

*Horizontal & Vertical
Curve Data*

	Cole Lane	State Line	Wilson Creek	Yorkridge	Jamison Rd	N. Dearborn
Horizontal Curves						
Minimum Radius (ft)	600	965	760	600	965	760
Total Curves (ft)	4710.66	15089.07	8152.72	10355.82	9348.79	22791.11
Total Deficient (ft)	2299.55	5020.56	2595.97	3395.17	5961.70	9620.84
Deficient %	49%	33%	32%	33%	64%	42%
Vertical Curves						
Crest rate or vertical curvature (K-value)	61	114	84	61	114	84
Sag rate of vertical curvature (K-value)	79	115	96	79	115	96
Maximum grade	10%	6%	10%	10%	6%	6%
Minimum grade	0.05%	0.5%	0.05%	0.05%	0.5%	0.5%
Total Curves (ft)	8300	16920	9700	11775	6650	34080
K-Values						
Total Deficient (ft)	3500	12120	6300	4575	1700	16380
Deficient %	42%	72%	65%	39%	26%	48%
Max/Min Grades						
Total Deficient (ft)	1200	2820	650	0	1100	19230
Deficient %	14%	17%	7%	0%	17%	56%

Cole Ln. - Category III Rural Collector

Minimum horizontal radius	600 ft
Crest rate or vertical curvature (K-value)	61
Sag rate of vertical curvature (K-value)	79
Maximum grade	10 %
Minimum grade	0.1 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius (ft)	Minimum Radius Met?
H1	9+66.98	10+64.46	0.21	0.23	97.48	100	NO
H2	11+95.70	15+53.27	0.25	0.32	357.57	800	YES
H3	17+88.87	19+97.17	0.37	0.40	208.30	225	NO
H4	21+94.45	24+17.59	0.44	0.48	223.14	300	NO
H5	26+93.80	28+88.63	0.54	0.57	194.83	2000	YES
H6	33+53.65	38+45.14	0.66	0.75	491.49	850	YES
H7	39+93.09	41+92.61	0.78	0.82	199.52	700	YES
H8	42+51.22	43+95.88	0.83	0.86	144.66	175	NO
H9	46+75.57	49+50.31	0.91	0.96	274.74	350	NO
H10	52+78.71	55+11.36	1.03	1.07	232.65	1000	YES
H11	61+57.66	63+58.38	1.19	1.23	200.72	800	YES
H12	74+18.65	77+41.08	1.43	1.49	322.43	350	NO
H13	79+55.23	82+98.56	1.53	1.60	343.33	225	NO
H14	87+23.80	90+05.51	1.68	1.73	281.71	465	NO
H15	95+49.07	97+82.90	1.83	1.88	233.83	500	NO
H16	105+67.33	106+69.09	2.03	2.05	101.76	2000	YES
H17	109+95.01	114+05.28	2.11	2.19	410.27	3000	YES
H18	126+99.83	128+69.76	2.43	2.46	169.93	500	NO
H19	138+34.11	140+56.41	2.65	2.69	222.30	2500	YES

Cole Ln. - Category III Rural Collector

Minimum horizontal radius	600 ft
Crest rate or vertical curvature (K-value)	61
Sag rate of vertical curvature (K-value)	79
Maximum grade	10 %
Minimum grade	0.1 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	1+18.82	6+18.82	0.05	0.14	3.54	-0.95	500.00	CREST	111	YES	YES
V2	7+62.25	12+62.25	0.17	0.27	-0.95	1.17	500.00	SAG	236	YES	YES
V3	16+66.97	18+66.97	0.34	0.38	1.17	13.72	200.00	SAG	16	NO	NO
V4	18+77.13	19+77.13	0.38	0.40	13.72	3.00	100.00	CREST	9	NO	NO
V5	22+13.40	25+13.40	0.45	0.50	3.00	8.51	300.00	SAG	54	NO	YES
V6	25+46.63	28+46.63	0.51	0.57	8.51	10.00	300.00	SAG	201	YES	YES
V7	30+64.05	35+64.05	0.61	0.70	10.00	7.09	500.00	CREST	172	YES	YES
V8	39+11.85	44+11.85	0.77	0.86	7.09	12.58	500.00	SAG	91	YES	NO
V9	50+30.93	54+30.93	0.98	1.05	12.58	-6.45	400.00	CREST	21	NO	NO
V10	59+07.31	64+07.31	1.15	1.24	-6.45	6.62	500.00	SAG	38	NO	YES
V11	70+33.62	72+33.62	1.36	1.40	6.62	-2.03	200.00	CREST	23	NO	YES
V12	72+61.03	74+61.03	1.40	1.44	-2.03	2.11	200.00	SAG	48	NO	YES
V13	80+54.73	85+54.73	1.55	1.65	2.11	-2.71	500.00	CREST	104	YES	YES
V14	87+90.34	92+90.34	1.69	1.79	-2.71	2.23	500.00	SAG	101	YES	YES
V15	94+07.73	99+07.73	1.81	1.90	2.23	-2.26	500.00	CREST	111	YES	YES
V16	103+51.83	108+51.83	1.99	2.08	-2.26	-3.77	500.00	CREST	331	YES	YES
V17	113+27.08	118+27.08	2.17	2.27	-3.77	2.84	500.00	SAG	76	NO	YES
V18	119+19.01	124+19.01	2.28	2.38	2.84	6.71	500.00	SAG	129	YES	YES
V19	124+67.46	129+67.46	2.39	2.48	6.71	-6.27	500.00	CREST	39	NO	YES
V20	131+28.99	134+28.99	2.51	2.57	-6.27	6.34	300.00	SAG	24	NO	YES
V21	134+43.04	137+43.04	2.57	2.63	6.34	0.76	300.00	CREST	54	NO	YES

State Line Rd. - Category IV Rural Arterial

Minimum horizontal radius	965 ft
Crest rate or vertical curvature (K-value)	114
Sag rate of vertical curvature (K-value)	115
Maximum grade	6 %
Minimum grade	0.5 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H1	26+94.91	31+27.84	3.53	3.61	432.93	900	NO
H2	34+23.14	38+41.03	3.67	3.75	417.89	10000	YES
H3	45+99.88	49+62.25	3.89	3.96	362.37	10000	YES
H4	51+21.73	55+26.45	3.99	4.07	404.72	1000	YES
H5	59+92.03	60+58.70	4.16	4.17	66.67	800	NO
H6	61+84.16	63+27.83	4.19	4.22	143.67	800	NO
H7	64+63.72	74+12.68	4.24	4.42	948.96	1600	YES
H8	74+97.61	76+37.16	4.44	4.47	139.55	300	NO
H9	77+26.83	79+19.03	4.48	4.52	192.20	1500	YES
H10	81+31.30	82+39.20	4.56	4.58	107.90	800	NO
H11	82+86.75	84+76.08	4.59	4.63	189.33	350	NO
H12	86+38.96	87+63.82	4.66	4.68	124.86	1000	YES
H13	88+32.18	90+60.22	4.69	4.74	228.04	350	NO
H14	92+96.73	96+73.11	4.78	4.85	376.38	1200	YES
H15	96+88.09	98+98.41	4.86	4.90	210.32	300	NO
H16	100+05.41	111+74.31	4.92	5.14	1168.90	5000	YES
H17	113+17.14	117+03.57	5.16	5.24	386.43	5000	YES
H18	118+10.40	119+53.82	5.26	5.28	143.42	1000	YES
H19	123+54.68	127+60.28	5.36	5.44	405.60	850	NO
H20	131+28.09	132+81.92	5.51	5.54	153.83	200	NO
H21	138+65.54	141+55.63	5.65	5.70	290.09	800	NO
H22	142+73.70	145+48.67	5.72	5.78	274.97	800	NO
H23	146+63.61	154+05.48	5.80	5.94	741.87	11000	YES
H24	156+58.77	162+65.07	5.99	6.10	606.30	1200	YES
H25	167+21.62	167+88.85	6.19	6.20	67.23	1000	YES
H26	169+10.18	171+42.13	6.22	6.27	231.95	350	NO
H27	172+97.50	176+73.79	6.30	6.37	376.29	300	NO
H28	182+80.65	189+99.97	6.48	6.62	719.32	1800	YES
H29	190+13.78	191+45.09	6.62	6.65	131.31	800	NO
H30	199+38.62	201+28.98	6.80	6.83	190.36	1500	YES
H31	206+85.65	209+36.58	6.94	6.99	250.93	350	NO
H32	227+26.27	229+81.99	7.32	7.37	255.72	500	NO
H33	241+66.66	244+52.92	7.60	7.65	286.26	2000	YES
H34	248+31.73	248+75.81	7.72	7.73	44.08	800	NO
H35	249+49.90	249+78.03	7.75	7.75	28.13	100	NO
H36	250+27.20	253+42.17	7.76	7.82	314.97	1500	YES
H37	262+18.16	264+98.73	7.99	8.04	280.57	1600	YES
H38	267+31.76	269+46.82	8.08	8.12	215.06	800	NO
H39	276+91.81	280+35.80	8.27	8.33	343.99	600	NO

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	imum Radius Met?
H40	286+69.36	288+90.63	8.45	8.49	221.27	300	NO
H41	301+02.83	303+81.65	8.72	8.77	278.82	1500	YES
H42	309+49.55	310+89.83	8.88	8.91	140.28	175	NO
H43	317+85.94	324+06.32	9.04	9.16	620.38	2000	YES
H44	33945.71	35300.65	9.45	9.71	1354.94	3500	YES
H45	35949.23	36030.59	9.83	9.84	81.36	1000	YES
H46	37066.54	37205.19	10.04	10.07	138.65	800	NO

State Line Rd. - Category IV Rural Arterial

Minimum horizontal radius	965 ft
Crest rate or vertical curvature (K-value)	114
Sag rate of vertical curvature (K-value)	115
Maximum grade	6 %
Minimum grade	0.5 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	4+05.89	9+05.89	3.10	3.19	1.21	-1.82	500.00	CREST	165	YES	YES
V2	12+31.40	20+31.40	3.25	3.41	-1.82	1.33	800.00	SAG	254	YES	YES
V3	45+85.07	47+35.07	3.89	3.92	1.33	4.55	150.00	SAG	47	NO	YES
V4	47+55.36	49+55.36	3.92	3.96	4.55	0.50	200.00	CREST	49	NO	YES
V5	51+28.50	55+28.50	3.99	4.07	0.50	4.27	400.00	SAG	106	NO	YES
V6	57+11.05	59+11.05	4.10	4.14	4.27	10.80	200.00	SAG	31	NO	NO
V7	59+46.01	61+46.01	4.15	4.18	10.80	4.80	200.00	CREST	33	NO	NO
V8	63+57.13	65+57.13	4.22	4.26	4.80	11.00	200.00	SAG	32	NO	NO
V9	65+70.32	68+20.32	4.27	4.31	11.00	6.88	250.00	CREST	61	NO	NO
V10	75+23.55	77+23.55	4.45	4.48	6.88	3.13	200.00	CREST	53	NO	NO
V11	77+74.30	80+74.30	4.49	4.55	3.13	10.64	300.00	SAG	40	NO	NO
V12	81+75.73	83+25.73	4.57	4.60	10.64	2.49	150.00	CREST	18	NO	NO
V13	83+39.63	85+39.63	4.60	4.64	2.49	8.43	200.00	SAG	34	NO	NO
V14	89+78.22	92+78.22	4.72	4.78	8.43	0.95	300.00	CREST	40	NO	NO
V15	94+22.96	96+22.96	4.81	4.84	0.95	10.00	200.00	SAG	22	NO	NO
V16	96+35.67	99+35.67	4.85	4.90	10.00	2.05	300.00	CREST	38	NO	NO
V17	113+84.00	115+84.00	5.18	5.21	2.05	-3.59	200.00	CREST	35	NO	YES
V18	115+95.79	118+95.79	5.22	5.27	-3.59	3.26	300.00	SAG	44	NO	YES
V19	120+49.92	122+49.92	5.30	5.34	3.26	-3.76	200.00	CREST	28	NO	YES
V20	122+74.99	124+74.99	5.35	5.38	-3.76	3.87	200.00	SAG	26	NO	YES
V21	124+82.60	126+07.60	5.38	5.41	3.87	-2.05	125.00	CREST	21	NO	YES
V22	127+54.23	132+54.23	5.44	5.53	-2.05	3.58	500.00	SAG	89	NO	YES
V23	136+67.75	139+67.75	5.61	5.67	3.58	-3.46	300.00	CREST	43	NO	YES
V24	140+20.35	143+20.35	5.68	5.73	-3.46	4.14	300.00	SAG	39	NO	YES
V25	144+96.85	147+96.85	5.77	5.82	4.14	-4.32	300.00	CREST	35	NO	YES
V26	148+88.94	151+88.94	5.84	5.90	-4.32	2.85	300.00	SAG	42	NO	YES
V27	155+08.26	160+08.26	5.96	6.05	2.85	-0.50	500.00	CREST	149	YES	YES
V28	167+82.17	169+32.17	6.20	6.23	-0.50	6.63	150.00	SAG	21	NO	NO
V29	169+40.40	171+10.40	6.23	6.26	6.63	4.98	170.00	CREST	103	NO	NO
V30	171+51.48	173+51.48	6.27	6.31	4.98	1.90	200.00	CREST	65	NO	YES
V31	181+39.89	185+39.89	6.46	6.53	1.90	-1.84	400.00	CREST	107	NO	YES
V32	185+47.74	188+47.74	6.53	6.59	-1.84	1.71	300.00	SAG	85	NO	YES
V33	191+50.49	194+50.49	6.65	6.70	1.71	-2.00	300.00	CREST	81	NO	YES
V34	194+80.19	197+80.19	6.71	6.77	-2.00	0.94	300.00	SAG	102	NO	YES
V35	209+82.55	212+82.55	6.99	7.05	0.94	-3.04	300.00	CREST	75	NO	YES
V36	214+19.57	217+19.57	7.08	7.13	-3.04	6.00	300.00	SAG	33	NO	YES
V37	217+25.78	219+75.78	7.14	7.18	6.00	0.50	250.00	CREST	45	NO	YES
V38	238+98.79	243+98.79	7.55	7.64	0.50	-3.71	500.00	CREST	119	YES	YES

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V39	246+04.80	248+04.80	7.68	7.72	-3.71	4.18	200.00	SAG	25	NO	YES
V40	248+49.73	249+99.73	7.73	7.76	4.18	-6.00	150.00	CREST	15	NO	YES
V41	250+23.43	251+73.43	7.76	7.79	-6.00	0.79	150.00	SAG	22	NO	YES
V42	256+03.32	261+03.32	7.87	7.96	0.79	-3.65	500.00	CREST	113	NO	YES
V43	264+35.66	270+35.66	8.03	8.14	-3.65	3.30	600.00	SAG	86	NO	YES
V44	272+63.57	277+63.57	8.18	8.28	3.30	-0.75	500.00	CREST	123	YES	YES
V45	285+06.63	290+06.63	8.42	8.51	-0.75	3.08	500.00	SAG	131	YES	YES
V46	291+46.46	296+46.46	8.54	8.64	3.08	-2.37	500.00	CREST	92	NO	YES
V47	297+46.93	302+46.93	8.65	8.75	-2.37	1.25	500.00	SAG	138	YES	YES
V48	331+00.57	341+00.57	9.29	9.48	1.25	-0.50	1000.00	CREST	571	YES	YES
V49	362+12.86	365+12.86	9.88	9.94	-0.50	-3.78	300.00	CREST	91	NO	YES
V50	366+63.05	369+63.05	9.96	10.02	-3.78	6.00	300.00	SAG	31	NO	YES
V51	369+79.26	372+79.26	10.02	10.08	6.00	-0.50	300.00	CREST	46	NO	YES
V52	376+02.67	378+27.67	10.14	10.19	-0.50	-3.01	225.00	CREST	90	NO	YES
V53	378+40.17	380+90.17	10.19	10.23	-3.01	0.74	250.00	SAG	67	NO	YES

Wilson Creek Rd. - Category IV Rural Collector

Minimum horizontal radius	760 ft
Crest rate or vertical curvature (K-value)	84
Sag rate of vertical curvature (K-value)	96
Maximum grade	10 %
Minimum grade	0.1 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H1	0+38.07	2+03.00	0.81	0.85	164.93	800	YES
H2	3+94.23	4+72.03	0.88	0.90	77.80	1200	YES
H3	5+66.29	6+29.42	0.91	0.93	63.13	1000	YES
H4	11+77.79	14+82.26	1.03	1.09	304.47	2000	YES
H5	20+10.77	21+67.90	1.19	1.22	157.13	1000	YES
H6	23+88.08	25+43.67	1.26	1.29	155.59	300	NO
H7	38+95.63	41+07.18	1.54	1.59	211.55	550	NO
H8	46+41.84	47+44.24	1.69	1.71	102.40	1000	YES
H9	51+90.58	56+62.01	1.79	1.88	471.43	800	YES
H10	56+85.19	58+91.88	1.88	1.92	206.69	800	YES
H11	60+62.62	63+18.80	1.96	2.00	256.18	760	YES
H12	64+67.32	66+70.60	2.03	2.07	203.28	800	YES
H13	69+55.35	71+75.34	2.12	2.17	219.99	300	NO
H14	75+32.17	78+96.90	2.23	2.30	364.73	2000	YES
H15	82+48.99	85+32.00	2.37	2.42	283.01	2000	YES
H16	85+88.14	88+47.06	2.43	2.48	258.92	800	YES
H17	89+07.83	89+95.16	2.49	2.51	87.33	1000	YES
H18	90+73.19	93+54.72	2.53	2.58	281.53	800	YES
H19	95+28.05	100+23.79	2.61	2.71	495.74	800	YES
H20	101+14.43	103+75.05	2.72	2.77	260.62	250	NO
H21	104+23.54	105+58.86	2.78	2.81	135.32	800	YES
H22	105+93.51	107+97.73	2.81	2.85	204.22	1000	YES
H23	108+80.17	109+93.71	2.87	2.89	113.54	1000	YES
H24	112+17.19	114+26.37	2.93	2.97	209.18	500	NO
H25	115+16.51	116+85.66	2.99	3.02	169.15	950	YES
H26	119+69.16	121+17.95	3.07	3.10	148.79	350	NO
H27	121+80.29	129+25.36	3.11	3.26	745.07	1700	YES
H28	131+17.87	133+63.71	3.29	3.34	245.84	760	YES
H29	135+24.29	136+89.20	3.37	3.40	164.91	1000	YES
H30	137+61.46	141+80.11	3.41	3.49	418.65	700	NO
H31	144+23.16	150+02.37	3.54	3.65	579.21	600	NO
H32	155+30.82	157+91.25	3.75	3.80	260.43	475	NO
H33	162+81.50	164+13.46	3.89	3.92	131.96	85	NO

Wilson Creek Rd. - Category IV Rural Collector

Minimum horizontal radius	760 ft
Crest rate or vertical curvature (K-value)	84
Sag rate of vertical curvature (K-value)	96
Maximum grade	10 %
Minimum grade	0.1 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	3+57.95	7+57.95	0.87	0.95	0.20	-2.10	400.00	CREST	174	YES	YES
V2	9+52.89	13+52.89	0.99	1.06	-2.10	1.91	400.00	SAG	100	YES	YES
V3	14+04.75	15+54.75	1.07	1.10	1.91	8.36	150.00	SAG	23	NO	YES
V4	15+55.20	17+05.20	1.10	1.13	8.36	1.99	150.00	CREST	24	NO	YES
V5	19+04.18	24+04.18	1.17	1.26	1.99	-2.98	500.00	CREST	101	YES	YES
V6	24+96.01	27+96.01	1.28	1.34	-2.98	4.24	300.00	SAG	42	NO	YES
V7	28+40.53	30+90.53	1.35	1.39	4.24	-5.46	250.00	CREST	26	NO	YES
V8	31+21.41	34+21.41	1.40	1.46	-5.46	1.23	300.00	SAG	45	NO	YES
V9	37+87.65	42+87.65	1.52	1.62	1.23	-2.76	500.00	CREST	125	YES	YES
V10	45+94.38	48+44.38	1.68	1.72	-2.76	3.77	250.00	SAG	38	NO	YES
V11	48+68.82	50+68.82	1.73	1.77	3.77	-5.72	200.00	CREST	21	NO	YES
V12	50+76.67	52+26.67	1.77	1.80	-5.72	4.62	150.00	SAG	15	NO	YES
V13	52+36.65	58+36.65	1.80	1.91	4.62	-2.61	600.00	CREST	83	NO	YES
V14	60+08.12	65+08.12	1.95	2.04	-2.61	1.79	500.00	SAG	114	YES	YES
V15	70+33.06	72+33.06	2.14	2.18	1.79	-4.95	200.00	CREST	30	NO	YES
V16	72+35.36	74+10.36	2.18	2.21	-4.95	0.94	175.00	SAG	30	NO	YES
V17	87+27.00	90+27.00	2.46	2.52	0.94	3.99	300.00	SAG	98	YES	YES
V18	91+69.86	93+69.86	2.54	2.58	3.99	-1.41	200.00	CREST	37	NO	YES
V19	94+12.62	99+12.62	2.59	2.68	-1.41	2.70	500.00	SAG	122	YES	YES
V20	115+38.94	119+38.94	2.99	3.07	2.70	13.84	400.00	SAG	36	NO	NO
V21	120+41.00	122+91.00	3.09	3.13	13.84	6.95	250.00	CREST	36	NO	NO
V22	124+47.91	127+47.91	3.16	3.22	6.95	10.00	300.00	SAG	98	YES	YES
V23	128+97.05	130+97.05	3.25	3.29	10.00	6.27	200.00	CREST	54	NO	YES
V24	131+22.21	134+22.21	3.29	3.35	6.27	-0.10	300.00	CREST	47	NO	YES
V25	137+07.00	140+07.00	3.40	3.46	-0.10	7.95	300.00	SAG	37	NO	YES
V26	141+30.32	145+30.32	3.48	3.56	7.95	0.81	400.00	CREST	56	NO	YES
V27	145+97.47	147+97.47	3.57	3.61	0.81	10.00	200.00	SAG	22	NO	YES
V28	147+99.09	149+74.09	3.61	3.64	10.00	-1.34	175.00	CREST	15	NO	YES
V29	151+03.87	154+53.87	3.67	3.73	-1.34	6.63	350.00	SAG	44	NO	YES
V30	157+86.90	159+36.90	3.80	3.83	6.63	-0.60	150.00	CREST	21	NO	YES
V31	159+59.73	161+59.73	3.83	3.87	-0.60	10.00	200.00	SAG	19	NO	YES
V32	161+63.40	163+13.40	3.87	3.90	10.00	-0.41	150.00	CREST	14	NO	YES
V33	165+89.39	167+89.39	3.95	3.99	-0.41	10.00	200.00	SAG	19	NO	YES
V34	168+01.52	169+01.52	3.99	4.01	10.0	-0.7	100.00	CREST	9	NO	YES

York Ridge Rd. - Category III Rural Collector

Minimum horizontal radius	600 ft
Crest rate or vertical curvature (K-value)	61
Sag rate of vertical curvature (K-value)	79
Maximum grade	9 %
Minimum grade	0.1 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H1	1+37.44	2+48.72	10.38	10.40	111.28	1000	YES
H2	5+14.67	6+88.51	10.45	10.49	173.84	500	NO
H3	8+31.91	11+53.32	10.51	10.57	321.41	475	NO
H4	12+00.03	14+12.55	10.58	10.62	212.52	200	NO
H5	17+13.28	18+75.29	10.68	10.71	162.01	465	NO
H6	19+18.15	20+36.19	10.72	10.74	118.04	1000	YES
H7	20+81.49	21+86.26	10.75	10.77	104.77	500	NO
H8	24+27.05	26+21.01	10.81	10.85	193.96	1200	YES
H9	29+00.98	31+11.31	10.90	10.94	210.33	350	NO
H10	32+09.23	32+64.85	10.96	10.97	55.62	1000	YES
H11	40+87.62	44+93.01	11.13	11.21	405.39	2000	YES
H12	48+11.17	49+48.22	11.27	11.29	137.05	250	NO
H13	51+73.04	53+35.14	11.33	11.37	162.10	475	NO
H14	57+08.08	59+67.02	11.44	11.49	258.94	465	NO
H15	61+62.40	64+41.14	11.52	11.58	278.74	2000	YES
H16	66+15.16	68+73.83	11.61	11.66	258.67	465	NO
H17	70+78.63	72+82.31	11.70	11.73	203.68	2000	YES
H18	74+47.72	76+39.23	11.77	11.80	191.51	500	NO
H19	83+39.17	87+26.87	11.93	12.01	387.70	800	YES
H20	87+84.44	90+19.53	12.02	12.06	235.09	500	NO
H21	95+10.45	98+97.66	12.16	12.23	387.21	465	NO
H22	101+95.45	104+40.06	12.29	12.33	244.61	1500	YES
H23	106+58.23	109+26.47	12.37	12.42	268.24	475	NO
H24	119+79.65	120+69.01	12.62	12.64	89.36	100	NO
H25	126+35.12	129+45.57	12.75	12.81	310.45	2000	YES
H26	131+60.62	135+02.67	12.85	12.91	342.05	700	YES
H27	136+99.10	139+52.00	12.95	13.00	252.90	2000	YES
H28	142+96.57	145+18.69	13.06	13.10	222.12	500	NO
H29	148+42.43	150+41.74	13.17	13.20	199.31	600	YES
H30	156+24.03	157+62.76	13.31	13.34	138.73	2000	YES
H31	162+93.82	168+05.27	13.44	13.54	511.45	4000	YES
H32	172+15.84	176+52.16	13.62	13.70	436.32	4000	YES
H33	182+01.28	184+31.77	13.80	13.85	230.49	800	YES
H34	185+55.85	187+00.09	13.87	13.90	144.24	5000	YES
H35	188+94.71	193+71.62	13.93	14.02	476.91	3000	YES
H36	197+96.43	200+79.81	14.10	14.16	283.38	5000	YES
H37	210+75.95	217+35.16	14.35	14.47	659.21	1300	YES
H38	23427.31	23687.93	14.79	14.84	260.62	5000	YES

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H39	25153.11	25541.89	15.12	15.19	388.78	2000	YES
H40	291+42.71	293+38.30	15.87	15.91	195.59	1000	YES
H41	323+03.69	324+34.89	16.47	16.50	131.20	1200	YES

York Ridge Rd. - Category III Rural Collector

Minimum horizontal radius	600 ft
Crest rate or vertical curvature (K-value)	61
Sag rate of vertical curvature (K-value)	79
Maximum grade	10 %
Minimum grade	0.1 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	18+63.85	24+63.85	10.71	10.82	10.00	8.00	600.00	CREST	300	YES	YES
V2	28+15.50	33+15.50	10.89	10.98	8.00	0.61	500.00	CREST	68	YES	YES
V3	50+16.25	51+16.25	11.31	11.32	0.61	4.24	100.00	SAG	28	NO	YES
V4	53+00.64	55+00.64	11.36	11.40	4.24	-2.71	200.00	CREST	29	NO	YES
V5	58+24.80	60+24.80	11.46	11.50	-2.71	1.14	200.00	SAG	52	NO	YES
V6	60+26.54	65+26.54	11.50	11.59	1.14	4.96	500.00	SAG	131	YES	YES
V7	67+17.62	72+17.62	11.63	11.72	4.96	0.68	500.00	CREST	117	YES	YES
V8	74+65.48	76+65.48	11.77	11.81	0.68	-2.91	200.00	CREST	56	NO	YES
V9	78+16.60	80+16.60	11.84	11.87	-2.91	0.97	200.00	SAG	52	NO	YES
V10	88+53.67	91+53.67	12.03	12.09	0.97	2.28	300.00	SAG	229	YES	YES
V11	93+86.67	96+86.67	12.13	12.19	2.28	-0.55	300.00	CREST	106	YES	YES
V12	106+21.22	108+71.22	12.37	12.41	-0.55	7.46	250.00	SAG	31	NO	YES
V13	108+92.33	111+42.33	12.42	12.47	7.46	0.23	250.00	CREST	35	NO	YES
V14	161+99.87	164+09.87	13.42	13.46	0.23	-4.55	210.00	CREST	44	NO	YES
V15	164+61.56	168+61.56	13.47	13.55	-4.55	4.76	400.00	SAG	43	NO	YES
V16	168+93.75	171+93.75	13.55	13.61	4.76	-1.08	300.00	CREST	51	NO	YES
V17	173+60.37	178+60.37	13.64	13.74	-1.08	3.68	500.00	SAG	105	YES	YES
V18	180+11.61	183+11.61	13.77	13.82	3.68	-5.15	300.00	CREST	34	NO	YES
V19	183+37.24	185+37.24	13.83	13.87	-5.15	0.97	200.00	SAG	33	NO	YES
V20	235+72.47	245+72.47	14.82	15.01	0.97	-0.74	1000.00	CREST	585	YES	YES
V21	260+17.79	270+17.79	15.28	15.47	-0.74	1.60	1000.00	SAG	427	YES	YES
V22	282+94.41	292+94.41	15.71	15.90	1.60	0.11	1000.00	CREST	671	YES	YES
V23	305+74.88	310+74.88	16.15	16.24	0.11	-1.55	500.00	CREST	301	YES	YES
V24	318+23.30	321+73.30	16.38	16.45	-1.55	6.31	350.00	SAG	45	NO	YES
V25	322+07.41	325+57.41	16.46	16.52	6.31	0.43	350.00	CREST	60	NO	YES
V26	344+93.37	349+93.37	16.89	16.98	0.43	-3.08	500.00	CREST	142	YES	YES
V27	354+07.99	359+22.99	17.06	17.16	-3.08	4.84	515.00	SAG	65	NO	YES
V28	360+78.79	364+28.79	17.19	17.25	4.84	-2.13	350.00	CREST	50	NO	YES
V29	364+39.55	366+39.55	17.26	17.29	-2.13	2.71	200.00	SAG	41	NO	YES

Jamison Rd. - Category IV Rural Arterial

Minimum horizontal radius	965 ft
Crest rate or vertical curvature (K-value)	114
Sag rate of vertical curvature (K-value)	115
Maximum grade	6 %
Minimum grade	0.5 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H1	2+61.12	3+88.34	9.58	9.61	127.22	300	NO
H2	5+35.02	7+66.81	9.63	9.68	231.79	800	NO
H3	10+41.65	13+35.00	9.73	9.79	293.35	500	NO
H4	16+15.31	17+77.41	9.84	9.87	162.10	1000	YES
H5	18+50.12	22+20.33	9.88	9.95	370.21	400	NO
H6	26+81.40	29+90.73	10.04	10.10	309.33	800	NO
H7	33+67.48	37+89.12	10.17	10.25	421.64	800	NO
H8	42+03.98	44+47.93	10.33	10.38	243.95	760	NO
H9	47+02.79	50+46.82	10.42	10.49	344.03	1000	YES
H10	52+95.69	56+08.06	10.54	10.60	312.37	850	NO
H11	56+51.29	58+70.47	10.60	10.64	219.18	500	NO
H12	59+96.16	62+84.26	10.67	10.72	288.10	760	NO
H13	66+36.07	72+34.01	10.79	10.90	597.94	475	NO
H14	75+89.28	77+92.56	10.97	11.01	203.28	225	NO
H15	78+23.73	81+05.64	11.01	11.07	281.91	350	NO
H16	82+57.79	87+00.39	11.10	11.18	442.60	475	NO
H17	88+68.94	91+01.48	11.21	11.26	232.54	1500	YES
H18	98+61.54	112+43.26	11.40	11.66	1381.72	1300	YES
H19	118+99.12	121+34.93	11.79	11.83	235.81	2500	YES
H20	122+59.92	125+63.07	11.85	11.91	303.15	1000	YES
H21	130+16.13	132+15.44	12.00	12.04	199.31	500	NO
H22	132+97.88	135+07.70	12.05	12.09	209.82	500	NO
H23	135+72.57	138+69.12	12.10	12.16	296.55	450	NO
H24	139+43.43	142+00.49	12.17	12.22	257.06	1000	YES
H25	142+70.47	144+93.10	12.24	12.28	222.63	1200	YES
H26	146+24.05	149+10.76	12.30	12.36	286.71	800	NO
H27	155+15.13	157+63.18	12.47	12.52	248.05	1000	YES
H28	158+48.41	162+77.57	12.53	12.62	429.16	600	NO
H29	164+16.94	166+14.22	12.64	12.68	197.28	500	NO

Jamison Rd. - Category IV Rural Arterial

Minimum horizontal radius	965 ft
Crest rate or vertical curvature (K-value)	114
Sag rate of vertical curvature (K-value)	115
Maximum grade	6 %
Minimum grade	0.5 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	0+95.22	5+95.22	9.55	9.65	2.06	-6.73	500.00	CREST	57	NO	NO
V2	38+75.11	44+75.11	10.27	10.38	-6.73	-1.96	600.00	SAG	126	YES	NO
V3	48+44.10	53+44.10	10.45	10.55	-1.96	-6.00	500.00	CREST	124	YES	YES
V4	54+05.85	55+55.85	10.56	10.59	-6.00	-2.39	150.00	SAG	42	NO	YES
V5	62+95.02	66+95.02	10.73	10.80	-2.39	-5.69	400.00	CREST	121	YES	YES
V6	67+09.12	71+09.12	10.80	10.88	-5.69	-1.80	400.00	SAG	103	NO	YES
V7	75+46.29	78+96.29	10.96	11.03	-1.80	-2.66	350.00	CREST	407	YES	YES
V8	79+13.62	82+63.62	11.03	11.10	-2.66	-3.96	350.00	CREST	269	YES	YES
V9	83+01.50	88+01.50	11.11	11.20	-3.96	-1.13	500.00	SAG	177	YES	YES
V10	108+93.64	112+93.64	11.60	11.67	-1.13	2.16	400.00	SAG	122	YES	YES
V11	113+00.90	117+00.90	11.67	11.75	2.16	-2.97	400.00	CREST	78	NO	YES
V12	119+34.80	125+34.80	11.79	11.91	-2.97	0.50	600.00	SAG	173	YES	YES
V13	130+75.95	133+25.95	12.01	12.06	0.50	2.59	250.00	SAG	120	YES	YES
V14	133+56.25	136+06.25	12.06	12.11	2.59	-2.59	250.00	CREST	48	NO	YES
V15	138+60.39	143+60.39	12.16	12.25	-2.59	0.96	500.00	SAG	141	YES	YES
V16	158+37.98	163+37.98	12.53	12.63	0.96	-0.94	500.00	CREST	263	YES	YES

N. Dearborn Rd. - Category II Rural Arterial

Minimum horizontal radius	760 ft
Crest rate or vertical curvature (K-value)	84
Sag rate of vertical curvature (K-value)	96
Maximum grade	6 %
Minimum grade	0.5 %

Horizontal Curves

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H1	0+61.18	1+86.34	0.01	0.04	125.16	1000	YES
H2	131+19.77	133+78.32	2.48	2.53	258.55	950	YES
H3	134+52.11	138+38.12	2.55	2.62	386.01	3500	YES
H4	141+38.57	141+71.80	2.68	2.68	33.23	100	NO
H5	152+20.12	152+36.79	2.88	2.89	16.67	100	NO
H6	291+61.93	294+33.90	5.52	5.57	271.97	450	NO
H7	299+18.47	303+54.70	5.67	5.75	436.23	1250	YES
H8	303+58.18	305+25.95	5.75	5.78	167.77	300	NO
H9	307+21.32	313+28.63	5.82	5.93	607.31	800	YES
H10	316+31.70	321+10.50	5.99	6.08	478.80	450	NO
H11	322+92.27	325+48.34	6.12	6.16	256.07	3000	YES
H12	325+87.22	328+10.97	6.17	6.21	223.75	375	NO
H13	331+92.09	338+42.56	6.29	6.41	650.47	275	NO
H14	340+51.36	344+51.09	6.45	6.52	399.73	2500	YES
H15	346+56.78	349+51.13	6.56	6.62	294.35	300	NO
H16	356+87.33	358+01.70	6.76	6.78	114.37	1000	YES
H17	360+02.63	363+24.79	6.82	6.88	322.16	1500	YES
H18	367+39.93	369+32.97	6.96	6.99	193.04	350	NO
H19	377+90.67	381+55.84	7.16	7.23	365.17	2000	YES
H20	389+45.82	389+93.74	7.38	7.39	47.92	50	NO
H21	394+43.59	396+07.80	7.47	7.50	164.21	350	NO
H22	400+55.84	402+63.88	7.59	7.63	208.04	1000	YES
H23	410+71.40	415+34.33	7.78	7.87	462.93	650	NO
H24	419+27.14	421+02.79	7.94	7.97	175.65	450	NO
H25	422+13.47	422+38.70	7.99	8.00	25.23	200	NO
H26	425+15.97	426+29.69	8.05	8.07	113.72	500	NO
H27	426+92.41	428+38.30	8.09	8.11	145.89	350	NO
H28	429+14.02	430+49.91	8.13	8.15	135.89	400	NO
H29	431+38.96	431+90.83	8.17	8.18	51.87	400	NO
H30	432+79.12	433+35.04	8.20	8.21	55.92	300	NO
H31	434+73.84	440+08.50	8.23	8.33	534.66	760	YES
H32	443+14.49	459+66.32	8.39	8.71	1651.83	4500	YES
H33	460+57.85	465+40.51	8.72	8.81	482.66	900	YES
H34	470+32.49	475+26.30	8.91	9.00	493.81	2000	YES
H35	483+45.84	487+44.18	9.16	9.23	398.34	800	YES
H36	499+41.49	504+34.51	9.46	9.55	493.02	850	YES
H37	504+86.93	509+86.74	9.56	9.66	499.81	2000	YES
H38	516+78.01	519+53.63	9.79	9.84	275.62	500	NO

Curve No.	PC	PT	PC Milepoint	PT Milepoint	Length (ft)	Radius	Minimum Radius Met?
H39	528+57.16	530+86.81	10.01	10.05	229.65	1000	YES
H40	532+85.83	539+91.74	10.09	10.23	705.91	760	YES
H41	545+95.44	549+70.52	10.34	10.41	375.08	400	NO
H42	555+01.36	556+73.46	10.51	10.54	172.10	125	NO
H43	595+22.19	597+52.07	11.27	11.32	229.88	500	NO
H44	607+12.82	613+51.30	11.50	11.62	638.48	2500	YES
H45	614+05.57	615+79.80	11.63	11.66	174.23	500	NO
H46	616+70.61	619+51.27	11.68	11.73	280.66	900	YES
H47	620+33.67	623+34.27	11.75	11.81	300.60	650	NO
H48	628+08.10	634+56.63	11.90	12.02	648.53	765	YES
H49	636+54.99	641+34.49	12.06	12.15	479.50	1000	YES
H50	647+56.16	648+11.50	12.26	12.27	55.34	100	NO
H51	659+71.12	660+50.41	12.49	12.51	79.29	100	NO
H52	664+21.80	667+90.60	12.58	12.65	368.80	500	NO
H53	679+81.35	682+34.77	12.88	12.92	253.42	800	YES
H54	684+73.29	688+23.04	12.97	13.03	349.75	800	YES
H55	692+95.31	695+78.75	13.12	13.18	283.44	450	NO
H56	697+15.00	699+50.41	13.20	13.25	235.41	600	NO
H57	704+65.07	707+45.81	13.35	13.40	280.74	450	NO
H58	710+39.61	714+09.82	13.45	13.52	370.21	800	YES
H59	720+93.05	724+19.69	13.65	13.72	326.64	600	NO
H60	726+97.30	729+18.28	13.77	13.81	220.98	350	NO
H61	730+35.29	732+51.61	13.83	13.87	216.32	250	NO
H62	734+18.48	738+07.04	13.91	13.98	388.56	200	NO
H63	741+04.01	744+06.31	14.03	14.09	302.30	250	NO
H64	745+13.35	746+28.98	14.11	14.13	115.63	500	NO
H65	748+28.66	749+62.62	14.17	14.20	133.96	200	NO
H66	765+72.19	766+45.45	14.50	14.52	73.26	200	NO
H67	768+50.67	770+55.72	14.56	14.59	205.05	600	NO
H68	772+78.40	773+38.46	14.64	14.65	60.06	1000	YES
H69	778+25.69	780+38.64	14.74	14.78	212.95	500	NO
H70	782+57.28	784+83.91	14.82	14.86	226.63	190	NO
H71	785+62.47	788+13.57	14.88	14.93	251.1	450	NO
H72	789+32.80	795+30.31	14.95	15.06	597.51	2500	YES
H73	797+14.89	801+22.54	15.10	15.17	407.65	400	NO
H74	803+59.66	808+83.32	15.22	15.32	523.66	2000	YES

N. Dearborn Rd. - Category II Rural Arterial

Minimum horizontal radius	760 ft
Crest rate or vertical curvature (K-value)	84
Sag rate of vertical curvature (K-value)	96
Maximum grade	6 %
Minimum grade	0.5 %

Vertical Curves

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V1	3+62.60	7+62.60	0.07	0.14	1.17	1.99	400.00	SAG	488	YES	YES
V2	8+47.04	12+47.04	0.16	0.24	1.99	-0.72	400.00	CREST	148	YES	YES
V3	15+75.27	20+75.27	0.30	0.39	-0.72	0.32	500.00	SAG	481	YES	NO
V4	34+22.06	39+22.06	0.65	0.74	0.32	-1.40	500.00	CREST	291	YES	NO
V5	42+53.04	45+03.04	0.81	0.85	-1.40	2.54	250.00	SAG	63	NO	YES
V6	45+28.40	47+78.40	0.86	0.91	2.54	-5.54	250.00	CREST	31	NO	YES
V7	47+82.02	49+82.02	0.91	0.94	-5.54	2.10	200.00	SAG	26	NO	YES
V8	57+22.41	62+22.41	1.08	1.18	2.10	-2.00	500.00	CREST	122	YES	YES
V9	62+31.14	65+81.14	1.18	1.25	-2.00	-0.50	350.00	SAG	233	YES	YES
V10	67+63.57	71+13.57	1.28	1.35	-0.50	-3.33	350.00	CREST	124	YES	YES
V11	72+47.46	75+47.46	1.37	1.43	-3.33	4.33	300.00	SAG	39	NO	YES
V12	75+67.85	78+67.85	1.43	1.49	4.33	-1.71	300.00	CREST	50	NO	YES
V13	86+07.36	94+07.36	1.63	1.78	-1.71	1.82	800.00	SAG	227	YES	YES
V14	102+47.56	108+47.56	1.94	2.05	1.82	-7.80	600.00	CREST	62	NO	NO
V15	109+08.76	114+08.76	2.07	2.16	-7.80	7.65	500.00	SAG	32	NO	NO
V16	114+26.35	115+26.35	2.16	2.18	7.65	-5.69	100.00	CREST	7	NO	NO
V17	115+63.31	119+63.31	2.19	2.27	-5.69	3.63	400.00	SAG	43	NO	YES
V18	121+86.46	126+86.46	2.31	2.40	3.63	-5.04	500.00	CREST	58	NO	YES
V19	128+14.48	131+14.48	2.43	2.48	-5.04	-0.62	300.00	SAG	68	NO	YES
V20	131+18.65	133+93.65	2.48	2.54	-0.62	-8.17	275.00	CREST	36	NO	NO
V21	136+52.27	140+52.27	2.59	2.66	3.88	-8.17	400.00	SAG	33	NO	NO
V22	153+37.86	159+37.86	2.90	3.02	3.88	1.23	600.00	CREST	226	YES	YES
V23	176+93.02	183+93.02	3.35	3.48	1.23	-5.79	700.00	CREST	100	YES	YES
V24	187+40.46	190+40.46	3.55	3.61	-5.79	7.11	300.00	SAG	23	NO	NO
V25	190+51.88	194+01.88	3.61	3.67	7.11	-5.69	350.00	CREST	27	NO	NO
V26	196+10.33	199+10.33	3.71	3.77	-5.69	0.34	300.00	SAG	50	NO	NO
V27	199+34.41	201+84.41	3.78	3.82	0.34	-7.00	250.00	CREST	34	NO	NO
V28	205+44.06	208+44.06	3.89	3.95	-7.00	6.91	300.00	SAG	22	NO	NO
V29	208+93.92	211+93.92	3.96	4.01	6.91	-2.37	300.00	CREST	32	NO	NO
V30	212+50.87	215+50.87	4.02	4.08	-2.37	3.97	300.00	SAG	47	NO	YES
V31	221+78.27	241+78.27	4.20	4.58	3.97	-2.57	2000.00	CREST	306	YES	YES
V32	243+98.22	246+98.22	4.62	4.68	-2.57	4.65	300.00	SAG	42	NO	YES
V33	247+17.92	249+67.92	4.68	4.73	4.65	-2.36	250.00	CREST	36	NO	YES
V34	265+53.94	270+53.94	5.03	5.12	-2.36	-0.71	500.00	SAG	303	YES	YES
V35	290+04.67	295+04.67	5.49	5.59	-0.71	-3.44	500.00	CREST	183	YES	YES
V36	303+19.18	306+19.18	5.74	5.80	-3.44	-6.06	300.00	CREST	115	YES	NO
V37	308+86.53	315+86.53	5.85	5.98	-6.06	-11.78	700.00	CREST	122	YES	NO
V38	320+77.99	326+77.99	6.08	6.19	-11.78	-0.73	600.00	SAG	54	NO	NO

Curve No.	PVC	PVT	PVC Milepoint	PVT Milepoint	Entrance Grade (%)	Exit Grade (%)	Length (ft)	Crest/Sag	K-Value	K-Value Criteria Met?	Minimum/Maximum Grade Criteria Met?
V39	336+68.76	346+68.76	6.38	6.57	-0.73	10.27	1000.00	SAG	91	NO	NO
V40	355+72.29	370+72.29	6.74	7.02	10.27	0.70	1500.00	CREST	157	YES	NO
V41	382+79.38	385+79.38	7.25	7.31	0.70	2.71	300.00	SAG	149	YES	YES
V42	388+32.61	391+32.61	7.35	7.41	2.71	-0.91	300.00	CREST	83	NO	YES
V43	395+79.31	397+79.31	7.50	7.53	-0.91	0.70	200.00	SAG	124	YES	YES
V44	397+81.78	404+11.78	7.53	7.65	0.70	-7.44	630.00	CREST	77	NO	NO
V45	413+56.17	418+56.17	7.83	7.93	-7.44	2.40	500.00	SAG	51	NO	NO
V46	419+16.67	421+16.67	7.94	7.98	2.40	-9.17	200.00	CREST	17	NO	NO
V47	421+52.97	424+52.97	7.98	8.04	-9.17	11.03	300.00	SAG	15	NO	NO
V48	426+49.34	456+49.34	8.08	8.65	11.03	-4.83	3000.00	CREST	189	YES	NO
V49	459+34.39	462+34.39	8.70	8.76	-4.83	3.58	300.00	SAG	36	NO	YES
V50	464+55.61	467+55.61	8.80	8.86	3.58	-3.92	300.00	CREST	40	NO	YES
V51	469+40.49	472+40.49	8.89	8.95	-3.92	1.69	300.00	SAG	53	NO	YES
V52	486+72.81	504+72.81	9.22	9.56	1.69	-8.15	1800.00	CREST	183	YES	NO
V53	504+88.95	508+38.95	9.56	9.63	-8.15	5.96	350.00	SAG	25	NO	NO
V54	511+61.94	516+61.94	9.69	9.78	5.96	-0.17	500.00	CREST	82	NO	NO
V55	525+07.54	528+07.54	9.94	10.00	-0.17	-9.30	300.00	CREST	33	NO	NO
V56	529+40.70	532+40.70	10.03	10.08	-9.30	4.24	300.00	SAG	22	NO	NO
V57	543+89.67	546+89.67	10.30	10.36	4.24	-0.54	300.00	CREST	63	NO	YES
V58	575+29.58	578+29.58	10.90	10.95	-0.54	-4.96	300.00	CREST	68	NO	YES
V59	580+26.35	583+76.35	10.99	11.06	-4.96	6.94	350.00	SAG	29	NO	NO
V60	584+93.07	587+93.07	11.08	11.14	6.94	-0.07	300.00	CREST	43	NO	NO
V61	609+14.51	612+14.51	11.54	11.59	-0.07	-7.77	300.00	CREST	39	NO	NO
V62	613+20.72	617+20.72	11.61	11.69	-7.77	8.18	400.00	SAG	25	NO	NO
V63	618+14.74	622+14.74	11.71	11.78	8.18	0.50	400.00	CREST	52	NO	NO
V64	650+17.31	653+17.31	12.31	12.37	0.50	-5.40	300.00	CREST	51	NO	YES
V65	655+51.20	657+26.20	12.42	12.45	-5.40	6.48	175.00	SAG	15	NO	NO
V66	657+35.56	658+85.56	12.45	12.48	6.48	0.50	150.00	CREST	25	NO	NO
V67	698+35.04	701+35.04	13.23	13.28	0.50	-2.65	300.00	CREST	95	YES	YES
V68	702+73.47	706+73.47	13.31	13.39	-2.65	-0.76	400.00	SAG	212	YES	YES
V69	723+69.38	728+69.38	13.71	13.80	-0.76	-4.26	500.00	CREST	143	YES	YES
V70	730+58.08	736+58.08	13.84	13.95	-4.26	-0.59	600.00	SAG	163	YES	YES
V71	778+55.99	783+55.99	14.75	14.84	-0.59	-9.51	500.00	CREST	56	NO	NO