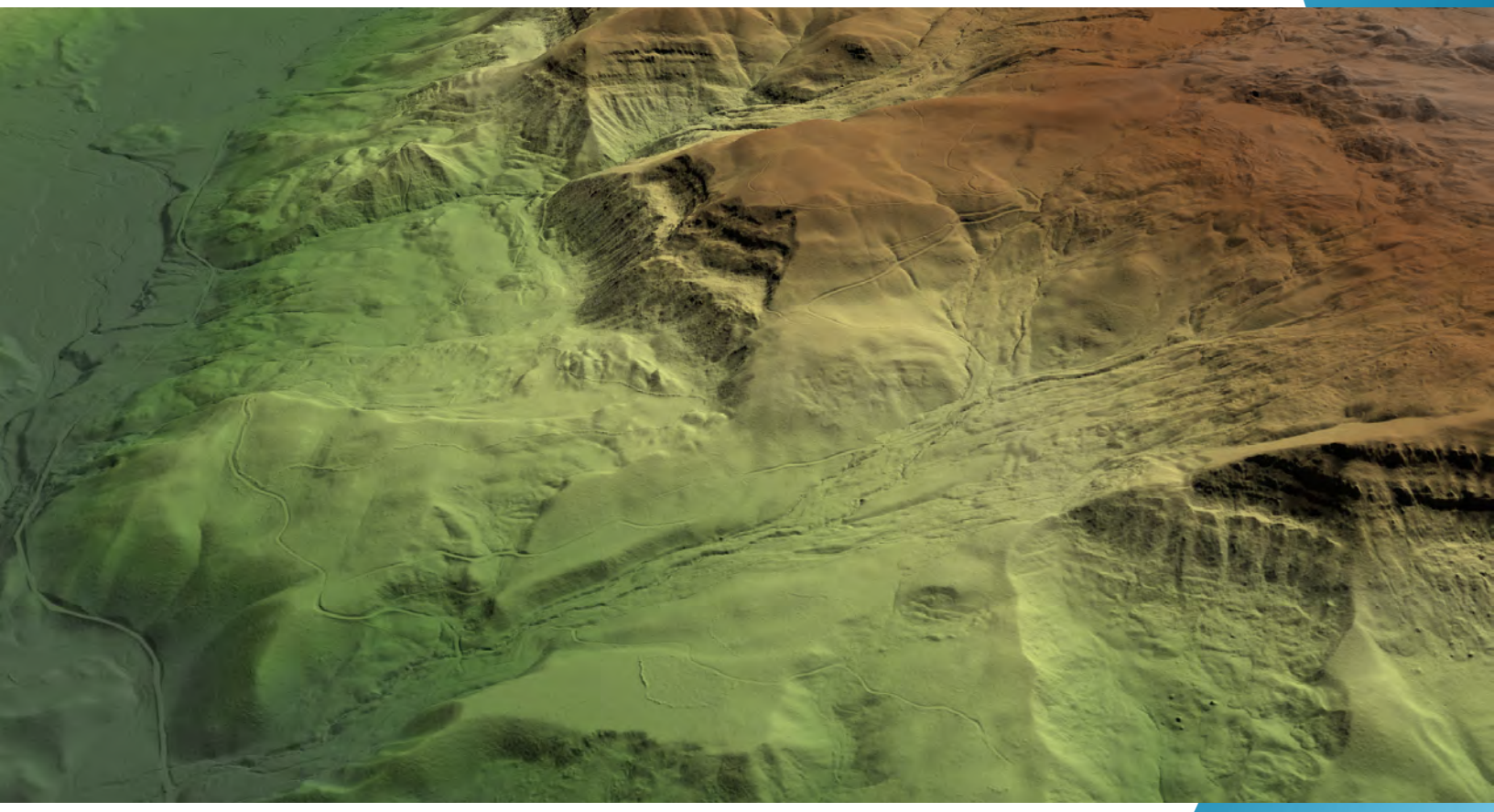

Submitted: August 7, 2020

SOUTHWEST COLORADO LIDAR PROJECT REPORT

CO_Southwest_NRCS_2018_D18

2018-2019

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Appendix A: Survey Report

1. Summary / Scope

1.1. Summary

This report contains a summary of the Southwest Colorado LiDAR acquisition task order, issued by USGS under their Contract G16PC00016 on Septmber 20, 2018. The task order yielded a project area covering approximately 7,604 square miles over southwestern Colorado. The intent of this document is only to provide specific validation information for the data acquisition/ collection, processing, and production of deliverables completed as specified in the task order.

1.2. Scope

Aerial topographic LiDAR was acquired using state of the art technology along with the necessary surveyed ground control points (GCPs) and airborne GPS and inertial navigation systems. The aerial data collection was designed with the following specifications listed in Table 1 below.

Table 1. Originally Planned LiDAR Specifications

Average Point Density	Flight Altitude (AGL)	Field of View	Minimum Side Overlap	RMSEz
2.0 pts / m^2	2100 m	60°	20%	≤ 10 cm

1.3. Coverage

The project boundary covers 7,604 square miles over Colorado. A buffer of 100 meters was created to meet task order specifications. Project extents are shown in Figure 1.

1.4. Duration

LiDAR data was acquired from October 5, 2018 to September 24, 2019 in 39 total lifts. See "Section: 2.4. Time Period" for more details.

1.5. Issues

We began acquisition in fall 2018, however, due to the onset of snow we ceased flight operations until optimal ground conditions were achieved in the summer and fall of 2019. Due to the time difference between these two acquisition periods, a disparity in water elevations was observed across two large reservoirs in the dataset.

There are also known high terrain areas within the project boundary where non-melting snow was identified, and this issue was discussed with USGS. It was confirmed by USGS in an email dated 1/31/2020 that no reflights would be required and that low confidence area polygons would be generated for snow. The low confidence polygons for snow cover would then be utilized to classify the points to Class 21.

1.6. Deliverables

The following products were produced and delivered:

- Classified LiDAR point cloud data tiles in .LAS 1.4 format
- Continuous hydro-flattened breaklines in Esri file geodatabase format
- 1-meter hydro-flattened bare earth digital elevation model (DEM) tiles in IMG format
- 1-meter intensity imagery tiles in GeoTIFF format
- Processing boundary in Esri shapefile format
- Tile index in Esri shapefile format
- Calibration and QC checkpoints (NVA/VVA) in Esri shapefile format
- Survey report in .PDF format
- FOCUS on Deliverables report in .PDF format
- Deliverable-level metadata in .XML format

Geospatial deliverables were produced with a horizontal datum/projection of NAD83(2011) and a vertical datum/projection of NAVD88, Geoid 12B. Tiled deliverables have a tile size of 1,000 m by 1,000 m. Tile names are based on the easting and northing locations of the lower left corner of each tile. The tile index is shown in Figure 2.

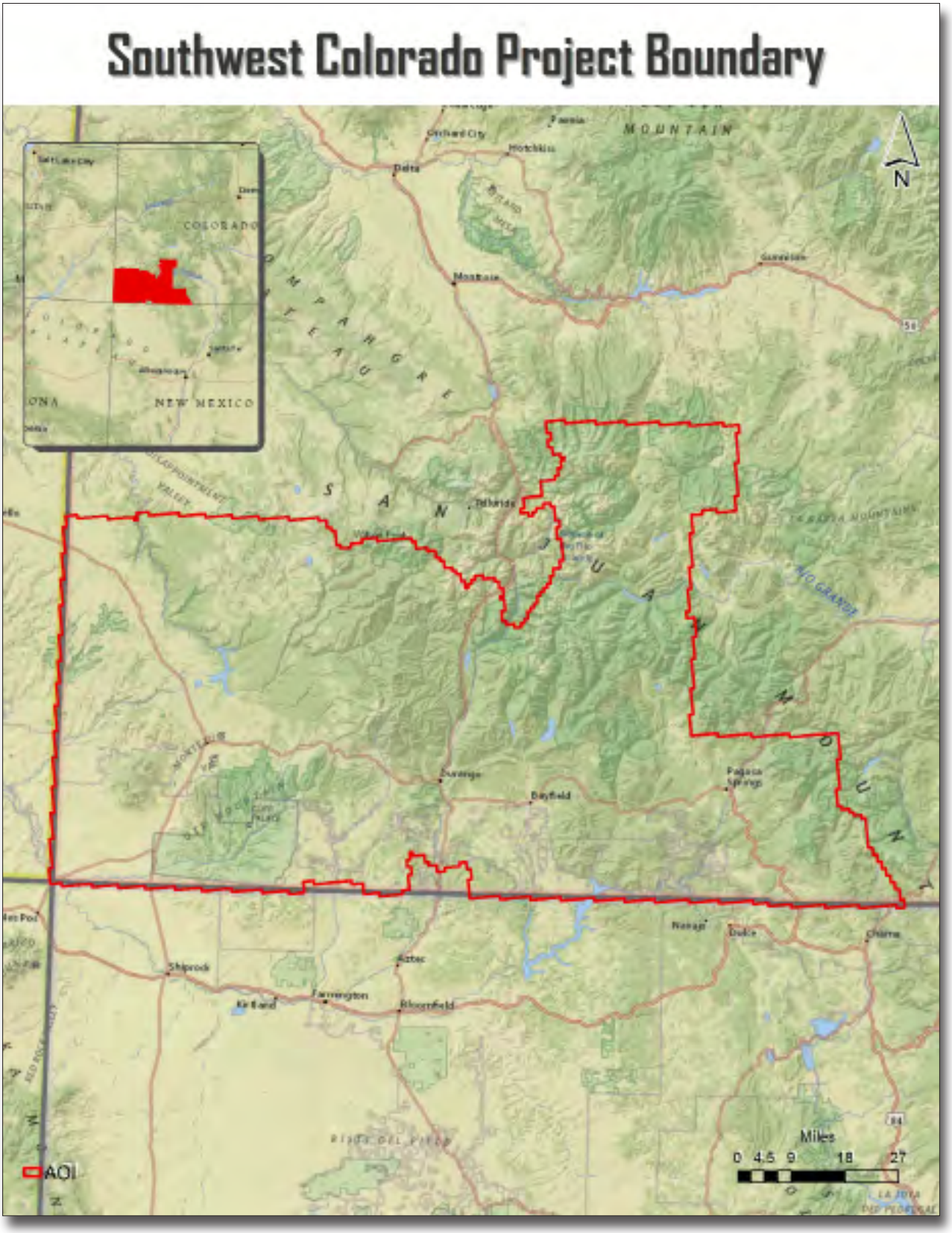

Figure 1. Project Boundary

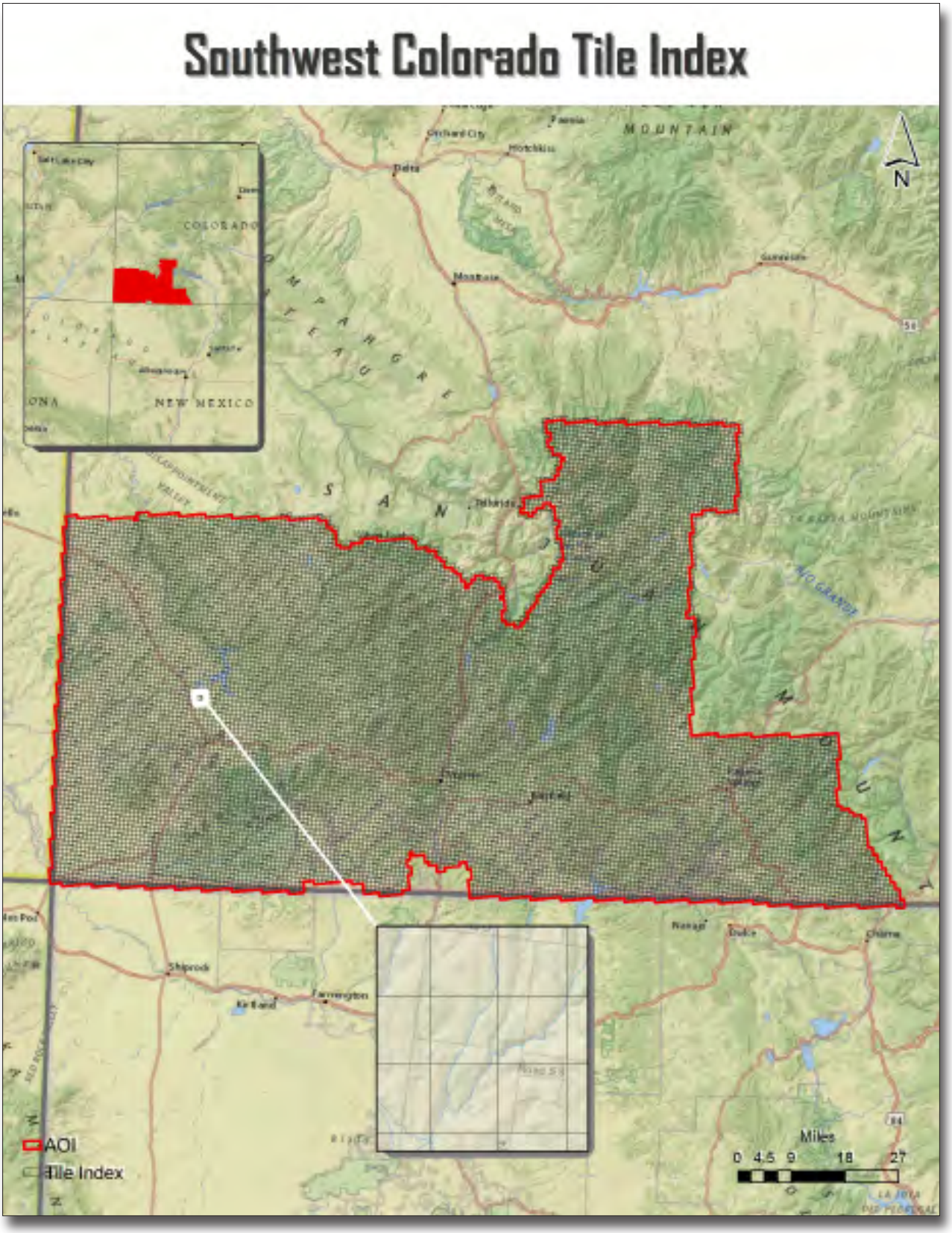

Figure 2. LiDAR Tile Layout

2. Planning / Equipment

2.1. Flight Planning

Flight planning was based on the unique project requirements and characteristics of the project site. The basis of planning included: required accuracies, type of development, amount / type of vegetation within project area, required data posting, and potential altitude restrictions for flights in project vicinity.

Detailed project flight planning calculations were performed for the project using RiPARAMETER planning software. The entire target area was comprised of 440 planned flight lines. Figure 2 shows actual flight lines.

2.2. LiDAR Sensor

Quantum Spatial utilized a Riegl VQ 1560i LiDAR sensor (Figure 4), serial numbers 2738 and 3543 for this project.

A brief summary of the aerial acquisition parameters for the project are shown in the LiDAR System Specifications in Table 2.

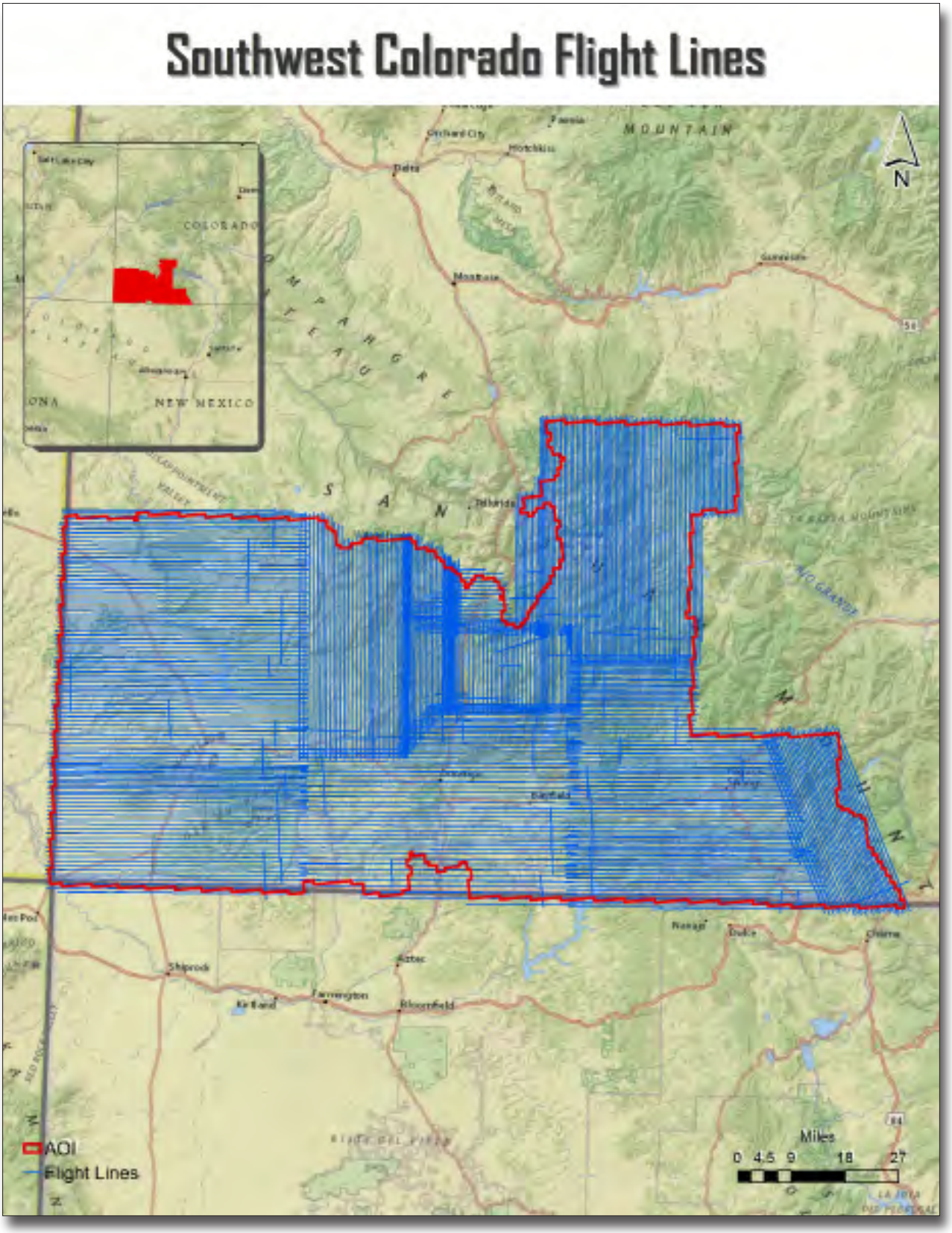

Figure 3. Planned Flight Lines

Table 2. LiDAR System Specifications

		Riegl VQ 1560i
Terrain and Aircraft Scanner	Flying Height	2100 m
	Recommended Ground Speed	150 kts
Scanner	Field of View	60°
	Scan Rate Setting Used	169 Hz
Laser	Laser Pulse Rate Used	700 kHz
	Multi Pulse in Air Mode	yes
Coverage	Full Swath Width	2353 m
	Line Spacing	471 m
Point Spacing and Density	Average Point Spacing	2.57 / m^2
	Average Point Density	2.0 pts / m^2

Figure 4. Riegl VQ 1560i LiDAR Sensor

2.3. Aircraft

All flights for the project were accomplished through the use of customized planes. Plane type and tail numbers are listed below.

LiDAR Collection Planes

- Piper Navajo, Tail Number(s): C-FVZM, C-FFRY

These aircraft provided an ideal, stable aerial base for LiDAR acquisition. These aerial platforms have relatively fast cruise speeds, which are beneficial for project mobilization / demobilization while maintaining relatively slow stall speeds, proving ideal for collection of high-density, consistent data posting using a state-of-the-art Riegl VQ 1560I LiDAR system. Some of Quantum Spatial's operating aircraft can be seen in Figure 5 below.

Figure 5. Some of Quantum Spatial's Planes

2.4. Time Period

Project specific flights were conducted between October 5, 2018 and September 24, 2019. Forty aircraft lifts were completed. Accomplished lifts are listed below.

- 20181005A (SN3543-AI, C-FFRY)
- 20181013A (SN3543-AI, C-FFRY)
- 20181016A (SN3543-AI, C-FFRY)
- 20181019A (SN3543-AI, C-FFRY)
- 20181020A (SN3543-AI, C-FFRY)
- 20181021A1 (SN3543-AI, C-FFRY)
- 20181021A2 (SN3543-AI, C-FFRY)
- 20181025A (SN3543, C-FFRY)
- 20181026A (SN3543, C-FFRY)
- 20181028A (SN3543, C-FFRY)
- 20181102A (SN3543, C-FFRY)
- 20181103A (SN3543, C-FFRY)
- 20181106A (SN3543, C-FFRY)
- 20181107A (SN3543, C-FFRY)
- 20181109A (SN3543, C-FFRY)
- 20181110A (SN3543, C-FFRY)
- 20190727A (SN2738, C-FVZM)
- 20190727A (SN2738, C-FVZM) Opt C
- 20190728A (SN2738, C-FVZM)
- 20190729A (SN2738, C-FVZM)
- 20190802A (SN2738, C-FVZM)
- 20190805A (SN2738, C-FVZM)
- 20190806A (SN2738, C-FVZM)
- 20190812A (SN2738, C-FVZM)
- 20190812A (SN2738, C-FVZM) Opt C
- 20190813A (SN2738, C-FVZM)
- 20190817A (SN2738, C-FVZM)
- 20190818A (SN2738, C-FVZM)
- 20190819A (SN2738, C-FVZM)
- 20190824A (SN2738, C-FVZM)
- 20190825A (SN2738, C-FVZM)
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- 20190912A (SN2738, C-FVZM)
- 20190915A (SN2738, C-FVZM)
- 20190918A (SN2738, C-FVZM)
- 20190921A (SN2738, C-FVZM)
- 20190922A (SN2738, C-FVZM)
- 20190924A (SN2738, C-FVZM)

3. Processing Summary

3.1. Flight Logs

Flight logs were completed by LIDAR sensor technicians for each mission during acquisition. These logs depict a variety of information, including:

- Job / Project #
- Flight Date / Lift Number
- FOV (Field of View)
- Scan Rate (HZ)
- Pulse Rate Frequency (Hz)
- Ground Speed
- Altitude
- Base Station
- PDOP avoidance times
- Flight Line #
- Flight Line Start and Stop Times
- Flight Line Altitude (AMSL)
- Heading
- Speed
- Returns
- Crab

Notes: (Visibility, winds, ride, weather, temperature, dew point, pressure, etc).

3.2. LiDAR Processing

Applanix + POSPac Mobile Mapping Suite software was used for post-processing of airborne GPS and inertial data (IMU), which is critical to the positioning and orientation of the LiDAR sensor during all flights. POSPac combines aircraft raw trajectory data with stationary GPS base station data yielding a "Smoothed Best Estimate Trajectory (SBET) necessary for additional post processing software to develop the resulting geo-referenced point cloud from the LiDAR missions.

During the sensor trajectory processing (combining GPS & IMU datasets) certain statistical graphs and tables are generated within the Applanix POSPac processing environment which are commonly used as indicators of processing stability and accuracy. This data for analysis include: Max horizontal / vertical GPS variance, separation plot, altitude plot, PDOP plot, base station baseline length, processing mode, number of satellite vehicles, and mission trajectory.

The generated point cloud is the mathematical three dimensional composite of all returns from all laser pulses as determined from the aerial mission. Laser point data are imported into TerraScan and a manual calibration is performed to assess the system offsets for pitch, roll, heading and scale. At this point this data is ready for analysis, classification, and filtering to generate a bare earth surface model in which the above-ground features are removed from the data set. Point clouds were created using the RiPROCESS software. GeoCue distributive processing software was used in the creation of some files needed in downstream processing, as well as in the tiling of the dataset into more manageable file sizes. TerraScan and TerraModeler software packages were then used for the automated data classification, manual cleanup, and bare earth generation. Project specific macros were developed to classify the ground and remove side overlap between parallel flight lines.

All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Global Mapper was used as a final check of the bare earth dataset. GeoCue was used to create the deliverable industry-standard LAS files for both the All Point Cloud Data and the Bare Earth. In-house software was then used to perform final statistical analysis of the classes in the LAS files.

3.3. LAS Classification Scheme

The classification classes are determined by the USGS Version 1.3 specifications and are an industry standard for the classification of LIDAR point clouds. All data starts the process as Class 1 (Unclassified), and then through automated classification routines, the classifications are determined using TerraScan macro processing.

The classes used in the dataset are as follows and have the following descriptions:

Table 3. LAS Classifications

	Classification Name	Description
1	Processed, but Unclassified	Laser returns that are not included in the ground class, or any other project classification
2	Bare earth	Laser returns that are determined to be ground using automated and manual cleaning algorithms
6	Buildings	Laser returns that are determined to be buildings or other man-made structures
7	Low Noise	Laser returns that are often associated with scaterring from reflective surfaces, or artificial points below the ground surface
9	Water	Laser returns that are found inside of hydro features
17	Bridge Deck	Laser returns falling on bridge decks
18	High Noise	Laser returns that are often associated with birds or artificial points above the ground surface
20	Ignored Ground	Ground points that fall within the given threshold of a collected hydro feature.
21	Snow	Ground points that fall on snow, where identifable

3.4. Classified LAS Processing

The bare earth surface is then manually reviewed to ensure correct classification on the Class 2 (Bare earth) points. After the bare earth surface is finalized; it is then used to generate all hydro-breaklines through heads-up digitization (see section 3.4)

All ground (ASPRS Class 2) LiDAR data inside of the Lake Pond and Double Line Drain hydro flattening breaklines were then classified to water (ASPRS Class 9) using TerraScan macro functionality. A buffer of 1 meter was also used around each hydro flattened feature to classify these ground (ASPRS Class 2) points to Ignored ground (ASPRS Class 20). All Lake Pond Island and Double Line Drain Island features were checked to ensure that the ground (ASPRS Class 2) points were reclassified to the correct classification after the automated classification was completed.

All overlap data was processed through automated functionality provided by TerraScan to classify the overlapping flight line data to approved classes by USGS. The overlap data was identified using the Overlap Flag, per LAS 1.4 specifications.

All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Global Mapper is used as a final check of the bare earth dataset. GeoCue was then used to create the deliverable industry-standard LAS files for all point cloud data. Quantum Spatial's proprietary software was used to perform final statistical analysis of the classes in the LAS files, on a per tile level to verify final classification metrics and full LAS header information.

3.5. Hydro-Flattened Breakline Processing

Class 2 LiDAR was used to create a bare earth surface model. The surface model was then used to heads-up digitize 2D breaklines of Inland Streams and Rivers with a 100 foot nominal width and Inland Ponds and Lakes of 2 acres or greater surface area.

Elevation values were assigned to all Inland Ponds and Lakes, Inland Pond and Lake Islands, Inland Streams and Rivers and Inland Stream and River Islands using TerraModeler functionality.

Elevation values were assigned to all Inland streams and rivers using Quantum Spatial's proprietary software.

All ground (ASPRS Class 2) LiDAR data inside of the collected inland breaklines were then classified to water (ASPRS Class 9) using TerraScan macro functionality. A buffer of 1 meter was also used around each hydro flattened feature. These points were moved from ground (ASPRS Class 2) to Ignored Ground (ASPRS Class 20).

The breakline files were then translated to Esri file geodatabase format using Esri conversion tools.

Breaklines are reviewed against lidar intensity imagery to verify completeness of capture. All breaklines are then compared to TINs (triangular irregular networks) created from ground only points prior to water classification. The horizontal placement of breaklines is compared to terrain features and the breakline elevations are compared to lidar elevations to ensure all breaklines match the lidar within acceptable tolerances. Some deviation is expected between breakline and lidar elevations due to monotonicity, connectivity, and flattening rules that are enforced on the breaklines. Once completeness, horizontal placement, and vertical variance is reviewed, all breaklines are reviewed for topological consistency and data integrity using a combination of Esri Data Reviewer tools and proprietary tools.

3.6. Hydro-Flattened Raster DEM Processing

Class 2 LiDAR in conjunction with the hydro breaklines were used to create a 1-meter Raster DEM. Using automated scripting routines within proprietary QSI tools, an IMG file was created for each tile. Each surface is reviewed using Global Mapper to check for any surface anomalies or

incorrect elevations found within the surface.

3.7. Intensity Image Processing

Proprietary QSI tools were used to create the deliverable intensity images. All overlap classes were ignored during this process. This helps to ensure a more aesthetically pleasing image. The GeoCue software was then used to verify full project coverage as well. TIF/TWF files with a cell size of 1-meter were then provided as the deliverable for this dataset requirement.

4. Project Coverage Verification

Coverage verification was performed by comparing coverage of processed .LAS files captured during project collection to generate project shape files depicting boundaries of specified project areas. Please refer to Figure 6.

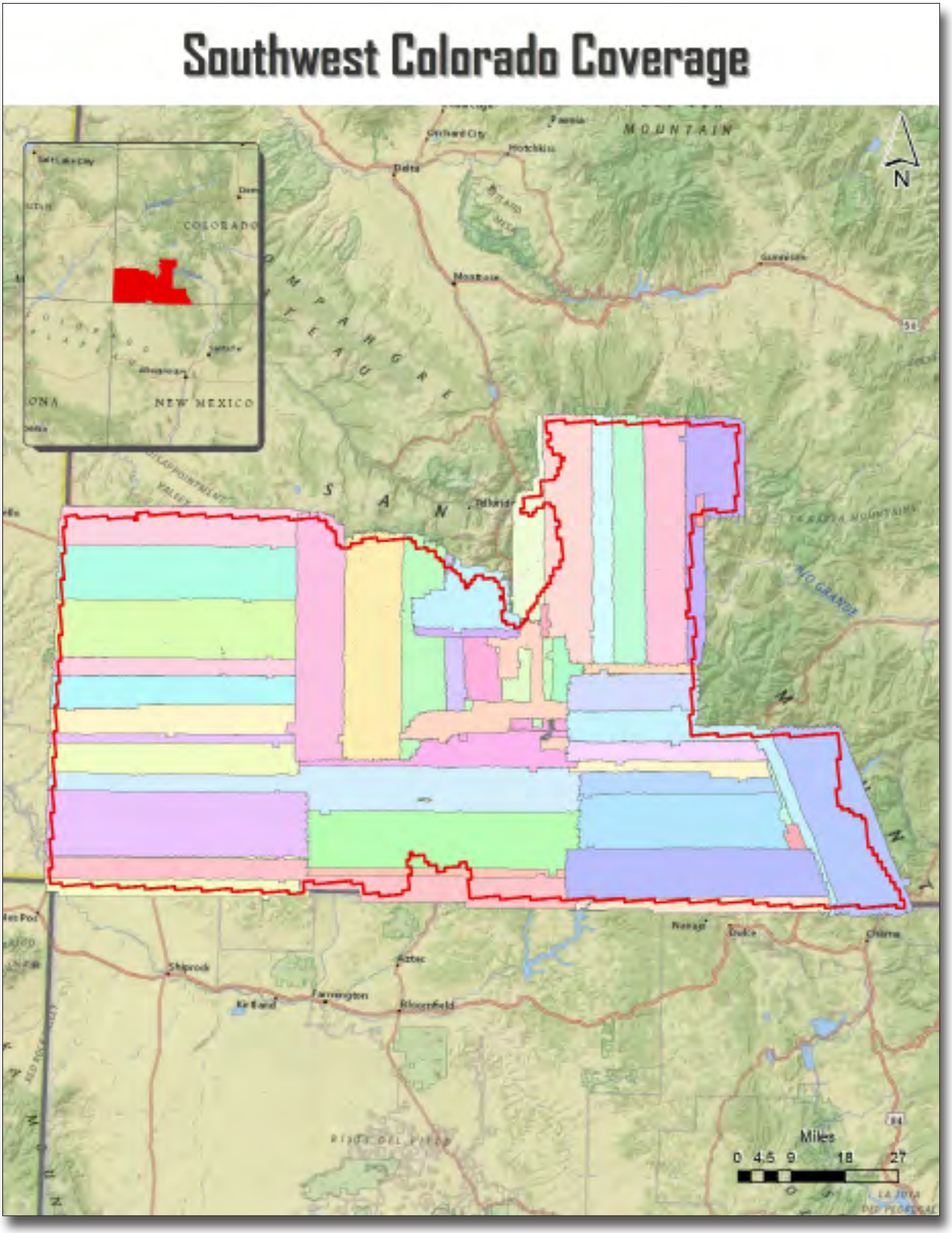

Figure 6. LiDAR Flight Line Coverage

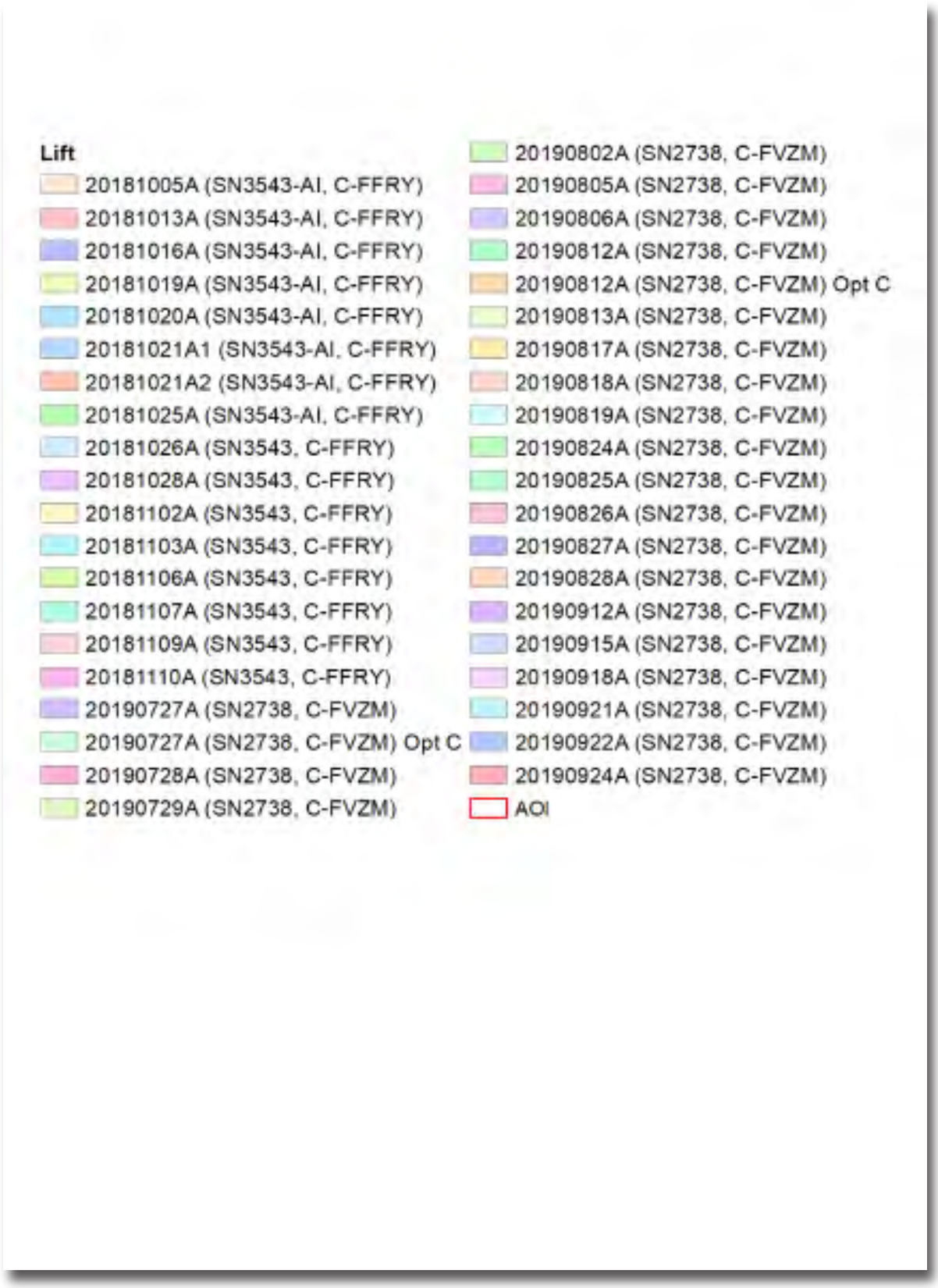

Figure 7. LiDAR Flight Line Coverage Legend

5. Ground Control and Check Point Collection

Quantum Spatial completed a field survey of 213 ground control (calibration) points along with 299 blind QA points in Non-Vegetated and Vegetated land cover classifications (total of 512 points) as an independent test of the accuracy of this project.

A combination of precise GPS surveying methods, including static and RTK observations were used to establish the 3D position of ground calibration points and QA points for the point classes above. GPS was not an appropriate methodology for surveying in the forested areas during the leaf-on conditions for the actual field survey (which was accomplished after the LiDAR acquisition). Therefore the 3D positions for the forested points were acquired using a GPS-derived offset point located out in the open near the forested area, and using precise offset surveying techniques to derive the 3D position of the forested point from the open control point. The explicit goal for these surveys was to develop 3D positions that were three times greater than the accuracy requirement for the elevation surface. In this case of the blind QA points the goal was a positional accuracy of 5 cm in terms of the RMSE.

For more information, see the Survey Report in Appendix A.

The required accuracy testing was performed on the LiDAR dataset (both the LiDAR point cloud and derived DEM's) according to the USGS LiDAR Base Specification Version 1.3.

5.1. Calibration Control Point Testing

Figure 8 shows the location of each bare earth calibration point for the project area. TerraScan was used to perform a quality assurance check using the LiDAR bare earth calibration points. The results of the surface calibration are not an independent assessment of the accuracy of these project deliverables, but the statistical results do provide additional feedback as to the overall quality of the elevation surface.

5.2. Point Cloud Testing

The project specifications require that only Non-Vegetated Vertical Accuracy (NVA) be computed for raw lidar point cloud swath files. The required accuracy (ACCz) is: 19.6 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSE of 10 cm in the "bare earth" and "urban" land cover classes. The NVA was tested with 166 checkpoints located in bare earth and urban (non-vegetated) areas. These check points were not used in the calibration or post processing of the lidar point cloud data. The checkpoints were distributed throughout the project area and were surveyed using GPS techniques. See survey report for additional survey methodologies.

Elevations from the unclassified lidar surface were measured for the x,y location of each check point. Elevations interpolated from the lidar surface were then compared to the elevation values of the surveyed control points. AccuracyZ has been tested to meet 19.6 cm or better Non-Vegetated Vertical Accuracy at 95% confidence level using RMSE(z) x 1.9600 as defined by the

National Standards for Spatial Data Accuracy (NSSDA); assessed and reported using National Digital Elevation Program (NDEP)/ASRPS Guidelines.

5.3. Digital Elevation Model (DEM) Testing

The project specifications require the accuracy (ACCz) of the derived DEM be calculated and reported in two ways:

1. The required NVA is: 19.6 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSE of 10 cm in the "bare earth" and "urban" land cover classes. This is a required accuracy. The NVA was tested with 167 checkpoints located in bare earth and urban (non-vegetated) areas. See Figure 9.

2. Vegetated Vertical Accuracy (VVA): VVA shall be reported for "brushlands/low trees" and "tall weeds/crops" land cover classes. The target VVA is: 29.4 cm at the 95th percentile, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for Lidar Data, i.e., based on the 95th percentile error in all vegetated land cover classes combined. This is a target accuracy. The VVA was tested with 132 checkpoints located in tall weeds/ crops and brushlands/low trees (vegetated) areas. The checkpoints were distributed throughout the project area and were surveyed using GPS techniques. See Figure 10.

AccuracyZ has been tested to meet 19.6 cm or better Non-Vegetated Vertical Accuracy at 95% confidence level using RMSE(z) x 1.9600 as defined by the National Standards for Spatial Data Accuracy (NSSDA); assessed and reported using National Digital Elevation Program (NDEP)/ ASRPS Guidelines.

A brief summary of results are listed below.

	Target	Measured	Point Count
Raw NVA	**0.196**	**0.066**	**166**
NVA	**0.196**	**0.062**	**167**
VVA	**0.294**	**0.063**	**132**

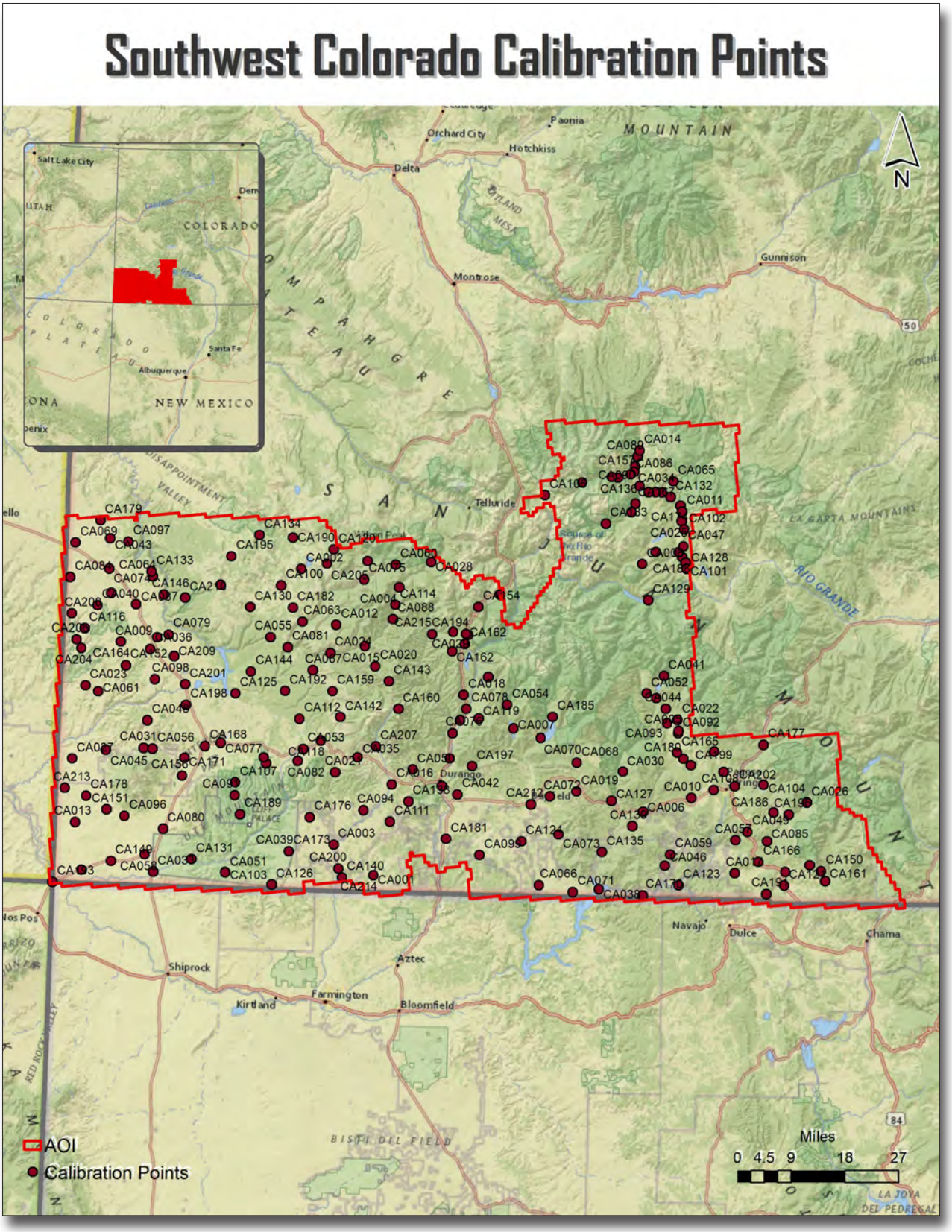

Figure 8. Calibration Control Point Locations

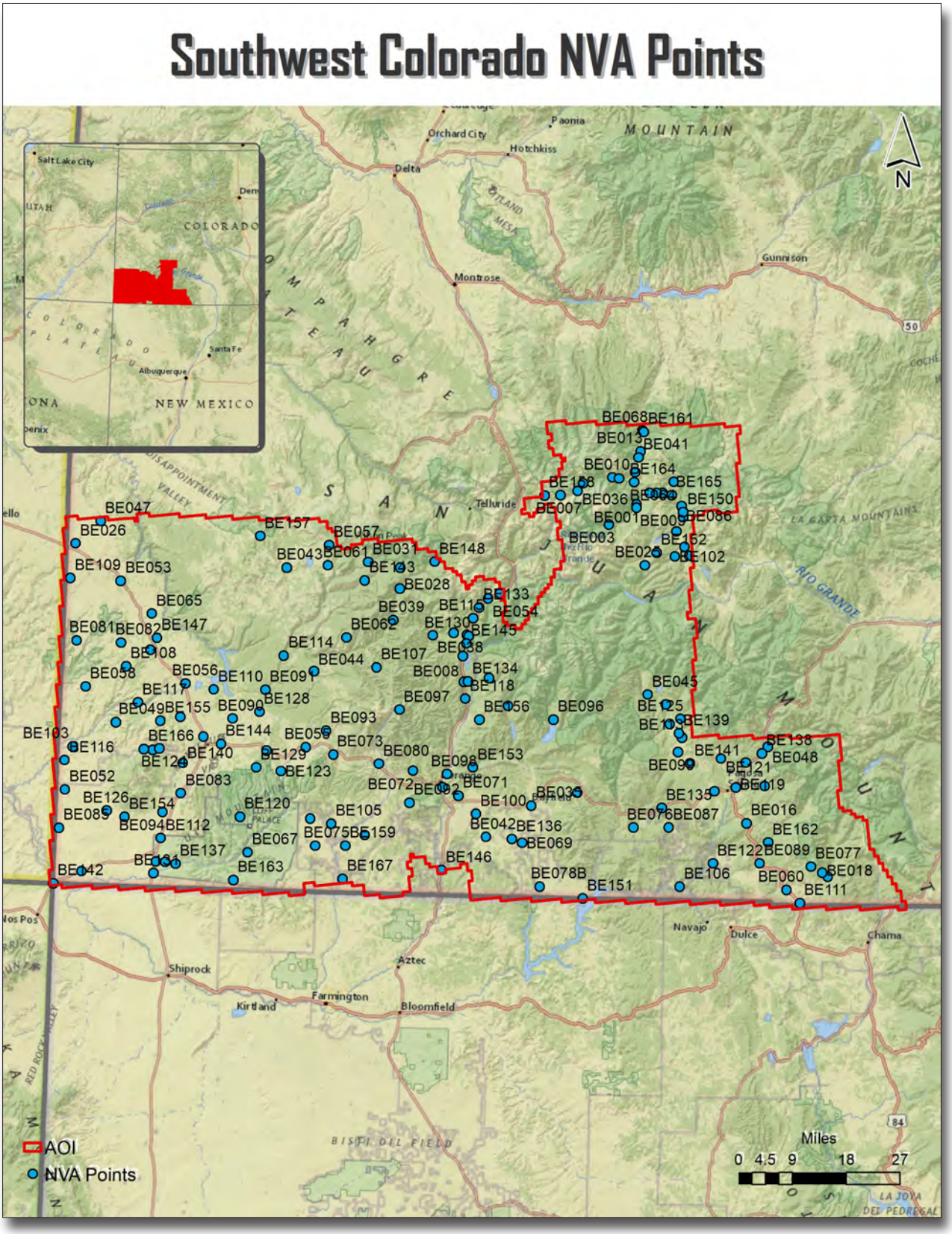

Figure 9. QC Checkpoint Locations - NVA

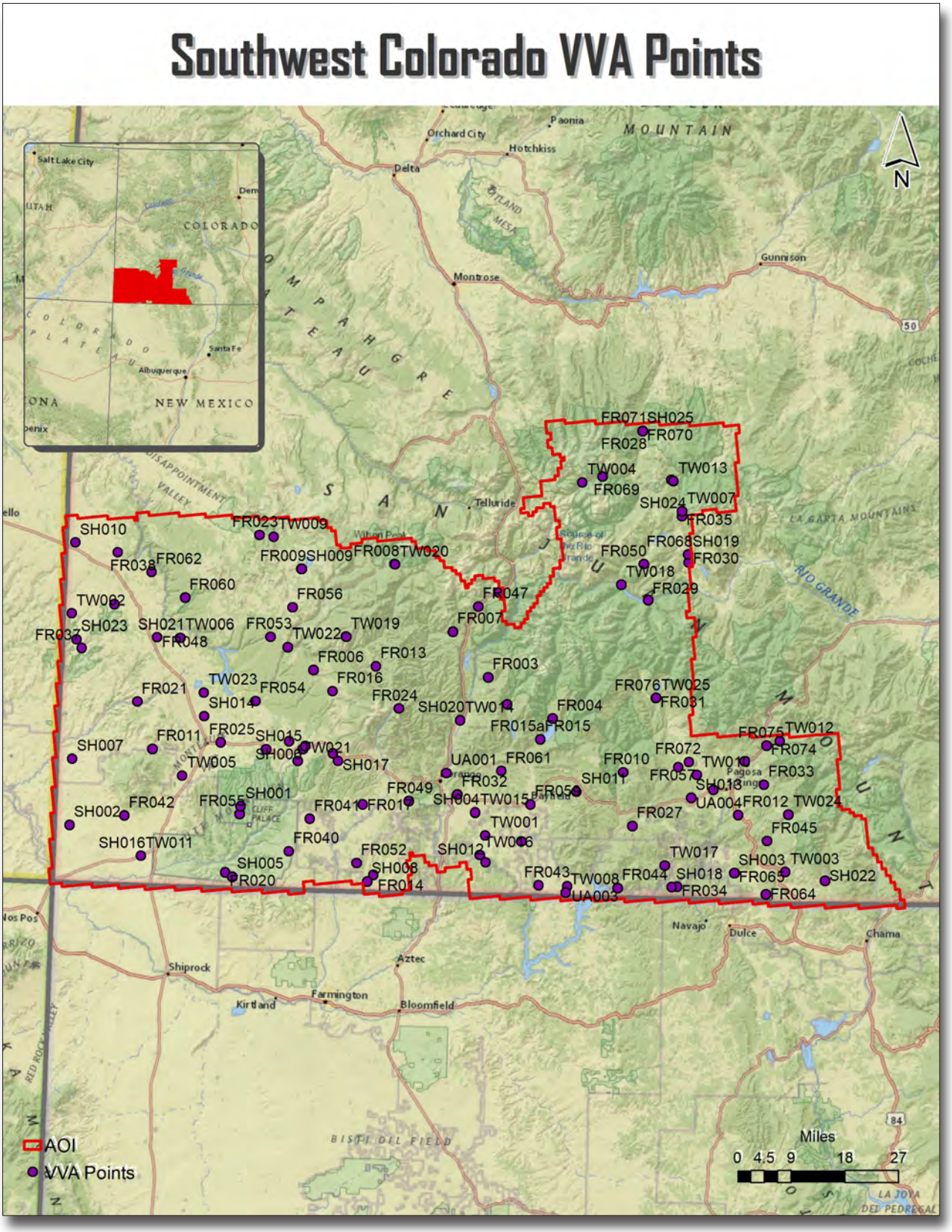

Figure 10. QC Checkpoint Locations - VVA

Project Report Appendices

The following section contains the appendices as listed in the Southwest Colorado LiDAR Project Report.

Appendix A

Survey Report

October 11, 2019

Survey Report of
LiDAR Calibration & Quality Control Points

USGS Contract: G16PC00016

CO_Southwest_NRCS_2018_D18

USGS Task Order: 140G0218F0446

Presented to:

Presented By:

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- NVA - Urban Area Points.....417

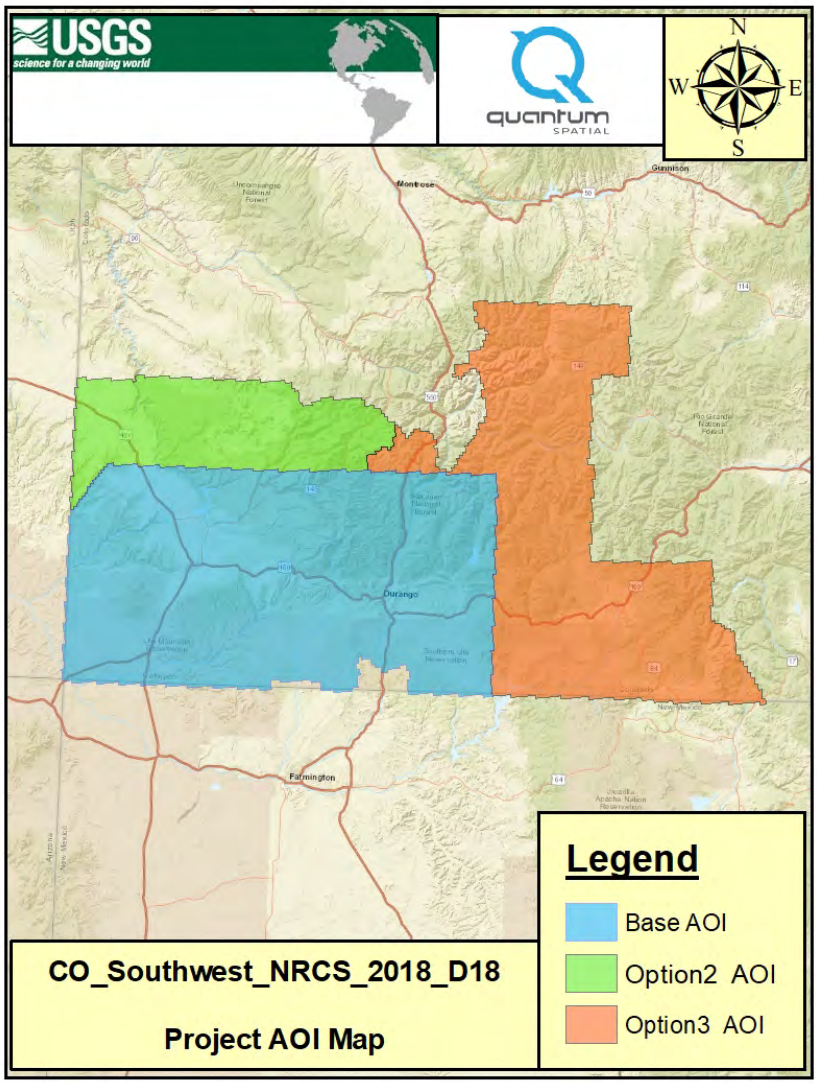
- VVA - Tall Weed Points.....423
- VVA – Forest Points.....449
- VVA – Brushland Points.....526

Introduction

Quantum Spatial, Inc. was contracted by USGS under task order 140G0218F0446 to survey LiDAR calibration and quality control points in support of the CO_Southwest_NRCS_2018_D18 project on the State of Colorado. The project area included the counties of Archuleta, Dolores, Hinsdale, La Plata, Montezuma, and portions of San Juan. This is the report of the technical approach used and detail of each point surveyed.

Project Area

The Project Area, shown in the figure below, consist of approximately 7,567 square miles.



Technical Approach to Land Cover Validation Point Selection

Referencing ASPRS Positional Accuracy Standards for Digital Geospatial Data (Edition 1, Version 1.0, - November, 2014) table C.1 Recommended Number of Checkpoints based on Area, Quantum Spatial calculated the total number of checkpoints required for the entire project area. It was determined that 173 Non-Vegetated Vertical Assessment (NVA) and 126 Vegetated Vertical Assessment (VVA) points were required for the project area.

To ensure that checkpoints were distributed generally proportionate among the various vegetated land cover types, Quantum Spatial used existing USGS Land Cover data to divide both the NVA and VVA categories among the various types, calculating the approximate number of required points in each representative type proportionate to the total project area. The resulting point classes are detailed below:

NVA Class	# of Points
Bare Earth	168
Urban Area	5

VVA Class	# of Points
Forested	76
Tall Weeds/Crops	25
Brushland	25

Quantum Spatial has adopted the philosophy that each vegetative class must be well distributed throughout the project area. While points in varying classes may be near to one another, points of a single vegetative class may not. Proposed point locations are selected with this distribution methodology in mind; however, access to the entire AOI limited the distribution.

Survey Accuracy Requirements

Given that the survey accuracy of calibration and quality control check points should be 3 times more accurate than the required accuracy of the data set, Quantum Spatial requires that calibration and NVA points are better than 3 centimeters RMSE, both horizontally and vertically, and that VVA points be better than 5 centimeters RMSE, both horizontally and vertically. The surveyed accuracy of each point must be determined through redundant measurements and/or network adjustment using procedures and methodologies that reliably and consistently result in the aforementioned accuracies.

Due to variances in reference control accuracy and adjustment, Quantum Spatial requires that the survey methodology used be explained, so that it can be repeated if necessary.

Field Survey Methodology

Date Range: October 2, 2018 – September 2, 2019

Equipment Used:

Field crews used Trimble R6, R7 and R8 dual frequency GNSS receivers as base stations and rovers. A Trimble M3 Total Station was used for conventional measurements.

GNSS Methodology:

A combination of fast static and RTK/PPK GNSS surveying methods were used during this project. Temporary marks were established and used as base stations for RTK/PPK surveys. The Mesa County RTVRN network was used wherever available. The fast static GPS method consisted of collecting static data. The data was downloaded and baselines processed to NGS CORS and Mesa County CORS base stations. The network was adjusted holding the CORS as control.

Conventional Methodology:

A total station was used to determine the positions of VVA-Forest points under the tree canopy. After backsight and instrument station positions were established with GNSS observations in open areas, a total station was used to observe the foresighted Forest point.

All of the GNSS and conventional information was downloaded, processed and analyzed using Trimble Business Center processing software. A network was formed and adjusted.

Overall Project Accuracy Statement

All point coordinates have been reported in the North American Datum of 1983 (NAD83 2011). Colorado State Plane – South Zone coordinates in US Survey Foot horizontally.

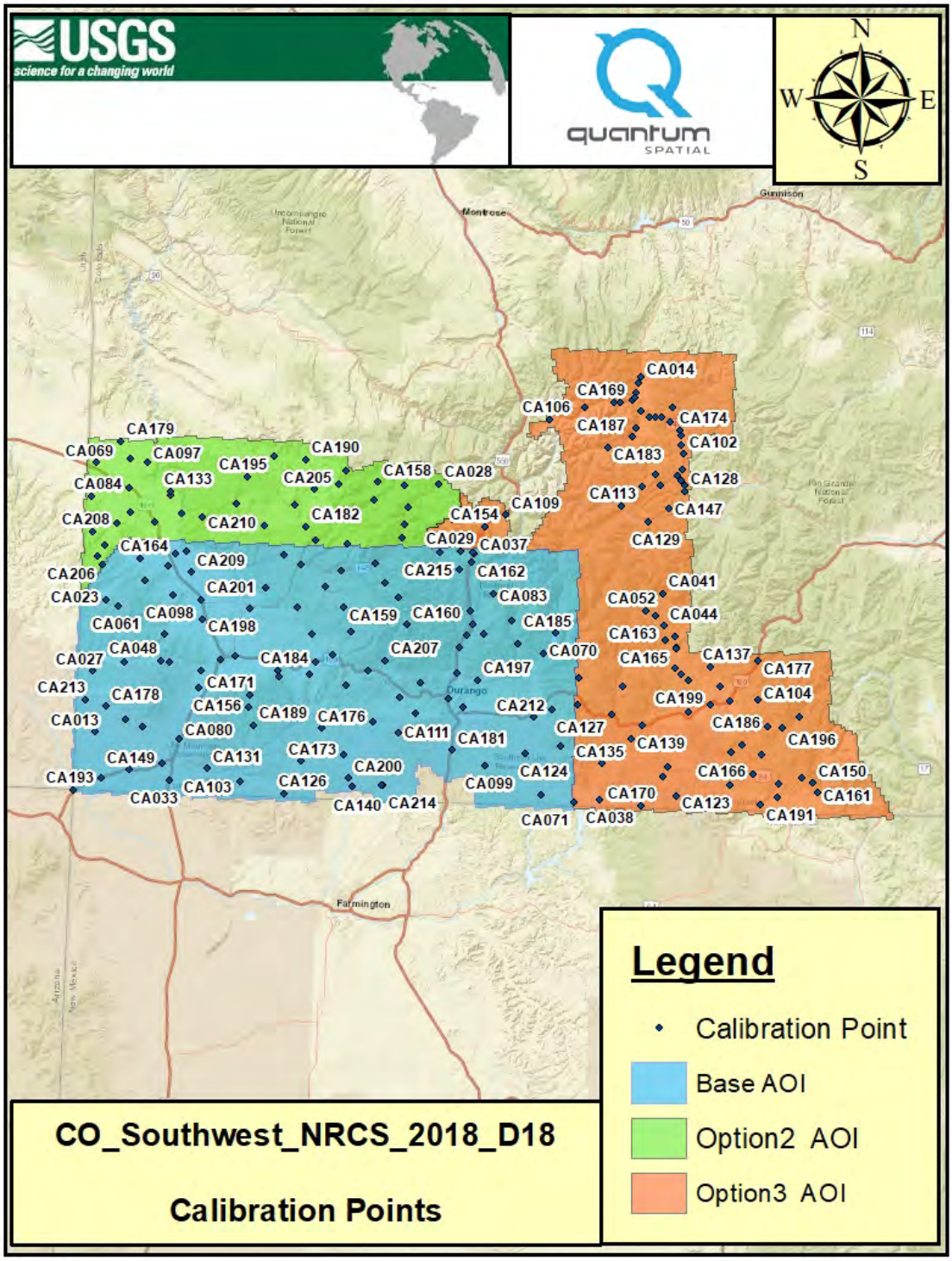
Elevations are relative to the North American Vertical Datum of 1988 (NAVD 88) which were derived using the Geoid 12B model and are reported in US Survey Foot.

Calibration Points
Average Horizontal RMSE is 0.05 usft.
Average Elevation RMSE is 0.07 usft.
Average 3 dimensional RMSE is 0.08 usft.

NVA Points
Average Horizontal RMSE is 0.05 usft.
Average Elevation RMSE is 0.07 usft.
Average 3 dimensional RMSE is 0.08 usft.

VVA Points
Average Horizontal RMSE is 0.07 usft.
Average Elevation RMSE is 0.09 usft.
Average 3 dimensional RMSE is 0.11 usft.

Project AOI & Point Location Maps


USGS
science for a changing world
quantum SPATIAL
N
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E
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Gunnison
Montrose
Durango
Farmington
CA014
CA169
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CA187
CA102
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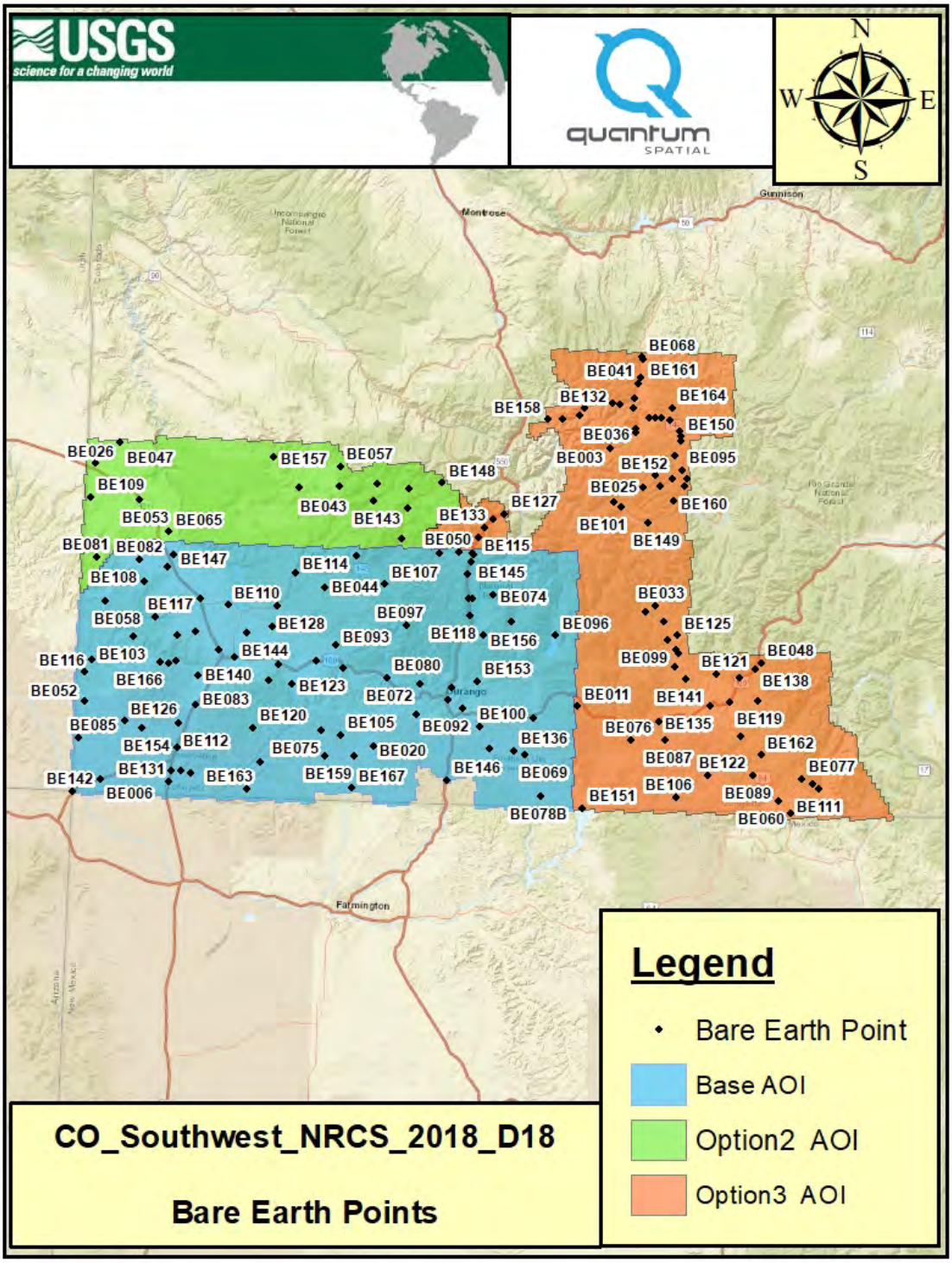
CO_Southwest_NRCS_2018_D18
Calibration Points
Legend
Calibration Point
Base AOI
Option2 AOI
Option3 AOI


USGS
science for a changing world
quantum SPATIAL
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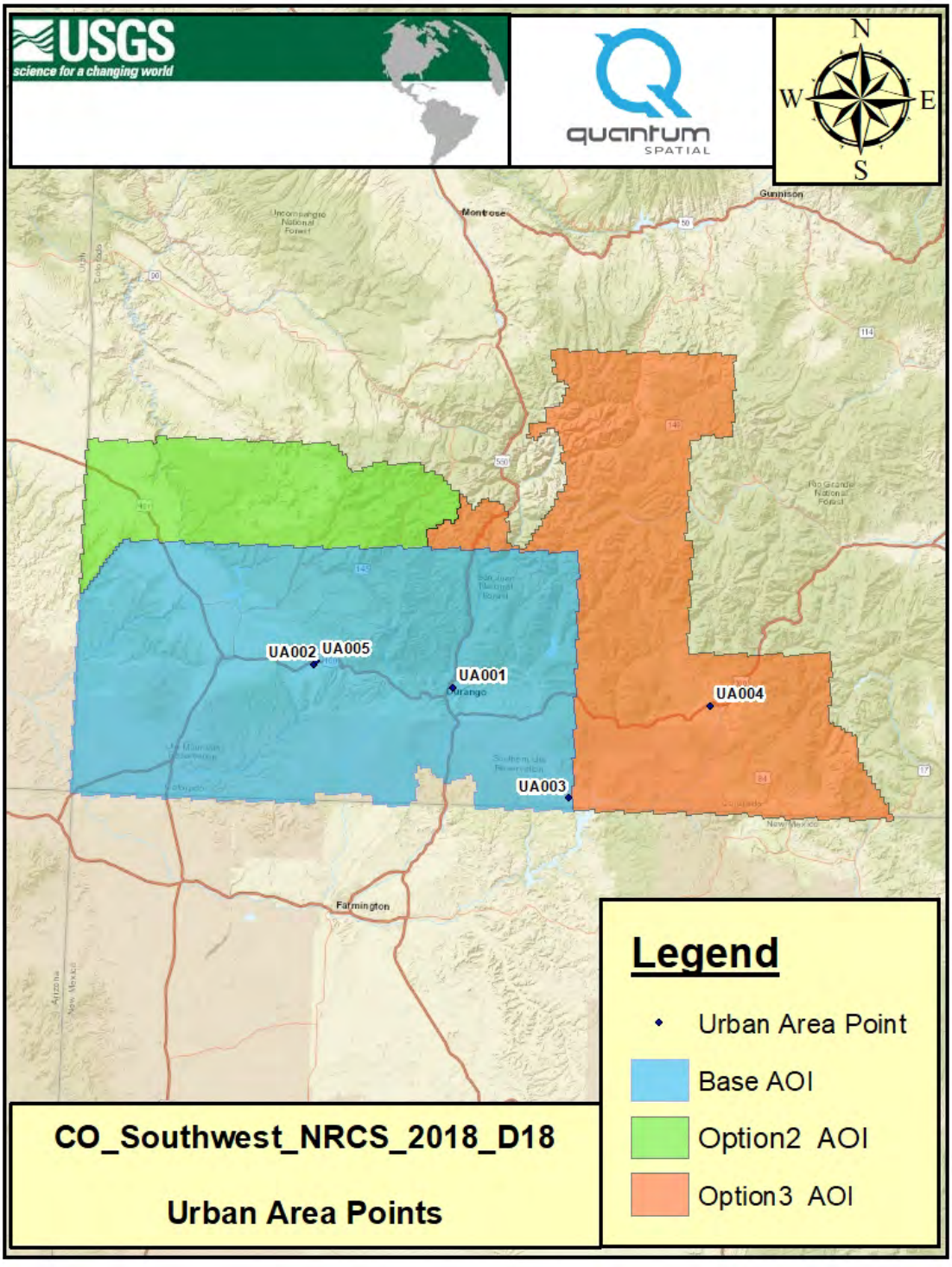
CO_Southwest_NRCS_2018_D18
Bare Earth Points
Legend
Bare Earth Point
Base AOI
Option2 AOI
Option3 AOI


USGS
science for a changing world
quantum SPATIAL
N
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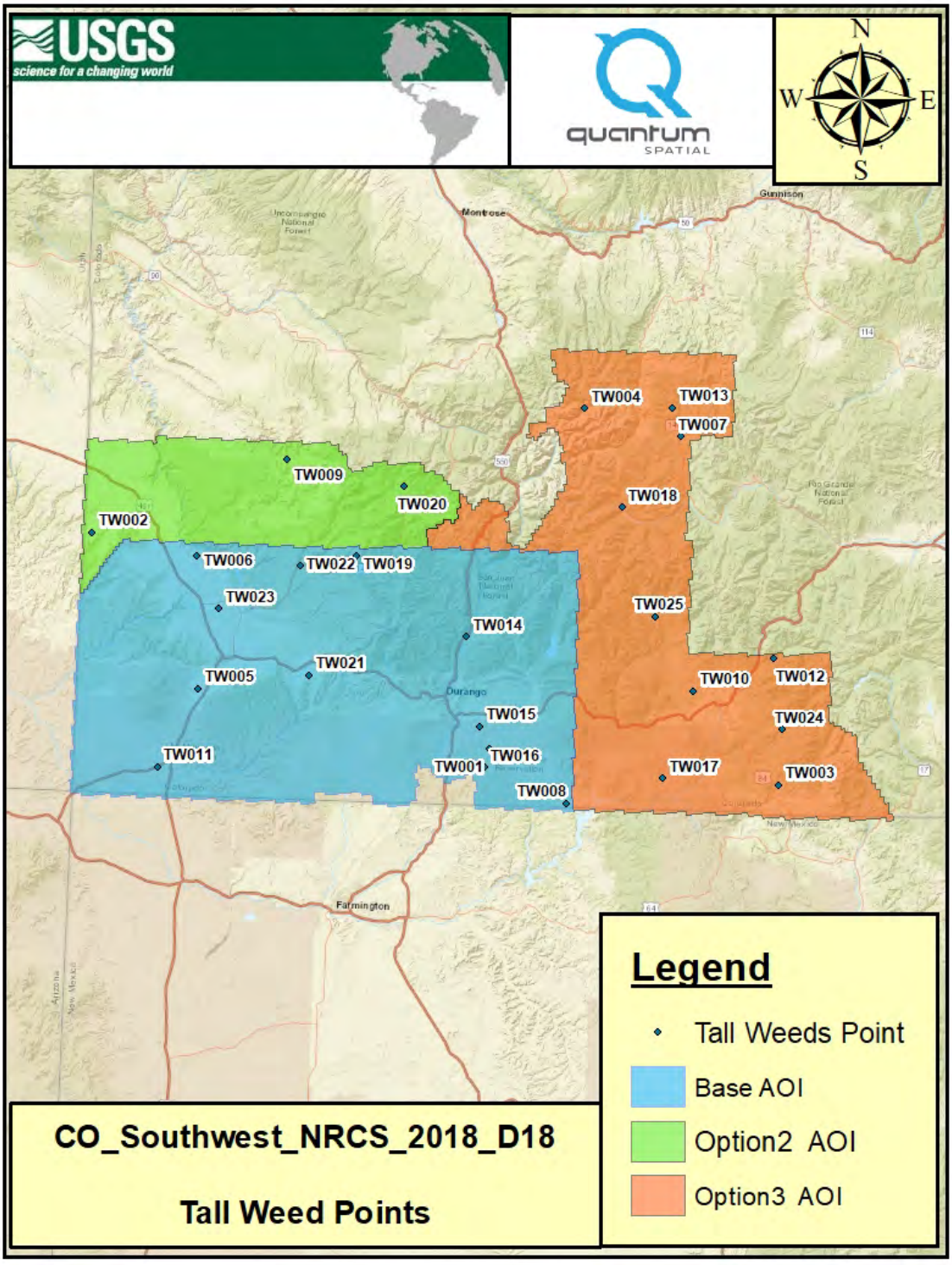
Gunnison
Montrose
Durango
Farmington
UA002
UA005
UA001
UA004
UA003
Legend
Urban Area Point
Base AOI
Option2 AOI
Option3 AOI
CO_Southwest_NRCS_2018_D18
Urban Area Points


USGS
science for a changing world
quantum SPATIAL
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Gunnison
Montrose
Durango
Farmington
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TW023
TW025
TW014
TW021
TW005
TW010
TW012
TW015
TW024
TW011
TW016
TW001
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TW003
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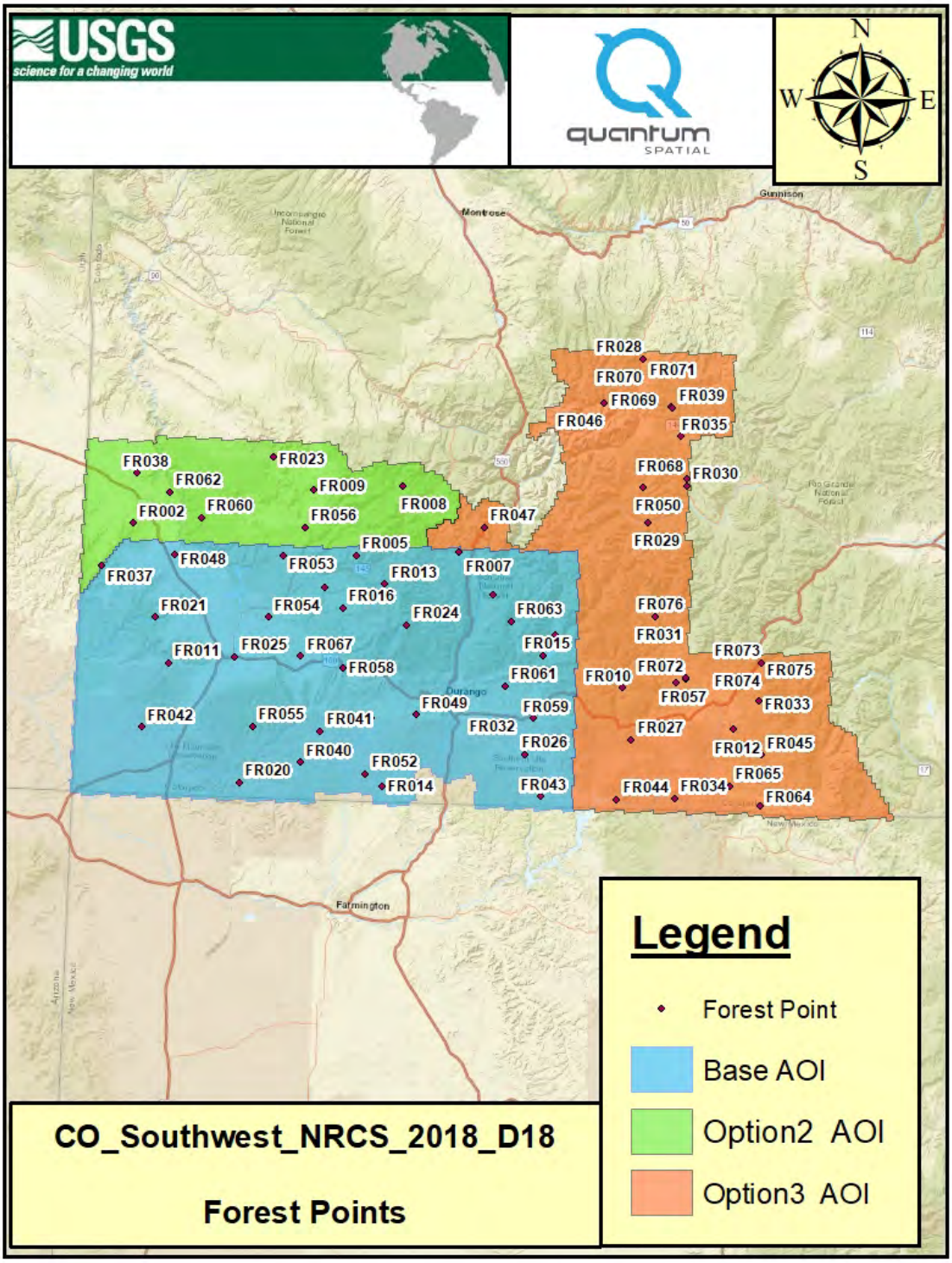
CO_Southwest_NRCS_2018_D18
Tall Weed Points
Legend
Tall Weeds Point
Base AOI
Option2 AOI
Option3 AOI


USGS
science for a changing world
quantum SPATIAL
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Gunnison
Montrose
Durango
Farmington
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FR069
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FR032
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FR026
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FR045
FR040
FR052
FR065
FR020
FR014
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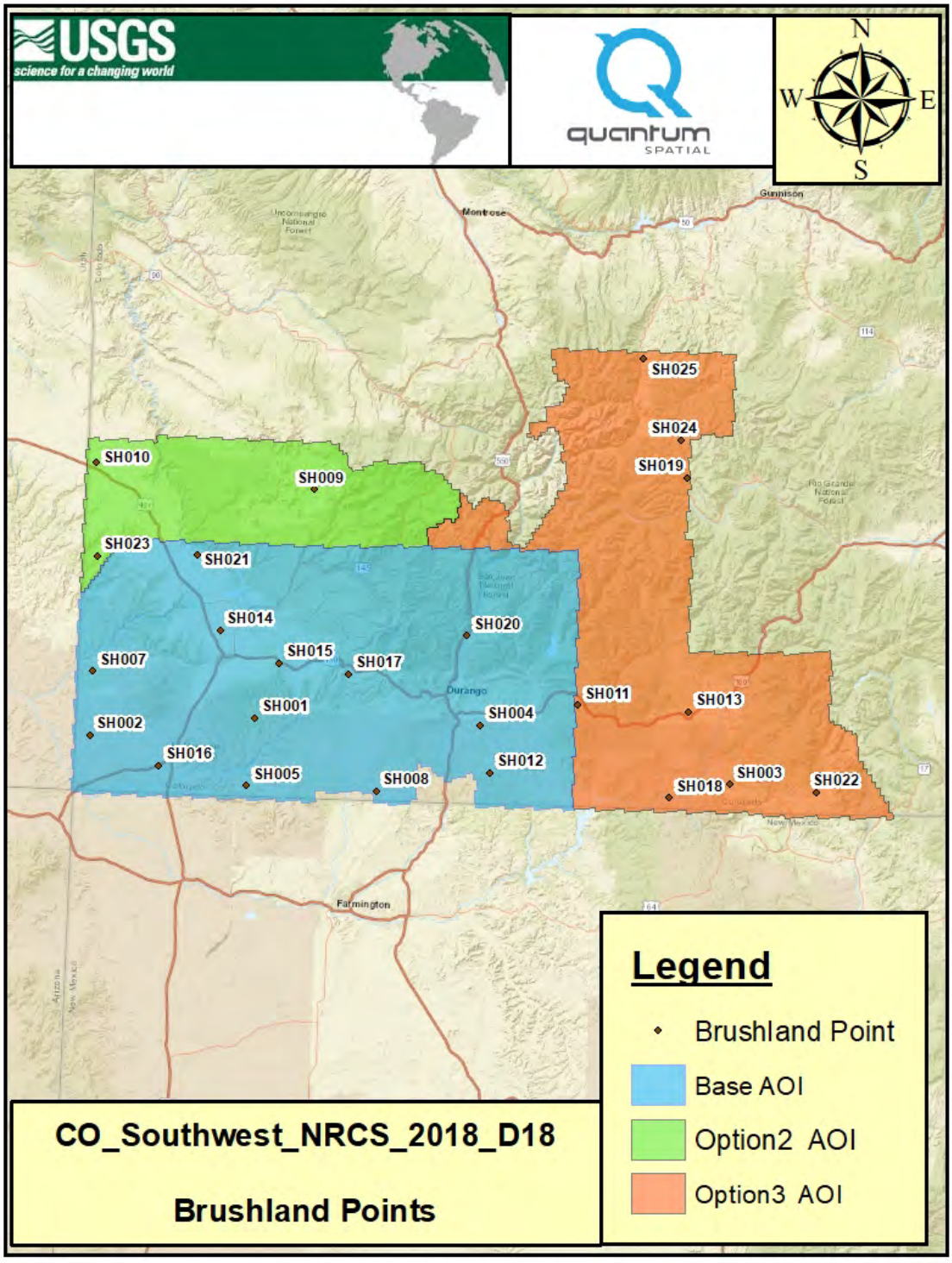
FR044
FR034
FR064
Legend
Forest Point
Base AOI
Option2 AOI
Option3 AOI
CO_Southwest_NRCS_2018_D18
Forest Points


USGS
science for a changing world
quantum SPATIAL
N
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Gunnison
Montrose
Durango
Farmington
SH025
SH024
SH019
SH010
SH009
SH023
SH021
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SH020
SH015
SH017
SH007
SH011
SH013
SH001
SH004
SH002
SH016
SH012
SH005
SH008
SH018
SH003
SH022
Legend
Brushland Point
Base AOI
Option2 AOI
Option3 AOI
CO_Southwest_NRCS_2018_D18
Brushland Points

Final Point Coordinates

Calibration Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
CA001	1146674.82	2248483.59	6193.32
CA002	1417111.22	2184926.87	8674.71
CA003	1173492.59	2213451.64	6506.54
CA004	1400961.46	2271260.21	9067.39
CA005	1274243.43	2518229.19	7854.86
CA006	1202716.42	2486624.34	6758.09
CA007	1276505.40	2372384.08	8216.36
CA008	1421375.19	2486064.23	10784.82
CA009	1357267.55	2057547.77	6937.83
CA010	1215054.86	2529307.93	7455.00
CA011	1468078.54	2521366.95	10900.26
CA012	1367697.94	2215768.30	9954.55
CA013	1193785.10	1985068.94	4996.47
CA014	1521989.13	2483810.91	8551.50
CA015	1349309.15	2241039.52	8173.68
CA016	1226948.32	2264738.48	8027.72
CA017	1148333.73	2567845.44	7358.04
CA018	1306007.25	2328293.08	7495.73
CA019	1220552.60	2428014.75	8402.34
CA020	1331590.68	2250258.62	10495.86
CA021	1237667.96	2214604.95	7228.45
CA022	1284035.10	2517268.60	8072.82
CA023	1314579.58	1994073.91	6110.29
CA024	1343271.62	2210475.09	7793.57
CA025	1459386.04	2520834.62	10694.06
CA026	1210763.07	2631679.56	8130.70
CA027	1249743.64	1982283.61	5076.02
CA028	1423179.35	2299518.86	10143.69
CA029	1361704.00	2319130.06	9455.78
CA030	1238017.81	2468880.15	8137.56

CA031	1259365.13	2045537.97	5579.72
CA032	1151400.77	1990423.05	4924.86
CA033	1149725.78	2053829.86	5077.80
CA034	1507916.54	2480097.70	8759.81
CA035	1250770.96	2234594.55	7914.03
CA036	1346861.70	2051381.30	6876.94
CA037	1358981.56	2332207.99	8755.17
CA038	1134104.69	2447730.12	6090.16
CA039	1167723.04	2173737.47	6796.34
CA040	1385104.39	2004688.32	6618.21
CA041	1322939.39	2505204.23	8386.73
CA042	1218030.48	2322753.81	6878.84
CA043	1444289.62	2015942.25	7212.72
CA044	1293745.97	2507090.39	7803.88
CA045	1257598.18	2012058.55	5219.78
CA046	1155015.91	2506001.35	6472.59
CA047	1437159.86	2522508.12	10038.54
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CA049	1185001.31	2579195.26	7068.08
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CA051	1149235.71	2117673.33	6315.41
CA052	1307295.04	2490007.41	8032.17
CA053	1258365.01	2186491.81	6971.62
CA054	1297311.76	2366982.96	8478.49
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CA056	1258630.80	2053295.29	5665.22
CA057	1177509.38	2568244.15	6891.29
CA058	1165095.88	2046441.98	5213.28
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CA061	1309294.78	2005444.97	6060.88
CA062	1225426.21	2308927.79	6557.93
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CA064	1410865.22	2053692.82	7585.50
CA065	1494632.42	2513750.16	10400.73
CA066	1137828.39	2394702.81	6317.77
CA067	1328132.07	2195093.37	8936.11
CA068	1245914.66	2428361.32	8580.46
CA069	1440605.49	1985324.08	6656.50
CA070	1268008.18	2396475.31	7682.90
CA071	1131596.77	2424854.89	6119.13

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CA073	1182623.93	2411990.08	6912.37
CA074	1417684.74	2015207.82	6838.38
CA075	1407827.02	2240292.57	8572.72
CA076	1272428.40	2318490.69	6574.50
CA077	1263893.17	2113658.56	6125.70
CA078	1293875.02	2330837.46	6837.85
CA079	1359493.05	2067620.56	7047.22
CA080	1187723.28	2062501.25	5409.94
CA081	1348479.01	2172738.72	7378.37
CA082	1247687.44	2181563.66	6853.82
CA083	1322054.73	2350051.81	10183.40
CA084	1410075.89	1980632.74	6624.04
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CA086	1500765.60	2476089.34	8689.09
CA087	1386141.48	2039071.97	6660.93
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CA089	1516477.46	2482025.17	8538.63
CA090	1490318.40	2483892.93	9020.62
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CA093	1280953.61	2508335.87	7653.41
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CA095	1245322.34	2153583.27	7849.12
CA096	1199161.33	2028601.59	5732.93
CA097	1441369.61	2032142.42	7640.84
CA098	1320175.86	2055664.78	6882.51
CA099	1164270.16	2342290.82	6767.85
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CA102	1451900.26	2523109.73	10464.96
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CA104	1226428.14	2593492.08	7812.88
CA105	1249781.37	2316190.74	6560.38
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CA110	1484909.99	2503603.61	11354.79
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CA142	1286442.84	2219417.23	9253.18
CA143	1318117.74	2262223.68	11185.42
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CA149	1159299.85	2016463.15	5012.06
CA150	1150126.74	2644169.18	8920.44
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CA152	1332487.68	2029712.11	6722.11
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CA154	1383599.95	2341329.50	10627.48
CA155	1283690.13	2325287.96	6682.93
CA156	1234726.51	2079588.52	5966.87
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CA179	1460455.88	2007418.00	7098.40
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CA185	1286624.12	2406926.15	7683.16
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CA189	1200584.05	2130440.37	6965.13
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CA191	1130076.10	2595813.72	7148.43
CA192	1309550.06	2170472.65	7979.51
CA193	1140758.40	1964876.19	4863.42

CA194	1359904.18	2330450.23	8909.66
CA195	1428307.98	2123169.24	7064.26
CA196	1200267.79	2615337.70	8143.42
CA197	1242893.65	2335802.66	7355.60
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CA199	1243652.00	2528889.83	7758.64
CA200	1152421.55	2217781.15	6208.27
CA201	1315357.67	2082022.94	6598.49
CA202	1225316.39	2567632.60	7155.29
CA203	1396003.66	2016902.89	6554.83
CA204	1347594.61	1990652.58	6562.58
CA205	1421816.32	2207595.65	9358.79
CA206	1355308.64	1986137.30	6550.54
CA207	1260456.22	2250809.80	8729.76
CA208	1377913.48	1981955.00	6620.35
CA209	1340579.26	2072246.68	6967.65
CA210	1391886.93	2082089.77	7866.17
CA211	1485129.46	2497977.74	10928.53
CA212	1209345.66	2387646.87	6866.19
CA213	1223716.92	1975925.25	5133.16
CA214	1146629.09	2248419.39	6193.71
CA215	1359828.18	2300601.59	8841.48

Bare Earth Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
BE001	1475139.68	2480351.85	9023.01
BE002	1146383.73	2649032.56	8306.78
BE003	1457293.24	2456065.15	9470.74
BE004	1451030.77	2515483.32	10264.46
BE005	1464039.57	2521144.45	10878.70
BE006	1151454.49	1990544.06	4924.21
BE007	1483281.54	2412996.41	10877.84
BE008	1318920.23	2327873.70	8045.70
BE009	1472049.60	2480377.65	9023.43
BE010	1498770.40	2458831.60	9200.96
BE011	1220471.45	2428024.45	8401.47
BE012	1346884.74	2051382.53	6878.25
BE013	1521973.97	2483829.39	8550.56
BE014	1197915.21	2192301.50	6994.13
BE015	1225389.97	2308920.96	6558.65
BE016	1193737.43	2577113.23	7344.60
BE017	1226391.73	2593423.93	7810.63
BE018	1150064.83	2644161.40	8919.17
BE019	1407811.55	2460131.73	9963.63
BE020	1183102.21	2240503.77	6955.70
BE021	1503209.15	2479128.85	8657.96
BE022	1485079.88	2503255.74	11333.06
BE023	1497903.51	2464801.08	8973.30
BE024	1422944.34	2524657.18	9546.13
BE025	1421171.39	2487458.44	10749.02
BE026	1440599.26	1985338.91	6655.64
BE027	1419111.95	2271703.50	10133.61
BE028	1400768.03	2271207.10	9063.28
BE029	1429642.10	2526685.93	9557.26
BE030	1270392.40	2098207.52	6137.62
BE031	1424027.02	2243418.25	9881.65

BE032	1341577.98	2326838.68	8844.46
BE033	1313462.37	2498194.33	8374.87
BE034	1221877.81	2548964.51	7597.46
BE035	1209304.61	2387491.15	6866.36
BE036	1486697.25	2428246.87	10036.02
BE037	1485182.97	2497909.98	10927.05
BE038	1359764.93	2300565.41	8840.31
BE039	1372776.52	2265582.72	8611.75
BE040	1281474.46	2509595.87	7735.33
BE041	1516520.77	2482064.05	8538.69
BE042	1181596.80	2347479.73	6544.11
BE043	1419256.63	2171481.49	8441.47
BE044	1328126.79	2195432.32	8937.40
BE045	1307258.52	2490101.75	8034.24
BE046	1297387.25	2366856.35	8484.24
BE047	1460455.62	2007437.77	7098.15
BE048	1261340.63	2595902.52	7701.67
BE049	1283133.80	2020852.42	6424.45
BE050	1361616.54	2318894.01	9436.31
BE051	1159672.85	2064266.79	5303.15
BE052	1223623.52	1975957.72	5134.44
BE053	1407514.59	2025104.53	6843.31
BE054	1391919.38	2349442.22	9768.70
BE055	1260926.73	2188397.21	7011.72
BE056	1317187.55	2082078.43	6648.18
BE057	1439108.72	2209001.64	10797.84
BE058	1314579.47	1994105.32	6108.45
BE059	1422465.76	2502752.21	9853.57
BE060	1134836.72	2612605.90	7373.13
BE061	1421287.22	2207978.52	9356.66
BE062	1357630.70	2224242.69	10242.94
BE063	1485303.13	2491810.34	10091.32
BE064	1494534.46	2478108.03	8849.69
BE065	1378558.41	2052626.92	6835.27
BE066	1159900.42	2056001.02	5265.16
BE067	1168053.80	2136986.66	6194.91
BE068	1540546.78	2485496.77	8422.71
BE069	1176509.39	2379154.23	6494.63
BE070	1298525.86	2506028.85	7955.34
BE071	1218078.11	2322851.40	6875.61
BE072	1239964.28	2283118.66	7106.71

BE073	1254427.67	2212736.14	7937.34
BE074	1321919.30	2349994.11	10179.44
BE074B	1359931.30	2330460.04	8909.57
BE075	1173931.65	2196618.14	6690.44
BE076	1189985.17	2477232.41	6568.84
BE077	1155291.59	2633964.64	9399.30
BE078B	1137894.59	2394697.22	6317.50
BE079	1287474.42	2077673.47	6392.13
BE080	1246199.46	2252791.25	8415.85
BE081	1355307.22	1986151.14	6550.50
BE082	1353357.72	2025196.90	6824.78
BE083	1220130.30	2078085.66	5933.28
BE084	1258053.28	2153502.03	6976.49
BE085	1189783.67	1970559.66	4937.04
BE086	1473324.05	2519948.99	10496.84
BE087	1189942.55	2508619.20	7086.66
BE088	1258528.88	2053232.01	5665.05
BE089	1158371.56	2588896.55	7458.12
BE090	1286220.04	2123678.42	6553.52
BE091	1311707.29	2152547.11	7097.34
BE092	1211983.79	2279645.16	7107.66
BE093	1275485.94	2206195.21	7886.02
BE094	1203675.18	2062156.77	5615.77
BE095	1437257.09	2522511.63	10039.06
BE096	1285309.32	2406952.36	7676.27
BE097	1293954.63	2270881.08	11422.87
BE098	1237070.93	2312837.94	6619.25
BE099	1256798.02	2516811.83	8014.50
BE100	1201952.96	2338657.45	6839.21
BE101	1403247.81	2467338.80	9462.87
BE102	1428961.96	2514164.58	9840.55
BE103	1261705.20	1982792.21	4950.99
BE104	1247380.60	2576373.38	7765.47
BE105	1193458.93	2210919.70	6697.67
BE106	1137718.59	2518265.77	6353.82
BE107	1331443.31	2250777.85	10486.44
BE108	1332491.39	2029729.78	6721.03
BE109	1410089.97	1980635.50	6624.18
BE110	1311834.54	2107073.87	6981.20
BE111	1123121.48	2624143.34	7748.00
BE112	1180578.67	2060540.12	5432.35

BE113	1269219.16	2520366.55	7883.52
BE114	1341913.67	2168984.29	7361.50
BE115	1374460.72	2335954.50	9377.34
BE116	1249443.38	1975694.58	5045.10
BE117	1300440.34	2040159.03	6548.91
BE118	1303686.92	2329114.91	7381.40
BE119	1225301.85	2567616.97	7155.06
BE120	1199525.15	2130294.36	6955.48
BE121	1250809.13	2554852.66	7875.48
BE122	1158132.21	2547591.83	6545.72
BE123	1239692.93	2166204.53	6510.57
BE124	1259996.24	2059031.10	5601.35
BE125	1285828.15	2519082.74	8124.62
BE126	1204998.64	2012553.10	5555.73
BE127	1396534.69	2359617.47	10583.99
BE128	1292161.59	2147407.32	7242.91
BE129	1242994.40	2144482.62	7814.35
BE130	1359007.48	2332173.42	8754.73
BE131	1149737.55	2053798.88	5076.90
BE132	1493652.54	2433099.88	9724.75
BE133	1383820.58	2341238.96	10636.18
BE134	1319081.25	2331373.21	7893.18
BE135	1207165.27	2502223.66	6838.50
BE136	1179653.06	2370132.57	6554.36
BE137	1157919.84	2073515.24	5234.95
BE138	1255433.06	2590711.18	7618.72
BE139	1273258.16	2517743.33	7844.55
BE140	1247009.59	2079801.13	5836.25
BE141	1246595.61	2527363.37	7843.67
BE142	1140675.16	1965453.46	4849.96
BE143	1407859.45	2240298.39	8573.02
BE144	1263999.26	2113631.62	6127.67
BE145	1352535.48	2329981.88	8847.62
BE146	1152213.89	2308035.59	6061.10
BE147	1357282.87	2057167.45	6924.52
BE148	1424369.75	2302258.59	10204.93
BE149	1389535.05	2491289.93	9322.04
BE150	1468407.95	2521166.88	10900.37
BE151	1127319.02	2432797.53	6195.02
BE152	1432307.40	2497811.38	11396.80
BE153	1242900.45	2335812.83	7355.52

BE154	1199375.74	2028401.51	5734.14
BE155	1284394.02	2060166.86	6735.24
BE156	1285285.12	2341447.19	8238.80
BE157	1447025.36	2147983.61	7095.18
BE158	1483034.10	2399158.01	12830.35
BE159	1173939.62	2223150.95	6652.20
BE160	1408737.49	2515245.15	9282.71
BE161	1539259.24	2486523.10	8466.83
BE162	1176624.19	2596377.38	7244.56
BE163	1143705.59	2124540.84	6358.96
BE164	1494759.51	2513261.06	10415.17
BE165	1483312.93	2511259.29	11321.67
BE166	1259355.07	2045568.52	5580.41
BE167	1144568.84	2220979.70	6328.94

Urban Area Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
UA001	1236971.03	2312863.72	6618.23
UA002	1258286.93	2186261.69	6967.56
UA003	1136606.76	2419764.11	6229.20
UA004	1221983.08	2548927.43	7595.60
UA005	1260922.74	2188365.81	7011.72

Tall Weed Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
TW001	1181666.48	2347500.47	6544.79
TW002	1377883.12	1981999.67	6618.99
TW003	1149409.80	2612599.24	7595.07
TW004	1493633.41	2433220.97	9722.14
TW005	1234707.57	2079593.55	5964.80
TW006	1356599.01	2078005.63	7288.89
TW007	1468105.69	2521387.72	10898.24
TW008	1131279.85	2418392.04	6160.32
TW009	1445418.70	2160392.54	7402.83
TW010	1235133.85	2534268.20	7859.78
TW011	1163714.57	2043174.63	5196.65
TW012	1265161.98	2607698.21	7979.98
TW013	1494759.85	2513840.39	10390.65
TW014	1283660.59	2325284.90	6680.98
TW015	1201999.47	2338599.50	6839.75
TW016	1164294.75	2342385.64	6769.18
TW017	1154986.37	2505951.13	6471.55
TW018	1403134.32	2467463.15	9459.40
TW019	1357313.08	2224456.10	10229.46
TW020	1421118.36	2267607.70	10097.23
TW021	1247710.36	2181555.49	6852.39
TW022	1348469.25	2172782.51	7376.10
TW023	1308184.02	2098626.61	6683.89
TW024	1200264.65	2615230.29	8148.63
TW025	1303330.31	2498538.62	8203.55

Forest Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
FR001	1429549.74	2526716.03	9555.02
FR002	1385994.02	2019690.30	6601.46
FR003	1321801.07	2350076.39	10207.01
FR004	1285261.44	2406910.06	7672.40
FR005	1357697.66	2224091.43	10231.58
FR006	1328149.48	2195545.99	8938.92
FR007	1361707.07	2318873.03	9455.01
FR008	1421338.86	2267001.29	10103.34
FR009	1417146.98	2184876.59	8674.53
FR010	1237572.72	2469149.82	8112.86
FR011	1258441.18	2053186.74	5659.93
FR012	1199853.06	2570818.41	7326.42
FR013	1331475.40	2250833.24	10490.58
FR014	1146717.16	2248494.38	6196.25
FR015	1266880.29	2396002.96	7613.84
FR016	1309459.37	2212539.38	9008.95
FR017	1209107.48	2239027.98	7339.95
FR018	1495917.66	2511835.98	10632.96
FR019	1539356.69	2486557.57	8466.97
FR020	1149188.63	2117701.73	6312.71
FR021	1300221.36	2039972.45	6543.98
FR022	1247290.22	2576384.12	7761.49
FR023	1447217.43	2147852.12	7104.05
FR024	1294023.43	2270921.95	11443.09
FR025	1264077.84	2113623.96	6128.79
FR026	1176334.80	2379296.29	6486.28
FR027	1190086.67	2477221.21	6577.94
FR028	1539297.32	2486512.62	8465.27
FR029	1389467.53	2491401.83	9326.69
FR030	1422925.73	2526981.90	9488.75
FR031	1303131.79	2498236.28	8215.33

FR032	1217970.09	2322709.24	6874.70
FR033	1226560.51	2593632.99	7812.15
FR034	1136479.57	2516909.38	6320.69
FR035	1468329.79	2521157.75	10903.89
FR036	1396331.19	2359371.46	10556.27
FR037	1347534.01	1990735.16	6563.98
FR038	1432016.25	2022670.38	7233.31
FR039	1494603.38	2513725.85	10403.31
FR040	1167736.91	2173692.33	6797.11
FR041	1196505.06	2192259.35	6942.13
FR042	1199467.24	2028395.98	5735.78
FR043	1137724.53	2394636.82	6316.01
FR044	1135190.82	2464272.37	6106.41
FR045	1176709.69	2596369.19	7243.84
FR046	1498921.92	2451208.98	9332.45
FR047	1383869.60	2341318.06	10630.37
FR048	1357205.76	2057610.52	6943.65
FR049	1212038.40	2279722.65	7106.65
FR050	1421424.23	2487311.06	10748.21
FR051	1242083.41	2517998.96	8061.97
FR052	1157280.42	2233556.75	6574.00
FR053	1357309.95	2157402.53	7930.78
FR054	1300686.03	2144131.53	7429.66
FR055	1200630.97	2130406.07	6966.04
FR056	1383148.91	2177191.95	8077.71
FR057	1246536.53	2527451.14	7846.52
FR058	1254412.00	2212802.51	7941.41
FR059	1209348.67	2387382.42	6867.47
FR060	1391858.64	2082243.39	7872.63
FR061	1238707.40	2361570.11	7756.18
FR062	1414522.81	2052631.43	7629.92
FR063	1297609.36	2366708.60	8497.81
FR064	1129692.77	2595326.71	7122.56
FR065	1148326.65	2567735.71	7357.61
FR066	1261234.66	2595936.72	7704.20
FR067	1265178.87	2173972.25	6771.68
FR068	1429604.46	2526660.61	9556.24
FR069	1498937.02	2451154.44	9333.16
FR070	1539261.39	2486585.20	8472.13
FR071	1539232.20	2486560.67	8470.12
FR072	1246618.34	2527443.90	7850.19

FR073	1261278.46	2595947.14	7704.16
FR074	1261299.60	2595856.18	7698.41
FR075	1261183.43	2595897.95	7701.60
FR076	1303115.69	2498299.77	8214.74

Brushland Point Coordinates

Horizontal Datum - NAD83(2011)
SPC COLORADO - SOUTH ZONE
Vertical Datum - NAVD 88
Geoid - GEOID12B
Units – Meters

Point ID	Northing (m)	Easting (m)	Elev. (m)
SH001	1207501.96	2131366.62	7115.37
SH002	1191165.01	1980172.94	4899.69
SH003	1148420.63	2567252.38	7349.62
SH004	1201824.11	2338715.61	6838.45
SH005	1145349.61	2123910.52	6340.27
SH006	1265092.61	2174151.25	6763.43
SH007	1249700.96	1982509.03	5075.02
SH008	1141083.93	2242924.59	6086.87
SH009	1417082.68	2185224.09	8697.83
SH010	1440568.65	1985363.11	6658.31
SH011	1220410.31	2427988.51	8401.31
SH012	1157875.18	2347575.50	7282.34
SH013	1215015.09	2529346.71	7449.38
SH014	1287381.56	2099125.28	6260.21
SH015	1258061.59	2153523.95	6975.26
SH016	1163696.00	2043175.20	5196.29
SH017	1247737.88	2217425.73	7439.06
SH018	1136021.70	2512139.94	6577.71
SH019	1429779.23	2526786.65	9557.51
SH020	1283702.78	2325374.34	6682.17
SH021	1356618.25	2077682.43	7298.10
SH022	1141517.22	2647567.00	7875.24
SH023	1355284.03	1986136.22	6549.31
SH024	1463993.02	2521146.34	10878.21
SH025	1539208.69	2486327.78	8457.99

Point Data and Accuracy Log Sheets

Calibration Point Log Sheets

Point ID	CA001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Pinkerton Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1146674.82	2248483.59	6193.32

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA002
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1417111.22	2184926.87	8674.71

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FastStatic

PHOTOS:

Point ID	CA003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1173492.59	2213451.64	6506.54

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Rico

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

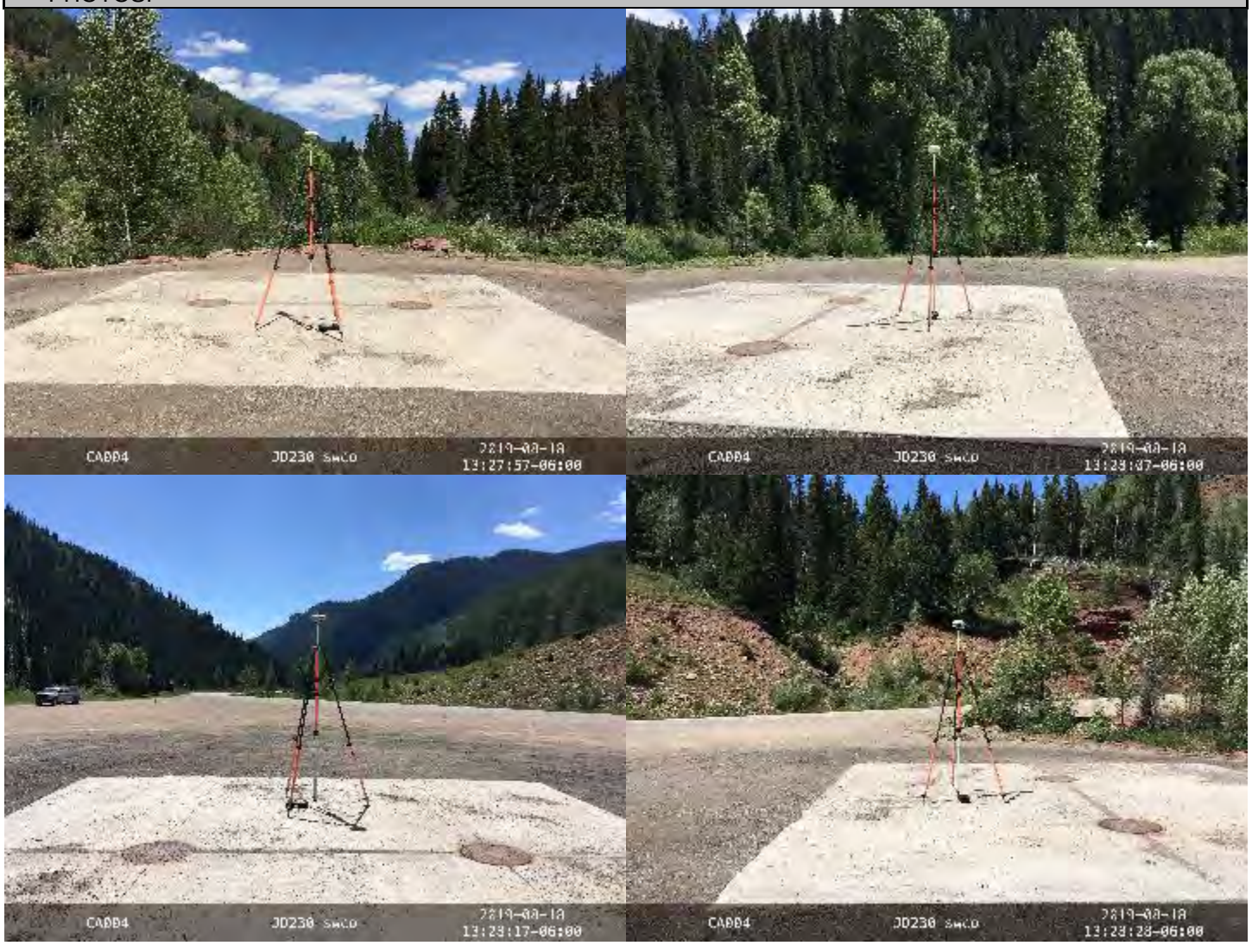
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1400961.46	2271260.21	9067.39

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:



Point ID	CA005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1274243.43	2518229.19	7854.86

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA006
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chimney Rock

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1202716.42	2486624.34	6758.09

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA007
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Lemon Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

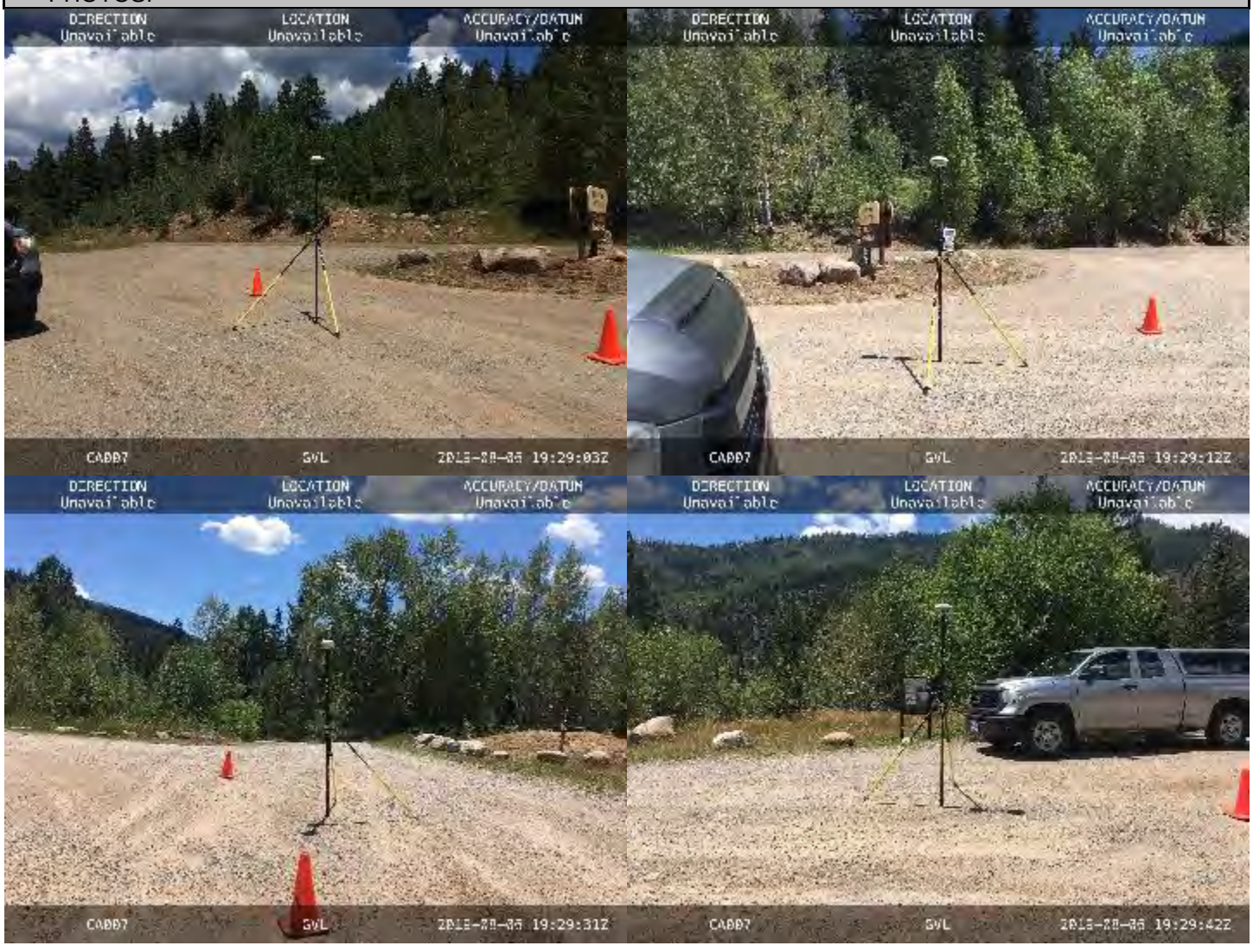
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1276505.40	2372384.08	8216.36

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA008
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

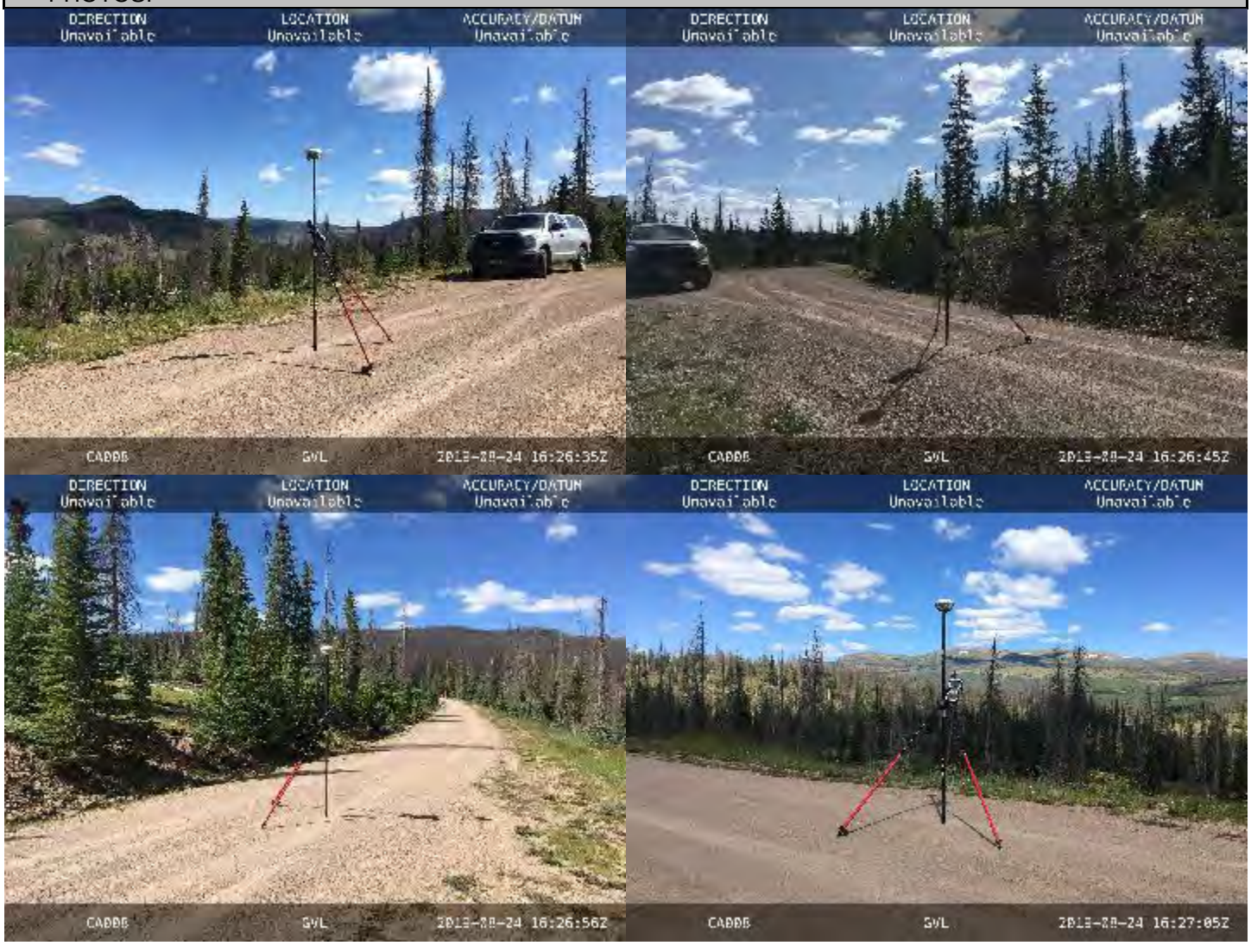
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1421375.19	2486064.23	10784.82

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA009
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357267.55	2057547.77	6937.83

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	1.781 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA010
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oak Brush Hill

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1215054.86	2529307.93	7455.00

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA011
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1468078.54	2521366.95	10900.26

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	CA012
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Clyde Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1367697.94	2215768.30	9954.55

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/16/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA013
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash West

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1193785.10	1985068.94	4996.47

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA014
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

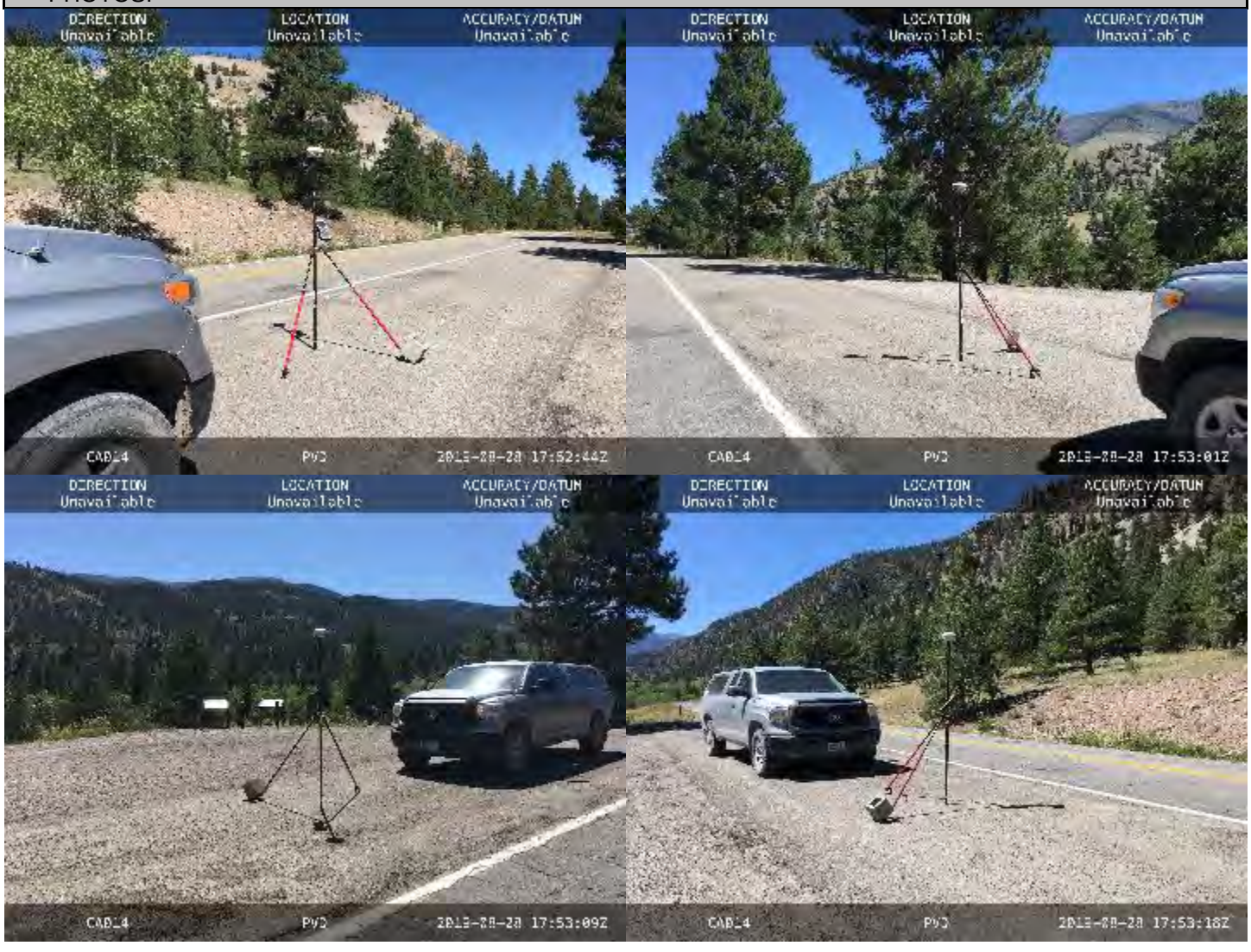
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1521989.13	2483810.91	8551.50

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	CA015
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Orphan Butte

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1349309.15	2241039.52	8173.68

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA016
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hesperus

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1226948.32	2264738.48	8027.72

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA017
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1148333.73	2567845.44	7358.04

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA018
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1306007.25	2328293.08	7495.73

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.02
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	CA019
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Badly Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1220552.60	2428014.75	8402.34

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA020
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Orphan Butte

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1331590.68	2250258.62	10495.86

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.05
RMSE Z	0.12
GPS Method	RTK

PHOTOS:

Point ID	CA021
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Thompson Park

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1237667.96	2214604.95	7228.45

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA022
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

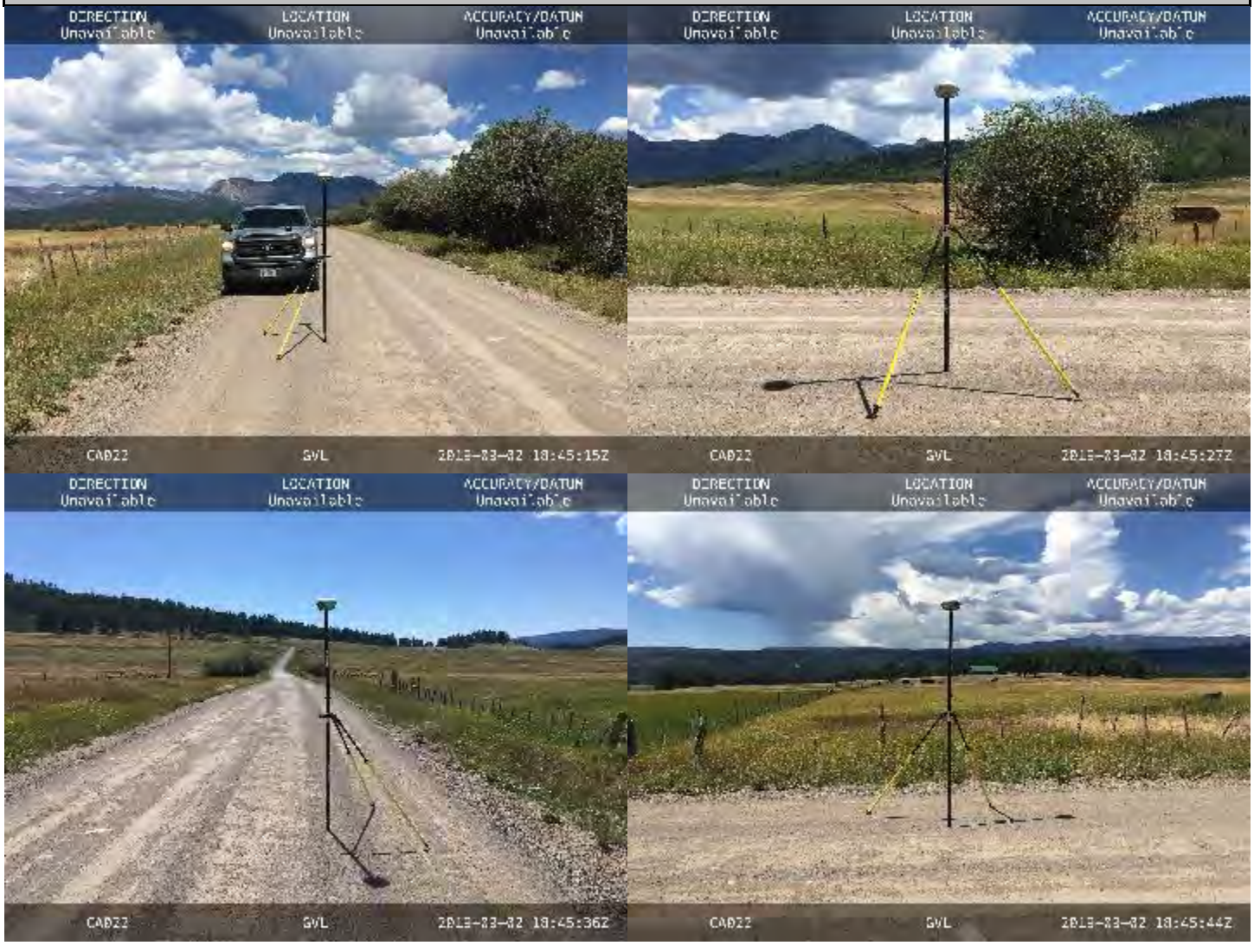
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1284035.10	2517268.60	8072.82

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA023
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Negro Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1314579.58	1994073.91	6110.29

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA024
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wallace Ranch

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1343271.62	2210475.09	7793.57

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/18/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FastStatic

PHOTOS:

Point ID	CA025
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1459386.04	2520834.62	10694.06

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTN

PHOTOS:

Point ID	CA026
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Harris Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1210763.07	2631679.56	8130.70

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA027
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wickiup Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1249743.64	1982283.61	5076.02

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA028
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Mount Wilson

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1423179.35	2299518.86	10143.69

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.01
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA029
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1361704.00	2319130.06	9455.78

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.07
RMSE Z	0.12
GPS Method	RTK

PHOTOS:

Point ID	CA030
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Devil Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1238017.81	2468880.15	8137.56

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/09/2018
RMSE Hz	0.08
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	CA031
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Battle Rock

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1259365.13	2045537.97	5579.72

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA032
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SW

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1151400.77	1990423.05	4924.86

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA033
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149725.78	2053829.86	5077.80

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA034
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

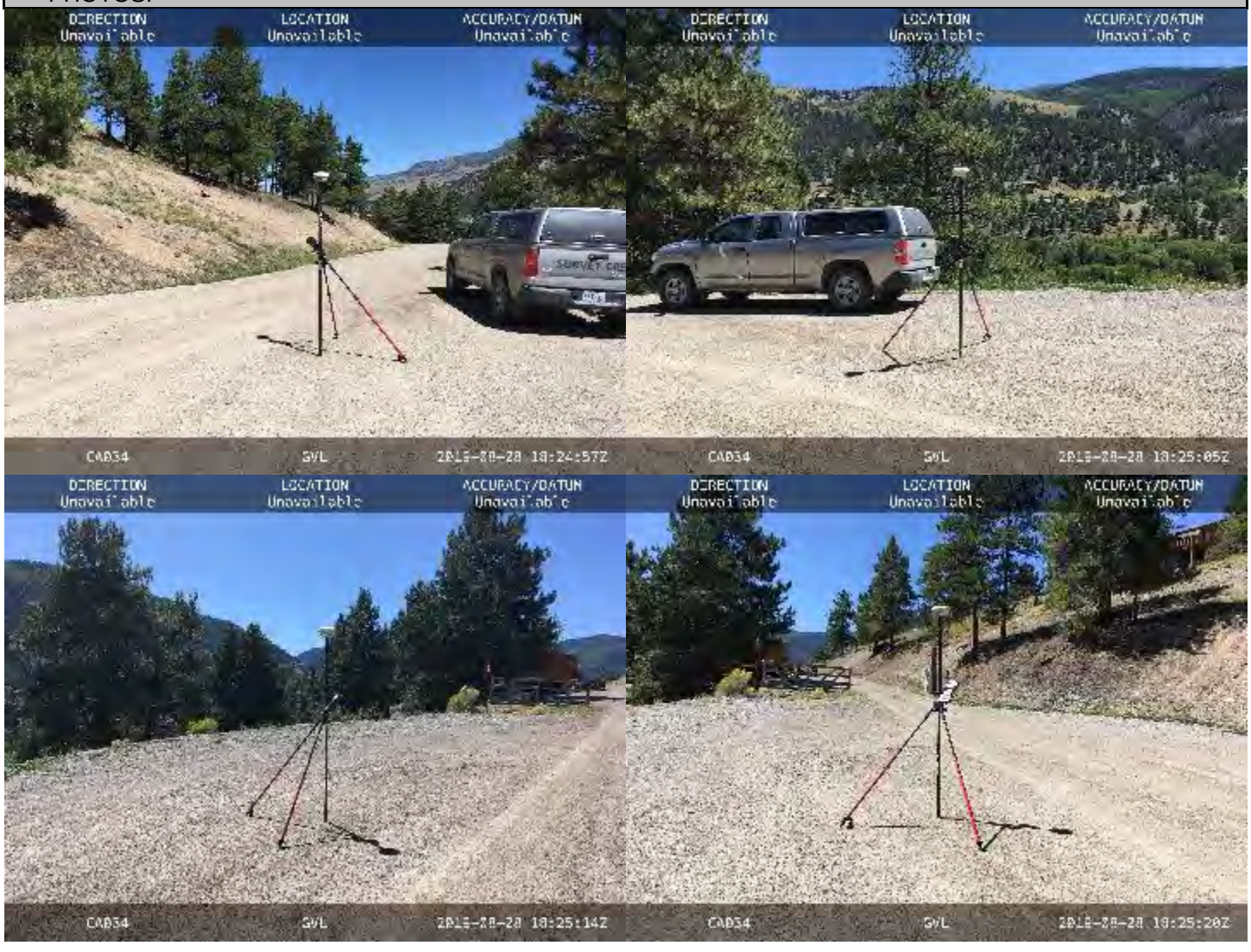
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1507916.54	2480097.70	8759.81

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	CA035
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Thompson Park

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1250770.96	2234594.55	7914.03

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA036
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1346861.70	2051381.30	6876.94

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA037
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1358981.56	2332207.99	8755.17

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.05
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	CA038
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Allison

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1134104.69	2447730.12	6090.16

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA039
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Red Horse Gulch

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1167723.04	2173737.47	6796.34

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA040
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Champagne Spring

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1385104.39	2004688.32	6618.21

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA041
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cimarrona Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

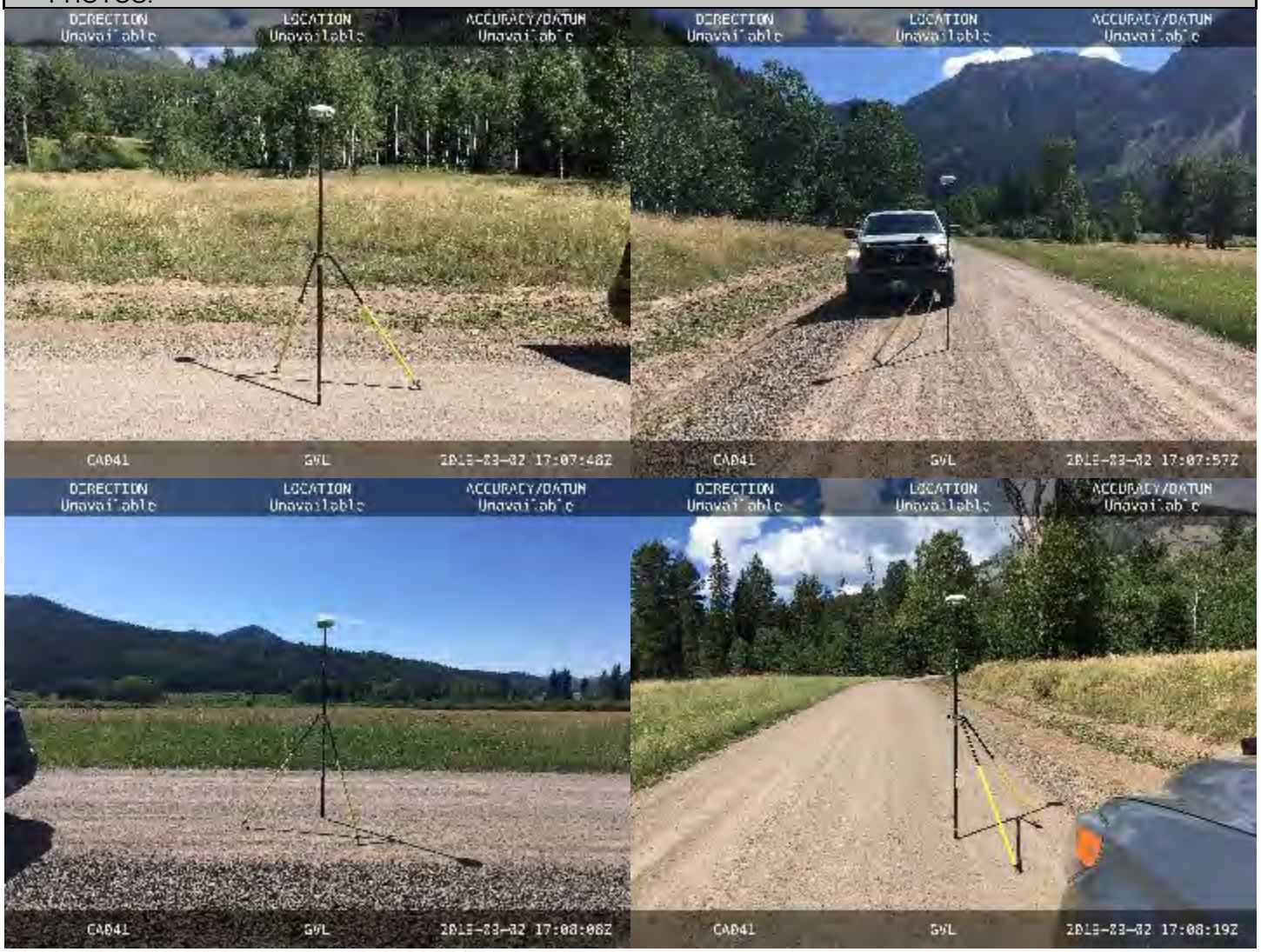
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1322939.39	2505204.23	8386.73

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.08
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA042
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1218030.48	2322753.81	6878.84

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA043
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1444289.62	2015942.25	7212.72

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA044
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

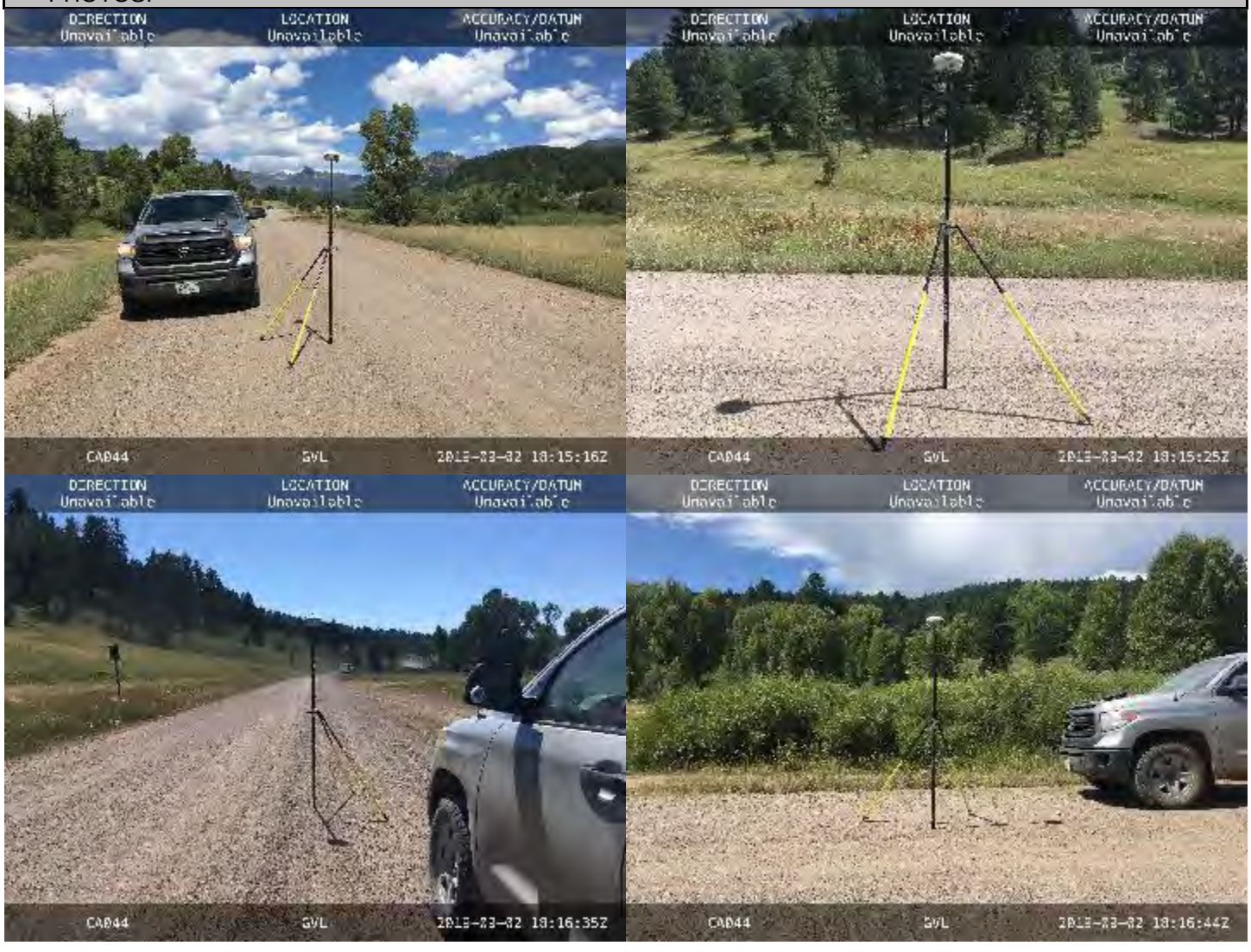
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1293745.97	2507090.39	7803.88

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA045
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Bowdish Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1257598.18	2012058.55	5219.78

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA046
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1155015.91	2506001.35	6472.59

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA047
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1437159.86	2522508.12	10038.54

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA048
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Woods Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1283682.24	2048793.66	6846.31

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA049
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1185001.31	2579195.26	7068.08

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA050
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango West

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

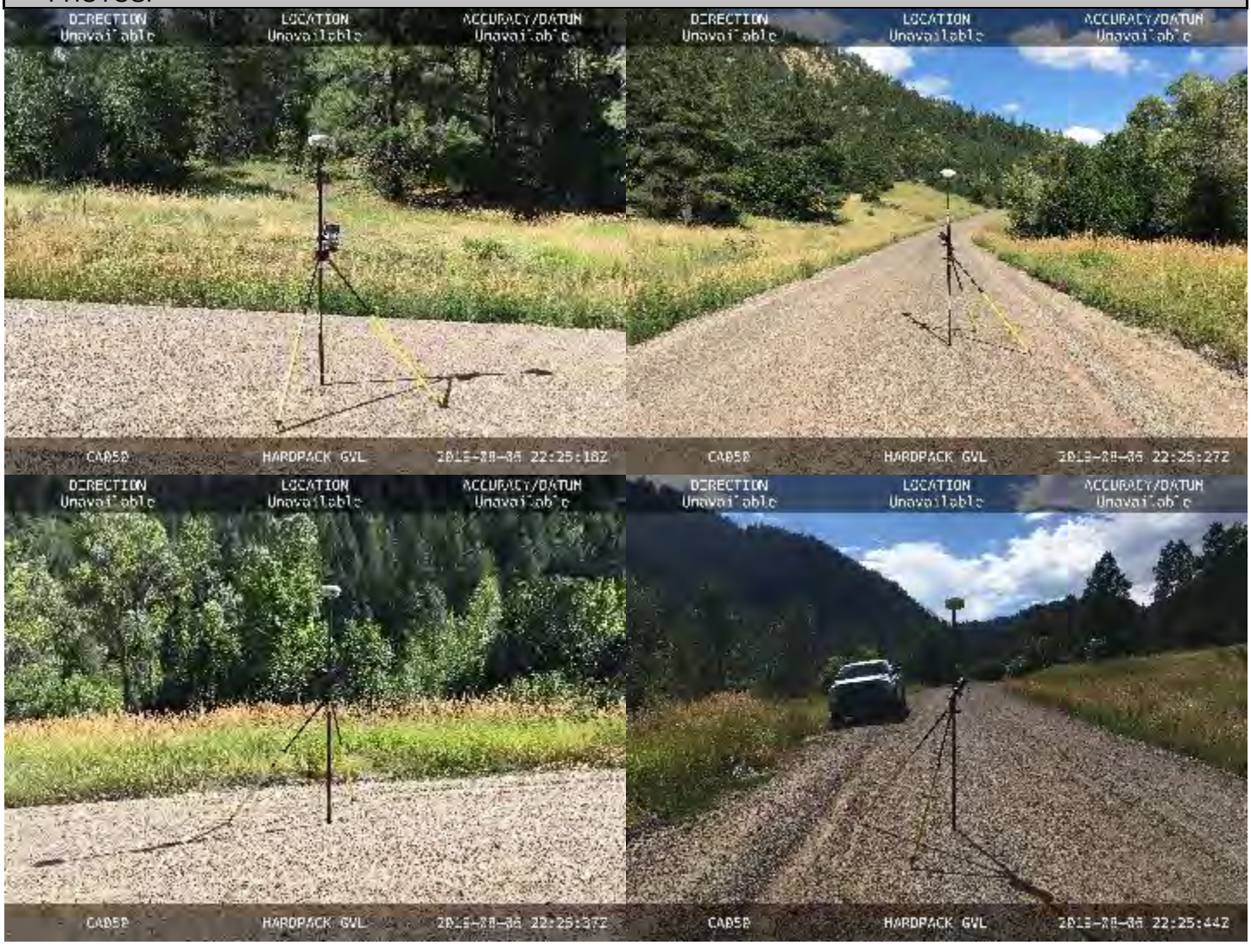
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1239956.52	2283179.75	7103.19

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA051
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moqui Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149235.71	2117673.33	6315.41

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA052
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Bear Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

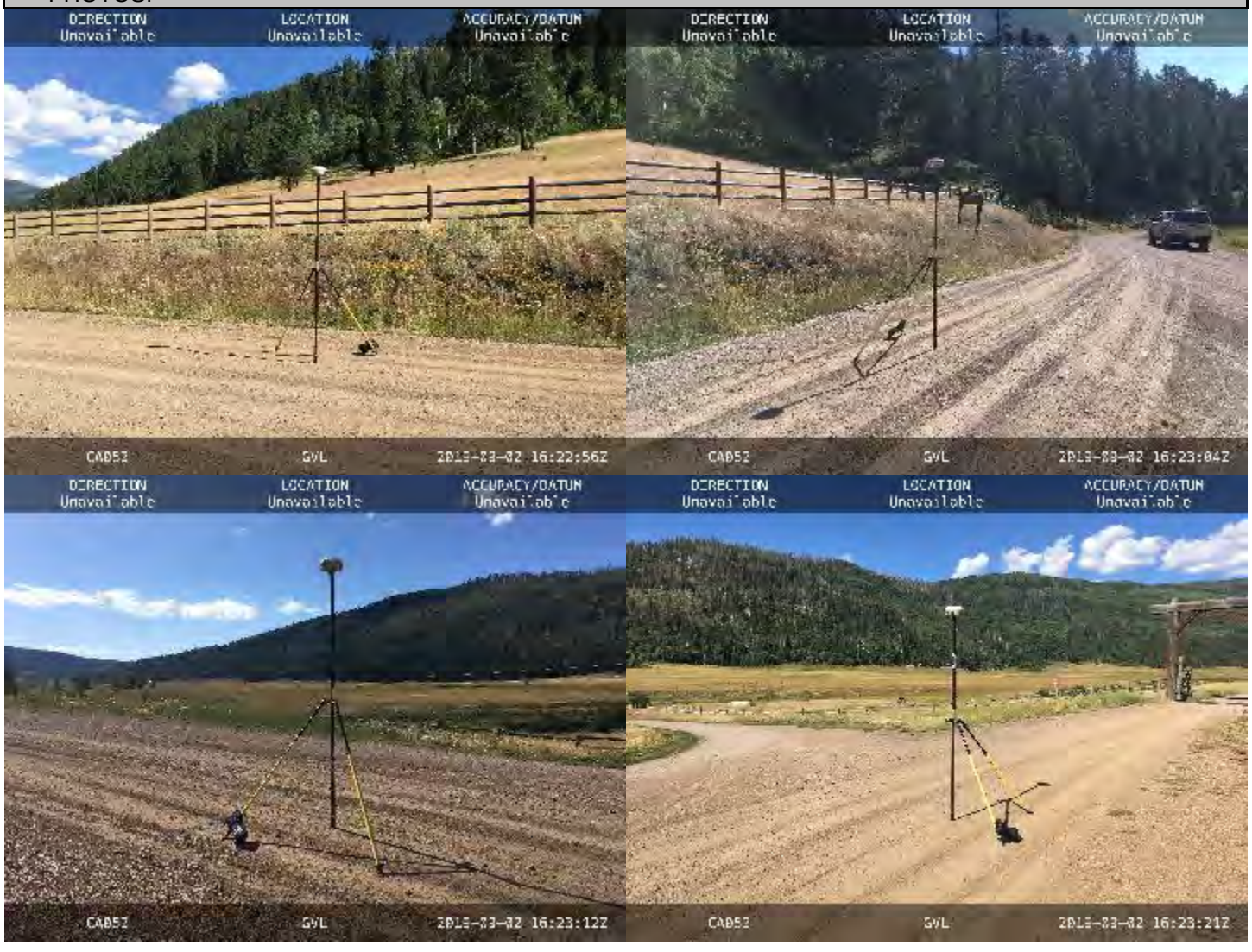
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1307295.04	2490007.41	8032.17

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.04
RMSE Z	0.10
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA053
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1258365.01	2186491.81	6971.62

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA054
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Lemon Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1297311.76	2366982.96	8478.49

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/08/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA055
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Boggy Draw

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357257.07	2157550.03	7933.04

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FastStatic

PHOTOS:

Point ID	CA056
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Battle Rock

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1258630.80	2053295.29	5665.22

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA057
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

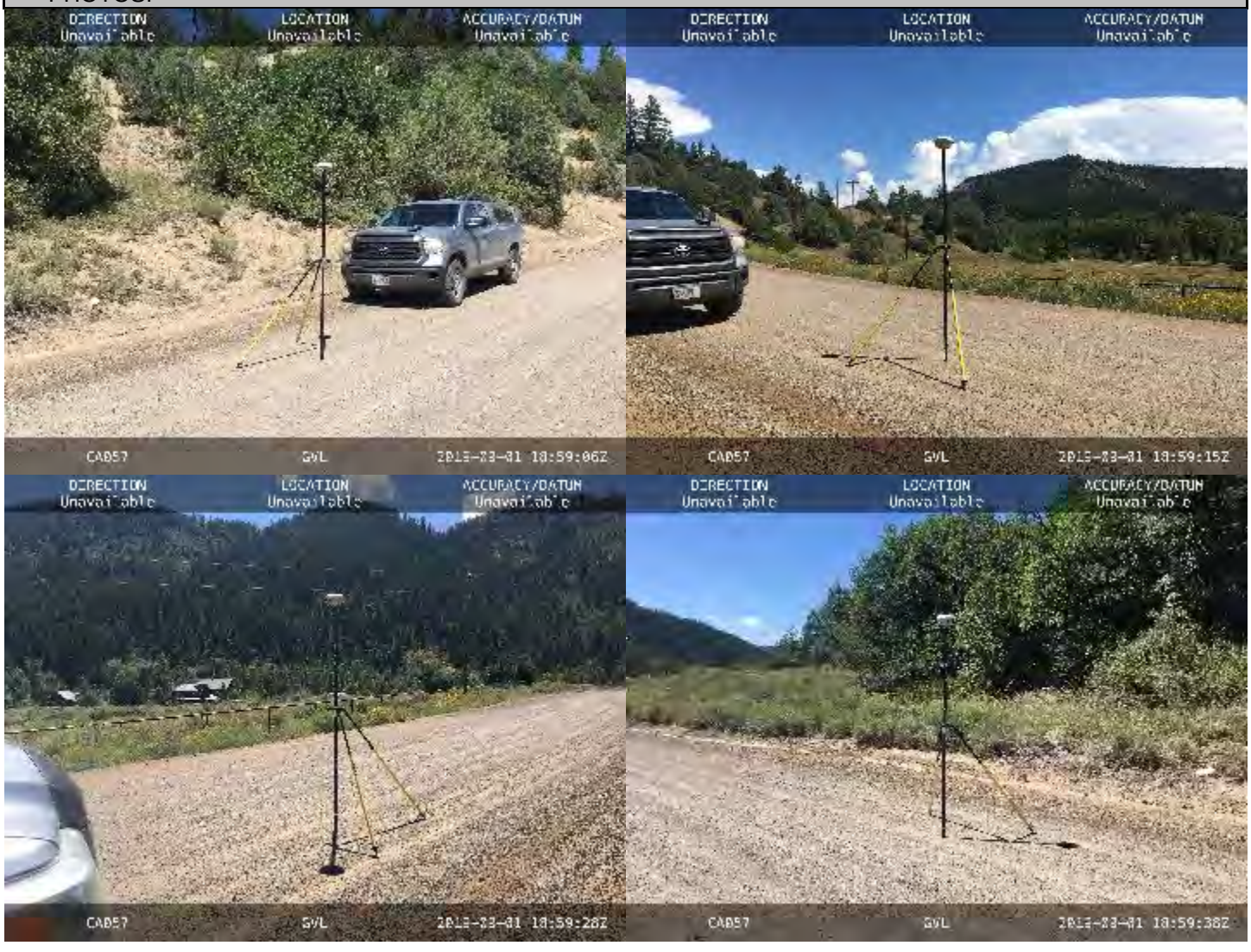
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1177509.38	2568244.15	6891.29

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA058
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SE

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1165095.88	2046441.98	5213.28

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA059
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1164721.11	2510938.88	6688.29

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/17/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA060
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1420900.61	2268230.23	10089.16

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.00
RMSE Z	0.01
GPS Method	Fast Static

PHOTOS:

Point ID	CA061
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Negro Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1309294.78	2005444.97	6060.88

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA062
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1225426.21	2308927.79	6557.93

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA063
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Nipple Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1370473.37	2185881.61	7650.26

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FastStatic

PHOTOS:

Point ID	CA064
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Cahone

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1410865.22	2053692.82	7585.50

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA065
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cannibal Plateau

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

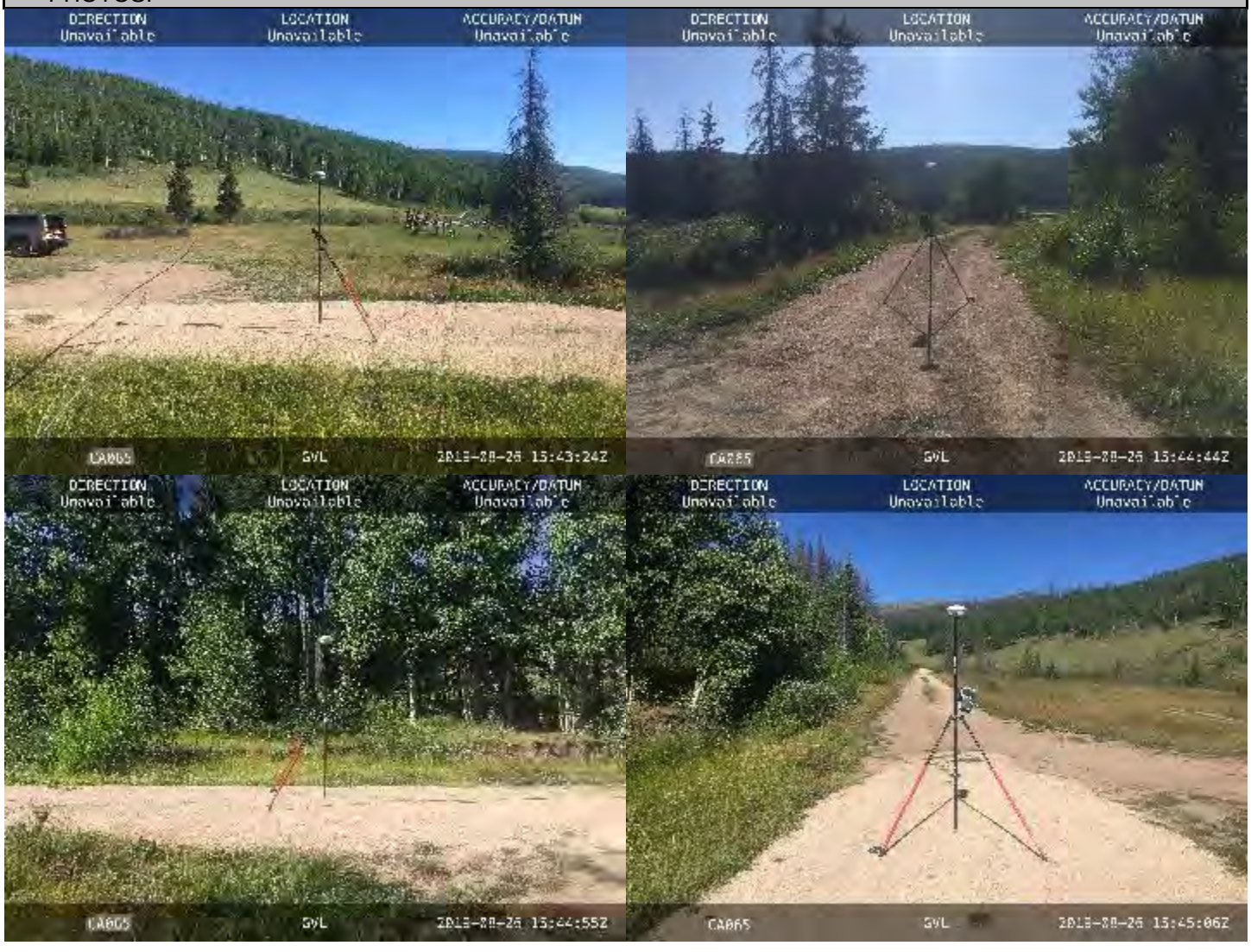
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1494632.42	2513750.16	10400.73

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA066
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Tiffany

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1137828.39	2394702.81	6317.77

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA067
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1328132.07	2195093.37	8936.11

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.995m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA068
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Baldy Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1245914.66	2428361.32	8580.46

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/10/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA069
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

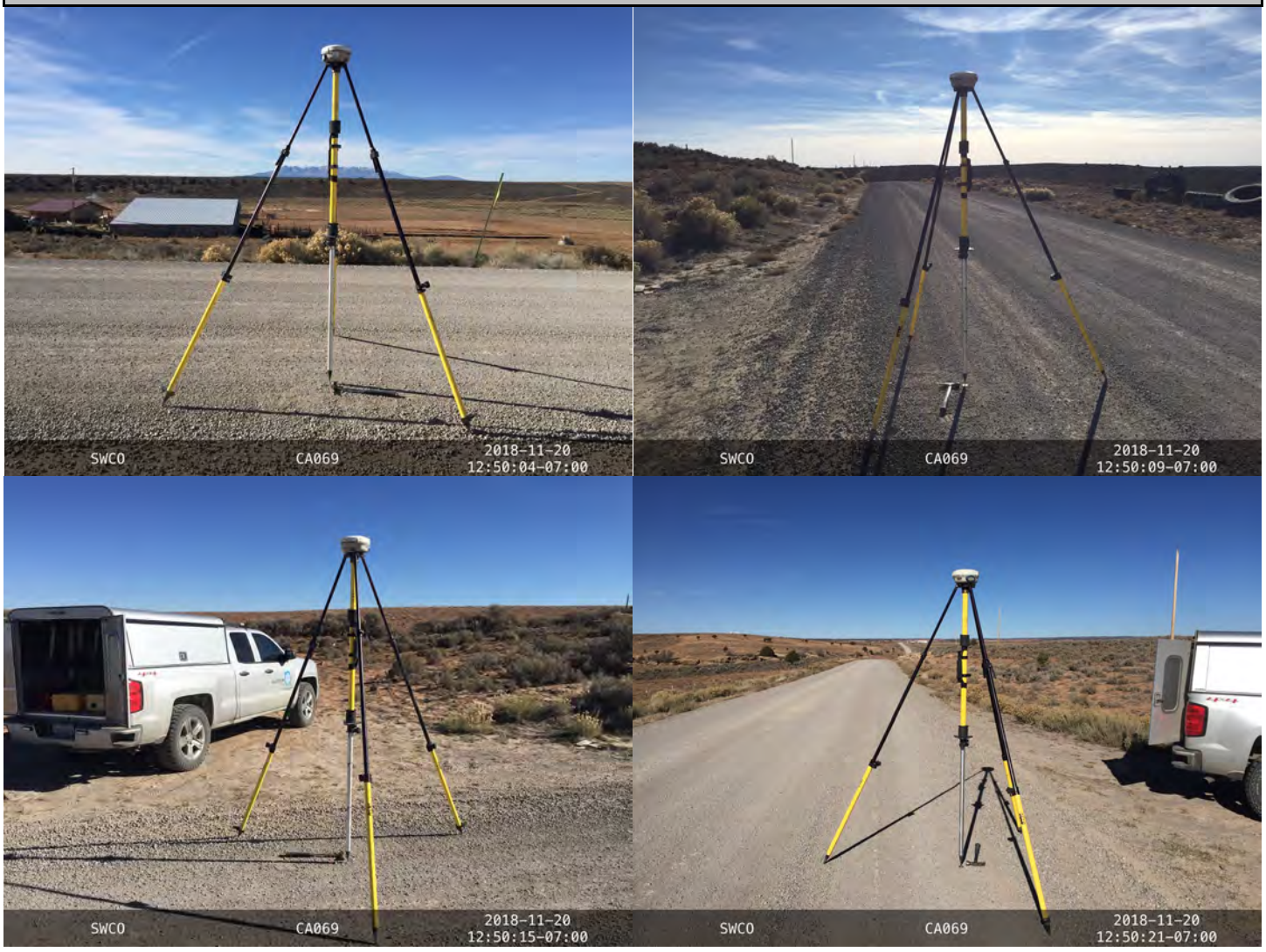
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1440605.49	1985324.08	6656.50

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	RTK

PHOTOS:



Point ID	CA070
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Vallecito Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1268008.18	2396475.31	7682.90

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA071
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Allison

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1131596.77	2424854.89	6119.13

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA072
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bayfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1216329.99	2404640.64	7001.42

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA073
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bayfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1182623.93	2411990.08	6912.37

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA074
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1417684.74	2015207.82	6838.38

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA075
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Ground Hog Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1407827.02	2240292.57	8572.72

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA076
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1272428.40	2318490.69	6574.50

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTN

PHOTOS:

Point ID	CA077
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1263893.17	2113658.56	6125.70

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA078
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

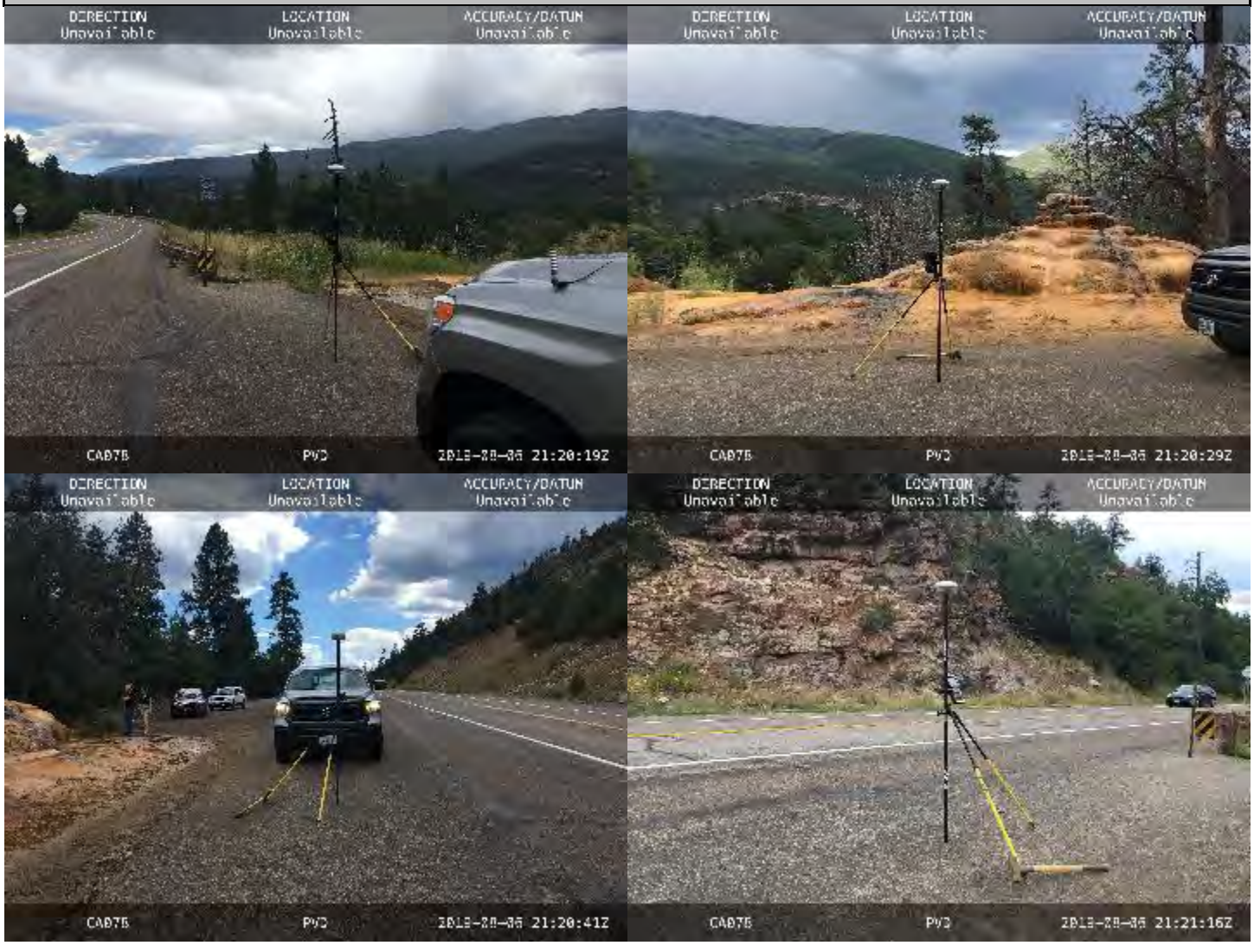
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1293875.02	2330837.46	6837.85

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	CA079
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Yellow Jacket

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1359493.05	2067620.56	7047.22

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA080
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Towaoc

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1187723.28	2062501.25	5409.94

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA081
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1348479.01	2172738.72	7378.37

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA082
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1247687.44	2181563.66	6853.82

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA083
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Mountain View Crest

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1322054.73	2350051.81	10183.40

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA084
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Burnt Cabin Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1410075.89	1980632.74	6624.04

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	RTK

PHOTOS:

Point ID	CA085
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1176413.29	2596260.21	7243.39

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	RTK

PHOTOS:

Point ID	CA086
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

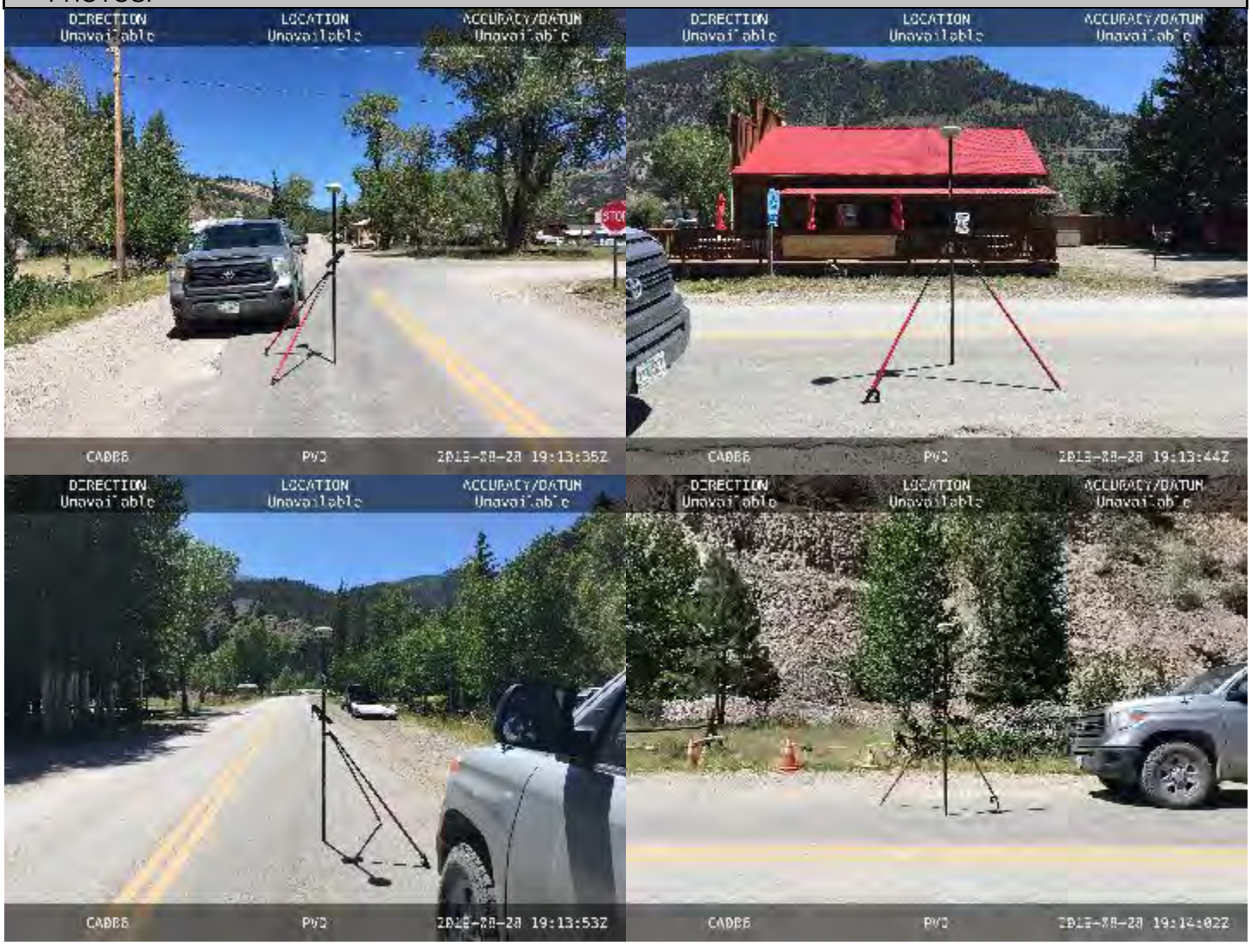
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1500765.60	2476089.34	8689.09

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA087
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Cahone

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1386141.48	2039071.97	6660.93

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA088
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Rico

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1372863.67	2265646.98	8613.80

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA089
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

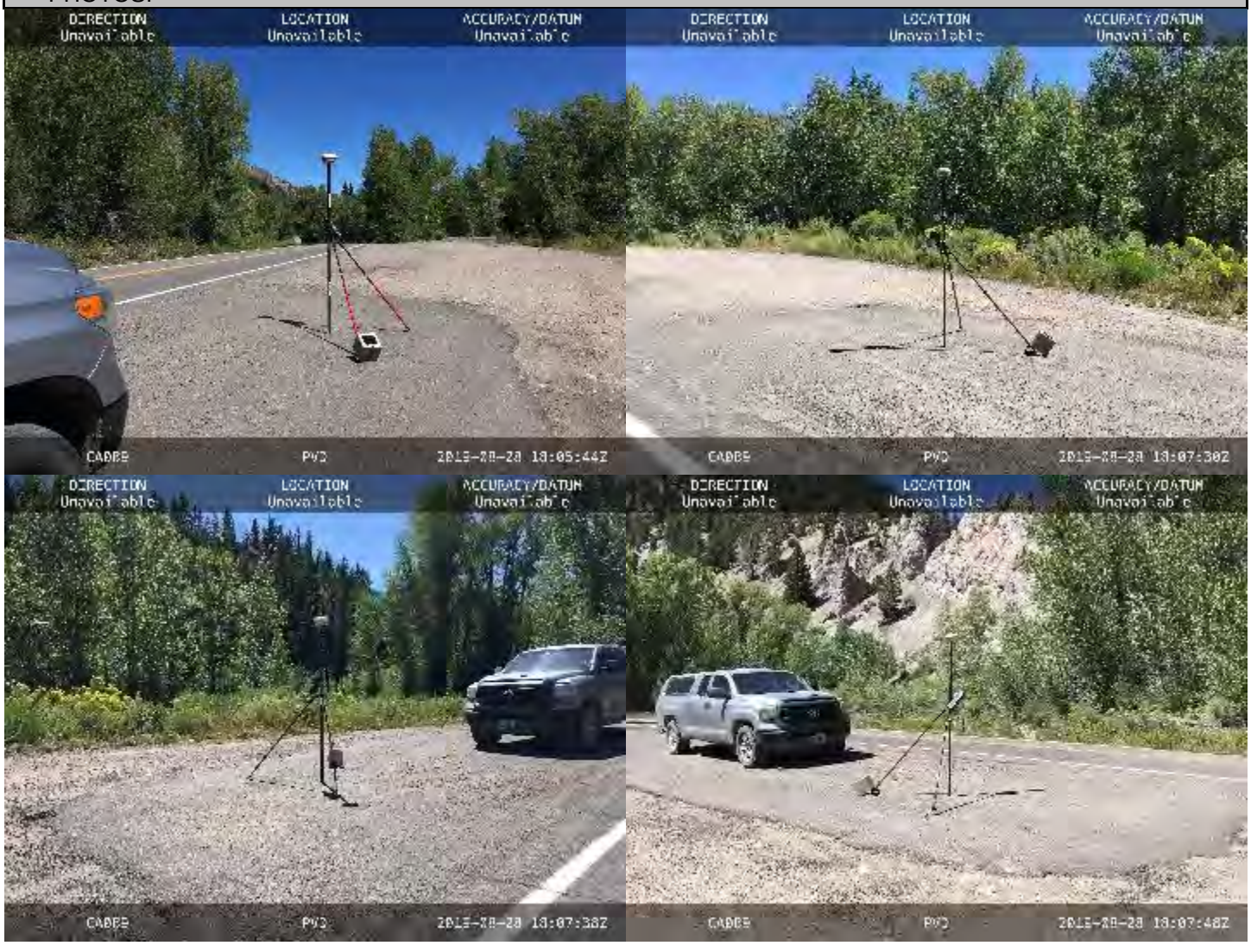
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1516477.46	2482025.17	8538.63

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA090
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

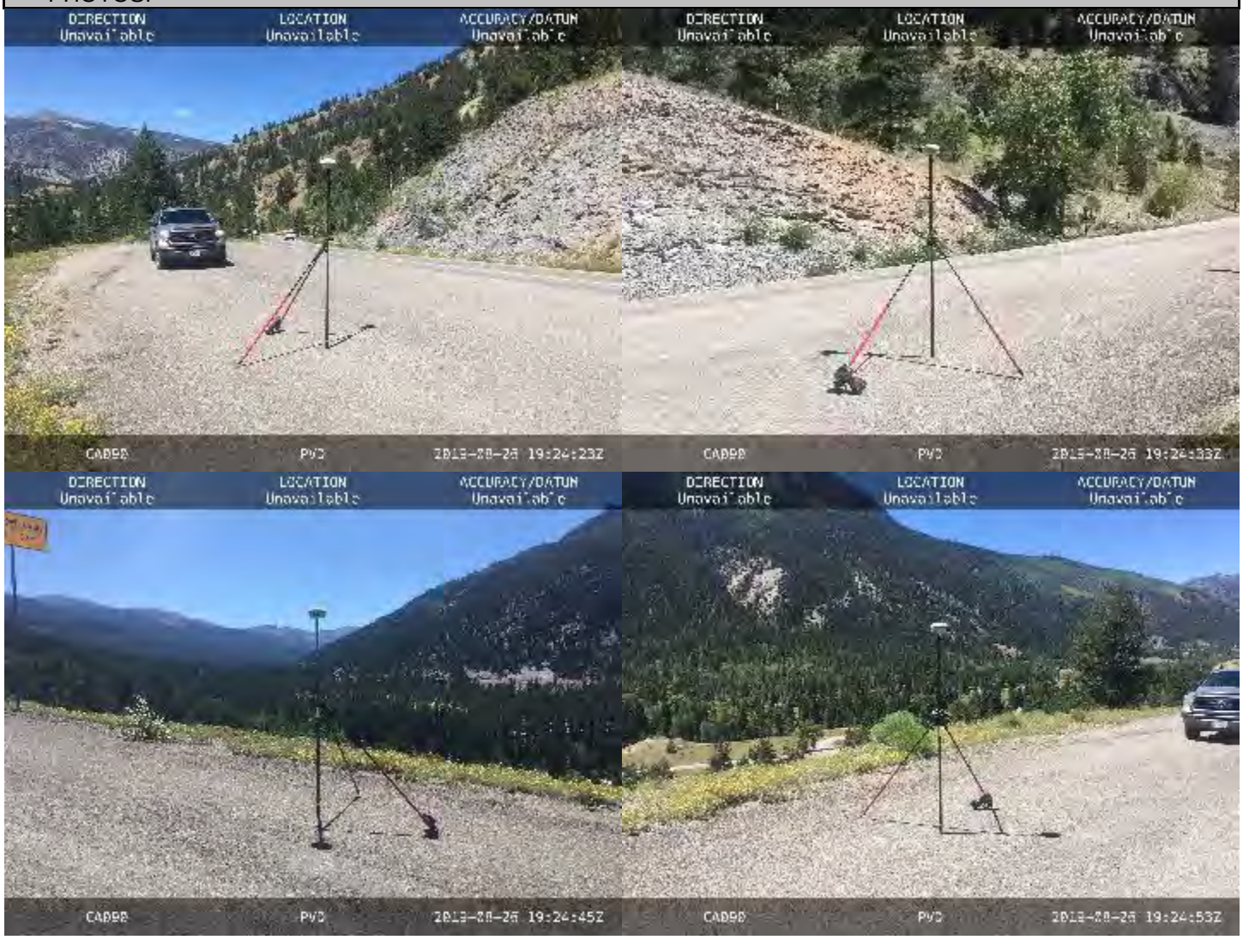
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1490318.40	2483892.93	9020.62

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	CA091
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moccasin Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1217406.34	2125980.78	7488.74

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA092
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

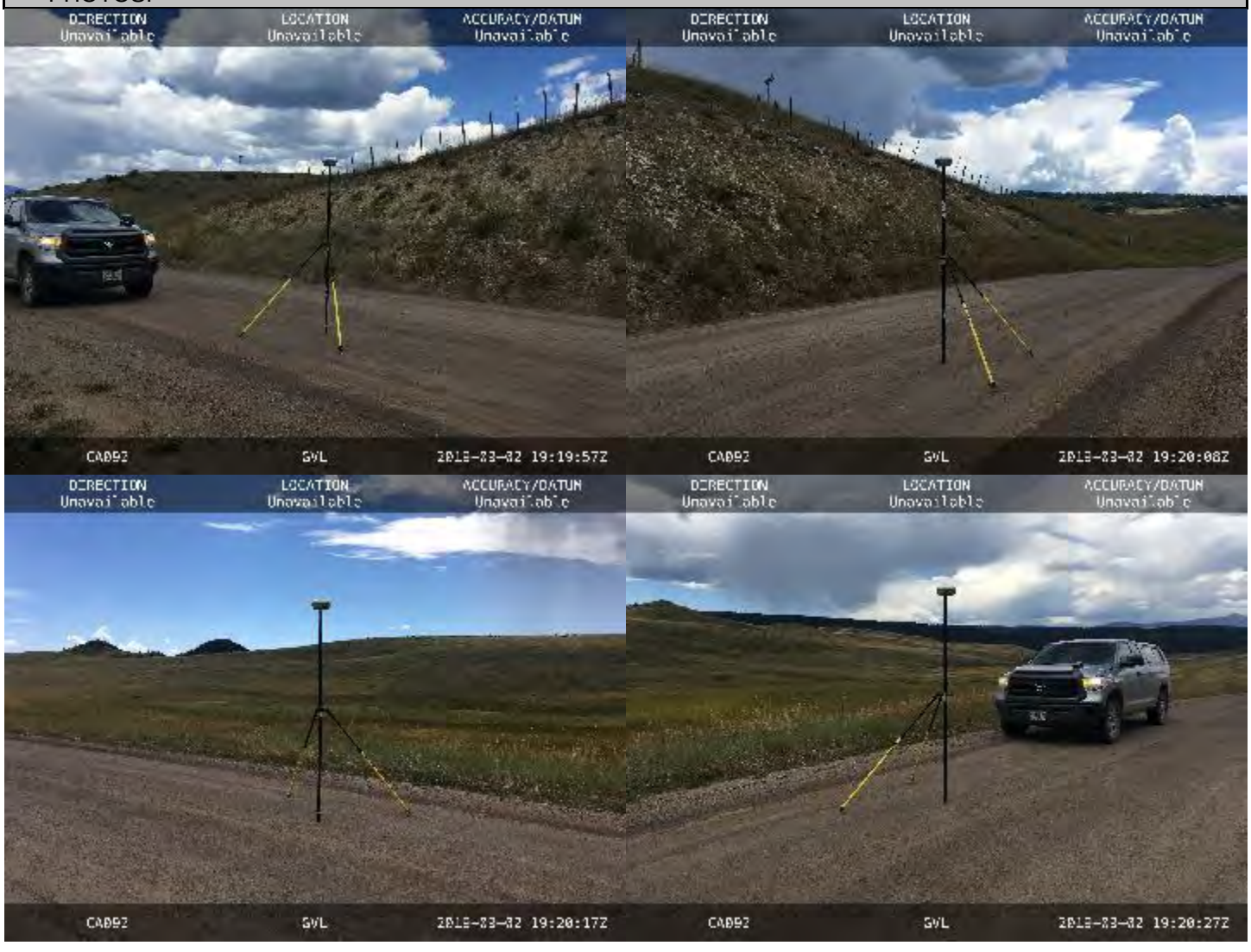
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1272286.79	2517903.08	7824.11

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA093
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hindsdale
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

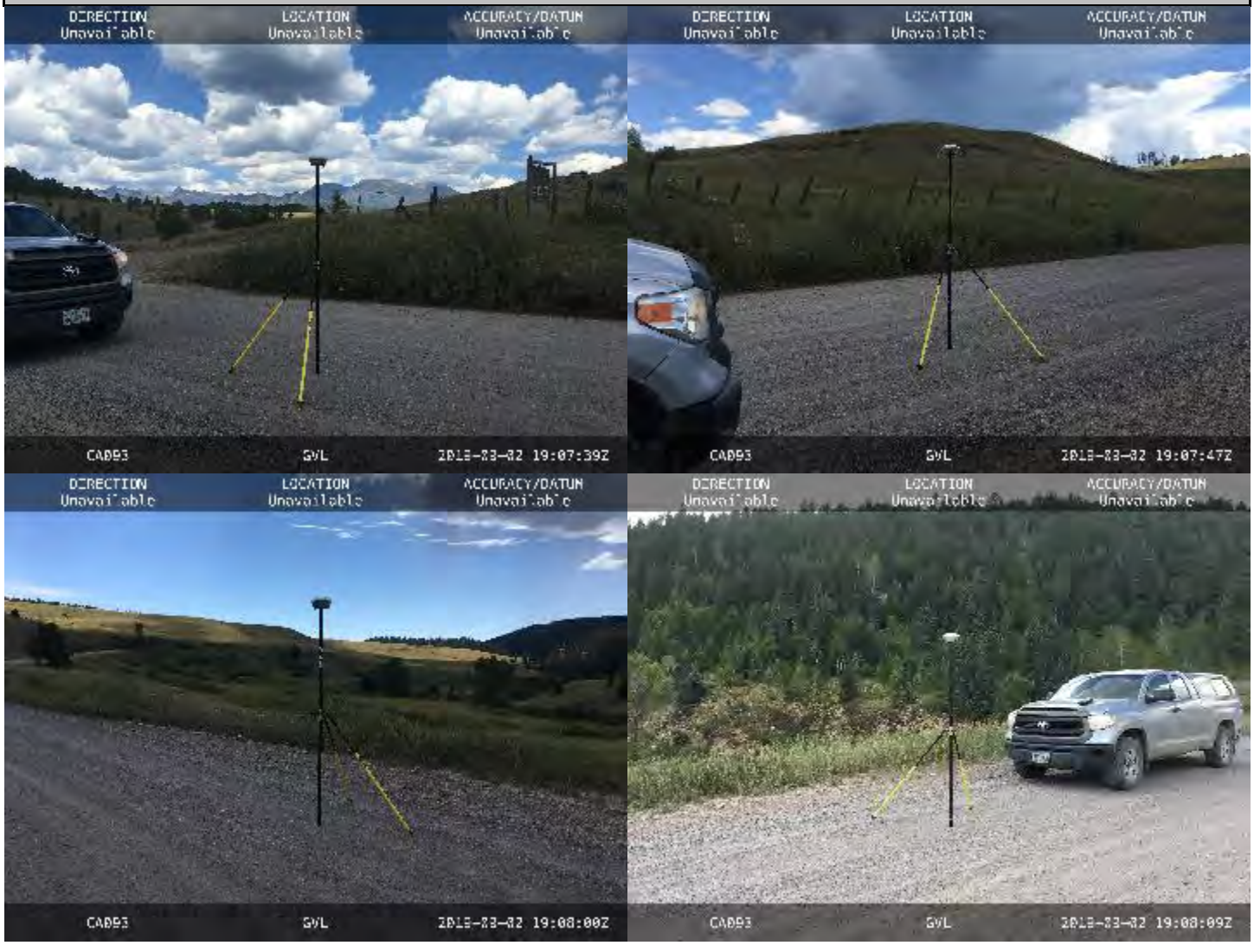
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1280953.61	2508335.87	7653.41

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA094
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Kline

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1204170.05	2239756.68	7221.23

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA095
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Point Lookout

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1245322.34	2153583.27	7849.12

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA096
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1199161.33	2028601.59	5732.93

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA097
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Secret Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1441369.61	2032142.42	7640.84

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA098
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1320175.86	2055664.78	6882.51

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA099
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bondad Hill

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1164270.16	2342290.82	6767.85

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/18/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA100
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Willow Spring

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1402715.34	2167080.11	8602.27

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA101
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1422911.12	2524594.02	9546.10

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA102
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1451900.26	2523109.73	10464.96

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTN

PHOTOS:

Point ID	CA103
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moqui Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149321.68	2117682.95	6313.46

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.8 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA104
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1226428.14	2593492.08	7812.88

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA105
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1249781.37	2316190.74	6560.38

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA106
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Handies Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

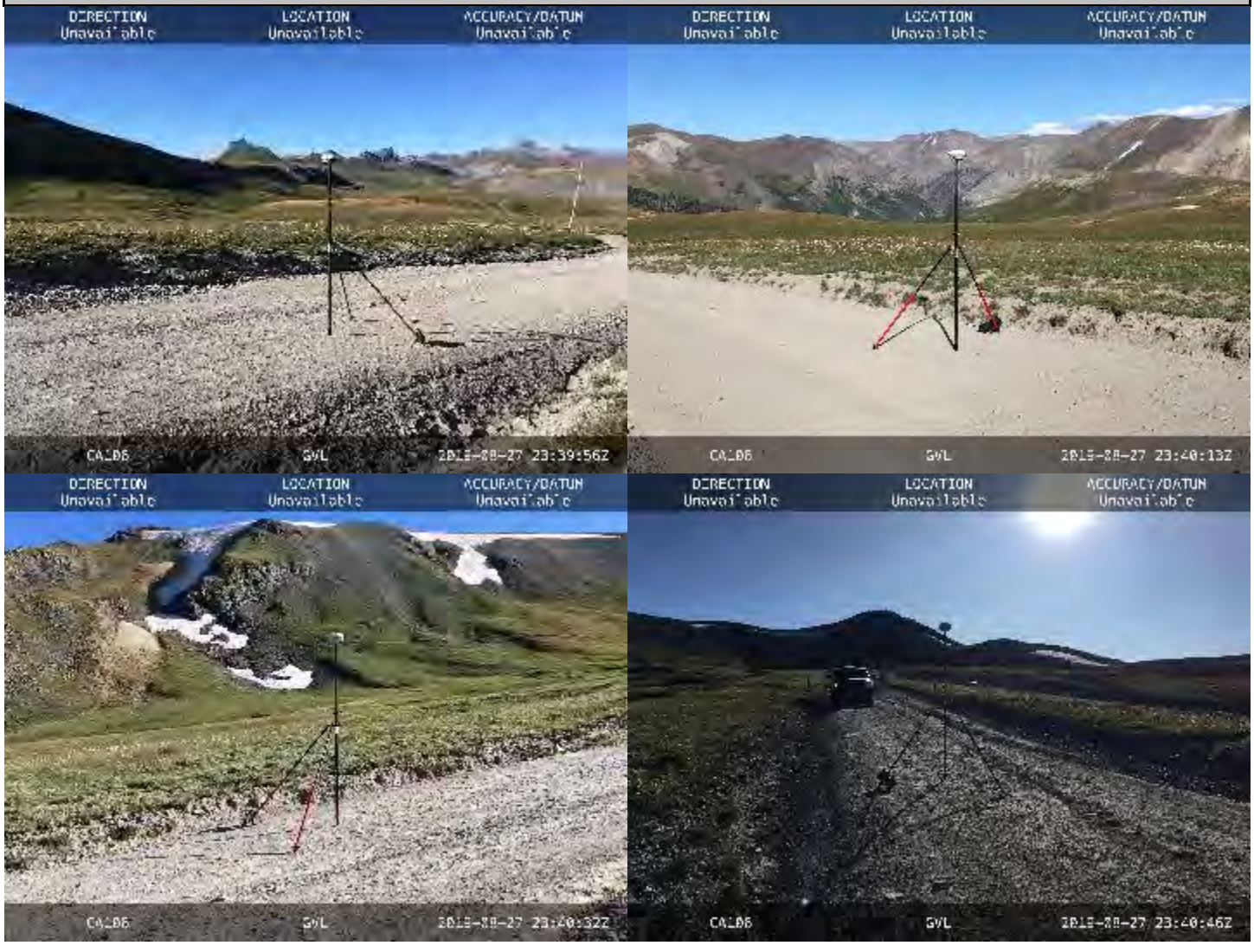
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1482415.88	2400302.14	12628.38

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA107
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1228631.92	2126491.67	8053.31

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA108
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1221964.76	2549037.50	7595.59

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA109
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Snowdon Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1394623.24	2360489.09	10814.29

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA110
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1484909.99	2503603.61	11354.79

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	CA111
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Kline

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1193965.96	2263224.50	7371.59

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA112
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Millwood

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1284997.91	2183326.05	7690.08

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA113
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

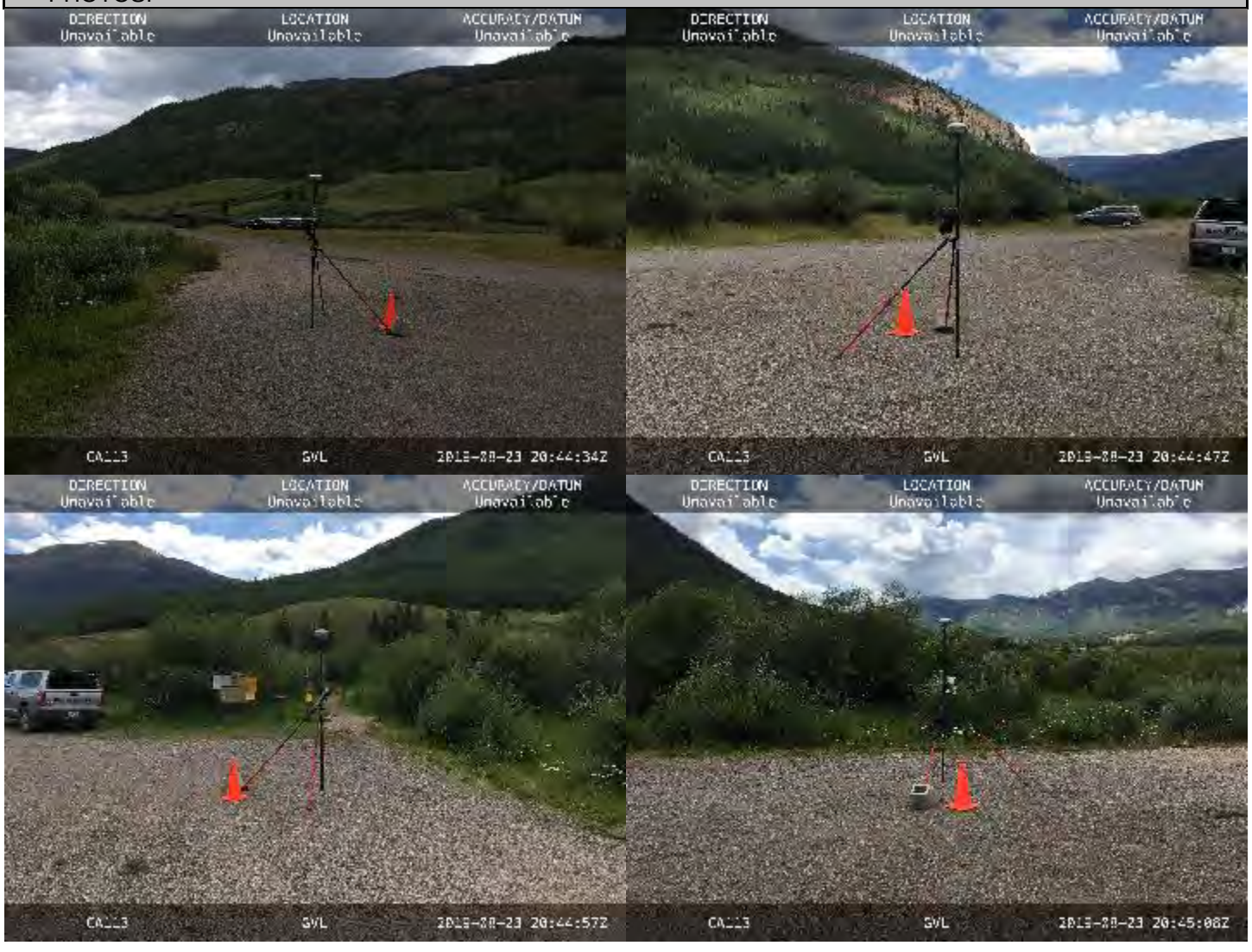
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1403260.54	2467299.53	9463.21

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA114
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Rico

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1385273.33	2267950.77	8773.47

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA115
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1422574.94	2502893.43	9850.81

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.03
RMSE Z	0.07
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA116
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Ruin Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1364908.37	1993343.73	6660.58

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA117
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

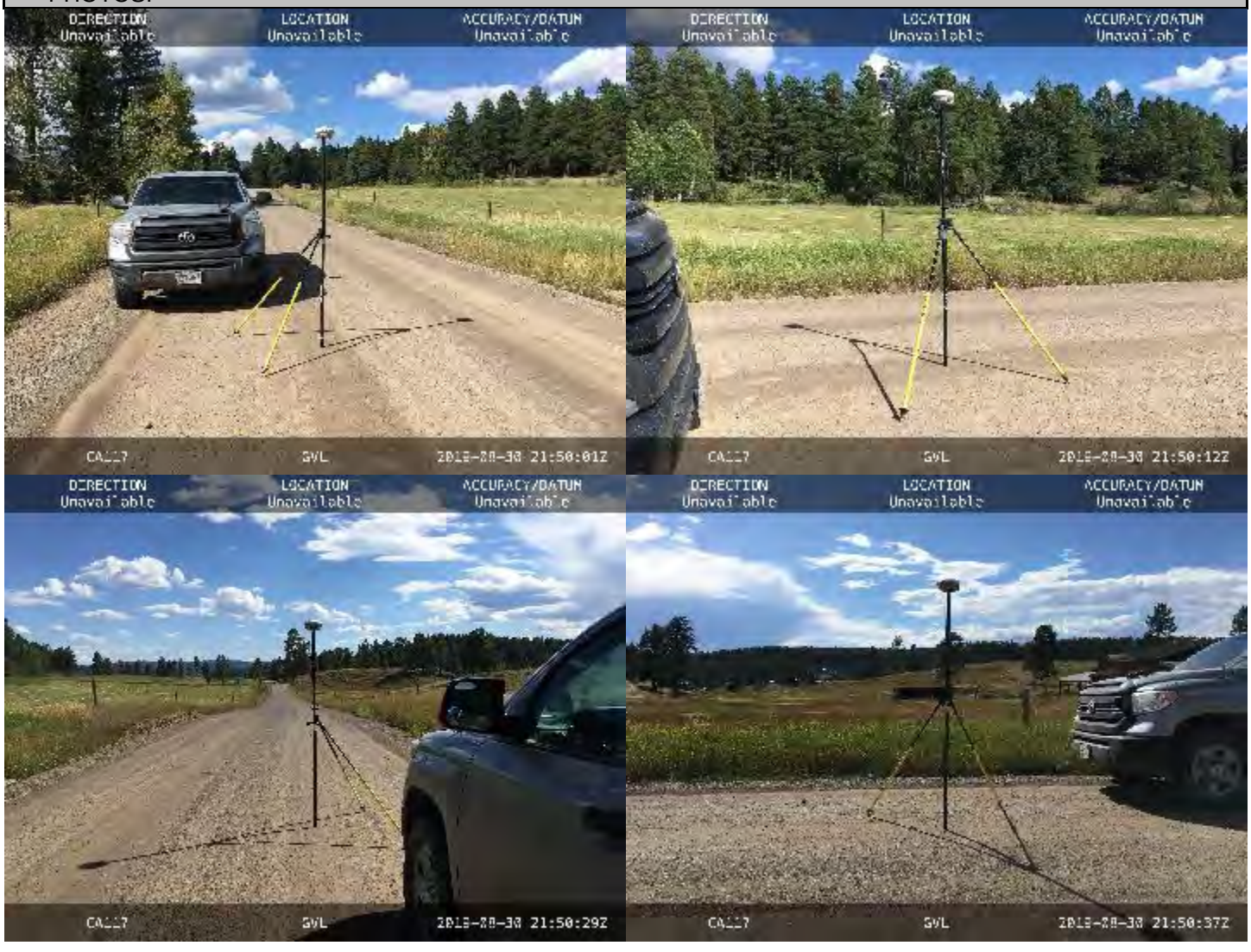
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1237830.57	2558044.01	7464.31

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	CA118
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Thompson Park

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1265943.11	2202049.46	7355.19

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA119
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

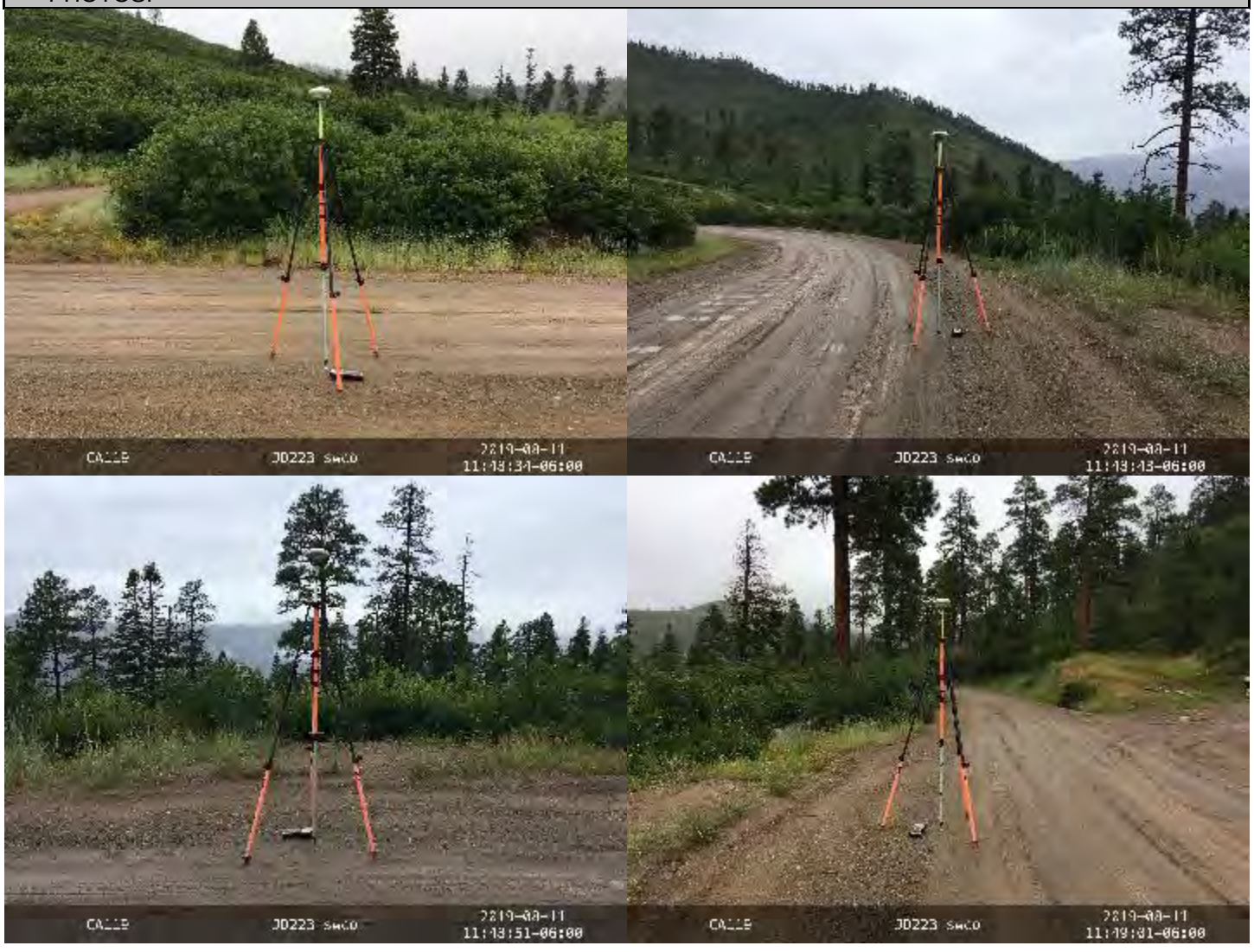
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1285292.15	2341399.60	8237.45

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/11/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:



Point ID	CA120
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1434426.64	2213585.76	10902.75

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/20/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA121
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chromo

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1137277.31	2611602.59	7339.29

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:

Point ID	CA122
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Narraguinnep Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

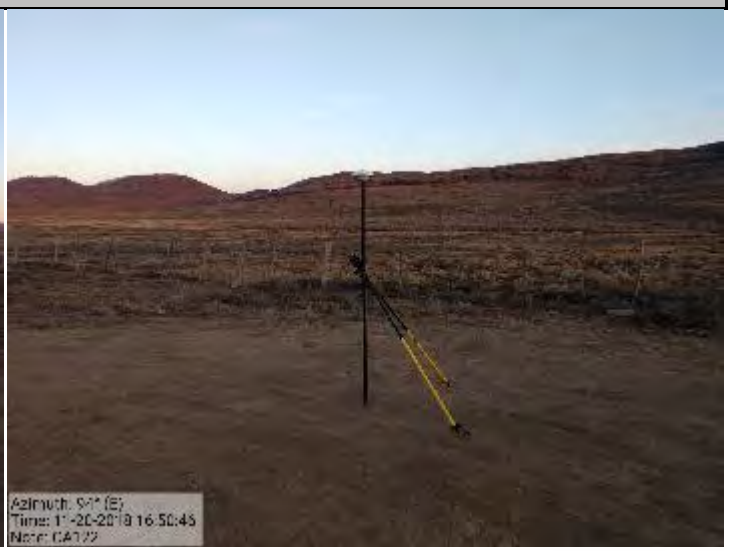
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1403400.79	2113624.68	8072.27

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	FastStatic

PHOTOS:



Point ID	CA123
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1137688.76	2518286.81	6352.66

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA124
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

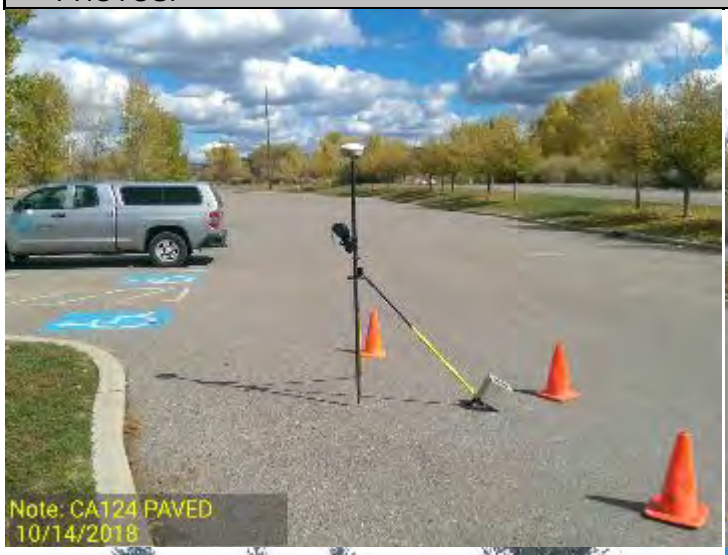
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1176431.01	2379217.74	6492.39

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	CA125
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores West

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1307407.16	2126604.78	6932.33

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.07
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	CA126
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Greasewood Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1138263.39	2158518.07	6670.74

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA127
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chimney Rock

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1212362.86	2458919.58	6887.28

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	FS

PHOTOS:

Point ID	CA128
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

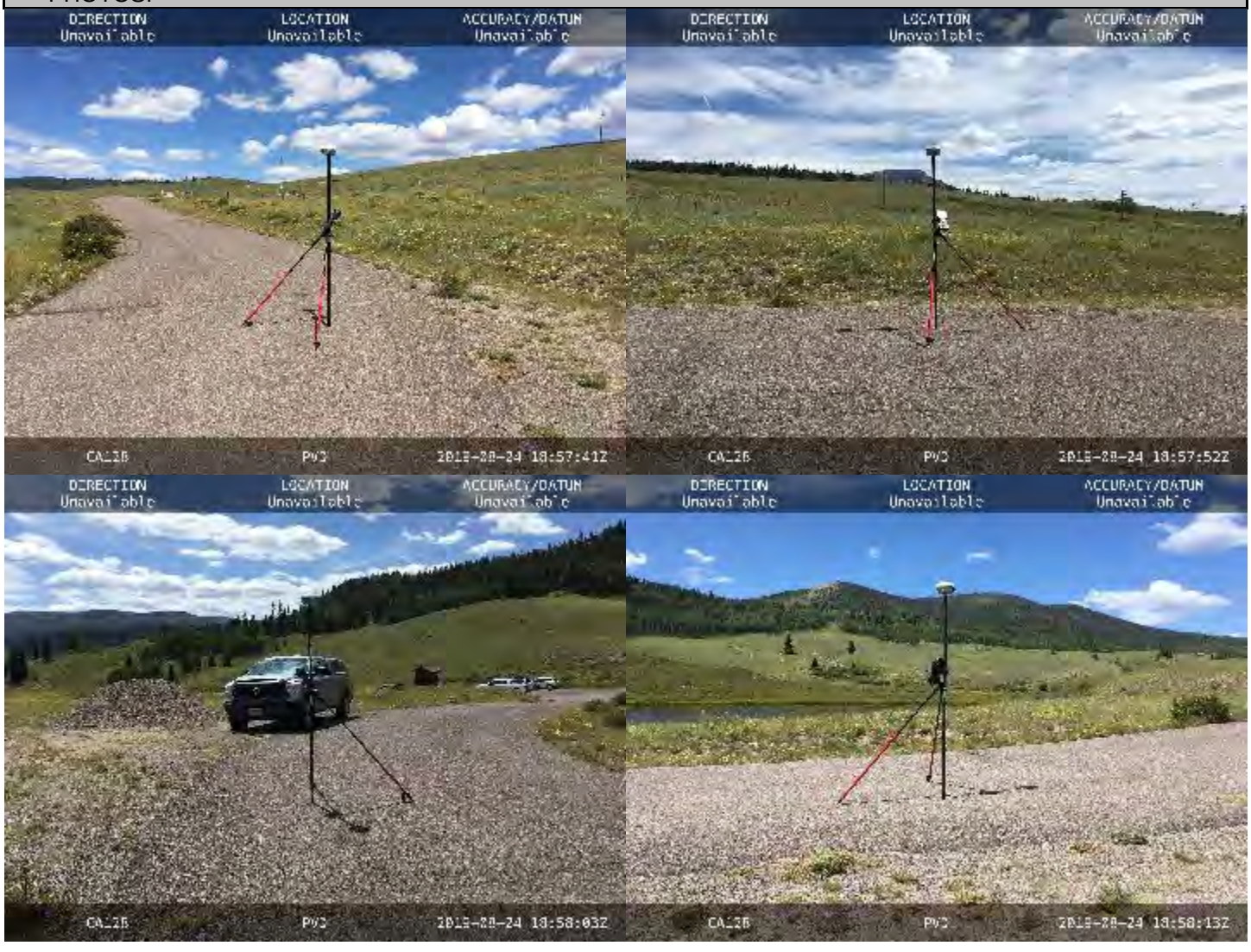
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1417103.54	2525328.00	9249.65

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	CA129
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Weminuche Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

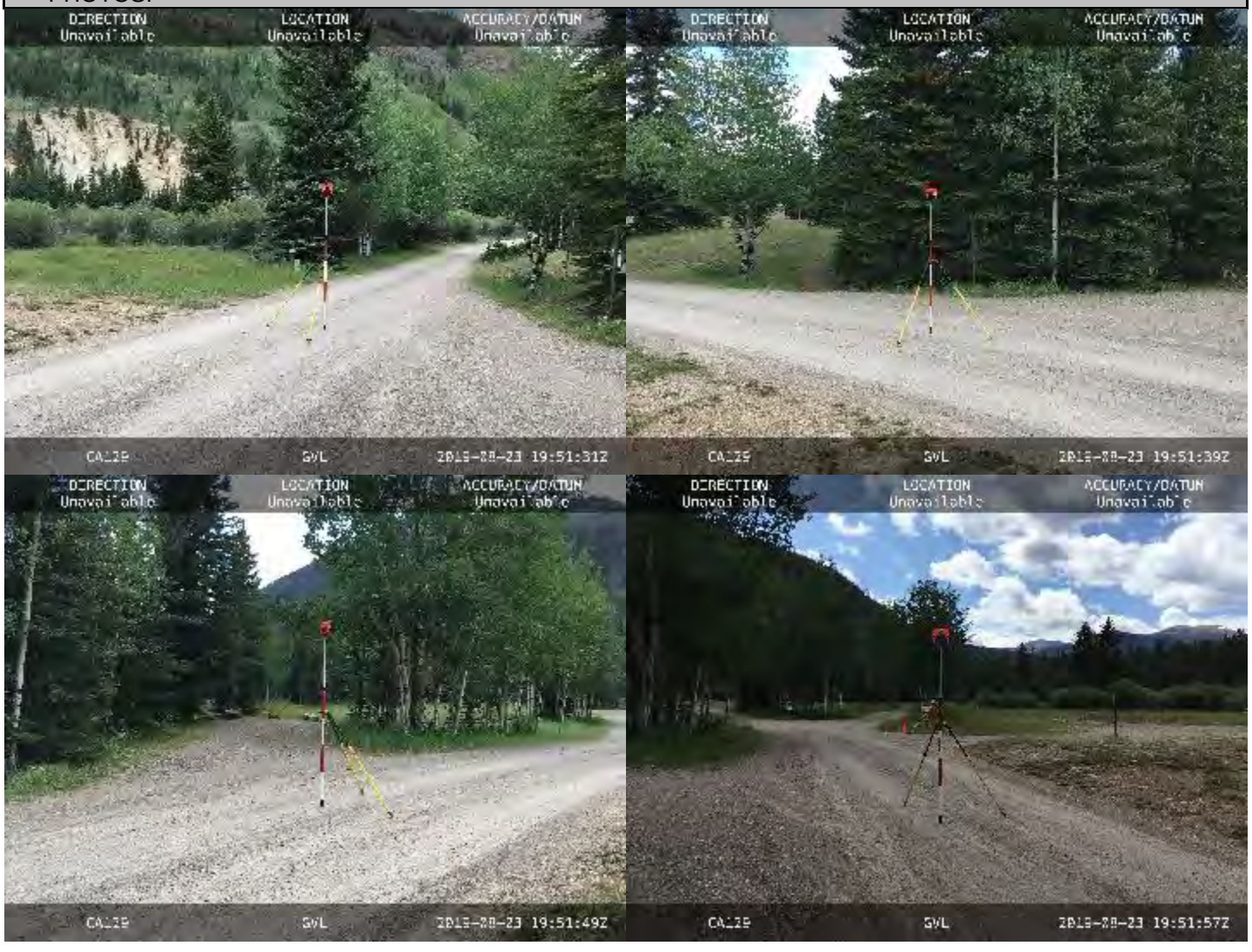
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1389539.43	2491378.14	9325.89

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.10
RMSE Z	0.06
GPS Method	TOTAL STATION

PHOTOS:



Point ID	CA130
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Willow Spring

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1383409.64	2139630.97	7603.37

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FastStatic

PHOTOS:

Point ID	CA131
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1160658.33	2087834.88	5339.83

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	FS

PHOTOS:

Point ID	CA132
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

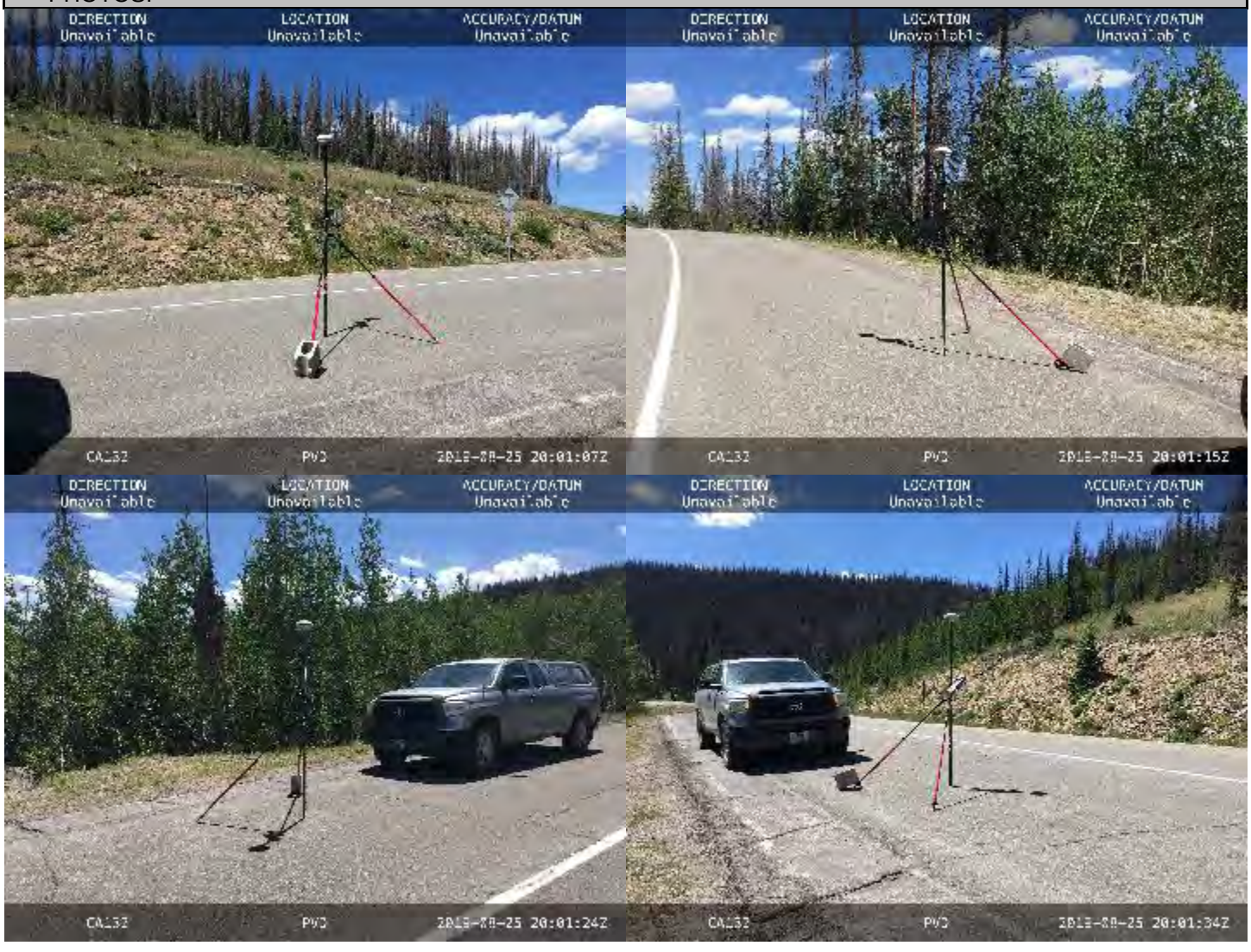
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1480837.84	2511182.66	11228.00

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA133
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Secret Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1414825.51	2052718.32	7638.88

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/22/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA134
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	South Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1447066.01	2147850.80	7093.80

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FastStatic

PHOTOS:

Point ID	CA135
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Allison

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1166875.81	2450403.88	6240.35

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FS

PHOTOS:

Point ID	CA136
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

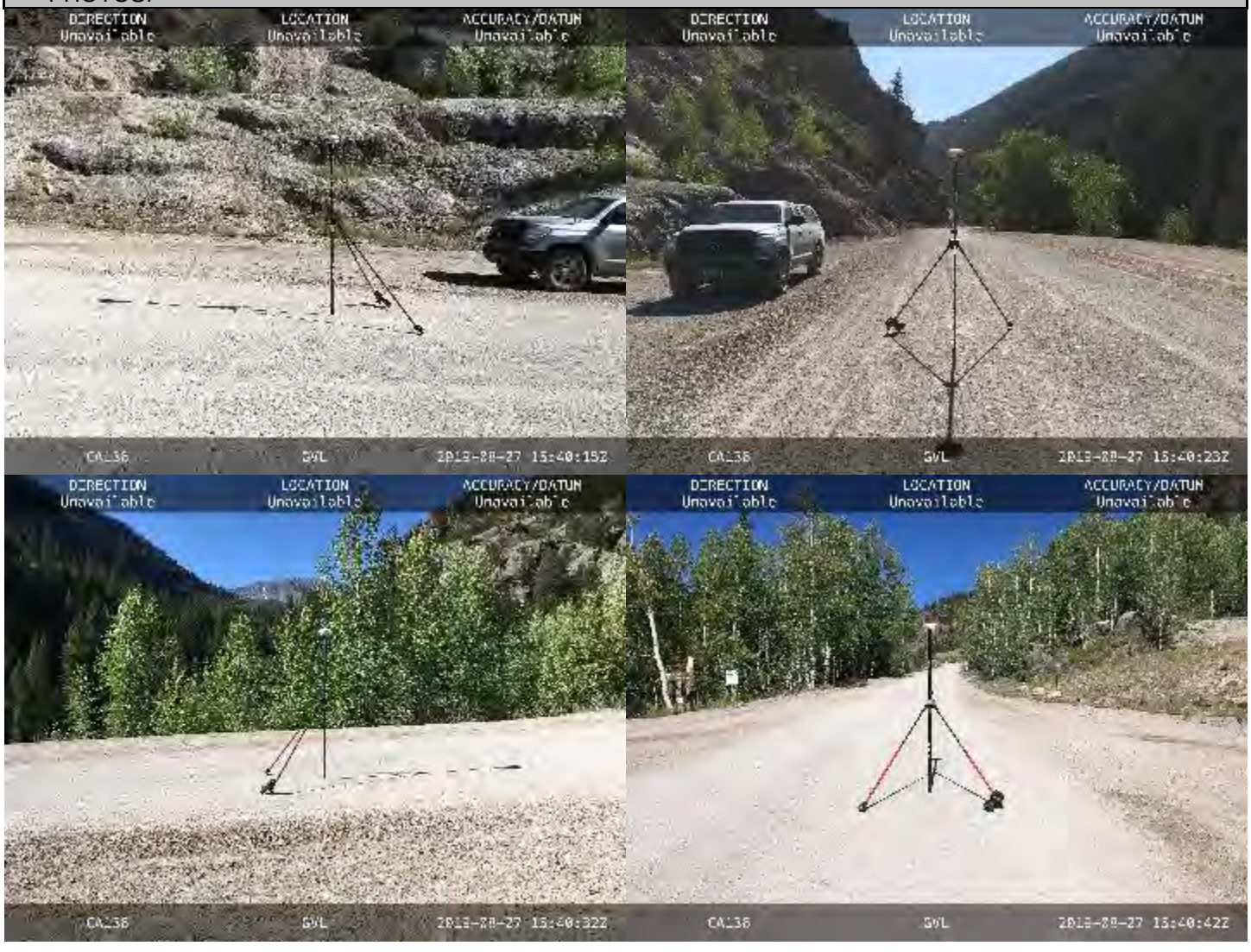
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1497947.06	2464749.50	8977.97

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA137
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1256067.93	2549849.08	8218.33

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.07
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA138
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Basin Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1211976.89	2279351.82	7118.83

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA139
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chimney Rock

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1189908.85	2477212.35	6567.88

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA140
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1144599.38	2221011.78	6330.34

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.07
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA141
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

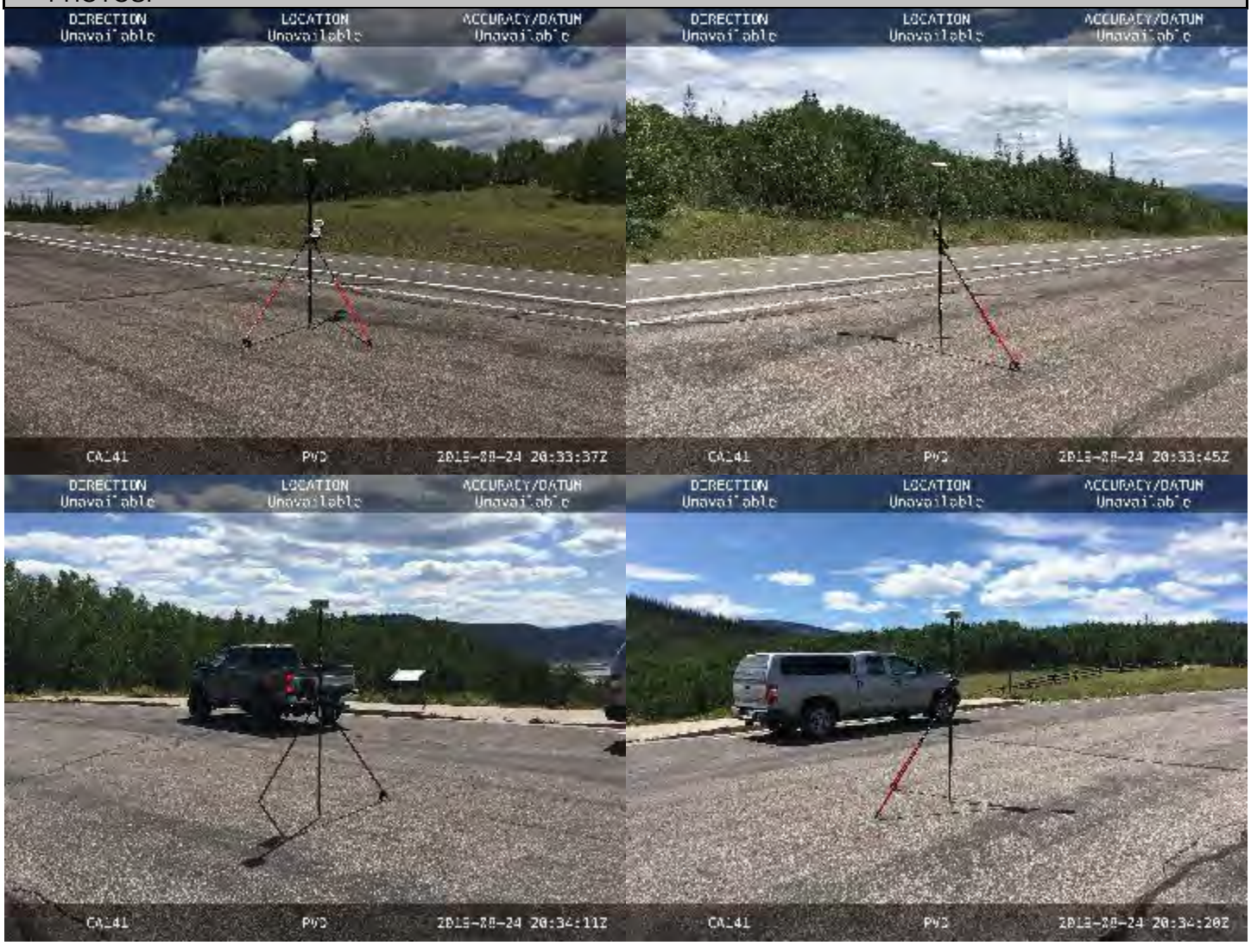
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1431829.91	2518178.09	10258.10

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA142
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Rampart Hills

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1286442.84	2219417.23	9253.18

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA143
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Orphan Butte

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

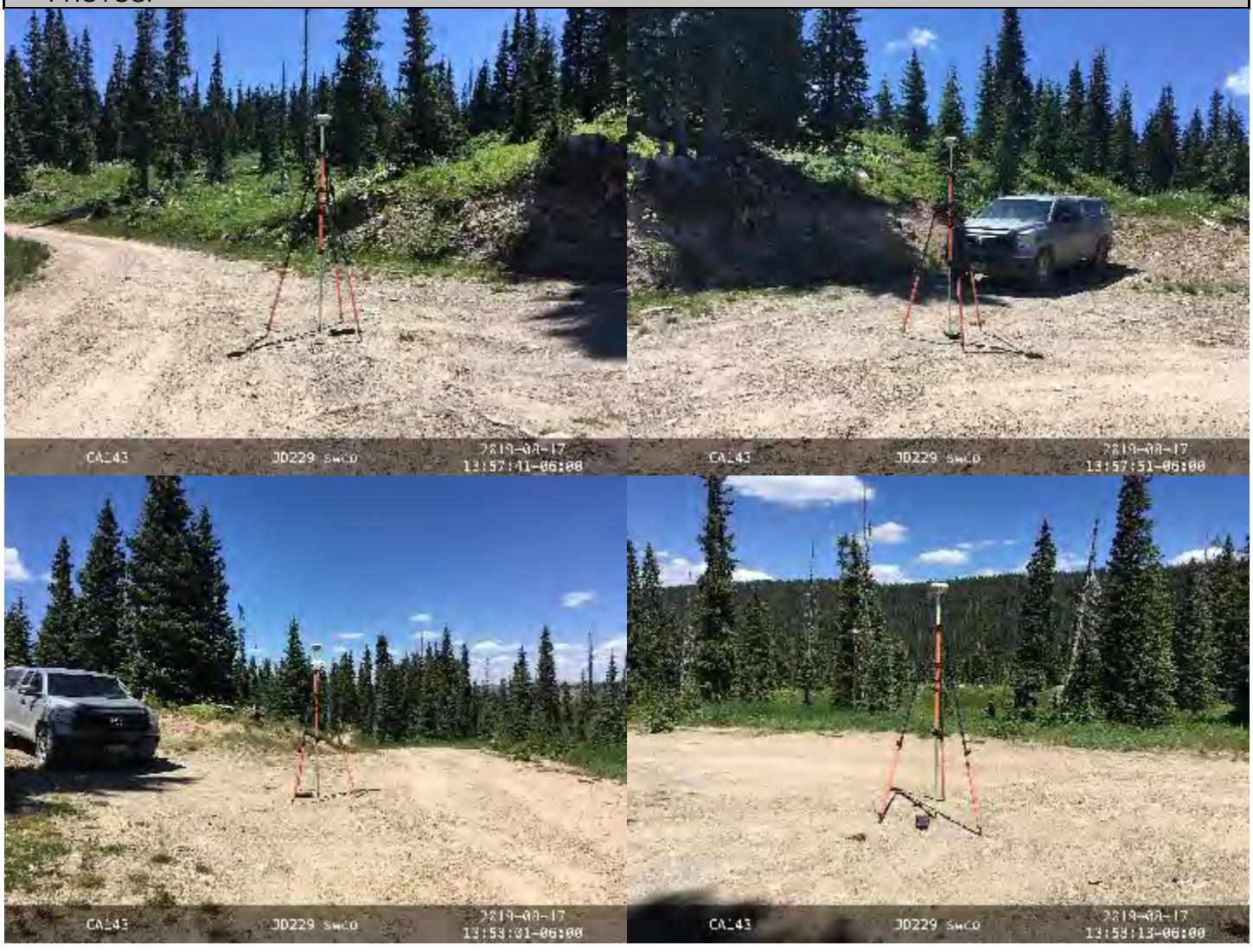
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1318117.74	2262223.68	11185.42

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.04
RMSE Z	0.12
GPS Method	Fast Static

PHOTOS:



Point ID	CA144
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Boggy Draw

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1326966.83	2140414.70	7522.11

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/18/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FastStatic

PHOTOS:

Point ID	CA145
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chromo

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1155293.70	2633984.16	9399.48

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	Fast Static

PHOTOS:

Point ID	CA146
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Doe Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1394574.83	2063168.95	7305.11

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA147
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1401868.89	2510957.55	9302.15

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.04
RMSE Z	0.08
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA148
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chromo

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149499.32	2612655.68	7598.76

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	Fast Static

PHOTOS:

Point ID	CA149
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SE

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1159299.85	2016463.15	5012.06

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA150
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chama Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

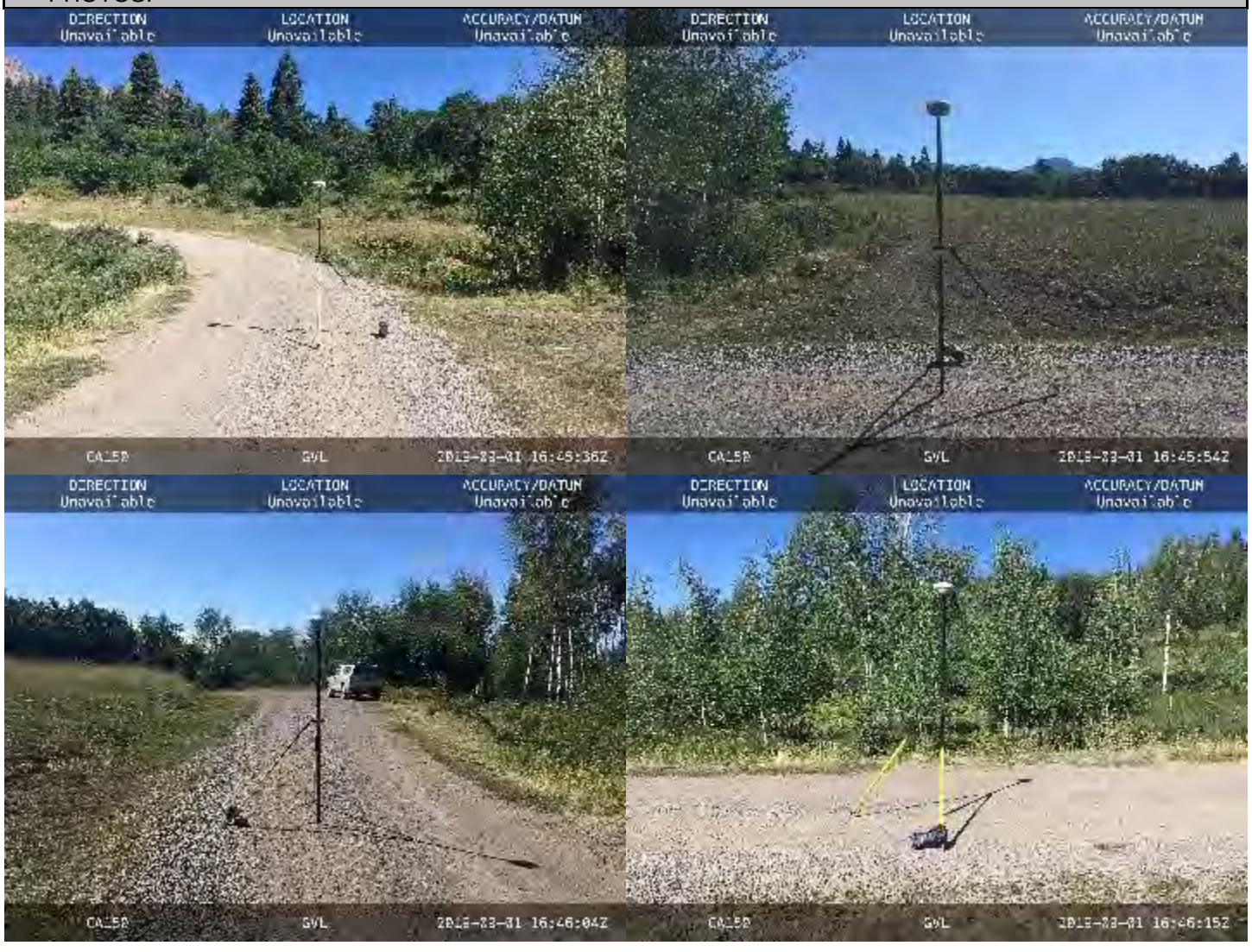
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1150126.74	2644169.18	8920.44

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.05
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	CA151
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash West

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

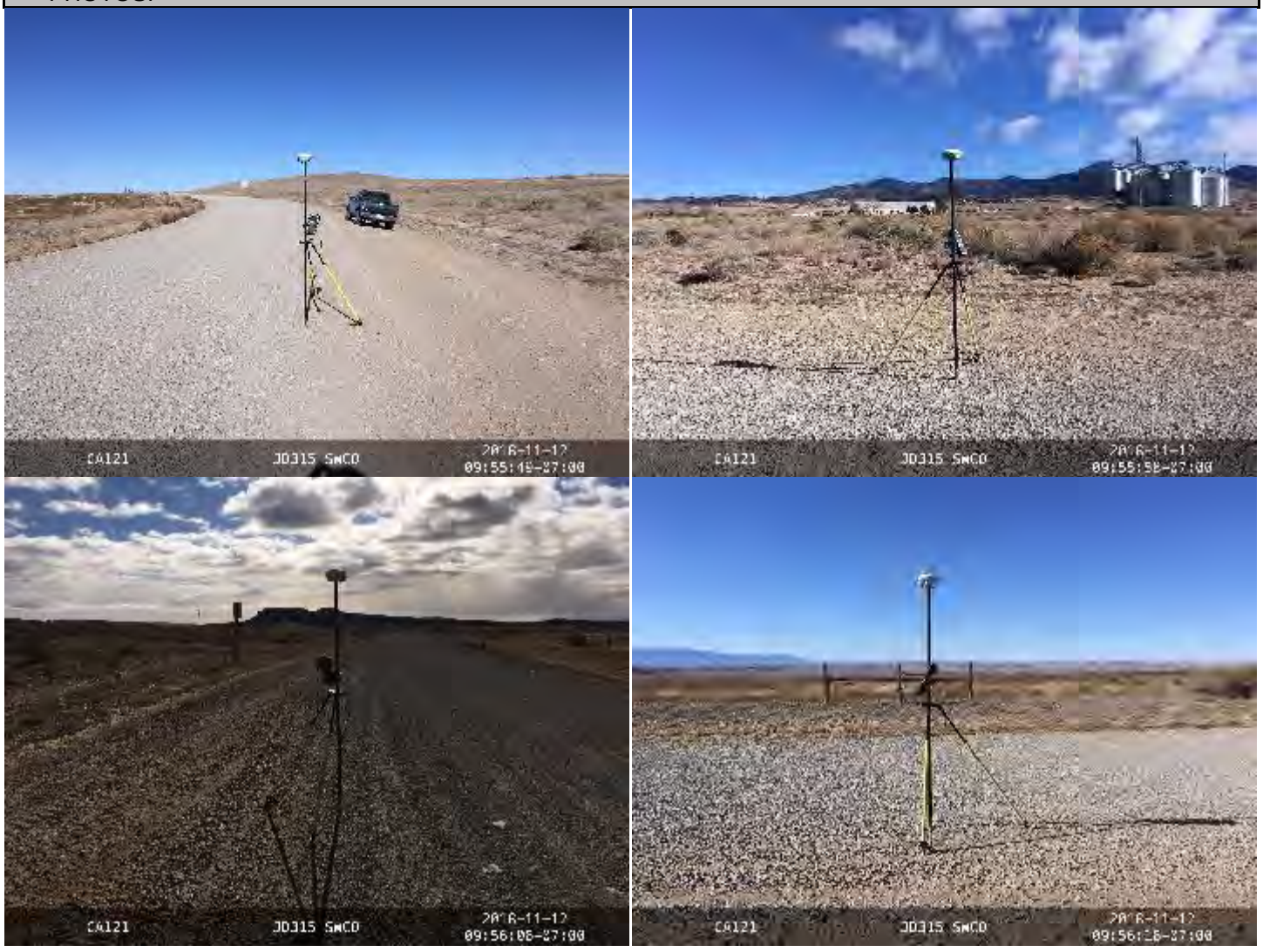
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1204952.06	2012583.14	5555.02

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	CA152
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1332487.68	2029712.11	6722.11

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA153
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

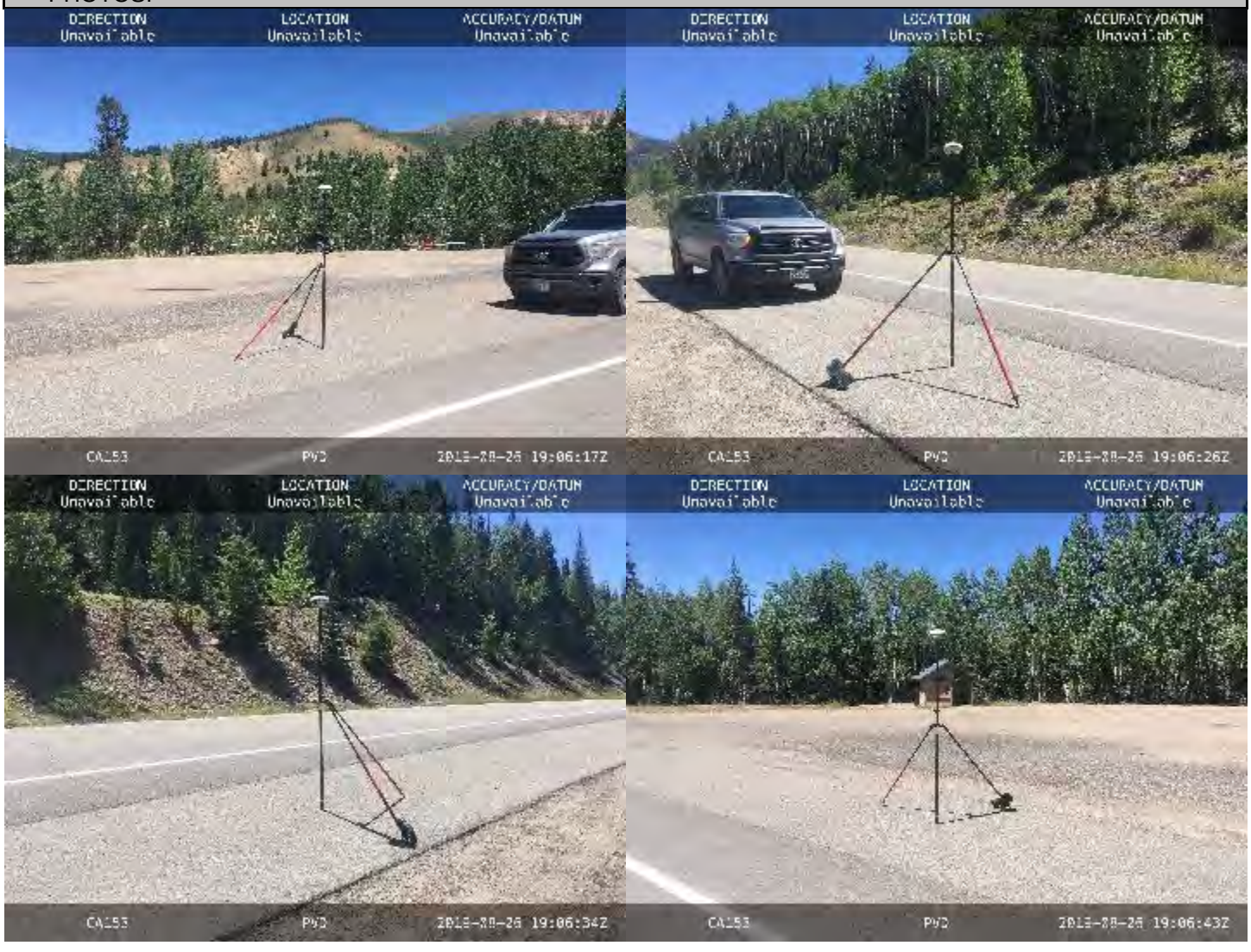
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1485234.07	2491801.95	10093.50

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTN

PHOTOS:



Point ID	CA154
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Engineer Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1383599.95	2341329.50	10627.48

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.995M

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.05
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	CA155
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1283690.13	2325287.96	6682.93

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/05/2019
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTN

PHOTOS:

Point ID	CA156
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mud Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1234726.51	2079588.52	5966.87

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA157
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

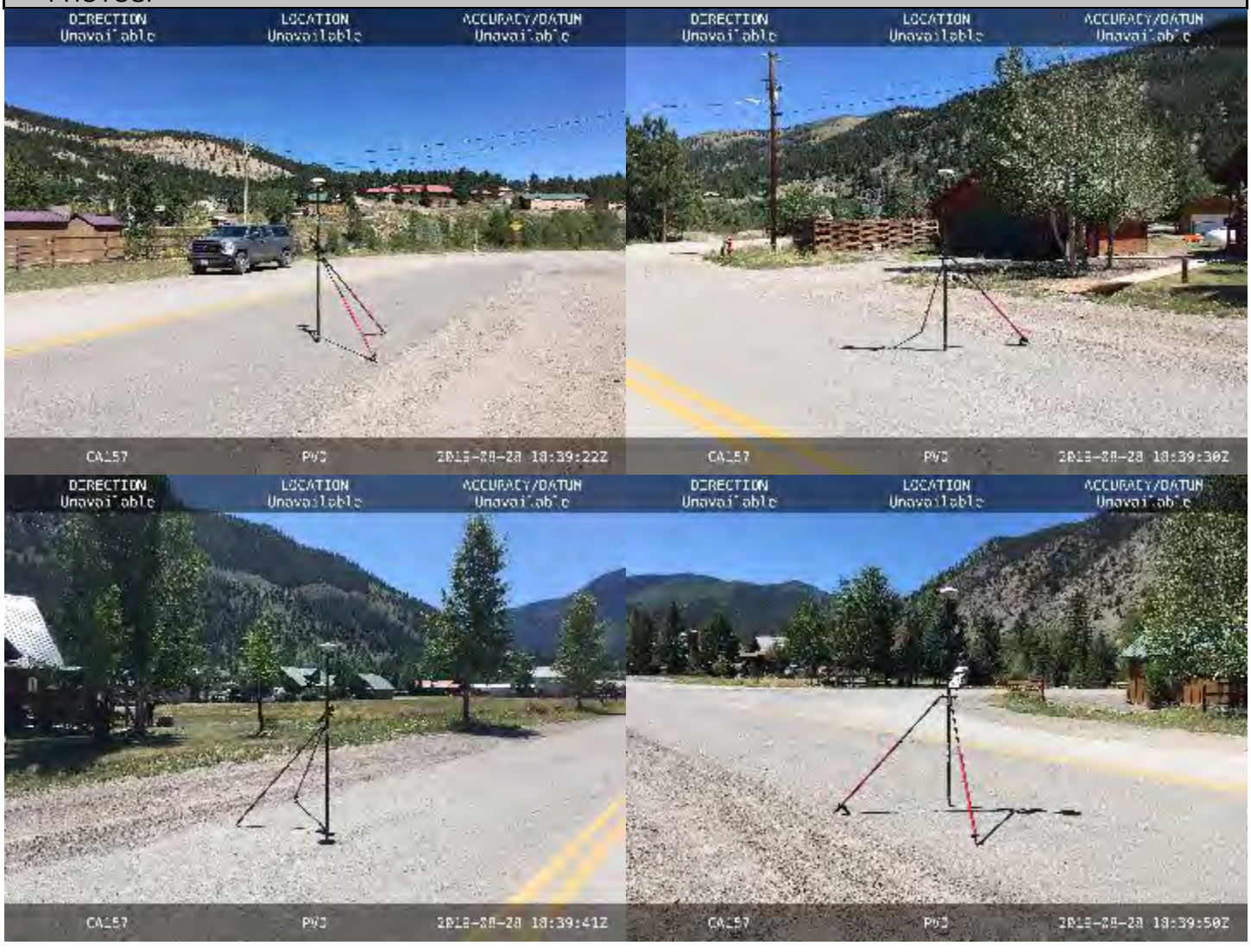
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1503139.64	2479005.78	8659.31

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA158
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1424126.09	2243420.82	9885.17

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.01
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA159
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Rampart Hills

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1309439.36	2212470.68	9008.28

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/12/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA160
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	La Plata

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1293734.34	2270558.20	11408.66

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.995m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.02
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	CA161
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chama Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1141477.28	2647813.05	7868.32

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	Fast Static

PHOTOS:

Point ID	CA162
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

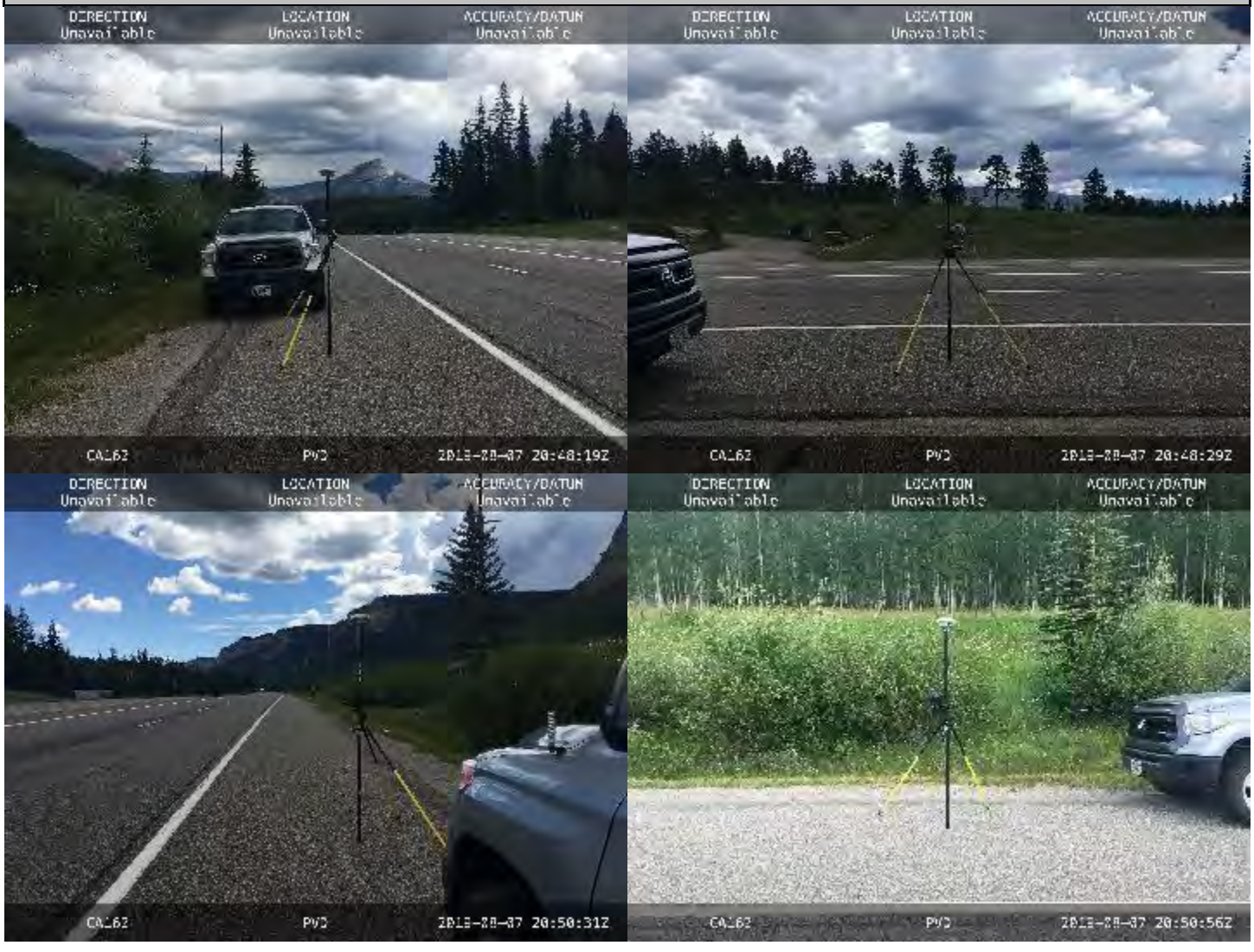
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1351289.53	2329378.73	8889.28

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA162B
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1344654.59	2317950.73	10564.95

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	CA163
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1303256.61	2498334.00	8211.65

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA164
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1353305.70	2025197.53	6825.81

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA165
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1255051.59	2516963.73	8000.11

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	FAST STATIC

PHOTOS:

Point ID	CA166
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1158266.85	2588897.29	7458.84

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA167
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1475209.15	2480412.30	9022.64

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA168
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1260971.99	2099722.35	6141.49

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA169
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

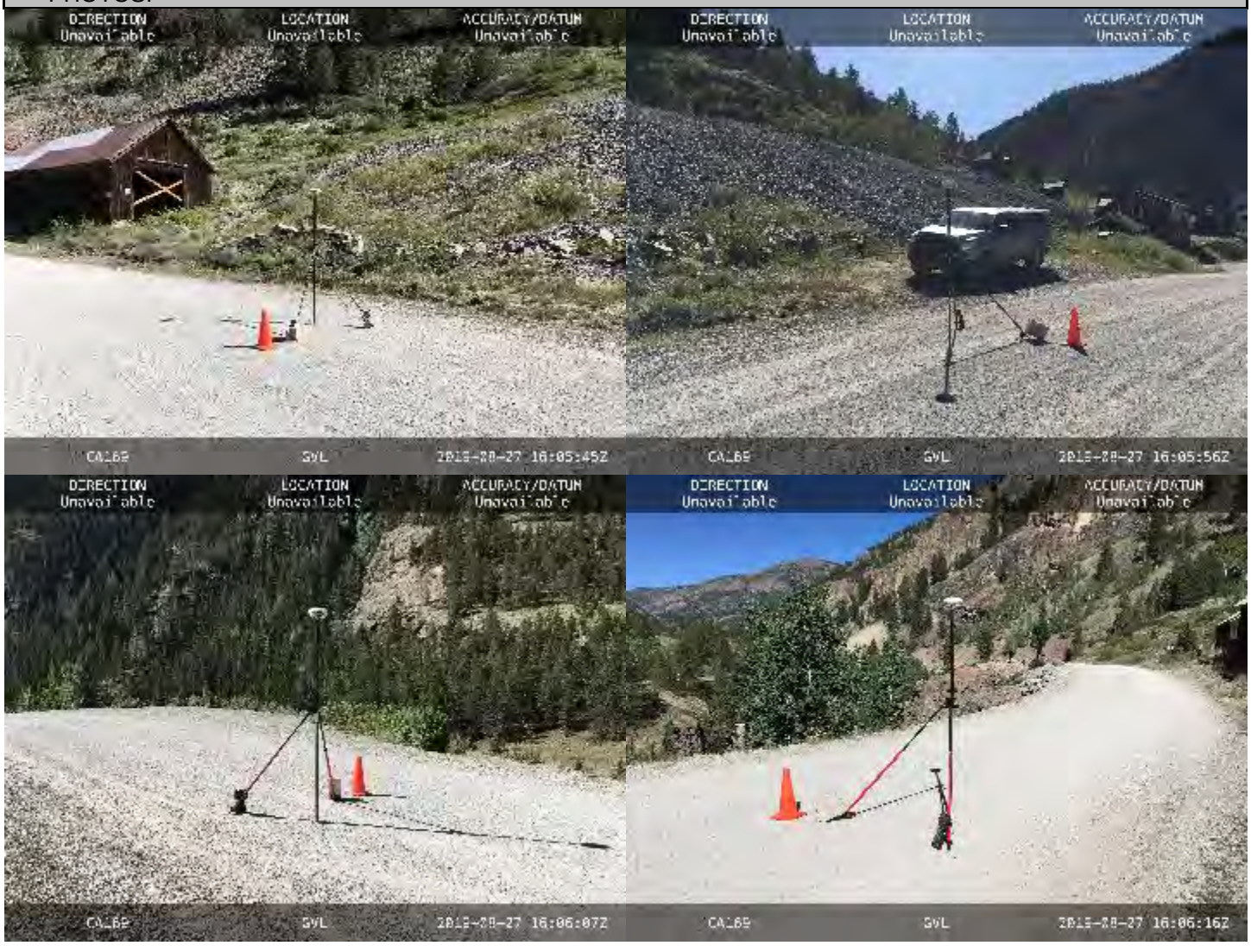
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1498516.03	2459147.37	9195.54

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA170
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Carracas

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1128793.13	2486415.67	6194.68

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA171
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mud Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1250419.62	2081418.95	5792.35

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA172
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

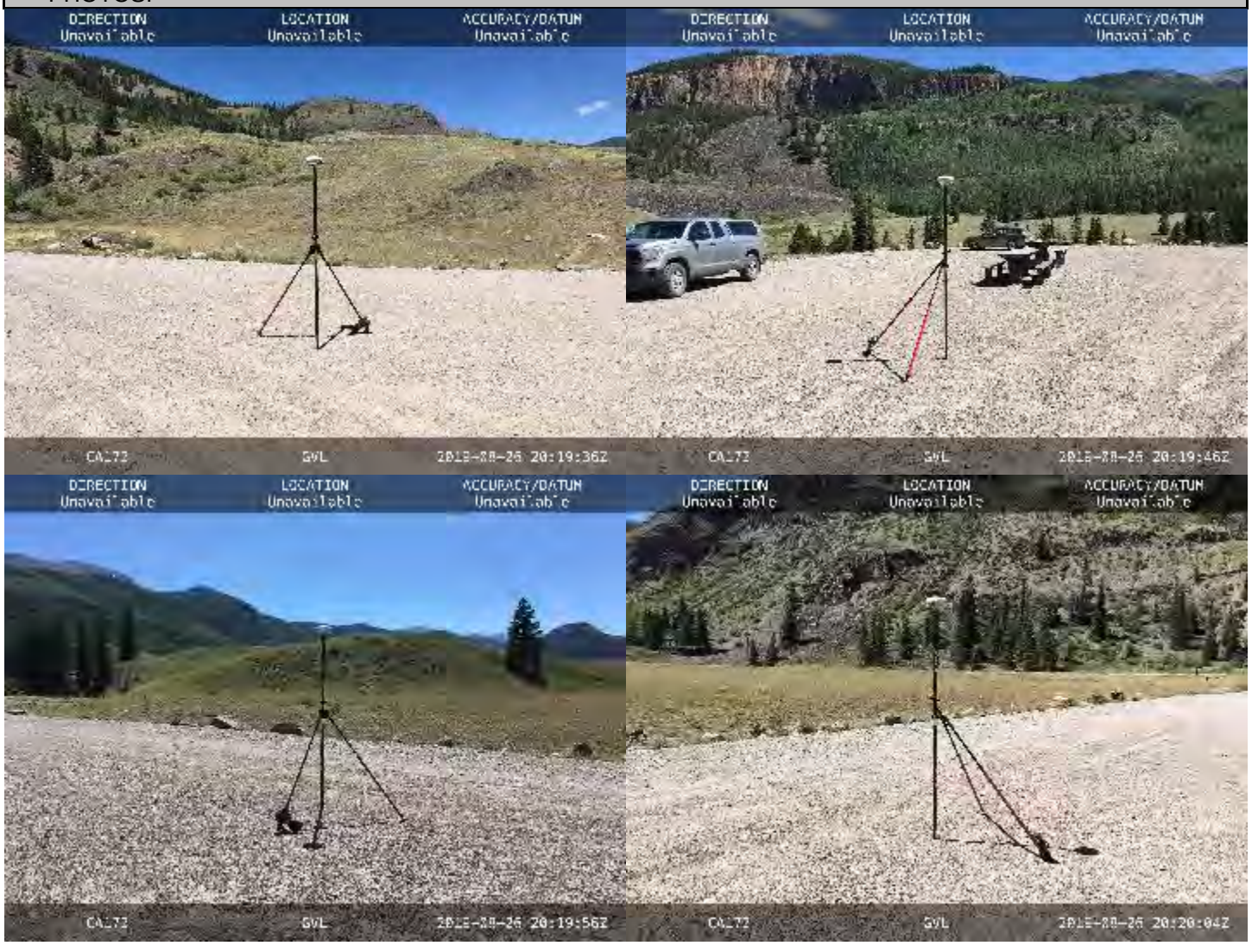
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1467746.45	2476765.77	9124.45

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA173
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Red Horse Gulch

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1167720.07	2173817.23	6799.65

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA174
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

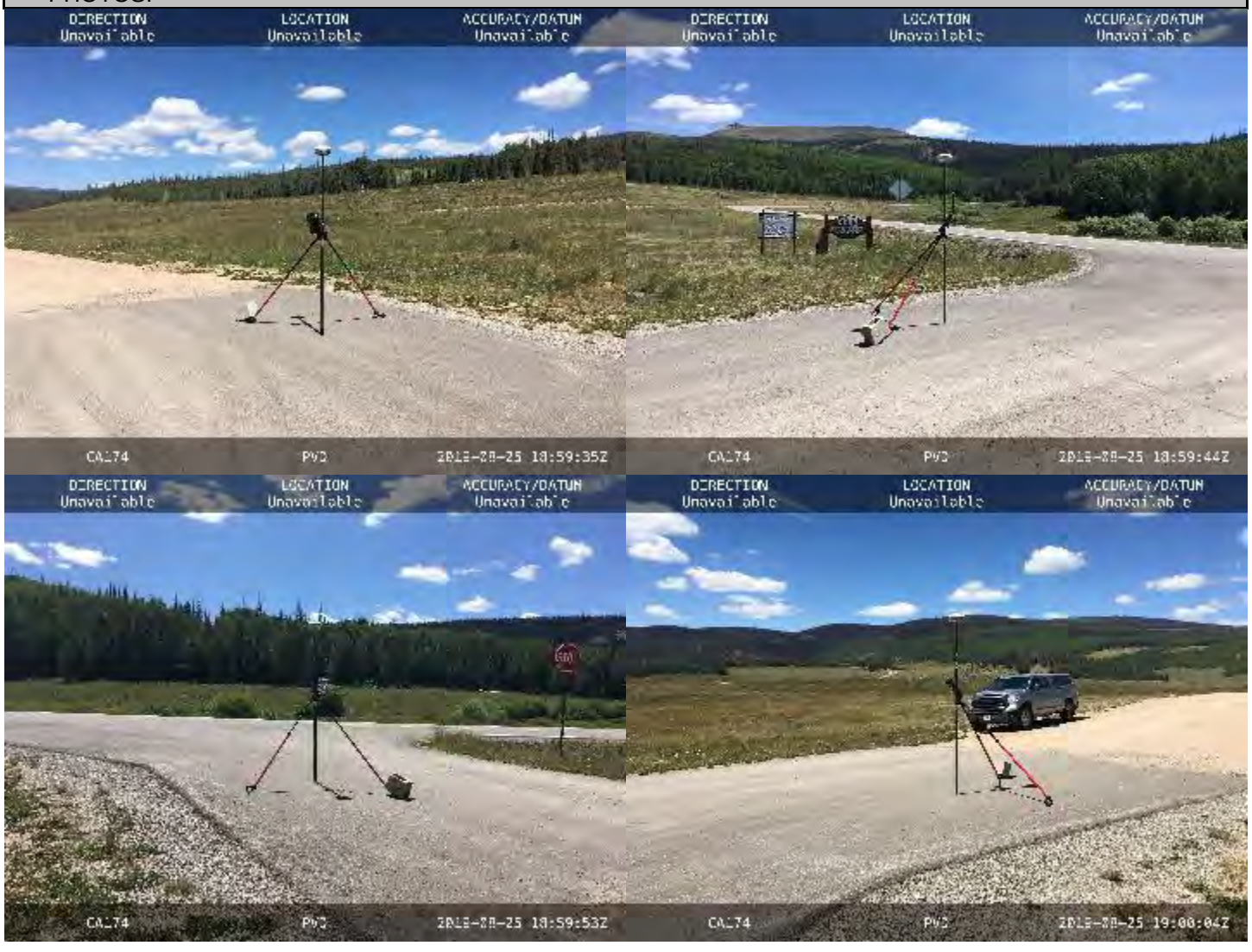
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1473232.57	2520017.81	10498.92

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTN

PHOTOS:



Point ID	CA175
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1432254.99	2497733.49	11394.53

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	CA176
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Trail Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1198025.70	2192306.71	6999.48

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA177
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Saddle Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

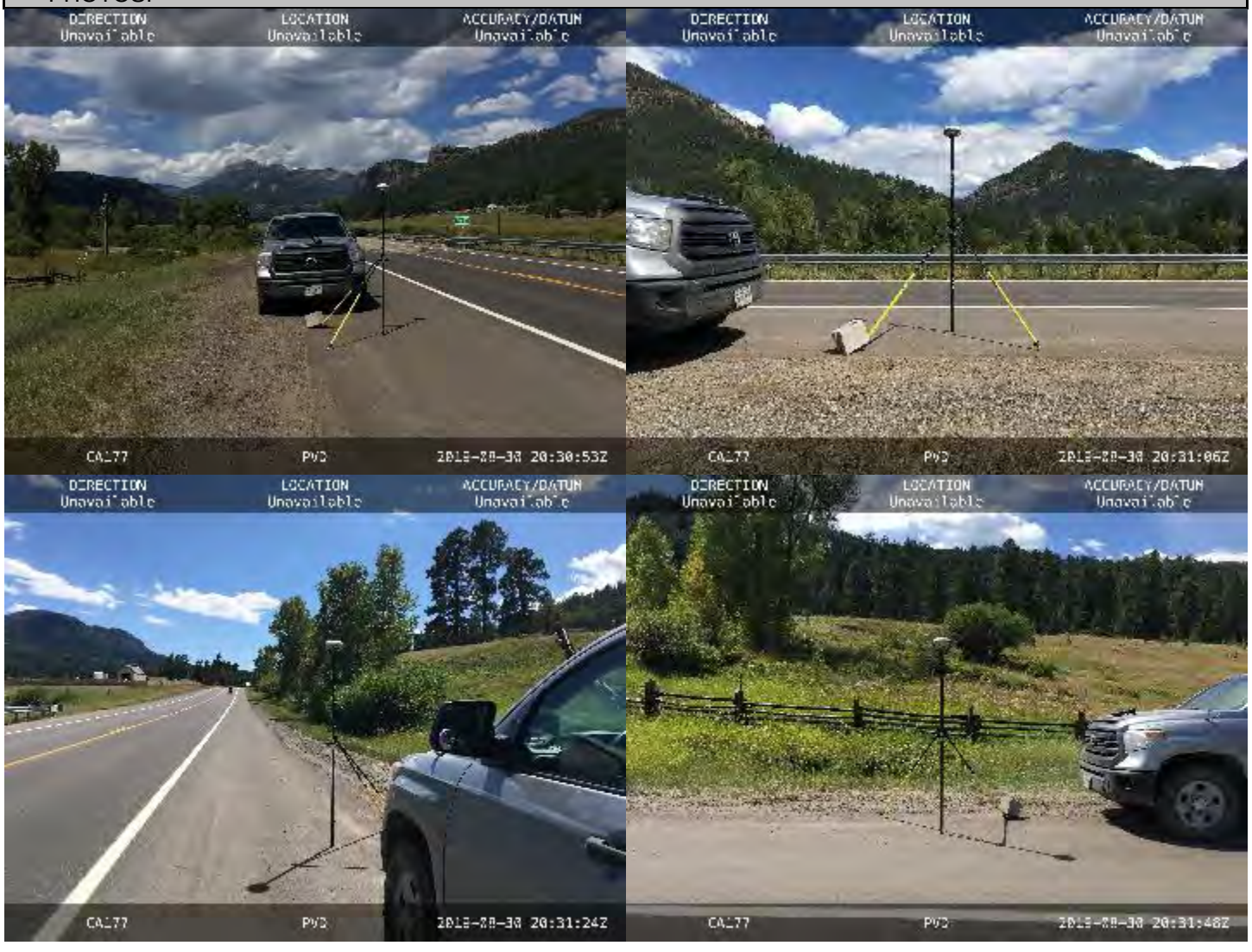
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1261918.53	2593374.77	7639.39

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	CA178
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash West

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1217136.82	1994741.94	5363.50

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA179
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Egnar

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1460455.88	2007418.00	7098.40

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA180
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

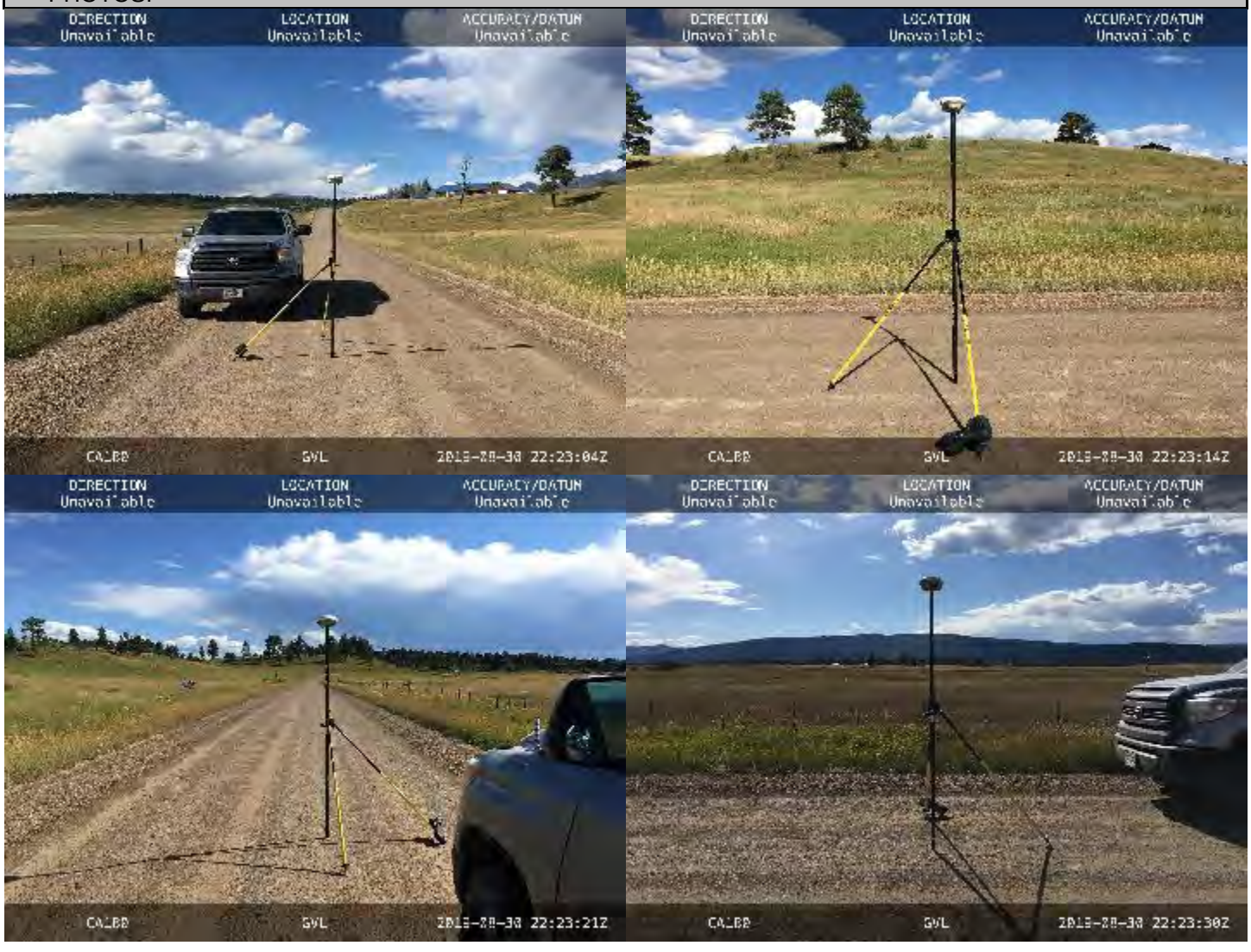
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1249583.77	2522666.96	8015.55

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	CA181
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1178601.66	2312736.55	6510.19

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA182
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Nipple Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1382925.09	2177236.20	8065.28

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	FastStatic

PHOTOS:

Point ID	CA183
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Redcloud Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

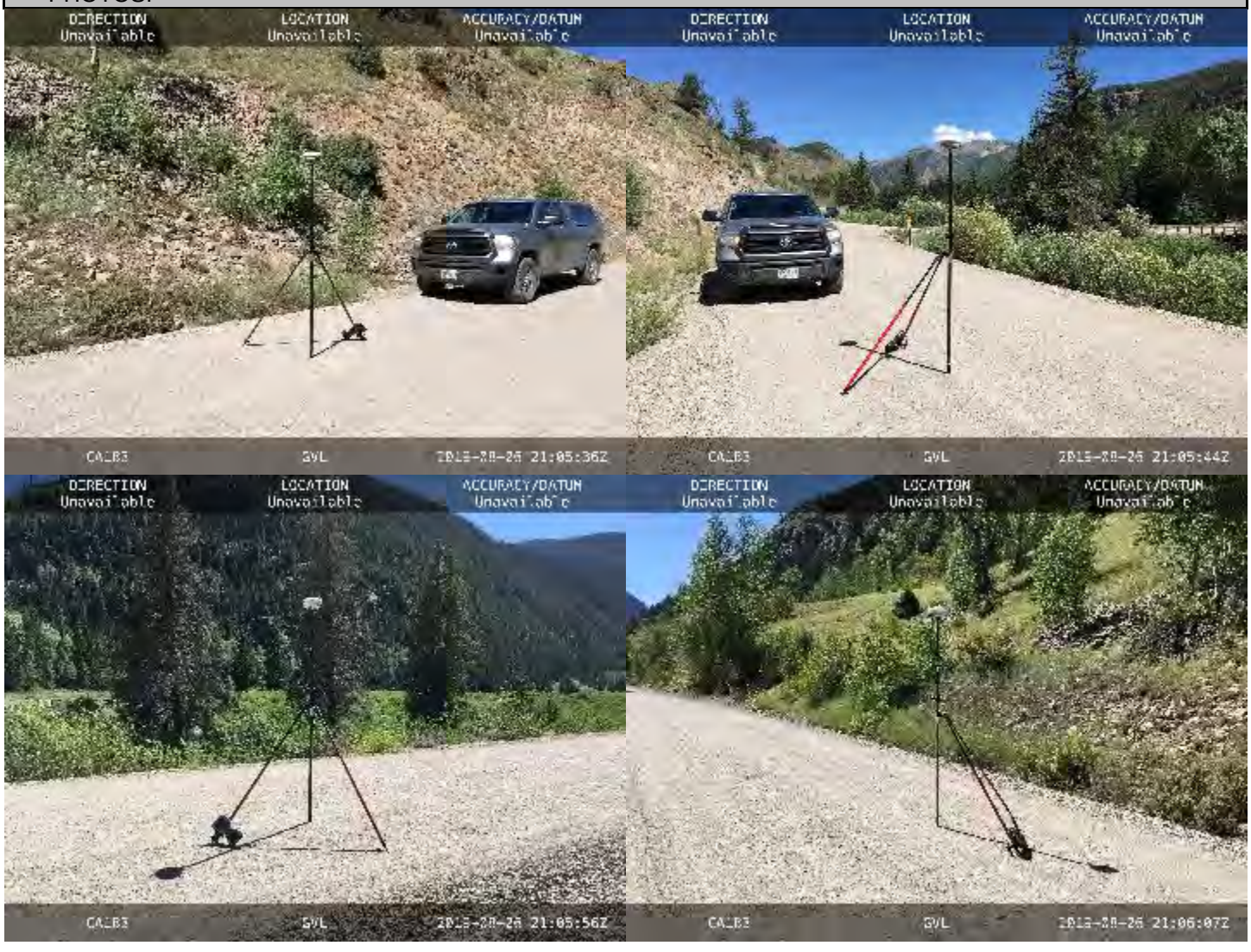
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1457279.80	2453810.99	9456.34

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA184
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Point Lookout

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1250982.82	2151822.27	7525.42

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.04
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA185
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Vallecito Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

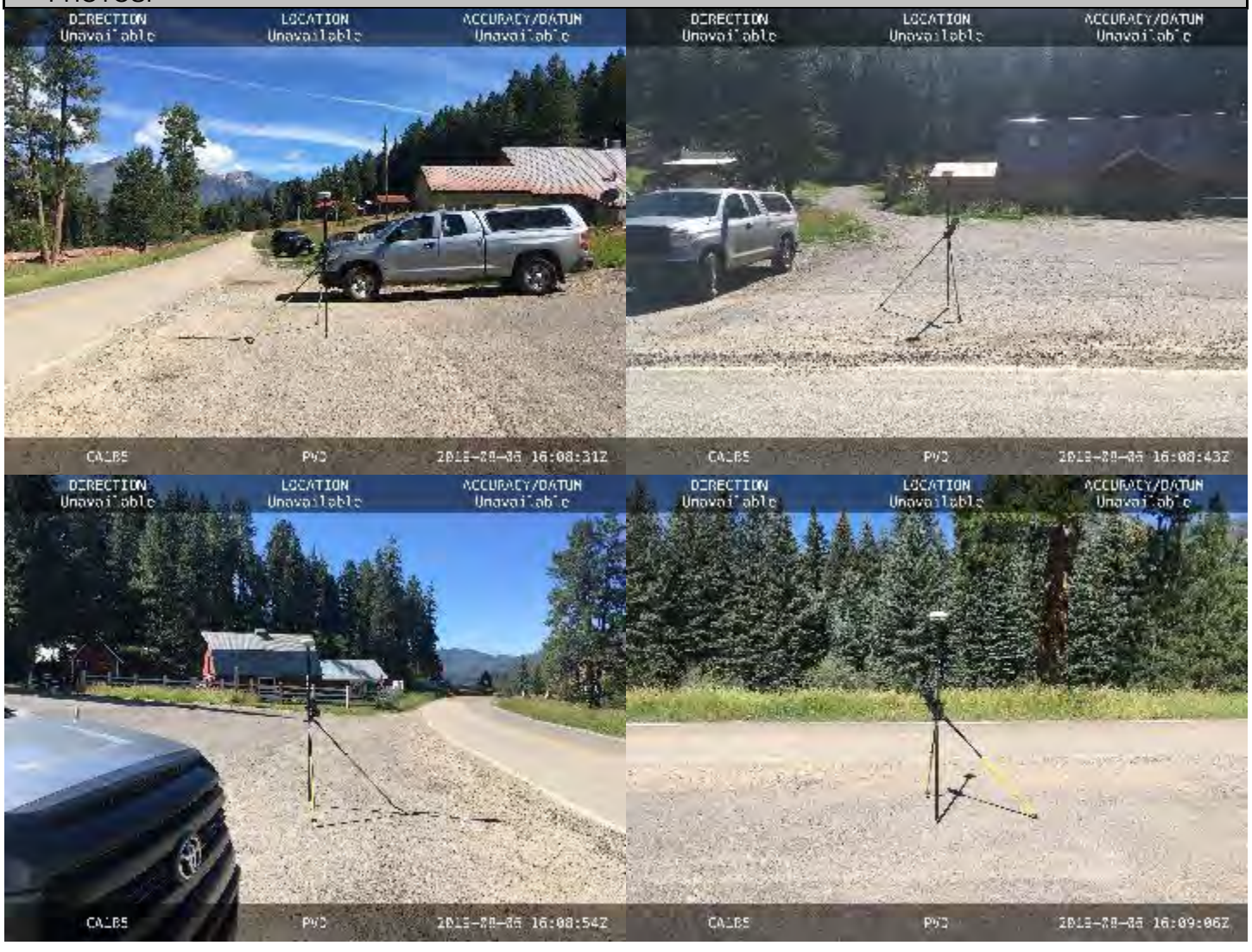
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1286624.12	2406926.15	7683.16

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	CA186
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Harris Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1202053.56	2601998.39	7661.69

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	RTN

PHOTOS:

Point ID	CA187
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

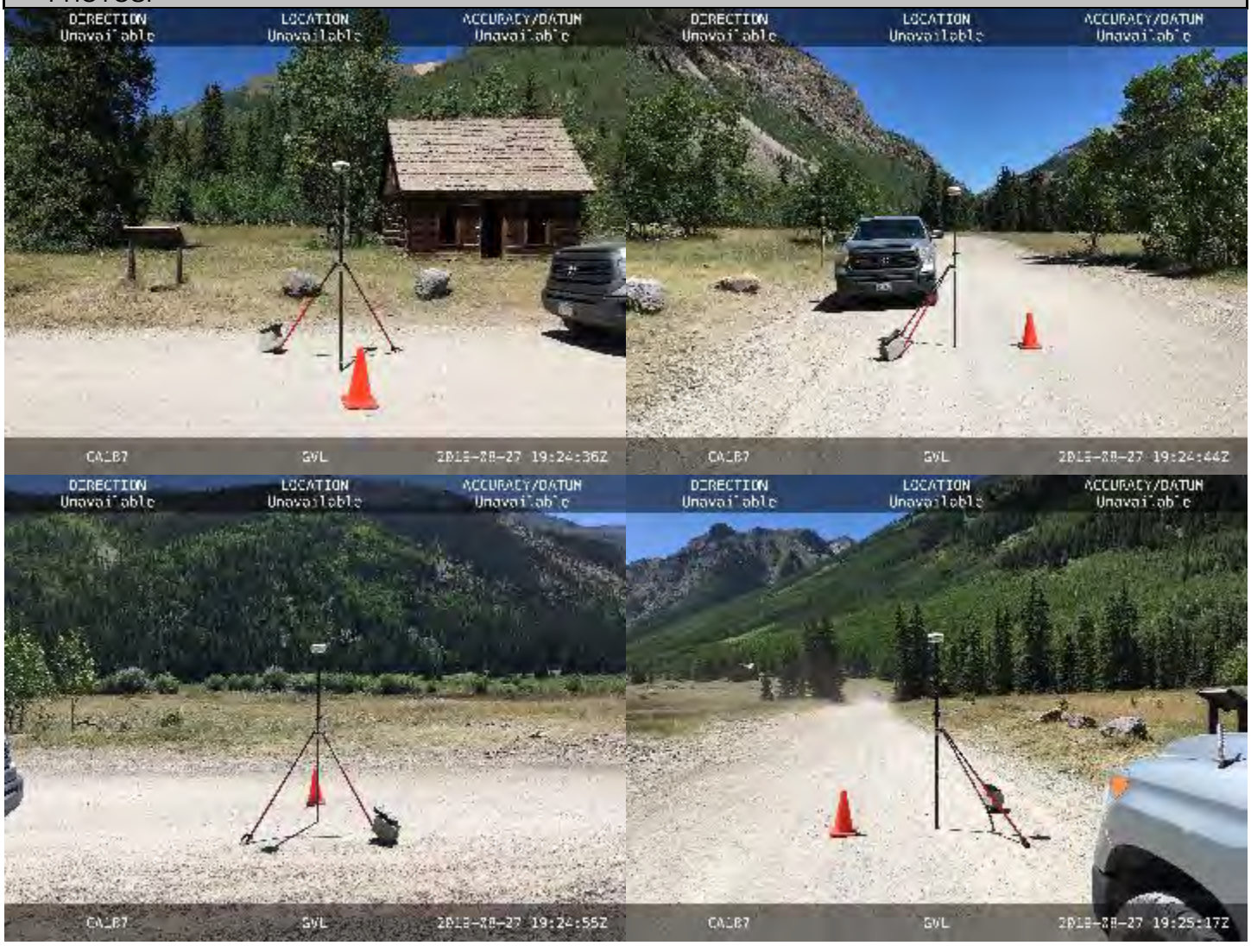
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1493702.74	2433220.28	9722.05

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	CA188
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

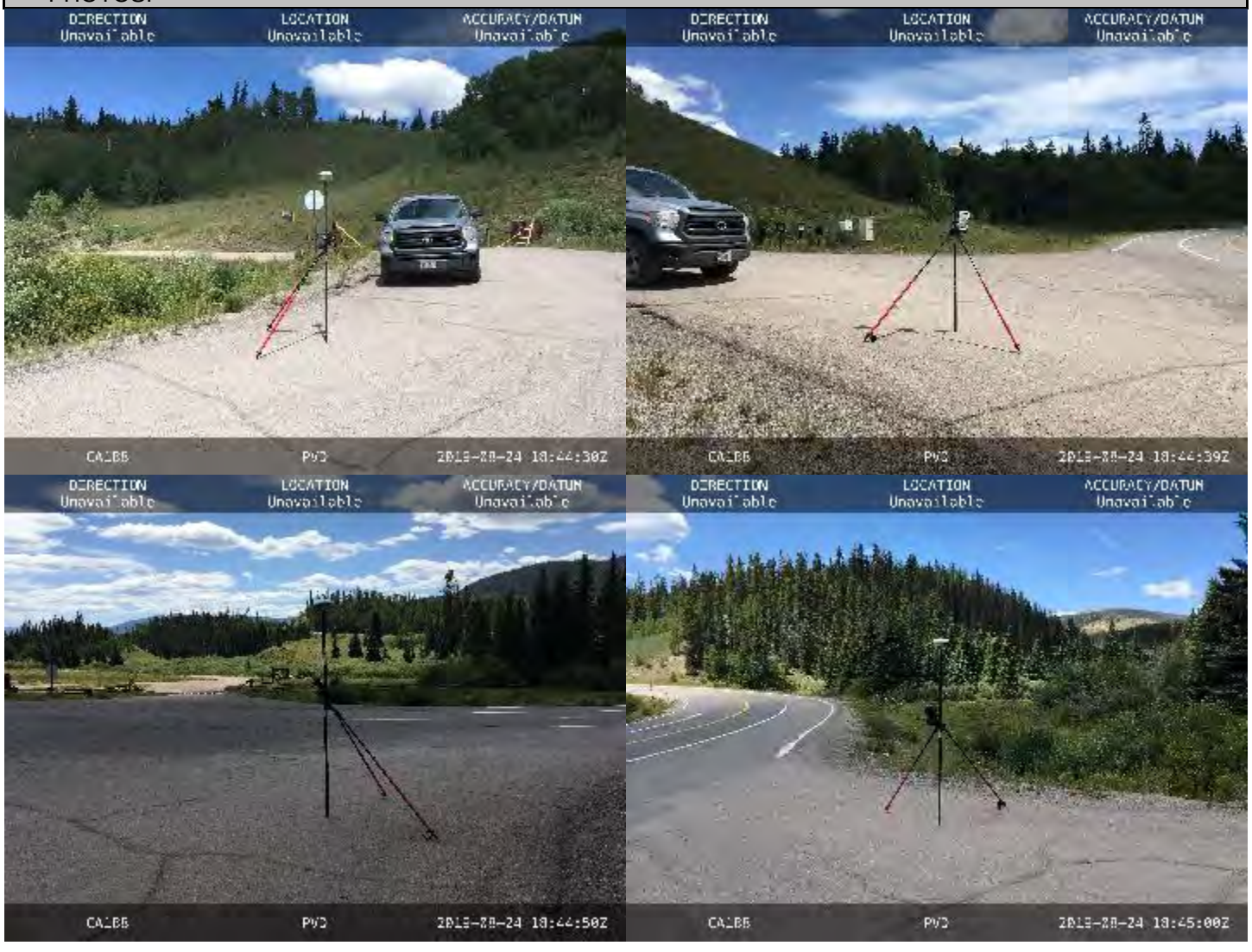
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1427689.14	2521232.70	9746.39

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	CA189
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moccasin Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1200584.05	2130440.37	6965.13

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA190
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Reservoir

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1444823.26	2177520.83	7958.24

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FastStatic

PHOTOS:

Point ID	CA191
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1130076.10	2595813.72	7148.43

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA192
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Millwood

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1309550.06	2170472.65	7979.51

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/12/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA193
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Teec Nos Pos

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1140758.40	1964876.19	4863.42

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA194
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1359904.18	2330450.23	8909.66

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	CA195
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Glade Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1428307.98	2123169.24	7064.26

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FastStatic

PHOTOS:

Point ID	CA196
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Harris Lake

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1200267.79	2615337.70	8143.42

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	CA197
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1242893.65	2335802.66	7355.60

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA198
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Arriola

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1297452.09	2082701.93	6421.54

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/14/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA199
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1243652.00	2528889.83	7758.64

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA200
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1152421.55	2217781.15	6208.27

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA201
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Arriola

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1315357.67	2082022.94	6598.49

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/18/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	CA202
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1225316.39	2567632.60	7155.29

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA203
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Champagne Spring

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1396003.66	2016902.89	6554.83

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA204
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Ruin Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1347594.61	1990652.58	6562.58

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	1.659 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA205
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1421816.32	2207595.65	9358.79

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/20/2019
RMSE Hz	0.01
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	CA206
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Ruin Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1355308.64	1986137.30	6550.54

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA207
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hesperus

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1260456.22	2250809.80	8729.76

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/16/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	CA208
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Burnt Cabin Creek

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1377913.48	1981955.00	6620.35

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA209
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Yellow Jacket

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1340579.26	2072246.68	6967.65

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA210
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Doe Canyon

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1391886.93	2082089.77	7866.17

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	CA211
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1485129.46	2497977.74	10928.53

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	CA212
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bayfield

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1209345.66	2387646.87	6866.19

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	CA213
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Peters Nipple

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

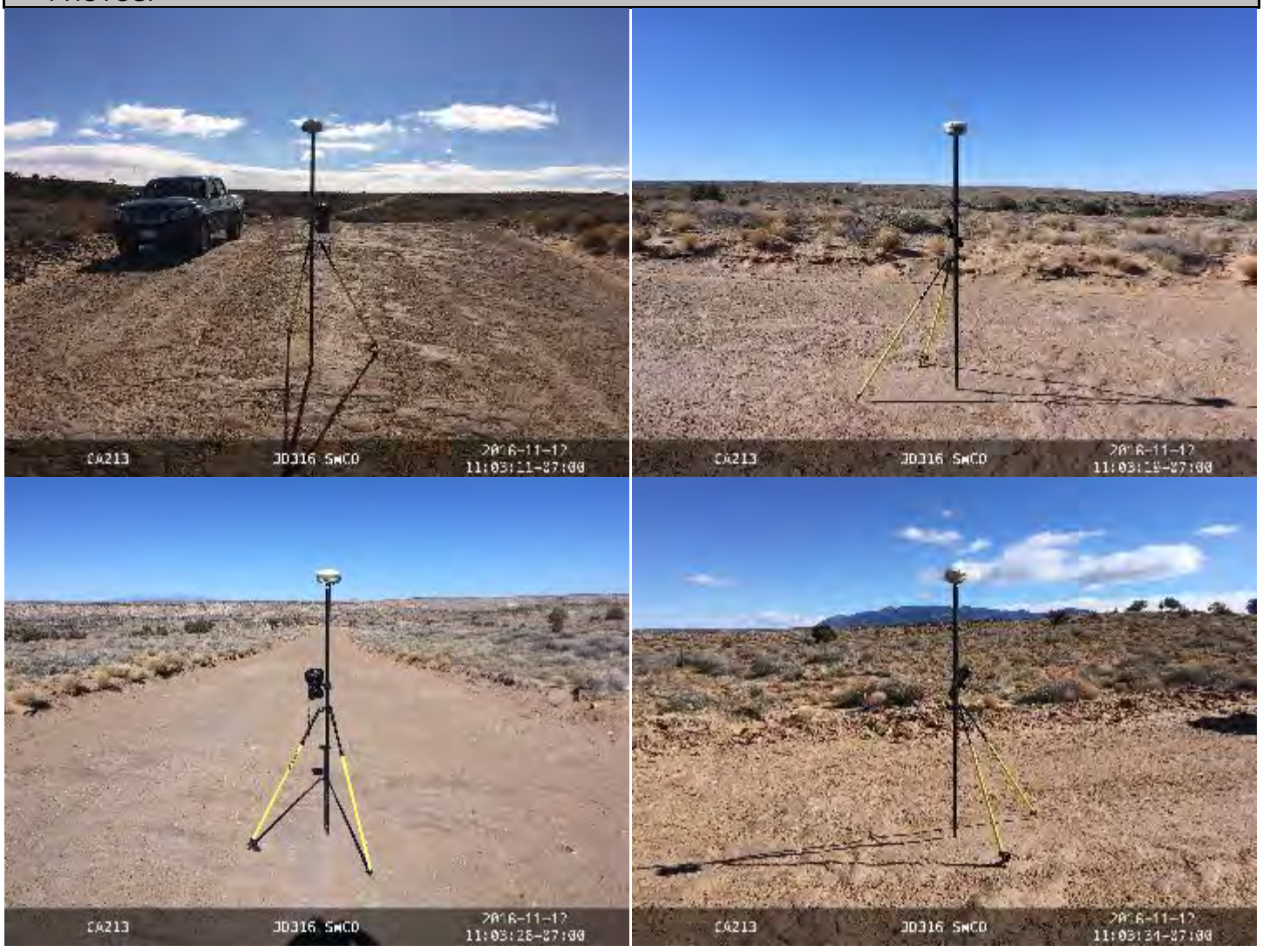
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1223716.92	1975925.25	5133.16

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	CA214
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Pinkerton Mesa

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1146629.09	2248419.39	6193.71

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	CA215
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa Mountain

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1359828.18	2300601.59	8841.48

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.03
RMSE Z	0.08
GPS Method	Fast Static

PHOTOS:

Bare Earth Point Log Sheets

Point ID	BE001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

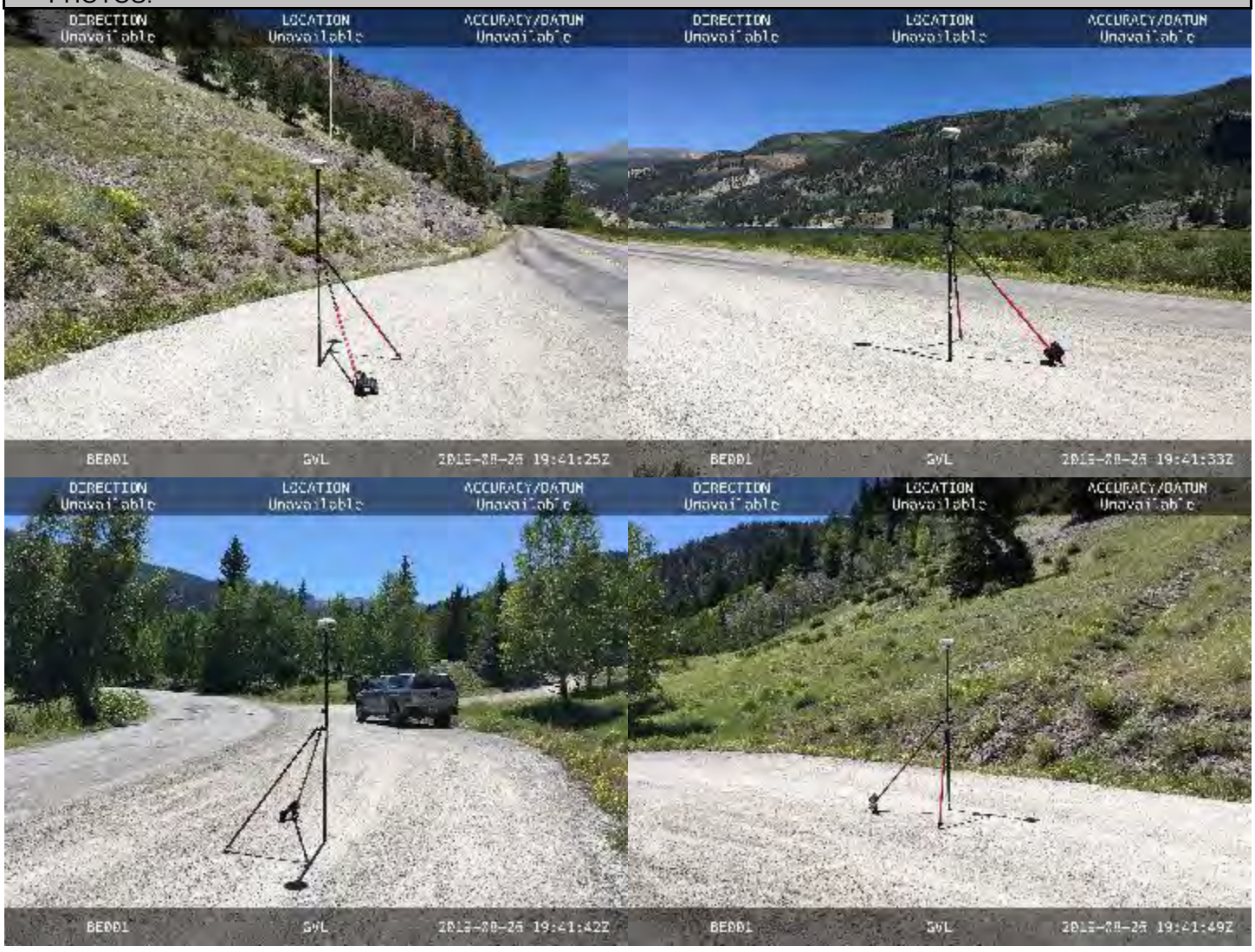
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1475139.68	2480351.85	9023.01

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	BE002
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chama Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1146383.73	2649032.56	8306.78

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Redcloud Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

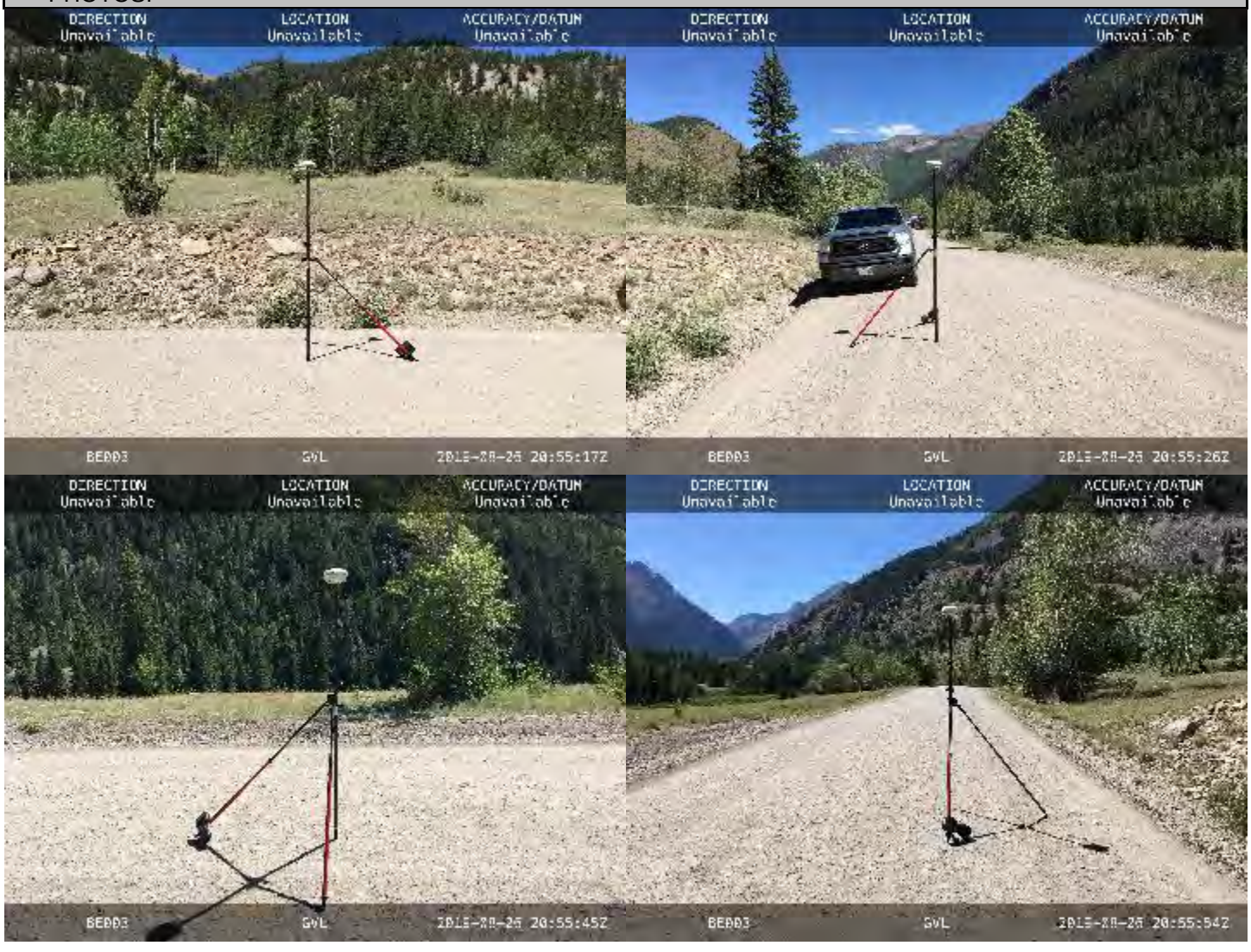
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1457293.24	2456065.15	9470.74

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

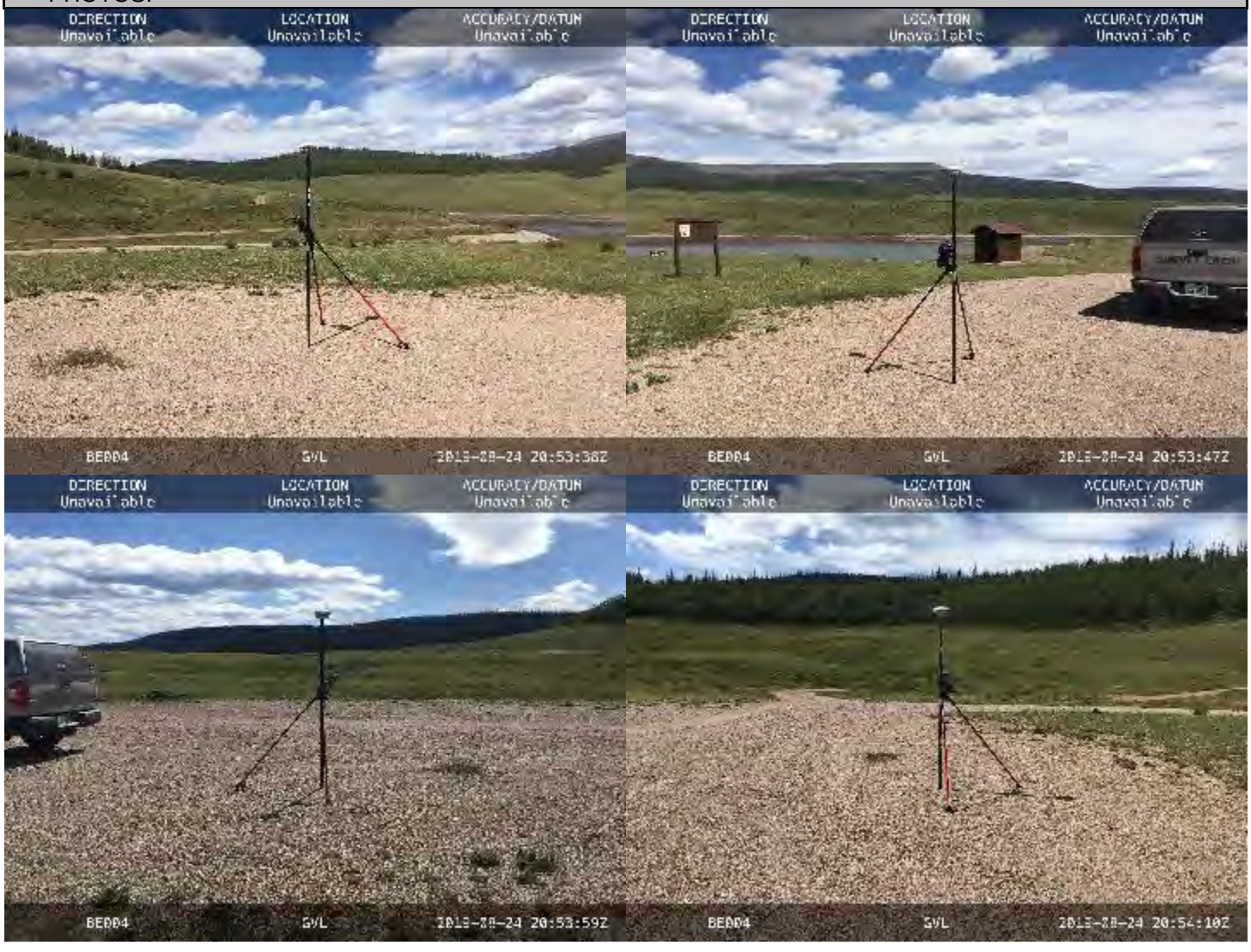
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1451030.77	2515483.32	10264.46

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1464039.57	2521144.45	10878.70

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	BE006
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SW

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1151454.49	1990544.06	4924.21

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE007
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Handies Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

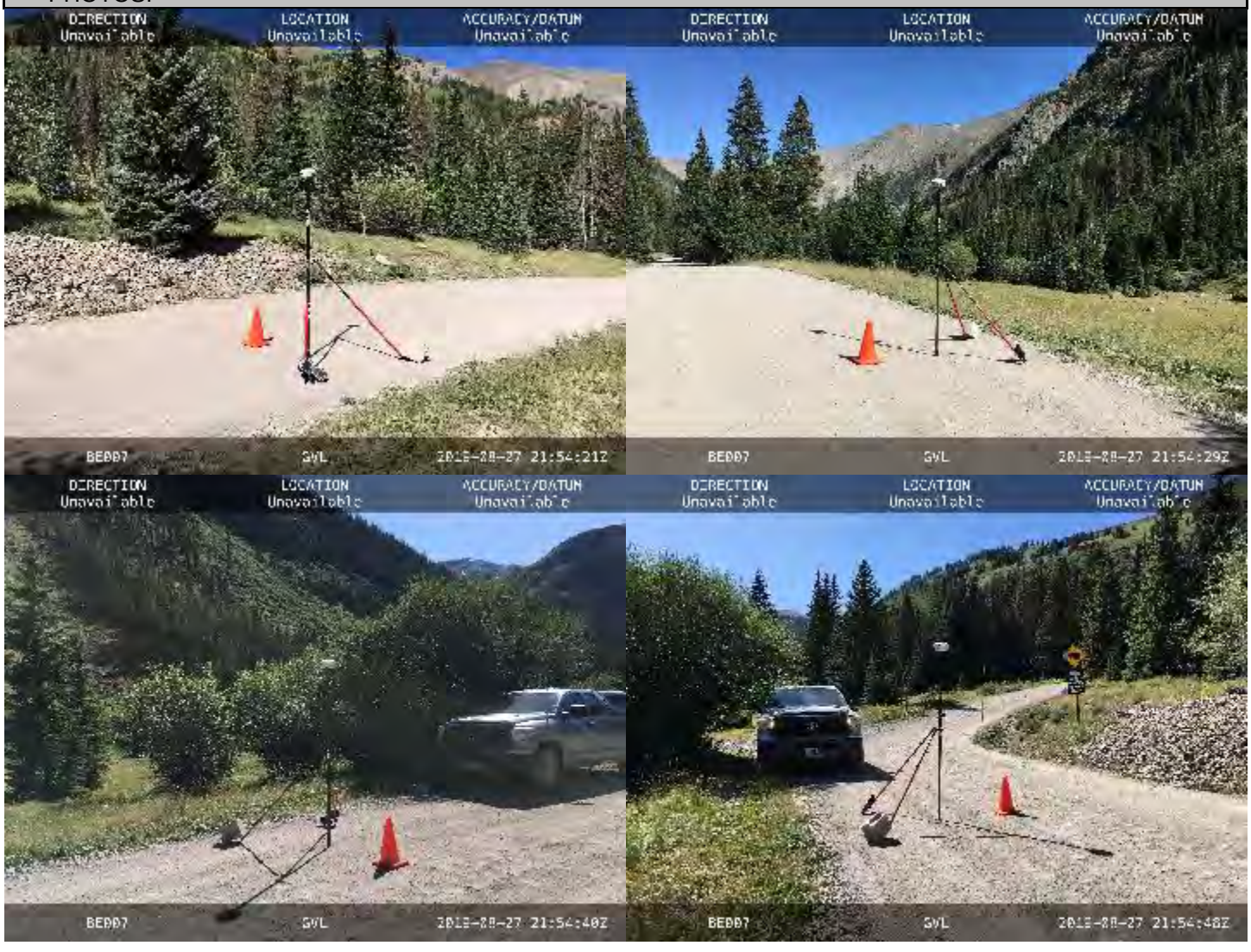
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1483281.54	2412996.41	10877.84

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.04
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE008
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1318920.23	2327873.70	8045.70

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/11/2019
RMSE Hz	0.05
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE009
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1472049.60	2480377.65	9023.43

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTN

PHOTOS:

Point ID	BE010
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

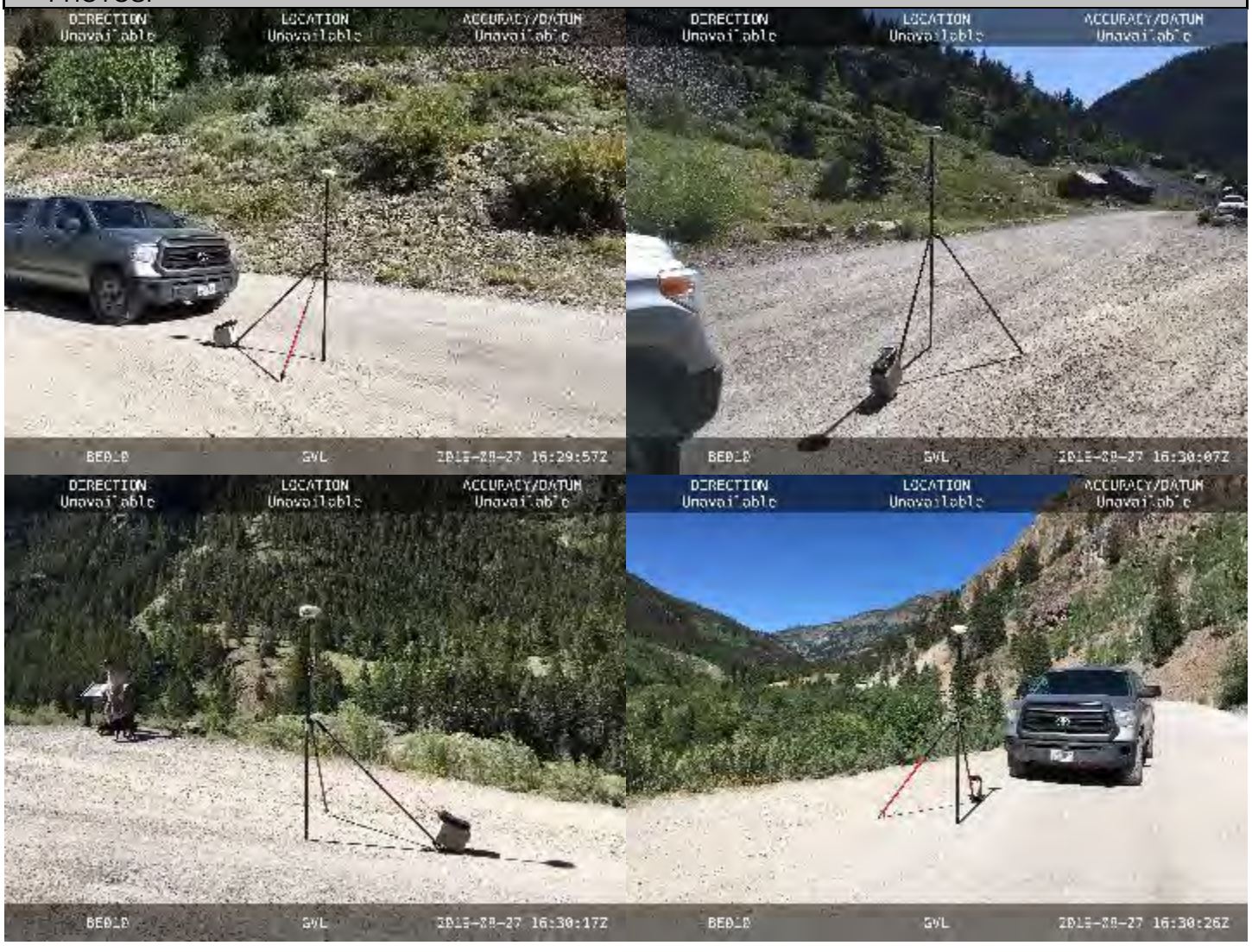
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1498770.40	2458831.60	9200.96

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.08
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE011
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Baldy Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1220471.45	2428024.45	8401.47

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE012
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1346884.74	2051382.53	6878.25

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE013
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1521973.97	2483829.39	8550.56

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	BE014
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Trail Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1197915.21	2192301.50	6994.13

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE015
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1225389.97	2308920.96	6558.65

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE016
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1193737.43	2577113.23	7344.60

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE017
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1226391.73	2593423.93	7810.63

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE018
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chama Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

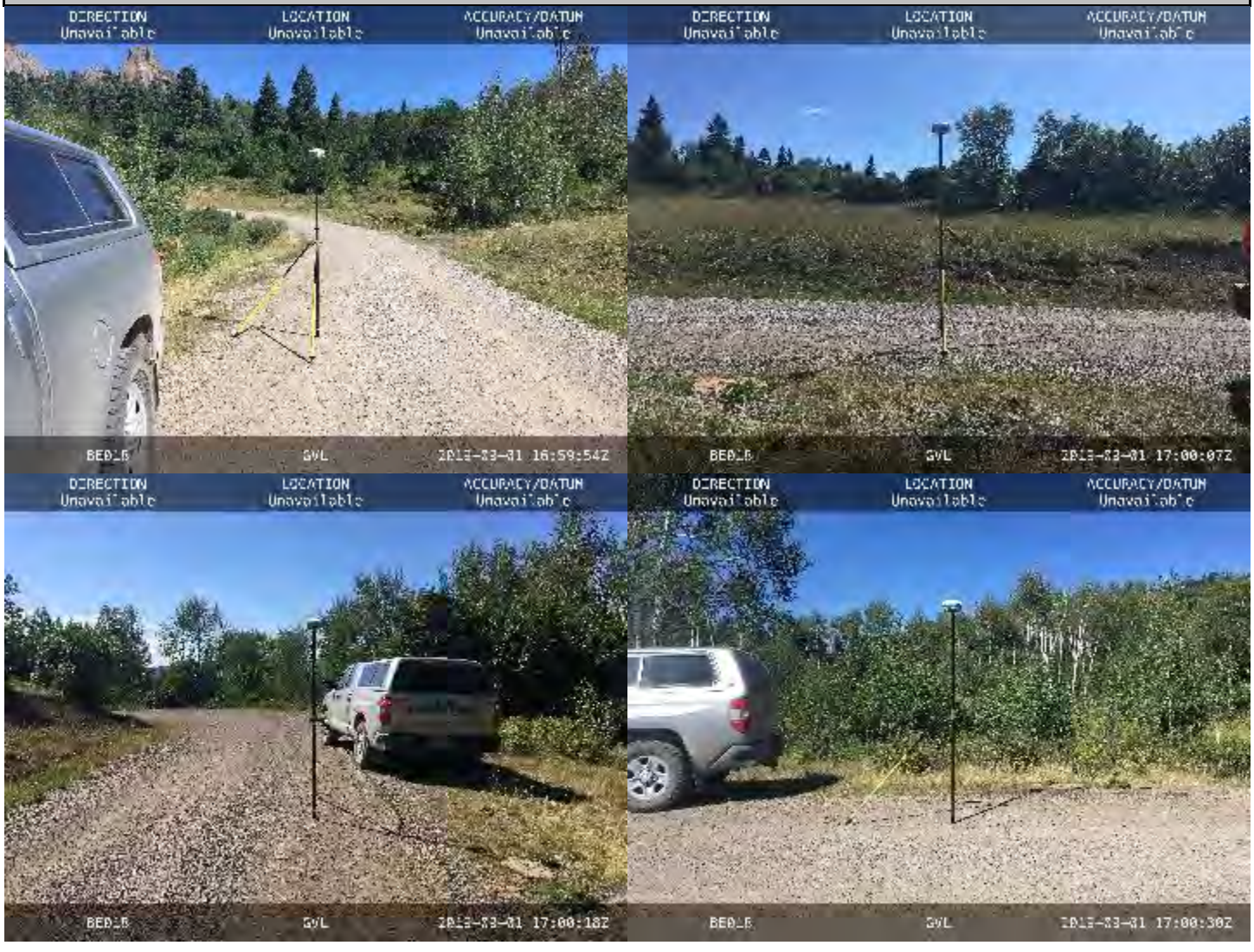
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1150064.83	2644161.40	8919.17

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.05
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	BE019
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1407811.55	2460131.73	9963.63

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE020
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Kline

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1183102.21	2240503.77	6955.70

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE021
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1503209.15	2479128.85	8657.96

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	BE022
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1485079.88	2503255.74	11333.06

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	BE023
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

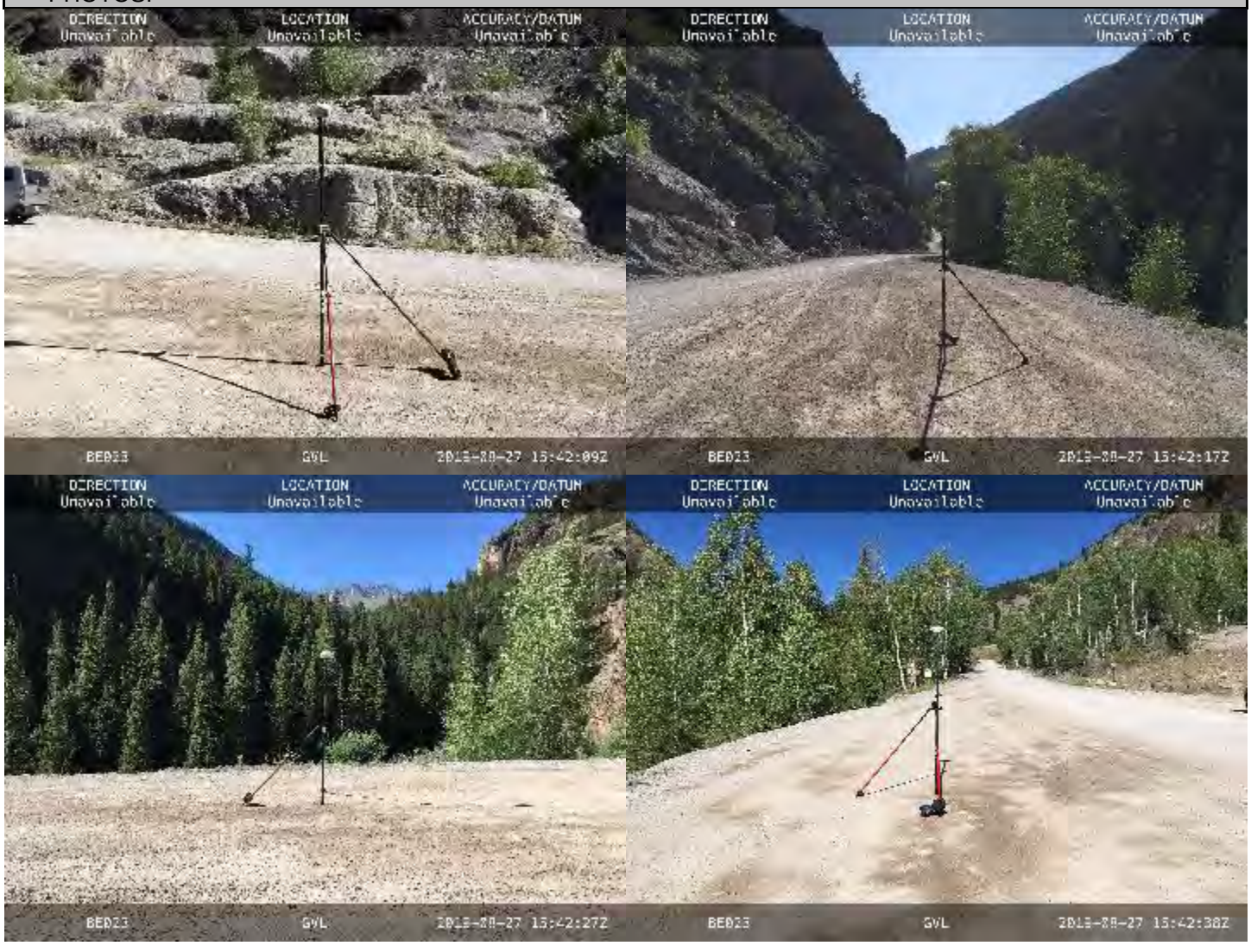
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1497903.51	2464801.08	8973.30

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	BE024
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1422944.34	2524657.18	9546.13

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTN

PHOTOS:

Point ID	BE025
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

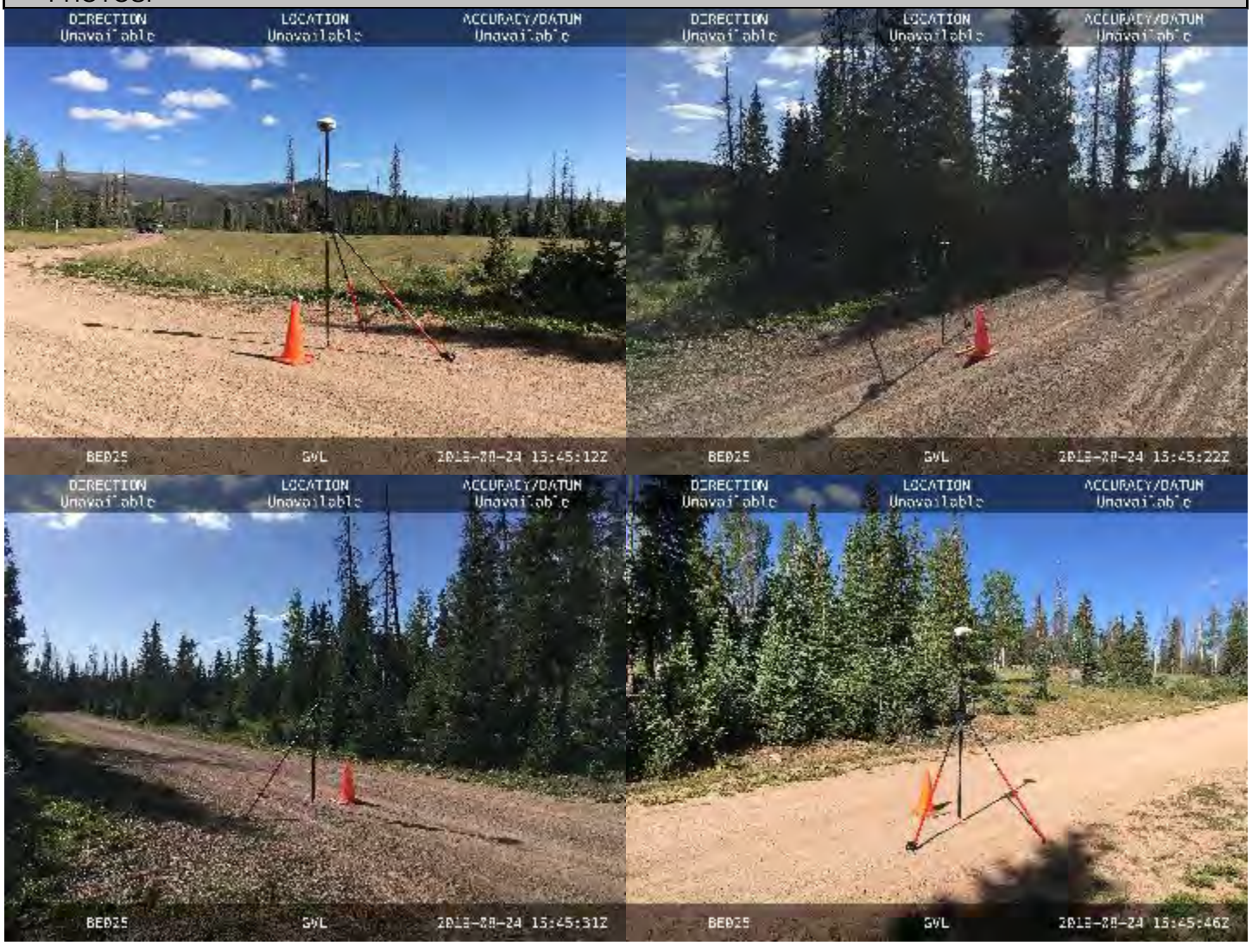
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1421171.39	2487458.44	10749.02

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.07
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	BE026
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1440599.26	1985338.91	6655.64

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	RTK

PHOTOS:

Point ID	BE027
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1419111.95	2271703.50	10133.61

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.01
RMSE Z	0.01
GPS Method	Fast Static

PHOTOS:

Point ID	BE028
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Rico

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1400768.03	2271207.10	9063.28

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE029
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

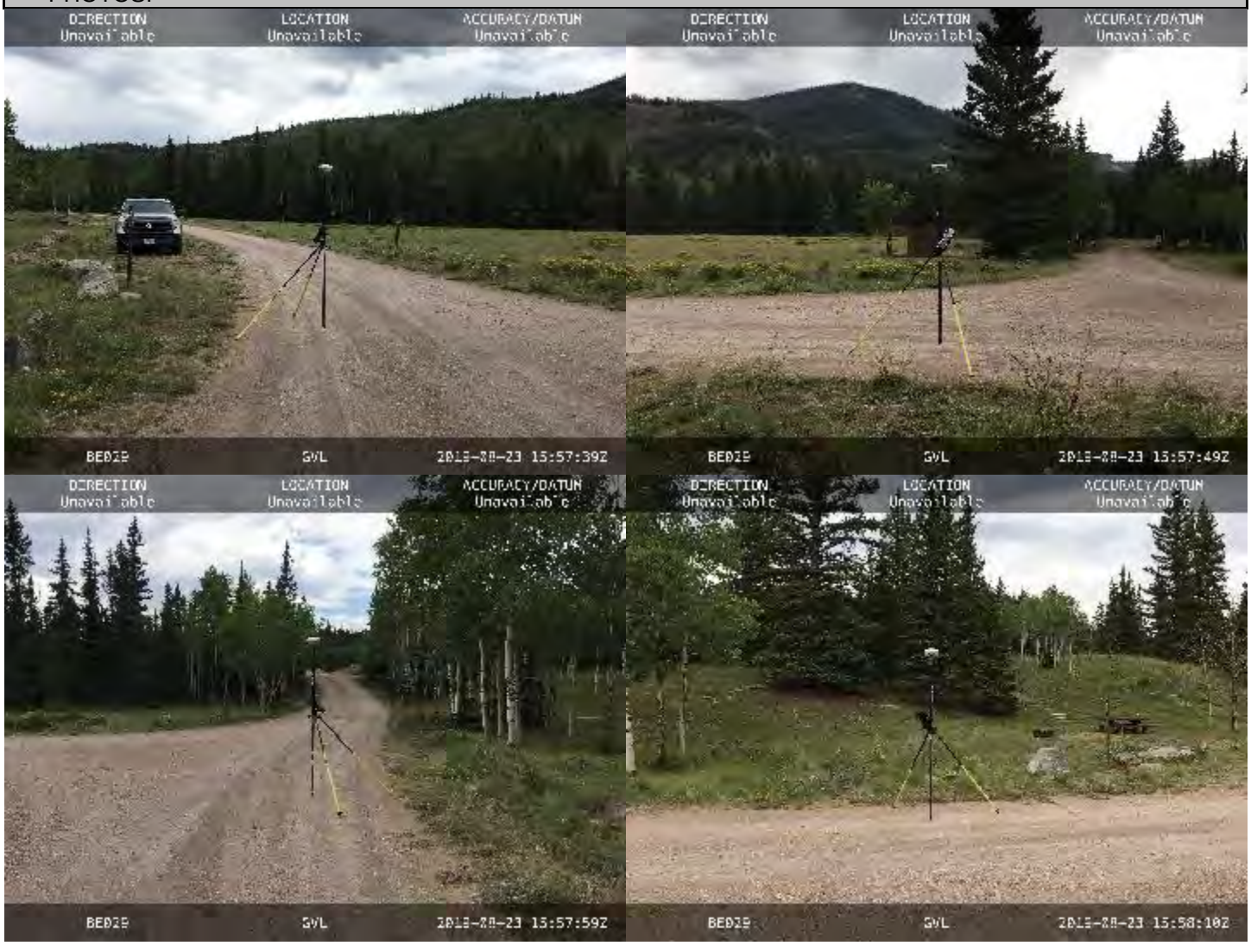
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1429642.10	2526685.93	9557.26

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	BE030
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
	LiDAR Ground Control
x	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1270392.40	2098207.52	6137.62

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE031
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1424027.02	2243418.25	9881.65

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	Fast Static

PHOTOS:

Point ID	BE032
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1341577.98	2326838.68	8844.46

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	BE033
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cimarrona Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1313462.37	2498194.33	8374.87

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.09
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE034
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1221877.81	2548964.51	7597.46

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE035
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bayfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1209304.61	2387491.15	6866.36

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE036
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Redcloud Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1486697.25	2428246.87	10036.02

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE037
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1485182.97	2497909.98	10927.05

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	BE038
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1359764.93	2300565.41	8840.31

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.03
RMSE Z	0.11
GPS Method	Fast Static

PHOTOS:

Point ID	BE039
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Rico

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

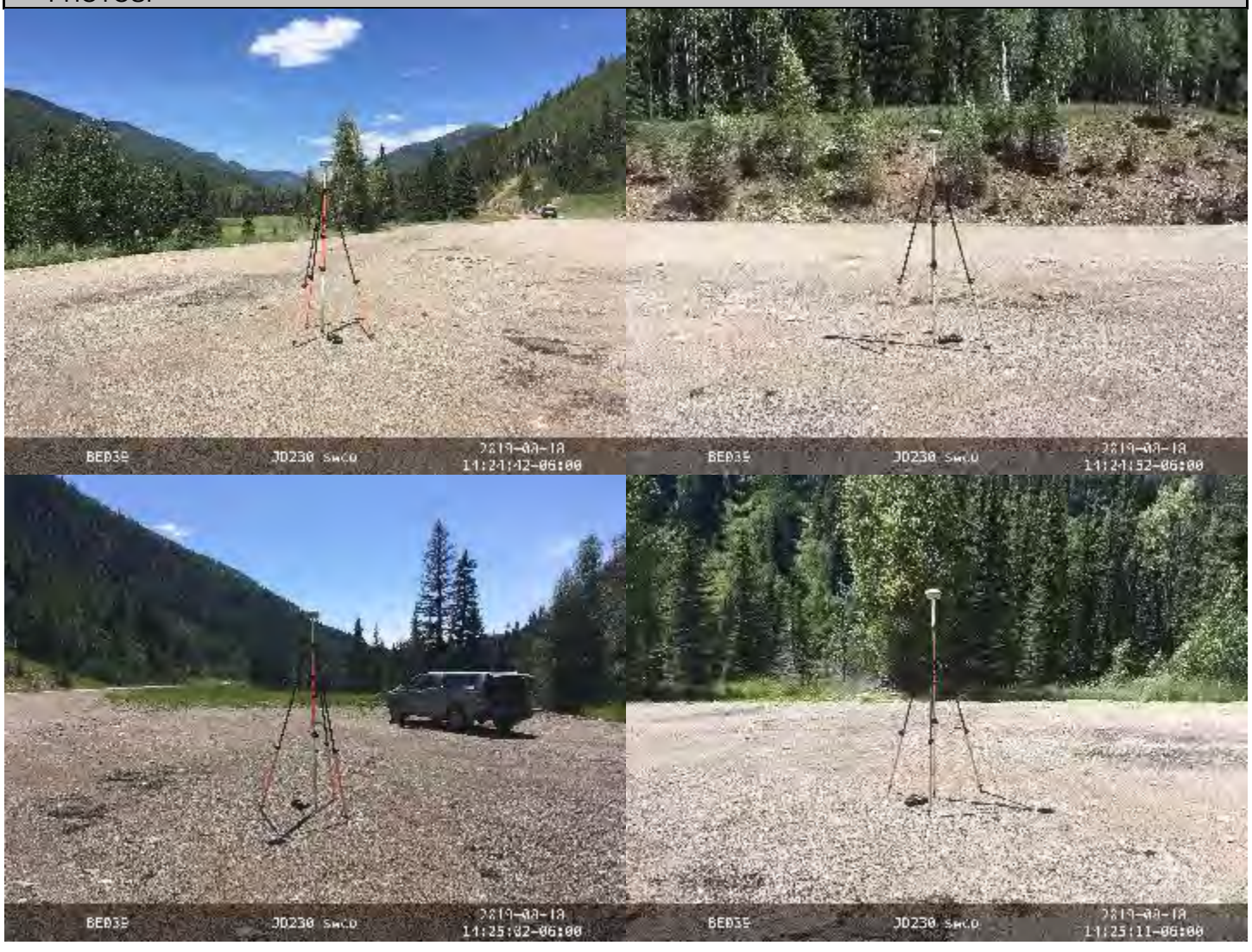
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1372776.52	2265582.72	8611.75

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:



Point ID	BE040
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

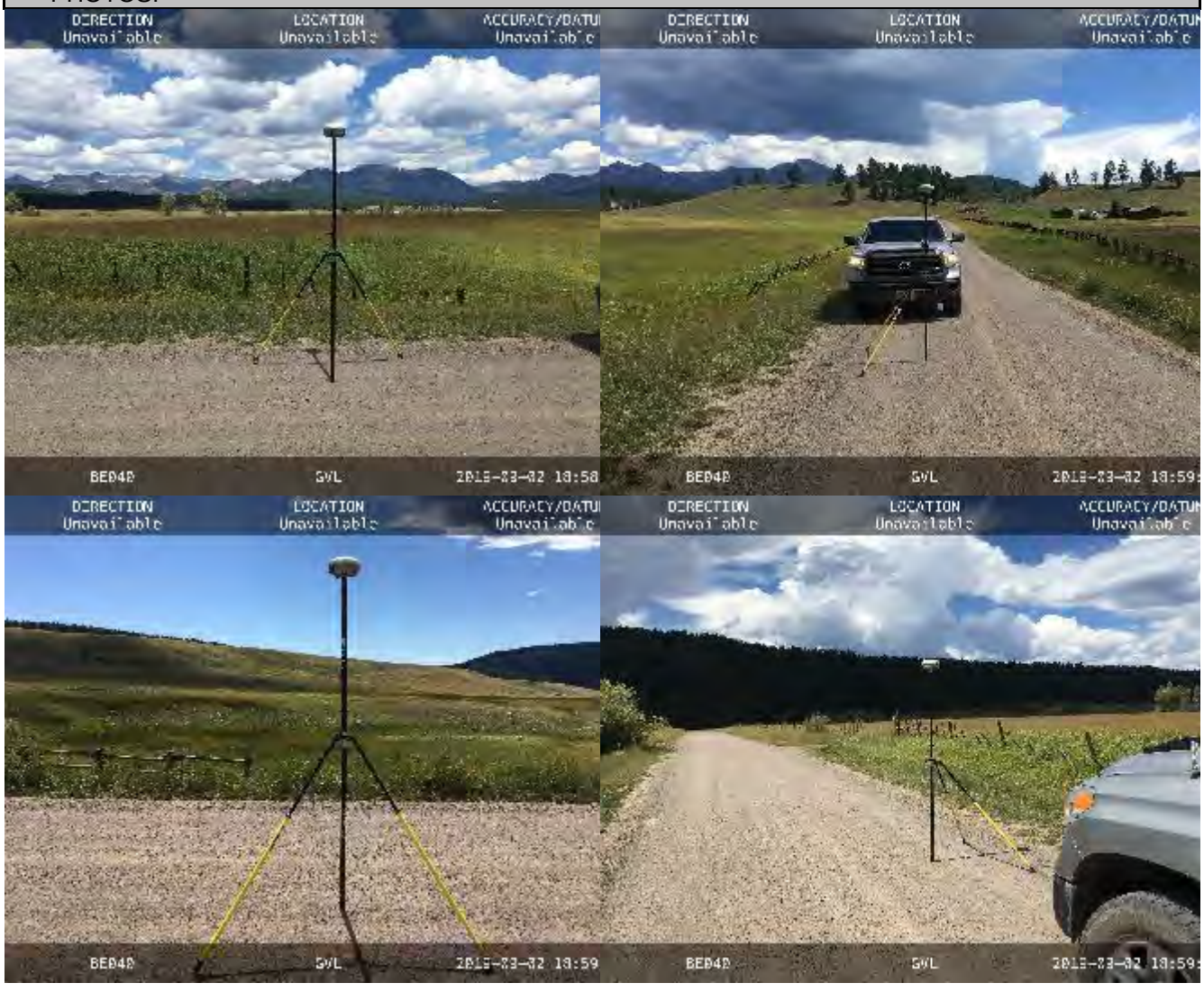
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1281474.46	2509595.87	7735.33

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE041
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1516520.77	2482064.05	8538.69

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTN

PHOTOS:

Point ID	BE042
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1181596.80	2347479.73	6544.11

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE043
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Resevoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1419256.63	2171481.49	8441.47

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/20/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:

Point ID	BE044
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1328126.79	2195432.32	8937.40

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE045
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Bear Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

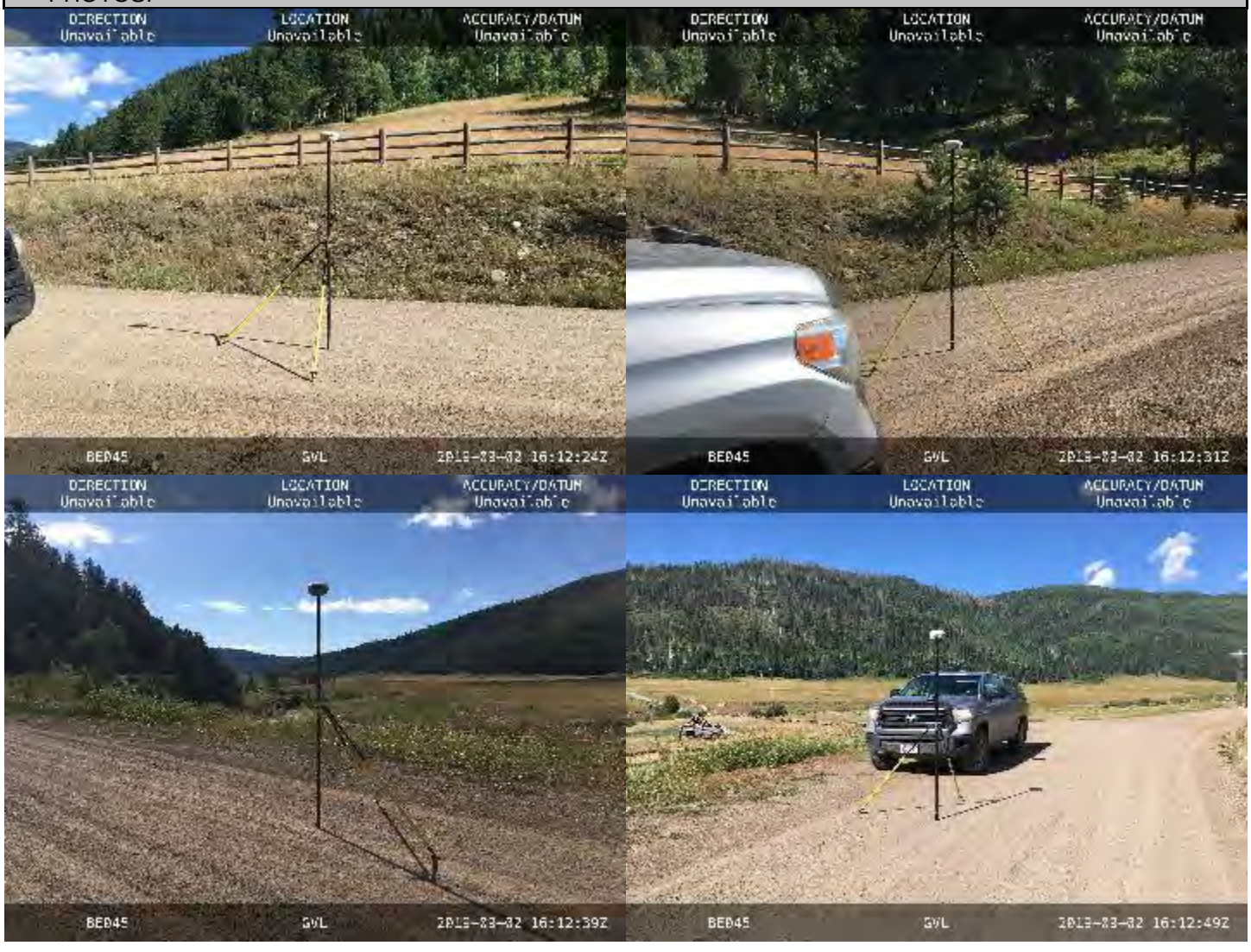
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1307258.52	2490101.75	8034.24

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.07
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE046
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Lemon Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1297387.25	2366856.35	8484.24

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/08/2019
RMSE Hz	0.05
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE047
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Egnar

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1460455.62	2007437.77	7098.15

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE048
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Saddle Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1261340.63	2595902.52	7701.67

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.04
RMSE Z	0.07
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE049
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Woods Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1283133.80	2020852.42	6424.45

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE50
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1361616.54	2318894.01	9436.31

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.07
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	BE051
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1159672.85	2064266.79	5303.15

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE052
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Peters Nipple

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1223623.52	1975957.72	5134.44

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE053
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Negro Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1407514.59	2025104.53	6843.31

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE054
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Snowdon Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1391919.38	2349442.22	9768.70

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.06
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	BE055
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1260926.73	2188397.21	7011.72

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE056
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Arriola

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

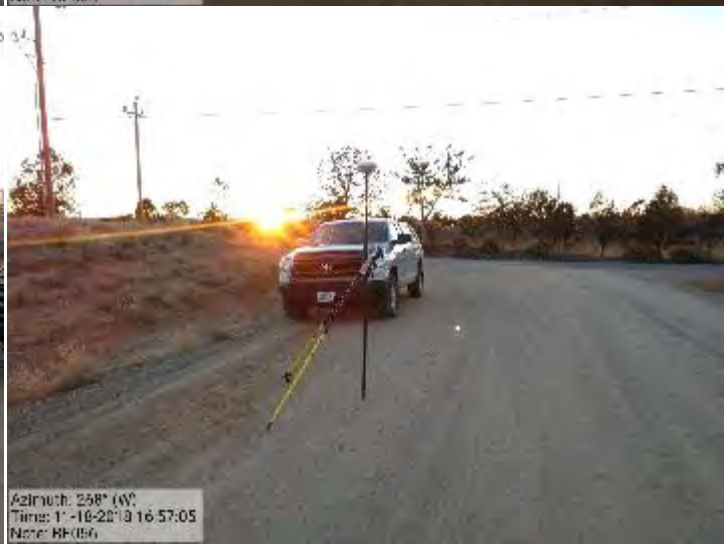
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1317187.55	2082078.43	6648.18

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/18/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	BE057
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1439108.72	2209001.64	10797.84

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/20/2019
RMSE Hz	0.02
RMSE Z	0.05
GPS Method	Fast Static

PHOTOS:

Point ID	BE058
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Negro Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1314579.47	1994105.32	6108.45

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE0059
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

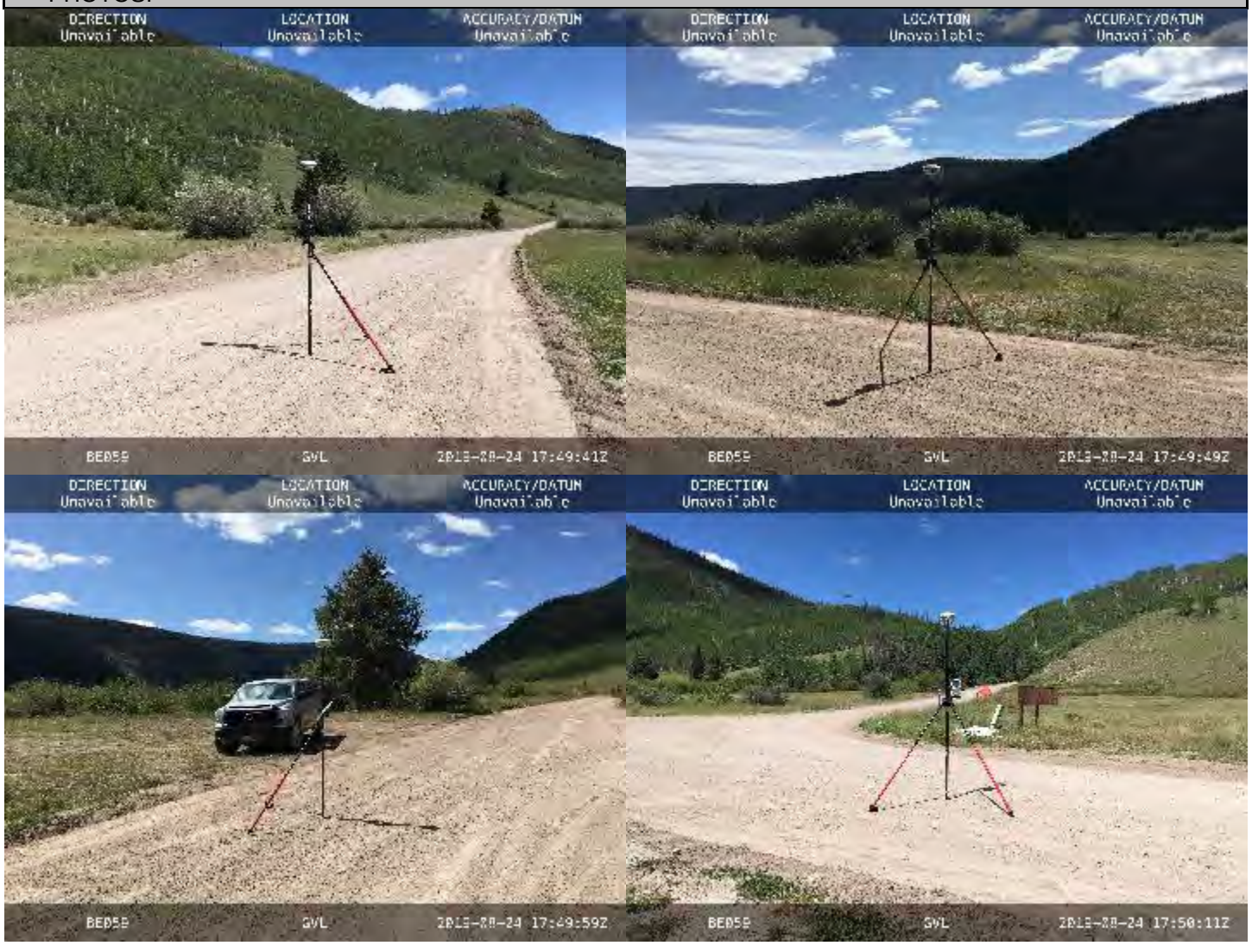
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1422465.76	2502752.21	9853.57

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.03
RMSE Z	0.09
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE060
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chromo

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

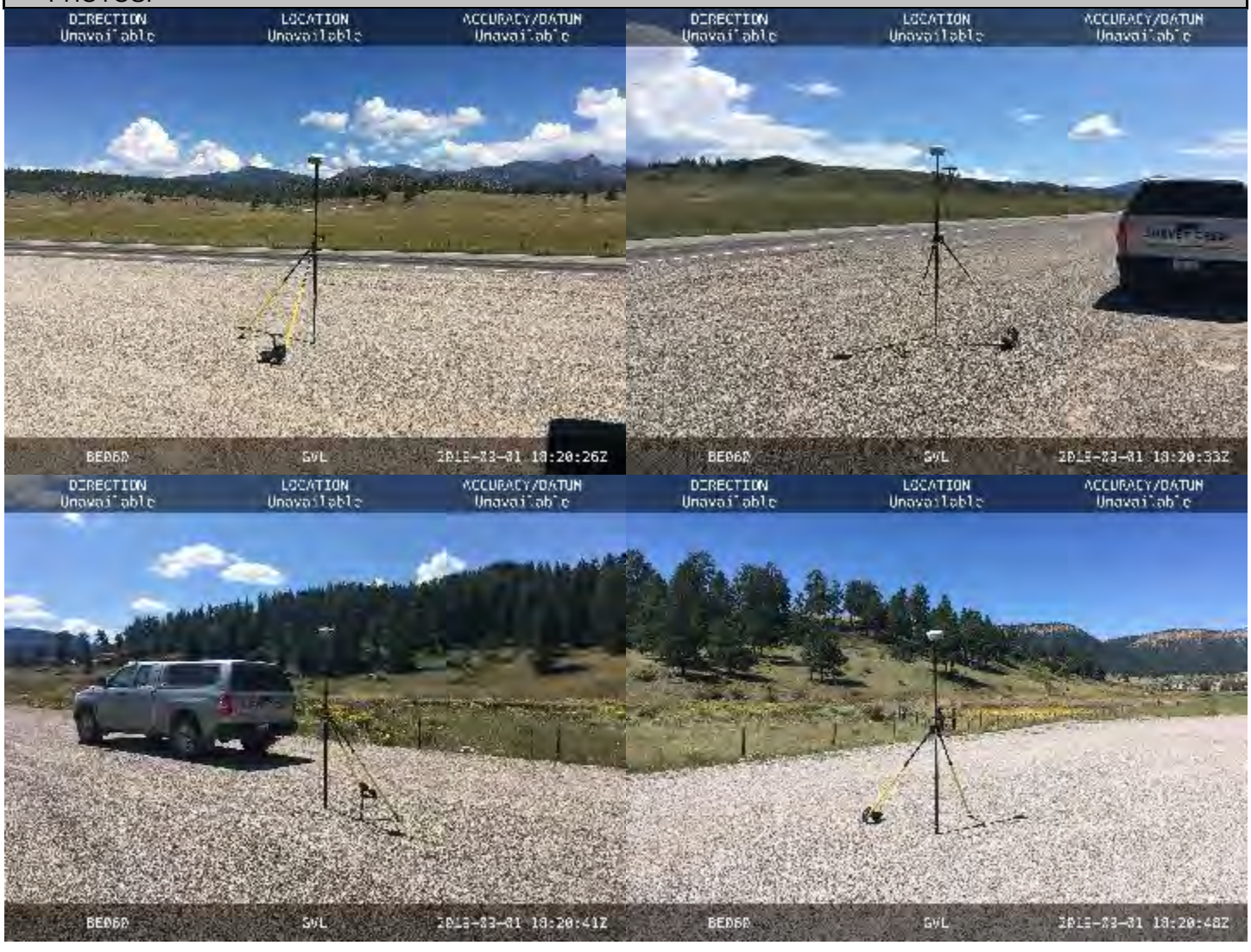
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1134836.72	2612605.90	7373.13

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE061
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1421287.22	2207978.52	9356.66

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/20/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	BE062
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wallace Ranch

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1357630.70	2224242.69	10242.94

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/16/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	BE063
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake San Cristobal

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

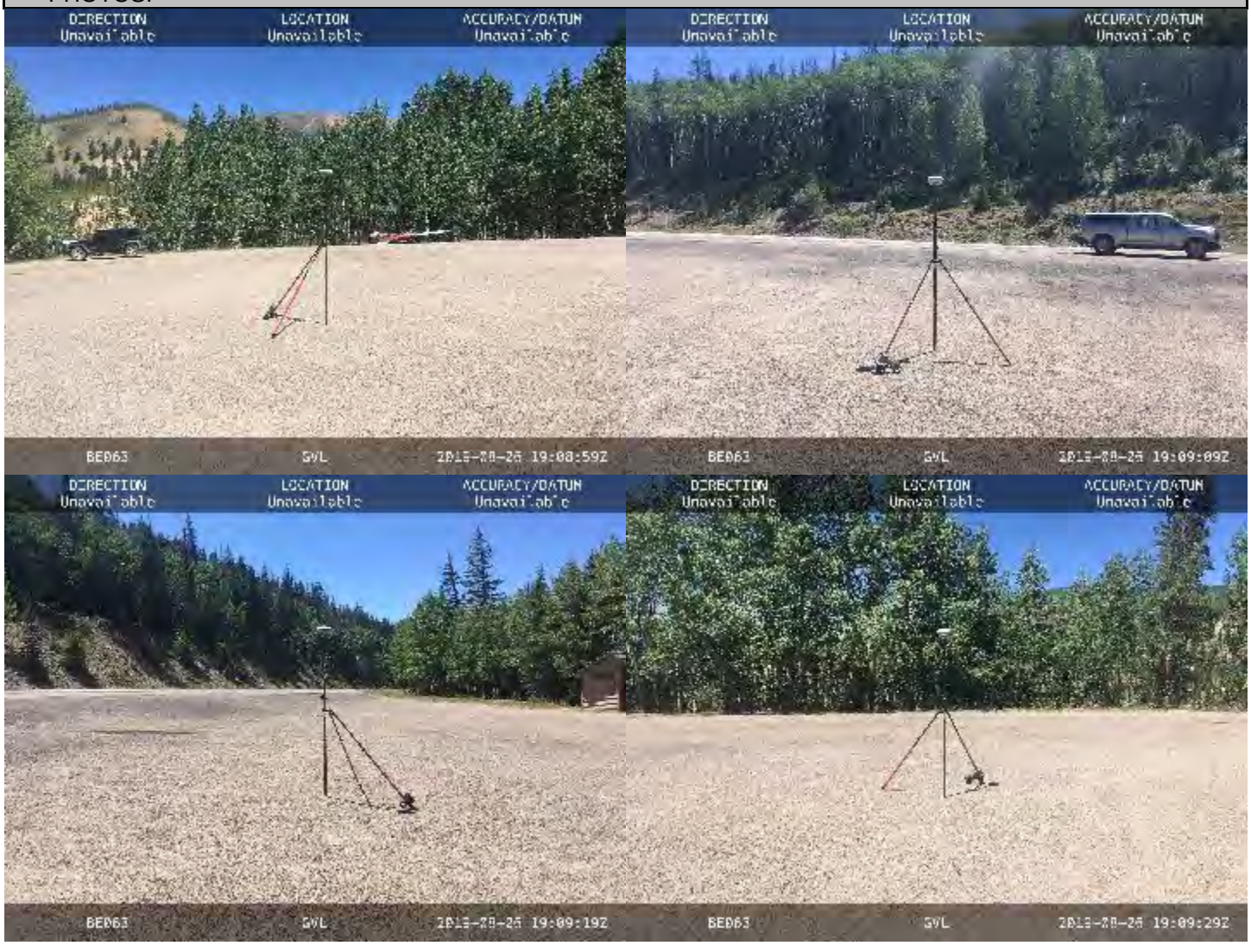
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1485303.13	2491810.34	10091.32

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	BE064
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Lake City

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1494534.46	2478108.03	8849.69

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.07
RMSE Z	0.11
GPS Method	RTN

PHOTOS:

Point ID	BE065
Project No.	R034035
Project Name	USGS SW Colorado
State	SPC - COLORADO SOUTH
County	Dolores
Quad	Cahone

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1378558.41	2052626.92	6835.27

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE066
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

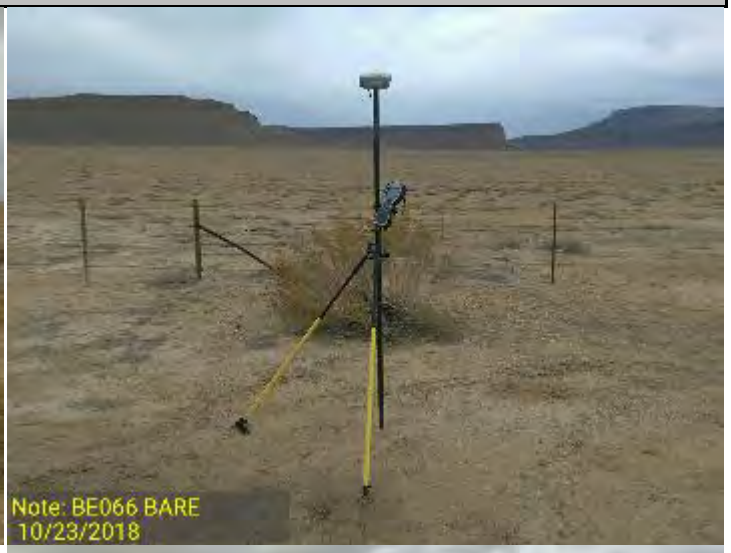
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1159900.42	2056001.02	5265.16

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:



Point ID	BE067
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Greasewood Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1168053.80	2136986.66	6194.91

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE068
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

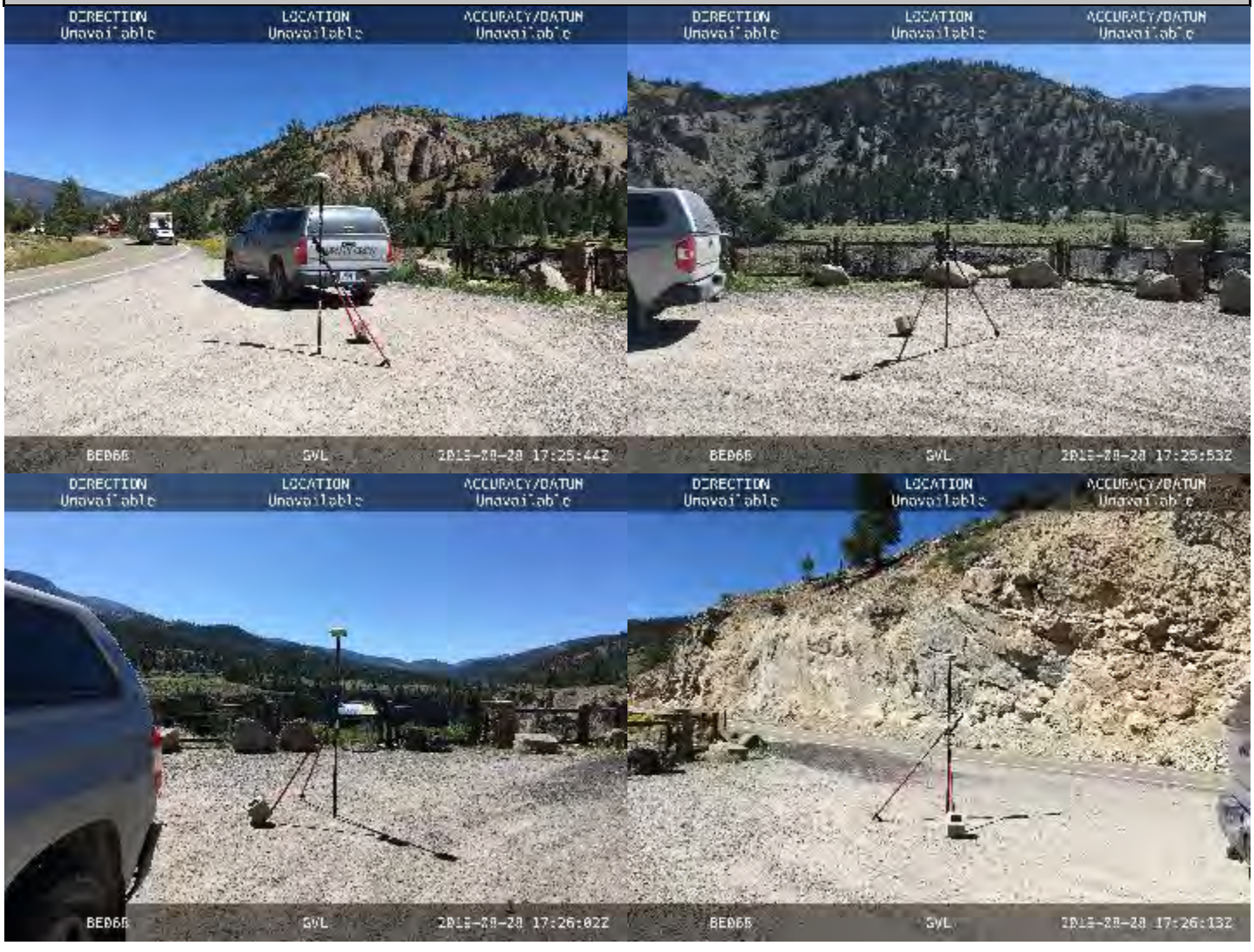
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1540546.78	2485496.77	8422.71

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.06
RMSE Z	0.13
GPS Method	RTN

PHOTOS:



Point ID	BE069
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1176509.39	2379154.23	6494.63

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE070
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

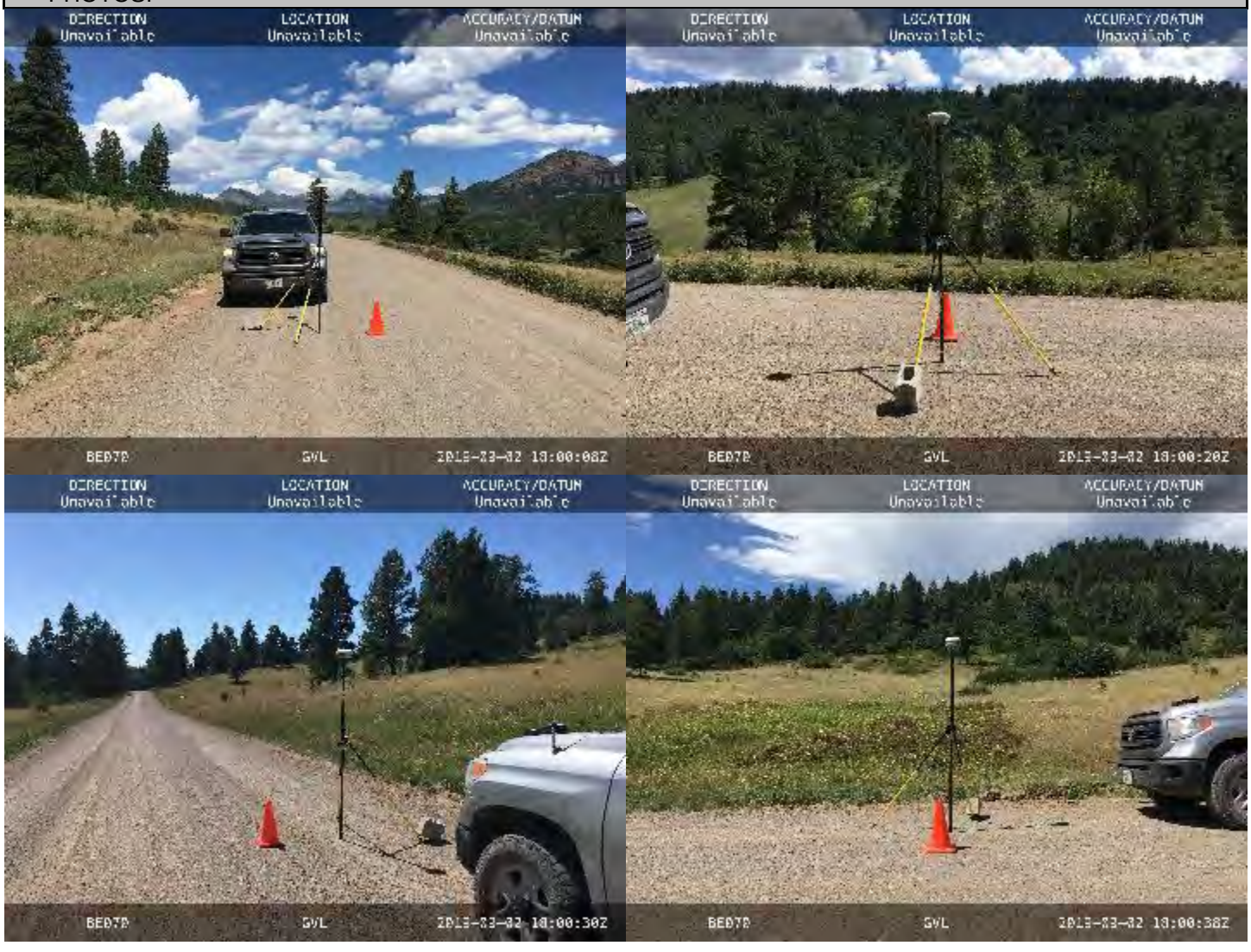
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1298525.86	2506028.85	7955.34

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE071
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1218078.11	2322851.40	6875.61

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.5 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE072
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

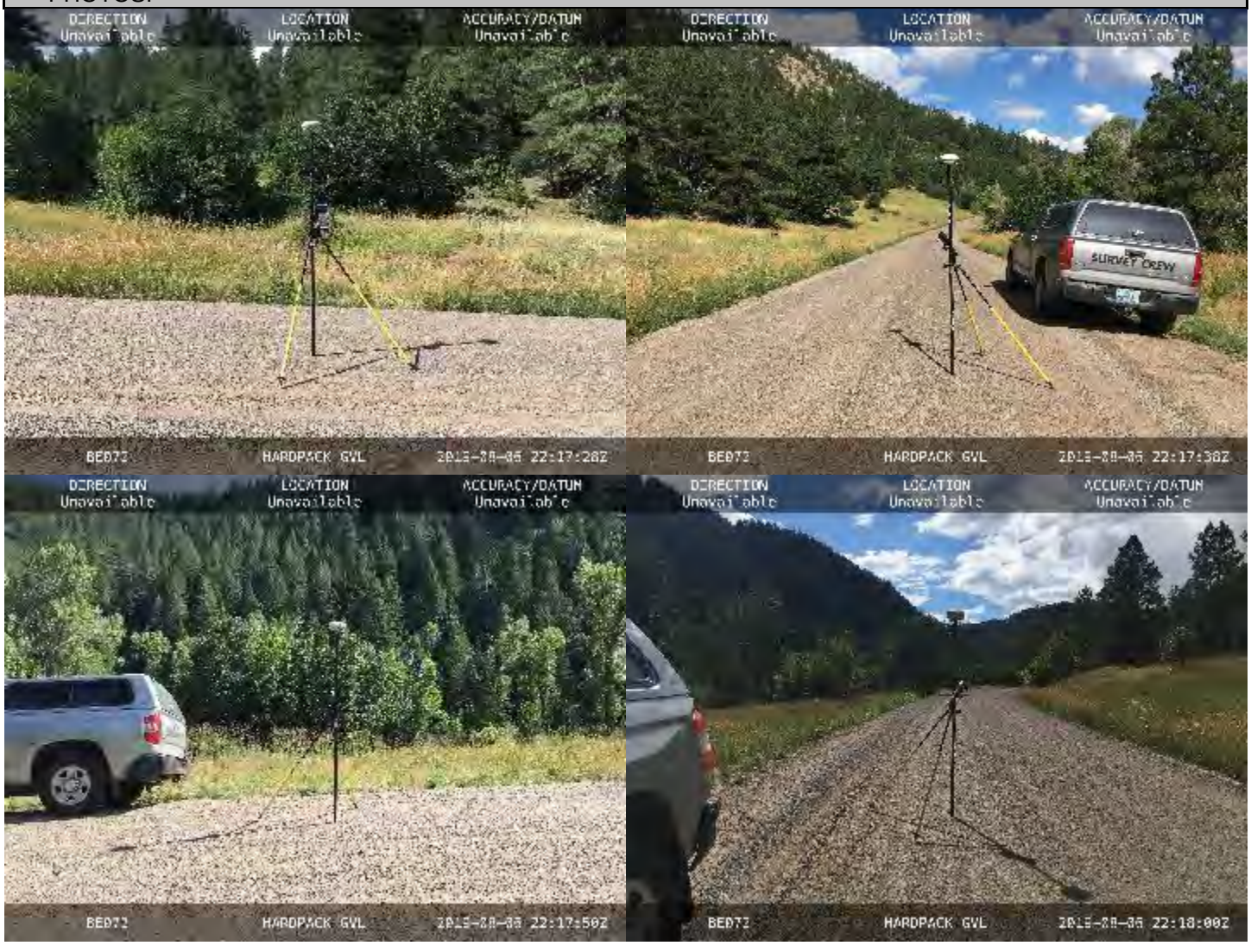
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1239964.28	2283118.66	7106.71

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	BE073
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Thompson Park

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1254427.67	2212736.14	7937.34

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE074
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

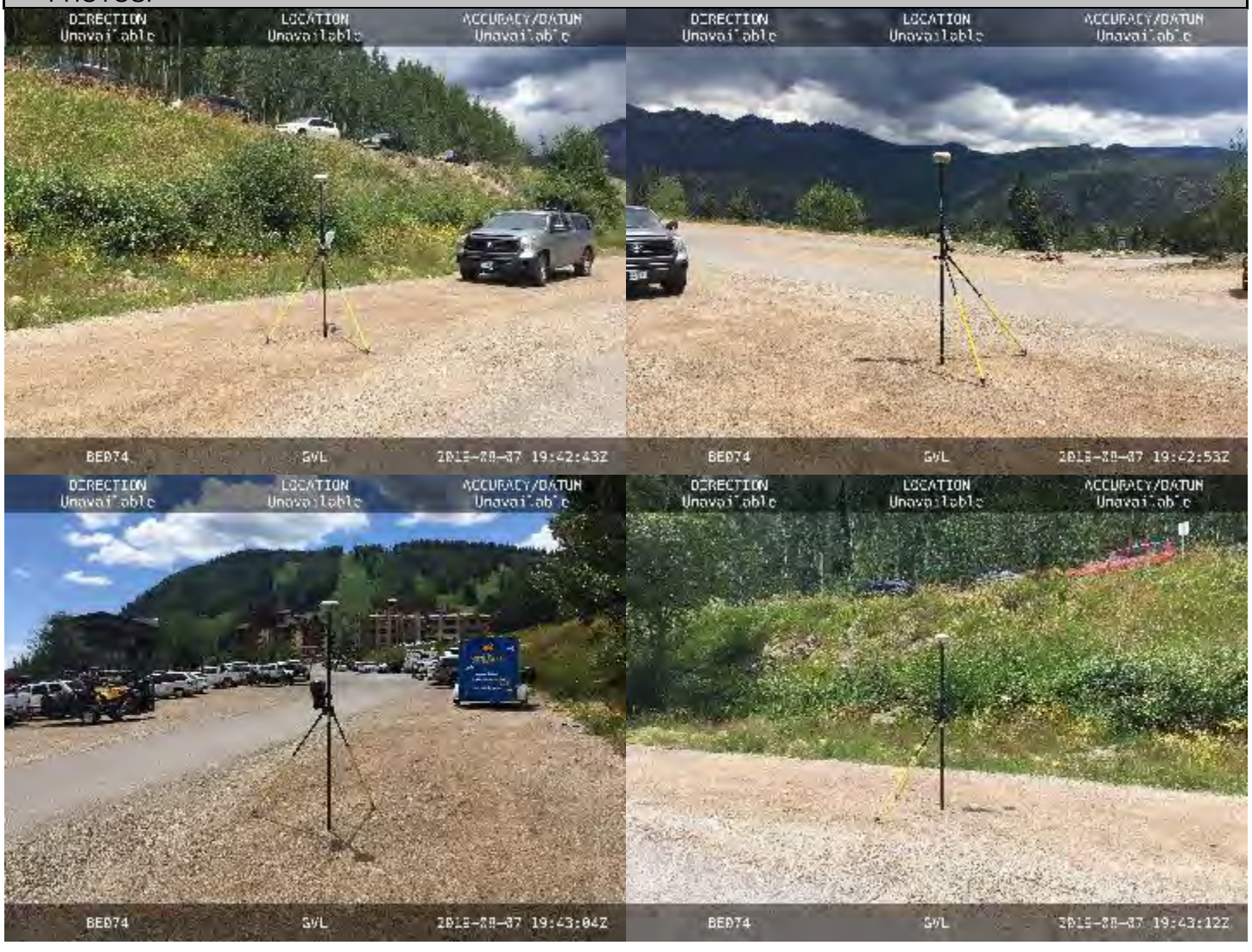
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1321919.30	2349994.11	10179.44

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE074B
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Mountain View Crest

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1359931.30	2330460.04	8909.57

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE075
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Red Horse Gulch

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1173931.65	2196618.14	6690.44

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE076
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chimney Rock

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

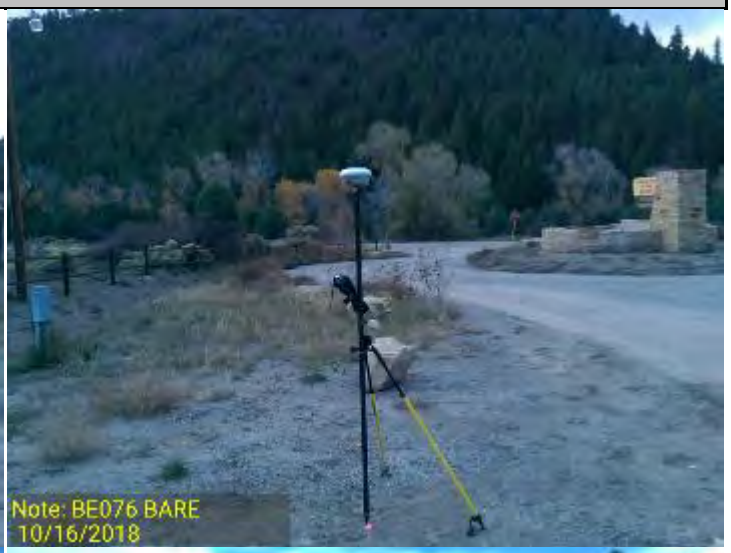
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

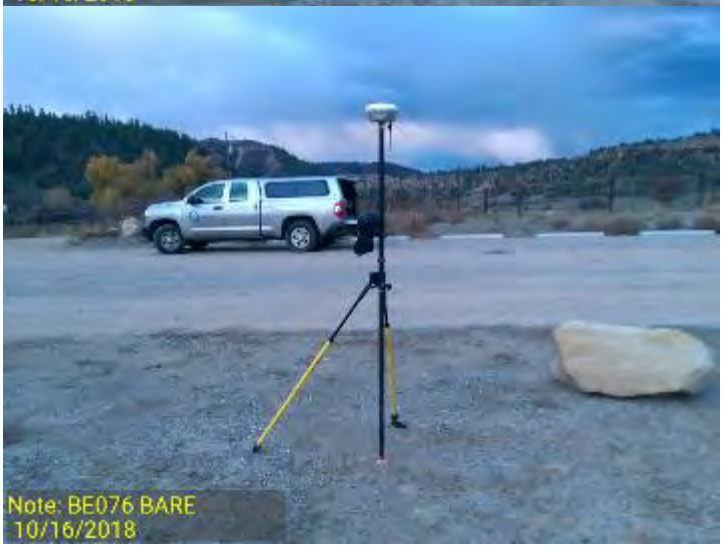
Northing	Easting	Elevation
1189985.17	2477232.41	6568.84

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:





Point ID	BE077
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chromo

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1155291.59	2633964.64	9399.30

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	Fast Static

PHOTOS:

Point ID	BE078B
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Tiffany

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1137894.59	2394697.22	6317.50

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	1.500 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE079
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Arriola

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1287474.42	2077673.47	6392.13

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE080
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hesperus

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1246199.46	2252791.25	8415.85

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE081
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Ruin Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1355307.22	1986151.14	6550.50

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE082
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1353357.72	2025196.90	6824.78

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE083
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Towaoc

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1220130.30	2078085.66	5933.28

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/10/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE084
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Point Lookout

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1258053.28	2153502.03	6976.49

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE085
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Peters Nipple

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1189783.67	1970559.66	4937.04

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE086
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1473324.05	2519948.99	10496.84

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTN

PHOTOS:

Point ID	BE087
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Lonetree Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1189942.55	2508619.20	7086.66

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE088
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Battle Rock

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1258528.88	2053232.01	5665.05

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE089
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1158371.56	2588896.55	7458.12

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE090
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1286220.04	2123678.42	6553.52

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE091
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1311707.29	2152547.11	7097.34

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE092
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Basin Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1211983.79	2279645.16	7107.66

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE093
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Rampart Hills

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1275485.94	2206195.21	7886.02

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE094
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Towaoc

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1203675.18	2062156.77	5615.77

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE095
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1437257.09	2522511.63	10039.06

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	BE096
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Vallecito Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

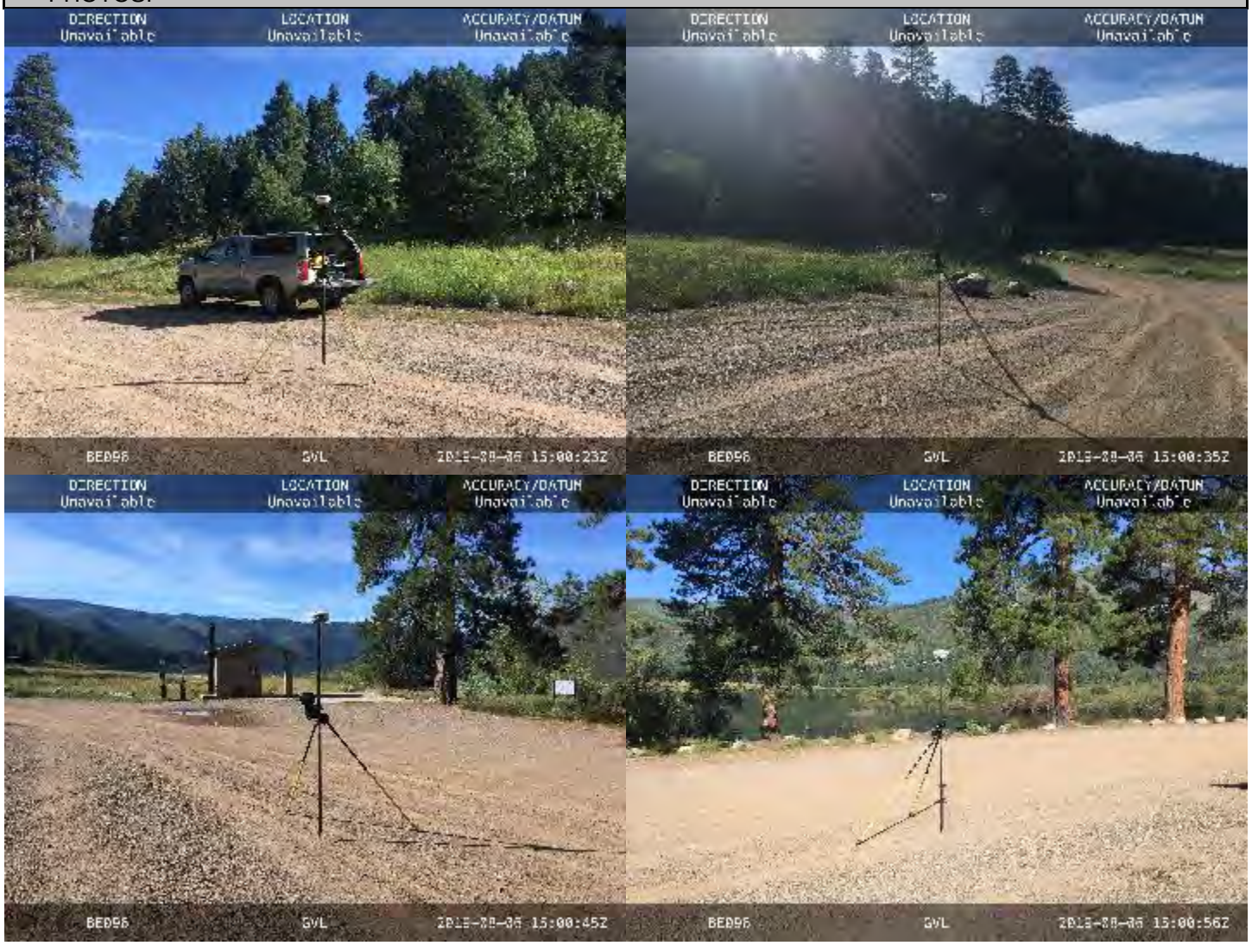
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1285309.32	2406952.36	7676.27

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.05
RMSE Z	0.09
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE097
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	La Plata

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1293954.63	2270881.08	11422.87

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	BE098
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1237070.93	2312837.94	6619.25

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE099
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1256798.02	2516811.83	8014.50

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE100		Aerial Target	Coordinate System

Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1201952.96	2338657.45	6839.21

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE101
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1403247.81	2467338.80	9462.87

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE102
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1428961.96	2514164.58	9840.55

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	BE103
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Bowdish Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1261705.20	1982792.21	4950.99

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE104
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1247380.60	2576373.38	7765.47

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE105
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Mormon Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1193458.93	2210919.70	6697.67

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE106
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1137718.59	2518265.77	6353.82

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE107
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Orphan Butte

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1331443.31	2250777.85	10486.44

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE108
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1332491.39	2029729.78	6721.03

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE109
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Burnt Cabin Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1410089.97	1980635.50	6624.18

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE110
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1311834.54	2107073.87	6981.20

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE111
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Monero

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1123121.48	2624143.34	7748.00

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	Fast Static

PHOTOS:

Point ID	BE112
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1180578.67	2060540.12	5432.35

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE113
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1269219.16	2520366.55	7883.52

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE114
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1341913.67	2168984.29	7361.50

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE115
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1374460.72	2335954.50	9377.34

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE116
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wickiup Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1249443.38	1975694.58	5045.10

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE117
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Woods Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1300440.34	2040159.03	6548.91

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE118
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1303686.92	2329114.91	7381.40

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE119
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1225301.85	2567616.97	7155.06

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE120
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moccasin Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1199525.15	2130294.36	6955.48

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE121
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1250809.13	2554852.66	7875.48

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTN

PHOTOS:

Point ID	BE122
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Trujillo

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1158132.21	2547591.83	6545.72

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	FS

PHOTOS:

Point ID	BE123
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1239692.93	2166204.53	6510.57

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE124
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mud Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1259996.24	2059031.10	5601.35

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE125
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1285828.15	2519082.74	8124.62

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE126
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

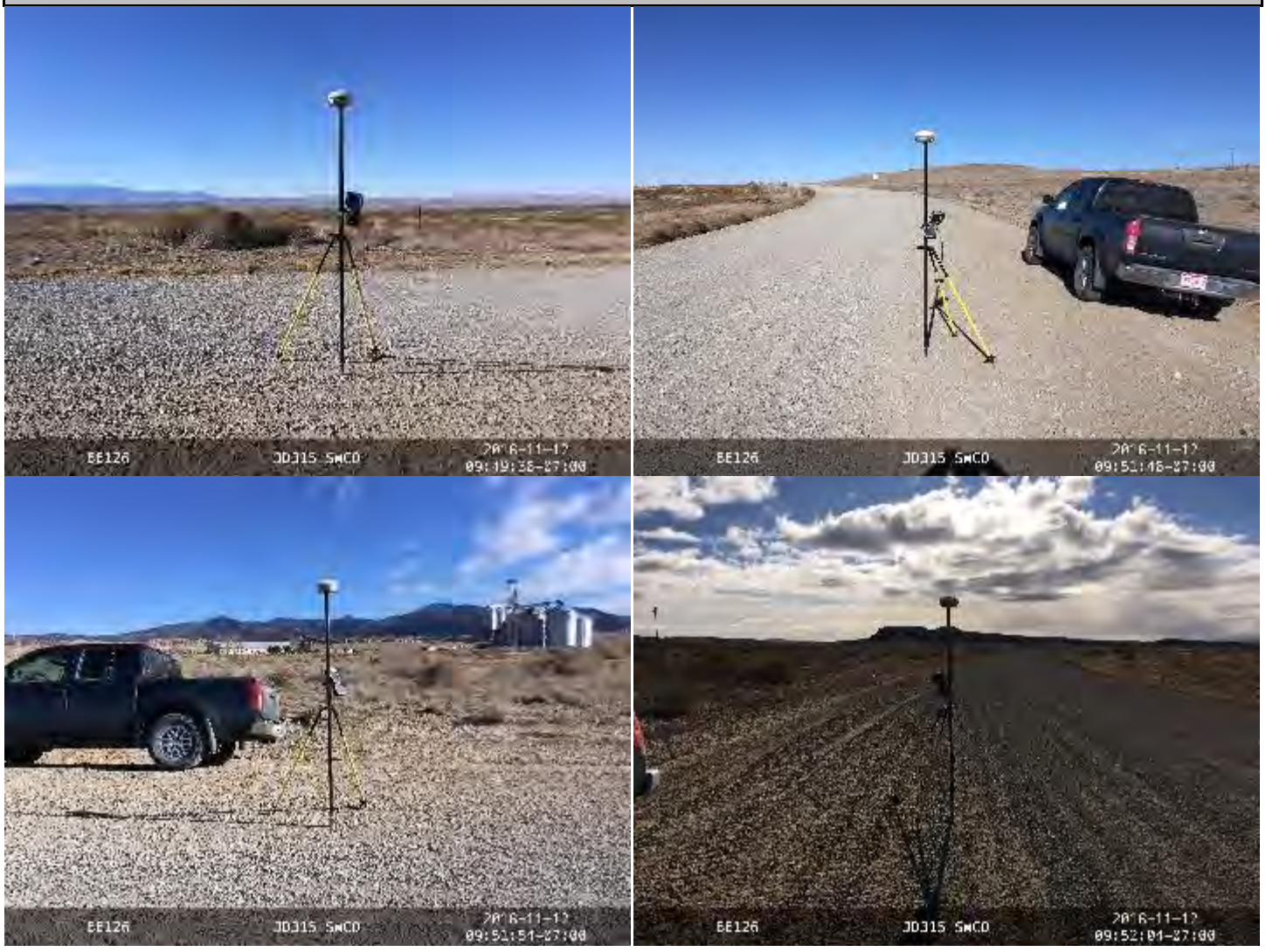
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1204998.64	2012553.10	5555.73

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	BE127
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Snowdon Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1396534.69	2359617.47	10583.99

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.995m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.07
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE128
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1292161.59	2147407.32	7242.91

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE129
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Point Lookup

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1242994.40	2144482.62	7814.35

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE130
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

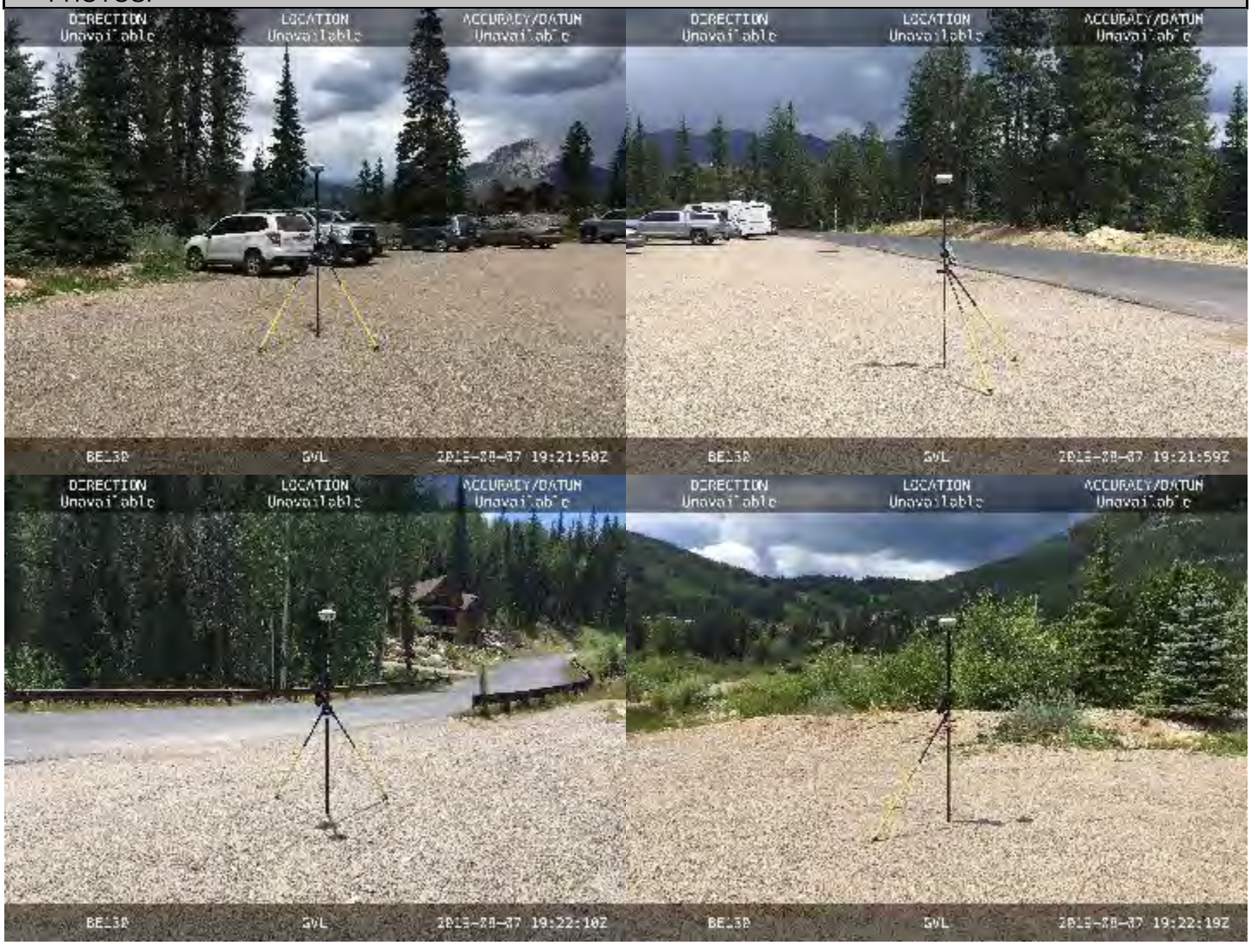
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1359007.48	2332173.42	8754.73

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.05
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE131
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1149737.55	2053798.88	5076.90

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE132
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

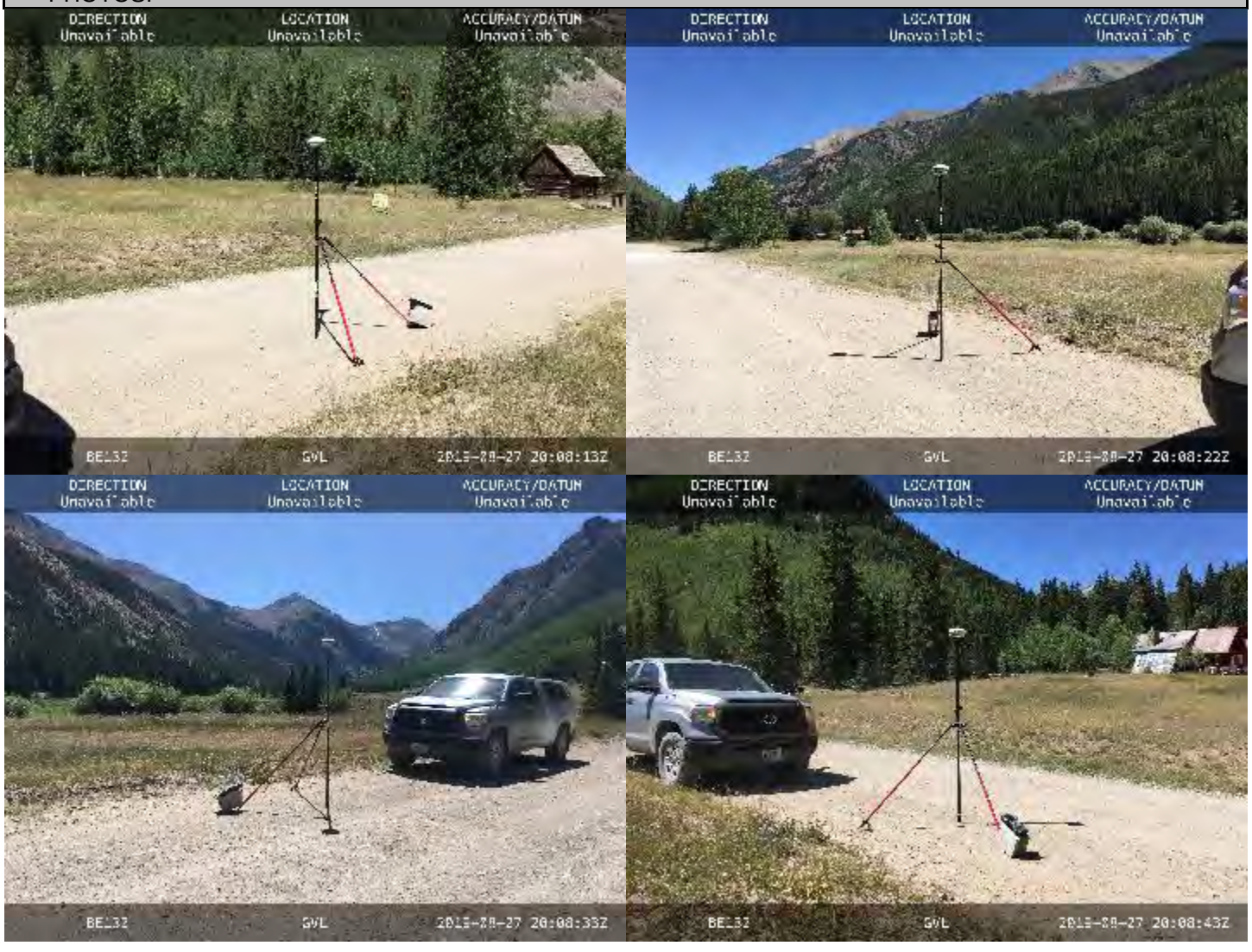
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1493652.54	2433099.88	9724.75

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	Fast Static

PHOTOS:



Point ID	BE133
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1383820.58	2341238.96	10636.18

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.06
RMSE Z	0.12
GPS Method	RTK

PHOTOS:

Point ID	BE134
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1319081.25	2331373.21	7893.18

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/11/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE135
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Lonetree Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1207165.27	2502223.66	6838.50

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE136
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

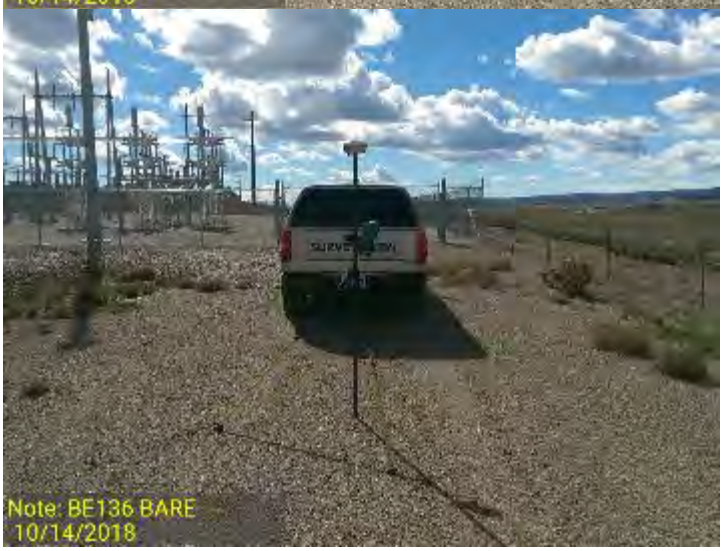
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1179653.06	2370132.57	6554.36

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:



Point ID	BE137
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Tanner Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1157919.84	2073515.24	5234.95

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.03
RMSE Z	0.05
GPS Method	FS

PHOTOS:

Point ID	BE138
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1255433.06	2590711.18	7618.72

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTN

PHOTOS:

Point ID	BE139
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1273258.16	2517743.33	7844.55

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.01
RMSE Z	0.03
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE140
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mud Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1247009.59	2079801.13	5836.25

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE141
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1246595.61	2527363.37	7843.67

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE142
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Teec Nos Pos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1140675.16	1965453.46	4849.96

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE143
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Ground Hog Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

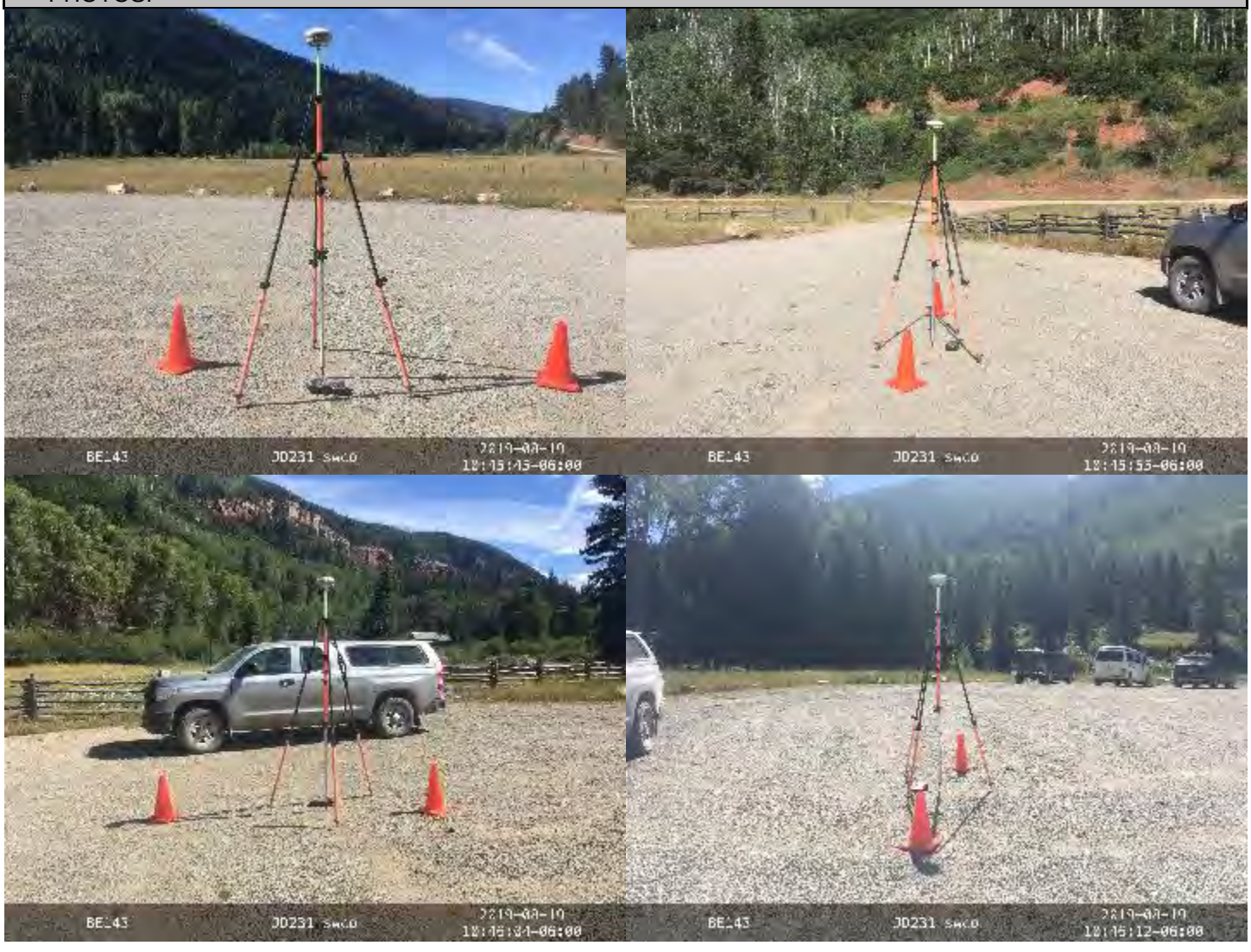
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1407859.45	2240298.39	8573.02

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	Fast Static

PHOTOS:



Point ID	BE144
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1263999.26	2113631.62	6127.67

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE145
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Electra Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

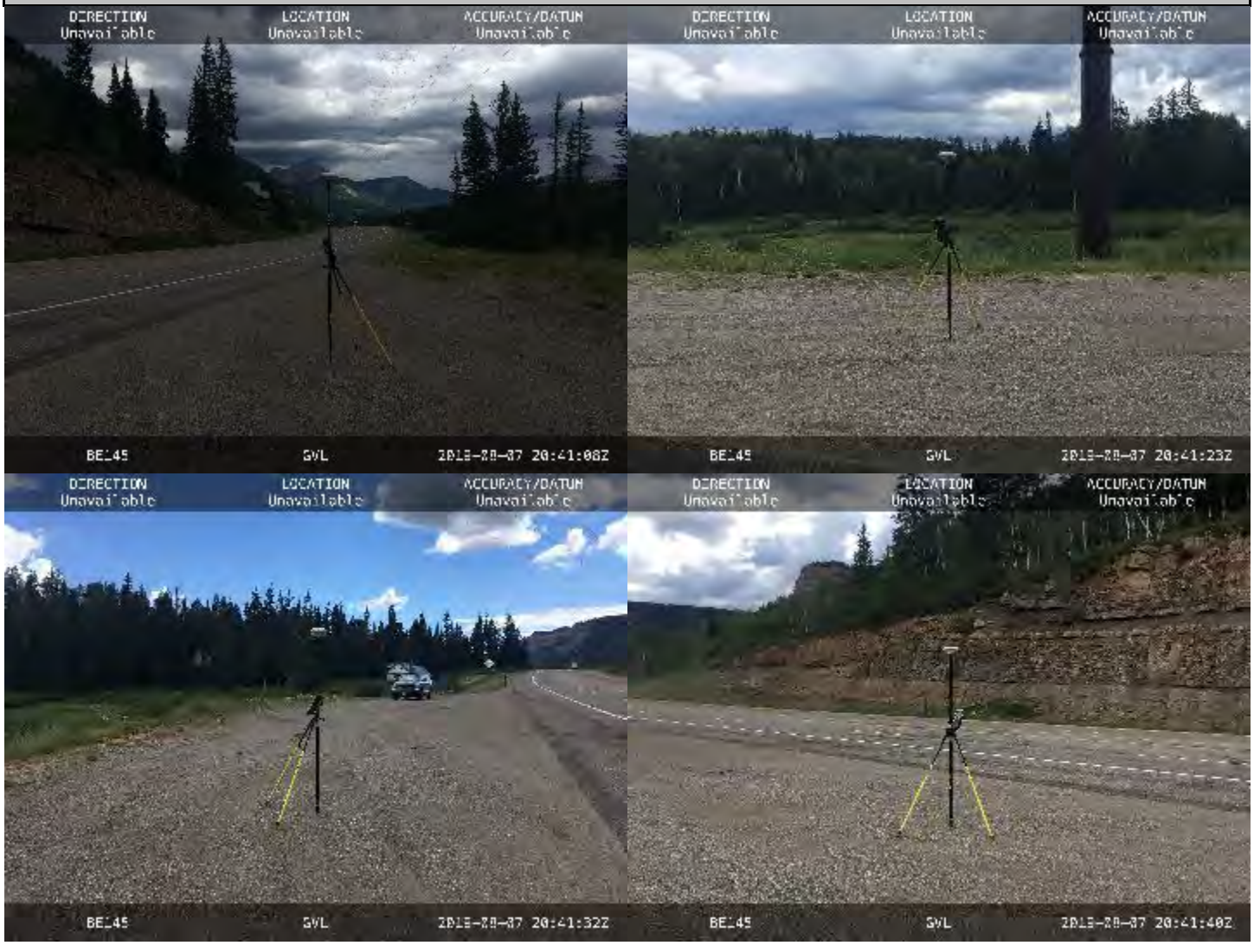
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1352535.48	2329981.88	8847.62

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/07/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE146
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bondad Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1152213.89	2308035.59	6061.10

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/18/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE147
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1357282.87	2057167.45	6924.52

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE148
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Mount Wilson

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1424369.75	2302258.59	10204.93

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/18/2019
RMSE Hz	0.01
RMSE Z	0.02
GPS Method	Fast Static

PHOTOS:

Point ID	BE149
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Weminuche Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

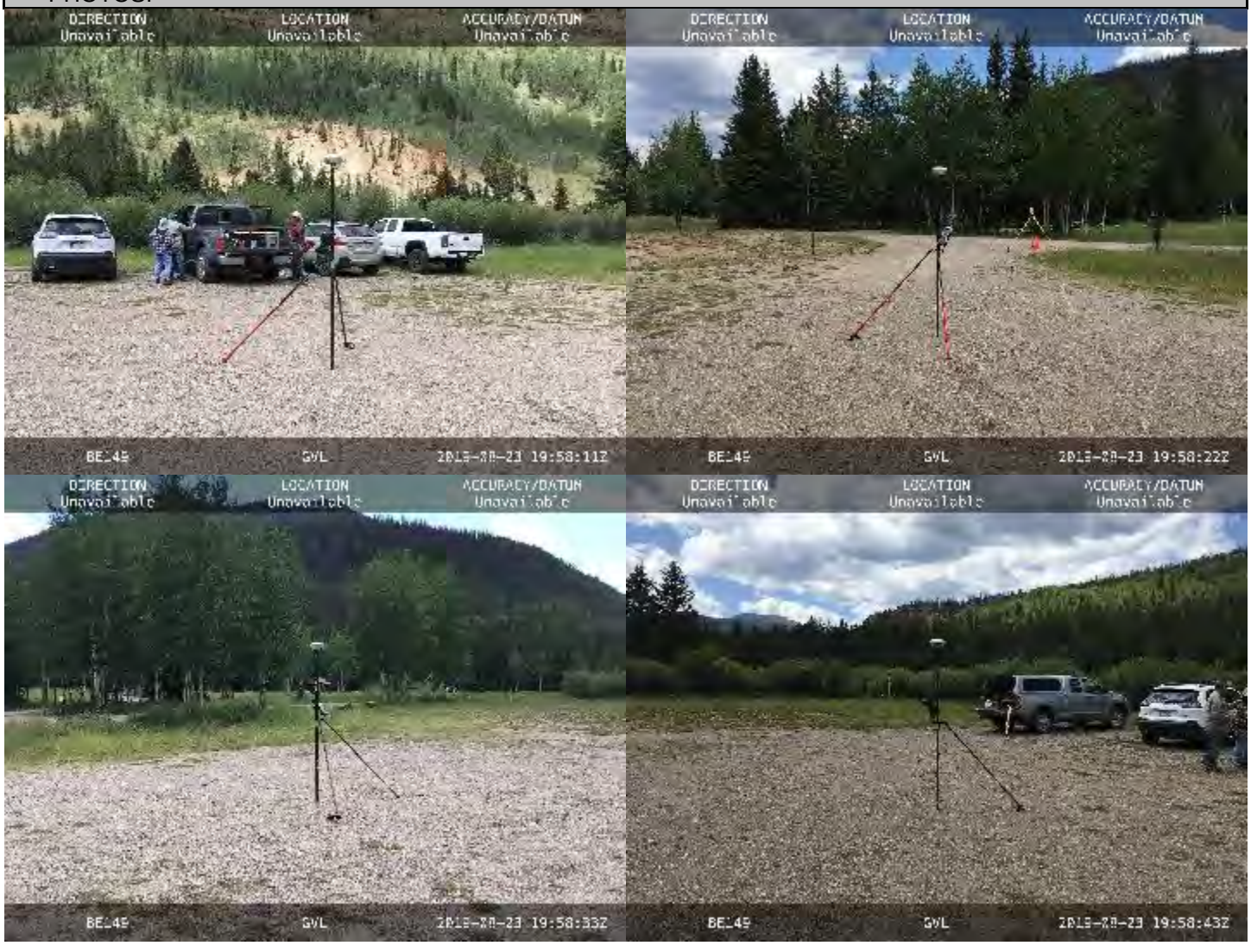
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1389535.05	2491289.93	9322.04

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE150
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

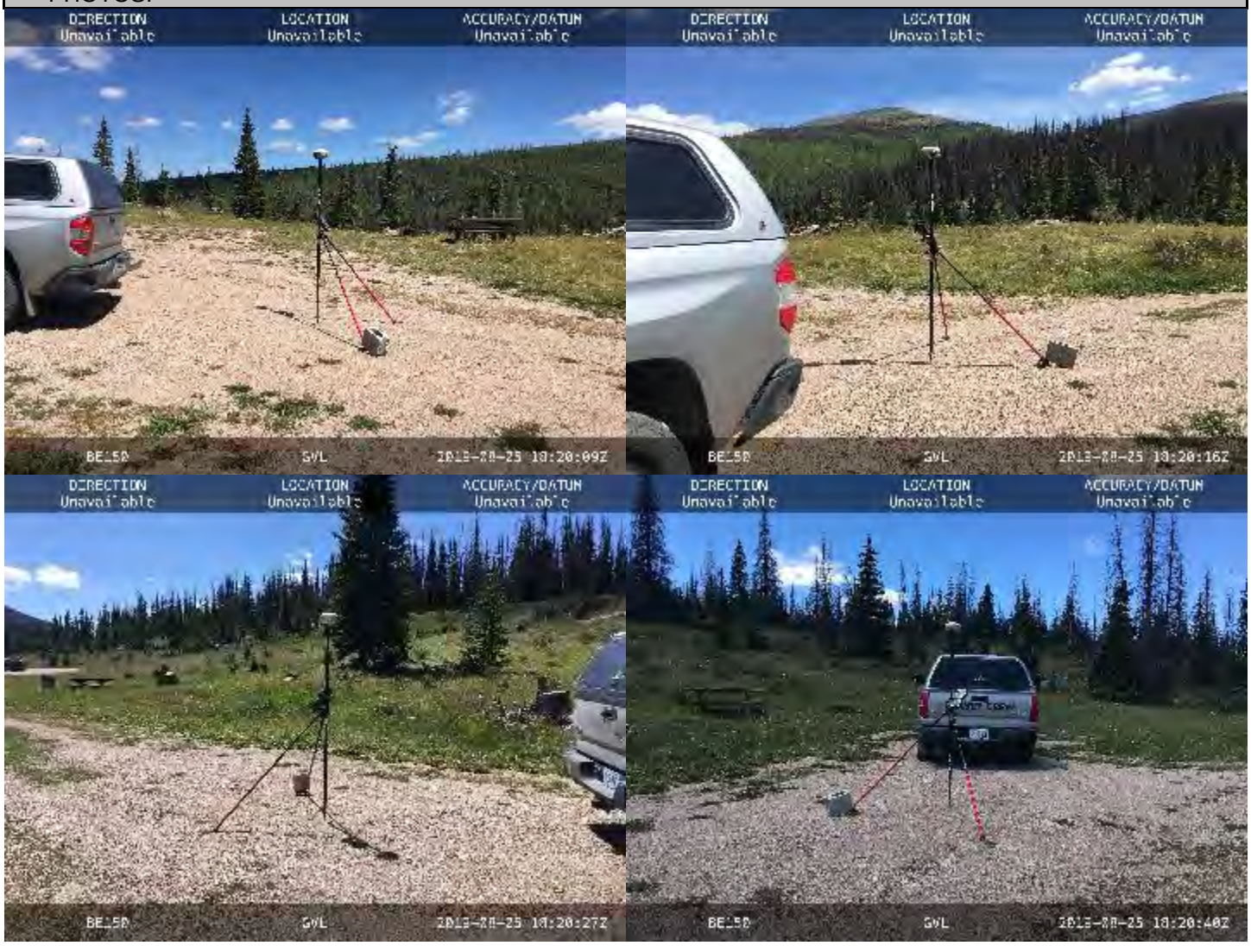
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1468407.95	2521166.88	10900.37

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE151
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Allison

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1127319.02	2432797.53	6195.02

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	BE152
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

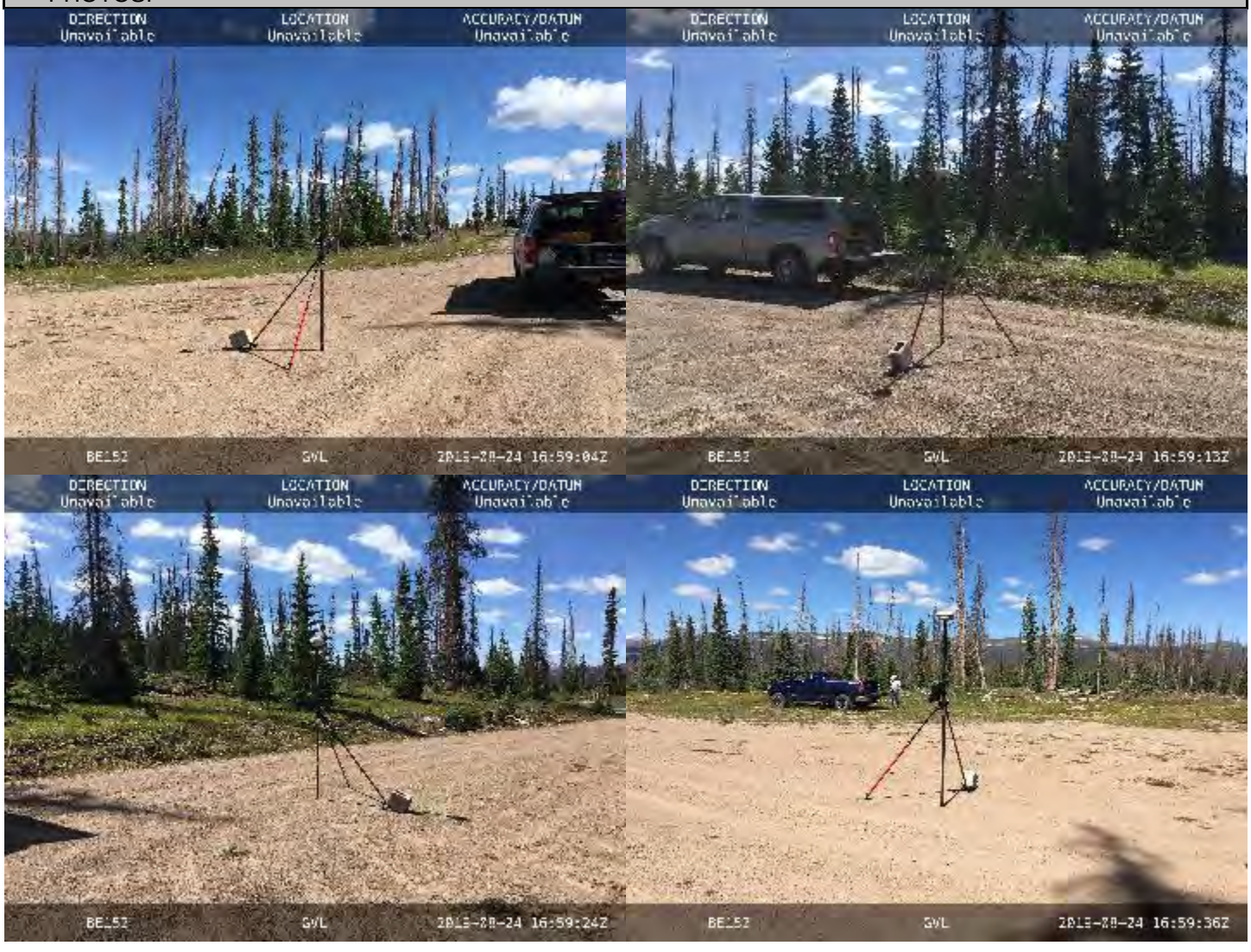
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1432307.40	2497811.38	11396.80

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.08
RMSE Z	0.10
GPS Method	RTN

PHOTOS:



Point ID	BE153
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1242900.45	2335812.83	7355.52

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE154
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1199375.74	2028401.51	5734.14

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.04
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	BE155
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Arriola

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1284394.02	2060166.86	6735.24

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	BE156
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1285285.12	2341447.19	8238.80

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/11/2019
RMSE Hz	0.06
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	BE157
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	South Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1447025.36	2147983.61	7095.18

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FastStatic

PHOTOS:

Point ID	BE158
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Handies Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1483034.10	2399158.01	12830.35

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:

Point ID	BE159
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1173939.62	2223150.95	6652.20

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE160
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

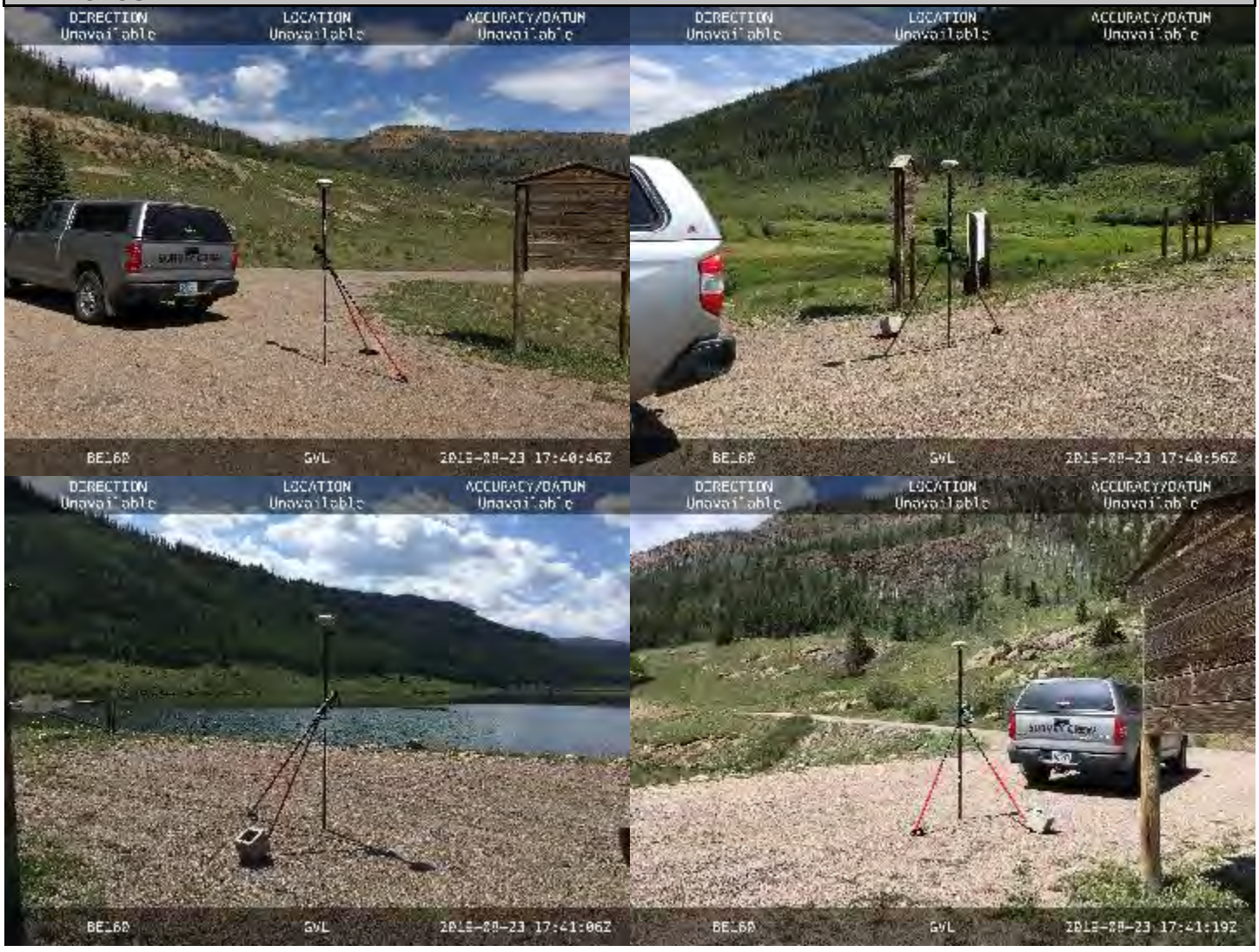
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1408737.49	2515245.15	9282.71

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.03
RMSE Z	0.08
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE161
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

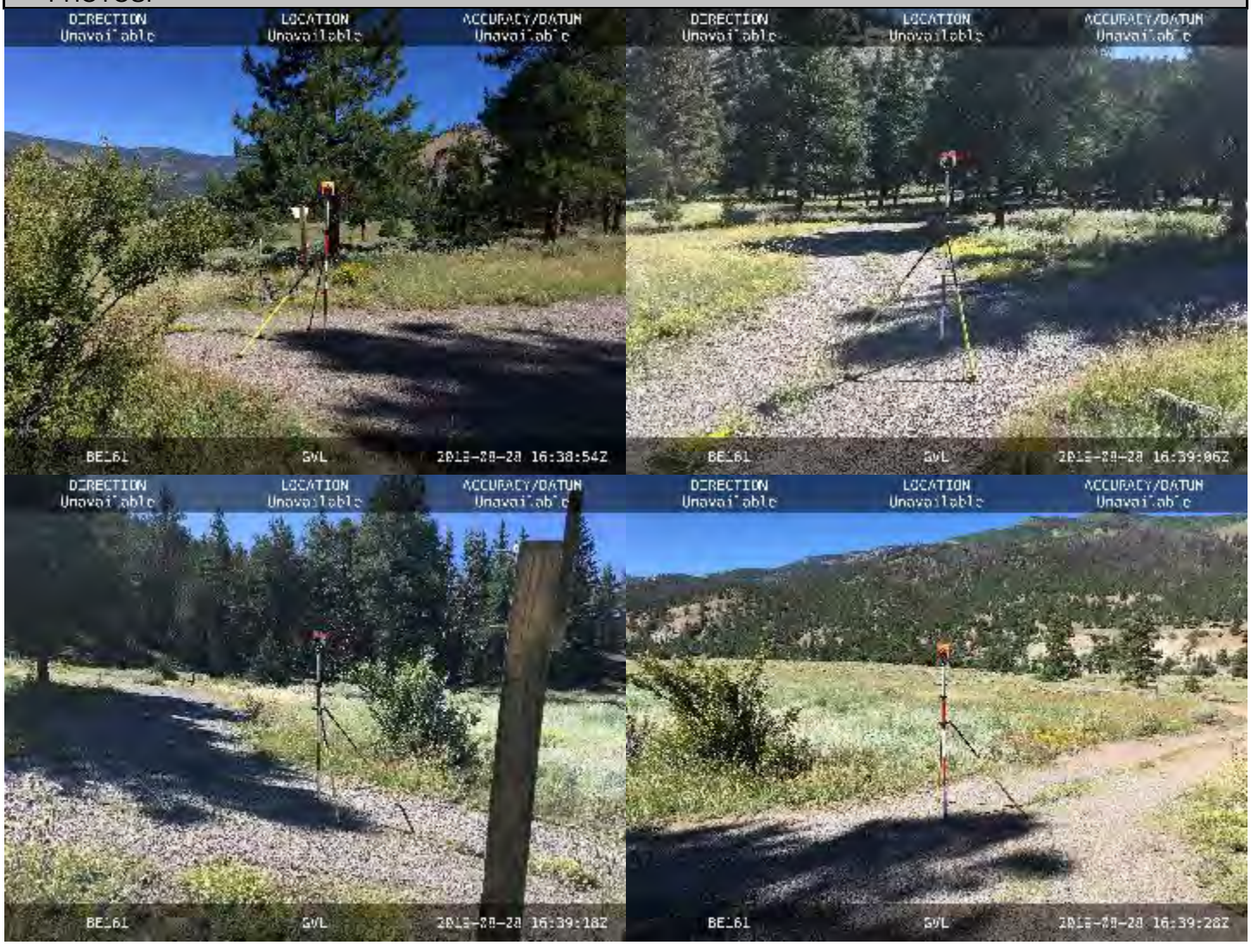
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1539259.24	2486523.10	8466.83

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.8 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:



Point ID	BE162
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1176624.19	2596377.38	7244.56

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	RTK

PHOTOS:

Point ID	BE163
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Greasewood Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1143705.59	2124540.84	6358.96

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	BE164
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cannibal Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

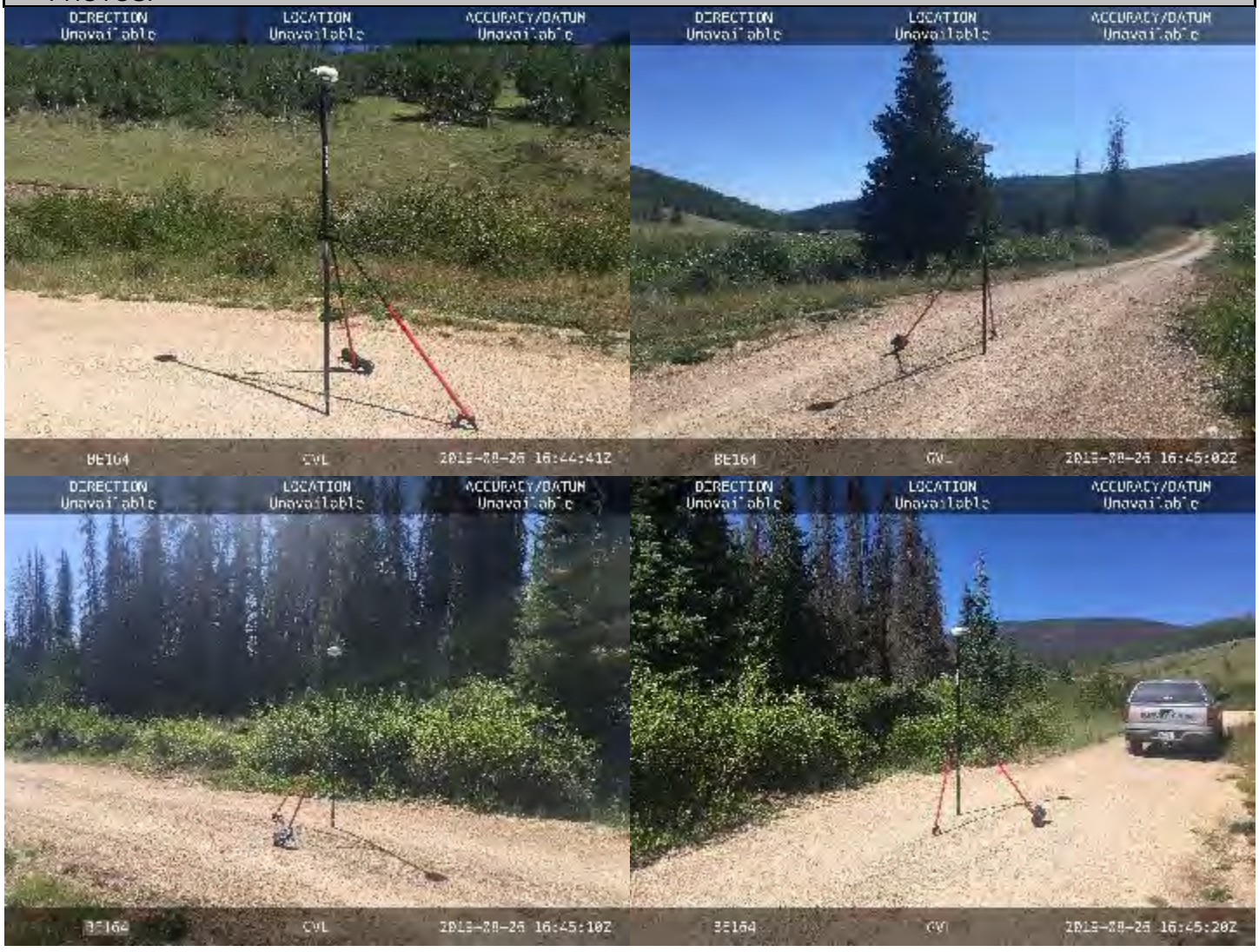
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1494759.51	2513261.06	10415.17

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	BE165
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

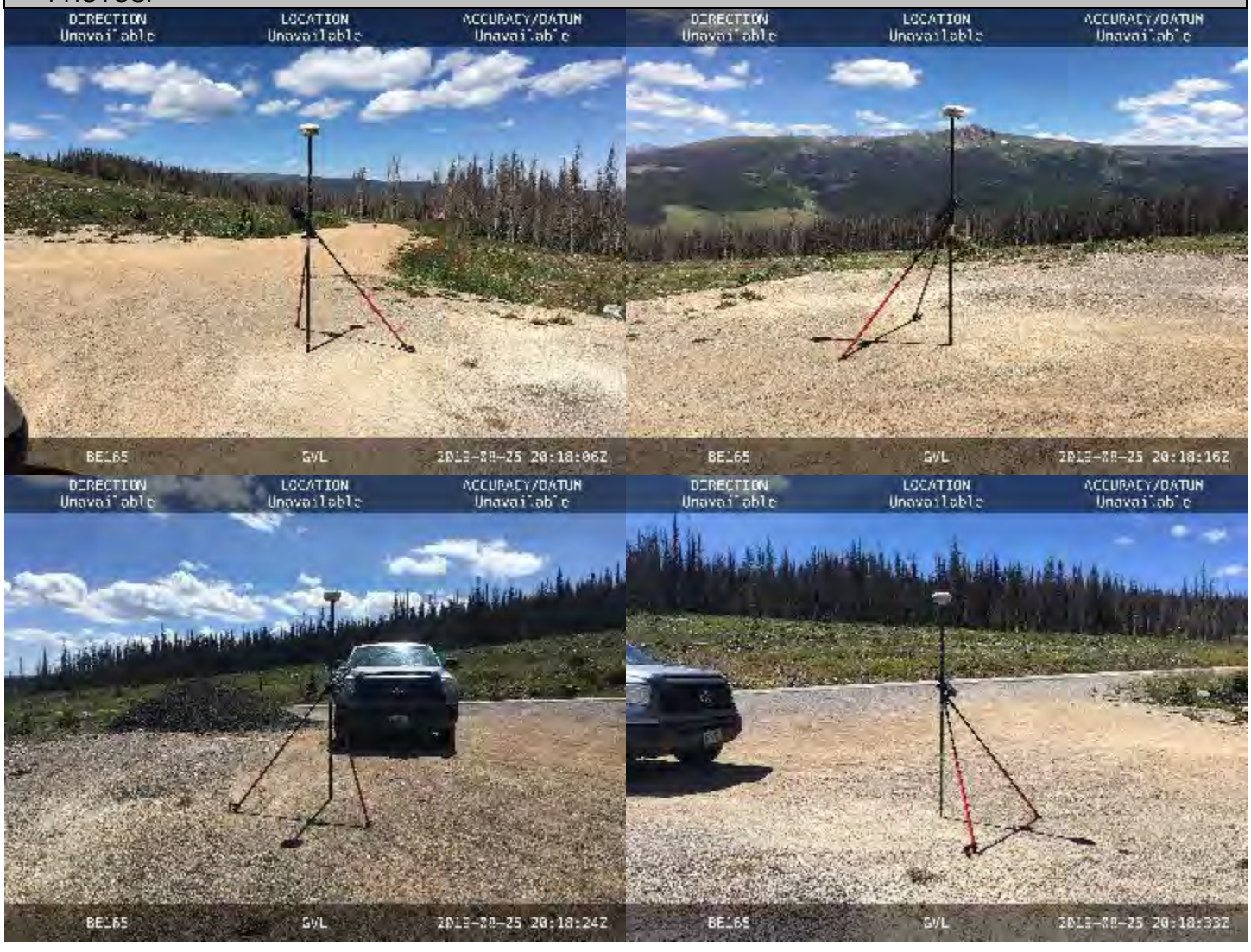
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1483312.93	2511259.29	11321.67

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	BE166
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Battle Rock

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1259355.07	2045568.52	5580.41

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.08
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	BE167
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US SURVEY FEET

Northing	Easting	Elevation
1144568.84	2220979.70	6328.94

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Urban Area Point Log Sheets

Point ID	UA001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Durango East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1236971.03	2312863.72	6618.23

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/13/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Quantum Spatial, Inc. – 523 Wellington Way, Lexington, KY 40503 – Ph. 859-277-8700 - www.quantumspatial.com

Point ID	UA002
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1258286.93	2186261.69	6967.56

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	UA003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Allison

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1136606.76	2419764.11	6229.20

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.09
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	UA004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1221983.08	2548927.43	7595.60

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	UA005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1260922.74	2188365.81	7011.72

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Tall Weeds Point Log Sheets

Point ID	TW001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1181666.48	2347500.47	6544.79

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	TW002
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1377883.12	1981999.67	6618.99

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	TW003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chromo

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149409.80	2612599.24	7595.07

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.02
RMSE Z	0.04
GPS Method	Fast Static

PHOTOS:

Point ID	TW004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

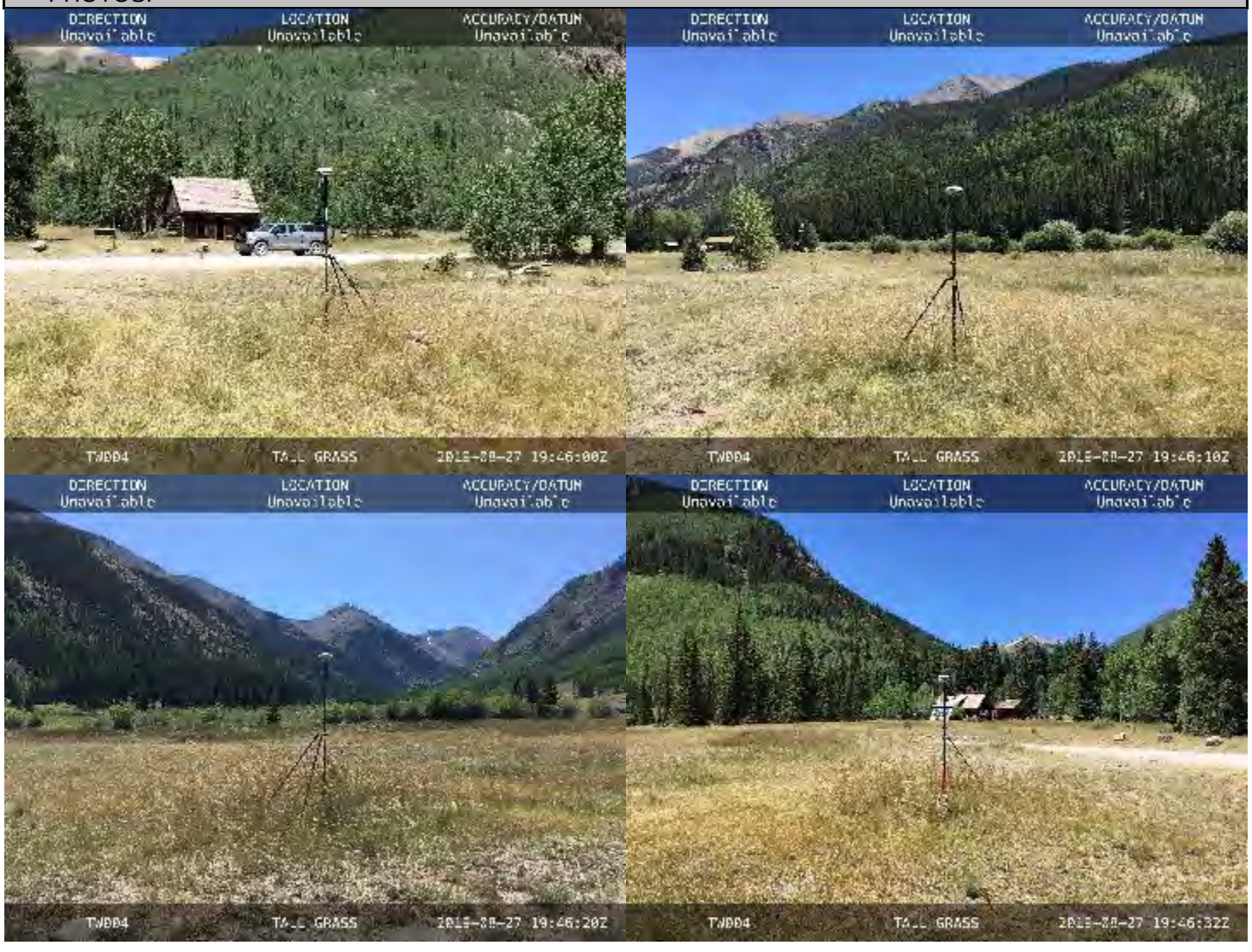
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1493633.41	2433220.97	9722.14

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	TW005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mud Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1234707.57	2079593.55	5964.80

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	TW006
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Yellow Jacket

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1356599.01	2078005.63	7288.89

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	TW007
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

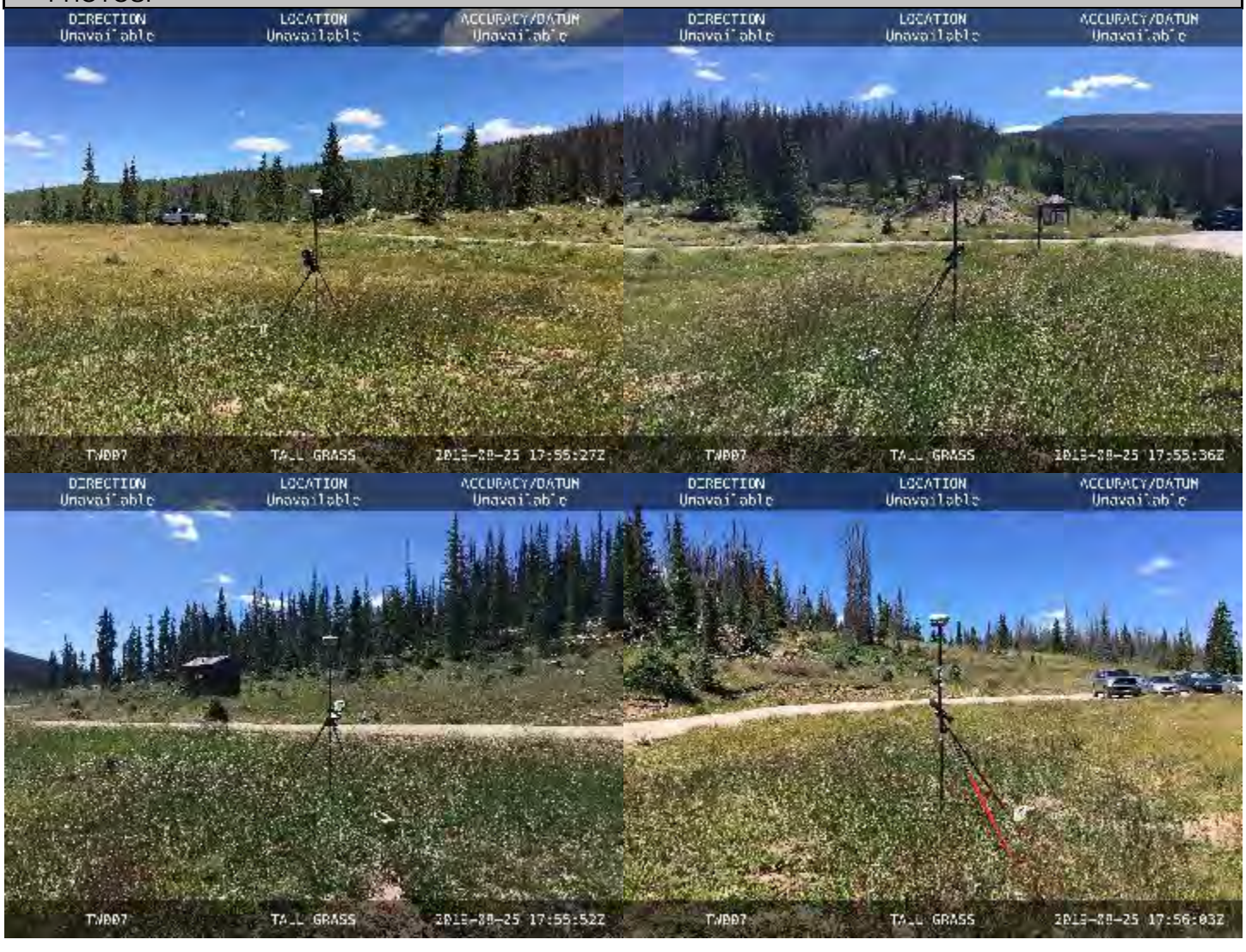
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1468105.69	2521387.72	10898.24

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.05
RMSE Z	0.11
GPS Method	RTN

PHOTOS:



Point ID	TW008
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Allison

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1131279.85	2418392.04	6160.32

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	TW009
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	South Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1445418.70	2160392.54	7402.83

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FastStatic

PHOTOS:

Point ID	TW010
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Springs

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1235133.85	2534268.20	7859.78

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/09/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	TW011
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SE

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1163714.57	2043174.63	5196.65

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	TW012
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Wolf Creek Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

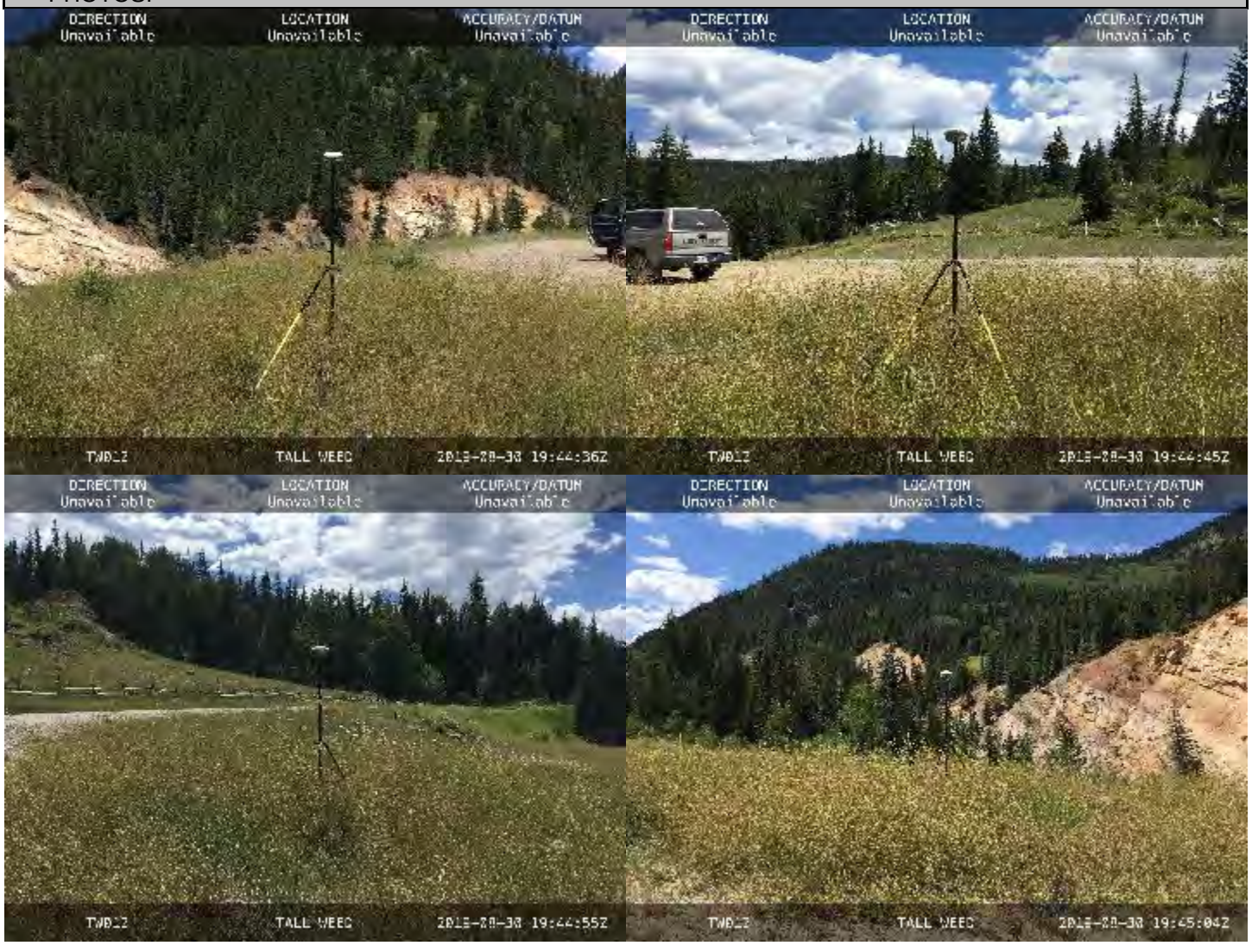
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1265161.98	2607698.21	7979.98

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	TW013
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cannibal Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

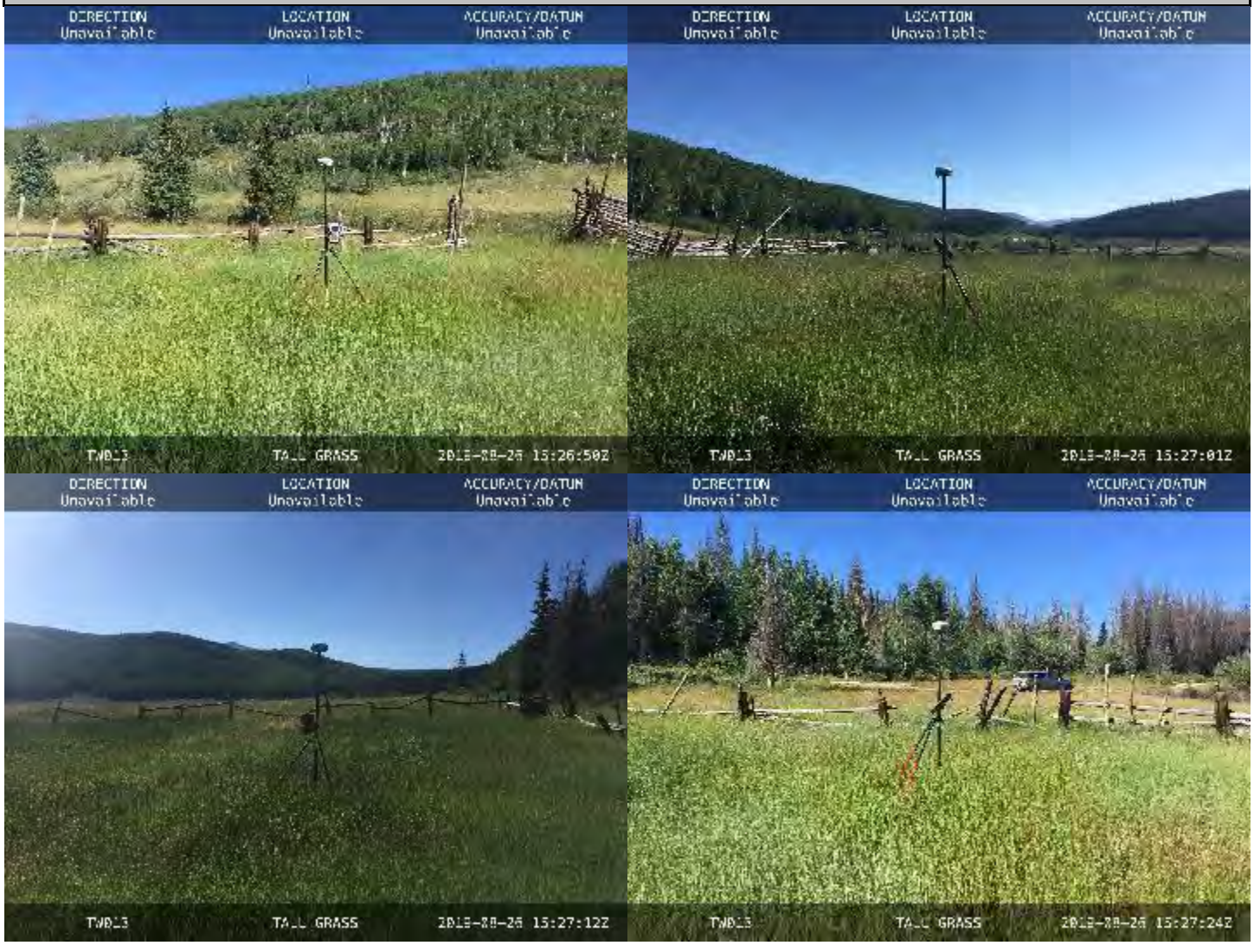
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1494759.85	2513840.39	10390.65

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:



Point ID	TW014
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

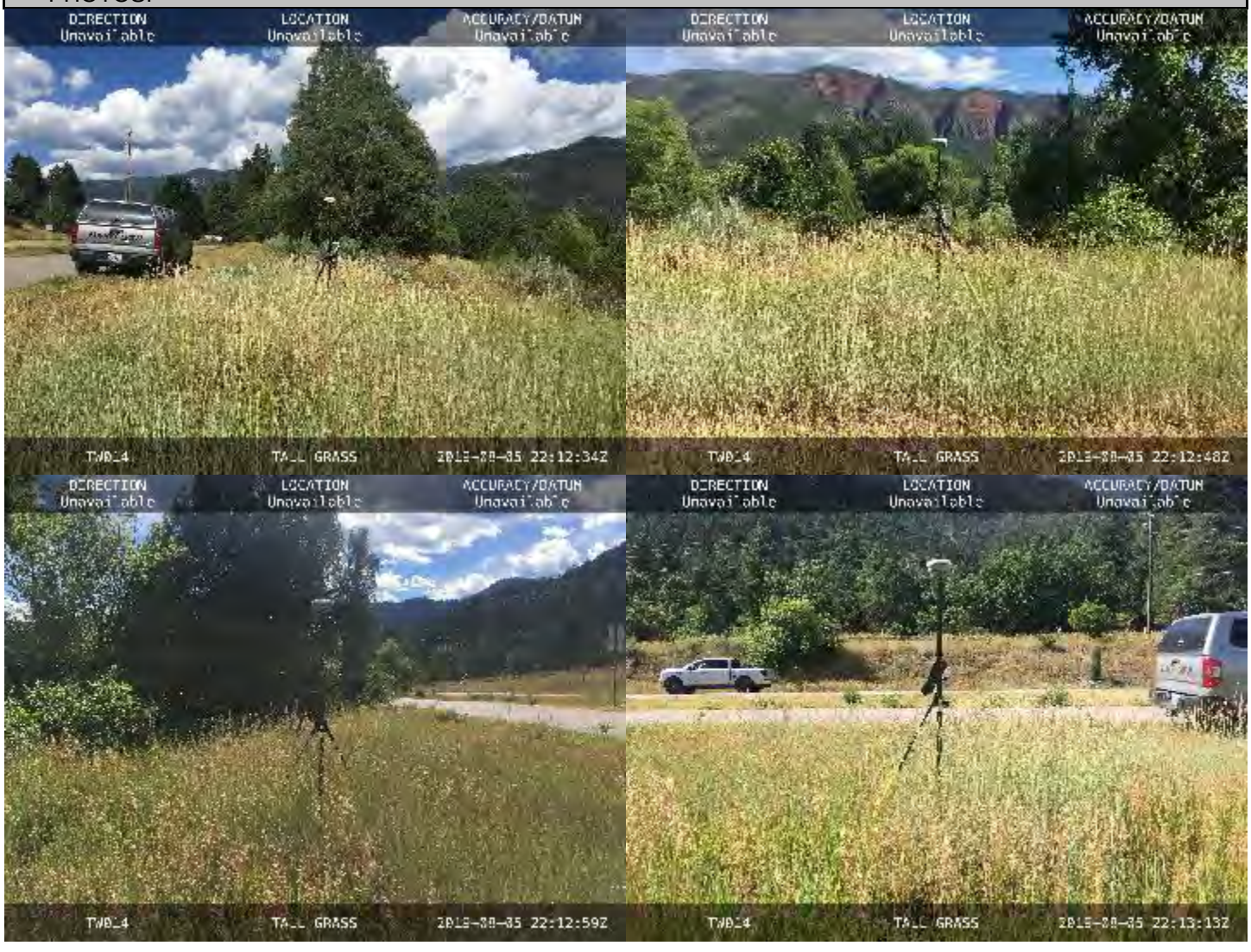
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1283660.59	2325284.90	6680.98

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/05/2019
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	RTN

PHOTOS:



Point ID	TW015
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1201999.47	2338599.50	6839.75

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	TW016
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Bondad Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1164294.75	2342385.64	6769.18

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/18/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	TW017
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1154986.37	2505951.13	6471.55

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/17/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	TW018
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1403134.32	2467463.15	9459.40

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FAST STATIC

PHOTOS:

Point ID	TW019
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wallace Ranch

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357313.08	2224456.10	10229.46

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/16/2019
RMSE Hz	0.07
RMSE Z	0.07
GPS Method	Fast Static

PHOTOS:

Point ID	TW020
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1421118.36	2267607.70	10097.23

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305M

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	Fast Static

PHOTOS:

Point ID	TW021
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1247710.36	2181555.49	6852.39

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	RTK

PHOTOS:

Point ID	TW022
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Burnt Cabin Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1348469.25	2172782.51	7376.10

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	TW023
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1308184.02	2098626.61	6683.89

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/14/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	TW024
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Harris Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

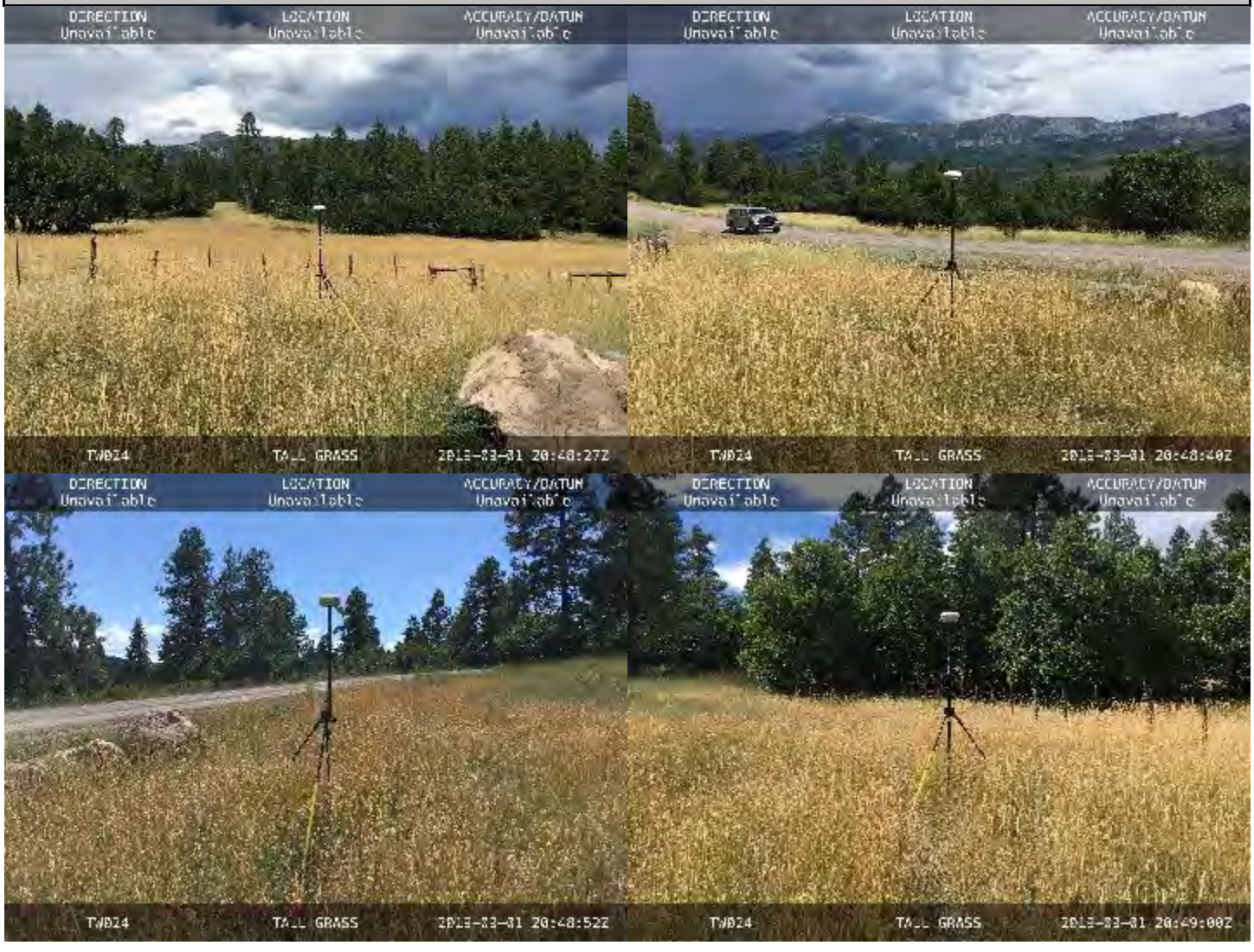
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1200264.65	2615230.29	8148.63

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/01/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTN

PHOTOS:



Point ID	TW025
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1303330.31	2498538.62	8203.55

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.04
RMSE Z	0.05
GPS Method	FAST STATIC

PHOTOS:

Forest Point Log Sheets

Point ID	FR001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1429549.74	2526716.03	9555.02

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR002
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Champagne Spring

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1385994.02	2019690.30	6601.46

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.09
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Mountain View Crest

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1321801.07	2350076.39	10207.01

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/10/2019
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total station

PHOTOS:

Quantum Spatial, Inc. – 523 Wellington Way, Lexington, KY 40503 – Ph. 859-277-8700 - www.quantumspatial.com

Point ID	FR004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Vallecito Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

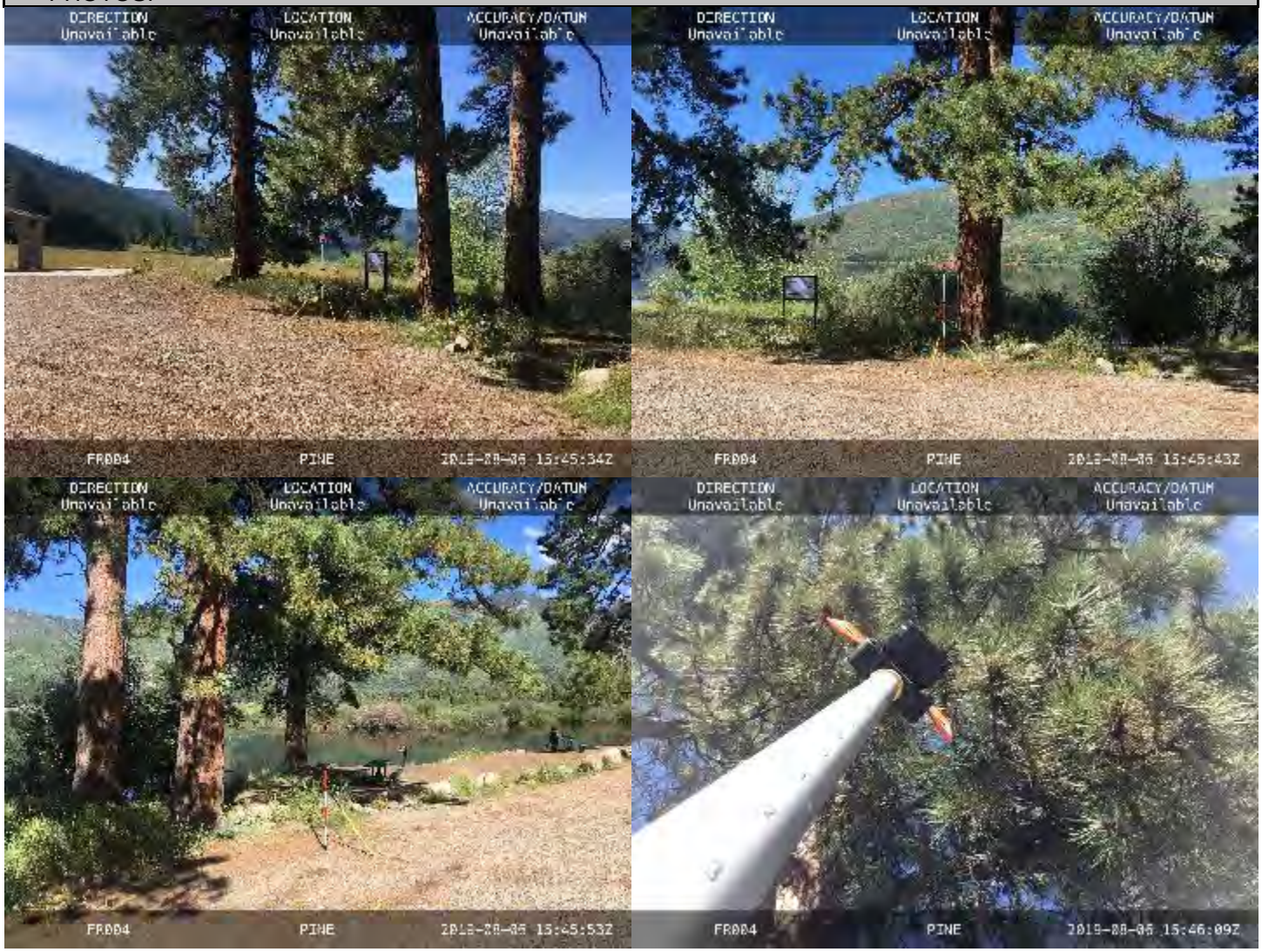
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1285261.44	2406910.06	7672.40

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.09
RMSE Z	0.12
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wallace Ranch

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357697.66	2224091.43	10231.58

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/16/2019
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	Total station

PHOTOS:

Point ID	FR006
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Stoner

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1328149.48	2195545.99	8938.92

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.10
RMSE Z	0.13
GPS Method	Total station

PHOTOS:

Point ID	FR007
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1361707.07	2318873.03	9455.01

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/14/2019
RMSE Hz	0.011
RMSE Z	0.015
GPS Method	Total station

PHOTOS:

Point ID	FR008
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dolores Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1421338.86	2267001.29	10103.34

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/19/2019
RMSE Hz	0.05
RMSE Z	0.04
GPS Method	Total station

PHOTOS:

Point ID	FR009
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1417146.98	2184876.59	8674.53

Operator	Emily Gottesfeld
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	Total Station

PHOTOS:

Quantum Spatial, Inc. – 523 Wellington Way, Lexington, KY 40503 – Ph. 859-277-8700 - www.quantumspatial.com

Point ID	FR010
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Devil Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1237572.72	2469149.82	8112.86

Operator	Aaron Olson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/09/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	Total Station

PHOTOS:

Point ID	FR011
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Battle Rock

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1258441.18	2053186.74	5659.93

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.10
RMSE Z	0.12
GPS Method	Total Station

PHOTOS:

Point ID	FR012
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1199853.06	2570818.41	7326.42

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.615m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	Total Station

PHOTOS:

Point ID	FR013
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Orphan Butte

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1331475.40	2250833.24	10490.58

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/17/2019
RMSE Hz	0.10
RMSE Z	0.13
GPS Method	Total station

PHOTOS:

Point ID	FR014
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Pinkerton Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1146717.16	2248494.38	6196.25

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.10
RMSE Z	0.13
GPS Method	Total Station

PHOTOS:

Point ID	FR015
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Lemon Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

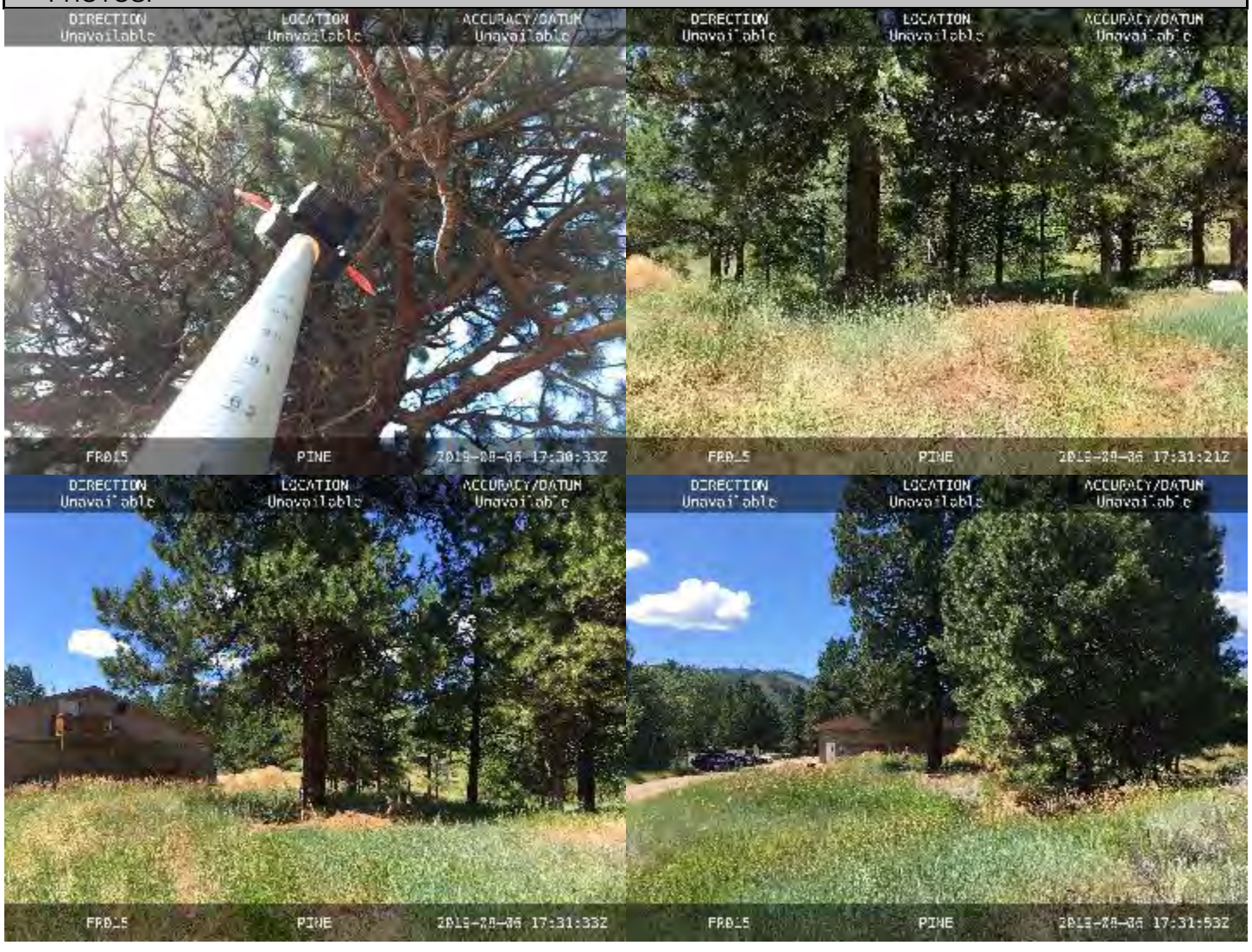
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1266880.29	2396002.96	7613.84

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/06/2019
RMSE Hz	0.06
RMSE Z	0.05
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR016
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Rampart Hills

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1309459.37	2212539.38	9008.95

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/12/2019
RMSE Hz	0.11
RMSE Z	0.14
GPS Method	Total station

PHOTOS:

Point ID	FR017
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Kline

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1209107.48	2239027.98	7339.95

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	FR018
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cannibal Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

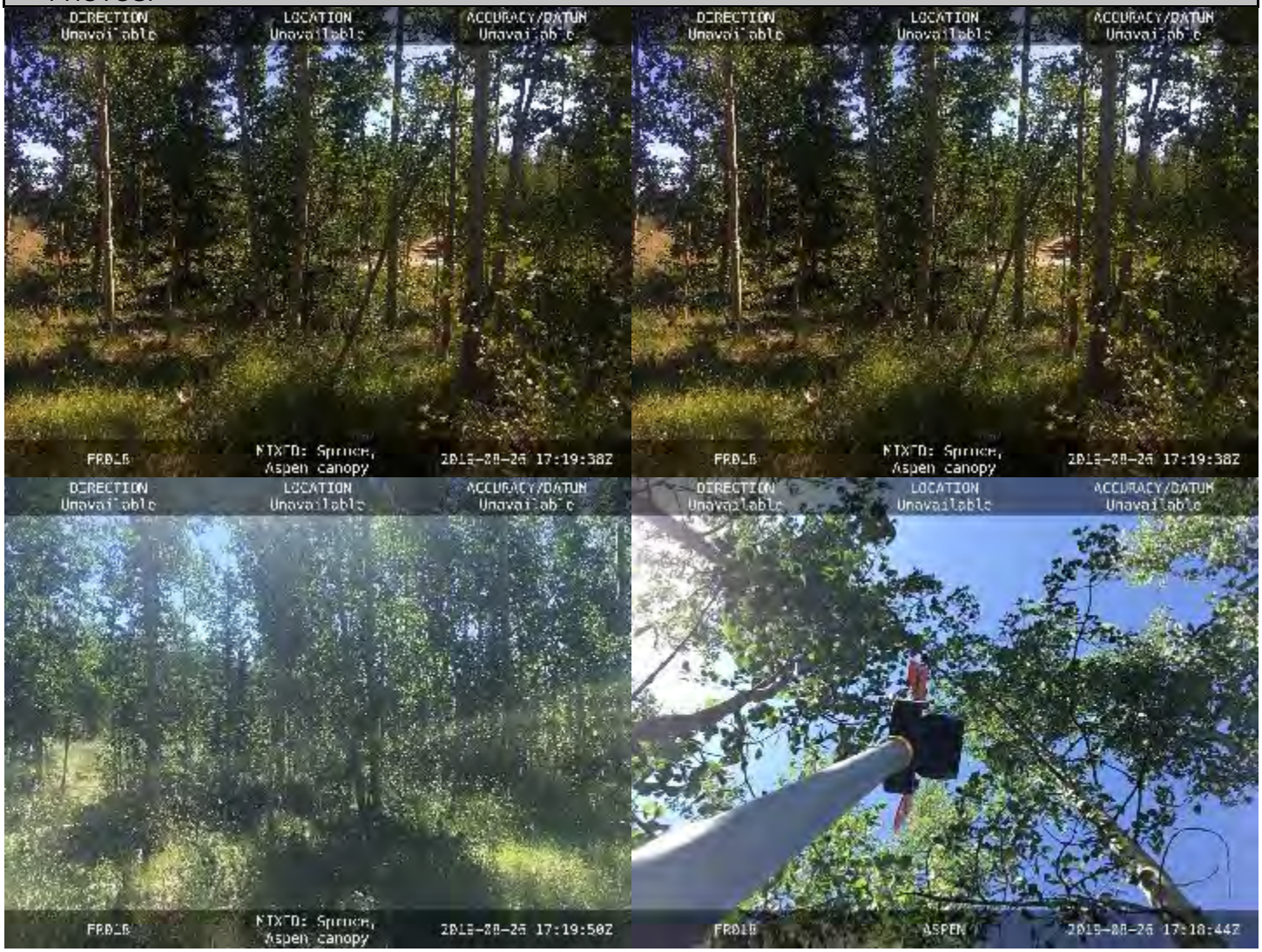
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1495917.66	2511835.98	10632.96

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.05
RMSE Z	0.05
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR019
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1539356.69	2486557.57	8466.97

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.8 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR020
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Monqui Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1149188.63	2117701.73	6312.71

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.85 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR021
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Woods Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1300221.36	2039972.45	6543.98

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.75 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.09
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR022
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1247290.22	2576384.12	7761.49

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.615m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.10
RMSE Z	0.13
GPS Method	Total Station

PHOTOS:

Point ID	FR023
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	South Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1447217.43	2147852.12	7104.05

Operator	Emily Gottesfeld
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	Total Station

PHOTOS:

Point ID	FR024
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	La Plata

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1294023.43	2270921.95	11443.09

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/13/2019
RMSE Hz	0.06
RMSE Z	0.05
GPS Method	Total station

PHOTOS:

Point ID	FR025
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Cortez

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1264077.84	2113623.96	6128.79

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.08
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR026
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Gem Village

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1176334.80	2379296.29	6486.28

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	FR027
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Chimney Rock

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1190086.67	2477221.21	6577.94

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.9 meters

Date (MM-DD-YYYY)	10/17/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR028
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

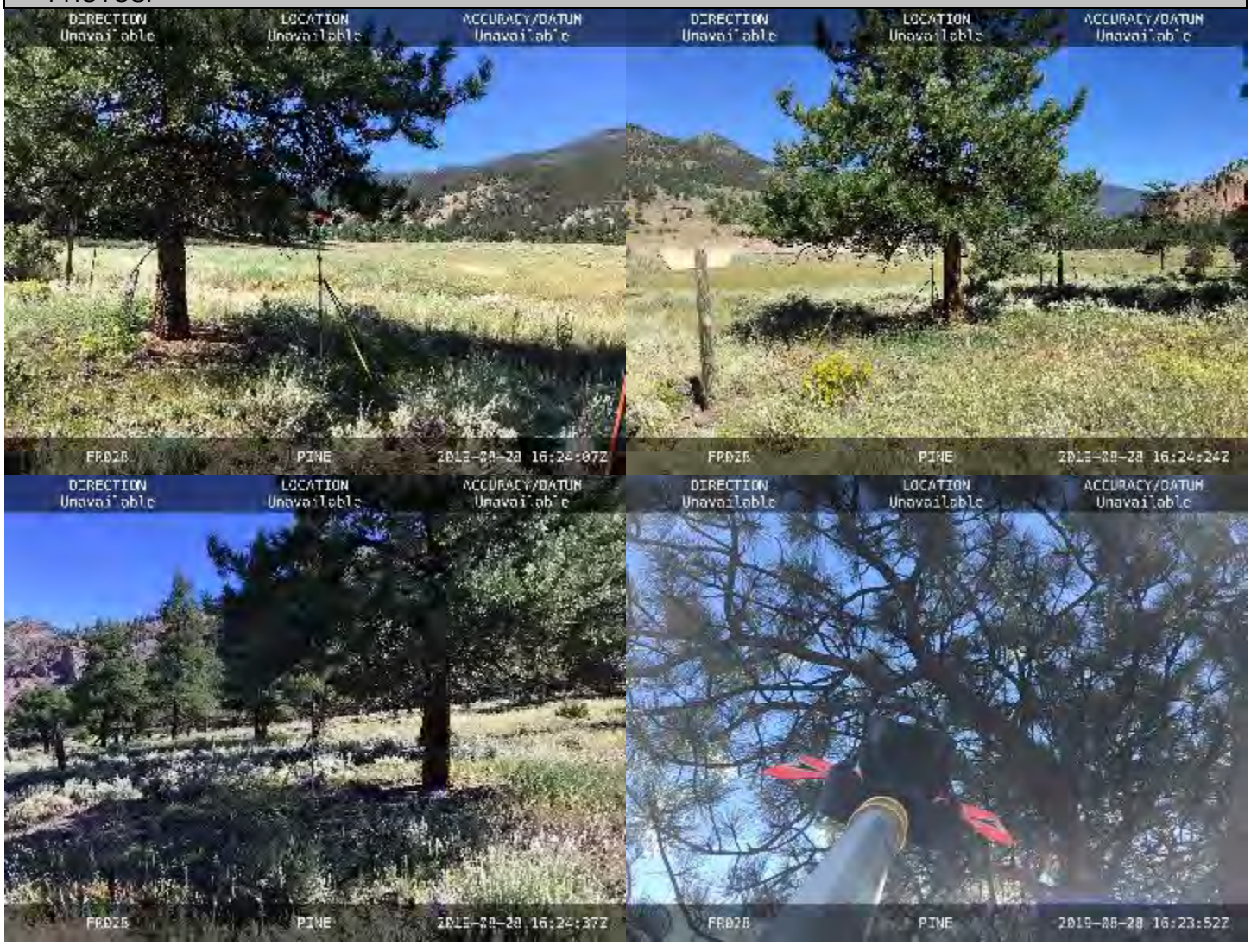
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1539297.32	2486512.62	8465.27

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.8 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR029
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Weminuche Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

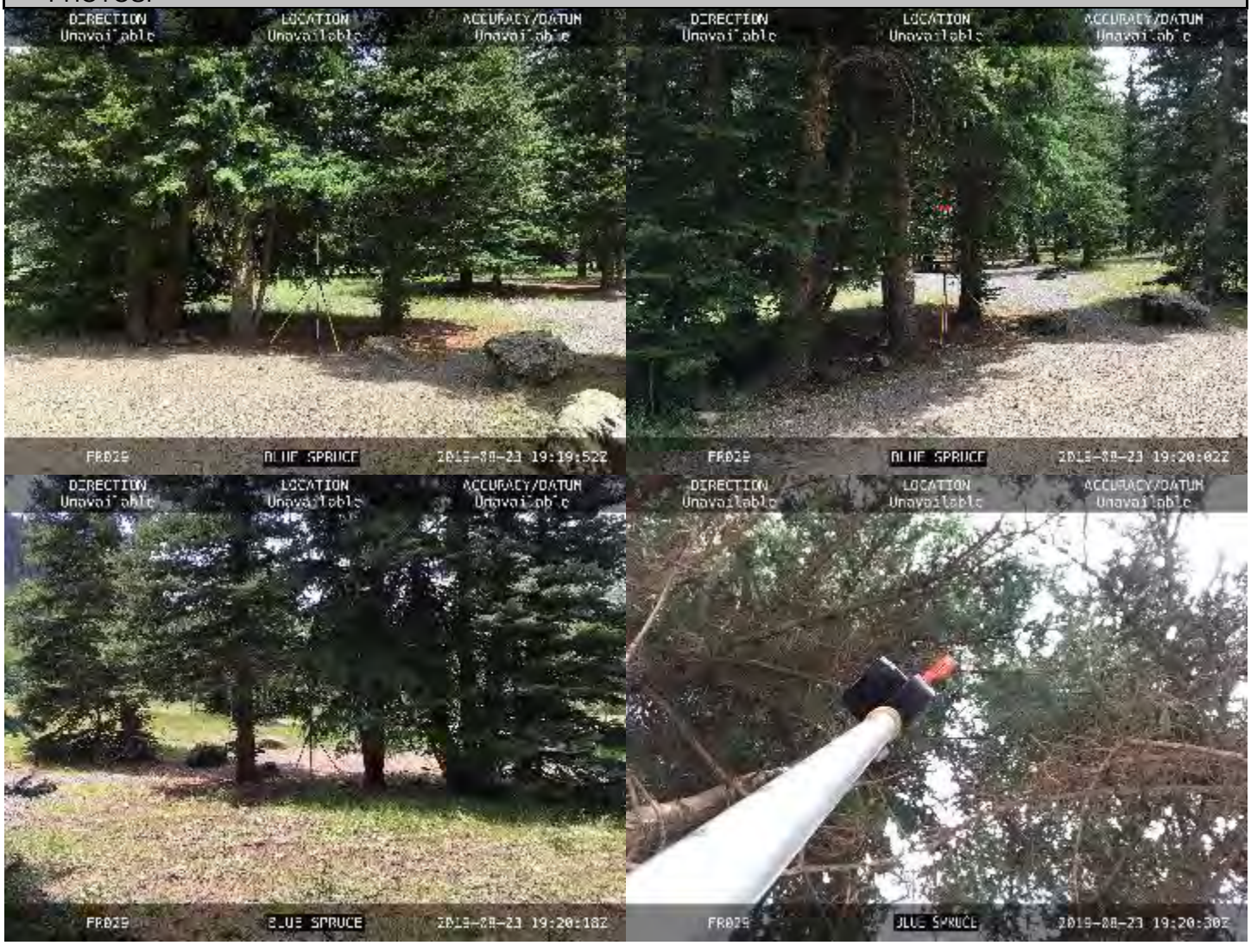
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1389467.53	2491401.83	9326.69

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.10
RMSE Z	0.06
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR030
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Mineral
Quad	Hermit Lakes

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

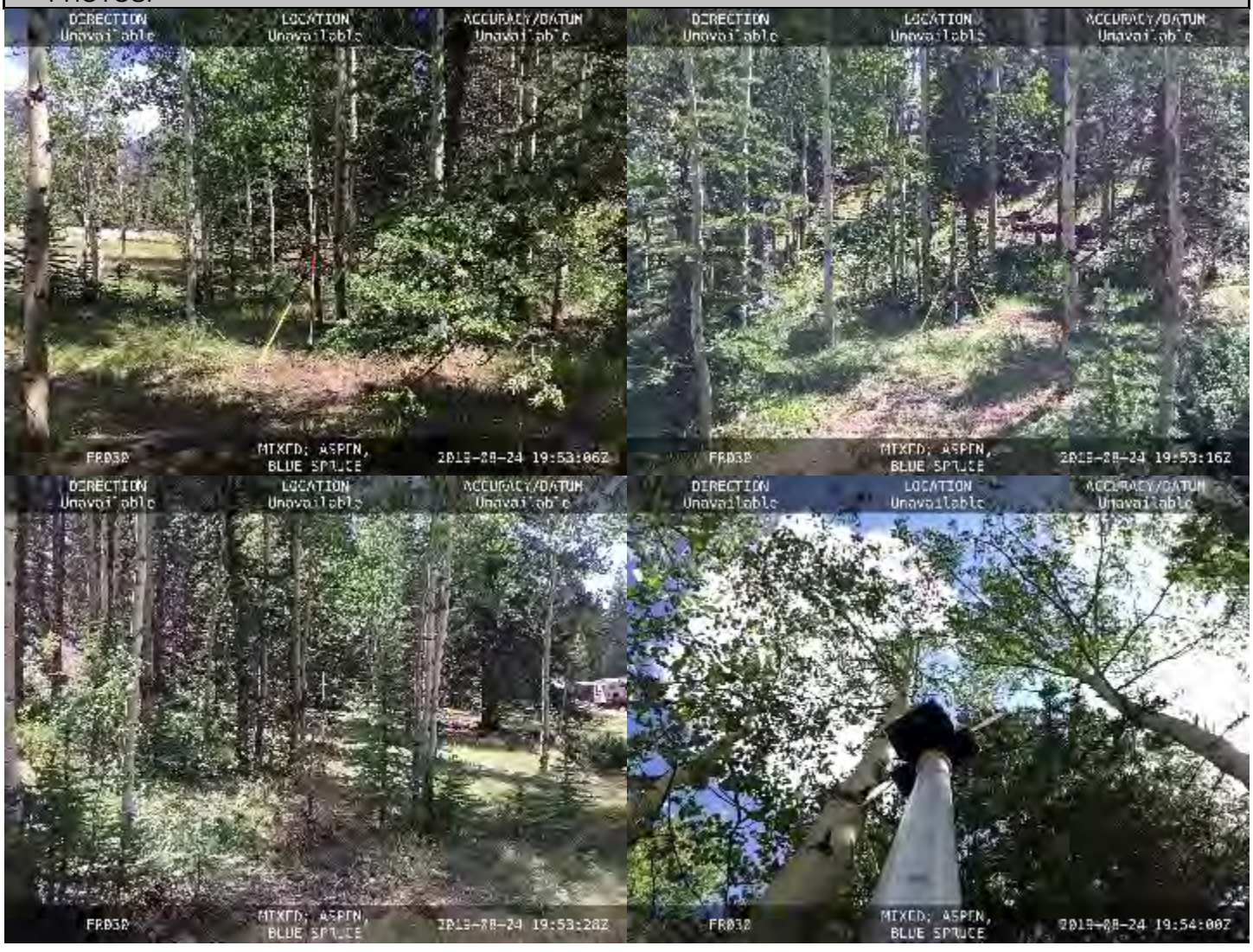
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1422925.73	2526981.90	9488.75

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.07
RMSE Z	0.04
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR031
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

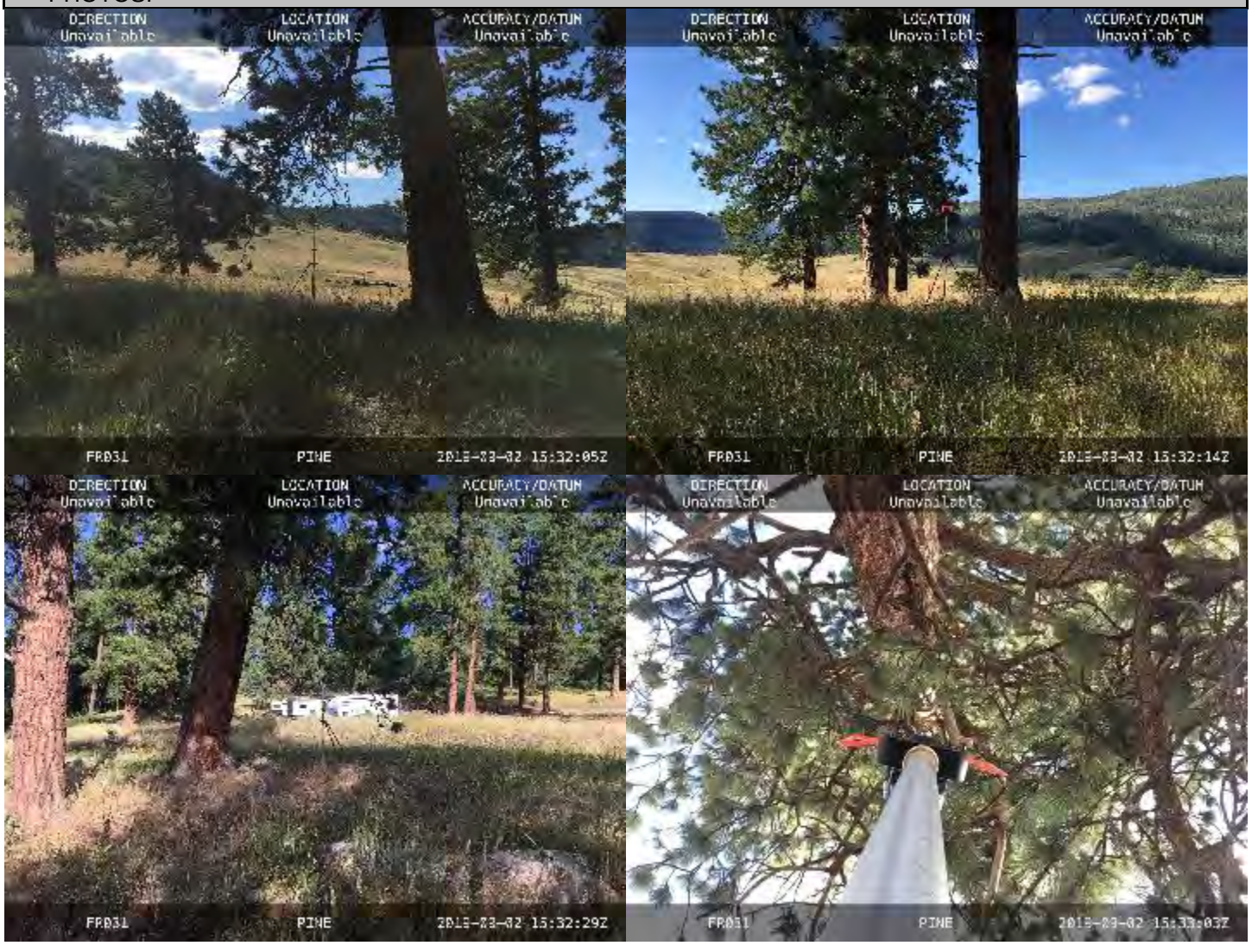
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1303131.79	2498236.28	8215.33

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.06
RMSE Z	0.06
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR032
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1217970.09	2322709.24	6874.70

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.08
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR033
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Jackson Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1226560.51	2593632.99	7812.15

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	RTK

PHOTOS:

Point ID	FR034
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1136479.57	2516909.38	6320.69

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/17/2018
RMSE Hz	0.11
RMSE Z	0.12
GPS Method	Total Station

PHOTOS:

Point ID	FR035
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

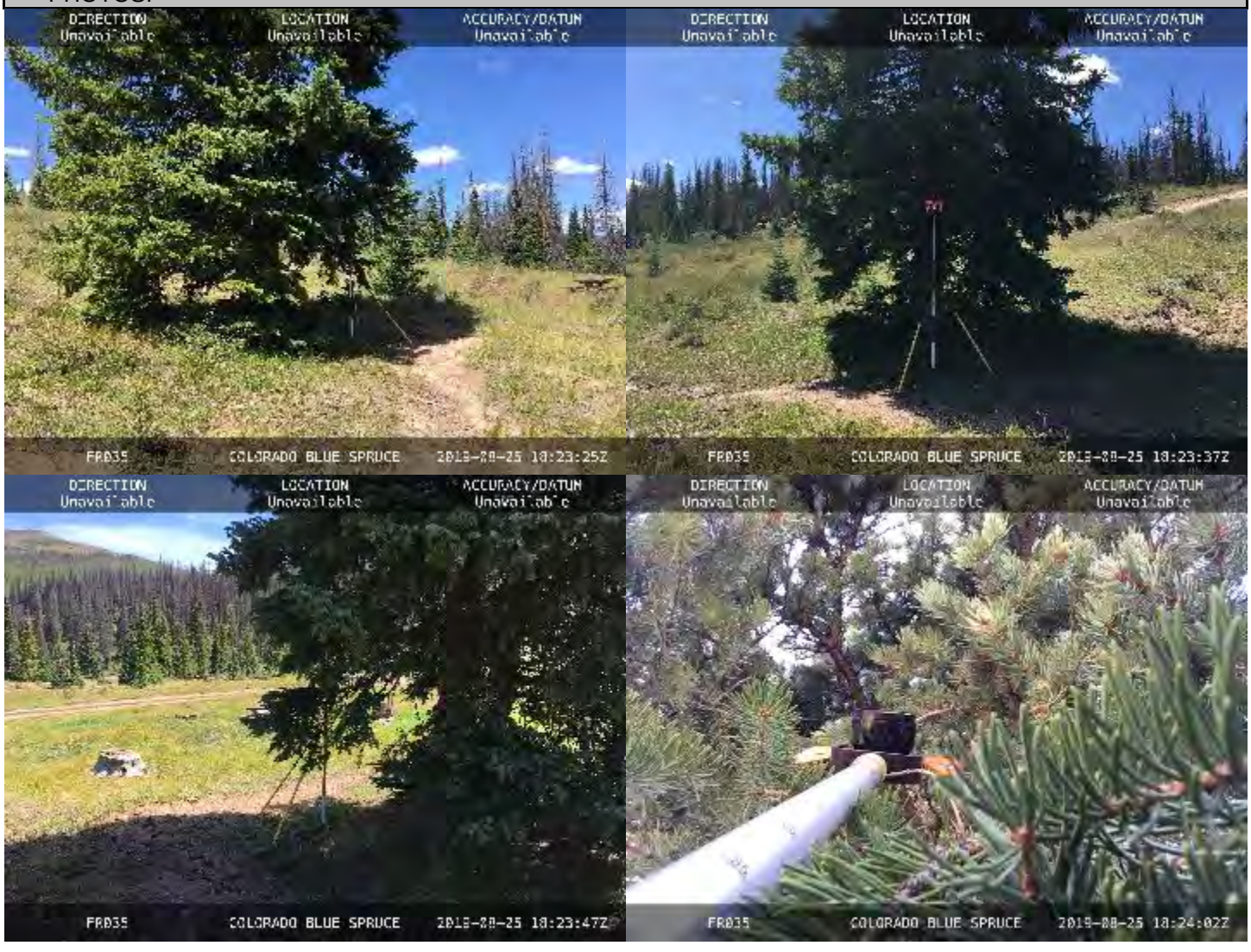
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1468329.79	2521157.75	10903.89

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.08
RMSE Z	0.06
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR036
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Snowdon Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1396331.19	2359371.46	10556.27

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.09
RMSE Z	0.11
GPS Method	Total station

PHOTOS:

Point ID	FR037
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Ruin Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1347534.01	1990735.16	6563.98

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR038
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1432016.25	2022670.38	7233.31

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/22/2018
RMSE Hz	0.08
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR039
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Cannibal Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

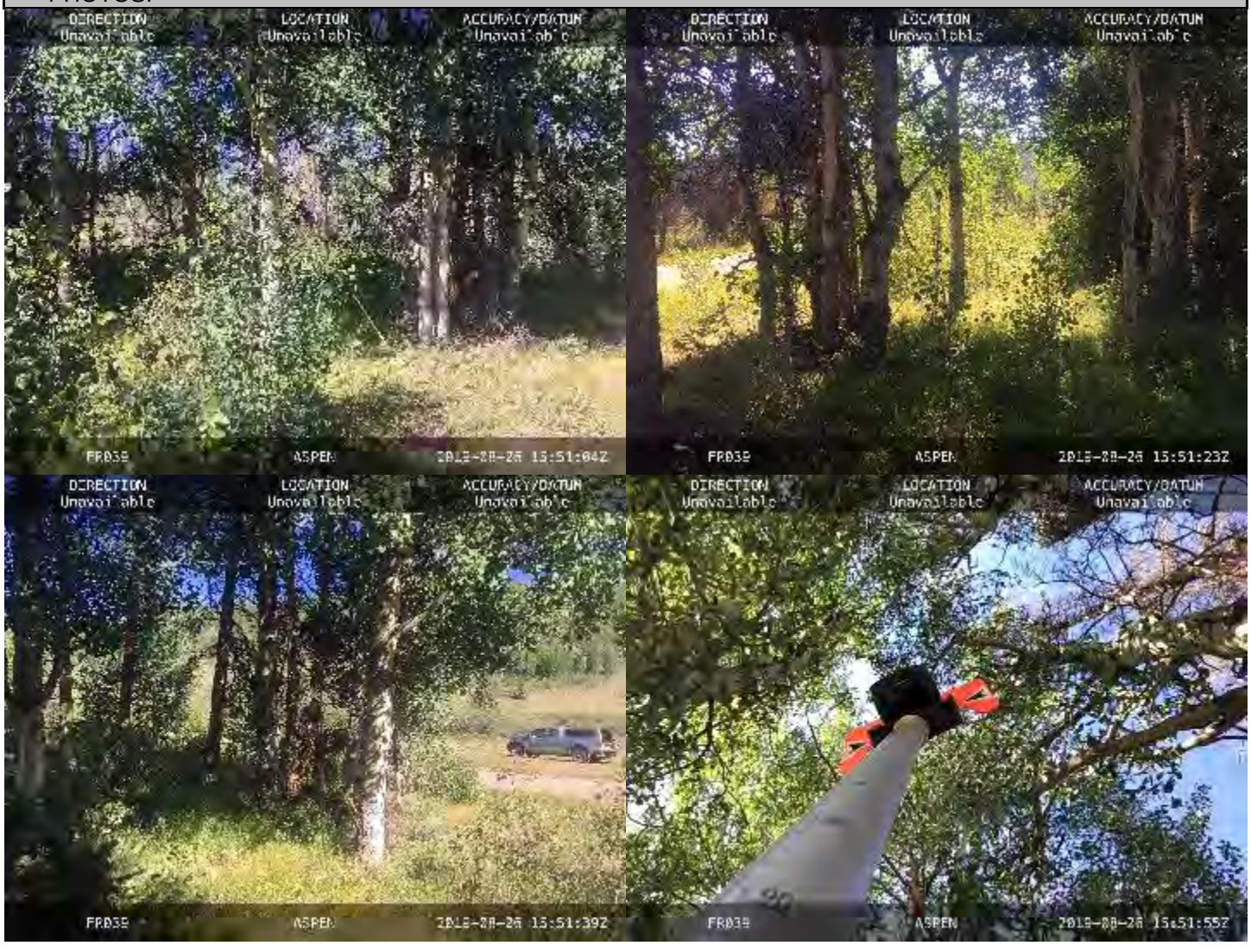
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1494603.38	2513725.85	10403.31

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/26/2019
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR040
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Red Horse Gulch

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1167736.91	2173692.33	6797.11

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.80 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.08
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR041
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Trail Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1196505.06	2192259.35	6942.13

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.08
RMSE Z	0.10
GPS Method	RTK

PHOTOS:

Point ID	FR042
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1199467.24	2028395.98	5735.78

Operator	Aaron Olson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/12/2018
RMSE Hz	0.08
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR043
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Tiffany

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1137724.53	2394636.82	6316.01

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000m

Date (MM-DD-YYYY)	10/15/2018
RMSE Hz	0.10
RMSE Z	0.13
GPS Method	RTK

PHOTOS:

Point ID	FR044
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Carracas

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1135190.82	2464272.37	6106.41

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.5meters

Date (MM-DD-YYYY)	10/17/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR045
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Serviceberry Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1176709.69	2596369.19	7243.84

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.615m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	Total Station

PHOTOS:

Point ID	FR046
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

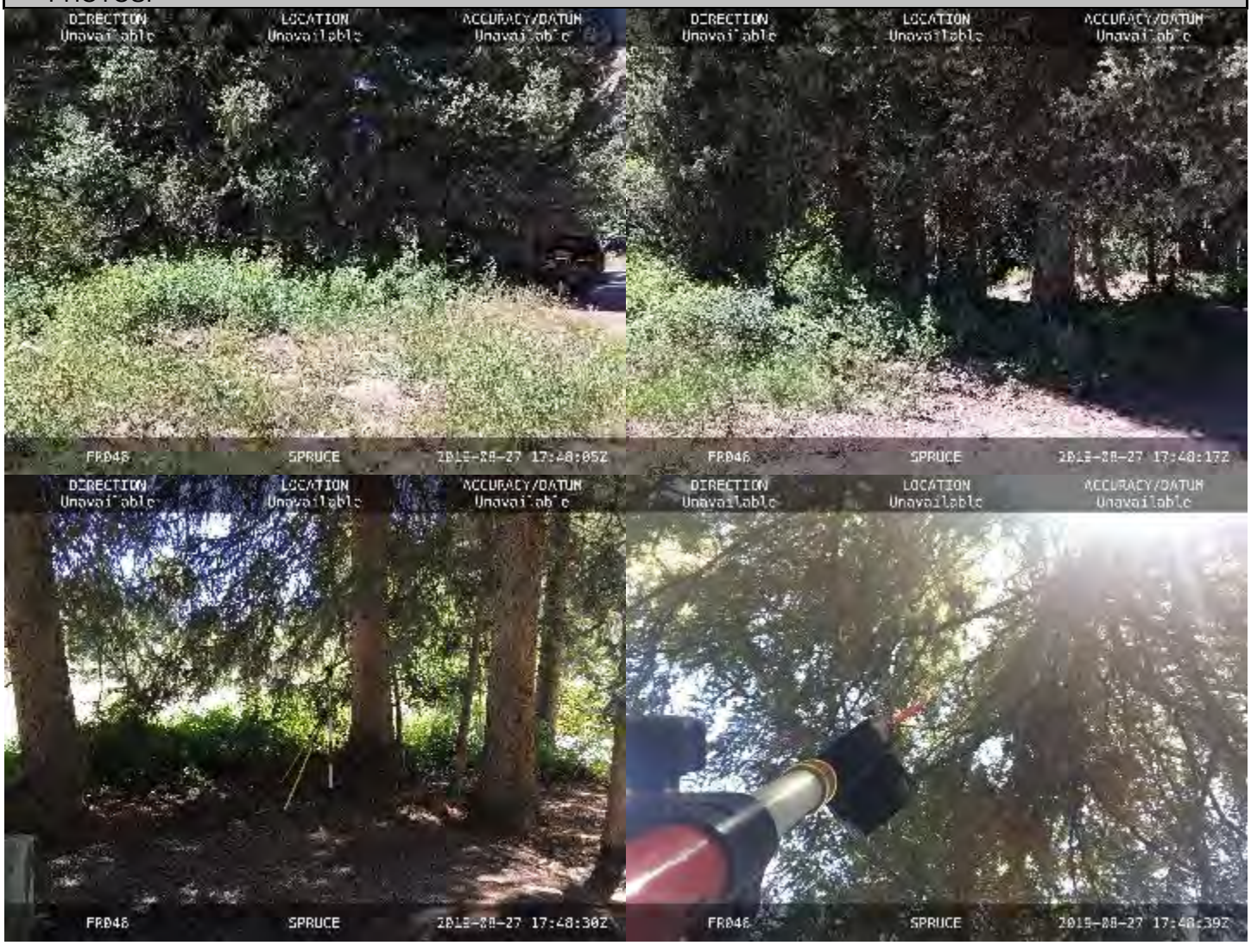
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1498921.92	2451208.98	9332.45

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR047
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	San Juan
Quad	Engineer Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1383869.60	2341318.06	10630.37

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.650m

Date (MM-DD-YYYY)	08/15/2019
RMSE Hz	0.10
RMSE Z	0.16
GPS Method	Total station

PHOTOS:

Point ID	FR048
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Pleasant View

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357205.76	2057610.52	6943.65

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/21/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	Total Station

PHOTOS:

Point ID	FR049
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Basin Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1212038.40	2279722.65	7106.65

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.10
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR050
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Finger Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

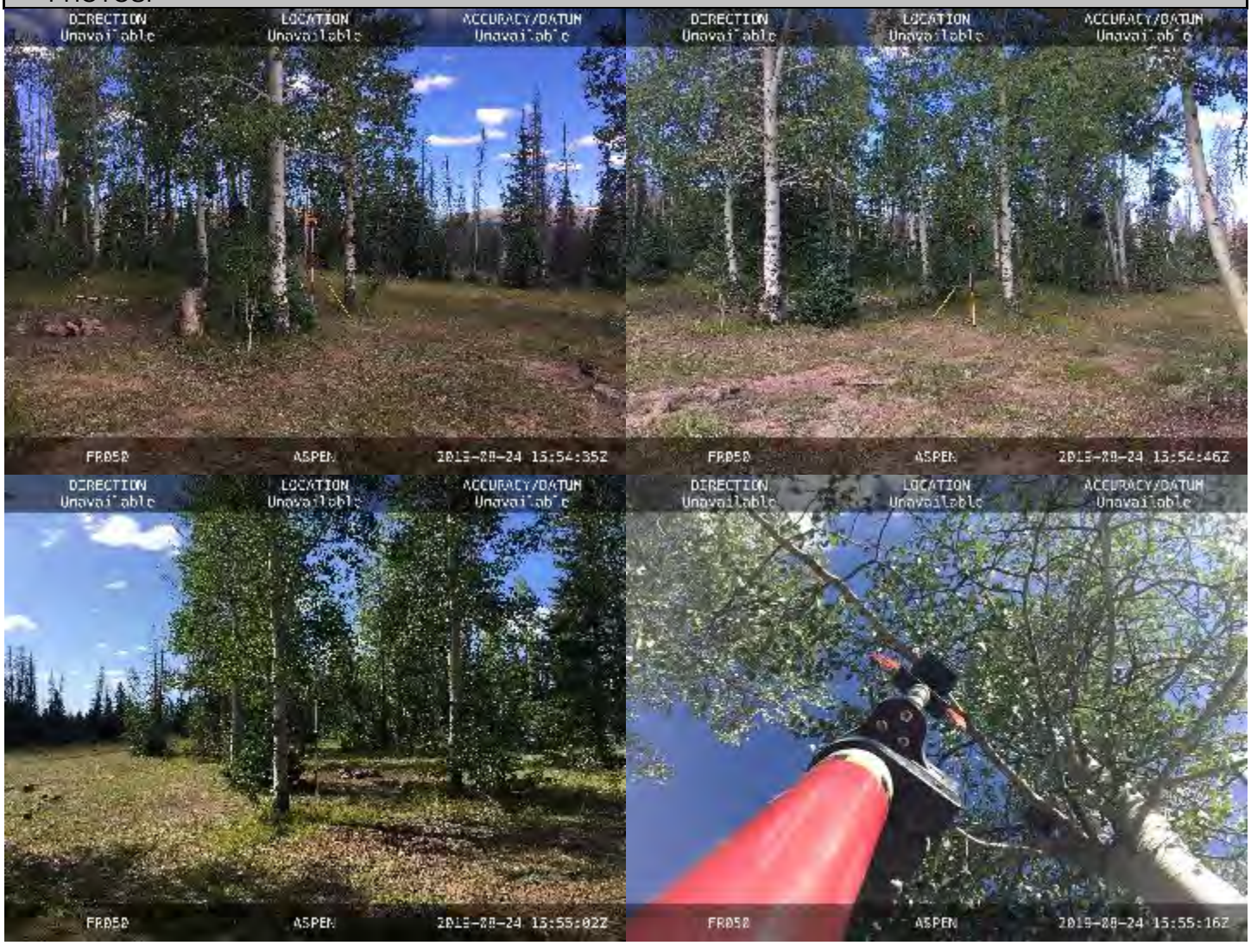
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1421424.23	2487311.06	10748.21

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/24/2019
RMSE Hz	0.12
RMSE Z	0.10
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR051
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1242083.41	2517998.96	8061.97

Operator	Aaron Olson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/09/2018
RMSE Hz	0.11
RMSE Z	0.11
GPS Method	Total Station

PHOTOS:

Point ID	FR052
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Redmesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1157280.42	2233556.75	6574.00

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/3/2018
RMSE Hz	0.10
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR053
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Boggy Draw

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1357309.95	2157402.53	7930.78

Operator	Emily Gottesfeld
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/18/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	Total Station

PHOTOS:

Point ID	FR054
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores East

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1300686.03	2144131.53	7429.66

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.10
RMSE Z	0.12
GPS Method	RTK

PHOTOS:

Point ID	FR055
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Moccasin Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1200630.97	2130406.07	6966.04

Operator	Aaron Olson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR056
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Nipple Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1383148.91	2177191.95	8077.71

Operator	Emily Gottesfeld
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/17/2018
RMSE Hz	0.10
RMSE Z	0.12
GPS Method	Total Station

PHOTOS:

Point ID	FR057
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1246536.53	2527451.14	7846.52

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.09
RMSE Z	0.13
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR058
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Thompson Park

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1254412.00	2212802.51	7941.41

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/2/2018
RMSE Hz	0.08
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR059
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	La Plata
Quad	Bayfield

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1209348.67	2387382.42	6867.47

Operator	Daniel Cassell
Receiver Model	Nikon NPL-322/-30 mm
Receiver S/N	
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	10/19/2018
RMSE Hz	0.11
RMSE Z	0.12
GPS Method	Total Station

PHOTOS:

Point ID	FR060
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Doe Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1391858.64	2082243.39	7872.63

Operator	Emily Gottesfeld
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.13
RMSE Z	0.15
GPS Method	Total Station

PHOTOS:

Point ID	FR061
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	LaPlata
Quad	Rules Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1238707.40	2361570.11	7756.18

Operator	Aaron Olson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.65 meters

Date (MM-DD-YYYY)	11/10/2018
RMSE Hz	0.10
RMSE Z	0.11
GPS Method	Total Station

PHOTOS:

Point ID	FR062
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Dolores
Quad	Secret Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1414522.81	2052631.43	7629.92

Operator	Scott Slowinski
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.6 meters

Date (MM-DD-YYYY)	11/22/2018
RMSE Hz	0.09
RMSE Z	0.10
GPS Method	Total Station

PHOTOS:

Point ID	FR063
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Lemon Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1297609.36	2366708.60	8497.81

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.305m

Date (MM-DD-YYYY)	08/08/2019
RMSE Hz	0.10
RMSE Z	0.14
GPS Method	RTK

PHOTOS:

Point ID	FR064
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1129692.77	2595326.71	7122.56

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.615m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.06
RMSE Z	0.09
GPS Method	Total Station

PHOTOS:

Point ID	FR065
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1148326.65	2567735.71	7357.61

Operator	Aaron Oleson
Receiver Model	Nikon
Receiver S/N	NPL – 322+
Antenna Height	1.615m

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.10
RMSE Z	0.12
GPS Method	Total Station

PHOTOS:

Point ID	FR066
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

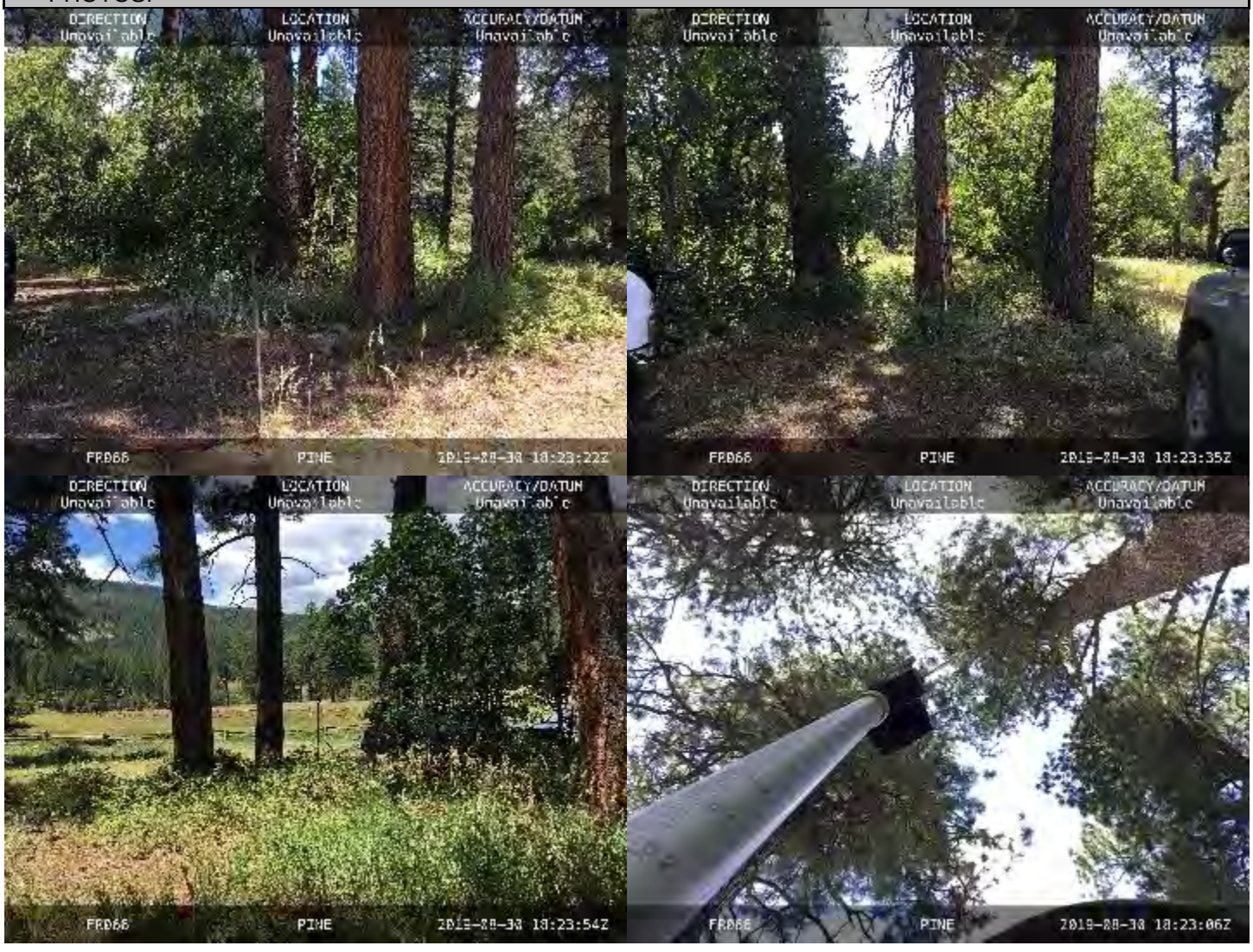
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1261234.66	2595936.72	7704.20

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.11
RMSE Z	0.15
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR067
Project No.	R034035
Project Name	SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1265178.87	2173972.25	6771.68

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.12
RMSE Z	0.14
GPS Method	RTK

PHOTOS:

Point ID	FR068
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

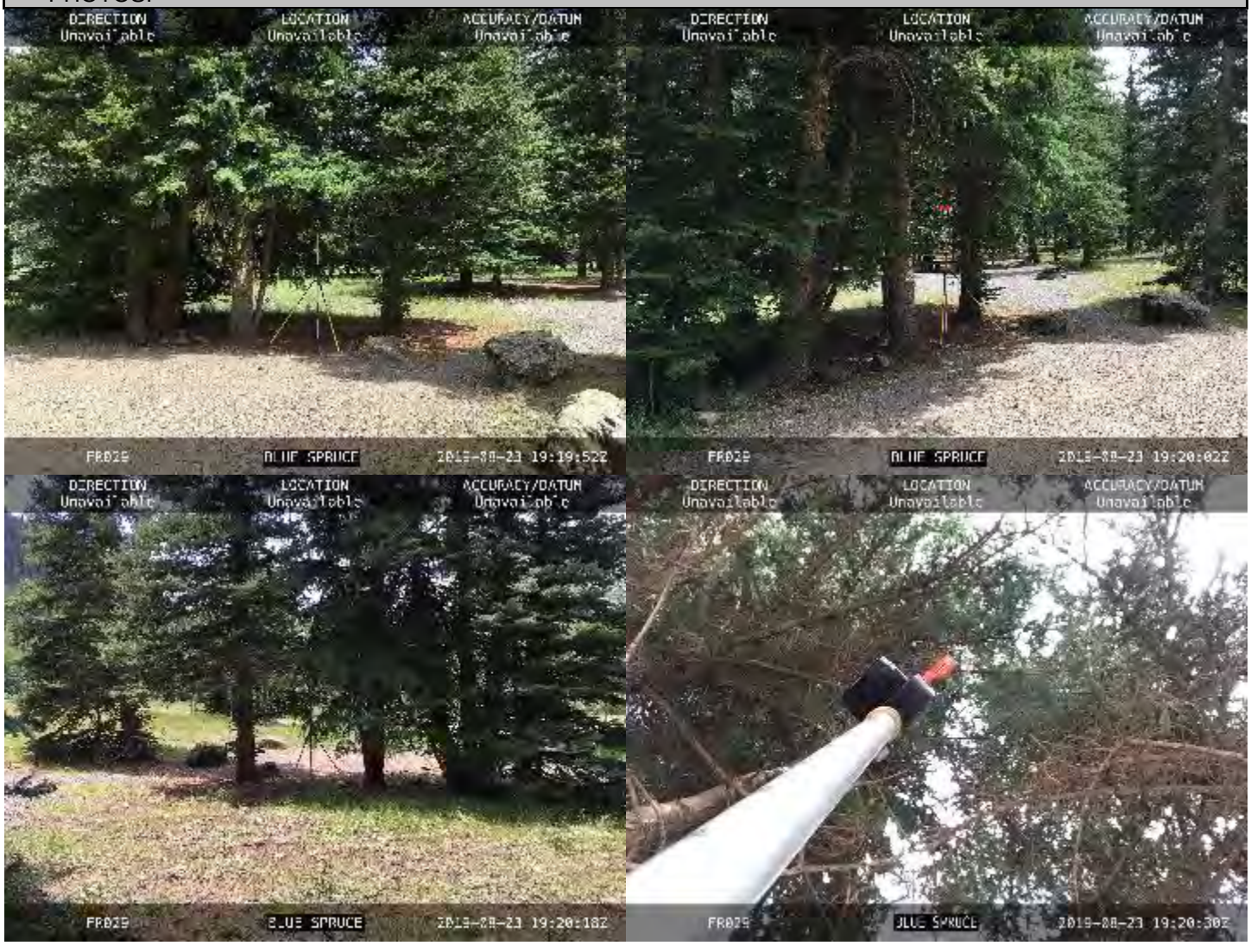
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1429604.46	2526660.61	9556.24

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR069
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Uncompahgre Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

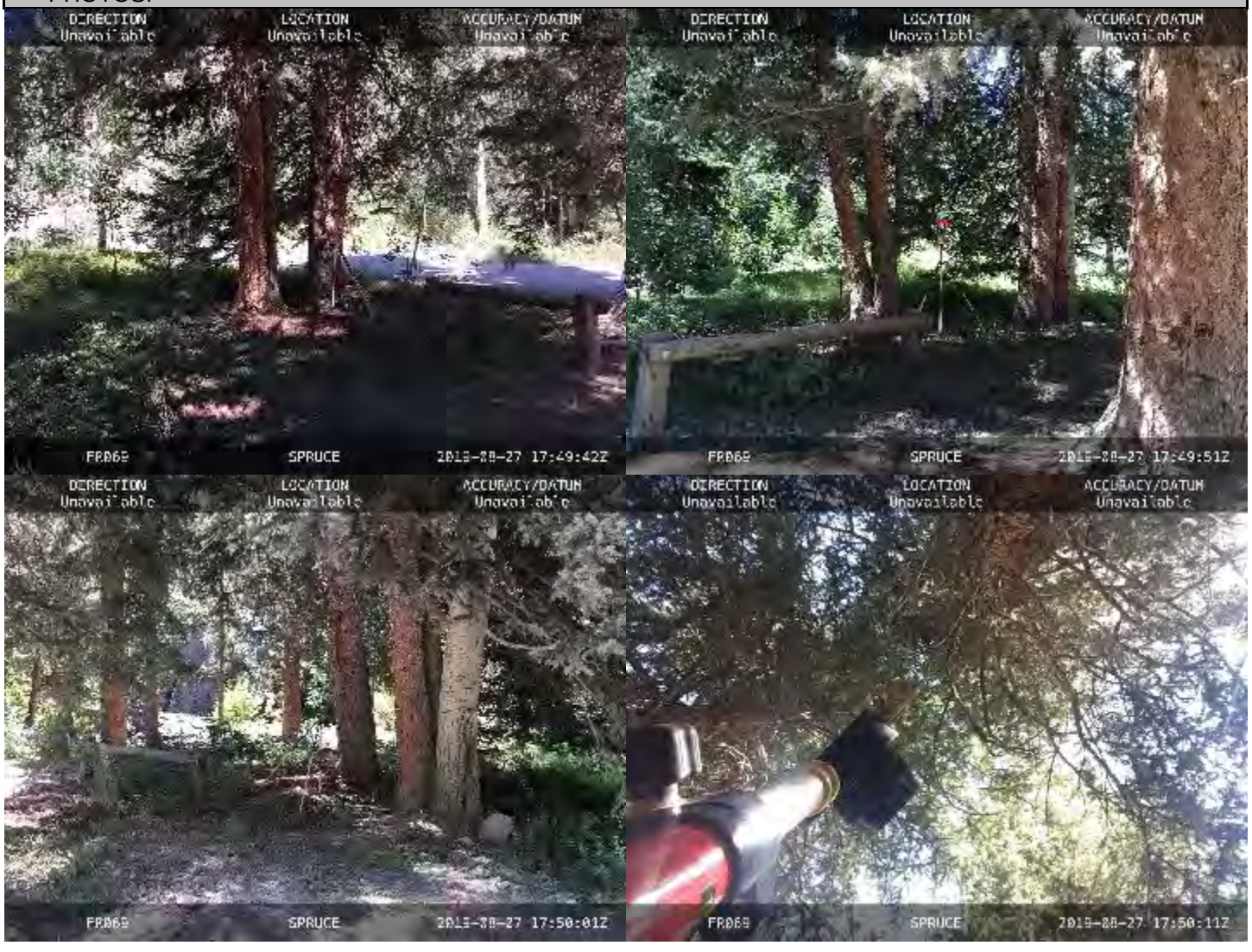
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1498937.02	2451154.44	9333.16

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/27/2019
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR070
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

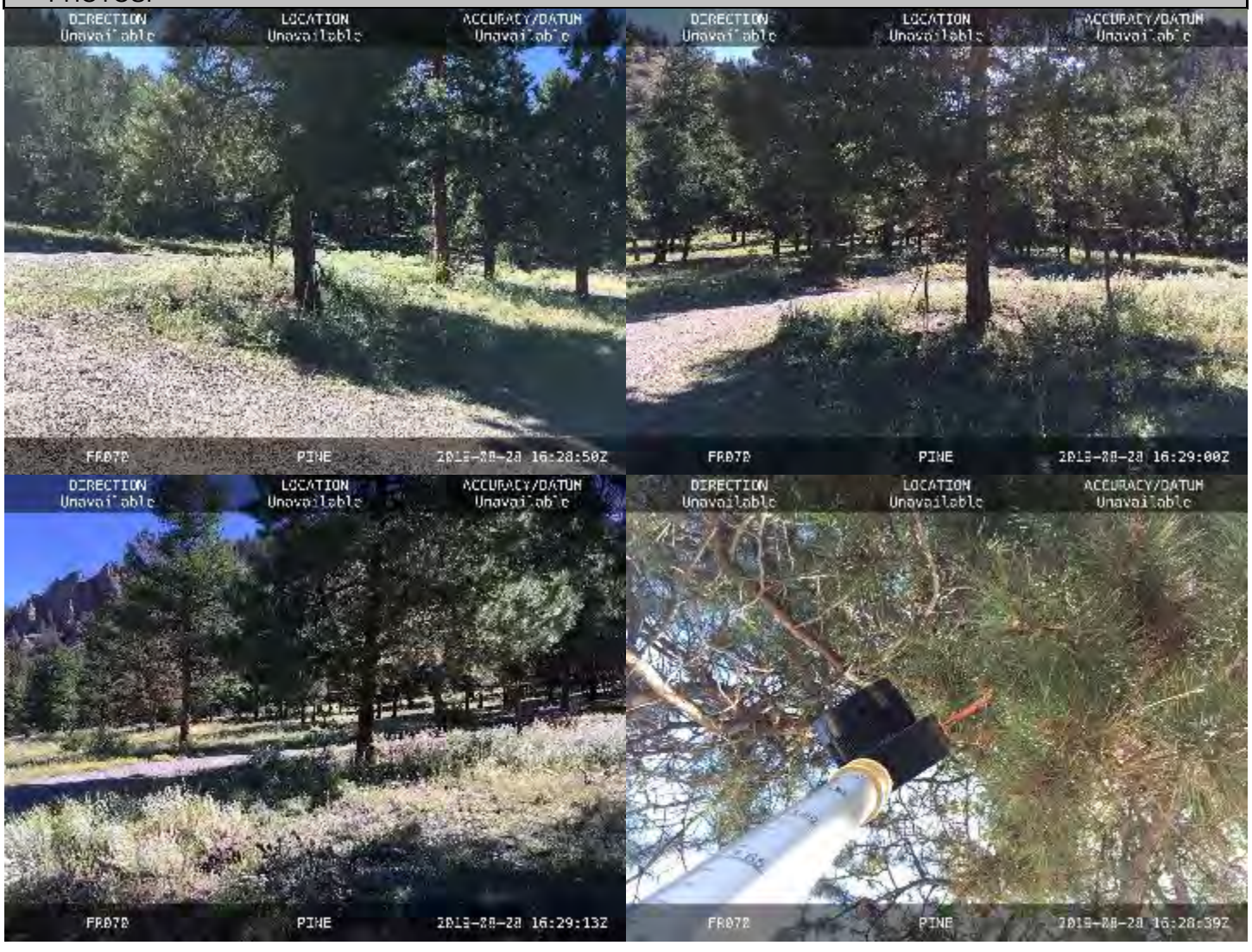
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1539261.39	2486585.20	8472.13

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.8 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR071
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

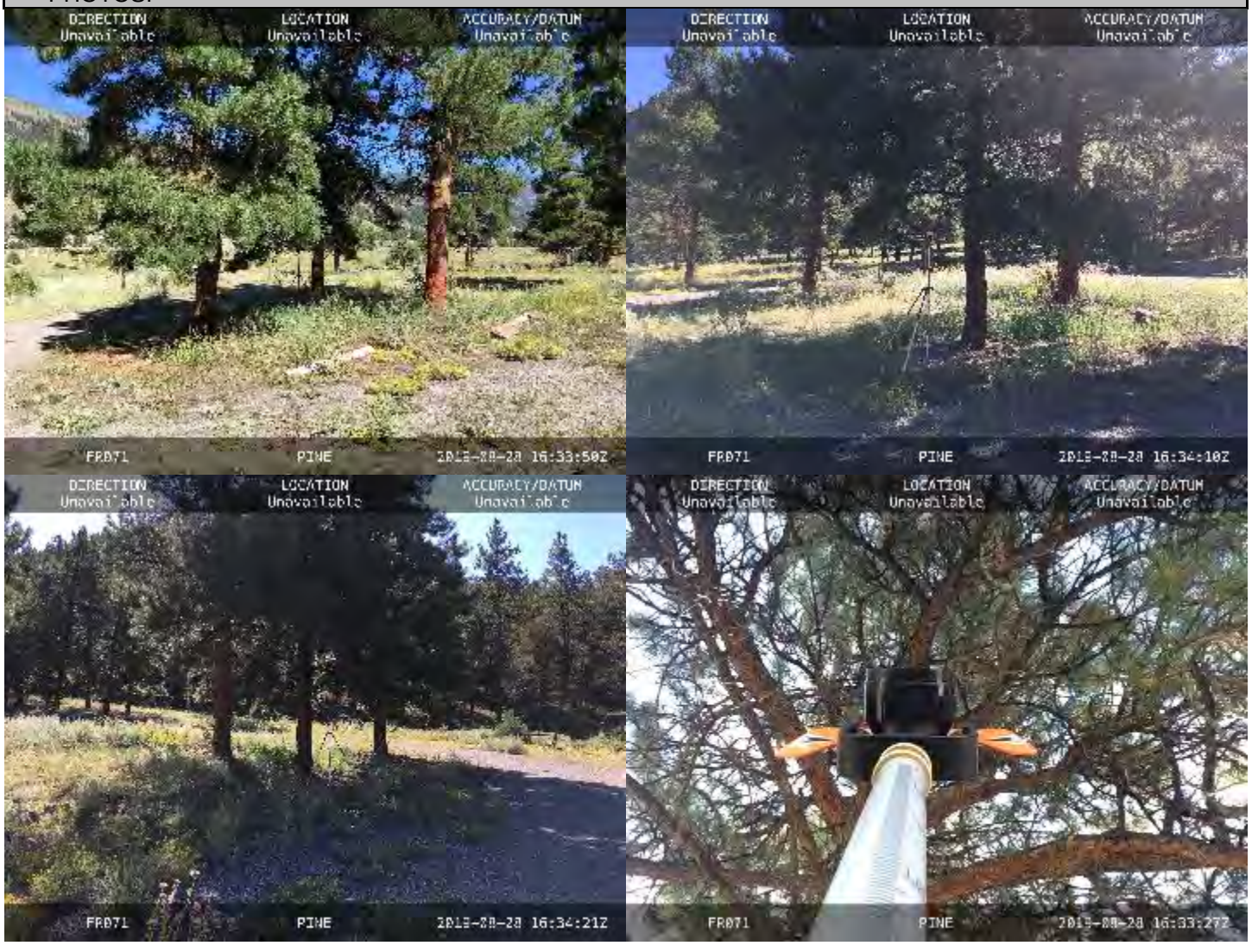
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1539232.20	2486560.67	8470.12

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	1.8 m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.09
RMSE Z	0.07
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR072
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Chris Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1246618.34	2527443.90	7850.19

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.09
RMSE Z	0.13
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR073
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Saddle Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

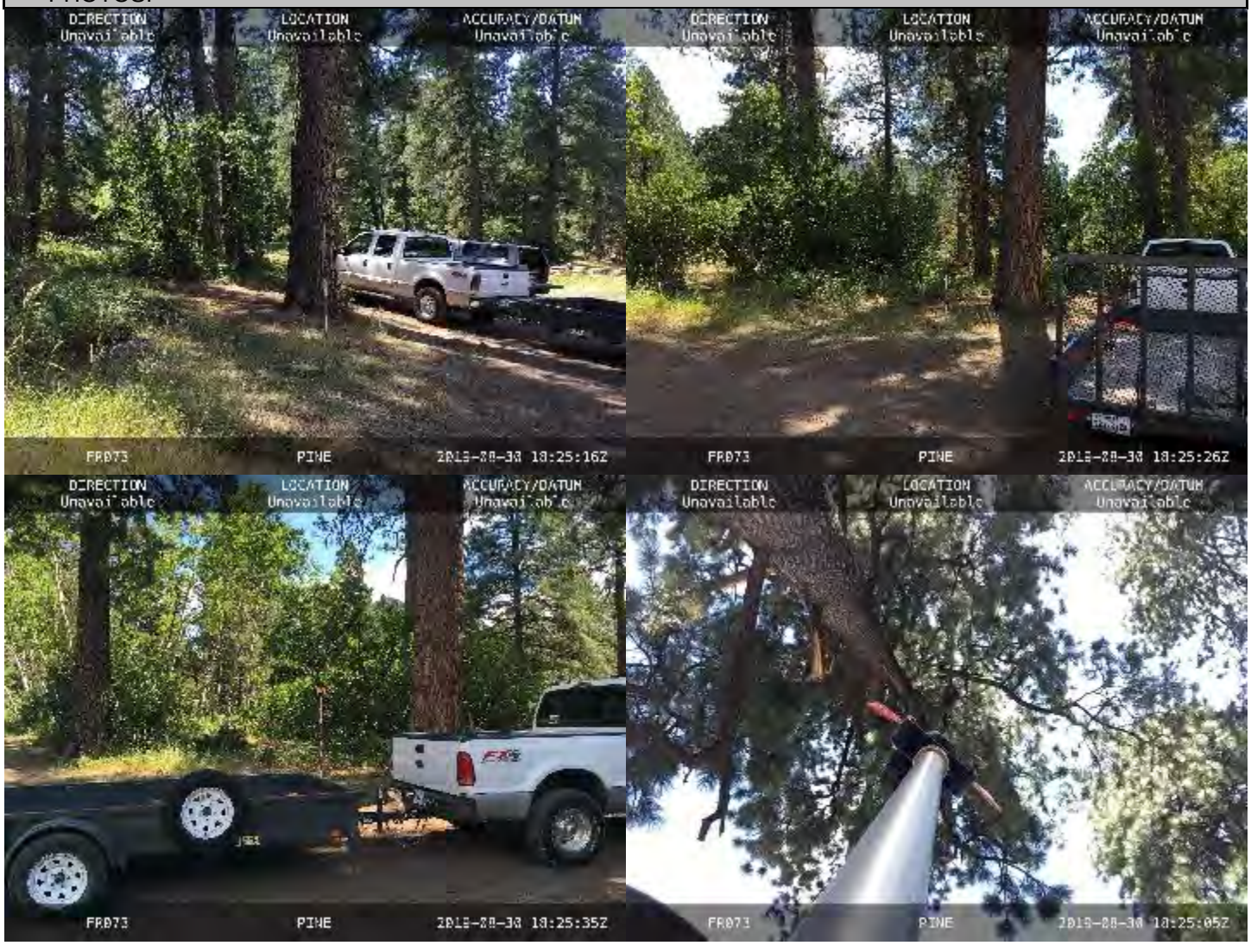
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1261278.46	2595947.14	7704.16

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.11
RMSE Z	0.15
GPS Method	TOTAL STATION

PHOTOS:



Point ID	FR074
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Saddle Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1261299.60	2595856.18	7698.41

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.11
RMSE Z	0.15
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR075
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Saddle Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1261183.43	2595897.95	7701.60

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	08/30/2019
RMSE Hz	0.11
RMSE Z	0.15
GPS Method	TOTAL STATION

PHOTOS:

Point ID	FR076
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Oakbrush Ridge

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1303115.69	2498299.77	8214.74

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0 m

Date (MM-DD-YYYY)	09/02/2019
RMSE Hz	0.08
RMSE Z	0.09
GPS Method	TOTAL STATION

PHOTOS:

Brushland Point Log Sheets

Point ID	SH001
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moccasin Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1207501.96	2131366.62	7115.37

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/13/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	SH002
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mariano Wash West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1191165.01	1980172.94	4899.69

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH003
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Edith

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1148420.63	2567252.38	7349.62

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/5/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	SH004
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Loma Linda

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1201824.11	2338715.61	6838.45

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/14/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH005
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Moqui Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1145349.61	2123910.52	6340.27

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/24/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH006
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Mancos

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1265092.61	2174151.25	6763.43

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/16/2018
RMSE Hz	0.06
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	SH007
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Wickiup Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1249700.96	1982509.03	5075.02

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/22/2018
RMSE Hz	0.07
RMSE Z	0.09
GPS Method	RTK

PHOTOS:

Point ID	SH008
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Pinkerton Mesa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1141083.93	2242924.59	6086.87

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/25/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	FS

PHOTOS:

Point ID	SH009
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Groundhog Reservoir

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1417082.68	2185224.09	8697.83

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.02
RMSE Z	0.03
GPS Method	FastStatic

PHOTOS:

Point ID	SH010
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Dolores
Quad	Dove Creek

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1440568.65	1985363.11	6658.31

Operator	Scott Slowinski
Receiver Model	Trimble R6
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/20/2018
RMSE Hz	0.03
RMSE Z	0.04
GPS Method	RTK

PHOTOS:

Point ID	SH011
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Baldy Mountain

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1220410.31	2427988.51	8401.31

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/20/2018
RMSE Hz	0.07
RMSE Z	0.08
GPS Method	RTK

PHOTOS:

Point ID	SH012
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Ignacio

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1157875.18	2347575.50	7282.34

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/18/2018
RMSE Hz	0.06
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	SH013
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Oak Brush Hill

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1215015.09	2529346.71	7449.38

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2m

Date (MM-DD-YYYY)	11/8/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH014
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Dolores West

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1287381.56	2099125.28	6260.21

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/11/2018
RMSE Hz	0.04
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	SH015
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Point Lookout

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1258061.59	2153523.95	6975.26

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/21/2018
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTK

PHOTOS:

Point ID	SH016
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Sentinel Peak SE

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

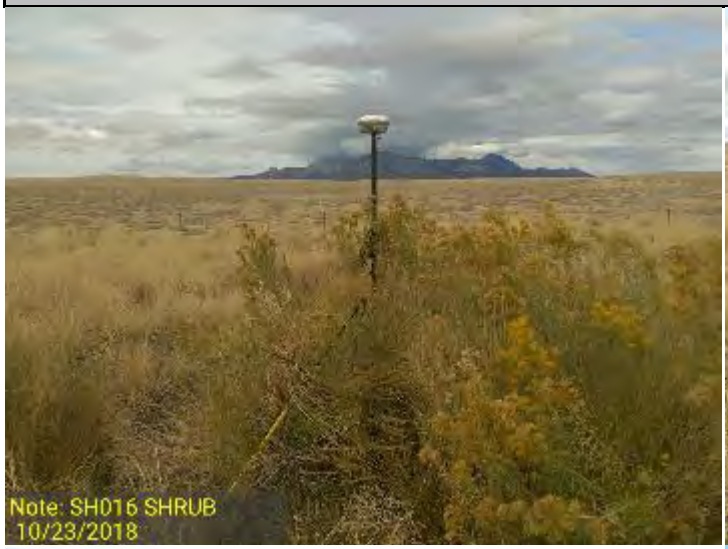
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1163696.00	2043175.20	5196.29

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	10/23/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:



Point ID	SH017
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	La Plata
Quad	Thompson Park

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1247737.88	2217425.73	7439.06

Operator	Aaron Olson
Receiver Model	Trimble R8
Receiver S/N	R8_0649
Antenna Height	2 meters

Date (MM-DD-YYYY)	11/4/2018
RMSE Hz	0.04
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH018
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Archuleta
Quad	Pagosa Junction

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1136021.70	2512139.94	6577.71

Operator	Daniel Cassell
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/16/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH019
Project No.	R034035
Project Name	USGS USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Hermit Lake

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

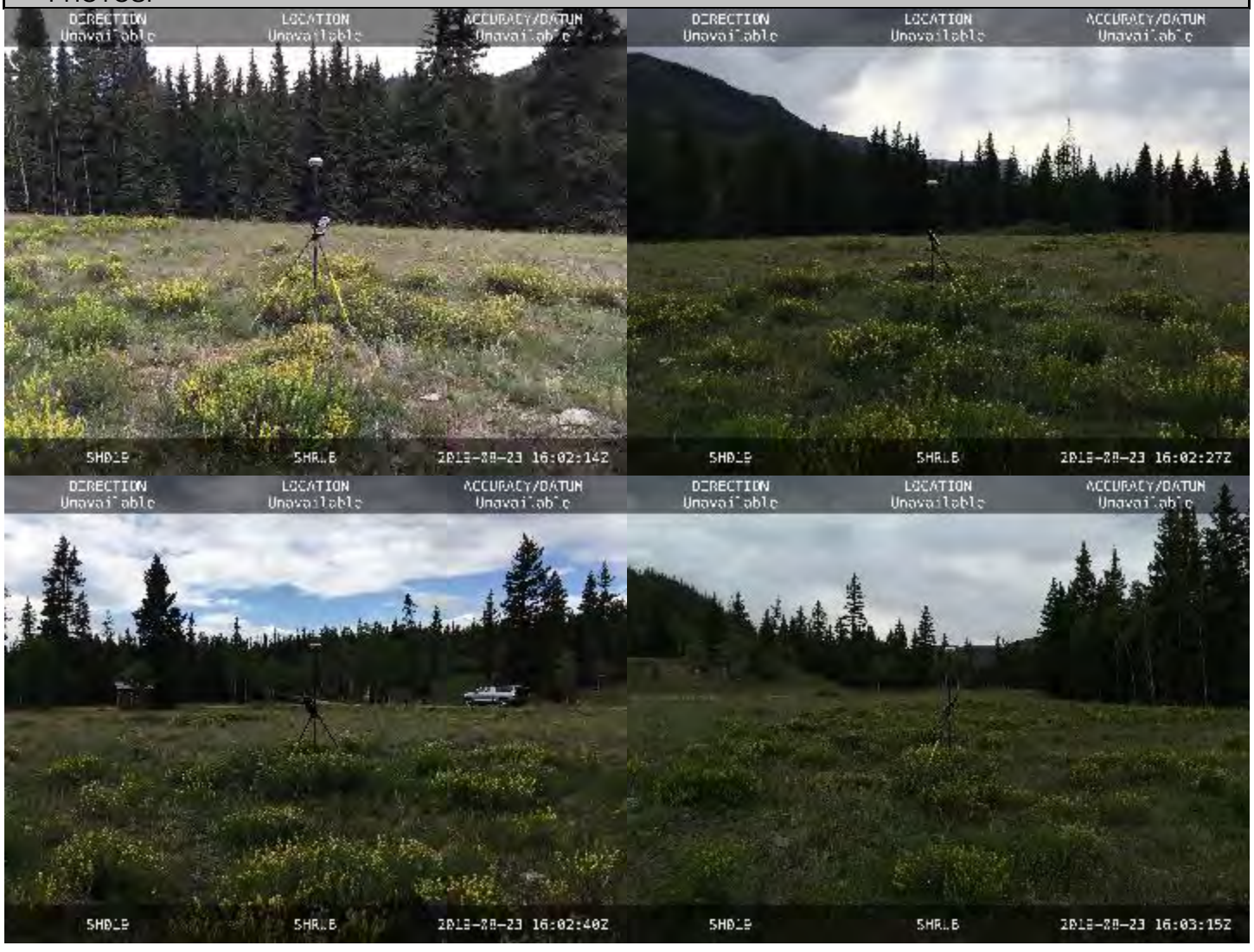
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1429779.23	2526786.65	9557.51

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/23/2019
RMSE Hz	0.05
RMSE Z	0.07
GPS Method	RTN

PHOTOS:



Point ID	SH020
Project No.	R034035
Project Name	USGS USGS SW Colorado
State	Colorado
County	La Plata
Quad	Hermosa

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

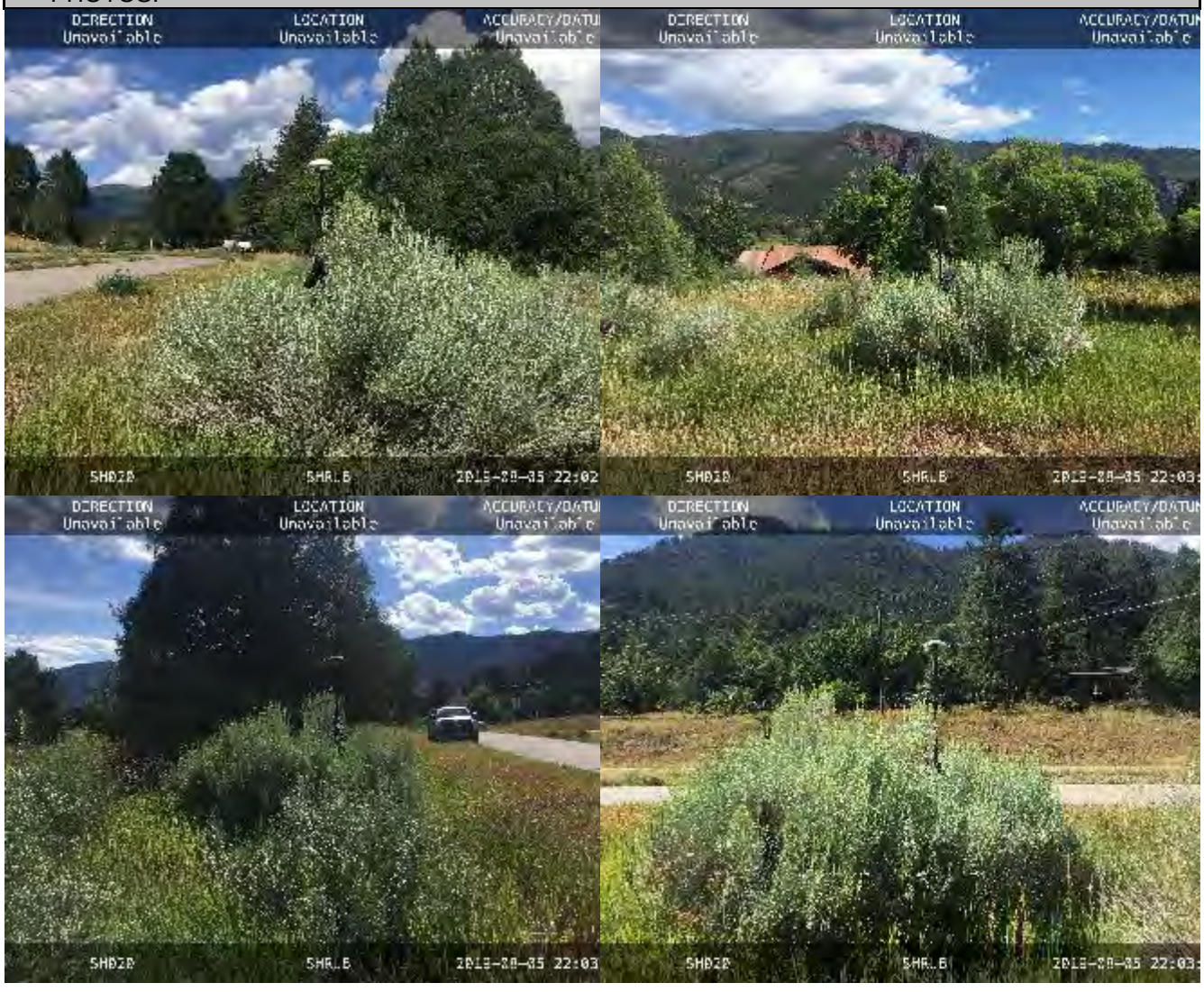
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1283702.78	2325374.34	6682.17

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/05/2019
RMSE Hz	0.07
RMSE Z	0.11
GPS Method	RTN

PHOTOS:



Point ID	SH021
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Yellow Jacket

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1356618.25	2077682.43	7298.10

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH022
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Pagosa Springs
Quad	Chama Peak

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1141517.22	2647567.00	7875.24

Operator	Scott Slowinski
Receiver Model	Trimble R8
Receiver S/N	R8_4744140649
Antenna Height	2.000 Meters

Date (MM-DD-YYYY)	10/2/2018
RMSE Hz	0.03
RMSE Z	0.06
GPS Method	Fast Static

PHOTOS:

Point ID	SH023
Project No.	R034035
Project Name	USGS SW Colorado
State	Colorado
County	Montezuma
Quad	Ruin Canyon

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1355284.03	1986136.22	6549.31

Operator	Emily Gottesfeld
Receiver Model	Trimble R8
Receiver S/N	R6_5049457238
Antenna Height	2.0 meters

Date (MM-DD-YYYY)	11/19/2018
RMSE Hz	0.05
RMSE Z	0.06
GPS Method	RTK

PHOTOS:

Point ID	SH024
Project No.	R034035
Project Name	USGS USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Slumgullion Pass

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

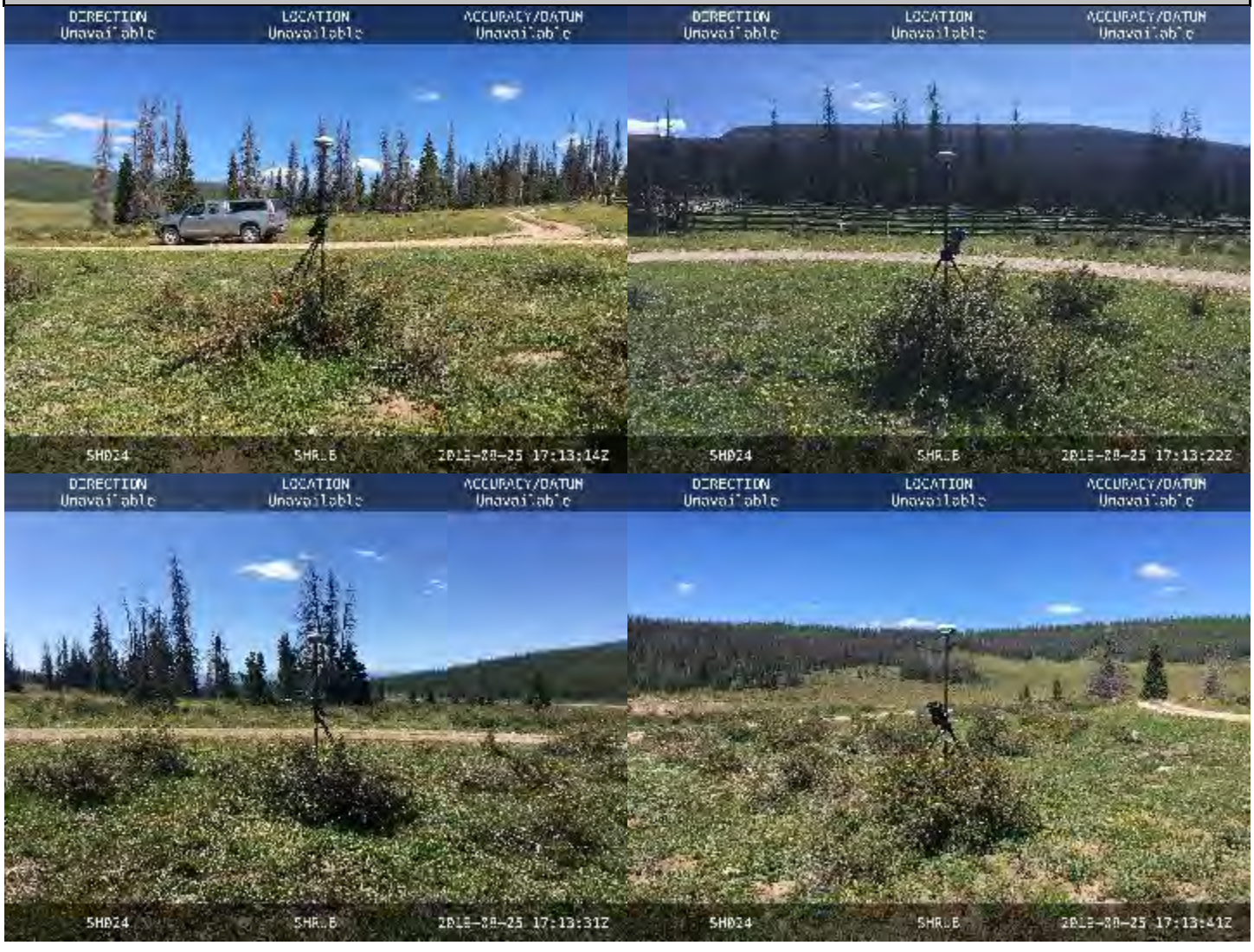
Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1463993.02	2521146.34	10878.21

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/25/2019
RMSE Hz	0.03
RMSE Z	0.09
GPS Method	FAST STATIC

PHOTOS:



Point ID	SH025
Project No.	R034035
Project Name	USGS USGS SW Colorado
State	Colorado
County	Hinsdale
Quad	Alpine Plateau

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
SPC - COLORADO SOUTH
NAVD88
GEOID12B
US Survey Feet

Northing	Easting	Elevation
1539208.69	2486327.78	8457.99

Operator	Casey Broderick
Receiver Model	Trimble R8
Receiver S/N	4744140649
Antenna Height	2.0m

Date (MM-DD-YYYY)	08/28/2019
RMSE Hz	0.05
RMSE Z	0.08
GPS Method	RTN

PHOTOS: