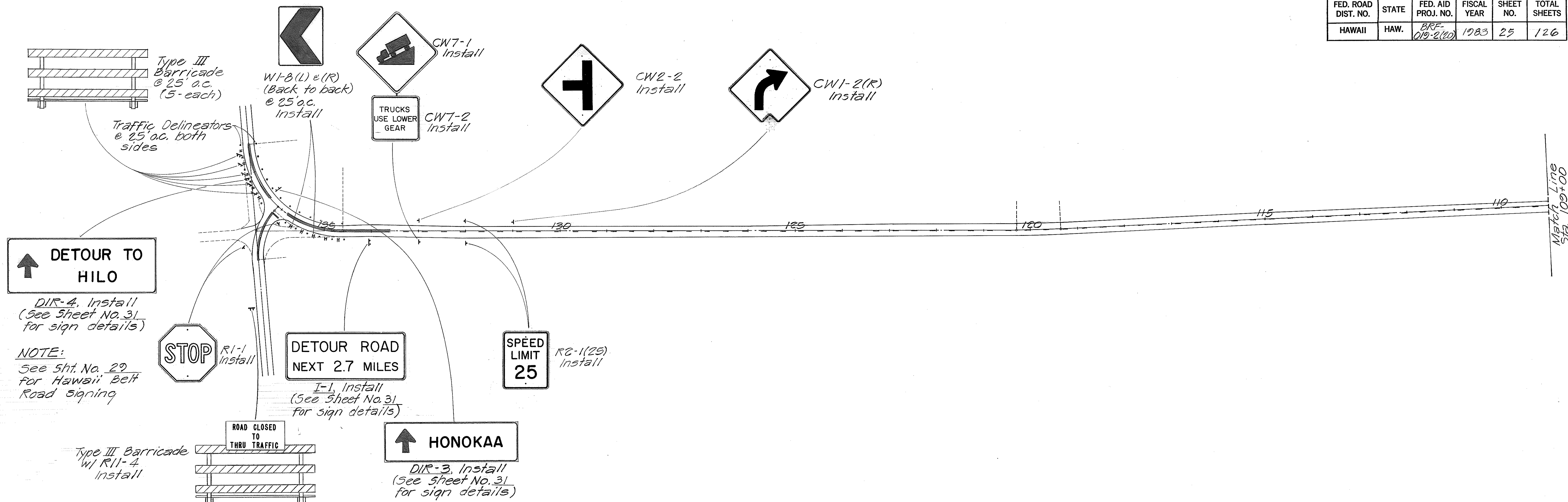


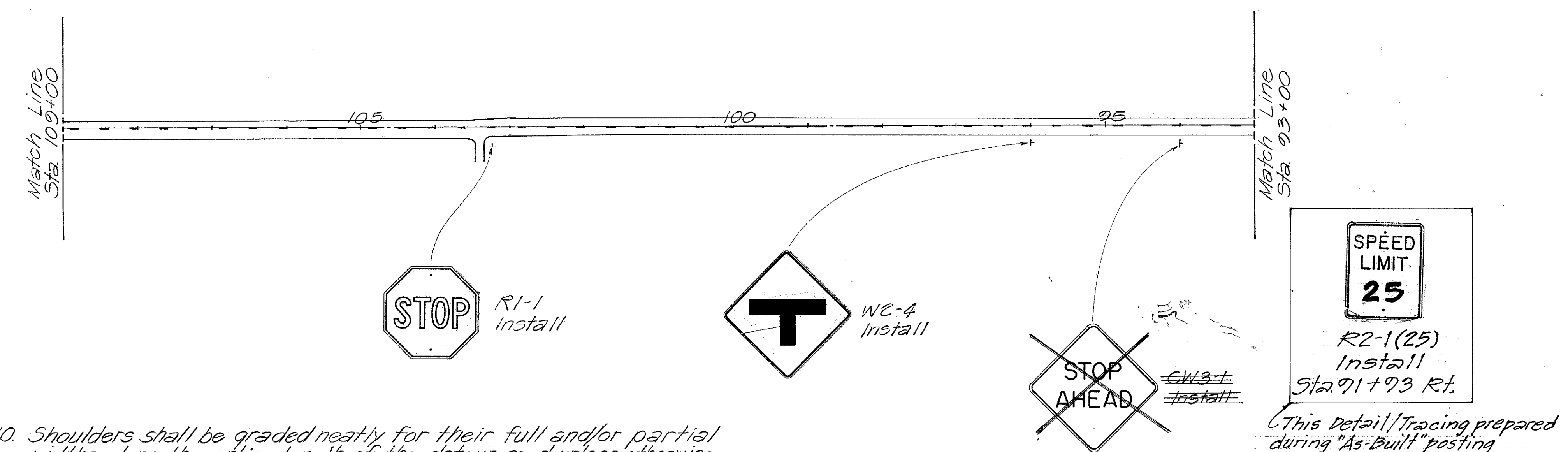
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	25	126



GENERAL NOTES

- For additional detour signing for Hawaii Belt Road, see Sheet No. 28.
- Pavement striping shall be done by others.
- Removal of "all" pavement markers, signs, and pavement striping as directed by the Engineer shall be incidental to installation of signs and pavement markers and no payment shall be made thereof. All shall include "existing" items and "detour road" items not needed when project is completed.
- Trimming or removing of trees throughout detour as directed by the Engineer shall be paid for under item no. 201.2000. Removal of trees and/or Trimming of Branches.
- See Sheet No. 32 for guard rail schedule for detours. All guard rails installed for detours and for roadway shall be new.
- Grading of shoulders as directed by the Engineer shall be paid for under item no. 306.1110.
- All signs, pavement striping, resurfacing, guard rails and shoring of structures for detour road shall be 100% completed prior to the opening of the detour road.
- All existing pavement areas to be resurfaced shall be tack coated prior to resurfacing. Payment for tack coating shall be paid under item no. 407.1000 "Emulsified Asphalt for Tack Coat."
- For additional pavement markings and striping for makai detour road connection, see Sheet No's. 19 to 20.

10. Shoulders shall be graded neatly for their full and/or partial widths along the entire length of the detour road unless otherwise directed by the Engineer. Grading shall be incidental to item no. 306.1110 "Dressing of Shoulders."



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

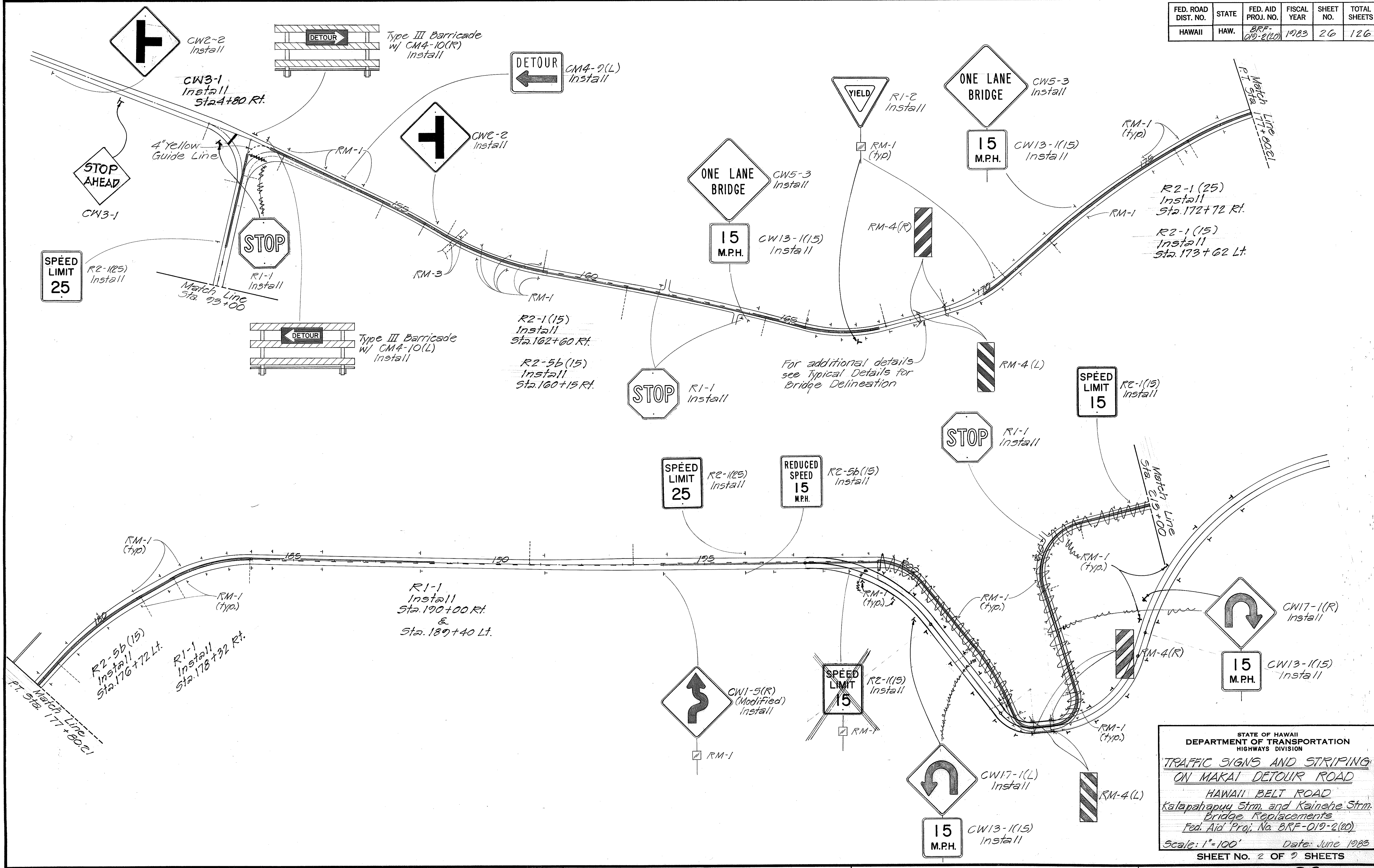
**TRAFFIC SIGNS AND STRIPING
ON MAKAI DETOUR ROAD**

HAWAII BELT ROAD
Kalapahapy Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)

Scale: 1"=100' Date: June 1983

SHEET NO. 1 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	26	126



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

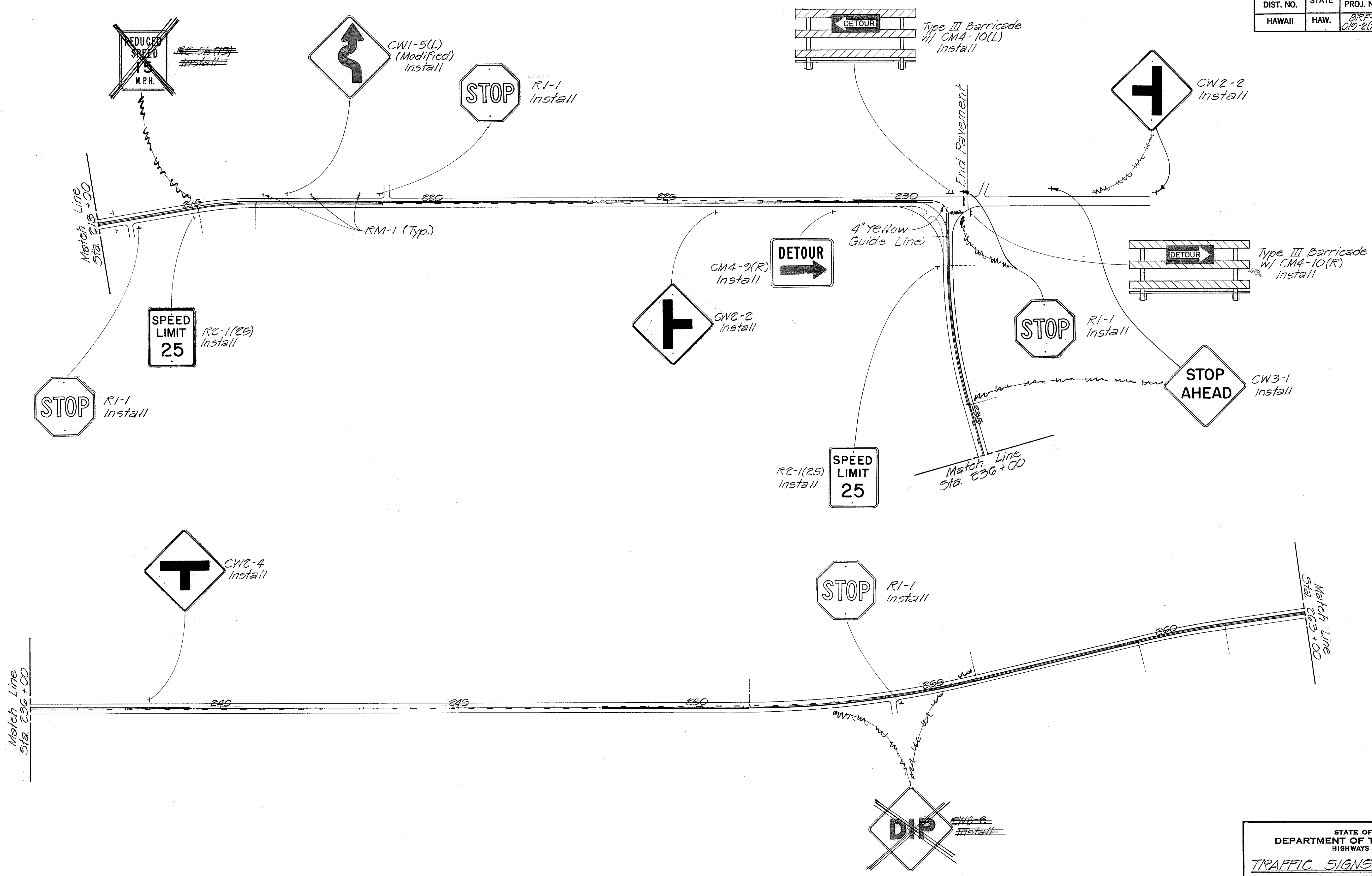
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SIGNS AND STRIPING
ON MAKAI DETOUR ROAD**

HAWAII BELT ROAD
Kalapahapuu Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)

Scale: 1"=100' Date: June 1983
SHEET NO. 2 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	27	126



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SIGNS AND STRIPING
ON MAKAI DETOUR ROAD**

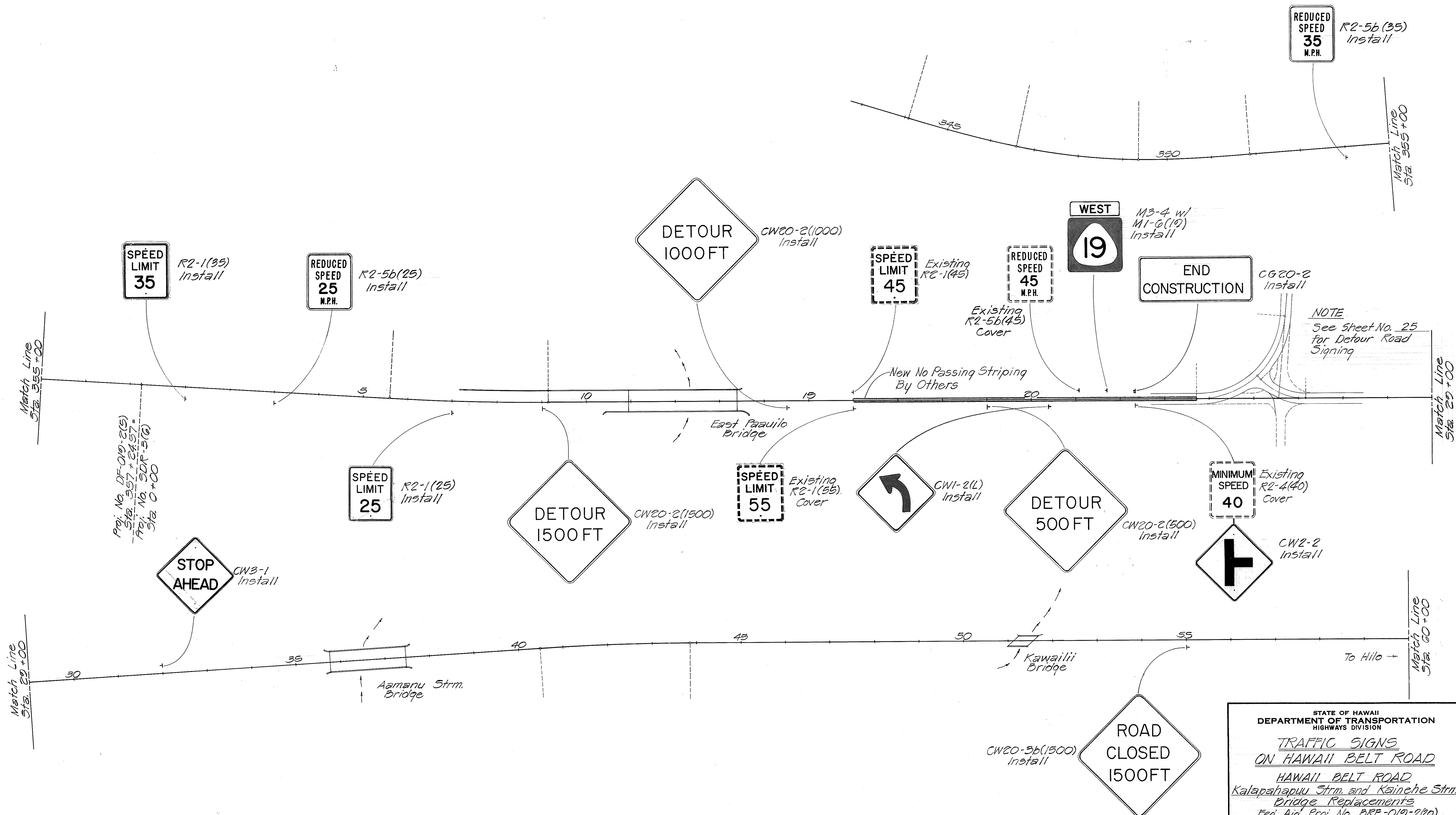
HAWAII BELT ROAD
Kalapahapyu Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)

Scale: 1"=100' Date: June 1983

SHEET No. 3 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRP-019-2(20)	1983	29	126

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

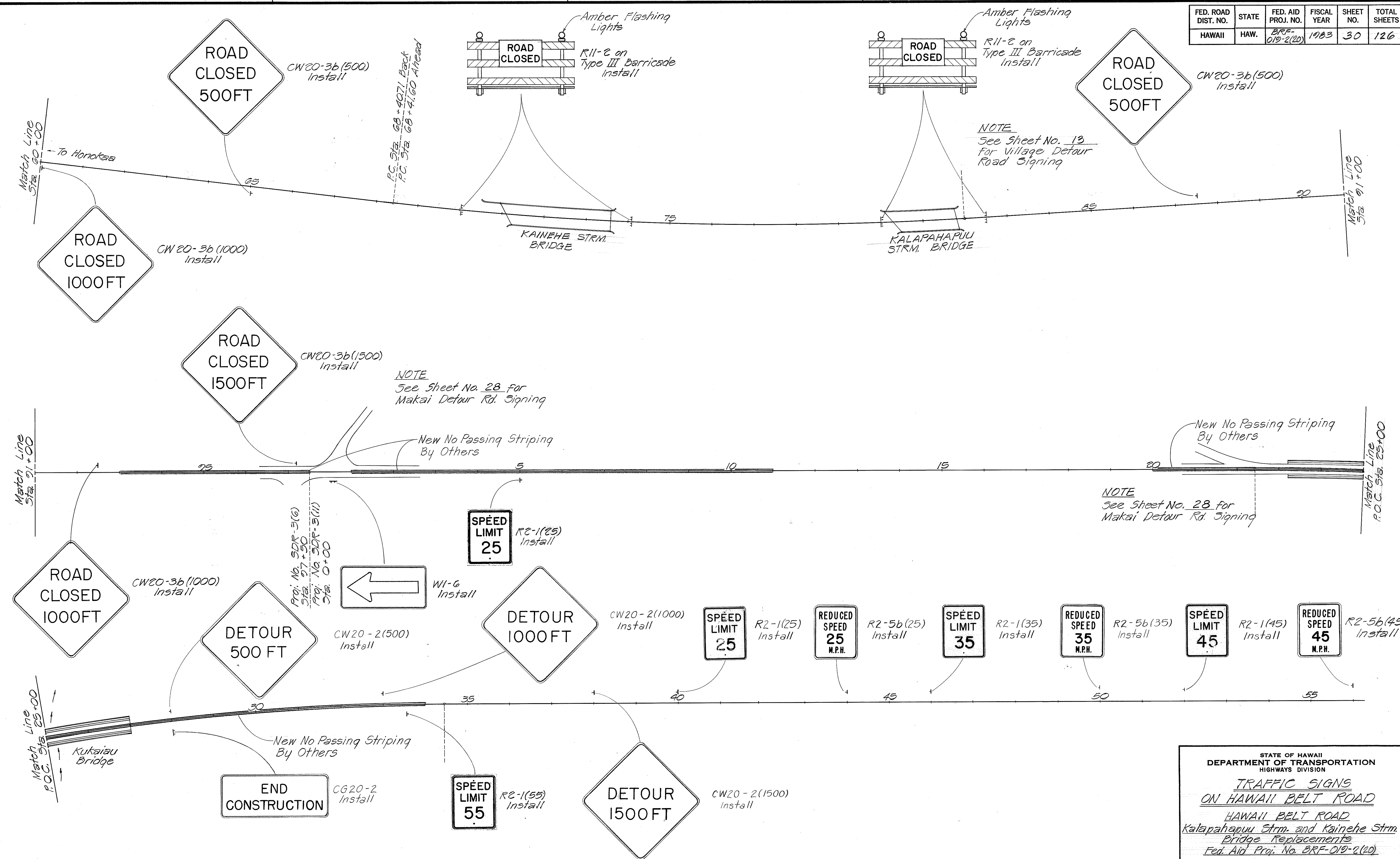


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNS
ON HAWAII BELT ROAD
HAWAII BELT ROAD
Kalapahapuu Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRP-019-2(20)

Scale: 1"=100' Date: June 1983
SHEET No. 5 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	30	126



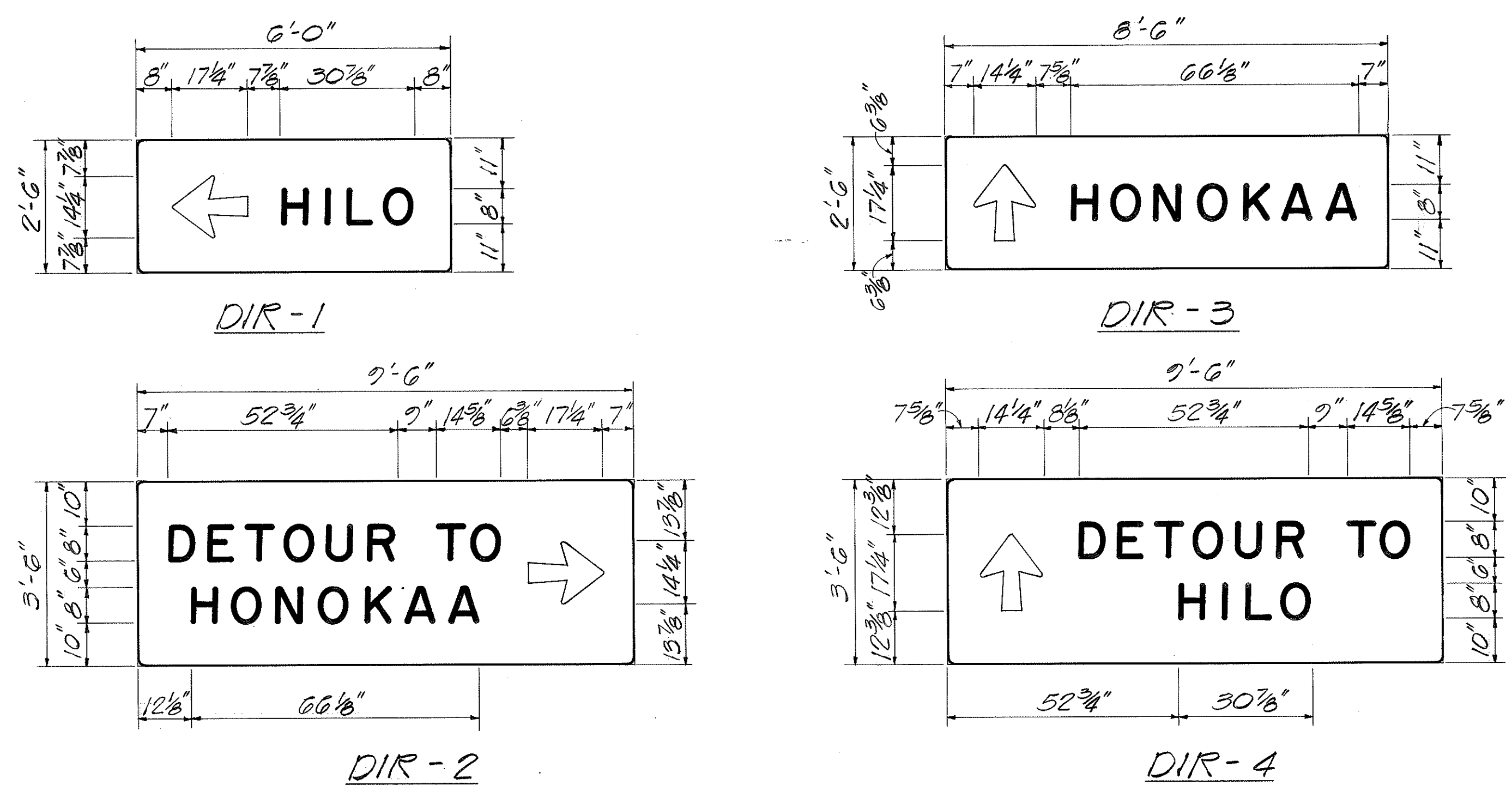
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

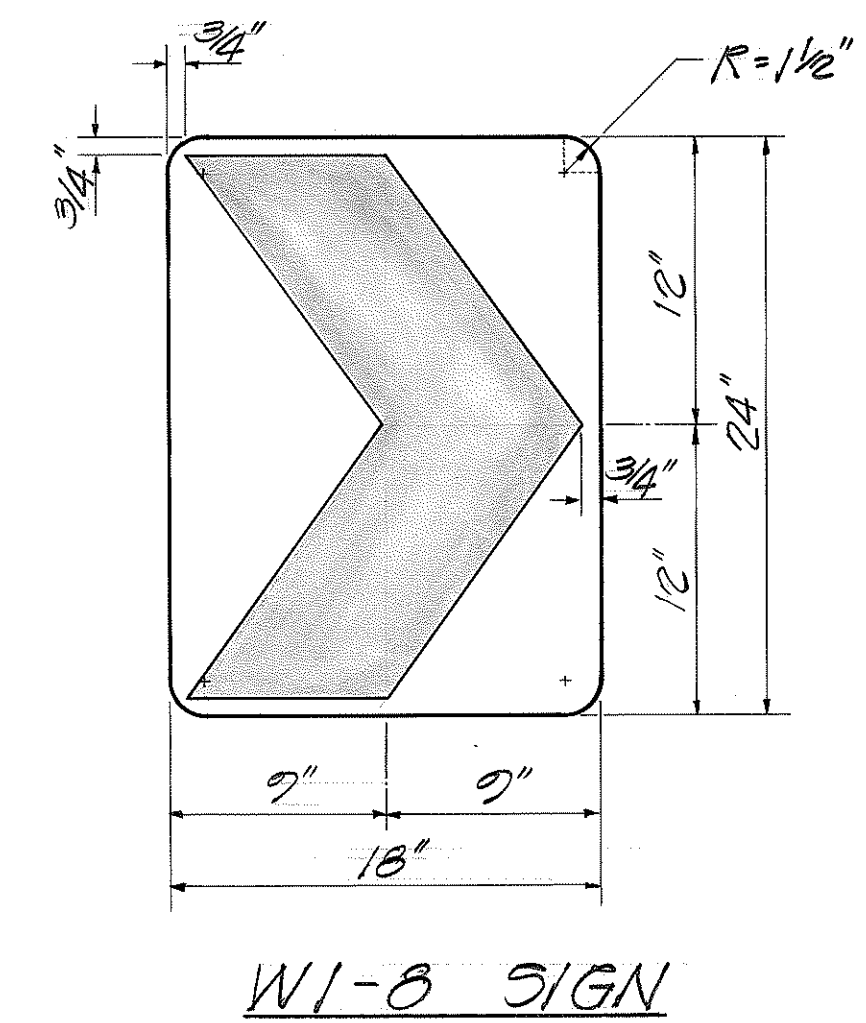
TRAFFIC SIGNS
ON HAWAII BELT ROAD
Kalapahapu Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)

Scale: 1" = 100' Date: June 1983
SHEET NO. 6 OF 9 SHEETS

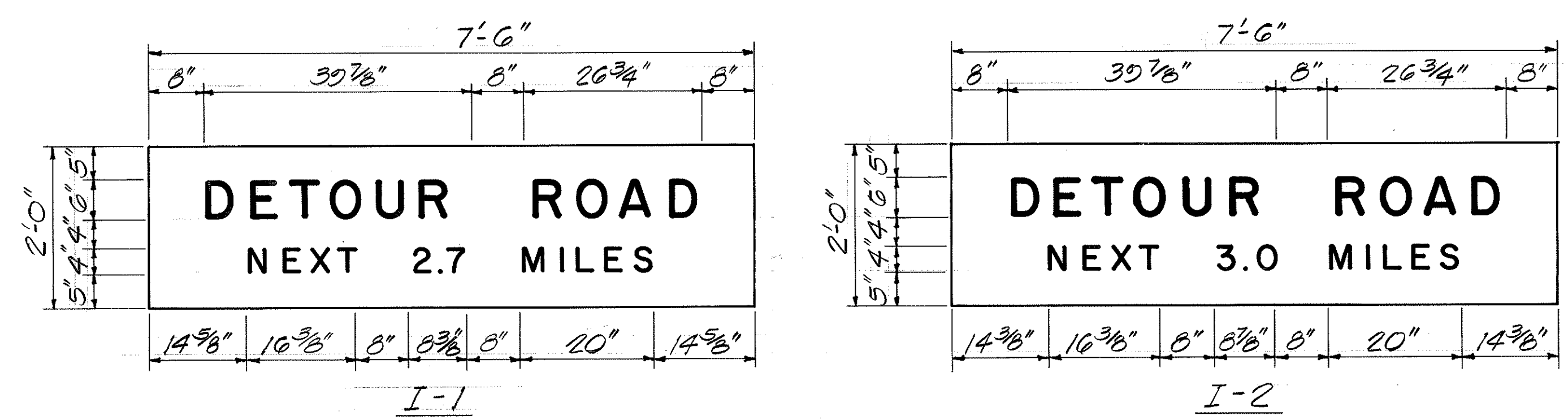
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	31	126



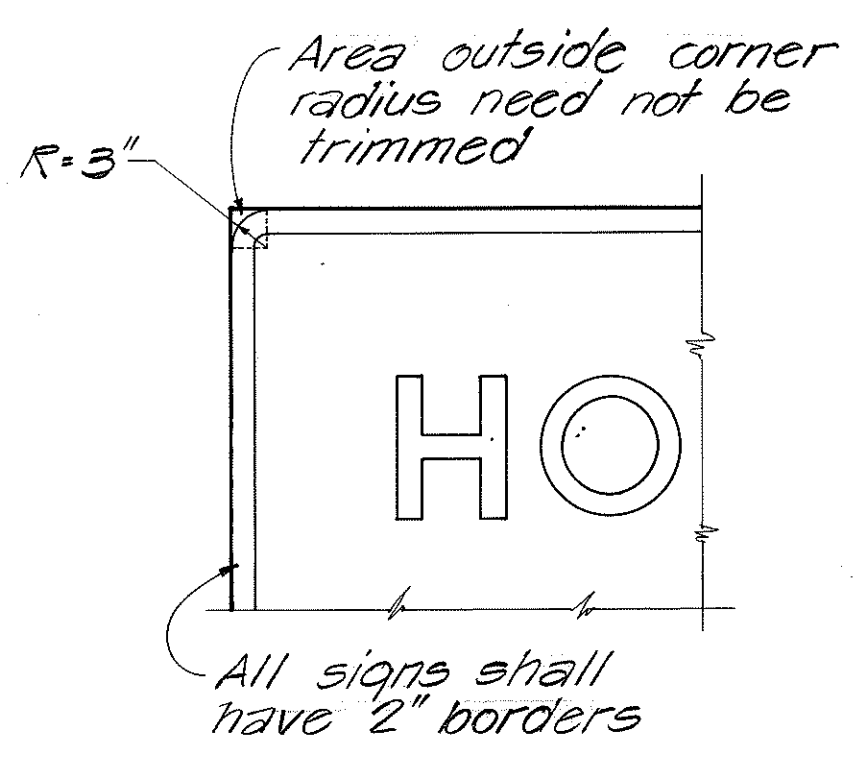
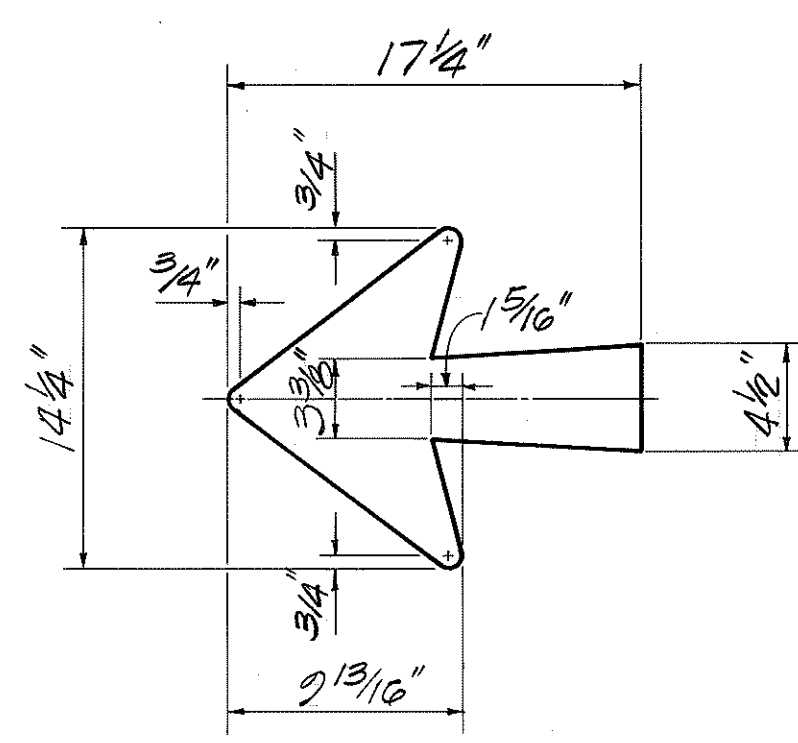
DIRECTIONAL SIGNS
Not to Scale



- NOTE**
1. Placing of the W1-8 signs shall be such that the motorists always have two in view until the change in alignment eliminates the need for the signs.
 2. Color:
Chevron - Black
Background - Yellow
 3. (R) or (L) indicates right or left.

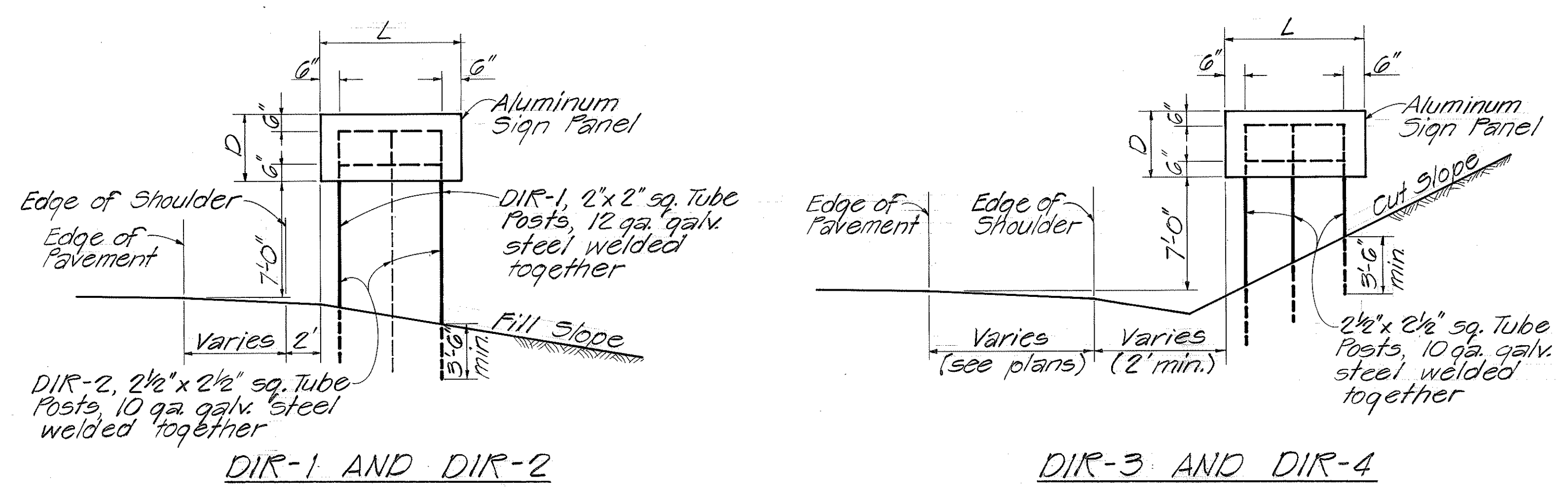


INFORMATIONAL SIGNS
Not to Scale



DIRECTIONAL & INFORMATIONAL SIGN NOTES

1. Directional and Informational signs shall conform to the latest FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended "Standard Alphabets for Highway Signs," and as amended.
2. Sign panel shall be 0.100" thick sheet aluminum.
A. Letters: Series "E" letters.
B. Color:
Directional: Letters, borders, and arrows shall be white reflective sheeting on demountable aluminum cut-outs fastened to sign panel w/ aluminum blind rivets.
Informational: Letters and borders shall be black enamel (high-gloss) paint.
3. If splicing of sign panel is necessary, contractor shall submit splice details to engineer for approval.
4. Posts shall be breakaway sign supports.



PLACEMENT OF DIRECTIONAL SIGNS
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGN DETAILS

HAWAII BELT ROAD
Kalapahapa Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)

Not to Scale Date: June 1983

SHEET NO. 7 OF 9 SHEETS

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

SUMMARY OF REGULATORY AND WARNING SIGNS							
ITEM NO.	TYPE	DESCRIPTION	QUANTITY (NEW)			QUANTITY (EXIST.)	
			W/O POST	W/POST	W/2-POST	RELOCATE	REMOVE
621.0300	DIR-1	Directional- Hilo			1		
	DIR-2	Directional- Detour to Honokaa			1		
	DIR-3	Directional- Honokaa			1 (3 POST)		
	DIR-4	Directional- Detour to Hilo			1 (3 POST)		
621.5000	W1-8	Chevron	13				
	R11-2	Road Closed	5				
	W1-6	Arrow Left			1		
	W1-8	Chevron		13			
621.5100	R1-1	Stop		13			
	R1-2	Yield		2			
	R2-1(15)	Speed Limit 15		2			
	R2-1(25)	Speed Limit 25		11			
	R2-1(35)	Speed Limit 35		2			
	R2-1(45)	Speed Limit 45		1			
	R2-1(55)	Speed Limit 55		1			
	R2-5b(15)	Reduced Speed 15		2			
	R2-5b(25)	Reduced Speed 25		2			
	R2-5b(35)	Reduced Speed 35		2			
	R2-5b(45)	Reduced Speed 45		1			
	R5-1	Do Not Enter		1			
621.5200	R11-3	Rd. Closed. Mi. Ahead, Local Traffic Only	2				
	R11-4	Road Closed to Thru Traffic	1				
621.5400	CM4-10(L)	Detour Left	2				
	CM4-10(R)	Detour Right	4				
	CW2-2	Sideroad	1				
	CW13-1(15)	15 M.P.H.	2				
621.5500	CW7-2	Trucks Use Lower Gear	2				
		Detour Road Next 2.7 Miles			2		
621.5500		Detour Road Next 3.0 Miles			2		
	CG20-2	End Construction			1		
	CM4-9(R)	Detour Right		4			
	CW17-1(L)	Turn Left		1			
	CW17-1(R)	Turn Right		1			
	CW1-2(L)	Curve Left		2			
	CW1-2(R)	Curve Right		3			
	CW1-5(L), Modified	Winding Road Left (Modified)		1			
	CW1-5(R), Modified	Winding Road Right (Modified)		1			
	CM4-9(L)	Detour Left		1			
	CW2-2	Sideroad		5			
	CW2-4	T-Intersection		2			
	CW3-1	Stop Ahead		5			
	CW5-3	One Lane Bridge		4			
	CW7-1	Hill		2			
	CW1-3R	Reverse Turn Sign					
	CW8-2	Dip		2			
				2			
	CW20-2(1500)	Detour 1500 ft.			2		
	CW20-2(1000)	Detour 1000 ft.			2		
	CW20-2(500)	Detour 500 ft.			2		
	CW20-3b(1500)	Road Closed 1500 ft.			2		
	CW20-3b(1000)	Road Closed 1000 ft.			2		
	CW20-3b(500)	Road Closed 500 ft.			2		
621.6100	M1-6(19)	Route 19 Marker		2			
	M3-2	East	1				
	M3-4	West	1				
TOTALS			41	96	22		

GUARD RAIL SCHEDULE								
STATION		SIDE		LENGTH (LINEAL FEET)			TERMINAL FLARE	
BEGIN	END	L	R	ITEM NO. 606.3110	ITEM NO. 606.3220	ITEM NO. 606.2000	APPROACH	TRAIL
Hawaii Belt Road								
710+82.5	711+70		✓	87.5			C	*
711+00	711+62.5	✓		62.5			*	F
713+45	0+75 (Side Rd.)	✓		50.0		1	*	B.C.T.
717+19.5	717+44.5		✓		1		B.C.T.	**
717+44.5	719+82	✓		237.5			**	*
722+30	723+17.5	✓		87.5			C	*
722+23	728+68		✓	575.0			*	**
728+68	728+23	✓			1		**	B.C.T.
Village Detour Rd.								
9+00	10+00		✓	75.0		1	B.C.T.	***
9+50	10+00	✓		50.0			**	F
12+00	13+00		✓	75.0		1	**	B.C.T.
12+00	12+30	✓		30.0			G	***
Makai Detour Road								
167+40.5	169+65.5	✓		168.75	56.25		C	G
167+40.5	169+13.5	✓		118.75	56.25		G	G
204+74.25	205+86.75	✓		75.0	37.5		G	G
204+73.5	206+11		✓	100.0	37.5		G	G
286+50	290+25	✓		375.0			*	G
TOTALS				2,167.5	187.5	5 EA.		

GUARD RAIL CONNECTIONS
* Connect to concrete end post.
** Connect to new metal guard rail.
*** Connect to temporary bridge rail

SUMMARY OF REFLECTOR MARKERS			
TYPE	DESCRIPTION	QUANTITY	
		W/POST	W/O POST
RM-1	Reflector Marker	163	3
RM-3	Reflector Marker	14	
RM-4(L)	Reflector Mkr. Left	6	
RM-4(R)	Reflector Mkr. Right	6	
SUB-TOTAL		189	
Traffic Delineator		73	
TOTAL		262	3

* = Use Flexible Delineator Posts
for areas without guard rails.

NOTE:
Existing signs to be covered during construction shall be considered incidental to item no. 621.5500.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	32	126

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SIGN SUMMARY &
GUARD RAIL SCHEDULE
HAWAII BELT ROAD
Kalapahapa Strm. and Kaneohe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)
Date: June 1983
SHEET No. 8 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-019-2(20)	1983	33	126

PAVEMENT MARKER SUMMARY

STATION		DESCRIPTION	TYPE		
FROM	TO		D	H	J
		DETOUR ROADS			
		Honokaa Connection			
137+60	136+20	No Pass - Both Sides	8	0	0
135+80	133+60	No Pass - Both Sides	12	0	0
0+16	1+25	No Pass - Both Sides	6	0	0
23+25	25+10	Pass - L No Pass - R	5	5	20
25+10	26+85	Pass - Both Sides	5	0	16
25+65		No Pass - Both Sides	9	0	0
		Makai Detour Road			
133+60	92+00	Pass - Both Sides	105	0	416
92+00	89+50	No Pass - Both Sides	14	0	0
151+50	159+00	No Pass - Both Sides	39	0	0
159+00	164+00	Pass - L No Pass - R	13	12	48
164+00	167+25	No Pass - Both Sides	17	0	0
169+90	184+00	No Pass - Both Sides	141	0	0
184+00	188+50	No Pass - L Pass - R	12	11	44
188+50	194+00	Pass - Both Sides	14	0	52
194+00	199+00	Pass - L No Pass - R	13	13	52
199+00	219+00	No Pass - Both Sides	101	0	0
219+00	224+50	No Pass - L Pass - R	14	13	52
224+50	229+00	Pass - L No Pass - R	11	10	40
229+00	230+50	No Pass - Both Sides	8	0	0
230+70	234+90	No Pass - Both Sides	22	0	0
234+90	239+30	No Pass - L Pass - R	11	11	44
239+30	248+00	Pass - Both Sides	22	0	88
248+00	253+60	Pass - L No Pass - R	14	14	56
253+60	274+70	No Pass - Both Sides	106	0	0
		Village Detour Road			
700+00	8+50	No Pass - Both Sides	53	0	0
16+00	16+80	No Pass - Both Sides	8	0	0
		HAWAII BELT ROAD			
		Bridges	15	6	54
		SDR 3(6)			
16+00	23+70	No Pass - Both Sides	39	0	0
16+80	18+90	Pass - Both Sides	7	0	28
18+90	24+50	Pass - L No Pass - R	14	14	56
93+00	97+50	No Pass - Both Sides	23	0	0
		Pass - Both Sides	11	0	44
		SDR 3(11)			
1+00	11+00	No Pass - Both Sides	50	0	0
20+00	34+00	No Pass - Both Sides	70	0	0
0+00	1+60	Pass - Both Sides	4	0	16
1+60	11+00	Pass - L No Pass - R	24	24	96
20+00	34+00	Pass - Both Sides	35	0	140
TOTALS			1,075	133	1,362

Phase I

Phase II

Phase I

Phase II

Phase I

Phase II

Phase I

Phase II

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PAVEMENT MARKER
SUMMARY
HAWAII BELT ROAD
Kalapahapa Strm. and Kainehe Strm.
Bridge Replacements
Fed. Aid Proj. No. BRF-019-2(20)
Scale: As Noted Date: June 1983
SHEET NO. 33 OF 33 SHEETS