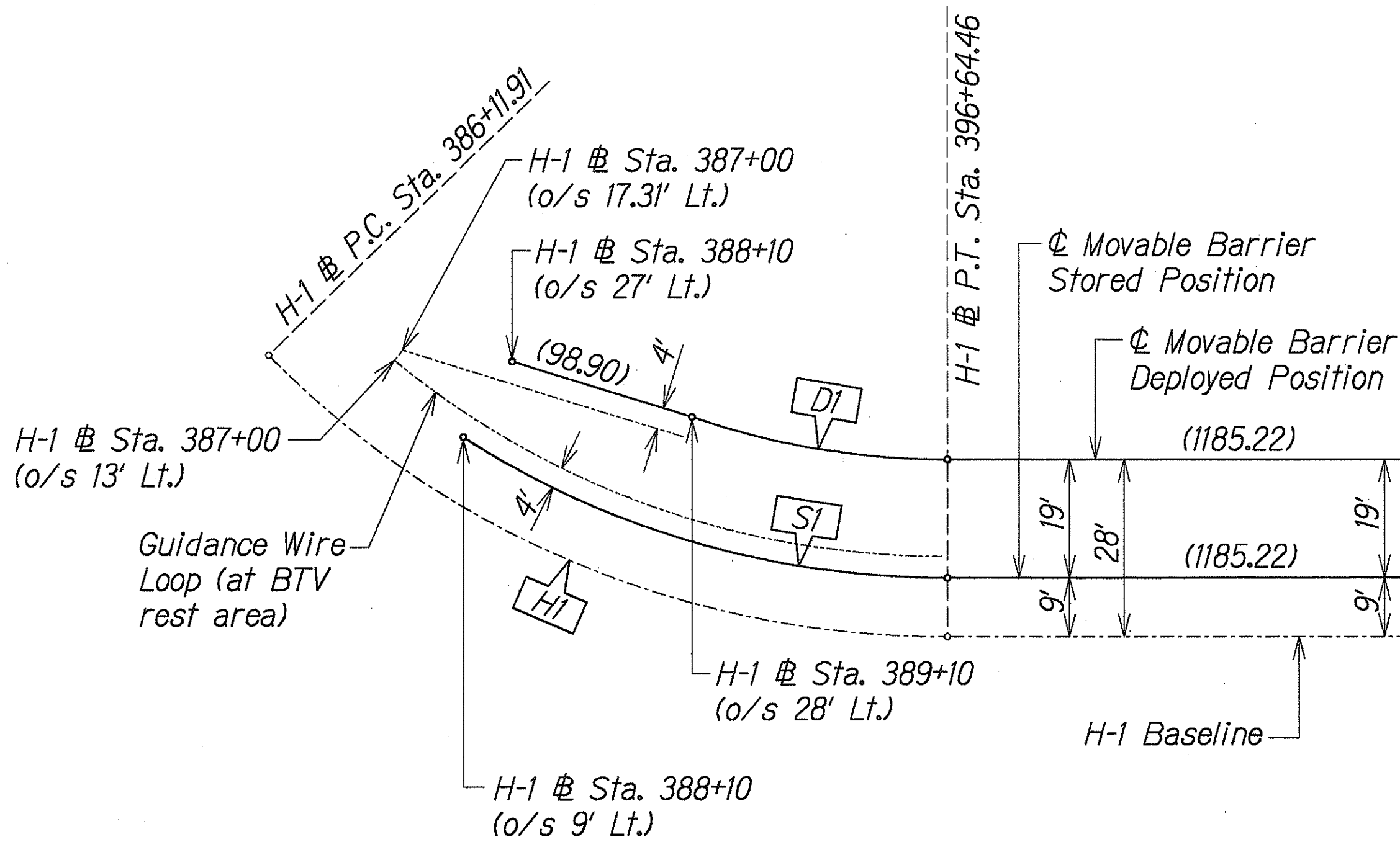
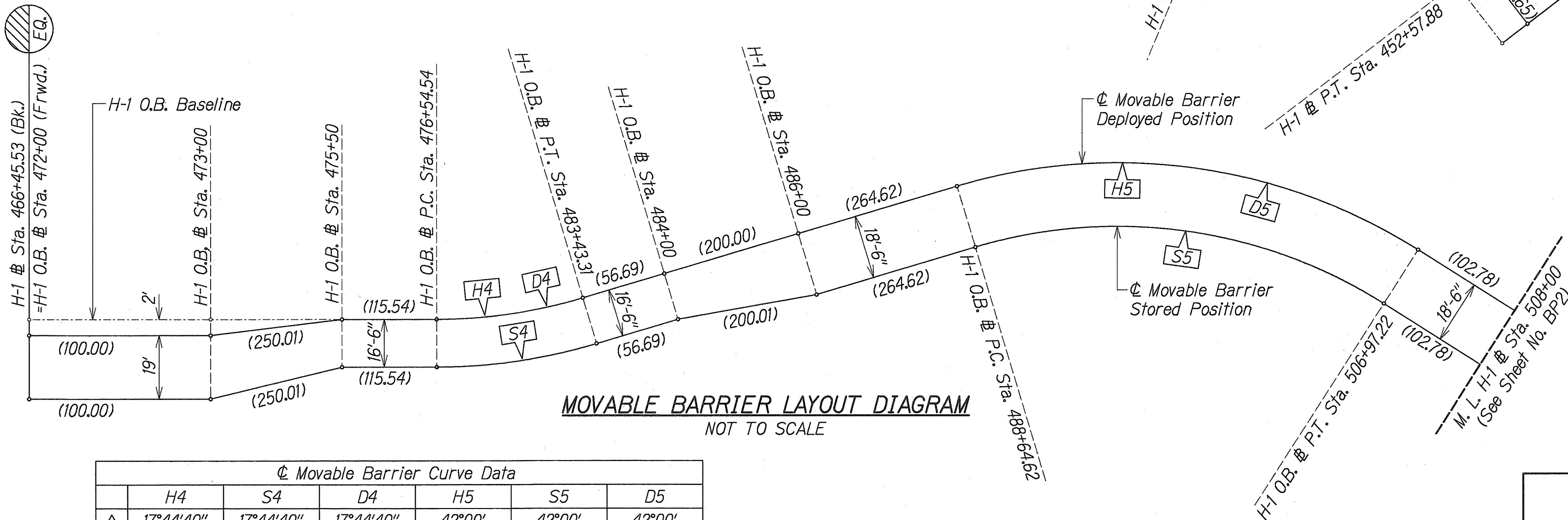


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIEFG-01-96	1998	81	344

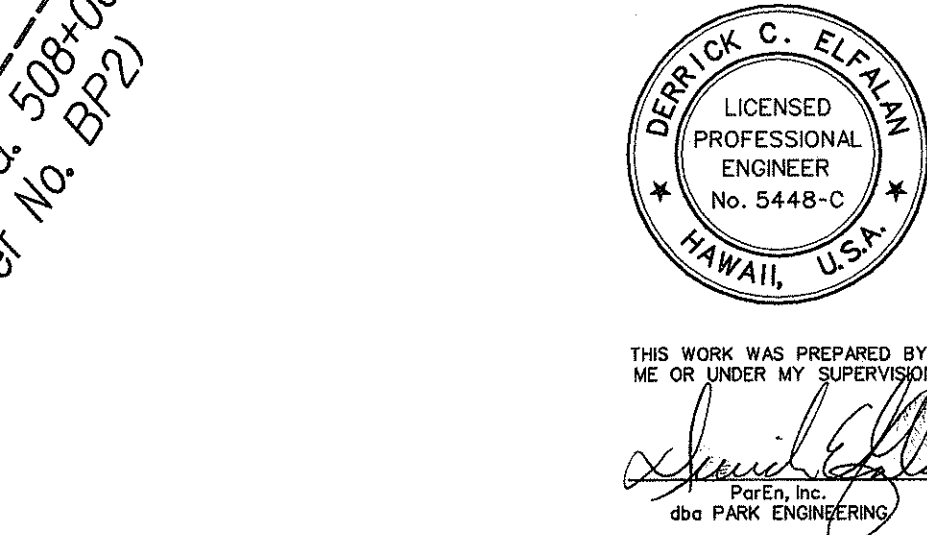
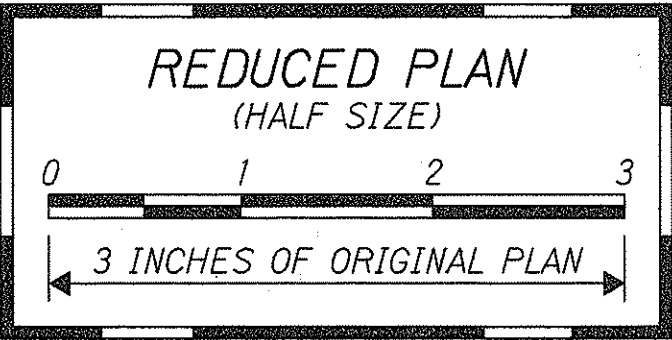
Movable Barrier Curve Data									
	H1	S1	D1	H2	S2	D2	H3	S3	D3
Δ	24°07'22"	19°34'58.4"	17°17'27.8"	28°33'36"	28°33'36"	28°33'36"	27°04'14"	27°04'14"	27°04'14"
R	2500.00	2491.00	2472.00	6000.00	6009.00	6028.00	3000.00	3009.00	3028.00
T	534.19	429.89	375.86	1527.14	1529.44	1534.28	722.19	724.36	728.93
C	1044.80	847.25	743.19	2959.93	2964.37	2973.74	1404.26	1408.48	1417.37
Lc	1052.55	851.39	746.02	2990.78	2995.28	3004.75	1417.42	1421.66	1430.64



MOVABLE BARRIER LAYOUT DIAGRAM
NOT TO SCALE



Movable Barrier Curve Data						
	H4	S4	D4	H5	S5	D5
Δ	17°44'40"	17°44'40"	17°44'40"	42°00'	42°00'	42°00'
R	2224.00	2240.50	2224.00	2500.00	2481.50	2500.00
T	347.16	349.74	347.16	959.66	952.56	959.66
C	686.02	691.11	686.02	1791.84	1778.58	1791.84
Lc	688.77	693.88	688.77	1832.60	1819.03	1832.60



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

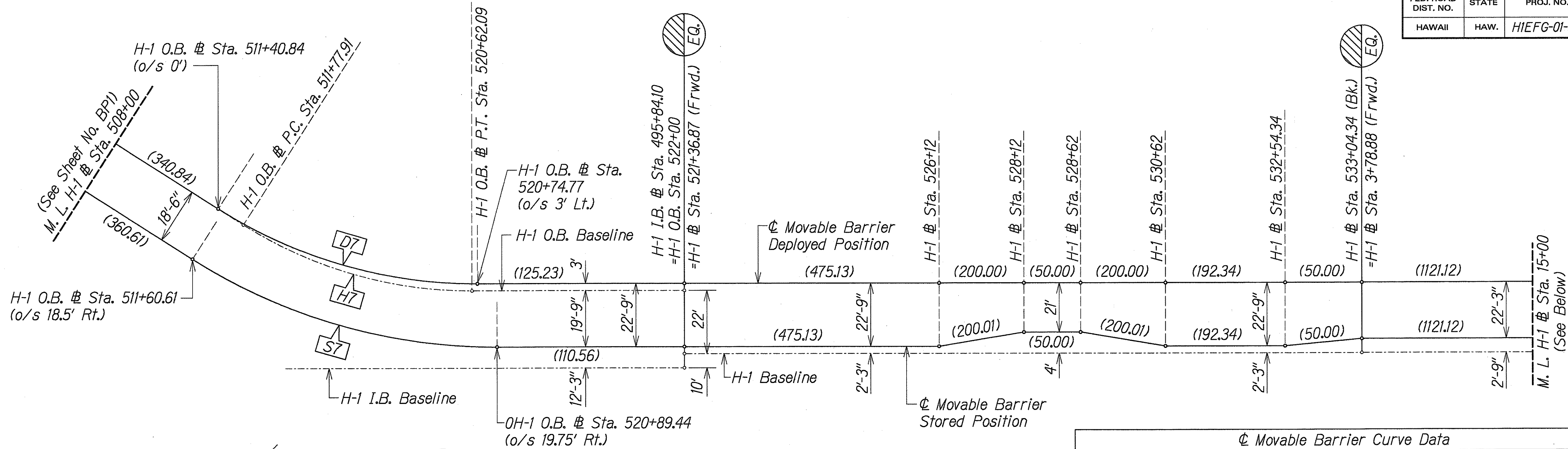
MOVABLE BARRIER LAYOUT DIAGRAM

INTERSTATE ROUTE H-1
CONTRAFLOW AND SHOULDER LANE
Waiawa Interchange to Keolu Interchange
PROJECT NO. HIEFG-01-96
Scale: None Date: October, 1997

SHEET No. BPI OF 4 SHEETS

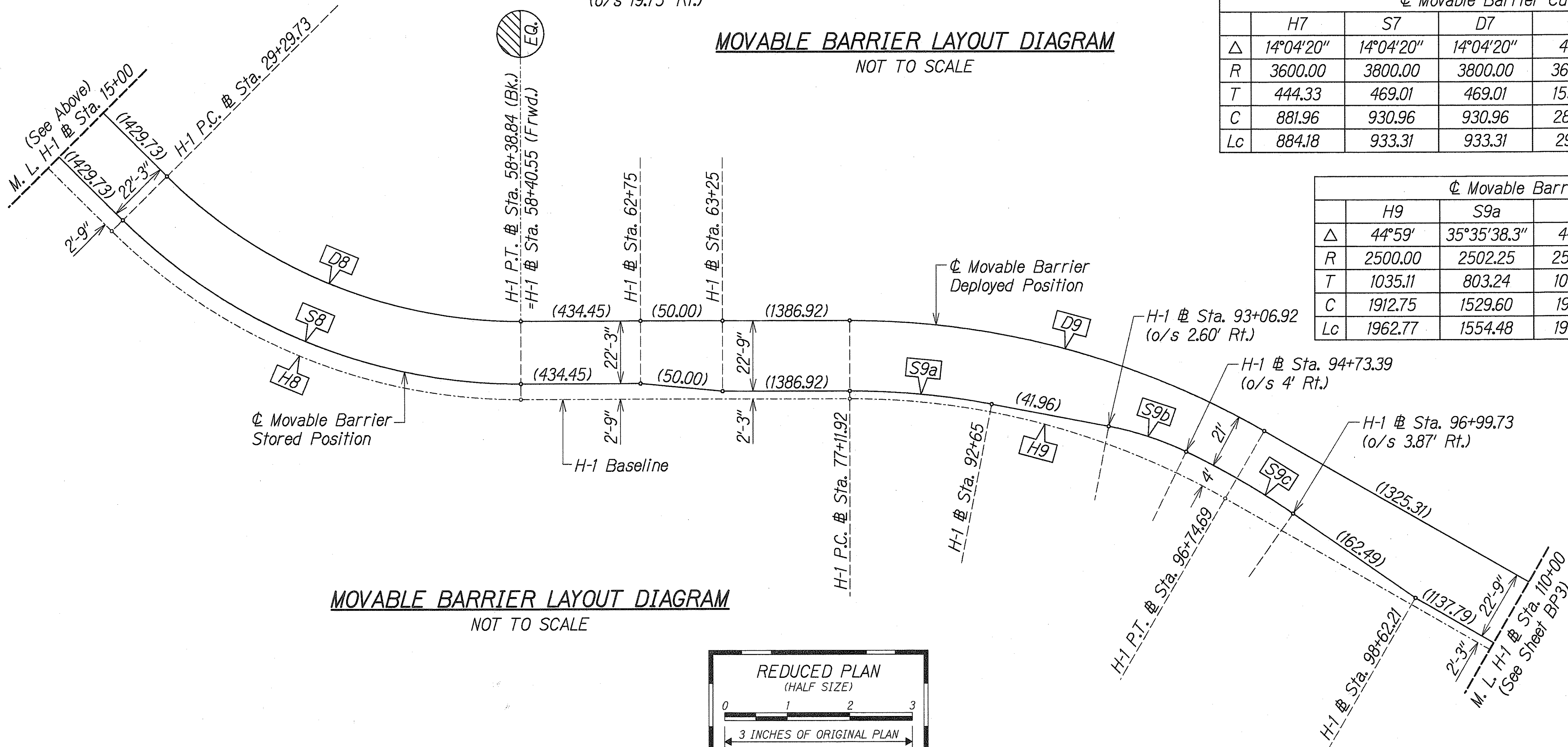
DATE	
DESIGNED BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
N.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIEFG-01-96	1998	82	344

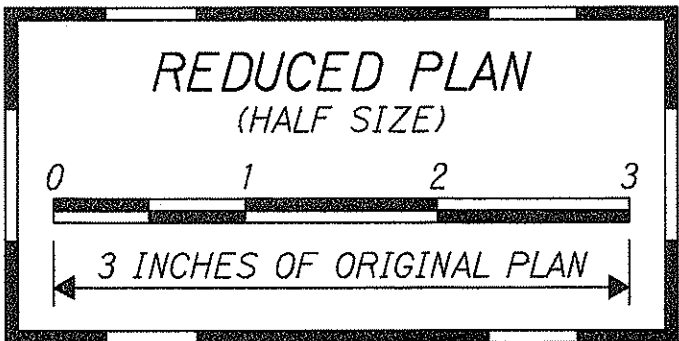


MOVABLE BARRIER LAYOUT DIAGRAM
NOT TO SCALE

	H7	S7	D7	H8	S8	D8
Δ	14°04'20"	14°04'20"	14°04'20"	46°18'	46°18'	46°18'
R	3600.00	3800.00	3800.00	3600.00	3597.25	3575.00
T	444.33	469.01	469.01	1539.24	1538.09	1528.56
C	881.96	930.96	930.96	2830.61	2828.44	2810.95
Lc	884.18	933.31	933.31	2909.11	2906.89	2888.91



MOVABLE BARRIER LAYOUT DIAGRAM
NOT TO SCALE



	H9	S9a	D9	S9b	S9c
Δ	44°59'	35°35'38.3"	44°59'	4°46'33.7"	5°11'10.6"
R	2500.00	2502.25	2525.00	2000.00	2504.00
T	1035.11	803.24	1045.46	83.41	113.41
C	1912.75	1529.60	1931.87	166.67	226.58
Lc	1962.77	1554.48	1982.40	166.71	226.66



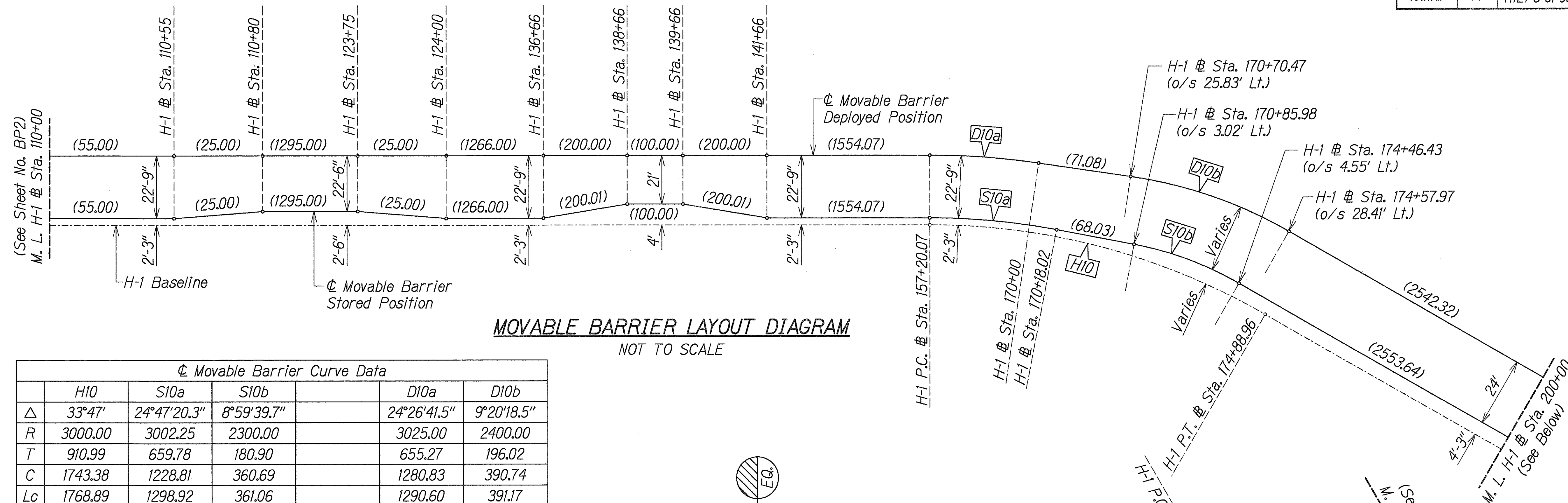
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION
Derrick C. Elfalan
PerEn, Inc.
380 PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MOVABLE BARRIER LAYOUT DIAGRAM

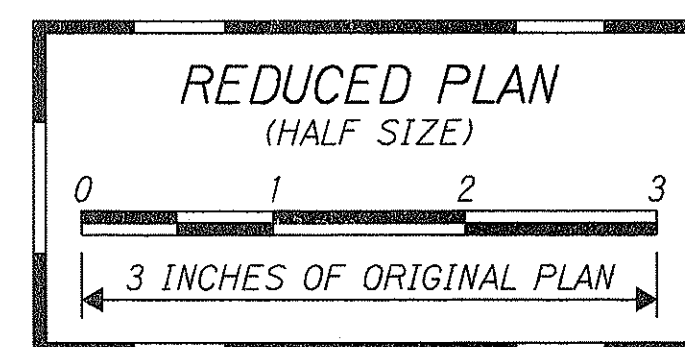
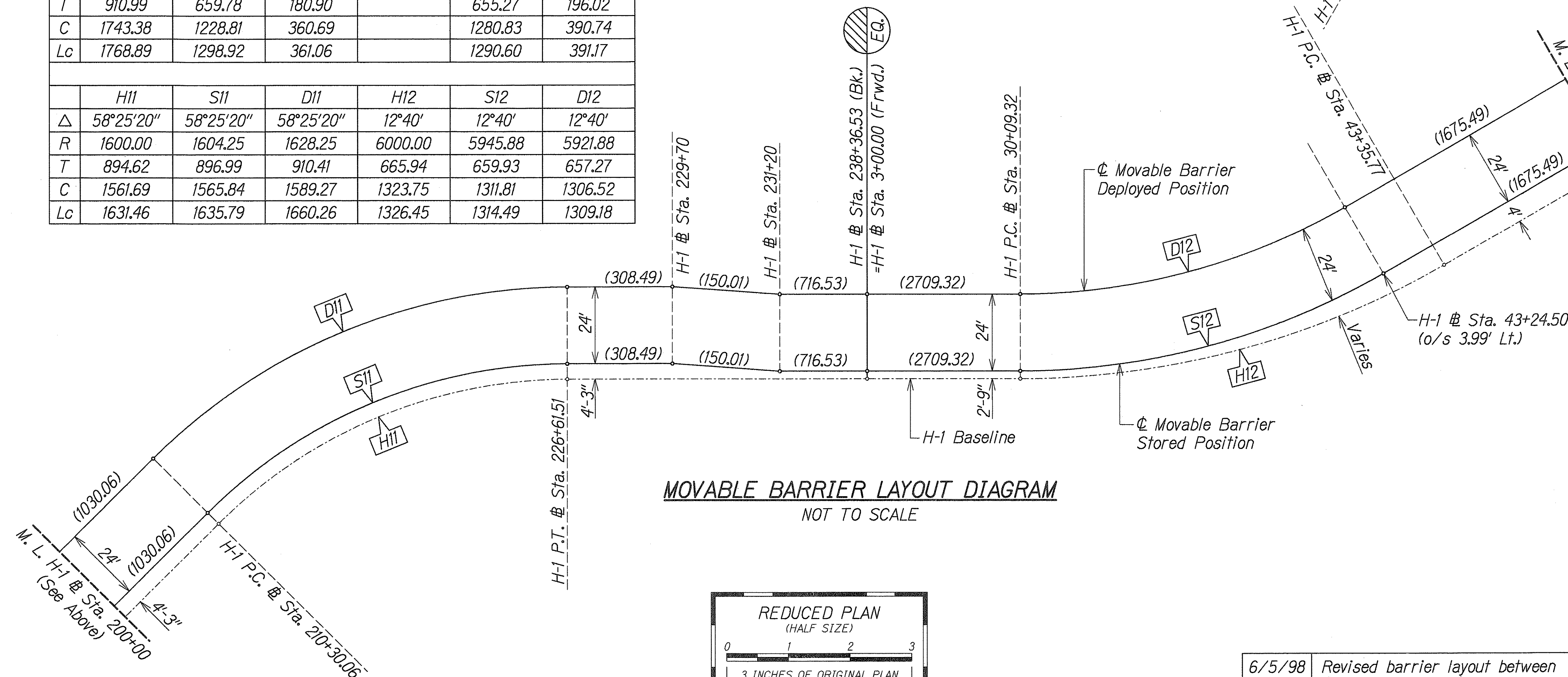
INTERSTATE ROUTE H-1
CONTRAFLOW AND SHOULDER LANE
Waiawa Interchange to Keolu Interchange
PROJECT NO. HIEFG-01-96
Scale: None Date: October, 1997
SHEET No. BP2 OF 4 SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	



Movable Barrier Curve Data						
	H10	S10a	S10b		D10a	D10b
Δ	33°47'	24°47'20.3"	8°59'39.7"		24°26'41.5"	9°20'18.5"
R	3000.00	3002.25	2300.00		3025.00	2400.00
T	910.99	659.78	180.90		655.27	196.02
C	1743.38	1228.81	360.69		1280.83	390.74
Lc	1768.89	1298.92	361.06		1290.60	391.17

	H11	S11	D11	H12	S12	D12
Δ	58°25'20"	58°25'20"	58°25'20"	12°40'	12°40'	12°40'
R	1600.00	1604.25	1628.25	6000.00	5945.88	5921.88
T	894.62	896.99	910.41	665.94	659.93	657.27
C	1561.69	1565.84	1589.27	1323.75	1311.81	1306.52
Lc	1631.46	1635.79	1660.26	1326.45	1314.49	1309.18



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
 Date: 10/1/97
 PortEn, Inc.
 680 PARK ENGINEERING

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

MOVABLE BARRIER LAYOUT DIAGRAM

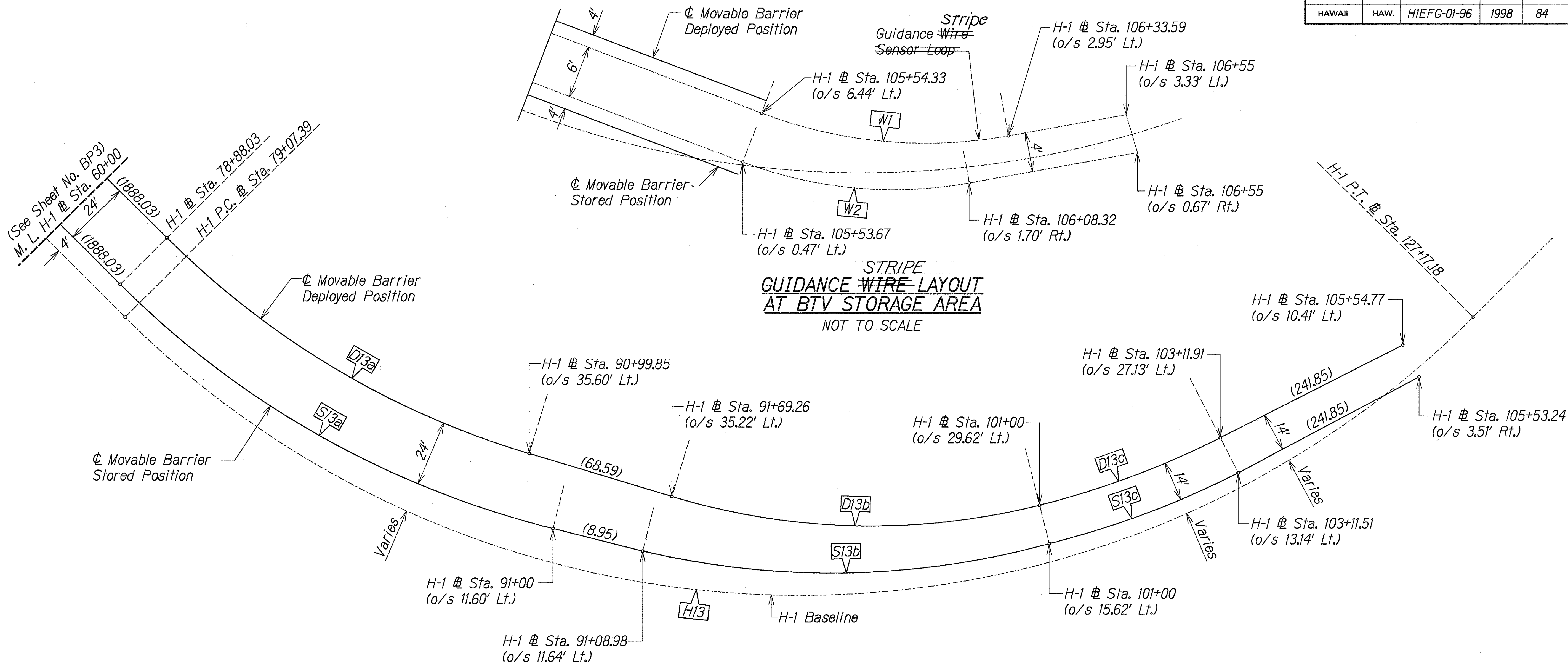
INTERSTATE ROUTE H-1
 CONTRAFLOW AND SHOULDER LANE
 Waiawa Interchange to Keolu Interchange
 PROJECT NO. HIEFG-01-96

Scale: None Date: October, 1997

SHEET No. **BP3** OF 4 SHEETS

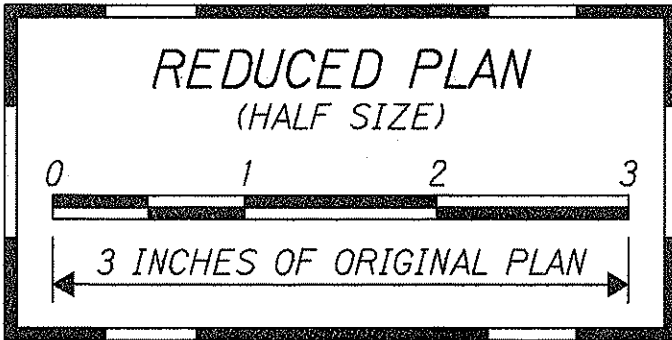
6/5/98	Revised barrier layout between Sta. 170+00 to Sta. 174+89.
DATE	REVISION

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HIEFG-01-96	1998	84	344



Movable Barrier Curve Data					
	H13	D13a	D13b	D13c	W1
Δ	91°51'37"	23°07'23.8"	19°02'09.5"	2°07'17.6"	9°00'50.8"
R	3000.00	2971.37	2772.58	5670.42	504.00
T	3099.02	607.86	464.87	104.99	39.73
C	4310.95	1191.06	916.93	209.95	79.21
Lc	4809.79	1199.18	921.16	209.97	79.29
	S13a	S13b	S13c	W2	
Δ	23°07'23.8"	19°02'09.5"	2°07'17.6"	9°00'50.8"	
R	2995.37	2969.44	5684.42	348.06	
T	612.77	497.87	105.25	27.44	
C	1200.68	982.04	210.47	54.70	
Lc	1208.86	986.57	210.48	54.76	

MOVABLE BARRIER LAYOUT DIAGRAM
NOT TO SCALE



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ME OR UNDER MY SUPERVISION
[Signature]
PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MOVABLE BARRIER LAYOUT DIAGRAM
INTERSTATE ROUTE H-1
CONTRAFLOW AND SHOULDER LANE
Waiawa Interchange to Keolu Interchange
PROJECT NO. HIEFG-01-96
Scale: None Date: October, 1997
SHEET No. **BP4** OF **4** SHEETS

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	
DATE	