

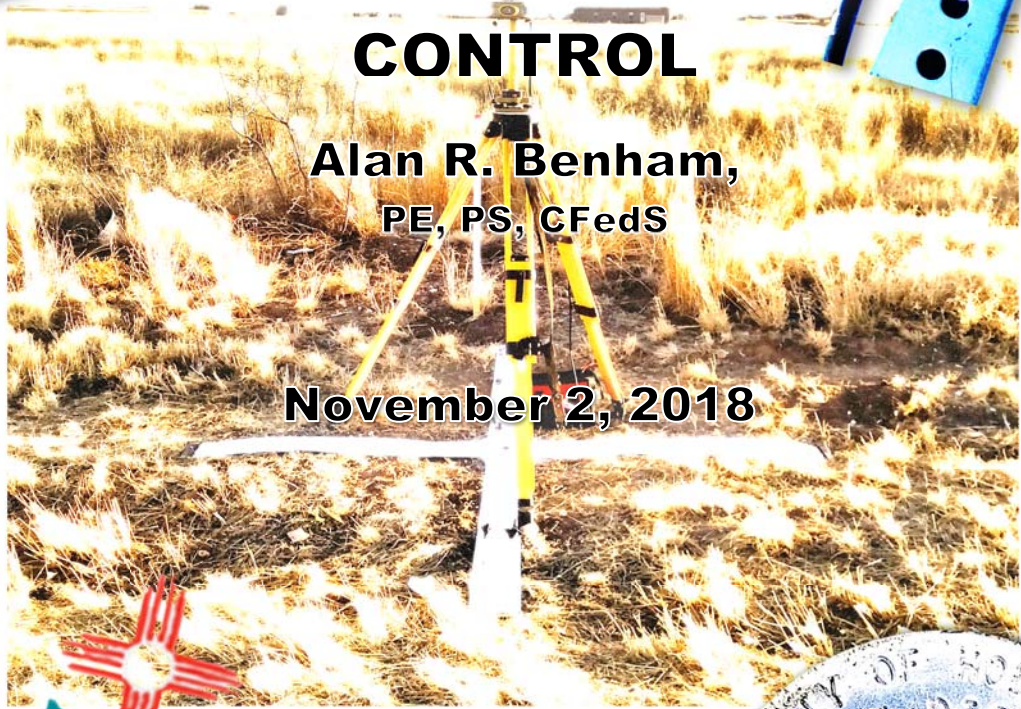


**BHI Project No.
20180324**

**Survey Control Report for
HOBBS GEODETIC
CONTROL**

**Alan R. Benham,
PE, PS, CFedS**

November 2, 2018



Hobbs



Report:

This revised control report for City of Hobbs primary control, has been prepared to supersede the previous reports created by Bohannon Huston Signed by Timothy M. Solinski / Dated May 7, 2018 and Signed by Alan R. Benham / Dated August 8, 2018. As will be explained in the following narrative, said reports were found to contain errors in the OPUS PROJECTS processing thereby rendering the solutions inconsistent with ground validation. The values contained in this report should supersede all previous control reporting as of September 17, 2008.

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 State Plane Coordinates, East Zone (3001)
Basis of Bearing:	Grid Bearings
Project Combined Factor:	0.99988638
Modification Method Used:	Scaled State Plane coordinates about origin (0,0) no truncation All project data provided in New Mexico State Plane Coordinates, East Zone (3001), USFt Grid. Project combined factor provided as a standard CF if needed for the Hobbs project area.
Field Methodology:	Static Observations (minimum 4-hour occupation)
Equipment Used:	Trimble GPS Equipment (R8, NetR9, and R10 Dual Frequency Receivers)
Control Set Date:	January 16-21, 2018
Observation Date:	February 12-20, 2018
Adjustment/ Publication Date:	Original Adjustment: 04-27-2018; Original Publication: 05-07-2018; Addendum Report: 08-15-2018 Revised Adjustment: 09-17-2018; Revised Report: 11-02-2018

I, Alan R. Benham, New Mexico Professional Surveyor No. 15700, do hereby certify that this Survey Control 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.



November 2, 2018

Alan R. Benham, PS 15700

Date

For and on behalf of
Bohannon Huston, Inc.
Courtyard I / 7500 Jefferson St. NE
Albuquerque, NM 87109-4335
(505) 823.1000



Control Report Narrative:

Original control observations for this project were performed February 12th through 20th, 2018 utilizing up to six different receivers. All observations were approximately 4 hours in length and each station had redundant observations in order to utilize the OPUS PROJECTS solution methodology. Original adjustment was performed through OPUS PROJECTS by Timothy M. Solinski with the final adjustment being completed April 27, 2018. An addendum was prepared by Alan R. Benham on August 8, 2018 to also show the results of this original adjustment for HOBBS_NTR9. Said value omitted from the first report. Subsequent field efforts were performed to validate the control as reported utilizing RTK methodology with the HOBBS_NTR9 base station. Validation ties to this primary control shows that horizontally, all monuments were satisfactory and within specifications, however, a vertical shift and inclined plane was observed through this check. While indicators on the OPUS PROJECT showed that the adjustment was valid, subsequent review of the OPUS PROJECT found that the adjustment methodology contained some systematic errors.

A readjustment was prepared by Alan R. Benham and finalized on September 17, 2018. This OPUS PROJECTS adjustment utilized the same original observations. However, several key adjustment variables were changed in the new adjustment. This second adjustment was then compared against the previous RTK validation (adjusted to the new HOBBS_NTR9 base value) and the adjustment was found to be within specifications both horizontally and vertically. The OPUS PROJECT changes made included the following:

- Inclusion of three CORS stations on the westerly side of the adjustment – Roswell, Holloman AFB and Las Cruces NM
- Inclusion of a very long baseline in North Carolina – NCCR which was allowed to float but utilized for Tropospheric modeling in the adjustment
- Ensuring that all solutions passed from CORS stations on the east, through HOBBS_NTR9 and continued through to NMRO CORS station on the west. These solutions all followed the same basic set up.
- Holding all fixed CORS stations in a tight adjustment.

Utilizing this methodology (as graphically shown on the following pages) resulted in an adjustment that met both horizontal and vertical specifications.

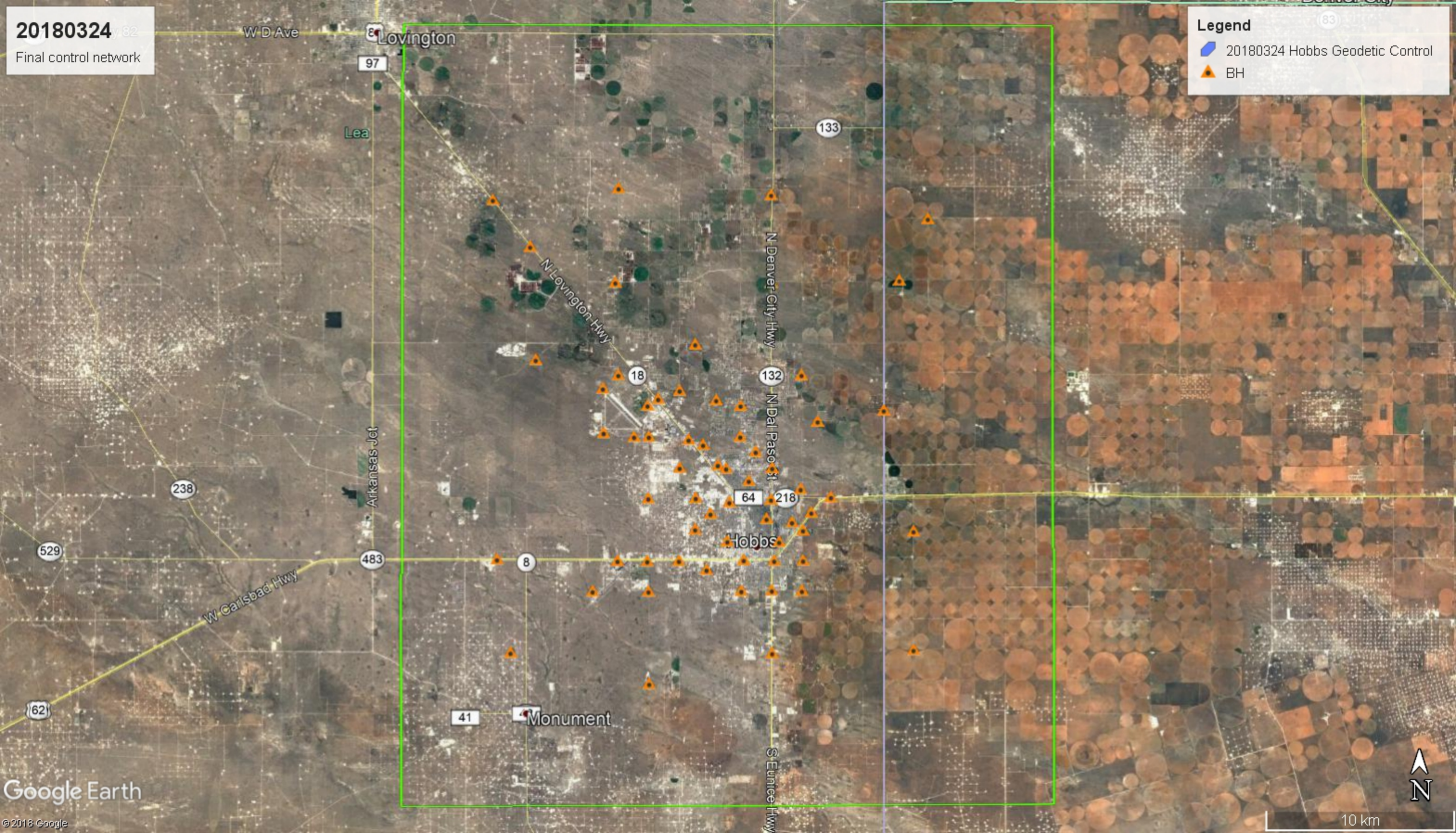
Also included in this adjustment (as in the prior/superseded adjustment) was the readjustment of HOBBS_NTR9. The NTR9 data was processed from eleven 24-hour sessions collected from Monday, February 12th, 2018 through Thursday, February 22nd, 2018 (GPS Dates 1988:43 to 1989:53). All observations were included in each of the OPUS PROJECTS sessions for the final adjustment. As such, the final coordinates continued to have an excellent quality and the readjustment yielded only a 0.02-foot vertical adjustment. The base receiver is a Trimble Net R9 – Part Number PN: 115000-00; Serial Number SN: 1551129645.

It was also found that point 012 was dropped out of the original adjustment because of a faulty receiver. Point 012 was reobserved in multiple sessions and adjusted through a separate OPUS PROJECTS adjustment. Additionally, point 055 was the single point that had the greatest vertical deviation. New observations were also taken on point 055 and included in this secondary adjustment with point 012. The same criteria and set up as stated above was used in this adjustment. Additionally, HOBBS_NTR9 was held fixed from the above adjustment to maintain coordinate integrity.

20180324
Final control network

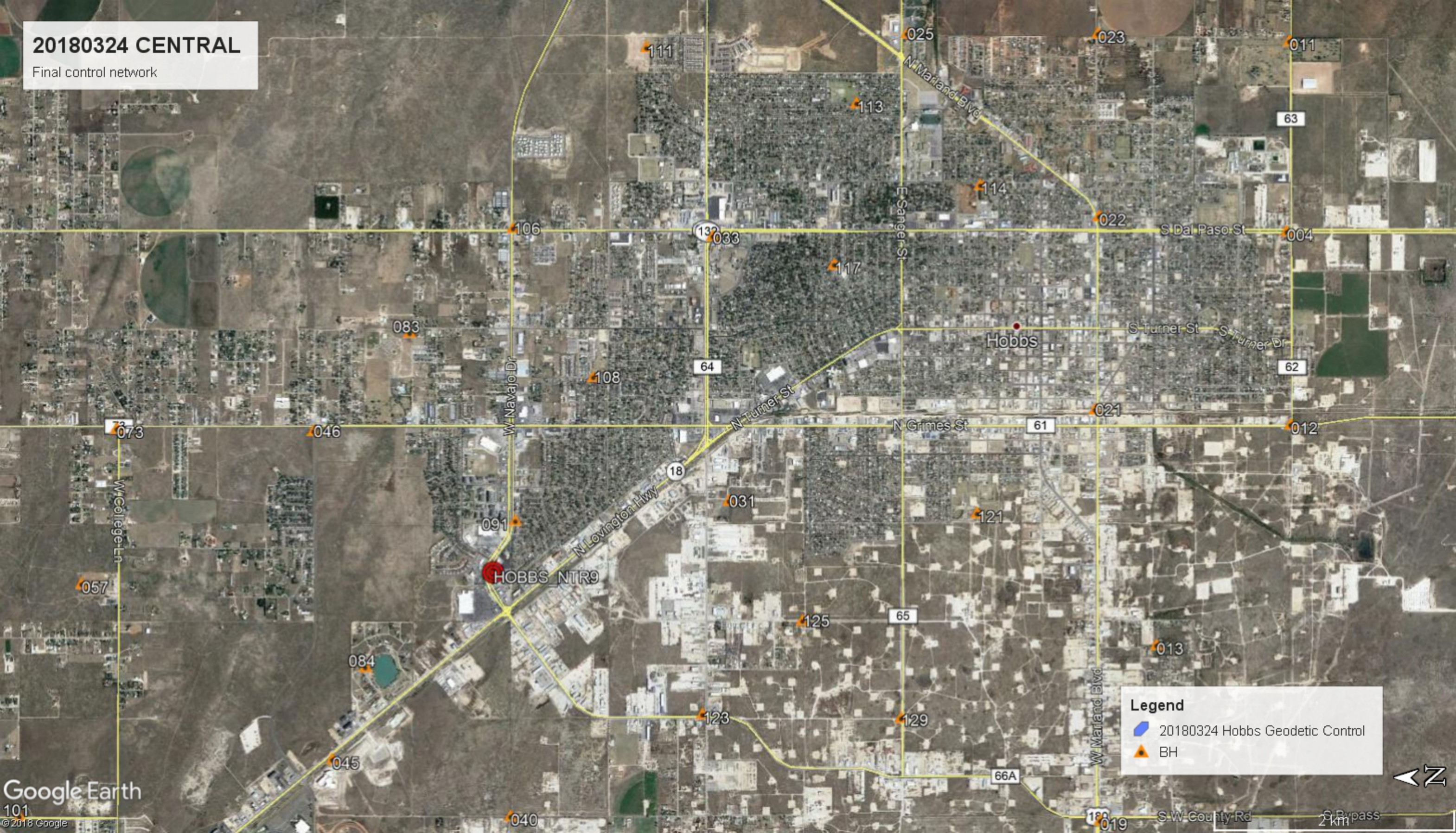
Legend

- 20180324 Hobbs Geodetic Control
- BH





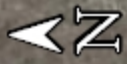
20180324 CENTRAL

Final control network



Legend



-  20180324 Hobbs Geodetic Control
-  BH

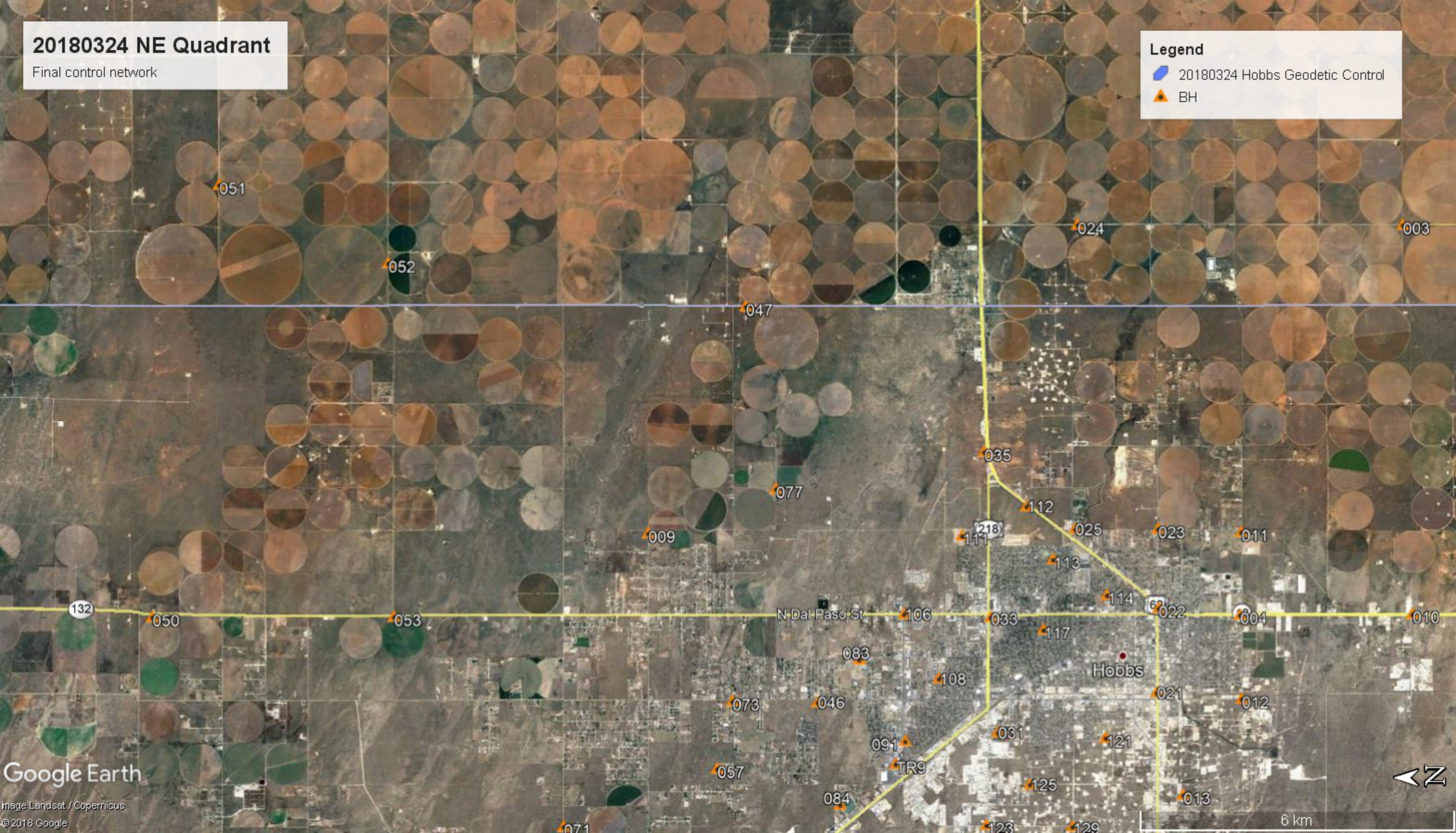


20180324 NE Quadrant

Final control network

Legend

-  20180324 Hobbs Geodetic Control
-  BH



051

052

024

003

047

077

009

035

112

025

023

011

132

050

053

N Dal Paso St

106

033

114

022

004

010

Hobbs

021

012

083

046

108

031

121

091

TR9

125

057

084

123

129

013

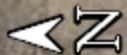
071

6 km

Google Earth

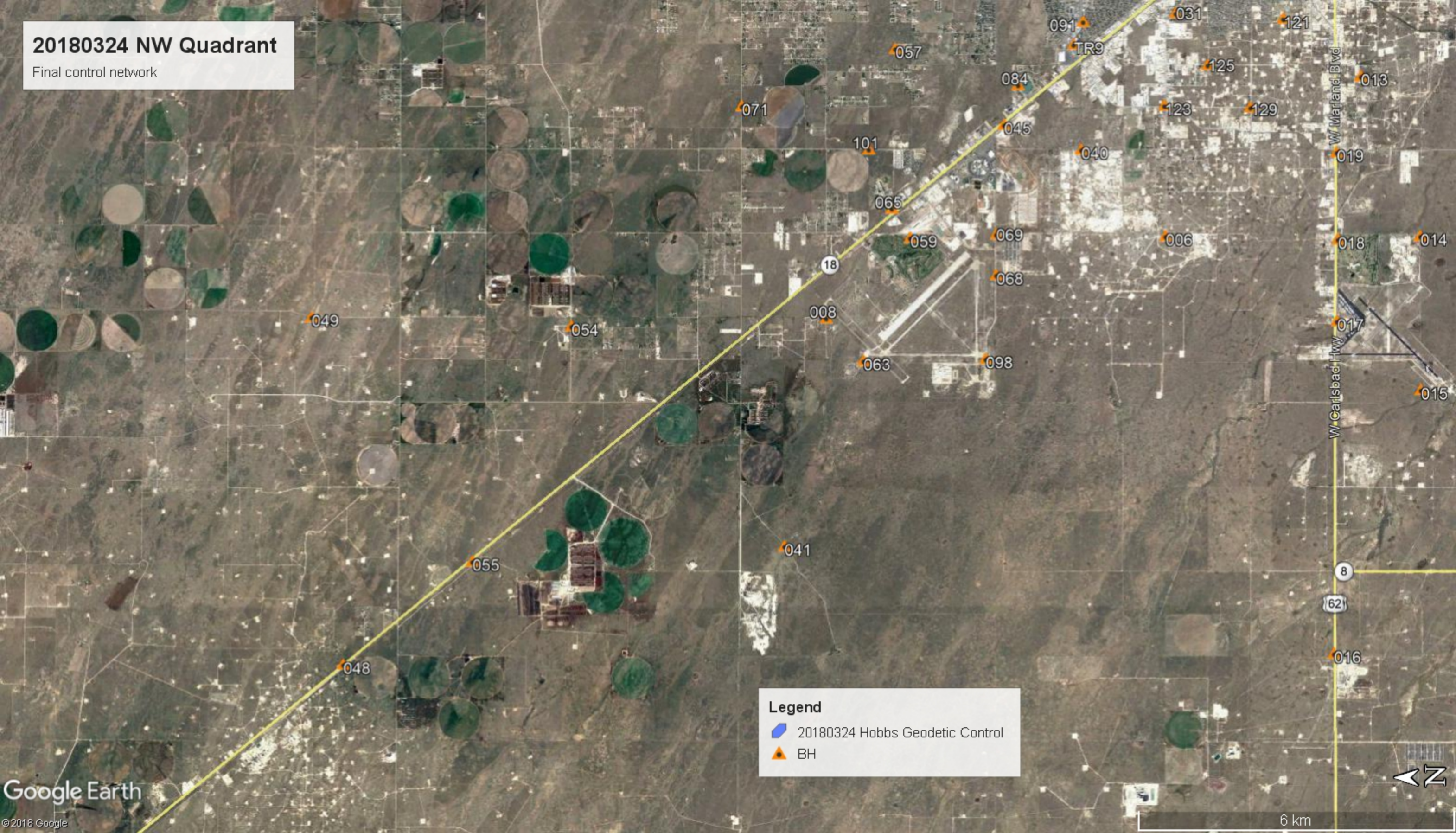
Image Landsat / Copernicus

©2018 Google





20180324 NW Quadrant

Final control network





Legend

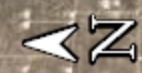
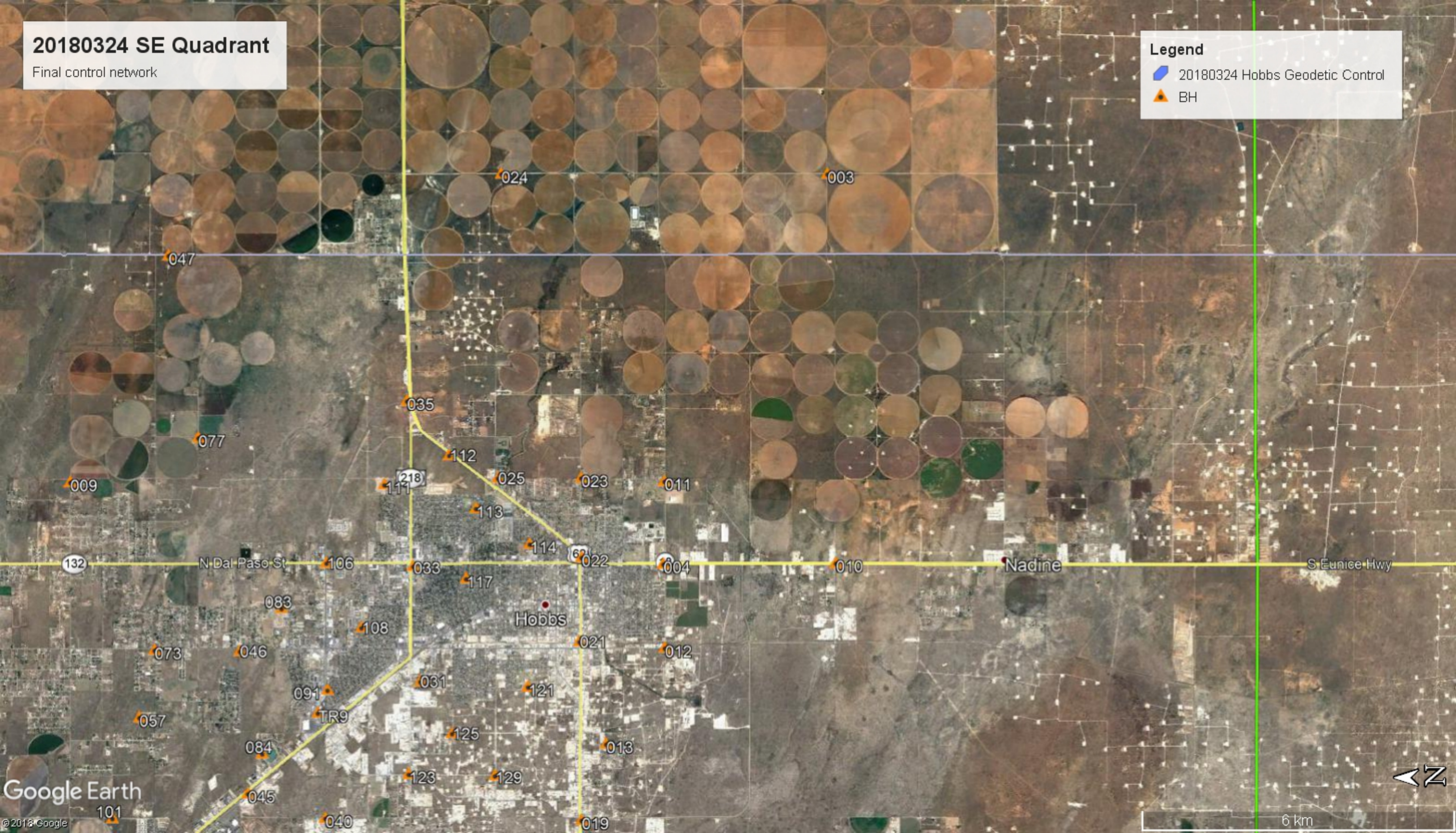
-  20180324 Hobbs Geodetic Control
-  BH

20180324 SE Quadrant

Final control network

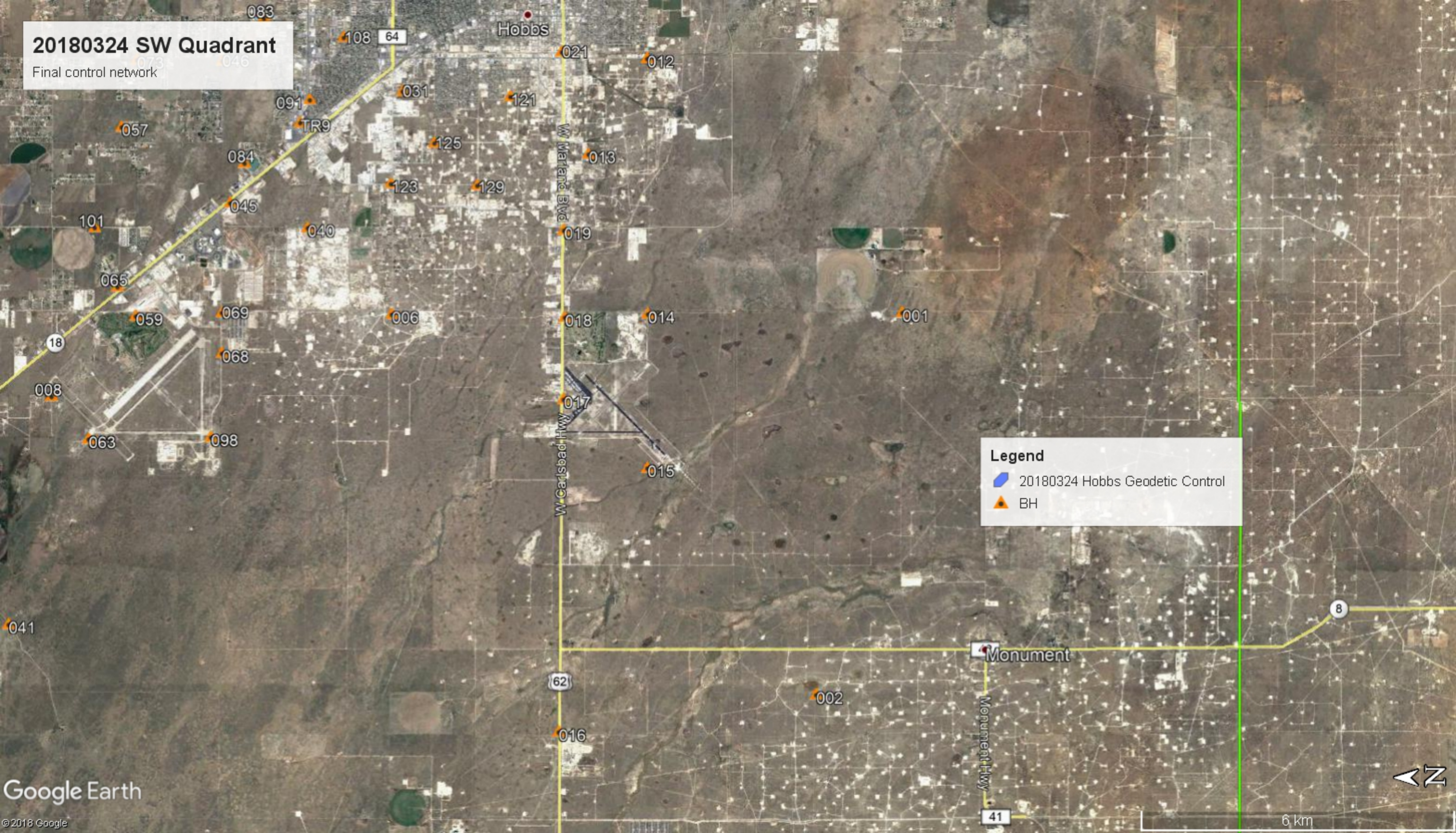
Legend

-  20180324 Hobbs Geodetic Control
-  BH





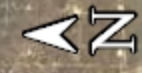
20180324 SW Quadrant

Final control network



Legend

-  20180324 Hobbs Geodetic Control
-  BH

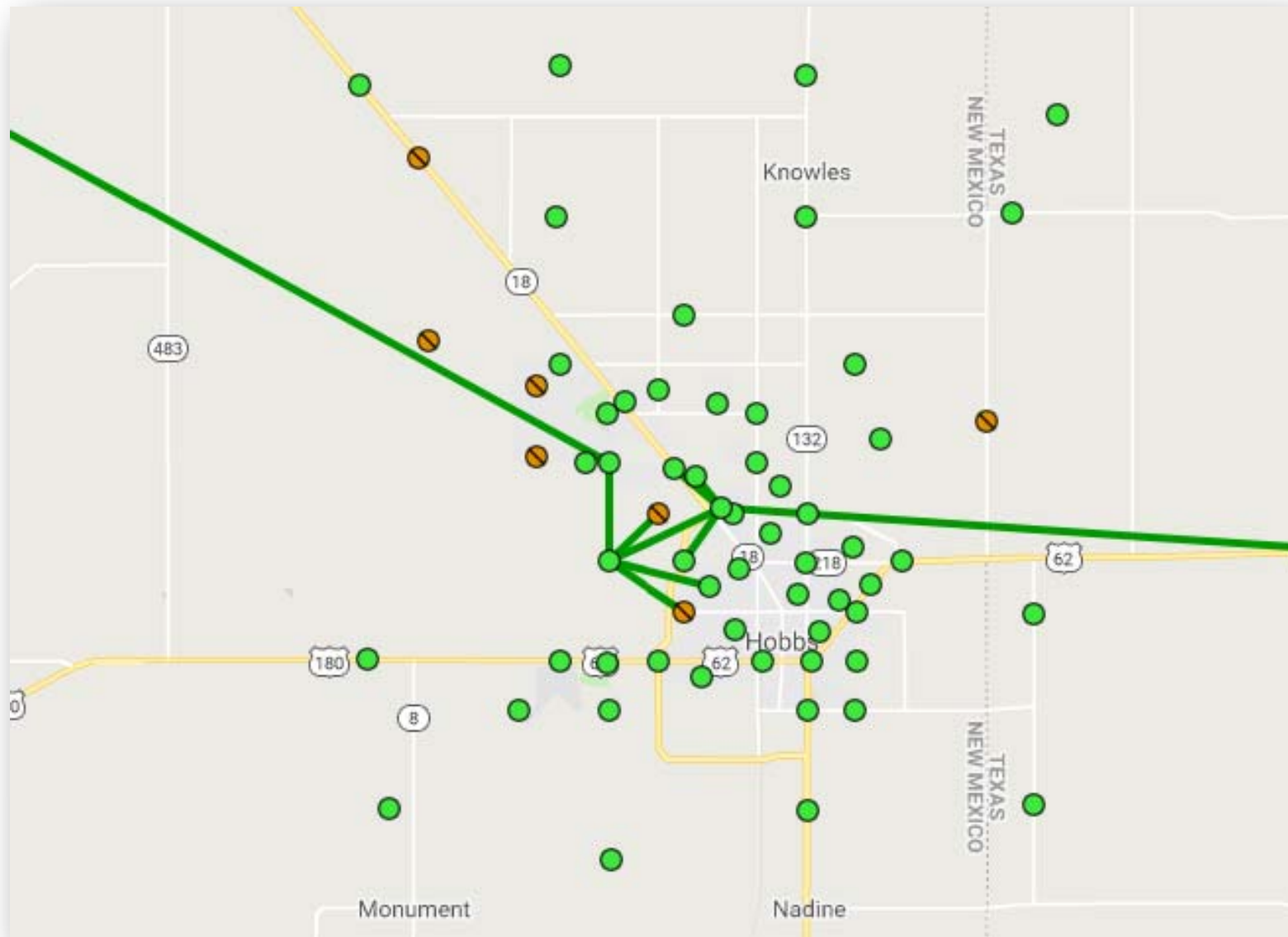


NAME	LATITUDE DD MM SS.sss	LONGITUDE DD MM SS.sss	ELLIPSOID (USFt)	GRID NORTHING (USFt)	GRID EASTING (USFt)	ORTHOMETRIC HEIGHT (ELEVATION) (USFt)	MODIFIED NORTHING (USFt)	MODIFIED EASTING (USFt)
BH 18-324-001	N 32° 38' 18.23971"	W 103° 11' 46.54891"	3534.297	597854.156	891361.132	3605.531	597922.092	891462.420
BH 18-324-002	N 32° 39' 11.24708"	W 103° 16' 25.82487"	3602.847	602964.384	867426.113	3674.455	603032.901	867524.681
BH 18-324-003	N 32° 39' 15.36782"	W 103° 02' 53.30948"	3475.236	604147.905	936890.636	3546.394	604216.556	936997.098
BH 18-324-004	N 32° 40' 56.72038"	W 103° 07' 39.23145"	3528.490	614104.511	912328.149	3599.419	614174.294	912431.819
BH 18-324-006	N 32° 43' 32.86435"	W 103° 11' 48.35104"	3591.184	629650.355	890866.380	3662.155	629721.904	890967.612
BH 18-324-008	N 32° 47' 01.82527"	W 103° 12' 48.75389"	3629.970	650714.442	885482.847	3700.993	650788.385	885583.467
BH 18-324-009	N 32° 47' 02.06980"	W 103° 06' 39.32708"	3588.881	651088.269	917022.244	3659.832	651162.254	917126.448
BH 18-324-011	N 32° 40' 56.04589"	W 103° 06' 38.56667"	3531.174	614095.686	917514.074	3602.115	614165.467	917618.334
BH 18-324-012	N 32° 40' 55.78998"	W 103° 08' 40.73365"	3539.543	613951.157	907072.500	3610.478	614020.922	907175.574
BH 18-324-013	N 32° 41' 31.87664"	W 103° 09' 50.90586"	3545.364	617531.662	901034.558	3616.299	617601.834	901136.945
BH 18-324-014	N 32° 40' 55.16399"	W 103° 11' 47.89868"	3551.640	613712.574	891075.889	3622.680	613782.312	891177.145
BH 18-324-015	N 32° 40' 55.32041"	W 103° 13' 40.55552"	3585.557	613626.639	881446.807	3656.728	613696.367	881546.968
BH 18-324-016	N 32° 41' 49.51449"	W 103° 16' 53.00700"	3649.937	618936.521	864943.534	3721.357	619006.853	865041.820
BH 18-324-017	N 32° 41' 46.95606"	W 103° 12' 50.38440"	3576.837	618890.199	885679.917	3647.903	618960.526	885780.560
BH 18-324-018	N 32° 41' 46.31620"	W 103° 11' 50.44478"	3576.197	618879.997	890802.905	3647.204	618950.322	890904.130
BH 18-324-019	N 32° 41' 46.97247"	W 103° 10' 46.65083"	3560.889	619005.175	896253.885	3631.846	619075.514	896355.729
BH 18-324-021	N 32° 41' 48.35680"	W 103° 08' 35.96909"	3549.973	619268.488	907420.133	3620.882	619338.858	907523.246
BH 18-324-022	N 32° 41' 47.17844"	W 103° 07' 34.41548"	3532.762	619208.845	912681.744	3603.671	619279.208	912785.455
BH 18-324-023	N 32° 41' 47.45054"	W 103° 06' 36.19203"	3529.698	619293.360	917657.124	3600.623	619363.733	917761.400
BH 18-324-024	N 32° 42' 36.95425"	W 103° 02' 53.26160"	3510.045	624521.954	936647.912	3581.141	624592.921	936754.346
BH 18-324-025	N 32° 42' 38.75929"	W 103° 06' 36.27863"	3542.408	624478.929	917589.896	3613.323	624549.890	917694.165
BH 18-324-031	N 32° 43' 26.46733"	W 103° 09' 05.04567"	3564.278	629156.447	904824.756	3635.173	629227.940	904927.574
BH 18-324-033	N 32° 43' 30.83223"	W 103° 07' 40.86505"	3555.134	629678.602	912011.461	3626.029	629750.154	912115.096
BH 18-324-035	N 32° 43' 34.84763"	W 103° 05' 39.81644"	3550.580	630203.699	922348.054	3621.525	630275.311	922452.863
BH 18-324-040	N 32° 44' 24.73979"	W 103° 10' 45.12400"	3588.641	634951.633	896210.736	3659.573	635023.785	896312.575
BH 18-324-041	N 32° 47' 27.39442"	W 103° 15' 35.17629"	3670.915	653151.360	871248.523	3742.056	653225.580	871347.525

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BH 18-324-045	N 32° 45' 12.35804"	W 103° 10' 27.07808"	3590.642	639781.113	897699.475	3661.571	639853.813	897801.483
BH 18-324-046	N 32° 45' 17.57058"	W 103° 08' 42.91030"	3574.688	640406.537	906589.879	3645.600	640479.308	906692.898
BH 18-324-047	N 32° 46' 01.92790"	W 103° 03' 53.31645"	3564.120	645176.608	931268.359	3635.157	645249.921	931374.181
BH 18-324-048	N 32° 51' 57.64832"	W 103° 17' 01.71034"	3732.073	680390.990	863590.142	3803.217	680468.305	863688.274
BH 18-324-049	N 32° 52' 17.80881"	W 103° 12' 48.44648"	3681.768	682650.544	885170.659	3752.798	682728.116	885271.244
BH 18-324-050	N 32° 52' 06.86338"	W 103° 07' 40.53299"	3633.359	681833.571	911445.404	3704.340	681911.050	911548.974
BH 18-324-051	N 32° 51' 26.55983"	W 103° 02' 24.06714"	3563.743	678079.530	938488.132	3634.825	678156.582	938594.775
BH 18-324-052	N 32° 49' 42.21121"	W 103° 03' 21.64973"	3575.308	667473.152	933703.538	3646.371	667548.999	933809.638
BH 18-324-053	N 32° 49' 38.42170"	W 103° 07' 40.41647"	3606.007	666830.746	911626.577	3676.978	666906.520	911730.168
BH 18-324-054	N 32° 49' 38.44295"	W 103° 12' 54.88326"	3654.209	666537.886	884792.182	3725.239	666613.626	884892.724
BH 18-324-055	N 32° 50' 38.80509"	W 103° 15' 46.56025"	3702.417	672486.842	870080.818	3773.526	672563.259	870179.688
BH 18-324-057	N 32° 46' 19.39128"	W 103° 09' 31.46680"	3592.063	646608.353	902373.708	3662.995	646681.829	902476.247
BH 18-324-059	N 32° 46' 10.23604"	W 103° 11' 49.92661"	3613.073	645553.994	890561.152	3684.054	645627.351	890662.349
BH 18-324-063	N 32° 46' 38.92827"	W 103° 13' 19.90779"	3636.810	648372.266	882847.417	3707.853	648445.943	882947.737
BH 18-324-065	N 32° 46' 21.51571"	W 103° 11' 28.49073"	3611.020	646713.701	892379.216	3681.991	646787.189	892480.620
BH 18-324-068	N 32° 45' 17.22440"	W 103° 12' 16.98887"	3610.039	640171.539	888307.483	3681.029	640244.284	888408.424
BH 18-324-069	N 32° 45' 17.32688"	W 103° 11' 47.22139"	3608.680	640209.093	890849.572	3679.651	640281.842	890950.802
BH 18-324-071	N 32° 47' 53.91131"	W 103° 10' 13.75450"	3609.474	656121.427	898657.936	3680.439	656195.984	898760.053
BH 18-324-073	N 32° 46' 10.09685"	W 103° 08' 42.21580"	3583.028	645715.927	906589.602	3653.953	645789.302	906692.621
BH 18-324-077	N 32° 45' 43.31354"	W 103° 06' 06.78939"	3574.068	643160.681	919892.780	3645.016	643233.765	919997.311
BH 18-324-083	N 32° 44' 51.89197"	W 103° 08' 11.73917"	3575.672	637841.231	909281.305	3646.577	637913.711	909384.629
BH 18-324-084	N 32° 45' 03.63767"	W 103° 09' 57.88025"	3586.535	638927.160	900202.789	3657.453	638999.763	900305.082
BH 18-324-091	N 32° 44' 23.56179"	W 103° 09' 11.41022"	3570.780	634920.776	904216.744	3641.682	634992.924	904319.493
BH 18-324-098	N 32° 45' 23.73894"	W 103° 13' 18.36553"	3626.613	640774.494	883058.896	3697.653	640847.307	883159.241
BH 18-324-010	N 32° 39' 10.26928"	W 103° 07' 38.50735"	3532.565	603346.542	912512.287	3603.572	603415.102	912615.979
BH 18-324-101	N 32° 46' 35.69525"	W 103° 10' 45.16460"	3608.520	648186.926	896062.991	3679.474	648260.581	896164.813

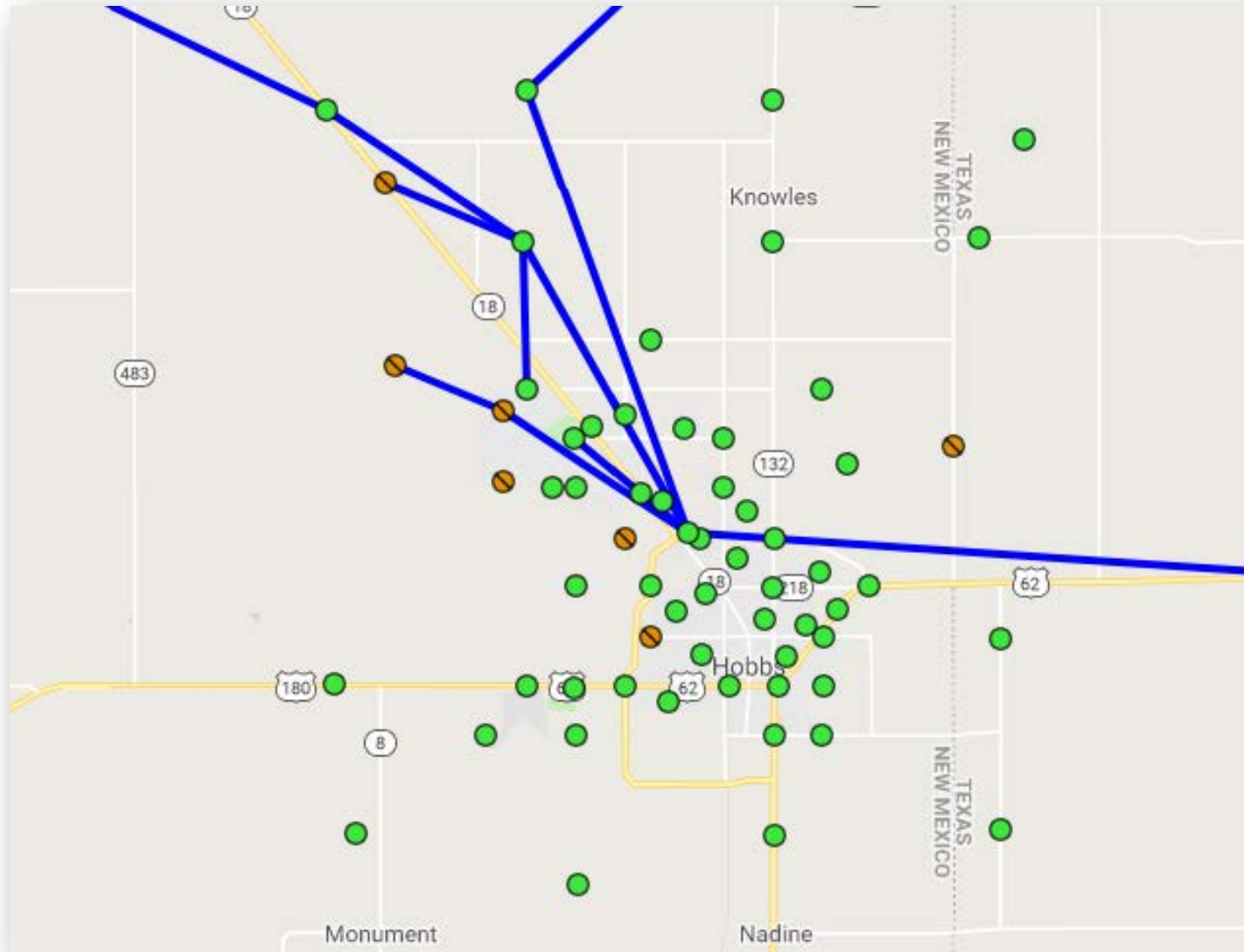
NAME	LATITUDE DD MM SS.sss	LONGITUDE DD MM SS.sss	ELLIPSOID (USFt)	GRID NORTHING (USFt)	GRID EASTING (USFt)	ORTHOMETRIC HEIGHT (ELEVATION) (USFt)	MODIFIED NORTHING (USFt)	MODIFIED EASTING (USFt)
BH 18-324-106	N 32° 44' 24.24315"	W 103° 07' 38.45195"	3566.010	635079.072	912156.168	3636.912	635151.238	912259.819
BH 18-324-108	N 32° 44' 02.74469"	W 103° 08' 25.70539"	3565.613	632860.569	908144.397	3636.508	632932.483	908247.592
BH 18-324-111	N 32° 43' 48.57267"	W 103° 06' 41.12027"	3575.327	631530.048	917094.851	3646.239	631601.810	917199.063
BH 18-324-112	N 32° 43' 08.78270"	W 103° 06' 19.61998"	3555.059	627529.788	918978.146	3625.980	627601.096	919082.572
BH 18-324-113	N 32° 42' 52.31997"	W 103° 06' 58.50563"	3547.598	625827.616	915674.973	3618.503	625898.730	915779.024
BH 18-324-114	N 32° 42' 19.12899"	W 103° 07' 24.52684"	3545.921	622447.633	913489.969	3616.827	622518.364	913593.772
BH 18-324-117	N 32° 42' 58.31435"	W 103° 07' 49.89055"	3551.742	626383.337	911277.703	3622.637	626454.515	911381.254
BH 18-324-121	N 32° 42' 20.06094"	W 103° 09' 08.94873"	3568.828	622441.225	904566.078	3639.730	622511.955	904668.866
BH 18-324-123	N 32° 43' 33.51819"	W 103° 10' 12.78630"	3574.947	629805.024	899029.731	3645.862	629876.591	899131.891
BH 18-324-125	N 32° 43' 06.74313"	W 103° 09' 43.02742"	3575.147	627126.950	901601.939	3646.052	627198.212	901704.390
BH 18-324-129	N 32° 42' 40.36849"	W 103° 10' 13.97441"	3571.099	624432.233	898987.164	3642.017	624503.189	899089.318
HOBBS_NTR9	N 32° 44' 29.44985"	W 103° 09' 28.17556"	3601.390	635499.944	902778.100	3672.296	635572.157	902880.685

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT



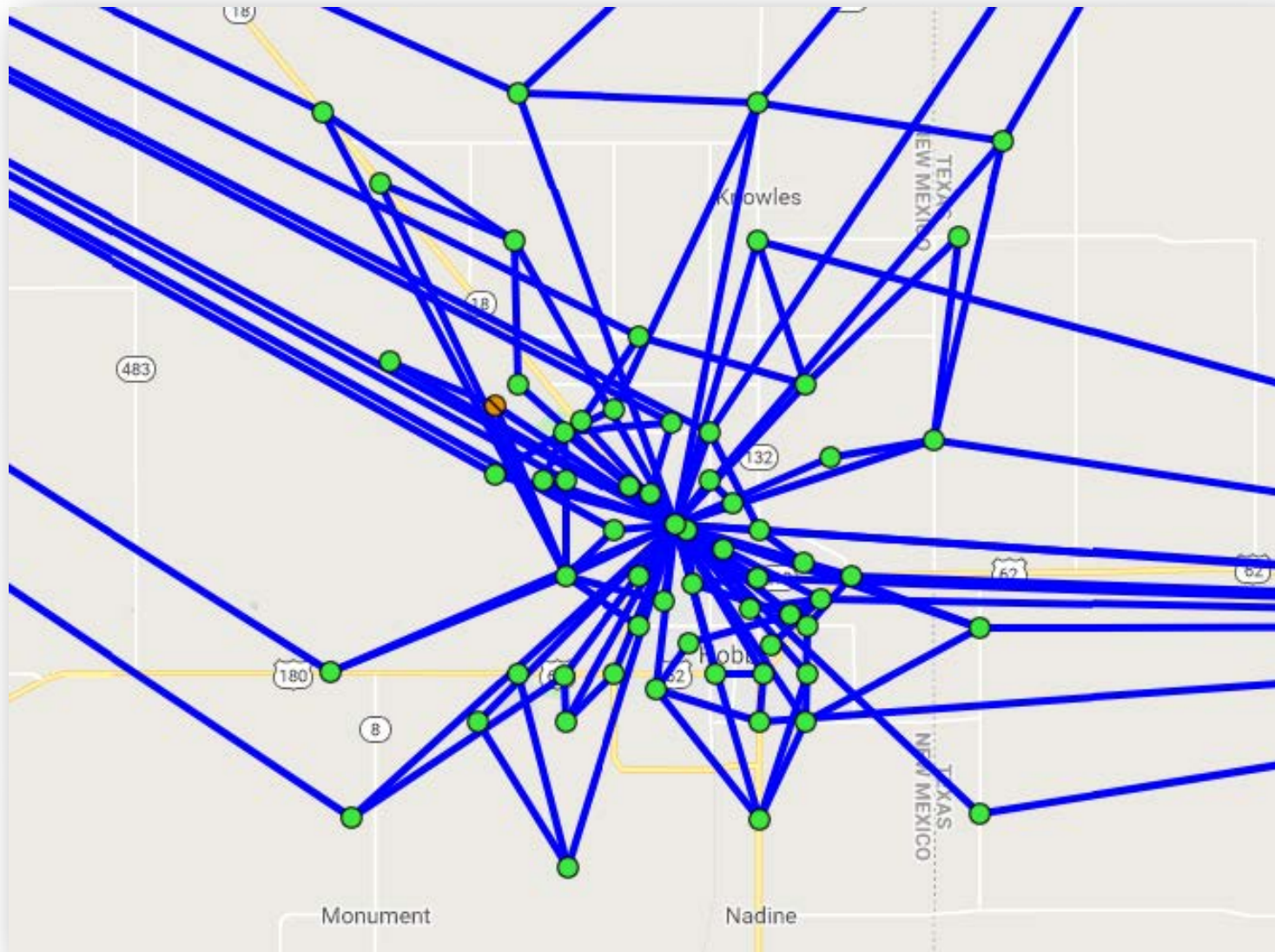
Example Session Solution. All sessions run through NTR9 and from an East CORS (in Texas) to a West CORS (NMRO in Roswell)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT



Example Session Solution. All sessions run through NTR9 and from an East CORS (in Texas) to a West CORS (NMRO in Roswell)

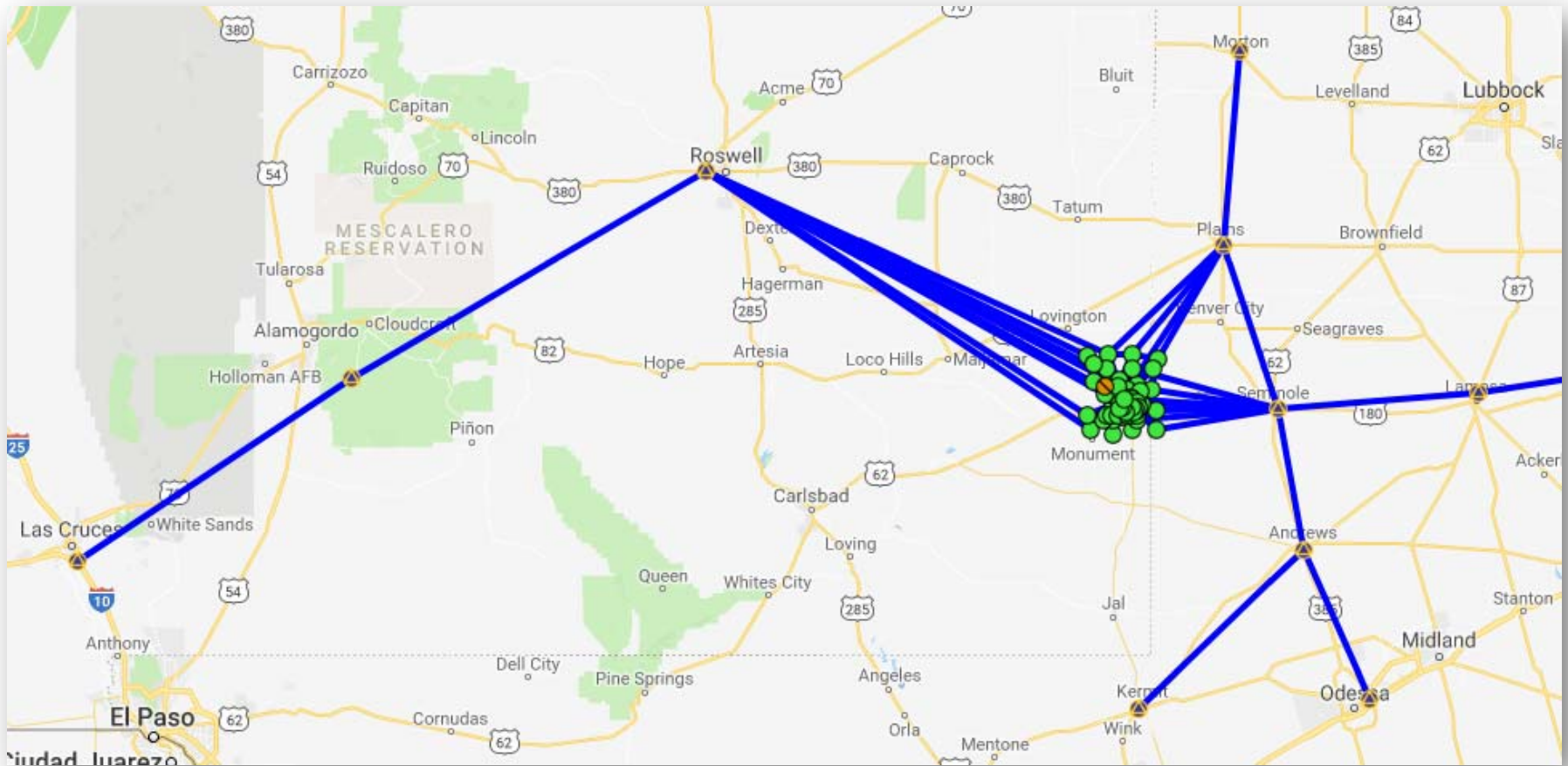
NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT



Entire network including all marks and CORS stations.

All CORS fixed 3D Tight

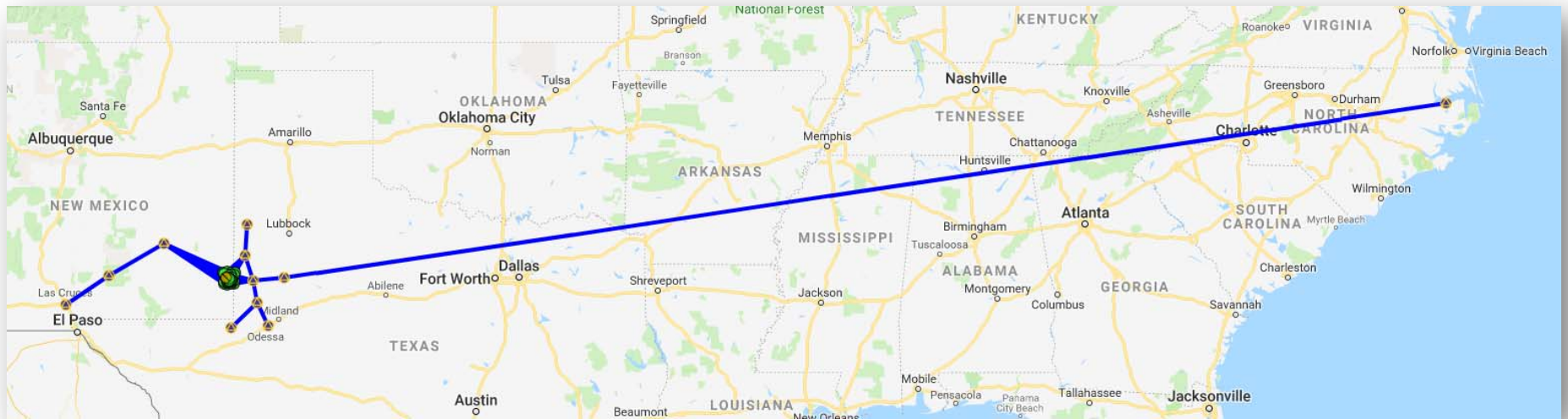
NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT



Entire network including all marks and CORS stations.

All CORS fixed 3D Tight

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT



Entire network including all marks and CORS stations.

NCCR used for Tropospheric Modeling only.

All others fixed 3D Tight

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.

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SUBMITTED BY:                abenham
SOLUTION FILE NAME:          network-20180324_FINAL_09-2018.sum
SOLUTION SOFTWARE:           GPSCOM(1504.22)
SOLUTION DATE:               2018-09-17T12:12:19 UTC
STANDARD ERROR OF UNIT WEIGHT: 0.899
TOTAL NUMBER OF OBSERVATIONS: 3199752
TOTAL NUMBER OF MARKS:       74
NUMBER OF CONSTRAINED MARKS: 10

START TIME:                  2018-02-12T00:00:00 GPS
STOP TIME:                   2018-02-22T23:59:30 GPS
FREQUENCY:                   L1 -> ION-FREE (L6)
OBSERVATION INTERVAL:       30 s
ELEVATION CUTOFF:           15 deg
TROPIC INTERVAL:            1800 s [STEP-OFFSET PARAMETERIZATION]
DD CORRELATIONS:            ON
    
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INCLUDED SOLUTION	RMS	SOFTWARE	RUN DATE
1) 2018-043 A1	1.5 cm	page5(1603.24)	2018-09-17T10:50 UTC
2) 2018-044 A1	1.3 cm	page5(1603.24)	2018-09-17T10:52 UTC
3) 2018-044 B1	1.5 cm	page5(1603.24)	2018-09-17T11:09 UTC
4) 2018-045 A1	1.3 cm	page5(1603.24)	2018-09-17T11:20 UTC
5) 2018-045 B1	1.3 cm	page5(1603.24)	2018-09-17T11:26 UTC
6) 2018-046 A1	1.3 cm	page5(1603.24)	2018-09-17T11:29 UTC
7) 2018-046 B1	1.7 cm	page5(1603.24)	2018-09-17T11:34 UTC
8) 2018-047 A1	1.4 cm	page5(1603.24)	2018-09-17T11:34 UTC
9) 2018-047 B1	1.4 cm	page5(1603.24)	2018-09-17T11:40 UTC
10) 2018-048 A1	1.5 cm	page5(1603.24)	2018-09-17T11:41 UTC
11) 2018-048 B1	1.4 cm	page5(1603.24)	2018-09-17T11:46 UTC
12) 2018-049 A1	1.5 cm	page5(1603.24)	2018-09-17T11:56 UTC
13) 2018-049 B1	1.5 cm	page5(1603.24)	2018-09-17T12:02 UTC
14) 2018-050 A1	1.6 cm	page5(1603.24)	2018-09-17T12:00 UTC
15) 2018-050 B1	1.6 cm	page5(1603.24)	2018-09-17T12:06 UTC
16) 2018-051 A1	1.5 cm	page5(1603.24)	2018-09-15T13:32 UTC
17) 2018-052 A1	1.5 cm	page5(1603.24)	2018-09-14T16:11 UTC
18) 2018-053 A1	1.5 cm	page5(1603.24)	2018-09-15T12:20 UTC

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

BASELINE	LENGTH	RMS	OBS	OMITTED	FIXED	IN SOLUTION(S)
0091-ntr9	0.473 km	0.6 cm	3628	6.3%	100.0%	6
0065-0059	0.657 km	0.4 cm	3594	0.6%	100.0%	7
0112-0113	1.133 km	0.9 cm	3371	3.4%	78.3%	5
0083-0046	1.133 km	0.7 cm	3354	4.1%	100.0%	5
0084-ntr9	1.307 km	0.7 cm	6928	10.1%	98.2%	6, 9
0004-0022	1.560 km	0.8 cm	2915	9.9%	96.3%	13
0014-0018	1.577 km	0.7 cm	3537	3.8%	94.4%	16
0022-0021	1.604 km	0.8 cm	6594	7.6%	95.2%	12
0069-0059	1.632 km	0.7 cm	3440	1.4%	100.0%	7
0091-0031	1.767 km	0.7 cm	3467	2.1%	100.0%	10
0068-0059	1.779 km	0.5 cm	3355	2.9%	100.0%	7
0108-ntr9	1.823 km	0.9 cm	6590	6.9%	100.0%	6,10
0121-0013	1.844 km	0.7 cm	3670	2.3%	100.0%	14
0111-0106	1.854 km	0.7 cm	3233	6.2%	100.0%	5
0101-0059	1.859 km	0.5 cm	3565	0.9%	100.0%	7
0046-ntr9	1.894 km	0.7 cm	6401	12.0%	98.2%	5, 6
0040-ntr9	2.009 km	4.0 cm	3366	3.0%	100.0%	10
0045-ntr9	2.025 km	1.2 cm	6611	6.7%	100.0%	7, 9
0031-ntr9	2.032 km	0.6 cm	7265	3.8%	100.0%	10
0123-ntr9	2.078 km	0.6 cm	3215	10.9%	100.0%	9
0083-ntr9	2.107 km	0.7 cm	3553	4.6%	94.7%	6
0117-0108	2.193 km	1.0 cm	2863	14.2%	95.8%	10
0033-0031	2.197 km	0.6 cm	3462	0.2%	100.0%	10
0019-0014	2.257 km	0.7 cm	3509	4.6%	100.0%	14
0035-0025	2.269 km	0.6 cm	3231	3.9%	100.0%	11
0114-0112	2.280 km	0.8 cm	2963	7.2%	97.3%	11
0040-0006	2.295 km	0.5 cm	3180	1.6%	100.0%	9
0117-0112	2.373 km	1.0 cm	3106	3.5%	88.2%	11
0057-0084	2.433 km	0.7 cm	3411	5.5%	97.8%	6
0125-ntr9	2.577 km	0.7 cm	3452	2.0%	100.0%	10
0098-0059	2.712 km	4.9 cm	3132	2.5%	73.7%	7
0106-ntr9	2.862 km	0.8 cm	6484	11.7%	98.4%	5, 6
0129-0006	2.943 km	0.5 cm	3708	1.5%	100.0%	9
0025-0011	3.165 km	0.6 cm	3327	3.2%	97.0%	12
0069-0006	3.219 km	0.6 cm	3518	5.9%	100.0%	9
0073-ntr9	3.324 km	0.7 cm	3442	6.5%	97.0%	6
0033-ntr9	3.327 km	0.6 cm	3009	6.6%	100.0%	5
0125-0006	3.362 km	0.5 cm	3510	1.1%	100.0%	9
0071-0065	3.448 km	0.5 cm	3639	0.9%	100.0%	2
0031-0113	3.460 km	0.7 cm	3171	3.7%	100.0%	11
0077-0047	3.522 km	0.6 cm	3663	2.0%	100.0%	4
0121-0113	3.540 km	0.6 cm	3175	3.4%	100.0%	11
0129-ntr9	3.566 km	2.6 cm	3644	6.6%	62.5%	15
0004-0013	3.598 km	1.1 cm	3326	6.3%	100.0%	14
0011-0010	3.614 km	1.0 cm	3118	3.5%	96.6%	13
0057-0059	3.615 km	0.7 cm	3396	1.4%	100.0%	7
0073-0106	3.660 km	0.7 cm	3144	6.4%	96.3%	5
0041-0063	3.824 km	4.5 cm	3281	1.6%	63.2%	1
0006-ntr9	4.045 km	0.6 cm	15028	5.2%	100.0%	8, 9
0068-ntr9	4.635 km	0.7 cm	3830	3.6%	100.0%	8
0065-ntr9	4.662 km	0.6 cm	3834	3.2%	100.0%	2
0059-ntr9	4.823 km	1.0 cm	6864	4.6%	100.0%	1, 7
0008-0054	4.828 km	0.6 cm	3081	0.5%	100.0%	1

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

0055-0054	4.838 km	3.2 cm	3126	2.8%	60.9%	1
0113-ntr9	4.914 km	0.7 cm	6347	6.6%	86.6%	5,11
0053-0009	5.073 km	0.7 cm	3237	3.2%	100.0%	3
0023-0010	5.108 km	1.1 cm	3059	2.1%	100.0%	13
0021-ntr9	5.146 km	0.9 cm	13432	8.1%	95.6%	12,13
0019-ntr9	5.407 km	0.9 cm	7230	6.4%	100.0%	15
0013-ntr9	5.503 km	0.9 cm	14146	5.9%	100.0%	14,15
0112-ntr9	5.504 km	0.7 cm	3144	7.3%	97.6%	11
0010-0013	5.562 km	0.8 cm	3504	1.2%	97.0%	14
0025-ntr9	5.628 km	0.7 cm	3510	4.2%	100.0%	11
0015-0001	5.679 km	0.9 cm	3547	0.7%	97.3%	16
0077-ntr9	5.716 km	0.5 cm	3086	4.3%	100.0%	3
0071-0009	5.805 km	0.7 cm	3446	1.0%	100.0%	3
0022-ntr9	5.812 km	1.0 cm	6345	14.2%	98.1%	13
0035-ntr9	6.180 km	1.9 cm	3301	14.3%	100.0%	4
0063-0006	6.209 km	0.6 cm	3502	0.1%	100.0%	8
0098-ntr9	6.222 km	0.8 cm	3614	4.1%	98.1%	8
0018-ntr9	6.245 km	1.0 cm	7155	7.3%	98.3%	15,16
0111-0024	6.332 km	0.6 cm	3469	0.4%	100.0%	4
0009-ntr9	6.437 km	0.7 cm	6879	5.4%	100.0%	3, 4
0024-0011	6.642 km	0.7 cm	3405	1.3%	100.0%	12
0017-0001	6.642 km	1.0 cm	3538	4.2%	100.0%	16
0023-ntr9	6.707 km	1.0 cm	6468	8.9%	100.0%	12
0052-0047	6.837 km	0.7 cm	3766	0.5%	100.0%	4
0008-ntr9	7.022 km	0.7 cm	3540	2.9%	100.0%	2
0052-0009	7.128 km	0.6 cm	3432	0.5%	100.0%	3
0063-ntr9	7.233 km	2.0 cm	3899	3.6%	40.0%	1
0014-ntr9	7.539 km	1.1 cm	3566	7.0%	100.0%	14
0048-0054	7.721 km	0.9 cm	3101	1.0%	100.0%	1
0011-ntr9	7.922 km	1.1 cm	6381	8.5%	100.0%	12
0049-0050	8.013 km	0.6 cm	3494	0.6%	100.0%	2
0050-0051	8.322 km	0.6 cm	3089	1.4%	100.0%	3
0016-0006	8.551 km	0.7 cm	3494	1.7%	100.0%	8
0002-0018	8.621 km	0.9 cm	3297	2.6%	100.0%	16
0047-ntr9	9.172 km	1.0 cm	6570	6.3%	97.8%	3, 4
0015-ntr9	9.314 km	1.2 cm	3030	7.9%	97.9%	15
0053-ntr9	9.924 km	1.1 cm	6758	6.4%	100.0%	2
0010-ntr9	10.241 km	1.3 cm	3188	8.3%	97.6%	13
0051-0047	10.268 km	1.0 cm	3321	2.1%	100.0%	4
0024-ntr9	10.853 km	1.5 cm	3606	5.9%	100.0%	4
0054-ntr9	10.935 km	1.2 cm	6715	3.8%	100.0%	1, 2
0041-ntr9	11.015 km	1.3 cm	3522	2.3%	97.6%	8
0101-0050	11.278 km	1.1 cm	3549	1.2%	100.0%	2
0001-ntr9	11.992 km	1.5 cm	6999	4.8%	97.5%	14,16
0016-ntr9	12.590 km	1.5 cm	3157	7.8%	100.0%	15
0003-ntr9	14.123 km	1.8 cm	12904	6.9%	100.0%	12,13
0050-ntr9	14.369 km	1.4 cm	7045	4.6%	98.7%	2
0055-0006	14.514 km	1.0 cm	3505	5.0%	100.0%	8
0002-ntr9	14.646 km	1.6 cm	3273	4.9%	98.4%	15
0049-ntr9	15.343 km	1.4 cm	3487	5.3%	100.0%	1
0051-ntr9	16.940 km	1.4 cm	2878	8.7%	100.0%	3
0048-0006	17.561 km	1.3 cm	3718	0.2%	100.0%	8
txs3-0024	39.229 km	1.6 cm	7303	3.2%	98.6%	4,12
txs3-0003	39.757 km	2.0 cm	6657	3.7%	100.0%	13
txs3-0047	41.241 km	3.8 cm	2833	3.9%	85.7%	3

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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txp2-0051    41.566 km      2.0 cm      6347      2.6%    100.0%     3, 4
txs3-0035    43.593 km      1.4 cm      3178      5.5%    100.0%     11
txs3-0112    44.609 km      1.9 cm      3629      5.2%     93.3%      5
txp2-0050    45.253 km      1.6 cm      7234      1.8%     98.2%      2
txad-txs3    45.510 km      1.6 cm    306900     6.6%     99.0%     1, 2, 3,...
txs3-0033    46.740 km      1.9 cm      3465      2.7%     96.8%     10
txs3-0106    46.755 km      1.9 cm      3517      6.5%     92.3%      6
txs3-0004    46.798 km      1.7 cm      3310      6.1%     97.0%     14
txs3-0053    48.406 km      1.8 cm      6826      5.1%     98.8%      2
txs3-ntr9    49.616 km      1.8 cm    135394     8.8%     98.6%     1, 7, 8,...
txp2-0049    50.508 km      1.7 cm      3628      1.0%    100.0%      1
txoe-txad    52.844 km      1.4 cm      52684     5.1%     99.8%    14,15,16
txp2-0073    55.043 km      1.8 cm      6946      3.3%     93.9%      5, 6
txp2-txs3    55.069 km      1.7 cm    213172     4.3%     98.9%      7, 8, 9,...
txm1-txp2    61.880 km      1.4 cm    194368     3.5%     98.7%      1, 2, 3,...
txla-txs3    64.529 km      1.5 cm    310405     6.2%     99.4%      1, 2, 3,...
txkm-txad    74.239 km      1.4 cm    312128     4.9%     99.5%      1, 2, 3,...
nmsu-p027    106.012 km     1.2 cm    356785     3.7%     99.7%      1, 2, 3,...
p027-nmro    131.168 km     1.3 cm    374372     2.6%     99.1%      1, 2, 3,...
nmro-0048    135.213 km     1.5 cm      8078      1.5%    100.0%      1, 8
nmro-0049    140.896 km     1.5 cm      3679      0.1%    100.0%      2
nmro-0016    144.622 km     1.8 cm      3262      3.0%    100.0%     15
nmro-0098    146.007 km     3.7 cm      3099      2.0%     97.4%      7
nmro-0002    147.900 km     2.0 cm      3285      1.9%     93.8%     16
nmro-0071    148.061 km     1.6 cm      7310      1.5%     98.0%      3
nmro-0069    148.175 km     1.8 cm      3588      2.3%    100.0%      9
nmro-0057    150.376 km     1.4 cm      7223      1.0%     96.2%      6
nmro-0040    150.376 km     1.5 cm      3412      0.4%    100.0%     10
nmro-0073    151.644 km     1.6 cm      3356      3.8%    100.0%      5
nmro-ntr9    152.057 km     1.6 cm    120994     6.3%     96.6%     4,11,12,...
nccr-txla    2349.504 km     1.7 cm    247458     2.3%     82.8%     1, 2, 3,...

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NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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 UNCONSTRAINED MARKS
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MARK: **0001** (0001 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1382)	
X:	-1227527.888 m	0.000 m	-1227528.726 m	0.000 m
Y:	-5235127.461 m	0.002 m	-5235126.058 m	0.002 m
Z:	3420838.664 m	0.001 m	3420838.486 m	0.001 m
LAT:	32 38 18.23971	0.000 m	32 38 18.25541	0.000 m
E LON:	256 48 13.45109	0.000 m	256 48 13.40750	0.000 m
W LON:	103 11 46.54891	0.000 m	103 11 46.59250	0.000 m
EL HGT:	1077.256 m	0.002 m	1076.171 m	0.002 m
ORTHO HGT:	1098.968 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)	3612637.732 m	182226.311 m
EASTING (X)	669193.283 m	271687.416 m
CONVERGENCE	0.97305000 deg	0.61331944 deg
POINT SCALE	0.99995300	1.00004940
COMBINED FACTOR	0.99978390	0.99988028

US NATIONAL GRID DESIGNATOR: 13SFS6919312637 (NAD 83)

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MARK: **0002** (0002 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1381)	
X:	-1234416.712 m	0.000 m	-1234417.550 m	0.000 m
Y:	-5232620.284 m	0.002 m	-5232618.881 m	0.002 m
Z:	3422225.103 m	0.001 m	3422224.925 m	0.001 m
LAT:	32 39 11.24708	0.000 m	32 39 11.26277	0.000 m
E LON:	256 43 34.17513	0.000 m	256 43 34.13147	0.000 m
W LON:	103 16 25.82487	0.000 m	103 16 25.86853	0.000 m
EL HGT:	1098.150 m	0.002 m	1097.066 m	0.002 m
ORTHO HGT:	1119.976 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)	3614149.336 m	183783.912 m
EASTING (X)	661888.983 m	264392.008 m
CONVERGENCE	0.93155556 deg	0.57169722 deg
POINT SCALE	0.99992317	1.00003087
COMBINED FACTOR	0.99975080	0.99985848

US NATIONAL GRID DESIGNATOR: 13SFS6188814149 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0003** (0003 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1336)
X:	-1213772.065 m 0.000 m	-1213772.903 m 0.000 m
Y:	-5237343.633 m 0.001 m	-5237342.229 m 0.001 m
Z:	3422311.011 m 0.001 m	3422310.833 m 0.001 m
LAT:	32 39 15.36782 0.000 m	32 39 15.38360 0.000 m
E LON:	256 57 06.69052 0.000 m	256 57 06.64702 0.000 m
W LON:	103 02 53.30948 0.000 m	103 02 53.35298 0.000 m
EL HGT:	1059.254 m 0.001 m	1058.165 m 0.001 m
ORTHO HGT:	1080.943 m 0.012 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3614643.012 m	2118749.373 m
EASTING (X)	683057.194 m	173489.024 m
CONVERGENCE	1.05345556 deg	-2.48053056 deg
POINT SCALE	1.00001322	0.99989652
COMBINED FACTOR	0.99984694	0.99973025

US NATIONAL GRID DESIGNATOR: 13SFS8305714643 (NAD 83)

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MARK: **0004** (0004 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1354)
X:	-1220651.123 m 0.001 m	-1220651.962 m 0.001 m
Y:	-5234027.881 m 0.002 m	-5234026.478 m 0.002 m
Z:	3424948.495 m 0.001 m	3424948.317 m 0.001 m
LAT:	32 40 56.72038 0.000 m	32 40 56.73613 0.000 m
E LON:	256 52 20.76855 0.000 m	256 52 20.72497 0.000 m
W LON:	103 07 39.23145 0.000 m	103 07 39.27503 0.000 m
EL HGT:	1075.486 m 0.002 m	1074.399 m 0.002 m
ORTHO HGT:	1097.105 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)	3617630.444 m	187179.429 m
EASTING (X)	675552.217 m	278078.176 m
CONVERGENCE	1.01134167 deg	0.65116389 deg
POINT SCALE	0.99998003	1.00006671
COMBINED FACTOR	0.99981120	0.99989787

US NATIONAL GRID DESIGNATOR: 13SFS7555217630 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0006** (0006 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1282)	
X:	-1226381.967 m	0.000 m	-1226382.806 m	0.000 m
Y:	-5230034.776 m	0.001 m	-5230033.374 m	0.001 m
Z:	3429007.048 m	0.001 m	3429006.871 m	0.001 m
LAT:	32 43 32.86435	0.000 m	32 43 32.88011	0.000 m
E LON:	256 48 11.64896	0.000 m	256 48 11.60532	0.000 m
W LON:	103 11 48.35104	0.000 m	103 11 48.39468	0.000 m
EL HGT:	1094.595 m	0.001 m	1093.512 m	0.001 m
ORTHO HGT:	1116.227 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)	3622327.156 m	191917.812 m
EASTING (X)	668981.586 m	271536.616 m
CONVERGENCE	0.97509444 deg	0.61450833 deg
POINT SCALE	0.99995211	1.00004900
COMBINED FACTOR	0.99978029	0.99987716

US NATIONAL GRID DESIGNATOR: 13SFS6898122327 (NAD 83)

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MARK: **0008** (0008 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1187)	
X:	-1227119.518 m	0.000 m	-1227120.357 m	0.000 m
Y:	-5226293.919 m	0.002 m	-5226292.517 m	0.002 m
Z:	3434427.994 m	0.001 m	3434427.817 m	0.001 m
LAT:	32 47 01.82527	0.000 m	32 47 01.84105	0.000 m
E LON:	256 47 11.24611	0.000 m	256 47 11.20242	0.000 m
W LON:	103 12 48.75389	0.000 m	103 12 48.79758	0.000 m
EL HGT:	1106.417 m	0.002 m	1105.334 m	0.002 m
ORTHO HGT:	1128.065 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)	3628736.411 m	198338.159 m
EASTING (X)	667300.443 m	269895.712 m
CONVERGENCE	0.96753889 deg	0.60638889 deg
POINT SCALE	0.99994513	1.00004472
COMBINED FACTOR	0.99977146	0.99987103

US NATIONAL GRID DESIGNATOR: 13SFS6730028736 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0009** (0009 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1207)	
X:	-1217753.783 m	0.000 m	-1217754.622 m	0.000 m
Y:	-5228469.118 m	0.002 m	-5228467.716 m	0.002 m
Z:	3434427.547 m	0.001 m	3434427.371 m	0.001 m
LAT:	32 47 02.06980	0.000 m	32 47 02.08563	0.000 m
E LON:	256 53 20.67292	0.000 m	256 53 20.62931	0.000 m
W LON:	103 06 39.32708	0.000 m	103 06 39.37069	0.000 m
EL HGT:	1093.893 m	0.002 m	1092.810 m	0.002 m
ORTHO HGT:	1115.519 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)	3628910.932 m	198452.101 m
EASTING (X)	676911.875 m	279508.939 m
CONVERGENCE	1.02314722 deg	0.66197222 deg
POINT SCALE	0.99998593	1.00007072
COMBINED FACTOR	0.99981422	0.99989899

US NATIONAL GRID DESIGNATOR: 13SFS7691128910 (NAD 83)

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MARK: **0010** (0010 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1345)	
X:	-1221035.055 m	0.000 m	-1221035.893 m	0.000 m
Y:	-5235757.242 m	0.002 m	-5235755.838 m	0.002 m
Z:	3422188.180 m	0.001 m	3422188.002 m	0.001 m
LAT:	32 39 10.26928	0.000 m	32 39 10.28504	0.000 m
E LON:	256 52 21.49265	0.000 m	256 52 21.44911	0.000 m
W LON:	103 07 38.50735	0.000 m	103 07 38.55089	0.000 m
EL HGT:	1076.728 m	0.002 m	1075.642 m	0.002 m
ORTHO HGT:	1098.371 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)	3614352.110 m	183900.394 m
EASTING (X)	675628.940 m	278134.302 m
CONVERGENCE	1.01063611 deg	0.65074722 deg
POINT SCALE	0.99998036	1.00006687
COMBINED FACTOR	0.99981134	0.99989783

US NATIONAL GRID DESIGNATOR: 13SFS7562814352 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0011** (0011 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1336)
X:	-1219114.386 m 0.000 m	-1219115.225 m 0.000 m
Y:	-5234398.262 m 0.001 m	-5234396.859 m 0.001 m
Z:	3424931.446 m 0.001 m	3424931.268 m 0.001 m
LAT:	32 40 56.04589 0.000 m	32 40 56.06164 0.000 m
E LON:	256 53 21.43333 0.000 m	256 53 21.38978 0.000 m
W LON:	103 06 38.56667 0.000 m	103 06 38.61022 0.000 m
EL HGT:	1076.304 m 0.002 m	1075.219 m 0.002 m
ORTHO HGT:	1097.927 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)	3617637.690 m	187176.739 m
EASTING (X)	677132.741 m	279658.849 m
CONVERGENCE	1.02044167 deg	0.66026111 deg
POINT SCALE	0.99998690	1.00007115
COMBINED FACTOR	0.99981794	0.99990218

US NATIONAL GRID DESIGNATOR: 13SFS7713217637 (NAD 83)

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MARK: **0013** (0013 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1363)
X:	-1223859.912 m 0.000 m	-1223860.750 m 0.000 m
Y:	-5232682.192 m 0.001 m	-5232680.789 m 0.001 m
Z:	3425862.911 m 0.001 m	3425862.734 m 0.001 m
LAT:	32 41 31.87664 0.000 m	32 41 31.89239 0.000 m
E LON:	256 50 09.09414 0.000 m	256 50 09.05055 0.000 m
W LON:	103 09 50.90586 0.000 m	103 09 50.94945 0.000 m
EL HGT:	1080.629 m 0.001 m	1079.544 m 0.001 m
ORTHO HGT:	1102.250 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)	3618653.288 m	188224.027 m
EASTING (X)	672103.733 m	274635.883 m
CONVERGENCE	0.99183889 deg	0.63157500 deg
POINT SCALE	0.99996524	1.00005726
COMBINED FACTOR	0.99979561	0.99988761

US NATIONAL GRID DESIGNATOR: 13SFS7210318653 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0014** (0014 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1370)
X:	-1226967.503 m 0.000 m	-1226968.341 m 0.000 m
Y:	-5232583.486 m 0.002 m	-5232582.083 m 0.002 m
Z:	3424911.944 m 0.001 m	3424911.767 m 0.001 m
LAT:	32 40 55.16399 0.000 m	32 40 55.17974 0.000 m
E LON:	256 48 12.10132 0.000 m	256 48 12.05770 0.000 m
W LON:	103 11 47.89868 0.000 m	103 11 47.94230 0.000 m
EL HGT:	1082.542 m 0.002 m	1081.457 m 0.002 m
ORTHO HGT:	1104.195 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)	3617470.279 m	187059.967 m
EASTING (X)	669075.988 m	271600.474 m
CONVERGENCE	0.97400278 deg	0.61384444 deg
POINT SCALE	0.99995250	1.00004917
COMBINED FACTOR	0.99978257	0.99987922

US NATIONAL GRID DESIGNATOR: 13SFS6907517470 (NAD 83)

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MARK: **0015** (0015 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1378)
X:	-1229826.626 m 0.000 m	-1229827.465 m 0.000 m
Y:	-5231918.503 m 0.002 m	-5231917.101 m 0.002 m
Z:	3424921.583 m 0.001 m	3424921.405 m 0.001 m
LAT:	32 40 55.32041 0.000 m	32 40 55.33611 0.000 m
E LON:	256 46 19.44448 0.000 m	256 46 19.40081 0.000 m
W LON:	103 13 40.55552 0.000 m	103 13 40.59919 0.000 m
EL HGT:	1092.880 m 0.002 m	1091.797 m 0.002 m
ORTHO HGT:	1114.573 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)	3617425.642 m	187033.774 m
EASTING (X)	666141.551 m	268665.524 m
CONVERGENCE	0.95709444 deg	0.59694444 deg
POINT SCALE	0.99994037	1.00004156
COMBINED FACTOR	0.99976882	0.99986999

US NATIONAL GRID DESIGNATOR: 13SFS6614117425 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0016** (0016 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1336)	
X:	-1234504.250 m	0.000 m	-1234505.089 m	0.000 m
Y:	-5229907.141 m	0.002 m	-5229905.738 m	0.002 m
Z:	3426337.460 m	0.001 m	3426337.282 m	0.001 m
LAT:	32 41 49.51449	0.000 m	32 41 49.53019	0.000 m
E LON:	256 43 06.99300	0.000 m	256 43 06.94930	0.000 m
W LON:	103 16 53.00700	0.000 m	103 16 53.05070	0.000 m
EL HGT:	1112.503 m	0.002 m	1111.420 m	0.002 m
ORTHO HGT:	1134.272 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)	3619012.274 m	188652.229 m
EASTING (X)	661101.797 m	263635.316 m
CONVERGENCE	0.92858889 deg	0.56830278 deg
POINT SCALE	0.99992004	1.00002902
COMBINED FACTOR	0.99974541	0.99985438

US NATIONAL GRID DESIGNATOR: 13SFS6110119012 (NAD 83)

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MARK: **0017** (0017 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1389)	
X:	-1228357.075 m	0.001 m	-1228357.913 m	0.001 m
Y:	-5231378.830 m	0.002 m	-5231377.428 m	0.002 m
Z:	3426259.088 m	0.002 m	3426258.910 m	0.002 m
LAT:	32 41 46.95606	0.000 m	32 41 46.97178	0.000 m
E LON:	256 47 09.61560	0.000 m	256 47 09.57196	0.000 m
W LON:	103 12 50.38440	0.000 m	103 12 50.42804	0.000 m
EL HGT:	1090.222 m	0.003 m	1089.138 m	0.003 m
ORTHO HGT:	1111.883 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)	3619037.897 m	188638.110 m
EASTING (X)	667421.565 m	269955.779 m
CONVERGENCE	0.96500000 deg	0.60470833 deg
POINT SCALE	0.99994564	1.00004488
COMBINED FACTOR	0.99977451	0.99987373

US NATIONAL GRID DESIGNATOR: 13SFS6742119037 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0018** (0018 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1383)
X:	-1226839.202 m 0.000 m	-1226840.041 m 0.000 m
Y:	-5231745.773 m 0.002 m	-5231744.370 m 0.002 m
Z:	3426242.392 m 0.001 m	3426242.214 m 0.001 m
LAT:	32 41 46.31620 0.000 m	32 41 46.33193 0.000 m
E LON:	256 48 09.55522 0.000 m	256 48 09.51158 0.000 m
W LON:	103 11 50.44478 0.000 m	103 11 50.48842 0.000 m
EL HGT:	1090.027 m 0.002 m	1088.942 m 0.002 m
ORTHO HGT:	1111.670 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)	3619044.606 m	188635.000 m
EASTING (X)	668982.891 m	271517.268 m
CONVERGENCE	0.97399722 deg	0.61370000 deg
POINT SCALE	0.99995212	1.00004895
COMBINED FACTOR	0.99978102	0.99987783

US NATIONAL GRID DESIGNATOR: 13SFS6898219044 (NAD 83)

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MARK: **0019** (0019 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1363)
X:	-1225217.674 m 0.000 m	-1225218.512 m 0.000 m
Y:	-5232110.504 m 0.001 m	-5232109.101 m 0.001 m
Z:	3426256.888 m 0.001 m	3426256.711 m 0.001 m
LAT:	32 41 46.97247 0.000 m	32 41 46.98823 0.000 m
E LON:	256 49 13.34917 0.000 m	256 49 13.30556 0.000 m
W LON:	103 10 46.65083 0.000 m	103 10 46.69444 0.000 m
EL HGT:	1085.361 m 0.002 m	1084.277 m 0.002 m
ORTHO HGT:	1106.989 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)	3619093.203 m	188673.155 m
EASTING (X)	670643.921 m	273178.730 m
CONVERGENCE	0.98358056 deg	0.62327778 deg
POINT SCALE	0.99995907	1.00005335
COMBINED FACTOR	0.99978870	0.99988296

US NATIONAL GRID DESIGNATOR: 13SFS7064319093 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0021** (0021 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1336)	
X:	-1221896.681 m	0.000 m	-1221897.519 m	0.000 m
Y:	-5232860.543 m	0.001 m	-5232859.140 m	0.001 m
Z:	3426290.984 m	0.001 m	3426290.807 m	0.001 m
LAT:	32 41 48.35680	0.000 m	32 41 48.37258	0.000 m
E LON:	256 51 24.03091	0.000 m	256 51 23.98734	0.000 m
W LON:	103 08 35.96909	0.000 m	103 08 36.01266	0.000 m
EL HGT:	1082.034 m	0.001 m	1080.949 m	0.001 m
ORTHO HGT:	1103.647 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3619194.853 m	188753.413 m
EASTING (X)	674046.517 m	276582.210 m
CONVERGENCE	1.00321389 deg	0.64290000 deg
POINT SCALE	0.99997354	1.00006257
COMBINED FACTOR	0.99980369	0.99989270

US NATIONAL GRID DESIGNATOR: 13SFS7404619194 (NAD 83)

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MARK: **0022** (0022 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1337)	
X:	-1220338.486 m	0.000 m	-1220339.324 m	0.000 m
Y:	-5233239.749 m	0.001 m	-5233238.346 m	0.001 m
Z:	3426257.597 m	0.001 m	3426257.419 m	0.001 m
LAT:	32 41 47.17844	0.000 m	32 41 47.19420	0.000 m
E LON:	256 52 25.58452	0.000 m	256 52 25.54096	0.000 m
W LON:	103 07 34.41548	0.000 m	103 07 34.45904	0.000 m
EL HGT:	1076.788 m	0.002 m	1075.702 m	0.002 m
ORTHO HGT:	1098.401 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3619186.760 m	188735.233 m
EASTING (X)	675650.201 m	278185.952 m
CONVERGENCE	1.01245000 deg	0.65213333 deg
POINT SCALE	0.99998045	1.00006701
COMBINED FACTOR	0.99981142	0.99989796

US NATIONAL GRID DESIGNATOR: 13SFS7565019186 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0023** (0023 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1337)
X:	-1218860.018 m 0.000 m	-1218860.857 m 0.000 m
Y:	-5233578.836 m 0.001 m	-5233577.433 m 0.001 m
Z:	3426264.148 m 0.001 m	3426263.970 m 0.001 m
LAT:	32 41 47.45054 0.000 m	32 41 47.46632 0.000 m
E LON:	256 53 23.80797 0.000 m	256 53 23.76438 0.000 m
W LON:	103 06 36.19203 0.000 m	103 06 36.23562 0.000 m
EL HGT:	1075.854 m 0.002 m	1074.768 m 0.002 m
ORTHO HGT:	1097.472 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)	3619222.054 m	188760.994 m
EASTING (X)	677166.378 m	279702.451 m
CONVERGENCE	1.02119444 deg	0.66087500 deg
POINT SCALE	0.99998705	1.00007127
COMBINED FACTOR	0.99981816	0.99990237

US NATIONAL GRID DESIGNATOR: 13SFS7716619222 (NAD 83)

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MARK: **0024** (0024 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1268)
X:	-1213015.682 m 0.000 m	-1213016.520 m 0.000 m
Y:	-5234085.416 m 0.002 m	-5234084.013 m 0.002 m
Z:	3427544.365 m 0.001 m	3427544.188 m 0.001 m
LAT:	32 42 36.95425 0.000 m	32 42 36.97007 0.000 m
E LON:	256 57 06.73840 0.000 m	256 57 06.69489 0.000 m
W LON:	103 02 53.26160 0.000 m	103 02 53.30511 0.000 m
EL HGT:	1069.864 m 0.002 m	1068.778 m 0.002 m
ORTHO HGT:	1091.534 m 0.012 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3620851.980 m	2124952.754 m
EASTING (X)	682944.182 m	173759.006 m
CONVERGENCE	1.05506667 deg	-2.48052500 deg
POINT SCALE	1.00001271	0.99989026
COMBINED FACTOR	0.99984476	0.99972233

US NATIONAL GRID DESIGNATOR: 13SFS8294420851 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0025** (0025 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1319)	
X:	-1218669.220 m	0.000 m	-1218670.059 m	0.000 m
Y:	-5232749.637 m	0.002 m	-5232748.235 m	0.002 m
Z:	3427596.490 m	0.001 m	3427596.313 m	0.001 m
LAT:	32 42 38.75929	0.000 m	32 42 38.77507	0.000 m
E LON:	256 53 23.72137	0.000 m	256 53 23.67781	0.000 m
W LON:	103 06 36.27863	0.000 m	103 06 36.32219	0.000 m
EL HGT:	1079.728 m	0.002 m	1078.643 m	0.002 m
ORTHO HGT:	1101.343 m	0.016 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3620802.325 m	190341.558 m
EASTING (X)	677135.949 m	279681.960 m
CONVERGENCE	1.02157778 deg	0.66111667 deg
POINT SCALE	0.99998691	1.00007121
COMBINED FACTOR	0.99981742	0.99990170

US NATIONAL GRID DESIGNATOR: 13SFS7713520802 (NAD 83)

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MARK: **0031** (0031 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1308)	
X:	-1222263.498 m	0.000 m	-1222264.336 m	0.000 m
Y:	-5231101.135 m	0.001 m	-5231099.732 m	0.001 m
Z:	3428836.802 m	0.001 m	3428836.625 m	0.001 m
LAT:	32 43 26.46733	0.000 m	32 43 26.48312	0.000 m
E LON:	256 50 54.95433	0.000 m	256 50 54.91072	0.000 m
W LON:	103 09 05.04567	0.000 m	103 09 05.08928	0.000 m
EL HGT:	1086.394 m	0.002 m	1085.310 m	0.002 m
ORTHO HGT:	1108.003 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3622203.403 m	191767.269 m
EASTING (X)	673236.572 m	275791.137 m
CONVERGENCE	0.99958889 deg	0.63900833 deg
POINT SCALE	0.99997006	1.00006040
COMBINED FACTOR	0.99979952	0.99988985

US NATIONAL GRID DESIGNATOR: 13SFS7323622203 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0033** (0033 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1283)	
X:	-1220111.438 m	0.000 m	-1220112.277 m	0.000 m
Y:	-5231526.442 m	0.002 m	-5231525.039 m	0.002 m
Z:	3428948.435 m	0.001 m	3428948.257 m	0.001 m
LAT:	32 43 30.83223	0.000 m	32 43 30.84801	0.000 m
E LON:	256 52 19.13495	0.000 m	256 52 19.09134	0.000 m
W LON:	103 07 40.86505	0.000 m	103 07 40.90866	0.000 m
EL HGT:	1083.607 m	0.002 m	1082.522 m	0.002 m
ORTHO HGT:	1105.216 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)	3622376.323 m	191926.422 m
EASTING (X)	675425.846 m	277981.650 m
CONVERGENCE	1.01227222 deg	0.65167500 deg
POINT SCALE	0.99997948	1.00006644
COMBINED FACTOR	0.99980938	0.99989633

US NATIONAL GRID DESIGNATOR: 13SFS7542522376 (NAD 83)

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MARK: **0035** (0035 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1282)	
X:	-1217025.636 m	0.000 m	-1217026.475 m	0.000 m
Y:	-5232175.294 m	0.002 m	-5232173.891 m	0.002 m
Z:	3429051.764 m	0.001 m	3429051.586 m	0.001 m
LAT:	32 43 34.84763	0.000 m	32 43 34.86342	0.000 m
E LON:	256 54 20.18356	0.000 m	256 54 20.13999	0.000 m
W LON:	103 05 39.81644	0.000 m	103 05 39.86001	0.000 m
EL HGT:	1082.219 m	0.002 m	1081.133 m	0.002 m
ORTHO HGT:	1103.843 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)	3622556.184 m	192086.471 m
EASTING (X)	678575.109 m	281132.249 m
CONVERGENCE	1.03049444 deg	0.66988056 deg
POINT SCALE	0.99999323	1.00007534
COMBINED FACTOR	0.99982335	0.99990544

US NATIONAL GRID DESIGNATOR: 13SFS7857522556 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0040** (0040 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1299)	
X:	-1224581.533 m	0.000 m	-1224582.371 m	0.000 m
Y:	-5229568.332 m	0.002 m	-5229566.930 m	0.002 m
Z:	3430351.137 m	0.001 m	3430350.959 m	0.001 m
LAT:	32 44 24.73979	0.000 m	32 44 24.75555	0.000 m
E LON:	256 49 14.87600	0.000 m	256 49 14.83238	0.000 m
W LON:	103 10 45.12400	0.000 m	103 10 45.16762	0.000 m
EL HGT:	1093.820 m	0.002 m	1092.736 m	0.002 m
ORTHO HGT:	1115.440 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)	3623953.056 m	193533.645 m
EASTING (X)	670600.191 m	273165.579 m
CONVERGENCE	0.98498056 deg	0.62425000 deg
POINT SCALE	0.99995888	1.00005331
COMBINED FACTOR	0.99978718	0.99988159

US NATIONAL GRID DESIGNATOR: 13SFS7060023953 (NAD 83)

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MARK: **0041** (0041 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1229)	
X:	-1231240.448 m	0.001 m	-1231241.287 m	0.001 m
Y:	-5224897.097 m	0.002 m	-5224895.695 m	0.002 m
Z:	3435097.057 m	0.001 m	3435096.880 m	0.001 m
LAT:	32 47 27.39442	0.000 m	32 47 27.41019	0.000 m
E LON:	256 44 24.82371	0.000 m	256 44 24.77997	0.000 m
W LON:	103 15 35.17629	0.000 m	103 15 35.22003	0.000 m
EL HGT:	1118.897 m	0.002 m	1117.816 m	0.002 m
ORTHO HGT:	1140.581 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)	3629451.747 m	199080.933 m
EASTING (X)	662957.663 m	265557.081 m
CONVERGENCE	0.94267222 deg	0.58146389 deg
POINT SCALE	0.99992745	1.00003373
COMBINED FACTOR	0.99975182	0.99985808

US NATIONAL GRID DESIGNATOR: 13SFS6295729451 (NAD 83)

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MARK: **0045** (0045 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1271)	
X:	-1223943.238 m	0.000 m	-1223944.076 m	0.000 m

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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Y:	-5228903.209 m	0.002 m	-5228901.807 m	0.002 m
Z:	3431585.449 m	0.001 m	3431585.271 m	0.001 m
LAT:	32 45 12.35804	0.000 m	32 45 12.37382	0.000 m
E LON:	256 49 32.92192	0.000 m	256 49 32.87828	0.000 m
W LON:	103 10 27.07808	0.000 m	103 10 27.12172	0.000 m
EL HGT:	1094.430 m	0.002 m	1093.346 m	0.002 m
ORTHO HGT:	1116.049 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)	3625427.774 m	195005.673 m
EASTING (X)	671044.639 m	273619.347 m
CONVERGENCE	0.98805000 deg	0.62718889 deg
POINT SCALE	0.99996076	1.00005452
COMBINED FACTOR	0.99978897	0.99988271

US NATIONAL GRID DESIGNATOR: 13SFS7104425427 (NAD 83)

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MARK: **0046** (0046 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1238)		
X:	-1221281.692 m	0.000 m	-1221282.531 m	0.000 m
Y:	-5229432.060 m	0.002 m	-5229430.657 m	0.002 m
Z:	3431717.885 m	0.001 m	3431717.708 m	0.001 m
LAT:	32 45 17.57058	0.000 m	32 45 17.58639	0.000 m
E LON:	256 51 17.08970	0.000 m	256 51 17.04606	0.000 m
W LON:	103 08 42.91030	0.000 m	103 08 42.95394	0.000 m
EL HGT:	1089.567 m	0.002 m	1088.483 m	0.002 m
ORTHO HGT:	1111.181 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)	3625635.448 m	195196.303 m
EASTING (X)	673752.937 m	276329.148 m
CONVERGENCE	1.00375556 deg	0.64287222 deg
POINT SCALE	0.99997227	1.00006187
COMBINED FACTOR	0.99980124	0.99989082

US NATIONAL GRID DESIGNATOR: 13SFS7375225635 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0047** (0047 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1218)	
X:	-1213770.624 m	0.000 m	-1213771.462 m	0.000 m
Y:	-5230418.514 m	0.002 m	-5230417.112 m	0.002 m
Z:	3432865.438 m	0.001 m	3432865.261 m	0.001 m
LAT:	32 46 01.92790	0.000 m	32 46 01.94375	0.000 m
E LON:	256 56 06.68355	0.000 m	256 56 06.64000	0.000 m
W LON:	103 03 53.31645	0.000 m	103 03 53.36000	0.000 m
EL HGT:	1086.346 m	0.002 m	1085.262 m	0.002 m
ORTHO HGT:	1107.998 m	0.012 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3627136.600 m	2131328.209 m
EASTING (X)	681265.014 m	172470.849 m
CONVERGENCE	1.04766389 deg	-2.48962222 deg
POINT SCALE	1.00000516	0.99988487
COMBINED FACTOR	0.99983463	0.99971436

US NATIONAL GRID DESIGNATOR: 13SFS8126527136 (NAD 83)

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MARK: **0048** (0048 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1226)	
X:	-1232398.678 m	0.000 m	-1232399.518 m	0.000 m
Y:	-5220001.893 m	0.002 m	-5220000.492 m	0.002 m
Z:	3442104.238 m	0.001 m	3442104.062 m	0.001 m
LAT:	32 51 57.64832	0.000 m	32 51 57.66413	0.000 m
E LON:	256 42 58.28966	0.000 m	256 42 58.24586	0.000 m
W LON:	103 17 01.71034	0.000 m	103 17 01.75414	0.000 m
EL HGT:	1137.538 m	0.002 m	1136.459 m	0.002 m
ORTHO HGT:	1159.223 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)	3637738.610 m	207383.588 m
EASTING (X)	660571.294 m	263222.802 m
CONVERGENCE	0.93153611 deg	0.56959722 deg
POINT SCALE	0.99991792	1.00002801
COMBINED FACTOR	0.99973937	0.99984944

US NATIONAL GRID DESIGNATOR: 13SFS6057137738 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0049** (0049 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1186)
X:	-1225908.327 m 0.000 m	-1225909.166 m 0.000 m
Y:	-5221170.432 m 0.002 m	-5221169.031 m 0.002 m
Z:	3442617.653 m 0.001 m	3442617.477 m 0.001 m
LAT:	32 52 17.80881 0.000 m	32 52 17.82465 0.000 m
E LON:	256 47 11.55352 0.000 m	256 47 11.50979 0.000 m
W LON:	103 12 48.44648 0.000 m	103 12 48.49021 0.000 m
EL HGT:	1122.205 m 0.002 m	1121.125 m 0.002 m
ORTHO HGT:	1143.855 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)	3638468.789 m	208072.302 m
EASTING (X)	667143.876 m	269800.556 m
CONVERGENCE	0.96988611 deg	0.60787778 deg
POINT SCALE	0.99994448	1.00004447
COMBINED FACTOR	0.99976833	0.99986830

US NATIONAL GRID DESIGNATOR: 13SFS6714338468 (NAD 83)

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MARK: **0050** (0050 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1199)
X:	-1218151.523 m 0.000 m	-1218152.363 m 0.000 m
Y:	-5223160.841 m 0.001 m	-5223159.440 m 0.001 m
Z:	3442326.391 m 0.001 m	3442326.215 m 0.001 m
LAT:	32 52 06.86338 0.000 m	32 52 06.87925 0.000 m
E LON:	256 52 19.46701 0.000 m	256 52 19.42333 0.000 m
W LON:	103 07 40.53299 0.000 m	103 07 40.57667 0.000 m
EL HGT:	1107.450 m 0.002 m	1106.369 m 0.002 m
ORTHO HGT:	1129.085 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)	3638270.398 m	207823.288 m
EASTING (X)	675153.096 m	277809.115 m
CONVERGENCE	1.01625833 deg	0.65426111 deg
POINT SCALE	0.99997829	1.00006596
COMBINED FACTOR	0.99980445	0.99989211

US NATIONAL GRID DESIGNATOR: 13SFS7515338270 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0051** (0051 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1212)
X:	-1210284.374 m 0.000 m	-1210285.213 m 0.000 m
Y:	-5225662.771 m 0.002 m	-5225661.370 m 0.002 m
Z:	3441271.793 m 0.001 m	3441271.617 m 0.001 m
LAT:	32 51 26.55983 0.000 m	32 51 26.57574 0.000 m
E LON:	256 57 35.93286 0.000 m	256 57 35.88927 0.000 m
W LON:	103 02 24.06714 0.000 m	103 02 24.11073 0.000 m
EL HGT:	1086.231 m 0.002 m	1085.148 m 0.002 m
ORTHO HGT:	1107.897 m 0.012 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3637178.347 m	2141217.637 m
EASTING (X)	683402.129 m	175223.309 m
CONVERGENCE	1.06368333 deg	-2.47610000 deg
POINT SCALE	1.00001476	0.99987834
COMBINED FACTOR	0.99984424	0.99970785

US NATIONAL GRID DESIGNATOR: 13SFS8340237178 (NAD 83)

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MARK: **0052** (0052 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1214)
X:	-1212137.738 m 0.000 m	-1212138.577 m 0.000 m
Y:	-5227026.182 m 0.002 m	-5227024.781 m 0.002 m
Z:	3438572.490 m 0.001 m	3438572.313 m 0.001 m
LAT:	32 49 42.21121 0.000 m	32 49 42.22708 0.000 m
E LON:	256 56 38.35027 0.000 m	256 56 38.30668 0.000 m
W LON:	103 03 21.64973 0.000 m	103 03 21.69332 0.000 m
EL HGT:	1089.756 m 0.002 m	1088.672 m 0.002 m
ORTHO HGT:	1111.416 m 0.012 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3633936.619 m	2138071.271 m
EASTING (X)	681964.332 m	173588.344 m
CONVERGENCE	1.05417222 deg	-2.48482500 deg
POINT SCALE	1.00000829	0.99988017
COMBINED FACTOR	0.99983722	0.99970912

US NATIONAL GRID DESIGNATOR: 13SFS8196433936 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0053** (0053 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1200)
X:	-1218710.440 m 0.000 m	-1218711.280 m 0.000 m
Y:	-5225570.698 m 0.001 m	-5225569.296 m 0.001 m
Z:	3438479.449 m 0.001 m	3438479.272 m 0.001 m
LAT:	32 49 38.42170 0.000 m	32 49 38.43754 0.000 m
E LON:	256 52 19.58353 0.000 m	256 52 19.53986 0.000 m
W LON:	103 07 40.41647 0.000 m	103 07 40.46014 0.000 m
EL HGT:	1099.113 m 0.002 m	1098.030 m 0.002 m
ORTHO HGT:	1120.745 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)	3633698.368 m	203250.418 m
EASTING (X)	675237.185 m	277864.336 m
CONVERGENCE	1.01514444 deg	0.65355000 deg
POINT SCALE	0.99997865	1.00006611
COMBINED FACTOR	0.99980612	0.99989356

US NATIONAL GRID DESIGNATOR: 13SFS7523733698 (NAD 83)

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MARK: **0054** (0054 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1180)
X:	-1226678.552 m 0.000 m	-1226679.392 m 0.000 m
Y:	-5223718.280 m 0.002 m	-5223716.878 m 0.002 m
Z:	3438487.964 m 0.001 m	3438487.788 m 0.001 m
LAT:	32 49 38.44295 0.000 m	32 49 38.45877 0.000 m
E LON:	256 47 05.11674 0.000 m	256 47 05.07300 0.000 m
W LON:	103 12 54.88326 0.000 m	103 12 54.92700 0.000 m
EL HGT:	1113.805 m 0.002 m	1112.724 m 0.002 m
ORTHO HGT:	1135.455 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)	3633557.502 m	203161.154 m
EASTING (X)	667059.538 m	269685.197 m
CONVERGENCE	0.96775556 deg	0.60618056 deg
POINT SCALE	0.99994414	1.00004418
COMBINED FACTOR	0.99976931	0.99986933

US NATIONAL GRID DESIGNATOR: 13SFS6705933557 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0055** (0055 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1230)
X:	-1230797.395 m 0.001 m	-1230798.235 m 0.001 m
Y:	-5221725.978 m 0.002 m	-5221724.577 m 0.002 m
Z:	3440058.619 m 0.001 m	3440058.443 m 0.001 m
LAT:	32 50 38.80413 0.000 m	32 50 38.81994 0.000 m
E LON:	256 44 13.43909 0.000 m	256 44 13.39532 0.000 m
W LON:	103 15 46.56091 0.000 m	103 15 46.60468 0.000 m
EL HGT:	1128.534 m 0.002 m	1127.454 m 0.002 m
ORTHO HGT:	1150.208 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)	3635342.193 m	204974.370 m
EASTING (X)	662564.597 m	265201.147 m
CONVERGENCE	0.94231389 deg	0.58058611 deg
POINT SCALE	0.99992586	1.00003285
COMBINED FACTOR	0.99974872	0.99985569

Station 0055 solution superseded
by a secondary OPUS PROJECT as
listed below.

~~US NATIONAL GRID DESIGNATOR: 13SFS6256435342 (NAD 83)~~

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MARK: **0057** (0057 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1255)
X:	-1222279.064 m 0.000 m	-1222279.903 m 0.000 m
Y:	-5228145.018 m 0.001 m	-5228143.616 m 0.001 m
Z:	3433322.480 m 0.001 m	3433322.303 m 0.001 m
LAT:	32 46 19.39128 0.000 m	32 46 19.40707 0.000 m
E LON:	256 50 28.53320 0.000 m	256 50 28.48954 0.000 m
W LON:	103 09 31.46680 0.000 m	103 09 31.51046 0.000 m
EL HGT:	1094.863 m 0.002 m	1093.780 m 0.002 m
ORTHO HGT:	1116.483 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)	3627517.461 m	197086.620 m
EASTING (X)	672456.080 m	275044.056 m
CONVERGENCE	0.99691667 deg	0.63586944 deg
POINT SCALE	0.99996673	1.00005836
COMBINED FACTOR	0.99979487	0.99988648

US NATIONAL GRID DESIGNATOR: 13SFS7245627517 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0059** (0059 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1247)
X:	-1225824.384 m 0.000 m	-1225825.223 m 0.000 m
Y:	-5227477.254 m 0.002 m	-5227475.852 m 0.002 m
Z:	3433088.760 m 0.001 m	3433088.583 m 0.001 m
LAT:	32 46 10.23604 0.000 m	32 46 10.25182 0.000 m
E LON:	256 48 10.07339 0.000 m	256 48 10.02973 0.000 m
W LON:	103 11 49.92661 0.000 m	103 11 49.97027 0.000 m
EL HGT:	1101.267 m 0.002 m	1100.184 m 0.002 m
ORTHO HGT:	1122.902 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)	3627173.443 m	196765.251 m
EASTING (X)	668858.042 m	271443.582 m
CONVERGENCE	0.97601389 deg	0.61500000 deg
POINT SCALE	0.99995159	1.00004875
COMBINED FACTOR	0.99977872	0.99987587

US NATIONAL GRID DESIGNATOR: 13SFS6885827173 (NAD 83)

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MARK: **0063** (0063 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1209)
X:	-1227996.642 m 0.001 m	-1227997.481 m 0.001 m
Y:	-5226482.063 m 0.002 m	-5226480.661 m 0.002 m
Z:	3433835.990 m 0.001 m	3433835.813 m 0.001 m
LAT:	32 46 38.92827 0.000 m	32 46 38.94405 0.000 m
E LON:	256 46 40.09221 0.000 m	256 46 40.04852 0.000 m
W LON:	103 13 19.90779 0.000 m	103 13 19.95148 0.000 m
EL HGT:	1108.502 m 0.002 m	1107.420 m 0.002 m
ORTHO HGT:	1130.156 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)	3628017.538 m	197624.262 m
EASTING (X)	666501.757 m	269092.431 m
CONVERGENCE	0.96268611 deg	0.60160000 deg
POINT SCALE	0.99994184	1.00004265
COMBINED FACTOR	0.99976784	0.99986863

US NATIONAL GRID DESIGNATOR: 13SFS6650128017 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0065** (0065 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1217)	
X:	-1225238.068 m	0.000 m	-1225238.907 m	0.000 m
Y:	-5227420.953 m	0.002 m	-5227419.551 m	0.002 m
Z:	3433380.645 m	0.001 m	3433380.468 m	0.001 m
LAT:	32 46 21.51571	0.000 m	32 46 21.53149	0.000 m
E LON:	256 48 31.50927	0.000 m	256 48 31.46558	0.000 m
W LON:	103 11 28.49073	0.000 m	103 11 28.53442	0.000 m
EL HGT:	1100.641 m	0.002 m	1099.559 m	0.002 m
ORTHO HGT:	1122.273 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)	3627530.373 m	197118.730 m
EASTING (X)	669409.897 m	271997.729 m
CONVERGENCE	0.97932222 deg	0.61827778 deg
POINT SCALE	0.99995389	1.00005021
COMBINED FACTOR	0.99978112	0.99987743

US NATIONAL GRID DESIGNATOR: 13SFS6940927530 (NAD 83)

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MARK: **0068** (0068 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1269)	
X:	-1226711.956 m	0.000 m	-1226712.795 m	0.000 m
Y:	-5228176.138 m	0.002 m	-5228174.736 m	0.002 m
Z:	3431714.745 m	0.001 m	3431714.568 m	0.001 m
LAT:	32 45 17.22440	0.000 m	32 45 17.24019	0.000 m
E LON:	256 47 43.01113	0.000 m	256 47 42.96746	0.000 m
W LON:	103 12 16.98887	0.000 m	103 12 17.03254	0.000 m
EL HGT:	1100.342 m	0.002 m	1099.260 m	0.002 m
ORTHO HGT:	1121.980 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)	3625528.734 m	195124.675 m
EASTING (X)	668181.536 m	270756.662 m
CONVERGENCE	0.97155556 deg	0.61068611 deg
POINT SCALE	0.99994878	1.00004696
COMBINED FACTOR	0.99977606	0.99987422

US NATIONAL GRID DESIGNATOR: 13SFS6818125528 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0069** (0069 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1276)	
X:	-1225956.960 m	0.000 m	-1225957.799 m	0.000 m
Y:	-5228351.116 m	0.002 m	-5228349.714 m	0.002 m
Z:	3431717.176 m	0.001 m	3431716.999 m	0.001 m
LAT:	32 45 17.32688	0.000 m	32 45 17.34266	0.000 m
E LON:	256 48 12.77861	0.000 m	256 48 12.73496	0.000 m
W LON:	103 11 47.22139	0.000 m	103 11 47.26504	0.000 m
EL HGT:	1099.928 m	0.002 m	1098.845 m	0.002 m
ORTHO HGT:	1121.560 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)	3625545.058 m	195136.122 m
EASTING (X)	668956.203 m	271531.492 m
CONVERGENCE	0.97603333 deg	0.61516389 deg
POINT SCALE	0.99995200	1.00004899
COMBINED FACTOR	0.99977934	0.99987632

US NATIONAL GRID DESIGNATOR: 13SFS6895625545 (NAD 83)

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MARK: **0071** (0071 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1200)	
X:	-1222992.601 m	0.000 m	-1222993.440 m	0.000 m
Y:	-5226363.182 m	0.001 m	-5226361.780 m	0.001 m
Z:	3435773.712 m	0.001 m	3435773.535 m	0.001 m
LAT:	32 47 53.91131	0.000 m	32 47 53.92712	0.000 m
E LON:	256 49 46.24550	0.000 m	256 49 46.20183	0.000 m
W LON:	103 10 13.75450	0.000 m	103 10 13.79817	0.000 m
EL HGT:	1100.170 m	0.002 m	1099.088 m	0.002 m
ORTHO HGT:	1121.800 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)	3630409.587 m	199986.211 m
EASTING (X)	671305.361 m	273911.487 m
CONVERGENCE	0.99125833 deg	0.62995556 deg
POINT SCALE	0.99996185	1.00005530
COMBINED FACTOR	0.99978915	0.99988259

US NATIONAL GRID DESIGNATOR: 13SFS7130530409 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0073** (0073 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1239)
X:	-1221065.400 m 0.000 m	-1221066.239 m 0.000 m
Y:	-5228585.409 m 0.002 m	-5228584.007 m 0.002 m
Z:	3433080.197 m 0.001 m	3433080.020 m 0.001 m
LAT:	32 46 10.09685 0.000 m	32 46 10.11266 0.000 m
E LON:	256 51 17.78420 0.000 m	256 51 17.74056 0.000 m
W LON:	103 08 42.21580 0.000 m	103 08 42.25944 0.000 m
EL HGT:	1092.109 m 0.002 m	1091.025 m 0.002 m
ORTHO HGT:	1113.727 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)	3627253.575 m	196814.608 m
EASTING (X)	673742.659 m	276329.064 m
CONVERGENCE	1.00425833 deg	0.64323056 deg
POINT SCALE	0.99997223	1.00006187
COMBINED FACTOR	0.99980080	0.99989042

US NATIONAL GRID DESIGNATOR: 13SFS7374227253 (NAD 83)

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MARK: **0077** (0077 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1215)
X:	-1217225.885 m 0.000 m	-1217226.724 m 0.000 m
Y:	-5229936.783 m 0.002 m	-5229935.380 m 0.002 m
Z:	3432384.801 m 0.001 m	3432384.624 m 0.001 m
LAT:	32 45 43.31354 0.000 m	32 45 43.32937 0.000 m
E LON:	256 53 53.21061 0.000 m	256 53 53.16701 0.000 m
W LON:	103 06 06.78939 0.000 m	103 06 06.83299 0.000 m
EL HGT:	1089.378 m 0.002 m	1088.294 m 0.002 m
ORTHO HGT:	1111.003 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)	3626500.363 m	196035.768 m
EASTING (X)	677801.951 m	280383.880 m
CONVERGENCE	1.02743611 deg	0.66647222 deg
POINT SCALE	0.99998982	1.00007320
COMBINED FACTOR	0.99981881	0.99990218

US NATIONAL GRID DESIGNATOR: 13SFS7780126500 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0083** (0083 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1241)
X:	-1220588.732 m 0.000 m	-1220589.571 m 0.000 m
Y:	-5230033.631 m 0.002 m	-5230032.228 m 0.002 m
Z:	3431052.644 m 0.001 m	3431052.467 m 0.001 m
LAT:	32 44 51.89197 0.000 m	32 44 51.90777 0.000 m
E LON:	256 51 48.26083 0.000 m	256 51 48.21722 0.000 m
W LON:	103 08 11.73917 0.000 m	103 08 11.78278 0.000 m
EL HGT:	1089.867 m 0.002 m	1088.783 m 0.002 m
ORTHO HGT:	1111.479 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)	3624858.792 m	194414.396 m
EASTING (X)	674578.120 m	277149.496 m
CONVERGENCE	1.00824722 deg	0.64743333 deg
POINT SCALE	0.99997582	1.00006413
COMBINED FACTOR	0.99980474	0.99989303

US NATIONAL GRID DESIGNATOR: 13SFS7457824858 (NAD 83)

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MARK: **0084** (0084 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1262)
X:	-1223235.917 m 0.000 m	-1223236.756 m 0.000 m
Y:	-5229216.925 m 0.002 m	-5229215.522 m 0.002 m
Z:	3431358.805 m 0.001 m	3431358.628 m 0.001 m
LAT:	32 45 03.63767 0.000 m	32 45 03.65345 0.000 m
E LON:	256 50 02.11975 0.000 m	256 50 02.07611 0.000 m
W LON:	103 09 57.88025 0.000 m	103 09 57.92389 0.000 m
EL HGT:	1093.178 m 0.002 m	1092.094 m 0.002 m
ORTHO HGT:	1114.794 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)	3625172.322 m	194745.388 m
EASTING (X)	671809.204 m	274382.359 m
CONVERGENCE	0.99237500 deg	0.63153611 deg
POINT SCALE	0.99996399	1.00005657
COMBINED FACTOR	0.99979239	0.99988496

US NATIONAL GRID DESIGNATOR: 13SFS7180925172 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0091** (0091 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1278)
X:	-1222208.844 m 0.000 m	-1222209.682 m 0.000 m
Y:	-5230138.821 m 0.002 m	-5230137.418 m 0.002 m
Z:	3430317.664 m 0.001 m	3430317.487 m 0.001 m
LAT:	32 44 23.56179 0.000 m	32 44 23.57757 0.000 m
E LON:	256 50 48.58978 0.000 m	256 50 48.54618 0.000 m
W LON:	103 09 11.41022 0.000 m	103 09 11.45382 0.000 m
EL HGT:	1088.376 m 0.002 m	1087.292 m 0.002 m
ORTHO HGT:	1109.987 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)	3623959.013 m	193524.239 m
EASTING (X)	673040.212 m	275605.815 m
CONVERGENCE	0.99906111 deg	0.63832778 deg
POINT SCALE	0.99996922	1.00005989
COMBINED FACTOR	0.99979837	0.99988903

US NATIONAL GRID DESIGNATOR: 13SFS7304023959 (NAD 83)

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MARK: **0098** (0098 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1265)
X:	-1228243.743 m 0.000 m	-1228244.582 m 0.000 m
Y:	-5227709.297 m 0.002 m	-5227707.895 m 0.002 m
Z:	3431886.280 m 0.001 m	3431886.103 m 0.001 m
LAT:	32 45 23.73894 0.000 m	32 45 23.75470 0.000 m
E LON:	256 46 41.63447 0.000 m	256 46 41.59077 0.000 m
W LON:	103 13 18.36553 0.000 m	103 13 18.40923 0.000 m
EL HGT:	1105.394 m 0.002 m	1104.312 m 0.002 m
ORTHO HGT:	1127.047 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)	3625702.418 m	195308.456 m
EASTING (X)	666580.797 m	269156.890 m
CONVERGENCE	0.96237222 deg	0.60148889 deg
POINT SCALE	0.99994217	1.00004282
COMBINED FACTOR	0.99976866	0.99986929

US NATIONAL GRID DESIGNATOR: 13SFS6658025702 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0101** (0101 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1227)	
X:	-1224085.948 m	0.000 m	-1224086.787 m	0.000 m
Y:	-5227447.303 m	0.002 m	-5227445.901 m	0.002 m
Z:	3433747.569 m	0.001 m	3433747.392 m	0.001 m
LAT:	32 46 35.69525	0.000 m	32 46 35.71105	0.000 m
E LON:	256 49 14.83540	0.000 m	256 49 14.79175	0.000 m
W LON:	103 10 45.16460	0.000 m	103 10 45.20825	0.000 m
EL HGT:	1099.879 m	0.002 m	1098.796 m	0.002 m
ORTHO HGT:	1121.506 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)	3627986.436 m	197567.770 m
EASTING (X)	670529.755 m	273120.546 m
CONVERGENCE	0.98594722 deg	0.62486111 deg
POINT SCALE	0.99995859	1.00005319
COMBINED FACTOR	0.99978594	0.99988052

US NATIONAL GRID DESIGNATOR: 13SFS7052927986 (NAD 83)

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MARK: **0106** (0106 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1239)	
X:	-1219848.774 m	0.000 m	-1219849.612 m	0.000 m
Y:	-5230676.860 m	0.002 m	-5230675.457 m	0.002 m
Z:	3430334.536 m	0.001 m	3430334.359 m	0.001 m
LAT:	32 44 24.24315	0.000 m	32 44 24.25895	0.000 m
E LON:	256 52 21.54805	0.000 m	256 52 21.50446	0.000 m
W LON:	103 07 38.45195	0.000 m	103 07 38.49554	0.000 m
EL HGT:	1086.922 m	0.002 m	1085.838 m	0.002 m
ORTHO HGT:	1108.533 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)	3624022.492 m	193572.489 m
EASTING (X)	675459.587 m	278025.756 m
CONVERGENCE	1.01304167 deg	0.65230000 deg
POINT SCALE	0.99997962	1.00006656
COMBINED FACTOR	0.99980900	0.99989593

US NATIONAL GRID DESIGNATOR: 13SFS7545924022 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0108** (0108 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1287)	
X:	-1221128.455 m	0.000 m	-1221129.294 m	0.000 m
Y:	-5230745.995 m	0.002 m	-5230744.592 m	0.002 m
Z:	3429777.299 m	0.001 m	3429777.122 m	0.001 m
LAT:	32 44 02.74469	0.000 m	32 44 02.76049	0.000 m
E LON:	256 51 34.29461	0.000 m	256 51 34.25100	0.000 m
W LON:	103 08 25.70539	0.000 m	103 08 25.74900	0.000 m
EL HGT:	1086.801 m	0.002 m	1085.717 m	0.002 m
ORTHO HGT:	1108.410 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)	3623338.666 m	192896.287 m
EASTING (X)	674241.185 m	276802.966 m
CONVERGENCE	1.00577500 deg	0.64509444 deg
POINT SCALE	0.99997437	1.00006317
COMBINED FACTOR	0.99980377	0.99989255

US NATIONAL GRID DESIGNATOR: 13SFS7424123338 (NAD 83)

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MARK: **0111** (0111 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1227)	
X:	-1218530.209 m	0.000 m	-1218531.048 m	0.000 m
Y:	-5231596.860 m	0.002 m	-5231595.458 m	0.002 m
Z:	3429411.586 m	0.001 m	3429411.408 m	0.001 m
LAT:	32 43 48.57267	0.000 m	32 43 48.58845	0.000 m
E LON:	256 53 18.87973	0.000 m	256 53 18.83614	0.000 m
W LON:	103 06 41.12027	0.000 m	103 06 41.16386	0.000 m
EL HGT:	1089.762 m	0.002 m	1088.677 m	0.002 m
ORTHO HGT:	1111.376 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)	3622950.337 m	192490.744 m
EASTING (X)	676971.551 m	279531.070 m
CONVERGENCE	1.02138889 deg	0.66073889 deg
POINT SCALE	0.99998619	1.00007079
COMBINED FACTOR	0.99981512	0.99989971

US NATIONAL GRID DESIGNATOR: 13SFS7697122950 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0112** (0112 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1277)	
X:	-1218133.977 m	0.000 m	-1218134.816 m	0.000 m
Y:	-5232364.278 m	0.002 m	-5232362.875 m	0.002 m
Z:	3428376.875 m	0.001 m	3428376.698 m	0.001 m
LAT:	32 43 08.78270	0.000 m	32 43 08.79850	0.000 m
E LON:	256 53 40.38002	0.000 m	256 53 40.33643	0.000 m
W LON:	103 06 19.61998	0.000 m	103 06 19.66357	0.000 m
EL HGT:	1083.584 m	0.002 m	1082.499 m	0.002 m
ORTHO HGT:	1105.201 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)	3621734.794 m	191271.462 m
EASTING (X)	677553.193 m	280105.099 m
CONVERGENCE	1.02431111 deg	0.66376944 deg
POINT SCALE	0.99998874	1.00007241
COMBINED FACTOR	0.99981864	0.99990230

US NATIONAL GRID DESIGNATOR: 13SFS7755321734 (NAD 83)

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MARK: **0113** (0113 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1278)	
X:	-1219182.154 m	0.000 m	-1219182.993 m	0.000 m
Y:	-5232399.673 m	0.002 m	-5232398.271 m	0.002 m
Z:	3427948.889 m	0.001 m	3427948.712 m	0.001 m
LAT:	32 42 52.31997	0.000 m	32 42 52.33574	0.000 m
E LON:	256 53 01.49437	0.000 m	256 53 01.45080	0.000 m
W LON:	103 06 58.50563	0.000 m	103 06 58.54920	0.000 m
EL HGT:	1081.310 m	0.002 m	1080.225 m	0.002 m
ORTHO HGT:	1102.922 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)	3621209.691 m	190752.639 m
EASTING (X)	676549.754 m	279098.290 m
CONVERGENCE	1.01834167 deg	0.65784722 deg
POINT SCALE	0.99998436	1.00006957
COMBINED FACTOR	0.99981462	0.99989981

US NATIONAL GRID DESIGNATOR: 13SFS7654921209 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0114** (0114 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1312)	
X:	-1219967.609 m	0.001 m	-1219968.448 m	0.001 m
Y:	-5232783.592 m	0.002 m	-5232782.190 m	0.002 m
Z:	3427088.151 m	0.002 m	3427087.973 m	0.002 m
LAT:	32 42 19.12899	0.000 m	32 42 19.14475	0.000 m
E LON:	256 52 35.47316	0.000 m	256 52 35.42957	0.000 m
W LON:	103 07 24.52684	0.000 m	103 07 24.57043	0.000 m
EL HGT:	1080.799 m	0.003 m	1079.714 m	0.003 m
ORTHO HGT:	1102.411 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)	3620175.389 m	189722.418 m
EASTING (X)	675890.314 m	278432.299 m
CONVERGENCE	1.01417778 deg	0.65377500 deg
POINT SCALE	0.99998149	1.00006770
COMBINED FACTOR	0.99981183	0.99989803

US NATIONAL GRID DESIGNATOR: 13SFS7589020175 (NAD 83)

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MARK: **0117** (0117 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1309)	
X:	-1220463.183 m	0.001 m	-1220464.022 m	0.001 m
Y:	-5231999.612 m	0.002 m	-5231998.209 m	0.002 m
Z:	3428104.964 m	0.001 m	3428104.787 m	0.001 m
LAT:	32 42 58.31435	0.000 m	32 42 58.33014	0.000 m
E LON:	256 52 10.10945	0.000 m	256 52 10.06587	0.000 m
W LON:	103 07 49.89055	0.000 m	103 07 49.93413	0.000 m
EL HGT:	1082.573 m	0.002 m	1081.488 m	0.002 m
ORTHO HGT:	1104.182 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)	3621370.625 m	190922.023 m
EASTING (X)	675208.540 m	277757.999 m
CONVERGENCE	1.01066667 deg	0.65016111 deg
POINT SCALE	0.99997854	1.00006582
COMBINED FACTOR	0.99980860	0.99989587

US NATIONAL GRID DESIGNATOR: 13SFS7520821370 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0123** (0123 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1285)	
X:	-1223955.273 m	0.001 m	-1223956.112 m	0.001 m
Y:	-5230587.752 m	0.002 m	-5230586.350 m	0.002 m
Z:	3429021.320 m	0.002 m	3429021.143 m	0.002 m
LAT:	32 43 33.51819	0.000 m	32 43 33.53397	0.000 m
E LON:	256 49 47.21370	0.000 m	256 49 47.17006	0.000 m
W LON:	103 10 12.78630	0.000 m	103 10 12.82994	0.000 m
EL HGT:	1089.646 m	0.003 m	1088.563 m	0.003 m
ORTHO HGT:	1111.261 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)	3622389.952 m	191964.955 m
EASTING (X)	671469.198 m	274024.810 m
CONVERGENCE	0.98946111 deg	0.62886667 deg
POINT SCALE	0.99996255	1.00005561
COMBINED FACTOR	0.99979151	0.99988455

US NATIONAL GRID DESIGNATOR: 13SFS7146922389 (NAD 83)

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MARK: **0125** (0125 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1295)	
X:	-1223302.172 m	0.000 m	-1223303.011 m	0.000 m
Y:	-5231198.565 m	0.002 m	-5231197.162 m	0.002 m
Z:	3428327.315 m	0.001 m	3428327.137 m	0.001 m
LAT:	32 43 06.74313	0.000 m	32 43 06.75889	0.000 m
E LON:	256 50 16.97258	0.000 m	256 50 16.92895	0.000 m
W LON:	103 09 43.02742	0.000 m	103 09 43.07105	0.000 m
EL HGT:	1089.707 m	0.002 m	1088.623 m	0.002 m
ORTHO HGT:	1111.319 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)	3621578.699 m	191148.677 m
EASTING (X)	672258.257 m	274808.821 m
CONVERGENCE	0.99373333 deg	0.63320833 deg
POINT SCALE	0.99996590	1.00005773
COMBINED FACTOR	0.99979484	0.99988666

US NATIONAL GRID DESIGNATOR: 13SFS7225821578 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **0129** (0129 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1325)
X:	-1224186.855 m 0.001 m	-1224187.694 m 0.001 m
Y:	-5231441.592 m 0.002 m	-5231440.190 m 0.002 m
Z:	3427642.933 m 0.001 m	3427642.755 m 0.001 m
LAT:	32 42 40.36849 0.000 m	32 42 40.38423 0.000 m
E LON:	256 49 46.02559 0.000 m	256 49 45.98195 0.000 m
W LON:	103 10 13.97441 0.000 m	103 10 14.01805 0.000 m
EL HGT:	1088.473 m 0.002 m	1087.389 m 0.002 m
ORTHO HGT:	1110.089 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)	3620752.425 m	190327.325 m
EASTING (X)	671466.529 m	274011.835 m
CONVERGENCE	0.98888611 deg	0.62843611 deg
POINT SCALE	0.99996254	1.00005558
COMBINED FACTOR	0.99979168	0.99988470

US NATIONAL GRID DESIGNATOR: 13SFS7146620752 (NAD 83)

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MARK: **0121** (0121 1)

REF FRAME:	NAD_83(2011) (2010.0000)	IGS08 (2018.1338)
X:	-1222614.364 m 0.000 m	-1222615.203 m 0.000 m
Y:	-5232155.924 m 0.002 m	-5232154.521 m 0.002 m
Z:	3427116.085 m 0.001 m	3427115.907 m 0.001 m
LAT:	32 42 20.06094 0.000 m	32 42 20.07670 0.000 m
E LON:	256 50 51.05127 0.000 m	256 50 51.00767 0.000 m
W LON:	103 09 08.94873 0.000 m	103 09 08.99233 0.000 m
EL HGT:	1087.781 m 0.002 m	1086.696 m 0.002 m
ORTHO HGT:	1109.392 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)	3620156.328 m	189720.465 m
EASTING (X)	673170.613 m	275712.292 m
CONVERGENCE	0.99850278 deg	0.63810278 deg
POINT SCALE	0.99996978	1.00006018
COMBINED FACTOR	0.99979903	0.99988941

US NATIONAL GRID DESIGNATOR: 13SFS7317020156 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **NCCR** (nccr a 2)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1292)	
X:	1209562.351 m	0.000 m	1209561.492 m	0.000 m
Y:	-5028018.181 m	0.000 m	-5028016.695 m	0.000 m
Z:	3720613.955 m	0.000 m	3720613.874 m	0.000 m
LAT:	35 54 56.93105	0.000 m	35 54 56.96024	0.000 m
E LON:	283 31 34.70796	0.000 m	283 31 34.68853	0.000 m
W LON:	76 28 25.29204	0.000 m	76 28 25.31147	0.000 m
EL HGT:	-28.255 m	0.000 m	-29.636 m	0.000 m
ORTHO HGT:	8.864 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 18)	SPC (3200 NC)
NORTHING (Y)	3975614.286 m	243161.213 m
EASTING (X)	367033.988 m	837585.917 m
CONVERGENCE	0.86458889 deg	1.45810833 deg
POINT SCALE	0.99981785	0.99993964
COMBINED FACTOR	0.99982228	0.99994407

US NATIONAL GRID DESIGNATOR: 18SUE6703375614 (NAD 83)

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MARK: **NTR9** (ntr9 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.1307)	
X:	-1222613.401 m	0.000 m	-1222614.240 m	0.000 m
Y:	-5229951.563 m	0.000 m	-5229950.160 m	0.000 m
Z:	3430475.304 m	0.000 m	3430475.127 m	0.000 m
LAT:	32 44 29.44985	0.000 m	32 44 29.46564	0.000 m
E LON:	256 50 31.82444	0.000 m	256 50 31.78079	0.000 m
W LON:	103 09 28.17556	0.000 m	103 09 28.21921	0.000 m
EL HGT:	1097.706 m	0.000 m	1096.622 m	0.000 m
ORTHO HGT:	1119.318 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)	

	UTM COORDINATES	STATE PLANE COORDINATES
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	UTM (Zone 13)	SPC (3001 NM E)
NORTHING (Y)	3624132.764 m	193700.770 m
EASTING (X)	672600.650 m	275167.315 m
CONVERGENCE	0.99658611 deg	0.63583611 deg
POINT SCALE	0.99996735	1.00005870
COMBINED FACTOR	0.99979504	0.99988637

US NATIONAL GRID DESIGNATOR: 13SFS7260024132 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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 CONSTRAINED MARKS
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MARK: **NMRO** (nmro 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 (2018.1293)
 X: -1342902.011 m 0.000 m -1342902.857 m 0.000 m
 Y: -5159506.254 m 0.000 m -5159504.866 m 0.000 m
 Z: 3491215.967 m 0.000 m 3491215.797 m 0.000 m
 LAT: 33 23 41.83424 0.000 m 33 23 41.84982 0.000 m
 E LON: 255 24 39.26274 0.000 m 255 24 39.21753 0.000 m
 W LON: 104 35 20.73726 0.000 m 104 35 20.78247 0.000 m
 EL HGT: 1095.735 m 0.000 m 1094.697 m 0.000 m
 ORTHO HGT: 1118.889 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)	3695148.388 m	265582.349 m
EASTING (X)	538213.353 m	141207.564 m
CONVERGENCE	0.22616944 deg	0.14077222 deg
POINT SCALE	0.99961800	0.99991607
COMBINED FACTOR	0.99944607	0.99974409
US NATIONAL GRID DESIGNATOR: 13SES3821395148 (NAD 83)		

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MARK: **NMSU** (nmsu 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 (2018.1282)
 X: -1555457.538 m 0.000 m -1555458.377 m 0.000 m
 Y: -5169962.409 m 0.000 m -5169961.016 m 0.000 m
 Z: 3386819.085 m 0.000 m 3386818.910 m 0.000 m
 LAT: 32 16 27.35285 0.000 m 32 16 27.36699 0.000 m
 E LON: 253 15 19.18970 0.000 m 253 15 19.14367 0.000 m
 W LON: 106 44 40.81030 0.000 m 106 44 40.85633 0.000 m
 EL HGT: 1188.527 m 0.000 m 1187.510 m 0.000 m
 ORTHO HGT: 1212.447 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)	3572172.598 m	141384.391 m
EASTING (X)	335688.071 m	453401.207 m
CONVERGENCE	0.93181389 deg	0.26414444 deg
POINT SCALE	0.99993295	0.99992677
COMBINED FACTOR	0.99974638	0.99974020
US NATIONAL GRID DESIGNATOR: 13SCR3568872172 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **P027** (p027 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 (2018.1282)
 X: -1462205.039 m 0.000 m -1462205.879 m 0.000 m
 Y: -5165895.327 m 0.000 m -5165893.939 m 0.000 m
 Z: 3437078.091 m 0.000 m 3437077.916 m 0.000 m
 LAT: 32 48 06.67487 0.000 m 32 48 06.68955 0.000 m
 E LON: 254 11 45.06495 0.000 m 254 11 45.01937 0.000 m
 W LON: 105 48 14.93505 0.000 m 105 48 14.98063 0.000 m
 EL HGT: 2897.760 m 0.000 m 2896.735 m 0.000 m
 ORTHO HGT: 2918.378 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)	3629607.055 m	199866.840 m
EASTING (X)	424711.295 m	541755.129 m
CONVERGENCE	0.43565556 deg	0.24153611 deg
POINT SCALE	0.99966989	0.99992149
COMBINED FACTOR	0.99921529	0.99946677
US NATIONAL GRID DESIGNATOR: 13SDS2471129607 (NAD 83)		

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MARK: **TXAD** (txad 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 (2018.1298)
 X: -1172064.487 m 0.000 m -1172065.319 m 0.000 m
 Y: -5267869.325 m 0.000 m -5267867.916 m 0.000 m
 Z: 3389853.959 m 0.000 m 3389853.777 m 0.000 m
 LAT: 32 18 28.81707 0.000 m 32 18 28.83283 0.000 m
 E LON: 257 27 23.05539 0.000 m 257 27 23.01265 0.000 m
 W LON: 102 32 36.94461 0.000 m 102 32 36.98735 0.000 m
 EL HGT: 947.963 m 0.000 m 946.856 m 0.000 m
 ORTHO HGT: 971.462 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3577227.207 m	2078446.843 m
EASTING (X)	731272.142 m	219301.450 m
CONVERGENCE	1.31345833 deg	-2.20535556 deg
POINT SCALE	1.00025964	0.99995620
COMBINED FACTOR	1.00011078	0.99980739
US NATIONAL GRID DESIGNATOR: 13SGR3127277227 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXKM** (txkm a 1)
 CONSTRAIN: 3-D TIGHT
 ADJUST X: 0.000m (0.000m) Y: 0.000m (0.000m) Z: 0.001m (0.000m)
 ADJUST N: 0.001m (0.000m) E: 0.000m (0.000m) H: 0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2018.1292)
 X: -1230159.084 m 0.000 m -1230159.914 m 0.000 m
 Y: -5282667.188 m 0.000 m -5282665.776 m 0.000 m
 Z: 3346065.352 m 0.000 m 3346065.168 m 0.000 m
 LAT: 31 50 33.35708 0.000 m 31 50 33.37233 0.000 m
 E LON: 256 53 28.74245 0.000 m 256 53 28.69954 0.000 m
 W LON: 103 06 31.25755 0.000 m 103 06 31.30046 0.000 m
 EL HGT: 849.100 m 0.000 m 847.994 m 0.000 m
 ORTHO HGT: 872.963 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4203 TX C)
NORTHING (Y)	3524547.942 m	3244500.361 m
EASTING (X)	678964.062 m	437331.560 m
CONVERGENCE	0.99810000 deg	-1.42946944 deg
POINT SCALE	0.99999501	0.99998931
COMBINED FACTOR	0.99986170	0.99985600
US NATIONAL GRID DESIGNATOR: 13RFR7896424547 (NAD 83)		

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MARK: **TXLA** (txla 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 (2018.1291)
 X: -1111261.412 m 0.000 m -1111262.249 m 0.000 m
 Y: -5253344.829 m 0.000 m -5253343.421 m 0.000 m
 Z: 3432215.909 m 0.000 m 3432215.733 m 0.000 m
 LAT: 32 45 40.90158 0.000 m 32 45 40.91793 0.000 m
 E LON: 258 03 21.82917 0.000 m 258 03 21.78651 0.000 m
 W LON: 101 56 38.17083 0.000 m 101 56 38.21349 0.000 m
 EL HGT: 892.759 m 0.000 m 891.651 m 0.000 m
 ORTHO HGT: 916.881 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4202 TXNC)
NORTHING (Y)	3628668.263 m	2126679.136 m
EASTING (X)	224201.123 m	277384.233 m
CONVERGENCE	-1.59409167 deg	-1.87830278 deg
POINT SCALE	1.00053804	0.99988538
COMBINED FACTOR	1.00039782	0.99974525
US NATIONAL GRID DESIGNATOR: 14SKB2420128668 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXM1** (txml a 1)
 CONSTRAIN: 3-D TIGHT
 ADJUST X: 0.000m (0.000m) Y: 0.000m (0.000m) Z: -0.001m (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 (2018.1250)
 X: -1172866.268 m 0.000 m -1172867.112 m 0.000 m
 Y: -5179261.526 m 0.000 m -5179260.133 m 0.000 m
 Z: 3522926.390 m 0.000 m 3522926.221 m 0.000 m
 LAT: 33 44 16.17020 0.000 m 33 44 16.18675 0.000 m
 E LON: 257 14 25.18337 0.000 m 257 14 25.13944 0.000 m
 W LON: 102 45 34.81663 0.000 m 102 45 34.86056 0.000 m
 EL HGT: 1126.648 m 0.000 m 1125.579 m 0.000 m
 ORTHO HGT: 1149.976 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3735341.408 m	2237678.430 m
EASTING (X)	707543.356 m	205396.492 m
CONVERGENCE	1.24470833 deg	-2.32320000 deg
POINT SCALE	1.00013105	0.99994419
COMBINED FACTOR	0.99995419	0.99976736
US NATIONAL GRID DESIGNATOR: 13SGT0754335341 (NAD 83)		

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MARK: **TXOE** (txoe 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 (2018.1365)
 X: -1156385.169 m 0.000 m -1156385.998 m 0.000 m
 Y: -5297462.694 m 0.000 m -5297461.278 m 0.000 m
 Z: 3348977.752 m 0.000 m 3348977.568 m 0.000 m
 LAT: 31 52 24.50322 0.000 m 31 52 24.51882 0.000 m
 E LON: 257 41 09.76767 0.000 m 257 41 09.72537 0.000 m
 W LON: 102 18 50.23233 0.000 m 102 18 50.27463 0.000 m
 EL HGT: 857.221 m 0.000 m 856.099 m 0.000 m
 ORTHO HGT: 881.312 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4203 TX C)
NORTHING (Y)	3529557.830 m	3246315.312 m
EASTING (X)	754100.725 m	512598.826 m
CONVERGENCE	1.41911389 deg	-1.02013611 deg
POINT SCALE	1.00039638	0.99999737
COMBINED FACTOR	1.00026174	0.99986279
US NATIONAL GRID DESIGNATOR: 13RGR5410029557 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXP2** (txp2 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 (2018.1289)
 X: -1185685.182 m 0.000 m -1185686.022 m 0.000 m
 Y: -5211171.388 m 0.000 m -5211169.989 m 0.000 m
 Z: 3471481.787 m 0.000 m 3471481.613 m 0.000 m
 LAT: 33 10 55.78757 0.000 m 33 10 55.80376 0.000 m
 E LON: 257 10 54.66089 0.000 m 257 10 54.61728 0.000 m
 W LON: 102 49 05.33911 0.000 m 102 49 05.38272 0.000 m
 EL HGT: 1090.801 m 0.000 m 1089.720 m 0.000 m
 ORTHO HGT: 1113.111 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3673602.278 m	2176327.752 m
EASTING (X)	703419.357 m	197449.963 m
CONVERGENCE	1.19454167 deg	-2.35509444 deg
POINT SCALE	1.00011021	0.99987521
COMBINED FACTOR	0.99993897	0.99970401
US NATIONAL GRID DESIGNATOR: 13SGS0341973602 (NAD 83)		

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MARK: **TXS3** (txs3 a 1)
 CONSTRAIN: 3-D TIGHT
 ADJUST X: -0.000m (0.000m) Y: -0.000m (0.000m) Z: -0.000m (0.000m)
 ADJUST N: -0.001m (0.000m) E: -0.000m (0.000m) H: 0.000m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2018.1303)
 X: -1174730.985 m 0.000 m -1174731.823 m 0.000 m
 Y: -5242639.195 m 0.000 m -5242637.790 m 0.000 m
 Z: 3427636.592 m 0.000 m 3427636.414 m 0.000 m
 LAT: 32 42 42.40868 0.000 m 32 42 42.42466 0.000 m
 E LON: 257 22 12.75846 0.000 m 257 22 12.71528 0.000 m
 W LON: 102 37 47.24154 0.000 m 102 37 47.28472 0.000 m
 EL HGT: 978.869 m 0.000 m 977.774 m 0.000 m
 ORTHO HGT: 1001.469 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3621819.741 m	2123501.298 m
EASTING (X)	722158.857 m	212950.228 m
CONVERGENCE	1.28141944 deg	-2.25236389 deg
POINT SCALE	1.00020862	0.99989011
COMBINED FACTOR	1.00005492	0.99973646
US NATIONAL GRID DESIGNATOR: 13SGS2215821819 (NAD 83)		

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-FINAL.sum
 SOLUTION SOFTWARE: GPSCOM(1504.22)
 SOLUTION DATE: 2018-10-22T13:08:29 UTC
 STANDARD ERROR OF UNIT WEIGHT: 0.880
 TOTAL NUMBER OF OBSERVATIONS: 826183
 TOTAL NUMBER OF MARKS: 14
 NUMBER OF CONSTRAINED MARKS: 11

START TIME: 2018-10-17T00:00:00 GPS
 STOP TIME: 2018-10-18T23:59:30 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) 2018-290 A	1.6 cm	page5(1603.24)	2018-10-22T11:49 UTC
2) 2018-290 B	1.6 cm	page5(1603.24)	2018-10-22T11:56 UTC
3) 2018-290 C	1.6 cm	page5(1603.24)	2018-10-22T11:52 UTC
4) 2018-291 A	1.6 cm	page5(1603.24)	2018-10-22T11:53 UTC
5) 2018-291 B	1.6 cm	page5(1603.24)	2018-10-22T11:58 UTC

BASELINE	LENGTH	RMS	OBS	OMITTED	FIXED IN SOLUTION(S)
0012-ntr9	6.698 km	1.1 cm	6274	8.4%	100.0% 1, 2, 3
0055-ntr9	15.049 km	1.6 cm	4489	7.3%	100.0% 4, 5
txad-txs3	45.510 km	1.6 cm	90180	6.6%	99.0% 1, 2, 3, ...
txs3-0012	48.398 km	1.6 cm	6523	4.2%	100.0% 1, 2, 3
txs3-ntr9	49.616 km	1.8 cm	36002	7.9%	99.1% 4, 5
txoe-txad	52.844 km	1.5 cm	53169	7.8%	99.6% 1, 2, 3
txp2-txs3	55.069 km	1.7 cm	94266	3.2%	99.2% 1, 2, 3, ...
txml-txp2	61.880 km	1.6 cm	37258	4.3%	97.4% 4, 5
txla-txs3	64.529 km	1.6 cm	91537	6.0%	98.9% 1, 2, 3, ...
txkm-txad	74.239 km	1.6 cm	90550	6.2%	99.4% 1, 2, 3, ...
nmsu-p027	106.012 km	1.5 cm	90341	3.6%	98.4% 1, 2, 3, ...
p027-nmro	131.168 km	1.4 cm	94603	2.5%	98.1% 1, 2, 3, ...
nmro-0055	138.043 km	1.7 cm	4636	2.9%	96.6% 4, 5
nmro-ntr9	152.057 km	1.7 cm	54081	6.9%	98.2% 1, 2, 3
nccr-txla	2349.504 km	2.1 cm	72274	2.7%	72.3% 1, 2, 3, ...

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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 UNCONSTRAINED MARKS
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MARK: **0012** (0012 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.7938)	
X:	-1222215.870 m	0.000 m	-1222216.717 m	0.000 m
Y:	-5233681.521 m	0.002 m	-5233680.118 m	0.002 m
Z:	3424926.187 m	0.001 m	3424926.006 m	0.001 m
LAT:	32 40 55.78998	0.000 m	32 40 55.80560	0.000 m
E LON:	256 51 19.26634	0.000 m	256 51 19.22244	0.000 m
W LON:	103 08 40.73366	0.000 m	103 08 40.77756	0.000 m
EL HGT:	1078.855 m	0.002 m	1077.770 m	0.002 m
ORTHO HGT:	1100.476 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)	3617573.637 m	187132.687 m
EASTING (X)	673950.759 m	276476.251 m
CONVERGENCE	1.00210278 deg	0.64193056 deg
POINT SCALE	0.99997313	1.00006228
COMBINED FACTOR	0.99980378	0.99989291

US NATIONAL GRID DESIGNATOR: 13SFS7395017573 (NAD 83)

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MARK: **0055** (0055 1)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.7964)	
X:	-1230797.368 m	0.001 m	-1230798.216 m	0.001 m
Y:	-5221725.938 m	0.002 m	-5221724.537 m	0.002 m
Z:	3440058.625 m	0.001 m	3440058.445 m	0.001 m
LAT:	32 50 38.80509	0.000 m	32 50 38.82077	0.000 m
E LON:	256 44 13.43975	0.000 m	256 44 13.39566	0.000 m
W LON:	103 15 46.56025	0.000 m	103 15 46.60434	0.000 m
EL HGT:	1128.499 m	0.002 m	1127.419 m	0.002 m
ORTHO HGT:	1150.173 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)	3635342.223 m	204974.399 m
EASTING (X)	662564.614 m	265201.164 m
CONVERGENCE	0.94231389 deg	0.58058611 deg
POINT SCALE	0.99992586	1.00003285
COMBINED FACTOR	0.99974873	0.99985570

US NATIONAL GRID DESIGNATOR: 13SFS6256435342 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **NCCR** (nccr a 2)

REF FRAME:	NAD_83(2011) (2010.0000)		IGS08 (2018.7942)
X:	1209562.343 m	0.000 m	1209561.475 m 0.000 m
Y:	-5028018.163 m	0.001 m	-5028016.677 m 0.001 m
Z:	3720613.944 m	0.001 m	3720613.865 m 0.001 m
LAT:	35 54 56.93113	0.000 m	35 54 56.96043 0.000 m
E LON:	283 31 34.70782	0.000 m	283 31 34.68801 0.000 m
W LON:	76 28 25.29218	0.000 m	76 28 25.31199 0.000 m
EL HGT:	-28.277 m	0.001 m	-29.658 m 0.001 m
ORTHO HGT:	8.842 m	0.015 m	(H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 18)	SPC (3200 NC)
NORTHING (Y)	3975614.289 m	243161.215 m
EASTING (X)	367033.984 m	837585.914 m
CONVERGENCE	0.86458889 deg	1.45810833 deg
POINT SCALE	0.99981785	0.99993964
COMBINED FACTOR	0.99982229	0.99994408

US NATIONAL GRID DESIGNATOR: 18SUE6703375614 (NAD 83)

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CONSTRAINED MARKS

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MARK: **NMRO** (nmro 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 (2018.7939)
X:	-1342902.011 m	0.000 m	-1342902.866 m 0.000 m
Y:	-5159506.255 m	0.000 m	-5159504.866 m 0.000 m
Z:	3491215.967 m	0.000 m	3491215.794 m 0.000 m
LAT:	33 23 41.83423	0.000 m	33 23 41.84969 0.000 m
E LON:	255 24 39.26275	0.000 m	255 24 39.21720 0.000 m
W LON:	104 35 20.73725	0.000 m	104 35 20.78280 0.000 m
EL HGT:	1095.735 m	0.000 m	1094.697 m 0.000 m
ORTHO HGT:	1118.889 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)	3695148.388 m	265582.349 m
EASTING (X)	538213.353 m	141207.564 m
CONVERGENCE	0.22616944 deg	0.14077222 deg
POINT SCALE	0.99961800	0.99991607
COMBINED FACTOR	0.99944607	0.99974409

US NATIONAL GRID DESIGNATOR: 13SES3821395148 (NAD 83)

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **NMSU** (nmsu 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 (2018.7942)
 X: -1555457.538 m 0.000 m -1555458.385 m 0.000 m
 Y: -5169962.409 m 0.000 m -5169961.016 m 0.000 m
 Z: 3386819.085 m 0.000 m 3386818.907 m 0.000 m
 LAT: 32 16 27.35285 0.000 m 32 16 27.36685 0.000 m
 E LON: 253 15 19.18970 0.000 m 253 15 19.14337 0.000 m
 W LON: 106 44 40.81030 0.000 m 106 44 40.85663 0.000 m
 EL HGT: 1188.527 m 0.000 m 1187.510 m 0.000 m
 ORTHO HGT: 1212.447 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)	3572172.598 m	141384.391 m
EASTING (X)	335688.071 m	453401.207 m
CONVERGENCE	0.93181389 deg	0.26414444 deg
POINT SCALE	0.99993295	0.99992677
COMBINED FACTOR	0.99974638	0.99974020
US NATIONAL GRID DESIGNATOR: 13SCR3568872172 (NAD 83)		

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MARK: **NTR9** (ntr9 1)
 CONSTRAIN: 3-D TIGHT
 ADJUST X: 0.003m (0.000m) Y: -0.024m (0.000m) Z: 0.012m (0.000m)
 ADJUST N: -0.002m (0.000m) E: 0.008m (0.000m) H: 0.025m (0.000m)

REF FRAME: NAD_83(2011) (2010.0000) IGS08 (2018.7943)
 X: -1222613.393 m 0.000 m -1222614.240 m 0.000 m
 Y: -5229951.562 m 0.000 m -5229950.160 m 0.000 m
 Z: 3430475.307 m 0.000 m 3430475.127 m 0.000 m
 LAT: 32 44 29.44998 0.000 m 32 44 29.46564 0.000 m
 E LON: 256 50 31.82473 0.000 m 256 50 31.78079 0.000 m
 W LON: 103 09 28.17527 0.000 m 103 09 28.21921 0.000 m
 EL HGT: 1097.706 m 0.000 m 1096.622 m 0.000 m
 ORTHO HGT: 1119.318 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)	3624132.768 m	193700.774 m
EASTING (X)	672600.657 m	275167.323 m
CONVERGENCE	0.99658611 deg	0.63583611 deg
POINT SCALE	0.99996735	1.00005870
COMBINED FACTOR	0.99979504	0.99988637
US NATIONAL GRID DESIGNATOR: 13SFS7260024132 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **P027** (p027 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 (2018.7942)
 X: -1462205.039 m 0.000 m -1462205.887 m 0.000 m
 Y: -5165895.327 m 0.000 m -5165893.939 m 0.000 m
 Z: 3437078.091 m 0.000 m 3437077.912 m 0.000 m
 LAT: 32 48 06.67487 0.000 m 32 48 06.68941 0.000 m
 E LON: 254 11 45.06495 0.000 m 254 11 45.01907 0.000 m
 W LON: 105 48 14.93505 0.000 m 105 48 14.98093 0.000 m
 EL HGT: 2897.760 m 0.000 m 2896.735 m 0.000 m
 ORTHO HGT: 2918.378 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)	3629607.055 m	199866.840 m
EASTING (X)	424711.295 m	541755.129 m
CONVERGENCE	0.43565556 deg	0.24153611 deg
POINT SCALE	0.99966989	0.99992149
COMBINED FACTOR	0.99921529	0.99946677
US NATIONAL GRID DESIGNATOR: 13SDS2471129607 (NAD 83)		

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MARK: **TXAD** (txad 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 (2018.7940)
 X: -1172064.487 m 0.000 m -1172065.327 m 0.000 m
 Y: -5267869.325 m 0.000 m -5267867.916 m 0.000 m
 Z: 3389853.959 m 0.000 m 3389853.774 m 0.000 m
 LAT: 32 18 28.81707 0.000 m 32 18 28.83271 0.000 m
 E LON: 257 27 23.05539 0.000 m 257 27 23.01236 0.000 m
 W LON: 102 32 36.94461 0.000 m 102 32 36.98764 0.000 m
 EL HGT: 947.963 m 0.000 m 946.856 m 0.000 m
 ORTHO HGT: 971.462 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3577227.207 m	2078446.843 m
EASTING (X)	731272.142 m	219301.450 m
CONVERGENCE	1.31345833 deg	-2.20535556 deg
POINT SCALE	1.00025964	0.99995620
COMBINED FACTOR	1.00011078	0.99980739
US NATIONAL GRID DESIGNATOR: 13SGR3127277227 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXKM** (txkm a 1)
 CONSTRAIN: 3-D TIGHT
 ADJUST X: 0.000m (0.000m) Y: -0.000m (0.000m) Z: 0.001m (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 (2018.7942)
 X: -1230159.084 m 0.000 m -1230159.922 m 0.000 m
 Y: -5282667.188 m 0.000 m -5282665.776 m 0.000 m
 Z: 3346065.351 m 0.000 m 3346065.164 m 0.000 m
 LAT: 31 50 33.35705 0.000 m 31 50 33.37220 0.000 m
 E LON: 256 53 28.74245 0.000 m 256 53 28.69924 0.000 m
 W LON: 103 06 31.25755 0.000 m 103 06 31.30076 0.000 m
 EL HGT: 849.099 m 0.000 m 847.994 m 0.000 m
 ORTHO HGT: 872.962 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4203 TX C)
NORTHING (Y)	3524547.941 m	3244500.360 m
EASTING (X)	678964.062 m	437331.560 m
CONVERGENCE	0.99810000 deg	-1.42946944 deg
POINT SCALE	0.99999501	0.99998931
COMBINED FACTOR	0.99986170	0.99985600
US NATIONAL GRID DESIGNATOR: 13RFR7896424547 (NAD 83)		

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MARK: **TXLA** (txla 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 (2018.7942)
 X: -1111261.412 m 0.000 m -1111262.258 m 0.000 m
 Y: -5253344.829 m 0.000 m -5253343.421 m 0.000 m
 Z: 3432215.910 m 0.000 m 3432215.730 m 0.000 m
 LAT: 32 45 40.90161 0.000 m 32 45 40.91782 0.000 m
 E LON: 258 03 21.82917 0.000 m 258 03 21.78618 0.000 m
 W LON: 101 56 38.17083 0.000 m 101 56 38.21382 0.000 m
 EL HGT: 892.760 m 0.000 m 891.651 m 0.000 m
 ORTHO HGT: 916.882 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 14)	SPC (4202 TXNC)
NORTHING (Y)	3628668.264 m	2126679.137 m
EASTING (X)	224201.123 m	277384.233 m
CONVERGENCE	-1.59409167 deg	-1.87830278 deg
POINT SCALE	1.00053804	0.99988538
COMBINED FACTOR	1.00039782	0.99974525
US NATIONAL GRID DESIGNATOR: 14SKB2420128668 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXM1** (txml 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 (2018.7959)
 X: -1172866.268 m 0.000 m -1172867.121 m 0.000 m
 Y: -5179261.526 m 0.000 m -5179260.133 m 0.000 m
 Z: 3522926.390 m 0.000 m 3522926.218 m 0.000 m
 LAT: 33 44 16.17020 0.000 m 33 44 16.18664 0.000 m
 E LON: 257 14 25.18337 0.000 m 257 14 25.13910 0.000 m
 W LON: 102 45 34.81663 0.000 m 102 45 34.86090 0.000 m
 EL HGT: 1126.648 m 0.000 m 1125.579 m 0.000 m
 ORTHO HGT: 1149.976 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3735341.408 m	2237678.430 m
EASTING (X)	707543.356 m	205396.492 m
CONVERGENCE	1.24470833 deg	-2.32320000 deg
POINT SCALE	1.00013105	0.99994419
COMBINED FACTOR	0.99995419	0.99976736
US NATIONAL GRID DESIGNATOR: 13SGT0754335341 (NAD 83)		

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MARK: **TXOE** (txoe 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 (2018.7931)
 X: -1156385.169 m 0.000 m -1156386.006 m 0.000 m
 Y: -5297462.694 m 0.000 m -5297461.279 m 0.000 m
 Z: 3348977.752 m 0.000 m 3348977.565 m 0.000 m
 LAT: 31 52 24.50322 0.000 m 31 52 24.51871 0.000 m
 E LON: 257 41 09.76767 0.000 m 257 41 09.72506 0.000 m
 W LON: 102 18 50.23233 0.000 m 102 18 50.27494 0.000 m
 EL HGT: 857.221 m 0.000 m 856.099 m 0.000 m
 ORTHO HGT: 881.312 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4203 TX C)
NORTHING (Y)	3529557.830 m	3246315.312 m
EASTING (X)	754100.725 m	512598.826 m
CONVERGENCE	1.41911389 deg	-1.02013611 deg
POINT SCALE	1.00039638	0.99999737
COMBINED FACTOR	1.00026174	0.99986279
US NATIONAL GRID DESIGNATOR: 13RGR5410029557 (NAD 83)		

NGS OPUS-PROJECTS NETWORK ADJUSTMENT REPORT

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MARK: **TXP2** (txp2 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 (2018.7947)
 X: -1185685.182 m 0.000 m -1185686.031 m 0.000 m
 Y: -5211171.387 m 0.000 m -5211169.989 m 0.000 m
 Z: 3471481.787 m 0.000 m 3471481.610 m 0.000 m
 LAT: 33 10 55.78758 0.000 m 33 10 55.80365 0.000 m
 E LON: 257 10 54.66088 0.000 m 257 10 54.61696 0.000 m
 W LON: 102 49 05.33912 0.000 m 102 49 05.38304 0.000 m
 EL HGT: 1090.800 m 0.000 m 1089.720 m 0.000 m
 ORTHO HGT: 1113.110 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3673602.279 m	2176327.753 m
EASTING (X)	703419.356 m	197449.963 m
CONVERGENCE	1.19454167 deg	-2.35509444 deg
POINT SCALE	1.00011021	0.99987521
COMBINED FACTOR	0.99993897	0.99970401
US NATIONAL GRID DESIGNATOR: 13SGS0341973602 (NAD 83)		

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MARK: **TXS3** (txs3 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 (2018.7944)
 X: -1174730.985 m 0.000 m -1174731.831 m 0.000 m
 Y: -5242639.195 m 0.000 m -5242637.790 m 0.000 m
 Z: 3427636.592 m 0.000 m 3427636.411 m 0.000 m
 LAT: 32 42 42.40868 0.000 m 32 42 42.42455 0.000 m
 E LON: 257 22 12.75846 0.000 m 257 22 12.71496 0.000 m
 W LON: 102 37 47.24154 0.000 m 102 37 47.28504 0.000 m
 EL HGT: 978.869 m 0.000 m 977.774 m 0.000 m
 ORTHO HGT: 1001.469 m 0.012 m (H = h - N WHERE N = GEOID12B HGT)

	UTM COORDINATES	STATE PLANE COORDINATES
	UTM (Zone 13)	SPC (4202 TXNC)
NORTHING (Y)	3621819.741 m	2123501.298 m
EASTING (X)	722158.857 m	212950.228 m
CONVERGENCE	1.28141944 deg	-2.25236389 deg
POINT SCALE	1.00020862	0.99989011
COMBINED FACTOR	1.00005492	0.99973646
US NATIONAL GRID DESIGNATOR: 13SGS2215821819 (NAD 83)		

Control Station Data



Name of Station: **HOBBS_NTR9**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: Other

Station Height: Unknown

Stamping:

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 29.44985"	635,499.944 US Ft	635,572.157 US Ft
Longitude Easting X:	W 103° 09' 28.17556"	902,778.100 US Ft	902,880.685 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,097.706 m	3,601.390 US Ft	3,672.296 US Ft

Location

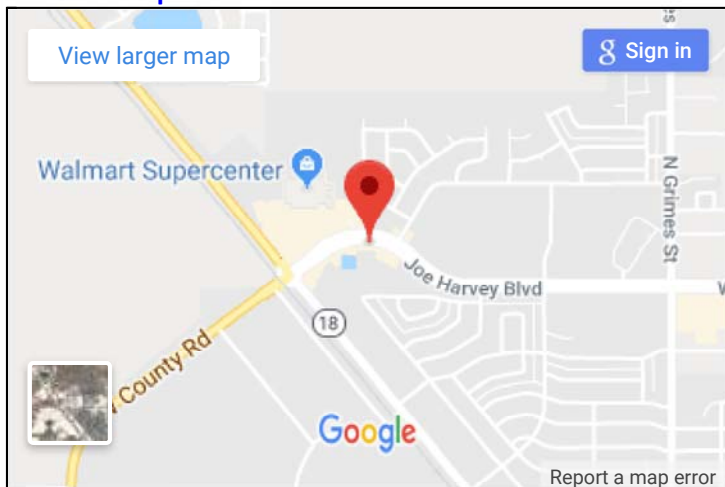
County & State: Lea, NM

Section: sec 16 T18S R38E

Land Grant(s): None

Note(s): NET R9 HOBBS BASE STATION SN_1551129645 PN_115000-00
NET R9 CORS BASE STATION _ CITY OF HOBBS

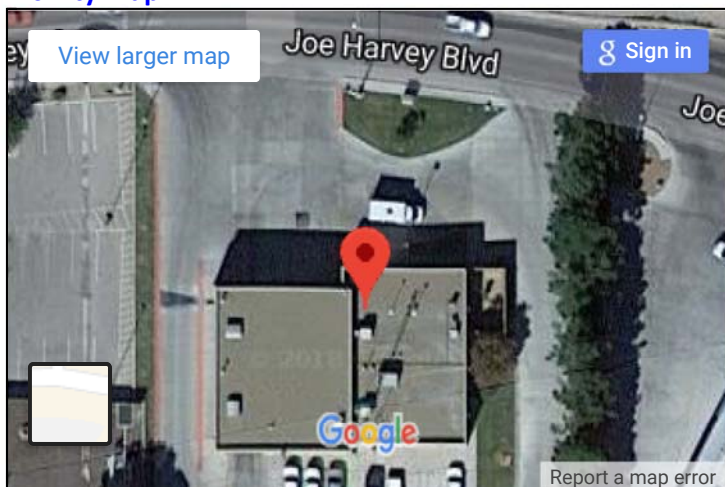
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [C2](#) [C3](#) [C4](#) [E2](#) [E3](#) [N](#) [N2](#) [N3](#) [S](#) [S2](#) [S3](#) [W](#)





VIEW EAST



08.07.2018 09:10

VIEW EAST



08.07.2018 09:14

VIEW EAST



08.07.2018 09:15

VIEW NORTH



08.07.2018 09:08

VIEW NORTH



VIEW NORTH



VIEW SOUTH



VIEW SOUTH



VIEW SOUTH

08.07.2018 09:14



VIEW WEST

08.07.2018 09:09



MARK ntr9 Occupations

Manage Data Files Save Occupations

DATA FILE	SPAN		HARDWARE						
ntr90430.18o	Start	2018-02-12T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-12T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90440.18o	Start	2018-02-13T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-13T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90450.18o	Start	2018-02-14T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-14T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90460.18o	Start	2018-02-15T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-15T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90470.18o	Start	2018-02-16T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-16T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90480.18o	Start	2018-02-17T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-17T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90490.18o	Start	2018-02-18T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-18T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90500.18o	Start	2018-02-19T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-19T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90510.18o	Start	2018-02-20T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-20T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90520.18o	Start	2018-02-21T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-21T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22
ntr90530.18o	Start	2018-02-22T00:00:00 GPS	Antenna	Model:	TRM115000.00 TZGD	S/N:		Height (m):	0.000
	End	2018-02-22T23:59:30 GPS	Receiver	Model:	TRIMBLE NETRS	S/N:	5751R51953	Firmware:	5.22

MARK ntr9 Processing Results From network-20180324_FINAL_09-2018

Manage Coordinates

Scale uncertainties by 1.0x (68.3%)

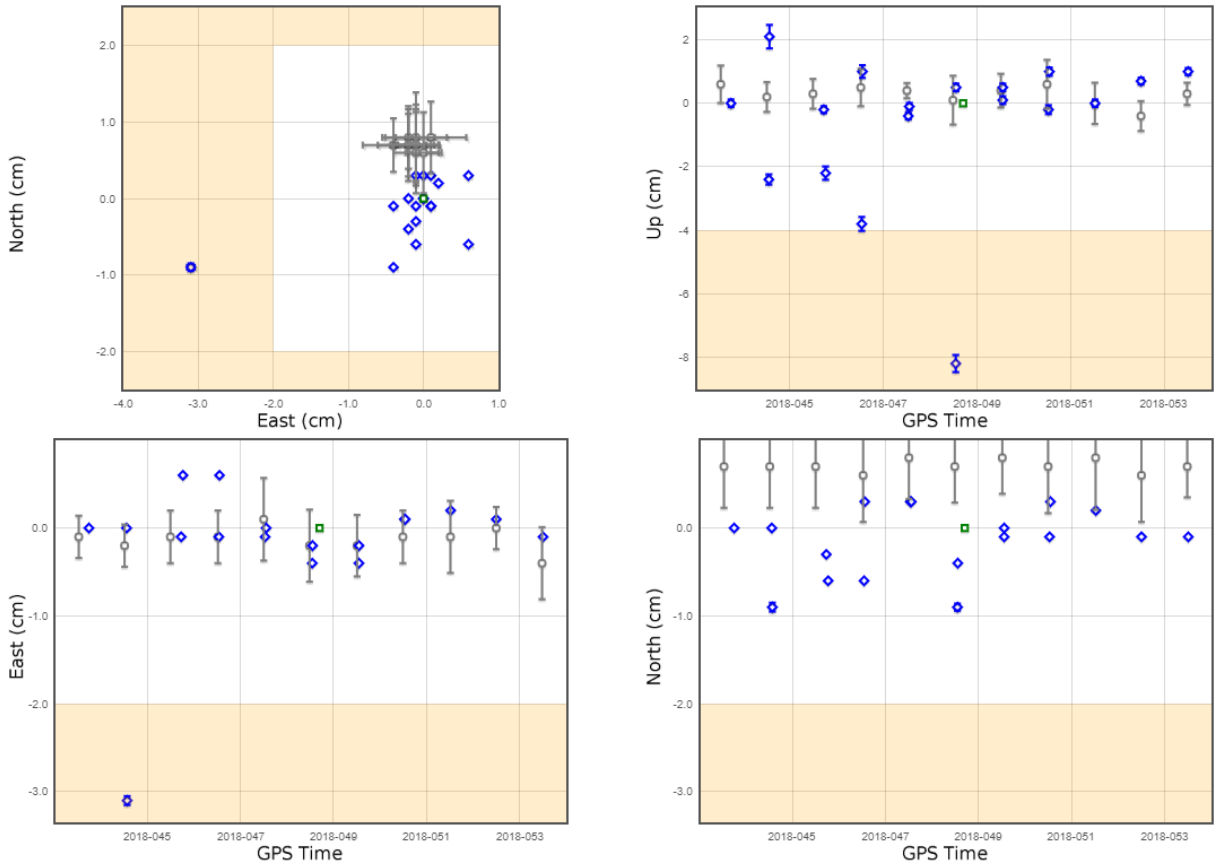
Coordinate Source: network-20180324_FINAL_09-2018				
REF FRAME:	IGS08 (2018.1307)	NAD_83(2011) (2010.0000)	COORDINATE SYSTEM:	SPC 3001 NM E UTM 13
LAT:	N32:44:29.46564 ±0.000 m	N32:44:29.44985 ±0.000 m	NORTHING:	193700.770 m 3624132.764 m
EAST LON:	E256:50:31.78079 ±0.000 m	E256:50:31.82444 ±0.000 m	EASTING:	275167.315 m 672600.650 m
WEST LON:	W103:09:28.21921 ±0.000 m	W103:09:28.17556 ±0.000 m	CONVERGENCE:	0.63583611" 0.99658611"
EL HGT:	1096.622 ±0.000 m	1097.706 ±0.000 m	POINT SCALE:	1.00005870 0.99996735
X:	-1222614.240 ±0.000 m	-1222613.401 ±0.000 m	COMBINED FACTOR:	0.99988637 0.99979504
Y:	-5229950.160 ±0.000 m	-5229951.563 ±0.000 m	U.S. NATIONAL GRID:	13SFS7260024132
Z:	3430475.127 ±0.000 m	3430475.304 ±0.000 m		
ORTHO HGT: 1119.318 ±0.015 m (H = h - N WHERE N = GEOID12B HGT)				

DATA FILE	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	FIXED (%)	RMS (m)	LAT (m)	LON (m)	HGT (m)	SOLUTION	
ntr90430.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90440.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90450.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90460.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90470.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90480.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90490.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90500.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90510.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90520.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
ntr90530.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	—	0.000	0.000	0.000	network-20180324_FINAL_09-2018
Preferences			Best Available	≥80.0	≥80.0	≤0.025	≤0.020	≤0.020	≤0.040	Preferences	

MARK ntr9 Processing Results Plots

Scale uncertainties by 1.0x (68.3%) Show preferences network session OPUS published.

The "zero" point coordinates, N32:44:29.46564049272275, W103:09:28.21921, 1096.622 m el. height, are the mean of all network adjustments.



MARK ntr9 Processing Results From network-20180324_FINAL_09-2018

[Manage Coordinates](#)

Scale uncertainties by 5.0x (100.0%)

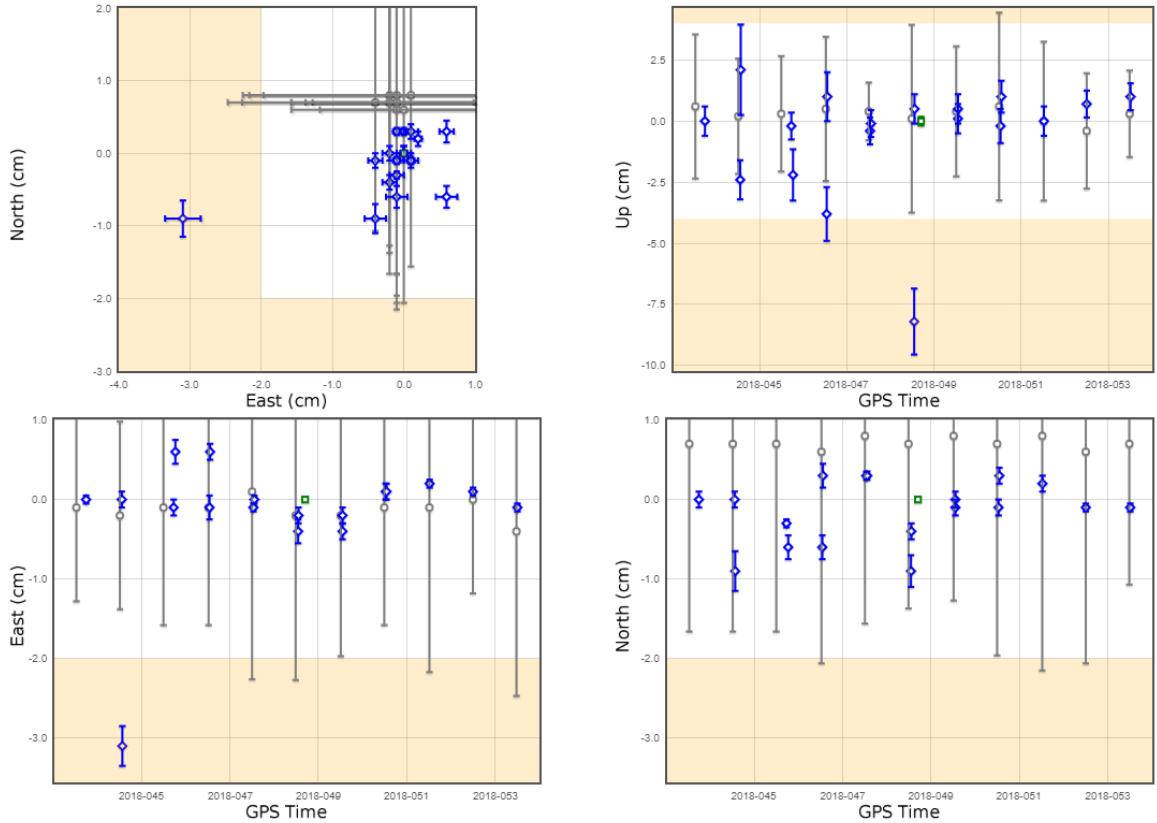
Coordinate Source: network-20180324_FINAL_09-2018				
REF FRAME:	IGS08 (2018.1307)	NAD_83(2011) (2010.0000)	COORDINATE SYSTEM:	SPC 3001 NM E UTM 13
LAT:	N32:44:29.46564 ±0.000 m	N32:44:29.44985 ±0.000 m	NORTHING:	193700.770 m 3624132.764 m
EAST LON:	E256:50:31.78079 ±0.000 m	E256:50:31.82444 ±0.000 m	EASTING:	275167.315 m 672600.650 m
WEST LON:	W103:09:28.21921 ±0.000 m	W103:09:28.17556 ±0.000 m	CONVERGENCE:	0.63583611" 0.99658611"
EL HGT:	1096.622 ±0.002 m	1097.706 ±0.002 m	POINT SCALE:	1.00005870 0.99996735
X:	-1222614.240 ±0.001 m	-1222613.401 ±0.001 m	COMBINED FACTOR:	0.99988637 0.99979504
Y:	-5229950.160 ±0.001 m	-5229951.563 ±0.001 m	U.S. NATIONAL GRID:	13SFS7260024132
Z:	3430475.127 ±0.001 m	3430475.304 ±0.001 m		
ORTHO HGT: 1119.318 ±0.015 m (H = h - N WHERE N = GEOID12B HGT)				

DATA FILE	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	FIXED (%)	RMS (m)	LAT (m)	LON (m)	HGT (m)	SOLUTION	
ntr90430.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90440.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90450.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90460.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90470.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90480.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90490.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90500.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90510.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90520.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
ntr90530.18o	TRM115000.00	TZGD	0.000	precise	93.5	97.8	---	0.000	0.000	0.002	network-20180324_FINAL_09-2018
Preferences			Best Available	≥80.0	≥80.0	≤0.025	≤0.020	≤0.020	≤0.040	Preferences	

MARK ntr9 Processing Results Plots

Scale uncertainties by 5.0x (100.0%) Show preferences network session OPUS published.

The "zero" point coordinates: N32:44:29.46564049272275, W103:09:28.21921, 1096.622 m el. height, are the mean of all network adjustments.



MARK ntr9 **Processing Results Table**

Scale uncertainties by 2.0x (95.4%) Show preferences network session OPUS published.
 The "zero" point coordinates, N32.44:29.46564049272275, W103.09:28.21921, 1096.622 m el. height, are the mean of all network adjustments.

OPUS SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
ntr90430.18o	0.7 ±0.9	-0.1 ±0.5	0.6 ±1.2	IGS08	2018-02-12T12:32:24
ntr90440.18o	0.7 ±0.9	-0.2 ±0.5	0.2 ±0.9	IGS08	2018-02-13T12:11:31
ntr90450.18o	0.7 ±0.9	-0.1 ±0.6	0.3 ±0.9	IGS08	2018-02-14T11:50:38
ntr90460.18o	0.6 ±1.1	-0.1 ±0.6	0.5 ±1.2	IGS08	2018-02-15T12:22:19
ntr90470.18o	0.8 ±0.9	0.1 ±0.9	0.4 ±0.5	IGS08	2018-02-16T12:01:26
ntr90480.18o	0.7 ±0.8	-0.2 ±0.8	0.1 ±1.5	IGS08	2018-02-17T11:40:33
ntr90490.18o	0.8 ±0.8	-0.2 ±0.7	0.4 ±1.1	IGS08	2018-02-18T12:12:14
ntr90500.18o	0.7 ±1.1	-0.1 ±0.6	0.6 ±1.5	IGS08	2018-02-19T11:51:21
ntr90510.18o	0.8 ±1.2	-0.1 ±0.8	0.0 ±1.3	IGS08	2018-02-20T12:23:02
ntr90520.18o	0.6 ±1.1	0.0 ±0.5	-0.4 ±0.9	IGS08	2018-02-21T12:02:09
ntr90530.18o	0.7 ±0.7	-0.4 ±0.8	0.3 ±0.7	IGS08	2018-02-22T11:41:16
SESSION SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
2018-043-A1	0.0 ±0.0	0.0 ±0.0	0.0 ±0.2	IGS08	2018-02-12T17:48:26
2018-044-A1	0.0 ±0.0	0.0 ±0.0	-2.4 ±0.3	IGS08	2018-02-13T13:14:21
2018-044-B1	-0.9 ±0.1	-3.1 ±0.1	2.1 ±0.7	IGS08	2018-02-13T13:31:21
2018-045-A1	-0.3 ±0.0	-0.1 ±0.0	-0.2 ±0.2	IGS08	2018-02-14T17:23:20
2018-045-B1	-0.6 ±0.1	0.6 ±0.1	-2.2 ±0.4	IGS08	2018-02-14T18:19:39
2018-046-A1	-0.6 ±0.1	-0.1 ±0.1	-3.8 ±0.4	IGS08	2018-02-15T12:52:09
2018-046-B1	0.3 ±0.1	0.6 ±0.0	1.0 ±0.4	IGS08	2018-02-15T13:11:54
2018-047-A1	0.3 ±0.0	-0.1 ±0.0	-0.4 ±0.2	IGS08	2018-02-16T12:44:30
2018-047-B1	0.3 ±0.0	0.0 ±0.0	-0.1 ±0.2	IGS08	2018-02-16T13:15:28
2018-048-A1	-0.9 ±0.1	-0.4 ±0.1	-8.2 ±0.5	IGS08	2018-02-17T13:03:34
2018-048-B1	-0.4 ±0.0	-0.2 ±0.0	0.5 ±0.2	IGS08	2018-02-17T13:14:23
2018-049-A1	-0.1 ±0.0	-0.4 ±0.0	0.1 ±0.2	IGS08	2018-02-18T13:10:14
2018-049-B1	0.0 ±0.0	-0.2 ±0.0	0.5 ±0.2	IGS08	2018-02-18T13:11:31
2018-050-A1	-0.1 ±0.0	0.1 ±0.0	-0.2 ±0.3	IGS08	2018-02-19T12:37:09
2018-050-B1	0.3 ±0.0	0.1 ±0.0	1.0 ±0.3	IGS08	2018-02-19T13:04:34
2018-051-A1	0.2 ±0.0	0.2 ±0.0	0.0 ±0.2	IGS08	2018-02-20T12:30:34
2018-052-A1	-0.1 ±0.0	0.1 ±0.0	0.7 ±0.2	IGS08	2018-02-21T12:04:02
2018-053-A1	-0.1 ±0.0	-0.1 ±0.0	1.0 ±0.2	IGS08	2018-02-22T12:12:23
NETWORK SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
network-20180324_FINAL_09-2018	0.0 ±0.0	0.0 ±0.0	0.0 ±0.1	IGS08	2018-02-17T16:49:44

MARK ntr9 **Processing Results Table**

Scale uncertainties by 5.0x (100.0%) Show preferences network session OPUS published.
 The "zero" point coordinates, N32.44:29.46564049272275, W103.09:28.21921, 1096.622 m el. height, are the mean of all network adjustments.

OPUS SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
ntr90430.18o	0.7 ±2.4	-0.1 ±1.2	0.6 ±3.0	IGS08	2018-02-12T12:32:24
ntr90440.18o	0.7 ±2.4	-0.2 ±1.2	0.2 ±2.4	IGS08	2018-02-13T12:11:31
ntr90450.18o	0.7 ±2.4	-0.1 ±1.5	0.3 ±2.4	IGS08	2018-02-14T11:50:38
ntr90460.18o	0.6 ±2.7	-0.1 ±1.5	0.5 ±3.0	IGS08	2018-02-15T12:22:19
ntr90470.18o	0.8 ±2.4	0.1 ±2.4	0.4 ±1.2	IGS08	2018-02-16T12:01:26
ntr90480.18o	0.7 ±2.1	-0.2 ±2.1	0.1 ±3.8	IGS08	2018-02-17T11:40:33
ntr90490.18o	0.8 ±2.1	-0.2 ±1.8	0.4 ±2.7	IGS08	2018-02-18T12:12:14
ntr90500.18o	0.7 ±2.7	-0.1 ±1.5	0.6 ±3.8	IGS08	2018-02-19T11:51:21
ntr90510.18o	0.8 ±3.0	-0.1 ±2.1	0.0 ±3.2	IGS08	2018-02-20T12:23:02
ntr90520.18o	0.6 ±2.7	0.0 ±1.2	-0.4 ±2.4	IGS08	2018-02-21T12:02:09
ntr90530.18o	0.7 ±1.8	-0.4 ±2.1	0.3 ±1.8	IGS08	2018-02-22T11:41:16
SESSION SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
2018-043-A1	0.0 ±0.1	0.0 ±0.1	0.0 ±0.6	IGS08	2018-02-12T17:48:26
2018-044-A1	0.0 ±0.1	0.0 ±0.1	-2.4 ±0.8	IGS08	2018-02-13T13:14:21
2018-044-B1	-0.9 ±0.3	-3.1 ±0.3	2.1 ±1.9	IGS08	2018-02-13T13:31:21
2018-045-A1	-0.3 ±0.1	-0.1 ±0.1	-0.2 ±0.6	IGS08	2018-02-14T17:23:20
2018-045-B1	-0.6 ±0.2	0.6 ±0.2	-2.2 ±1.1	IGS08	2018-02-14T18:19:39
2018-046-A1	-0.6 ±0.2	-0.1 ±0.2	-3.8 ±1.1	IGS08	2018-02-15T12:52:09
2018-046-B1	0.3 ±0.2	0.6 ±0.1	1.0 ±0.1	IGS08	2018-02-15T13:11:54
2018-047-A1	0.3 ±0.1	-0.1 ±0.1	-0.4 ±0.6	IGS08	2018-02-16T12:44:30
2018-047-B1	0.3 ±0.1	0.0 ±0.1	-0.1 ±0.6	IGS08	2018-02-16T13:15:28
2018-048-A1	-0.9 ±0.2	-0.4 ±0.2	-8.2 ±1.4	IGS08	2018-02-17T13:03:34
2018-048-B1	-0.4 ±0.1	-0.2 ±0.1	0.5 ±0.6	IGS08	2018-02-17T13:14:23
2018-049-A1	-0.1 ±0.1	-0.4 ±0.1	0.1 ±0.6	IGS08	2018-02-18T13:10:14
2018-049-B1	0.0 ±0.1	-0.2 ±0.1	0.5 ±0.6	IGS08	2018-02-18T13:11:31
2018-050-A1	-0.1 ±0.1	0.1 ±0.1	-0.2 ±0.7	IGS08	2018-02-19T12:37:09
2018-050-B1	0.3 ±0.1	0.1 ±0.1	1.0 ±0.7	IGS08	2018-02-19T13:04:34
2018-051-A1	0.2 ±0.1	0.2 ±0.1	0.0 ±0.6	IGS08	2018-02-20T12:30:34
2018-052-A1	-0.1 ±0.1	0.1 ±0.1	0.7 ±0.6	IGS08	2018-02-21T12:04:02
2018-053-A1	-0.1 ±0.1	-0.1 ±0.1	1.0 ±0.6	IGS08	2018-02-22T12:12:23
NETWORK SOLUTIONS	NORTH (cm)	EAST (cm)	UP (cm)	REFERENCE FRAME	EPOCH (GPS)
network-20180324_FINAL_09-2018	0.0 ±0.0	0.0 ±0.0	0.0 ±0.2	IGS08	2018-02-17T16:49:44

Control Station Data



Name of Station: **BH 18-324-001**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 001 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 38' 18.23971"	597,854.156 US Ft	597,922.092 US Ft
Longitude Easting X:	W 103° 11' 46.54891"	891,361.132 US Ft	891,462.420 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,077.256 m	3,534.297 US Ft	3,605.531 US Ft

Location

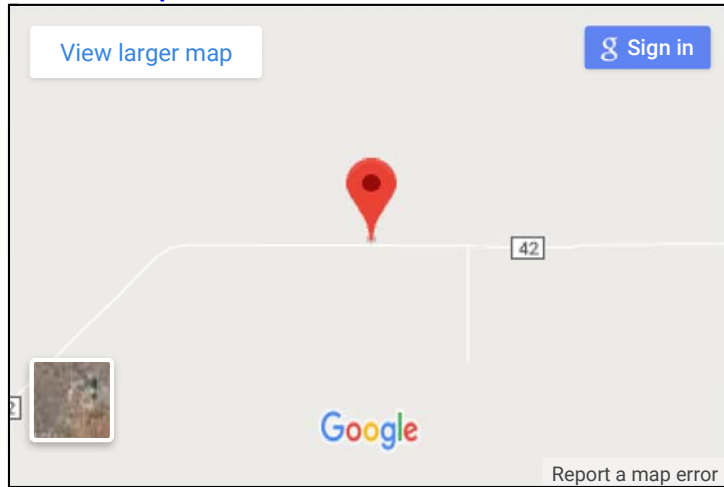
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 30 T19S R38E

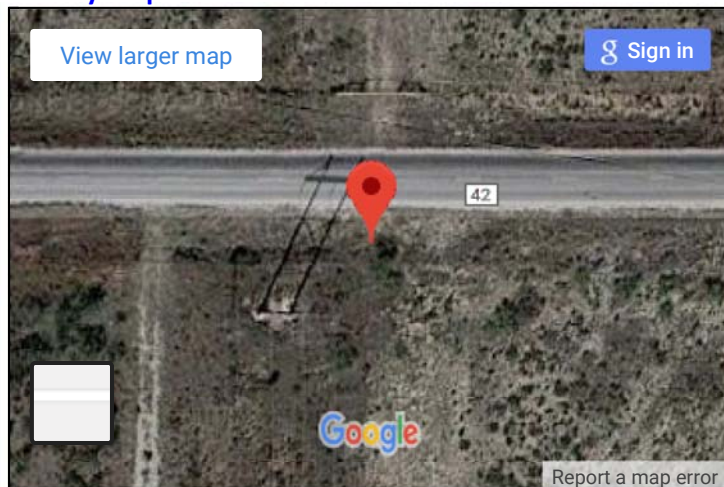
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-002**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 002 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 39' 11.24708"	602,964.384 US Ft	603,032.901 US Ft
Longitude Easting X:	W 103° 16' 25.82487"	867,426.113 US Ft	867,524.681 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,098.150 m	3,602.847 US Ft	3,674.455 US Ft

Location

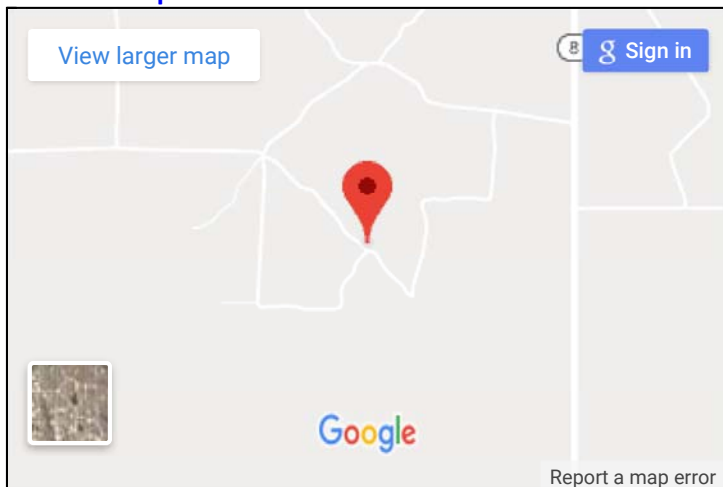
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 17 T19S R37E

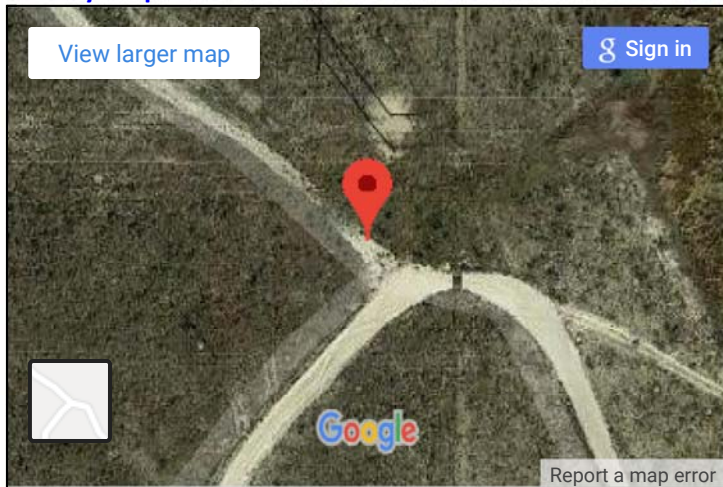
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-003**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 003 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 39' 15.36782"	604,147.905 US Ft	604,216.556 US Ft
Longitude Easting X:	W 103° 02' 53.30948"	936,890.636 US Ft	936,997.098 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,059.254 m	3,475.236 US Ft	3,546.394 US Ft

Location

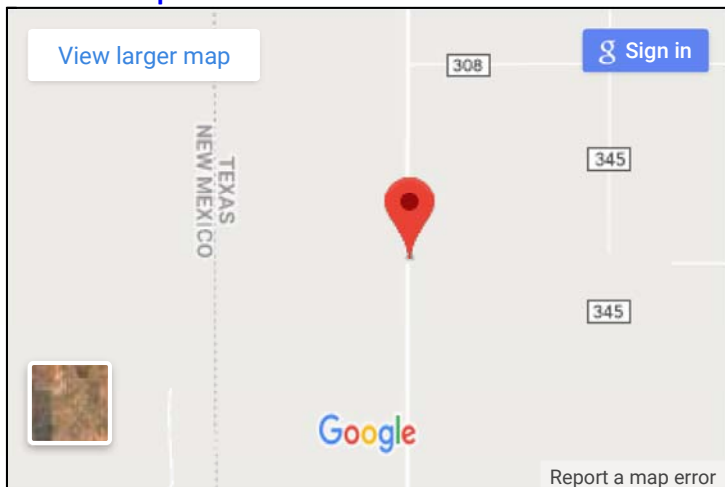
County & State: Gaines, TX

Land Grant(s): None

Note(s):

Section:

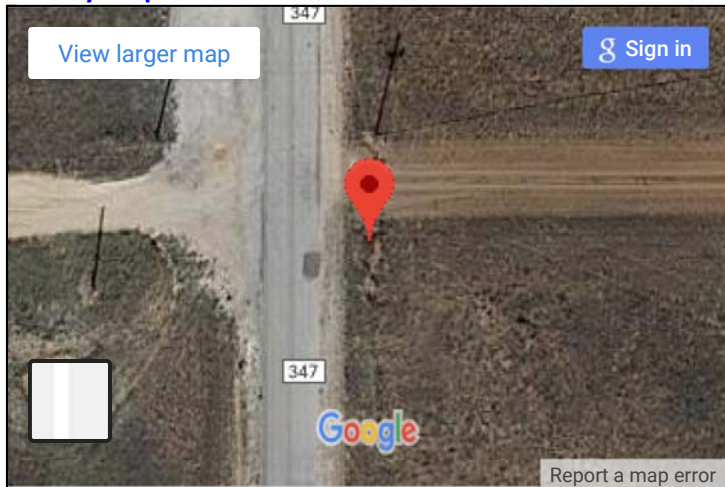
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-004**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 004 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 40' 56.72038"	614,104.511 US Ft	614,174.294 US Ft
Longitude Easting X:	W 103° 07' 39.23145"	912,328.149 US Ft	912,431.819 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,075.486 m	3,528.490 US Ft	3,599.419 US Ft

Location

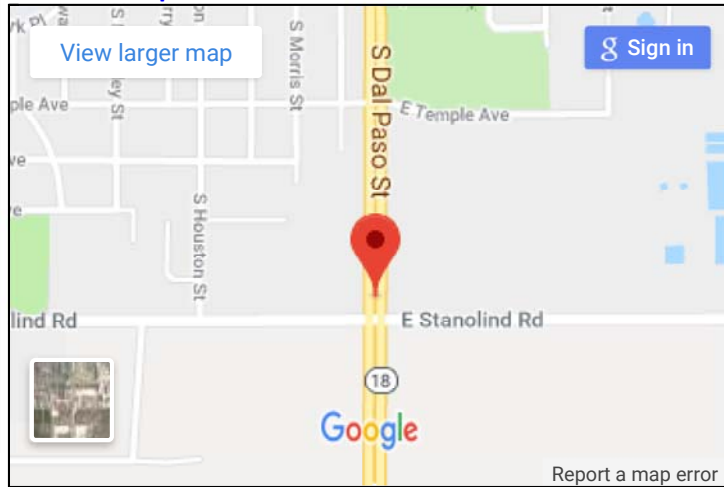
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T19S R38E

Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-006**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 006 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 32.86435"	629,650.355 US Ft	629,721.904 US Ft
Longitude Easting X:	W 103° 11' 48.35104"	890,866.380 US Ft	890,967.612 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,094.595 m	3,591.184 US Ft	3,662.155 US Ft

Location

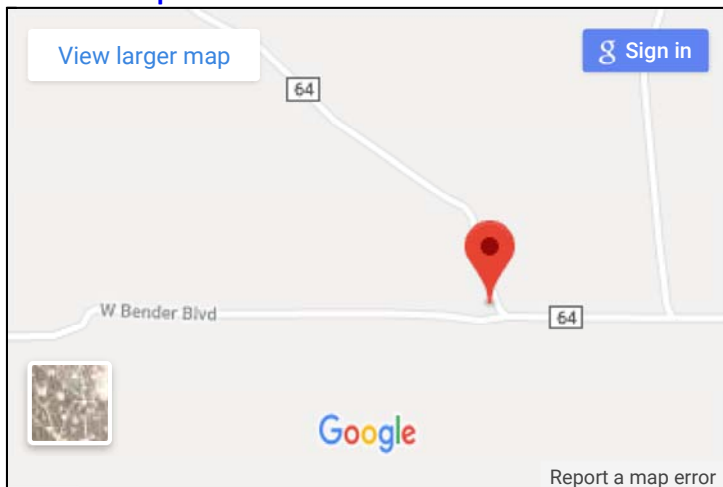
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 24 T18S R37E

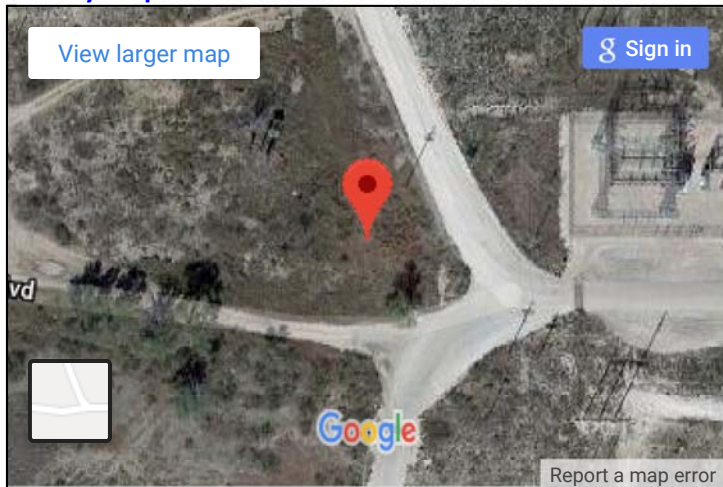
Location Map:



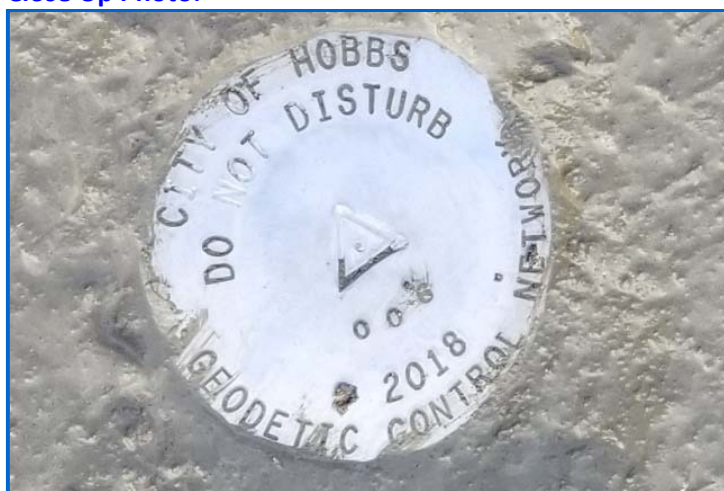
Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-008**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 008 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 47' 01.82527"	650,714.442 US Ft	650,788.385 US Ft
Longitude Easting X:	W 103° 12' 48.75389"	885,482.847 US Ft	885,583.467 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,106.417 m	3,629.970 US Ft	3,700.993 US Ft

Location

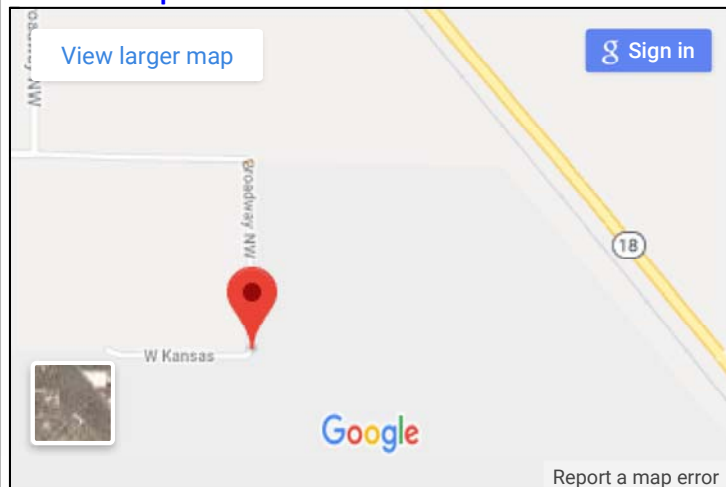
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 35 T17S R37E

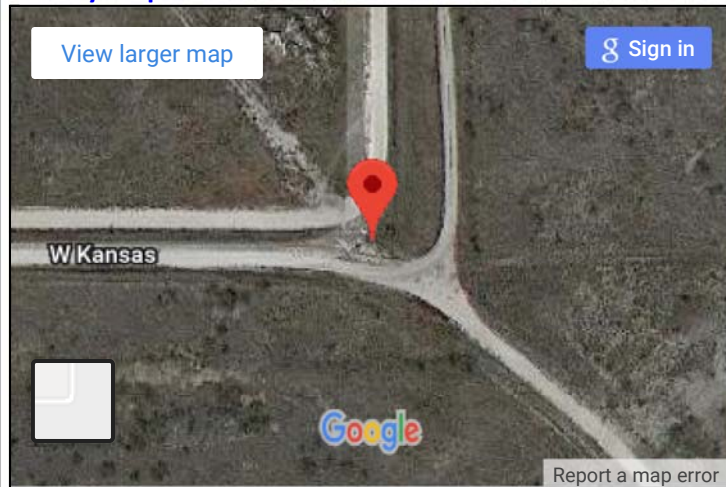
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [4C](#) [4E](#) [4N](#) [4S](#) [4W](#) [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH 18-324-009**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 009 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 47' 02.06980"	651,088.269 US Ft	651,162.254 US Ft
Longitude Easting X:	W 103° 06' 39.32708"	917,022.244 US Ft	917,126.448 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,093.893 m	3,588.881 US Ft	3,659.832 US Ft

Location

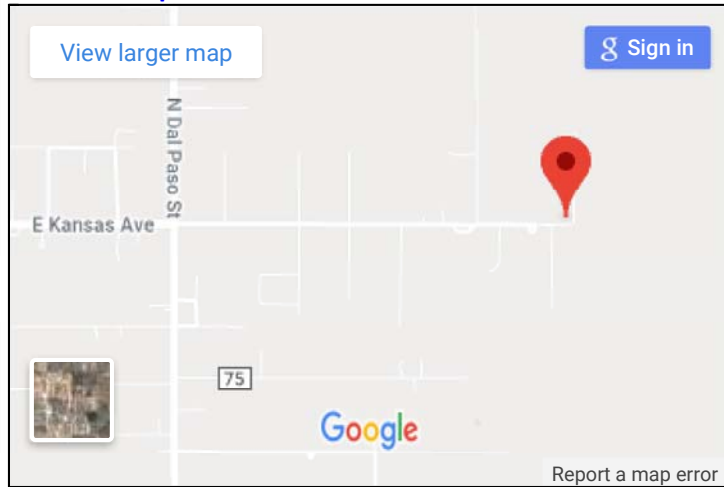
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 35 T17S R38E

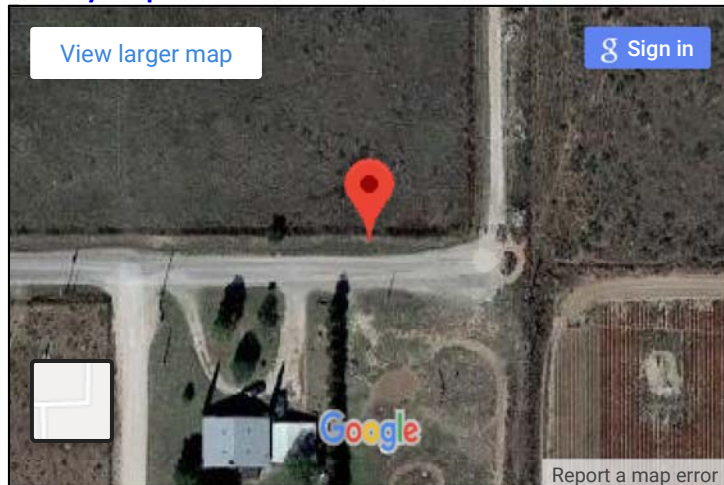
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [8C](#) [8E](#) [8N](#) [8S](#) [8W](#) [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH 18-324-010**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 010 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 39' 10.26928"	603,346.542 US Ft	603,415.102 US Ft
Longitude Easting X:	W 103° 07' 38.50735"	912,512.287 US Ft	912,615.979 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,076.728 m	3,532.565 US Ft	3,603.572 US Ft

Location

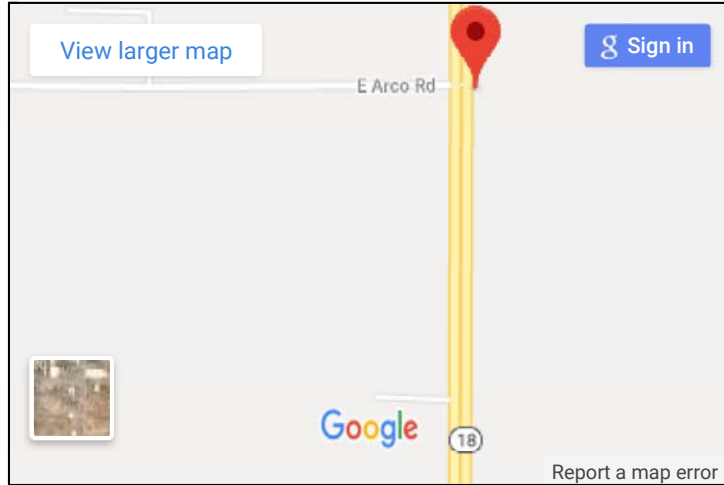
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 23 T19S R38E

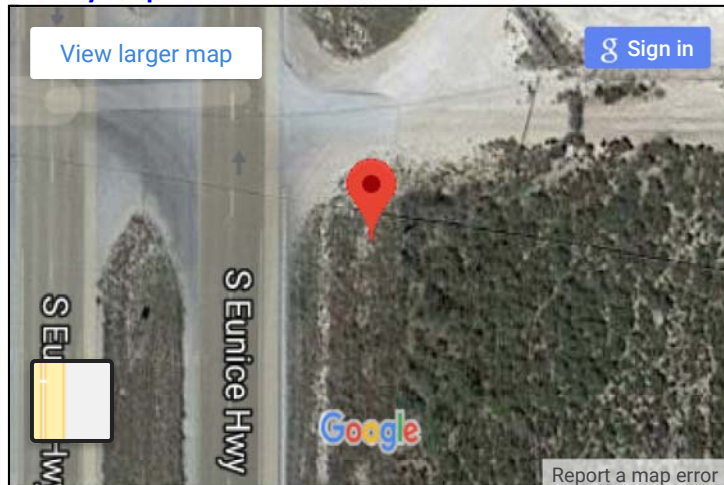
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-011**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 010 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 40' 56.04589"	614,095.686 US Ft	614,165.467 US Ft
Longitude Easting X:	W 103° 06' 38.56667"	917,514.074 US Ft	917,618.334 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,076.304 m	3,531.174 US Ft	3,602.115 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T19S R38E

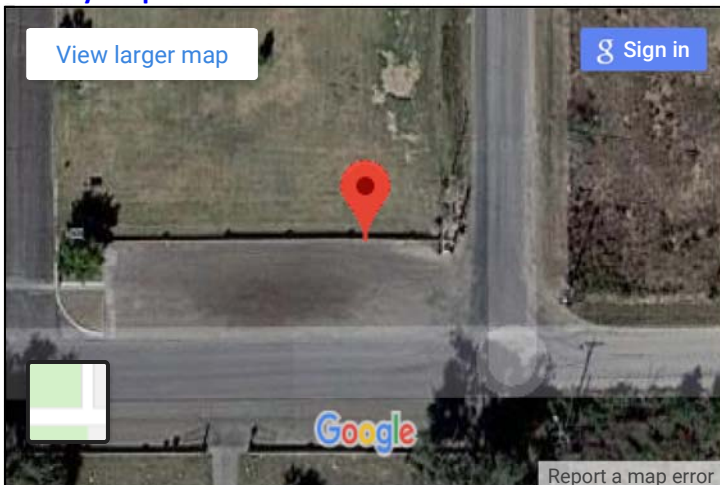
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [1C](#) [1E](#) [1N](#) [1S](#) [1W](#) [2C](#) [2E](#) [2N](#) [2S](#) [2W](#) [3C](#) [3E](#) [3N](#) [3S](#) [3W](#) [4C](#) [4E](#) [4N](#) [4S](#) [4W](#) [7C](#) [7E](#) [7N](#) [7S](#) [7W](#) [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH 18-324-012**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 22-Oct-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: Unknown

Stamping: CITY OF HOBBS 012 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 40' 55.78998"	613,951.157 US Ft	614,020.922 US Ft
Longitude Easting X:	W 103° 08' 40.73365"	907,072.500 US Ft	907,175.574 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,078.855 m	3,539.543 US Ft	3,610.478 US Ft

Location

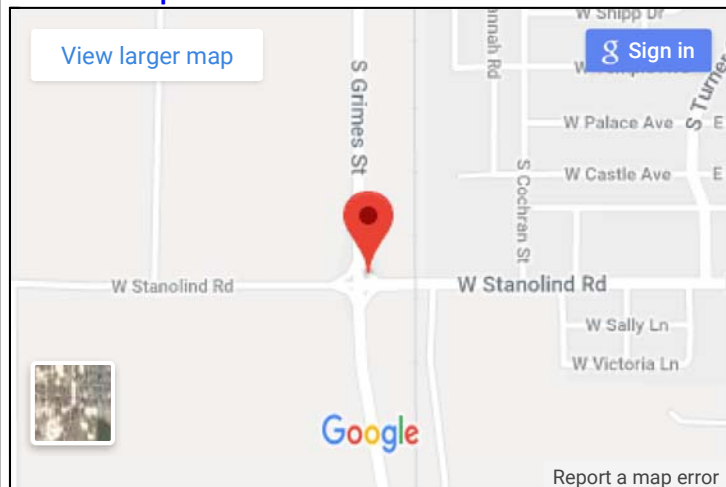
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 3 T19S R38E

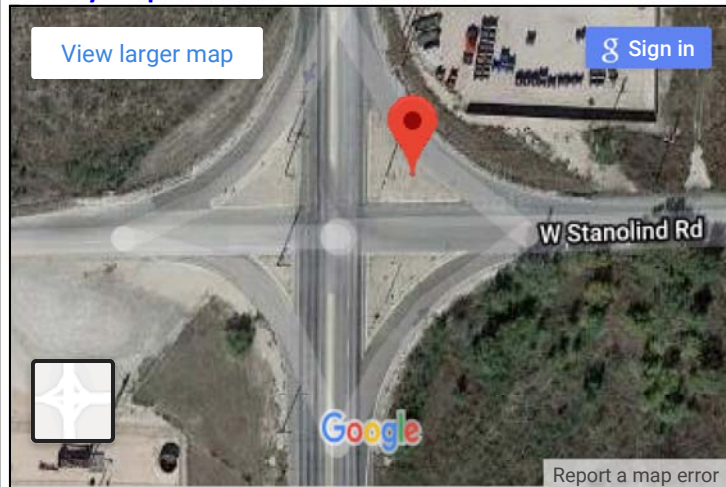
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-013**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 013 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 31.87664"	617,531.662 US Ft	617,601.834 US Ft
Longitude Easting X:	W 103° 09' 50.90586"	901,034.558 US Ft	901,136.945 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,080.629 m	3,545.364 US Ft	3,616.299 US Ft

Location

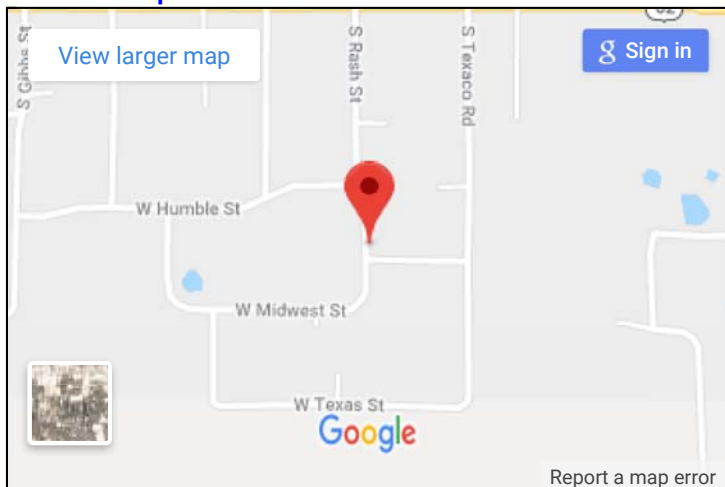
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 5 T19S R38E

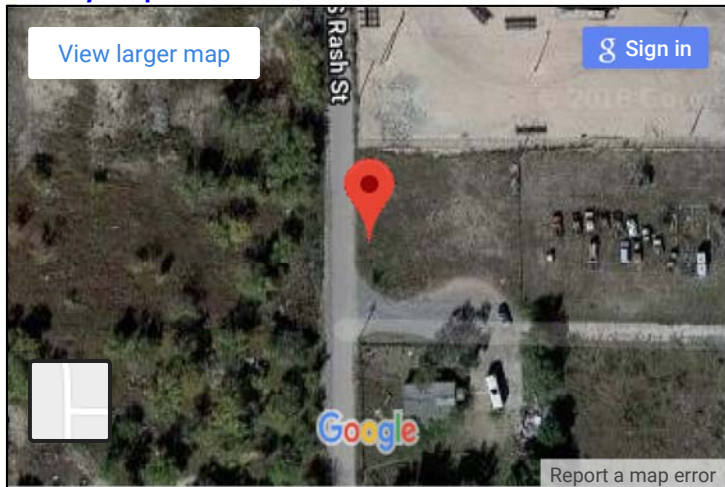
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-014**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 014 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 40' 55.16399"	613,712.574 US Ft	613,782.312 US Ft
Longitude Easting X:	W 103° 11' 47.89868"	891,075.889 US Ft	891,177.145 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,082.542 m	3,551.640 US Ft	3,622.680 US Ft

Location

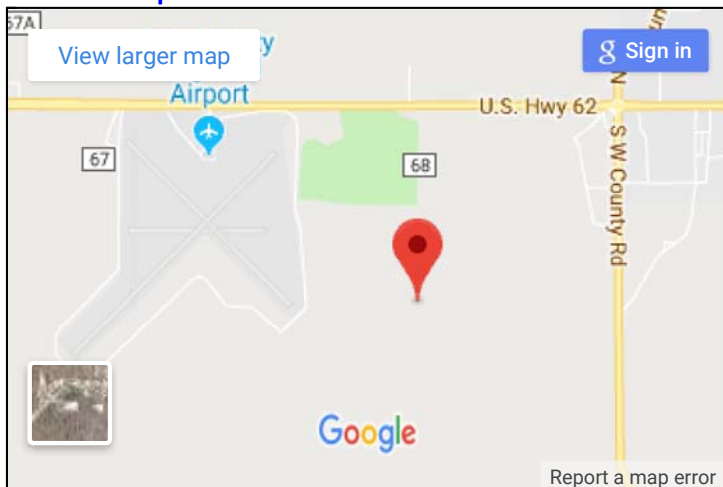
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 12 T19S R37E

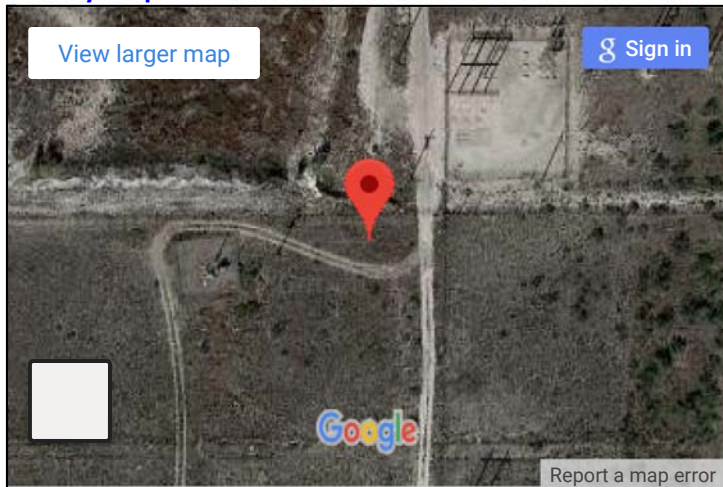
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-015**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 015 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 40' 55.32041"	613,626.639 US Ft	613,696.367 US Ft
Longitude Easting X:	W 103° 13' 40.55552"	881,446.807 US Ft	881,546.968 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,092.880 m	3,585.557 US Ft	3,656.728 US Ft

Location

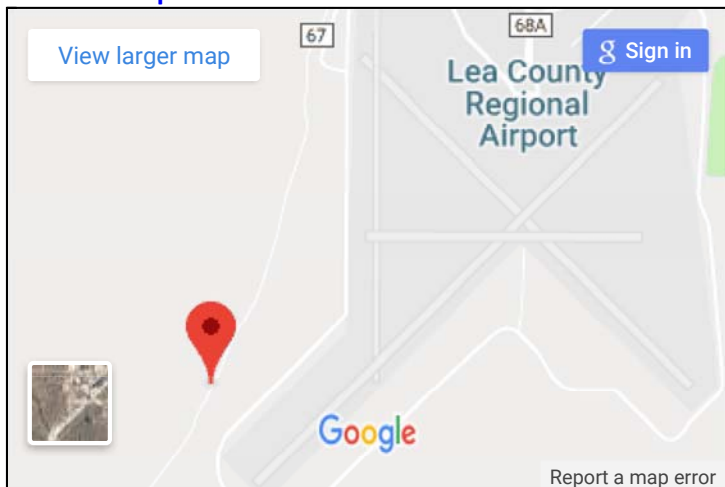
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T19S R37E

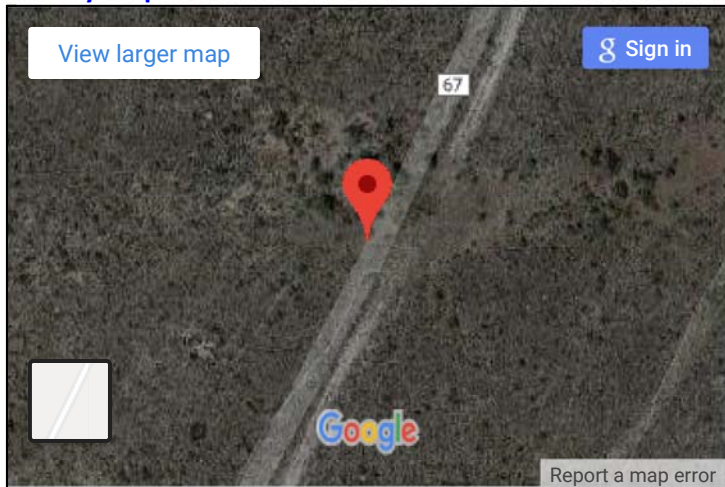
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-016**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 016 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 49.51449"	618,936.521 US Ft	619,006.853 US Ft
Longitude Easting X:	W 103° 16' 53.00700"	864,943.534 US Ft	865,041.820 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,112.503 m	3,649.937 US Ft	3,721.357 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 32 T18S R37E

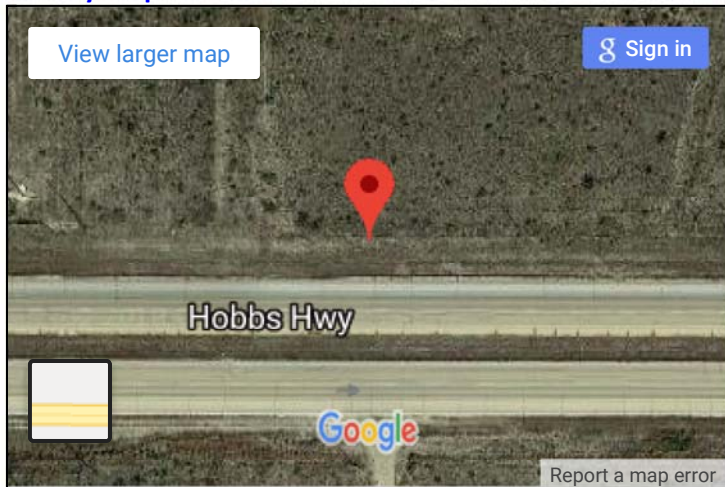
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-017**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 20-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 017 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 46.95606"	618,890.199 US Ft	618,960.526 US Ft
Longitude Easting X:	W 103° 12' 50.38440"	885,679.917 US Ft	885,780.560 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,090.222 m	3,576.837 US Ft	3,647.903 US Ft

Location

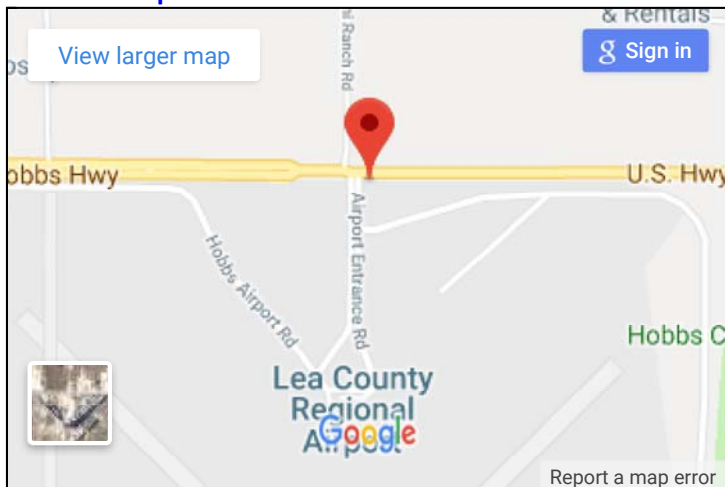
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T19S R37E

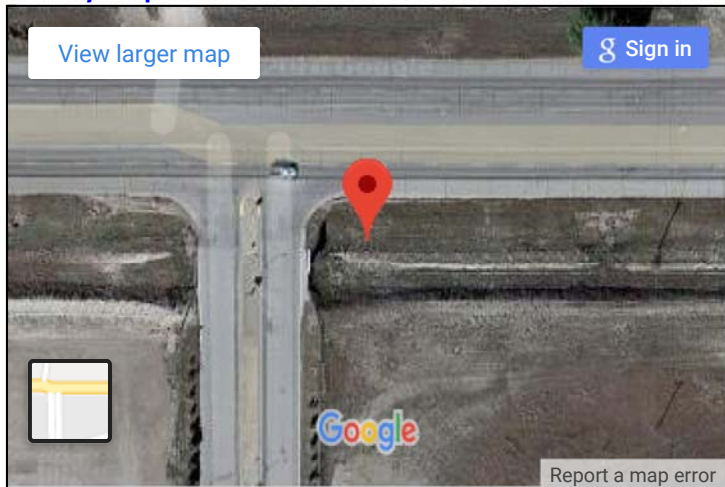
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-018**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 018 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 46.31620"	618,879.997 US Ft	618,950.322 US Ft
Longitude Easting X:	W 103° 11' 50.44478"	890,802.905 US Ft	890,904.130 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,090.027 m	3,576.197 US Ft	3,647.204 US Ft

Location

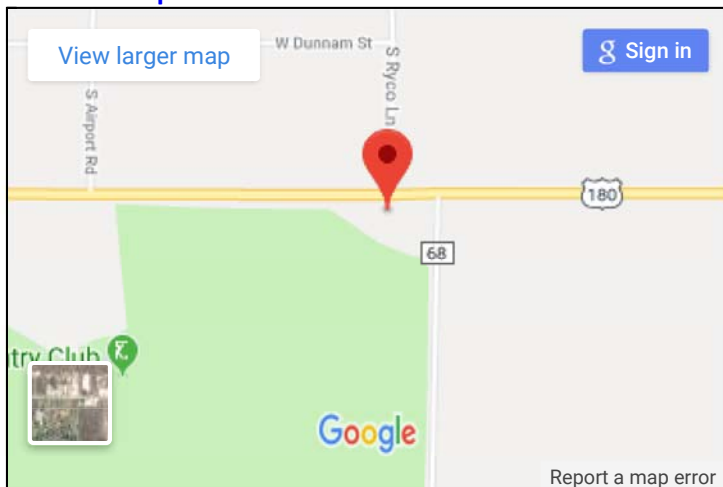
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 1 T19S R37E

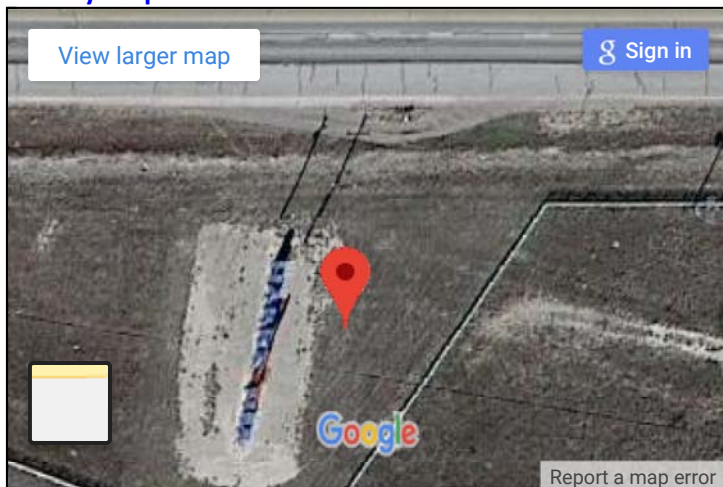
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-019**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 19-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 019 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 46.97247"	619,005.175 US Ft	619,075.514 US Ft
Longitude Easting X:	W 103° 10' 46.65083"	896,253.885 US Ft	896,355.729 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,085.361 m	3,560.889 US Ft	3,631.846 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 6 T19S R38E

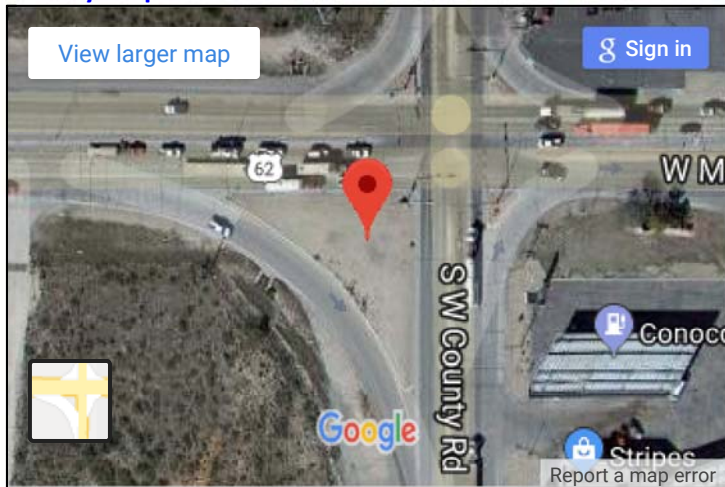
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-021**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 021 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 48.35680"	619,268.488 US Ft	619,338.858 US Ft
Longitude Easting X:	W 103° 08' 35.96909"	907,420.133 US Ft	907,523.246 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,082.034 m	3,549.973 US Ft	3,620.882 US Ft

Location

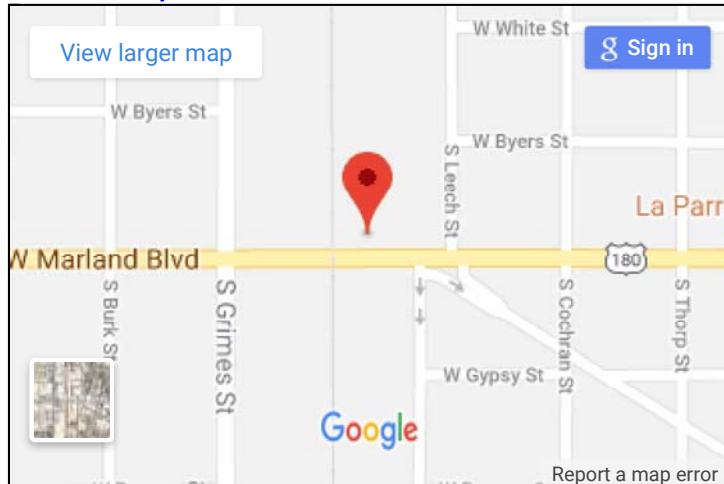
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 34 T18S R38E

Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-022**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 022 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 47.17844"	619,208.845 US Ft	619,279.208 US Ft
Longitude Easting X:	W 103° 07' 34.41548"	912,681.744 US Ft	912,785.455 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,076.788 m	3,532.762 US Ft	3,603.671 US Ft

Location

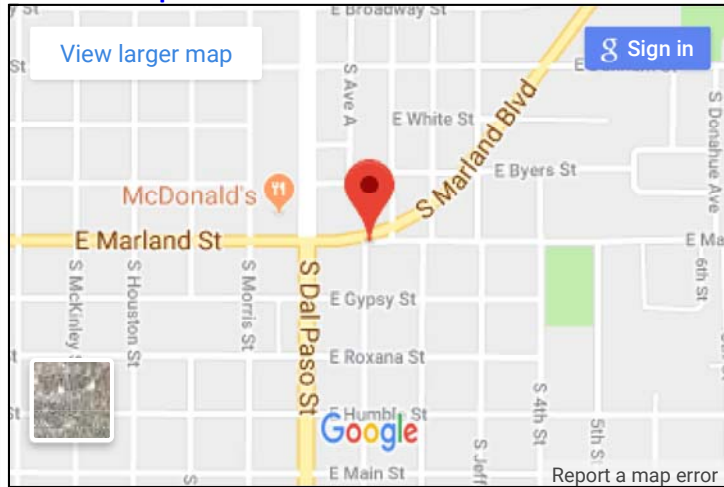
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T19S R38E

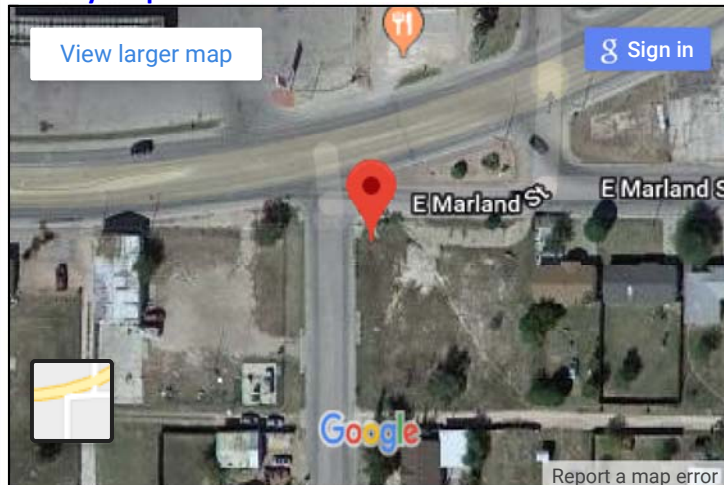
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-023**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 18-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 023 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 41' 47.45054"	619,293.360 US Ft	619,363.733 US Ft
Longitude Easting X:	W 103° 06' 36.19203"	917,657.124 US Ft	917,761.400 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,075.854 m	3,529.698 US Ft	3,600.623 US Ft

Location

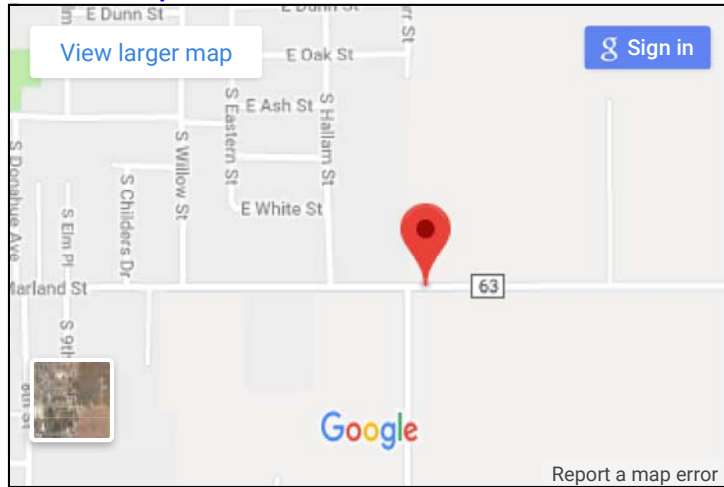
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 1 T19S R38E

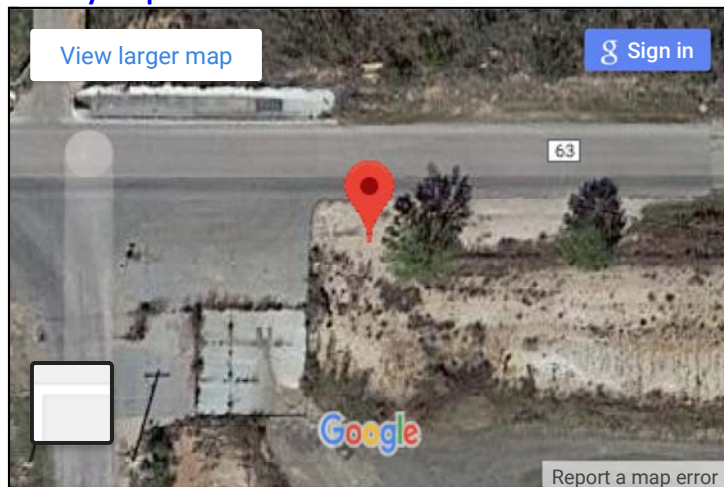
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-024**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 024 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 36.95425"	624,521.954 US Ft	624,592.921 US Ft
Longitude Easting X:	W 103° 02' 53.26160"	936,647.912 US Ft	936,754.346 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,069.864 m	3,510.045 US Ft	3,581.141 US Ft

Location

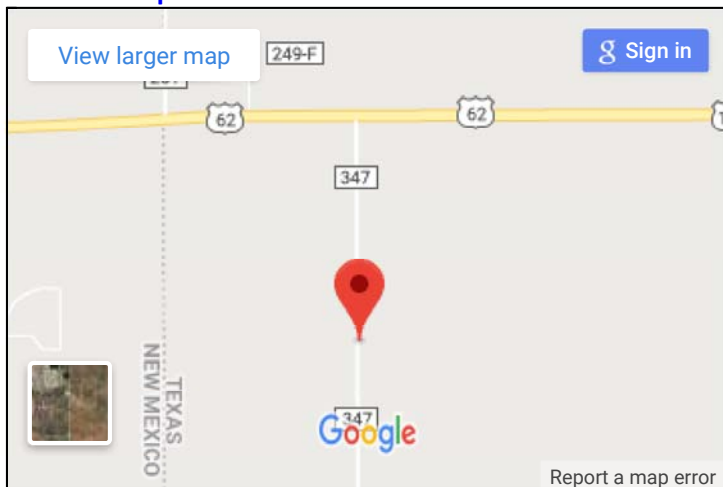
County & State: Gaines, TX

Land Grant(s): None

Note(s):

Section:

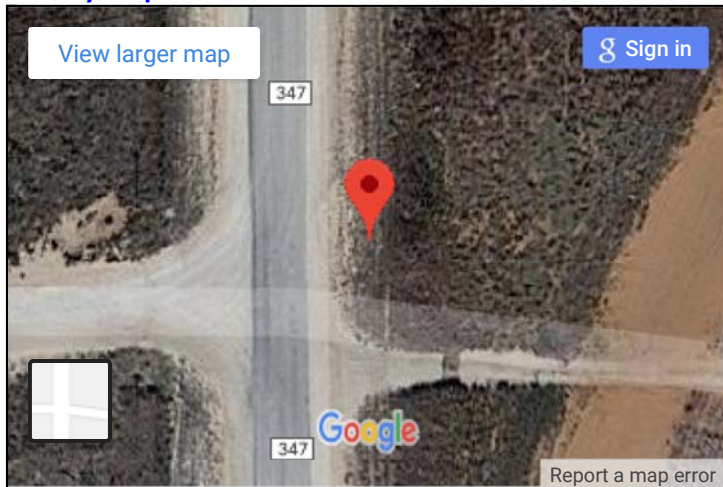
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-025**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 17-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 025 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 38.75929"	624,478.929 US Ft	624,549.890 US Ft
Longitude Easting X:	W 103° 06' 36.27863"	917,589.896 US Ft	917,694.165 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,079.728 m	3,542.408 US Ft	3,613.323 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 36 T18S R38E

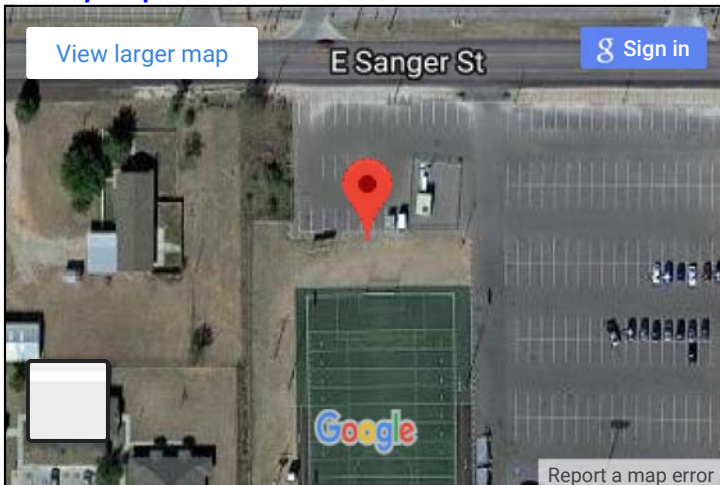
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-031**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 17-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: CITY OF HOBBS 031 2018 GEODETIC CONTROL NETWORK

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 26.46733"	629,156.447 US Ft	629,227.940 US Ft
Longitude Easting X:	W 103° 09' 05.04567"	904,824.756 US Ft	904,927.574 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,086.394 m	3,564.278 US Ft	3,635.173 US Ft

Location

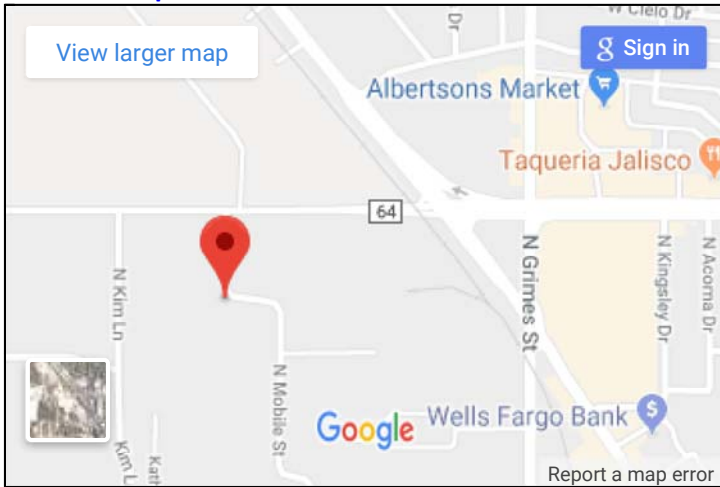
County & State: Lea, NM

Section: sec 28 T18S R38E

Land Grant(s): None

Note(s):

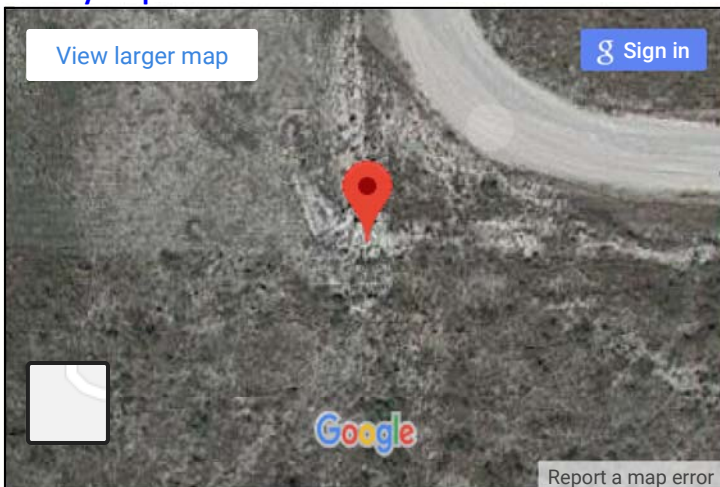
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-033**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 033 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 30.83223"	629,678.602 US Ft	629,750.154 US Ft
Longitude Easting X:	W 103° 07' 40.86505"	912,011.461 US Ft	912,115.096 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,083.607 m	3,555.134 US Ft	3,626.029 US Ft

Location

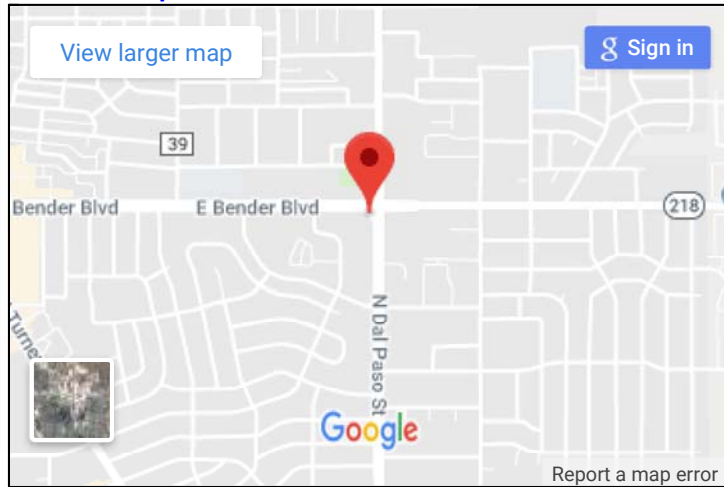
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 27 T18S R38E

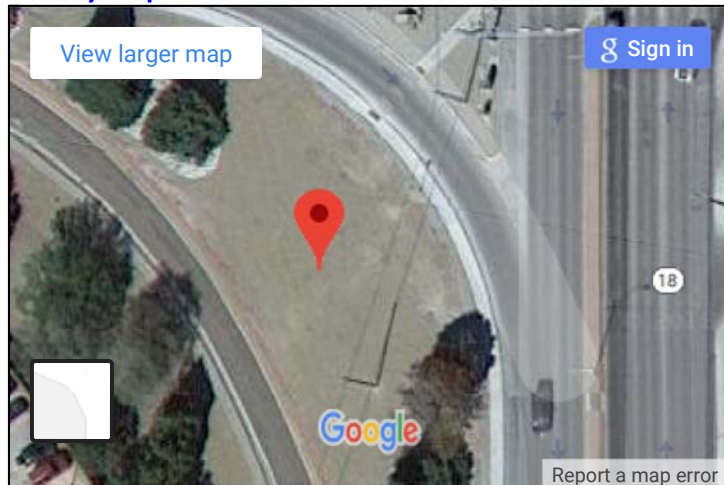
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-035**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 035 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 34.84763"	630,203.699 US Ft	630,275.311 US Ft
Longitude Easting X:	W 103° 05' 39.81644"	922,348.054 US Ft	922,452.863 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,082.219 m	3,550.580 US Ft	3,621.525 US Ft

Location

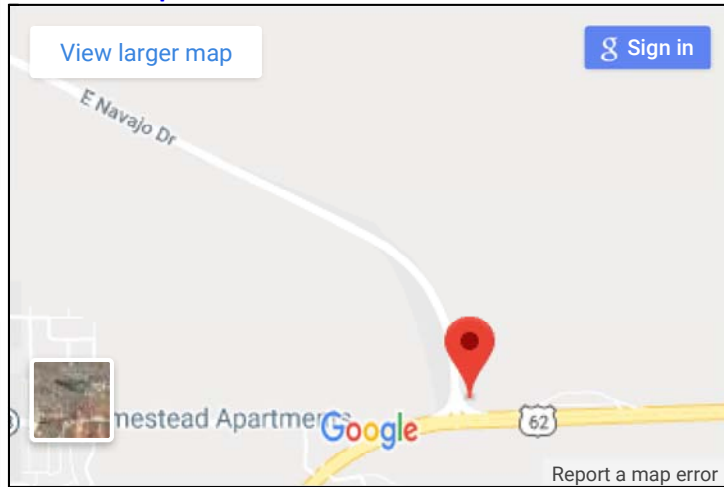
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 24 T18S R38E

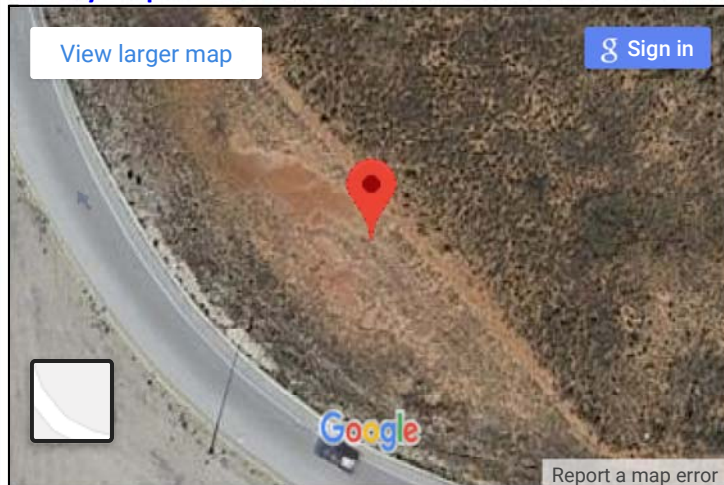
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-040**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 040 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 24.73979"	634,951.633 US Ft	635,023.785 US Ft
Longitude Easting X:	W 103° 10' 45.12400"	896,210.736 US Ft	896,312.575 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,093.820 m	3,588.641 US Ft	3,659.573 US Ft

Location

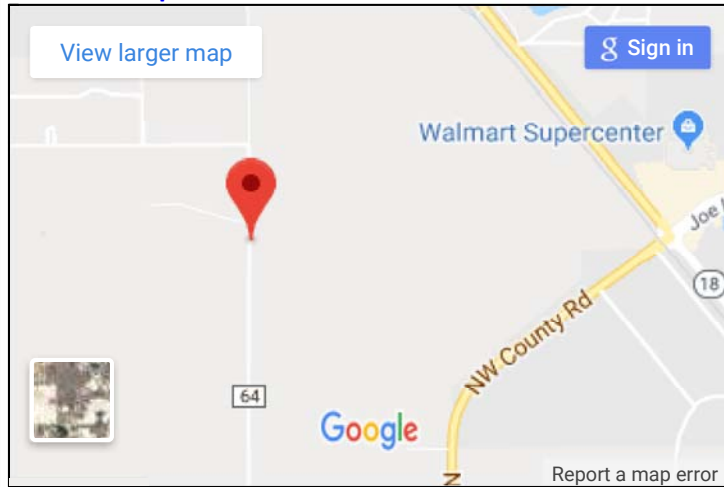
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 17 T18S R38E

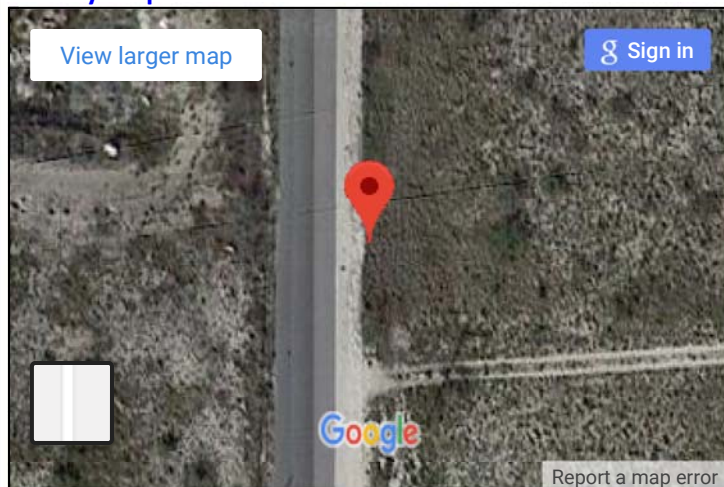
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-041**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 041 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 47' 27.39442"	653,151.360 US Ft	653,225.580 US Ft
Longitude Easting X:	W 103° 15' 35.17629"	871,248.523 US Ft	871,347.525 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,118.897 m	3,670.915 US Ft	3,742.056 US Ft

Location

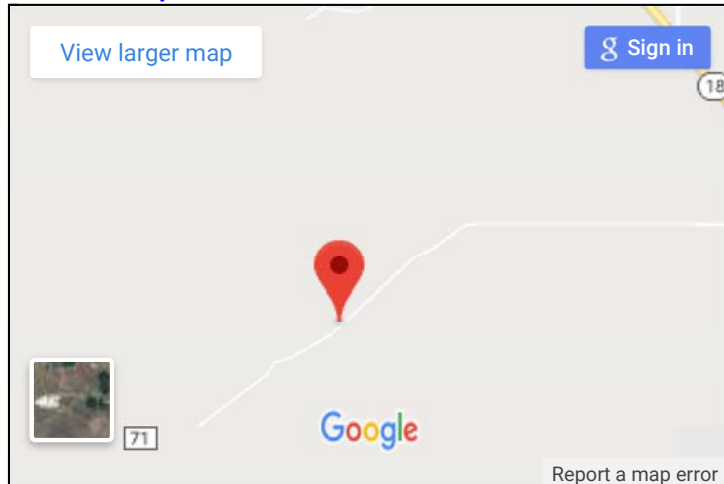
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 33 T17S R37E

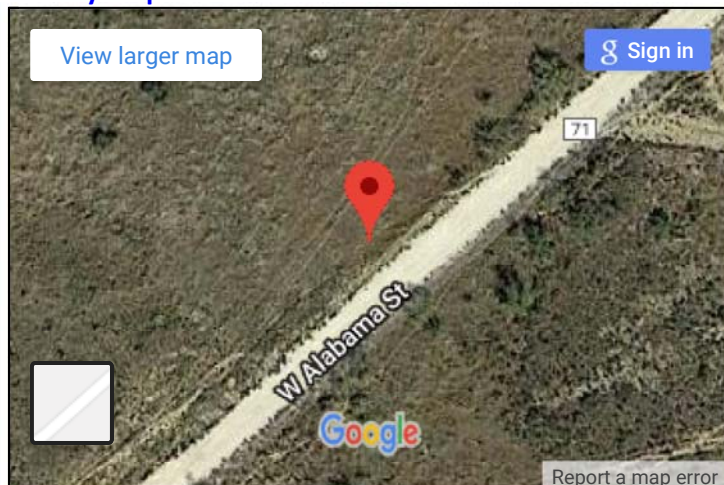
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-045**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 045 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 12.35804"	639,781.113 US Ft	639,853.813 US Ft
Longitude Easting X:	W 103° 10' 27.07808"	897,699.475 US Ft	897,801.483 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,094.430 m	3,590.642 US Ft	3,661.571 US Ft

Location

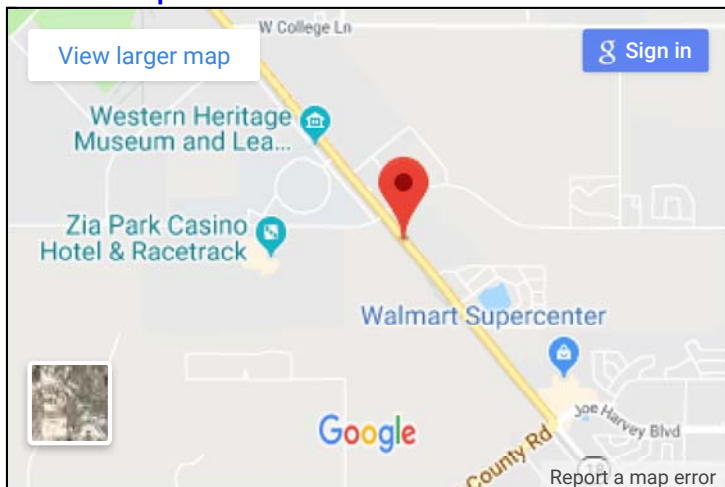
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 17 T18S R38E

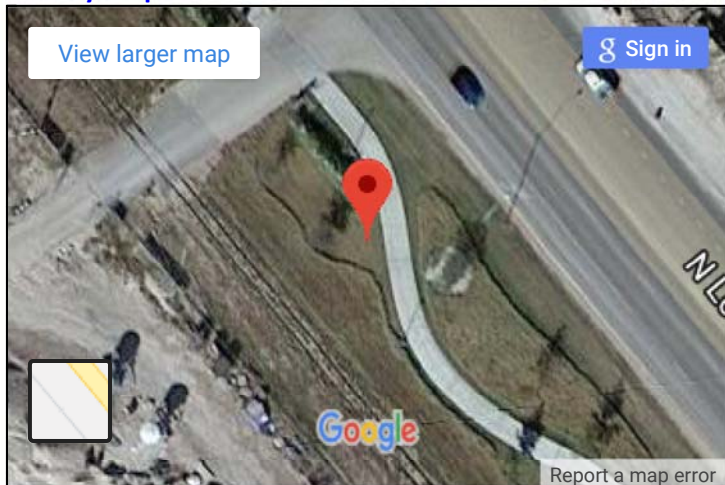
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-046**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 046 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 17.57058"	640,406.537 US Ft	640,479.308 US Ft
Longitude Easting X:	W 103° 08' 42.91030"	906,589.879 US Ft	906,692.898 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.567 m	3,574.688 US Ft	3,645.600 US Ft

Location

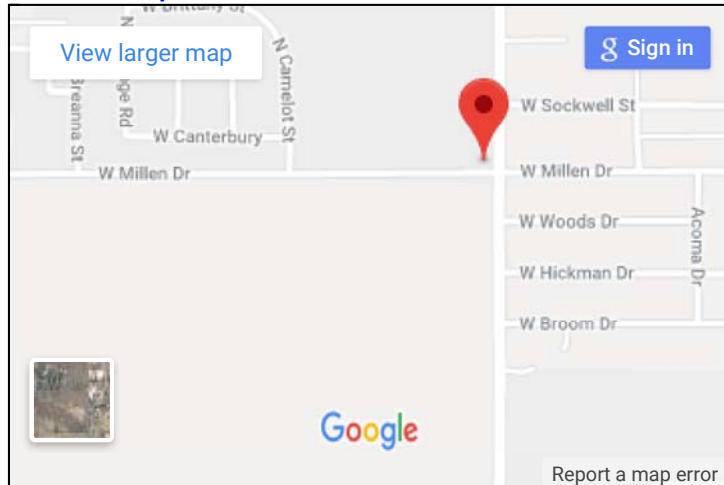
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 9 T18S R38E

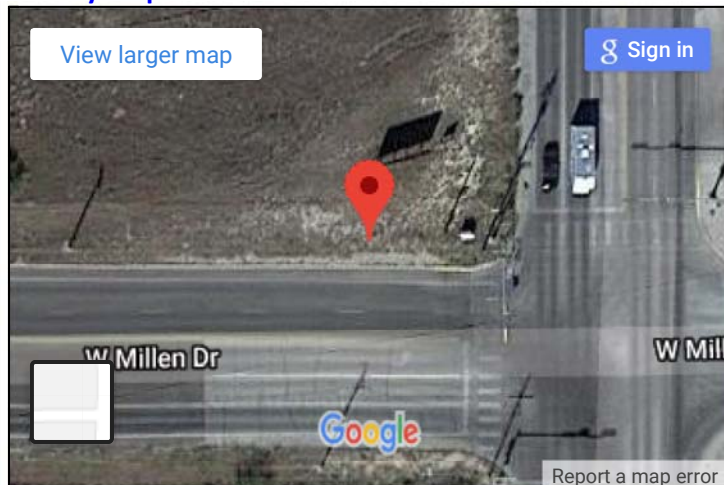
Location Map:



Vicinity Photo (Looking North):



Vicinity Map:



Close Up Photo:



Control Station Data



Name of Station: **BH 18-324-047**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 047 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 01.92790"	645,176.608 US Ft	645,249.921 US Ft
Longitude Easting X:	W 103° 03' 53.31645"	931,268.359 US Ft	931,374.181 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,086.346 m	3,564.120 US Ft	3,635.157 US Ft

Location

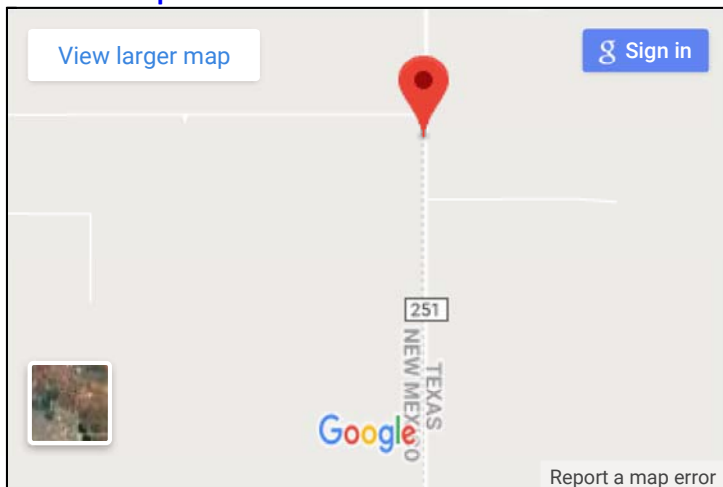
County & State: Gaines, TX

Land Grant(s): None

Note(s):

Section:

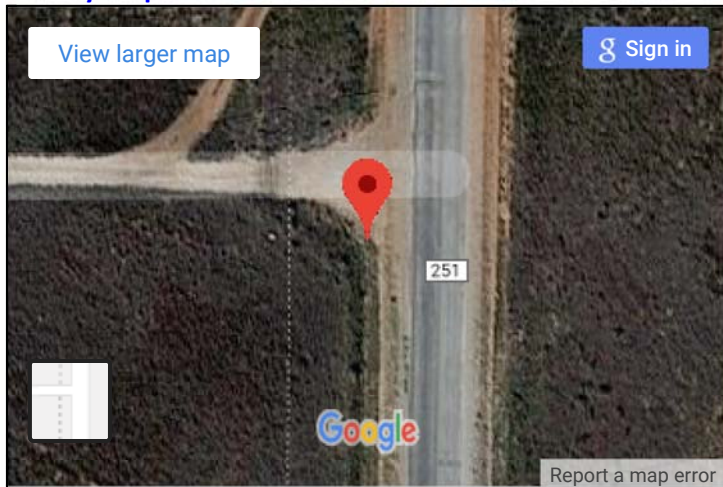
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-048**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 048 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 51' 57.64832"	680,390.990 US Ft	680,468.305 US Ft
Longitude Easting X:	W 103° 17' 01.71034"	863,590.142 US Ft	863,688.274 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,137.538 m	3,732.073 US Ft	3,803.217 US Ft

Location

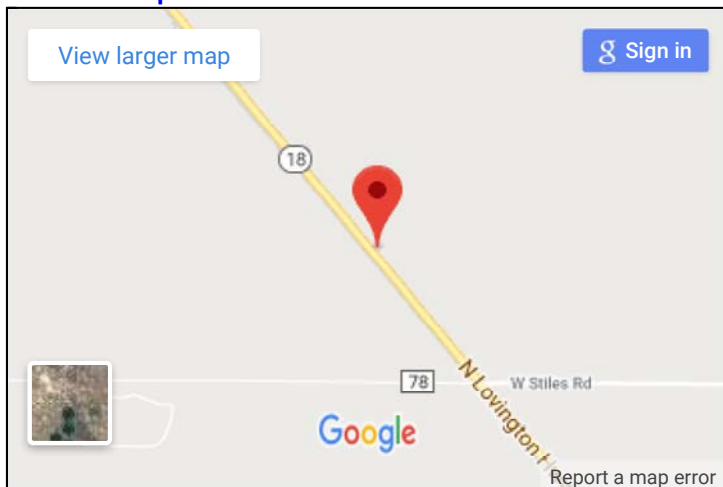
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 6 T17S R37E

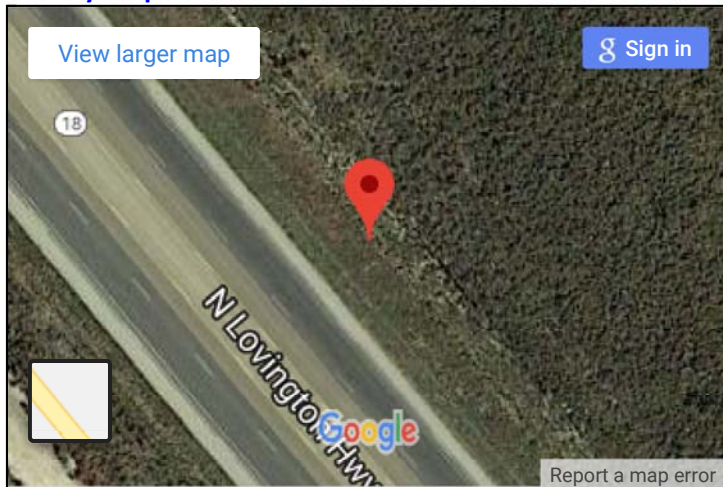
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-049**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 049 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 52' 17.80881"	682,650.544 US Ft	682,728.116 US Ft
Longitude Easting X:	W 103° 12' 48.44648"	885,170.659 US Ft	885,271.244 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,122.205 m	3,681.768 US Ft	3,752.798 US Ft

Location

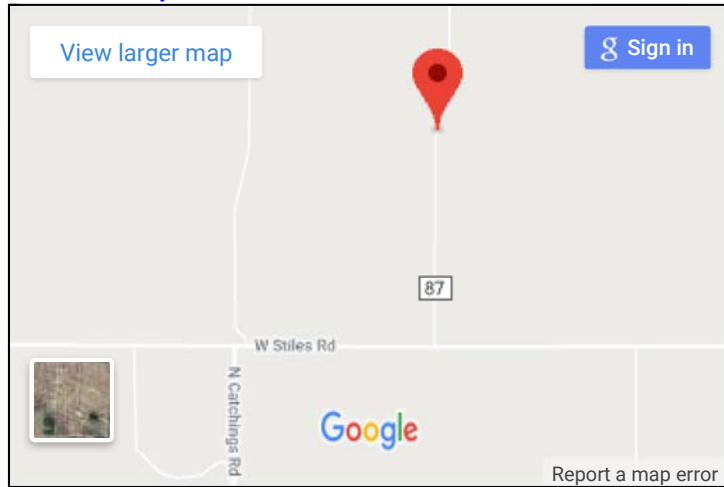
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 35 T16S R37E

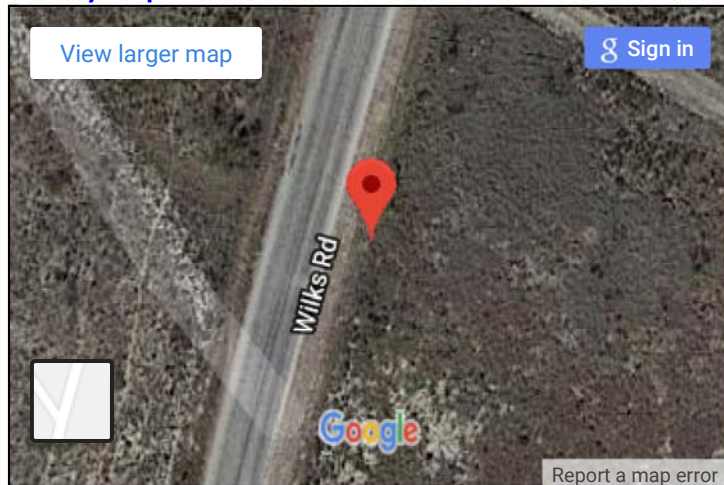
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-050**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 050 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 52' 06.86338"	681,833.571 US Ft	681,911.050 US Ft
Longitude Easting X:	W 103° 07' 40.53299"	911,445.404 US Ft	911,548.974 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,107.450 m	3,633.359 US Ft	3,704.340 US Ft

Location

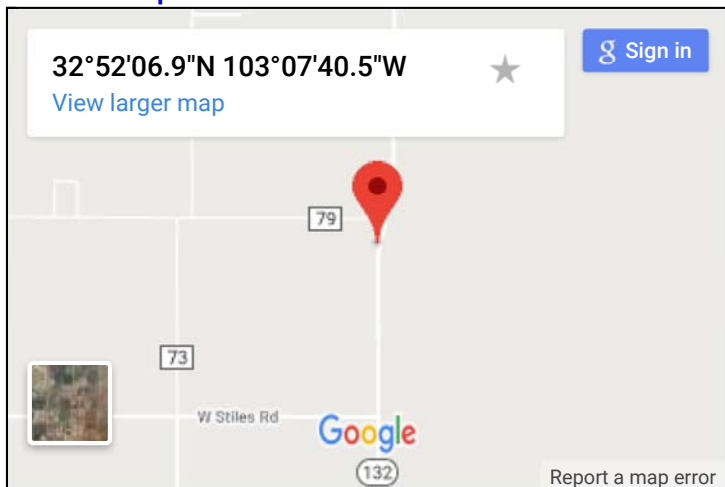
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 3 T17S R38E

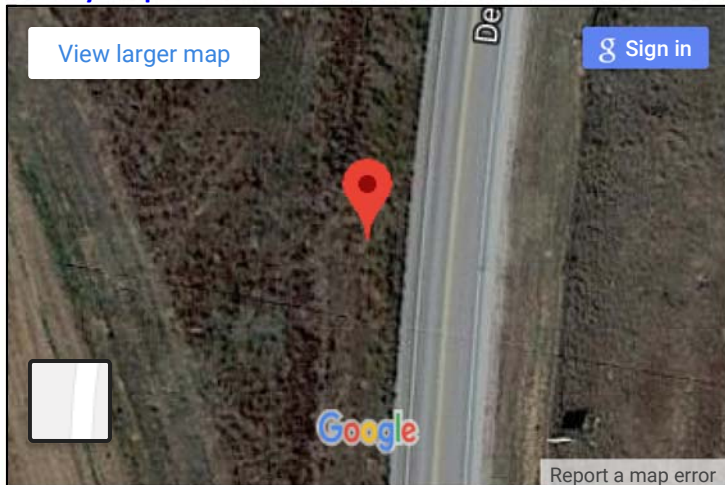
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-051**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 051 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 51' 26.55983"	678,079.530 US Ft	678,156.582 US Ft
Longitude Easting X:	W 103° 02' 24.06714"	938,488.132 US Ft	938,594.775 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,086.231 m	3,563.743 US Ft	3,634.825 US Ft

Location

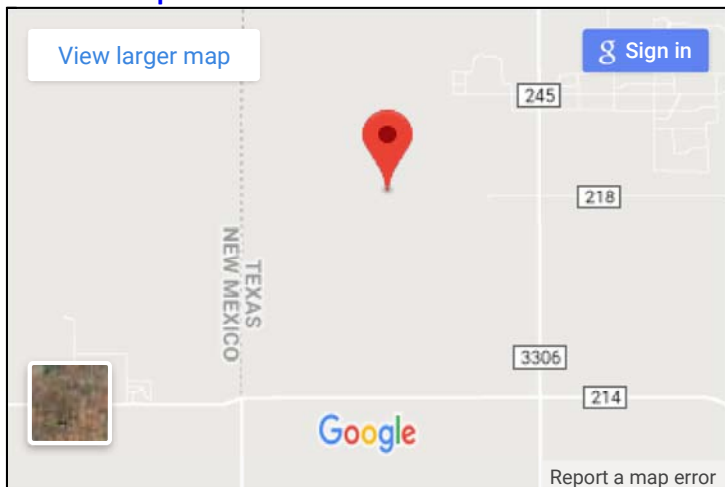
County & State: Gaines, TX

Land Grant(s): None

Note(s):

Section:

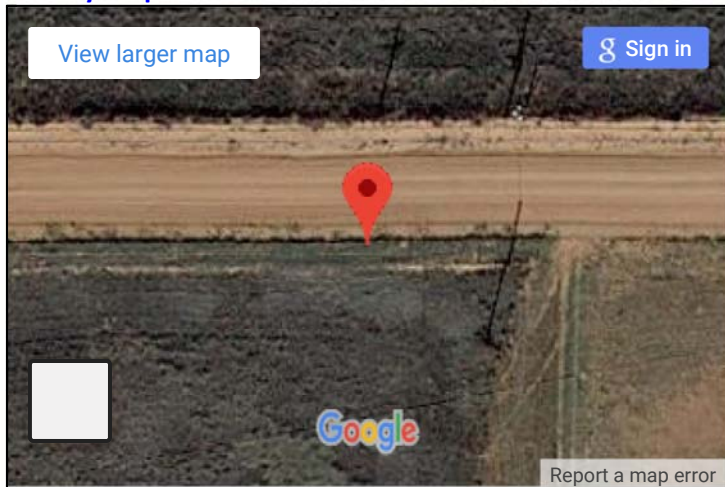
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-052**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 052 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 49' 42.21121"	667,473.152 US Ft	667,548.999 US Ft
Longitude Easting X:	W 103° 03' 21.64973"	933,703.538 US Ft	933,809.638 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.756 m	3,575.308 US Ft	3,646.371 US Ft

Location

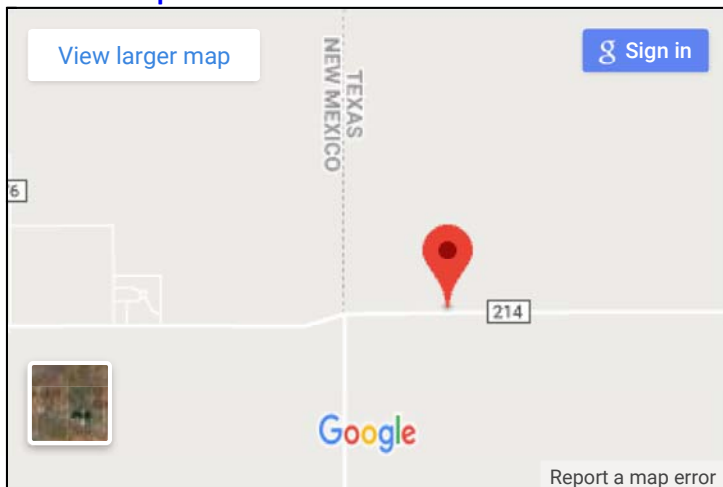
County & State: Gaines, TX

Land Grant(s): None

Note(s):

Section:

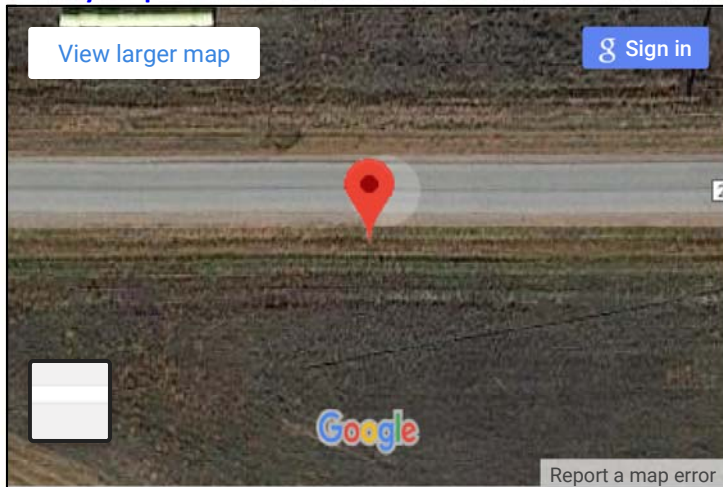
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-053**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 053 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 49' 38.42170"	666,830.746 US Ft	666,906.520 US Ft
Longitude Easting X:	W 103° 07' 40.41647"	911,626.577 US Ft	911,730.168 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,099.113 m	3,606.007 US Ft	3,676.978 US Ft

Location

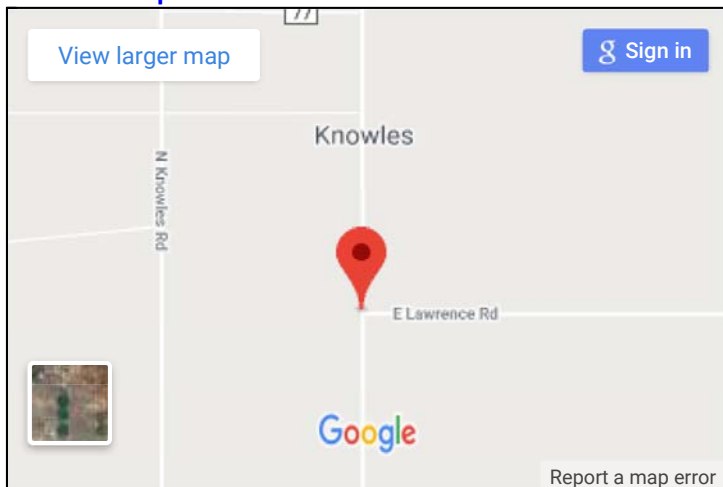
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 22 T17S R38E

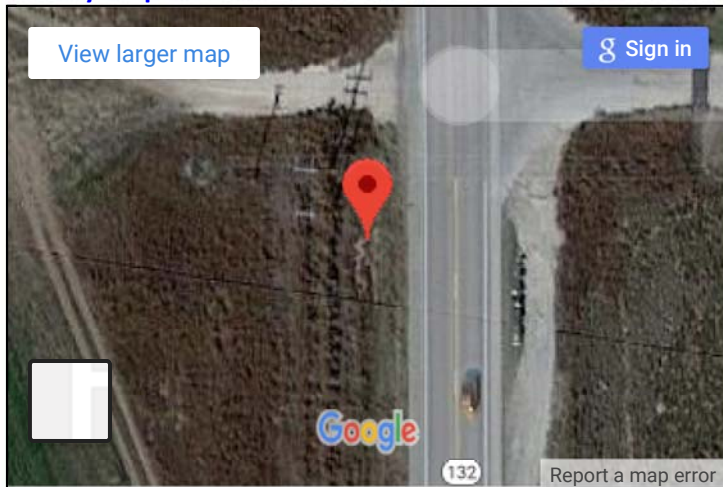
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-054**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 054 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 49' 38.44295"	666,537.886 US Ft	666,613.626 US Ft
Longitude Easting X:	W 103° 12' 54.88326"	884,792.182 US Ft	884,892.724 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,113.805 m	3,654.209 US Ft	3,725.239 US Ft

Location

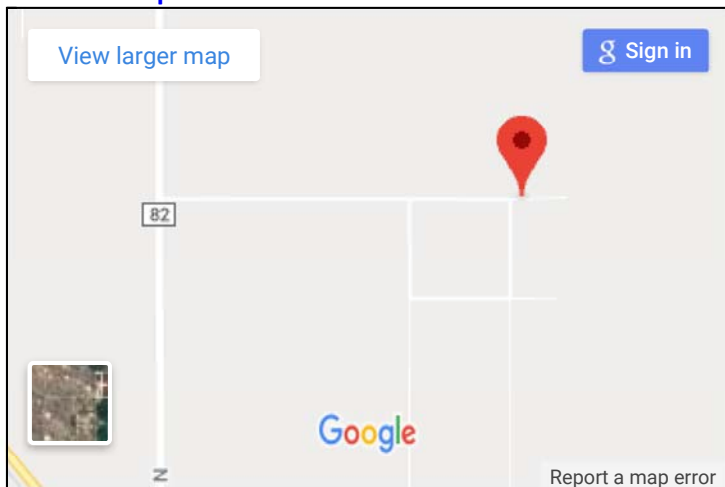
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 23 T17S R37E

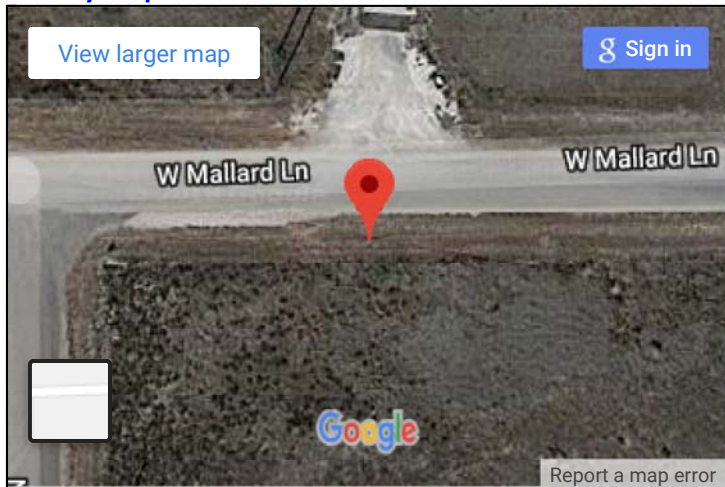
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-055**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 055 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 50' 38.80509"	672,486.842 US Ft	672,563.259 US Ft
Longitude Easting X:	W 103° 15' 46.56025"	870,080.818 US Ft	870,179.688 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,128.499 m	3,702.417 US Ft	3,773.526 US Ft

Location

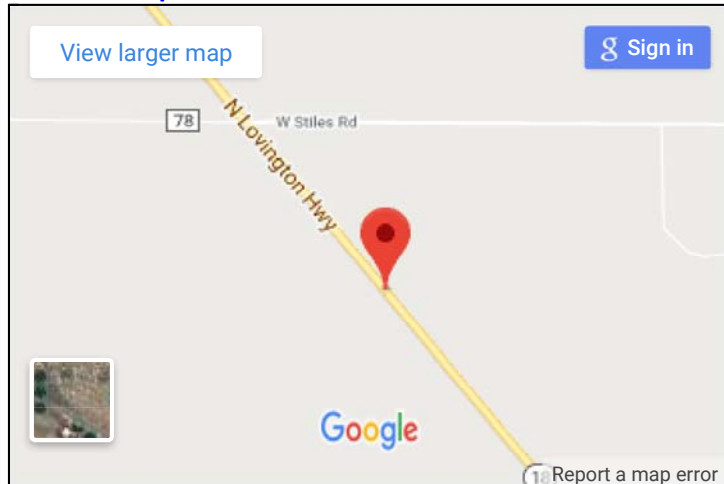
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 9 T17S R37E

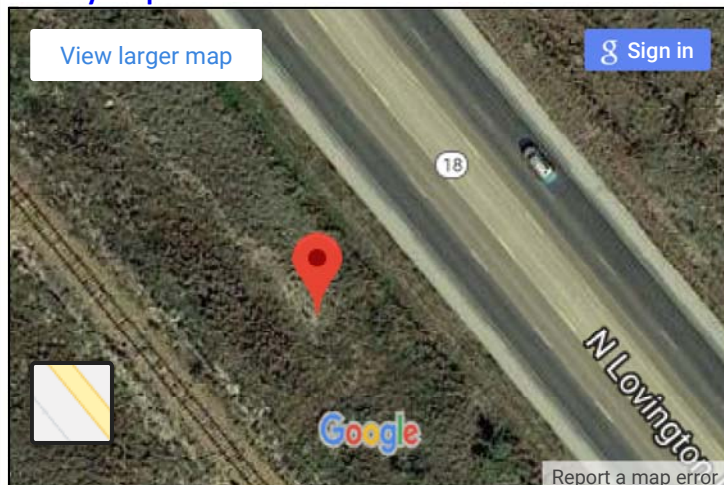
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-057**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 057 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 19.39128"	646,608.353 US Ft	646,681.829 US Ft
Longitude Easting X:	W 103° 09' 31.46680"	902,373.708 US Ft	902,476.247 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,094.863 m	3,592.063 US Ft	3,662.995 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 4 T18S R38E

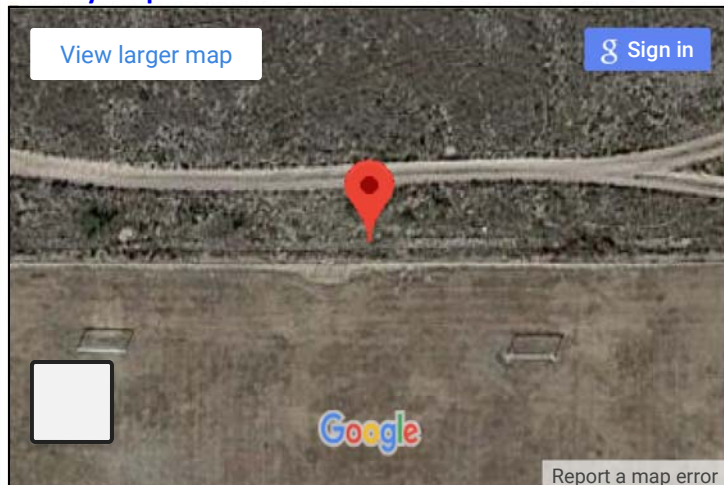
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-059**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 059 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 10.23604"	645,553.994 US Ft	645,627.351 US Ft
Longitude Easting X:	W 103° 11' 49.92661"	890,561.152 US Ft	890,662.349 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,101.267 m	3,613.073 US Ft	3,684.054 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 1 T18S R37E

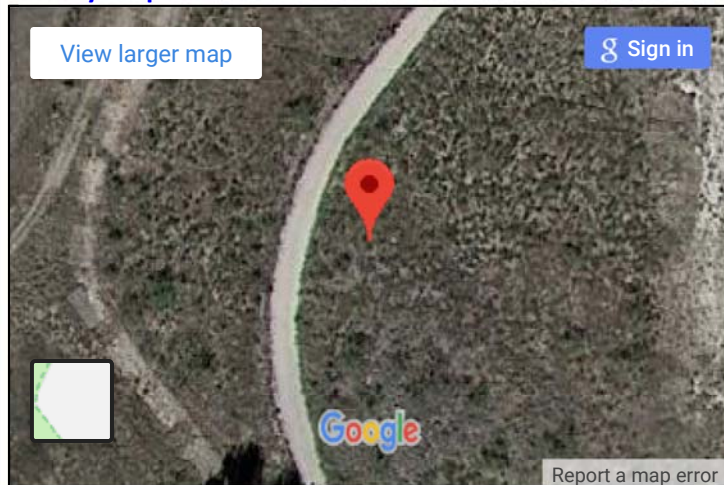
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



Other Photos: [E-1](#) [N](#) [S](#) [W](#)

Control Station Data



Name of Station: **BH 18-324-063**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 12-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 063 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 38.92827"	648,372.266 US Ft	648,445.943 US Ft
Longitude Easting X:	W 103° 13' 19.90779"	882,847.417 US Ft	882,947.737 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,108.502 m	3,636.810 US Ft	3,707.853 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 2 T18S R37E

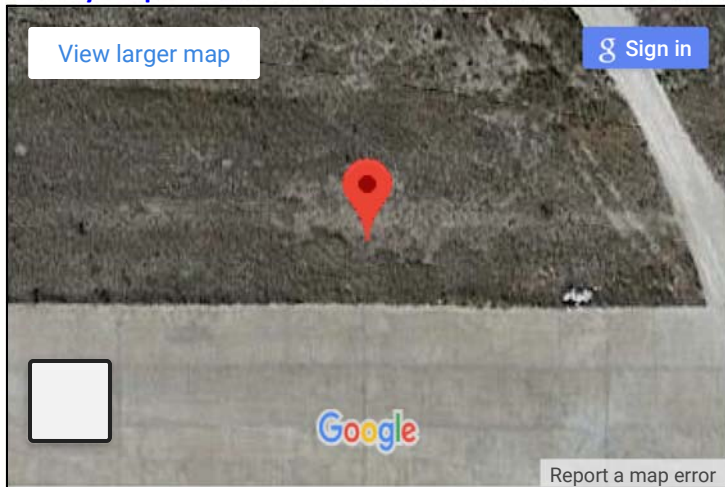
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-065**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 065 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 21.51571"	646,713.701 US Ft	646,787.189 US Ft
Longitude Easting X:	W 103° 11' 28.49073"	892,379.216 US Ft	892,480.620 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,100.641 m	3,611.020 US Ft	3,681.991 US Ft

Location

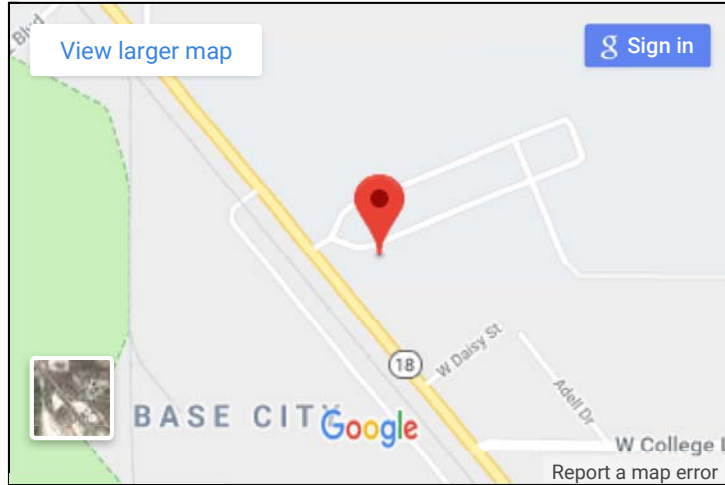
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 6 T18S R38E

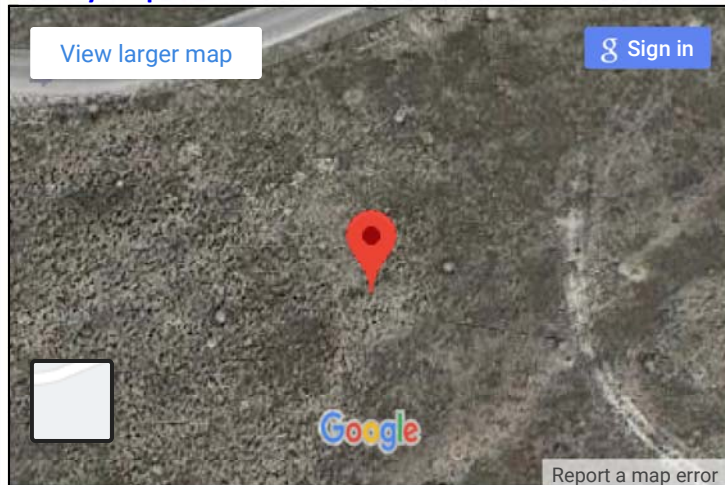
Location Map:



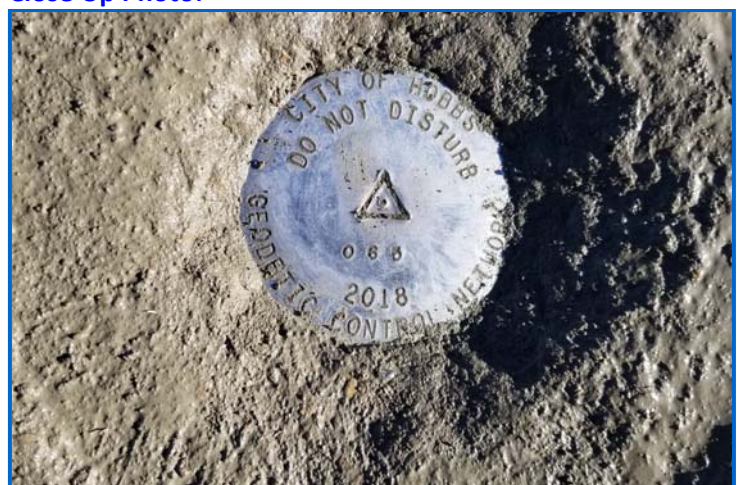
Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-068**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 068 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 17.22440"	640,171.539 US Ft	640,244.284 US Ft
Longitude Easting X:	W 103° 12' 16.98887"	888,307.483 US Ft	888,408.424 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,100.342 m	3,610.039 US Ft	3,681.029 US Ft

Location

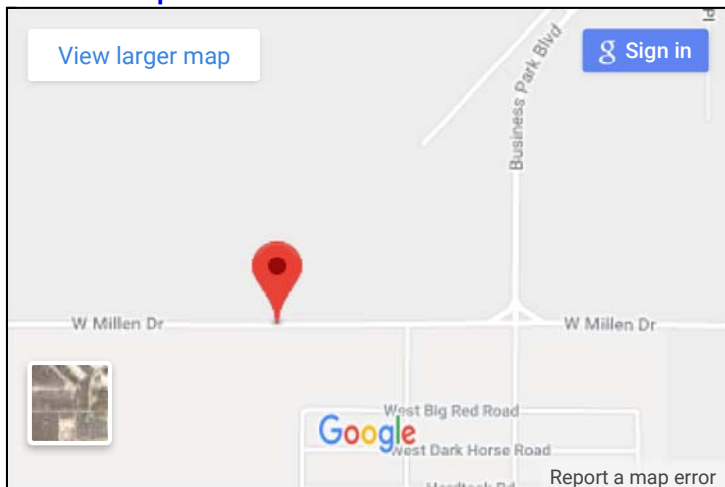
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 12 T18S R37E

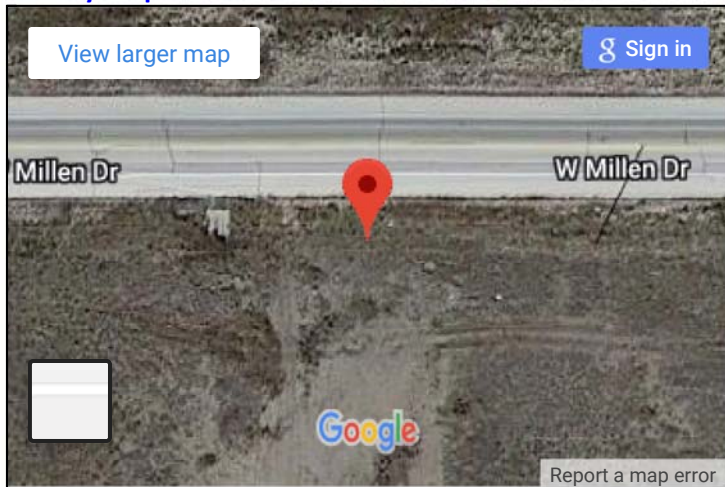
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-069**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 069 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 17.32688"	640,209.093 US Ft	640,281.842 US Ft
Longitude Easting X:	W 103° 11' 47.22139"	890,849.572 US Ft	890,950.802 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,099.928 m	3,608.680 US Ft	3,679.651 US Ft

Location

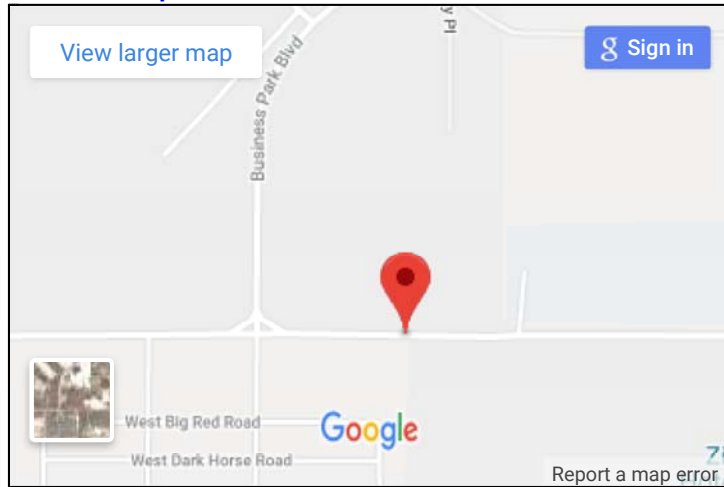
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 12 T18S R37E

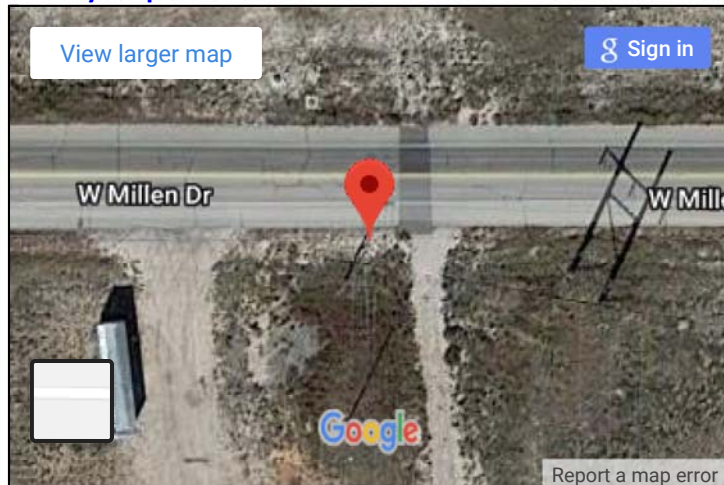
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-071**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 071 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 47' 53.91131"	656,121.427 US Ft	656,195.984 US Ft
Longitude Easting X:	W 103° 10' 13.75450"	898,657.936 US Ft	898,760.053 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,100.170 m	3,609.474 US Ft	3,680.439 US Ft

Location

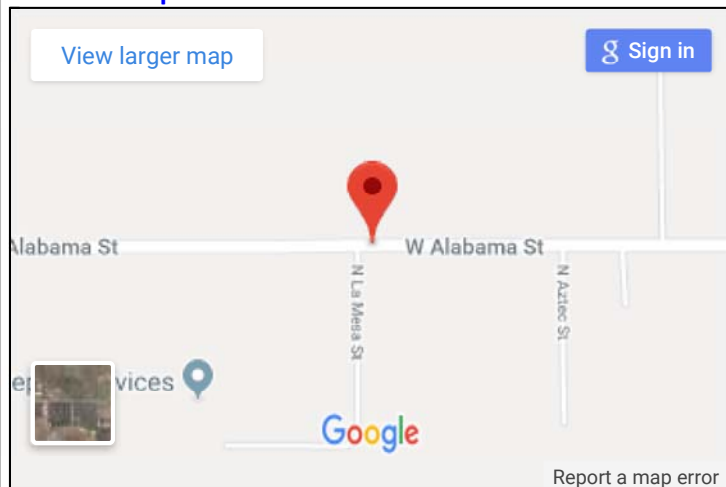
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 32 T17S R38E

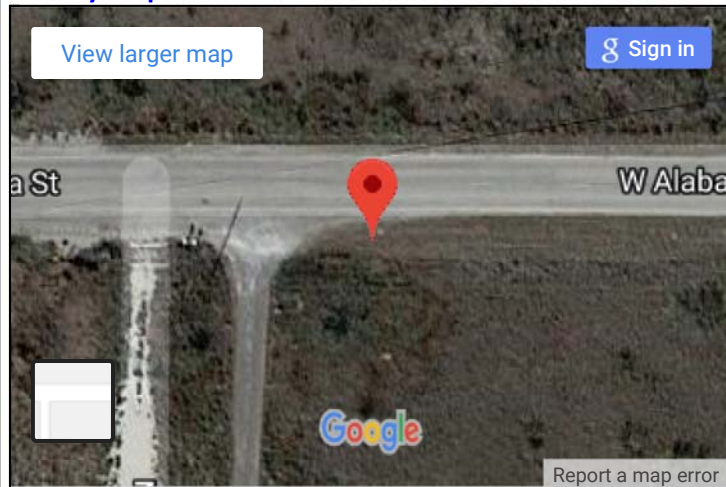
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-073**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: CITY OF HOBBS 073 2018 GEODETIC CONTROL NETWORK

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 10.09685"	645,715.927 US Ft	645,789.302 US Ft
Longitude Easting X:	W 103° 08' 42.21580"	906,589.602 US Ft	906,692.621 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,092.109 m	3,583.028 US Ft	3,653.953 US Ft

Location

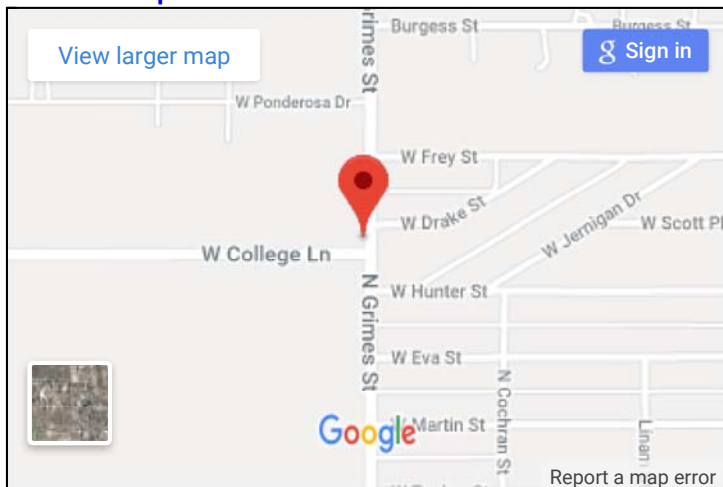
County & State: Lea, NM

Section: sec 4 T18S R38E

Land Grant(s): None

Note(s):

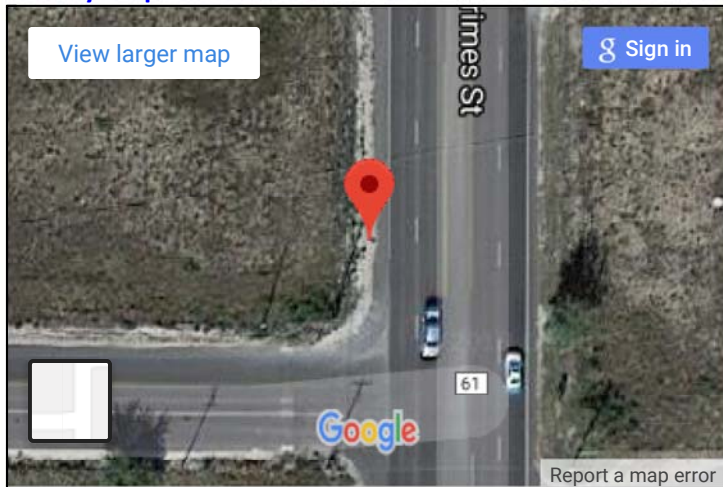
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-077**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 077 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 43.31354"	643,160.681 US Ft	643,233.765 US Ft
Longitude Easting X:	W 103° 06' 06.78939"	919,892.780 US Ft	919,997.311 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.378 m	3,574.068 US Ft	3,645.016 US Ft

Location

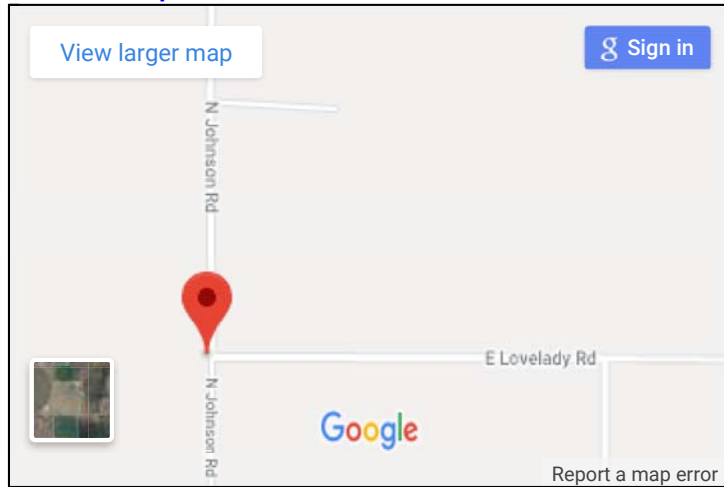
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 12 T18S R38E

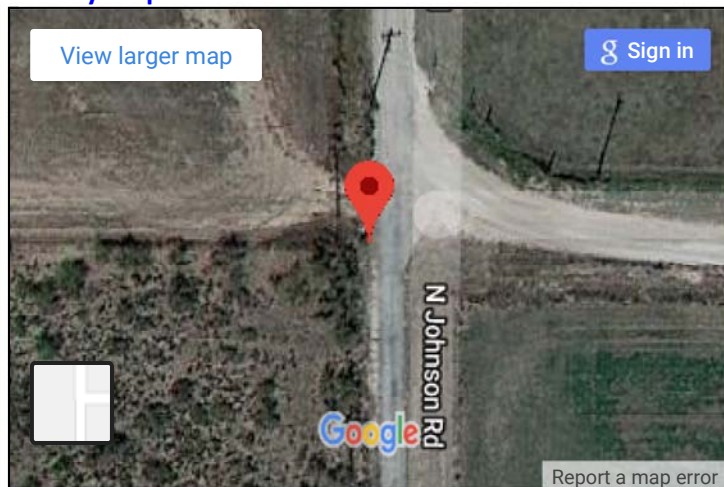
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-083**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 083 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 51.89197"	637,841.231 US Ft	637,913.711 US Ft
Longitude Easting X:	W 103° 08' 11.73917"	909,281.305 US Ft	909,384.629 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.867 m	3,575.672 US Ft	3,646.577 US Ft

Location

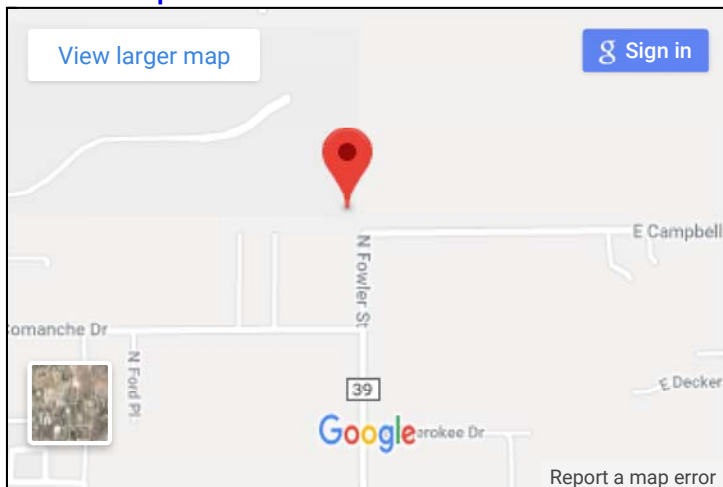
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 15 T18S R38E

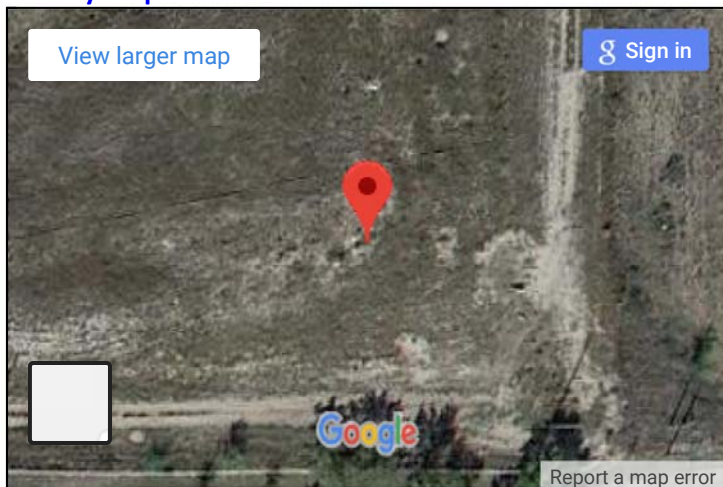
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-084**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 084 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 03.63767"	638,927.160 US Ft	638,999.763 US Ft
Longitude Easting X:	W 103° 09' 57.88025"	900,202.789 US Ft	900,305.082 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,093.178 m	3,586.535 US Ft	3,657.453 US Ft

Location

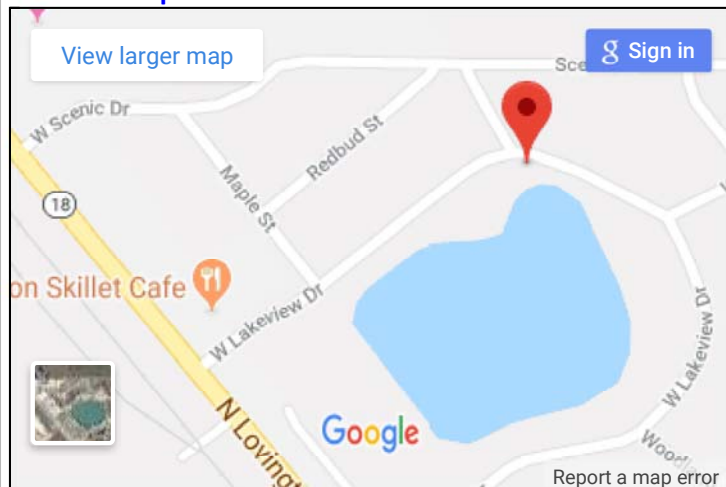
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 17 T18S R38E

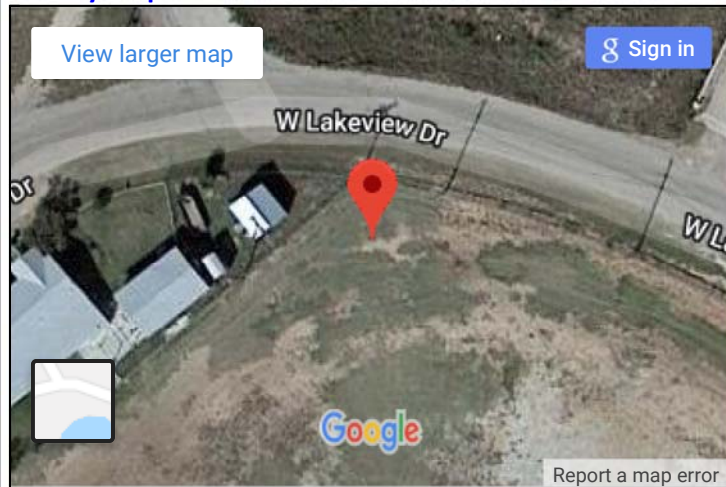
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-091**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 091 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 23.56179"	634,920.776 US Ft	634,992.924 US Ft
Longitude Easting X:	W 103° 09' 11.41022"	904,216.744 US Ft	904,319.493 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,088.376 m	3,570.780 US Ft	3,641.682 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 21 T18S R38E

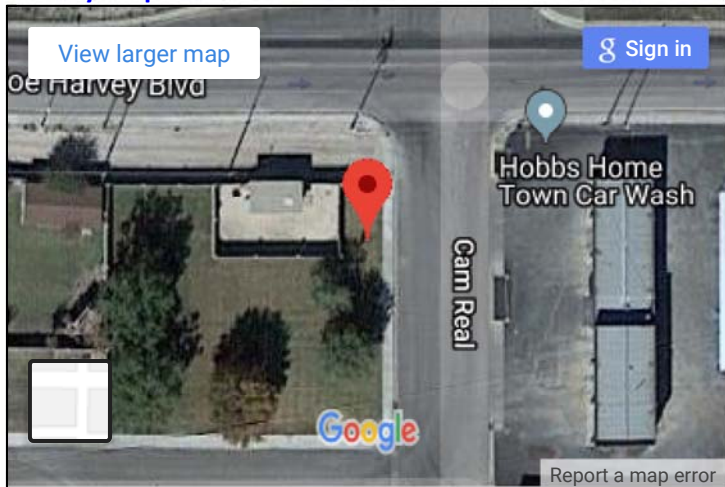
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-098**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 098 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 45' 23.73894"	640,774.494 US Ft	640,847.307 US Ft
Longitude Easting X:	W 103° 13' 18.36553"	883,058.896 US Ft	883,159.241 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,105.394 m	3,626.613 US Ft	3,697.653 US Ft

Location

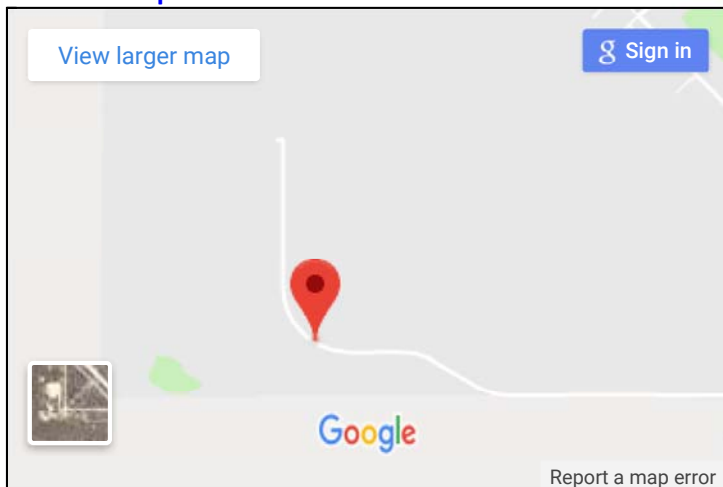
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 11 T18S R37E

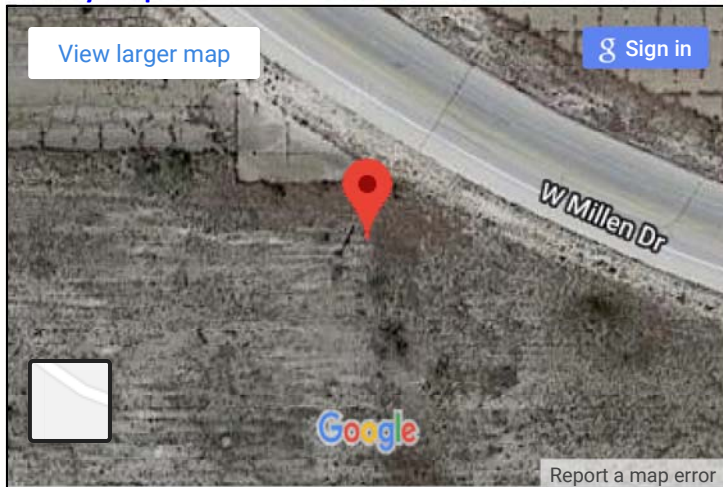
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-101**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 13-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Horizontal Method: OPUS

Station Height: 0.00 US Ft

Vertical Method: OPUS

Stamping: CITY OF HOBBS 101 2018 GEODETIC CONTROL NETWORK

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 46' 35.69525"	648,186.926 US Ft	648,260.581 US Ft
Longitude Easting X:	W 103° 10' 45.16460"	896,062.991 US Ft	896,164.813 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,099.879 m	3,608.520 US Ft	3,679.474 US Ft

Location

County & State: Lea, NM

Section: sec 5 T18S R38E

Land Grant(s): None

Note(s):

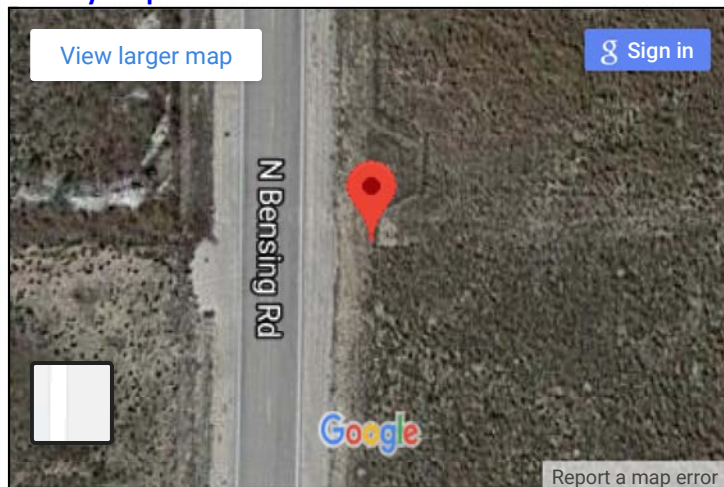
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-106**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 106 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 24.24315"	635,079.072 US Ft	635,151.238 US Ft
Longitude Easting X:	W 103° 07' 38.45195"	912,156.168 US Ft	912,259.819 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,086.922 m	3,566.010 US Ft	3,636.912 US Ft

Location

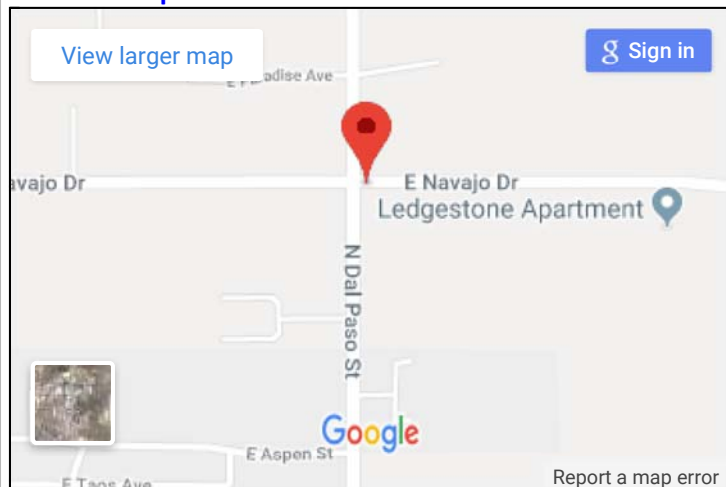
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 23 T18S R38E

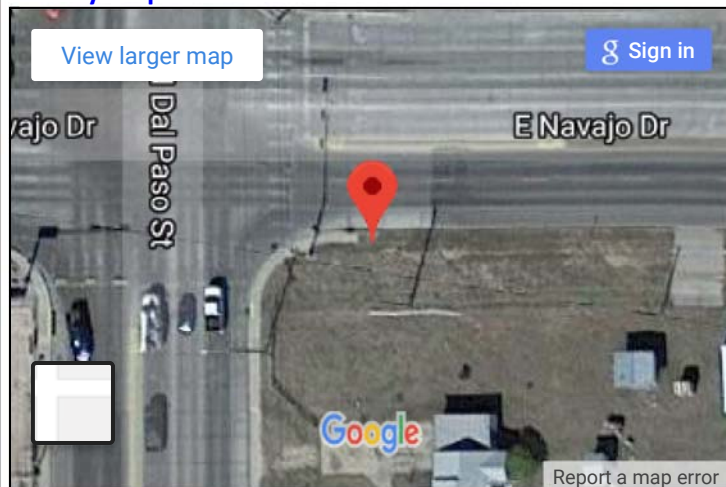
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-108**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 15-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 108 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 44' 02.74469"	632,860.569 US Ft	632,932.483 US Ft
Longitude Easting X:	W 103° 08' 25.70539"	908,144.397 US Ft	908,247.592 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,086.801 m	3,565.613 US Ft	3,636.508 US Ft

Location

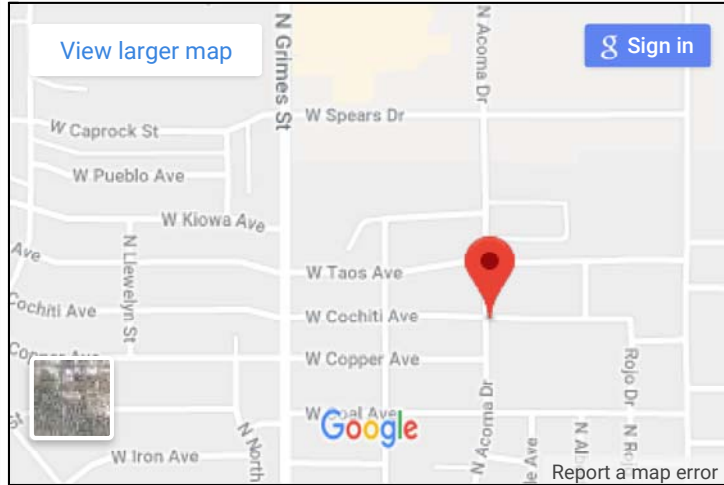
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 22 T18S R38E

Location Map:



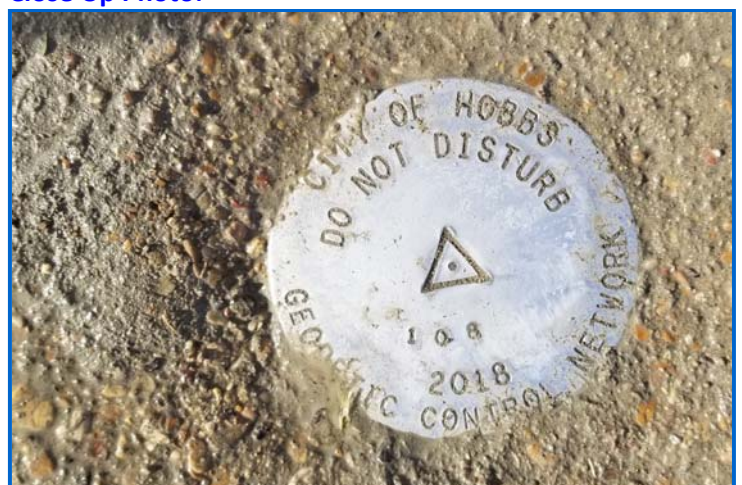
Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-111**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 111 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 48.57267"	631,530.048 US Ft	631,601.810 US Ft
Longitude Easting X:	W 103° 06' 41.12027"	917,094.851 US Ft	917,199.063 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.762 m	3,575.327 US Ft	3,646.239 US Ft

Location

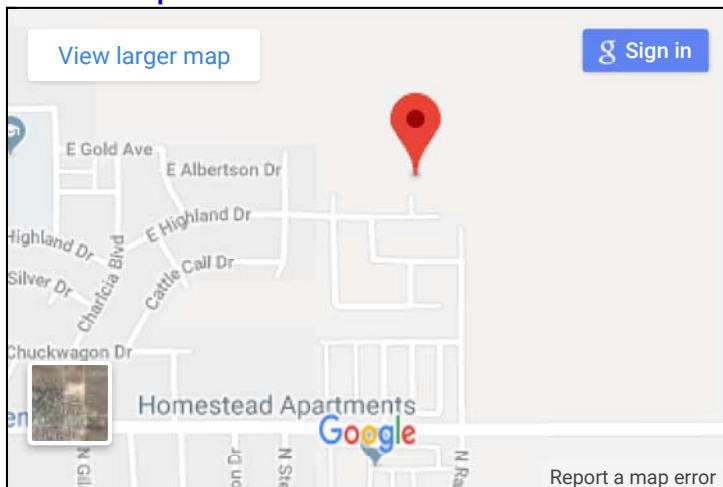
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 23 T18S R38E

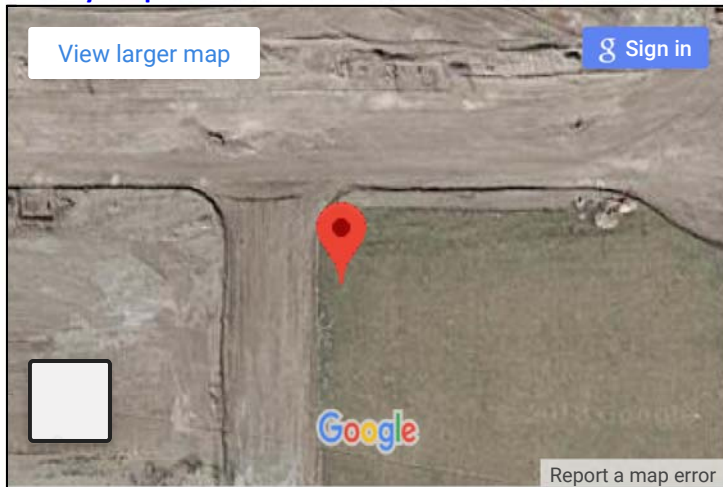
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-112**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 112 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 08.78270"	627,529.788 US Ft	627,601.096 US Ft
Longitude Easting X:	W 103° 06' 19.61998"	918,978.146 US Ft	919,082.572 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,083.584 m	3,555.059 US Ft	3,625.980 US Ft

Location

County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 25 T18S R38E

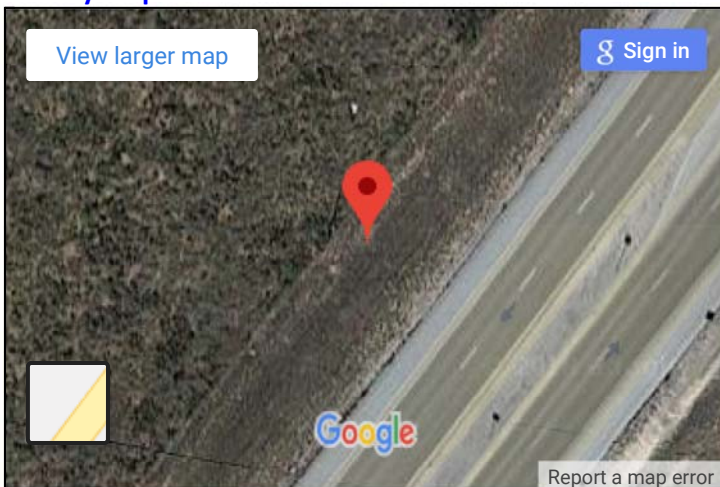
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-113**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 14-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 113 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 52.31997"	625,827.616 US Ft	625,898.730 US Ft
Longitude Easting X:	W 103° 06' 58.50563"	915,674.973 US Ft	915,779.024 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,081.310 m	3,547.598 US Ft	3,618.503 US Ft

Location

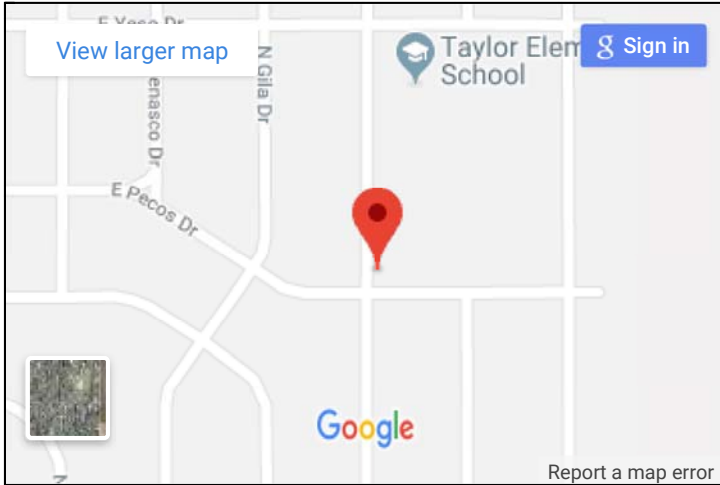
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 26 T18S R38E

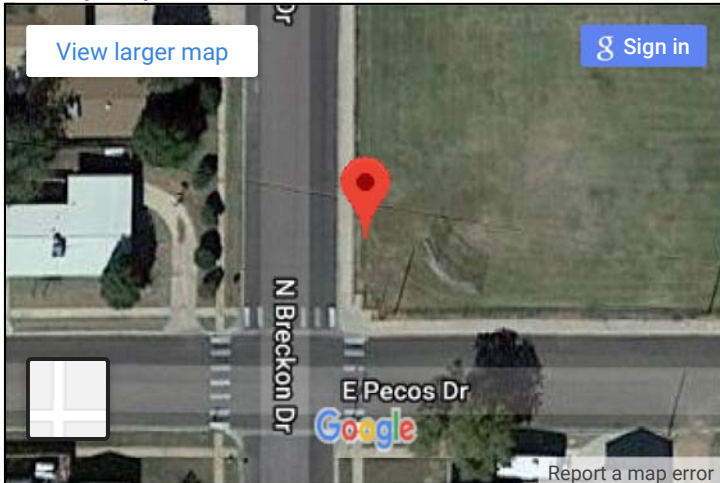
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-114**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 17-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 114 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 19.12899"	622,447.633 US Ft	622,518.364 US Ft
Longitude Easting X:	W 103° 07' 24.52684"	913,489.969 US Ft	913,593.772 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,080.799 m	3,545.921 US Ft	3,616.827 US Ft

Location

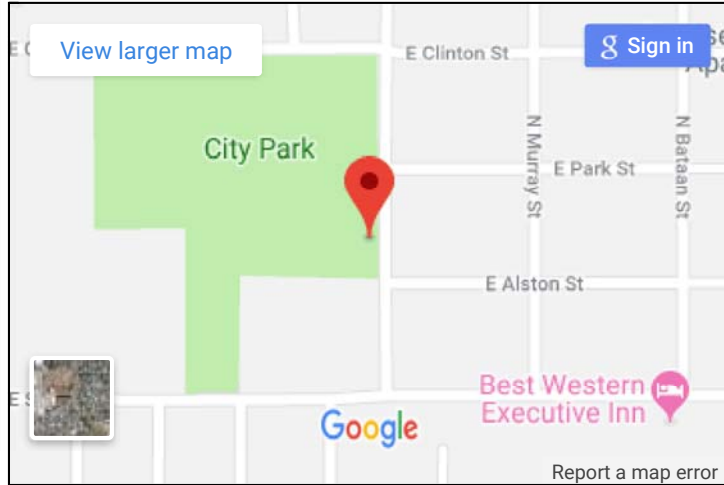
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 35 T18S R38E

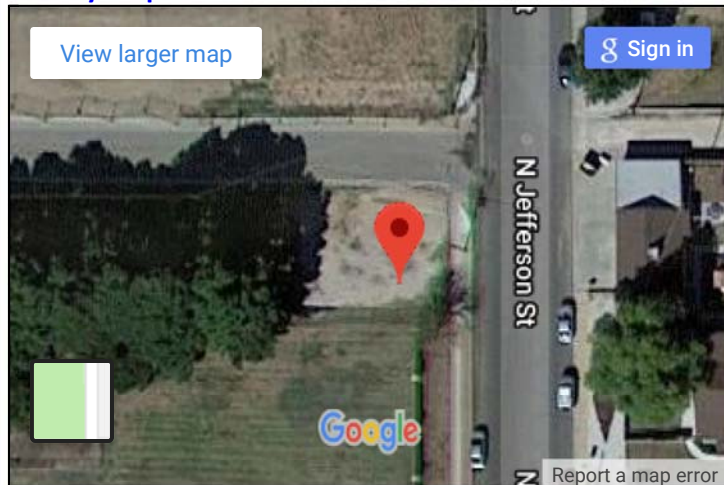
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-117**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 17-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 117 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 58.31435"	626,383.337 US Ft	626,454.515 US Ft
Longitude Easting X:	W 103° 07' 49.89055"	911,277.703 US Ft	911,381.254 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,082.573 m	3,551.742 US Ft	3,622.637 US Ft

Location

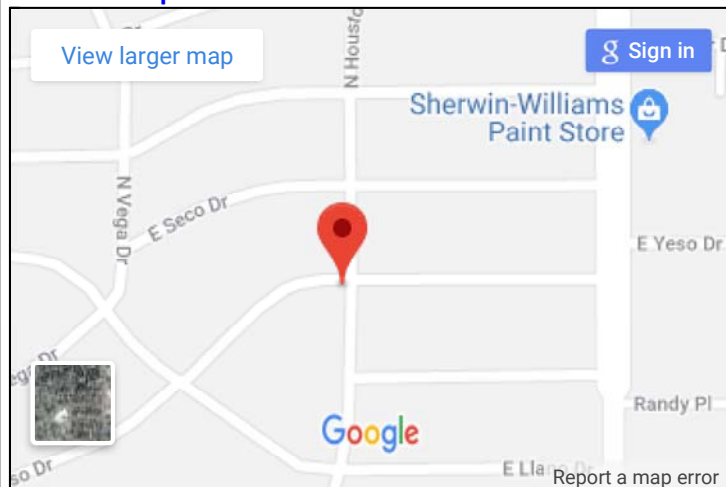
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 27 T18S R38E

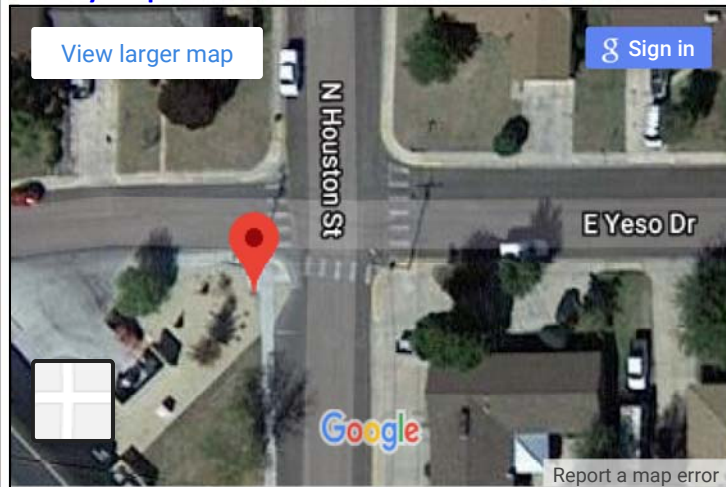
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-121**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 17-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 121 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 20.06094"	622,441.225 US Ft	622,511.955 US Ft
Longitude Easting X:	W 103° 09' 08.94873"	904,566.078 US Ft	904,668.866 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,087.781 m	3,568.828 US Ft	3,639.730 US Ft

Location

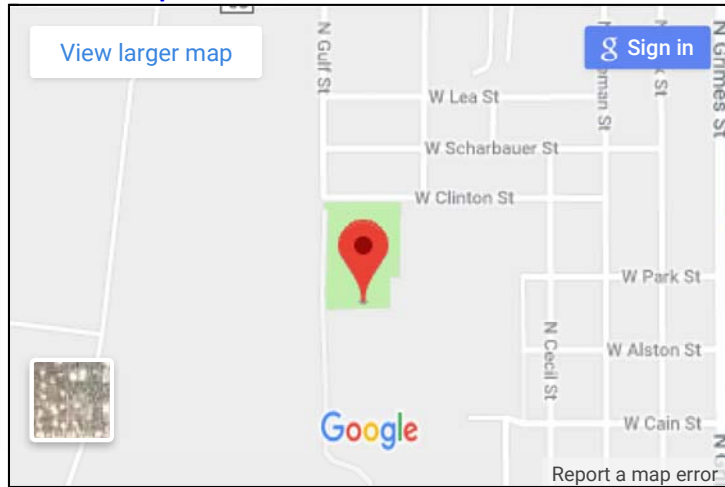
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 33 T18S R38E

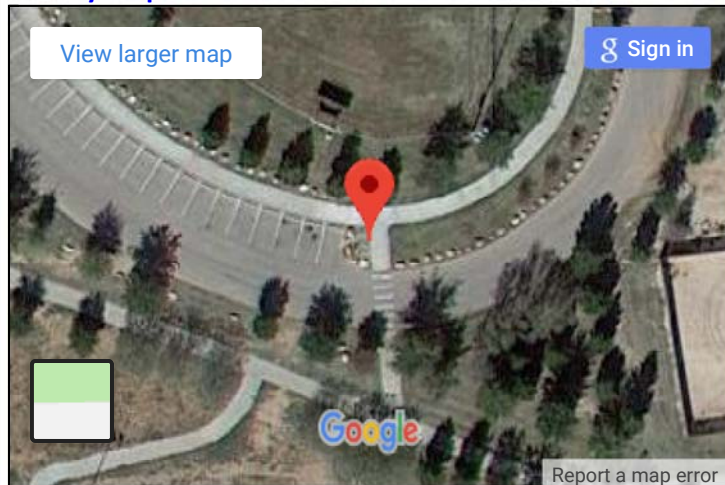
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-123**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 123 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 33.51819"	629,805.024 US Ft	629,876.591 US Ft
Longitude Easting X:	W 103° 10' 12.78630"	899,029.731 US Ft	899,131.891 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.646 m	3,574.947 US Ft	3,645.862 US Ft

Location

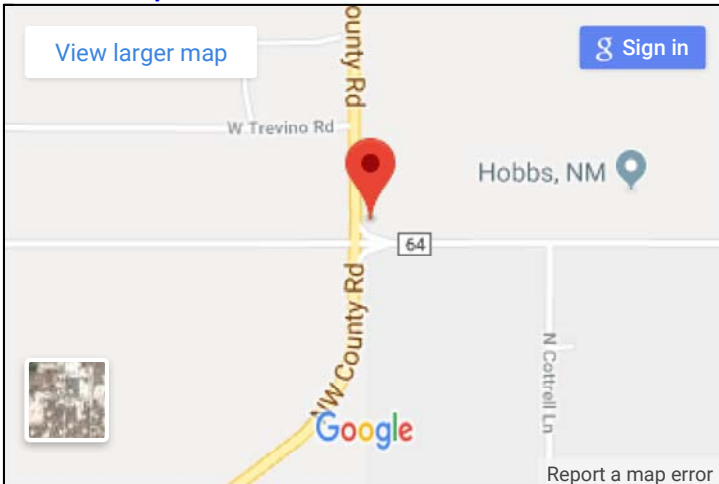
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 20 T18S R38E

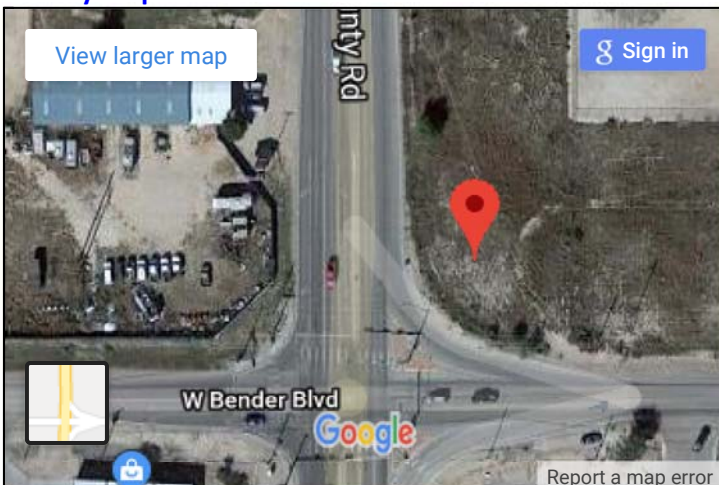
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-125**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 125 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 43' 06.74313"	627,126.950 US Ft	627,198.212 US Ft
Longitude Easting X:	W 103° 09' 43.02742"	901,601.939 US Ft	901,704.390 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,089.707 m	3,575.147 US Ft	3,646.052 US Ft

Location

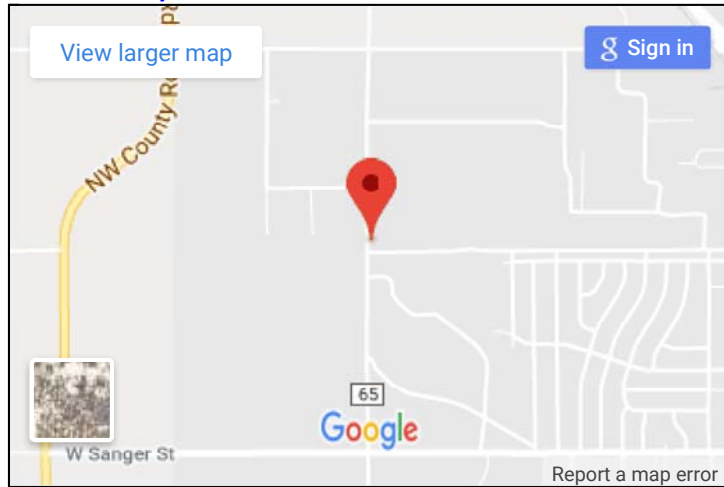
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 28 T18S R38E

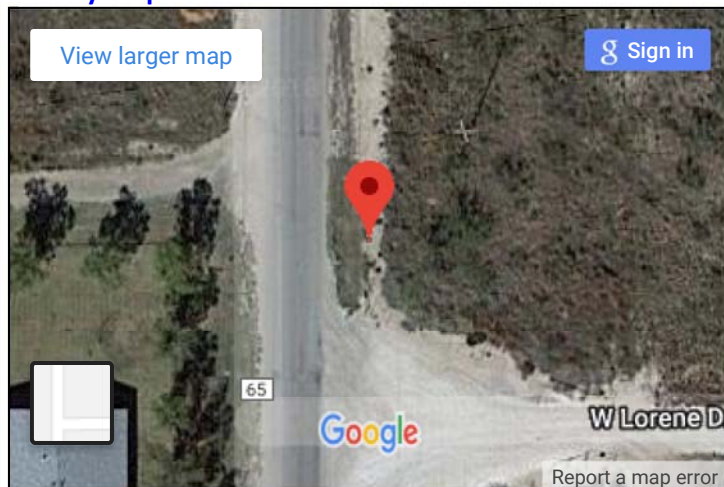
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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

Control Station Data



Name of Station: **BH 18-324-129**

Establishing Group: Bohannon Huston, Inc.

Observation Date: 16-Feb-2018

BST Project #: 20180324

Project Name: Hobbs Geodetic Control

Station Data

Type/Composition: 3.25" Aluminum Cap

Station Height: 0.00 US Ft

Stamping: CITY OF HOBBS 129 2018 GEODETIC CONTROL NETWORK

Horizontal Method: OPUS

Vertical Method: OPUS

Coordinate Data

Horizontal Datum:	Geodetic (NAD83)	Grid (NM SP East Zone)	** Modified ** (MODIFIED_20180324)
Latitude Northing Y:	N 32° 42' 40.36849"	624,432.233 US Ft	624,503.189 US Ft
Longitude Easting X:	W 103° 10' 13.97441"	898,987.164 US Ft	899,089.318 US Ft
Vertical Datum:	Ellipsoid (GRS80)	Ellipsoid (GRS80)	Orthometric (NAVD88, GEOID12B)
Elevation:	1,088.473 m	3,571.099 US Ft	3,642.017 US Ft

Location

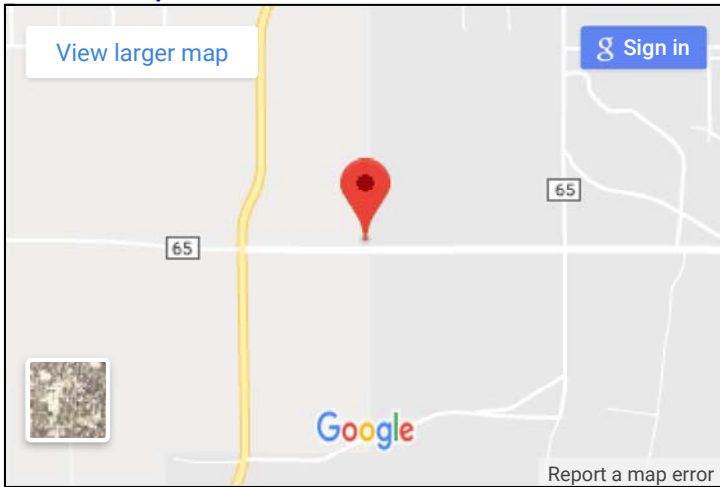
County & State: Lea, NM

Land Grant(s): None

Note(s):

Section: sec 29 T18S R38E

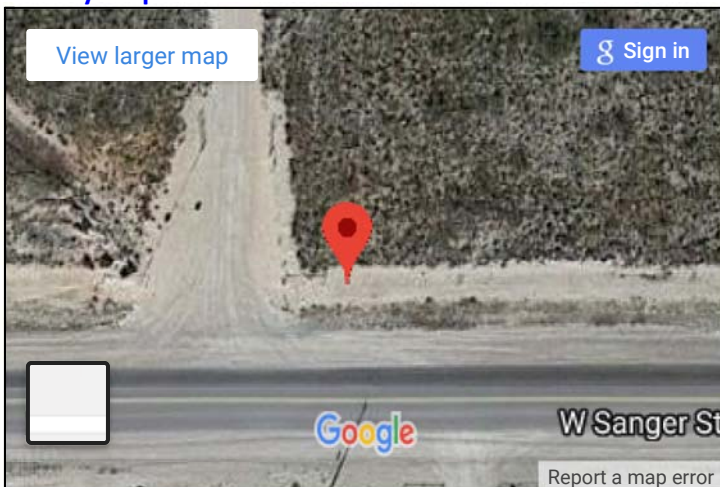
Location Map:



Vicinity Photo (Looking East):



Vicinity Map:



Close Up Photo:



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