

**Project Definition:** The entire collection for a contracted area.

**Work Unit Definition:** A production block of data defined by the National Geospatial Technical Operations Center due to expediency, priority or resource allocation. There can be one or many work units per project.

### Project Information

|  |   |
|--|---|
| <b>Lidar Base Specification:</b> 2021 Revision A | <b>Primary Contractor:</b> Fugro Geospatial, Inc. (Fugro) |
| <b>Las Version:</b> 1.4                          | <b>Contract Mechanism:</b> GPSC                           |
| <b>P Method:</b> 7 - Linear-Mode Lidar           |   |
| <b>Collection Start Date:</b> 10-29-2021         | <b>Collection End Date:</b> 11-08-2021                    |
| <b>The National Map Email:</b> tnm_help@usgs.gov |   |

### Vertical Accuracy Results

The U.S. Geological Survey evaluates absolute vertical accuracy of the lidar and lidar-derived bare earth DEM data at the project level

| Lidar Point Cloud | Required NVA RMSEz (cm) | Tested NVA RMSEz (cm) | Required NVA at 95% confidence level (cm) | Tested NVA at 95% confidence level (cm) | Required VVA at 95th percentile (cm) | Tested VVA at 95th percentile (cm) |
|-------------------|-------------------------|-----------------------|---|---|--------------------------------------|------------------------------------|
|                   | 10.0                    | <b>2.45</b>           | 19.6                                      | <b>4.8</b>                              | N/A                                  | <b>14.40</b>                       |

| Digital Elevation Model | Required NVA RMSEz (cm) | Tested NVA RMSEz (cm) | Required NVA at 95% confidence level (cm) | Tested NVA at 95% confidence level (cm) | Required VVA at 95th percentile (cm) | Tested VVA at 95th percentile (cm) |
|-------------------------|-------------------------|-----------------------|---|---|--------------------------------------|------------------------------------|
|                         | 10.0                    | <b>2.88</b>           | 19.6                                      | <b>5.64</b>                             | 30.0                                 | <b>14.56</b>                       |

Please see the vertical\_accuracy folder within the project metadata for more information.

### Classifications Used

Classification verification is limited to the minimum required by applicable Lidar Base Specification. Classifications beyond the minimum are not verified by USGS.

| Classification ID | Classification Type |
|-------------------|---------------------|
| 1                 | Unclassified        |
| 2                 | Ground              |
| 6                 | Building            |
| 7                 | Low Noise           |
| 9                 | Water               |
| 17                | Bridge Deck         |
| 18                | High Noise          |
| 20                | Ignored Ground      |

### Sensor(s) Used

|   |
|---|
| <b>Sensor</b>                           |
| Leica ALS80 - Aerial Oscillating Mirror |
| Riegl LMS Q1560 - Aerial Rotating Prism |

## Work Unit Information

|  |   |                             |
|--|---|-----------------------------|
| <a href="#">ND_SouthWest_2_D21</a>       | <b>Work Unit ID:</b> 300143             | <b>Quality Level:</b> 2     |
| <b>Horizontal EPSG Code:</b> 6343        | <b>Vertical EPSG Code:</b> 5703         | <b>Geoid Model:</b> GEOID18 |
| <b>DEM Ground Sample Distance:</b> 1.0   | <b>Hydro Treatment:</b> hydro-flattened |                             |
| <b>Collection Start Date:</b> 2021-11-06 | <b>Collection End Date:</b> 2021-11-07  |                             |

|  |   |                             |
|--|---|-----------------------------|
| <a href="#">ND_SouthWest_1_D21</a>       | <b>Work Unit ID:</b> 223464             | <b>Quality Level:</b> 2     |
| <b>Horizontal EPSG Code:</b> 6342        | <b>Vertical EPSG Code:</b> 5703         | <b>Geoid Model:</b> GEOID18 |
| <b>DEM Ground Sample Distance:</b> 1.0   | <b>Hydro Treatment:</b> hydro-flattened |                             |
| <b>Collection Start Date:</b> 2021-10-29 | <b>Collection End Date:</b> 2021-11-08  |                             |