

Leica Geosystems AG
 Heinrich Wild Strasse
 CH-9435 Heerbrugg
 St. Gallen, Switzerland

Phone: + 41 71 727 3131
 Fax: + 41 71 727 4674

- when it has to be **right**



Level Report

Report created: 01/07/2021 08:52:21

Project Details

General

Project Name: TUS-250-23.46 PID 102408
 Owner: -
 Lead Surveyor: Jon Penix
 Date Created: 08/24/2020 11:25:16
 Last Accessed: 01/07/2021 08:43:28
 Application Software: Infinity 3.4.0

Customer Details

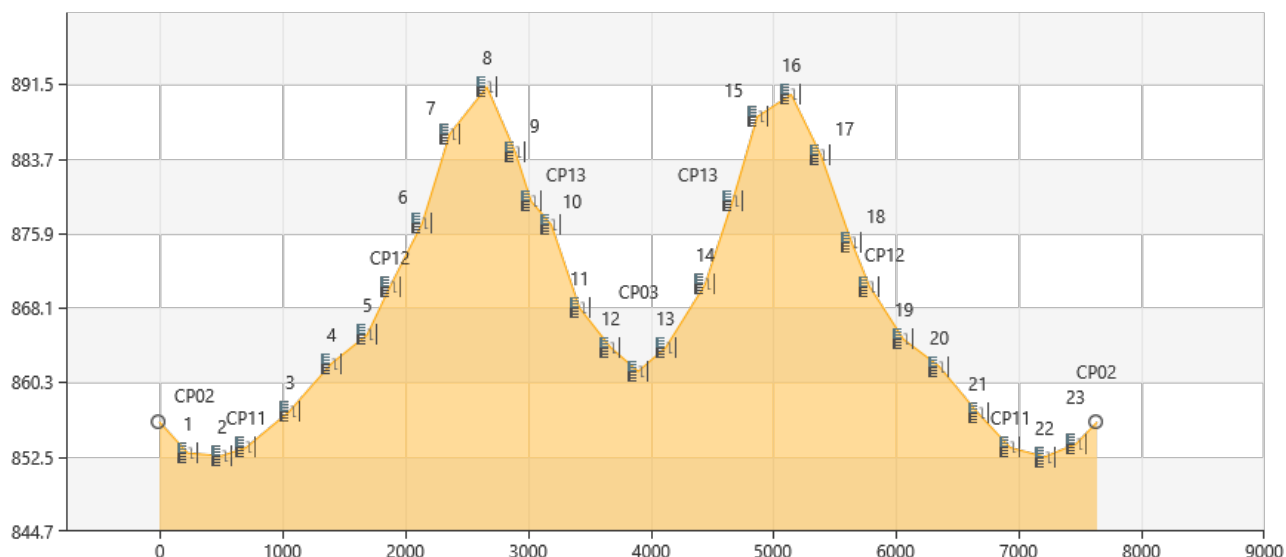
Customer Name: -
 Contact Person: -
 Number: -
 Email: -
 Skype: -
 Website: -

Master Coordinate System

Coordinate System Name: OHIO NORTH
 Transformation Type: Classical 3D
 Residual Distribution: None
 Ellipsoid: GRS 1980
 Projection Type: Lambert two
 Geoid Model: OH G18 GRS80
 CSCS Model: -

Path: I:\ProjectData\102408\Design\Survey\RawData\Level\Infinity\TUS-250-23.46 PID 102408\TUS-250-23.46 PID 102408.iprj
 Size: 207.7 MB
 Comments: -

Level Line Id: LINE00001



General

Date/Time: 7/17/2021 12:08:20 PM
 Staff One Id:
 Staff Two Id:
 Start Point: CP02
 End Point: CP02
 Instrument Type: Dna3/10
 Method: BF
 Stations: 31
 Observations: 62

Results

Height Difference: 0.000 ftUS
 Length: 7,635.727 ftUS
 Misclosure: 0.021 ftUS
 Height Error / Point: 0.001 ftUS
 Total Distance Balance: **-359.058 ftUS**
 Total Station Difference: -

Processing Parameters

Adjustment Method: By Distance
 Staff Corrections: Not Applied

Points

Point Id	Date/Time	Height [ftUS]	ΔHeight [ftUS]	SD [ftUS]
CP02	7/17/2021 12:08:22 PM	856.133	-	-
1	7/17/2021 12:09:50 PM	852.904	-3.229	0.000
2	7/17/2021 12:13:43 PM	852.602	-0.302	0.000
CP11	7/17/2021 12:17:52 PM	853.472	0.870	0.000
3	7/17/2021 12:26:02 PM	857.242	3.769	0.000
4	7/17/2021 12:32:19 PM	862.261	5.020	0.000
5	7/17/2021 12:38:15 PM	865.273	3.011	0.000
CP12	7/17/2021 12:43:23 PM	870.325	5.052	0.000
6	7/17/2021 12:47:09 PM	876.930	6.604	0.000
7	7/17/2021 12:53:06 PM	886.321	9.391	0.000
8	7/17/2021 12:58:03 PM	891.195	4.874	0.000
9	7/17/2021 1:02:55 PM	884.378	-6.816	0.000
CP13	7/17/2021 1:06:44 PM	879.224	-5.154	0.000
10	7/17/2021 1:08:26 PM	876.810	-2.414	0.000
11	7/17/2021 1:13:39 PM	868.057	-8.753	0.000
12	7/17/2021 1:17:45 PM	863.967	-4.090	0.000
CP03	7/17/2021 1:21:25 PM	861.448	-2.519	0.000
13	7/17/2021 1:22:56 PM	863.967	2.519	0.000
14	7/17/2021 1:28:21 PM	870.550	6.583	0.000
CP13	7/17/2021 1:32:55 PM	879.221	8.671	0.000
15	7/17/2021 1:37:08 PM	888.098	8.877	0.000
16	7/17/2021 1:41:24 PM	890.426	2.328	0.000
17	7/17/2021 1:45:39 PM	884.114	-6.312	0.000
18	7/17/2021 1:49:52 PM	875.023	-9.091	0.000
CP12	7/17/2021 1:53:49 PM	870.326	-4.696	0.000
19	7/17/2021 1:58:10 PM	864.819	-5.507	0.000
20	7/17/2021 2:02:33 PM	861.980	-2.839	0.000
21	7/17/2021 2:07:23 PM	857.084	-4.896	0.000
CP11	7/17/2021 2:12:19 PM	853.468	-3.616	0.000
22	7/17/2021 2:16:45 PM	852.502	-0.966	0.000
23	7/17/2021 2:20:45 PM	853.880	1.378	0.000
CP02	7/17/2021 12:08:22 PM	856.133	2.253	-

Line Tolerances

Allowable Misclosure $E = a + b \sqrt{L}$
 a: 0.007 ftUS
 b: 0.021 ftUS/ \sqrt{mi}
 L (Level Line Length): 1.446 mi
 Height Error / Point: 0.002 ftUS
 Total Distance Balance: 30.000 ftUS

Observation Tolerances

Double Observation Check: 0.003 ftUS
 Station Difference: 0.001 ftUS
 Max. Sight Distance: 130.000 ftUS
 Min. Ground Clearance: 1.600 ftUS

Point Height Tolerances

Height Spread: 0.066 ftUS
 Max. Difference From Fixed: 0.033 ftUS
 Height:

Booking Sheet

Point Id	Type	BS [ftUS]	IS [ftUS]	FS [ftUS]	Rise [ftUS]	Fall [ftUS]	H _z Dist. [ftUS]	ΔHeight [ftUS]	ΔHeight Corr. [ftUS]	Height [ftUS]	Remark
CP02		-	-	-	-	-	-	0.000	0.000	856.133	
CP02	BS1	3.344	-	-	-	-	80.732	-	-	-	
1	FS1	-	-	6.572	-	3.228	149.308	-	-	-	
1		-	-	-	-	-	-	-3.228	-0.001	852.904	
1	BS1	5.197	-	-	-	-	97.810	-	-	-	
2	FS1	-	-	5.498	-	0.301	176.339	-	-	-	
2		-	-	-	-	-	-	-0.301	-0.001	852.602	
2	BS1	5.698	-	-	-	-	94.851	-	-	-	
CP11	FS1	-	-	4.827	0.871	-	105.540	-	-	-	
CP11		-	-	-	-	-	-	0.871	-0.001	853.472	
CP11	BS1	6.805	-	-	-	-	190.335	-	-	-	
3	FS1	-	-	3.035	3.770	-	161.537	-	-	-	
3		-	-	-	-	-	-	3.770	-0.001	857.242	
3	BS1	8.940	-	-	-	-	175.880	-	-	-	
4	FS1	-	-	3.920	5.021	-	166.626	-	-	-	
4		-	-	-	-	-	-	5.021	-0.001	862.261	

4	BS1	6.813	-	-	-	-	157.509	-	-	-
5	FS1	-	-	3.801	3.012	-	133.611	-	-	-
5		-	-	-	-	-	-	3.012	-0.001	865.273
5	BS1	10.879	-	-	-	-	104.092	-	-	-
CP12	FS1	-	-	5.826	5.053	-	83.178	-	-	-
CP12		-	-	-	-	-	-	5.053	-0.001	870.325
CP12	BS1	10.349	-	-	-	-	89.033	-	-	-
6	FS1	-	-	3.744	6.605	-	172.483	-	-	-
6		-	-	-	-	-	-	6.605	-0.001	876.930
6	BS1	10.693	-	-	-	-	115.873	-	-	-
7	FS1	-	-	1.301	9.392	-	109.974	-	-	-
7		-	-	-	-	-	-	9.392	-0.001	886.321
7	BS1	8.579	-	-	-	-	143.582	-	-	-
8	FS1	-	-	3.704	4.875	-	158.382	-	-	-
8		-	-	-	-	-	-	4.875	-0.001	891.195
8	BS1	2.821	-	-	-	-	113.055	-	-	-
9	FS1	-	-	9.637	-	6.816	118.558	-	-	-
9		-	-	-	-	-	-	-6.816	-0.001	884.378
9	BS1	2.019	-	-	-	-	72.063	-	-	-
CP13	FS1	-	-	7.172	-	5.154	57.702	-	-	-
CP13		-	-	-	-	-	-	-5.154	0.000	879.224
CP13	BS1	7.172	-	-	-	-	57.687	-	-	-
10	FS1	-	-	9.586	-	2.414	104.145	-	-	-
10		-	-	-	-	-	-	-2.414	0.000	876.810
10	BS1	1.254	-	-	-	-	87.666	-	-	-
11	FS1	-	-	10.006	-	8.752	144.781	-	-	-
11		-	-	-	-	-	-	-8.752	-0.001	868.057
11	BS1	2.269	-	-	-	-	126.470	-	-	-
12	FS1	-	-	6.358	-	4.090	124.481	-	-	-
12		-	-	-	-	-	-	-4.090	-0.001	863.967
12	BS1	4.027	-	-	-	-	103.867	-	-	-
CP03	FS1	-	-	6.546	-	2.519	121.316	-	-	-
CP03		-	-	-	-	-	-	-2.519	-0.001	861.448
CP03	BS1	6.546	-	-	-	-	121.330	-	-	-
13	FS1	-	-	4.026	2.520	-	103.819	-	-	-
13		-	-	-	-	-	-	2.520	-0.001	863.967
13	BS1	7.462	-	-	-	-	185.800	-	-	-
14	FS1	-	-	0.878	6.584	-	134.825	-	-	-
14		-	-	-	-	-	-	6.584	-0.001	870.550
14	BS1	10.438	-	-	-	-	136.338	-	-	-
CP13	FS1	-	-	1.766	8.671	-	85.274	-	-	-
CP13		-	-	-	-	-	-	8.671	-0.001	879.221
CP13	BS1	9.847	-	-	-	-	104.475	-	-	-
15	FS1	-	-	0.970	8.877	-	98.420	-	-	-
15		-	-	-	-	-	-	8.877	-0.001	888.098
15	BS1	8.294	-	-	-	-	140.361	-	-	-
16	FS1	-	-	5.966	2.329	-	135.707	-	-	-
16		-	-	-	-	-	-	2.329	-0.001	890.426
16	BS1	2.827	-	-	-	-	100.791	-	-	-
17	FS1	-	-	9.138	-	6.311	139.884	-	-	-
17		-	-	-	-	-	-	-6.311	-0.001	884.114
17	BS1	1.932	-	-	-	-	95.976	-	-	-
18	FS1	-	-	11.022	-	9.090	153.903	-	-	-
18		-	-	-	-	-	-	-9.090	-0.001	875.023
18	BS1	4.040	-	-	-	-	57.238	-	-	-
CP12	FS1	-	-	8.736	-	4.696	90.690	-	-	-
CP12		-	-	-	-	-	-	-4.696	0.000	870.326
CP12	BS1	2.221	-	-	-	-	94.811	-	-	-
19	FS1	-	-	7.727	-	5.506	181.157	-	-	-
19		-	-	-	-	-	-	-5.506	-0.001	864.819
19	BS1	3.938	-	-	-	-	146.139	-	-	-
20	FS1	-	-	6.776	-	2.838	144.092	-	-	-
20		-	-	-	-	-	-	-2.838	-0.001	861.980
20	BS1	3.238	-	-	-	-	149.976	-	-	-
21	FS1	-	-	8.134	-	4.896	166.871	-	-	-

21		-	-	-	-	-	-	-4.896	-0.001	857.084	
21	BS1	2.487	-	-	-	-	137.461	-	-	-	
CP11	FS1	-	-	6.102	-	3.615	126.048	-	-	-	
CP11		-	-	-	-	-	-	-3.615	-0.001	853.468	
CP11	BS1	4.386	-	-	-	-	140.238	-	-	-	
22	FS1	-	-	5.352	-	0.965	140.214	-	-	-	
22		-	-	-	-	-	-	-0.965	-0.001	852.502	
22	BS1	5.847	-	-	-	-	124.504	-	-	-	
23	FS1	-	-	4.469	1.379	-	132.474	-	-	-	
23		-	-	-	-	-	-	1.379	-0.001	853.880	
23	BS1	5.488	-	-	-	-	92.389	-	-	-	
CP02	FS1	-	-	3.234	2.254	-	76.056	-	-	-	
CP02		-	-	-	-	-	-	2.254	0.000	856.133	