



PROJECT MEMORANDUM

**To: Mr. Doug Buskirk, P.E.
ODOT District 9**

From: Charles H. Murphy P.S.

Date: May 13, 2013

Subject: SCI-823-10.13 Survey Check Sections

As part of the SCI-823-10.13 PDP Step 8.2.5 Field Survey task of the Scope of Services, DLZ Ohio, Inc. was scoped to survey twenty (20) mainline cross sections to check the accuracy of the provided mapping TIN compiled from Aerial Photography exposed 3/11/2002, 4/2/2003 and 4/5/2004. Locations for these cross sections were strategically chosen in an attempt to cover both pavement and ground surfaces in different terrain throughout the total corridor of Section 2 of the Project. The cross section locations were generally equally divided between the three (3) segments of Section 2 designated Section 2A, 2B and 2C. In general the surveyed points compared to the provided mapping TIN surface were both positive and negative to the surface. This exercise was an attempt to provide a summary and tabulation of the comparison of field surveyed data to the provided mapping TIN at twenty (20) cross sectional locations throughout the project designated Section 2. No adjustments to the TIN were made as part of our work. Any adjustment of the provided mapping TIN is at the sole discretion of others and not part of our Scope of Services.

Attached is our GEOPAK Compare Points to TIN Report.

GEOPAK Compare COGO Points to TIN Surface

SCI-823-10.13 - Phase 2 - PID 79977

JOB File: S:\Dept\Survey\Proj\0621\1008\01\geopak\job0SV.gpk

TIN File: S:\Dept\Survey\Proj\0621\1008\01\geopak\TIN\79977XAE001.TIN

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV576	X	523.04	523.30	-0.26	325743.33	1825020.44	1910+30.67	258.87' LT	RAMP A
SV577	X	524.04	OUTSIDE TIN		325755.83	1824824.70	1910+32.27	454.99' LT	RAMP A
SV578	X	524.17	OUTSIDE TIN		325754.73	1824873.83	1910+32.94	405.86' LT	RAMP A
SV579	X	524.13	524.16	-0.03	325752.21	1824926.06	1910+33.04	353.57' LT	RAMP A
SV580	X	523.63	523.48	0.15	325749.09	1824976.67	1910+32.77	302.87' LT	RAMP A
SV581	TB	523.08	523.19	-0.11	325739.85	1825029.82	1910+28.81	249.35' LT	RAMP A
SV582	TSL	521.98	522.19	-0.21	325742.38	1825035.82	1910+30.52	243.46' LT	RAMP A
SV583	TSL	522.17	522.39	-0.22	325741.78	1825037.26	1910+30.19	242.00' LT	RAMP A
SV584	TB	523.33	523.32	0.01	325741.79	1825041.19	1910+30.31	238.07' LT	RAMP A
SV585	X	523.62	523.59	0.03	325738.91	1825093.60	1910+29.97	185.59' LT	RAMP A
SV586	X	523.29	523.42	-0.13	325735.67	1825143.41	1910+29.20	135.68' LT	RAMP A
SV587	X	523.35	523.24	0.11	325732.07	1825193.85	1910+28.00	85.14' LT	RAMP A
SV588	X	523.33	523.21	0.12	325728.66	1825247.44	1910+26.80	31.46' LT	RAMP A
SV589	X	523.74	523.63	0.11	325725.36	1825303.37	1910+25.44	24.55' RT	RAMP A
SV590	X	523.68	523.63	0.05	325722.34	1825353.89	1910+23.75	75.14' RT	RAMP A
SV591	X	523.54	523.54	0.00	325718.64	1825408.53	1910+20.53	129.86' RT	RAMP A
SV592	X	523.79	523.78	0.01	325715.10	1825461.23	1910+15.88	182.60' RT	RAMP A
SV593	X	524.07	524.02	0.05	325711.52	1825513.75	1910+07.97	235.12' RT	RAMP A
SV594	X	524.38	524.53	-0.15	325708.44	1825566.32	1909+93.88	287.58' RT	RAMP A
SV1080	TB	545.43	544.87	0.56	327080.82	1825768.99	629+98.46	170.99' RT	US 23
SV1081	TSL	537.92	538.15	-0.23	327072.91	1825749.55	629+98.03	150.01' RT	US 23
SV1082	X	535.51	535.42	0.09	327059.60	1825711.69	629+99.16	109.90' RT	US 23
SV1083	TB	534.28	534.47	-0.19	327052.52	1825692.12	629+99.56	89.09' RT	US 23
SV1084	TSL	533.65	533.90	-0.25	327049.66	1825686.47	629+98.91	82.79' RT	US 23
SV1085	TSL	533.98	534.18	-0.20	327048.38	1825681.50	629+99.49	77.69' RT	US 23
SV1086	TB	540.28	539.76	0.52	327041.10	1825659.35	630+00.63	54.40' RT	US 23
SV1087	EP	540.61	540.12	0.49	327040.63	1825658.00	630+00.67	52.97' RT	US 23
SV1088	PAINTL	541.13	540.59	0.54	327036.91	1825650.49	629+99.89	44.63' RT	US 23
SV1089	CP	541.41	541.13	0.28	327031.23	1825639.88	629+98.38	32.69' RT	US 23
SV1090	PAINTL	541.29	540.96	0.33	327029.50	1825628.05	630+01.00	21.02' RT	US 23
SV1091	EP	541.17	540.66	0.51	327028.85	1825625.88	630+01.17	18.76' RT	US 23
SV1092	TB	541.00	540.50	0.50	327028.19	1825625.04	630+00.86	17.74' RT	US 23
SV1093	TSL	538.04	538.25	-0.21	327022.43	1825609.90	630+00.90	1.55' RT	US 23
SV1094	TSL	538.14	538.19	-0.05	327021.89	1825607.24	630+01.35	1.13' LT	US 23
SV1095	TB	540.81	540.45	0.36	327015.37	1825593.25	630+00.27	16.53' LT	US 23

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV1096	EP	541.02	540.65	0.37	327014.64	1825592.10	630+00.00	17.86' LT	US 23
SV1097	PAINTL	541.07	540.60	0.47	327013.84	1825590.22	629+99.92	19.91' LT	US 23
SV1098	CP	541.23	541.26	-0.03	327010.66	1825578.90	630+01.01	31.61' LT	US 23
SV1099	PAINTL	540.90	540.74	0.16	327005.63	1825567.83	630+00.27	43.75' LT	US 23
SV1100	EP	540.35	539.87	0.48	327002.65	1825559.81	630+00.36	52.31' LT	US 23
SV1101	TB	539.98	539.64	0.34	327001.89	1825558.37	630+00.17	53.92' LT	US 23
SV1102	TSL	533.73	534.25	-0.52	326993.33	1825533.39	630+01.12	80.31' LT	US 23
SV1103	X	532.88	532.61	0.27	326973.03	1825475.15	630+03.02	141.96' LT	US 23
SV1104	X	531.78	531.47	0.31	326957.94	1825436.38	630+02.81	183.56' LT	US 23
SV1105	X	528.89	528.70	0.19	326945.73	1825395.14	630+06.17	226.44' LT	US 23
SV1106	X	526.93	526.80	0.13	326938.80	1825356.25	630+13.63	265.23' LT	US 23
SV1107	X	526.46	526.28	0.18	326935.31	1825330.03	630+19.76	290.96' LT	US 23
SV1108	TB	526.16	525.95	0.21	326934.72	1825326.55	630+20.45	294.42' LT	US 23
SV1109	TSL	524.85	525.06	-0.21	326934.27	1825324.39	630+20.80	296.60' LT	US 23
SV1110	TB	525.97	525.48	0.49	326933.46	1825321.82	630+20.97	299.29' LT	US 23
SV1111	X	525.43	525.27	0.16	326922.48	1825249.83	630+36.49	370.44' LT	US 23
SV1112	X	525.34	525.27	0.07	326906.08	1825197.59	630+39.88	425.09' LT	US 23
SV1113	X	525.10	524.94	0.16	326893.18	1825139.53	630+48.62	483.92' LT	US 23
SV1118	TB	553.64	553.30	0.34	323813.53	1827018.71	595+10.98	211.90' RT	US 23
SV1119	TSL	537.53	539.80	-2.27	323795.39	1826992.25	595+01.81	181.16' RT	US 23
SV1120	X	534.69	535.05	-0.36	323782.18	1826952.87	595+01.28	139.63' RT	US 23
SV1121	X	533.81	534.20	-0.39	323765.88	1826905.27	595+00.32	89.33' RT	US 23
SV1122	TB	533.85	534.16	-0.31	323761.87	1826893.16	595+00.21	76.57' RT	US 23
SV1123	TSL	532.97	533.85	-0.88	323760.83	1826889.16	595+00.44	72.44' RT	US 23
SV1124	TB	540.25	539.96	0.29	323752.33	1826862.79	595+00.41	44.74' RT	US 23
SV1125	EP	540.50	540.27	0.23	323752.14	1826861.05	595+00.77	43.02' RT	US 23
SV1126	PAINTL	540.99	541.05	-0.06	323750.52	1826853.31	595+01.59	35.16' RT	US 23
SV1127	CP	541.23	541.53	-0.30	323746.09	1826842.12	595+00.80	23.15' RT	US 23
SV1128	PAINTL	541.12	541.54	-0.42	323743.83	1826830.48	595+02.21	11.38' RT	US 23
SV1129	EP	541.05	540.86	0.19	323743.08	1826828.78	595+02.01	9.53' RT	US 23
SV1130	TB	540.85	540.56	0.29	323742.97	1826827.66	595+02.25	8.43' RT	US 23
SV1131	TSL	539.69	540.04	-0.35	323740.90	1826820.55	595+02.45	1.03' RT	US 23
SV1132	TB	540.69	540.81	-0.12	323738.07	1826813.76	595+01.84	6.30' LT	US 23
SV1133	EP	540.92	540.94	-0.02	323737.15	1826812.72	595+01.28	7.58' LT	US 23
SV1134	PAINTL	540.97	541.21	-0.24	323735.95	1826810.89	595+00.70	9.69' LT	US 23
SV1135	CP	541.10	541.70	-0.60	323732.05	1826799.86	595+00.36	21.38' LT	US 23
SV1136	PAINTL	540.91	541.40	-0.49	323728.59	1826788.67	595+00.49	33.09' LT	US 23
SV1137	EP	540.31	540.47	-0.16	323726.11	1826780.83	595+00.52	41.31' LT	US 23
SV1138	TB	540.03	540.09	-0.06	323725.49	1826779.37	595+00.38	42.89' LT	US 23
SV1139	TSL	533.76	534.33	-0.57	323716.97	1826752.16	595+00.59	71.41' LT	US 23
SV1140	X	533.14	533.37	-0.23	323707.12	1826718.45	595+01.53	106.51' LT	US 23

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV1141	X	532.88	533.19	-0.31	323689.49	1826662.72	595+01.79	164.96' LT	US 23
SV1142	X	532.94	533.17	-0.23	323675.26	1826605.82	595+05.65	223.49' LT	US 23
SV595	X	668.26	668.63	-0.37	325761.85	1830285.25	856+72.85	324.93' RT	SR 823
SV596	X	665.79	665.96	-0.17	325710.83	1830297.31	856+76.06	272.59' RT	SR 823
SV597	X	662.16	662.06	0.10	325661.44	1830309.62	856+78.46	221.74' RT	SR 823
SV598	TB	656.73	656.79	-0.06	325616.54	1830322.12	856+79.29	175.14' RT	SR 823
SV599	X	648.26	648.10	0.16	325569.26	1830329.34	856+86.01	127.76' RT	SR 823
SV670	X	637.70	637.14	0.56	325529.73	1830339.70	856+87.29	86.91' RT	SR 823
SV671	TSL	625.43	625.03	0.40	325489.12	1830349.50	856+89.39	45.19' RT	SR 823
SV672	X	623.06	622.86	0.20	325436.73	1830363.47	856+90.78	9.02' LT	SR 823
SV673	TB	620.74	620.15	0.59	325390.16	1830372.72	856+94.99	56.31' LT	SR 823
SV674	TSL	618.91	618.60	0.31	325383.26	1830373.23	856+96.42	63.07' LT	SR 823
SV675	X	618.33	618.20	0.13	325359.61	1830379.91	856+96.65	87.65' LT	SR 823
SV676	X	618.05	615.41	2.64	325311.65	1830392.01	856+98.45	137.07' LT	SR 823
SV677	X	615.42	614.18	1.24	325262.80	1830401.52	857+02.85	186.63' LT	SR 823
SV678	X	613.06	612.72	0.34	325208.54	1830417.41	857+02.76	243.17' LT	SR 823
SV679	X	611.61	610.63	0.98	325145.20	1830431.29	857+06.87	307.87' LT	SR 823
SV680	TB	611.10	610.05	1.05	325128.00	1830434.06	857+08.86	325.16' LT	SR 823
SV681	TSL	607.74	607.11	0.63	325115.26	1830438.17	857+08.49	338.54' LT	SR 823
SV682	TSL	607.17	609.27	-2.10	325104.23	1830441.57	857+08.31	350.08' LT	SR 823
SV683	TB	612.33	611.64	0.69	325099.53	1830442.44	857+08.74	354.84' LT	SR 823
SV684	X	611.79	611.76	0.03	325050.77	1830455.24	857+09.92	405.23' LT	SR 823
SV685	X	612.11	612.02	0.09	324999.07	1830466.65	857+13.02	458.07' LT	SR 823
SV686	X	611.10	610.70	0.40	324946.91	1830480.09	857+14.42	511.91' LT	SR 823
SV1145	X	665.42	665.89	-0.47	325491.61	1827890.76	881+84.80	201.09' RT	SR 823
SV1146	TB	683.90	684.32	-0.42	325414.91	1827890.95	881+82.46	124.42' RT	SR 823
SV1147	TB	687.45	687.54	-0.09	325366.70	1827880.76	881+91.30	75.95' RT	SR 823
SV1148	X	687.33	687.92	-0.59	325313.70	1827872.92	881+97.65	22.75' RT	SR 823
SV1149	X	687.24	687.49	-0.25	325289.96	1827869.66	882+00.25	1.07' LT	SR 823
SV1150	X	684.16	684.69	-0.53	325236.80	1827867.31	882+01.11	54.28' LT	SR 823
SV1151	X	680.63	681.08	-0.45	325187.65	1827872.92	881+94.12	103.25' LT	SR 823
SV1152	X	677.10	677.24	-0.14	325138.45	1827880.42	881+85.25	152.22' LT	SR 823
SV1153	X	673.35	673.31	0.04	325084.87	1827888.79	881+75.38	205.55' LT	SR 823
SV1154	X	672.70	672.77	-0.07	325037.22	1827891.15	881+71.68	253.11' LT	SR 823
SV1155	X	672.13	672.11	0.02	324985.59	1827902.12	881+59.27	304.41' LT	SR 823
SV1158	X	672.67	672.67	0.00	325547.27	1828987.39	870+87.50	287.27' RT	SR 823
SV1159	X	667.56	667.61	-0.05	325493.35	1828982.83	870+91.24	233.27' RT	SR 823
SV1160	X	663.88	663.73	0.15	325447.68	1828978.95	870+94.35	187.53' RT	SR 823
SV1161	X	659.80	659.76	0.04	325397.52	1828975.89	870+96.46	137.32' RT	SR 823
SV1162	X	655.06	654.45	0.61	325348.62	1828974.20	870+97.15	88.39' RT	SR 823
SV1163	X	650.80	649.69	1.11	325298.77	1828971.29	870+99.04	38.49' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV1164	X	646.76	645.71	1.05	325260.51	1828969.45	871+00.06	0.20' RT	SR 823
SV1165	X	641.18	641.17	0.01	325208.85	1828966.21	871+02.17	51.52' LT	SR 823
SV1166	X	636.15	635.88	0.27	325161.40	1828963.58	871+03.72	99.01' LT	SR 823
SV1167	TB	630.96	629.98	0.98	325130.11	1828962.40	871+04.19	130.32' LT	SR 823
SV1168	TSL	627.79	627.47	0.32	325124.74	1828961.13	871+05.31	135.72' LT	SR 823
SV1169	TB	627.13	626.83	0.30	325122.59	1828961.24	871+05.15	137.86' LT	SR 823
SV1170	TSL	625.21	626.59	-1.38	325121.79	1828961.27	871+05.10	138.66' LT	SR 823
SV1171	TSL	625.29	626.63	-1.34	325116.30	1828962.68	871+03.62	144.12' LT	SR 823
SV1172	TB	630.35	629.91	0.44	325110.24	1828960.84	871+05.27	150.22' LT	SR 823
SV1173	X	636.53	636.42	0.11	325060.82	1828960.88	871+04.16	199.63' LT	SR 823
SV1174	X	642.55	643.00	-0.45	325007.61	1828961.88	871+02.08	252.80' LT	SR 823
SV1175	X	651.30	651.04	0.26	324954.78	1828960.59	871+02.20	305.65' LT	SR 823
SV1176	X	655.60	655.67	-0.07	324905.05	1828962.51	870+99.41	355.32' LT	SR 823
SV2513	X	800.14	800.44	-0.30	316743.09	1852463.94	577+14.70	281.30' RT	SR 823
SV2514	TB	798.22	798.40	-0.18	316727.08	1852465.51	577+13.20	265.29' RT	SR 823
SV2515	TSL	791.70	791.69	0.01	316694.76	1852469.57	577+09.27	232.95' RT	SR 823
SV2516	X	787.56	787.61	-0.05	316659.95	1852470.83	577+08.15	198.14' RT	SR 823
SV2517	TB	785.20	785.22	-0.02	316637.16	1852471.58	577+07.49	175.34' RT	SR 823
SV2518	TSL	783.19	783.19	0.00	316627.41	1852471.60	577+07.51	165.59' RT	SR 823
SV2519	X	780.44	780.50	-0.06	316602.59	1852473.91	577+05.30	140.77' RT	SR 823
SV2520	X	777.04	777.37	-0.33	316565.99	1852476.38	577+02.98	104.16' RT	SR 823
SV2521	X	772.27	772.42	-0.15	316510.33	1852479.00	577+00.58	48.49' RT	SR 823
SV2522	WOODS	771.28	771.41	-0.13	316477.35	1852479.94	576+99.78	15.50' RT	SR 823
SV2523	X	770.61	770.89	-0.28	316462.02	1852479.74	577+00.04	0.17' RT	SR 823
SV2524	X	769.36	769.71	-0.35	316414.56	1852481.21	576+98.76	47.29' LT	SR 823
SV2525	TB	768.57	769.35	-0.78	316388.37	1852482.85	576+97.23	73.49' LT	SR 823
SV2526	TSL	767.59	768.41	-0.82	316383.82	1852482.62	576+97.47	78.04' LT	SR 823
SV2527	TSL	768.16	768.40	-0.24	316379.92	1852483.72	576+96.39	81.94' LT	SR 823
SV2528	TB	769.03	769.08	-0.05	316372.06	1852484.82	576+95.32	89.81' LT	SR 823
SV2529	X	768.81	768.76	0.05	316346.68	1852485.86	576+94.38	115.19' LT	SR 823
SV2530	X	767.88	768.13	-0.25	316304.30	1852488.27	576+92.14	157.58' LT	SR 823
SV2531	X	766.89	767.65	-0.76	316256.61	1852491.95	576+88.64	205.28' LT	SR 823
SV2532	TB	767.45	766.84	0.61	316228.31	1852489.62	576+91.09	233.58' LT	SR 823
SV2533	TSL	765.98	766.45	-0.47	316225.36	1852489.34	576+91.38	236.52' LT	SR 823
SV2534	TSL	766.22	766.11	0.11	316223.24	1852489.73	576+91.00	238.65' LT	SR 823
SV2535	TB	766.94	766.34	0.60	316222.13	1852490.12	576+90.61	239.76' LT	SR 823
SV2536	X	766.76	766.77	-0.01	316199.46	1852491.54	576+89.28	262.43' LT	SR 823
SV2537	TB	766.72	766.15	0.57	316181.12	1852492.90	576+87.99	280.78' LT	SR 823
SV2538	TSL	766.24	765.92	0.32	316180.32	1852493.05	576+87.84	281.58' LT	SR 823
SV2539	TSL	766.61	766.60	0.01	316177.40	1852493.23	576+87.67	284.50' LT	SR 823
SV2540	TB	769.05	769.30	-0.25	316172.19	1852493.58	576+87.34	289.71' LT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV2541	X	770.36	770.50	-0.14	316164.51	1852494.10	576+86.85	297.39' LT	SR 823
SV2542	EP	771.37	771.27	0.10	316159.81	1852494.08	576+86.88	302.09' LT	SR 823
SV2543	CP	771.88	771.82	0.06	316150.76	1852494.84	576+86.16	311.15' LT	SR 823
SV2544	EP	771.71	771.31	0.40	316142.21	1852495.35	576+85.68	319.70' LT	SR 823
SV2545	DR	800.63	800.71	-0.08	316745.86	1852465.02	577+13.61	284.07' RT	SR 823
SV2546	X	800.77	800.98	-0.21	316765.03	1852463.77	577+14.78	303.24' RT	SR 823
SV2549	X	922.83	922.90	-0.07	315972.56	1854284.84	557+97.31	0.62' LT	SR 823
SV2550	X	925.58	925.62	-0.04	315999.30	1854296.41	558+02.57	28.04' RT	SR 823
SV2551	X	929.99	930.02	-0.03	316047.18	1854322.90	558+07.07	82.56' RT	SR 823
SV2552	X	932.25	932.46	-0.21	316081.81	1854348.41	558+05.16	125.53' RT	SR 823
SV2556	X	916.07	916.20	-0.13	315936.63	1854259.98	557+97.90	44.30' LT	SR 823
SV2557	X	909.68	909.62	0.06	315891.40	1854236.13	557+92.29	95.14' LT	SR 823
SV2558	X	903.62	903.45	0.17	315842.69	1854209.32	557+86.99	150.51' LT	SR 823
SV2559	TB	899.43	899.44	-0.01	315813.35	1854192.75	557+84.06	184.09' LT	SR 823
SV2560	TSL	898.16	898.91	-0.75	315809.58	1854190.67	557+83.64	188.38' LT	SR 823
SV2561	X	896.88	897.41	-0.53	315795.83	1854184.15	557+81.13	203.42' LT	SR 823
SV2562	TB	896.59	896.55	0.04	315787.14	1854179.57	557+79.93	213.18' LT	SR 823
SV2563	X	891.43	891.46	-0.03	315755.64	1854162.45	557+76.01	248.85' LT	SR 823
SV2564	X	887.19	886.95	0.24	315729.76	1854149.81	557+71.41	277.35' LT	SR 823
SV2565	X	882.25	882.30	-0.05	315706.79	1854137.50	557+68.24	303.25' LT	SR 823
SV2567	X	933.21	933.02	0.19	316101.28	1854363.44	558+03.56	150.07' RT	SR 823
SV2568	TB	932.70	932.57	0.13	316129.38	1854380.81	558+04.68	183.08' RT	SR 823
SV2569	X	925.60	925.97	-0.37	316173.01	1854408.10	558+06.12	234.52' RT	SR 823
SV2570	X	917.53	917.61	-0.08	316204.51	1854424.14	558+09.92	269.63' RT	SR 823
SV2571	TB	912.18	912.24	-0.06	316221.76	1854432.18	558+12.52	288.44' RT	SR 823
SV2572	X	902.55	902.49	0.06	316244.70	1854451.64	558+09.36	318.32' RT	SR 823
SV2573	X	891.10	891.26	-0.16	316275.68	1854471.78	558+09.73	355.27' RT	SR 823
SV2574	X	881.45	881.25	0.20	316304.56	1854489.77	558+10.64	389.28' RT	SR 823
SV2602	X	950.56	951.54	-0.98	316455.40	1850829.80	593+49.99	0.24' RT	SR 823
SV2603	X	951.14	952.54	-1.40	316407.37	1850835.25	593+44.74	47.82' LT	SR 823
SV2604	X	951.91	952.52	-0.61	316361.97	1850841.52	593+38.65	93.24' LT	SR 823
SV2605	X	952.26	952.40	-0.14	316320.34	1850847.05	593+33.29	134.89' LT	SR 823
SV2606	TSL	951.90	952.71	-0.81	316313.82	1850847.91	593+32.46	141.42' LT	SR 823
SV2607	TB	952.92	954.18	-1.26	316305.67	1850848.14	593+32.26	149.57' LT	SR 823
SV2608	X	949.03	949.76	-0.73	316268.65	1850853.84	593+26.71	186.61' LT	SR 823
SV2609	X	942.62	943.67	-1.05	316215.04	1850856.63	593+24.14	240.23' LT	SR 823
SV2610	X	939.29	940.01	-0.72	316189.12	1850861.25	593+19.62	266.17' LT	SR 823
SV2612	X	950.63	951.10	-0.47	316500.83	1850824.02	593+55.59	45.69' RT	SR 823
SV2613	X	950.25	950.91	-0.66	316547.25	1850818.82	593+60.60	92.13' RT	SR 823
SV2614	X	950.48	950.98	-0.50	316584.10	1850815.86	593+63.41	128.99' RT	SR 823
SV2615	X	950.52	951.46	-0.94	316626.71	1850813.39	593+65.71	171.61' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV2616	X	951.58	951.78	-0.20	316666.02	1850808.18	593+70.76	210.94' RT	SR 823
SV2617	X	952.54	952.80	-0.26	316711.04	1850804.39	593+74.37	255.98' RT	SR 823
SV2641	X	956.24	956.28	-0.04	316447.20	1848830.19	613+49.62	0.13' RT	SR 823
SV2642	X	958.66	958.99	-0.33	316479.18	1848831.64	613+48.04	32.11' RT	SR 823
SV2643	X	961.31	961.60	-0.29	316525.14	1848833.62	613+45.87	78.06' RT	SR 823
SV2644	X	962.84	963.11	-0.27	316554.17	1848834.28	613+45.10	107.09' RT	SR 823
SV2645	X	965.39	966.13	-0.74	316597.81	1848836.08	613+43.12	150.72' RT	SR 823
SV2646	X	965.91	966.59	-0.68	316641.91	1848834.44	613+44.58	194.83' RT	SR 823
SV2647	X	967.18	967.55	-0.37	316678.36	1848834.19	613+44.68	231.28' RT	SR 823
SV2648	X	968.05	968.00	0.05	316711.88	1848834.67	613+44.07	264.79' RT	SR 823
SV2649	X	952.95	952.74	0.21	316401.37	1848828.23	613+51.77	45.69' LT	SR 823
SV2650	X	949.31	949.64	-0.33	316356.63	1848826.38	613+53.80	90.42' LT	SR 823
SV2651	X	946.52	947.04	-0.52	316315.96	1848824.09	613+56.25	131.08' LT	SR 823
SV2652	X	944.61	944.98	-0.37	316268.73	1848822.87	613+57.66	178.30' LT	SR 823
SV2653	X	943.19	943.56	-0.37	316218.75	1848819.81	613+60.93	228.27' LT	SR 823
SV2654	X	942.60	942.73	-0.13	316181.41	1848820.09	613+60.80	265.61' LT	SR 823
SV2657	X	969.43	969.42	0.01	316515.10	1847183.12	629+99.87	0.08' LT	SR 823
SV2658	X	970.70	970.72	-0.02	316471.06	1847177.14	629+99.83	44.52' LT	SR 823
SV2659	X	973.13	972.93	0.20	316430.74	1847170.06	630+01.37	85.43' LT	SR 823
SV2660	X	974.37	974.25	0.12	316383.00	1847162.47	630+02.40	133.76' LT	SR 823
SV2661	TB	972.04	971.81	0.23	316338.66	1847157.69	630+01.15	178.34' LT	SR 823
SV2662	X	964.14	964.51	-0.37	316293.41	1847153.10	629+99.60	223.79' LT	SR 823
SV2663	X	957.00	957.04	-0.04	316259.20	1847150.48	629+97.64	258.04' LT	SR 823
SV2664	X	970.04	969.74	0.30	316558.94	1847191.23	629+97.76	44.46' RT	SR 823
SV2665	X	972.18	972.13	0.05	316608.74	1847197.83	629+97.95	94.69' RT	SR 823
SV2666	X	976.07	975.99	0.08	316656.18	1847207.86	629+94.36	143.05' RT	SR 823
SV2667	X	978.32	978.20	0.12	316698.51	1847210.40	629+97.63	185.34' RT	SR 823
SV2668	X	981.38	981.04	0.34	316744.46	1847216.38	629+97.92	231.67' RT	SR 823
SV2669	X	983.58	983.46	0.12	316784.69	1847225.75	629+93.93	272.80' RT	SR 823
SV2683	X	740.40	741.34	-0.94	317868.63	1844713.63	658+83.75	504.19' RT	SR 823
SV2684	X	737.37	737.93	-0.56	317830.41	1844687.75	658+87.77	458.19' RT	SR 823
SV2685	X	735.88	735.67	0.21	317800.74	1844667.20	658+91.27	422.24' RT	SR 823
SV2686	X	734.10	733.98	0.12	317770.24	1844647.91	658+93.16	386.20' RT	SR 823
SV2687	TSL	732.31	733.16	-0.85	317748.17	1844633.49	658+94.93	359.89' RT	SR 823
SV2688	X	734.59	734.74	-0.15	317703.83	1844601.37	659+01.32	305.48' RT	SR 823
SV2689	TB	734.58	734.97	-0.39	317690.35	1844593.03	659+01.95	289.64' RT	SR 823
SV2690	TB	732.37	731.70	0.67	317675.18	1844581.57	659+04.53	270.79' RT	SR 823
SV2691	TSL	728.68	730.80	-2.12	317671.52	1844579.95	659+04.12	266.81' RT	SR 823
SV2692	TSL	729.20	731.23	-2.03	317670.09	1844579.15	659+04.11	265.17' RT	SR 823
SV2693	TB	732.22	732.28	-0.06	317667.57	1844577.07	659+04.69	261.95' RT	SR 823
SV2694	X	731.54	730.93	0.61	317653.37	1844567.81	659+05.77	245.03' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV2695	TB	727.65	726.49	1.16	317633.99	1844554.41	659+07.93	221.56' RT	SR 823
SV2696	TSL	720.81	722.02	-1.21	317619.62	1844544.99	659+09.05	204.42' RT	SR 823
SV2697	TSL	719.04	719.13	-0.09	317590.80	1844524.62	659+12.60	169.30' RT	SR 823
SV2698	X	716.35	716.77	-0.42	317554.54	1844501.26	659+15.02	126.23' RT	SR 823
SV2699	X	714.04	714.62	-0.58	317522.39	1844479.99	659+17.64	87.76' RT	SR 823
SV2700	X	712.53	713.48	-0.95	317480.40	1844450.92	659+22.14	36.89' RT	SR 823
SV2701	X	711.97	712.49	-0.52	317449.94	1844430.14	659+25.10	0.13' RT	SR 823
SV2702	X	709.95	710.49	-0.54	317413.18	1844406.81	659+27.12	43.36' LT	SR 823
SV2703	X	708.53	709.12	-0.59	317367.92	1844375.23	659+32.03	98.32' LT	SR 823
SV2704	TSL	709.27	709.90	-0.63	317343.14	1844356.98	659+35.51	128.89' LT	SR 823
SV2705	TB	712.84	711.67	1.17	317311.53	1844335.89	659+38.04	166.81' LT	SR 823
SV2706	TB	711.64	712.39	-0.75	317297.37	1844327.20	659+38.53	183.41' LT	SR 823
SV2708	TB	709.21	709.33	-0.12	317283.17	1844319.42	659+38.22	199.60' LT	SR 823
SV2709	TSL	705.04	705.93	-0.89	317270.04	1844310.27	659+39.59	215.54' LT	SR 823
SV2710	TB	706.74	706.06	0.68	317262.13	1844303.26	659+41.68	225.89' LT	SR 823
SV2711	X	705.03	704.65	0.38	317231.49	1844278.54	659+47.66	264.77' LT	SR 823
SV2712	X	709.08	709.15	-0.07	317192.58	1844253.86	659+49.59	310.81' LT	SR 823
SV2713	X	709.39	710.06	-0.67	317155.74	1844234.31	659+48.23	352.49' LT	SR 823
SV2714	X	713.24	712.87	0.37	317127.53	1844216.18	659+49.81	385.98' LT	SR 823
SV2715	X	713.32	713.39	-0.07	317109.30	1844203.15	659+51.91	408.28' LT	SR 823
SV2716	X	715.07	715.48	-0.41	317080.70	1844187.65	659+51.12	440.80' LT	SR 823
SV2717	X	718.98	719.12	-0.14	317061.15	1844174.90	659+52.35	464.10' LT	SR 823
SV2718	X	723.38	723.63	-0.25	317042.13	1844159.73	659+55.78	488.16' LT	SR 823
SV2719	X	723.54	722.72	0.82	317023.95	1844141.88	659+61.77	512.82' LT	SR 823
SV2751	TB	963.31	963.80	-0.49	317162.45	1844985.15	652+99.86	0.06' RT	SR 823
SV2752	X	955.27	955.73	-0.46	317133.66	1844971.26	653+00.27	31.90' LT	SR 823
SV2753	X	946.74	947.47	-0.73	317099.29	1844955.65	652+99.87	69.65' LT	SR 823
SV2754	X	944.52	945.26	-0.74	317084.05	1844949.13	652+99.33	86.22' LT	SR 823
SV2755	X	941.75	942.40	-0.65	317055.01	1844935.97	652+98.98	118.10' LT	SR 823
SV2756	X	940.30	940.81	-0.51	317028.01	1844921.48	653+00.65	148.69' LT	SR 823
SV2757	X	940.65	941.56	-0.91	317003.79	1844911.32	652+99.63	174.94' LT	SR 823
SV2758	X	941.64	942.39	-0.75	316975.45	1844897.44	653+00.20	206.49' LT	SR 823
SV2759	X	943.01	943.61	-0.60	316944.32	1844879.58	653+03.12	242.25' LT	SR 823
SV2760	X	943.97	944.46	-0.49	316929.26	1844870.99	653+04.47	259.53' LT	SR 823
SV2761	TSL	963.77	965.89	-2.12	317170.57	1844989.70	652+99.18	9.34' RT	SR 823
SV2762	TB	965.58	966.25	-0.67	317172.49	1844990.57	652+99.20	11.45' RT	SR 823
SV2763	X	970.52	971.51	-0.99	317195.47	1845000.37	653+00.05	36.42' RT	SR 823
SV2764	X	976.21	976.69	-0.48	317221.15	1845010.41	653+01.83	63.93' RT	SR 823
SV2765	TB	978.68	979.34	-0.66	317238.43	1845019.50	653+00.90	83.44' RT	SR 823
SV2768	X	980.72	981.26	-0.54	317266.77	1845032.64	653+00.99	114.68' RT	SR 823
SV2769	X	980.67	981.57	-0.90	317295.85	1845046.88	653+00.39	147.05' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV2770	X	981.14	981.76	-0.62	317335.51	1845066.99	652+98.91	191.49' RT	SR 823
SV2771	X	981.80	982.44	-0.64	317370.57	1845082.33	652+99.87	229.75' RT	SR 823
SV2772	X	982.12	982.58	-0.46	317406.99	1845098.79	653+00.39	269.72' RT	SR 823
SV4014	CP	701.34	701.14	0.20	321833.40	1840009.94	719+98.75	832.98' LT	SR 823
SV4015	CP	703.70	703.57	0.13	321830.85	1840057.44	719+79.53	789.47' LT	SR 823
SV4016	CP	706.36	706.22	0.14	321829.66	1840104.65	719+61.68	745.74' LT	SR 823
SV4017	CP	709.42	709.47	-0.05	321835.00	1840147.14	719+51.61	704.12' LT	SR 823
SV4018	CP	711.86	711.72	0.14	321844.94	1840188.56	719+46.23	661.87' LT	SR 823
SV4019	CP	712.64	712.38	0.26	321859.11	1840230.16	719+44.73	617.94' LT	SR 823
SV4020	CP	711.65	711.51	0.14	321873.53	1840273.04	719+43.02	572.74' LT	SR 823
SV4021	CP	709.80	709.48	0.32	321884.17	1840318.76	719+36.76	526.21' LT	SR 823
SV4022	CP	708.38	708.27	0.11	321893.04	1840362.85	719+29.43	481.84' LT	SR 823
SV4043	CP	708.03	707.65	0.38	321897.64	1840408.72	719+17.47	437.32' LT	SR 823
SV4044	CP	708.70	708.51	0.19	321905.59	1840459.00	719+07.08	387.49' LT	SR 823
SV4045	CP	709.90	709.45	0.45	321911.81	1840507.73	718+95.62	339.72' LT	SR 823
SV4046	CP	711.47	711.12	0.35	321919.88	1840555.74	718+86.15	291.96' LT	SR 823
SV4047	CP	713.32	713.09	0.23	321929.05	1840603.04	718+77.96	244.48' LT	SR 823
SV4081	CP	716.12	715.69	0.43	321941.51	1840650.04	718+72.95	196.12' LT	SR 823
SV4082	CP	718.08	717.80	0.28	321959.54	1840691.20	718+75.22	151.24' LT	SR 823
SV4083	CP	719.30	719.19	0.11	321978.46	1840733.92	718+77.77	104.59' LT	SR 823
SV4084	CP	720.98	720.74	0.24	321995.40	1840775.67	718+78.81	59.54' LT	SR 823
SV4085	CP	722.86	722.63	0.23	322014.06	1840817.71	718+81.36	13.62' LT	SR 823
SV4086	CP	724.39	724.22	0.17	322031.11	1840861.12	718+81.91	33.02' RT	SR 823
SV4111	CP	725.66	725.44	0.22	322046.05	1840907.23	718+79.54	81.43' RT	SR 823
SV4112	CP	726.79	726.54	0.25	322060.30	1840951.00	718+77.35	127.41' RT	SR 823
SV4113	CP	727.86	727.63	0.23	322072.72	1840994.83	718+73.43	172.79' RT	SR 823
SV4114	CP	729.21	728.97	0.24	322083.75	1841037.75	718+68.53	216.84' RT	SR 823
SV4115	CP	730.36	730.16	0.20	322092.01	1841080.87	718+60.97	260.08' RT	SR 823
SV4116	CP	731.06	730.96	0.10	322097.09	1841124.96	718+50.09	303.11' RT	SR 823
SV4117	CP	731.05	730.71	0.34	322098.93	1841169.26	718+36.11	345.19' RT	SR 823
SV4118	CP	730.72	730.53	0.19	322098.76	1841215.23	718+19.65	388.11' RT	SR 823
SV4119	CP	730.74	730.67	0.07	322098.52	1841259.08	718+03.88	429.03' RT	SR 823
SV4120	CP	731.38	731.25	0.13	322096.04	1841302.62	717+86.13	468.86' RT	SR 823
SV4121	CP	732.19	732.05	0.14	322095.14	1841348.13	717+69.16	511.10' RT	SR 823
SV4122	CP	733.08	732.79	0.29	322093.17	1841392.33	717+51.65	551.73' RT	SR 823
SV4123	CP	734.24	733.98	0.26	322092.77	1841437.99	717+35.09	594.29' RT	SR 823
SV4124	CP	734.98	734.70	0.28	322093.04	1841484.29	717+18.93	637.68' RT	SR 823
SV4654	CP	1010.09	1009.54	0.55	326227.36	1839562.20	760+86.43	619.99' RT	SR 823
SV4655	CP	1008.51	1008.31	0.20	326183.52	1839586.44	760+43.15	609.97' RT	SR 823
SV4656	CP	1007.75	1007.60	0.15	326141.96	1839612.12	760+00.45	602.98' RT	SR 823
SV4657	CP	1007.04	1007.00	0.04	326100.06	1839637.04	759+57.83	595.64' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV4658	CP	1006.13	1006.20	-0.07	326059.14	1839659.56	759+17.10	587.48' RT	SR 823
SV4659	CP	1005.54	1005.72	-0.18	326011.16	1839680.77	758+72.02	574.34' RT	SR 823
SV4660	CP	1008.84	1008.82	0.02	325904.17	1839699.08	757+86.29	523.68' RT	SR 823
SV4661	CP	1009.35	1009.51	-0.16	325853.16	1839696.86	757+50.70	491.36' RT	SR 823
SV4662	CP	1008.46	1008.57	-0.11	325801.18	1839688.05	757+17.48	453.46' RT	SR 823
SV4663	CP	1006.94	1007.14	-0.20	325747.06	1839671.47	756+86.32	408.27' RT	SR 823
SV4664	CP	1006.11	1006.09	0.02	325697.09	1839647.04	756+61.95	359.32' RT	SR 823
SV4665	CP	1005.95	1006.05	-0.10	325655.55	1839617.78	756+46.15	311.42' RT	SR 823
SV4670	CP	1005.85	1005.93	-0.08	325621.73	1839584.73	756+38.07	264.92' RT	SR 823
SV4671	CP	1005.39	1005.39	0.00	325587.64	1839544.14	756+33.76	212.11' RT	SR 823
SV4672	CP	1003.13	1003.12	0.01	325554.58	1839504.72	756+29.52	160.85' RT	SR 823
SV4673	CP	998.38	998.42	-0.04	325521.43	1839466.72	756+24.32	110.70' RT	SR 823
SV4674	CP	992.70	992.72	-0.02	325489.78	1839431.57	756+18.61	63.76' RT	SR 823
SV4675	CP	986.86	986.89	-0.03	325458.57	1839396.54	756+13.08	17.18' RT	SR 823
SV4676	CP	980.59	980.75	-0.16	325423.12	1839359.05	756+05.33	33.83' LT	SR 823
SV4677	CP	974.82	974.67	0.15	325388.32	1839323.16	755+97.03	83.15' LT	SR 823
SV4678	CP	968.84	968.78	0.06	325352.69	1839287.30	755+87.83	132.90' LT	SR 823
SV4679	CP	962.22	962.05	0.17	325314.15	1839250.56	755+76.43	184.99' LT	SR 823
SV4680	CP	957.01	957.05	-0.04	325278.87	1839220.18	755+63.83	229.97' LT	SR 823
SV4681	CP	953.04	952.96	0.08	325235.82	1839189.90	755+44.06	279.18' LT	SR 823
SV4717	CP	917.58	917.49	0.09	324848.21	1839166.64	751+97.21	503.37' LT	SR 823
SV4718	CP	924.36	924.45	-0.09	324897.38	1839167.13	752+44.66	478.41' LT	SR 823
SV4719	CP	931.11	930.92	0.19	324950.94	1839165.01	752+97.20	453.01' LT	SR 823
SV4720	CP	936.00	936.35	-0.35	324995.61	1839160.82	753+41.92	433.48' LT	SR 823
SV4721	CP	941.74	941.78	-0.04	325050.99	1839155.18	753+97.03	409.10' LT	SR 823
SV4722	CP	945.49	945.49	0.00	325095.56	1839152.48	754+39.82	387.50' LT	SR 823
SV4723	CP	948.49	948.48	0.01	325149.55	1839155.84	754+87.13	355.30' LT	SR 823
SV4724	CP	950.45	950.54	-0.09	325193.91	1839168.71	755+19.42	320.11' LT	SR 823
SV4725	CP	953.37	953.34	0.03	325240.75	1839193.32	755+46.37	273.58' LT	SR 823
SV4727	CP	910.20	910.17	0.03	324798.74	1839163.33	751+50.43	530.49' LT	SR 823
SV4728	CP	903.05	902.66	0.39	324752.06	1839157.39	751+07.25	558.17' LT	SR 823
SV4735	CP	895.38	894.88	0.50	324701.14	1839149.08	750+60.45	589.57' LT	SR 823
SV4737	CP	888.22	888.09	0.13	324653.58	1839139.64	750+16.97	620.01' LT	SR 823
SV4738	CP	881.64	881.38	0.26	324605.74	1839127.61	749+73.89	652.52' LT	SR 823
SV4739	CP	875.18	874.94	0.24	324552.27	1839111.65	749+26.20	690.69' LT	SR 823
SV4740	CP	870.73	870.44	0.29	324511.12	1839098.51	748+89.30	720.55' LT	SR 823
SV4741	CP	865.37	865.11	0.26	324459.02	1839081.42	748+41.99	758.40' LT	SR 823
SV4742	CP	861.10	861.06	0.04	324417.60	1839067.87	748+03.70	788.16' LT	SR 823
SV4744	CP	856.12	856.04	0.08	324369.59	1839052.31	747+58.48	822.18' LT	SR 823
SV4745	CP	851.70	851.62	0.08	324324.11	1839035.48	747+15.91	855.98' LT	SR 823
SV4746	CP	847.56	847.52	0.04	324280.68	1839014.56	746+76.91	892.42' LT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV4748	CP	843.03	OUTSIDE TIN		324238.66	1838985.44	746+42.73	935.60' LT	SR 823
SV5340	CL	776.55	777.36	-0.81	326953.47	1833616.52	820+99.95	0.22' LT	SR 823
SV5341	X	877.62	878.97	-1.35	327280.34	1833460.79	820+99.99	361.86' RT	SR 823
SV5342	X	871.11	871.59	-0.48	327254.59	1833472.65	821+00.34	333.51' RT	SR 823
SV5343	TB	855.60	856.19	-0.59	327216.41	1833491.64	820+99.64	290.87' RT	SR 823
SV5344	TSL	852.22	854.79	-2.57	327212.59	1833494.42	820+98.80	286.23' RT	SR 823
SV5345	TB	850.14	849.74	0.40	327198.47	1833499.37	821+00.35	271.35' RT	SR 823
SV5346	TSL	844.40	844.64	-0.24	327181.86	1833507.00	821+00.60	253.08' RT	SR 823
SV5347	X	835.57	835.92	-0.35	327142.87	1833526.70	820+99.61	209.40' RT	SR 823
SV5348	TB	823.13	823.50	-0.37	327103.11	1833545.59	820+99.65	165.38' RT	SR 823
SV5349	TSL	821.12	822.31	-1.19	327099.68	1833546.94	820+99.90	161.71' RT	SR 823
SV5350	TB	817.95	817.60	0.35	327084.22	1833554.43	820+99.79	144.53' RT	SR 823
SV5351	TB	810.30	809.17	1.13	327057.02	1833566.55	821+00.53	114.76' RT	SR 823
SV5352	X	800.83	801.13	-0.30	327033.43	1833578.88	820+99.55	88.16' RT	SR 823
SV5353	X	788.37	788.55	-0.18	326987.74	1833599.92	821+00.20	37.86' RT	SR 823
SV5354	X	767.00	767.59	-0.59	326918.55	1833632.34	821+00.69	38.54' LT	SR 823
SV5355	X	761.03	760.82	0.21	326873.71	1833655.09	820+99.42	88.81' LT	SR 823
SV5356	X	760.43	760.45	-0.02	326864.87	1833658.91	820+99.77	98.43' LT	SR 823
SV5357	X	757.21	758.17	-0.96	326843.02	1833668.89	821+00.17	122.45' LT	SR 823
SV5358	X	753.31	753.76	-0.45	326803.56	1833686.68	821+01.09	165.73' LT	SR 823
SV5359	X	747.24	747.92	-0.68	326764.37	1833706.45	821+00.07	209.61' LT	SR 823
SV5360	TB	743.79	744.29	-0.50	326745.23	1833715.12	821+00.49	230.62' LT	SR 823
SV5361	TSL	742.28	743.40	-1.12	326740.76	1833716.83	821+00.87	235.39' LT	SR 823
SV5362	TB	741.12	741.33	-0.21	326729.95	1833720.66	821+02.10	246.80' LT	SR 823
SV5363	TSL	737.77	739.67	-1.90	326720.94	1833726.05	821+01.08	257.25' LT	SR 823
SV5364	X	733.63	733.47	0.16	326677.55	1833746.64	821+01.16	305.28' LT	SR 823
SV5365	TB	728.04	725.00	3.04	326625.16	1833773.67	820+99.21	364.20' LT	SR 823
SV5366	TSL	720.30	720.67	-0.37	326608.20	1833784.55	820+96.57	384.19' LT	SR 823
SV5367	X	716.01	716.31	-0.30	326561.82	1833802.33	821+00.64	433.71' LT	SR 823
SV5368	X	714.00	713.72	0.28	326507.58	1833825.94	821+02.76	492.83' LT	SR 823
SV32000	X	1069.32	1069.32	0.00	327402.95	1835296.81	803+50.00	0.01' RT	SR 823
SV32001	X	1070.09	1070.67	-0.58	327352.06	1835292.57	803+57.91	50.45' LT	SR 823
SV32002	X	1069.84	1070.12	-0.28	327300.66	1835288.36	803+66.00	101.41' LT	SR 823
SV32003	X	1067.59	1067.87	-0.28	327269.95	1835287.94	803+68.77	132.00' LT	SR 823
SV32004	X	1064.31	1065.01	-0.70	327248.25	1835284.73	803+73.75	153.40' LT	SR 823
SV32005	X	1054.39	1054.71	-0.32	327213.04	1835282.13	803+79.24	188.31' LT	SR 823
SV32006	X	1044.87	1045.56	-0.69	327182.92	1835279.50	803+84.42	218.13' LT	SR 823
SV32007	X	1037.93	1038.18	-0.25	327150.05	1835277.92	803+88.80	250.78' LT	SR 823
SV32008	X	1031.99	1032.13	-0.14	327119.42	1835274.69	803+94.81	281.05' LT	SR 823
SV32009	X	1020.85	1021.34	-0.49	327078.13	1835271.36	804+01.94	321.94' LT	SR 823
SV32010	X	1013.02	1013.78	-0.76	327051.89	1835269.61	804+06.15	347.94' LT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV32011	X	1066.21	1066.39	-0.18	327445.28	1835299.30	803+44.58	42.06' RT	SR 823
SV32012	X	1058.96	1059.36	-0.40	327485.04	1835301.85	803+39.37	81.55' RT	SR 823
SV32013	X	1047.08	1047.52	-0.44	327529.29	1835304.69	803+33.68	125.51' RT	SR 823
SV32014	X	1034.98	1035.03	-0.05	327577.63	1835307.76	803+27.61	173.54' RT	SR 823
SV32015	X	1021.41	1021.47	-0.06	327629.97	1835310.64	803+21.59	225.58' RT	SR 823
SV32016	X	1006.84	1007.04	-0.20	327680.94	1835311.30	803+17.88	276.40' RT	SR 823
SV32017	X	996.75	997.38	-0.63	327724.00	1835314.07	803+12.74	319.20' RT	SR 823
SV32018	X	989.06	989.42	-0.36	327756.98	1835315.22	803+09.76	352.05' RT	SR 823
SV32019	X	980.44	980.73	-0.29	327804.18	1835318.90	803+03.70	398.93' RT	SR 823
SV32020	X	976.47	977.07	-0.60	327855.71	1835321.73	802+98.29	450.20' RT	SR 823
SV32021	X	976.14	976.65	-0.51	327886.50	1835324.21	802+94.40	480.79' RT	SR 823
SV5396	CL	1029.72	1029.60	0.12	326860.50	1837804.00	777+50.06	0.10' LT	SR 823
SV5397	X	1010.88	1011.20	-0.32	326371.36	1837538.94	777+50.03	556.44' LT	SR 823
SV5398	X	1014.28	1014.48	-0.20	326416.59	1837563.36	777+50.12	505.04' LT	SR 823
SV5399	X	1016.67	1017.42	-0.75	326469.43	1837592.07	777+50.05	444.90' LT	SR 823
SV5400	X	1016.86	1017.27	-0.41	326511.18	1837614.82	777+49.93	397.35' LT	SR 823
SV5401	X	1015.96	1017.09	-1.13	326559.11	1837640.78	777+49.95	342.85' LT	SR 823
SV5402	X	1016.83	1017.60	-0.77	326611.24	1837668.94	777+50.03	283.60' LT	SR 823
SV5403	X	1017.90	1018.66	-0.76	326658.05	1837694.26	777+50.08	230.38' LT	SR 823
SV5404	X	1020.41	1021.06	-0.65	326703.71	1837719.14	777+49.96	178.38' LT	SR 823
SV5405	X	1024.11	1024.84	-0.73	326744.02	1837740.88	777+50.05	132.58' LT	SR 823
SV5406	X	1027.36	1027.67	-0.31	326784.52	1837762.76	777+50.12	86.55' LT	SR 823
SV5407	X	1029.34	1029.41	-0.07	326823.54	1837783.70	777+50.30	42.26' LT	SR 823
SV5408	X	1028.99	1029.49	-0.50	326838.97	1837792.03	777+50.33	24.73' LT	SR 823
SV5409	X	1030.30	1029.68	0.62	326849.23	1837797.96	777+50.00	12.88' LT	SR 823
SV5410	X	1028.57	1029.16	-0.59	326903.91	1837826.76	777+50.73	48.91' RT	SR 823
SV5411	X	1027.21	1028.26	-1.05	326948.84	1837851.86	777+50.07	100.37' RT	SR 823
SV5412	X	1027.52	1027.98	-0.46	326996.08	1837877.26	777+50.25	154.01' RT	SR 823
SV5413	X	1027.29	1027.61	-0.32	327043.62	1837903.17	777+50.12	208.15' RT	SR 823
SV5414	X	1026.08	1026.70	-0.62	327090.71	1837928.71	777+50.10	261.72' RT	SR 823
SV5415	X	1025.95	1026.67	-0.72	327144.87	1837958.47	777+49.77	323.52' RT	SR 823
SV5416	X	1029.58	1029.56	0.02	327186.49	1837980.63	777+50.09	370.67' RT	SR 823
SV5417	X	1032.38	1032.92	-0.54	327232.81	1838005.77	777+50.06	423.37' RT	SR 823
SV5418	X	1038.12	1038.49	-0.37	327277.09	1838029.80	777+50.04	473.75' RT	SR 823
SV5419	X	1042.85	1042.75	0.10	327323.85	1838055.05	777+50.11	526.89' RT	SR 823
SV5420	X	1048.13	1048.42	-0.29	327372.70	1838081.59	777+50.06	582.49' RT	SR 823
SV5467	X	1005.88	1005.30	0.58	318573.30	1843071.73	677+00.61	99.51' RT	SR 823
SV5468	X	994.59	994.66	-0.07	318536.59	1843038.45	676+99.87	49.96' RT	SR 823
SV5469	X	982.49	980.90	1.59	318501.73	1843003.47	677+01.65	0.61' RT	SR 823
SV5470	TB	981.58	980.02	1.56	318499.91	1843001.81	677+01.62	1.86' LT	SR 823
SV5471	TSL	978.95	977.79	1.16	318495.81	1842997.38	677+02.06	7.88' LT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV5472	X	973.69	973.68	0.01	318481.71	1842984.75	677+01.67	26.80' LT	SR 823
SV5473	TB	970.16	968.67	1.49	318468.10	1842972.83	677+01.09	44.88' LT	SR 823
SV5474	X	963.31	963.36	-0.05	318447.20	1842954.87	676+99.96	72.42' LT	SR 823
SV5475	X	956.80	957.27	-0.47	318426.95	1842936.11	676+99.86	100.02' LT	SR 823
SV5476	X	945.83	945.99	-0.16	318396.29	1842908.07	676+99.44	141.57' LT	SR 823
SV5477	X	929.60	929.30	0.30	318354.29	1842867.46	677+00.44	199.98' LT	SR 823
SV5480	X	912.82	912.56	0.26	318317.43	1842834.13	676+99.67	249.67' LT	SR 823
SV5481	X	891.52	891.98	-0.46	318280.89	1842799.45	677+00.07	300.04' LT	SR 823
SV5482	X	870.88	871.05	-0.17	318249.86	1842769.05	677+01.07	343.47' LT	SR 823
SV5483	X	852.25	852.52	-0.27	318223.68	1842744.61	677+01.07	379.29' LT	SR 823
SV5484	X	840.90	841.50	-0.60	318202.68	1842725.62	677+00.63	407.60' LT	SR 823
SV5485	X	831.63	832.20	-0.57	318179.34	1842704.36	677+00.27	439.16' LT	SR 823
SV5486	TB	829.49	829.88	-0.39	318174.66	1842699.73	677+00.45	445.75' LT	SR 823
SV5487	TSL	823.25	823.74	-0.49	318166.76	1842688.54	677+03.08	459.16' LT	SR 823
SV5488	TB	818.94	819.63	-0.69	318155.84	1842677.72	677+03.50	474.52' LT	SR 823
SV5489	TSL	817.56	818.98	-1.42	318154.07	1842675.63	677+03.80	477.24' LT	SR 823
SV5490	X	815.53	816.30	-0.77	318148.18	1842669.85	677+03.99	485.49' LT	SR 823
SV5491	TB	814.16	814.32	-0.16	318144.14	1842665.38	677+04.47	491.50' LT	SR 823
SV5492	X	805.83	805.64	0.19	318125.77	1842648.39	677+04.34	516.52' LT	SR 823
SV5493	X	797.47	797.53	-0.06	318106.22	1842632.80	677+02.51	541.45' LT	SR 823
SV5495	X	1010.00	1009.07	0.93	318588.57	1843086.27	677+00.40	120.59' RT	SR 823
SV5496	X	1010.13	1009.56	0.57	318597.96	1843094.01	677+01.16	132.73' RT	SR 823
SV5497	X	1009.29	1011.23	-1.94	318616.74	1843112.87	677+00.17	159.33' RT	SR 823
SV5498	X	1013.95	1013.29	0.66	318630.56	1843121.85	677+03.11	175.56' RT	SR 823
SV5501	X	1018.46	1018.30	0.16	318687.43	1843176.64	677+01.86	254.52' RT	SR 823
SV5502	X	1017.39	1016.94	0.45	318719.58	1843208.95	677+00.13	300.07' RT	SR 823
SV5503	X	1017.16	1016.79	0.37	318752.62	1843239.30	677+00.51	344.93' RT	SR 823
SV5504	X	1020.02	1020.34	-0.32	318778.31	1843262.16	677+01.37	379.31' RT	SR 823
SV5505	X	1025.17	1025.29	-0.12	318802.59	1843285.08	677+01.19	412.70' RT	SR 823
SV5506	X	1030.61	1030.75	-0.14	318820.19	1843299.39	677+02.83	435.33' RT	SR 823
SV5507	X	1036.19	1035.81	0.38	318849.33	1843323.27	677+05.44	472.93' RT	SR 823
SV5509	X	945.57	945.17	0.40	323812.68	1840150.07	737+99.85	0.37' LT	SR 823
SV5510	X	1043.87	1043.94	-0.07	323951.31	1840515.97	737+99.78	390.91' RT	SR 823
SV5511	X	1036.24	1036.03	0.21	323936.31	1840477.09	737+99.53	349.24' RT	SR 823
SV5512	X	1025.84	1025.83	0.01	323920.85	1840437.40	737+99.15	306.65' RT	SR 823
SV5513	X	1022.31	1022.09	0.22	323914.38	1840420.78	737+98.99	288.81' RT	SR 823
SV5514	X	1021.09	1021.60	-0.51	323913.53	1840418.77	737+98.90	286.63' RT	SR 823
SV5515	X	1013.43	1013.31	0.12	323899.51	1840386.24	737+97.33	251.25' RT	SR 823
SV5516	X	1002.96	1002.74	0.22	323887.72	1840352.98	737+98.09	215.97' RT	SR 823
SV5517	X	992.80	992.52	0.28	323872.24	1840314.87	737+97.12	174.84' RT	SR 823
SV5518	X	983.42	983.37	0.05	323861.22	1840281.35	737+98.70	139.59' RT	SR 823

GEOPAK Compare COGO Points to TIN Surface

Point	Feature	COGO Elev	TIN Elev	Elev Diff	Northing	Easting	Station	Offset	Align
SV5519	X	972.14	972.19	-0.05	323848.75	1840244.45	738+00.12	100.67' RT	SR 823
SV5520	X	959.48	959.58	-0.10	323833.13	1840200.26	738+01.18	53.81' RT	SR 823
SV5521	X	932.54	932.91	-0.37	323799.33	1840103.77	738+03.77	48.39' LT	SR 823
SV5522	X	923.94	923.48	0.46	323777.54	1840056.74	738+00.07	100.09' LT	SR 823
SV5523	X	913.95	913.65	0.30	323757.12	1840009.69	737+97.65	151.33' LT	SR 823
SV5524	X	902.38	902.21	0.17	323742.05	1839963.43	737+99.96	199.92' LT	SR 823
SV5527	X	890.79	890.36	0.43	323724.73	1839918.54	737+99.68	248.04' LT	SR 823
SV5528	X	878.40	877.91	0.49	323712.25	1839883.41	738+00.46	285.31' LT	SR 823
SV5529	X	865.07	865.23	-0.16	323698.91	1839852.88	737+98.81	318.59' LT	SR 823
SV5530	X	852.42	852.08	0.34	323685.22	1839819.88	737+97.70	354.30' LT	SR 823

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 The Sum of (Elev Diff)Squared = 158.90
 The Ave of (Elev Diff)Squared = 0.32
 The Root Mean Square Error is = 0.57
 National Standard for Spatial Data Accuracy(NSSDA) is = 1.11

Points FAILED the 95% confidence test based on 1.96 Chi Square Value.

User defined Tolerance = 1.00

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 20.5% of points are between Half Tolerance and Tolerance *
 6.7% of the points are greater than Tolerance ***
 -2.57 is the maximum difference BELOW
 3.04 is the maximum difference ABOVE
 493 Total number of points
 273 Points are below the TIN Surface
 214 Points are above the TIN Surface
 6 Points are equal to the TIN Surface