GENERAL INFORMATION

THIS SURVEY WAS CONVERTED TO ENGLISH UNITS. THE ORIGINAL SURVEY WAS IN METRIC UNITS. THE DATUM PLANE FOR THIS SURVEY IS THE SAME AS THAT OF JOHN ADAMS FEB-1996 @ APR-1996 SURVEY ON EAST BOUND OFF RAMP @ EAST BOUND ON RAMP ON I-80 AT THE US # 65 INTERCHANGE. PROJ # IM-80-5(181)--13-77

BM # 503 THIS CONVERTED SURVEY ELEVATION 972.642
= BM # 503 JOHN ADAMS FEB @ APR 1996 SURVEY ELEVATION 296.462

BM # 504 THIS SURVEY ELEVATION 995.067
= BM # 504 JOHN ADAMS FEB @ APR 1996 SURVEY ELEVATION 303.297

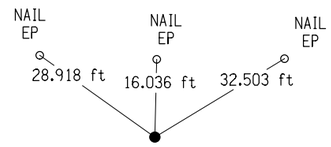
THIS SURVEY IS A RETRACE OF THE CENTERLINE OF THE MEDIAN OF I-80

THE DATUM STATIONING FOR THIS SURVEY WAS OBTAINED BY FINDING
POT STA 1293+01.21 (ENGLISH) CENTERLINE OAK HILL ROAD
= POT STA 1293+01.21 (ENGLISH) THIS SURVEY
THIS STATIONING WAS CARRIED THROUGHOUT THIS SURVEY ON I-80.

POT STA 1293+01.21 THIS SURVEY (ENGLISH)
= POT 1293+01.21 (ENGLISH) I-80 I-IG-80-4(2)142 ASBUILT PLANS
YC 1640416.666 XC 1640416.666 WAS USED FOR ASSUMED COORDINATES ON THIS POINT

BENCHMARKS				ELEVATION
No. 505	Sta. 1268+53.159	71.38 Rt.	CUT X S. BOLT OF FIRST LIGHT PO WEST OF OAK HILL BRIDGE	958.325
No. 506	Sta. 1278+01.622	74.38 Rt.	CUT X CONC BASE OF FIRST OVERHEAD SIGN W. OF THE OAK HILL BRG	964.558
No. 503	Sta. 1304+75.025	206.13 Rt.	N. BOLT FIRST STEEL LAMP POLE W. OF THE HWY 65 & OFFRAMP I-80 E.BOUND	972.642
No. 510	Sta. 1315+12.867	11.15 Lt.	FD IHC BM SW WING OF THE W.BOUND BRG OVER HWY 65	994.795
No. 504	Sta. 1326+19.237	26.13 Rt.	FD IHC SW WING HWY 65 N. BRG OVER I-80 W.BOUND	995.067
No. 515	Sta. 1341+24.319	97.92 Lt.	CUT X FIRST CONC SIGN BASE E. OF THE HWY 65 N. BRG	971.629
No. 516	Sta. 1363+52.857	84.33 Rt.	CUT X OUTLET HDWL 1.83 X 1.83 RCB????????	951.399
No. 517	Sta. 1382+46.744	138.19 Rt.	SET (2)60DD NAIL COR POST	970.077
No. 507	Sta. 4572+73.234	14.60 Lt.	CUT X SW WING OAK HILL BRG OVER I-80	988.489
No. 508	Sta. 7868+11.387	149.95 Rt.	CUT X CONC BASE LAMP POLE	964.253
No. 509	Sta. 7874+18.247	67.44 Lt.	FD IHC BM SW WING OF E.BOUND BRG OVER HWY 65	992.600
No. 511	Sta. 7892+65.519	239.19 Rt.	CUT X E.BOLT STEEL LAMP POLE	973.522
No. 512	Sta. 7906+79.873	166.63 Rt.	SET (2)60DD NAIL COR POST	979.604
No. 513	Sta. 7917+87.813	67.34 Lt.	SET RR SPK E.SIDE P.POLE	972.557
No. 514	Sta. 7926+16.081	67.67 Lt.	SET RR SPK E.SIDE P.POLE	959.614

PT 1288+39.49
SET HINGE NAIL
XC=1639954.948, YC=1640416.667



POT 1293+01.21
CUT X BRIDGE FLOOR
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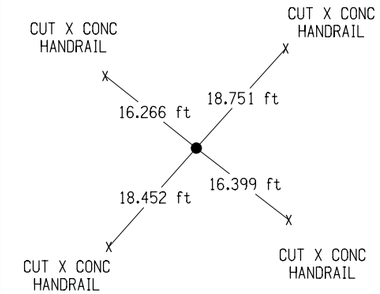

POT 1305+44.26
SET IRON PIN
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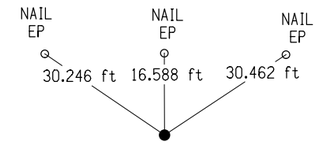

POT 1315+92.38
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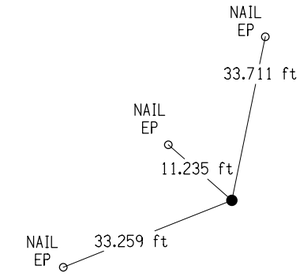

POT 1318+71.29
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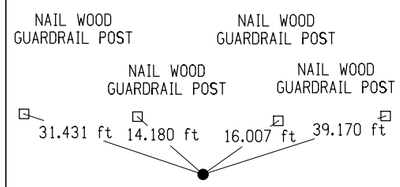

POT 1325+92.47
SET IRON PIN
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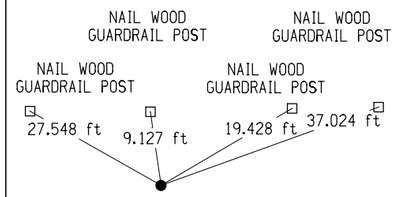
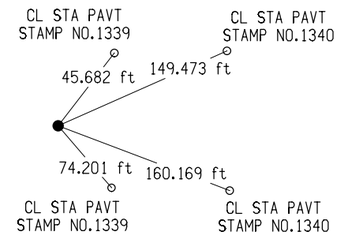


POT 1338+14.18
SET IRON PIN
XC=1644929.637, YC=1640416.667



PI 1351+06.10
SET IRON PIN
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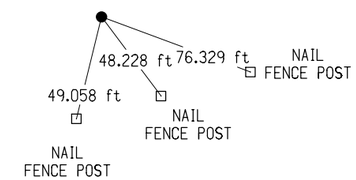

PT 1360+57.08
SET IRON PIN
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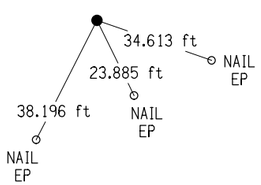
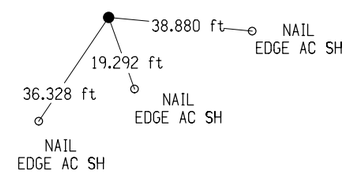
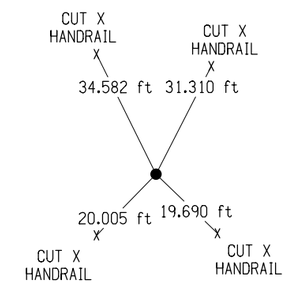


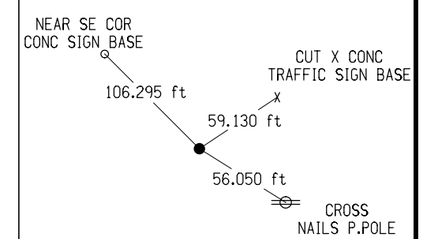
POT 1374+39.83
SET IRON PIN
XC=1648371.526, YC=1641399.263



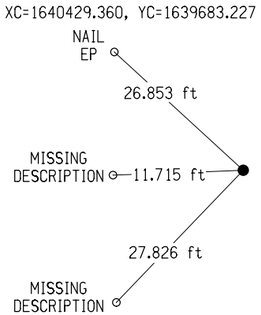
POT 1402+26.16
FOUND X IN BRIDGE FLOOR
XC=1650905.740, YC=1642557.466



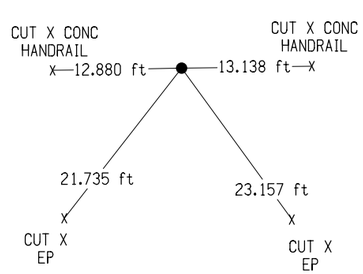
PI 1390+22.728
FOUND DISK
XC=1640438.855, YC=1639142.716



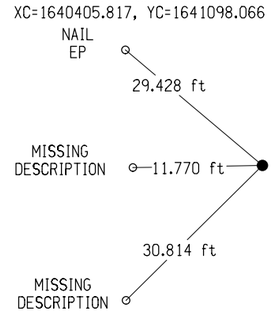
POT 1391+87.501
SET HINGE NAIL
XC=1640429.360, YC=1639683.227



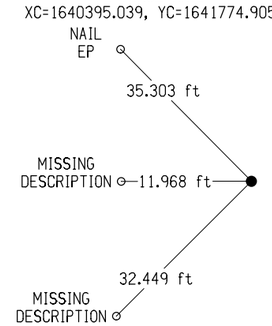
PI 1393+76.552
SET HINGE NAIL
XC=1640418.471, YC=1640303.373



POT 1396+18.805
SET HINGE NAIL
XC=1640405.817, YC=1641098.066



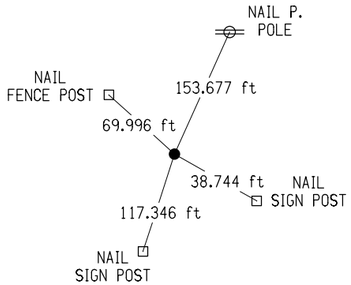
PI 1398+25.132
FD HINGE NAIL
XC=1640395.039, YC=1641774.905



DETAILS OF REFERENCE INFORMATION

All References Plumb Distances
(unless otherwise noted)

PI 2390+89.142
SET HINGE NAIL
XC=1640457.667, YC=1637938.371



POT 2394+09.181
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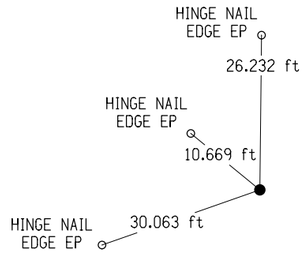
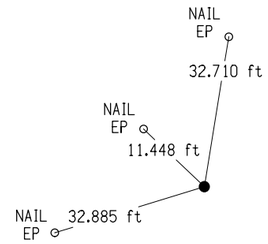
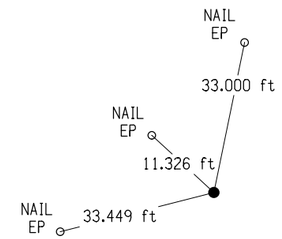


POT 2406+84.085
SET HINGE NAIL
XC=1643975.167, YC=1641812.487



PI 2412+01.429
FD PK NAIL
XC=1645116.122, YC=1643069.115



POT 2416+43.788
SET PK NAIL
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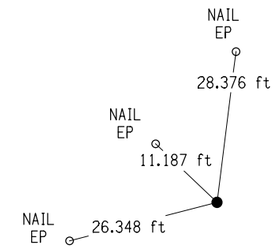

PI 2418+26.458
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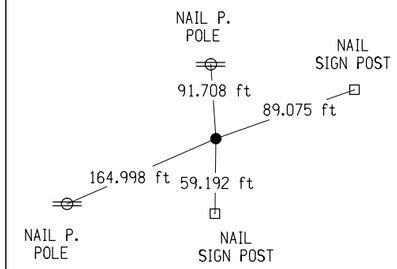
XC=1646494.391, YC=1644587.472



DETAILS OF REFERENCE INFORMATION

All References Plumb Distances
(unless otherwise noted)

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
I80																			
ML1		1235+00.00	1,639,464.95	1,634,710.40															
ML1								1272+24.23	1,640,246.54	1,638,351.69	1280+34.88	1,640,416.67	1,639,144.29	1288+39.49	1,640,416.67	1,639,954.95			
ML2								1341+24.98	1,640,416.67	1,645,240.43	1351+06.10	1,640,416.67	1,646,221.55	1360+57.08	1,640,824.49	1,647,113.90			
ML2		1402+26.16	1,642,557.46	1,650,905.74															
Median Width Transition Eastbound Lanes																			
CUR21006								21341+24.98	1,640,401.67	1,645,240.43	21351+33.43	1,640,401.67	1,646,248.88	21361+10.89	1,640,820.85	1,647,166.07			
21008		21366+07.87	1,641,027.43	1,647,618.08															
Median Width Transition Eastbound Lanes																			
CUR21001								11341+24.98	1,640,431.67	1,645,240.43	11350+78.78	1,640,431.67	1,646,194.23	11360+03.28	1,640,828.14	1,647,061.73			
21002		11360+95.15	1,640,866.33	1,647,145.29															
21003		11365+92.13	1,641,072.91	1,647,597.30															
US 65 Ramp B																			
34001								2537+58.93	1,638,200.55	1,636,261.68	2551+46.89	1,639,457.84	1,635,673.78	2558+22.39	1,639,864.71	1,637,000.76			
34002								2558+22.39	1,639,864.71	1,637,000.76	2559+94.65	1,639,915.21	1,637,165.45	2561+66.69	1,639,951.36	1,637,333.86			
34th Ave. NW																			
2		4549+05.91	1,637,938.37	1,640,457.67															
3		4561+10.40	1,639,142.72	1,640,438.86															
4		4572+71.24	1,640,303.37	1,640,418.47															
5		4587+42.95	1,641,774.91	1,640,395.04															
US 65/Hubbell Ave.																			
HUBBELL1		7844+11.63	1,637,938.37	1,640,457.67															
HUBBELL2		7913+41.69	1,643,069.12	1,645,116.12															
HUBBELL3		7933+92.31	1,644,587.48	1,646,494.39															
Hubbell Ramp A																			
41001		11321+30.12	1,641,279.89	1,643,491.60															
41002								11327+44.45	1,640,866.94	1,643,946.42	11332+07.91	1,640,555.39	1,644,289.55	11336+36.37	1,640,524.56	1,644,751.99			
41003		11337+10.00	1,640,519.67	1,644,825.45															
Hubbell Ramp A Ret_1																			
41011		0+00.00	1,641,185.93	1,643,612.94															
41012								0+00.00	1,641,185.93	1,643,612.94	0+65.00	1,641,229.63	1,643,564.82	1+02.10	1,641,277.75	1,643,608.51			
41013		1+02.10	1,641,277.75	1,643,608.51															
Hubbell Ramp A Ret_3 (Median Crossing)																			
41101		0+00.00	1,641,159.36	1,643,398.37															
41102								0+00.00	1,641,159.36	1,643,398.37	0+59.08	1,641,203.10	1,643,438.08	1+16.03	1,641,224.44	1,643,493.18			
41103		1+16.03	1,641,224.44	1,643,493.18															
41104		1+29.58	1,641,215.33	1,643,503.21															
Hubbell Ramp B																			
42001								2298+50.00	1,640,312.67	1,640,965.45	2303+82.83	1,640,277.22	1,641,497.11	2309+13.61	1,640,161.72	1,642,017.27			
42002								2309+13.61	1,640,161.72	1,642,017.27	2310+72.80	1,640,127.21	1,642,172.67	2312+24.82	1,640,020.20	1,642,290.53			
42003		2312+67.27	1,639,991.67	1,642,321.96															
Hubbell Ramp B Ret_1 (Median Crossing)																			
44120		0+00.00	1,640,060.31	1,642,416.69															
44121								0+00.00	1,640,060.31	1,642,416.69	0+22.47	1,640,043.67	1,642,401.59	0+44.91	1,640,025.74	1,642,388.03			
44122								0+44.91	1,640,025.74	1,642,388.03	0+63.97	1,640,010.54	1,642,376.54	0+55.83	1,640,019.84	1,642,393.18			
44123								0+55.83	1,640,019.84	1,642,393.18	1+13.02	1,640,047.74	1,642,443.10	1+69.22	1,640,090.09	1,642,481.55			
44124		1+69.22	1,640,090.09	1,642,481.55															
Hubbell Ramp B Ret_3																			
42050		0+00.00	1,640,081.24	1,642,187.98															
42051								0+00.00	1,640,081.24	1,642,187.98	0+35.05	1,640,063.31	1,642,218.10	0+69.78	1,640,038.92	1,642,243.27			
42052								0+69.78	1,640,038.92	1,642,243.27	1+02.56	1,640,016.11	1,642,266.81	1+27.81	1,639,985.42	1,642,255.29			
42053								1+27.81	1,639,985.42	1,642,255.29	1+85.18	1,639,931.72	1,642,235.11	2+41.17	1,639,889.25	1,642,196.55			
42054		2+41.17	1,639,889.25	1,642,196.55															
Hubbell Ramp C																			
43001								3307+75.00	1,640,491.67	1,641,290.45	3314+26.73	1,640,491.67	1,641,942.18	3320+67.10	1,640,698.55	1,642,560.20			
43002								3320+67.10	1,640,698.55	1,642,560.20	3324+12.46	1,640,808.18	1,642,887.70	3327+46.44	1,641,047.86	1,643,136.35			
43003		3333+93.46	1,641,496.90	1,643,602.19															
Hubbell Ramp D																			
44001		4308+85.01	1,639,731.54	1,642,085.77															
44002								4322+59.97	1,640,150.99	1,643,395.19	4328+85.00	1,640,341.67	1,643,990.43	4335+00.00	1,640,341.67	1,644,615.45			

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
Hubbell Ramp D Ret_4																			
44040		0+00.00	1,639,715.79	1,642,190.34															
44041								0+00.00	1,639,715.79	1,642,190.34	0+93.78	1,639,785.23	1,642,253.38	1+83.26	1,639,813.84	1,642,342.69			
44042		1+83.26	1,639,813.84	1,642,342.69															
Hubbel Ramp D2																			
44101		44311+34.33	1,640,000.55	1,642,330.02															
44102								44312+22.33	1,639,941.40	1,642,395.17	44312+87.78	1,639,897.40	1,642,443.63	44313+41.82	1,639,915.28	1,642,506.59			
Hubbel Ramp D2 Ret_1																			
44111		0+00.00	1,639,947.71	1,642,400.90															
44112								0+00.00	1,639,947.71	1,642,400.90	0+21.41	1,639,931.46	1,642,414.84	0+41.71	1,639,925.01	1,642,435.26			
44113								0+41.71	1,639,925.01	1,642,435.26	0+94.16	1,639,909.23	1,642,485.28	1+43.63	1,639,923.55	1,642,535.73			
44116		10+31.99	1,640,166.23	1,643,390.31															
Hubbell Loop E																			
45001								5319+23.67	1,640,491.67	1,643,039.13	5321+84.04	1,640,491.67	1,643,299.49	5324+43.67	1,640,525.42	1,643,557.66			
45002								5324+43.67	1,640,525.42	1,643,557.66	5332+01.83	1,640,427.14	1,642,805.90	5333+88.33	1,640,953.30	1,643,351.75			
Eastbound Widening (West End)																			
EBDET10		31257+00.00	1,639,876.79	1,636,872.11															
EBDET1								31272+24.23	1,640,196.67	1,638,362.40	31280+22.34	1,640,364.17	1,639,142.73	31288+14.60	1,640,365.65	1,639,940.84			
EBDET2								31300+72.28	1,640,365.65	1,641,198.52	31301+85.27	1,640,365.65	1,641,311.51	31302+98.03	1,640,353.08	1,641,423.80			
EBDET11		31307+74.43	1,640,300.05	1,641,897.24															
Eastbound Widening (East End)																			
EBDET2		41329+88.37	1,640,285.11	1,644,079.06															
EBDET3								41330+61.20	1,640,302.80	1,644,149.71	41333+07.74	1,640,362.67	1,644,388.86	41335+51.80	1,640,362.67	1,644,635.40			
EBDET4								41341+29.15	1,640,362.67	1,645,212.75	41351+37.68	1,640,362.67	1,646,221.28	41361+15.23	1,640,781.89	1,647,138.56			
EBDET3		41380+53.43	1,641,587.54	1,648,901.38															
Westbound Widening (West End)																			
WBW1		51236+00.00	1,639,535.80	1,634,797.47															
WBW1								51272+24.23	1,640,296.40	1,638,340.99	51277+16.04	1,640,399.62	1,638,821.85	51282+06.51	1,640,440.74	1,639,311.94			
Westbound Widening (East End)																			
WBW5		61365+55.00	1,641,076.03	1,647,546.40															
WBW6		61375+00.00	1,641,468.84	1,648,405.89															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
I80																
ML1											12° 06′ 52.08″ RT	810.65′	1,615.26′	7,639.44′	42.89′	
ML2											24° 33′ 42.04″ LT	981.12′	1,932.10′	4,507.06′	105.55′	
Median Width Transition Eastbound Lanes																
CUR21006											24° 33′ 42.07″ LT	1,008.45′	1,985.91′	4,632.59′	108.49′	
Median Width Transition Eastbound Lanes																
CUR21001											24° 33′ 42.07″ LT	953.80′	1,878.30′	4,381.56′	102.61′	
US 65 Ramp B																
34001											98° 00′ 51.26″ RT	1,387.96′	2,063.46′	1,206.23′	632.63′	
34002											4° 55′ 54.09″ RT	172.25′	344.30′	4,000.00′	3.71′	
Hubbell Ramp A																
41002											38° 25′ 25.59″ LT	463.46′	891.93′	1,330.00′	78.44′	
Hubbell Ramp A Ret_1																
41012											90° 00′ 00.00″ RT	65.00′	102.10′	65.00′	26.92′	
Hubbell Ramp A Ret_3 (Median Crossing)																
41102											26° 35′ 32.85″ RT	59.08′	116.03′	250.00′	6.89′	
Hubbell Ramp B																
42001											8° 42′ 20.90″ RT	532.83′	1,063.61′	7,000.00′	20.25′	
42002											29° 43′ 04.69″ RT	159.19′	311.21′	600.00′	20.76′	
Hubbell Ramp B Ret_1 (Median Crossing)																
44121											5° 08′ 48.75″ LT	22.47′	44.91′	500.00′	0.50′	
44122											156° 17′ 25.95″ LT	19.06′	10.91′	4.00′	15.47′	
44123											18° 33′ 45.30″ LT	57.20′	113.39′	350.00′	4.64′	
Hubbell Ramp B Ret_3																
42051											13° 19′ 40.47″ RT	35.05′	69.78′	300.00′	2.04′	
42052											66° 29′ 40.31″ RT	32.78′	58.03′	50.00′	9.79′	
42053											21° 39′ 00.69″ RT	57.36′	113.36′	300.00′	5.44′	
Hubbell Ramp C																
43001											18° 30′ 28.56″ LT	651.73′	1,292.10′	4,000.00′	52.75′	
43002											25° 26′ 24.51″ LT	345.36′	679.34′	1,530.00′	38.49′	
Hubbell Ramp D																
44002											17° 45′ 43.74″ RT	625.03′	1,240.03′	4,000.00′	48.54′	
Hubbell Ramp D Ret_4																
44041											30° 00′ 00.00″ RT	93.78′	183.26′	350.00′	12.35′	
Hubbell Ramp D2																
44102											58° 05′ 26.88″ LT	65.45′	119.49′	117.86′	16.95′	
Hubbell Ramp D2 Ret_1																
44112											31° 51′ 54.14″ LT	21.41′	41.71′	75.00′	3.00′	
44113											33° 22′ 06.91″ LT	52.45′	101.92′	175.00′	7.69′	
Hubbell Loop E																
45001											7° 26′ 54.43″ LT	260.37′	520.00′	4,000.00′	8.46′	
45002											216° 29′ 58.64″ LT	758.16′	944.66′	250.00′	1,048.31′	
US 65 Ramp B																
34001											98° 00′ 51.26″ RT	1,387.96′	2,063.46′	1,206.23′	632.63′	
34002											4° 55′ 54.09″ RT	172.25′	344.30′	4,000.00′	3.71′	
Eastbound Widening (West End)																
EBDET1											12° 00′ 28.51″ RT	798.11′	1,590.37′	7,588.44′	41.85′	
EBDET2											6° 23′ 25.47″ RT	112.99′	225.74′	2,024.00′	3.15′	
Eastbound Widening (East End)																
EBDET3											14° 03′ 16.39″ RT	246.54′	490.60′	2,000.00′	15.14′	
EBDET4											24° 33′ 42.07″ LT	1,008.53′	1,986.08′	4,633.00′	108.50′	
Westbound Widening (West End)																
WBW1											7° 19′ 05.77″ RT	491.81′	982.28′	7,690.44′	15.71′	

ISLAND DATA

101-13
04-20-04

Point No.	Station	Offset	Remarks
A	2312+14.15	16.8149	Chain HUB B
B	2312+39.72	15.934	Chain HUB B
B	7871+69.07	27.5495	Chain HUBBELL
C	7871+37.81	27.0433	Chain HUBBELL

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
I80	ML1	7639	2.8	221	197	PV-306	1268+72.53	1269+11.93	1270+69.53	1272+27.13	1272+66.53	1272+90.53			1272+24.23				
							1291+91.19	1291+51.79	1289+94.19	1288+36.59	1287+97.19	1287+73.19			1288+39.49				
	ML2																		See CUR21006 and CUR21001 for
																			superelevation
MW Trans. (EB)	CUR21006	4382	4.6	363	197	PV-301	21336+73.89	21338+70.89	21340+67.89	21342+33.89			21341+24.99			21341+86.54	21341+86.54		
							21365+61.99	21363+64.99	21361+67.99	21360+01.99			21361+10.89			21360+49.34	21360+49.34		
MW Trans. (WB)	CUR21001	4633	4.6	363	197	PV-301	1336+73.88	1338+70.88	1340+67.88	1342+33.88			1341+24.98			1341+86.53	1341+86.53		
							11364+54.38	11362+57.38	11360+60.38	11358+94.38			11360+03.28			11359+41.73	11359+41.73		
Hubbell Ramp A	41002	1330	6.0	186	62	PV-303	11326+76.25		11327+44.45	11328+00.25						11327+38.25	11327+38.25		
							11337+04.57		11336+36.37	11335+80.57						11336+42.57	11336+42.57		
Hubbell Ramp B	42001	7000	3.0	93	62	PV-303	2298+46.90		2298+50.00	2298+77.90									
							2310+75.90		2310+72.80	2310+44.90									
	42002	600	6.0	144	48	PV-303	2297+97.20		2298+50.00	2298+93.20						2298+45.20	2298+45.20		
							2311+25.60		2310+72.80	2310+29.60						2310+77.60	2310+77.60		
Hubbell Ramp C	43001	4000	3.6	112	62	PV-303	3307+58.60		3307+75.00	3308+08.60									
							3327+62.84		3327+46.44	3327+12.84									
	43002	1530	6.0	186	62	PV-303	3307+06.80		3307+75.00	3308+30.80						3307+68.80	3307+68.80		
							3328+14.64		3327+46.44	3326+90.64						3327+52.64	3327+52.64		
Hubbell Ramp D	44002	4000	3.6	112	62	PV-303	4322+43.57		4322+59.97	4322+93.57									
							4335+16.40		4335+00.00	4334+66.40									
Hubbell Loop E	45002	250	6.0	137	46	PV-303	5318+73.77		5319+23.67	5319+64.77						5319+19.10	5319+19.10		
							5334+38.23		5333+88.33	5333+47.23						5333+92.90	5333+92.90		
US 65 Ramp B	34001	1206	8.0	261	65	PV-303	2536+41.23		2537+58.93	2538+37.23						2537+06.73	2537+06.73	2538+04.61	
							2562+84.39		2561+66.69	2560+88.39						2562+18.89	2562+18.89	2561+21.02	
EB Widening (W)	EBDET1	7588.44																	Match existing pavement cross-slope
	EBDET2	2024																	Match existing pavement cross-slope
EB Widening (E)	EBDET3	2000																	Match existing pavement cross-slope
	EBDET4	4633																	Match existing pavement cross-slope
WB Widening	WBW1	7690.44																	Match existing pavement cross-slope