

2005680 Western Seminole County LiDAR Consolidated Vertical Accuracy Report
 UTM Zone 17 (Meters) NAD83, NAVD88 (Feet)

| <u>Point No.</u> | <u>Easting</u> | <u>Northing</u> | <u>Elevation</u> | <u>Laser DTM Elev</u> | <u>Difference</u> | <u>Difference²</u> |
|------------------|----------------|-----------------|------------------|-----------------------|-------------------|-------------------------------|
| O1 | 476623.19 | 3184382.37 | 33.858 | 33.08 | -0.778 | 0.605284 |
| A1 | 453893.51 | 3169119.52 | 123.976 | 123.48 | -0.496 | 0.246016 |
| B1 | 454275.47 | 3172045.9 | 89.232 | 88.75 | -0.482 | 0.232324 |
| D1 | 458122.44 | 3175573.72 | 55.899 | 55.43 | -0.469 | 0.219961 |
| O2 | 476655.56 | 3184414.9 | 31.129 | 30.67 | -0.459 | 0.210681 |
| D2 | 458124.49 | 3175519.1 | 48.898 | 48.45 | -0.448 | 0.200704 |
| F1 | 462155.6 | 3174713.27 | 57.447 | 57.05 | -0.397 | 0.157609 |
| T1 | 466910.4 | 3170359.73 | 87.539 | 87.17 | -0.369 | 0.136161 |
| F2 | 462173.78 | 3174670.18 | 62.894 | 62.61 | -0.284 | 0.080656 |
| B2 | 454298.64 | 3172060.6 | 88.799 | 88.53 | -0.269 | 0.072361 |
| S4 | 474175.32 | 3174584.83 | 44.669 | 44.4 | -0.269 | 0.072361 |
| E1 | 462288.6 | 3171754.74 | 82.3 | 82.06 | -0.24 | 0.0576 |
| F4 | 462250.93 | 3174780.77 | 60.269 | 60.03 | -0.239 | 0.057121 |
| A2 | 453898.95 | 3169169.96 | 123.08 | 122.85 | -0.23 | 0.0529 |
| S2 | 474063.72 | 3174694.42 | 44.557 | 44.34 | -0.217 | 0.047089 |
| F3 | 462224.48 | 3174762.58 | 59.485 | 59.27 | -0.215 | 0.046225 |
| P1 | 470635.65 | 3183463.79 | 44.879 | 44.71 | -0.169 | 0.028561 |
| K2 | 455290.7 | 3181853.15 | 36.565 | 36.41 | -0.155 | 0.024025 |
| S1 | 474221.49 | 3174652.52 | 47.424 | 47.29 | -0.134 | 0.017956 |
| J2 | 464825.85 | 3188990.89 | 25.472 | 25.34 | -0.132 | 0.017424 |
| T3 | 466929.94 | 3170307.94 | 91.312 | 91.18 | -0.132 | 0.017424 |
| H2 | 466056.8 | 3182280.25 | 68.733 | 68.62 | -0.113 | 0.012769 |
| H1 | 466086.6 | 3182245.72 | 67.966 | 67.86 | -0.106 | 0.011236 |
| Q1 | 473911.38 | 3181300.95 | 45.764 | 45.66 | -0.104 | 0.010816 |
| E2 | 462266.01 | 3171729.42 | 80.088 | 79.99 | -0.098 | 0.009604 |
| I1 | 463976.54 | 3185094.31 | 59.511 | 59.42 | -0.091 | 0.008281 |
| L2 | 457043.67 | 3187356.34 | 36.581 | 36.49 | -0.091 | 0.008281 |
| B3 | 454292.72 | 3172051.14 | 89.025 | 88.95 | -0.075 | 0.005625 |
| N3 | 472029.74 | 3187108.71 | 16.588 | 16.53 | -0.058 | 0.003364 |
| R4 | 468271.08 | 3176479.72 | 60.817 | 60.76 | -0.057 | 0.003249 |
| E3 | 462261.41 | 3171681.59 | 77.109 | 77.06 | -0.049 | 0.002401 |
| R1 | 468274.24 | 3176438.33 | 61.929 | 61.9 | -0.029 | 0.000841 |
| L1 | 456992.13 | 3187293.13 | 36.227 | 36.2 | -0.027 | 0.000729 |
| J3 | 464826.38 | 3188975.83 | 25.974 | 25.96 | -0.014 | 0.000196 |
| E4 | 462304.9 | 3171774.21 | 82.333 | 82.35 | 0.017 | 0.000289 |
| R2 | 468262.92 | 3176454.03 | 62.67 | 62.69 | 0.02 | 0.0004 |
| H3 | 466045.44 | 3182288.92 | 69.042 | 69.08 | 0.038 | 0.001444 |
| Q2 | 473843.66 | 3181324.67 | 40.758 | 40.8 | 0.042 | 0.001764 |
| K4 | 455194.55 | 3181880.44 | 39.813 | 39.86 | 0.047 | 0.002209 |
| M3 | 468354.81 | 3189781.09 | 8.474 | 8.54 | 0.066 | 0.004356 |
| D4 | 458118.94 | 3175503.12 | 48.271 | 48.35 | 0.079 | 0.006241 |
| I2 | 463934.32 | 3185113.34 | 59.468 | 59.56 | 0.092 | 0.008464 |
| S3 | 474145.24 | 3174643.94 | 45.833 | 45.93 | 0.097 | 0.009409 |
| T2 | 466946.66 | 3170296.81 | 91.269 | 91.39 | 0.121 | 0.014641 |
| J1 | 464836.24 | 3188932.06 | 24.298 | 24.43 | 0.132 | 0.017424 |
| P2 | 470773.8 | 3183486.46 | 45.466 | 45.6 | 0.134 | 0.017956 |
| A3 | 453883.86 | 3169196.36 | 123.271 | 123.41 | 0.139 | 0.019321 |
| I3 | 463892.96 | 3185085.15 | 60.833 | 61 | 0.167 | 0.027889 |
| H4 | 466065.57 | 3182223.22 | 66.466 | 66.65 | 0.184 | 0.033856 |
| P4 | 470660.37 | 3183465.13 | 44.419 | 44.62 | 0.201 | 0.040401 |
| G2 | 460829.5 | 3180925.54 | 21.224 | 21.45 | 0.226 | 0.051076 |
| M2 | 468383.86 | 3189808.11 | 10.213 | 10.44 | 0.227 | 0.051529 |
| M4 | 468411.24 | 3189828.53 | 2.756 | 2.99 | 0.234 | 0.054756 |

| | | | | | | |
|----|-----------|------------|---------|--------|-------|----------|
| N2 | 472046.44 | 3187086.01 | 16.384 | 16.63 | 0.246 | 0.060516 |
| K3 | 455252.3 | 3181865.21 | 37.779 | 38.04 | 0.261 | 0.068121 |
| C4 | 453248.62 | 3175642.2 | 83.691 | 83.96 | 0.269 | 0.072361 |
| A4 | 453939.37 | 3169133.81 | 123.851 | 124.13 | 0.279 | 0.077841 |
| R3 | 468212.16 | 3176457.04 | 60.548 | 60.83 | 0.282 | 0.079524 |
| O4 | 476625.97 | 3184348.74 | 32.946 | 33.23 | 0.284 | 0.080656 |
| I4 | 463999.21 | 3185118.45 | 57.595 | 57.89 | 0.295 | 0.087025 |
| C2 | 453189.13 | 3175595.18 | 83.533 | 83.83 | 0.297 | 0.088209 |
| N4 | 472042.61 | 3187118.49 | 15.896 | 16.21 | 0.314 | 0.098596 |
| L4 | 457058.22 | 3187350.58 | 36.457 | 36.78 | 0.323 | 0.104329 |
| C1 | 453200.74 | 3175586.9 | 83.307 | 83.64 | 0.333 | 0.110889 |
| G1 | 460778.04 | 3180953.08 | 19.111 | 19.47 | 0.359 | 0.128881 |
| N1 | 471997.29 | 3187125.66 | 15.889 | 16.27 | 0.381 | 0.145161 |
| O3 | 476678.18 | 3184421.39 | 30.709 | 31.12 | 0.411 | 0.168921 |
| M1 | 468374.44 | 3189805.14 | 10.866 | 11.3 | 0.434 | 0.188356 |
| J4 | 464730.13 | 3188852.81 | 24.757 | 25.2 | 0.443 | 0.196249 |
| Q3 | 473812.75 | 3181335.91 | 40.154 | 40.65 | 0.496 | 0.246016 |
| P3 | 470648.3 | 3183487.3 | 43.182 | 43.75 | 0.568 | 0.322624 |
| G3 | 460819.09 | 3180981.27 | 20.889 | 21.46 | 0.571 | 0.326041 |
| D3 | 458137.14 | 3175510.59 | 47.621 | 48.23 | 0.609 | 0.370881 |
| B4 | 454299.51 | 3172081.46 | 89.705 | 90.43 | 0.725 | 0.525625 |
| L3 | 457010.93 | 3187325.26 | 35.348 | 36.09 | 0.742 | 0.550564 |

| | |
|-------------------|-------|
| <u>Min</u> | -0.78 |
| <u>Max</u> | 0.74 |
| <u>Mean</u> | 0.05 |
| <u>StDev (One</u> | |
| <u>Sigma)</u> | 0.31 |
| <u>StDev (Two</u> | |
| <u>Sigma)</u> | 0.61 |
| <u>RMS</u> | 0.31 |
| <u>Skewness</u> | -0.05 |
| <u>Kurtosis</u> | -0.09 |

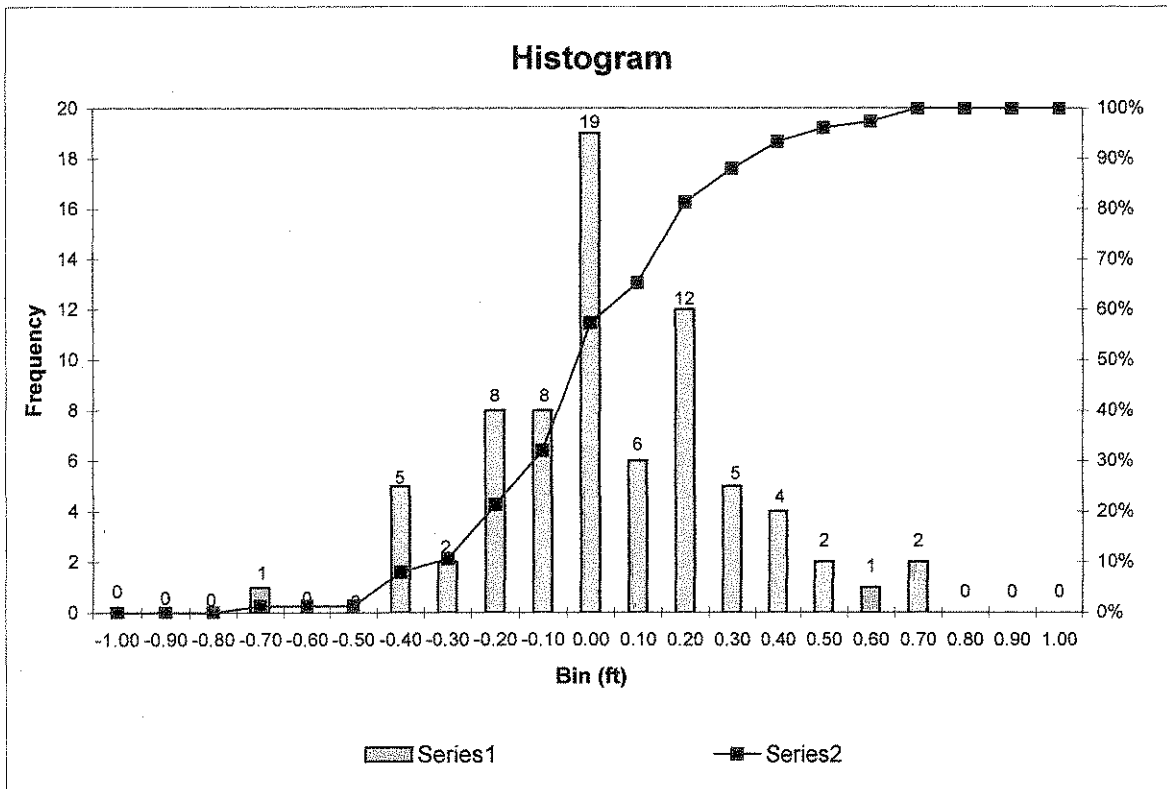
"Tested 0.78 feet vertical accuracy at 95 percent confidence level using the 95th percentile method."

| Bin (m) | Frequency | Cumulative % | Normalized Distribution |
|---------|-----------|--------------|-------------------------|
| -1.00 | 0 | 0.00% | .00% |
| -0.90 | 0 | 0.00% | .00% |
| -0.80 | 0 | 0.00% | .00% |
| -0.70 | 1 | 1.33% | 1.33% |
| -0.60 | 0 | 1.33% | .00% |
| -0.50 | 0 | 1.33% | .00% |
| -0.40 | 5 | 8.00% | 6.67% |
| -0.30 | 2 | 10.67% | 2.67% |
| -0.20 | 8 | 21.33% | 10.67% |
| -0.10 | 8 | 32.00% | 10.67% |
| 0.00 | 19 | 57.33% | 25.33% |
| 0.10 | 6 | 65.33% | 8.00% |
| 0.20 | 12 | 81.33% | 16.00% |
| 0.30 | 5 | 88.00% | 6.67% |
| 0.40 | 4 | 93.33% | 5.33% |
| 0.50 | 2 | 96.00% | 2.67% |
| 0.60 | 1 | 97.33% | 1.33% |
| 0.70 | 2 | 100.00% | 2.67% |
| 0.80 | 0 | 100.00% | .00% |
| 0.90 | 0 | 100.00% | .00% |
| 1.00 | 0 | 100.00% | .00% |
| | 75 | | |

| Summary Statistics | |
|-------------------------|--------|
| Mean | 0.05 |
| Standard Error | 0.22 |
| Median | 0.04 |
| Mode | 0.27 |
| Standard Deviation | 0.29 |
| Sample Variance | 0.96 |
| Kurtosis | -0.09 |
| Skewness | -0.05 |
| Range | 1.52 |
| Minimum | -0.778 |
| Maximum | 0.74 |
| Sum | 3.69 |
| Count | 75 |
| Confidence Level(95.0%) | 95% |

points within:

| | |
|--|--------|
| -1.00 to -0.61 | 1.33% |
| -0.60 to -0.31 (ft) | 9.33% |
| -0.30 to 0.30 (ft) | 70.67% |
| 0.31 to 0.60 (ft) | 16.00% |
| 0.61 to 1.00 (ft) | 2.67% |
| Percentage of points falling within 0.778 ft | 97% |



Outliers

| <u>Point Name</u> | <u>Easting</u> | <u>Northing</u> | <u>Elevation</u> | <u>Laser DTM Elev</u> | <u>Difference</u> | <u>Difference Squared</u> |
|-------------------|----------------|-----------------|------------------|-----------------------|-------------------|---------------------------|
| C3 | 453161.55 | 3175621.46 | 84.265 | 85.87 | 1.605 | 2.576025 |
| G4 | 460771.25 | 3180984.14 | 19.511 | 21.25 | 1.739 | 3.024121 |
| Q4 | 473828.98 | 3181456.75 | 41.355 | 40.34 | -1.015 | 1.030225 |
| T4 | 466950.48 | 3170322.93 | 91.269 | 90.25 | -1.019 | 1.038361 |