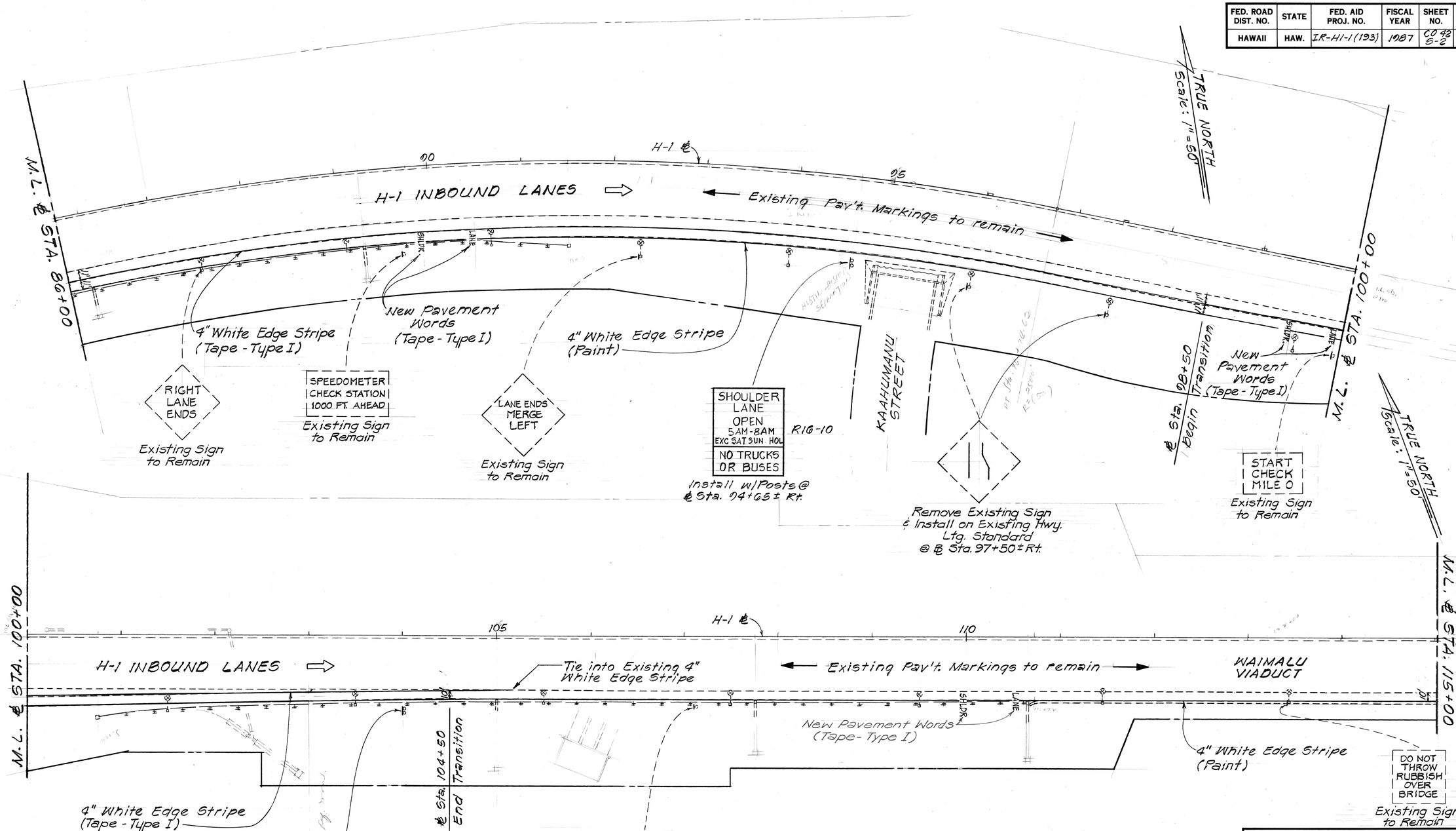
Scale: As Shown Date: Oct, 1987

SHEET No. 752 OF 19 SHEETS

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

C.O.42 S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	CO 42 S-2	62



ORIGINAL PLAN
NOTE BOOK
No.

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

DATE	REVISION
10/5/87	Revised Pavement Markings and Added Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. No. IR-HI-1(193)

Scale: As Shown Date: Oct., 1987

SHEET No. T56 OF 19 SHEETS

C.O. 42 S-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	C.042 S-3	62

TRUE NORTH
Scale: 1"=50'

M.L. ℄ STA. 115+00

120

H-1 ℄

125

M.L. ℄ STA. 130+00

WAIMALU VIADUCT

H-1 INBOUND LANES ⇨

← Existing Pav't. Markings to remain →

Existing 4" White Edge Stripe

10'

SHLDR

LANE

New Pavement Words
(Tape - Type I)

4" White Edge Stripe
(Paint)

New Pavement Words
(Tape - Type I)

DO NOT THROW RUBBISH OVER BRIDGE

Existing Sign to Remain

DO NOT THROW RUBBISH OVER BRIDGE

Existing Sign to Remain

SHOULDER LANE OPEN 5AM-8AM EXC SAT SUN HOL

NO TRUCKS OR BUSES

R10-10

Install w/Posts @ ℄ Sta. 130+00± Rt.

Existing Signs to Remain

H-1
Pearl Harbor

EXIT 13A

78
Aiea
Honolulu
EXIT ONLY

TRUE NORTH
Scale: 1"=50'

M.L. ℄ STA. 130+00

135

H-1 ℄

140

M.L. ℄ STA. 145+00

H-1 INBOUND LANES ⇨

← Existing Pav't. Markings to remain →

Existing 4" White Edge Stripe

10'

4" White Edge Stripe
(Paint)

New Pavement Words
(Tape - Type I)

SHLDR

LANE

KAONOHI STREET

RIGHT LANE
MOANALUA
AIEA
EXIT ONLY

Existing Sign to Remain

ORIGINAL PLAN

NOTE BOOK
No.

SURVEY PLOTTED BY _____ DATE
DRAWN BY _____
TRACED BY _____
DESIGNED BY _____
QUANTITIES BY _____
CHECKED BY _____

DATE	REVISION
10/5/87	Revised Pavement Markings and Added Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. No. IR-HI-1(193)

Scale: As Shown Date: Oct., 1987

SHEET No. T5c OF 19 SHEETS

C.042 S-3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	C092 S-4	62

TRUE NORTH
Scale: 1"=50'

M.L. ℄ STA. 145+00

150

H-1 ℄

155

M.L. ℄ STA. 160+00

H-1 INBOUND LANES ⇨

← Existing Pav't. Markings to remain →

Existing 4" White Edge Stripe

4" White Edge Stripe (Paint)

MOANALUA FRWY
LANE
USE EXIT 13B
Existing Sign to Remain

END CHECK MILE 1
Existing Sign to Remain

RIGHT LANE EXIT ONLY
Existing Sign to Remain

SPEED LIMIT 55 MINIMUM 45
Existing Sign to Remain

SHOULDER LANE OPEN 5AM-8AM EXC SAT SUN HOL
NO TRUCKS OR BUSES
R16-10
Install w/Posts @ ℄ Sta. 150+00± Rt.

TRUE NORTH
Scale: 1"=50'

4 Each Type "A" Pav't Markers w/Type "CL" Pav't Markers @ 40' o.c.

H-1 ℄

165

Tie into Existing Pav't Markings

Existing to remain

170

4" Yellow Stripe (Paint) w/Type "HL" Pav't. Markers @ 40' o.c.

Remove Existing and Stripe New Pavement Diamond (Tape - Type I)

M.L. ℄ STA. 160+00

H-1 INBOUND LANES ⇨

← Existing Pav't. Markings to remain →

Existing 4" White Edge Stripe

℄ Sta. 167+80 Begin Striping

℄ Sta. 169+45 Begin Lane Drop Marking

New Pavement Words (Tape-Type I)

Lane Drop Marking (Tape-Type I)

M.L. ℄ STA. 173+00

4" White Edge Stripe (Paint)

4" White Edge Stripe (Tape - Type I)

RIGHT LANE MOANALUA AIEA EXIT ONLY
Existing Sign to Remain

RIGHT LANE EXIT ONLY
Existing Sign to Remain

EXIT 13A
78
Aiea
Honolulu
RIGHT LANE
EXIT ONLY
Existing Sign to Remain

KAAMILO STREET

RIGHT LANE EXIT ONLY
Existing Sign to Remain

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

DATE	REVISION
10/5/87	Revised Pavement Markings and Added Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

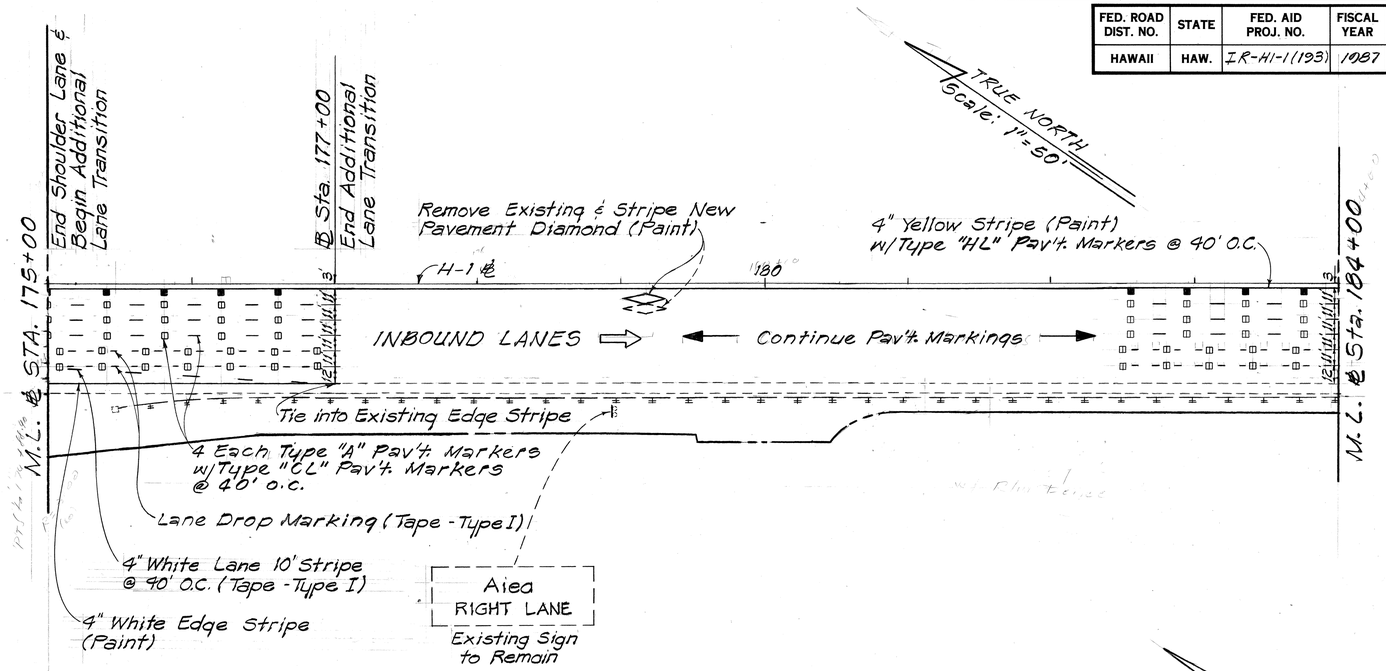
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. No. IR-HI-1(193)

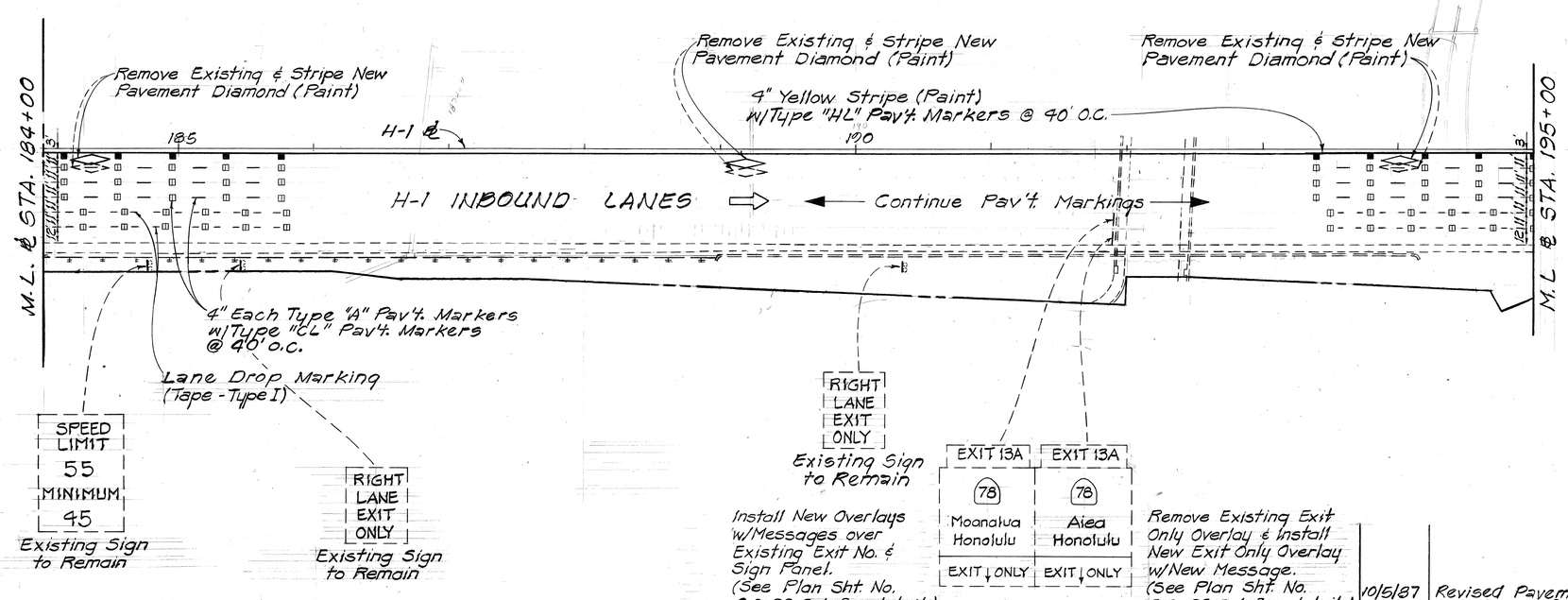
Scale: As Shown Date: Oct., 1987

SHEET No. 75d OF 19 SHEETS

C.042 S-4

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	C0 42 S-5	62





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

DATE	REVISION
10/5/87	Revised Pavement Markings and Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKINGS

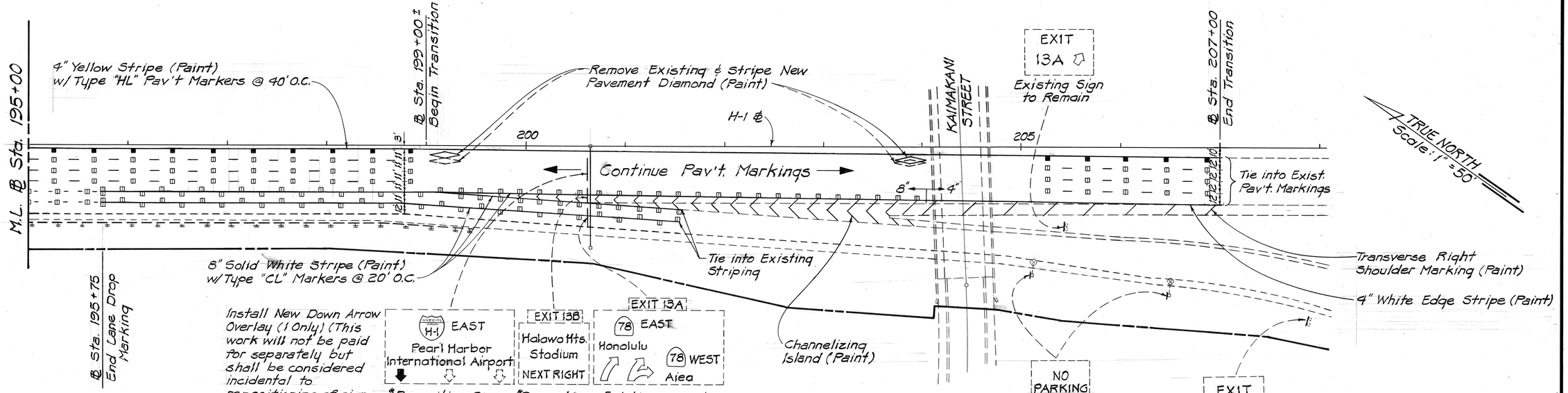
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. NO. IR-H-1(193)

Scale: As Shown Date: Oct, 1987

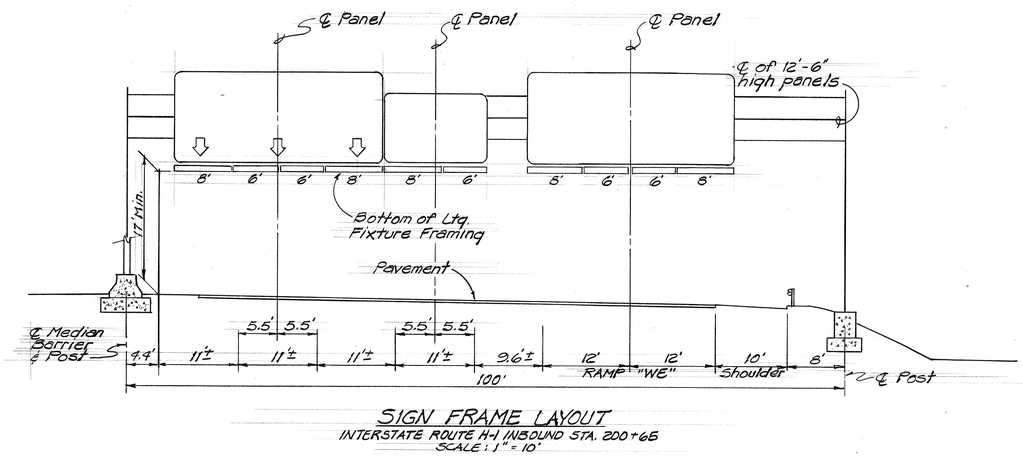
SHEET No. T5e OF 19 SHEETS

C.O. 42 S-5

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1987	C042 S-6	62



*Incidental parts & services, including sign lighting system, not shown on the plans or specified but deemed necessary for the sign reposition, shall be furnished and installed by the Contractor as part of the work contracted.



SIGN FRAME LAYOUT
INTERSTATE ROUTE H-1 INBOUND STA. 200+65
SCALE: 1" = 10'

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

DATE	REVISION
10/15/87	Revised Pavement Markings and Signs for I.B. Shoulder Lane.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & PAVEMENT MARKINGS & SIGN FRAME LAYOUT

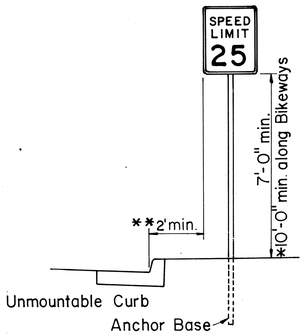
INTERSTATE ROUTE H-1
ADDITIONAL LANES
F.A.I. PROJ. No. IR-HI-1(193)

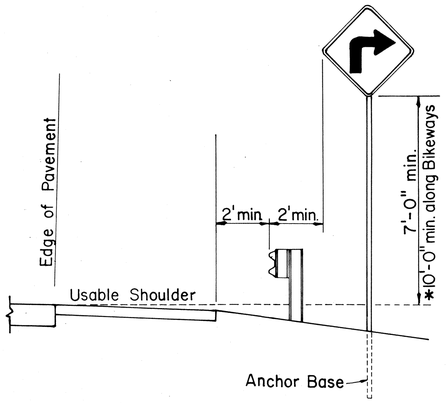
Scale: As Shown Date: Oct., 1987

SHEET No. 75 OF 19 SHEETS

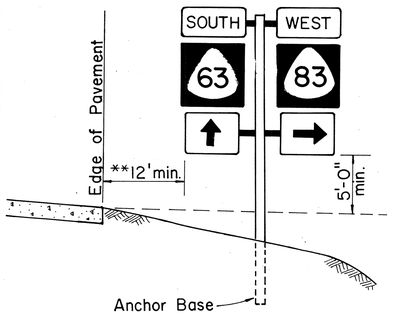
C.O.42 S-6

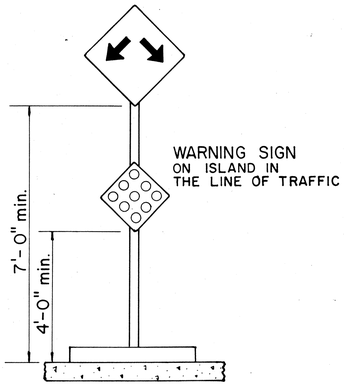
H-1 CHANNEL LN. (193)

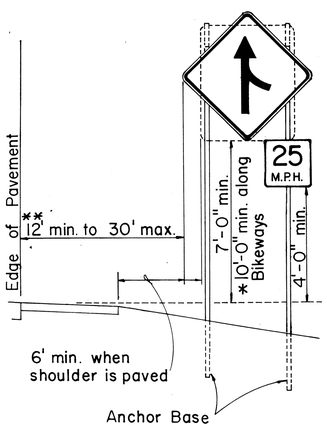


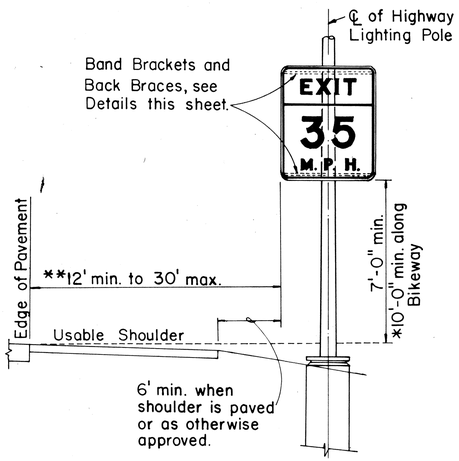


ROADSIDE ASSEMBLY
RURAL DISTRICT

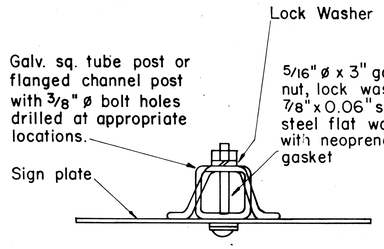








HEIGHT AND LATERAL LOCATION OF SIGNS
TYPICAL INSTALLATION



GALVANIZED SQUARE TUBE
OR FLANGED CHANNEL POST

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	43	62

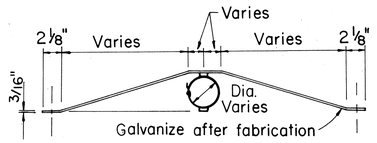
GENERAL NOTES

1. 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.
2. 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.
3. 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:
   a. 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.
   b. 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.
   c. Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
4. All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
5. Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
6. (R) or (L) indicates right or left and shown on the plans.

* 7. See plans for special details of signs along bikeways.

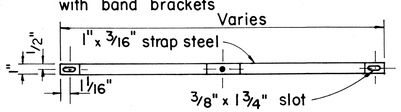
** 8. The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.

9. 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.
10. Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



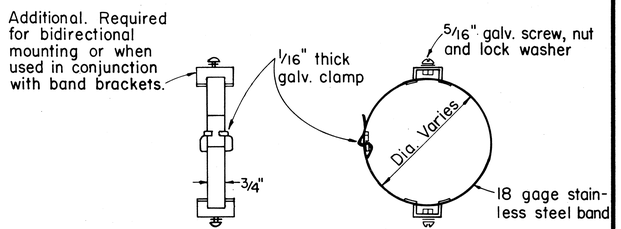
PLAN

Back braces shall be used in conjunction with band brackets



ELEVATION

BACK BRACE



LEFT SIDE VIEW PLAN

BAND BRACKET

TYPICAL MOUNTING DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supercedes Sht. DT 100 approved 11/15/77		10-18-83

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

APPROVED:
M. Fujiyama — 10-18-83
ASSISTANT CHIEF, ENGINEERING — DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

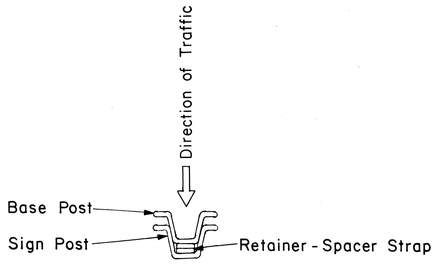
MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983

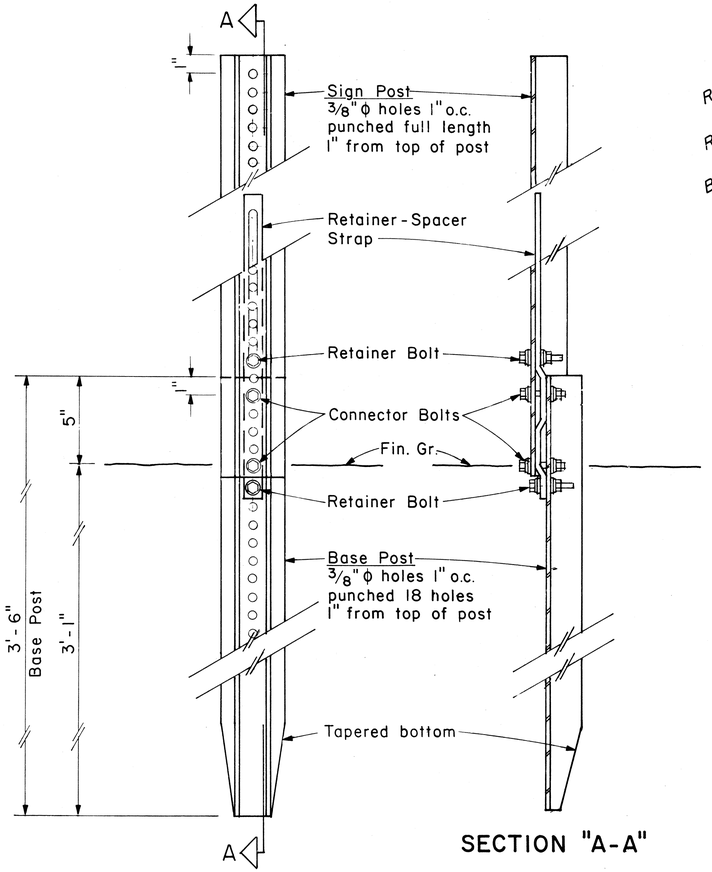
SHEET No. 76 OF 19 SHEETS DT 100

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(103)	1986	44	62



TOP VIEW

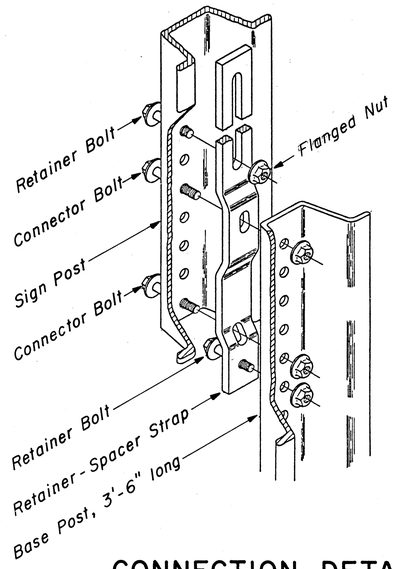


BACK VIEW

SECTION "A-A"

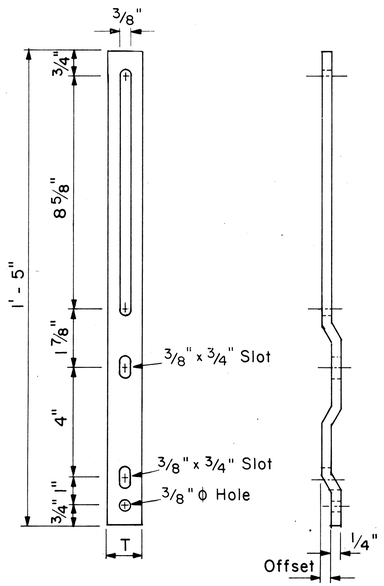
ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



CONNECTION DETAIL

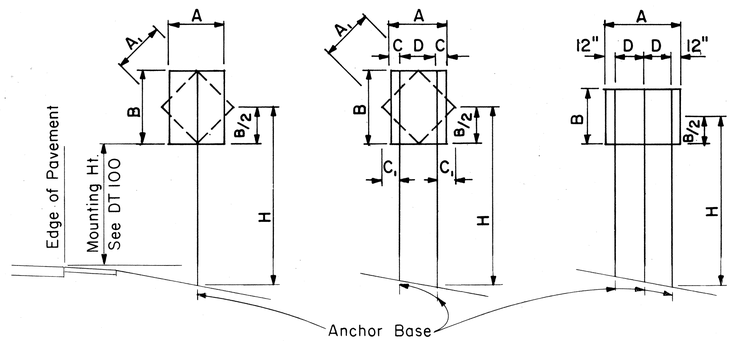
Not to Scale



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.)						
		7	8	9	10	11	12	
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75	A x B (Area, sq. ft.)
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.)						
		7	8	9	10	11	12	
2.50 lbs./ft.	124	17.71	15.50	13.77	12.40	11.27	10.33	A x B (Area, sq. ft.)
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.)						
		7	8	9	10	11	12	
2.50 lbs./ft.	187	26.71	23.38	20.78	18.70	17.00	15.58	A x B (Area, sq. ft.)
4.00 lbs./ft.	362	51.71	45.25	40.22	36.20	32.91	30.17	

WINDLOAD CHARTS

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

1. 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"
2. Retainer - Spacer Strap shall be AISI 1020 steel and galvanized in accordance with ASTM A 123.
3. 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.
4. All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
5. For additional details see sht. DT 100.
6. Basic formulas for use with the windload charts:
   Factor = A x B x H
   Therefore, if sign area (A x B) is known,
   Maximum H = Factor / sign area (A x B)
   and if H is known,
   Maximum sign area (A x B) = Factor / H

APPROVAL RECOMMENDED:

Eiichi Tanaka — 9/21/82
TRAFFIC ENGINEER — DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING — DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

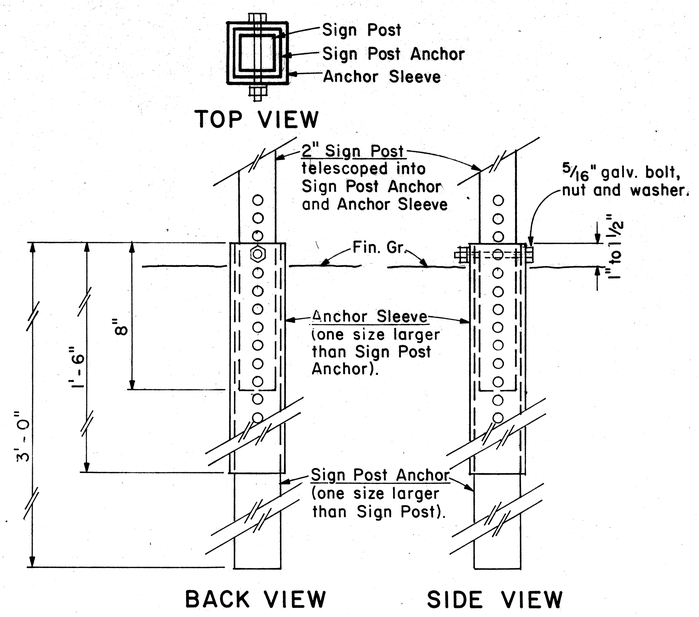
GALVANIZED FLANGED CHANNEL SIGN POST MOUNTING

Scale: As Shown Date: Sept. 1982

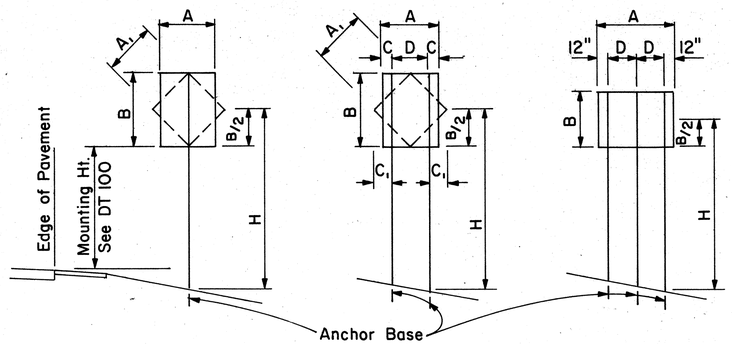
SHEET No. 77 OF 19 SHEETS DT100A

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1 (193)	1986	45	62



2" SIGN POST INSTALLATION



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 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

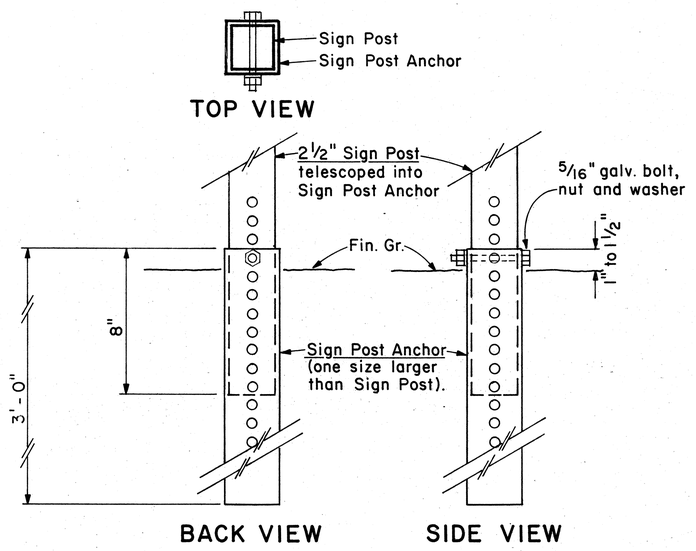
Not to Scale

SQUARE TUBE: 1-POST INSTALLATION								
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	A x B (Area, sq. ft.)
2½"	107	-	-	-	-	9.6	8.8	

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	A x B (Area, sq. ft.)
2½"	212	30.2	26.5	23.5	21.1	19.2	17.6	
2½", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5	

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	A x B (Area, sq. ft.)
2½"	318	45.4	39.5	35.2	31.5	28.8	26.5	
2½", 10 ga.	388	55.0	48.5	43.0	38.5	35.0	32.0	

WINDLOAD CHARTS



2½" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

GENERAL NOTES

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

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 9/21/82 DATE

APPROVED:

Herbert R. Takeishi — ASSISTANT CHIEF, ENGINEERING — 9/22/82 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: Sept 1982

SHEET NO. 18 OF 19 SHEETS DT100B

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	46	62

CW20-1a 48"x48"

CW20-2d 48"x48"

CW20-3b 48"x48"

CW20-4d 48"x48"

CW20-5d(L) 48"x48"

CW20-7c 36"x36"
24"x18"
CW20-7c-A 48"x48"
24"x18"

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

1. Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
2. All construction signs shall be reflectorized.
3. All construction signs shall have $^{3}/_{8}$" bolt holes drilled at appropriate locations.
4. Numerals in ( ) indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. 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:
Eiichi Tanaka 3/21/72
TRAFFIC ENGINEER DATE

APPROVED:
Walter Raleigh 3/23/72
ASSISTANT CHIEF, ENGINEERING 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.	10/10/74
3	Revised General Note 2	MH	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76
5	Revised General Note 1 and sign CW 20-7c	E.T.	9/19/85

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

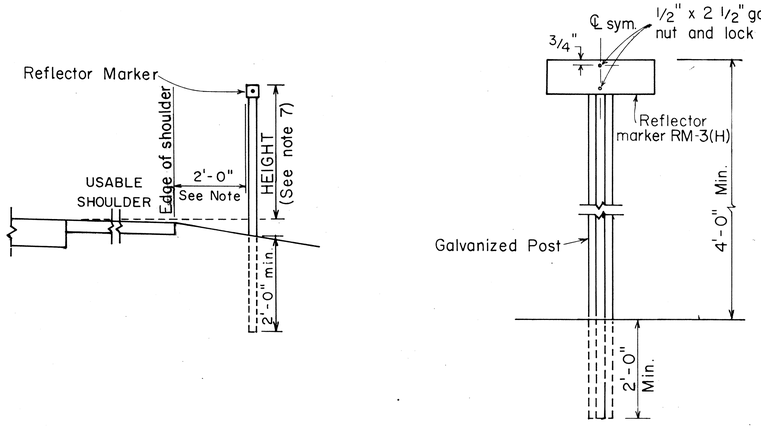
NOT TO SCALE

SHEET No. T9 OF 19 SHEETS DT 104

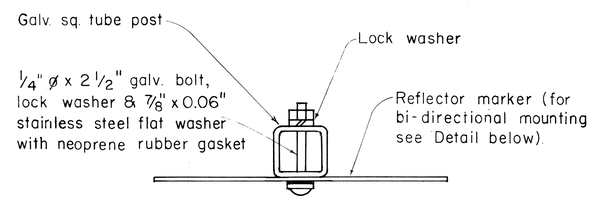
ORIGINAL PLAN
NOTE BOOK No.
SURVEY PLOTTED BY DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY

K&E IMPERIAL LA 3207

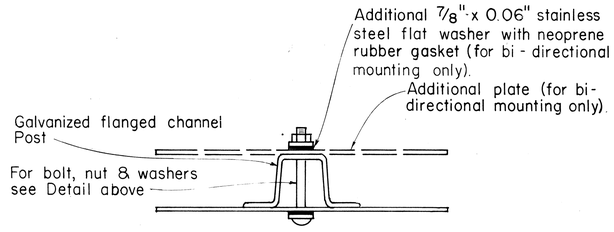
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(159)	1986	47	62



REFLECTOR MARKER MOUNTING DETAIL



GALVANIZED SQUARE TUBE POST

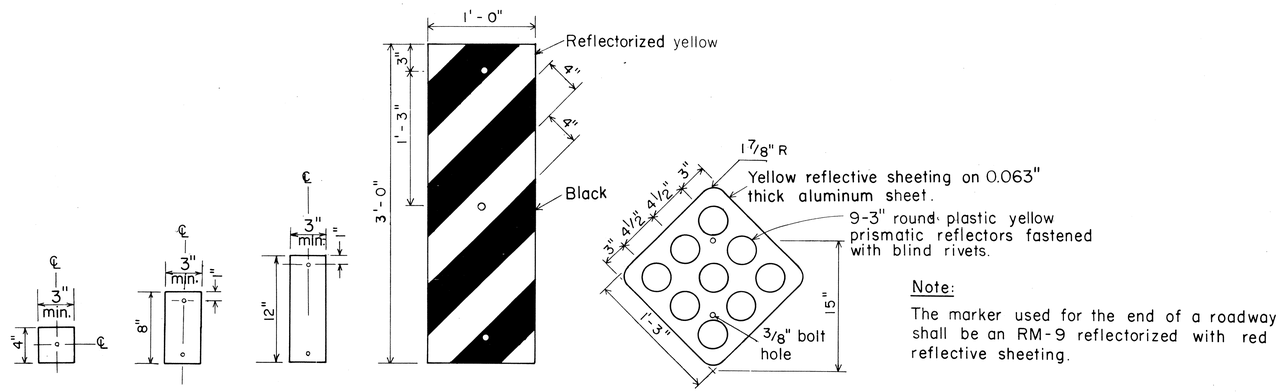


GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS

GENERAL NOTES:

1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
   a) Yellow if placed along the left edge of divided roadways, one-way roadways, and ramps in the direction of travel.
   b) White if placed along the right edge of divided roadways, one-way roadways, and ramps in the direction of travel.
4. For RM-4, the stripes shall slope downward at an angle of 45° toward the side of the obstruction that traffic is to pass.
5. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
6. (H) indicates horizontal mounting of reflector marker.
7. Height = 4'-0" min. for RM-1, RM-2 and RM-3.
   Height = 5'-6" min. for RM-4 and RM-9.
8. Final locations of reflector markers shall be approved by the Engineer.



RM-1 (WHITE, YELLOW, OR RED)

RM-2 (WHITE, YELLOW, OR RED)

RM-3 (YELLOW)

RM-4 (R)

RM-9

Note:

The marker used for the end of a roadway shall be an RM-9 reflectorized with red reflective sheeting.

REFLECTOR MARKERS

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.H.	4/25/80
2	Revised General Notes, Mounting Details and Reflector Markers.	[illegible]	9-28-83
3	Eliminated White for RM-4	[illegible]	1-30-85

APPROVAL RECOMMENDED:
Euchi Tanaka — TRAFFIC ENGINEER — 11/7/77 DATE

APPROVED:
Herbert S. Takeuchi — ASSISTANT CHIEF, ENGINEERING — 11/10/77 DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

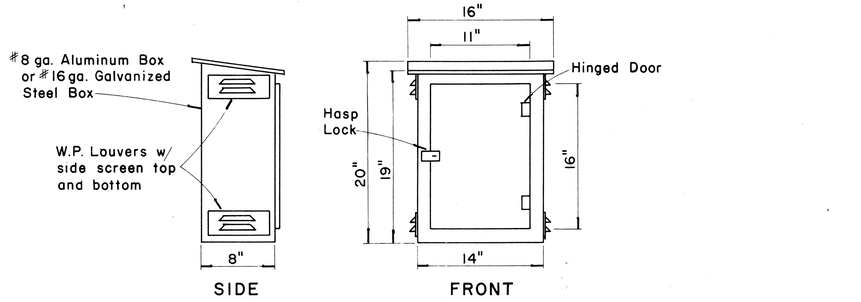
MISCELLANEOUS REFLECTOR MARKERS

Not to scale — June, 1977

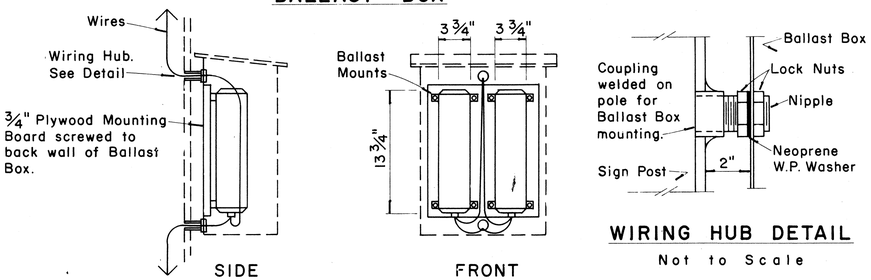
SHEET NO. T10 OF 19 SHEETS DT 110

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRHI-1(103)	1986	48	62



BALLAST BOX



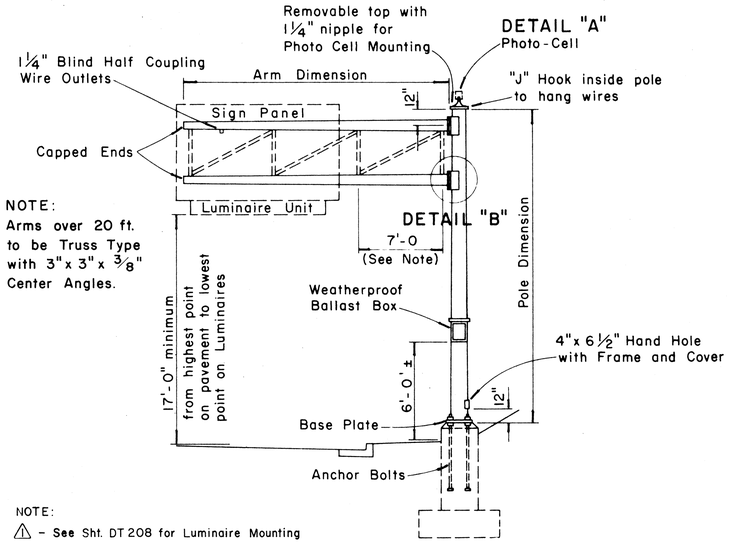
WIRING HUB DETAIL

Not to Scale

BALLASTS

WEATHERPROOF BALLAST BOX

Scale: 1½" = 1'-0"

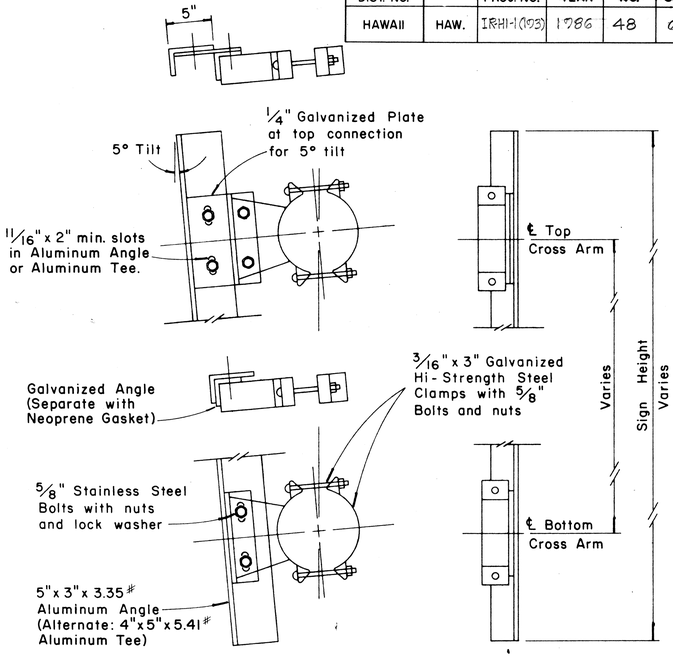


TYPE "C"

SINGLE SIGN POST — CANTILEVER TYPE

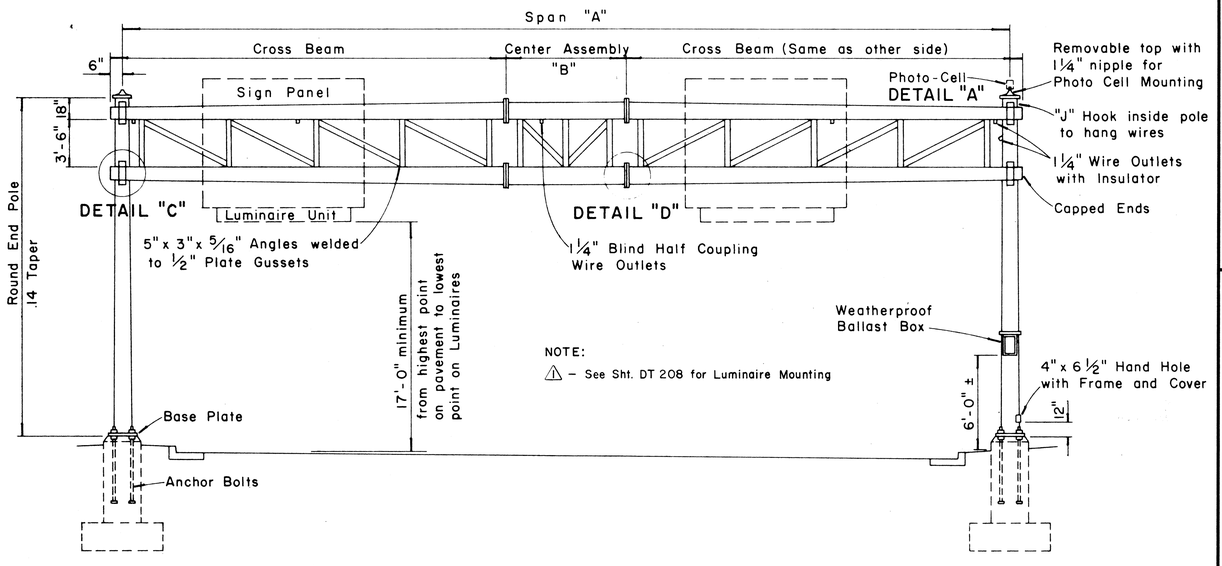
DOUBLE MAST ARM

Scale: 3/16" = 1'-0"



SIGN BRACKET ASSEMBLY

Scale: 1½" = 1'-0"



TYPE "D"

TWO-TUBE TRUSS — SPAN TYPE

Scale: 3/16" = 1'-0"

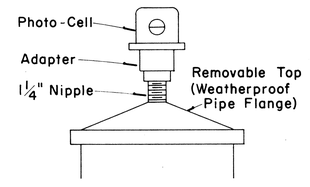
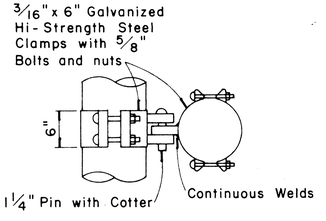


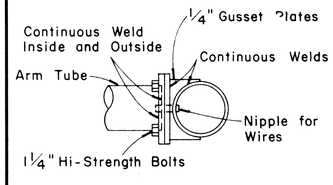
PHOTO-CELL DETAIL "A"

Not to Scale



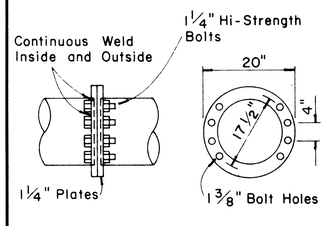
BEAM CLAMP DETAIL "C"

Scale: 1" = 1'-0"



ARM ATTACHMENT DETAIL "B"

Scale: ¾" = 1'-0"



CENTER JOINT DETAIL "D"

Scale: ¾" = 1'-0"

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 12/27/89 DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING — 12-30-89 DATE

NO.	REVISION	APPROVED BY	DATE
⚠	Added Note	H.T.	10/2/91

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
OVERHEAD SIGN SUPPORTS

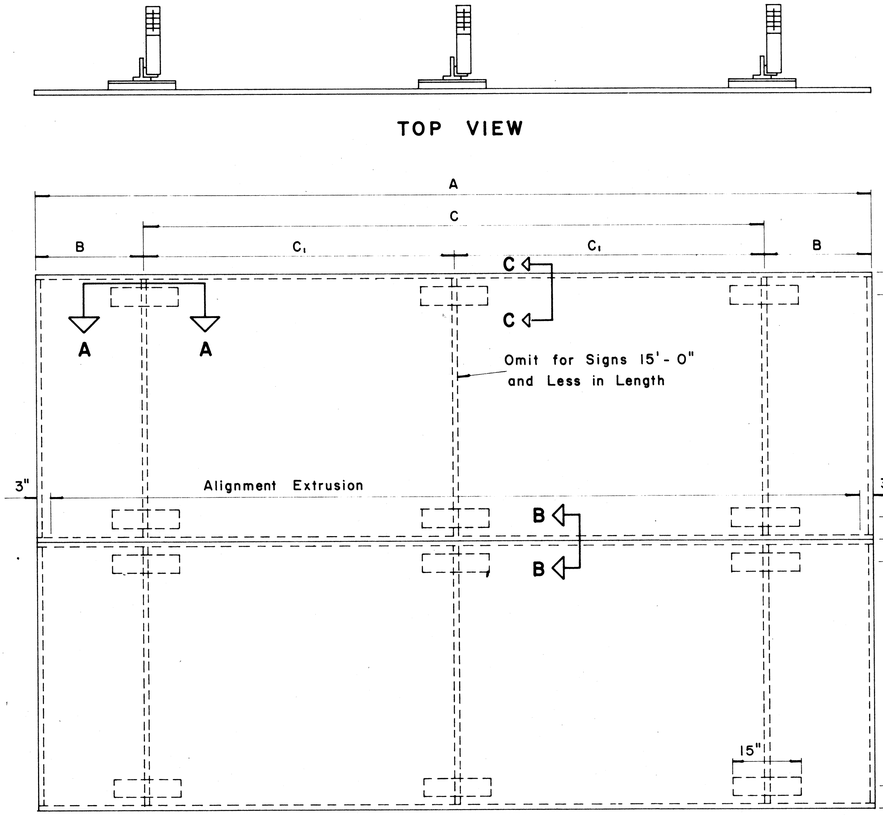
Scale As Shown

SHEET No. T11 OF 19 SHEETS DT 200

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

PRINTED ON NO. 1000H CLEARPRINT

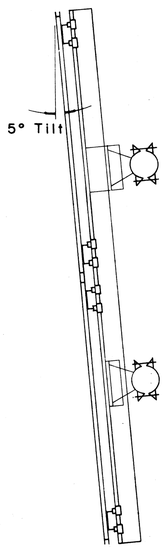
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(103)	1986	49	62



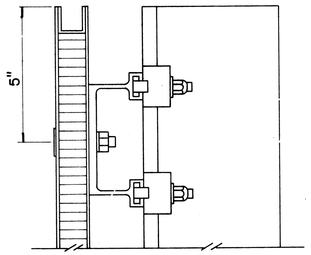
ELEVATION

TYPICAL SIGN ASSEMBLY

Scale: $\frac{3}{4}$" = 1'-0"

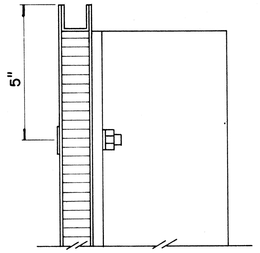


SIDE VIEW



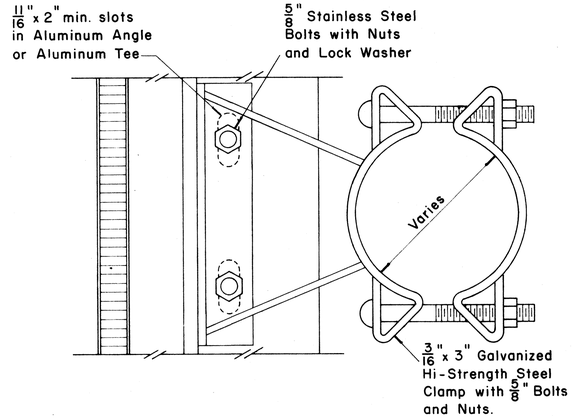
SECTION "C-C"

Scale: $\frac{3}{8}$" = 1"



SECTION "C-C" (Alternate)

Scale: $\frac{3}{8}$" = 1"



SIGN BRACKET ASSEMBLY

Scale: $\frac{3}{8}$" = 1"

NOTE: For additional details of Sign Bracket Assembly, see Standard Detail Sheet "Overhead Sign Supports."

(OVERHEAD SIGNS)

SUPPORT SPACING TABLE

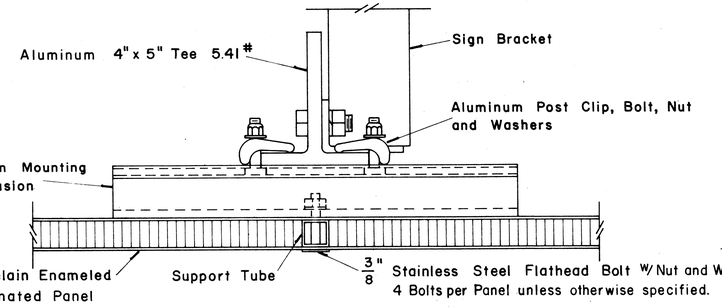
PANEL THICK.	LENGTH OF SIGN A	NO. OF SUPPORTS	OVERHANG B	SUPPORT SPACING C or C1
1"	6'-0"	2	12"	48"
1"	6'-6"	2	15"	48"
1"	7'-0"	2	15"	54"
1"	7'-6"	2	18"	54"
1"	8'-0"	2	18"	60"
1"	8'-6"	2	20"	62"
1"	9'-0"	2	22"	64"
1"	9'-6"	2	23"	68"
1"	10'-0"	2	24"	72"
1"	10'-6"	2	24"	78"
1"	11'-0"	2	24"	84"
1"	11'-6"	2	27"	84"
1"	12'-0"	2	30"	84"
1"	12'-6"	2	30"	90"
1"	13'-0"	2	30"	96"
1"	13'-6"	2	30"	102"
1"	14'-0"	2	30"	108"
1"	14'-6"	2	36"	102"
1"	15'-0"	2	36"	108"
1"	15'-6"	3	24"	69"
1"	16'-0"	3	24"	72"
1"	16'-6"	3	24"	75"
1"	17'-0"	3	24"	78"
1"	17'-6"	3	24"	81"
1"	18'-0"	3	24"	84"
1"	18'-6"	3	27"	84"
1"	19'-0"	3	27"	87"
1"	19'-6"	3	27"	90"
1"	20'-0"	3	30"	90"
1"	20'-6"	3	30"	93"
1"	21'-0"	3	30"	96"
1"	21'-6"	3	33"	96"
1"	22'-0"	3	36"	96"
1"	22'-6"	3	36"	99"
1"	23'-0"	3	36"	102"
1"	23'-6"	3	36"	105"
1"	24'-0"	3	36"	108"

APPROVAL RECOMMENDED:

Eiichi Tanaka — TRAFFIC ENGINEER — 12/29/89 DATE

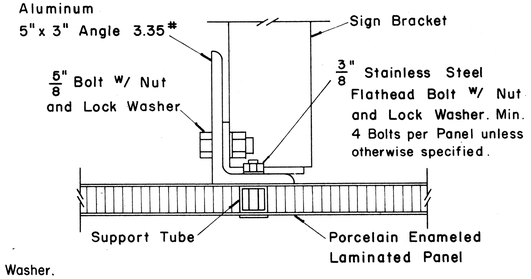
APPROVED:

ASSISTANT CHIEF, ENGINEERING — 12-30-89 DATE



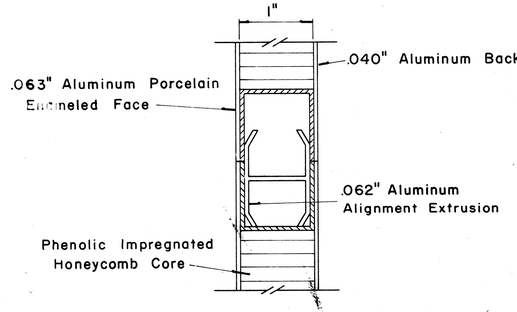
SECTION "A-A"

Scale: $\frac{3}{8}$" = 1"



SECTION "A-A" (Alternate)

Scale: $\frac{3}{8}$" = 1"



CLOSURE DETAIL SECTION "B-B"

FULL SCALE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

LAMINATED ALUMINUM SIGN PANELS (OVERHEAD)

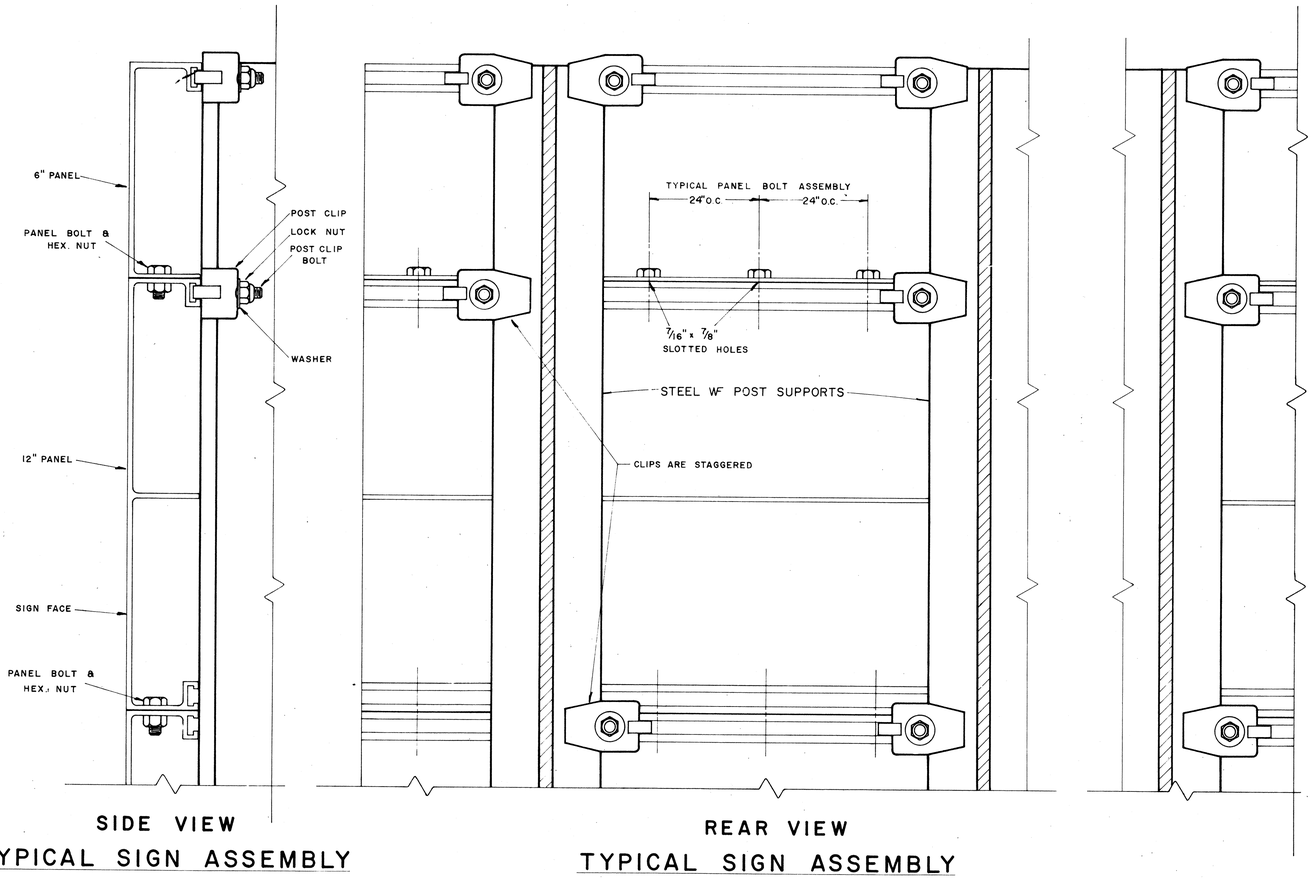
Scale: As Shown

SHEET No. T12 OF 19 SHEETS DT 205

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

PRINTED ON NO. 1000H CLEARPRINT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	50	62

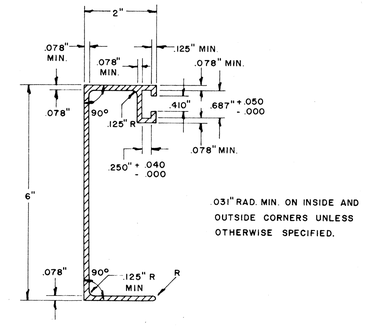


SIDE VIEW

TYPICAL SIGN ASSEMBLY

REAR VIEW

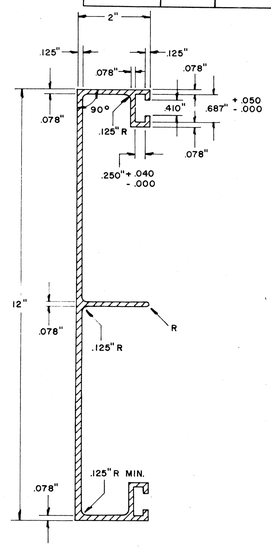
TYPICAL SIGN ASSEMBLY



.031" RAD. MIN. ON INSIDE AND OUTSIDE CORNERS UNLESS OTHERWISE SPECIFIED.

6" SIGN PANEL

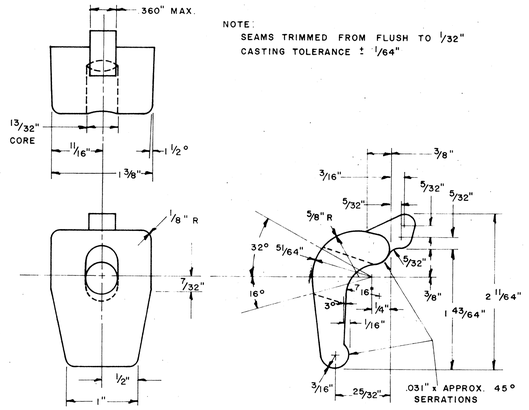
WT./ LINEAL FT. - 1.103 LBS. MIN.
ALLOY - 6061 - F(1)
MOMENT OF INERTIA - 0.487 MIN
MINIMUM SECTION MODULUS 0.341



12" SIGN PANEL

WT./LINEAL FT. - 2.690 LBS. MIN.
ALLOY - 6061 - F(1)
MOMENT OF INERTIA 0.936 MIN.
MINIMUM SECTION MODULUS 0.605

SOLID EXTRUDED SIGN PANEL DETAILS



POST CLIP DETAIL

ALLOY 356 - T6

POST CLIP BOLT ASSEMBLY

3/8" - 16 x 1 3/4" LONG SQ. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 LOCK NUT - ALLOY 2017 - T4
25/32" ID x 3/4" OD x .09" WASHER - ALLOY ALCLAD 2024 - T4

PANEL BOLT ASSEMBLY

3/8" - 16 x 3/4" LONG HEX. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 HEX. NUT - ALLOY 6061 - T6
FLAT WASHER - ALLOY ALCLAD 2024 - T4

NOTE:
Extruded Aluminum Panels to be used for Destination Signs with Reflective Sheeting Background

APPROVAL RECOMMENDED:

Euichi Tanaka — TRAFFIC ENGINEER — 12/29/89 DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING — 12-30-89 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

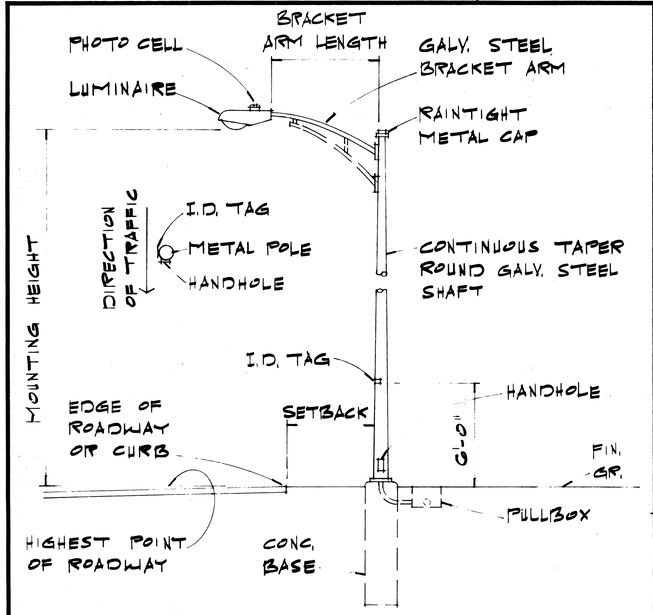
STANDARD DETAILS

SOLID ALUMINUM EXTRUDED SIGN PANEL AND ACCESSORY DETAILS

SCALE:

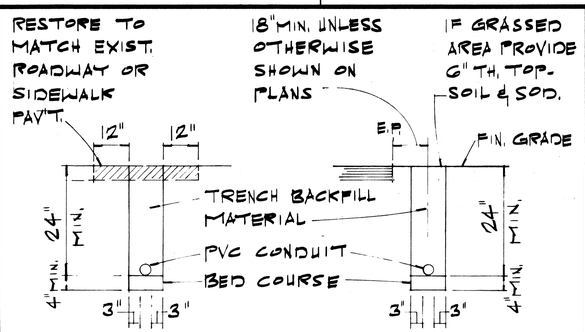
SHEET No. T13 OF 19 SHEETS DT207

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



STREET LIGHT DETAIL

SCALE: 1/4" = 1'-0"

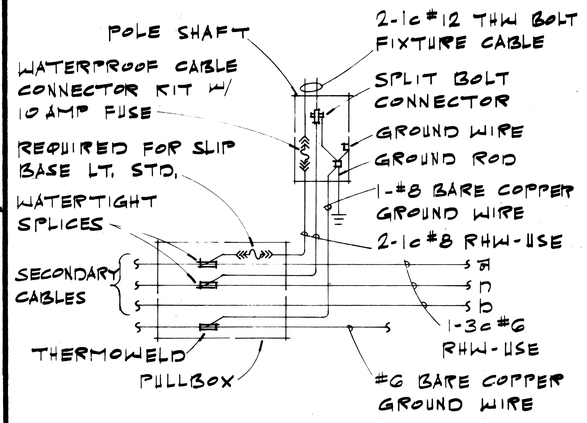


ROAD CROSSING EDGE OF SHOULDER OR CURB CROSSING

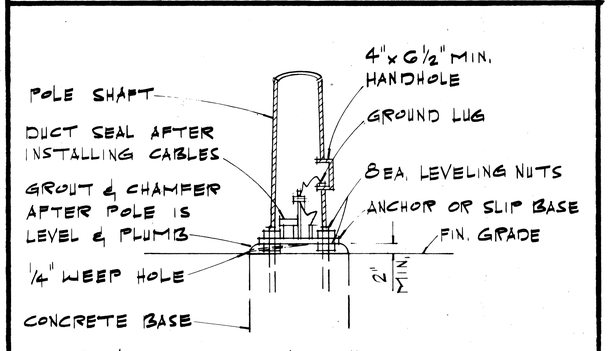
TYPICAL DUCT SECTION DETAIL

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

NOTE:
FOR MULTIPLE CONDUIT LAYOUTS PROVIDE 3" CL. SPACING BETWEEN CONDUITS.

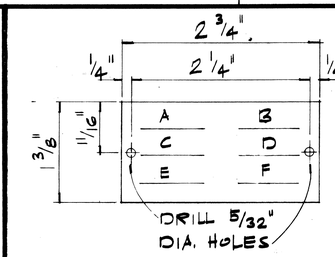


WIRING CONNECTION DIAGRAM



POLE MOUNTING DETAIL

SCALE: 3/4" = 1'-0"



IDENTIFICATION TAG FOR MULTIBLE STREET LIGHTING

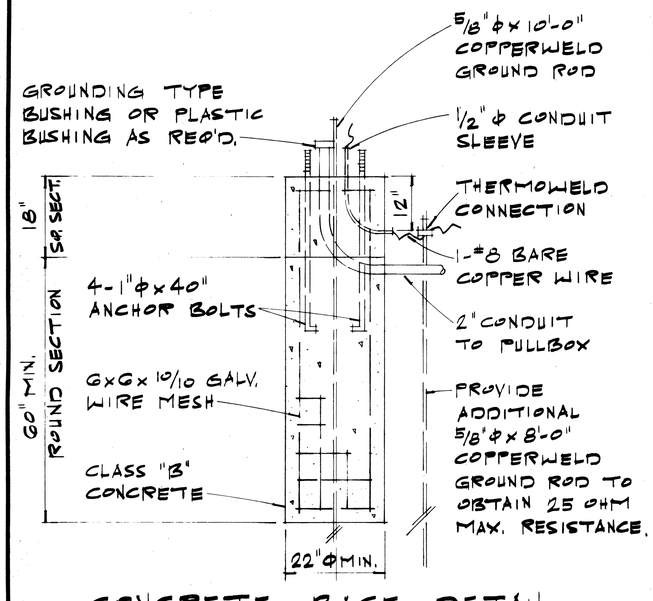
NOT TO SCALE

*ENGRAVING SCHEDULE

A= CONTRACT NUMBER
B= LIGHT NUMBER
C= LIGHT DATA
D= REFRACTOR NUMBER (IES ROMAN NUMERAL)
E= POST NUMBER
F= LAMP VOLTAGE - OBTAINED FROM SUPPLIER (55 OR 100 V)

* AS SHOWN ON PLANS

NOTE:
1. MAKE FROM 3-PLY LAMINATED PLASTIC (BLACK-WHITE-BLACK) W/ 1/5" HIGH COMMERCIAL GOTHIC LETTERS ENGRAVED.
2. ATTACH TO POLE W/ #7 CADMIUM PLATED SCREWS.



CONCRETE BASE DETAIL

SCALE: 3/4" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	51	62

GENERAL NOTES

1. ALL LUMINAIRES SHALL BE HIGH PRESSURE SODIUM TYPE W/ WATTAGE & IES TYPE LIGHT DISTRIBUTION AS SHOWN ON PLANS.
2. ALL SECONDARY CIRCUIT EXTENSIONS TO _____ SERVICE SHALL BE PROVIDED BY CONTRACTOR. ALL CONNECTIONS MADE BY _____ SUBJECT TO CHARGE SHALL BE PAID BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING & INFORMING _____ OF STREET LIGHT LOCATIONS ON PROJECT SITE PRIOR TO INSTALLATION OF _____ SECONDARY CIRCUIT CONNECTION.
4. THE CONTRACTOR SHALL NOTIFY & COORDINATE WORK W/ THE STATE ELECTRICAL MAINTAINANCE SECTION, ADD:_____ _____, PH. #_____, 72 HOURS IN ADVANCE OF COMMENCING INSTALLATION OF STREET LIGHT SYSTEM.
5. THE CONTRACTOR SHALL LOCATE & VERIFY EXISTING STREET LIGHT SECONDARY VOLTAGE BEFORE ORDERING LIGHTING EQUIPMENT.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TYPICAL DETAILS

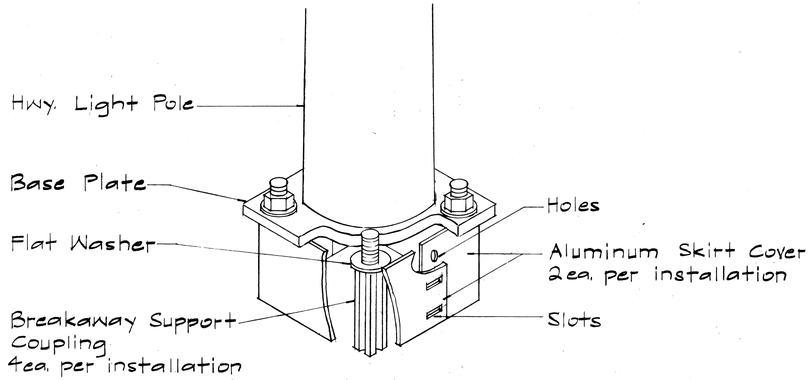
HIGHWAY LIGHTING LUMINAIRE MOUNTED ON METAL POLE

F.A.I. PROJ. NO. IR-HI-1 (193)

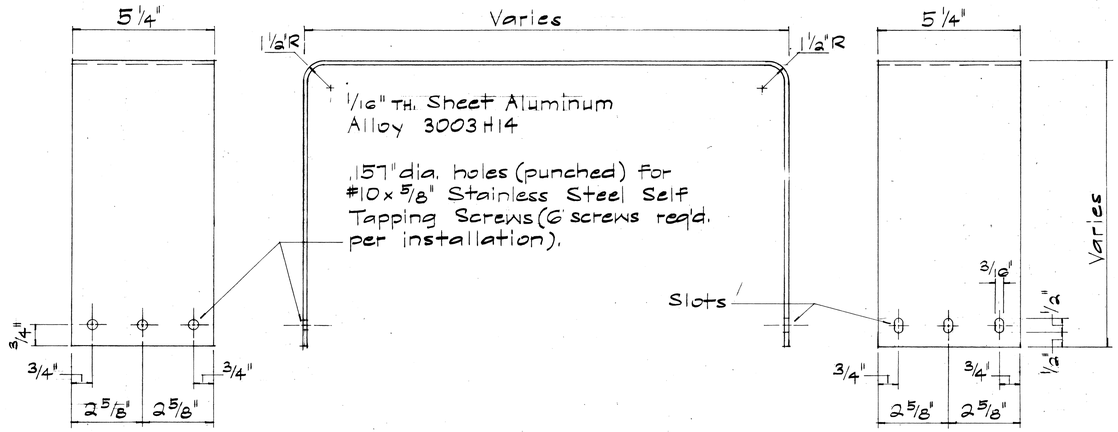
SCALE: AS SHOWN

SHEET NO. T14 OF 19 SHEETS

FED. ROAD DIST. NO,	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	52	62



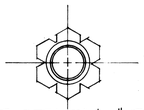
SKIRT COVER DETAIL



LEFT SIDE VIEW TOP VIEW RIGHT SIDE VIEW

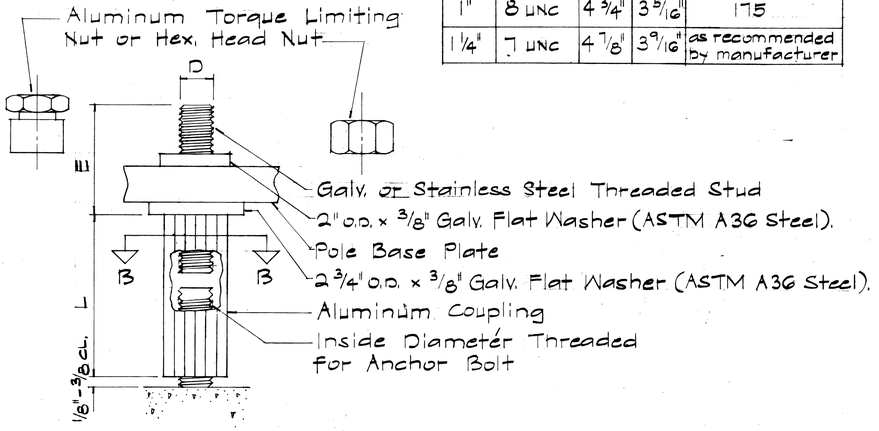
SKIRT COVER FOR BREAKAWAY SUPPORT COUPLING

Not to Scale



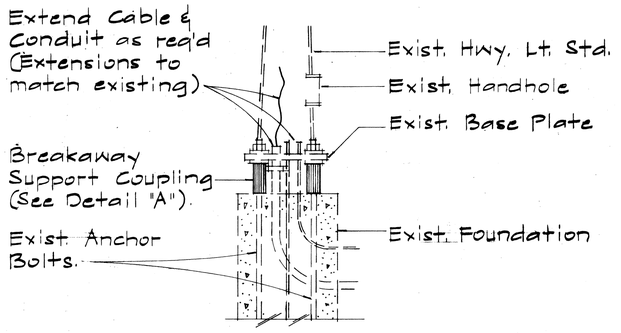
SECTION "B-B"

DIMENSION SCHEDULE				
D	THREAD	L	E	NUT TORQUE ± 25 FT. LBS.
1"	8 UNC	4 3/4"	3 5/16"	175
1 1/4"	7 UNC	4 7/8"	3 9/16"	as recommended by manufacturer



DETAIL "A"

Not to Scale



MOUNTING DETAIL

Scale: 3/4" = 1'-0"

BREAKAWAY SUPPORT COUPLING

Scale: As Shown

GENERAL NOTES:

1. Contractor shall verify size of exist. anchor bolts & base plates prior to ordering couplings & skirt covers.
2. Breakaway support coupling shall conform to the applicable requirements of AASHTO standards & shall be fabricated from either die cast aluminum alloy 380 according to ASTM B85, or extruded from alloy 2024-T8511 according to ASTM B 221.
3. Hex. nut shall meet the requirements of ASTM A563 grade A, and ANSI B 18.2.2.
4. Torque nut shall be fabricated from aluminum alloy and grooved to separate at the specified torque.
5. Threaded stud shall meet the requirements of ASTM A 675 grade 90 or AISI stainless steel.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

TYPICAL DETAILS

BREAKAWAY SUPPORT COUPLING & SKIRT COVER

FAI. PROJ. No. IR-HI-1 (193)

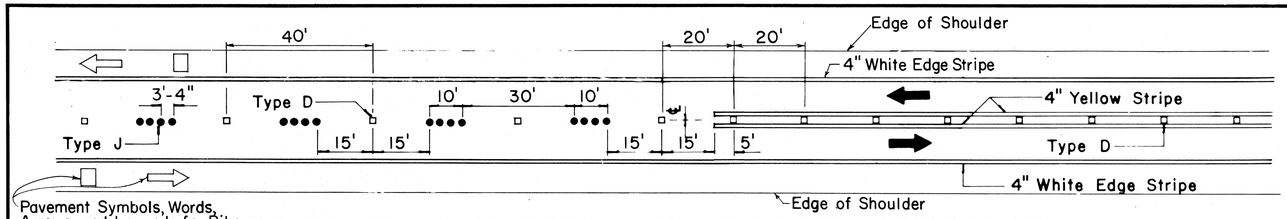
Scale: As Shown

SHEET No. T15 OF 19 SHEETS

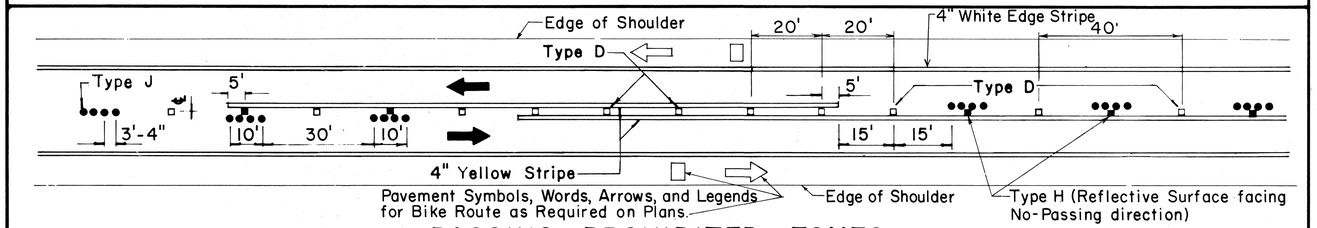
ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | NOTE BOOK | No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	53	62

TWO - LANE

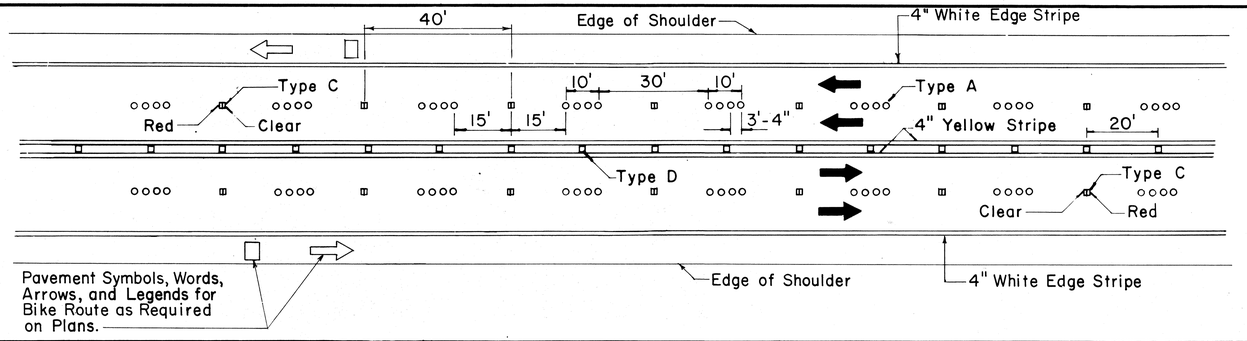


PASSING PERMITTED AND PASSING PROHIBITED

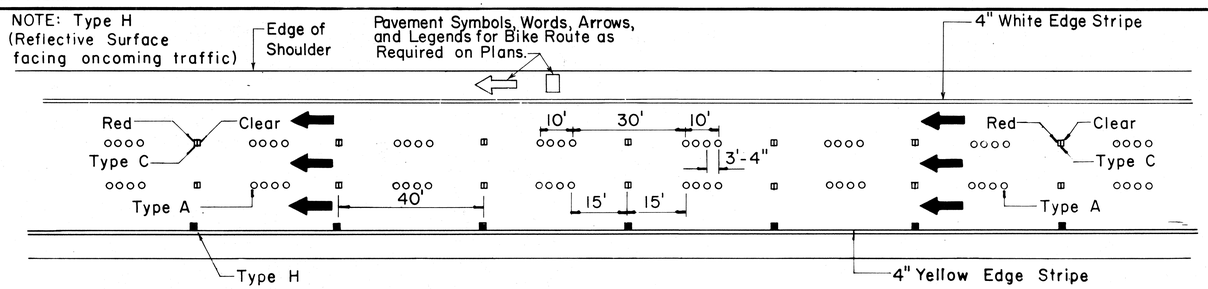


PASSING PROHIBITED ZONES

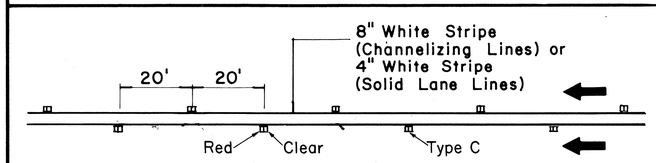
MULTI - LANE



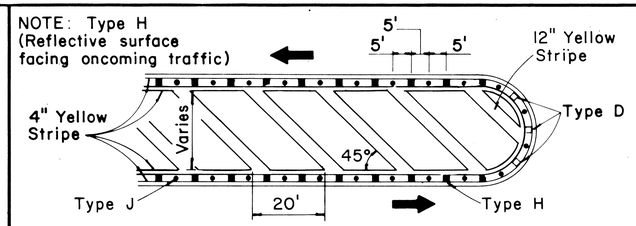
DIVIDED HIGHWAY AND FREEWAY



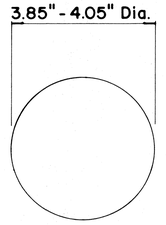
MISCELLANEOUS



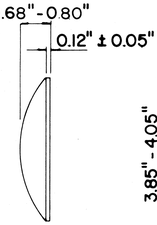
CHANNELIZING LINES OR SOLID LANE LINES

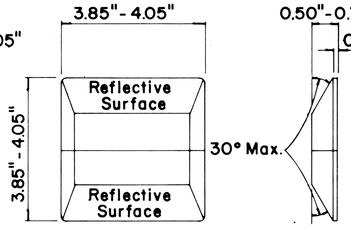


MEDIAN NOSE DELINEATION



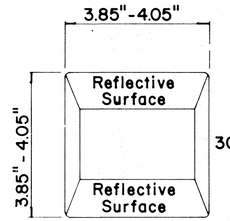
TYPE A
NON - REFLECTIVE WHITE MARKER

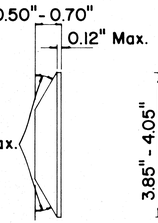




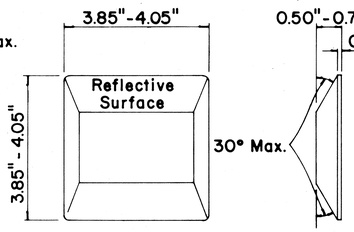
TYPE C
RED - CLEAR REFLECTIVE MARKER

TYPE J
NON - REFLECTIVE YELLOW MARKER





TYPE D
TWO - WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE - WAY YELLOW REFLECTIVE MARKER

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:

Eiichi Tanaka — TRAFFIC ENGINEER — 7/21/78 DATE

APPROVED:

Herbert R. Takeishi — ASSISTANT CHIEF, ENGINEERING — 7/24/78 DATE

No.	REVISION	APPROVED BY	DATE
1	Supercedes DT 300 approved 11/18/71.	H.T.	7/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.T.	10/15/79
3	Added General Note 3. Revised left edge stripe.	[illegible]	9-28-83
4	Revised Channelizing Lines or Solid Lane Lines.	E.T.	9/18/85

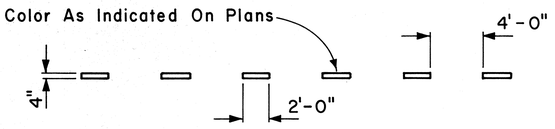
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS AND STRIPING

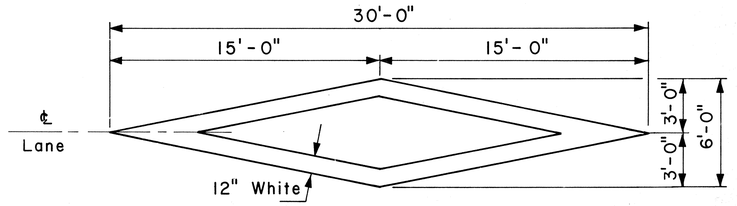
Not to Scale — July 1978

SHEET No. T16 OF 19 SHEETS DT 300

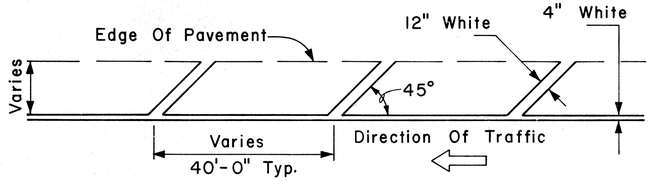
SURVEY PLOTTED BY — DATE
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
ORIGINAL PLAN
NOTE BOOK
No.



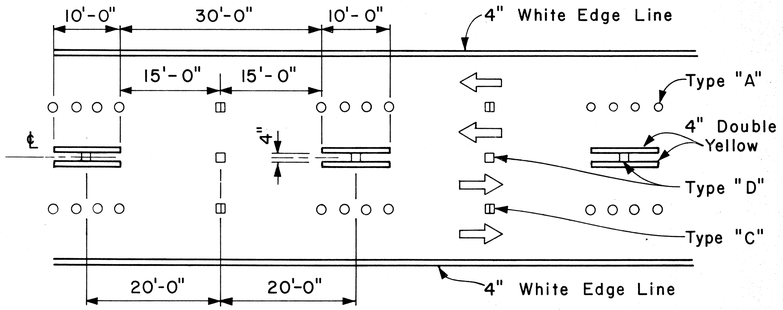
4" GUIDE LINE



PAVEMENT DIAMOND

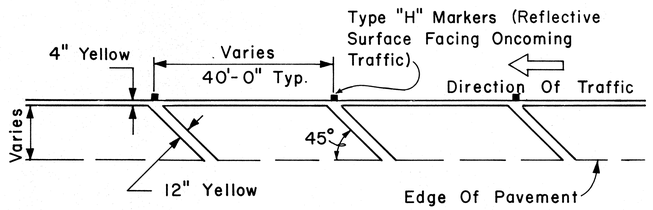


TRANSVERSE RIGHT SHOULDER MARKING

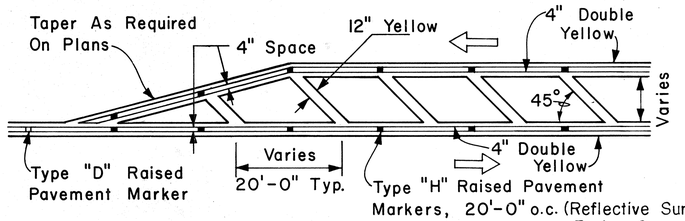


NOTE: Traffic Cone Usage Required.

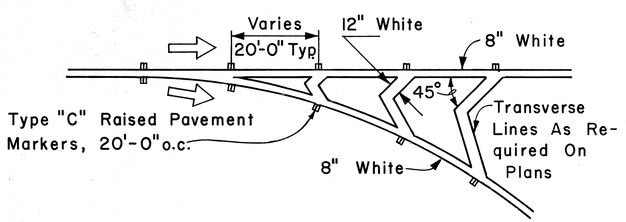
MULTI-LANE REVERSIBLE LANES



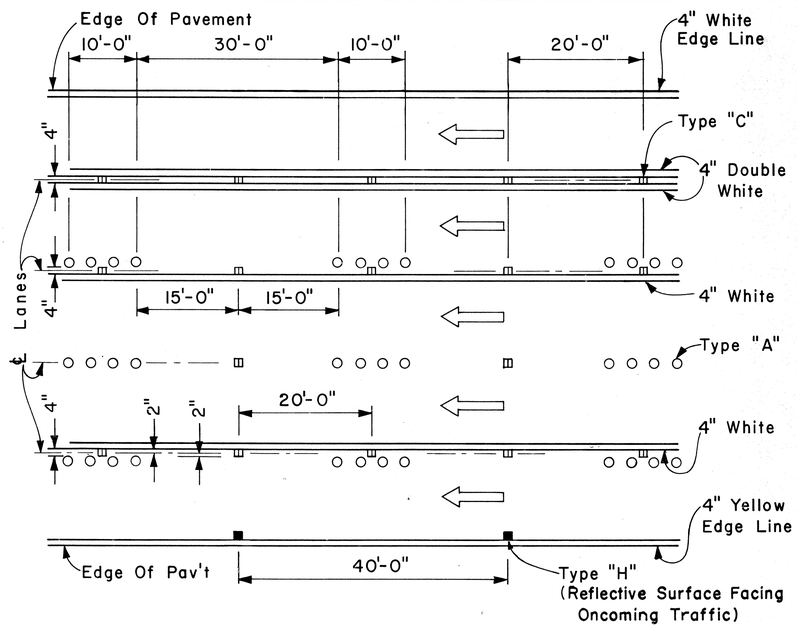
TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND



MULTI-LANE LANE CHANGE RESTRICTION ZONES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(193)	1986	54	62

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.

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

APPROVED:
Herbert S. Takeishi — ASSISTANT CHIEF, ENGINEERING — 5/3/78 DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Transverse left Shoulder Marking, Channelizing Island & Lane Change Restriction Zones.	E.T.	9/10/85

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS PAVEMENT MARKINGS

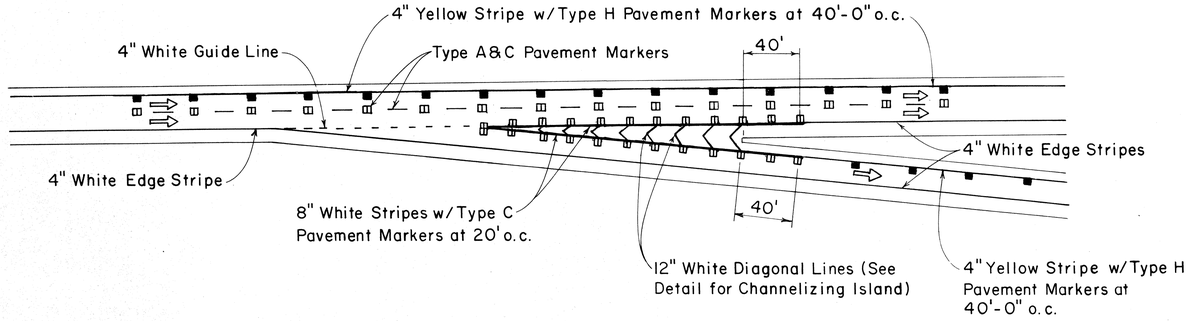
Scale: Not to Scale Date: April, 1978

SHEET No. T17 OF 19 SHEETS DT 302

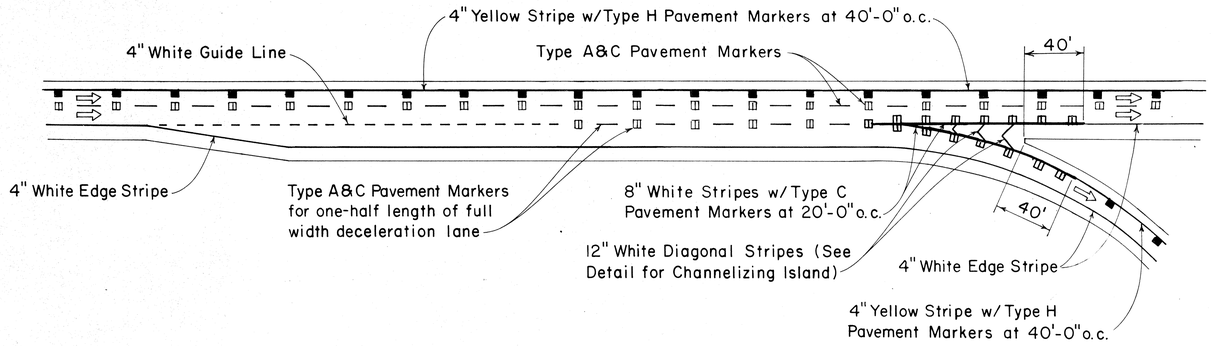
ORIGINAL PLAN | NOTE BOOK No. | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(123)	1986	55	62

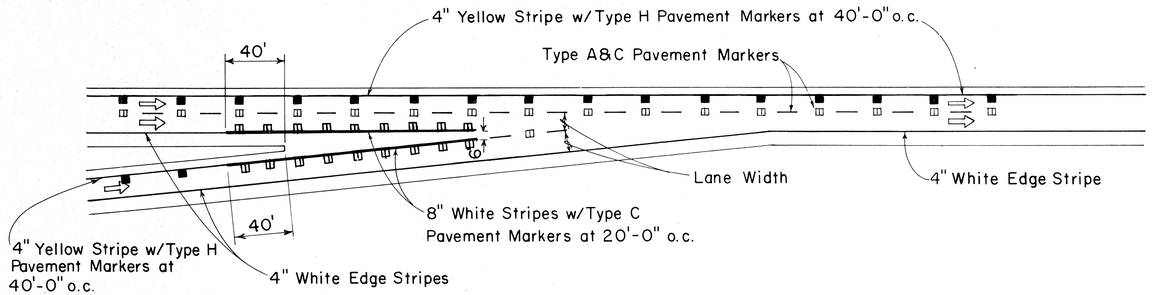
TAPERED DECELERATION LANE



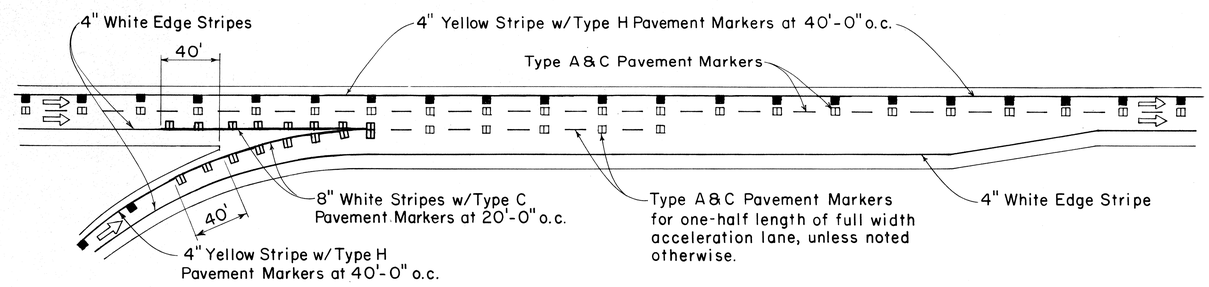
PARALLEL DECELERATION LANE



TAPERED ACCELERATION LANE



PARALLEL ACCELERATION LANE



TYPICAL ROADWAY EXIT MARKINGS

TYPICAL ROADWAY ENTRANCE MARKINGS

GENERAL NOTES:

1. Pavement Markings 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 details, see sheet DT 300.

NO.	REVISION	APPROVED BY	DATE
1	Revised Typical Roadway Entrance Markings and Typical Roadway Exit Markings.	E. T.	9/18/85

APPROVAL RECOMMENDED:

Eiichi Tanaka — 7/21/78
TRAFFIC ENGINEER — DATE

APPROVED:

Herbert Q. Kaneiaka — 7/24/78
ASSISTANT CHIEF, ENGINEERING — DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

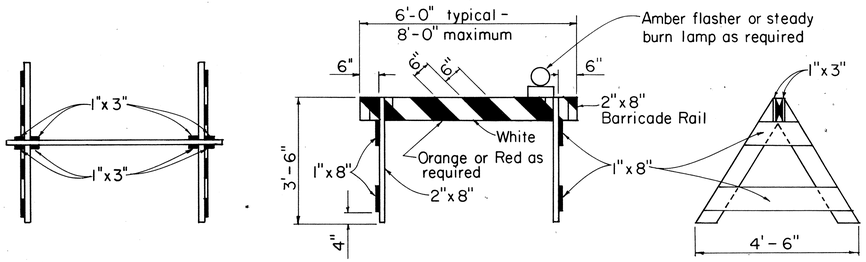
MISCELLANEOUS PAVEMENT MARKINGS

Not to Scale — July 1978

SHEET No. T18 OF 19 SHEETS DT 304

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

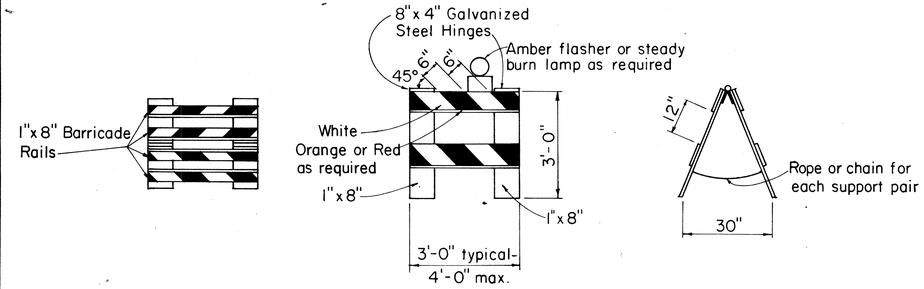
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(073)	1986	56	62



PLAN VIEW FRONT VIEW END VIEW

TYPE I BARRICADE

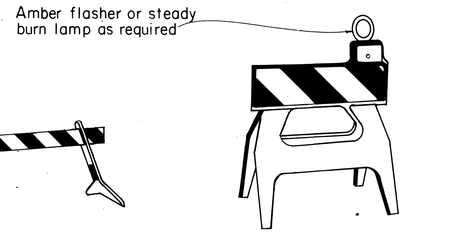
Scale: 1/2" = 1'-0"



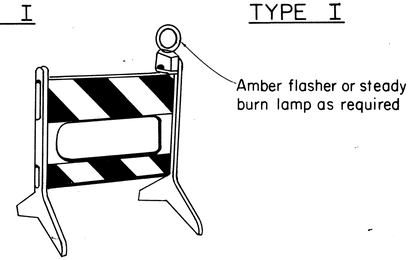
PLAN VIEW FRONT VIEW END VIEW

TYPE II BARRICADE

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



TYPE I TYPE I

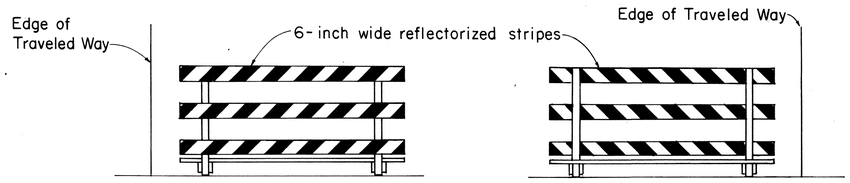


TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.

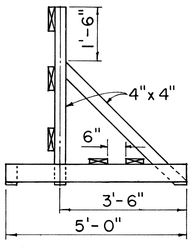


FRONT FACE BACK FACE

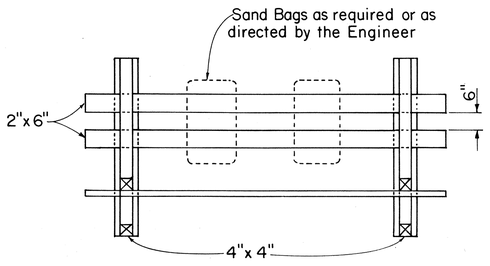
TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

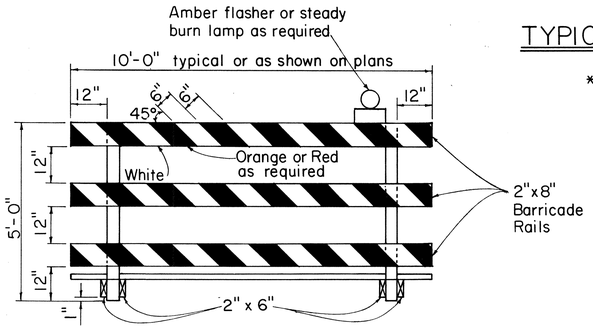
** Similar for Types I & II



END VIEW



PLAN VIEW



FRONT VIEW

TYPE III BARRICADE

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

GENERAL NOTES

1. The front and back faces of each barricade rail shall be reflectorized with stripes sloping downward toward the same side (traveled way) of each barricade.
2. Contractor may submit alternate barricade designs for approval.
3. Sandbags or other approved weights shall not be placed on top of any striped rail.
4. The Contractor is directed to Section 626.

APPROVAL RECOMMENDED:

Eiichi Tanaka 10/21/81
TRAFFIC ENGINEER DATE

APPROVED:

Herbert R. Siderio 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supercedes DT 800 Approved 12/30/69	H.T.	10/23/81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET No. T19 OF 19 SHEETS DT 800

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE

NOTE BOOK | No.