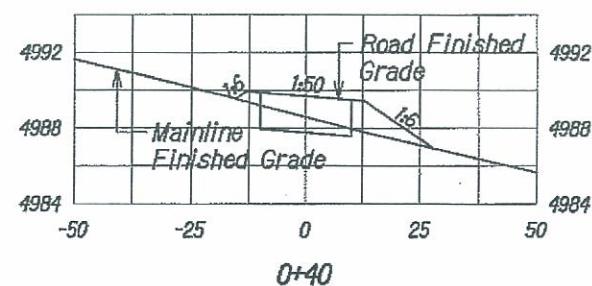
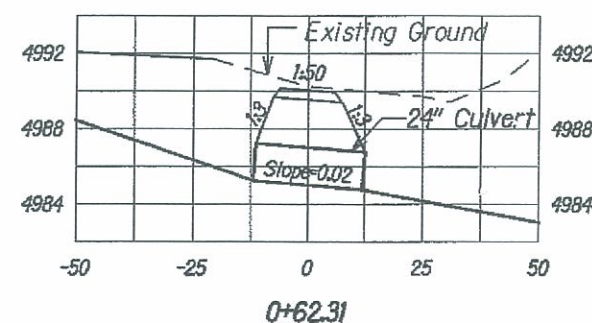
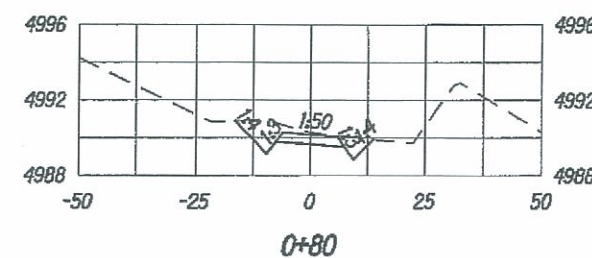
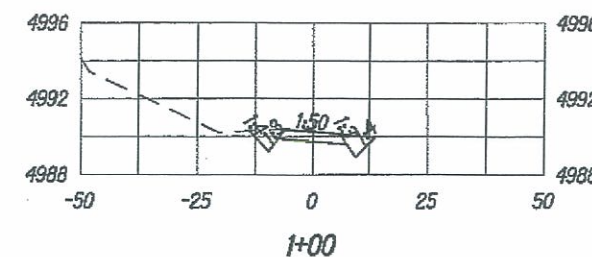
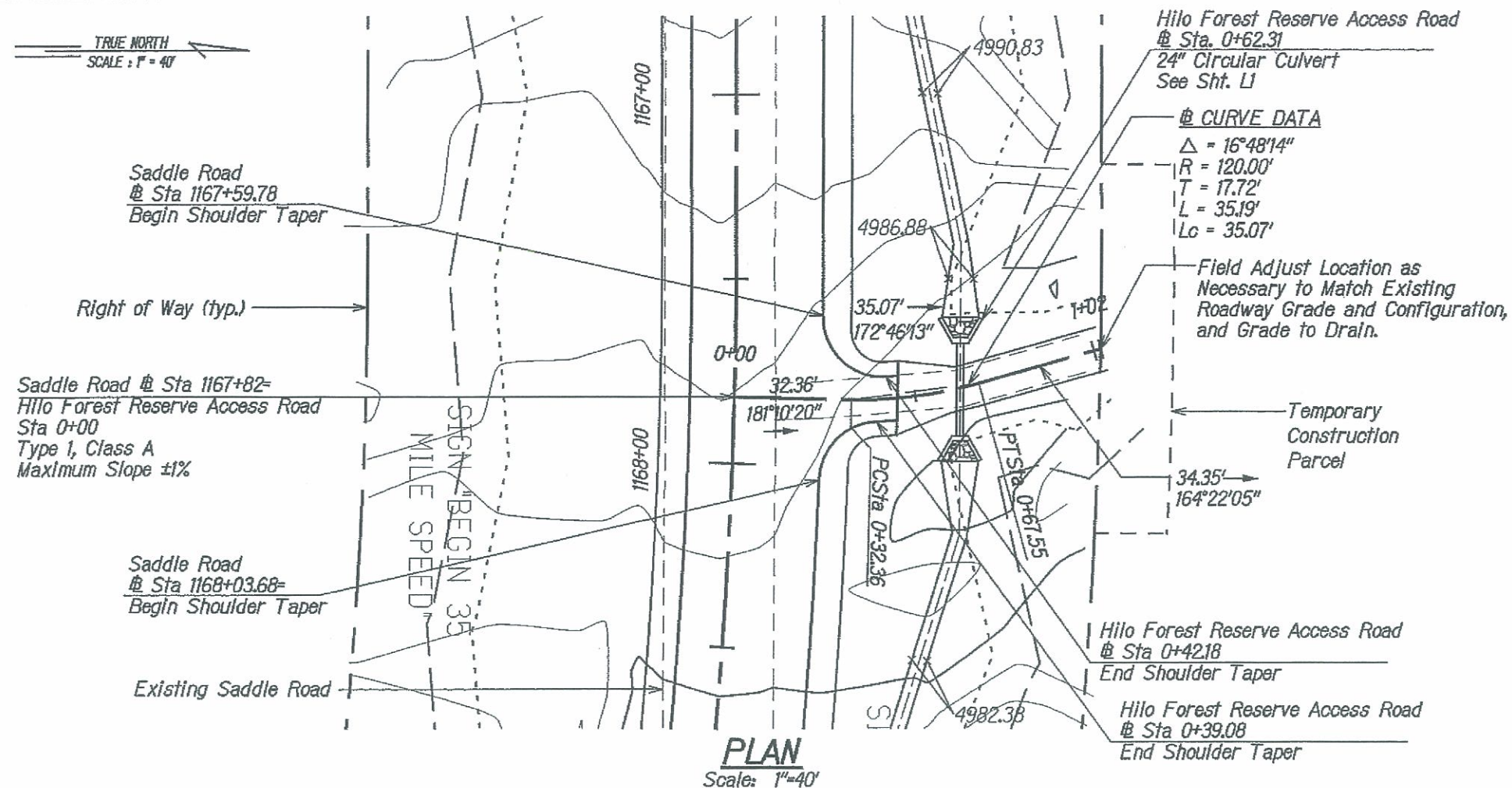


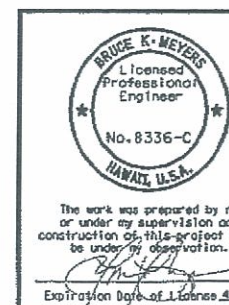
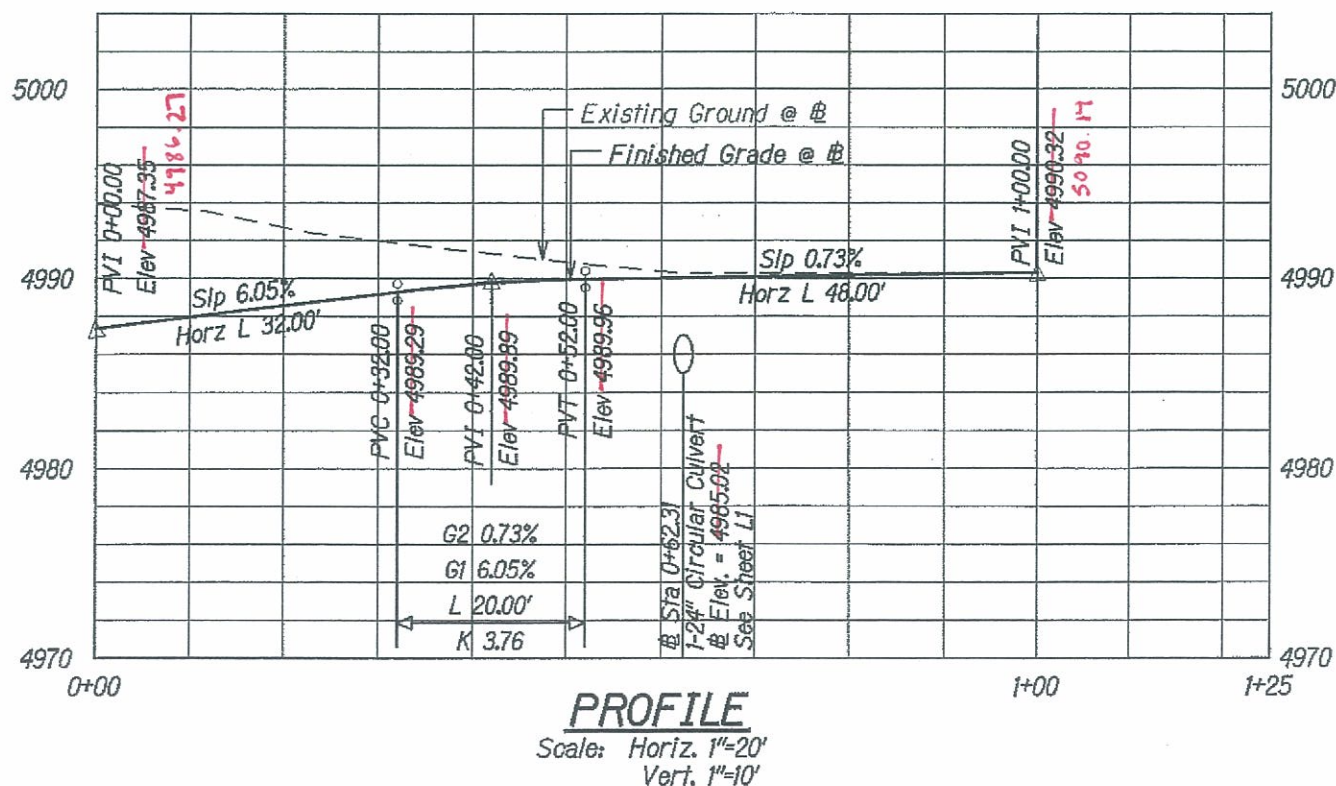
TRUE NORTH
SCALE: 1" = 40'



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 63 CY
Fill: 4 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**HILO FOREST RESERVE
ACCESS ROAD
@ STA 1167+82**

Scale: As Noted

Date: June 5, 2009

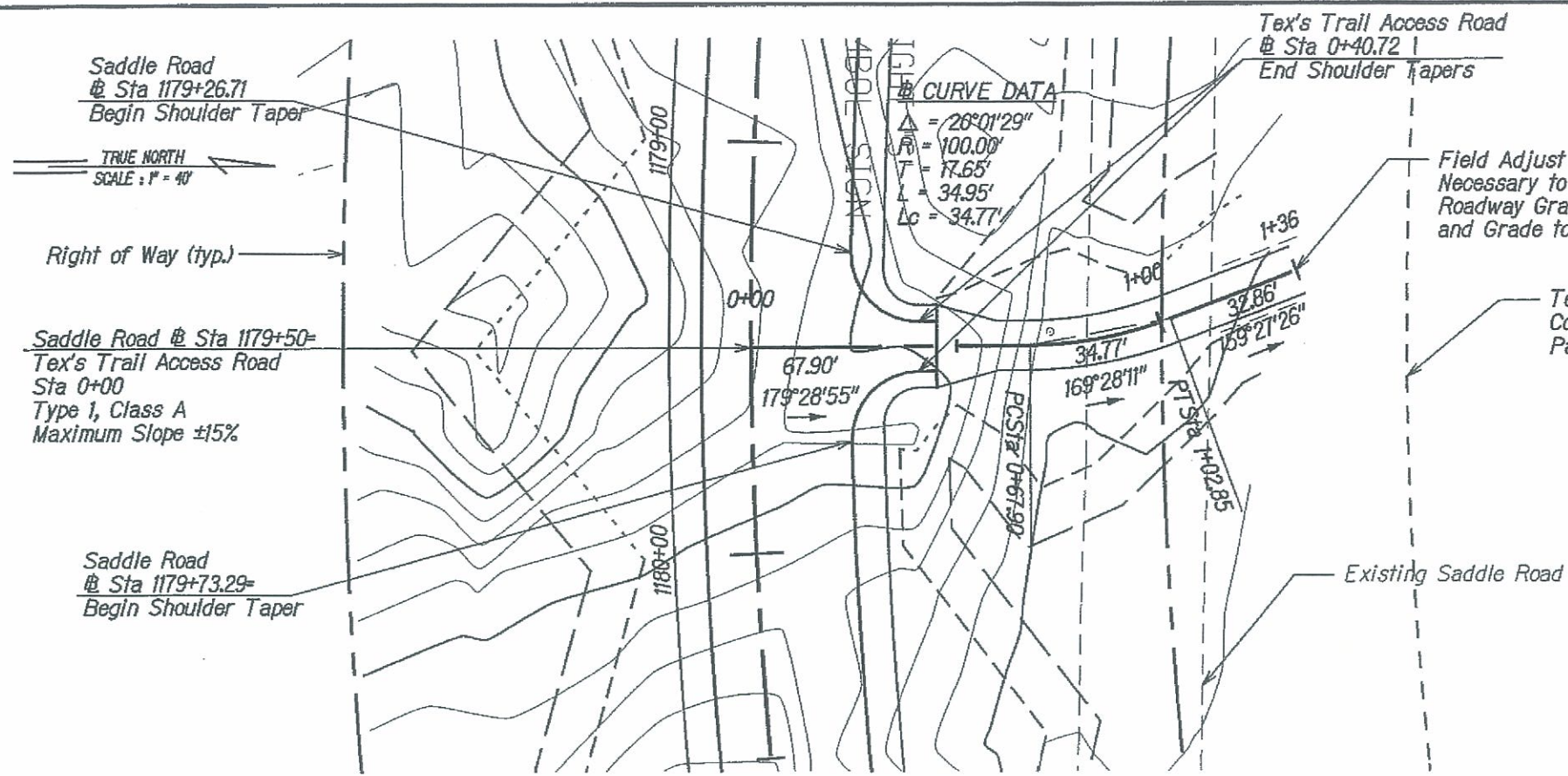
SHEET No. 1 OF 1

Approach Road: 1179+50 LT
Staking Notes

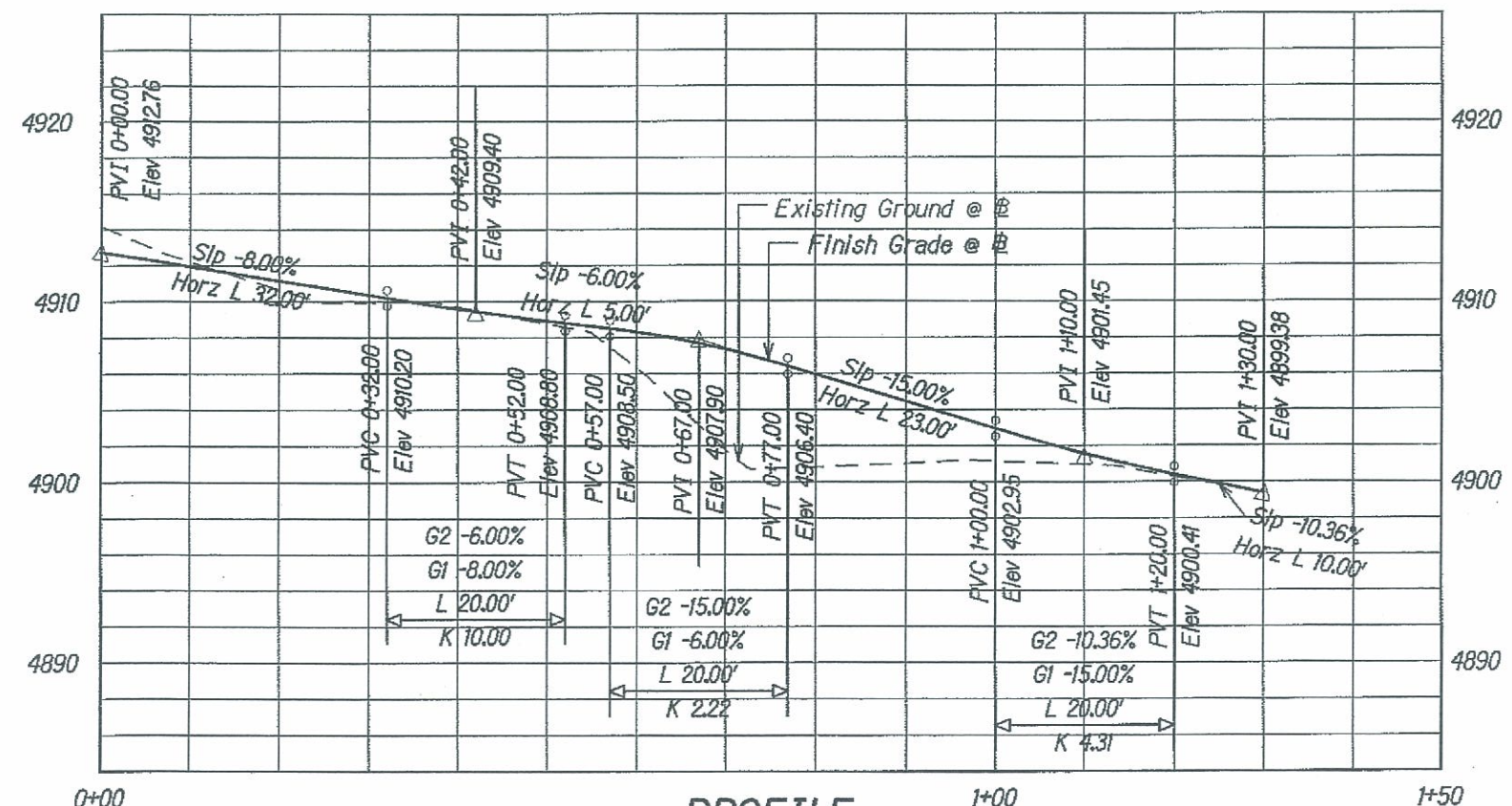
Description	Station	Elevation	Offset	Northing	Easting
Subgrade Elevations:					
3' Spacing	0+44.0	4909.71	-13.00	-14722.98	-80060.51
Lt Edge Pvmt2	0+44.0	4909.77	-10.00	-14722.95	-80057.51
Lt Edge Pvmt	0+44.0	4908.85	-10.00	-14722.95	-80057.51
Centerline	0+44.0	4908.40	0.00	-14722.86	-80047.51
Rt Edge Pvmt	0+44.0	4907.95	10.00	-14722.77	-80037.51
Rt Edge Pvmt2	0+44.0	4908.87	10.00	-14722.77	-80037.51
3' Spacing	0+44.0	4908.81	13.00	-14722.74	-80034.51
The following elevations are to finished grade:					
Lt Slope Stake	0+52.0				
Lt Shoulder	0+52.0	4909.25	-11.10	-14714.96	-80058.75
Centerline	0+52.0	4908.84	0.00	-14714.86	-80047.58
Rt Shoulder	0+52.0	4908.43	11.10	-14714.76	-80036.42
Rt Slope Stake	0+52.0				
Lt Slope Stake	0+68.0				
Lt Shoulder	0+68.0	4907.42	-7.50	-14699.03	-80055.23
Centerline	0+68.0	4907.27	0.00	-14698.96	-80047.73
Rt Shoulder	0+68.0	4907.12	7.50	-14698.79	-80040.23
Rt Slope Stake	0+68.0				
Lt Slope Stake	0+75.0				
Lt Shoulder	0+75.0	4906.53	-7.50	-14692.53	-80055.51
Centerline	0+75.0	4906.38	0.00	-14691.94	-80048.04
Rt Shoulder	0+75.0	4906.23	7.50	-14691.34	-80040.56
Rt Slope Stake	0+75.0				
Lt Slope Stake	0+85.0				
Lt Shoulder	0+85.0	4905.25	-7.50	-14683.42	-80056.70
Centerline	0+85.0	4905.10	0.00	-14682.09	-80049.31
Rt Shoulder	0+85.0	4904.95	7.50	-14680.75	-80041.93
Rt Slope Stake	0+85.0				
Lt Slope Stake	1+03.0				
Lt Shoulder	1+03.0	4902.97	-7.50	-14667.28	-80061.15
Centerline	1+03.0	4902.82	0.00	-14664.64	-80054.13
Rt Shoulder	1+03.0	4902.67	7.50	-14662.01	-80047.11
Rt Slope Stake	1+03.0				
Lt Shoulder	1+30.0	4899.53	-7.50	-14641.99	-80070.63
Centerline	1+30.0	4899.38	0.00	-14639.36	-80063.61
Rt Shoulder	1+30.0	4899.23	7.50	-14636.73	-80056.58

Match existing ground AS-BUILT E4

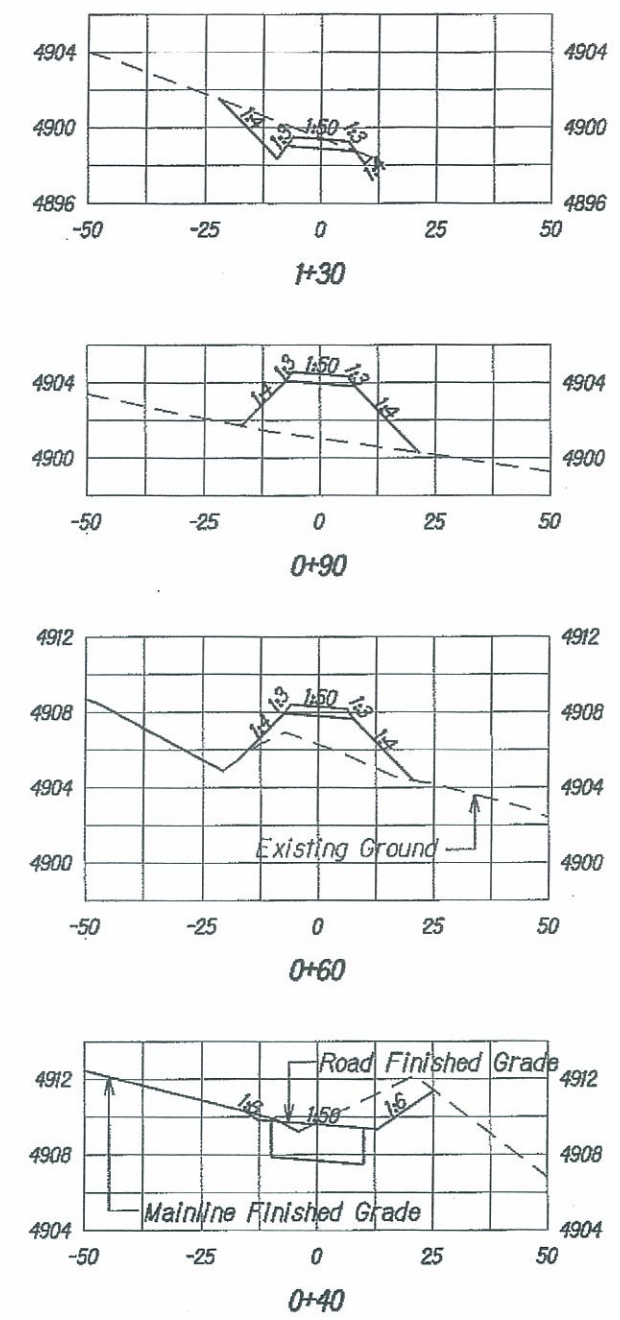
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E4	E20



PLAN
Scale: 1"=40'



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'
Earthwork Quantities:
Cut: 28 CY
Fill: 186 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

TEX'S TRAIL ACCESS ROAD
@ STA 1179+50

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

M:\Mproj\Lenin\208009H\sheet\sheet004.dgn

Approach Road: 1183+20 RT

Staking Notes

(No culvert needed)

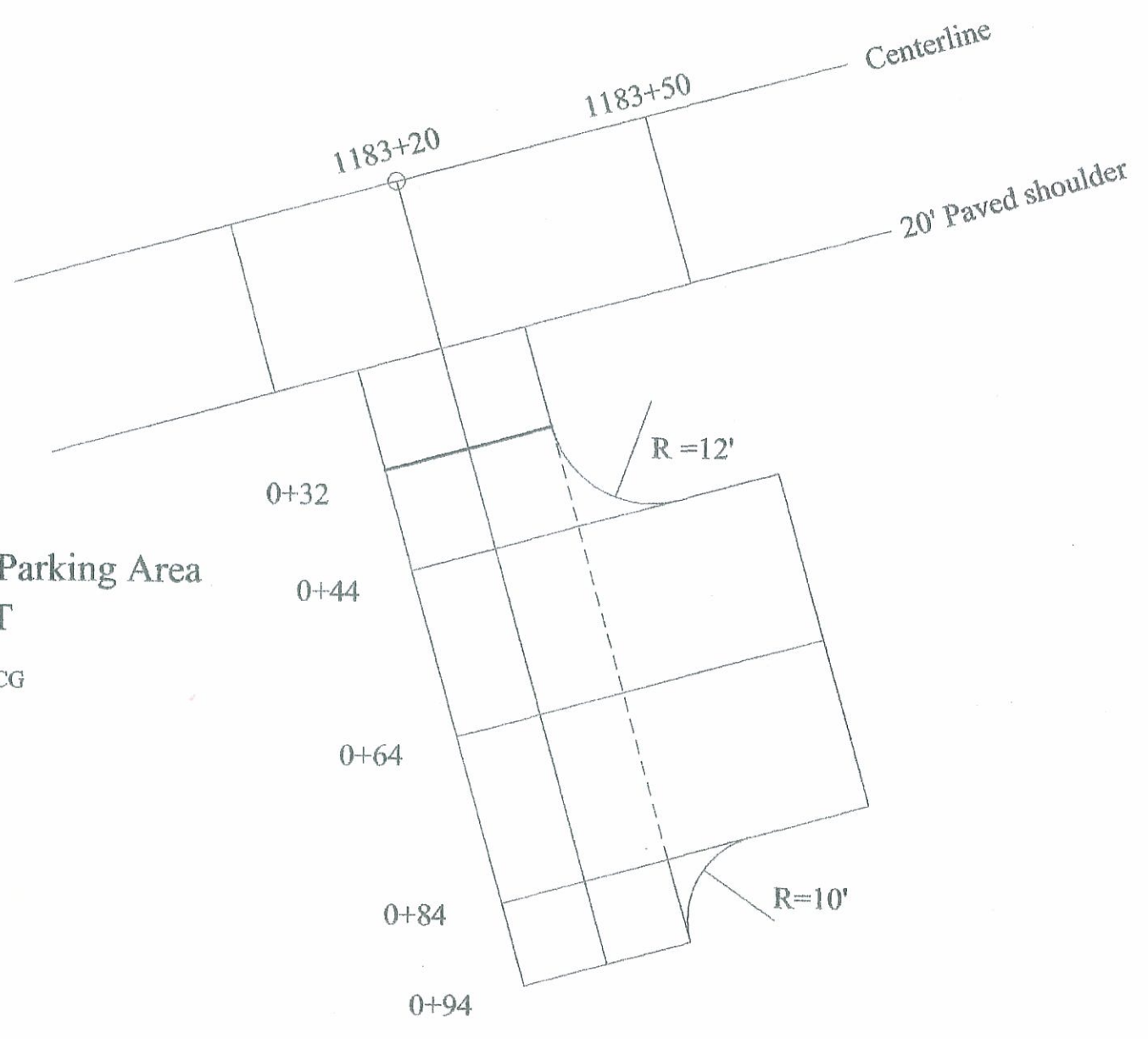
6/17/2010

Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
Lt Slope Stake						6:1
3' Spacing	0+32.0	4892.37	-13.00	-14735.56	-79662.02	
Lt Edge of Pvmt2	0+32.0	4892.50	-10.01	-14736.36	-79664.90	
Lt Edge of Pvmt	0+32.0	4891.58	-10.00	-14736.36	-79664.91	
Centerline	0+32.0	4892.03	0.00	-14739.04	-79674.54	
Rt Edge of Pvmt	0+32.0	4892.48	10.00	-14741.72	-79684.18	
Rt Edge of Pvmt2	0+32.0	4893.40	10.01	-14741.72	-79684.19	
3' Spacing	0+32.0	4893.34	13.00	-14742.52	-79687.07	
Rt Slope Stake						10:1
End pf pavement						
The following elevations are to finished grade:						
Lt Slope Stake	0+44.0					4:1
Lt Shoulder	0+44.0	4891.57	-34.00	-14741.50	-79638.57	
Point	0+44.0	4892.08	-17.00	-14746.05	-79654.95	
Centerline	0+44.0	4892.59	0.00	-14750.60	-79671.33	
Rt Shoulder	0+44.0	4892.89	10.00	-14753.28	-79680.96	
Rt Slope Stake	0+44.0					10:1
Lt Slope Stake	0+64.0					4:1
Lt Shoulder	0+64.0	4891.31	-34.00	-14760.77	-79633.21	
Point	0+64.0	4891.65	-17.00	-14765.32	-79649.59	
Centerline	0+64.0	4891.99	0.00	-14769.87	-79665.97	
Rt Shoulder	0+64.0	4892.19	10.00	-14772.55	-79675.61	
Rt Slope Stake	0+64.0					10:1
Lt Slope Stake	0+84.0					4:1
Lt Shoulder	0+84.0	4890.71	-34.00	-14780.04	-79627.86	
Point	0+84.0	4891.05	-17.00	-14784.59	-79644.24	
Centerline	0+84.0	4891.39	0.00	-14789.14	-79660.62	
Rt Shoulder	0+84.0	4891.59	10.00	-14791.82	-79670.25	
Rt Slope Stake	0+84.0					6:1
Lt Slope Stake	0+94.0					4:1
Lt Shoulder	0+94.0	4890.89	-10.00	-14796.10	-79648.30	
Centerline	0+94.0	4891.09	0.00	-14798.78	-79657.94	
Rt Shoulder	0+94.0	4891.29	10.00	-14801.46	-79667.57	
Rt Slope Stake	0+94.0					4:1

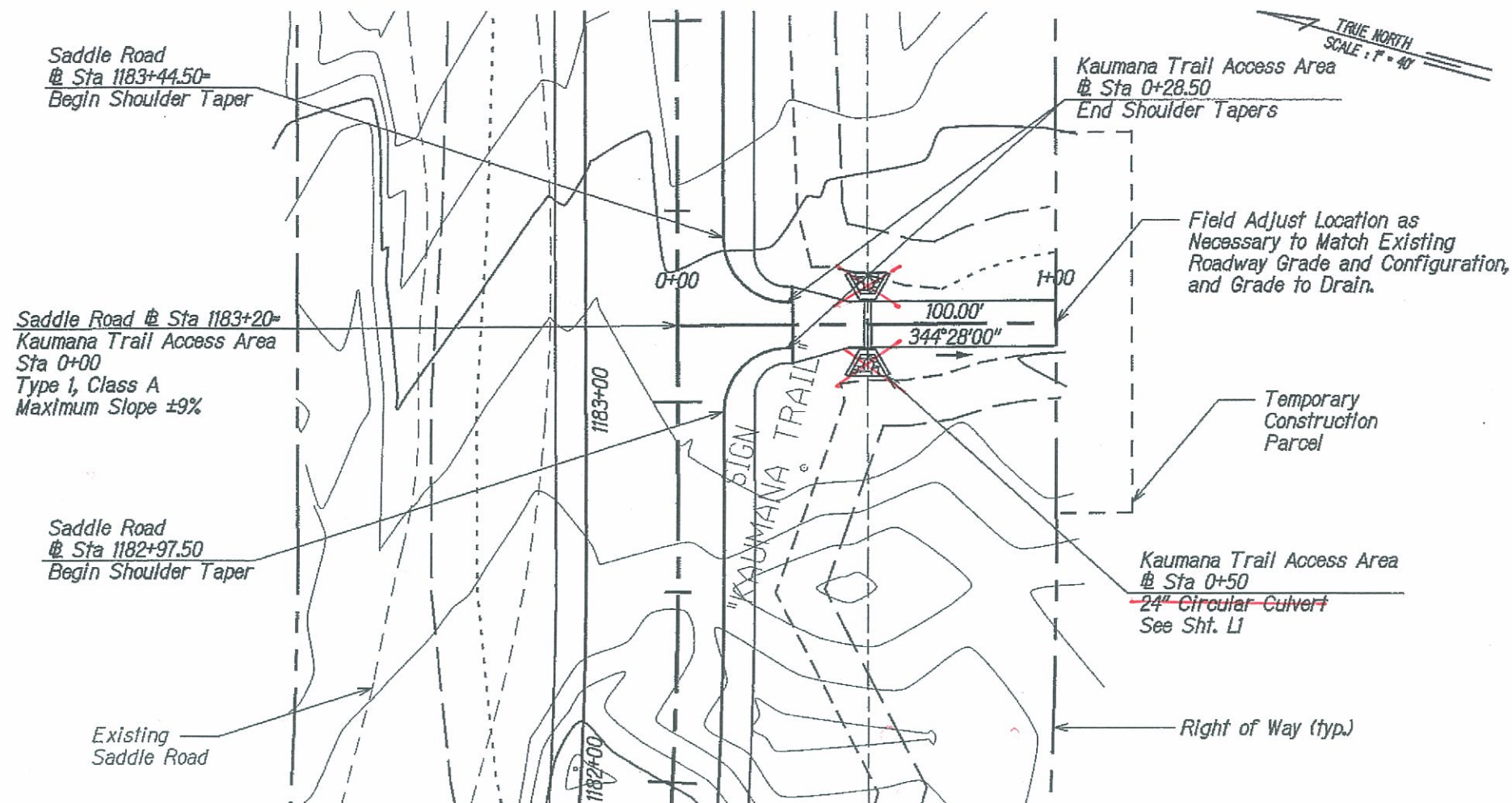
Catch the slopes at the slope ratios shown above.

AS-BUILT E5

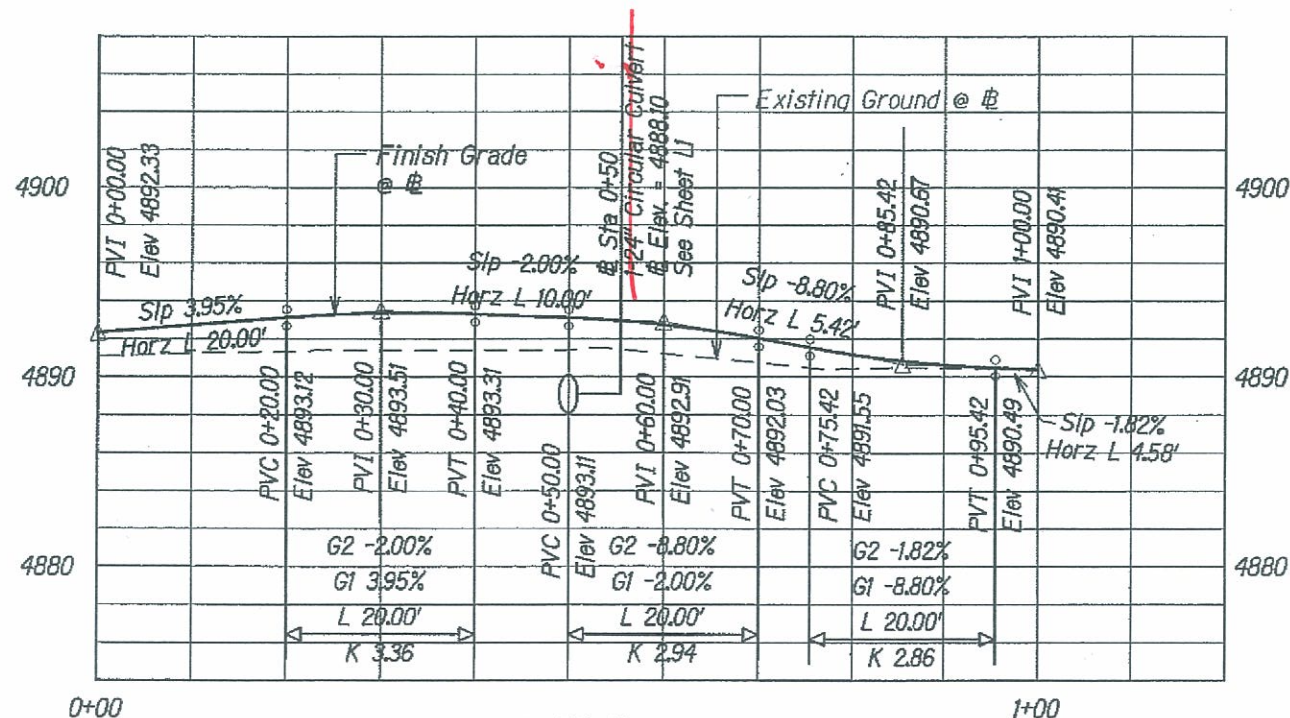
Approach Road and Parking Area
1183+20 RT
Rev. 6/17/2010 RCG



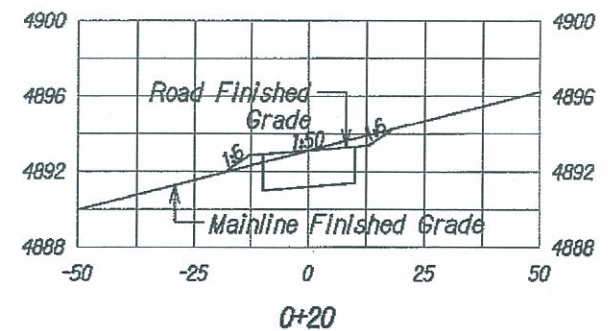
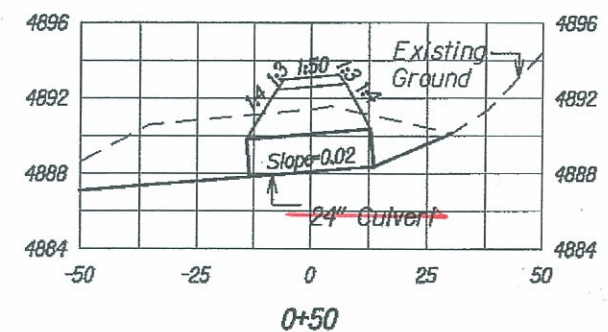
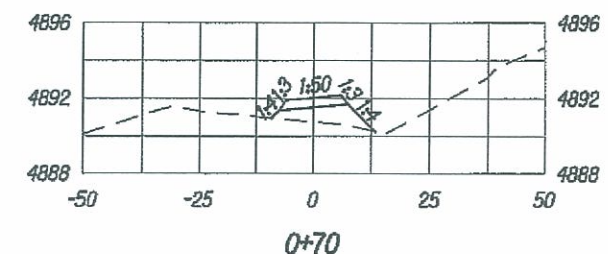
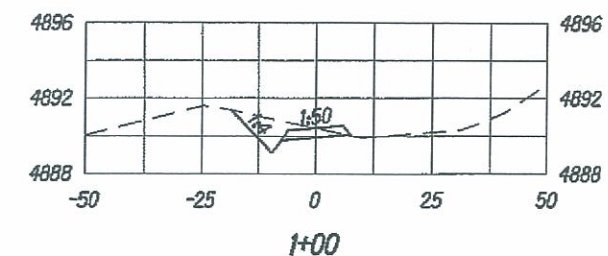
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E5	E20



PLAN
Scale: 1"=40'



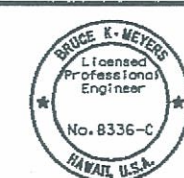
PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 10 CY
Fill: 62 CY



The work was prepared by me or under my supervision and construction of this project will be under my observation.
Expiration Date of License 4/10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

KAUMANA TRAIL ACCESS AREA
@ STA 1183+20

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

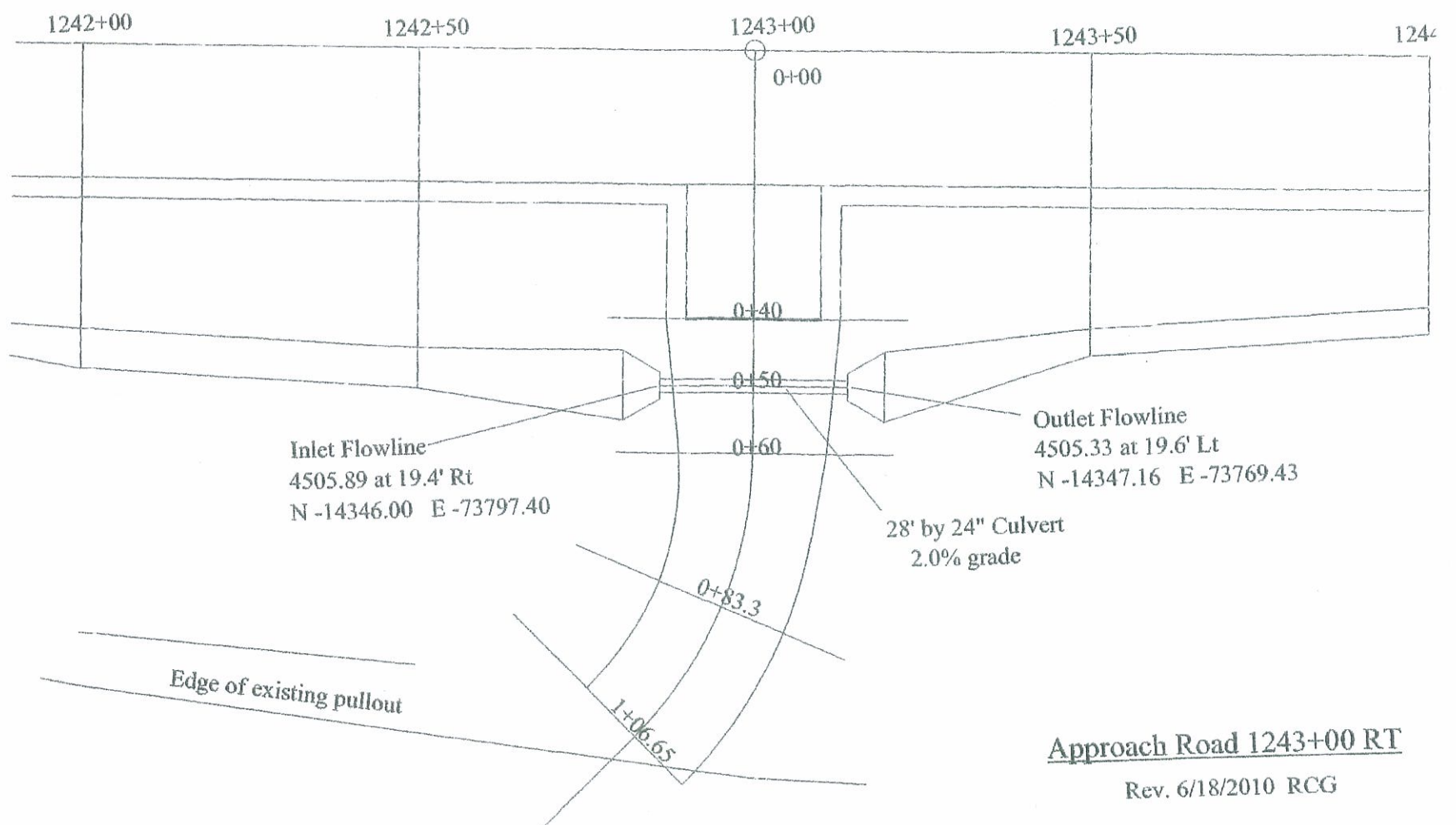
Approach Road: 1243+00 RT
Staking Notes

6/18/2010

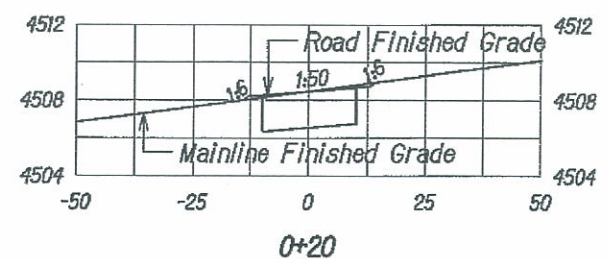
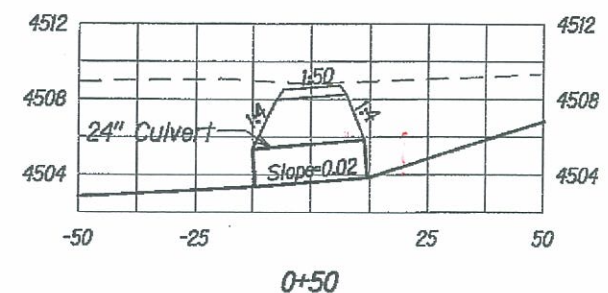
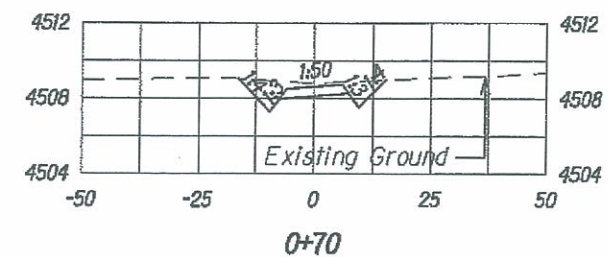
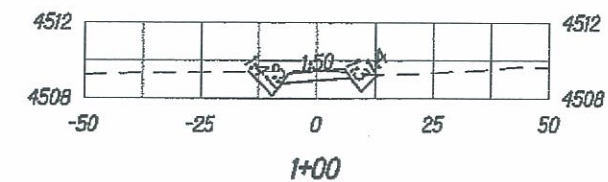
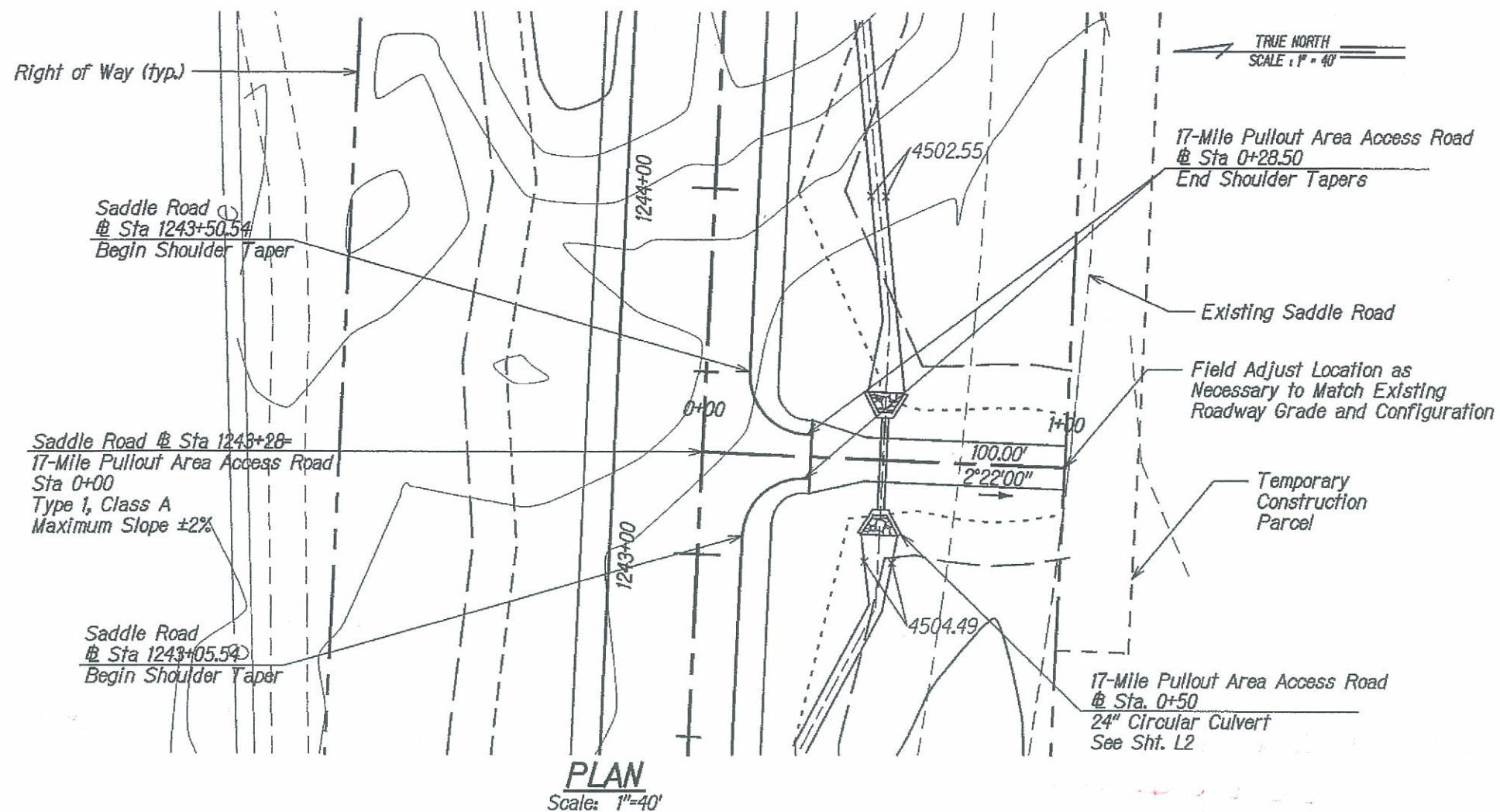
Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
Lt Slope Stake *	0+40.0	4505.83	-23.00	-14337.53	-73760.12	3.3:1
3' Spacing	0+40.0	4508.86	-13.00	-14337.12	-73770.11	
Lt Edge of Pvmt2	0+40.0	4508.96	-10.01	-14337.00	-73773.10	
Lt Edge of Pvmt	0+40.0	4508.04	-10.00	-14337.00	-73773.11	
Centerline	0+40.0	4508.37	0.00	-14336.59	-73783.10	
Rt Edge of Pvmt	0+40.0	4508.70	10.00	-14336.17	-73793.09	
Rt Edge of Pvmt2	0+40.0	4509.62	10.01	-14336.17	-73793.10	
3' Spacing	0+40.0	4509.56	13.00	-14336.05	-73796.09	
Rt Slope Stake *	0+40.0	4506.94	21.80	-1435.68	-73804.90	3.3:1
End pf pavement						
The following elevations are to finished grade:						
Lt Outlet Apron	0+50.0	4505.22	-19.60	-14347.39	-73763.93	
Lt Shoulder	0+50.0	4509.01	-12.00	-14347.07	-73771.52	
Centerline	0+50.0	4509.29	0.00	-14346.58	-73783.51	
Rt Shoulder	0+50.0	4509.57	12.00	-14346.08	-73795.50	
Rt Inlet Apron	0+50.0	4506.00	19.40	-14345.78	-73802.90	
Lt Slope Stake	0+60.0					4:1
Lt Ditch	0+60.0	4505.70	-21.00	-14357.44	-73762.94	
Lt Shoulder	0+60.0	4509.05	-11.00	-14357.02	-73772.94	
Centerline	0+60.0	4509.27	0.00	-14356.57	-73783.93	
Rt Shoulder	0+60.0	4509.49	11.00	-14356.11	-73794.92	
Rt Ditch *	0+60.0	4506.39	20.30	-14355.73	-73804.21	
Lt Slope Stake	0+83.3					10:1
Lt Ditch	0+83.3	4508.64	-20.00	-14387.42	-73771.15	
Lt Shoulder	0+83.3	4509.14	-10.00	-14383.25	-73780.24	
Centerline	0+83.3	4509.24	0.00	-14379.08	-73789.33	
Rt Shoulder	0+83.3	4509.34	10.00	-14374.92	-73798.42	
Rt Ditch *	0+83.3	4507.38	23.40	-14369.33	-73810.60	
Lt Slope Stake	1+06.65					20:1
Lt Shoulder	1+06.65	4509.20	-10.00	-14405.21	-73796.06	
Centerline	1+06.65	4509.20	0.00	-14397.91	-73802.89	
Rt Shoulder	1+06.65	4509.20	10.00	-14390.61	-73809.72	
Rt Ditch *	1+06.65	4508.35	25.50	-14379.28	-73820.31	

* Catches to mainline slope.

AS-BUILT E6



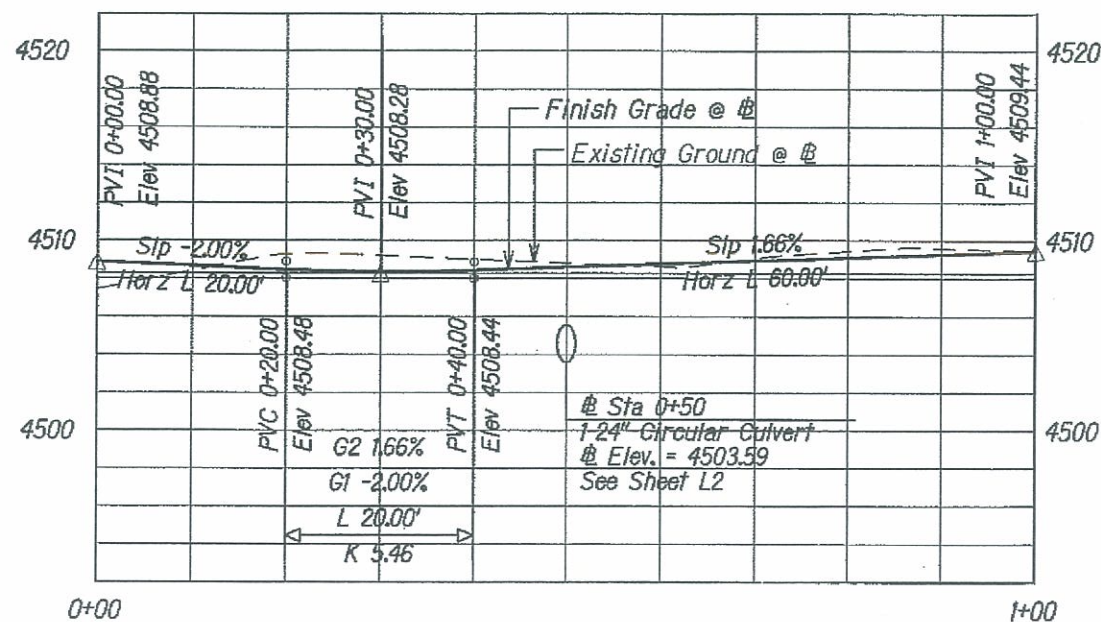
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E6	E20



CROSS SECTIONS

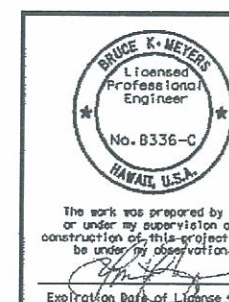
Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 85 CY
Fill: 0 CY



PROFILE

Scale: Horiz. 1"=20'
Vert. 1"=10'



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**17-MILE PULLOUT AREA
ACCESS ROAD
@ STA 1243+28**

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

Approach Road: 1265+00 RT

6/25/2010

Staking Notes

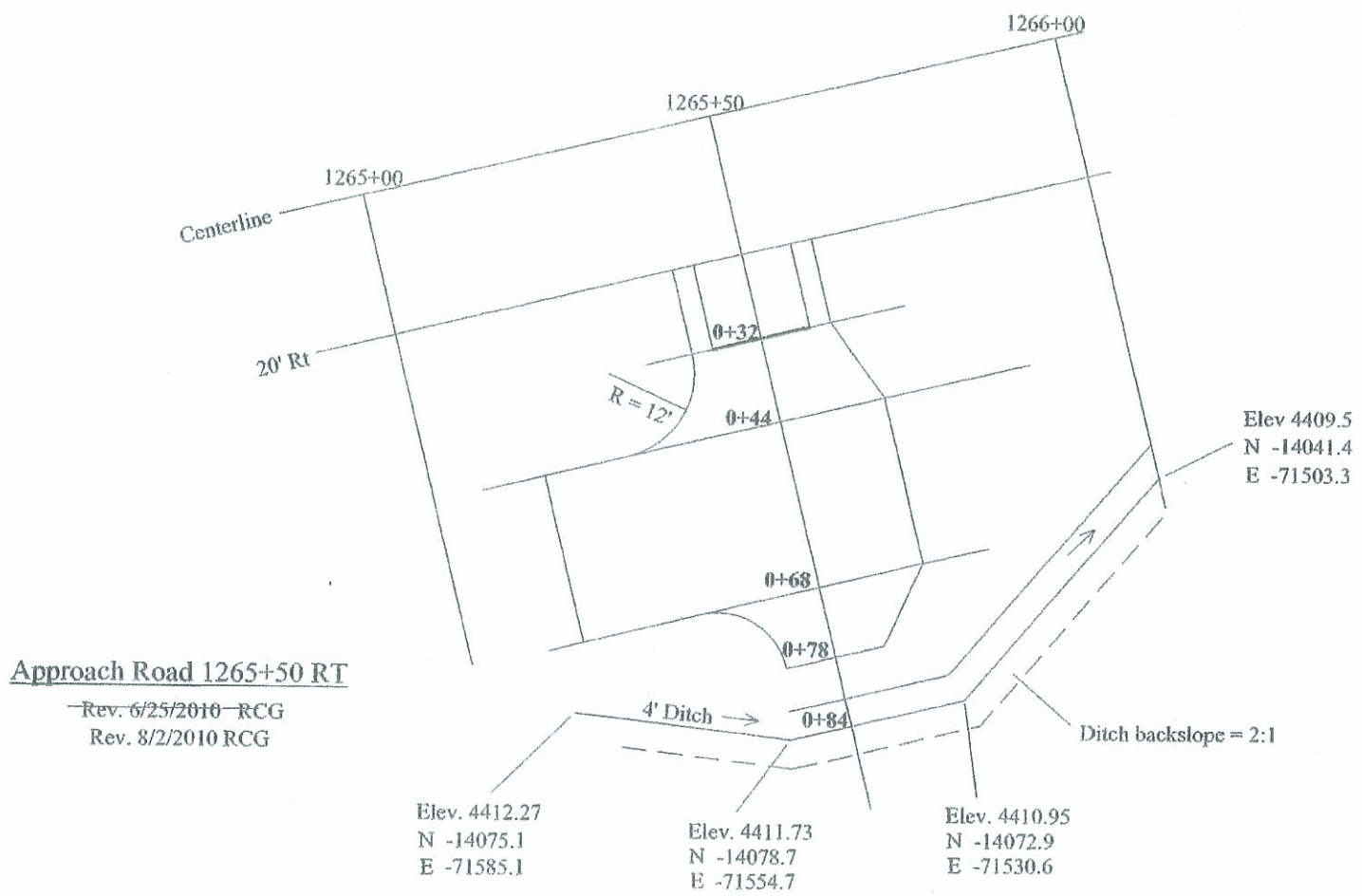
(No culvert needed)

Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
Catch to mainline	0+32.00	4412.29	-24.05	-14028.30	-71584.52	5 :1
3' Spacing	0+32.00	4415.10	-10.00	-14031.59	-71598.18	
Lt Edge of Pvm2	0+32.00	4415.16	-7.01	-14032.30	-71601.08	
Lt Edge of Pvm	0+32.00	4414.24	-7.00	-14032.30	-71601.09	
Centerline	0+32.00	4414.52	0.00	-14033.94	-71607.90	
Rt Edge of Pvm	0+32.00	4414.80	7.00	-14035.58	-71614.70	
Rt Edge of Pvm2	0+32.00	4415.72	7.01	-14035.58	-71614.71	
3' Spacing	0+32.00	4415.66	10.00	-14036.28	-71617.62	
Catch to mainline	0+32.00	4414.62	16.24	-14037.74	-71623.69	6 :1
The following elevations are to finished grade:						
Lt Slope Stake	0+44.00	4409.90	-40.00	-14036.23	-71566.20	5 :1
Lt Shoulder	0+44.00	4414.90	-15.00	-14042.09	-71590.50	
Centerline	0+44.00	4415.20	0.00	-14045.60	-71605.09	
Point	0+44.00	4415.54	17.00	-14049.59	-71621.61	
Rt Shoulder	0+44.00	4415.88	34.00	-14053.58	-71638.14	
Rt Slope Stake	0+44.00	4414.36	46.16	-14056.42	-71649.96	8 :1
Lt Slope Stake	0+62.00	4410.74	-34.00	-14055.15	-71567.81	5 :1
Lt Shoulder	0+62.00	4414.54	-15.00	-14059.59	-71586.29	
Centerline	0+62.00	4414.84	0.00	-14063.10	-71600.87	
Point	0+62.00	4415.18	17.00	-14067.08	-71617.40	
Rt Shoulder	0+62.00	4415.52	34.00	-14071.06	-71633.93	
Rt Slope Stake	0+62.00	4414.22	41.81	-14072.89	-71641.52	6 :1
Lt Slope Stake	0+80.00	4412.00	-25.90	-14074.54	-71571.48	5 :1
Lt Shoulder	0+80.00	4414.18	-15.00	-14077.09	-71582.08	
Centerline	0+80.00	4414.48	0.00	-14080.60	-71596.66	
Point	0+80.00	4414.82	17.00	-14084.58	-71613.19	
Rt Shoulder	0+80.00	4415.16	34.00	-14088.56	-71629.71	
Rt Slope Stake	0+80.00	4413.87	46.23	-14091.42	-71641.60	9.5 :1
Ditch line	0+86.00	4411.91	-28.90	-14079.67	-71567.16	
Ditch line	0+86.00	4412.68	-15.00	-14082.93	-71580.67	
Ditch line	0+86.00	4412.98	0.00	-14086.44	-71595.25	
Ditch line	0+86.00	4413.32	17.00	-14090.42	-71611.78	
Ditch line	0+86.00	4413.81	40.00	-14095.80	-71634.14	
Ditch line	0+90.00	4411.91	-30.89	-14083.10	-71564.29	
Ditch line	0+90.00	4412.98	0.00	-14090.33	-71594.32	
Ditch line	0+90.00	4413.81	41.61	-14100.06	-71634.77	

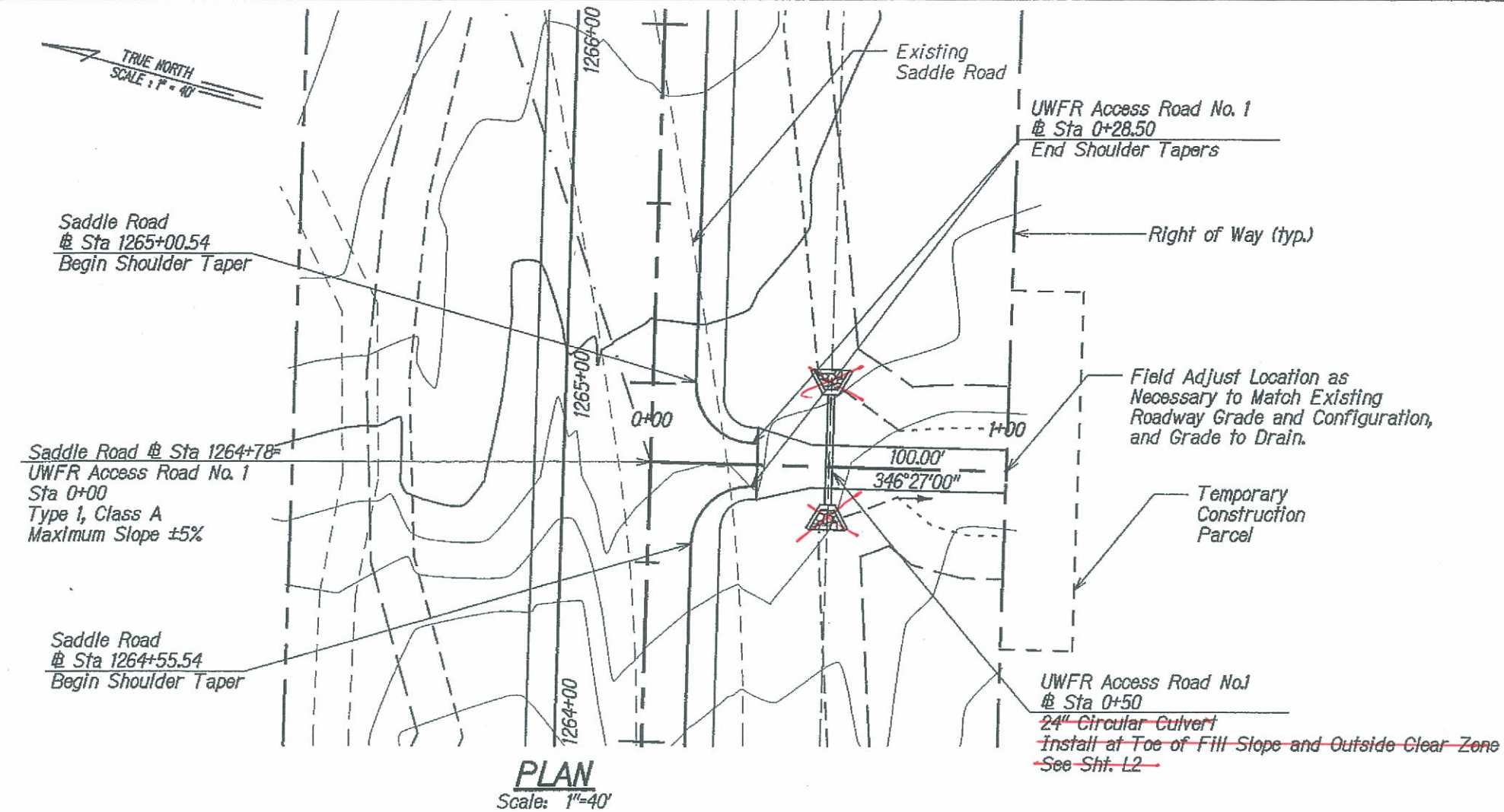
Slope stakes shown are estimated.

Catch from ditch line at 0+90 to original ground at 2:1 slope ratio (see drawing).

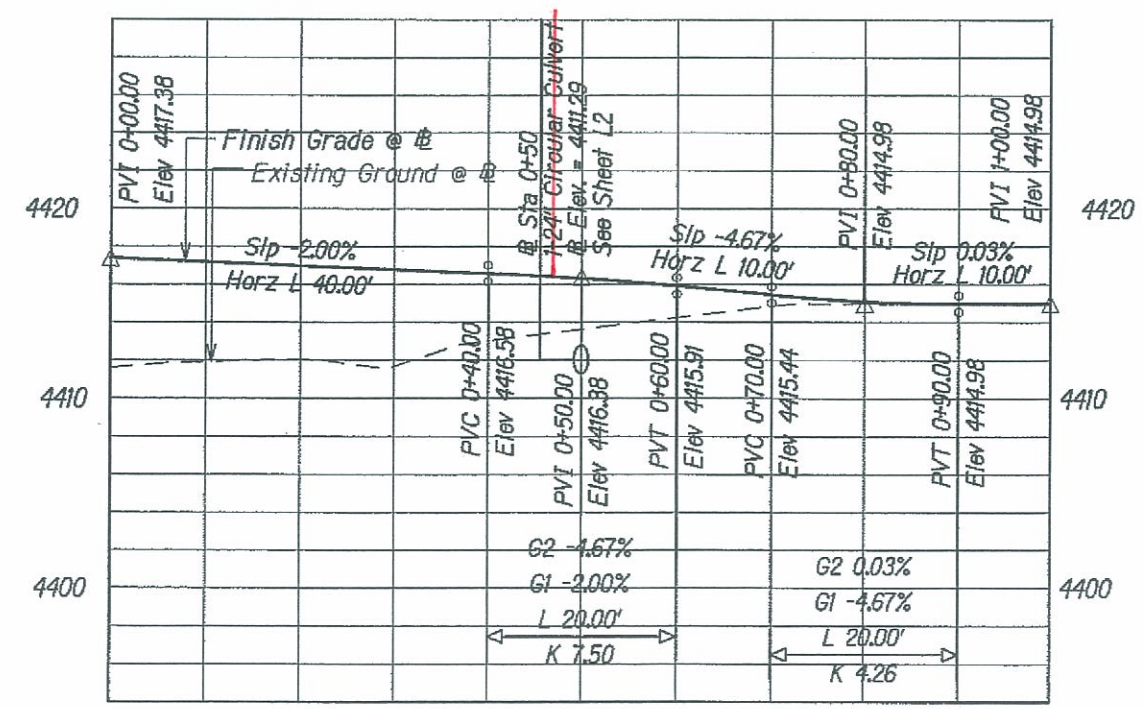
AS-BUILT E7



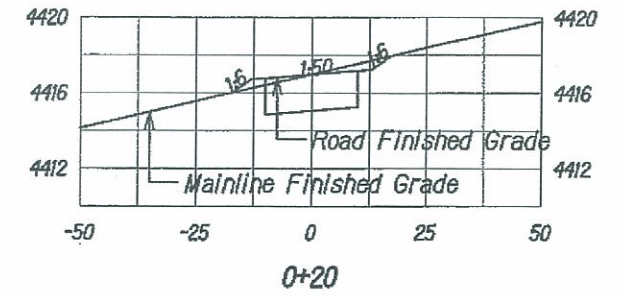
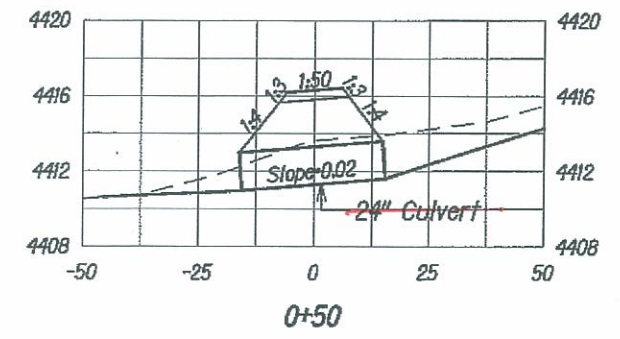
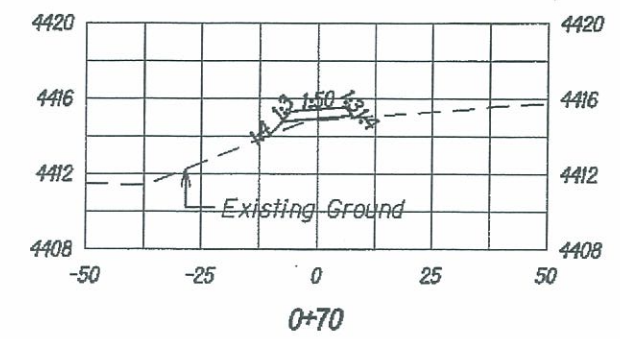
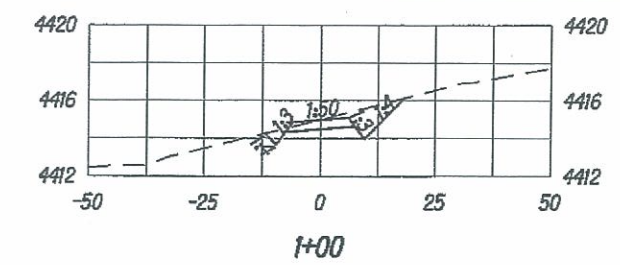
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E7	E20



PLAN
Scale: 1"=40'



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS
Scale: Horiz. 1"=40'
Vert. 1"=10'
Earthwork Quantities:
Cut: 24 CY
Fill: 128 CY

The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 5/19.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**UPPER WAIAKEA FOREST
RESERVE ACCESS ROAD NO. 1**

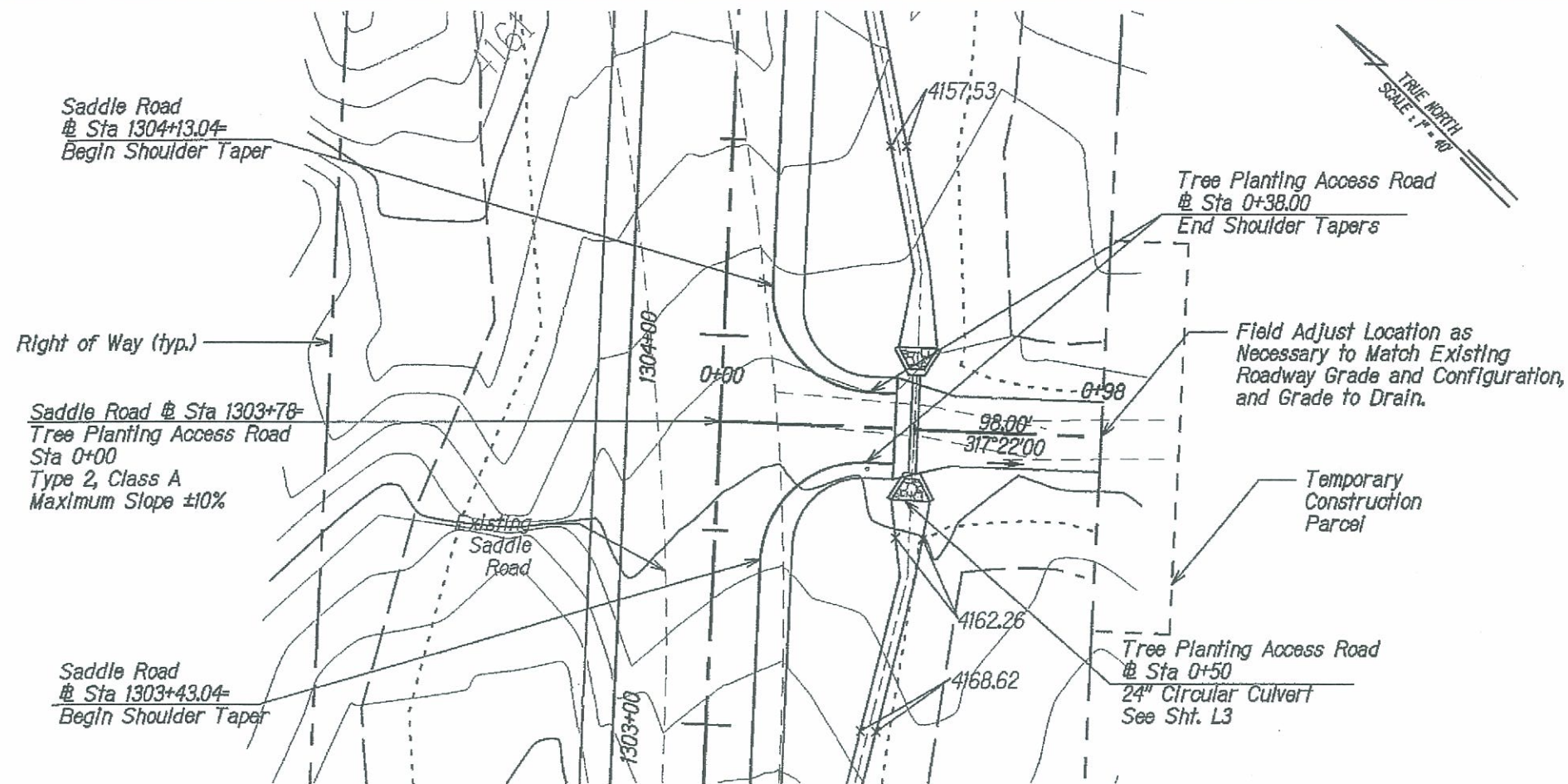
@ STA 1264+78

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

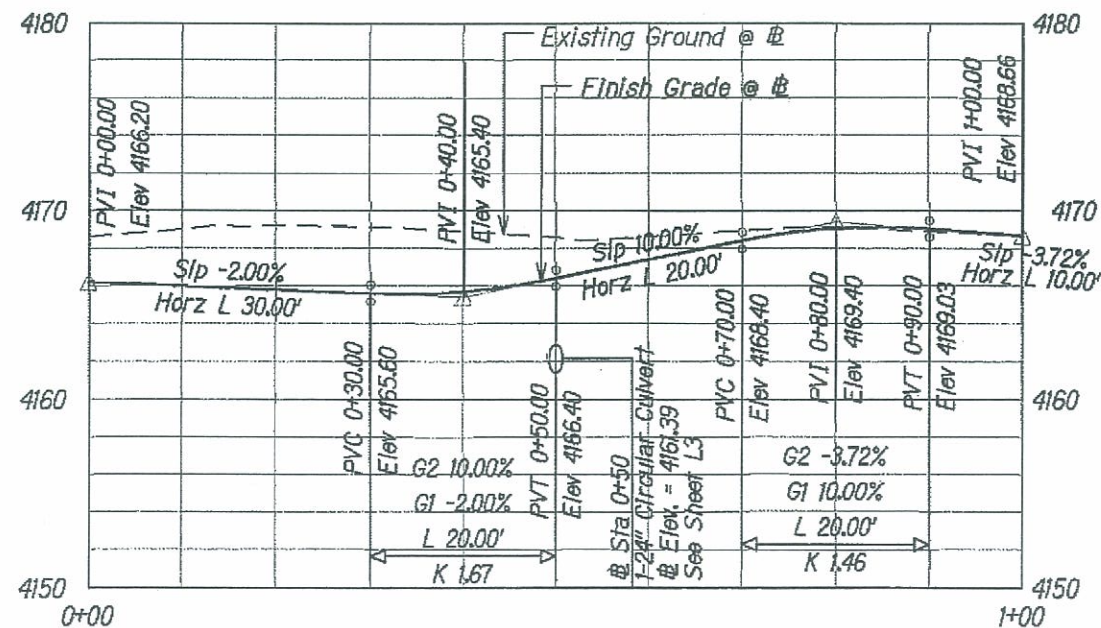
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PLAN
Scale: 1"=40'

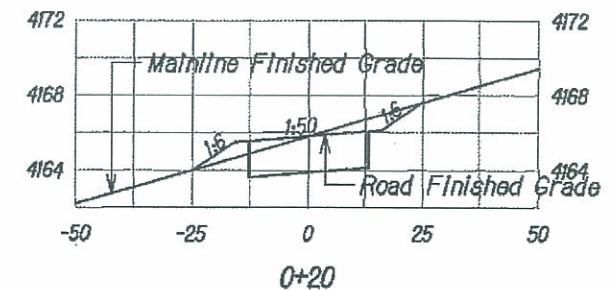
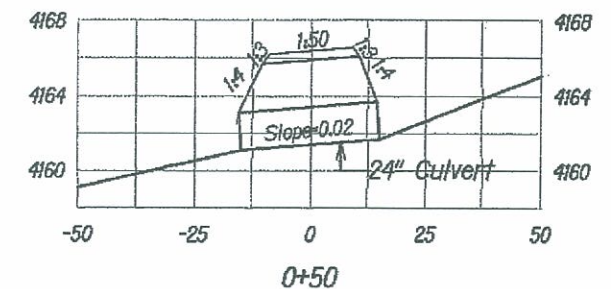
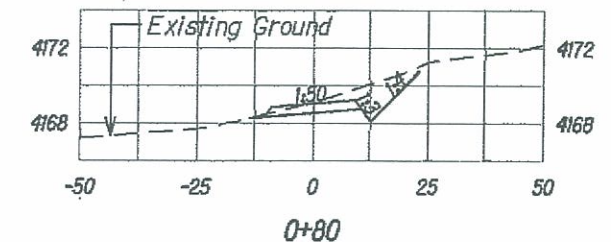
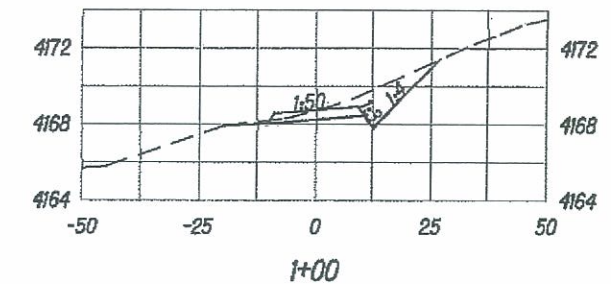
**Install 16-foot metal gate on road ±200' outside of ROW
Per Item No. 61902-1400



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'

REVISED 07/14/09
AMENDMENT A002

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TJ 200(2)	E8	E20



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 204 CY
Fill: 2 CY



The work was prepared by me or under my supervision and construction of this project will be under my observation.
Expiration Date of License 4/12

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

TREE PLANTING ACCESS ROAD @ STA 1303+78

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

Approach Road: 1309+78 LT

Staking Notes - All Elevations to Subgrade

6/15/2010

Description	Station	Elevation	Offset	Northing	Easting
3' Spacing	0+44.0	4129.48	-15.00	-11608.49	-67923.48
Lt Edge Pvmt2	0+44.0	4129.54	-12.01	-11606.70	-67921.08
Lt Edge Pvmt	0+44.0	4128.62	-12.00	-11606.69	-67921.07
Centerline	0+44.0	4128.10	0.00	-11599.51	-67911.46
Rt Edge Pvmt	0+44.0	4127.59	12.00	-11592.32	-67901.86
Rt Edge Pvmt2	0+44.0	4128.50	12.01	-11592.31	-67901.85
3' Spacing	0+44.0	4128.37	15.00	-11590.52	-67899.45
End of 11-inch structural section					
Begin 2-inches of pavement on subgrade surface from 0+44 ahead					
Lt Ditch Bottom	0+62.0	4127.27	-21.50	-11597.97	-67939.46
4' Spacing	0+62.0	4130.55	-14.00	-11593.48	-67933.46
Lt Edge Pvmt2	0+62.0	4130.63	-10.01	-11591.09	-67930.26
Lt Edge Pvmt	0+62.0	4130.46	-10.00	-11591.08	-67930.25
Centerline	0+62.0	4130.16	0.00	-11585.09	-67922.25
Rt Edge Pvmt	0+62.0	4129.86	10.00	-11579.10	-67914.24
Rt Edge Pvmt2	0+62.0	4130.03	10.01	-11579.10	-67914.23
4' Spacing	0+62.0	4129.87	14.00	-11576.71	-67911.04
Rt Ditch Bottom	0+62.0	4126.12	21.50	-11572.21	-67905.03
Lt Slope Stake	0+90.0	4138.10	-30.48	-11580.92	-67963.42
Lt Ditch Bottom	0+90.0	4131.36	-17.00	-11572.85	-67952.63
2' Shoulder	0+90.0	4132.86	-11.00	-11569.26	-67947.83
Lt Edge Pvmt2	0+90.0	4132.90	-9.01	-11568.07	-67946.23
Lt Edge Pvmt	0+90.0	4132.73	-9.00	-11568.06	-67946.23
Centerline	0+90.0	4132.55	0.00	-11562.67	-67939.02
Rt Edge Pvmt	0+90.0	4132.37	9.00	-11557.28	-67931.81
Rt Edge Pvmt2	0+90.0	4132.54	9.01	-11557.27	-67931.80
2' Shoulder	0+90.0	4132.50	11.00	-11556.08	-67930.21
Rt Ditch Bottom	0+90.0	4131.00	17.00	-11552.49	-67925.40
Rt Slope Stake	0+90.0	4138.10	30.48	-11544.42	-67914.60
Lt Slope Stake	1+20.0	4140.67	-31.99	-11555.43	-67983.75
Lt Ditch Bottom	1+20.0	4134.67	-14.00	-11545.86	-67968.52
2' Shoulder	1+20.0	4135.42	-11.00	-11544.27	-67965.98
Lt Edge Pvmt2	1+20.0	4135.46	-9.01	-11543.21	-67964.29
Lt Edge Pvmt	1+20.0	4135.29	-9.00	-11543.20	-67964.28
Centerline	1+20.0	4135.11	0.00	-11538.42	-67956.66
Rt Edge Pvmt	1+20.0	4134.93	9.00	-11533.63	-67949.04
Rt Edge Pvmt2	1+20.0	4135.10	9.01	-11533.63	-67949.03
2' Shoulder	1+20.0	4135.06	11.00	-11532.57	-67947.35
Rt Ditch Bottom	1+20.0	4134.31	14.00	-11530.97	-67944.81
Rt Slope Stake	1+20.0	4139.73	30.26	-11522.32	-67931.04

2:1

2:1

3:1

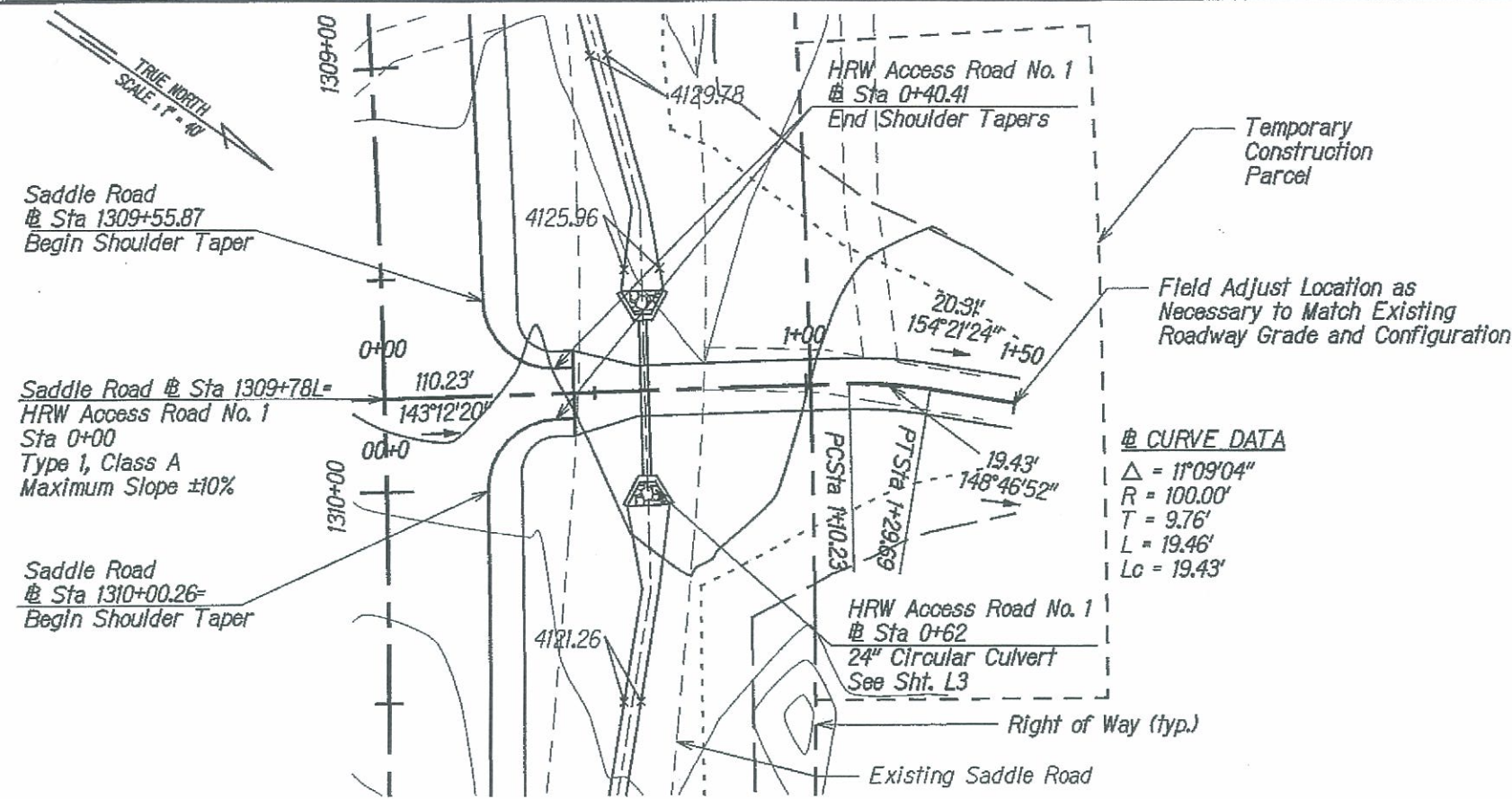
3:1

Lt Slope Stake	1+50.0	4139.67	-23.80	-11518.57	-67991.95	4:1
Lt Ditch Bottom	1+50.0	4137.22	-14.00	-11515.57	-67982.62	
2' Shoulder	1+50.0	4137.97	-11.00	-11514.66	-67979.77	
Lt Edge Pvmt2	1+50.0	4138.01	-9.01	-11514.05	-67977.87	
Lt Edge Pvmt	1+50.0	4137.84	-9.00	-11514.04	-67977.86	
Centerline	1+50.0	4137.66	0.00	-11511.29	-67969.29	
Rt Edge Pvmt	1+50.0	4137.48	9.00	-11508.54	-67960.72	
Rt Edge Pvmt2	1+50.0	4137.65	9.01	-11508.54	-67960.71	
2' Shoulder	1+50.0	4137.61	11.00	-11507.93	-67958.82	
Rt Ditch Bottom	1+50.0	4136.86	14.00	-11507.01	-67955.96	
Rt Slope Stake	1+50.0	4139.10	22.98	-11504.27	-67947.42	4:1
Lt Ditch Bottom	1+75.6	4138.01	-14.00	-11487.63	-67988.40	
2' Shoulder	1+75.6	4138.76	-11.00	-11487.34	-67985.42	
Lt Edge Pvmt2	1+75.6	4138.80	-9.01	-11487.15	-67983.44	
Lt Edge Pvmt	1+75.6	4138.63	-9.00	-11487.15	-67983.43	
Centerline	1+75.6	4138.45	0.00	-11486.27	-67974.47	
Rt Edge Pvmt	1+75.6	4138.27	9.00	-11485.40	-67965.51	
Rt Edge Pvmt2	1+75.6	4138.44	9.01	-11485.40	-67965.50	
2' Shoulder	1+75.6	4138.40	11.00	-11485.20	-67963.52	
Rt Ditch Bottom	1+75.6	4137.65	14.00	-11484.91	-67960.54	
Match to existing ground						

Note: Slope stakes from 0+90 to 1+50 are estimated. Catch the slopes and report the actual slope stake data to FHWA.

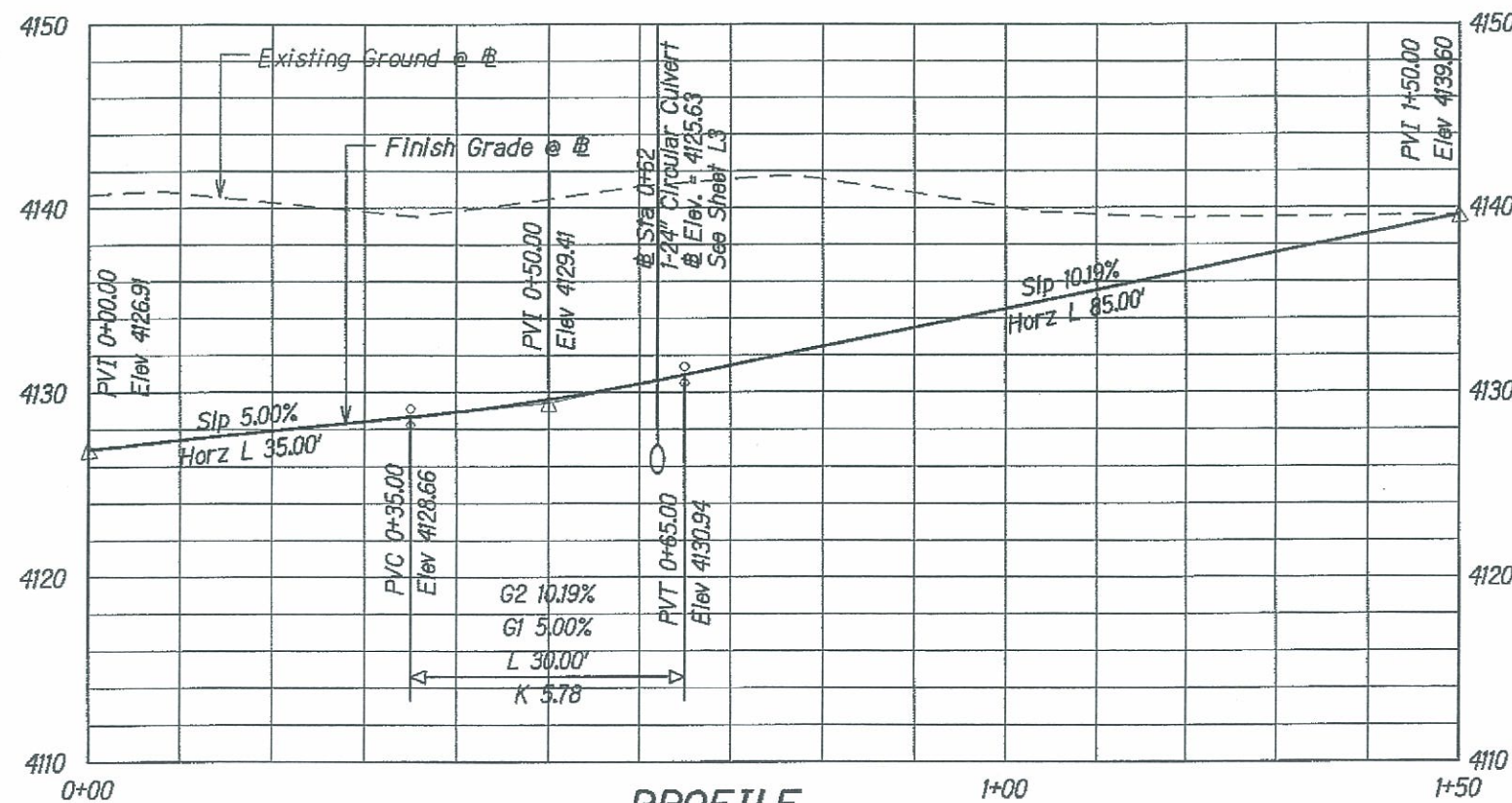
AS-BUILT E9

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E9	E20

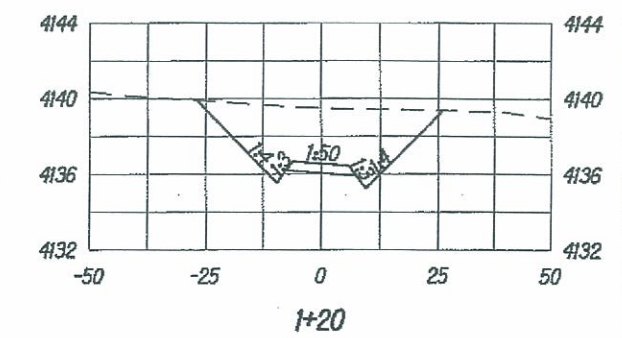
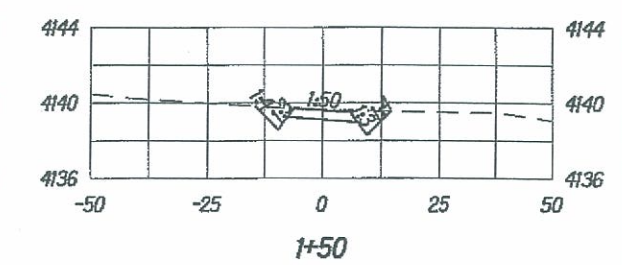
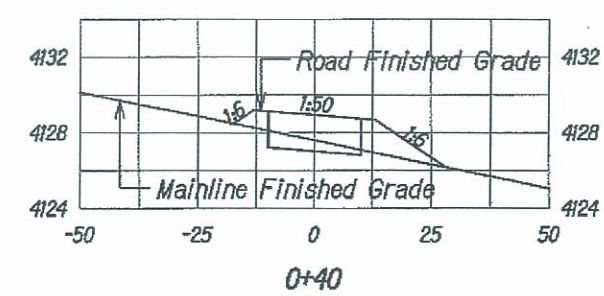
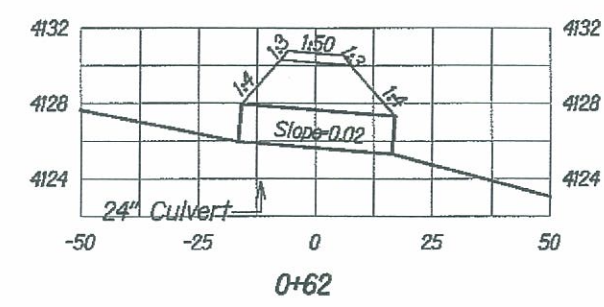
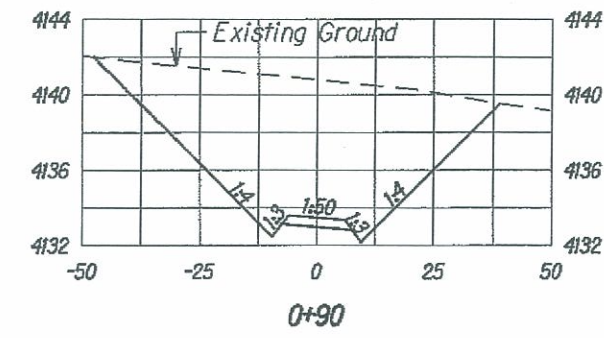


PLAN
Scale: 1"=40'

CURVE DATA
 $\Delta = 11^\circ 09' 04''$
 $R = 100.00'$
 $T = 9.76'$
 $L = 19.46'$
 $Lc = 19.43'$



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS
Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 1351 CY
Fill: 9 CY

BRUCE K. MEYERS
Licensed Professional Engineer
No. 8336-C
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 4/18

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 1
@ STA 1309+78L

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

Station 0+30.00 Surface SUBGRDE														
-11659.9382449 N -67868.7015131 E Azimuth = 143°12'20.0"														
FC					SSL					SSR				
Elev					4124.487	4124.505	4124.585	4124.705	4124.825	4124.905	4124.923			
Off					-10.936	-10.001	-6.0	0.0	6.0	10.001	10.899			
Slope					-50.00:1	-50.00:1	-50.00:1		50.00:1	50.00:1	50.00:1			

Station 0+45.00 Surface SUBGRDE														
-11671.9500867 N -67859.7173238 E Azimuth = 143°12'20.0"														
FC						PSS				PSS				
Elev						4126.148	4126.148	4126.268	4126.388	4126.388				
Off						-7.5	-6.0	0.0	6.0	7.5				
Slope						horz	-2.00%		2.00%	horz				

Station 0+50.00 Surface SUBGRDE														
-11675.9540339 N -67856.722594 E Azimuth = 143°12'20.0"														
FC						PSS				PSS				
Elev						4126.657	4126.657	4126.777	4126.897	4126.897				
Off						-7.5	-6.0	0.0	6.0	7.5				
Slope						horz	-2.00%		2.00%	horz				

Station 0+75.00 Surface SUBGRDE														
-11695.9737702 N -67841.7489451 E Azimuth = 143°12'20.0"														
FC						PSS				PSS				
Elev						4129.199	4129.199	4129.319	4129.439	4129.439				
Off						-7.5	-6.0	0.0	6.0	7.5				
Slope						horz	-2.00%		2.00%	horz				

Station 0+83.66 Surface SUBGRDE														
-11702.9086067 N -67836.562073 E Azimuth = 143°11'58.7"														
FC						PSS				PSS				
Elev						4130.08	4130.08	4130.2	4130.32	4130.32				
Off						-7.5	-6.0	0.0	6.0	7.5				
Slope						horz	-2.00%		2.00%	horz				

Station 1+00.00 Surface SUBGRDE														
-11713.6600521 N -67824.4084823 E Azimuth = 119°47'39.5"														
FC						PSS				PSS				
Elev						4131.741	4131.741	4131.861	4131.981	4131.981				
Off						-7.5	-6.0	0.0	6.0	7.5				
Slope						horz	-2.00%		2.00%	horz				

Station 1+11.28 Surface SUBGRDE															
-11717.8198358 N -67813.963693 E Azimuth = 103°38'53.0"															
FC						PSS				PSS					
Elev						4132.888	4132.888	4133.008	4133.128	4133.128					
Off						-7.5	-6.0	0.0	6.0	7.5					
Slope						horz	-2.00%		2.00%	horz					

Station 1+25.00 Surface SUBGRDE															
-11721.0571691 N -67800.6310986 E Azimuth = 103°38'53.0"															
FC						PSS				PSS	PDC				
Elev						4134.283	4134.283	4134.403	4134.523	4134.523	4134.523				
Off						-7.5	-6.0	0.0	6.0	7.5	7.5				
Slope						horz	-2.00%		2.00%	horz	vert				

Station 1+50.00 Surface SUBGRDE															
-11726.9561001692 N -67776.3370126233 E Azimuth = 103°38'53.0"															
FC						PSS				PSS					
Elev						4136.826	4136.826	4136.946	4137.066	4137.066					
Off						-7.5	-6.0	0.0	6.0	7.5					
Slope						horz	-2.00%		2.00%	horz					

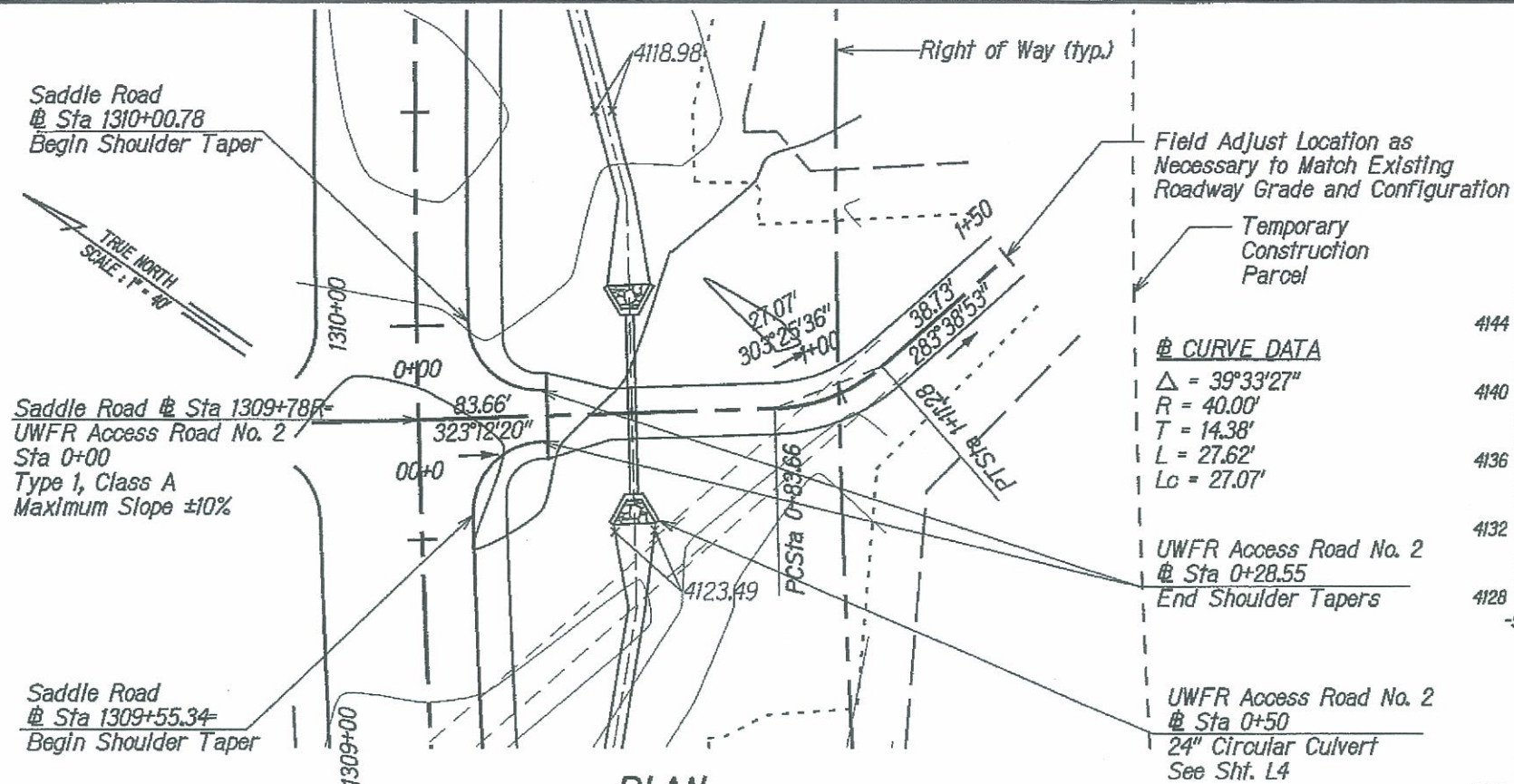
Station 1+75.00 Surface SUBGRDE															
-11732.8550311912 N -67752.0429266599 E Azimuth = 103°38'53.0"															
FC						PSS				PSS					
Elev						4139.368	4139.368	4139.488	4139.608	4139.608					
Off						-7.5	-6.0	0.0	6.0	7.5					
Slope						horz	-2.00%		2.00%	horz					

Station 2+00.00 Surface SUBGRDE															
-11738.7539622133 N -67727.7488406965 E Azimuth = 103°38'53.0"															
FC						PSS				PSS					
Elev						4140.893	4140.893	4141.013	4141.133	4141.133					
Off						-7.5	-6.0	0.0	6.0	7.5					
Slope						horz	-2.00%		2.00%	horz					

***** End of Report *****

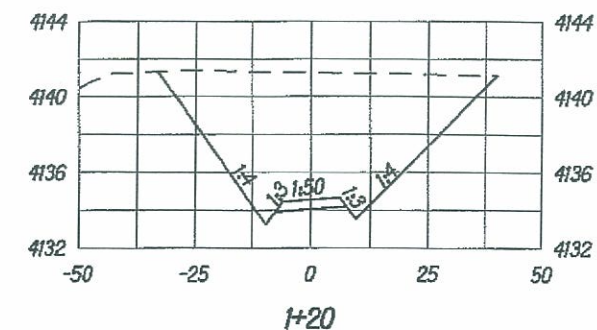
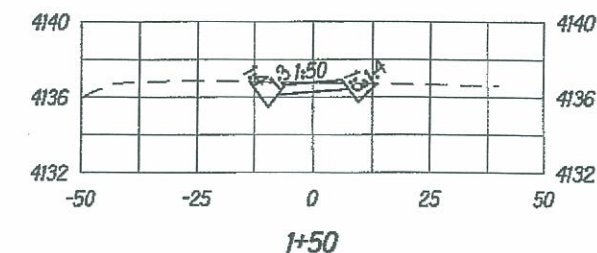
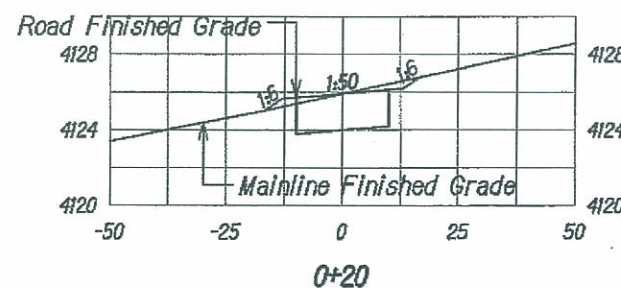
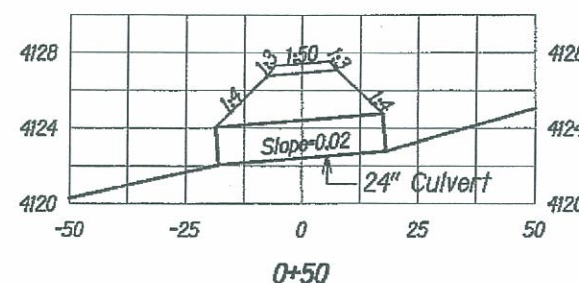
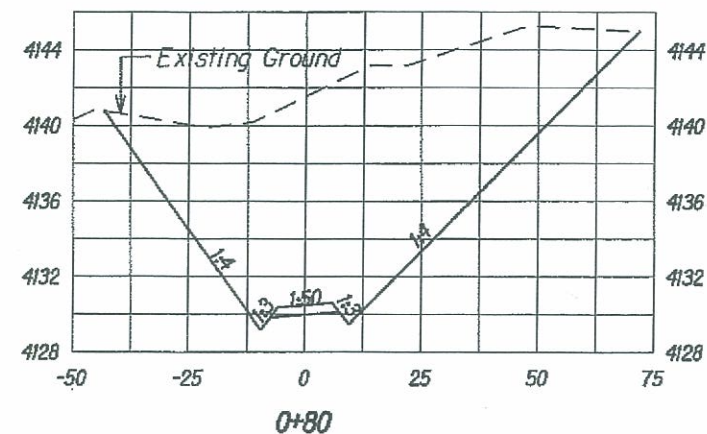
AS-BUILT E10

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E10	E20



CURVE DATA

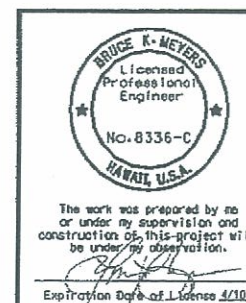
$\Delta = 39^\circ 33' 27''$
 $R = 40.00'$
 $T = 14.38'$
 $L = 27.62'$
 $L_c = 27.07'$



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 2521 CY
Fill: 0 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

UPPER WAIAKEA FOREST RESERVE
ACCESS ROAD NO. 2
@ STA 1309+78R

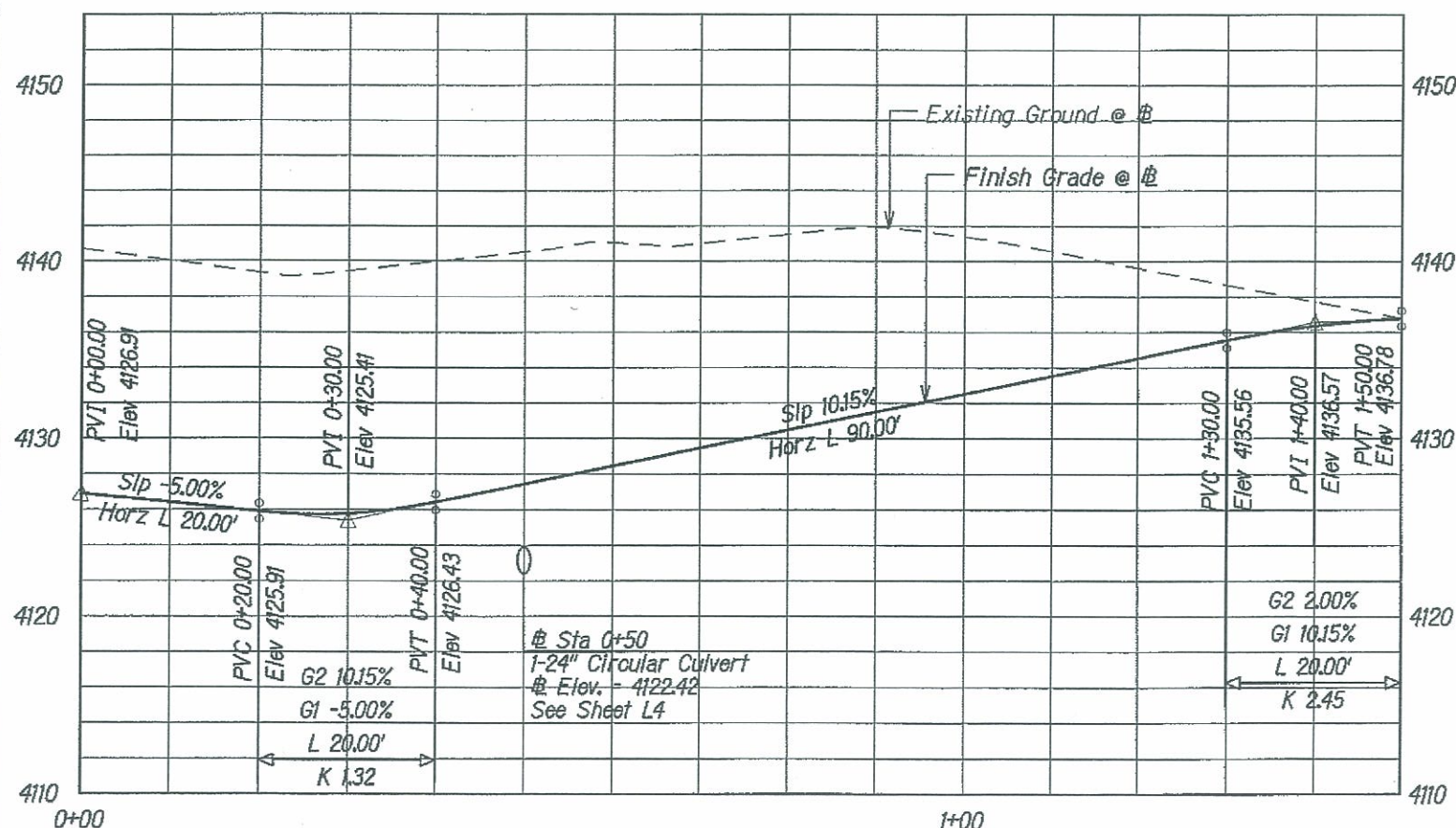
Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

PROFILE

Scale: Horiz. 1"=20'
Vert. 1"=10'



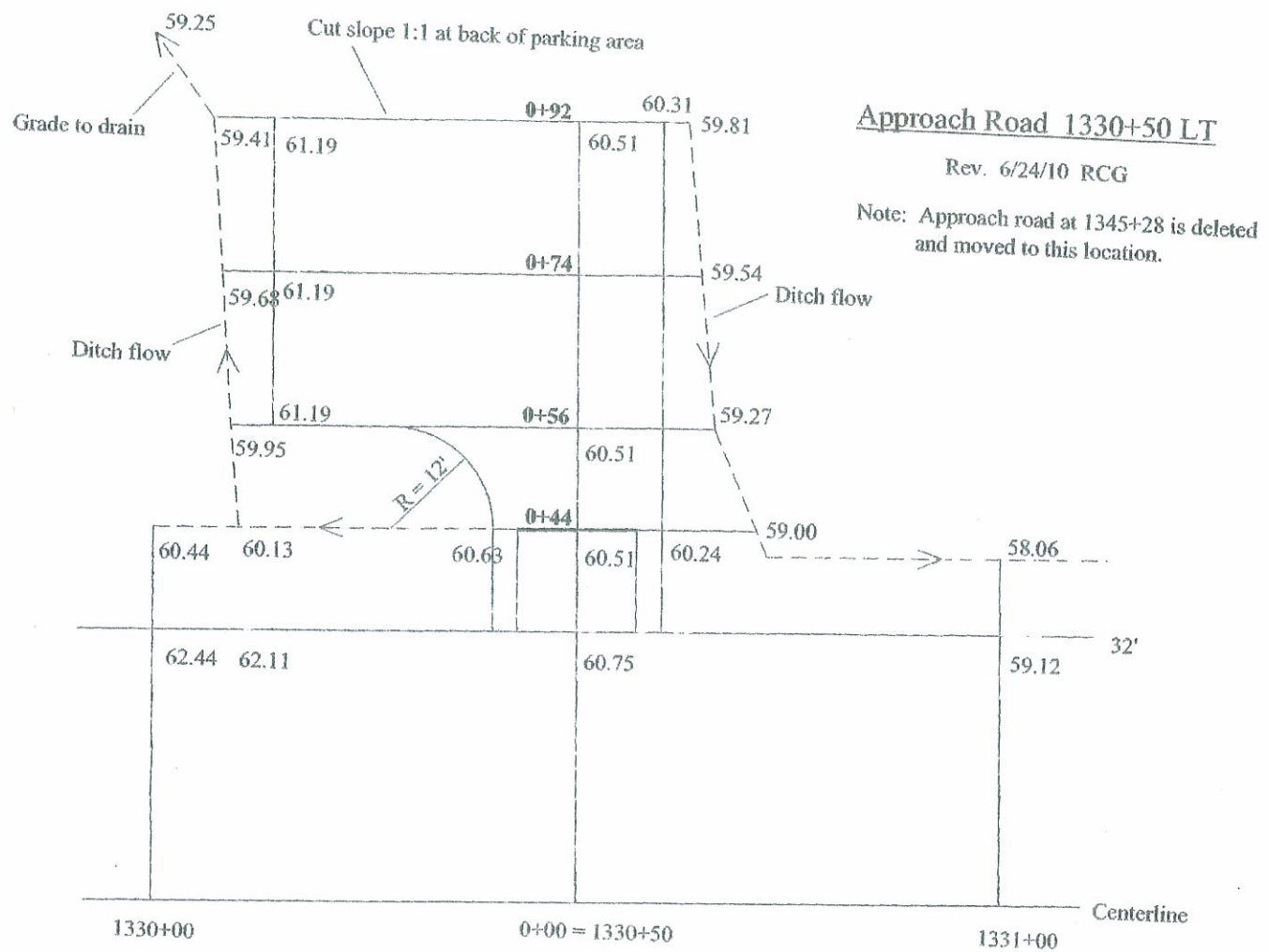
Approach Road: 1330+50 LT (Replaces 1345+28 LT)
Staking Notes (No culvert needed)

6/24/2010

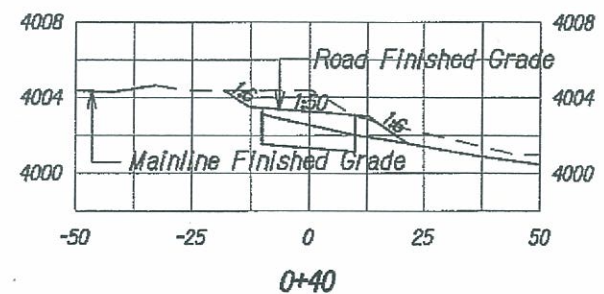
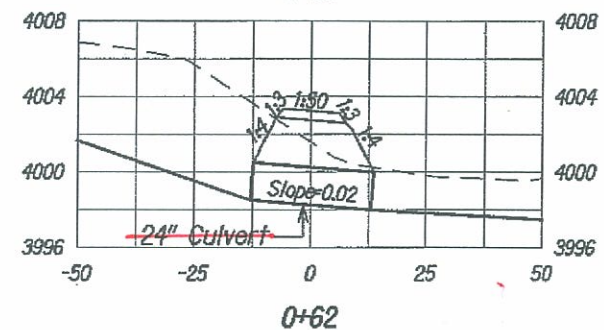
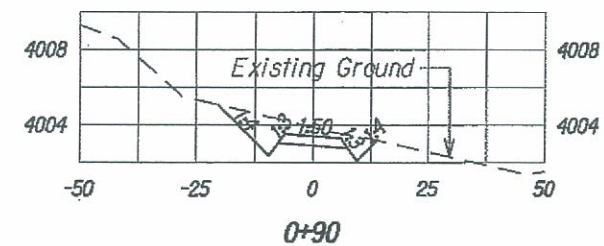
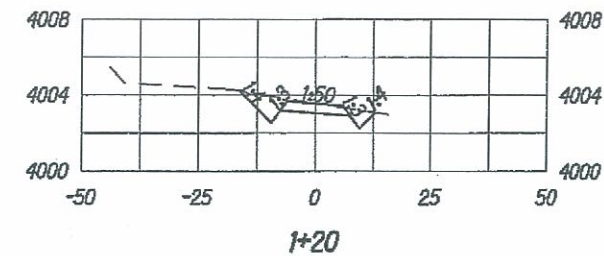
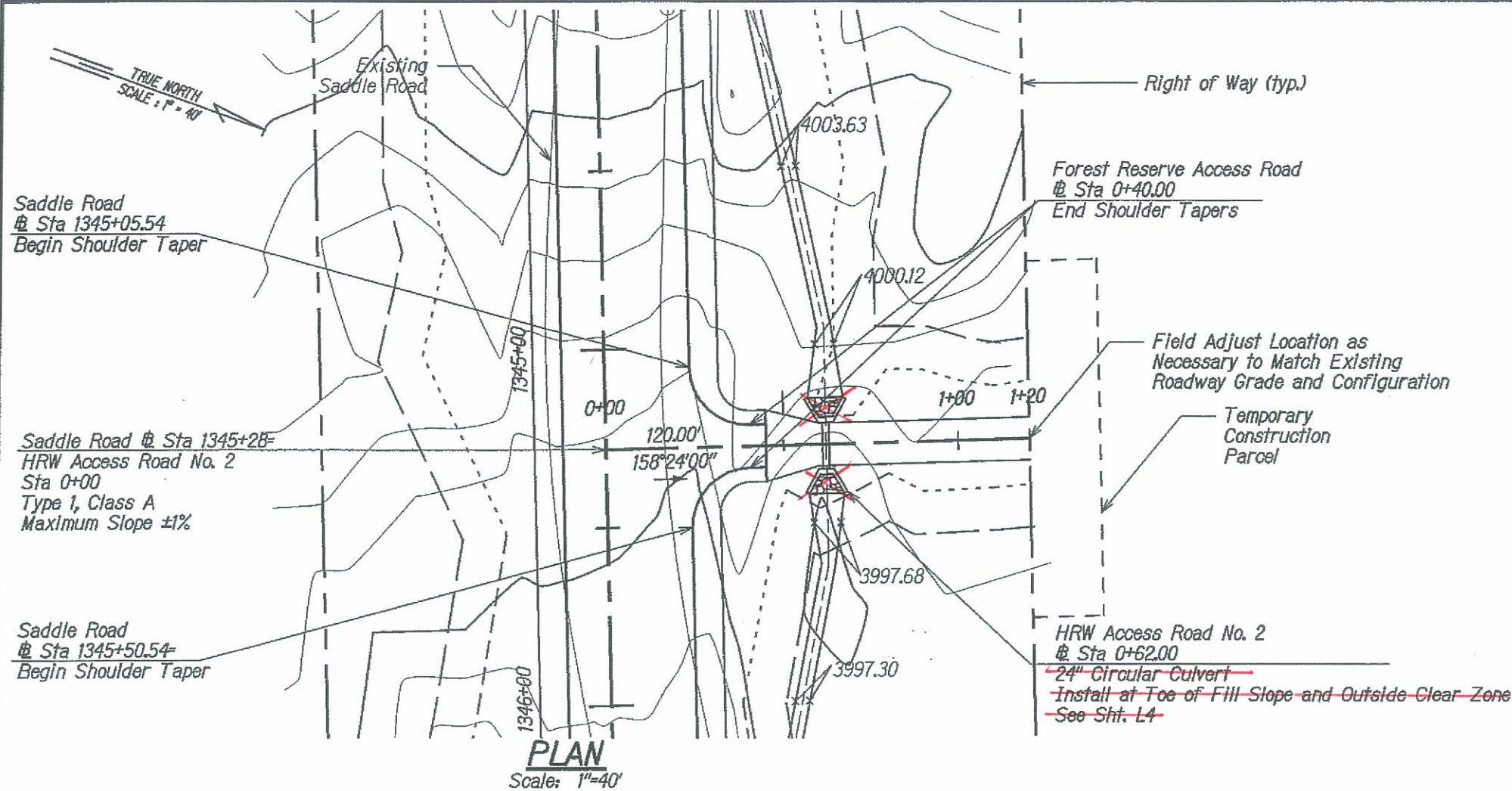
Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
Catch to mainline	0+44.0	4060.13	-40.00	-10995.09	-65982.68	
3' Spacing	0+44.0	4060.64	-10.00	-10994.10	-65952.70	
Lt Edge of Pvmt2	0+44.0	4060.70	-7.01	-10994.00	-65949.71	
Lt Edge of Pvmt	0+44.0	4059.78	-7.00	-10994.00	-65949.70	
Centerline	0+44.0	4059.59	0.00	-10993.76	-65942.70	
Rt Edge of Pvmt	0+44.0	4059.40	7.00	-10993.53	-65935.71	
Rt Edge of Pvmt2	0+44.0	4060.32	7.01	-10993.53	-65935.70	
3' Spacing	0+44.0	4060.26	10.00	-10993.43	-65932.71	
Catch to mainline	0+44.0	4059.00	21.17	-10993.06	-65921.54	
The following elevations are to finished grade:						
Lt Slope Stake	0+56.0					4:1
Lt Ditch	0+56.0	4059.95	-40.96	-10983.12	-65984.05	
Lt Shoulder	0+56.0	4061.19	-36.00	-10982.96	-65979.09	
Point	0+56.0	4060.87	-18.00	-10982.37	-65961.10	
Centerline	0+56.0	4060.51	0.00	-10981.77	-65943.11	
Rt Shoulder	0+56.0	4060.31	10.00	-10981.44	-65933.11	
Rt Ditch	0+56.0	4059.27	16.20	-10981.24	-65926.92	
Rt Slope Stake	0+56.0					6:1
Lt Slope Stake	0+74.0					4:1
Lt Ditch	0+74.0	4059.68	-42.04	-10965.17	-65985.72	
Lt Shoulder	0+74.0	4061.19	-36.00	-10964.97	-65979.68	
Point	0+74.0	4060.87	-18.00	-10964.38	-65961.69	
Centerline	0+74.0	4060.51	0.00	-10963.78	-65943.70	
Rt Shoulder	0+74.0	4060.31	10.00	-10963.45	-65933.71	
Rt Ditch	0+74.0	4059.54	14.60	-10963.30	-65929.11	
Rt Slope Stake	0+74.0					6:1
Lt Slope Stake	0+92.0					4:1
Lt Ditch	0+92.0	4059.41	-43.13	-10947.21	-65987.40	
Lt Shoulder	0+92.0	4061.19	-36.00	-10946.98	-65980.28	
Point	0+92.0	4060.87	-18.00	-10946.39	-65962.29	
Centerline	0+92.0	4060.51	0.00	-10945.79	-65944.30	
Rt Shoulder	0+92.0	4060.31	10.00	-10945.46	-65934.30	
Rt Ditch	0+92.0	4059.81	13.00	-10945.36	-65931.30	
Rt Slope Stake	0+92.0					6:1

Catch slope stakes at indicated slope ratios.

AS-BUILT E11



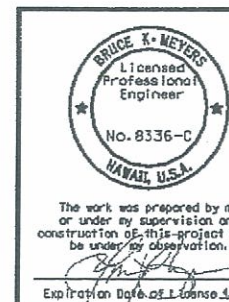
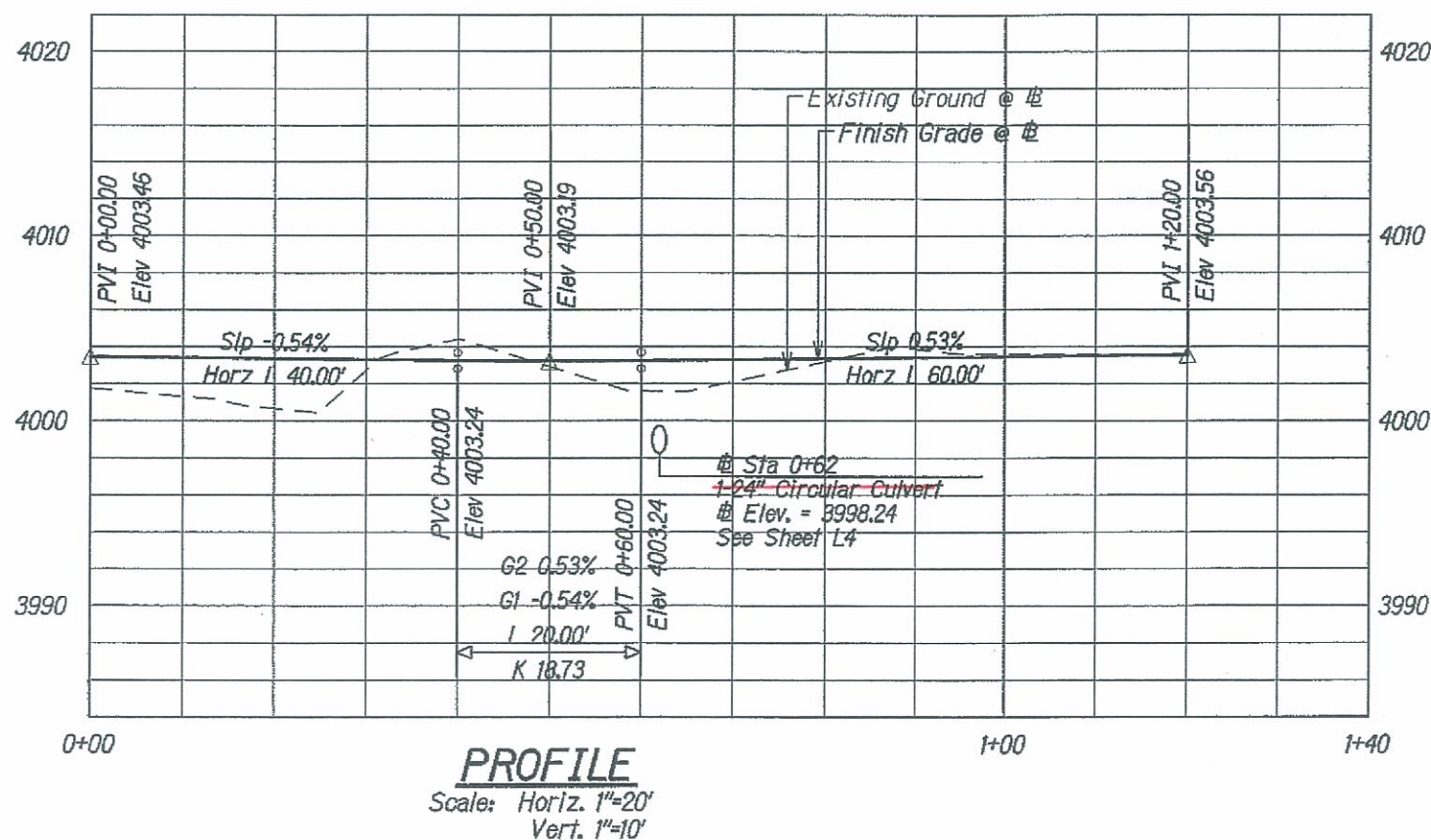
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E11	E20



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 39 CY
Fill: 25 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 2
@ STA 1345+28

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

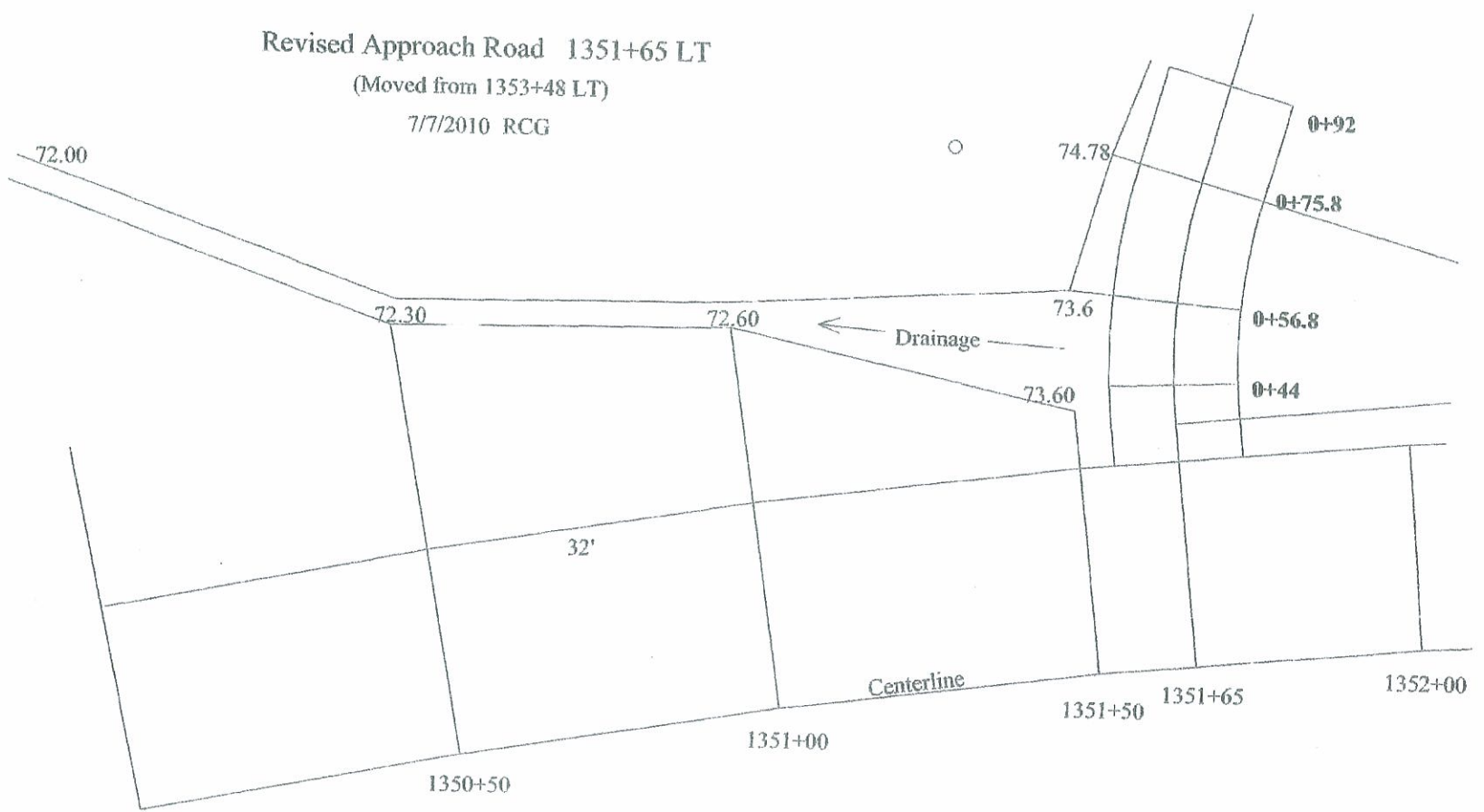
Approach Road: 1351+65 LT (Moved from 1353+48 LT)
Staking Notes

Rev. 7/7/2010

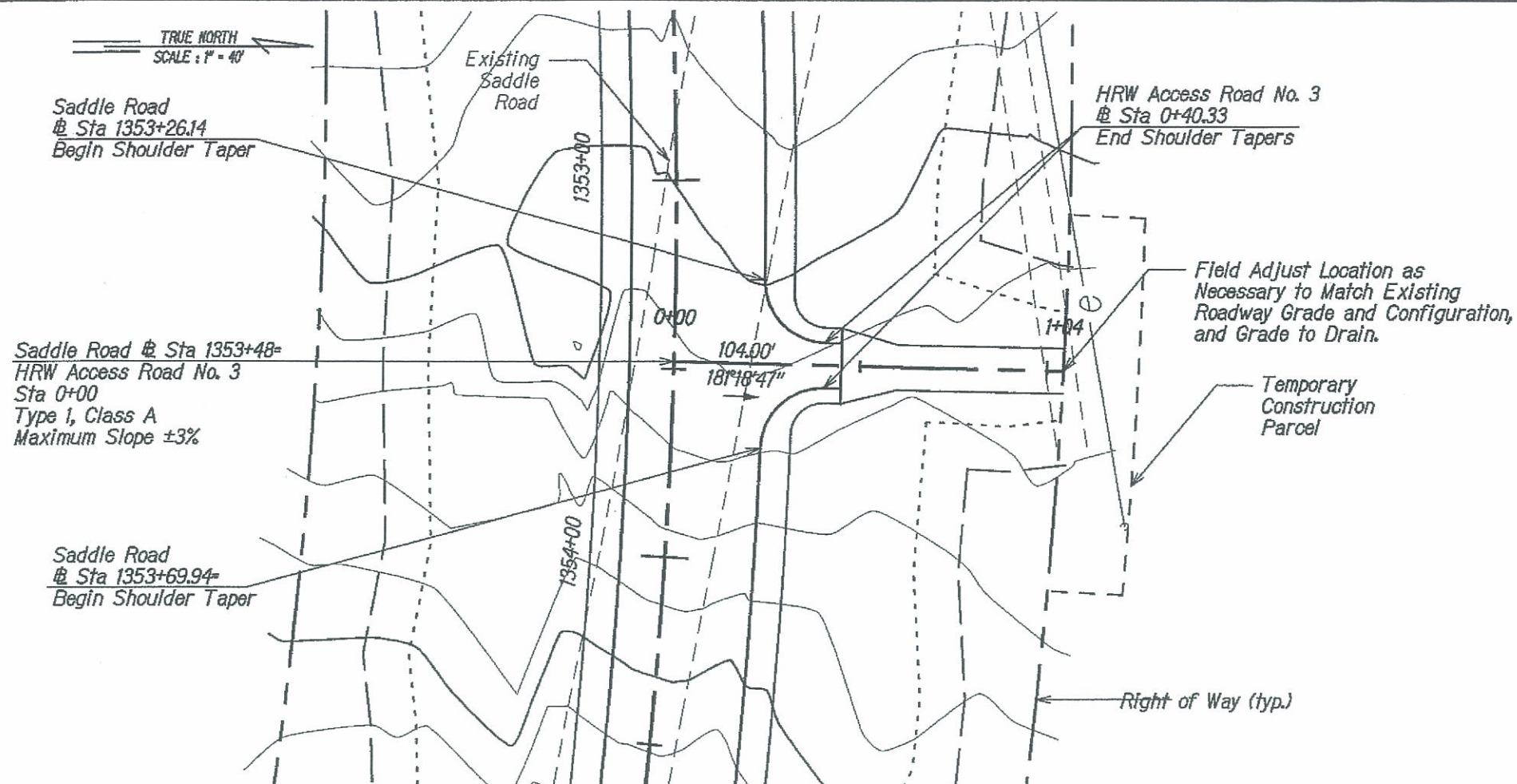
Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
Lt Ditch	0+44.00	3973.60	-17.44	-10575.32	-63912.84	
3' Spacing	0+44.00	3974.34	-13.00	-10575.15	-63908.40	
Lt Edge Pvm2	0+44.00	3974.40	-10.01	-10575.04	-63905.42	
Lt Edge Pvm1	0+44.00	3973.48	-10.00	-10575.04	-63905.41	
Centerline	0+44.00	3973.08	0.00	-10574.66	-63895.41	
Rt Edge Pvm1	0+44.00	3972.68	10.00	-10574.28	-63885.42	
Rt Edge Pvm2	0+44.00	3973.60	10.01	-10574.28	-63885.41	
3' Spacing	0+44.00	3973.54	13.00	-10574.17	-63882.42	
Rt Ditch	0+44.00	3972.60	19.00	-10573.94	-63876.43	
The following elevations are to finished grade:						
Lt Ditch Bottom	0+56.80	3973.60	-16.42	-10560.39	-63911.43	
Lt Shoulder	0+56.80	3974.67	-10.00	-10560.97	-63905.04	
Centerline	0+56.80	3974.37	0.00	-10561.87	-63895.08	
Right Shoulder	0+56.80	3974.07	10.00	-10562.77	-63885.12	
Rt Ditch Bottom	0+56.80	3973.32	14.50	-10563.18	-63880.64	
Rt Slope Stake	0+56.80					4:1
Lt Slope Stake	0+75.80					4:1
Lt Ditch Bottom	0+75.80	3974.46	-14.50	-10539.21	-63905.52	
Lt Shoulder	0+75.80	3975.21	-10.00	-10540.46	-63901.19	
Centerline	0+75.80	3975.01	0.00	-10543.22	-63891.58	
Right Shoulder	0+75.80	3974.81	10.00	-10545.99	-63881.97	
Rt Ditch Bottom	0+75.80	3974.06	14.50	-10547.23	-63877.65	
Rt Slope Stake	0+75.80					4:1
Lt Slope Stake	0+92.00					6:1
Lt Ditch Bottom	0+92.00	3975.10	-13.00	-10524.06	-63899.59	
Lt Shoulder	0+92.00	3975.60	-10.00	-10524.89	-63896.71	
Centerline	0+92.00	3975.50	0.00	-10527.66	-63887.10	
Right Shoulder	0+92.00	3975.40	10.00	-10530.43	-63877.49	
Rt Ditch Bottom	0+92.00	3974.90	13.00	-10531.26	-63874.61	
Rt Slope Stake	0+92.00					6:1

Revised Approach Road 1351+65 LT
(Moved from 1353+48 LT)

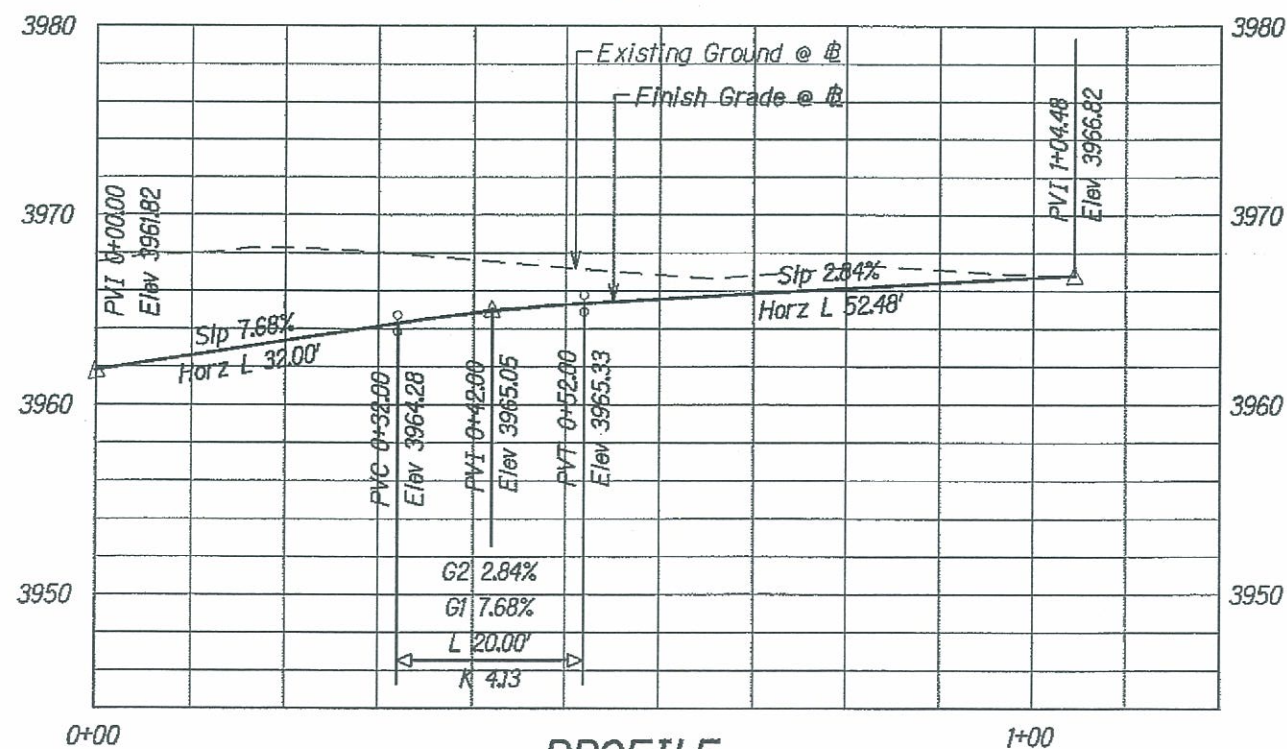
7/7/2010 RCG



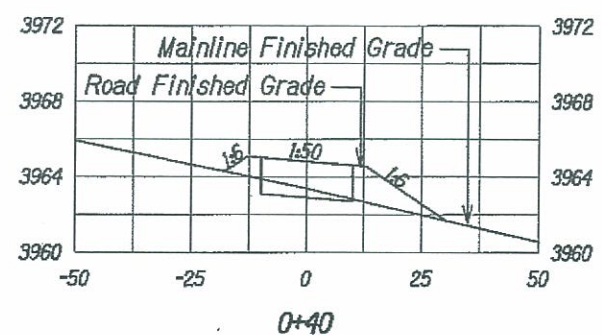
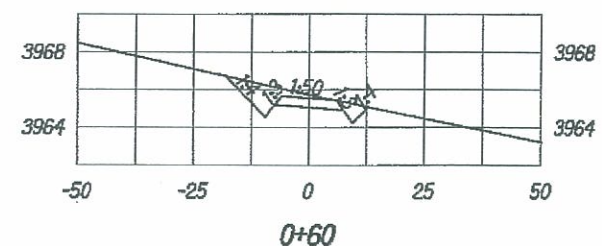
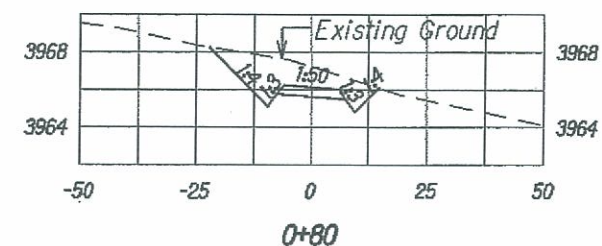
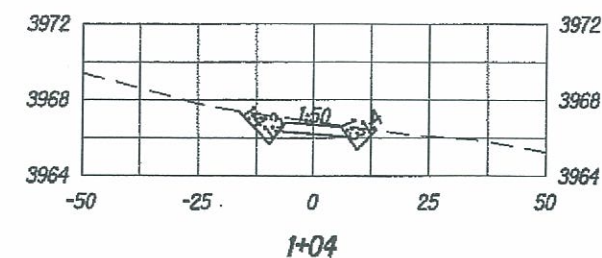
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E12	E20



PLAN
Scale: 1"=40'



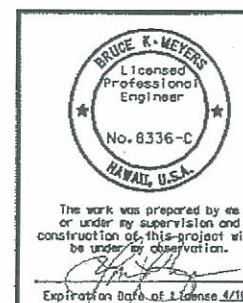
PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 101 CY
Fill: 10 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 3
@ STA 1353+48

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

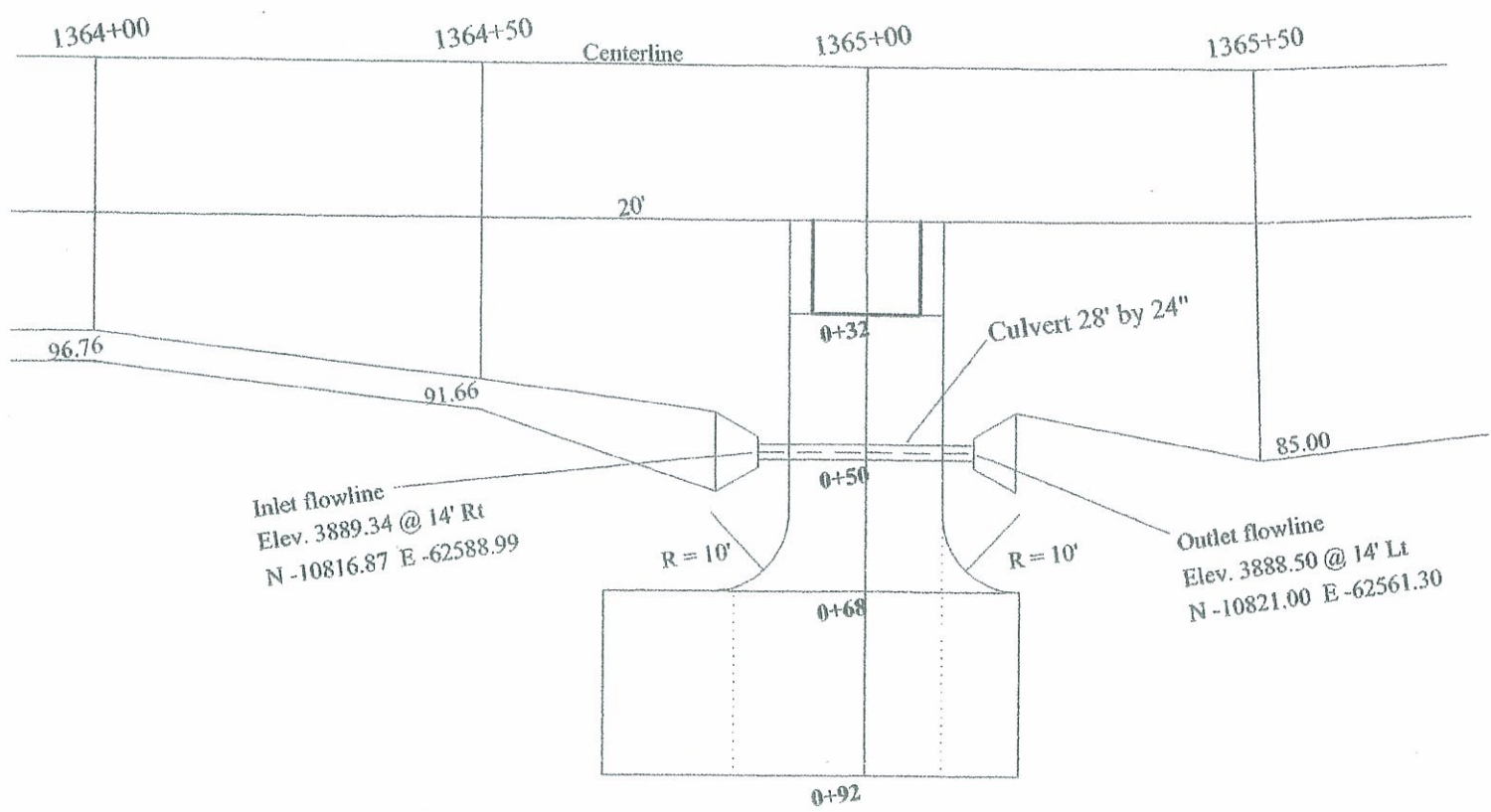
Approach Road: 1365+00 RT
Staking Notes

7/8/2010

Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations:						
3' Spacing	0+32.0	3892.41	-10.00	-10802.60	-62562.60	
Lt Edge of Pvmt2	0+32.0	3892.47	-7.01	-10802.16	-62565.56	
Lt Edge of Pvmt	0+32.0	3891.55	-7.00	-10802.16	-62565.57	
Centerline	0+32.0	3891.86	0.00	-10801.13	-62572.49	
Rt Edge of Pvmt	0+32.0	3892.18	7.00	-10800.10	-62579.42	
Rt Edge of Pvmt2	0+32.0	3893.10	7.01	-10800.10	-62579.42	
3' Spacing	0+32.0	3893.04	10.00	-10799.66	-62582.38	
The following elevations are to finished grade:						
Lt Outlet Apron	0+50.0	3888.34	-19.50	-10821.81	-62555.85	
Lt Shoulder	0+50.0	3892.12	-10.00	-10820.41	-62565.25	
Centerline	0+50.0	3892.42	0.00	-10818.94	-62575.14	
Rt Shoulder	0+50.0	3892.72	10.00	-10817.46	-62585.03	
Rt Inlet Apron	0+50.0	3889.50	19.50	-10816.06	-62594.43	
Lt Slope Stake	0+68.0					3:1
Lt Shoulder	0+68.0	3891.66	-20.00	-10839.69	-62558.01	
	0+68.0	3891.86	-10.00	-10838.21	-62567.90	
Centerline	0+68.0	3892.06	0.00	-10836.74	-62577.79	
	0+68.0	3892.40	17.00	-10834.23	-62594.61	
Rt Shoulder	0+68.0	3892.74	34.00	-10831.73	-62611.42	
Rt Slope Stake	0+68.0					4:1
Lt Slope Stake	0+92.0					3:1
Lt Shoulder	0+92.0	3891.18	-20.00	-10863.42	-62561.55	
	0+92.0	3891.38	-10.00	-10861.95	-62571.44	
Centerline	0+92.0	3891.58	0.00	-10860.48	-62581.33	
	0+92.0	3891.92	17.00	-10857.97	-62598.14	
Rt Shoulder	0+92.0	3892.26	34.00	-10855.47	-62614.96	
Rt Ditch	0+92.0	3891.76	36.00	-10855.17	-62616.94	
Rt Slope Stake	0+92.0					3:1

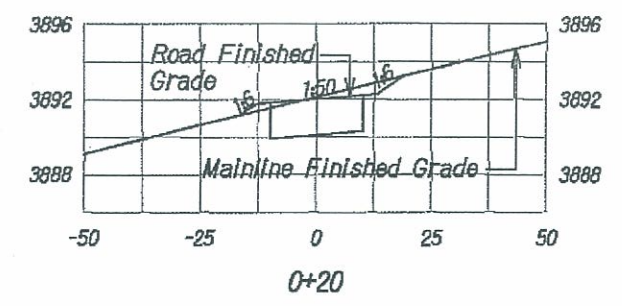
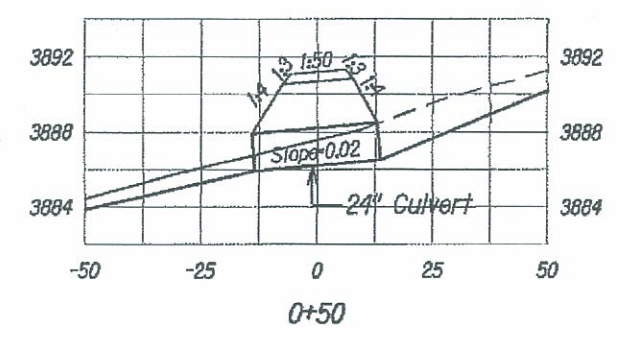
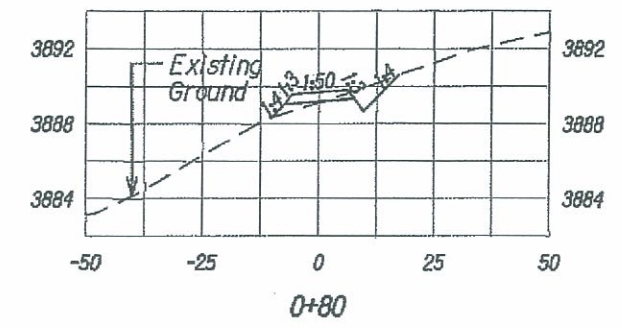
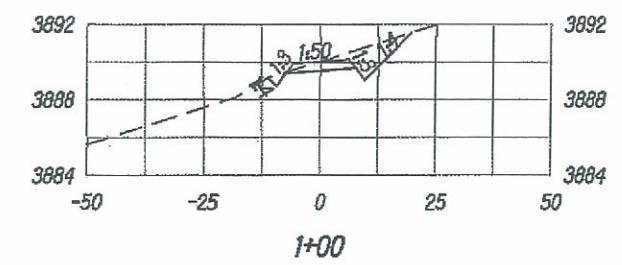
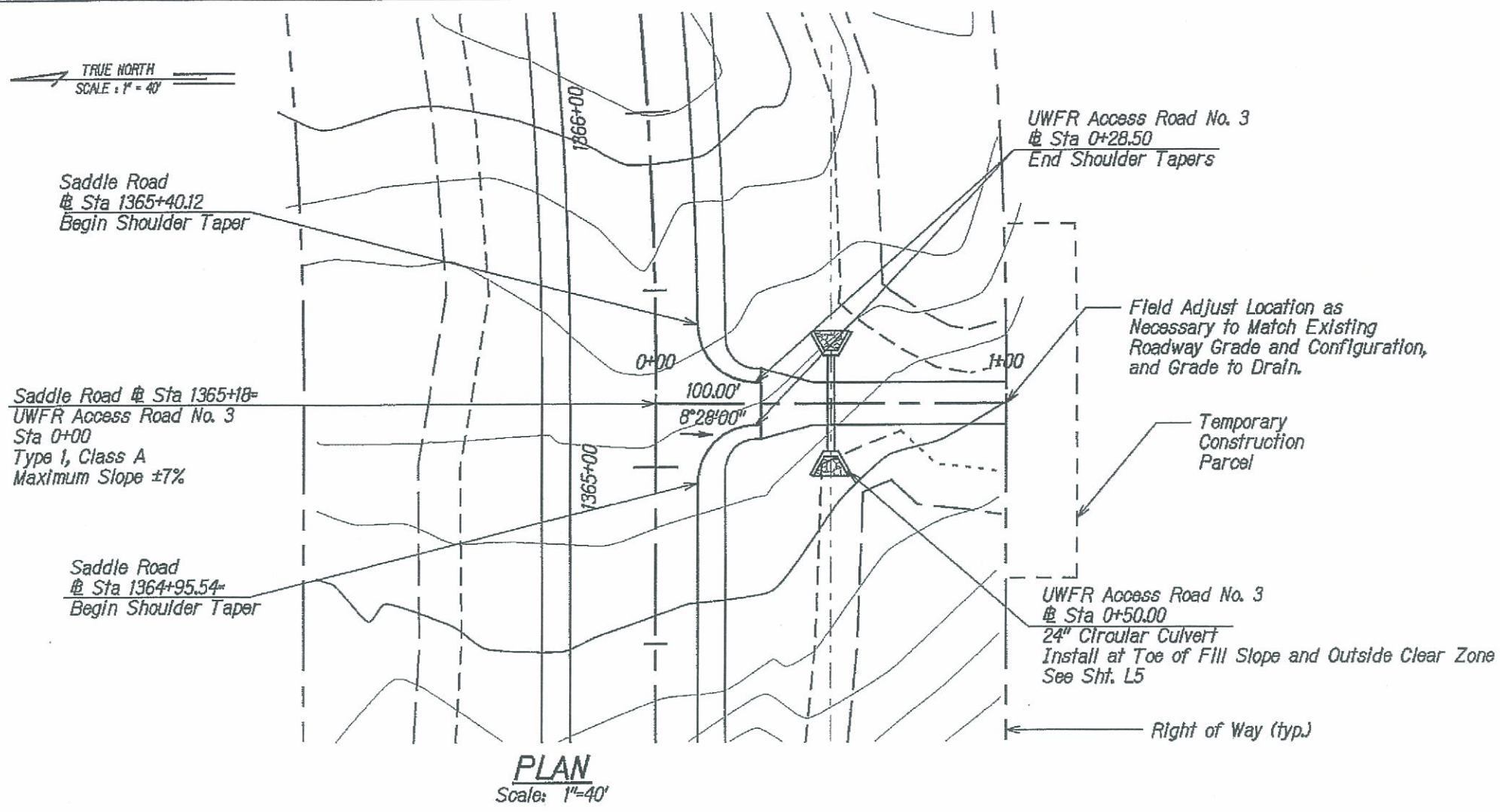
AS-BUILT E13

Approach Road 1365+00 RT
(Moved from 1365+18 Rt)
7/8/2010 RCG



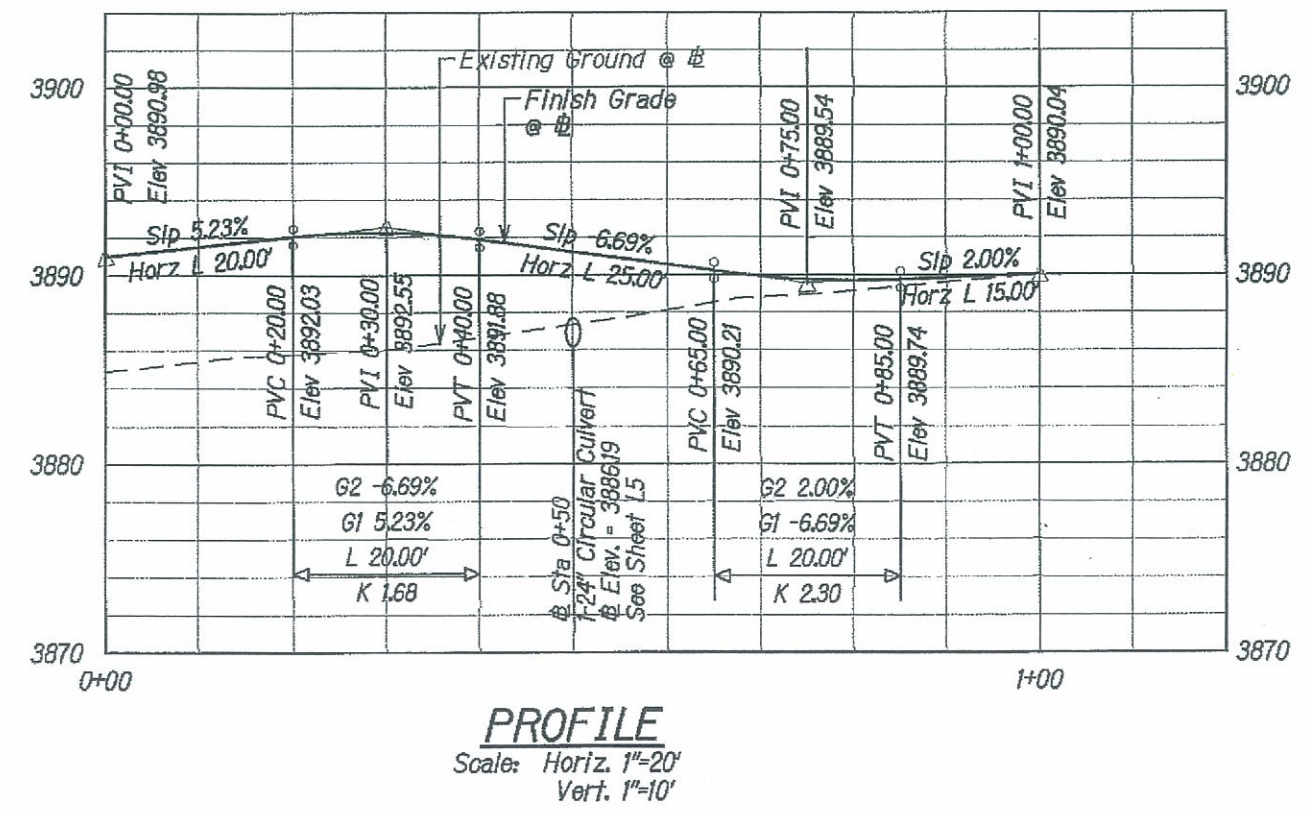
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E13	E20

REVISED 07/14/09
AMENDMENT A002



CROSS SECTIONS
Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 30 CY
Fill: 169 CY



M:\Mproj\Lenila\200009H\sheet\sh1e013.dgn

The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 4/10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

UPPER WAIAKEA FOREST RESERVE

ACCESS ROAD NO. 3

@ STA 1365+18

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

Approach Road: 1379+78 LT
Staking Notes

1/6/2011

Description	Station	Elevation	Offset	Northing	Easting
Subgrade Elevations:					
3' Spacing	0+44.00	3791.99	-13.00	-10272.19	-61236.82
Lt Edge of Pvmt2	0+44.00	3792.05	-10.01	-10270.71	-61234.22
Lt Edge of Pvmt	0+44.00	3791.13	-10.00	-10270.71	-61234.22
Centerline	0+44.00	3790.67	0.00	-10265.77	-61225.52
Rt Edge of Pvmt	0+44.00	3790.21	10.00	-10260.83	-61216.82
Rt Edge of Pvmt2	0+44.00	3791.13	10.01	-10260.83	-61216.82
3' Spacing	0+44.00	3791.07	13.00	-10259.35	-61214.22
End pf pavement					
The following elevations are to finished grade:					
Lt Shoulder	0+58.93	3790.71	-10.00	-10257.73	-61241.59
Centerline	0+58.93	3790.41	0.00	-10252.79	-61232.89
Rt Shoulder	0+58.93	3790.11	10.00	-10247.85	-61224.20
Lt Shoulder	0+82.49	3787.85	-9.50	-10227.48	-61244.89
Centerline	0+82.49	3787.66	0.00	-10230.01	-61235.73
Rt Shoulder	0+82.49	3787.47	9.50	-10232.53	-61226.57
Lt Shoulder	1+06.05	3784.31	-9.00	-10204.06	-61226.08
Centerline	1+06.05	3784.13	0.00	-10211.89	-61221.63
Rt Shoulder	1+06.05	3783.95	9.00	-10219.71	-61217.18
Lt Shoulder	1+28.00	3780.94	-8.00	-10194.09	-61206.49
Centerline	1+28.00	3780.94	0.00	-10201.05	-61202.54
Rt Shoulder	1+28.00	3780.94	8.00	-10208.00	-61198.59
Lt Shoulder	1+50.00	3778.07	-7.00	-10184.10	-61186.87
Centerline	1+50.00	3778.21	0.00	-10190.18	-61183.41
Rt Shoulder	1+50.00	3778.35	7.00	-10196.27	-61179.96
Match to existing pavement					

PC

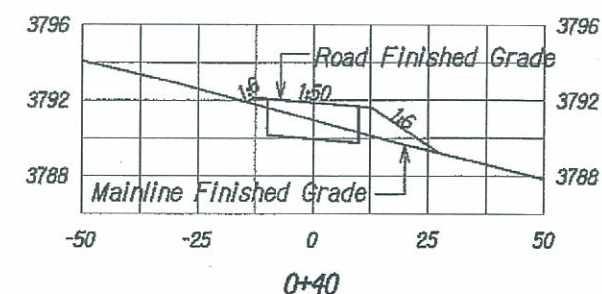
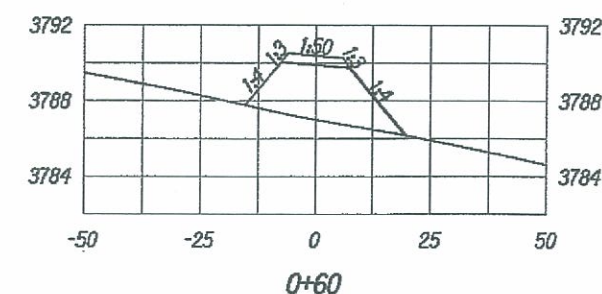
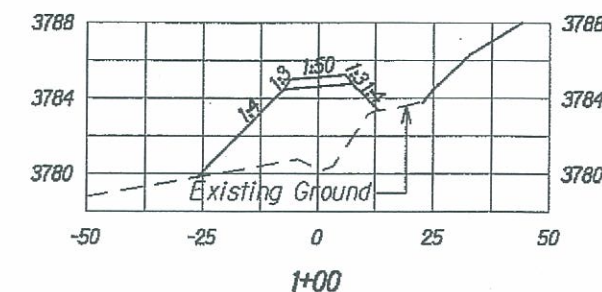
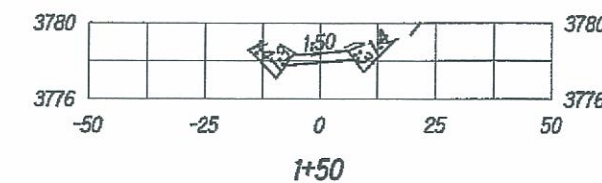
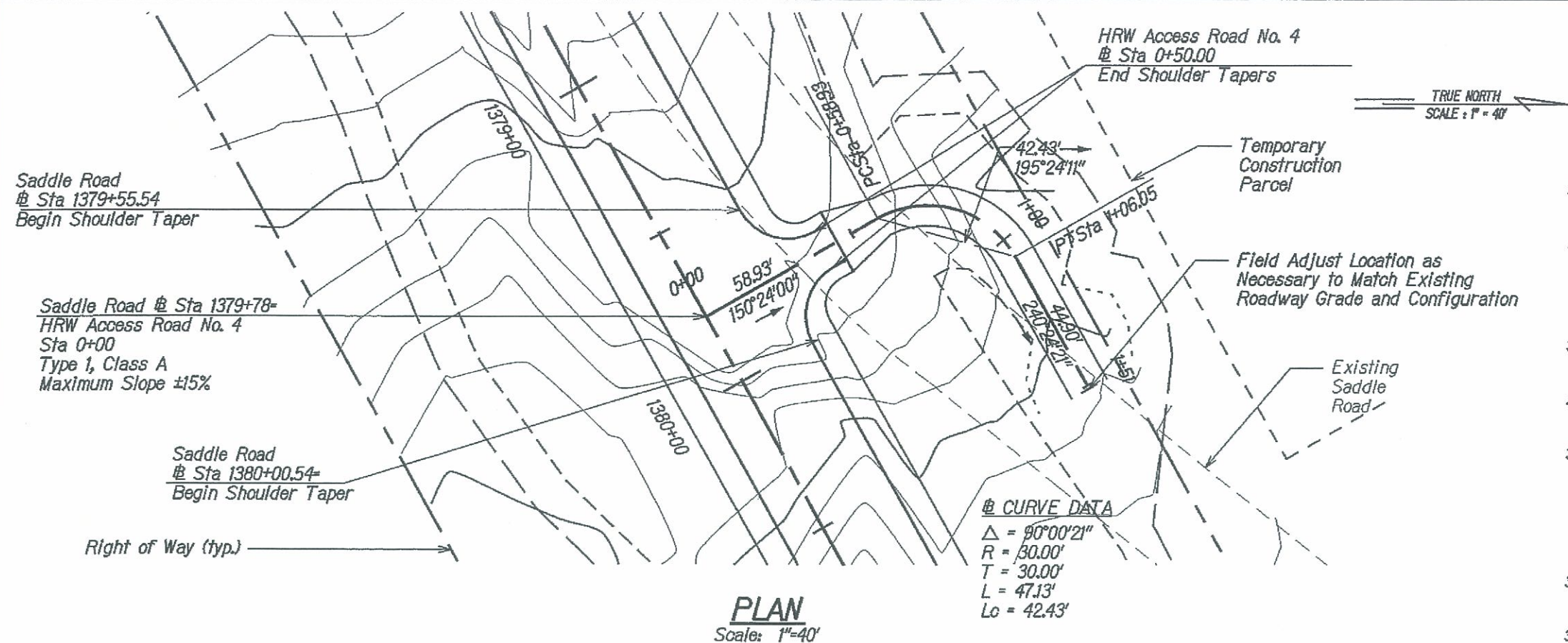
POC

PT

Note: Catch fill slopes using slope selection table on plan sheet B2.

AS-BUILT E14

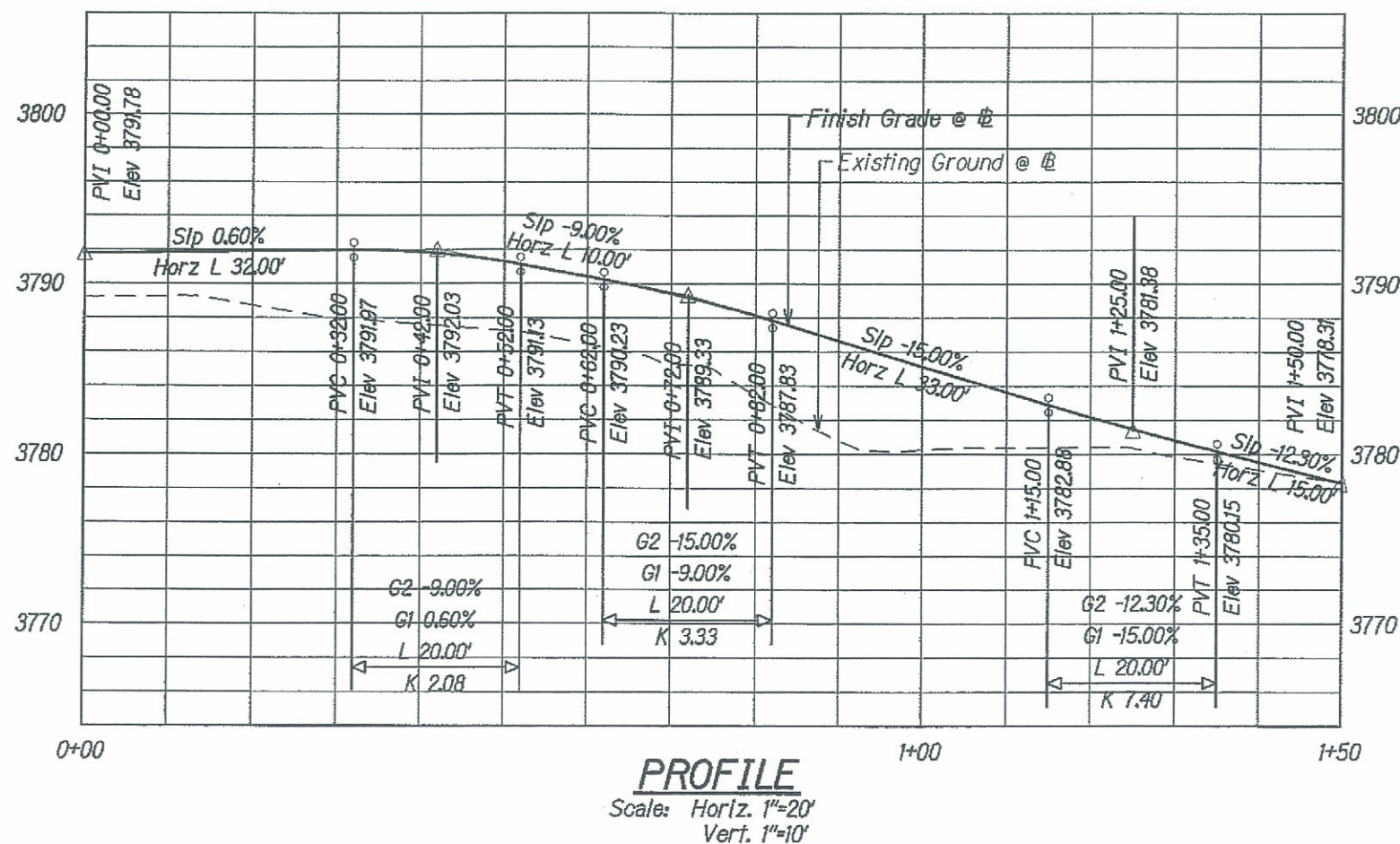
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E14	E20



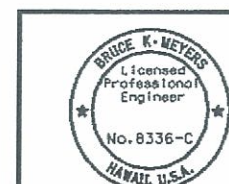
CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 29 CY
Fill: 363 CY



M:\Mproj\Leimle\208009H\sheet\site014.dgn



The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 4/10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 4
@ STA 1379+78

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

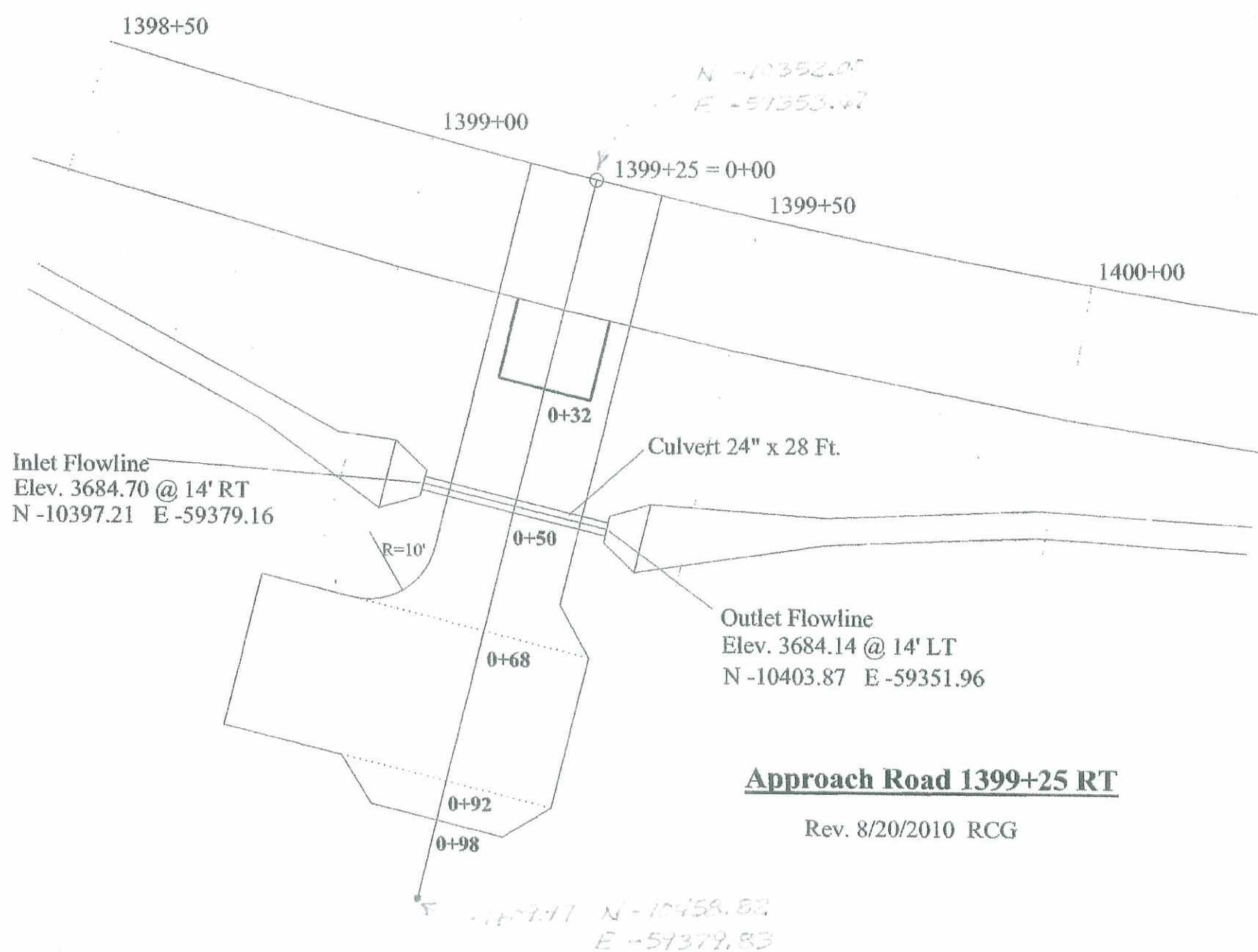
E14

Approach Road: 1399+25 RT
Staking Notes

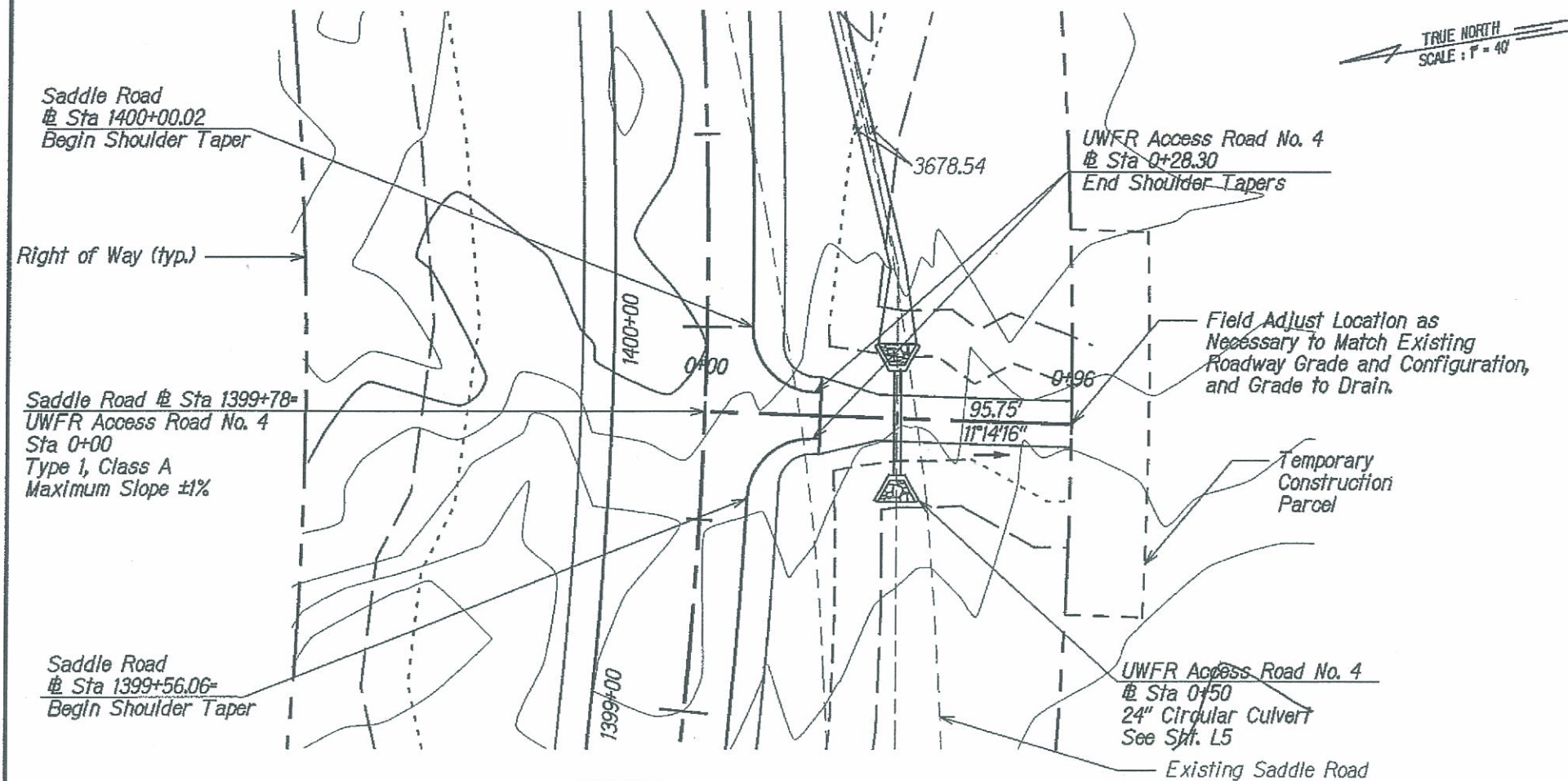
10/27/2010

Description	Station	Elevation	Offset	Northing	Easting	Slope Ratio
Subgrade Elevations*						
3' Spacing	0+32.0	3687.80	-10.00	-10385.46	-59351.56	
Lt Edge of Pvmt2	0+32.0	3687.89	-7.01	-10384.75	-59354.48	
Lt Edge of Pvmt*	0+32.0	3686.97	-7.00	-10384.75	-59354.48	
Centerline*	0+32.0	3687.18	0.00	-10383.08	-59361.28	
Rt Edge of Pvmt*	0+32.0	3687.39	7.00	-10381.42	-59368.08	
Rt Edge of Pvmt2	0+32.0	3688.31	7.01	-10381.42	-59368.08	
3' Spacing	0+32.0	3688.40	10.00	-10380.71	-59370.99	
The following elevations are to finished grade:						
Lt Outlet Apron	0+50.0		-12.50			
Lt Shoulder	0+50.0	3687.72	-10.00	-10402.94	-59355.84	
Centerline	0+50.0	3687.92	0.00	-10400.57	-59365.56	
Rt Shoulder	0+50.0	3688.12	10.00	-10398.19	-59375.27	
Rt Inlet Apron	0+50.0		12.50			
Lt Slope Stake	0+68.0					4:1
Lt Shoulder	0+68.0	3687.50	-16.00	-10421.86	-59354.30	
Centerline	0+68.0	3687.74	0.00	-10418.05	-59369.85	
	0+68.0	3688.00	17.00	-10414.00	-59386.36	
Rt Shoulder	0+68.0	3688.25	34.00	-10409.96	-59402.87	
Rt Slope Stake	0+68.0					6:1
Lt Slope Stake	0+92.0					4:1
Lt Shoulder	0+92.0	3687.27	-16.00	-10445.17	-59360.01	
Centerline	0+92.0	3687.50	0.00	-10441.36	-59375.56	
	0+92.0	3687.76	17.00	-10437.31	-59392.07	
Rt Shoulder	0+92.0	3688.01	34.00	-10433.27	-59408.58	
Rt Slope Stake	0+92.0					6:1
Lt Slope Stake	0+98.0					4:1
Lt Shoulder	0+98.0	3687.29	-10.00	-10449.57	-59367.27	
Centerline	0+98.0	3687.44	0.00	-10447.19	-59376.98	
Rt Shoulder	0+98.0	3687.59	10.00	-10444.81	-59386.70	
Rt Slope Stake	0+98.0					

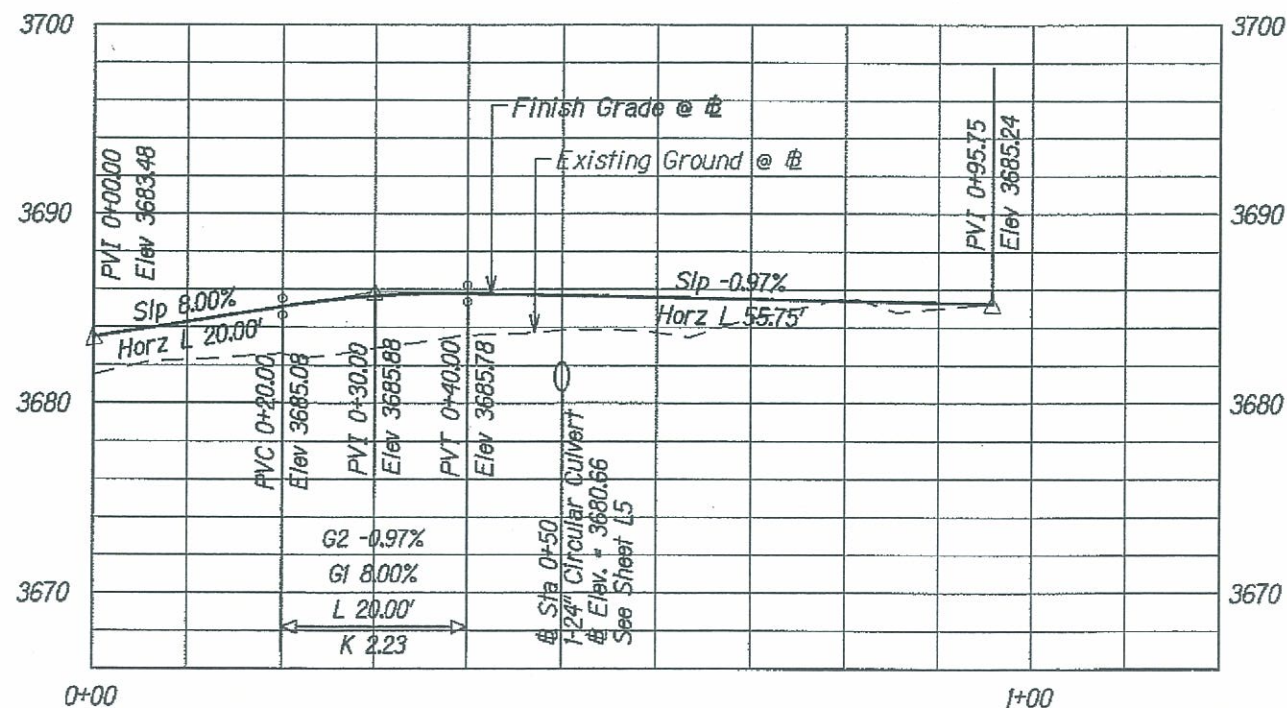
AS-BUILT E15



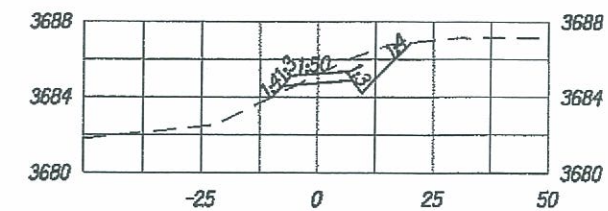
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E15	E20



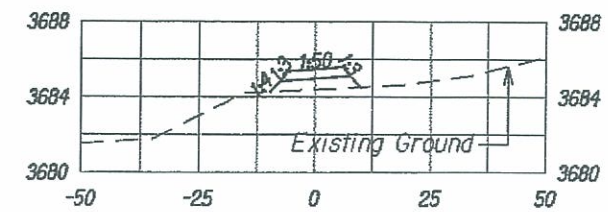
PLAN
Scale: 1"=40'



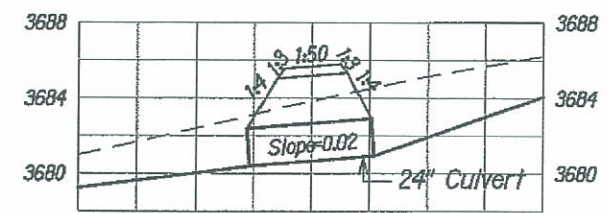
PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



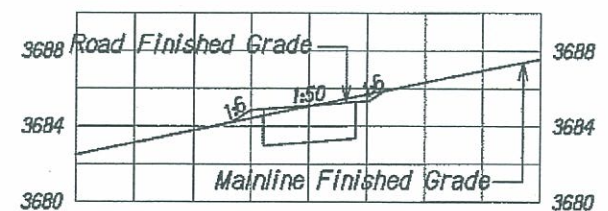
0+96



0+70



0+50

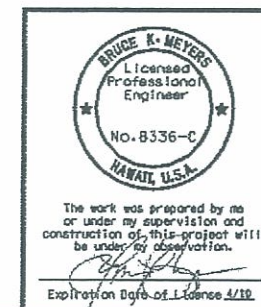


0+20

CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 29 CY
Fill: 54 CY



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

UPPER WAIAKEA FOREST RESERVE
ACCESS ROAD NO. 4
@ STA 1399+78

Scale: As Noted

Date: June 5, 2009

SHEET No. 1 OF 1

Approach Road: 1444+13 LT
Staking Notes

Feb. 16, 2011
(No culvert needed - See note below)

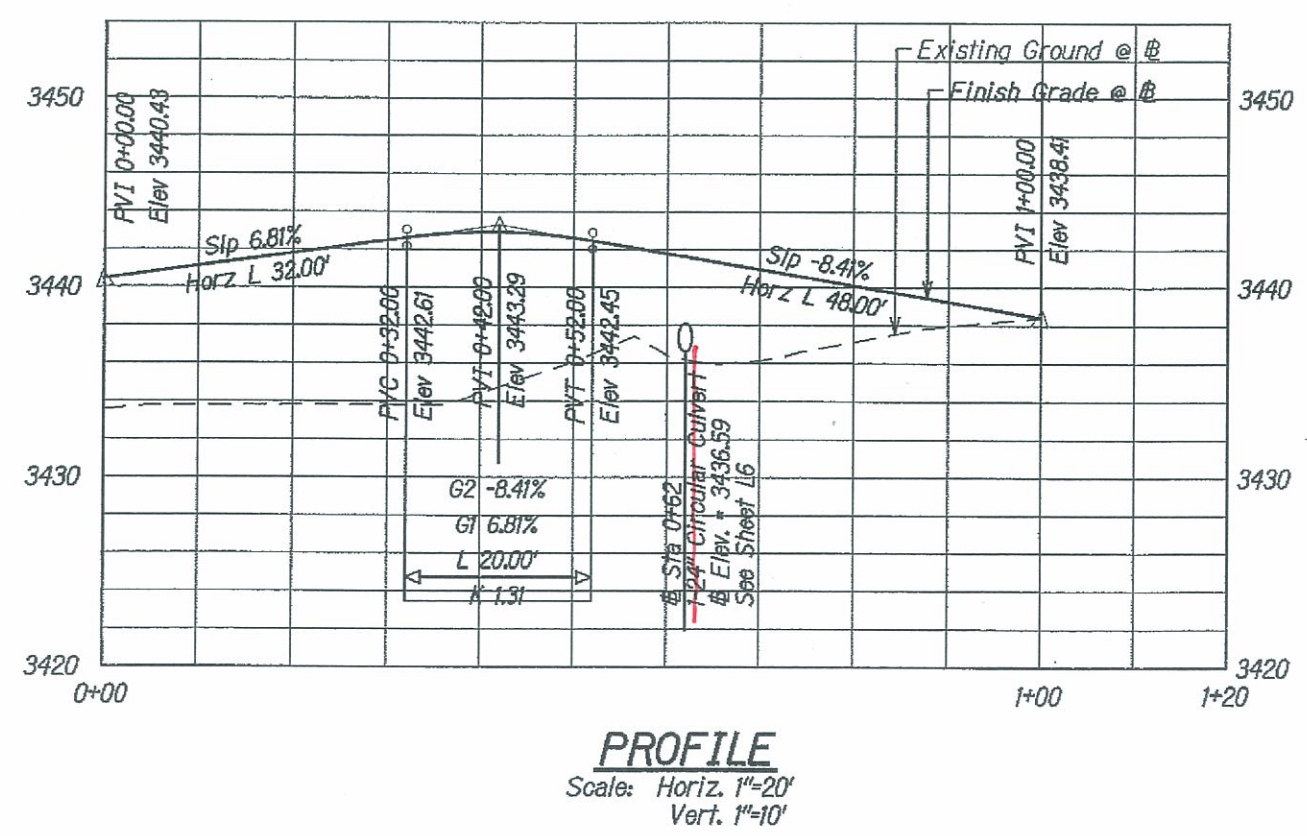
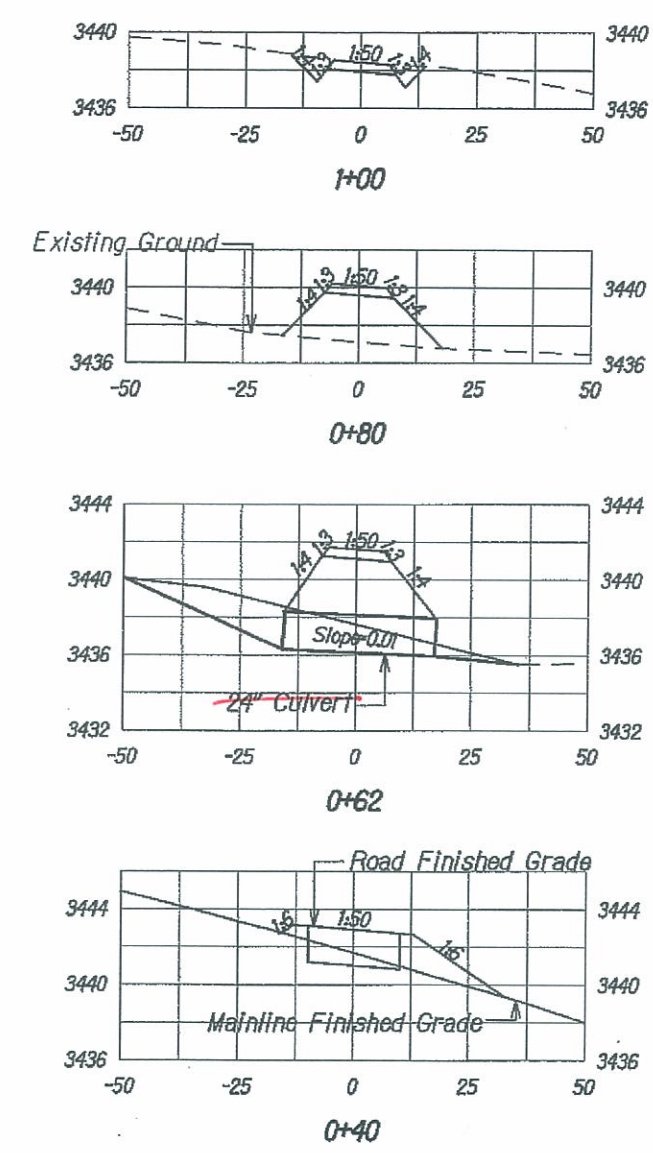
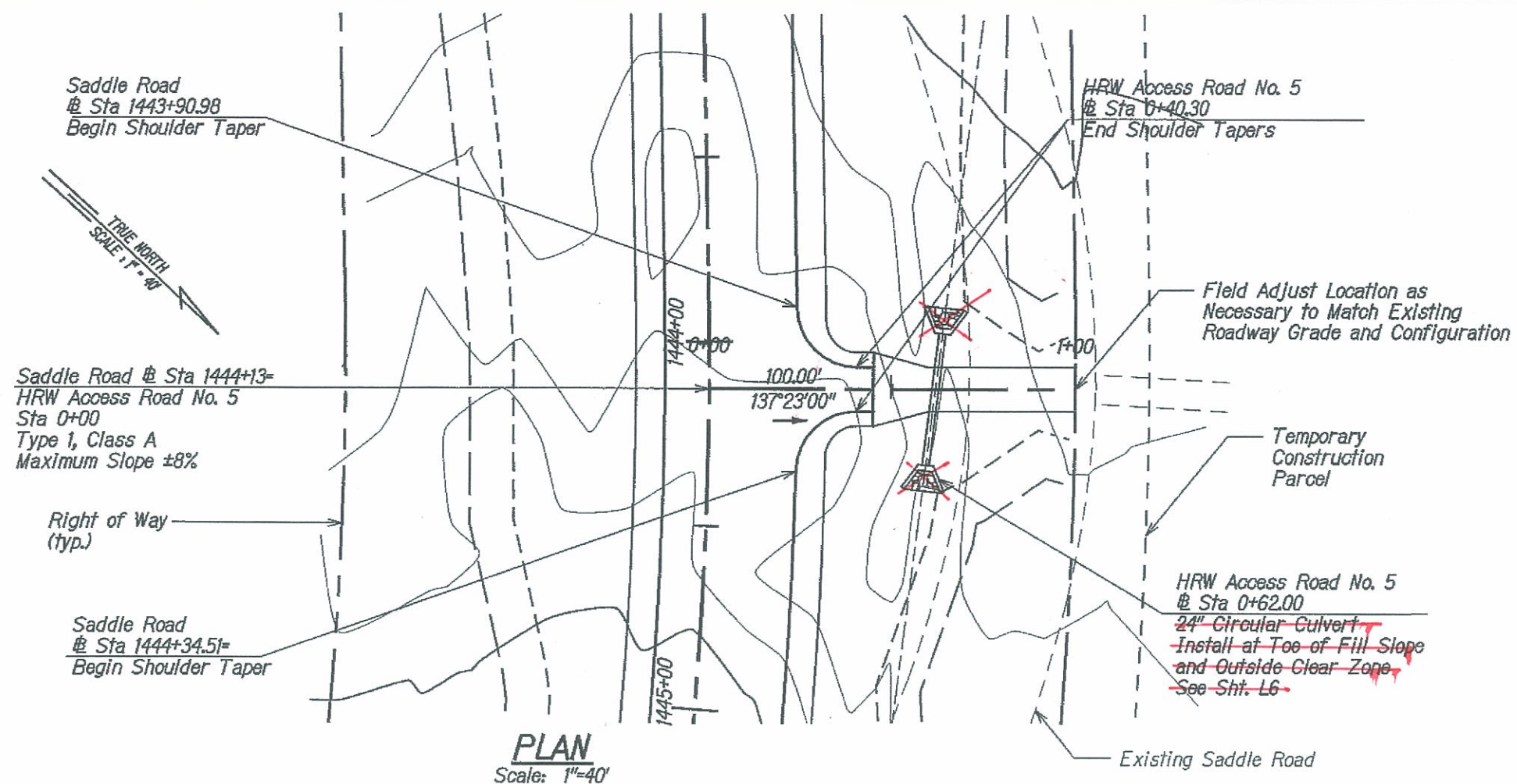
Description	Station	Elevation	Offset	Northing	Easting
Subgrade Elevations:					
3' Spacing	0+44.0	3439.94	-13.00	-8535.608	-55400.06
Lt Edge Pvmt2	0+44.0	3440.00	-10.01	-8533.584	-55397.86
Lt Edge Pvmt	0+44.0	3439.08	-10.00	-8533.577	-55397.86
Centerline	0+44.0	3438.68	0.00	-8526.805	-55390.50
Rt Edge Pvmt	0+44.0	3438.28	10.00	-8520.033	-55383.14
Rt Edge Pvmt2	0+44.0	3439.20	10.01	-8520.026	-55383.13
3' Spacing	0+44.0	3439.14	13.00	-8518.001	-55380.93
The following elevations are to finished grade:					
Lt Slope Stake	0+60.0	*			
Lt Shoulder	0+60.0	3439.63	-9.00	-8521.115	-55407.95
Centerline	0+60.0	3439.45	0.00	-8515.026	-55401.33
Rt Shoulder	0+60.0	3439.27	9.00	-8508.937	-55394.70
Rt Slope Stake	0+60.0	*			
Lt Slope Stake	0+80.0	*			
Lt Shoulder	0+80.0	3439.18	-7.50	-8505.373	-55420.38
Centerline	0+80.0	3439.03	0.00	-8500.299	-55414.86
Rt Shoulder	0+80.0	3438.88	7.50	-8495.225	-55409.33
Rt Slope Stake	0+80.0	*			
Lt Slope Stake	1+00.0	*			
Lt Shoulder	1+00.0	3438.70	-7.50	-8490.646	-55433.91
Centerline	1+00.0	3438.60	0.00	-8485.571	-55428.39
Rt Shoulder	1+00.0	3438.50	7.50	-8480.497	-55422.87
Rt Slope Stake	1+00.0	*			

Match existing ground

* Catch slopes using the slope selection table on plan sheet B2.
Excavate a four foot wide ditch from approximately 0+80 to 1+80 LT. FHWA will stake the ditch grades.

AS-BUILT E16

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E16	E20



CROSS SECTIONS
Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 12 CY
Fill: 172 CY

The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 4/10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 5
@ STA 1444+13

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

Approach Road: 1471+08 LT
Staking Notes

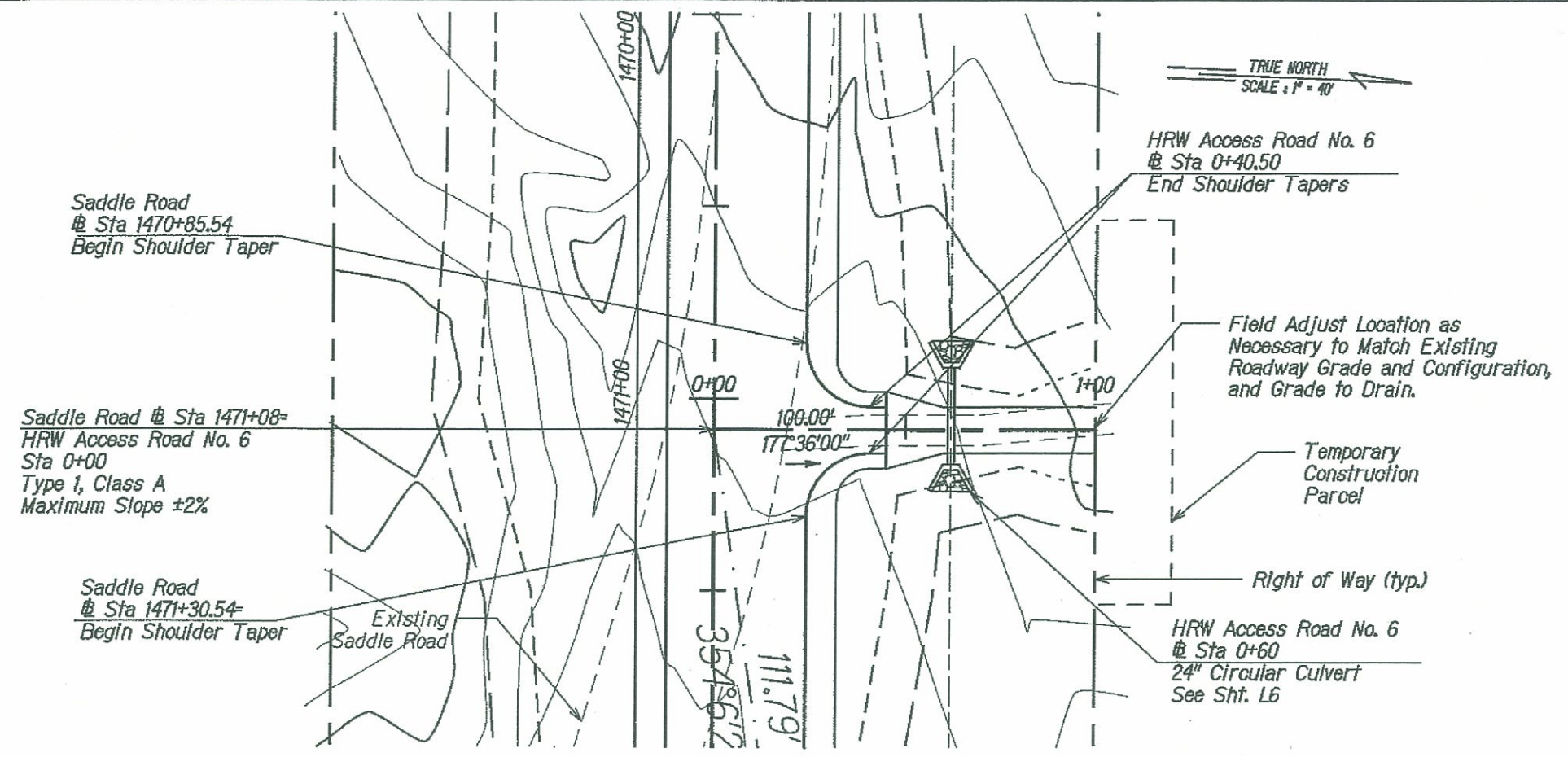
Feb. 22, 2011
(28' by 24" culvert pipe)

Description	Station	Elevation	Offset	Northing	Easting
Subgrade Elevations:					
3' Spacing	0+44.0	3239.75	-13.00	-8122.56	-52762.07
Lt Edge Pvmt2	0+44.0	3239.81	-10.01	-8122.43	-52759.09
Lt Edge Pvmt	0+44.0	3238.73	-10.00	-8122.43	-52759.08
Centerline	0+44.0	3238.37	0.00	-8122.00	-52749.08
Rt Edge Pvmt	0+44.0	3238.01	10.00	-8121.57	-52739.09
Rt Edge Pvmt2	0+44.0	3239.09	10.01	-8121.57	-52739.08
3' Spacing	0+44.0	3239.03	13.00	-8121.44	-52736.10
The following elevations are to finished grade:					
Lt Slope Stake		*			
Lt Shoulder2	0+60.0	3239.85	-12.00	-8106.52	-52761.75
Lt Shoulder	0+60.0	3239.81	-10.00	-8106.44	-52759.75
Centerline	0+60.0	3239.61	0.00	-8106.02	-52749.76
Rt Shoulder	0+60.0	3239.41	10.00	-8105.59	-52739.77
Rt Shoulder2	0+60.0	3239.37	12.00	-8105.51	-52737.77
Rt Slope Stake		*			
Lt Slope Stake	0+80.0	*			
Lt Shoulder	0+80.0	3240.17	-8.70	-8086.40	-52759.30
Centerline	0+80.0	3240.00	0.00	-8086.03	-52750.61
Rt Shoulder	0+80.0	3239.83	8.70	-8085.67	-52741.91
Rt Slope Stake	0+80.0	*			
Lt Slope Stake	1+00.0	*			
Lt Shoulder	1+00.0	3240.47	-7.50	-8066.37	-52758.94
Centerline	1+00.0	3240.39	0.00	-8066.05	-52751.45
Rt Shoulder	1+00.0	3240.31	7.50	-8065.73	-52743.96
Rt Slope Stake	1+00.0	*			

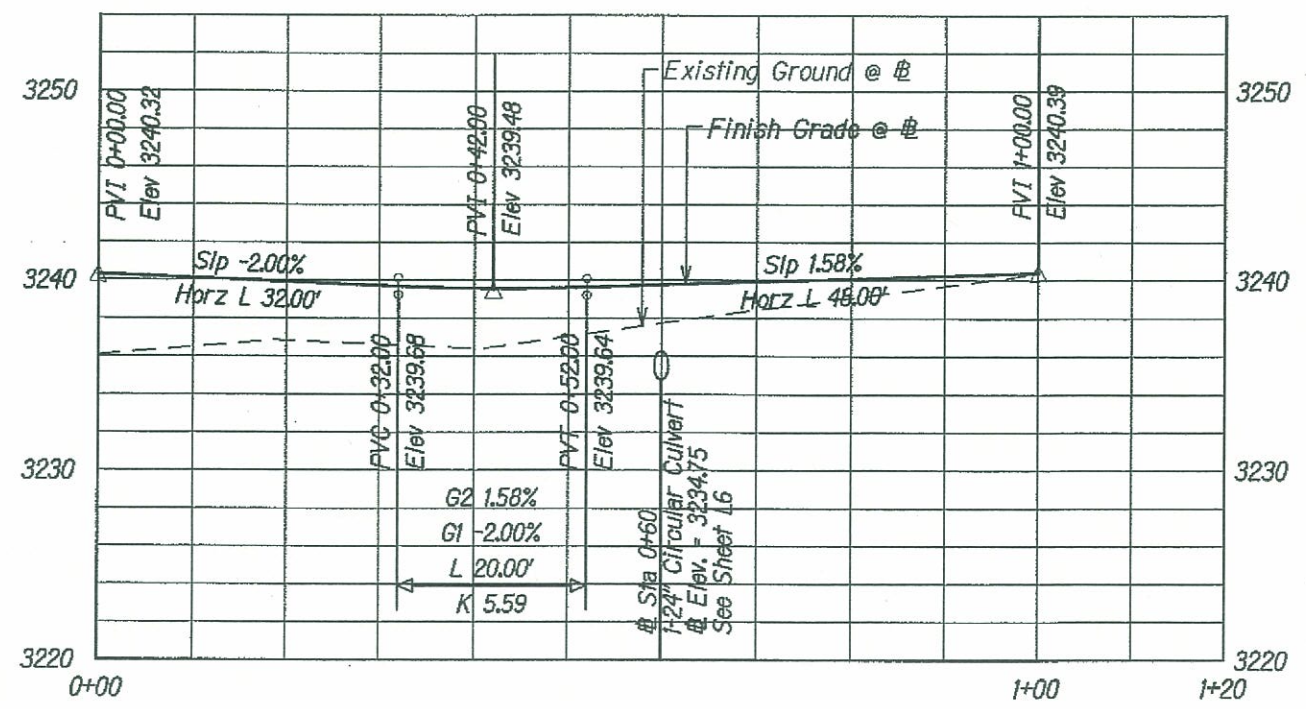
Match existing ground

* Catch slopes using the slope selection table on plan sheet B2.

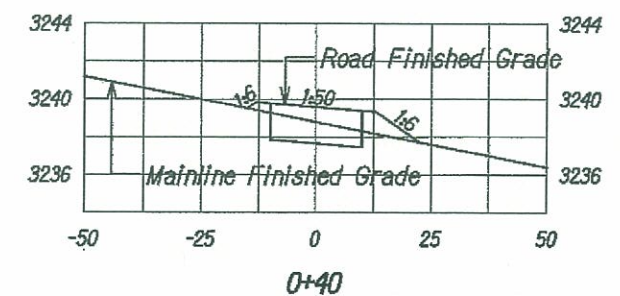
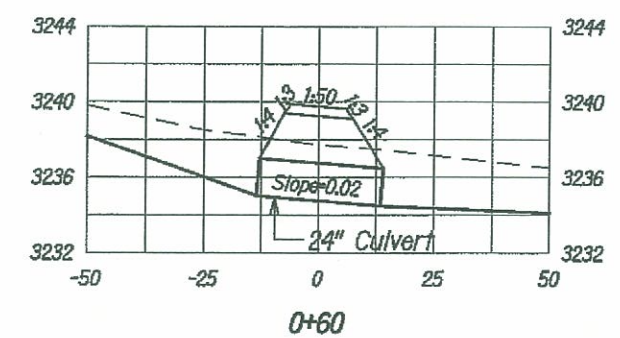
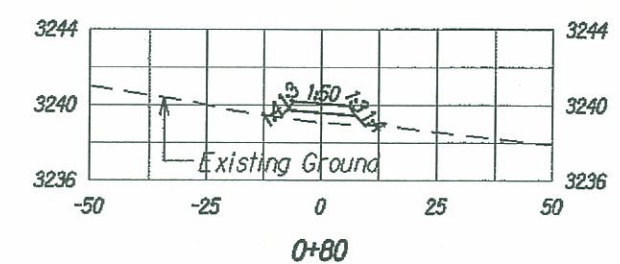
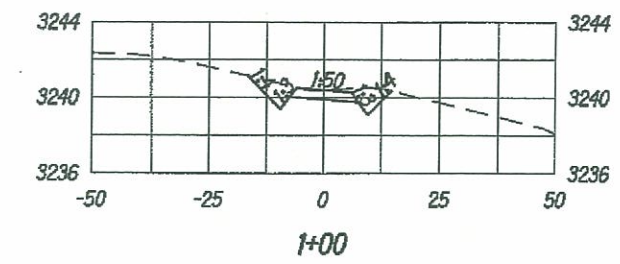
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E17	E20



PLAN
Scale: 1"=40'



PROFILE
Scale: Horiz. 1"=20'
Vert. 1"=10'



CROSS SECTIONS

Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 16 CY
Fill: 44 CY

The work was prepared by me or under my supervision and construction of this project will be under my observation.
Expiration Date of License 4/30

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 6
@ STA 1471+08

Scale: As Noted Date: June 5, 2009

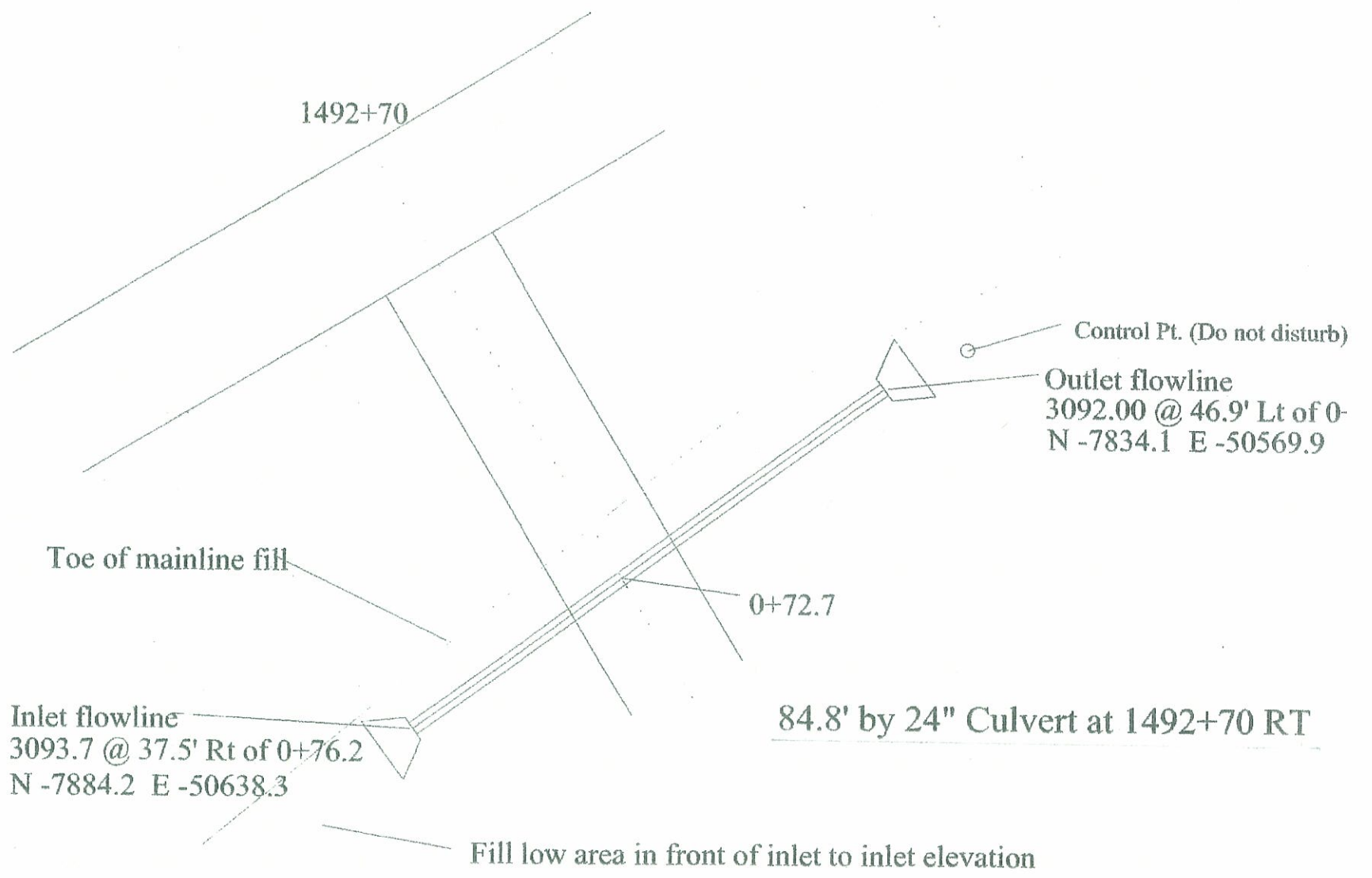
SHEET No. 1 OF 1

Approach Road: 1492+70 RT
Staking Notes

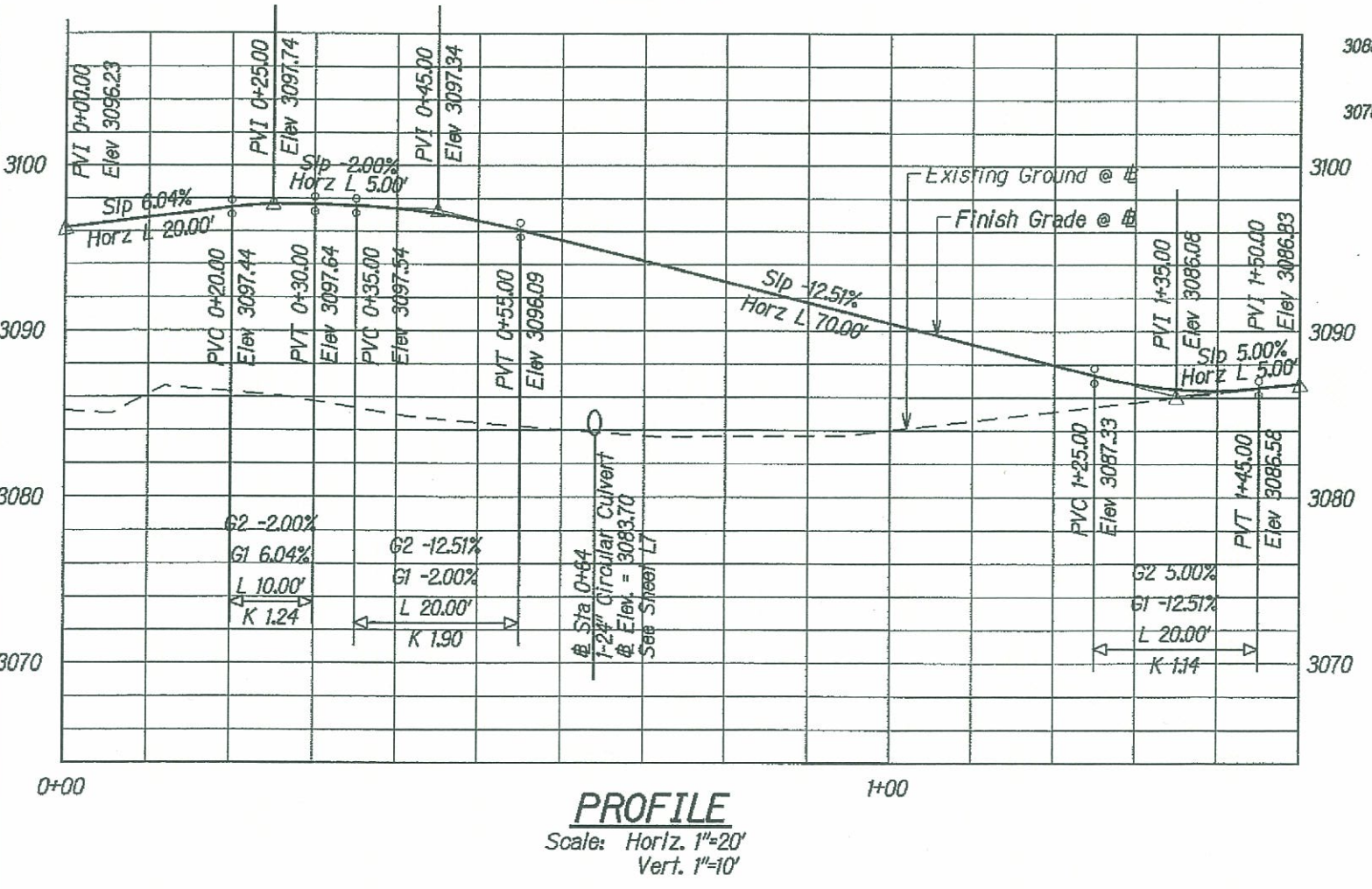
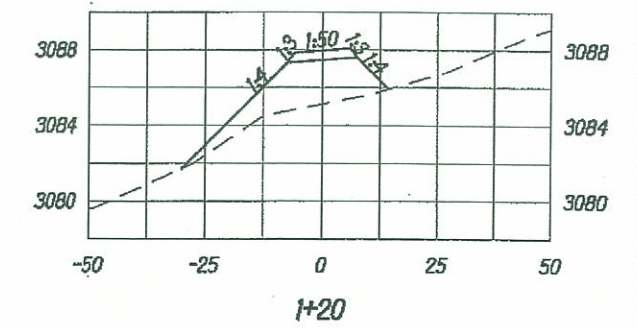
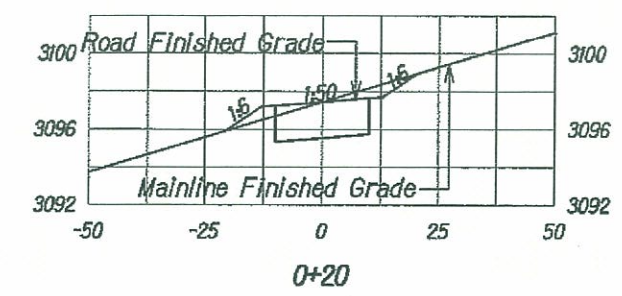
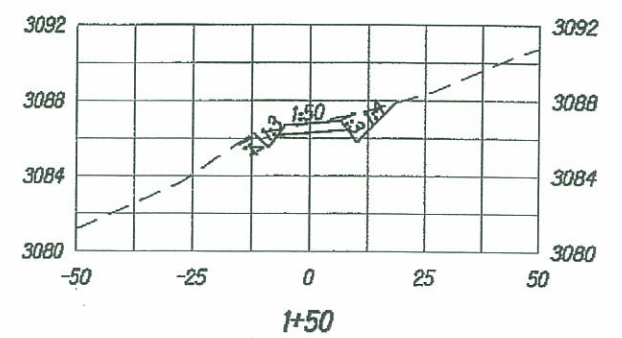
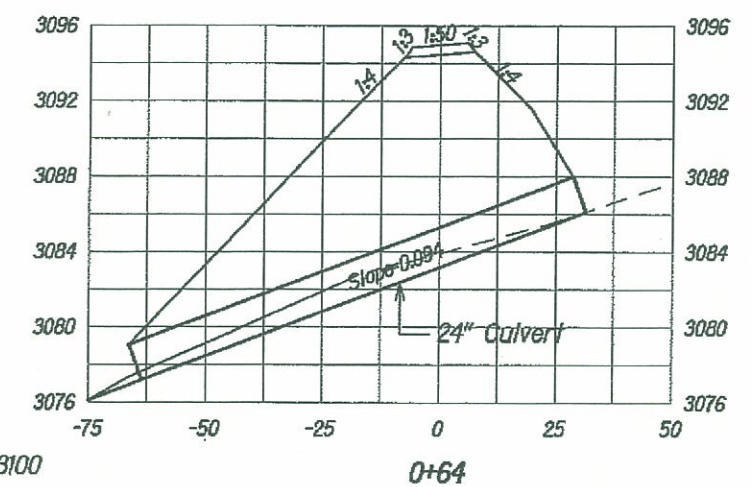
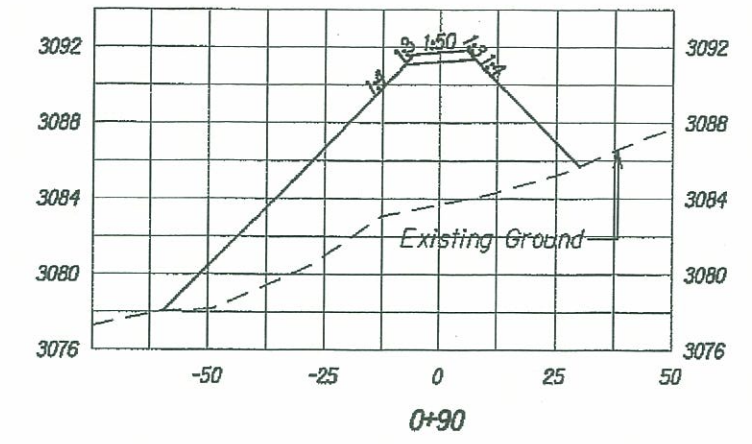
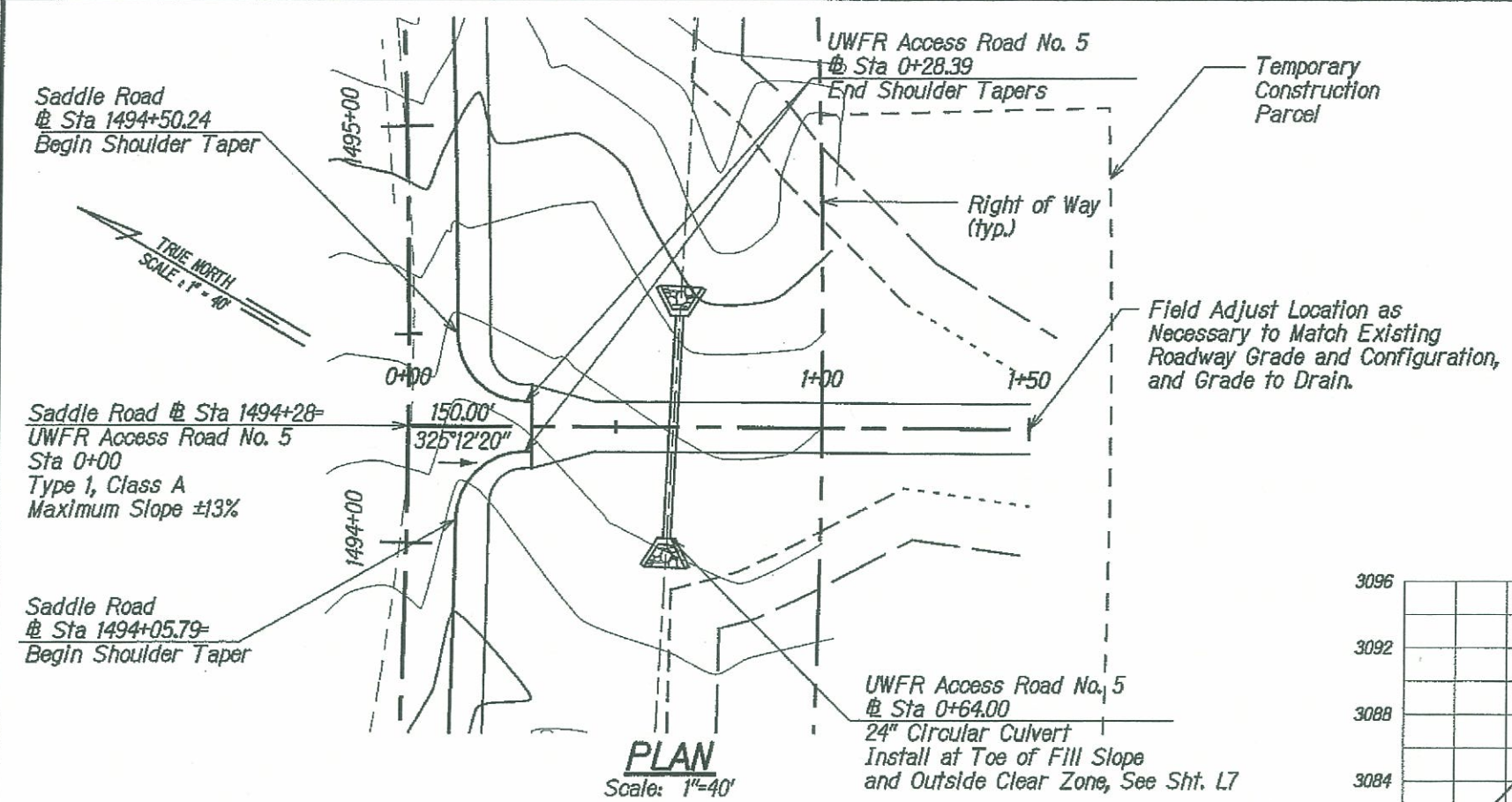
Feb. 28, 2011
(84.8' by 24" culvert pipe)

Description	Station	Elevation	Offset	Northing	Easting
Subgrade Elevations:					
3' Spacing	0+32.0	3106.12	-13.00	-7820.38	-50617.64
Lt Edge Pvmt2	0+32.0	3106.18	-10.01	-7821.91	-50620.20
Lt Edge Pvmt	0+32.0	3105.26	-10.00	-7821.92	-50620.21
Centerline	0+32.0	3105.76	0.00	-7827.05	-50628.80
Rt Edge Pvmt	0+32.0	3106.26	10.00	-7832.18	-50637.38
Rt Edge Pvmt2	0+32.0	3107.18	10.01	-7832.18	-50637.39
3' Spacing	0+32.0	3107.12	13.00	-7833.72	-50639.95
The following elevations are to finished grade:					
Lt Slope Stake	0+50.0	*			
Lt Shoulder	0+50.0	3105.50	-9.50	-7837.63	-50611.41
Centerline	0+50.0	3105.69	0.00	-7842.50	-50619.56
Rt Shoulder	0+50.0	3105.88	9.50	-7847.37	-50627.72
Rt Slope Stake	0+50.0	*			
Lt Slope Stake	0+68.0	*			
Lt Shoulder	0+68.0	3104.10	-9.00	-7853.34	-50602.60
Centerline	0+68.0	3104.28	0.00	-7857.95	-50610.33
Rt Shoulder	0+68.0	3104.46	9.00	-7862.57	-50618.05
Rt Slope Stake	0+68.0	*			
Lt Slope Stake	0+95.0	*			
Lt Shoulder	0+95.0	3101.97	-9.00	-7876.51	-50588.75
Centerline	0+95.0	3102.15	0.00	-7881.13	-50596.48
Rt Shoulder	0+95.0	3102.33	9.00	-7885.75	-50604.21
Rt Slope Stake	0+95.0	*			
Lt Slope Stake		*			
Lt Shoulder	1+20.000	3100.01	-9.00	-7897.98	-50575.93
Centerline	1+20.000	3100.19	0.00	-7902.59	-50583.66
Rt Shoulder	1+20.000	3100.37	9.00	-7907.21	-50591.39
Rt Slope Stake		*			
Lt Slope Stake		*			
Lt Shoulder	1+50.000	3098.82	-9.00	-7923.73	-50560.55
Centerline	1+50.000	3099.00	0.00	-7928.35	-50568.27
Rt Shoulder	1+50.000	3099.18	9.00	-7932.96	-50576.00
Rt Slope Stake		*			

* Stake slopes on 4:1 ratio or flatter



STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E18	E20



CROSS SECTIONS Earthwork Quantities:
 Scale: Horiz. 1"=40' Cut: 2 CY
 Vert. 1"=10' Fill: 1769 CY

The work was prepared by me or under my supervision and construction of this project will be under my observation.
 Expiration Date of License 3/10

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 CENTRAL FEDERAL LANDS HIGHWAY DIVISION

UPPER WAIAKEA FOREST RESERVE
ACCESS ROAD NO. 5
@ STA 1494+28

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

APPROACH ROAD 1526+68 LT Rev. 5-11-2011

Station 0+45.00 Surface BOTTOM OF 5" PAVEMENT
-6107.1368277 N -47719.871566 E Azimuth = 351°55'42.0"

FC					TOP					TOP					
Elev					2893.60	2893.18	2893.10	2892.98	2892.86	2892.78	2893.20				
Off					-10.409	-10.001	-6.0	0.0	6.0	10.001	10.426				
Slope					50.00:1	50.00:1	50.00:1		-50.00:1	-50.00:1	-50.00:1				

Station 0+60.00 Surface FINISH GRD
-6092.2854295 N -47721.9777405 E Azimuth = 351°55'42.0"

FC						PSH	PCL	PSH							
Elev						2892.80	2892.68	2892.56							
Off						-6.0	0.0	6.0							
Slope						50.00:1		-50.00:1							

Station 0+75.00 Surface FINISH GRD
-6077.4340313 N -47724.0839151 E Azimuth = 351°55'42.0"

FC						PSH	PCL	PSH							
Elev						2891.94	2891.82	2891.70							
Off						-6.0	0.0	6.0							
Slope						50.00:1		-50.00:1							

Station 1+00.00 Surface FINISH GRD
-6052.6817009 N -47727.5942061 E Azimuth = 351°55'42.0"

FC						PSH	PCL	PSH							
Elev						2890.493	2890.373	2890.253							
Off						-6.0	0.0	6.0							
Slope						50.00:1		-50.00:1							

***** End of Report *****

AS-BUILT E19

Profile Name : INT17 Wed Apr 28 13:05:01 2010
Description :

All elevations = finish grade (plan)

K-VALUE		STATION	ELEVATION	GRADE	TOTAL	BACK AHEAD
				PERCENT	VC LEN	VC LEN VC LEN
VPI AT	1	0+00.00	2892.860			
			91.34			
VPC		0+32.00	2891.539	6.0238		
VPI AT	2	0+42.00	2895.399		20.000	10.000 10.000
			93.87			
1.390252						
VPT		0+52.00	2894.554	-2.3621		
				-5.741 %		
VPI AT	3	1+00.00	2890.540			

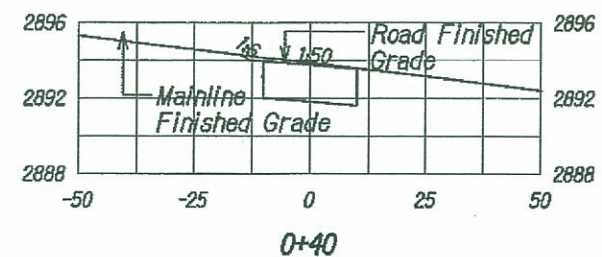
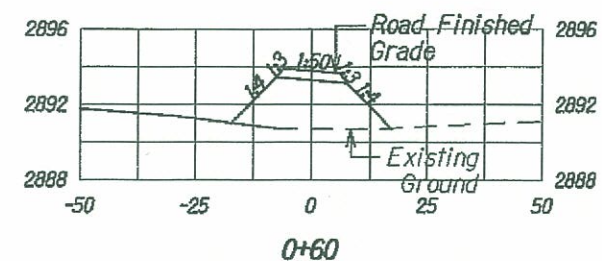
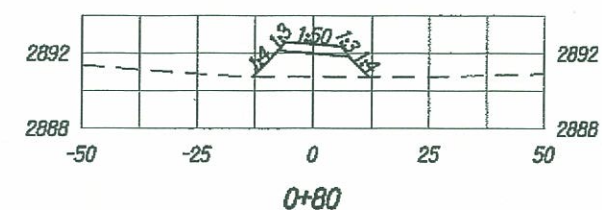
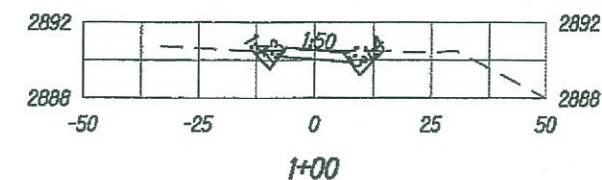
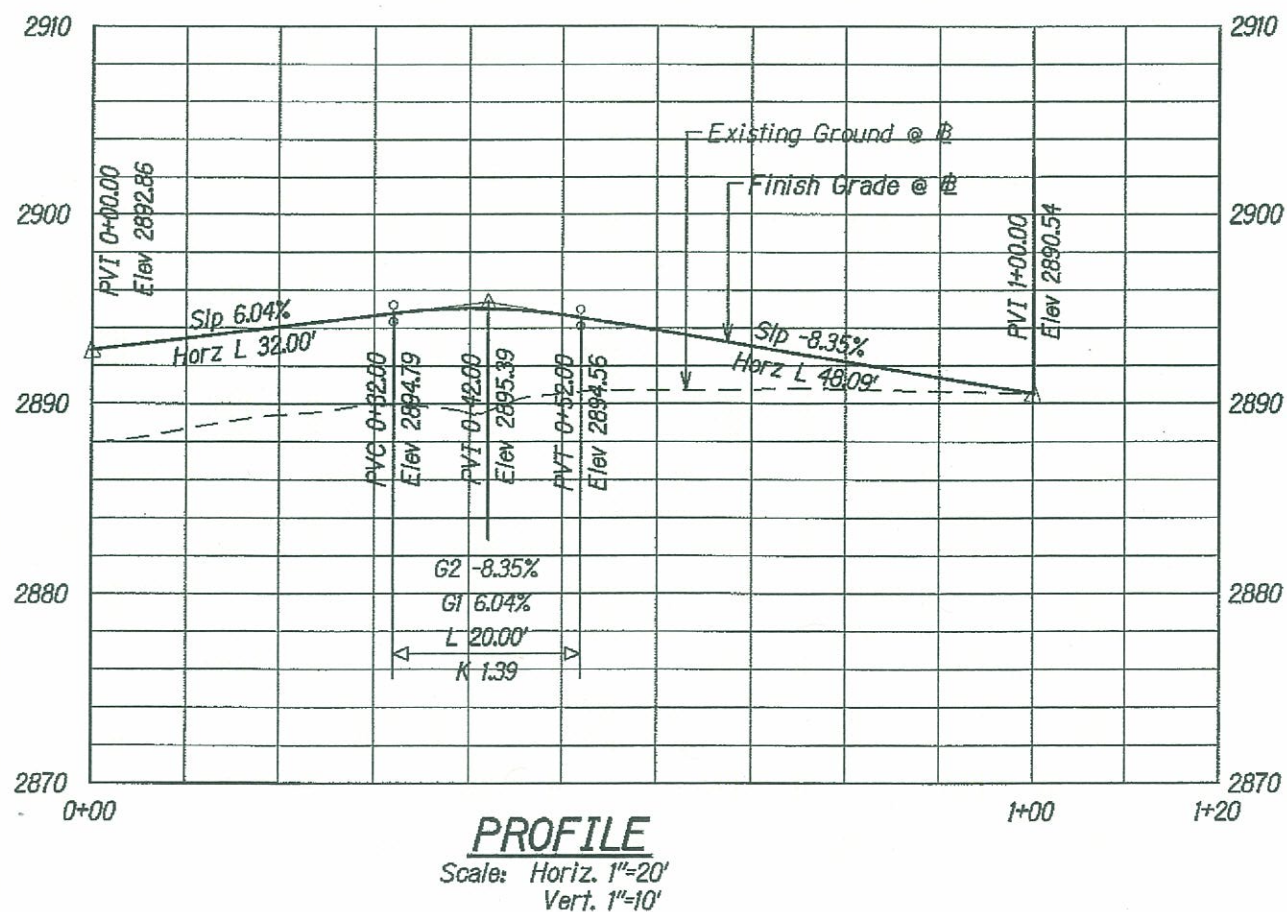
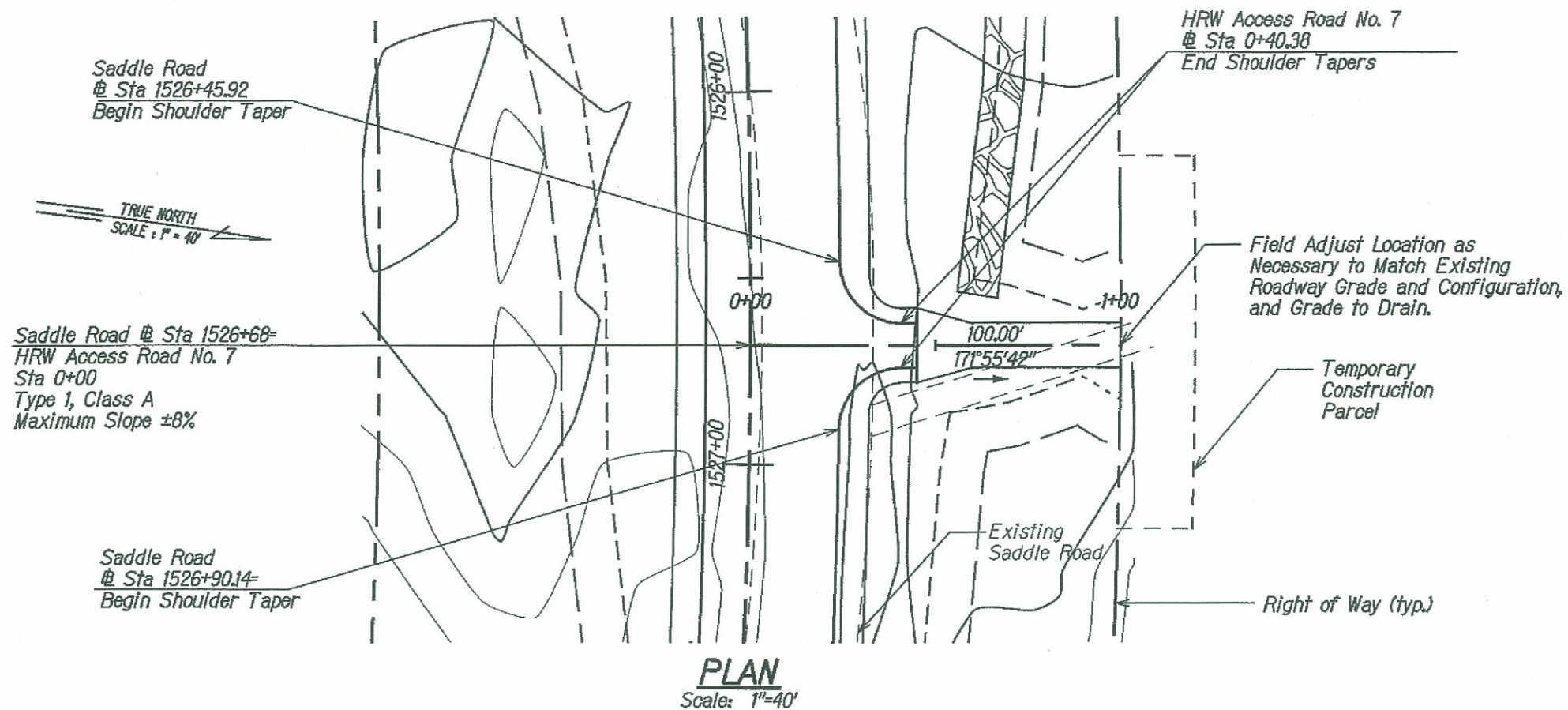
End of Report Profile.

CAiCE Visual Roads Design System
Profile Elevation Report

Profile Name : INT17 Wed Apr 28 13:05:01 2010
Description :

STATION	ELEVATION	GRADE PERCENT	LOCATION
2891.34 0+00.00	2892.860	6.024	BETWEEN VPI 1 AND VPI 2
0+25.00	2894.366	6.024	BETWEEN VPI 1 AND VPI 2
0+42.37	2895.340	CREST	ON VERTICAL CURVE AT VPI 2
2893.56 0+45.00	2894.363	-3.227	ON VERTICAL CURVE AT VPI 2
0+60.00	2894.187	-6.362	ON VERTICAL CURVE AT VPI 2
2892.84 0+60.00	2893.895	-6.362	BETWEEN VPI 2 AND VPI 3
2891.98 0+75.00	2892.651	-6.362	BETWEEN VPI 2 AND VPI 3
1+00.00	2890.540	-3.362	BETWEEN VPI 2 AND VPI 3

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E19	E20



CROSS SECTIONS
Scale: Horiz. 1"=40'
Vert. 1"=10'

Earthwork Quantities:
Cut: 11 CY
Fill: 73 CY



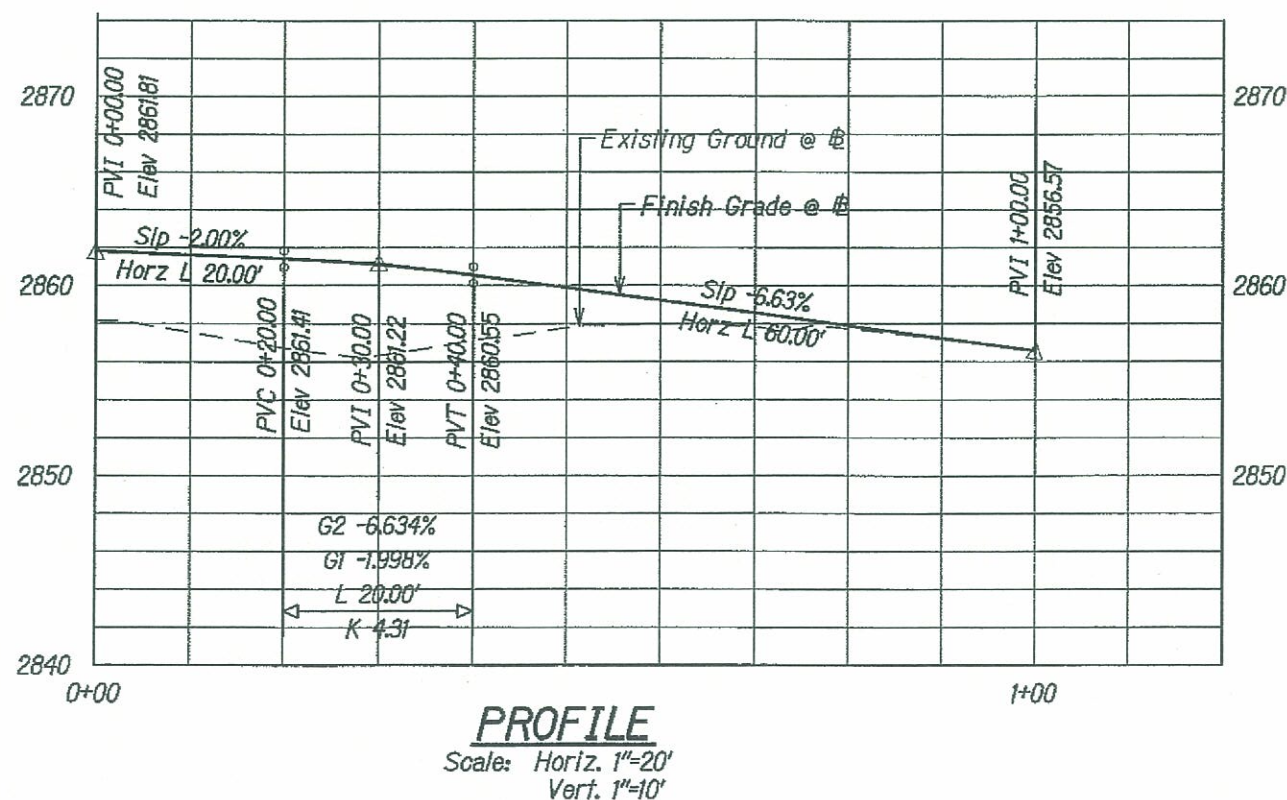
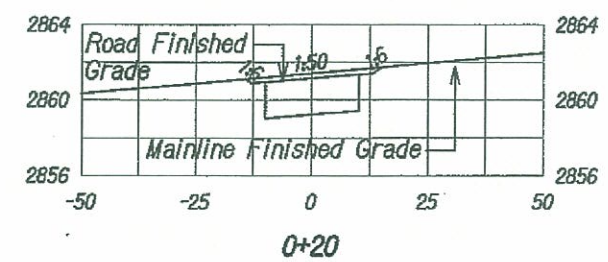
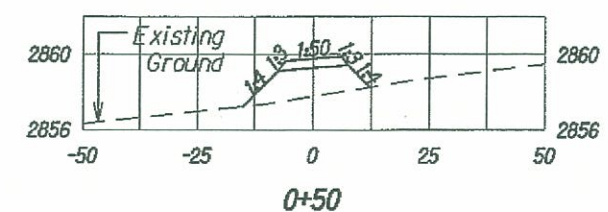
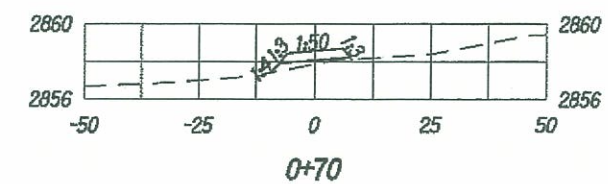
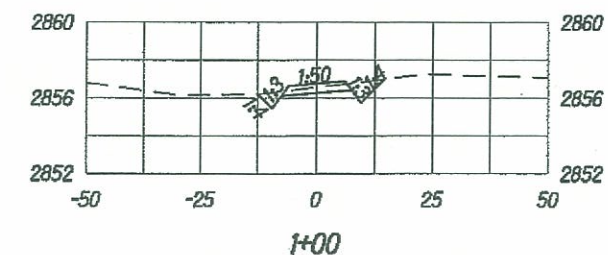
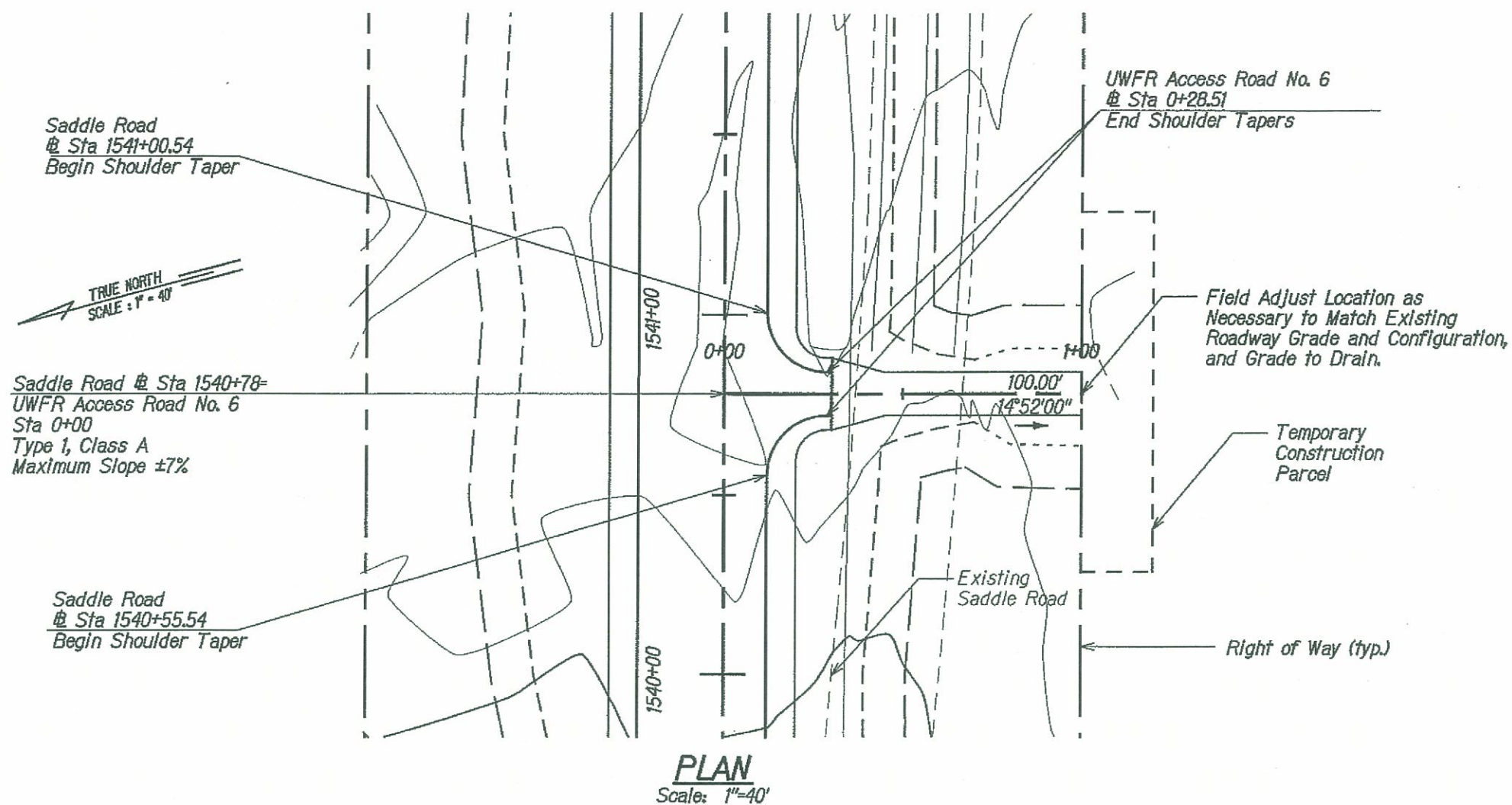
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

**HILO RESTRICTED WATERSHED
ACCESS ROAD NO. 7
@ STA 1526+68**

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI HP & TI 200(2)	E20	E20



CROSS SECTIONS Earthwork Quantities:
Scale: Horiz. 1"=40' Cut: 27 CY
Vert. 1"=10' Fill: 63 CY

The work was prepared by me or under my supervision and construction of this project will be under my observation.

Expiration Date of License 4/10

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

UPPER WAIAKEA FOREST RESERVE

ACCESS ROAD NO. 6

@ STA 1540+78

Scale: As Noted Date: June 5, 2009

SHEET No. 1 OF 1

HI HP & TI 200(2), Saddle Road

Item 15705-1400, Sediment Log

STA	to	STA	LEFT SIDE	EACH	COMMENT
1295+50		1296+50	LT	3	50' spacing
1299+80			LT	2	Across diversion swale
1303+80			LT	2	Across diversion swale
1305+85			LT	2	Across diversion swale
1316+75		1317+00	LT	2	25' spacing
1351+25		1351+50	LT	2	25' spacing
1359+80			LT	2	Across diversion swale
1365+10			LT	2	Across diversion swale
1369+30			LT	2	Across diversion swale
1401+60			LT	2	Across diversion swale
1403+75			LT	2	Across diversion swale
1408+00			LT	2	At end diversion swale at toe of fill
1434+50		1438+00	LT	10	APPROX; determine after pavement complete
1439+00			LT	2	
1446+25			LT	2	Across diversion swale
1446+50			LT	2	Across diversion swale
1448+00			LT	2	Across diversion swale
1448+25			LT	2	Across diversion swale
1472+30			LT	2	Across diversion swale
1474+25			LT	2	Across diversion swale

1479+25		LT	2	Across diversion swale
1482+95		LT	2	Across diversion swale
1483+90		LT	2	Across diversion swale
1491+50		LT	2	Across diversion swale
1492+25		LT	2	Across diversion swale
1553+50		LT	3	Create a diversion swale using equipment hours approximately 50' before end of project
1554+00	1556+00	LT	4	APPROX; determine when pavement complete, see Plan s

TOTAL	(each)	66	6	396
LENGTH	(feet)	11		
TOTAL	(feet)	726		

HI HP & TI 200(2), Saddle Road

Item 15705-1400, Sediment Log

STA	TO	STA	RIGHT SIDE	EACH	COMMENT
1288+25		1288+50	RT	2	25' spacing
1321+50			RT	2	Replace existing
1323+00			RT	0	Remove existing
1327+50		1327+75	RT	2	25' spacing
1366+00			RT	1	Across diversion swale
1373+50			RT	1	Across diversion swale
1398+00		1398+25	RT	2	In ditch line
1414+50			RT	2	Across diversion swale
1443+40			RT	2	Across diversion swale
1450+90			RT	2	Across diversion swale
1454+00		1457+00	RT	8	100' spacing, 2 @ each per Alternate section /
1479+70			RT	2	Across diversion swale
1489+25			RT	2	Across diversion swale
1489+95			RT	2	
1538+50		1540+00	RT	4	50' spacing, at toe
1543+50		1544+00	RT	2	50' spacing, at toe
1546+35			RT	1	Across diversion swale
1554+00		1556+00	RT	4	APPROX; determine when pavement complet