

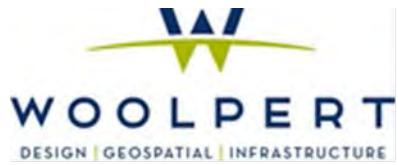
LiDAR GROUND CONTROL SURVEY REPORT



73741 - NRCS LAUREL MS 0.7M NPS LIDAR
ATTALA, CARROLL, CHOCTAW, JASPER, LEAKE,
LEXINGTON, MONTGOMERY, SCOTT, SMITH, WEBSTER
COUNTIES, MS
CHOCTAW, WASHINGTON COUNTIES, AL

UNITED STATES GEOLOGICAL SURVEY (USGS)

December 2014



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SECTION 1: SURVEY REPORT

INTRODUCTION

Report Date: December 17, 2014

Project Name: NRCS Laurel MS 0.7m NPS LiDAR
Client Information: United States Geological Survey (USGS)
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Contract Number: G10PC00057
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Woolpert Project Number: 073741

This report contains a comprehensive outline of the LiDAR Ground Control Survey that supported the NRCS Lauderdale MS 0.7m NPS LiDAR Task Order. All surveys were performed in such a way as to achieve ground control accuracies that meet or exceed the National Mapping Accuracy Standards.

PROJECT AREA

The LiDAR data acquisition and processing for this project consisted of approximately 5,113 square miles of Mississippi and approximately 2008 square miles of Alabama. The Areas of Interest (AOI) for this project includes Attala, Leake, Lexington, Montgomery, Scott, Smith, Webster Counties and a portion of Carroll, Choctaw and Jasper Counties MS and Choctaw and Washington Counties AL.

PURPOSE

The purpose of this survey was to establish three-dimensional coordinates for 20 ground control points (GCPs) and a minimum of 20 quality control points (QCPs) in each of the land cover classifications in which there was more than 10% coverage.

The GCPs were located on open, bare earth surfaces with a level slope to enable effective assessment of swath-to-swath reproducibility and absolute accuracy. The QCPs were collected uniformly dispersed over the project area in the appropriate land cover categories to verify fundamental, supplemental, and consolidated vertical accuracies throughout the task order AOI's.

DATE OF SURVEY

Ground control field operations took place between November 13, 2013 thru November 23, 2013 for the Mississippi AOI and January 14 thru January 24 and April 3 for the Alabama AOI.

MONUMENTATION

Prior to aerial imagery acquisition, Woolpert field crews performed a field reconnaissance to verify the existence and suitability of pre-selected existing National Geodetic Survey (NGS) control stations. These existing control stations were utilized to ensure that quality x, y, and z coordinate values were computed for each of the newly established photogrammetric control stations. Recovery information sheets for the existing NGS control stations can be found in Section 5 of this report. A control diagram showing the ground control stations used to support this LiDAR mapping project can be found in Section 6 of this report.

ACCURACY

The data collected under this task order shall meet the National Standard for Spatial Database Accuracy (NSSDA) accuracy standards. The NSSDA standards specify that vertical accuracy be reported at the 95 percent confidence level, ($\text{RMSE}_z * 1.96$), for data tested by an independent source of higher accuracy. For example, the metadata statement will read, –Tested __ (meters, feet) vertical accuracy at the 95 percent confidence level.||

The Fundamental Vertical Accuracy (FVA) of the Lidar Point Cloud: 12.9 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSE of 6.6 cm in the –open terrain|| land cover category.

Supplemental Vertical Accuracy (SVA): The SVA will be reported for each of the land cover classes within the task order AOI. The target SVA is 26.9 cm at a 95th percentile level, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for LiDAR Data, i.e., based on the 95th percentile error for each required land cover class.

Consolidated Vertical Accuracy (CVA): 20.7 cm at a 95th percentile level, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for LiDAR Data, i.e., based on the 95th percentile error in all land cover categories combined.

The relative accuracy will be <=7cm RMSE_z within individual swaths: <=10cm RMSE_z within swath overlap (between adjacent swaths).

The overall accuracy of the ground control survey is expressed in terms of standard deviation, at a 95% confidence level, based on the published NGS control monuments that were used throughout the task order AOI. The standard deviation of the ground control survey is 0.005 meters horizontally and 0.008 meters vertically at the 95% confidence level.

GPS EQUIPMENT

Woolpert utilized the following equipment for this project:

- a Trimble Navigation R8 Model 3 GNSS dual-frequency GPS receivers with Air Link Communications Raven CDMA cellular modem
- a Trimble Navigation R6 Model 3 GNSS dual-frequency GPS receivers with Air Link Communications Raven CDMA cellular modem
- two Trimble Navigation R8 Model 2 receivers with an Air Link Communications Raven CDMA cellular modem.
- a Trimble Navigation R8 receiver with an Air Link Communications Raven CDMA cellular modem
- two Trimble TSC2 data collectors.
- a Trimble TSC3 data collector.

METHODOLOGY

MISSISSIPPI AOI

REAL-TIME KINEMATIC (RTK) GPS

The field crew utilized Real-Time Kinematic (RTK) GPS surveying throughout most of the ground control data collection process. Using RTK GPS techniques, observations were performed on 24 ground control points and 161 quality control check points (26 Bare Earth, 25 Urban, 31 Tall Grass, 28 Tall Brush, 51 Forested). The survey was conducted using a 1-second epoch rate, in a fixed solution RTK mode, with each observation lasting between 60 to 180 seconds. Each station was occupied twice to insure the necessary horizontal and vertical accuracies were being met for this photogrammetric project.

RAPID-STATIC GPS

In addition to the RTK GPS techniques, the project field crew utilized rapid-static (RS) GPS surveying techniques to establish RTK Base stations within areas lacking sufficient NGS control monument stations

Using RS GPS techniques, observations were performed on one (2) RTK Base stations (110_L & 111_L). The survey was conducted at a 5-second sync rate with each observation lasting between 40-360 minutes.

CONVENTIONAL TOTAL STATION

A Trimble 5600 total station in combination with a Trimble TSC2 data collector was used in areas where sufficient satellite coverage was not available for some quality control check points.

ALABAMA AOI

REAL-TIME KINEMATIC (RTK) GPS

The field crew utilized Real-Time Kinematic (RTK) GPS surveying utilizing the Alabama Department of Transportation (ALDOT) Continually Operating Reference Station (CORS) network, via the internet using TCP/IP protocol and MiFi cellular connection. ALDOT provides single base corrections from the nearest operating GPS reference station. Using RTK GPS techniques, observations were performed on 21 ground control points and 116 quality control check points (24 Bare Earth, 24 Urban, 24 Tall Grass, 23 Tall Brush, and 21 Forested). The survey was conducted using a 1-second epoch rate, in a fixed solution RTK mode, with each observation lasting between 60 to 180 seconds. Each station was occupied twice to insure the necessary horizontal and vertical accuracies were being met for this photogrammetric project.

CONVENTIONAL TOTAL STATION

A Sokkia Set330R3 total station in combination with a Trimble TSC3 data collector was used in areas where sufficient satellite coverage was not available for some quality control check points.

GPS DATA ANALYSIS AND PROCESSING

The field crew chief processed all GPS data each day using *Trimble Navigation's Trimble Business Center (TBC)* Version 3.10. Daily processing ensured the integrity of the network as it was constructed, and allowed the field crews to immediately reschedule observations of poor quality. Once the field work was complete, the processed observations were adjusted to fit the local NGS control. Once this process was completed, the results were closely analyzed to be sure that it meets the requirements of the survey.

The GPS Control stations for the Mississippi AOI consisted of the following:

Dimension	NGS Control Stations
3-D (Orthometric Elevations Held)	19 V 62 (CO1755), 25 V 42 (CO1508), 49 14 (DK0302), 82 V 165 (DJ1172), BEE LAKE (DK0265), E 223 (CO0797), L 54 (CP0198), M 40 (DJ1212), MAYBE 2 RM 4 (BV2006)
3-D (Ellipsoid Heights Held)	BAYS (DN4005), CART (DN3967), KALE (DN3957), KOSC (C00837), LEX (DK2129)
2-D	L 102 (CO0724)

The GPS Control stations for the Alabama AOI consisted of the following:

Dimension	NGS Control Stations
3-D (Orthometric Elevations Held)	ALDOT 8 DIV VIS 4 CORS ARP (DL9796), CHOCTAW ELEM SCH CORS ARP (DM5367), MCDAVIDJONESSCH2 CORS ARP (DO2054), ALDOT 8 DIV DIS 2 CORS ARP (DM3483), ALDOT 8 DIV DIS 1 CORS ARP (DN9085), 12 43 (AA8353), 65 38 (AA8496)

DATUM REFERENCE AND FINAL COORDINATES

New horizontal GPS control was based on the UTM Zone 16, referenced to North American Datum 1983, national re-adjustment of 2011 (NAD83/2011), expressed in meters. Vertical control was based on the North American Vertical Datum of 1988 (NAVD88), also expressed in meters, using the geoid model of 2012 (GEID12A). These coordinates for the photogrammetric control survey can be found in Section 2 of this report.

QUALITY ASSURANCE

Existing NGS published control stations were surveyed to assure that there were no discrepancies in the field observation data. Close examinations of the residuals showed no distortions in orientation or scale.

SECTION 2: GEODETIC / GROUND CONTROL COORDINATE LISTINGS

COORDINATE SYSTEM: GRID

Coordinates in UTM Zone 16

HORIZONTAL DATUM: NAD83 (2011)

VERTICAL DATUM: NAVD88

GEOID MODEL: GEOID 12A

UNITS: Meters

MISSISSIPPI AOI

NGS CONTROL POINTS

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
19 V 62	3646771.81	285015.62	143.66	CO1755
25 V 42	3621683.09	253653.42	107.34	CO1508
49 14	3692801.41	198464.63	36.39	DK0302
82 V 165	3714177.19	297323.54	118.90	DJ1172
BAYS	3539314.09	285970.58		DN4005
BEE LAKE	3661407.16	189411.32	34.39	DK0265
CART	3623066.66	258960.22		DN3967
E 223	3577250.25	298855.26	110.48	CO0797
KALE	3583492.94	258407.85		DN3957
KOSC	3664155.63	262810.05		DJ2103
L 54	3612410.54	214692.81	67.71	CP0198
L 102	3605651.43	300764.45		CO0724
LEX	3669283.64	217662.30		DK2129
M 40	3748537.62	285651.16	77.87	DJ1212
MAYBE 2 RM 4	3537284.62	232044.50	109.45	BV2006

TEMPORARY SURVEY MARKS (TSM)

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
110_L	3687868.14	296943.07	156.19	TSM
111_L	3708425.61	243244.35	148.76	TSM
200_L	3537780.68	280024.71	152.90	TSM
201_L	3537898.78	280089.34	149.86	TSM
202_L	3541103.75	309848.15	141.84	TSM
203_L	3540860.68	309818.18	139.75	TSM
204_L	3551408.21	286396.55	126.60	TSM
205_L	3551361.00	286458.31	126.95	TSM
206_L	3557945.26	274162.28	116.21	TSM
207_L	3557956.90	274019.17	118.69	TSM
208_L	3561452.14	308893.52	130.95	TSM
209_L	3561441.13	308980.70	130.11	TSM
210_L	3607307.05	263956.94	134.01	TSM
211_L	3607304.67	264071.75	132.04	TSM
212_L	3631085.29	281222.29	111.77	TSM
213_L	3631206.24	281287.07	111.60	TSM
214_L	3624892.31	247578.04	108.26	TSM
215_L	3624814.96	247537.12	107.51	TSM
216_L	3666689.37	256365.45	122.00	TSM
217_L	3666614.85	256398.24	120.25	TSM
218_L	3680817.73	286557.40	160.77	TSM
220_L	3651475.11	277600.95	125.82	TSM
221_L	3688698.25	275544.47	135.30	TSM
222_L	3688615.79	275643.79	137.77	TSM
223_L	3715561.83	266612.51	119.17	TSM
224_L	3715582.25	266716.77	118.27	TSM
225_L	3734806.58	302249.72	104.90	TSM
226_L	3734824.49	302376.89	103.52	TSM
251_L	3551419.92	245100.30	106.62	TSM
252_L	3551400.61	244954.39	106.58	TSM
253_L	3583051.01	254199.81	137.50	TSM
254_L	3583109.53	254254.41	138.56	TSM
255_L	3592048.94	250639.47	118.43	TSM
256_L	3591871.51	250673.74	118.39	TSM
257_L	3591683.29	275278.41	122.44	TSM
258_L	3591635.53	275446.69	121.40	TSM
259_L	3647187.01	239713.20	85.55	LCP
260_L	3647214.41	239871.86	89.92	TSM
261_L	3680980.54	234604.52	120.80	TSM
262_L	3680985.55	234470.04	122.04	TSM

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
263_L	3656904.31	206583.59	96.99	TSM
264_L	3656997.70	206693.16	97.25	TSM
265_L	3729615.88	245428.35	71.22	TSM
266_L	3729731.88	245347.16	70.99	TSM
267_L	3709343.81	234565.83	87.67	TSM
268_L	3709412.00	234464.65	88.19	TSM
269_L	3706911.90	254903.39	129.16	TSM
270_L	3706925.96	255003.32	129.20	TSM
285_L	3529520.27	312565.84	97.66	TSM

LiDAR GROUND CONTROL

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
1001_L	3734398.63	303426.69	104.94	GCP
1002_L	3729779.85	245335.22	71.05	GCP
1003_L	3714174.44	294915.62	124.15	GCP
1004_L	3706126.75	257563.45	110.23	GCP
1005_L	3709205.09	235937.26	98.20	GCP
1006_L	3680591.82	286521.38	156.46	GCP
1007_L	3662909.98	257924.06	145.29	GCP
1008_L	3680924.89	230780.89	143.63	GCP
1009_L	3651418.66	277636.13	126.38	GCP
1010_L	3647113.89	239203.08	94.63	GCP
1010A_L	3647121.13	239216.73	94.60	GCP
1011_L	3655321.43	206152.47	99.28	GCP
1012_L	3631431.43	281281.21	114.69	GCP
1013_L	3624896.32	247577.98	108.25	GCP
1014_L	3591840.31	274621.11	127.91	GCP
1015_L	3593202.96	250527.19	114.99	GCP
1016_L	3551409.55	246236.37	131.75	GCP
1017_L	3528702.95	258374.89	89.18	GCP
1018_L	3535006.52	277754.69	150.08	GCP
1019_L	3538318.35	314009.84	159.97	GCP
1020_L	3561322.33	309830.49	123.28	GCP
1021_L	3557961.84	273350.83	124.34	GCP
1021A_L	3557968.93	273349.17	124.34	GCP
1022_L	3520684.73	280699.66	104.94	GCP
1023_L	3529616.30	312225.32	104.44	GCP
1030_L	3642501.52	222108.54	72.74	GCP

QUALITY CONTROL POINTS

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
2001_L	3734859.48	303439.70	110.48	Bare Earth/Open Terrain
2002_L	3727902.50	246562.82	73.74	Bare Earth/Open Terrain
2003_L	3713919.21	294922.50	116.87	Bare Earth/Open Terrain
2004_L	3706067.98	257408.83	109.08	Bare Earth/Open Terrain
2005_L	3709304.14	231647.34	119.55	Bare Earth/Open Terrain
2006_L	3680362.94	286614.35	153.09	Bare Earth/Open Terrain
2007_L	3662957.39	258256.39	142.11	Bare Earth/Open Terrain
2007A_L	3666577.37	256397.02	118.89	Bare Earth/Open Terrain
2008_L	3681103.78	230705.65	145.87	Bare Earth/Open Terrain
2009_L	3650420.89	279017.61	166.32	Bare Earth/Open Terrain
2010_L	3647772.48	241528.44	99.49	Bare Earth/Open Terrain
2011_L	3654972.46	204897.55	99.33	Bare Earth/Open Terrain
2012_L	3631289.49	281350.96	111.35	Bare Earth/Open Terrain
2013_L	3624814.96	247537.12	107.51	Bare Earth/Open Terrain
2014_L	3591838.48	274740.20	126.19	Bare Earth/Open Terrain
2015_L	3594119.72	250112.86	117.97	Bare Earth/Open Terrain
2016_L	3552314.92	245943.82	134.50	Bare Earth/Open Terrain
2018_L	3534868.25	277691.21	153.90	Bare Earth/Open Terrain
2019_L	3538389.16	313913.62	159.90	Bare Earth/Open Terrain
2020_L	3561458.77	309576.89	126.96	Bare Earth/Open Terrain
2021_L	3558039.80	273311.23	124.20	Bare Earth/Open Terrain
2022_L	3607149.88	260785.24	129.00	Bare Earth/Open Terrain
2023_L	3686447.21	276310.32	121.63	Bare Earth/Open Terrain
2024_L	3582597.08	251168.15	137.03	Bare Earth/Open Terrain
2025_L	3550493.37	286712.79	129.49	Bare Earth/Open Terrain
2026_L	3529550.62	312578.26	97.79	Bare Earth/Open Terrain
3001_L	3724603.69	248777.25	78.04	Urban
3002_L	3724482.79	247726.18	86.86	Urban
3003_L	3713181.71	302755.61	130.23	Urban
3004_L	3713561.76	289456.60	119.12	Urban
3005_L	3708774.52	245827.76	121.91	Urban
3006_L	3687770.20	297814.11	159.24	Urban
3007_L	3660690.10	258322.26	144.89	Urban
3008_L	3663164.05	233640.40	80.82	Urban
3009_L	3660136.59	260335.08	120.84	Urban
3010_L	3642560.17	222327.60	72.27	Urban
3011_L	3643385.44	221703.41	78.40	Urban
3012_L	3624855.69	263674.69	110.64	Urban
3013_L	3623890.58	261196.54	108.50	Urban
3014_L	3605823.66	280206.77	125.74	Urban
3015_L	3582547.79	249676.27	147.94	Urban
3016_L	3546962.10	261805.58	164.53	Urban

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
3017_L	3528676.00	258463.90	88.38	Urban
3018_L	3540301.91	283474.12	133.05	Urban
3019_L	3540444.12	284641.46	131.09	Urban
3020_L	3558115.17	311726.63	117.18	Urban
3021_L	3582265.41	266432.28	149.26	Urban
3022_L	3585062.09	266805.67	140.91	Urban
3023_L	3686416.91	276384.33	123.99	Urban
3024_L	3582600.85	251116.88	138.34	Urban
3025_L	3550426.48	286698.70	128.66	Urban
3026_L	3529804.69	312393.69	102.55	Urban
4001_L	3734838.39	303327.61	107.08	Tall Weeds/Crops
4002_L	3726151.80	247422.98	73.03	Tall Weeds/Crops
4002A_L	3727846.77	246615.77	73.44	Tall Weeds/Crops
4003A_L	3703435.08	269081.81	111.37	Tall Weeds/Crops
4003B_L	3715608.76	266728.98	117.16	Tall Weeds/Crops
4004A_L	3705578.79	268099.40	137.09	Tall Weeds/Crops
4004B_L	3715586.46	266576.70	118.57	Tall Weeds/Crops
4005_L	3709130.50	237197.60	103.48	Tall Weeds/Crops
4006_L	3679709.81	287354.03	142.38	Tall Weeds/Crops
4007_L	3666063.48	256377.62	108.18	Tall Weeds/Crops
4008_L	3681027.21	234113.29	105.00	Tall Weeds/Crops
4008A_L	3677383.82	236212.08	96.32	Tall Weeds/Crops
4009_L	3651539.52	277665.54	125.97	Tall Weeds/Crops
4010_L	3648026.57	230557.46	71.14	Tall Weeds/Crops
4011_L	3655675.72	202468.57	91.02	Tall Weeds/Crops
4012_L	3631096.64	281240.99	111.49	Tall Weeds/Crops
4013_L	3624062.57	246845.26	110.95	Tall Weeds/Crops
4014_L	3591869.81	274615.60	128.20	Tall Weeds/Crops
4015_L	3592817.88	250613.91	113.58	Tall Weeds/Crops
4016_L	3551630.20	246263.85	134.81	Tall Weeds/Crops
4017_L	3528148.66	256725.31	95.72	Tall Weeds/Crops
4018_L	3535699.71	279103.02	159.32	Tall Weeds/Crops
4019_L	3541580.21	309962.51	141.52	Tall Weeds/Crops
4020_L	3561410.34	309604.55	125.99	Tall Weeds/Crops
4021_L	3558114.57	272337.65	107.21	Tall Weeds/Crops
4021A_L	3558085.33	272323.72	106.92	Tall Weeds/Crops
4022_L	3607133.38	260753.67	128.63	Tall Weeds/Crops
4022A_L	3606408.96	261318.26	130.56	Tall Weeds/Crops
4023_L	3686821.98	274979.03	125.72	Tall Weeds/Crops
4024_L	3583047.57	254173.18	136.90	Tall Weeds/Crops
4025_L	3552524.95	286564.65	120.61	Tall Weeds/Crops
4026_L	3529475.80	313130.32	110.16	Tall Weeds/Crops
5001_L	3734881.39	303026.99	101.79	Brush Lands/Trees

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
5002_L	3726227.67	247396.88	73.11	Brush Lands/Trees
5003_L	3715563.68	266892.28	117.45	Brush Lands/Trees
5004_L	3706936.43	256186.39	108.33	Brush Lands/Trees
5005_L	3709351.00	231744.93	122.07	Brush Lands/Trees
5006_L	3680826.51	288219.91	160.32	Brush Lands/Trees
5007_L	3666095.38	256389.52	108.12	Brush Lands/Trees
5008_L	3678392.17	233098.17	129.50	Brush Lands/Trees
5009_L	3650435.77	279009.40	166.85	Brush Lands/Trees
5010_L	3646762.15	232181.00	73.19	Brush Lands/Trees
5011_L	3659081.17	209363.22	106.35	Brush Lands/Trees
5012_L	3631071.63	281217.55	111.59	Brush Lands/Trees
5013_L	3628986.53	248473.70	108.30	Brush Lands/Trees
5014_L	3591231.55	273326.07	137.75	Brush Lands/Trees
5015_L	3592773.88	250613.61	113.69	Brush Lands/Trees
5016_L	3551442.08	249133.47	120.10	Brush Lands/Trees
5017_L	3528145.79	255260.34	117.25	Brush Lands/Trees
5018_L	3533893.78	277147.84	142.59	Brush Lands/Trees
5019_L	3540829.50	309876.79	136.79	Brush Lands/Trees
5020_L	3561424.80	308760.76	131.27	Brush Lands/Trees
5021_L	3557970.51	274160.00	114.95	Brush Lands/Trees
5022_L	3607634.67	262731.56	140.99	Brush Lands/Trees
5022A_L	3607395.12	264437.03	129.45	Brush Lands/Trees
5022B_L	3607655.41	262731.18	140.84	Brush Lands/Trees
5023_L	3686273.11	278400.84	139.91	Brush Lands/Trees
5024_L	3581706.07	248005.66	131.86	Brush Lands/Trees
5025_L	3551625.55	286976.75	122.91	Brush Lands/Trees
5026_L	3529484.28	313095.83	110.24	Brush Lands/Trees
5030_L	3713358.90	265966.84	142.80	Brush Lands/Trees
6001_L	3734837.49	302217.64	106.42	Forested/Fully Grown
6001A_L	3734826.50	302190.77	107.22	Forested/Fully Grown
6002_L	3729566.01	245437.32	70.28	Forested/Fully Grown
6002A_L	3729548.37	245414.55	70.38	Forested/Fully Grown
6003_L	3715548.31	266587.14	118.47	Forested/Fully Grown
6003A_L	3715523.90	266597.76	118.61	Forested/Fully Grown
6004_L	3706873.82	254920.79	124.51	Forested/Fully Grown
6004A_L	3706870.40	254891.92	123.03	Forested/Fully Grown
6005_L	3709329.85	234605.47	84.59	Forested/Fully Grown
6005A_L	3709301.87	234584.41	83.99	Forested/Fully Grown
6006_L	3680783.38	286579.42	157.91	Forested/Fully Grown
6006A_L	3680849.83	286582.58	160.73	Forested/Fully Grown
6007_L	3666687.26	256334.95	121.89	Forested/Fully Grown
6007A_L	3666716.05	256340.27	121.26	Forested/Fully Grown
6008_L	3680942.25	234608.08	116.08	Forested/Fully Grown

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
6008A_L	3680944.35	234576.34	115.90	Forested/Fully Grown
6009_L	3651503.58	277591.48	125.97	Forested/Fully Grown
6009A_L	3651531.44	277595.20	126.05	Forested/Fully Grown
6010_L	3647164.91	239754.88	87.97	Forested/Fully Grown
6010A_L	3647158.98	239704.82	83.59	Forested/Fully Grown
6011_L	3656881.31	206607.28	96.67	Forested/Fully Grown
6011A_L	3656863.50	206607.11	96.19	Forested/Fully Grown
6012_L	3631099.98	281206.82	110.60	Forested/Fully Grown
6012A_L	3631090.39	281194.30	110.39	Forested/Fully Grown
6013_L	3624896.43	247530.44	108.27	Forested/Fully Grown
6013A_L	3624945.27	247541.20	108.47	Forested/Fully Grown
6014_L	3591686.03	275504.47	120.61	Forested/Fully Grown
6014A_L	3591693.69	275477.83	120.80	Forested/Fully Grown
6015_L	3592073.59	250681.56	117.95	Forested/Fully Grown
6015A_L	3592105.74	250676.74	118.07	Forested/Fully Grown
6016_L	3551459.91	245100.08	103.72	Forested/Fully Grown
6016A_L	3551457.47	245072.95	103.30	Forested/Fully Grown
6017_L	3528725.34	258474.48	87.41	Forested/Fully Grown
6017A_L	3528709.65	258510.40	87.27	Forested/Fully Grown
6018_L	3537778.14	279988.16	152.41	Forested/Fully Grown
6018A_L	3537816.03	280002.18	152.81	Forested/Fully Grown
6019_L	3541112.20	309875.77	140.66	Forested/Fully Grown
6019A_L	3541082.32	309865.41	140.73	Forested/Fully Grown
6020_L	3561479.26	308893.56	128.85	Forested/Fully Grown
6020A_L	3561467.71	308911.04	129.18	Forested/Fully Grown
6021_L	3558004.48	274216.30	115.07	Forested/Fully Grown
6021A_L	3557974.61	274226.81	114.83	Forested/Fully Grown
6022_L	3607296.02	263947.38	133.38	Forested/Fully Grown
6022A_L	3607299.36	263932.56	133.94	Forested/Fully Grown
6023_L	3688667.02	275536.57	136.25	Forested/Fully Grown
6023A_L	3688685.03	275518.48	135.39	Forested/Fully Grown
6024_L	3582998.19	254154.21	136.19	Forested/Fully Grown
6024A_L	3582955.97	254206.18	135.98	Forested/Fully Grown
6025_L	3551405.96	286369.99	126.75	Forested/Fully Grown
6025A_L	3551405.73	286348.67	126.95	Forested/Fully Grown
6026_L	3529525.57	312615.48	97.11	Forested/Fully Grown
6027_I	3529503.15	312645.44	97.02	Forested/Fully Grown

COORDINATE SYSTEM: WGS84

HORIZONTAL DATUM: NAD83 (2011)

VERTICAL DATUM: NAVD88

GEOID MODEL: GEOID 12A

UNITS: Meters

NGS CONTROL POINTS

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
19 V 62	N32 56 17.17921	W89 17 58.24016	116.12	CO1755
25 V 42	N32 42 19.46735	W89 37 40.83697	80.11	CO1508
49 14	N33 19 55.88128	W90 14 21.80480	9.78	DK0302
82 V 165	N33 32 52.86050	W89 10 58.81841	91.11	DJ1172
BAYS	N31 58 10.80173	W89 15 53.73282	87.44	DN4005
BEE LAKE	N33 02 48.89894	W90 19 32.86567	7.52	DK0265
CART	N32 43 08.57684	W89 34 18.49941	80.23	DN3967
E 223	N32 18 50.52182	W89 08 11.84427	83.18	CO0797
KALE	N32 21 44.25478	W89 34 03.06537	122.44	DN3957
KOSC	N33 05 24.59112	W89 32 28.77238	118.41	DJ2103
L 54	N32 36 44.94999	W90 02 25.21301	40.68	CP0198
L 102	N32 34 13.48242	W89 07 20.45778		CO0724
LEX	N33 07 32.02251	W90 01 33.95493	71.38	DK2129
M 40	N33 51 19.41345	W89 19 00.99289	50.43	DJ1212
MAYBE 2 RM 4	N31 56 23.71584	W89 50 04.15883	83.37	BV2006

TEMPORARY SURVEY MARKS (TSM)

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
110_L	N33 18 38.93839	W89 10 52.17021	128.28	TSM
111_L	N33 29 04.43792	W89 45 47.90751	122.01	TSM
200_L	N31 57 16.94294	W89 19 38.83470	126.57	TSM
201_L	N31 57 20.82065	W89 19 36.47148	123.52	TSM
202_L	N31 59 24.21551	W89 00 45.86408	115.11	TSM
203_L	N31 59 16.30784	W89 00 46.83315	113.03	TSM
204_L	N32 04 43.58158	W89 15 47.16451	99.92	TSM
205_L	N32 04 42.09147	W89 15 44.77299	100.27	TSM
206_L	N32 08 07.13477	W89 23 38.99540	89.54	TSM
207_L	N32 08 07.40922	W89 23 44.46313	92.02	TSM
208_L	N32 10 24.10024	W89 01 36.78859	103.83	TSM
209_L	N32 10 23.79640	W89 01 33.45372	102.99	TSM
210_L	N32 34 41.17083	W89 30 52.40378	106.81	TSM
211_L	N32 34 41.18159	W89 30 48.00211	104.84	TSM
212_L	N32 47 45.48879	W89 20 10.83811	84.35	TSM
213_L	N32 47 49.45957	W89 20 08.45202	84.18	TSM
214_L	N32 43 58.62260	W89 41 37.07036	81.04	TSM
215_L	N32 43 56.07968	W89 41 38.56551	80.29	TSM
216_L	N33 06 41.64838	W89 36 39.56101	94.89	TSM
217_L	N33 06 39.25760	W89 36 38.22559	93.14	TSM
218_L	N33 14 42.95316	W89 17 27.52857	133.02	TSM
220_L	N32 58 44.43685	W89 22 47.63312	98.42	TSM
221_L	N33 18 50.58282	W89 24 39.78475	107.76	TSM
222_L	N33 18 47.98212	W89 24 35.87319	110.22	TSM
223_L	N33 33 15.19858	W89 30 50.01163	91.89	TSM
224_L	N33 33 15.94289	W89 30 45.99136	90.98	TSM
225_L	N33 44 05.55758	W89 08 04.42897	77.27	TSM
226_L	N33 44 06.22431	W89 07 59.50440	75.89	TSM
251_L	N32 04 13.12222	W89 42 00.90086	80.32	TSM
252_L	N32 04 12.37726	W89 42 06.44132	80.28	TSM
253_L	N32 21 26.61201	W89 36 43.50530	110.56	TSM
254_L	N32 21 28.55393	W89 36 41.47315	111.63	TSM
255_L	N32 26 15.67870	W89 39 08.12377	91.38	TSM
256_L	N32 26 09.95010	W89 39 06.64387	91.34	TSM
257_L	N32 26 22.69680	W89 23 25.12022	95.27	TSM
258_L	N32 26 21.26909	W89 23 18.64027	94.23	TSM
259_L	N32 55 55.17943	W89 47 01.46022	58.41	LCP
260_L	N32 55 56.20431	W89 46 55.38580	62.78	TSM
261_L	N33 14 06.77618	W89 50 53.24058	93.93	TSM
262_L	N33 14 06.81951	W89 50 58.43569	95.17	TSM
263_L	N33 00 40.05351	W90 08 26.59576	69.98	TSM
264_L	N33 00 43.18781	W90 08 22.48631	70.24	TSM

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
265_L	N33 40 33.58031	W89 44 45.13208	44.47	TSM
266_L	N33 40 37.27227	W89 44 48.40114	44.24	TSM
267_L	N33 29 26.59383	W89 51 24.77398	61.05	TSM
268_L	N33 29 28.71496	W89 51 28.76277	61.56	TSM
269_L	N33 28 25.18012	W89 38 15.12015	102.16	TSM
270_L	N33 28 25.71881	W89 38 11.26635	102.19	TSM
285_L	N31 53 09.85429	W88 58 54.28270	71.08	TSM

LiDAR GROUND CONTROL

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
1001_L	N33 43 53.10914	W89 07 18.39407	77.30	GCP
1002_L	N33 40 38.81766	W89 44 48.91385	44.30	GCP
1003_L	N33 32 51.11550	W89 12 32.12325	96.37	GCP
1004_L	N33 28 01.89275	W89 36 31.39891	83.16	GCP
1005_L	N33 29 23.31655	W89 50 31.54498	71.56	GCP
1006_L	N33 14 35.59775	W89 17 28.72843	128.72	GCP
1007_L	N33 04 40.30244	W89 35 35.87973	118.16	GCP
1008_L	N33 14 01.56585	W89 53 20.74033	116.78	GCP
1009_L	N32 58 42.63108	W89 22 46.22976	98.98	GCP
1010_L	N32 55 52.37009	W89 47 21.00616	67.49	GCP
1010A_L	N32 55 52.61661	W89 47 20.48834	67.46	GCP
1011_L	N32 59 48.31158	W90 08 41.36388	72.27	GCP
1012_L	N32 47 56.76228	W89 20 08.86842	87.27	GCP
1013_L	N32 43 58.75273	W89 41 37.07676	81.03	GCP
1014_L	N32 26 27.31347	W89 23 50.40563	100.74	GCP
1015_L	N32 26 53.02606	W89 39 13.51684	87.93	GCP
1016_L	N32 04 13.70676	W89 41 17.60630	105.45	GCP
1017_L	N31 52 06.54659	W89 33 14.65786	63.13	GCP
1018_L	N31 55 45.32477	W89 21 02.94425	123.82	GCP
1019_L	N31 57 56.29045	W88 58 05.43035	133.24	GCP
1020_L	N32 10 20.45879	W89 01 00.93988	96.15	GCP
1021_L	N32 08 07.08632	W89 24 09.95496	97.68	GCP
1021A_L	N32 08 07.31513	W89 24 10.02423	97.68	GCP
1022_L	N31 48 02.60755	W89 18 59.24231	78.80	GCP
1023_L	N31 53 12.76899	W88 59 07.30416	77.86	GCP
1030_L	N32 53 07.62610	W89 58 13.42410	45.58	GCP

QUALITY CONTROL POINTS

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
2001_L	N33 44 08.07098	W89 07 18.25703	82.84	Bare Earth/Open Terrain
2002_L	N33 39 38.98680	W89 43 59.36467	46.96	Bare Earth/Open Terrain
2003_L	N33 32 42.83908	W89 12 31.64597	89.10	Bare Earth/Open Terrain
2004_L	N33 27 59.86045	W89 36 37.32562	82.01	Bare Earth/Open Terrain
2005_L	N33 29 22.68662	W89 53 17.68898	92.96	Bare Earth/Open Terrain
2006_L	N33 14 28.23758	W89 17 24.94484	125.34	Bare Earth/Open Terrain
2007_L	N33 04 42.10672	W89 35 23.11978	114.97	Bare Earth/Open Terrain
2007A_L	N33 06 38.04088	W89 36 38.23656	91.78	Bare Earth/Open Terrain
2008_L	N33 14 07.29985	W89 53 23.83490	119.02	Bare Earth/Open Terrain
2009_L	N32 58 11.26812	W89 21 52.18653	138.89	Bare Earth/Open Terrain
2010_L	N32 56 15.72062	W89 45 52.23260	72.36	Bare Earth/Open Terrain
2011_L	N32 59 35.77659	W90 09 29.24678	72.31	Bare Earth/Open Terrain
2012_L	N32 47 52.20655	W89 20 06.06806	83.92	Bare Earth/Open Terrain
2013_L	N32 43 56.07968	W89 41 38.56551	80.29	Bare Earth/Open Terrain
2014_L	N32 26 27.34066	W89 23 45.84707	99.02	Bare Earth/Open Terrain
2015_L	N32 27 22.43232	W89 39 30.24267	90.90	Bare Earth/Open Terrain
2016_L	N32 04 42.84226	W89 41 29.61375	108.19	Bare Earth/Open Terrain
2018_L	N31 55 40.79296	W89 21 05.24528	127.63	Bare Earth/Open Terrain
2019_L	N31 57 58.53221	W88 58 09.14327	133.17	Bare Earth/Open Terrain
2020_L	N32 10 24.73277	W89 01 10.71518	99.84	Bare Earth/Open Terrain
2021_L	N32 08 09.58741	W89 24 11.53145	97.54	Bare Earth/Open Terrain
2022_L	N32 34 33.62216	W89 32 53.79317	101.80	Bare Earth/Open Terrain
2023_L	N33 17 38.12560	W89 24 08.18780	94.08	Bare Earth/Open Terrain
2024_L	N32 21 09.46932	W89 38 38.95242	110.13	Bare Earth/Open Terrain
2025_L	N32 04 14.10788	W89 15 34.38013	102.83	Bare Earth/Open Terrain
2026_L	N31 53 10.84654	W88 58 53.83126	71.21	Bare Earth/Open Terrain
3001_L	N33 37 53.88686	W89 42 30.12326	51.20	Urban
3002_L	N33 37 49.07059	W89 43 10.75268	60.04	Urban
3003_L	N33 32 24.22228	W89 07 27.52619	102.41	Urban
3004_L	N33 32 27.41142	W89 16 03.13420	91.39	Urban
3005_L	N33 29 17.97429	W89 44 08.27010	95.11	Urban
3006_L	N33 18 36.35051	W89 10 18.42978	131.32	Urban
3007_L	N33 03 28.60908	W89 35 18.42673	117.75	Urban
3008_L	N33 04 28.09606	W89 51 11.70599	53.79	Urban
3009_L	N33 03 12.25638	W89 34 00.36416	93.68	Urban
3010_L	N32 53 09.72818	W89 58 05.06773	45.11	Urban
3011_L	N32 53 35.92114	W89 58 29.95433	51.25	Urban
3012_L	N32 44 10.29570	W89 31 19.20147	83.40	Urban

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
3013_L	N32 43 37.06024	W89 32 53.43509	81.28	Urban
3014_L	N32 34 05.07595	W89 20 28.42600	98.43	Urban
3015_L	N32 21 06.67061	W89 39 35.92409	121.05	Urban
3016_L	N32 02 01.60894	W89 31 20.40186	138.22	Urban
3017_L	N31 52 05.74026	W89 33 11.24971	62.33	Urban
3018_L	N31 58 41.15259	W89 17 29.57093	106.63	Urban
3019_L	N31 58 46.56844	W89 16 45.23975	104.65	Urban
3020_L	N32 08 37.50927	W88 59 46.30973	90.09	Urban
3021_L	N32 21 10.57167	W89 28 55.22210	122.26	Urban
3022_L	N32 22 41.59422	W89 28 43.42675	113.87	Urban
3023_L	N33 17 37.19773	W89 24 05.30178	96.44	Urban
3024_L	N32 21 09.55060	W89 38 40.91531	111.44	Urban
3025_L	N32 04 11.92745	W89 15 34.86370	102.00	Urban
3026_L	N31 53 18.98420	W88 59 01.02981	75.96	Urban
4001_L	N33 44 07.31186	W89 07 22.59349	79.44	Tall Weeds/Crops
4002_L	N33 38 42.94298	W89 43 24.21326	46.22	Tall Weeds/Crops
4002A_L	N33 39 37.22476	W89 43 57.25402	46.66	Tall Weeds/Crops
4003A_L	N33 26 43.73915	W89 29 03.08833	83.98	Tall Weeds/Crops
4003B_L	N33 33 16.81243	W89 30 45.54339	89.87	Tall Weeds/Crops
4004A_L	N33 27 52.51770	W89 29 43.09726	109.73	Tall Weeds/Crops
4004B_L	N33 33 15.96926	W89 30 51.42241	91.28	Tall Weeds/Crops
4005_L	N33 29 22.01445	W89 49 42.68430	76.82	Tall Weeds/Crops
4006_L	N33 14 07.57121	W89 16 55.83332	114.62	Tall Weeds/Crops
4007_L	N33 06 21.35491	W89 36 38.49116	81.06	Tall Weeds/Crops
4008_L	N33 14 07.85506	W89 51 12.24718	78.13	Tall Weeds/Crops
4008A_L	N33 12 11.54287	W89 49 47.44152	69.40	Tall Weeds/Crops
4009_L	N32 58 46.57391	W89 22 45.20302	98.56	Tall Weeds/Crops
4010_L	N32 56 14.42095	W89 52 54.47496	44.00	Tall Weeds/Crops
4011_L	N32 59 56.20236	W90 11 03.52165	64.02	Tall Weeds/Crops
4012_L	N32 47 45.87031	W89 20 10.12932	84.07	Tall Weeds/Crops
4013_L	N32 43 31.10153	W89 42 04.38168	83.73	Tall Weeds/Crops
4014_L	N32 26 28.26648	W89 23 50.64177	101.03	Tall Weeds/Crops
4015_L	N32 26 40.60362	W89 39 09.83269	86.52	Tall Weeds/Crops
4016_L	N32 04 20.88751	W89 41 16.76887	108.51	Tall Weeds/Crops
4017_L	N31 51 47.29726	W89 34 16.87662	69.69	Tall Weeds/Crops
4018_L	N31 56 08.76710	W89 20 12.20688	133.03	Tall Weeds/Crops
4019_L	N31 59 39.74997	W89 00 41.84650	114.78	Tall Weeds/Crops
4020_L	N32 10 23.17768	W89 01 09.62477	98.86	Tall Weeds/Crops
4021_L	N32 08 11.30686	W89 24 48.72376	80.56	Tall Weeds/Crops
4021A_L	N32 08 10.34784	W89 24 49.22997	80.27	Tall Weeds/Crops
4022_L	N32 34 33.06221	W89 32 54.98762	101.43	Tall Weeds/Crops
4022A_L	N32 34 09.99798	W89 32 32.69055	103.37	Tall Weeds/Crops
4023_L	N33 17 49.28649	W89 24 59.95343	98.20	Tall Weeds/Crops

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
4024_L	N32 21 26.47922	W89 36 44.52017	109.96	Tall Weeds/Crops
4025_L	N32 05 19.93747	W89 15 41.65036	93.91	Tall Weeds/Crops
4026_L	N31 53 08.74511	W88 58 32.77708	83.57	Tall Weeds/Crops
5001_L	N33 44 08.50624	W89 07 34.30283	74.15	Brush Lands/Trees
5002_L	N33 38 45.38152	W89 43 25.30309	46.30	Brush Lands/Trees
5003_L	N33 33 15.47873	W89 30 39.17417	90.16	Brush Lands/Trees
5004_L	N33 28 27.03050	W89 37 25.48587	81.29	Brush Lands/Trees
5005_L	N33 29 24.29461	W89 53 13.96272	95.48	Brush Lands/Trees
5006_L	N33 14 44.41665	W89 16 23.33989	132.54	Brush Lands/Trees
5007_L	N33 06 22.39956	W89 36 38.06320	81.01	Brush Lands/Trees
5008_L	N33 12 41.49547	W89 51 48.63577	102.62	Brush Lands/Trees
5009_L	N32 58 11.74519	W89 21 52.51553	139.43	Brush Lands/Trees
5010_L	N32 55 34.84890	W89 51 50.70810	46.05	Brush Lands/Trees
5011_L	N33 01 53.32022	W90 06 42.10413	79.33	Brush Lands/Trees
5012_L	N32 47 45.04200	W89 20 11.00849	84.17	Brush Lands/Trees
5013_L	N32 46 12.17240	W89 41 06.68242	81.08	Brush Lands/Trees
5014_L	N32 26 06.61415	W89 24 39.43259	110.60	Brush Lands/Trees
5015_L	N32 26 39.17592	W89 39 09.80231	86.63	Brush Lands/Trees
5016_L	N32 04 17.09210	W89 39 27.25487	93.80	Brush Lands/Trees
5017_L	N31 51 46.07389	W89 35 12.56941	91.23	Brush Lands/Trees
5018_L	N31 55 08.78660	W89 21 25.11438	116.35	Brush Lands/Trees
5019_L	N31 59 15.33116	W89 00 44.57893	110.07	Brush Lands/Trees
5020_L	N32 10 23.13173	W89 01 41.83533	104.15	Brush Lands/Trees
5021_L	N32 08 07.95251	W89 23 39.10394	88.28	Brush Lands/Trees
5022_L	N32 34 50.85741	W89 31 39.65690	113.79	Brush Lands/Trees
5022A_L	N32 34 44.39601	W89 30 34.08671	102.25	Brush Lands/Trees
5022B_L	N32 34 51.53001	W89 31 39.69036	113.64	Brush Lands/Trees
5023_L	N33 17 34.03195	W89 22 47.27256	112.32	Brush Lands/Trees
5024_L	N32 20 38.01221	W89 40 38.96714	105.00	Brush Lands/Trees
5025_L	N32 04 51.02949	W89 15 25.22304	96.22	Brush Lands/Trees
5026_L	N31 53 09.00003	W88 58 34.09497	83.66	Brush Lands/Trees
5030_L	N33 32 03.22879	W89 31 12.95166	115.52	Brush Lands/Trees
6001_L	N33 44 06.53915	W89 08 05.69942	78.79	Forested/Fully Grown
6001A_L	N33 44 06.16451	W89 08 06.73427	79.59	Forested/Fully Grown
6002_L	N33 40 31.97070	W89 44 44.73249	43.53	Forested/Fully Grown
6002A_L	N33 40 31.37870	W89 44 45.59747	43.63	Forested/Fully Grown
6003_L	N33 33 14.73992	W89 30 50.98203	91.18	Forested/Fully Grown
6003A_L	N33 33 13.95656	W89 30 50.54766	91.32	Forested/Fully Grown
6004_L	N33 28 23.95948	W89 38 14.40950	97.51	Forested/Fully Grown
6004A_L	N33 28 23.82460	W89 38 15.52326	96.03	Forested/Fully Grown
6005_L	N33 29 26.17633	W89 51 23.22469	57.96	Forested/Fully Grown
6005A_L	N33 29 25.25034	W89 51 24.00979	57.37	Forested/Fully Grown
6006_L	N33 14 41.85447	W89 17 26.64948	130.17	Forested/Fully Grown

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
6006A_L	N33 14 44.01256	W89 17 26.58346	132.99	Forested/Fully Grown
6007_L	N33 06 41.55519	W89 36 40.73457	94.78	Forested/Fully Grown
6007A_L	N33 06 42.49339	W89 36 40.55738	94.15	Forested/Fully Grown
6008_L	N33 14 05.53745	W89 50 53.06258	89.21	Forested/Fully Grown
6008A_L	N33 14 05.57763	W89 50 54.28979	89.03	Forested/Fully Grown
6009_L	N32 58 45.35353	W89 22 48.02249	98.56	Forested/Fully Grown
6009A_L	N32 58 46.26012	W89 22 47.90377	98.64	Forested/Fully Grown
6010_L	N32 55 54.49842	W89 46 59.83449	60.83	Forested/Fully Grown
6010A_L	N32 55 54.26332	W89 47 01.75410	56.45	Forested/Fully Grown
6011_L	N33 00 39.33091	W90 08 25.65752	69.66	Forested/Fully Grown
6011A_L	N33 00 38.75304	W90 08 25.64382	69.18	Forested/Fully Grown
6012_L	N32 47 45.95434	W89 20 11.44499	83.18	Forested/Fully Grown
6012A_L	N32 47 45.63420	W89 20 11.91747	82.97	Forested/Fully Grown
6013_L	N32 43 58.71708	W89 41 38.90146	81.04	Forested/Fully Grown
6013A_L	N32 44 00.31013	W89 41 38.53629	81.25	Forested/Fully Grown
6014_L	N32 26 22.94985	W89 23 16.47238	93.43	Forested/Fully Grown
6014A_L	N32 26 23.17909	W89 23 17.49850	93.62	Forested/Fully Grown
6015_L	N32 26 16.51234	W89 39 06.53711	90.90	Forested/Fully Grown
6015A_L	N32 26 17.55125	W89 39 06.75188	91.02	Forested/Fully Grown
6016_L	N32 04 14.41933	W89 42 00.94734	77.43	Forested/Fully Grown
6016A_L	N32 04 14.31824	W89 42 01.97860	77.00	Forested/Fully Grown
6017_L	N31 52 07.34936	W89 33 10.89166	61.36	Forested/Fully Grown
6017A_L	N31 52 06.86757	W89 33 09.51159	61.22	Forested/Fully Grown
6018_L	N31 57 16.83505	W89 19 40.22394	126.08	Forested/Fully Grown
6018A_L	N31 57 18.07444	W89 19 39.72139	126.47	Forested/Fully Grown
6019_L	N31 59 24.50641	W89 00 44.81827	113.93	Forested/Fully Grown
6019A_L	N31 59 23.53037	W89 00 45.19158	114.00	Forested/Fully Grown
6020_L	N32 10 24.98055	W89 01 36.80676	101.74	Forested/Fully Grown
6020A_L	N32 10 24.61646	W89 01 36.13139	102.06	Forested/Fully Grown
6021_L	N32 08 09.09549	W89 23 36.98565	88.40	Forested/Fully Grown
6021A_L	N32 08 08.13397	W89 23 36.55936	88.16	Forested/Fully Grown
6022_L	N32 34 40.80557	W89 30 52.75996	106.17	Forested/Fully Grown
6022A_L	N32 34 40.90268	W89 30 53.33092	106.74	Forested/Fully Grown
6023_L	N33 18 49.56381	W89 24 40.06198	108.71	Forested/Fully Grown
6023A_L	N33 18 50.13455	W89 24 40.77711	107.85	Forested/Fully Grown
6024_L	N32 21 24.86230	W89 36 45.19894	109.26	Forested/Fully Grown
6024A_L	N32 21 23.53378	W89 36 43.17310	109.05	Forested/Fully Grown
6025_L	N32 04 43.49045	W89 15 48.17538	100.07	Forested/Fully Grown
6025A_L	N32 04 43.46867	W89 15 48.98767	100.27	Forested/Fully Grown
6026_L	N31 53 10.05579	W88 58 52.39792	70.53	Forested/Fully Grown
6027_L	N31 53 09.34585	W88 58 51.24244	70.44	Forested/Fully Grown

Coordinates in UTM Zone 16
HORIZONTAL DATUM: NAD83 (2011)
VERTICAL DATUM: NAVD88
GEOID MODEL: GEOID 12A
UNITS: Meters

ALABAMA AOI

NGS CONTROL POINTS

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
12 43	3550914.63	381663.66	47.22	AA8353
65 38	3483821.97	411268.58	12.71	AA8496
AL81	3604867.32	389077.23	51.25	DN9085
AL82	3569143.40	441053.78	55.41	DM3483
AL84	3507495.26	425217.00	140.59	DL9796
ALBU	3550149.91	383621.98	45.75	DM5367
ALMJ	3433462.51	382632.71	99.74	DO2054

TEMPORARY SURVEY MARKS (TSM)

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
201	3485189.21	408296.65	40.68	TSM
202	3485188.37	408303.67	40.80	TSM
203	3461384.84	401870.30	16.68	TSM
204	3461390.29	401843.88	16.71	TSM
205	3451181.70	403666.64	16.54	TSM
206	3451198.45	403670.15	16.77	TSM
207	3449444.11	386254.62	92.13	TSM
208	3449440.10	386265.92	92.07	TSM
209	3446245.31	366690.99	82.78	TSM
210	3446254.89	366704.46	82.47	TSM
211	3463812.09	370188.86	70.30	TSM
212	3463809.32	370170.85	70.05	TSM
213	3489674.96	397677.78	57.54	TSM
214	3489668.56	397658.51	57.07	TSM
215	3500341.95	383208.29	42.63	TSM
216	3500345.20	383194.11	42.33	TSM
217	3498203.38	367414.76	86.43	TSM
218	3498187.51	367411.83	86.29	TSM

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
219	3484304.09	370888.97	72.11	TSM
220	3484297.50	370868.38	72.74	TSM
221	3479427.51	386078.61	37.27	TSM
222	3479441.08	386084.97	37.46	TSM
223	3463139.27	390359.69	26.86	TSM
224	3463127.15	390363.46	26.87	TSM
225	3550930.78	364599.07	136.56	TSM
226	3550926.75	364571.41	135.93	TSM
227	3568254.37	367329.33	87.96	TSM
228	3568246.62	367347.46	88.01	TSM
229	3561229.69	380134.20	41.16	TSM
230	3561217.56	380128.49	41.36	TSM
231	3570717.91	390020.41	59.09	TSM
232	3570694.05	390027.02	58.82	TSM
233	3564004.60	401098.32	32.00	TSM
234	3564000.71	401112.64	31.75	TSM
235	3555461.39	398058.85	22.12	TSM
236	3555451.39	398076.09	21.88	TSM
237	3551610.02	388842.52	47.62	TSM
238	3551614.89	388863.74	48.20	TSM
239	3511512.65	390804.17	18.12	TSM
240	3511502.69	390788.49	17.96	TSM
241	3527947.80	388956.70	17.65	TSM
242	3527948.77	388966.71	17.71	TSM
243	3529536.07	368232.60	33.89	TSM
244	3529522.62	368241.55	33.90	TSM
245	3516584.87	364039.09	69.46	TSM
246	3516579.11	364054.31	69.55	TSM
247	3481531.37	365529.96	72.14	TSM
248	3481534.10	365554.18	71.81	TSM

LiDAR GROUND CONTROL

Station Name	Northing (meters)	Easting (meters)	Elevation (meters)	Description
1001	3568125.95	368064.96	88.95	GCP
1002	3570678.84	390032.06	58.75	GCP
1003	3565294.42	402501.52	26.21	GCP
1004	3555462.02	398071.51	22.38	GCP
1005	3550899.84	384521.06	47.43	GCP

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
1006	3551184.61	365567.98	138.41	GCP
1007	3530204.72	367802.18	39.45	GCP
1008	3527664.26	388640.08	21.80	GCP
1009	3517073.79	362769.61	84.88	GCP
1010	3513414.82	391700.46	12.74	GCP
1011	3498897.11	367360.91	87.07	GCP
1012	3501832.79	391229.64	46.58	GCP
1013	3485503.08	407629.44	40.35	GCP
1014	3480180.71	386327.24	46.35	GCP
1015	3481533.15	365543.24	71.93	GCP
1016	3462858.39	368180.29	55.29	GCP
1017	3465333.40	389384.37	37.26	GCP
1018	3461332.68	403634.52	17.00	GCP
1019	3451774.18	403608.46	19.46	GCP
1020	3449441.80	386253.20	92.17	GCP
1021	3446062.88	365873.65	86.38	GCP

QUALITY CONTROL POINTS

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
2001	3568114.55	368089.54	89.29	Bare Earth/Open Terrain
2002	3570689.54	390036.50	58.99	Bare Earth/Open Terrain
2003	3564100.13	400814.93	32.69	Bare Earth/Open Terrain
2004	3555444.94	398080.76	21.79	Bare Earth/Open Terrain
2005	3550719.73	384497.80	48.14	Bare Earth/Open Terrain
2006	3551122.58	365629.45	137.50	Bare Earth/Open Terrain
2007	3530211.96	367801.68	39.42	Bare Earth/Open Terrain
2008	3527667.47	388635.30	21.55	Bare Earth/Open Terrain
2009	3517086.48	362780.72	85.05	Bare Earth/Open Terrain
2010	3513444.09	391686.72	12.93	Bare Earth/Open Terrain
2011	3498877.61	367337.93	88.28	Bare Earth/Open Terrain
2012	3498030.01	390391.50	56.72	Bare Earth/Open Terrain
2013	3485507.86	407588.46	40.27	Bare Earth/Open Terrain
2014	3480204.27	386318.27	47.08	Bare Earth/Open Terrain
2015	3481537.51	365544.26	71.82	Bare Earth/Open Terrain
2016	3463943.95	369979.80	71.23	Bare Earth/Open Terrain
2017	3467724.29	388933.68	44.77	Bare Earth/Open Terrain
2018	3461427.88	401850.16	16.97	Bare Earth/Open Terrain
2019	3451551.95	403641.66	18.64	Bare Earth/Open Terrain
2020	3450774.12	387795.12	67.60	Bare Earth/Open Terrain

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
2021	3446049.96	365661.04	86.91	Bare Earth/Open Terrain
2022	3560097.13	379147.28	52.85	Bare Earth/Open Terrain
2023	3476263.15	363545.51	74.82	Bare Earth/Open Terrain
2024	3490377.00	399539.26	77.99	Bare Earth/Open Terrain
3001	3568144.70	368101.27	90.94	URBAN
3002	3570724.25	390024.01	59.26	URBAN
3003	3564099.93	400800.80	32.46	URBAN
3004	3551013.77	386135.36	39.33	URBAN
3005	3550695.19	384500.10	48.06	URBAN
3006	3539852.89	373863.45	49.43	URBAN
3007	3533557.10	362172.39	108.37	URBAN
3008	3527679.25	374936.37	38.71	URBAN
3009	3515178.76	374229.96	71.93	URBAN
3010	3513388.22	391492.70	13.48	URBAN
3011	3498780.61	367376.45	88.26	URBAN
3012	3501847.73	391236.67	46.69	URBAN
3013	3485512.57	407604.43	40.12	URBAN
3014	3478944.03	402102.66	20.02	URBAN
3015	3481667.77	380887.35	56.85	URBAN
3016	3463929.72	369994.42	71.36	URBAN
3017	3469569.29	383284.78	63.32	URBAN
3018	3459502.25	401846.13	14.09	URBAN
3019	3451247.16	404004.33	15.19	URBAN
3020	3449462.34	386289.64	91.40	URBAN
3021	3446190.19	380084.42	66.59	URBAN
3022	3560122.64	379158.07	52.99	URBAN
3023	3482268.69	380980.13	49.92	URBAN
3024	3490347.42	399614.84	78.65	URBAN
4001	3568534.52	369724.51	77.54	Tall Weeds/Crops
4002	3569730.45	390071.97	68.29	Tall Weeds/Crops
4003	3564256.57	398897.92	30.04	Tall Weeds/Crops
4004	3554671.67	396114.99	29.51	Tall Weeds/Crops
4005	3559277.65	379397.16	45.77	Tall Weeds/Crops
4006	3549431.74	369738.89	141.09	Tall Weeds/Crops
4007	3530230.23	367797.86	40.20	Tall Weeds/Crops
4008	3527649.20	388652.74	20.39	Tall Weeds/Crops
4009	3515982.46	366783.73	113.78	Tall Weeds/Crops
4010	3515021.76	388213.41	51.98	Tall Weeds/Crops
4011	3498792.41	375725.57	37.79	Tall Weeds/Crops
4012	3498038.28	390420.13	56.90	Tall Weeds/Crops
4013	3485203.17	408316.71	40.99	Tall Weeds/Crops
4014	3479283.37	390001.11	44.35	Tall Weeds/Crops
4015	3481501.33	365537.19	71.43	Tall Weeds/Crops

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
4016	3464425.52	369576.33	58.84	Tall Weeds/Crops
4017	3465509.31	389326.72	39.35	Tall Weeds/Crops
4018	3461374.03	403535.21	15.35	Tall Weeds/Crops
4019	3451572.75	403648.76	18.52	Tall Weeds/Crops
4020	3450791.85	387811.63	68.02	Tall Weeds/Crops
4021	3446063.36	365653.67	86.89	Tall Weeds/Crops
4022	3560131.96	379181.23	52.22	Tall Weeds/Crops
4023	3476239.09	363570.77	74.66	Tall Weeds/Crops
4024	3489710.13	397710.40	59.45	Tall Weeds/Crops
5001	3568910.69	366200.87	87.26	Brush Lands/Trees
5002	3567189.38	389061.08	33.21	Brush Lands/Trees
5004	3555442.83	398094.57	21.88	Brush Lands/Trees
5005	3551609.40	388897.21	47.39	Brush Lands/Trees
5006	3553361.15	371059.17	159.25	Brush Lands/Trees
5007	3530211.78	367813.35	39.77	Brush Lands/Trees
5008	3527477.34	388521.88	20.59	Brush Lands/Trees
5009	3515383.93	366006.83	103.75	Brush Lands/Trees
5010	3515056.36	388269.62	50.29	Brush Lands/Trees
5011	3499324.12	375429.52	31.94	Brush Lands/Trees
5012	3501916.63	391201.87	45.97	Brush Lands/Trees
5013	3485521.56	407565.29	40.72	Brush Lands/Trees
5014	3479520.24	386062.12	39.75	Brush Lands/Trees
5015	3484591.46	370096.50	78.99	Brush Lands/Trees
5016	3464414.58	369598.52	58.67	Brush Lands/Trees
5017	3465498.69	389315.23	39.41	Brush Lands/Trees
5018	3461363.04	403601.75	15.39	Brush Lands/Trees
5019	3451201.17	403741.02	16.18	Brush Lands/Trees
5020	3450802.81	387811.95	68.22	Brush Lands/Trees
5021	3446224.60	366680.09	82.48	Brush Lands/Trees
5022	3560079.86	379149.39	52.77	Brush Lands/Trees
5023	3476263.69	363610.18	75.65	Brush Lands/Trees
5024	3489673.40	398257.74	62.05	Brush Lands/Trees
6001	3568278.38	367355.25	88.06	Forested/Fully Grown
6002	3570686.57	390072.04	60.70	Forested/Fully Grown
6003	3563976.87	401093.58	31.40	Forested/Fully Grown
6004	3555450.07	398050.81	21.74	Forested/Fully Grown
6005	3551646.50	388835.82	49.00	Forested/Fully Grown
6006	3550905.42	364575.47	134.90	Forested/Fully Grown
6007	3529542.23	368280.19	32.32	Forested/Fully Grown
6008	3527941.34	388989.25	16.15	Forested/Fully Grown
6009	3516606.40	364037.63	67.81	Forested/Fully Grown
6010	3511492.36	390818.65	18.69	Forested/Fully Grown
6011	3498202.01	367434.94	86.25	Forested/Fully Grown

Station Name	Northing	Easting	Elevation	Description
	(meters)	(meters)	(meters)	
6012	3500319.59	383202.66	42.05	Forested/Fully Grown
6013	3485205.95	408299.03	40.26	Forested/Fully Grown
6014	3479452.62	386108.67	37.09	Forested/Fully Grown
6015	3484267.34	370891.27	72.20	Forested/Fully Grown
6016	3463792.52	370201.84	69.88	Forested/Fully Grown
6017	3463128.88	390342.18	26.03	Forested/Fully Grown
6018	3461377.48	401864.06	17.21	Forested/Fully Grown
6019	3451178.56	403633.81	17.42	Forested/Fully Grown
6022	3561232.52	380104.34	41.14	Forested/Fully Grown
6023	3481500.45	365504.19	71.87	Forested/Fully Grown

COORDINATE SYSTEM: WGS84

HORIZONTAL DATUM: NAD83 (2011)

VERTICAL DATUM: NAVD88

GEOID MODEL: GEOID 12A

UNITS: Meters

NGS CONTROL POINTS

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
12 43	N 32 05 17.99332	W 88 15'14.35745"	19.67	AA8353
65 38	N 31 29 08.92314	W 87 56'03.14100"	-15.24	AA8496
AL81	N 32 34 32.54496	W 88 10'54.29720"	22.46	DN9085
AL82	N 32 15 26.78467	W 87 37'32.93023"	27.12	DM3483
AL84	N 31 42 01.32768	W 87 47'20.98252"	112.87	DL9796
ALBU	N 32 04 53.89574	W 88 13'59.33198"	18.22	DM5367
ALMJ	N 31 01 44.31313	W 88 13'47.06835"	71.50	DO2054

TEMPORARY SURVEY MARKS (TSM)

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
201	N 31 29 52.49050	W 87 57'56.22750"	12.79	TSM
202	N 31 29 52.46517	W 87 57'55.96107"	12.90	TSM
203	N 31 16 57.50930	W 88 01'51.34408"	-11.48	TSM
204	N 31 16 57.67812	W 88 01'52.34513"	-11.44	TSM
205	N 31 11 26.67864	W 88 00'39.88300"	-11.75	TSM
206	N 31 11 27.22349	W 88 00'39.75603"	-11.52	TSM
207	N 31 10 24.61363	W 88 11'36.96282"	64.11	TSM
208	N 31 10 24.48726	W 88 11'36.53435"	64.05	TSM
209	N 31 08 33.29773	W 88 23'54.31992"	54.89	TSM
210	N 31 08 33.61441	W 88 23'53.81593"	54.58	TSM
211	N 31 18 05.16373	W 88 21'50.44356"	42.77	TSM
212	N 31 18 05.06645	W 88 21'51.12329"	42.51	TSM
213	N 31 32 14.95355	W 88 04'40.37489"	29.82	TSM
214	N 31 32 14.73974	W 88 04'41.10336"	29.35	TSM
215	N 31 37 56.39294	W 88 13'53.55550"	15.17	TSM
216	N 31 37 56.49332	W 88 13'54.09504"	14.87	TSM
217	N 31 36 40.77884	W 88 23'51.91586"	59.27	TSM

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
218	N 31 36 40.26231	W 88 23'52.01929"	59.13	TSM
219	N 31 29 10.87000	W 88 21'33.54582"	44.82	TSM
220	N 31 29 10.64779	W 88 21'34.32293"	45.45	TSM
221	N 31 26 38.26104	W 88 11'55.92638"	9.69	TSM
222	N 31 26 38.70384	W 88 11'55.69097"	9.88	TSM
223	N 31 17 50.78741	W 88 09'07.30667"	-1.02	TSM
224	N 31 17 50.39505	W 88 09'07.15908"	-1.01	TSM
225	N 32 05 11.61049	W 88 26'05.19074"	109.06	TSM
226	N 32 05 11.46743	W 88 26'06.24352"	108.43	TSM
227	N 32 14 35.23763	W 88 24'29.71214"	60.05	TSM
228	N 32 14 34.99376	W 88 24'29.01580"	60.10	TSM
229	N 32 10 52.34045	W 88 16'17.33659"	13.37	TSM
230	N 32 10 51.94443	W 88 16'17.54900"	13.57	TSM
231	N 32 16 04.06679	W 88 10'03.81804"	31.02	TSM
232	N 32 16 03.29451	W 88 10'03.55566"	30.75	TSM
233	N 32 12 29.79064	W 88 02'57.93761"	4.00	TSM
234	N 32 12 29.66896	W 88 02'57.38900"	3.75	TSM
235	N 32 07 51.39831	W 88 04'50.74732"	-5.59	TSM
236	N 32 07 51.07937	W 88 04'50.08530"	-5.84	TSM
237	N 32 05 43.20201	W 88 10'40.83537"	20.06	TSM
238	N 32 05 43.36747	W 88 10'40.02819"	20.63	TSM
239	N 31 44 01.83621	W 88 09'09.73873"	-9.41	TSM
240	N 31 44 01.50745	W 88 09'10.33051"	-9.57	TSM
241	N 31 52 54.88911	W 88 10'26.68099"	-9.74	TSM
242	N 31 52 54.92435	W 88 10'26.30041"	-9.68	TSM
243	N 31 53 38.49574	W 88 23'36.10237"	6.66	TSM
244	N 31 53 38.06286	W 88 23'35.75513"	6.67	TSM
245	N 31 46 36.20388	W 88 26'09.18133"	42.36	TSM
246	N 31 46 36.02345	W 88 26'08.59971"	42.45	TSM
247	N 31 27 38.63477	W 88 24'55.25524"	44.91	TSM
248	N 31 27 38.73346	W 88 24'54.33904"	44.58	TSM

LiDAR GROUND CONTROL

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
1001	N 32 14 31.38064	W 88 24'01.54505"	61.05	GCP
1002	N 32 16 02.80239	W 88 10'03.35653"	30.68	GCP
1003	N 32 13 12.11567	W 88 02'04.81866"	-1.85	GCP
1004	N 32 07 51.42302	W 88 04'50.26430"	-5.34	GCP
1005	N 32 05 18.57903	W 88 13'25.36707"	19.88	GCP

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
1006	N 32 05 20.26877	W 88 25'28.36714"	110.90	GCP
1007	N 31 54 00.02651	W 88 23'52.81164"	12.22	GCP
1008	N 31 52 45.57058	W 88 10'38.61312"	-5.59	GCP
1009	N 31 46 51.53217	W 88 26'57.68085"	57.79	GCP
1010	N 31 45 03.91272	W 88 08'36.44215"	-14.78	GCP
1011	N 31 37 03.28250	W 88 23'54.29591"	59.91	GCP
1012	N 31 38 47.64239	W 88 08'49.70367"	18.99	GCP
1013	N 31 30 02.49236	W 87 58'21.62204"	12.47	GCP
1014	N 31 27 02.80865	W 88 11'46.81943"	18.77	GCP
1015	N 31 27 38.69816	W 88 24'54.75296"	44.70	GCP
1016	N 31 17 33.38152	W 88 23'05.95120"	27.76	GCP
1017	N 31 19 01.71020	W 88 09'45.06814"	9.44	GCP
1018	N 31 16 56.34574	W 88 00'44.61061"	-11.18	GCP
1019	N 31 11 45.90354	W 88 00'42.28554"	-8.82	GCP
1020	N 31 10 24.53818	W 88 11'37.01555"	64.15	GCP
1021	N 31 08 27.03755	W 88 24'25.09080"	58.50	GCP

QUALITY CONTROL POINTS

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
2001	N 32 14 31.02091	W 88 24'00.60036"	61.39	Bare Earth/Open Terrain
2002	N 32 16 03.15139	W 88 10'03.19130"	30.92	Bare Earth/Open Terrain
2003	N 32 12 32.80284	W 88 03'08.79689"	4.69	Bare Earth/Open Terrain
2004	N 32 07 50.87141	W 88 04'49.90477"	-5.93	Bare Earth/Open Terrain
2005	N 32 05 12.72217	W 88 13'26.17626"	20.59	Bare Earth/Open Terrain
2006	N 32 05 18.28114	W 88 25'25.99154"	109.99	Bare Earth/Open Terrain
2007	N 31 54 00.26138	W 88 23'52.83422"	12.19	Bare Earth/Open Terrain
2008	N 31 52 45.67313	W 88 10'38.79635"	-5.84	Bare Earth/Open Terrain
2009	N 31 46 51.94901	W 88 26'57.26498"	57.96	Bare Earth/Open Terrain
2010	N 31 45 04.85853	W 88 08'36.97600"	-14.59	Bare Earth/Open Terrain
2011	N 31 37 02.63977	W 88 23'55.15842"	61.12	Bare Earth/Open Terrain
2012	N 31 36 43.86465	W 88 09'19.99297"	29.14	Bare Earth/Open Terrain
2013	N 31 30 02.63579	W 87 58'23.17695"	12.39	Bare Earth/Open Terrain
2014	N 31 27 03.57057	W 88 11'47.16895"	19.50	Bare Earth/Open Terrain
2015	N 31 27 38.84017	W 88 24'54.71646"	44.59	Bare Earth/Open Terrain
2016	N 31 18 09.36155	W 88 21'58.41164"	43.70	Bare Earth/Open Terrain
2017	N 31 20 19.20011	W 88 10'03.07504"	16.99	Bare Earth/Open Terrain
2018	N 31 16 58.90086	W 88 01'52.12082"	-11.18	Bare Earth/Open Terrain
2019	N 31 11 38.69591	W 88 00'40.95443"	-9.65	Bare Earth/Open Terrain
2020	N 31 11 08.34277	W 88 10'39.31244"	39.58	Bare Earth/Open Terrain

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
2021	N 31 08 26.53023	W 88 24'33.11145"	59.03	Bare Earth/Open Terrain
2022	N 32 10 15.18636	W 88 16'54.50103"	25.09	Bare Earth/Open Terrain
2023	N 31 24 46.73248	W 88 26'07.82043"	47.56	Bare Earth/Open Terrain
2024	N 31 32 38.34209	W 88 03'30.04956"	50.25	Bare Earth/Open Terrain
3001	N 32 14 32.00478	W 88 24'00.16726"	63.04	URBAN
3002	N 32 16 04.27402	W 88 10'03.68306"	31.19	URBAN
3003	N 32 12 32.79185	W 88 03'09.33649"	4.46	URBAN
3004	N 32 05 22.86909	W 88 12'23.84409"	11.78	URBAN
3005	N 32 05 11.92619	W 88 13'26.07792"	20.51	URBAN
3006	N 31 59 15.78229	W 88 20'06.64058"	22.08	URBAN
3007	N 31 55 46.46545	W 88 27'28.79816"	81.16	URBAN
3008	N 31 52 40.93026	W 88 19'20.10236"	11.43	URBAN
3009	N 31 45 54.75050	W 88 19'41.16834"	44.69	URBAN
3010	N 31 45 02.97800	W 88 08'44.32708"	-14.04	URBAN
3011	N 31 36 59.50611	W 88 23'53.64967"	61.10	URBAN
3012	N 31 38 48.12995	W 88 08'49.44276"	19.10	URBAN
3013	N 31 30 02.79335	W 87 58'22.57321"	12.24	URBAN
3014	N 31 26 27.84103	W 88 01'48.77157"	-7.87	URBAN
3015	N 31 27 49.12780	W 88 15'13.52766"	29.38	URBAN
3016	N 31 18 08.90534	W 88 21'57.85206"	43.83	URBAN
3017	N 31 21 17.12147	W 88 13'37.58321"	35.68	URBAN
3018	N 31 15 56.36106	W 88 01'51.59290"	-14.09	URBAN
3019	N 31 11 28.90456	W 88 00'27.14765"	-13.10	URBAN
3020	N 31 10 25.21799	W 88 11'35.64757"	63.38	URBAN
3021	N 31 08 36.72310	W 88 15'28.61197"	38.58	URBAN
3022	N 32 10 16.01883	W 88 16'54.10073"	25.23	URBAN
3023	N 31 28 08.67616	W 88 15'10.27257"	22.45	URBAN
3024	N 31 32 37.40518	W 88 03'27.17271"	50.91	URBAN
4001	N 32 14 45.34433	W 88 22'58.34678"	49.62	Tall Weeds/Crops
4002	N 32 15 32.02187	W 88 10'01.43716"	40.24	Tall Weeds/Crops
4003	N 32 12 37.26730	W 88 04'22.07399"	2.05	Tall Weeds/Crops
4004	N 32 07 25.11540	W 88 06'04.61797"	1.83	Tall Weeds/Crops
4005	N 32 09 48.67477	W 88 16'44.59008"	18.03	Tall Weeds/Crops
4006	N 32 04 25.11674	W 88 22'48.43833"	113.61	Tall Weeds/Crops
4007	N 31 54 00.85300	W 88 23'52.98858"	12.97	Tall Weeds/Crops
4008	N 31 52 45.08601	W 88 10'38.12512"	-7.00	Tall Weeds/Crops
4009	N 31 46 17.80827	W 88 24'24.56210"	86.65	Tall Weeds/Crops
4010	N 31 45 54.88614	W 88 10'49.62285"	24.52	Tall Weeds/Crops
4011	N 31 37 03.24916	W 88 18'36.84204"	10.46	Tall Weeds/Crops
4012	N 31 36 44.14303	W 88 09'18.90988"	29.32	Tall Weeds/Crops
4013	N 31 29 52.94961	W 87 57'55.47179"	13.10	Tall Weeds/Crops
4014	N 31 26 34.94679	W 88 09'27.29053"	16.69	Tall Weeds/Crops
4015	N 31 27 37.66239	W 88 24'54.96661"	44.20	Tall Weeds/Crops

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
4016	N 31 18 24.83685	W 88 22'13.89682"	31.32	Tall Weeds/Crops
4017	N 31 19 07.40317	W 88 09'47.31914"	11.53	Tall Weeds/Crops
4018	N 31 16 57.65906	W 88 00'48.38045"	-12.83	Tall Weeds/Crops
4019	N 31 11 39.37355	W 88 00'40.69337"	-9.77	Tall Weeds/Crops
4020	N 31 11 08.92427	W 88 10'38.69590"	40.00	Tall Weeds/Crops
4021	N 31 08 26.96233	W 88 24'33.39613"	59.01	Tall Weeds/Crops
4022	N 32 10 16.33040	W 88 16'53.22084"	24.46	Tall Weeds/Crops
4023	N 31 24 45.96194	W 88 26'06.85214"	47.40	Tall Weeds/Crops
4024	N 31 32 16.10618	W 88 04'39.15130"	31.73	Tall Weeds/Crops
5001	N 32 14 56.06406	W 88 25'13.15420"	59.35	Brush Lands/Trees
5002	N 32 14 09.15382	W 88 10'39.00135"	5.23	Brush Lands/Trees
5004	N 32 07 50.80739	W 88 04'49.37696"	-5.84	Brush Lands/Trees
5005	N 32 05 43.20120	W 88 10'38.74913"	19.82	Brush Lands/Trees
5006	N 32 06 33.24558	W 88 21'59.99154"	131.69	Brush Lands/Trees
5007	N 31 54 00.26042	W 88 23'52.38996"	12.54	Brush Lands/Trees
5008	N 31 52 39.45918	W 88 10'43.03398"	-6.80	Brush Lands/Trees
5009	N 31 45 58.04699	W 88 24'53.79446"	76.64	Brush Lands/Trees
5010	N 31 45 56.02950	W 88 10'47.50064"	22.83	Brush Lands/Trees
5011	N 31 37 20.39939	W 88 18'48.31865"	4.62	Brush Lands/Trees
5012	N 31 38 50.35552	W 88 08'50.79128"	18.38	Brush Lands/Trees
5013	N 31 30 03.07403	W 87 58'24.05979"	12.84	Brush Lands/Trees
5014	N 31 26 41.26649	W 88 11'56.58919"	12.17	Brush Lands/Trees
5015	N 31 29 19.88150	W 88 22'03.71042"	51.71	Brush Lands/Trees
5016	N 31 18 24.49056	W 88 22'13.05244"	31.15	Brush Lands/Trees
5017	N 31 19 07.05435	W 88 09'47.74954"	11.59	Brush Lands/Trees
5018	N 31 16 57.32198	W 88 00'45.86037"	-12.79	Brush Lands/Trees
5019	N 31 11 27.33292	W 88 00'37.07951"	-12.11	Brush Lands/Trees
5020	N 31 11 09.28032	W 88 10'38.68822"	40.20	Brush Lands/Trees
5021	N 31 08 32.62074	W 88 23'54.72154"	54.59	Brush Lands/Trees
5022	N 32 10 14.62643	W 88 16'54.41263"	25.01	Brush Lands/Trees
5023	N 31 24 46.77744	W 88 26'05.37216"	48.39	Brush Lands/Trees
5024	N 31 32 15.08778	W 88 04'18.38387"	34.32	Brush Lands/Trees
6001	N 32 14 36.02831	W 88 24'28.73407"	60.16	Forested/Fully Grown
6002	N 32 16 03.06751	W 88 10'01.83184"	32.63	Forested/Fully Grown
6003	N 32 12 28.88882	W 88 02'58.10823"	3.40	Forested/Fully Grown
6004	N 32 07 51.02824	W 88 04'51.04965"	-5.98	Forested/Fully Grown
6005	N 32 05 44.38411	W 88 10'41.10629"	21.43	Forested/Fully Grown
6006	N 32 05 10.77678	W 88 26'06.07798"	107.40	Forested/Fully Grown
6007	N 31 53 38.71564	W 88 23'34.29430"	5.09	Forested/Fully Grown
6008	N 31 52 54.69088	W 88 10'25.43940"	-11.24	Forested/Fully Grown
6009	N 31 46 36.90239	W 88 26'09.24752"	40.71	Forested/Fully Grown
6010	N 31 44 01.18220	W 88 09'09.18050"	-8.83	Forested/Fully Grown
6011	N 31 36 40.74280	W 88 23'51.14951"	59.09	Forested/Fully Grown

Station Name	Latitude	Longitude	Ellipsoid Ht. (meters)	Description
6012	N 31 37 55.66488	W 88 13'53.75969"	14.59	Forested/Fully Grown
6013	N 31 29 53.03484	W 87 57'56.14284"	12.37	Forested/Fully Grown
6014	N 31 26 39.08709	W 88 11'54.79800"	9.51	Forested/Fully Grown
6015	N 31 29 09.67755	W 88 21'33.44140"	44.91	Forested/Fully Grown
6016	N 31 18 04.53345	W 88 21'49.94348"	42.35	Forested/Fully Grown
6017	N 31 17 50.44404	W 88 09'07.96476"	-1.85	Forested/Fully Grown
6018	N 31 16 57.26825	W 88 01'51.57737"	-10.94	Forested/Fully Grown
6019	N 31 11 26.56679	W 88 00'41.12202"	-10.87	Forested/Fully Grown
6022	N 32 10 52.42078	W 88 16'18.47793"	13.35	Forested/Fully Grown
6023	N 31 27 37.62000	W 88 24'56.21626"	44.64	Forested/Fully Grown

SECTION 3: PART 1 GEODETIC/GROUND CONTROL LOGS AND PHOTOS FOR ATTALA, CARROLL, CHOCTAW, JASPER, LEAKE, LEXINGTON, MONTGOMERY, SCOTT, SMITH AND WEBSTER COUNTIES MS

This section contains the station recovery information sheets and photographs for the geodetic and ground control stations established for the project. The stations appear as they are ordered in the final coordinate listing of Section 2.

The data is assembled on the following pages.

NGS CONTROL STATION: 19 V 62 (CO1755)

GPS Observation Log Sheet		
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	19 V 62	
Latitude:	32 56 17.18	
Longitude:	89 17 58.24	
Ellip. Height:	380.799	
Type of Mark:	NGS CRN	
Stamping on Mark:	19 V 62 1991 MSHD	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 20 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	234324	Session No. 0
Start Time:	10:01	End Time: 11:01
Data File Name:	8346383543240.DAT	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

N
Pasture



19 V 62-CO1755-CBN-1-18NOV2013



19 V 62-CO1755-CBN-2-18NOV2013



19 V 62-CO1755-CBN-3NE-18NOV2013



19 V 62-CO1755-CBN-3NW-18NOV2013



19 V 62-CO1755-CBN-3SE-18NOV2013

NGS CONTROL STATION: 25 V 42 (CO1508)

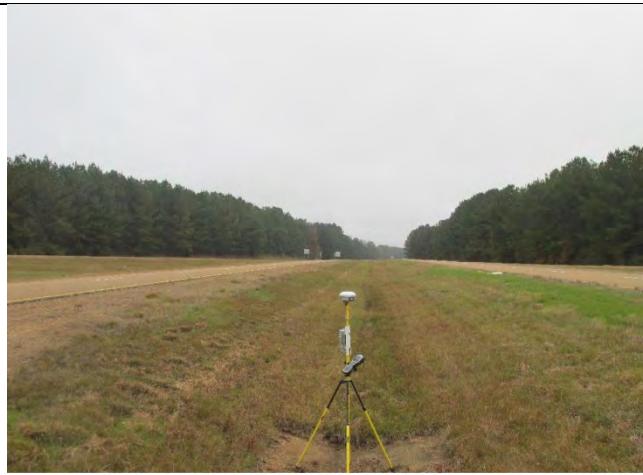
GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	25 V 42	
Latitude:	32 42 19.47	
Longitude:	81 37 40.84	
Ellip. Height:	80.115 m	
Type of Mark:	NGS mon	
Stamping on Mark:	B M 25V42 1588	
Weather Condition:	Rainy / Overcast 50°	
Project Number:	73741	Survey Date: 16 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	320	Session No. 0
Start Time:	10:14	End Time: 10:34
Data File Name:	737411116130.m2.dat 83543200.0AT	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount



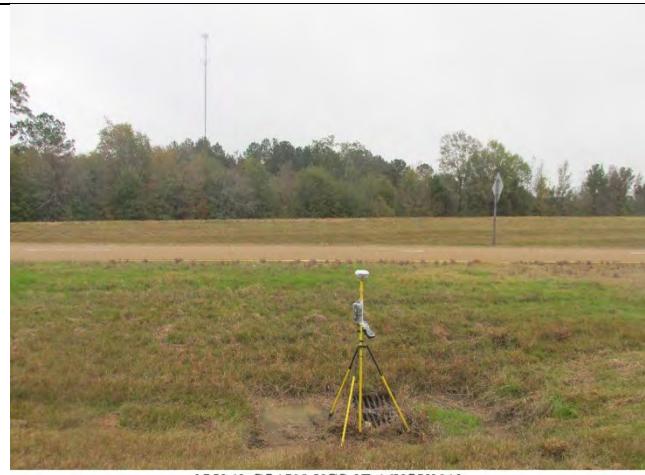
25 V 42-CO1508-NGS-1-16NOV2013



25 V 42-CO1508-NGS-2-16NOV2013



25 V 42-CO1508-NGS-3N-16NOV2013



25 V 42-CO1508-NGS-3E-16NOV2013



25 V 42-CO1508-NGS-3S-16NOV2013



25 V 42-CO1508-NGS-3W-16NOV2013

NGS CONTROL STATION: 49 14 (DK0302)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	49-14	
Latitude:	32° 19' 55.88"	
Longitude:	90° 19' 21.90"	
Ellip. Height:	32.027'	
Type of Mark:	3" DISK .IN CONC	
Stamping on Mark:	STA 49-14 1960	
Weather Condition:	PC SD°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	723	Session No. 1
Start Time:	9:03	End Time: 5:10
Data File Name:	86793232.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount



49 14-DK0302-1-19NOV2013



49 14-DK0302-2-19NOV2013



49 14-DK0302-3N-19NOV2013



49 14-DK0302-3E-19NOV2013



49 14-DK0302-3S-19NOV2013



49 14-DK0302-3W-19NOV2013

NGS CONTROL STATION: 82 V 165 (DJ1172)

GPS Observation Log Sheet		WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	82V-165	
Latitude:	33° 32' 52.06"	
Longitude:	39° 10' 58.81"	
Ellip. Height:	798.82	
Type of Mark:	3" DISK ~ CONC	
Stamping on Mark:	BM 82V-165 1965	
Weather Condition:	PC 50°	
Project Number:	73741	Survey Date: 11-23-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	327	Session No. /
Start Time:		
End Time:		
Data File Name:	80103270.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.75	to bottom of antenna mount



82 V 165-DJ1172-BM-1-20NOV2013



82 V 165-DJ1172-BM-2-20NOV2013



82 V 165-DJ1172-BM-3N-20NOV2013



82 V 165-DJ1172-BM-3E-20NOV2013



82 V 165-DJ1172-BM-3W-20NOV2013

NGS CONTROL STATION: BAYS (DN4005)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	RAYS	
Latitude:	31 58' 10.80"	
Longitude:	89 15' 53.73"	
Ellip. Height:	87.437m	
Type of Mark:	HT MOD	
Stamping on Mark:	BAYS 2008 MS DOT	
Weather Condition:	Sunny	
Project Number:	73741	Survey Date: 13 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	317	Session No. 0
Start Time:	9:21	End Time: 6:52
Data File Name:	83463170	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2.25m	to bottom of antenna mount

The site plan shows a rectangular boundary with various features inside. In the upper left, there's a north arrow pointing up. To the right of it is a small oval labeled 'Grass' with a triangle inside, labeled 'BAYS'. Above this is a label 'Equipment Shed' with an arrow pointing towards it. To the right of the grass area is a large irregular shape labeled 'MS DOT BLDG'. Below the grass area is a label 'Gravel'. At the bottom center, there's a vertical line with a horizontal extension to the right, labeled 'gate' with an arrow pointing to a point on the line.

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	14 NOV 13
Station Name:	BAYS	Operator Name:	Dave McGlothlin		
Latitude:	31 58 10.80	Julian Day:	318	Session No.	0
Longitude:	89 15 53.77	Start Time:	9:22	End Time:	3:39
Ellip. Height:	87.437m	Data File Name:	83463180.DAT		
Type of Mark:	HT MOD	Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	BAYS 2008 MS DOT	Type of Antenna:	INTERNAL		
Weather Condition:	Sunny	Antenna Height:	2.25m	to bottom of antenna mount.	



See sketch from

13 NOV 13

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS	Project Number:	73741	Survey Date:	2-18-14
Station Name:	BAYS	Operator Name:	R. CHALOUPKA		
Latitude:	31-58-10.8	Julian Day:	049	Session No.	1
Longitude:	89-15-53.7	Start Time:	8:32	End Time:	12:21
Ellip. Height:	87.4m	Data File Name:	04060490.T02		
Type of Mark:	CONCRETE W/DISK	Type of Receiver:	TRIMBLE R8/Z		
Stamping on Mark:	BAYS 2008 MS DOT	Type of Antenna:	INTERNAL		
Weather Condition:	65° / PC	Antenna Height:	2.076m to bottom of antenna mount		



See Sketch From

13 Nov



BAYS-DN4005-HT-MOD-1-12NOV2013



BAYS-DN4005-HT-MOD-2-12NOV2013



BAYS-DN4005-HT-MOD-3N-12NOV2013



BAYS-DN4005-HT-MOD-3E-12NOV2013



BAYS-DN4005-HT-MOD-3S-12NOV2013



BAYS-DN4005-HT-MOD-3W-12NOV2013

NGS CONTROL STATION: BEE LAKE (DN0265)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	BEE LAKE	
Latitude:	33° 02' 42.89"	
Longitude:	90° 19' 32.86"	
Ellip. Height:	24.606'	
Type of Mark:	3" DISC IL Cone	
Stamping on Mark:	BEE LAKE 1957	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. -
Start Time:	11:36	End Time: 12:13
Data File Name:	B6743220.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount

The sketch map illustrates the survey site's surroundings. A road runs diagonally from the bottom left towards the top right. To the left of the road are two labeled 'farm fields'. In the center-left, there is a cluster of buildings labeled 'TANK'. To the right of the road, there is a large rectangular structure labeled 'SILOS' containing three circles, with dashed lines extending from its base. Below the silos, the word 'Gravel' is written next to a dashed line. Several other dashed lines represent property boundaries or undeveloped land. A north arrow is located in the upper left corner of the sketch.



BEE LAKE-DK0265-CBN-1-18NOV2013



BEE LAKE-DK0265-CBN-2-18NOV2013



BEE LAKE-DK0265-CBN-3NE-18NOV2013



BEE LAKE-DK0265-CBN-3SE-18NOV2013



BEE LAKE-DK0265-CBN-3SW-18NOV2013



BEE LAKE-DK0265-CBN-3NW-18NOV2013

NGS CONTROL STATION: CART (DN3967)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	CART	
Latitude:	32 43 08.58	
Longitude:	89 34 18.50	
Ellip. Height:	80.234m	
Type of Mark:	HT MOD	
Stamping on Mark:	CART 2008 MSOT	
Weather Condition:	Overcast 50°	
Project Number:	73741	Survey Date: 16 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	320	Session No. 1
Start Time:	9:36	End Time: 6:08
Data File Name:	8346 3201.DAT	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2.25m	to bottom of antenna mount
<p>The sketch map shows a rectangular plot of land with several small circles representing survey points. In the center, there is a triangle pointing down, labeled 'CART'. To the right of the triangle, the word 'Grass' is written with two curly braces. Above the plot, the text 'HWY 16' is written above a line representing a road. To the left of the plot, there is a small circle with a dot inside, and above it, the word 'House' is written above a north arrow pointing upwards. Below the plot, the text 'P-LOT MS DOT' is written.</p>		

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-7-13
Station Name:	CART		Operator Name:	Dave McGlothlin		
Latitude:	32 43 08.58		Julian Day:	322	Session No.	0
Longitude:	99 39 18.50		Start Time:	9:30	End Time:	5:18
Ellip. Height:	80.234m		Data File Name:	90213220.DAT		
Type of Mark:	HT MOD		Type of Receiver:	TRIMBLE 4000		
Stamping on Mark:	CART 2008 MS0001		Type of Antenna:	Compact L1/L2		
Weather Condition:	Sunny 60°		Antenna Height:	2.0M	to bottom of antenna mount	



See Previous Sketch



CART-DN3967-HT-MOD-1-15NOV2013



CART-DN3967-HT-MOD-2-15NOV2013



CART-DN3967-HT-MOD-3N-15NOV2013



CART-DN3967-HT-MOD-3E-15NOV2013



CART-DN3967-HT-MOD-3S-15NOV2013



CART-DN3967-HT-MOD-3W-15NOV2013

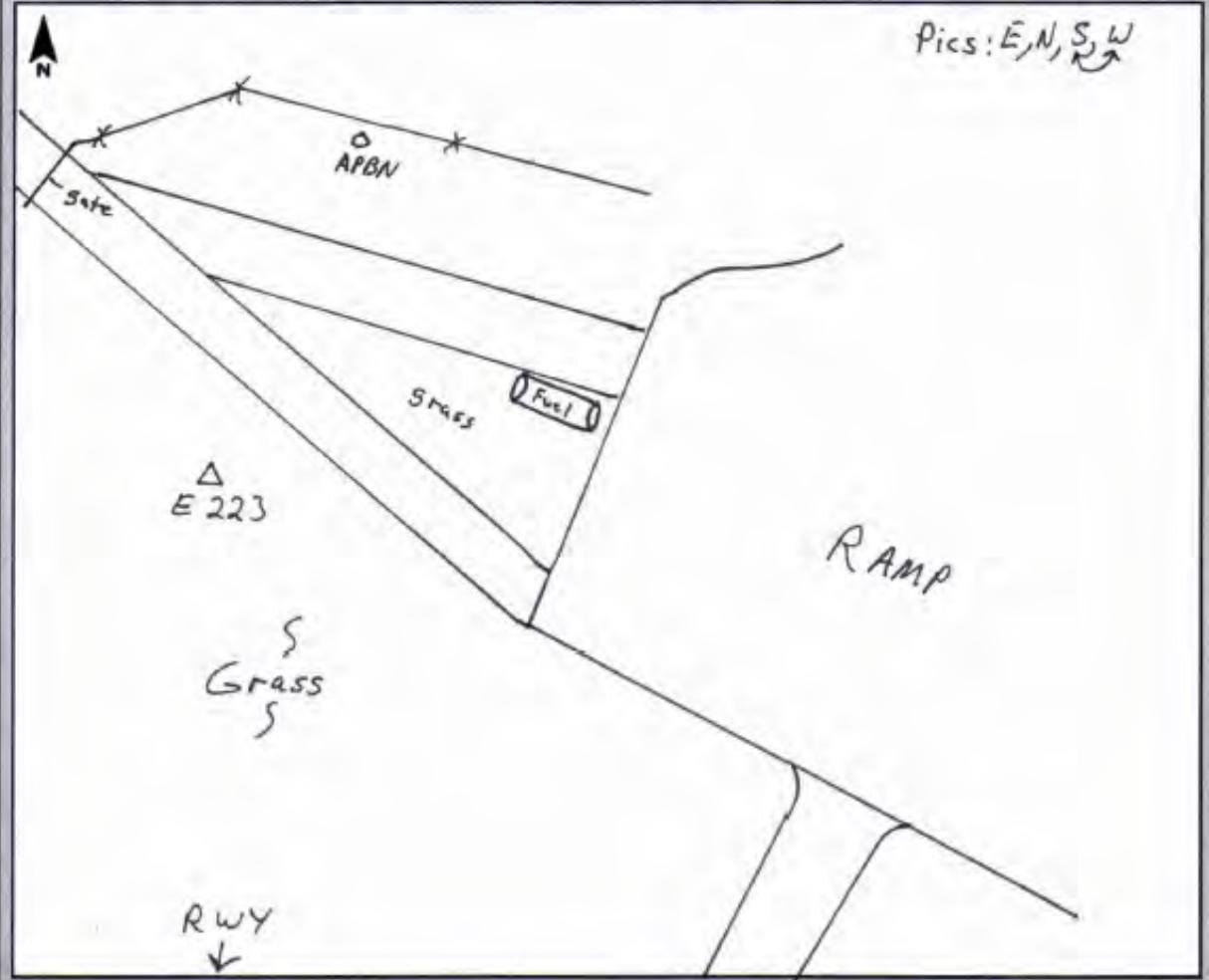
NGS CONTROL STATION: E 223 (CO0797)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	E 223	
Latitude:	32° 18' 50.52"	
Longitude:	82° 08' 11.84"	
Ellip. Height:	272.926'	
Type of Mark:	3" D18C n CONC	
Stamping on Mark:	E 223 1968	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-16-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	320	Session No. 1
Start Time:	1:58	End Time: 4:19
Data File Name:	86793203.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	14 Nov 13
Station Name:	<u>E 223 (CBN)</u>		Operator Name:	Dave McGlothlin		
Latitude:	<u>32 18 50.50</u>		Julian Day:	318	Session No.	0
Longitude:	<u>89 08 11.83</u>		Start Time:	1:57	End Time:	2:45
Ellip. Height:	<u>277.43'</u>		Data File Name:	<u>8354 3180.DAT</u>		
Type of Mark:	<u>CBN</u>		Type of Receiver:	<u>TRIMBLE R8-3</u>		
Stamping on Mark:	<u>E 223 1968 CGS</u>		Type of Antenna:	<u>INTERNAL</u>		
Weather Condition:	<u>Sunny 50°</u>		Antenna Height:	<u>2 m</u>	to bottom of antenna mount	



GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	14 NOV 13
Station Name:	E 223 (CBN)		Operator Name:	Dave McGlothlin		
Latitude:	32 18 50.50		Julian Day:	318	Session No.	3
Longitude:	89 08 11.83		Start Time:	4:27	End Time:	5:58
Ellip. Height:	277.43'		Data File Name:	83463183.DAT		
Type of Mark:	CBN		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	E223 1968 C+65		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 50°		Antenna Height:	2.25m	to bottom of antenna mount	



See sketch from

14 NOV 2013 Session 8

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	E 223	
Latitude:	32 18 50.50	
Longitude:	89 08 11.83	
Ellip. Height:	277.43'	
Type of Mark:	CBN	
Stamping on Mark:	E223-1968 C&G5	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 15 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	319	Session No. 0
Start Time:	9:50	End Time: 4:34
Data File Name:	83463150	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2.25m	to bottom of antenna mount



See Sketch From

14 NOV 2013



E-223-CO0797-CBN-1-14NOV2013



E-223-CO0797-CBN-2-14NOV2013



E-223-CO0797-CBN-3N-14NOV2013



E-223-CO0797-CBN-3E-14NOV2013



E-223-CO0797-CBN-3S-14NOV2013



E-223-CO0797-CBN-3W-14NOV2013

NGS CONTROL STATION: KALE (DN3957)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	KALE	
Latitude:	32° 21' 44.25"	
Longitude:	89° 39' 03.06"	
Ellip. Height:	401.782	
Type of Mark:	3" DISK w/ Cone	
Stamping on Mark:	KALE 2008	
Weather Condition:	CLEAR 70	
Project Number:	73741	Survey Date: 11-13-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	317	Session No. 1
Start Time:	1:16	End Time: 2:07
Data File Name:	86243171.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows several parallel roads or paths. A north arrow is at the top left. Labels include "MDOT STORAGE" with an arrow pointing to a rectangular area, "SWED" with an arrow pointing to a small building-like shape, "US 80" with an arrow pointing to a road, "PP" with an arrow pointing to a point on a road, and "GLORIA 1" with an arrow pointing to a point on a road. There are also some dashed lines and arrows indicating survey points.

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	11-14-13
Station Name:	KALE	Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 21' 44.25"	Julian Day:	218	Session No.	2
Longitude:	89° 39' 03.06"	Start Time:	2:41	End Time:	5:41
Ellip. Height:	901.782	Data File Name:	20103181.DAT		
Type of Mark:	3" DIAK N CONC.	Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	KALE 2008	Type of Antenna:	INTERNAL		
Weather Condition:	CLEAR 70'	Antenna Height:	2.25m	to bottom of antenna mount	



SET MAY 317

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-15-13
Station Name:	KALE		Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 21' 44.25"		Julian Day:	319	Session No.	1
Longitude:	89° 34' 03.06"		Start Time:	828	End Time:	5.26
Ellip. Height:	401.782		Data File Name:	88103190.DAT		
Type of Mark:	3" DISC w CONC.		Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	KALE 2008		Type of Antenna:	INTERNAL		
Weather Condition:	CLOUDY 60°		Antenna Height:	2.25m	to bottom of antenna mount	



SEE MAY 317

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-16-12
Station Name:	KALE		Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 21' 49.25"		Julian Day:	320	Session No.	1
Longitude:	89° 34' 03.06"		Start Time:	7:41	End Time:	9:53
Ellip. Height:	901.782		Data File Name:	8810 3200.01T		
Type of Mark:	3" DISK ~ CONC		Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	KALE 2008		Type of Antenna:	INTERNAL		
Weather Condition:	PC 60°		Antenna Height:	2.25m	to bottom of antenna mount	



SET DAY 317



KALE-DN3957-1-13NOV2013



KALE-DN3957-2-13NOV2013



KALE-DN3957-3NE-13NOV2013



KALE-DN3957-3SE-13NOV2013



KALE-DN3957-3SW-13NOV2013



KALE-DN3957-3NW-13NOV2013

NGS CONTROL STATION: KOSC (DJ2103)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	KOSC	
Latitude:	37 05 24.59	
Longitude:	89 32 28.77	
Ellip. Height:	118.405m	
Type of Mark:	CBN	
Stamping on Mark:	KOSC 1986 NGS	
Weather Condition:	Sunny 60°	
Project Number:	73741	Survey Date: 17 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	322	Session No. 0
Start Time:	10:47	End Time: 6:11
Data File Name:	83463220	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2.25m	to bottom of antenna mount
<p>N</p> <p>RWY</p> <p>KOSCIUSKO Apt</p> <p>RAMP</p> <p>TAXWAY</p> <p>KOSC</p> <p>Grass</p> <p>WSK</p>		

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	19NOV13
Station Name:	KOSC	Operator Name:	Dave McGlothlin		
Latitude:	32 05 24.59	Julian Day:	320	Session No.	0
Longitude:	89 32 28.77	Start Time:	9:08	End Time:	7:31
Ellip. Height:	118.405m	Data File Name:	83416 32300.DAT		
Type of Mark:	CBN	Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	KOSC 1986 NGS				
Weather Condition:	INTERNAL Antenna Height: 2.25 to bottom of antenna mount				



See Sketch from

17 NOV 13

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	18 NOV 13
Station Name:	██████████ KOSC		Operator Name:	Dave McGlothlin		
Latitude:	32 05 24.59		Julian Day:	324	Session No.	0
Longitude:	89 32 28.27		Start Time:	8:30	End Time:	11:33
Ellip. Height:	118.405m		Data File Name:	83163240.DAT		
Type of Mark:	C ISN		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	KOSC/1886 NGS		Type of Antenna:	INTERNAL		
Weather Condition:			Antenna Height:	2.25m	to bottom of antenna mount	



See sketch from

17 NOV 13



KOSC-DJ2103-CBN-1-18NOV2013



KOSC-DJ2103-CBN-2-18NOV2013



KOSC-DJ2103-CBN-3NE-18NOV2013



KOSC-DJ2103-CBN-3SE-18NOV2013



KOSC-DJ2103-CBN-3SW-18NOV2013



KOSC-DJ2103-CBN-3NW-18NOV2013

NGS CONTROL STATION: L 54 (CP0198)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	L 54	
Latitude:	32° 16' 44.99"	
Longitude:	90° 02' 25.21"	
Ellip. Height:	133.479'	
Type of Mark:	3" DISC IN CONC	
Stamping on Mark:	L 54 1935	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-16-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	320	Session No.
Start Time:	9:10	End Time: 9:57
Data File Name:	BL743200.DAT	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount
<p>A hand-drawn sketch of the GPS station location. It shows a street labeled "W. PEACE ST." with "SR-22" to its right. To the left is a building labeled "BLDG". In the foreground, there's a planter with a sign, a tree labeled "SIGN", a "PLANTER", and a "PARKING" area. A road labeled "GRANITE" leads towards the station. To the right, there are more buildings labeled "BLDG.", "BLDG.", and "BLDG.". A north arrow points upwards.</p>		

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-18-13
Station Name:	L 59		Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 36' 44.99"		Julian Day:	322	Session No.	1
Longitude:	90° 02' 25.21"		Start Time:	8:53	End Time:	1:09
Ellip. Height:	133. 979'		Data File Name:	B2723221.017		
Type of Mark:	3" DISK IN CONC		Type of Receiver:	5700		
Stamping on Mark:	L 59 1935		Type of Antenna:	SENNY R. 3000 MHz		
Weather Condition:	PC 60°		Antenna Height:	2.0 m	to bottom of antenna mount	

N

566 DAY 320



L 54-CP0198-CBN-1-16NOV2013



L 54-CP0198-CBN-2-16NOV2013



L 54-CP0198-CBN-3N-16NOV2013



L 54-CP0198-CBN-3E-16NOV2013



L 54-CP0198-CBN-3S-16NOV2013



L 54-CP0198-CBN-3W-16NOV2013

NGS CONTROL STATION: L 102 (CO0724)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	L 102	
Latitude:	32° 39' 13.98"	
Longitude:	89° 07' 20.45"	
Ellip. Height:	380.720'	
Type of Mark:	3" DISC in CONC	
Stamping on Mark:	L 102 1935	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-16-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	320	Session No. 1
Start Time:	1:07	End Time: 3:38
Data File Name:	JL123203.DAT	
Type of Receiver:	5700	
Type of Antenna:	ZENITH ZEO-ETTE	
Antenna Height:	2.0 m	to bottom of antenna mount



L 102-CO0724-CBN-1-16NOV2013



L 102-CO0724-CBN-2-16NOV2013



L 102-CO0724-CBN-3NE-16NOV2013



L 102-CO0724-CBN-3SE-16NOV2013

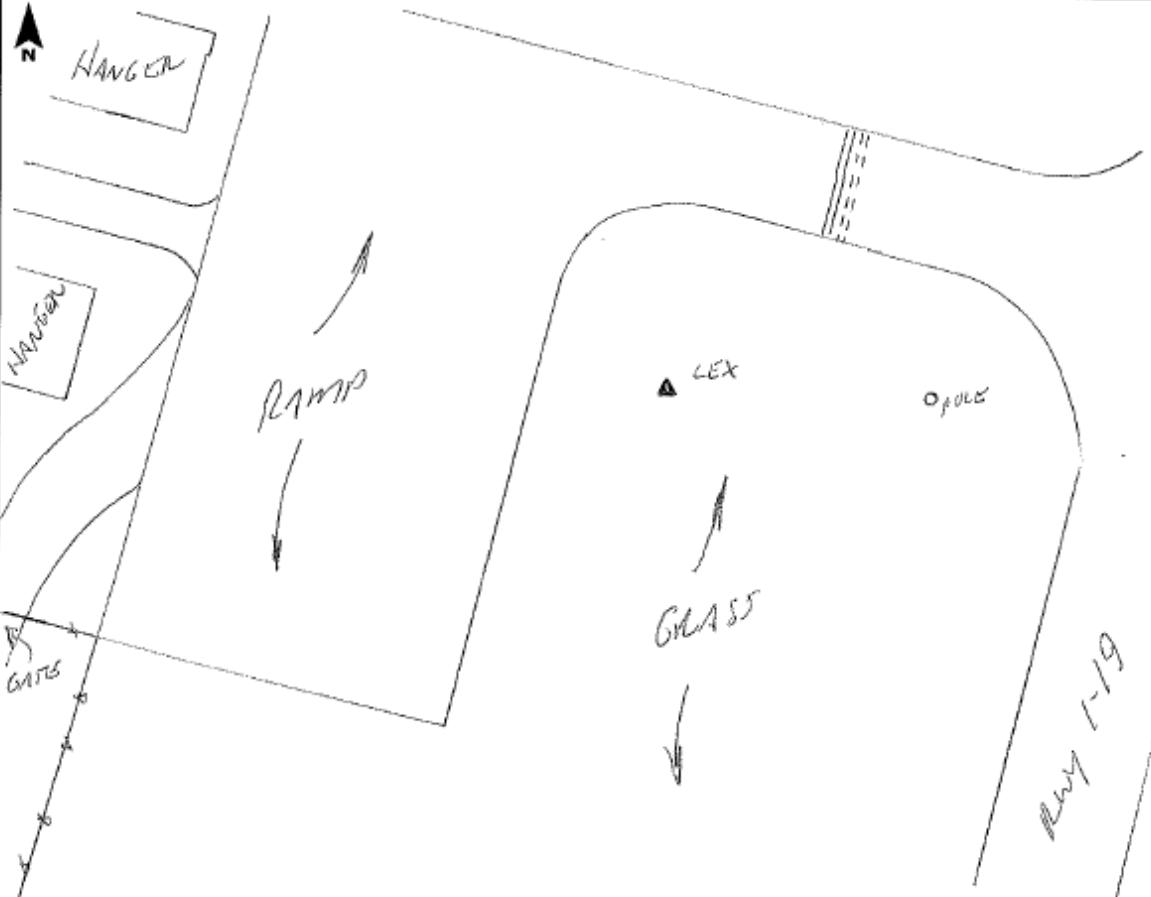


L 102-CO0724-CBN-3SW-16NOV2013



L 102-CO0724-CBN-3NW-16NOV2013

NGS CONTROL STATION: LEX (DK2129)

GPS Observation Log Sheet						
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-18-13
Station Name:	LEX		Operator Name:	JAMES R. SPEELMAN		
Latitude:	33° 07' 32.02"		Julian Day:	322	Session No.	1
Longitude:	90° 01' 33.75"		Start Time:	2:11	End Time:	5:35
Ellip. Height:	239.155"		Data File Name:	33103220.01T		
Type of Mark:	3" DISK + CONE		Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	LEX 1986		Type of Antenna:	INTERNAL		
Weather Condition:	PC 70°		Antenna Height:	2.25m	to bottom of antenna mount	
 <p>A hand-drawn sketch of the survey site. It shows a hanger on the left, a ramp leading up to a gate, a grassy area, and a pole labeled 'LEX'. There is also a label 'pole' and a date 'Aug 11/13'.</p>						

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-19-13
Station Name:	LCX		Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 07' 32.92"		Julian Day:	323	Session No.	1
Longitude:	90° 01' 33.95"		Start Time:	7:46	End Time:	5:49
Ellip. Height:	239.185'		Data File Name:	88103230.DAT		
Type of Mark:	3" Disk - CONC		Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	LCX 1986		Type of Antenna:	INTERNAL		
Weather Condition:	PC 50°		Antenna Height:	2.25m	to bottom of antenna mount	



DAY 322
SCE



LEX-DK2129-CBN-1-19NOV2013



LEX-DK2129-CBN-2-19NOV2013



LEX-DK2129-CBN-3N-19NOV2013



LEX-DK2129-CBN-3E-19NOV2013



LEX-DK2129-CBN-3S-19NOV2013



LEX-DK2129-CBN-3W-19NOV2013

NGS CONTROL STATION: M 40 (DJ1212)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	M 40	
Latitude:	33° 57' 19.91"	
Longitude:	99° 19' 00.99"	
Ellip. Height:	1657462	
Type of Mark:	3" DISK in NEWMALL	
Stamping on Mark:	M 40 1935	
Weather Condition:	PC 50°	
Project Number:	73741	Survey Date: 11-23-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	327	Session No. ~
Start Time:	11:37	End Time: 12:29
Data File Name:	96743670.DAT	
Type of Reciever:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 ~	to bottom of antenna mount
<p>A hand-drawn sketch map of the survey site. It shows a building footprint with a door labeled 'NSB'. To the left is a small rectangular area with 'PP' written twice. In the center is a large irregular shape labeled 'BRUSH'. To the right is a street labeled 'W. TAYLOR AVE.' and at the bottom right 'W. VETERANS AVE.'. There are several vertical dashed lines representing trees. A north arrow points upwards.</p>		



M 40-DJ1212-BM-1-23NOV2013



M 40-DJ1212-BM-2-23NOV2013



M 40-DJ1212-BM-3NE-23NOV2013



M 40-DJ1212-BM-3E-23NOV2013



M 40-DJ1212-BM-3S-23NOV2013



M 40-DJ1212-BM-3W-23NOV2013

NGS CONTROL STATION: MAYBE 2 RM 4 (BV2006)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	<u>MAYBE 2 RM 4</u>	
Latitude:	<u>31° 56' 23.71"</u>	
Longitude:	<u>99° 50' 09.15"</u>	
Ellip. Height:	<u>273.94</u>	
Type of Mark:	<u>3" DISK IN CONC.</u>	
Stamping on Mark:	<u>MAYBE 2 NV 4 1963</u>	
Weather Condition:	<u>CLEAR 70°</u>	
Project Number:	<u>73741</u>	Survey Date: <u>11-13-13</u>
Operator Name:	<u>JAMES R. SPEELMAN</u>	
Julian Day:	<u>317</u>	Session No. <u>1</u>
Start Time:	<u>10.21</u>	End Time: <u>5.45</u>
Data File Name:	<u>88103170.DAT</u>	
Type of Receiver:	<u>TRIMBLE R8-2</u>	
Type of Antenna:	<u>INTERNAL</u>	
Antenna Height:	<u>2.25 m</u>	to bottom of antenna mount

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	11-14-B
Station Name:	MAYBE 2 NM 4	Operator Name:	JAMES R. SPEELMAN		
Latitude:	31° 56' 23.71"	Julian Day:	318	Session No.	1
Longitude:	89° 50' 04.15"	Start Time:	8:44	End Time:	1:23
Ellip. Height:	272.491	Data File Name:	28103180_001.T		
Type of Mark:	3" DISK IN CONC.	Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	MAYBE 2 NO 41963	Type of Antenna:	INTERNAL		
Weather Condition:	CLEAR 70°	Antenna Height:	2.25 m	to bottom of antenna mount	



SEE DAY 317



MAYBE 2 RM 4-BV2006-1-13NOV2013



MAYBE 2 RM 4-BV2006-2-13NOV2013



MAYBE 2 RM 4-BV2006-3NE-13NOV2013



MAYBE 2 RM 4-BV2006-3SE-13NOV2013



MAYBE 2 RM 4-BV2006-3SW-13NOV2013



MAYBE 2 RM 4-BV2006-3NW-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 110_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	19NOV13
Station Name:	110		Operator Name:	Dave McGlothlin		
Latitude:	33 18 38.94		Julian Day:	323	Session No.	I
Longitude:	89 10 52.17		Start Time:	2:46	End Time:	6:46
Ellip. Height:	420.858'		Data File Name:	83433231.DAT		
Type of Mark:	TSM #5Rmark30"		Type of Receiver:	Trimble 4200		
Stamping on Mark:	Woolpert		Type of Antenna:	Comptel 1/L2		
Weather Condition:	Overcast 50°		Antenna Height:	2.0m	to bottom of antenna mount	

N
 old RR tracks
 Scattered brush/Trees - Trailer
 EX¹ Draw - ummmmm
 Dirt Road
 R/R
 110 GRASS
 R/R
 R/R

GPS Observation Log Sheet



Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	20 NOV 13
Station Name:	110		Operator Name:	Dave McGlothlin		
Latitude:	33 18 38.94		Julian Day:	324	Session No.	0
Longitude:	89 10 52.17		Start Time:	9:14	End Time:	6:05
Ellip. Height:	420.858'		Data File Name:	8343 3240.DAT		
Type of Mark:	TSM		Type of Receiver:	Trimble 4700		
Stamping on Mark:	Woolpert		Type of Antenna:	Macro Centered L1/L2/W/GP		
Weather Condition:	Sunny 40°		Antenna Height:	2 m	to bottom of antenna mount	



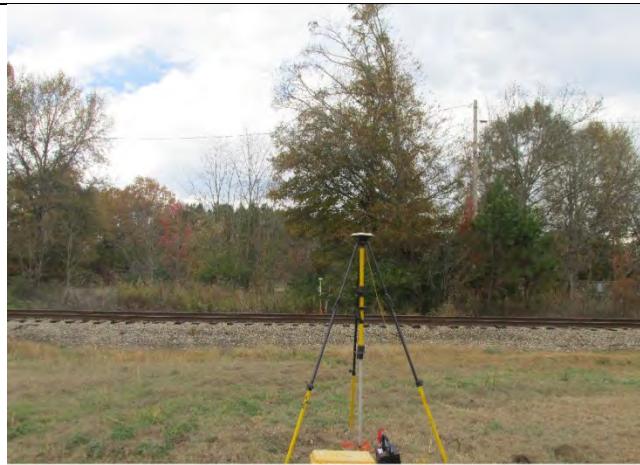
See Sketch from 19 Nov 2013



110-TSM-1-19NOV2013



110-TSM-2-19NOV2013



110-TSM-3N-19NOV2013



110-TSM-3E-19NOV2013



110-TSM-3S-19NOV2013



110-TSM-3W-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 111_L)

GPS Observation Log Sheet		W WOOLPERT			
Project Name:	NCRS LAUREL MS	Project Number:	73741	Survey Date:	11-20-13
Station Name:	III	Operator Name:	D. MC GLOTHLIN		
Latitude:	33-29-04.4	Julian Day:	323	Session No.	1
Longitude:	89-45-47.9	Start Time:	8:03	End Time:	1620
Ellip. Height:	122.1	Data File Name:	B2723231.DAT		
Type of Mark:	#5 Re-Bar w/CAP	Type of Receiver:	RB-3		
Stamping on Mark:	NA	Type of Antenna:	INTERNAL		
Weather Condition:	60° / SUNNY	Antenna Height:	231S	to bottom of antenna mount	



111-TSM-1-20NOV2013



111-TSM-2-20NOV2013



111-TSM-3N-20NOV2013



111-TSM-3S-20NOV2013



111-TSM-3SW-20NOV2013



111-TSM-3SW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 200_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	13ANU13
Station Name:	200		Operator Name:	Dave McGlothlin		
Latitude:	31 57 16.92		Julian Day:	317	Session No.	N/A
Longitude:	89 19 38.82		Start Time:		End Time:	
Ellip. Height:	419.742'		Data File Name:	73741 111313.DM.DC		
Type of Mark:	TSM (Temporary Survey Mark)		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 38°		Antenna Height:	2 m	to bottom of antenna mount	



200-1-13NOV2013



200-2-13NOV2013



200-3NE-13NOV2013



200-3SE-13NOV2013



200-3SW-13NOV2013



200-3NW-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 201_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	201	
Latitude:	31 57 20.80	
Longitude:	89 19 36.45	
Ellip. Height:	409.72'	
Type of Mark:	TSM	
Stamping on Mark:	NA	
Weather Condition:	Sunny 40°	
Project Number:	73741	Survey Date: 13 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	317	Session No. 1
Start Time:		
Data File Name:	73741_111313DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

Pics NE, NW, SW, SE



201-1-13NOV2013



201-2-13NOV2013



201-3NE-13NOV2013



201-3SE-13NOV2013



201-3SW-13NOV2013



201-3NW-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 202_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	202	
Latitude:	31 59 24.19	
Longitude:	89 00 45.85	
Ellip. Height:	382.40'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 13NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	317	Session No.
Start Time:		
Data File Name:	73741_111313DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount



202-1-13NOV2013



202-2-13NOV2013



202-3N-13NOV2013



202-3E-13NOV2013



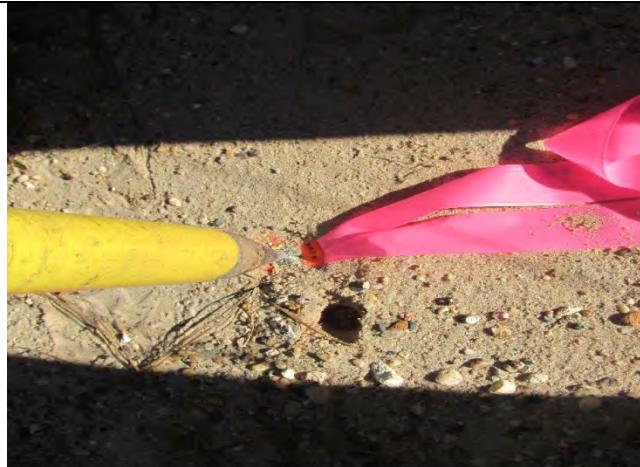
202-3S-13NOV2013



202-3W-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 203_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	203	
Latitude:	31 59 16.29	
Longitude:	89 00 46.81	
Ellip. Height:	375.45'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 13NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	317	Session No. —
Start Time:		
End Time:		
Data File Name:	73741_111313.DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	21	to bottom of antenna mount
<p>A hand-drawn sketch of a survey site. It shows a vertical line labeled "Hwy 500" running through the center. To the left of the highway, there is a cluster of trees and a house. To the right, there is a "Gravel Road" sloping down towards the bottom right. A "Clear cut" area is shown near the bottom right. Several survey points are marked with stars (*). An arrow points to the top left with the letter "N". Labels include "TREES", "House", "Hwy 500", "Gravel Road", "Clear cut", and "Pics NW, SE".</p>		



203-1-13NOV2013



203-2-13NOV2013



203-3N-13NOV2013



203-3E-13NOV2013



203-3S-13NOV2013



203-3W-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 204_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	204	
Latitude:	32 04 43.58	
Longitude:	89 15 47.17	
Ellip. Height:	327.852	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 12/NOV/13
Operator Name:	Dave McGlothlin	
Julian Day:	217	Session No. _____
Start Time:	_____	End Time: _____
Data File Name:	737411313Jm.dc	
Type of Receiver:	Trimble R8-3	
Type of Antenna:	Internal	
Antenna Height:	2 m	to bottom of antenna mount
<p>A hand-drawn sketch of a survey site. It shows a road labeled "Pineville Rd" running diagonally from the top left towards the bottom right. A wavy line labeled "TREE" is positioned above the road. Another wavy line labeled "TREES" is to the right of the road. A small area labeled "Drive" is shown near the bottom right. A house is indicated by a simple outline at the bottom. A north arrow points upwards on the left side. The sketch is done in black ink on white paper.</p>		



204-1-13NOV2013



204-2-13NOV2013



204-3NE-13NOV2013



204-3SE-13NOV2013



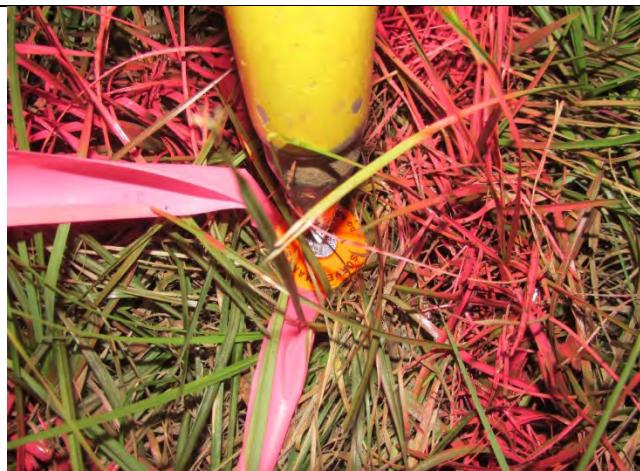
204-3SW-13NOV2013



204-3NW-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 205_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	13NOV13
Station Name:	205		Operator Name:	Dave McGlothlin		
Latitude:	32 04 42.09		Julian Day:	317	Session No.	—
Longitude:	89 15 44.77		Start Time:	—	End Time:	—
Ellip. Height:	328.952		Data File Name:	73741_111313.DAT.DL		
Type of Mark:	TSM		Type of Receiver:	Trimble R8-3		
Stamping on Mark:	N/A		Type of Antenna:	Internal		
Weather Condition:	Sunny 50°		Antenna Height:	2 m	to bottom of antenna mount	



205-1-13NOV2013



205-2-13NOV2013



205-3NE-13NOV2013



205-3SE-13NOV2013



205-3SW-13NOV2013



205-3NW-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 206_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	206	
Latitude:	32 08 07.11	
Longitude:	89 23 38.98	
Ellip. Height:	298.32'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 45°	
Project Number:	73741	Survey Date: 19 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	318	Session No. —
Start Time:	Data File Name: 73741_111413.DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount
<p>A hand-drawn sketch of the survey area. It shows a road curving from the top right towards the center. The word "Pines" is written near the road. A small north arrow points upwards. To the left of the road, there is a wavy line labeled "TREES". Below the road, there is a rectangular area labeled "Smith County 504". To the right of the road, there is another area labeled "Pines" and "Gravel Rd". At the bottom right, there is a large area labeled "TREES" and "Pics N, W, S, E".</p>		



206-1-14NOV2013



206-2-14NOV2013



206-3N-14NOV2013



206-3E-14NOV2013

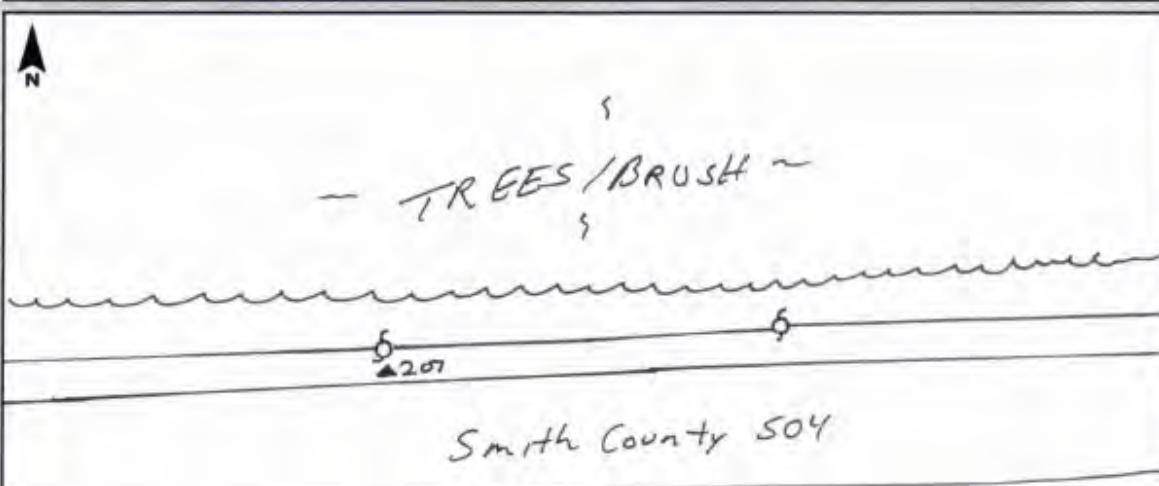


206-3S-14NOV2013



206-3W-14NOV2013

TEMPORARY SURVEY MARKS (TSM, 207_L)

GPS Observation Log Sheet		
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	207	
Latitude:	32° 08' 07.39"	
Longitude:	89° 23' 44.94"	
Ellip. Height:	306.31'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 45°	
Project Number:	73741	Survey Date: 14 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	318	Session No. _____
Start Time:	End Time: _____	
Data File Name:	73741_111413.DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount
		



207-1-14NOV2013



207-2-14NOV2013



207-3N-14NOV2013



207-3E-14NOV2013



207-3S-14NOV2013



207-3W-14NOV2013

TEMPORARY SURVEY MARKS (TSM, 208_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	208	
Latitude:	32 10 24.10	
Longitude:	89 01 36.29	
Ellip. Height:	340.54	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Rainy 50°	
Project Number:	73741	Survey Date: 15NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	319	Session No. —
Start Time:	—	
Data File Name:	73741_111513PM.PC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount



208-1-15NOV2013



208-2-15NOV2013



208-3N-15NOV2013



208-3E-15NOV2013



208-3S-15NOV2013



208-3W-15NOV2013

TEMPORARY SURVEY MARKS (TSM, 209_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	209	
Latitude:	32 10 23.80	
Longitude:	89 01 33.45	
Ellip. Height:	338.230'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Rainy 50°	
Project Number:	73741	Survey Date: 15NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	318	Session No. _____
Start Time:	_____	
Data File Name:	73741_111513DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount
<p>CR -20</p>		
<p>Scattered TREES</p>		



209-1-15NOV2013



209-2-15NOV2013



209-3N-15NOV2013



209-3E-15NOV2013



209-3S-15NOV2013



209-3W-15NOV2013

TEMPORARY SURVEY MARKS (TSM, 210_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	210	
Latitude:	32 34 41.17	
Longitude:	89 30 52.40	
Ellip. Height:	350.421'	
Type of Mark:	TSM	
Stamping on Mark:	—	
Weather Condition:	Overcast 50°	
Project Number:	73741	Survey Date: 16 NOV 14
Operator Name:	Dave McGlothlin	
Julian Day:	320	Session No. —
Start Time:	—	
Data File Name:	73741_111613.DM-0C	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount



210-1-16NOV2013



210-2-16NOV2013



210-3N-16NOV2013



210-3E-16NOV2013



210-3S-16NOV2013



210-3W-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 211_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	16 NOV 13
Station Name:	211		Operator Name:	Dave McGlothlin		
Latitude:	32 34 41.18		Julian Day:	320	Session No.:	—
Longitude:	89 30 48.00		Start Time:	—	End Time:	—
Ellip. Height:	343.861		Data File Name:	73741111613.DM.DC		
Type of Mark:	TSM		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Overcast 50°		Antenna Height:	2m	to bottom of antenna mount	
<p>A hand-drawn sketch of a survey site. It features a wavy line representing a road labeled "Rabbit College Rd". To the left of the road is a zigzag line labeled "church". To the right is a triangular survey marker labeled "211". Above the road, the word "TREES" is written. A north arrow pointing upwards is located in the top left corner of the sketch area.</p>						



211-1-16NOV2013



211-2-16NOV2013



211-3N-16NOV2013



211-3E-16NOV2013



211-3S-16NOV2013



211-3W-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 212_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	212	
Latitude:	32 47 45.49	
Longitude:	89 20 10.84	
Ellip. Height:	276.788'	
Type of Mark:	TSM	
Stamping on Mark:		
Weather Condition:	Overcast 60°	
Project Number:	73741	Survey Date: 16 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	320	Session No.
Start Time:	—	
Data File Name:	73741 111613 PM2.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch map showing survey points 212 and TSM. The map includes a river, a road labeled "River Rd", scattered brush, and a cultivated field. A north arrow is present.



212-1-16NOV2013



212-2-16NOV2013



212-3NE-16NOV2013



212-3SE-16NOV2013

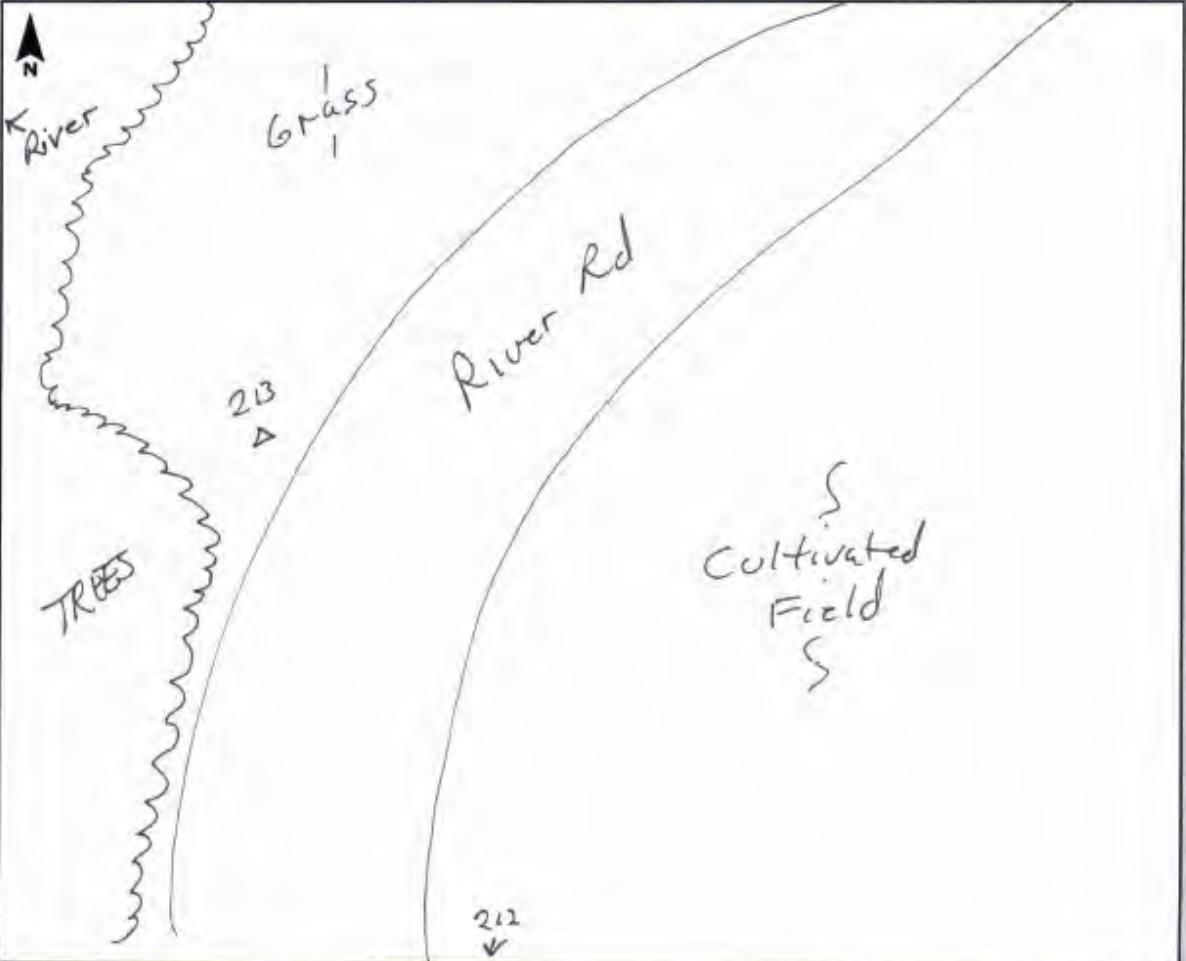


212-3SW-16NOV2013



212-3NW-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 213_L)

GPS Observation Log Sheet						
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	16 NOV 13
Station Name:	213		Operator Name:	Dave McGlothlin		
Latitude:	32 47 49.46		Julian Day:	321	Session No.	—
Longitude:	89 30 08.45		Start Time:	—	End Time:	—
Ellip. Height:	276.145'		Data File Name:	73741_111613002.DC		
Type of Mark:	TSM		Type of Receiver:	7	TRIMBLE R8-3	
Stamping on Mark:	—		Type of Antenna:	INTERNAL		
Weather Condition:	Overcast 60°		Antenna Height:	2m	to bottom of antenna mount	
 <p>The sketch illustrates the survey location. A river curves from the top left towards the center. A grassy area is labeled "Grass". A road follows the river's curve, labeled "River Rd". A cluster of trees is labeled "TREES". Two temporary survey marks are indicated: "213" near the river bend and "212" near the bottom right. A cultivated field is labeled "Cultivated Field". A north arrow points upwards.</p>						



213-1-16NOV2013



213-2-16NOV2013



213-3NE-16NOV2013



213-3SE-16NOV2013



213-3SW-16NOV2013



213-3NW-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 214_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	214	
Latitude:	32 43 58.62	
Longitude:	89 41 37.67	
Ellip. Height:	265.826	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 65°	
Project Number:	73741	Survey Date: 17 NOV 15
Operator Name:	Dave McGlothlin	
Julian Day:	322	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741 11 17 13 00.DC	
Type of Receiver:	Trimble R8-3	
Type of Antenna:	Internal	
Antenna Height:	2 m	to bottom of antenna mount
<p>A hand-drawn sketch of the survey site. It shows a road labeled "Ed Merchant Rd" running diagonally across the page. A field is labeled "Field". A hill is labeled "Natchez Trace PKwy" and has a small triangle with "214" written on it. A cluster of trees is labeled "TREES". An arrow points North.</p>		



214-1-16NOV2013



214-2-16NOV2013



214-3NE-16NOV2013



214-3SE-16NOV2013



214-3SW-16NOV2013



214-3NW-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 215_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	215	
Latitude:	32 43 56.08	
Longitude:	89 41 38.57	
Ellip. Height:	263,384'	
Type of Mark:	TSM	
Stamping on Mark:	—	
Weather Condition:	Sunny 65°	
Project Number:	73741	Survey Date: 17 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	322	Session No. —
Start Time:	—	
End Time:	—	
Data File Name:	73741_111713.DAT.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

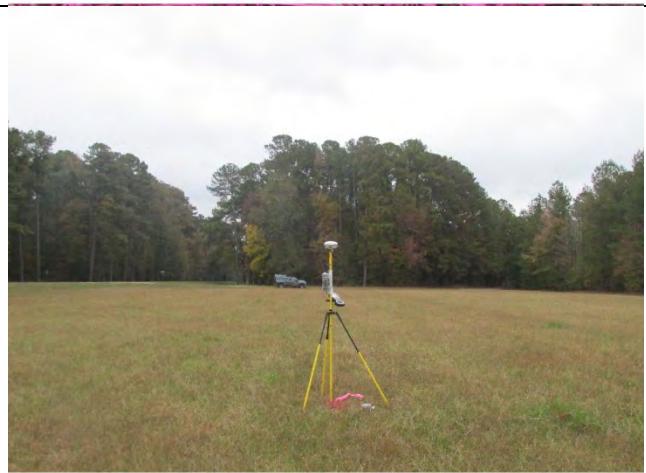
A hand-drawn sketch map within a rectangular frame. In the top left corner, there is a north arrow pointing upwards. To its right, a curved line is labeled "Natchez Trace PK". Below this line, a large, irregularly shaped area is labeled "Field". In the bottom left corner, there is a small triangle symbol with the number "215" next to it. To the right of the "Field" area, a wavy line is labeled "TREES". At the bottom right, another wavy line is labeled "Ed Merchant Rd". The sketch is done in a simple, sketchy style.



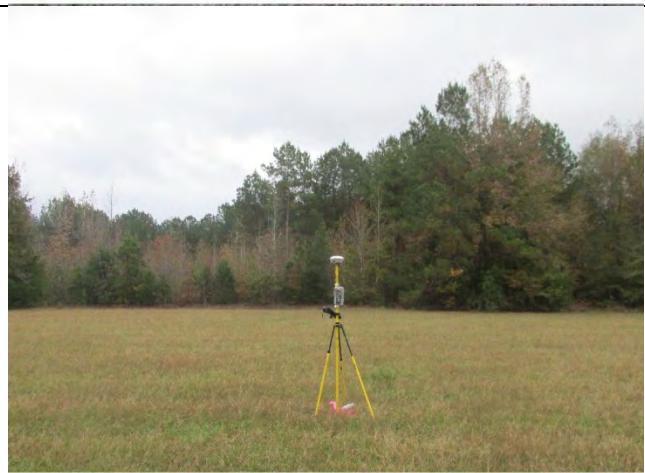
215-1-16NOV2013



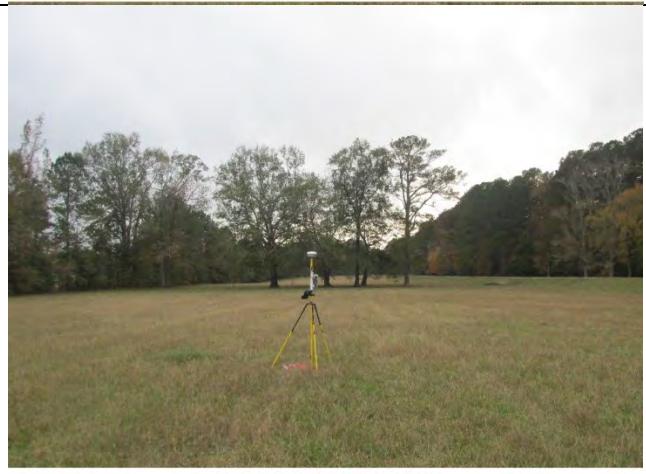
215-2-16NOV2013



215-3NE-16NOV2013



215-3SE-16NOV2013



215-3SW-16NOV2013



215-3NW-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 216_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	216	
Latitude:	33 06 41.65	
Longitude:	89 36 39.56	
Ellip. Height:	311.369	
Type of Mark:	TSM	
Stamping on Mark:	—	
Weather Condition:	Sunny 55°	
Project Number:	73741	Survey Date: 18NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	323	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741_11_18_13_0M.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

A hand-drawn sketch map showing survey marks and terrain features. A north arrow points up. Labels include '216' with a triangle symbol, 'Grass', 'Pitch', 'CP - 35', 'Briar Rd', 'Trees', and 'Fence'.



216-1-19NOV2013



216-2-19NOV2013



216-3NE-19NOV2013



216-3SE-19NOV2013



216-3SW-19NOV2013



216-3NW-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 217_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	217	
Latitude:	33 06 39.26	
Longitude:	89 36 38.23	
Ellip. Height:	305.537'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 55°	
Project Number:	73741	Survey Date: 18 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	323	Session No. —
Start Time:	End Time:	
Data File Name:	Z3741_111813.DM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch showing a curved road labeled "Britt Rd" and a straight road labeled "CR-35". A north arrow is present. A small triangle at the bottom right is labeled "217".



217-1-19NOV2013



217-2-19NOV2013



217-3NE-19NOV2013



217-3SE-19NOV2013



217-3SW-19NOV2013



217-3NW-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 218_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	18NOV13
Station Name:	218		Operator Name:	Dave McGlothlin		
Latitude:	33 14 42.95		Julian Day:	323	Session No.	
Longitude:	89 17 27.53		Start Time:		End Time:	
Ellip. Height:	436.382		Data File Name:	23741_111817PM.DC		
Type of Mark:	TSM		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:			Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 50°		Antenna Height:	2m	to bottom of antenna mount	
<p>N 1006 used as backsight</p> <p>218 gate</p> <p>pines</p>						



218-1-19NOV2013



218-2-19NOV2013



218-3N-19NOV2013



218-3E-19NOV2013



218-3S-19NOV2013

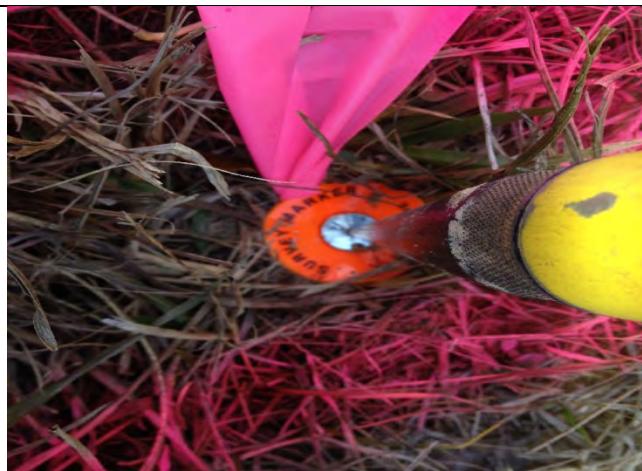


218-3W-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 220_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS	
Station Name:	220	
Latitude:	32-58-44.4	
Longitude:	89-22-47.6	
Ellip. Height:	98.4	
Type of Mark:	60d nail	
Stamping on Mark:	NA	
Weather Condition:	Sunny / 60°	
Project Number:	73741	
Survey Date:	11-18-13	
Operator Name:	D. McGlothlin	
Julian Day:	322	
Session No.		
Start Time:	—	
End Time:	—	
Data File Name:	73741_111813.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTEGRAL	
Antenna Height:	20 m to bottom of antenna mount	

The sketch illustrates the survey location. It shows a hillside labeled "wooded" with a north arrow pointing upwards. A small triangle marks the survey point. Below the hillside, a road is labeled "Hwy 19". A coordinate system shows values 10, 0, 2, and 9.



220-1-18NOV2013



220-2-18NOV2013



220-3NE-18NOV2013



220-3SE-18NOV2013



220-3SW-18NOV2013



220-3NW-18NOV2013

TEMPORARY SURVEY MARKS (TSM, 221_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	221	
Latitude:	33 18 50.58	
Longitude:	89 24 38.78	
Ellip. Height:	253.857'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 60°	
Project Number:	73741	Survey Date: 20 NOV 17
Operator Name:	Dave McGlothlin	
Julian Day:	224	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741 112013 DM.AC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount
<p>A hand-drawn sketch map showing the location of survey point 221. The map includes a north arrow pointing upwards. It shows a 'Driveway' leading towards a point labeled '221'. To the right of '221' is a road labeled 'Hwy 41'. There are several areas labeled 'TREES' and 'Dirt'.</p>		



221-1-20NOV2013



221-2-20NOV2013



221-3NE-20NOV2013



221-3SE-20NOV2013



221-3SW-20NOV2013



221-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 222_L)

GPS Observation Log Sheet			W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number: 73741 Survey Date: 20NOV13
Station Name:	222		Operator Name: Dave McGlothlin
Latitude:	33 18 47.98		Julian Day: 324 Session No. _____
Longitude:	89 24 35.87		Start Time: _____ End Time: _____
Ellip. Height:	361.529'		Data File Name: 73741_112013.DAT.DC
Type of Mark:	TSM		Type of Receiver: TRIMBLE R8-3
Stamping on Mark:	—		Type of Antenna: INTERNAL
Weather Condition:	Sunny 60°		Antenna Height: 2m to bottom of antenna mount



222-1-20NOV2013



222-2-20NOV2013



222-3NE-20NOV2013



223-3SE-20NOV2013



222-3SW-20NOV2013



222-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 223_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	223	
Latitude:	33 33 15.21	
Longitude:	89 30 50.03	
Ellip. Height:	286.185'	
Type of Mark:	TSM	
Stamping on Mark:	—	
Weather Condition:	Sunny 60°	
Project Number:	73741	Survey Date: 20 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	324	Session No. —
Start Time:	—	
End Time:	—	
Data File Name:	8354324.DAT	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch on the log sheet. It shows a road labeled 'Loc. Rd' curving through a landscape. Two 'Cotton Fields' are indicated by arrows pointing to areas of irregular terrain. A north arrow points upwards. A small triangle marks the survey point '223'.



223-1-20NOV2013



223-2-20NOV2013



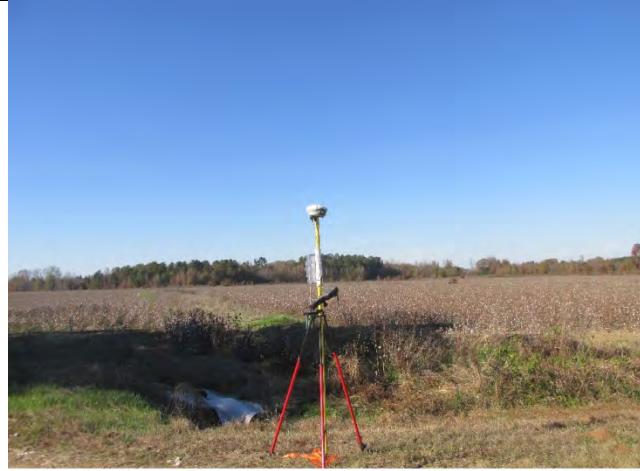
223-3NE-20NOV2013



223-3SE-20NOV2013



223-3SW-20NOV2013



223-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 224_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	224	
Latitude:	33 33 15.94	
Longitude:	89 30 45.99	
Ellip. Height:	298.484'	
Type of Mark:	TSM	
Stamping on Mark:	—	
Weather Condition:	Sunny 60°	
Project Number:	73741	Survey Date: 20NOV13
Operator Name:	Dave McGlothlin	
Julian Day:	324	Session No. —
Start Time:	—	End Time: —
Data File Name:	8354-324 73741_1120130m	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch on the log sheet shows a curved road labeled "Lodi Rd". To the left of the road, there is a north arrow pointing upwards and the number "224" with an arrow. To the right of the road, there is a point marked with "224" and a bracket labeled "Field access". Above the road, there is a label "Cotton Field" with arrows pointing to the area. Below the road, another label "Cotton Field" is written.



224-1-20NOV2013



224-2-20NOV2013



224-3N-20NOV2013



224-3E-20NOV2013



224-3S-20NOV2013



224-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 225_L)

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	20 NOV 13
Station Name:	225		Operator Name:	Dave McGlothlin		
Latitude:	33 44 05.56		Julian Day:	324	Session No.	—
Longitude:	89 08 04.43		Start Time:	—	End Time:	—
Ellip. Height:	253.554		Data File Name:	73741_112013.DM, DC		
Type of Mark:	TSM		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 60°		Antenna Height:	2 m	to bottom of antenna mount	
<p>A hand-drawn sketch of a survey site. At the top left is a north arrow pointing upwards. To the left of the sketch, the word "TREES" is written above a wavy line representing a forest. In the center, there is a small triangle symbol with the number "225" next to it. To the right, the words "cultivated Field" are written above a wavy line representing a field. Below the sketch, the road name "CR- 266" is written.</p>						



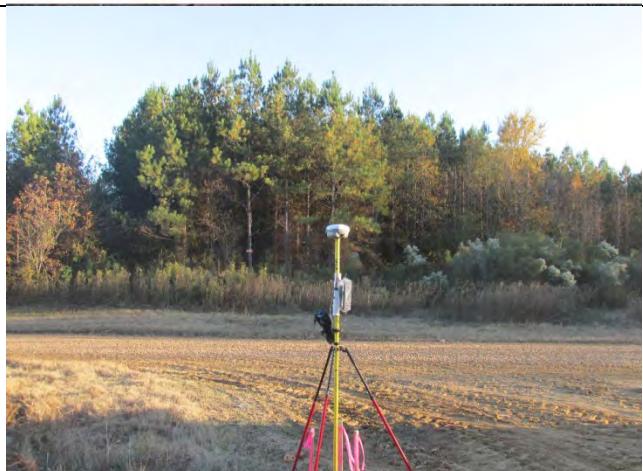
225-1-20NOV2013



225-2-20NOV2013



225-3NE-20NOV2013



225-3SE-20NOV2013



225-3SW-20NOV2013



225-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 226_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	226	
Latitude:	33 44 06.22	
Longitude:	89 02 59.51	
Ellip. Height:	248.866'	
Type of Mark:	TSM	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 60°	
Project Number:	73741	Survey Date: 20 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	324	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741_112013AM.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows a cultivated field with several parallel lines representing rows. To the left, there's a wavy line representing a body of water. In the center, a road is labeled 'CR-266'. To the right, a survey mark is labeled '226' with a small triangle above it. A north arrow points upwards.



226-1-20NOV2013



226-2-20NOV2013



226-3N-20NOV2013



226-3E-20NOV2013



226-3S-20NOV2013



226-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 251_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	251	
Latitude:	32° 09' 13.12"	
Longitude:	89° 42' 00.90"	
Ellip. Height:	263.396	
Type of Mark:	MAG NAIL w/ 215C	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 70°	
Project Number:	73741	Survey Date: 11-13-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	317	Session No. -
Start Time:	- End Time: -	
Data File Name:	73741 111313 JJ DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m to bottom of antenna mount	

A hand-drawn sketch map showing two temporary survey marks, 251 and 252. Survey mark 251 is located on a road labeled "SR-591 (SR 18)". Survey mark 252 is located on a nearby road. A north arrow points upwards. A body of water is shown to the west of the roads.



251-1-13NOV2013



251-2-13NOV2013



251-3N-13NOV2013



251-3E-13NOV2013



251-3S-13NOV2013



251-3W-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 252_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	252	
Latitude:	32° 04' 12.37"	
Longitude:	89° 42' 06.44"	
Ellip. Height:	262.358	
Type of Mark:	MAG NAIL w/PLATE	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 70°	
Project Number:	73741	Survey Date: 11-13-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	317	Session No. -
Start Time:	-	End Time: -
Data File Name:	73741 111313 TS.0C	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount
 SET 251 DAY 317		



252-1-13NOV2013



252-2-13NOV2013



252-3N-13NOV2013



252-3E-13NOV2013



252-3S-13NOV2013



252-3W-13NOV2013

TEMPORARY SURVEY MARKS (TSM, 253_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	253	
Latitude:	32° 21' 26.61"	
Longitude:	89° 36' 43.50"	
Ellip. Height:	362.815	
Type of Mark:	MAG NAIL w/DISC	
Stamping on Mark:	NSA	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-14-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	318	Session No. —
Start Time:	—	
Data File Name:	737411119135506	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

The sketch map illustrates the survey area. It shows a building labeled "BLDG" with a "SCALE" bar nearby. Several survey points are marked with triangles and labeled "253". The terrain is depicted with dashed lines for roads or paths, and various labels indicate features like "PAD", "ASPHALT", "SAND", "TALL GRASS", "PP", and "SAND". A vertical note on the right side of the map reads "ENT DRIVE TO WEVERDALE".



253-1-14NOV2013



253-2-14NOV2013



253-3N-14NOV2013



253-3E-14NOV2013



253-3S-14NOV2013



253-3W-14NOV2013

TEMPORARY SURVEY MARKS (TSM, 254_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	259	
Latitude:	32° 21' 28.55"	
Longitude:	89° 36' 41.97"	
Ellip. Height:	266.314	
Type of Mark:	6" NAIL w/DISC	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	318	Session No. 1
Start Time:	-	End Time: -
Data File Name:	23741_11191355.QZ	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount

N

SEE 253
DAY 318



254-1-14NOV2013



254-2-14NOV2013



254-3N-14NOV2013



254-3E-14NOV2013



254-3S-14NOV2013



254-3W-14NOV2013

TEMPORARY SURVEY MARKS (TSM, 255_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name: NRCS LAUREL MS (G10PC00057)	Project Number: 73741	Survey Date: 11-15-12
Station Name: 255	Operator Name: JAMES R. SPEELMAN	
Latitude: 32° 26' 15.67"	Julian Day: 319	Session No. 1
Longitude: 89° 39' 08.12"	Start Time: -	End Time: ✓
Ellip. Height: 299.835'	Data File Name: 7374111151355.RC	
Type of Mark: 6" NAIL ~1015C	Type of Receiver: TRIMBLE R8-2	
Stamping on Mark: N/A	Type of Antenna: INTERNAL	
Weather Condition: CLOUDY 60°	Antenna Height: 2.0 m	to bottom of antenna mount



255-1-15NOV2013



255-2-15NOV2013



255-3N-15NOV2013



255-3E-15NOV2013



255-3S-15NOV2013



255-3W-15NOV2013

TEMPORARY SURVEY MARKS (TSM, 256_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	256	
Latitude:	32° 26' 09.94"	
Longitude:	99° 39' 06.69"	
Ellip. Height:	299.792'	
Type of Mark:	6" NAIL - / DISC	
Stamping on Mark:	N/A	
Weather Condition:	CLOUDY 60°	
Project Number:	73741	Survey Date: 11-15-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	319	Session No. -
Start Time:	6	End Time: -
Data File Name:	73741111513 TS.00	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	m to bottom of antenna mount
 Set 255 Day 319		



256-1-15NOV2013



256-2-15NOV2013



256-3NE-15NOV2013



256-3SE-15NOV2013



256-3SW-15NOV2013



256-3NW-15NOV2013

TEMPORARY SURVEY MARKS (TSM, 257_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	257	
Latitude:	32° 26' 22.69"	
Longitude:	89° 23' 25.12"	
Ellip. Height:	312.696	
Type of Mark:	6" NAIL w/ DISC	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-16-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	320	Session No. -
Start Time:	-	End Time: -
Data File Name:	237911161705.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount



257-1-16NOV2013



257-2-16NOV2013



257-3N-16NOV2013



257-3E-16NOV2013



257-3S-16NOV2013



257-3W-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 258_L)

GPS Observation Log Sheet


WOOLPERT
 INC.

Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	11-16-13
Station Name:	258		Operator Name:	JAMES R. SPEELMAN		
Latitude:	32° 26' 21.26"		Julian Day:	320	Session No.	-
Longitude:	89° 23' 18.69"		Start Time:	-	End Time:	-
Ellip. Height:	309.242'		Data File Name:	73741111613JJ.DC		
Type of Mark:	6" NML ~ PINE		Type of Receiver:	TRIMBLE R8-2		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	PC 60°		Antenna Height:	2.0~	to bottom of antenna mount	

SSW 257
 DAY 320



258-1-16NOV2013



258-2-16NOV2013



258-3N-16NOV2013



258-3E-16NOV2013



258-3S-16NOV2013



258-3W-16NOV2013

TEMPORARY SURVEY MARKS (TSM, 259_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	259	
Latitude:	32° 55' 55.17"	
Longitude:	02° 47' 01.96"	
Ellip. Height:	191.658'	
Type of Mark:	6" MAIL ~ DISC	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. 1
Start Time:	~	
Data File Name:	73741111813 TS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount

The map shows a terrain with several survey points marked. Point 259 is located near a small clearing with a 'PP' label. Point 260 is located further up a slope. A road labeled 'SR-1A' runs through the area. The terrain is depicted with wavy lines representing elevation changes. Handwritten labels 'TREES' point to wooded areas. The map is drawn with black ink on a white background.



259-1-18NOV2013



259-2-18NOV2013



259-3N-18NOV2013



259-3E-18NOV2013



259-3S-18NOV2013



259-3W-18NOV2013

TEMPORARY SURVEY MARKS (TSM, 260_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	260	
Latitude:	32° 55' 56.20"	
Longitude:	89° 46' 55.38"	
Ellip. Height:	205.938	
Type of Mark:	6" NAIL w DISC	
Stamping on Mark:	N/A	
Weather Condition:	pc 60°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. 5
Start Time:		
Data File Name:	2779111813JS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

N

SEE 259
DAY 322



260-1-18NOV2013



260-2-18NOV2013



260-3N-18NOV2013



260-3E-18NOV2013



260-3S-18NOV2013



260-3W-18NOV2013

TEMPORARY SURVEY MARKS (TSM, 261_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	261	
Latitude:	33° 19' 06.77"	
Longitude:	99° 50' 53.24"	
Ellip. Height:	308.119'	
Type of Mark:	MAG NAIL w/ DISC	
Stamping on Mark:	N/A	
Weather Condition:	PC 50°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	723	Session No. -
Start Time:	-	End Time: -
Data File Name:	73741/111913JS.00	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

Sketch Description: A hand-drawn sketch of a survey point labeled '261'. The sketch shows a horizontal baseline with a wavy profile. Above the baseline, there is a small circle with an arrow pointing to it, labeled 'Trues'. Below the baseline, the text 'MT. PLEASANT RD.' is written. To the left of the baseline, there is a dashed line labeled 'Dirt Driveway'. To the right, there is a vertical line labeled 'Dirt Drive' with a zigzag pattern at the bottom. A north arrow is located in the top left corner of the sketch area.



261-1-19NOV2013



261-2-19NOV2013



261-3N-19NOV2013



261-3E-19NOV2013



261-3S-19NOV2013



261-3W-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 262_L)

GPS Observation Log Sheet


WOOLPERT

Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	262	
Latitude:	33° 19' 06.81"	
Longitude:	89° 50' 58.93"	
Ellip. Height:	312.245'	
Type of Mark:	6" NAIL w/ DICE	
Stamping on Mark:	NIA	
Weather Condition:	PC 50°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	323	Session No. -
Start Time:	-	End Time: -
Data File Name:	73741111913.JS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

261
 56°
 DAY 323



262-1-19NOV2013



262-2-19NOV2013



262-3N-19NOV2013



262-3E-19NOV2013



262-3S-19NOV2013



262-3W-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 263_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	Z63	
Latitude:	33° 00' 90.08"	
Longitude:	90° 08' 26.59"	
Ellip. Height:	229.536'	
Type of Mark:	6" NAIL w/ DISC	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	323	Session No. -
Start Time:	-	
Data File Name:	73741/11191355.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

The map shows a survey area with several features labeled. A dashed line represents a road or path. A solid line extends diagonally across the area. A small rectangular box contains the letters 'BNU'. Two survey marks are circled with the numbers 'Z63' and 'Z64'. Another mark, 'Z65', is shown near the bottom left. Labels include 'TRACTOR STORAGE' near the top left, 'BEONZVILLE RD.' along the diagonal line, and 'TREES' in the bottom right. A north arrow points upwards.



263-1-19NOV2013



263-2-19NOV2013



263-3NE-19NOV2013



263-3SE-19NOV2013



264-3SW-19NOV2013



263-3NW-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 264_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00067)	
Station Name:	264	
Latitude:	32° 00' 43.18"	
Longitude:	90° 08' 22.48"	
Ellip. Height:	230.909'	
Type of Mark:	6" NAIL ✓/D15C	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	323	Session No. 5
Start Time:	End Time:	
Data File Name:	2074111913.DS.D0	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount
 N		
263 505 323 DAY		



264-1-19NOV2013



264-2-19NOV2013



264-3NE-19NOV2013



264-3SE-19NOV2013



264-3SW-19NOV2013



264-3NW-19NOV2013

TEMPORARY SURVEY MARKS (TSM, 265_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	265	
Latitude:	37° 40' 33.57"	
Longitude:	89° 49' 45.13"	
Ellip. Height:	195.878'	
Type of Mark:	6" NAIL v DINC	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 55°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	229	Session No. -
Start Time:	-	
End Time:	-	
Data File Name:	73741/112013JS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

The map shows a survey point labeled 265 marked with a triangle. Another point labeled 266 is also marked with a triangle. Roads are labeled PP, 6P, OS, S1, and SUBSTATION. A river is labeled BAPTIST. A north arrow is present. A scale bar indicates Montgomery County 1:12,500.



265-1-20NOV2013



265-2-20NOV2013



265-3NE-20NOV2013



265-3SE-20NOV2013



265-3SW-20NOV2013



265-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 266_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	266	
Latitude:	33° 40' 37.27"	
Longitude:	89° 99' 48.40"	
Ellip. Height:	195.155'	
Type of Mark:	6" NAIL w/ DISC	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 55°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	324	Session No.
Start Time:	End Time:	
Data File Name:	73741/112013JJ.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

N

266 265
SEB DAY 324



266-1-20NOV2013



266-2-20NOV2013



266-3NE-20NOV2013



266-3SE-20NOV2013



266-3SW-20NOV2013



266-3NW-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 267_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	267	
Latitude:	33° 29' 26.59"	
Longitude:	89° 51' 29.77"	
Ellip. Height:	200.257'	
Type of Mark:	M16 NAIL w/ D18C	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	329	Session No. ✓
Start Time:	~	
Data File Name:	73741112013JS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount



267-1-20NOV2013



267-2-20NOV2013



267-3N-20NOV2013



267-3E-20NOV2013



267-3S-20NOV2013



267-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 268_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	268	
Latitude:	33° 29' 29.71"	
Longitude:	82° 51' 28.76"	
Ellip. Height:	201.982'	
Type of Mark:	6" NAIL ~ DISC	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	324	Session No. -
Start Time:	-	End Time: -
Data File Name:	7374111201305.0C	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount
 N		
268 267 SE 266 329 DAY		



268-1-20NOV2013



268-2-20NOV2013



268-3N-20NOV2013



268-3E-20NOV2013

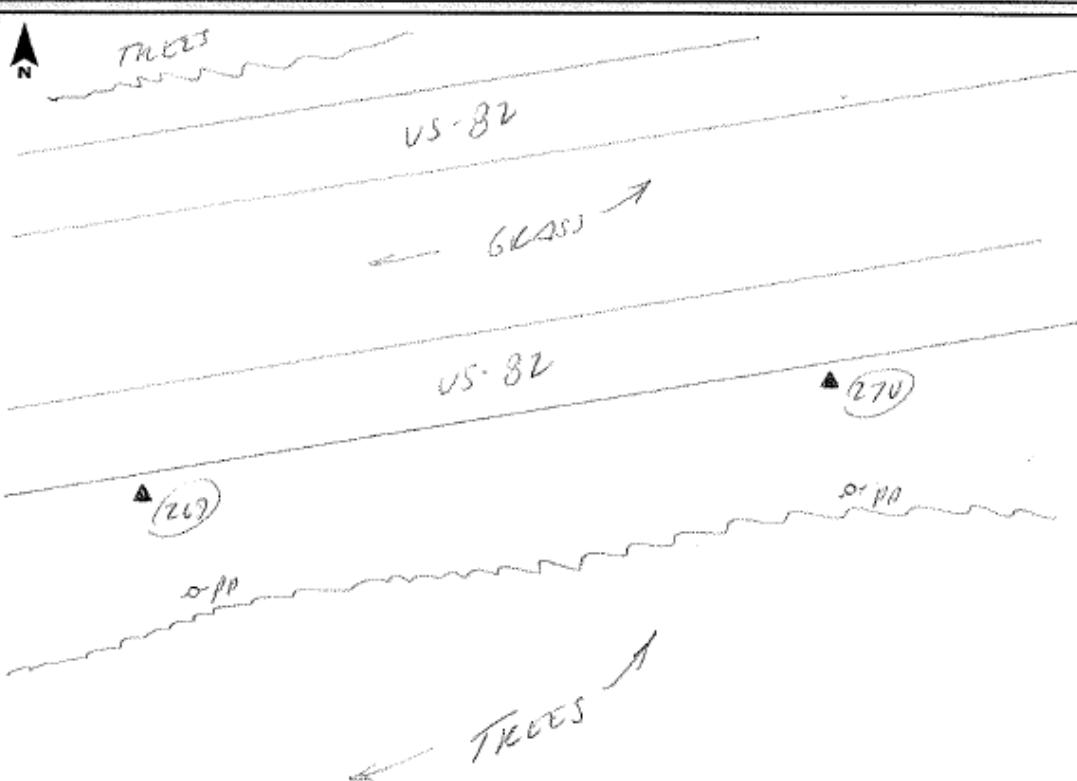


268-3S-20NOV2013



268-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 269_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	269	
Latitude:	33° 28' 25.17"	
Longitude:	87° 30' 15.12"	
Ellip. Height:	735.205'	
Type of Mark:	6" NAIL w/ DISC	
Stamping on Mark:	NA	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	329	Session No. 1
Start Time:		
Data File Name:	7779111261355.00	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount
		



269-1-20NOV2013



269-2-20NOV2013



269-3N-20NOV2013



269-3E-20NOV2013



269-3S-20NOV2013



269-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 270_L)

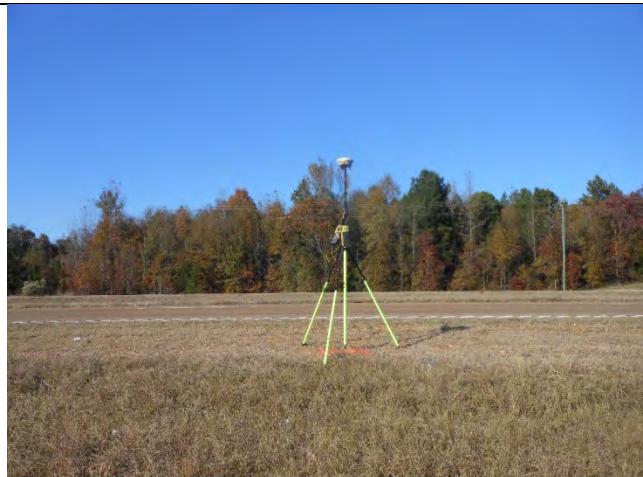
GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	270	
Latitude:	33° 28' 25.71"	
Longitude:	89° 38' 11.26"	
Ellip. Height:	775.298'	
Type of Mark:	6' NAIL w/ D150	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	324	Session No. 1
Start Time:	End Time:	
Data File Name:	73741112013.J5.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount
 N		
500 269 MAY 324		



270-1-20NOV2013



270-2-20NOV2013



270-3N-20NOV2013



270-3E-20NOV2013



270-3S-20NOV2013



270-3W-20NOV2013

TEMPORARY SURVEY MARKS (TSM, 285_L)

GPS Observation Log Sheet		W WOOLPERT
Project Name: <u>NRCS LAUREL MS</u>	Project Number: <u>73741</u>	Survey Date: <u>2-18-14</u>
Station Name: <u>285 (TSM)</u>	Operator Name: <u>R. CHALOUPKA</u>	
Latitude: <u>31-53-09.9</u>	Julian Day: <u>49</u>	Session No. _____
Longitude: <u>88-58-54.3</u>	Start Time: <u>10:55</u>	End Time: <u>10:58</u>
Ellip. Height: <u>71.1</u>	Data File Name: <u>LAUREL 021814</u>	
Type of Mark: <u>6 PK. NAIL</u>	Type of Receiver: <u>R8</u>	
Stamping on Mark: <u>NA</u>	Type of Antenna: <u>INTERNAL</u>	
Weather Condition: <u>20°/PC</u>	Antenna Height: <u>2.0m</u>	to bottom of antenna mount





285-1-18FEB2014



285-2-18FEB2014



285-3N-18FEB2014



285-3E-18FEB2014



285-3S-18FEB2014



285-3W-18FEB2014

LiDAR GROUND CONTROL – 1001_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1001	
Latitude:	33° 43' 53.10"	
Longitude:	89° 07' 18.39"	
Ellip. Height:	253.152'	
Type of Mark:	NRCS NPS	
Stamping on Mark:	NPS	
Weather Condition:	AC SV	
Project Number:	73741	Survey Date: 11-23-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	327	Session No.
Start Time:	—	
End Time:	—	
Data File Name:	73741 112313J3.0C	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount

N

TRACES

FARM

FIELD

APP

FIELD

FARM

TRACES



1001-1-23NOV2013



1001-2-23NOV2013



1001-3N-23NOV2013



1001-3E-23NOV2013



1001-3S-23NOV2013



1001-3W-23NOV2013

LiDAR GROUND CONTROL – 1002_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1002	
Latitude:	33° 40' 38.31"	
Longitude:	89° 49' 48.91"	
Ellip. Height:	195.392'	
Type of Mark:	N/A (PID)	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 50°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	324	Session No. -
Start Time:	-	
Data File Name:	7374111201355.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m	to bottom of antenna mount



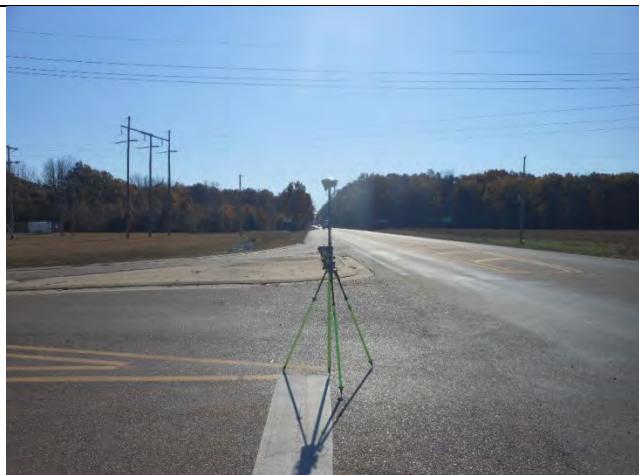
1002-1-20NOV2013



1002-2-20NOV2013



1002-3NE-20NOV2013



1002-3SE-20NOV2013



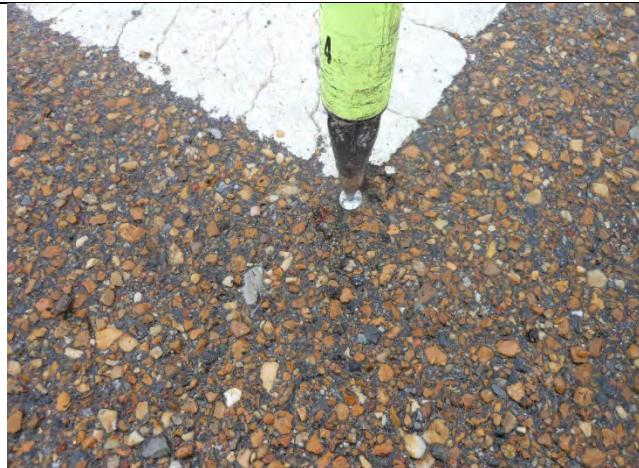
1002-3SW-20NOV2013



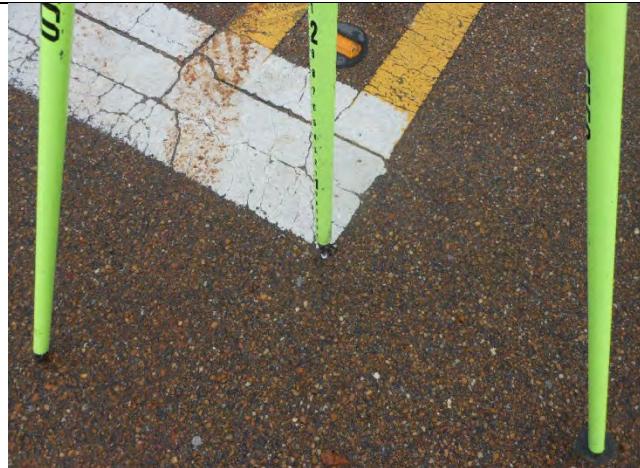
1002-3NW-20NOV2013

LiDAR GROUND CONTROL – 1003_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1003	
Latitude:	33° 32' 57.11"	
Longitude:	39° 12' 32.12"	
Ellip. Height:	316.190'	
Type of Mark:	MAGNAG	
Stamping on Mark:	N18	
Weather Condition:	PC 50°	
Project Number:	73741	Survey Date: 11-23-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	327	Session No. ~
Start Time:	~	
Data File Name:	73741 112313 SS.g2	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount



1003-1-23NOV2013



1003-2-23NOV2013



1003-3N-23NOV2013



1003-3E-23NOV2013



1003-3S-23NOV2013



1003-3W-23NOV2013

LiDAR GROUND CONTROL – 1004_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1009	
Latitude:	33° 28' 01.82"	
Longitude:	82° 36' 31.39"	
Ellip. Height:	272.345'	
Type of Mark:	N/A	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	329	Session No. -
Start Time:	-	End Time: -
Data File Name:	7379111201315.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

The sketch illustrates the survey setup. A vertical line represents the station point (1009). A horizontal line extends from it, labeled 'STOP BAR'. A small box labeled 'RECEIVER' is shown near the station. The background features several curved lines representing roads, with labels 'U.S. 32', 'RIVER RD', and 'FARM FIELD'. Two circular areas are labeled 'GRASS'. A north arrow points upwards.



1004-1-20NOV2013



1004-2-20NOV2013



1004-3NE-20NOV2013



1004-3SE-20NOV2013



1004-3SW-20NOV2013



1004-3NW-20NOV2013

LiDAR GROUND CONTROL – 1005_L

GPS Observation Log Sheet		
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1005	
Latitude:	33° 29' 23.31"	
Longitude:	89° 50' 31.59"	
Ellip. Height:	239.751'	
Type of Mark:	MA6 NAIL - PLATE (P10)	
Stamping on Mark:	NIA	
Weather Condition:	CLEAR 60°	
Project Number:	73741	Survey Date: 11-20-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	329	Session No. -
Start Time:	-	End Time: -
Data File Name:	73741112013J5.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m to bottom of antenna mount	

A hand-drawn sketch showing survey points. Two points are labeled "US-82" and one is labeled "62-82". A line connects the first two points. A north arrow is present.

A hand-drawn sketch showing survey points. One point is labeled "55" and another is labeled "62-55". A north arrow is present.

A hand-drawn sketch showing survey points. One point is labeled "AP" and another is labeled "Trees". A north arrow is present.



1005-1-20NOV2013



1005-2-20NOV2013



1005-3N-20NOV2013



1005-3E-20NOV2013



1005-3S-20NOV2013



1005-3W-20NOV2013

LiDAR GROUND CONTROL – 1006_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1006	
Latitude:	33 14 35.59	
Longitude:	89 17 28.73	
Ellip. Height:	422.345	
Type of Mark:	LiDAR Control Point	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 55°	
Project Number:	73741	Survey Date: 18 Nov 13
Operator Name:	Dave McGlothlin	
Julian Day:	323	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741 1118130m.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount



1006-1-18NOV2013



1006-2-18NOV2013



1006-3N-18NOV2013



1006-3E-18NOV2013



1006-3S-18NOV2013



1006-3W-18NOV2013

LiDAR GROUND CONTROL – 1007_L

GPS Observation Log Sheet			W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	18NOV13
Station Name:	1007		Operator Name:	Dave McGlothlin		
Latitude:	33 04 40.30		Julian Day:	723	Session No.	—
Longitude:	89 35 35.88		Start Time:	—	End Time:	—
Ellip. Height:	387.645		Data File Name:	73741 111813.DAT.DC		
Type of Mark:	PIP		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 55°		Antenna Height:	2m	to bottom of antenna mount	
<p>N</p> <p>BLACK JACK Rd</p> <p>BLDG</p> <p>OPEN LOT</p> <p>CR - 35</p> <p>Martin Luther King</p> <p>1007</p> <p>Trailer →</p> <p>PIP - NE corner of Street</p>						



1007-1-19NOV2013



1007-2-19NOV2013



1007-3N-19NOV2013



1007-3E-19NOV2013



1007-3S-19NOV2013



1007-3W-19NOV2013

LiDAR GROUND CONTROL – 1008_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1008	
Latitude:	37° 19' 01.58"	
Longitude:	89° 53' 20.79"	
Ellip. Height:	303.096'	
Type of Mark:	M16 NAIL w/DISC	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	323	Session No. -
Start Time:	-	End Time: -
Data File Name:	737411191355.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount

A hand-drawn sketch map showing a road labeled "MT. PLEASANT RD" with a church sign. A north arrow points up. Another road labeled "SP-19" leads to "TREES" and "BRUSH".



1008-1-19NOV2013



1008-2-19NOV2013



1008-3N-19NOV2013



1008-3E-19NOV2013



1008-3S-19NOV2013



1008-3W-19NOV2013

LiDAR GROUND CONTROL – 1009_L

GPS Observation Log Sheet		
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1009	
Latitude:	32 58 42.63	
Longitude:	89 22 46.23	
Ellip. Height:	324.720	
Type of Mark:	PID	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 17 Nov 13
Operator Name:	Dave McGlothlin	
Julian Day:	322	Session No. —
Start Time:	—	End Time: —
Data File Name:	737411171700.DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2m	to bottom of antenna mount

A hand-drawn sketch showing a road labeled "Hwy 19" curving to the right. A vertical line extends from the ground surface to a point labeled "1009". An arrow points north, and the letter "N" is written next to it.



1009-1-18NOV2013



1009-2-18NOV2013



1009-3NE-18NOV2013



1009-3SE-18NOV2013



1009-3SW-18NOV2013



1009-3NW-18NOV2013

LiDAR GROUND CONTROL – 1010_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1010	
Latitude:	32° 53' 52.36"	
Longitude:	89° 47' 21.00"	
Ellip. Height:	221.410'	
Type of Mark:	N/A (P/D)	
Stamping on Mark:	N/A	
Weather Condition:	PC 65°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. 1
Start Time:	-	
Data File Name:	73741111813TS.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m to bottom of antenna mount	



1010-1-18NOV2013



1010-2-18NOV2013



1010-3NE-18NOV2013



1011-3SE-19NOV2013



1010A-3SW-18NOV2013



1010-3NW-18NOV2013

LiDAR GROUND CONTROL – 1010A_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1010A	
Latitude:	32° 55' 52.61"	
Longitude:	89° 47' 20.49"	
Ellip. Height:	221.304'	
Type of Mark:	'X' MARKER	
Stamping on Mark:	N/A	
Weather Condition:	PC 65°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. -
Start Time:	-	End Time: -
Data File Name:	227911181305.X	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount

N

SET 1010
DAY 322



1010A-1-18NOV2013



1010A-2-18NOV2013



1010A-3NE-18NOV2013



1010A-3SE-18NOV2013



1010A-3SW-18NOV2013



1010A-3NW-18NOV2013

LiDAR GROUND CONTROL – 1011_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1011	
Latitude:	32° 59' 48.31"	
Longitude:	90° 08' 41.36"	
Ellip. Height:	237.052'	
Type of Mark:	N/A (PID)	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	323	Session No.
Start Time:		
End Time:		
Data File Name:	237411191355.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0m to bottom of antenna mount	

A hand-drawn sketch of a survey site. It shows a road labeled "COXBURG RD." curving from the bottom left towards the center. A small rectangular marker is placed on the ground near the road, with the number "1011" written on it. To the right of the road, there is a stop sign. A curved line labeled "EBENEZER-COXBURG RD SR 433" runs parallel to the first road. In the center, there is a large, irregularly shaped area labeled "BLOOMFIELD RD". Two arrows point towards this area from the left and right. The word "MEAS" is written twice in the upper left and lower right corners of the sketch. A north arrow is located in the top left corner of the sketch area.



1011-1-19NOV2013



1011-2-19NOV2013



1011-3NE-19NOV2013



1011-3SE-19NOV2013



1011-3SW-19NOV2013



1011-3NW-19NOV2013

LiDAR GROUND CONTROL – 1012_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1012	
Latitude:	32 47 56.76	
Longitude:	89 20 08.87	
Ellip. Height:	286.302'	
Type of Mark:	Lidar Control Point	
Stamping on Mark:	—	
Weather Condition:	Overcast 55°	

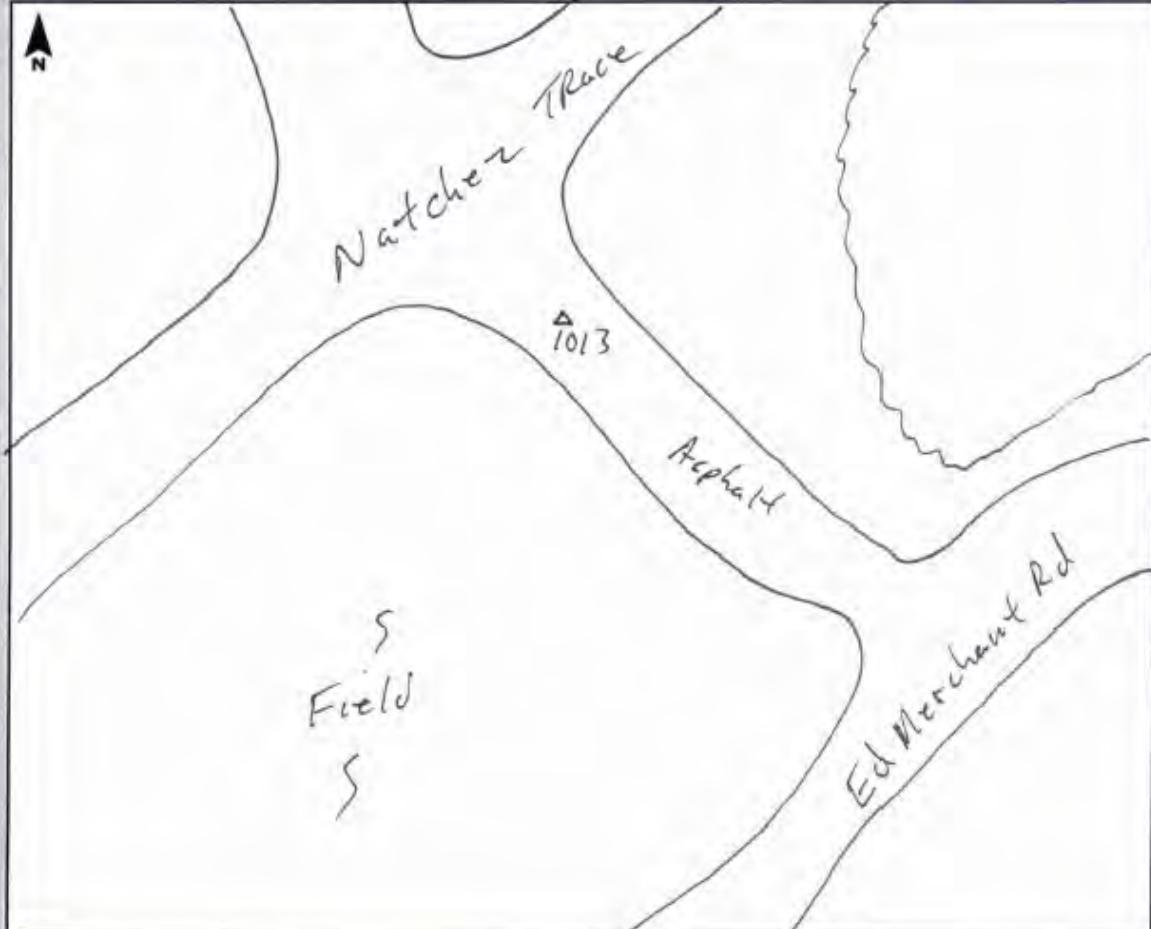


1012-3NE-15NOV2013



1012-3SE-15NOV2013

LiDAR GROUND CONTROL – 1013_L

GPS Observation Log Sheet		W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	[7/10/01]
Station Name:	1013	Operator Name:	Dave McGlothlin		
Latitude:	32 43 58.75	Julian Day:	322	Session No.	—
Longitude:	89 41 37.00	Start Time:	—	End Time:	—
Ellip. Height:	265.822'	Data File Name:	7341_111713.DM.0C		
Type of Mark:	Lidar Control Point	Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A	Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 65°	Antenna Height:	2m	to bottom of antenna mount	
					



1013-3NE-16NOV2013



1013-3NW-16NOV2013

LiDAR GROUND CONTROL – 1014_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1014	
Latitude:	32° 26' 27.31"	
Longitude:	89° 23' 50.40"	
Ellip. Height:	320.608	
Type of Mark:	MAG NAIL - DISC	
Stamping on Mark:	N/A	
Weather Condition:	CLOUDY 60°	
Project Number:	73741	Survey Date: 11-15-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	319	Session No. 1
Start Time:		
End Time:		
Data File Name:	7374111151025.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount



1014-1-15NOV2013



1014-2-15NOV2013



1014-3N-15NOV2013



1014-3E-15NOV2013



1014-3S-15NOV2013



1014-3W-15NOV2013

LiDAR GROUND CONTROL – 1015_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1015	
Latitude:	32° 26' 52.02"	
Longitude:	89° 39' 13.57"	
Ellip. Height:	288.589'	
Type of Mark:	N/A	
Stamping on Mark:	N/A	
Weather Condition:	cloudy 60°	
Project Number:	73741	Survey Date: 11-15-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	319	Session No. 1
Start Time:	-	
End Time:	-	
Data File Name:	73741111513.JJ.BC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m	to bottom of antenna mount



1015-1-15NOV2013



1015-2-15NOV2013



1015-3N-15NOV2013



1015-3E-15NOV2013



1015-3S-15NOV2013

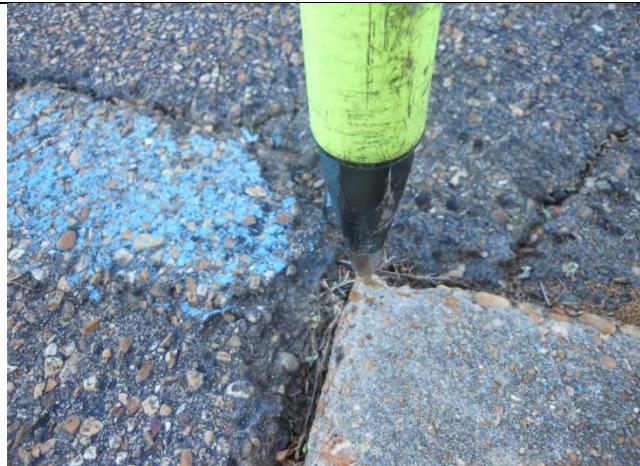


1015-3W-15NOV2013

LiDAR GROUND CONTROL – 1016_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1016	
Latitude:	32° 09' 13.70"	
Longitude:	09° 41' 17.60"	
Ellip. Height:	345.900	
Type of Mark:	N/A	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 70°	
Project Number:	73741	Survey Date: 11-13-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	317	Session No. 1
Start Time:	—	
Data File Name:	73741_111313.J5.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 m to bottom of antenna mount	

A hand-drawn sketch showing a building complex. On the left, there's a long vertical wall with several irregular shapes cut out of it, resembling windows or doors. To the right of this wall is a parking area with a curved arrow pointing towards it. A small building with a gabled roof is situated near the parking area. A vehicle, labeled "WAVIC", is parked in front of this building. A tall, thin structure, possibly a water tower or antenna, is visible behind the building. The sketch is done in a simple, sketchy style with some handwritten labels.



1016-1-13NOV2013



1016-2-13NOV2013



1016-3N-13NOV2013



1016-3E-13NOV2013



1016-3S-13NOV2013



1016-3W-13NOV2013

LiDAR GROUND CONTROL – 1017_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1017	
Latitude:	31° 52' 06.54"	
Longitude:	89° 33' 19.65"	
Ellip. Height:	207.196	
Type of Mark:	'T' MARKER	
Stamping on Mark:	N/A	
Weather Condition:	CLEAR 70°	
Project Number:	73741	Survey Date: 11-19-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	318	Session No. —
Start Time:		
Data File Name:	73741_111913.J5S.DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0	to bottom of antenna mount



1017-1-141NOV2013



1017-2-141NOV2013



1017-3N-141NOV2013



1017-3E-141NOV2013



1017-3S-141NOV2013



1017-3W-141NOV2013

LiDAR GROUND CONTROL – 1018_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1018	
Latitude:	31 55 45.30	
Longitude:	89 21 02.92	
Ellip. Height:	410.64	
Type of Mark:	PID	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 37° windy	
Project Number:	73741	Survey Date: 13 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	317	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741 1113 13 DM, DC	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount

Pines

SC Rd 99

House

N

HWY 531

Pasture

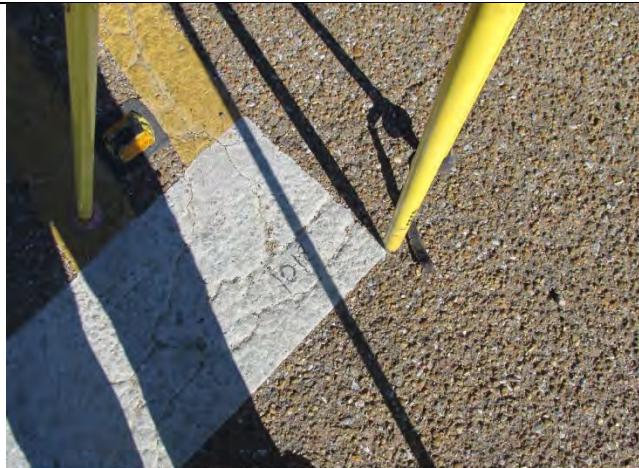
Pond

PID - SE CORNER OF STOPBAR

Pic 5 NW, SW, SE, NE



1018-1-13NOV2013



1018-2-13NOV2013



1018-3NE-13NOV2013



1018-3SE-13NOV2013



1018-3SW-13NOV2013



1018-3NW-13NOV2013

LiDAR GROUND CONTROL – 1019_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1019	
Latitude:	31 57 56.29	
Longitude:	88 58 05.43	
Ellip. Height:	437.144'	
Type of Mark:	PID	
Stamping on Mark:	N/A	
Weather Condition:	Sunny 50°	
Project Number:	73741	Survey Date: 13 NOV 13
Operator Name:	Dave McGlothlin	
Julian Day:	217	Session No. —
Start Time:	—	End Time: —
Data File Name:	73741_111313DM.LK	
Type of Receiver:	TRIMBLE R8-3	
Type of Antenna:	INTERNAL	
Antenna Height:	2 m	to bottom of antenna mount

A hand-drawn sketch showing a road intersection. A north arrow points upwards. The sketch includes labels: 'CR-3915' along a road, '1019' at an intersection, 'stop bar' near a junction, 'TREES' above a wavy line, 'OFF RAMP I-59 @ EXIT 118' along a road, 'ON RAMP S Bound' along another road, and 'Bridge' with arrows pointing towards it.



1019-1-13NOV2013



1019-2-13NOV2013



1019-3NE-13NOV2013



1019-3SE-13NOV2013



1019-3SW-13NOV2013



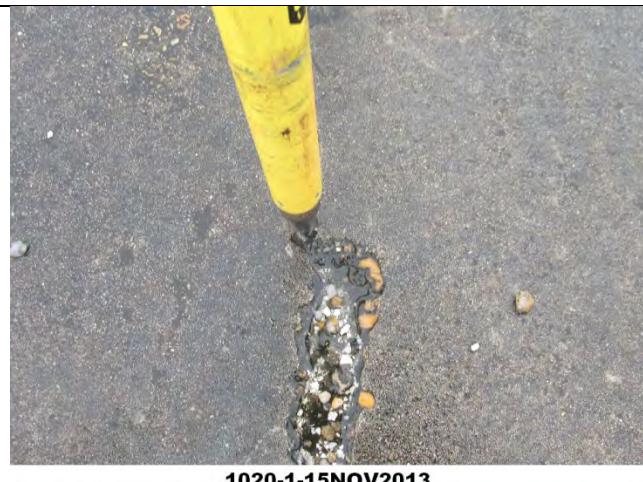
1019-3NW-13NOV2013

LiDAR GROUND CONTROL – 1020_L

GPS Observation Log Sheet		W WOOLPERT			
Project Name:	NRCS LAUREL MS (G10PC00057)	Project Number:	73741	Survey Date:	15 NOV 13
Station Name:	1020 / 1020A	Operator Name:	Dave McGlothlin		
Latitude:	32 10 20.46	Julian Day:	219	Session No.	—
Longitude:	89 01 00.94	Start Time:	—	End Time:	—
Ellip. Height:	215.391	Data File Name:	23142 111513 DM.DC		
Type of Mark:	Lidar Control Point	Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A	Type of Antenna:	INTERNAL		
Weather Condition:	Rainy 50°	Antenna Height:	2 m	to bottom of antenna mount	

CR - 20

The sketch shows a rectangular concrete foundation labeled "Concrete 1020". To its right is a grassy area labeled "Grass". Further to the right is a building labeled "Church". A vertical line labeled "Gravel Driveway" extends downwards from the church area. An arrow points upwards from the "Gravel Driveway" label towards the church. A north arrow is located in the top left corner of the sketch area.



1020-1-15NOV2013



1020-2-15NOV2013



1020-3N-15NOV2013



1020-3E-15NOV2013



1020-3S-15NOV2013



1020-3W-15NOV2013

LiDAR GROUND CONTROL – 1021_L

GPS Observation Log Sheet						
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	14 NOV 13
Station Name:	1021/1021A		Operator Name:	Dave McGlothlin		
Latitude:	32 08 07.07		Julian Day:	318	Session No.	—
Longitude:	89 24 09.94		Start Time:	—	End Time:	—
Ellip. Height:	324.96'		Data File Name:	73741 111413 DM.DC		
Type of Mark:	PID		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 40°		Antenna Height:	2m	to bottom of antenna mount	
						
<p>1021A - Located with bascon E 223</p> <p>Pics NE, SE, SW, NW</p>						



1021-1-14NOV2013



1021-2-14NOV2013



1021-3NE-14NOV2013



1021-3SE-14NOV2013



1021-3SW-14NOV2013



1021-3NW-14NOV2013

LiDAR GROUND CONTROL – 1021A_L

GPS Observation Log Sheet						
Project Name:	NRCS LAUREL MS (G10PC00057)		Project Number:	73741	Survey Date:	14 NOV 13
Station Name:	1021/1021A		Operator Name:	Dave McGlothlin		
Latitude:	32 08 07.07		Julian Day:	318	Session No.	—
Longitude:	89 24 09.94		Start Time:	—	End Time:	—
Ellip. Height:	324.96'		Data File Name:	73741_111413.DM,DC		
Type of Mark:	PID		Type of Receiver:	TRIMBLE R8-3		
Stamping on Mark:	N/A		Type of Antenna:	INTERNAL		
Weather Condition:	Sunny 40°		Antenna Height:	2m	to bottom of antenna mount	
 <p>1021A - Located with bascon E 223</p> <p>Pics NE, SE, SW, NW</p>						



1021A-1-15NOV2013



1021A-2-15NOV2013



1021A-3N-15NOV2013



1021A-3E-15NOV2013

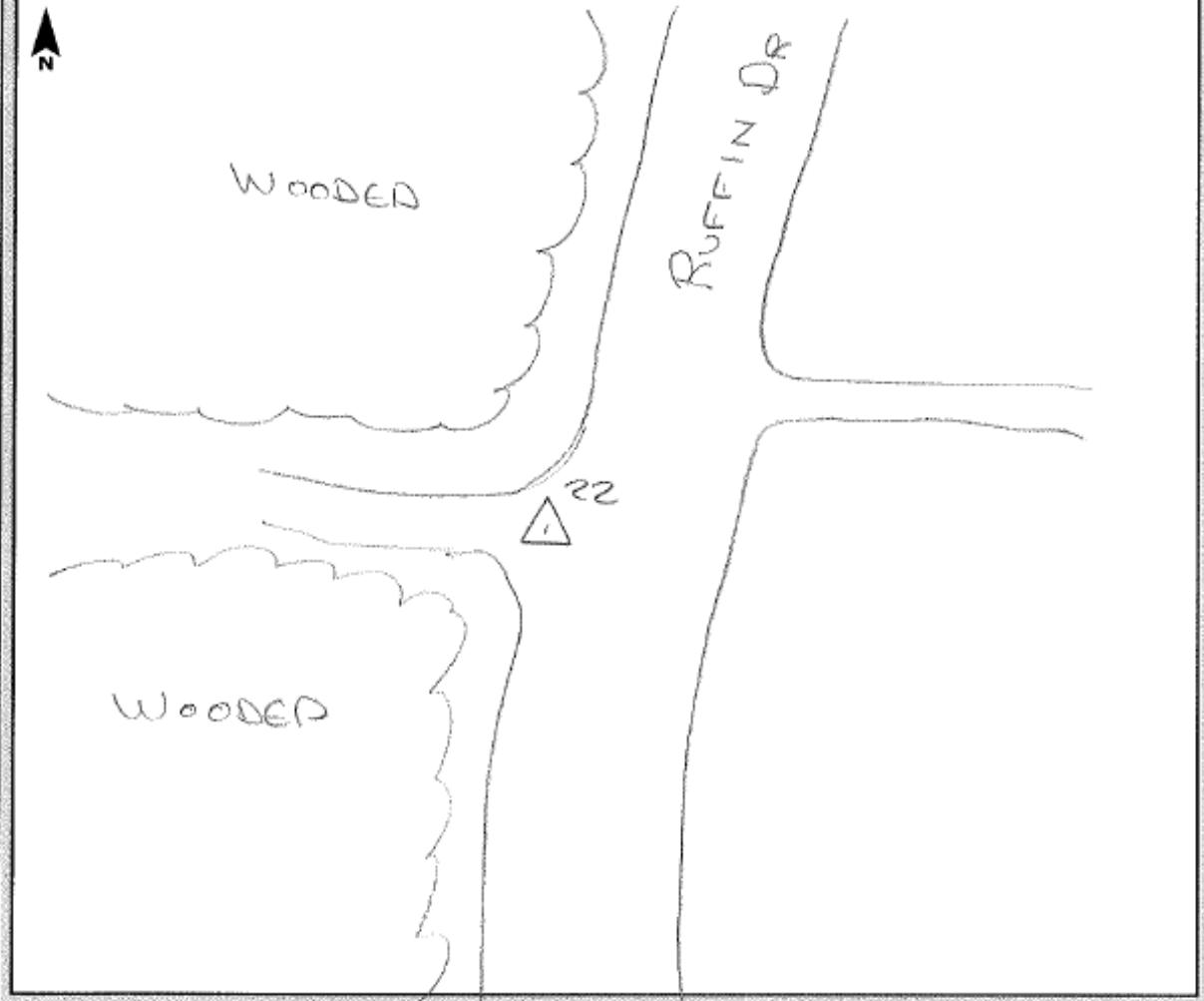


1021A-3S-15NOV2013



1021A-3W-15NOV2013

LiDAR GROUND CONTROL – 1022_L

GPS Observation Log Sheet		W WOOLPERT
Project Name: <u>NRCS LAUREL MS</u>	Project Number: <u>7374</u>	Survey Date: <u>2-18-14</u>
Station Name: <u>1022 (GCP)</u>	Operator Name: <u>R. CHALOUPKA</u>	
Latitude: <u>31-48-02.6</u>	Julian Day: <u>049</u>	Session No. <u>-</u>
Longitude: <u>89-18-39.4</u>	Start Time: <u>9:13</u>	End Time: <u>9:16</u>
Ellip. Height: <u>78.8 m</u>	Data File Name: <u>LAUREL 021814.</u>	<u>-</u>
Type of Mark: <u>PK</u>	Type of Receiver: <u>R8</u>	
Stamping on Mark: <u>N/A</u>	Type of Antenna: <u>INTERNAL</u>	
Weather Condition: <u>70° / PC</u>	Antenna Height: <u>2.0 m</u>	to bottom of antenna mount
		



LiDAR GROUND CONTROL – 1023_L

GPS Observation Log Sheet		W WOOLPERT
Project Name: <u>ACRS LAUREL MS</u>	Project Number: <u>73741</u>	Survey Date: <u>2-18-14</u>
Station Name: <u>1023 (GCP)</u>	Operator Name: <u>R. CHALOUPKA</u>	
Latitude: <u>31-53-12.8</u>	Julian Day: <u>49</u>	Session No. _____
Longitude: <u>88° 59'-07.3</u>	Start Time: <u>10:12</u>	End Time: <u>10:15</u>
Ellip. Height: <u>77.8</u>	Data File Name: <u>LAUREL021814</u>	
Type of Mark: <u>PK</u>	Type of Receiver: <u>RB</u>	
Stamping on Mark: <u>NA</u>	Type of Antenna: <u>INTERNAL</u>	
Weather Condition: <u>70° / PC</u>	Antenna Height: <u>2.0m</u> to bottom of antenna mount	

N

Hwy S28

23 WHITE STRIPES

OAK AVE



1023-1-18FEB2014



1023-2-18FEB2014



1023-3N-18FEB2014



1023-3E-18FEB2014



1023-3S-18FEB2014



1023-3W-18FEB2014

LiDAR GROUND CONTROL – 1030_L

GPS Observation Log Sheet		W WOOLPERT
Project Name:	NRCS LAUREL MS (G10PC00057)	
Station Name:	1030	
Latitude:	32° 53' 07.62"	
Longitude:	89° 58' 13.42"	
Ellip. Height:	199.526	
Type of Mark:	N/A (P10)	
Stamping on Mark:	N/A	
Weather Condition:	PC 60°	
Project Number:	73741	Survey Date: 11-18-13
Operator Name:	JAMES R. SPEELMAN	
Julian Day:	322	Session No. -
Start Time:	-	End Time: -
Data File Name:	73741111813.DS DC	
Type of Receiver:	TRIMBLE R8-2	
Type of Antenna:	INTERNAL	
Antenna Height:	2.0 ~	to bottom of antenna mount

A hand-drawn sketch map of a street intersection. The sketch shows a vertical street labeled "C. LIBERTY ST." and a diagonal street labeled "MARTIN LUTHER KING DR". On the left side of the intersection, there is a "STOP BAR" marking. Above the intersection, there is a "SIGNAL" marking. To the left of the sketch, there is a cloud-like shape labeled "NEC". To the right of the sketch, there is another cloud-like shape labeled "OPEN LOT". A north arrow is located at the top left of the sketch.



1030-1-18NOV2013



1030-2-18NOV2013



1030-3NE-18NOV2013



1030-3SE-18NOV2013



1030-3SW-18NOV2013



1030-3NW-18NOV2013

SECTION 3: PART 2 GEODETIC/GROUND CONTROL LOGS AND PHOTOS FOR CHOCTAW AND WASHINGTON COUNTIES AL

This section contains the station recovery information sheets and photographs for the geodetic and ground control stations established for the project. The stations appear as they are ordered in the final coordinate listing of Section 2.

The data is assembled on the following pages.

NGS CONTROL STATION – 12 43 (AA8353)

GPS Observation Log Sheet		MAGNOLIA Survey
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 12-43 (PID: AA8353)	Operator Name: S. Greenlee	
Latitude: 32 05 17.99332	Julian Day: 017	Session No. 1
Longitude: 88 15 14.35745	Start Time (UTC): 15:20	End Time (UTC): 15:24
Ellip. Height: 19.672 m	Data File Name: 70290172	
Type of Mark: NGS	Type of Receiver: Trimble R6-3	
Stamping on Mark: 12-43 1995	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

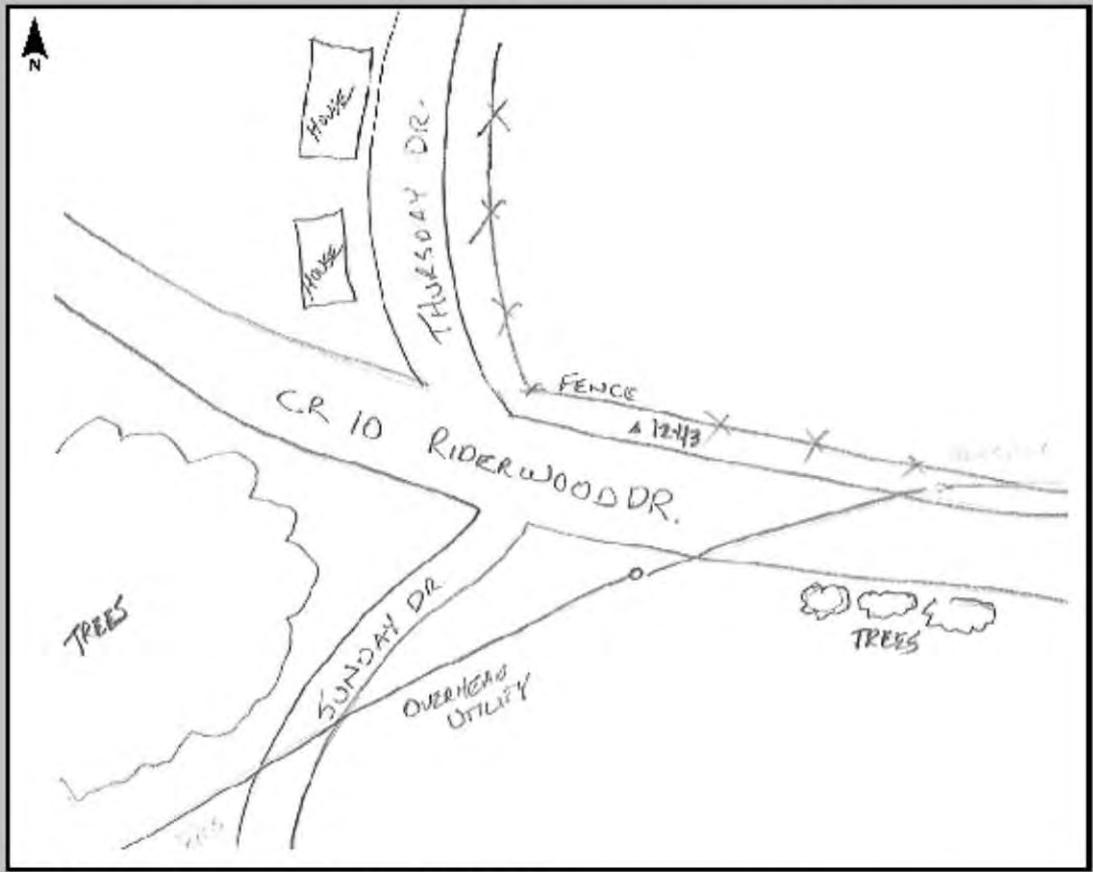
A hand-drawn sketch map of the survey site. It shows a road labeled 'CR 10' running diagonally. A road labeled 'RIDERWOOD DR.' runs horizontally across the middle. Another road labeled 'SUNDAY DR.' runs diagonally from the bottom left towards the center. A fence line is shown with several 'X' marks along it. Two utility poles are indicated with 'OVERHEAD UTILITY' written below them. There are two small rectangular structures labeled 'House'. Several 'TREES' are drawn as clusters of circles. A north arrow points upwards.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	17-Jan-14
Station Name:	12-43 (PID: AA8353)	Operator Name:	S. Greenlee		
Latitude:	32 05 17.99332	Julian Day:	017	Session No.	1
Longitude:	88 15 14.35745	Start Time (UTC):	15:41	End Time (UTC):	22:08
Ellip. Height:	19.672 m	Data File Name:	70290172		
Type of Mark:	NGS	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	12-43 1995	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	

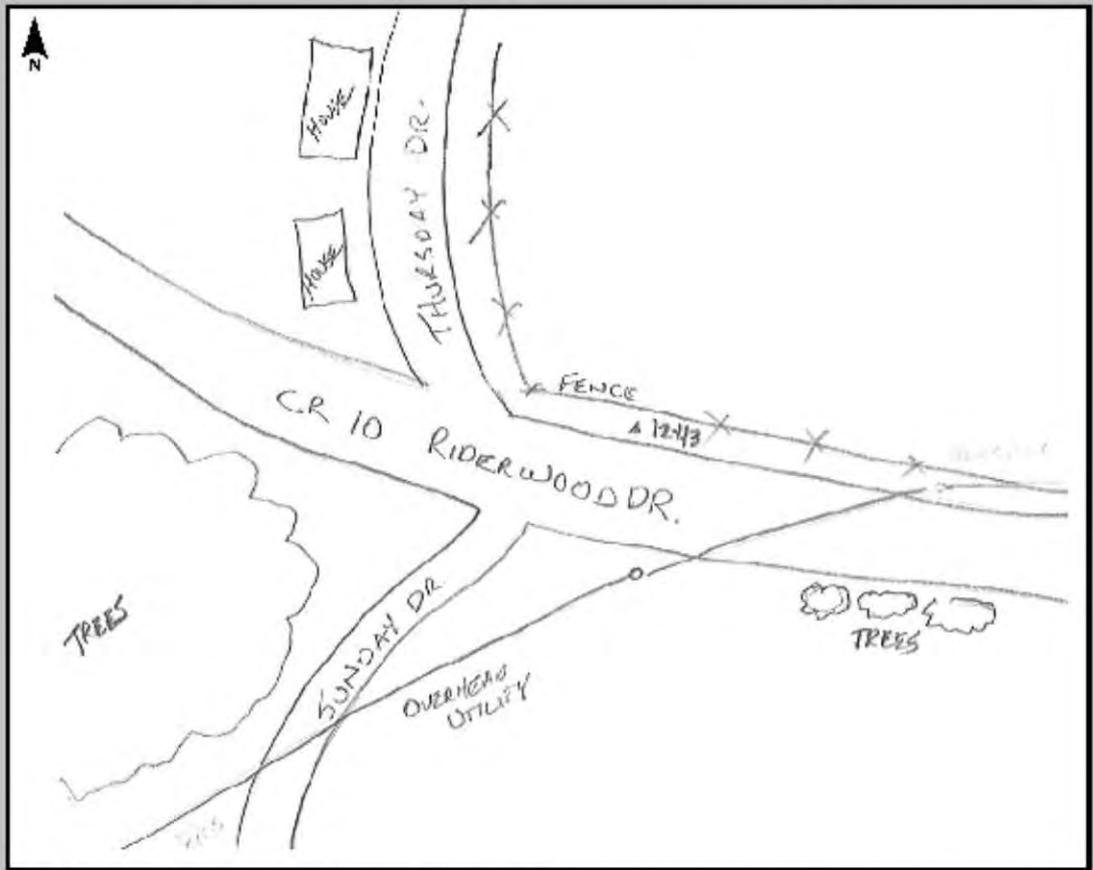


Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	23-Jan-14
Station Name:	12-43 (PID: AA8353)	Operator Name:	S. Greenlee		
Latitude:	32 05 17.99332	Julian Day:	023	Session No.	1
Longitude:	88 15 14.35745	Start Time (UTC):	19:06	End Time (UTC):	19:14
Ellip. Height:	19.672 m	Data File Name:	70290172		
Type of Mark:	NGS	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	12-43 1995	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



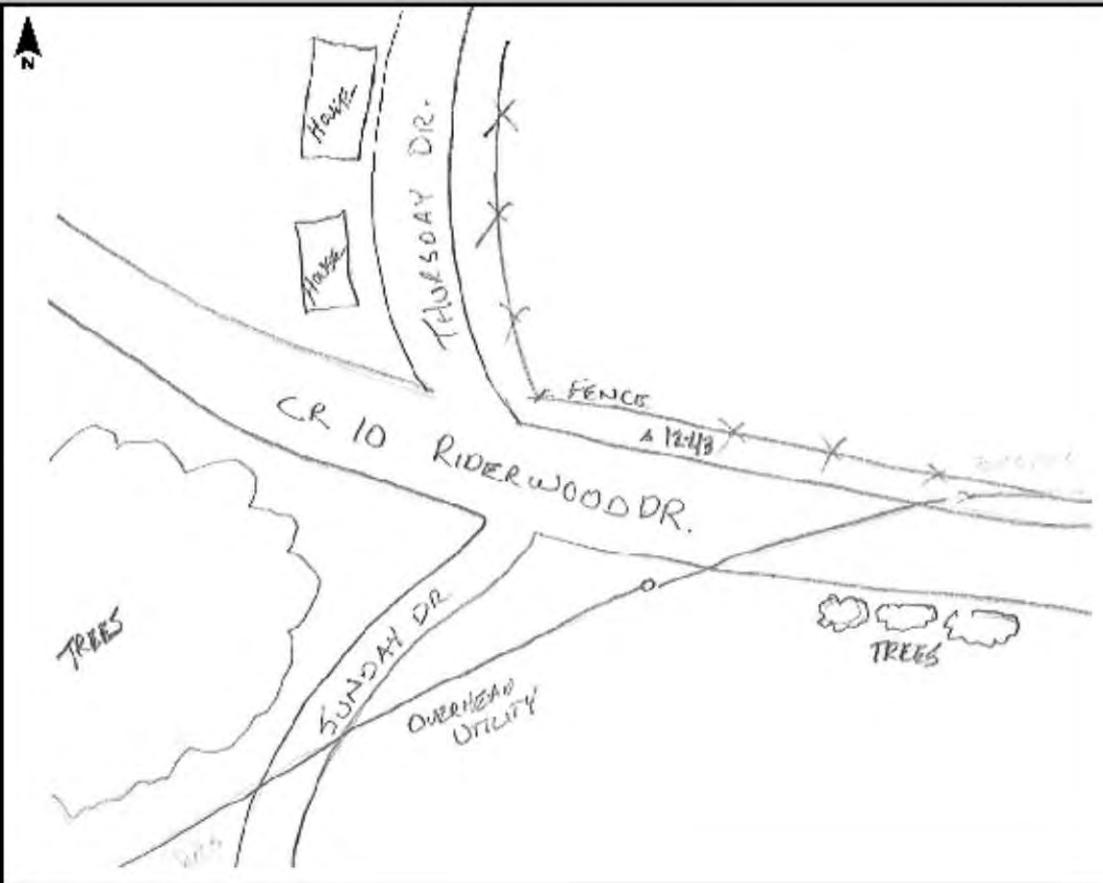
Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: Choctaw/Washington Counties, AL
 Station Name: 12-43 (PID: AA8353)
 Latitude: 32 05 17.99332
 Longitude: 88 15 14.35745
 Ellip. Height: 19.672 m
 Type of Mark: NGS
 Stamping on Mark: 12-43 1995
 Weather Condition: Clear

Project Number: 20944 Survey Date: 17-Jan-14
 Operator Name: S. Greenlee
 Julian Day: 017 Session No. 1
 Start Time (UTC): 15:20 End Time (UTC): 15:24
 Data File Name: 70290172
 Type of Receiver: Trimble R6-3
 Type of Antenna: Trimble R6-3
 Antenna Height: 2.0 m to bottom of antenna mount

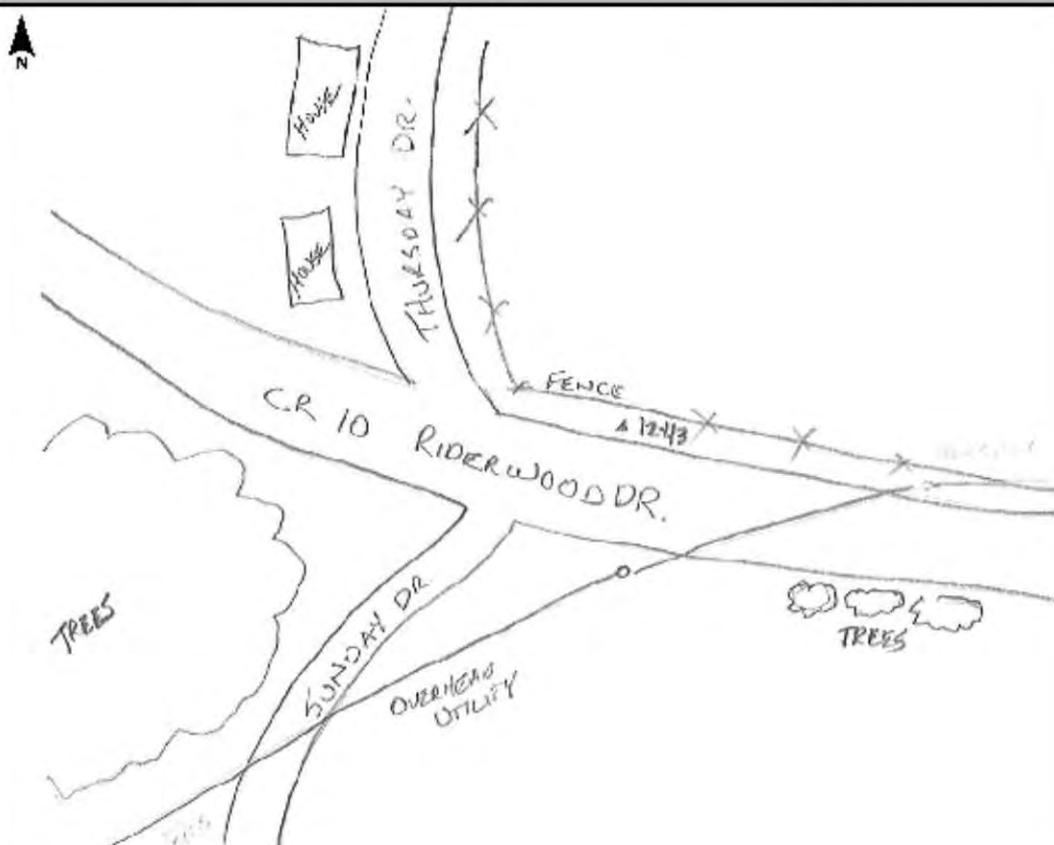


Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 24-Jan-14
Station Name: 12-43 (PID: AA8353)	Operator Name: S. Greenlee	
Latitude: 32 05 17.99332	Julian Day: 024	Session No. 1
Longitude: 88 15 14.35745	Start Time (UTC): 20:00	End Time (UTC): 20:08
Ellip. Height: 19.672 m	Data File Name: 70290172	
Type of Mark: NGS	Type of Receiver: Trimble R6-3	
Stamping on Mark: 12-43 1995	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



12-43_AA0353_1_17.JAN.2014



12-43_AA0353_2_17.JAN.2014



12-43_AA0353_2B_17.JAN.2014



12-42_AA0353_5C_17.JAN.2014



12-43_AA0353_3W_17.JAN.2014

NGS CONTROL STATION – 65 38 (AA8496)

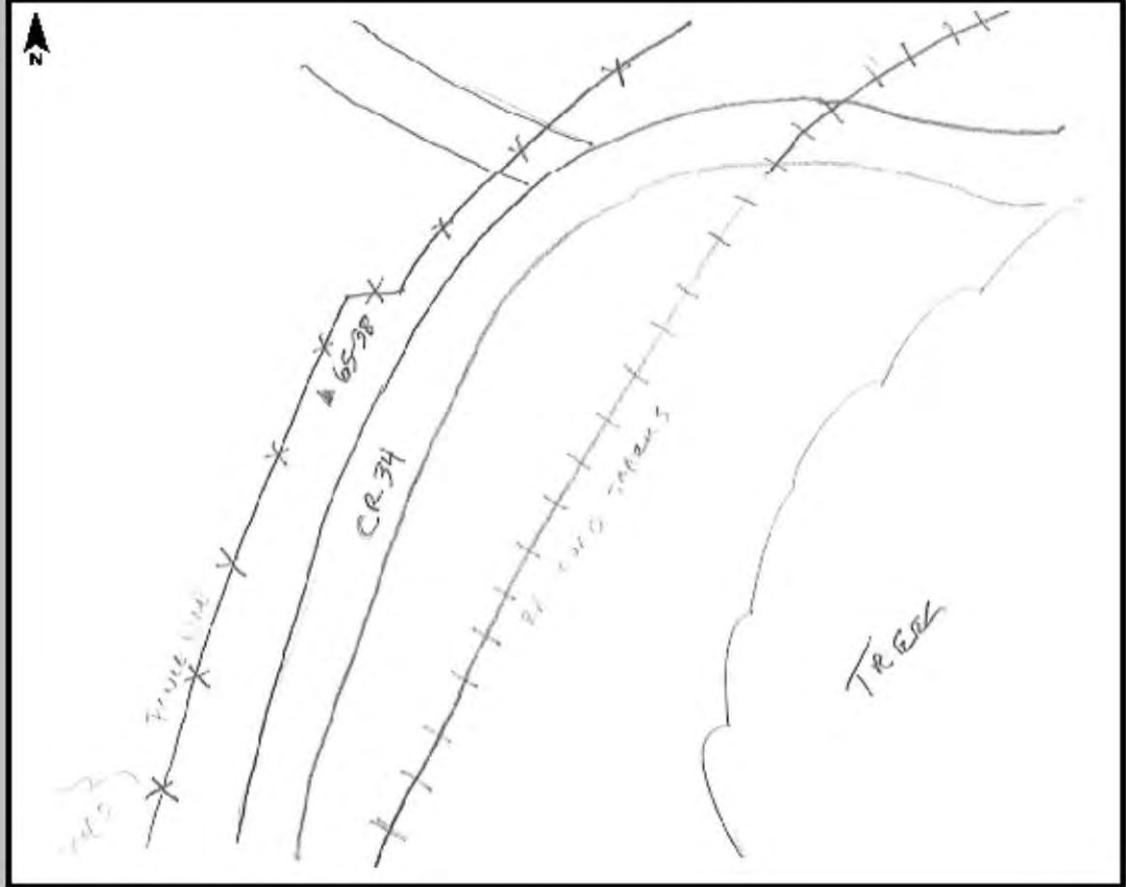
GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 14-Jan-14
Station Name: 65-38 (PID: AA8496)	Operator Name: S. Greenlee	
Latitude: 31 29 08.92314	Julian Day: 014	Session No. 1
Longitude: 87 56 03.14100	Start Time (UTC): 20:55	End Time (UTC): 20:58
Ellip. Height: -15.239 m	Data File Name: 70290150	
Type of Mark: NGS	Type of Receiver: Trimble R6-3	
Stamping on Mark: 65-38 1995	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u>	Survey Date: <u>15-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>	
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>015</u>	Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>14:00</u>	End Time (UTC): <u>14:03</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>	
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>	
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>	
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount	

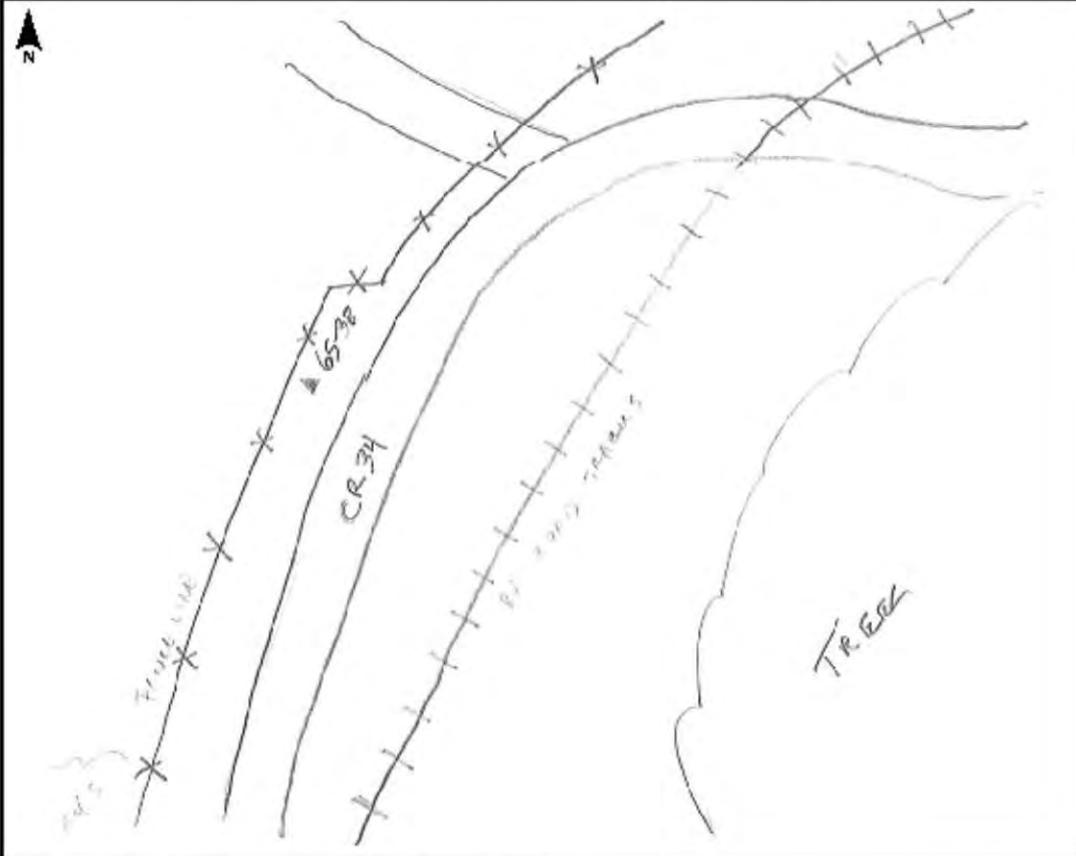


Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 65-38 (PID: AA8496)	Operator Name: S. Greenlee	
Latitude: 31 29 08.92314	Julian Day: 015	Session No. 1
Longitude: 87 56 03.14100	Start Time (UTC): 14:14	End Time (UTC): 20:45
Ellip. Height: -15.239 m	Data File Name: 70290150	
Type of Mark: NGS	Type of Receiver: Trimble R6-3	
Stamping on Mark: 65-38 1995	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

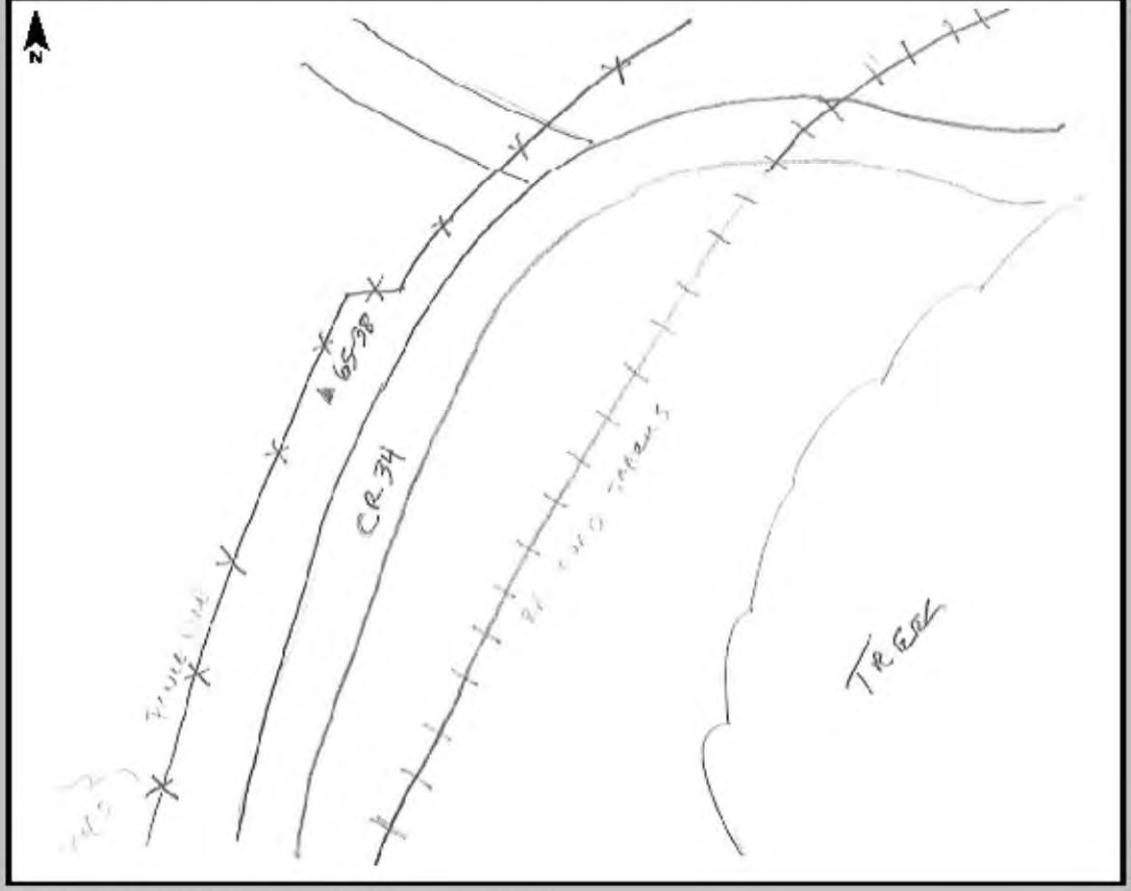


*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u>	Survey Date: <u>16-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>	
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>016</u>	Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>14:05</u>	End Time (UTC): <u>14:08</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>	
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>	
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>	
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount	

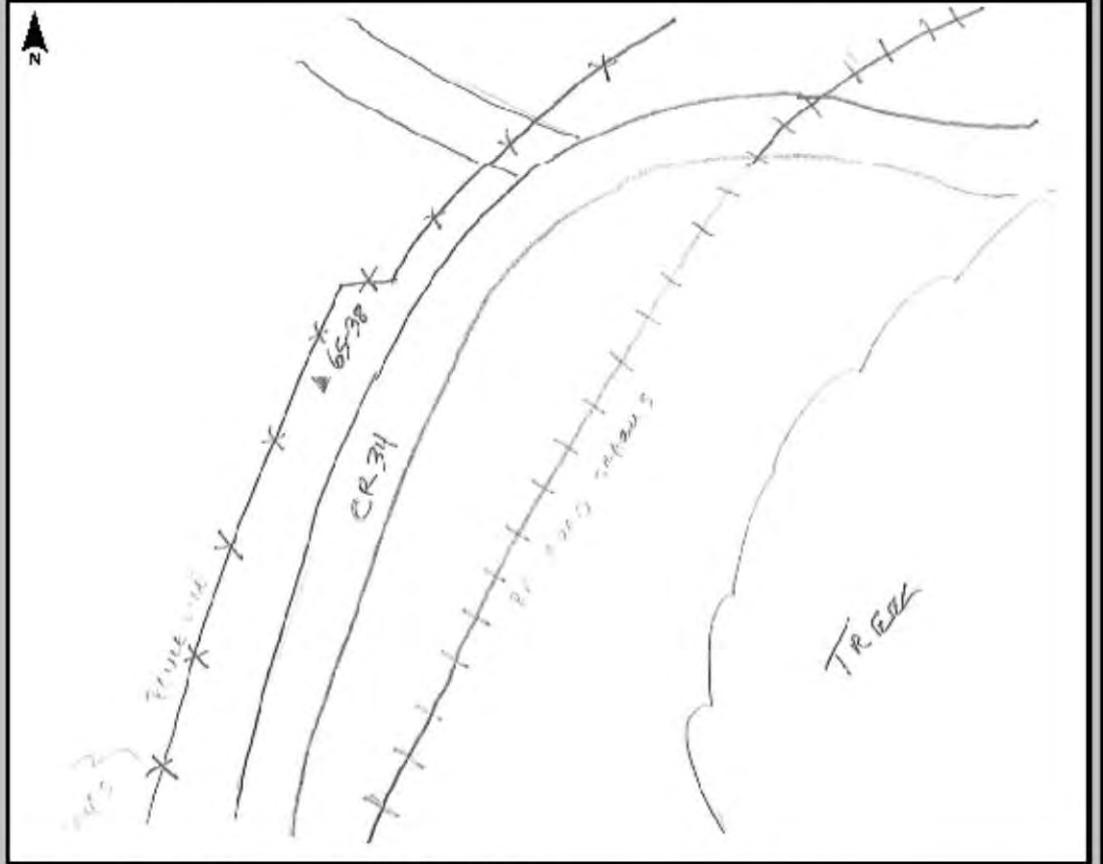


Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	16-Jan-14
Station Name:	65-38 (PID: AA8496)	Operator Name:	S. Greenlee		
Latitude:	31 29 08.92314	Julian Day:	016	Session No.	1
Longitude:	87 56 03.14100	Start Time (UTC):	14:20	End Time (UTC):	20:40
Ellip. Height:	-15.239 m	Data File Name:	70290163		
Type of Mark:	NGS	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	65-38 1995	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u> Survey Date: <u>18-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>018</u> Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>13:57</u> End Time (UTC): <u>14:00</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount

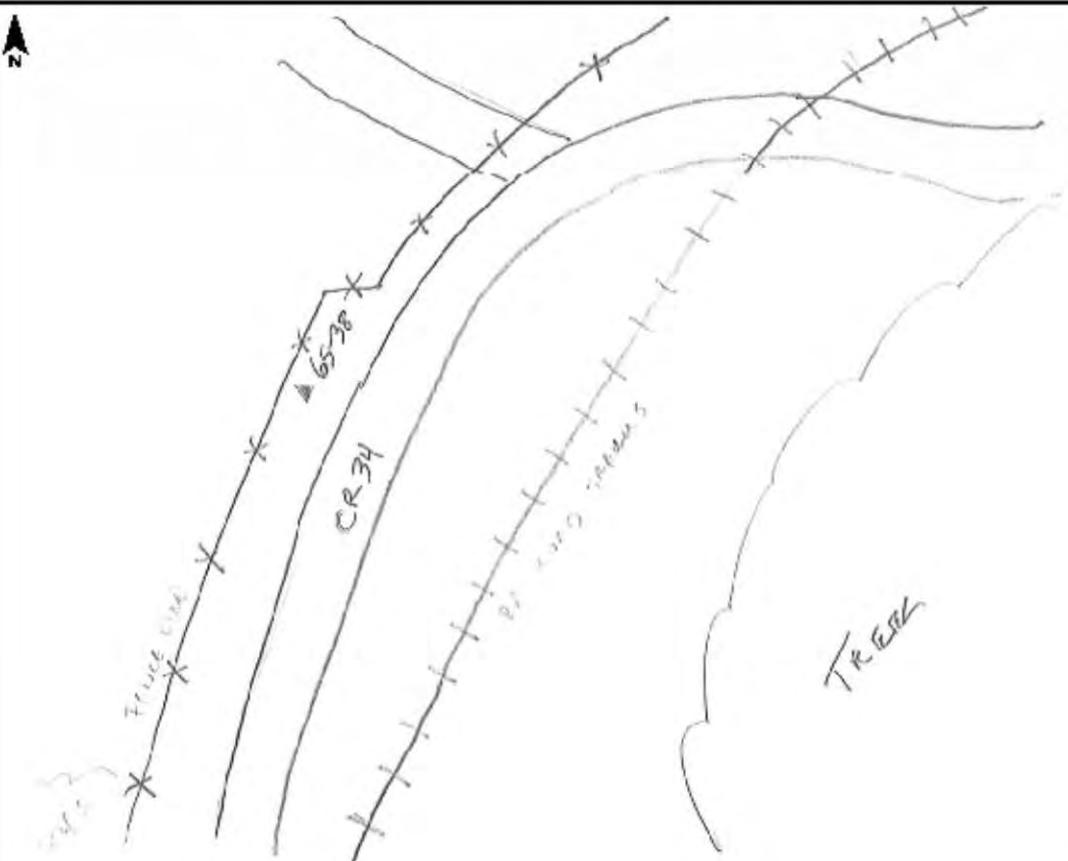
A hand-drawn sketch map showing a road labeled "CR 34". Along the road, several survey points are marked with an "X" and labeled with coordinates: "4652P", "4652Q", "4652R", "4652S", and "4652T". A north arrow is located in the upper left corner of the sketch. The sketch is enclosed in a rectangular frame.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	18-Jan-14
Station Name:	65-38 (PID: AA8496)	Operator Name:	S. Greenlee		
Latitude:	31 29 08.92314	Julian Day:	018	Session No.	1
Longitude:	87 56 03.14100	Start Time (UTC):	14:04	End Time (UTC):	20:40
Ellip. Height:	-15.239 m	Data File Name:	70290181		
Type of Mark:	NGS	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	65-38 1995	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u> Survey Date: <u>19-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>019</u> Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>14:00</u> End Time (UTC): <u>14:03</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount

A hand-drawn sketch map showing a road labeled "CR 34". Along the road, several survey points are marked with crosses and labeled with coordinates: "4652P", "4652Q", "4652R", "4652S", and "4652T". A north arrow is located in the upper left corner of the sketch. The sketch is enclosed in a rectangular frame.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u> Survey Date: <u>20-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>020</u> Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>14:10</u> End Time (UTC): <u>14:14</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount

N

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u> Survey Date: <u>21-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>021</u> Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>19:00</u> End Time (UTC): <u>19:03</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount

A hand-drawn sketch map showing a road labeled "CR 34". Along the road, several survey points are marked with crosses and labeled with coordinates: "4652P", "4652Q", "4652R", "4652S", and "4652T". A north arrow is located in the upper left corner of the sketch. The sketch is enclosed in a rectangular frame.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

GPS Observation Log Sheet



Project Name: <u>Choctaw/Washington Counties, AL</u>	Project Number: <u>20944</u> Survey Date: <u>21-Jan-14</u>
Station Name: <u>65-38 (PID: AA8496)</u>	Operator Name: <u>S. Greenlee</u>
Latitude: <u>31 29 08.92314</u>	Julian Day: <u>021</u> Session No. <u>1</u>
Longitude: <u>87 56 03.14100</u>	Start Time (UTC): <u>14:19</u> End Time (UTC): <u>14:25</u>
Ellip. Height: <u>-15.239 m</u>	Data File Name: <u>70290150</u>
Type of Mark: <u>NGS</u>	Type of Receiver: <u>Trimble R6-3</u>
Stamping on Mark: <u>65-38 1995</u>	Type of Antenna: <u>Trimble R6-3</u>
Weather Condition: <u>Clear</u>	Antenna Height: <u>2.0 m</u> to bottom of antenna mount

A hand-drawn sketch map showing a road labeled "CR 34". Along the road, several survey points are marked with crosses and labeled with coordinates: "4652P", "4652Q", "4652R", "4652S", and "4652T". A north arrow is located in the upper left corner of the sketch. The sketch also shows some surrounding terrain and a few other small crosses.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



GS-3B_AA5406_1_15.JAN2014



GS-3B_AA5406_2_15.JAN2014



GS-3B_AA5406_3N_15.JAN2014



GS-3B_AA5406_3P_15.JAN2014



GS-3B_AA5406_3W_15.JAN2014

LiDAR GROUND CONTROL – 1001

GPS Observation Log Sheet		MAGNOLIA
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 24-Jan-14
Station Name: 1001	Operator Name: S. Greenlee	
Latitude: 32°14'31.38057"	Julian Day: 024	Session No. 1
Longitude: 88°24'01.54527"	Start Time (UTC): 14:47	End Time (UTC): 14:53
Ellip. Height: 61.05 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1001_1_24JAN2014



1001_2_24JAN2014



1001_SH_24JAN2014



1001_SF_24JAN2014



1001_SS_24JAN2014



1001_SW_24JAN2014

LiDAR GROUND CONTROL – 1002

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 24-Jan-14
Station Name: 1002	Operator Name: S. Greenlee	
Latitude: 32°16'02.80212"	Julian Day: 024	Session No. 1
Longitude: 88°10'03.35664"	Start Time (UTC): 20:47	End Time (UTC): 20:50
Ellip. Height: 30.68 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch map of a survey site. It shows a road labeled "WARD CHAPEL RD" running diagonally. To the left of the road, there is a wavy line labeled "TREES". In the center, there is a rectangular area labeled "PAVED DRIVEWAY" and "4231 DRIVEWAY". To the right of this area, there is a smaller area labeled "GAS STA.". Below the paved driveway, there is a curved line labeled "232". At the bottom right, there is another curved line labeled "1002 UNPAVED DRIVEWAY". A north arrow is located in the top left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1002_1_24JAN2014



1007_2_24JAN2014



1002_3N_24JAN2014



1002_3F_24JAN2014



1002_3S_24JAN2014



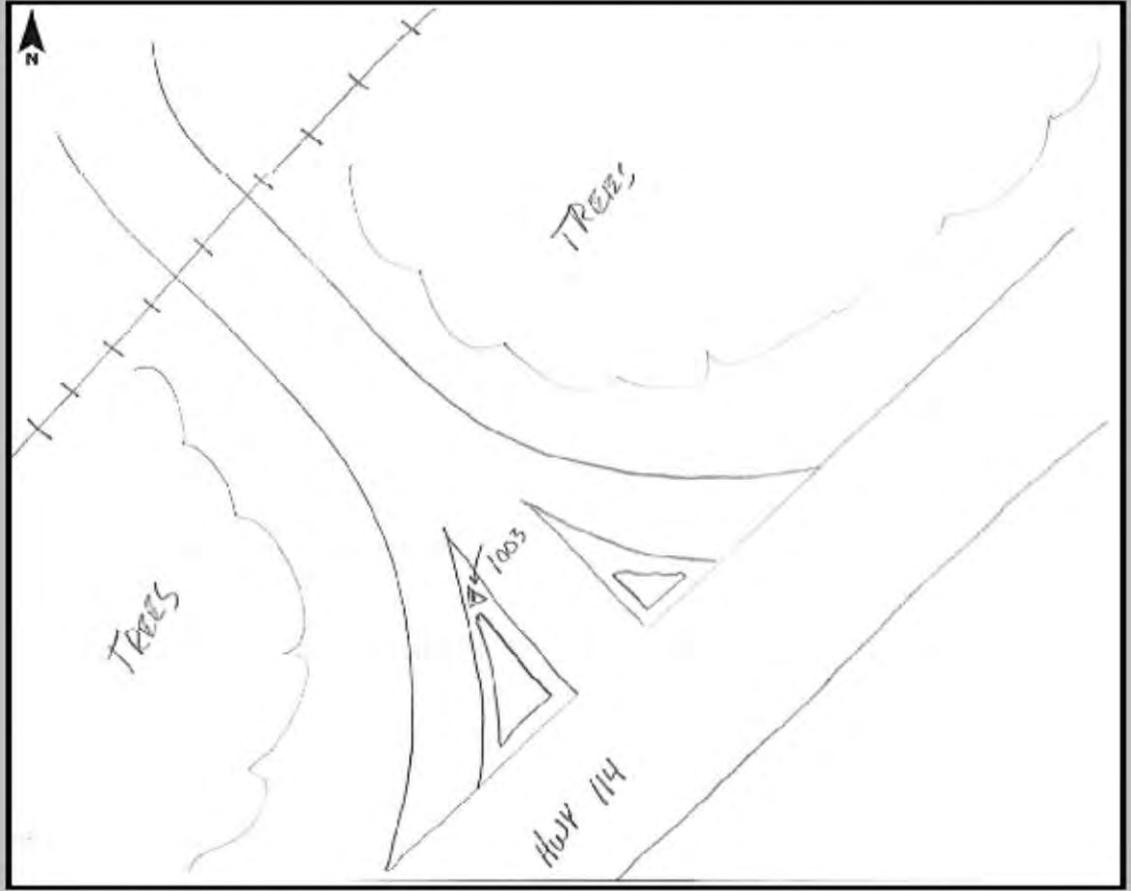
1002_3W_24JAN2014

LiDAR GROUND CONTROL – 1003

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	24-Jan-14
Station Name:	1003	Operator Name:	S. Greenlee		
Latitude:	32°13'12.11560"	Julian Day:	024	Session No.	1
Longitude:	88°02'04.81878"	Start Time (UTC):	21:55	End Time (UTC):	21:58
Ellip. Height:	-1.839 m	Data File Name:	NA		
Type of Mark:	GCP	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

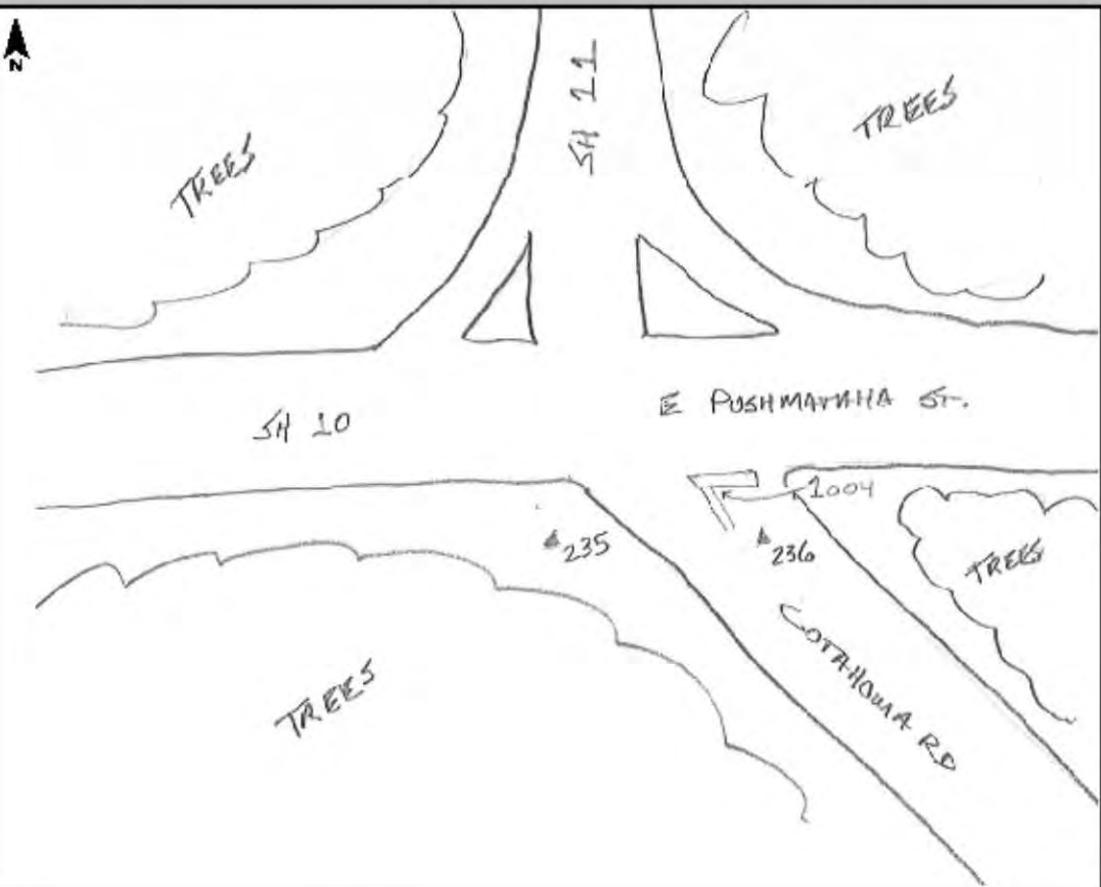


LiDAR GROUND CONTROL – 1004

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	23-Jan-14
Station Name:	1004	Operator Name:	S. Greenlee		
Latitude:	32°07'51.42316"	Julian Day:	023	Session No.	1
Longitude:	88°04'50.26431"	Start Time (UTC):	21:18	End Time (UTC):	21:24
Ellip. Height:	-5.311 m	Data File Name:	NA		
Type of Mark:	GCP	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1004_1_23JAN2014



1004_2_23JAN2014



1004_3N_23JAN2014



1004_3F_23JAN2014



1004_3B_23JAN2014



1004_3W_23JAN2014

LiDAR GROUND CONTROL – 1005

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 23-Jan-14
Station Name: 1005	Operator Name: S. Greenlee	
Latitude: 32°05'18.57881"	Julian Day: 023	Session No. 1
Longitude: 88°13'25.36699"	Start Time (UTC): 19:24	End Time (UTC): 19:27
Ellip. Height: 19.893 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1006_1_23JAN2014



1006_2_23JAN2014



1005_3H_23JAN2014



1006_3F_23JAN2014



1005_3B_23JAN2014



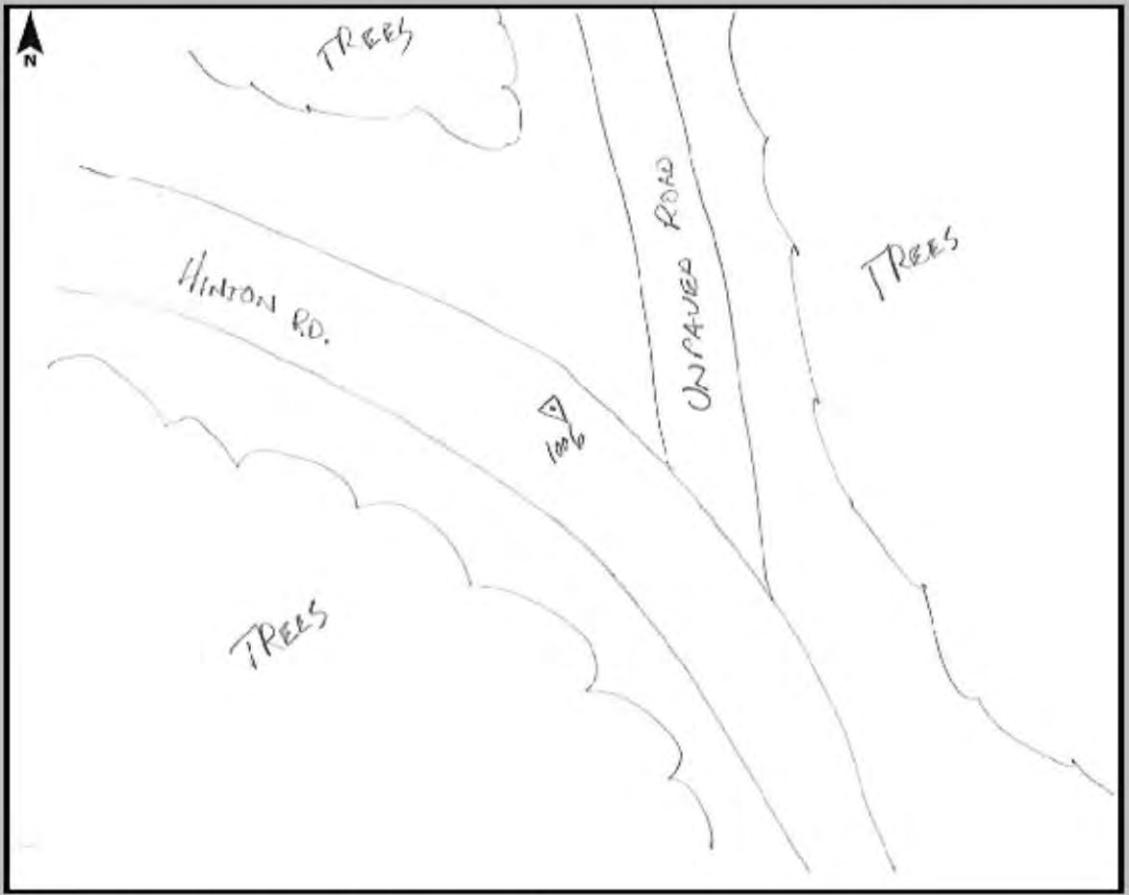
1006_3W_23JAN2014

LiDAR GROUND CONTROL – 1006

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	24-Jan-14
Station Name:	1006	Operator Name:	S. Greenlee		
Latitude:	32°05'20.27067"	Julian Day:	024	Session No.	1
Longitude:	88°25'28.36569"	Start Time (UTC):	17:44	End Time (UTC):	17:47
Ellip. Height:	110.964 m	Data File Name:	NA		
Type of Mark:	GCP	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1006_1_24JAN2014



1006_2_24JAN2014



1006_3L_24JAN2014



1006_3E_24JAN2014



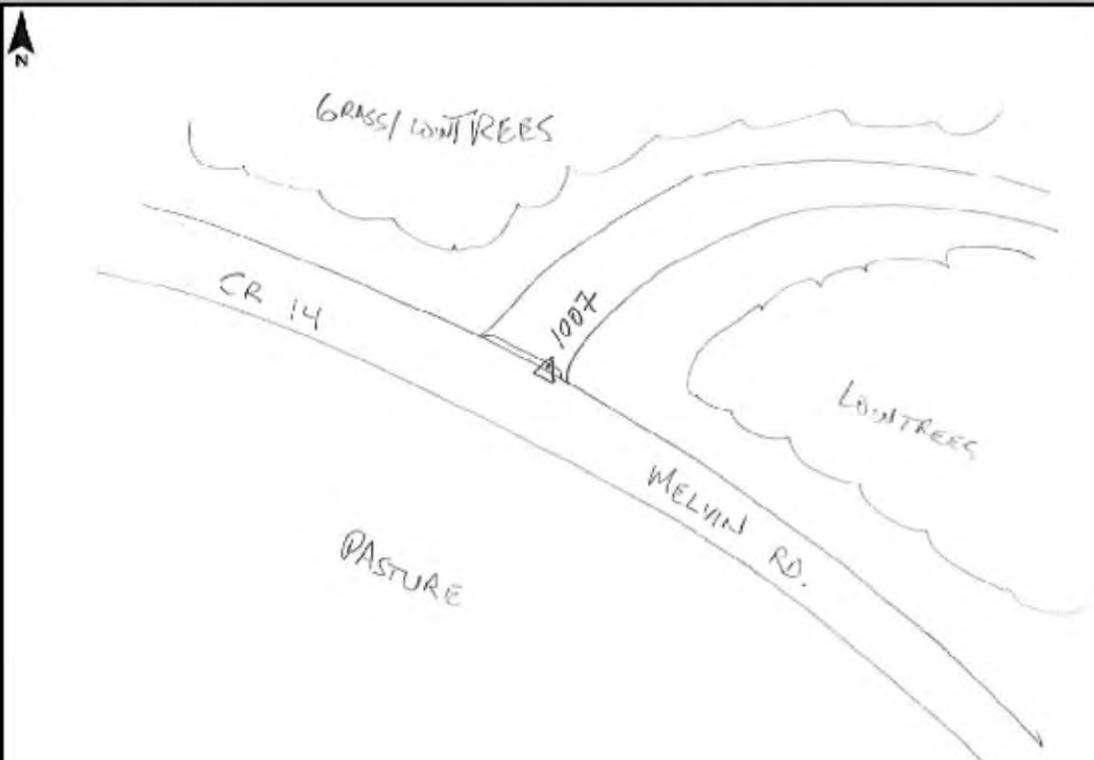
1006_3S_24JAN2014



1006_3W_24JAN2014

LiDAR GROUND CONTROL – 1007

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 23-Jan-14
Station Name: 1007	Operator Name: S. Greenlee	
Latitude: 31°54'00.02648"	Julian Day: 023	Session No. 1
Longitude: 88°23'52.81153"	Start Time (UTC): 15:26	End Time (UTC): 15:29
Ellip. Height: 12.223 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1007_1_23JAN2014



1007_2_23JAN2014



1007_3N_23JAN2014



1007_3E_23JAN2014



1007_3S_23JAN2014



1007_3W_23JAN2014

LiDAR GROUND CONTROL – 1008

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 22-Jan-14
Station Name: 1008	Operator Name: S. Greenlee	
Latitude: 31°52'45.57085"	Julian Day: 022	Session No. 1
Longitude: 88°10'38.61326"	Start Time (UTC): 19:12	End Time (UTC): 19:15
Ellip. Height: -5.582 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows an 'UNPAVED Rd.' curving from the top left towards the center. A 'triangle' is drawn at the bottom right corner of the sketch. Labels include 'MASH' at the top center, 'P' at the top right, 'Rd.' at the middle right, '△ 100ft' at the bottom center, 'TREES' on the left side, 'GRASS' on the bottom left, and 'HILL GRASS' on the bottom right. A north arrow points upwards.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1008_1_22JAN2014



1008_2_22JAN2014



1008_3N_22JAN2014



1008_3F_22JAN2014



1008_3R_22JAN2014



1008_3W_22JAN2014

LiDAR GROUND CONTROL – 1009

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 23-Jan-14
Station Name: 1009	Operator Name: S. Greenlee	
Latitude: 31°46'51.53203"	Julian Day: 023	Session No. 1
Longitude: 88°26'57.68096"	Start Time (UTC): 16:42	End Time (UTC): 16:45
Ellip. Height: 57.797 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It includes a square labeled "CHURCH", a rectangular area labeled "CEMETERY", a wavy line labeled "TREES", and a horizontal line labeled "US HWY 84". A vertical line labeled "100A" is shown near the highway. An arrow points upwards and to the left, labeled "N", indicating North.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1008_1_25JAN2014



1009_2_25JAN2014



1009_3N_25JAN2014



1009_3E_25JAN2014



1009_3S_25JAN2014



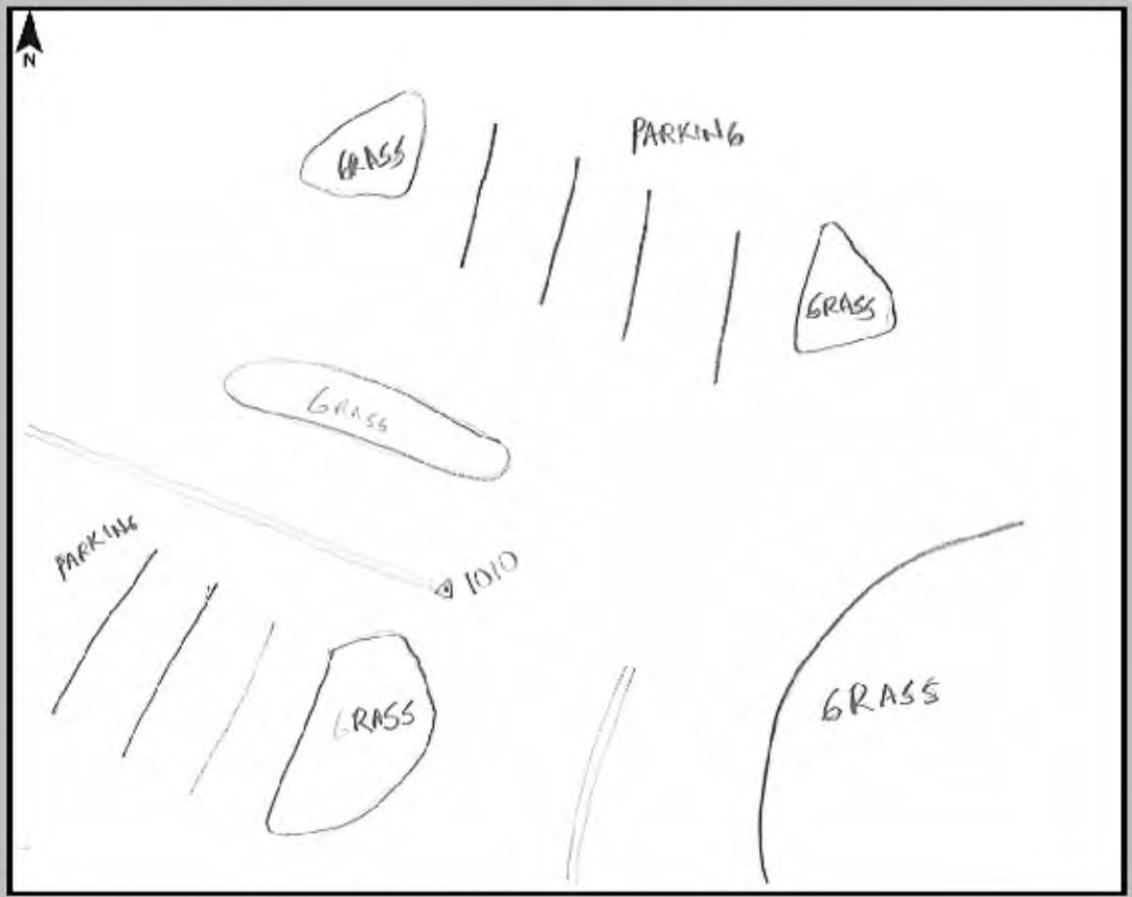
1009_3W_25JAN2014

LiDAR GROUND CONTROL – 1010

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	22-Jan-14
Station Name:	1010	Operator Name:	S. Greenlee		
Latitude:	31°45'03.91249"	Julian Day:	022	Session No.	1
Longitude:	88°08'36.44204"	Start Time (UTC):	17:42	End Time (UTC):	17:47
Ellip. Height:	-14.787 m	Data File Name:	NA		
Type of Mark:	GCP	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



LiDAR GROUND CONTROL – 1011

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 20-Jan-14
Station Name: 1011	Operator Name: S. Greenlee	
Latitude: 31°37'03.28226"	Julian Day: 020	Session No. 1
Longitude: 88°23'54.29626"	Start Time (UTC): 18:15	End Time (UTC): 18:18
Ellip. Height: 59.912 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



LiDAR GROUND CONTROL – 1012

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 20-Jan-14
Station Name: 1012	Operator Name: S. Greenlee	
Latitude: 31°38'47.64229"	Julian Day: 020	Session No. 1
Longitude: 88°08'49.70354"	Start Time (UTC): 16:47	End Time (UTC): 16:51
Ellip. Height: 18.984	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1012_1_20JAN2014



1012_2_20JAN2014



1012_3N_20JAN2014



1012_3E_20JAN2014



1012_SS_20JAN2014



1012_SW_20JAN2014

LiDAR GROUND CONTROL – 1013

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 1013	Operator Name: S. Greenlee	
Latitude: 31°30'02.49250"	Julian Day: 015	Session No. 1
Longitude: 87°58'21.62190"	Start Time (UTC): 14:30	End Time (UTC): 14:33
Ellip. Height: 12.383 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows a road with a white line and a center line, labeled 'C.R. 34'. A survey marker is marked with a triangle and the number '1013'. To the left of the road is a rectangular signpost labeled 'LEROY WATER'. To the right of the road is a wavy line labeled 'Trees'. A north arrow points upwards. Handwritten text 'US 43 S/B' and 'US 43 N/B' is written along the road. The sketch is done in black ink on a white background.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1013_1_14JAN2014



1013_2_14JAN2014



1013_3N_14JAN2014



1013_3E_14JAN2014



1013_3R_14JAN2014



1013_3W_14JAN2014

LiDAR GROUND CONTROL – 1014

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 1014	Operator Name: S. Greenlee	
Latitude: 31°27'02.80853"	Julian Day: 016	Session No. 1
Longitude: 88°11'46.81943"	Start Time (UTC): 20:43	End Time (UTC): 20:46
Ellip. Height: 18.769 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1014_1 18JAN2014



1014_2 18JAN2014



1014_3N_16 JAN2014



1014_SE_13JAN2014



1014_3S_16JAN2014



1014_SW_16JAN2014

LiDAR GROUND CONTROL – 1015

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 1015	Operator Name: S. Greenlee	
Latitude: 31°27'38.69833"	Julian Day: 016	Session No. 1
Longitude: 88°24'54.75307"	Start Time (UTC): 18:36	End Time (UTC): 18:39
Ellip. Height: 44.694 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1015_1 18JAN2014



1015_2 18JAN2014



1015_3H 16JAN2014



1015_3F 16JAN2014



1015_3S 16JAN2014



1015_3W 16JAN2014

LiDAR GROUND CONTROL – 1016

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 1016	Operator Name: S. Greenlee	
Latitude: 31°17'33.38169"	Julian Day: 018	Session No. 1
Longitude: 88°23'05.95160"	Start Time (UTC): 21:19	End Time (UTC): 21:23
Ellip. Height: 27.77 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Sketch of Survey Area:

The sketch shows a road labeled "PLANT RD." running vertically. To its right is a building labeled "HOUSE". A utility pole with wires labeled "OVERHEAD UTIL." is positioned near the road. A stream or creek is labeled "ESCATAWPA CREEK" flowing from the bottom left towards the center. A north arrow points upwards. A note on the sketch says "Lab" with an arrow pointing towards the creek.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1016_1 18JAN2014



1016_2 18JAN2014



1016_3N_18JAN2014



1016_3E_18JAN2014



1016_3S_18JAN2014



1016_3W_18JAN2014

LiDAR GROUND CONTROL – 1017

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 1017	Operator Name: S. Greenlee	
Latitude: 31°19'01.71035"	Julian Day: 016	Session No. 1
Longitude: 88°09'45.06836"	Start Time (UTC): 21:15	End Time (UTC): 21:18
Ellip. Height: 9.434 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Sketch of Observation Site:

The sketch illustrates the survey setup. A vertical line labeled "C.R. 19" extends downwards from an intersection point. To the right, a curved line labeled "UNPAVED DRIVEWAY" and "K+K SERVICES" runs parallel to another line labeled "OFF". On the left, there are "OVERHEAD" power lines and utility poles. A north arrow points upwards.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1017_1_18JAN2014



1017_2_18JAN2014



1017_3N_18JAN2014



1017_SE_18JAN2014



1017_SE_18JAN2014



1017_SW_18JAN2014

LiDAR GROUND CONTROL – 1018

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 1018	Operator Name: S. Greenlee	
Latitude: 31°16'56.34567"	Julian Day: 015	Session No. 1
Longitude: 88°00'44.61049"	Start Time (UTC): 17:45	End Time (UTC): 17:48
Ellip. Height: -11.186 m	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch showing a survey point marked with a triangle labeled '1018'. The point is located at the intersection of two paths or lanes. One path is labeled 'CIBA LANE' running vertically. The other path has a wavy line representing vegetation, with the word 'TREES' written above it. Another 'TREES' label is written near the bottom left. A north arrow points upwards.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



LiDAR GROUND CONTROL – 1019

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 1019	Operator Name: S. Greenlee	
Latitude: 31°11'45.90345"	Julian Day: 015	Session No. 1
Longitude: 88°00'42.28558"	Start Time (UTC): 18:31	End Time (UTC): 18:34
Ellip. Height: -8.821	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



A hand-drawn sketch map of a survey site. The map shows a road running diagonally from the bottom left towards the top right. A point on the road is labeled '1019'. To the left of the road, there is a cluster of trees labeled 'TREES'. Above the trees, there is a house labeled 'HOUSE'. To the right of the road, there are two more houses labeled 'HOUSE'. Further down the road, there is a label 'WILK.' (Wildlife). A north arrow is located in the top left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



LiDAR GROUND CONTROL – 1020

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 1020	Operator Name: S. Greenlee	
Latitude: 31°10'24.53807"	Julian Day: 015	Session No. 1
Longitude: 88°11'37.01547"	Start Time (UTC): 19:56	End Time (UTC): 19:59
Ellip. Height: 64.153	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



1020_1 15JAN2014



1020_2 15JAN2014



1020_3H_15JAN2014



1020_3E_15JAN2014



1020_3S_15JAN2014



1020_3W_15JAN2014

LiDAR GROUND CONTROL – 1021

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 1021	Operator Name: S. Greenlee	
Latitude: 31°08'27.03756"	Julian Day: 015	Session No. 1
Longitude: 88°24'25.09061"	Start Time (UTC): 21:21	End Time (UTC): 21:24
Ellip. Height: 58.499	Data File Name: NA	
Type of Mark: GCP	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch shows a survey point marked with a triangle and labeled '1021'. It is situated on a road labeled 'CR 9'. Two houses are shown, one to the left and one to the right. A tall utility pole is positioned between the houses. In the background, there are trees and a hillside. A north arrow is located in the upper left corner of the sketch area.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



102_1 15JAN2014



1021_2 15JAN2014



1021_3R 15JAN2014



1021_3T 15JAN2014



1021_3R 15JAN2014



1021_3V 15JAN2014

TEMPORARY SURVEY MARKS – 201

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 201	Operator Name: S. Greenlee	
Latitude: 31°29'52.49072"	Julian Day: 015	Session No. 1
Longitude: 87°57'56.22746"	Start Time (UTC): 15:14	End Time (UTC): 15:17
Ellip. Height: 12.766 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch map illustrates the survey area. It features a road labeled "U.S.43 HARRISVILLE PARK RD" running diagonally from the top left towards the center. A second road, "LOWER FERRY RD", runs horizontally across the middle. Several survey markers are indicated by small rectangles with numbers: "201" near the bottom left, "202" near the center, and "203" near the top right. There are three clusters of irregular shapes labeled "TREES". Three small rectangular labels with the word "HOUSE" are placed near the bottom right. A north arrow is located in the top left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

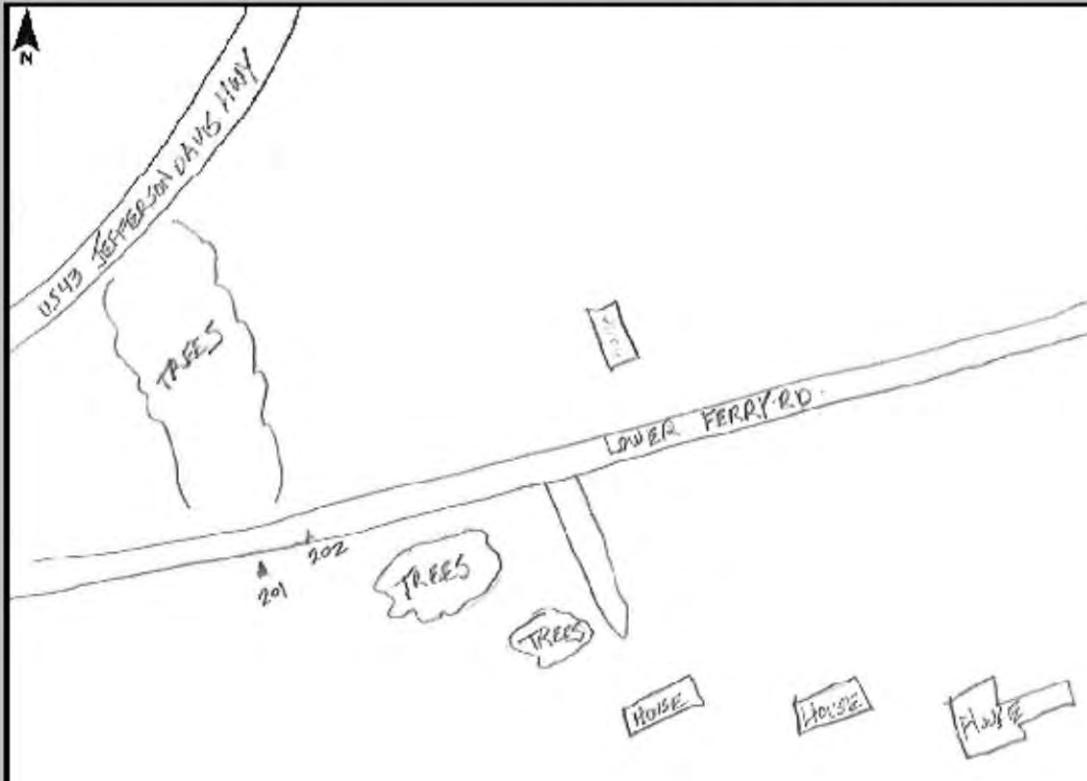


TEMPORARY SURVEY MARK – 202

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	15-Jan-14
Station Name:	202	Operator Name:	S. Greenlee		
Latitude:	31°29'52.46498"	Julian Day:	015	Session No.	1
Longitude:	87°57'55.96118"	Start Time (UTC):	15:33	End Time (UTC):	15:36
Ellip. Height:	12.902 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



202_1_15Jan2014



202_2_15Jan2014



202_3h_15Jan2014



202_SE_15Jan2014



202_S9_15Jan2014



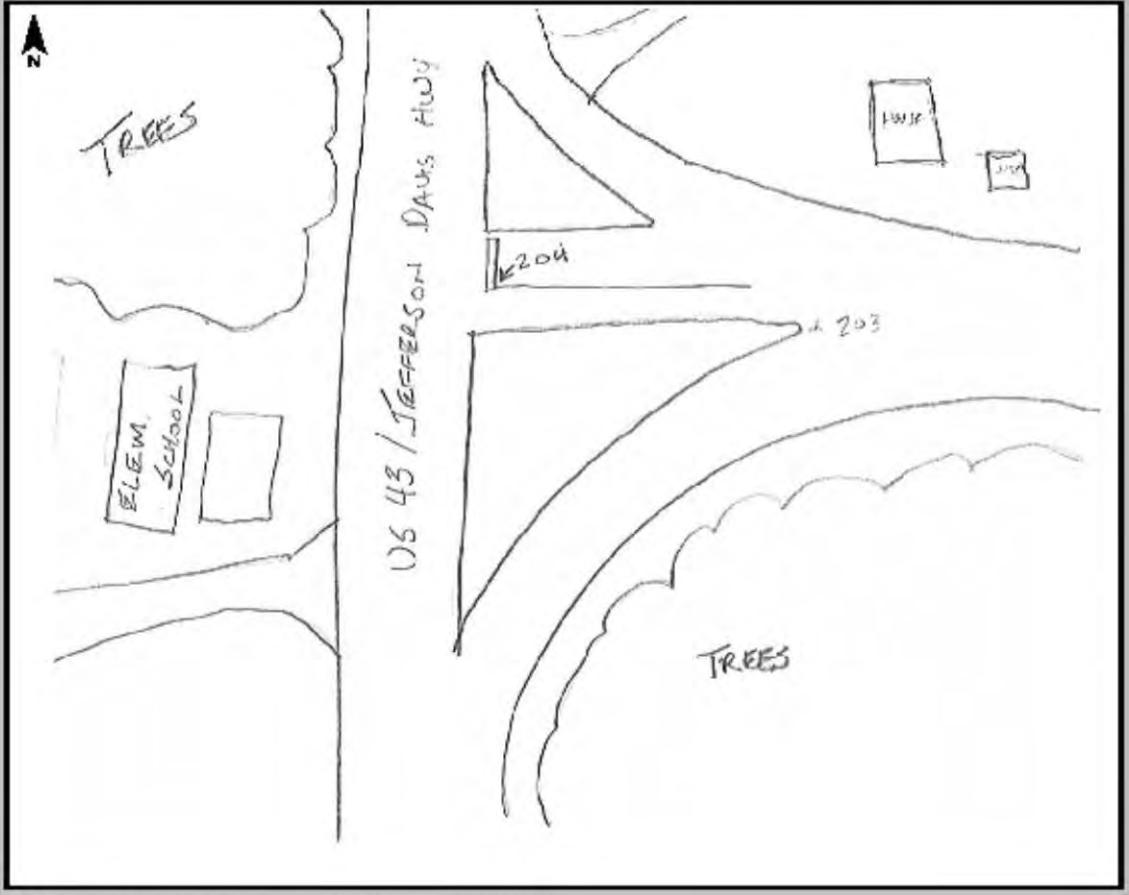
202_SW_15Jan2014

TEMPORARY SURVEY MARK – 203

GPS Observation Log Sheet



Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 203	Operator Name: S. Greenlee	
Latitude: 31°16'57.50916"	Julian Day: 015	Session No. 1
Longitude: 88°01'51.34411"	Start Time (UTC): 16:42	End Time (UTC): 16:45
Ellip. Height: -11.473 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



203_1 15JAN2014



203_2 15JAN2014



203_3E 15JAN2014



203_3F 15JAN2014



203_3G 15JAN2014



203_3H 15JAN2014

TEMPORARY SURVEY MARK – 204

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 204	Operator Name: S. Greenlee	
Latitude: 31°16'57.67813"	Julian Day: 015	Session No. 1
Longitude: 88°01'52.34509"	Start Time (UTC): 16:48	End Time (UTC): 16:51
Ellip. Height: -11.447 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



204_1_15JAN2014



204_2_15JAN2014



204_3_15JAN2014



204_4_15JAN2014



204_5_15JAN2014



204_6_15JAN2014

TEMPORARY SURVEY MARK – 205

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 205	Operator Name: S. Greenlee	
Latitude: 31°11'26.67865"	Julian Day: 015	Session No. 1
Longitude: 88°00'39.88305"	Start Time (UTC): 18:48	End Time (UTC): 18:51
Ellip. Height: -11.757 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch map illustrates a survey area bounded by a winding road labeled "FLOYD JOHNSON RD". To the west, there's a body of water labeled "LITTLE POLL BAYOU". A vertical line labeled "US 43" runs through the center. A vertical line labeled "JEFFERSON DAVIS Hwy" is positioned to the right of the US 43 line. Several "TREES" are indicated by hand-drawn scribbles. A north arrow is located in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 206

GPS Observation Log Sheet	
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944 Survey Date: 15-Jan-14
Station Name: 206	Operator Name: S. Greenlee
Latitude: 31°11'27.22353"	Julian Day: 015 Session No. 1
Longitude: 88°00'39.75580"	Start Time (UTC): 18:51 End Time (UTC): 18:54
Ellip. Height: -11.525 m	Data File Name: NA
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3
Stamping on Mark: NA	Type of Antenna: Trimble R6-3
Weather Condition: Clear	Antenna Height: 2.0 m to bottom of antenna mount

The sketch map illustrates the survey site's surroundings. It features a winding road labeled "LLOYD JEFFERSON RD" running diagonally across the top. A vertical line labeled "US 43" extends downwards from the road. The area is bounded by a wavy line representing "LITTLE POLL BAYOU". Several "TREES" are indicated by hand-drawn scribbles. A north arrow is present in the upper left corner. The sketch is done in black ink on white paper.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



206_1_15JAN2014



206_2_15JAN2014



206_N_15JAN2014



206_SE_15JAN2014



206_NE_15JAN2014



206_SW_15JAN2014

TEMPORARY SURVEY MARK – 207

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 207	Operator Name: S. Greenlee	
Latitude: 31°10'24.61358"	Julian Day: 015	Session No. 1
Longitude: 88°11'36.96289"	Start Time (UTC): 20:05	End Time (UTC): 20:09
Ellip. Height: 64.11 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch map illustrates the survey area around station 207. It shows a road labeled 'CR 35' running diagonally. Point 207 is located near a cluster of trees. Point 1020 is marked on the road, and point 1028 is further down the road. Several buildings are depicted with labels: 'House' at the top left, 'MEMORIAL FELLOWSHIP HALL' with an arrow pointing to a building on the right, and 'House' at the bottom center. A north arrow is present in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



207_1 15JAN2014



207_2 15JAN2014



207_3B 15JAN2014



207_2F 15JAN2014



207_3S 15JAN2014

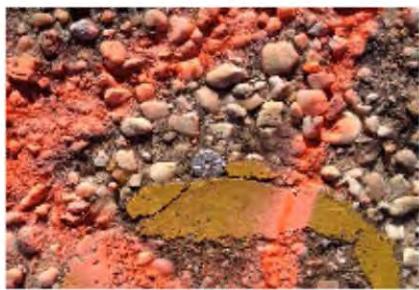


207_3W 15JAN2014

TEMPORARY SURVEY MARK – 208

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 208	Operator Name: S. Greenlee	
Latitude: 31°10'24.48732"	Julian Day: 015	Session No. 1
Longitude: 88°11'36.53440"	Start Time (UTC): 20:11	End Time (UTC): 20:16
Ellip. Height: 64.050 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



208_1 15JAN2014



208_2 15JAN2014



208_3K 15JAN2014



208_2F 15JAN2014



208_3L 15JAN2014



208_2M 15JAN2014

TEMPORARY SURVEY MARK – 209

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 209	Operator Name: S. Greenlee	
Latitude: 31°08'33.29772"	Julian Day: 015	Session No. 1
Longitude: 88°23'54.31983"	Start Time (UTC): 21:33	End Time (UTC): 21:36
Ellip. Height: 54.899 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



209_1_15JAN2014



209_2_15JAN2014



209_3N_15JAN2014



209_2E_15JAN2014



209_3S_15JAN2014



209_SW_15JAN2014

TEMPORARY SURVEY MARK – 210

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 210	Operator Name: S. Greenlee	
Latitude: 31°08'33.61447"	Julian Day: 015	Session No. 1
Longitude: 88°23'53.81606"	Start Time (UTC): 21:38	End Time (UTC): 21:41
Ellip. Height: 54.573 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 211

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 211	Operator Name: S. Greenlee	
Latitude: 31°18'05.16399"	Julian Day: 015	Session No. 1
Longitude: 88°21'50.44341"	Start Time (UTC): 22:19	End Time (UTC): 22:22
Ellip. Height: 42.761 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

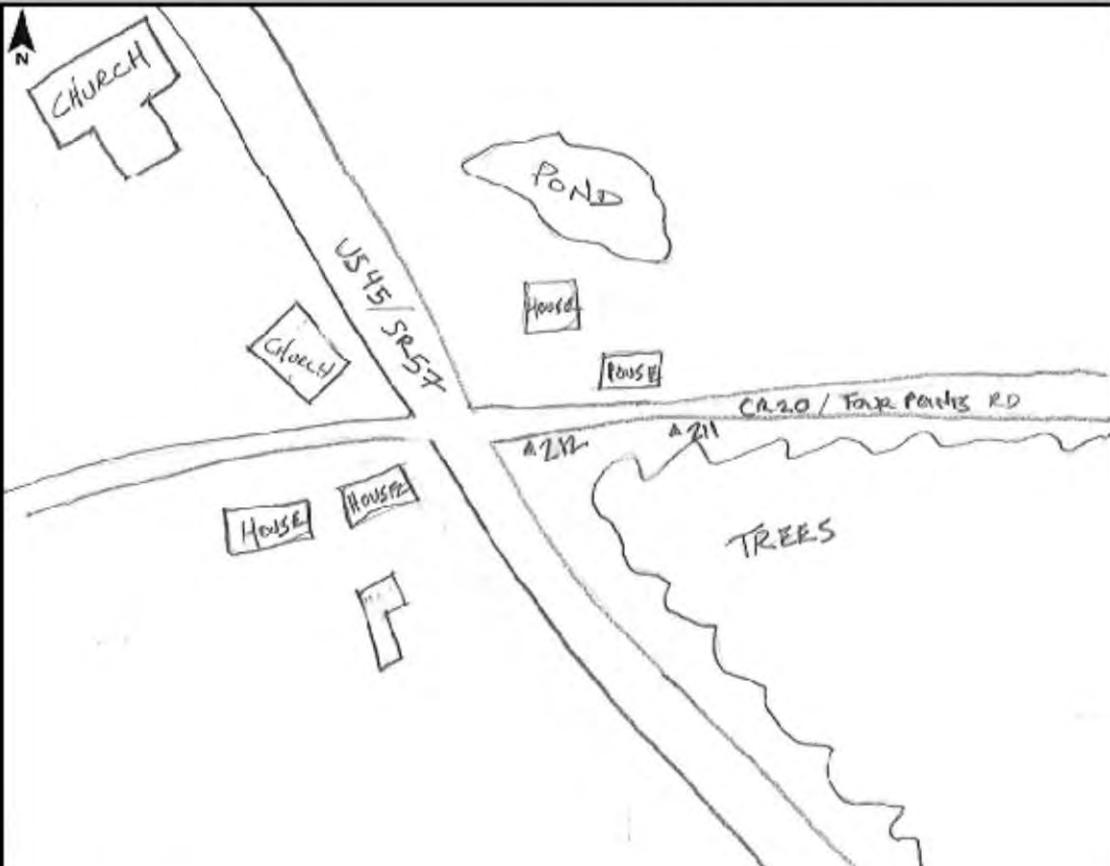
A hand-drawn map showing the location of survey station 211. The map features several roads: US 45/SR 57 running diagonally from the top left to the center, and CR 20 / Tava Pontic RD running horizontally across the center. There are two church buildings labeled "CHURCH". A pond is labeled "POND". Several houses are labeled "HOUSE". A large area of trees is labeled "TREES". A north arrow points upwards. The map is drawn with simple lines and labels.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 212

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 15-Jan-14
Station Name: 212	Operator Name: S. Greenlee	
Latitude: 31°18'05.06643"	Julian Day: 015	Session No. 1
Longitude: 88°21'51.12322"	Start Time (UTC): 22:24	End Time (UTC): 22:27
Ellip. Height: 42.507 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



212_1 15JAN2014



212_2 15JAN2014



212_3N 15JAN2014



212_3E 15JAN2014



212_3S 15JAN2014



212_3W 15JAN2014

TEMPORARY SURVEY MARK – 213

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 213	Operator Name: S. Greenlee	
Latitude: 31°32'14.95350"	Julian Day: 016	Session No. 1
Longitude: 88°04'40.37500"	Start Time (UTC): 14:50	End Time (UTC): 14:53
Ellip. Height: 29.814 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of the survey site. It shows a road labeled 'CR 28' running diagonally. A small plot of land is labeled 'MT. NEBO CEMETERY & A'. Another road labeled 'DIRT ROAD' leads into the cemetery. The terrain is depicted with wavy lines, and the word 'TREES' is written in the lower right area. A north arrow is located in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



213_1_18JAN2014



213_2_18JAN2014



213_3N_18JAN2014



213_2F_18JAN2014



213_3N_18JAN2014



213_3W_18JAN2014

TEMPORARY SURVEY MARK – 214

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 214	Operator Name: S. Greenlee	
Latitude: 31°32'14.73980"	Julian Day: 016	Session No. 1
Longitude: 88°04'41.10343"	Start Time (UTC): 14:55	End Time (UTC): 15:58
Ellip. Height: 29.340 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of the survey site. It shows a dirt road labeled 'DIRT ROAD' leading up a hill. The hill is labeled 'CR 28 RATTLESNAKE PARK RD'. At the top of the hill is a cemetery labeled 'MT. NEBB CEMETERY & A'. There are also 'TREES' indicated on the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



214_1 16JAN2014



214_2 16JAN2014



214_3B 16JAN2014



214_2F 16JAN2014



214_3S 16JAN2014



214_3W 16JAN2014

TEMPORARY SURVEY MARK – 215

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 215	Operator Name: S. Greenlee	
Latitude: 31°37'56.39302"	Julian Day: 016	Session No. 1
Longitude: 88°13'53.55538"	Start Time (UTC): 15:54	End Time (UTC): 15:57
Ellip. Height: 15.180 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



215_1_18JAN2014



215_2_18JAN2014



215_3B_18JAN2014



215_3E_18JAN2014



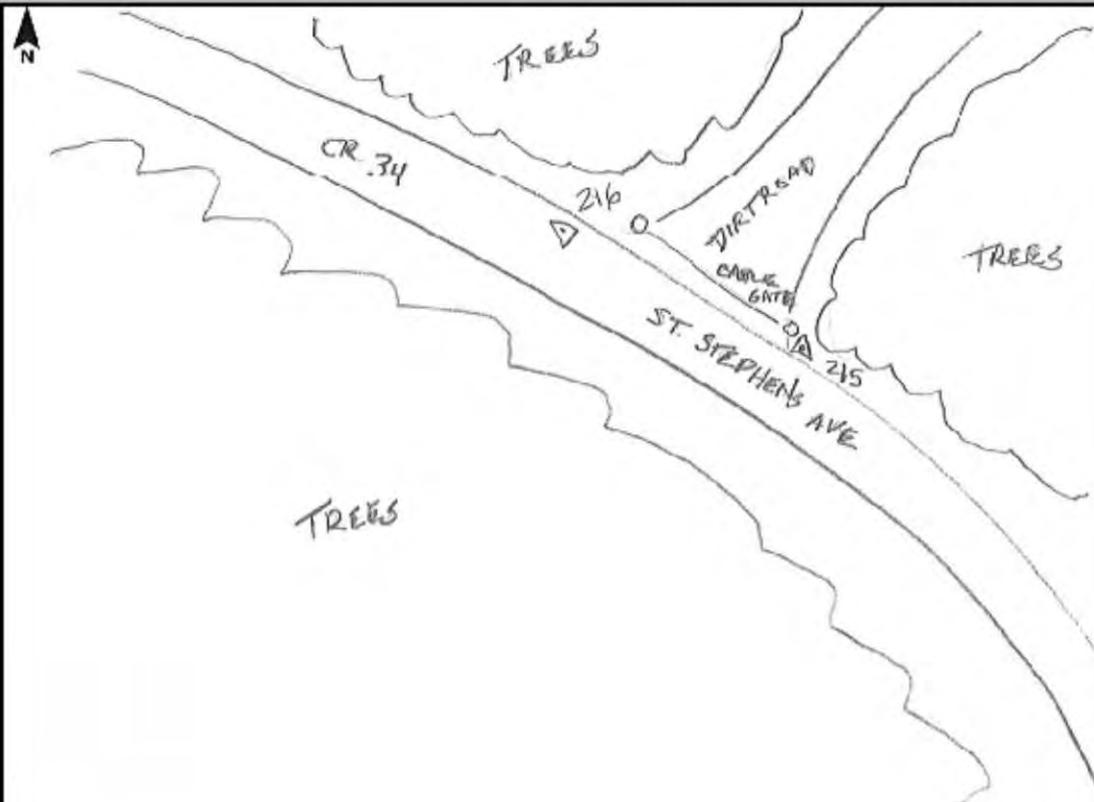
215_3G_18JAN2014



215_3N_18JAN2014

TEMPORARY SURVEY MARK – 216

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 216	Operator Name: S. Greenlee	
Latitude: 31°37'56.49338"	Julian Day: 016	Session No. 1
Longitude: 88°13'54.09517"	Start Time (UTC): 16:00	End Time (UTC): 16:03
Ellip. Height: 14.864 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



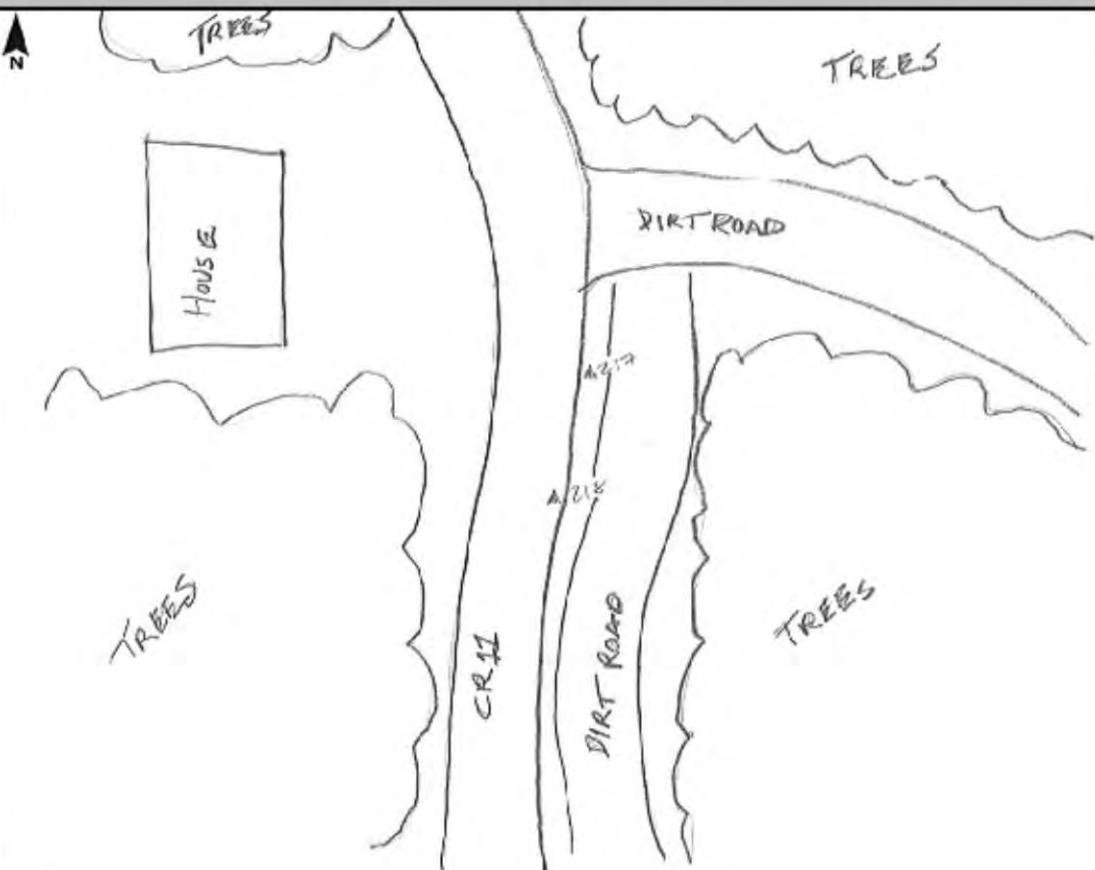
*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 217

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 217	Operator Name: S. Greenlee	
Latitude: 31°36'40.77892"	Julian Day: 016	Session No. 1
Longitude: 88°23'51.91629"	Start Time (UTC): 16:58	End Time (UTC): 17:01
Ellip. Height: 59.293 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount





A hand-drawn sketch map showing the location of Survey Mark 217. The map includes a north arrow pointing upwards. A rectangular building is labeled "House". A road running vertically through the center is labeled "CR 17". A road branching off to the right is labeled "DIRT ROAD". The terrain is depicted with wavy lines, and the word "TREES" is written in several places around the perimeter of the survey area.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 218

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 218	Operator Name: S. Greenlee	
Latitude: 31°36'40.26211"	Julian Day: 016	Session No. 1
Longitude: 88°23'52.01961"	Start Time (UTC): 17:03	End Time (UTC): 17:06
Ellip. Height: 59.136 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Sketch Map:

The sketch map illustrates the survey location. A rectangular box labeled "House" is positioned on the left side. To its right is a vertical line labeled "CR 12". From this line, a diagonal line extends upwards and to the right, labeled "DIRT ROAD". Another vertical line extends downwards from the "CR 12" line, also labeled "DIRT ROAD". The area around the roads and the house is labeled "TREES". A north arrow points upwards.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



218_1_16JAN2014



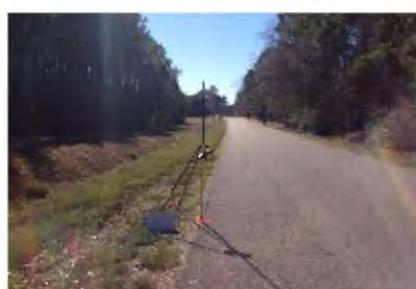
218_2_16JAN2014



218_3N_16JAN2014



218_3E_16JAN2014



218_3S_16JAN2014



218_3W_16JAN2014

TEMPORARY SURVEY MARK – 219

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 219	Operator Name: S. Greenlee	
Latitude: 31°29'10.87001"	Julian Day: 016	Session No. 1
Longitude: 88°21'33.54581"	Start Time (UTC): 17:55	End Time (UTC): 17:58
Ellip. Height: 44.798 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

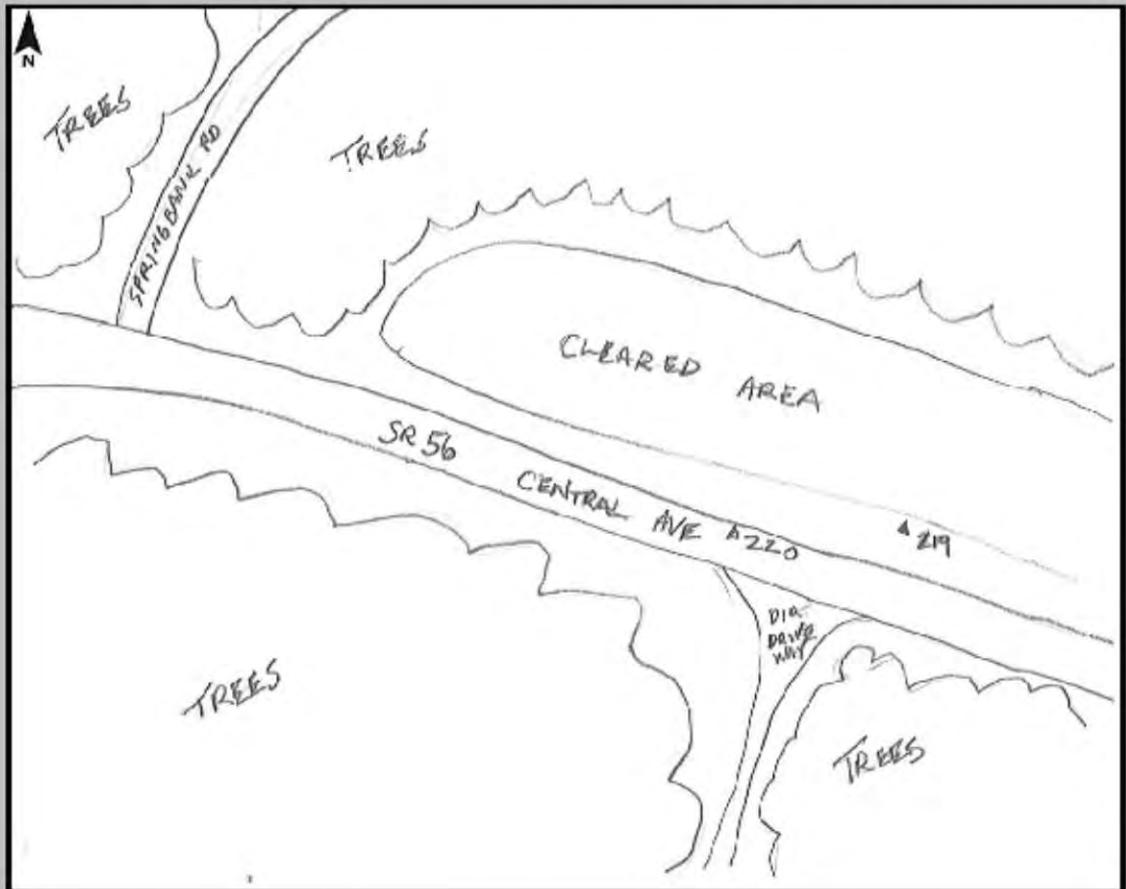


TEMPORARY SURVEY MARK – 220

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	16-Jan-14
Station Name:	220	Operator Name:	S. Greenlee		
Latitude:	31°29'10.64754"	Julian Day:	016	Session No.	1
Longitude:	88°21'34.32306"	Start Time (UTC):	18:01	End Time (UTC):	18:04
Ellip. Height:	45.447 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



220_1 16JAN2014



220_2 16JAN2014



220_3N 16JAN2014



220_2F 16JAN2014



220_3S 16JAN2014



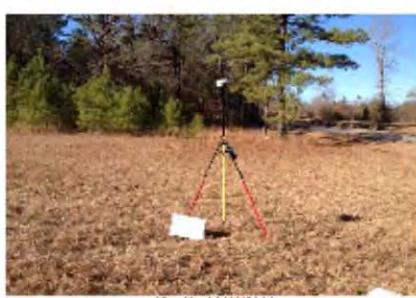
220_2W 16JAN2014

TEMPORARY SURVEY MARK – 221

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 221	Operator Name: S. Greenlee	
Latitude: 31°26'38.26107"	Julian Day: 016	Session No. 1
Longitude: 88°11'55.92642"	Start Time (UTC): 20:05	End Time (UTC): 20:08
Ellip. Height: 9.690 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

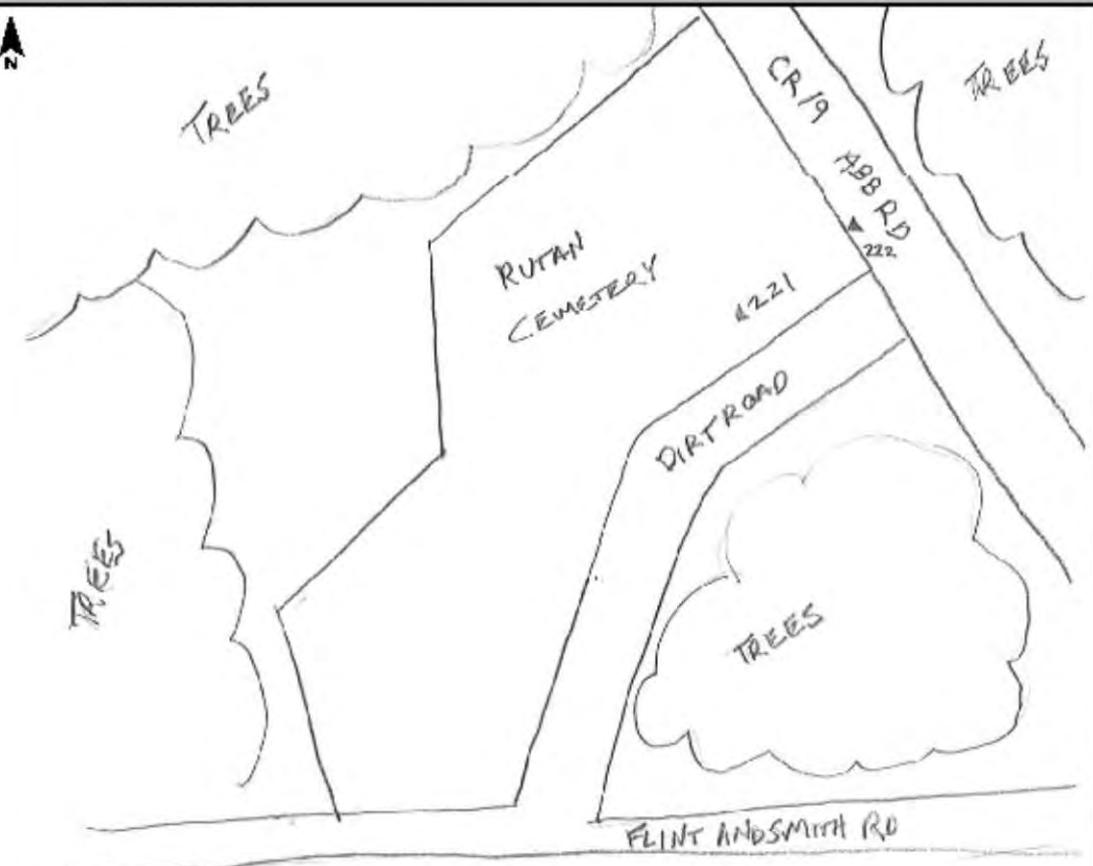
The sketch map illustrates the survey area. It features several roads: CR 19 running diagonally from the top left; a road labeled '221' running parallel to CR 19; a road labeled 'DIRT ROAD' running roughly eastward; and a road labeled 'FLINT AND SMITH RD' at the bottom. A 'CEMETERY' is shown near the center, surrounded by 'TREES'. A north arrow is located in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 222

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 222	Operator Name: S. Greenlee	
Latitude: 31°26'38.70397"	Julian Day: 016	Session No. 1
Longitude: 88°11'55.69098"	Start Time (UTC): 20:10	End Time (UTC): 20:13
Ellip. Height: 9.877 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch map of the survey area. It shows several roads: CR 19 running diagonally from top-left to middle-right; CR 21 running horizontally across the middle; AB 8 RD running vertically down the right side; and Flint and Smith Rd at the bottom. There are areas labeled 'TREES' and 'DIRT ROAD'. A small cemetery is labeled 'RUTAN CEMETERY'. A north arrow is present in the top-left corner of the sketch.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



222_1_16JAN2014



222_2_16JAN2014



222_3R_16JAN2014



222_3T_16JAN2014



222_3S_16JAN2014



222_3W_16JAN2014

TEMPORARY SURVEY MARK – 223

GPS Observation Log Sheet		MAGNOLIA rivers
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 223	Operator Name: S. Greenlee	
Latitude: 31°17'50.78757"	Julian Day: 016	Session No. 1
Longitude: 88°09'07.30657"	Start Time (UTC): 21:35	End Time (UTC): 21:38
Ellip. Height: -1.020 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows a dirt road running diagonally from the top left towards the bottom right. A north arrow points upwards. The road is labeled "DIRT ROAD". On the left side of the road, there are two "TREES" labeled. On the right side, there is a "GATE" and some "BRUSH" labeled. A point on the road is labeled "A 223". Another point on the road is labeled "A 224".

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 224

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 16-Jan-14
Station Name: 224	Operator Name: S. Greenlee	
Latitude: 31°17'50.39485"	Julian Day: 016	Session No. 1
Longitude: 88°09'07.15883"	Start Time (UTC): 21:40	End Time (UTC): 21:43
Ellip. Height: -0.997 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows two dirt roads. The upper road is labeled "DIRT ROAD" and has a point marked "223". The lower road is also labeled "DIRT ROAD" and has points marked "223" and "224". There are several labels: "N" at the top left, "TREES" on the left side, "CP" on the left side of the upper road, "GATE" on the right side of the lower road, and "BRUSH" on the right side. The sketch is done in black ink on white paper.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



224_1_18JAN2014



224_1_18JAN2014



224_2h_18JAN2014



224_2t_18JAN2014



224_2h_18JAN2014



224_2t_18JAN2014

TEMPORARY SURVEY MARK – 225

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 225	Operator Name: S. Greenlee	
Latitude: 32°05'11.61043"	Julian Day: 017	Session No. 1
Longitude: 88°26'05.19057"	Start Time (UTC): 16:17	End Time (UTC): 16:20
Ellip. Height: 109.065 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch shows a top-down view of a survey point. A horizontal line represents the ground level. Above it, a road is labeled "CR 20" with a height of "172.0". To the left, there's a cloud-like shape with "TREES" written in it. To the right, there are two vertical lines representing poles, with "POLE" written next to each. Between the poles, the ground is labeled "UNPAVED". Above the poles, the ground is labeled "TREES". A north arrow points upwards. There are also some handwritten numbers like "225" and "172.0" scattered around the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



225_1_17JAN2014



225_2_17JAN2014



225_3N_17JAN2014



225_3E_17JAN2014



225_3S_17JAN2014



225_3W_17JAN2014

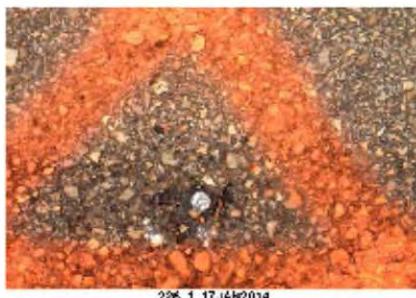
TEMPORARY SURVEY MARK – 226

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 226	Operator Name: S. Greenlee	
Latitude: 32°05'11.46742"	Julian Day: 017	Session No. 1
Longitude: 88°26'06.24397"	Start Time (UTC): 16:35	End Time (UTC): 16:38
Ellip. Height: 108.392 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Sketch of Survey Site:

The sketch illustrates a survey point at station 226. It shows a paved road labeled "CR 20" with an elevation of "215". A vertical line extends downwards from the road, passing through several poles and areas labeled "PAVED" and "PAVING". The terrain is depicted with wavy lines, and there are numerous "TREES" scattered throughout the area. A north arrow is located in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



226_1 17JAN2014



226_2 17JAN2014



226_3N_17JAN2014



226_3T_17JAN2014



226_3N_17JAN2014



226_3N_17JAN2014

TEMPORARY SURVEY MARK – 227

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 227	Operator Name: S. Greenlee	
Latitude: 32°14'35.23756"	Julian Day: 017	Session No. 1
Longitude: 88°24'29.71210"	Start Time (UTC): 17:35	End Time (UTC): 17:38
Ellip. Height: 60.061 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



227_1 17JAN2014



227_2 17JAN2014



227_3b 17JAN2014



227_3c 17JAN2014



227_3d 17JAN2014



227_3e 17JAN2014

TEMPORARY SURVEY MARK – 228

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 228	Operator Name: S. Greenlee	
Latitude: 32°14'34.99385"	Julian Day: 017	Session No. 1
Longitude: 88°24'29.01579"	Start Time (UTC): 17:41	End Time (UTC): 17:44
Ellip. Height: 60.097 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



228_1_17JAN2014



228_2_17JAN2014



228_3R_17JAN2014



228_3T_17JAN2014



228_3L_17JAN2014



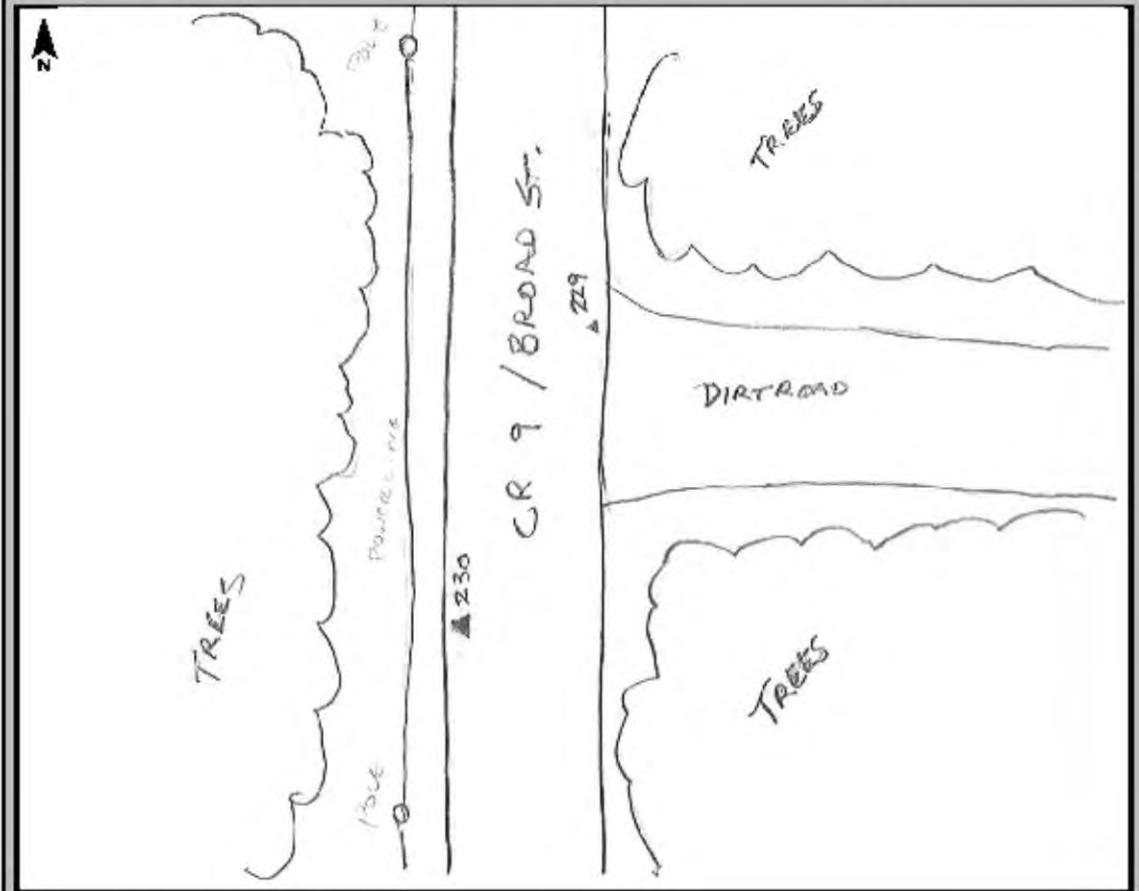
228_3W_17JAN2014

TEMPORARY SURVEY MARK – 229

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	11-04-14
Station Name:	229	Operator Name:	S. Greenlee		
Latitude:	32°10'52.34060"	Julian Day:	017	Session No.	1
Longitude:	88°16'17.33632"	Start Time (UTC):	18:22	End Time (UTC):	18:26
Ellip. Height:	13.371 m	Data File Name:	NA		
Type of Mark:	TSM	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



229_1_17JAN2014



228_2_17JAN2014



228_3N_17JAN2014



228_3E_17JAN2014



228_3E_17JAN2014



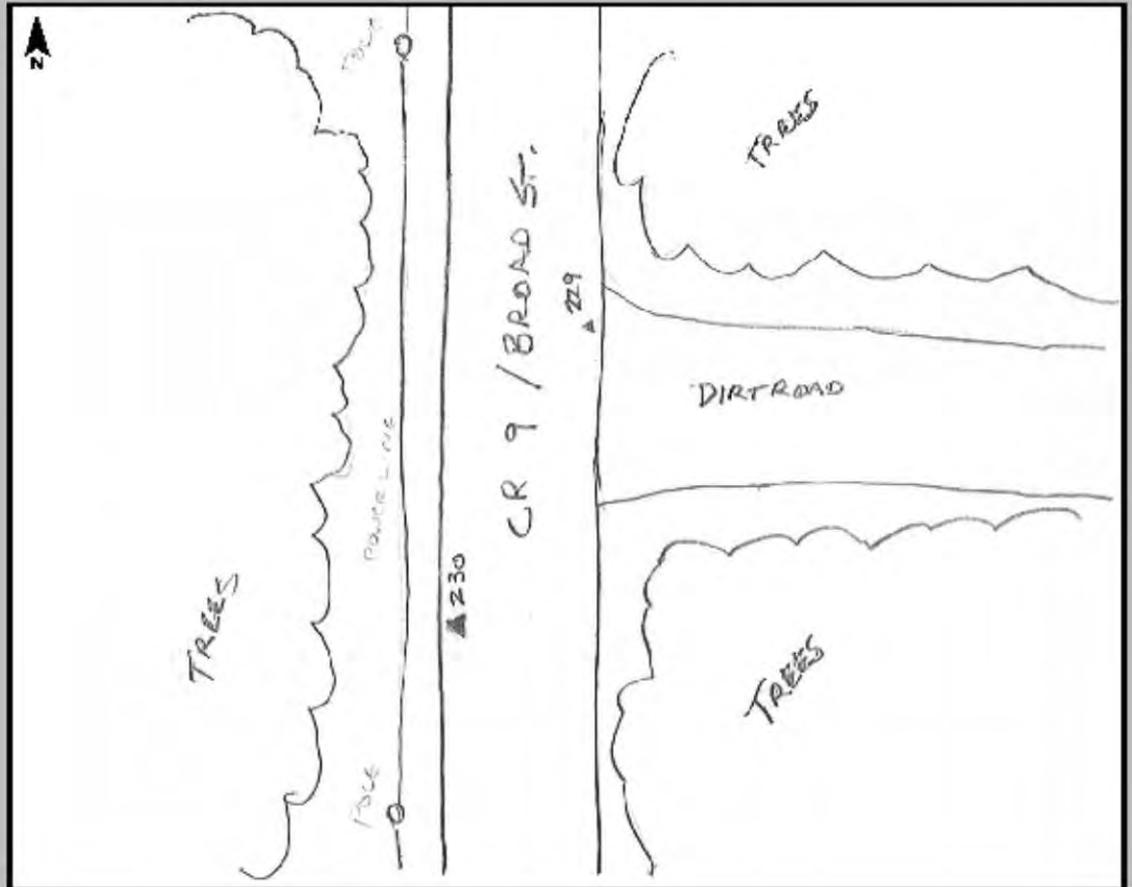
228_3W_17JAN2014

TEMPORARY SURVEY MARK – 230

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	24-Jan-14
Station Name:	230	Operator Name:	S. Greenlee		
Latitude:	32°10'51.94468"	Julian Day:	024	Session No.	1
Longitude:	88°16'17.54958"	Start Time (UTC):	16:43	End Time (UTC):	16:47
Ellip. Height:	13.594 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



230_1 17JAN2014



230_2 17JAN2014



230_3R 17JAN2014



230_2L 17JAN2014



230_3S 17JAN2014



230_3W 17JAN2014

TEMPORARY SURVEY MARK – 231

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 231	Operator Name: S. Greenlee	
Latitude: 32°16'04.06670"	Julian Day: 017	Session No. 0:00
Longitude: 88°10'03.81816"	Start Time (UTC): 19:56	End Time (UTC): 20:07
Ellip. Height: 31.022 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



251_1_17JAN2014



251_2_17JAN2014



251_3N_17JAN2014



251_3E_17JAN2014



251_3S_17JAN2014

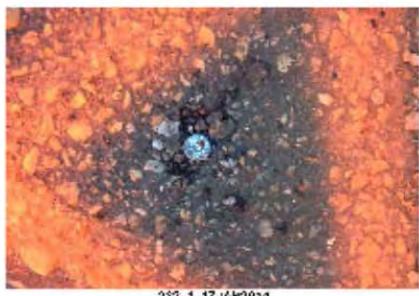


251_3W_17JAN2014

TEMPORARY SURVEY MARK – 232

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 232	Operator Name: S. Greenlee	
Latitude: 32°16'03.29476"	Julian Day: 017	Session No. 1
Longitude: 88°10'03.55549"	Start Time (UTC): 20:16	End Time (UTC): 20:19
Ellip. Height: 30.757 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



232_1 17JAN2014



232_2 17JAN2014



232_3h 17JAN2014



232_2F 17JAN2014



232_3G 17JAN2014



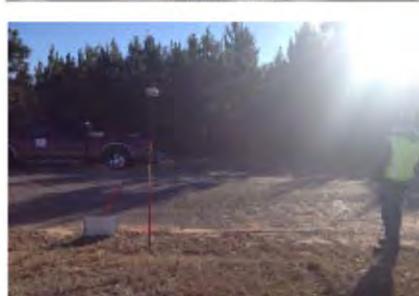
232_3N 17JAN2014

TEMPORARY SURVEY MARK – 233

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 233	Operator Name: S. Greenlee	
Latitude: 32°12'29.79076"	Julian Day: 017	Session No. 1
Longitude: 88°02'57.93757"	Start Time (UTC): 20:52	End Time (UTC): 20:55
Ellip. Height: 3.985 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows a building labeled "BUILDING" at the top left. A road labeled "5th St / MAIN ST" runs diagonally from the bottom left towards the center. Another road labeled "OLD Lock Rd." runs parallel to it on the right. There are several survey markers represented by 'X' marks along these roads. A point labeled "233" is marked on the 5th St road, and a point labeled "234" is marked on the Old Lock Rd. road. Two clusters of wavy lines labeled "TREES" are shown on the right side. A north arrow is located in the upper left corner of the sketch area.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 234

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 234	Operator Name: S. Greenlee	
Latitude: 32°12'29.66895"	Julian Day: 017	Session No. 1
Longitude: 88°02'57.38899"	Start Time (UTC): 20:59	End Time (UTC): 21:02
Ellip. Height: 3.742 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

A hand-drawn sketch of a survey site. It shows a road labeled "5th St / MAIN ST" running diagonally from the bottom left towards the top right. A point on this road is marked with a vertical line and labeled "234". To the left of the road, there is a building labeled "BUILDING". To the right, there are two areas labeled "TREES". A north arrow is located in the upper left corner of the sketch area.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

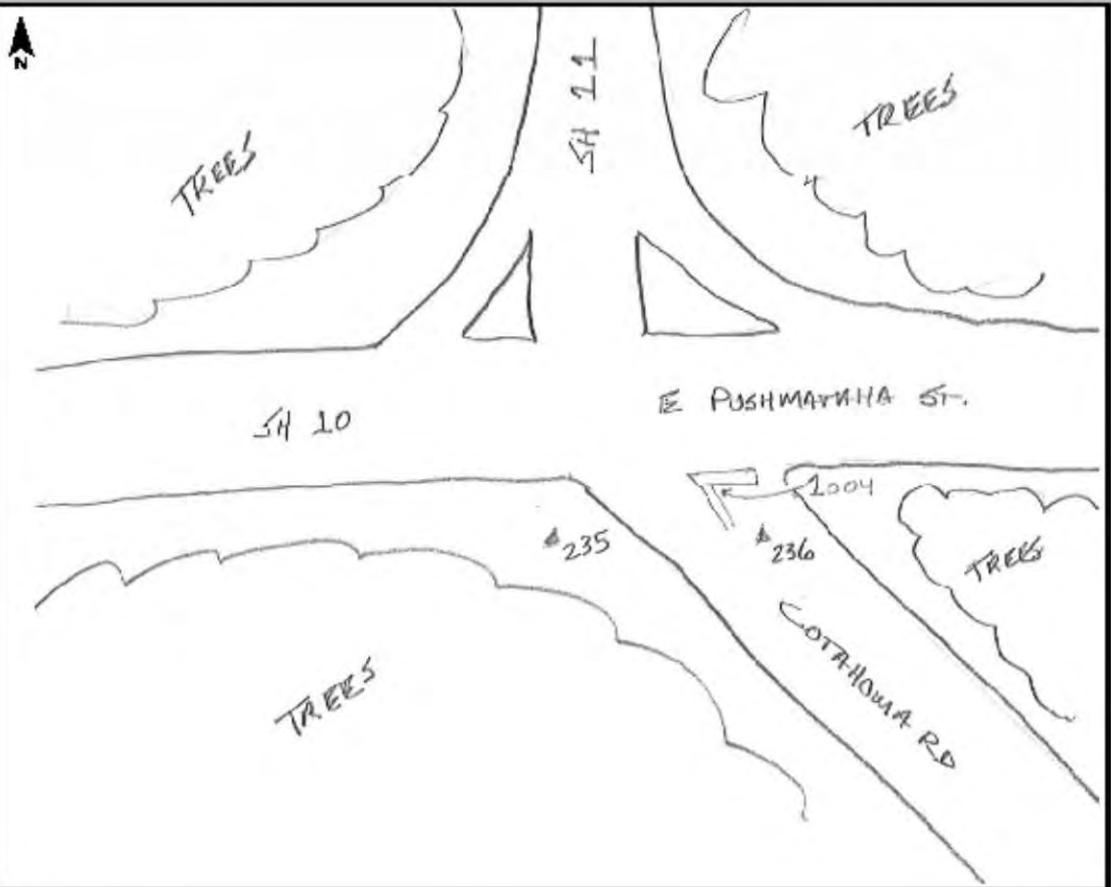


TEMPORARY SURVEY MARK – 235

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	17-Jan-14
Station Name:	235	Operator Name:	S. Greenlee		
Latitude:	32°07'51.39832"	Julian Day:	017	Session No.	1
Longitude:	88°04'50.74734"	Start Time (UTC):	21:37	End Time (UTC):	21:40
Ellip. Height:	-5.599 m	Data File Name:	NA		
Type of Mark:	TSM	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



235_1_17JAN2014



235_2_17JAN2014



235_3N_17JAN2014



235_3E_17JAN2014



235_3S_17JAN2014



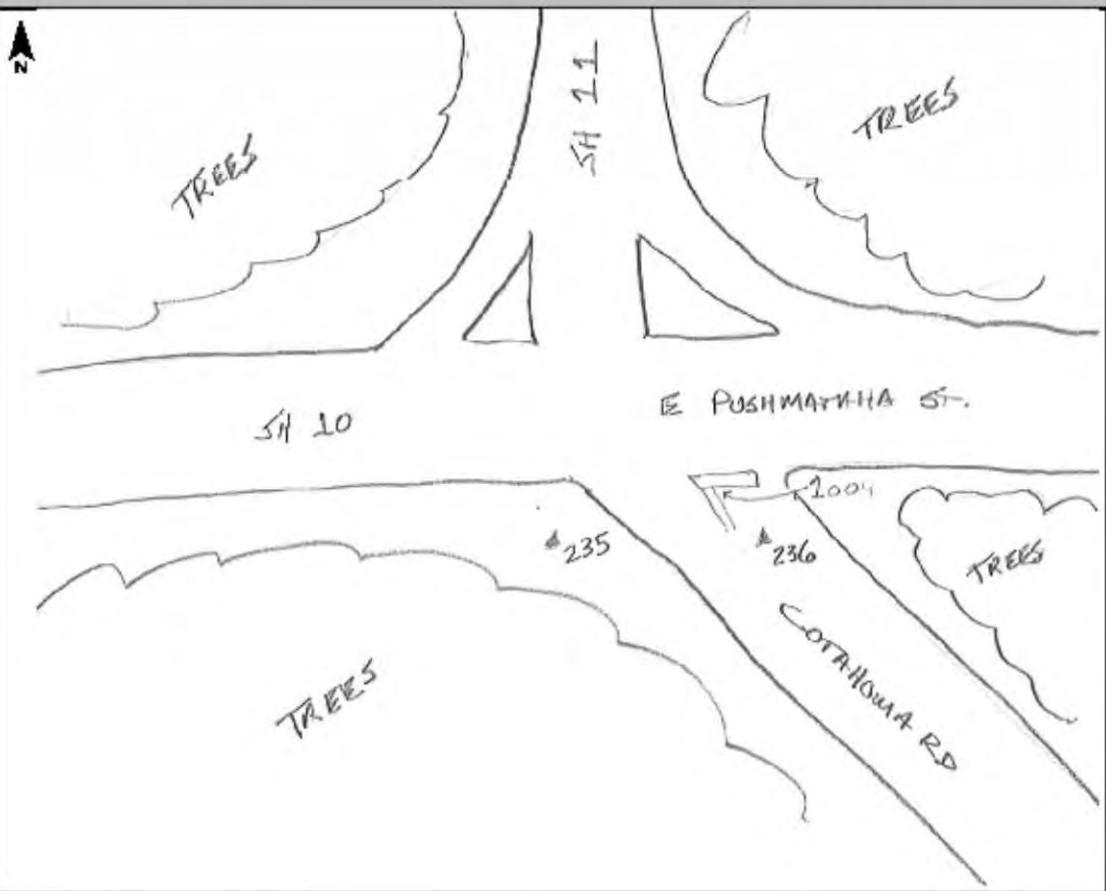
235_3W_17JAN2014

TEMPORARY SURVEY MARK – 236

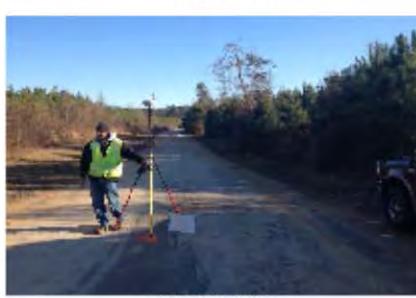
GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	17-Jan-14
Station Name:	236	Operator Name:	S. Greenlee		
Latitude:	32°07'51.07934"	Julian Day:	017	Session No.	1
Longitude:	88°04'50.08542"	Start Time (UTC):	21:42	End Time (UTC):	21:45
Ellip. Height:	-5.845 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



TEMPORARY SURVEY MARK – 237

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 237	Operator Name: S. Greenlee	
Latitude: 32°05'43.20194"	Julian Day: 017	Session No. 1
Longitude: 88°10'40.83540"	Start Time (UTC): 22:16	End Time (UTC): 22:19
Ellip. Height: 20.059 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch illustrates the survey location. At the top left, there is a north arrow. To the right of the arrow, a wavy line labeled 'TREES' runs across the top. Below this, a horizontal line labeled 'OVERHEAD UTILITY' extends from left to right. A vertical line labeled 'DRIVEWAY' is on the far left. In the center, a road is labeled 'E PUSHMATAHA ST'. To the right of the road, a line labeled 'SR10' runs diagonally upwards. Two survey points are marked with triangles: one labeled '237' and another labeled '238'. The terrain is depicted with various lines and shading to show elevation changes and vegetation.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



237_1_17JAN2014



237_2_17JAN2014



237_SN_17JAN2014



237_2F_17JAN2014



237_3G_17JAN2014



237_2W_17JAN2014

TEMPORARY SURVEY MARK – 238

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 17-Jan-14
Station Name: 238	Operator Name: S. Greenlee	
Latitude: 32°05'43.36753"	Julian Day: 017	Session No. 1
Longitude: 88°10'40.02819"	Start Time (UTC): 22:26	End Time (UTC): 22:29
Ellip. Height: 20.632 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Sketch of Survey Site:

The sketch illustrates the survey setup. A utility pole stands at the intersection of E Pushmataha St and SR10. A driveway leads from the pole towards the left. An overhead utility line runs along the pole. The area is bounded by trees and a parking lot. Two survey markers are shown: one labeled '237' near the bottom left and another labeled '238' near the top right.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



238_1_17JUN2014



238_2_17JUN2014



238_3N_17JUN2014



238_2F_17JUN2014



238_3G_17JUN2014

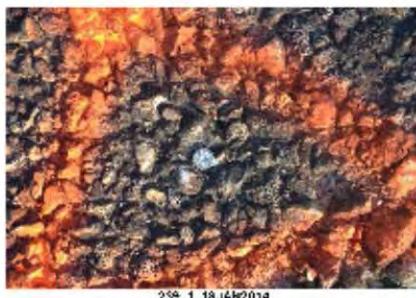


238_2H_17JUN2014

TEMPORARY SURVEY MARK – 239

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 239	Operator Name: S. Greenlee	
Latitude: 31°44'01.83632"	Julian Day: 018	Session No. 1
Longitude: 88°09'09.73873"	Start Time (UTC): 14:56	End Time (UTC): 14:59
Ellip. Height: -9.420	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

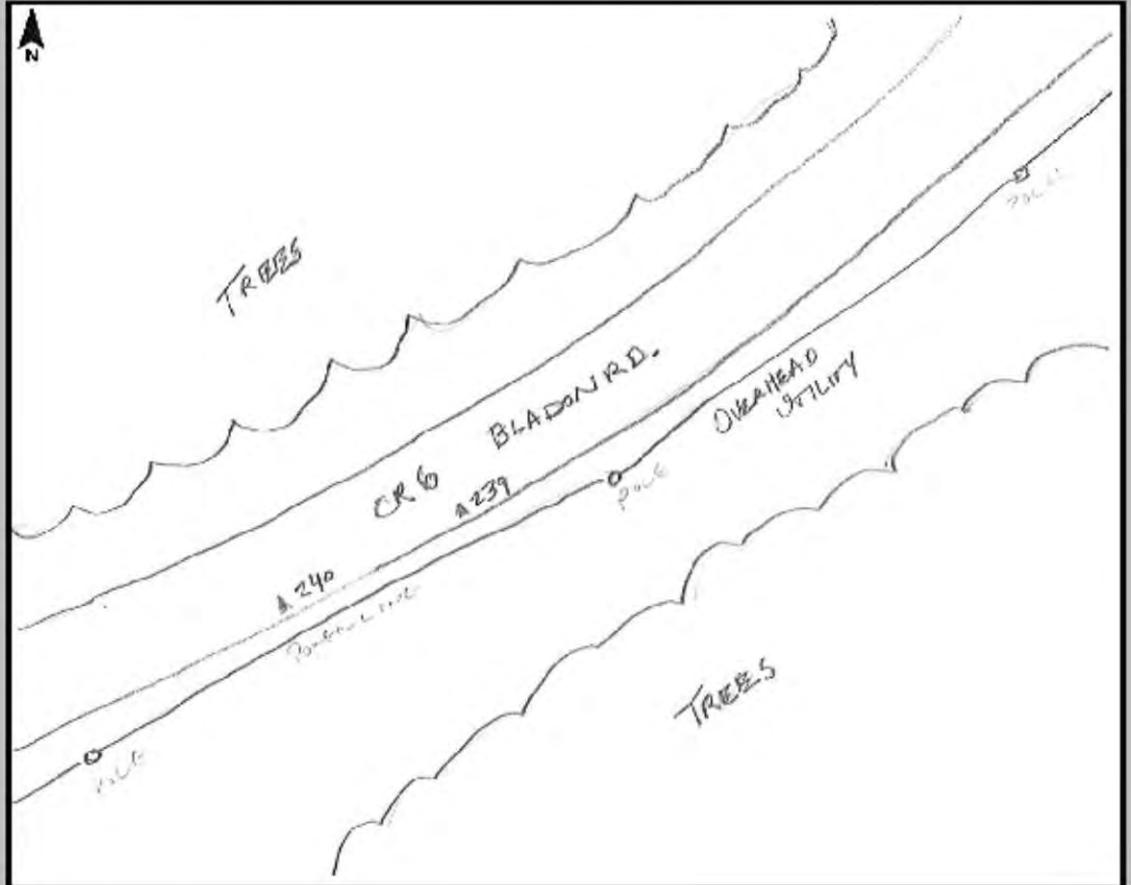


TEMPORARY SURVEY MARK – 240

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	18-Jan-14
Station Name:	240	Operator Name:	S. Greenlee		
Latitude:	31°44'01.50755"	Julian Day:	018	Session No.	1
Longitude:	88°09'10.33072"	Start Time (UTC):	15:01	End Time (UTC):	15:04
Ellip. Height:	-9.568 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



240_1_18JAN2014



240_2_18JAN2014



240_3h_18JAN2014



240_3E_18JAN2014



240_3S_18JAN2014



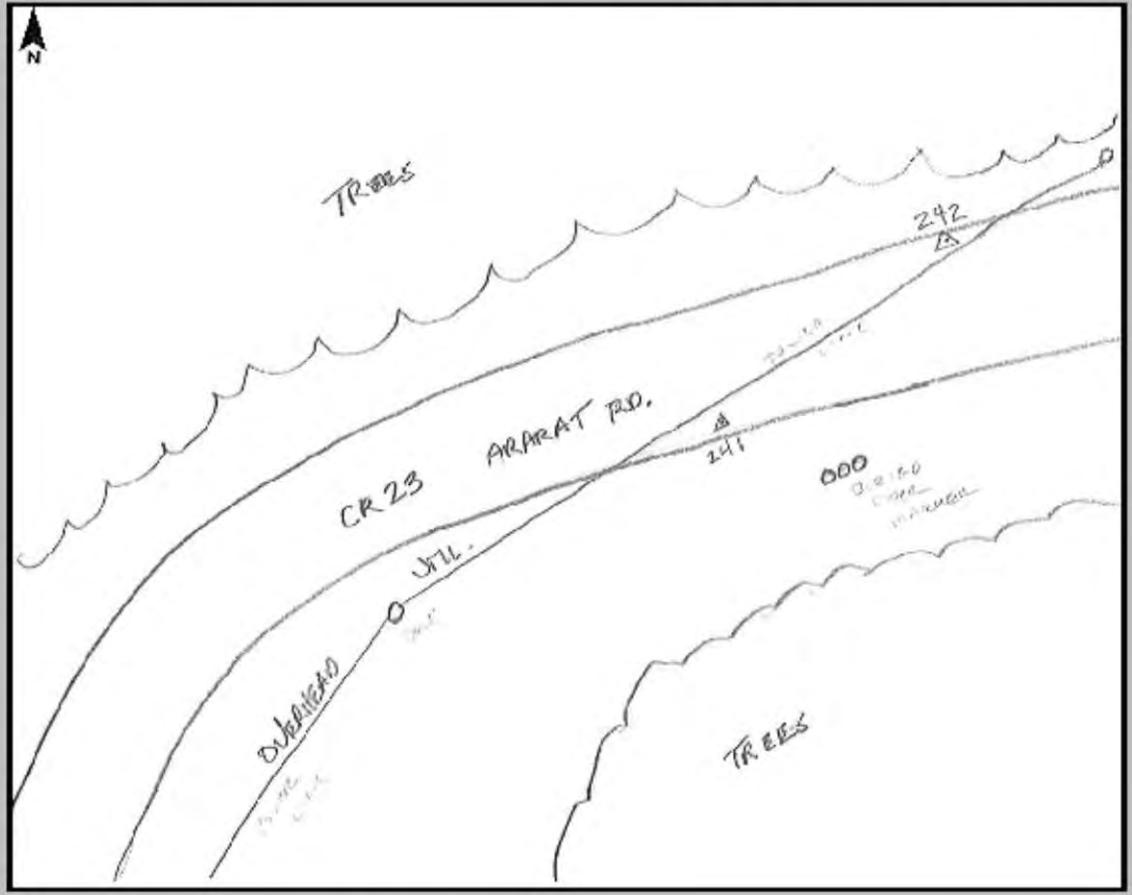
240_3W_18JAN2014

TEMPORARY SURVEY MARK – 241

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	18-Jan-14
Station Name:	241	Operator Name:	S. Greenlee		
Latitude:	31°52'54.88926"	Julian Day:	018	Session No.	1
Longitude:	88°10'26.68097"	Start Time (UTC):	16:06	End Time (UTC):	16:09
Ellip. Height:	-9.741	Data File Name:	NA		
Type of Mark:	TSM	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



241_1_18JUN2014



241_2_18JUN2014



241_3b_18JUN2014



241_2f_18JUN2014



241_3c_18JUN2014



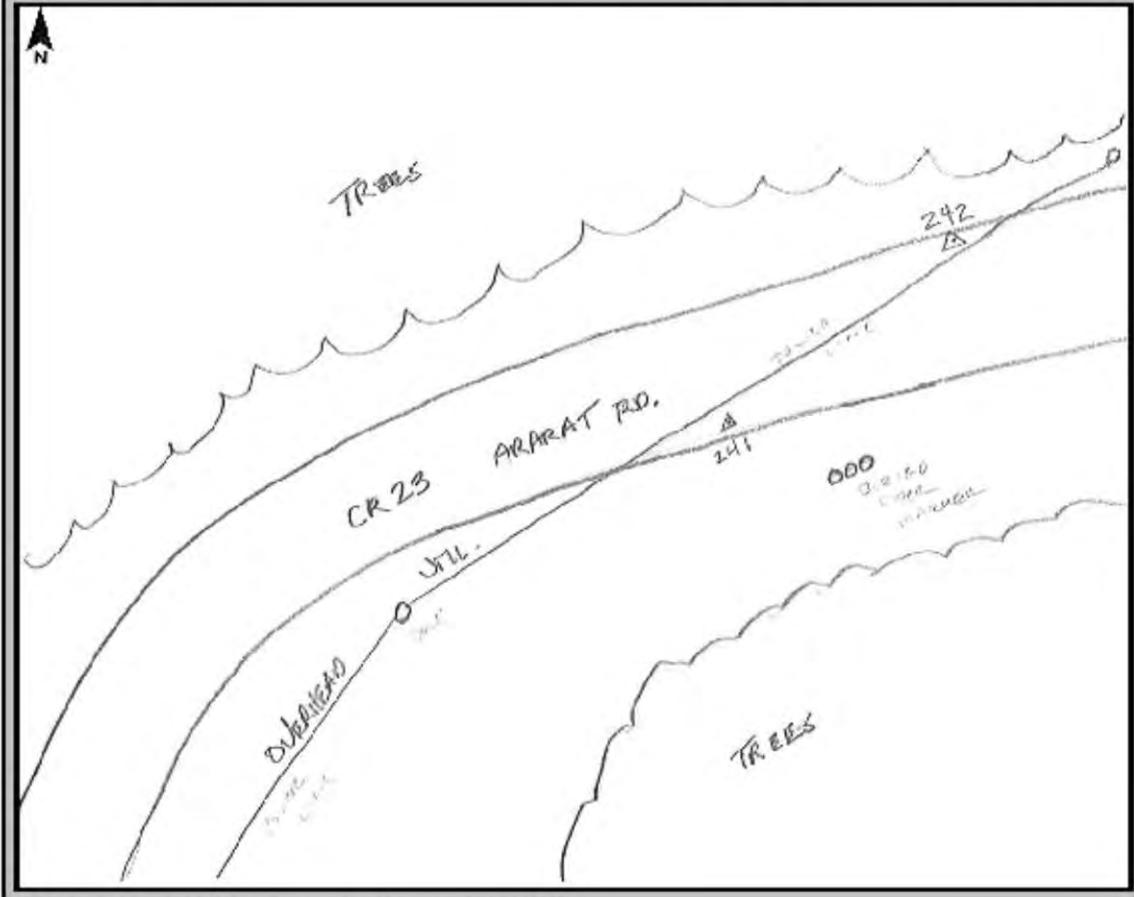
241_2g_18JUN2014

TEMPORARY SURVEY MARK – 242

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	18-Jan-14
Station Name:	242	Operator Name:	S. Greenlee		
Latitude:	31°52'55.19347"	Julian Day:	018	Session No.	1
Longitude:	88°10'26.33407"	Start Time (UTC):	16:11	End Time (UTC):	16:14
Ellip. Height:	-9.674 m	Data File Name:	NA		
Type of Mark:	TSM (Backsite)	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	





TEMPORARY SURVEY MARK – 243

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 243	Operator Name: S. Greenlee	
Latitude: 31°53'38.49592"	Julian Day: 018	Session No. 1
Longitude: 88°23'36.10252"	Start Time (UTC): 17:29	End Time (UTC): 17:32
Ellip. Height: 6.644 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



243_1_18JAN2014



243_1_18JAN2014



243_2a_18JAN2014



243_2b_18JAN2014



243_2c_18JAN2014



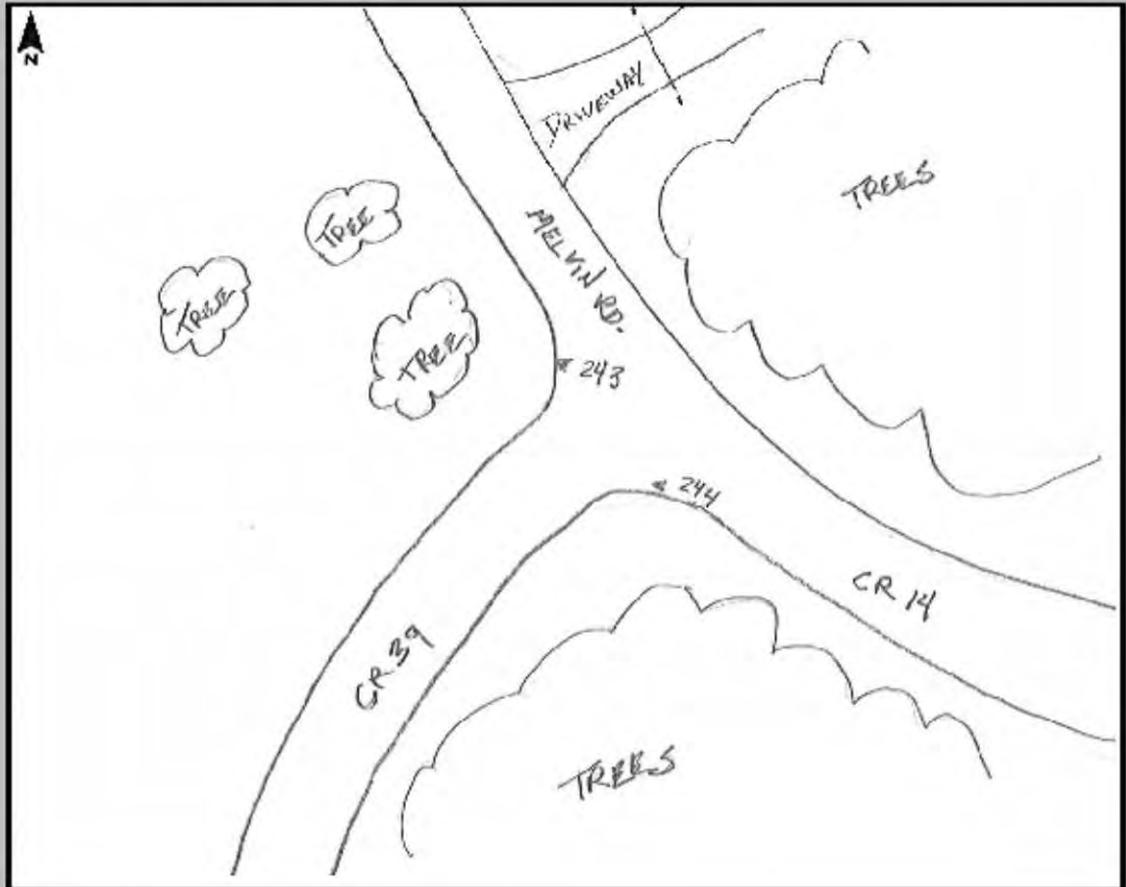
243_2d_18JAN2014

TEMPORARY SURVEY MARK – 244

GPS Observation Log Sheet



Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 244	Operator Name: S. Greenlee	
Latitude: 31°53'38.06277"	Julian Day: 018	Session No. 1
Longitude: 88°23'35.75514"	Start Time (UTC): 17:35	End Time (UTC): 17:38
Ellip. Height: 6.670 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



244_1_18JAN2014



244_2_18JAN2014



244_3N_18JAN2014



244_2I_18JAN2014



244_3S_18JAN2014



244_3W_18JAN2014

TEMPORARY SURVEY MARK – 245

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 245	Operator Name: S. Greenlee	
Latitude: 31°46'36.20398"	Julian Day: 018	Session No. 1
Longitude: 88°26'09.18129"	Start Time (UTC): 18:37	End Time (UTC): 18:40
Ellip. Height: 42.353 m	Data File Name: NA	
Type of Mark: TSM	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch shows a dirt road with 'Dirt Road' written on it. Two survey marks are indicated: '245' and '246'. To the left of the road is a 'BRIDGE'. Below the road is 'US 84'. There are areas labeled 'TREES' and 'CREEK'. A north arrow points upwards.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



245_1 18JAN2014



245_2 18JAN2014



245_3N 18JAN2014



245_3E 18JAN2014



245_3S 18JAN2014



245_3W 18JAN2014

TEMPORARY SURVEY MARK – 246

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 246	Operator Name: S. Greenlee	
Latitude: 31°46'36.02334"	Julian Day: 018	Session No. 1
Longitude: 88°26'08.59977"	Start Time (UTC): 18:43	End Time (UTC): 18:46
Ellip. Height: 42.449 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch map illustrates the survey location. It shows a dirt road running horizontally. At its intersection with a vertical line labeled 'US 84', there is a survey point marked '246'. To the left of this intersection, a vertical line labeled 'BRIDGE' extends downwards. Above the intersection, the word 'TREES' is written. To the right of the intersection, another survey point is marked '245' near a vertical line labeled 'Dirt Road'. Further to the right, another area labeled 'TREES' is shown. A north arrow is located in the upper left corner of the sketch.

Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

TEMPORARY SURVEY MARK – 246

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 246	Operator Name: S. Greenlee	
Latitude: 31°46'36.02334"	Julian Day: 018	Session No. 1
Longitude: 88°26'08.59977"	Start Time (UTC): 18:43	End Time (UTC): 18:46
Ellip. Height: 42.449 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount

The sketch map illustrates the survey location. It shows a dirt road running horizontally across the center. A vertical line extends downwards from the road, labeled 'BRIDGE'. To the left of the bridge, there is a cluster of trees. To the right of the bridge, the road continues. Two survey points are marked: '245' near the bridge and '246' further down the road. Another cluster of trees is shown to the right of point 246. A north arrow is located in the upper left corner of the sketch.

*Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.

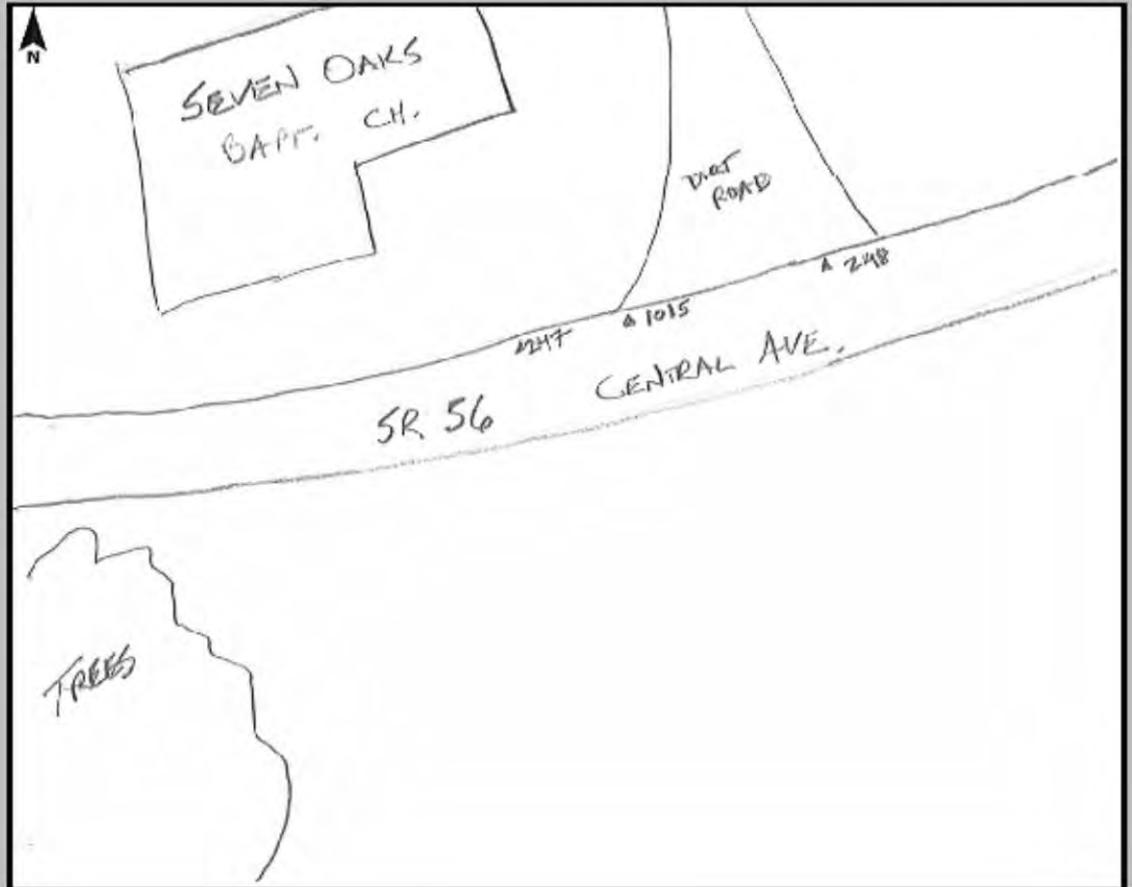


TEMPORARY SURVEY MARK – 247

GPS Observation Log Sheet



Project Name:	Choctaw/Washington Counties, AL	Project Number:	20944	Survey Date:	18-Jan-14
Station Name:	247	Operator Name:	S. Greenlee		
Latitude:	31°27'38.63479"	Julian Day:	018	Session No.	1
Longitude:	88°24'55.25514"	Start Time (UTC):	20:16	End Time (UTC):	20:19
Ellip. Height:	44.915 m	Data File Name:	NA		
Type of Mark:	TSM	Type of Receiver:	Trimble R6-3		
Stamping on Mark:	NA	Type of Antenna:	Trimble R6-3		
Weather Condition:	Clear	Antenna Height:	2.0 m	to bottom of antenna mount	



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



247_1_18JAN2014



247_2_18JAN2014



247_3N_18JAN2014



247_3E_18JAN2014



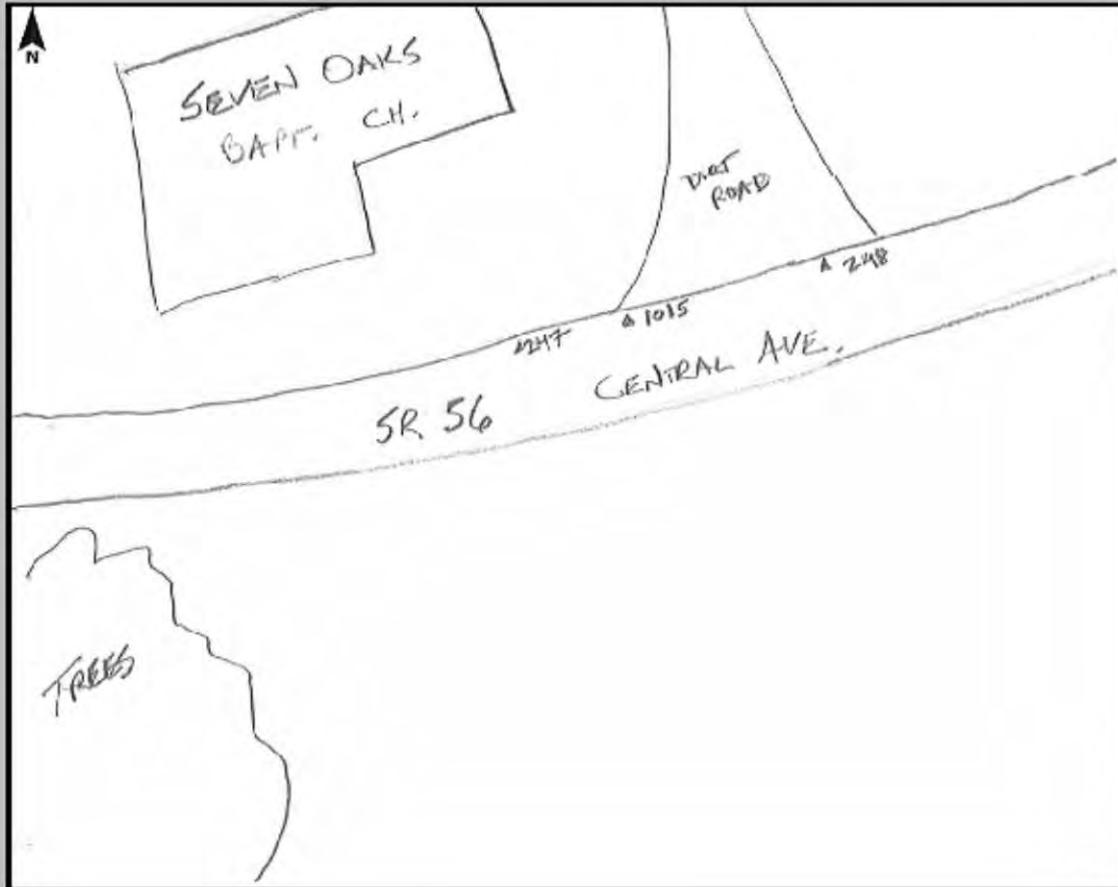
247_3S_18JAN2014



247_3W_18JAN2014

TEMPORARY SURVEY MARK – 248

GPS Observation Log Sheet		
Project Name: Choctaw/Washington Counties, AL	Project Number: 20944	Survey Date: 18-Jan-14
Station Name: 248	Operator Name: S. Greenlee	
Latitude: 31°27'38.73343"	Julian Day: 018	Session No. 1
Longitude: 88°24'54.33906"	Start Time (UTC): 20:11	End Time (UTC): 20:14
Ellip. Height: 44.576 m	Data File Name: NA	
Type of Mark: TSM (Backsite)	Type of Receiver: Trimble R6-3	
Stamping on Mark: NA	Type of Antenna: Trimble R6-3	
Weather Condition: Clear	Antenna Height: 2.0 m	to bottom of antenna mount



Note: The above coordinates were derived from an autonomous GPS solution and are not final coordinates.



248_1_18JAN2014



248_2_18JAN2014



248_3N_18JAN2014



248_SE_18JAN2014



248_SS_18JAN2014



248_SW_18JAN2014

SECTION 4: SITE CALIBRATIONS

This section includes the site quality control and Quality checks on points surveyed. Points surveyed included existing National Geodetic Survey control stations and a percentage of survey points surveyed within the site.

Coordinate System:	UTM Zone 16 U.S. State Plane 1983
Project Datum:	UTM Zone 16, NAD83 (2011)
Vertical Datum:	NAVD88
Coordinate Units:	meters
Distance Units:	meters
Height Units:	Meters
Date	06/04/2014
Geoid Model:	Geoid 12A

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Listed below are coordinates and differences between the northing, easting and elevation value for the RTK GPS observations taken on different days on the same point and times to verify accuracy of GPS observation.

Woolpert RTK Coordinate

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
223_L	3715561.83	266612.51	119.17	91.89
224_L	3715582.25	266716.77	118.27	90.98
225_L	3734806.58	302249.72	104.90	77.27
1003_L	3714174.44	294915.62	124.15	96.37
1008_L	3680924.89	230780.89	143.63	116.78
1010A_L	3647121.13	239216.73	94.60	67.46
1021_L	3557961.84	273350.83	124.34	97.68
2022_L	3607149.88	260785.24	129.00	101.80
3007_L	3660690.10	258322.26	144.89	117.75
3008_L	3663164.05	233640.40	80.82	53.79
3014_L	3605823.66	280206.77	125.74	98.43
3015_L	3582547.79	249676.27	147.94	121.05
3016_L	3546962.10	261805.58	164.53	138.22
3018_L	3540301.91	283474.12	133.05	106.63

Woolpert RTK Check Coordinate

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
223_L RTK	3715561.84	266612.54	119.17	91.88
224_L RTK	3715582.25	266716.77	118.30	91.00
225_L RTK CHK	3734806.56	302249.73	104.91	77.28
1003_L RTK CHK	3714174.45	294915.62	124.15	96.37
1008_L CHK	3680924.92	230780.90	143.64	116.79
1010A_L CHK	3647121.11	239216.74	94.58	67.44
1021_L CHECK	3557961.84	273350.84	124.28	97.62
2022_L CHK 1	3607149.85	260785.21	129.05	101.85
2022_L CHK 2	3607149.89	260785.22	129.02	101.82
3007_L CHK	3660690.10	258322.25	144.89	117.75
3008_L CHK	3663164.06	233640.41	80.82	53.79
3014_L CHK 1	3605823.62	280206.77	125.80	98.49
3014_L CHK 2	3605823.68	280206.77	125.74	98.43
3015_L CHK	3582547.78	249676.27	147.92	121.03
3016_L CHK 1	3546962.09	261805.59	164.50	138.18
3016_L CHK 2	3546962.09	261805.58	164.49	138.18
3018_L CHK	3540301.89	283474.12	133.05	106.63

Differences

<u>Point</u>	<u>Δ North</u>	<u>Δ Easting</u>	<u>Δ Elev</u>
223_L RTK	-0.01	-0.03	0.00
224_L RTK	0.00	0.00	-0.03
225_L RTK CHK	0.02	-0.01	-0.01
1003_L RTK CHK	-0.01	0.00	0.00
1008_L CHK	-0.03	-0.01	-0.01
1010A_L CHK	0.02	-0.01	0.02
1021_L CHECK	0.00	-0.01	0.06
2022_L CHK 1	0.03	0.03	-0.05
2022_L CHK 2	-0.01	0.02	-0.02
3007_L CHK	0.00	0.01	0.00
3008_L CHK	-0.01	-0.01	0.00
3014_L CHK 1	0.04	0.00	-0.06
3014_L CHK 2	-0.02	0.00	0.00
3015_L CHK	0.01	0.00	0.02
3016_L CHK 1	0.01	-0.01	0.03
3016_L CHK 2	0.01	0.00	0.04
3018_L CHK	0.02	0.00	0.00

Listed below are coordinates and differences between the northing, easting and elevation coordinate for the Published NGS coordinate and the RTK GPS observations.

NGS Published Coordinates

<u>Point</u>	<u>PID</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
19 V 62	CO1755	3646771.81	285015.62	143.66	116.12
25 V 42	CO1508	3621683.09	253653.42	107.34	80.12
49 14	DK0302	3692801.41	198464.63	36.39	9.78
H 100	CO0710	3630599.07	276419.07	118.40	91.08
LEX AZ MK	DK2130	3669753.84	217791.92		75.90

Woolpert RTK Coordinate

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>	<u>Description</u>
19 V 62	3646771.80	285015.60	143.62	116.087	19 V 62 RTK
25 V 42	3621683.10	253653.42	107.342	80.12	25 V 42 RTK
49 14	3692801.41	198464.65	36.382	9.78	49 14 RTK
H 100	3630599.07	276419.07	118.40	91.06	H 100 RTK
LEX AZ MK	3669753.84	217791.94	102.80	75.83	LEX AZ MK RTK 1
LEX AZ MK	3669753.84	217791.94	102.79	75.82	LEX AZ MK RTK 2

DIFFERENCES

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>	<u>Description</u>
19 V 62	0.01	0.02	0.04	0.03	19 V 62 RTK
25 V 42	-0.01	0.00	0.00	0.00	25 V 42 RTK
49 14	0.00	-0.02	0.01	0.00	49 14 RTK
H 100	0.00	0.00	0.00	0.02	H 100 RTK
LEX AZ MK	0.00	-0.02			LEX AZ MK RTK 1
LEX AZ MK	0.00	-0.02			LEX AZ MK RTK 2

Listed below are coordinates and differences between the northing, easting and elevation value for the RTK and or Static GPS coordinate and the coordinated calculated from OPUS-RS.

Woolpert RTK Coordinate &/or Static Value

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
110_L	3687868.14	296943.07	156.19	128.28
111_L	3708425.61	243244.35	148.76	122.01

OPUS Value

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
110_L OPUS DAY 323	3687868.13	296943.07	156.17	128.25
110_L OPUS DAY 324	3687868.12	296943.07	156.17	128.26
111_L OPUS DAY 324	3708425.60	243244.36	148.71	121.96
111_L OPUS DAY 327	3708425.61	243244.36	148.69	121.94

DIFFERENCES

<u>Point</u>	<u>Northing (Meters)</u>	<u>Easting (Meters)</u>	<u>Elev (Meters)</u>	<u>Ellip. Height (Meters)</u>
110_L OPUS DAY 323	0.00	0.01	0.03	0.03
110_L OPUS DAY 324	0.01	0.00	0.03	0.02
111_L OPUS DAY 324	0.01	-0.01	0.05	0.05
111_L OPUS DAY 327	0.00	-0.01	0.07	0.07

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Listed below are coordinates and differences between the northing, easting and elevation coordinate for the Published NGS coordinate and the RTK GPS observations.

	12-43 Pub. NGS Coordinates			Measured			Difference Δ		
	Easting	Northing	Ortho. Ht.	Easting	Northing	Ortho. Ht.	Easting Δ	Northing Δ	Height Δ
12-43_17JAN_1	381663.661	3550914.627	47.222	381663.662	3550914.622	47.245	-0.001	0.005	-0.023
12-43_17JAN_2	381663.661	3550914.627	47.222	381663.655	3550914.620	47.232	0.006	0.007	-0.01
12-43_23JAN_1	381663.661	3550914.627	47.222	381663.650	3550914.630	47.218	0.011	-0.003	0.004
12-43_23JAN_2	381663.661	3550914.627	47.222	381663.653	3550914.634	47.201	0.008	-0.007	0.021
12-43_24JAN_1	381663.661	3550914.627	47.222	381663.646	3550914.632	47.291	0.015	-0.005	-0.069
12-43_24JAN_2	381663.661	3550914.627	47.222	381663.644	3550914.638	47.260	0.017	-0.011	-0.038
12-43_03APR_1	381663.661	3550914.627	47.222	381663.658	3550914.617	47.249	0.003	0.01	-0.027
12-43_03APR_2	381663.661	3550914.627	47.222	381663.67	3550914.6	47.255	-0.013	0.013	-0.033

	65-38 Pub. NGS Coordinates			Measured			Difference Δ		
	Easting	Northing	Ortho. Ht.	Easting	Northing	Ortho. Ht.	Easting Δ	Northing Δ	Height Δ
65-38_14JAN_1	411268.583	3483821.971	12.711	411268.596	3483821.962	12.681	-0.013	0.009	0.030
65-38_15JAN_1	411268.583	3483821.971	12.711	411268.586	3483821.971	12.704	-0.003	0.000	0.007
65-38_15JAN_2	411268.583	3483821.971	12.711	411268.583	3483821.973	12.709	0.000	-0.002	0.002
65-38_16JAN_1	411268.583	3483821.971	12.711	411268.602	3483821.970	12.704	-0.019	0.001	0.007
65-38_16JAN_2	411268.583	3483821.971	12.711	411268.605	3483821.971	12.711	-0.022	0.000	0.000
65-38_18JAN_1	411268.583	3483821.971	12.711	411268.59	3483821.978	12.698	-0.007	-0.007	0.013
65-38_18JAN_2	411268.583	3483821.971	12.711	411268.595	3483821.970	12.698	-0.012	0.001	0.013
65-38_19JAN_1	411268.583	3483821.971	12.711	411268.582	3483821.973	12.716	0.001	-0.002	-0.005
65-38_19JAN_2	411268.583	3483821.971	12.711	411268.586	3483821.974	12.719	-0.003	-0.003	-0.008
65-38_20JAN_1	411268.583	3483821.971	12.711	411268.602	3483821.968	12.699	-0.019	0.003	0.012
65-38_20JAN_2	411268.583	3483821.971	12.711	411268.589	3483821.959	12.722	-0.006	0.012	-0.011
65-38_21JAN_1	411268.583	3483821.971	12.711	411268.595	3483821.963	12.712	-0.012	0.008	-0.001
65-38_21JAN_2	411268.583	3483821.971	12.711	411268.592	3483821.960	12.696	-0.009	0.011	0.015
65-38_22JAN_1	411268.583	3483821.971	12.711	411268.583	3483821.963	12.739	0.000	0.008	-0.028
65-38_22JAN_2	411268.583	3483821.971	12.711	411268.583	3483821.960	12.725	0.000	0.011	-0.014

SECTION 5 PART 1: EXISTING NGS DATA SHEETS

This section contains the published National Geodetic Survey (NGS) Data Sheets used in the final control network for Attala, Leake, Carroll, Choctaw, Jasper, Lexington, Montgomery, Scott, Smith, and Webster County MS.

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NGS DATA SHEET: 19 V 62 (CO1755)

CO1755 ****
CO1755 CBN - This is a Cooperative Base Network Control Station.
CO1755 DESIGNATION - 19 V 62
CO1755 PID - CO1755
CO1755 STATE/COUNTY- MS/WINSTON
CO1755 COUNTRY - US
CO1755 USGS QUAD - FOUR CORNERS (1989)
CO1755
CO1755 *CURRENT SURVEY CONTROL
CO1755
CO1755* NAD 83(2011) POSITION- 32 56 17.17921(N) 089 17 58.24016(W) ADJUSTED
CO1755* NAD 83(2011) ELLIP HT- 116.121 (meters) (06/27/12) ADJUSTED
CO1755* NAD 83(2011) EPOCH - 2010.00
CO1755* NAVD 88 ORTHO HEIGHT - 143.655 (meters) 471.31 (feet) ADJUSTED
CO1755
CO1755 NAD 83(2011) X - 65,508.163 (meters) COMP
CO1755 NAD 83(2011) Y - -5,357,907.280 (meters) COMP
CO1755 NAD 83(2011) Z - 3,448,262.825 (meters) COMP
CO1755 LAPLACE CORR - -2.85 (seconds) DEFLEC12A
CO1755 GEOID HEIGHT - -27.54 (meters) GEOID12A
CO1755 DYNAMIC HEIGHT - 143.493 (meters) 470.78 (feet) COMP
CO1755 MODELED GRAVITY - 979,505.8 (mgal) NAVD 88
CO1755
CO1755 VERT ORDER - SECOND CLASS II
CO1755
CO1755 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
CO1755 Type Horiz Ellip Dist(km)
CO1755 -----
CO1755 NETWORK 0.98 1.39
CO1755 -----
CO1755 MEDIAN LOCAL ACCURACY AND DIST (019 points) 1.23 1.74 46.59
CO1755 -----
CO1755 NOTE: Click [here](#) for information on individual local accuracy
CO1755 values and other accuracy information.
CO1755
CO1755
CO1755.The horizontal coordinates were established by GPS observations
CO1755.and adjusted by the National Geodetic Survey in June 2012.
CO1755
CO1755.NAD 83(2011) refers to NAD 83 coordinates where the reference
CO1755.frame has been affixed to the stable North American tectonic plate. See
CO1755.NA2011 for more information.
CO1755
CO1755.The horizontal coordinates are valid at the epoch date displayed above
CO1755.which is a decimal equivalence of Year/Month/Day.
CO1755
CO1755.The orthometric height was determined by differential leveling and
CO1755.adjusted by the NATIONAL GEODETIC SURVEY
CO1755.in May 1996.
CO1755
CO1755.The X, Y, and Z were computed from the position and the ellipsoidal ht.
CO1755
CO1755.The Laplace correction was computed from DEFLEC12A derived deflections.
CO1755
CO1755.The ellipsoidal height was determined by GPS observations
CO1755.and is referenced to NAD 83.
CO1755

CO1755.The dynamic height is computed by dividing the NAVD 88
 CO1755.geopotential number by the normal gravity value computed on the
 CO1755.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CO1755.degrees latitude ($g = 980.6199$ gals.).
 CO1755
 CO1755.The modeled gravity was interpolated from observed gravity values.
 CO1755
 CO1755. The following values were computed from the NAD 83(2011) position.
 CO1755
 CO1755; North East Units Scale Factor Converg.
 CO1755;SPC MS E - 381,271.779 256,405.772 MT 0.99997342 -0 15 12.5
 CO1755;SPC MS E - 1,250,889.16 841,224.60 SFT 0.99997342 -0 15 12.5
 CO1755;UTM 16 - 3,646,771.811 285,015.616 MT 1.00016991 -1 15 02.9
 CO1755
 CO1755! - Elev Factor x Scale Factor = Combined Factor
 CO1755!SPC MS E - 0.99998177 x 0.99997342 = 0.99995519
 CO1755!UTM 16 - 0.99998177 x 1.00016991 = 1.00015168
 CO1755
 CO1755 SUPERSEDED SURVEY CONTROL
 CO1755
 CO1755 NAD 83(2007)- 32 56 17.17951(N) 089 17 58.24072(W) AD(2002.00) A
 CO1755 ELLIP H (09/06/11) 116.126 (m) GP(2002.00) 4 1
 CO1755 NAD 83(2007)- 32 56 17.17916(N) 089 17 58.24048(W) AD(2002.00) 0
 CO1755 ELLIP H (02/10/07) 116.080 (m) GP(2002.00)
 CO1755 ELLIP H (04/15/02) 116.106 (m) GP() 4 2
 CO1755 NAD 83(1993)- 32 56 17.17889(N) 089 17 58.24045(W) AD() B
 CO1755 ELLIP H (02/15/02) 116.106 (m) GP() 4 1
 CO1755 NAVD 88 (02/15/02) 143.66 (m) 471.3 (f) LEVELING 3
 CO1755
 CO1755.Superseded values are not recommended for survey control.
 CO1755
 CO1755.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CO1755.[See file dsdata.txt](#) to determine how the superseded data were derived.
 CO1755
 CO1755_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBB8501546771(NAD 83)
 CO1755
 CO1755_MARKER: DR = REFERENCE MARK DISK
 CO1755_SETTING: 34 = SET IN THE FOOTINGS OF SMALL/MEDIUM STRUCTURES
 CO1755_SP_SET: CONC CULVERT
 CO1755_STAMPING: BM 19 V 62 1991
 CO1755_MARK LOGO: MSHD
 CO1755_MAGNETIC: N = NO MAGNETIC MATERIAL
 CO1755_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CO1755+STABILITY: SURFACE MOTION
 CO1755_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 CO1755+SATELLITE: SATELLITE OBSERVATIONS - December 08, 2008
 CO1755
 CO1755 HISTORY - Date Condition Report By
 CO1755 HISTORY - 1991 MONUMENTED MSHD
 CO1755 HISTORY - 20000701 GOOD NGS
 CO1755 HISTORY - 20081208 GOOD MSDOT
 CO1755
 CO1755 STATION DESCRIPTION
 CO1755
 CO1755'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1991
 CO1755'MARK IS LOCATED ABOUT 15.7 MI (25.3 KM) NORTHWEST OF PHILADELPHIA, IN
 CO1755'A CULVERT UNDER STATE HIGHWAY 19, 16.15 MI (25.99 KM) NORTHWEST ALONG
 CO1755'STATE HIGHWAY 19 FROM THE STATE HIGHWAY 15 BRIDGE, 0.65 MI (1.05 KM)
 CO1755'NORTHWEST ALONG STATE HIGHWAY 19 FROM THE NESHoba-WINSTON COUNTY LINE
 CO1755'AND IS IN SECTION 32, T 13N, R 10E.
 CO1755'TO REACH FROM THE STATE HIGHWAY 19 BRIDGE OVER STATE HIGHWAY 25, AT
 CO1755'FOUR CORNERS, GO SOUTHEAST ON STATE HIGHWAY 19 FOR 0.8 MI (1.3 KM) TO

CO1755'THE MARK ON THE LEFT.

CO1755'MARK IS A MSHD REFERENCE MARK DISK SET IN A DRILL HOLE IN THE
CO1755'NORTHWEST END OF THE NORTHEAST HEADWALL OF A 12 X 8 FOOT BOX CULVERT,
CO1755'ABOUT 3 FT (0.9 M) BELOW THE LEVEL OF THE HIGHWAY, 28 FT (8.5 M)
CO1755'NORTHEAST OF THE CENTER OF HIGHWAY 19 AND 0.6 FT (0.2 M) SOUTHEAST OF
CO1755'THE NORTHWEST END OF THE CULVERT.

CO1755

CO1755 STATION RECOVERY (2000)

CO1755

CO1755'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000

CO1755'RECOVERED AS DESCRIBED. ADDITIONAL TIES. THE STATION IS 0.09 MI
CO1755'(0.14 KM) SOUTHEAST ALONG RTE 19 FROM JAMES FORTUNE ROAD, AND SW
CO1755'ACROSS AN OPEN LOT FROM A BLUE METAL SHOP BUILDING.

CO1755

CO1755 STATION RECOVERY (2008)

CO1755

CO1755'RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)

CO1755'RECOVERED AS DESCRIBED.

NGS DATA SHEET: 25 V 42 (CO1508)

CO1508 *****
CO1508 DESIGNATION - 25 V 42
CO1508 PID - CO1508
CO1508 STATE/COUNTY- MS/LEAKE
CO1508 COUNTRY - US
CO1508 USGS QUAD - OFAHOMA (1989)
CO1508
CO1508 *CURRENT SURVEY CONTROL
CO1508
CO1508* NAD 83(2011) POSITION- 32 42 19.46735(N) 089 37 40.83697(W) ADJUSTED
CO1508* NAD 83(2011) ELLIP HT- 80.115 (meters) (06/27/12) ADJUSTED
CO1508* NAD 83(2011) EPOCH - 2010.00
CO1508* NAVD 88 ORTHO HEIGHT - 107.340 (meters) 352.16 (feet) ADJUSTED
CO1508
CO1508 NAD 83(2011) X - 34,878.896 (meters) COMP
CO1508 NAD 83(2011) Y - -5,372,152.272 (meters) COMP
CO1508 NAD 83(2011) Z - 3,426,556.234 (meters) COMP
CO1508 LAPLACE CORR - 0.04 (seconds) DEFLEC12A
CO1508 GEOID HEIGHT - -27.23 (meters) GEOID12A
CO1508 DYNAMIC HEIGHT - 107.218 (meters) 351.76 (feet) COMP
CO1508 MODELED GRAVITY - 979,497.9 (mgal) NAVD 88
CO1508
CO1508 VERT ORDER - SECOND CLASS II
CO1508
CO1508 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
CO1508 Type Horiz Ellip Dist(km)
CO1508 -----
CO1508 NETWORK 0.88 1.00
CO1508 -----
CO1508 MEDIAN LOCAL ACCURACY AND DIST (004 points) 0.61 0.59 5.49
CO1508 -----
CO1508 NOTE: Click [here](#) for information on individual local accuracy
CO1508 values and other accuracy information.
CO1508
CO1508
CO1508.The horizontal coordinates were established by GPS observations
CO1508.and adjusted by the National Geodetic Survey in June 2012.
CO1508
CO1508.NAD 83(2011) refers to NAD 83 coordinates where the reference
CO1508.frame has been affixed to the stable North American tectonic plate. See
CO1508.[NA2011](#) for more information.
CO1508
CO1508.The horizontal coordinates are valid at the epoch date displayed above
CO1508.which is a decimal equivalence of Year/Month/Day.
CO1508
CO1508.The orthometric height was determined by differential leveling and
CO1508.adjusted by the NATIONAL GEODETIC SURVEY
CO1508.in June 1991.
CO1508
CO1508.The X, Y, and Z were computed from the position and the ellipsoidal ht.
CO1508
CO1508.The Laplace correction was computed from DEFLEC12A derived deflections.
CO1508
CO1508.The ellipsoidal height was determined by GPS observations
CO1508.and is referenced to NAD 83.
CO1508
CO1508.The dynamic height is computed by dividing the NAVD 88

CO1508.geopotential number by the normal gravity value computed on the
 CO1508.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CO1508.degrees latitude ($g = 980.6199$ gals.).
 CO1508
 CO1508.The modeled gravity was interpolated from observed gravity values.
 CO1508
 CO1508. The following values were computed from the NAD 83(2011) position.
 CO1508
 CO1508; North East Units Scale Factor Converg.
 CO1508;SPC MS E - 355,649.354 225,491.792 MT 1.00001843 -0 25 45.8
 CO1508;SPC MS E - 1,166,826.26 739,800.99 SFT 1.00001843 -0 25 45.8
 CO1508;UTM 16 - 3,621,683.092 253,653.415 MT 1.00034838 -1 25 14.5
 CO1508
 CO1508! - Elev Factor x Scale Factor = Combined Factor
 CO1508!SPC MS E - 0.99998742 x 1.00001843 = 1.00000585
 CO1508!UTM 16 - 0.99998742 x 1.00034838 = 1.00033580
 CO1508
 CO1508 SUPERSEDED SURVEY CONTROL
 CO1508
 CO1508 NAD 83(2007)- 32 42 19.46756(N) 089 37 40.83750(W) AD(2002.00) A
 CO1508 ELLIP H (09/06/11) 80.117 (m) GP(2002.00) 4 1
 CO1508
 CO1508.Superseeded values are not recommended for survey control.
 CO1508
 CO1508.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CO1508.See file dsdata.txt to determine how the superseded data were derived.
 CO1508
 CO1508_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBB5365321683(NAD 83)
 CO1508
 CO1508_MARKER: DD = SURVEY DISK
 CO1508_SETTING: 35 = SET IN A MAT FOUNDATION OR CONCRETE SLAB OTHER THAN
 CO1508+WITH SETTING: PAVEMENT
 CO1508_SP_SET: DROP INLET
 CO1508_STAMPING: BM 25V42 1988
 CO1508_MARK LOGO: MSHD
 CO1508_MAGNETIC: N = NO MAGNETIC MATERIAL
 CO1508_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CO1508+STABILITY: SURFACE MOTION
 CO1508_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 CO1508+SATELLITE: SATELLITE OBSERVATIONS - August 15, 2008
 CO1508
 CO1508 HISTORY - Date Condition Report By
 CO1508 HISTORY - 1988 MONUMENTED MSHD
 CO1508 HISTORY - 20080815 GOOD MSDOT
 CO1508
 CO1508 STATION DESCRIPTION
 CO1508
 CO1508'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1988
 CO1508'0.24 KM (0.15 MI) NORTH ALONG STATE HIGHWAY 25 FROM THE JUNCTION OF
 CO1508'STATE HIGHWAY 16 ABOUT 8.86 KM (5.50 MI) WEST OF CARTHAGE TO THE MARK
 CO1508'ON THE LEFT, SET IN A DRILL HOLE IN THE TOP OF THE NORTHEAST CORNER OF
 CO1508'A CONCRETE DROP INLET, 13.41 M (44.0 FT) WEST OF THE CENTER OF THE
 CO1508'NORTH BOUND LANES OF HIGHWAY 25, 13.41 M (44.0 FT) EAST OF THE CENTER
 CO1508'OF THE SOUTH BOUND LANES OF HIGHWAY 25 AND ABOUT 0.91 M (3.0 FT) BELOW
 CO1508'THE LEVEL OF THE HIGHWAY.
 CO1508
 CO1508 STATION RECOVERY (2008)
 CO1508
 CO1508'RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)
 CO1508'RECOVERED AS DESCRIBED.

NGS DATA SHEET: 49 14 (DK0302)

DK0302 *****
DK0302 CBN - This is a Cooperative Base Network Control Station.
DK0302 DESIGNATION - 49 14
DK0302 PID - DK0302
DK0302 STATE/COUNTY- MS/HOLMES
DK0302 COUNTRY - US
DK0302 USGS QUAD - CRUGER (1982)
DK0302
DK0302 *CURRENT SURVEY CONTROL
DK0302
DK0302* NAD 83(2011) POSITION- 33 19 55.88128(N) 090 14 21.80480(W) ADJUSTED
DK0302* NAD 83(2011) ELLIP HT- 9.781 (meters) (06/27/12) ADJUSTED
DK0302* NAD 83(2011) EPOCH - 2010.00
DK0302* NAVD 88 ORTHO HEIGHT - 36.388 (meters) 119.38 (feet) ADJUSTED
DK0302
DK0302 NAD 83(2011) X - -22,287.544 (meters) COMP
DK0302 NAD 83(2011) Y - -5,334,281.211 (meters) COMP
DK0302 NAD 83(2011) Z - 3,484,804.185 (meters) COMP
DK0302 LAPLACE CORR - -0.98 (seconds) DEFLEC12A
DK0302 GEOID HEIGHT - -26.61 (meters) GEOID12A
DK0302 DYNAMIC HEIGHT - 36.349 (meters) 119.26 (feet) COMP
DK0302 MODELED GRAVITY - 979,585.7 (mgal) NAVD 88
DK0302
DK0302 VERT ORDER - SECOND CLASS 0
DK0302
DK0302 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DK0302 Type Horiz Ellip Dist(km)
DK0302 -----
DK0302 NETWORK 0.62 0.88
DK0302 -----
DK0302 MEDIAN LOCAL ACCURACY AND DIST (028 points) 0.91 1.30 56.74
DK0302 -----
DK0302 NOTE: Click [here](#) for information on individual local accuracy
DK0302 values and other accuracy information.
DK0302
DK0302
DK0302.The horizontal coordinates were established by GPS observations
DK0302.and adjusted by the National Geodetic Survey in June 2012.
DK0302
DK0302.NAD 83(2011) refers to NAD 83 coordinates where the reference
DK0302.frame has been affixed to the stable North American tectonic plate. See
DK0302.[NA2011](#) for more information.
DK0302
DK0302.The horizontal coordinates are valid at the epoch date displayed above
DK0302.which is a decimal equivalence of Year/Month/Day.
DK0302
DK0302.The orthometric height was determined by differential leveling and
DK0302.adjusted by the NATIONAL GEODETIC SURVEY
DK0302.in June 1991.
DK0302
DK0302.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DK0302
DK0302.The Laplace correction was computed from DEFLEC12A derived deflections.
DK0302
DK0302.The ellipsoidal height was determined by GPS observations
DK0302.and is referenced to NAD 83.
DK0302

DK0302.The dynamic height is computed by dividing the NAVD 88
 DK0302.geopotential number by the normal gravity value computed on the
 DK0302.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DK0302.degrees latitude ($g = 980.6199$ gals.).
 DK0302
 DK0302.The modeled gravity was interpolated from observed gravity values.
 DK0302
 DK0302. The following values were computed from the NAD 83(2011) position.
 DK0302
 DK0302:

	North	East	Units	Scale Factor	Converg.
DK0302:SPC MS W	- 424,883.713	708,745.803	MT	0.99995094	+0 03 05.8
DK0302:SPC MS W	- 1,393,972.65	2,325,276.86	sFT	0.99995094	+0 03 05.8
DK0302:UTM 15	- 3,691,517.537	756,953.627	MT	1.00041411	+1 31 04.0

 DK0302
 DK0302!:

	Elev Factor	x	Scale Factor	=	Combined Factor
DK0302!SPC MS W	- 0.99999846	x	0.99995094	=	0.99994940
DK0302!UTM 15	- 0.99999846	x	1.00041411	=	1.00041257

 DK0302
 DK0302:

	Primary Azimuth Mark	Grid Az
DK0302:SPC MS W	- 49 14 AZ MK	138 34 14.4
DK0302:UTM 15	- 49 14 AZ MK	137 06 16.2

 DK0302
 DK0302|-----

PID	Reference Object	Distance	Geod. Az
DK0302			dddmms.s
DK0302	DK0301 49 14 AZ MK		1383720.2
DK0302	DK0303 49 14 RM 1	18.849 METERS	14602
DK0302	DK0304 49 14 RM 2	31.736 METERS	35925

 DK0302|-----
 DK0302
 DK0302 SUPERSEDED SURVEY CONTROL
 DK0302

DK0302 NAD 83(2007)- 33 19 55.88141(N)	090 14 21.80516(W)	AD(2002.00)	A
DK0302 ELLIP H (09/06/11) 9.770 (m)		GP(2002.00)	4 1
DK0302 NAD 83(2007)- 33 19 55.88109(N)	090 14 21.80572(W)	AD(2002.00)	1
DK0302 ELLIP H (02/15/08) 9.795 (m)		GP(2002.00)	4 2
DK0302 NAD 83(2007)- 33 19 55.88090(N)	090 14 21.80556(W)	AD(2002.00)	0
DK0302 ELLIP H (02/10/07) 9.768 (m)		GP(2002.00)	
DK0302 ELLIP H (04/15/02) 9.748 (m)		GP()	4 2
DK0302 NAD 83(1993)- 33 19 55.88084(N)	090 14 21.80534(W)	AD()	B
DK0302 ELLIP H (02/15/02) 9.760 (m)		GP()	4 1
DK0302 NAD 83(1993)- 33 19 55.87939(N)	090 14 21.79630(W)	AD()	2
DK0302 NAD 83(1986)- 33 19 55.89068(N)	090 14 21.79275(W)	AD()	2
DK0302 NAD 27 - 33 19 55.44520(N)	090 14 21.49080(W)	AD()	2
DK0302 NAVD 88 (02/15/08) 36.4 (m)		GEOID03 model used	GPS OBS
DK0302 NAVD 88 (02/15/02) 36.3 (m)		GEOID99 model used	GPS OBS
DK0302 NGVD 29 (??/?/??) 36.456 (m)	119.61 (f)	ADJUSTED	2 0

 DK0302
 DK0302.Superceded values are not recommended for survey control.
 DK0302
 DK0302.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DK0302.See file dsdata.txt to determine how the superseded data were derived.
 DK0302
 DK0302_U.S. NATIONAL GRID SPATIAL ADDRESS: 15SYS5695391517(NAD 83)
 DK0302
 DK0302_MARKER: DD = SURVEY DISK
 DK0302_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DK0302_SP_SET: SET IN TOP OF CONCRETE MONUMENT
 DK0302_STAMPING: STA 49-14 1960
 DK0302_MARK LOGO: MSHD
 DK0302_PROJECTION: FLUSH
 DK0302_MAGNETIC: N = NO MAGNETIC MATERIAL

DK0302_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DK0302+STABILITY: SURFACE MOTION
DK0302_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DK0302+SATELLITE: SATELLITE OBSERVATIONS - April 05, 2008

DK0302

DK0302	HISTORY	- Date	Condition	Report By
DK0302	HISTORY	- 1960	MONUMENTED	MSHD
DK0302	HISTORY	- 1972	GOOD	MSHD
DK0302	HISTORY	- 1972	GOOD	MSHD
DK0302	HISTORY	- 20000601	GOOD	NGS
DK0302	HISTORY	- 20070125	GOOD	EMCINC
DK0302	HISTORY	- 20080405	GOOD	MSDOT

DK0302

STATION DESCRIPTION

DK0302

DK0302' DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1960 (AMC)
DK0302' STATION IS 0.8 MILE NORTH OF CRUGER IN THE SOUTHWEST CORNER
DK0302' OF SECTION 18, T 17 N, R 1 E, ON RAILROAD RIGHT-OF-WAY.

DK0302'

DK0302' TO REACH FROM THE RAILROAD DEPOT IN CRUGER GO EAST ON A BLACK
DK0302' TOP ROAD 0.2 MILE TO THE JUNCTION OF U.S. HIGHWAY 49 E,
DK0302' TURN LEFT, NORTH, FOR 0.7 MILE TO AN EAST-WEST LEVEE ON
DK0302' THE LEFT AND THE AZIMUTH ON THE LEFT. CONTINUE NORTH 0.1
DK0302' MILE TO A FIELD ROAD LEFT, TURN LEFT, WEST AND FOLLOW ROAD
DK0302' FOR 0.1 MILE TO A GRAVEL AND ASPHALT RAMP CROSSING THE RAILROAD
DK0302' TRACK, TURN RIGHT, NORTH, AND FOLLOW THE EAST SIDE OF THE
DK0302' TRACK 385 FEET TO THE STATION AS DESCRIBED.

DK0302'

DK0302' ALL MARKS ARE MSHD-USC AND GS BRONZE DISKS SET IN THE TOP
DK0302' OF 11-INCH SQUARE CONCRETE POST.

DK0302'

DK0302' STATION MARKS ARE STAMPED STA 49-14 1960, AND THE SURFACE MARK
DK0302' IS 6 INCHES BELOW THE GROUND SURFACE. IT IS 125.3 FEET
DK0302' WEST-SOUTHWEST OF A POWERLINE POLE NUMBERED 55, 105.2 FEET
DK0302' SOUTH-SOUTHWEST OF A TELEPHONE LINE POLE, 71.5 FEET
DK0302' NORTH-NORTHWEST OF A TELEPHONE POLE, 60 FEET SOUTH-SOUTHWEST OF A
DK0302' WHITE RAILROAD RIGHT-OF-WAY MARKER, 233 FEET EAST OF THE EAST
DK0302' RAIL OF RAILROAD TRACK AND 1.5 FEET SOUTHEAST OF A METAL
DK0302' WITNES POST. THE UNDERGROUND MARK IS SET IN AN
DK0302' IRREGULAR MASS OF CONCRETE 36 INCHES BELOW THE GROUND
DK0302' SURFACE.

DK0302'

DK0302' REFERENCE MARK NO. 1 STAMPED 49-14 RM-1 1960, PROJECTS 4
DK0302' INCHES. IT IS 330 FEET NORTH OF THE APPROXIMATE CENTER
DK0302' OF THE FIELD ROAD, 147.7 FEET SOUTHWEST OF THE POWERLINE
DK0302' POLE, 451 FEET EAST OF THE EAST RAIL OF THE TRACK AND 1
DK0302' FOOT NORTH OF A TELEPHONE LINE POLE.

DK0302'

DK0302' REFERENCE MARK NO. 2, STAMPED 49-14 RM-2 1960, PROJECTS
DK0302' 4 INCHES. IT IS 384 FEET NORTH OF THE APPROXIMATE CENTER
DK0302' OF THE FIELD ROAD, 94.9 FEET WEST-NORTHWEST OF THE POWERLINE
DK0302' POLE, 57.4 FEET NORTHEAST OF THE RIGHT-OF-WAY MARKER, 42.4
DK0302' FEET EAST OF THE EAST RAIL OF THE TRACK AND 1 FOOT SOUTH
DK0302' OF A TELEPHONE LINE POLE.

DK0302'

DK0302' AZIMUTH MARK, STAMPED 49-14 AZ 1960, PROJECTS 2 INCHES.
DK0302' IT IS 95.5 FEET WEST OF THE CENTER LINE OF HIGHWAY 49 E,
DK0302' 55.5 FEET NORTH OF A POWERLINE POLE AND 2.5 FEET SOUTH OF
DK0302' A METAL WITNESS POST.

DK0302'

DK0302' HEIGHT OF LIGHT ABOVE STATION 47.19 FT.

DK0302

DK0302

STATION RECOVERY (1972)

DK0302

DK0302'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1972 (RLW)
DK0302'THE STATION WAS VISITED 12-12-72 AND THE STATION MARK, RM NO 1, RM NO
DK0302'2, AND THE AZIMUTH MARK WAS FOUND IN GOOD CONDITION. THE AZIMUTH
DK0302'MARK IS VISIBLE FROM THE STATION.

DK0302'

DK0302'THE STATION IS LOCATED 0.8 MILE NORTH OF CRUGER ON THE EAST ROW OF
DK0302'THE ICRR TRACK, 10.4 MILES NORTH OF TCHULA IN THE SW 1/4 OF SECTION
DK0302'18, T 17N, R 1W. IT IS 22 FEET EAST OF THE EAST RAIL, 22.5 FEET
DK0302'WEST OF A ROW OF TELEPHONE POLES, 62.5 FEET NW OF A TELEPHONE
DK0302'POLE, 105 FEET SW OF ANOTHER TELEPHONE POLE, 124 FEET WSW OF A
DK0302'POWER POLE, 391 FEET SOUTH OF A POWER LINE LEADING WEST, 1 FOOT
DK0302'WEST OF A METAL WITNESS POST AND ABOUT 7 FEET BELOW THE LEVEL OF
DK0302'THE TRACK. IT IS A TRIANGULATION DISK, STAMPED STA 49-14 1960 12
DK0302'INCHES BELOW THE GROUND.

DK0302'

DK0302'REFERENCE MARK NO 1 IS 61.84 FEET SE OF THE STATION. IT IS 46 FEET
DK0302'EAST OF THE EAST RAIL, 147.5 FEET SW OF A POWER POLE, 1 FOOT NORTH
DK0302'OF A TELEPHONE POLE, 1 FOOT SOUTH OF A METAL WITNESS POST AND ABOUT
DK0302'7 FEET BELOW THE LEVEL OF THE TRACK. IT IS A REFERENCE MARK
DK0302'DISK, STAMPED 49-14 RM 2 1960 FLUSH.

DK0302'

DK0302'REFERENCE MARK NO 2 IS 104.12 FEET NORTH OF THE STATION. IT IS 42.5
DK0302'FEET EAST OF THE EAST RAIL, 95 FEET NW OF A POWER POLE, 1 FOOT SOUTH
DK0302'OF A TELEPHONE POLE, 1 FOOT NORTH OF A METAL WITNESS POST AND ABOUT
DK0302'7 FEET BELOW THE LEVEL OF THE TRACK. IT IS A REFERENCE MARK DISK,
DK0302'STAMPED 49-14 RM 2 1960 FLUSH.

DK0302'

DK0302'THE DISTANCE BETWEEN REFERENCE NO 1 AND NO 2 IS 159.46 FEET.

DK0302'

DK0302'THE AZIMUTH MARK IS 0.25 MILE SE OF THE STATION. IT IS 95 FEET SW
DK0302'OF THE CENTER OF HIGHWAY 49, 56 FEET NW OF A POWER POLE, 2.5 FEET
DK0302'SE OF A METAL WITNESS POST ABOUT LEVEL WITH THE HIGHWAY AND IS ON
DK0302'LINE WITH A ROW OF POLES. IT IS AN AZIMUTH MARK DISK, STAMPED
DK0302'49-14 AZ 1960 PROJECTING 1 INCH.

DK0302'

DK0302'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAY 12 AND U.S.
DK0302'HIGHWAY 49E IN TCHULA GO NORTH ON U.S. HIGHWAY 49 FOR 10.2 MILES
DK0302'TO THE CROSSROAD AT CRUGER. CONTINUE NORTH ON U.S. HIGHWAY 49E FOR
DK0302'0.7 MILE TO A LEVEE AND THE AZIMUTH MARK ON THE LEFT. CONTINUE
DK0302'NORTH ON U.S. HIGHWAY 49E FOR 0.4 MILE TO A SIDE ROAD LEFT JUST
DK0302'BEYOND A SIDE ROAD RIGHT. TURN LEFT AND GO WEST ON A GRAVELED ROAD
DK0302'FOR 0.1 MILE TO A RAILROAD CROSSING. THENCE SOUTH ALONG THE
DK0302'RAILROAD TRACK FOR 1000 FEET TO THE STATION ON THE LEFT.

DK0302'

DK0302'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--0.8 MILE NORTH
DK0302'OF CRUGER.

DK0302

STATION RECOVERY (1972)

DK0302

DK0302'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1972
DK0302'0.8 MI N FROM CRUGER.
DK0302'THE MARK IS LOCATED 0.8 MILES NORTH OF CRUGER ON THE EAST ROW OF THE
DK0302'ILLINOIS CENTRAL RAILROAD TRACK, 10.4 MILES NORTH OF TCHULA IN THE
DK0302'SOUTHWEST 1/4 OF SECTION 18, T 17N, R 1W. IT IS 22 FEET EAST OF THE
DK0302'EAST RAIL, 22.5 FEET WEST OF A ROW OF TELEPHONE POLES, 124 FEET
DK0302'WEST-SOUTHWEST OF A POWER POLE, 391 FEET SOUTH OF A POWER LINE LEADING
DK0302'WEST, 1 FOOT WEST OF A METAL WITNESS POST SET IN THE TOP OF AN 11 INCH
DK0302'SQUARE POST ABOUT 7 FEET BELOW THE LEVEL OF THE TRACK AND IS ABOUT 12
DK0302'INCHES BELOW THE GROUND. TO REACH FROM THE JUNCTION OF STATE HIGHWAY
DK0302'12 AND U.S. HIGHWAY 49E IN TCHULA GO NORTH ON U.S. HIGHWAY 49E FOR

DK0302' 10.2 MILES TO THE CROSSROAD AT CRUGER. CONTINUE NORTH ON U.S. HIGHWAY DK0302' 49E FOR 1.1 MILES TO A SIDE ROAD LEFT JUST BEYOND A SIDE ROAD RIGHT. DK0302' TURN LEFT AND GO WEST ON A GRAVELED ROAD FOR 0.1 MILES TO A RAILROAD DK0302' CROSSING, THENCE SOUTH ALONG THE RAILROAD TRACK FOR 1000 FEET TO THE DK0302' MARK ON THE LEFT.

DK0302

STATION RECOVERY (2000)

DK0302

DK0302' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000
DK0302' REVISED DESCRIPTION FOLLOWS. THE STATION IS ABOUT 10 MI (16.1 KM) DK0302' NORTH OF TCHULA AND 13 MI (20.9 KM) SOUTH OF GREENWOOD, MS. TO REACH DK0302' FROM THE INTERSECTION OF US 49E AND US 82 ON THE SOUTH SIDE OF DK0302' GREENWOOD, DRIVE SOUTH ON US 49E FOR 13.0 MI (20.9 KM), CROSSING THE DK0302' LEFLORE/HOLMES COUNTY LINE, TO A GRAVEL SIDE ROAD RIGHT TOWARD EGYPT, DK0302' MS. (THE SIDE ROAD IS ALSO 1.1 MI (1.8 KM) SOUTH OF THE LEFLORE DK0302' COUNTY LINE, AND 0.45 MI (0.72 KM) SOUTH OF A HWY BRIDGE.) TURN RIGHT DK0302' AND CONTINUE WEST ON GRAVEL ROAD 0.1 MI (0.2 KM) TO A RR CROSSING. DK0302' TURN LEFT, SOUTH, ON TO A FIELD ROAD BEFORE CROSSING THE TRACK, AND DK0302' PROCEED ALONG THE EAST SIDE OF THE RR FOR ABOUT 1000 FT (304.8 M) TO DK0302' THE STATION ON THE RIGHT, AT THE TOE OF THE SLOPE. THE FIELD ROAD MAY DK0302' BE MUDDY AND VERY SOFT AFTER A RAIN. THE STATION IS 22 FT (6.7 M) DK0302' EAST OF THE EAST RAIL AND ABOUT 7 FT (2.1 M) BELOW THE TRACK, 49 FT DK0302' (14.9 M) NORTHWEST OF A POWER POLE WITH 1 CROSS TREE AND 1 GUY WIRE, DK0302' AND 76.5 FT (23.3 M) SSE OF A TRACK-SIDE SIGN POST WITH A SIGN W ON DK0302' IT. IT IS ALSO 1 FT (0.3 M) EAST OF AN ORANGE WITNESS POST, AND 1 FT DK0302' (0.3 M) WEST OF A WHITE WITNESS POST.

DK0302

STATION RECOVERY (2007)

DK0302

DK0302' RECOVERY NOTE BY EMC INCORPORATED 2007 (MDG)

DK0302' RECOVERED IN GOOD CONDITION.

DK0302

STATION RECOVERY (2008)

DK0302

DK0302' RECOVERY NOTE BY MS DEPT TRANS 2008 (JL)

DK0302' RECOVERED AS DESCRIBED.

NGS DATA SHEET: 82 V 165 (DJ1172)

DJ1172 *****
DJ1172 DESIGNATION - 82 V 165
DJ1172 PID - DJ1172
DJ1172 STATE/COUNTY- MS/WEBSTER
DJ1172 COUNTRY - US
DJ1172 USGS QUAD - SAPA (1972)
DJ1172
DJ1172 *CURRENT SURVEY CONTROL
DJ1172
DJ1172* NAD 83(2011) POSITION- 33 32 52.86050(N) 089 10 58.81841(W) ADJUSTED
DJ1172* NAD 83(2011) ELLIP HT- 91.113 (meters) (06/27/12) ADJUSTED
DJ1172* NAD 83(2011) EPOCH - 2010.00
DJ1172* NAVD 88 ORTHO HEIGHT - 118.897 (meters) 390.08 (feet) ADJUSTED
DJ1172
DJ1172 NAD 83(2011) X - 75,873.813 (meters) COMP
DJ1172 NAD 83(2011) Y - -5,320,663.225 (meters) COMP
DJ1172 NAD 83(2011) Z - 3,504,824.456 (meters) COMP
DJ1172 LAPLACE CORR - -0.94 (seconds) DEFLEC12A
DJ1172 GEOID HEIGHT - -27.79 (meters) GEOID12A
DJ1172 DYNAMIC HEIGHT - 118.768 (meters) 389.66 (feet) COMP
DJ1172 MODELED GRAVITY - 979,556.1 (mgal) NAVD 88
DJ1172
DJ1172 VERT ORDER - SECOND CLASS 0
DJ1172
DJ1172 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DJ1172 Type Horiz Ellip Dist(km)
DJ1172 -----
DJ1172 NETWORK 1.32 1.59
DJ1172 -----
DJ1172 MEDIAN LOCAL ACCURACY AND DIST (001 points) 1.20 1.39 0.04
DJ1172 -----
DJ1172 NOTE: Click [here](#) for information on individual local accuracy
DJ1172 values and other accuracy information.
DJ1172
DJ1172
DJ1172.The horizontal coordinates were established by GPS observations
DJ1172.and adjusted by the National Geodetic Survey in June 2012.
DJ1172
DJ1172.NAD 83(2011) refers to NAD 83 coordinates where the reference
DJ1172.frame has been affixed to the stable North American tectonic plate. See
DJ1172.[NA2011](#) for more information.
DJ1172
DJ1172.The horizontal coordinates are valid at the epoch date displayed above
DJ1172.which is a decimal equivalence of Year/Month/Day.
DJ1172
DJ1172.The orthometric height was determined by differential leveling and
DJ1172.adjusted by the NATIONAL GEODETIC SURVEY
DJ1172.in June 1991.
DJ1172
DJ1172.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DJ1172
DJ1172.The Laplace correction was computed from DEFLEC12A derived deflections.
DJ1172
DJ1172.The ellipsoidal height was determined by GPS observations
DJ1172.and is referenced to NAD 83.
DJ1172
DJ1172.The dynamic height is computed by dividing the NAVD 88

DJ1172.geopotential number by the normal gravity value computed on the
 DJ1172.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DJ1172.degrees latitude ($g = 980.6199$ gals.).
 DJ1172
 DJ1172.The modeled gravity was interpolated from observed gravity values.
 DJ1172
 DJ1172. The following values were computed from the NAD 83(2011) position.
 DJ1172
 DJ1172; North East Units Scale Factor Converg.
 DJ1172;SPC MS E - 448,871.272 267,527.104 MT 0.99996300 -0 11 35.7
 DJ1172;SPC MS E - 1,472,671.83 877,711.84 SFT 0.99996300 -0 11 35.7
 DJ1172;UTM 16 - 3,714,177.194 297,323.536 MT 1.00010645 -1 12 24.5
 DJ1172
 DJ1172! - Elev Factor x Scale Factor = Combined Factor
 DJ1172!SPC MS E - 0.99998570 x 0.99996300 = 0.99994870
 DJ1172!UTM 16 - 0.99998570 x 1.00010645 = 1.00009214
 DJ1172
 DJ1172|-----|
 DJ1172| PID Reference Object Distance Geod. Az
 DJ1172| dddmmss.s
 DJ1172| DN3823 WEBS 41.037 METERS 08744
 DJ1172|-----|
 DJ1172
 DJ1172 SUPERSEDED SURVEY CONTROL
 DJ1172
 DJ1172 NAD 83(2007)- 33 32 52.86081(N) 089 10 58.81902(W) AD(2002.00) A
 DJ1172 ELLIP H (09/06/11) 91.106 (m) GP(2002.00) 4 1
 DJ1172 NGVD 29 (??/?/92) 118.827 (m) 389.85 (f) ADJ UNCH 2 0
 DJ1172
 DJ1172.Superseded values are not recommended for survey control.
 DJ1172
 DJ1172.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DJ1172. [See file dsdata.txt](#) to determine how the superseded data were derived.
 DJ1172
 DJ1172_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBC9732314177(NAD 83)
 DJ1172
 DJ1172_MARKER: DD = SURVEY DISK
 DJ1172_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DJ1172_SP_SET: SET IN TOP OF CONCRETE MONUMENT
 DJ1172_STAMPING: BM 82V-165 1965
 DJ1172_MARK LOGO: MSHD
 DJ1172_PROJECTION: FLUSH
 DJ1172_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DJ1172+STABILITY: SURFACE MOTION
 DJ1172_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DJ1172+SATELLITE: SATELLITE OBSERVATIONS - November 07, 2008
 DJ1172
 DJ1172 HISTORY - Date Condition Report By
 DJ1172 HISTORY - 1965 MONUMENTED MSHD
 DJ1172 HISTORY - 20081107 GOOD MSDOT
 DJ1172
 DJ1172 STATION DESCRIPTION
 DJ1172
 DJ1172'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1965
 DJ1172'3.6 MI W FROM MATHISTON.
 DJ1172'TO REACH THE MARK FROM THE POST OFFICE IN MATHISTON, GO NORTH ON STATE
 DJ1172'HIGHWAY 15 FOR 0.3 MILE TO THE INTERSECTION OF STATE HIGHWAY 15 AND U.
 DJ1172'S. HIGHWAY 82, TURN LEFT WEST AND GO 1.4 MILES TO THE NATCHEZ TRACE
 DJ1172'PARKWAY, CONTINUE WEST 1.8 MILES TO A T BLACKTOP ROAD TO THE NORTH,
 DJ1172'RIGHT, CONTINUE WEST FOR 0.4 MILE TO THE MSHD MAINTENANCE SHOP AND THE
 DJ1172'MARK ON THE RIGHT. THE MARK IS A DISK SET IN THE TOP OF A 12-INCH
 DJ1172'ROUND, CONCRETE POST. IT IS 1.1 FEET SOUTH OF A FENCE, 2.4 FEET

DJ1172'SOUTHEAST OF A POLE, 13.3 FEET WEST OF THE SOUTHWEST CORNER OF THE DJ1172'BUILDING, ABOUT LEVEL WITH THE GROUND SURFACE AND FLUSH WITH THE DJ1172'GROUND. A METAL WITNESS POST WAS SET 1.8 FEET EAST OF THE MARK.

DJ1172

DJ1172 STATION RECOVERY (2008)

DJ1172

DJ1172'RECOVERY NOTE BY MS DEPT TRANS 2008 (MH)

DJ1172'RECOVERED AS DESCRIBED.

NGS DATA SHEET: BAYS (DN4005)

DN4005 *****
DN4005 HT_MOD - This is a Height Modernization Survey Station.
DN4005 DESIGNATION - BAYS
DN4005 PID - DN4005
DN4005 STATE/COUNTY- MS/JASPER
DN4005 COUNTRY - US
DN4005 USGS QUAD - BAY SPRINGS (1974)
DN4005
DN4005 *CURRENT SURVEY CONTROL
DN4005
DN4005* NAD 83(2011) POSITION- 31 58 10.80173(N) 089 15 53.73282(W) ADJUSTED
DN4005* NAD 83(2011) ELLIP HT- 87.437 (meters) (06/27/12) ADJUSTED
DN4005* NAD 83(2011) EPOCH - 2010.00
DN4005* NAVD 88 ORTHO HEIGHT - 113.88 (meters) 373.6 (feet) GPS OBS
DN4005* NAVD 88 EPOCH - 2009.55
DN4005 **This station is located in a suspected subsidence area (see below).
DN4005
DN4005 GEOID HEIGHT - -26.43 (meters) GEOID12A
DN4005 NAD 83(2011) X - 69,481.375 (meters) COMP
DN4005 NAD 83(2011) Y - -5,415,468.315 (meters) COMP
DN4005 NAD 83(2011) Z - 3,357,624.843 (meters) COMP
DN4005 LAPLACE CORR - -1.40 (seconds) DEFLEC12A
DN4005
DN4005 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DN4005 Type Horiz Ellip Dist(km)
DN4005 -----
DN4005 NETWORK 0.93 1.16
DN4005 -----
DN4005 MEDIAN LOCAL ACCURACY AND DIST (006 points) 0.96 1.08 13.91
DN4005 -----
DN4005 NOTE: Click [here](#) for information on individual local accuracy
DN4005 values and other accuracy information.
DN4005
DN4005
DN4005 The horizontal coordinates were established by GPS observations
DN4005 and adjusted by the National Geodetic Survey in June 2012.
DN4005
DN4005 NAD 83(2011) refers to NAD 83 coordinates where the reference
DN4005 frame has been affixed to the stable North American tectonic plate. See
DN4005 [NA2011](#) for more information.
DN4005
DN4005 The horizontal coordinates are valid at the epoch date displayed above
DN4005 which is a decimal equivalence of Year/Month/Day.
DN4005
DN4005 ** This station is in an area of known vertical motion. Due to the
DN4005 ** variability of land subsidence, uplift, and crustal motion, NGS has,
DN4005 ** determined the orthometric heights for marks in these suspect
DN4005 ** subsidence areas should be considered valid only at the epoch date
DN4005 ** associated with the orthometric height. These heights must always
DN4005 ** be validated when used as control. All previously superseded
DN4005 ** orthometric heights are now considered suspect and are available
DN4005 ** in the superseded section. NGS does not recommend using suspect
DN4005 ** or superseded heights as control.
DN4005
DN4005 The orthometric height was determined by GPS observations and a
DN4005 high-resolution geoid model using precise GPS observation and
DN4005 processing techniques.

DN4005
 DN4005.The X, Y, and Z were computed from the position and the ellipsoidal ht.
 DN4005
 DN4005.The Laplace correction was computed from DEFLEC12A derived deflections.
 DN4005
 DN4005.The ellipsoidal height was determined by GPS observations
 DN4005.and is referenced to NAD 83.
 DN4005
 DN4005. The following values were computed from the NAD 83(2011) position.
 DN4005
 DN4005;
 DN4005;SPC MS E - 273,867.314 259,205.922 MT 0.99997052 -0 13 42.7
 DN4005;SPC MS E - 898,513.01 850,411.43 SFT 0.99997052 -0 13 42.7
 DN4005;UTM 16 - 3,539,314.089 285,970.578 MT 1.00016497 -1 11 58.8
 DN4005
 DN4005!
 DN4005!SPC MS E - Elev Factor x Scale Factor = Combined Factor
 DN4005!SPC MS E - 0.99998627 x 0.99997052 = 0.99995679
 DN4005!UTM 16 - 0.99998627 x 1.00016497 = 1.00015124
 DN4005
 DN4005 SUPERSEDED SURVEY CONTROL
 DN4005
 DN4005 NAD 83(2007)- 31 58 10.80185(N) 089 15 53.73313(W) AD(2002.00) A
 DN4005 ELLIP H (09/06/11) 87.433 (m) GP(2002.00) 4 1
 DN4005
 DN4005.Superseded values are not recommended for survey control.
 DN4005
 DN4005.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DN4005.See file dsdata.txt to determine how the superseded data were derived.
 DN4005
 DN4005_U.S. NATIONAL GRID SPATIAL ADDRESS: 16RBA8597039314(NAD 83)
 DN4005
 DN4005_MARKER: DD = SURVEY DISK
 DN4005_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DN4005_STAMPING: BAYS 2008
 DN4005_MARK LOGO: MSDOT
 DN4005_PROJECTION: FLUSH
 DN4005_MAGNETIC: N = NO MAGNETIC MATERIAL
 DN4005_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DN4005+STABILITY: SURFACE MOTION
 DN4005_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DN4005+SATELLITE: SATELLITE OBSERVATIONS - December 16, 2008
 DN4005
 DN4005 HISTORY - Date Condition Report By
 DN4005 HISTORY - 20081216 MONUMENTED MSDOT
 DN4005
 DN4005 STATION DESCRIPTION
 DN4005
 DN4005'DESCRIBED BY MS DEPT TRANS 2008 (PAB)
 DN4005'THE MARK IS LOCATED ABOUT 3 MI (4.8 KM) EAST OF BAY SPRINGS ALONG THE
 DN4005'NORTH SIDE OF S.R. 528 AT THE M.D.O.T. JASPER COUNTY MAINTENANCE
 DN4005'FACILITY.
 DN4005'
 DN4005'TO REACH FROM THE INTERSECTION OF S.R. 528 AND S.R. 15, NEAR DOWNTOWN
 DN4005'BAY SPRINGS, TRAVEL EAST ON S.R. 528 FOR 1.8 MI (2.9 KM) TO THE MARK
 DN4005'ON THE LEFT.
 DN4005'
 DN4005'THE MARK IS A M.D.O.T. DISK SET IN THE TOP OF A 12-INCH ROUND CONCRETE
 DN4005'POST FLUSH WITH THE GROUND. IT IS 84.0 FT (25.6 M) SOUTHWEST OF THE
 DN4005'NORTHWEST CORNER OF A METAL BUILDING, 57.0 FT (17.4 M) EAST OF A
 DN4005'NORTH-SOUTH CHAIN-LINK FENCE, 33.0 FT (10.1 M) WEST OF A FLAG POLE,
 DN4005'11.0 FT (3.4 M) SOUTH OF THE SOUTHWEST CORNER OF A CONCRETE SLAB AND
 DN4005'1.5 FT (0.5 M) SOUTH OF A FIBERGLASS WITNESS POST.

NGS DATA SHEET: BEE LAKE (DN0265)

DK0265 *****
DK0265 CBN - This is a Cooperative Base Network Control Station.
DK0265 DESIGNATION - BEE LAKE
DK0265 PID - DK0265
DK0265 STATE/COUNTY- MS/HOLMES
DK0265 COUNTRY - US
DK0265 USGS QUAD - THORNTON (1982)
DK0265
DK0265 *CURRENT SURVEY CONTROL
DK0265
DK0265* NAD 83(2011) POSITION- 33 02 48.89894(N) 090 19 32.86567(W) ADJUSTED
DK0265* NAD 83(2011) ELLIP HT- 7.500 (meters) (06/27/12) ADJUSTED
DK0265* NAD 83(2011) EPOCH - 2010.00
DK0265* NAVD 88 ORTHO HEIGHT - 34.391 (meters) 112.83 (feet) ADJUSTED
DK0265
DK0265 NAD 83(2011) X - -30,430.433 (meters) COMP
DK0265 NAD 83(2011) Y - -5,351,558.875 (meters) COMP
DK0265 NAD 83(2011) Z - 3,458,325.387 (meters) COMP
DK0265 LAPLACE CORR - -1.03 (seconds) DEFLEC12A
DK0265 GEOID HEIGHT - -26.87 (meters) GEOID12A
DK0265 DYNAMIC HEIGHT - 34.354 (meters) 112.71 (feet) COMP
DK0265 MODELED GRAVITY - 979,553.3 (mgal) NAVD 88
DK0265
DK0265 VERT ORDER - SECOND CLASS 0
DK0265
DK0265 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DK0265 Type Horiz Ellip Dist(km)
DK0265 -----
DK0265 NETWORK 0.42 0.71
DK0265 -----
DK0265 MEDIAN LOCAL ACCURACY AND DIST (028 points) 0.81 0.96 50.44
DK0265 -----
DK0265 NOTE: Click [here](#) for information on individual local accuracy
DK0265 values and other accuracy information.
DK0265
DK0265
DK0265.The horizontal coordinates were established by GPS observations
DK0265.and adjusted by the National Geodetic Survey in June 2012.
DK0265
DK0265.NAD 83(2011) refers to NAD 83 coordinates where the reference
DK0265.frame has been affixed to the stable North American tectonic plate. See
DK0265.[NA2011](#) for more information.
DK0265
DK0265.The horizontal coordinates are valid at the epoch date displayed above
DK0265.which is a decimal equivalence of Year/Month/Day.
DK0265
DK0265.The orthometric height was determined by differential leveling and
DK0265.adjusted by the NATIONAL GEODETIC SURVEY
DK0265.in June 1991.
DK0265
DK0265.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DK0265
DK0265.The Laplace correction was computed from DEFLEC12A derived deflections.
DK0265
DK0265.The ellipsoidal height was determined by GPS observations
DK0265.and is referenced to NAD 83.
DK0265

DK0265.The dynamic height is computed by dividing the NAVD 88
 DK0265.geopotential number by the normal gravity value computed on the
 DK0265.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DK0265.degrees latitude ($g = 980.6199$ gals.).
 DK0265
 DK0265.The modeled gravity was interpolated from observed gravity values.
 DK0265
 DK0265. The following values were computed from the NAD 83(2011) position.
 DK0265
 DK0265:

	North	East	Units	Scale Factor	Converg.
DK0265;SPC MS W	- 393,242.384	700,703.978	MT	0.99995001	+0 00 14.8
DK0265;SPC MS W	- 1,290,162.72	2,298,892.97	sFT	0.99995001	+0 00 14.8
DK0265;UTM 15	- 3,659,667.469	749,717.720	MT	1.00036894	+1 27 32.6

 DK0265
 DK0265!:

	Elev Factor	x	Scale Factor	=	Combined Factor
DK0265!SPC MS W	- 0.99999882	x	0.99995001	=	0.99994883
DK0265!UTM 15	- 0.99999882	x	1.00036894	=	1.00036776

 DK0265
 DK0265:

	Primary Azimuth	Mark	Grid Az
DK0265:SPC MS W	- BEE LAKE AZ MK		015 04 57.6
DK0265:UTM 15	- BEE LAKE AZ MK		013 37 39.8

 DK0265
 DK0265|-----

PID	Reference Object	Distance	Geod. Az
ddmmss.s			
DK0265 DK0266	BEE LAKE AZ MK	APPROX. 0.9 KM	0150512.4
DK0265 CY5257	BEE LAKE RM 1	26.704 METERS	06725
DK0265 DK0231	P 52	83.772 METERS	09214
DK0265 DK0267	BEE LAKE RM 2	28.435 METERS	17727

 DK0265|-----
 DK0265
 DK0265 SUPERSEDED SURVEY CONTROL
 DK0265

DK0265 NAD 83(2007)-	33 02 48.89921(N)	090 19 32.86618(W)	AD(2002.00)	A
DK0265 ELLIP H (09/06/11)	7.487 (m)		GP(2002.00)	4 1
DK0265 NAD 83(2007)-	33 02 48.89868(N)	090 19 32.86621(W)	AD(2002.00)	B
DK0265 ELLIP H (02/15/08)	7.510 (m)		GP(2002.00)	4 2
DK0265 NAD 83(2007)-	33 02 48.89872(N)	090 19 32.86644(W)	AD(2002.00)	0
DK0265 ELLIP H (02/10/07)	7.488 (m)		GP(2002.00)	
DK0265 ELLIP H (04/15/02)	7.492 (m)		GP()	4 2
DK0265 NAD 83(1993)-	33 02 48.89862(N)	090 19 32.86628(W)	AD()	B
DK0265 ELLIP H (02/15/02)	7.499 (m)		GP()	4 1
DK0265 NAD 83(1993)-	33 02 48.89828(N)	090 19 32.86778(W)	AD()	3
DK0265 ELLIP H (05/13/94)	7.546 (m)		GP()	4 1
DK0265 NAD 83(1986)-	33 02 48.90956(N)	090 19 32.86209(W)	AD()	3
DK0265 NAD 27	- 33 02 48.45100(N)	090 19 32.53840(W)	AD()	3
DK0265 NAVD 88 (02/15/08)	34.4 (m)	GEOID03 model used	GPS OBS	
DK0265 NAVD 88 (02/15/02)	34.3 (m)	GEOID99 model used	GPS OBS	
DK0265 NGVD 29 (??/?/??)	34.450 (m)	113.02 (f)	ADJUSTED	2 0

 DK0265
 DK0265.Superseeded values are not recommended for survey control.
 DK0265
 DK0265.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DK0265.See file dsdata.txt to determine how the superseded data were derived.
 DK0265
 DK0265_U.S. NATIONAL GRID SPATIAL ADDRESS: 15SYS4971759667(NAD 83)
 DK0265
 DK0265_MARKER: DS = TRIANGULATION STATION DISK
 DK0265_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DK0265_SP_SET: TOP OF SQUARE CONCRETE MONUMENT
 DK0265_STAMPING: BEE LAKE 1957
 DK0265_MARK LOGO: CGS

DK0265_PROJECTION: FLUSH
DK0265_MAGNETIC: N = NO MAGNETIC MATERIAL
DK0265_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DK0265+STABILITY: SURFACE MOTION
DK0265_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DK0265+SATELLITE: SATELLITE OBSERVATIONS - February 02, 2008

DK0265

DK0265	HISTORY	- Date	Condition	Report By
DK0265	HISTORY	- 1957	MONUMENTED	CGS
DK0265	HISTORY	- 1960	GOOD	MSHD
DK0265	HISTORY	- 1972	GOOD	MSHD
DK0265	HISTORY	- 1972	GOOD	MSHD
DK0265	HISTORY	- 1988	GOOD	NGS
DK0265	HISTORY	- 19991117	GOOD	NGS
DK0265	HISTORY	- 20000405	GOOD	NGS
DK0265	HISTORY	- 20061207	GOOD	EMCINC
DK0265	HISTORY	- 20080202	GOOD	MSDOT

DK0265

STATION DESCRIPTION

DK0265

DK0265'DESCRIBED BY COAST AND GEODETIC SURVEY 1957 (WNM)
DK0265'THE STATION IS LOCATED AT BEE LAKE, A SMALL SETTLEMENT AND
DK0265'RAILWAY SIDING 4-1/2 MILES NORTH OF EDEN AND ABOUT 2-1/2
DK0265'MILES SOUTH OF THORNTON, ALONG U.S. HIGHWAY 49E ON PROPERTY
DK0265'OWNED BY MR. J.T. CALHOUN. IT IS 86 FEET EAST OF THE CENTERLINE
DK0265'OF THE HIGHWAY, 38 FEET SOUTH OF THE CENTERLINE OF A GRAVELED
DK0265'SIDE ROAD, 18 FEET NORTHEAST OF THE NORTHWEST CORNER OF A
DK0265'CONCRETE FOUNDATION PLATFORM, AND 13 FEET NORTH OF A WHITE
DK0265'WITNESS POST. THE MARK IS FLUSH WITH THE GROUND, AND THE
DK0265'DISK IS STAMPED BEE LAKE 1957.

DK0265'

DK0265'TO REACH FROM THE INTERSECTION OF U.S. HIGHWAY 49E AND A
DK0265'GRAVELED CROSSROAD IN EDEN, GO NORTH ON U.S. HIGHWAY 49E
DK0265'FOR 4.45 MILES TO A DRIVE ROAD AND THE STATION ON THE RIGHT.
DK0265'

DK0265'REFERENCE MARK 1 IS 4 FEET NORTHWEST OF THE SOUTHWEST CORNER
DK0265'OF AN IMPLEMENT SHED, AND 28 FEET NORTH OF THE CENTERLINE
DK0265'OF THE GRAVELED ROAD. THE MARK PROJECTS 2 INCHES, AND THE
DK0265'DISK IS STAMPED BEE LAKE NO 1 1957.

DK0265'

DK0265'REFERENCE MARK 2 IS 3 FEET SOUTHWEST OF THE SOUTHWEST CORNER
DK0265'OF A SEED STORAGE SHED, AND 39 FEET EAST OF THE EAST SIDE
DK0265'OF THE CONCRETE FOUNDATION PLATFORM. THE MARK PROJECTS
DK0265'2 INCHES, AND THE DISK IS STAMPED BEE LAKE NO 2 1957.

DK0265'

DK0265'THE AZIMUTH MARK IS 58 FEET WEST OF THE CENTERLINE OF U.S.
DK0265'HIGHWAY 49E, 24 FEET SOUTH OF THE CENTERLINE OF A DRIVE ROAD,
DK0265'2 FEET SOUTH OF A POWERLINE POLE, AND 3 FEET SOUTHWEST OF
DK0265'A WHITE WITNESS POST. THE MARK PROJECTS 2 INCHES, AND THE
DK0265'DISK IS STAMPED BEE LAKE 1957.

DK0265'

DK0265'TO REACH THE AZIMUTH MARK FROM THE STATION, GO NORTH ON U.S.
DK0265'HIGHWAY 49E FOR 0.55 MILE TO THE MARK ON THE LEFT.

DK0265'

DK0265'BENCH MARK P 52 IS A STANDARD U.S.C AND GS BENCH MARK DISK SET IN
DK0265'TOP OF A 10-INCH SQUARE POST AND PROJECTS 2 INCHES, STAMPED
DK0265'P 52 1935. IT IS 35 FEET WEST OF CENTER LINE OF MAIN LINE
DK0265'RAILROAD AND 16 FEET N OF NORTHEAST CORNER OF DEPORT BUILDING.

DK0265'

DK0265'HEIGHT OF LIGHT ABOVE STATION MARK 30 METERS.

DK0265

STATION RECOVERY (1960)

DK0265

DK0265'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1960 (AMC)
DK0265'THE STATION, AZIMUTH MARK, AND REFERENCE MARK NO. 2 WERE
DK0265'FOUND IN GOOD CONDITION. REFERENCE MARK NO. 1 WAS DESTROYED
DK0265'AND THE AREA WHERE MARK WAS SUPPOSED TO BE WAS DISTURBED.
DK0265'THE DESCRIPTION IS ADEQUATE.

DK0265'

DK0265'THIS STATION WAS NOT OCCUPIED.

DK0265

DK0265 STATION RECOVERY (1972)

DK0265

DK0265'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1972 (RLW)
DK0265'THE STATION WAS VISITED 9-29-72 AND THE STATION MARK, RM
DK0265'NO 2, BENCH MARK P 52, AND THE AZIMUTH MARK WERE FOUND IN
DK0265'GOOD CONDITION. RM NO 1 WAS NOT FOUND. THE AZIMUTH MARK IS
DK0265'VISIBLE FROM THE STATION. NO ADDITIONAL RMS WERE SET BECAUSE
DK0265'THE RM 2 AND BM P 52 ARE ADEQUATE.

DK0265'

DK0265'THE STATION IS LOCATED 2.2 MILES SOUTH OF THRONTON JUST NORTH
DK0265'OF A CONCRETE PLATFORM IN A FARM EQUIPMENT PARKING AREA JUST
DK0265'SOUTH OF A GRAVELED ROAD ABOUT 200 FEET NW OF THE ICRR TRACK.
DK0265'IT IS 86 FEET ESE OF THE CENTER OF HIGHWAY 49, 39 FEET SSW
DK0265'OF THE CENTER OF A GRAVELED ROAD, 39 FEET WNW OF THE CENTER
DK0265'OF A NARROW BLACK TOP ROAD, 18 FEET ENE OF THE NW CORNER
DK0265'OF A CONCRETE PLATFORM, 14 FEET NE OF THE NORTH SIDE OF THE
DK0265'PLATFORM, 19 FEET NW OF THE NE CORNER OF THE PLATFORM, 75
DK0265'FEET SW OF THE SW CORNER OF AN IMP SHED, AND 79 FEET WEST
DK0265'OF A POWER POLE WITH A GUY WIRE. IT IS A TRIANGULATION
DK0265'DISK, STAMPED BEE LAKE 1957 FLUSH.

DK0265'

DK0265'REFERENCE MARK NO 2 IS 93.29 FEET SOUTH OF THE STATION.
DK0265'IT IS 138 FEET ESE OF THE CENTER OF A GRAVELED ROAD, 11 FEET
DK0265'ESE OF THE CENTER OF A NARROW BLACK TOP ROAD, 52 FEET NE OF THE
DK0265'SE CORNER OF A CONCRETE PLATFORM, 39 FEET ESE OF THE EAST
DK0265'EDGE OF THE PLATFORM, 3 FEET SSW OF THE SW CORNER OF A
DK0265'SEED HOUSE AND 1 FOOT SSW OF A METAL WITNESS POST. IT IS
DK0265'A REFERENCE MARK DISK, STAMPED BEE LAKE NO 2 1957 PROJECTING
DK0265'1 INCH.

DK0265'

DK0265'BENCH MARK P 52 IS 274.85 FEET EAST OF THE STATION. IT IS
DK0265'33 FEET NW OF THE NW RAIL OF THE MAIN TRACK, 31 FEET SE
DK0265'OF THE SE RAIL OF A SIDE TRACK, 84 FEET NE OF THE CENTER OF
DK0265'A GRAVELED ROAD, LEADING ACROSS THE TRACK TO A FRAME CHURCH,
DK0265'85.5 FEET EAST OF A TELEPHONE POLE, 55 FEET NW OF THE FIRST
DK0265'POLE NE OF THE CROSSING, 93 FEET SSE OF POLE NO. 377, 1 FOOT
DK0265'EAST OF A METAL WITNESS POST SET IN THE TOP OF A 10 INCH SQUARE
DK0265'CONCRETE POST ABOUT 2 FEET BELOW THE LEVEL OF THE TRACK
DK0265'AND IS FLUSH WITH THE GROUND. IT IS A BENCH MARK DISK,
DK0265'STAMPED P 52 1935.

DK0265'

DK0265'THE AZIMUTH MARK IS 0.55 MILE NORTH OF THE STATION. IT IS
DK0265'58.5 FEET WEST OF THE CENTER OF HIGHWAY 49, 1.5 FEET SOUTH
DK0265'OF A POWER POLE WITH A GUY POLE ACROSS THE HIGHWAY, 1 FOOT
DK0265'NORTH OF A METAL WITNESS POST AND ABOUT 2 FEET BELOW THE
DK0265'LEVEL OF THE HIGHWAY. IT IS AN AZIMUTH MARK DISK, STAMPED
DK0265'BEE LAKE 1957 PROJECTING 4 INCHES.

DK0265'

DK0265'TO REACH THE STATION FROM THE HIGHWAY 3 OVERPASS 3.5 MILES NORTH
DK0265'OF YAZOO CITY GO NORTH ON U.S. HIGHWAY 49E FOR 8.5 MILES TO THE
DK0265'CROSSROAD AT EDEN. CONTINUE NORTH ON U.S. HIGHWAY E FOR
DK0265'3.9 MILES TO A RAILROAD CROSSING. CONTINUE NE ON HIGHWAY
DK0265'49 FOR 0.7 MILE TO A SIDE ROAD AND THE STATION ON THE RIGHT.

DK0265' TO REACH THE AZIMUTH CONTINUE NORTH ON HIGHWAY 49 FOR 0.6
DK0265' MILE TO THE MARK ON THE LEFT.

DK0265'

DK0265' AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--2.2 MILES
DK0265' SOUTH OF THORTON

DK0265

STATION RECOVERY (1972)

DK0265

DK0265' RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1972
DK0265' 2.2 MI S FROM THORTON.

DK0265' THE MARK IS LOCATED 2.2 MILES SOUTH OF THORTON JUST NORTH OF A CONCRETE PLATFORM IN A FARM EQUIPMENT PARKING AREA JUST SOUTH OF A GRAVELED ROAD, 4.4 MILES SOUTH OF EDEN IN THE NORTHWEST 1/4 OF SECTION 20, T 14N, R 1W ON THE PROPERTY OF MRS. J.T. CALHOUN. IT IS 86 FEET EAST-SOUTHEAST OF THE CENTER OF HIGHWAY 49, 39 FEET SOUTH-SOUTHWEST OF THE CENTER OF A NARROW BLACK TOP ROAD, 18 FEET WEST-NORTHWEST OF THE CENTER OF A CORNER OF A CONCRETE PLATFORM, 14 FEET NORTHEAST OF THE NORTH SIDE OF THE PLATFORM, 19 FEET NORTHWEST OF THE NORTHEAST CORNER OF THE PLATFORM, 75 FEET SOUTHWEST OF THE SOUTHWEST CORNER OF AN IMPLIMENT SHED, 79 FEET WEST OF A SQUARE CONCRETE POST ABOUT 1 FOOT BELOW THE LEVEL OF THE HIGHWAY AND IS FLUSH WITH THE GROUND. TO REACH FROM THE HIGHWAY 3 OVERPASS 3.5 MILES NORTH OF YAZOO CITY GO NORTH ON U.S. HIGHWAY 49E FOR 8.5 MILES TO THE CROSSROAD AT EDEN. CONTINUE NORTH ON U.S. HIGHWAY 49E FOR 3.9 MILES TO A RAILROAD CROSSING. CONTINUE NORTHEAST ON HIGHWAY 49 FOR 0.7 MILES TO A SIDE ROAD AND THE MARK ON THE RIGHT.

DK0265

DK0265 STATION RECOVERY (1988)

DK0265

DK0265' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988 (AJL)

DK0265' THE STATION WAS RECOVERED AT THIS DATE.

DK0265' A NEW DESCRIPTION FOLLOWS.

DK0265'

DK0265' THE STATION IS LOCATED ABOUT 7.2 KM (4.5 MI)

DK0265' NORTH OF EDEN,

DK0265' 4.0 KM (2.5 MI) SOUTH OF THORTON, ON THE EAST SIDE OF U.S. HIGHWAY 49E.

DK0265' OWNERSHIP--STATE HIGHWAY RIGHT-OF-WAY.

DK0265'

DK0265' TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 49E AND

DK0265' 49W, AT THE EAST EDGE OF YAZOO CITY, GO NORTH FOR

DK0265' 17.8 KM (11.05 MI) ON U.S. HIGHWAY 49E TO THE CROSS ROAD AT EDEN.

DK0265' CONTINUE STRAIGHT AHEAD AND GO NORTH FOR 6.4 KM (3.95 MI) ON

DK0265' HIGHWAY 49E TO A RAILROAD CROSSING.

DK0265' CONTINUE STRAIGHT AHEAD AND GO NORTH FOR 1.1 KM (0.7 MI) ON HIGHWAY

DK0265' 49E TO A GRAVEL ROAD AND THE STATION ON THE RIGHT.

DK0265'

DK0265' THE STATION IS A STANDARD CGS DISK

DK0265' STAMPED---BEE LAKE 1957---,

DK0265' SET INTO THE TOP OF A SQUARE CONCRETE MONUMENT

DK0265' 30 CM ON SIDE FLUSH WITH GROUND. LOCATED

DK0265' 26.21 METERS (86.0 FT) EAST FROM THE CENTER OF THE HIGHWAY,

DK0265' 11.58 METERS (38.0 FT) SOUTH FROM THE CENTER OF THE GRAVEL ROAD,

DK0265' 22.86 METERS (75.0 FT) SOUTH-SOUTHWEST FROM THE SOUTHWEST WOODEN

DK0265' POST SUPPORTING A LARGE SHED,

DK0265' 5.94 METERS (19.5 FT) NORTHWEST FROM THE NORTHWEST CORNER OF A

DK0265' LARGE CONCRETE PLATFORM,

DK0265' 4.57 METERS (15.0 FT) NORTH FROM THE NORTH EDGE OF THE CONCRETE

DK0265' PLATFORM,

DK0265' 5.18 METERS (17.0 FT) NORTHEAST FROM THE NORTHWEST CORNER OF THE

DK0265' CONCRETE PLATFORM, AND

DK0265' 4.57 METERS (15.0 FT) NORTH FROM A CARSONITE WITNESS POST.

DK0265'

DK0265' DESCRIBED BY D.D. REXRODE, TYPED BY R.L. ZURFLUH.

DK0265

DK0265 STATION RECOVERY (1999)

DK0265

DK0265' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1999

DK0265' RECOVERED AS DESCRIBED. UPDATED INFORMATION - DRIVING DIRECTIONS ARE

DK0265' ADEQUATE. REFER TO 1988 DESCRIPTION - STATION IS 5.79 M (19.0 FT)

DK0265' NORTHWEST FROM THE NORTHEAST CORNER OF A CONCRETE FOUNDATION, 4.15 M

DK0265' (13.62 FT) NORTH OF THE NORTH EDGE OF THE FOUNDATION, 5.49 M (18.01

DK0265' FT) NORTHEAST OF THE NORTHWEST CORNER OF THE FOUNDATION, AND 4.15 M

DK0265' (13.62 FT) NORTH OF AN ORANGE WITNESS POST. THE LARGE WOODEN SHED TO

DK0265' WHICH REFERED HAS COLLAPSED.

DK0265

DK0265 STATION RECOVERY (2000)

DK0265

DK0265' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000

DK0265' RECOVERED AS DESCRIBED.

DK0265

DK0265 STATION RECOVERY (2006)

DK0265

DK0265' RECOVERY NOTE BY EMC INCORPORATED 2006 (MDG)

DK0265' RECOVERED IN GOOD CONDITION.

DK0265

DK0265 STATION RECOVERY (2008)

DK0265

DK0265' RECOVERY NOTE BY MS DEPT TRANS 2008 (ST)

DK0265' RECOVERED AS DESCRIBED WITH THE FOLLOWING ADDENDUMS, 123.5 FT WEST OF A

DK0265' POWER POLE WITH TWO GUIDE WIRES, 72.2 FT (22.0 M) EAST OF THE EDGE OF

DK0265' PAVEMENT OF HIGHWAY 49E AND THE SOUTHEAST CORNER OF THE PAVED RAMP, 66

DK0265' FT (20.1 M) SOUTH A POWER POLE WITH THREE TRANSFORMERS, 49.5 FT (15.1

DK0265' M) SOUTHWEST OF THE SOUTHWEST CORNER OF AN ELEVATED CONCRETE LOADING

DK0265' PAD, IN THE MIDDLE OF THREE WHITE CARSONITE WITNESS POSTS.

NGS DATA SHEET: CART (DN3967)

DN3967 *****
DN3967 HT_MOD - This is a Height Modernization Survey Station.
DN3967 DESIGNATION - CART
DN3967 PID - DN3967
DN3967 STATE/COUNTY- MS/LEAKE
DN3967 COUNTRY - US
DN3967 USGS QUAD - CARTHAGE (1989)
DN3967
DN3967 *CURRENT SURVEY CONTROL
DN3967
DN3967* NAD 83(2011) POSITION- 32 43 08.57684(N) 089 34 18.49941(W) ADJUSTED
DN3967* NAD 83(2011) ELLIP HT- 80.234 (meters) (06/27/12) ADJUSTED
DN3967* NAD 83(2011) EPOCH - 2010.00
DN3967* NAVD 88 ORTHO HEIGHT - 107.47 (meters) 352.6 (feet) GPS OBS
DN3967
DN3967 GEOID HEIGHT - -27.23 (meters) GEOID12A
DN3967 NAD 83(2011) X - 40,142.637 (meters) COMP
DN3967 NAD 83(2011) Y - -5,371,298.018 (meters) COMP
DN3967 NAD 83(2011) Z - 3,427,829.208 (meters) COMP
DN3967 LAPLACE CORR - -0.24 (seconds) DEFLEC12A
DN3967
DN3967 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DN3967 Type Horiz Ellip Dist(km)
DN3967 -----
DN3967 NETWORK 0.72 0.84
DN3967 -----
DN3967 MEDIAN LOCAL ACCURACY AND DIST (006 points) 0.60 0.45 5.25
DN3967 -----
DN3967 NOTE: Click [here](#) for information on individual local accuracy
DN3967 values and other accuracy information.
DN3967
DN3967
DN3967. The horizontal coordinates were established by GPS observations
DN3967. and adjusted by the National Geodetic Survey in June 2012.
DN3967
DN3967. NAD 83(2011) refers to NAD 83 coordinates where the reference
DN3967. frame has been affixed to the stable North American tectonic plate. See
DN3967. [NA2011](#) for more information.
DN3967
DN3967. The horizontal coordinates are valid at the epoch date displayed above
DN3967. which is a decimal equivalence of Year/Month/Day.
DN3967
DN3967. The orthometric height was determined by GPS observations and a
DN3967. high-resolution geoid model using precise GPS observation and
DN3967. processing techniques.
DN3967
DN3967. The X, Y, and Z were computed from the position and the ellipsoidal ht.
DN3967
DN3967. The Laplace correction was computed from DEFLEC12A derived deflections.
DN3967
DN3967. The ellipsoidal height was determined by GPS observations
DN3967. and is referenced to NAD 83.
DN3967
DN3967. The following values were computed from the NAD 83(2011) position.
DN3967
DN3967; SPC MS E - 357,124.069 230,772.176 MT 1.00000907 -0 23 57.0

DN3967;SPC MS E - 1,171,664.55 757,125.05 sFT 1.00000907 -0 23 57.0
 DN3967;UTM 16 - 3,623,066.660 258,960.216 MT 1.00031647 -1 23 26.8
 DN3967
 DN3967! - Elev Factor x Scale Factor = Combined Factor
 DN3967!SPC MS E - 0.99998740 x 1.00000907 = 0.99999647
 DN3967!UTM 16 - 0.99998740 x 1.00031647 = 1.00030387
 DN3967
 DN3967|-----
 DN3967| PID Reference Object Distance Geod. Az
 DN3967| dddmmss.s
 DN3967| DN3969 CAR 1 68.396 METERS 15046
 DN3967|-----
 DN3967
 DN3967 SUPERSEDED SURVEY CONTROL
 DN3967
 DN3967 NAD 83(2007)- 32 43 08.57706(N) 089 34 18.49996(W) AD(2002.00) A
 DN3967 ELLIP H (09/06/11) 80.237 (m) GP(2002.00) 4 1
 DN3967
 DN3967.Superseded values are not recommended for survey control.
 DN3967
 DN3967.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DN3967. [See file dsdata.txt](#) to determine how the superseded data were derived.
 DN3967
 DN3967_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBB5896023066(NAD 83)
 DN3967
 DN3967_MARKER: DD = SURVEY DISK
 DN3967_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DN3967_STAMPING: CART 2008
 DN3967_MARK LOGO: MSDOT
 DN3967_PROJECTION: FLUSH
 DN3967_MAGNETIC: N = NO MAGNETIC MATERIAL
 DN3967_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DN3967+STABILITY: SURFACE MOTION
 DN3967_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DN3967+SATELLITE: SATELLITE OBSERVATIONS - December 20, 2008
 DN3967
 DN3967 HISTORY - Date Condition Report By
 DN3967 HISTORY - 20081220 MONUMENTED MSDOT
 DN3967
 DN3967 STATION DESCRIPTION
 DN3967
 DN3967'DESCRIBED BY MS DEPT TRANS 2008 (SOL)
 DN3967'THE STATION IS LOCATED IN THE NORTH FRONT LAWN OF THE MS DEPARTMENT OF
 DN3967' TRANSPORTATION CARTHAGE PROJECT OFFICE SOUTHWEST OF CARTHAGE, MS.
 DN3967'
 DN3967'TO REACH THE STATION FROM THE INTERSECTION OF HIGHWAY 35 AND HIGHWAY
 DN3967'16 CONTINUE ON HIGHWAY 16 WEST FOR 2.3 MI (3.7 KM) TO THE MARK ON THE
 DN3967'LEFT.
 DN3967'
 DN3967'THE STATION IS 89 FT (27.1 M) SOUTH OF THE CENTERLINE OF HIGHWAY 16,
 DN3967'89 FT (27.1 M) NORTH OF A PARKING LOT LAMP POST, 48 FT (14.6 M)
 DN3967'SOUTHEAST OF A POWER POLE, AND 37 FT (11.3 M) EAST OF A WATER METER.

NGS DATA SHEET: E 223 (CO0797)

CO0797 ****
CO0797 CBN - This is a Cooperative Base Network Control Station.
CO0797 DESIGNATION - E 223
CO0797 PID - CO0797
CO0797 STATE/COUNTY- MS/NEWTON
CO0797 COUNTRY - US
CO0797 USGS QUAD - NEWTON (1982)
CO0797
CO0797 *CURRENT SURVEY CONTROL
CO0797
CO0797* NAD 83(2011) POSITION- 32 18 50.52182(N) 089 08 11.84427(W) ADJUSTED
CO0797* NAD 83(2011) ELLIP HT- 83.188 (meters) (06/27/12) ADJUSTED
CO0797* NAD 83(2011) EPOCH - 2010.00
CO0797* NAVD 88 ORTHO HEIGHT - 110.480 (meters) 362.47 (feet) ADJUSTED
CO0797
CO0797 NAD 83(2011) X - 81,301.861 (meters) COMP
CO0797 NAD 83(2011) Y - -5,394,981.697 (meters) COMP
CO0797 NAD 83(2011) Z - 3,389,956.826 (meters) COMP
CO0797 LAPLACE CORR - -1.86 (seconds) DEFLEC12A
CO0797 GEOID HEIGHT - -27.30 (meters) GEOID12A
CO0797 DYNAMIC HEIGHT - 110.351 (meters) 362.04 (feet) COMP
CO0797 MODELED GRAVITY - 979,467.2 (mgal) NAVD 88
CO0797
CO0797 VERT ORDER - FIRST CLASS I
CO0797
CO0797 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
CO0797 Type Horiz Ellip Dist(km)
CO0797 -----
CO0797 NETWORK 0.84 1.20
CO0797 -----
CO0797 MEDIAN LOCAL ACCURACY AND DIST (023 points) 1.08 1.39 48.13
CO0797 -----
CO0797 NOTE: Click [here](#) for information on individual local accuracy
CO0797 values and other accuracy information.
CO0797
CO0797
CO0797 This mark is at James H Eason Field Airport (M23)
CO0797
CO0797 The horizontal coordinates were established by GPS observations
CO0797 and adjusted by the National Geodetic Survey in June 2012.
CO0797
CO0797 NAD 83(2011) refers to NAD 83 coordinates where the reference
CO0797 frame has been affixed to the stable North American tectonic plate. See
CO0797 [NA2011](#) for more information. for more information.
CO0797
CO0797 The horizontal coordinates are valid at the epoch date displayed above
CO0797 which is a decimal equivalence of Year/Month/Day.
CO0797
CO0797 The orthometric height was determined by differential leveling and
CO0797 adjusted by the NATIONAL GEODETIC SURVEY
CO0797 in June 1991.
CO0797
CO0797 [Photographs](#) are available for this station.
CO0797
CO0797 The X, Y, and Z were computed from the position and the ellipsoidal ht.
CO0797
CO0797 The Laplace correction was computed from DEFLEC12A derived deflections.

CO0797
 CO0797.The ellipsoidal height was determined by GPS observations
 CO0797.and is referenced to NAD 83.
 CO0797
 CO0797.The dynamic height is computed by dividing the NAVD 88
 CO0797.geopotential number by the normal gravity value computed on the
 CO0797.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 CO0797.degrees latitude (g = 980.6199 gals.).
 CO0797
 CO0797.The modeled gravity was interpolated from observed gravity values.
 CO0797
 CO0797. The following values were computed from the NAD 83(2011) position.
 CO0797
 CO0797; North East Units Scale Factor Converg.
 CO0797;SPC MS E - 312,011.040 271,440.648 MT 0.99996005 -0 09 43.7
 CO0797;SPC MS E - 1,023,656.22 890,551.53 sFT 0.99996005 -0 09 43.7
 CO0797;UTM 16 - 3,577,250.250 298,855.255 MT 1.00009896 -1 08 33.1
 CO0797
 CO0797! - Elev Factor x Scale Factor = Combined Factor
 CO0797!SPC MS E - 0.99998694 x 0.99996005 = 0.99994699
 CO0797!UTM 16 - 0.99998694 x 1.00009896 = 1.00008590
 CO0797
 CO0797 SUPERSEDED SURVEY CONTROL
 CO0797
 CO0797 NAD 83(2007)- 32 18 50.52206(N) 089 08 11.84466(W) AD(2002.00) A
 CO0797 ELLIP H (09/06/11) 83.180 (m) GP(2002.00) 4 1
 CO0797 NAD 83(2007)- 32 18 50.52184(N) 089 08 11.84483(W) AD() 0
 CO0797 ELLIP H (02/10/07) 83.183 (m) GP()
 CO0797 ELLIP H (04/15/02) 83.182 (m) GP() 4 2
 CO0797 NAD 83(1993)- 32 18 50.52172(N) 089 08 11.84452(W) AD() B
 CO0797 ELLIP H (02/15/02) 83.180 (m) GP() 4 1
 CO0797 NAVD 88 (02/15/02) 110.48 (m) 362.5 (f) LEVELING 3
 CO0797 NGVD 29 (??/?/??) 110.473 (m) 362.44 (f) ADJUSTED 1 1
 CO0797
 CO0797.Superseded values are not recommended for survey control.
 CO0797
 CO0797.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CO0797.[See file dsdata.txt](#) to determine how the superseded data were derived.
 CO0797
 CO0797_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBA9885577250(NAD 83)
 CO0797
 CO0797_MARKER: DB = BENCH MARK DISK
 CO0797_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CO0797_SP_SET: CONCRETE POST
 CO0797_STAMPING: E 223 1968
 CO0797_MARK LOGO: CGS
 CO0797_PROJECTION: RECESSED 15 CENTIMETERS
 CO0797_MAGNETIC: T = STEEL SPIKE ADJACENT TO MONUMENT
 CO0797_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CO0797+STABILITY: SURFACE MOTION
 CO0797_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 CO0797+SATELLITE: SATELLITE OBSERVATIONS - August 10, 2008
 CO0797
 CO0797 HISTORY - Date Condition Report By
 CO0797 HISTORY - 1968 MONUMENTED CGS
 CO0797 HISTORY - 19890809 GOOD MSHD
 CO0797 HISTORY - 20000501 GOOD NGS
 CO0797 HISTORY - 20080809 GOOD JCLS
 CO0797 HISTORY - 20080810 GOOD MSDOT
 CO0797
 CO0797 STATION DESCRIPTION
 CO0797

CO0797' DESCRIBED BY COAST AND GEODETIC SURVEY 1968

CO0797' 4.25 MI SE FROM NEWTON.

CO0797' ABOUT 0.25 MILE WEST ALONG THE ILLINOIS CENTRAL RAILROAD FROM THE
CO0797' STATION AT NEWTON, THENCE 0.8 MILE NORTH ALONG THE GULF, MOBILE AND
CO0797' OHIO RAILROAD, THENCE 1.5 MILES EAST ALONG U.S. HIGHWAY 80, THENCE
CO0797' 0.15 MILE SOUTH ALONG A GRADED DIRT ROAD, THENCE 0.1 MILE EAST ALONG A
CO0797' GRADED DIRT ROAD, THENCE 0.9 MILE SOUTH ALONG A GRADED DIRT ROAD,
CO0797' THENCE 0.45 MILE WEST ALONG A PAVED ROAD, THENCE 0.1 MILE SOUTH ALONG
CO0797' A PAVED ENTRANCE ROAD TO OKEEFE AIRPORT, IN SECTION 35, T 6 N, R 11 E,
CO0797' 59 FEET WEST OF THE CENTERLINE OF THE ENTRANCE ROAD, 276 FEET
CO0797' NORTHEAST OF THE NORTHEAST EDGE OF A PAVED RUNWAY, 241 FEET NORTHWEST
CO0797' OF THE WEST CORNER OF A CONCRETE BLOCK BUILDING, 34 1/2 FEET NORTHWEST
CO0797' OF AN ENCLOSURE FOR A WATER METER, 5 FEET NORTH OF A CORNER FENCE
CO0797' POST, 1 FOOT WEST OF A FENCE, AND SET IN THE TOP OF A CONCRETE POST
CO0797' ABOUT LEVEL WITH THE SURFACE OF THE GROUND.

CO0797

STATION RECOVERY (1989)

CO0797

CO0797' RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1989

CO0797' MARK IS LOCATED 2.74 KM (1.70 MI) EAST SOUTHEAST OF NEWTON OPPOSITE A
CO0797' GATE AT THE ENTRANCE TO THE OKEEFE AIRPORT IN SECTION 35,K T6N, R11E.
CO0797' TO REACH FROM THE INTERSECTION OF THE STATE HIGHWAY 15 BYPASS AND U.S.
CO0797' HIGHWAY 80 AT THE NORTHEAST EDGE OF NEWTON, GO SOUTH ON STATE HIGHWAY
CO0797' 15 FOR 2.09 KM (1.30 MI) TO A CROSSROAD, TURN LEFT AND GO EAST ON A
CO0797' PAVED ROAD FOR 1.13 KM (0.70 MI) TO A SIDE ROAD RIGHT, TURN RIGHT AND
CO0797' GO SOUTH ON A PAVED ROAD FOR 0.16 KM (0.10 MI) TO A GATE AND THE MARK
CO0797' ON THE RIGHT. MARK IS A STANDARD DISK SET IN THE TOP OF A ROUND
CO0797' CONCRETE POST 0.15 M (0.5 FT) BELOW THE GROUND. IT IS 84.12 M
CO0797' (276.0 FT) NORTHEAST OF THE NORTHEAST EDGE OF A PAVED RUNWAY, 74.07 M
CO0797' (243.0 FT) WEST OF THE WEST CORNER OF A CONCRETE BLOCK BUILDING USED
CO0797' AS A PILOTS LOUNGE, 59.28 M (194.5 FT) WEST OF A POWER POLE WITH A
CO0797' TRANSFORMER, GUY WIRES AND A LAMP, 41.61 M (136.5 FT) SOUTH OF A POWER
CO0797' POLE WITH A LAMP, 17.07 M (56.0 FT) SOUTHWEST OF THE CENTER OF THE
CO0797' ENTRANCE ROAD, 15.85 M (52.0 FT) WEST OF THE SOUTHWEST GATE POST,
CO0797' 10.61 M (34.8 FT) NORTHWEST OF THE ENTER OF A WATER METER AND 0.3 M
CO0797' (1.0 FT) NORTHEAST OF A CARSONITE WITNESS POST.

CO0797

STATION RECOVERY (2000)

CO0797

CO0797' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000

CO0797' RECOVERED AS DESCRIBED.

CO0797

STATION RECOVERY (2008)

CO0797

CO0797' RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2008

CO0797' RECOVERED IN GOOD CONDITION.

CO0797

STATION RECOVERY (2008)

CO0797

CO0797' RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)

CO0797' RECOVERED AS DESCRIBED.

NGS DATA SHEET: KALE (DN3957)

DN3957 *****
DN3957 HT_MOD - This is a Height Modernization Survey Station.
DN3957 DESIGNATION - KALE
DN3957 PID - DN3957
DN3957 STATE/COUNTY- MS/SCOTT
DN3957 COUNTRY - US
DN3957 USGS QUAD - PULASKI (1982)
DN3957
DN3957 *CURRENT SURVEY CONTROL
DN3957
DN3957* NAD 83(2011) POSITION- 32 21 44.25478(N) 089 34 03.06537(W) ADJUSTED
DN3957* NAD 83(2011) ELLIP HT- 122.436 (meters) (06/27/12) ADJUSTED
DN3957* NAD 83(2011) EPOCH - 2010.00
DN3957* NAVD 88 ORTHO HEIGHT - 149.42 (meters) 490.2 (feet) GPS OBS
DN3957
DN3957 GEOID HEIGHT - -26.97 (meters) GEOID12A
DN3957 NAD 83(2011) X - 40,705.453 (meters) COMP
DN3957 NAD 83(2011) Y - -5,392,611.107 (meters) COMP
DN3957 NAD 83(2011) Z - 3,394,499.483 (meters) COMP
DN3957 LAPLACE CORR - -0.55 (seconds) DEFLEC12A
DN3957
DN3957 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DN3957 Type Horiz Ellip Dist(km)
DN3957 -----
DN3957 NETWORK 0.66 0.78
DN3957 -----
DN3957 MEDIAN LOCAL ACCURACY AND DIST (005 points) 0.62 0.49 13.86
DN3957 -----
DN3957 NOTE: Click [here](#) for information on individual local accuracy
DN3957 values and other accuracy information.
DN3957
DN3957
DN3957. The horizontal coordinates were established by GPS observations
DN3957. and adjusted by the National Geodetic Survey in June 2012.
DN3957
DN3957. NAD 83(2011) refers to NAD 83 coordinates where the reference
DN3957. frame has been affixed to the stable North American tectonic plate. See
DN3957. [NA2011](#) for more information.
DN3957
DN3957. The horizontal coordinates are valid at the epoch date displayed above
DN3957. which is a decimal equivalence of Year/Month/Day.
DN3957
DN3957. The orthometric height was determined by GPS observations and a
DN3957. high-resolution geoid model using precise GPS observation and
DN3957. processing techniques.
DN3957
DN3957. The X, Y, and Z were computed from the position and the ellipsoidal ht.
DN3957
DN3957. The Laplace correction was computed from DEFLEC12A derived deflections.
DN3957
DN3957. The ellipsoidal height was determined by GPS observations
DN3957. and is referenced to NAD 83.
DN3957
DN3957. The following values were computed from the NAD 83(2011) position.
DN3957
DN3957; SPC MS E North East Units Scale Factor Converg.
DN3957; SPC MS E - 317,558.936 230,901.389 MT 1.00000886 -0 23 34.8
DN3957; UTM 16 - 1,041,857.94 757,548.97 sFT 1.00000886 -0 23 34.8
DN3957; UTM 16 - 3,583,492.937 258,407.848 MT 1.00031982 -1 22 29.9
DN3957

DN3957! - Elev Factor x Scale Factor = Combined Factor
 DN3957! SPC MS E - 0.99998078 x 1.00000886 = 0.99998964
 DN3957! UTM 16 - 0.99998078 x 1.00031982 = 1.00030059
 DN3957
 DN3957 SUPERSEDED SURVEY CONTROL
 DN3957
 DN3957 NAD 83(2007)- 32 21 44.25490(N) 089 34 03.06580(W) AD(2002.00) A
 DN3957 ELLIP H (09/06/11) 122.437 (m) GP(2002.00) 4 1
 DN3957
 DN3957. Superseded values are not recommended for survey control.
 DN3957
 DN3957.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DN3957. [See file dsdata.txt](#) to determine how the superseded data were derived.
 DN3957
 DN3957_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBA5840783492(NAD 83)
 DN3957
 DN3957_MARKER: DD = SURVEY DISK
 DN3957_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DN3957_STAMPING: KALE 2008
 DN3957_MARK LOGO: MSDOT
 DN3957_PROJECTION: FLUSH
 DN3957_MAGNETIC: N = NO MAGNETIC MATERIAL
 DN3957_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DN3957+STABILITY: SURFACE MOTION
 DN3957_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DN3957+SATELLITE: SATELLITE OBSERVATIONS - December 22, 2008
 DN3957
 DN3957 HISTORY - Date Condition Report By
 DN3957 HISTORY - 20081222 MONUMENTED MSDOT
 DN3957
 DN3957 STATION DESCRIPTION
 DN3957
 DN3957' DESCRIBED BY MS DEPT TRANS 2008 (SOL)
 DN3957' THE STATION IS LOCATED ABOUT 6.5 MI (10.5 KM) NORTH-NORTHEAST OF
 DN3957' PULASKI, 5.5 MI (8.8 KM) WEST OF FOREST AND 5.1 MI (8.2 KM) EAST OF
 DN3957' MORTON.
 DN3957'
 DN3957' TO REACH THE MARK FROM THE INTERSECTIONS OF HIGHWAY 35 AND HIGHWAY 80
 DN3957' CONTINUE ON HIGHWAY 80 WEST FOR 5.4 MI (8.7 KM) TO THE MARK ON THE
 DN3957' RIGHT. MARK IS LOCATED INSIDE OF CHAIN LINK FENCED MS DEPARTMENT OF
 DN3957' TRANSPORTATION MAINTENANCE SPUR.
 DN3957'
 DN3957' THE STATION IS 154 FT (46.9 M) SOUTHEAST OF THE NORTHEAST CORNER OF
 DN3957' THE METAL SHED, 153 FT (46.6 M) EAST OF THE SOUTHEAST CORNER OF THE
 DN3957' METAL SHED, 134.5 FT (41.0 M) NORTHEAST OF A POWER POLE, 45.9 FT (14.0
 DN3957' M) NORTHWEST OF A POWER POLE, AND 22 FT (6.7 M) NORTH OF A FENCE

NGS DATA SHEET: KOSC (DJ2103)

DJ2103 *****
DJ2103 CBN - This is a Cooperative Base Network Control Station.
DJ2103 DESIGNATION - KOSC
DJ2103 PID - DJ2103
DJ2103 STATE/COUNTY- MS/ATTALA
DJ2103 COUNTRY - US
DJ2103 USGS QUAD - KOSCIUSKO (1982)
DJ2103
DJ2103 *CURRENT SURVEY CONTROL
DJ2103
DJ2103* NAD 83(2011) POSITION- 33 05 24.59112(N) 089 32 28.77238(W) ADJUSTED
DJ2103* NAD 83(2011) ELLIP HT- 118.405 (meters) (06/27/12) ADJUSTED
DJ2103* NAD 83(2011) EPOCH - 2010.00
DJ2103* NAVD 88 ORTHO HEIGHT - 145.6 (meters) 478. (feet) GPS OBS
DJ2103
DJ2103 NAVD 88 orthometric height was determined with geoid model GEOID99
DJ2103 GEOID HEIGHT - -27.10 (meters) GEOID99
DJ2103 GEOID HEIGHT - -27.19 (meters) GEOID12A
DJ2103 NAD 83(2011) X - 42,821.276 (meters) COMP
DJ2103 NAD 83(2011) Y - -5,348,949.772 (meters) COMP
DJ2103 NAD 83(2011) Z - 3,462,405.437 (meters) COMP
DJ2103 LAPLACE CORR - -1.99 (seconds) DEFLEC12A
DJ2103
DJ2103 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DJ2103 Type Horiz Ellip Dist(km)
DJ2103 -----
DJ2103 NETWORK 1.20 3.61
DJ2103 -----
DJ2103 MEDIAN LOCAL ACCURACY AND DIST (033 points) 1.35 3.68 84.44
DJ2103 -----
DJ2103 NOTE: Click [here](#) for information on individual local accuracy
DJ2103 values and other accuracy information.
DJ2103
DJ2103
DJ2103 This mark is at Kosciusko-Attala County Airport (OSX)
DJ2103
DJ2103 The horizontal coordinates were established by GPS observations
DJ2103 and adjusted by the National Geodetic Survey in June 2012.
DJ2103
DJ2103 NAD 83(2011) refers to NAD 83 coordinates where the reference
DJ2103 frame has been affixed to the stable North American tectonic plate. See
DJ2103 [NA2011](#) for more information.
DJ2103
DJ2103 The horizontal coordinates are valid at the epoch date displayed above
DJ2103 which is a decimal equivalence of Year/Month/Day.
DJ2103
DJ2103 The orthometric height was determined by GPS observations and a
DJ2103 high-resolution geoid model.
DJ2103
DJ2103 The X, Y, and Z were computed from the position and the ellipsoidal ht.
DJ2103
DJ2103 The Laplace correction was computed from DEFLEC12A derived deflections.
DJ2103
DJ2103 The ellipsoidal height was determined by GPS observations
DJ2103 and is referenced to NAD 83.
DJ2103
DJ2103 The following values were computed from the NAD 83(2011) position.
DJ2103
DJ2103; North East Units Scale Factor Converg.
DJ2103; SPC MS E - 398,261.500 233,905.840 MT 1.00000384 -0 23 11.6

DJ2103;SPC MS E - 1,306,629.60 767,406.08 sFT 1.00000384 -0 23 11.6
 DJ2103;UTM 16 - 3,664,155.632 262,810.052 MT 1.00029371 -1 23 17.2
 DJ2103
 DJ2103! - Elev Factor x Scale Factor = Combined Factor
 DJ2103!SPC MS E - 0.99998141 x 1.00000384 = 0.99998525
 DJ2103!UTM 16 - 0.99998141 x 1.00029371 = 1.00027512
 DJ2103
 DJ2103 SUPERSEDED SURVEY CONTROL
 DJ2103
 DJ2103 NAD 83(2007)- 33 05 24.59097(N) 089 32 28.77290(W) AD(2002.00) 0
 DJ2103 ELLIP H (02/10/07) 118.409 (m) GP(2002.00)
 DJ2103 ELLIP H (04/15/02) 118.419 (m) GP() 4 2
 DJ2103 ELLIP H (02/15/02) 118.417 (m) GP() 4 1
 DJ2103 NAD 83(1986)- 33 05 24.60723(N) 089 32 28.77633(W) AD() 1
 DJ2103 NAD 83(1993)- 33 05 24.59073(N) 089 32 28.77265(W) AD() B
 DJ2103 ELLIP H (01/12/94) 118.475 (m) GP() 4 1
 DJ2103 NAD 83(1986)- 33 05 24.60724(N) 089 32 28.77634(W) AD() 3
 DJ2103 NAD 27 - 33 05 24.15083(N) 089 32 28.51794(W) AD() 3
 DJ2103 NAVD 88 (01/12/94) 145.6 (m) GEOID93 model used GPS OBS
 DJ2103 NGVD 29 (09/20/88) 145.7 (m) RAPSU86 model used GPS OBS
 DJ2103
 DJ2103. Superseded values are not recommended for survey control.
 DJ2103
 DJ2103.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DJ2103. [See file dsdata.txt](#) to determine how the superseded data were derived.
 DJ2103
 DJ2103_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBB6281064155(NAD 83)
 DJ2103
 DJ2103_MARKER: DS = TRIANGULATION STATION DISK
 DJ2103_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DJ2103_SP_SET: CONCRETE POST
 DJ2103_STAMPING: KOSC 1986
 DJ2103_MARK LOGO: NGS
 DJ2103_MAGNETIC: N = NO MAGNETIC MATERIAL
 DJ2103_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DJ2103+STABILITY: SURFACE MOTION
 DJ2103_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DJ2103+SATELLITE: SATELLITE OBSERVATIONS - May 11, 2000
 DJ2103
 DJ2103 HISTORY - Date Condition Report By
 DJ2103 HISTORY - 1986 MONUMENTED NGS
 DJ2103 HISTORY - 1986 GOOD NGS
 DJ2103 HISTORY - 19880111 GOOD MSHD
 DJ2103 HISTORY - 19921006 GOOD MSHD
 DJ2103 HISTORY - 19930511 GOOD MSHD
 DJ2103 HISTORY - 20000511 GOOD MSHD
 DJ2103
 DJ2103 STATION DESCRIPTION
 DJ2103
 DJ2103'DESCRIBED BY NATIONAL GEODETIC SURVEY 1986 (AJL)
 DJ2103'THE STATION IS LOCATED ABOUT 7.2 KM (4.5 MI)
 DJ2103'NORTHEAST OF KOSCIUSKO,
 DJ2103'1.6 KM (1.0 MI) NORTHWEST OF STATE HIGHWAY 12, AT THE KOSCIUSKO
 DJ2103'MUNICIPAL AIRPORT AND NEAR THE CENTER OF THE FIELD.
 DJ2103'OWNERSHIP--KOSCIUSKO CITY AND ATTALA COUNTY, C/O AIRPORT MANAGER
 DJ2103'STEVEN FRANKS, ROUTE 2, BOX 51, KOSCIUSKO, MS 39090. PHONE (601)
 DJ2103'289-3536.
 DJ2103'
 DJ2103'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAYS 12, 19, 35
 DJ2103'AND 43 IN KOSCIUSKO, GO EAST FOR 6.3 KM (3.9 MI) ON HIGHWAY 12 TO A
 DJ2103'PAVED SIDE ROAD ON THE LEFT.
 DJ2103'TURN LEFT AND GO NORTHWEST FOR 1.0 KM (0.65 MI) ON THE PAVED ROAD

DJ2103' TO THE AIRPORT ENTRANCE ON THE LEFT.
DJ2103' TURN LEFT AND GO SOUTHWEST FOR 0.1 KM (0.05 MI) ON THE PAVED
DJ2103' ENTRANCE DRIVE PASSING THROUGH THE GATE ACROSS THE PARKING PAD AND
DJ2103' RAMP TO THE STATION ON THE LEFT JUST BEFORE REACHING THE RUNWAY.
DJ2103'
DJ2103' THE STATION IS A STANDARD NGS DISK
DJ2103' STAMPED---KOSC 1986---,
DJ2103' SET INTO THE TOP OF A ROUND CONCRETE MONUMENT
DJ2103' 30 CM IN DIAMETER PROJECTING 1 CM ABOVE GROUND. LOCATED
DJ2103' 64.6 METERS (212.0 FT) WEST FROM THE WINDSOCK POLE,
DJ2103' 42.7 METERS (140.0 FT) SOUTHWEST FROM THE SOUTHWEST EDGE OF THE
DJ2103' PARKING PAD,
DJ2103' 29.3 METERS (96.0 FT) NORTHEAST FROM THE NORTHEAST EDGE OF THE
DJ2103' RUNWAY,
DJ2103' 14.9 METERS (49.0 FT) SOUTHEAST FROM THE SOUTHEAST EDGE OF THE RAMP,
DJ2103' AND
DJ2103' 13.3 METERS (43.5 FT) SOUTH FROM A RAMP LIGHT ON LINE WITH THE
DJ2103' EXTENDED PLANE OF THE NORTHWEST SIDE OF THE LARGEST METAL HANGAR.
DJ2103' THE UNDERGROUND MARK IS A STANDARD NGS DISK
DJ2103' STAMPED---KOSC 1986---,
DJ2103' SET INTO AN IRREGULAR MASS OF CONCRETE 1.2 METERS BELOW THE SURFACE.
DJ2103'
DJ2103' DESCRIBED BY D.D. REXRODE, TYPED BY C.L. SMITH.
DJ2103
DJ2103 STATION RECOVERY (1986)
DJ2103
DJ2103' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1986
DJ2103' RECOVERED IN GOOD CONDITION.
DJ2103
DJ2103 STATION RECOVERY (1988)
DJ2103
DJ2103' RECOVERED 1988
DJ2103' RECOVERED IN GOOD CONDITION.
DJ2103
DJ2103 STATION RECOVERY (1992)
DJ2103
DJ2103' RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
DJ2103' MARK IS LOCATED ABOUT 3.5 MI (5.6 KM) NORTHEAST OF KOSCIUSKO NEAR THE
DJ2103' CENTER OF THE FIELD AT THE MUNICIPAL AIRPORT. OWNERSHIP--CITY AND
DJ2103' ATTALA COUNTY, C/O AIRPORT MANAGER TOD MC NEAL, ROUTE 2, BOX 51,
DJ2103' KOSCIUSKO, MS 39090. PHONE (601) 289-3536.
DJ2103' TO REACH FROM THE JUNCTION OF STATE HIGHWAYS 12, 19, 35 AND 43 IN
DJ2103' KOSCIUSKO, GO EAST ON STATE HIGHWAY 12 FOR 3.9 MI (6.3 KM) TO A SIDE
DJ2103' ROAD LEFT, TURN LEFT AND GO NORTHWEST ON A PAVED ROAD FOR 0.65 MI
DJ2103' (1.05 KM) TO THE ENTRANCE TO THE AIRPORT ON THE LEFT, TURN LEFT AND
DJ2103' GO SOUTHWEST ON A PAVED ENTRANCE DRIVE PASSING THROUGH A GATE ACROSS
DJ2103' A PARKING PAD AND RAMP FOR 0.05 MI (0.08 KM) TO THE MARK ON THE LEFT.
DJ2103' MARK IS A STANDARD NGS DISK SET IN THE TOP OF A ROUND CONCRETE POST,
DJ2103' FLUSH WITH THE GROUND, 212 FT (64.6 M) WEST OF A WINDSOCK POLE, 140
DJ2103' FT (42.7 M) SOUTHWEST OF THE SOUTHWEST EDGE OF A PARKING PAD, 96 FT
DJ2103' (29.3 M) NORTHEAST OF THE NORTHEAST EDGE OF THE RUNWAY, 49 FT
DJ2103' (14.9 M) SOUTHEAST OF THE SOUTHEAST EDGE OF A RAMP, 43.5 FT (13.3 M)
DJ2103' SOUTH OF A RAMP LIGHT, 1 FT (0.3 M) SOUTHEAST OF A CARSONITE WITNESS
DJ2103' POST AND IS ON LINE WITH THE EXTENDED PLANE OF THE NORTHWEST SIDE OF
DJ2103' A LARGE METAL HANGAR.
DJ2103
DJ2103 STATION RECOVERY (1993)
DJ2103
DJ2103' RECOVERED 1993
DJ2103' RECOVERED IN GOOD CONDITION.
DJ2103
DJ2103 STATION RECOVERY (2000)

DJ2103

DJ2103'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 2000
DJ2103'RECOVERED AS DESCRIBED.

NGS DATA SHEET: L 54 (CP0198)

CP0198 *****
CP0198 CBN - This is a Cooperative Base Network Control Station.
CP0198 DESIGNATION - L 54
CP0198 PID - CP0198
CP0198 STATE/COUNTY- MS/MADISON
CP0198 COUNTRY - US
CP0198 USGS QUAD - CANTON (1989)
CP0198
CP0198 *CURRENT SURVEY CONTROL
CP0198
CP0198* NAD 83(2011) POSITION- 32 36 44.94999(N) 090 02 25.21301(W) ADJUSTED
CP0198* NAD 83(2011) ELLIP HT- 40.683 (meters) (06/27/12) ADJUSTED
CP0198* NAD 83(2011) EPOCH - 2010.00
CP0198* NAVD 88 ORTHO HEIGHT - 67.708 (meters) 222.14 (feet) ADJUSTED
CP0198
CP0198 NAD 83(2011) X - -3,786.034 (meters) COMP
CP0198 NAD 83(2011) Y - -5,377,791.897 (meters) COMP
CP0198 NAD 83(2011) Z - 3,417,859.249 (meters) COMP
CP0198 LAPLACE CORR - -1.07 (seconds) DEFLEC12A
CP0198 GEOID HEIGHT - -27.03 (meters) GEOID12A
CP0198 DYNAMIC HEIGHT - 67.630 (meters) 221.88 (feet) COMP
CP0198 MODELED GRAVITY - 979,495.3 (mgal) NAVD 88
CP0198
CP0198 VERT ORDER - SECOND CLASS 0
CP0198
CP0198 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
CP0198 Type Horiz Ellip Dist(km)
CP0198 -----
CP0198 NETWORK 0.92 1.31
CP0198 -----
CP0198 MEDIAN LOCAL ACCURACY AND DIST (030 points) 1.25 2.21 70.08
CP0198 -----
CP0198 NOTE: Click [here](#) for information on individual local accuracy
CP0198 values and other accuracy information.
CP0198
CP0198
CP0198.The horizontal coordinates were established by GPS observations
CP0198.and adjusted by the National Geodetic Survey in June 2012.
CP0198
CP0198.NAD 83(2011) refers to NAD 83 coordinates where the reference
CP0198.frame has been affixed to the stable North American tectonic plate. See
CP0198.[NA2011](#) for more information.
CP0198
CP0198.The horizontal coordinates are valid at the epoch date displayed above
CP0198.which is a decimal equivalence of Year/Month/Day.
CP0198
CP0198.The orthometric height was determined by differential leveling and
CP0198.adjusted by the NATIONAL GEODETIC SURVEY
CP0198.in June 1991.
CP0198
CP0198.The X, Y, and Z were computed from the position and the ellipsoidal ht.
CP0198
CP0198.The Laplace correction was computed from DEFLEC12A derived deflections.
CP0198
CP0198.The ellipsoidal height was determined by GPS observations
CP0198.and is referenced to NAD 83.
CP0198
CP0198.The dynamic height is computed by dividing the NAVD 88
CP0198.geopotential number by the normal gravity value computed on the
CP0198.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

CP0198.degrees latitude (g = 980.6199 gals.).
 CP0198
 CP0198.The modeled gravity was interpolated from observed gravity values.
 CP0198
 CP0198. The following values were computed from the NAD 83(2011) position.
 CP0198
 CP0198; North East Units Scale Factor Converg.
 CP0198;SPC MS E - 345,708.999 186,713.248 MT 1.00010820 -0 39 02.1
 CP0198;SPC MS E - 1,134,213.61 612,575.05 SFT 1.00010820 -0 39 02.1
 CP0198;SPC MS W - 345,103.723 727,499.199 MT 0.99995932 +0 09 28.5
 CP0198;SPC MS W - 1,132,227.80 2,386,803.62 SFT 0.99995932 +0 09 28.5
 CP0198;UTM 15 - 3,612,196.627 777,733.824 MT 1.00055128 +1 35 46.1
 CP0198;UTM 16 - 3,612,410.542 214,692.805 MT 1.00060387 -1 38 23.0
 CP0198
 CP0198! - Elev Factor x Scale Factor = Combined Factor
 CP0198!SPC MS E - 0.99999361 x 1.00010820 = 1.00010181
 CP0198!SPC MS W - 0.99999361 x 0.99995932 = 0.99995293
 CP0198!UTM 15 - 0.99999361 x 1.00055128 = 1.00054489
 CP0198!UTM 16 - 0.99999361 x 1.00060387 = 1.00059748
 CP0198
 CP0198 SUPERSEDED SURVEY CONTROL
 CP0198
 CP0198 NAD 83(2007)- 32 36 44.95015(N) 090 02 25.21352(W) AD(2002.00) A
 CP0198 ELLIP H (09/06/11) 40.676 (m) GP(2002.00) 4 1
 CP0198 NAD 83(2007)- 32 36 44.94974(N) 090 02 25.21355(W) AD(2002.00) 0
 CP0198 ELLIP H (02/10/07) 40.721 (m) GP(2002.00)
 CP0198 ELLIP H (04/15/02) 40.763 (m) GP() 4 2
 CP0198 ELLIP H (02/15/02) 40.759 (m) GP() 4 1
 CP0198 NAD 83(1986)- 32 36 44.96441(N) 090 02 25.21007(W) AD() 1
 CP0198 NAD 83(1993)- 32 36 44.94957(N) 090 02 25.21336(W) AD() B
 CP0198 ELLIP H (01/12/94) 40.774 (m) GP() 4 1
 CP0198 NAVD 88 (01/12/94) 67.71 (m) 222.1 (f) LEVELING 3
 CP0198 NGVD 29 (??/?/92) 67.768 (m) 222.34 (f) ADJ UNCH 2 0
 CP0198
 CP0198.Superseded values are not recommended for survey control.
 CP0198
 CP0198.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CP0198. [See file dsdata.txt](#) to determine how the superseded data were derived.
 CP0198
 CP0198_U.S. NATIONAL GRID SPATIAL ADDRESS: 15SYS7773312196(NAD 83)
 CP0198
 CP0198_MARKER: DB = BENCH MARK DISK
 CP0198_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CP0198_SP_SET: CONCRETE POST
 CP0198_STAMPING: L 54 1935
 CP0198_MARK LOGO: CGS
 CP0198_PROJECTION: FLUSH
 CP0198_MAGNETIC: N = NO MAGNETIC MATERIAL
 CP0198_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CP0198+STABILITY: SURFACE MOTION
 CP0198_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 CP0198+SATELLITE: SATELLITE OBSERVATIONS - March 12, 2011
 CP0198
 CP0198 HISTORY - Date Condition Report By
 CP0198 HISTORY - 1935 MONUMENTED CGS
 CP0198 HISTORY - 1965 GOOD CGS
 CP0198 HISTORY - 1971 GOOD NGS
 CP0198 HISTORY - 19890330 GOOD MSHD
 CP0198 HISTORY - 19921009 GOOD MSHD
 CP0198 HISTORY - 19930503 GOOD NGS
 CP0198 HISTORY - 20000601 GOOD INDIV
 CP0198 HISTORY - 20040922 GOOD

CP0198 HISTORY - 20080828 GOOD MSDOT
CP0198 HISTORY - 20110312 GOOD MSSU

CP0198
CP0198 STATION DESCRIPTION
CP0198
CP0198 DESCRIBED BY COAST AND GEODETIC SURVEY 1965
CP0198 IN CANTON.
CP0198 THE MARK IS AT THE CANTON ILLINOIS CENTRAL DEPOT. THE MARK IS A DISK
CP0198 SET IN THE TOP OF A SQUARE, CONCRETE POST. IT IS 56.5 FEET EAST OF
CP0198 THE CENTERLINE OF THE MAIN NORTHBOUND TRACK. IT IS 46 FEET
CP0198 WEST-SOUTHWEST OF STEEL ARC STREET LIGHTING POLE, 14.5 FEET SOUTH OF
CP0198 THE SOUTH CURB OF STATE HIGHWAY 22 (W. PEACE STREET). IT IS 4.8 FEET
CP0198 SOUTH OF THE SOUTH EDGE OF A SIDEWALK, 6 INCHES ABOVE THE CENTERLINE
CP0198 OF HIGHWAY 22 AND FLUSH WITH THE GROUND.

CP0198
CP0198 STATION RECOVERY (1971)
CP0198
CP0198 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1971
CP0198 RECOVERED IN GOOD CONDITION.

CP0198
CP0198 STATION RECOVERY (1989)
CP0198
CP0198 RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1989
CP0198 TO REACH FROM THE COURTHOUSE IN CANTON GO WEST ON STATE HIGHWAY 22 FOR
CP0198 0.48 KM (0.30 MI) TO THE RAILROAD CROSSING AND THE MARK ON THE LEFT.
CP0198 IT IS 22.25 M (73.0 FT) WEST OF THE CENTER OF A PAVED ROAD, 19.81 M
CP0198 (65.0 FT) NORTH OF THE NORTHEAST CORNER OF THE ABANDONED RAILROAD
CP0198 STATION, 16.15 M (53.0 FT) EAST OF THE EAST RAIL, 14.33 M (47.0 FT)
CP0198 SOUTH OF THE CENTER OF HIGHWAY 22, 13.41 M (44.0 FT) SOUTHWEST OF A
CP0198 METAL LAMP POLE, 4.42 M (14.5 FT) SOUTH OF THE SOUTH EDGE OF A
CP0198 CONCRETE WALK AND IS FLUSH WITH THE GROUND.

CP0198
CP0198 STATION RECOVERY (1992)
CP0198
CP0198 RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
CP0198 MARK IS LOCATED ABOUT 0.3 MI (0.5 KM) WEST OF THE COURTHOUSE IN CANTON
CP0198 ON THE SOUTH R.O.W. OF STATE HIGHWAY 22 (WEST PEACE STREET), IN THE
CP0198 SOUTHEAST ANGLE OF THE CROSSING OF THE I.C.G. RAILROAD TRACK, IN A
CP0198 PARKING AREA ON THE NORTH SIDE OF THE ABANDONED RAILROAD STATION.
CP0198 (NOTE) THE MARK NEEDS TO BE GUARDED BEFORE THE CARS ARRIVE IN THE
CP0198 MORNING BECAUSE CARS PARK ON THE MARK.

CP0198 MARK IS A STANDARD DISK SET IN THE TOP OF A CONCRETE POST, FLUSH WITH
CP0198 THE PARKING LOT, 73 FT (22.3 M) WEST OF THE CENTER OF FRONT STREET,
CP0198 65 FT (19.8 M) NORTH OF THE NORTHEAST CORNER OF THE ABANDONED
CP0198 STATION, 53 FT (16.2 M) EAST OF THE EAST RAIL OF THE MAIN TRACK, 47
CP0198 FT (14.3 M) SOUTH OF THE CENTER OF PEACE STREET, 44 FT (13.4 M)
CP0198 SOUTHWEST OF A METAL LAMP POLE AND 4.8 FT (1.5 M) SOUTH OF THE SOUTH
CP0198 EDGE OF A WALK.

CP0198
CP0198 STATION RECOVERY (1993)
CP0198
CP0198 RECOVERED 1993
CP0198 RECOVERED IN GOOD CONDITION.

CP0198
CP0198 STATION RECOVERY (2000)
CP0198
CP0198 RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000
CP0198 RECOVERED AS AMENDED. THE STATION IS NOW IN A RAISED PLANTED FLOWER
CP0198 BED NORTH OF THE BRICK DEPOT BUILDING. IT IS 4.6 FT (1.4 M) SOUTH OF
CP0198 THE METAL RAIL FENCE ALONG THE EDGE OF THE SIDEWALK, 5.6 FT (1.7 M)
CP0198 WEST OF A METAL RAIL FENCE ON THE EAST SIDE OF THE PLANTED BED, 10.8
CP0198 FT (3.3 M) NORTH OF THE FACE OF THE CURB ON THE SOUTH SIDE OF THE

CP0198' PLANTED BED, AND 12.3 FT (3.7 M) EAST OF THE TRAIN MUSEUM SIGN, METAL
CP0198' FRAME WITH WOODEN SIGN BOARD.

CP0198

CP0198 STATION RECOVERY (2004)

CP0198

CP0198'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2004 (JCB)

CP0198'RECOVERED AS DESCRIBED

CP0198

CP0198 STATION RECOVERY (2008)

CP0198

CP0198'RECOVERY NOTE BY MS DEPT TRANS 2008 (SOL)

CP0198'RECOVERED AS DESCRIBED.

CP0198

CP0198 STATION RECOVERY (2011)

CP0198

CP0198'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2011 (RSB)

CP0198'THE MARK IS IN THE MIDDLE OF DECORATIVE HOLLY SHRUBS.

NGS DATA SHEET: L 102 (CO0724)

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CO0724 ****
CO0724 CBN - This is a Cooperative Base Network Control Station.
CO0724 DESIGNATION - L 102
CO0724 PID - CO0724
CO0724 STATE/COUNTY- MS/NEWTON
CO0724 COUNTRY - US
CO0724 USGS QUAD - UNION EAST (1982)
CO0724
CO0724 *CURRENT SURVEY CONTROL
CO0724
CO0724* NAD 83(2011) POSITION- 32 34 13.48242(N) 089 07 20.45778(W) ADJUSTED
CO0724* NAD 83(2011) ELLIP HT- 115.921 (meters) (06/27/12) ADJUSTED
CO0724* NAD 83(2011) EPOCH - 2010.00
CO0724* NAVD 88 ORTHO HEIGHT - 143.629 (meters) 471.22 (feet) ADJUSTED
CO0724
CO0724 NAD 83(2011) X - 82,412.708 (meters) COMP
CO0724 NAD 83(2011) Y - -5,379,738.722 (meters) COMP
CO0724 NAD 83(2011) Z - 3,413,968.532 (meters) COMP
CO0724 LAPLACE CORR - -2.62 (seconds) DEFLEC12A
CO0724 GEOID HEIGHT - -27.65 (meters) GEOID12A
CO0724 DYNAMIC HEIGHT - 143.462 (meters) 470.67 (feet) COMP
CO0724 MODELED GRAVITY - 979,478.4 (mgal) NAVD 88
CO0724
CO0724 VERT ORDER - SECOND CLASS 0
CO0724
CO0724 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
CO0724 Type Horiz Ellip Dist(km)
CO0724 -----
CO0724 NETWORK 1.52 6.29
CO0724 -----
CO0724 MEDIAN LOCAL ACCURACY AND DIST (018 points) 1.63 6.33 44.09
CO0724 -----
CO0724 NOTE: Click here for information on individual local accuracy
CO0724 values and other accuracy information.
CO0724
CO0724
CO0724.The horizontal coordinates were established by GPS observations
CO0724.and adjusted by the National Geodetic Survey in June 2012.
CO0724
CO0724.NAD 83(2011) refers to NAD 83 coordinates where the reference
CO0724.frame has been affixed to the stable North American tectonic plate. See
CO0724.NA2011 for more information.
CO0724
CO0724.The horizontal coordinates are valid at the epoch date displayed above
CO0724.which is a decimal equivalence of Year/Month/Day.
CO0724
CO0724.The orthometric height was determined by differential leveling and
CO0724.adjusted by the NATIONAL GEODETIC SURVEY
CO0724.in June 1991.
CO0724
CO0724.The X, Y, and Z were computed from the position and the ellipsoidal ht.
CO0724
CO0724.The Laplace correction was computed from DEFLEC12A derived deflections.
CO0724
CO0724.The ellipsoidal height was determined by GPS observations
CO0724.and is referenced to NAD 83.
CO0724
CO0724.The dynamic height is computed by dividing the NAVD 88
CO0724.geopotential number by the normal gravity value computed on the
CO0724.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

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CO0724.degrees latitude (g = 980.6199 gals.).
 CO0724
 CO0724.The modeled gravity was interpolated from observed gravity values.
 CO0724
 CO0724. The following values were computed from the NAD 83(2011) position.
 CO0724
 CO0724; North East Units Scale Factor Converg.
 CO0724;SPC MS E - 340,436.984 272,861.700 MT 0.99995908 -0 09 20.1
 CO0724;SPC MS E - 1,116,917.01 895,213.76 SFT 0.99995908 -0 09 20.1
 CO0724;UTM 16 - 3,605,651.426 300,764.454 MT 1.00008950 -1 08 34.5
 CO0724
 CO0724! - Elev Factor x Scale Factor = Combined Factor
 CO0724!SPC MS E - 0.99998180 x 0.99995908 = 0.99994088
 CO0724!UTM 16 - 0.99998180 x 1.00008950 = 1.00007130
 CO0724
 CO0724 SUPERSEDED SURVEY CONTROL
 CO0724
 CO0724 NAD 83(2007)- 32 34 13.48243(N) 089 07 20.45830(W) AD(2002.00) 0
 CO0724 ELLIP H (04/15/02) 115.932 (m) GP() 4 2
 CO0724 NAD 83(1993)- 32 34 13.48224(N) 089 07 20.45802(W) AD() B
 CO0724 ELLIP H (02/15/02) 115.930 (m) GP() 4 1
 CO0724 NAVD 88 (02/15/02) 143.5 (m) GEOID99 model used GPS OBS
 CO0724 NGVD 29 (??/?/92) 143.640 (m) 471.26 (f) ADJ UNCH 2 0
 CO0724
 CO0724.Superseded values are not recommended for survey control.
 CO0724
 CO0724.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 CO0724.See file dsdata.txt to determine how the superseded data were derived.
 CO0724
 CO0724_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB0076405651(NAD 83)
 CO0724
 CO0724_MARKER: DB = BENCH MARK DISK
 CO0724_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 CO0724_SP_SET: CONCRETE POST
 CO0724_STAMPING: L 102 1935
 CO0724_MARK LOGO: CGS
 CO0724_MAGNETIC: N = NO MAGNETIC MATERIAL
 CO0724_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 CO0724+STABILITY: SURFACE MOTION
 CO0724_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 CO0724+SATELLITE: SATELLITE OBSERVATIONS - May 01, 2000
 CO0724
 CO0724 HISTORY - Date Condition Report By
 CO0724 HISTORY - 1935 MONUMENTED CGS
 CO0724 HISTORY - 1964 GOOD MSHD
 CO0724 HISTORY - 19890629 GOOD MSHD
 CO0724 HISTORY - 20000501 GOOD NGS
 CO0724 HISTORY - 20051123 MARK NOT FOUND MSSU
 CO0724
 CO0724 STATION DESCRIPTION
 CO0724
 CO0724'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1964
 CO0724'IN UNION.
 CO0724'THE MARK IS LOCATED AT THE GULF, MOBILE, AND OHIO RAILROAD STATION IN
 CO0724'UNION. THE MARK IS A DISK SET IN THE TOP OF A 12-INCH ROUND CONCRETE
 CO0724'POST. IT IS 235 FEET SOUTH OF THE SOUTH SIDE OF THE STATION, 8 FEET
 CO0724'NORTH OF THE EIGHTH POLE SOUTH OF MILEPOST 181, 35 FEET EAST OF AND
 CO0724'ABOUT LEVEL WITH THE MAIN TRACK, AND PROJECTS 2 INCHES. A METAL
 CO0724'WITNESS POST WAS SET 1.0 FOOT NORTH OF THE MARK.
 CO0724
 CO0724 STATION RECOVERY (1989)
 CO0724

CO0724'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1989
CO0724'MARK IS LOCATED 1 BLOCK WEST OF THE CENTER OF DOWNTOWN UNION IN THE
CO0724'SOUTHEAST ANGLE OF THE CROSSING OF STATE HWY. 492 AND THE RAILROAD
CO0724' TRACK IN THE NE 1/4 OF SECTION 1, T8N, R11E. MARK IS A STANDARD DISK
CO0724' SET IN THE TOP OF A ROUND CONCRETE POST ABOUT 0.06 M (0.2 FT) BELOW
CO0724'THE GROUND. IT IS 54.56 M (179.0 FT) SOUTH OF THE CENTER OF HIGHWAY
CO0724'492, 45.42 M (149.0 FT) SOUTH OF A LAMP POLE, 39.93 M (131.0 FT)
CO0724'SOUTHWEST OF THE NORTHWEST CORNER OF AN OLD BRICK BUILDING, 7.77 M
CO0724'(25.5 FT)EAST OF EAST RAIL OF THE MAIN TRACK, 1.83 M (6.0 FT) NORTH OF
CO0724'AN ABANDONED POLE, 0.3 M (1.0 FT) SOUTH OF A CARSONITE WITNESS POST
CO0724'AND IS ABOUT LEVEL WITH THE TRACK.

CO0724

STATION RECOVERY (2000)

CO0724

CO0724'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000

CO0724'THE STATION IS LOCATED ON THE WEST SIDE OF UNION, MS, IN THE NORTH END
CO0724'OF NEWTON COUNTY. TO REACH THE STATION FROM THE INTERSECTION OF RTE
CO0724'15 AND 492 EAST OF UNION, DRIVE ABOUT 1.0 MI (1.6 KM) WEST INTO TOWN
CO0724'ON RTE 492/JACKSON RD. TO A Y INTERSECTION. TAKE THE LEFT FORK, MAIN
CO0724'ST./RTE 489 AND PROCEED 0.2 MI (0.3 KM) THROUGH DOWNTOWN TO AN
CO0724'AT-GRADE RAILROAD CROSSING (WEST OF FRONT ST.) AND THE STATION ON THE
CO0724'LEFT. THE STATION IS IN THE SOUTHEAST ANGLE OF THE RR WITH RTE 489.

CO0724

STATION RECOVERY (2005)

CO0724

CO0724'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2005 (JAF)

CO0724'THE AREA HAS BECOME A NEW SWITCHYARD. THERE WAS NO SIGN OF A WITNESS

CO0724'POST OR MARK

NGS DATA SHEET: LEX (DK2129)

DK2129 *****
DK2129 CBN - This is a Cooperative Base Network Control Station.
DK2129 DESIGNATION - LEX
DK2129 PID - DK2129
DK2129 STATE/COUNTY- MS/HOLMES
DK2129 COUNTRY - US
DK2129 USGS QUAD - LEXINGTON NORTH (1982)
DK2129
DK2129 *CURRENT SURVEY CONTROL
DK2129
DK2129* NAD 83(2011) POSITION- 33 07 32.02251(N) 090 01 33.95493(W) ADJUSTED
DK2129* NAD 83(2011) ELLIP HT- 71.380 (meters) (06/27/12) ADJUSTED
DK2129* NAD 83(2011) EPOCH - 2010.00
DK2129* NAVD 88 ORTHO HEIGHT - 98.3 (meters) 323. (feet) GPS OBS
DK2129
DK2129 NAVD 88 orthometric height was determined with geoid model GEOID99
DK2129 GEOID HEIGHT - -26.83 (meters) GEOID99
DK2129 GEOID HEIGHT - -26.98 (meters) GEOID12A
DK2129 NAD 83(2011) X - -2,435.564 (meters) COMP
DK2129 NAD 83(2011) Y - -5,346,936.847 (meters) COMP
DK2129 NAD 83(2011) Z - 3,465,668.239 (meters) COMP
DK2129 LAPLACE CORR - -0.20 (seconds) DEFLEC12A
DK2129
DK2129 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DK2129 Type Horiz Ellip Dist(km)
DK2129 -----
DK2129 NETWORK 0.85 2.80
DK2129 -----
DK2129 MEDIAN LOCAL ACCURACY AND DIST (029 points) 1.18 3.41 61.41
DK2129 -----
DK2129 NOTE: Click [here](#) for information on individual local accuracy
DK2129 values and other accuracy information.
DK2129
DK2129
DK2129 This mark is at C A Moore Regional Airport (19M)
DK2129
DK2129 The horizontal coordinates were established by GPS observations
DK2129 and adjusted by the National Geodetic Survey in June 2012.
DK2129
DK2129 NAD 83(2011) refers to NAD 83 coordinates where the reference
DK2129 frame has been affixed to the stable North American tectonic plate. See
DK2129 [NA2011](#) for more information.
DK2129
DK2129 The horizontal coordinates are valid at the epoch date displayed above
DK2129 which is a decimal equivalence of Year/Month/Day.
DK2129
DK2129 The orthometric height was determined by GPS observations and a
DK2129 high-resolution geoid model.
DK2129
DK2129 The X, Y, and Z were computed from the position and the ellipsoidal ht.
DK2129
DK2129 The Laplace correction was computed from DEFLEC12A derived deflections.
DK2129
DK2129 The ellipsoidal height was determined by GPS observations
DK2129 and is referenced to NAD 83.
DK2129
DK2129 The following values were computed from the NAD 83(2011) position.
DK2129
DK2129; SPC MS W - 402,006.179 728,669.959 MT 0.99996013 +0 10 04.4
North East Units Scale Factor Converg.

DK2129;SPC MS W - 1,318,915.27 2,390,644.69 SFT 0.99996013 +0 10 04.4
 DK2129;UTM 15 - 3,669,144.110 777,465.867 MT 1.00054934 +1 37 34.3
 DK2129;UTM 16 - 3,669,283.638 217,662.299 MT 1.00058297 -1 39 17.2
 DK2129
 DK2129! - Elev Factor x Scale Factor = Combined Factor
 DK2129!SPC MS W - 0.99998879 x 0.99996013 = 0.99994892
 DK2129!UTM 15 - 0.99998879 x 1.00054934 = 1.00053813
 DK2129!UTM 16 - 0.99998879 x 1.00058297 = 1.00057176
 DK2129
 DK2129: Primary Azimuth Mark Grid Az
 DK2129:SPC MS W - LEX AZ MK 013 35 26.7
 DK2129:UTM 15 - LEX AZ MK 012 07 56.8
 DK2129:UTM 16 - LEX AZ MK 015 24 48.3
 DK2129
 DK2129|-----|
 DK2129| PID Reference Object Distance Geod. Az |
 DK2129|-----| dddmmss.s |
 DK2129| DK2130 LEX AZ MK 487.463 METERS 0134531.1 |
 DK2129|-----|
 DK2129
 DK2129 SUPERSEDED SURVEY CONTROL
 DK2129
 DK2129 NAD 83(2007)- 33 07 32.02224(N) 090 01 33.95563(W) AD(2002.00) 0
 DK2129 ELLIP H (02/10/07) 71.382 (m) GP(2002.00)
 DK2129 ELLIP H (04/15/02) 71.372 (m) GP() 4 2
 DK2129 ELLIP H (02/15/02) 71.381 (m) GP() 4 1
 DK2129 NAD 83(1993)- 33 07 32.02206(N) 090 01 33.95540(W) AD() B
 DK2129 ELLIP H (01/12/94) 71.450 (m) GP() 4 1
 DK2129 NAD 83(1986)- 33 07 32.03610(N) 090 01 33.95165(W) AD() 3
 DK2129 NAD 27 - 33 07 31.58161(N) 090 01 33.66869(W) AD() 3
 DK2129 NAVD 88 (01/12/94) 98.3 (m) GEOID93 model used GPS OBS
 DK2129 NGVD 29 (09/20/88) 98.1 (m) RAPSU86 model used GPS OBS
 DK2129
 DK2129. Superseded values are not recommended for survey control.
 DK2129
 DK2129.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DK2129. [See file dsdata.txt](#) to determine how the superseded data were derived.
 DK2129
 DK2129_U.S. NATIONAL GRID SPATIAL ADDRESS: 15SYS7746569144(NAD 83)
 DK2129
 DK2129_MARKER: DS = TRIANGULATION STATION DISK
 DK2129_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DK2129_SP_SET: CONCRETE POST
 DK2129_STAMPING: LEX 1986
 DK2129_MARK LOGO: NGS
 DK2129_MAGNETIC: N = NO MAGNETIC MATERIAL
 DK2129_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DK2129+STABILITY: SURFACE MOTION
 DK2129_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DK2129+SATELLITE: SATELLITE OBSERVATIONS - April 01, 2000
 DK2129
 DK2129 HISTORY - Date Condition Report By
 DK2129 HISTORY - 1986 MONUMENTED NGS
 DK2129 HISTORY - 1986 GOOD NGS
 DK2129 HISTORY - 19880108 GOOD
 DK2129 HISTORY - 19921006 GOOD MSHD
 DK2129 HISTORY - 19930511 GOOD
 DK2129 HISTORY - 20000401 GOOD NGS
 DK2129 HISTORY - 20080420 GOOD MSSU
 DK2129
 DK2129 STATION DESCRIPTION
 DK2129

DK2129' DESCRIBED BY NATIONAL GEODETIC SURVEY 1986 (AJL)
DK2129' THE STATION IS LOCATED ABOUT 4.2 KM (2.6 MI)
DK2129' NORTHEAST OF THE CENTER OF LEXINGTON, AT THE C.A. MOORE
DK2129' AIRPORT, NEAR THE CENTER OF THE SINGLE RUNWAY.
DK2129' OWNERSHIP--CITY OF LEXINGTON, C/O AIRPORT MANAGER JAMES KEITH, CITY
DK2129' HALL, LEXINGTON, MS 39095. PHONE (601) 834-1261.
DK2129'
DK2129' TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAYS 12 AND 17
DK2129' AT THE SQUARE IN LEXINGTON, GO EAST FOR 1.9 KM (1.2 MI) ON HIGHWAY
DK2129' 12 TO A PAVED SIDE ROAD ON THE LEFT.
DK2129' TURN LEFT AND GO NORTHEAST FOR 1.4 KM (0.9 MI) ON THE PAVED ROAD TO
DK2129' THE END OF THE ROAD AND A LOCKED GATE AT THE AIRPORT ENTRANCE.
DK2129' PASS THROUGH THE GATE AND CONTINUE AHEAD, NORTHEAST FOR 0.1 KM
DK2129' (0.05 MI) ON THE PARKING PAD TO THE RAMP AND THE STATION ON THE
DK2129' RIGHT.
DK2129'
DK2129' THE STATION IS A STANDARD NGS DISK
DK2129' STAMPED---LEX 1986---,
DK2129' SET INTO THE TOP OF A ROUND CONCRETE MONUMENT
DK2129' 30 CM IN DIAMETER PROJECTING 2 CM ABOVE GROUND. LOCATED
DK2129' 66.1 METERS (217.0 FT) NORTHWEST FROM THE FIRST RUNWAY LIGHT SOUTH
DK2129' OF THE RAMP,
DK2129' 43.7 METERS (143.5 FT) WEST FROM THE WEST EDGE OF THE RUNWAY,
DK2129' 40.8 METERS (133.7 FT) WEST FROM THE BLUE RAMP LIGHT AT THE WEST
DK2129' EDGE OF THE RUNWAY,
DK2129' 17.5 METERS (57.3 FT) SOUTH FROM THE SOUTH EDGE OF THE RAMP,
DK2129' 15.7 METERS (51.5 FT) EAST FROM THE EAST EDGE OF THE PARKING PAD,
DK2129' AND 0.5 METERS (1.5 FT) NORTH FROM A FIBERGLASS WITNESS POST.
DK2129' THE UNDERGROUND MARK IS A STANDARD NGS DISK
DK2129' STAMPED---LEX 1986---,
DK2129' SET INTO AN IRREGULAR MASS OF CONCRETE 1.2 METERS BELOW THE SURFACE.
DK2129'
DK2129' DESCRIBED BY D.D. REXRODE, TYPED BY C.L. SMITH.
DK2129
DK2129 STATION RECOVERY (1986)
DK2129
DK2129' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1986
DK2129' RECOVERED IN GOOD CONDITION.
DK2129
DK2129 STATION RECOVERY (1988)
DK2129
DK2129' RECOVERED 1988
DK2129' RECOVERED IN GOOD CONDITION.
DK2129
DK2129 STATION RECOVERY (1992)
DK2129
DK2129' RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
DK2129' THE STATION IS LOCATED ABOUT 2.6 MI (4.2 KM) NORTHEAST OF LEXINGTON,
DK2129' AT THE C.A. MOORE AIRPORT, NEAR THE CENTER OF THE SINGLE RUNWAY JUST
DK2129' SOUTH OF A TAXI RAMP. OWNERSHIP--CITY OF LEXINGTON, C/O AIRPORT
DK2129' MANAGER DAN PEPPER, CITY HALL, LEXINGTON, MS 39095. PHONE (601)
DK2129' 834-1261.
DK2129' TO REACH FROM THE JUNCTION OF STATE HIGHWAYS 12 AND 17 AT THE EAST
DK2129' SIDE OF THE SQUARE IN LEXINGTON, GO EAST ON STATE HIGHWAY 12 FOR 1.2
DK2129' MI (1.9 KM) TO A SIDE ROAD LEFT, TURN LEFT AND GO NORTHEAST ON A
DK2129' PAVED ROAD FOR 0.5 MI (0.8 KM) TO A SIDE ROAD LEFT, TURN LEFT AND GO
DK2129' NORTH ON A PAVED ROAD FOR 0.9 MI (1.4 KM) TO THE END OF THE ROAD AND
DK2129' A LOCKED GATE AT THE ENTRANCE TO THE AIRPORT, PASS THROUGH THE GATE
DK2129' AND CONTINUE NORTHEAST ON THE PARKING PAD FOR 0.05 MI (0.08 KM) TO
DK2129' THE RAMP AND THE STATION ON THE RIGHT.
DK2129' MARK IS A STANDARD NGS DISK SET IN THE TOP OF A ROUND CONCRETE POST,
DK2129' FLUSH WITH THE GROUND, 217 FT (66.1 M) NORTHWEST OF THE FIRST RUNWAY

DK2129'LIGHT SOUTH OF THE RAMP, 143.5 FT (43.7 M) WEST OF THE WEST EDGE OF
DK2129'THE RUNWAY, 133.7 FT (40.8 M) WEST OF THE BLUE LIGHT AT THE WEST EDGE
DK2129'OF THE RUNWAY, 57.3 FT (17.5 M) SOUTH OF THE SOUTH EDGE OF THE RAMP,
DK2129'51.5 FT (15.7 M) EAST OF THE EAST EDGE OF THE PARKING PAD AND 1.5 FT
DK2129'(0.5 M) NORTH OF A CARSONITE WITNESS POST.

DK2129

DK2129 STATION RECOVERY (1993)

DK2129

DK2129'RECOVERED 1993

DK2129'RECOVERED IN GOOD CONDITION.

DK2129

DK2129 STATION RECOVERY (2000)

DK2129

DK2129'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000

DK2129'RECOVERED AS AMENDED. THE TURN IS ON TO BOWLING GREEN ROAD, PAST THE
DK2129'METHODIST HOSPITAL ON THE LEFT, TO A PAVED ROAD THE TURNS LEFT ONLY.
DK2129'THE ROAD TO THE C.A. MOORE AIRPORT WAS NOT MARKED, BUT IS NOW PAVED.
DK2129'THE STATION IS AN EASY WALK FROM THE PARKING AREA PAST THE LOCKED
DK2129'VEHICLE GATE THROUGH AN OPEN PEDESTRIAN GATE, ACROSS THE AIRCRAFT
DK2129'PARKING RAMP NORTHEASTERLY TO A GRASS AREA BEYOND. THE WITNESS POST
DK2129'IS GONE. THE STATION IS 49.5 FT (15.1 M) NORTHEAST OF A WHITE AND
DK2129'RUST STEEL POLE.

DK2129

DK2129 STATION RECOVERY (2008)

DK2129

DK2129'RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2008 (CCC)

DK2129'RECOVERED IN GOOD CONDITION.

NGS DATA SHEET: M 40 (DJ1212)

DJ1212 *****
DJ1212 DESIGNATION - M 40
DJ1212 PID - DJ1212
DJ1212 STATE/COUNTY- MS/CALHOUN
DJ1212 COUNTRY - US
DJ1212 USGS QUAD - CALHOUN CITY (1983)
DJ1212
DJ1212 *CURRENT SURVEY CONTROL
DJ1212
DJ1212* NAD 83(2011) POSITION- 33 51 19.41345(N) 089 19 00.99289(W) ADJUSTED
DJ1212* NAD 83(2011) ELLIP HT- 50.433 (meters) (06/27/12) ADJUSTED
DJ1212* NAD 83(2011) EPOCH - 2010.00
DJ1212* NAVD 88 ORTHO HEIGHT - 77.873 (meters) 255.49 (feet) ADJUSTED
DJ1212
DJ1212 NAD 83(2011) X - 63,209.856 (meters) COMP
DJ1212 NAD 83(2011) Y - -5,301,876.098 (meters) COMP
DJ1212 NAD 83(2011) Z - 3,533,165.587 (meters) COMP
DJ1212 LAPLACE CORR - -1.00 (seconds) DEFLEC12A
DJ1212 GEOID HEIGHT - -27.44 (meters) GEOID12A
DJ1212 DYNAMIC HEIGHT - 77.792 (meters) 255.22 (feet) COMP
DJ1212 MODELED GRAVITY - 979,596.0 (mgal) NAVD 88
DJ1212
DJ1212 VERT ORDER - SECOND CLASS 0
DJ1212
DJ1212 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
DJ1212 Type Horiz Ellip Dist(km)
DJ1212 -----
DJ1212 NETWORK 1.59 4.98
DJ1212 -----
DJ1212 MEDIAN LOCAL ACCURACY AND DIST (010 points) 1.63 5.05 44.19
DJ1212 -----
DJ1212 NOTE: Click [here](#) for information on individual local accuracy
DJ1212 values and other accuracy information.
DJ1212
DJ1212
DJ1212.The horizontal coordinates were established by GPS observations
DJ1212.and adjusted by the National Geodetic Survey in June 2012.
DJ1212
DJ1212.NAD 83(2011) refers to NAD 83 coordinates where the reference
DJ1212.frame has been affixed to the stable North American tectonic plate. See
DJ1212.[NA2011](#) for more information.
DJ1212
DJ1212.The horizontal coordinates are valid at the epoch date displayed above
DJ1212.which is a decimal equivalence of Year/Month/Day.
DJ1212
DJ1212.The orthometric height was determined by differential leveling and
DJ1212.adjusted by the NATIONAL GEODETIC SURVEY
DJ1212.in June 1991.
DJ1212
DJ1212.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DJ1212
DJ1212.The Laplace correction was computed from DEFLEC12A derived deflections.
DJ1212
DJ1212.The ellipsoidal height was determined by GPS observations
DJ1212.and is referenced to NAD 83.
DJ1212
DJ1212.The dynamic height is computed by dividing the NAVD 88
DJ1212.geopotential number by the normal gravity value computed on the
DJ1212.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DJ1212.degrees latitude ($g = 980.6199$ gals.).

DJ1212

DJ1212.The modeled gravity was interpolated from observed gravity values.

DJ1212

DJ1212. The following values were computed from the NAD 83(2011) position.

DJ1212

	North	East	Units	Scale Factor	Converg.
DJ1212;SPC MS E	- 483,013.231	255,248.342	MT	0.99997468	-0 16 09.9
DJ1212;SPC MS E	- 1,584,685.91	837,427.27	sFT	0.99997468	-0 16 09.9
DJ1212;UTM 16	- 3,748,537.615	285,651.164	MT	1.00016643	-1 17 28.5

DJ1212

	Elev Factor	x	Scale Factor	=	Combined Factor
DJ1212!SPC MS E	- 0.99999208	x	0.99997468	=	0.99996676
DJ1212!UTM 16	- 0.99999208	x	1.00016643	=	1.00015851

DJ1212

DJ1212 SUPERSEDED SURVEY CONTROL

DJ1212

DJ1212 NAD 83(2007)- 33 51 19.41336(N)	089 19 00.99372(W)	AD(2002.00)	0
DJ1212 ELLIP H (02/10/07)	50.452 (m)	GP(2002.00)	
DJ1212 ELLIP H (04/15/02)	50.459 (m)	GP()	4 2
DJ1212 NAD 83(1993)- 33 51 19.41323(N)	089 19 00.99330(W)	AD()	1
DJ1212 ELLIP H (02/15/02)	50.461 (m)	GP()	4 1
DJ1212 NAVD 88 (02/15/02)	77.87 (m)	255.5 (f)	LEVELING 3
DJ1212 NGVD 29 (??/?/92)	77.840 (m)	255.38 (f)	ADJ UNCH 2 0

DJ1212

DJ1212.Superseded values are not recommended for survey control.

DJ1212

DJ1212.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

DJ1212.[See file dsdata.txt](#) to determine how the superseded data were derived.

DJ1212

DJ1212_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SBC8565148537(NAD 83)

DJ1212

DJ1212_MARKER: DB = BENCH MARK DISK

DJ1212_SETTING: 38 = SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE

DJ1212_SP_SET: BRIDGE ABUTMENT

DJ1212_STAMPING: M 40 1935

DJ1212_MARK LOGO: CGS

DJ1212_MAGNETIC: N = NO MAGNETIC MATERIAL

DJ1212_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

DJ1212_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR

DJ1212+SATELLITE: SATELLITE OBSERVATIONS - October 28, 2008

DJ1212

	Date	Condition	Report By
DJ1212 HISTORY	- 1935	MONUMENTED	CGS
DJ1212 HISTORY	- 1973	GOOD	MSHD
DJ1212 HISTORY	- 20000228	GOOD	MSHD
DJ1212 HISTORY	- 20051204	MARK NOT FOUND	MSSU
DJ1212 HISTORY	- 20080220	GOOD	MSDOT
DJ1212 HISTORY	- 20081028	GOOD	MSDOT

DJ1212

DJ1212 STATION DESCRIPTION

DJ1212

DJ1212'DESCRIBED BY COAST AND GEODETIC SURVEY 1935

DJ1212'0.7 MI W FROM CALHOUN CITY.

DJ1212'0.7 MILES WEST OF O H AND CC RR DEPOT AT CALHOUN CITY AT WEST CITY

DJ1212'LIMITS OF CALHOUN CITY. ON TOP OF SOUTH CONCRETE ABUTMENT AT WEST END

DJ1212'OF 20 FOOT CONCRETE HIGHWAY BRIDGE. 3 INCHES SOUTH OF BANNISTER ON

DJ1212'SOUTH SIDE OF BRIDGE ON STATE HIGHWAY 8.

DJ1212

DJ1212 STATION RECOVERY (1973)

DJ1212

DJ1212'RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1973

DJ1212'THE MARK IS LOCATED 0.3 MILE WEST OF CALHOUN CITY IN THE SOUTH END OF

DJ1212' THE WEST ABUTMENT OF A 20 FOOT CONCRETE BRIDGE IN THE SE 1/4 OF
DJ1212' SECTION 14, T 23N, R 1W. IT IS 11 FEET SOUTH OF THE CENTER OF A BLACK
DJ1212' TOP ROAD, 94 FEET NORTH OF THE CENTER OF ANOTHER BLACK TOP ROAD, 52
DJ1212' FEET ENE OF THE NE CORNER OF A FLAT TOP BRICK BUILDING, 50 FEET EAST
DJ1212' OF THE PROJECTED PLANE OF THE EAST WALL OF THE BUILDING, 32 FEET NE
DJ1212' OF A UTILITY POLE, 64.5 FEET SE OF A POLE WITH A LAMP ON IT, 1 FOOT
DJ1212' EAST OF A METAL WITNESS POST SET IN A DRILL HOLE IN THE SOUTH END OF
DJ1212' THE WEST ABUTMENT OF A 20 FOOT CONCRETE BRIDGE AND IS ABOUT LEVEL
DJ1212' WITH THE ROAD. TO REACH FROM THE WEST SIDE OF THE SQUARE IN CALHOUN
DJ1212' CITY GO WEST ON RUSSELL AVENUE FOR 0.2 MILE TO A FORK. TAKE THE RIGHT
DJ1212' FORK AND GO WEST ON A BLACK TOP ROAD FOR ABOUT 100 YARDS TO A
DJ1212' CONCRETE BRIDGE AND THE MARK ON THE LEFT.

DJ1212

STATION RECOVERY (2000)

DJ1212

DJ1212' RECOVERY NOTE BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 2000

DJ1212' RECOVERED AS DESCRIBED.

DJ1212

STATION RECOVERY (2005)

DJ1212

DJ1212' RECOVERY NOTE BY MISSISSIPPI STATE UNIVERSITY 2005

DJ1212' MARK NOT FOUND

DJ1212

STATION RECOVERY (2008)

DJ1212

DJ1212' RECOVERY NOTE BY MS DEPT TRANS 2008 (HDB)

DJ1212' THE 1973 DESCRIPTION IS SUFFICIENT FOR LOCATING THE MARK.

DJ1212

STATION RECOVERY (2008)

DJ1212

DJ1212' RECOVERY NOTE BY MS DEPT TRANS 2008 (LKK)

DJ1212' RECOVERED AS DESCRIBED.

NGS DATA SHEET: MAYBE 2 RM 4 (BV2006)

BV2006 *****
BV2006 DESIGNATION - MAYBE 2 RM 4
BV2006 PID - BV2006
BV2006 STATE/COUNTY- MS/SIMPSON
BV2006 COUNTRY - US
BV2006 USGS QUAD - MENDENHALL EAST (1970)
BV2006
BV2006 *CURRENT SURVEY CONTROL
BV2006
BV2006* NAD 83(2011) POSITION- 31 56 23.71584(N) 089 50 04.15883(W) ADJUSTED
BV2006* NAD 83(2011) ELLIP HT- 83.345 (meters) (06/27/12) ADJUSTED
BV2006* NAD 83(2011) EPOCH - 2010.00
BV2006* NAVD 88 ORTHO HEIGHT - 109.448 (meters) 359.08 (feet) ADJUSTED
BV2006* NAVD 88 EPOCH - 2009.55
BV2006 **This station is located in a suspected subsidence area (see below).
BV2006
BV2006 NAD 83(2011) X - 15,650.068 (meters) COMP
BV2006 NAD 83(2011) Y - -5,417,633.664 (meters) COMP
BV2006 NAD 83(2011) Z - 3,354,824.039 (meters) COMP
BV2006 LAPLACE CORR - 0.25 (seconds) DEFLEC12A
BV2006 GEOID HEIGHT - -26.08 (meters) GEOID12A
BV2006 DYNAMIC HEIGHT - 109.319 (meters) 358.66 (feet) COMP
BV2006 MODELED GRAVITY - 979,455.9 (mgal) NAVD 88
BV2006
BV2006 VERT ORDER - SECOND CLASS II
BV2006
BV2006 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
BV2006 Type Horiz Ellip Dist(km)
BV2006 -----
BV2006 NETWORK 1.54 2.10
BV2006 -----
BV2006 MEDIAN LOCAL ACCURACY AND DIST (003 points) 1.45 1.90 7.51
BV2006 -----
BV2006 NOTE: Click [here](#) for information on individual local accuracy
BV2006 values and other accuracy information.
BV2006
BV2006
BV2006.The horizontal coordinates were established by GPS observations
BV2006.and adjusted by the National Geodetic Survey in June 2012.
BV2006
BV2006.NAD 83(2011) refers to NAD 83 coordinates where the reference
BV2006.frame has been affixed to the stable North American tectonic plate. See
BV2006.[NA2011](#) for more information.
BV2006
BV2006.The horizontal coordinates are valid at the epoch date displayed above
BV2006.which is a decimal equivalence of Year/Month/Day.
BV2006
BV2006 ** This station is in an area of known vertical motion. Due to the
BV2006 ** variability of land subsidence, uplift, and crustal motion, NGS has,
BV2006 ** determined the orthometric heights for marks in these suspect
BV2006 ** subsidence areas should be considered valid only at the epoch date
BV2006 ** associated with the orthometric height. These heights must always
BV2006 ** be validated when used as control. All previously superseded
BV2006 ** orthometric heights are now considered suspect and are available
BV2006 ** in the superseded section. NGS does not recommend using suspect
BV2006 ** or superseded heights as control.
BV2006
BV2006.The orthometric height was determined by differential leveling and
BV2006.adjusted by the NATIONAL GEODETIC SURVEY
BV2006.in July 2012.

BV2006
BV2006.The X, Y, and Z were computed from the position and the ellipsoidal ht.
BV2006
BV2006.The Laplace correction was computed from DEFLEC12A derived deflections.
BV2006
BV2006.The ellipsoidal height was determined by GPS observations
BV2006.and is referenced to NAD 83.
BV2006
BV2006.The dynamic height is computed by dividing the NAVD 88
BV2006.geopotential number by the normal gravity value computed on the
BV2006.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
BV2006.degrees latitude (g = 980.6199 gals.).
BV2006
BV2006.The modeled gravity was interpolated from observed gravity values.
BV2006
BV2006.The following values were computed from the NAD 83(2011) position.
BV2006
BV2006; North East Units Scale Factor Converg.
BV2006:SPC MS W - 270,596.328 747,166.026 MT 0.99997743 +0 15 50.1
BV2006:SPC MS W - 887,781.45 2,451,327.20 sFT 0.99997743 +0 15 50.1
BV2006:UTM 16 - 3,537,284.619 232,044.496 MT 1.00048559 -1 30 01.5
BV2006
BV2006! - Elev Factor x Scale Factor = Combined Factor
BV2006!SPC MS W - 0.99998691 x 0.99997743 = 0.99996434
BV2006!UTM 16 - 0.99998691 x 1.00048559 = 1.00047250
BV2006
BV2006 SUPERSEDED SURVEY CONTROL
BV2006
BV2006 NAD 83(2007)- 31 56 23.71585(N) 089 50 04.15925(W) AD(2002.00) A
BV2006 ELLIP H (09/06/11) 83.340 (m) GP(2002.00) 4 1
BV2006 NAVD 88 (05/22/96) 109.488 (m) 359.21 (f) SUPERSEDED 2 2
BV2006
BV2006.Superseded values are not recommended for survey control.
BV2006
BV2006.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BV2006.See file dsdata.txt to determine how the superseded data were derived.
BV2006
BV2006_U.S. NATIONAL GRID SPATIAL ADDRESS: 16RBA3204437284(NAD 83)
BV2006
BV2006_MARKER: DR = REFERENCE MARK DISK
BV2006_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BV2006_SP_SET: CONCRETE POST
BV2006_STAMPING: MAYBE 2 NO 4 1963
BV2006_MARK LOGO: CGS
BV2006_PROJECTION: FLUSH
BV2006_MAGNETIC: N = NO MAGNETIC MATERIAL
BV2006_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BV2006+STABILITY: SURFACE MOTION
BV2006_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
BV2006+SATELLITE: SATELLITE OBSERVATIONS - October 09, 2008
BV2006
BV2006 HISTORY - Date Condition Report By
BV2006 HISTORY - 1963 MONUMENTED CGS
BV2006 HISTORY - 19920115 GOOD MSHD
BV2006 HISTORY - 20081009 GOOD MSDOT
BV2006
BV2006 STATION DESCRIPTION
BV2006
BV2006'DESCRIBED BY MISSISSIPPI STATE HIGHWAY DEPARTMENT 1992
BV2006'MARK IS LOCATED ABOUT 7.5 MI (12.1 KM) NORTHWEST OF MAGEE, ON THE
BV2006'SOUTHWEST R.O.W. OF U.S. HIGHWAY 49, 2.5 NI SOUTHEAST OF MENDENHALL
BV2006'AND IS IN SECTION 12, T 1N, R 4E. TO REACH FROM THE U.S. HIGHWAY 49

BV2006' BRIDGE OVER STATE HIGHWAY 13, AT THE NORTH EDGE OF MENDENHALL, GO
BV2006' SOUTHEAST ON U.S. HIGHWAY 49 FOR 3.65 MI (5.87 KM) TO THE MARK ON
BV2006' THE RIGHT. MARK IS A STANDARD DISK SET IN THE TOP OF A ROUND
BV2006' CONCRETE POST, ABOUT LEVEL WITH THE HIGHWAY, PROJECTING 4 INCHES,
BV2006' 194.5 FT (59.3 M) NORTH NORTHWEST OF THE NORTH CORNER OF A LARGE
BV2006' METAL BUILDING, 155 FT (47.2 M) NORTHEAST OF THE NORTHEAST RAIL OF
BV2006' THE RAILROAD TRACK, 110.5 FT (33.7 M) SOUTHWEST OF THE CENTER OF THE
BV2006' SOUTH BOUND LANE OF HIGHWAY 49, 47 FT (14.3 M) SOUTHWEST OF THE
BV2006' CENTER OF THE OLD HIGHWAY (FRONTAGE) ROAD, 1.3 FT (0.4 M) SOUTHWEST
BV2006' OF A TELEPHONE CABLE POLE AND 1.2 FT (0.4 M) WEST OF A METAL WITNESS
BV2006' POST.

BV2006

STATION RECOVERY (2008)

BV2006

BV2006'RECOVERY NOTE BY MS DEPT TRANS 2008 (RDB)

BV2006'RECOVERED AS DESCRIBED.

ALABAMA AOI

NGS DATA SHEET: ALDOT 8 DIV DIS 4 CORS ARP (DL9796)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014
 DL9796 ****
 DL9796 CORS - This is a GPS Continuously Operating Reference Station.
 DL9796 DESIGNATION - ALDOT 8 DIV DIS 4 CORS ARP
 DL9796 CORS_ID - AL84
 DL9796 PID - DL9796
 DL9796 STATE/COUNTY- AL/CLARKE
 DL9796 COUNTRY - US
 DL9796 USGS QUAD - GROVE HILL (1986)
 DL9796
 DL9796 *CURRENT SURVEY CONTROL
 DL9796
 DL9796* NAD 83(2011) POSITION- 31 42 01.32768(N) 087 47 20.98252(W) ADJUSTED
 DL9796* NAD 83(2011) ELLIP HT- 112.865 (meters) (08/??/11) ADJUSTED
 DL9796* NAD 83(2011) EPOCH - 2010.00
 DL9796* NAVD 88 ORTHO HEIGHT - 140.589 (meters) 461.25 (feet) ADJUSTED
 DL9796
 DL9796 NAD 83(2011) X - 209,537.261 (meters) COMP
 DL9796 NAD 83(2011) Y - -5,427,643.577 (meters) COMP
 DL9796 NAD 83(2011) Z - 3,332,268.976 (meters) COMP
 DL9796 GEOID HEIGHT - -27.71 (meters) GEOID12A
 DL9796 VERT ORDER - SECOND CLASS I
 DL9796
 DL9796. Formal positional accuracy estimates are not available for this CORS
 DL9796. because its coordinates were determined in part using modeled
 DL9796. velocities. Approximate one-sigma accuracies for latitude, longitude,
 DL9796. and ellipsoid height can be obtained from the [short-term time series](#).
 DL9796. Additional information regarding modeled velocities is available on
 DL9796. the [CORS Coordinates](#) and [Multi-Year CORS Solution FAQ](#) web pages.
 DL9796
 DL9796. The coordinates were established by GPS observations
 DL9796. and adjusted by the National Geodetic Survey in August 2011.
 DL9796
 DL9796. NAD 83(2011) refers to NAD 83 coordinates where the reference
 DL9796. frame has been affixed to the stable North American Tectonic Plate.
 DL9796
 DL9796. The coordinates are valid at the epoch date displayed above
 DL9796. which is a decimal equivalence of Year/Month/Day.
 DL9796
 DL9796. The orthometric height was determined by differential leveling and
 DL9796. adjusted by the NATIONAL GEODETIC SURVEY
 DL9796. in August 2012.
 DL9796
 DL9796. No vertical observational check was made to the station.
 DL9796
 DL9796. The PID for the CORS L1 Phase Center is DL9797.
 DL9796
 DL9796. The XYZ, and position/ellipsoidal ht. are equivalent.
 DL9796
 DL9796. The ellipsoidal height was determined by GPS observations
 DL9796. and is referenced to NAD 83.
 DL9796
 DL9796. The following values were computed from the NAD 83(2011) position.
 DL9796
 DL9796; SPC AL W - North East Units Scale Factor Converg.
 DL9796; 188,538.452 572,589.484 MT 0.99994260 -0 09 07.0
 DL9796

DL9796! - Elev Factor x Scale Factor = Combined Factor
DL9796!SPC AL W - 0.99998228 x 0.99994260 = 0.99992488

DL9796
DL9796 SUPERSEDED SURVEY CONTROL
DL9796
DL9796 NAD 83(CORS)- 31 42 01.32814(N) 087 47 20.98337(W) AD(2002.00) c
DL9796 ELLIP H (07/??/10) 112.848 (m) GP(2002.00) c c
DL9796
DL9796. Superseded values are not recommended for survey control.
DL9796
DL9796.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DL9796. [See file dsdata.txt](#) to determine how the superseded data were derived.
DL9796
DL9796_U.S. NATIONAL GRID SPATIAL ADDRESS: 16RDA2521607495(NAD 83)
DL9796
DL9796_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DL9796
DL9796 STATION DESCRIPTION
DL9796
DL9796'DESCRIBED BY NATIONAL GEODETIC SURVEY 2011
DL9796'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DL9796'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DL9796'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DL9796' ftp://cors.ngs.noaa.gov/cors/README.txt
DL9796' ftp://cors.ngs.noaa.gov/cors/coord/coord_08
DL9796' ftp://cors.ngs.noaa.gov/cors/station_log
DL9796' <http://geodesy.noaa.gov/CORS>

NGS DATA SHEET: CHOCTAW ELEM SCH CORS ARP (DM5367)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014

DM5367 ****

DM5367 CORS - This is a GPS Continuously Operating Reference Station.

DM5367 DESIGNATION - CHOCTAW ELEM SCH CORS ARP

DM5367 CORS_ID - ALBU

DM5367 PID - DM5367

DM5367 STATE/COUNTY- AL/CHOCTAW

DM5367 COUNTRY - US

DM5367 USGS QUAD - BUTLER (1986)

DM5367

DM5367 *CURRENT SURVEY CONTROL

DM5367

DM5367* NAD 83(2011) POSITION- 32 04 53.89574(N) 088 13 59.33198(W) ADJUSTED

DM5367* NAD 83(2011) ELLIP HT- 18.222 (meters) (08/??/11) ADJUSTED

DM5367* NAD 83(2011) EPOCH - 2010.00

DM5367* NAVD 88 ORTHO HEIGHT - 45.747 (meters) 150.09 (feet) ADJUSTED

DM5367

DM5367 NAD 83(2011) X - 166,781.358 (meters) COMP

DM5367 NAD 83(2011) Y - -5,406,699.288 (meters) COMP

DM5367 NAD 83(2011) Z - 3,368,114.735 (meters) COMP

DM5367 GEOID HEIGHT - -27.54 (meters) GEOID12A

DM5367 VERT ORDER - SECOND CLASS I

DM5367

DM5367. Formal positional accuracy estimates are not available for this CORS

DM5367. because its coordinates were determined in part using modeled

DM5367. velocities. Approximate one-sigma accuracies for latitude, longitude,

DM5367. and ellipsoid height can be obtained from the short-term time series.

DM5367. Additional information regarding modeled velocities is available on

DM5367. the CORS Coordinates and Multi-Year CORS Solution FAQ web pages.

DM5367

DM5367. The coordinates were established by GPS observations

DM5367. and adjusted by the National Geodetic Survey in August 2011.

DM5367

DM5367. NAD 83(2011) refers to NAD 83 coordinates where the reference

DM5367. frame has been affixed to the stable North American Tectonic Plate.

DM5367

DM5367. The coordinates are valid at the epoch date displayed above

DM5367. which is a decimal equivalence of Year/Month/Day.

DM5367

DM5367. The orthometric height was determined by differential leveling and

DM5367. adjusted by the NATIONAL GEODETIC SURVEY

DM5367. in August 2012.

DM5367

DM5367. No vertical observational check was made to the station.

DM5367

DM5367. The PID for the CORS L1 Phase Center is DM5368.

DM5367

DM5367. The XYZ, and position/ellipsoidal ht. are equivalent.

DM5367

DM5367. The ellipsoidal height was determined by GPS observations

DM5367. and is referenced to NAD 83.

DM5367

DM5367. The following values were computed from the NAD 83(2011) position.

DM5367

	North	East	Units	Scale Factor	Converg.
DM5367;SPC AL W	- 231,011.452	530,787.802	MT	0.99999239	-0 23 21.9

DM5367

DM5367! - Elev Factor x Scale Factor = Combined Factor

	Elev Factor	x	Scale Factor	=	Combined Factor
DM5367!SPC AL W	- 0.99999714	x	0.99999239	=	0.99998953

DM5367

DM5367 SUPERSEDED SURVEY CONTROL
DM5367
DM5367 NAD 83(CORS)- 32 04 53.89630(N) 088 13 59.33288(W) AD(2002.00) c
DM5367 ELLIP H (02/??/11) 18.204 (m) GP(2002.00) c c
DM5367
DM5367. Superseded values are not recommended for survey control.
DM5367
DM5367.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DM5367. [See file dsdata.txt](#) to determine how the superseded data were derived.
DM5367
DM5367_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCA8362150149(NAD 83)
DM5367
DM5367_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DM5367
DM5367 STATION DESCRIPTION
DM5367
DM5367' DESCRIBED BY NATIONAL GEODETIC SURVEY 2011
DM5367' STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DM5367' VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DM5367' BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DM5367' <ftp://cors.ngs.noaa.gov/cors/README.txt>
DM5367' ftp://cors.ngs.noaa.gov/cors/coord/coord_08
DM5367' ftp://cors.ngs.noaa.gov/cors/station_log
DM5367' <http://geodesy.noaa.gov/CORS>

NGS DATA SHEET: MCDAVIDJONESSCH2 CORS ARP (DO2054)

DO2054 SUPERSEDED SURVEY CONTROL
DO2054
DO2054.No superseded survey control is available for this station.
DO2054
DO2054_U.S. NATIONAL GRID SPATIAL ADDRESS: 16RCV8263233462(NAD 83)
DO2054
DO2054_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DO2054
DO2054 STATION DESCRIPTION
DO2054
DO2054' DESCRIBED BY NATIONAL GEODETIC SURVEY 2012
DO2054' STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DO2054' VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DO2054' BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DO2054' ftp://cors.ngs.noaa.gov/cors/README.txt
DO2054' ftp://cors.ngs.noaa.gov/cors/coord/coord_08
DO2054' ftp://cors.ngs.noaa.gov/cors/station_log
DO2054' <http://geodesy.noaa.gov/CORS>

NGS DATA SHEET: ALDOT 8 DIV DIS 2 CORS ARP (DM3483)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014
 DM3483 *****
 DM3483 CORS - This is a GPS Continuously Operating Reference Station.
 DM3483 DESIGNATION - ALDOT 8 DIV DIS 2 CORS ARP
 DM3483 CORS_ID - AL82
 DM3483 PID - DM3483
 DM3483 STATE/COUNTY- AL/MARENGO
 DM3483 COUNTRY - US
 DM3483 USGS QUAD - THOMASTON WEST (1986)
 DM3483
 DM3483 *CURRENT SURVEY CONTROL
 DM3483
 DM3483* NAD 83(2011) POSITION- 32 15 26.78467(N) 087 37 32.93023(W) ADJUSTED
 DM3483* NAD 83(2011) ELLIP HT- 27.118 (meters) (08/??/11) ADJUSTED
 DM3483* NAD 83(2011) EPOCH - 2010.00
 DM3483* NAVD 88 ORTHO HEIGHT - 55.405 (meters) 181.77 (feet) ADJUSTED
 DM3483
 DM3483 NAD 83(2011) X - 223,652.126 (meters) COMP
 DM3483 NAD 83(2011) Y - -5,394,264.609 (meters) COMP
 DM3483 NAD 83(2011) Z - 3,384,621.325 (meters) COMP
 DM3483 GEOID HEIGHT - -28.29 (meters) GEOID12A
 DM3483 VERT ORDER - SECOND CLASS I
 DM3483
 DM3483. Formal positional accuracy estimates are not available for this CORS
 DM3483.because its coordinates were determined in part using modeled
 DM3483.velocities. Approximate one-sigma accuracies for latitude, longitude,
 DM3483.and ellipsoid height can be obtained from the [short-term time series](#).
 DM3483.Additional information regarding modeled velocities is available on
 DM3483.the [CORS Coordinates](#) and [Multi-Year CORS Solution FAQ](#) web pages.
 DM3483
 DM3483.The coordinates were established by GPS observations
 DM3483.and adjusted by the National Geodetic Survey in August 2011.
 DM3483
 DM3483.NAD 83(2011) refers to NAD 83 coordinates where the reference
 DM3483.frame has been affixed to the stable North American Tectonic Plate.
 DM3483
 DM3483.The coordinates are valid at the epoch date displayed above
 DM3483.which is a decimal equivalence of Year/Month/Day.
 DM3483
 DM3483.The orthometric height was determined by differential leveling and
 DM3483.adjusted by the NATIONAL GEODETIC SURVEY
 DM3483.in August 2012.
 DM3483
 DM3483.No vertical observational check was made to the station.
 DM3483
 DM3483.The PID for the CORS L1 Phase Center is DM3484.
 DM3483
 DM3483.The XYZ, and position/ellipsoidal ht. are equivalent.
 DM3483
 DM3483.The ellipsoidal height was determined by GPS observations
 DM3483.and is referenced to NAD 83.
 DM3483
 DM3483. The following values were computed from the NAD 83(2011) position.
 DM3483
 DM3483; SPC AL W - North East Units Scale Factor Converg.
 DM3483; SPC AL W - 250,276.599 588,145.568 MT 0.99993507 -0 04 01.7
 DM3483
 DM3483! SPC AL W - Elev Factor x Scale Factor = Combined Factor
 DM3483! SPC AL W - 0.99999574 x 0.99993507 = 0.99993081
 DM3483

DM3483 SUPERSEDED SURVEY CONTROL
DM3483
DM3483 NAD 83(CORS)- 32 15 26.78510(N) 087 37 32.93104(W) AD(2002.00) c
DM3483 ELLIP H (09/??/10) 27.101 (m) GP(2002.00) c c
DM3483
DM3483.Superseded values are not recommended for survey control.
DM3483
DM3483.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DM3483.See file dsdata.txt to determine how the superseded data were derived.
DM3483
DM3483_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SDA4105369143(NAD 83)
DM3483
DM3483_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DM3483
DM3483 STATION DESCRIPTION
DM3483
DM3483'DESCRIBED BY NATIONAL GEODETIC SURVEY 2011
DM3483'STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DM3483'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DM3483'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DM3483' ftp://cors.ngs.noaa.gov/cors/README.txt
DM3483' ftp://cors.ngs.noaa.gov/cors/coord/coord_08
DM3483' ftp://cors.ngs.noaa.gov/cors/station_log
DM3483' <http://geodesy.noaa.gov/CORS>

NGS DATA SHEET: ALDOT 8 DIV DIS 1 CORS ARP (DN9085)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014
 DN9085 ****
 DN9085 CORS - This is a GPS Continuously Operating Reference Station.
 DN9085 DESIGNATION - ALDOT 8 DIV DIS 1 CORS ARP
 DN9085 CORS_ID - AL81
 DN9085 PID - DN9085
 DN9085 STATE/COUNTY- AL/SUMTER
 DN9085 COUNTRY - US
 DN9085 USGS QUAD - LIVINGSTON (1986)
 DN9085
 DN9085 *CURRENT SURVEY CONTROL
 DN9085
 DN9085* NAD 83(2011) POSITION- 32 34 32.54496(N) 088 10 54.29720(W) ADJUSTED
 DN9085* NAD 83(2011) ELLIP HT- 22.463 (meters) (06/??/12) ADJUSTED
 DN9085* NAD 83(2011) EPOCH - 2010.00
 DN9085* NAVD 88 ORTHO HEIGHT - **(meters) **(feet)
 DN9085
 DN9085 NAD 83(2011) X - 170,701.962 (meters) COMP
 DN9085 NAD 83(2011) Y - -5,377,266.231 (meters) COMP
 DN9085 NAD 83(2011) Z - 3,414,413.072 (meters) COMP
 DN9085 GEOID HEIGHT - -28.79 (meters) GEOID12A
 DN9085
 DN9085. Formal positional accuracy estimates are not available for this CORS
 DN9085. because its coordinates were determined in part using modeled
 DN9085. velocities. Approximate one-sigma accuracies for latitude, longitude,
 DN9085. and ellipsoid height can be obtained from the short-term time series.
 DN9085. Additional information regarding modeled velocities is available on
 DN9085. the CORS Coordinates and Multi-Year CORS Solution FAQ web pages.
 DN9085
 DN9085. The coordinates were established by GPS observations
 DN9085. and adjusted by the National Geodetic Survey in June 2012.
 DN9085
 DN9085. NAD 83(2011) refers to NAD 83 coordinates where the reference
 DN9085. frame has been affixed to the stable North American Tectonic Plate.
 DN9085
 DN9085. The coordinates are valid at the epoch date displayed above
 DN9085. which is a decimal equivalence of Year/Month/Day.
 DN9085
 DN9085. The PID for the CORS L1 Phase Center is DN9086.
 DN9085
 DN9085. The XYZ, and position/ellipsoidal ht. are equivalent.
 DN9085
 DN9085. The ellipsoidal height was determined by GPS observations
 DN9085. and is referenced to NAD 83.
 DN9085
 DN9085. The following values were computed from the NAD 83(2011) position.
 DN9085
 DN9085; SPC AL W - 285,766.261 535,988.775 MT 0.99998384 -0 22 01.5
 DN9085
 DN9085! - Elev Factor x Scale Factor = Combined Factor
 DN9085! SPC AL W - 0.99999647 x 0.99998384 = 0.99998031
 DN9085
 DN9085 SUPERSEDED SURVEY CONTROL
 DN9085
 DN9085 NAD 83(CORS)- 32 34 32.54555(N) 088 10 54.29797(W) AD(2002.00) c
 DN9085 ELLIP H (06/??/12) 22.461 (m) GP(2002.00) c c
 DN9085
 DN9085. Superseded values are not recommended for survey control.
 DN9085

DN9085.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
DN9085. [See file dsdata.txt](#) to determine how the superseded data were derived.
DN9085
DN9085_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCB8907704867(NAD 83)
DN9085
DN9085_MARKER: STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
DN9085
DN9085 STATION DESCRIPTION
DN9085
DN9085' DESCRIBED BY NATIONAL GEODETIC SURVEY 2012
DN9085' STATION IS A GPS CORS. LATEST INFORMATION INCLUDING POSITIONS AND
DN9085' VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES ACCESSIBLE
DN9085' BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
DN9085' ftp://cors.ngs.noaa.gov/cors/README.txt
DN9085' ftp://cors.ngs.noaa.gov/cors/coord/coord_08
DN9085' ftp://cors.ngs.noaa.gov/cors/station_log
DN9085' <http://geodesy.noaa.gov/CORS>

NGS DATA SHEET: 12 43 (AA8353)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014
AA8353 *****
AA8353 DESIGNATION - 12 43
AA8353 PID - AA8353
AA8353 STATE/COUNTY- AL/CHOCTAW
AA8353 COUNTRY - US
AA8353 USGS QUAD - LAND (1974)
AA8353
AA8353 *CURRENT SURVEY CONTROL
AA8353
AA8353* NAD 83(2011) POSITION- 32 05 17.99332(N) 088 15 14.35745(W) ADJUSTED
AA8353* NAD 83(2011) ELLIP HT- 19.667 (meters) (06/27/12) ADJUSTED
AA8353* NAD 83(2011) EPOCH - 2010.00
AA8353* NAVD 88 ORTHO HEIGHT - 47.222 (meters) 154.93 (feet) ADJUSTED
AA8353
AA8353 NAD 83(2011) X - 164,802.772 (meters) COMP
AA8353 NAD 83(2011) Y - -5,406,366.728 (meters) COMP
AA8353 NAD 83(2011) Z - 3,368,744.393 (meters) COMP
AA8353 LAPLACE CORR - -0.14 (seconds) DEFLEC12A
AA8353 GEOID HEIGHT - -27.55 (meters) GEOID12A
AA8353 DYNAMIC HEIGHT - 47.168 (meters) 154.75 (feet) COMP
AA8353 MODELED GRAVITY - 979,482.1 (mgal) NAVD 88
AA8353
AA8353 VERT ORDER - SECOND CLASS I
AA8353
AA8353 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
AA8353 Type Horiz Ellip Dist(km)
AA8353 -----
AA8353 NETWORK 0.93 2.41
AA8353 -----
AA8353 MEDIAN LOCAL ACCURACY AND DIST (007 points) 0.91 2.43 10.44
AA8353 -----
AA8353 NOTE: Click [here](#) for information on individual local accuracy
AA8353 values and other accuracy information.
AA8353
AA8353
AA8353.The horizontal coordinates were established by GPS observations
AA8353.and adjusted by the National Geodetic Survey in June 2012.
AA8353
AA8353.NAD 83(2011) refers to NAD 83 coordinates where the reference
AA8353.frame has been affixed to the stable North American tectonic plate. See
AA8353.[NA2011](#) for more information.
AA8353
AA8353.The horizontal coordinates are valid at the epoch date displayed above
AA8353.which is a decimal equivalence of Year/Month/Day.
AA8353
AA8353.The orthometric height was determined by differential leveling and
AA8353.adjusted by the NATIONAL GEODETIC SURVEY
AA8353.in July 2008.
AA8353
AA8353.No vertical observational check was made to the station.
AA8353
AA8353.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AA8353
AA8353.The Laplace correction was computed from DEFLEC12A derived deflections.
AA8353
AA8353.The ellipsoidal height was determined by GPS observations
AA8353.and is referenced to NAD 83.
AA8353
AA8353.The dynamic height is computed by dividing the NAVD 88

AA8353.geopotential number by the normal gravity value computed on the
 AA8353.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 AA8353.degrees latitude ($g = 980.6199$ gals.).
 AA8353
 AA8353.The modeled gravity was interpolated from observed gravity values.
 AA8353
 AA8353. The following values were computed from the NAD 83(2011) position.
 AA8353
 AA8353; North East Units Scale Factor Converg.
 AA8353:SPC AL W - 231,767.254 528,825.520 MT 0.99999578 -0 24 02.0
 AA8353:UTM 16 - 3,550,914.627 381,663.661 MT 0.99977269 -0 39 58.4
 AA8353
 AA8353! - Elev Factor x Scale Factor = Combined Factor
 AA8353!SPC AL W - 0.99999691 x 0.99999578 = 0.99999269
 AA8353!UTM 16 - 0.99999691 x 0.99977269 = 0.99976960
 AA8353
 AA8353: Primary Azimuth Mark Grid Az
 AA8353:SPC AL W - 12 44 105 12 24.6
 AA8353:UTM 16 - 12 44 105 28 21.0
 AA8353
 AA8353|-----|
 AA8353| PID Reference Object Distance Geod. Az |
 AA8353| | dddmmss.s |
 AA8353| AA8354 12 44 481.747 METERS 1044822.6 |
 AA8353|-----|
 AA8353
 AA8353 SUPERSEDED SURVEY CONTROL
 AA8353
 AA8353 NAD 83(2007)- 32 05 17.99335(N) 088 15 14.35795(W) AD(2002.00) 0
 AA8353 ELLIP H (02/10/07) 19.684 (m) GP(2002.00)
 AA8353 ELLIP H (07/29/02) 19.625 (m) GP() 4 1
 AA8353 NAD 83(1992)- 32 05 17.99281(N) 088 15 14.35569(W) AD() 1
 AA8353 ELLIP H (09/29/95) 19.662 (m) GP() 3 2
 AA8353 NGVD 29 (09/29/95) 47.2 (m) UNKNOWN model used GPS OBS
 AA8353
 AA8353.Superseeded values are not recommended for survey control.
 AA8353
 AA8353.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AA8353.[See file dsdata.txt](#) to determine how the superseded data were derived.
 AA8353
 AA8353_U.S. NATIONAL GRID SPATIAL ADDRESS: 16SCA8166350914(NAD 83)
 AA8353
 AA8353_MARKER: DD = SURVEY DISK
 AA8353_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 AA8353_STAMPING: 12-43 1995
 AA8353_MARK LOGO: ALHD
 AA8353_PROJECTION: RECESSED 5 CENTIMETERS
 AA8353_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT
 AA8353_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AA8353+STABILITY: SURFACE MOTION
 AA8353_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AA8353+SATELLITE: SATELLITE OBSERVATIONS - June 29, 2010
 AA8353
 AA8353 HISTORY - Date Condition Report By
 AA8353 HISTORY - 1995 MONUMENTED ALHD
 AA8353 HISTORY - 20051215 GOOD WOOLPT
 AA8353 HISTORY - 20100629 GOOD ALDOT
 AA8353
 AA8353 STATION DESCRIPTION
 AA8353
 AA8353'DESCRIBED BY ALABAMA HIGHWAY DEPARTMENT 1995 (JDS)
 AA8353'THE STATION IS LOCATED IN CHOCTAW COUNTY ON THE NORTH RIGHT OF WAY OF

AA8353' CHOCTAW COUNTY ROAD NO. 24, ABOUT 1.85 MI (2.98 KM) WEST OF BUTLER AND AA8353' ABOUT 5.90 MI (9.49 KM) SOUTH-SOUTHEAST OF LISMAN. TO REACH THE AA8353' STATION FROM THE JUNCTION OF ALA 10 AND ALA 17 (MILE POST 110.05 AN AA8353' ALA 17 AND MILE POST 17.65 ON ALA 10) AT A TRAFFIC LIGHT AT THE AA8353' NORTHEAST CORNER OF THE COURTHOUSE IN BUTLER, DRIVE SOUTH ON ALA 17 AA8353' FOR 0.15 MI (0.24 KM) TO MILE POST 109.90 AND CHOCTAW COUNTY ROAD NO. AA8353' 24 (RIDERWOOD ROAD) ON THE RIGHT, TURN RIGHT ON CHOCTAW COUNTY ROAD AA8353' NO. 24 AND DRIVE WEST FOR 2.00 MI (3.22 KM) TO THE STATION ON THE AA8353' RIGHT. THE STATION IS 3.0 FT (0.9 M) SOUTH OF A FOUR STRAND BARBED AA8353' WIRE FENCE ON TREATED WOOD POSTS, 27.0 FT (8.2 M) NORTH OF THE AA8353' CENTERLINE OF CHOCTAW COUNTY ROAD NO. 24, 57.3 FT (17.5 M) EAST OF A AA8353' FIRE HYDRANT, 59.0 FT (18.0 M) EAST OF A WATER VALVE, 70.2 FT (21.4 M) AA8353' NORTHWEST OF POWER AND CABLE POLE NO. 57 ACROSS THE ROAD, 78.3 FT AA8353' (23.9 M) EAST OF TELEPHONE CABLE PEDESTAL NO. L4100 20 AND A REPEATER, AA8353' 3.0 FT (0.9 M) SOUTH-SOUTHWEST OF A CARSONITE WITNESS POST, AND SET AA8353' FLUSH WITH THE GROUND. STATION 12-44 1995 MAY BE USED AS AN AZIMUTH AA8353' FOR THIS STATION.

AA8353

STATION RECOVERY (2005)

AA8353

AA8353' RECOVERY NOTE BY WOOLPERT CONSULTANTS 2005 (ARL)

AA8353' RECOVERED AS DESCRIBED.

AA8353

STATION RECOVERY (2010)

AA8353

AA8353' RECOVERY NOTE BY ALABAMA DEPARTMENT OF TRANSPORTATION 2010 (RB)

AA8353' RECOVERED AS DESCRIBED.

NGS DATA SHEET: 65 38 (AA8496)

1 National Geodetic Survey, Retrieval Date = JUNE 3, 2014
AA8496 *****
AA8496 FBN - This is a Federal Base Network Control Station.
AA8496 DESIGNATION - 65 38
AA8496 PID - AA8496
AA8496 STATE/COUNTY- AL/WASHINGTON
AA8496 COUNTRY - US
AA8496 USGS QUAD - PRESTWICK (1983)
AA8496
AA8496 *CURRENT SURVEY CONTROL
AA8496
AA8496* NAD 83(2011) POSITION- 31 29 08.92314(N) 087 56 03.14100(W) ADJUSTED
AA8496* NAD 83(2011) ELLIP HT- -15.238 (meters) (06/27/12) ADJUSTED
AA8496* NAD 83(2011) EPOCH - 2010.00
AA8496* NAVD 88 ORTHO HEIGHT - 12.711 (meters) 41.70 (feet) ADJUSTED
AA8496
AA8496 NAD 83(2011) X - 196,241.879 (meters) COMP
AA8496 NAD 83(2011) Y - -5,440,502.751 (meters) COMP
AA8496 NAD 83(2011) Z - 3,311,937.636 (meters) COMP
AA8496 LAPLACE CORR - -1.47 (seconds) DEFLEC12A
AA8496 GEOID HEIGHT - -27.95 (meters) GEOID12A
AA8496 DYNAMIC HEIGHT - 12.695 (meters) 41.65 (feet) COMP
AA8496 MODELED GRAVITY - 979,423.1 (mgal) NAVD 88
AA8496
AA8496 VERT ORDER - SECOND CLASS I
AA8496
AA8496 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)
AA8496 Type Horiz Ellip Dist(km)
AA8496 -----
AA8496 NETWORK 0.81 2.14
AA8496 -----
AA8496 MEDIAN LOCAL ACCURACY AND DIST (128 points) 1.08 2.74 229.88
AA8496 -----
AA8496 NOTE: Click [here](#) for information on individual local accuracy
AA8496 values and other accuracy information.
AA8496
AA8496
AA8496 The horizontal coordinates were established by GPS observations
AA8496 and adjusted by the National Geodetic Survey in June 2012.
AA8496
AA8496 NAD 83(2011) refers to NAD 83 coordinates where the reference
AA8496 frame has been affixed to the stable North American tectonic plate. See
AA8496 [NA2011](#) for more information.
AA8496
AA8496 The horizontal coordinates are valid at the epoch date displayed above
AA8496 which is a decimal equivalence of Year/Month/Day.
AA8496
AA8496 The orthometric height was determined by differential leveling and
AA8496 adjusted by the NATIONAL GEODETIC SURVEY
AA8496 in July 2008.
AA8496
AA8496 No vertical observational check was made to the station.
AA8496
AA8496 [Photographs](#) are available for this station.
AA8496
AA8496 The X, Y, and Z were computed from the position and the ellipsoidal ht.
AA8496
AA8496 The Laplace correction was computed from DEFLEC12A derived deflections.
AA8496
AA8496 The ellipsoidal height was determined by GPS observations

AA8496.and is referenced to NAD 83.

AA8496

AA8496.The dynamic height is computed by dividing the NAVD 88

AA8496.geopotential number by the normal gravity value computed on the
AA8496.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AA8496.degrees latitude (g = 980.6199 gals.).

AA8496

AA8496.The modeled gravity was interpolated from observed gravity values.

AA8496

AA8496. The following values were computed from the NAD 83(2011) position.

AA8496

	North	East	Units	Scale Factor	Converg.
AA8496:SPC AL W	- 164,795.337	558,745.780	MT	0.99995432	-0 13 36.4
AA8496:UTM 16	- 3,483,821.971	411,268.583	MT	0.99969711	-0 29 16.6

AA8496

AA8496! - Elev Factor x Scale Factor = Combined Factor

AA8496!SPC AL W - 1.00000239 x 0.99995432 = 0.99995671

AA8496!UTM 16 - 1.00000239 x 0.99969711 = 0.99969950

AA8496

	Primary Azimuth Mark	Grid Az
AA8496:SPC AL W	- 65 37	203 56 48.8
AA8496:UTM 16	- 65 37	204 12 29.0

AA8496

PID	Reference Object	Distance	Geod. Az
AA8496	AA8495 65 37	APPROX. 0.6 KM	dddmmss.s 2034312.4

AA8496

AA8496 SUPERSEDED SURVEY CONTROL

AA8496

AA8496 NAD 83(2007)- 31 29 08.92322(N)	087 56 03.14153(W)	AD(2002.00) 0
AA8496 ELLIP H (02/10/07) -15.221 (m)		GP(2002.00)
AA8496 NAD 83(1992)- 31 29 08.92302(N)	087 56 03.14106(W)	AD() A
AA8496 ELLIP H (08/29/05) -15.201 (m)		GP() 4 1
AA8496 ELLIP H (07/29/02) -15.307 (m)		GP() 4 1
AA8496 NAD 83(1992)- 31 29 08.92248(N)	087 56 03.13967(W)	AD() 1
AA8496 ELLIP H (09/29/95) -15.267 (m)		GP() 3 2
AA8496 NAVD 88 (08/29/05) 12.8 (m)	GEOID03 model used	GPS OBS
AA8496 NGVD 29 (09/29/95) 12.6 (m)	UNKNOWN model used	GPS OBS

AA8496

AA8496.Superseded values are not recommended for survey control.

AA8496

AA8496.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AA8496.[See file dsdata.txt](#) to determine how the superseded data were derived.

AA8496

AA8496_U.S. NATIONAL GRID SPATIAL ADDRESS: 16RDV1126883821(NAD 83)

AA8496

AA8496_MARKER: DD = SURVEY DISK

AA8496_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AA8496_STAMPING: 65-38 1995

AA8496_MARK LOGO: ALHD

AA8496_PROJECTION: FLUSH

AA8496_MAGNETIC: R = STEEL ROD IMBEDDED IN MONUMENT

AA8496_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AA8496+STABILITY: SURFACE MOTION

AA8496_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AA8496+SATELLITE: SATELLITE OBSERVATIONS - February 23, 2009

AA8496

HISTORY	Date	Condition	Report By
AA8496 HISTORY	- 1995	MONUMENTED	ALHD
AA8496 HISTORY	- 20031204	GOOD	JCLS

AA8496	HISTORY	- 20040622 GOOD	ALDOT
AA8496	HISTORY	- 20050612 GOOD	JCLS
AA8496	HISTORY	- 20070620 GOOD	WOOLPT
AA8496	HISTORY	- 20090223 GOOD	CDGENG

AA8496

STATION DESCRIPTION

AA8496

AA8496' DESCRIBED BY ALABAMA HIGHWAY DEPARTMENT 1995 (JLB)
AA8496' THE STATION IS IN WASHINGTON COUNTY ON THE WEST RIGHT OF WAY OF
AA8496' WASHINGTON COUNTY ROAD NO 34 ABOUT 18.75 MI (30.17 KM) EAST OF CHATOM
AA8496' AND ABOUT 16.00 MI (25.75 KM) NORTH OF MCINTOSH. TO REACH THE STATION
AA8496' FROM THE JUNCTION OF U.S. 43 AND AL 56 WEST (MILEPOST 54.15 ON U.S. 43
AA8496' AND MILEPOST 27.90 ON AL 56) IN WAGARVILLE, DRIVE NORTH AND NORTHEAST
AA8496' ON U.S. 43 FOR 6.05 MI (9.74 KM) TO MILEPOST 60.20 AND WASHINGTON
AA8496' COUNTY ROAD NO 34 RIGHT. TURN RIGHT ON WASHINGTON COUNTY ROAD NO 34
AA8496' AND DRIVE SOUTHEAST AND NORTHEAST FOR 3.60 MI (5.79 KM) TO THE STATION
AA8496' ON THE LEFT. THE STATION IS 3.0 FT (0.9 M) EAST-SOUTHEAST OF A FIVE
AA8496' STRAND BARBED WIRE FENCE ON RUSTY METAL POSTS, 47.6 FT (14.5 M)
AA8496' WEST-NORTHWEST OF THE CENTER OF WASHINGTON COUNTY ROAD NO 34, 54.0 FT
AA8496' (16.5 M) EAST OF AN ANGLE POWER POLE WITH TWO GUY WIRES IN A FIELD,
AA8496' 67.0 FT (20.4 M) SOUTH-SOUTHWEST OF THE JUNCTION OF THE FIVE STRAND
AA8496' BARBED WIRE FENCE AND A FIVE FOOT CHAIN LINK FENCE, 172.3 FT (52.5 M)
AA8496' NORTH-NORtheast OF THE NORTH POST OF A SEVEN FOOT CHAIN LINK GATE IN
AA8496' THE FENCELINE, 188.0 FT (57.3 M) NORTH-NORtheast OF THE SOUTH POST OF
AA8496' A SEVEN FOOT CHAIN LINK GATE IN THE FENCELINE, 3.2 FT (1.0 M)
AA8496' SOUTHEAST OF A CARSONITE WITNESS POST, AND SET FLUSH WITH THE GROUND.
AA8496' STATION 65-37 1995 MAY BE USED AS AN AZIMUTH FOR THIS STATION.

AA8496

STATION RECOVERY (2003)

AA8496

AA8496' RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2003 (MRY)

AA8496' RECOVERED IN GOOD CONDITION.

AA8496

STATION RECOVERY (2004)

AA8496

AA8496' RECOVERY NOTE BY ALABAMA DEPARTMENT OF TRANSPORTATION 2004 (CBC)

AA8496' THE MILEPOST OF U.S. 43 AT THE STARTING JUNCTION WITH AL 56 WEST IN
AA8496' WAGARVILLE IS NOW 50.0. PROCEED NORTH AND NE ALONG US 43 AS IN 1995
AA8496' TO MP 56.2 AND A RIGHT TURN ON CR 34 AT LEROY HIGH SCHOOL, THENCE AS
AA8496' IN 1995 3.6 MILES SE AND NE TO THE MARK ON THE LEFT, THEN AS LOCALLY
AA8496' DESCRIBED.

AA8496

STATION RECOVERY (2005)

AA8496

AA8496' RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2005

AA8496' RECOVERED IN GOOD CONDITION.

AA8496

STATION RECOVERY (2007)

AA8496

AA8496' RECOVERY NOTE BY WOOLPERT CONSULTANTS 2007 (BJM)

AA8496' RECOVERED AS DESCRIBED.

AA8496

STATION RECOVERY (2009)

AA8496

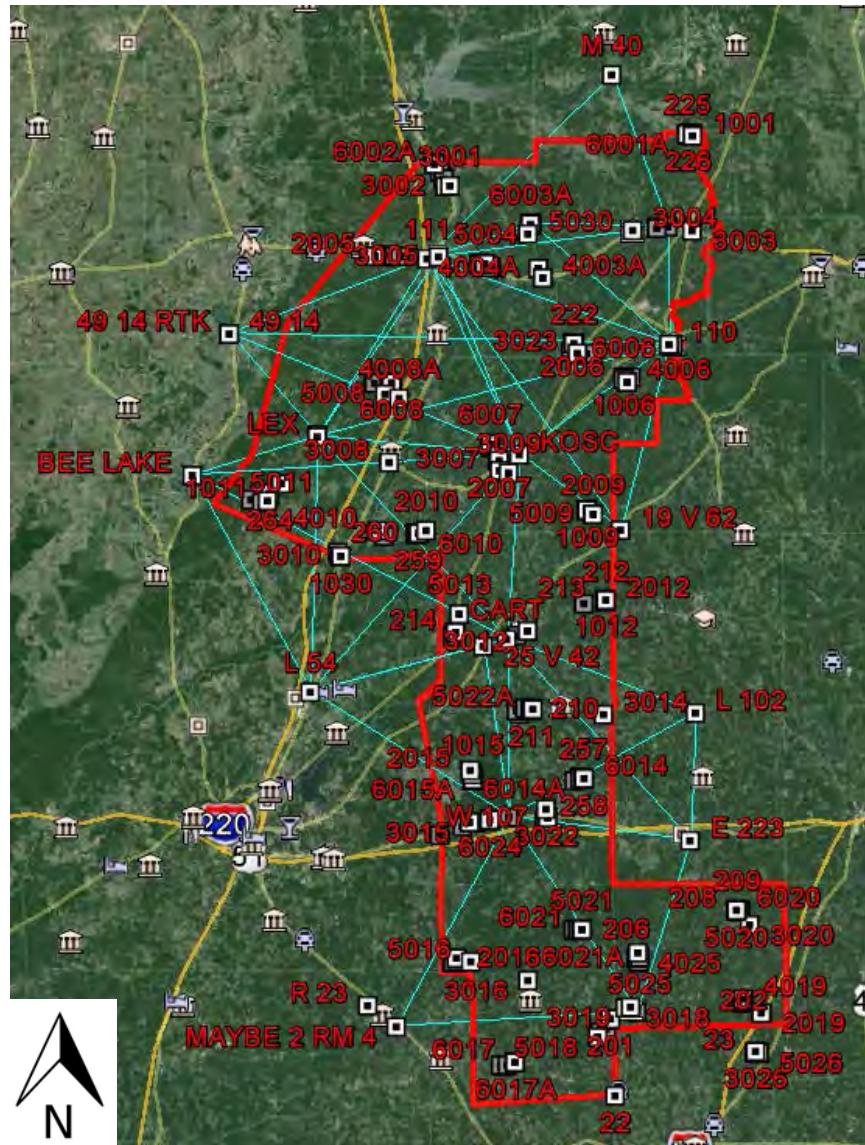
AA8496' RECOVERY NOTE BY CDG ENGINEERING AND ASSOCIATES 2009 (WBM)

AA8496' RECOVERED IN GOOD CONDITION.

SECTION 6 PART 1: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Attala, Leake, Carroll, Choctaw, Jasper, Lexington, Montgomery, Scott, Smith, and Webster County MS.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

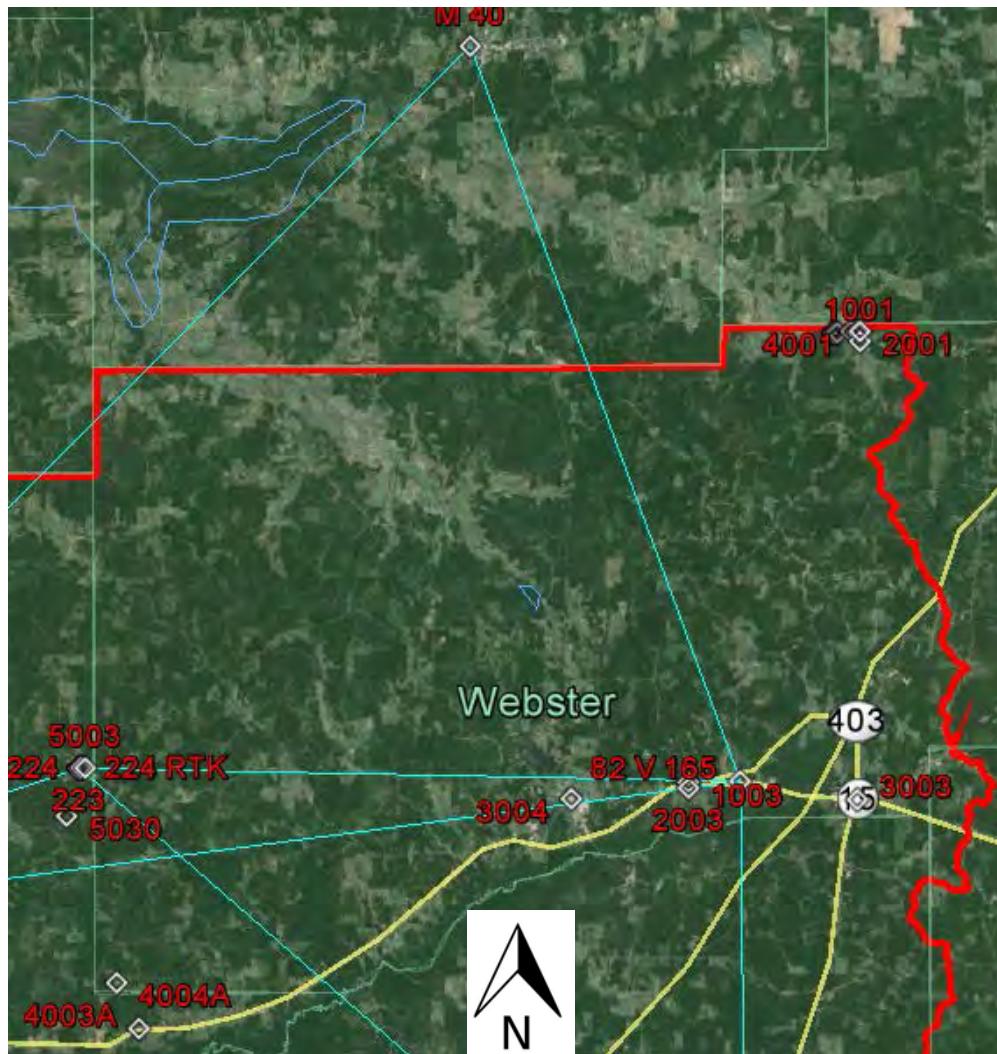


Not to Scale

SECTION 6 PART 2: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Webster County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

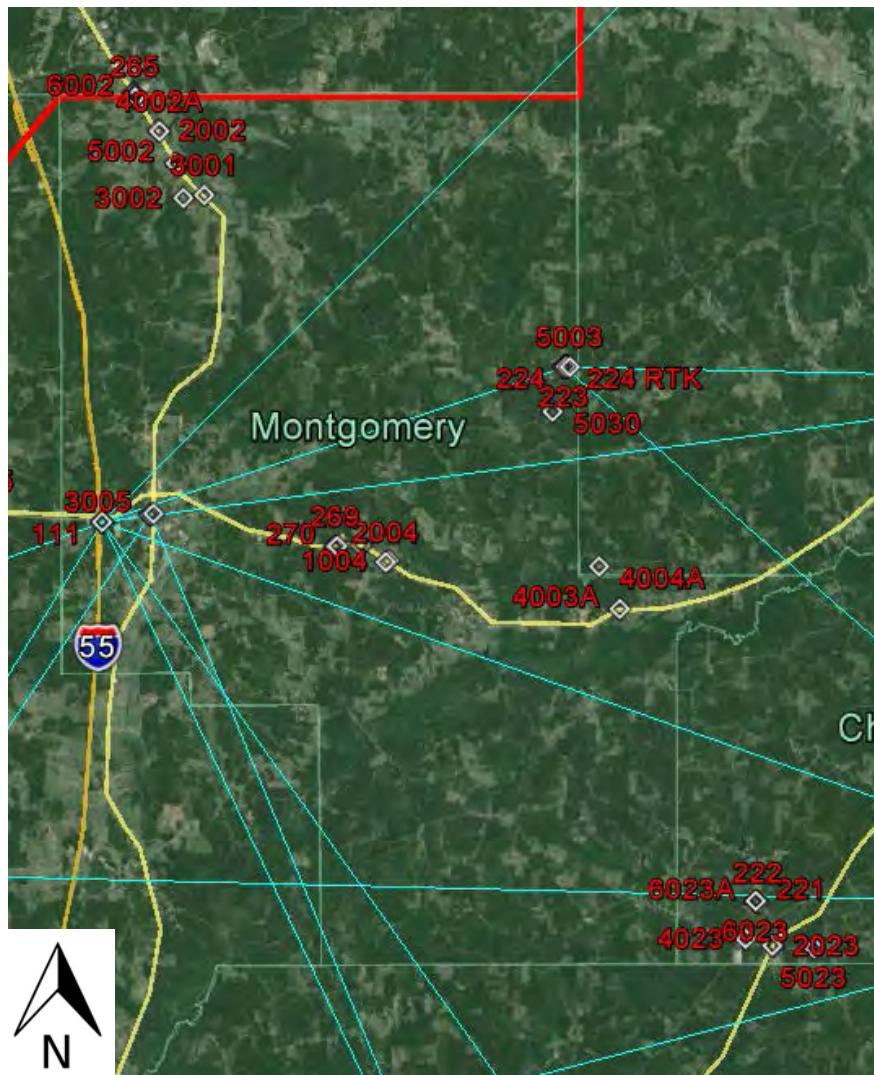


Not to Scale

SECTION 6 PART 3: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Montgomery County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

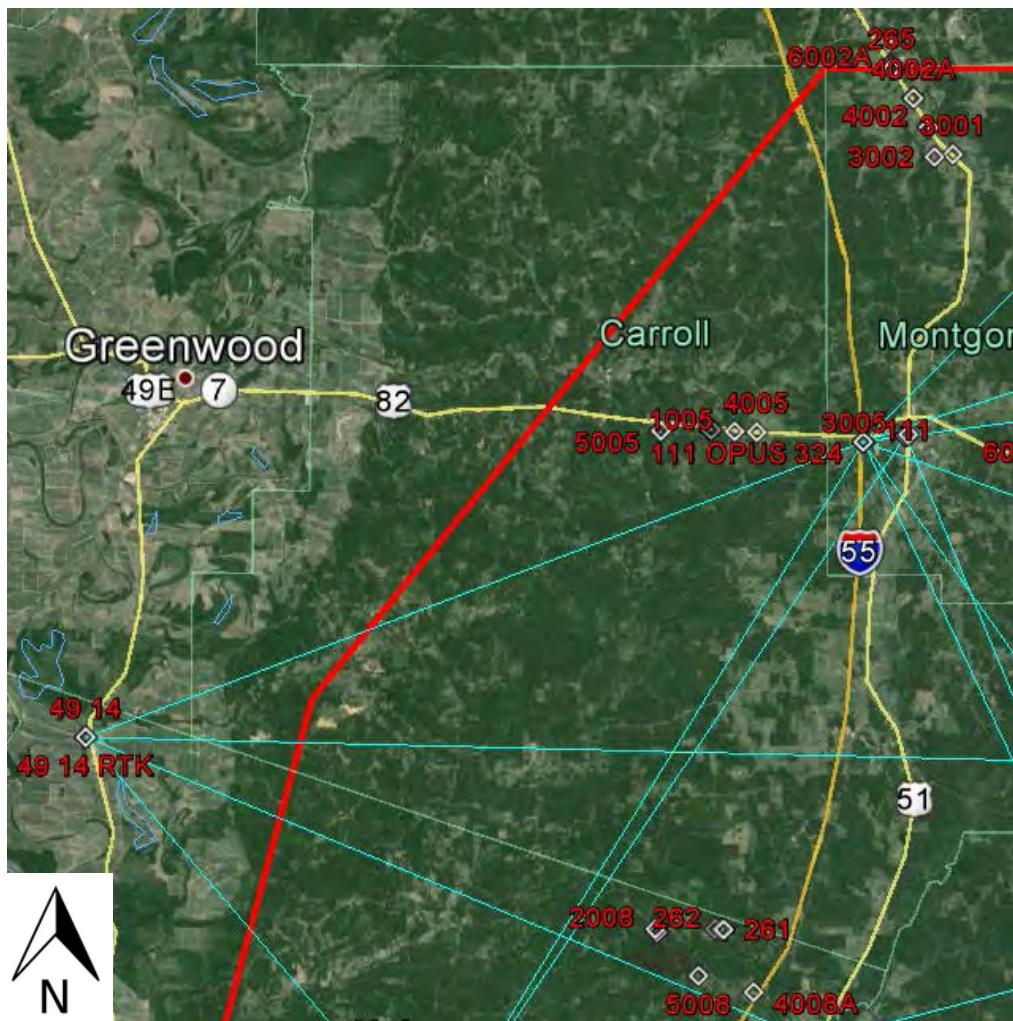


Not to Scale

SECTION 6 PART 4: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Carroll County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

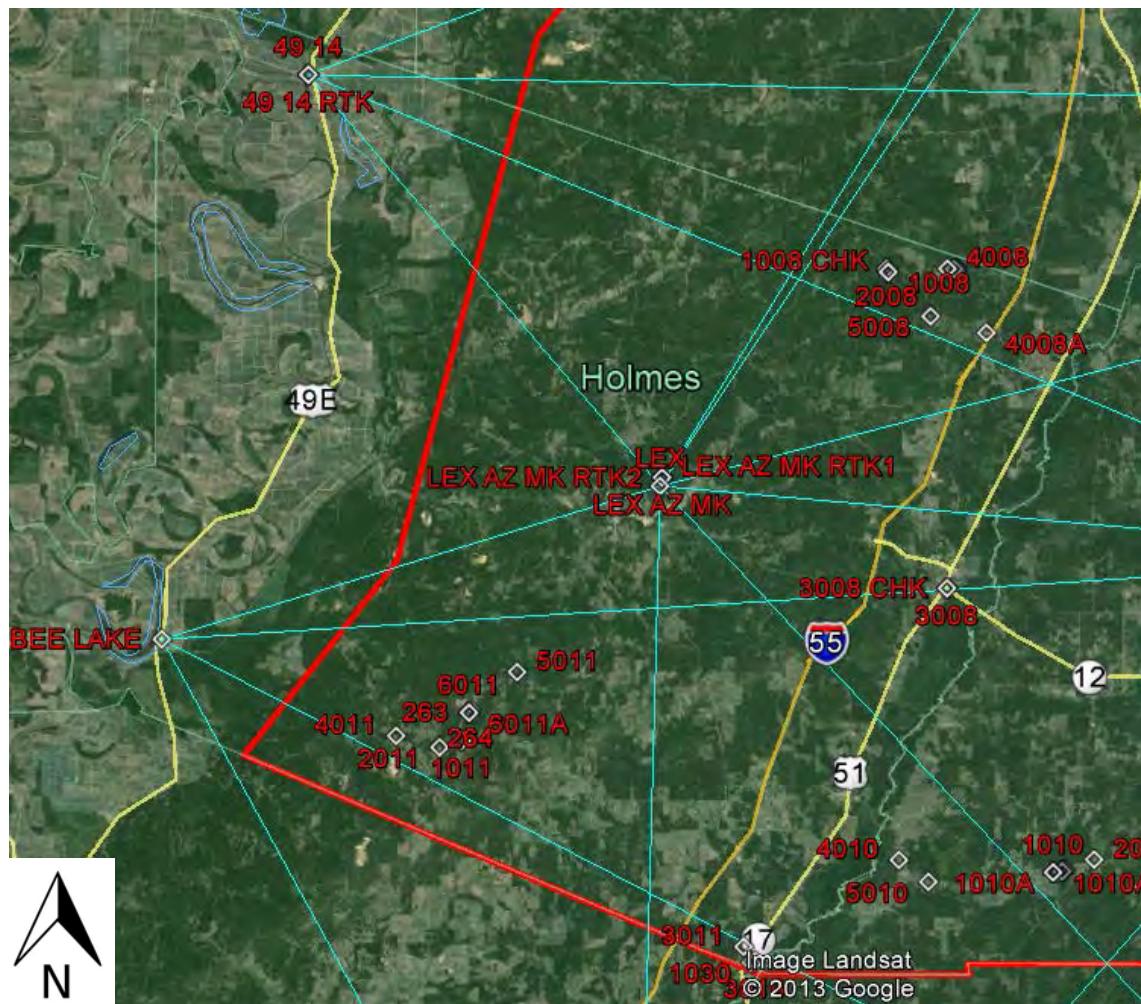


Not to Scale

SECTION 6 PART 5: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Holmes County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

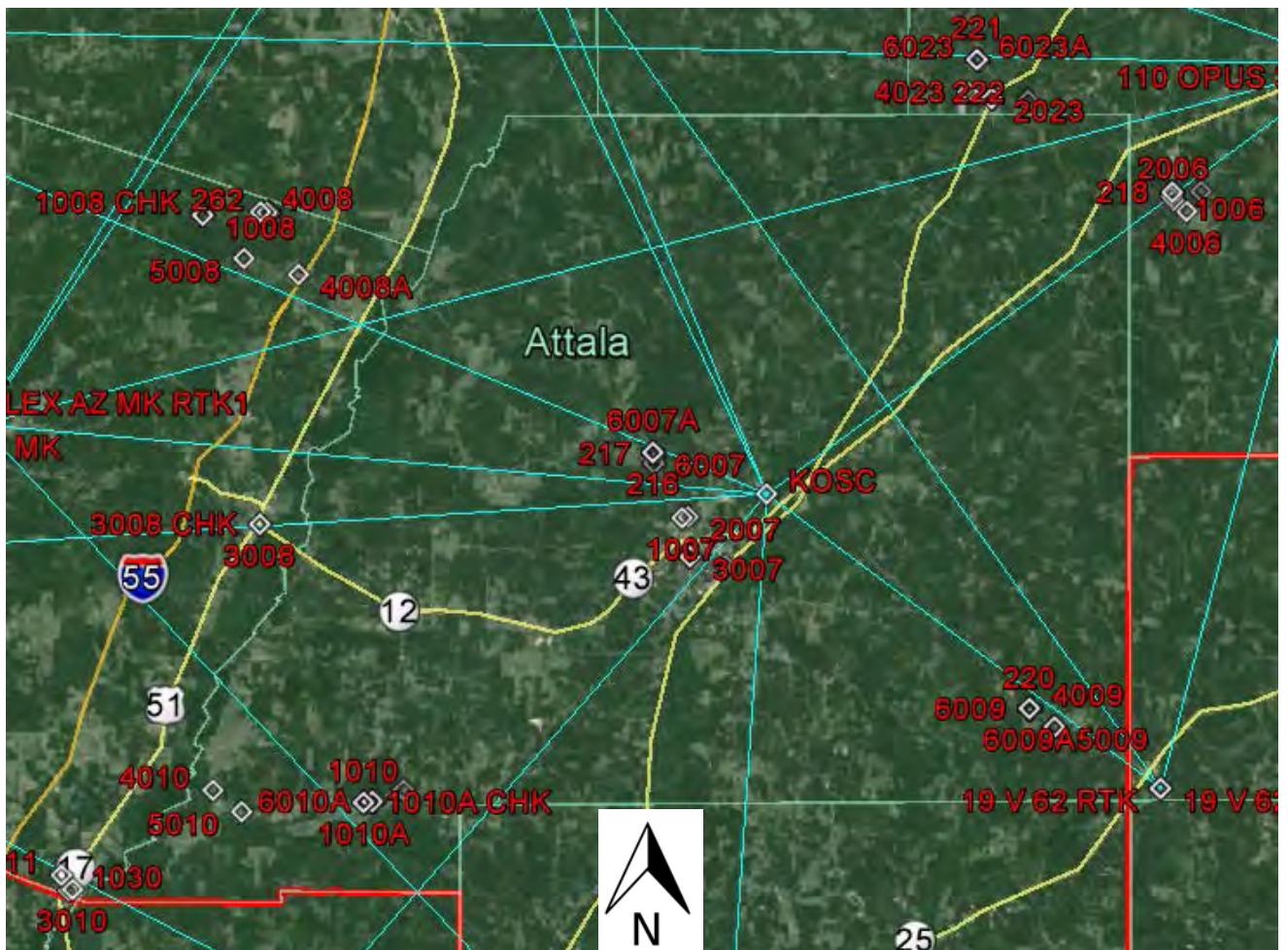


Not to Scale

SECTION 6 PART 6: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Attala County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

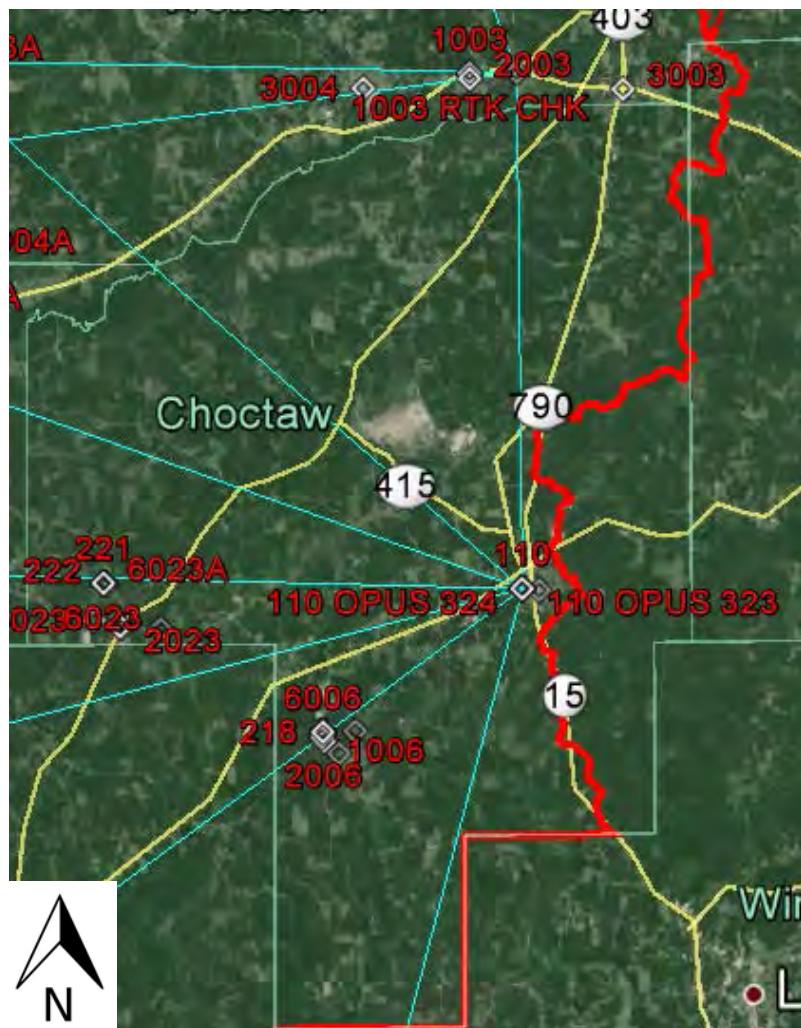


Not to Scale

SECTION 6 PART 7: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Choctaw County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

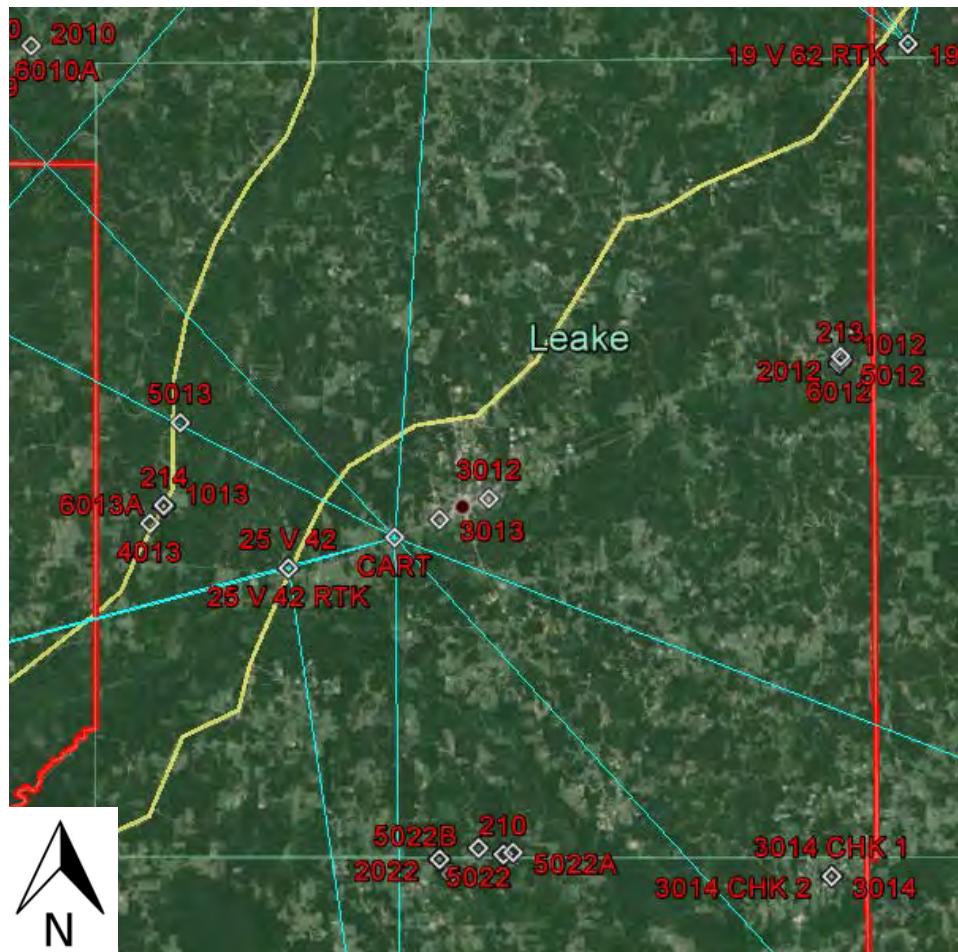


Not to Scale

SECTION 6 PART 8: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Leake County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

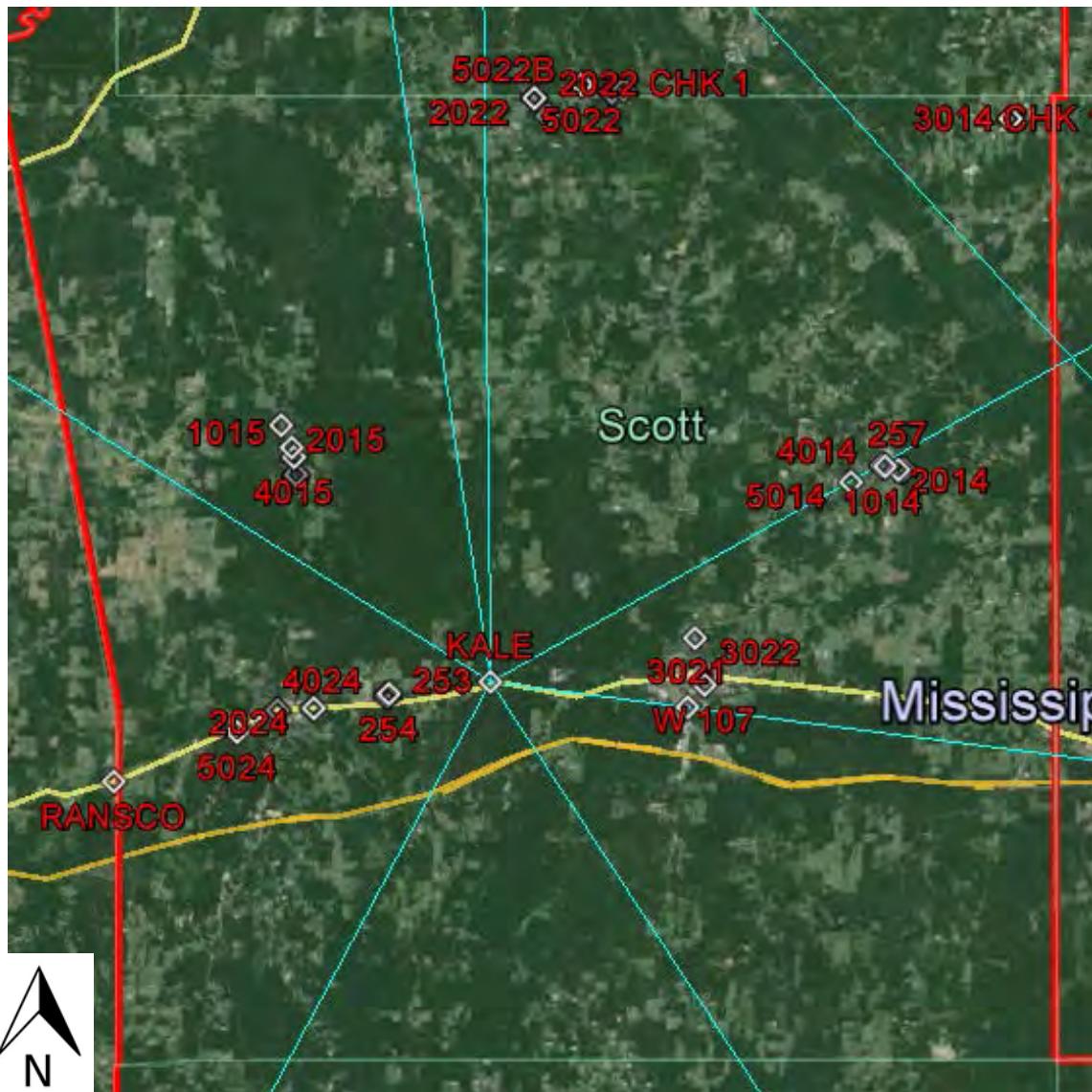


Not to Scale

SECTION 6 PART 9: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Scott County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

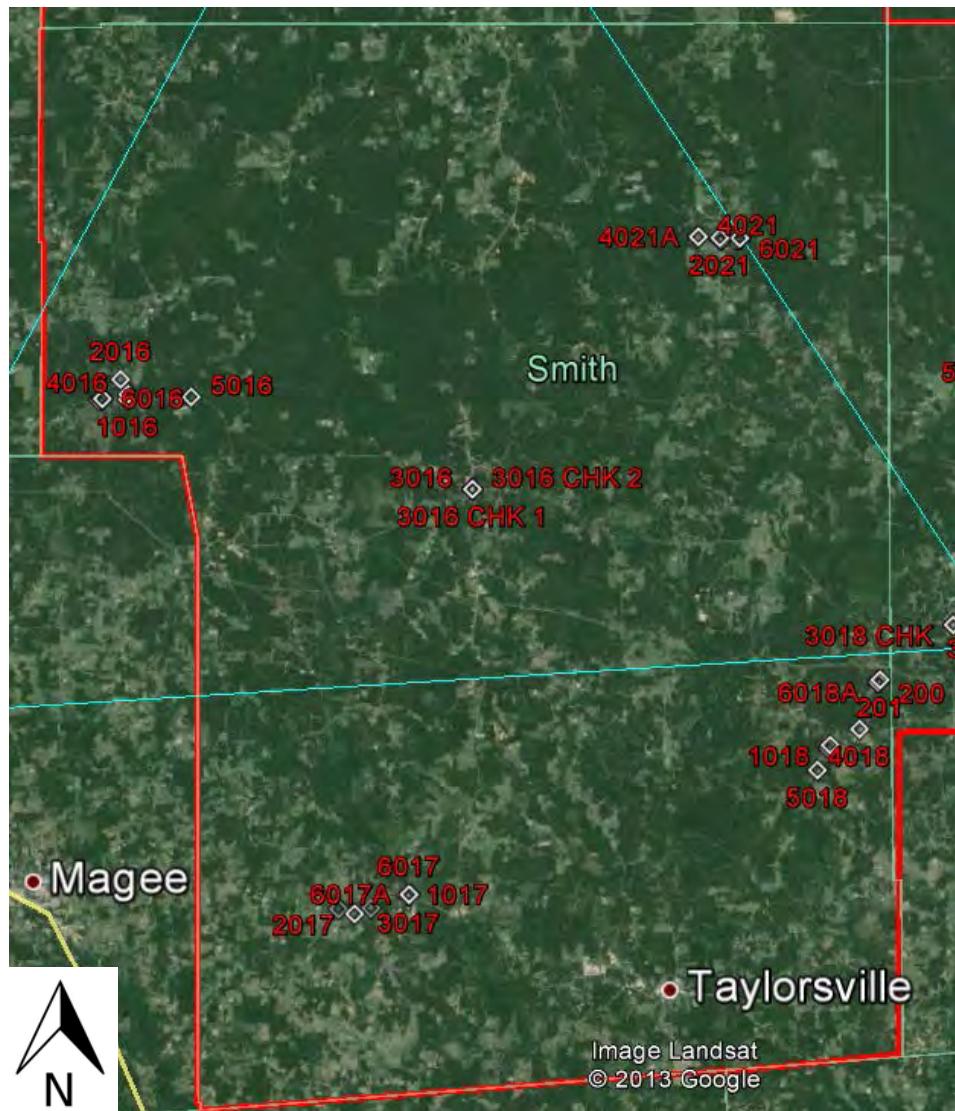


Not to Scale

SECTION 6 PART 10: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Smith County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

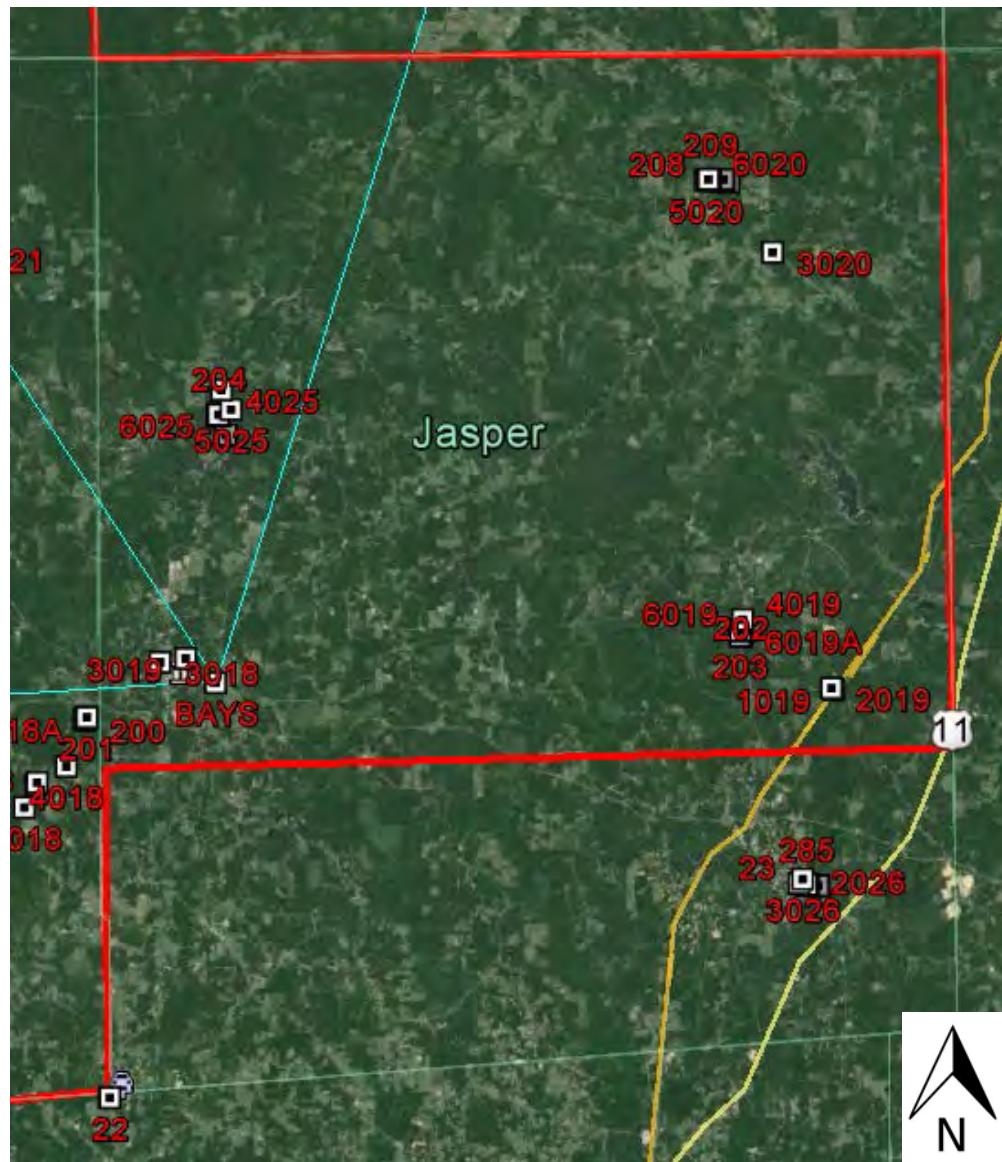


Not to Scale

SECTION 6 PART 11: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Jasper County.

The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report

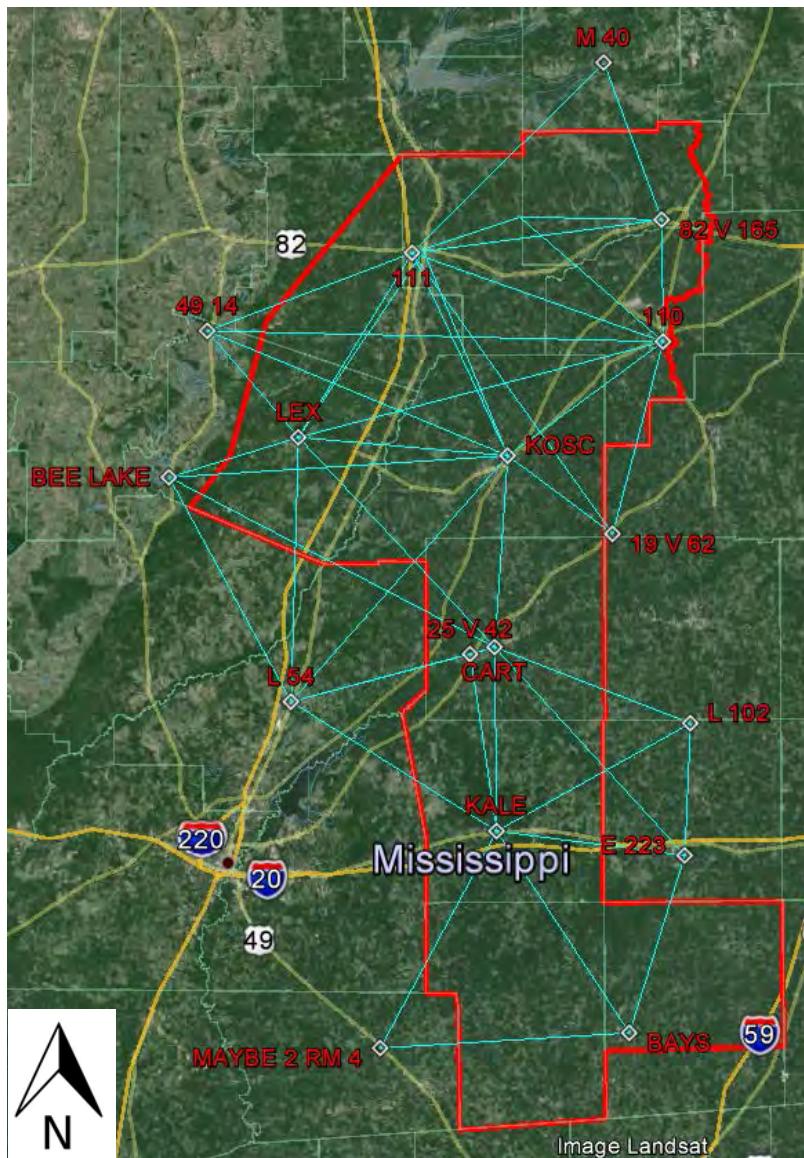


Not to Scale

SECTION 6 PART 12 GPS CONTROL DIAGRAM

This section contains a graphical representation of the established base stations (110 and 111) and the existing NGS control stations utilized used in the AOI.

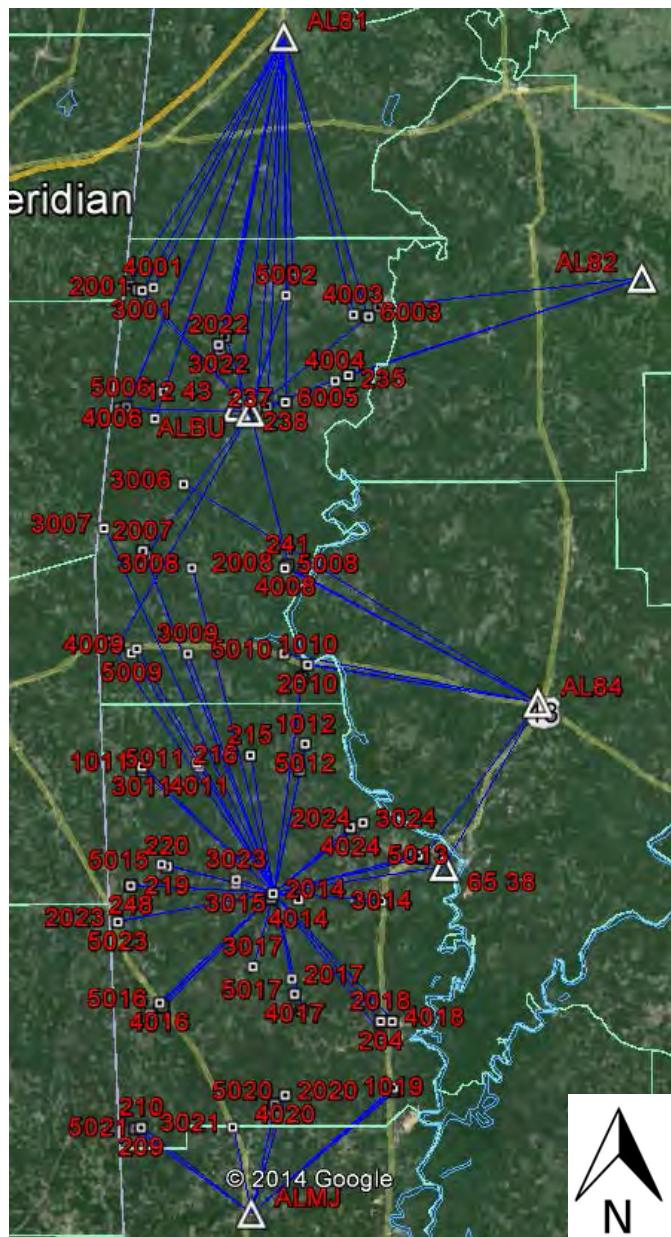
The points depicted here are equivalent to points designated with the suffix “_L” previously listed in this report



Not to Scale

SECTION 6 PART 13: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Choctaw and Washington County AL.



Not to Scale

SECTION 6 PART 14: GPS CONTROL DIAGRAM

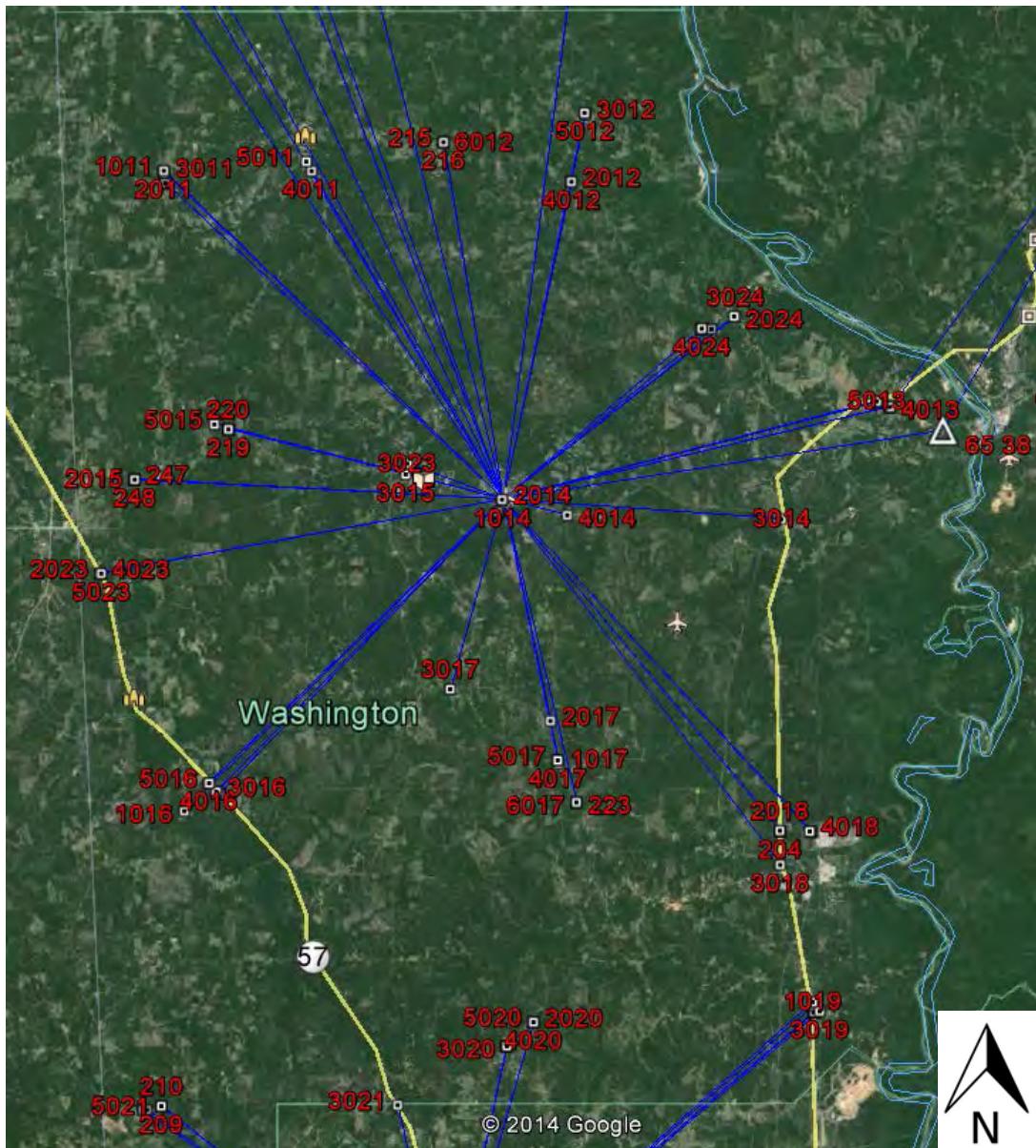
This section contains a graphical representation of the new and existing control stations used for Choctaw County.



Not to Scale

SECTION 6 PART 15: GPS CONTROL DIAGRAM

This section contains a graphical representation of the new and existing control stations used for Washington County.



Not to Scale

