

GROUND CONTROL SURVEY REPORT

**GPS SURVEY
FOR LIDAR CONTROL**

PEACE RIVER TOPOGRAPHIC MAPPING (P692)

SWFWMD, FLORIDA

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**3001, INC. THE GEOSPATIAL COMPANY
501 ROBERT BLVD, 2ND FLOOR
SLIDELL, LOUISIANA 70458**

(AUTHORIZATION NO: 05PCSOW0028)



August 2006

Southwest Florida Water Management District
2379 Broad Street
Brooksville, FL 34604-6899

Attn: Jim Owens, PSM

Re: Peace River Topographic Mapping

This photogrammetric mapping ground control survey is certified to the Southwest Florida Water Management Standards applicable for the work, as set forth in Chapter 61G17-6, Florida Administrative Code.

A handwritten signature in black ink, appearing to read 'Stephen L. Hebert'.

Stephen L. Hebert, P.L.S.
Louisiana Reg. No. 4467



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ABSTRACT

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This report documents the GPS ground surveys conducted in support of LIDAR data collection for SWFWMD, Florida. The data was collected during February, 2005. The ground control stations were established utilizing four Trimble 4000 SSE receivers, three Trimble 4000 SSI receivers and one Trimble 4700 receiver with fixed-height tripods, seven Trimble Compact L1/L2 antennas with ground plane and one Trimble microcentered L1/L2 antenna with ground plane. There were no problems encountered during this survey.

Following the control network surveys, surveys were conducted at 13 sites utilizing the base stations established in the static network. These surveys established "Ground Truth" data at each site on different surface types, including sand, asphalt, concrete, tall grass, mowed grass, trees and brush, thick brush, thick cut grass, limestone, and brush and grass.

Statistical comparisons were made between ground truth points collected in the survey and airborne LIDAR points which fell within 3 feet of the ground truth points.

SURVEY METHODOLOGY

SURVEY METHODOLOGY

Prior to beginning the survey collection, a reconnaissance was done of the existing control in the project area, and surrounding areas. Based on the results of the findings, the control to be included in the network was picked based on their locations, horizontal and vertical orders, and their accessibility. In addition to the survey control, several Continuously Operating Reference Stations (CORS) were included into the GPS network. All control monuments and CORS can be found in the Fully-Constrained Adjustment report, found in Section 4-B, and can also be seen on the GPS Network Map shown in Section 4-A.

The GPS network was planned to coincide with the guidelines established in NGS-58, Guidelines for Establishing GPS-derived Ellipsoid Heights. Control monuments were tied together with several sessions, for at least five hours each. These monuments were then tied to newly established monuments, or secondary control monuments, and these were tied together with a minimum of three occupations, for at least one hour each.

MAIN REPORT

STATIC GPS SUMMARY

The Standard Operating Procedure for the data collection includes a geodetic control network plan designed to maximize the use of the highest order control points in the area of interest, and to optimize the spatial distribution of geodetic control across the network.

Also included is the simultaneous occupation of points designed to provide redundant vectors and loop closures, as well as a collection of a superfluity of points to compare observed values against published values of geodetic control points.

In addition, the static GPS network was established to verify the compatibility and correlation of existing published NGS controls in the project area. Horizontal and vertical constraints were selected based on the order of accuracy and correlation of the controls selected.

PRELIMINARY ANALYSIS

The baselines were processed using Trimble Geomatics Office's baseline processing module, WAVE (*Weighted Ambiguity Vector Estimator*). Ionosphere-free fixed solutions were found to provide the best results. Preliminary blunder detections were undertaken using "Redundant Vectors" and Global Network Closures and any extremely large errors were eliminated.

MINIMALLY CONSTRAINED ADJUSTMENT

The data are then processed using a minimally constrained geodetic control network to test the network internally, without external constraints, and produce a statistical summary. The statistics from this process are required to be within the tolerance outlined in the Geometric Geodetic Accuracy Standards and Specifications for using GPS Relative Positioning Techniques, published by the FGCC. These tolerances are represented as ellipsoids showing the margin of error value on a graph of the theoretical points, covariance values that indicate the degree of error of the vectors relative to the other vectors in the network, and a chi-squared test that compares the predicted variance determined through a least-squares analysis to the observed variance. The summary is evaluated to eliminate vectors that are outside of the error tolerances to be replaced with redundant vectors that are within the tolerances until all tolerances are met.

FULLY CONSTRAINED ADJUSTMENT

The quality of the existing horizontal controls is assessed before undertaking the constrained adjustment. Geodetic inverses between the published NAD83 Coordinates of existing stations were compared with the geodetic inverses derived from the minimally constrained least square adjustment results. This distance analysis is especially useful,

since it provides a datum invariant means of comparison.

Once the minimally constrained network satisfies the requirements of the above tests, the highest order control points in the control network are selected with an optimum spatial relationship to fully constrain the network to known control points, and have their published values entered as the position for those points and the network re-adjusted. The fully constrained report is given in Section 4-B. The same statistical tests are rerun on the adjusted network, as well as visually comparing adjusted values of geodetic control points to published values of control points not used as constraints. Again, the summary is evaluated to identify vectors outside of the tolerances and constraining points reselected to obtain the best fit to the geoid where all vectors are within the prescribed tolerances.

ERROR ELLIPSES

The adjustment results show that the a posteriori variance factor of the network was close to 1.0, as should be desired, and passed the χ^2 test. None of the residual components in the network were flagged for possible rejection under the τ -max test at the 0.05 level of significance. The relative confidence ellipses reveal that the horizontal positional accuracy between all directly connected pairs of stations in the network were better than (1:100,000) at the 95% level of confidence. The horizontal and vertical Error ellipses are included in this report in Section 4-D.

GROUND TRUTH SUMMARY

Surveys were conducted to establish ground truth data at representative sites throughout the project area. These sites were selected on the basis of the various types of ground surfaces and vegetation covers that would be encountered by the LIDAR surveys. As a quality control measure, a number of “check-in” points consisted of published horizontal and vertical control points within the area. The base stations used to collect survey data were included in the static GPS network, and were selected on the basis of their having an unobstructed view of the sky, as well as being in a location considered favorable for collecting ground truth data. The vertical and horizontal accuracy of each base station was determined by the statistical tests performed in the least squares adjustment process.

SAMPLE POINTS / TEST POINTS

The test points were distributed and categorized into sites as shown in the Project Area Site Map attached in this report (Section 5-A). These sites were selected on the basis of various types of ground surfaces and vegetation covers. At the time of LIDAR data acquisition, checkpoints were collected on surfaces with sand, asphalt, concrete, tall grass, mowed grass, trees and brush, thick brush, thick cut grass, limestone, and brush and grass.

DATA ANALYSIS

Data analysis was accomplished by comparing ground truth checkpoints with LIDAR points from the edited data set, which were within 3 feet horizontally from the ground truth points. The only exception to this would be the ground truth points collected under tree canopy, where comparisons could be made with LIDAR pulses that fell within 4 feet of the check points. This is because fewer LIDAR pulses are able to reach the ground in heavily forested areas, so the point spacing is larger than in cleared areas. Based on the number of returns and the density of points in this project, it was not necessary to compare to anything further away than 3 feet from the ground truth points. Note that the edited LIDAR points are simply a subset of the raw LIDAR points. The points that fell above the ground surface on vegetation canopies, buildings, or other obstructions were removed from the data set.

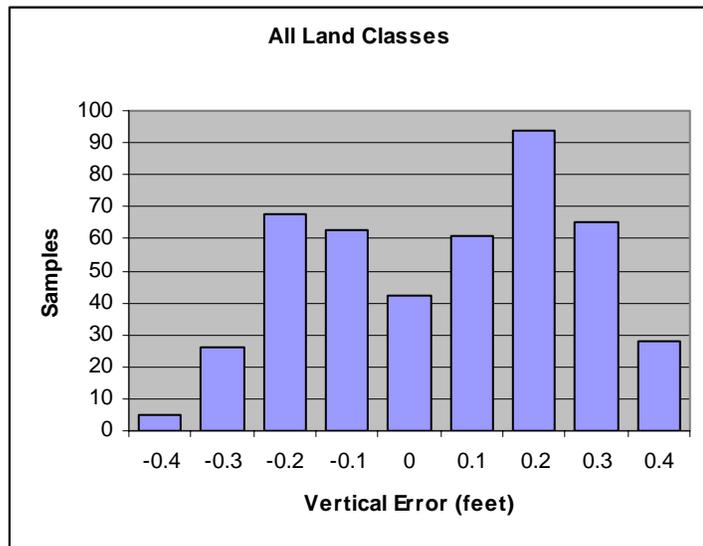
LIDAR POINT COMPARISON

The result of the comparisons of these values indicated a Vertical Root Mean Square Error (RMSEz) of 0.217 feet, which equates to Vertical Accuracy of 0.425 feet at the 95 percent confidence level.

OVERALL ACCURACY

A comparison of these values indicated a Vertical Root Mean Square Error (RMSEz) of 0.217 feet. This is within the vertical accuracy tolerance. The mean elevation difference for all points is 0.061 centimeters. Skewness is -0.193, indicating an approximately normal distribution. Descriptive statistics and a histogram of the vertical error distribution for all samples are shown below.

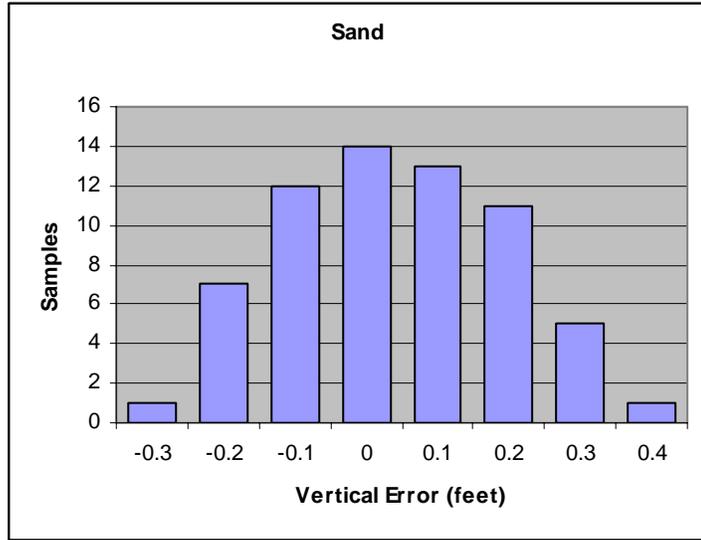
All Land Classes (feet)	
RMSEz	0.217
Mean	0.061
Standard Error	0.010
Median	0.1
Mode	0.16
Standard Deviation	0.208
Sample Variance	0.043
Kurtosis	-1.105
Skewness	-0.193
Range	0.83
Minimum	-0.4
Maximum	0.43
Count	452



SAND

This set includes only those points that were collected in areas of sand surfaces. The resulting RMSEz is 0.170 feet, which is within the accuracy specification. The skewness value is 0.027.

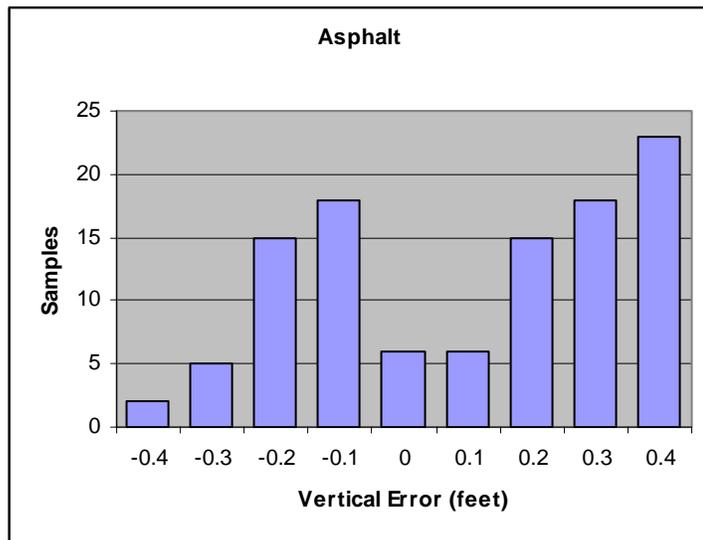
Sand (feet)	
RMSEz	0.170
Mean	0.036
Standard Error	0.021
Median	0.035
Mode	-0.15
Standard Deviation	0.167
Sample Variance	0.028
Kurtosis	-0.948
Skewness	0.027
Range	0.65
Minimum	-0.27
Maximum	0.38
Count	64



ASPHALT

This set includes only those points that were collected in areas of asphalt surfaces. The resulting RMSEz is 0.260 feet. The large range seen in the asphalt class may be caused by having comparisons in both old and fresh asphalt, which can affect the reflectivity of the surface.

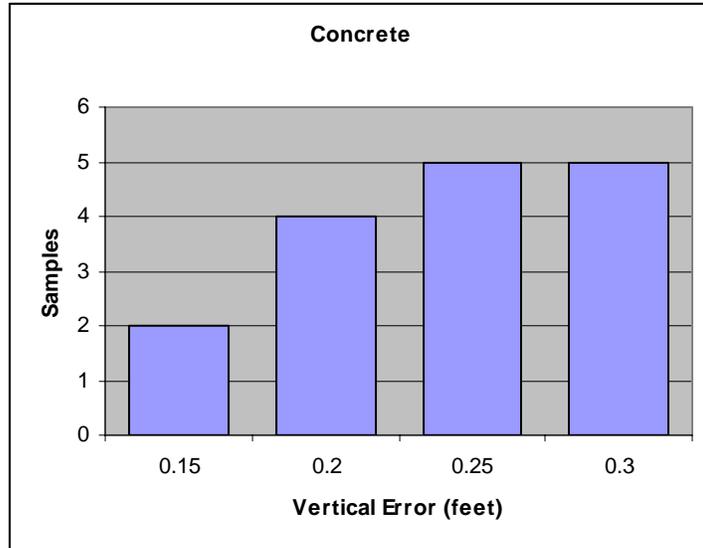
Asphalt (feet)	
RMSEz	0.260
Mean	0.103
Standard Error	0.023
Median	0.17
Mode	0.37
Standard Deviation	0.240
Sample Variance	0.058
Kurtosis	-1.293
Skewness	-0.288
Range	0.82
Minimum	-0.39
Maximum	0.43
Count	108



CONCRETE

This set includes only those points that were collected in areas of concrete surfaces. The resulting RMSEz is 0.245 feet, which is within the accuracy specifications.

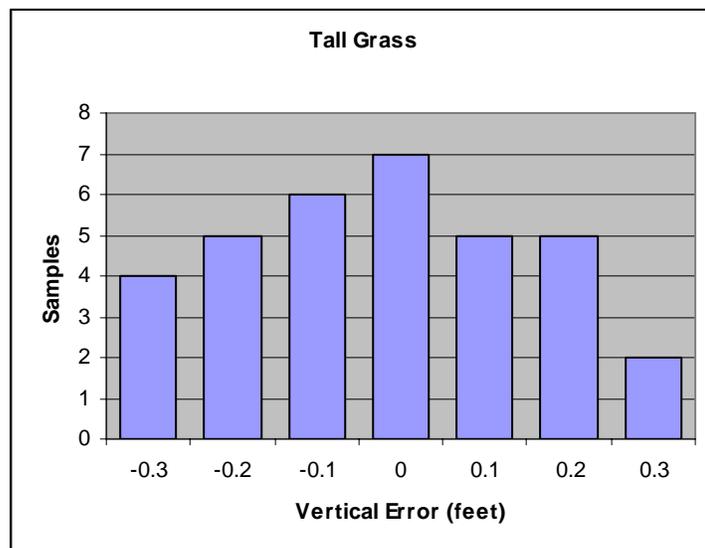
Concrete (feet)	
RMSEz	0.245
Mean	0.241
Standard Error	0.012
Median	0.235
Mode	0.3
Standard Deviation	0.048
Sample Variance	0.002
Kurtosis	-0.985
Skewness	-0.287
Range	0.14
Minimum	0.16
Maximum	0.3
Count	16



TALL GRASS

This set includes only those points that were collected in areas of tall grass. The resulting RMSEz is 0.170 feet, which is within the accuracy specifications.

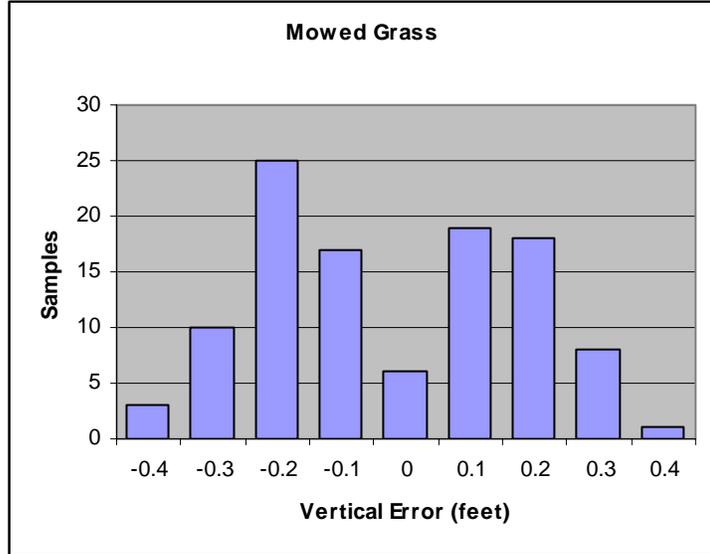
Tall Grass (feet)	
RMSEz	0.170
Mean	-0.026
Standard Error	0.029
Median	-0.025
Mode	-0.16
Standard Deviation	0.170
Sample Variance	0.029
Kurtosis	-0.954
Skewness	-0.121
Range	0.6
Minimum	-0.34
Maximum	0.26
Count	34



MOWED GRASS

This set includes only those points that were collected in areas of mowed grass. The resulting RMSEz is 0.200 feet, which is within the accuracy specifications.

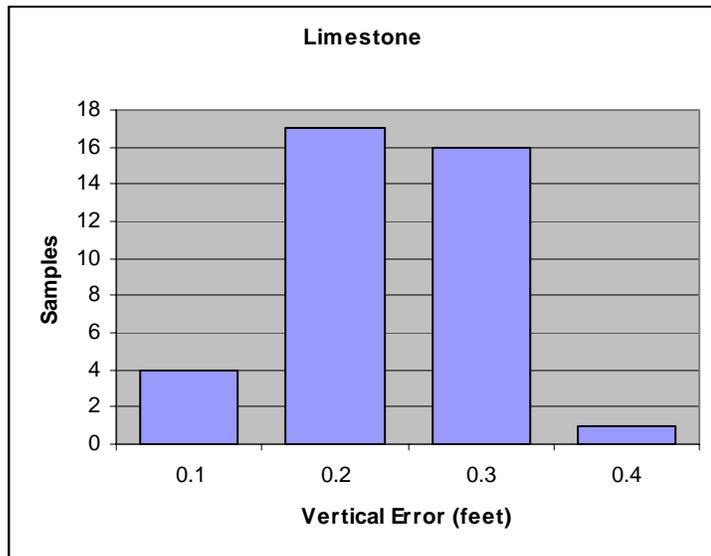
Mowed Grass (feet)	
RMSEz	0.200
Mean	-0.024
Standard Error	0.019
Median	-0.05
Mode	0.16
Standard Deviation	0.200
Sample Variance	0.040
Kurtosis	-1.200
Skewness	0.093
Range	0.76
Minimum	-0.4
Maximum	0.36
Count	107



LIMESTONE

This set includes only those points that were collected in areas of limestone. The resulting RMSEz is 0.252 feet, which is within the accuracy specifications.

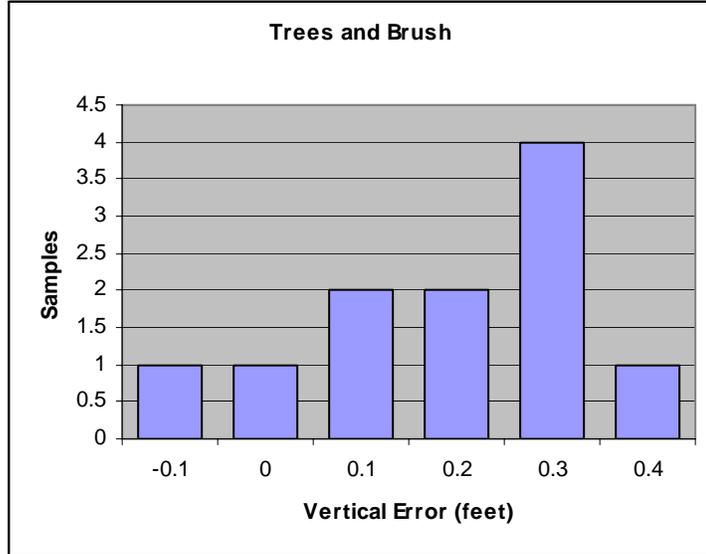
Limestone (feet)	
RMSEz	0.252
Mean	0.241
Standard Error	0.012
Median	0.245
Mode	0.21
Standard Deviation	0.073
Sample Variance	0.005
Kurtosis	-0.451
Skewness	-0.383
Range	0.28
Minimum	0.09
Maximum	0.37
Count	38



TREES AND BRUSH

This set includes only those points that were collected in areas of trees and brush surfaces. The resulting RMSEz is 0.241 feet, which is within the accuracy specification.

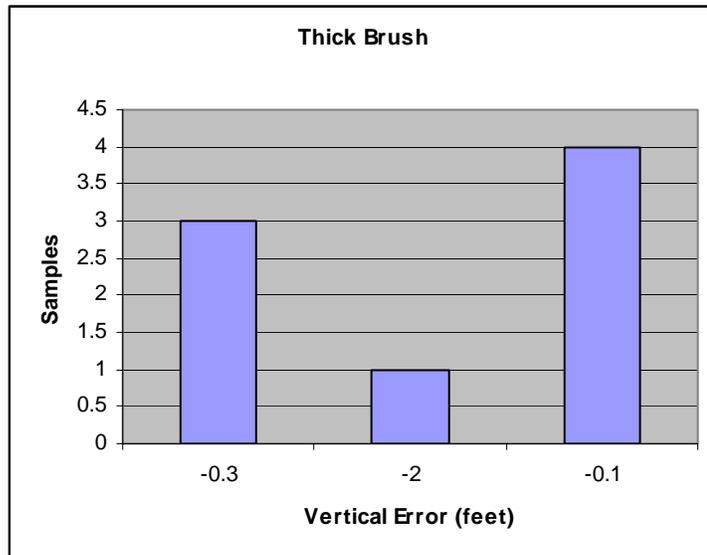
Trees and Brush (feet)	
RMSEz	0.241
Mean	0.197
Standard Error	0.044
Median	0.23
Mode	0.15
Standard Deviation	0.145
Sample Variance	0.021
Kurtosis	2.509
Skewness	-1.422
Range	0.51
Minimum	-0.15
Maximum	0.36
Count	11



THICK BRUSH

This set includes only those points that were collected in areas of thick brush surfaces. The resulting RMSEz is 0.208 feet.

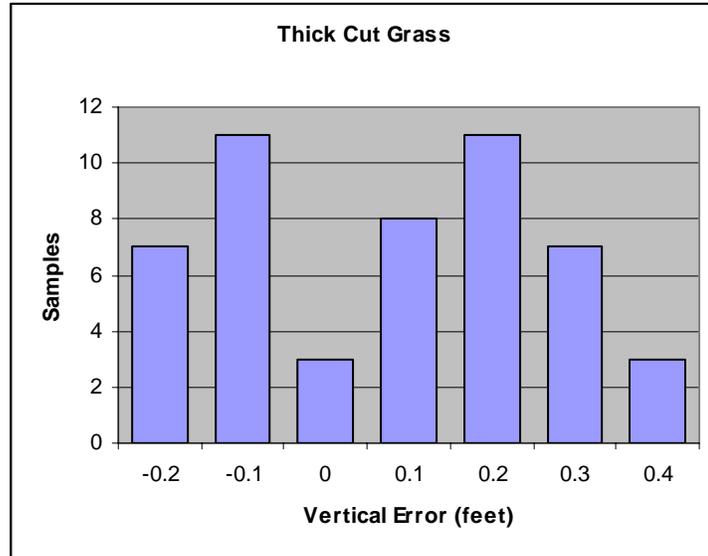
Thick Brush (feet)	
RMSEz	0.208
Mean	-0.178
Standard Error	0.041
Median	-0.12
Mode	-0.08
Standard Deviation	0.116
Sample Variance	0.013
Kurtosis	-1.962
Skewness	-0.585
Range	0.26
Minimum	-0.34
Maximum	-0.08
Count	8



THICK CUT GRASS

This set includes only those points that were collected in areas of thick cut grass surfaces. The resulting RMSEz is 0.207 feet, which is within the accuracy specification.

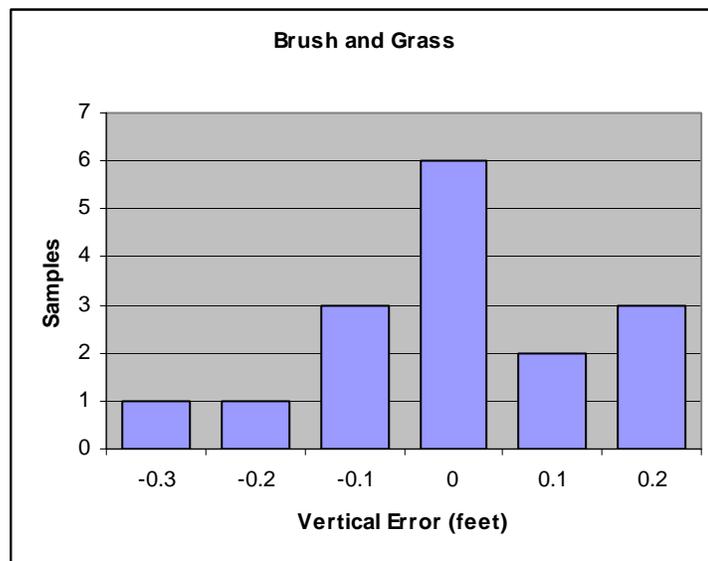
Thick Cut Grass (feet)	
RMSEz	0.207
Mean	0.075
Standard Error	0.028
Median	0.09
Mode	-0.21
Standard Deviation	0.195
Sample Variance	0.038
Kurtosis	-1.328
Skewness	-0.035
Range	0.65
Minimum	-0.23
Maximum	0.42
Count	50



BRUSH AND GRASS

This set includes only those points that were collected in areas of brush and grass surfaces. The resulting RMSEz is 0.135 feet.

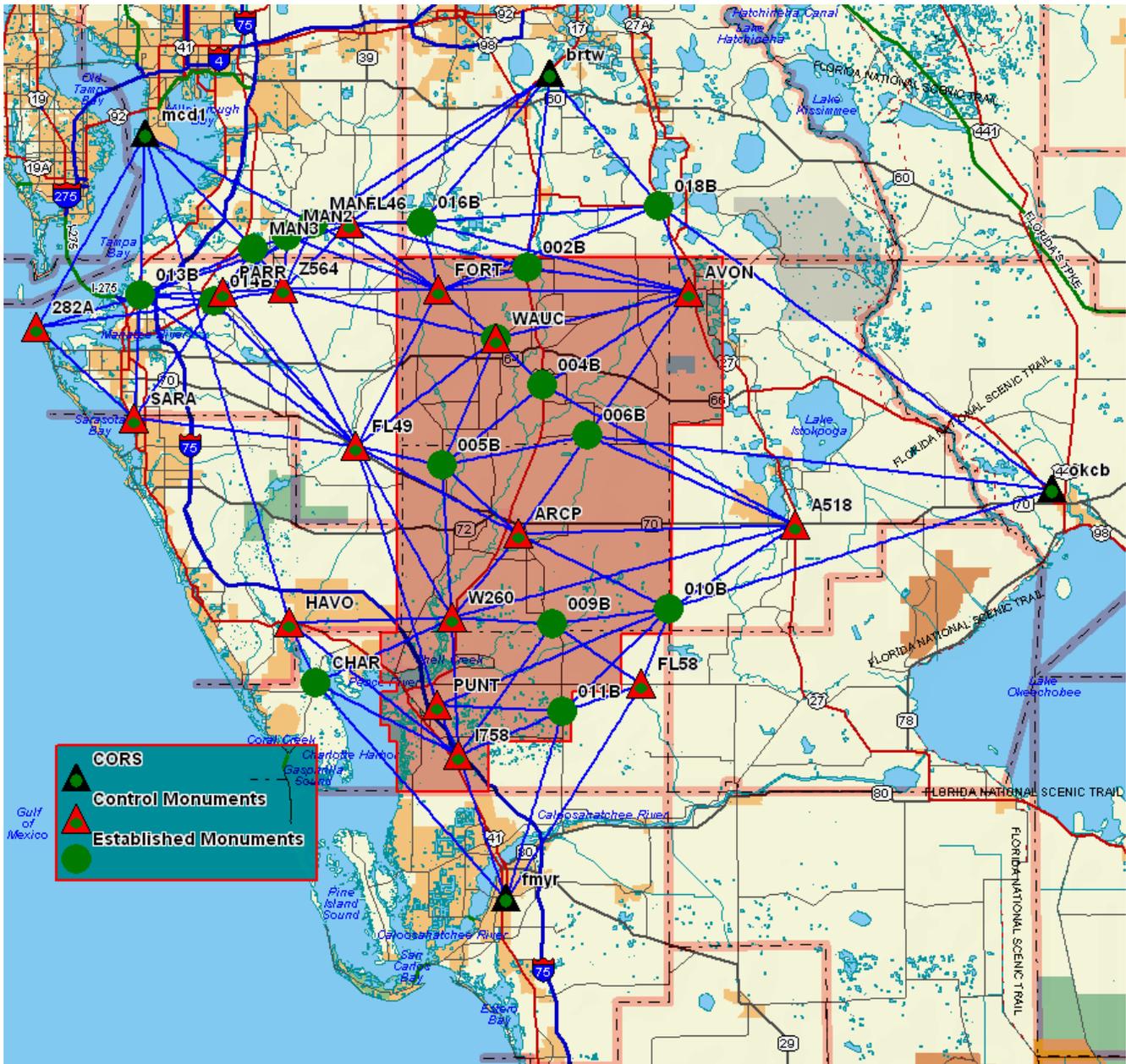
Brush and Grass (feet)	
RMSEz	0.135
Mean	-0.001
Standard Error	0.035
Median	0.005
Mode	0.04
Standard Deviation	0.139
Sample Variance	0.019
Kurtosis	-0.374
Skewness	-0.373
Range	0.49
Minimum	-0.28
Maximum	0.21
Count	16



GPS NETWORK

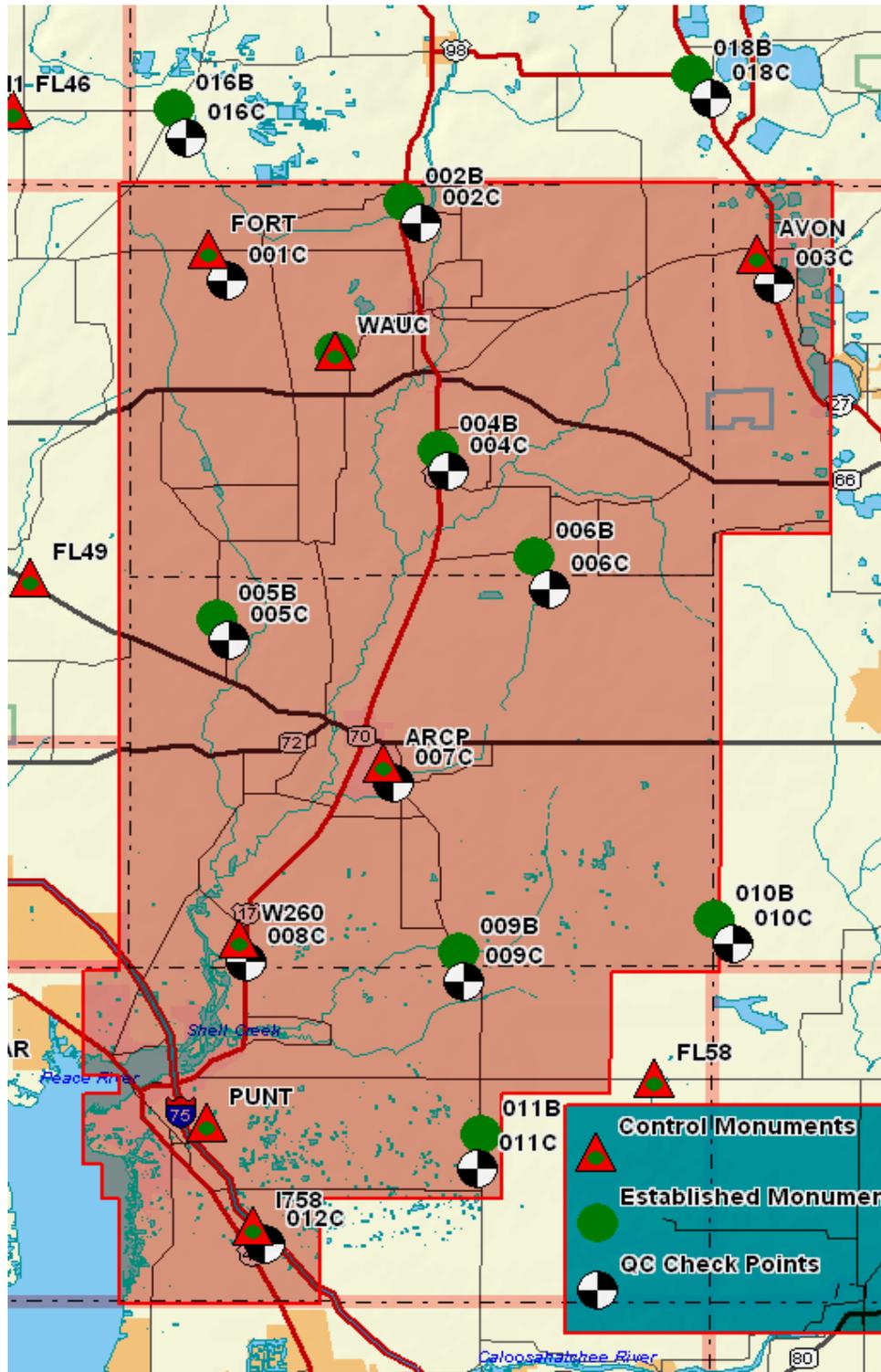
A. GPS Network Map

SWFWMD GPS Network



This map shows the GPS baselines processed for this network. The CORS and control monuments can be distinguished from the newly established monuments (see the legend above).

QC Check Points



The check points can be seen in the above map. The QC procedures are described in Section 3, in the Ground Truth Summary.

B. Fully Constrained

SWFWMD, Florida
 LIDAR Ground Truth
 GPS Control Network
 (Fully-Constrained Adjustment)

Coordinate System: US State Plane 1983
 Zone: Florida West 0902
 Horizontal Datum: NAD83
 Geoid Model: Geoid03
 Units: US Survey Feet

Name	Latitude	Longitude	Northing	Easting	Elevation	Height	Northing error	Easting error	Ellip error
brtw	27°56'58.64223"N	81°46'58.20127"W	1314451.266	726276.703	130.473	44.502	0.000	0.000	0.030
fmyr	26°35'27.50814"N	81°51'50.97251"W	820515.883	700558.082	35.657	-43.553	0.000	0.000	0.000
mcd1	27°50'59.33879"N	82°31'56.33636"W	1278477.277	484154.808	34.282	-46.998	0.000	0.000	0.000
okcb	27°15'57.71572"N	80°51'19.18214"W	1067579.581	1028027.524	42.120	-45.128	0.000	0.000	0.000
282A	27°31'56.86901"N	82°43'56.29928"W	1163433.882	418843.334	2.172	-77.445	0.043	0.036	0.059
A518	27°12'26.16974"N	81°19'44.24947"W	1045100.307	874271.918	136.210	54.052	0.000	0.000	0.000
ARCP	27°11'34.70369"N	81°50'30.44703"W	1039351.899	707594.480	57.809	-22.693	0.010	0.010	0.020
AVON	27°35'29.33331"N	81°31'35.66239"W	1184481.325	809510.077	151.562	66.663	0.013	0.010	0.020
CH1C	26°56'42.14258"N	82°13'02.80426"W	949253.988	585327.618	4.966	-73.243	0.052	0.043	0.066
CHAR	26°56'51.80782"N	82°12'57.70514"W	950229.132	585790.726	3.711	-74.509	0.016	0.013	0.026
FL46	27°42'16.54245"N	82°09'17.10263"W	1225340.692	606094.617	115.828	33.846	0.013	0.013	0.023
FL49	27°20'16.06691"N	82°08'28.36289"W	1091991.530	610323.463	46.635	-34.058	0.000	0.000	0.000
FL58	26°56'42.27017"N	81°36'47.88931"W	949398.599	782144.608	56.593	-23.584	0.020	0.016	0.030
FORT	27°35'41.96722"N	81°59'22.03261"W	1185463.843	659582.554	122.064	39.938	0.013	0.013	0.023
HAVO	27°02'48.34214"N	82°15'52.23382"W	986260.066	570072.698	6.751	-71.673	0.000	0.000	0.000
I758	26°49'44.77474"N	81°57'08.42554"W	907053.357	671708.949	27.407	-51.554	0.010	0.007	0.016
MA1C	27°42'30.36755"N	82°13'12.56056"W	1226769.005	584934.242	91.873	9.985	0.050	0.042	0.068

MA2C	27°41'05.21993"N	82°16'09.69273"W	1218202.016	568995.406	62.352	-19.449	0.050	0.042	0.071
MA3C	27°39'51.47026"N	82°19'58.59094"W	1210804.673	548398.207	49.192	-32.435	0.044	0.038	0.064
MAN1	27°42'17.99819"N	82°13'12.73023"W	1225519.916	584916.761	87.634	5.747	0.041	0.035	0.064
MAN2	27°40'58.76185"N	82°16'09.74682"W	1217549.860	568989.119	56.191	-25.609	0.050	0.042	0.068
MAN3	27°39'48.39618"N	82°19'54.21711"W	1210493.180	548790.639	52.394	-29.236	0.050	0.042	0.071
PARR	27°35'26.78536"N	82°23'19.48549"W	1184128.438	530251.005	32.554	-48.715	0.044	0.038	0.064
PUNT	26°54'38.51632"N	81°59'27.83573"W	936710.266	659078.216	21.322	-57.649	0.041	0.035	0.061
SARA	27°23'01.26478"N	82°33'06.36323"W	1109043.694	477112.517	25.764	-54.129	0.044	0.035	0.061
WAUC	27°30'54.36904"N	81°53'00.60849"W	1156439.181	693926.227	101.681	19.517	0.031	0.025	0.041
WMD1	27°30'54.28086"N	81°53'00.43686"W	1156430.291	693941.687	101.983	19.819	0.073	0.061	0.100
Z564	27°35'46.81768"N	82°16'33.73990"W	1186053.277	566761.791	106.810	25.190	0.043	0.036	0.062
001C	27°35'41.13095"N	81°59'20.58262"W	1185379.406	659713.016	122.542	40.415	0.043	0.036	0.059
002B	27°37'58.12624"N	81°49'31.24012"W	1199253.405	712716.177	96.824	13.727	0.046	0.036	0.059
002C	27°37'52.67410"N	81°49'32.51850"W	1198702.667	712601.979	93.725	10.639	0.046	0.036	0.056
003C	27°35'24.85627"N	81°31'30.29568"W	1184031.064	809994.675	151.376	66.475	0.049	0.039	0.066
004B	27°26'17.60099"N	81°47'46.81498"W	1128527.258	722224.251	71.543	-10.563	0.046	0.039	0.066
004C	27°26'13.20941"N	81°47'46.85329"W	1128083.788	722221.525	72.178	-9.920	0.049	0.039	0.072
005B	27°18'21.53143"N	81°58'57.83473"W	1080400.334	661774.210	67.984	-12.746	0.046	0.039	0.062
005C	27°18'04.45045"N	81°58'57.92112"W	1078675.523	661766.655	66.905	-13.799	0.043	0.033	0.056
006B	27°21'18.13033"N	81°42'53.62995"W	1098338.487	748708.618	81.836	-0.099	0.052	0.039	0.079
006C	27°21'36.79952"N	81°42'53.35703"W	1100223.756	748728.914	79.356	-2.617	0.043	0.036	0.062
007C	27°11'37.91810"N	81°50'25.95869"W	1039676.994	707999.342	58.928	-21.580	0.052	0.043	0.066
008C	27°03'18.42281"N	81°57'58.96402"W	989208.548	667109.015	25.300	-54.291	0.052	0.043	0.069
009B	27°02'41.46635"N	81°46'45.72920"W	985538.287	727979.952	39.651	-40.554	0.046	0.039	0.062
009C	27°02'28.47321"N	81°46'36.32869"W	984227.800	728832.217	39.275	-40.925	0.043	0.036	0.059
010B	27°04'12.90702"N	81°33'44.36361"W	994956.194	798594.950	74.926	-5.444	0.046	0.036	0.059
010C	27°04'28.00109"N	81°33'44.25850"W	996480.378	798599.152	74.540	-5.847	0.033	0.026	0.039
011B	26°54'04.60483"N	81°45'36.24560"W	933360.106	734361.399	36.942	-42.983	0.033	0.026	0.039
011C	26°54'00.11938"N	81°45'36.23211"W	932907.199	734363.479	38.473	-41.449	0.075	0.062	0.098

012C	26°49'49.40761"N	81°57'13.47087"W	907520.976	671251.741	25.309	-53.647	0.041	0.035	0.061
013B	27°35'10.44080"N	82°32'25.92831"W	1182662.549	481078.068	12.325	-68.227	0.044	0.035	0.061
013C	27°35'24.80692"N	82°32'24.22771"W	1184112.645	481237.418	18.259	-62.302	0.044	0.035	0.058
014B	27°34'32.50503"N	82°24'12.27420"W	1178662.206	525483.540	26.389	-54.775	0.047	0.038	0.068
015C	27°35'48.34036"N	82°16'41.86737"W	1186208.681	566030.921	107.084	25.467	0.044	0.038	0.068
016B	27°42'22.86387"N	82°01'09.69782"W	1225948.109	649902.373	141.820	59.336	0.047	0.038	0.074
016C	27°42'28.85962"N	82°01'06.08081"W	1226553.536	650227.552	141.482	58.985	0.044	0.038	0.064
018B	27°44'00.04383"N	81°34'54.70092"W	1235990.965	791427.157	152.862	67.378	0.041	0.032	0.058
018C	27°44'00.70273"N	81°34'57.99848"W	1236056.500	791130.623	153.816	68.339	0.050	0.038	0.081
008B	27°03'17.78009"N	81°57'52.51060"W	989143.809	667692.459	26.008	-53.589	0.031	0.025	0.041

C. Published Positions vs GPS Derived Positions

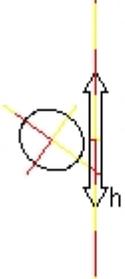
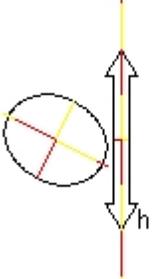
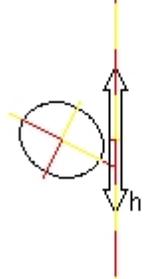
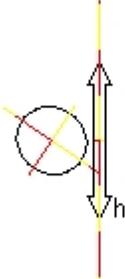
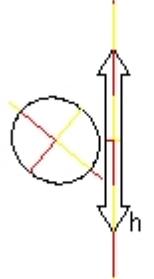
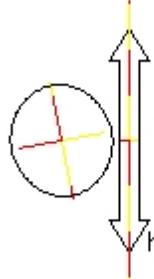
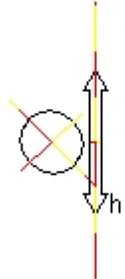
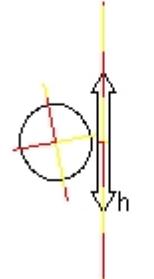
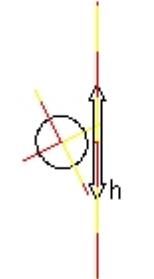
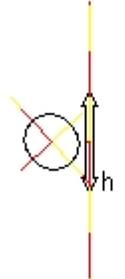
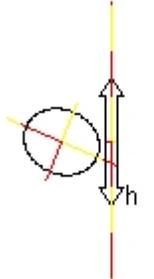
Published Positions vs GPS Derived Positions

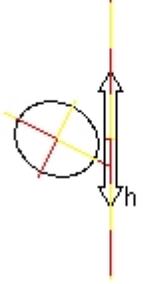
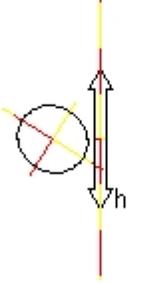
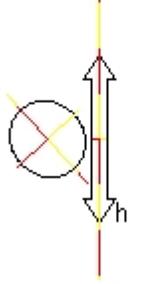
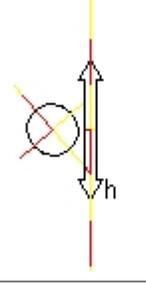
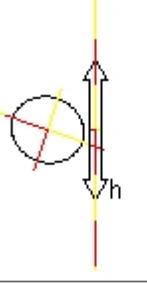
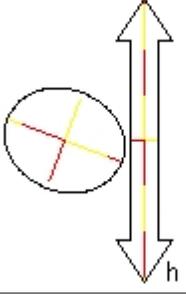
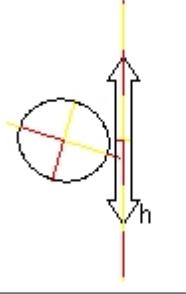
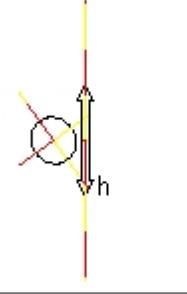
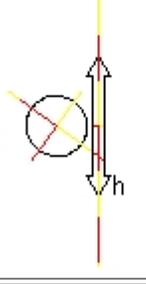
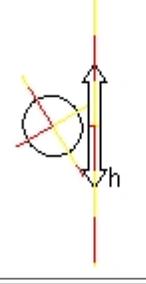
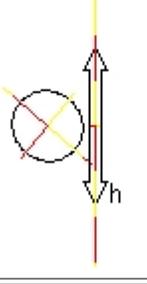
NGS Positions								GPS Derived Positions					delta		
Designation	Northing	Easting	Elev (US feet)	Ellip (US feet)	Horiz Order	Vert Order	Ellip Order	Name	Northing	Easting	Elev (US feet)	Ellip (US feet)	Northing (US feet)	Easting (US feet)	Elev (US feet)
872 6282 A TIDAL	1163433.913	418843.363	2.080	-77.526	B	2	5	282A	1163433.882	418843.334	2.172	-77.445	0.031	0.029	-0.092
A 518	1045100.306	874271.9178	136.204	54.068	A	1	4	A518	1045100.307	874271.918	136.210	54.052	-0.001	0.000	-0.006
ARCPORT	1039351.923	707594.4538	57.415	-23.097	B	-	5	ARCP	1039351.899	707594.480	57.809	-22.693	0.024	-0.026	
AVONPORT	1184481.344	809509.9446	152.231	67.126	A	-	4	AVON	1184481.325	809510.077	151.562	66.663	0.019	-0.132	
FLGPS 46	1225340.701	606094.5949	115.288	33.924	A	3	4	FL46	1225340.692	606094.617	115.828	33.846	0.009	-0.022	
FLGPS 49	1091991.529	610323.4629	46.617	-33.596	B	2	5	FL49	1091991.530	610323.463	46.635	-34.058	-0.001	0.000	-0.018
FLGPS 58	949398.5863	782144.5747	56.430	-23.786	A	-	4	FL58	949398.599	782144.608	56.593	-23.584	-0.013	-0.033	
FORT RESET	1185463.862	659582.5371	121.719	39.797	B	-	5	FORT	1185463.843	659582.554	122.064	39.938	0.019	-0.017	
HAVOLINE 2	986260.0654	570072.6983	6.542	-72.014	B	2	5	HAVO	986260.066	570072.698	6.751	-71.673	-0.001	0.000	-0.209
I75 82 A07	907053.3772	671709.1962	27.139	-	2	2	-	I758	907053.357	671708.949	27.407	-51.554	0.020	0.247	-0.268
PARISH	1184128.475	530250.9986	32.444	-48.753	B	2	5	PARR	1184128.438	530251.005	32.554	-48.715	0.037	-0.006	-0.110
WAUCPORT	1156439.22	693926.1754	101.378	19.390	B	-	5	WAUC	1156439.181	693926.227	101.681	19.517	0.039	-0.052	
Z 564	-	-	106.817	-	-	2	-	Z564	1186053.277	566761.791	106.810	25.190			0.007

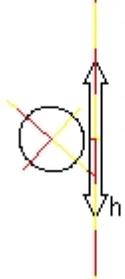
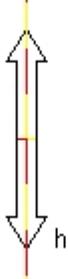
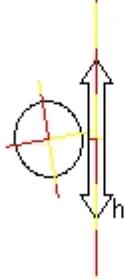
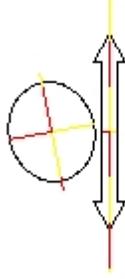
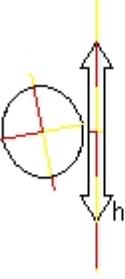
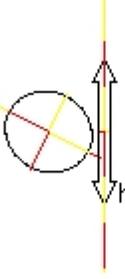
Note: Only the monuments with 2nd order or better positions were compared to the GPS derived positions (highlighted).

D. Error Ellipses

Point Error Ellipses

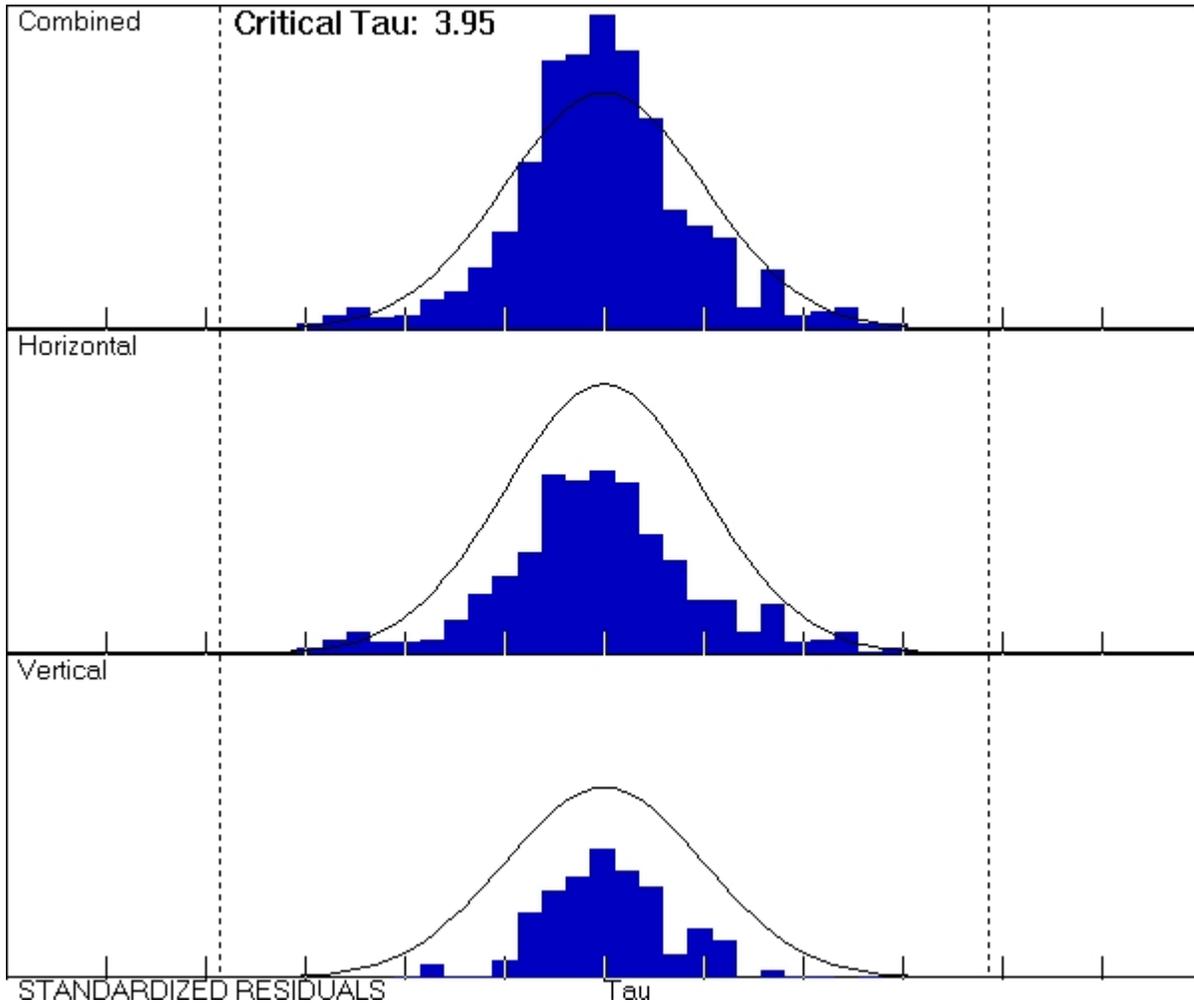
10B	PUNT	011B
 -37°	 -28°	 -28°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
I758	FL58	009B
 -35°	 -40°	 -79°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
W260	004B	WAUC
 -45°	 -79°	 -62°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
5B	AVON	006B
 -48°	 0°	 -23°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

ARCP	14B	PARR
 -27°	 -32°	 -48°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
Z564	FL46	013B
 -62°	 -49°	 -20°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
282A	SARA	FORT
 -21°	 -17°	 -55°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		
2B	WMD1	016B
 -36°	 -59°	 -41°
Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ		

018B	brtw	MAN1
 <p data-bbox="191 520 240 550">-42°</p>	 <p data-bbox="605 520 638 550">0°</p>	 <p data-bbox="1019 520 1068 550">-80°</p>
<p data-bbox="311 571 1291 600">Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		
MAN3	MAN2	CHAR
 <p data-bbox="191 938 240 968">-77°</p>	 <p data-bbox="605 938 654 968">-78°</p>	 <p data-bbox="1019 938 1068 968">-27°</p>
<p data-bbox="311 989 1291 1018">Tick Size: 0.033sft Horizontal Bivariate Scalar: 2.45σ Vertical Univariate Scalar: 1.96σ</p>		

E. Histograms of Standardized Residuals

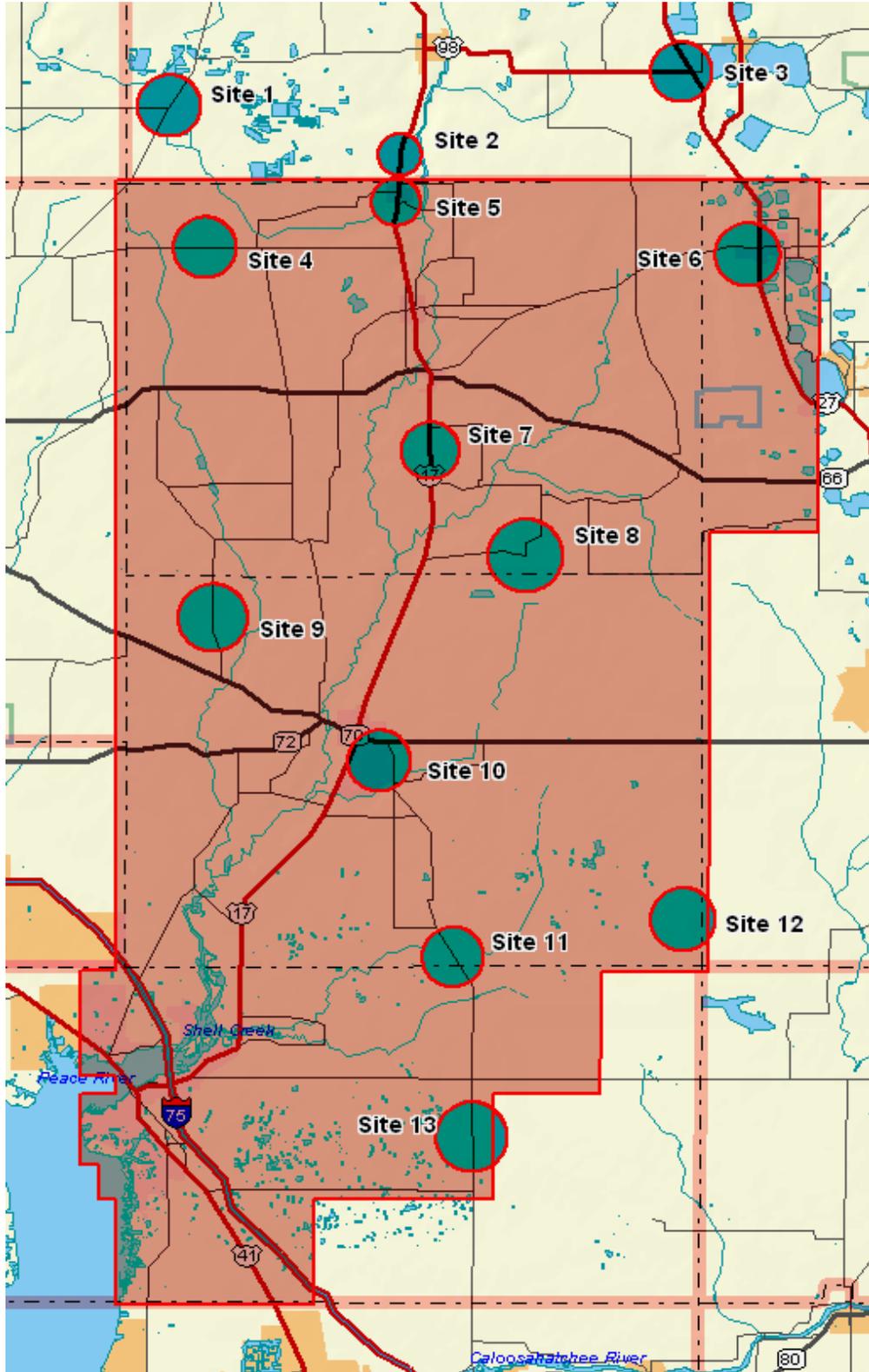
Histograms of Standardized Residuals



GROUND TRUTH SURVEY

A. Map of Ground Truth Locations

**SWFWMD, Florida
Ground Control Areas**



B. Ground Truth Analysis of LIDAR Points

Ground Check-Point Descriptive Codes

Surface Type		Sky Visibility		Surface Slope		Confidence	
1	Dirt	1	Open	1	Flat	1	Good
2	Sand	2	Part open	2	Slight Slope	2	Fair
3	Asphalt	3	Covered	3	Slope	3	Bad
4	Concrete						
5	Tall Grass						
6	Mowed Grass						
7	Trees and Brush						
8	Weeds and short grass						
9	Thick brush						
A	Thick cut grass						
B	Cultivated field - unplowed						
C	Limestone						
D	Trees and grass						
E	Gravel						
F	Brush and grass						

This table shows how the four character descriptive codes are assigned to each survey point in the ground control.

Example: 2111 = sand, open sky, flat slope, good confidence

GROUND TRUTH ANALYSIS
Comparison of LIDAR Points to RTK Ground-Truth Points

Horizontal units = US Survey Feet (US State Plane, Florida West 0902, NAD83)

Vertical units = US Survey Feet (NAVD88 – Geoid03)

Survey X	Survey Y	Survey Z	LIDAR X	LIDAR Y	LIDAR Z	dx	dy	dz	dist	FeatureCode
792843.29	994888.65	74.24	792840.44	994887.87	74.51	2.85	0.78	-0.27	2.95	2111
792708.73	994897.46	74.29	792708.03	994896.70	74.54	0.70	0.76	-0.25	1.03	2111
792740.04	994893.78	74.41	792739.52	994891.51	74.64	0.52	2.27	-0.23	2.33	2111
792825.17	994888.66	74.31	792827.65	994887.51	74.54	-2.48	1.15	-0.23	2.73	2111
792708.73	994897.46	74.29	792706.06	994896.83	74.51	2.67	0.63	-0.22	2.74	2111
792872.26	994888.30	74.49	792873.09	994887.38	74.70	-0.83	0.92	-0.21	1.24	2111
792886.28	994887.85	74.47	792885.88	994886.56	74.67	0.40	1.29	-0.20	1.35	2111
792825.17	994888.66	74.31	792824.73	994889.51	74.47	0.44	-0.85	-0.16	0.96	2111
792901.35	994887.69	74.52	792903.01	994886.33	74.67	-1.66	1.36	-0.15	2.15	2111
792920.28	994886.74	74.65	792921.54	994885.05	74.80	-1.26	1.69	-0.15	2.11	2111
792805.93	994889.21	74.46	792804.61	994888.46	74.61	1.32	0.75	-0.15	1.52	2111
748700.01	1098107.71	81.44	748701.36	1098106.00	81.59	-1.35	1.71	-0.15	2.18	2111
792843.29	994888.65	74.24	792843.39	994890.56	74.38	-0.10	-1.91	-0.14	1.92	2111
792791.58	994889.80	74.44	792791.69	994889.28	74.57	-0.11	0.52	-0.13	0.54	2111
792872.26	994888.30	74.49	792870.36	994888.23	74.61	1.90	0.07	-0.12	1.90	2111
792773.18	994891.22	74.42	792771.58	994890.17	74.54	1.60	1.05	-0.12	1.92	2111
748699.94	1098118.84	81.33	748701.32	1098119.19	81.43	-1.38	-0.35	-0.10	1.43	2111
792726.32	994895.10	74.29	792727.38	994896.30	74.38	-1.06	-1.20	-0.09	1.60	2111
792758.55	994892.33	74.46	792755.93	994892.92	74.54	2.62	-0.59	-0.08	2.69	2111
792805.93	994889.21	74.46	792807.44	994890.53	74.54	-1.51	-1.32	-0.08	2.01	2111
748700.41	1098192.32	81.42	748700.90	1098189.96	81.46	-0.49	2.36	-0.04	2.41	2111
748700.41	1098192.32	81.42	748700.90	1098193.90	81.46	-0.49	-1.58	-0.04	1.65	2111
748700.41	1098192.32	81.42	748702.57	1098191.47	81.46	-2.16	0.85	-0.04	2.32	2111
792920.28	994886.74	74.65	792918.66	994888.99	74.67	1.62	-2.25	-0.02	2.77	2111
792934.11	994886.59	74.68	792931.12	994886.49	74.70	2.99	0.10	-0.02	2.99	2111
792773.18	994891.22	74.42	792774.69	994890.56	74.44	-1.51	0.66	-0.02	1.64	2111
748700.44	1098181.14	81.41	748700.96	1098181.99	81.43	-0.52	-0.85	-0.02	1.00	2111
748700.08	1098167.56	81.36	748702.77	1098167.09	81.36	-2.69	0.47	0.00	2.73	2111
792901.35	994887.69	74.52	792899.14	994888.79	74.51	2.21	-1.10	0.01	2.47	2111
792934.11	994886.59	74.68	792934.47	994889.09	74.67	-0.36	-2.50	0.01	2.53	2111
748700.08	1098167.56	81.36	748701.03	1098165.81	81.33	-0.95	1.75	0.03	1.99	2111
748700.08	1098167.56	81.36	748701.00	1098169.92	81.33	-0.92	-2.36	0.03	2.53	2111
792857.45	994888.63	74.45	792856.68	994890.17	74.41	0.77	-1.54	0.04	1.73	2111
722481.50	1128469.84	71.40	722479.56	1128470.31	71.36	1.94	-0.47	0.04	1.99	2111
748699.87	1098140.38	81.49	748701.16	1098140.68	81.43	-1.29	-0.30	0.06	1.32	2111
748700.03	1098129.97	81.28	748701.26	1098132.19	81.20	-1.23	-2.22	0.08	2.54	2111
748699.74	1098084.18	81.38	748701.45	1098083.63	81.30	-1.71	0.55	0.08	1.79	2111
722547.44	1128469.70	71.35	722548.78	1128471.53	71.26	-1.34	-1.83	0.09	2.27	2111

748699.93	1098095.89	81.29	748701.42	1098097.18	81.20	-1.49	-1.29	0.09	1.97	2111
722481.50	1128469.84	71.40	722480.84	1128469.59	71.29	0.66	0.25	0.11	0.70	2111
722509.84	1128469.37	71.37	722508.20	1128469.46	71.26	1.64	-0.09	0.11	1.65	2111
792758.55	994892.33	74.46	792759.08	994894.33	74.34	-0.53	-2.00	0.12	2.07	2111
722547.44	1128469.70	71.35	722548.52	1128467.76	71.23	-1.08	1.94	0.12	2.22	2111
748700.02	1098154.43	81.32	748701.13	1098153.38	81.20	-1.11	1.05	0.12	1.53	2111
748700.02	1098154.43	81.32	748702.90	1098154.56	81.20	-2.88	-0.13	0.12	2.89	2111
722494.65	1128469.92	71.39	722492.39	1128468.48	71.26	2.26	1.44	0.13	2.68	2111
722509.84	1128469.37	71.37	722509.48	1128469.79	71.23	0.36	-0.42	0.14	0.56	2111
722547.44	1128469.70	71.35	722549.83	1128470.31	71.19	-2.39	-0.61	0.16	2.47	2111
748700.44	1098181.14	81.41	748702.67	1098179.43	81.23	-2.23	1.71	0.18	2.81	2111
722535.47	1128469.74	71.26	722537.14	1128470.31	71.06	-1.67	-0.57	0.20	1.76	2111
722467.54	1128469.17	71.44	722469.29	1128468.28	71.23	-1.75	0.89	0.21	1.97	2111
722467.54	1128469.17	71.44	722468.24	1128471.46	71.23	-0.70	-2.29	0.21	2.39	2111
748700.03	1098129.97	81.28	748701.26	1098127.89	81.07	-1.23	2.08	0.21	2.42	2111
722522.55	1128469.50	71.35	722520.93	1128469.03	71.13	1.62	0.47	0.22	1.69	2111
722454.06	1128468.89	71.49	722452.69	1128469.00	71.26	1.37	-0.11	0.23	1.38	2111
722494.65	1128469.92	71.39	722496.78	1128470.05	71.16	-2.13	-0.13	0.23	2.13	2111
722441.20	1128468.17	71.66	722441.30	1128466.84	71.42	-0.10	1.33	0.24	1.33	2111
748699.74	1098084.18	81.38	748697.16	1098085.20	81.14	2.58	-1.02	0.24	2.78	2111
722427.69	1128467.15	71.77	722425.03	1128466.80	71.52	2.66	0.35	0.25	2.69	2111
722441.20	1128468.17	71.66	722441.50	1128470.67	71.36	-0.30	-2.50	0.30	2.52	2111
722441.20	1128468.17	71.66	722440.29	1128465.56	71.36	0.91	2.61	0.30	2.76	2111
722535.47	1128469.74	71.26	722532.87	1128469.72	70.96	2.60	0.02	0.30	2.60	2111
722467.54	1128469.17	71.44	722468.04	1128467.59	71.10	-0.50	1.58	0.34	1.66	2111
722427.69	1128467.15	71.77	722429.20	1128466.54	71.39	-1.51	0.61	0.38	1.62	2111
708048.16	1039770.65	59.65	708048.35	1039772.85	60.04	-0.19	-2.20	-0.39	2.21	3111
708072.57	1039789.43	59.54	708073.16	1039792.24	59.91	-0.59	-2.81	-0.37	2.87	3111
708001.32	1039734.53	59.76	708000.16	1039735.49	60.10	1.16	-0.96	-0.34	1.50	3111
708009.15	1039740.53	59.74	708006.46	1039741.62	60.07	2.69	-1.09	-0.33	2.91	3111
708040.67	1039764.84	59.66	708042.78	1039764.68	59.97	-2.11	0.16	-0.31	2.12	3111
708009.15	1039740.53	59.74	708011.41	1039741.39	60.04	-2.26	-0.86	-0.30	2.42	3111
708017.35	1039746.75	59.73	708018.10	1039749.23	60.01	-0.75	-2.48	-0.28	2.59	3111
728684.09	984220.62	40.14	728685.68	984221.03	40.39	-1.59	-0.41	-0.25	1.64	3111
707970.31	1039710.40	59.81	707970.83	1039709.60	60.04	-0.52	0.80	-0.23	0.95	3111
734325.71	932842.38	39.29	734325.70	932843.15	39.50	0.01	-0.77	-0.21	0.77	3111
707977.71	1039716.20	59.80	707977.59	1039714.88	60.01	0.12	1.32	-0.21	1.33	3111
728684.09	984220.62	40.14	728682.73	984221.88	40.35	1.36	-1.26	-0.21	1.85	3111
728701.47	984221.37	40.25	728702.45	984221.03	40.45	-0.98	0.34	-0.20	1.03	3111
728701.47	984221.37	40.25	728704.25	984222.18	40.45	-2.78	-0.81	-0.20	2.89	3111
708033.52	1039759.34	59.69	708033.33	1039758.71	59.88	0.19	0.63	-0.19	0.65	3111
707986.02	1039722.73	59.79	707985.23	1039724.17	59.97	0.79	-1.44	-0.18	1.64	3111
728715.42	984221.32	40.48	728715.01	984219.26	40.65	0.41	2.06	-0.17	2.10	3111
728715.42	984221.32	40.48	728717.37	984222.24	40.65	-1.95	-0.92	-0.17	2.15	3111
728701.47	984221.37	40.25	728698.64	984221.49	40.42	2.83	-0.12	-0.17	2.84	3111
734327.23	932728.57	39.41	734327.83	932726.41	39.57	-0.60	2.16	-0.16	2.24	3111
728595.37	984220.10	39.77	728594.54	984218.04	39.93	0.83	2.06	-0.16	2.22	3111
728595.37	984220.10	39.77	728597.13	984218.93	39.93	-1.76	1.17	-0.16	2.11	3111

728654.13	984220.25	39.89	728653.82	984219.26	40.03	0.31	0.99	-0.14	1.03	3111
728639.17	984220.19	39.82	728641.00	984219.82	39.96	-1.83	0.37	-0.14	1.87	3111
728609.26	984220.10	39.76	728606.97	984220.41	39.89	2.29	-0.31	-0.13	2.31	3111
734327.23	932728.57	39.41	734329.17	932728.42	39.53	-1.94	0.15	-0.12	1.94	3111
728669.18	984220.26	40.07	728670.62	984218.14	40.19	-1.44	2.12	-0.12	2.57	3111
708080.72	1039795.59	59.47	708081.46	1039793.92	59.58	-0.74	1.67	-0.11	1.83	3111
728580.87	984220.07	39.78	728578.30	984220.31	39.89	2.57	-0.24	-0.11	2.59	3111
728639.17	984220.19	39.82	728637.91	984222.24	39.93	1.26	-2.05	-0.11	2.41	3111
708056.41	1039777.01	59.59	708057.61	1039778.46	59.68	-1.20	-1.45	-0.09	1.88	3111
708064.64	1039783.29	59.57	708065.18	1039780.63	59.65	-0.54	2.66	-0.08	2.72	3111
708001.32	1039734.53	59.76	708004.03	1039734.66	59.84	-2.71	-0.13	-0.08	2.72	3111
728580.87	984220.07	39.78	728582.17	984218.08	39.86	-1.30	1.99	-0.08	2.37	3111
728624.22	984220.06	39.75	728622.23	984220.04	39.83	1.99	0.02	-0.08	1.99	3111
728624.22	984220.06	39.75	728626.04	984220.50	39.83	-1.82	-0.44	-0.08	1.87	3111
734326.24	932784.23	39.30	734328.91	932783.60	39.37	-2.67	0.63	-0.07	2.75	3111
728609.26	984220.10	39.76	728609.66	984221.32	39.83	-0.40	-1.22	-0.07	1.29	3111
707993.58	1039728.43	59.78	707992.02	1039726.07	59.84	1.56	2.36	-0.06	2.83	3111
734324.72	932903.05	39.42	734325.04	932901.02	39.47	-0.32	2.03	-0.05	2.05	3111
734326.18	932767.83	39.36	734326.78	932769.98	39.40	-0.60	-2.15	-0.04	2.23	3111
734325.02	932863.28	39.34	734324.32	932865.42	39.37	0.70	-2.14	-0.03	2.25	3111
734325.71	932842.38	39.29	734327.96	932842.16	39.27	-2.25	0.22	0.02	2.26	3111
734325.96	932820.14	39.29	734324.22	932818.57	39.27	1.74	1.57	0.02	2.35	3111
734326.28	932801.09	39.29	734324.61	932799.48	39.27	1.67	1.61	0.02	2.32	3111
734326.18	932767.83	39.36	734326.12	932765.49	39.34	0.06	2.34	0.02	2.34	3111
734326.24	932784.23	39.30	734323.73	932785.80	39.21	2.51	-1.57	0.09	2.96	3111
734324.95	932884.60	39.34	734327.43	932884.88	39.24	-2.48	-0.28	0.10	2.49	3111
734324.95	932884.60	39.34	734322.68	932886.16	39.24	2.27	-1.56	0.10	2.76	3111
734327.00	932747.10	39.24	734325.37	932747.08	39.11	1.63	0.02	0.13	1.63	3111
734327.23	932728.57	39.41	734326.78	932730.58	39.27	0.45	-2.01	0.14	2.06	3111
722185.36	1128208.67	73.04	722185.76	1128206.37	72.90	-0.40	2.30	0.14	2.33	3111
722189.11	1128106.27	73.20	722186.51	1128106.14	73.03	2.60	0.13	0.17	2.60	3111
722187.11	1128165.55	73.14	722187.20	1128168.28	72.97	-0.09	-2.73	0.17	2.73	3111
722185.36	1128208.67	73.04	722183.96	1128206.27	72.87	1.40	2.40	0.17	2.78	3111
734326.18	932767.83	39.36	734328.88	932769.00	39.17	-2.70	-1.17	0.19	2.94	3111
722187.51	1128151.72	73.16	722184.55	1128152.11	72.97	2.95	-0.39	0.19	2.98	3111
722187.51	1128151.72	73.16	722188.45	1128153.71	72.97	-0.94	-1.99	0.19	2.20	3111
810045.83	1184065.73	151.68	810044.57	1184066.50	151.48	1.26	-0.77	0.20	1.47	3111
722189.64	1128091.15	73.17	722187.83	1128091.12	72.97	1.81	0.03	0.20	1.81	3111
810124.14	1183988.26	151.65	810123.35	1183990.35	151.44	0.79	-2.09	0.21	2.23	3111
722187.11	1128165.55	73.14	722187.63	1128163.39	72.93	-0.52	2.16	0.21	2.22	3111
810065.05	1184046.67	151.63	810066.13	1184047.47	151.41	-1.08	-0.80	0.22	1.35	3111
810104.99	1184007.13	151.63	810107.20	1184008.16	151.41	-2.21	-1.03	0.22	2.44	3111
722190.40	1128077.54	73.12	722189.14	1128075.93	72.90	1.26	1.61	0.22	2.05	3111
722188.04	1128137.22	73.20	722185.83	1128137.47	72.97	2.21	-0.25	0.23	2.22	3111
722188.04	1128137.22	73.20	722189.70	1128139.08	72.97	-1.66	-1.86	0.23	2.49	3111
810114.36	1183997.96	151.63	810113.04	1183998.98	151.38	1.32	-1.02	0.25	1.67	3111
722190.40	1128077.54	73.12	722191.07	1128077.60	72.87	-0.67	-0.06	0.25	0.67	3111
722186.52	1128179.96	73.13	722186.02	1128182.62	72.87	0.50	-2.66	0.26	2.71	3111

722186.52	1128179.96	73.13	722187.89	1128182.59	72.87	-1.37	-2.63	0.26	2.97	3111
810045.83	1184065.73	151.68	810046.80	1184063.51	151.41	-0.97	2.22	0.27	2.43	3111
722185.96	1128194.16	73.07	722184.78	1128196.89	72.80	1.18	-2.73	0.27	2.97	3111
722185.36	1128208.67	73.04	722183.59	1128210.96	72.77	1.77	-2.29	0.27	2.90	3111
712559.50	1198689.79	93.78	712560.45	1198691.99	93.50	-0.95	-2.20	0.28	2.39	3111
810104.99	1184007.13	151.63	810105.40	1184005.67	151.34	-0.41	1.46	0.29	1.51	3111
722188.54	1128120.70	73.22	722187.10	1128122.68	72.93	1.44	-1.98	0.29	2.45	3111
661782.13	1078796.81	67.38	661780.53	1078797.97	67.09	1.60	-1.16	0.29	1.98	3111
712598.90	1198689.11	93.87	712600.74	1198687.76	93.57	-1.84	1.35	0.30	2.28	3111
722186.52	1128179.96	73.13	722186.42	1128177.86	72.83	0.10	2.10	0.30	2.10	3111
712598.90	1198689.11	93.87	712597.79	1198688.22	93.54	1.11	0.89	0.33	1.42	3111
722189.11	1128106.27	73.20	722188.45	1128107.78	72.87	0.66	-1.51	0.33	1.65	3111
712589.41	1198689.37	93.84	712591.82	1198690.74	93.50	-2.41	-1.37	0.34	2.77	3111
722189.64	1128091.15	73.17	722189.76	1128092.72	72.83	-0.12	-1.57	0.34	1.57	3111
661781.48	1078737.65	67.27	661780.89	1078737.74	66.93	0.59	-0.09	0.34	0.59	3111
712569.58	1198689.88	93.85	712570.03	1198687.79	93.50	-0.45	2.09	0.35	2.14	3111
712579.39	1198689.60	93.80	712580.96	1198689.10	93.44	-1.57	0.50	0.36	1.65	3111
712609.25	1198688.42	93.87	712611.01	1198687.86	93.50	-1.76	0.56	0.37	1.85	3111
712589.41	1198689.37	93.84	712588.83	1198690.94	93.47	0.58	-1.57	0.37	1.67	3111
712559.50	1198689.79	93.78	712557.63	1198691.33	93.41	1.87	-1.54	0.37	2.42	3111
712550.33	1198689.84	93.84	712552.35	1198690.91	93.47	-2.02	-1.07	0.37	2.29	3111
712528.96	1198689.95	93.91	712529.68	1198689.50	93.54	-0.72	0.45	0.37	0.85	3111
722185.96	1128194.16	73.07	722185.17	1128192.17	72.70	0.79	1.99	0.37	2.14	3111
661782.09	1078812.38	67.36	661784.90	1078812.90	66.99	-2.81	-0.52	0.37	2.86	3111
661781.48	1078737.65	67.27	661779.25	1078735.80	66.90	2.23	1.85	0.37	2.90	3111
712579.39	1198689.60	93.80	712577.84	1198690.61	93.41	1.55	-1.01	0.39	1.85	3111
712609.25	1198688.42	93.87	712609.11	1198686.15	93.47	0.14	2.27	0.40	2.28	3111
661782.09	1078812.38	67.36	661779.35	1078812.90	66.96	2.74	-0.52	0.40	2.79	3111
661781.81	1078766.89	67.33	661782.89	1078768.51	66.93	-1.08	-1.62	0.40	1.94	3111
661781.79	1078781.82	67.36	661784.08	1078780.29	66.96	-2.29	1.53	0.40	2.76	3111
712540.71	1198689.95	93.88	712538.11	1198690.25	93.47	2.60	-0.30	0.41	2.61	3111
712540.71	1198689.95	93.88	712541.36	1198691.66	93.47	-0.65	-1.71	0.41	1.83	3111
712528.96	1198689.95	93.91	712527.68	1198688.42	93.50	1.28	1.53	0.41	1.99	3111
712518.29	1198690.20	93.91	712516.13	1198689.14	93.50	2.16	1.06	0.41	2.40	3111
712518.29	1198690.20	93.91	712521.15	1198690.35	93.50	-2.86	-0.15	0.41	2.87	3111
661782.13	1078796.81	67.38	661782.93	1078795.09	66.96	-0.80	1.72	0.42	1.90	3111
712550.33	1198689.84	93.84	712549.95	1198689.53	93.41	0.38	0.31	0.43	0.49	3111
661782.09	1078812.38	67.36	661781.81	1078810.01	66.93	0.28	2.36	0.43	2.38	3111
712620.81	1198655.66	93.34	712621.18	1198656.92	93.18	-0.37	-1.26	0.16	1.32	4111
712631.45	1198656.07	93.37	712631.97	1198654.75	93.21	-0.52	1.32	0.16	1.42	4111
712616.26	1198666.70	93.40	712618.75	1198667.52	93.21	-2.49	-0.82	0.19	2.62	4111
712624.84	1198666.79	93.45	712626.63	1198666.86	93.24	-1.79	-0.07	0.21	1.79	4111
712604.03	1198655.62	93.32	712605.10	1198656.36	93.11	-1.07	-0.74	0.21	1.30	4111
712616.26	1198666.70	93.40	712615.93	1198666.60	93.18	0.33	0.10	0.22	0.35	4111
712606.62	1198666.52	93.41	712607.20	1198669.06	93.18	-0.58	-2.54	0.23	2.61	4111
712612.98	1198655.66	93.27	712613.08	1198657.31	93.04	-0.10	-1.65	0.23	1.65	4111
712635.93	1198667.08	93.51	712634.47	1198666.53	93.27	1.46	0.54	0.24	1.56	4111
712595.12	1198656.01	93.37	712594.67	1198653.61	93.11	0.45	2.40	0.26	2.44	4111

712624.84	1198666.79	93.45	712623.64	1198668.37	93.18	1.20	-1.58	0.27	1.98	4111
712604.03	1198655.62	93.32	712602.35	1198655.11	93.04	1.68	0.51	0.28	1.76	4111
712616.26	1198666.70	93.40	712613.96	1198665.02	93.11	2.30	1.68	0.29	2.85	4111
712635.93	1198667.08	93.51	712636.83	1198668.21	93.21	-0.90	-1.14	0.30	1.45	4111
712595.91	1198666.43	93.38	712594.97	1198664.43	93.08	0.94	2.00	0.30	2.21	4111
712595.91	1198666.43	93.38	712597.85	1198664.33	93.08	-1.94	2.10	0.30	2.86	4111
748514.67	1098181.18	81.35	748514.15	1098183.17	81.69	0.52	-1.99	-0.34	2.06	5111
748529.41	1098281.78	81.37	748531.15	1098280.12	81.69	-1.74	1.66	-0.32	2.41	5111
748515.75	1098195.04	81.29	748515.76	1098196.52	81.59	-0.01	-1.48	-0.30	1.48	5111
748513.81	1098167.84	81.23	748514.28	1098166.83	81.50	-0.47	1.00	-0.27	1.11	5111
661899.82	1078472.87	65.23	661902.65	1078472.02	65.45	-2.83	0.85	-0.22	2.95	5111
748515.75	1098195.04	81.29	748514.05	1098195.11	81.50	1.70	-0.07	-0.21	1.70	5111
748514.67	1098181.18	81.35	748514.18	1098179.17	81.53	0.49	2.01	-0.18	2.07	5111
661899.82	1078472.87	65.23	661898.81	1078473.01	65.39	1.01	-0.14	-0.16	1.02	5111
661900.26	1078446.75	65.19	661901.89	1078447.12	65.35	-1.63	-0.37	-0.16	1.67	5111
748517.69	1098207.62	81.59	748515.96	1098208.92	81.73	1.73	-1.30	-0.14	2.16	5111
748522.83	1098244.33	81.50	748523.44	1098245.54	81.63	-0.61	-1.21	-0.13	1.35	5111
661897.01	1078511.10	65.33	661898.15	1078509.16	65.45	-1.14	1.94	-0.12	2.25	5111
748527.26	1098270.10	81.44	748528.69	1098272.11	81.53	-1.43	-2.02	-0.09	2.47	5111
748522.83	1098244.33	81.50	748522.12	1098241.60	81.59	0.71	2.73	-0.09	2.82	5111
748514.67	1098181.18	81.35	748515.92	1098180.38	81.40	-1.25	0.80	-0.05	1.48	5111
748513.81	1098167.84	81.23	748516.05	1098168.05	81.27	-2.24	-0.22	-0.04	2.25	5111
748525.32	1098258.21	81.40	748523.60	1098258.37	81.43	1.72	-0.16	-0.03	1.73	5111
661897.01	1078511.10	65.33	661899.59	1078509.62	65.35	-2.58	1.48	-0.02	2.98	5111
748515.75	1098195.04	81.29	748515.79	1098192.55	81.30	-0.04	2.49	-0.01	2.49	5111
809992.30	1183960.07	150.96	809992.24	1183961.28	150.95	0.06	-1.21	0.01	1.21	5111
809943.82	1183897.96	150.56	809942.67	1183897.11	150.52	1.15	0.84	0.04	1.43	5111
748527.26	1098270.10	81.44	748528.62	1098267.68	81.40	-1.36	2.42	0.04	2.77	5111
809957.36	1183911.00	150.68	809958.55	1183909.28	150.59	-1.19	1.72	0.09	2.09	5111
809963.67	1183918.23	150.72	809964.16	1183916.89	150.62	-0.49	1.34	0.10	1.43	5111
748529.41	1098281.78	81.37	748528.72	1098281.07	81.27	0.69	0.71	0.10	0.99	5111
748519.45	1098218.84	81.62	748521.96	1098220.47	81.50	-2.51	-1.63	0.12	2.99	5111
748520.67	1098229.91	81.66	748522.03	1098228.87	81.53	-1.36	1.03	0.13	1.71	5111
809950.35	1183904.03	150.48	809948.74	1183905.73	150.33	1.61	-1.70	0.15	2.34	5111
809957.36	1183911.00	150.68	809955.47	1183910.66	150.52	1.89	0.34	0.16	1.92	5111
748520.67	1098229.91	81.66	748523.27	1098228.84	81.50	-2.60	1.06	0.16	2.81	5111
809997.91	1183968.58	150.96	809997.62	1183969.81	150.79	0.29	-1.24	0.17	1.27	5111
809943.82	1183897.96	150.56	809945.89	1183899.70	150.33	-2.07	-1.74	0.23	2.71	5111
809950.35	1183904.03	150.48	809951.36	1183906.55	150.23	-1.01	-2.52	0.25	2.71	5111
661902.30	1078433.89	65.09	661901.50	1078434.49	64.83	0.80	-0.60	0.26	1.00	5111
708084.11	1039745.93	59.15	708084.77	1039745.92	59.55	-0.66	0.01	-0.40	0.66	6111
708128.14	1039780.22	58.99	708128.37	1039781.09	59.38	-0.23	-0.87	-0.39	0.90	6111
708136.84	1039786.84	59.02	708137.23	1039788.83	59.38	-0.39	-1.99	-0.36	2.02	6111
708048.57	1039719.99	59.27	708050.65	1039718.62	59.61	-2.08	1.37	-0.34	2.49	6111
708093.16	1039753.04	59.10	708093.76	1039754.61	59.42	-0.60	-1.57	-0.32	1.69	6111
708119.46	1039773.94	59.03	708121.38	1039775.45	59.32	-1.92	-1.51	-0.29	2.45	6111
728761.15	984303.61	38.62	728760.12	984302.82	38.91	1.03	0.79	-0.29	1.29	6111
792602.84	994809.71	73.51	792600.97	994809.39	73.79	1.87	0.32	-0.28	1.90	6111

728768.93	984291.31	38.57	728767.54	984293.21	38.85	1.39	-1.90	-0.28	2.35	6111
728719.59	984367.58	38.53	728717.60	984368.50	38.81	1.99	-0.92	-0.28	2.19	6111
792548.32	994830.01	73.94	792547.10	994832.69	74.21	1.22	-2.68	-0.27	2.94	6111
728728.40	984354.18	38.61	728727.12	984354.82	38.88	1.28	-0.64	-0.27	1.43	6111
708066.76	1039733.06	59.22	708065.55	1039732.43	59.48	1.21	0.63	-0.26	1.36	6111
792548.32	994830.01	73.94	792549.17	994830.72	74.18	-0.85	-0.71	-0.24	1.11	6111
792585.29	994810.73	73.61	792586.96	994810.25	73.85	-1.67	0.48	-0.24	1.74	6111
792602.84	994809.71	73.51	792603.93	994807.36	73.75	-1.09	2.35	-0.24	2.59	6111
708110.63	1039767.27	59.11	708110.07	1039764.98	59.35	0.56	2.29	-0.24	2.35	6111
792624.82	994830.46	73.62	792624.14	994830.00	73.85	0.68	0.46	-0.23	0.82	6111
792533.41	994813.09	73.79	792532.11	994810.71	74.02	1.30	2.38	-0.23	2.71	6111
792533.41	994813.09	73.79	792533.72	994812.51	74.02	-0.31	0.58	-0.23	0.65	6111
792619.67	994808.79	73.65	792617.51	994808.90	73.88	2.16	-0.11	-0.23	2.16	6111
728785.39	984264.89	38.71	728785.19	984265.62	38.94	0.20	-0.73	-0.23	0.75	6111
792549.75	994811.39	73.76	792549.56	994808.77	73.98	0.19	2.62	-0.22	2.63	6111
708075.35	1039739.29	59.20	708077.09	1039739.98	59.42	-1.74	-0.69	-0.22	1.87	6111
792585.29	994810.73	73.61	792584.54	994813.00	73.82	0.75	-2.27	-0.21	2.39	6111
728793.20	984252.05	38.77	728792.47	984252.89	38.98	0.73	-0.84	-0.21	1.11	6111
728777.39	984278.25	38.64	728778.46	984276.48	38.85	-1.07	1.77	-0.21	2.07	6111
728753.00	984315.78	38.64	728750.71	984315.25	38.85	2.29	0.53	-0.21	2.35	6111
792624.82	994830.46	73.62	792625.91	994829.74	73.82	-1.09	0.72	-0.20	1.31	6111
792577.33	994830.77	73.85	792575.87	994829.77	74.05	1.46	1.00	-0.20	1.77	6111
792593.03	994831.47	73.64	792595.26	994833.38	73.82	-2.23	-1.91	-0.18	2.94	6111
792567.09	994810.16	73.77	792565.44	994812.12	73.95	1.65	-1.96	-0.18	2.56	6111
792567.09	994810.16	73.77	792568.20	994810.44	73.95	-1.11	-0.28	-0.18	1.14	6111
792635.72	994808.66	73.58	792637.72	994807.49	73.75	-2.00	1.17	-0.17	2.32	6111
708145.68	1039793.37	59.05	708144.29	1039792.15	59.22	1.39	1.22	-0.17	1.85	6111
792549.75	994811.39	73.76	792547.53	994810.67	73.92	2.22	0.72	-0.16	2.33	6111
792549.75	994811.39	73.76	792549.46	994814.25	73.92	0.29	-2.86	-0.16	2.87	6111
792549.75	994811.39	73.76	792551.86	994813.17	73.92	-2.11	-1.78	-0.16	2.76	6111
792563.76	994830.32	74.03	792565.15	994828.69	74.18	-1.39	1.63	-0.15	2.14	6111
792635.72	994808.66	73.58	792635.65	994811.10	73.72	0.07	-2.44	-0.14	2.44	6111
728793.20	984252.05	38.77	728794.74	984250.46	38.91	-1.54	1.59	-0.14	2.22	6111
792533.11	994830.35	73.67	792531.68	994832.85	73.79	1.43	-2.50	-0.12	2.88	6111
728719.59	984367.58	38.53	728720.39	984368.80	38.65	-0.80	-1.22	-0.12	1.46	6111
792608.34	994830.74	73.87	792608.35	994828.72	73.98	-0.01	2.02	-0.11	2.02	6111
792593.03	994831.47	73.64	792592.02	994830.69	73.75	1.01	0.78	-0.11	1.28	6111
792619.67	994808.79	73.65	792620.56	994807.69	73.75	-0.89	1.10	-0.10	1.42	6111
728785.39	984264.89	38.71	728787.98	984264.70	38.81	-2.59	0.19	-0.10	2.60	6111
728745.29	984327.49	38.65	728743.95	984327.62	38.75	1.34	-0.13	-0.10	1.35	6111
708039.69	1039713.20	59.33	708041.23	1039712.72	59.42	-1.54	0.48	-0.09	1.61	6111
792533.11	994830.35	73.67	792533.42	994829.01	73.75	-0.31	1.34	-0.08	1.38	6111
728753.00	984315.78	38.64	728753.46	984317.72	38.71	-0.46	-1.94	-0.07	2.00	6111
728736.44	984341.15	38.58	728737.19	984343.27	38.65	-0.75	-2.12	-0.07	2.25	6111
728728.40	984354.18	38.61	728730.86	984353.35	38.68	-2.46	0.83	-0.07	2.60	6111
792641.15	994828.90	73.83	792641.20	994831.47	73.88	-0.05	-2.57	-0.05	2.57	6111
728768.93	984291.31	38.57	728770.85	984293.01	38.62	-1.92	-1.70	-0.05	2.57	6111
792577.33	994830.77	73.85	792578.53	994831.64	73.88	-1.20	-0.87	-0.03	1.48	6111

792563.76	994830.32	74.03	792562.46	994829.31	74.05	1.30	1.01	-0.02	1.64	6111
792608.34	994830.74	73.87	792606.32	994832.20	73.88	2.02	-1.46	-0.01	2.50	6111
712678.71	1198750.64	93.56	712681.12	1198751.93	93.54	-2.41	-1.29	0.02	2.74	6111
728745.29	984327.49	38.65	728746.18	984328.87	38.62	-0.89	-1.38	0.03	1.64	6111
661978.01	1080371.27	67.70	661975.81	1080372.41	67.65	2.20	-1.14	0.05	2.48	6111
792641.15	994828.90	73.83	792641.26	994825.96	73.75	-0.11	2.94	0.08	2.94	6111
662052.95	1080334.06	67.37	662050.87	1080332.78	67.29	2.08	1.28	0.08	2.44	6111
661978.01	1080371.27	67.70	661979.12	1080373.26	67.62	-1.11	-1.99	0.08	2.28	6111
712611.04	1198735.41	93.59	712610.78	1198735.30	93.50	0.26	0.11	0.09	0.28	6111
712611.04	1198735.41	93.59	712613.63	1198734.18	93.50	-2.59	1.23	0.09	2.87	6111
661944.46	1080387.72	67.71	661943.72	1080387.67	67.62	0.74	0.05	0.09	0.74	6111
712669.11	1198748.93	93.51	712667.96	1198750.78	93.41	1.15	-1.85	0.10	2.18	6111
712617.08	1198736.36	93.61	712615.60	1198738.28	93.50	1.48	-1.92	0.11	2.43	6111
712617.08	1198736.36	93.61	712618.65	1198735.20	93.50	-1.57	1.16	0.11	1.95	6111
662052.95	1080334.06	67.37	662053.63	1080335.08	67.26	-0.68	-1.02	0.11	1.23	6111
712650.16	1198744.14	93.56	712648.15	1198746.12	93.44	2.01	-1.98	0.12	2.82	6111
809941.98	1183971.65	151.30	809941.82	1183970.01	151.18	0.16	1.64	0.12	1.65	6111
661965.36	1080377.53	67.67	661966.20	1080375.89	67.55	-0.84	1.64	0.12	1.84	6111
712659.12	1198746.50	93.54	712660.98	1198746.85	93.41	-1.86	-0.35	0.13	1.89	6111
661917.99	1080400.25	67.68	661918.43	1080402.10	67.55	-0.44	-1.85	0.13	1.90	6111
662028.63	1080346.11	67.49	662027.68	1080347.28	67.36	0.95	-1.17	0.13	1.51	6111
712623.10	1198737.35	93.69	712624.36	1198735.17	93.54	-1.26	2.18	0.15	2.52	6111
712623.10	1198737.35	93.69	712625.25	1198739.33	93.54	-2.15	-1.98	0.15	2.92	6111
661965.36	1080377.53	67.67	661962.98	1080377.23	67.52	2.38	0.30	0.15	2.39	6111
712640.44	1198741.70	93.60	712641.16	1198740.71	93.44	-0.72	0.99	0.16	1.22	6111
712631.46	1198739.25	93.66	712633.58	1198738.71	93.50	-2.12	0.54	0.16	2.19	6111
809965.66	1183994.21	151.21	809967.05	1183996.38	151.05	-1.39	-2.17	0.16	2.58	6111
662040.39	1080340.15	67.42	662041.06	1080340.23	67.26	-0.67	-0.08	0.16	0.68	6111
662016.02	1080352.47	67.52	662014.36	1080352.56	67.36	1.66	-0.09	0.16	1.66	6111
662016.02	1080352.47	67.52	662018.43	1080353.94	67.36	-2.41	-1.47	0.16	2.82	6111
661990.63	1080364.98	67.65	661988.50	1080365.46	67.49	2.13	-0.48	0.16	2.19	6111
661990.63	1080364.98	67.65	661991.72	1080362.21	67.49	-1.09	2.77	0.16	2.97	6111
712659.12	1198746.50	93.54	712658.02	1198746.16	93.37	1.10	0.34	0.17	1.15	6111
662004.10	1080358.25	67.57	662001.37	1080358.34	67.39	2.73	-0.09	0.18	2.73	6111
662004.10	1080358.25	67.57	662005.04	1080358.01	67.39	-0.94	0.24	0.18	0.97	6111
712650.16	1198744.14	93.56	712650.21	1198745.57	93.37	-0.05	-1.43	0.19	1.43	6111
712631.46	1198739.25	93.66	712631.22	1198738.71	93.47	0.24	0.54	0.19	0.60	6111
712623.10	1198737.35	93.69	712620.88	1198737.07	93.50	2.22	0.28	0.19	2.24	6111
712669.11	1198748.93	93.51	712671.18	1198747.73	93.31	-2.07	1.20	0.20	2.40	6111
712678.71	1198750.64	93.56	712678.10	1198752.10	93.34	0.61	-1.47	0.22	1.59	6111
712604.32	1198734.86	93.72	712602.97	1198736.25	93.50	1.35	-1.39	0.22	1.94	6111
712640.44	1198741.70	93.60	712638.57	1198741.11	93.37	1.87	0.59	0.23	1.97	6111
659725.41	1185437.79	123.30	659723.22	1185435.88	123.03	2.19	1.91	0.27	2.91	6111
659669.75	1185437.84	123.12	659669.87	1185438.97	122.83	-0.12	-1.13	0.29	1.14	6111
659691.30	1185437.99	123.23	659693.76	1185439.69	122.93	-2.46	-1.70	0.30	2.99	6111
659725.41	1185437.79	123.30	659726.30	1185439.62	123.00	-0.89	-1.83	0.30	2.03	6111
712604.32	1198734.86	93.72	712605.17	1198737.07	93.41	-0.85	-2.21	0.31	2.37	6111
659680.35	1185437.71	123.17	659680.44	1185438.44	122.83	-0.09	-0.73	0.34	0.74	6111

659702.41	1185438.01	123.30	659702.16	1185435.98	122.96	0.25	2.03	0.34	2.04	6111
659702.41	1185438.01	123.30	659705.18	1185437.39	122.96	-2.77	0.62	0.34	2.84	6111
659691.30	1185437.99	123.23	659690.71	1185439.13	122.87	0.59	-1.14	0.36	1.29	6111
659689.86	1185702.70	118.98	659687.46	1185702.61	119.13	2.40	0.09	-0.15	2.40	7211
659691.73	1185666.18	119.20	659691.30	1185664.52	119.13	0.43	1.66	0.07	1.71	7211
659693.21	1185655.38	119.31	659694.19	1185654.94	119.16	-0.98	0.44	0.15	1.07	7211
659712.87	1185672.06	119.05	659711.48	1185670.30	118.90	1.39	1.76	0.15	2.24	7211
659689.86	1185702.70	118.98	659691.82	1185702.29	118.80	-1.96	0.41	0.18	2.00	7211
659707.33	1185690.32	119.03	659705.80	1185689.43	118.80	1.53	0.89	0.23	1.77	7211
659705.35	1185700.38	118.99	659702.95	1185699.01	118.73	2.40	1.37	0.26	2.76	7211
659690.22	1185688.97	118.96	659691.66	1185688.47	118.67	-1.44	0.50	0.29	1.53	7211
659709.59	1185681.71	119.03	659708.62	1185679.91	118.73	0.97	1.80	0.30	2.05	7211
659718.69	1185662.43	119.26	659717.61	1185663.83	118.93	1.08	-1.40	0.33	1.77	7211
659690.22	1185688.97	118.96	659688.97	1185687.92	118.60	1.25	1.05	0.36	1.63	7211
748776.86	1099780.52	82.40	748776.03	1099781.26	82.74	0.83	-0.74	-0.34	1.11	9111
748796.07	1099767.35	82.36	748793.97	1099768.57	82.68	2.10	-1.22	-0.32	2.43	9111
748786.52	1099780.69	82.23	748788.13	1099780.25	82.51	-1.61	0.44	-0.28	1.67	9111
748798.74	1099782.83	82.23	748799.49	1099785.00	82.38	-0.75	-2.17	-0.15	2.29	9111
748796.07	1099767.35	82.36	748796.76	1099768.44	82.45	-0.69	-1.09	-0.09	1.29	9111
748810.44	1099784.20	82.27	748807.98	1099785.53	82.35	2.46	-1.33	-0.08	2.80	9111
748810.44	1099784.20	82.27	748810.71	1099784.32	82.35	-0.27	-0.12	-0.08	0.29	9111
748810.44	1099784.20	82.27	748813.00	1099785.17	82.35	-2.56	-0.97	-0.08	2.73	9111
792551.28	994940.93	73.79	792549.40	994940.79	74.02	1.88	0.14	-0.23	1.89	A111
792484.57	994934.81	73.77	792486.05	994934.85	73.98	-1.48	-0.04	-0.21	1.48	A111
792438.83	994931.36	73.97	792437.06	994932.33	74.18	1.77	-0.97	-0.21	2.02	A111
792423.49	994929.67	74.21	792421.15	994931.21	74.41	2.34	-1.54	-0.20	2.80	A111
792535.64	994939.60	73.96	792537.23	994937.74	74.15	-1.59	1.86	-0.19	2.45	A111
792468.52	994933.35	73.96	792470.66	994932.36	74.15	-2.14	0.99	-0.19	2.36	A111
792517.32	994937.72	74.10	792519.35	994939.45	74.28	-2.03	-1.73	-0.18	2.67	A111
792551.28	994940.93	73.79	792552.55	994939.18	73.95	-1.27	1.75	-0.16	2.16	A111
792535.64	994939.60	73.96	792534.80	994942.14	74.11	0.84	-2.54	-0.15	2.67	A111
792452.72	994932.20	73.90	792453.17	994931.67	74.05	-0.45	0.53	-0.15	0.69	A111
792438.83	994931.36	73.97	792438.51	994933.57	74.11	0.32	-2.21	-0.14	2.24	A111
792568.04	994941.14	73.83	792567.87	994940.20	73.95	0.17	0.94	-0.12	0.96	A111
792517.32	994937.72	74.10	792516.49	994935.61	74.21	0.83	2.11	-0.11	2.27	A111
792438.83	994931.36	73.97	792439.85	994933.74	74.08	-1.02	-2.38	-0.11	2.59	A111
792423.49	994929.67	74.21	792422.89	994931.38	74.31	0.60	-1.71	-0.10	1.81	A111
792501.26	994936.21	74.06	792504.19	994936.13	74.15	-2.93	0.08	-0.09	2.93	A111
792484.57	994934.81	73.77	792482.99	994936.53	73.85	1.58	-1.72	-0.08	2.33	A111
792468.52	994933.35	73.96	792467.77	994932.20	74.02	0.75	1.15	-0.06	1.37	A111
792501.26	994936.21	74.06	792499.60	994933.74	74.08	1.66	2.47	-0.02	2.98	A111
792423.49	994929.67	74.21	792424.99	994932.13	74.21	-1.50	-2.46	0.00	2.88	A111
722220.90	1128099.86	72.06	722218.40	1128098.92	72.01	2.50	0.94	0.05	2.68	A111
722217.26	1128195.74	71.94	722219.75	1128194.10	71.88	-2.49	1.64	0.06	2.98	A111
722219.72	1128122.61	71.95	722222.50	1128122.74	71.88	-2.78	-0.13	0.07	2.78	A111
722217.34	1128184.52	71.95	722217.29	1128181.73	71.88	0.05	2.79	0.07	2.79	A111
722218.15	1128173.96	72.23	722218.17	1128172.02	72.15	-0.02	1.94	0.08	1.94	A111
722219.72	1128122.61	71.95	722220.31	1128122.12	71.85	-0.59	0.49	0.10	0.76	A111

722217.34	1128184.52	71.95	722214.89	1128185.57	71.85	2.45	-1.05	0.10	2.66	A111
722217.34	1128184.52	71.95	722216.89	1128186.55	71.82	0.45	-2.03	0.13	2.08	A111
722220.90	1128099.86	72.06	722222.01	1128102.07	71.92	-1.11	-2.21	0.14	2.47	A111
722220.42	1128109.95	71.98	722221.16	1128112.15	71.82	-0.74	-2.20	0.16	2.33	A111
659615.52	1185533.10	122.18	659614.95	1185530.83	122.01	0.57	2.27	0.17	2.34	A111
722219.69	1128133.12	72.06	722219.42	1128132.06	71.88	0.27	1.06	0.18	1.10	A111
722218.92	1128153.22	72.14	722217.78	1128151.75	71.95	1.14	1.47	0.19	1.86	A111
722218.92	1128153.22	72.14	722219.85	1128152.47	71.92	-0.93	0.75	0.22	1.20	A111
722218.15	1128173.96	72.23	722217.71	1128176.84	72.01	0.44	-2.88	0.22	2.91	A111
722219.44	1128141.41	71.92	722220.73	1128142.59	71.69	-1.29	-1.18	0.23	1.75	A111
659698.66	1185532.53	122.22	659699.66	1185530.37	121.98	-1.00	2.16	0.24	2.38	A111
722217.92	1128163.71	72.25	722216.50	1128166.31	72.01	1.42	-2.60	0.24	2.96	A111
659686.48	1185532.60	122.23	659684.87	1185531.88	121.98	1.61	0.72	0.25	1.76	A111
659686.48	1185532.60	122.23	659687.75	1185532.31	121.98	-1.27	0.29	0.25	1.30	A111
659627.10	1185533.06	122.12	659625.32	1185530.90	121.85	1.78	2.16	0.27	2.79	A111
722217.92	1128163.71	72.25	722216.93	1128161.49	71.98	0.99	2.22	0.27	2.43	A111
659674.81	1185532.48	122.30	659673.68	1185532.34	122.01	1.13	0.14	0.29	1.14	A111
659723.02	1185532.78	122.12	659723.12	1185534.70	121.82	-0.10	-1.92	0.30	1.92	A111
722219.44	1128141.41	71.92	722218.60	1128142.00	71.62	0.84	-0.59	0.30	1.03	A111
659650.67	1185532.15	122.20	659650.88	1185529.45	121.88	-0.21	2.70	0.32	2.71	A111
659698.66	1185532.53	122.22	659698.19	1185535.39	121.88	0.47	-2.85	0.34	2.89	A111
659662.26	1185532.21	122.20	659664.10	1185530.04	121.85	-1.84	2.17	0.35	2.84	A111
659674.81	1185532.48	122.30	659677.09	1185533.39	121.88	-2.28	-0.91	0.42	2.46	A111
659662.26	1185532.21	122.20	659659.70	1185532.93	121.78	2.56	-0.72	0.42	2.66	A111
661742.61	1078646.11	67.35	661740.08	1078647.05	67.26	2.53	-0.94	0.09	2.70	C111
661700.54	1078647.35	67.05	661702.45	1078647.97	66.96	-1.91	-0.62	0.09	2.01	C111
661707.79	1078646.90	67.16	661708.06	1078649.71	67.06	-0.27	-2.81	0.10	2.82	C111
661707.79	1078646.90	67.16	661708.42	1078645.38	67.03	-0.63	1.52	0.13	1.64	C111
661691.35	1078647.69	66.83	661690.83	1078646.69	66.67	0.52	1.00	0.16	1.13	C111
712741.91	1198707.51	93.74	712741.68	1198708.36	93.57	0.23	-0.85	0.17	0.88	C111
661752.85	1078645.67	67.23	661750.68	1078643.90	67.06	2.17	1.77	0.17	2.80	C111
661734.29	1078646.63	67.35	661734.14	1078647.12	67.16	0.15	-0.49	0.19	0.51	C111
661697.45	1078647.35	66.95	661698.35	1078646.53	66.76	-0.90	0.82	0.19	1.22	C111
661725.47	1078646.69	67.36	661725.91	1078647.45	67.16	-0.44	-0.76	0.20	0.88	C111
661691.35	1078647.69	66.83	661692.70	1078646.89	66.63	-1.35	0.80	0.20	1.57	C111
712741.75	1198727.00	94.07	712742.77	1198726.57	93.86	-1.02	0.43	0.21	1.11	C111
712742.35	1198752.67	94.30	712742.01	1198754.79	94.09	0.34	-2.12	0.21	2.15	C111
661716.79	1078646.94	67.27	661715.44	1078649.02	67.06	1.35	-2.08	0.21	2.48	C111
712742.03	1198717.24	93.95	712741.95	1198719.06	93.73	0.08	-1.82	0.22	1.82	C111
661734.29	1078646.63	67.35	661732.24	1078648.40	67.13	2.05	-1.77	0.22	2.71	C111
712742.51	1198776.24	94.46	712740.90	1198774.01	94.23	1.61	2.23	0.23	2.75	C111
661707.79	1078646.90	67.16	661710.39	1078645.71	66.93	-2.60	1.19	0.23	2.86	C111
712742.40	1198760.68	94.40	712740.77	1198760.13	94.16	1.63	0.55	0.24	1.72	C111
712742.17	1198735.54	94.18	712743.26	1198738.19	93.93	-1.09	-2.65	0.25	2.87	C111
661697.45	1078647.35	66.95	661696.15	1078646.89	66.70	1.30	0.46	0.25	1.38	C111
712742.33	1198771.06	94.49	712742.04	1198768.83	94.23	0.29	2.23	0.26	2.25	C111
661742.61	1078646.11	67.35	661744.31	1078644.66	67.09	-1.70	1.45	0.26	2.23	C111
712742.46	1198766.09	94.50	712742.04	1198768.83	94.23	0.42	-2.74	0.27	2.77	C111

661752.85	1078645.67	67.23	661752.28	1078646.99	66.96	0.57	-1.32	0.27	1.43	C111
712742.40	1198744.11	94.32	712742.01	1198743.53	94.03	0.39	0.58	0.29	0.70	C111
661700.54	1078647.35	67.05	661698.35	1078646.53	66.76	2.19	0.82	0.29	2.34	C111
712741.75	1198727.00	94.07	712740.73	1198724.41	93.77	1.02	2.59	0.30	2.78	C111
712742.51	1198776.24	94.46	712742.27	1198777.59	94.16	0.24	-1.35	0.30	1.37	C111
661762.21	1078645.52	67.14	661762.55	1078647.64	66.83	-0.34	-2.12	0.31	2.15	C111
661716.79	1078646.94	67.27	661714.39	1078645.48	66.96	2.40	1.46	0.31	2.81	C111
712742.17	1198735.54	94.18	712740.31	1198737.20	93.86	1.86	-1.66	0.32	2.49	C111
712742.40	1198744.11	94.32	712744.47	1198744.22	94.00	-2.07	-0.11	0.32	2.07	C111
712741.91	1198707.51	93.74	712744.37	1198708.53	93.41	-2.46	-1.02	0.33	2.66	C111
712742.33	1198771.06	94.49	712743.49	1198772.34	94.16	-1.16	-1.28	0.33	1.73	C111
661762.21	1078645.52	67.14	661762.91	1078643.22	66.80	-0.70	2.30	0.34	2.40	C111
661716.79	1078646.94	67.27	661715.77	1078644.59	66.93	1.02	2.35	0.34	2.56	C111
712742.46	1198766.09	94.50	712743.26	1198763.58	94.13	-0.80	2.51	0.37	2.63	C111
659670.14	1185570.85	121.40	659668.56	1185573.02	121.68	1.58	-2.17	-0.28	2.69	F111
659680.97	1185569.54	121.47	659679.68	1185572.07	121.68	1.29	-2.53	-0.21	2.84	F111
659717.38	1185566.73	121.90	659720.33	1185566.79	122.04	-2.95	-0.06	-0.14	2.95	F111
659692.64	1185568.65	121.64	659691.10	1185568.85	121.75	1.54	-0.20	-0.11	1.55	F111
659658.44	1185570.53	121.36	659660.03	1185568.03	121.42	-1.59	2.50	-0.06	2.96	F111
659645.65	1185570.66	121.25	659645.86	1185569.35	121.29	-0.21	1.31	-0.04	1.33	F111
722245.88	1127998.35	72.57	722248.29	1127997.09	72.60	-2.41	1.26	-0.03	2.72	F111
659717.38	1185566.73	121.90	659718.14	1185564.79	121.91	-0.76	1.94	-0.01	2.08	F111
659692.64	1185568.65	121.64	659694.91	1185569.97	121.62	-2.27	-1.32	0.02	2.63	F111
659739.91	1185565.60	121.86	659739.53	1185565.38	121.82	0.38	0.22	0.04	0.44	F111
659705.33	1185567.25	121.95	659703.17	1185566.92	121.91	2.16	0.33	0.04	2.18	F111
659729.78	1185565.88	121.86	659727.91	1185566.66	121.75	1.87	-0.78	0.11	2.02	F111
659729.78	1185565.88	121.86	659731.65	1185566.98	121.75	-1.87	-1.10	0.11	2.18	F111
659705.33	1185567.25	121.95	659705.83	1185567.35	121.78	-0.50	-0.10	0.17	0.51	F111
659658.44	1185570.53	121.36	659658.56	1185573.09	121.19	-0.12	-2.56	0.17	2.56	F111
659752.01	1185565.87	121.89	659749.63	1185565.71	121.68	2.38	0.16	0.21	2.38	F111

CONTROL MARK DATA SHEETS

AG7391 *****

AG7391 TIDAL BM - This is a Tidal Bench Mark.

AG7391 DESIGNATION - 872 6282 A TIDAL

AG7391 PID - AG7391

AG7391 STATE/COUNTY- FL/MANATEE

AG7391 USGS QUAD - ANNA MARIA (1981)

AG7391

AG7391 *CURRENT SURVEY CONTROL

AG7391 * NAD 83(1999)- 27 31 56.86932(N) 082 43 56.29896(W) ADJUSTED

AG7391 * NAVD 88 - 0.634 (meters) 2.08 (feet) ADJUSTED

AG7391 X - 715,999.335 (meters) COMP

AG7391 Y - -5,614,364.001 (meters) COMP

AG7391 Z - 2,930,649.790 (meters) COMP

AG7391 LAPLACE CORR- -1.61 (seconds) DEFLEC99

AG7391 ELLIP HEIGHT- -23.63 (meters) GPS OBS

AG7391 GEOID HEIGHT- -24.15 (meters) GEOID99

AG7391 DYNAMIC HT - 0.633 (meters) 2.08 (feet) COMP

AG7391 MODELED GRAV- 979,148.9 (mgal) NAVD 88

AG7391

AG7391 HORZ ORDER - B

AG7391 VERT ORDER - SECOND CLASS I

AG7391 ELLP ORDER - FIFTH CLASS I

AG7391

AG7391.The horizontal coordinates were established by GPS observations

AG7391.and adjusted by the National Geodetic Survey in May 2001.

AG7391

AG7391.The orthometric height was determined by differential leveling

AG7391.and adjusted by the National Geodetic Survey in June 1991.

AG7391

AG7391.This Tidal Bench Mark is designated as VM 6196

AG7391.by the Center for Operational Oceanographic Products and Services.

AG7391

AG7391.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AG7391

AG7391.The Laplace correction was computed from DEFLEC99 derived deflections.

AG7391

AG7391.The ellipsoidal height was determined by GPS observations

AG7391.and is referenced to NAD 83.

AG7391

AG7391.The geoid height was determined by GEOID99.

AG7391

AG7391.The dynamic height is computed by dividing the NAVD 88

AG7391.geopotential number by the normal gravity value computed on the

AG7391.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AG7391.degrees latitude (g = 980.6199 gals.).

AG7391

AG7391.The modeled gravity was interpolated from observed gravity values.

AG7391

AG7391; North East Units Scale Converg.

AG7391;SPC FL W - 354,615.366 127,663.712 MT 1.00000574 -0 20 18.7

AG7391;UTM 17 - 3,046,608.394 328,930.879 MT 0.99996124 -0 48 03.4

AG7391

AG7391 SUPERSEDED SURVEY CONTROL

AG7391

AG7391 NAD 83(1990)- 27 31 56.86838(N) 082 43 56.29873(W) AD() B
AG7391 ELLIP HT - -23.61 (m) GP() 3 2
AG7391

AG7391.Superseded values are not recommended for survey control.
AG7391.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AG7391.See file dsdata.txt to determine how the superseded data were derived.
AG7391

AG7391_MARKER: DJ = TIDAL STATION DISK
AG7391_SETTING: 30 = CATCH BASIN
AG7391_STAMPING: 6282 A 1976
AG7391_MARK LOGO: NOS
AG7391_MAGNETIC: N = NO MAGNETIC MATERIAL
AG7391_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
AG7391_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AG7391+SATELLITE: SATELLITE OBSERVATIONS - February 28, 2000
AG7391

AG7391 HISTORY	- Date	Condition	Report By
AG7391 HISTORY	- 1976	MONUMENTED	NOS
AG7391 HISTORY	- 1979	GOOD	FLDNR
AG7391 HISTORY	- 1983	GOOD	USPSQD
AG7391 HISTORY	- 1983	GOOD	FLDNR
AG7391 HISTORY	- 20000228	GOOD	FLDT

AG7391
AG7391 STATION DESCRIPTION
AG7391

AG7391'DESCRIBED BY FL DEPT OF NAT RES 1979
AG7391'ANNA MARIA.
AG7391'0.3 MILE NORTHWEST ALONG GULF DRIVE (C 789) FROM THE POST OFFICE IN
AG7391'ANNA MARIA TO THE JUNCTION OF PINE AVENUE, THENCE 0.5 MILE NORTHEAST
AG7391'ALONG PINE AVENUE, 20.3 FEET NORTHWEST OF THE CENTERLINE OF THE
AG7391'AVENUE, 151 FEET SOUTHWEST OF THE CENTERLINE OF GAY BOULEVARD, 6 FEET
AG7391'SOUTH OF A CHAIN LINK FENCE CORNER, AND 33.5 FEET NORTHEAST OF A 35
AG7391'MPH SPEED LIMIT SIGN POST.

AG7391
AG7391 STATION RECOVERY (1983)
AG7391
AG7391'RECOVERY NOTE BY US POWER SQUADRON 1983
AG7391'RECOVERED IN GOOD CONDITION.

AG7391
AG7391 STATION RECOVERY (1983)
AG7391
AG7391'RECOVERY NOTE BY FL DEPT OF NAT RES 1983
AG7391'RECOVERED IN GOOD CONDITION.

AG7391
AG7391 STATION RECOVERY (2000)
AG7391
AG7391'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2000 (CDM)
AG7391'RECOVERED AS DESCRIBED.

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AJ7235 *****
AJ7235 DESIGNATION - A 518
AJ7235 PID - AJ7235
AJ7235 STATE/COUNTY- FL/HIGHLANDS
AJ7235 USGS QUAD - CHILDS (1972)
AJ7235
AJ7235 *CURRENT SURVEY CONTROL
AJ7235
AJ7235* NAD 83(1999)- 27 12 26.16974(N) 081 19 44.24947(W) ADJUSTED
AJ7235* NAVD 88 - 41.515 (meters) 136.20 (feet) ADJUSTED
AJ7235
AJ7235 X - 855,786.517 (meters) COMP
AJ7235 Y - -5,611,556.906 (meters) COMP
AJ7235 Z - 2,898,667.522 (meters) COMP
AJ7235 LAPLACE CORR- -2.53 (seconds) DEFLEC99
AJ7235 ELLIP HEIGHT- 16.48 (meters) (12/09/02) GPS OBS
AJ7235 GEOID HEIGHT- -25.04 (meters) GEOID03
AJ7235 DYNAMIC HT - 41.452 (meters) 136.00 (feet) COMP
AJ7235 MODELED GRAV- 979,136.4 (mgal) NAVD 88
AJ7235
AJ7235 HORZ ORDER - A
AJ7235 VERT ORDER - FIRST CLASS II
AJ7235 ELLP ORDER - FOURTH CLASS I
AJ7235
AJ7235.The horizontal coordinates were established by GPS observations
AJ7235.and adjusted by the National Geodetic Survey in December 2002.
AJ7235
AJ7235.The orthometric height was determined by differential leveling
AJ7235.and adjusted by the National Geodetic Survey in February 2002.
AJ7235
AJ7235.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AJ7235
AJ7235.The Laplace correction was computed from DEFLEC99 derived deflections.
AJ7235
AJ7235.The ellipsoidal height was determined by GPS observations
AJ7235.and is referenced to NAD 83.
AJ7235
AJ7235.The geoid height was determined by GEOID03.
AJ7235
AJ7235.The dynamic height is computed by dividing the NAVD 88
AJ7235.geopotential number by the normal gravity value computed on the
AJ7235.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AJ7235.degrees latitude (g = 980.6199 gals.).
AJ7235
AJ7235.The modeled gravity was interpolated from observed gravity values.
AJ7235
AJ7235; North East Units Scale Factor Converg.
AJ7235;SPC FL E - 318,411.989 167,411.179 MT 0.99995428 -0 09 01.5
AJ7235;UTM 17 - 3,009,435.330 467,422.298 MT 0.99961310 -0 09 01.5
AJ7235
AJ7235! - Elev Factor x Scale Factor = Combined Factor
AJ7235!SPC FL E - 0.99999741 x 0.99995428 = 0.99995169
AJ7235!UTM 17 - 0.99999741 x 0.99961310 = 0.99961051
AJ7235
AJ7235 SUPERSEDED SURVEY CONTROL
AJ7235

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AJ7235 NAVD 88 (12/09/02) 41.52 (m) 136.2 (f) LEVELING 3

AJ7235

AJ7235.Superseded values are not recommended for survey control.

AJ7235.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AJ7235.See file dsdata.txt to determine how the superseded data were derived.

AJ7235

AJ7235_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML6742209435(NAD 83)

AJ7235_MARKER: F = FLANGE-ENCASED ROD

AJ7235_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AJ7235_STAMPING: A 518 2001 CERP

AJ7235_MARK LOGO: NONE

AJ7235_PROJECTION: RECESSED 3 CENTIMETERS

AJ7235_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

AJ7235_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AJ7235_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AJ7235+SATELLITE: SATELLITE OBSERVATIONS - April 13, 2002

AJ7235_ROD/PIPE-DEPTH: 24.7 meters

AJ7235

AJ7235 HISTORY - Date Condition Report By

AJ7235 HISTORY - 200105 MONUMENTED FOST

AJ7235 HISTORY - 20020212 GOOD NGS

AJ7235 HISTORY - 20020413 GOOD MAPTEC

AJ7235

AJ7235 STATION DESCRIPTION

AJ7235

AJ7235'DESCRIBED BY CHARLEY FOSTER AND ASSOCIATES 2001 (JB)

AJ7235'THE MONUMENT IS LOCATED IN BAIRS DEN, FL., 18.25 MILES (29.37 KM)

AJ7235'NORTH OF PALMDALE, FL. AND 4.0 MILES

AJ7235'(6.44 KM) SOUTH OF LAKE PLACID, FL. IN SECTION 4, TOWNSHIP 38 SOUTH,

AJ7235'RANGE 30 EAST.

AJ7235'

AJ7235'OWNERSHIP IS THE FLORIDA DEPARTMENT OF TRANSPORTATION.

AJ7235'

AJ7235'TO REACH THE MONUMENT FROM THE INTERSECTION OF STATE ROAD 70 AND US

AJ7235'HIGHWAY 27, IN BAIRS DEN, GO SOUTH ON

AJ7235'US HIGHWAY 27 0.05 MILES (0.08 KM) AND MONUMENT IS ON THE WEST (RIGHT)

AJ7235'SIDE OF THE ROAD AND ON THE

AJ7235'EAST SIDE OF A FENCED IN WELL. THE MONUMENT IS 19.7 MILES (31.70 KM)

AJ7235'NORTH OF THE JUNCTION OF STATE

AJ7235'ROAD 29 AND US HIGHWAY 27.

AJ7235'

AJ7235'THE MONUMENT IS 61.5 FEET (18.75 M) WEST OF THE CENTERLINE OF THE

AJ7235'SOUTHBOUND LANE OF US HIGHWAY

AJ7235'27, 18.2 FEET (5.55 M) NORTHEAST OF THE NORTHEAST CORNER OF WELL

AJ7235'FENCE, 41.3 FEET (12.59 M)

AJ7235'SOUTHEAST OF A TELEPHONE JUNCTION BOX, 39.1 FEET (11.92 M) SOUTHWEST

AJ7235'OF THE THIRD STREET LIGHT

AJ7235'POLE SOUTH OF THE INTERSECTION OF STATE ROAD 70 AND US 29 AND 13 FEET

AJ7235'(3.96 M) EAST OF A CARSONITE

AJ7235'WITNESS POST. NOTE NOTE ACCESS TO THE DATUM POINT (THE TOP OF A

AJ7235'STAINLESS STEEL ROD) IS HAD

AJ7235'THROUGH A 5 INCH LOGO CAP. NOTE A MAGNET WAS PLACED INSIDE THE PVC

AJ7235'PIPE.

AJ7235

AJ7235 STATION RECOVERY (2002)

AJ7235

AJ7235'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2002 (RLT)
AJ7235'RECOVER AS DESCRIBED
AJ7235'
AJ7235'
AJ7235'
AJ7235'
AJ7235
AJ7235 STATION RECOVERY (2002)
AJ7235
AJ7235'RECOVERY NOTE BY MAPTECH INCORPORATED 2002 (CDP)
AJ7235'RECOVERED AS DESCRIBED
AJ7235'

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AF7410 *****
AF7410 CBN      - This is a Cooperative Base Network Control Station.
AF7410 DESIGNATION - ARCPORT
AF7410 PID      - AF7410
AF7410 STATE/COUNTY- FL/DE SOTO
AF7410 USGS QUAD  - ARCADIA (1988)
AF7410
AF7410          *CURRENT SURVEY CONTROL
AF7410
AF7410* NAD 83(1999)- 27 11 34.70393(N) 081 50 30.44732(W) ADJUSTED
AF7410* NAVD 88   - 17.5 (meters) 57. (feet) GPS OBS
AF7410
AF7410 X      - 805,625.780 (meters)          COMP
AF7410 Y      - -5,619,687.900 (meters)       COMP
AF7410 Z      - 2,897,247.848 (meters)        COMP
AF7410 LAPLACE CORR- -0.83 (seconds)          DEFLEC99
AF7410 ELLIP HEIGHT- -7.04 (meters) (05/31/01) GPS OBS
AF7410 GEOID HEIGHT- -24.54 (meters)          GEOID03
AF7410
AF7410 HORZ ORDER - B
AF7410 ELLP ORDER - FIFTH CLASS I
AF7410
AF7410.This mark is at Arcadia Airport (X06)
AF7410
AF7410.The horizontal coordinates were established by GPS observations
AF7410.and adjusted by the National Geodetic Survey in May 2001.
AF7410
AF7410.The orthometric height was determined by GPS observations and a
AF7410.high-resolution geoid model.
AF7410
AF7410.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF7410
AF7410.The Laplace correction was computed from DEFLEC99 derived deflections.
AF7410
AF7410.The ellipsoidal height was determined by GPS observations
AF7410.and is referenced to NAD 83.
AF7410
AF7410.The geoid height was determined by GEOID03.
AF7410
AF7410;          North      East      Units Scale Factor Converg.
AF7410;SPC FL W - 316,795.100 215,675.221 MT 0.99994421 +0 04 20.3
AF7410;UTM 17 - 3,008,089.020 416,622.831 MT 0.99968581 -0 23 05.0
AF7410
AF7410!          - Elev Factor x Scale Factor = Combined Factor
AF7410!SPC FL W - 1.00000111 x 0.99994421 = 0.99994532
AF7410!UTM 17 - 1.00000111 x 0.99968581 = 0.99968692
AF7410
AF7410:          Primary Azimuth Mark          Grid Az
AF7410:SPC FL W - ARCPORT AZ MK          052 18 47.7
AF7410:UTM 17 - ARCPORT AZ MK          052 46 13.0
AF7410
AF7410|-----|
AF7410|PID Reference Object          Distance Geod. Az |
AF7410|          |          dddmmss.s |
AF7410|AF7429 ARCPORT AZ MK          APPROX. 1.1 KM 0522308.0 |
AF7410|-----|

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AF7410

AF7410 SUPERSEDED SURVEY CONTROL

AF7410

AF7410 NAD 83(1990)- 27 11 34.70246(N) 081 50 30.44691(W) AD() B

AF7410 ELLIP H (09/13/90) -6.97 (m) GP() 4 1

AF7410 NGVD 29 (09/13/90) 17.8 (m) 58. (f) GPS OBS

AF7410

AF7410.Superseded values are not recommended for survey control.

AF7410.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AF7410.See file dsdata.txt to determine how the superseded data were derived.

AF7410

AF7410_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML1662308089(NAD 83)

AF7410_MARKER: I = METAL ROD

AF7410_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AF7410_STAMPING: ARCPort 1989

AF7410_MARK LOGO: NGS

AF7410_PROJECTION: FLUSH

AF7410_MAGNETIC: N = NO MAGNETIC MATERIAL

AF7410_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AF7410_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AF7410+SATELLITE: SATELLITE OBSERVATIONS - 1989

AF7410_ROD/PIPE-DEPTH: 12.3 meters

AF7410_SLEEVE-DEPTH : 0.91 meters

AF7410

AF7410 HISTORY - Date Condition Report By

AF7410 HISTORY - 1989 MONUMENTED NGS

AF7410 HISTORY - 19961212 GOOD USPSQD

AF7410 HISTORY - 20010727 GOOD USPSQD

AF7410

AF7410 STATION DESCRIPTION

AF7410

AF7410'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989

AF7410'THE STATION IS LOCATED ABOUT 2.9 KM (1.80 MI) SOUTHEAST OF ARCADIA, AT

AF7410'THE ARCADIA MUNICIPAL AIRPORT, BETWEEN RUNWAY 5-23 AND A PAVED

AF7410'TAXIWAY, IN THE GRASSY AREA AT THE SOUTHWEST END OF RUNWAY.

AF7410'OWNERSHIP--CITY OF ARCADIA, BOX 351, ARCADIA FL 33821, AIRPORT MANAGER

AF7410'IS BILL MOSS OR ELMER LINDQUIST, PHONE 813-494-3808, 494-1057,

AF7410'494-7844. NOTE--PERMISSION MUST BE OBTAINED BEFORE ENTERING AIRPORT.

AF7410'TO REACH THE STATION FROM THE JUNCTION OF STATE ROUTE 70 AND U.S.

AF7410'HIGHWAY 17, LOCATED AT THE CENTER OF ARCADIA, GO EAST ALONG STATE

AF7410'ROUTE 70 FOR 1.6 KM (1.00 MI) TO THE JUNCTION OF AN ASPHALT ROAD

AF7410'(AIRPORT ROAD) ON THE RIGHT AND AT A STOPLIGHT, THEN GO RIGHT, SOUTH,

AF7410'ALONG AIRPORT ROAD FOR 1.3 KM (0.80 MI) TO THE AIRPORT ACCESS ROAD

AF7410'(CARNARHAW AVE.) ON THE LEFT, THEN GO LEFT, EAST ALONG THE AIRPORT

AF7410'ACCESS ROAD FOR ABOUT 0.16 KM (0.10 MI) TO ARCADIA MUNICIPAL AIRPORT

AF7410'STRAIGHT AHEAD. PASS TO THE NORTH SIDE OF A PAINTED HANGAR AND THEN

AF7410'SOUTH THROUGH A METAL GATE AT THE EAST SIDE OF THE HANGAR, THEN GO

AF7410'ACROSS COUNTRY ALONG GRASSY AREA SOUTHEAST AND ALONG THE NORTHEAST

AF7410'SIDE OF A TURF RUNWAY FOR 0.48 KM (0.30 MI) TO THE JUNCTION OF A PAVED

AF7410'TAXIWAY, THEN GO SOUTHWEST ALONG THE PAVED TAXIWAY FOR 0.24 KM

AF7410'(0.15 MI) TO THE STATION, LOCATED BETWEEN THE TAXIWAY AND THE PAVED

AF7410'RUNWAY.

AF7410'LOCATED 32.3 M (106.0 FT) NORTHWEST OF THE NORTHWEST EDGE OF THE

AF7410'RUNWAY, 10.5 M (34.4 FT) SOUTHEAST OF THE SOUTHEAST EDGE OF THE

AF7410'TAXIWAY, 7.4 M (24.3 FT) SOUTHEAST OF A PURPLE TAXI LIGHT AND 13.9 M

AF7410'(45.6 FT) NORTHEAST OF THE NORTHEAST EDGE OF TAXI APPROACH.

AF7410'DESCRIBED BY G.F. SMITH.

AF7410

AF7410 STATION RECOVERY (1996)

AF7410

AF7410'RECOVERY NOTE BY US POWER SQUADRON 1996

AF7410'RECOVERED IN GOOD CONDITION.

AF7410

AF7410 STATION RECOVERY (2001)

AF7410

AF7410'RECOVERY NOTE BY US POWER SQUADRON 2001 (MDB)

AF7410'RECOVERED IN GOOD CONDITION.

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AF7411 *****
AF7411 FBN      - This is a Federal Base Network Control Station.
AF7411 DESIGNATION - AVONPORT
AF7411 PID      - AF7411
AF7411 STATE/COUNTY- FL/HIGHLANDS
AF7411 USGS QUAD  - AVON PARK (1987)
AF7411
AF7411                *CURRENT SURVEY CONTROL
AF7411
AF7411* NAD 83(1999)- 27 35 29.33351(N)  081 31 35.66386(W)  ADJUSTED
AF7411* NAVD 88   -   46.4 (meters)  152. (feet) GPS OBS
AF7411
AF7411 X      - 833,540.582 (meters)          COMP
AF7411 Y      - -5,595,100.140 (meters)       COMP
AF7411 Z      - 2,936,467.890 (meters)        COMP
AF7411 LAPLACE CORR-   -2.69 (seconds)        DEFLEC99
AF7411 ELLIP HEIGHT-   20.46 (meters)        (04/12/01) GPS OBS
AF7411 GEOID HEIGHT-  -25.88 (meters)        GEOID03
AF7411
AF7411 HORZ ORDER - A
AF7411 ELLP ORDER - FOURTH CLASS I
AF7411
AF7411.This mark is at Avon Park Airport (AVO)
AF7411
AF7411.The horizontal coordinates were established by GPS observations
AF7411.and adjusted by the National Geodetic Survey in April 2001.
AF7411
AF7411.The orthometric height was determined by GPS observations and a
AF7411.high-resolution geoid model.
AF7411
AF7411.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF7411
AF7411.The Laplace correction was computed from DEFLEC99 derived deflections.
AF7411
AF7411.The ellipsoidal height was determined by GPS observations
AF7411.and is referenced to NAD 83.
AF7411
AF7411.The geoid height was determined by GEOID03.
AF7411
AF7411;          North      East      Units Scale Factor Converg.
AF7411;SPC FL E  - 361,051.844 148,013.890 MT 0.99997452 -0 14 38.0
AF7411;SPC FL W  - 361,030.636 246,739.125 MT 0.99996813 +0 13 09.4
AF7411;UTM 17   - 3,052,060.636 448,031.627 MT 0.99963334 -0 14 38.0
AF7411
AF7411!          - Elev Factor x Scale Factor = Combined Factor
AF7411!SPC FL E  - 0.99999679 x 0.99997452 = 0.99997131
AF7411!SPC FL W  - 0.99999679 x 0.99996813 = 0.99996492
AF7411!UTM 17   - 0.99999679 x 0.99963334 = 0.99963013
AF7411
AF7411:          Primary Azimuth Mark          Grid Az
AF7411:SPC FL E  - AVONPORT AZ MK              225 28 12.3
AF7411:SPC FL W  - AVONPORT AZ MK              225 00 24.9
AF7411:UTM 17   - AVONPORT AZ MK              225 28 12.3
AF7411
AF7411|-----|
AF7411|PID Reference Object          Distance Geod. Az |

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AF7411| dddmmss.s |
 AF7411| AF7434 AVONPORT AZ MK APPROX. 0.7 KM 2251334.3 |
 AF7411|-----|
 AF7411
 AF7411 SUPERSEDED SURVEY CONTROL
 AF7411
 AF7411 NAD 83(1990)- 27 35 29.33258(N) 081 31 35.66362(W) AD() B
 AF7411 ELLIP H (09/13/90) 20.42 (m) GP() 4 1
 AF7411 NGVD 29 (09/13/90) 46.6 (m) 153. (f) GPS OBS
 AF7411
 AF7411.Superseded values are not recommended for survey control.
 AF7411.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AF7411.See file dsdata.txt to determine how the superseded data were derived.
 AF7411
 AF7411_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML4803252061(NAD 83)
 AF7411_MARKER: F = FLANGE-ENCASED ROD
 AF7411_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AF7411_STAMPING: AVONPORT 1989
 AF7411_MARK LOGO: NGS
 AF7411_PROJECTION: FLUSH
 AF7411_MAGNETIC: I = MARKER IS A STEEL ROD
 AF7411_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AF7411_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AF7411+SATELLITE: SATELLITE OBSERVATIONS - October 02, 2003
 AF7411_ROD/PIPE-DEPTH: 40.2 meters
 AF7411_SLEEVE-DEPTH : 0.9 meters
 AF7411

AF7411 HISTORY	- Date	Condition	Report By
AF7411 HISTORY	- 1989	MONUMENTED	NGS
AF7411 HISTORY	- 19910501	GOOD	KEISCH
AF7411 HISTORY	- 19920714	GOOD	KEISCH
AF7411 HISTORY	- 19951229	GOOD	NGS
AF7411 HISTORY	- 19990405	GOOD	FLDT
AF7411 HISTORY	- 20030403	GOOD	FLDEP
AF7411 HISTORY	- 20031002	GOOD	FL-105

 AF7411
 AF7411 STATION DESCRIPTION
 AF7411
 AF7411'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989
 AF7411'THE STATION IS LOCATED ABOUT 2.09 KM (1.30 MI) WEST-SOUTHWEST OF AVON
 AF7411'PARK, AT THE AVON PARK MUNICIPAL AIRPORT, IN SECTION 21, T 33 S, R 28
 AF7411'E, BETWEEN RUNWAY 04-22 AND PARALLEL TAXIWAY, ON THE SOUTHWEST SIDE OF
 AF7411'A NORTHWEST-SOUTHEAST TAXIWAY. OWNERSHIP--CITY OF AVON PARK, 110 E.
 AF7411'MAIN ST, AVON PARK FL 33825, DAVID HEACOCK - CITY MANAGER, PHONE
 AF7411'813-452-2221. NOTE--PERMISSION MUST BE OBTAINED BEFORE ENTERING
 AF7411'AIRPORT.
 AF7411'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 27, 98 AND
 AF7411'STATE ROADS 17 AND 64 ON THE WEST SIDE OF AVON PARK, GO WEST FOR 1.13
 AF7411'KM (0.70 MI) ON STATE ROAD 64 TO A PAVED ROAD LEFT. TURN LEFT AND GO
 AF7411'SOUTH FOR 0.07 KM (0.05 MI) ON THE PAVED ROAD TO A T-JUNCTION. TURN
 AF7411'LEFT AND GO EAST FOR 50 M (164.0 FT) ON THE PAVED ROAD TO AN ASPHALT
 AF7411'APRON ON RIGHT. TURN RIGHT AND GO SOUTH, THEN SOUTHEAST FOR 0.15 KM
 AF7411'(0.10 MI) ON THE APRON AND TAXIWAY TO THE RUNWAY EDGE. CONTINUE AHEAD
 AF7411'FOR 0.10 KM (0.05 MI) ACROSS RUNWAYS AND ON TAXIWAY TO A CURVE RIGHT.
 AF7411'BEAR RIGHT AND GO SOUTHWEST FOR 0.22 KM (0.15 MI) ON THE TAXIWAY TO A
 AF7411'CROSS TAXIWAY. TURN RIGHT AND GO NORTHWEST FOR ABOUT 45 M (147.6 FT)

AF7411'ON THE TAXIWAY TO THE STATION ON LEFT.
 AF7411'THE STATION IS RECESSED 9 CM BELOW GROUND. LOCATED 48.83 M
 AF7411'(160.2 FT) NORTHWEST FROM THE APPROXIMATE CENTER OF A
 AF7411'NORTHEAST-SOUTHWEST TAXIWAY, 42.58 M (139.7 FT) SOUTHEAST FROM THE
 AF7411'APPROXIMATE CENTER OF RUNWAY 04-22, 27.74 M (91.0 FT) SOUTH-SOUTHEAST
 AF7411'FROM A SIGN (A), 26.88 SOUTHWEST FROM THE APPROXIMATE CENTER OF A
 AF7411'NORTHWEST-SOUTHEAST TAXIWAY, 17.22 M (56.5 FT) SOUTHWEST FROM THE
 AF7411'SOUTH CORNER OF A 0.61 M (2.0 FT) BY 1.83 M (6.0 FT) CONCRETE BASE FOR
 AF7411'SIGN (4-22) AND 12.50 M (41.0 FT) NORTHWEST FROM THE NORTHWEST EDGE OF
 AF7411'A DRAINAGE DITCH. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH
 AF7411'LOGO CAP.
 AF7411'DESCRIBED BY D.F. CALLAHAN.
 AF7411
 AF7411 STATION RECOVERY (1991)
 AF7411
 AF7411'RECOVERY NOTE BY KEITH AND SCHNARS - LAKELAND 1991
 AF7411'RECOVERED IN GOOD CONDITION.
 AF7411
 AF7411 STATION RECOVERY (1992)
 AF7411
 AF7411'RECOVERY NOTE BY KEITH AND SCHNARS - LAKELAND 1992
 AF7411'RECOVERED IN GOOD CONDITION.
 AF7411
 AF7411 STATION RECOVERY (1995)
 AF7411
 AF7411'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)
 AF7411'THE STATION IS LOCATED ABOUT 1.30 MI (2.09 KM) WEST-SOUTHWEST OF AVON
 AF7411'PARK, AT THE AVON PARK MUNICIPAL AIRPORT, IN SECTION 21, T 33 S, R 28
 AF7411'E, BETWEEN RUNWAY 4-22 AND PARALLEL TAXIWAY, ON THE SOUTHWEST SIDE OF
 AF7411'A NORTHWEST-SOUTHEAST TAXIWAY. OWNERSHIP -- CITY OF AVON PARK, 110 E.
 AF7411'MAIN ST, AVON PARK, FL 33825. SUSAN BOYER, CITY MANAGER/AIRPORT
 AF7411'MANAGER, PHONE 941-452-4400. NOTE -- PERMISSION MUST BE OBTAINED
 AF7411'BEFORE ENTERING AIRPORT. TO REACH THE STATION FROM THE JUNCTION OF U.
 AF7411'S. HIGHWAY 27, 98 AND STATE ROADS 17 AND 64 ON THE WEST SIDE OF AVON
 AF7411'PARK, GO WEST FOR 0.70 MI (1.13 KM) ON STATE ROAD 64 TO A PAVED ROAD
 AF7411'LEFT. TURN LEFT AND GO SOUTH FOR 0.05 MI,PASSING THROUGH GATE, ON
 AF7411'PAVED ROAD TO A T-JUNCTION. TURN LEFT AND GO EAST ON THE PAVED ROAD
 AF7411'FOR 164.0 FT (50.0 M) TO AN ASPHALT APRON ON THE RIGHT. TURN RIGHT
 AF7411'AND GO SOUTH, THEN SOUTHEAST FOR 0.10 MI (0.16 KM) ON THE APRON AND
 AF7411'TAXIWAY TO THE RUNWAY EDGE. CONTINUE AHEAD FOR 0.05 MI (0.08 KM)
 AF7411'ACROSS RUNWAY AND ONTO TAXIWAY TO A CURVE RIGHT. BEAR RIGHT AND GO
 AF7411'SOUTHWEST FOR 0.15 MI (0.24 KM) ON THE TAXIWAY TO A CROSS TAXIWAY.
 AF7411'TURN RIGHT AND GO NORTHWEST FOR ABOUT 147.6 FT (45.0 M) ON THE TAXIWAY
 AF7411'TO THE STATION ON THE LEFT. THE STATION IS RECESSED 9 CM BELOW
 AF7411'GROUND. LOCATED 160.2 FT (48.8 M) NORTHWEST FROM THE APPROXIMATE
 AF7411'CENTER OF A NORTHEAST-SOUTHWEST TAXIWAY, 139.7 FT (42.6 M) SOUTHEAST
 AF7411'FROM THE APPROXIMATE CENTER OF RUNWAY 4-22, 91.0 FT (27.7 M)
 AF7411'SOUTH-SOUTHEAST FROM TAXIWAY SIGN (A), 88.0 FT (26.8 M) SOUTHWEST FROM
 AF7411'THE APPROXIMATE CENTER OF TAXIWAY A, 56.5 FT (17.2 M) SOUTHWEST FROM
 AF7411'THE SOUTH CORNER OF A CONCRETE BASE FOR RUNWAY SIGN 4-22, 41.0 FT
 AF7411'(12.5 M) NORTHWEST FROM THE NORTHWEST EDGE OF A DRAINAGE DITCH, AND
 AF7411'3.0 FT (0.9 M) NORTHWEST OF A CARSONITE WITNESS POST. NOTE -- ACCESS
 AF7411'TO DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
 AF7411
 AF7411 STATION RECOVERY (1999)
 AF7411

AF7411'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1999
AF7411'RECOVERED AS DESCRIBED.

AF7411

AF7411 STATION RECOVERY (2003)

AF7411

AF7411'RECOVERY NOTE BY FL DEPT OF ENV PRO 2003 (BPJ)

AF7411'RECOVERED AS DESCRIBED.

AF7411'

AF7411'NOTE PHONE CURRENT AIRPORT CONTACT IS GEORGE POPE OR ANDREW HUGHES AT

AF7411'863-453-5046.

AF7411'

AF7411

AF7411 STATION RECOVERY (2003)

AF7411

AF7411'RECOVERY NOTE BY POLK COUNTY FLORIDA 2003 (RWY)

AF7411'RECOVERED AS DESCRIBED. RECOVERY NOTE BY POLK COUNTY PROPERTY

AF7411'APPRAISER GIS DEPARTMENT.

AG9371 *****

AG9371 CBN - This is a Cooperative Base Network Control Station.

AG9371 DESIGNATION - FLGPS 46

AG9371 PID - AG9371

AG9371 STATE/COUNTY- FL/HILLSBOROUGH

AG9371 USGS QUAD - FT LONESOME (1987)

AG9371

AG9371 *CURRENT SURVEY CONTROL

AG9371 * NAD 83(1999)- 27 42 16.54254(N) 082 09 17.10287(W) ADJUSTED

AG9371 * NAVD 88 - 35.14 (meters) 115.3 (feet) N HEIGHT

AG9371 X - 771,353.179 (meters) COMP

AG9371 Y - -5,598,131.455 (meters) COMP

AG9371 Z - 2,947,566.509 (meters) COMP

AG9371 LAPLACE CORR- -0.85 (seconds) DEFLEC99

AG9371 ELLIP HEIGHT- 10.34 (meters) GPS OBS

AG9371 GEOID HEIGHT- -24.92 (meters) GEOID99

AG9371 DYNAMIC HT - 35.09 (meters) 115.1 (feet) COMP

AG9371 MODELED GRAV- 979,163.1 (mgal) NAVD 88

AG9371

AG9371 HORZ ORDER - A

AG9371 VERT ORDER - THIRD

AG9371 ELLP ORDER - FOURTH CLASS I

AG9371

AG9371.The horizontal coordinates were established by GPS observations

AG9371.and adjusted by the National Geodetic Survey in April 2001.

AG9371

AG9371.The orthometric height was determined by differential leveling

AG9371.and adjusted by the National Geodetic Survey in May 2001.

AG9371.WARNING-GPS observations at this control monument resulted in a GPS

AG9371.derived orthometric height which differed from the leveled height by

AG9371.more than one decimeter (0.1 meter).

AG9371

AG9371.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AG9371

AG9371.The Laplace correction was computed from DEFLEC99 derived deflections.

AG9371

AG9371.The ellipsoidal height was determined by GPS observations

AG9371.and is referenced to NAD 83.

AG9371

AG9371.The geoid height was determined by GEOID99.

AG9371

AG9371.The dynamic height is computed by dividing the NAVD 88

AG9371.geopotential number by the normal gravity value computed on the

AG9371.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AG9371.degrees latitude (g = 980.6199 gals.).

AG9371

AG9371.The modeled gravity was interpolated from observed gravity values.

AG9371

AG9371; North East Units Scale Converg.

AG9371;SPC FL W - 373,484.593 184,738.002 MT 0.99994405 -0 04 19.0

AG9371;UTM 17 - 3,065,012.998 386,149.466 MT 0.99975999 -0 32 12.9

AG9371

AG9371 SUPERSEDED SURVEY CONTROL

AG9371

AG9371 NAD 83(1990)- 27 42 16.54175(N) 082 09 17.10252(W) AD() 1
AG9371 NGVD 29 - 35.5 (m) 116. (f) GPS OBS
AG9371

AG9371.Superseded values are not recommended for survey control.
AG9371.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AG9371.See file dsdata.txt to determine how the superseded data were derived.
AG9371

AG9371_MARKER: F = FLANGE-ENCASED ROD
AG9371_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AG9371_STAMPING: FLGPS 46 1989
AG9371_MARK LOGO: NGS
AG9371_PROJECTION: FLUSH
AG9371_MAGNETIC: N = NO MAGNETIC MATERIAL
AG9371_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
AG9371+STABILITY: POSITION/ELEVATION WELL
AG9371_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AG9371+SATELLITE: SATELLITE OBSERVATIONS - April 05, 1999
AG9371_ROD/PIPE-DEPTH: 7.3 meters
AG9371_SLEEVE-DEPTH : 0.91 meters
AG9371

AG9371 HISTORY	- Date	Condition	Report By
AG9371 HISTORY	- 1989	MONUMENTED	NGS
AG9371 HISTORY	- 19901102	GOOD	FLDNR
AG9371 HISTORY	- 19990405	GOOD	DCJOHN

AG9371

AG9371 STATION DESCRIPTION

AG9371

AG9371'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989
AG9371'THE STATION IS LOCATED ABOUT 34.44 KM (21.40 MI) SOUTH OF PLANT CITY,
AG9371'13.84 KM (8.60 MI) EAST OF WIMAUMA, IN SECTION 12, T 32 S, R 21 E.
AG9371'OWNERSHIP--STATE ROAD RIGHT-OF-WAY.
AG9371'TO REACH THE STATION FROM THE INTERSECTION OF COUNTY ROAD 39 AND STATE
AG9371'ROAD 674 IN FORT LONESOME, GO WEST FOR 0.89 KM (0.55 MI) ON STATE ROAD
AG9371'674 TO THE STATION ON RIGHT.
AG9371'THE STATION IS RECESSED 8 CM BELOW GROUND. LOCATED 20.03 M (65.7 FT)
AG9371'EAST FROM A CONCRETE RIGHT-OF-WAY MONUMENT, 19.51 M (64.0 FT) EAST
AG9371'FROM A UTILITY POLE, 13.26 M (43.5 FT) NORTH FROM THE APPROXIMATE
AG9371'CENTER OF STATE ROAD 674, 2.59 M (8.5 FT) SOUTH FROM A FENCE LINE AND
AG9371'2.29 M (7.5 FT) SOUTH FROM A CARSONITE WITNESS POST. NOTE--ACCESS TO
AG9371'DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.
AG9371'DESCRIBED BY R.L. MALLOY.

AG9371

AG9371 STATION RECOVERY (1990)

AG9371

AG9371'RECOVERY NOTE BY FL DEPT OF NAT RES 1990
AG9371'THE STATION IS ABOUT 21.4 MI (34.4 KM) SOUTH OF PLANT CITY, 8.6 MI
AG9371'(13.8 KM) EAST OF WINAUMA, IN FORT LONESOME, IN SECTION 12, T 32 S, R
AG9371'21 E.
AG9371'TO REACH THE STATION FROM THE INTERSECTION OF COUNTY ROAD 39 AND STATE
AG9371'ROAD 674, GO WEST ON STATE ROAD 674 FOR 0.55 MI (0.89 KM) TO THE
AG9371'STATION ON THE RIGHT. RECESSED 0.3 FT (9.1 CM) BELOW THE GROUND.
AG9371'LOCATED 65.2 FT (19.9 M) EAST OF A CONCRETE RIGHT-OF-WAY MARKER, 63.6
AG9371'FT (19.4 M) EAST OF A POWER POLE NUMBER 14 3755, 44.0 FT (13.4 M)
AG9371'NORTH OF THE CENTERLINE OF STATE ROAD 674, 8.1 FT (2.5 M) SOUTH OF A
AG9371'FENCE LINE AND 7.5 FT (2.3 M) NORTH OF A CARSONITE WITNESS POST.
AG9371'NOTE ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

AG9371

AG9371

STATION RECOVERY (1999)

AG9371

AG9371'RECOVERY NOTE BY DC JOHNSON ASSOC 1999

AG9371'RECOVERED IN GOOD CONDITION WITH THIS CHANGE, THE STATION IS 7.5 FT

AG9371'(2.3 M) SOUTH OF A CARSONITE WITNESS POST.

AG9363 *****

AG9363 CBN - This is a Cooperative Base Network Control Station.

AG9363 DESIGNATION - FLGPS 49

AG9363 PID - AG9363

AG9363 STATE/COUNTY- FL/MANATEE

AG9363 USGS QUAD - MYAKKA CITY (1972)

AG9363

AG9363 *CURRENT SURVEY CONTROL

AG9363

AG9363* NAD 83(1999)- 27 20 16.06691(N) 082 08 28.36289(W) ADJUSTED

AG9363* NAVD 88 - 14.209 (meters) 46.62 (feet) ADJUSTED

AG9363

AG9363 X - 775,241.504 (meters) COMP

AG9363 Y - -5,616,535.923 (meters) COMP

AG9363 Z - 2,911,510.897 (meters) COMP

AG9363 LAPLACE CORR- -0.40 (seconds) DEFLEC99

AG9363 ELLIP HEIGHT- -10.24 (meters) (05/31/01) GPS OBS

AG9363 GEOID HEIGHT- -24.59 (meters) GEOID03

AG9363 DYNAMIC HT - 14.188 (meters) 46.55 (feet) COMP

AG9363 MODELED GRAV- 979,128.1 (mgal) NAVD 88

AG9363

AG9363 HORZ ORDER - B

AG9363 VERT ORDER - SECOND CLASS I

AG9363 ELLP ORDER - FIFTH CLASS I

AG9363

AG9363.The horizontal coordinates were established by GPS observations

AG9363.and adjusted by the National Geodetic Survey in May 2001.

AG9363

AG9363.The orthometric height was determined by differential leveling

AG9363.and adjusted by the National Geodetic Survey in May 2004.

AG9363.No vertical observational check was made to the station.

AG9363

AG9363.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AG9363

AG9363.The Laplace correction was computed from DEFLEC99 derived deflections.

AG9363

AG9363.The ellipsoidal height was determined by GPS observations

AG9363.and is referenced to NAD 83.

AG9363

AG9363.The geoid height was determined by GEOID03.

AG9363

AG9363.The dynamic height is computed by dividing the NAVD 88

AG9363.geopotential number by the normal gravity value computed on the

AG9363.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AG9363.degrees latitude (g = 980.6199 gals.).

AG9363

AG9363.The modeled gravity was interpolated from observed gravity values.

AG9363

AG9363; North East Units Scale Factor Converg.

AG9363;SPC FL W - 332,839.684 186,026.964 MT 0.99994359 -0 03 53.5

AG9363;UTM 17 - 3,024,366.543 387,110.380 MT 0.99975731 -0 31 26.9

AG9363

AG9363! - Elev Factor x Scale Factor = Combined Factor

AG9363!SPC FL W - 1.00000161 x 0.99994359 = 0.99994520

AG9363!UTM 17 - 1.00000161 x 0.99975731 = 0.99975892

AG9363

AG9363: Primary Azimuth Mark Grid Az
AG9363:SPC FL W - FLGPS 49 AZ MK 293 22 08.7
AG9363:UTM 17 - FLGPS 49 AZ MK 293 49 42.1

AG9363

AG9363|-----|

AG9363|PID Reference Object Distance Geod. Az |

AG9363| dddmms.s |

AG9363|AG9374 FLGPS 49 AZ MK APPROX. 0.8 KM 2931815.2 |

AG9363|-----|

AG9363

AG9363 SUPERSEDED SURVEY CONTROL

AG9363

AG9363 NAD 83(1990)- 27 20 16.06547(N) 082 08 28.36245(W) AD() B

AG9363 ELLIP H (09/13/90) -10.13 (m) GP() 4 1

AG9363 NGVD 29 (09/13/90) 14.6 (m) 48. (f) GPS OBS

AG9363

AG9363.Superseded values are not recommended for survey control.

AG9363.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AG9363.See file dsdata.txt to determine how the superseded data were derived.

AG9363

AG9363_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLL8711024367(NAD 83)

AG9363_MARKER: F = FLANGE-ENCASED ROD

AG9363_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AG9363_STAMPING: FLGPS 49 1989

AG9363_MARK LOGO: NGS

AG9363_PROJECTION: FLUSH

AG9363_MAGNETIC: N = NO MAGNETIC MATERIAL

AG9363_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AG9363_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AG9363+SATELLITE: SATELLITE OBSERVATIONS - April 20, 2002

AG9363_ROD/PIPE-DEPTH: 24.4 meters

AG9363_SLEEVE-DEPTH : 0.9 meters

AG9363

AG9363 HISTORY - Date Condition Report By

AG9363 HISTORY - 1989 MONUMENTED NGS

AG9363 HISTORY - 20020420 GOOD FLDEP

AG9363

AG9363 STATION DESCRIPTION

AG9363

AG9363'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989

AG9363'THE STATION IS LOCATED ABOUT 41.04 KM (25.50 MI) SOUTHWEST OF

AG9363'WAUCHULA, 2.74 KM (1.70 MI) SOUTHEAST OF MYAKKA CITY, IN SECTION 19, T

AG9363'36 S, R 22 E. OWNERSHIP--STATE ROAD RIGHT-OF-WAY.

AG9363'TO REACH THE STATION FROM THE INTERSECTION OF STATE ROAD 70 AND THE

AG9363'WAUCHULA-MYAKKA ROAD IN MYAKKA CITY, GO EAST FOR 2.33 KM (1.45 MI) ON

AG9363'STATE ROAD 70 TO THE STATION ON LEFT.

AG9363'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 14.63 M

AG9363'(48.0 FT) NORTH-NORTHEAST FROM THE APPROXIMATE CENTER OF STATE ROAD

AG9363'70, 6.22 M (20.4 FT) SOUTH-SOUTHWEST FROM A FENCE LINE, 6.22 M

AG9363'(20.4 FT) SOUTHWEST FROM A CARSONITE WITNESS POST AND 6.10 M

AG9363'(20.0 FT) SOUTH-SOUTHWEST FROM AT+T WITNESS POST NUMBER 537.

AG9363'NOTE--ACCESS TO DATUM POINT IS HAD THROUGH A 5-INCH LOGO CAP.

AG9363'DESCRIBED BY R.L. MALLOY.

AG9363

AG9363 STATION RECOVERY (2002)

AG9363

AG9363'RECOVERY NOTE BY FL DEPT OF ENV PRO 2002 (BPJ)
AG9363'THE MARK IS ABOUT 1.6 MI SOUTHEAST OF MYAKKA CITY, IN SECTION 19,
AG9363'TOWNSHIP 36 SOUTH,
AG9363'RANGE 22 EAST.
AG9363'
AG9363'TO REACH THE STATION FROM THE POST OFFICE IN MYAKKA CITY, GO EAST ON
AG9363'STATE ROAD 70 FOR
AG9363'1.7 MI TO THE STATION ON THE LEFT, A STAINLESS STEEL ROD IN A SLEEVE
AG9363'DRIVEN TO REFUSAL AT A
AG9363'DEPTH OF 80.0 FT WITH AN NGS LOGO CAP FLUSH WITH THE GROUND AND ABOUT
AG9363'1.0 FT BELOW THE
AG9363'LEVEL OF STATE ROAD 70, THE DATUM POINT IS RECESSED 0.3 FT BELOW THE
AG9363'LEVEL OF THE NGS
AG9363'LOGO CAP.
AG9363'
AG9363'LOCATED 48.0 FT NORTH-NORTHEAST OF THE APPROXIMATE CENTERLINE OF STATE
AG9363'ROAD 70, 35.3 FT
AG9363'NORTH-NORTHEAST OF THE EDGE OF THE PAVEMENT OF STATE ROAD 70, 20.4 FT
AG9363'SOUTH-SOUTHWEST OF A BARB WIRE FENCE, 20.4 FT SOUTH-SOUTHWEST OF A
AG9363'CARSONITE WITNESS
AG9363'POST AND 20.0 FT SOUTH-SOUTHWEST FROM AN ATT FIBER OPTIC CABLE WARNING
AG9363'POST NUMBER
AG9363'537.
AG9363'
AG9363'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.
AG9363'

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AD7896 *****
AD7896 CBN      - This is a Cooperative Base Network Control Station.
AD7896 DESIGNATION - FLGPS 58
AD7896 PID      - AD7896
AD7896 STATE/COUNTY- FL/CHARLOTTE
AD7896 USGS QUAD  - TELEGRAPH SWAMP NE (1973)
AD7896
AD7896          *CURRENT SURVEY CONTROL
AD7896
AD7896* NAD 83(1999)- 26 56 42.27004(N) 081 36 47.88968(W) ADJUSTED
AD7896* NAVD 88   -   17.2 (meters)  56. (feet) GPS OBS
AD7896
AD7896 X      - 829,853.019 (meters)          COMP
AD7896 Y      - -5,628,796.423 (meters)        COMP
AD7896 Z      - 2,872,788.428 (meters)        COMP
AD7896 LAPLACE CORR- -0.39 (seconds)          DEFLEC99
AD7896 ELLIP HEIGHT- -7.25 (meters)          (04/12/01) GPS OBS
AD7896 GEOID HEIGHT- -24.44 (meters)          GEOID03
AD7896
AD7896 HORZ ORDER - A
AD7896 ELLP ORDER - FOURTH CLASS I
AD7896
AD7896.The horizontal coordinates were established by GPS observations
AD7896.and adjusted by the National Geodetic Survey in April 2001.
AD7896
AD7896.The orthometric height was determined by GPS observations and a
AD7896.high-resolution geoid model.
AD7896
AD7896.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AD7896
AD7896.The Laplace correction was computed from DEFLEC99 derived deflections.
AD7896
AD7896.The ellipsoidal height was determined by GPS observations
AD7896.and is referenced to NAD 83.
AD7896
AD7896.The geoid height was determined by GEOID03.
AD7896
AD7896;          North      East      Units Scale Factor Converg.
AD7896;SPC FL W - 289,377.268 238,398.143 MT 0.99995937 +0 10 30.8
AD7896;UTM 17 - 2,980,499.467 439,120.833 MT 0.99964575 -0 16 40.5
AD7896
AD7896!          - Elev Factor x Scale Factor = Combined Factor
AD7896!SPC FL W - 1.00000114 x 0.99995937 = 0.99996051
AD7896!UTM 17 - 1.00000114 x 0.99964575 = 0.99964689
AD7896
AD7896:          Primary Azimuth Mark          Grid Az
AD7896:SPC FL W - FLGPS 58 AZ MK          269 57 32.9
AD7896:UTM 17 - FLGPS 58 AZ MK          270 24 44.2
AD7896
AD7896|-----|
AD7896| PID Reference Object          Distance Geod. Az |
AD7896|          dddmmss.s |
AD7896| AD7922 FLGPS 58 AZ MK          APPROX. 0.9 KM 2700803.7 |
AD7896|-----|
AD7896
AD7896          SUPERSEDED SURVEY CONTROL

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AD7896
 AD7896 ELLIP H (06/02/94) -7.22 (m) GP() 3 1
 AD7896 NAD 83(1990)- 26 56 42.26839(N) 081 36 47.88891(W) AD() B
 AD7896 ELLIP H (09/13/90) -7.27 (m) GP() 4 1
 AD7896 NGVD 29 (09/13/90) 17.5 (m) 57. (f) GPS OBS
 AD7896
 AD7896.Superseded values are not recommended for survey control.
 AD7896.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AD7896.See file dsdata.txt to determine how the superseded data were derived.
 AD7896
 AD7896_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK3912180499(NAD 83)
 AD7896_MARKER: F = FLANGE-ENCASED ROD
 AD7896_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AD7896_STAMPING: FLGPS 58 1989
 AD7896_MARK LOGO: NGS
 AD7896_PROJECTION: FLUSH
 AD7896_MAGNETIC: N = NO MAGNETIC MATERIAL
 AD7896_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD
 AD7896+STABILITY: POSITION/ELEVATION WELL
 AD7896_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AD7896+SATELLITE: SATELLITE OBSERVATIONS - April 05, 1999
 AD7896_ROD/PIPE-DEPTH: 17.2 meters
 AD7896_SLEEVE-DEPTH : 0.91 meters

AD7896

AD7896 HISTORY	- Date	Condition	Report By
AD7896 HISTORY	- 1989	MONUMENTED	NGS
AD7896 HISTORY	- 19920921	GOOD	DENI
AD7896 HISTORY	- 19930303	GOOD	NGS
AD7896 HISTORY	- 19990405	GOOD	FL-015

AD7896
 AD7896 STATION DESCRIPTION
 AD7896

AD7896'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989
 AD7896'THE STATION IS LOCATED ABOUT 14.3 KM (8.90 MI) EAST OF BABCOCK, 5.2 KM
 AD7896'(3.25 MI) WEST OF THE GLADES-CHARLOTTE COUNTY LINE, IN THE
 AD7896'RIGHT-OF-WAY OF COUNTY ROAD 74, IN SECTION 4, T 41 S, R 27 E.
 AD7896'OWNERSHIP--CHARLOTTE COUNTY.
 AD7896'TO REACH THE STATION FROM THE INTERSECTION OF STATE ROUTE 31 AND
 AD7896'COUNTY ROAD 74 IN BABCOCK, GO EAST ALONG COUNTY ROAD 74 FOR 7.3 KM
 AD7896'(4.55 MI) TO THE ENTRANCE TO PARADISE RV PARK, CONTINUE EAST ALONG
 AD7896'COUNTY ROAD 74 FOR 7 KM (4.35 MI) TO THE STATION ON RIGHT.
 AD7896'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 1.28 M (4.2 FT)
 AD7896'NORTH OF A FENCE LINE, 14.72 M (48.3 FT) SOUTH OF THE CENTERLINE OF
 AD7896'STATE ROUTE 74, 21.09 M (69.2 FT) WEST OF THE WESTERNMOST BRACE POLE
 AD7896'OF A PAIR AND 1.31 M (4.3 FT) NORTH OF A CARSONITE WITNESS POST.
 AD7896'DESCRIBED BY R.L. MALLOY.

AD7896
 AD7896 STATION RECOVERY (1992)
 AD7896
 AD7896'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1992
 AD7896'RECOVERED IN GOOD CONDITION.

AD7896
 AD7896 STATION RECOVERY (1993)
 AD7896
 AD7896'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
 AD7896'STATION IS LOCATED ABOUT 14.3 KM (8.90 MI) EAST OF BABCOCK, 5.2 KM


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AF0480 *****
AF0480 CBN      - This is a Cooperative Base Network Control Station.
AF0480 DESIGNATION - FORT RESET
AF0480 PID      - AF0480
AF0480 STATE/COUNTY- FL/HARDEE
AF0480 USGS QUAD  - FT GREEN (1987)
AF0480
AF0480                *CURRENT SURVEY CONTROL
AF0480
AF0480* NAD 83(1999)- 27 35 41.96740(N)  081 59 22.03280(W)  ADJUSTED
AF0480* NAVD 88   -   37.1 (meters)  122. (feet) GPS OBS
AF0480
AF0480 X      - 788,286.133 (meters)          COMP
AF0480 Y      - -5,601,465.792 (meters)       COMP
AF0480 Z      - 2,936,808.688 (meters)        COMP
AF0480 LAPLACE CORR- -1.31 (seconds)          DEFLEC99
AF0480 ELLIP HEIGHT- 12.13 (meters)          (05/31/01) GPS OBS
AF0480 GEOID HEIGHT- -25.03 (meters)         GEOID03
AF0480
AF0480 HORZ ORDER - B
AF0480 ELLP ORDER - FIFTH CLASS I
AF0480
AF0480.The horizontal coordinates were established by GPS observations
AF0480.and adjusted by the National Geodetic Survey in May 2001.
AF0480
AF0480.The orthometric height was determined by GPS observations and a
AF0480.high-resolution geoid model.
AF0480
AF0480.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF0480
AF0480.The Laplace correction was computed from DEFLEC99 derived deflections.
AF0480
AF0480.The ellipsoidal height was determined by GPS observations
AF0480.and is referenced to NAD 83.
AF0480
AF0480.The geoid height was determined by GEOID03.
AF0480
AF0480;           North      East      Units Scale Factor Converg.
AF0480;SPC FL W - 361,330.108 201,041.159 MT 0.99994119 +0 00 17.6
AF0480;UTM 17  - 3,052,729.356 402,350.332 MT 0.99971770 -0 27 30.1
AF0480
AF0480!           - Elev Factor x Scale Factor = Combined Factor
AF0480!SPC FL W - 0.99999809 x 0.99994119 = 0.99993928
AF0480!UTM 17  - 0.99999809 x 0.99971770 = 0.99971580
AF0480
AF0480:           Primary Azimuth Mark          Grid Az
AF0480:SPC FL W - FORT AZ MK                    091 37 41.6
AF0480:UTM 17  - FORT AZ MK                    092 05 29.3
AF0480
AF0480|-----|
AF0480| PID Reference Object          Distance Geod. Az |
AF0480|                                dddmmss.s |
AF0480| AF0479 FORT GREEN TANK          APPROX. 5.5 KM 0550929.3 |
AF0480| AF0477 BOWLING GREEN MUN TANK    APPROX.17.2 KM 0730151.2 |
AF0480| CW7140 FORT AZ MK                0913759.2 |
AF0480| AF0478 WAUCHULA NEW MUN TANK    APPROX.18.5 KM 1053907.8 |

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AF0480| CW7141 FORT RM 1 42.285 METERS 12729 |
AF0480| CW7142 FORT RM 2 35.232 METERS 22439 |
AF0480| CW7143 FORT RM 3 35.348 METERS 22446 |

AF0480|-----|

AF0480

AF0480 SUPERSEDED SURVEY CONTROL

AF0480

AF0480 NAD 83(1990)- 27 35 41.96599(N) 081 59 22.03226(W) AD() B

AF0480 ELLIP H (09/13/90) 12.16 (m) GP() 4 1

AF0480 NAD 83(1986)- 27 35 41.96660(N) 081 59 22.05049(W) AD() 2

AF0480 NAD 27 - 27 35 40.83862(N) 081 59 22.74478(W) AD() 2

AF0480 NGVD 29 (09/13/90) 37.5 (m) 123. (f) GPS OBS

AF0480

AF0480.Superseded values are not recommended for survey control.

AF0480.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AF0480.See file dsdata.txt to determine how the superseded data were derived.

AF0480

AF0480_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML0235052729(NAD 83)

AF0480_MARKER: DH = HORIZONTAL CONTROL DISK

AF0480_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AF0480_STAMPING: FORT 1937 1974

AF0480_MARK LOGO: NGS

AF0480_MAGNETIC: N = NO MAGNETIC MATERIAL

AF0480_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AF0480+STABILITY: SURFACE MOTION

AF0480_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AF0480+SATELLITE: SATELLITE OBSERVATIONS - October 01, 2003

AF0480

AF0480 HISTORY - Date Condition Report By

AF0480 HISTORY - 1937 MONUMENTED CGS

AF0480 HISTORY - 1963 MARK NOT FOUND CGS

AF0480 HISTORY - 1974 SEE DESCRIPTION NGS

AF0480 HISTORY - 1974 GOOD NGS

AF0480 HISTORY - 19890302 GOOD NGS

AF0480 HISTORY - 19910501 GOOD KEISCH

AF0480 HISTORY - 20031001 GOOD FL-105

AF0480

AF0480 STATION DESCRIPTION

AF0480

AF0480'DESCRIBED BY COAST AND GEODETIC SURVEY 1937 (RAE)

AF0480'STATION IS ABOUT 13.7 MILES BY ROAD N AND W OF WAUCHULA, 2.8

AF0480'MILES W OF THE FORT GREEN POST OFFICE, ON THE N SIDE OF STATE

AF0480'ROUTE 32, BETWEEN ROADWAY AND FENCE LINE ON RIGHT-OF-WAY

AF0480'PROPERTY. IT IS 42 FEET N OF THE CENTER LINE OF ROUTE 32, 12

AF0480'FEET S OF FENCE LINE, 58 FEET W OF THE CENTER LINE OF A CATTLE

AF0480'GUARD, 89 FEET E OF GATEPOST, ABOUT 0.1 MILE W OF WARNING SIGN

AF0480'STOP FOR SCHOOL BUS. PROJECTS 2 INCHES.

AF0480'

AF0480'SURFACE, UNDERGROUND, REFERENCE AND AZIMUTH MARKS ARE STANDARD

AF0480'BRONZE DISKS SET IN CONCRETE.

AF0480'

AF0480'REFERENCE MARK NO. 1 IS SE OF THE STATION, 42 FEET S OF THE

AF0480'CENTER LINE OF ROUTE 32, 1-1/2 FEET N OF FENCE LINE. MARK IS

AF0480'FLUSH WITH TOP OF GROUND.

AF0480'

AF0480'REFERENCE MARK NO. 2 IS SW OF THE STATION, 42 FEET S OF THE

AF0480'CENTER LINE OF ROUTE 32, 1-1/2 FEET N OF FENCE LINE. MARK
AF0480'PROJECTS 2 INCHES.

AF0480'

AF0480'AZIMUTH MARK IS E OF THE STATION, 41 FEET S OF THE CENTER LINE
AF0480'OF ROUTE 32, 1-1/2 FEET N OF FENCE LINE, 30 FEET W OF THE CENTER
AF0480'LINE OF CATTLE GUARD AND TRAIL SOUTHWARD THROUGH SCRUB
AF0480'PALMETTOES. MARK PROJECTS 3 INCHES.

AF0480'

AF0480'TO REACH FROM WAUCHULA, GO N ON U.S. ROUTE 17 FOR 3.4 MILES TO
AF0480'JUNCTION WITH ROUTE 32. HERE TURN W AND GO 10.3 MILES TO THE
AF0480'STATION ON RIGHT OR 2.8 MILES W OF THE FORT GREEN POST OFFICE TO
AF0480'STATION.

AF0480'

AF0480'HEIGHT OF LIGHT ABOVE STATION MARK 34.7 METERS.

AF0480

STATION RECOVERY (1963)

AF0480

AF0480'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1963 (VRS)
AF0480'THE STATION WAS NOT RECOVERED AFTER A THOROUGH SEARCH. IT IS
AF0480'BELIEVED THAT THE STATION WAS DESTROYED WHEN THE HIGHWAY WAS
AF0480'WIDENED AND REPAVED.

AF0480

STATION RECOVERY (1974)

AF0480

AF0480'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1974 (CLN)
AF0480'RM 1 TO RM 3 OBSTRUCTED BY HIGH BRUSH.

AF0480'

AF0480'THE STATION UNDERGROUND MARK AND REFERENCE MARK 1 WERE RECOVERED
AF0480'AND FOUND IN GOOD CONDITION. THE SURFACE STATION MARK AND
AF0480'REFERENCE MARK 2 WERE FOUND DESTROYED. AZIMUTH MARK WAS SEARCHED
AF0480'FOR AT LENGTH BUT NOT FOUND. APPARENTLY THE AZIMUTH MARK WAS
AF0480'DESTROYED WHEN THE HIGHWAY WAS RECONSTRUCTED. A NEW SURFACE
AF0480'STATION MARK WAS SET DIRECTLY OVER THE UNDERGROUND STATION
AF0480'MARK. REFERENCE MARK 3 WAS ALSO ESTABLISHED AT THIS TIME. THE
AF0480'DISTANCE TO REFERENCE MARK 1 CHECKED THE ORIGINAL DESCRIPTION.
AF0480'A NEW AZIMUTH MARK WAS ESTABLISHED AT THIS TIME. DUE TO
AF0480'CHANGES, A COMPLETE NEW DESCRIPTION FOLLOWS.

AF0480'

AF0480'STATION IS ABOUT 37 MILES SOUTHEAST OF TAMPA, 22 MILES SOUTHWEST
AF0480'OF BARTOW, 12 MILES WEST-NORTHWEST OF WAUCHULA, 2.8 MILES WEST
AF0480'OF FORT GREEN SPRINGS AND ON PROPERTY OF MR. D. WATERS WHO LIVES
AF0480'.4 MILES EAST OF STATION ON THE NORTH SIDE OF STATE HIGHWAY 62.

AF0480'

AF0480'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAY 62 AND
AF0480'SECONDARY ROAD S-663 IN FORT GREEN SPRINGS, GO WEST ON STATE
AF0480'HIGHWAY 62 FOR 2.75 MILES TO STATION ON RIGHT.

AF0480'

AF0480'STATION MARK, A STANDARD DISK STAMPED FORT 1937 1974, IS SET IN
AF0480'THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT IS SET
AF0480'3-INCHES BELOW THE GROUND SURFACE. IT IS 261 FEET EAST OF POWER
AF0480'LINE POLE 16-89A, 128 FEET WEST OF POWER LINE POLE 1689, 41.5
AF0480'FEET NORTH OF THE CENTER OF STATE HIGHWAY 62, 6.1 FEET NORTH OF
AF0480'A METAL WITNESS POST, 5.8 FEET NORTH OF A WIRE RIGHT-OF-WAY
AF0480'FENCE AND 1 FOOT SOUTH OF A METAL WITNESS POST. THE UNDERGROUND
AF0480'MARK IS A STANDARD DISK STAMPED FORT 1937, IS SET IN THE TOP
AF0480'OF AN IRREGULAR MASS OF CONCRETE ABOUT 28-INCHES BELOW THE

AG1868 *****

AG1868 CBN - This is a Cooperative Base Network Control Station.

AG1868 DESIGNATION - HAVOLINE 2

AG1868 PID - AG1868

AG1868 STATE/COUNTY- FL/SARASOTA

AG1868 USGS QUAD - MYAKKA RIVER (1987)

AG1868

AG1868 *CURRENT SURVEY CONTROL

AG1868

AG1868* NAD 83(1999)- 27 02 48.34214(N) 082 15 52.23382(W) ADJUSTED

AG1868* NAVD 88 - 1.994 (meters) 6.54 (feet) ADJUSTED

AG1868

AG1868 X - 765,135.406 (meters) COMP

AG1868 Y - -5,632,783.596 (meters) COMP

AG1868 Z - 2,882,821.277 (meters) COMP

AG1868 LAPLACE CORR- -0.89 (seconds) DEFLEC99

AG1868 ELLIP HEIGHT- -21.95 (meters) GPS OBS

AG1868 GEOID HEIGHT- -23.84 (meters) GEOID99

AG1868 DYNAMIC HT - 1.991 (meters) 6.53 (feet) COMP

AG1868 MODELED GRAV- 979,129.9 (mgal) NAVD 88

AG1868

AG1868 HORZ ORDER - B

AG1868 VERT ORDER - SECOND CLASS II

AG1868 ELLP ORDER - FIFTH CLASS I

AG1868

AG1868.The horizontal coordinates were established by GPS observations

AG1868.and adjusted by the National Geodetic Survey in May 2001.

AG1868

AG1868.The orthometric height was determined by differential leveling

AG1868.and adjusted by the National Geodetic Survey in June 1991.

AG1868

AG1868.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AG1868

AG1868.The Laplace correction was computed from DEFLEC99 derived deflections.

AG1868

AG1868.The ellipsoidal height was determined by GPS observations

AG1868.and is referenced to NAD 83.

AG1868

AG1868.The geoid height was determined by GEOID99.

AG1868

AG1868.The dynamic height is computed by dividing the NAVD 88

AG1868.geopotential number by the normal gravity value computed on the

AG1868.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

AG1868.degrees latitude (g = 980.6199 gals.).

AG1868

AG1868.The modeled gravity was interpolated from observed gravity values.

AG1868

AG1868; North East Units Scale Converg.

AG1868;SPC FL W - 300,612.669 173,758.506 MT 0.99994967 -0 07 13.0

AG1868;UTM 17 - 2,992,243.908 374,587.384 MT 0.99979416 -0 34 30.3

AG1868

AG1868: Primary Azimuth Mark Grid Az

AG1868:SPC FL W - HAVOLINE 2 AZ 275 49 46.9

AG1868:UTM 17 - HAVOLINE 2 AZ 276 17 04.2

AG1868

AG1868|-----|

AG1868 PID	Reference Object	Distance	Geod. Az
AG1868		dddmms.s	
AG1868	AG1871 HAVOLINE RESET	41.707 METERS	00406
AG1868	AG1869 HAVOLINE 2 RM 7	15.262 METERS	09500
AG1868	AG7344 HAVOLINE 2 RM 8	29.998 METERS	27518
AG1868	AG1867 HAVOLINE 2 AZ	495.509 METERS	2754233.9
AG1868	AG1873 HAVOLINE 2 RM 6	8.678 METERS	35825

AG1868|-----|

AG1868

AG1868 SUPERSEDED SURVEY CONTROL

AG1868

AG1868 NAD 83(1990)- 27 02 48.34061(N) 082 15 52.23322(W) AD() B

AG1868 ELLIP HT - -21.92 (m) GP() 4 1

AG1868 NAD 83(1986)- 27 02 48.34063(N) 082 15 52.24656(W) AD() 2

AG1868 NAD 27 - 27 02 47.13459(N) 082 15 52.91223(W) AD() 2

AG1868 NGVD 29 - 2.335 (m) 7.66 (f) ADJUSTED 2 2

AG1868

AG1868.Superseded values are not recommended for survey control.

AG1868.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AG1868.See file dsdata.txt to determine how the superseded data were derived.

AG1868

AG1868_MARKER: DH = HORIZONTAL CONTROL DISK

AG1868_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

AG1868_STAMPING: HAVOLINE 2 1974

AG1868_MARK LOGO: NGS

AG1868_MAGNETIC: N = NO MAGNETIC MATERIAL

AG1868_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

AG1868+STABILITY: SURFACE MOTION

AG1868_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AG1868+SATELLITE: SATELLITE OBSERVATIONS - October 16, 1992

AG1868

AG1868 HISTORY - Date Condition Report By

AG1868 HISTORY - 1974 MONUMENTED NGS

AG1868 HISTORY - 1974 GOOD NGS

AG1868 HISTORY - 1977 GOOD NGS

AG1868 HISTORY - 1977 GOOD NGS

AG1868 HISTORY - 1983 GOOD FLDT

AG1868 HISTORY - 19890327 GOOD NGS

AG1868 HISTORY - 19920922 GOOD DENI

AG1868 HISTORY - 19921016 GOOD FL-115

AG1868 HISTORY - 20020104 GOOD USPSQD

AG1868

AG1868 STATION DESCRIPTION

AG1868

AG1868'DESCRIBED BY NATIONAL GEODETIC SURVEY 1974 (CLN)

AG1868'STATION IS ABOUT 15-1/2 MILES NORTHWEST OF PUNTA GORDA, 12-1/2

AG1868'MILES EAST-SOUTHEAST OF VENICE, 9 MILES NORTHEAST OF

AG1868'ENGLEWOOD, 1 MILE WEST OF NORTH PORT CHARLOTTE AND ON THE SOUTH

AG1868'SIDE OF U.S. HIGHWAY 41 ON THE RIGHT-OF-WAY LINE.

AG1868'

AG1868'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41

AG1868'AND SOUTH BISCAYNE DRIVE IN NORTH PORT CHARLOTTE, GO WESTERLY

AG1868'ON U.S. HIGHWAY 41 FOR 1.05 MILES TO POWER LINE POLE 15N9 ON

AG1868'LEFT AND STATION.

AG1868'

AG1868'STATION MARKS ARE STANDARD DISKS STAMPED HAVOLINE 2 1974, THE

AG1868'SURFACE MARK IS A STANDARD DISK SET IN THE TOP OF A 12-INCH
AG1868'CYLINDRICAL CONCRETE MONUMENT THAT IS SET FLUSH WITH THE
AG1868'GROUND SURFACE. IT IS 273 FEET EAST-SOUTHEAST OF POWER LINE
AG1868'POLE 15N10, 127 WEST-SOUTHWEST OF POWER LINE POLE 15N9, 75 FEET
AG1868'SOUTH OF THE CENTER OF U.S. HIGHWAY 41 (EAST BOUND LANE), 2.4
AG1868'FEET EAST OF A METAL WITNESS POST, 2.4 FEET WEST OF A METAL
AG1868'WITNESS POST AND ABOUT 2.5 FEET LOWER IN ELEVATION THAN THE
AG1868'HIGHWAY. THE UNDERGROUND STATION MARK IS SET IN THE TOP OF AN
AG1868'IRREGULAR MASS OF CONCRETE 42-INCHES BELOW THE GROUND
AG1868'SURFACE.

AG1868'

AG1868'REFERENCE MARK 6, A STANDARD DISK STAMPED HAVOLINE 2 NO 6
AG1868'1974, IS SET IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE
AG1868'MONUMENT THAT IS SET FLUSH WITH THE GROUND SURFACE. IT IS 126.5
AG1868'FEET WEST OF POWER LINE POLE 15N9, 46.5 FEET SOUTH OF
AG1868'THE CENTER OF U.S. HIGHWAY 41, 2.1 FEET EAST OF A METAL WITNESS
AG1868'POST, 2 FEET WEST OF A METAL WITNESS POST, IN LINE WITH A ROW OF
AG1868'POWER LINE POLES AND ABOUT 1 FOOT HIGHER IN ELEVATION THAN THE
AG1868'STATION.

AG1868'

AG1868'REFERENCE MARK 7, A STANDARD DISK STAMPED HAVOLINE 2 NO 7
AG1868'1974, IS SET IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE
AG1868'MONUMENT THAT IS SET FLUSH WITH THE GROUND SURFACE. IT IS 75.5
AG1868'FEET SOUTH OF THE CENTER OF U.S. HIGHWAY 41, 80.5 FEET SOUTHWEST
AG1868'OF POWER LINE POLE 15N9, 2.9 FEET WEST OF A METAL WITNESS
AG1868'POST AND 6-INCHES HIGHER THAN THE STATION.

AG1868'

AG1868'AZIMUTH MARK, A STANDARD DISK STAMPED HAVOLINE 2 1974, IS
AG1868'SET IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT IS
AG1868'SET FLUSH WITH THE GROUND SURFACE. IT IS 80 FEET WEST OF THE
AG1868'CENTER OF A PROJECTED LINE OF ORTEGA PLACE STREET, 46 FEET SOUTH OF
AG1868'THE CENTER OF U.S. HIGHWAY 41 (EAST BOUND LANE), 44 FEET
AG1868'WEST OF THE CENTER OF GRASS MEDIAN OF BLACKBURN BOULEVARD, 2
AG1868'FEET EAST OF POWER LINE POLE 102 AND 1.2 FEET SOUTHEAST OF
AG1868'A METAL WITNESS POST.

AG1868'

AG1868'TO REACH THE AZIMUTH MARK FROM THE STATION, GO WESTERLY ON
AG1868'U.S. HIGHWAY 41 FOR 0.3 MILE TO MARK ON LEFT AT BLACKBURN
AG1868'BOULEVARD.

AG1868'

AG1868'HEIGHT OF LIGHT ABOVE STATION MARK 1 METER.

AG1868

AG1868

STATION RECOVERY (1974)

AG1868

AG1868'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1974

AG1868'1 MI W FROM NORTH PORT CHARLOTTE.

AG1868'1.05 MILES WEST ALONG U.S. HIGHWAY 41 FROM ITS JUNCTION WITH
AG1868'S. BISCAYNE DRIVE IN NORTH PORT CHARLOTTE, 273 FEET EAST-SOUTHEAST
AG1868'OF POWER LINE POLE 15N10, 127 FEET WEST-SOUTHWEST OF POWER LINE
AG1868'POLE 15N9, 75 FEET SOUTH OF THE CENTER OF U.S. HIGHWAY 41 (EAST
AG1868'BOUND LANE), 2.4 FEET WEST OF A METAL WITNESS POST, 2.4 FEET
AG1868'EAST OF A METAL WITNESS POST, 2.5 FEET LOWER THAN THE SURFACE
AG1868'OF THE HIGHWAY, ON HIGHWAY RIGHT-OF-WAY AND A DISK SET IN THE
AG1868'TOP OF A 12-INCH ROUND CONCRETE MONUMENT THAT IS SET FLUSH
AG1868'WITH THE GROUND SURFACE.

AG1868

AG1868 STATION RECOVERY (1977)
AG1868
AG1868'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977 (CLN)
AG1868'THE STATION MARK, REFERENCE MARK 6 AND AZIMUTH MARK WERE
AG1868'RECOVERED AND FOUND IN GOOD CONDITION. REFERENCE MARK 7
AG1868'WAS DESTROYED WHEN THE ENTRANCE ROAD WAS CONSTRUCTED FOR LA
AG1868'CASA ADULT MOBILE COMMUNITY. REFERENCE MARK 8 WAS ESTABLISHED
AG1868'AT THIS TIME. DUE TO CHANGES, A COMPLETE NEW DESCRIPTION
AG1868'FOLLOWS.
AG1868'
AG1868'STATION IS LOCATED ABOUT 1 MILE WEST OF NORTH PORT, ON THE SOUTH
AG1868'SIDE OF U.S. HIGHWAY 41 AND ON THE WEST SIDE OF THE ENTRANCE
AG1868'ROAD TO LA CASA MOBILE COMMUNITY.
AG1868'
AG1868'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND
AG1868'BISCAYNE DRIVE AT THE STOP LIGHT IN NORTH PORT, GO WEST ON
AG1868'U.S. HIGHWAY 1 FOR 1.05 MILES TO LA CASA MOBILE COMMUNITY
AG1868'AND STATION ON LEFT.
AG1868'
AG1868'STATION MARKS ARE STANDARD DISKS STAMPED HAVOLINE 2 1974. THE
AG1868'SURFACE MARK IS SET IN A 12-INCH ROUND CONCRETE MONUMENT
AG1868'THAT IS 3-INCHES BELOW THE GROUND SURFACE. IT IS 129.5 FEET
AG1868'EAST OF POWER LINE POLE 15N9A, 99 FEET WEST OF POWER LINE
AG1868'POLE 15N9, 75 FEET SOUTH OF THE CENTER OF THE EAST BOUND LANE
AG1868'OF HIGHWAY 41, 61 FEET WEST OF THE CENTER OF THE ENTRANCE
AG1868'ROAD TO LA CASA, 25.5 FEET WEST-SOUTHWEST OF THE WEST END OF
AG1868'A CONCRETE CULVERT, 2.4 FEET WEST OF A METAL WITNESS POST,
AG1868'2.4 FEET EAST OF A METAL WITNESS POST AND ABOUT 3 FEET LOWER
AG1868'THAN THE HIGHWAY. THE UNDERGROUND MARK IS SET IN THE TOP OF
AG1868'AN IRREGULAR MASS OF CONCRETE.
AG1868'
AG1868'REFERENCE MARK 6 IS A STANDARD DISK STAMPED HAVOLINE 2 NO 6
AG1868'1974, IS SET IN THE TOP OF A 12-INCH ROUND CONCRETE MONUMENT
AG1868'THAT IS 6-INCHES BELOW THE GROUND SURFACE. IT IS 129 FEET
AG1868'EAST-NORTHEAST OF POWER LINE POLE 15N9A, 64 FEET WEST OF THE
AG1868'CENTER OF THE ENTRANCE ROAD TO LA CASA, 47 FEET SOUTH OF THE
AG1868'CENTER OF HIGHWAY 41 EAST BOUND LANE AND 36.5 FEET NORTHWEST
AG1868'OF THE WEST END OF A CONCRETE CULVERT.
AG1868'
AG1868'REFERENCE MARK 8 IS A STANDARD DISK STAMPED HAVOLINE 2 1974
AG1868'NO 8 1977, IS SET IN THE TOP OF A 12-INCH ROUND CONCRETE
AG1868'MONUMENT THAT IS SET FLUSH WITH THE GROUND. IT IS 159 FEET
AG1868'WEST OF THE CENTER OF THE ENTRANCE ROAD TO LA CASA, 73.5 FEET
AG1868'SOUTH OF THE CENTER OF HIGHWAY 41 EAST, 31 FEET EAST OF POWER LINE
AG1868'POLE 15N9A, 30.5 FEET EAST OF A METAL WITNESS POST AND ABOUT 2.5
AG1868'FEET LOWER THAN THE HIGHWAY.
AG1868'
AG1868'AZIMUTH MARK IS LOCATED 0.35 MILE WEST ALONG HIGHWAY 41 FROM
AG1868'STATION, AT ENTRANCE TO HARBOR COVE AT U.S. HIGHWAY 41 12000 SOUTH
AG1868'AND IS A STANDARD DISK STAMPED HAVOLINE 2 AZ 1974 THAT IS SET
AG1868'IN THE TOP OF A 12 INCH ROUND CONCRETE MONUMENT THAT IS 4-INCHES
AG1868'BELOW THE GROUND SURFACE. IT IS 45.5 FEET SOUTH OF CENTER OF
AG1868'HIGHWAY 41 EAST BOUND LANE. 44 FEET WEST OF THE CENTER OF
AG1868'MEDIAN OF BLACKBURN BOULEVARD 29 FEET NORTH-NORTHEAST OF A
AG1868'UNDERGROUND TELEVISION CABLE JUNCTION BOX, 10 FEET NORTH OF
AG1868'THE WEST END OF A CULVERT AND 1 FOOT EAST OF A METAL WITNESS

AG1868'POST.

AG1868'

AG1868'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN

AG1868'1 MILE WEST OF NORTH PORT.

AG1868

AG1868 STATION RECOVERY (1977)

AG1868

AG1868'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977

AG1868'1.05 MILES WEST ALONG U.S. HIGHWAY 41 FROM ITS JUNCTION WITH BISCAYNE

AG1868'DRIVE AT THE STOP LIGHT IN NORTH PORT, 129.5 FEET EAST OF POWER LINE

AG1868'1.0 MILES WEST ALONG U.S. HIGHWAY 41 FROM ITS JUNCTION WITH BISCAYNE

AG1868'DRIVE AT THE STOP LIGHT IN NORTH PORT, 129.5 FEET EAST OF POWER LINE

AG1868'POLE 15 N 9 A, 99.0 FEET WEST OF POWER LINE POLE 15 N 9, 75.0 FEET

AG1868'SOUTH OF THE CENTER OF THE EAST BOUND LANE OF U.S. HIGHWAY 41, 61.0

AG1868'FEET WEST OF THE CENTER OF ENTRANCE ROAD TO LA CASA ADULT MOBILE

AG1868'COMMUNITY, 25.5 FEET WEST-SOUTHWEST OF THE WEST END OF A CONCRETE

AG1868'CULVERT, AND ON RIGHT-OF-WAY HIGHWAY LINE.

AG1868

AG1868 STATION RECOVERY (1983)

AG1868

AG1868'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1983

AG1868'RECOVERED IN GOOD CONDITION.

AG1868

AG1868 STATION RECOVERY (1989)

AG1868

AG1868'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989

AG1868'THE STATION IS LOCATED ABOUT 25.8 KM (16.05 MI) NORTHWEST OF PUNTA

AG1868'GORDA, 20.2 KM (12.55 MI) EAST-SOUTHEAST OF VENICE, 14.5 KM (9.00 MI)

AG1868'NORTHEAST OF ENGLEWOOD AND ABOUT 1.6 KM (1.00 MI) WEST OF NORTH PORT,

AG1868'ON THE SOUTH RIGHT-OF-WAY OF U.S. HIGHWAY 41 EASTBOUND, AND AT THE

AG1868'ENTRANCE TO THE LACASA MOBILE COMMUNITY. OWNERSHIP--STATE OF FLORIDA.

AG1868'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 41 AND BISCAYNE

AG1868'BLVD. AT THE WEST EDGE OF NORTH PORT, GO WESTERLY ALONG U.S. HIGHWAY

AG1868'41 WESTBOUND FOR 1.6 KM (1.00 MI) TO THE ENTRANCE TO LA CASA MOBILE

AG1868'COMMUNITY AND THE STATION ON THE LEFT, ABOUT 0.24 KM (0.15 MI) WEST OF

AG1868'THE HOT MINERAL SPRINGS MOTEL.

AG1868'THE STATION IS RECESSED 8 CM BELOW GROUND. LOCATED 23.2 M (76.1 FT)

AG1868'SOUTH OF THE CENTERLINE OF THE EASTBOUND LANES OF HIGHWAY, 18.8 M

AG1868'(61.7 FT) WEST OF THE CENTER OF PAVED ENTRANCE ROAD TO LA CASA MOBILE

AG1868'COMMUNITY, 7.7 M (25.3 FT) WEST OF THE WEST END OF A 30-INCH CONCRETE

AG1868'PIPE CULVERT, 39.6 M (129.9 FT) EAST OF A CONCRETE POWERLINE POLE, 0.8

AG1868'M (2.6 FT) EAST OF A METAL WITNESS POST, 0.7 M (2.3 FT) WEST OF A

AG1868'METAL WITNESS POST AND ABOUT 0.61 M (2.0 FT) BELOW THE LEVEL OF THE

AG1868'HIGHWAY.

AG1868'DESCRIBED BY G.F. SMITH.

AG1868

AG1868 STATION RECOVERY (1992)

AG1868

AG1868'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1992

AG1868'RECOVERED IN GOOD CONDITION.

AG1868

AG1868 STATION RECOVERY (1992)

AG1868

AG1868'RECOVERY NOTE BY SARASOTA COUNTY FLORIDA 1992

AG1868'TO REACH THE STATION FROM THE INTERSECTION OF RIVER ROAD AND U.S.

AG1868'HIGHWAY 41 (TAMIAMI TRAIL) IN SARASOTA COUNTY, GO EASTERLY ON U.S.


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AD6362 *****
AD6362 DESIGNATION - I75 82 A07
AD6362 PID - AD6362
AD6362 STATE/COUNTY- FL/CHARLOTTE
AD6362 USGS QUAD - GILCHRIST (1987)
AD6362
AD6362 *CURRENT SURVEY CONTROL
AD6362
AD6362* NAD 83(1990)- 26 49 44.77494(N) 081 57 08.42281(W) ADJUSTED
AD6362* NAVD 88 - 8.272 (meters) 27.14 (feet) ADJUSTED
AD6362
AD6362 LAPLACE CORR- -1.73 (seconds) DEFLEC99
AD6362 GEOID HEIGHT- -23.98 (meters) GEOID99
AD6362 DYNAMIC HT - 8.259 (meters) 27.10 (feet) COMP
AD6362 MODELED GRAV- 979,098.7 (mgal) NAVD 88
AD6362
AD6362 HORZ ORDER - SECOND
AD6362 VERT ORDER - SECOND CLASS II
AD6362
AD6362.The horizontal coordinates were established by classical geodetic methods
AD6362.and adjusted by the National Geodetic Survey in May 1991.
AD6362
AD6362.The orthometric height was determined by differential leveling
AD6362.and adjusted by the National Geodetic Survey in June 1991.
AD6362
AD6362.The Laplace correction was computed from DEFLEC99 derived deflections.
AD6362
AD6362.The geoid height was determined by GEOID99.
AD6362
AD6362.The dynamic height is computed by dividing the NAVD 88
AD6362.geopotential number by the normal gravity value computed on the
AD6362.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AD6362.degrees latitude (g = 980.6199 gals.).
AD6362
AD6362.The modeled gravity was interpolated from observed gravity values.
AD6362
AD6362; North East Units Scale Converg.
AD6362;SPC FL W - 276,470.422 204,737.372 MT 0.99994145 +0 01 17.4
AD6362;UTM 17 - 2,967,862.158 405,368.427 MT 0.99971055 -0 25 47.5
AD6362
AD6362|-----|
AD6362|PID Reference Object Distance Geod. Az |
AD6362| dddmms.s |
AD6362|AD6361 I75 82 A07 RM 2 9.216 METERS 08121 |
AD6362|AD6363 I75 82 A07 RM 1 10.868 METERS 35555 |
AD6362|-----|
AD6362
AD6362 SUPERSEDED SURVEY CONTROL
AD6362
AD6362 NAD 83(1986)- 26 49 44.77469(N) 081 57 08.43733(W) AD( ) 2
AD6362 NGVD 29 - 8.620 (m) 28.28 (f) ADJUSTED 2 2
AD6362
AD6362.Superseded values are not recommended for survey control.
AD6362.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AD6362.See file dsdata.txt to determine how the superseded data were derived.
AD6362

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AD6362_MARKER: DD = SURVEY DISK
AD6362_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
AD6362_STAMPING: I75 82 A07
AD6362_MARK LOGO: FLDT
AD6362_PROJECTION: RECESSED 8 CENTIMETERS
AD6362_MAGNETIC: N = NO MAGNETIC MATERIAL
AD6362_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
AD6362+STABILITY: SURFACE MOTION

AD6362

AD6362 HISTORY	- Date	Condition	Report By
AD6362 HISTORY	- 1982	MONUMENTED	FLDT
AD6362 HISTORY	- 1982	GOOD	FLDT
AD6362 HISTORY	- 20011011	GOOD	USPSQD

AD6362

STATION DESCRIPTION

AD6362

AD6362'DESCRIBED BY FLORIDA DEPARTMENT OF TRANSPORTATION 1982 (CBM)
AD6362'STATION IS LOCATED ABOUT 6 MILES NORTHWEST OF INTERSECTION OF
AD6362'INTERSTATE ROUTE 75 WITH LEE-CHARLOTTE COUNTY LINE AND ABOUT 9-3/4
AD6362'MILES SOUTHEAST OF PUNTA GORDA, ON INTERSTATE ROUTE 75 RIGHT-OF-WAY.
AD6362'
AD6362'TO REACH STATION FROM INTERSTATE ROUTE 75 AND CHARLOTTE-LEE COUNTY, GO
AD6362'NORTH ON INTERSTATE ROUTE 75 FOR 6.35 MILES TO STATION ON RIGHT OVER
AD6362'A TWIN BOX CULVERT. IT IS ALSO 2.55 MILES SOUTHEAST ALONG INTERSTATE
AD6362'ROUTE 75 FROM TUCKERS GRADE ROAD.

AD6362'

AD6362'THE STATION MARK IS A FLORIDA DEPARTMENT OF TRANSPORTATION BRASS DISK,
AD6362'STAMPED---I75 82 A07---, SET IN TOP OF A ROUND CONCRETE MONUMENT
AD6362'3 INCHES BELOW GROUND. IT IS 23.5 FEET SOUTHWEST OF EDGE OF BOX
AD6362'CULVERT HEADWALL, 28.5 FEET NORTHEAST OF CENTER OF NORTHBOUND LANE,
AD6362'36.5 FEET SOUTH OF NORTHWEST END OF HEADWALL, 41.7 FEET WEST OF
AD6362'SOUTHEAST END OF HEADWALL AND 41.8 FEET WEST OF METAL WITNESS POST.

AD6362'

AD6362'REFERENCE MARK NUMBER 1 IS A FLORIDA DEPARTMENT OF TRANSPORTATION
AD6362'BRASS DISK, STAMPED---I75 82 A07 RM NO 1---, SET IN DRILL HOLE IN TOP
AD6362'OF CONCRETE HEADWALL. IT IS 1.5 FEET SOUTHEAST OF NORTHWEST END OF
AD6362'HEADWALL, 13.5 FEET NORTHWEST OF EXPANSION JOINT IN HEADWALL AND 52.6
AD6362'FEET NORTHEAST OF CENTER OF NORTHBOUND LANE.

AD6362'

AD6362'REFERENCE MARK NUMBER 2 IS A FLORIDA DEPARTMENT OF TRANSPORTATION
AD6362'BRASS DISK, STAMPED---I75 82 A07 RM NO 2---, SET IN DRILL HOLE IN TOP
AD6362'OF CONCRETE HEADWALL. IT IS 1.0 FOOT NORTHWEST OF EXPANSION JOINT IN
AD6362'HEADWALL, 15.4 FEET NORTHWEST OF A METAL WITNESS POST AND 52.6 FEET
AD6362'NORTHEAST OF CENTER OF NORTHBOUND LANE.

AD6362

AD6362 STATION RECOVERY (1982)

AD6362

AD6362'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 1982
AD6362'9.5 MI SE FROM PUNTA GORDA.
AD6362'FROM THE SOUTH END OF THE INTERSTATE ROUTE 75 BRIDGES OVER PEACE RIVER
AD6362'AT THE NORTHEAST EDGE OF PUNTA GORDA, GO SOUTHEAST ON INTERSTATE ROUTE
AD6362'75 FOR ABOUT 7.1 MILES TO THE INTERSECTION OF STATE ROAD 762 (GREEN
AD6362'GULF BOULEVARD, CONTINUE SOUTHEAST ON INTERSTATE ROUTE 75 FOR ABOUT
AD6362'2.4 MILES TO A CONCRETE HEADWALL ON NORTHEAST SIDE OF THE NORTHBOUND
AD6362'LANES. IT IS 41.7 FEET WEST OF THE SOUTHEAST END OF THE HEADWALL,
AD6362'36.5 FEET SOUTH OF THE NORTHWEST END, 28.5 FEET NORTHEAST OF THE

AD6362'CENTER OF THE NORTHBOUND LANES AND 23.5 FEET SOUTHWEST OF THE EDGE OF
AD6362'THE HEADWALL.

AD6362'THE MARK IS 42.0 FT W FROM A WITNESS POST.

AD6362

AD6362 STATION RECOVERY (2001)

AD6362

AD6362'RECOVERY NOTE BY US POWER SQUADRON 2001 (MDB)

AD6362'RECOVERED IN GOOD CONDITION.

AG6295 *****

AG6295 DESIGNATION - PARISH
AG6295 PID - AG6295
AG6295 STATE/COUNTY- FL/MANATEE
AG6295 USGS QUAD - PARRISH (1987)

AG6295
AG6295 *CURRENT SURVEY CONTROL

AG6295* NAD 83(1999)- 27 35 26.78573(N) 082 23 19.48556(W) ADJUSTED
AG6295* NAVD 88 - 9.889 (meters) 32.44 (feet) ADJUSTED

AG6295
AG6295 X - 749,256.374 (meters) COMP
AG6295 Y - -5,607,014.103 (meters) COMP
AG6295 Z - 2,936,382.026 (meters) COMP
AG6295 LAPLACE CORR- -1.47 (seconds) DEFLEC99
AG6295 ELLIP HEIGHT- -14.86 (meters) GPS OBS
AG6295 GEOID HEIGHT- -24.67 (meters) GEOID99
AG6295 DYNAMIC HT - 9.874 (meters) 32.39 (feet) COMP
AG6295 MODELED GRAV- 979,142.4 (mgal) NAVD 88

AG6295
AG6295 HORZ ORDER - B
AG6295 VERT ORDER - SECOND CLASS 0
AG6295 ELLP ORDER - FIFTH CLASS I

AG6295
AG6295.The horizontal coordinates were established by GPS observations
AG6295.and adjusted by the National Geodetic Survey in May 2001.

AG6295
AG6295.The orthometric height was determined by differential leveling
AG6295.and adjusted by the National Geodetic Survey in June 1991.

AG6295
AG6295.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AG6295
AG6295.The Laplace correction was computed from DEFLEC99 derived deflections.

AG6295
AG6295.The ellipsoidal height was determined by GPS observations
AG6295.and is referenced to NAD 83.

AG6295
AG6295.The geoid height was determined by GEOID99.

AG6295
AG6295.The dynamic height is computed by dividing the NAVD 88
AG6295.geopotential number by the normal gravity value computed on the
AG6295.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AG6295.degrees latitude (g = 980.6199 gals.).

AG6295
AG6295.The modeled gravity was interpolated from observed gravity values.

AG6295
AG6295; North East Units Scale Converg.
AG6295;SPC FL W - 360,923.081 161,620.828 MT 0.99995935 -0 10 48.2
AG6295;UTM 17 - 3,052,641.079 362,934.916 MT 0.99983190 -0 38 35.9

AG6295
AG6295: Primary Azimuth Mark Grid Az
AG6295:SPC FL W - GILLETTE 272 00 24.4
AG6295:UTM 17 - GILLETTE 272 28 12.1

AG6295
AG6295|-----|
AG6295| PID Reference Object Distance Geod. Az |

AG6295| dddmss.s |
 AG6295| AG6297 PARISH RM 1 49.384 METERS 04457 |
 AG6295| PARISH AZ MK 0672119.1 |
 AG6295| PARISH RM 2 40.380 METERS 11817 |
 AG6295| AG1570 MANATEE NOCATEE CRATE CO TANK APPROX.18.9 KM 2350245.2 |
 AG6295| AG1572 MANATEE MUN TANK APPROX.19.6 KM 2360541.1 |
 AG6295| AG1575 BRADENTON MUN PUMPING STA TANK APPROX.20.4 KM 2381412.3 |
 AG6295| AG1267 PARISH 1934 TP 1 1944 249.898 METERS 23903 |
 AG6295| AG1574 BRADENTON FLORIDA PWR CORP STK APPROX.20.5 KM 2391501.5 |
 AG6295| AG2435 ELLENTON MUNICIPAL TANK APPROX.15.8 KM 2403314.4 |
 AG6295| AG8529 GILLETTE APPROX.13.7 KM 2714936.2 |
 AG6295| AG1282 SUN CITY POWER CO TANK APPROX.13.3 KM 3182712.2 |
 AG6295| AG6296 PARISH RM 3 20.679 METERS 32302 |
 AG6295|-----|

AG6295
 AG6295 SUPERSEDED SURVEY CONTROL

AG6295
 AG6295 ELLIP HT - -14.83 (m) GP() 3 2
 AG6295 NAD 83(1990)- 27 35 26.78425(N) 082 23 19.48476(W) AD() B
 AG6295 ELLIP HT - -14.72 (m) GP() 4 1
 AG6295 NAD 83(1986)- 27 35 26.78868(N) 082 23 19.49797(W) AD() 1
 AG6295 NAD 27 - 27 35 25.65949(N) 082 23 20.16047(W) AD() 1
 AG6295 NGVD 29 - 10.176 (m) 33.39 (f) ADJ UNCH 2 0
 AG6295

AG6295.Superseded values are not recommended for survey control.
 AG6295.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AG6295.See file dsdata.txt to determine how the superseded data were derived.
 AG6295

AG6295_MARKER: DS = TRIANGULATION STATION DISK
 AG6295_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 AG6295_STAMPING: PARISH 1934
 AG6295_MARK LOGO: CGS
 AG6295_MAGNETIC: N = NO MAGNETIC MATERIAL
 AG6295_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 AG6295+STABILITY: SURFACE MOTION
 AG6295_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 AG6295+SATELLITE: SATELLITE OBSERVATIONS - February 28, 2000
 AG6295

AG6295 HISTORY	- Date	Condition	Report By
AG6295 HISTORY	- 1934	MONUMENTED	CGS
AG6295 HISTORY	- 1943	GOOD	CGS
AG6295 HISTORY	- 1954	GOOD	CGS
AG6295 HISTORY	- 1958	GOOD	CGS
AG6295 HISTORY	- 1960	GOOD	CGS
AG6295 HISTORY	- 1972	GOOD	NGS
AG6295 HISTORY	- 1972	GOOD	NGS
AG6295 HISTORY	- 1981	GOOD	FL-057
AG6295 HISTORY	- 19870424	GOOD	
AG6295 HISTORY	- 19890302	GOOD	NGS
AG6295 HISTORY	- 19910806	GOOD	GEOBAS
AG6295 HISTORY	- 19951228	GOOD	NGS
AG6295 HISTORY	- 19990405	GOOD	USGS
AG6295 HISTORY	- 20000228	GOOD	FLDT

AG6295
 AG6295 STATION DESCRIPTION
 AG6295

AG6295'DESCRIBED BY COAST AND GEODETIC SURVEY 1934 (GLA)
AG6295'THIS STATION IS ABOUT 14.5 MILES NE FROM PALMETTO, 2.3 MILES
AG6295'EASTWARD FROM PARISH RAILROAD STATION, 60 FEET N OF THE CENTER
AG6295'LINE OF STATE HIGHWAY 32, 36 FEET NE OF A 20-INCH OAK TREE
AG6295'(TRIANGULAR BLAZE), 33 PACES W OF THE CENTER LINE OF SAND ROAD
AG6295'AND PROJECTS 3 INCHES.
AG6295'
AG6295'SURFACE, UNDERGROUD, REFERENCE, AND AZIMUTH MARKS ARE STANDARD
AG6295'BRONZE DISKS SET IN CONCRETE.
AG6295'
AG6295'REFERENCE MARK NO. 1 IS NE OF THE STATION, 3.5 FEET W OF THE
AG6295'FENCE LINE, 7 FEET E OF THE CENTER LINE OF THE SAND ROAD, 120
AG6295'FEET N OF THE CENTER LINE OF STATE HIGHWAY 32, AND PROJECTS 12
AG6295'INCHES.
AG6295'
AG6295'REFERENCE MARK NO. 2 IS SE OF THE STATION, 1 FOOT W OF THE
AG6295'FENCE LINE, 53 FEET S OF THE CENTER LINE OF STATE HIGHWAY 32 AND
AG6295'PROJECTS 10 INCHES.
AG6295'
AG6295'AZIMUTH MARK IS ENE OF THE STATION, 41 FEET S OF THE CENTER
AG6295'LINE OF THE HIGHWAY, 2.5 FEET N OF FENCE LINE AND PROJECTS 12
AG6295'INCHES.
AG6295'
AG6295'TO REACH GO E ON STATE HIGHWAY 32 FOR 2.3 MILES FROM THE PARISH
AG6295'RAILROAD STATION TO THE STATION ON THE N SIDE OF THE ROAD.
AG6295'
AG6295'177.6 FEET BETWEEN THE REFERENCE MARKS.
AG6295'
AG6295' STATION RECOVERY (1943)
AG6295'
AG6295'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1943 (RLS)
AG6295'RECOVERED AS DESCRIBED, EXCEPT FOR THE FOLLOWING DISCREPANCIES--
AG6295'
AG6295'1. THE STATION IS FLUSH WITH THE GROUND. IT DOES NOT PROJECT
AG6295'3 INCHES.
AG6295'
AG6295'2. REFERENCE MARK 1 IS 9 FEET E OF THE CENTER LINE OF DIRT
AG6295'ROAD, NOT 7 FEET.
AG6295'
AG6295'3. REFERENCE MARK 1 IS 109 FEET N OF CENTER LINE OF STATE
AG6295'HIGHWAY 32, NOT 120 FEET N OF IT.
AG6295'
AG6295' STATION RECOVERY (1954)
AG6295'
AG6295'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1954 (IRR)
AG6295'STATION AND REFERENCE MARKS 1 AND 2 RECOVERED IN GOOD
AG6295'CONDITION. THE AZIMUTH MARK WAS FOUND LYING ON THE SHOULDER OF
AG6295'THE ROAD, DESTROYED.
AG6295'
AG6295'THE DESCRIPTION IS ADEQUATE WITH THE FOLLOWING CORRECTIONS--
AG6295'
AG6295'STATE HIGHWAY 32 HAS BEEN RENUMBERED 62.
AG6295'
AG6295'THE MARK IS FLUSH WITH THE GROUND AND COVERED WITH SAND AND
AG6295'TRASH. A 4- BY 4-IN. CONCRETE WITNESS POST WAS SET 11.3 FT.
AG6295'TO THE SE AND PROJECTS 18 IN.

AG6295

AG6295

STATION RECOVERY (1958)

AG6295

AG6295'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1958 (ALW)

AG6295'THIS STATION WAS RECOVERED IN JUNE 1958. THE STATION AND
AG6295'REFERENCE MARK 1 WERE FOUND TO BE IN GOOD CONDITION. REFERENCE
AG6295'MARK 2 WAS SEARCHED FOR BUT NOT RECOVERED. IT MAY HAVE BEEN
AG6295'DESTROYED BY HIGHWAY CONSTRUCTION. THE AZIMUTH MARK WAS FOUND
AG6295'DESTROYED. THE POST WAS FOUND BROKEN OFF. THE DISK WAS
AG6295'RECOVERED. REFERENCE MARK 3 WAS SET.

AG6295'

AG6295'THE STATION IS LOCATED 2.3 MI. E OF PARISH, 0.25 MI. W OF A
AG6295'CURVE IN THE HIGHWAY, 160 YD. W OF A SMALL FARM POND, 290 YD. W
AG6295'OF A JUNCTION WITH AN OILED ROAD LEADING N, 58 FT. N OF THE
AG6295'CENTERLINE OF STATE HIGHWAY 62, 10.3 FT. N OF A FENCE, 129 FT. W
AG6295'OF A T-FENCE CORNER, 118 FT. W OF THE W END OF A WIRE GATE, 129
AG6295'FT. W OF A FENCE LEADING N, 34 FT. NE OF AN 18-IN. DEAD OAK TREE
AG6295'AND 1.8 FT. E OF A CONCRETE WITNESS POST. A TRIANGULATION
AG6295'STATION DISK SET IN THE TOP OF A ROUND CONCRETE POST WHICH IS
AG6295'FLUSH WITH THE GROUND, STAMPED PARISH 1934.

AG6295'

AG6295'REFERENCE MARK 1 IS 161.97 FT. OR 49.369 M. NE OF THE STATION,
AG6295'3 FT. E OF A N AND S FENCE, 64 FT. N OF A T-FENCE CORNER, 111 FT.
AG6295'N OF THE CENTERLINE OF THE HIGHWAY AND 69 FT. N OF THE W END OF
AG6295'A WIRE GATE. A REFERENCE MARK DISK SET IN THE TOP OF A ROUND
AG6295'CONCRETE POST WHICH PROJECTS 1.0 FT. ABOVE THE GROUND, STAMPED
AG6295'PARISH NO 1 1934.

AG6295'

AG6295'REFERENCE MARK 3 IS 67.820 FT. OR 20.670 M. N OF THE STATION,
AG6295'79 FT. N-NE OF AN 18-IN. DEAD OAK TREE, 124 FT. N OF THE CENTERLINE
AG6295'OF THE HIGHWAY, 77 FT. N OF A FENCE, 157 FT. W OF A FENCE
AG6295'AND 159 FT. W-NW OF A FENCE. A REFERENCE MARK DISK SET IN THE
AG6295'TOP OF A SQUARE CONCRETE POST WHICH PROJECTS 0.1 FT. ABOVE THE
AG6295'GROUND, STAMPED PARISH NO 3 1934.

AG6295'

AG6295'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAY 62 AND
AG6295'U.S. HIGHWAY 301 AT PARISH, GO 2.3 MI. E ALONG STATE HIGHWAY 62
AG6295'TO A T-FENCE CORNER AND THE STATION ON THE LEFT.

AG6295

AG6295

STATION RECOVERY (1960)

AG6295

AG6295'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1960 (WRK)

AG6295'THE STATION, R.M. 1 AND R.M. 3 WERE RECOVERED AS DESCRIBED IN JUNE
AG6295'1958 AND WERE FOUND IN GOOD CONDITION. STEEL WITNESS POSTS WERE
AG6295'SET BY ALL MARKS.

AG6295

AG6295

STATION RECOVERY (1972)

AG6295

AG6295'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1972 (LFS)

AG6295'STATION MARK, REFERENCE MARK 1 AND 3 WERE RECOVERED AND FOUND IN
AG6295'GOOD CONDITION. THE AZIMUTH MARK WAS SEARCHED FOR BUT NOT FOUND
AG6295'AND APPARENTLY WAS DESTROYED WHEN STATE HIGHWAY 60 WAS WIDENED. THE
AG6295'DISTANCE TO REFERENCE MARK 1 CHECKED THE ORIGINAL DESCRIPTION.
AG6295'DUE TO LACK OF DATA, A COMPLETE NEW DESCRIPTION FOLLOWS.

AG6295'

AG6295'STATION IS ABOUT 23 MILES SOUTHEAST OF SAINT PETERSBURG, 25 MILES

AG6295'SOUTH-SOUTHEAST OF TAMPA, 20 MILES NORTHEAST OF SARASOTA, 2-1/4
AG6295'MILES EAST OF PARRISH AND ON PROPERTY OWNED BY THE MAYOR OF
AG6295'PARRISH.

AG6295'

AG6295'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 301 AND
AG6295'STATE HIGHWAY 62 IN PARRISH, GO EAST ON STATE HIGHWAY 62 FOR 2.35
AG6295'MILES TO A GATE ON LEFT AND STATION.

AG6295'

AG6295'STATION MARK, A STANDARD DISK STAMPED PARISH 1934, IS SET IN
AG6295'THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT IS
AG6295'SET FLUSH WITH THE GROUND SURFACE. IT IS 148 FEET WEST-NORTHWEST
AG6295'OF A 12-INCH PINE TREE, 131 FEET WEST-NORTHWEST OF THE FENCE
AG6295'CORNER ON THE EAST SIDE OF THE GATE, 58 FEET NORTH OF THE CENTER
AG6295'OF STATE HIGHWAY 62, 11 FEET NORTH OF A 4-INCH SQUARE CONCRETE
AG6295'RIGHT-OF-WAY POST, 10 FEET NORTH OF A BARBED WIRE FENCE, 1.8
AG6295'FEET EAST OF A 4-INCH SQUARE CONCRETE RIGHT-OF-WAY MARKER
AG6295'POST, 1.5 FEET WEST OF A METAL WITNESS POST AND 1 FOOT NORTH
AG6295'OF A METAL WITNESS POST.

AG6295'

AG6295'REFERENCE MARK 1, A STANDARD DISK STAMPED PARISH NO 1 1934, IS
AG6295'SET IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT
AG6295'PROJECTS 9-INCHES ABOVE THE GROUND SURFACE. IT IS 108 FEET NORTH
AG6295'OF THE CENTER OF STATE HIGHWAY 62, 64 FEET NORTHEAST OF THE FENCE
AG6295'CORNER, 63 FEET NORTH-NORTHWEST OF THE 12-INCH PINE TREE, 2 FEET
AG6295'SOUTHEAST OF A FENCE, 1.3 FEET NORTHEAST OF A METAL WITNESS POST
AG6295'AND ABOUT THE SAME ELEVATION AS THE STATION MARK.

AG6295'

AG6295'REFERENCE MARK 3, A STANDARD DISK, STAMPED PARISH NO 3 1934, IS
AG6295'SET IN THE TOP OF AN 8-INCH SQUARE PRECAST CONCRETE MONUMENT THAT
AG6295'IS SET FLUSH WITH THE GROUND SURFACE. IT IS 161 FEET NORTHWEST
AG6295'OF THE FENCE CORNER, 125 FEET NORTH OF THE CENTER OF STATE
AG6295'HIGHWAY 62, 77 FEET NORTH OF THE RIGHT-OF-WAY FENCE, 1 FOOT EAST
AG6295'OF A METAL WITNESS POST AND ABOUT THE SAME ELEVATION AS THE
AG6295'STATION MARK.

AG6295'

AG6295'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN
AG6295'2.35 MILES EAST OF PARRISH.

AG6295

STATION RECOVERY (1972)

AG6295

AG6295'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1972

AG6295'2.4 MI E FROM PARRISH.

AG6295'2.35 MILES EAST ALONG STATE HIGHWAY 62 FROM ITS JUNCTION WITH
AG6295'U.S. HIGHWAY 301 IN PARRISH, 148 FEET WEST-NORTHWEST OF A
AG6295'12-INCH PINE TREE, 131 FEET WEST-NORTHWEST OF A FENCE CORNER,
AG6295'58 FEET NORTH OF THE CENTER OF STATE HIGHWAY 62, 11 FEET NORTH
AG6295'OF A 4-INCH SQUARE CONCRETE RIGHT-OF-WAY POST, 10 FEET NORTH OF A
AG6295'BARBED-WIRE FENCE, 1.8 FEET EAST OF A 4-INCH SQUARE CONCRETE
AG6295'RIGHT-OF-WAY POST, 1.5 FEET WEST OF A METAL WITNESS POST AND
AG6295'1 FOOT NORTH OF A METAL WITNESS POST. A STANDARD DISK SET
AG6295'IN THE TOP OF A 12-INCH CYLINDRICAL CONCRETE MONUMENT THAT IS
AG6295'SET FLUSH WITH THE GROUND SURFACE.

AG6295

STATION RECOVERY (1981)

AG6295

AG6295'RECOVERY NOTE BY HILLSBOROUGH COUNTY FLORIDA 1981 (SW)

AG6295'PARISH 1934 RECOVERED GOOD.
AG6295'
AG6295'STA. PARISH VERTICALLY OBSTRUCTED BY POWER LINE.
AG6295'
AG6295'RM NO. 3 CLEAR.
AG6295'
AG6295'RM NO. 1 NEEDS WITNESS REPLACED.
AG6295'
AG6295'DISTANCE AND DIRECTION FROM NEAREST TOWN--2.3 MILES EAST OF PARISH.
AG6295
AG6295 STATION RECOVERY (1987)
AG6295
AG6295'RECOVERED 1987
AG6295'RECOVERED IN GOOD CONDITION.
AG6295
AG6295 STATION RECOVERY (1989)
AG6295
AG6295'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989
AG6295'THE STATION IS LOCATED ABOUT 37.0 KM (23.00 MI) SOUTHEAST OF ST.
AG6295'PETERSBURG, 3.7 KM (2.30 MI) EAST OF PARRISH, IN SECTION 22, T 33 S, R
AG6295'19 E. OWNERSHIP--UNKNOWN.
AG6295'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 301 AND STATE
AG6295'HIGHWAY 62 IN PARRISH, GO EAST FOR 3.94 KM (2.45 MI) ON HIGHWAY 62 TO
AG6295'THE STATION ON LEFT.
AG6295'LOCATED 0.24 KM (0.15 MI) WEST FROM THE JUNCTION OF STATE HIGHWAY 62
AG6295'AND KEEN ROAD, 17.68 M (58.0 FT) NORTH FROM THE APPROXIMATE CENTER OF
AG6295'HIGHWAY 62, 2.96 M (9.7 FT) NORTH FROM A BARBED WIRE FENCE, 2.90 M
AG6295'(9.5 FT) WEST FROM A UTILITY POLE, 0.55 M (1.8 FT) EAST FROM A
AG6295'RIGHT-OF-WAY MARKER AND 0.30 M (1.0 FT) NORTH FROM A METAL WITNESS
AG6295'POST.
AG6295'DESCRIBED BY R.L. TAYLOR.
AG6295
AG6295 STATION RECOVERY (1991)
AG6295
AG6295'RECOVERY NOTE BY GEOBASE CONTROL INCORPORATED 1991
AG6295'RECOVERED IN GOOD CONDITION.
AG6295
AG6295 STATION RECOVERY (1995)
AG6295
AG6295'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)
AG6295'THE STATION IS LOCATED ABOUT 23.00 MI (37.01 KM) SOUTHEAST OF ST.
AG6295'PETERSBURG, 2.35 MI (3.78 KM) EAST OF PARRISH, IN SECTION 22, T 33 S,
AG6295'R 19 E. OWNERSHIP -- UNKNOWN. TO REACH THE STATION FROM THE JUNCTION
AG6295'OF U.S. HIGHWAY 301 AND STATE HIGHWAY 62 IN PARRISH, GO EAST ON STATE
AG6295'HIGHWAY 62 FOR 2.35 MI (3.78 KM) TO THE STATION ON THE LEFT. LOCATED
AG6295'0.15 MI (0.24 KM) WEST OF STATE HIGHWAY 62 AND KEEN ROAD JUNCTION,
AG6295'58.0 FT (17.7 M) NORTH FROM THE APPROXIMATE CENTER OF STATE HIGHWAY
AG6295'62, 9.7 FT (3.0 M) NORTH OF A BARBED WIRE FENCE, 9.5 FT (2.9 M) WEST
AG6295'OF A UTILITY POLE, 1.8 FT (0.5 M) EAST OF A 4-INCH CONCRETE
AG6295'RIGHT-OF-WAY MARKER, AND 1.0 FT (0.3 M) NORTH OF A METAL WITNESS POST.
AG6295'RECOVERED IN GOOD CONDITION.
AG6295
AG6295 STATION RECOVERY (1999)
AG6295
AG6295'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1999
AG6295'RECOVERED AS DESCRIBED.

AG6295

AG6295

STATION RECOVERY (2000)

AG6295

AG6295'RECOVERY NOTE BY FLORIDA DEPARTMENT OF TRANSPORTATION 2000 (CDM)

AG6295'RECOVERED AS DESCRIBED.

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AF5095 *****
AF5095 DESIGNATION - W 260
AF5095 PID - AF5095
AF5095 STATE/COUNTY- FL/DE SOTO
AF5095 USGS QUAD - FT OGDEN (1987)
AF5095
AF5095 *CURRENT SURVEY CONTROL
AF5095
AF5095* NAD 83(1999)- 27 03 17.77999(N) 081 57 52.51078(W) ADJUSTED
AF5095* NAVD 88 - 7.812 (meters) 25.63 (feet) ADJUSTED
AF5095
AF5095 X - 794,553.498 (meters) COMP
AF5095 Y - -5,628,298.081 (meters) COMP
AF5095 Z - 2,883,630.731 (meters) COMP
AF5095 LAPLACE CORR- -1.38 (seconds) DEFLEC99
AF5095 ELLIP HEIGHT- -16.43 (meters) (05/31/01) GPS OBS
AF5095 GEOID HEIGHT- -24.26 (meters) GEOID03
AF5095 DYNAMIC HT - 7.801 (meters) 25.59 (feet) COMP
AF5095 MODELED GRAV- 979,115.3 (mgal) NAVD 88
AF5095
AF5095 HORZ ORDER - B
AF5095 VERT ORDER - FIRST CLASS I
AF5095 ELLP ORDER - FIFTH CLASS I
AF5095
AF5095.The horizontal coordinates were established by GPS observations
AF5095.and adjusted by the National Geodetic Survey in May 2001.
AF5095
AF5095.The orthometric height was determined by differential leveling
AF5095.and adjusted by the National Geodetic Survey in June 1991.
AF5095
AF5095.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF5095
AF5095.The Laplace correction was computed from DEFLEC99 derived deflections.
AF5095
AF5095.The ellipsoidal height was determined by GPS observations
AF5095.and is referenced to NAD 83.
AF5095
AF5095.The geoid height was determined by GEOID03.
AF5095
AF5095.The dynamic height is computed by dividing the NAVD 88
AF5095.geopotential number by the normal gravity value computed on the
AF5095.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
AF5095.degrees latitude (g = 980.6199 gals.).
AF5095
AF5095.The modeled gravity was interpolated from observed gravity values.
AF5095
AF5095; North East Units Scale Factor Converg.
AF5095;SPC FL W - 301,491.633 203,513.064 MT 0.99994133 +0 00 58.0
AF5095;UTM 17 - 2,992,886.521 404,342.269 MT 0.99971296 -0 26 19.6
AF5095
AF5095! - Elev Factor x Scale Factor = Combined Factor
AF5095!SPC FL W - 1.00000258 x 0.99994133 = 0.99994391
AF5095!UTM 17 - 1.00000258 x 0.99971296 = 0.99971554
AF5095
AF5095 SUPERSEDED SURVEY CONTROL
AF5095

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AF5095 NAD 83(1990)- 27 03 17.77842(N) 081 57 52.51025(W) AD() B
AF5095 ELLIP H (09/13/90) -16.41 (m) GP() 4 1
AF5095 NAVD 88 (11/12/93) 7.81 (m) 25.6 (f) LEVELING 3
AF5095 NGVD 29 (09/01/92) 8.159 (m) 26.77 (f) ADJUSTED 1 1

AF5095

AF5095.Superseded values are not recommended for survey control.

AF5095.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AF5095.See file dsdata.txt to determine how the superseded data were derived.

AF5095

AF5095_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RMK0434292887(NAD 83)

AF5095_MARKER: DB = BENCH MARK DISK

AF5095_SETTING: 46 = COPPER-CLAD STEEL ROD W/O SLEEVE (10 FT.+)

AF5095_STAMPING: W 260 1966

AF5095_MARK LOGO: CGS

AF5095_PROJECTION: FLUSH

AF5095_MAGNETIC: O = OTHER; SEE DESCRIPTION

AF5095_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AF5095_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AF5095+SATELLITE: SATELLITE OBSERVATIONS - June 14, 2002

AF5095_ROD/PIPE-DEPTH: 18.8 meters

AF5095

AF5095 HISTORY	- Date	Condition	Report By
AF5095 HISTORY	- 1966	MONUMENTED	CGS
AF5095 HISTORY	- 1979	GOOD	NGS
AF5095 HISTORY	- 1989	GOOD	NGS
AF5095 HISTORY	- 19920910	GOOD	DENI
AF5095 HISTORY	- 19921029	GOOD	FL-115
AF5095 HISTORY	- 19930303	GOOD	NGS
AF5095 HISTORY	- 19951227	GOOD	NGS
AF5095 HISTORY	- 19961219	GOOD	USPSQD
AF5095 HISTORY	- 20010710	POOR	USPSQD
AF5095 HISTORY	- 20020614	GOOD	JCLS

AF5095

AF5095 STATION DESCRIPTION

AF5095

AF5095'DESCRIBED BY COAST AND GEODETIC SURVEY 1966

AF5095'2.5 MI S FROM FORT OGDEN.

AF5095'ABOUT 2.5 MILES SOUTH ALONG THE ATLANTIC COAST LINE RAILROAD

AF5095'FROM THE STATION AT FORT OGDEN, 0.4 MILE SOUTH OF MILEPOST X 926,

AF5095'AT THE CROSSING OF A BLACK TOP ROAD, IN SECTION 25, R 23 E,

AF5095'T 39 S, 74.0 FEET SOUTHEAST OF THE CENTER OF THE CROSSING, 59.5

AF5095'FEET EAST OF THE EAST RAIL, 43.0 FEET SOUTH OF THE CENTER LINE

AF5095'OF THE ROAD, 1 FOOT WEST OF THE RIGHT-OF-WAY FENCE, 1.5 FEET NORTH

AF5095'OF A METAL WITNESS POST, ABOUT LEVEL WITH THE TRACK AND IS A

AF5095'DISK ON TOP OF A COPPER COATED STEEL ROD FLUSH WITH THE GROUND

AF5095'AND PROTECTED BY A 6-INCH IRON PIPE FLUSH WITH THE GROUND. THE

AF5095'ROD WAS DRIVEN TO REFUSAL AT A DEPTH OF 61.5 FEET.

AF5095

AF5095 STATION RECOVERY (1979)

AF5095

AF5095'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979

AF5095'RECOVERED IN GOOD CONDITION.

AF5095

AF5095 STATION RECOVERY (1989)

AF5095

AF5095'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989

AF5095'DISK WAS FOUND SLIGHTLY CHEWED ON BY LAWN MOWER BUT IS INTACT AND AF5095'STABLE ON ROD, ABLE TO OCCUPY FOR GPS OBSERVATIONS.

AF5095'THE STATION IS LOCATED ABOUT 3.6 KM (2.25 MI) SOUTH OF THE SOUTH EDGE AF5095'OF FORT OGDEN, IN A MOWED LAWN AREA AND ON THE EAST RIGHT-OF-WAY OF AF5095'THE ATLANTIC COAST LINE RAILROAD, AND AT THE SOUTH SIDE OF LIVERPOOL AF5095'ROAD. OWNERSHIP--ATLANTIC COAST LINE RAILROAD.

AF5095'TO REACH THE STATION FROM THE U.S. POST OFFICE ON U.S. HIGHWAY 17 AT AF5095'THE SOUTH EDGE OF FORT OGDEN, GO SOUTH ALONG U.S. HIGHWAY 17 FOR 3.8 AF5095'KM (2.35 MI) TO THE JUNCTION OF LIVERPOOL ROAD ON THE RIGHT, THEN GO AF5095'RIGHT, WEST ALONG LIVERPOOL ROAD FOR 0.56 KM (0.35 MI) TO THE CROSSING AF5095'OF THE ATLANTIC COAST LINE RAILROAD AND THE STATION ON THE LEFT.

AF5095'LOCATED 13.1 M (43.0 FT) SOUTH OF THE CENTER OF LIVERPOOL ROAD, 18 M AF5095'(59.1 FT) EAST OF THE EAST RAIL, 8 M (26.2 FT) NORTH OF A LAWN LIGHT AF5095'SUPPORT POLE, 2.5 M (8.2 FT) NORTH OF A 2-INCH MAGNOLIA TREE, 7.9 M AF5095'(25.9 FT) WEST OF A 24-INCH PALM TREE, 2.8 M (9.2 FT) SOUTH OF A AF5095'CONCRETE PROPERTY CORNER POST, 0.45 M (1.5 FT) NORTH OF A METAL AF5095'WITNESS POST AND ABOUT 0.61 M (2.0 FT) ABOVE THE LEVEL OF THE ROAD. AF5095'DESCRIBED BY G.F. SMITH.

AF5095

AF5095 STATION RECOVERY (1992)

AF5095

AF5095'RECOVERY NOTE BY DENI ASSOCIATES INCORPORATED 1992

AF5095'RECOVERED IN GOOD CONDITION.

AF5095

AF5095 STATION RECOVERY (1992)

AF5095

AF5095'RECOVERY NOTE BY SARASOTA COUNTY FLORIDA 1992

AF5095'TO REACH THE STATION FROM THE INTERSECTION OF STATE ROAD 72 (CLARK AF5095'ROAD) AND THE SARASOTA - DE SOTO COUNTY LINE, GO EAST ON STATE ROAD AF5095'72 (CLARK ROAD), 5.9 MI (9.49 KM) TO THE INTERSECTION OF STATE ROAD AF5095'72 (CLARK ROAD) AND STATE ROAD 769, GO SOUTH ON STATE ROAD 769, 8.0 AF5095'MI (12.87 KM) TO THE INTERSECTION OF STATE ROAD 769 AND STATE ROAD AF5095'761, GO SOUTHERLY AND EASTERLY ON STATE ROAD 761, 3.15 MI (5.07 KM) AF5095'TO THE INTERSECTION OF STATE ROAD 761 AND STATE ROAD 17, GO SOUTH ON AF5095'STATE ROAD 17, 0.85 MI (1.37 KM) TO THE INTERSECTION OF INTERSTATE AF5095'ROAD 17 AND LIVERPOOL BOULEVARD IN DE SOTO COUNTY, GO WEST ON AF5095'LIVERPOOL BOULEVARD, 0.35 MI (0.56 KM) TO THE STATION ON THE LEFT. AF5095'THE STATION IS U.S. COAST AND GEODETIC SURVEY (C.G.S.) BENCH MARK DISK AF5095'STAMPED ---W 260 1966--- SET ON A DEEP ROD THAT IS FLUSH WITH THE AF5095'SURFACE. (DISK LOOKS LIKE IT HAS BEEN HIT WITH A LAWN MOWER BUT IS AF5095'USABLE FOR G.P.S.) IT IS 43.2 FT (13.17 M) SOUTHERLY OF THE AF5095'CENTERLINE OF LIVERPOOL BOULEVARD AND 59.0 FT (17.98 M) EASTERLY OF AF5095'THE RAIL ROAD TRACKS.

AF5095'REFERENCES--

AF5095'REFERENCE MARK NUMBER 1 IS A STANDARD SARASOTA COUNTY (SARCO)REFERENCE AF5095'DISK AND NAIL SET IN THE SOUTHERLY EDGE OF ASPHALT PAVEMENT ROAD BED AF5095'FOR LIVERPOOL BOULEVARD. IT IS 38.04 FT (11.59 M) NORTHEASTERLY OF AF5095'CORPS OF ENGINEER STATION W 260, AND 31.41 FT (9.57 M) EASTERLY OF AF5095'SARCO REFERENCE NO. 2.

AF5095'REFERENCE MARK NUMBER 2 IS A STANDARD SARASOTA COUNTY (SARCO)REFERENCE AF5095'DISK AND NAIL SET IN THE SOUTHERLY EDGE OF ASPHALT PAVEMENT ROAD BED AF5095'FOR LIVERPOOL BOULEVARD. IT IS 37.12 FT (11.31 M) NORTHWESTERLY OF AF5095'CORPS OF ENGINEER STATION W 260, AND 31.41 FT (9.57 M) WESTERLY OF AF5095'SARCO REFERENCE NO. 1.

AF5095

AF5095 STATION RECOVERY (1993)

AF5095

AF5095'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993

AF5095'DISK WAS FOUND SLIGHTLY SCARED BY LAWN MOWER BUT INTACK AND STABLE ON AF5095'ROD, ABLE TO OCCUPY FOR GPS OBSERVATIONS.

AF5095'STATION IS LOCATED ABOUT 3.6 KM (2.25 MI) SOUTH OF THE SOUTH EDGE OF AF5095'FORT OGDEN, IN A MOWED LAWN AREA AND ON THE EAST RIGHT-OF-WAY OF THE AF5095'SEABOARD COASTLINE RAILROAD, AND AT THE SOUTH SIDE OF LIVERPOOL ROAD. AF5095'OWNERSHIP--SEABOARD COASTLINE RAILROAD.

AF5095'TO REACH THE STATION FROM THE U.S. POST OFFICE ON U.S. HIGHWAY 17 AT AF5095'THE SOUTH EDGE OF FORT OGDEN, GO SOUTH ALONG U.S. HIGHWAY 17 FOR 3.20 AF5095'KM (2.00 MI) TO THE JUNCTION OF LIVERPOOL ROAD ON THE RIGHT, THEN GO AF5095'RIGHT, WEST, ALONG LIVERPOOL ROAD FOR 0.64 KM (0.40 MI) TO THE AF5095'CROSSING OF THE SEABOARD COASTLINE RAILROAD AND THE STATION ON THE AF5095'LEFT.

AF5095'THE STATION IS FLUSH WITH THE GROUND. LOCATED INSIDE A 6-INCH IRON AF5095'PIPE 18 M (59.1 FT) EAST OF THE EAST RAIL, 13.1 M (43.0 FT) SOUTH OF AF5095'THE CENTER OF LIVERPOOL ROAD, 8 M (26.2 FT) NORTH OF A LAWN LIGHT AF5095'SUPPORT POLE, 7.75 M (25.43 FT) WEST OF A 24-INCH PALM TREE, 2.8 M AF5095'(9.2 FT) SOUTH OF A CONCRETE PROPERTY CORNER POST, 2.50 M (8.20 FT) AF5095'NORTH OF AN ORANGE TREE, 0.45 M (1.48 FT) NORTH OF A METAL WITNESS AF5095'POST AND ABOUT 0.61 M (2.00 FT) ABOVE THE LEVEL OF THE ROAD.

AF5095

AF5095 STATION RECOVERY (1995)

AF5095

AF5095'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (CFS)

AF5095'THE STATION IS LOCATED ABOUT 2.25 MI (3.62 KM) SOUTH OF THE SOUTH EDGE AF5095'OF FORT OGDEN, 10.15 MI (16.33 KM) NORTHEAST OF INTERSTATE HIGHWAY 75 AF5095'AND STATE HIGHWAY 17 JUNCTION, IN A MOWED LAWN AREA ON THE SOUTH SIDE AF5095'OF LIVERPOOL ROAD IN THE EAST RIGHT-OF WAY OF THE SEABOARD COASTLINE AF5095'RAILROAD. OWNERSHIP -- SEABOARD COASTLINE RAILROAD. TO REACH THE AF5095'STATION FROM THE U.S. POST OFFICE ON THE SOUTH EDGE OF FORT OGDEN, GO AF5095'SOUTH ON U.S. HIGHWAY 17 FOR 2.00 MILES (3.22 KM) TO LIVERPOOL ROAD ON AF5095'RIGHT, TURN RIGHT, WEST, ALONG LIVERPOOL ROAD FOR 0.35 MI (0.56 KM) TO AF5095'THE SEABOARD COASTLINE RAILROAD CROSSING AND STATION ON THE LEFT. THE AF5095'STATION IS FLUSH WITH THE GROUND. LOCATED INSIDE A 6-INCH IRON PIPE AF5095'59.1 FT (18.0 M) EAST OF THE EAST RAIL OF THE RAILROAD, 43.0 FT (13.1 AF5095'M) SOUTH OF THE APPROXIMATE CENTER OF LIVERPOOL ROAD, 26.2 FT (8.0 M) AF5095'NORTH OF A LAWN LIGHT SUPPORT POLE, 26.0 FT (7.9 M) WEST OF A 24-INCH AF5095'PALM TREE, 9.2 FT (2.8 M) SOUTH OF A CONCRETE PROPERTY CORNER POST, AF5095'7.6 FT (2.3 M) NORTH OF A 5-INCH GRAPEFRUIT TREE, 1.5 FT (0.5 M) NORTH AF5095'OF A METAL WITNESS POST, AND IS ABOUT 1.0 FT (0.3 M) ABOVE THE LEVEL AF5095'OF LIVERPOOL ROAD. NOTE -- THE MARK IS SCARRED AND BENT AS PREVIOUSLY AF5095'NOTED BUT APPEARS IN GOOD CONDITION.

AF5095

AF5095 STATION RECOVERY (1996)

AF5095

AF5095'RECOVERY NOTE BY US POWER SQUADRON 1996

AF5095'RECOVERED IN GOOD CONDITION.

AF5095

AF5095 STATION RECOVERY (2001)

AF5095

AF5095'RECOVERY NOTE BY US POWER SQUADRON 2001 (MDB)

AF5095'HIT BUT USABLE

AF5095

AF5095 STATION RECOVERY (2002)

AF5095

AF5095'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2002
AF5095'RECOVERED IN GOOD CONDITION.

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AF7425 *****
AF7425 CBN      - This is a Cooperative Base Network Control Station.
AF7425 DESIGNATION - WAUCPORT
AF7425 PID      - AF7425
AF7425 STATE/COUNTY- FL/HARDEE
AF7425 USGS QUAD  - FT GREEN (1987)
AF7425
AF7425                *CURRENT SURVEY CONTROL
AF7425
AF7425* NAD 83(1999)- 27 30 54.36943(N) 081 53 00.60906(W) ADJUSTED
AF7425* NAVD 88   -   30.9 (meters) 101. (feet) GPS OBS
AF7425
AF7425 X      - 799,220.391 (meters)          COMP
AF7425 Y      - -5,604,047.269 (meters)       COMP
AF7425 Z      - 2,928,957.370 (meters)        COMP
AF7425 LAPLACE CORR-   -1.53 (seconds)          DEFLEC99
AF7425 ELLIP HEIGHT-   5.91 (meters)          (05/31/01) GPS OBS
AF7425 GEOID HEIGHT-  -25.04 (meters)          GEOID03
AF7425
AF7425 HORZ ORDER - B
AF7425 ELLP ORDER - FIFTH CLASS I
AF7425
AF7425.This mark is at Wauchula Airport (FD06)
AF7425
AF7425.The horizontal coordinates were established by GPS observations
AF7425.and adjusted by the National Geodetic Survey in May 2001.
AF7425
AF7425.The orthometric height was determined by GPS observations and a
AF7425.high-resolution geoid model.
AF7425
AF7425.The X, Y, and Z were computed from the position and the ellipsoidal ht.
AF7425
AF7425.The Laplace correction was computed from DEFLEC99 derived deflections.
AF7425
AF7425.The ellipsoidal height was determined by GPS observations
AF7425.and is referenced to NAD 83.
AF7425
AF7425.The geoid height was determined by GEOID03.
AF7425
AF7425;          North      East      Units Scale Factor Converg.
AF7425;SPC FL W - 352,483.379 211,509.121 MT 0.99994281 +0 03 13.8
AF7425;UTM 17 - 3,043,800.503 412,744.066 MT 0.99969398 -0 24 29.5
AF7425
AF7425!          - Elev Factor x Scale Factor = Combined Factor
AF7425!SPC FL W - 0.99999907 x 0.99994281 = 0.99994188
AF7425!UTM 17 - 0.99999907 x 0.99969398 = 0.99969305
AF7425
AF7425;          Primary Azimuth Mark          Grid Az
AF7425;SPC FL W - WAUCPORT AZ MK          359 57 09.5
AF7425;UTM 17 - WAUCPORT AZ MK          000 24 52.8
AF7425
AF7425|-----|
AF7425| PID Reference Object          Distance Geod. Az |
AF7425|                               dddmmss.s |
AF7425| AF7486 WAUCPORT AZ MK          APPROX. 0.6 KM 0000023.3 |
AF7425|-----|

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AF7425

AF7425 SUPERSEDED SURVEY CONTROL

AF7425

AF7425 NAD 83(1990)- 27 30 54.36807(N) 081 53 00.60854(W) AD() B

AF7425 ELLIP H (09/13/90) 5.92 (m) GP() 4 1

AF7425 NGVD 29 (09/13/90) 31.3 (m) 103. (f) GPS OBS

AF7425

AF7425.Superseded values are not recommended for survey control.

AF7425.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

AF7425.See file dsdata.txt to determine how the superseded data were derived.

AF7425

AF7425_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RML1274443801(NAD 83)

AF7425_MARKER: I = METAL ROD

AF7425_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)

AF7425_STAMPING: WAUCPORT 1989

AF7425_MARK LOGO: NGS

AF7425_PROJECTION: FLUSH

AF7425_MAGNETIC: N = NO MAGNETIC MATERIAL

AF7425_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AF7425_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AF7425+SATELLITE: SATELLITE OBSERVATIONS - 1989

AF7425_ROD/PIPE-DEPTH: 17.8 meters

AF7425_SLEEVE-DEPTH : 0.91 meters

AF7425

AF7425 HISTORY - Date Condition Report By

AF7425 HISTORY - 1989 MONUMENTED NGS

AF7425 HISTORY - 19970430 GOOD USPSQD

AF7425 HISTORY - 20020603 GOOD USPSQD

AF7425

AF7425 STATION DESCRIPTION

AF7425

AF7425'DESCRIBED BY NATIONAL GEODETIC SURVEY 1989

AF7425'THE STATION IS LOCATED ABOUT 7.24 KM (4.50 MI) WEST OF WAUCHULA, 0.8

AF7425'KM (0.50 MI) SOUTH OF VANDOLAH ROAD, AT THE WAUCHULA MUNICIPAL

AF7425'AIRPORT, ALONG THE EAST SIDE OF SONNY CLAVEL ROAD, NEAR THE

AF7425'SOUTH-SOUTHWEST END OF TURF RUNWAY 03-21. OWNERSHIP--CITY OF

AF7425'WAUCHULA, P.O. BOX 818, WAUCHULA FL 33873,

AF7425 PHONE 863-773-3131. NOTE--PERMISSION MUST BE OBTAINED BEFORE

AF7425'ENTERING AIRPORT. DICK WISEMAN AT AIRPORT.

AF7425'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAY 17 AND STATE

AF7425'HIGHWAY 64A (MAIN STREET) IN WAUCHULA, GO WEST-SOUTHWEST FOR 5.6 KM

AF7425'(3.50 MI) ON STATE HIGHWAY 64A TO VANDOLAH ROAD ON RIGHT. TURN RIGHT

AF7425'AND GO WEST FOR 2.1 KM (1.30 MI) ON VANDOLAH ROAD TO A SIDE ROAD LEFT,

AF7425'JUST AFTER CROSSING THE BRIDGE OVER TROUBLESOME CREEK. TURN LEFT AND

AF7425'GO SOUTH FOR 0.32 KM (0.20 MI) ON SONNY CLAVEL ROAD TO A SHARP TURN

AF7425'RIGHT. TURN RIGHT AND GO WEST FOR 0.32 KM (0.20 MI) ON SONNY CLAVEL

AF7425'ROAD TO A POINT WHERE THE ROAD TURNS LEFT AND WAUCPORT AZ MK ON LEFT.

AF7425'CONTINUE AHEAD AND GO SOUTH FOR 0.5 KM (0.30 MI) ON SONNY CLAVEL ROAD

AF7425'TO THE STATION ON LEFT.

AF7425'THE STATION IS RECESSED 10 CM BELOW GROUND. LOCATED 22.5 M (73.8 FT)

AF7425'EAST FROM A SIGN INDICATING CURVE IN ROAD, 18.3 M (60.0 FT) WEST FROM

AF7425'A METAL TURF RUNWAY END INDICATOR, 18.0 M (59.1 FT) EAST FROM THE

AF7425'APPROXIMATE CENTER OF SONNY CLAVEL ROAD AND 2.83 M (9.3 FT) EAST FROM

AF7425'A CARSONITE WITNESS POST. NOTE--ACCESS TO DATUM POINT IS HAD THROUGH

AF7425'A 5-INCH LOGO CAP.

AF7425'DESCRIBED BY S.E. RANDALL.

AF7425
AF7425 STATION RECOVERY (1997)
AF7425
AF7425'RECOVERY NOTE BY US POWER SQUADRON 1997
AF7425'RECOVERED IN GOOD CONDITION.
AF7425
AF7425 STATION RECOVERY (2002)
AF7425
AF7425'RECOVERY NOTE BY US POWER SQUADRON 2002
AF7425'COVER GONE

DE9094 *****

DE9094 DESIGNATION - Z 564

DE9094 PID - DE9094

DE9094 STATE/COUNTY- FL/MANATEE

DE9094 USGS QUAD - RYE (1979)

DE9094

DE9094 *CURRENT SURVEY CONTROL

DE9094* NAD 83(1986)- 27 35 46. (N) 082 16 33. (W) SCALED

DE9094* NAVD 88 - 32.558 (meters) 106.82 (feet) ADJUSTED

DE9094 GEOID HEIGHT- -24.88 (meters) GEOID03

DE9094 DYNAMIC HT - 32.508 (meters) 106.65 (feet) COMP

DE9094 MODELED GRAV- 979,137.7 (mgal) NAVD 88

DE9094

DE9094 VERT ORDER - SECOND CLASS I

DE9094

DE9094.The horizontal coordinates were scaled from a topographic map and have

DE9094.an estimated accuracy of +/- 6 seconds.

DE9094

DE9094.The orthometric height was determined by differential leveling

DE9094.and adjusted by the National Geodetic Survey in May 2004.

DE9094

DE9094.The geoid height was determined by GEOID03.

DE9094

DE9094.The dynamic height is computed by dividing the NAVD 88

DE9094.geopotential number by the normal gravity value computed on the

DE9094.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

DE9094.degrees latitude (g = 980.6199 gals.).

DE9094

DE9094.The modeled gravity was interpolated from observed gravity values.

DE9094

DE9094;	North	East	Units	Estimated Accuracy
DE9094;SPC FL W	- 361,490.	172,770.	MT	(+/- 180 meters Scaled)

DE9094

DE9094 SUPERSEDED SURVEY CONTROL

DE9094

DE9094.No superseded survey control is available for this station.

DE9094

DE9094_U.S. NATIONAL GRID SPATIAL ADDRESS: 17RLL740531(NAD 83)

DE9094_MARKER: F = FLANGE-ENCASED ROD

DE9094_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

DE9094_STAMPING: Z 564 2002

DE9094_MARK LOGO: NGS

DE9094_PROJECTION: FLUSH

DE9094_MAGNETIC: M = MARKER EQUIPPED WITH BAR MAGNET

DE9094_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

DE9094_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

DE9094+SATELLITE: SATELLITE OBSERVATIONS - May 18, 2002

DE9094_ROD/PIPE-DEPTH: 16.8 meters

DE9094

DE9094 HISTORY	- Date	Condition	Report By
DE9094 HISTORY	- 20020518	MONUMENTED	FLDEP

DE9094

DE9094 STATION DESCRIPTION

DE9094

DE9094'DESCRIBED BY FL DEPT OF ENV PRO 2002 (BPJ)
DE9094'THE MARK IS ABOUT 9.3 MI EAST OF PARRISH, IN SECTION 23, TOWNSHIP 33
DE9094'SOUTH, RANGE 20 EAST.
DE9094'
DE9094'TO REACH THE MARK FROM THE JUNCTION OF U.S. HIGHWAY 301 AND STATE ROAD
DE9094'62 IN PARRISH,
DE9094'GO EAST ON STATE ROAD 62 FOR 3.85 MI TO THE JUNCTION OF CORBETT JOHN
DE9094'ROAD ON THE LEFT,
DE9094'CONTINUE EAST ON STATE ROAD 62 FOR 4.45 MI TO THE JUNCTION OF SAFFOLD
DE9094'ROAD ON THE LEFT,
DE9094'CONTINUE EAST ON STATE ROAD 62 FOR 1.0 MI TO THE MARK ON THE LEFT, A
DE9094'STAINLESS STEEL ROD
DE9094'DRIVEN TO REFUSAL AT A DEPTH OF 55.2 FT WITH A NGS LOGO CAP FLUSH WITH
DE9094'THE GROUND AND
DE9094'LEVEL WITH STATE ROAD 62, THE DATUM POINT IS RECESSED 0.4 FT BELOW THE
DE9094'LEVEL OF THE NGS
DE9094'LOGO CAP.
DE9094'
DE9094'LOCATED 88.9 FT EAST OF POWER POLE NUMBER 16-271, 59.4 FT NORTH OF THE
DE9094'APPROXIMATE
DE9094'CENTERLINE OF STATE ROAD 62, 29.8 FT WEST OF THE APPROXIMATE
DE9094'CENTERLINE OF A DIRT ROAD
DE9094'LEADING TO WALKER FARMS, 10.2 FT WEST OF THE BARB WIRE FENCE CORNER
DE9094'POST, 1.5 FT SOUTH
DE9094'OF THE BARB WIRE FENCE AND 0.9 FT SOUTH OF A CARSONITE WITNESS POST.
DE9094'
DE9094'NOTE A MAGNET WAS BURIED ON THE SOUTH SIDE OF THE MONUMENT.
DE9094'
DE9094'NOTE ACCESS TO THE DATUM POINT IS HAD THROUGH A 5-INCH NGS LOGO CAP.
DE9094'

SURVEY INFORMATION

A. Field Personnel

The following field personnel worked on this GPS network, and related survey collection:

Party Chief: Maurice Havard

Party Chief: John Purpera

Instrument Man: Mitch Havard

Instrument Man: Verron McNeal

Rodman: Gary Ballard

The point of contact for survey related questions is:

Josh Hardy

Operations Supervisor

(985) 661-3001

B. GPS Logsheets

5525 Mounes St., Suite 102
 New Orleans, LA 70123
 504-733-3001 voice 504-734-8938 fax

**GPS CONTROL SURVEY
 FIELD DATA SHEET**

PAGE:
 1

JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 2B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4700
 RECEIVER S/N: 3112

LATITUDE: 27 37 58.15N HGT. MTS:
 LONGITUDE: 81 49 31.24W

SESSION: 002B0462 DATE: 02/15/05
 DAY OF YEAR: 46

START TIME: 14:17 X U.T.C.
 END TIME: 15:48 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010 0.000
 ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 WGRD. PL

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

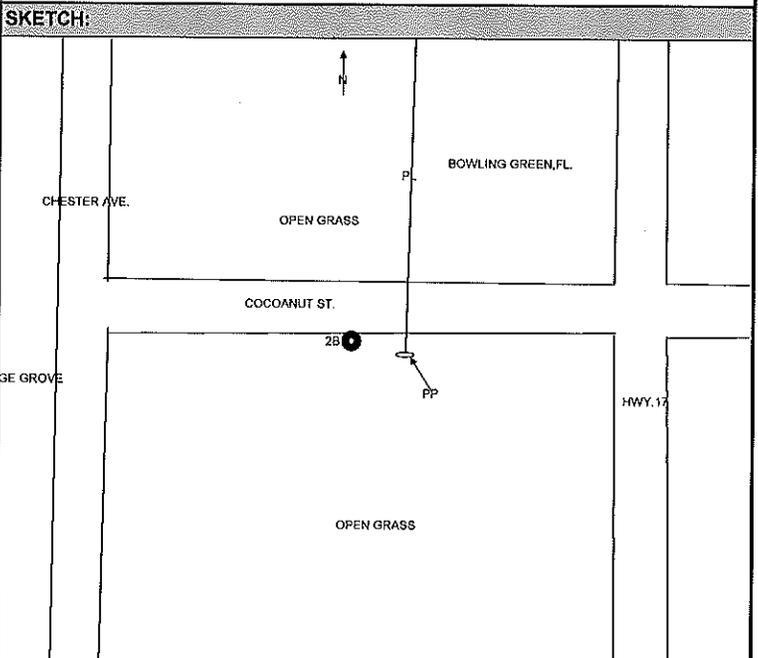
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 2B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND APPROX. +.125FT. WEST OF HWY. 17 AND ON THE SOUTH SIDE OF COCOANUT ST. AND +.125FT. EAST OF CHESTER AVE. IN BOWLING GREEN, FL. 4FT. SOUTH OF THE SOUTH EDGE OF COCOANUT ST. AND +.30FT. NW OF A POWERPOLE.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL X PHOTO I.D.
 NEW CONTROL
 BASE STATION

NOTE:
 LANDAIR CREW ARRIVED AT SWFWMD1 (IRON ROD W/CAP) AT WAUCHULA AIRPORT. HAD TO MOVE RECEIVER OFF POINT ON 2nd. ---1 HOUR SESSION--- USE THEIR DATA FOR 2nd. STATIC TIE. ON SWFWMD1.

PHOTO:





the spatial data company

5525 Mounes St., Suite 102
 New Orleans, LA 70123
 504-733-3001 voice 504-734-8938 fax

**GPS CONTROL SURVEY
 FIELD DATA SHEET**

PAGE:
 1

JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 5B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4700
 RECEIVER S/N: 3112

LATITUDE: 27 18 21.54N HGT. MTS:
 LONGITUDE: 81 58 57.83W

SESSION: 005B0424 DATE: 02/11/05
 DAY OF YEAR: 42

START TIME: 18:33 X U.T.C.
 END TIME: 19:34 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT:
 MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010 0.000
 ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

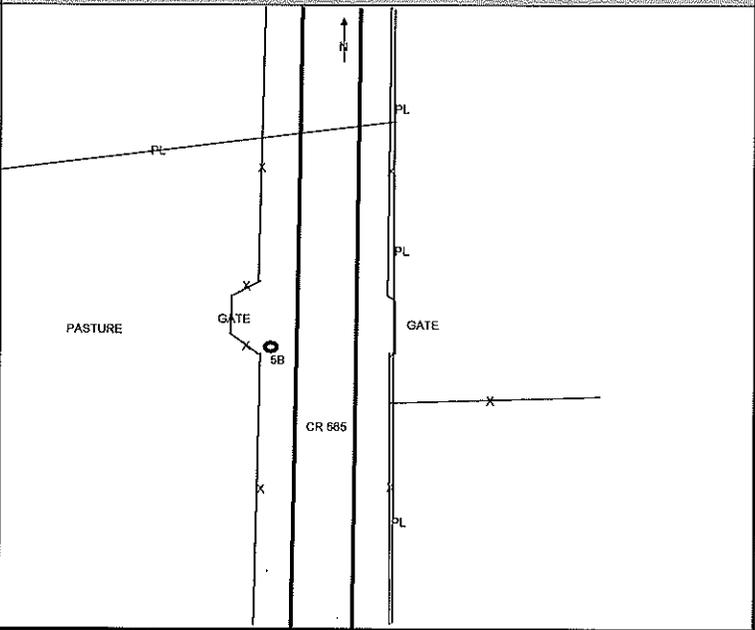
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 5B IS A 1/2" REBAR W/PLASTIC CAP SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.8 MILES N.W. OF ARCADIA, FLORIDA, FROM THE INTER. OF HWY. 70 (NW OF ARCADIA FL.) AND CR 665, GO 3.4 MILES NORTH ON CR 665 AND POINT ON LEFT, AT AN ENTRANCE GATE INTO A PASTURE, 17.8 FT. WEST OF THE WEST EDGE OF CR 665, 3.6 FT. N.E. OF A FENCE LINE CORNER POST.

AERIAL TARGET PHOTO I.D.
 PUB. BENCH MARK NEW CONTROL
 PUB. CONTROL X BASE STATION

PHOTO:

SKETCH:



**GPS CONTROL SURVEY
FIELD DATA SHEET**

5525 Mounes St., Suite 102
New Orleans, LA 70123
504-733-3001 voice 504-734-8938 fax

JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 9B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302

LATITUDE: 27 02 41.48 N HGT. MTS
LONGITUDE: 081 46 45.69 W

SESSION: 009B0431 DATE: 02/12/05
DAY OF YEAR: 43

START TIME: 17:02 X U.T.C.
END TIME: 17:47 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

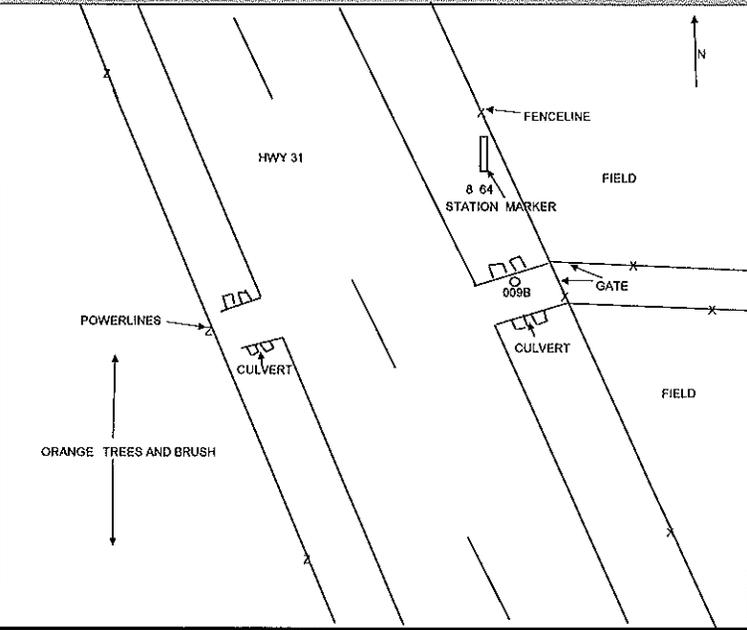
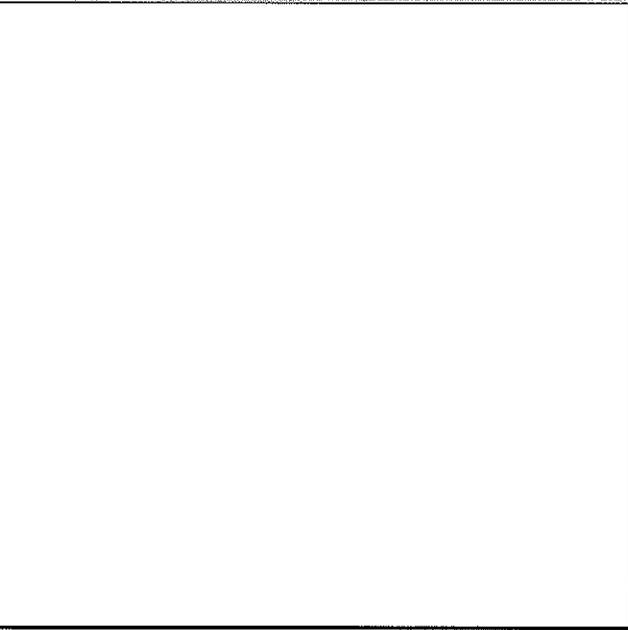
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 009B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND ON TOP OF CONCRETE CULVERT. IS LOCATED ON THE EAST SIDE OF HWY 31. IS 20 FEET SOUTHWEST OF FENCELINE. IS 32 FEET NORTHEAST OF GL HWY 31.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: (AG6285)PARRISH 1934 (SITE 14)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: PARRISH

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)
LATITUDE: 27 35 26.78573N HGT. MTS:
LONGITUDE: 82 23 19.48556W 9.889

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION: PARR0451 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 12:39 X U.T.C.
END TIME: 18:25 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT:
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

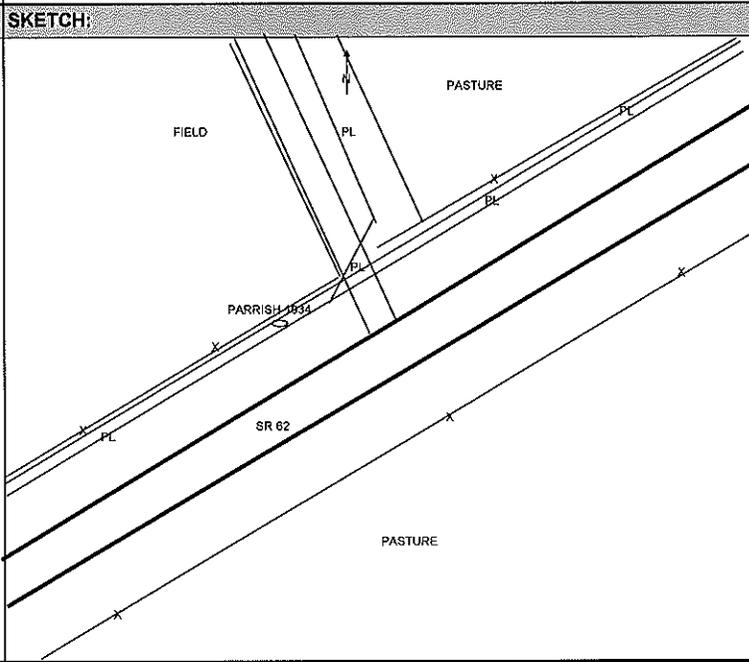
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 10B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000
RECEIVER S/N: 4302
LATITUDE: 27 04 13.00N HGT. MTS
LONGITUDE: 81 33 44.43W

SESSION: 010B0431 DATE: 02/12/05 START TIME: 13:39 X U.T.C.
DAY OF YEAR: 43 END TIME: 14:22 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

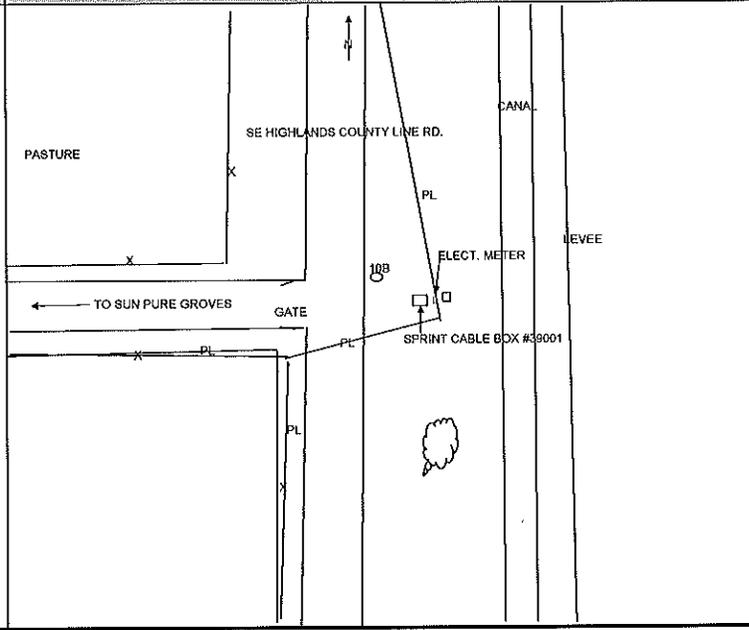
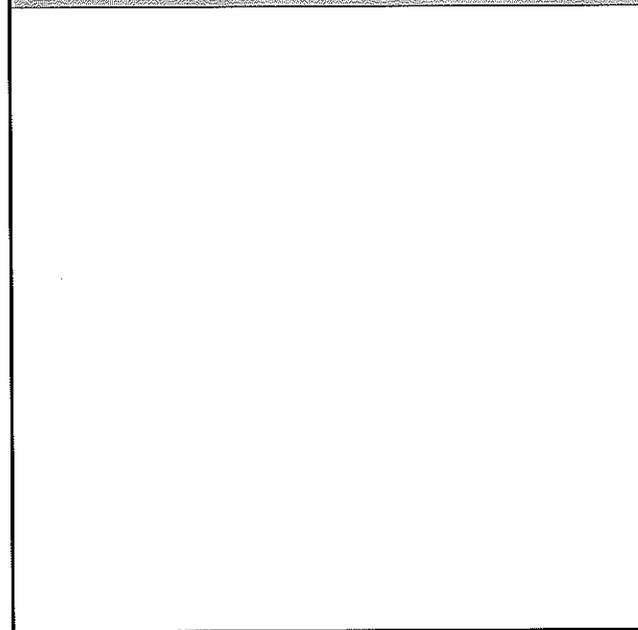
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 10B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE EAST EDGE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A RD LEADING WEST TO SUN PURE GROVES...5FT. EAST OF THE EAST EDGE OF RD...15.8FT. NW OF A ELECT. METER (MOUNTED ON POST)...10.8FT. NW OF THE NW CORNER OF A SPRINT CABLE BOX #39001.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO: SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

11B-A580 2003

Proj. No.:

04129-02

STATE	FLORIDA	COUNTY	CHARLOTTE	QUAD:	
-------	---------	--------	-----------	-------	--

OPERATOR	MITCH	APPROXIMATE POSITION (G/A/CODE)			
----------	-------	---------------------------------	--	--	--

LATITUDE	26 54 04.69 N	HGT. MTS	
LONGITUDE	081 45 36.27 W		

RECEIVER MODEL	TRIMBLE 4000SE
RECEIVER S/N	4302

SESSION	DATE:	02/12/05	START TIME	18:10	X	U.T.C.
011B0431	DAY OF YEAR	43	END TIME	18:58		LOCAL

ANTENNA HEIGHT (SLANT)			
MTRS/FT			
	MEASURED		FIXED HGT.

ANTENNA INFO		
RADIUS (M)		0.000
S/N NUMBER	10019	0.000
ANTENNA TYPE	TRIMBLE COMP. L1/L2 W/ GRO. PLANE	

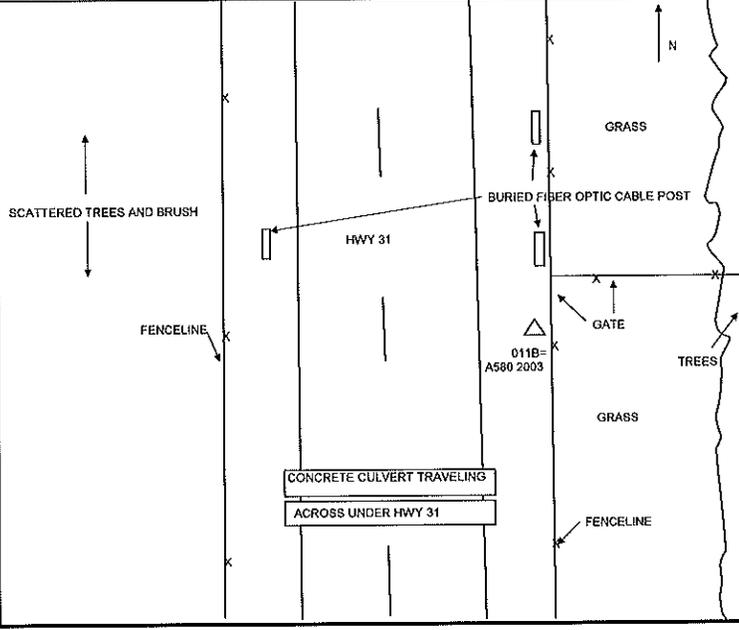
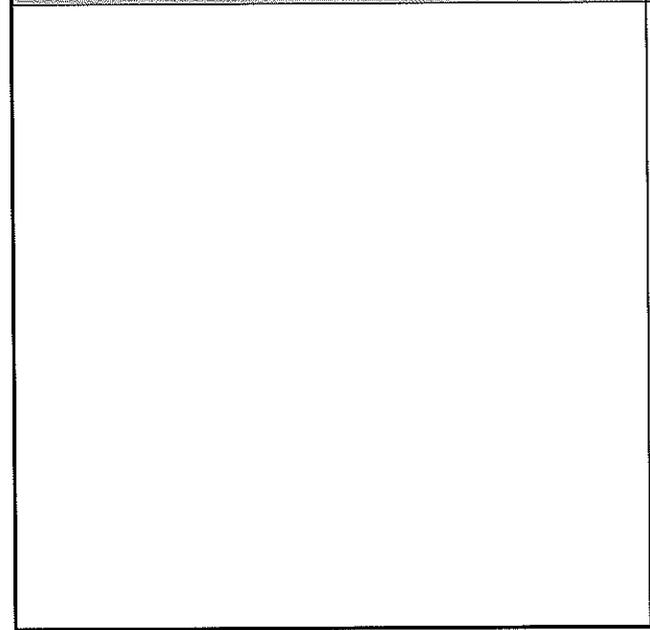
ANTENNA HEIGHT (VERTICAL)			
MTRS/FT	2.000M		
	MEASURED	X	FIXED HGT.

TOP OF MONUMENT IS:	X	FLUSH
METERS/FEET		ABOVE GROUND
METERS/FEET		BELOW GROUND

3001 DESCRIPTION: 011B-A580 2003 IS AN ALUMINUM FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION SURVEY CAP FLUSH WITH GROUND. IS LOCATED ON THE EAST SIDE OF HWY 31. IS 2 FEET WEST OF FENCELINE. IS 45 FEET EAST OF CL HWY 31.

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK		NEW CONTROL
	PUB. CONTROL	X	BASE STATION

PHOTO: SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 11C
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
 RECEIVER S/N: 4570

LATITUDE: 26 54 00.21N HGT. MTS:
 LONGITUDE: 81 45 36.26W

SESSION: 011C0431 DATE: 02/12/05
 DAY OF YEAR: 43

START TIME: 18:27 X U.T.C.
 END TIME: 18:49 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

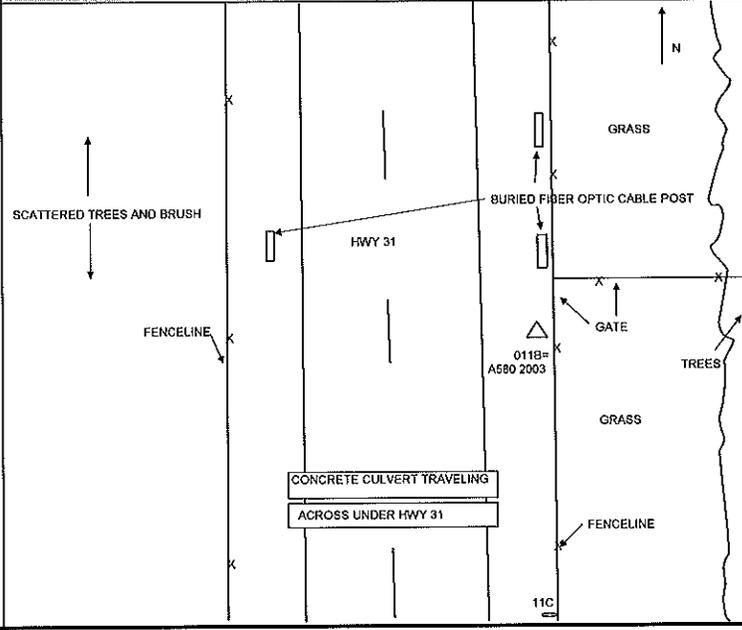
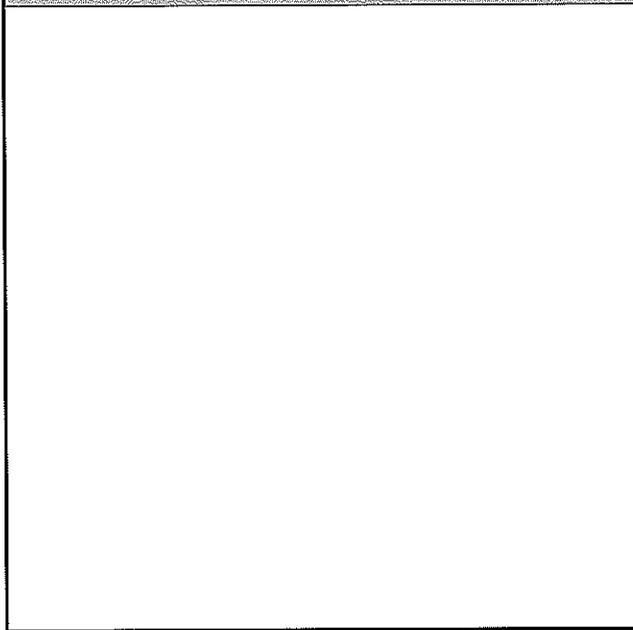
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET: ABOVE GROUND
 METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 11C IS A SPIKE NAIL SET FLUSH IN GROUND ON THE EAST SIDE OF HWY 31, 39FT. NE OF THE C/L OF HWY 31, 8.4FT. SE OF A ATT PVC FIBER OPTIC POST #51, .6FT. NW OF A FENCELINE.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 X NEW CONTROL
 BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 1C=32.4-300Z
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V.MCNEAL

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
 RECEIVER S/N: 4570

LATITUDE: 27 35 41.17N HGT. MTS:
 LONGITUDE: 81 59 20.62W

SESSION: 001C0481 DATE: 02/17/05
 DAY OF YEAR: 48

START TIME: 12:44 X U.T.C.
 END TIME: 13:15 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 50907 0.000
 ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

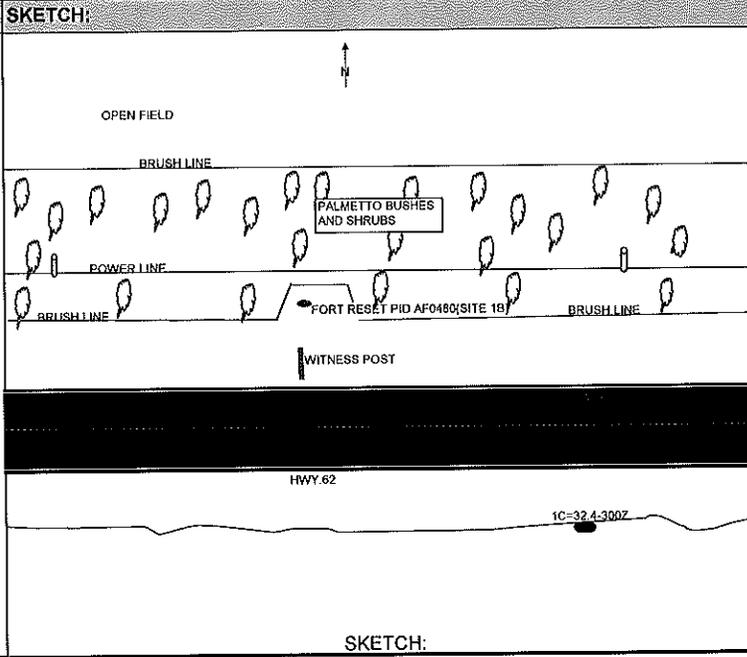
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.00M UNCORRECTED
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 1C=32.4-300Z IS AN ALUM. GULFSTREAM MON. GPS SURVEY CAP FLUSH W/
 GROUND...+125FT. SE OF FORT RESET...42FT. SOUTH OF THE C/L OF HWY.62...2FT. NORTH OF A
 ORANGE CARSONITE WITNESS POST...20FT. EAST OF A WHITE/BLACK SURVEY MARKER SIGN.

AERIAL TARGET PHOTO I.D.
 PUB. BENCH MARK X NEW CONTROL
 PUB. CONTROL BASE STATION

PHOTO:



SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 2B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (GIA/CODE)

RECEIVER MODEL: TRIMBLE 4700
RECEIVER S/N: 3112

LATITUDE: 27 37 58.15N HGT. MTS:
LONGITUDE: 81 49 31.24W

SESSION: 002B0461 DATE: 02/15/05
DAY OF YEAR: 46

START TIME: 13:10 X U.T.C.
END TIME: 14:16 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

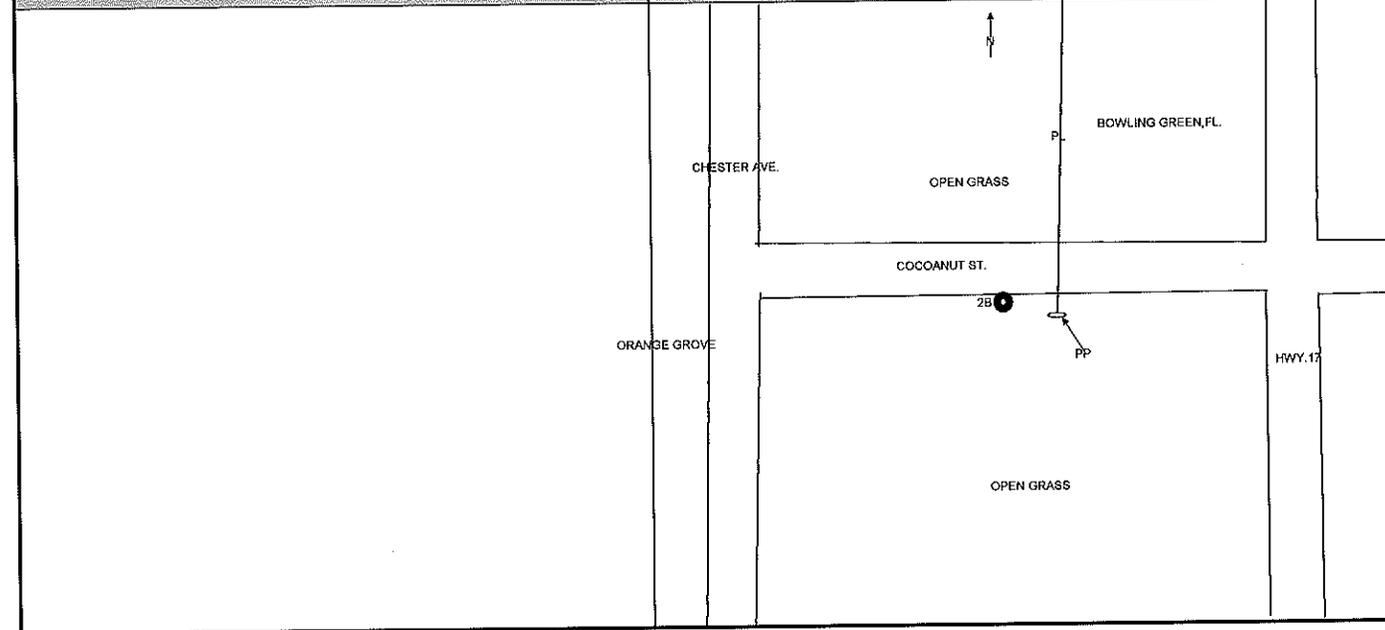
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 2B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND APPROX. +-125FT. WEST OF HWY 17 AND ON THE SOUTH SIDE OF COCOANUT ST. AND +-125FT. EAST OF CHESTER AVE. IN BOWLING GREEN FL. 4FT. SOUTH OF THE SOUTH EDGE OF COCOANUT ST. AND +-30FT. NW OF A POWERPOLE.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: (DE9094)Z564=SITE15B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: RYE

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 35 46.85N HGT. MTS: 32.558
LONGITUDE: 82 16 33.72W

RECEIVER S/N: 3112

SESSION: Z5640463 DATE: 02/15/05
DAY OF YEAR: 46

START TIME: 16:28 X U.T.C.
END TIME: 17:29 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

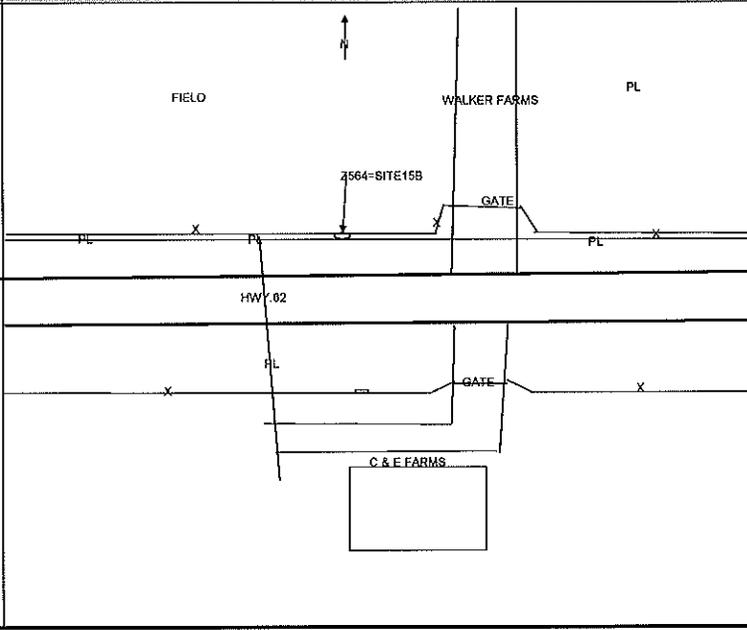
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 2C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 37 52.76N HGT. MTS:

RECEIVER S/N: 4570

LONGITUDE: 81 49 32.50W

SESSION: 002C0481 DATE: 02/17/05
DAY OF YEAR: 48

START TIME: 14:13 X U.T.C.
END TIME: 14:34 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP.L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

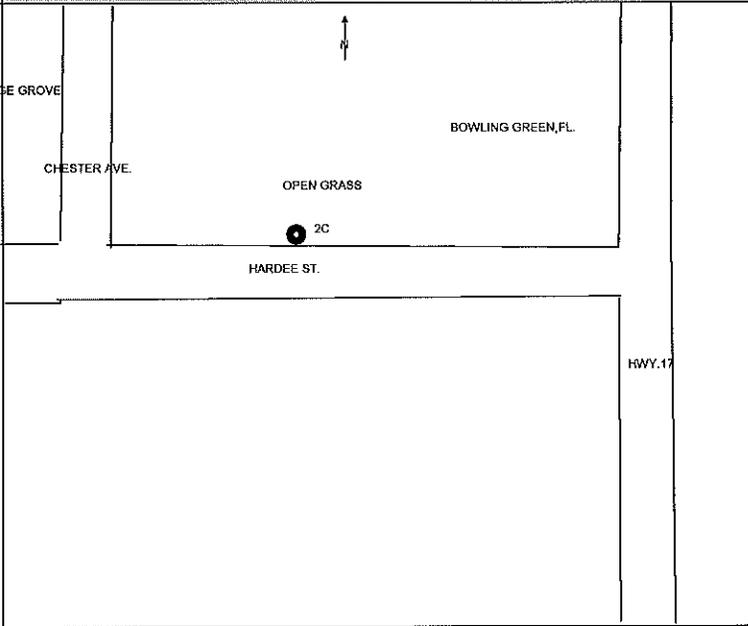
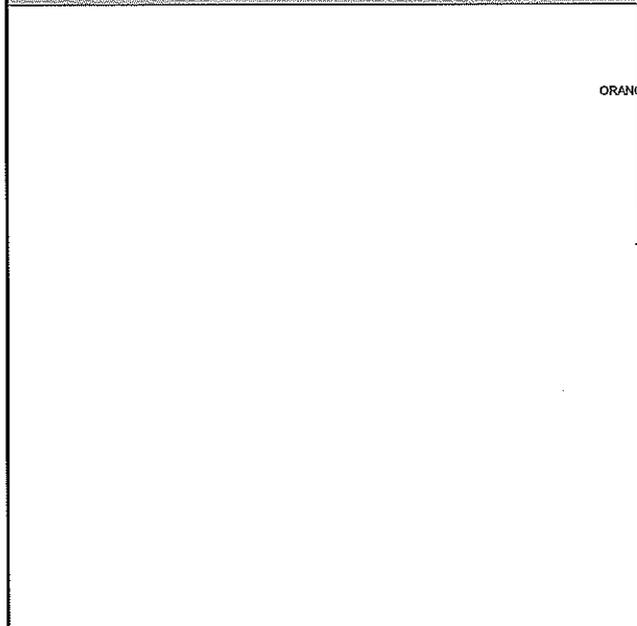
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 2C IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE NORTH SIDE OF HARDEE ST. IN BOWLING GREEN, FL., 16FT. NORTH OF GIL OF HARDEE ST., 82FT. EAST OF A POWERPOLE, 28.4FT. WEST OF A 35MPH SPEED SIGN.

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID: 3C

Proj. No.: 04129-02

STATE: FLORIDA

COUNTY: HIGHLANDS

QUAD:

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 35 24.93N

HGT. MTS

LONGITUDE: 81 31 30.28W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4570

SESSION

003C0471

DATE: 02/16/05

DAY OF YEAR: 47

START TIME: 19:57

END TIME: 20:18

X

U.T.C.

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.000M

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

50907

0.000

ANTENNA TYPE

TRIMBLE COMP. L1/L2 W/GRO. PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

3001 DESCRIPTION: 3C IS A 60D NAIL SET FLUSH IN GROUND ON THE SOUTH SIDE OF A ASPHALT RD. LEADING TO TWO TWIN MEATEL BLDG. ON THE LAST ASPHALT ENTRANCE TO BLDG...64FT SOUTH WEST OF C/L OF ASPHALT RD...24FT. SE OF THE C/L OF ASPHALT ENTRANCE TO LAST BLDG. SE OF AVONPORT MARK...62FT. EAST OF A NIGHT LIGHT POLE.

AERIAL TARGET

PUB. BENCH MARK

PUB. CONTROL

PHOTO I.D.

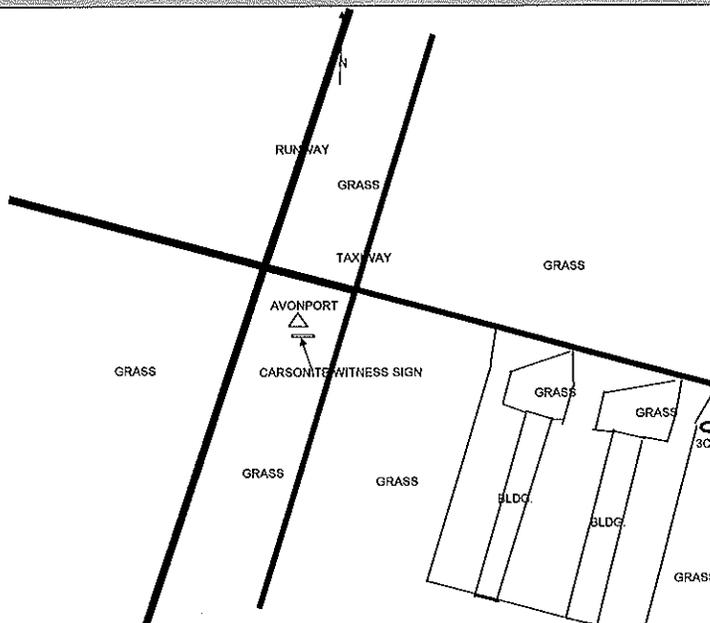
X

NEW CONTROL

BASE STATION

PHOTO:

SKETCH:



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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMP-LIDAR CHECKS

POINT ID: 4B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V. MCNEAL APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 26' 17.69"N HGT. MTS
 LONGITUDE: 081 47' 46.87"W

RECEIVER MODEL: TRIMBLE 4000SE
 RECEIVER S/N: 4302

SESSION: 004B0481 DATE: 02/17/05 START TIME: 15:29 END TIME: 16:08
 DAY OF YEAR: 48 X U.T.C. LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M)
 S/N NUMBER: 10019
 ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GROUND PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.00M UNCORRECTED
 MEASURED X FIXED HGT

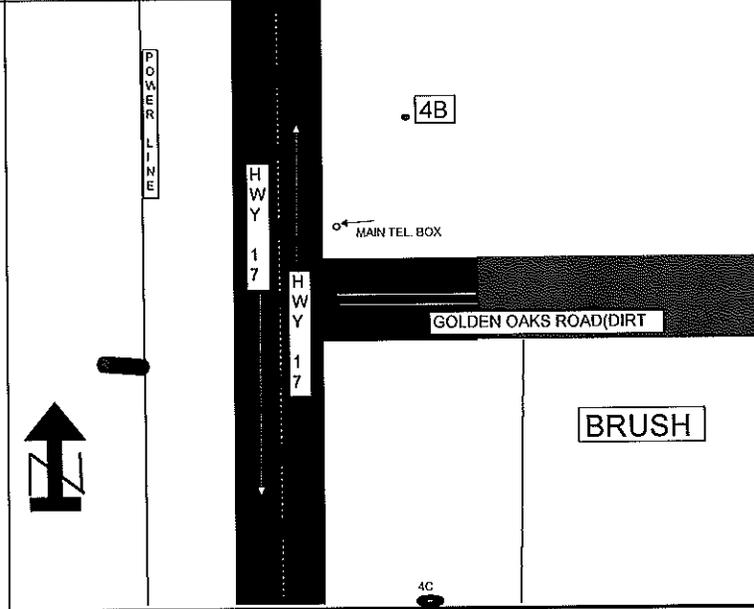
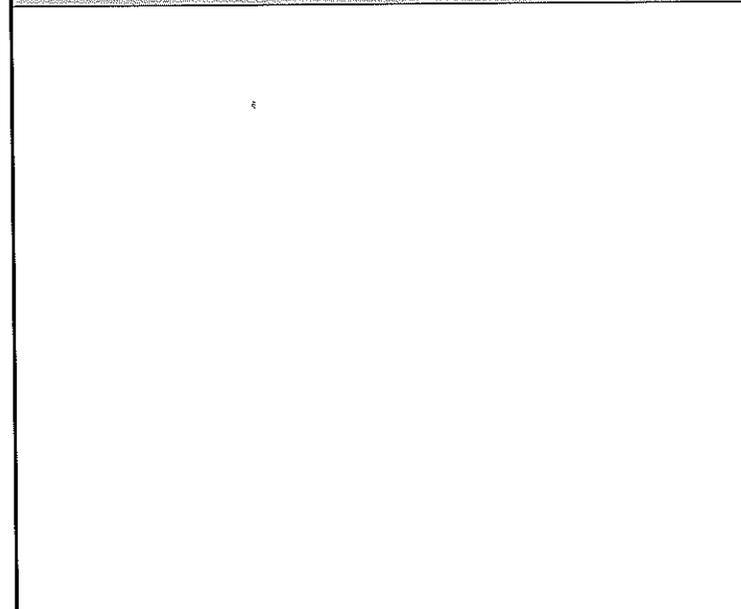
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

30001 DESCRIPTION: POINT IS A 3/4 INCH ROUND ROD W/ORANGE PLASTIC CAP SET FLUSH W/GROUND ON THE EAST SIDE OF HWY 17 & NORTH SIDE OF GOLDEN OAKS ROAD. POINT IS 62.7 FT EAST FROM C/L OF HWY 17 & 117.1 FT NORTH OF C/L OF GOLDEN OAKS ROAD & 81.3 FT NE OF A MAIN TELEPHONE BOX.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMP-LIDAR CHECKS

POINT ID:

4B

Proj. No.:

04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 26' 17.69"N HGT. MTS

LONGITUDE: 081 47' 46.87"W

RECEIVER MODEL: TRIMBLE 4000SSI

RECEIVER S/N: 4652

SESSION

DATE:

02/11/05

START TIME

17:20

U.T.C.

004B-042-3

DAY OF YEAR

42

END TIME

18:21

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA INFO

RADIUS (M)

S/N NUMBER

50496

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GROUND PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

FIXED HGT

TOP OF MONUMENT IS:

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

30001 DESCRIPTION: POINT IS A 3/4 INCH ROUND ROD W/ORANGE PLASTIC CAP SET FLUSH W/GROUND ON THE EAST SIDE OF HWY 17 & NORTH SIDE OF GOLDEN OAKS ROAD. POINT IS 62.7 FT EAST FROM C/L OF HWY 17 & 117.1 FT NORTH OF C/L OF GOLDEN OAKS ROAD & 81.3 FT NE OF A MAIN TELEPHONE BOX.

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

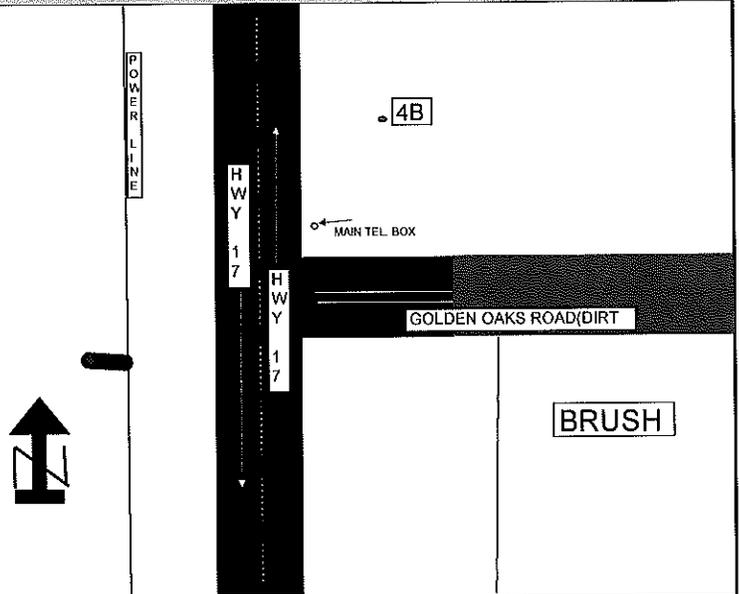
NEW CONTROL

PUB. CONTROL

BASE STATION

PHOTO:

SKETCH:





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FIELD DATA SHEET

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JOB REFERENCE

SWFWMP-LIDAR CHECKS

POINT ID: 4B

Proj. No.: 04129-02

STATE: FLORIDA

COUNTY: HARDEE

QUAD:

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 26' 17.69"N

HGT. MTS

LONGITUDE: 081 47' 46.87"W

RECEIVER MODEL: TRIMBLE 4000SSI

RECEIVER S/N: 4652

SESSION

004B-042-4

DATE: 02/11/05

DAY OF YEAR: 42

START TIME: 18:22

X

U.T.C.

END TIME: 19:23

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

S/N NUMBER: 50496

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GROUND PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

30001 DESCRIPTION POINT IS A 3/4 INCH ROUND ROD W/ORANGE PLASTIC CAP SET FLUSH W/GROUND ON THE EAST SIDE OF HWY 17 & NORTH SIDE OF GOLDEN OAKS ROAD. POINT IS 62.7 FT EAST OF C/L OF HWY 17 & 117.1 FT NORTH OF C/L OF GOLDEN OAKS ROAD & 81.3 FT NE OF A MAIN TELEPHONE BOX.

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

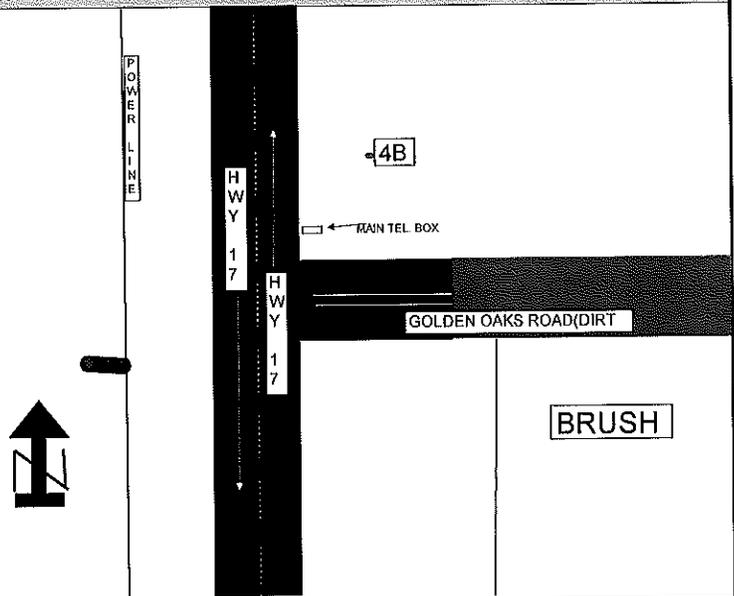
NEW CONTROL

PUB. CONTROL

X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMP-LIDAR CHECKS

POINT ID:

4C

Proj. No.:

04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V. MCNEAL APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 26 13.28N HGT. MTS

LONGITUDE: 81 47 46.79W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4570

SESSION: DATE: 02/17/05

004C0481 DAY OF YEAR: 48

START TIME: 15:42

U.T.C.

END TIME: 16:03

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT 2.00M UNCORRECTED MEASURED FIXED HGT

ANTENNA INFO

RADIUS (M)

S/N NUMBER: 50907

ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GROUND PLANE

TOP OF MONUMENT IS: FLUSH

METERS/FEET ABOVE GROUND

METERS/FEET BELOW GROUND

30001 DESCRIPTION: 4C IS A 60D NAIL SET FLUSH IN GROUND ON THE EAST SIDE OF HWY.17, 42.5FT. EAST OF C/L OF HWY.17, 11FT. NE OF A AT&T TEL. JUNCTION BOX, 330FT. SOUTH OF GOLDEN OAKS RD.

AERIAL TARGET

PHOTO I.D.

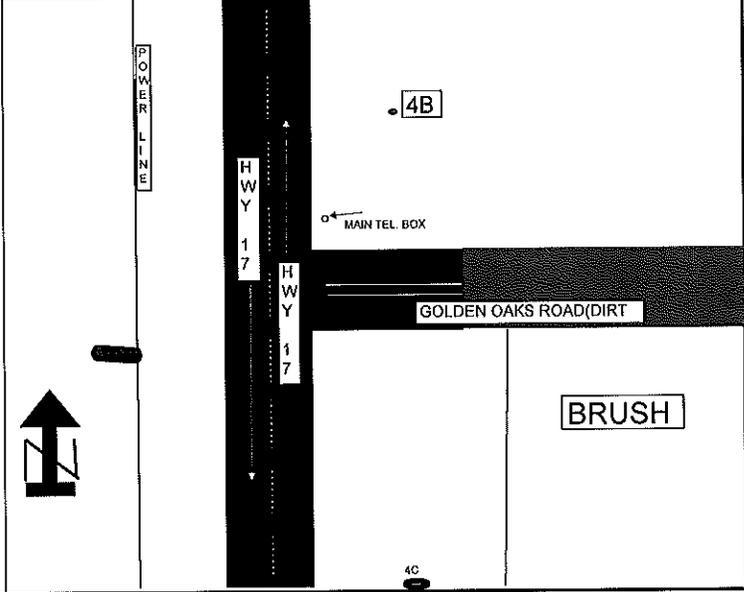
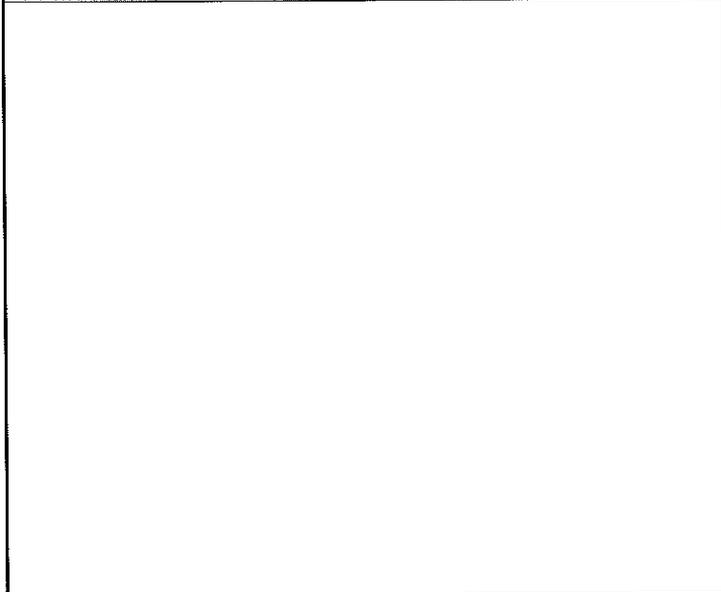
PUB. BENCH MARK

NEW CONTROL

PUB. CONTROL

BASE STATION

PHOTO: SKETCH:





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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 5B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 18 21.54N HGT. MTS
 LONGITUDE: 81 58 57.83W

RECEIVER MODEL: TRIMBLE 4700
 RECEIVER S/N: 3112

SESSION: 005B0421 DATE: 02/11/05 START TIME: 14:17 X U.T.C.
 DAY OF YEAR: 42 END TIME: 15:18 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT
 MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010
 ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

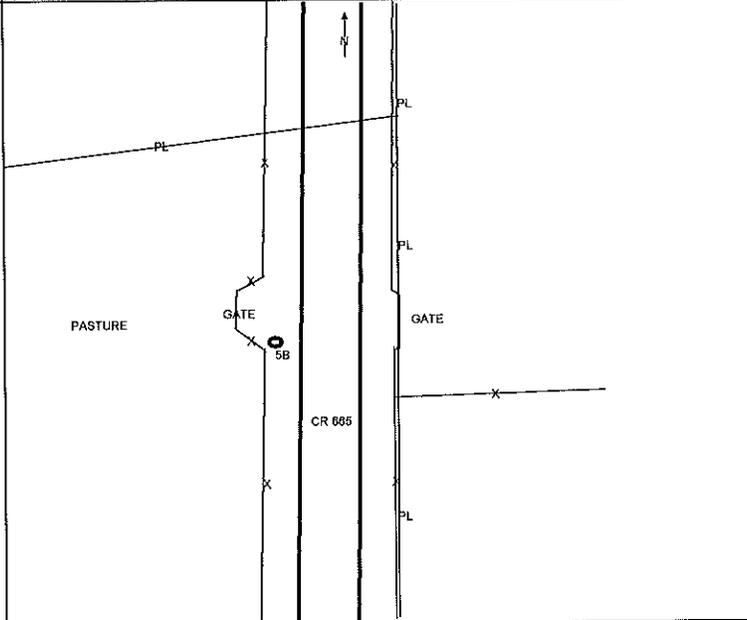
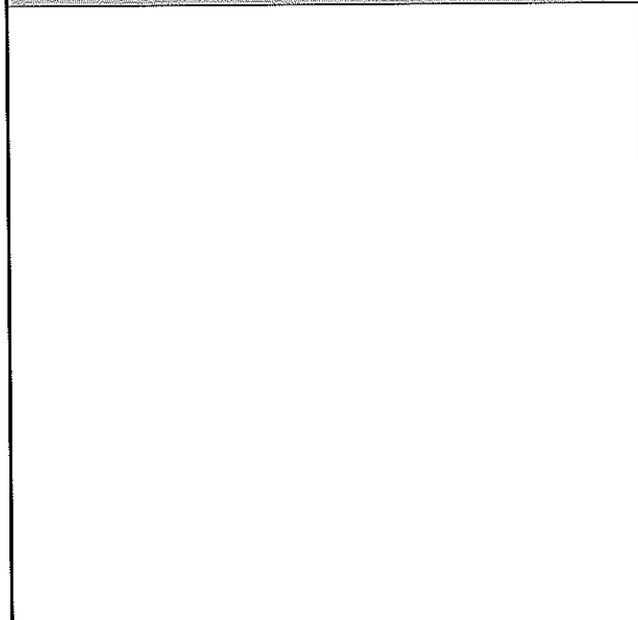
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT.

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 5B IS A 1/2" REBAR W/PLASTIC CAP SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.8 MILES N.W. OF ARCADIA, FLORIDA, FROM THE INTER. OF HWY. 70 (NW OF ARCADIA, FL.) AND CR 665, GO 3.4 MILES NORTH ON CR 665 AND POINT ON LEFT, AT A ENTRANCE GATE INTO A PASTURE, 17.8 FT. WEST OF THE WEST EDGE OF CR 665, 3.8 FT. N.E. OF A FENCE LINE CORNER POST.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO: SKETCH:





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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 8B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 18 21.54N HGT. MTS:
LONGITUDE: 81 58 57.83W

RECEIVER S/N: 3112

SESSION: 005B0422 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 15:19 X U.T.C.
END TIME: 16:20 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT:
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

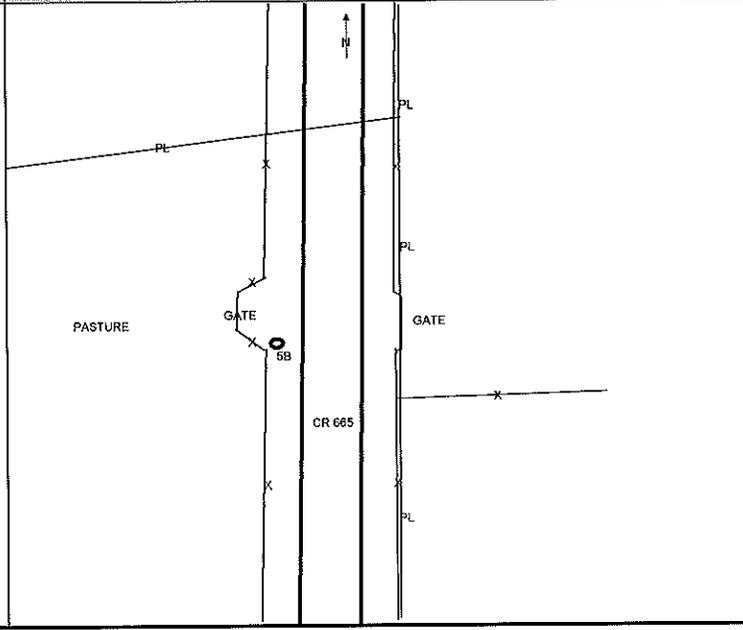
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 5B IS A 1/2" REBAR W/PLASTIC CAP SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.8 MILES N.W. OF ARCADIA FLORIDA, FROM THE INTER. OF HWY. 79 (NW OF ARCADIA FL. AND CR 665, GO 3.4 MILES NORTH ON CR 665 AND POINT ON LEFT, AT A ENTRANCE GATE INTO A PASTURE, 17.8 FT. WEST OF THE WEST EDGE OF CR 665, 3.8 FT. N.E. OF A FENCE LINE CORNER POST.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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 FIELD DATA SHEET

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 5B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 18 21.54N HGT. MTS:
 LONGITUDE: 81 58 57.83W

RECEIVER S/N: 3112

SESSION: 005B0423 DATE: 02/11/05
 DAY OF YEAR: 42

START TIME: 17:16 X U.T.C.
 END TIME: 18:32 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010
 ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

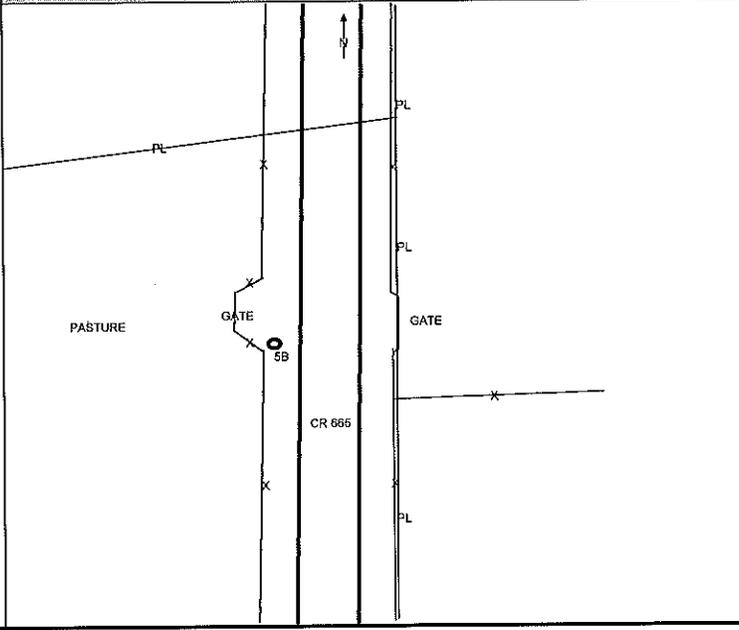
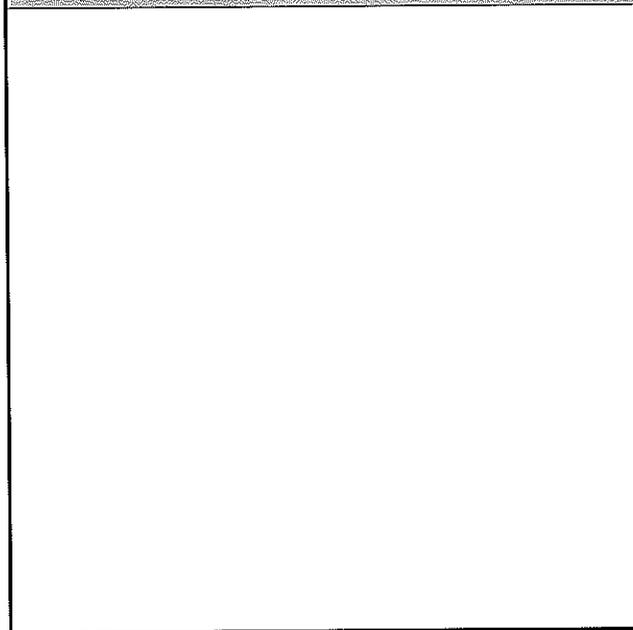
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 5B IS A 1/2" REBAR W/PLASTIC CAP SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.8 MILES N.W. OF ARCADIA, FLORIDA, FROM THE INTER. OF HWY. 70 (NW OF ARCADIA FL.) AND CR 665, GO 3.4 MILES NORTH ON CR 665 AND POINT ON LEFT AT A ENTRANCE GATE INTO A PASTURE, 17.8 FT. WEST OF THE WEST EDGE OF CR 665, 3.6 FT. N.E. OF A FENCE LINE CORNER POST.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 5B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 18 21.54N HGT. MTS

RECEIVER S/N: 4302

LONGITUDE: 81 58 57.83W

SESSION: 005B0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 12:59 X U.T.C.
END TIME: 13:50 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M) 0.000
S/N NUMBER 10019 0.000
ANTENNA TYPE TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

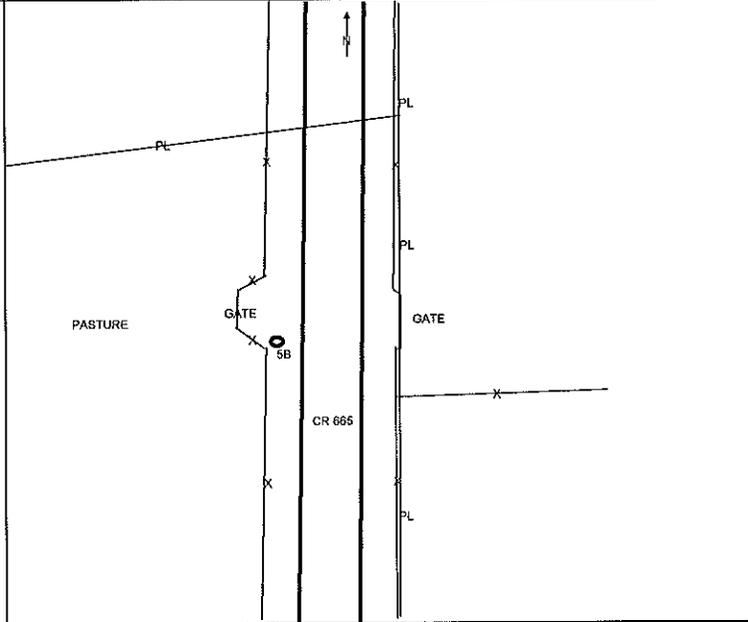
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 5B IS A 1/2" REBAR W/PLASTIC CAP SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.6 MILES N.W. OF ARCADIA, FLORIDA, FROM THE INTER. OF HWY. 70 (NW OF ARCADIA, FL.) AND CR 665, GO 3.4 MILES NORTH ON CR 665 AND POINT ON LEFT, AT A ENTRANCE GATE INTO A PASTURE... 17.6 FT. WEST OF THE WEST EDGE OF CR 665... 3.8 FT. N.E. OF A FENCE LINE CORNER POST.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 5C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 18 04.46N HGT. MTS

RECEIVER S/N: 4570

LONGITUDE: 81 58 57.92W

SESSION: 005C0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 13:17 X U.T.C.
END TIME: 13:42 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

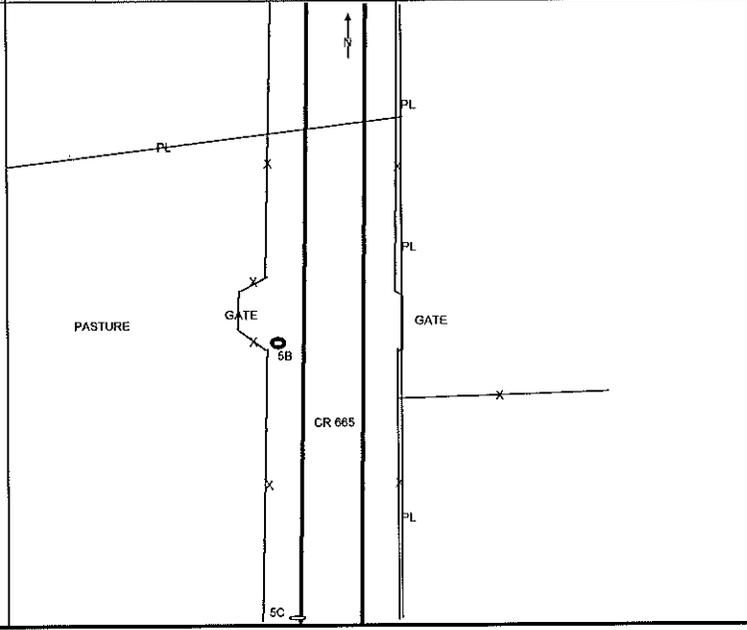
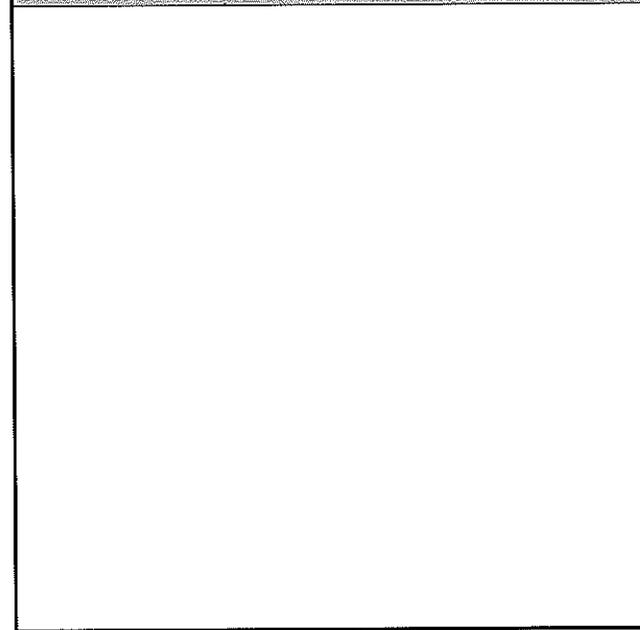
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SCIS A 60D NAIL, SET FLUSH IN GROUND ON THE WEST SIDE OF CR 665, APPROX. 9.8 MILES N.W. OF ARCADIA, FLORIDA, FROM THE INTER. OF HWY. 70 (NW OF ARCADIA, FL.) AND CR 685, GO 3.2 MILES NORTH ON CR 685 AND POINT ON LEFT, AT AN ENTRANCE GATE INTO AN ORANGE GROVE, 15 FT. WEST OF C/L OF CR 685, 49 FT. EAST OF A NORTH GATE POST, 31 FT. NORTH OF C/L OF LIMESTONE RD. TO ORANGE GROVE.

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: 6B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 21 18.16 N HGT. MTS

RECEIVER S/N: 4302

LONGITUDE: 081 42 53.65 W

SESSION: 006B0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 17:53 X U.T.C.
END TIME: 18:42 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M MEASURED X FIXED HGT.

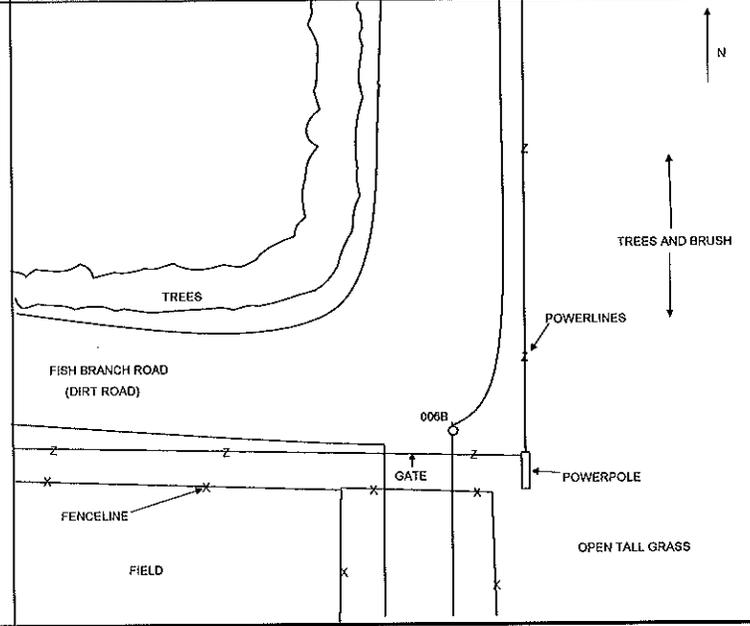
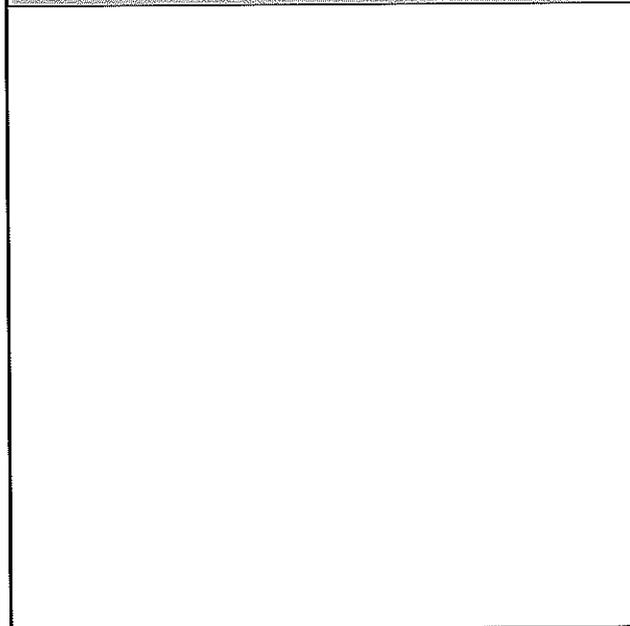
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 006B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE SIDE OF CURVE ON FISH BRANCH ROAD. IS 51.2 FEET SE OF CL FISH BRANCH ROAD. IS 72.2 FEET NORTH OF FENCELINE CORNER WHERE GATE IS AND THE POLE WHERE FENCE ATTACHES TO.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: 6B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI

LATITUDE: 27 21 18.16 N HGT. MTS

RECEIVER S/N: 3158

LONGITUDE: 081 42 53.65 W

SESSION: 006B0421 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 14:17 X U.T.C.
END TIME: 15:18 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

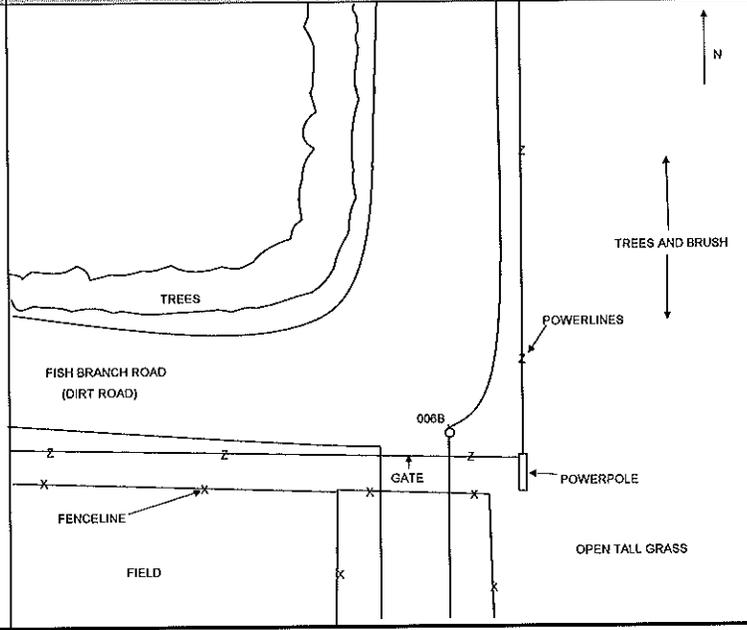
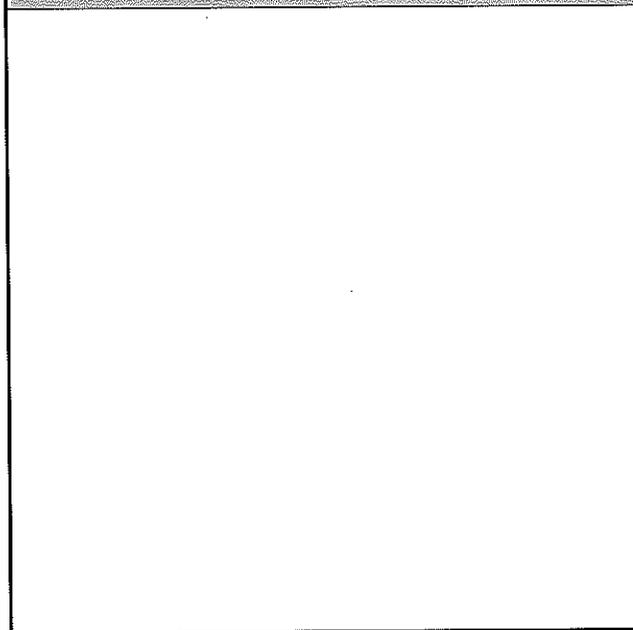
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 006B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE SIDE OF CURVE ON FISH BRANCH ROAD. IS 51.2 FEET SE OF CL FISH BRANCH ROAD. IS 72.2 FEET NORTH OF FENCELINE CORNER WHERE GATE IS AND THE POLE WHERE FENCE ATTACHES TO.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
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JOB REFERENCE
 SWFWMD-LIDARCHECK

POINT ID: 006B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: MITCH/GARY APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158
 LATITUDE: 27 21 18.16 N HGT. MTS:
 LONGITUDE: 081 42 53.65 W

SESSION: 006B0422 DATE: 02/11/05 START TIME: 15:19 X U.T.C.
 DAY OF YEAR: 42 END TIME: 16:20 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

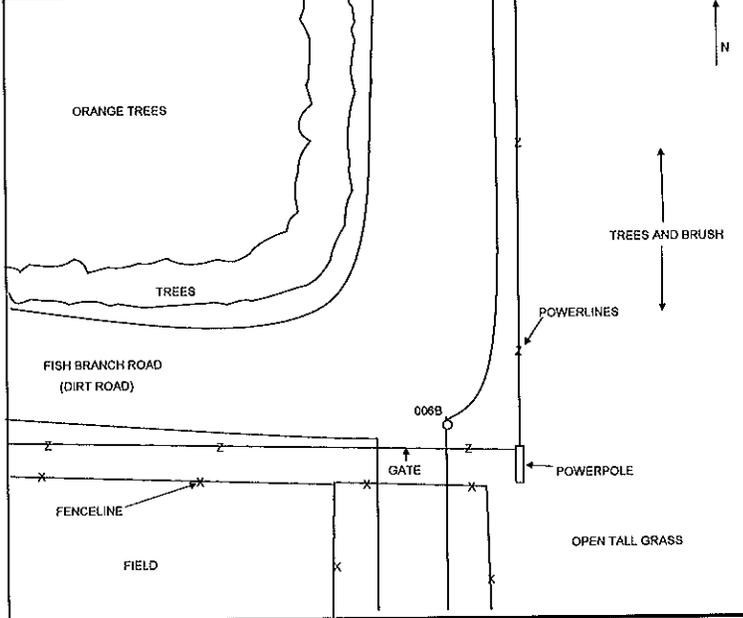
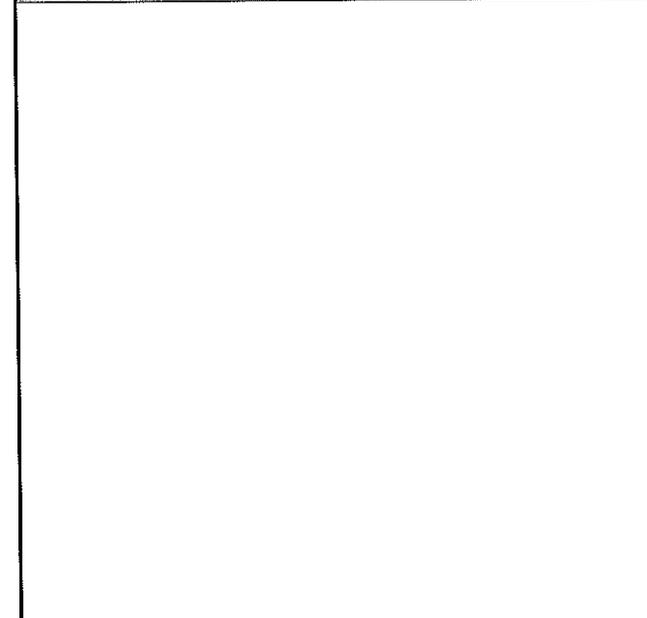
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 006B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE SIDE OF CURVE ON FISH BRANCH ROAD. IS 51.2 FEET SE OF CL FISH BRANCH ROAD. IS 72.2 FEET NORTH OF FENCELINE CORNER WHERE GATE IS AND THE POLE WHERE FENCE ATTACHES TO.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO: SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: 6C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD:

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (GIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4570

LATITUDE: 27 21 36.85N HGT. MTS:
LONGITUDE: 81 42 53.35W

SESSION: 006C0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 18:04 X U.T.C.
END TIME: 18:34 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M MEASURED X FIXED HGT.

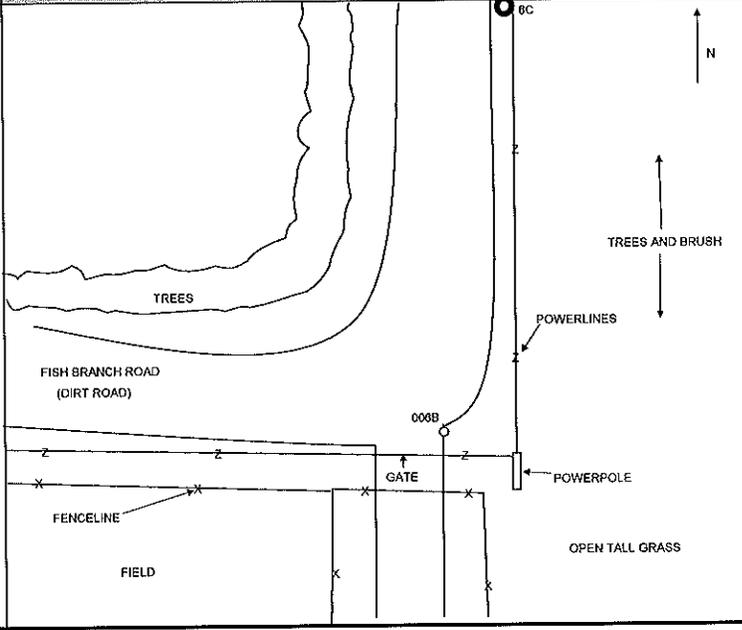
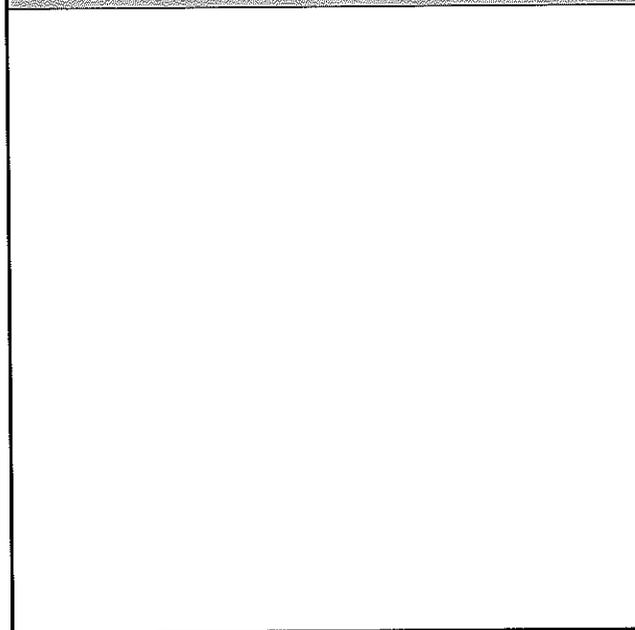
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 6C IS A GI SPIKE SET FLUSH IN GROUND ON THE EAST SIDE OF FISH BRANCH RD.
NORTH OF 68.....27FT, EAST OF RD.....8FT, SW OF FENCE POST.....66.5FT, NORTH OF A POWERPOLE,

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

PHOTO:

SKETCH:



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**GPS CONTROL SURVEY
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JOB REFERENCE
 SWFWMP-LIDAR CHECKS

POINT ID: 7C
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 11' 38.00N HGT. MTS
 LONGITUDE: 081 50' 25.96W

RECEIVER MODEL: TRIMBLE 4000SE
 RECEIVER S/N: 4570

SESSION: 007C0471 DATE: 02/16/05
 DAY OF YEAR: 47

START TIME: 16:37 X U.T.C.
 END TIME: 16:58 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M):
 S/N NUMBER: 50907
 ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

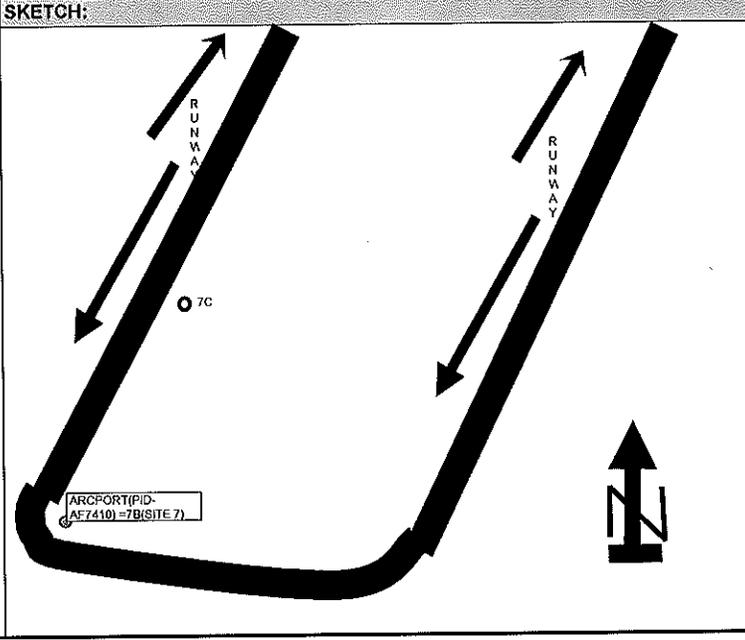
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.00M UNCORRECTED
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET: ABOVE GROUND
 METERS/FEET: BELOW GROUND

30001 DESCRIPTION: 7C IS A 60D NAIL SET FLUSH IN GROUND +500FT. NE OF
 AIRPORT(SURVEY MARK) 15FT. SE OF A BLUE TAXIWAY LT.....+200FT. SOUTH OF A
 ORANGE WIND FLOP...45FT. SE OF C/L OF TAXIWAY.

AERIAL TARGET
 PUB. BENCH MARK X NEW CONTROL
 PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMP-LIDAR CHECKS

POINT ID: (8B)W260(PID=AF5095)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: FT OGDEN(1987)

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 03' 17.77999"N HGT. MTS:
LONGITUDE: 081 57' 52.51078"W 7.812M

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 4652

SESSION: W260-042-1 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 12:20 END TIME: 20:14
X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): S/N NUMBER: 50496
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT

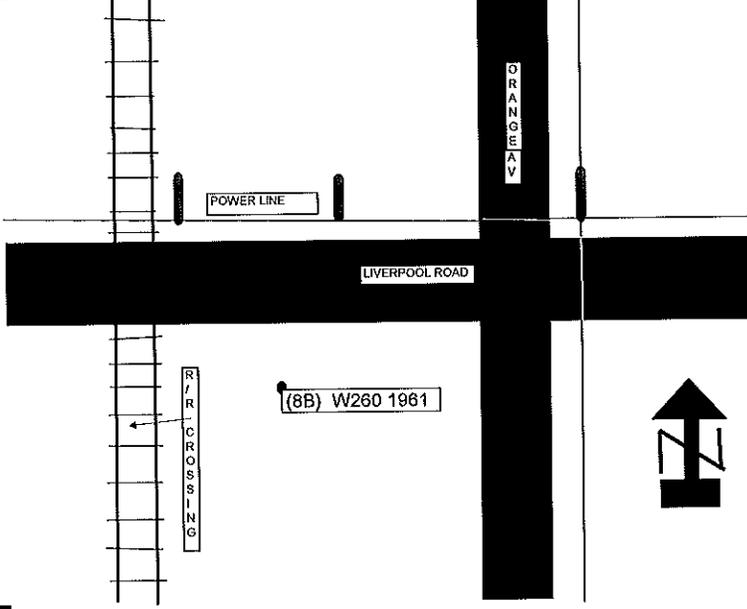
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

30001 DESCRIPTION:SEE NGS DATA SHEET. POINT IS = TO 8B(SITE B)

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:

SKETCH:



GPS CONTROL SURVEY FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: (8B)W260(PID=AF5095)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: FT OGDEN(1987)

OPERATOR: V. MCNEAL APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 03' 17.77999"N HGT. MTS: 7.812M
LONGITUDE: 081 57' 52.51078"W

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 4652

SESSION: W260-041-3 DATE: 02/10/05
DAY OF YEAR: 41

START TIME: 17:12 X U.T.C.
END TIME: 18:15 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): S/N NUMBER: 50496
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT

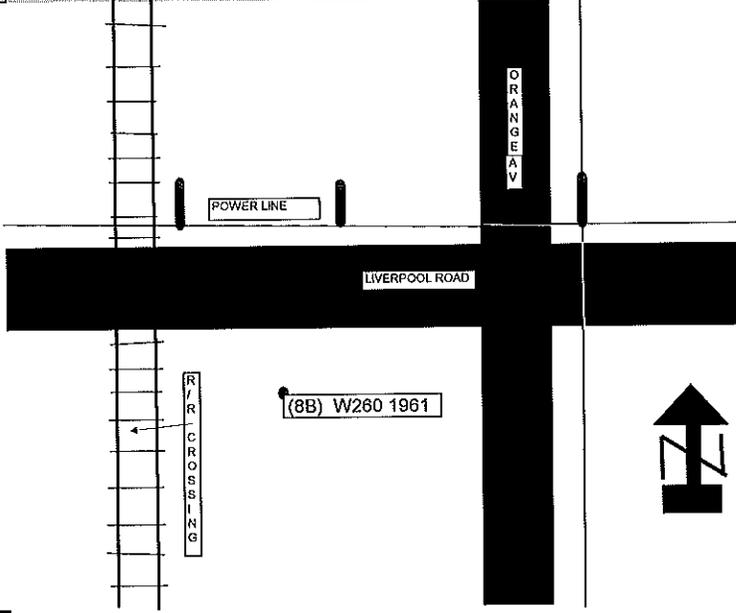
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

30001 DESCRIPTION: SEE NGS DATA SHEET. POINT IS = TO 8B(SITE B)

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:



**GPS CONTROL SURVEY
FIELD DATA SHEET**

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: (8B)W260(PID=AF5095)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: FT OGDEN(1987)

OPERATOR: V. MCNEAL APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 03' 17.77999"N HGT. MTS
LONGITUDE: 081 57' 52.51078"W 7.812M

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 4652

SESSION: W260-041-4 DATE: 02/10/05
DAY OF YEAR: 41

START TIME: 18:17 END TIME: 19:18
X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M)
S/N NUMBER: 50496
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.00M UNCORRECTED
MEASURED X FIXED HGT

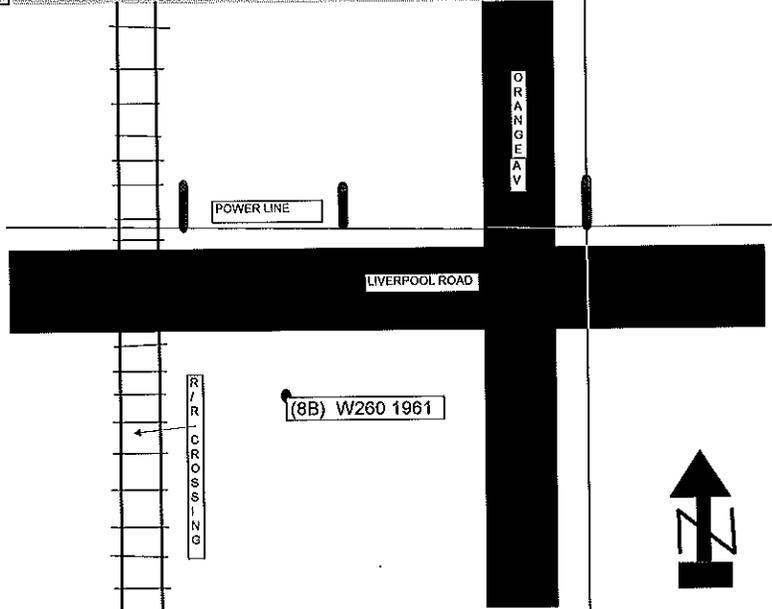
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

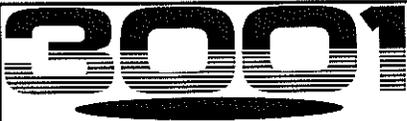
30001 DESCRIPTION:SEE NGS DATA SHEET. POINT IS = TO 8B(SITE B)

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMP-LIDAR CHECKS

POINT ID: (8B)W260(PID=AF5095)

Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: FT OGDEN(1987)

OPERATOR: M. HAVARD APPROXIMATE POSITION (GIA/CODE)

LATITUDE: 27 03' 17.77999"N HGT. MTS

LONGITUDE: 081 57' 52.51078"W 7.812M

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION: W2600471 DATE: 02/16/05

DAY OF YEAR: 47

START TIME: 15:01

X U.T.C.

END TIME: 15:40

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT 2.00M UNCORRECTED
MEASURED X FIXED HGT

ANTENNA INFO

RADIUS (M)
S/N NUMBER: 10019
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

TOP OF MONUMENT IS: X FLUSH

METERS/FEET ABOVE GROUND

METERS/FEET BELOW GROUND

30001 DESCRIPTION:SEE NGS DATA SHEET. POINT IS = TO 8B(SITE B)

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

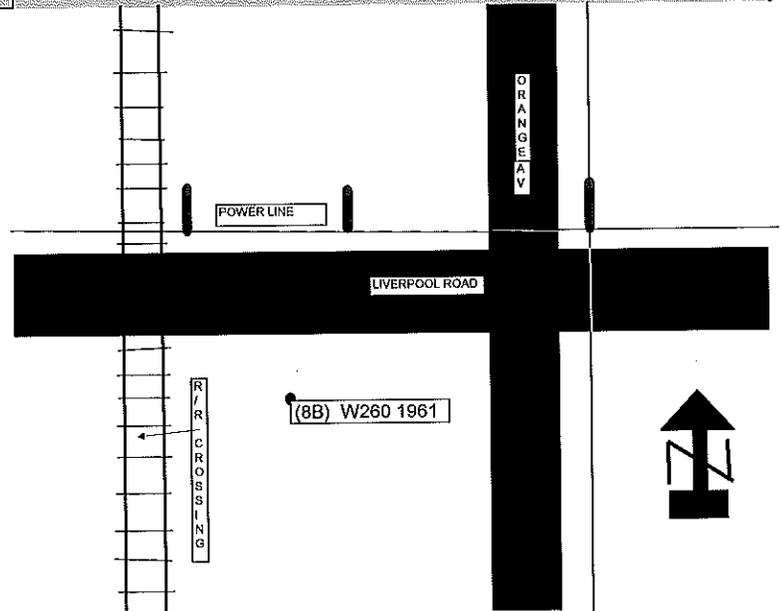
NEW CONTROL

X PUB. CONTROL

BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMP-LIDAR CHECKS

POINT ID: 8C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 03 18.55N HGT. MTS:
LONGITUDE: 81 57 59.02W 7.812M

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4570

SESSION: 008C0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 15:14 X U.T.C.
END TIME: 15:35 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M):
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT.

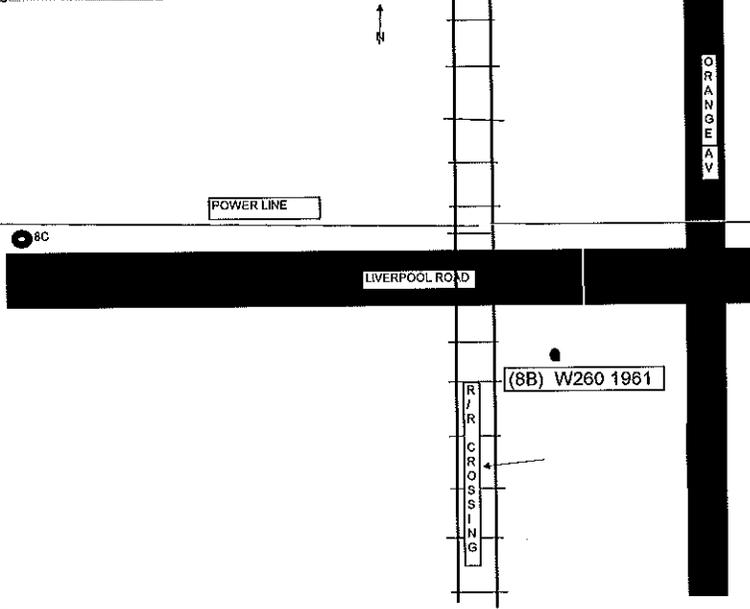
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

30001 DESCRIPTION: 8C IS A 60D NAIL SET FLUSH IN GROUND ON THE NORTH SIDE OF LIVERPOOL RD. 17FT. NORTH OF C/L. OF LIVERPOOL RD. 23FT. S.E. OF A POWERPOLE. 67FT. EAST OF C/L. OF A SAND RD. LEADING NORTH.

AERIAL TARGET
PUB. BENCH MARK X
PUB. CONTROL BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
 FIELD DATA SHEET

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 9B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (C/A/CODE)
 LATITUDE: 27 02 41.48 N HGT. MTS
 LONGITUDE: 081 46 45.69 W

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158

SESSION: 009B0413 DATE: 02/10/05
 DAY OF YEAR: 41

START TIME: 17:12 X U.T.C.
 END TIME: 18:15 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT
 MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M) 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 WW GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

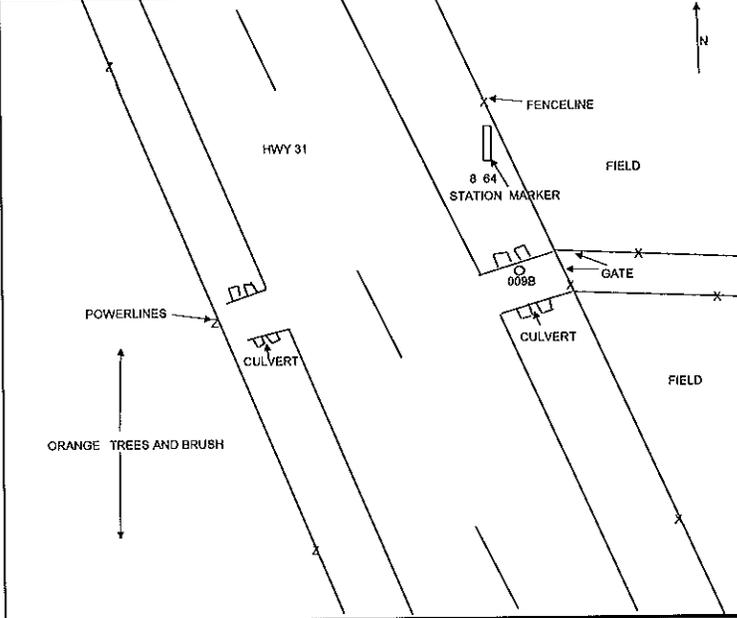
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 009B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND ON TOP OF CONCRETE CULVERT. IS LOCATED ON THE EAST SIDE OF HWY 31. IS 20 FEET SOUTHWEST OF FENCELINE. IS 32 FEET NORTHEAST OF CL HWY 31.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
 FIELD DATA SHEET

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 009B
 Proj. No.: 04128-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (CIA/CODE)
 LATITUDE: 27 02 41.48 N HGT. MTS
 LONGITUDE: 081 46 45.69 W

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158

SESSION: 009B0414 DATE: 02/10/05
 DAY OF YEAR: 41

START TIME: 18:16 X U.T.C.
 END TIME: 19:18 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

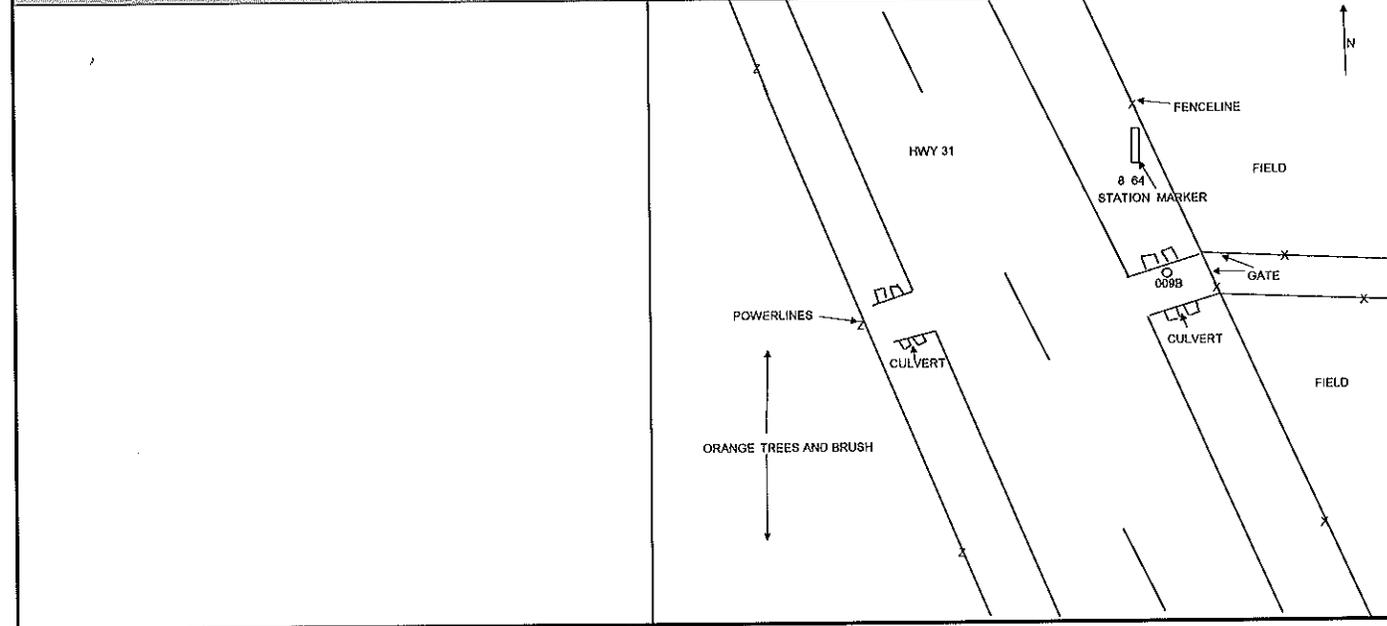
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 009B IS 3/8 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND ON TOP OF CONCRETE CULVERT. IS LOCATED ON THE EAST SIDE OF HWY 31. IS 20 FEET SOUTHWEST OF FENCELINE. IS 32 FEET NORTHEAST OF CL HWY 31.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
 FIELD DATA SHEET

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 9C
 Proj. No.: 04128-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 02 28.44N HGT. MTS:
 LONGITUDE: 081 46 36.26W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4570

SESSION: 009C0431 DATE: 02/12/05
 DAY OF YEAR: 43

START TIME: 17:14 X U.T.C.
 END TIME: 17:41 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

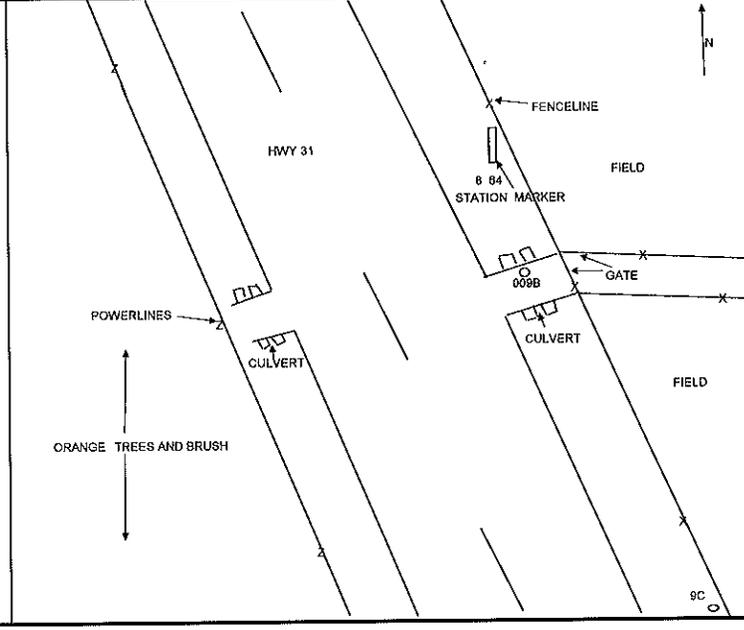
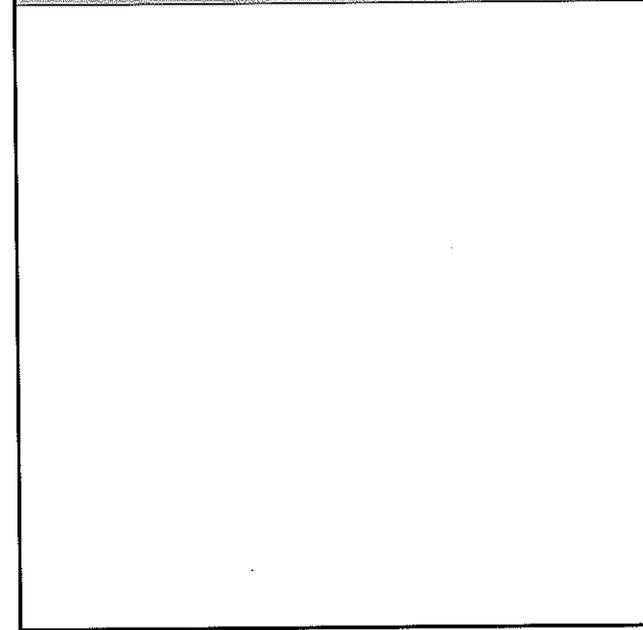
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 009C IS A 80D NAIL, DRIVEN FLUSH WITH GROUND ON THE EAST SIDE OF HWY. 31, (JUNCTION OF HWY. 31 AND SE NOTTSDAIRY RD.), 43.3FT. N.E. OF C/L OF HWY. 31, 12FT. N.W. OF A GATE (NORTHLY MOST GATEPOST, 19FT. SOUTH OF A FIBER OPTIC SIGN POST).

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 X NEW CONTROL
 BASE STATION

PHOTO: SKETCH:





**GPS CONTROL SURVEY
FIELD DATA SHEET**

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 10B
Proj. No.: 04128-02

STATE: FLORIDA **COUNTY:** DESOTO **QUAD:**

OPERATOR: M. HAVARD

RECEIVER MODEL: TRIMBLE 4700
RECEIVER S/N: 3112

APPROXIMATE POSITION (GIA/CODE)

LATITUDE: 27 04 12.95N **HGT. MTS:**
LONGITUDE: 81 33 44.33W

SESSION: 010B0413 **DATE:** 02/10/05 **START TIME:** 17:14 X U.T.C.
DAY OF YEAR: 41 **END TIME:** 18:15 LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT: **MEASURED** **FIXED HGT.**

ANTENNA INFO

RADIUS (M): 0.000
S/N NUMBER: 59010 0.000
ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)

MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X **FIXED HGT**

TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

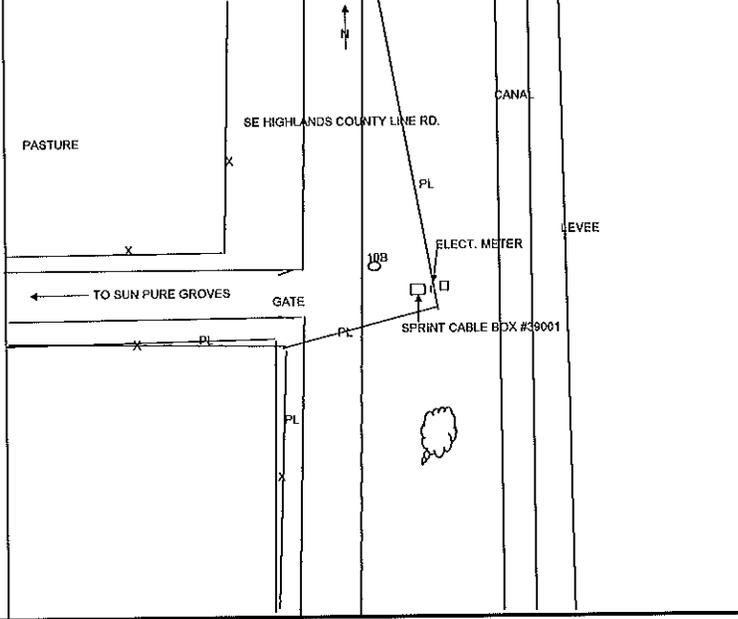
3001 DESCRIPTION: 10B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE EAST EDGE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A RD. LEADING WEST TO SUN PURE GROVES, 5FT. EAST OF THE EAST EDGE OF RD, 15.8FT. NW OF A ELECT. METER (MOUNTED ON POST), 10.8FT. NW OF THE NW CORNER OF A SPRINT CABLE BOX #39001.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL

PHOTO I.D.
NEW CONTROL
X **BASE STATION**

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 10B
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 04 12.95N HGT. MTS:
LONGITUDE: 81 33 44.33W

RECEIVER MODEL: TRIMBLE 4700

RECEIVER S/N: 3112

SESSION: 010B0414 DATE: 02/10/05
DAY OF YEAR: 41

START TIME: 18:16 X U.T.C.
END TIME: 19:18 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

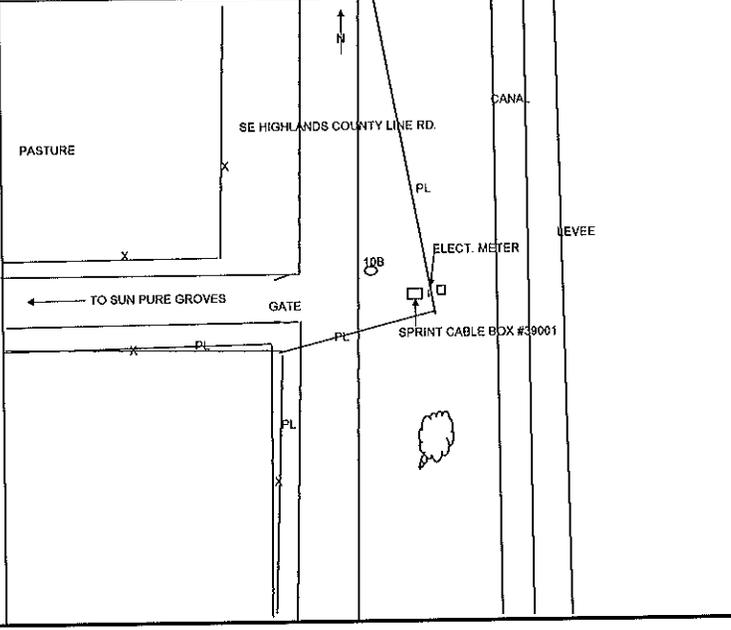
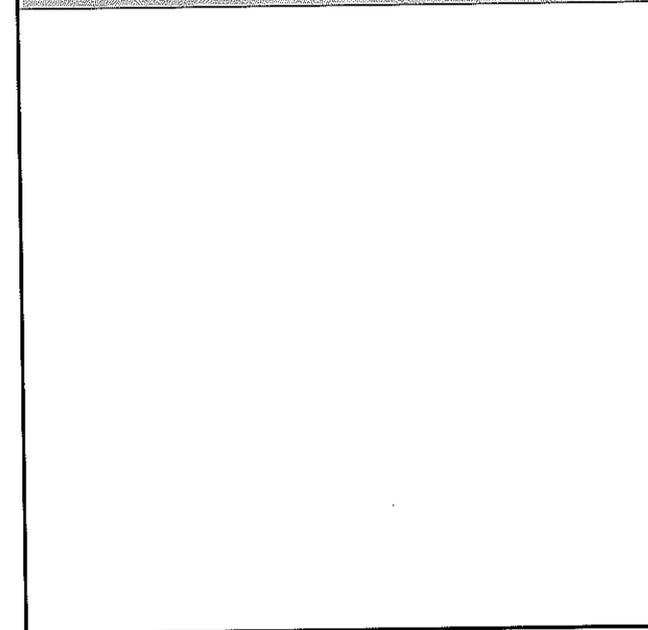
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 10B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE EAST EDGE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A RD. LEADING WEST TO SUN PURE GROVES...5FT. EAST OF THE EAST EDGE OF RD...15.6FT. NW OF A ELECT. METER (MOUNTED ON POST)...10.6FT. NW OF THE NW CORNER OF A SPRINT CABLE BOX #39001.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





**GPS CONTROL SURVEY
FIELD DATA SHEET**

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 10B
Proj. No.: 04129-02

STATE: FLORIDA **COUNTY:** DESOTO **QUAD:**

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 04 12.95N **HGT. MTS:**

RECEIVER S/N: 3112

LONGITUDE: 81 33 44.33W

SESSION: 010B0411 **DATE:** 02/10/05
DAY OF YEAR: 41

START TIME: 14:23 **X** **U.T.C.**
END TIME: 15:25 **LOCAL**

ANTENNA HEIGHT (SLANT)

MTRS/FT: **MEASURED** **FIXED HGT.**

ANTENNA INFO

RADIUS (M): 0.000
S/N NUMBER: 59010 **0.000**
ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)

MTRS/FT: 2.000M (UNCORRECTED)
MEASURED **X** **FIXED HGT**

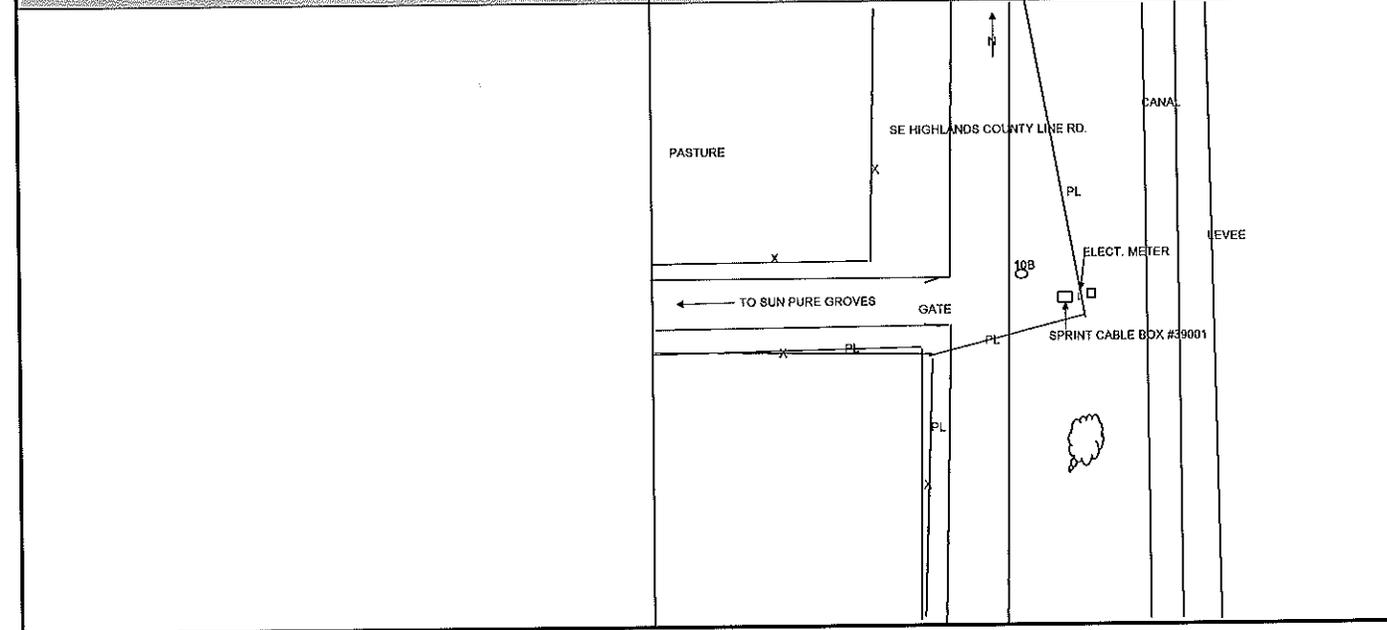
TOP OF MONUMENT IS: **X** **FLUSH**
METERS/FEET: **ABOVE GROUND**
METERS/FEET: **BELOW GROUND**

3001 DESCRIPTION: 10B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE EAST EDGE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A RD. LEADING WEST TO SUN PURE GROVES...5FT. EAST OF THE EAST EDGE OF RD...15.9FT. NW OF A ELECT. METER (MOUNTED ON POST)...10.8FT. NW OF THE NW CORNER OF A SPRINT CABLE BOX #39001.

<input type="checkbox"/>	AERIAL TARGET	<input type="checkbox"/>	PHOTO I.D.
<input type="checkbox"/>	PUB. BENCH MARK	<input type="checkbox"/>	NEW CONTROL
<input type="checkbox"/>	PUB. CONTROL	X	BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 10B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 04 12.95N HGT. MTS:
 LONGITUDE: 81 33 44.33W

RECEIVER S/N: 3112

SESSION: 010B0412 DATE: 02/10/05
 DAY OF YEAR: 41

START TIME: 15:26 X U.T.C.
 END TIME: 16:28 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010
 ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

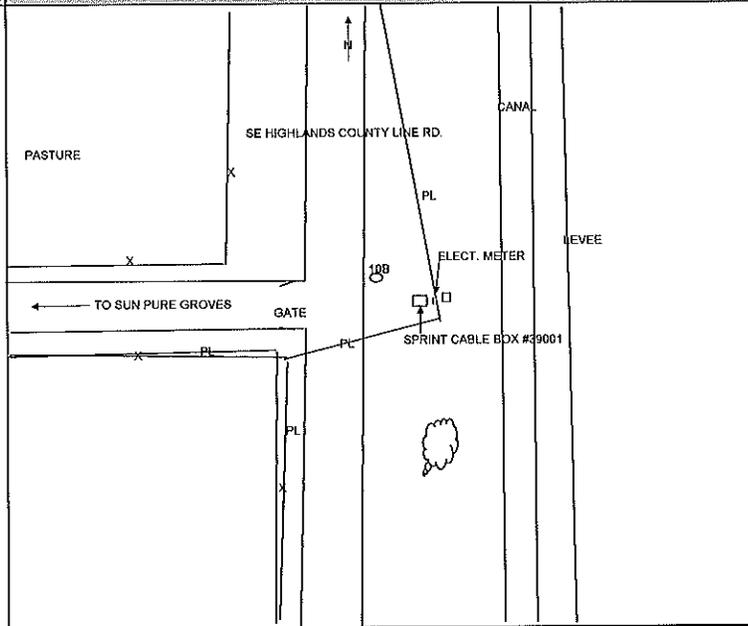
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 10B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE EAST EDGE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A RD. LEADING WEST TO SUN PURE GROVES...9FT. EAST OF THE EAST EDGE OF RD...15.8FT. NW OF A ELECT. METER (MOUNTED ON POST)...10.8FT. NW OF THE NW CORNER OF A SPRINT CABLE BOX #39001.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 10C
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: DESOTO QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000
RECEIVER S/N: 4570

LATITUDE: 27 04 27.94N HGT. MTS:
LONGITUDE: 81 33 44.24W

SESSION: 010C0431 DATE: 02/12/05
DAY OF YEAR: 43

START TIME: 13:41 X U.T.C.
END TIME: 14:06 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

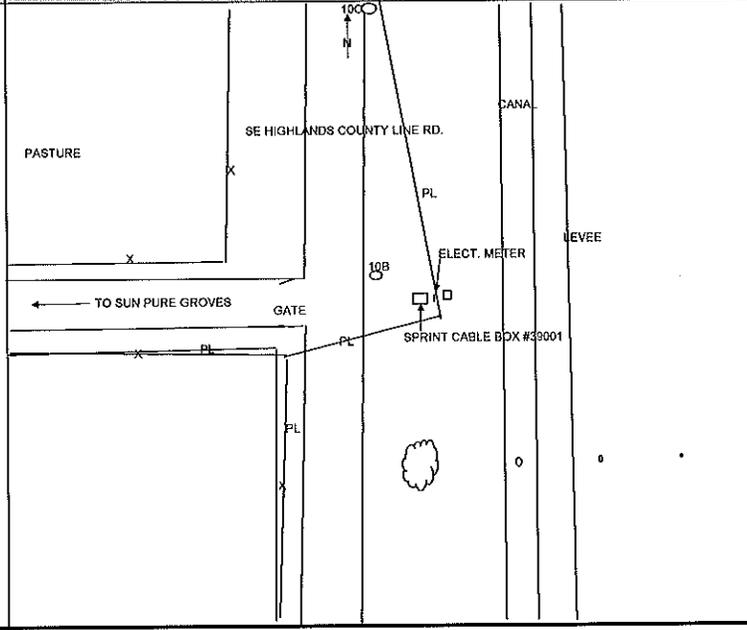
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 10C IS A 80D NAIL SET FLUSH IN GROUND ON THE EAST SIDE OF SE HIGHLANDS COUNTY LINE RD. AT THE JUNCTION OF SE HIGHLANDS COUNTY LINE RD. AND A GATE ENTRANCE THAT IS ON THE WEST SIDE OF RD. AND CHECK POINT IS ACROSS RD. FROM GATE... 43FT. EAST OF C/L OF GATE... 18FT. EAST OF C/L OF RD... 8.2FT. NORTH OF WOODEN POST FOR SPRINT BOX NAFCO 18.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 11B=A580 2003
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 3158

LATITUDE: 26 54 04.69 N HGT. MTS:
LONGITUDE: 081 45 36.27 W

SESSION: 011B0411 DATE: 02/10/05
DAY OF YEAR: 41

START TIME: 14:24 X U.T.C.
END TIME: 15:25 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

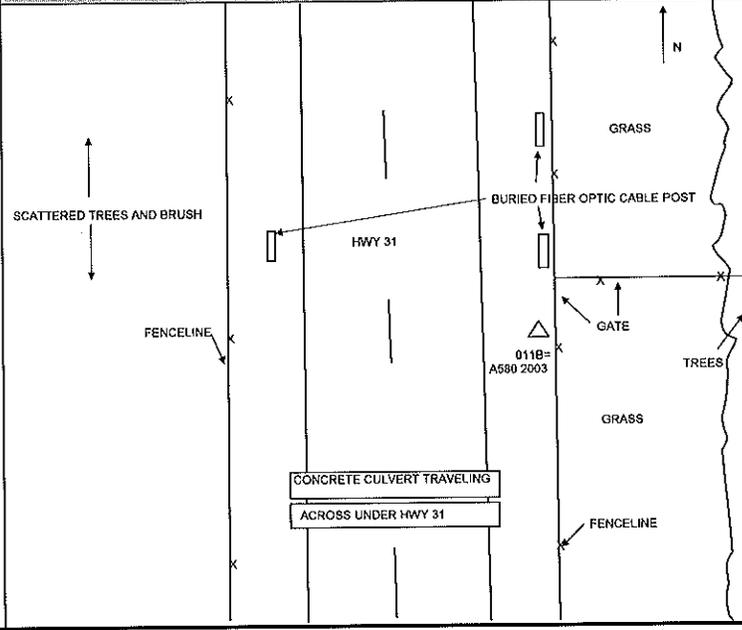
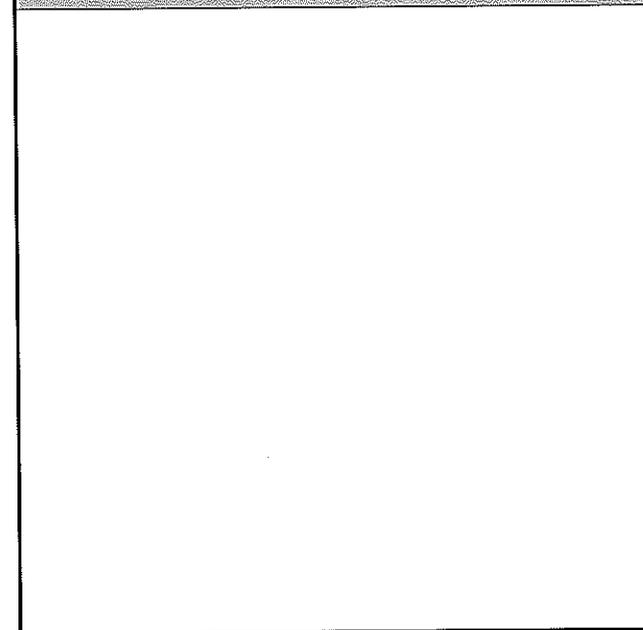
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 011B=A580 2003 IS AN ALUMINUM FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION SURVEY CAP FLUSH WITH GROUND. IS LOCATED ON THE EAST SIDE OF HWY 31. IS 2 FEET WEST OF FENCELINE. IS 45 FEET EAST OF CL HWY 31.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 11B=A580 2003
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 26 54 04.69 N HGT. MTS
 LONGITUDE: 081 45 36.27 W

RECEIVER MODEL: TRIMBLE 4000SSI

RECEIVER S/N: 3158

SESSION: 011B0412 DATE: 02/10/05
 DAY OF YEAR: 41

START TIME: 15:26 X U.T.C.
 END TIME: 16:28 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

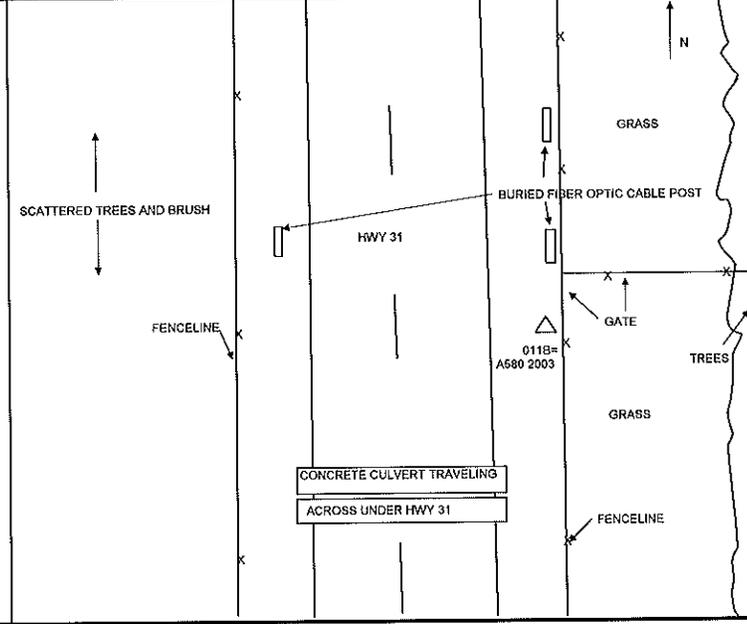
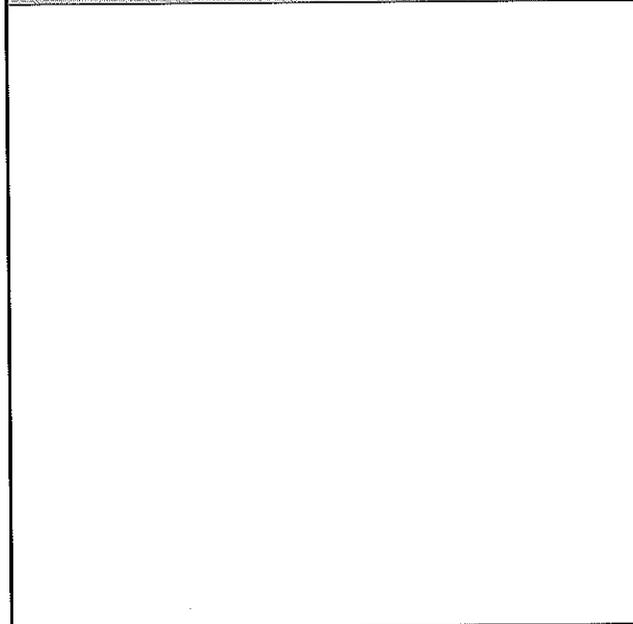
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 011B=A580 2003 IS AN ALUMINUM FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION SURVEY CAP FLUSH WITH GROUND. IS LOCATED ON THE EAST SIDE OF HWY 31 IS 2 FEET WEST OF FENCELINE. IS 45 FEET EAST OF CL HWY 31.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO: SKETCH:





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GPS CONTROL SURVEY
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 12C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD:

OPERATOR: M.HAVARD
RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302
APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 26 49 49.49N HGT. MTS
LONGITUDE: 81 57 13.50W

SESSION: 012C-043-1 DATE: 01/12/05 START TIME: 20:33 END TIME: 20:55
DAY OF YEAR: 43 U.T.C. LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.00M UNCORRECTED MEASURED X FIXED HGT.

ANTENNA INFO
RADIUS (M)
S/N NUMBER: 10018
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

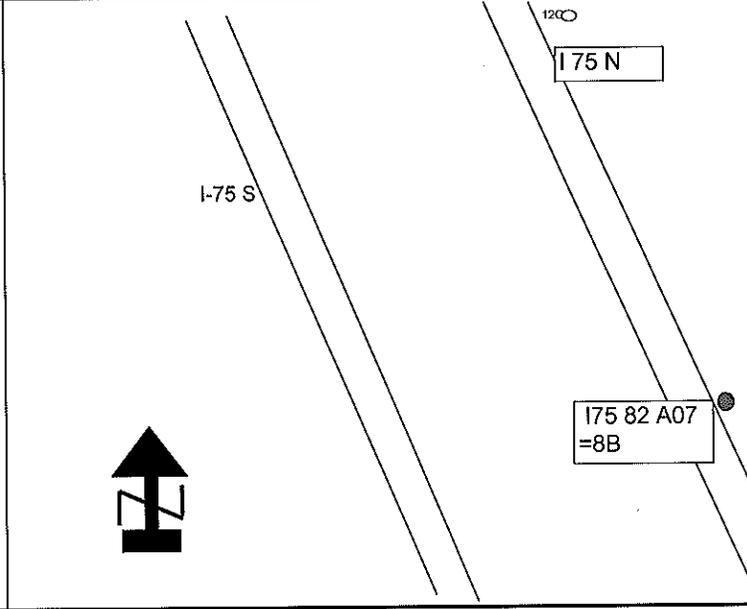
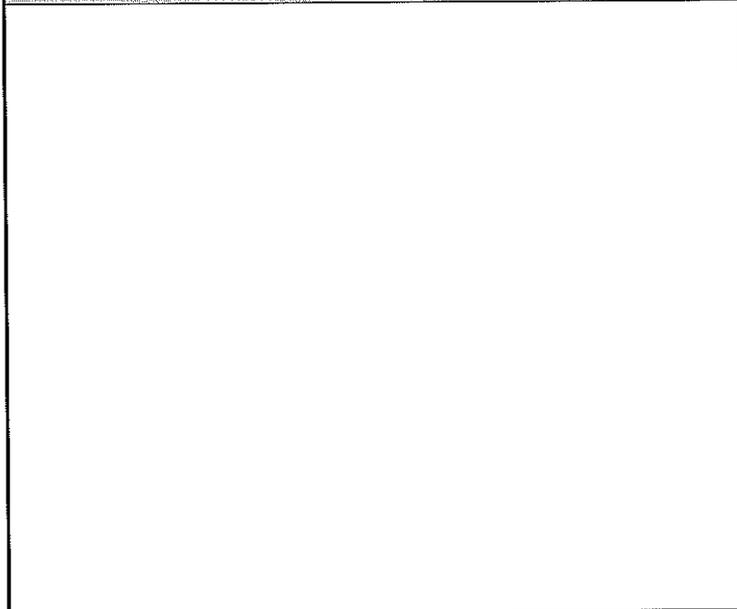
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

30001 DESCRIPTION: 12C IS A 1/2" IRON ROD W/PLASTIC CAP STAMPED GPS. PT. LB 3114 W/A 1' SQ. AREIAL TARGET OVER CAP...22.3FT. NE OF EAST EDGE OF I-75 NORTH BOUND LANE...27.5FT. SW OF A BURNT PINE TREE.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 MANATEE-LIDARCHECK

POINT ID: 13B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: MITCH APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158

LATITUDE: 27 35 10.46 N HGT. MTS:
 LONGITUDE: 082 32 25.95 W

SESSION: 013B0451 DATE: 02/14/05
 DAY OF YEAR: 45

START TIME: 13:37 X U.T.C.
 END TIME: 14:44 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

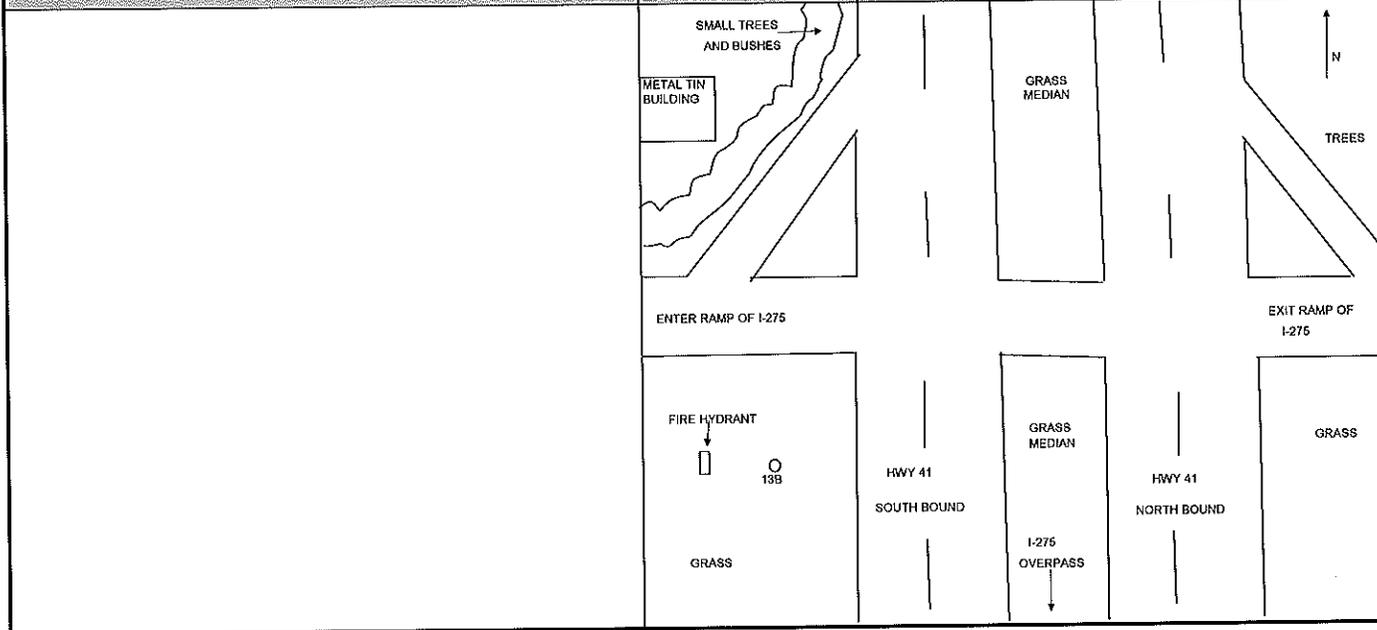
ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 13B IS A 3/4 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE WEST SIDE OF HWY 41 +/- 200 FEET NORTH OF I-275 OVERPASS. IS 34.4 FEET EAST OF YELLOW FIRE HYDRANT. IS 55 FEET WEST OF CL HWY 41. IS 27.2 FEET SOUTH SOUTHWEST OF SPEEDING FINES DOUBLED SIGN.

AERIAL TARGET PHOTO I.D.
 PUB. BENCH MARK NEW CONTROL
 PUB. CONTROL X BASE STATION

PHOTO: SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
MANATEE-LIDARCHECK

POINT ID: 13B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 3158

LATITUDE: 27 35 10.46 N HGT. MTS:
LONGITUDE: 082 32 25.95 W

SESSION: 013B0452 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 14:45 X U.T.C.
END TIME: 15:46 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

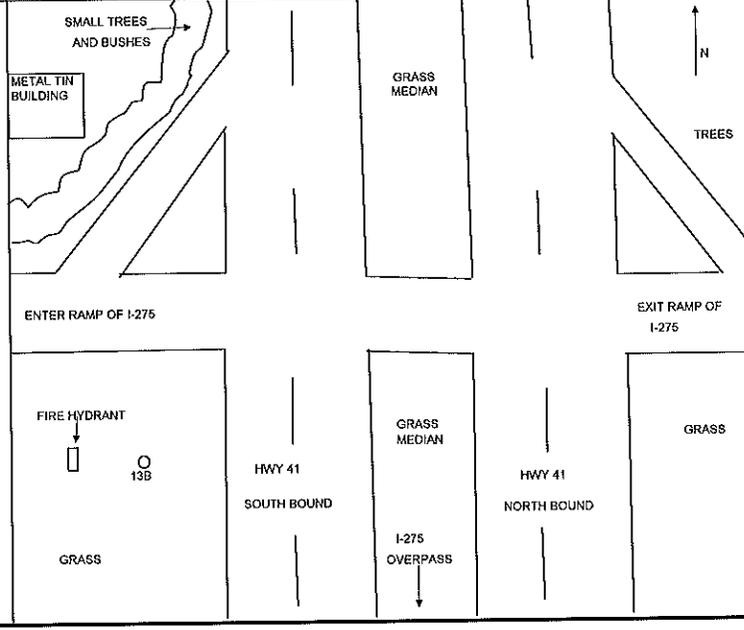
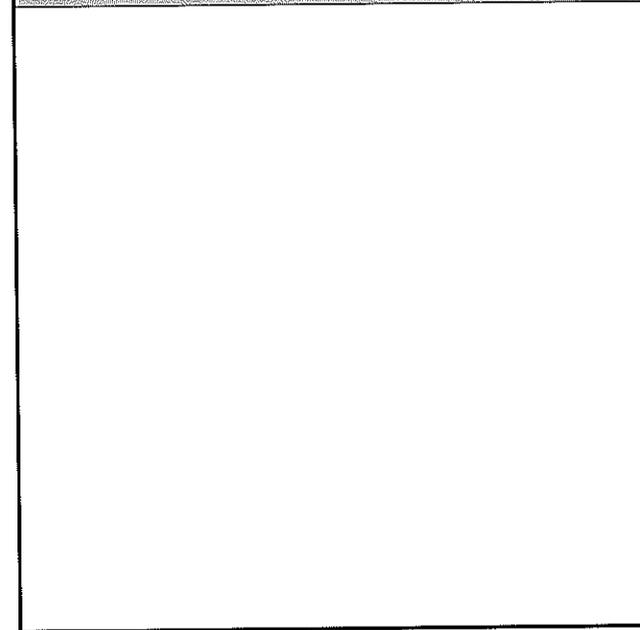
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 13B IS A 3/4 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE WEST SIDE OF HWY 41 +/- 200 FEET NORTH OF I-276 OVERPASS. IS 34.4 FEET EAST OF YELLOW FIRE HYDRANT. IS 55 FEET WEST OF CL HWY 41. IS 27.2 FEET SOUTH SOUTHWEST OF SPEEDING FINES DOUBLED SIGN.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 13C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4570

LATITUDE: 27 35 24.84N HGT. MTS:
LONGITUDE: 82 32 24.24W

SESSION: 013C0441 DATE: 02/13/05
DAY OF YEAR: 44

START TIME: 12:42 X U.T.C.
END TIME: 13:12 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

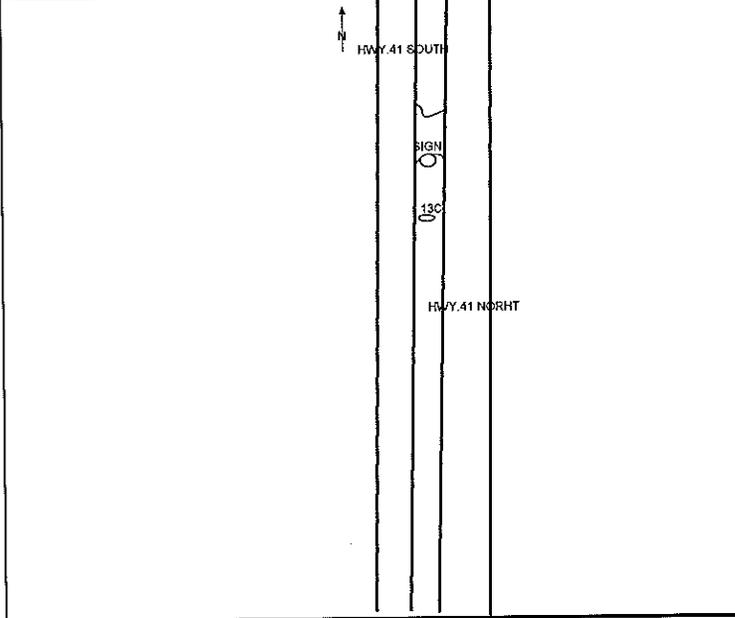
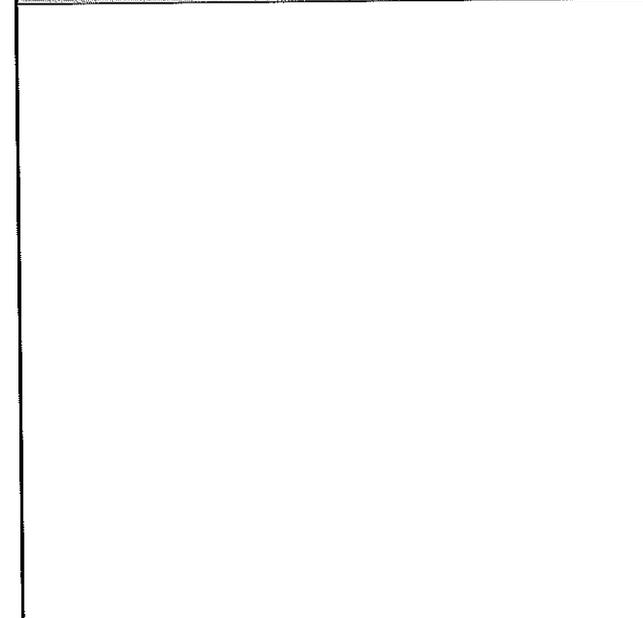
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 13C IS A 60D NAIL, SET FLUSH IN GROUND IN THE GRASS MEDIAN BETWEEN NORTH-SOUTH LANES OF HWY. 41, APPROX. 1/4 MILE NORTH OF I-275, 34.2FT EAST OF HWY. 41 (SOUTH BOUND), 47FT. WEST OF HWY. 41 (NORTH BOUND), 34.4FT. SOUTH OF A ONEWAY/YIELD SIGN.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK X NEW CONTROL
PUB. CONTROL BASE STATION

PHOTO:

SKETCH:





**GPS CONTROL SURVEY
FIELD DATA SHEET**

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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 14B=LIDAR BASE 3
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 34 32.60N HGT. MTS

RECEIVER S/N: 3112

LONGITUDE: 82 24 12.26W

SESSION: 014B0451 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 13:38 X U.T.C.
END TIME: 14:44 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

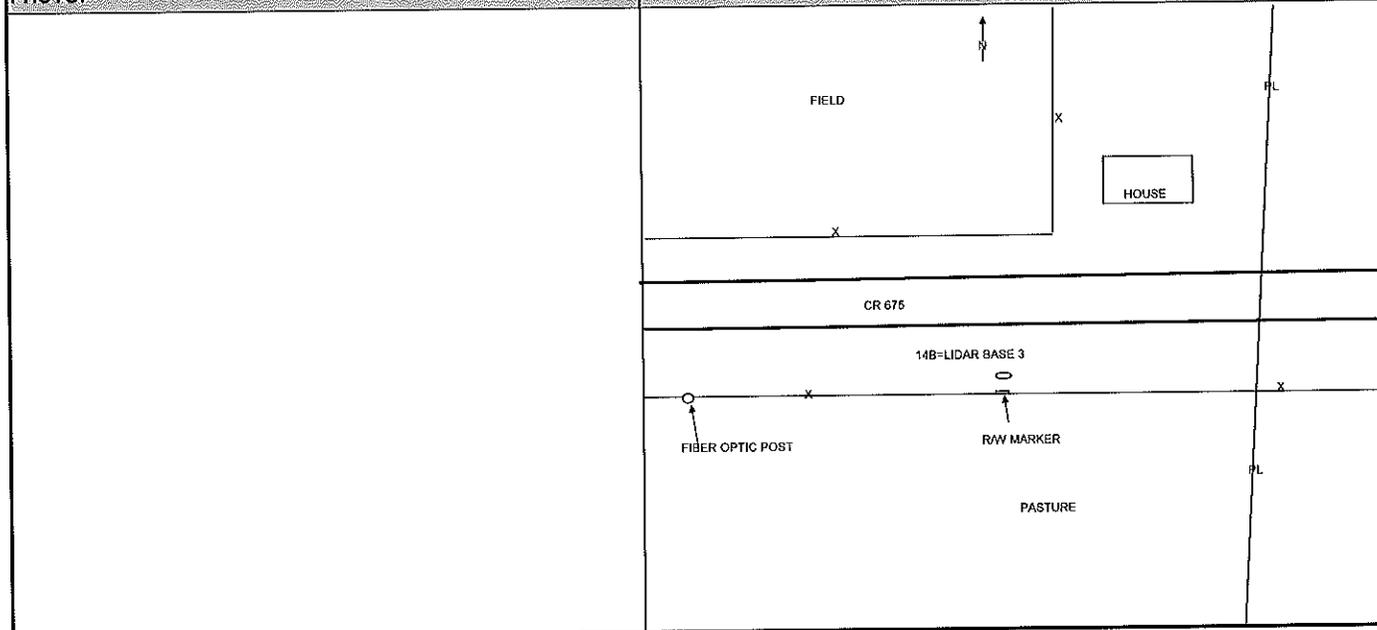
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 14B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE SOUTH SIDE OF CR 675 APPROX. 1800FT. EAST OF JUNCTION OF CR 675 AND SPENCER PARRISH RD... 44.5FT. SOUTH OF THE C/L OF CR 675... 5.3FT. NORTH OF A SRO R/W CONC. MARKER... 114FT. EAST OF A PVC FIBER OPTIC CABLE POST.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





**GPS CONTROL SURVEY
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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 14B=LIDAR BASE 3
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 34 32.60N HGT. MTS:

RECEIVER S/N: 3112

LONGITUDE: 82 24 12.26W

SESSION: 014B0452 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 14:45 X U.T.C.
END TIME: 15:46 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010
ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

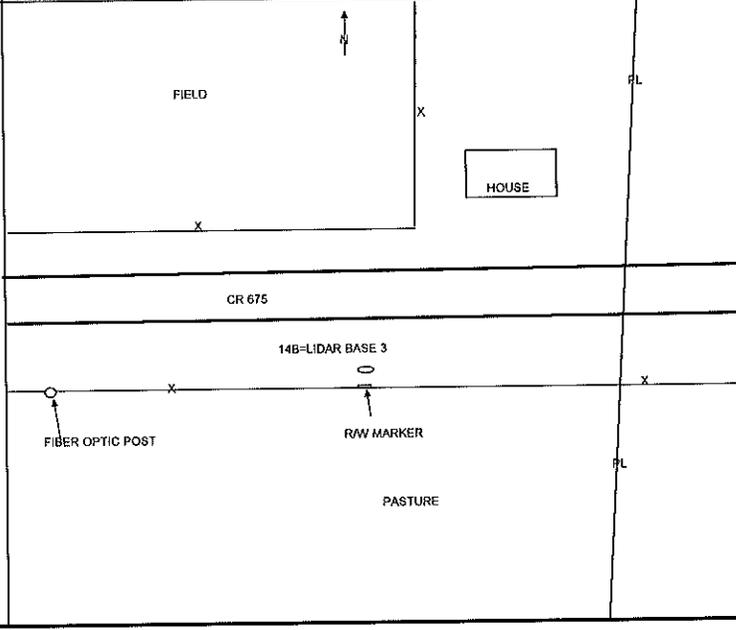
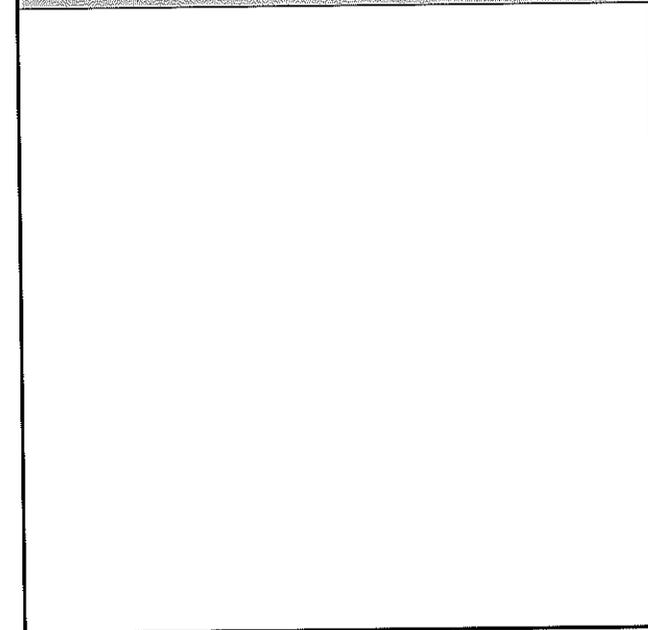
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 14B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE SOUTH SIDE OF CR 675 APPROX. 1800FT. EAST OF JUNCTION OF CR 675 AND SPENCER PARRISH RD... 44.6FT. SOUTH OF THE C/L OF CR 675... 5.3FT. NORTH OF A SRD R/W CONC. MARKER... 114FT. EAST OF A PVC FIBER OPTIC CABLE POST.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
PUB. CONTROL X BASE STATION

PHOTO:

SKETCH:





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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 14B=LIDAR BASE 3
Proj.No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4700
RECEIVER S/N: 3112

LATITUDE: 27 34 32.60N HGT. MTS:
LONGITUDE: 82 24 12.26W

SESSION: 014B0454 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 17:15 X U.T.C.
END TIME: 18:16 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 59010 0.000
ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

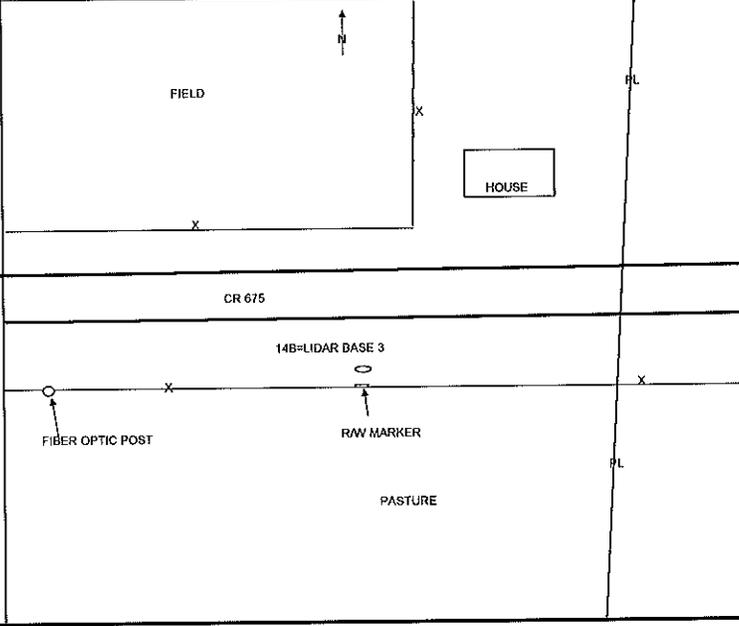
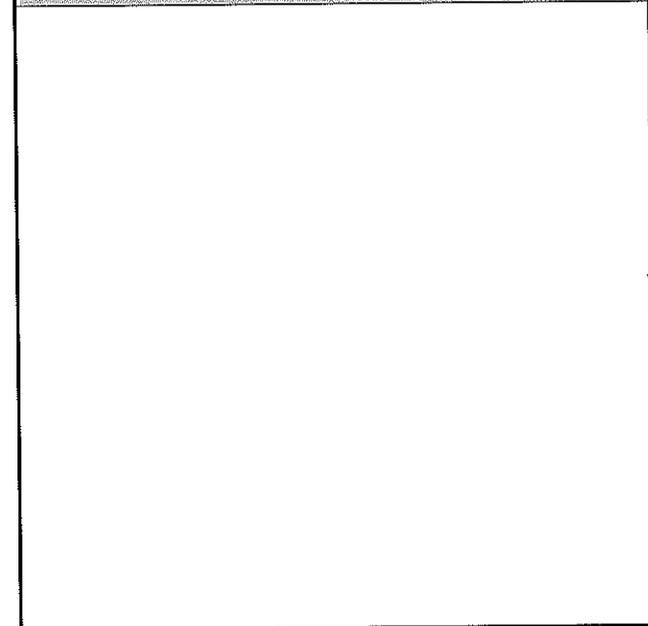
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT.

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 14B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE SOUTH SIDE OF CR 675, APPROX. 1600 FT. EAST OF JUNCTION OF CR 675 AND SPENCER PARRISH RD., 44.5 FT. SOUTH OF THE C/L OF CR 675, 5.3 FT. NORTH OF A SRD RW CONC. MARKER, 114 FT. EAST OF A PVC FIBER OPTIC CABLE POST.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO: SKETCH:





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JOB REFERENCE
 MANATEE-LIDAR CHECKS

POINT ID: 14B=LIDAR BASE 3
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

RECEIVER MODEL: TRIMBLE 4700

LATITUDE: 27 34 32.60N HGT. MTS

RECEIVER S/N: 3112

LONGITUDE: 82 24 12.26W

SESSION: 014B0453 DATE: 02/14/05
 DAY OF YEAR: 45

START TIME: 16:13 X U.T.C.
 END TIME: 17:14 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010 0.000
 ANTENNA TYPE: MBLE MICRO-CENTERED L1/L2 W/GRD. PL.

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

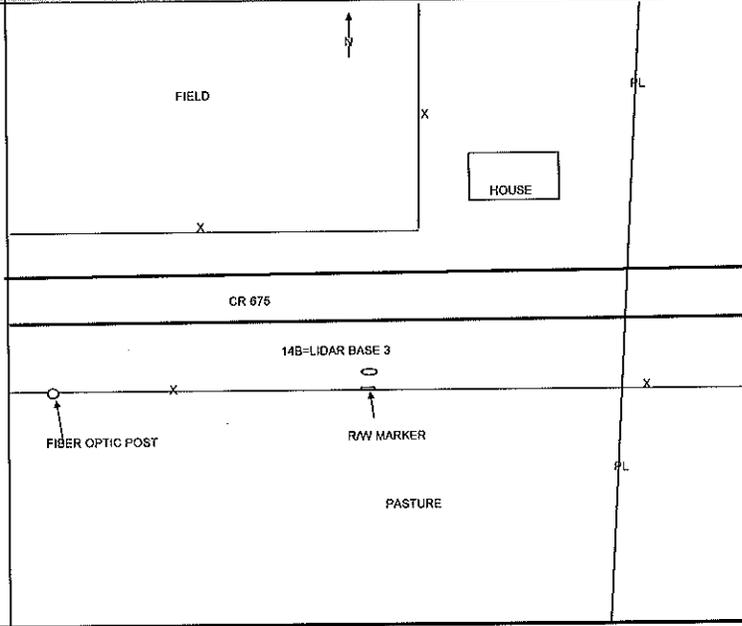
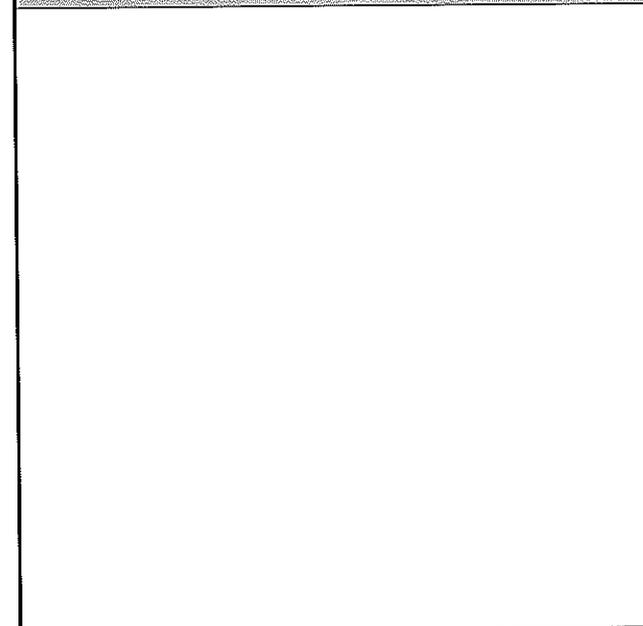
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 14B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE SOUTH SIDE OF CR 675 APPROX. 1800FT. EAST OF JUNCTION OF CR 675 AND SPENCER PARRISH RD... 44.5FT. SOUTH OF THE C/L OF CR 675... 5.9FT. NORTH OF A SRD RW CONC. MARKER... 114FT. EAST OF A PVC FIBER OPTIC CABLE POST.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 14B=LIDAR BASE 3
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: MANATEE QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 34 32.63N HGT. MTS

RECEIVER S/N: 4302

LONGITUDE: 82 24 12.30W

SESSION: 014B0441 DATE: 02/13/05
DAY OF YEAR: 44

START TIME: 15:02 X U.T.C.
END TIME: 17:16 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

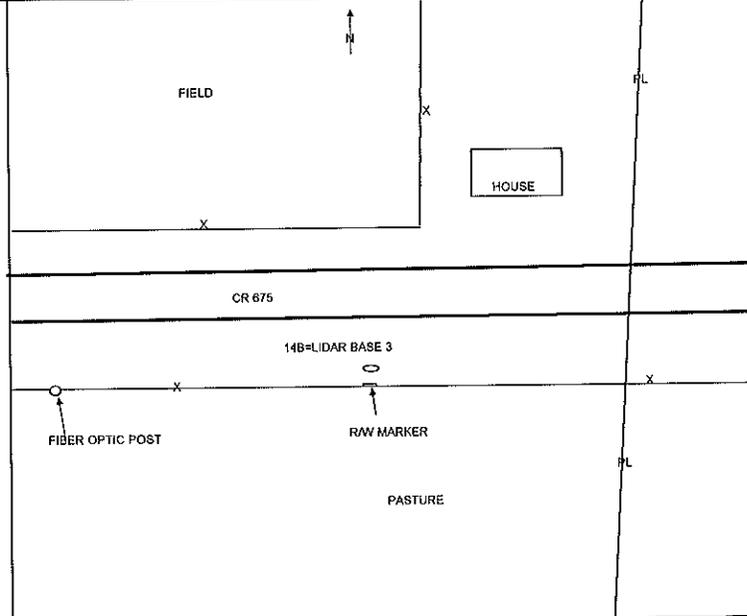
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: 14B IS A 3/4" IRON ROD W/PLASTIC CAP SET FLUSH IN GROUND ON THE SOUTH SIDE OF CR 675, APPROX. 1800FT. EAST OF JUNCTION OF CR 675 AND SPENCER PARRISH RD., 44.5FT. SOUTH OF THE C/L OF CR 675, 5.3FT. NORTH OF A SRD R/W CONC. MARKER, 114FT. EAST OF A PVG FIBER OPTIC CABLE POST.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





**GPS CONTROL SURVEY
FIELD DATA SHEET**

PAGE:
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5525 Mounes St., Suite 102
New Orleans, LA 70123
504-733-3001 voice 504-734-8938 fax

JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: 16C
Proj. No.: 04129-02

STATE: FLORIDA **COUNTY:** MANATEE **QUAD:**

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4570

LATITUDE: 27 35 48.43N **HGT. MTS:**
LONGITUDE: 82 16 41.92W

SESSION: 015C0441 **DATE:** 02/13/05
DAY OF YEAR: 44

START TIME: 18:18 X **U.T.C.**
END TIME: 18:50 **LOCAL**

ANTENNA HEIGHT (SLANT)

MTRS/FT: **MEASURED** **FIXED HGT.**

ANTENNA INFO

RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)

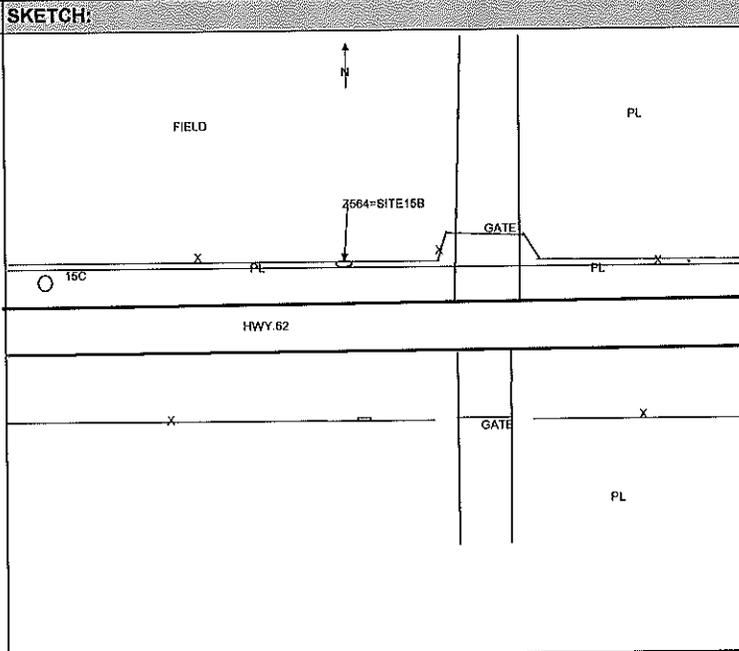
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X **FIXED HGT**

TOP OF MONUMENT IS: X **FLUSH**
METERS/FEET: **ABOVE GROUND**
METERS/FEET: **BELOW GROUND**

3001 DESCRIPTION: 16C IS A 60D NAIL SET FLUSH IN GROUND ON THE NORTH SIDE OF HWY.62 ON AND OVER TOP OF DRAINAGE CULVERT...24FT. SOUTH OF A POWERPOLE #16 272...35.6FT. NORTH OF C/A OF HWY.62...12.7FT. SW OF A YELLOW CULVERT WITNESS POST.

AERIAL TARGET **PHOTO I.D.**
PUB. BENCH MARK X **NEW CONTROL**
PUB. CONTROL **BASE STATION**

PHOTO:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 16B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: POLK QUAD:

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 42 22.9N HGT. MTS:
 LONGITUDE: 82 01 09.70W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION: 016B0491 DATE: 02/18/05
 DAY OF YEAR: 49

START TIME: 12:45 X U.T.C.
 END TIME: 13:46 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10019 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

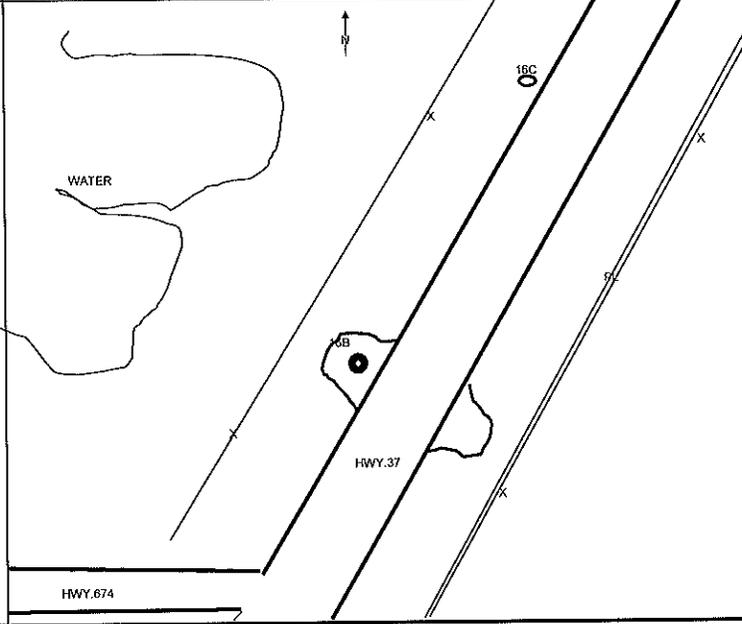
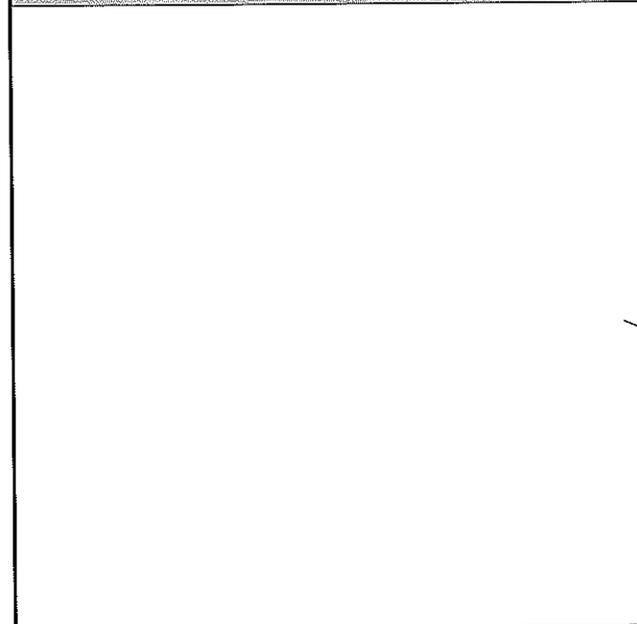
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: 16B IS A PK NAIL SET FLUSH IN ASPHALT PARKING AREA ON THE NW SIDE OF HWY. 37 AND APPROX. 0.1 MILE NE OF INTER. OF HWY. 37 AND HWY. 674... 22FT. NW OF THE NW EDGE OF HWY. 37... 29FT. SE OF THE NW END OF ASPHALT PARKING... 47FT. SE OF A FENCELINE.

AERIAL TARGET PHOTO I.D.
 PUB. BENCH MARK NEW CONTROL
 PUB. CONTROL X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 16B
Proj. No.: 04129-02

STATE FLORIDA

COUNTY POLK

QUAD:

OPERATOR M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

LATITUDE 27 42 22.9N HGT. MTS
LONGITUDE 82 01 09.70W

RECEIVER MODEL TRIMBLE 4000SE
RECEIVER S/N 4302

SESSION DATE: 02/18/05
016B0492 DAY OF YEAR 49

START TIME 13:47 X U.T.C.
END TIME 14:48 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M) 0.000
S/N NUMBER 10019 0.000
ANTENNA TYPE TRIMBLE COMP.L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

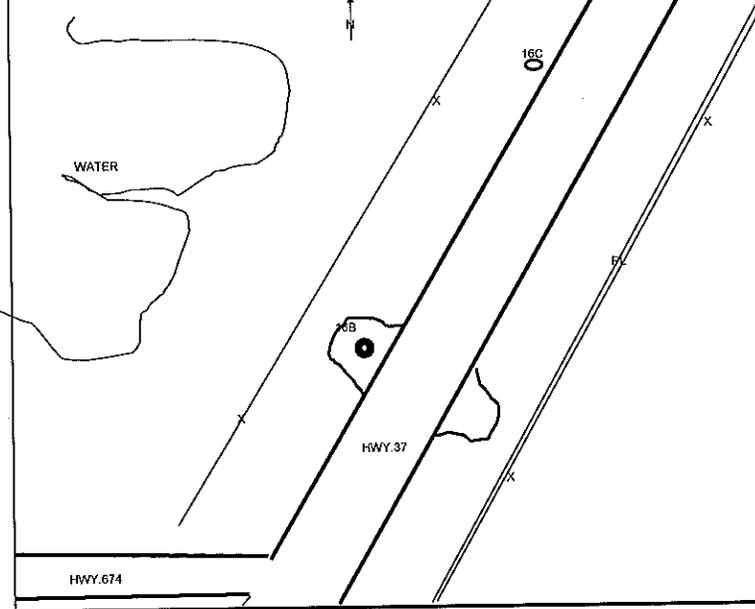
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 16B IS A PK NAIL SET FLUSH IN ASPHALT PARKING AREA ON THE NW SIDE OF HWY.37 AND APPROX. 0.1 MILE NE OF INTER. OF HWY.37 AND HWY.674...22FT.NW OF THE NW EDGE OF HWY.37...79FT. SE OF THE NW END OF ASPHALT PARKING...47FT. SE OF A FENCELINE.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
PUB. CONTROL X BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

PAGE:
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JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: 16B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: POLK QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 42 22.9N HGT. MTS:
 LONGITUDE: 82 01 09.70W

RECEIVER MODEL: TRIMBLE 4000SE
 RECEIVER S/N: 4302

SESSION: 016B0481 DATE: 02/17/05
 DAY OF YEAR: 48

START TIME: 21:22
 END TIME: 21:59

X U.T.C.
 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10019
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

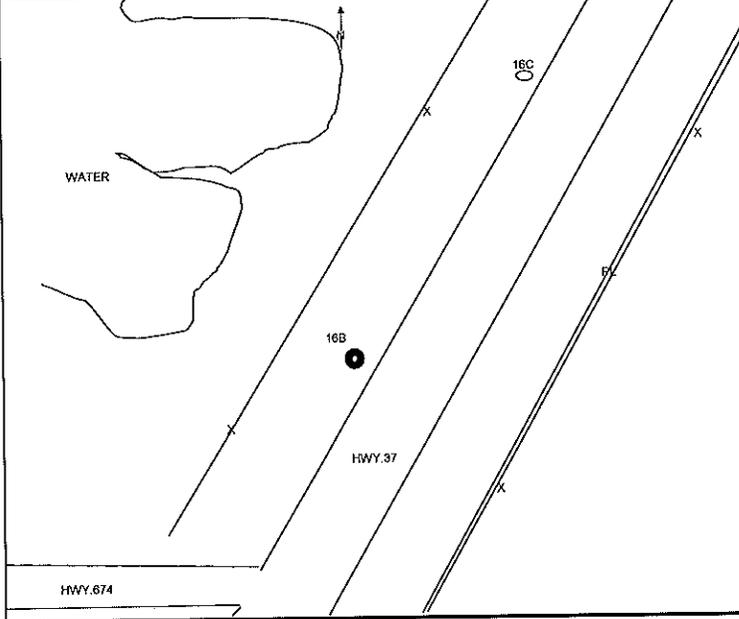
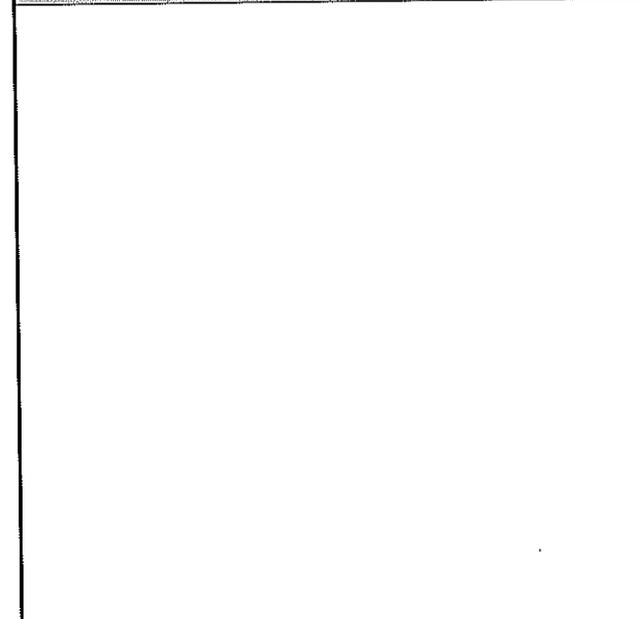
3001 DESCRIPTION: 16B IS A PK NAIL SET FLUSH IN ASPHALT PARKING AREA ON THE NW SIDE OF HWY. 37 AND APPROX. 0.1 MILE NE OF INTER. OF HWY. 37 AND HWY. 674... 22FT. NW OF THE NW EDGE OF HWY. 37... 29FT. SE OF THE NW END OF ASPHALT PARKING... 47FT. SE OF A FENCELINE.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL

PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 16C
Proj. No.: 04129-02

STATE: FLORIDA

COUNTY: POLK

QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 42 28.87N HGT. MTS
LONGITUDE: 82 01 06.10W

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4570

SESSION: 016C0481
DATE: 02/17/05
DAY OF YEAR: 48

START TIME: 21:36
END TIME: 21:58

X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M) 0.000
S/N NUMBER 50907 0.000
ANTENNA TYPE TRIMBLE COMP.L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

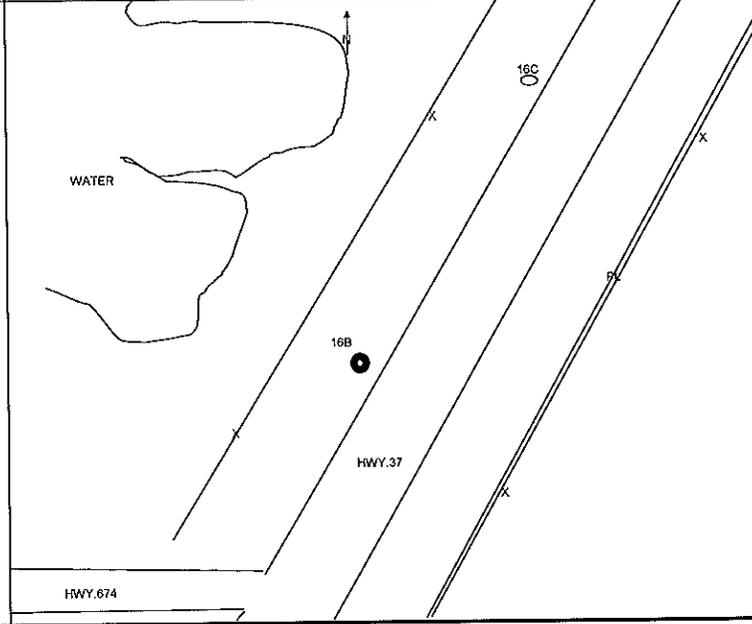
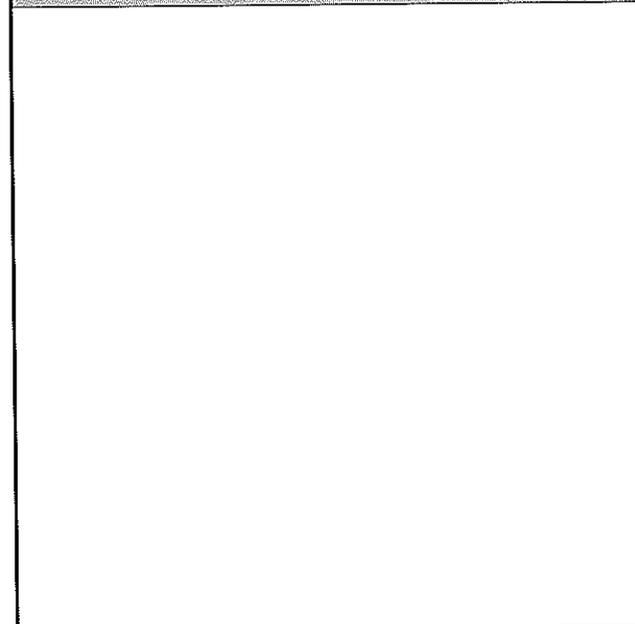
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 16C IS A 600 NAIL SET FLUSH IN GROUND ON THE WEST SIDE OF HWY.37...14FT. NW OF THE NW EDGE OF HWY.37...61FT. SE OF A FENCELINE...38FT. S.S.E. OF A 14" PINE TREE...

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

PAGE:
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JOB REFERENCE
 SWFWMD-LIDARCHECK

POINT ID: 018B
 Proj. No.: 04120-02

STATE: FLORIDA COUNTY: POLK QUAD:

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158

LATITUDE: 27 44 00.08 N HGT. MTS:
 LONGITUDE: 081 34 54.74 W

SESSION: 018B0491 DATE: 02/18/05
 DAY OF YEAR: 49

START TIME: 12:45 X U.T.C.
 END TIME: 13:46 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

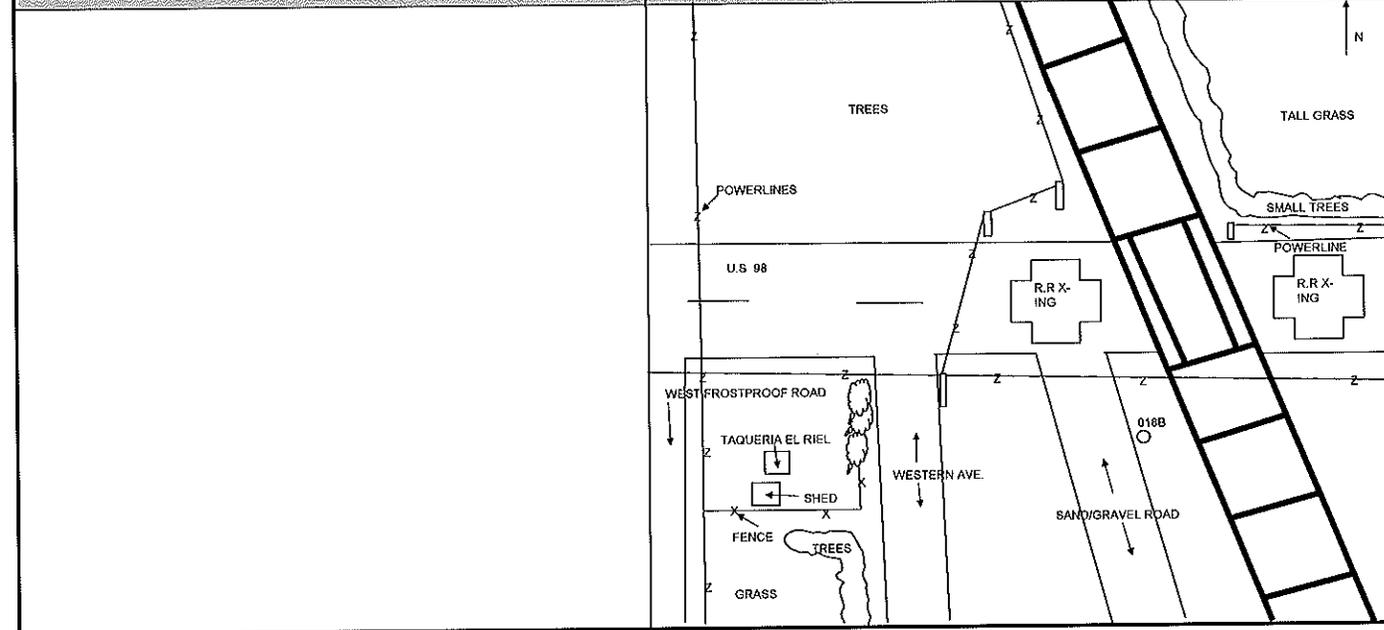
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

DESCRIPTION: 018B IS 3/4 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE SOUTH SIDE OF U.S. 98 AND ON THE WEST SIDE OF RAILROAD TRACKS ON A SAND WITH A LITTLE LIMESTONE/GRAVEL ROAD. IS 26 FEET WEST OF THE WEST MOST RAILROAD TRACK. IS 165 FEET SOUTH OF CL U.S. 98. IS 93 FEET EAST OF WESTERN AVENUE (DIRT ROAD).

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:



**GPS CONTROL SURVEY
FIELD DATA SHEET**

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JOB REFERENCE
SWFWMD-LIDARCHCK

POINT ID: 018B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: POLK QUAD:

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)

LATITUDE	27 44 00.08 N	HGT. MTS
LONGITUDE	081 34 54.74 W	

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 3158

SESSION: 018B0492 DATE: 02/18/05
DAY OF YEAR: 49

START TIME: 13:47 X U.T.C.
END TIME: 14:48 LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.
---------	----------	------------

ANTENNA INFO

RADIUS (M)	0.000
S/N NUMBER	10018
ANTENNA TYPE	TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	2.000M	
MEASURED	X	FIXED HGT

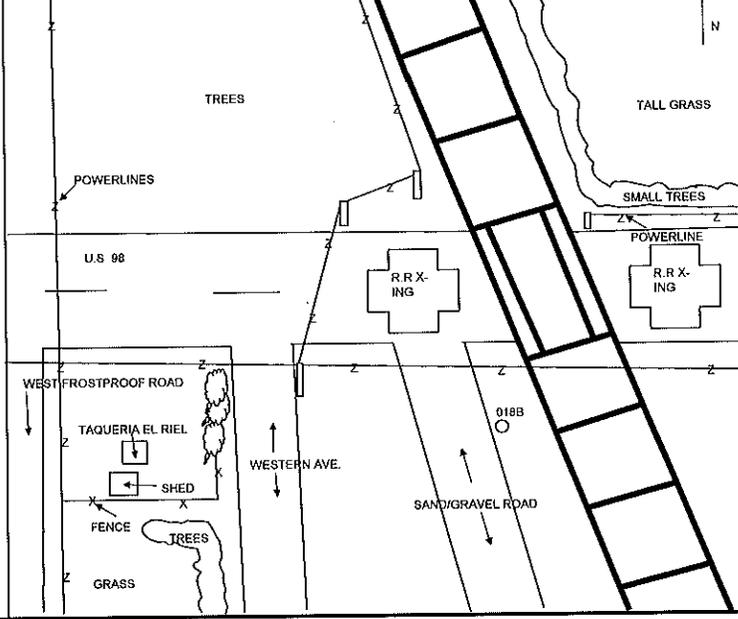
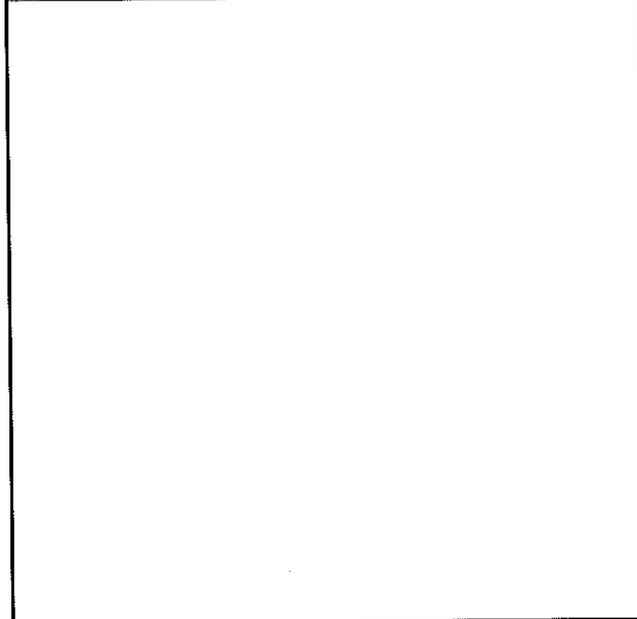
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

DESCRIPTION: 018B IS 3/4 INCH METAL ROD WITH PLASTIC CAP DRIVEN FLUSH WITH GROUND. IS LOCATED ON THE SOUTH SIDE OF U.S. 98 AND ON THE WEST SIDE OF RAILROAD TRACKS ON A SAND WITH A LITTLE LIMESTONE/GRAVEL ROAD. IS 25 FEET WEST OF THE WEST MOST RAILROAD TRACK. IS 155 FEET SOUTH OF CL U.S. 98. IS 93 FEET EAST OF WESTERN AVENUE (DIRT ROAD).

AERIAL TARGET	PHOTO I.D.
PUB. BENCH MARK	NEW CONTROL
PUB. CONTROL	X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: 18C
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: POLK QUAD:

OPERATOR: MITCH

APPROXIMATE POSITION (GIA/CODE)

LATITUDE: 27 44 00.76N HGT. MTS:
LONGITUDE: 81 34 57.97W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4570

SESSION: 018C481 DATE: 02/17/05
DAY OF YEAR: 48

START TIME: 19:43
END TIME: 20:20

X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP.L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

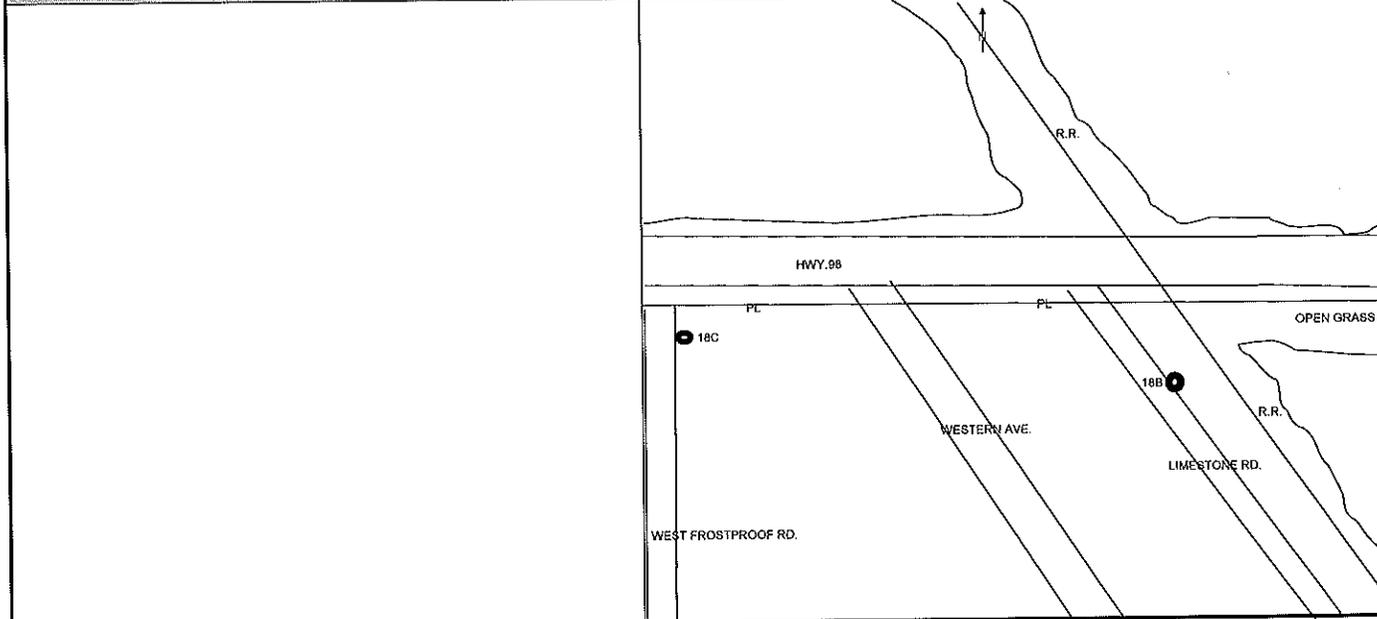
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: 18C IS A 80D NAIL SET FLUSH IN GROUND ON THE SOUTH SIDE OF US 98 AT THE JUNCTION OF WEST FROSTPROOF RD.45FT. SOUTH OF C/L OF US 98...22FT. EAST OF C/L OF WEST FROSTPROOF RD....27FT. SE OF A POWERPOLE...

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
X NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID: A 518 (AJ7235)

Proj. No.: 04129-02

STATE: FLORIDA

COUNTY: HIGHLANDS

QUAD: CHILDS

OPERATOR: M. HAVARD

APPROXIMATE POSITION (GIA/CODE)

LATITUDE	27 12 26.16974N	HGT. MTS
LONGITUDE	81 19 44.24947W	41.515M

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4300

SESSION	DATE: 02/10/05
A5180411	DAY OF YEAR: 41

START TIME	12:47
END TIME	19:57

X	U.T.C.
	LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.
---------	----------	------------

ANTENNA INFO

RADIUS (M)	0.000
S/N NUMBER	10011
ANTENNA TYPE	TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	2.000M (UNCORRECTED)
MEASURED	X
	FIXED HGT

TOP OF MONUMENT IS:

	FLUSH
METERS/FEET	ABOVE GROUND
METERS/FEET	0.3FT. BELOW GROUND

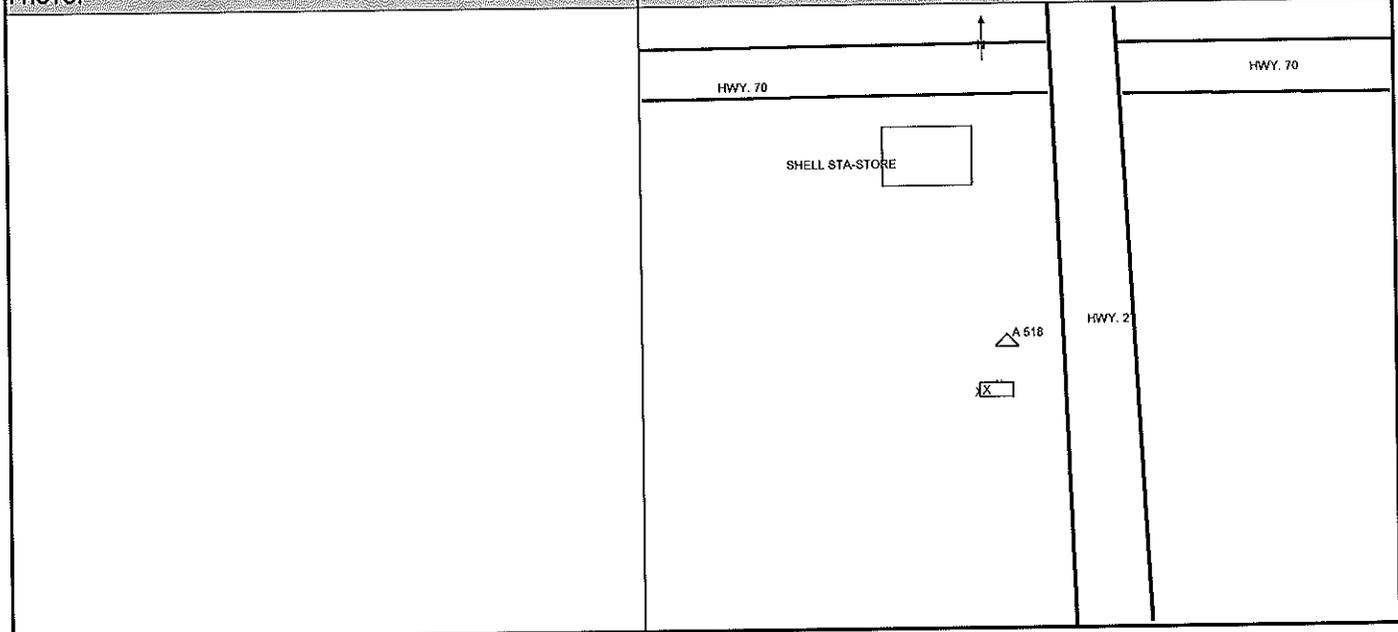
3001 DESCRIPTION: SEE NGS DATA SHEET

	AERIAL TARGET
	PUB. BENCH MARK
X	PUB. CONTROL

	PHOTO I.D.
	NEW CONTROL
	BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: A 518 (AJ7235)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HIGHLANDS QUAD: CHILDS

OPERATOR: M. HAVARD

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4300

LATITUDE: 27 12 26.16974N HGT. MTS:
LONGITUDE: 81 19 44.24947W 41.515M

SESSION: A5180421 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 13:12 X U.T.C.
END TIME: 21:06 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10011 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

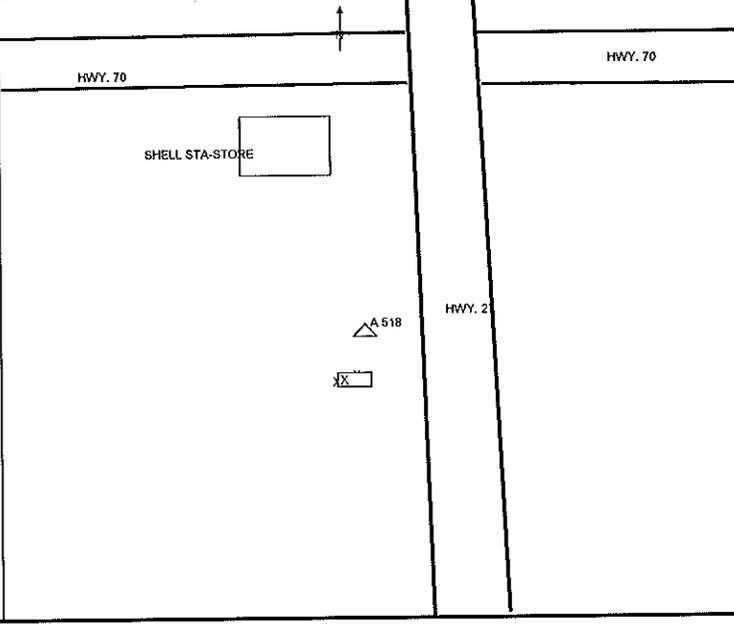
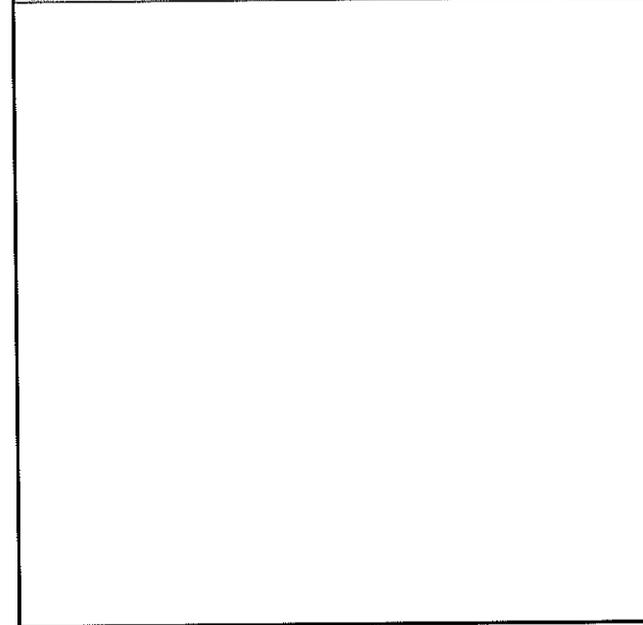
TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.3FT. BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMP-LIDAR CHECKS

POINT ID: (7B)ARCP0471
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: ARCADIA(1988)

OPERATOR: M. HAVARD APPROXIMATE POSITION (GIA/CODE)

LATITUDE: 27 11' 34.70393"N HGT. MTS
LONGITUDE: 081 50' 30.44732"W 17.5M

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302

SESSION: ARCP0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 16:26 X U.T.C.
END TIME: 17:04 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): S/N NUMBER: 10019
ANTENNA TYPE: TRIMBLE COMP L1/L2 WGRD PLANE

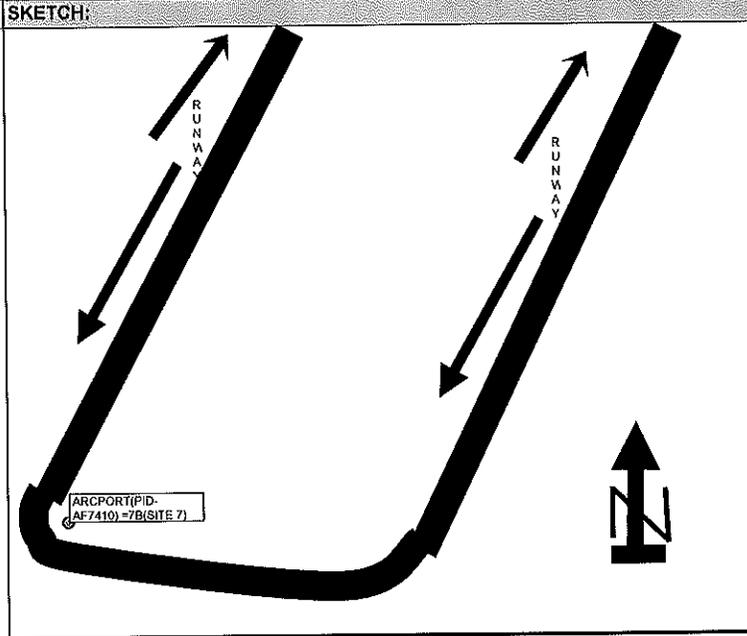
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.4 BELOW GROUND

30001 DESCRIPTION:SEE NGS DATA SHEETS. ALSO = TO 7B(SITE 7)

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:



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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 SWFWMP-LIDAR CHECKS

POINT ID: (7B)ARCPORT-PID=AF7410
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: ARCADIA(1988)

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE	27 11' 34.70393"N	HGT. MTS
LONGITUDE	081 50' 30.44732"W	17.5M

RECEIVER MODEL: TRIMBLE 4000 SSI
 RECEIVER S/N: 4652

SESSION: ARCP-042-1 DATE: 02/11/05
 DAY OF YEAR: 42

START TIME: 14:17 X U.T.C.
 END TIME: 15:18 LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT	MEASURED	FIXED HGT.
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ANTENNA INFO

RADIUS (M)	
S/N NUMBER	50496
ANTENNA TYPE	TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	2.00M UNCORRECTED	MEASURED	X	FIXED HGT
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TOP OF MONUMENT IS:

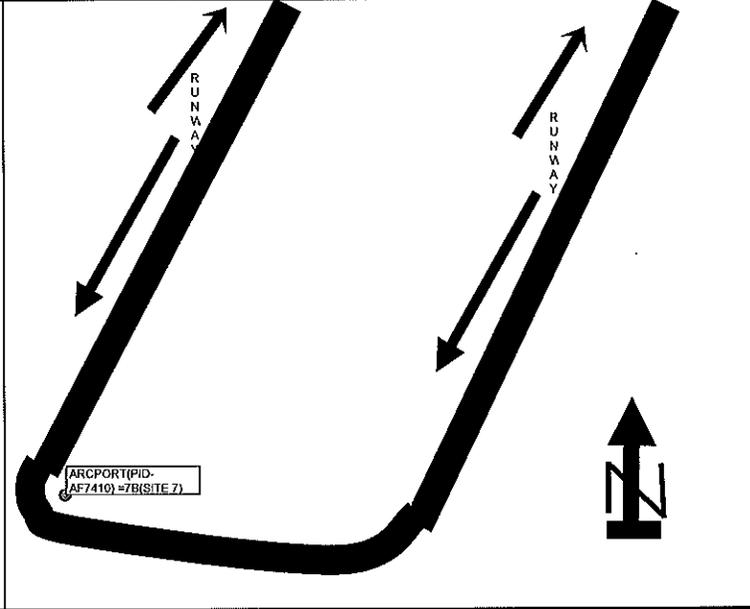
METERS/FEET		FLUSH
METERS/FEET	0.4	ABOVE GROUND
		BELOW GROUND

30001 DESCRIPTION:SEE NGS DATA SHEETS. ALSO = TO 7B(SITE 7)

X	AERIAL TARGET	PHOTO I.D.
	PUB. BENCH MARK	NEW CONTROL
	PUB. CONTROL	BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMP-LIDAR CHECKS

POINT ID: (7B)ARCPORP-PID=AF7410
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: DESOTO QUAD: ARCADIA(1988)

OPERATOR: V. MCNEAL
RECEIVER MODEL: TRIMBLE 4000 SSI
RECEIVER S/N: 4652
APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 11' 34.70393"N HGT. MTS: 17.5M
LONGITUDE: 081 50' 30.44732"W

SESSION: ARCP-042-2 DATE: 02/11/05 START TIME: 15:19 END TIME: 16:20
DAY OF YEAR: 42 X U.T.C. LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED MEASURED X FIXED HGT

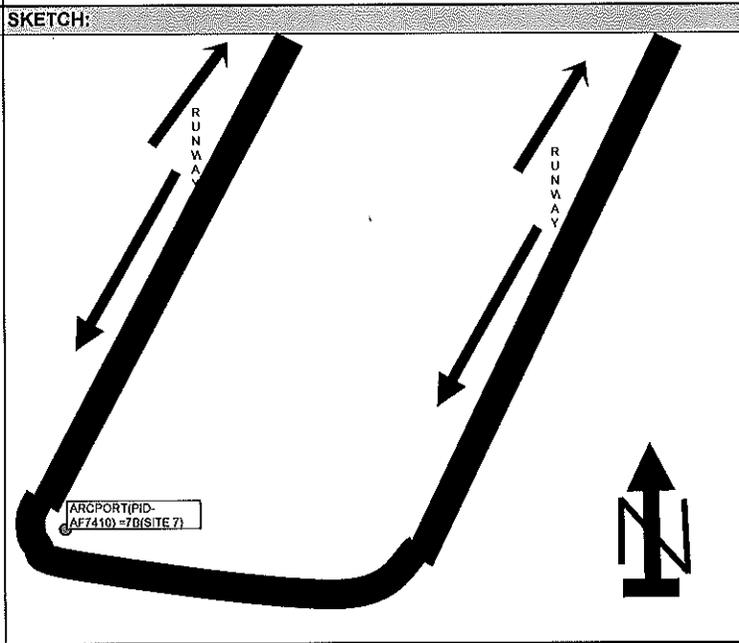
ANTENNA INFO
RADIUS (M): S/N NUMBER: 50496
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.4 BELOW GROUND

30001 DESCRIPTION:SEE NGS DATA SHEETS. ALSO = TO 7B(SITE 7)

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: AVONPORT-3B (AF7411)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HIGHLANDS QUAD: AVONPARK

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI

LATITUDE: 27 35 29.33351 N HGT. MTS: 46.4
LONGITUDE: 081 31 35.66386 W

RECEIVER S/N: 4570

SESSION: AVON0491 DATE: 02/18/05
DAY OF YEAR: 49

START TIME: 12:18 X U.T.C.
END TIME: 15:06 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION:SEE NGS DATA SHEET.

12:18 X
AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
PUB. CONTROL BASE STATION

PHOTO:

SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: AVONPORT=3B (AF7411)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HIGHLANDS QUAD: AVONPARK

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 35 29.33351 N HGT. MTS: 46.4
LONGITUDE: 081 31 35.66386 W

RECEIVER S/N: 4302

SESSION: AVON0471 DATE: 02/16/05
DAY OF YEAR: 47

START TIME: 19:50 X U.T.C.
END TIME: 20:27 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M MEASURED X FIXED HGT.

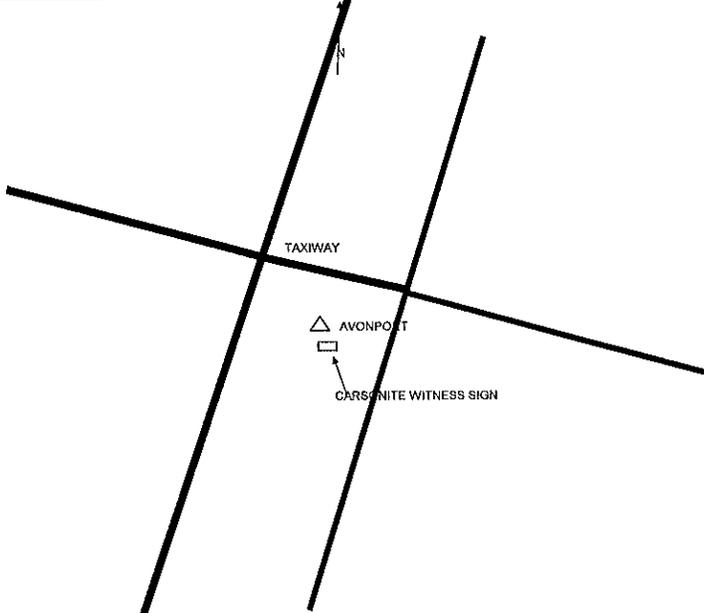
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: AVONPORT=3B (AF7411)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HIGHLANDS QUAD: AVONPARK

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 4570

LATITUDE: 27 35 29.33351 N HGT. MTS: 46.4
LONGITUDE: 081 31 35.66386 W

SESSION: AVON0421 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 12:24 X U.T.C.
END TIME: 20:13 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

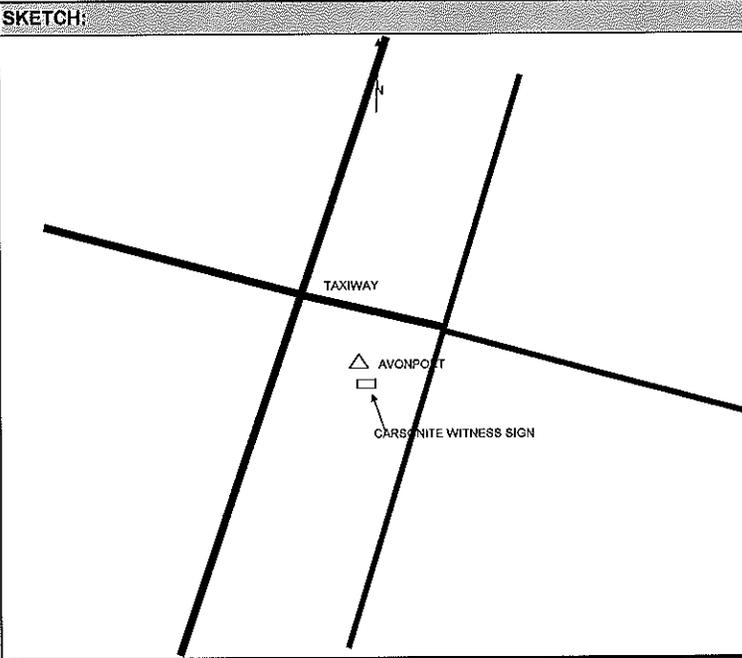
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: FLGPS 46 (AG9371)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HILLSBOROUGH QUAD: FT LONESOME

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SE

LATITUDE: 27 42 16.54254N HGT. MTS: 35.14
LONGITUDE: 82 09 17.10287W

RECEIVER S/N: 4300

SESSION: FL460451 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 11:55 X U.T.C.
END TIME: 18:58 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10011
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

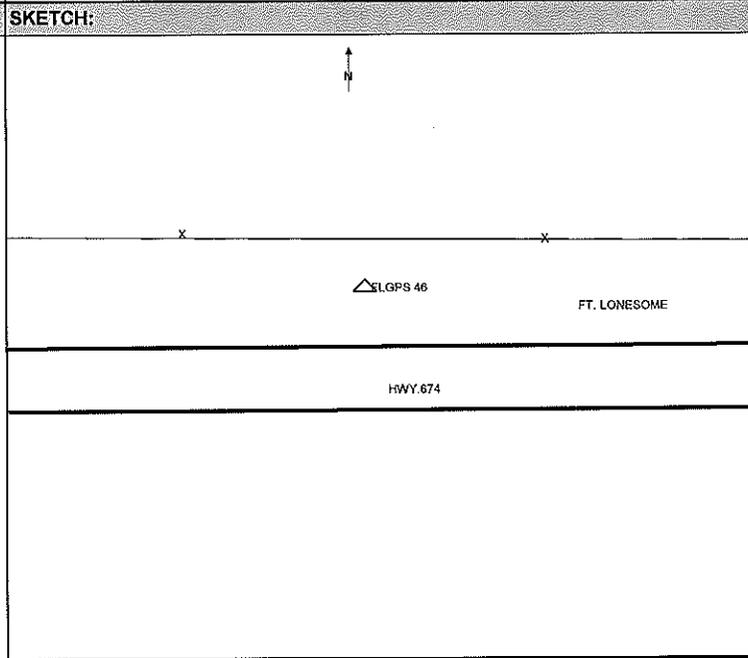
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.3FT. BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
MANATEE-LIDARCHECKS

POINT ID: FLGPS 49 (AG9363)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: MYAKKA CITY

OPERATOR: MITCH

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI

LATITUDE: 27 20 16.06691 N HGT. MTS: 14.209
LONGITUDE: 082 08 28.36289 W

RECEIVER S/N: 4570

SESSION: FL490451 DATE: 02/14/05 DAY OF YEAR: 45

START TIME: 11:47 END TIME: 19:04 X U.T.C. LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M MEASURED X FIXED HGT.

TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:

SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: FLGPS 58 (AD7896)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD: TELEGRAPH SWAMP NE

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)

RECEIVER MODEL: TRIMBLE 4000SSI

LATITUDE: 26 56 42.27004 N HGT. MTS: 17.2
LONGITUDE: 081 36 47.88968 W

RECEIVER S/N: 4570

SESSION: FL580411 DATE: 02/10/05 DAY OF YEAR: 41

START TIME: 12:20 END TIME: 19:38

X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ GRO. PLANE

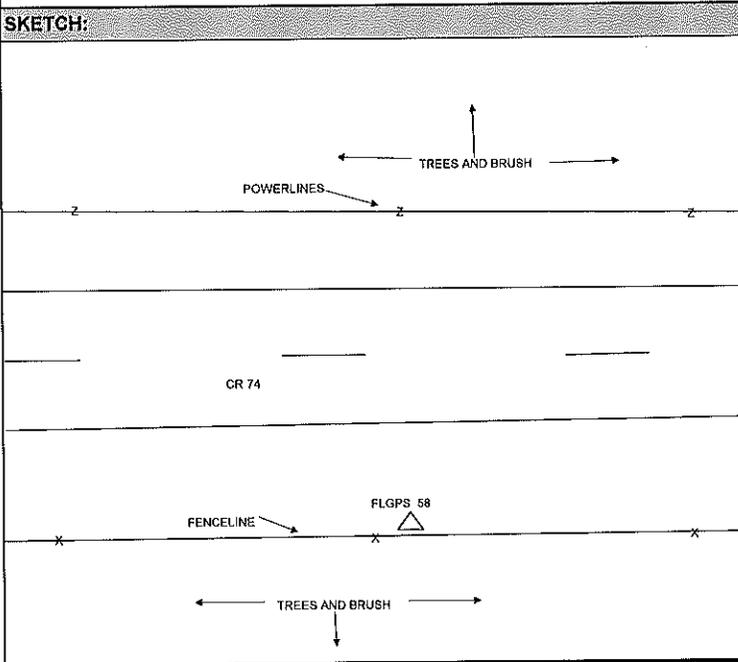
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: FLGPS 46 (AG9371)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HILLSBOROUGH QUAD: FT LONESOME

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 42 16.54254N HGT. MTS:
LONGITUDE: 82 09 17.10287W 35.14

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302

SESSION: FL460461 DATE: 02/15/05
DAY OF YEAR: 46

START TIME: 11:52 X U.T.C.
END TIME: 18:58 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

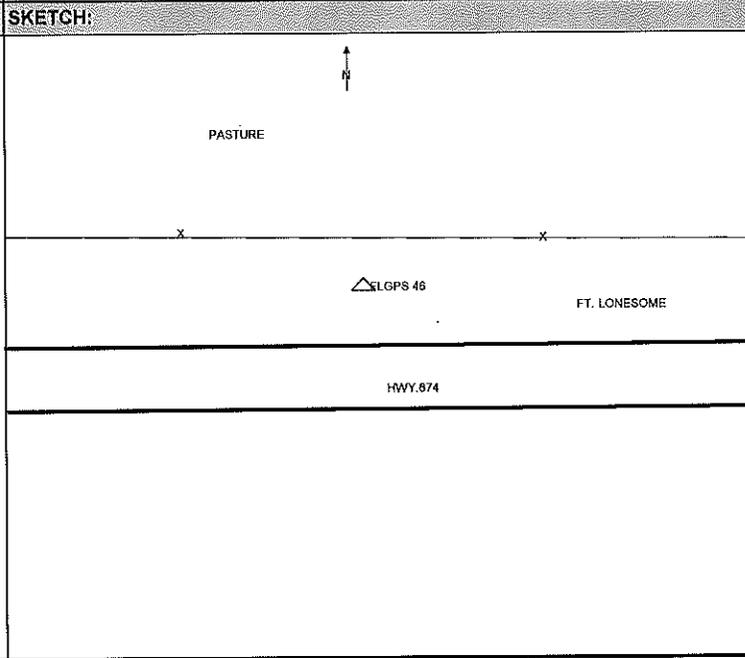
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.3FT. BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FLGPS 49(PID AG93631)

Proj. No.:

04129-02

STATE	FLORIDA	COUNTY	MANATEE	QUAD:	MYAKKA CITY
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OPERATOR	V. MCNEAL	APPROXIMATE POSITION (C/A/CODE)			
----------	-----------	---------------------------------	--	--	--

RECEIVER MODEL	TRIMBLE 4000 SE	LATITUDE	27 20 16.06691N	HGT. MTS
RECEIVER S/N	4927	LONGITUDE	82 08 28.36289W	14.209M

SESSION	FL49-046-1	DATE:	02/15/05	START TIME	12:29	X	U.T.C.
		DAY OF YEAR	46	END TIME	19:07		LOCAL

ANTENNA HEIGHT (SLANT)			
MTRS/FT			
	MEASURED		FIXED HGT.

ANTENNA INFO			
RADIUS (M)			0.000
S/N NUMBER	24415		0.000
ANTENNA TYPE	TRIMBLE COMP L1/L2 W/GRD PLANE		

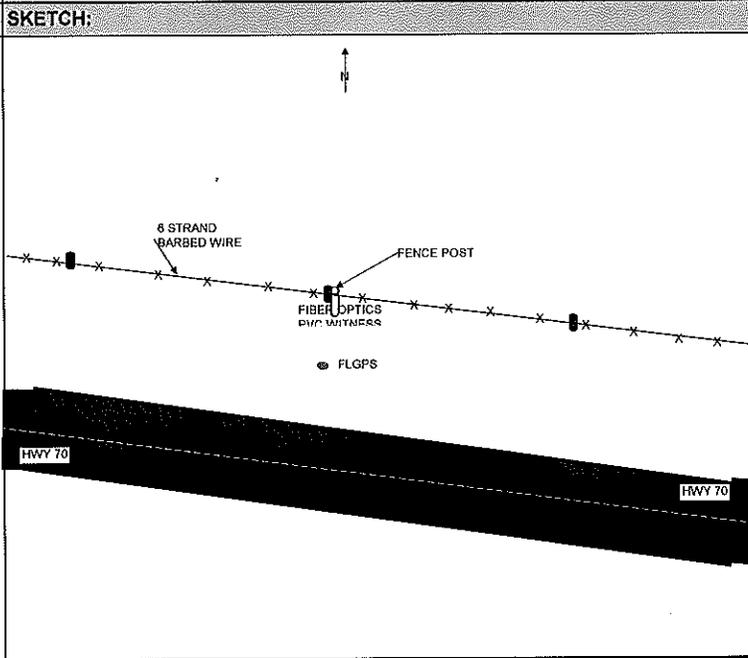
ANTENNA HEIGHT (VERTICAL)			
MTRS/FT	2.00M UNCORRECTED		
	MEASURED	X	FIXED HGT

TOP OF MONUMENT IS:		FLUSH
METERS/FEET		ABOVE GROUND
METERS/FEET	0.4FT	BELOW GROUND

3001 DESCRIPTION:SEE NGS DATA SHEET

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK		NEW CONTROL
X	PUB. CONTROL		BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: FLGPS 46 (AG9371)
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: HILLSBOROUGH QUAD: FT LONESOME

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 42 16.54254N HGT. MTS:
LONGITUDE: 82 09 17.10287W 35.14

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4300

SESSION: FL460491 DATE: 02/18/05
DAY OF YEAR: 49

START TIME: 12:07 X U.T.C.
END TIME: 15:05 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10011 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

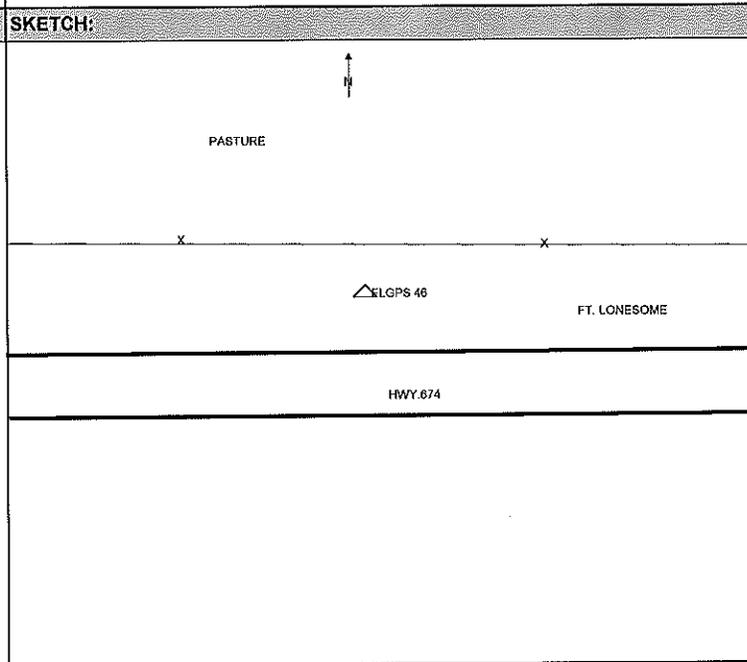
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.3FT. BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: FLGPS 49 (AG9363)
Proj. No.: 04129-02

STATE: FLORIDA

COUNTY: MANATEE

QUAD: MYAKKA CITY

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 20 16.06691N HGT. MTS: 14.209M
LONGITUDE: 82 08 28.36289W

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION: FL490411
DATE: 02/10/05
DAY OF YEAR: 41

START TIME: 11:26
END TIME: 20:56

X U.T.C.
LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT
MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT.

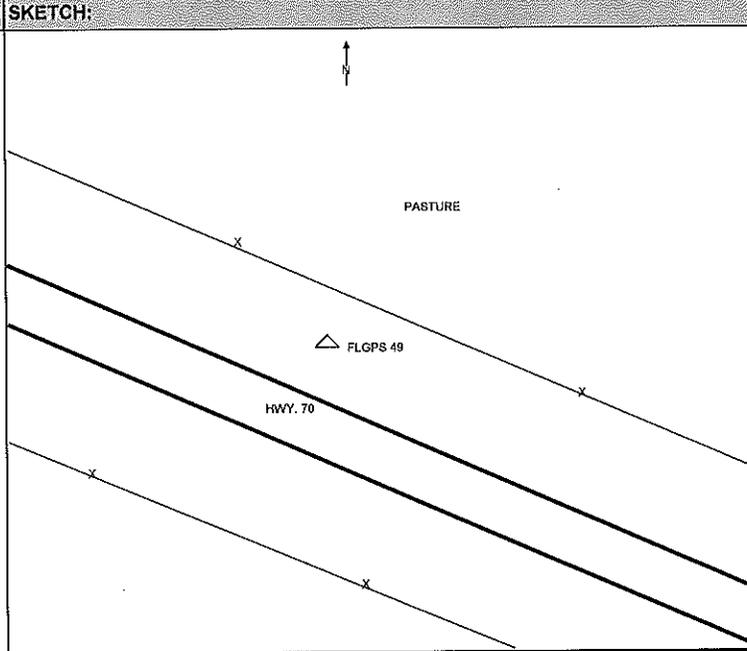
TOP OF MONUMENT IS: FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET 0.3FT. BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL

PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:





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GPS CONTROL SURVEY
 FIELD DATA SHEET

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FLGPS 49 (AG8363)

Proj. No.:

04129-02

STATE: FLORIDA

COUNTY: MANATEE

QUAD: MYAKKA CITY

OPERATOR: M. HAVARD

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 20 16.08691N

HGT. MTS

LONGITUDE: 82 08 28.36289W

14.209M

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION

FL490421

DATE: 02/11/05

DAY OF YEAR: 42

START TIME: 11:39

END TIME: 20:07

X

U.T.C.

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.000M (UNCORRECTED)

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

10019

0.000

ANTENNA TYPE

TRIMBLE COMP. L1/L2 W/GRD. PLANE

TOP OF MONUMENT IS:

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

0.3FT.

BELOW GROUND

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

NEW CONTROL

X

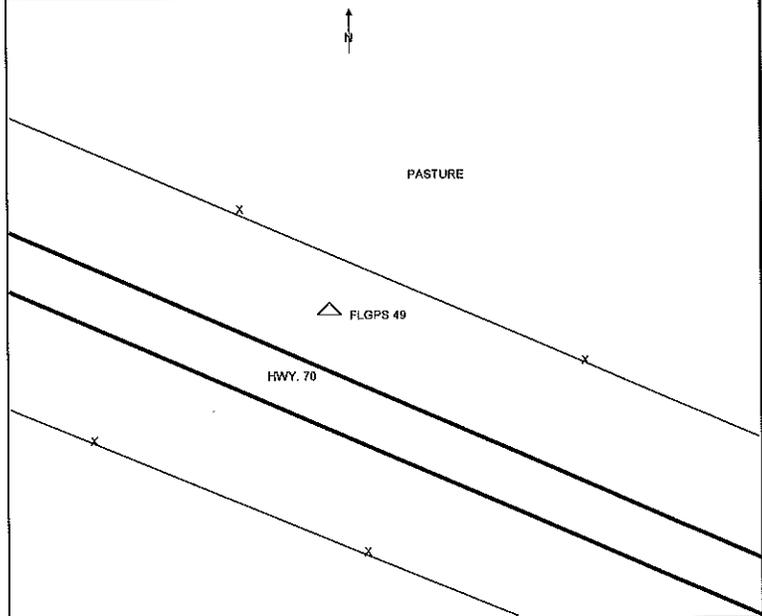
PUB. CONTROL

BASE STATION

3001 DESCRIPTION: SEE NGS DATA SHEET

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FORT RESET (SITE 1B)PID AF0480

Proj. No.:

04128-02

STATE: FLORIDA

COUNTY: HARDEE

QUAD: FT GREEN

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 35 41.96740N

HGT. MTS

LONGITUDE: 81 59 22.03280W

37.1M

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4302

SESSION

FORT0481

DATE: 02/17/05

DAY OF YEAR: 48

START TIME: 12:33

END TIME: 13:16

X U.T.C.

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

10019

0.000

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GRD PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

AERIAL TARGET

PUB. BENCH MARK

X

PUB. CONTROL

PHOTO I.D.

NEW CONTROL

X

BASE STATION

3001 DESCRIPTION:SEE NGS DATA SHEET.

PHOTO:

SKETCH:

OPEN FIELD

BRUSH LINE

PALMETTO BUSHES
AND SHRUBS

POWER LINE

FORT RESET PID AF0480(SITE 1B)

WITNESS POST

HWY.62

1C=32.4.300Z

SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FORT RESET (SITE 1B)PID AF0480

Proj. No.:

04129-02

STATE: FLORIDA

COUNTY: HARDEE

QUAD: FT GREEN

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE: 27 35 41.96740N

HGT. MTS

LONGITUDE: 81 59 22.03280W

37.1M

RECEIVER MODEL: TRIMBLE 4000 SSI

RECEIVER S/N: 4927

SESSION

FORT-049-1

DATE:

02/18/05

START TIME

12:26

X

U.T.C.

DAY OF YEAR

49

END TIME

14:49

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

24415

0.000

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GRD PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

3001 DESCRIPTION:SEE NGS DATA SHEET.

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

NEW CONTROL

X

PUB. CONTROL

BASE STATION

PHOTO:

SKETCH:

OPEN FIELD

BRUSH LINE

PALMETTO BUSHES
AND SHRUBS

POWER LINE

FORT RESET PID AF0480(SITE 1B)

WITNESS POST

SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
SWFWMD-LIDAR CHECKS

POINT ID: FORT RESET (SITE 1B)PID AF0460
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD: FT GREEN

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 35 41.96740N HGT. MTS
LONGITUDE: 81 59 22.03280W 37.1M

RECEIVER MODEL: TRIMBLE 4000 SSI
RECEIVER S/N: 4652

SESSION: FORT-046-2 DATE: 02/15/05 START TIME: 14:17 X U.T.C.
DAY OF YEAR: 46 END TIME: 15:48 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 24415 0.000
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT

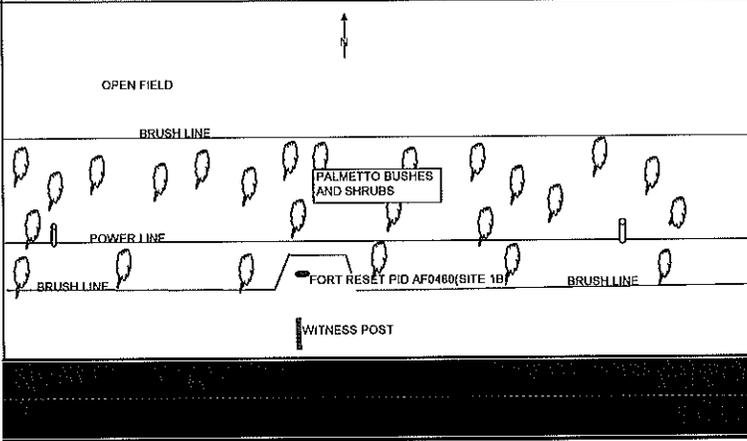
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION-SEE NGS DATA SHEET.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:

SKETCH:



SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FORT RESET (SITE 1B)PID AF0480

Proj. No.:

04129-02

STATE	FLORIDA	COUNTY	HARDEE	QUAD:	FT GREEN
-------	---------	--------	--------	-------	----------

OPERATOR	V. MCNEAL	APPROXIMATE POSITION (C/A/CODE)			
----------	-----------	---------------------------------	--	--	--

RECEIVER MODEL	TRIMBLE 4000 SSI	LATITUDE	27 35 41.96740N	HGT. MTS
RECEIVER S/N	4652	LONGITUDE	81 59 22.03280W	37.1M

SESSION	FORT-046-3	DATE:	02/15/05	START TIME	16:28	X	U.T.C.
		DAY OF YEAR	46	END TIME	17:29		LOCAL

ANTENNA HEIGHT (SLANT)			
MTRS/FT			
	MEASURED		FIXED HGT.

ANTENNA HEIGHT (VERTICAL)			
MTRS/FT	2.00M UNCORRECTED		
	MEASURED	X	FIXED HGT.

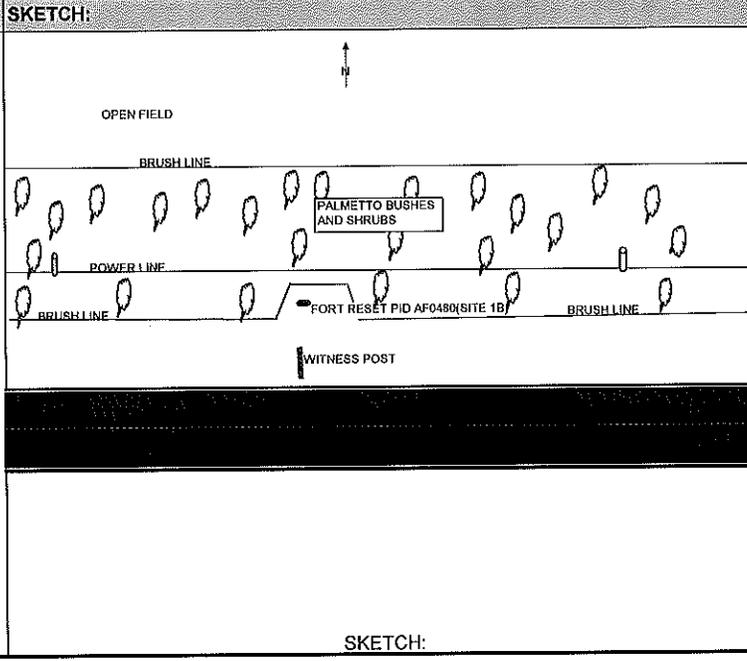
ANTENNA INFO			
RADIUS (M)		0.000	
S/N NUMBER	24415	0.000	
ANTENNA TYPE	TRIMBLE COMP L1/L2 W/GRD PLANE		

TOP OF MONUMENT IS:	X	FLUSH
METERS/FEET		ABOVE GROUND
METERS/FEET		BELOW GROUND

3001 DESCRIPTION:SEE NGS DATA SHEET.

	AERIAL TARGET		PHOTO I.D.
	PUB. BENCH MARK		NEW CONTROL
X	PUB. CONTROL		BASE STATION

PHOTO:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

FORT RESET (SITE 1B)PID AF0480

Proj. No.:

04129-02

STATE FLORIDA

COUNTY HARDEE

QUAD: FT GREEN

OPERATOR V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE 27 35 41.96740N

HGT. MTS

LONGITUDE 81 59 22.03280W

37.1M

RECEIVER MODEL TRIMBLE 4000 SSI

RECEIVER S/N 4652

SESSION

FORT-046-4

DATE: 02/15/05

DAY OF YEAR 46

START TIME 17:30

END TIME 18:31

X U.T.C.

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

24415

0.000

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GRD PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

NEW CONTROL

X PUB. CONTROL

BASE STATION

3001 DESCRIPTION:SEE NGS DATA SHEET.

PHOTO:

SKETCH:

OPEN FIELD

BRUSH LINE

PALMETTO BUSHES
AND SHRUBS

POWER LINE

FORT RESET PID AF0480(SITE 1B)

BRUSH LINE

BRUSH LINE

WITNESS POST

SKETCH:



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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID: (12B) I 75 82 A07(AD6362)

Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD: GILCHRIST

OPERATOR: V. MCNEAL
RECEIVER MODEL: 4000SE
RECEIVER S/N: 4927
APPROXIMATE POSITION (CIA/CODE)
LATITUDE: 26 49' 44.77494"N HGT. MTS: 8.272M
LONGITUDE: 081 57' 08.42281"W

SESSION: I758-041-1 DATE: 01/10/05 START TIME: 13:29 END TIME: 19:49
DAY OF YEAR: 41 U.T.C. LOCAL: X

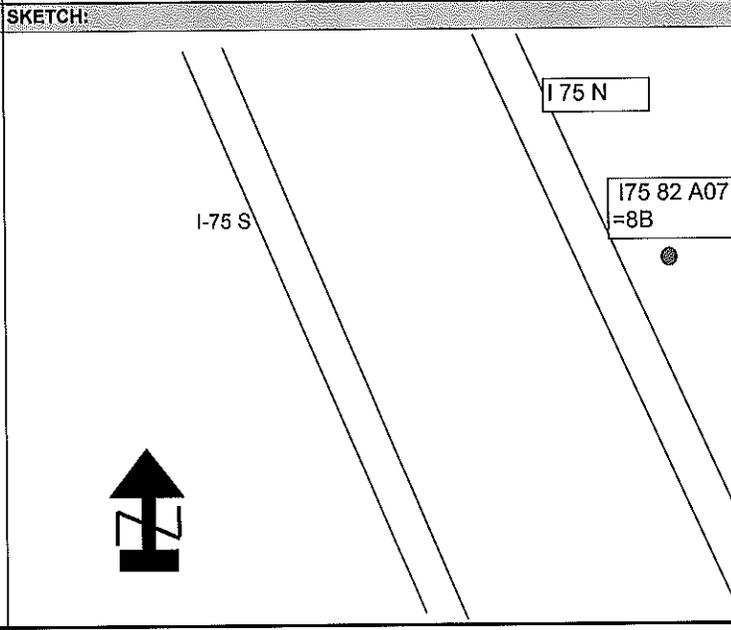
ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.
ANTENNA INFO
RADIUS (M): S/N NUMBER: 24415
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED MEASURED X FIXED HGT
TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.2ft. BELOW GROUND

30001 DESCRIPTION: SEE NGS DATA SHEETS

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID: (12B) I 75 82 A07(AD6362)

Proj. No.: 04129-02

STATE: FLORIDA COUNTY: CHARLOTTE QUAD: GILCHRIST

OPERATOR: V. MCNEAL
RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302
APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 26 49' 44.77494"N HGT. MTS: 8.272M
LONGITUDE: 081 57' 08.42281"W

SESSION: I758-043-1 DATE: 01/12/05 START TIME: 20:17 END TIME: 21:10
DAY OF YEAR: 43 X U.T.C. LOCAL

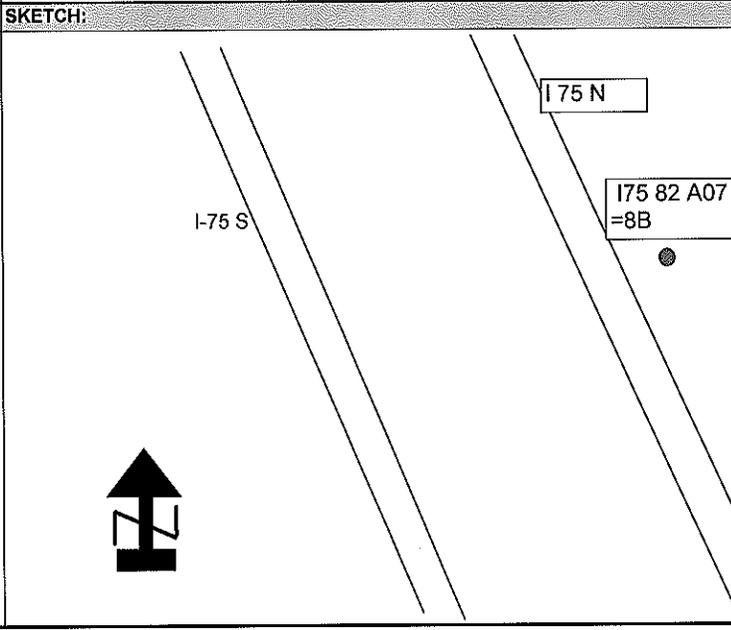
ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.
ANTENNA INFO
RADIUS (M): S/N NUMBER: 10019
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED MEASURED X FIXED HGT
TOP OF MONUMENT IS: FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: 0.2ft. BELOW GROUND

30001 DESCRIPTION: SEE NGS DATA SHEETS

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

PHOTO:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: (AG6295)PARISH 1934 (SITE 14)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: PARRISH

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 35 26.78573N HGT. MTS:
LONGITUDE: 82 23 19.48556W 9.889

RECEIVER MODEL: TRIMBLE 4000SE

RECEIVER S/N: 4570

SESSION: PARR0441 DATE: 02/13/05
DAY OF YEAR: 44

START TIME: 15:44 X U.T.C.
END TIME: 16:14 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 50907 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT.

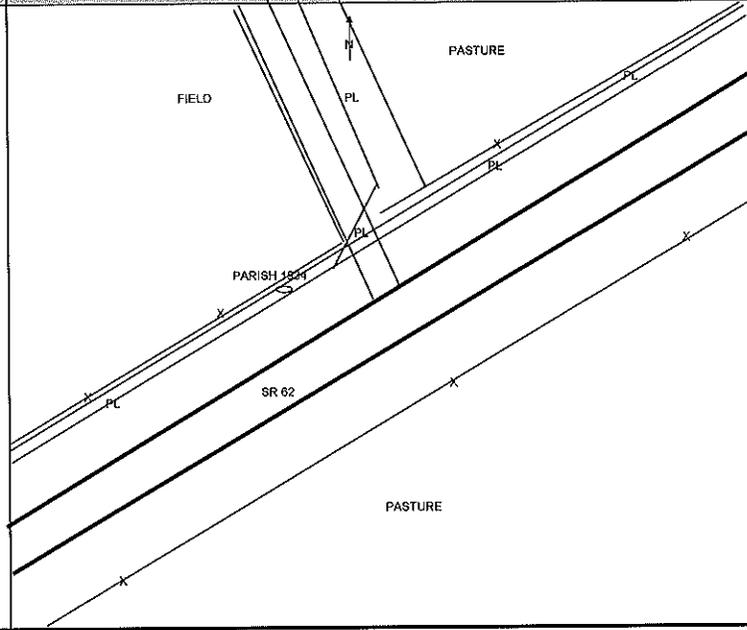
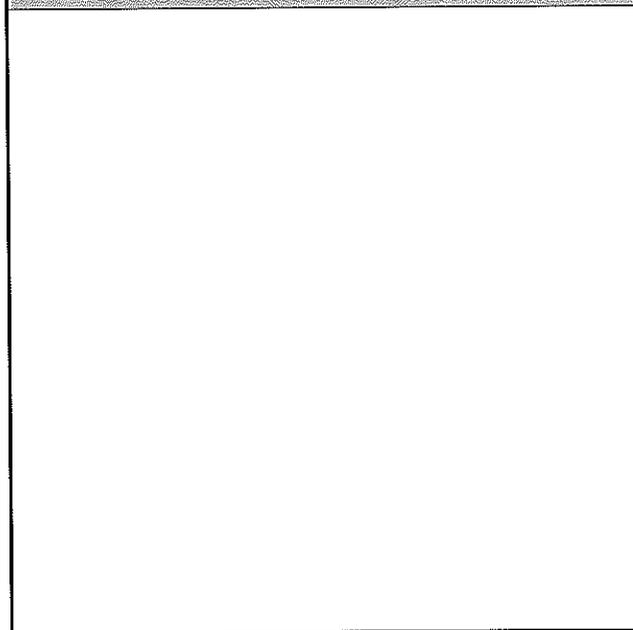
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDAR CHECKS

POINT ID:

PUNT

Proj. No.:

04129-02

STATE FLORIDA

COUNTY CHARLOTTE

QUAD:

OPERATOR V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE 26 54' 38.61"N

HGT. MTS

LONGITUDE 081 59' 27.86"W

RECEIVER MODEL TRIMBLE 4000 SSI

RECEIVER S/N 4652

SESSION

DATE: 02/10/05

START TIME 14:23

X

U.T.C.

PUNT-041-1

DAY OF YEAR 41

END TIME 15:25

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA INFO

RADIUS (M)

S/N NUMBER 50496

ANTENNA TYPE

TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.00M UNCORRECTED

MEASURED

X

FIXED HGT

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

30001 DESCRIPTION: POINT IS A 1 INCH ROUND ROD W/ORANGE PLASTIC CAP (STAMPED-TRAV PT LB 7009) THAT IS SET FLUSH W/GROUND. POINT IS 88.2 FT NW OF THE WEST EDGE OF CONCRETE OF (RUNWAY) A--> (BLACK ON YELLOW) SIGN & 69 FT SW OF THE SW EDGE OF RUNWAY 33 & 108 FT SOUTH OF ORANGE/WHITE LIGHT. POINT IS SET IN CHARLOTTE COUNTY AIRPORT PROPERTY.

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

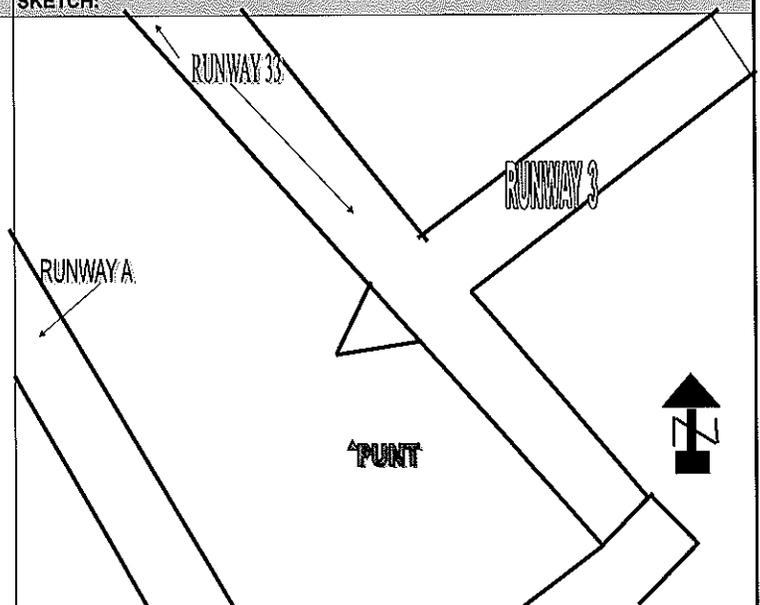
NEW CONTROL

PUB. CONTROL

X BASE STATION

PHOTO:

SKETCH:



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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

PAGE: _____

JOB REFERENCE
 SWFWMD-LIDAR CHECKS

POINT ID: PUNT
Proj. No.: 04129-02

STATE: FLORIDA **COUNTY:** CHARLOTTE **QUAD:** _____

OPERATOR: V. MCNEAL

APPROXIMATE POSITION (C/A/CODE)

LATITUDE	26 54' 38.61"N	HGT. MTS	
LONGITUDE	081 59' 27.86"W		

RECEIVER MODEL: TRIMBLE 4000 SSI
RECEIVER S/N: 4652

SESSION: PUNT-041-2 **DATE:** 02/10/05
DAY OF YEAR: 41

START TIME: 15:27 **U.T.C.**
END TIME: 16:28 **LOCAL**

ANTENNA HEIGHT (SLANT)

MTRS/FT	<input type="checkbox"/> MEASURED	<input type="checkbox"/> FIXED HGT.
----------------	------------------------------------------	--------------------------------------------

ANTENNA INFO

RADIUS (M)	
S/N NUMBER	50496
ANTENNA TYPE	TRIMBLE COMP L1/L2 WGRD PLANE

ANTENNA HEIGHT (VERTICAL)

MTRS/FT	2.00M UNCORRECTED
<input type="checkbox"/> MEASURED	<input checked="" type="checkbox"/> FIXED HGT.

TOP OF MONUMENT IS: **FLUSH**
 ABOVE GROUND
 BELOW GROUND

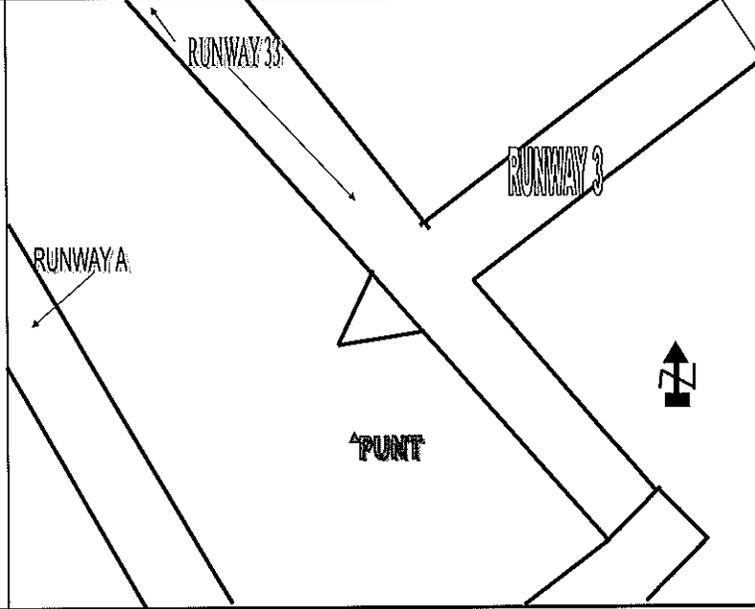
30001 DESCRIPTION: POINT IS A 1 INCH ROUND ROD W/ORANGE PLASTIC CAP (STAMPED-TRAV PT LB 7009) THAT IS SET FLUSH W/GROUND. POINT IS 88.2 FT NW OF THE WEST EDGE OF CONCRETE OF (RUNWAY) A--> (BLACK ON YELLOW) SIGN & 69 FT SW TO SW EDGE OF RUNWAY 33 & 108 FT SOUTH OF ORANGE/WHITE LIGHT. POINT IS SET IN CHARLOTTE COUNTY AIRPORT PROPERTY.

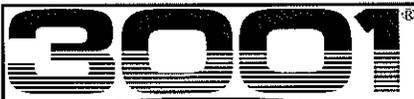
AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL

PHOTO I.D.
 NEW CONTROL
 BASE STATION

PHOTO: _____

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:
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JOB REFERENCE

MANATEE-LIDAR CHECKS

POINT ID: SARA
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: SARASOTA QUAD:

OPERATOR: V. MCNEAL
APPROXIMATE POSITION (CIA/CODE)
LATITUDE: 27 23' 01.30"N HGT. MTS
LONGITUDE: 082 33' 08.39"W

RECEIVER MODEL: TRIMBLE 4000 SSI
RECEIVER S/N: 4652

SESSION: SARA-045-1 DATE: 02/14/05 START TIME: 13:43 END TIME: 14:44
DAY OF YEAR: 45 U.T.C. LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): S/N NUMBER: 50496
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

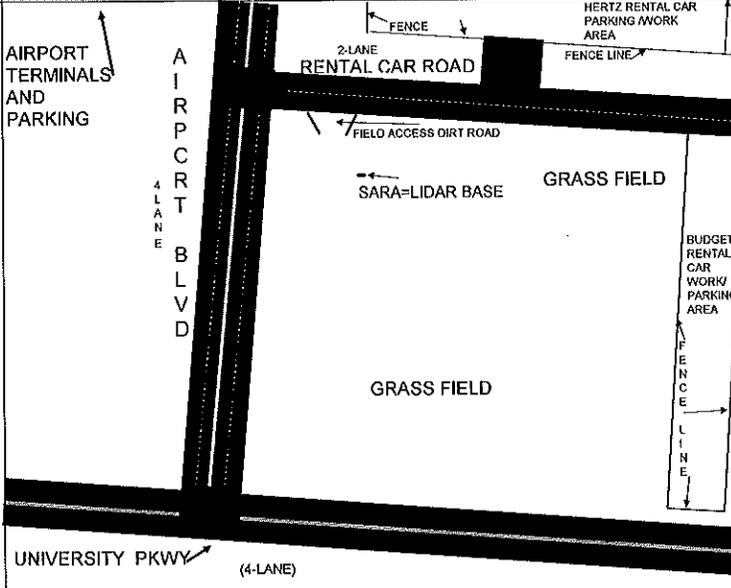
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

30001 DESCRIPTION: POINT IS A 3/4 INCH ROUND ROD W/ORANGE PLASTIC CAP SET FLUSH WITH GROUND IN A GRASS FIELD ON SARASOTA/BRADENTON AIRPORT PROPERTY @ AT THE JUNCTION OF AIRPORT BLVD & RENTAL CAR ROAD. POINT IS 142 FT EAST FROM C/L OF AIRPORT BLVD---124FT SOUTH FROM C/L OF RENTAL CAR RD--- 92FT SOUTHEAST FROM A METAL MANHOLE DRAINAGE COVER.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
PUB. CONTROL X BASE STATION

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

MANATEE-LIDAR CHECKS

POINT ID: SARA

Proj. No.: 04129-02

STATE	FLORIDA	COUNTY	SARASOTA	QUAD:	
OPERATOR	V. MCNEAL		APPROXIMATE POSITION (C/A/CODE)		
RECEIVER MODEL	TRIMBLE 4000 SSI		LATITUDE	27 23' 01.30"N	HGT. MTS
RECEIVER S/N	4652		LONGITUDE	082 33' 06.39"W	

SESSION	SARA-045-2	DATE:	02/14/05	START TIME	14:45	<input checked="" type="checkbox"/>	U.T.C.
		DAY OF YEAR	45	END TIME	15:46	<input type="checkbox"/>	LOCAL

ANTENNA HEIGHT (SLANT)			
MTRS/FT		MEASURED	FIXED HGT.
		<input type="checkbox"/>	<input type="checkbox"/>

ANTENNA INFO	
RADIUS (M)	
S/N NUMBER	50496
ANTENNA TYPE	TRIMBLE COMP L1/L2 W/GRD PLANE

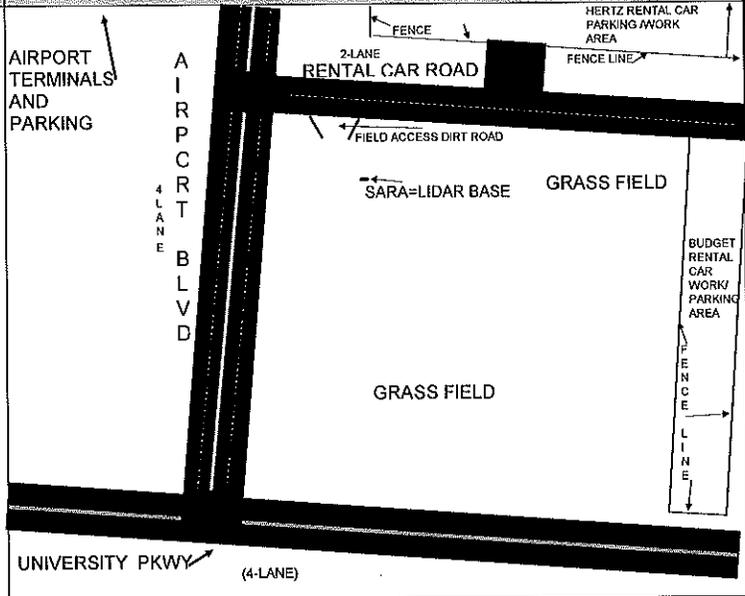
ANTENNA HEIGHT (VERTICAL)			
MTRS/FT	2.00M UNCORRECTED	MEASURED	FIXED HGT
		<input type="checkbox"/>	<input checked="" type="checkbox"/>

TOP OF MONUMENT IS:	<input checked="" type="checkbox"/>	FLUSH
METERS/FEET		ABOVE GROUND
METERS/FEET		BELOW GROUND

30001 DESCRIPTION: POINT IS A 3/4 INCH ROUND ROD W/ORANGE PLASTIC CAP SET FLUSH WITH GROUND IN A GRASS FIELD ON SARASOTA/BRADENTON AIRPORT PROPERTY @ AT THE JUNCTION OF AIRPORT BLVD & RENTAL CAR ROAD. POINT IS 142 FT EAST FROM C/L OF AIRPORT BLVD---124FT SOUTH FROM C/L OF RENTAL CAR RD--- 92FT SOUTHEAST FROM A METAL MANHOLE DRAINAGE COVER.

<input type="checkbox"/>	AERIAL TARGET	<input type="checkbox"/>	PHOTO I.D.
<input type="checkbox"/>	PUB. BENCH MARK	<input type="checkbox"/>	NEW CONTROL
<input type="checkbox"/>	PUB. CONTROL	<input checked="" type="checkbox"/>	BASE STATION

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

MANATEE-LIDAR CHECKS

POINT ID: 872 6282 A TIDAL(PID=AG7391)

Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: ANNA MARIA

OPERATOR: V. MCNEAL
APPROXIMATE POSITION (C/A/CODE)
RECEIVER MODEL: TRIMBLE 4000 SE
RECEIVER S/N: 4927
LATITUDE: 27 31' 56.86932"N HGT. MTS
LONGITUDE: 082 43' 56.2986"W 0.634M

SESSION: 282A-045-1 DATE: 02/14/05 START TIME: 12:09 END TIME: 18:18
DAY OF YEAR: 45 X U.T.C. LOCAL

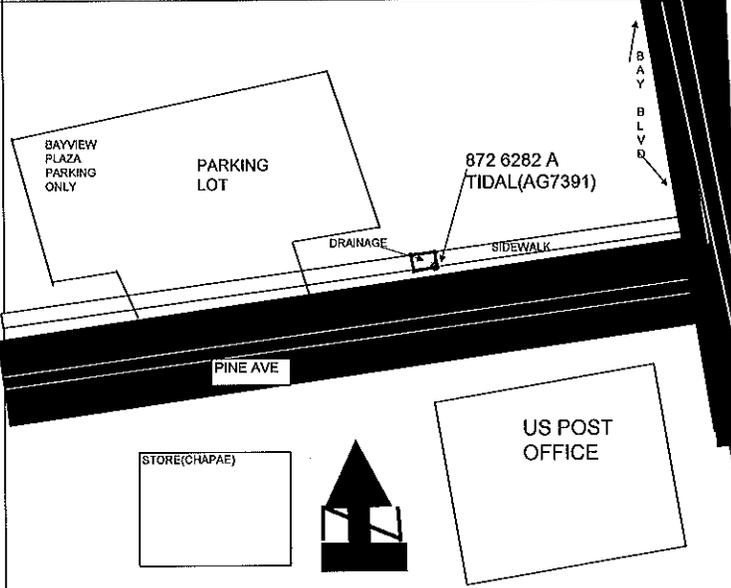
ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.
ANTENNA INFO
RADIUS (M): S/N NUMBER: 24415
ANTENNA TYPE: TRIMBLE COMP L1/L2 W/GRD PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.00M UNCORRECTED MEASURED X FIXED HGT.
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
X PUB. CONTROL BASE STATION

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: WAUCPORT (AF7425)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD: FT GREEN

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (G/A/CODE)
LATITUDE: 27 30 54.36943 N HGT. MTS:
LONGITUDE: 081 53 00.60906 W 30.9

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 3158

SESSION: WAUC0423 DATE: 02/11/05
DAY OF YEAR: 42

START TIME: 17:17 X U.T.C.
END TIME: 18:21 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

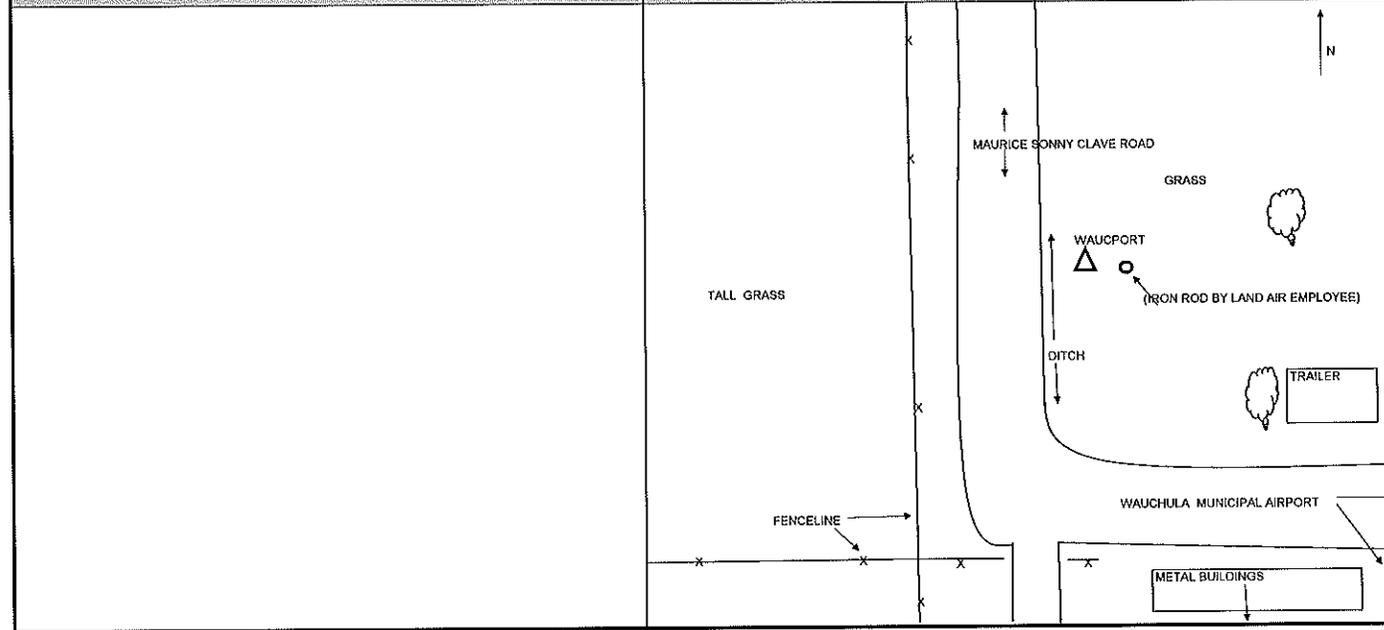
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET. TALK TO DICK WISEMAN AIRPORT MANAGER. CONTACT AT 863-773-3131

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: WAUCPORT (AF7425)
Proj. No.: 04128-02

STATE: FLORIDA COUNTY: HARDEE QUAD: FT GREEN

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (G/A/CODE)
LATITUDE: 27 30 54.36943 N HGT. MTS:
LONGITUDE: 081 53 00.60906 W 30.9

RECEIVER MODEL: TRIMBLE 4000SSi
RECEIVER S/N: 3158

SESSION: WAUC0461 DATE: 02/15/05
DAY OF YEAR: 46

START TIME: 13:05 X U.T.C.
END TIME: 19:08 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

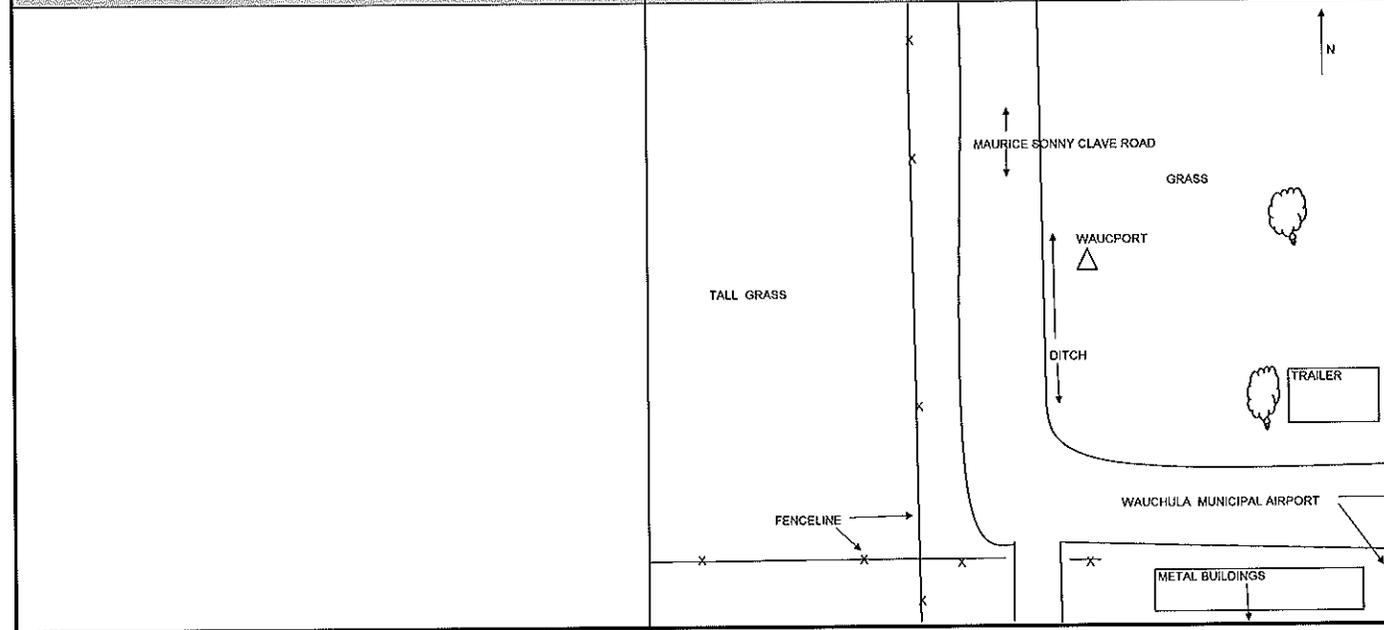
TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

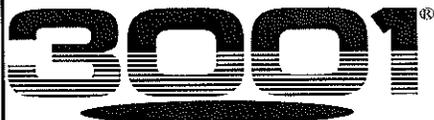
3001 DESCRIPTION: SEE NOS DATA SHEET. TALK TO DICK WISEMAN AIRPORT MANAGER. CONTACT AT 863-773-3131

AERIAL TARGET
PUB. BENCH MARK
X PUB. CONTROL
PHOTO I.D.
NEW CONTROL
BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

PAGE:

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JOB REFERENCE

SWFWMD-LIDARCHECK

POINT ID:

WAUCPORT (AF7425)

Proj. No.:

04129-02

STATE: FLORIDA

COUNTY: HARDEE

QUAD: FT GREEN

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (CIA/CODE)

LATITUDE: 27 30 54.36943 N

HGT. MTS:

LONGITUDE: 081 53 00.60906 W

30.9

RECEIVER MODEL: TRIMBLE 4000SSI

RECEIVER S/N: 3158

SESSION:

WAUC0424

DATE: 02/11/05

DAY OF YEAR: 42

START TIME: 18:22

END TIME: 19:34

X

U.T.C.

LOCAL

ANTENNA HEIGHT (SLANT)

MTRS/FT

MEASURED

FIXED HGT.

ANTENNA HEIGHT (VERTICAL)

MTRS/FT

2.000M

MEASURED

X

FIXED HGT

ANTENNA INFO

RADIUS (M)

0.000

S/N NUMBER

10018

0.000

ANTENNA TYPE

TRIMBLE COMP. L1/L2 W/GRO. PLANE

TOP OF MONUMENT IS:

X

FLUSH

METERS/FEET

ABOVE GROUND

METERS/FEET

BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET. TALK TO DICK WISEMAN AIRPORT MANAGER, CONTACT AT 863-773-3131

AERIAL TARGET

PHOTO I.D.

PUB. BENCH MARK

NEW CONTROL

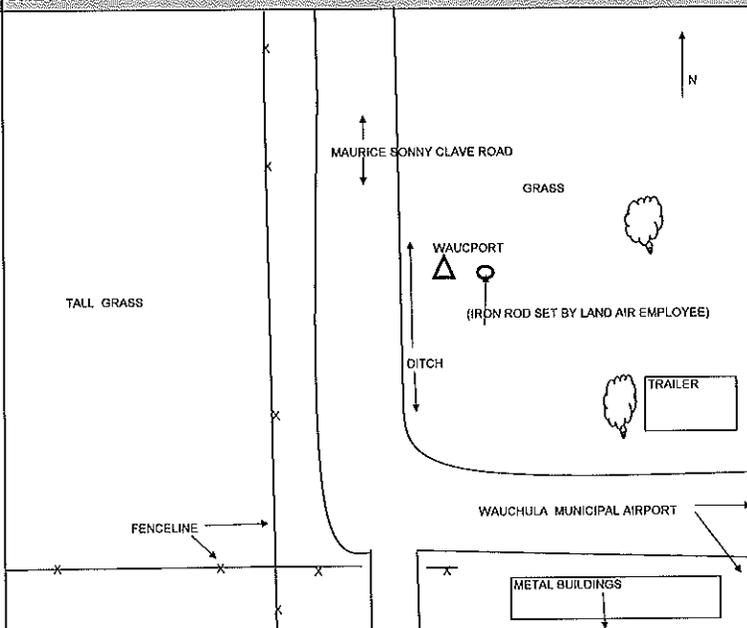
X

PUB. CONTROL

BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
 FIELD DATA SHEET

PAGE:
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JOB REFERENCE
 SWFWMD-LIDARCHECK

POINT ID: SWFWMD1
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD: FT GREEN

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (CIA/CODE)
 LATITUDE: 27 30 54.30 N HGT. MTS
 LONGITUDE: 081 53 00.43 W

RECEIVER MODEL: TRIMBLE 4000SSI
 RECEIVER S/N: 3158

SESSION: WMD10461 DATE: 02/15/05
 DAY OF YEAR: 46

START TIME: 13:11 X U.T.C.
 END TIME: 14:16 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M
 MEASURED X FIXED HGT

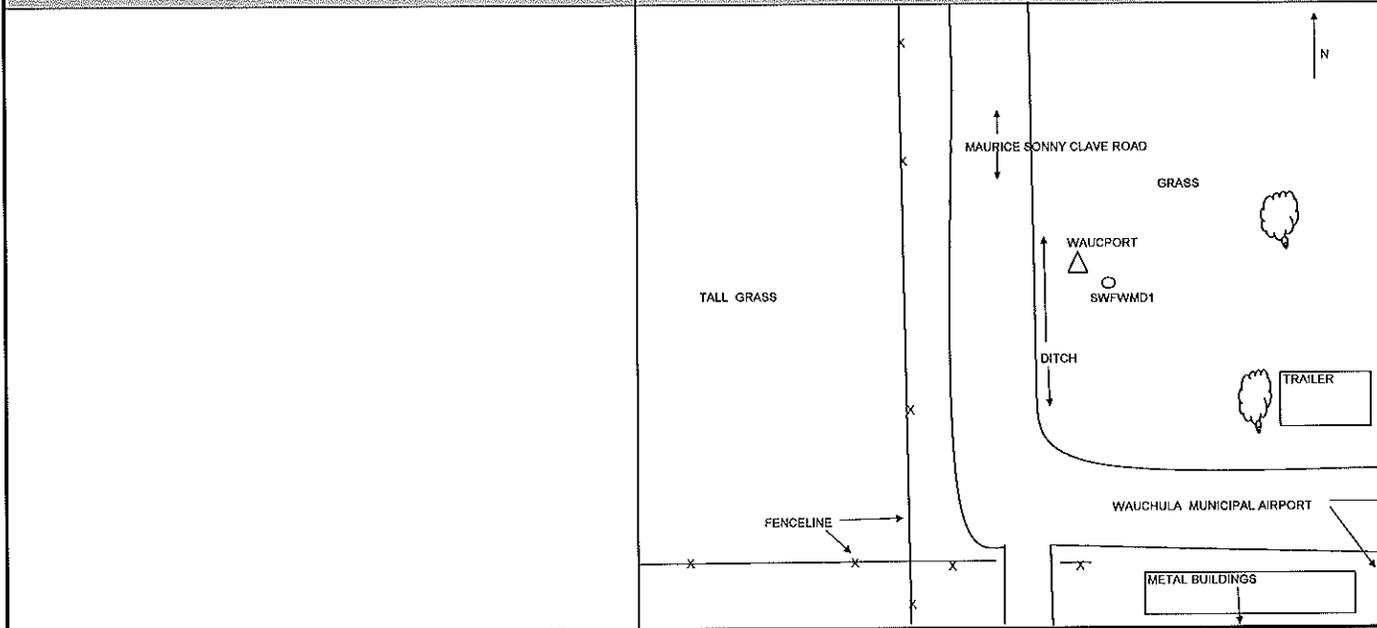
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET ABOVE GROUND
 METERS/FEET BELOW GROUND

3001 DESCRIPTION: WMD1 IS A 3/4 INCH METAL ROD WITH BRASS CAP NOT STAMPED. IS LOCATED ON THE EAST SIDE OF MAURICE SONNY CLAVE ROAD. IS 17.6 FEET SOUTHEAST OF WAUCPORT CAP POINT. IS 74.2 FEET EAST OF CL MAURICE SONNY CLAVE ROAD, SEE LAND AIR CREW ABOUT DATA ON SECOND SESSION BECAUSE THEY ARRIVED TO USE METAL ROD WITH BRASS CAP FOR BASE POINT. SET BY LAND AIR CREW.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
SWFWMD-LIDARCHECK

POINT ID: SWFWMD-WMD1
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: HARDEE QUAD: FT GREEN

OPERATOR: MITCH/GARY

APPROXIMATE POSITION (C/A/CODE)
LATITUDE: 27 30 54.30 N HGT. MTS
LONGITUDE: 081 53 00.43 W

RECEIVER MODEL: TRIMBLE 4000SSI

RECEIVER S/N: 3158

SESSION: WMD10462 DATE: 02/15/05
DAY OF YEAR: 46

START TIME: 14:17 X U.T.C.
END TIME: NO SESSION LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRO. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

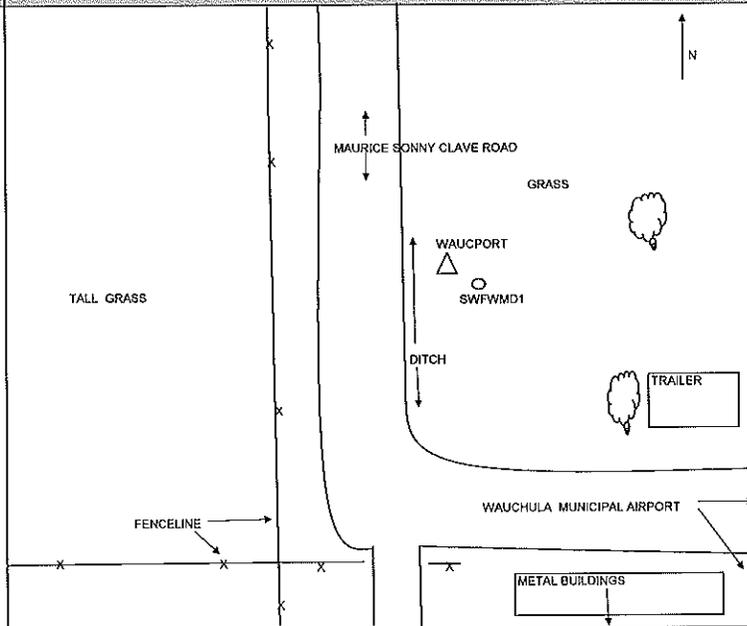
3001 DESCRIPTION: WMD1 IS A 3/4 INCH METAL ROD WITH BRASS CAP NOT STAMPED. IS LOCATED ON THE EAST SIDE OF MAURICE SONNY CLAVE ROAD. IS 17.8 FEET SOUTHEAST OF WAUCPORT CAP POINT. IS 74.2 FEET EAST OF CL MAURICE SONNY CLAVE ROAD.

NOTE:-----
-----STARTED SECOND SESSION AND LAND AIR HAD
ME MOVE AND THEY SET UP ON THE BRASS CAP.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 MANATEE-LIDARCHECK

POINT ID: Z564=15B (DE9094)
 Proj. No.: 04128-02

STATE: FLORIDA COUNTY: MANATEE QUAD: RYE

OPERATOR: MITCH

APPROXIMATE POSITION (CIA/CODE)

RECEIVER MODEL: TRIMBLE 4000SSi
 RECEIVER S/N: 3158

LATITUDE: 27 35 46.83 N HGT. MTS: 32.558
 LONGITUDE: 082 16 33.75 W

SESSION: Z5640453 DATE: 02/14/05
 DAY OF YEAR: 45

START TIME: 16:13 X U.T.C.
 END TIME: 17:14 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 10018 0.000
 ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ O. PLANE

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M MEASURED X FIXED HGT.

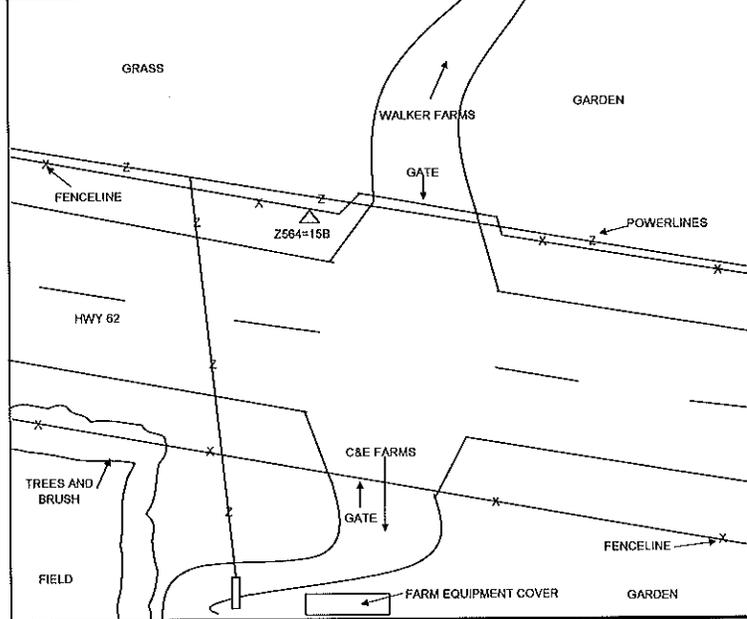
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET: ABOVE GROUND
 METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET
 PUB. BENCH MARK
 PUB. CONTROL
 PHOTO I.D.
 NEW CONTROL
 X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
MANATEE-LIDAR CHECKS

POINT ID: (DE9094)Z564-SITE15B
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: RYE

OPERATOR: M. HAVARD

APPROXIMATE POSITION (GIA/CODE)
LATITUDE: 27 35 46.94N HGT. MTS:
LONGITUDE: 82 16 33.79W 32.558

RECEIVER MODEL: TRIMBLE 4000SE
RECEIVER S/N: 4302

SESSION: Z5640441 DATE: 02/13/05
DAY OF YEAR: 44

START TIME: 18:05 X U.T.C.
END TIME: 18:58 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10019 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/GRD. PLANE

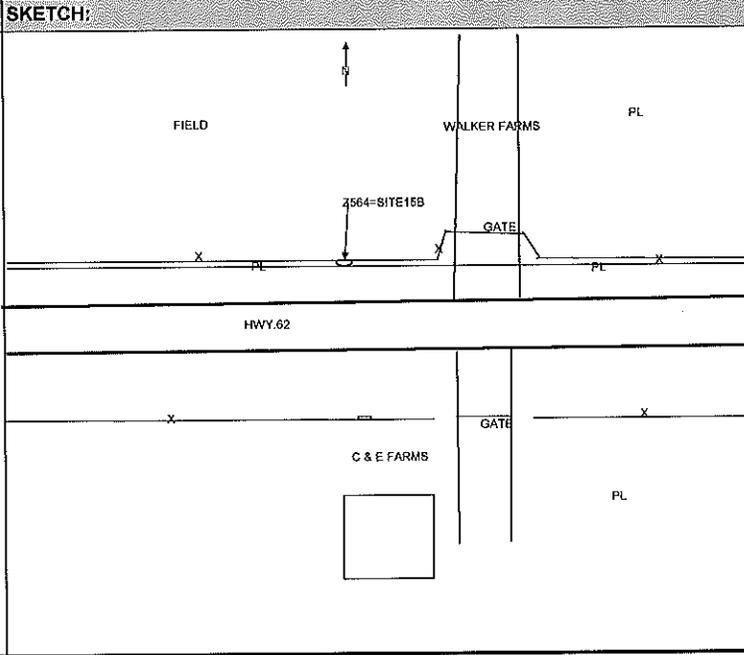
ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M (UNCORRECTED)
MEASURED X FIXED HGT

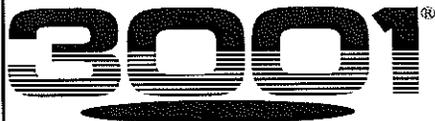
TOP OF MONUMENT IS: X FLUSH
METERS/FEET: ABOVE GROUND
METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NOS DATA SHEET

AERIAL TARGET PHOTO I.D.
PUB. BENCH MARK NEW CONTROL
PUB. CONTROL X BASE STATION

PHOTO:





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**GPS CONTROL SURVEY
 FIELD DATA SHEET**

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JOB REFERENCE
 MANATEE-LIDAR CHECKS

POINT ID: (DE9094)Z564-SITE15B
 Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: RYE

OPERATOR: M. HAVARD

APPROXIMATE POSITION (C/A/CODE)
 LATITUDE: 27 35 46.85N HGT. MTS:
 LONGITUDE: 82 16 33.72W 32.558

RECEIVER MODEL: TRIMBLE 4700

RECEIVER S/N: 3112

SESSION: Z5640464 DATE: 02/15/05
 DAY OF YEAR: 46

START TIME: 17:30 X U.T.C.
 END TIME: 18:31 LOCAL

ANTENNA HEIGHT (SLANT)
 MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
 RADIUS (M): 0.000
 S/N NUMBER: 59010 0.000
 ANTENNA TYPE: MBL MICRO-CENTERED L1/L2 W/GRD. PL

ANTENNA HEIGHT (VERTICAL)
 MTRS/FT: 2.000M (UNCORRECTED)
 MEASURED X FIXED HGT

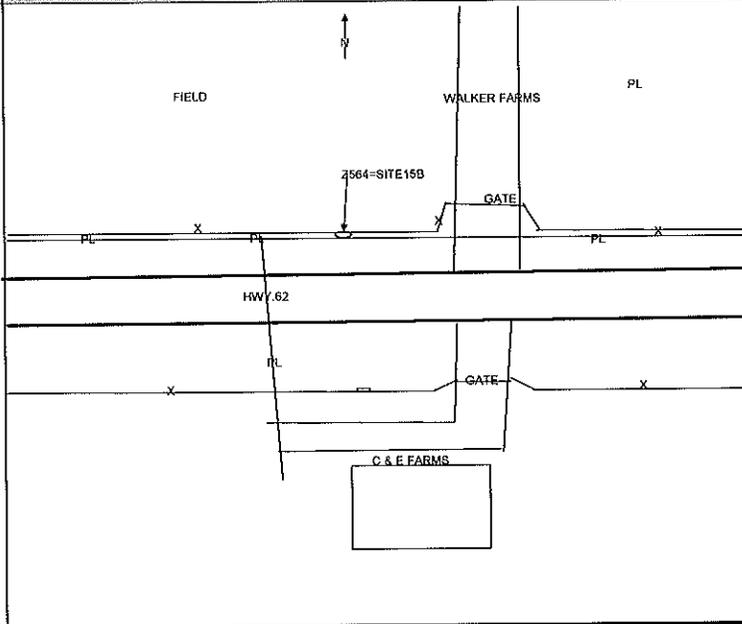
TOP OF MONUMENT IS: X FLUSH
 METERS/FEET: ABOVE GROUND
 METERS/FEET: BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET

AERIAL TARGET PHOTO I.D.
 PUB. BENCH MARK NEW CONTROL
 X PUB. CONTROL X BASE STATION

PHOTO:

SKETCH:





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GPS CONTROL SURVEY
FIELD DATA SHEET

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JOB REFERENCE
MANATEE-LIDARCHECK

POINT ID: Z564+15B (DE9094)
Proj. No.: 04129-02

STATE: FLORIDA COUNTY: MANATEE QUAD: RYE

OPERATOR: MITCH

APPROXIMATE POSITION (G/A/CODE)

LATITUDE: 27 35 46.83 N HGT. MTS:
LONGITUDE: 082 16 33.75 W 32.558

RECEIVER MODEL: TRIMBLE 4000SSI
RECEIVER S/N: 3158

SESSION: Z5640454 DATE: 02/14/05
DAY OF YEAR: 45

START TIME: 17:15 X U.T.C.
END TIME: 18:16 LOCAL

ANTENNA HEIGHT (SLANT)
MTRS/FT: MEASURED FIXED HGT.

ANTENNA INFO
RADIUS (M): 0.000
S/N NUMBER: 10018 0.000
ANTENNA TYPE: TRIMBLE COMP. L1/L2 W/ O. PLANE

ANTENNA HEIGHT (VERTICAL)
MTRS/FT: 2.000M
MEASURED X FIXED HGT

TOP OF MONUMENT IS: X FLUSH
METERS/FEET ABOVE GROUND
METERS/FEET BELOW GROUND

3001 DESCRIPTION: SEE NGS DATA SHEET.

AERIAL TARGET
PUB. BENCH MARK
PUB. CONTROL
PHOTO I.D.
NEW CONTROL
X BASE STATION

PHOTO:

SKETCH:

