

BHI Project No. 20170098.001.01.SRVABQ

Survey Control Report for **SFCO LiDAR Check Point Survey**

Alan Benham, P.S.



November 29, 2016



Introduction:

LiDAR check points were established with the purpose of providing for independent vertical accuracy assessment of the 2014 Santa Fe County LiDAR project Digital Elevation Model data. These check points were selected in coordination with the County and the project surveyor. The points are independent from the LiDAR in that they were not used in the control or calibration processing of the LiDAR. A minimum number of points to be surveyed for this vertical accuracy assessment task was agreed upon by cooperative agreement between the County and USGS. Independent check points were surveyed using National Geodetic Survey (NGS) OPUS Projects methodology to meet vertical point accuracy requirements and providing data at least three times more accurate than the LiDAR dataset to be tested. The points were well distributed throughout the defined project area (DPA) following siting guidance related to slope, visibility, and landcover. Permanent monuments were established on several County-owned parcels to improve the longevity of sited monuments. These monuments were driven to repose using steel rods. Monuments sited off County parcels were established using 18" rebar and two-inch aluminum cap. Tested locations were photographed. Monument construction is as listed on the separate datasheets.

Project Control Specifications:

Units:	US Survey Foot
Horizontal Datum:	NAD_83(2011)(EPOCH:2010.0000)
Vertical Datum:	NAVD88
Geoid Model:	GEOID12B
Projection:	Transverse Mercator
State Plane and/or UTM Zone:	New Mexico Central Zone (3002)
Basis of Bearing:	Grid Bearings
Project Combined Factor:	Project Delivered in Grid
Modification Method Used:	N/A
Field Methodology:	OPUS Project Solution
Equipment Used:	Trimble GPS Equipment (R8 Dual Frequency Receivers)
Control Set Date:	August-November, 2016
Observation Date:	August-November, 2016
Adjustment/ Publication Date:	November 29, 2016

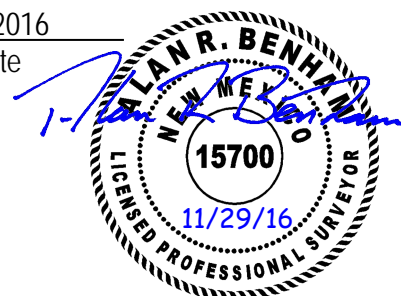
I, Alan R. Benham, New Mexico Professional Surveyor No. 15700, do hereby certify that this Control Survey Report was prepared by me or under my direct supervision based on an actual survey on the ground as described herein; that I am responsible for this survey; and that the survey and report meets the minimum standards for surveying in New Mexico.

Alan R. Benham

November 29, 2016

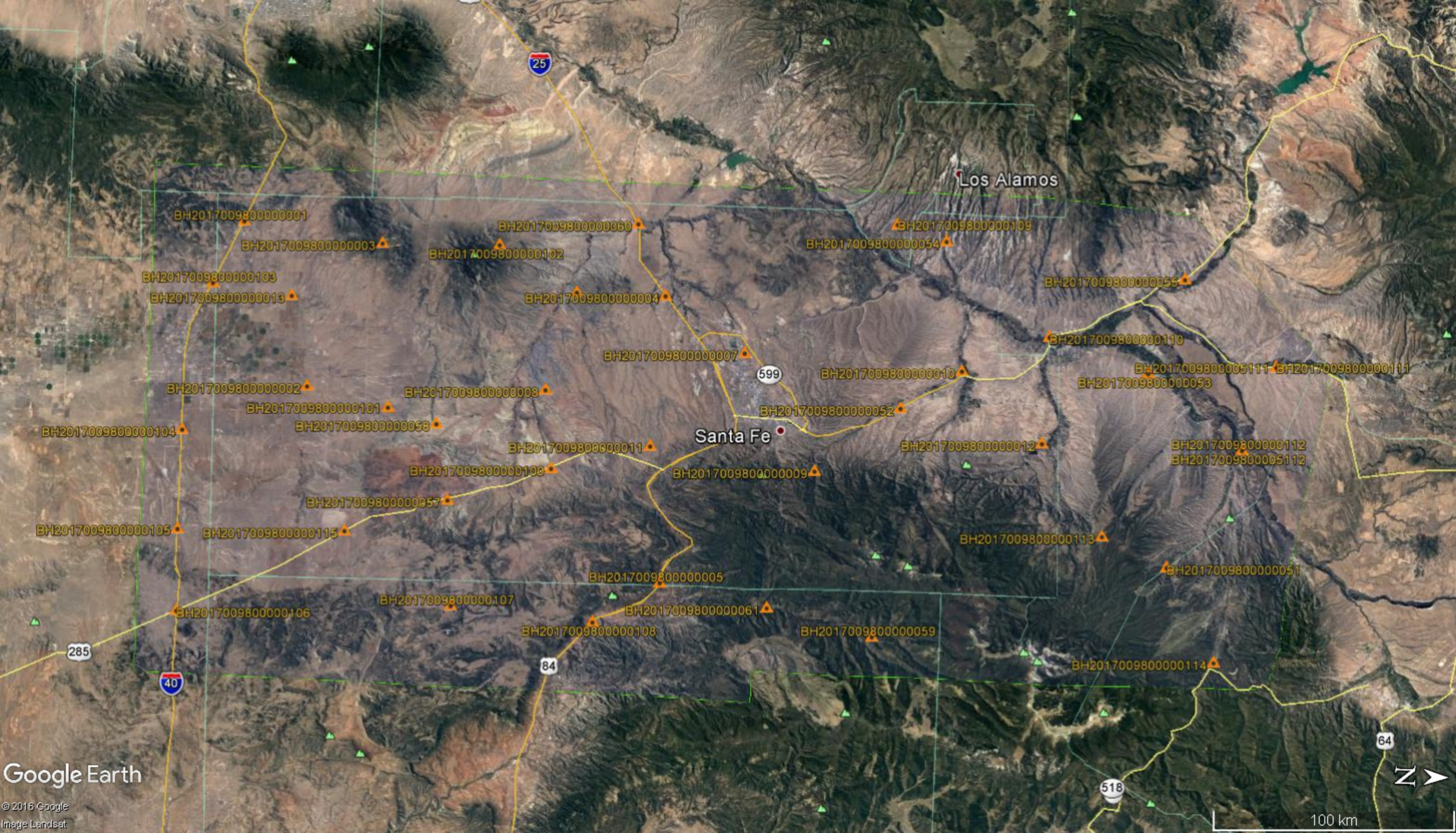
Date

Alan R. Benham, P.S.
Bohannon Huston, Inc.
Courtyard I / 7500 Jefferson St. NE
Albuquerque, NM 87109-4335
(505).823.1000



Point ID	Northing	Easting	Elevation	Ellipsoid Height (Global)	Feature Code	GNSS Vector Observation.Start Time	GNSS Vector Observation.H. Precision	GNSS Vector Observation.V. Precision
0001	451419.240	503808.819	2053.593	2034.060	MON	10/10/2016 16:26	0.000	0.016
0002	459956.236	524417.133	1928.438	1908.860	MON	10/4/2016 16:20	0.000	0.015
0003	469011.885	506088.524	2149.758	2130.318	MON	10/4/2016 18:59	0.000	0.015
0004	504805.559	511551.262	1851.258	1831.677	MON	10/10/2016 16:36	0.000	0.015
0005	505263.229	547757.341	2158.699	2140.498	MON	10/3/2016 21:18	0.000	0.016
0006	493599.065	511445.838	1787.851	1768.226	MON	10/10/2016 17:41	0.000	0.015
0007	515005.964	518470.071	1966.618	1947.383	MON	10/10/2016 17:09	0.000	0.015
0008	490042.952	523920.439	1881.356	1861.952	MON	10/3/2016 19:53	0.000	0.015
0009	524206.327	533039.727	2303.334	2285.385	MON	10/5/2016 20:25	0.000	0.016
0010	542495.002	519841.391	1768.862	1749.893	MON	10/5/2016 18:09	0.000	0.016
0011	503498.568	530588.847	2088.905	2070.074	MON	10/3/2016 20:32	0.000	0.016
0012	552790.878	528681.823	1893.496	1875.242	MON	10/13/2016 15:27	0.000	0.015
0013	457645.989	513021.734	1963.555	1943.961	MON	10/10/2016 17:04	0.000	0.015
0051	568800.697	543779.030	2274.316	2256.857	MON	8/24/2016 16:59	0.000	0.016
0052	534852.424	524809.658	1924.473	1905.881	MON	8/24/2016 15:22	0.000	0.016
0053	566082.184	519375.165	1767.054	1748.058	MON	10/4/2016 17:11	0.000	0.016
0054	539969.249	503531.583	1923.095	1903.663	MON	10/13/2016 15:28	0.000	0.016
0055	570345.826	507305.232	1774.509	1755.453	MON	10/4/2016 18:08	0.000	0.016
0057	478175.252	538250.279	1988.367	1969.234	MON	8/18/2016 19:39	0.000	0.016
0058	476451.671	528658.310	1923.472	1904.091	MON	10/10/2016 20:21	0.000	0.016
0059	532000.033	553561.889	2519.355	2502.502	MON	10/13/2016 16:32	0.001	0.016
0060	501041.887	502494.616	1739.535	1719.509	MON	10/10/2016 16:13	0.000	0.015
0061	518791.533	550447.736	2239.936	2222.482	MON	10/13/2016 15:03	0.000	0.016
0100	491107.191	533828.067	1942.556	1923.487	MON	8/18/2016 20:04	0.000	0.016
0101	470294.454	526769.328	1993.970	1974.507	MON	8/26/2016 19:34	0.000	0.016
0102	483784.098	505849.998	2067.202	2047.574	MON	8/26/2016 18:25	0.000	0.015
0103	447619.782	511724.462	1955.525	1935.970	MON	8/17/2016 17:49	0.000	0.016
0104	444319.398	530405.628	1929.394	1909.718	MON	8/17/2016 18:26	0.000	0.016
0105	444238.041	542983.841	2033.445	2013.828	MON	8/17/2016 18:53	0.000	0.016

Point ID	Northing	Easting	Elevation	Ellipsoid Height (Global)	Feature Code	GNSS Vector Observation.Start Time	GNSS Vector Observation.H. Precision	GNSS Vector Observation.V. Precision
0106	444489.764	553311.783	2155.855	2136.275	MON	8/18/2016 15:41	0.000	0.016
0107	479070.369	551537.358	2138.303	2119.369	MON	8/25/2016 17:21	0.000	0.015
0108	496982.692	552993.287	2087.772	2069.252	MON	8/25/2016 18:10	0.000	0.016
0109	533718.491	501618.524	1966.724	1947.196	MON	10/13/2016 14:58	0.000	0.016
0110	553451.747	515150.561	1703.787	1684.589	MON	8/18/2016 16:58	0.000	0.015
0111	582202.947	518047.530	1862.653	1843.978	MON	8/18/2016 16:18	0.000	0.015
0112	578264.922	528722.912	1793.829	1775.423	MON	8/18/2016 17:44	0.000	0.016
0113	560513.001	540113.051	2400.403	2382.953	MON	8/24/2016 16:23	0.000	0.015
0114	575011.032	555514.270	2355.888	2338.733	MON	10/13/2016 16:36	0.000	0.016
0115	465373.645	542534.207	2080.992	2061.721	MON	8/18/2016 16:11	0.000	0.016
5111	582192.883	518047.321	1862.049	1843.373	MON	10/4/2016 19:02	0.000	0.016
5112	578253.747	528740.347	1794.132	1775.727	MON	10/4/2016	0.000	0.016



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Los Alamos

BH2017009800000001

BH2017009800000003

BH2017009800000060

BH2017009800000102

BH2017009800000109

BH2017009800000054

BH2017009800000103

BH2017009800000013

BH2017009800000004

BH2017009800000055

BH2017009800000007

BH2017009800000010

BH2017009800000110

BH20170098000005111

BH2017009800000111

BH2017009800000053

BH2017009800000002

BH2017009800000008

599

Santa Fe

BH2017009800000052

BH2017009800000104

BH2017009800000101

BH2017009800000058

BH2017009800000011

BH2017009800000012

BH2017009800000112

BH20170098000005112

BH2017009800000100

BH2017009800000009

BH2017009800000057

BH2017009800000113

BH2017009800000105

BH2017009800000115

BH2017009800000051

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BH2017009800000107

BH2017009800000061

BH2017009800000108

BH2017009800000059

285

40

84

BH2017009800000114

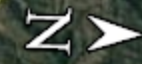
518

64

Google Earth

© 2016 Google
Image Landsat

100 km



Results From network-Test_Final

Controls

Preferences
Project List
Design
Serfil
Solutions
Show File
Send Email
Set up Adjustment
Review and Share
Delete Project

LEGEND

MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error
CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines: —

Map Satellite + Marks Marks&CORS -

LEGEND

MARKS

- 0001
- 0002
- 0003
- 0004
- 0005
- 0006
- 0007
- 0008
- 0009
- 0010
- 0011
- 0012
- 0013
- 0051

Add MARKS

CORS

- ncwm
- nmgr
- nmsf
- p034
- p035
- p036

Add CORS

Map data ©2016 Google 20 km Terms of Use Report a map error

Control Station Data



Name of Station: BH2017009800000001

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.21 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 04' 14.56758"	451,419.240 m	451,419.240 m
Longitude Easting X:	W 106° 12' 29.65262"	503,808.819 m	503,808.819 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,034.060 m	2,034.060 m	2,053.593 m

Location

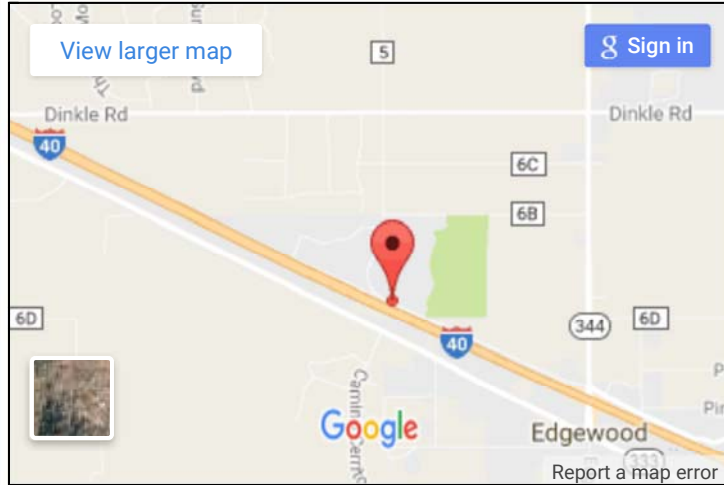
County & State: Santa Fe, NM

Section: sec 21 T10N R7E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 0.75 LENGTHS FOR A TOTAL DEPTH OF 3 FEET

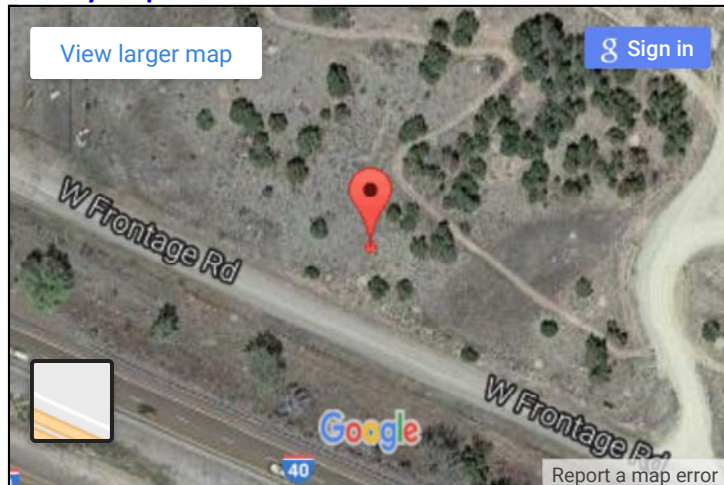
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000002

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.30 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 08' 50.57324"	459,956.236 m	459,956.236 m
Longitude Easting X:	W 105° 58' 55.26862"	524,417.133 m	524,417.133 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,908.860 m	1,908.860 m	1,928.438 m

Location

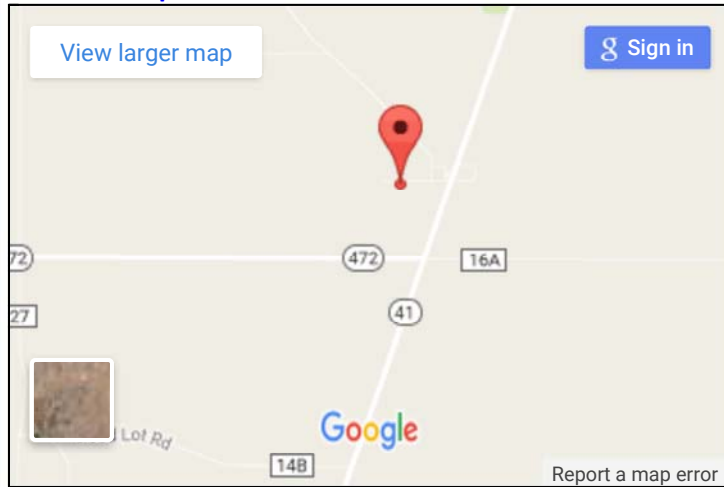
County & State: Santa Fe, NM

Section: sec 28 T11N R9E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 5 LENGTHS FOR A TOTAL DEPTH OF 20 FEET

Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH2017009800000003**

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.37 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 13' 45.44777"	469,011.885 m	469,011.885 m
Longitude Easting X:	W 106° 10' 59.19800"	506,088.524 m	506,088.524 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,130.318 m	2,130.318 m	2,149.758 m

Location

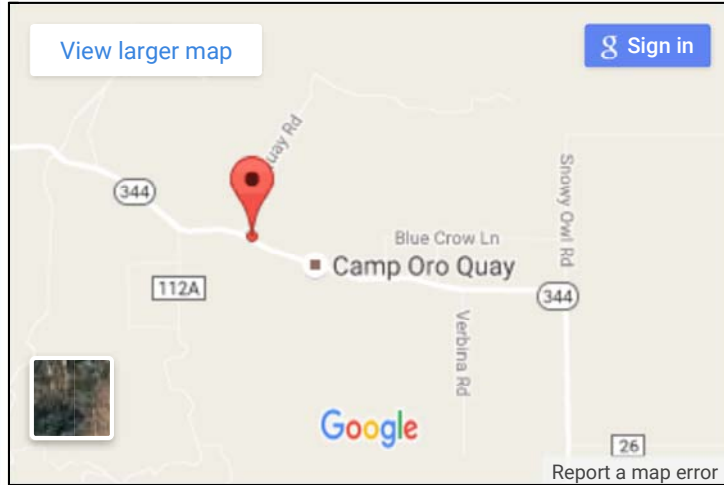
County & State: Santa Fe, NM

Section: sec 27 T12N R7E (Projected)

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 3 LENGTHS FOR A TOTAL DEPTH OF 12 FEET

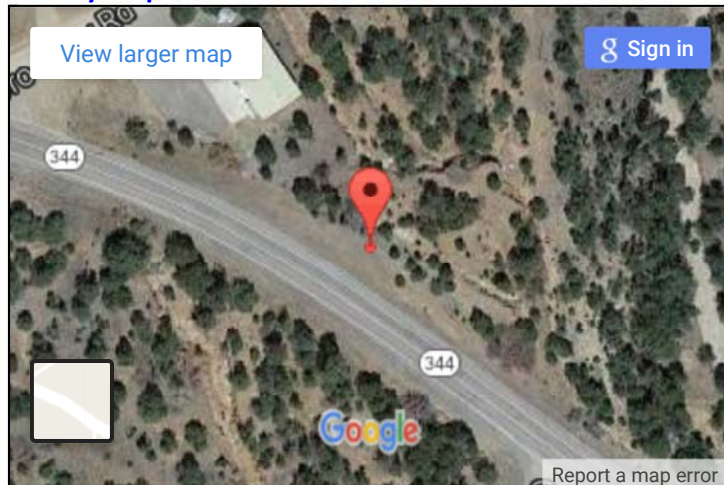
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#)

Control Station Data



Name of Station: BH2017009800000004

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.26 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 33' 06.81079"	504,805.559 m	504,805.559 m
Longitude Easting X:	W 106° 07' 21.32314"	511,551.262 m	511,551.262 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,831.677 m	1,831.677 m	1,851.258 m

Location

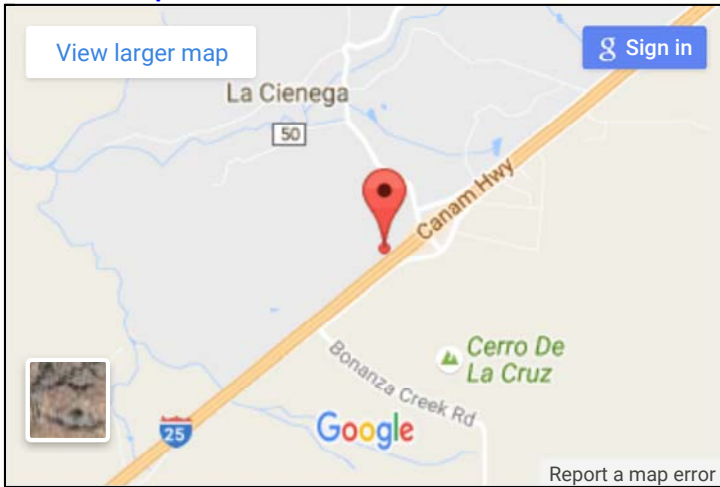
County & State: Santa Fe, NM

Section: sec 5 T15N R8E

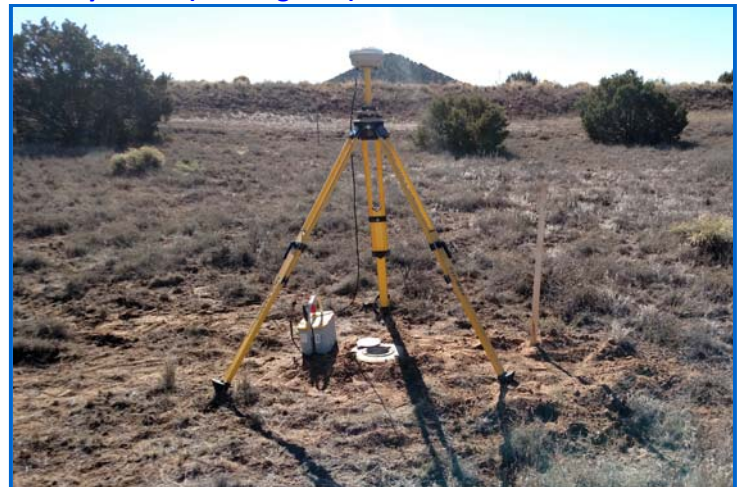
Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 5 LENGTHS FOR A TOTAL DEPTH OF 20 FEET

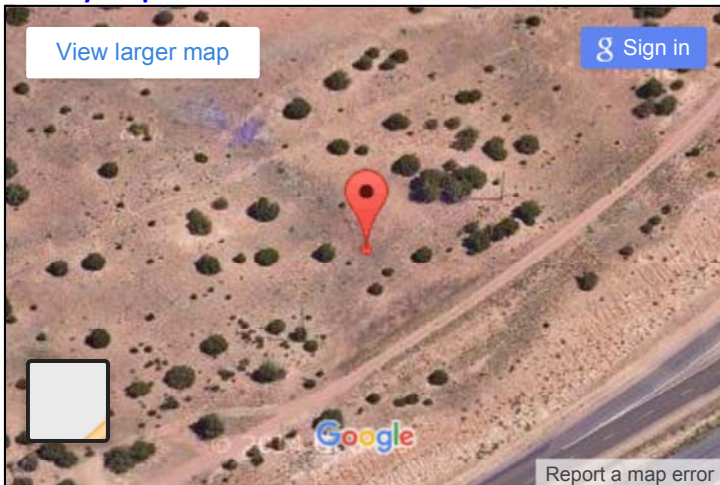
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000005

Establishing Group: Bohannon Huston, Inc.

Observation Date: 3-Oct-2016

BST Project #: 20170098

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Station Height: -0.50 US Ft

Stamping:

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 33' 17.76190"	505,263.229 m	505,263.229 m
Longitude Easting X:	W 105° 43' 23.59076"	547,757.341 m	547,757.341 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,140.498 m	2,140.498 m	2,158.699 m

Location

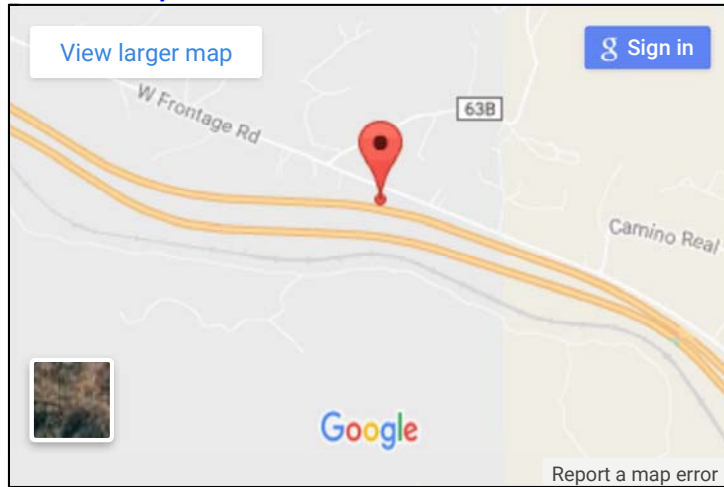
County & State: Santa Fe, NM

Land Grant(s): Pueblo of Pecos

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 3 LENGTHS FOR A TOTAL DEPTH OF 12 FEET

Section: sec 1 T15N R11E (Projected)

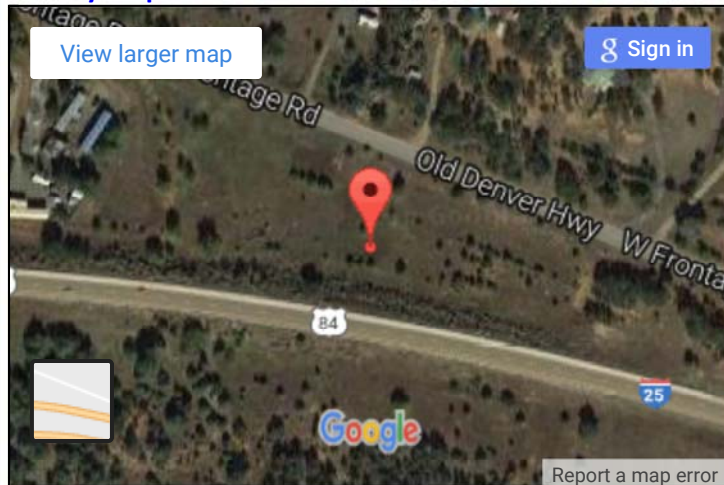
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000006

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle
 Station Height: -0.13 US Ft
 Stamping:

Horizontal Method: OPUS
 Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 27' 03.16135"	493,599.065 m	493,599.065 m
Longitude Easting X:	W 106° 07' 26.07798"	511,445.838 m	511,445.838 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,768.226 m	1,768.226 m	1,787.851 m

Location

County & State: Santa Fe, NM

Section: sec 8 T14N R8E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 3 LENGTHS FOR A TOTAL DEPTH OF 12 FEET

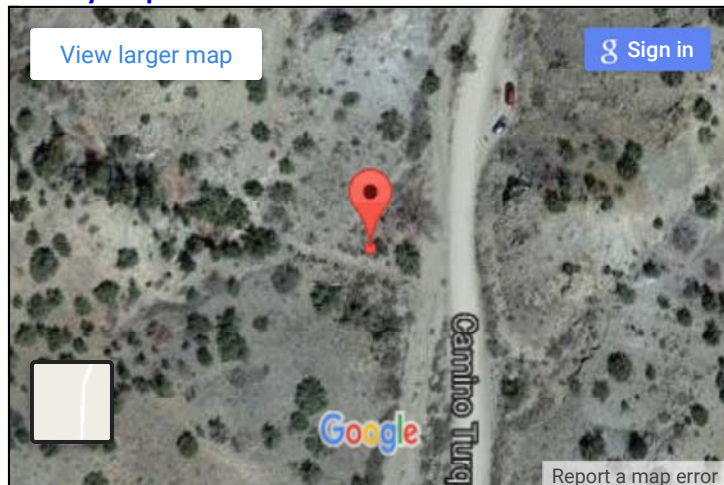
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data

Name of Station: BH2017009800000007

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.39 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 38' 37.43293"	515,005.964 m	515,005.964 m
Longitude Easting X:	W 106° 02' 45.75345"	518,470.071 m	518,470.071 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,947.383 m	1,947.383 m	1,966.618 m

Location

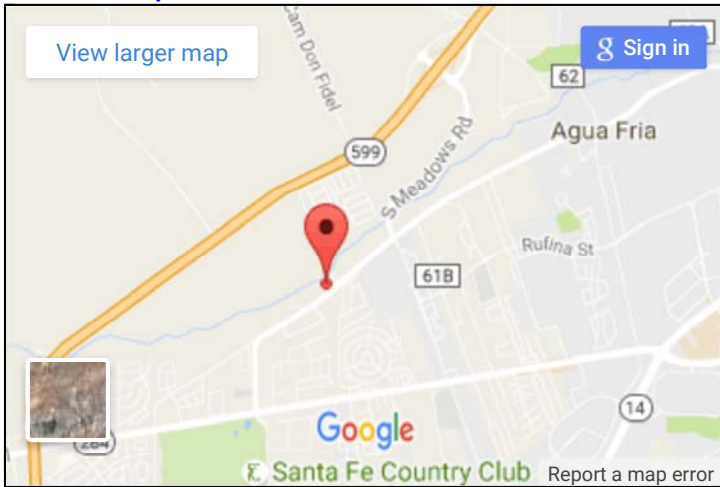
County & State: Santa Fe, NM

Section: sec 1 T16N R8E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 5 LENGTHS FOR A TOTAL DEPTH OF 20 FEET

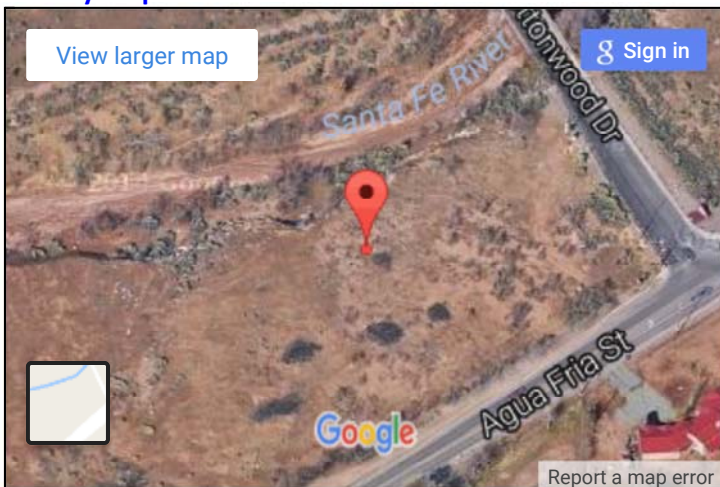
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data

Name of Station: BH2017009800000008

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 3-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.40 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 25' 06.96590"	490,042.952 m	490,042.952 m
Longitude Easting X:	W 105° 59' 11.73636"	523,920.439 m	523,920.439 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,861.952 m	1,861.952 m	1,881.356 m

Location

County & State: Santa Fe, NM

Section: sec 28 T14N R9E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 5 LENGTHS FOR A TOTAL DEPTH OF 20 FEET

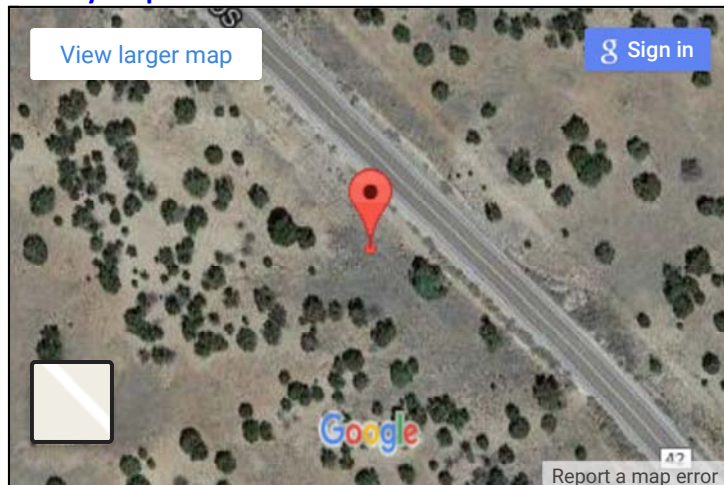
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000009

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 5-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.30 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 43' 34.60527"	524,206.327 m	524,206.327 m
Longitude Easting X:	W 105° 53' 05.20959"	533,039.727 m	533,039.727 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,285.385 m	2,285.385 m	2,303.334 m

Location

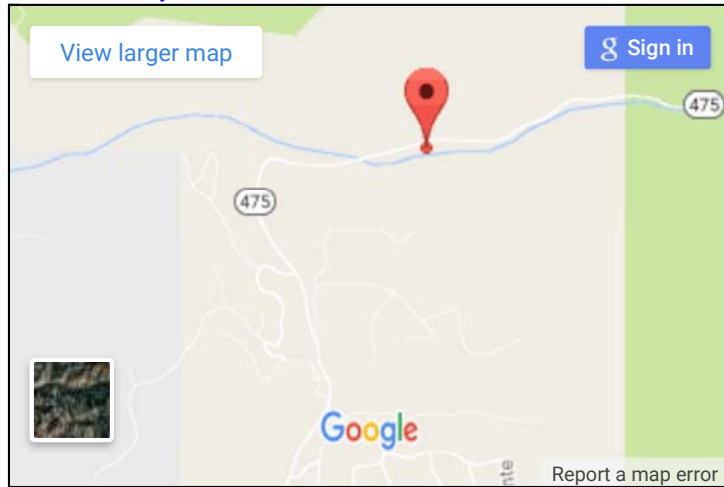
County & State: Santa Fe, NM

Section: sec 4 T17N R10E

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 4 LENGTHS FOR A TOTAL DEPTH OF 16 FEET

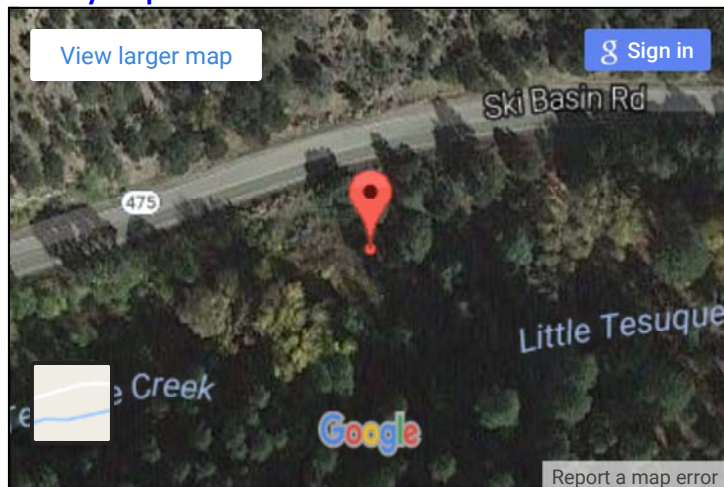
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000010

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 5-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.20 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 53' 29.32020"	542,495.002 m	542,495.002 m
Longitude Easting X:	W 106° 01' 48.78918"	519,841.391 m	519,841.391 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,749.893 m	1,749.893 m	1,768.862 m

Location

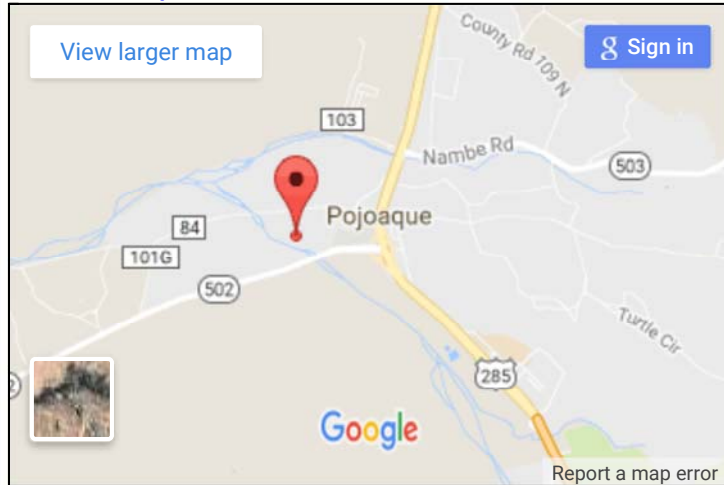
County & State: Santa Fe, NM

Section: sec 7 T19N R9E

Land Grant(s): Pueblo of Pojoaque

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 14.5 LENGTHS FOR A TOTAL DEPTH OF 58 FEET

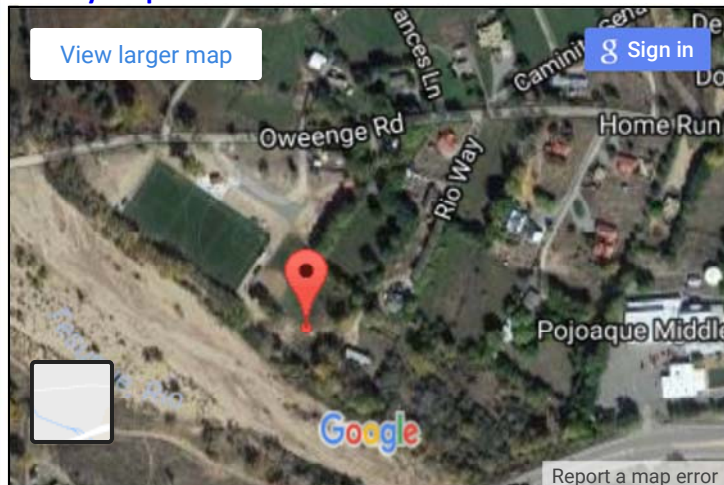
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000011

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 3-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.20 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 32' 22.94256"	503,498.568 m	503,498.568 m
Longitude Easting X:	W 105° 54' 45.56548"	530,588.847 m	530,588.847 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,070.074 m	2,070.074 m	2,088.905 m

Location

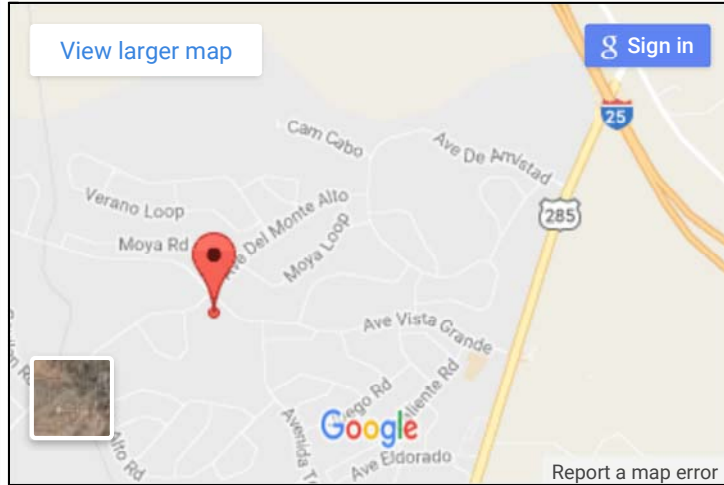
County & State: Santa Fe, NM

Section: sec 8 T15N R10E (Projected)

Land Grant(s): Cañada de Los Álamos

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 6 LENGTHS FOR A TOTAL DEPTH OF 24 FEET

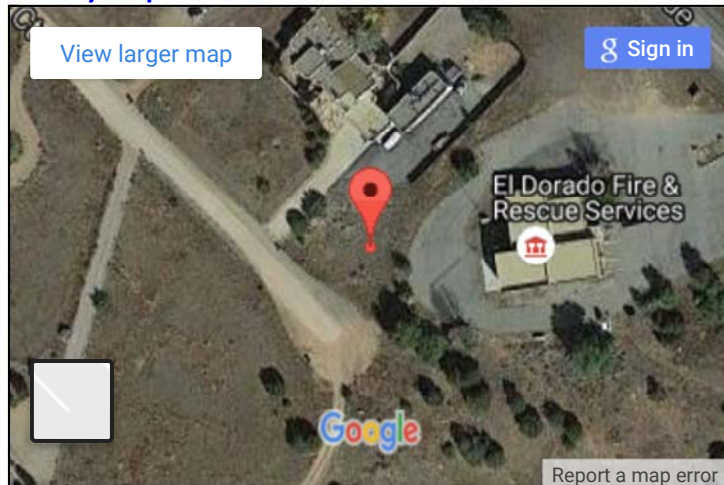
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000012

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.30 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 59' 02.60683"	552,790.878 m	552,790.878 m
Longitude Easting X:	W 105° 55' 54.92763"	528,681.823 m	528,681.823 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,875.242 m	1,875.242 m	1,893.496 m

Location

County & State: Santa Fe, NM

Section: sec 12 T20N R9E (Projected)

Land Grant(s): None

Note(s): STAINLESS STEEL ROD DRIVEN TO REPOSE - 5 LENGTHS FOR A TOTAL DEPTH OF 20 FEET

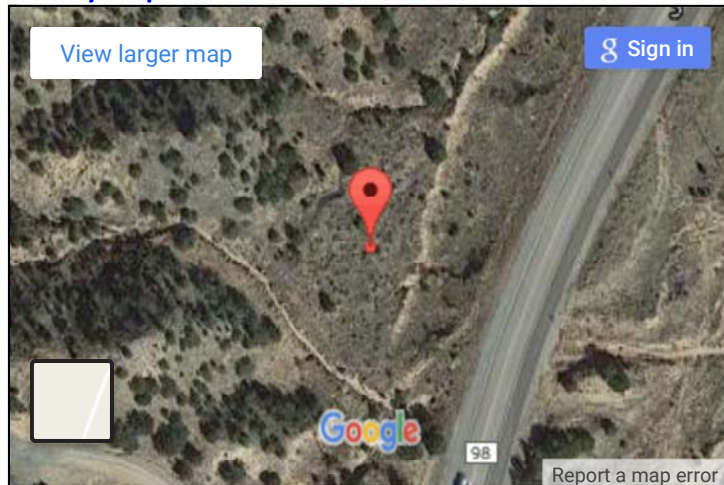
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000013

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: Spindle

Horizontal Method: OPUS

Station Height: -0.31 US Ft

Vertical Method: OPUS

Stamping:

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 07' 36.36399"	457,645.989 m	457,645.989 m
Longitude Easting X:	W 106° 06' 25.63493"	513,021.734 m	513,021.734 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,943.961 m	1,943.961 m	1,963.555 m

Location

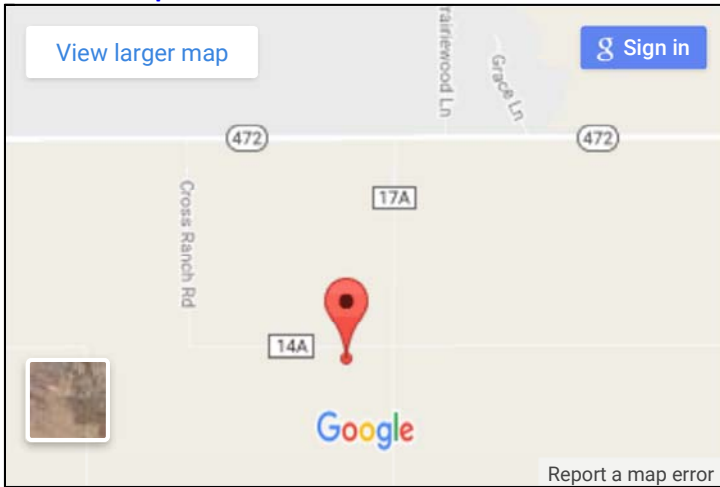
County & State: Santa Fe, NM

Section: sec 5 T10N R8E

Land Grant(s): None

Note(s):

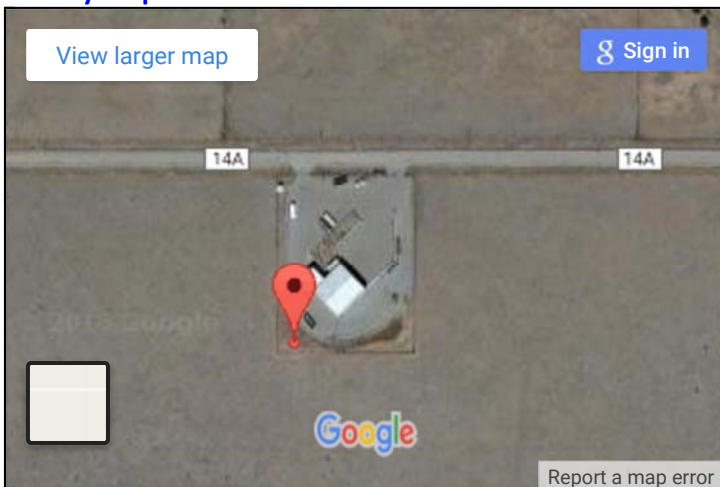
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000051

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 24-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-051

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 07' 40.04608"	568,800.697 m	568,800.697 m
Longitude Easting X:	W 105° 45' 49.02030"	543,779.030 m	543,779.030 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,256.857 m	2,256.857 m	2,274.316 m

Location

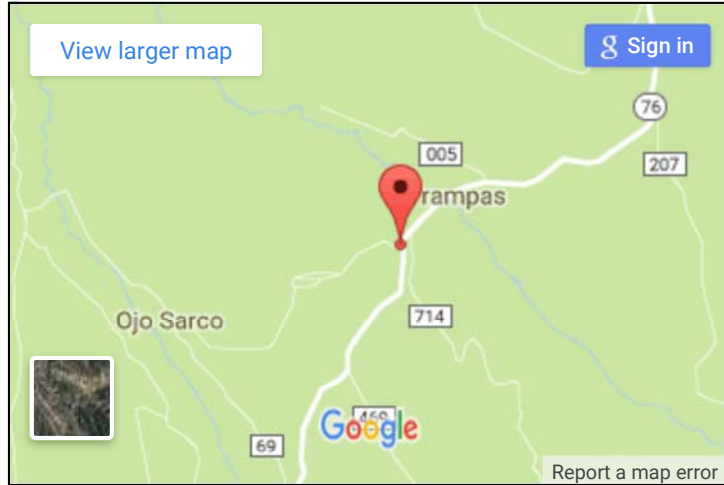
County & State: Rio Arriba, NM

Section: sec 22 T22N R11E (Projected)

Land Grant(s): Town of Las Trampas

Note(s):

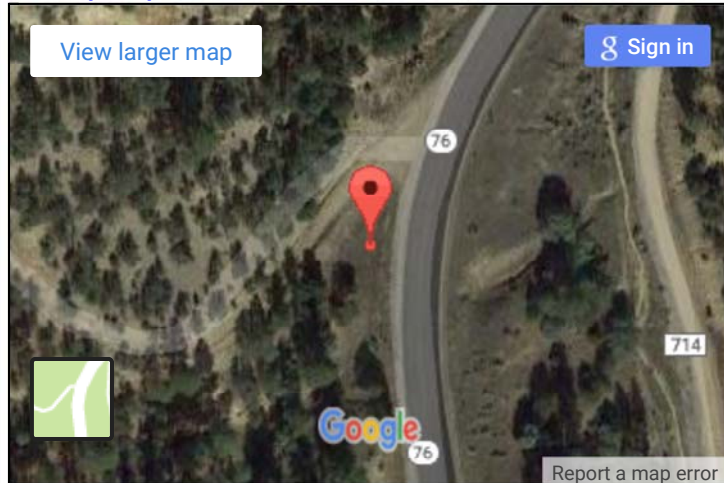
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000052

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 24-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-052

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 49' 20.92544"	534,852.424 m	534,852.424 m
Longitude Easting X:	W 105° 58' 31.52803"	524,809.658 m	524,809.658 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,905.881 m	1,905.881 m	1,924.473 m

Location

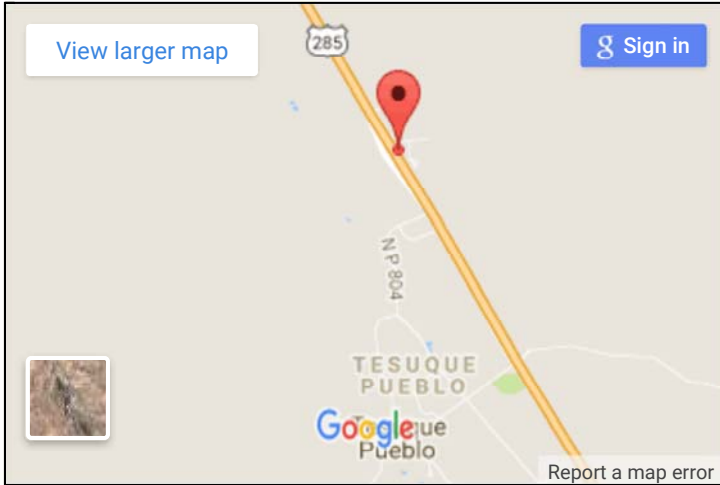
County & State: Santa Fe, NM

Section: sec 3 T18N R9E

Land Grant(s): Pueblo of Tesuque

Note(s):

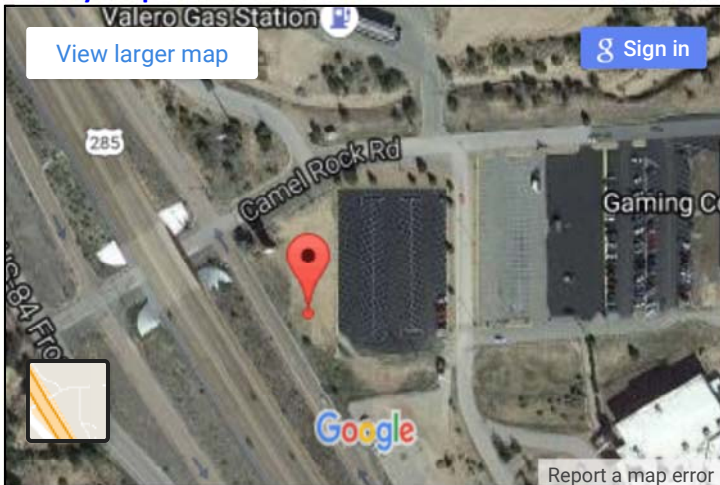
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000053

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-053

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 06' 14.69759"	566,082.184 m	566,082.184 m
Longitude Easting X:	W 106° 02' 05.30433"	519,375.165 m	519,375.165 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,748.058 m	1,748.058 m	1,767.054 m

Location

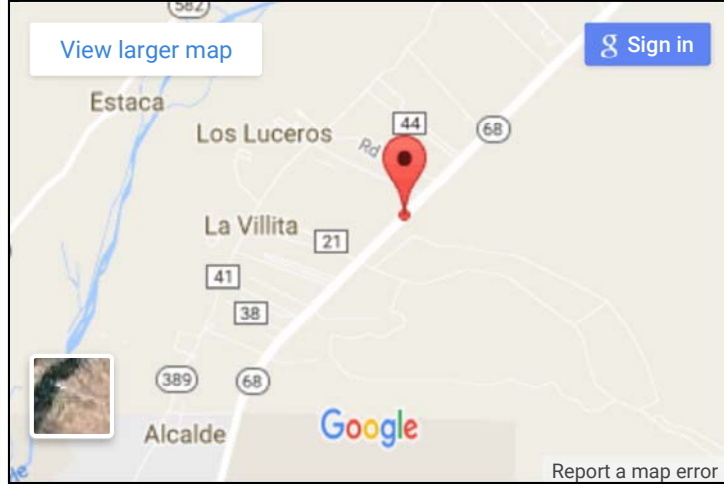
County & State: Rio Arriba, NM

Section: sec 30 T22N R9E (Projected)

Land Grant(s): Sebastián Martín

Note(s):

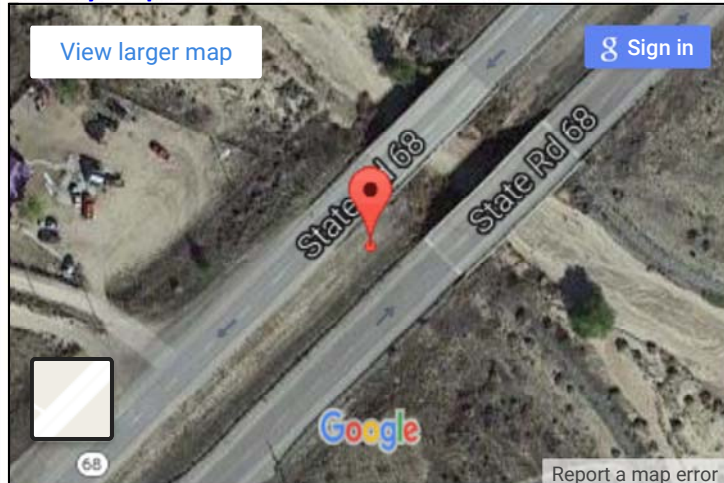
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH2017009800000054**

Establishing Group: United States Geodetic Survey

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 3.5" Brass Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: G 81 1934

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 52' 08.06479"	539,969.249 m	539,969.249 m
Longitude Easting X:	W 106° 12' 39.21168"	503,531.583 m	503,531.583 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,903.663 m	1,903.663 m	1,923.095 m

Location

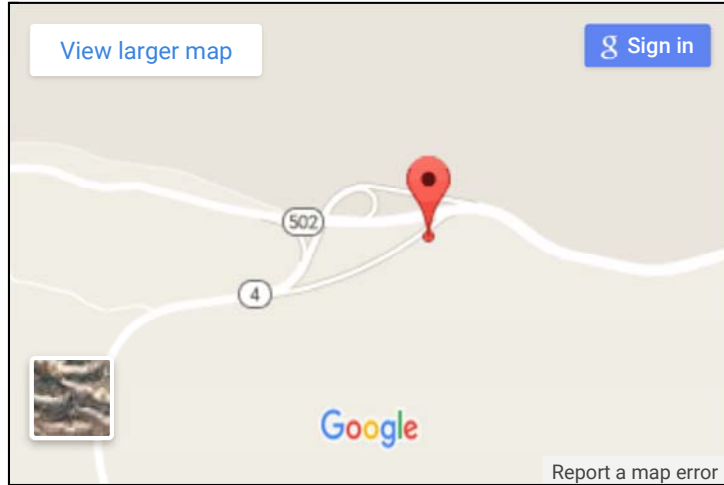
County & State: Santa Fe, NM

Section: sec 21 T19N R7E

Land Grant(s): None

Note(s): MONUMENT IN A ROCK OUTCROP - SEE PHOTO

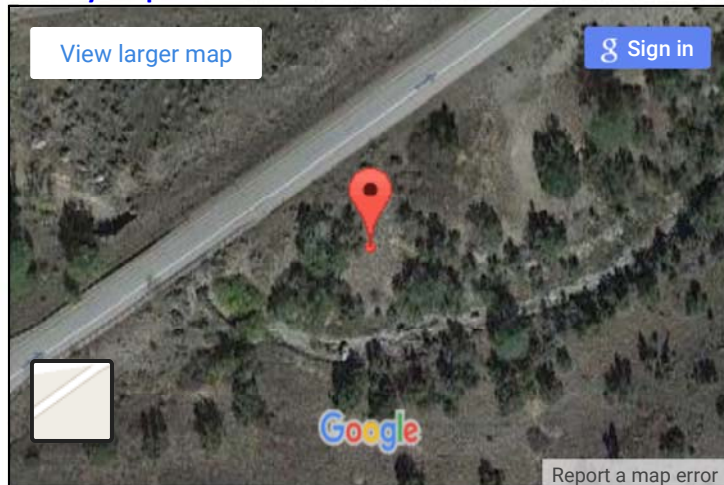
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000055

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-055

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 08' 33.63658"	570,345.826 m	570,345.826 m
Longitude Easting X:	W 106° 10' 07.76477"	507,305.232 m	507,305.232 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,755.453 m	1,755.453 m	1,774.509 m

Location

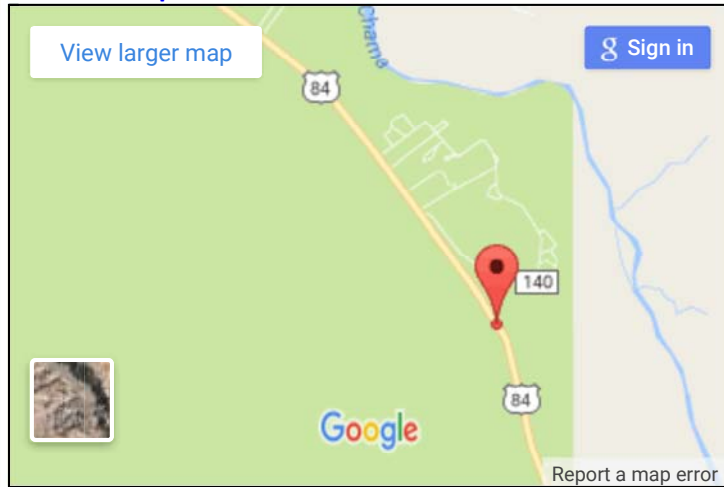
County & State: Rio Arriba, NM

Section: sec 14 T22N R7E

Land Grant(s): Juan José Lovato

Note(s):

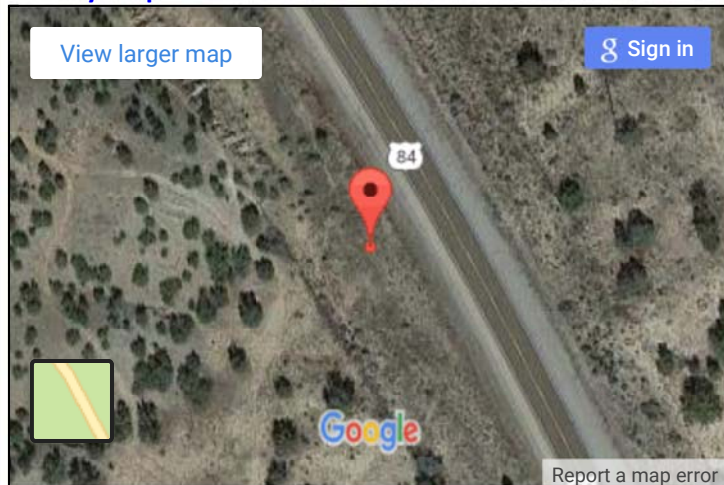
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000057

Establishing Group: National Geodetic Survey

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 3" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.55 US Ft

Vertical Method: OPUS

Stamping: SF 76 1992

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 18' 40.24645"	478,175.252 m	478,175.252 m
Longitude Easting X:	W 105° 49' 45.67730"	538,250.279 m	538,250.279 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,969.234 m	1,969.234 m	1,988.367 m

Location

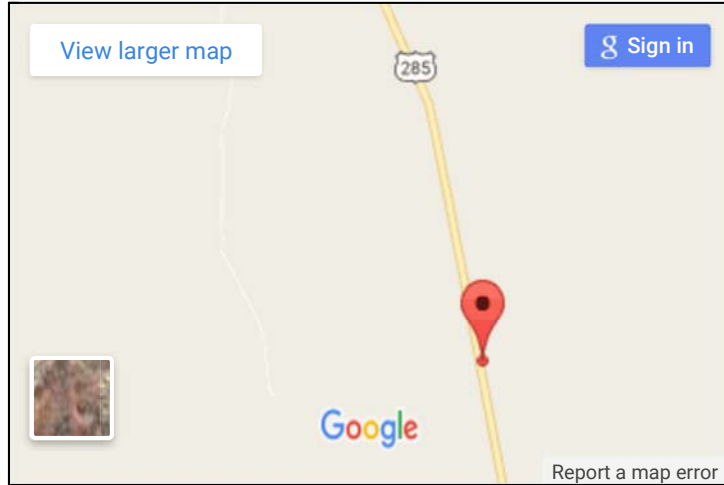
County & State: Santa Fe, NM

Section: sec 36 T13N R10E (Projected)

Land Grant(s): San Cristóbal

Note(s):

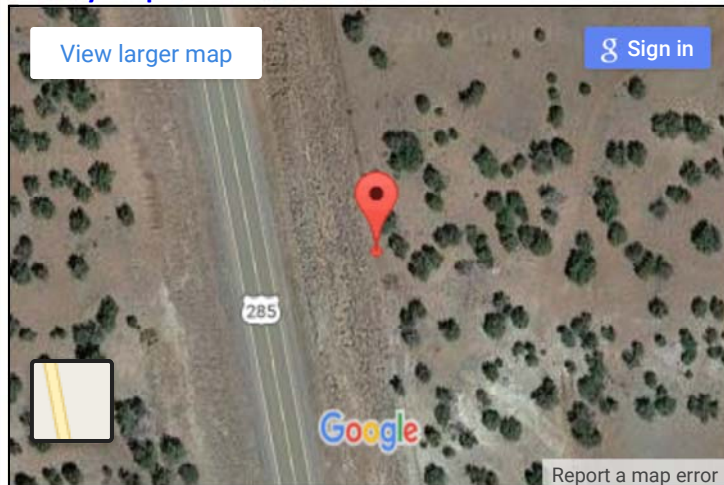
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000058

Establishing Group: National Geodetic Survey

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 3" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: SF 73 1992

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 17' 45.46994"	476,451.671 m	476,451.671 m
Longitude Easting X:	W 105° 56' 05.63278"	528,658.310 m	528,658.310 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,904.091 m	1,904.091 m	1,923.472 m

Location

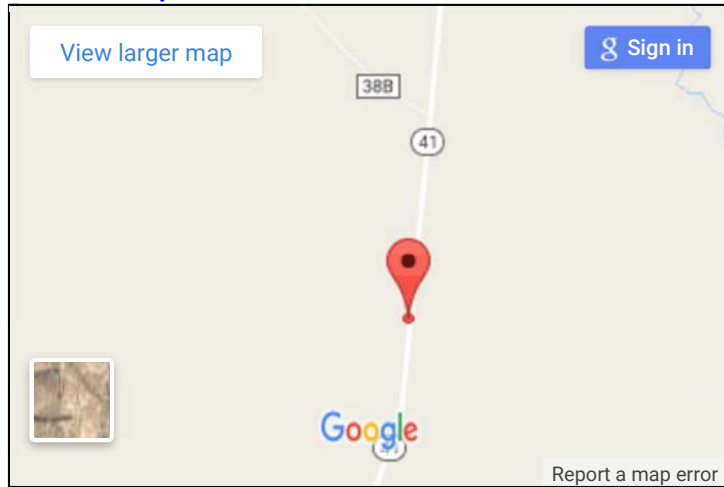
County & State: Santa Fe, NM

Section: sec 1 T12N R9E (Projected)

Land Grant(s): San Cristóbal

Note(s):

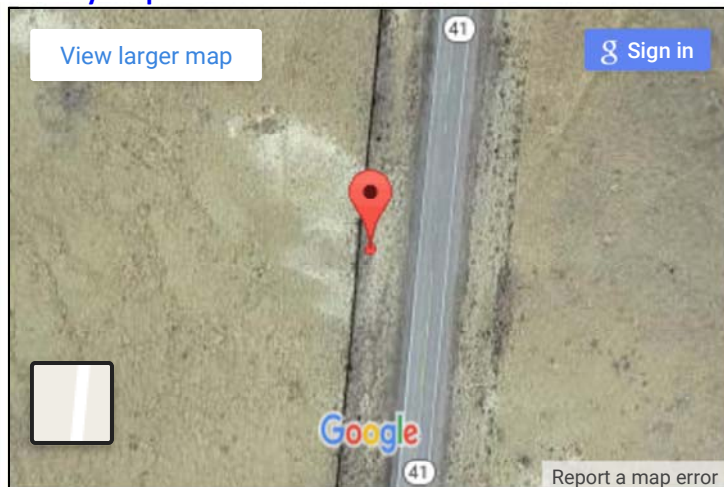
Location Map:



Vicinity Photo (Looking North):



Vicinity Map:



Close Up Photo:



Other Photos: [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000059

Establishing Group: United States Geodetic Survey

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 3.5" Brass Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: Q136 RESET 1939

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 47' 44.24108"	532,000.033 m	532,000.033 m
Longitude Easting X:	W 105° 39' 26.70307"	553,561.889 m	553,561.889 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,502.502 m	2,502.502 m	2,519.355 m

Location

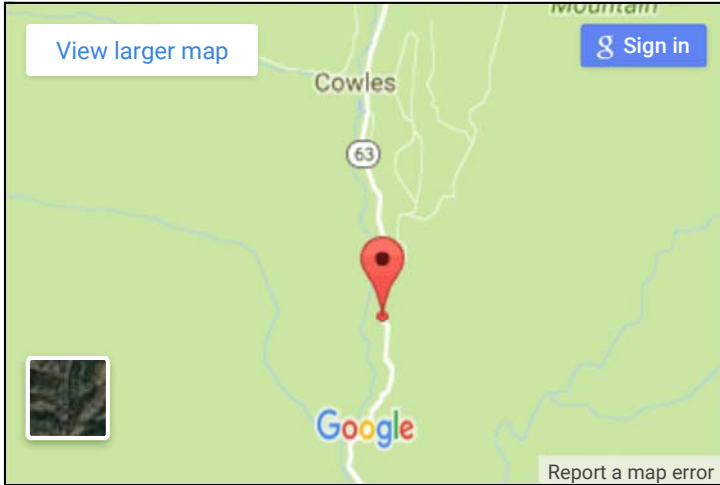
County & State: San Miguel, NM

Section: sec 10 T18N R12E (Projected)

Land Grant(s): None

Note(s):

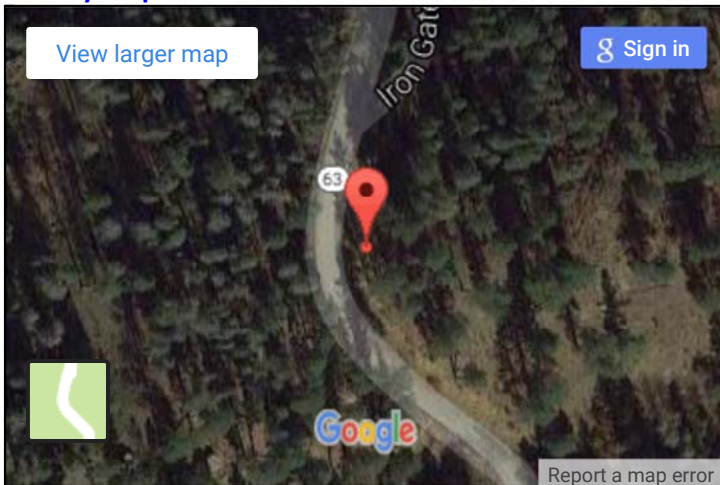
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000060

Establishing Group: National Geodetic Survey

BST Project #: 20170098

Observation Date: 10-Oct-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 3.5" Brass Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: P438 1984

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 31' 04.91001"	501,041.887 m	501,041.887 m
Longitude Easting X:	W 106° 13' 20.98552"	502,494.616 m	502,494.616 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,719.509 m	1,719.509 m	1,739.535 m

Location

County & State: Santa Fe, NM

Section: sec 20 T15N R7E

Land Grant(s): Mesita de Juana López, Pueblo of Santo Domingo

Note(s):

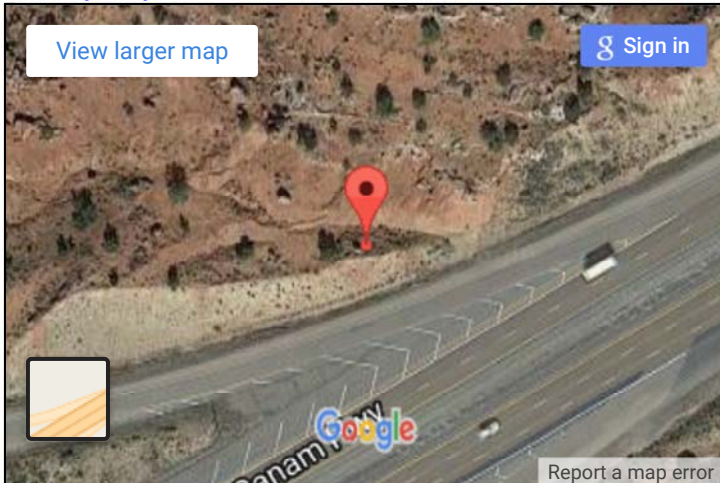
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000061

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-061

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 40' 36.25116"	518,791.533 m	518,791.533 m
Longitude Easting X:	W 105° 41' 33.71868"	550,447.736 m	550,447.736 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,222.482 m	2,222.482 m	2,239.936 m

Location

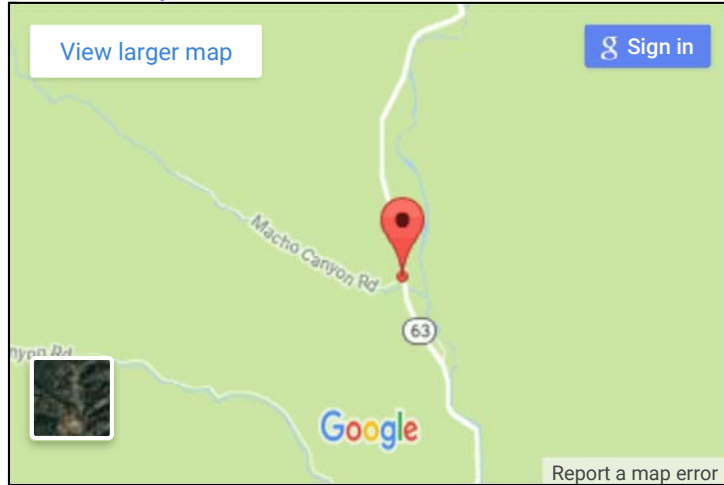
County & State: San Miguel, NM

Section: sec 29 T17N R12E (Projected)

Land Grant(s): None

Note(s):

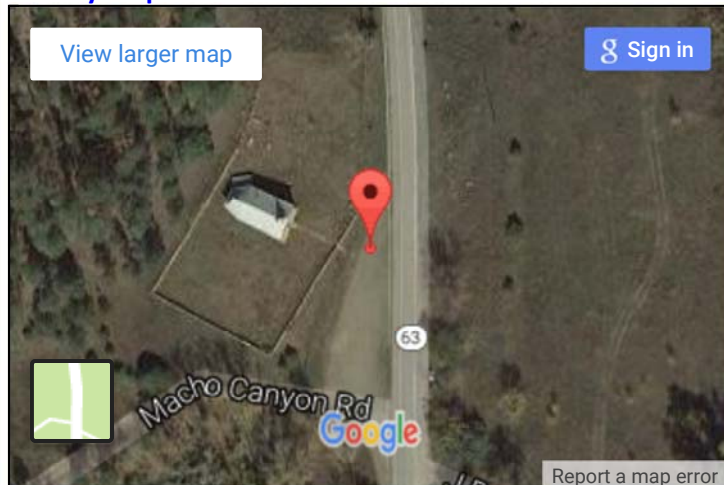
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000100

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-100

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 25' 40.46654"	491,107.191 m	491,107.191 m
Longitude Easting X:	W 105° 52' 38.82153"	533,828.067 m	533,828.067 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,923.487 m	1,923.487 m	1,942.556 m

Location

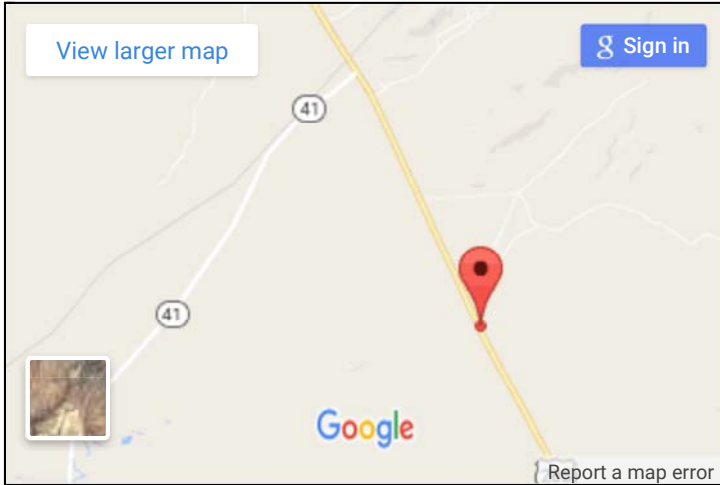
County & State: Santa Fe, NM

Section: sec 21 T14N R10E

Land Grant(s): None

Note(s):

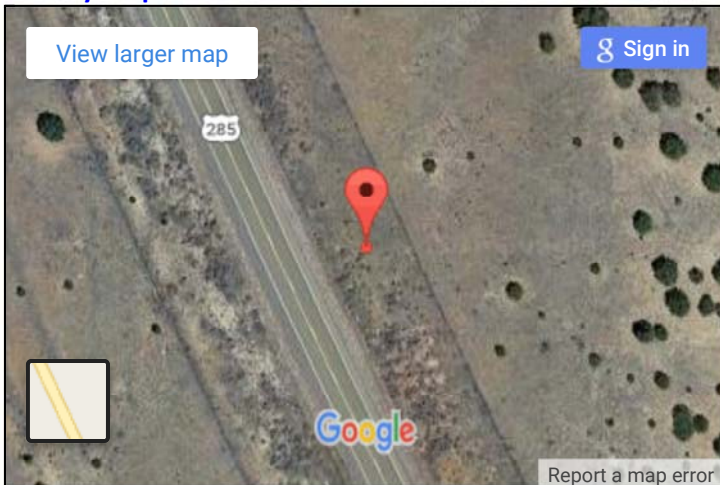
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH2017009800000101**

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 26-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-101

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 14' 25.84934"	470,294.454 m	470,294.454 m
Longitude Easting X:	W 105° 57' 21.12489"	526,769.328 m	526,769.328 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,974.507 m	1,974.507 m	1,993.970 m

Location

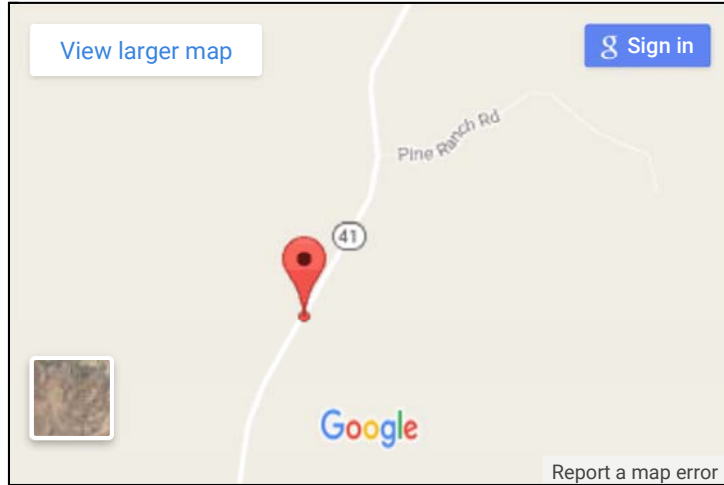
County & State: Santa Fe, NM

Section: sec 26 T12N R9E

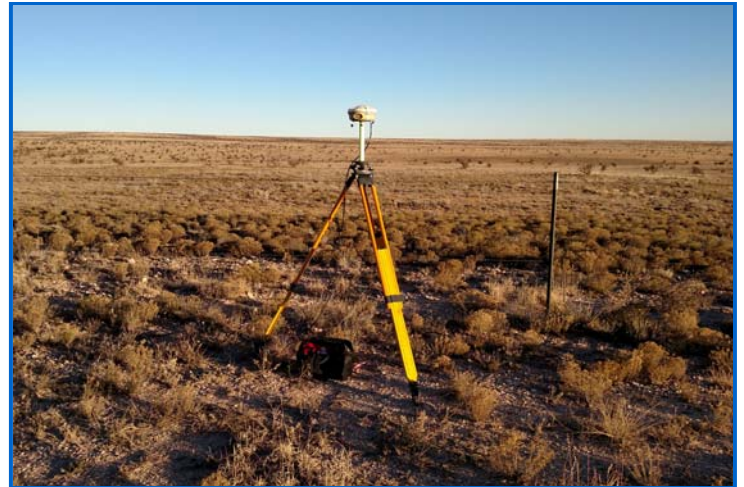
Land Grant(s): None

Note(s):

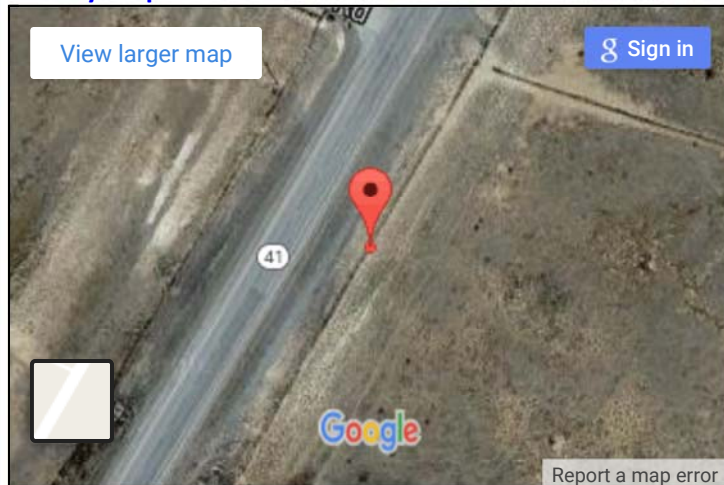
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000102

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 26-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-102

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 21' 44.83249"	483,784.098 m	483,784.098 m
Longitude Easting X:	W 106° 11' 08.25245"	505,849.998 m	505,849.998 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,047.574 m	2,047.574 m	2,067.202 m

Location

County & State: Santa Fe, NM

Section: sec 10 T13N R7E (Projected)

Land Grant(s): Ortiz Mine

Note(s):

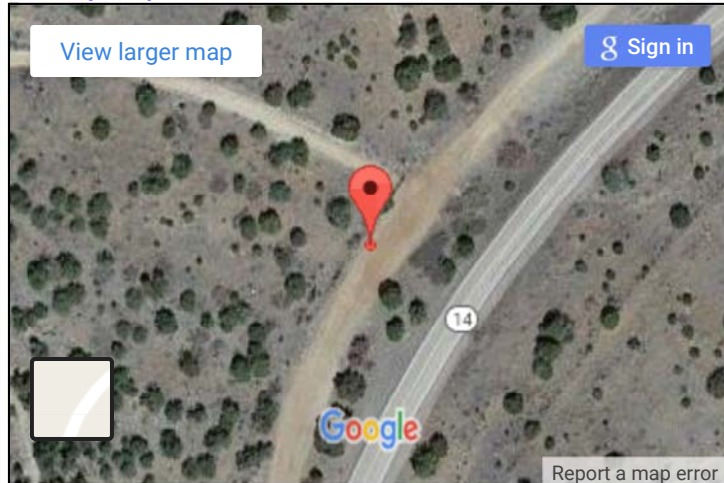
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000103

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 17-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-103

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 02' 11.04559"	447,619.782 m	447,619.782 m
Longitude Easting X:	W 106° 07' 17.38821"	511,724.462 m	511,724.462 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,935.970 m	1,935.970 m	1,955.525 m

Location

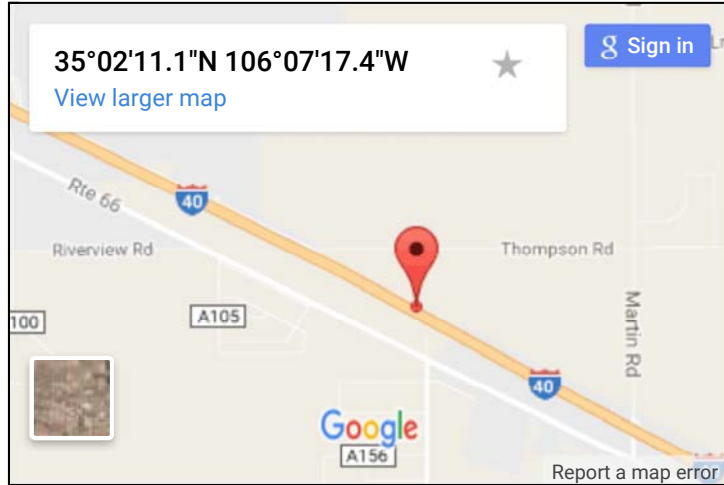
County & State: Torrance, NM

Section: sec 6 T9N R8E

Land Grant(s): None

Note(s):

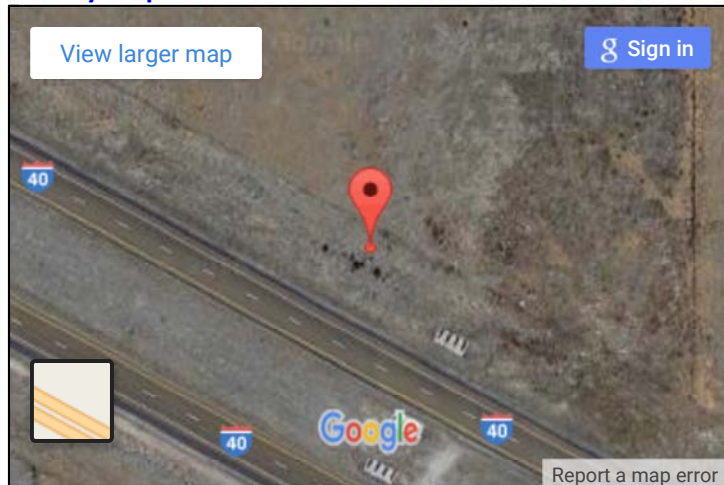
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000104

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 17-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-104

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 00' 22.53777"	444,319.398 m	444,319.398 m
Longitude Easting X:	W 105° 55' 00.72813"	530,405.628 m	530,405.628 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,909.718 m	1,909.718 m	1,929.394 m

Location

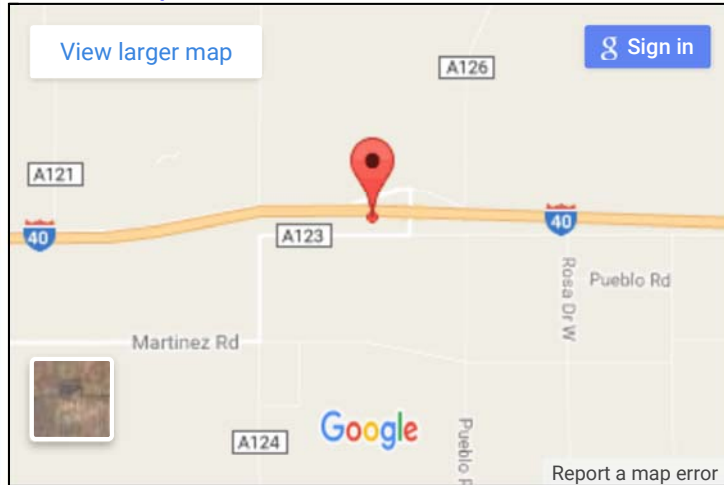
County & State: Torrance, NM

Section: sec 18 T9N R10E

Land Grant(s): None

Note(s):

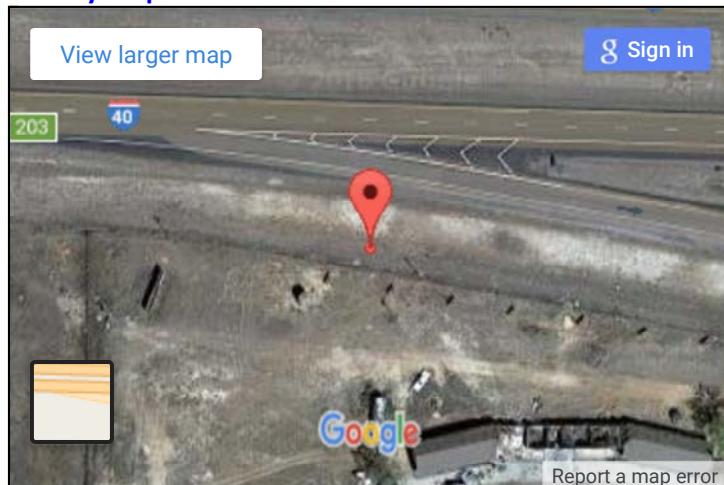
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000105

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 17-Aug-2016

Project Name: SFCO LIDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-105

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 00' 18.25447"	444,238.041 m	444,238.041 m
Longitude Easting X:	W 105° 46' 44.64067"	542,983.841 m	542,983.841 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,013.828 m	2,013.828 m	2,033.445 m

Location

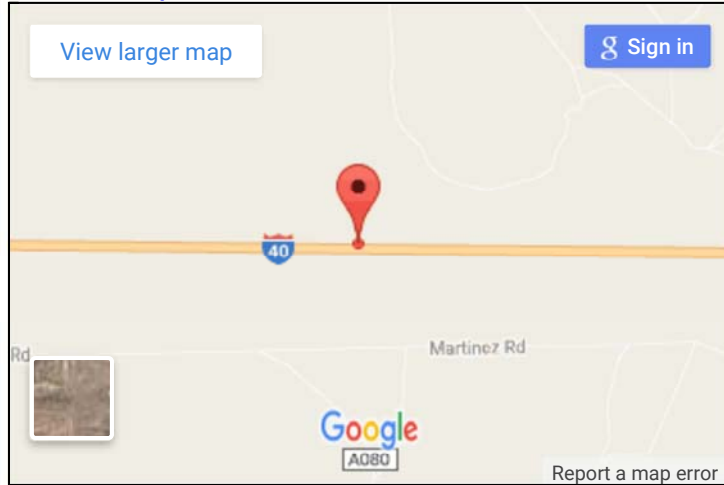
County & State: Torrance, NM

Section: sec 16 T9N R11E

Land Grant(s): None

Note(s):

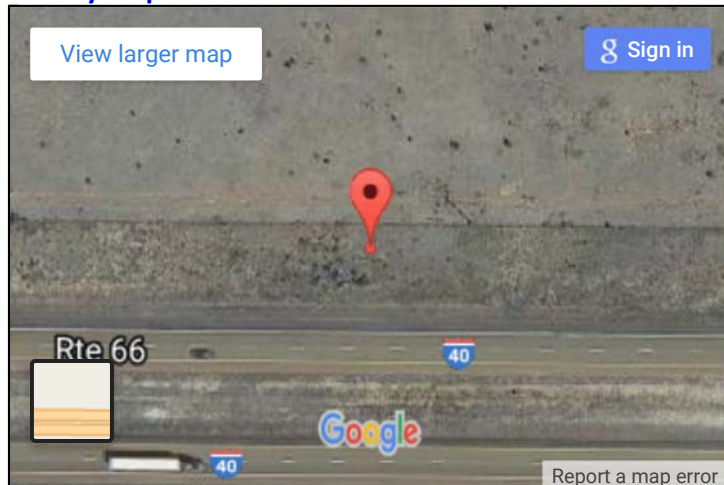
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000106

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-106

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 00' 24.65305"	444,489.764 m	444,489.764 m
Longitude Easting X:	W 105° 39' 57.24713"	553,311.783 m	553,311.783 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,136.275 m	2,136.275 m	2,155.855 m

Location

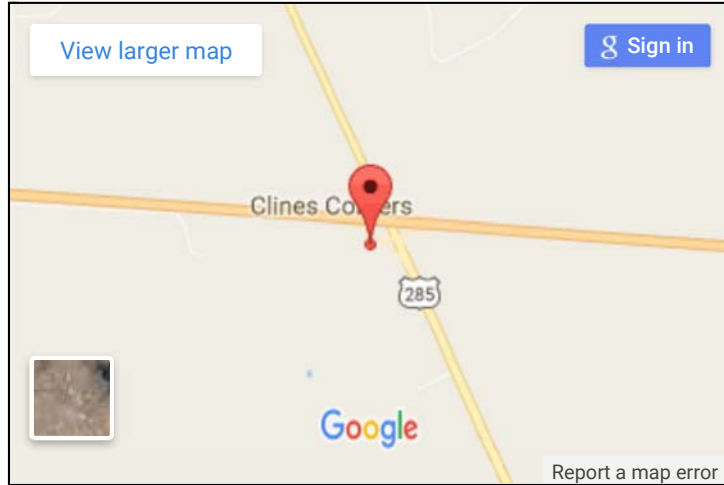
County & State: Torrance, NM

Section: sec 16 T9N R12E

Land Grant(s): None

Note(s):

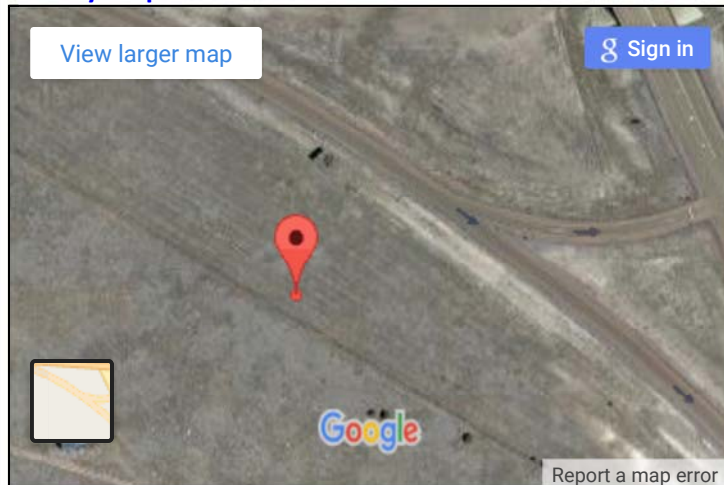
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH2017009800000107**

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 25-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-107

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 19' 07.14526"	479,070.369 m	479,070.369 m
Longitude Easting X:	W 105° 40' 59.46120"	551,537.358 m	551,537.358 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,119.369 m	2,119.369 m	2,138.303 m

Location

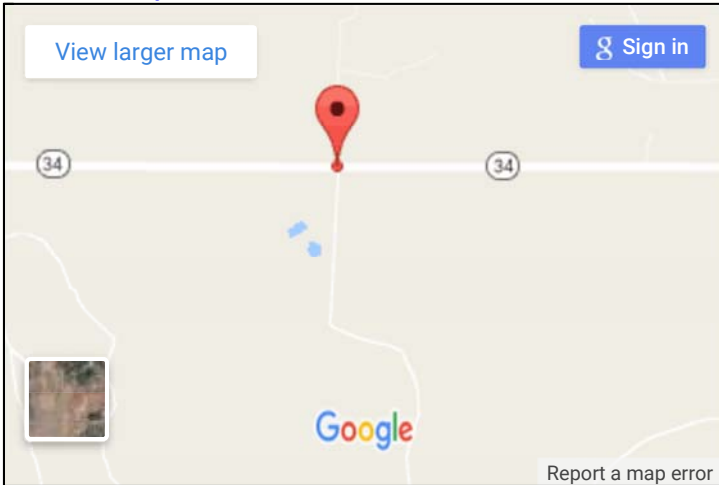
County & State: San Miguel, NM

Section: sec 29 T13N R12E

Land Grant(s): None

Note(s):

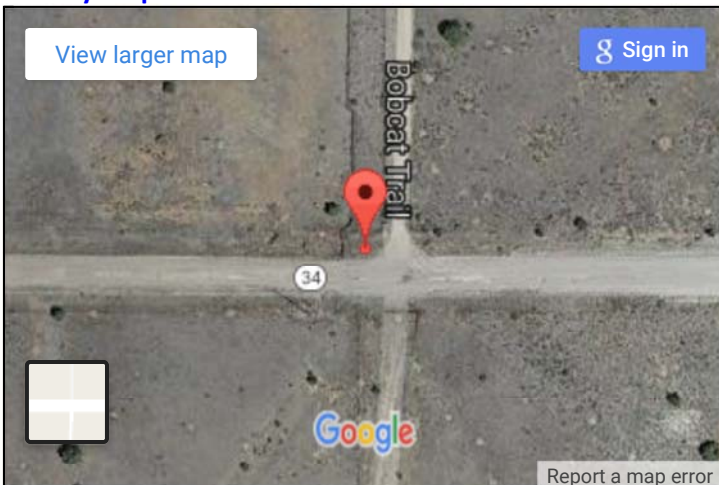
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: **BH2017009800000108**

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 25-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-108

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 28' 48.11212"	496,982.692 m	496,982.692 m
Longitude Easting X:	W 105° 39' 57.63135"	552,993.287 m	552,993.287 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,069.252 m	2,069.252 m	2,087.772 m

Location

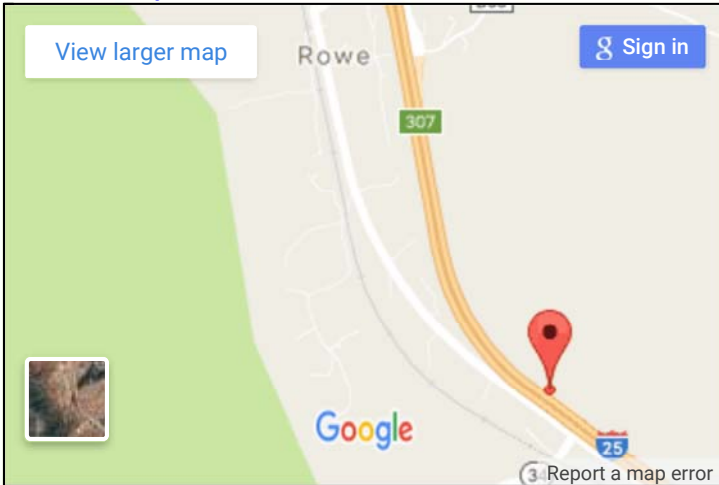
County & State: San Miguel, NM

Section: sec 33 T15N R12E (Projected)

Land Grant(s): Los Trigos

Note(s):

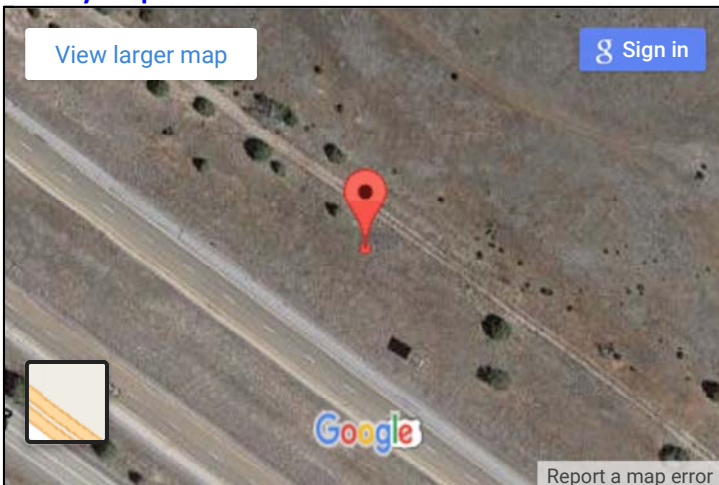
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000109

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-109

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 48' 45.25503"	533,718.491 m	533,718.491 m
Longitude Easting X:	W 106° 13' 55.52234"	501,618.524 m	501,618.524 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,947.196 m	1,947.196 m	1,966.724 m

Location

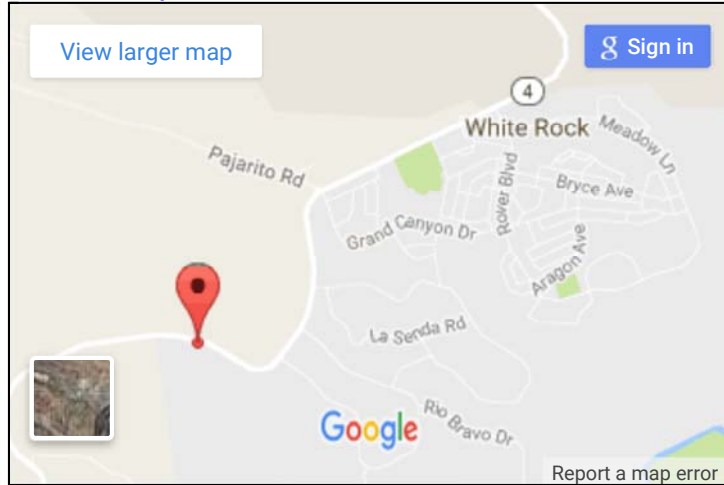
County & State: Los Alamos, NM

Section: sec 8 T18N R7E (Projected)

Land Grant(s): Ramón Vigil

Note(s):

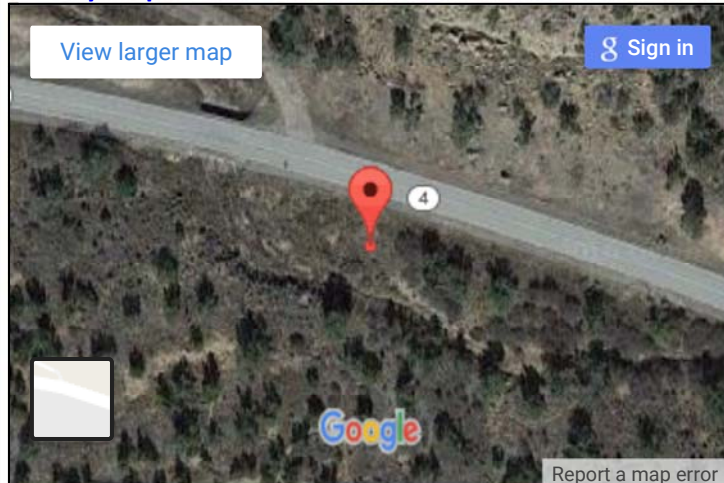
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000110

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-110

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 59' 25.14475"	553,451.747 m	553,451.747 m
Longitude Easting X:	W 106° 04' 55.09147"	515,150.561 m	515,150.561 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88,GEOID12A)
Elevation:	1,684.589 m	1,684.589 m	1,703.787 m

Location

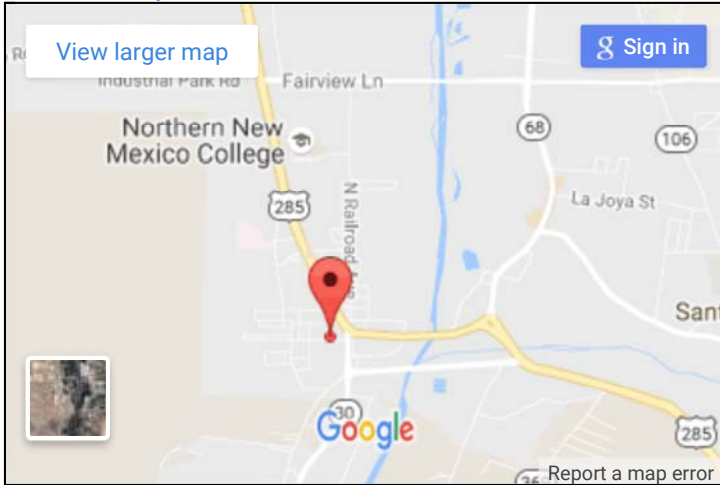
County & State: Rio Arriba, NM

Section: sec 3 T20N R8E (Projected)

Land Grant(s): Pueblo of Santa Clara

Note(s):

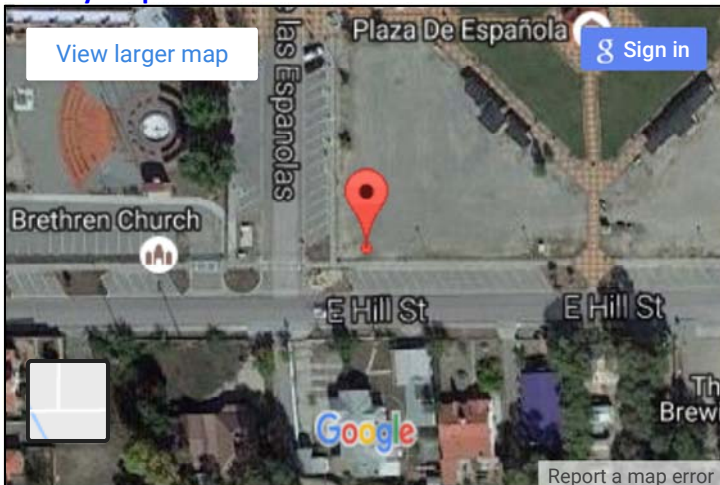
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000111

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-111

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 14' 57.85203"	582,202.947 m	582,202.947 m
Longitude Easting X:	W 106° 02' 57.05457"	518,047.530 m	518,047.530 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,843.978 m	1,843.978 m	1,862.653 m

Location

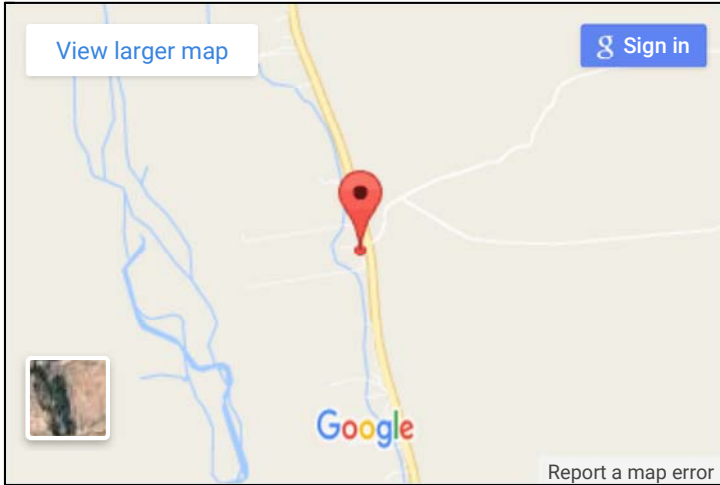
County & State: Rio Arriba, NM

Section: sec 1 T23N R8E (Projected)

Land Grant(s): Ojo Caliente

Note(s):

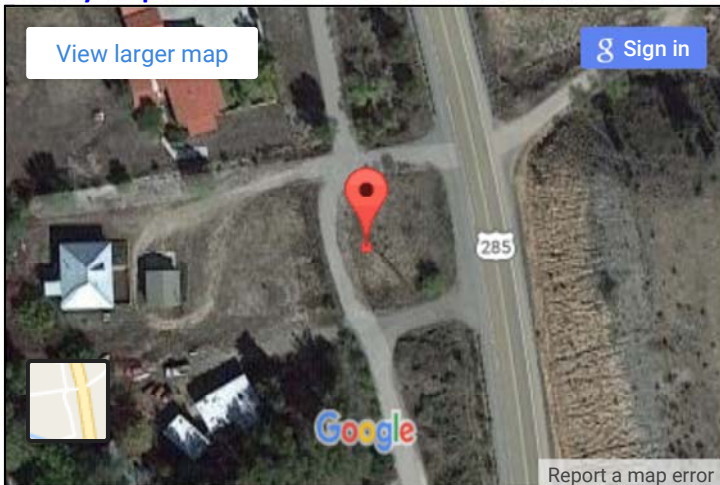
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000112

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-112

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 12' 49.14911"	578,264.922 m	578,264.922 m
Longitude Easting X:	W 105° 55' 49.94635"	528,722.912 m	528,722.912 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,775.423 m	1,775.423 m	1,793.829 m

Location

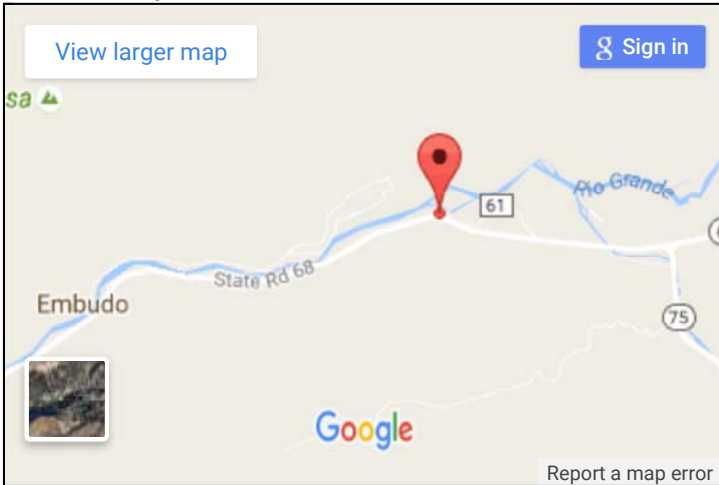
County & State: Rio Arriba, NM

Section: sec 24 T23N R9E

Land Grant(s): None

Note(s):

Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000113

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 24-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-113

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 03' 11.71237"	560,513.001 m	560,513.001 m
Longitude Easting X:	W 105° 48' 17.15740"	540,113.051 m	540,113.051 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,382.953 m	2,382.953 m	2,400.403 m

Location

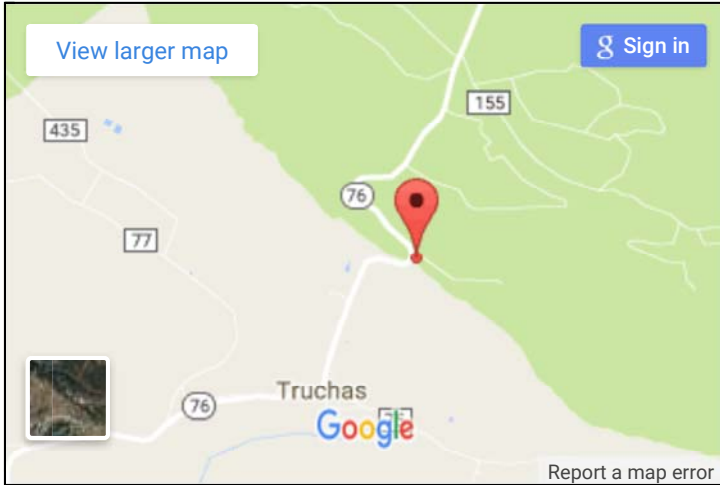
County & State: Rio Arriba, NM

Section: sec 17 T21N R11E (Projected)

Land Grant(s): Francisco Montes Vigil

Note(s):

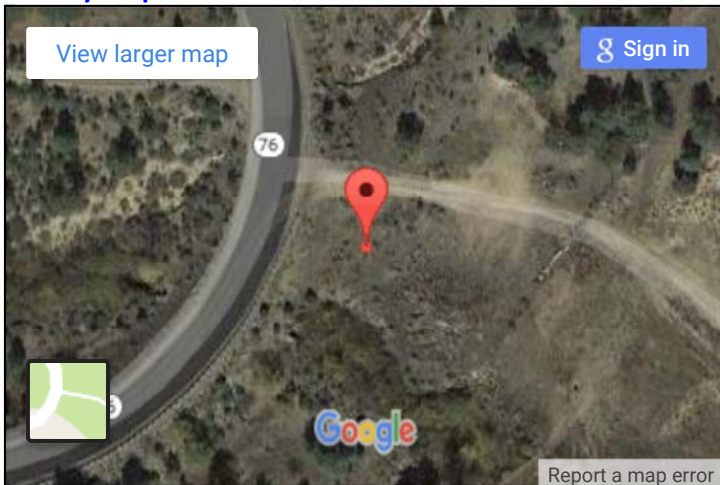
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD S](#) [ADD W](#)

Control Station Data



Name of Station: BH2017009800000114

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 13-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-114

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 10' 59.37884"	575,011.032 m	575,011.032 m
Longitude Easting X:	W 105° 37' 58.10273"	555,514.270 m	555,514.270 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,338.733 m	2,338.733 m	2,355.888 m

Location

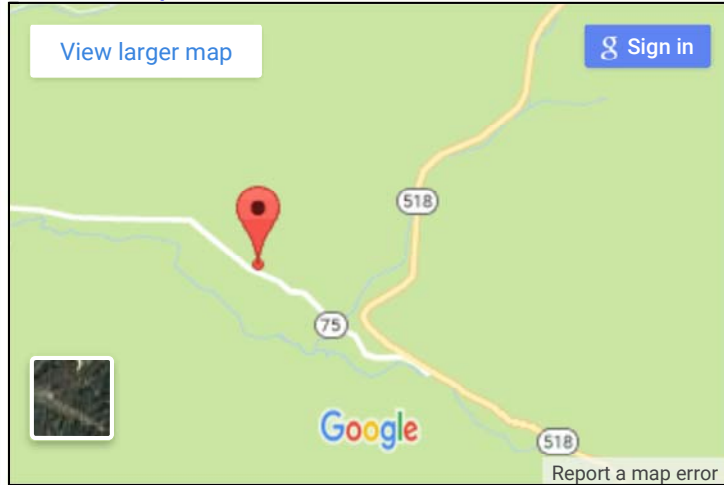
County & State: Taos, NM

Section: sec 35 T23N R12E (Projected)

Land Grant(s): None

Note(s):

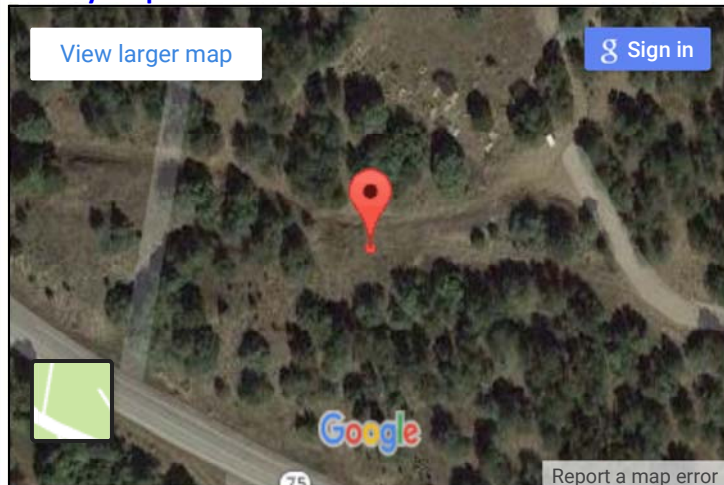
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800000115

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 18-Aug-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-115

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 35° 11' 44.20355"	465,373.645 m	465,373.645 m
Longitude Easting X:	W 105° 46' 58.46679"	542,534.207 m	542,534.207 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	2,061.721 m	2,061.721 m	2,080.992 m

Location

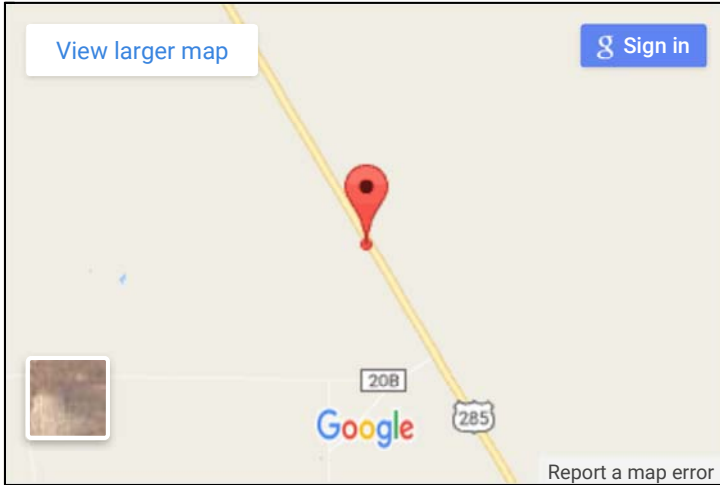
County & State: Santa Fe, NM

Section: sec 9 T11N R11E

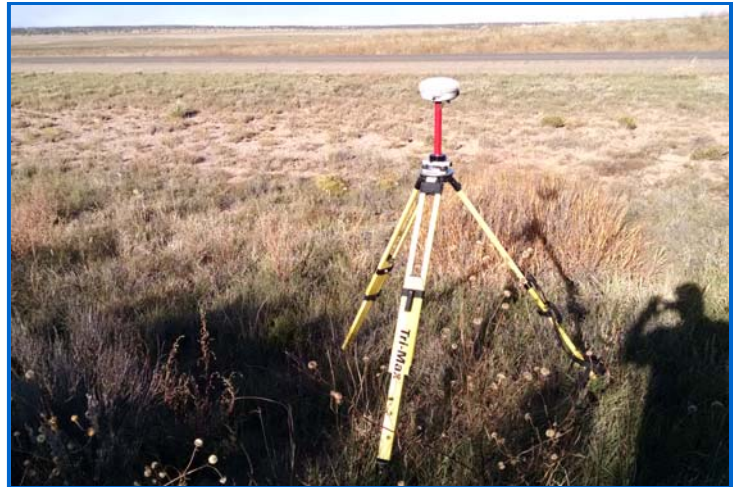
Land Grant(s): None

Note(s):

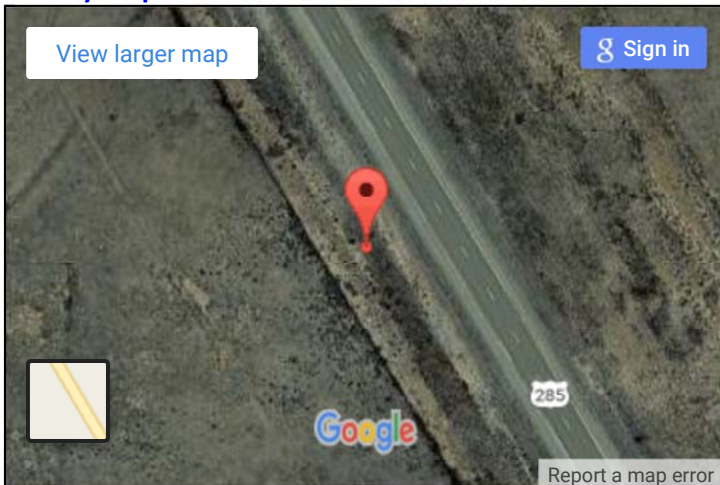
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH2017009800005111**

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-0111

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 14' 57.52551"	582,192.883 m	582,192.883 m
Longitude Easting X:	W 106° 02' 57.06378"	518,047.321 m	518,047.321 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,843.373 m	1,843.373 m	1,862.049 m

Location

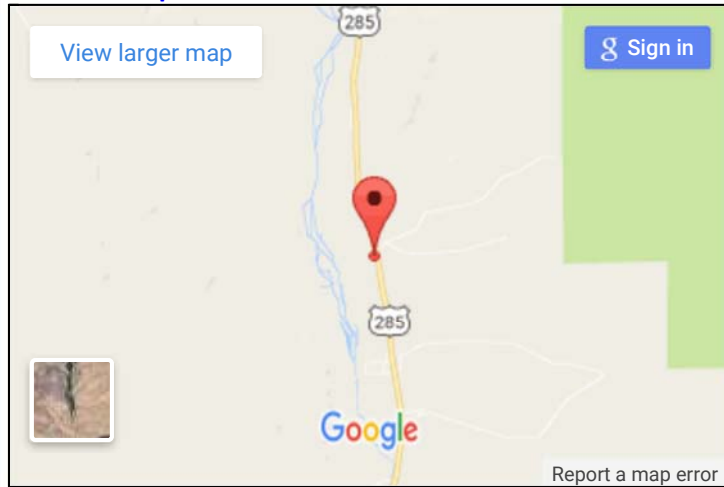
County & State: Rio Arriba, NM

Section: sec 1 T23N R8E (Projected)

Land Grant(s): Ojo Caliente

Note(s):

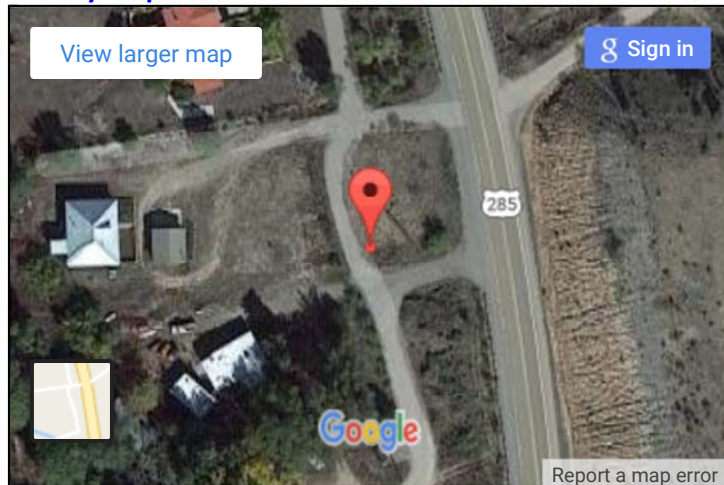
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [N](#) [S](#) [W](#)

Control Station Data



Name of Station: BH2017009800005112

Establishing Group: Bohannon Huston, Inc.

BST Project #: 20170098

Observation Date: 4-Oct-2016

Project Name: SFCO LiDAR Check Point Survey

Station Data

Type/Composition: 2" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: BH 17-098-112

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM83-C)	Alternate (NM83-C)
Latitude Northing Y:	N 36° 12' 48.78467"	578,253.747 m	578,253.747 m
Longitude Easting X:	W 105° 55' 49.24974"	528,740.347 m	528,740.347 m
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12A)
Elevation:	1,775.727 m	1,775.727 m	1,794.132 m

Location

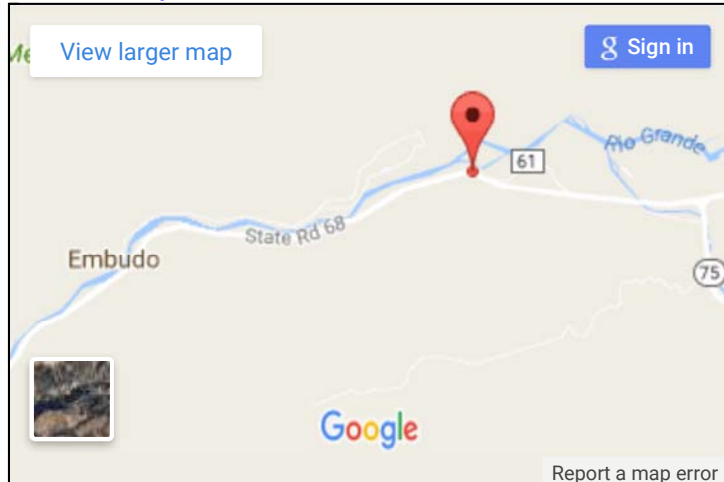
County & State: Rio Arriba, NM

Section: sec 24 T23N R9E

Land Grant(s): None

Note(s):

Location Map:



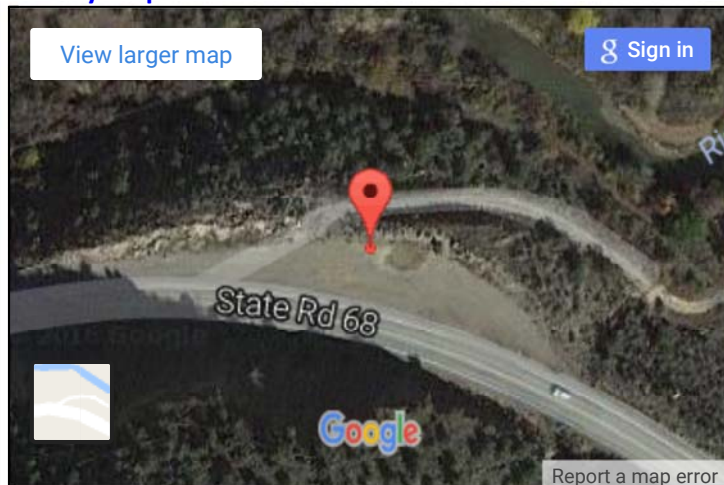
Vicinity Photo (Looking East):



Close Up Photo:



Vicinity Map:



Other Photos: [N](#) [S](#) [W](#) [ADD C](#) [ADD E](#) [ADD N](#) [ADD S](#) [ADD W](#)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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All coordinate accuracies reported here are 1 times the formal uncertainties from the solution. For additional information: geodesy.noaa.gov/OPUS/Using_OPUS-Projects.html#accuracy

These positions were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.

SUBMITTED BY: abenham
 SOLUTION FILE NAME: network-Test_final_Tight.sum
 SOLUTION SOFTWARE: GPSCOM(1504.23)
 SOLUTION DATE: 2016-10-21T13:56:35 UTC
 STANDARD ERROR OF UNIT WEIGHT: 0.646
 TOTAL NUMBER OF OBSERVATIONS: 1573109
 TOTAL NUMBER OF MARKS: 51
 NUMBER OF CONSTRAINED MARKS: 9

START TIME: 2016-08-17T00:00:00 GPS
 STOP TIME: 2016-10-13T23:59:30 GPS
 FREQUENCY: L1 -> ION-FREE (L6)
 OBSERVATION INTERVAL: 30 s
 ELEVATION CUTOFF: 15 deg
 TROPO INTERVAL: 1800 s [STEP-OFFSET PARAMETERIZATION]
 DD CORRELATIONS: ON

INCLUDED SOLUTION	RMS	SOFTWARE	RUN DATE
1) 2016-230 230-A	1.0 cm	page5(1509.10)	2016-10-21T12:56 UTC
2) 2016-231 231-A	1.0 cm	page5(1509.10)	2016-10-21T12:35 UTC
3) 2016-231 231-B	1.0 cm	page5(1509.10)	2016-10-21T12:38 UTC
4) 2016-231 231-C	1.0 cm	page5(1509.10)	2016-10-21T12:40 UTC
5) 2016-237 237-A	1.4 cm	page5(1509.10)	2016-10-21T12:38 UTC
6) 2016-237 237-B	1.5 cm	page5(1509.10)	2016-10-21T12:40 UTC
7) 2016-238 238-A	1.7 cm	page5(1509.10)	2016-10-21T12:39 UTC
8) 2016-239 239-A	1.6 cm	page5(1509.10)	2016-10-21T12:40 UTC
9) 2016-277 277-A	1.3 cm	page5(1509.10)	2016-10-21T12:41 UTC
10) 2016-278 278-A	1.1 cm	page5(1509.10)	2016-10-21T12:44 UTC
11) 2016-279 279-A	1.2 cm	page5(1509.10)	2016-10-21T12:44 UTC
12) 2016-284 284-A	1.5 cm	page5(1509.10)	2016-10-21T12:48 UTC
13) 2016-284 284-B	1.5 cm	page5(1509.10)	2016-10-21T13:26 UTC
14) 2016-284 284-C	1.5 cm	page5(1509.10)	2016-10-21T12:51 UTC
15) 2016-287 287-A	1.4 cm	page5(1509.10)	2016-10-21T13:02 UTC

BASELINE	LENGTH	RMS	OBS	OMITTED	FIXED	IN SOLUTION(S)
nmsf-0007	8.596 km	1.1 cm	6364	0.7%	100.0%	12,13
nmsf-0009	8.868 km	1.0 cm	2343	13.5%	91.7%	11
0113-0051	9.067 km	1.4 cm	2090	5.5%	100.0%	6
0013-0001	11.125 km	1.2 cm	2146	1.4%	100.0%	12
0006-0004	11.211 km	1.4 cm	2866	3.1%	100.0%	13
0112-0111	11.383 km	1.1 cm	1233	0.6%	100.0%	3
5112-5111	11.400 km	1.2 cm	2047	1.6%	95.2%	10
0104-0105	12.584 km	1.3 cm	1989	2.7%	95.2%	1
p120-0105	13.973 km	1.1 cm	2020	1.0%	100.0%	1
0008-0011	15.025 km	1.4 cm	3149	2.3%	100.0%	9
nmsf-0011	15.453 km	1.3 cm	3229	0.0%	100.0%	9
0055-5111	15.998 km	1.6 cm	2116	3.7%	100.0%	10
0053-5111	16.172 km	1.5 cm	2031	7.8%	95.7%	10
nmsf-0052	16.575 km	1.1 cm	2149	1.6%	100.0%	5
0011-0005	17.266 km	1.4 cm	2135	1.4%	100.0%	9
0108-0107	17.979 km	1.8 cm	3071	1.7%	100.0%	7
0103-0104	18.978 km	1.5 cm	2585	1.0%	92.3%	1
0008-0004	19.267 km	1.5 cm	2208	0.7%	96.0%	13
0007-0006	22.539 km	1.6 cm	5444	1.4%	96.3%	12,13
0010-0009	22.569 km	1.7 cm	1954	8.8%	100.0%	11
nmsf-0061	24.082 km	1.4 cm	4400	1.1%	100.0%	15
0058-0006	24.306 km	1.7 cm	1237	1.5%	100.0%	14
0102-0101	24.902 km	1.5 cm	1997	0.3%	100.0%	8
p034-0001	26.797 km	1.4 cm	2613	0.5%	100.0%	12
zab2-p034	27.150 km	1.4 cm	214578	2.5%	94.2%	1, 2, 3,...
0054-0012	28.241 km	2.1 cm	2490	10.1%	100.0%	15
nmsf-0100	28.264 km	1.5 cm	2649	0.0%	100.0%	4
0110-0111	28.908 km	1.4 cm	3456	0.9%	100.0%	2, 3
nmsf-0006	28.929 km	1.8 cm	3408	3.1%	97.1%	14
0113-0052	29.894 km	1.1 cm	1410	0.0%	100.0%	5
0059-0012	32.443 km	2.5 cm	1028	191.1%	94.7%	15
p034-0103	32.450 km	1.6 cm	3310	1.8%	91.7%	1
0109-0012	33.122 km	1.4 cm	2305	1.2%	92.3%	15
nmsf-0108	34.150 km	1.9 cm	3050	2.1%	96.3%	7
0114-0012	34.856 km	1.3 cm	2184	1.3%	100.0%	15
p120-0107	34.927 km	2.4 cm	4269	0.6%	100.0%	7
zab2-0003	35.540 km	1.7 cm	4161	4.3%	97.6%	10
0060-0058	35.920 km	1.4 cm	1634	1.7%	100.0%	14
p120-0002	35.996 km	1.1 cm	4180	0.1%	100.0%	10
nmsf-0110	36.861 km	1.7 cm	6570	0.4%	100.0%	2, 3
p034-0013	37.910 km	1.4 cm	10408	0.1%	100.0%	13,14
p120-0101	39.665 km	1.3 cm	2004	0.2%	100.0%	8
nmsf-0102	40.228 km	1.8 cm	3576	0.3%	93.3%	8
p036-0114	40.268 km	1.3 cm	2147	2.8%	100.0%	15
0061-0012	40.387 km	1.4 cm	4103	1.5%	100.0%	15
zab2-0102	40.573 km	1.8 cm	3516	2.0%	97.0%	8
p120-0058	42.633 km	1.2 cm	2129	0.6%	100.0%	14
0006-0001	42.883 km	1.8 cm	1679	0.8%	100.0%	12
nmsf-0113	44.354 km	1.5 cm	2792	0.6%	100.0%	6
p123-0111	44.586 km	1.4 cm	4290	1.3%	100.0%	2, 3
p123-5111	44.596 km	1.6 cm	2149	1.7%	100.0%	10
0060-0013	44.672 km	1.6 cm	13107	0.6%	100.0%	12,13,14
p120-0013	45.847 km	1.4 cm	10294	1.0%	100.0%	12,13
0004-0013	47.201 km	1.4 cm	6848	1.2%	100.0%	12,13

nmsf-0053	48.254 km	1.4 cm	4580	1.4%	100.0%	10
p036-0051	53.279 km	1.4 cm	2147	2.6%	95.2%	6
p123-0114	56.036 km	1.6 cm	2182	0.9%	90.9%	15
p120-0008	56.216 km	1.8 cm	4230	1.0%	100.0%	9
0003-p120	56.447 km	1.4 cm	4662	1.6%	100.0%	10
p123-0051	57.852 km	1.3 cm	2150	2.1%	100.0%	6
p036-p123	60.223 km	1.0 cm	210550	0.2%	99.6%	2, 3, 4,...
p035-p120	60.588 km	1.0 cm	213130	0.3%	99.9%	1, 7, 8,...
p036-0113	61.421 km	1.5 cm	2802	0.1%	100.0%	5
p035-0106	63.036 km	1.1 cm	2102	1.3%	100.0%	2
0100-0110	65.107 km	1.2 cm	1156	0.1%	100.0%	4
p034-0115	67.658 km	1.2 cm	2005	1.2%	100.0%	2
p070-p036	67.875 km	1.1 cm	152959	0.2%	99.2%	2, 3, 4,...
p034-0008	67.895 km	1.5 cm	4236	0.7%	100.0%	9
zab2-0100	68.814 km	1.8 cm	2603	1.5%	92.3%	4
nmsf-0103	72.272 km	1.6 cm	3325	0.9%	96.3%	1
p123-0110	73.214 km	1.8 cm	3264	0.6%	100.0%	4
p120-0061	74.527 km	1.3 cm	4414	0.9%	96.8%	15
p034-p120	76.414 km	1.1 cm	58308	0.2%	99.7%	7,11,15
zab2-nmsf	78.354 km	1.5 cm	75255	2.3%	98.9%	3, 5, 6,11
0110-0057	78.771 km	1.4 cm	1410	3.2%	100.0%	4
p120-nmsf	79.895 km	1.2 cm	38842	0.2%	97.1%	5, 6
p123-0010	83.246 km	1.2 cm	4110	5.0%	96.6%	11
0115-0110	92.272 km	1.3 cm	1466	1.2%	100.0%	2
p035-0057	98.412 km	1.7 cm	3236	0.2%	96.0%	4
p036-nmsf	102.267 km	1.2 cm	96789	0.1%	98.5%	9,12,13,14
0106-0110	115.495 km	1.2 cm	1195	0.1%	100.0%	2
p070-nmsf	121.110 km	1.3 cm	19272	0.2%	99.1%	1
5111-0002	122.448 km	1.5 cm	2120	2.7%	91.7%	10
p035-p034	122.890 km	1.0 cm	18719	0.1%	100.0%	3
nmgr-zab2	124.239 km	1.5 cm	18701	2.9%	96.7%	1
ncwm-p070	2472.449 km	1.4 cm	130651	0.2%	67.6%	1, 2, 3,...
ncwm-p036	2519.449 km	1.6 cm	58527	0.1%	63.8%	11,12,13,14
ncwm-p035	2540.957 km	1.4 cm	28871	0.1%	73.9%	7, 8

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 UNCONSTRAINED MARKS
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MARK: 0001 (0001 1)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7753)
 X: -1459172.200 m 0.001 m -1459173.038 m 0.001 m
 Y: -5019809.958 m 0.002 m -5019808.593 m 0.002 m
 Z: 3645459.132 m 0.001 m 3645458.986 m 0.001 m
 LAT: 35 04 14.56758 0.000 m 35 04 14.58377 0.000 m
 E LON: 253 47 30.34739 0.000 m 253 47 30.30060 0.000 m
 W LON: 106 12 29.65261 0.000 m 106 12 29.69940 0.000 m
 EL HGT: 2034.060 m 0.002 m 2033.095 m 0.002 m
 ORTHO HGT: 2053.593 m 0.016 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3881552.394 m	451419.240 m
EASTING (X)	389838.526 m	503808.819 m
CONVERGENCE	-0.69430703 deg	0.02399657 deg
POINT SCALE	0.99974956	0.99990018
COMBINED FACTOR	0.99943046	0.99958104

US NATIONAL GRID DESIGNATOR: 13SCU8983881552 (NAD 83)

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MARK: 0002 (0002 1)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7590)
 X: -1437965.889 m 0.000 m -1437966.727 m 0.000 m
 Y: -5020729.187 m 0.001 m -5020727.822 m 0.001 m
 Z: 3652347.505 m 0.001 m 3652347.359 m 0.001 m
 LAT: 35 08 50.57324 0.000 m 35 08 50.58957 0.000 m
 E LON: 254 01 04.73138 0.000 m 254 01 04.68471 0.000 m
 W LON: 105 58 55.26862 0.000 m 105 58 55.31529 0.000 m
 EL HGT: 1908.860 m 0.002 m 1907.892 m 0.002 m
 ORTHO HGT: 1928.438 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3889828.635 m	459956.236 m
EASTING (X)	410548.618 m	524417.133 m
CONVERGENCE	-0.56536785 deg	0.15427247 deg
POINT SCALE	0.99969861	0.99990735
COMBINED FACTOR	0.99939917	0.99960784

US NATIONAL GRID DESIGNATOR: 13SDU1054889828 (NAD 83)

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MARK: 0003 (0003 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7593)
X:	-1454168.749 m 0.000 m	-1454169.588 m 0.000 m
Y:	-5010794.407 m 0.001 m	-5010793.043 m 0.001 m
Z:	3659904.255 m 0.001 m	3659904.110 m 0.001 m
LAT:	35 13 45.44778 0.000 m	35 13 45.46407 0.000 m
E LON:	253 49 00.80200 0.000 m	253 49 00.75511 0.000 m
W LON:	106 10 59.19800 0.000 m	106 10 59.24489 0.000 m
EL HGT:	2130.318 m 0.002 m	2129.356 m 0.002 m
ORTHO HGT:	2149.758 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3899112.308 m	469011.885 m
EASTING (X)	392338.649 m	506088.524 m
CONVERGENCE	-0.68254291 deg	0.03858519 deg
POINT SCALE	0.99974285	0.99990046
COMBINED FACTOR	0.99940867	0.99956622

US NATIONAL GRID DESIGNATOR: 13SCU9233899112 (NAD 83)

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MARK: 0004 (0004 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7754)
X:	-1443049.471 m 0.000 m	-1443050.312 m 0.000 m
Y:	-4992174.090 m 0.001 m	-4992172.729 m 0.001 m
Z:	3688918.677 m 0.001 m	3688918.535 m 0.001 m
LAT:	35 33 06.81080 0.000 m	35 33 06.82729 0.000 m
E LON:	253 52 38.67688 0.000 m	253 52 38.62982 0.000 m
W LON:	106 07 21.32312 0.000 m	106 07 21.37018 0.000 m
EL HGT:	1831.677 m 0.001 m	1830.721 m 0.001 m
ORTHO HGT:	1851.258 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3934828.174 m	504805.559 m
EASTING (X)	398252.250 m	511551.262 m
CONVERGENCE	-0.65277467 deg	0.07408150 deg
POINT SCALE	0.99972757	0.99990164
COMBINED FACTOR	0.99944024	0.99961426

US NATIONAL GRID DESIGNATOR: 13SCV9825234828 (NAD 83)

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MARK: 0005 (0005 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7567)
X:	-1408232.519 m 0.001 m	-1408233.359 m 0.001 m
Y:	-5002164.140 m 0.002 m	-5002162.779 m 0.002 m
Z:	3689372.919 m 0.001 m	3689372.776 m 0.001 m
LAT:	35 33 17.76189 0.000 m	35 33 17.77855 0.000 m
E LON:	254 16 36.40922 0.000 m	254 16 36.36248 0.000 m
W LON:	105 43 23.59078 0.000 m	105 43 23.63752 0.000 m
EL HGT:	2140.498 m 0.002 m	2139.534 m 0.002 m
ORTHO HGT:	2158.699 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3934826.503 m	505263.229 m
EASTING (X)	434453.086 m	547757.341 m
CONVERGENCE	-0.42055510 deg	0.30631973 deg
POINT SCALE	0.99965294	0.99992810
COMBINED FACTOR	0.99931720	0.99959227

US NATIONAL GRID DESIGNATOR: 13SDV3445334826 (NAD 83)

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MARK: 0006 (0006 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7755)
X:	-1444958.207 m 0.000 m	-1444959.047 m 0.000 m
Y:	-4998345.371 m 0.001 m	-4998344.010 m 0.001 m
Z:	3679755.244 m 0.001 m	3679755.101 m 0.001 m
LAT:	35 27 03.16135 0.000 m	35 27 03.17778 0.000 m
E LON:	253 52 33.92204 0.000 m	253 52 33.87506 0.000 m
W LON:	106 07 26.07796 0.000 m	106 07 26.12494 0.000 m
EL HGT:	1768.226 m 0.001 m	1767.268 m 0.001 m
ORTHO HGT:	1787.851 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3923625.862 m	493599.065 m
EASTING (X)	398004.890 m	511445.838 m
CONVERGENCE	-0.65192971 deg	0.07313256 deg
POINT SCALE	0.99972820	0.99990161
COMBINED FACTOR	0.99945081	0.99962418

US NATIONAL GRID DESIGNATOR: 13SCV9800423625 (NAD 83)

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MARK: 0007 (0007 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7754)
X:	-1434764.676 m 0.000 m	-1434765.518 m 0.000 m
Y:	-4988485.996 m 0.001 m	-4988484.636 m 0.001 m
Z:	3697273.997 m 0.001 m	3697273.856 m 0.001 m
LAT:	35 38 37.43292 0.000 m	35 38 37.44950 0.000 m
E LON:	253 57 14.24653 0.000 m	253 57 14.19946 0.000 m
W LON:	106 02 45.75347 0.000 m	106 02 45.80054 0.000 m
EL HGT:	1947.383 m 0.001 m	1946.427 m 0.001 m
ORTHO HGT:	1966.618 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3944938.029 m	515005.964 m
EASTING (X)	405298.747 m	518470.071 m
CONVERGENCE	-0.60961977 deg	0.11885515 deg
POINT SCALE	0.99971051	0.99990420
COMBINED FACTOR	0.99940504	0.99959867

US NATIONAL GRID DESIGNATOR: 13SDV0529844938 (NAD 83)

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MARK: 0008 (0008 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7597)
X:	-1433567.861 m 0.000 m	-1433568.700 m 0.000 m
Y:	-5003863.933 m 0.001 m	-5003862.571 m 0.001 m
Z:	3676891.010 m 0.001 m	3676890.867 m 0.001 m
LAT:	35 25 06.96590 0.000 m	35 25 06.98238 0.000 m
E LON:	254 00 48.26362 0.000 m	254 00 48.21679 0.000 m
W LON:	105 59 11.73638 0.000 m	105 59 11.78321 0.000 m
EL HGT:	1861.952 m 0.001 m	1860.990 m 0.001 m
ORTHO HGT:	1881.356 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3919912.948 m	490042.952 m
EASTING (X)	410431.139 m	523920.439 m
CONVERGENCE	-0.57181410 deg	0.15265688 deg
POINT SCALE	0.99969886	0.99990705
COMBINED FACTOR	0.99940678	0.99961491

US NATIONAL GRID DESIGNATOR: 13SDV1043119912 (NAD 83)

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MARK: 0009 (0009 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7621)
X:	-1419330.982 m 0.001 m	-1419331.823 m 0.001 m
Y:	-4987628.139 m 0.003 m	-4987626.780 m 0.003 m
Z:	3704912.869 m 0.002 m	3704912.728 m 0.002 m
LAT:	35 43 34.60528 0.000 m	35 43 34.62196 0.000 m
E LON:	254 06 54.79041 0.000 m	254 06 54.74343 0.000 m
W LON:	105 53 05.20959 0.000 m	105 53 05.25657 0.000 m
EL HGT:	2285.385 m 0.003 m	2284.428 m 0.003 m
ORTHO HGT:	2303.334 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3953950.295 m	524206.327 m
EASTING (X)	419981.167 m	533039.727 m
CONVERGENCE	-0.51666278 deg	0.21325860 deg
POINT SCALE	0.99967890	0.99991345
COMBINED FACTOR	0.99932044	0.99955491

US NATIONAL GRID DESIGNATOR: 13SDV1998153950 (NAD 83)

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MARK: 0010 (0010 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7620)
X:	-1428904.579 m 0.001 m	-1428905.421 m 0.001 m
Y:	-4973281.226 m 0.002 m	-4973279.869 m 0.002 m
Z:	3719469.158 m 0.001 m	3719469.018 m 0.001 m
LAT:	35 53 29.32020 0.000 m	35 53 29.33691 0.000 m
E LON:	253 58 11.21081 0.000 m	253 58 11.16359 0.000 m
W LON:	106 01 48.78919 0.000 m	106 01 48.83641 0.000 m
EL HGT:	1749.893 m 0.002 m	1748.943 m 0.002 m
ORTHO HGT:	1768.862 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3972401.959 m	542495.002 m
EASTING (X)	407020.164 m	519841.391 m
CONVERGENCE	-0.60401123 deg	0.12884731 deg
POINT SCALE	0.99970653	0.99990485
COMBINED FACTOR	0.99943204	0.99963030

US NATIONAL GRID DESIGNATOR: 13SDV0702072401 (NAD 83)

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MARK: 0011 (0011 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7567)
X:	-1425017.162 m 0.001 m	-1425018.002 m 0.001 m
Y:	-4998370.569 m 0.002 m	-4998369.208 m 0.002 m
Z:	3687956.874 m 0.001 m	3687956.732 m 0.001 m
LAT:	35 32 22.94254 0.000 m	35 32 22.95912 0.000 m
E LON:	254 05 14.43452 0.000 m	254 05 14.38765 0.000 m
W LON:	105 54 45.56548 0.000 m	105 54 45.61235 0.000 m
EL HGT:	2070.074 m 0.002 m	2069.113 m 0.002 m
ORTHO HGT:	2088.905 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3933280.133 m	503498.568 m
EASTING (X)	417267.909 m	530588.847 m
CONVERGENCE	-0.53052755 deg	0.19608783 deg
POINT SCALE	0.99968435	0.99991153
COMBINED FACTOR	0.99935964	0.99958675

US NATIONAL GRID DESIGNATOR: 13SDV1726733280 (NAD 83)

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MARK: 0012 (0012 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7835)
X:	-1418742.940 m 0.000 m	-1418743.783 m 0.000 m
Y:	-4970023.855 m 0.001 m	-4970022.499 m 0.001 m
Z:	3727862.224 m 0.001 m	3727862.085 m 0.001 m
LAT:	35 59 02.60682 0.000 m	35 59 02.62361 0.000 m
E LON:	254 04 05.07237 0.000 m	254 04 05.02516 0.000 m
W LON:	105 55 54.92763 0.000 m	105 55 54.97484 0.000 m
EL HGT:	1875.242 m 0.002 m	1874.293 m 0.002 m
ORTHO HGT:	1893.496 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3982581.647 m	552790.878 m
EASTING (X)	415989.816 m	528681.823 m
CONVERGENCE	-0.54759362 deg	0.18688985 deg
POINT SCALE	0.99968696	0.99991013
COMBINED FACTOR	0.99939282	0.99961592

US NATIONAL GRID DESIGNATOR: 13SDV1598982581 (NAD 83)

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MARK: 0013 (0013 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7755)
X:	-1449298.138 m 0.000 m	-1449298.976 m 0.000 m
Y:	-5018870.022 m 0.001 m	-5018868.657 m 0.001 m
Z:	3650496.927 m 0.001 m	3650496.782 m 0.001 m
LAT:	35 07 36.36397 0.000 m	35 07 36.38025 0.000 m
E LON:	253 53 34.36509 0.000 m	253 53 34.31835 0.000 m
W LON:	106 06 25.63491 0.000 m	106 06 25.68165 0.000 m
EL HGT:	1943.961 m 0.001 m	1942.995 m 0.001 m
ORTHO HGT:	1963.555 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3887662.076 m	457645.989 m
EASTING (X)	399127.311 m	513021.734 m
CONVERGENCE	-0.63707714 deg	0.08221100 deg
POINT SCALE	0.99972540	0.99990209
COMBINED FACTOR	0.99942044	0.99959708

US NATIONAL GRID DESIGNATOR: 13SCU9912787662 (NAD 83)

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MARK: 0051 (0051 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6469)
X:	-1401670.125 m 0.001 m	-1401670.967 m 0.001 m
Y:	-4965430.047 m 0.002 m	-4965428.692 m 0.002 m
Z:	3740984.579 m 0.002 m	3740984.442 m 0.002 m
LAT:	36 07 40.04609 0.000 m	36 07 40.06307 0.000 m
E LON:	254 14 10.97970 0.000 m	254 14 10.93260 0.000 m
W LON:	105 45 49.02030 0.000 m	105 45 49.06740 0.000 m
EL HGT:	2256.857 m 0.002 m	2255.907 m 0.002 m
ORTHO HGT:	2274.316 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3998392.422 m	568800.697 m
EASTING (X)	431287.618 m	543779.030 m
CONVERGENCE	-0.45023704 deg	0.28677037 deg
POINT SCALE	0.99965817	0.99992361
COMBINED FACTOR	0.99930421	0.99956955

US NATIONAL GRID DESIGNATOR: 13SDV3128798392 (NAD 83)

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MARK: 0052 (0052 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6468)
X:	-1425417.132 m 0.001 m	-1425417.972 m 0.001 m
Y:	-4979079.580 m 0.002 m	-4979078.222 m 0.002 m
Z:	3713353.839 m 0.002 m	3713353.699 m 0.002 m
LAT:	35 49 20.92544 0.000 m	35 49 20.94217 0.000 m
E LON:	254 01 28.47197 0.000 m	254 01 28.42490 0.000 m
W LON:	105 58 31.52803 0.000 m	105 58 31.57510 0.000 m
EL HGT:	1905.881 m 0.002 m	1904.928 m 0.002 m
ORTHO HGT:	1924.473 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3964698.093 m	534852.424 m
EASTING (X)	411889.356 m	524809.658 m
CONVERGENCE	-0.57092911 deg	0.16070325 deg
POINT SCALE	0.99969566	0.99990758
COMBINED FACTOR	0.99939671	0.99960856

US NATIONAL GRID DESIGNATOR: 13SDV1188964698 (NAD 83)

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MARK: 0053 (0053 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7591)
X:	-1425471.405 m 0.000 m	-1425472.248 m 0.000 m
Y:	-4959835.804 m 0.001 m	-4959834.449 m 0.001 m
Z:	3738558.899 m 0.001 m	3738558.762 m 0.001 m
LAT:	36 06 14.69758 0.000 m	36 06 14.71443 0.000 m
E LON:	253 57 54.69569 0.000 m	253 57 54.64834 0.000 m
W LON:	106 02 05.30431 0.000 m	106 02 05.35166 0.000 m
EL HGT:	1748.058 m 0.002 m	1747.114 m 0.002 m
ORTHO HGT:	1767.054 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3995988.508 m	566082.184 m
EASTING (X)	406856.473 m	519375.165 m
CONVERGENCE	-0.60980780 deg	0.12680386 deg
POINT SCALE	0.99970690	0.99990462
COMBINED FACTOR	0.99943270	0.99963037

US NATIONAL GRID DESIGNATOR: 13SDV0685695988 (NAD 83)

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MARK: 0054 (0054 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7834)
X:	-1445024.555 m 0.001 m	-1445025.398 m 0.001 m
Y:	-4970280.182 m 0.002 m	-4970278.825 m 0.002 m
Z:	3717529.523 m 0.001 m	3717529.383 m 0.001 m
LAT:	35 52 08.06480 0.000 m	35 52 08.08143 0.000 m
E LON:	253 47 20.78834 0.000 m	253 47 20.74099 0.000 m
W LON:	106 12 39.21166 0.000 m	106 12 39.25901 0.000 m
EL HGT:	1903.663 m 0.002 m	1902.716 m 0.002 m
ORTHO HGT:	1923.095 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3970085.377 m	539969.249 m
EASTING (X)	390682.263 m	503531.583 m
CONVERGENCE	-0.70957157 deg	0.02291458 deg
POINT SCALE	0.99974725	0.99990015
COMBINED FACTOR	0.99944863	0.99960149

US NATIONAL GRID DESIGNATOR: 13SCV9068270085 (NAD 83)

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MARK: 0055 (0055 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7591)
X:	-1436367.163 m 0.001 m	-1436368.007 m 0.001 m
Y:	-4954068.322 m 0.002 m	-4954066.968 m 0.002 m
Z:	3742023.365 m 0.001 m	3742023.228 m 0.001 m
LAT:	36 08 33.63658 0.000 m	36 08 33.65337 0.000 m
E LON:	253 49 52.23525 0.000 m	253 49 52.18778 0.000 m
W LON:	106 10 07.76475 0.000 m	106 10 07.81222 0.000 m
EL HGT:	1755.453 m 0.002 m	1754.513 m 0.002 m
ORTHO HGT:	1774.509 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4000406.242 m	570345.826 m
EASTING (X)	394844.553 m	507305.232 m
CONVERGENCE	-0.68943301 deg	0.04787774 deg
POINT SCALE	0.99973625	0.99990066
COMBINED FACTOR	0.99946089	0.99962525

US NATIONAL GRID DESIGNATOR: 13SCA9484400406 (NAD 83)

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MARK: 0057 (0057 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6309)
X:	-1421736.244 m 0.001 m	-1421737.081 m 0.001 m
Y:	-5014501.881 m 0.002 m	-5014500.517 m 0.002 m
Z:	3667231.102 m 0.001 m	3667230.958 m 0.001 m
LAT:	35 18 40.24644 0.000 m	35 18 40.26294 0.000 m
E LON:	254 10 14.32270 0.000 m	254 10 14.27610 0.000 m
W LON:	105 49 45.67730 0.000 m	105 49 45.72390 0.000 m
EL HGT:	1969.234 m 0.002 m	1968.266 m 0.002 m
ORTHO HGT:	1988.367 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3907867.995 m	478175.252 m
EASTING (X)	424606.746 m	538250.279 m
CONVERGENCE	-0.47940366 deg	0.24314296 deg
POINT SCALE	0.99967005	0.99991802
COMBINED FACTOR	0.99936115	0.99960905

US NATIONAL GRID DESIGNATOR: 13SDV2460607867 (NAD 83)

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MARK: 0058 (0058 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7757)
X:	-1431224.248 m 0.001 m	-1431225.087 m 0.001 m
Y:	-5012761.687 m 0.002 m	-5012760.324 m 0.002 m
Z:	3665815.356 m 0.002 m	3665815.211 m 0.002 m
LAT:	35 17 45.46993 0.000 m	35 17 45.48634 0.000 m
E LON:	254 03 54.36721 0.000 m	254 03 54.32048 0.000 m
W LON:	105 56 05.63279 0.000 m	105 56 05.67952 0.000 m
EL HGT:	1904.091 m 0.003 m	1903.126 m 0.003 m
ORTHO HGT:	1923.472 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3906265.864 m	476451.671 m
EASTING (X)	414996.062 m	528658.310 m
CONVERGENCE	-0.54021655 deg	0.18206722 deg
POINT SCALE	0.99968905	0.99991012
COMBINED FACTOR	0.99939036	0.99961137

US NATIONAL GRID DESIGNATOR: 13SDV1499606265 (NAD 83)

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MARK: 0059 (0059 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7836)
X:	-1398361.382 m 0.001 m	-1398362.223 m 0.001 m
Y:	-4989059.569 m 0.004 m	-4989058.209 m 0.004 m
Z:	3711285.458 m 0.003 m	3711285.317 m 0.003 m
LAT:	35 47 44.24109 0.001 m	35 47 44.25791 0.001 m
E LON:	254 20 33.29692 0.001 m	254 20 33.25006 0.001 m
W LON:	105 39 26.70308 0.001 m	105 39 26.74994 0.001 m
EL HGT:	2502.502 m 0.005 m	2501.542 m 0.005 m
ORTHO HGT:	2519.355 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3961479.732 m	532651.812 m
EASTING (X)	440595.602 m	45315.895 m
CONVERGENCE	-0.38453194 deg	-0.77454308 deg
POINT SCALE	0.99964348	1.00008555
COMBINED FACTOR	0.99925100	0.99969290

US NATIONAL GRID DESIGNATOR: 13SDV4059561479 (NAD 83)

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MARK: 0060 (0060 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7755)
X:	-1452336.767 m 0.000 m	-1452337.608 m 0.000 m
Y:	-4991659.795 m 0.001 m	-4991658.434 m 0.001 m
Z:	3685795.389 m 0.001 m	3685795.247 m 0.001 m
LAT:	35 31 04.91001 0.000 m	35 31 04.92646 0.000 m
E LON:	253 46 39.01448 0.000 m	253 46 38.96737 0.000 m
W LON:	106 13 20.98552 0.000 m	106 13 21.03263 0.000 m
EL HGT:	1719.509 m 0.001 m	1718.554 m 0.001 m
ORTHO HGT:	1739.535 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3931180.237 m	501041.887 m
EASTING (X)	389150.075 m	502494.616 m
CONVERGENCE	-0.71029256 deg	0.01597871 deg
POINT SCALE	0.99975142	0.99990008
COMBINED FACTOR	0.99948167	0.99963029

US NATIONAL GRID DESIGNATOR: 13SCV8915031180 (NAD 83)

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MARK: 0061 (0061 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7835)
X:	-1403456.435 m 0.001 m	-1403457.276 m 0.001 m
Y:	-4995398.491 m 0.001 m	-4995397.130 m 0.001 m
Z:	3700410.683 m 0.001 m	3700410.541 m 0.001 m
LAT:	35 40 36.25116 0.000 m	35 40 36.26789 0.000 m
E LON:	254 18 26.28129 0.000 m	254 18 26.23448 0.000 m
W LON:	105 41 33.71871 0.000 m	105 41 33.76552 0.000 m
EL HGT:	2222.482 m 0.002 m	2221.520 m 0.002 m
ORTHO HGT:	2239.936 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3948315.769 m	519504.611 m
EASTING (X)	437314.341 m	41943.733 m
CONVERGENCE	-0.40400352 deg	-0.79289746 deg
POINT SCALE	0.99964842	1.00009563
COMBINED FACTOR	0.99929983	0.99974689

US NATIONAL GRID DESIGNATOR: 13SDV3731448315 (NAD 83)

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MARK: 0100 (0100 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6309)
X:	-1423883.333 m 0.001 m	-1423884.171 m 0.001 m
Y:	-5006058.130 m 0.002 m	-5006056.768 m 0.002 m
Z:	3677768.267 m 0.001 m	3677768.124 m 0.001 m
LAT:	35 25 40.46653 0.000 m	35 25 40.48310 0.000 m
E LON:	254 07 21.17848 0.000 m	254 07 21.13177 0.000 m
W LON:	105 52 38.82152 0.000 m	105 52 38.86823 0.000 m
EL HGT:	1923.487 m 0.002 m	1922.523 m 0.002 m
ORTHO HGT:	1942.556 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3920851.607 m	491107.191 m
EASTING (X)	420349.230 m	533828.067 m
CONVERGENCE	-0.50866558 deg	0.21596089 deg
POINT SCALE	0.99967818	0.99991410
COMBINED FACTOR	0.99937646	0.99961231

US NATIONAL GRID DESIGNATOR: 13SDV2034920851 (NAD 83)

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MARK: 0101 (0101 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6527)
X:	-1434051.384 m 0.001 m	-1434052.221 m 0.001 m
Y:	-5015709.161 m 0.002 m	-5015707.797 m 0.002 m
Z:	3660831.678 m 0.002 m	3660831.533 m 0.002 m
LAT:	35 14 25.84933 0.000 m	35 14 25.86573 0.000 m
E LON:	254 02 38.87512 0.000 m	254 02 38.82846 0.000 m
W LON:	105 57 21.12488 0.000 m	105 57 21.17154 0.000 m
EL HGT:	1974.507 m 0.003 m	1973.541 m 0.003 m
ORTHO HGT:	1993.970 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3900134.271 m	470294.454 m
EASTING (X)	413030.096 m	526769.328 m
CONVERGENCE	-0.55157998 deg	0.16971809 deg
POINT SCALE	0.99969321	0.99990883
COMBINED FACTOR	0.99938348	0.99959903

US NATIONAL GRID DESIGNATOR: 13SDV1303000134 (NAD 83)

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MARK: 0102 (0102 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6526)
X:	-1451989.604 m 0.001 m	-1451990.442 m 0.001 m
Y:	-5002465.061 m 0.001 m	-5002463.699 m 0.001 m
Z:	3671918.505 m 0.001 m	3671918.362 m 0.001 m
LAT:	35 21 44.83248 0.000 m	35 21 44.84885 0.000 m
E LON:	253 48 51.74756 0.000 m	253 48 51.70067 0.000 m
W LON:	106 11 08.25244 0.000 m	106 11 08.29933 0.000 m
EL HGT:	2047.574 m 0.002 m	2046.615 m 0.002 m
ORTHO HGT:	2067.202 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3913884.026 m	483784.098 m
EASTING (X)	392286.375 m	505849.998 m
CONVERGENCE	-0.68624319 deg	0.03725645 deg
POINT SCALE	0.99974298	0.99990042
COMBINED FACTOR	0.99942178	0.99957917

US NATIONAL GRID DESIGNATOR: 13SCV9228613884 (NAD 83)

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MARK: 0103 (0103 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6280)
X:	-1452156.007 m 0.001 m	-1452156.843 m 0.001 m
Y:	-5024037.070 m 0.002 m	-5024035.704 m 0.002 m
Z:	3642285.689 m 0.001 m	3642285.543 m 0.001 m
LAT:	35 02 11.04560 0.000 m	35 02 11.06184 0.000 m
E LON:	253 52 42.61179 0.000 m	253 52 42.56516 0.000 m
W LON:	106 07 17.38821 0.000 m	106 07 17.43484 0.000 m
EL HGT:	1935.970 m 0.002 m	1935.002 m 0.002 m
ORTHO HGT:	1955.525 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3877654.674 m	447619.782 m
EASTING (X)	397704.665 m	511724.462 m
CONVERGENCE	-0.64390350 deg	0.07377340 deg
POINT SCALE	0.99972897	0.99990169
COMBINED FACTOR	0.99942526	0.99959793

US NATIONAL GRID DESIGNATOR: 13SCU9770477654 (NAD 83)

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MARK: 0104 (0104 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6280)
X:	-1434724.324 m 0.001 m	-1434725.159 m 0.001 m
Y:	-5031016.590 m 0.002 m	-5031015.223 m 0.002 m
Z:	3639531.364 m 0.001 m	3639531.217 m 0.001 m
LAT:	35 00 22.53778 0.000 m	35 00 22.55408 0.000 m
E LON:	254 04 59.27189 0.000 m	254 04 59.22544 0.000 m
W LON:	105 55 00.72811 0.000 m	105 55 00.77456 0.000 m
EL HGT:	1909.718 m 0.002 m	1908.745 m 0.002 m
ORTHO HGT:	1929.394 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3874121.352 m	444319.398 m
EASTING (X)	416339.336 m	530405.628 m
CONVERGENCE	-0.52600700 deg	0.19110742 deg
POINT SCALE	0.99968626	0.99991139
COMBINED FACTOR	0.99938668	0.99961174

US NATIONAL GRID DESIGNATOR: 13SDU1633974121 (NAD 83)

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MARK: 0105 (0105 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6280)
X:	-1422663.875 m 0.001 m	-1422664.710 m 0.001 m
Y:	-5034607.644 m 0.002 m	-5034606.277 m 0.002 m
Z:	3639482.935 m 0.002 m	3639482.788 m 0.002 m
LAT:	35 00 18.25447 0.000 m	35 00 18.27083 0.000 m
E LON:	254 13 15.35934 0.000 m	254 13 15.31303 0.000 m
W LON:	105 46 44.64066 0.000 m	105 46 44.68697 0.000 m
EL HGT:	2013.828 m 0.002 m	2012.852 m 0.002 m
ORTHO HGT:	2033.445 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3873882.638 m	444238.041 m
EASTING (X)	428912.492 m	542983.841 m
CONVERGENCE	-0.44692959 deg	0.27015444 deg
POINT SCALE	0.99966228	0.99992276
COMBINED FACTOR	0.99934638	0.99960678

US NATIONAL GRID DESIGNATOR: 13SDU2891273882 (NAD 83)

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MARK: 0106 (0106 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6304)
X:	-1412713.783 m 0.001 m	-1412714.618 m 0.001 m
Y:	-5037395.345 m 0.002 m	-5037393.977 m 0.002 m
Z:	3639714.743 m 0.002 m	3639714.596 m 0.002 m
LAT:	35 00 24.65304 0.000 m	35 00 24.66943 0.000 m
E LON:	254 20 02.75288 0.000 m	254 20 02.70661 0.000 m
W LON:	105 39 57.24712 0.000 m	105 39 57.29339 0.000 m
EL HGT:	2136.275 m 0.003 m	2135.297 m 0.003 m
ORTHO HGT:	2155.855 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3874005.049 m	444489.764 m
EASTING (X)	439239.934 m	553311.783 m
CONVERGENCE	-0.38202257 deg	0.33508994 deg
POINT SCALE	0.99964550	0.99993502
COMBINED FACTOR	0.99931041	0.99959983

US NATIONAL GRID DESIGNATOR: 13SDU3923974005 (NAD 83)

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MARK: 0107 (0107 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6499)
X:	-1408842.332 m 0.000 m	-1408843.168 m 0.000 m
Y:	-5017769.077 m 0.001 m	-5017767.713 m 0.001 m
Z:	3667994.545 m 0.001 m	3667994.400 m 0.001 m
LAT:	35 19 07.14528 0.000 m	35 19 07.16183 0.000 m
E LON:	254 19 00.53881 0.000 m	254 19 00.49234 0.000 m
W LON:	105 40 59.46119 0.000 m	105 40 59.50766 0.000 m
EL HGT:	2119.369 m 0.002 m	2118.398 m 0.002 m
ORTHO HGT:	2138.303 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3908595.276 m	479763.295 m
EASTING (X)	437900.512 m	42261.608 m
CONVERGENCE	-0.39497701 deg	-0.78047732 deg
POINT SCALE	0.99964752	1.00009469
COMBINED FACTOR	0.99931509	0.99976211

US NATIONAL GRID DESIGNATOR: 13SDV3790008595 (NAD 83)

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MARK: 0108 (0108 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6499)
X:	-1404525.526 m 0.001 m	-1404526.364 m 0.001 m
Y:	-5008162.122 m 0.002 m	-5008160.760 m 0.002 m
Z:	3682565.086 m 0.001 m	3682564.943 m 0.001 m
LAT:	35 28 48.11213 0.000 m	35 28 48.12878 0.000 m
E LON:	254 20 02.36867 0.000 m	254 20 02.32210 0.000 m
W LON:	105 39 57.63133 0.000 m	105 39 57.67790 0.000 m
EL HGT:	2069.252 m 0.002 m	2068.285 m 0.002 m
ORTHO HGT:	2087.772 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3926482.626 m	497646.871 m
EASTING (X)	439582.213 m	44064.663 m
CONVERGENCE	-0.38657593 deg	-0.77360410 deg
POINT SCALE	0.99964498	1.00008927
COMBINED FACTOR	0.99932041	0.99976456

US NATIONAL GRID DESIGNATOR: 13SDV3958226482 (NAD 83)

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MARK: 0109 (0109 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7834)
X:	-1447896.554 m 0.001 m	-1447897.397 m 0.001 m
Y:	-4973294.353 m 0.002 m	-4973292.996 m 0.002 m
Z:	3712486.261 m 0.002 m	3712486.121 m 0.002 m
LAT:	35 48 45.25502 0.000 m	35 48 45.27160 0.000 m
E LON:	253 46 04.47766 0.000 m	253 46 04.43033 0.000 m
W LON:	106 13 55.52234 0.000 m	106 13 55.56967 0.000 m
EL HGT:	1947.196 m 0.003 m	1946.248 m 0.003 m
ORTHO HGT:	1966.724 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3963860.503 m	533718.491 m
EASTING (X)	388689.804 m	501618.524 m
CONVERGENCE	-0.72101352 deg	0.01048005 deg
POINT SCALE	0.99975267	0.99990003
COMBINED FACTOR	0.99944722	0.99959454

US NATIONAL GRID DESIGNATOR: 13SCV8868963860 (NAD 83)

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MARK: 0110 (0110 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6306)
X:	-1431597.662 m 0.000 m	-1431598.503 m 0.000 m
Y:	-4965750.878 m 0.001 m	-4965749.522 m 0.001 m
Z:	3728312.437 m 0.001 m	3728312.300 m 0.001 m
LAT:	35 59 25.14475 0.000 m	35 59 25.16154 0.000 m
E LON:	253 55 04.90854 0.000 m	253 55 04.86128 0.000 m
W LON:	106 04 55.09146 0.000 m	106 04 55.13872 0.000 m
EL HGT:	1684.589 m 0.001 m	1683.643 m 0.001 m
ORTHO HGT:	1703.787 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3983415.761 m	553451.747 m
EASTING (X)	402470.902 m	515150.561 m
CONVERGENCE	-0.63586814 deg	0.09874286 deg
POINT SCALE	0.99971720	0.99990283
COMBINED FACTOR	0.99945295	0.99963853

US NATIONAL GRID DESIGNATOR: 13SDV0247083415 (NAD 83)

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MARK: 0111 (0111 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6305)
X:	-1424104.955 m 0.000 m	-1424105.797 m 0.000 m
Y:	-4950402.512 m 0.001 m	-4950401.159 m 0.001 m
Z:	3751635.384 m 0.001 m	3751635.249 m 0.001 m
LAT:	36 14 57.85205 0.000 m	36 14 57.86897 0.000 m
E LON:	253 57 02.94545 0.000 m	253 57 02.89807 0.000 m
W LON:	106 02 57.05455 0.000 m	106 02 57.10193 0.000 m
EL HGT:	1843.978 m 0.002 m	1843.037 m 0.002 m
ORTHO HGT:	1862.653 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4012121.868 m	582202.947 m
EASTING (X)	405736.776 m	518047.530 m
CONVERGENCE	-0.62042822 deg	0.11874436 deg
POINT SCALE	0.99970948	0.99990401
COMBINED FACTOR	0.99942024	0.99961472

US NATIONAL GRID DESIGNATOR: 13SDA0573612121 (NAD 83)

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MARK: 0112 (0112 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6305)
X:	-1414479.777 m 0.001 m	-1414480.619 m 0.001 m
Y:	-4955542.890 m 0.002 m	-4955541.536 m 0.002 m
Z:	3748394.009 m 0.002 m	3748393.873 m 0.002 m
LAT:	36 12 49.14911 0.001 m	36 12 49.16607 0.001 m
E LON:	254 04 10.05364 0.000 m	254 04 10.00637 0.000 m
W LON:	105 55 49.94636 0.000 m	105 55 49.99363 0.000 m
EL HGT:	1775.423 m 0.003 m	1774.479 m 0.003 m
ORTHO HGT:	1793.829 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4008047.363 m	578264.922 m
EASTING (X)	416358.265 m	528722.912 m
CONVERGENCE	-0.54979338 deg	0.18873721 deg
POINT SCALE	0.99968620	0.99991016
COMBINED FACTOR	0.99940772	0.99963162

US NATIONAL GRID DESIGNATOR: 13SDA1635808047 (NAD 83)

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MARK: 0113 (0113 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6469)
X:	-1406591.044 m 0.000 m	-1406591.885 m 0.000 m
Y:	-4969209.631 m 0.001 m	-4969208.275 m 0.001 m
Z:	3734372.978 m 0.001 m	3734372.841 m 0.001 m
LAT:	36 03 11.71238 0.000 m	36 03 11.72931 0.000 m
E LON:	254 11 42.84261 0.000 m	254 11 42.79552 0.000 m
W LON:	105 48 17.15739 0.000 m	105 48 17.20448 0.000 m
EL HGT:	2382.953 m 0.002 m	2382.003 m 0.002 m
ORTHO HGT:	2400.403 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3990154.668 m	560513.001 m
EASTING (X)	427516.416 m	540113.051 m
CONVERGENCE	-0.47365511 deg	0.26204018 deg
POINT SCALE	0.99966474	0.99991982
COMBINED FACTOR	0.99929100	0.99954599

US NATIONAL GRID DESIGNATOR: 13SDV2751690154 (NAD 83)

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MARK: 0114 (0114 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7835)
X:	-1389370.721 m 0.001 m	-1389371.565 m 0.001 m
Y:	-4965188.890 m 0.002 m	-4965187.535 m 0.002 m
Z:	3745995.445 m 0.001 m	3745995.308 m 0.001 m
LAT:	36 10 59.37883 0.000 m	36 10 59.39586 0.000 m
E LON:	254 22 01.89726 0.000 m	254 22 01.85015 0.000 m
W LON:	105 37 58.10274 0.000 m	105 37 58.14985 0.000 m
EL HGT:	2338.733 m 0.002 m	2337.782 m 0.002 m
ORTHO HGT:	2355.888 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4004449.486 m	575011.032 m
EASTING (X)	443098.492 m	555514.270 m
CONVERGENCE	-0.37359893 deg	0.36438100 deg
POINT SCALE	0.99963989	0.99993796
COMBINED FACTOR	0.99927310	0.99957106

US NATIONAL GRID DESIGNATOR: 13SDA4309804449 (NAD 83)

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MARK: 0115 (0115 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6304)
X:	-1419704.811 m 0.001 m	-1419705.647 m 0.001 m
Y:	-5022849.283 m 0.002 m	-5022847.918 m 0.002 m
Z:	3656810.906 m 0.002 m	3656810.761 m 0.002 m
LAT:	35 11 44.20355 0.000 m	35 11 44.22002 0.000 m
E LON:	254 13 01.53323 0.000 m	254 13 01.48676 0.000 m
W LON:	105 46 58.46677 0.000 m	105 46 58.51324 0.000 m
EL HGT:	2061.721 m 0.003 m	2060.749 m 0.003 m
ORTHO HGT:	2080.992 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3895016.721 m	465373.645 m
EASTING (X)	428728.084 m	542534.207 m
CONVERGENCE	-0.45126316 deg	0.26922205 deg
POINT SCALE	0.99966260	0.99992229
COMBINED FACTOR	0.99933920	0.99959880

US NATIONAL GRID DESIGNATOR: 13SDU2872895016 (NAD 83)

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MARK: 5111 (5111 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7591)
X:	-1424106.687 m 0.001 m	-1424107.531 m 0.001 m
Y:	-4950407.701 m 0.002 m	-4950406.348 m 0.002 m
Z:	3751626.907 m 0.001 m	3751626.771 m 0.001 m
LAT:	36 14 57.52550 0.000 m	36 14 57.54242 0.000 m
E LON:	253 57 02.93624 0.000 m	253 57 02.88878 0.000 m
W LON:	106 02 57.06376 0.000 m	106 02 57.11122 0.000 m
EL HGT:	1843.373 m 0.002 m	1842.432 m 0.002 m
ORTHO HGT:	1862.049 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4012111.808 m	582192.883 m
EASTING (X)	405736.437 m	518047.321 m
CONVERGENCE	-0.62042839 deg	0.11874259 deg
POINT SCALE	0.99970948	0.99990401
COMBINED FACTOR	0.99942034	0.99961481

US NATIONAL GRID DESIGNATOR: 13SDA0573612111 (NAD 83)

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MARK: 5112 (5112 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.7591)
X:	-1414464.930 m 0.001 m	-1414465.773 m 0.001 m
Y:	-4955554.287 m 0.002 m	-4955552.934 m 0.002 m
Z:	3748385.123 m 0.002 m	3748384.986 m 0.002 m
LAT:	36 12 48.78466 0.000 m	36 12 48.80158 0.000 m
E LON:	254 04 10.75027 0.000 m	254 04 10.70294 0.000 m
W LON:	105 55 49.24973 0.000 m	105 55 49.29706 0.000 m
EL HGT:	1775.727 m 0.003 m	1774.783 m 0.003 m
ORTHO HGT:	1794.132 m 0.016 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	4008035.967 m	578253.747 m
EASTING (X)	416375.551 m	528740.347 m
CONVERGENCE	-0.54967771 deg	0.18885108 deg
POINT SCALE	0.99968616	0.99991017
COMBINED FACTOR	0.99940763	0.99963158

US NATIONAL GRID DESIGNATOR: 13SDA1637508035 (NAD 83)

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MARK: ncwm (ncwm a 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2016.6999)
X:	1161487.988 m 0.000 m	1161487.150 m 0.000 m
Y:	-5045039.022 m 0.000 m	-5045037.535 m 0.000 m
Z:	3712946.045 m 0.000 m	3712945.955 m 0.000 m
LAT:	35 49 49.75725 0.000 m	35 49 49.78598 0.000 m
E LON:	282 57 53.79029 0.000 m	282 57 53.77105 0.000 m
W LON:	77 02 06.20971 0.000 m	77 02 06.22895 0.000 m
EL HGT:	-21.900 m 0.000 m	-23.280 m 0.000 m
ORTHO HGT:	14.150 m 0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (3200 NC)
NORTHING (Y)	3967058.837 m	232550.200 m
EASTING (X)	316181.056 m	787120.809 m
CONVERGENCE	-1.19163483 deg	1.13410593 deg
POINT SCALE	1.00001638	0.99992350
COMBINED FACTOR	1.00001982	0.99992694

US NATIONAL GRID DESIGNATOR: 18SUE1618167058 (NAD 83)

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CONSTRAINED MARKS
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MARK: nmgr (nmgr a 3)
CONSTRAIN: 3-D TIGHT
ADJUST X: 0.000m (0.000m) Y: 0.000m (0.000m) Z: -0.000m (0.000m)
ADJUST N: 0.000m (0.000m) E: -0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.6270)
X: -1606475.444 m 0.000 m -1606476.280 m 0.000 m
Y: -4964823.793 m 0.000 m -4964822.425 m 0.000 m
Z: 3658688.203 m 0.000 m 3658688.054 m 0.000 m
LAT: 35 12 59.64995 0.000 m 35 12 59.66553 0.000 m
E LON: 252 04 11.63164 0.000 m 252 04 11.58356 0.000 m
W LON: 107 55 48.36836 0.000 m 107 55 48.41644 0.000 m
EL HGT: 2021.631 m 0.000 m 2020.691 m 0.000 m
ORTHO HGT: 2042.006 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 12)	SPC (3003 NM W)
NORTHING (Y)	3901379.670 m	467610.665 m
EASTING (X)	779438.293 m	821190.207 m
CONVERGENCE	1.77146027 deg	-0.05580367 deg
POINT SCALE	1.00056245	0.99991762
COMBINED FACTOR	1.00024505	0.99960043

US NATIONAL GRID DESIGNATOR: 12SYE7943801379 (NAD 83)

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MARK: nmsf (nmsf a 4)
CONSTRAIN: 3-D TIGHT
ADJUST X: 0.000m (0.000m) Y: 0.000m (0.000m) Z: -0.000m (0.000m)
ADJUST N: -0.000m (0.000m) E: 0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7040)
X: -1426647.927 m 0.000 m -1426648.762 m 0.000 m
Y: -4988917.605 m 0.000 m -4988916.247 m 0.000 m
Z: 3700071.486 m 0.000 m 3700071.341 m 0.000 m
LAT: 35 40 25.62400 0.000 m 35 40 25.64052 0.000 m
E LON: 254 02 29.06907 0.000 m 254 02 29.02234 0.000 m
W LON: 105 57 30.93093 0.000 m 105 57 30.97766 0.000 m
EL HGT: 2097.239 m 0.000 m 2096.280 m 0.000 m
ORTHO HGT: 2115.875 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (3002 NM C)
NORTHING (Y)	3948190.594 m	518360.064 m
EASTING (X)	413248.674 m	526379.607 m
CONVERGENCE	-0.55905654 deg	0.16994131 deg
POINT SCALE	0.99969274	0.99990857
COMBINED FACTOR	0.99936378	0.99957954

US NATIONAL GRID DESIGNATOR: 13SDV1324848190 (NAD 83)

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MARK: p034 (p034 a 1)
CONSTRAIN: 3-D TIGHT
ADJUST X: -0.000m (0.000m) Y: -0.000m (0.000m) Z: 0.000m (0.000m)
ADJUST N: -0.000m (0.000m) E: 0.000m (0.000m) H: 0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7053)
X: -1483355.409 m 0.000 m -1483356.242 m 0.000 m
Y: -5020832.545 m 0.000 m -5020831.175 m 0.000 m
Z: 3633960.755 m 0.000 m 3633960.605 m 0.000 m
LAT: 34 56 44.21333 0.000 m 34 56 44.22936 0.000 m
E LON: 253 32 26.68178 0.000 m 253 32 26.63499 0.000 m
W LON: 106 27 33.31822 0.000 m 106 27 33.36501 0.000 m
EL HGT: 1811.873 m 0.000 m 1810.904 m 0.000 m
ORTHO HGT: 1831.973 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3002 NM C)
NORTHING (Y) 3867984.082 m 437561.315 m
EASTING (X) 366747.522 m 480886.755 m
CONVERGENCE -0.83598242 deg -0.11986138 deg
POINT SCALE 0.99981884 0.99990450
COMBINED FACTOR 0.99953457 0.99962020

US NATIONAL GRID DESIGNATOR: 13SCU6674767984 (NAD 83)

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MARK: p035 (p035 a 3)
CONSTRAIN: 3-D TIGHT
ADJUST X: -0.000m (0.000m) Y: -0.000m (0.000m) Z: 0.000m (0.000m)
ADJUST N: -0.000m (0.000m) E: 0.000m (0.000m) H: 0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7136)
X: -1376909.839 m 0.000 m -1376910.671 m 0.000 m
Y: -5073612.578 m 0.000 m -5073611.206 m 0.000 m
Z: 3602567.008 m 0.000 m 3602566.856 m 0.000 m
LAT: 34 36 04.99754 0.000 m 34 36 05.01388 0.000 m
E LON: 254 48 59.07292 0.000 m 254 48 59.02729 0.000 m
W LON: 105 11 00.92708 0.000 m 105 11 00.97271 0.000 m
EL HGT: 1781.358 m 0.000 m 1780.361 m 0.000 m
ORTHO HGT: 1802.281 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3001 NM E)
NORTHING (Y) 3828855.299 m 399690.111 m
EASTING (X) 483166.184 m 87013.089 m
CONVERGENCE -0.10425483 deg -0.48285472 deg
POINT SCALE 0.99960349 0.99998403
COMBINED FACTOR 0.99932405 0.99970449

US NATIONAL GRID DESIGNATOR: 13SDU8316628855 (NAD 83)

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MARK: p036 (p036 a 3)
CONSTRAN: 3-D TIGHT
ADJUST X: 0.000m (0.000m) Y: -0.000m (0.000m) Z: 0.000m (0.000m)
ADJUST N: 0.000m (0.000m) E: 0.000m (0.000m) H: 0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7232)
X: -1355885.529 m 0.000 m -1355886.372 m 0.000 m
Y: -4958444.634 m 0.000 m -4958443.275 m 0.000 m
Z: 3767321.332 m 0.000 m 3767321.189 m 0.000 m
LAT: 36 25 12.96964 0.000 m 36 25 12.98687 0.000 m
E LON: 254 42 22.89014 0.000 m 254 42 22.84314 0.000 m
W LON: 105 17 37.10986 0.000 m 105 17 37.15686 0.000 m
EL HGT: 2530.859 m 0.000 m 2529.898 m 0.000 m
ORTHO HGT: 2547.713 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3001 NM E)
NORTHING (Y) 4030604.155 m 601576.486 m
EASTING (X) 473675.877 m 78883.429 m
CONVERGENCE -0.17433709 deg -0.57017351 deg
POINT SCALE 0.99960854 1.00000043
COMBINED FACTOR 0.99921165 0.99960339

US NATIONAL GRID DESIGNATOR: 13SDA7367530604 (NAD 83)

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MARK: p070 (p070 a 1)
CONSTRAN: 3-D TIGHT
ADJUST X: -0.000m (0.000m) Y: 0.001m (0.000m) Z: -0.000m (0.000m)
ADJUST N: 0.000m (0.000m) E: -0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.6790)
X: -1310383.073 m 0.000 m -1310383.909 m 0.000 m
Y: -4995597.723 m 0.000 m -4995596.365 m 0.000 m
Z: 3733318.768 m 0.000 m 3733318.626 m 0.000 m
LAT: 36 02 41.18978 0.000 m 36 02 41.20706 0.000 m
E LON: 255 18 07.24159 0.000 m 255 18 07.19552 0.000 m
W LON: 104 41 52.75841 0.000 m 104 41 52.80448 0.000 m
EL HGT: 1884.504 m 0.000 m 1883.530 m 0.000 m
ORTHO HGT: 1903.625 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3001 NM E)
NORTHING (Y) 3988956.856 m 559547.205 m
EASTING (X) 527204.227 m 132142.864 m
CONVERGENCE 0.17770991 deg -0.21457130 deg
POINT SCALE 0.99960912 0.99992239
COMBINED FACTOR 0.99931355 0.99962673

US NATIONAL GRID DESIGNATOR: 13SEV2720488956 (NAD 83)

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MARK: p120 (p120 a 1)
CONSTRAN: 3-D TIGHT
ADJUST X: -0.000m (0.000m) Y: 0.000m (0.000m) Z: 0.000m (0.000m)
ADJUST N: 0.000m (0.000m) E: -0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7231)
X: -1409190.549 m 0.000 m -1409191.381 m 0.000 m
Y: -5038303.420 m 0.000 m -5038302.055 m 0.000 m
Z: 3639743.366 m 0.000 m 3639743.216 m 0.000 m
LAT: 35 00 26.82347 0.000 m 35 00 26.83977 0.000 m
E LON: 254 22 26.16817 0.000 m 254 22 26.12209 0.000 m
W LON: 105 37 33.83183 0.000 m 105 37 33.87791 0.000 m
EL HGT: 2090.640 m 0.000 m 2089.660 m 0.000 m
ORTHO HGT: 2110.228 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3002 NM C)
NORTHING (Y) 3874048.398 m 444578.635 m
EASTING (X) 442875.375 m 556947.468 m
CONVERGENCE -0.35917220 deg 0.35795084 deg
POINT SCALE 0.99964022 0.99993996
COMBINED FACTOR 0.99931228 0.99961193

US NATIONAL GRID DESIGNATOR: 13SDU4287574048 (NAD 83)

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MARK: p123 (p123 a 1)
CONSTRAN: 3-D TIGHT
ADJUST X: -0.000m (0.000m) Y: 0.000m (0.000m) Z: -0.000m (0.000m)
ADJUST N: -0.000m (0.000m) E: -0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.7164)
X: -1405299.673 m 0.000 m -1405300.515 m 0.000 m
Y: -4929804.350 m 0.000 m -4929803.003 m 0.000 m
Z: 3786420.701 m 0.000 m 3786420.567 m 0.000 m
LAT: 36 38 06.59893 0.000 m 36 38 06.61604 0.000 m
E LON: 254 05 20.99384 0.000 m 254 05 20.94637 0.000 m
W LON: 105 54 39.00616 0.000 m 105 54 39.05363 0.000 m
EL HGT: 2412.123 m 0.000 m 2411.189 m 0.000 m
ORTHO HGT: 2429.419 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3002 NM C)
NORTHING (Y) 4054787.674 m 625040.584 m
EASTING (X) 418570.932 m 530330.282 m
CONVERGENCE -0.54354109 deg 0.20238721 deg
POINT SCALE 0.99968169 0.99991133
COMBINED FACTOR 0.99930340 0.99953295

US NATIONAL GRID DESIGNATOR: 13SDA1857054787 (NAD 83)

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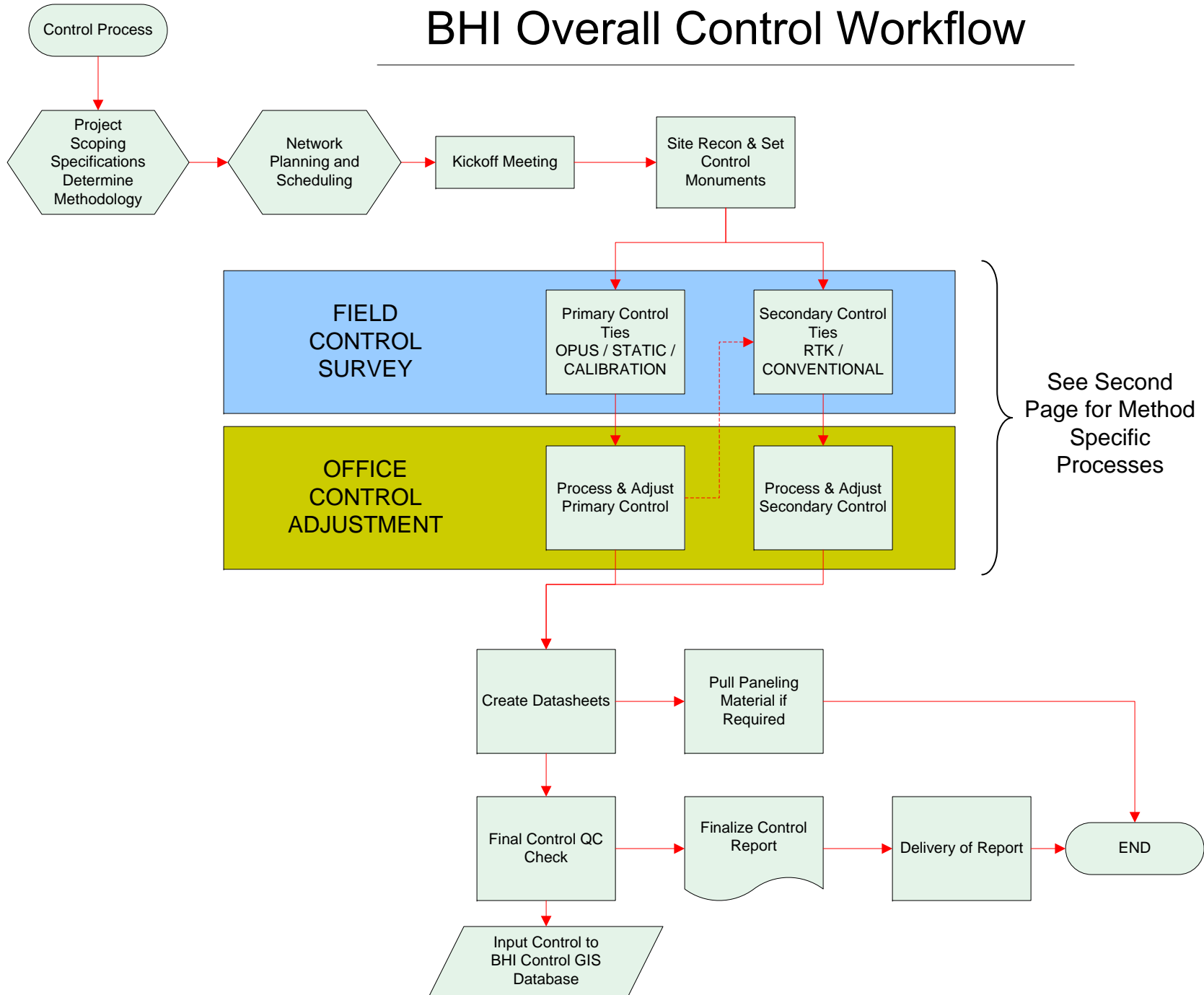
MARK: zab2 (zab2 a 3)
CONSTRAN: 3-D TIGHT
ADJUST X: 0.000m (0.000m) Y: 0.000m (0.000m) Z: -0.000m (0.000m)
ADJUST N: -0.000m (0.000m) E: 0.000m (0.000m) H: -0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2016.6896)
X: -1488630.604 m 0.000 m -1488631.445 m 0.000 m
Y: -5003949.230 m 0.000 m -5003947.874 m 0.000 m
Z: 3654557.553 m 0.000 m 3654557.415 m 0.000 m
LAT: 35 10 24.85236 0.000 m 35 10 24.86851 0.000 m
E LON: 253 25 57.80737 0.000 m 253 25 57.76025 0.000 m
W LON: 106 34 02.19263 0.000 m 106 34 02.23975 0.000 m
EL HGT: 1620.690 m 0.000 m 1619.744 m 0.000 m
ORTHO HGT: 1641.546 m 0.015 m (H = h - N WHERE N = GEOID12B HGT)

UTM COORDINATES STATE PLANE COORDINATES
UTM (Zone 13) SPC (3002 NM C)
NORTHING (Y) 3893416.223 m 462874.627 m
EASTING (X) 357280.115 m 471100.613 m
CONVERGENCE -0.90299003 deg -0.18276964 deg
POINT SCALE 0.99985103 0.99991029
COMBINED FACTOR 0.99959674 0.99965599

US NATIONAL GRID DESIGNATOR: 13SCU5728093416 (NAD 83)

BHI Overall Control Workflow



OPUS ONLY PROCESS

