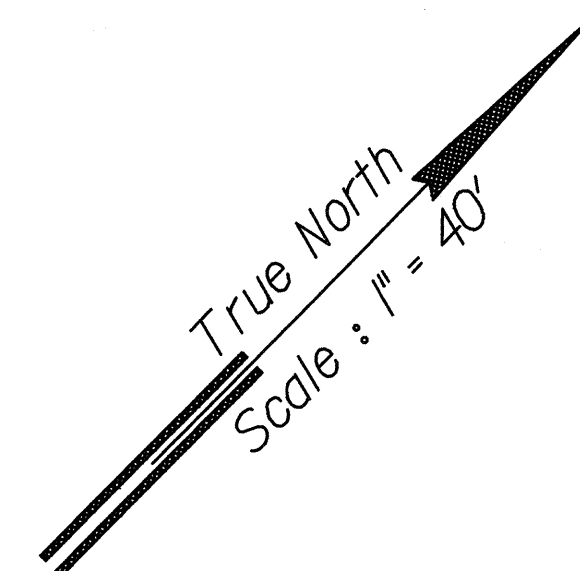


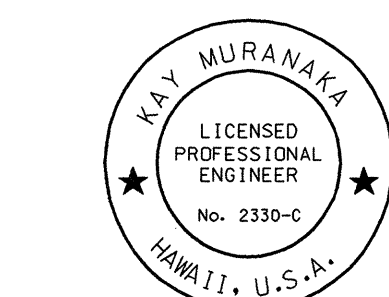
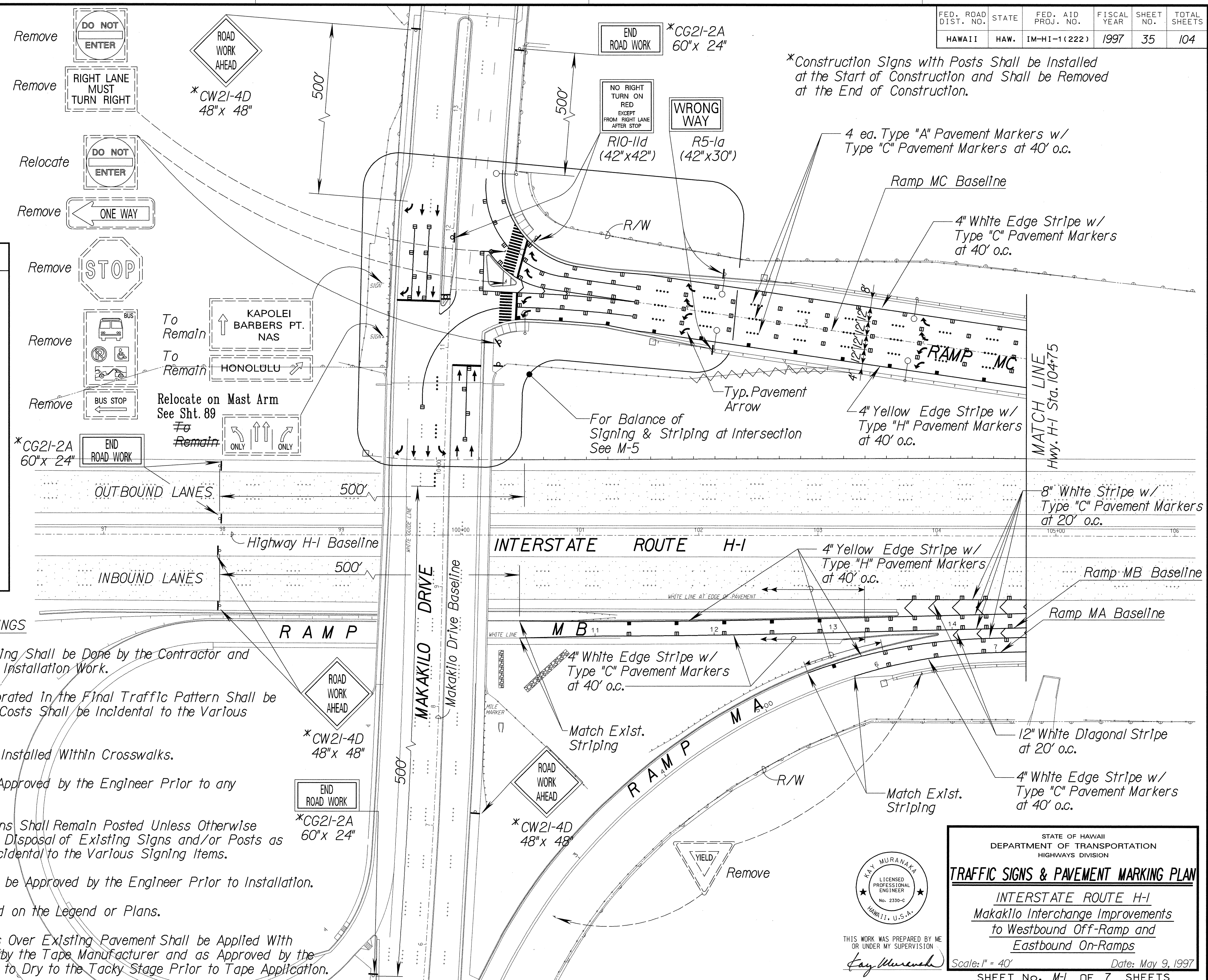
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	35	104



STRIPING MATERIAL	
<u>Tape, Type I or Thermoplastic Extrusion</u>	Lane Change Restriction Marking (4" White Stripe)
<u>Tape, Type II or Thermoplastic Extrusion</u>	4" White Edge Stripe 4" Yellow Edge Stripe 8" White Stripe 12" White Diagonal Stripe
<u>Tape, Type III or Thermoplastic Extrusion</u>	12" White Stop Line 4" Guide Lines - Pavement Arrows

GENERAL NOTES FOR PAVEMENT MARKINGS

- Layout of Pavement Markings and Striping Shall be Done by the Contractor and Approved by the Engineer Prior to any Installation Work.
- Existing Pavement Markings not Incorporated in the Final Traffic Pattern Shall be Removed as Directed by the Engineer. Costs Shall be Incidental to the Various Pavement Marking Items.
- Raised Pavement Markers Shall Not be Installed Within Crosswalks.
- Final Locations of all Signs Shall be Approved by the Engineer Prior to any Installation Work.
- Existing Signs not Shown on these Plans Shall Remain Posted Unless Otherwise Directed by the Engineer. Removal and Disposal of Existing Signs and/or Posts as Designated on these Plans Shall be Incidental to the Various Signing Items.
- Final Locations of all Stop Lines shall be Approved by the Engineer Prior to Installation.
- All Pavement Striping Shall be as Noted on the Legend or Plans.
- All Preformed Pavement Marking Tapes Over Existing Pavement Shall be Applied With an Approved Primer as Recommended by the Tape Manufacturer and as Approved by the Engineer. The Primer Shall be Allowed to Dry to the Tacky Stage Prior to Tape Application.

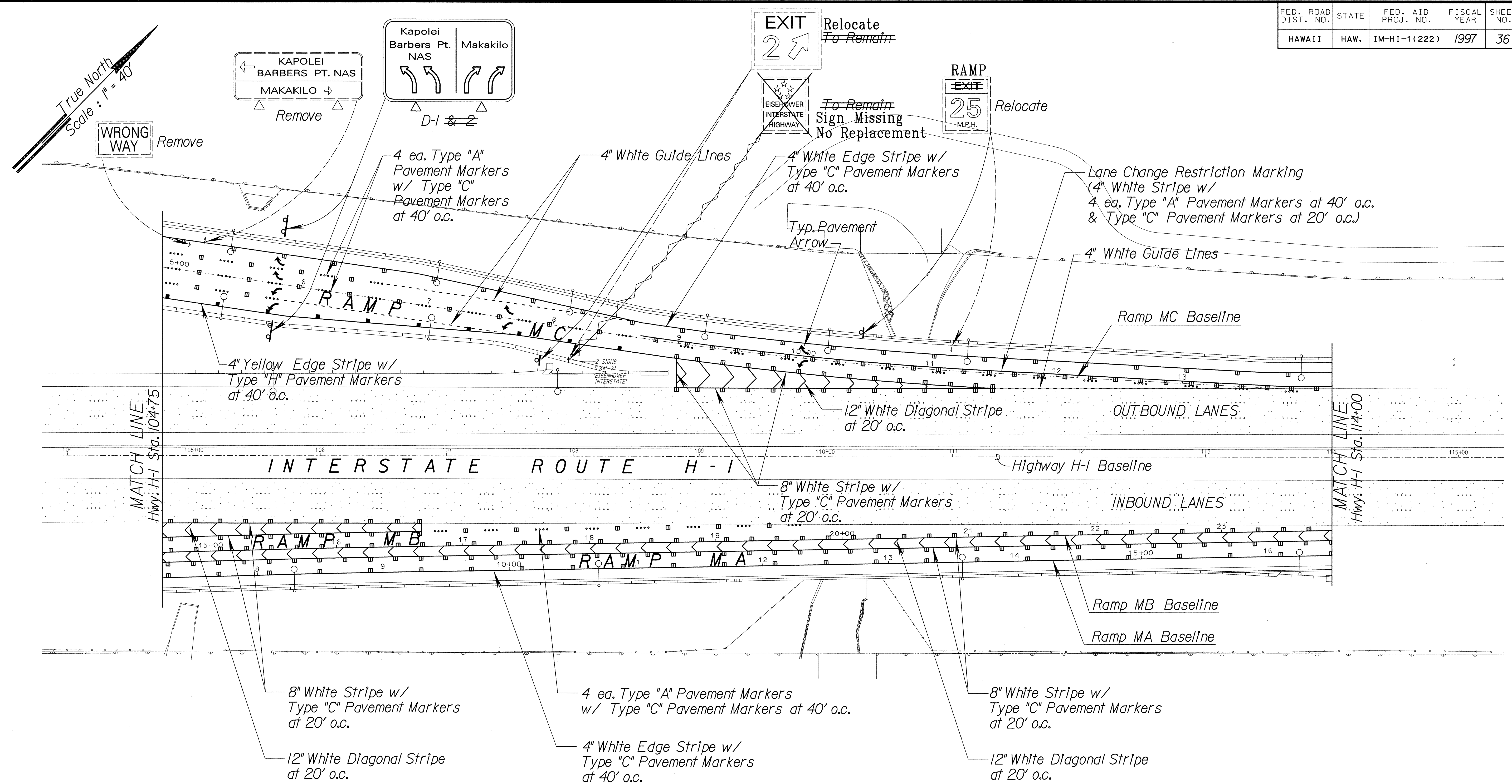


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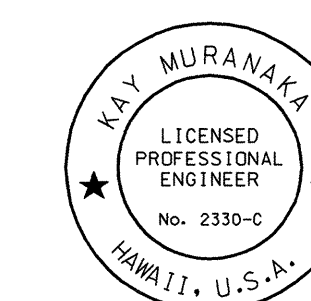
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNS & PAVEMENT MARKING PLAN
INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps
Scale: 1" = 40'
Date: May 9, 1997
SHEET No. M-1 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	36	104



DESIGNED BY	DATE
DRAWN BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

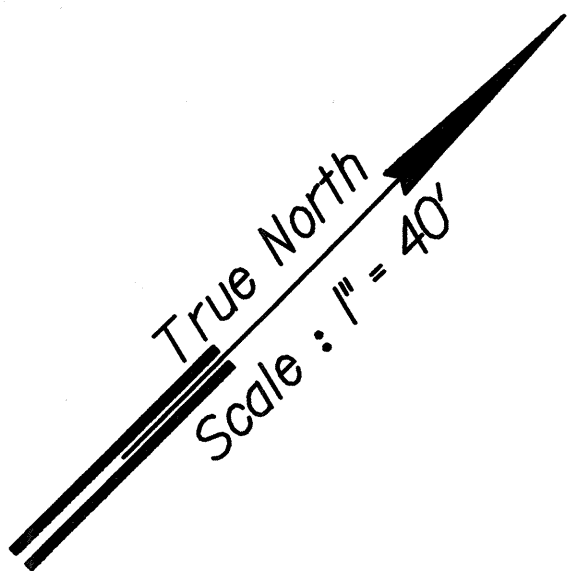


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNS & PAVEMENT MARKING PLAN
INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps
Scale: 1" = 40' Date: May 9, 1997
SHEET No. M-2 OF 7 SHEETS

MAKAKILO KAPOLEI BARBERS PT. NAS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	37	104



EXIT 2
Makakilo
Kapolei
Barbers Pt. NAS
Relocate

4" White Edge Stripe w/
Type "C" Pavement Markers at 40' o.c.

Lane Change Restriction Marking
(4" White Stripe w/
4 ea. Type "A" Pavement Markers at 40' o.c.
& Type "C" Pavement Markers at 20' o.c.)

Typ. Pavement Arrow

MATCH LINE
Hwy. H-1 Sta. 114+00

Ramp MB Baseline

Ramp MA Baseline

INTERSTATE ROUTE H-1

Highway H-1 Baseline

INBOUND LANES

MATCH LINE
Hwy. H-1 Sta. 123+00

4" White Edge Stripe w/
Type "C" Pavement Markers at 40' o.c.

12" White Diagonal Stripe
at 20' o.c.

8" White Stripe w/
Type "C" Pavement Markers at 20' o.c.

4 ea. Type "A" Pavement Markers
w/ Type "C" Pavement Markers at 40' o.c.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
DATE	



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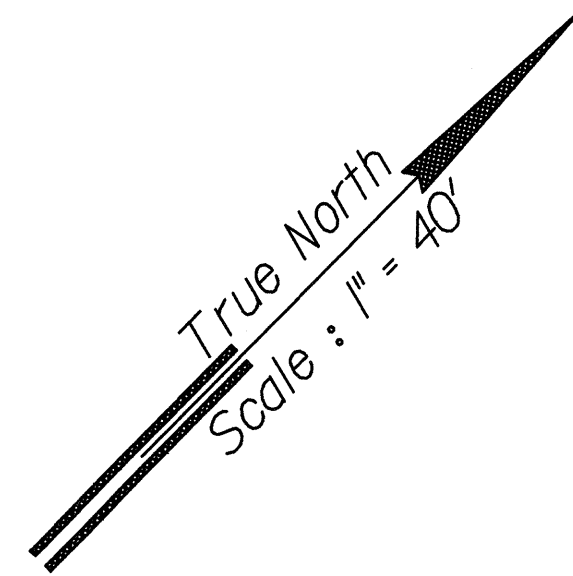
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNS & PAVEMENT MARKING PLAN

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 40' Date: May 9, 1997
SHEET No. M-3 OF 7 SHEETS

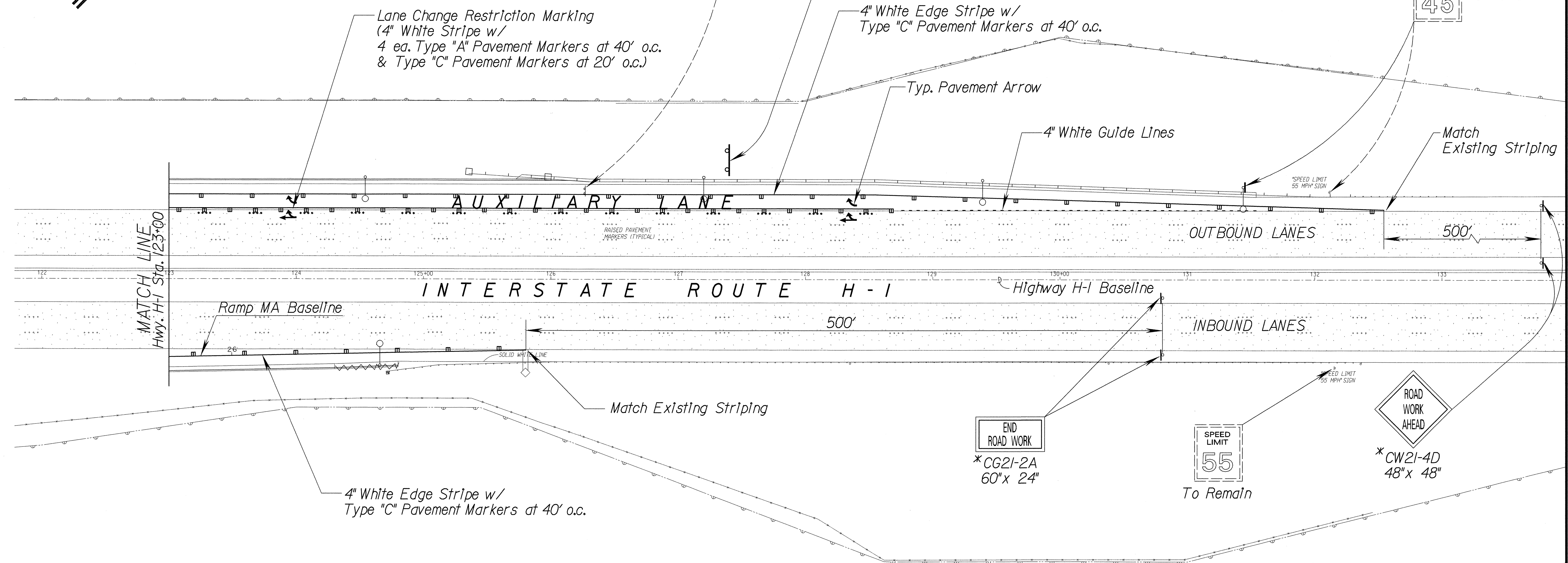
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	38	104



EXIT 2
Makakilo
Kapolei
Barbers Pt. NAS
12 MILE
Remove

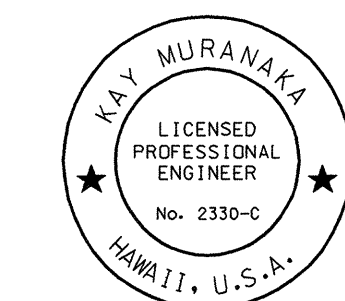
WEST
Kapolei
Barbers Pt. NAS
Makakilo
D-3
D-2

MINIMUM SPEED
45
Relocate
~~To Remain~~



*Construction Signs with Posts Shall be Installed at the Start of Construction and Shall be Removed at the End of Construction.

ORIGINAL PLAN	DATE
SURVEY DOTTED BY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NA	



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNS & PAVEMENT MARKING PLAN

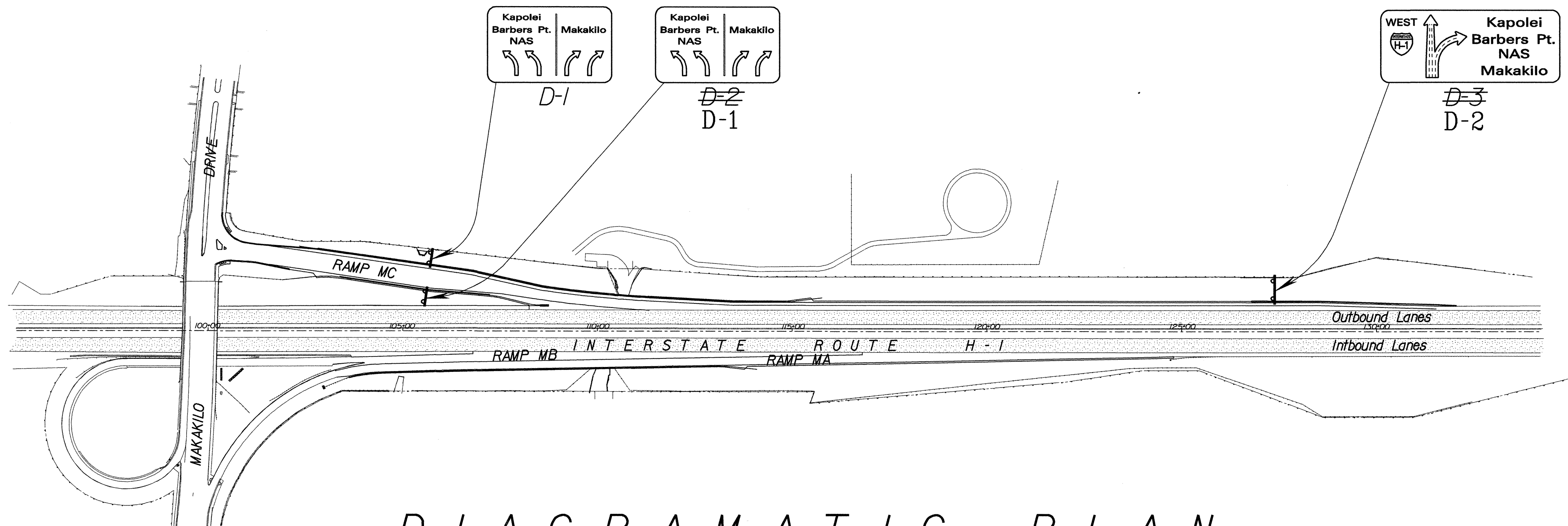
INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 40' Date: May 9, 1997

SHEET No. M-4 OF 7 SHEETS

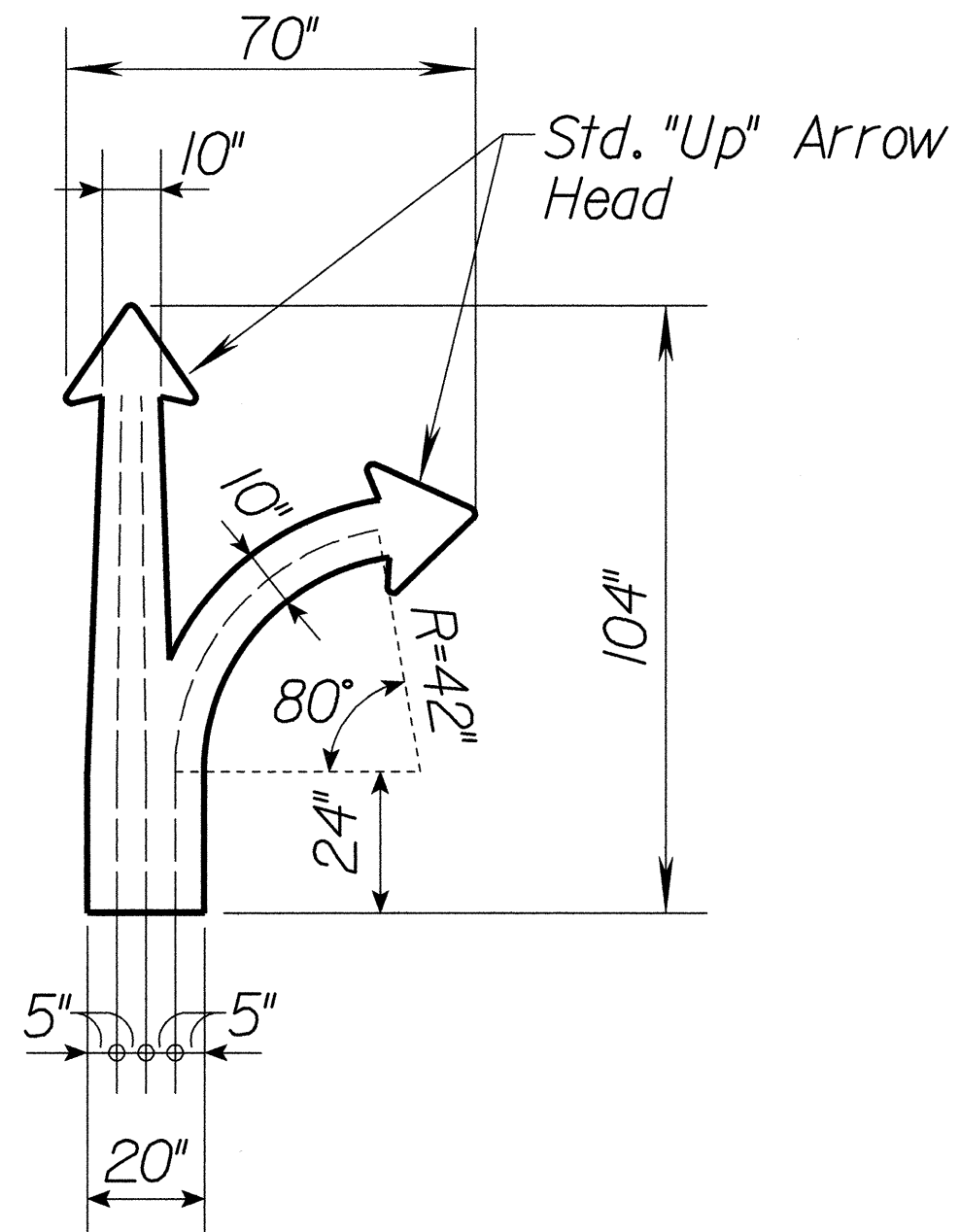
41M\DCN\KAPOLEI\MAKAKILO\DET-01.DGN

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1M-HI-1(222)	1997	40	104



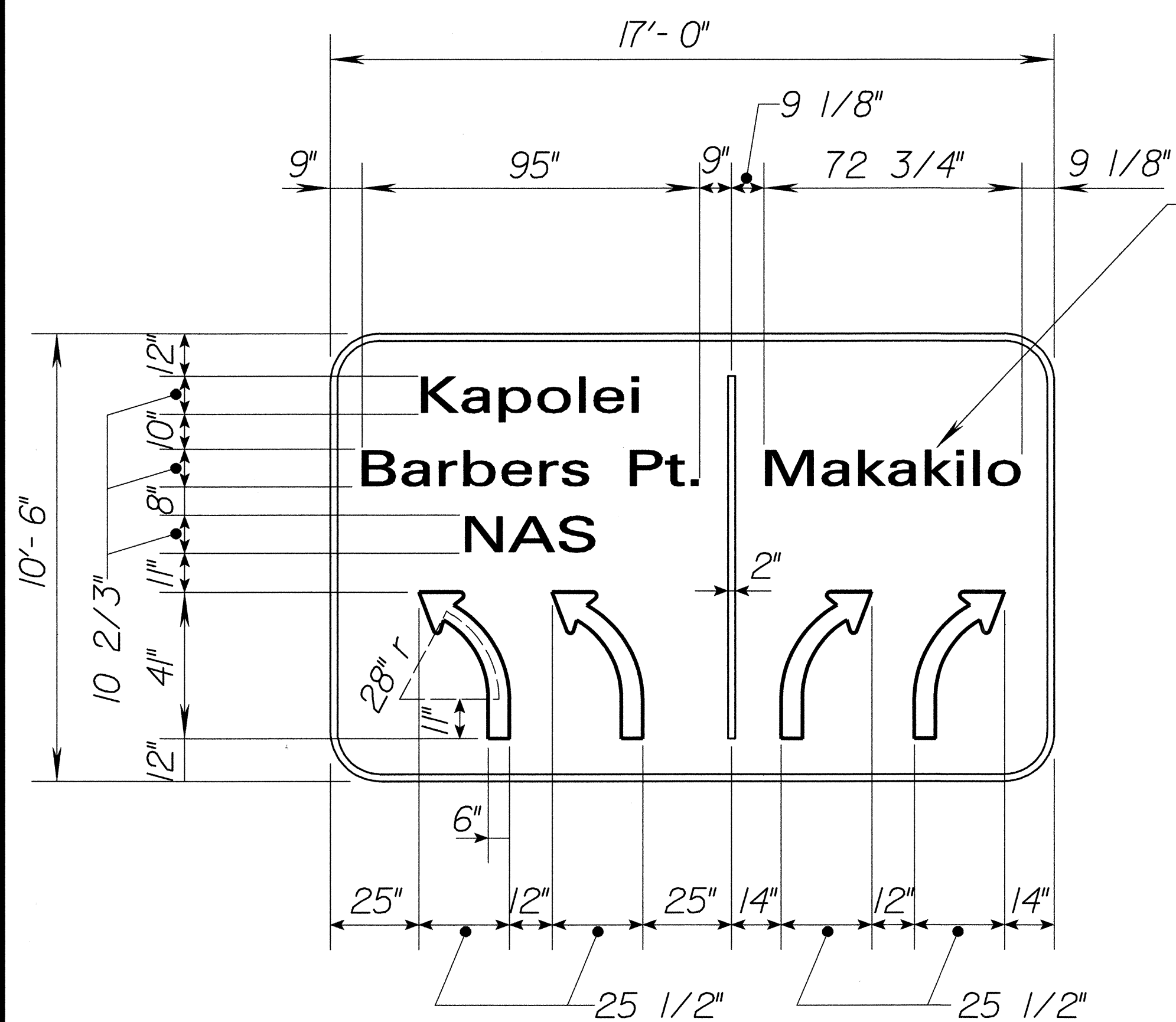
DIAGRAMMATIC PLAN

Scale : 1" = 200'



LANE ARROW

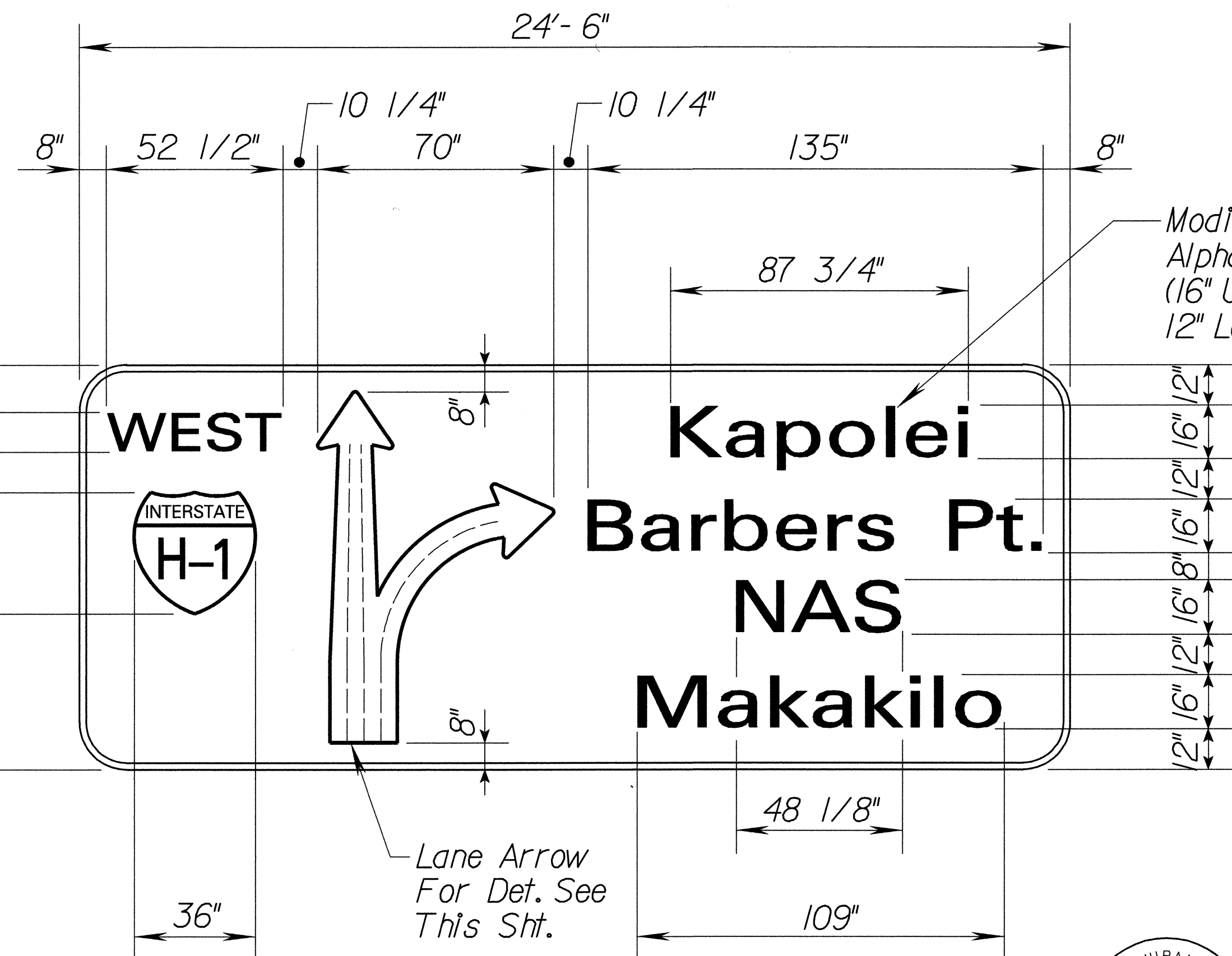
Scale : 3/8" = 1'-0"



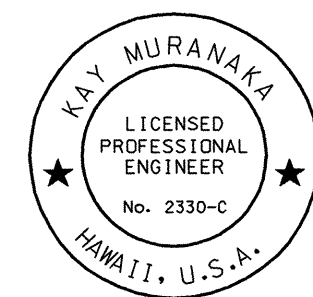
D - 1 & 2

PANEL LAYOUT

Scale : 3/8" = 1'-0"



D - 2
~~D - 3~~



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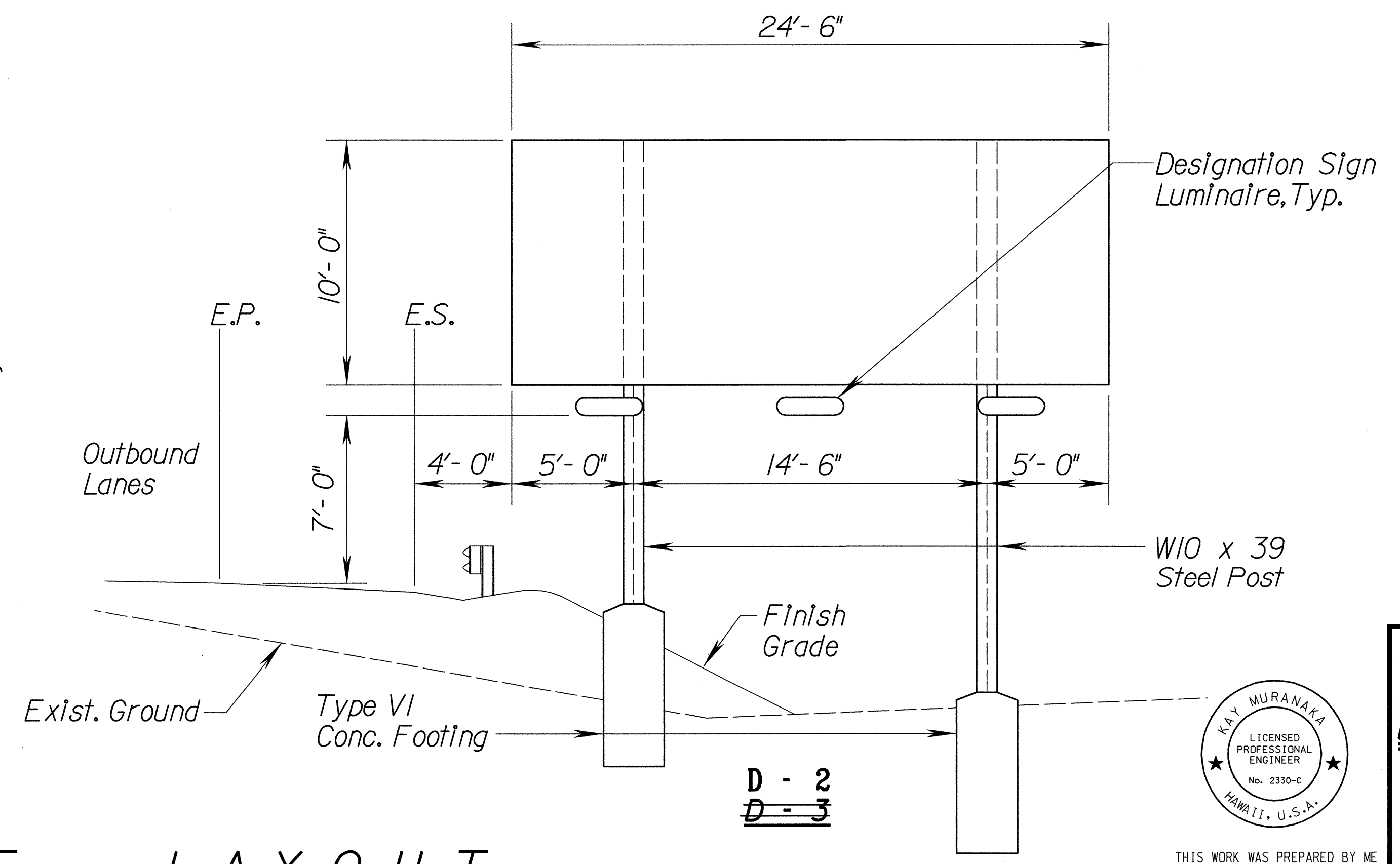
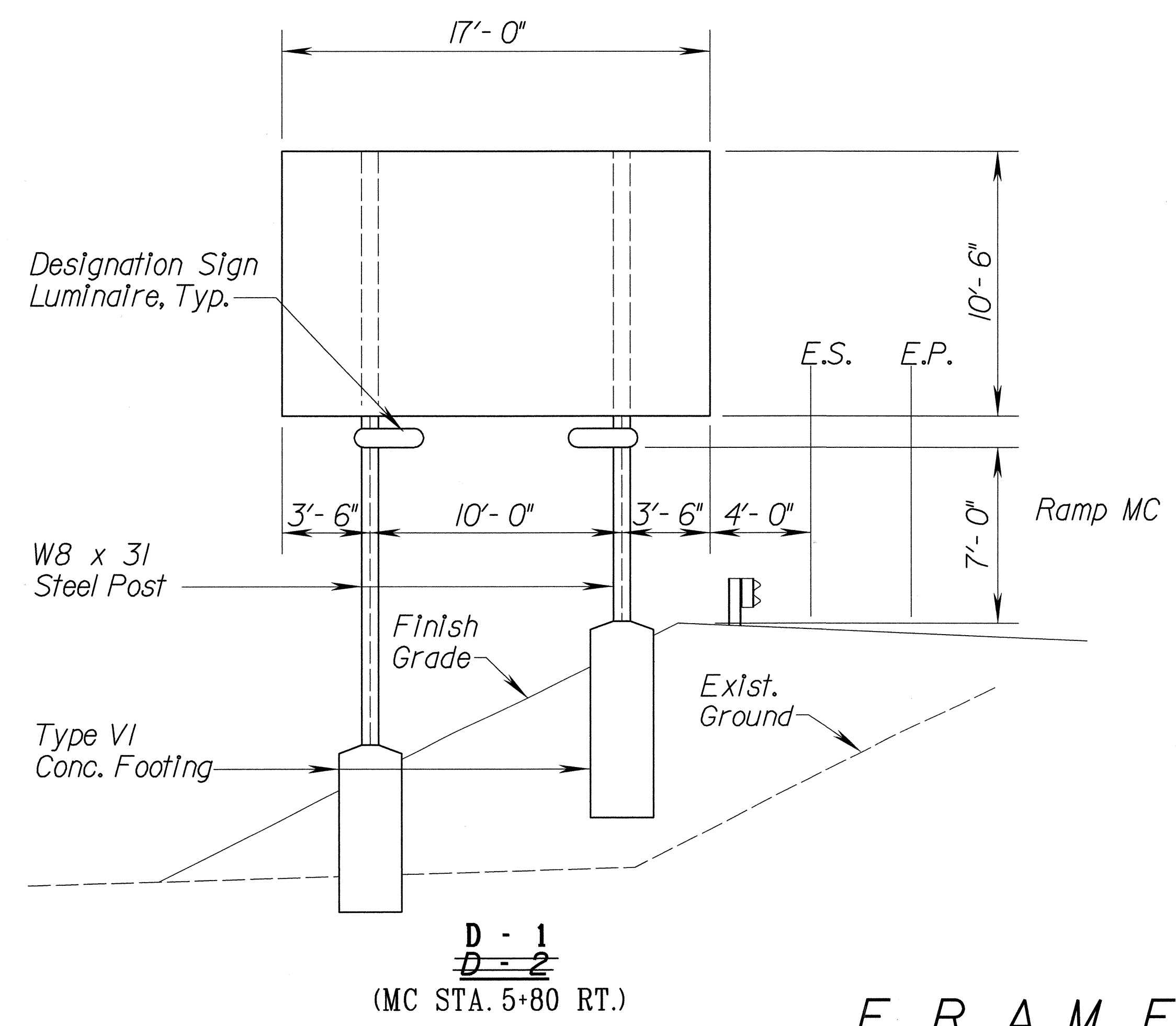
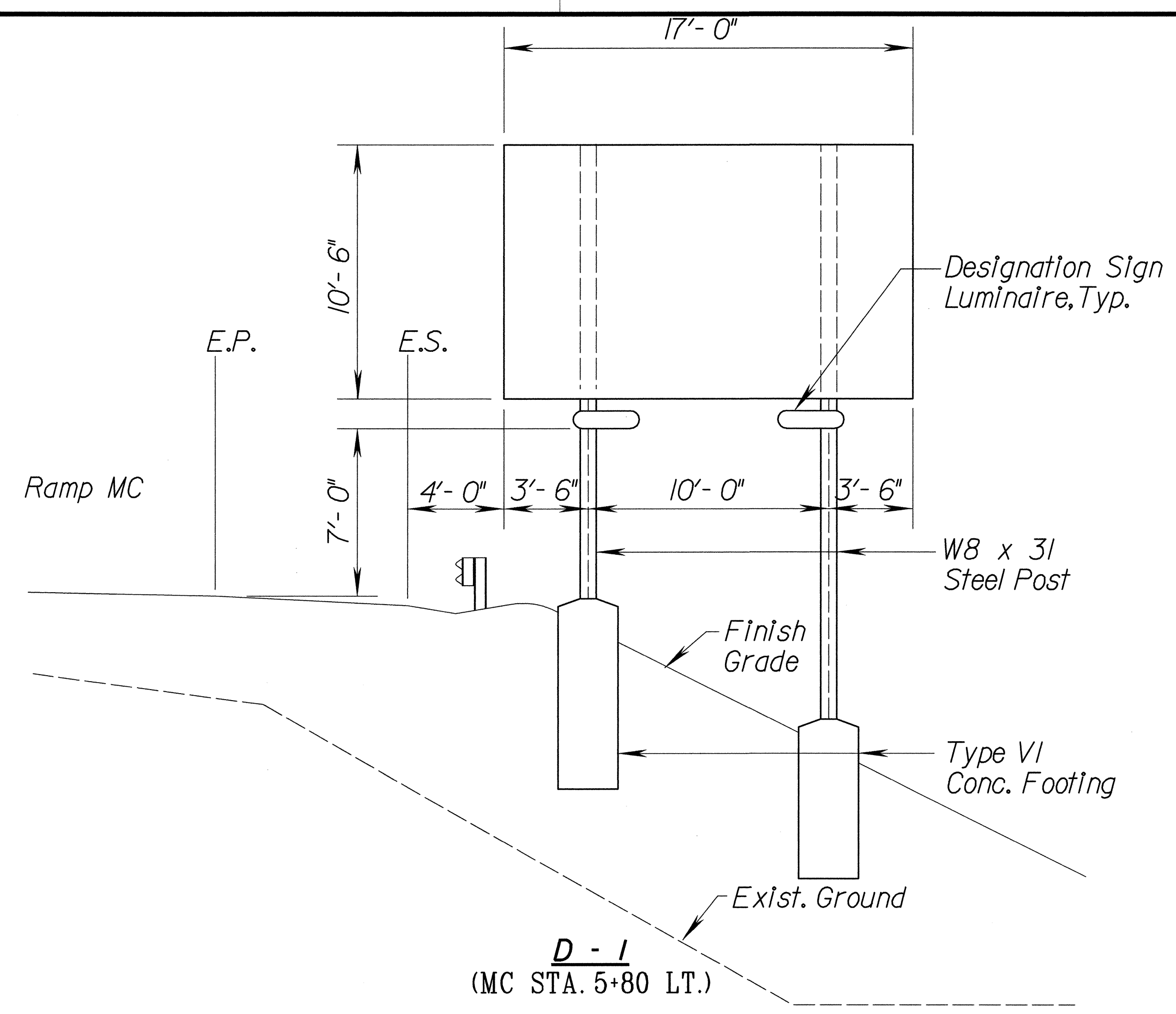
DESTINATION SIGN DETAILS

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: As Shown Date: May 9, 1997
SHEET No. M-6 OF 7 SHEETS

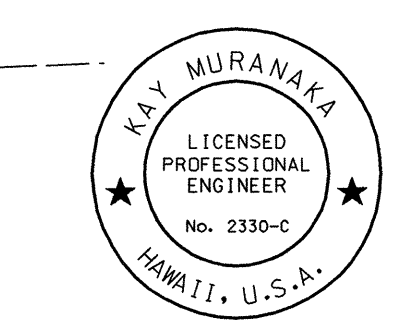
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	41	104



FRAME LAYOUT Scale : 1/4" = 1'-0"

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



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

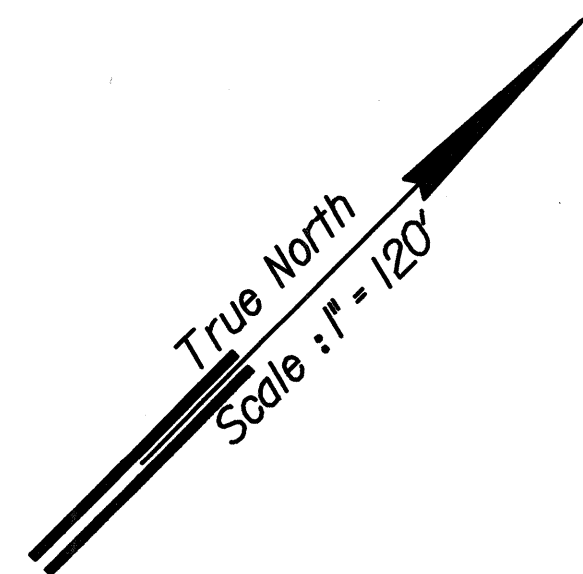
DESTINATION SIGN FRAME LAYOUT

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

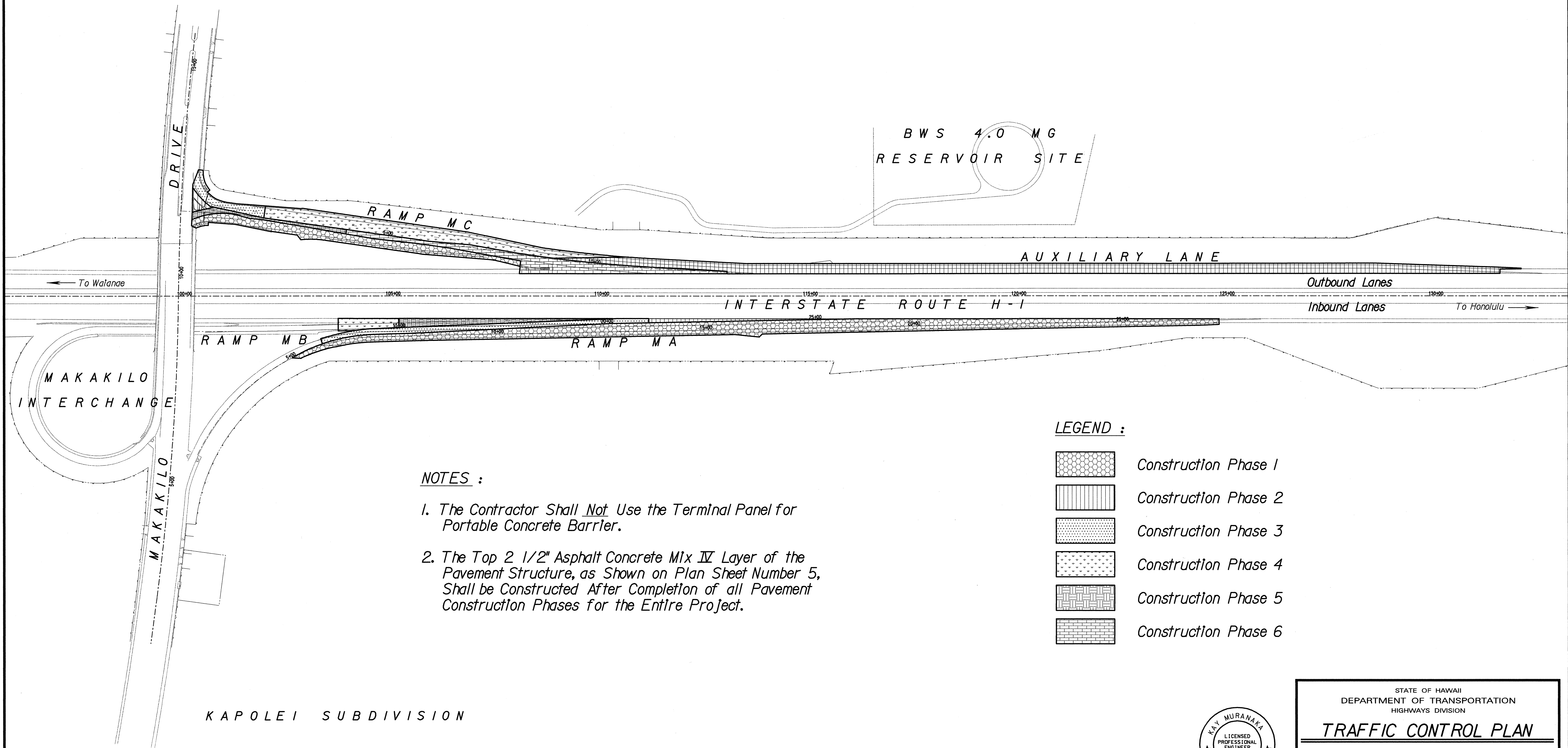
Scale: 1/4" = 1'-0" Date: May 9, 1997

SHEET No. M-7 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	42	104



MAKAKILO SUBDIVISION



NOTES :

1. The Contractor Shall Not Use the Terminal Panel for Portable Concrete Barrier.
2. The Top 2 1/2" Asphalt Concrete Mix IV Layer of the Pavement Structure, as Shown on Plan Sheet Number 5, Shall be Constructed After Completion of all Pavement Construction Phases for the Entire Project.

LEGEND :

- Construction Phase 1
- Construction Phase 2
- Construction Phase 3
- Construction Phase 4
- Construction Phase 5
- Construction Phase 6

KAPOLEI SUBDIVISION

CONSTRUCTION PHASING PLAN
Scale : 1" = 120'

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



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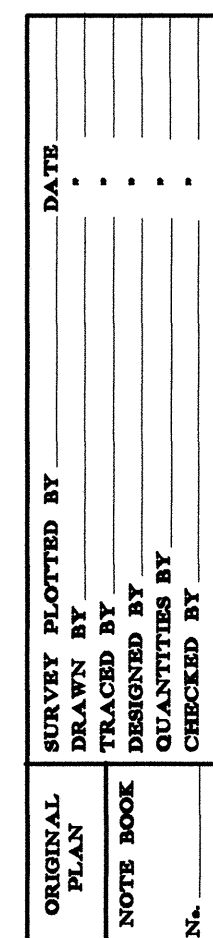
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 120' Date: May 9, 1997

SHEET No. F-1 OF 8 SHEETS



Note :
Remove Existing GRP, Anchor Block & Guardrail,
Provide Temporary Pavement Structure (For Detail
See C-2). At End Of Construction Phase 3, Remove
Temporary Pavement Structure and Restore GRP,
Anchor Block, Guardrail and Grassing to Original Condition.

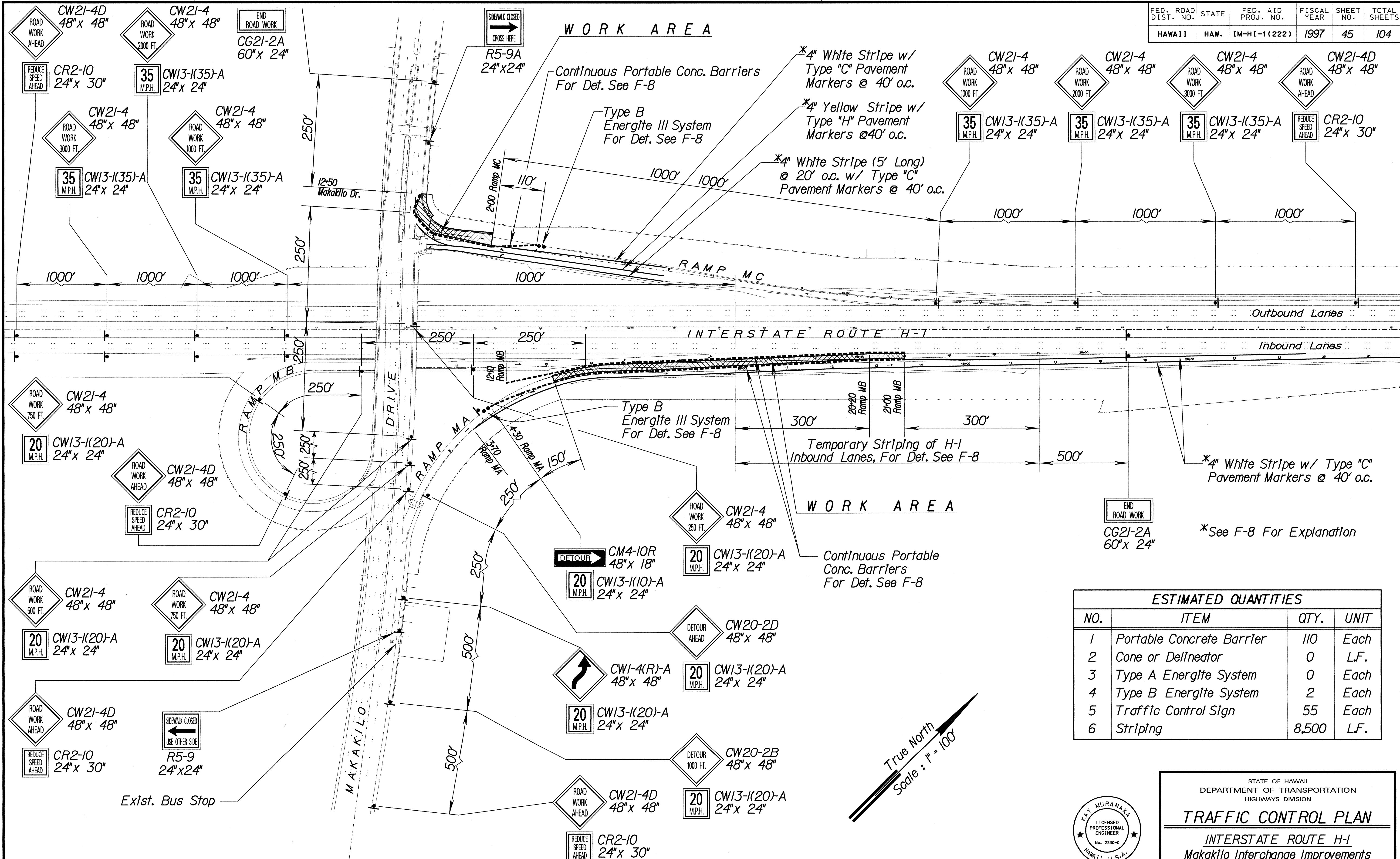
Scale : 1" = 100'

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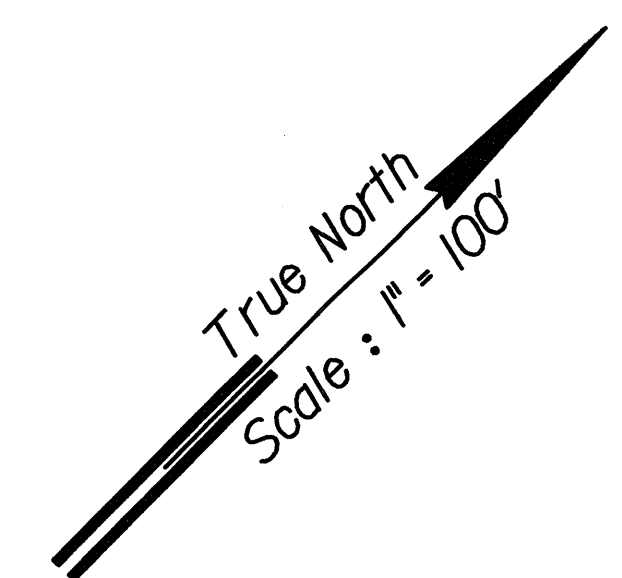
Toy Muranaka

Scale: 1" = 100' Date: May 9, 1997
SHEET No. F-2 OF 8 SHEETS

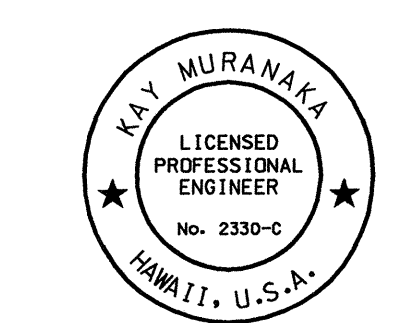
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	45	104



ESTIMATED QUANTITIES			
NO.	ITEM	QTY.	UNIT
1	Portable Concrete Barrler	110	Each
2	Cone or Delineator	0	L.F.
3	Type A Energite System	0	Each
4	Type B Energite System	2	Each
5	Traffic Control Sign	55	Each
6	Striping	8,500	L.F.



CONSTRUCTION PHASE 3
Scale: 1" = 100'



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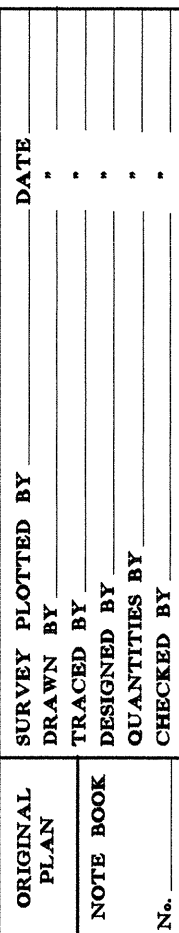
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 100' Date: May 9, 1997

SHEET No. F-4 OF 8 SHEETS



* *Remove Existing Guardrails and Concrete Curbs, Provide Temporary Pavement Structure (For Detail See C-2). At End of Construction Phase, Remove Temporary Pavement Structure And Restore Concrete Curb, Guardrail and Grassing to Original Condition. The Temporary Detour Through the Curb Island Shall be Coned-Off During Non-Construction Hours.*

Scale : 1" = 100'

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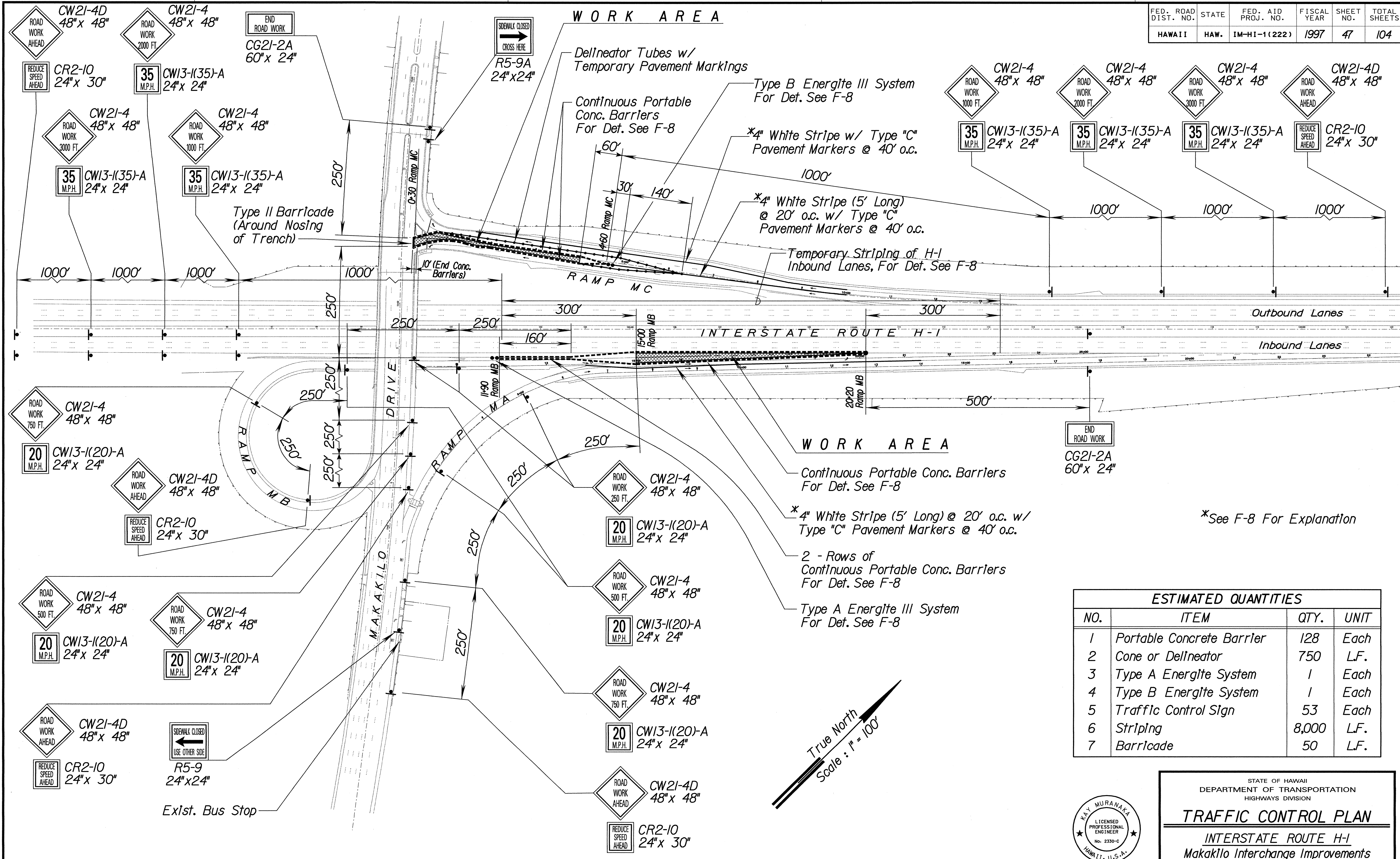
INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 100' Date: May 9, 1997

SHEET No. F-5 OF 8 SHEETS

MAKAKILO INTERCHANGE IMPROVEMENTS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	47	104



CONSTRUCTION PHASE 5
Scale : 1" = 100'

ESTIMATED QUANTITIES			
NO.	ITEM	QTY.	UNIT
1	Portable Concrete Barrier	128	Each
2	Cone or Delineator	750	L.F.
3	Type A Energite System	1	Each
4	Type B Energite System	1	Each
5	Traffic Control Sign	53	Each
6	Striping	8,000	L.F.
7	Barricade	50	L.F.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

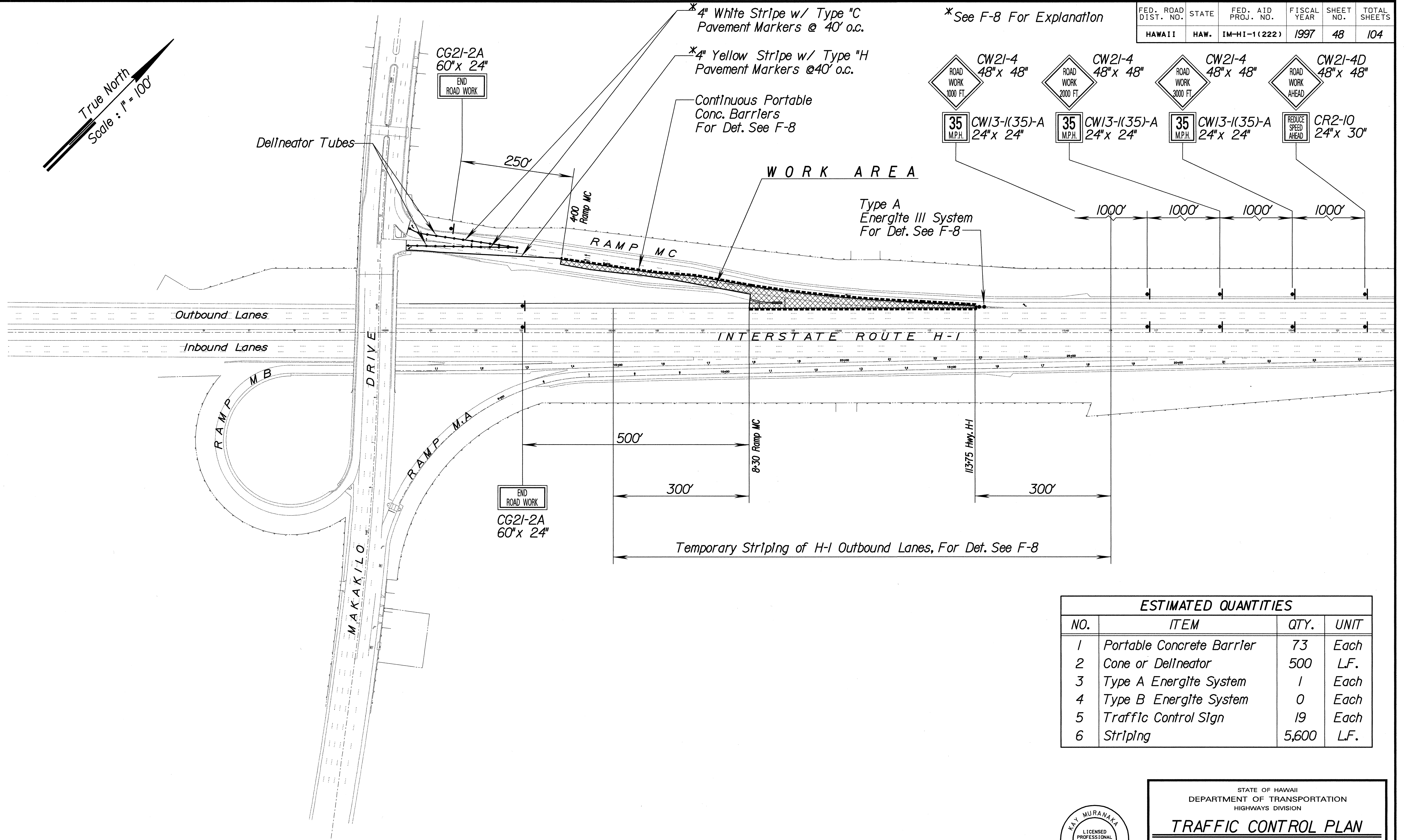
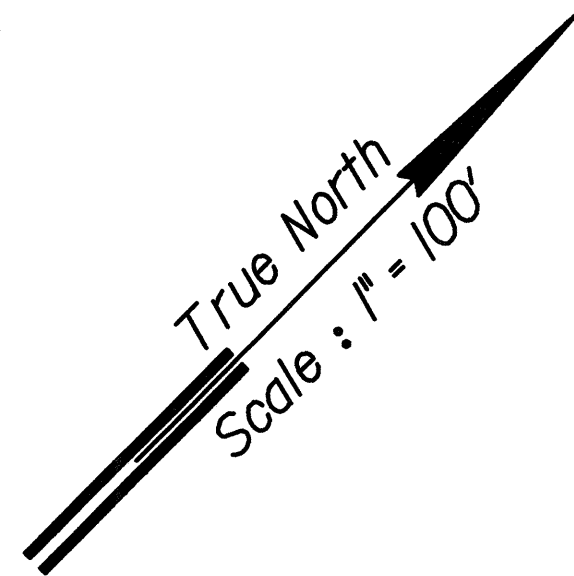
TRAFFIC CONTROL PLAN

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 100' Date: May 9, 1997
SHEET No. F-6 OF 8 SHEETS

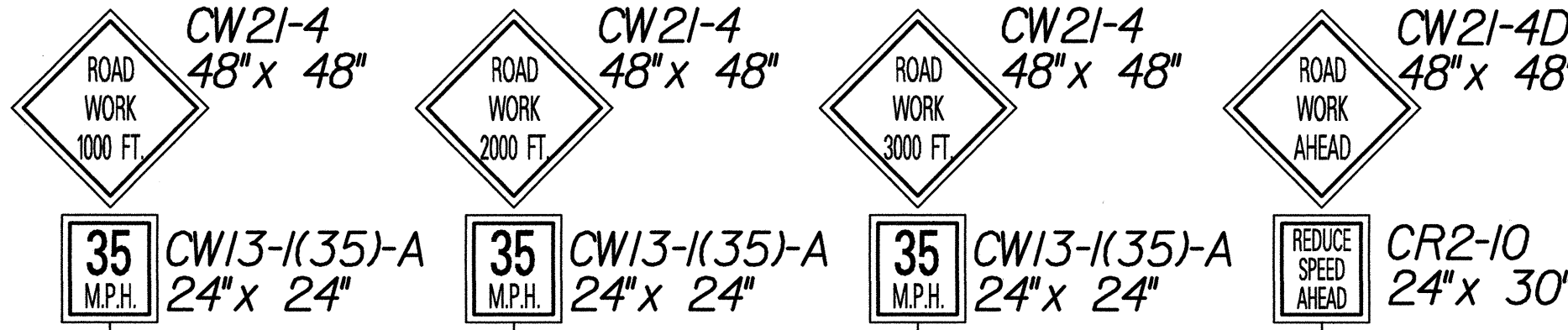
DESIGNED BY: DATE: _____
DRAWN BY: _____
CHECKED BY: _____
NOTED BY: _____
QUANTITIES BY: _____

MAKAKILO INTERCHANGE IMPROVEMENTS TCR-07.DGN



*See F-8 For Explanation

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IM-HI-1(222)	1997	48	104



ESTIMATED QUANTITIES			
NO.	ITEM	QTY.	UNIT
1	Portable Concrete Barrler	73	Each
2	Cone or Delineator	500	LF.
3	Type A Energite System	1	Each
4	Type B Energite System	0	Each
5	Traffic Control Sign	19	Each
6	Striping	5,600	LF.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
CHECKED BY	

CONSTRUCTION PHASE 6
Scale : 1" = 100'



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL PLAN

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: 1" = 100' Date: May 9, 1997
SHEET No. F-7 OF 8 SHEETS

MAKAKILO INTERCHANGE IMPROVEMENTS

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

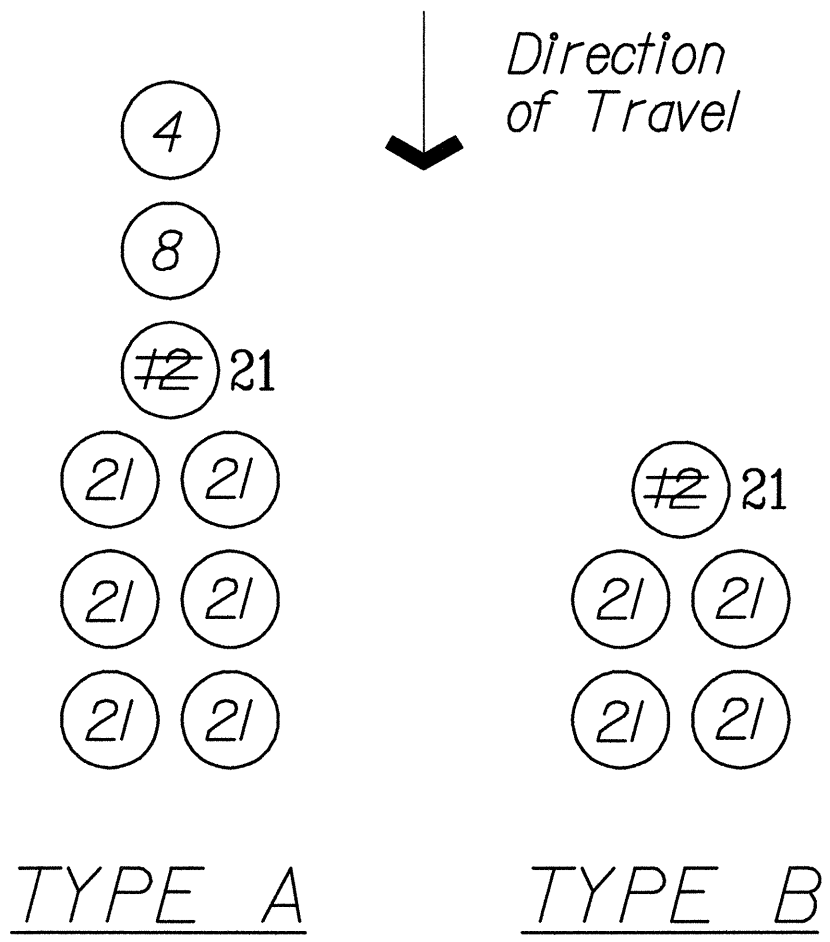
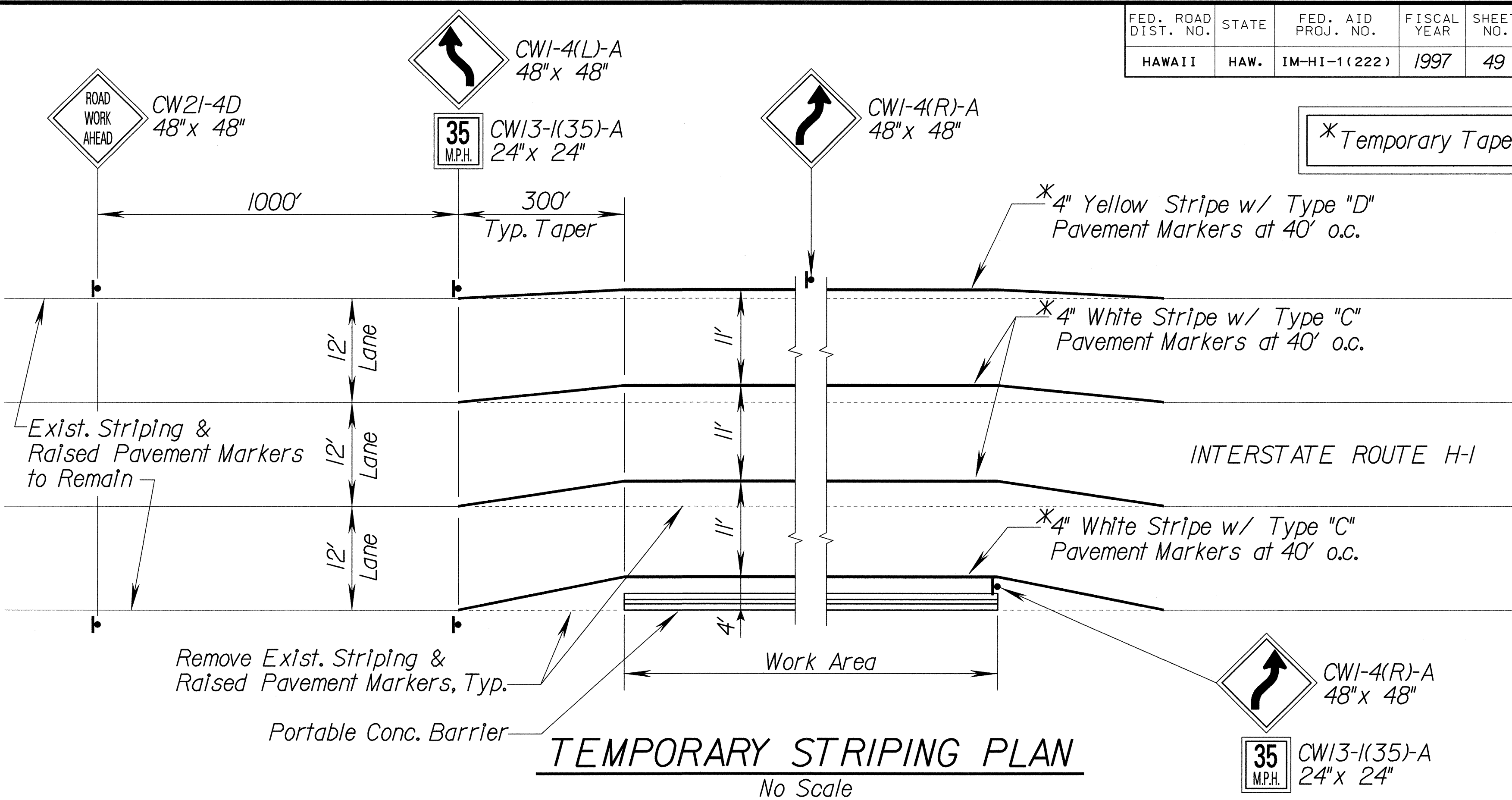
- The Permittee Shall Make Minor Adjustments at Intersections, Driveways, Bridges, Structures, Etc., to Fit Field Conditions.
- Cones or Delineators Shall be Extended to a Point Where They are Visible to Approaching Traffic.
- Traffic Control Devices Shall be Installed Such That the Sign or Device Farthest From the Work Area Shall be Placed First. The Others Shall Then be Placed Progressively Toward the Work Area.
- Regulatory and Warning Signs Within the Construction Zone that are in Conflict with the Traffic Control Plans Shall be Removed or Covered. All Signs Shall be Restored Upon Completion of the Work.
- Flaggers and/or Police officers Shall be in Sight of Each Other or in Direct Communication at all Times.
- When Required by the Issuing Officer, the Permittee Shall Install a Flashing Arrow Signal as Shown on the Traffic Control Plans.
- Sign Spacings (L), Taper Lengths (T) and Spacing of Cones or Delineators Shall be as Shown in Table 1, Unless Otherwise Noted on the Traffic Control Plans.
- All Traffic Lanes Shall be a Minimum of 10 Feet Wide.
- All Construction Warning Signs Shall be Promptly Removed or Covered Whenever the Message is not Applicable or not in Use.
- The Backs of All Signs Used for Traffic Control Shall be Appropriately Covered to Preclude the Display of Inapplicable Sign Messages (i.e., When Signs Have Messages on Both Faces).
- At the End of Each Day's Work or as Soon as the Work is Completed, the Permittee Shall Remove all Traffic Control Devices no Longer Needed to Permit Free and Safe Passage of Public Traffic. Removal Shall be in the Reverse Order of Installation.
- Replace Permanent Pavement Markings and Traffic Signs Upon Completion of Each Phase of Work.

ADDITIONAL NOTES FOR TRAFFIC CONTROL PLAN

- Existing Conflicting Pavement Markings Shall be Removed and Temporary Markings Shall be Installed Before Traffic Patterns are Changed. After Completion of the Work, Temporary Markings Shall be Removed. When a Lane Closure is Limited to Daylight Hours, Lanes may be Delineated by Channellizing Devices in Lieu of Temporary Markings.

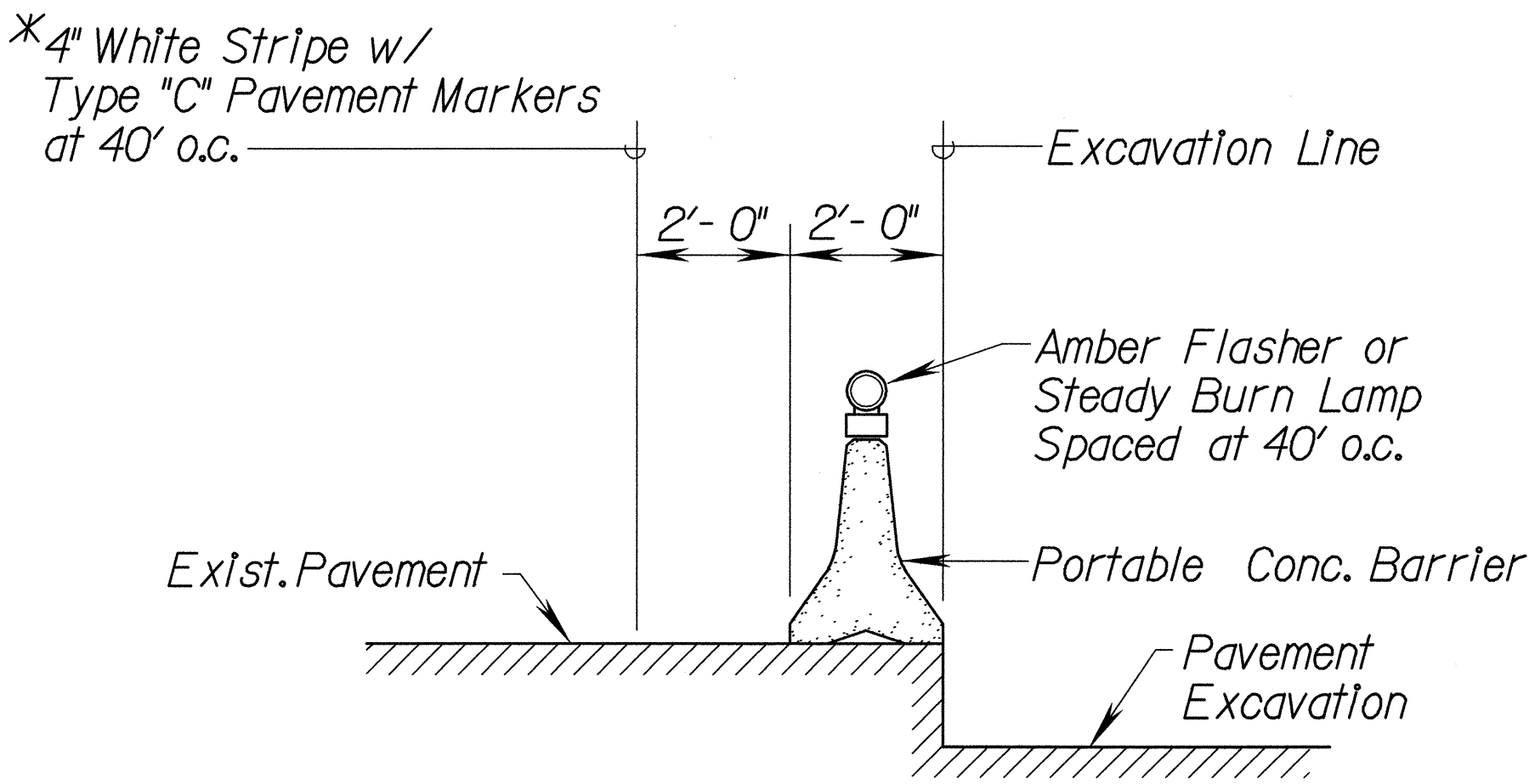
TABLE 1 FOR TRAFFIC CONTROL PLAN							
Posted Speed Limit (M.P.H.)	Sign Spacing (D) (Feet)	Taper Length (T) (Feet)		Longitudinal Buffer Space (B) (Feet)	Spacing of Cones or Delineators (Feet)		
		*W = 12' or Less	*W = Greater Than 12'		Taper	Tangent	Work Area
20	250	200	Wx17	35	20	20	10
25	250	200	Wx17	55	25	25	10
30	250	250	Wx20	85	30	30	10
35	250	250	Wx20	120	35	35	10
40	500	350	Wx30	170	40	40	10
45	500	550	Wx45	220	45	45	10
50	1000	600	Wx50	280	50	50	10
55	1000	700	Wx55	335	55	55	10

*W = Width of Lane, Shoulder or Offset



Notes :

- Contractor to Install System Per Manufacturer's Recommendation.
- Numbers Indicate Pounds of Sand In Thousands.



PLACEMENT OF PORTABLE CONC. BARRIER DURING ALL HOURS



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC CONTROL DETAILS & NOTES

INTERSTATE ROUTE H-1
Makakilo Interchange Improvements
to Westbound Off-Ramp and
Eastbound On-Ramps

Scale: None Date: May 9, 1997

SHEET No. F-8 OF 8 SHEETS